

PCW-02, LEGA dry-run, and LEGA results review: Noise temperatures

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- We present hot/cold spectra for each date and spectrometer. The y-axis is shared between subplots in order to draw attention to outliers.
- System temperatures are shown across the bands with the y-axis locked to the range 0 . . . 5000 K.
- For the CTS also the comb spectra are shown.
- Observed issues are listed for each date and spectrometer.
- We give a list of the analyzed data files on the next two slides.

Measurements of noise temperatures during 2024

2024-01-24 CTS

- 00174_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00175_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00176_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00177_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00178_0x04056c00_SWI_TSYS_CTS_V1.nc

2024-07-04 CTS

- 00191_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00192_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00193_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00194_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00195_0x04056c00_SWI_TSYS_CTS_V1.nc

2024-08-21 CTS

- 00237_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00238_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00239_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00240_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00241_0x04056c00_SWI_TSYS_CTS_V1.nc

Measurements of noise temperatures during 2024

2024-08-23 CTS

- 00381_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00382_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00383_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00384_0x04056c00_SWI_TSYS_CTS_V1.nc
- 00385_0x04056c00_SWI_TSYS_CTS_V1.nc

2024-07-04 ACS

- 00196_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00197_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00198_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00199_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00200_0x04054800_SWI_TSYS_ACS_CCH_V1.nc

2024-08-23 ACS

- 00414_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00415_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00416_0x04054800_SWI_TSYS_ACS_CCH_V1.nc
- 00417_0x04054800_SWI_TSYS_ACS_CCH_V1.nc

Section 1

CTS

Table 1: List of observations 00174 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measrects	1	SKY	2024-01-24 16:36:05	0	536.355	219	1	1086.480	195	208.895
measrects	0	HOT	2024-01-24 16:36:09	2	536.355	219	3	1086.480	195	208.895
measrects	0	HOT	2024-01-24 16:36:13	4	537.705	221	5	1089.630	198	208.895
measrects	0	HOT	2024-01-24 16:36:17	6	538.875	503	7	1090.440	199	208.895
measrects	0	HOT	2024-01-24 16:36:21	8	539.505	506	9	1091.340	200	208.898
measrects	0	HOT	2024-01-24 16:36:25	10	540.540	513	11	1093.320	202	208.898
measrects	0	HOT	2024-01-24 16:36:30	12	541.080	227	13	1095.660	205	208.898
measrects	0	HOT	2024-01-24 16:36:34	14	541.800	229	15	1098.540	209	208.901
measrects	0	HOT	2024-01-24 16:36:38	16	542.835	231	17	1101.150	212	208.901
measrects	0	HOT	2024-01-24 16:36:42	18	544.680	521	19	1101.600	213	208.901
measrects	0	HOT	2024-01-24 16:36:46	20	545.445	235	21	1103.400	215	208.904
measrects	0	HOT	2024-01-24 16:36:51	22	546.030	239	23	1105.020	217	208.904
measrects	0	HOT	2024-01-24 16:36:55	24	547.425	242	25	1107.450	220	208.904
measrects	0	HOT	2024-01-24 16:36:59	26	549.900	246	27	1109.340	223	208.901
measrects	0	HOT	2024-01-24 16:37:03	28	550.980	541	29	1110.060	224	208.901
measrects	0	HOT	2024-01-24 16:37:07	30	552.105	545	31	1111.860	227	208.901
measrects	0	SKY	2024-01-24 16:37:13	32	536.355	219	33	1086.480	195	208.906
measrects	0	SKY	2024-01-24 16:37:17	34	537.705	221	35	1089.630	198	208.906
measrects	0	SKY	2024-01-24 16:37:21	36	538.875	503	37	1090.440	199	208.906
measrects	0	SKY	2024-01-24 16:37:25	38	539.505	506	39	1091.340	200	208.914
measrects	0	SKY	2024-01-24 16:37:30	40	540.540	513	41	1093.320	202	208.914
measrects	0	SKY	2024-01-24 16:37:34	42	541.080	227	43	1095.660	205	208.914
measrects	0	SKY	2024-01-24 16:37:38	44	541.800	229	45	1098.540	209	208.908
measrects	0	SKY	2024-01-24 16:37:42	46	542.835	231	47	1101.150	212	208.908
measrects	0	SKY	2024-01-24 16:37:46	48	544.680	521	49	1101.600	213	208.908
measrects	0	SKY	2024-01-24 16:37:51	50	545.445	235	51	1103.400	215	208.908
measrects	0	SKY	2024-01-24 16:37:55	52	546.030	239	53	1105.020	217	208.908
measrects	0	SKY	2024-01-24 16:37:59	54	547.425	242	55	1107.450	220	208.908
measrects	0	SKY	2024-01-24 16:38:03	56	549.900	246	57	1109.340	223	208.911
measrects	0	SKY	2024-01-24 16:38:07	58	550.980	541	59	1110.060	224	208.911
measrects	0	SKY	2024-01-24 16:38:12	60	552.105	545	61	1111.860	227	208.911

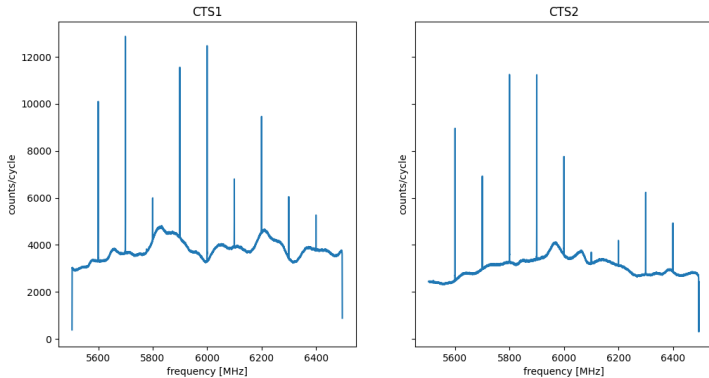


Figure 1: Comb spectra

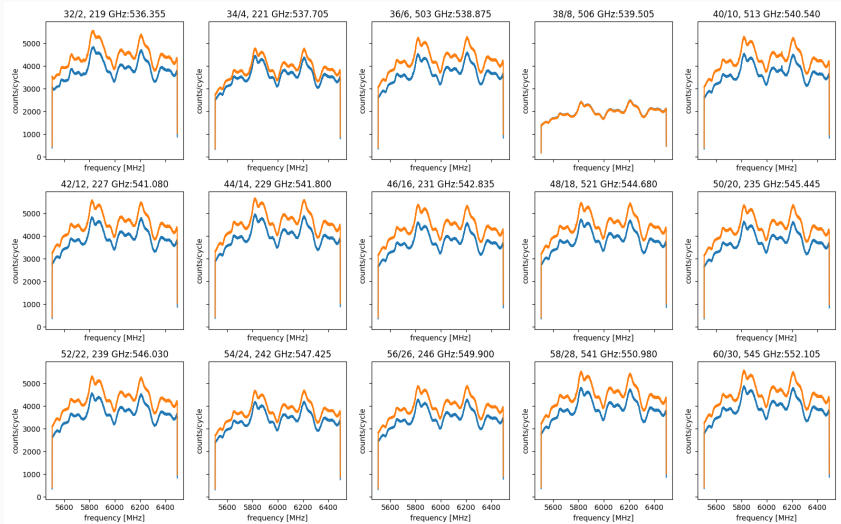


Figure 2: Hot/cold spectra

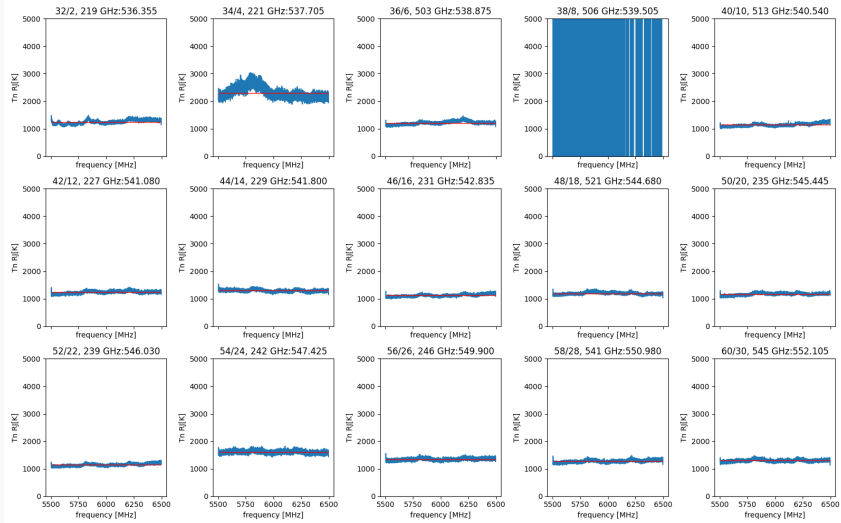


Figure 3: Tsys spectra

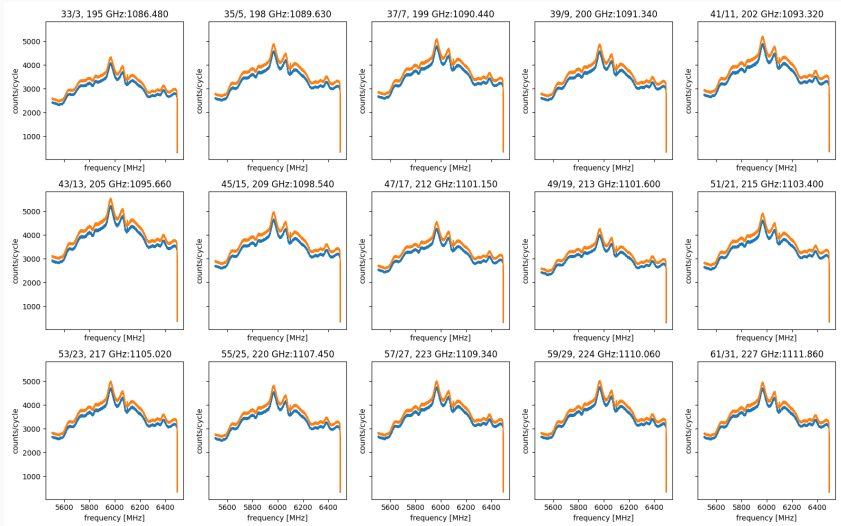


Figure 4: Hot/cold spectra

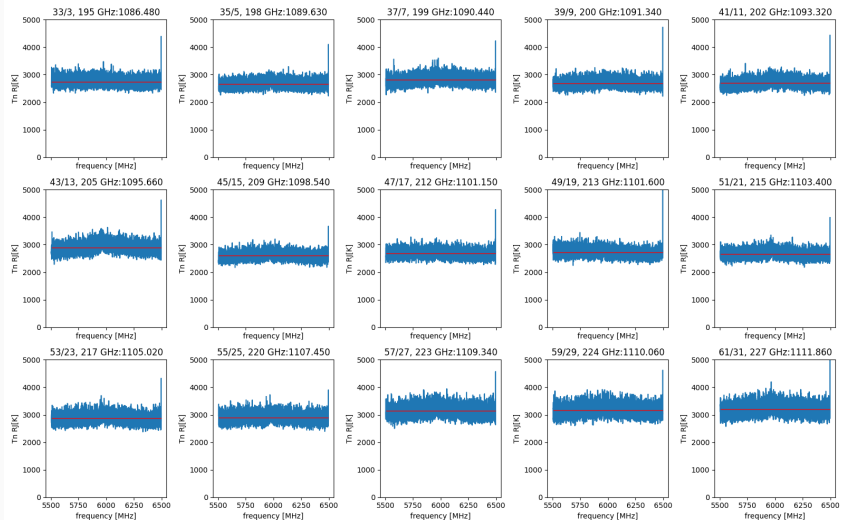


Figure 5: Tsys spectra

Table 2: List of observations 00175 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-01-24 16:39:35	0	553.140	549	1	1113.120	229	208.922
measurects	0	SKY	2024-01-24 16:39:37	2	553.140	549	3	1113.120	229	208.922
measurects	0	SKY	2024-01-24 16:39:42	4	553.680	255	5	1114.740	231	208.917
measurects	0	SKY	2024-01-24 16:39:46	6	554.265	553	7	1115.730	232	208.917
measurects	0	SKY	2024-01-24 16:39:50	8	554.850	554	9	1116.900	233	208.917
measurects	0	SKY	2024-01-24 16:39:54	10	555.525	561	11	1119.330	236	208.917
measurects	0	SKY	2024-01-24 16:39:58	12	557.145	265	13	1121.220	238	208.917
measurects	0	SKY	2024-01-24 16:40:03	14	557.685	271	15	1122.120	239	208.917
measurects	0	SKY	2024-01-24 16:40:07	16	558.000	273	17	1123.830	241	208.922
measurects	0	SKY	2024-01-24 16:40:11	18	559.350	275	19	1126.890	245	208.922
measurects	0	SKY	2024-01-24 16:40:15	20	560.745	582	21	1127.700	246	208.922
measurects	0	SKY	2024-01-24 16:40:19	22	561.645	588	23	1130.850	249	208.928
measurects	0	SKY	2024-01-24 16:40:24	24	562.950	288	25	1140.570	257	208.928
measurects	0	SKY	2024-01-24 16:40:28	26	564.120	293	27	1145.700	261	208.928
measurects	0	SKY	2024-01-24 16:40:32	28	565.110	294	29	1147.140	262	208.925
measurects	0	SKY	2024-01-24 16:40:36	30	566.505	299	31	1151.640	266	208.925
measurects	0	HOT	2024-01-24 16:40:42	32	553.140	549	33	1113.120	229	208.925
measurects	0	HOT	2024-01-24 16:40:46	34	553.680	255	35	1114.740	231	208.925
measurects	0	HOT	2024-01-24 16:40:50	36	554.265	553	37	1115.730	232	208.922
measurects	0	HOT	2024-01-24 16:40:54	38	554.850	554	39	1116.900	233	208.922
measurects	0	HOT	2024-01-24 16:40:58	40	555.525	561	41	1119.330	236	208.922
measurects	0	HOT	2024-01-24 16:41:03	42	557.145	265	43	1121.220	238	208.930
measurects	0	HOT	2024-01-24 16:41:07	44	557.685	271	45	1122.120	239	208.930
measurects	0	HOT	2024-01-24 16:41:11	46	558.000	273	47	1123.830	241	208.930
measurects	0	HOT	2024-01-24 16:41:15	48	559.350	275	49	1126.890	245	208.927
measurects	0	HOT	2024-01-24 16:41:19	50	560.745	582	51	1127.700	246	208.927
measurects	0	HOT	2024-01-24 16:41:24	52	561.645	588	53	1130.850	249	208.927
measurects	0	HOT	2024-01-24 16:41:28	54	562.950	288	55	1140.570	257	208.933
measurects	0	HOT	2024-01-24 16:41:32	56	564.120	293	57	1145.700	261	208.935
measurects	0	HOT	2024-01-24 16:41:36	58	565.110	294	59	1147.140	262	208.935
measurects	0	HOT	2024-01-24 16:41:40	60	566.505	299	61	1151.640	266	208.938

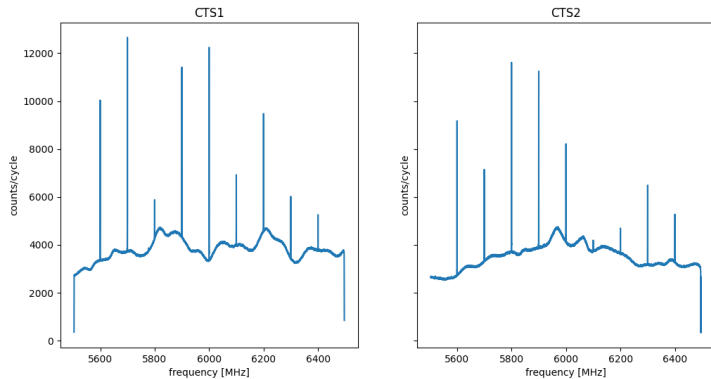


Figure 6: Comb spectra

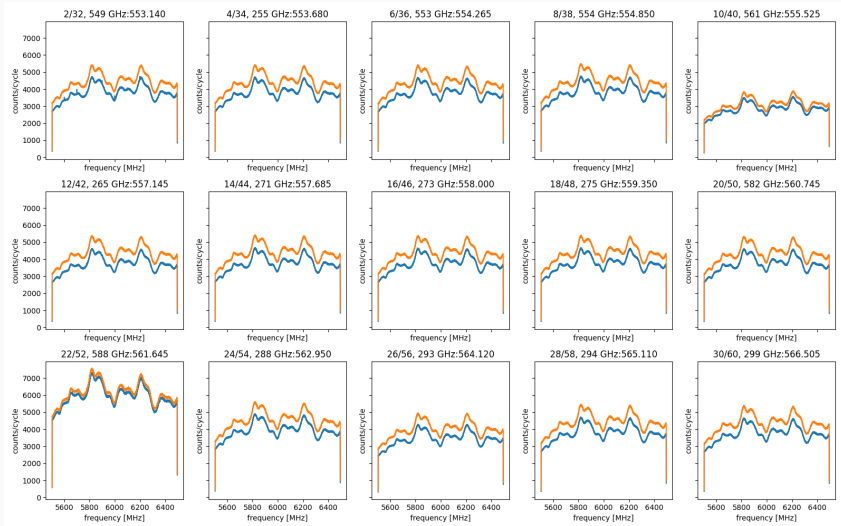


Figure 7: Hot/cold spectra

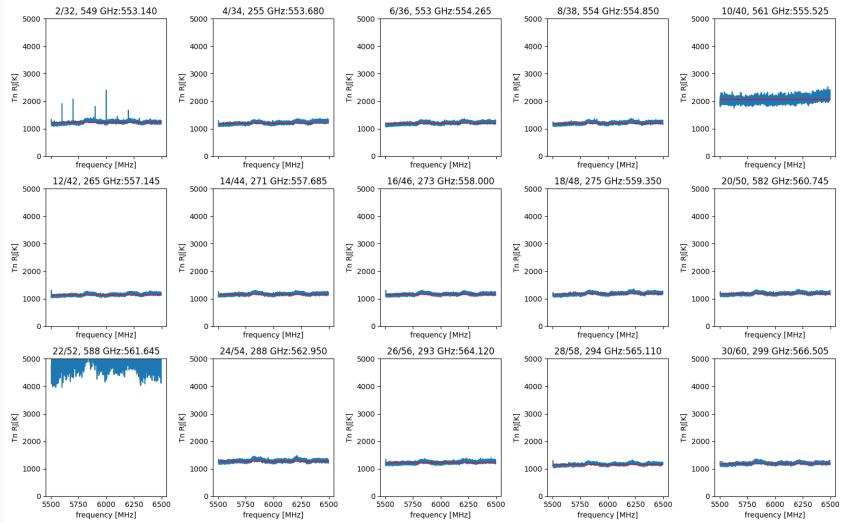


Figure 8: Tsys spectra

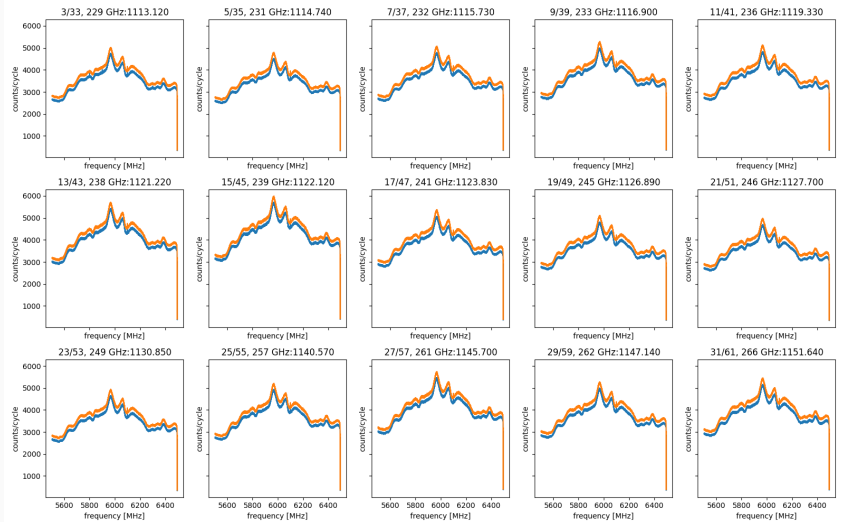


Figure 9: Hot/cold spectra

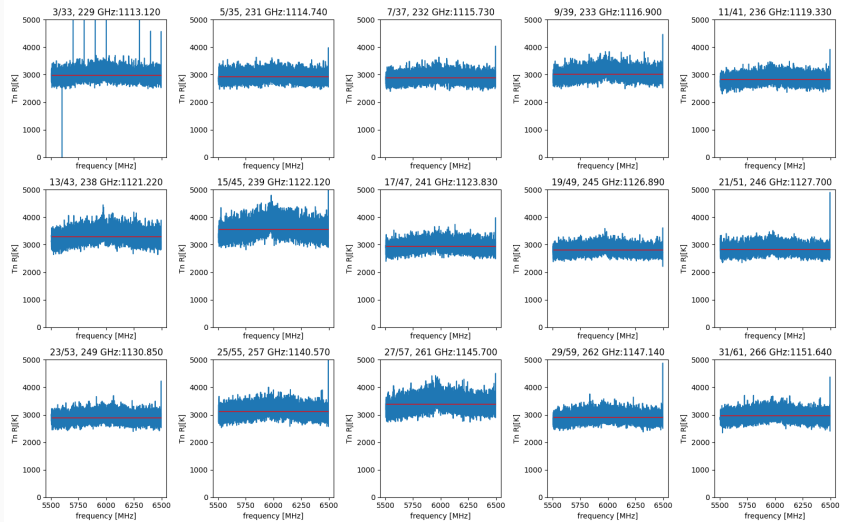


Figure 10: Tsys spectra

Table 3: List of observations 00176 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measrects	1	HOT	2024-01-24 16:43:05	0	567.540	304	1	1156.140	270	208.951
measrects	0	HOT	2024-01-24 16:43:07	2	567.540	304	3	1156.140	270	208.951
measrects	0	HOT	2024-01-24 16:43:12	4	569.520	313	5	1156.950	271	208.943
measrects	0	HOT	2024-01-24 16:43:16	6	570.330	322	7	1157.670	272	208.943
measrects	0	HOT	2024-01-24 16:43:20	8	572.220	326	9	1159.110	273	208.943
measrects	0	HOT	2024-01-24 16:43:24	10	573.210	327	11	1162.350	277	208.943
measrects	0	HOT	2024-01-24 16:43:28	12	575.865	671	13	1163.700	278	208.943
measrects	0	HOT	2024-01-24 16:43:33	14	576.765	674	15	1165.680	280	208.943
measrects	0	HOT	2024-01-24 16:43:37	16	578.520	678	17	1168.110	283	208.957
measrects	0	HOT	2024-01-24 16:43:41	18	579.780	681	19	1168.920	284	208.957
measrects	0	HOT	2024-01-24 16:43:45	20	581.625	339	21	1170.810	286	208.957
measrects	0	HOT	2024-01-24 16:43:49	22	582.255	344	23	1171.710	287	208.946
measrects	0	HOT	2024-01-24 16:43:54	24	583.065	698	25	1172.880	288	208.946
measrects	0	HOT	2024-01-24 16:43:58	26	583.965	706	27	1174.410	290	208.946
measrects	0	HOT	2024-01-24 16:44:02	28	585.450	715	29	1179.540	294	208.949
measrects	0	HOT	2024-01-24 16:44:06	30	586.665	352	31	1183.770	297	208.949
measrects	0	SKY	2024-01-24 16:44:12	32	567.540	304	33	1156.140	270	208.946
measrects	0	SKY	2024-01-24 16:44:16	34	569.520	313	35	1156.950	271	208.954
measrects	0	SKY	2024-01-24 16:44:20	36	570.330	322	37	1157.670	272	208.954
measrects	0	SKY	2024-01-24 16:44:24	38	572.220	326	39	1159.110	273	208.960
measrects	0	SKY	2024-01-24 16:44:28	40	573.210	327	41	1162.350	277	208.957
measrects	0	SKY	2024-01-24 16:44:33	42	575.865	671	43	1163.700	278	208.957
measrects	0	SKY	2024-01-24 16:44:37	44	576.765	674	45	1165.680	280	208.960
measrects	0	SKY	2024-01-24 16:44:41	46	578.520	678	47	1168.110	283	208.960
measrects	0	SKY	2024-01-24 16:44:45	48	579.780	681	49	1168.920	284	208.960
measrects	0	SKY	2024-01-24 16:44:49	50	581.625	339	51	1170.810	286	208.952
measrects	0	SKY	2024-01-24 16:44:54	52	582.255	344	53	1171.710	287	208.952
measrects	0	SKY	2024-01-24 16:44:58	54	583.065	698	55	1172.880	288	208.952
measrects	0	SKY	2024-01-24 16:45:02	56	583.965	706	57	1174.410	290	208.957
measrects	0	SKY	2024-01-24 16:45:06	58	585.450	715	59	1179.540	294	208.960
measrects	0	SKY	2024-01-24 16:45:10	60	586.665	352	61	1183.770	297	208.960

