S O L A R R A D I O E M I S S I O N
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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
01			HOLL	0005.0	0104.0	III	N	1	32	141	
			LEAR	0006.0	0052.0	III	N	1	25	180	
	0000	0800	CULG	0006.0	0021.0	III	GG	1	27U	180	
			CULG	0052.0	0052.0	III	B	1	30	170	
	0000	0900	HIRA	0052.0	0052.5	III	B	1	25X	110	
			CULG	0243.0	0322.0	III	N	1	20	180	
			LEAR	0302.0	0321.0	III	N	1	25	180	
			CULG	0421.0	0421.0	III	B	3	18X	150	
			HIRA	0421.0	0421.5	III	B	1	30	120	
			LEAR	0421.0	0421.0	III		1	25	180	
	0439	1744	POTS	0528 U	1055	I	S,N	2	200U	400	100-200MHz no data
			CULG	0531.0	0531.0	III	B	1	27U	180	
	0600	1200	IZMI	0648.0U	1050.0U	I	N	1	160	270X	
			CULG	0652.0	0704.0	III	G	1	20	180	
			IZMI	0652.5	0653.6	III	G	1	40	140	
			POTS	0659.2	0703.5	III	GG,N	2	200U	450	
			IZMI	0659.5	0703.5	III	GG	1	110	270X	
			POTS	0711.7	0713.6	III	G	2	200U	420	
			IZMI	0713.0	0713.4	III	G	2	165	270X	
			POTS	0718.1	0718.3	III	G	1	200U	280	
			CULG	0719.0	0719.0	III	B	3	23	180	
			HIRA	0719.0	0719.5	III	B	1	25X	110	
			IZMI	0719.0	0719.6	III	B	2	25X	175	
			LEAR	0719.0	0719.0	III		1	25	180	
			POTS	0719.0	0719.3	III	B	2	40X	85U	
			SVTO	0719.0	0719.0	III		1	25	76	
			LEAR	0758.0	0800.0	III		1	25	133	
			SVTO	0758.0	0806.0	III		1	25U	83U	
			IZMI	0758.4	0759.9	III	G	1	25X	130	
			HIRA	0800.5	0801.0	III	B	1	40	130	
			IZMI	0800.6	0801.1	III	G,C,FS	2	25X	160	
			POTS	0800.6	0801.0	III	G	2	40X	85U	
			IZMI	0806.4	0806.6	III	G	1	25X	130	
			IZMI	0927.1	0927.2	III	B	1	45	95	
			IZMI	1008.7	1009.9	III	G	1	25X	95	
			POTS	1009	1055	III	GG,N	2	40X	300	
			SVTO	1009.0	1009.0	III		1	25	42	
			IZMI	1014.7	1024.8	III	GG	2	25X	270X	
			SVTO	1018.0	1020.0	III		1	25	48	
			IZMI	1031.2	1032.9	III	G	1	50	90	
			IZMI	1038.5	1054.7	III	N	2	45	95	
			IZMI	1039.2	1039.4	III	G	1	50	265	
			IZMI	1047.1	1048.8	III	G	2	50	65	
			POTS	1220.0	1220.5	III	B	2	40X	240	
			SGMR	1220.0	1220.0	III		1	30	55	
			SVTO	1220.0	1221.0	III		2	25U	83U	
			POTS	1224.0	1224.7	DCIM		2	230	340	
			POTS	1226.6	1728 U	I	S,N	2	200U	370	
			POTS	1237.7	1238.4	III	G	2	200U	350	
	0555	1700	BLEN	1237.7	1238.4	III	GG,S	1	160	350	
			POTS	1328.6	1329.2	DCIM		1	250	460	
			POTS	1338	1409	III	GG,N	2	40X	450	
			HOLL	1351.0	1357.0	III		1	25	180	
			SVTO	1351.0	1405.0	III	N	1	25	180	
			SGMR	1355.0	1357.0	III		2	30	55	
			POTS	1418.7	1419.9	III	GG	2	200U	500	
			HOLL	1435.0	1443.0	III		1	25	180	
			SVTO	1435.0	1443.0	III		1	25	180	
	0548	1623	ONDR	1435.2	1437.4	DCIM	G	1	800X	1156	
			BLEN	1435.5	1439.7	III	GG,C	3	100X	4000X	
			POTS	1435.6	1456.7	III	GG,N	2	200U	720	
			HOLL	1449.0	1600.0	III	N	1	25	180	
			SVTO	1449.0	1456.0	III		2	25U	152U	
			SGMR	1450.0	1454.0	III		2	30	80	
			POTS	1646.8	1649.0	III	GG,N	2	200U	720	
			HOLL	1710.0	1710.0	III		1	25	58	
			HOLL	1909.0	1911.0	V		1	25	180	
			PALE	1909.0	1911.0	III		1	25	155	
			SGMR	1909.0	1910.0	III		3	30	80	

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01	2023	2400	HIRA								
	2020	2400	CULG	2038.0	2049.0	III	G	1	20	180	
02			LEAR	0254.0	0254.0	III		1	25	144	
	0000	0750	CULG	0254.0	0254.0	III	B	1	35U	180	
	0000	0901	HIRA	0254.0	0254.5	III	B	1	30	140	
			PALE	0331.0	0332.0	III		1	25	70	
			CULG	0340.0	0349.0	III	G	1	20	180	
			LEAR	0340.0	0348.0	III		1	25	180	
			HIRA	0342.5	0344.5	III	G	1	25X	200	
	0437	1744	POTS	0446 U	0947	I	S,N	2	200U	330	100-200MHz no data
	0547	1625	ONDR								
	0555	1705	BLEN								
	0600	1200	IZMI	0600.0E	0935.0U	I	N	1	180	270	
			LEAR	0615.0	0616.0	III		1	25	180	
			SVTO	0615.0	0619.0	III		1	25	84	
			HIRA	0615.5	0616.0	III	B	1	30	170	
			IZMI	0615.6	0616.4	III	G	2	25X	170	
			CULG	0616.0	0616.0	III	B	1	20	180	
			IZMI	0618.6	0619.5	III	G	1	45	85	
			IZMI	0621.6	0621.8	III	B	1	45	85	
			LEAR	0702.0	0702.0	III		1	25	99	
			SVTO	0702.0	0702.0	III		1	25	80	
			HIRA	0702.5	0703.0	III	B	1	40	70	
			IZMI	0702.5	0702.9	III	G	2	25X	95	
			CULG	0703.0	0703.0	III	B	1	27U	75	
			HIRA	0738.0	0739.0	III	G	1	30	250	
			LEAR	0738.0	0738.0	III		1	25	180	
			SVTO	0738.0	0738.0	III		2	25	123	
			POTS	0738.1	0738.7	III	GG	2	40X	300	
			IZMI	0738.2	0738.7	III	G	2	25X	270X	
			POTS	0755.1	0755.3	DCIM		1	380	500	
			POTS	0755.1	0755.4	III	B	2	40X	500	
			IZMI	0755.2	0755.4	III	B	1	30	50	
			POTS	0755.2	0755.4	III	B	2	40X	340	
			SVTO	0817.0	0819.0	III		1	25	77	
			IZMI	0817.7	0819.4	III	GG	2	25X	160	
			POTS	0817.7	0819.4	III	G	2	40X	85	
			HIRA	0819.0	0819.5	III	B	1	50	70	
			LEAR	0900.0	0901.0	III		1	25	72	
			SVTO	0900.0	0900.0	III		1	25	52	
			IZMI	0900.6	0900.9	III	G	2	25X	60	
			POTS	0900.6	0900.9	III	G	2	40X	60	
			IZMI	0910.5	0910.7	III	G	1	45	65	
			IZMI	0923.0	0923.2	III	B	1	40	65	
			POTS	0923.0	0923.3	III	B	1	40X	80	
			POTS	1034.8	1038.4	III	GG	2	40X	85U	
			POTS	1035.1	1722 U	I	S,N	1	210	380	
			SVTO	1036.0	1038.0	III		1	25	136	
			IZMI	1036.7	1038.3	III	GG	2	25X	190	
			POTS	1038.6	1038.7	DCIM		2	370	440	
			POTS	1634.7	1636.4	III	GG	1	200U	420	
			HOLL	1640.0	1640.0	III		1	25	136	
			SGMR	1640.0	1640.0	III		1	30	50	
			SVTO	1640.0	1640.0	III		1	25	131	
			POTS	1640.2	1640.6	III	G	1	40X	280	
	2020	2400	CULG								
	2022	2400	HIRA								
			HOLL	2022.0	2023.0	III		1	25	106	
			PALE	2022.0	2023.0	III		1	25	79	
03	0000	0750	CULG								
	0000	0902	HIRA								
	0436	1748	POTS	0451 U	1738 U	I	S,N	2	200U	420	100-200MHz no data
	0555	0905	BLEN								
	0600	1204	IZMI	0621.0U	1204.0D	I	N	2	50	270X	
			IZMI	0626.0	0640.0	III	N	1	45	95	
			LEAR	0756.0	0943.0	III	N	1	98	180	
			SVTO	0802.0	1348.0	III	N	1	35U	180U	

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03			IZMI	0831.3	0849.0	III	N	2	40	250	
			IZMI	0841.6	0844.5	III	G	1	45	270X	
			IZMI	0922.0	0922.1	III	B	1	55	165	
			POTS	0925.9	0926.1	III	B,U	1	40X	80	
			ONDR	1021.3	1026.4	DCIM	G	1	800X	2000X	
	0545	1627	ONDR	1023.5	1026.5	DCIM	G	1	2000X	4500X	
			IZMI	1040.6	1057.7	III	G	1	45	95	
			IZMI	1041.9	1042.0	III	B	1	135	240	
			IZMI	1114.6	1146.2	III	N	1	45	95	
			SVTO	1421.0	1653.0	III	N	1	25	156	
			HOLL	1535.0	1535.0	III		1	25	83	
			HOLL	1535.0	1733.0	III	N	1	25	84	
			SVTO	1602.0	1603.0	III		1	25U	157U	
			POTS	1602.8	1604.0	III	GG	2	40X	430	
			POTS	1659.4	1659.6	III	B	2	40X	250	
			SGMR	1947.0	1947.0	III		2	30	50	
			HOLL	2120.0	2208.0	III	N	1	37	121	
	2020	2400	CULG	2120.0	2120.0	III	B	1	27	90	
			CULG	2137.0	2137.0	III	B	1	27	70	
			CULG	2219.0	2220.0	III	G	1	27	90	
			HOLL	2219.0	2219.0	III		1	37	119	
			HOLL	2258.0	0002.0	III	N	1	25	155	
			PALE	2316.0	2317.0	III		1	25	130	
	2020	2400	HIRA	2316.5	2317.0	III	B	2	25X	120	
			CULG	2317.0	2317.0	III	B	2	18	100	
			LEAR	2320.0	0755.0	CONT		1	75	180	
04	0000	0903	HIRA								
			LEAR	0025.0	0755.0	III	N	1	25	88	
	0435	1730	POTS	0443 U	1730 U	I	S,N,DC	2	200U	420	100-200MHz no data
	0543	1628	ONDR								
	0555	1705	BLEN								
			IZMI	0555.0E	0735.0U	III	N	2	45	95	
	0555	1200	IZMI	0555.0E	1200.0U	I	N	2	50	270X	
			SVTO	0600.0	0604.0	III		1	25U	130U	
			IZMI	0601.2	0606.9	III	GG	1	45	185	
			SVTO	0610.0	0748.0	III	N	2	25	180	
			IZMI	0611.1	0639.7	III	S	2	40	210	
			IZMI	0621.1	0622.9	III	G	2	25X	210	
			IZMI	0701.6	0705.3	III	GG	2	25X	135	
	0000	0750	CULG	0702.0	0712.0	III	GG	1	30	180	
			POTS	0702.3	0705.2	III	G	2	40X	80	
			IZMI	0841.5	0841.8	III	G	1	40	85	
			POTS	0841.6	0842.0	III	G	2	40X	85U	
			POTS	0944.5	0953.8	III	GG,N	2	40X	85U	
			IZMI	0945.5	0949.9	III	GG	2	25X	135	
			SVTO	0946.0	0951.0	III		1	25	124	
			POTS	1004.9	1007.5	III	GG	2	40X	85U	
			IZMI	1049.0	1049.3	III	G	1	200	245	
			IZMI	1105.0	1107.0	III	GG	2	25X	95	
			SVTO	1105.0	1106.0	III		1	25U	83U	
			SGMR	1210.0	1211.0	III		1	30	55	
			SVTO	1210.0	1217.0	III		1	25	147	
			POTS	1210.8	1220.2	III	GG,N	3	40X	85U	
			HOLL	1327.0	1345.0	III	N	1	25	150	
			SGMR	1329.0	1336.0	III		1	30	65	
			SVTO	1329.0	1345.0	III	N	1	25	148	
			POTS	1329.3	1330.9	III	GG	2	40X	400	
			POTS	1334.0	1345.0	III	GG,N	2	40X	85U	
			HOLL	1546.0	1547.0	III		1	25	87	
			SVTO	1546.0	1546.0	III		1	25U	83U	
			PALE	1729.0	1729.0	III		1	25	86	
			SGMR	1729.0	1730.0	III		2	30	65	
			HOLL	1956.0	1957.0	III		1	26	39	
			PALE	1956.0	1957.0	III		1	25	51	
			PALE	2005.0	2008.0	III		1	25	180	
			HOLL	2006.0	2006.0	III		1	25	178	
	2019	2400	HIRA								
			HOLL	2019.0	2154.0	CONT		1	25	180	