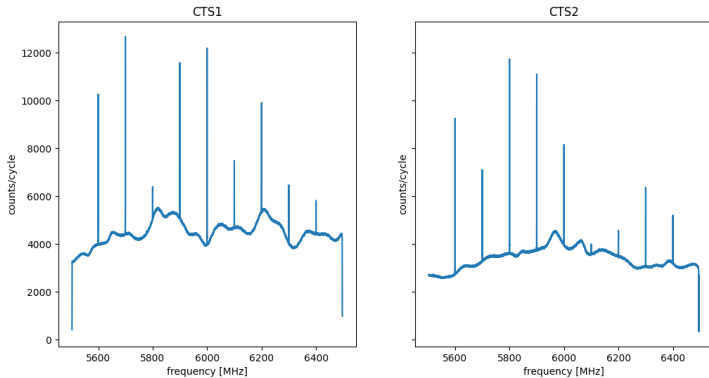


Figure 11: Comb spectra



Figure 12: Hot/cold spectra

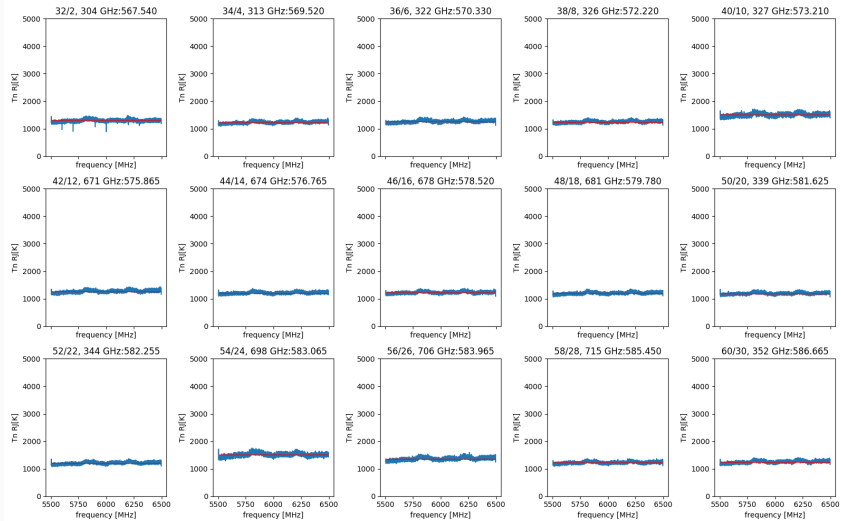


Figure 13: Tsys spectra

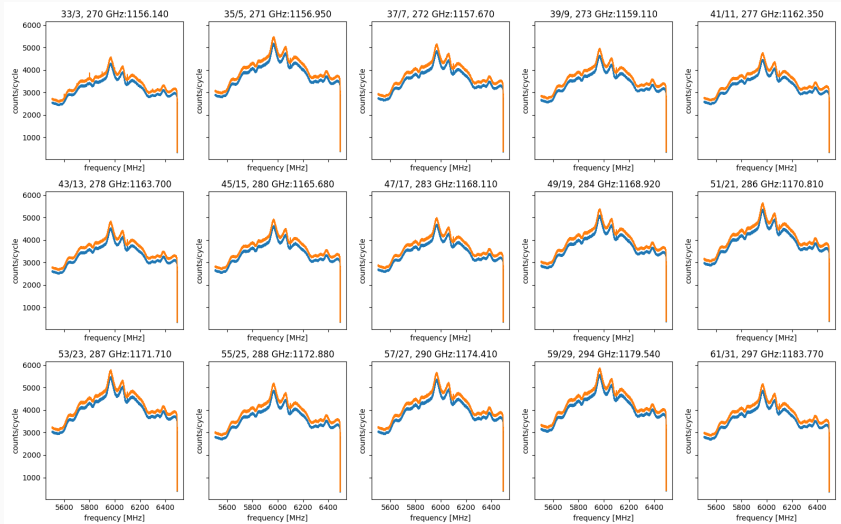


Figure 14: Hot/cold spectra

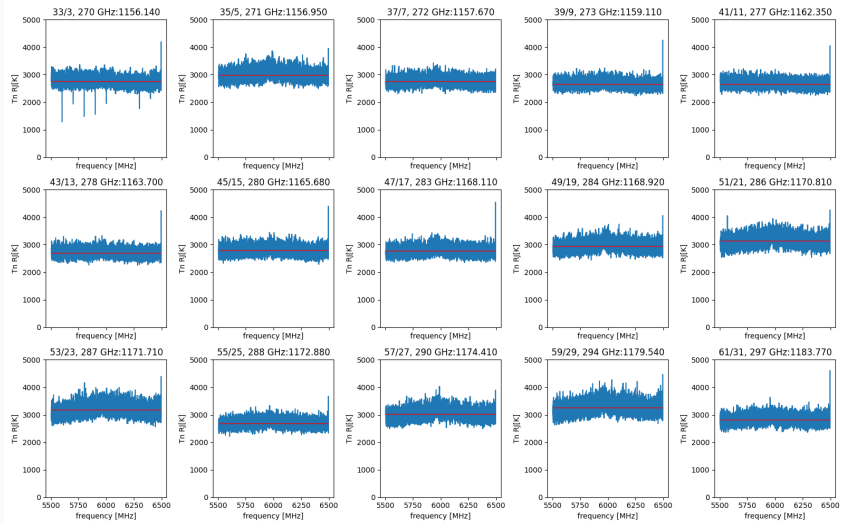


Figure 15: Tsys spectra

Table 4: List of observations 00177 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-01-24 16:46:35	0	587.970	720	1	1184.940	298	208.971
measurects	0	SKY	2024-01-24 16:46:38	2	587.970	720	3	1184.940	298	208.971
measurects	0	SKY	2024-01-24 16:46:42	4	588.780	723	5	1186.200	299	208.971
measurects	0	SKY	2024-01-24 16:46:46	6	590.445	725	7	1189.980	302	208.973
measurects	0	SKY	2024-01-24 16:46:50	8	593.010	739	9	1193.040	305	208.973
measurects	0	SKY	2024-01-24 16:46:54	10	593.955	756	11	1200.690	310	208.973
measurects	0	SKY	2024-01-24 16:46:59	12	594.720	370	13	1201.680	311	208.973
measurects	0	SKY	2024-01-24 16:47:03	14	596.295	373	15	1203.210	313	208.973
measurects	0	SKY	2024-01-24 16:47:07	16	597.645	768	17	1205.100	315	208.973
measurects	0	SKY	2024-01-24 16:47:11	18	598.275	377	19	1209.060	318	208.973
measurects	0	SKY	2024-01-24 16:47:15	20	598.815	378	21	1211.220	320	208.973
measurects	0	SKY	2024-01-24 16:47:20	22	601.425	784	23	1212.750	321	208.973
measurects	0	SKY	2024-01-24 16:47:24	24	603.540	790	25	1213.650	322	208.973
measurects	0	SKY	2024-01-24 16:47:28	26	605.295	793	27	1215.720	323	208.973
measurects	0	SKY	2024-01-24 16:47:32	28	605.925	795	29	1217.070	325	208.973
measurects	0	SKY	2024-01-24 16:47:36	30	608.265	807	31	1221.030	327	208.976
measurects	0	HOT	2024-01-24 16:47:42	32	587.970	720	33	1184.940	298	208.976
measurects	0	HOT	2024-01-24 16:47:46	34	588.780	723	35	1186.200	299	208.976
measurects	0	HOT	2024-01-24 16:47:50	36	590.445	725	37	1189.980	302	208.984
measurects	0	HOT	2024-01-24 16:47:54	38	593.010	739	39	1193.040	305	208.984
measurects	0	HOT	2024-01-24 16:47:59	40	593.955	756	41	1200.690	310	208.984
measurects	0	HOT	2024-01-24 16:48:03	42	594.720	370	43	1201.680	311	208.984
measurects	0	HOT	2024-01-24 16:48:07	44	596.295	373	45	1203.210	313	208.984
measurects	0	HOT	2024-01-24 16:48:11	46	597.645	768	47	1205.100	315	208.984
measurects	0	HOT	2024-01-24 16:48:15	48	598.275	377	49	1209.060	318	208.981
measurects	0	HOT	2024-01-24 16:48:20	50	598.815	378	51	1211.220	320	208.981
measurects	0	HOT	2024-01-24 16:48:24	52	601.425	784	53	1212.750	321	208.981
measurects	0	HOT	2024-01-24 16:48:28	54	603.540	790	55	1213.650	322	208.989
measurects	0	HOT	2024-01-24 16:48:32	56	605.295	793	57	1215.720	323	208.989
measurects	0	HOT	2024-01-24 16:48:36	58	605.925	795	59	1217.070	325	208.989
measurects	0	HOT	2024-01-24 16:48:41	60	608.265	807	61	1221.030	327	208.984

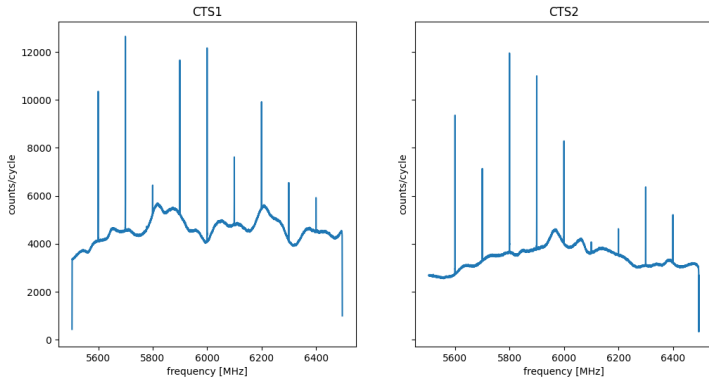


Figure 16: Comb spectra

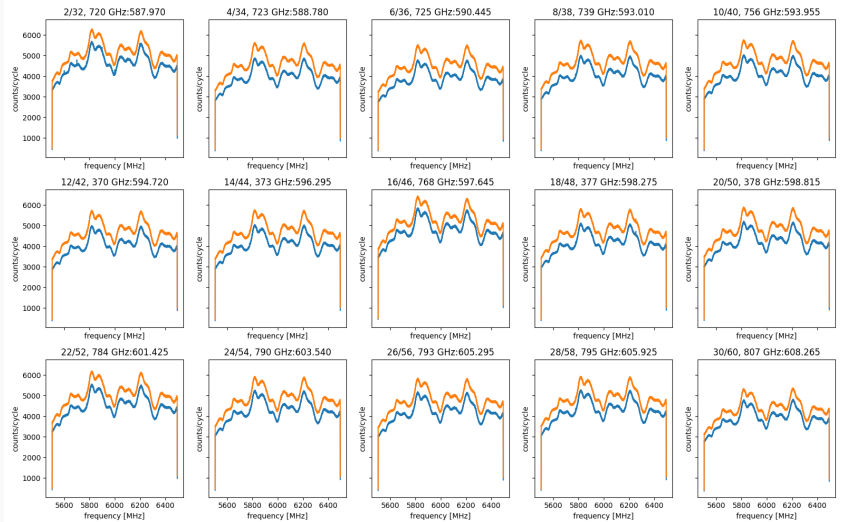


Figure 17: Hot/cold spectra

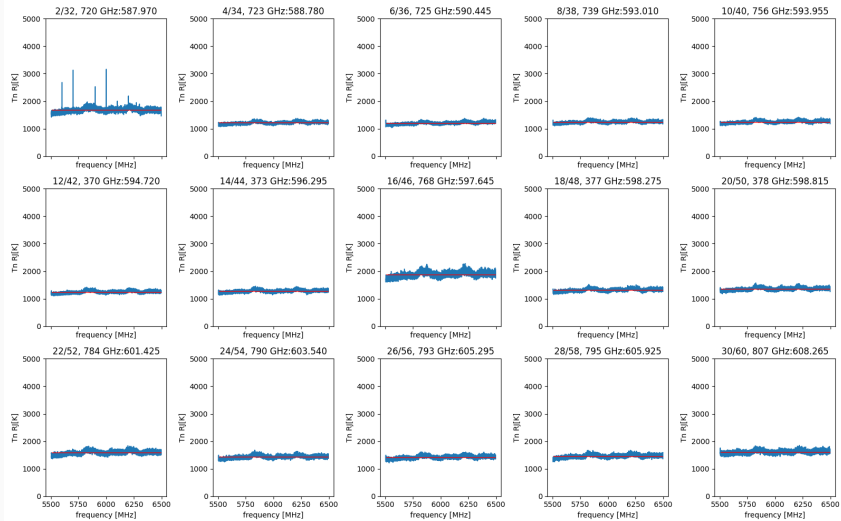


Figure 18: Tsys spectra

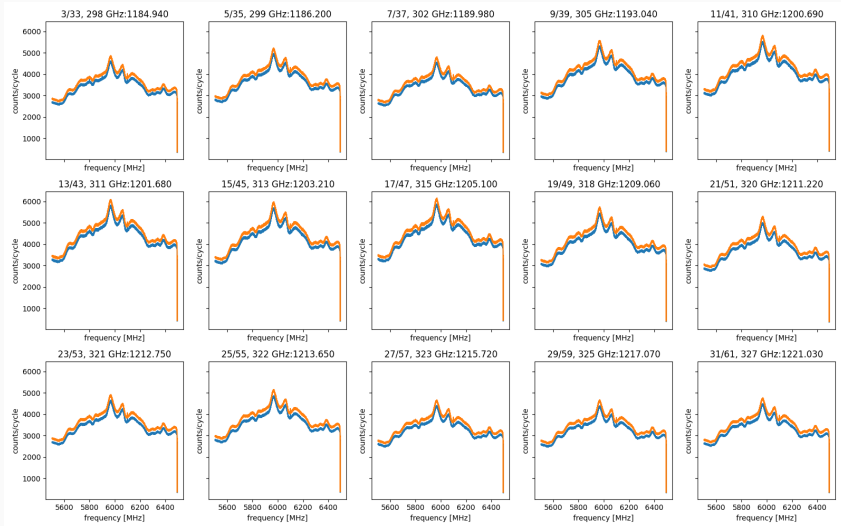


Figure 19: Hot/cold spectra

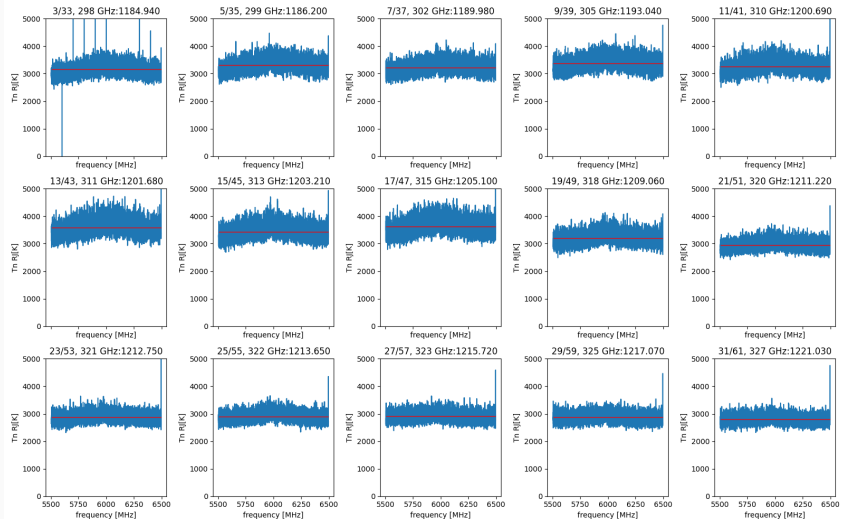


Figure 20: Tsys spectra

Table 5: List of observations 00178 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	HOT	2024-01-24 16:50:05	0	610.290	394	1	1222.920	328	208.997
measurects	0	HOT	2024-01-24 16:50:08	2	610.290	394	3	1222.920	328	208.997
measurects	0	HOT	2024-01-24 16:50:12	4	613.485	815	5	1226.340	331	209.000
measurects	0	HOT	2024-01-24 16:50:16	6	614.295	400	7	1228.050	332	209.000
measurects	0	HOT	2024-01-24 16:50:20	8	616.590	402	9	1233.900	335	209.000
measurects	0	HOT	2024-01-24 16:50:24	10	617.445	822	11	1234.800	336	209.005
measurects	0	HOT	2024-01-24 16:50:29	12	618.210	824	13	1238.310	339	209.005
measurects	0	HOT	2024-01-24 16:50:33	14	618.975	405	15	1240.110	340	209.005
measurects	0	HOT	2024-01-24 16:50:37	16	619.920	828	17	1243.530	343	209.003
measurects	0	HOT	2024-01-24 16:50:41	18	622.395	410	19	1245.780	345	209.003
measurects	0	HOT	2024-01-24 16:50:45	20	623.295	411	21	1250.100	348	209.003
measurects	0	HOT	2024-01-24 16:50:50	22	626.310	843	23	1252.080	350	209.010
measurects	0	HOT	2024-01-24 16:50:54	24	628.515	423	25	1257.480	356	209.010
measurects	0	HOT	2024-01-24 16:50:58	26	630.225	855	27	1260.990	358	209.010
measurects	0	HOT	2024-01-24 16:51:02	28	630.990	858	29	1262.070	359	209.005
measurects	0	HOT	2024-01-24 16:51:06	30	631.935	861	31	1273.050	366	209.005
measurects	0	SKY	2024-01-24 16:51:12	32	610.290	394	33	1222.920	328	209.013
measurects	0	SKY	2024-01-24 16:51:16	34	613.485	815	35	1226.340	331	209.011
measurects	0	SKY	2024-01-24 16:51:20	36	614.295	400	37	1228.050	332	209.011
measurects	0	SKY	2024-01-24 16:51:24	38	616.590	402	39	1233.900	335	209.010
measurects	0	SKY	2024-01-24 16:51:29	40	617.445	822	41	1234.800	336	209.016
measurects	0	SKY	2024-01-24 16:51:33	42	618.210	824	43	1238.310	339	209.016
measurects	0	SKY	2024-01-24 16:51:37	44	618.975	405	45	1240.110	340	209.018
measurects	0	SKY	2024-01-24 16:51:41	46	619.920	828	47	1243.530	343	209.021
measurects	0	SKY	2024-01-24 16:51:45	48	622.395	410	49	1245.780	345	209.021
measurects	0	SKY	2024-01-24 16:51:50	50	623.295	411	51	1250.100	348	209.018
measurects	0	SKY	2024-01-24 16:51:54	52	626.310	843	53	1252.080	350	209.021
measurects	0	SKY	2024-01-24 16:51:58	54	628.515	423	55	1257.480	356	209.021
measurects	0	SKY	2024-01-24 16:52:02	56	630.225	855	57	1260.990	358	209.021
measurects	0	SKY	2024-01-24 16:52:06	58	630.990	858	59	1262.070	359	209.021
measurects	0	SKY	2024-01-24 16:52:11	60	631.935	861	61	1273.050	366	209.021

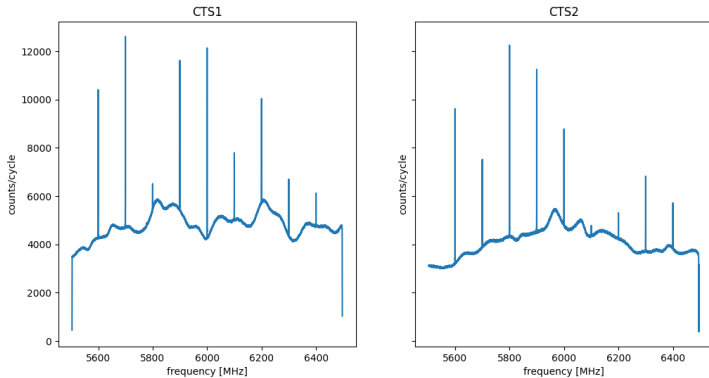


Figure 21: Comb spectra

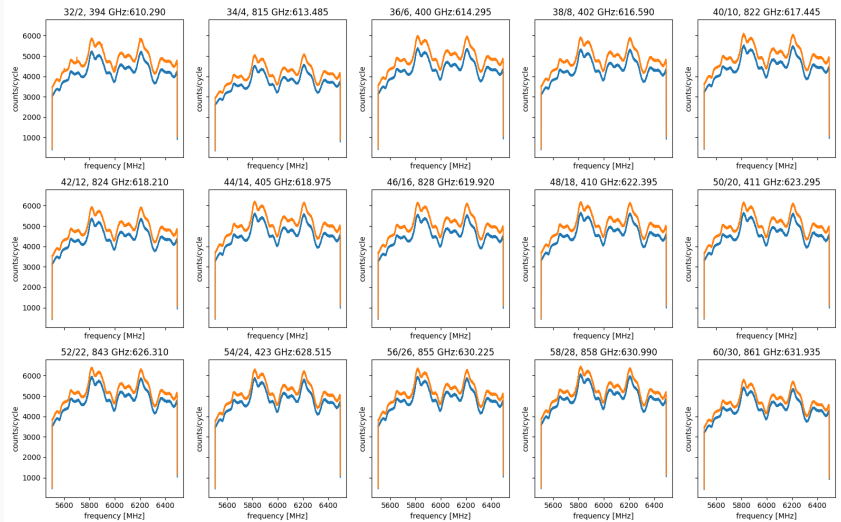


Figure 22: Hot/cold spectra

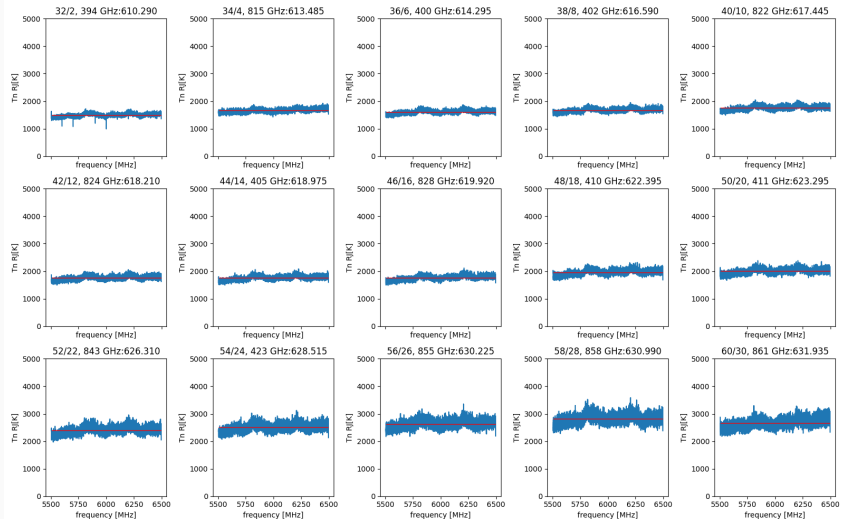


Figure 23: Tsys spectra

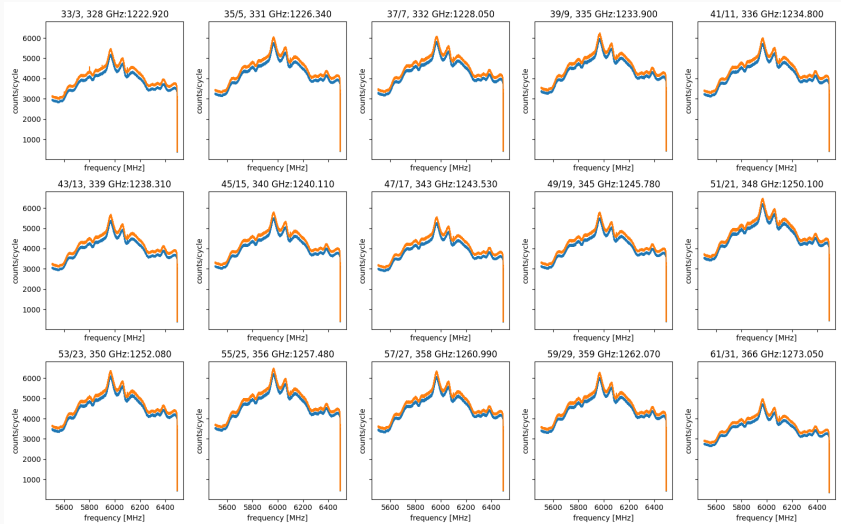


Figure 24: Hot/cold spectra

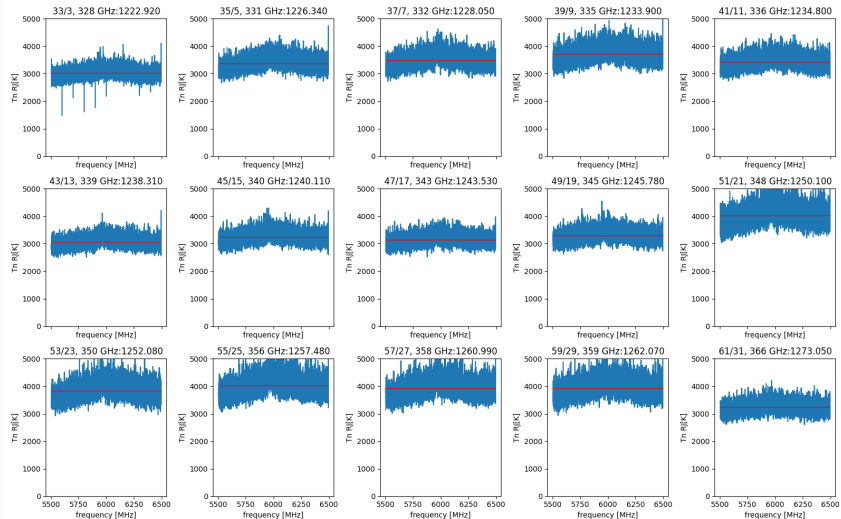


Figure 25: Tsys spectra

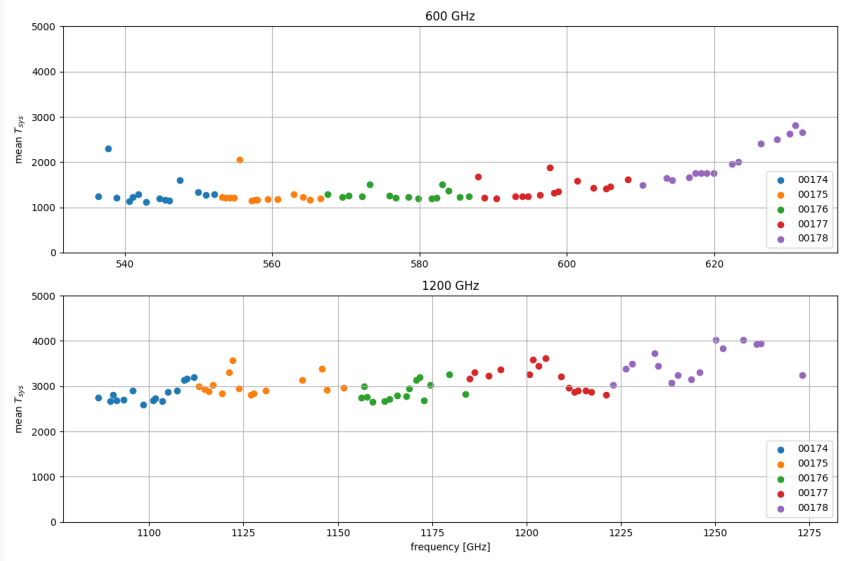


Figure 26: Results from 2024-01-24

- 600 GHz
 - ▶ Failed tuning at 539.505 GHz.
 - ▶ Sub-optimal performance at 537.705, 555.525 and 561.645 GHz
 - ▶ Spurious seen at 553.140, 567.540, 587.970 and 610.290 GHz
- 1200 GHz
 - ▶ Spurious seen at 1113.120, 1115.140, 1184.940 and 1222.920 GHz

Table 6: List of observations 00191 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-07-04 14:03:01	0	536.355	219	1	1086.480	195	208.083
measurects	0	HOT	2024-07-04 14:03:04	2	536.355	219	3	1086.480	195	208.083
measurects	0	HOT	2024-07-04 14:03:08	4	537.705	221	5	1089.630	198	208.078
measurects	0	HOT	2024-07-04 14:03:13	6	538.875	503	7	1090.440	199	208.078
measurects	0	HOT	2024-07-04 14:03:17	8	539.505	506	9	1091.340	200	208.078
measurects	0	HOT	2024-07-04 14:03:21	10	540.540	513	11	1093.320	202	208.086
measurects	0	HOT	2024-07-04 14:03:25	12	541.080	227	13	1095.660	205	208.086
measurects	0	HOT	2024-07-04 14:03:29	14	541.800	229	15	1098.540	209	208.086
measurects	0	HOT	2024-07-04 14:03:34	16	542.835	231	17	1101.150	212	208.086
measurects	0	HOT	2024-07-04 14:03:38	18	544.680	521	19	1101.600	213	208.086
measurects	0	HOT	2024-07-04 14:03:42	20	545.445	235	21	1103.400	215	208.086
measurects	0	HOT	2024-07-04 14:03:46	22	546.030	239	23	1105.020	217	208.089
measurects	0	HOT	2024-07-04 14:03:50	24	547.425	242	25	1107.450	220	208.089
measurects	0	HOT	2024-07-04 14:03:55	26	549.900	246	27	1109.340	223	208.089
measurects	0	HOT	2024-07-04 14:03:59	28	550.980	541	29	1110.060	224	208.078
measurects	0	HOT	2024-07-04 14:04:03	30	552.105	545	31	1111.860	227	208.078
measurects	0	SKY	2024-07-04 14:04:08	32	536.355	219	33	1086.480	195	208.081
measurects	0	SKY	2024-07-04 14:04:13	34	537.705	221	35	1089.630	198	208.081
measurects	0	SKY	2024-07-04 14:04:17	36	538.875	503	37	1090.440	199	208.081
measurects	0	SKY	2024-07-04 14:04:21	38	539.505	506	39	1091.340	200	208.081
measurects	0	SKY	2024-07-04 14:04:25	40	540.540	513	41	1093.320	202	208.081
measurects	0	SKY	2024-07-04 14:04:29	42	541.080	227	43	1095.660	205	208.081
measurects	0	SKY	2024-07-04 14:04:34	44	541.800	229	45	1098.540	209	208.073
measurects	0	SKY	2024-07-04 14:04:38	46	542.835	231	47	1101.150	212	208.073
measurects	0	SKY	2024-07-04 14:04:42	48	544.680	521	49	1101.600	213	208.073
measurects	0	SKY	2024-07-04 14:04:46	50	545.445	235	51	1103.400	215	208.084
measurects	0	SKY	2024-07-04 14:04:50	52	546.030	239	53	1105.020	217	208.084
measurects	0	SKY	2024-07-04 14:04:55	54	547.425	242	55	1107.450	220	208.084
measurects	0	SKY	2024-07-04 14:04:59	56	549.900	246	57	1109.340	223	208.092
measurects	0	SKY	2024-07-04 14:05:03	58	550.980	541	59	1110.060	224	208.092
measurects	0	SKY	2024-07-04 14:05:07	60	552.105	545	61	1111.860	227	208.092

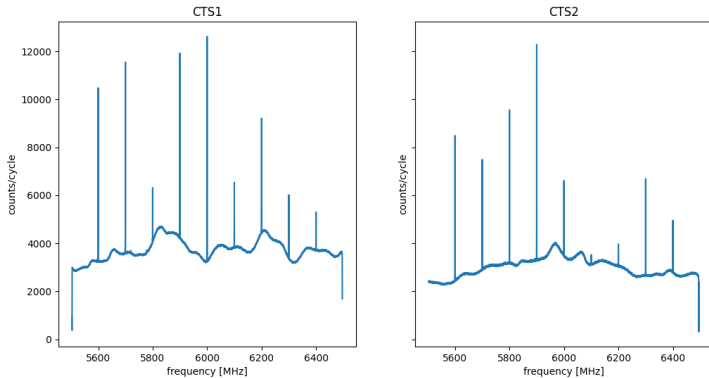


Figure 27: Comb spectra

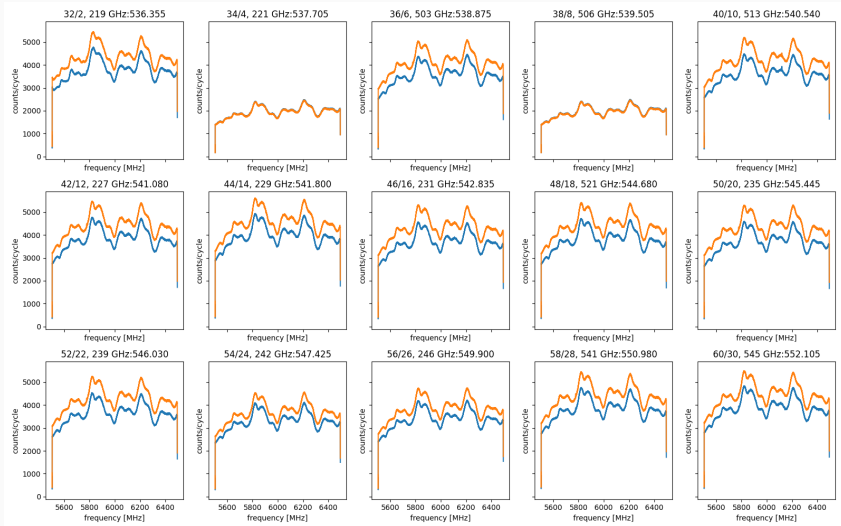


Figure 28: Hot/cold spectra

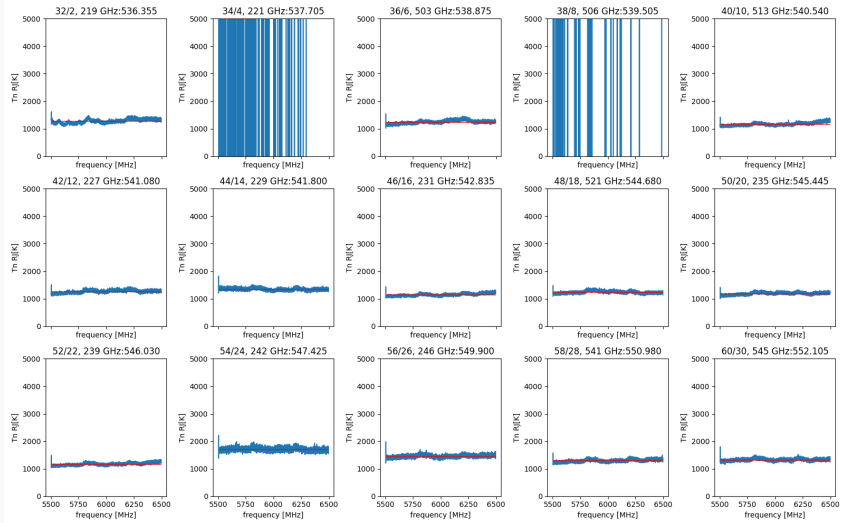


Figure 29: Tsys spectra

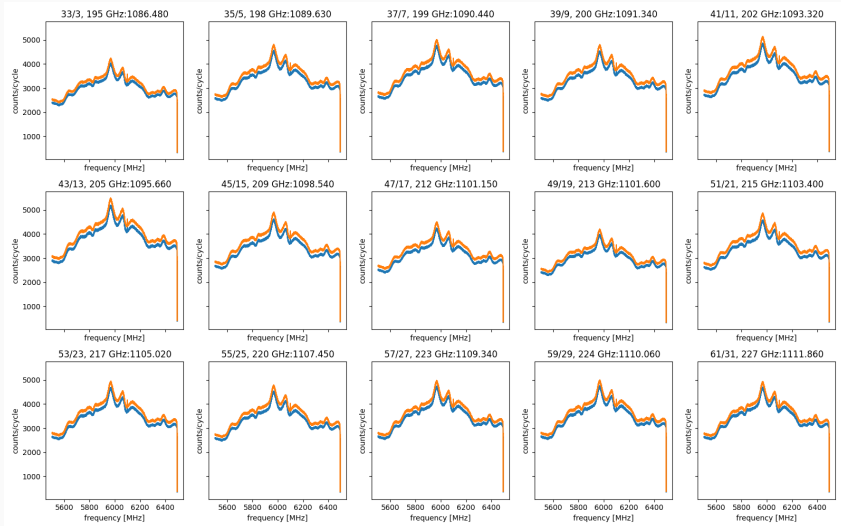


Figure 30: Hot/cold spectra

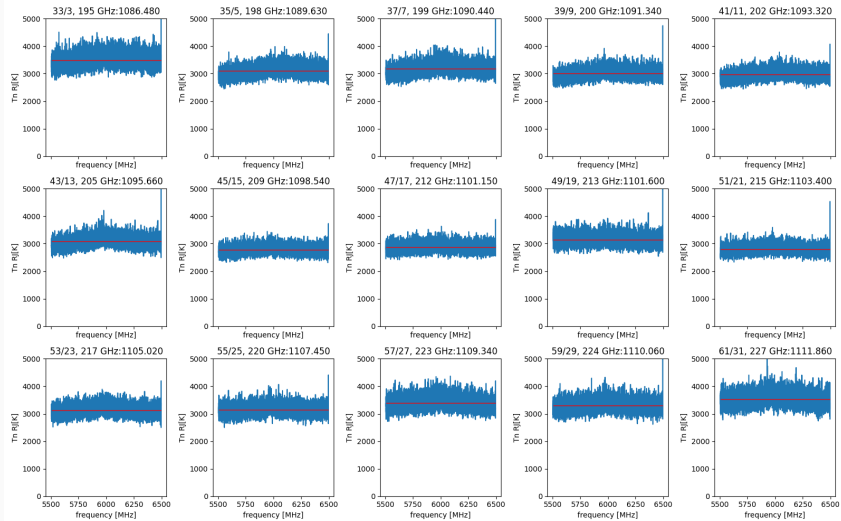


Figure 31: Tsys spectra

Table 7: List of observations 00192 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-07-04 14:05:22	0	553.140	549	1	1113.120	229	208.083
measurects	0	SKY	2024-07-04 14:05:24	2	553.140	549	3	1113.120	229	208.092
measurects	0	SKY	2024-07-04 14:05:28	4	553.680	255	5	1114.740	231	208.092
measurects	0	SKY	2024-07-04 14:05:32	6	554.265	553	7	1115.730	232	208.092
measurects	0	SKY	2024-07-04 14:05:37	8	554.850	554	9	1116.900	233	208.089
measurects	0	SKY	2024-07-04 14:05:41	10	555.525	561	11	1119.330	236	208.089
measurects	0	SKY	2024-07-04 14:05:45	12	557.145	265	13	1121.220	238	208.089
measurects	0	SKY	2024-07-04 14:05:49	14	557.685	271	15	1122.120	239	208.086
measurects	0	SKY	2024-07-04 14:05:53	16	558.000	273	17	1123.830	241	208.086
measurects	0	SKY	2024-07-04 14:05:58	18	559.350	275	19	1126.890	245	208.086
measurects	0	SKY	2024-07-04 14:06:02	20	560.745	582	21	1127.700	246	208.078
measurects	0	SKY	2024-07-04 14:06:06	22	561.645	588	23	1130.850	249	208.078
measurects	0	SKY	2024-07-04 14:06:10	24	562.950	288	25	1140.570	257	208.078
measurects	0	SKY	2024-07-04 14:06:14	26	564.120	293	27	1145.700	261	208.081
measurects	0	SKY	2024-07-04 14:06:19	28	565.110	294	29	1147.140	262	208.081
measurects	0	SKY	2024-07-04 14:06:23	30	566.505	299	31	1151.640	266	208.081
measurects	0	HOT	2024-07-04 14:06:28	32	553.140	549	33	1113.120	229	208.087
measurects	0	HOT	2024-07-04 14:06:32	34	553.680	255	35	1114.740	231	208.087
measurects	0	HOT	2024-07-04 14:06:37	36	554.265	553	37	1115.730	232	208.087
measurects	0	HOT	2024-07-04 14:06:41	38	554.850	554	39	1116.900	233	208.083
measurects	0	HOT	2024-07-04 14:06:45	40	555.525	561	41	1119.330	236	208.083
measurects	0	HOT	2024-07-04 14:06:49	42	557.145	265	43	1121.220	238	208.083
measurects	0	HOT	2024-07-04 14:06:53	44	557.685	271	45	1122.120	239	208.083
measurects	0	HOT	2024-07-04 14:06:58	46	558.000	273	47	1123.830	241	208.083
measurects	0	HOT	2024-07-04 14:07:02	48	559.350	275	49	1126.890	245	208.083
measurects	0	HOT	2024-07-04 14:07:06	50	560.745	582	51	1127.700	246	208.083
measurects	0	HOT	2024-07-04 14:07:10	52	561.645	588	53	1130.850	249	208.083
measurects	0	HOT	2024-07-04 14:07:14	54	562.950	288	55	1140.570	257	208.083
measurects	0	HOT	2024-07-04 14:07:19	56	564.120	293	57	1145.700	261	208.081
measurects	0	HOT	2024-07-04 14:07:23	58	565.110	294	59	1147.140	262	208.081
measurects	0	HOT	2024-07-04 14:07:27	60	566.505	299	61	1151.640	266	208.081

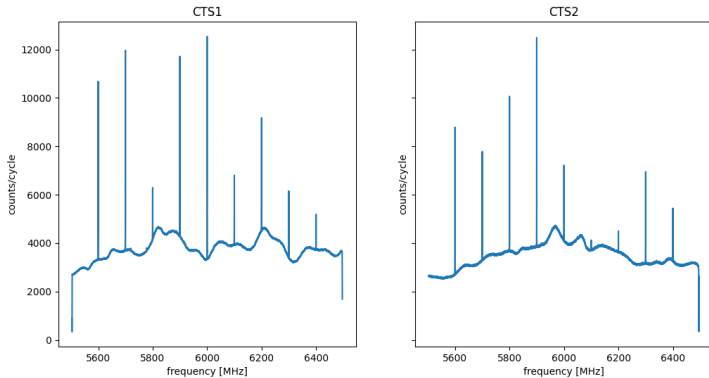


Figure 32: Comb spectra

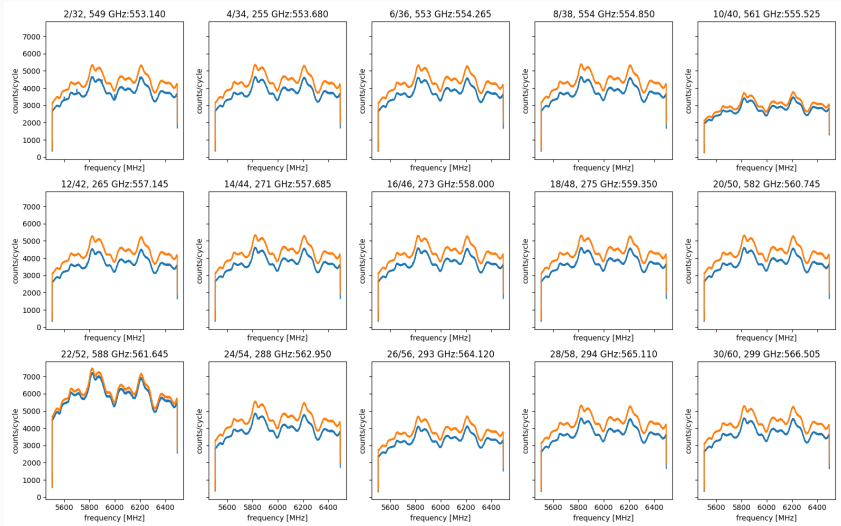


Figure 33: Hot/cold spectra

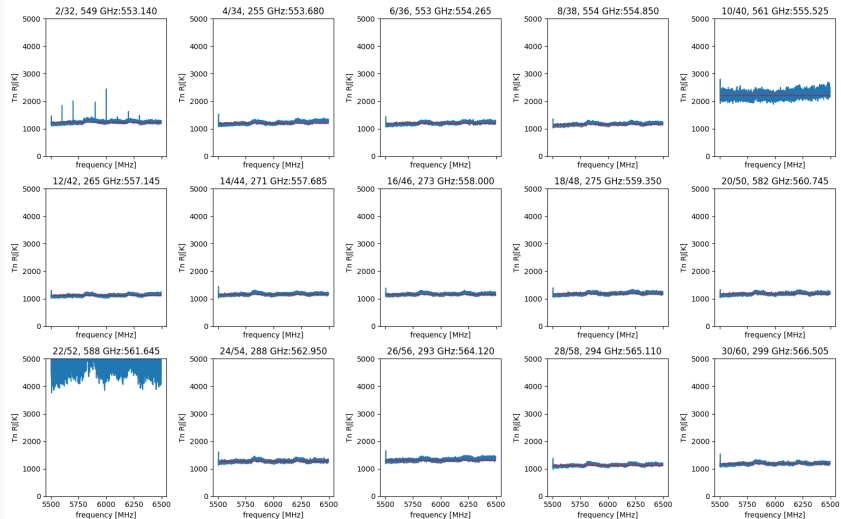


Figure 34: Tsys spectra

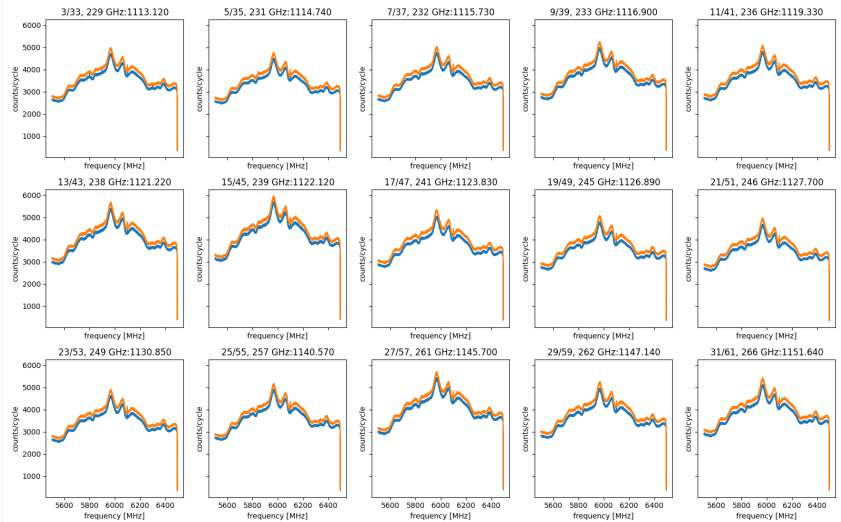


Figure 35: Hot/cold spectra

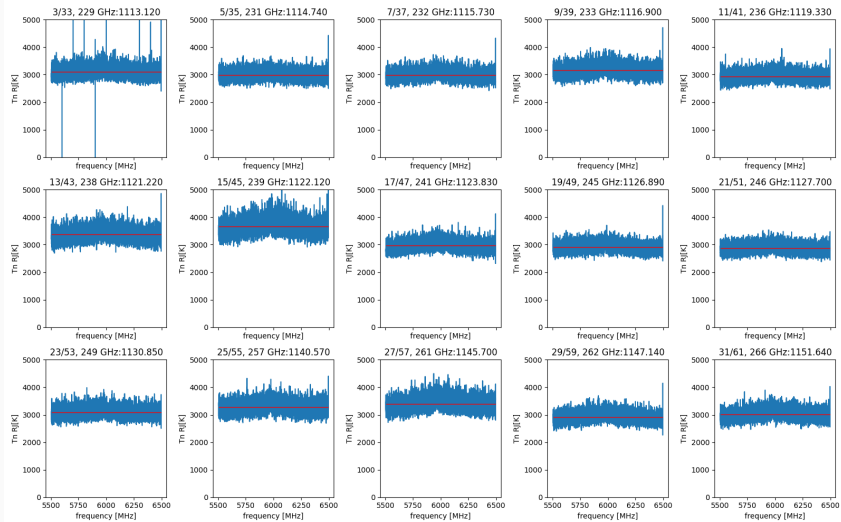


Figure 36: Tsys spectra

Table 8: List of observations 00193 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	HOT	2024-07-04 14:07:42	0	567.540	304	1	1156.140	270	208.092
measurects	0	HOT	2024-07-04 14:07:44	2	567.540	304	3	1156.140	270	208.089
measurects	0	HOT	2024-07-04 14:07:48	4	569.520	313	5	1156.950	271	208.089
measurects	0	HOT	2024-07-04 14:07:52	6	570.330	322	7	1157.670	272	208.089
measurects	0	HOT	2024-07-04 14:07:57	8	572.220	326	9	1159.110	273	208.097
measurects	0	HOT	2024-07-04 14:08:01	10	573.210	327	11	1162.350	277	208.097
measurects	0	HOT	2024-07-04 14:08:05	12	575.865	671	13	1163.700	278	208.097
measurects	0	HOT	2024-07-04 14:08:09	14	576.765	674	15	1165.680	280	208.089
measurects	0	HOT	2024-07-04 14:08:13	16	578.520	678	17	1168.110	283	208.089
measurects	0	HOT	2024-07-04 14:08:18	18	579.780	681	19	1168.920	284	208.089
measurects	0	HOT	2024-07-04 14:08:22	20	581.625	339	21	1170.810	286	208.092
measurects	0	HOT	2024-07-04 14:08:26	22	582.255	344	23	1171.710	287	208.092
measurects	0	HOT	2024-07-04 14:08:30	24	583.065	698	25	1172.880	288	208.092
measurects	0	HOT	2024-07-04 14:08:34	26	583.965	706	27	1174.410	290	208.094
measurects	0	HOT	2024-07-04 14:08:39	28	585.450	715	29	1179.540	294	208.094
measurects	0	HOT	2024-07-04 14:08:43	30	586.665	352	31	1183.770	297	208.094
measurects	0	SKY	2024-07-04 14:08:48	32	567.540	304	33	1156.140	270	208.092
measurects	0	SKY	2024-07-04 14:08:52	34	569.520	313	35	1156.950	271	208.092
measurects	0	SKY	2024-07-04 14:08:57	36	570.330	322	37	1157.670	272	208.092
measurects	0	SKY	2024-07-04 14:09:01	38	572.220	326	39	1159.110	273	208.086
measurects	0	SKY	2024-07-04 14:09:05	40	573.210	327	41	1162.350	277	208.086
measurects	0	SKY	2024-07-04 14:09:09	42	575.865	671	43	1163.700	278	208.086
measurects	0	SKY	2024-07-04 14:09:13	44	576.765	674	45	1165.680	280	208.094
measurects	0	SKY	2024-07-04 14:09:18	46	578.520	678	47	1168.110	283	208.094
measurects	0	SKY	2024-07-04 14:09:22	48	579.780	681	49	1168.920	284	208.094
measurects	0	SKY	2024-07-04 14:09:26	50	581.625	339	51	1170.810	286	208.089
measurects	0	SKY	2024-07-04 14:09:30	52	582.255	344	53	1171.710	287	208.089
measurects	0	SKY	2024-07-04 14:09:34	54	583.065	698	55	1172.880	288	208.089
measurects	0	SKY	2024-07-04 14:09:39	56	583.965	706	57	1174.410	290	208.097
measurects	0	SKY	2024-07-04 14:09:43	58	585.450	715	59	1179.540	294	208.097
measurects	0	SKY	2024-07-04 14:09:47	60	586.665	352	61	1183.770	297	208.097