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04			HOLL	2028.0	2113.0	III	N	1	25	178	
	2020	2400	CULG	2033.0	2047.0	III	GG	1	30U	90	
			CULG	2057.0	2100.0	UNCLF		1	35	90	
			CULG	2114.0	2122.0	UNCLF		1	30	75	
			CULG	2132.0	2151.0	II	FN	2	30	70	ESS 350
			LEAR	2314.0	0400.0	CONT		1	25	180	
05	0000	0903	HIRA								
	0000	0750	CULG	0309.0	0313.0	III	G	1	23	90	
	0541	1630	ONDR								
	0550	1710	BLEN								
	0433	1750	POTS	0707	0748	I	S,N	1	200U	240	100-200MHz no data
			POTS	0827.7	0834.8	III	G,N	1	220	430	
			POTS	0839 U	0904	I	S,N	1	200U	350	
			POTS	0901.8	0902.7	III	G	1	40X	85U	
	0608	1200	IZMI	0901.9	0902.3	III	G,C	2	55	155	
			LEAR	0902.0	0902.0	III		1	25	157	
			SVTO	0902.0	0902.0	III		1	62U	142U	
			IZMI	0939.4	0939.7	III	G	1	45	95	
			POTS	0939.4	0939.8	III	G	2	40X	270	
			POTS	1027.3	1027.8	III	G	1	200U	330	
			POTS	1229.8	1230.2	III	G	2	40X	85U	
			POTS	1256	1511	I	S,N	1	200U	340	
			POTS	1301.9	1302.2	III	G	2	40X	85U	
			POTS	1334.0	1334.4	III	G	2	40X	800X	
			HOLL	1407.0	1409.0	III		1	25	78	
			SGMR	1509.0	1511.0	III		1	30	50	
			SVTO	1509.0	1511.0	III		1	32U	71U	
			POTS	1509.5	1511.1	III	G	1	40X	80	
			POTS	1534.8	1539.2	DCIM		1	210	450	
			POTS	1634	1652	I	S,N	1	200U	270	
			HOLL	1715.0	1715.0	III		1	25	164	
			HOLL	1952.0	0001.0	III	N	1	25	73	
			SGMR	1952.0	2008.0	III	N	1	30	60	
	2017	2400	HIRA								
	2020	2400	CULG								
			HOLL	2348.0	2348.0	III		1	114	143	
06	0000	0750	CULG								
	0000	0904	HIRA								
	0431	1752	POTS	0523 U	1419	I	S,N	1	200U	400	100-200MHz no data
	0550	1710	BLEN								
			POTS	0801	0810	DCIM		2	210	460	
	0600	1200	IZMI	0808.0U	1200.0D	I	SG	2	50	270X	
	0539	1631	ONDR	0808.1	0809.5	DCIM	G	1	2166	4500X	
			SVTO	0908.0	0908.0	III		1	25	44	
			SVTO	1014.0	1250.0	CONT		1	75	168	
			IZMI	1101.5	1101.5	III	B	1	45	90	
			POTS	1124	1220 U	I	S,N	2	50	85U	
			POTS	1200.3	1200.7	III	B	1	40X	85U	
			POTS	1223	1250	III	G,N	1	40X	85U	
			POTS	1506	1521	I	S,N	1	250	400	
			HOLL	1845.0	1846.0	III		1	25	58	
	2016	2400	HIRA								
	2020	2400	CULG								
07	0000	0750	CULG	0021.0	0021.0	III	B	1	100	180	
			CULG	0205.0	0205.0	III	B	1	100	180	
			CULG	0250.0	0257.0	III	G	1	27U	330	
			LEAR	0250.0	0256.0	III		1	25	180	
	0000	0905	HIRA	0250.5	0255.0	III	G	1	25X	280	
			PALE	0251.0	0255.0	III		1	25	180	
			CULG	0505.0	0507.0	III	G	1	35	90	
	0537	1633	ONDR								
	0545	1710	BLEN								
	0430	1754	POTS	0629	1113	I	S,N	1	200U	280	100-200MHz no data
			POTS	0826.6	0827.4	III	GG	2	200U	440	
			LEAR	0849.0	0849.0	III		1	60	112	
			SVTO	0849.0	0851.0	III		1	29	70	

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07			POTS	0849.2	0849.7	III	B	2	50	85U	
	0600	1200	IZMI	0849.2	0850.2	III	G,C	2	50	90	
			IZMI	0901.9	0902.0	III	G	1	45	65	
			POTS	0901.9	0902.1	III	B	1	40X	65	
			POTS	1042.6	1046.1	III	GG	2	200U	750	
			IZMI	1043.3	1045.9	III	GG	2	150	270X	
			POTS	1103.1	1104.0	DCIM		1	210	400	
			IZMI	1111.4	1111.7	III	G,HARM	2	30	90	
			POTS	1111.4	1111.8	III	B	2	55	85U	
			POTS	1143.4	1148.0	DCIM		2	200U	520	
			POTS	1145.2	1145.4	III	B	1	40X	55	
			POTS	1150	1743 U	I	S,N	1	200U	300	
			SVTO	1248.0	1248.0	III		1	28	49	
			POTS	1248.3	1248.5	III	B	1	40X	55	
			POTS	1331.0	1332.5	DCIM	U	1	200U	430	
			POTS	1425.2	1426.6	III	GG	2	70	500	
			HOLL	1426.0	1426.0	III		1	73	160	
			SVTO	1426.0	1426.0	III		1	71	151	
			POTS	1520.8	1521.1	DCIM		1	240	400	
	2015	2400	HIRA	2114.0	2114.5	III	B	1	80	180	
	2020	2400	CULG	2114.0	2115.0	III	G	1	25U	180	
			HOLL	2209.0	2229.0	III	N	1	25	88	
			HIRA	2301.5	2302.0	III	B	1	25X	80	
			CULG	2302.0	2305.0	III	G	1	27	440	
08	0000	0750	CULG	0245.0	0245.0	III	B	1	100	160	
			CULG	0304.0	0304.0	III	B	1	25	180	
			CULG	0321.0	0321.0	III	B	1	90	180	
	0000	0906	HIRA	0321.0	0321.5	III	B	1	80	200	
			LEAR	0354.0	0354.0	III		1	69	180	
			HIRA	0354.5	0355.0	III	B	2	60	130	
			CULG	0355.0	0355.0	III	B	1	65	180	
	0428	1755	POTS	0428 E	1740 U	I	S,N,DC	2	200U	400	100-200MHz no data
			CULG	0514.0	0658.0	III	N	1	40U	180	
	0534	1634	ONDR								
	0600	1200	IZMI	0616.0	0618.9	III	GG	1	40	90	
			IZMI	0624.0	0624.3	III	G	2	45	220	
			CULG	0730.0	0730.0	III	B	1	27	150	
			IZMI	0730.3	0730.5	III	G	1	45	85	
			IZMI	0733.0U	1200.0D	I	N	2	130	270X	
			IZMI	0822.3	0822.4	III	G	1	25X	95	
			IZMI	0825.5	0827.7	III	GG	2	40	180	
			IZMI	0841.0	0841.2	III	G	1	45	85	
			POTS	0905.0	0905.3	III	B	1	40X	65	
			IZMI	0905.8	0905.9	III	G	1	135	190	
			POTS	0958.1	1000.6	DCIM		2	270	600	
			POTS	1005.5	1006.4	DCIM		1	280	460	
			POTS	1135.3	1135.5	III	B	1	40X	60	
			POTS	1139.3	1140.9	DCIM		2	220	800X	
			POTS	1220.9	1223.5	DCIM		2	200U	800X	
			HOLL	1338.0	1443.0	III	N	1	25	75	
			SVTO	1338.0	1446.0	III	N	1	30U	62U	
			POTS	1338.2	1338.6	III	B,U	2	40	70	
			POTS	1350.3	1350.6	III	B	1	40X	70	
			POTS	1430.9	1431.2	III	B,U	2	55	85U	
			HOLL	1536.0	1536.0	III		1	25	93	
			SVTO	1536.0	1536.0	III		1	39	48	
			HOLL	1927.0	1927.0	III		1	25	90	
			PALE	1927.0	1927.0	III		1	25U	89U	
			SGMR	1927.0	1927.0	III		1	30	80	
	2013	2400	HIRA								
			HOLL	2111.0	2113.0	III		1	25	48	
	2020	2400	CULG	2112.0	2113.0	III	G	1	20	90	
			CULG	2117.0	2117.0	III	B	1	100	180	
			CULG	2300.0	2300.0	III	B	1	30	90	
09			LEAR	0342.0	0348.0	III		1	25	180	
	0000	0750	CULG	0348.0	0349.0	III	G	3	23	230	
	0000	0907	HIRA	0348.5	0349.0	III	B	2	25X	220	

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09			CULG	0420.0	0422.0	III	G	1	40U	180	
			HIRA	0421.0	0421.5	III	B	1	30	110	
			LEAR	0421.0	0421.0	III		1	25	180	
	0427	1754	POTS	0436 U	1740 U	I	S,N,DC	2	200U	350	100-200MHz no data
			CULG	0533.0	0533.0	III	B	1	27U	90	
	0500	1200	IZMI	0555.0E	0820.0U	I	N	1	130	270X	
			IZMI	0613.7	0613.8	III	G	1	50	85	
			IZMI	0644.0	0644.1	III	G	1	85	95	
			SVTO	0650.0	0650.0	III		1	25	58	
			IZMI	0650.3	0650.7	III	G	1	25X	95	
			IZMI	0709.2	0709.2	III	B	1	70	90	
			IZMI	0828.1	0828.4	III	G	1	55	90	
			IZMI	0900.5	0901.7	III	G	1	55	85	
			IZMI	0919.4	0919.5	III	G	1	110	150	
			ONDR	0926.1	0930.5	DCIM	G	2	800X	2000X	
			POTS	0927.0	0931.2	DCIM		2	300	800X	
			SVTO	0928.0	0930.0	III		2	25	42	
	0532	1636	ONDR	0929.0	0930.0	DCIM	G	1	2000X	4500X	
			IZMI	0929.5	0930.1	III	G	1	25X	140	
			POTS	0938.3	0938.5	III	B,RS	2	42	55	
			IZMI	1017.5	1017.5	III	B	2	125	160	
			SVTO	1135.0	1135.0	III		1	25	44	
			IZMI	1135.4	1135.7	III	G	1	25X	215	
			POTS	1135.4	1135.7	III	B	2	40X	300	
			SVTO	1212.0	1213.0	III		1	25	42	
			SVTO	1512.0	1513.0	III		1	25	55	
			HOLL	1700.0	1704.0	III		1	25	180	
			SGMR	1700.0	1703.0	III		1	30	65	
			POTS	1700.3	1703.9	III	GG	2	40X	360	
	2011	2400	HIRA								
	2020	2400	CULG	2036.0	2056.0	III	N	1	20	90	
			CULG	2147.0	2147.0	III	B	1	100	180	
			CULG	2327.0	2330.0	III	G	1	30	180	
			LEAR	2327.0	2328.0	III		1	25	123	
			PALE	2339.0	0432.0	CONT		1	99	180	
			CULG	2340.0	2341.0	II	FN	1	57	70	
			CULG	2340.0	2350.0	II	SH	1	57	140	ESS 350
10	0000	0907	HIRA								
	0000	0740	CULG	0136.0	0154.0	III	N	1	27U	180	
			LEAR	0137.0	0142.0	III		1	25	88	
			CULG	0332.0	0332.0	III	B	1	30U	90	
			CULG	0348.0	0348.0	III	B	1	30U	90	
			CULG	0425.0	0721.0	III	N	1	20	180	
	0426	1757	POTS	0433 U	1742 U	I	S,N,DC	2	200U	390	100-200MHz no data
	0530	1637	ONDR								
			LEAR	0537.0	0538.0	III		1	25	180	
			SVTO	0537.0	1700.0	III	N	2	25	180	
			SVTO	0538.0	0538.0	III		1	28U	84U	
			LEAR	0543.0	0937.0	III	N	1	25	180	
	0608	1200	IZMI	0545.0E	1156.0U	III	N	1	45	95	
			IZMI	0550.7	0551.4	III	G	1	45U	95U	
			IZMI	0605.7	0605.9	III	G	1	45U	95U	
			IZMI	0608.0E	1200.0D	I	N	2	120	270X	
			IZMI	0621.0	0622.2	III	G	1	40	120	
			IZMI	0750.2	0750.8	III	G	1	40	270X	
			POTS	0750.2	0750.8	III	G	2	40X	50	
			IZMI	0814.5	0814.8	III	G	1	45	145	
			IZMI	0819.5	0822.9	III	G	1	40	140	
			IZMI	0839.4	0839.6	III	G	1	40	155	
			POTS	0839.4	0847.5	III	GG,N	2	40X	480	
			IZMI	0846.4	0847.4	III	G	1	30	265	
			IZMI	0908.9	0913.4	III	GG	1	45	235	
			POTS	0908.9	0909.2	DCIM		1	370	470	
			IZMI	0916.0	0922.6	III	GG	1	35	270X	
			POTS	0922.5	0922.7	III	B	2	40X	85U	
			IZMI	0937.0	0941.0	III	GG	1	45	200	
			POTS	0938.0	0941.1	III	G,N	2	40X	600U	
			POTS	1001.0	1001.7	III	G	3	40X	440	

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10			IZMI	1001.3	1002.1	III	G,C	2	30	260	
			POTS	1001.5	1002.1	V	B	3	40X	60	
			IZMI	1012.4	1013.1	III	G	1	45	135	
			POTS	1012.5	1012.7	III	B	1	40X	240	
			IZMI	1019.7	1020.4	III	G	1	45	90	
			POTS	1051.7	1124.3	III	GG,N,U	2	40X	85U	
			IZMI	1055.6	1058.8	III	G	2	40	150	
			IZMI	1118.5	1118.6	III	B	2	65	95	
			POTS	1210.3	1210.5	III	G	1	40X	60	
			POTS	1221.3	1221.7	III	B	1	40X	85U	
			POTS	1340.0	1340.3	III	B	1	40X	55	
			POTS	1346.3	1346.6	DCIM		2	210	450	
			HOLL	1432.0	1456.0	III	N	1	25	131	
			HOLL	1432.0	1656.0	III	N	1	25	131	
			POTS	1432.0	1446.3	III	GG,N	2	40X	440	
			POTS	1438.4	1448.6	DCIM		1	270	500	
			SGMR	1445.0	1445.0	III		1	30	80	
			PALE	2024.0	2024.0	III		1	25	100	
	2010	2400	HIRA	2024.0	2024.5	III	B	1	25X	////	
			HIRA	2243.0	2243.5	III	B	1	25X	////	
	2020	2400	CULG	2243.0	2243.0	III	B	1	30U	90	
			CULG	2332.0	2332.0	III	B	1	18	180	
			HIRA	2332.0	2338.0	III	G	1	25X	////	
			HOLL	2332.0	2338.0	III		1	25	180	
			LEAR	2332.0	2338.0	III	N	2	25	180	
			PALE	2332.0	0335.0	III	N	1	25	180	
			CULG	2337.0	2338.0	III	G	1	30	180	
			HOLL	2339.0	2350.0	II		1	71	144	ESS 0241
			LEAR	2339.0	0937.0	CONT		1	64	180	
			CULG	2356.0	2356.0	III	B	1	57	150	
11	0000	0740	CULG	0149.0	0227.0	III	N	1	18	160	
			LEAR	0154.0	0935.0	III	N	1	25	155	
			LEAR	0259.0	0935.0	CONT		1	125	180	
			CULG	0357.0	0357.0	III	B	1	20	150	
	0000	0908	HIRA	0357.0	0357.5	III	B	1	30	110	
			CULG	0406.0	0406.0	III	B	1	50	140	
	0424	1759	POTS	0430 U	1746 U	I	S,N,DC	2	200U	410	100-200MHz no data
			POTS	0437.9	0438.3	III	G	2	40X	300	
			CULG	0438.0	0438.0	III	B	3	20	150	
			HIRA	0438.0	0438.5	III	B	2	40	130	
			CULG	0453.0	0615.0	III	N	1	40U	180	
			SVTO	0527.0	1413.0	III	N	2	25	180	
			HIRA	0536.5	0541.0	III	G	2	30	200	
			POTS	0536.8	0537.9	III	G	2	40X	400U	
			CULG	0537.0	0539.0	III	G	2	20	180	
			IZMI	0555.9	0559.2	III	GG	2	25X	95U	
	0558	1205	IZMI	0558.0E	1205.0E	I	N,C	2	120	270X	
			IZMI	0600.9	0608.3	III	GG	2	30	85	
			IZMI	0610.4	0614.8	III	GG	2	25X	155	
			HIRA	0611.0	0613.5	III	G	1	30	100	
			SVTO	0709.0	0712.0	III		2	25	180	
			HIRA	0709.5	0711.5	III	G	2	25X	200	
			IZMI	0709.5	0712.6	III	GG,C	2	25X	270X	
			POTS	0709.7	0712.1	III	GG	3	40X	800X	
			CULG	0710.0	0712.0	III	G	3	25	280	
			POTS	0710.2	0710.8	V	B	3	40X	55	
			IZMI	0718.2	0720.3	III	GG	1	35	155	
			CULG	0720.0	0733.0	III	G	1	30U	180	
			IZMI	0726.2	0729.1	III	GG	1	25X	270	
			POTS	0728.0	0728.9	DCIM	RS	2	200U	800X	
			ONDR	0728.3	0728.5	DCIM	G	1	800X	2000X	
	0528	1639	ONDR	0728.3	0728.4	DCIM	G	2	2000X	3621	
			IZMI	0732.4	0733.4	III	G	2	25X	170	
			POTS	0732.5	0745.2	III	G,N	3	40X	85U	
			CULG	0733.0	0733.0	III	B	2	30	170	
			HIRA	0733.0	0733.5	III	B	1	30	130	
			IZMI	0736.4	0748.0	III	GG	2	25X	180	
			SVTO	0806.0	0806.0	III		1	25	150	

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11			IZMI	0806.4	0806.6	III	G,C	2	25X	270X	
			POTS	0806.4	0806.6	III	B	2	40X	540	
			HIRA	0806.5	0807.0	III	B	1	40	330	
			IZMI	0818.8	0819.1	III	G	2	25X	160	
			POTS	0818.8	0844.9	III	GG,N	2	40X	620	
			IZMI	0825.2	0828.1	III	G	1	25X	160	
			IZMI	0830.6	0832.8	III	GG	2	25X	270X	
			IZMI	0839.2	0844.5	III	GG	2	30	215	
			IZMI	0857.5	0857.7	III	G	1	45	95	
			IZMI	0907.4	0908.6	III	G	1	40	95	
			POTS	0907.4	0921.6	III	GG,N	3	40X	800X	
			IZMI	0911.7	0912.7	III	G	1	40	95	
			SVTO	0915.0	0921.0	V		2	25	180	
			IZMI	0916.7	0920.6	III	GG,C	2	25X	270X	
			POTS	0919.1	0920.1	V	G	3	40X	60	
			IZMI	0921.1	0921.4	III	G	2	40	270X	
			ONDR	0921.1	0921.2	DCIM	G	2	800X	1939	
			IZMI	0942.1	0944.3	III	GG,C	2	25X	270X	
			POTS	0942.1	0944.2	III	G	3	40X	550	
			IZMI	0950.2	0950.8	III	G	1	40	95	
			POTS	0950.2	0950.5	III	B	1	40X	70	
			IZMI	0955.5	1001.3	III	G	1	45	95	
			POTS	1016.3	1016.7	III	B	1	40X	55	
			POTS	1030.7	1031.0	III	B	1	40X	55	
			IZMI	1041.6	1041.9	III	G	1	45X	95	
			IZMI	1046.4	1048.6	III	G	1	35	190	
			IZMI	1054.2	1054.4	III	G	1	60	95	
			POTS	1059.8	1101.7	III	G	2	40X	320	
			IZMI	1059.9	1101.5	III	G	2	40	170	
			SGMR	1125.0	1125.0	III		1	30	55	
			POTS	1125.3	1125.9	III	GG	3	40X	420	
			IZMI	1125.4	1125.7	III	G	2	25X	270X	
			POTS	1237.0	1237.4	III	B	2	40X	85U	
			POTS	1245.0	1256.0	III	G,N	2	40X	85U	
			POTS	1309.3	1312.2	III	G,N	2	40X	85U	
			HOLL	1337.0	1338.0	III		1	36	141	
			SGMR	1337.0	1355.0	III	N	3	30	80	
			POTS	1337.2	1338.5	III	GG	2	40X	280	
			HOLL	1354.0	1355.0	III		1	25	166	
			POTS	1354.7	1355.1	III	G	3	40X	240	
			POTS	1401.6	1402.3	III	G	2	40X	320	
			SVTO	1503.0	1514.0	III		2	25	180	
			HOLL	1504.0	1702.0	III	N	1	25	141	
			POTS	1504.0	1514.2	III	GG,N	2	40X	800X	
			SGMR	1504.0	1513.0	III	N	2	30	80	
	1235	1715	BLEN	1507.0	1514.1	III	GG,RS	2	100X	1600	
			SVTO	1543.0	1551.0	III		1	36	79	
			SVTO	1606.0	1620.0	III	N	1	28	165	
			POTS	1607.0	1607.6	III	G	2	40X	330	
			SGMR	1607.0	1616.0	III		1	30	55	
			HOLL	1730.0	1853.0	III	N	1	25	89	
			PALE	1809.0	1809.0	III		1	25	73	
			SGMR	1809.0	1809.0	III		1	30	60	
			PALE	1823.0	1824.0	III		1	25	83	
			HOLL	1903.0	2230.0	III	N	1	25	180	
			PALE	1903.0	0404.0	III	N	1	25	88	
	2020	2400	CULG	2115.0	2115.0	III	B	1	30	170	
	2009	2400	HIRA	2115.5	2116.0	III	B	1	25X	140	
			HOLL	2251.0	2252.0	III		1	25	180	
			HIRA	2251.5	2253.0	III	G	1	25X	120	
			CULG	2252.0	2253.0	III	G	1	27	180	
			HOLL	2323.0	2328.0	III		1	25	180	
			HIRA	2325.5	2328.5	III	G	1	25X	200	
			CULG	2326.0	2328.0	III	G	1	27	180	
			LEAR	2327.0	2328.0	III		1	25	180	
12			LEAR	0045.0	0046.0	III		1	25	180	
	0000	0909	HIRA	0045.5	0046.0	III	B	1	25X	130	
	0000	0740	CULG	0046.0	0046.0	III	B	1	18	150	