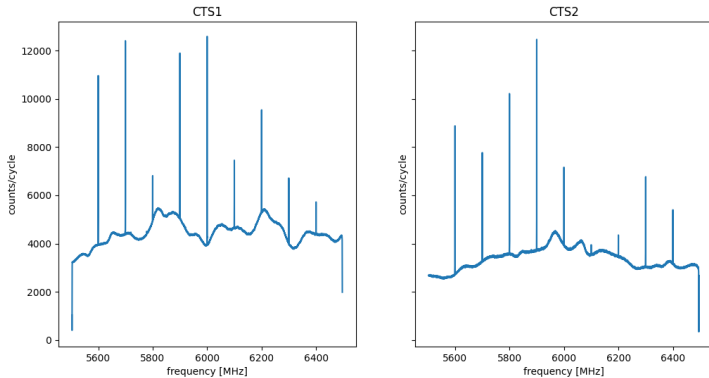


Figure 37: Comb spectra

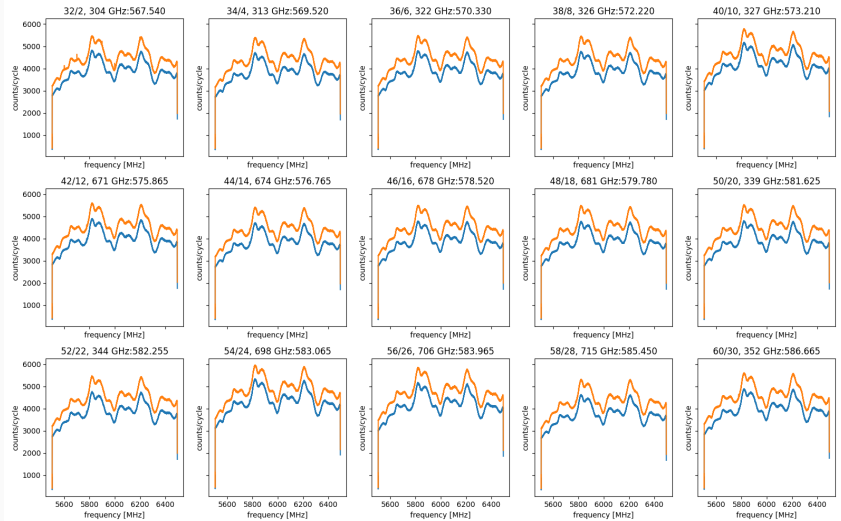


Figure 38: Hot/cold spectra

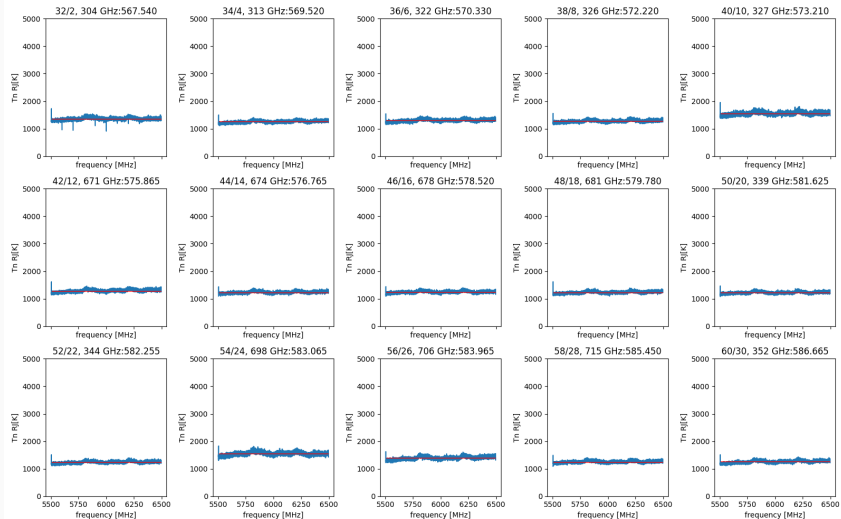


Figure 39: Tsys spectra

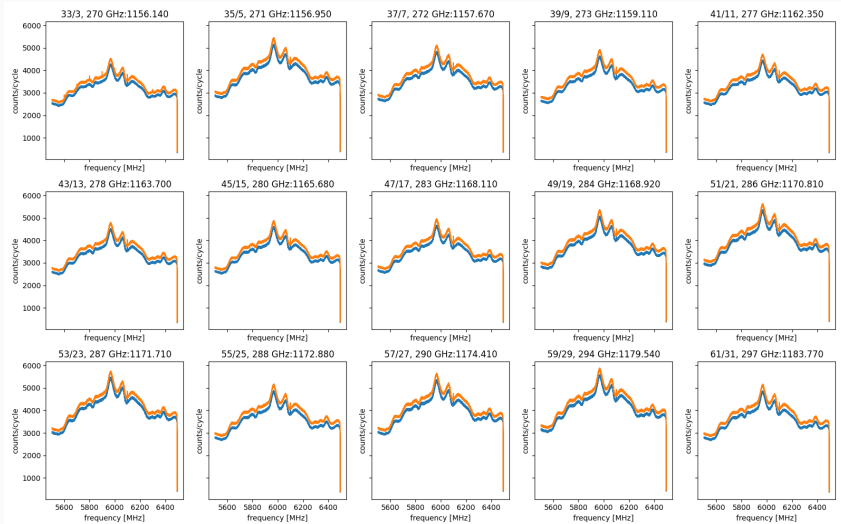


Figure 40: Hot/cold spectra

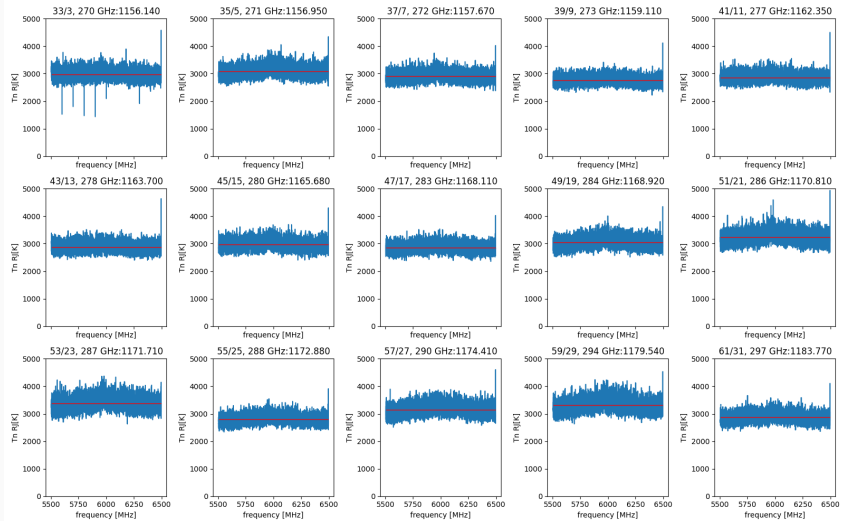


Figure 41: Tsys spectra

Table 9: List of observations 00194 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-07-04 14:10:02	0	587.970	720	1	1184.940	298	208.092
measurects	0	SKY	2024-07-04 14:10:04	2	587.970	720	3	1184.940	298	208.092
measurects	0	SKY	2024-07-04 14:10:08	4	588.780	723	5	1186.200	299	208.092
measurects	0	SKY	2024-07-04 14:10:12	6	590.445	725	7	1189.980	302	208.092
measurects	0	SKY	2024-07-04 14:10:17	8	593.010	739	9	1193.040	305	208.092
measurects	0	SKY	2024-07-04 14:10:21	10	593.955	756	11	1200.690	310	208.092
measurects	0	SKY	2024-07-04 14:10:25	12	594.720	370	13	1201.680	311	208.092
measurects	0	SKY	2024-07-04 14:10:29	14	596.295	373	15	1203.210	313	208.097
measurects	0	SKY	2024-07-04 14:10:33	16	597.645	768	17	1205.100	315	208.097
measurects	0	SKY	2024-07-04 14:10:38	18	598.275	377	19	1209.060	318	208.097
measurects	0	SKY	2024-07-04 14:10:42	20	598.815	378	21	1211.220	320	208.097
measurects	0	SKY	2024-07-04 14:10:46	22	601.425	784	23	1212.750	321	208.097
measurects	0	SKY	2024-07-04 14:10:50	24	603.540	790	25	1213.650	322	208.097
measurects	0	SKY	2024-07-04 14:10:54	26	605.295	793	27	1215.720	323	208.097
measurects	0	SKY	2024-07-04 14:10:59	28	605.925	795	29	1217.070	325	208.097
measurects	0	SKY	2024-07-04 14:11:03	30	608.265	807	31	1221.030	327	208.097
measurects	0	HOT	2024-07-04 14:11:08	32	587.970	720	33	1184.940	298	208.094
measurects	0	HOT	2024-07-04 14:11:12	34	588.780	723	35	1186.200	299	208.094
measurects	0	HOT	2024-07-04 14:11:17	36	590.445	725	37	1189.980	302	208.094
measurects	0	HOT	2024-07-04 14:11:21	38	593.010	739	39	1193.040	305	208.097
measurects	0	HOT	2024-07-04 14:11:25	40	593.955	756	41	1200.690	310	208.097
measurects	0	HOT	2024-07-04 14:11:29	42	594.720	370	43	1201.680	311	208.100
measurects	0	HOT	2024-07-04 14:11:33	44	596.295	373	45	1203.210	313	208.097
measurects	0	HOT	2024-07-04 14:11:38	46	597.645	768	47	1205.100	315	208.097
measurects	0	HOT	2024-07-04 14:11:42	48	598.275	377	49	1209.060	318	208.097
measurects	0	HOT	2024-07-04 14:11:46	50	598.815	378	51	1211.220	320	208.103
measurects	0	HOT	2024-07-04 14:11:50	52	601.425	784	53	1212.750	321	208.103
measurects	0	HOT	2024-07-04 14:11:54	54	603.540	790	55	1213.650	322	208.103
measurects	0	HOT	2024-07-04 14:11:59	56	605.295	793	57	1215.720	323	208.103
measurects	0	HOT	2024-07-04 14:12:03	58	605.925	795	59	1217.070	325	208.103
measurects	0	HOT	2024-07-04 14:12:07	60	608.265	807	61	1221.030	327	208.102

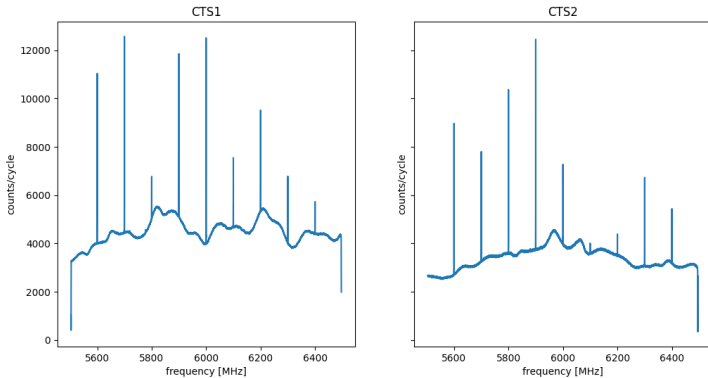


Figure 42: Comb spectra

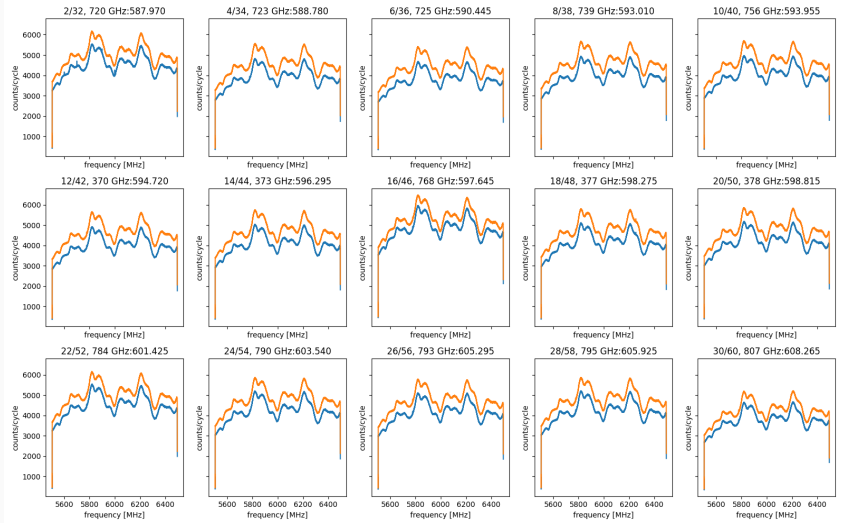


Figure 43: Hot/cold spectra

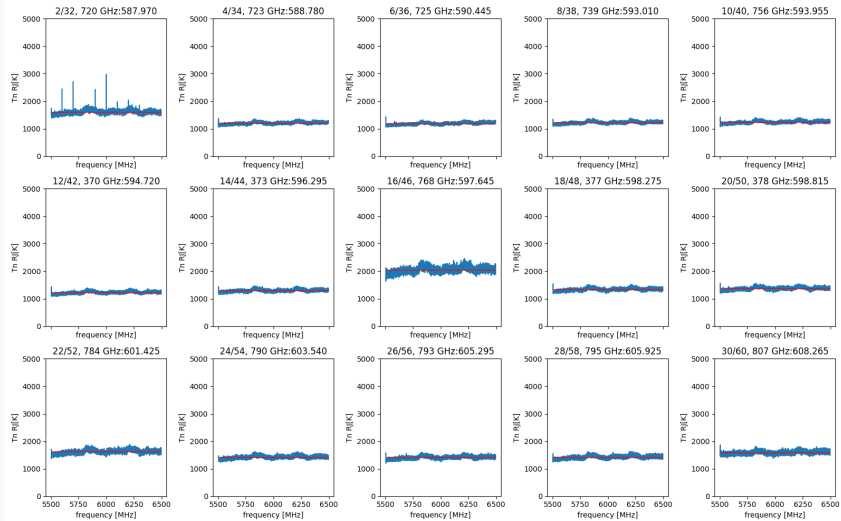


Figure 44: Tsys spectra

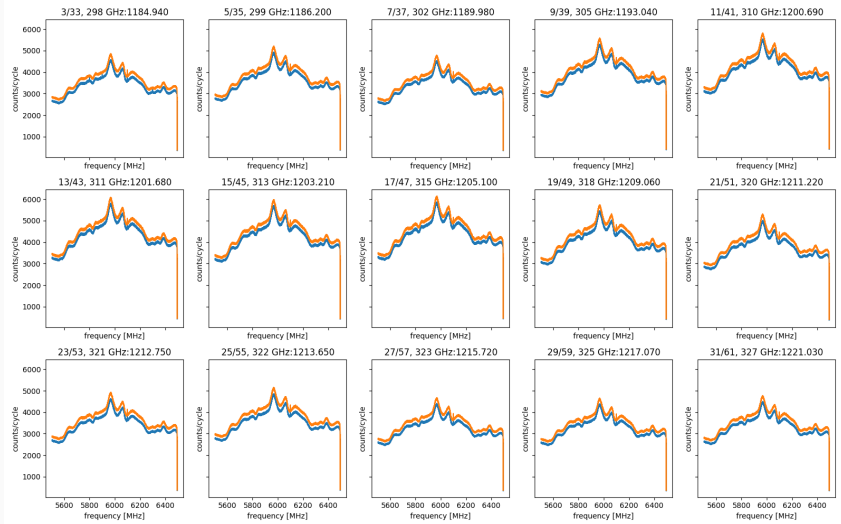


Figure 45: Hot/cold spectra

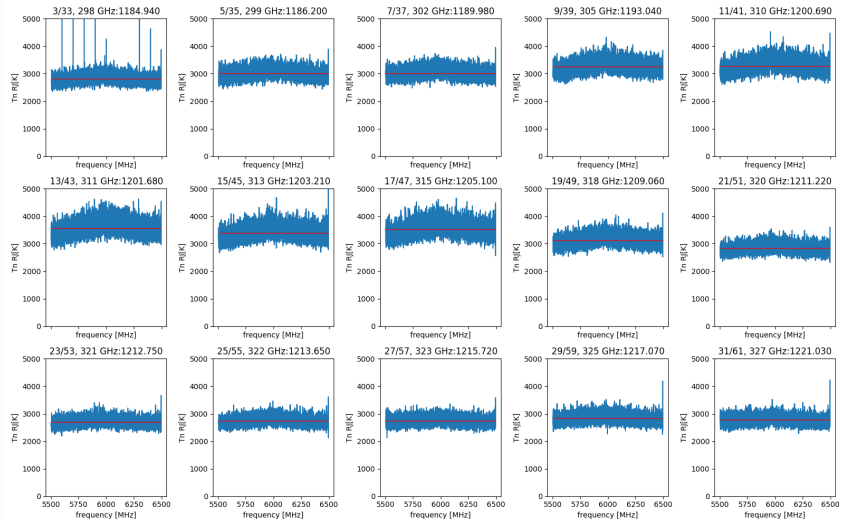


Figure 46: Tsys spectra

Table 10: List of observations 00195 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	HOT	2024-07-04 14:12:22	0	610.290	394	1	1222.920	328	208.110
measurects	0	HOT	2024-07-04 14:12:24	2	610.290	394	3	1222.920	328	208.110
measurects	0	HOT	2024-07-04 14:12:28	4	613.485	815	5	1226.340	331	208.110
measurects	0	HOT	2024-07-04 14:12:32	6	614.295	400	7	1228.050	332	208.105
measurects	0	HOT	2024-07-04 14:12:37	8	616.590	402	9	1233.900	335	208.105
measurects	0	HOT	2024-07-04 14:12:41	10	617.445	822	11	1234.800	336	208.105
measurects	0	HOT	2024-07-04 14:12:45	12	618.210	824	13	1238.310	339	208.110
measurects	0	HOT	2024-07-04 14:12:49	14	618.975	405	15	1240.110	340	208.110
measurects	0	HOT	2024-07-04 14:12:53	16	619.920	828	17	1243.530	343	208.110
measurects	0	HOT	2024-07-04 14:12:58	18	622.395	410	19	1245.780	345	208.108
measurects	0	HOT	2024-07-04 14:13:02	20	623.295	411	21	1250.100	348	208.108
measurects	0	HOT	2024-07-04 14:13:06	22	626.310	843	23	1252.080	350	208.108
measurects	0	HOT	2024-07-04 14:13:10	24	628.515	423	25	1257.480	356	208.105
measurects	0	HOT	2024-07-04 14:13:14	26	630.225	855	27	1260.990	358	208.105
measurects	0	HOT	2024-07-04 14:13:19	28	630.990	858	29	1262.070	359	208.105
measurects	0	HOT	2024-07-04 14:13:23	30	631.935	861	31	1273.050	366	208.102
measurects	0	SKY	2024-07-04 14:13:28	32	610.290	394	33	1222.920	328	208.102
measurects	0	SKY	2024-07-04 14:13:32	34	613.485	815	35	1226.340	331	208.102
measurects	0	SKY	2024-07-04 14:13:37	36	614.295	400	37	1228.050	332	208.103
measurects	0	SKY	2024-07-04 14:13:41	38	616.590	402	39	1233.900	335	208.103
measurects	0	SKY	2024-07-04 14:13:45	40	617.445	822	41	1234.800	336	208.103
measurects	0	SKY	2024-07-04 14:13:49	42	618.210	824	43	1238.310	339	208.102
measurects	0	SKY	2024-07-04 14:13:53	44	618.975	405	45	1240.110	340	208.105
measurects	0	SKY	2024-07-04 14:13:58	46	619.920	828	47	1243.530	343	208.105
measurects	0	SKY	2024-07-04 14:14:02	48	622.395	410	49	1245.780	345	208.111
measurects	0	SKY	2024-07-04 14:14:06	50	623.295	411	51	1250.100	348	208.111
measurects	0	SKY	2024-07-04 14:14:10	52	626.310	843	53	1252.080	350	208.111
measurects	0	SKY	2024-07-04 14:14:14	54	628.515	423	55	1257.480	356	208.105
measurects	0	SKY	2024-07-04 14:14:19	56	630.225	855	57	1260.990	358	208.108
measurects	0	SKY	2024-07-04 14:14:23	58	630.990	858	59	1262.070	359	208.108
measurects	0	SKY	2024-07-04 14:14:27	60	631.935	861	61	1273.050	366	208.110

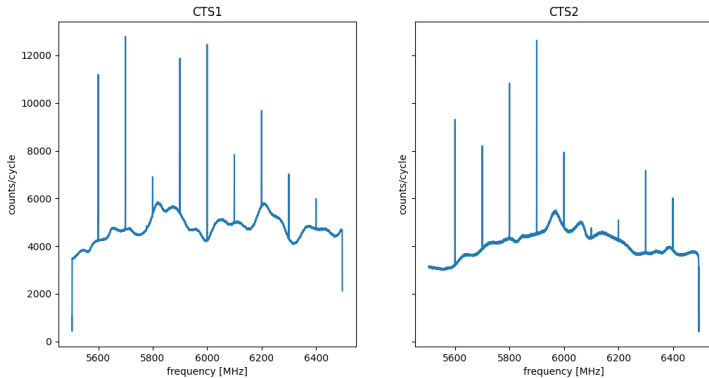


Figure 47: Comb spectra

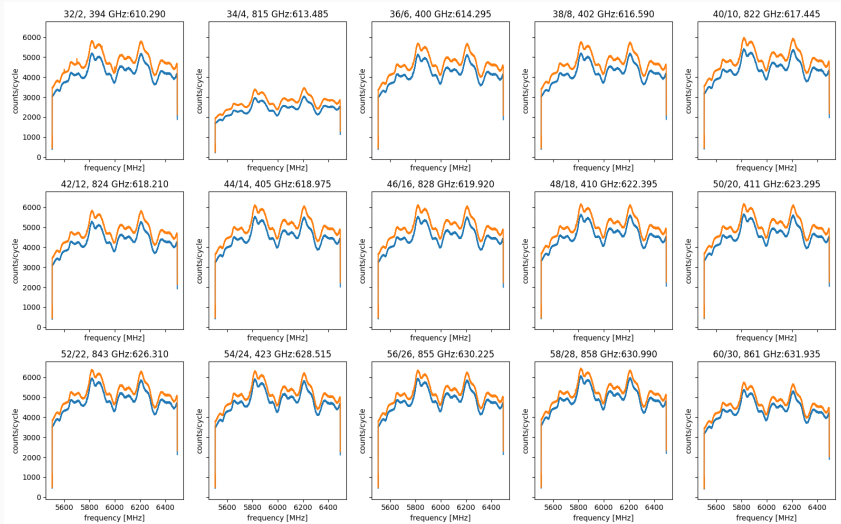


Figure 48: Hot/cold spectra

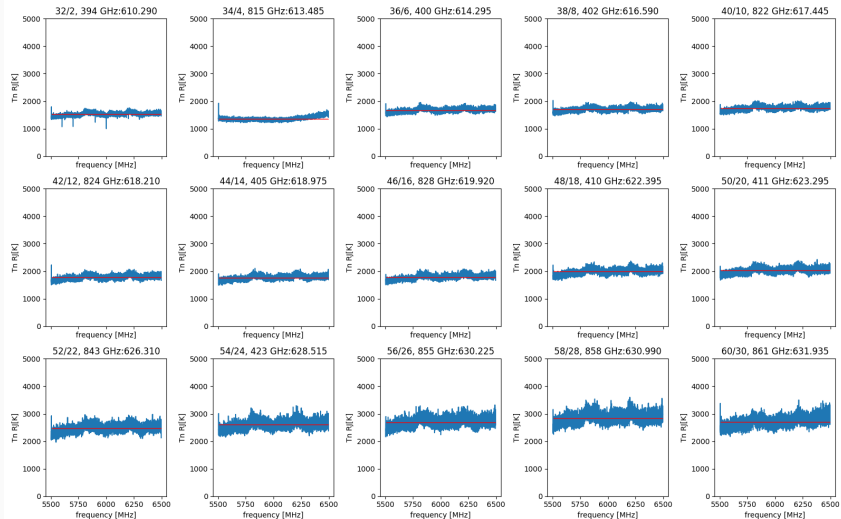


Figure 49: Tsys spectra

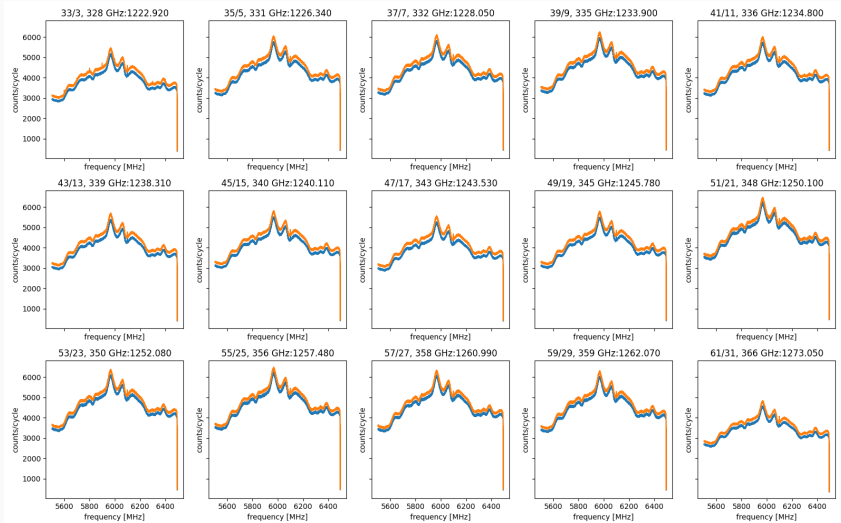


Figure 50: Hot/cold spectra

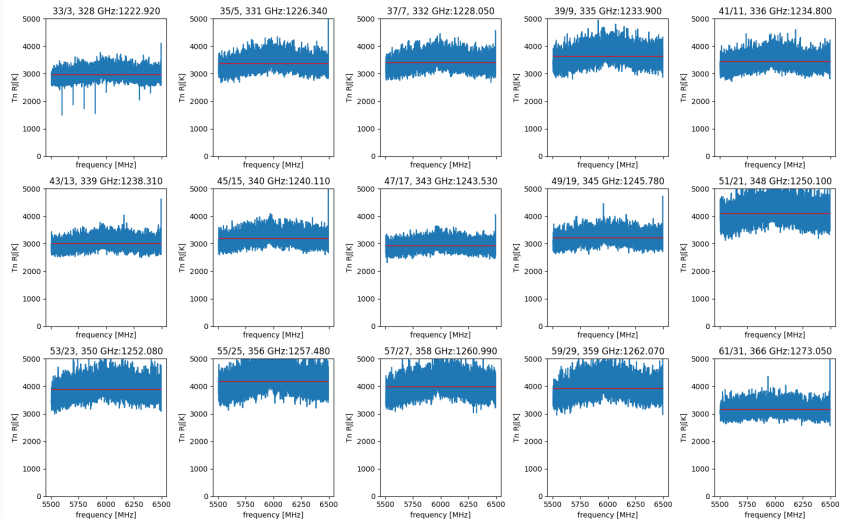


Figure 51: Tsys spectra

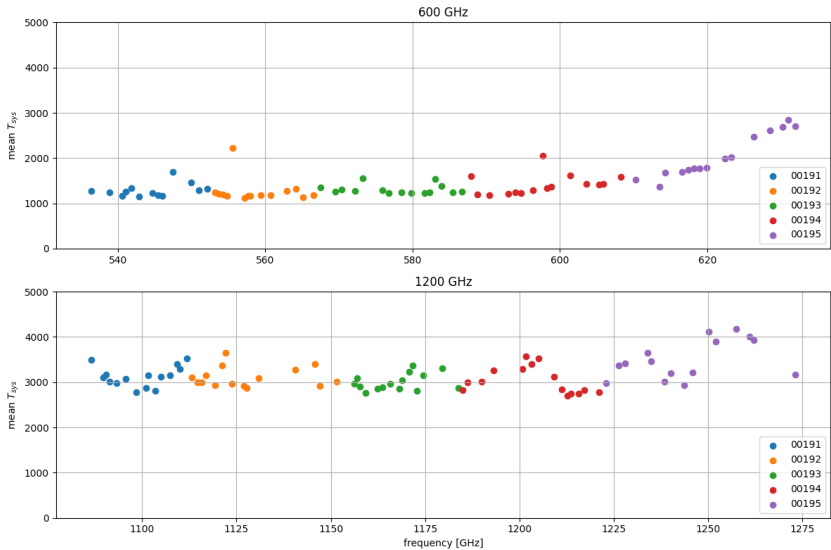


Figure 52: Results from 2024-07-04

- 600 GHz
 - ▶ Failed tuning at 537.705, 539.505 GHz.
 - ▶ Sub-optimal performance at 555.525 and 561.645 GHz
 - ▶ Spurious seen at 553.140, 567.540, 587.970 GHz
- 1200 GHz
 - ▶ Spurious seen at 1113.120, 115.140, 1184.940 and 1222.920 GHz