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12			CULG	0149.0	0149.0	III	B	1	35	90	
			CULG	0240.0	0244.0	III	G	1	30	90	
			CULG	0336.0	0336.0	III	B	1	100	400	
			LEAR	0423.0	0424.0	III		1	25	120	
			HIRA	0423.5	0424.0	III	B	1	30	80	
			CULG	0424.0	0424.0	III	B	1	35	130	
	0422	1801	POTS	0432 U	1745 U	I	S,N,DC	2	200U	420	100-200MHz no data
			CULG	0451.0	0513.0	III	N	1	27	150	
			POTS	0454.3	0455.4	DCIM		2	200	500	
			LEAR	0459.0	0512.0	III	N	1	25	180	
			SVTO	0503.0	0510.0	III		1	30	79	
	0526	1640	ONDR								
			SVTO	0552.0	0556.0	III		1	39	75	
			CULG	0557.0	0557.0	III	B	1	30	90	
	0600	1200	IZMI	0600.0E	1200.0D	I	N	1	130	270X	
			LEAR	0631.0	0632.0	III		1	25	149	
			SVTO	0631.0	1219.0	III	N	2	25	180	
			HIRA	0631.5	0632.0	III	B	1	50	120	
			IZMI	0631.5	0632.4	III	G	2	40	145	
			CULG	0632.0	0710.0	III	N	1	30	150	
			IZMI	0638.7	0640.6	III	G	1	40	95	
			IZMI	0651.2	0652.0	III	G	1	40	90	
			IZMI	0657.5	0658.0	III	G	1	45	90	
			IZMI	0710.5	0712.5	III	GG,C	2	25X	260	
			CULG	0711.0	0712.0	III	G	2	30	220	
			HIRA	0711.0	0736.5	III	G	2	30	260	
			LEAR	0711.0	0712.0	III		1	25	180	
			SVTO	0711.0	0720.0	III		2	25	180	
			POTS	0712.1	0720.3	III	G,N	3	40X	650	
			LEAR	0718.0	0720.0	III		1	25	180	
			IZMI	0718.9	0720.6	III	GG	2	25X	270X	
			CULG	0719.0	0720.0	III	G	1	30	250	
	0540	1715	BLEN	0719.0	0720.1	III	GG	2	130	400	
			CULG	0734.0	0736.0	III	G	1	40U	180	
			LEAR	0734.0	0808.0	III	N	1	25	180	
			IZMI	0734.2	0738.0	III	GG	1	25X	175	
			POTS	0736.8	0746.3	III	G,N	2	40X	420	
			IZMI	0742.0	0747.7	III	GG	1	45	95	
			IZMI	0745.3	0745.5	III	G	2	25X	175	
			IZMI	0757.6	0757.7	III	G	2	40	95	
			POTS	0758.4	0810.8	III	GG,N	3	40X	650	
			HIRA	0802.0	0809.0	III	G	2	30	230	
			IZMI	0802.1	0809.7	III	GG,U	2	25X	270X	
			SVTO	0803.0	0803.0	III		2	25	170	
			SVTO	0808.0	0809.0	III		1	28U	84U	
			IZMI	0817.4	0823.2	III	GG	1	45	175	
			IZMI	0834.9	0935.2	III	G	1	45	95	
			POTS	0835.8	0836.3	III	G	1	40X	370	
			IZMI	0840.2	0840.8	III	G	1	45	95	
			LEAR	0849.0	0934.0	III	N	1	25	180	
			HIRA	0849.5	0851.0	III	G	1	40	310	
			IZMI	0849.5	0853.5	III	GG	2	25X	270X	
			SVTO	0850.0	0850.0	III		2	25	180	
			POTS	0850.3	0854.3	III	GG	3	40X	500	
			POTS	0856.9	0857.5	DCIM		2	250	580	
			SVTO	0900.0	0902.0	III		2	25	180	
			IZMI	0900.3	0903.5	III	GG	2	25X	250	
			POTS	0901.4	0903.8	III	GG	3	40X	800X	
			IZMI	0915.8	0916.0	III	G	1	30	165	
			POTS	0916.8	0917.1	III	B	2	40X	270	
			POTS	0923.2	0923.4	DCIM		2	230	500	
			IZMI	0928.0	0929.0	III	G	2	25X	180	
			POTS	0929.1	0930.3	III	GG	2	40X	430	
			IZMI	0949.3	0952.3	III	G	2	25X	215	
			POTS	0950.5	0951.9	III	G	2	40X	440	
			IZMI	1002.3	1006.6	III	G	1	40	90	
			POTS	1003.5	1003.8	III	B	2	40X	270	
			IZMI	1015.4	1025.6	III	GG	2	25X	270X	
			POTS	1016.7	1019.6	III	G,U	2	40X	270	

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12			POTS	1026.8	1027.0	III	B,U	1	40X	60	
			IZMI	1028.9	1029.1	III	G	1	180	270X	
			POTS	1030.2	1030.5	DCIM		2	200	530	
			IZMI	1038.2	1038.6	III	G	2	25X	95	
			POTS	1039.6	1040.6	III	G	2	40X	85U	
			IZMI	1058.0	1058.1	III	G	1	45	95	
			POTS	1059.4	1100.0	III	B	2	40X	85U	
			IZMI	1108.9	1113.1	III	GG	2	25X	270X	
			POTS	1109.4	1111.5	III	G	2	40X	280	
			POTS	1121.5	1130.0	III	GG,N	3	40X	560	
			IZMI	1123.0	1131.3	III	GG	2	25X	270X	
			BLEN	1123.2	1130.0	III	GG	2	130	400	
			SGMR	1125.0	1219.0	III	N	2	30	80	
			SVTO	1125.0	1131.0	III		2	25	180	
			IZMI	1125.4	1126.3	III	GG,FS,C	2	25X	270X	
			POTS	1155.0	1203.8	III	G,U	2	40X	280	
			IZMI	1156.3	1158.2	III	G	1	25X	95	
			POTS	1217.2	1218.4	III	GG	2	40X	280	
			HOLL	1251.0	1544.0	III	N	1	25	160	
			POTS	1322.3	1331.7	III	GG	2	40X	800X	
			SVTO	1323.0	1503.0	III	N	2	25	180	
			HOLL	1324.0	1328.0	III		1	25	171	
			SGMR	1325.0	1722.0	III	N	2	30	80	
			POTS	1349.9	1354.7	III	G	2	40X	720	
			BLEN	1353.6	1355.5	III	GG,C	2	100X	4000X	
			POTS	1431.5	1432.2	III	G	3	40X	80	
			POTS	1445.2	1445.6	III	B	2	40X	80	
			SVTO	1530.0	1544.0	III	N	1	27	83	
			POTS	1533.4	1535.7	DCIM		2	200U	420	
			SVTO	1621.0	1622.0	III		1	34	143	
			POTS	1621.1	1621.9	III	G	2	40X	370	
			POTS	1637.6	1643.1	III	GG	2	40X	620	
			BLEN	1640.0	1644.3	III	GG,S	3	100X	600	
			PALE	1642.0	1643.0	III		1	25	180	
			SVTO	1643.0	1643.0	III		1	29	180	
	2020	2400	CULG	2040.0	2115.0	III	N	1	35X	180	
			PALE	2104.0	0424.0	III	N	1	25	180	
			HOLL	2257.0	2258.0	III		1	25	88	
	2008	2400	HIRA	2257.5	2258.0	III	B	1	25X	60	
			CULG	2258.0	2300.0	III	G	1	40	180	
			CULG	2347.0	2354.0	III	G	1	18	180	
			LEAR	2347.0	0003.0	III	N	2	25	180	
			HIRA	2351.5	2352.0	III	B	1	25X	300	
13	0000	0740	CULG	0001.0	0003.0	III	G	1	18	230	
	0000	0910	HIRA	0001.0	0003.0	III	G	2	25X	200	
			CULG	0124.0	0125.0	III	G	1	35U	150	
			LEAR	0124.0	0234.0	III	N	2	25	180	
			CULG	0129.0	0130.0	III	G	2	18X	170	
			HIRA	0129.0	0130.0	III	B	1	25X	140	
			CULG	0147.0	0235.0	III	N	1	30U	180	
			LEAR	0343.0	0349.0	III		1	25	180	
			HIRA	0343.5	0349.0	III	G	1	25X	210	
			CULG	0344.0	0350.0	III	G	1	30U	180	
			CULG	0429.0	0430.0	III	G	1	30U	180	
			HIRA	0429.0	0430.5	III	G	1	40	190	
			LEAR	0429.0	0430.0	III		1	25	180	
	0421	1802	POTS	0429.8	0430.2	DCIM		2	200U	560	100-200MHz no data
			POTS	0445 U	0630 U	I	S,N	1	200U	340	
			CULG	0446.0	0449.0	III	G	1	50	180	
			HIRA	0447.5	0448.0	III	G	1	90	200	
			POTS	0447.6	0449.2	UNCLF		2	200U	370	
			POTS	0711	0717	I	S,N	1	200U	240	
			HIRA	0806.0	0806.5	III	B	1	40	100	
			LEAR	0806.0	0806.0	III		1	25	139	
			POTS	0806.0	0806.8	III	G	2	40X	85U	
			SVTO	0806.0	0807.0	V		2	25U	84U	
	0600	1200	IZMI	0806.0	0806.9	III	G	2	25X	120	
			IZMI	0822.1	0822.2	III	B	1	45	90	

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13			HIRA	0847.0	0855.5	III	G	2	40	270	
			LEAR	0847.0	0934.0	III	N	2	25	180	
			SVTO	0847.0	0855.0	III		2	25	180	
			SVTO	0847.0	0859.0	III	N	2	25	180	
			POTS	0847.2	0900.1	III	GG	2	40X	800X	
			IZMI	0847.3	0853.1	III	GG,C	2	25X	270X	
	0524	1642	ONDR	0849.0	0853.0	DCIM	G	2	2000X	4500X	
			ONDR	0849.2	0855.0	DCIM	G	1	800X	2000X	
	0540	1715	BLEN	0849.3	0859.2	III	GG,C	3	100X	4000X	
			IZMI	0853.6	0856.8	III	GG,FS	2	25X	145	
			IZMI	0857.3	0859.7	III	G	2	40	175	
			SVTO	0912.0	0913.0	III		1	25	180	
			POTS	0912.7	0913.1	III	G	1	40X	240	
			IZMI	0912.8	0913.3	III	G	2	50	190	
			POTS	1003	1015	I	S,N	1	200U	300	
			SVTO	1006.0	1006.0	III		1	25	40	
			IZMI	1012.9	1019.0	III	G	2	110	170	
			IZMI	1040.4	1040.5	III	B	1	125	150	
			POTS	1229.7	1230.5	III	G	1	200U	300	
			POTS	1234.0	1234.7	I	S,N	1	200U	260	
			POTS	1234.9	1235.3	III	G	2	40X	70	
			SVTO	1235.0	1235.0	III		1	25U	68U	
			POTS	1238.3	1240.2	III	GG,RS	1	200U	260	
			POTS	1311.1	1311.3	III	B	1	50	80	
			SGMR	1438.0	1444.0	V		3	30	80	
			HOLL	1439.0	1450.0	III		1	25	180	
			SVTO	1439.0	1443.0	V		2	25	180	
			POTS	1439.1	1443.7	III	GG	3	40X	600	
			BLEN	1441.6	1443.4	III	GG,C	1	100X	1600	
			POTS	1442.1	1443.8	V	G	3	40X	55	
			SVTO	1449.0	1450.0	III		1	25	180	
			BLEN	1449.7	1450.0	III	G	1	160	370	
			POTS	1449.8	1450.1	III	G	2	40X	380	
			POTS	1602 U	1716 U	I	S,N	1	200U	350	
			HOLL	2026.0	2031.0	III		1	25	96	
	2006	2400	HIRA	2026.0	2031.0	III	G	1	25X	200	
	2020	2400	CULG	2026.0	2026.0	III	B	1	25	80	
			PALE	2030.0	2031.0	III		1	25	58	
			SGMR	2030.0	.0	III		1	30	80	
			CULG	2031.0	2031.0	III	B	1	27	150	
			CULG	2117.0	2118.0	III	G	3	20	200	
			HIRA	2117.0	2120.5	III	G	2	25X	500	
			HOLL	2117.0	2201.0	III	N	1	25	175	
			PALE	2117.0	0230.0	III	N	1	25	180	
			SGMR	2117.0	2118.0	III		2	30	80	
			CULG	2119.0	2136.0	III	N	1	25	180	
			HOLL	2347.0	0100.0	III	N	1	25	180	
14	0000	0740	CULG	0055.0	0055.0	III	B	1	35	130	
			CULG	0100.0	0100.0	III	B	1	30	130	
	0000	0911	HIRA	0127.5	0128.0	III	B	1	30	80	
			CULG	0128.0	0129.0	III	G	1	30	80	
	0522	1643	ONDR								
	0540	1715	BLEN								
	0600	1200	IZMI	0609.1	0612.3	III	GG	2	40	130	
	0420	1804	POTS	0611.8	0616.9	III	G	2	40X	380	100-200MHz no data
			CULG	0612.0	0617.0	III	B	1	35	160	
			HIRA	0615.5	0616.0	III	B	1	30	110	
			IZMI	0615.6	0616.8	III	GG,FS	2	25X	145	
			IZMI	0626.1	0626.3	CONT		1	40	80	
			IZMI	0648.8	0649.2	III	G	1	45	75	
			CULG	0649.0	0649.0	III	B	1	40U	75	
			IZMI	0705.3	0705.5	III	B	1	45	65	
			POTS	0709.1	0711.2	I	S	1	220	270	
			IZMI	0725.8	0726.0	III	B	2	55	95	
			CULG	0726.0	0726.0	III	B	1	50	90	
			IZMI	0738.1	0738.5	III	G	1	45	95	
			POTS	0748	1213	I	S,N	1	210	320	
			IZMI	0817.4	0825.3	III	GG	2	25X	95	