Table 11: List of observations 00237 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-21 11:30:16	0	550.980	541	1	1107.450	220	211.536
measurects	0	HOT	2024-08-21 11:30:27	2	550.980	541	3	1107.450	220	211.544
measurects	0	HOT	2024-08-21 11:30:39	4	560.745	582	5	1126.890	245	211.550
measurects	0	HOT	2024-08-21 11:30:50	6	619.920	828	7	1107.450	220	211.555
measurects	0	HOT	2024-08-21 11:31:01	8	582.255	344	9	1157.670	272	211.558
measurects	0	HOT	2024-08-21 11:31:13	10	593.955	756	11	1222.920	328	211.569
measurects	0	HOT	2024-08-21 11:31:24	12	569.520	313	13	1101.600	213	211.569
measurects	0	HOT	2024-08-21 11:31:35	14	558.000	273	15	1213.650	322	211.576
measurects	0	HOT	2024-08-21 11:31:47	16	565.110	294	17	1111.860	227	211.582
measurects	0	HOT	2024-08-21 11:31:58	18	614.295	400	19	1226.340	331	211.585
measurects	0	HOT	2024-08-21 11:32:09	20	596.295	373	21	1109.340	223	211.590
measurects	0	HOT	2024-08-21 11:32:20	22	601.425	784	23	1184.940	298	211.590
measurects	0	HOT	2024-08-21 11:32:32	24	545.445	235	25	1162.350	277	211.593
measurects	0	HOT	2024-08-21 11:32:43	26	538.875	503	27	1273.050	366	211.604
measurects	0	HOT	2024-08-21 11:32:54	28	579.780	681	29	1140.570	257	211.606
measurects	0	HOT	2024-08-21 11:33:06	30	553.680	255	31	1262.070	359	211.606
measurects	0	SKY	2024-08-21 11:33:18	32	550.980	541	33	1107.450	220	211.606
measurects	0	SKY	2024-08-21 11:33:30	34	560.745	582	35	1126.890	245	211.617
measurects	0	SKY	2024-08-21 11:33:41	36	619.920	828	37	1107.450	220	211.617
measurects	0	SKY	2024-08-21 11:33:52	38	582.255	344	39	1157.670	272	211.630
measurects	0	SKY	2024-08-21 11:34:04	40	593.955	756	41	1222.920	328	211.628
measurects	0	SKY	2024-08-21 11:34:15	42	569.520	313	43	1101.600	213	211.625
measurects	0	SKY	2024-08-21 11:34:26	44	558.000	273	45	1213.650	322	211.638
measurects	0	SKY	2024-08-21 11:34:38	46	565.110	294	47	1111.860	227	211.641
measurects	0	SKY	2024-08-21 11:34:49	48	614.295	400	49	1226.340	331	211.649
measurects	0	SKY	2024-08-21 11:35:00	50	596.295	373	51	1109.340	223	211.649
measurects	0	SKY	2024-08-21 11:35:12	52	601.425	784	53	1184.940	298	211.660
measurects	0	SKY	2024-08-21 11:35:23	54	545.445	235	55	1162.350	277	211.660
measurects	0	SKY	2024-08-21 11:35:34	56	538.875	503	57	1273.050	366	211.657
measurects	0	SKY	2024-08-21 11:35:46	58	579.780	681	59	1140.570	257	211.668
measurects	0	SKY	2024-08-21 11:35:57	60	553.680	255	61	1262.070	359	211.676

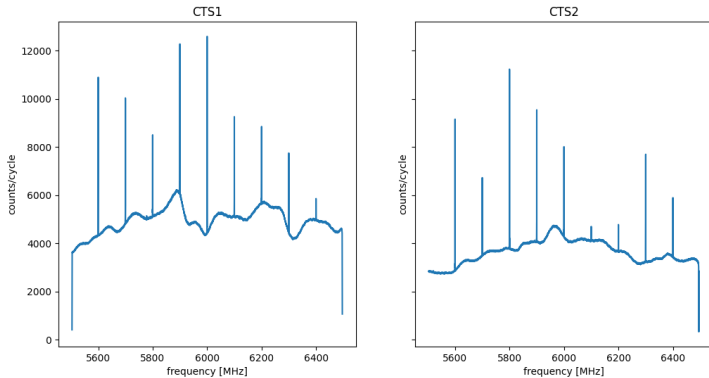


Figure 53: Comb spectra

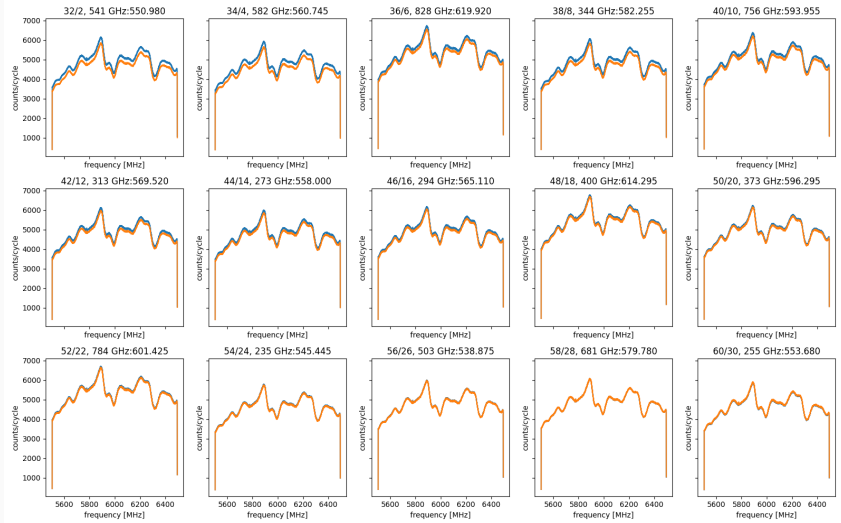


Figure 54: Hot/cold spectra

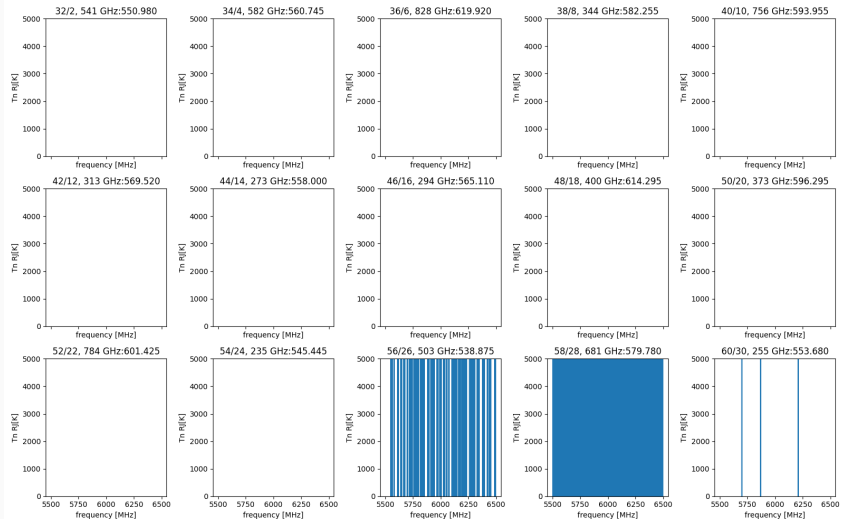


Figure 55: Tsys spectra

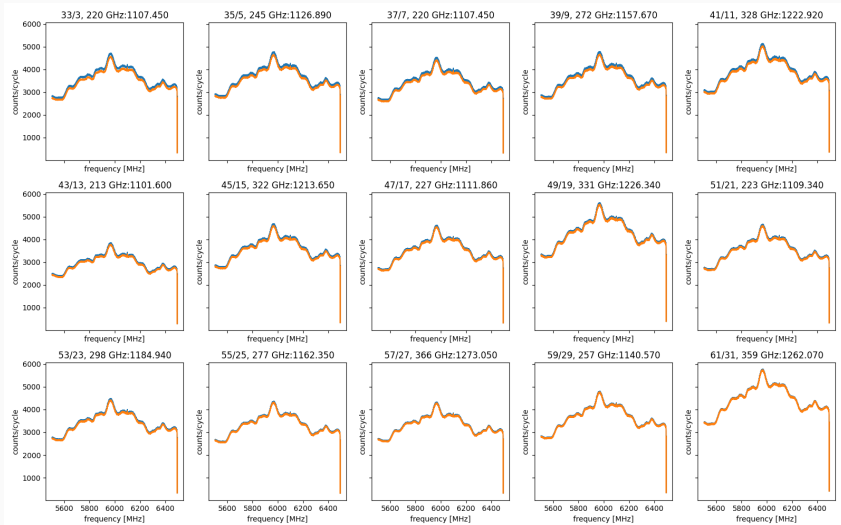


Figure 56: Hot/cold spectra

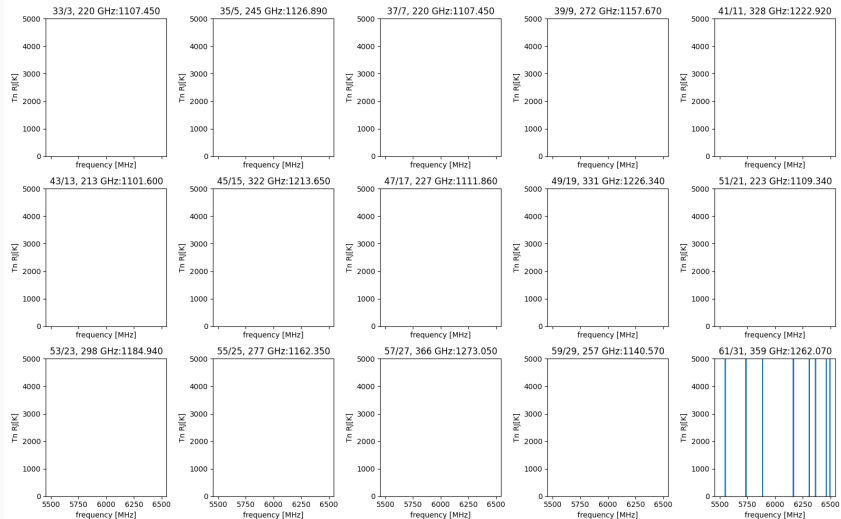


Figure 57: Tsys spectra

Table 12: List of observations 00238 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-21 11:36:16	0	536.355	219	1	1086.480	195	211.681
measurects	0	SKY	2024-08-21 11:36:26	2	536.355	219	3	1086.480	195	211.679
measurects	0	SKY	2024-08-21 11:36:37	4	541.800	229	5	1089.630	198	211.684
measurects	0	SKY	2024-08-21 11:36:49	6	542.835	231	7	1093.320	202	211.689
measurects	0	SKY	2024-08-21 11:37:00	8	544.680	521	9	1095.660	205	211.703
measurects	0	SKY	2024-08-21 11:37:11	10	547.425	242	11	1098.540	209	211.705
measurects	0	SKY	2024-08-21 11:37:23	12	549.900	246	13	1101.150	212	211.700
measurects	0	SKY	2024-08-21 11:37:34	14	552.105	545	15	1103.400	215	211.714
measurects	0	SKY	2024-08-21 11:37:45	16	555.525	561	17	1105.020	217	211.716
measurects	0	SKY	2024-08-21 11:37:57	18	557.145	265	19	1114.740	231	211.716
measurects	0	SKY	2024-08-21 11:38:08	20	557.685	271	21	1116.900	233	211.724
measurects	0	SKY	2024-08-21 11:38:19	22	562.950	288	23	1119.330	236	211.721
measurects	0	SKY	2024-08-21 11:38:31	24	564.120	293	25	1121.220	238	211.727
measurects	0	SKY	2024-08-21 11:38:42	26	566.505	299	27	1123.830	241	211.732
measurects	0	SKY	2024-08-21 11:38:53	28	567.540	304	29	1130.850	249	211.737
measurects	0	SKY	2024-08-21 11:39:05	30	570.330	322	31	1151.640	266	211.740
measurects	0	HOT	2024-08-21 11:39:17	32	536.355	219	33	1086.480	195	211.740
measurects	0	HOT	2024-08-21 11:39:28	34	541.800	229	35	1089.630	198	211.746
measurects	0	HOT	2024-08-21 11:39:40	36	542.835	231	37	1093.320	202	211.754
measurects	0	HOT	2024-08-21 11:39:51	38	544.680	521	39	1095.660	205	211.764
measurects	0	HOT	2024-08-21 11:40:02	40	547.425	242	41	1098.540	209	211.767
measurects	0	HOT	2024-08-21 11:40:14	42	549.900	246	43	1101.150	212	211.775
measurects	0	HOT	2024-08-21 11:40:25	44	552.105	545	45	1103.400	215	211.775
measurects	0	HOT	2024-08-21 11:40:36	46	555.525	561	47	1105.020	217	211.780
measurects	0	HOT	2024-08-21 11:40:48	48	557.145	265	49	1114.740	231	211.783
measurects	0	HOT	2024-08-21 11:40:59	50	557.685	271	51	1116.900	233	211.783
measurects	0	HOT	2024-08-21 11:41:10	52	562.950	288	53	1119.330	236	211.789
measurects	0	HOT	2024-08-21 11:41:22	54	564.120	293	55	1121.220	238	211.791
measurects	0	HOT	2024-08-21 11:41:33	56	566.505	299	57	1123.830	241	211.791
measurects	0	HOT	2024-08-21 11:41:44	58	567.540	304	59	1130.850	249	211.802
measurects	0	HOT	2024-08-21 11:41:56	60	570.330	322	61	1151.640	266	211.810

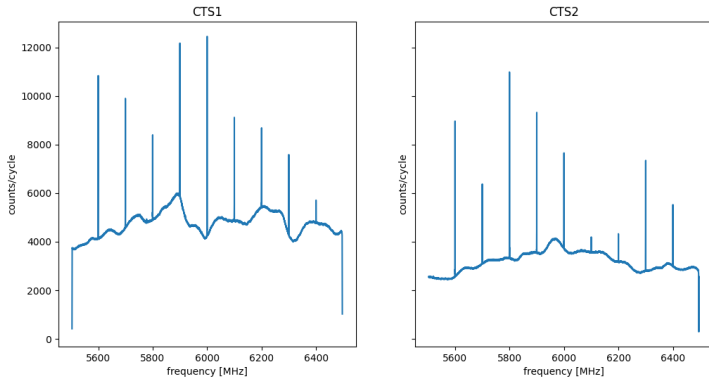


Figure 58: Comb spectra

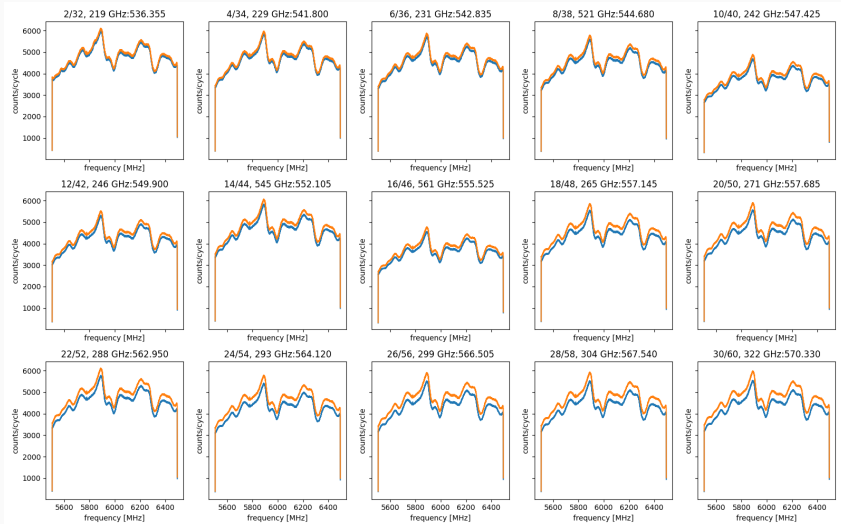


Figure 59: Hot/cold spectra

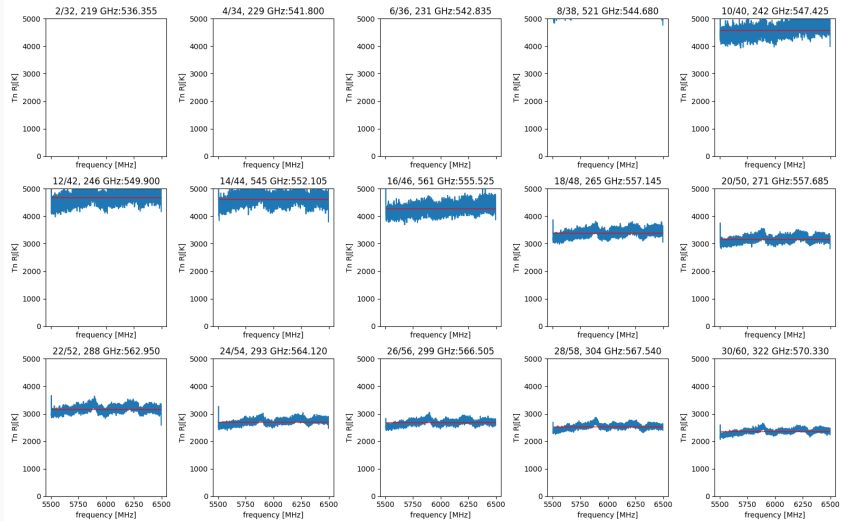


Figure 60: Tsys spectra

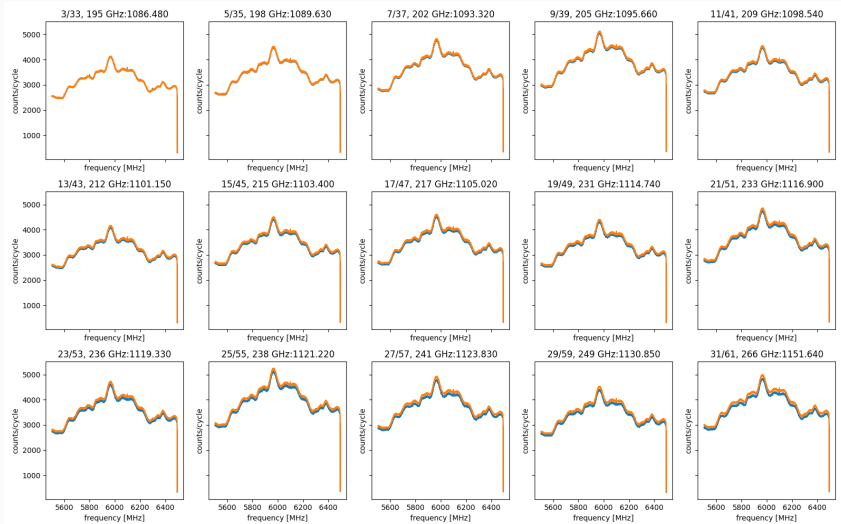


Figure 61: Hot/cold spectra

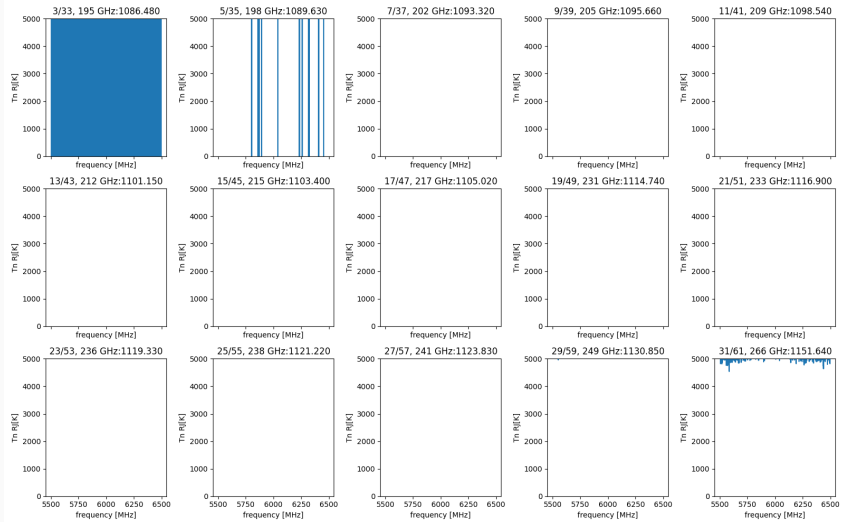


Figure 62: Tsys spectra

Table 13: List of observations 00239 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-21 11:42:16	0	572.220	326	1	1156.140	270	211.821
measurects	0	HOT	2024-08-21 11:42:27	2	572.220	326	3	1156.140	270	211.821
measurects	0	HOT	2024-08-21 11:42:39	4	573.210	327	5	1159.110	273	211.823
measurects	0	HOT	2024-08-21 11:42:50	6	575.865	671	7	1165.680	280	211.826
measurects	0	HOT	2024-08-21 11:43:01	8	576.765	674	9	1168.110	283	211.828
measurects	0	HOT	2024-08-21 11:43:13	10	578.520	678	11	1171.710	287	211.839
measurects	0	HOT	2024-08-21 11:43:24	12	581.625	339	13	1174.410	290	211.844
measurects	0	HOT	2024-08-21 11:43:35	14	583.965	706	15	1179.540	294	211.847
measurects	0	HOT	2024-08-21 11:43:47	16	585.450	715	17	1183.770	297	211.853
measurects	0	HOT	2024-08-21 11:43:58	18	586.665	352	19	1186.200	299	211.855
measurects	0	HOT	2024-08-21 11:44:09	20	588.780	723	21	1189.980	302	211.855
measurects	0	HOT	2024-08-21 11:44:20	22	590.445	725	23	1193.040	305	211.861
measurects	0	HOT	2024-08-21 11:44:32	24	593.010	739	25	1200.690	310	211.874
measurects	0	HOT	2024-08-21 11:44:43	26	597.645	768	27	1201.680	311	211.874
measurects	0	HOT	2024-08-21 11:44:54	28	598.815	378	29	1205.100	315	211.880
measurects	0	HOT	2024-08-21 11:45:06	30	603.540	790	31	1209.060	318	211.879
measurects	0	SKY	2024-08-21 11:45:18	32	572.220	326	33	1156.140	270	211.879
measurects	0	SKY	2024-08-21 11:45:30	34	573.210	327	35	1159.110	273	211.890
measurects	0	SKY	2024-08-21 11:45:41	36	575.865	671	37	1165.680	280	211.898
measurects	0	SKY	2024-08-21 11:45:52	38	576.765	674	39	1168.110	283	211.898
measurects	0	SKY	2024-08-21 11:46:04	40	578.520	678	41	1171.710	287	211.901
measurects	0	SKY	2024-08-21 11:46:15	42	581.625	339	43	1174.410	290	211.907
measurects	0	SKY	2024-08-21 11:46:26	44	583.965	706	45	1179.540	294	211.914
measurects	0	SKY	2024-08-21 11:46:38	46	585.450	715	47	1183.770	297	211.917
measurects	0	SKY	2024-08-21 11:46:49	48	586.665	352	49	1186.200	299	211.928
measurects	0	SKY	2024-08-21 11:47:00	50	588.780	723	51	1189.980	302	211.928
measurects	0	SKY	2024-08-21 11:47:12	52	590.445	725	53	1193.040	305	211.930
measurects	0	SKY	2024-08-21 11:47:23	54	593.010	739	55	1200.690	310	211.930
measurects	0	SKY	2024-08-21 11:47:34	56	597.645	768	57	1201.680	311	211.933
measurects	0	SKY	2024-08-21 11:47:46	58	598.815	378	59	1205.100	315	211.944
measurects	0	SKY	2024-08-21 11:47:57	60	603.540	790	61	1209.060	318	211.944