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14			HIRA	0818.5	0820.5	III	G	1	40	100	
			POTS	0818.8	0821.5	III	G	2	40X	280	
			LEAR	0819.0	0821.0	III		1	25U	117U	
			SVTO	0819.0	0821.0	III		1	25	78	
			IZMI	0830.7	0831.8	III	G	1	45	95	
			IZMI	0907.2	0911.8	III	GG	1	45	95	
			IZMI	0916.1	0923.1	III	G	1	45	95	
			IZMI	0938.6	0945.3	III	G	1	45	95	
			IZMI	0953.3	0953.6	III	G	1	45	95	
			POTS	0955.0	0955.3	III	B	1	40X	55	
			IZMI	1101.3	1104.7	III	GG	1	45	135	
			IZMI	1148.1	1148.2	III	B	1	55	85	
			POTS	1211.0	1211.3	III	B	1	40X	55	
			POTS	1224.3	1227.6	III	G,N	2	40X	85U	
			POTS	1239.4	1239.6	III	B	2	40X	270	
			SVTO	1336.0	1336.0	III		1	25	42	
			POTS	1349	1355	I	S	1	220	300	
			POTS	1423	1432	I	S	1	240	320	
	2005	2400	HIRA								
	2020	2400	CULG	2036.0	2041.0	III	G	1	23	80	
15			HOLL	0018.0	0020.0	III		1	25	180	
			LEAR	0140.0	0140.0	III		1	25	99	
	0000	0740	CULG	0140.0	0140.0	III	B	1	35	180	
	0000	0912	HIRA	0140.5	0141.0	III	B	1	25X	70	
			LEAR	0535.0	0931.0	III	N	1	48	180	
	0540	1715	BLEN								
	0600	1200	IZMI								
			HOLL	1348.0	1354.0	III		1	25	180	
			SVTO	1348.0	1354.0	III		1	25	131	
	0418	1805	POTS	1348.1	1354.1	III	GG	2	40X	85U	100-200MHz no data
			SGMR	1350.0	1354.0	III		1	30	50	
			POTS	1502.4	1502.9	I	S	1	200U	330	
			SVTO	1604.0	1705.0	III	N	1	29	119	
			SVTO	1604.0	1707.0	III		1	29	119	
			SVTO	1604.0	1707.0	III	N	1	29	119	
			PALE	1631.0	1958.0	III	N	1	25	71	
	2003	2400	HIRA								
	2030	2400	CULG								
16	0000	0913	HIRA								
	0417	1807	POTS						100-200MHz no data		
	0000	0740	CULG	0456.0	0456.0	III	B	1	40U	90	
	0540	1720	BLEN								
			CULG	0546.0	0546.0	III	B	1	50	80	
	0600	1200	IZMI								
			HOLL	1401.0	1402.0	III		1	25	55	
			SGMR	1401.0	1402.0	III		1	30	45	
			SVTO	1401.0	1402.0	III		2	25	63	
	2002	2222	HIRA								
			HOLL	2213.0	2213.0	III		1	25	66	
			PALE	2213.0	2238.0	III		1	25	60	
	2030	2400	CULG	2213.0	2213.0	III	B	1	23	90	
17	0000	0740	CULG	0047.0	0051.0	III	G	1	25	70	
	0517	1647	ONDR								
	0415	1809	POTS	0616	0748	I	S,N	1	200U	350	100-200MHz no data
	0555	1200	IZMI	0622.7	0622.8	III	B	1	120	190	
			LEAR	0836.0	0839.0	III		1	25U	180U	
			SVTO	0836.0	0838.0	III		1	25	180	
	0134	0914	HIRA	0836.0	0839.0	III	G	1	40	330	
			POTS	0836.2	0839.6	III	GG	2	40X	450	
			IZMI	0836.3	0841.6	III	GG	2	40	270X	
	0535	1720	BLEN	0836.3	0839.3	III	GG	2	160	500	
			POTS	0909.6	0910.4	III	G	2	200U	320	
			IZMI	0909.7	0910.4	III	G	1	110	215	
			POTS	0945.0	0948.7	III	G	1	200U	380	
			IZMI	0947.0	0947.3	III	G	1	110	240	
			POTS	1019.0	1022.3	III	G	1	200U	280	

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17			POTS	1024.7	1025.5	III	G	2	40X	330	
			SVTO	1025.0	1025.0	III		1	75	159	
			BLEN	1025.1	1025.2	III	B	1	100X	300	
			IZMI	1025.1	1025.4	III	G	2	45	260	
			IZMI	1051.0	1051.1	III	B	1	110	240	
			POTS	1051.0	1051.2	III	G	1	200U	370	
			POTS	1055.3	1056.3	I	DC	2	200U	280	
			POTS	1114.9	1115.4	III	G	1	200U	320	
			POTS	1128.4	1130.1	III	GG	2	200U	400	
			IZMI	1128.5	1132.5	III	GG	1	110	270X	
			HOLL	1432.0	1433.0	III		1	25	67	
			SVTO	1432.0	1433.0	III		1	25	62	
			POTS	1432.8	1433.0	III	B	1	40X	70	
			HOLL	1921.0	1957.0	III	N	1	25	63	
			PALE	1921.0	1930.0	III		1	25	65	
			SGMR	1921.0	1927.0	III		1	30	80	
	2000	2400	HIRA								
			HOLL	2328.0	2328.0	III		1	26	62	
	2030	2400	CULG	2329.0	2329.0	III	B	1	20	80	
18			HIRA								
	0000	0740	CULG	0203.0	0216.0	III	GG	1	23	180	
			CULG	0212.0	0213.0	III	G	3	23	300	
			LEAR	0212.0	0213.0	III		2	25	180	
			PALE	0212.0	0213.0	III		1	25	180	
	0000	0915	HIRA	0212.0	0213.0	III	B	3	25X	400	
	0515	1649	ONDR								
	0415	1608	POTS	0540.9	0541.5	III	G	1	200U	370	100-200MHz no data
	0600	1200	IZMI	0937.1	0938.2	III	G	1	130	270X	
			IZMI	0942.6	0945.8	III	GG	1	130	270X	
	0535	1720	BLEN	1141.7	1143.6	III	GG	1	130	340	
			IZMI	1141.8	1142.5	III	GG	1	80	270X	
			SVTO	1142.0	1143.0	III		1	25	52	
			IZMI	1145.6	1145.9	III	G	1	200	270X	
	1959	2400	HIRA	2125.0	2125.5	III	B	1	80	180	
	2030	2400	CULG	2125.0	2126.0	III	G	1	65	180	
19			HOLL	0050.0	0054.0	III		1	25	180	
			LEAR	0051.0	0054.0	III		2	25	180	
			PALE	0051.0	0054.0	III		1	25	180	
	0000	0740	CULG	0051.0	0055.0	III	G	1	20	200	
	0000	0915	HIRA	0051.0	0054.5	III	G	1	25X	230	
	0513	1650	ONDR								
	0409	1813	POTS	0532 U	0554 U	I	S,N	1	200U	240	100-200MHz no data
			POTS	0725.6	0726.5	III	G	2	200U	330	
	0605	1200	IZMI	0725.6	0726.4	III	GG	1	80	270X	
			CULG	0726.0	0726.0	III	G	1	65	180	
			POTS	0727.4	0728.6	I	S,N	1	200U	230	
			POTS	0908 U	1009 U	UNCLF		2	45	70	
			POTS	1246.1	1246.4	III	B	1	40X	50	
			POTS	1255.9	1256.2	III	G	1	200U	310	
			POTS	1327.5	1329.2	DCIM		1	240	440	
			POTS	1351.2	1351.6	III	G	1	200U	260	
			POTS	1440.7	1443.3	DCIM		2	230	800X	
	0530	1720	BLEN	1441.7	1446.3	III	G,S	1	230	900	
			POTS	1704.1	1704.4	DCIM		2	300	480	
	1958	2400	HIRA								
	2030	2400	CULG								
20	0000	0730	CULG								
	0000	0915	HIRA								
			PALE	0347.0	0436.0	III	N	1	25	62	
	0511	1652	ONDR								
	0530	1720	BLEN								
	0408	1814	POTS	0921.5	0922.5	DCIM		2	220	380	100-200MHz no data
			POTS	0926.5	0926.6	UNCLF		2	210	220	
			POTS	0939.7	0940.2	DCIM		2	340	720	
			POTS	1055.8	1105.0	III	G,N	2	40X	80	
	0601	2000	IZMI	1055.8	1057.0	III	G	1	45	85	

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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			IZMI	1104.1	1104.9	III	G	1	50	85	
			POTS	1145.5	1147.2	DCIM		2	290	440	
			POTS	1219.2	1219.4	III	B	1	40X	55	
			POTS	1306.8	1311.7	III	G	1	40X	80	
			HOLL	1921.0	1922.0	III		1	25	180	
			SGMR	1921.0	1922.0	III		1	30	80	
			PALE	1922.0	1922.0	III		1	25	86	
			PALE	2054.0	0258.0	III	N	1	25	70	
			HOLL	2127.0	2128.0	III		1	25	99	
	1957	2400	HIRA	2127.0	2129.0	III	G	1	25X	130	
	2030	2400	CULG	2127.0	2129.0	III	G	1	27	180	
			CULG	2306.0	2306.0	III	B	1	20	180	
			CULG	2320.0	2320.0	III	B	1	23	90	
21	0000	0730	CULG	0421.0	0440.0	III	N	1	30	90	
	0407	1817	POTS	0438.2	0441.6	III	GG	2	200U	430	100-200MHz no data
	0555	1200	IZMI	0551.4	0551.5	III	G	1	50	65	
			POTS	0716	0725	I	S,N	1	200U	270	
			LEAR	0717.0	0725.0	III		1	25	180	
			SVTO	0717.0	0725.0	III		1	25	180	
			IZMI	0717.7	0718.9	III	GG,C	2	40	270X	
			POTS	0717.8	0720.2	III	GG	2	40X	330	
			CULG	0718.0	0722.0	III	G	1	30U	200	
	0000	0916	HIRA	0718.0	0722.0	III	G	1	30	210	
			IZMI	0720.1	0722.0	III	GG,C	2	25	270X	
			IZMI	0724.6	0725.3	III	G	1	40	220	
			LEAR	0746.0	0747.0	III		1	25	100	
			SVTO	0746.0	0747.0	III		1	25	58	
			IZMI	0746.6	0746.9	III	G	1	40	95	
			POTS	0746.7	0747.0	III	G	1	40X	60	
			IZMI	0822.0	0822.1	UNCLF		1	45	65	
			POTS	0822.0	0822.2	III	B	1	40X	55	
			IZMI	0849.7	0849.9	III	G	1	45X	95	
			SVTO	0903.0	0904.0	III		1	25	46	
			IZMI	0903.8	0903.9	III	B	1	45	85	
			IZMI	0922.0	0922.7	III	G	1	45	85	
			LEAR	0925.0	0926.0	III		1	25	165	
			POTS	1104.0	1105.1	III	G	2	40X	85U	
			IZMI	1104.1	1104.9	III	G	1	25X	95	
			POTS	1208.0	1214.5	III	G,RS,N	1	40X	80	
			SVTO	1208.0	1212.0	III		1	25U	62U	
			POTS	1217.7	1221.0	DCIM		2	200U	440	
			SVTO	1300.0	1302.0	III		1	25	78	
			POTS	1300.9	1302.5U	III	G	2	40X	270	
			SVTO	1302.0	1320.0	IV		3	25	180	
			ONDR	1302.2	1310.2	DCIM	GG,FS	3	800X	2000X	
	0509	1653	ONDR	1302.3	1310.5	DCIM	GG	2	2000X	4500X	
	0530	1720	BLEN	1302.4	1309.9	IV	P,S	3	100X	4000X	
			POTS	1302.5	1321	IV		3	40X	800X	
			POTS	1304.5	1316	II		3	40X	500U	
			HOLL	1305.0	1318.0	II		2	25	180	ESS 1459
			HOLL	1306.0	1320.0	IV		1	25	180	
			HOLL	1309.0	1318.0	II		3	25	180	ESS 1459
			SVTO	1309.0	1314.0	II		3	25	180	ESS 1223
			POTS	1353.1	1355.6	I	S,N	1	200U	230	
			HOLL	1531.0	1531.0	III		1	25	66	
			SVTO	1531.0	1534.0	III		1	25U	72U	
			POTS	1531.7	1533.7	III	G	1	40X	55	
			HOLL	1613.0	1830.0	III	N	1	25	69	
			SVTO	1627.0	1627.0	III		1	25	129	
			POTS	1721.9	1722.5	DCIM		1	200U	400	
			POTS	1753.5	1800.7	DCIM		2	200U	420	
			HOLL	2100.0	2100.0	III		1	25	180	
	2030	2400	CULG	2100.0	2100.0	III	B	1	65	160	
			CULG	2115.0	2115.0	III	G	1	30	160	
			SGMR	2117.0	2133.0	III	N	2	30	80	
			CULG	2118.0	2121.0	III	G	1	20	180	
			CULG	2130.0	2139.0	III	GG	1	20	180	
			HOLL	2133.0	2139.0	III		1	25	180	