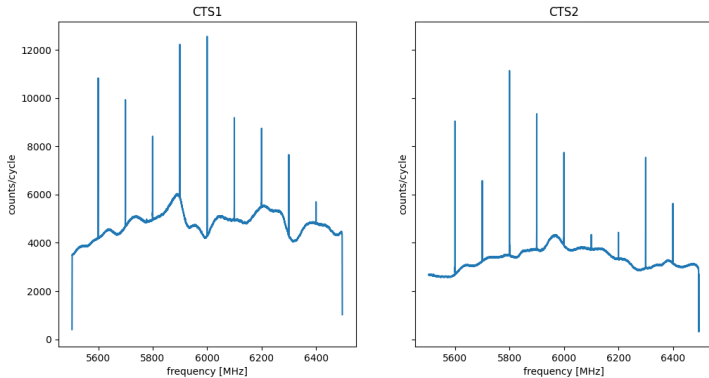


Figure 63: Comb spectra

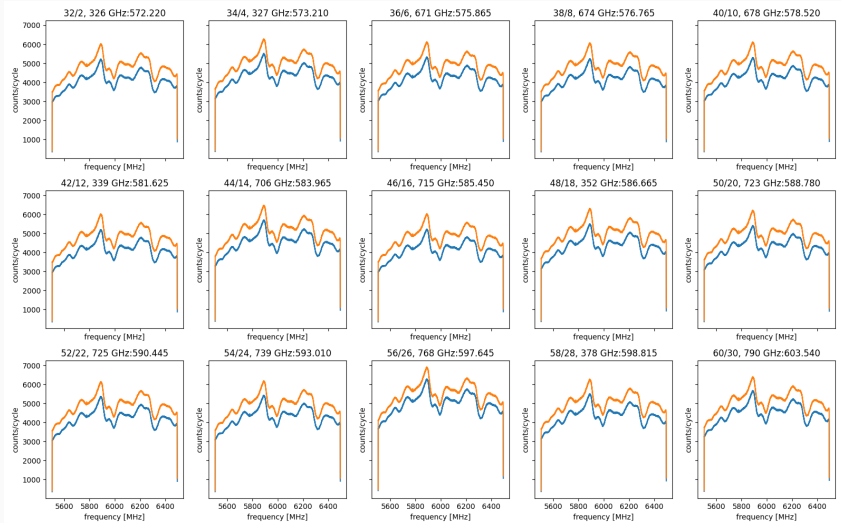


Figure 64: Hot/cold spectra

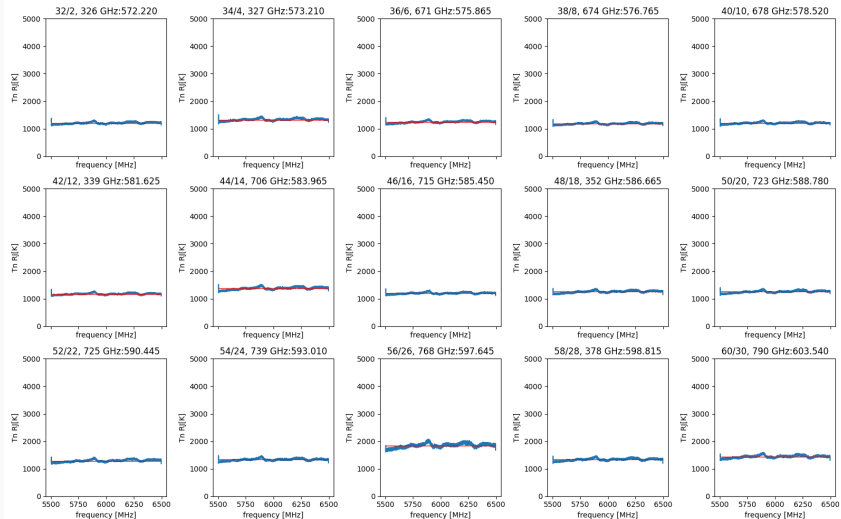


Figure 65: Tsys spectra

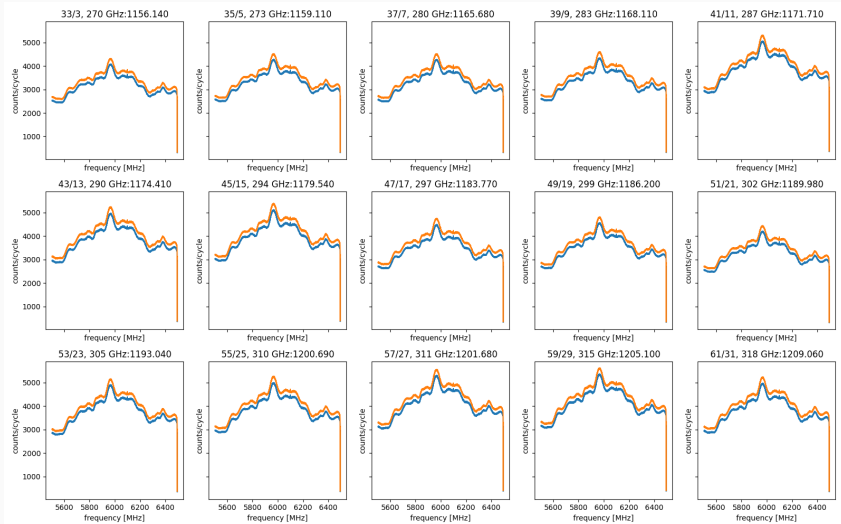


Figure 66: Hot/cold spectra

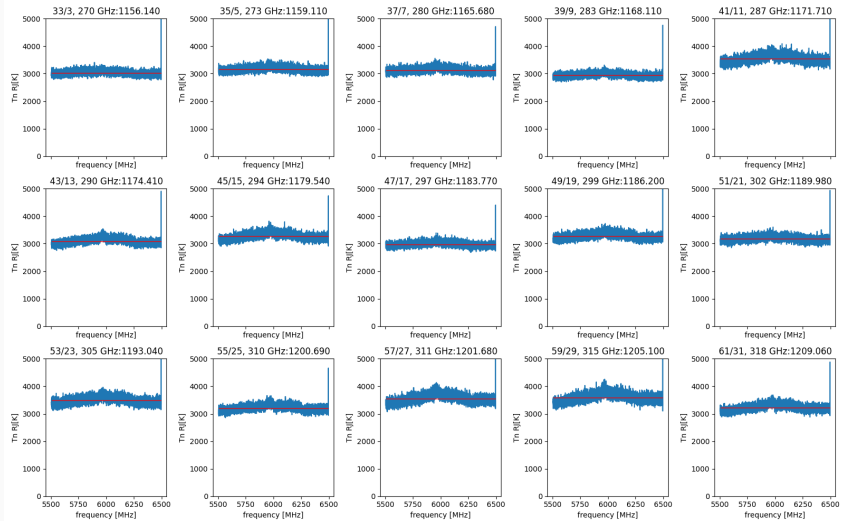


Figure 67: Tsys spectra

Table 14: List of observations 00240 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-21 11:48:16	0	605.295	793	1	1211.220	320	211.949
measurects	0	SKY	2024-08-21 11:48:26	2	605.295	793	3	1211.220	320	211.954
measurects	0	SKY	2024-08-21 11:48:37	4	605.925	795	5	1215.720	323	211.954
measurects	0	SKY	2024-08-21 11:48:49	6	608.265	807	7	1217.070	325	211.968
measurects	0	SKY	2024-08-21 11:49:00	8	610.290	394	9	1221.030	327	211.968
measurects	0	SKY	2024-08-21 11:49:11	10	613.485	815	11	1228.050	332	211.971
measurects	0	SKY	2024-08-21 11:49:23	12	616.590	402	13	1233.900	335	211.979
measurects	0	SKY	2024-08-21 11:49:34	14	618.210	824	15	1234.800	336	211.981
measurects	0	SKY	2024-08-21 11:49:45	16	622.395	410	17	1238.310	339	211.990
measurects	0	SKY	2024-08-21 11:49:57	18	623.295	411	19	1240.110	340	211.990
measurects	0	SKY	2024-08-21 11:50:08	20	626.310	843	21	1243.530	343	211.997
measurects	0	SKY	2024-08-21 11:50:19	22	628.515	423	23	1250.100	348	212.003
measurects	0	SKY	2024-08-21 11:50:31	24	630.225	855	25	1252.080	350	212.003
measurects	0	SKY	2024-08-21 11:50:42	26	630.990	858	27	1260.990	358	212.008
measurects	0	SKY	2024-08-21 11:50:53	28	631.935	861	29	1090.440	199	212.008
measurects	0	SKY	2024-08-21 11:51:05	30	618.975	405	31	1091.340	200	212.008
measurects	0	HOT	2024-08-21 11:51:17	32	605.295	793	33	1211.220	320	212.008
measurects	0	HOT	2024-08-21 11:51:28	34	605.925	795	35	1215.720	323	212.035
measurects	0	HOT	2024-08-21 11:51:40	36	608.265	807	37	1217.070	325	212.029
measurects	0	HOT	2024-08-21 11:51:51	38	610.290	394	39	1221.030	327	212.029
measurects	0	HOT	2024-08-21 11:52:02	40	613.485	815	41	1228.050	332	212.037
measurects	0	HOT	2024-08-21 11:52:14	42	616.590	402	43	1233.900	335	212.040
measurects	0	HOT	2024-08-21 11:52:25	44	618.210	824	45	1234.800	336	212.048
measurects	0	HOT	2024-08-21 11:52:36	46	622.395	410	47	1238.310	339	212.056
measurects	0	HOT	2024-08-21 11:52:48	48	623.295	411	49	1240.110	340	212.056
measurects	0	HOT	2024-08-21 11:52:59	50	626.310	843	51	1243.530	343	212.056
measurects	0	HOT	2024-08-21 11:53:10	52	628.515	423	53	1250.100	348	212.059
measurects	0	HOT	2024-08-21 11:53:22	54	630.225	855	55	1252.080	350	212.069
measurects	0	HOT	2024-08-21 11:53:33	56	630.990	858	57	1260.990	358	212.070
measurects	0	HOT	2024-08-21 11:53:44	58	631.935	861	59	1090.440	199	212.083
measurects	0	HOT	2024-08-21 11:53:56	60	618.975	405	61	1091.340	200	212.086

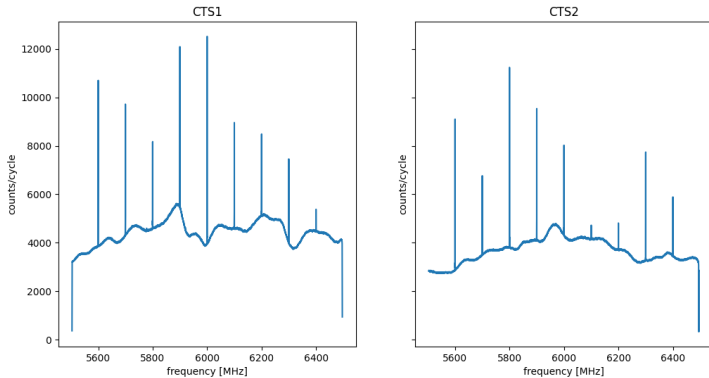


Figure 68: Comb spectra

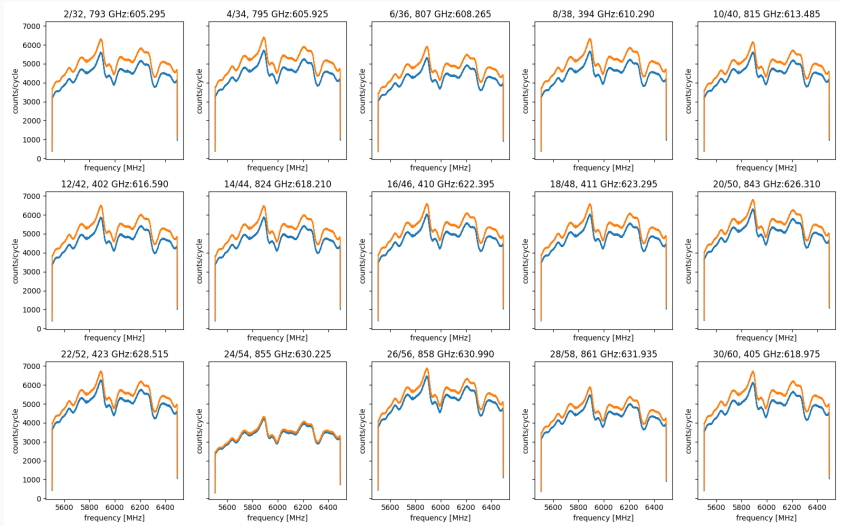


Figure 69: Hot/cold spectra

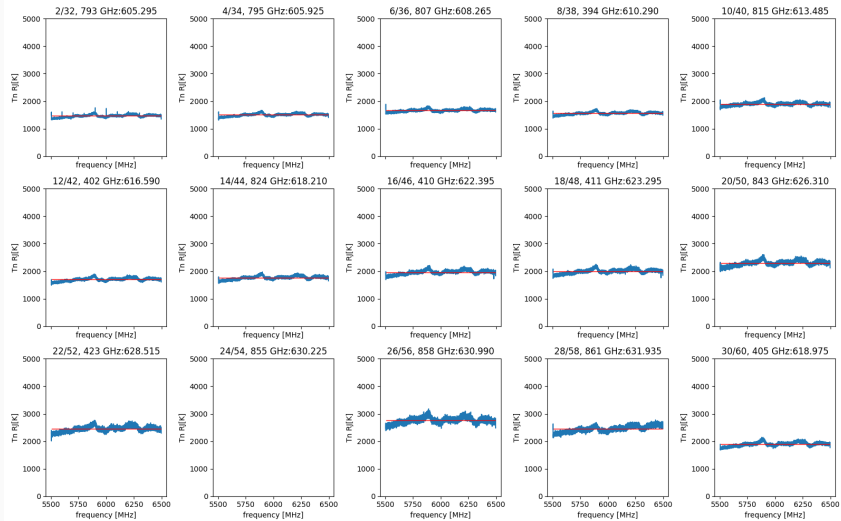


Figure 70: Tsys spectra

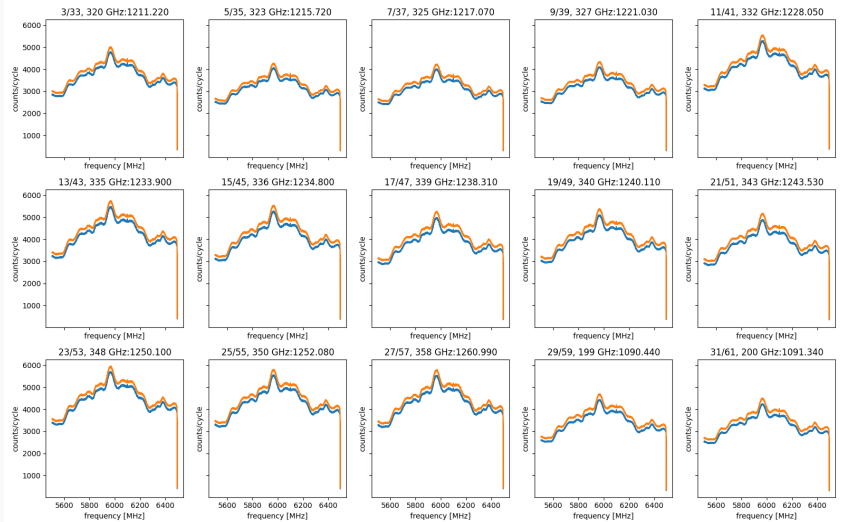


Figure 71: Hot/cold spectra

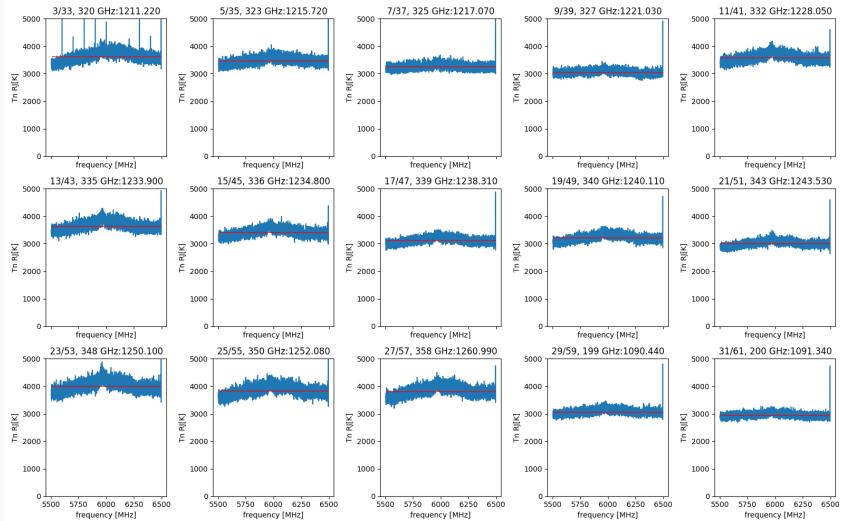


Figure 72: Tsys spectra

Table 15: List of observations 00241 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-21 11:54:16	0	617.445	822	1	1110.060	224	212.091
measurects	0	HOT	2024-08-21 11:54:27	2	617.445	822	3	1110.060	224	212.091
measurects	0	HOT	2024-08-21 11:54:39	4	598.275	377	5	1113.120	229	212.099
measurects	0	HOT	2024-08-21 11:54:50	6	594.720	370	7	1115.730	232	212.102
measurects	0	HOT	2024-08-21 11:55:01	8	587.970	720	9	1122.120	239	212.102
measurects	0	HOT	2024-08-21 11:55:13	10	583.065	698	11	1127.700	246	212.107
measurects	0	HOT	2024-08-21 11:55:24	12	561.645	588	13	1156.950	271	212.123
measurects	0	HOT	2024-08-21 11:55:35	14	559.350	275	15	1163.700	278	212.121
measurects	0	HOT	2024-08-21 11:55:47	16	554.850	554	17	1168.920	284	212.123
measurects	0	HOT	2024-08-21 11:55:58	18	554.265	553	19	1170.810	286	212.129
measurects	0	HOT	2024-08-21 11:56:09	20	553.140	549	21	1172.880	288	212.131
measurects	0	HOT	2024-08-21 11:56:20	22	546.030	239	23	1203.210	313	212.132
measurects	0	HOT	2024-08-21 11:56:32	24	541.080	227	25	1212.750	321	212.139
measurects	0	HOT	2024-08-21 11:56:43	26	540.540	513	27	1157.670	272	212.137
measurects	0	HOT	2024-08-21 11:56:54	28	539.505	506	29	1213.650	322	212.147
measurects	0	HOT	2024-08-21 11:57:06	30	537.705	221	31	1107.450	220	212.153
measurects	0	SKY	2024-08-21 11:57:18	32	617.445	822	33	1110.060	224	212.153
measurects	0	SKY	2024-08-21 11:57:30	34	598.275	377	35	1113.120	229	212.161
measurects	0	SKY	2024-08-21 11:57:41	36	594.720	370	37	1115.730	232	212.155
measurects	0	SKY	2024-08-21 11:57:52	38	587.970	720	39	1122.120	239	212.174
measurects	0	SKY	2024-08-21 11:58:04	40	583.065	698	41	1127.700	246	212.177
measurects	0	SKY	2024-08-21 11:58:15	42	561.645	588	43	1156.950	271	212.185
measurects	0	SKY	2024-08-21 11:58:26	44	559.350	275	45	1163.700	278	212.182
measurects	0	SKY	2024-08-21 11:58:38	46	554.850	554	47	1168.920	284	212.190
measurects	0	SKY	2024-08-21 11:58:49	48	554.265	553	49	1170.810	286	212.196
measurects	0	SKY	2024-08-21 11:59:00	50	553.140	549	51	1172.880	288	212.196
measurects	0	SKY	2024-08-21 11:59:12	52	546.030	239	53	1203.210	313	212.204
measurects	0	SKY	2024-08-21 11:59:23	54	541.080	227	55	1212.750	321	212.204
measurects	0	SKY	2024-08-21 11:59:34	56	540.540	513	57	1157.670	272	212.214
measurects	0	SKY	2024-08-21 11:59:46	58	539.505	506	59	1213.650	322	212.204
measurects	0	SKY	2024-08-21 11:59:57	60	537.705	221	61	1107.450	220	212.217

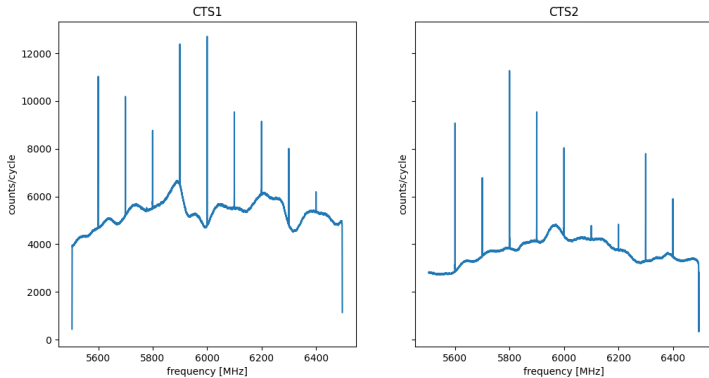


Figure 73: Comb spectra

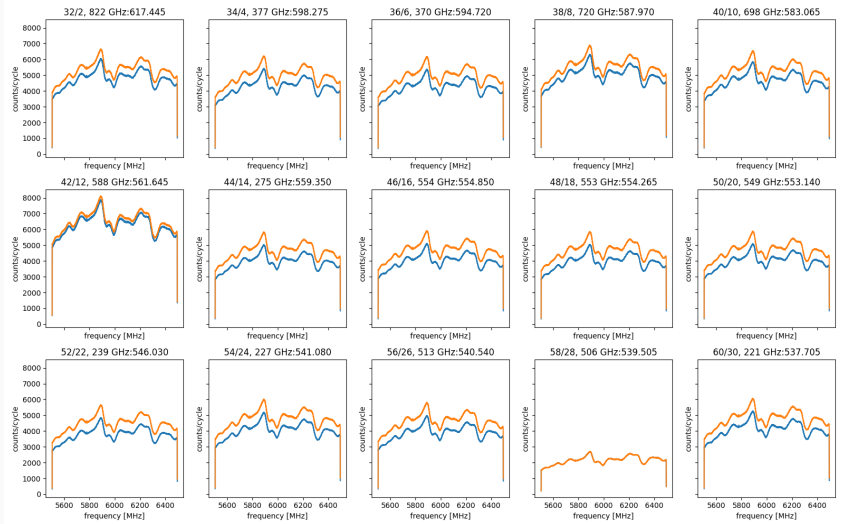


Figure 74: Hot/cold spectra

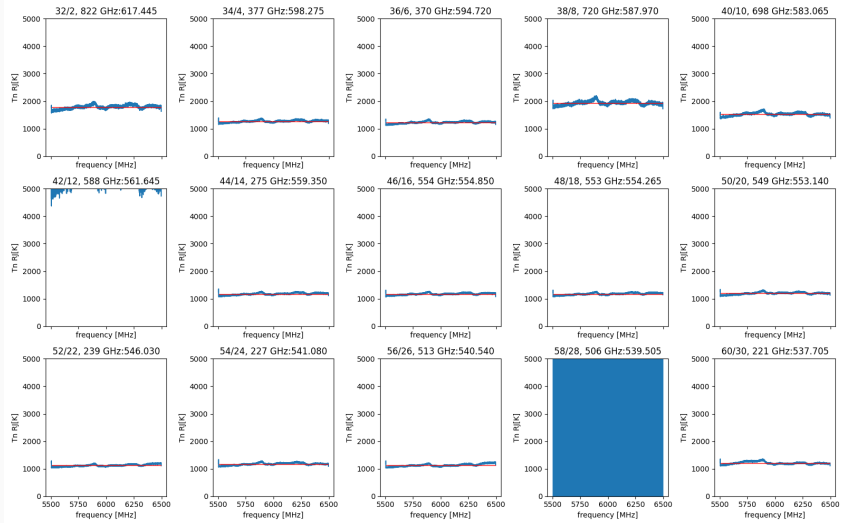


Figure 75: Tsys spectra

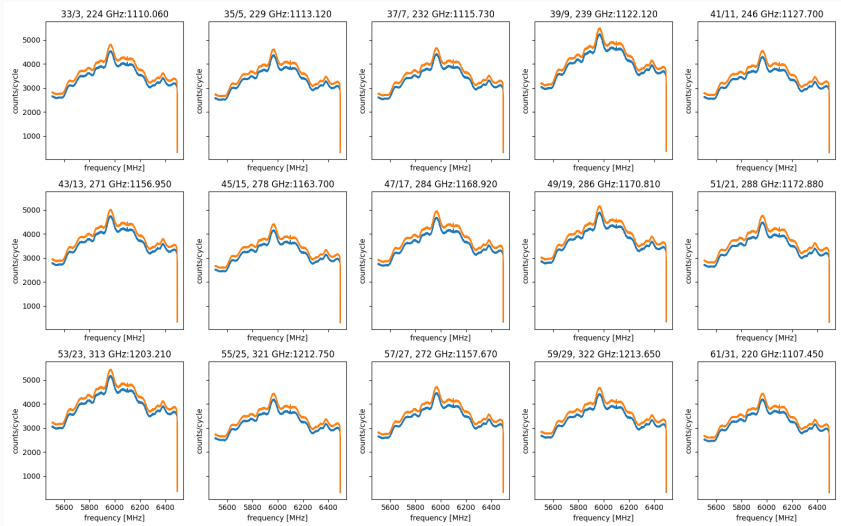


Figure 76: Hot/cold spectra

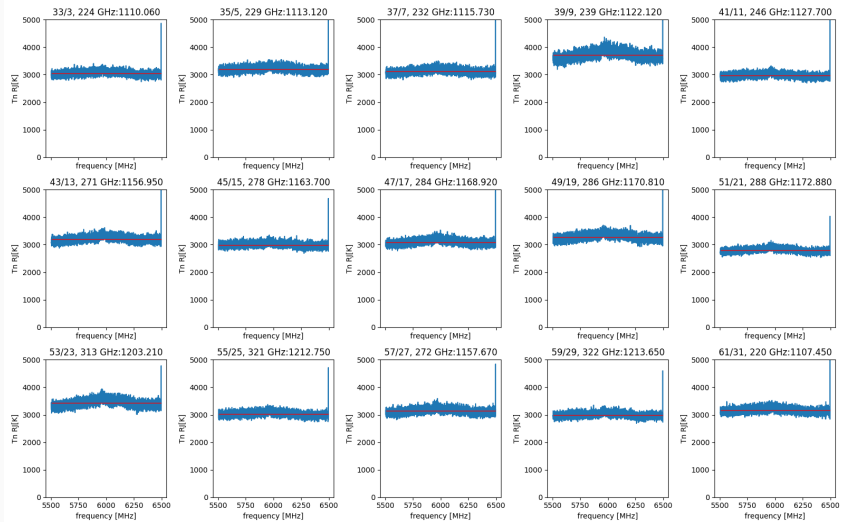


Figure 77: Tsys spectra

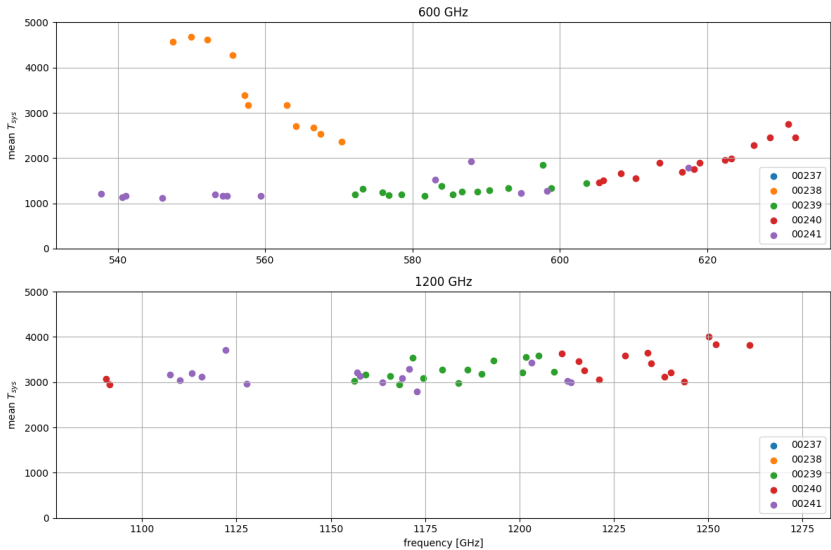


Figure 78: Results from 2024-08-21

- 600 GHz
 - ▶ Basically no contrast between hot and cold for all frequencies during obs id 00237 and 00238.
- 1200 GHz
 - ▶ Basically no contrast between hot and cold for all frequencies during obs id 00237 and 00238.