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21			CULG	2224.0	2225.0	III	G	1	25	90	
			HOLL	2304.0	2305.0	III		1	25	180	
			CULG	2305.0	2305.0	III	B	1	20	180	
			CULG	2354.0	2357.0	III	G	1	20	180	
			LEAR	2354.0	2359.0	III		1	25	180	
			CULG	2358.0	2400.0	III	G	1	20	180	
22	0000	0735	CULG	0006.0	0006.0	III	B	1	23	90	
			PALE	0018.0	0333.0	III	N	1	25	51	
			CULG	0036.0	0036.0	III	B	1	23	90	
			LEAR	0036.0	0926.0	III	N	1	25	180	
			CULG	0045.0	0045.0	III	B	1	30	80	
			CULG	0142.0	0142.0	III	B	1	40	180	
			CULG	0216.0	0218.0	III	G	2	18	180	
			CULG	0228.0	0324.0	III	S	1	30	150	
			LEAR	0716.0	0734.0	II		2	25	180	ESS 0967
	0550	0825	HIRA	0716.0	0733.0	II		2	30	140	
	0600	1200	IZMI	0716.8	0737.0	II	NARM	2	25X	165	
			CULG	0717.0	0725.0	II	FN	2	30U	65	
			CULG	0717.0	0733.0	II	SH	2	45	160	ESS 800
			SVTO	0717.0	0734.0	II		2	25	180	ESS 0964
			IZMI	0717.3	0717.9	III	G,C	1	165	250	
	0530	1720	BLEN	0717.3	0726.6	III	GG	1	120	400	
			POTS	0717.4	0728	IV		3	40X	400U	
	0405	1819	POTS	0717.4	0734	II		3	40X	85U	100-200MHz no data
			IZMI	0719.5	0721.1	III	GG,C,RS	2	160	265	
			CULG	0720.0	0720.0	III	B	1	27	250	
			IZMI	0806.4	0806.4	III	B	1	50X	75	
			SVTO	0844.0	0845.0	III		1	25	40	
			IZMI	0852.3	0904.0	III	GG	2	25X	175	
			POTS	0857.4	0904.8	III	GG	2	40X	260	
			SVTO	0858.0	0906.0	III		1	25	151	
	0900	0917	HIRA								
			BLEN	0911.7	0911.9	III	G	1	120	400	
			IZMI	0911.7	0911.9	III	G	2	80	270X	
			POTS	0911.8	0912.0	III	G	2	40X	340	
			POTS	0921.3	0924.2	III	G,N	1	40X	80	
			IZMI	0923.8	0924.2	III	G	2	45	80	
			POTS	1032.9	1036.8	III	G	2	40X	85U	
			SVTO	1033.0	1035.0	III		1	25U	83U	
			IZMI	1033.8	1035.9	III	G	1	25X	145	
			POTS	1100.2	1230.8	III	GG,N	1	40X	80	
			POTS	1111	1132	I	S,N	1	200U	280	
			IZMI	1124.7	1124.8	III	B	2	45	65	
			SVTO	1134.0	1135.0	III		1	25U	83U	
			SVTO	1214.0	1230.0	III	N	1	25	50	
			SVTO	1319.0	1325.0	III		2	25	147	
			POTS	1319.1	1336.8	III	G,RS,N	2	40X	370	
			HOLL	1325.0	1325.0	III		1	25	136	
			SVTO	1442.0	1620.0	III	N	1	25	64	
			SGMR	1539.0	1539.0	III		1	30	45	
			POTS	1539.1	1540.7	III	G	1	40X	80	
			POTS	1552.7	1554.1	III	G	1	40X	60	
			HOLL	1614.0	1616.0	III		2	25	180	
			SVTO	1614.0	1616.0	III		3	25	180	
			POTS	1614.7	1616.4	III	GG	3	40X	630	
			BLEN	1615.0	1616.3	DCIM	P,C	3	100X	4000X	
			ONDR	1615.0	1616.0	DCIM	G	2	800X	2000X	
	0507	1654	ONDR	1615.0	1615.5	DCIM	G	1	2000X	4500X	
			PALE	1958.0	2004.0	III		1	25	76	
			HOLL	1959.0	2004.0	III		1	25	86	
			SGMR	2004.0	2004.0	III		1	30	55	
	1954	2400	HIRA	2009.0	2018.0	IV		3	100	380	
			HOLL	2010.0	2018.0	IV		1	111	180	
			PALE	2010.0	2017.0	IV		1	111U	180U	
			HIRA	2110.0	2111.0	III	G	1	25X	110	
			HOLL	2110.0	2110.0	III		1	25	180	
			PALE	2110.0	2110.0	III		1	25	53	
	2030	2400	CULG	2110.0	2111.0	III	G	1	20	130	

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22			CULG	2125.0	2125.0	III	G	1	360	710	
			CULG	2141.0	2159.0	III	N	1	23U	50	
			HOLL	2354.0	0006.0	III		1	25	180	
			LEAR	2354.0	2359.0	III		1	25	180	
23	0000	0730	CULG	0002.0	0058.0	III	N	1	30	80	
			CULG	0101.0	0101.0	III	B	1	23	420	
			CULG	0101.0	0106.0	II	FN	3	30	150	
			CULG	0101.0	0106.0	II	SH	3	60	300	ESS 1500
			CULG	0101.0	0122.0	IV	FS	1	30U	1000	
			HOLL	0101.0	0110.0	II		2	25	180	
			PALE	0101.0	0355.0	III	N	3	25	180	
	0000	0613	HIRA	0101.5	0113.5	III	G	3	25X	////	
			CULG	0102.0	0105.0	III	G	3	18	180	
			PALE	0102.0	0113.0	II		2	25	165	ESS 0437
			CULG	0106.0	0115.0	II	FN	3	27U	60	
			CULG	0106.0	0115.0	II	SH	3	50U	130	ESS 550
			CULG	0107.0	0113.0	III	G	3	18X	100	
			LEAR	0107.0	0118.0	II		2	25	180	ESS 0513
			CULG	0115.0	0117.0	III	G	1	30	90	
			CULG	0129.0	0132.0	III	G	1	220	1200	
			CULG	0153.0	0211.0	CONT		1	30U	450	
			LEAR	0153.0	0221.0	IV		1	70	180	
			LEAR	0156.0	0156.0	III		1	25	180	
			HIRA	0156.5	0157.0	III	B	2	25X	////	
			CULG	0157.0	0157.0	III	B	3	20	470	
			CULG	0216.0	0220.0	III	G	1	20	90	
			CULG	0238.0	0345.0	IV		2	250	780	
			CULG	0258.0	0258.0	III	B	1	30	130	
			CULG	0354.0	0558.0	III	N	1	27U	180	
			LEAR	0456.0	0503.0	III		1	25	142	
			LEAR	0527.0	0926.0	III	N	1	25	119	
			SVTO	0528.0	1713.0	III	N	2	25	180	
			SVTO	0535.0	0538.0	III		1	25	84	
	0555	1200	IZMI	0552.0E	1200.0D	III	N	2	25X	95	
			CULG	0607.0	0730.0D	III	S	1	30U	130	
	0404	1820	POTS	0608.6	0611.3	III	GG	2	40X	230	100-200MHz no data
			CULG	0610.0	0612.0	III	G	2	30	90	
			IZMI	0632.1	0637.5	III	GG	2	45	165	
			POTS	0641.9	0646.1	III	G,RS	1	40X	85U	
			SVTO	0659.0	0700.0	III		2	25	41	
			CULG	0700.0	0700.0	III	G	1	400	750	
			POTS	0733	0810	IV	C	2	270	430	
			POTS	0819.6	1047 U	III	GG,N	1	40X	60	
			IZMI	0843.0	0843.2	III	G	2	25X	95	
			IZMI	0859.6	0859.8	III	G	1	25X	95	
			IZMI	0932.5	0936.3	III	G	1	40	95	
			IZMI	1027.0	1028.0	III	G	2	45	95	
			POTS	1052.3U	1059.4U	III	GG	3	40X	230	
			IZMI	1053.4	1058.6	III	GG,C	2	25X	160	
			SGMR	1054.0	1055.0	III		1	30	60	
			POTS	1100 U	1454	III	GG,N	2	40X	80	
	0530	1720	BLEN	1138.0	1142.7	DCIM	C	2	2000	4000X	
			POTS	1214	1335	IV	C	2	270	500	
			SGMR	1214.0	1806.0	III	N	2	30	60	
			HOLL	1315.0	1315.0	III		1	25	88	
			POTS	1329.7	1330.1	III	G	2	200U	330	
			POTS	1350 U	1725 U	I	S,N	2	200U	400	
			HOLL	1410.0	1716.0	III	N	1	25	164	
			POTS	1440.0	1451.6	III	G	2	40X	550	
			ONDR	1540.3	1601.0	DCIM	GG	1	800X	2000X	
	0506	1656	ONDR	1541.0	1606.4	DCIM	G	1	2000X	4500X	
			BLEN	1542.5	1555.7	IV	P	3	200	4000X	
			POTS	1545	1623	IV	C	3	200U	800X	
			BLEN	1558.5	1625.7	II	H	3	300	1000	
			POTS	1627.6	1628.5	III	G	1	40X	70	
			PALE	1641.0	0437.0	III	N	1	25	180	
			HOLL	1904.0	0113.0	III	N	1	25	84	
			SGMR	1904.0	2022.0	III	N	1	30	65	

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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
23	1953	2400	HIRA								
	2030	2400	CULG	2105.0	2105.0	III	B	1	35	80	
			CULG	2157.0	2250.0	III	N	1	23	90	
			CULG	2308.0	2400.0D	III	S	1	20	100	
			HOLL	2311.0	0113.0	CONT		1	25	124	
			LEAR	2328.0	0924.0	CONT		1	25	180	
24	0000	0720	CULG	0000.0E	0225.0	III	S	1	30U	180	
			CULG	0111.0	0258.0	I	S	1	70	180	
			LEAR	0302.0	0303.0	III		1	25	90	
	0000	0919	HIRA	0302.5	0303.0	III	B	1	25X	60	
			CULG	0303.0	0303.0	III	B	1	20	90	
	0402	1823	POTS	0402 E	0720 U	I	S,N,DC	2	200U	420	100-200MHz no data
			CULG	0405.0	0406.0	III	G	1	30	70	
			LEAR	0405.0	0924.0	III	N	1	25	180	
			CULG	0424.0	0424.0	III	B	1	30	50	
			CULG	0424.0	0720.0D	I	S	1	45	90	
			SVTO	0504.0	1714.0	III	N	1	25	180	
			HIRA	0504.5	0505.0	III	B	1	25X	230	
			CULG	0505.0	0505.0	III	B	1	20	160	
			POTS	0505.0	0505.4	III	G	2	40X	670	
			CULG	0514.0	0515.0	III	G	1	20	160	
			HIRA	0514.0	0514.5	III	B	1	25X	130	
			POTS	0514.5	0514.9	III	B	2	40X	240	
	0525	1720	BLEN	0531.2	0534.0	III	GG,RS,C	3	600	4000X	
			IZMI	0603.0E	1200.0D	III	N	1	25X	95U	
	0603	1200	IZMI	0603.0E	1200.0D	I	S,C	2	40	270X	
			CULG	0615.0	0720.0D	III	S,C	1	27	180	
			SVTO	0637.0	1714.0	CONT		1	25	180	
			IZMI	0637.4	0637.6	III	G	1	25X	140	
			POTS	0638.4	0638.7	III	B	1	40X	65	
			POTS	0720 U	1248 U	I	S,N,DC	3	40X	420	
			POTS	0742	1248 U	III	GG,N	2	40X	300	
			IZMI	0746.2	0748.1	III	G	1	25	95	
			IZMI	0757.4	0801.6	III	GG	2	25X	180U	
			IZMI	0809.2	0841.6	III	S	2	25X	155	
			SGMR	1127.0	1947.0	CONT		2	30	75	
			POTS	1248	1318	IV		3	40X	800X	
			POTS	1249.0	1318	II		3	40X	440U	
	0504	1657	ONDR	1249.0	1302.2	DCIM	G	2	2000X	4500X	
			ONDR	1249.1	1258.0	DCIM	GG	2	800X	2000X	
			BLEN	1249.2	1258.7	II	H,C	3	100X	4000X	
			SVTO	1251.0	1306.0	II		2	25	180	ESS 0830
			SGMR	1258.0	1305.0	III		2	30	80	
			HOLL	1300.0	1505.0	IV		1	25	138	
			POTS	1318 U	1726 U	I	S,N,DC	2	40X	420	
			POTS	1325 U	1558	III	GG,N	2	40X	80	
			HOLL	1505.0	0118.0	CONT		1	25	134	
			POTS	1726 U	1804 U	I	S,N	2	200U	400	
			HOLL	1836.0	0118.0	III	N	2	25	163	
			PALE	2021.0	2022.0	III		2	25	180	
	1952	2400	HIRA	2021.0	2122.0	III	B	3	25X	190	
	2030	2400	CULG	2030.0E	2400.0D	III	S,C	1	20	180	
			CULG	2206.0	2206.0	III	B	3	20	45	
			CULG	2231.0	2233.0	III	G	3	18	250	
			HIRA	2231.0	2233.0	III	G	1	25X	250	
			CULG	2238.0	2400.0D	I	S	1	100	180	
			LEAR	2322.0	0924.0	CONT		1	25	180	
25			CULG	0000.0E	0142.0	I	S	1	100	180	
	0000	0720	CULG	0000.0E	0720.0D	III	S,C	1	30	180	
			CULG	0134.0	0135.0	III	G	2	18X	140	
	0000	0920	HIRA	0134.0	0135.0	III	G	1	25X	110	
			HIRA	0224.5	0225.0	III	B	1	25X	220	
			CULG	0225.0	0225.0	III	B	3	18	250	
			HIRA	0318.5	0319.5	III	G	1	110	210	
	0400	1824	POTS	0400 E	0527.7U	I	S,N	2	200U	420	100-200MHz no data
			CULG	0440.0	0445.0	III	G	2	18	290	
			HIRA	0440.0	0445.5	III	G	1	25X	230	