Table 16: List of observations 00381 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-23 06:30:16	0	550.980	541	1	1107.450	220	210.894
measurects	0	HOT	2024-08-23 06:30:27	2	550.980	541	3	1107.450	220	210.894
measurects	0	HOT	2024-08-23 06:30:39	4	560.745	582	5	1126.890	245	210.894
measurects	0	HOT	2024-08-23 06:30:50	6	619.920	828	7	1107.450	220	210.896
measurects	0	HOT	2024-08-23 06:31:01	8	582.255	344	9	1157.670	272	210.891
measurects	0	HOT	2024-08-23 06:31:13	10	593.955	756	11	1222.920	328	210.894
measurects	0	HOT	2024-08-23 06:31:24	12	569.520	313	13	1101.600	213	210.896
measurects	0	HOT	2024-08-23 06:31:35	14	558.000	273	15	1213.650	322	210.894
measurects	0	HOT	2024-08-23 06:31:47	16	565.110	294	17	1111.860	227	210.896
measurects	0	HOT	2024-08-23 06:31:58	18	614.295	400	19	1226.340	331	210.902
measurects	0	HOT	2024-08-23 06:32:09	20	596.295	373	21	1109.340	223	210.896
measurects	0	HOT	2024-08-23 06:32:20	22	601.425	784	23	1184.940	298	210.899
measurects	0	HOT	2024-08-23 06:32:32	24	545.445	235	25	1162.350	277	210.896
measurects	0	HOT	2024-08-23 06:32:43	26	538.875	503	27	1273.050	366	210.899
measurects	0	HOT	2024-08-23 06:32:54	28	579.780	681	29	1140.570	257	210.899
measurects	0	HOT	2024-08-23 06:33:06	30	553.680	255	31	1262.070	359	210.899
measurects	0	SKY	2024-08-23 06:33:18	32	550.980	541	33	1107.450	220	210.899
measurects	0	SKY	2024-08-23 06:33:30	34	560.745	582	35	1126.890	245	210.896
measurects	0	SKY	2024-08-23 06:33:41	36	619.920	828	37	1107.450	220	210.896
measurects	0	SKY	2024-08-23 06:33:52	38	582.255	344	39	1157.670	272	210.899
measurects	0	SKY	2024-08-23 06:34:04	40	593.955	756	41	1222.920	328	210.896
measurects	0	SKY	2024-08-23 06:34:15	42	569.520	313	43	1101.600	213	210.894
measurects	0	SKY	2024-08-23 06:34:26	44	558.000	273	45	1213.650	322	210.899
measurects	0	SKY	2024-08-23 06:34:38	46	565.110	294	47	1111.860	227	210.891
measurects	0	SKY	2024-08-23 06:34:49	48	614.295	400	49	1226.340	331	210.896
measurects	0	SKY	2024-08-23 06:35:00	50	596.295	373	51	1109.340	223	210.896
measurects	0	SKY	2024-08-23 06:35:12	52	601.425	784	53	1184.940	298	210.896
measurects	0	SKY	2024-08-23 06:35:23	54	545.445	235	55	1162.350	277	210.891
measurects	0	SKY	2024-08-23 06:35:34	56	538.875	503	57	1273.050	366	210.889
measurects	0	SKY	2024-08-23 06:35:46	58	579.780	681	59	1140.570	257	210.896
measurects	0	SKY	2024-08-23 06:35:57	60	553.680	255	61	1262.070	359	210.891

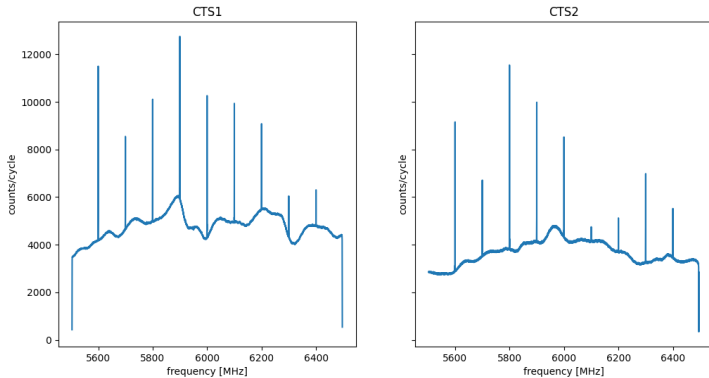


Figure 79: Comb spectra

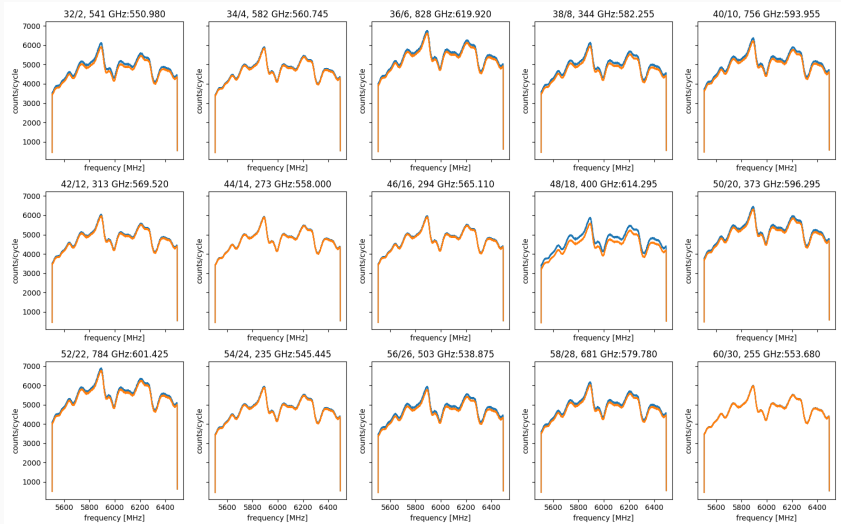


Figure 80: Hot/cold spectra

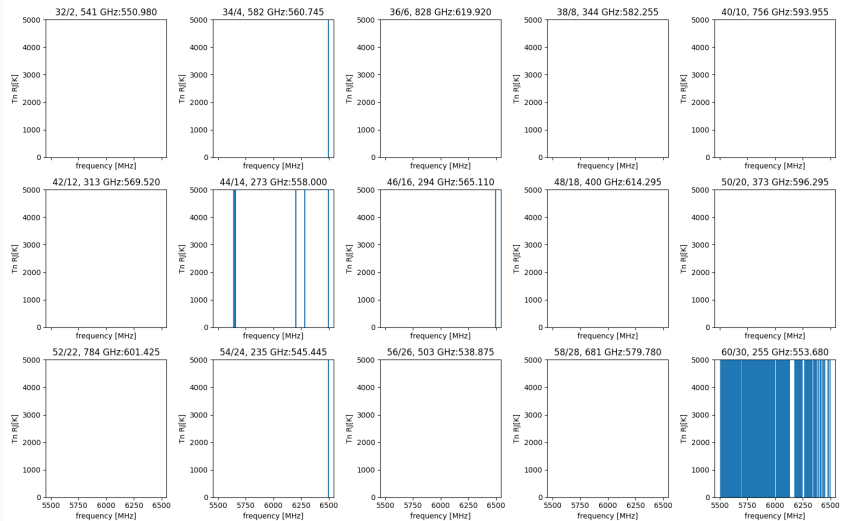


Figure 81: Tsys spectra

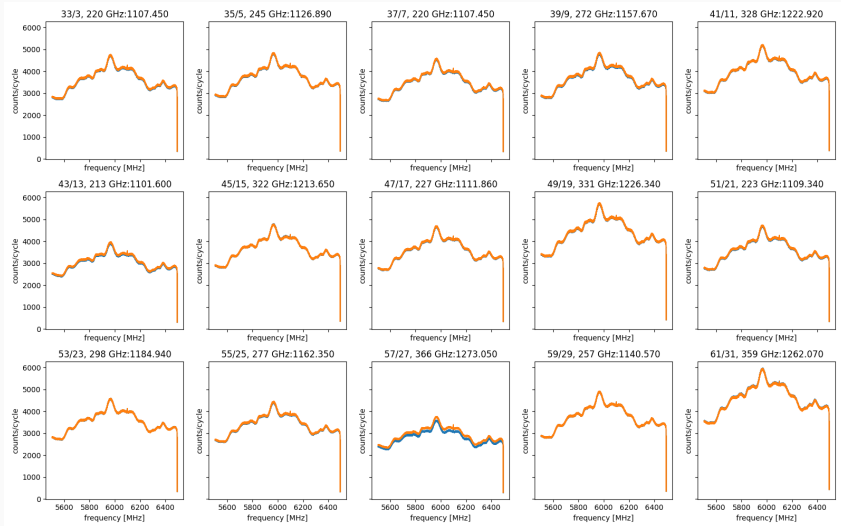


Figure 82: Hot/cold spectra

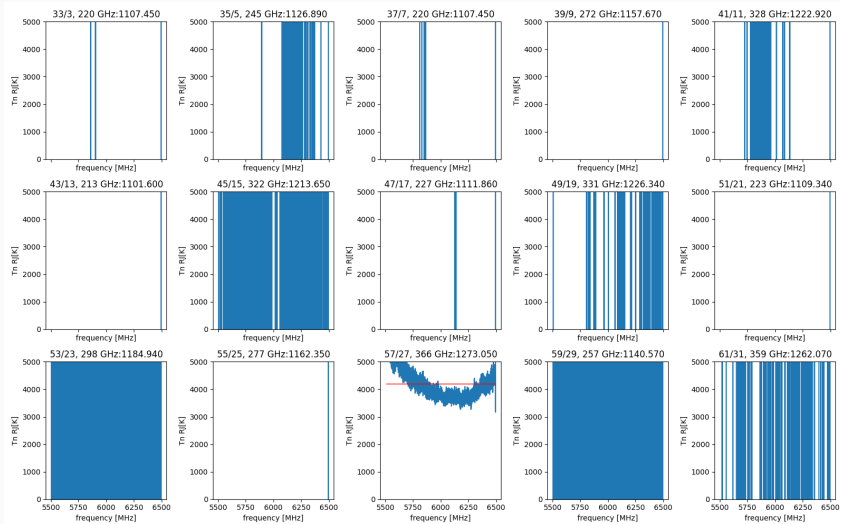


Figure 83: Tsys spectra

Table 17: List of observations 00382 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-23 06:36:16	0	536.355	219	1	1086.480	195	210.891
measurects	0	SKY	2024-08-23 06:36:26	2	536.355	219	3	1086.480	195	210.894
measurects	0	SKY	2024-08-23 06:36:37	4	541.800	229	5	1089.630	198	210.904
measurects	0	SKY	2024-08-23 06:36:49	6	542.835	231	7	1093.320	202	210.894
measurects	0	SKY	2024-08-23 06:37:00	8	544.680	521	9	1095.660	205	210.888
measurects	0	SKY	2024-08-23 06:37:11	10	547.425	242	11	1098.540	209	210.891
measurects	0	SKY	2024-08-23 06:37:23	12	549.900	246	13	1101.150	212	210.888
measurects	0	SKY	2024-08-23 06:37:34	14	552.105	545	15	1103.400	215	210.894
measurects	0	SKY	2024-08-23 06:37:45	16	555.525	561	17	1105.020	217	210.883
measurects	0	SKY	2024-08-23 06:37:57	18	557.145	265	19	1114.740	231	210.883
measurects	0	SKY	2024-08-23 06:38:08	20	557.685	271	21	1116.900	233	210.896
measurects	0	SKY	2024-08-23 06:38:19	22	562.950	288	23	1119.330	236	210.889
measurects	0	SKY	2024-08-23 06:38:30	24	564.120	293	25	1121.220	238	210.894
measurects	0	SKY	2024-08-23 06:38:42	26	566.505	299	27	1123.830	241	210.891
measurects	0	SKY	2024-08-23 06:38:53	28	567.540	304	29	1130.850	249	210.896
measurects	0	SKY	2024-08-23 06:39:04	30	570.330	322	31	1151.640	266	210.891
measurects	0	HOT	2024-08-23 06:39:17	32	536.355	219	33	1086.480	195	210.891
measurects	0	HOT	2024-08-23 06:39:28	34	541.800	229	35	1089.630	198	210.891
measurects	0	HOT	2024-08-23 06:39:40	36	542.835	231	37	1093.320	202	210.886
measurects	0	HOT	2024-08-23 06:39:51	38	544.680	521	39	1095.660	205	210.891
measurects	0	HOT	2024-08-23 06:40:02	40	547.425	242	41	1098.540	209	210.891
measurects	0	HOT	2024-08-23 06:40:14	42	549.900	246	43	1101.150	212	210.896
measurects	0	HOT	2024-08-23 06:40:25	44	552.105	545	45	1103.400	215	210.891
measurects	0	HOT	2024-08-23 06:40:36	46	555.525	561	47	1105.020	217	210.896
measurects	0	HOT	2024-08-23 06:40:48	48	557.145	265	49	1114.740	231	210.896
measurects	0	HOT	2024-08-23 06:40:59	50	557.685	271	51	1116.900	233	210.896
measurects	0	HOT	2024-08-23 06:41:10	52	562.950	288	53	1119.330	236	210.901
measurects	0	HOT	2024-08-23 06:41:22	54	564.120	293	55	1121.220	238	210.904
measurects	0	HOT	2024-08-23 06:41:33	56	566.505	299	57	1123.830	241	210.894
measurects	0	HOT	2024-08-23 06:41:44	58	567.540	304	59	1130.850	249	210.899
measurects	0	HOT	2024-08-23 06:41:56	60	570.330	322	61	1151.640	266	210.888

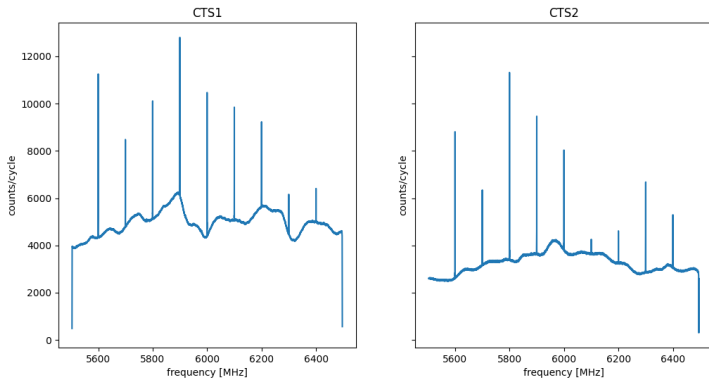


Figure 84: Comb spectra

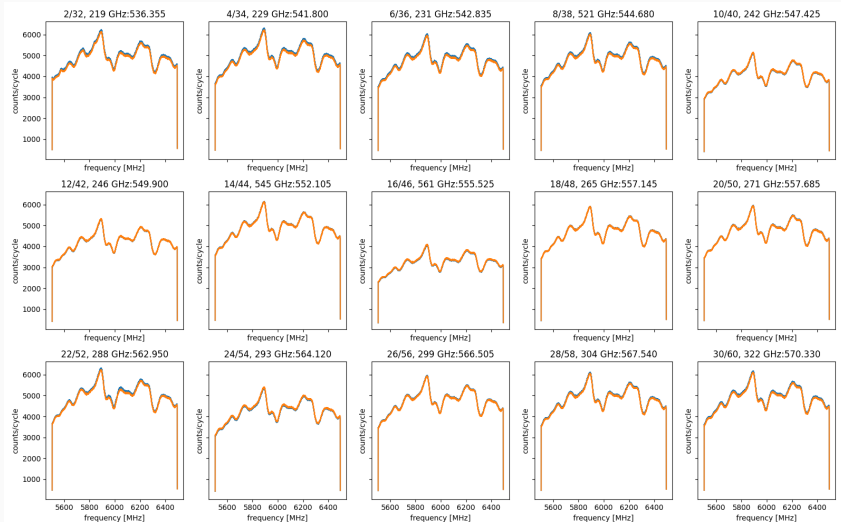


Figure 85: Hot/cold spectra

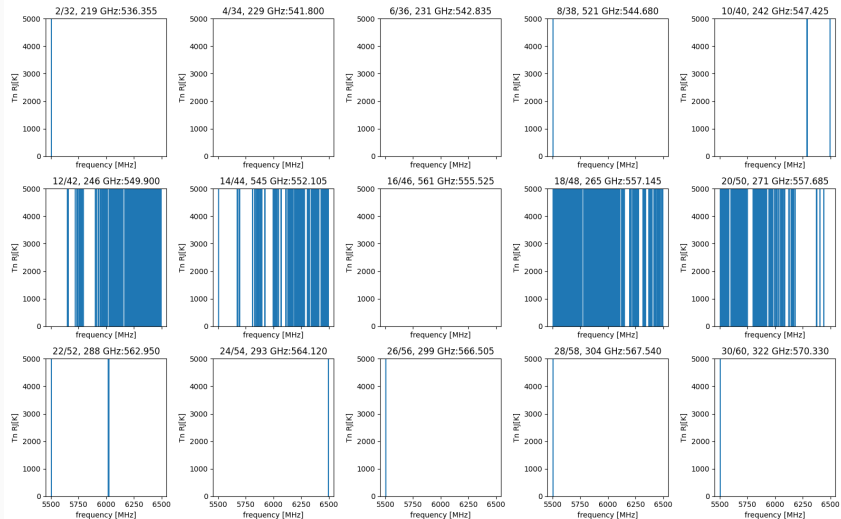


Figure 86: Tsys spectra



Figure 87: Hot/cold spectra

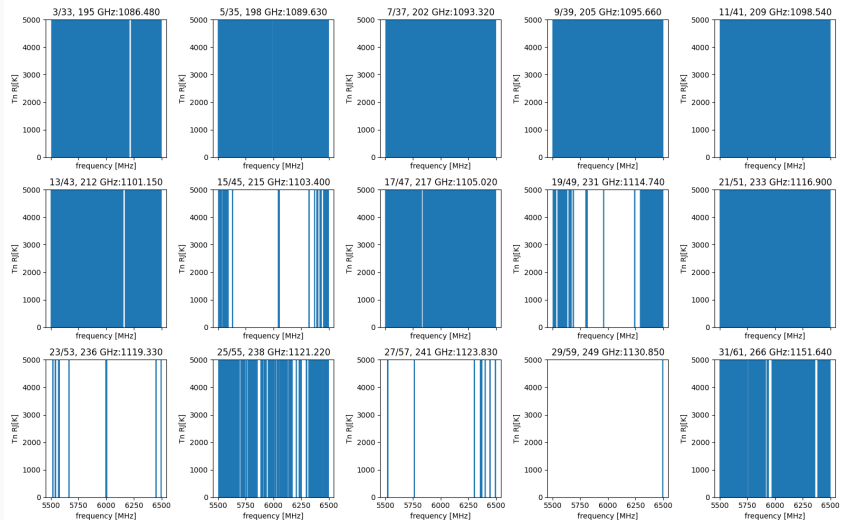


Figure 88: Tsys spectra

Table 18: List of observations 00383 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-23 06:42:16	0	572.220	326	1	1156.140	270	210.902
measurects	0	HOT	2024-08-23 06:42:27	2	572.220	326	3	1156.140	270	210.902
measurects	0	HOT	2024-08-23 06:42:38	4	573.210	327	5	1159.110	273	210.894
measurects	0	HOT	2024-08-23 06:42:50	6	575.865	671	7	1165.680	280	210.896
measurects	0	HOT	2024-08-23 06:43:01	8	576.765	674	9	1168.110	283	210.899
measurects	0	HOT	2024-08-23 06:43:12	10	578.520	678	11	1171.710	287	210.907
measurects	0	HOT	2024-08-23 06:43:24	12	581.625	339	13	1174.410	290	210.896
measurects	0	HOT	2024-08-23 06:43:35	14	583.965	706	15	1179.540	294	210.904
measurects	0	HOT	2024-08-23 06:43:46	16	585.450	715	17	1183.770	297	210.910
measurects	0	HOT	2024-08-23 06:43:58	18	586.665	352	19	1186.200	299	210.904
measurects	0	HOT	2024-08-23 06:44:09	20	588.780	723	21	1189.980	302	210.901
measurects	0	HOT	2024-08-23 06:44:20	22	590.445	725	23	1193.040	305	210.896
measurects	0	HOT	2024-08-23 06:44:32	24	593.010	739	25	1200.690	310	210.904
measurects	0	HOT	2024-08-23 06:44:43	26	597.645	768	27	1201.680	311	210.904
measurects	0	HOT	2024-08-23 06:44:54	28	598.815	378	29	1205.100	315	210.899
measurects	0	HOT	2024-08-23 06:45:06	30	603.540	790	31	1209.060	318	210.904
measurects	0	SKY	2024-08-23 06:45:18	32	572.220	326	33	1156.140	270	210.904
measurects	0	SKY	2024-08-23 06:45:30	34	573.210	327	35	1159.110	273	210.907
measurects	0	SKY	2024-08-23 06:45:41	36	575.865	671	37	1165.680	280	210.904
measurects	0	SKY	2024-08-23 06:45:52	38	576.765	674	39	1168.110	283	210.909
measurects	0	SKY	2024-08-23 06:46:03	40	578.520	678	41	1171.710	287	210.912
measurects	0	SKY	2024-08-23 06:46:15	42	581.625	339	43	1174.410	290	210.904
measurects	0	SKY	2024-08-23 06:46:26	44	583.965	706	45	1179.540	294	210.899
measurects	0	SKY	2024-08-23 06:46:37	46	585.450	715	47	1183.770	297	210.907
measurects	0	SKY	2024-08-23 06:46:49	48	586.665	352	49	1186.200	299	210.910
measurects	0	SKY	2024-08-23 06:47:00	50	588.780	723	51	1189.980	302	210.910
measurects	0	SKY	2024-08-23 06:47:11	52	590.445	725	53	1193.040	305	210.910
measurects	0	SKY	2024-08-23 06:47:23	54	593.010	739	55	1200.690	310	210.917
measurects	0	SKY	2024-08-23 06:47:34	56	597.645	768	57	1201.680	311	210.912
measurects	0	SKY	2024-08-23 06:47:45	58	598.815	378	59	1205.100	315	210.910
measurects	0	SKY	2024-08-23 06:47:57	60	603.540	790	61	1209.060	318	210.915

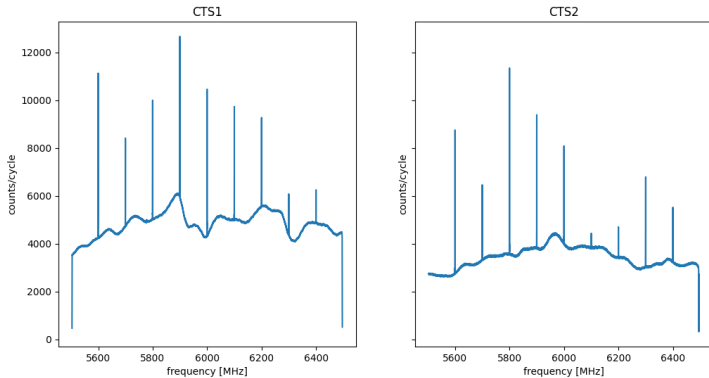


Figure 89: Comb spectra

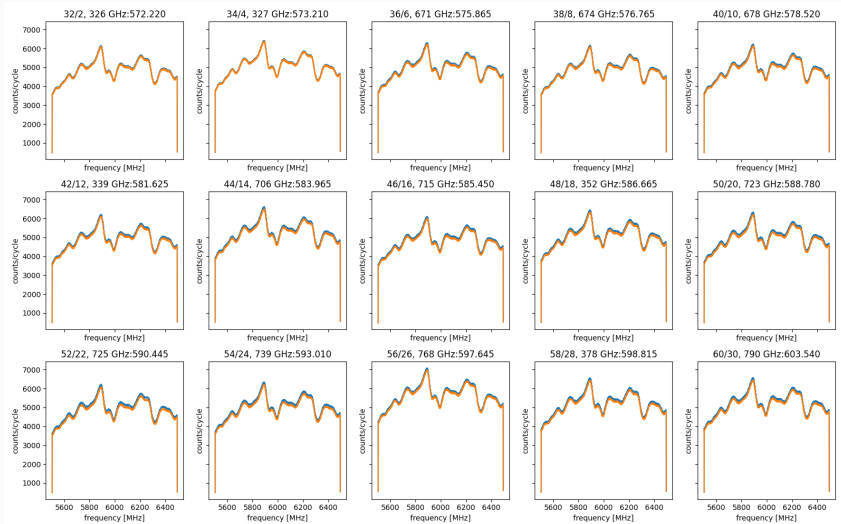


Figure 90: Hot/cold spectra

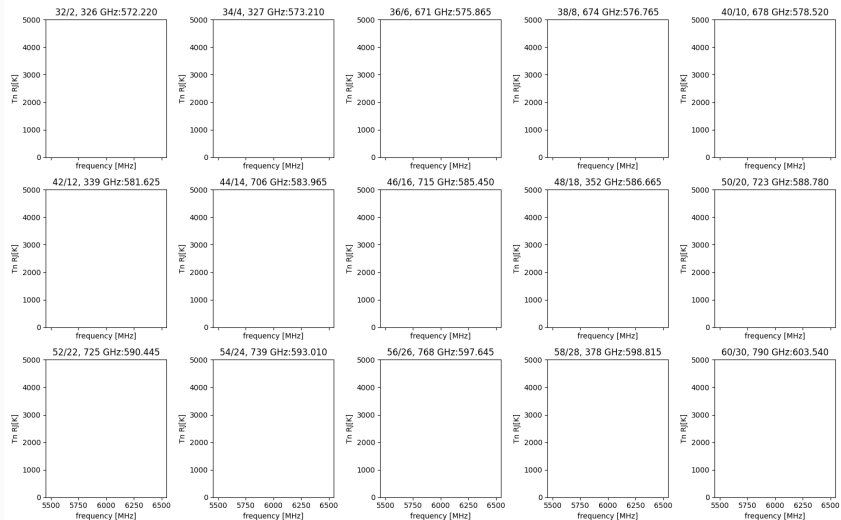


Figure 91: Tsys spectra



Figure 92: Hot/cold spectra

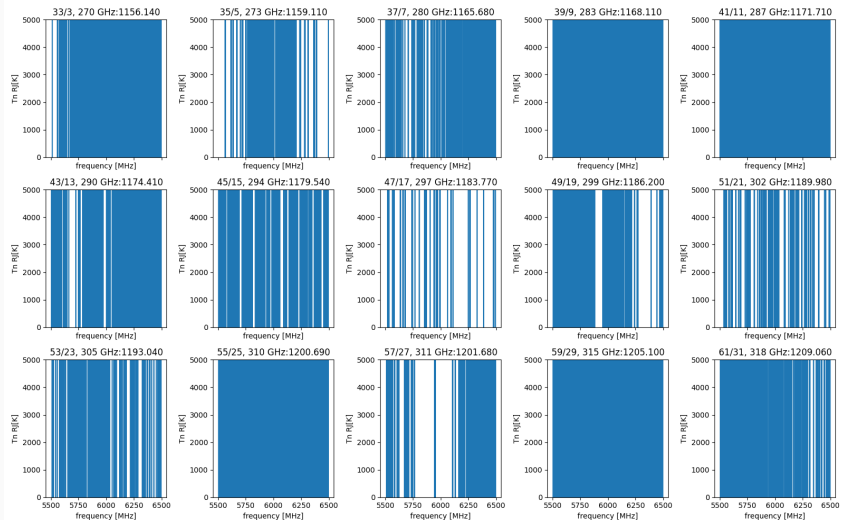


Figure 93: Tsys spectra

Table 19: List of observations 00384 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-23 06:48:16	0	605.295	793	1	1211.220	320	210.910
measurects	0	SKY	2024-08-23 06:48:26	2	605.295	793	3	1211.220	320	210.912
measurects	0	SKY	2024-08-23 06:48:37	4	605.925	795	5	1215.720	323	210.915
measurects	0	SKY	2024-08-23 06:48:49	6	608.265	807	7	1217.070	325	210.915
measurects	0	SKY	2024-08-23 06:49:00	8	610.290	394	9	1221.030	327	210.904
measurects	0	SKY	2024-08-23 06:49:11	10	613.485	815	11	1228.050	332	210.915
measurects	0	SKY	2024-08-23 06:49:23	12	616.590	402	13	1233.900	335	210.918
measurects	0	SKY	2024-08-23 06:49:34	14	618.210	824	15	1234.800	336	210.918
measurects	0	SKY	2024-08-23 06:49:45	16	622.395	410	17	1238.310	339	210.918
measurects	0	SKY	2024-08-23 06:49:57	18	623.295	411	19	1240.110	340	210.918
measurects	0	SKY	2024-08-23 06:50:08	20	626.310	843	21	1243.530	343	210.923
measurects	0	SKY	2024-08-23 06:50:19	22	628.515	423	23	1250.100	348	210.926
measurects	0	SKY	2024-08-23 06:50:30	24	630.225	855	25	1252.080	350	210.921
measurects	0	SKY	2024-08-23 06:50:42	26	630.990	858	27	1260.990	358	210.918
measurects	0	SKY	2024-08-23 06:50:53	28	631.935	861	29	1090.440	199	210.928
measurects	0	SKY	2024-08-23 06:51:04	30	618.975	405	31	1091.340	200	210.923
measurects	0	HOT	2024-08-23 06:51:17	32	605.295	793	33	1211.220	320	210.923
measurects	0	HOT	2024-08-23 06:51:28	34	605.925	795	35	1215.720	323	210.928
measurects	0	HOT	2024-08-23 06:51:40	36	608.265	807	37	1217.070	325	210.928
measurects	0	HOT	2024-08-23 06:51:51	38	610.290	394	39	1221.030	327	210.928
measurects	0	HOT	2024-08-23 06:52:02	40	613.485	815	41	1228.050	332	210.928
measurects	0	HOT	2024-08-23 06:52:14	42	616.590	402	43	1233.900	335	210.931
measurects	0	HOT	2024-08-23 06:52:25	44	618.210	824	45	1234.800	336	210.928
measurects	0	HOT	2024-08-23 06:52:36	46	622.395	410	47	1238.310	339	210.931
measurects	0	HOT	2024-08-23 06:52:48	48	623.295	411	49	1240.110	340	210.934
measurects	0	HOT	2024-08-23 06:52:59	50	626.310	843	51	1243.530	343	210.934
measurects	0	HOT	2024-08-23 06:53:10	52	628.515	423	53	1250.100	348	210.934
measurects	0	HOT	2024-08-23 06:53:22	54	630.225	855	55	1252.080	350	210.934
measurects	0	HOT	2024-08-23 06:53:33	56	630.990	858	57	1260.990	358	210.936
measurects	0	HOT	2024-08-23 06:53:44	58	631.935	861	59	1090.440	199	210.947
measurects	0	HOT	2024-08-23 06:53:56	60	618.975	405	61	1091.340	200	210.934