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APRIL 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
25			LEAR	0440.0	0924.0	III	N	2	25	180	
			SVTO	0441.0	1715.0	III	N	2	25	180	
			POTS	0441.2	0445.4	III	G	2	40X	500	
			SVTO	0443.0	1715.0	CONT		1	25	180	
			POTS	0501.8	0502.7	III	G	2	40X	500	
	0502	1659	ONDR								
			CULG	0502.0	0503.0	III	G	2	20	180	
			HIRA	0502.0	0503.0	III	G	2	25X	140	
			SVTO	0523.0	0526.0	III		2	25	170	
			CULG	0524.0	0527.0	III	G	3	23	150	
			HIRA	0524.0	0526.0	III	G	2	25X	110	
	0515	1730	BLEN	0524.0	0550.2	III	GG,RS,C	3	100X	4000X	
			POTS	0524.2	0525.7	III	G	2	40X	280	
			POTS	0527.7	0555	IV		2	40X	800X	
			CULG	0528.0	0533.0	III	G	1	25	1500	
			POTS	0529.9	0546.5	II		3	40X	85U	
			CULG	0530.0	0546.0	II	SH	3	45U	150	ESS 700
			CULG	0530.0	0548.0	II	FN	3	20	65	
			HIRA	0530.0	0545.0	II		2	25X	120	
			LEAR	0530.0	0544.0	II		2	25	160	ESS 0814
			CULG	0531.0	0531.0	III	B	3	20	75	
			SVTO	0531.0	0547.0	II		2	25	140	ESS 0604
			CULG	0538.0	0538.0	III	B	1	23U	900	
			CULG	0541.0	0555.0	II	SH	1	30U	180	ESS 700
			CULG	0550.0	0556.0	III	G	2	25	360	
			POTS	0555	0731 U	I	S,N,C	2	200U	420	
			POTS	0603	1651	III	GG,N,RS	2	40X	85U	
			IZMI	0604.0E	1200.0D	III	N	1	45U	95U	
	0604	1200	IZMI	0604.0E	1200.0D	I	S	2	25X	220U	
			IZMI	0615.3	0619.7	III	GG	2	25X	260	
			CULG	0617.0	0619.0	III	G	3	25	180	
			HIRA	0617.0	0619.0	III	G	1	25X	80	
			IZMI	0629.6	0630.2	III	G	2	40	270	
			IZMI	0643.8	0644.0	III	B	2	40	150	
			IZMI	0703.6	0706.3	III	G	2	25X	95	
			IZMI	0715.6	0720.1	III	GG	2	25X	160	
			SVTO	0722.0	0723.0	III		2	25	180	
			BLEN	0722.9	0723.1	III		1	100X	270	
			IZMI	0722.9	0727.6	III	G	2	25X	145	
			HIRA	0723.0	0723.5	III	B	1	40	230	
			POTS	0731	1705 U	I	S,N,DC,C	2	40X	420	
			IZMI	0750.4	0756.1	III	G	2	25X	205	
			HIRA	0750.5	0751.0	III	B	1	30	190	
			IZMI	0802.5	0802.6	III	B	2	25X	90	
			POTS	0807.7U	0814 U	II		3	40X	85U	
			IZMI	0813.1	0817.0	III	G	1	25X	85	
			IZMI	0849.3	0849.4	III	B,FS	2	40	65	
			IZMI	0857.7	0857.9	III	B	1	125	190	
			SVTO	0927.0	0927.0	III		2	25	180	
			BLEN	0927.2	0927.7	III	G,RS	1	100X	500	
			IZMI	0927.2	0927.8	III	GG,C	2	25X	270X	
			POTS	0927.2	0927.8	III	G	3	40X	600	
			BLEN	1040.2	1040.5	III	GG	2	150	650	
			IZMI	1040.2	1040.3	III	G	2	155	270X	
			POTS	1040.2	1040.5	DCIM		2	230	640	
			POTS	1126.0	1127.9	III	GG	3	40X	240	
			POTS	1126.4	1127.1	V	G	3	40X	75	
			SGMR	1200.0	2203.0	CONT		2	30	80	
			POTS	1203.9	1207.3	III	G	3	40X	400	
			BLEN	1236.6	1244.3	III	GG,RS	2	150	600	
			POTS	1236.7	1244.4	DCIM		2	210	600	
			HOLL	1258.0	0120.0	CONT		1	25	180	
			POTS	1347.0	1348.3	DCIM		2	270	490	
			POTS	1447.2	1448.7	DCIM		2	200U	450	
			PALE	1623.0	0342.0	III	N	1	25	90	
			POTS	1705 U	1808 U	I	S,N	1	200U	380	
			POTS	1713.1	1719.8	DCIM		2	220	550	
			PALE	1728.0	0437.0	III	N	1	25	110	
			HOLL	1913.0	1914.0	III		1	25	129	

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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
25			SGMR	1913.0	1914.0	III		2	30	80	
			SGMR	1949.0	1950.0	III		2	30	70	
			CULG	2040.0E	2400.0D	I	S	1	57	100	
	2040	2400	CULG	2040.0E	2400.0D	III	S,C	1	27	180	
			SGMR	2053.0	2054.0	III		3	30	80	
	1950	2400	HIRA	2053.5	2055.0	III	B	2	25X	270	
			CULG	2054.0	2055.0	III	G	2	23	280	
			CULG	2156.0	2157.0	III	G	3	20	150	
			HIRA	2156.0	2157.0	III	B	1	25X	140	
			CULG	2201.0	2203.0	III	G	3	20	50	
			PALE	2340.0	2344.0	II		1	64	180	ESS 0542
26			CULG	0000.0E	0720.0D	I	S,C	1	57	100	
	0000	0720	CULG	0000.0E	0720.0D	III	C	1	18	180	
			CULG	0054.0	0059.0	III	G	3	18X	300	
			LEAR	0054.0	0056.0	V		2	25	180	
			PALE	0054.0	0058.0	III		2	25	180	
	0000	0921	HIRA	0054.0	0058.5	III	G	3	25X	360	
			LEAR	0057.0	0058.0	III		2	25	180	
			HIRA	0104.5	0105.0	III	B	1	60	420	
			CULG	0105.0	0105.0	III	B	1	30	360	
			LEAR	0231.0	0232.0	III		1	25	180	
			HIRA	0231.5	0232.5	III	B	1	25X	140	
			CULG	0232.0	0233.0	III	G	2	18	170	
			CULG	0300.0	0300.0	III	B	2	27	180	
			HIRA	0300.5	0301.0	III	B	2	30	200	
			CULG	0303.0	0305.0	III	G	3	18X	400	
			HIRA	0303.0	0304.5	III	B	3	25X	500	
			LEAR	0303.0	0304.0	III		2	25	180	
			PALE	0303.0	0304.0	III		2	25	180	
			CULG	0308.0	0313.0	III	G	3	18X	260	
			HIRA	0308.0	0312.0	III	G	2	25X	220	
			LEAR	0309.0	0312.0	III		2	25	180	
			PALE	0309.0	0311.0	III		2	25	155	
			CULG	0341.0	0343.0	III	G	3	18X	110	
			LEAR	0341.0	0342.0	III		1	25	180	
			HIRA	0341.5	0342.5	III	B	1	25X	70	
	0358	1827	POTS	0358 E	0654 U	I	S,N	2	200U	400	100-200MHz no data
			SVTO	0417.0	1716.0	CONT		1	25	180	
			HIRA	0427.0	0428.0	III	G	1	25X	110	
			HIRA	0445.5	0446.5	III	B	1	25X	110	
			HIRA	0513.5	0514.0	III	B	1	25X	100	
			LEAR	0542.0	0543.0	III		1	25	135	
			SVTO	0542.0	0543.0	III		2	25	120	
			HIRA	0542.5	0543.0	III	B	1	30	80	
			POTS	0542.8	0543.0	III	B	1	40X	80	
			CULG	0543.0	0543.0	III	B	3	20	75	
			IZMI	0600.0E	1207.0D	III	N	1	25X	95U	
	0600	1207	IZMI	0600.0E	1207.0D	I	S	2	45U	200	
			HIRA	0603.0	0604.0	III	G	1	100	130	
			LEAR	0624.0	0631.0	III		2	25	109	
			SVTO	0624.0	0630.0	III		2	25	120	
			HIRA	0624.5	0625.0	III	B	1	40	110	
			IZMI	0624.6	0631.2	III	GG,C	2	25X	100	
			POTS	0624.6	0630.4	III	G,N	2	40X	85U	
			CULG	0625.0	0625.0	III	B	2	35	100	
			CULG	0627.0	0627.0	III	B	2	30	90	
			HIRA	0629.5	0630.0	III	B	2	25X	100	
			CULG	0630.0	0630.0	III	G	3	23	100	
			POTS	0650.1	0650.4	DCIM		1	230	430	
			POTS	0654 U	1222 U	I	S,N,DC	2	40X	400	
			IZMI	0722.4	0724.4	III	G	2	25X	95	
			POTS	0723	1259	III	GG,N	2	40X	85	
			LEAR	0754.0	0758.0	III		2	25	180	
			IZMI	0754.3	0801.4	III	GG	2	25X	270	
			SVTO	0756.0	0758.0	III		2	25	153	
			POTS	0756.8	0758.3	III	GG	3	40X	800X	
			HIRA	0757.0	0758.5	III	G	1	30	210	
			IZMI	0803.0	0810.2	III	GG,C	2	25X	270X	

SOLAR RADIO EMISSION
Spectral Observations

APRIL 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
26			LEAR	0803.0	0809.0	III		2	25	180	
	0515	1730	BLEN	0803.1	0810.3	III	GG,C	3	100X	4000X	
			SVTO	0804.0	0807.0	III		3	25	180	
			HIRA	0805.0	0814.0	III	G	3	25X	1000	
	0500	1700	ONDR	0805.3	0807.0	DCIM	G	2	800X	2000X	
			SVTO	0809.0	0814.0	II		2	33U	86U	ESS 0592
			IZMI	0809.6	0914.8	II	HARM	2	30	120	
			IZMI	0812.2	0817.2	III	GG	2	25X	175	
			IZMI	0824.5	0825.5	III	G	2	25X	120	
			HIRA	0825.0	0825.5	III	B	1	25X	110	
			SVTO	0825.0	0825.0	III		2	25U	82U	
			IZMI	0842.6	0849.4	III	GG	2	25X	90	
			IZMI	0910.0	0912.0	III	G,C	2	25X	65	
			IZMI	0955.6	0955.9	III	G,C	2	25X	90	
			SVTO	1007.0	1007.0	III		2	25U	84U	
			IZMI	1007.1	1007.5	III	G,C	2	25X	95	
			SVTO	1038.0	1039.0	III		1	25	58	
			IZMI	1038.8	1039.1	III	G	2	25X	95	
			IZMI	1126.0	1127.9	III	GG,C	2	25X	190	
			SGMR	1126.0	1127.0	V		2	30	80	
			SVTO	1126.0	1127.0	III		2	25	180	
			SVTO	1126.0	1127.0	V		2	25	180	
			SGMR	1203.0	1259.0	III	N	2	30	80	
			SVTO	1204.0	1207.0	III		2	25	169	
			SVTO	1217.0	1217.0	V		3	25	124	
			POTS	1222 U	1808	I	S,N	2	200U	450	
			SVTO	1230.0	1231.0	III		2	25	71	
			POTS	1356.8	1357.6	III	G	2	40X	320	
			HOLL	1420.0	1430.0	III		2	25	180	
			SGMR	1420.0	1956.0	III	N	3	30	80	
			POTS	1420.4	1430.2	III	G	3	40X	410	
			SVTO	1422.0	1424.0	III		3	25	180	
			SVTO	1422.0	1424.0	V		3	25	180	
			POTS	1422.8	1424.1	V	G	3	40X	80	
			SVTO	1428.0	1449.0	III	N	2	25	180	
			POTS	1440.8	1454.6	III	GG,N	2	40X	350	
			HOLL	1442.0	1453.0	II		1	25	180	ESS 0575
			SGMR	1447.0	1453.0	II		2	30	70	ESS 0750
			SVTO	1447.0	1454.0	II		1	29	81	ESS 0617
			POTS	1447.5	1453.5	II	UE	2	40X	80	
			SVTO	1524.0	1716.0	III	N	2	25	180	
			HOLL	1525.0	1527.0	III		2	25	180	
			HOLL	1525.0	2229.0	III	N	2	25	180	
			POTS	1525.9	1527.4	III	G	2	40X	460	
			POTS	1529.5	1530.0	III	G	1	200U	380	
			POTS	1534.9	1535.1	III	B	1	40X	55	
			BLEN	1538.3	1541.0	III	GG	3	100X	450	
			POTS	1539.4	1541.9	III	GG,RS	3	40X	600	
			POTS	1544.6	1551	III	GG,N	2	200U	360	
			POTS	1558.4	1606.3	III	GG	3	40X	630	
			POTS	1620.8	1744	III	GG,N	3	40X	520	
			BLEN	1632.8	1634.6	III	GG,C	3	100X	4000X	
			PALE	1634.0	1635.0	III		1	25	180	
			PALE	1702.0	0415.0	III	N	2	25	180	
			POTS	1754.8	1759.1	III	GG,N	3	40X	670	
	2040	2400	CULG	2040.0E	2210.0	I	S	1	110	170	
			CULG	2045.0	2045.0	III	B	1	900	1300	
			CULG	2054.0	2054.0	III	B	1	650	1100	
			CULG	2144.0	2144.0	III	B	1	27	57	
			CULG	2156.0	2156.0	III	B	1	30	180	
			CULG	2203.0	2204.0	III	G	1	25	90	
			HOLL	2258.0	0019.0	III	N	2	25	180	
	1949	2400	HIRA	2258.0	2258.5	III	B	1	110	230	
			CULG	2302.0	2302.0	III	B	2	27	180	
			HIRA	2302.0	2302.5	III	B	3	30	270	
			CULG	2313.0	2314.0	III	G	2	18	370	
			HIRA	2313.0	2314.0	III	B	2	25X	420	
			CULG	2339.0	2340.0	III	G	3	18X	550	
			HIRA	2339.0	2340.5	III	G	3	25X	500	

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

APRIL 2003

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
26			HIRA	2340.0	2347.5	II		1	80	230	
			HOLL	2340.0	2348.0	II		1	38	180	ESS 0773
			LEAR	2340.0	2350.0	II		1	76	180	ESS 0557
			CULG	2341.0	2346.0	II	FN	1	27U	100	
			CULG	2341.0	2348.0	II	SH	1	60	220	ESS 800
			CULG	2344.0	2350.0	III	G	1	20	250	
27	0000	0720	CULG	0052.0	0234.0	III	N	1	18	180	
	0000	0922	HIRA	0052.5	0053.0	III	B	1	170	400	
			HOLL	0056.0	0057.0	III		1	25	152	
			HIRA	0056.5	0057.5	III	B	1	25X	160	
			CULG	0057.0	0057.0	III	G	3	18	180	
			HIRA	0111.0	0112.0	III	G	1	25X	100	
			HIRA	0155.5	0158.5	III	G	1	25X	120	
			CULG	0156.0	0159.0	III	G	2	18	150	
			HIRA	0229.5	0230.5	III	G	1	25X	130	
			CULG	0317.0	0327.0	III	G	1	30	80	
			HIRA	0332.5	0333.0	III	B	3	25X	200	
			CULG	0333.0	0333.0	III	B	3	18	180	
			CULG	0339.0	0345.0	III	G	2	27	180	
			HIRA	0339.0	0343.0	III	G	1	25X	210	
			CULG	0353.0	0439.0	III	N	1	30U	140	
	0356	1828	POTS	0356 E	1811 U	I	S,N,DC	2	200U	420	100-200MHz no data
			POTS	0453.9	0454.3	III	B	2	40X	80	
			CULG	0454.0	0456.0	III	G	3	18	130	
			HIRA	0454.0	0456.0	III	G	1	25X	100	
			LEAR	0454.0	0456.0	V		2	25	148	
			SVTO	0454.0	0456.0	III		2	25	80	
			CULG	0538.0	0542.0	III	G	3	18X	180	
			HIRA	0538.0	0541.0	III	G	2	25X	200	
			SVTO	0538.0	0542.0	III		2	25U	138U	
			POTS	0538.2	0541.0	III	G	2	40X	550	
			LEAR	0540.0	0542.0	V		2	25	180	
	0600	1200	IZMI	0600.0E	1200.0D	I	N	1	120	270X	
			POTS	0645.0	0645.8	DCIM		2	330	640	
			IZMI	0729.1	0730.8	III	G	1	45	90	
	0515	1730	BLEN	0737.2	0741.7	III	GG,RS,C	3	100X	4000X	
			HIRA	0737.5	0740.0	III	G	3	25X	500	
			IZMI	0737.5	0740.7	III	GG,C	2	25X	270X	
			POTS	0737.6	0741.7	III	GG	3	40X	800X	
	0459	1701	ONDR	0739.0	0741.4	DCIM	G	1	800X	2000X	
			POTS	0739.2	0741.0	V	G	3	40X	70	
			IZMI	0744.4	0746.1	III	G	2	45	175	
			POTS	0745.6	0746.0	III	G	2	40X	260	
			IZMI	0825.4	0825.5	III	B	1	45	85	
			IZMI	0839.0	0839.2	III	G	1	25X	95	
			POTS	0839.0	0839.2	III	B	1	40X	80	
			POTS	0911.5	0913.1	III	G	1	40X	85U	
			IZMI	1052.0	1052.2	III	G	1	45	95	
			POTS	1052.1	1052.3	III	B	1	40X	85U	
			POTS	1110.1	1110.4	III	G	1	40X	85U	
			SVTO	1305.0	1306.0	III		1	25U	59U	
			POTS	1305.7	1306.1	III	G	2	40X	540	
			HOLL	1529.0	1615.0	III	N	2	25	180	
			HOLL	1529.0	2345.0	III	N	2	25	180	
			SVTO	1529.0	1534.0	III		2	25	180	
			POTS	1529.7	1531.3	III	GG	3	40X	800X	
			SGMR	1530.0	1538.0	III		3	30	80	
			BLEN	1530.3	1531.1	III	GG,V,C	3	100X	4000X	
			BLEN	1532.3	1535.7	II		3	140	500	
			POTS	1532.3	1535.7	II	UE	3	200U	510	
			SVTO	1537.0	1539.0	III		1	33U	84U	
			POTS	1537.6	1538.8	III	G	1	40X	80	
	1948	2400	HIRA								
	2040	2400	CULG	2254.0	2259.0	III	G	1	25	180	
			LEAR	2346.0	0239.0	III	N	1	25	180	
28	0000	0720	CULG	0026.0	0106.0	III	N	1	20	180	
			CULG	0221.0	0221.0	III	B	1	30	140	

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

APRIL 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
28			CULG	0234.0	0235.0	III	G	1	230	360	
	0000	0922	HIRA	0234.0	0235.0	III	G	1	210	330	
	0354	1830	POTS	0354 E	1810 U	I	S,N,DC	2	200U	420	100-200MHz no data
			CULG	0400.0	0402.0	III	G	2	20	180	
			LEAR	0400.0	0401.0	III		1	25	180	
			HIRA	0400.5	0401.5	III	G	1	25X	200	
			CULG	0407.0	0510.0	III	N	1	30	160	
			LEAR	0437.0	0445.0	III		1	25U	180U	
			POTS	0438.7	0501.1	III	GG,N	2	200U	800X	
			SVTO	0439.0	0444.0	III		1	42	78	
			HIRA	0439.5	0440.5	III	G	1	40	110	
	0457	1703	ONDR								
			LEAR	0503.0	0922.0	III	N	1	25	180	
			SVTO	0503.0	0614.0	III	N	1	30	77	
	0515	1730	BLEN								
	0600	1200	IZMI	0600.0E	0820.0U	I	NG	1	200	270X	
			IZMI	1123.7	1123.9	III	G	1	55	125	
			HOLL	2152.0	2152.0	III		1	25	89	
	1947	2400	HIRA	2152.0	2152.5	III	B	1	60	130	
	2040	2400	CULG	2152.0	2152.0	III	B	1	27	180	
			CULG	2312.0	2312.0	III	B	1	30	180	
			LEAR	2323.0	0921.0	III	N	1	25	163	
29	0000	0924	HIRA								
	0352	1832	POTS	0352 E	1813 U	I	S,N,DC	2	200U	410	100-200MHz no data
	0000	0720	CULG	0410.0	0411.0	III	G	1	30U	90	
			CULG	0515.0	0534.0	III	N	1	30	180	
			CULG	0557.0	0557.0	III	B	1	27	90	
	0604	1200	IZMI	0600.4E	1200.0D	I	N	1	45U	270X	
			SVTO	0656.0	0656.0	III		1	36	78	
			IZMI	0656.7	0656.9	III	B	2	40	85	
			SVTO	0706.0	1341.0	III	N	1	25	180	
			IZMI	0722.0U	0922.0U	III	N	2	25X	95U	
			POTS	0741	1221	III	GG,N	2	40X	80	
			IZMI	0748.0	0749.4	III	G	2	40	85	
			IZMI	0922.0	1200.0D	III	S,C	2	25X	95U	
			IZMI	1118.5	1121.8	III	GG	2	25X	170	
			SGMR	1158.0	1232.0	III	N	2	30	55	
			SVTO	1158.0	1158.0	III		2	25	83	
			IZMI	1158.4	1158.9	III	G	2	25X	95	
			POTS	1230.2	1232.5	III	G	2	40X	270	
			SVTO	1250.0	1719.0	CONT		1	35	180	
	0456	1704	ONDR	1615.1	1618.1	DCIM	GG,SP	2	800X	2000X	
			POTS	1615.2	1618.2	DCIM		2	250	800X	
	0515	1715	BLEN	1617.3	1618.2	DCIM	S	3	140	1360	
	1946	2400	HIRA								
	2040	2400	CULG								
30	0350	1834	POTS	0355 U	1813 U	I	S,N	1	200U	420	100-200MHz no data
	0000	0925	HIRA	0355.5	0356.5	III	G	1	110	250	
	0000	0720	CULG	0356.0	0356.0	III	G	1	30	180	
			ONDR	0730.1	0731.2	DCIM	GG	2	800X	2000X	
	0454	1705	ONDR	0730.3	0731.2	DCIM	G	2	2000X	4500X	
	0604	1203	IZMI	0956.5	0956.7	III	B	1	45	95	
			POTS	0956.6	0956.9	III	B	1	40X	85U	
			IZMI	1002.0U	1145.0U	I	N	1	210U	270X	
			IZMI	1026.3	1026.5	III	B	1	45	95	
			IZMI	1044.5	1044.6	III	G	1	180	270	
			POTS	1044.5	1048.5	III	G	2	40X	330	
			IZMI	1126.8	1127.8	III	G	1	45	160	
			POTS	1137.7	1138.2	DCIM		2	270	630	
			POTS	1146.6	1146.8	DCIM		1	280	460	
			IZMI	1202.4	1202.5	III	B	1	110	180	
			POTS	1249.9	1251.0	III	GG	3	40X	480	
	0515	1715	BLEN	1249.9	1251.2	III	GG,V,C	2	100X	4000X	
			SGMR	1250.0	1251.0	III		1	30	50	
			SVTO	1250.0	1251.0	III		2	25	78	
			HOLL	1335.0	1335.0	III		1	25	130	
			POTS	1335.0	1335.3	III	G	2	40X	330	

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

APRIL 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
30			SGMR	1335.0	1335.0	III		2	30	80	
			SVTO	1335.0	1335.0	III		1	25U	83U	
			POTS	1448.1	1449.9	DCIM		2	290	800X	
			BLEN	1448.2	1449.8	III	GG	2	300	2400	
			ONDR	1448.5	1449.0	DCIM	G	1	800X	1648	
			SVTO	1513.0	1521.0	III		1	25	175	
			HOLL	1516.0	1518.0	III		1	25	88	
			SGMR	1517.0	1518.0	III		1	30	50	
			POTS	1517.6	1518.0	III	G	2	40X	480	
			HOLL	1611.0	1611.0	III		1	25	73	
			SVTO	1611.0	1611.0	III		1	25	49	
			BLEN	1720.8	1723.3	DCIM	P	2	700	1400	
	1945	2400	HIRA								
	2040	2400	CULG								
			HOLL	2300.0	2301.0	III		1	25	70	

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
- PALE = Palehua
- POTS = Potsdam
- SGMR = Sagamore Hill
- SVTO = San Vito
- BLEN = Bleien

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