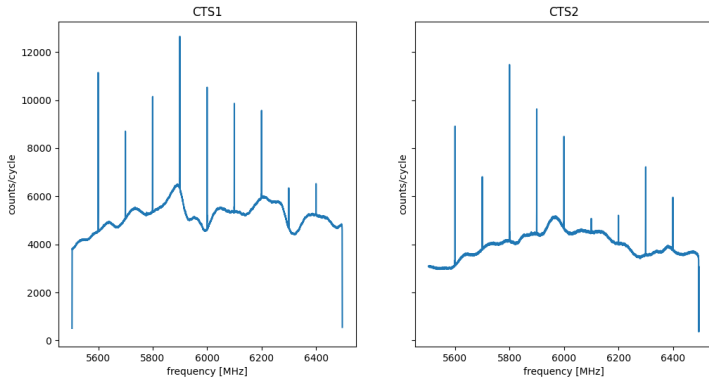


Figure 94: Comb spectra

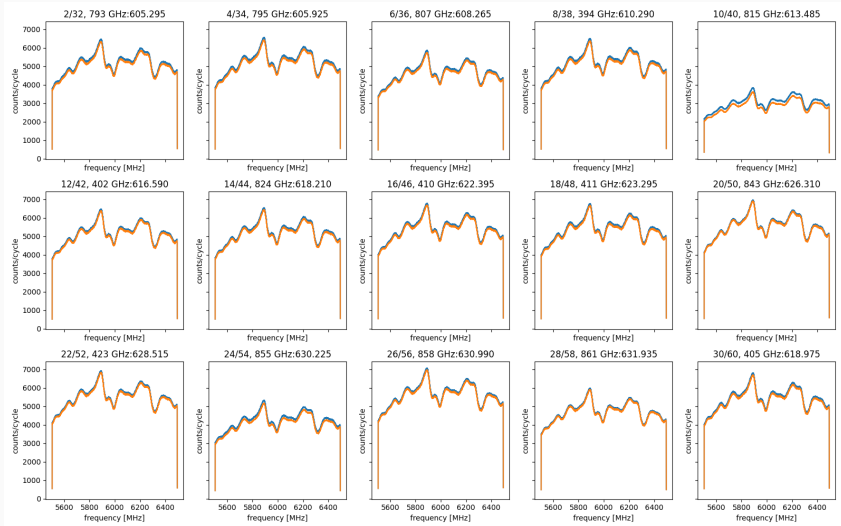


Figure 95: Hot/cold spectra

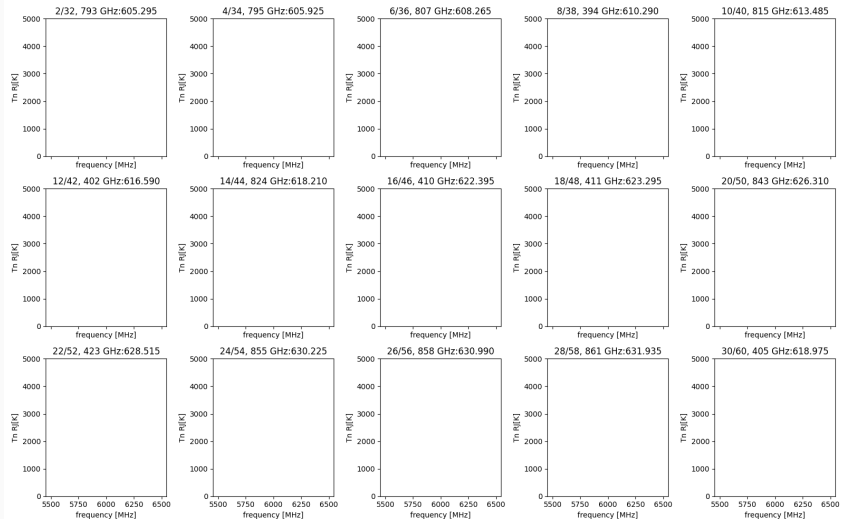


Figure 96: Tsys spectra

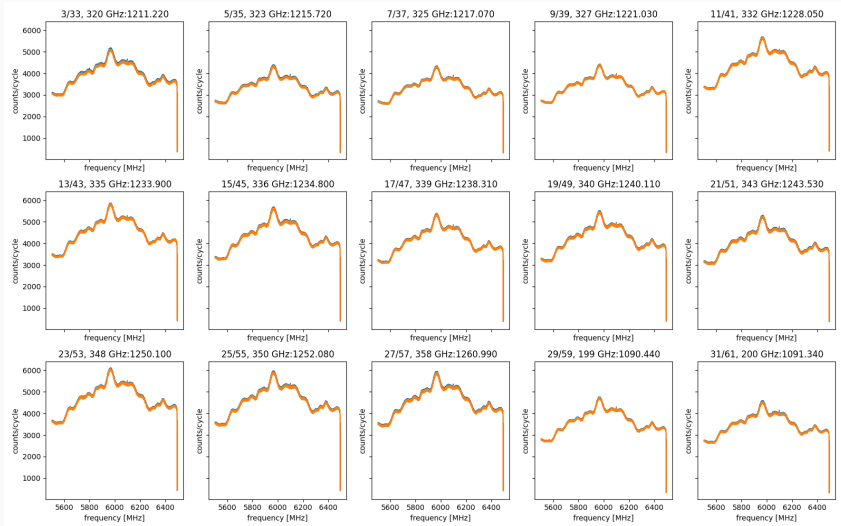


Figure 97: Hot/cold spectra

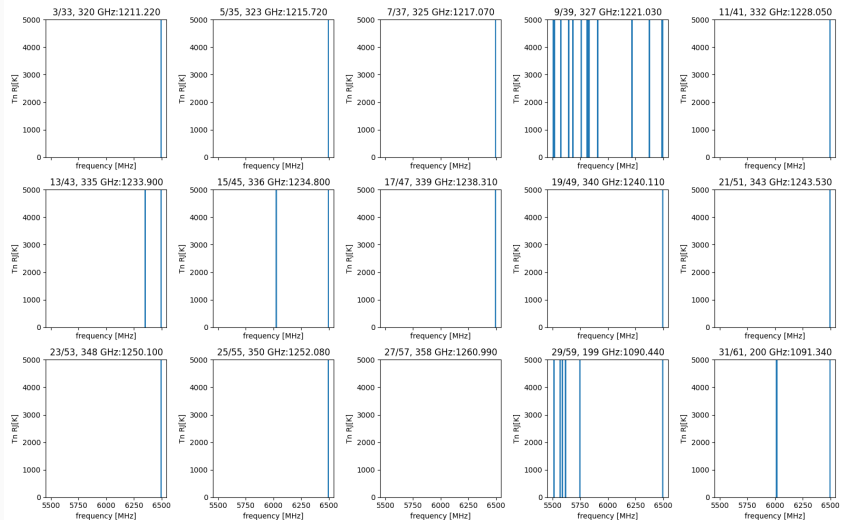


Figure 98: Tsys spectra

Table 20: List of observations 00385 0x04056c00 SWI TSYS CTS V1.

CMD	COMB	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measurects	1	SKY	2024-08-23 06:54:16	0	617.445	822	1	1110.060	224	210.945
measurects	0	HOT	2024-08-23 06:54:27	2	617.445	822	3	1110.060	224	210.945
measurects	0	HOT	2024-08-23 06:54:38	4	598.275	377	5	1113.120	229	210.947
measurects	0	HOT	2024-08-23 06:54:50	6	594.720	370	7	1115.730	232	210.947
measurects	0	HOT	2024-08-23 06:55:01	8	587.970	720	9	1122.120	239	210.944
measurects	0	HOT	2024-08-23 06:55:12	10	583.065	698	11	1127.700	246	210.942
measurects	0	HOT	2024-08-23 06:55:24	12	561.645	588	13	1156.950	271	210.947
measurects	0	HOT	2024-08-23 06:55:35	14	559.350	275	15	1163.700	278	210.950
measurects	0	HOT	2024-08-23 06:55:46	16	554.850	554	17	1168.920	284	210.942
measurects	0	HOT	2024-08-23 06:55:58	18	554.265	553	19	1170.810	286	210.953
measurects	0	HOT	2024-08-23 06:56:09	20	553.140	549	21	1172.880	288	210.955
measurects	0	HOT	2024-08-23 06:56:20	22	546.030	239	23	1203.210	313	210.953
measurects	0	HOT	2024-08-23 06:56:32	24	541.080	227	25	1212.750	321	210.961
measurects	0	HOT	2024-08-23 06:56:43	26	540.540	513	27	1157.670	272	210.961
measurects	0	HOT	2024-08-23 06:56:54	28	539.505	506	29	1213.650	322	210.955
measurects	0	HOT	2024-08-23 06:57:06	30	537.705	221	31	1107.450	220	210.961
measurects	0	SKY	2024-08-23 06:57:18	32	617.445	822	33	1110.060	224	210.961
measurects	0	SKY	2024-08-23 06:57:30	34	598.275	377	35	1113.120	229	210.961
measurects	0	SKY	2024-08-23 06:57:41	36	594.720	370	37	1115.730	232	210.958
measurects	0	SKY	2024-08-23 06:57:52	38	587.970	720	39	1122.120	239	210.969
measurects	0	SKY	2024-08-23 06:58:03	40	583.065	698	41	1127.700	246	210.969
measurects	0	SKY	2024-08-23 06:58:15	42	561.645	588	43	1156.950	271	210.969
measurects	0	SKY	2024-08-23 06:58:26	44	559.350	275	45	1163.700	278	210.969
measurects	0	SKY	2024-08-23 06:58:37	46	554.850	554	47	1168.920	284	210.974
measurects	0	SKY	2024-08-23 06:58:49	48	554.265	553	49	1170.810	286	210.974
measurects	0	SKY	2024-08-23 06:59:00	50	553.140	549	51	1172.880	288	210.974
measurects	0	SKY	2024-08-23 06:59:11	52	546.030	239	53	1203.210	313	210.974
measurects	0	SKY	2024-08-23 06:59:23	54	541.080	227	55	1212.750	321	210.982
measurects	0	SKY	2024-08-23 06:59:34	56	540.540	513	57	1157.670	272	210.974
measurects	0	SKY	2024-08-23 06:59:45	58	539.505	506	59	1213.650	322	210.974
measurects	0	SKY	2024-08-23 06:59:57	60	537.705	221	61	1107.450	220	210.982

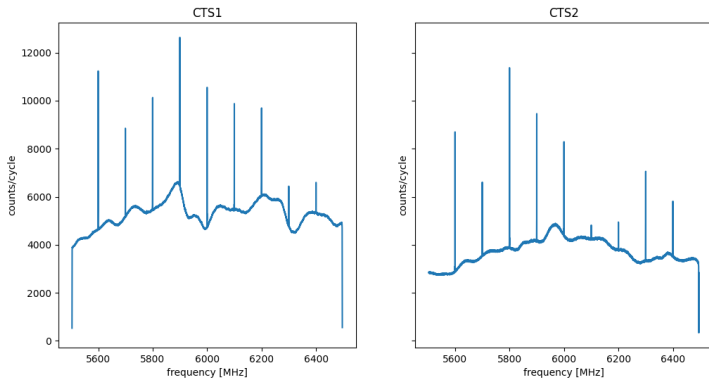


Figure 99: Comb spectra

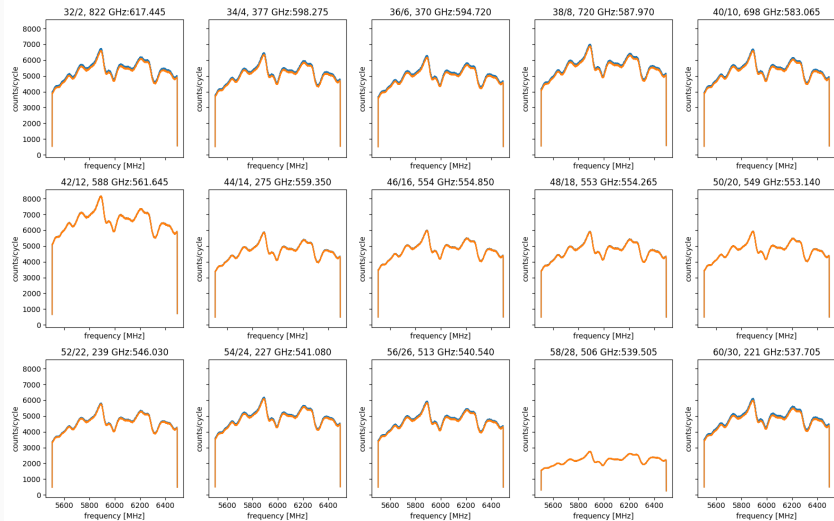


Figure 100: Hot/cold spectra

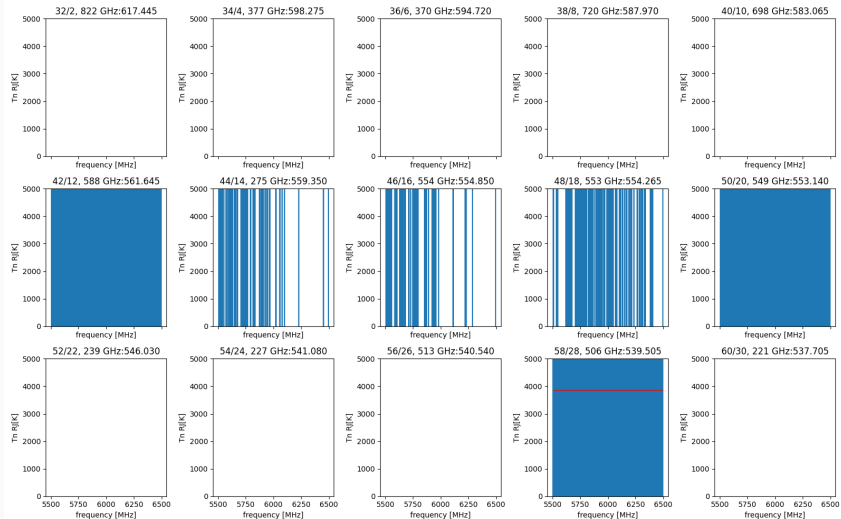


Figure 101: Tsys spectra



Figure 102: Hot/cold spectra

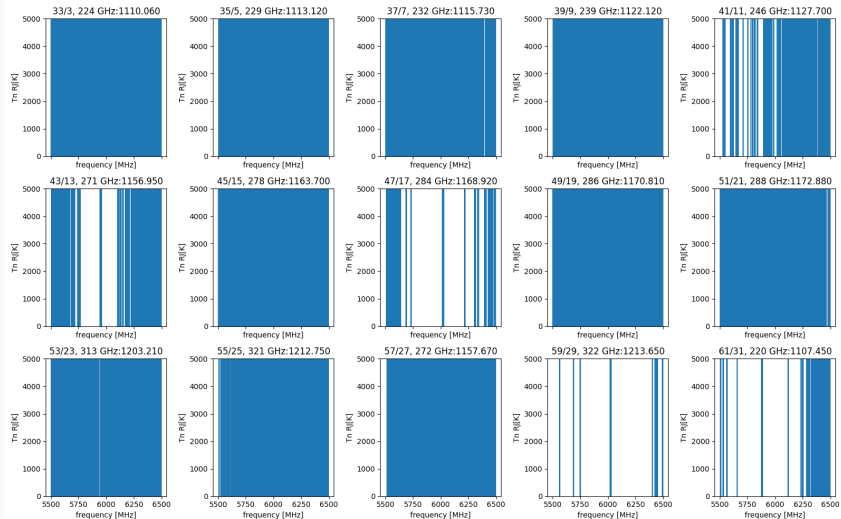


Figure 103: Tsys spectra

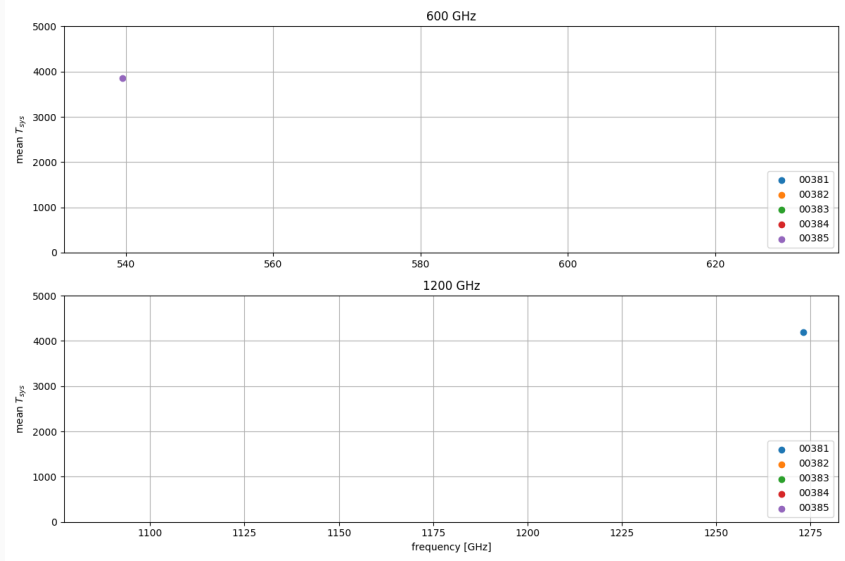


Figure 104: Results from 2024-08-23

- 600 GHz
 - ▶ Basically no contrast between hot and cold for all frequencies.
- 1200 GHz
 - ▶ Basically no contrast between hot and cold for all frequencies.

Section 2

ACS

Table 21: List of observations 00196 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	HOT	2024-07-04 14:19:00	0	536.355	219	1	1086.480	195	208.118
measacscch	HOT	2024-07-04 14:19:06	2	537.705	221	3	1089.630	198	208.118
measacscch	HOT	2024-07-04 14:19:13	4	538.875	503	5	1090.440	199	208.121
measacscch	HOT	2024-07-04 14:19:19	6	539.505	506	7	1091.340	200	208.121
measacscch	HOT	2024-07-04 14:19:25	8	540.540	513	9	1093.320	202	208.121
measacscch	HOT	2024-07-04 14:19:32	10	541.080	227	11	1095.660	205	208.121
measacscch	HOT	2024-07-04 14:19:38	12	541.800	229	13	1098.540	209	208.126
measacscch	HOT	2024-07-04 14:19:45	14	542.835	231	15	1101.150	212	208.126
measacscch	HOT	2024-07-04 14:19:52	16	544.680	521	17	1101.600	213	208.124
measacscch	HOT	2024-07-04 14:19:59	18	545.445	235	19	1103.400	215	208.124
measacscch	HOT	2024-07-04 14:20:05	20	546.030	239	21	1105.020	217	208.124
measacscch	HOT	2024-07-04 14:20:11	22	547.425	242	23	1107.450	220	208.124
measacscch	HOT	2024-07-04 14:20:18	24	549.900	246	25	1109.340	223	208.126
measacscch	HOT	2024-07-04 14:20:24	26	550.980	541	27	1110.060	224	208.126
measacscch	HOT	2024-07-04 14:20:31	28	552.105	545	29	1111.860	227	208.124
measacscch	SKY	2024-07-04 14:19:00	30	536.355	219	31	1086.480	195	208.118
measacscch	SKY	2024-07-04 14:19:06	32	537.705	221	33	1089.630	198	208.118
measacscch	SKY	2024-07-04 14:19:13	34	538.875	503	35	1090.440	199	208.121
measacscch	SKY	2024-07-04 14:19:19	36	539.505	506	37	1091.340	200	208.121
measacscch	SKY	2024-07-04 14:19:25	38	540.540	513	39	1093.320	202	208.121
measacscch	SKY	2024-07-04 14:19:32	40	541.080	227	41	1095.660	205	208.121
measacscch	SKY	2024-07-04 14:19:38	42	541.800	229	43	1098.540	209	208.126
measacscch	SKY	2024-07-04 14:19:45	44	542.835	231	45	1101.150	212	208.126
measacscch	SKY	2024-07-04 14:19:52	46	544.680	521	47	1101.600	213	208.124
measacscch	SKY	2024-07-04 14:19:59	48	545.445	235	49	1103.400	215	208.124
measacscch	SKY	2024-07-04 14:20:05	50	546.030	239	51	1105.020	217	208.124
measacscch	SKY	2024-07-04 14:20:11	52	547.425	242	53	1107.450	220	208.124
measacscch	SKY	2024-07-04 14:20:18	54	549.900	246	55	1109.340	223	208.126
measacscch	SKY	2024-07-04 14:20:24	56	550.980	541	57	1110.060	224	208.126
measacscch	SKY	2024-07-04 14:20:31	58	552.105	545	59	1111.860	227	208.124

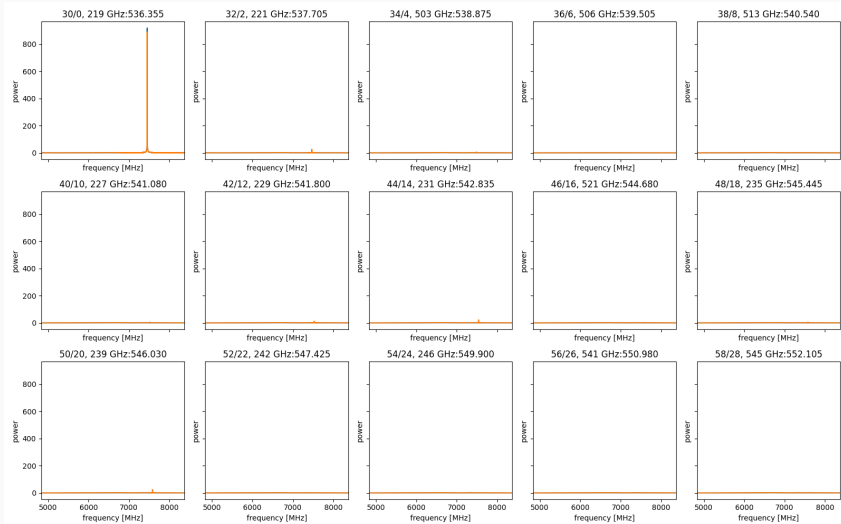


Figure 105: Hot/cold spectra

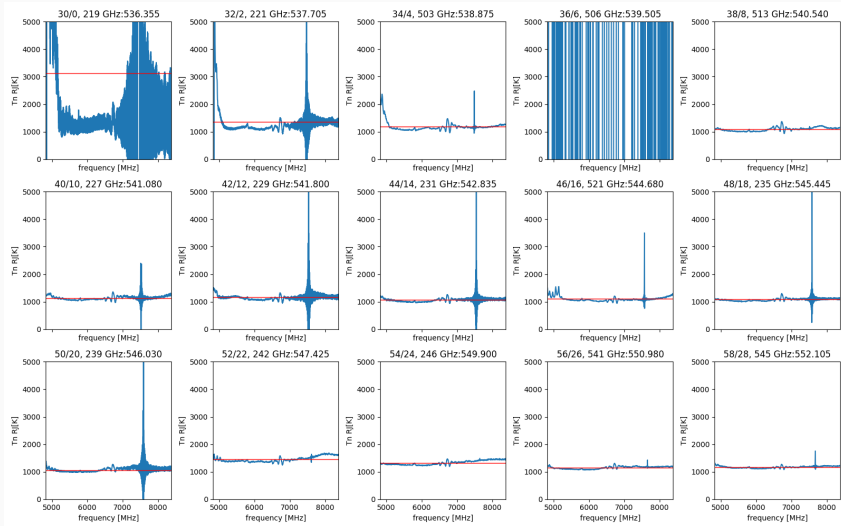


Figure 106: Tsys spectra

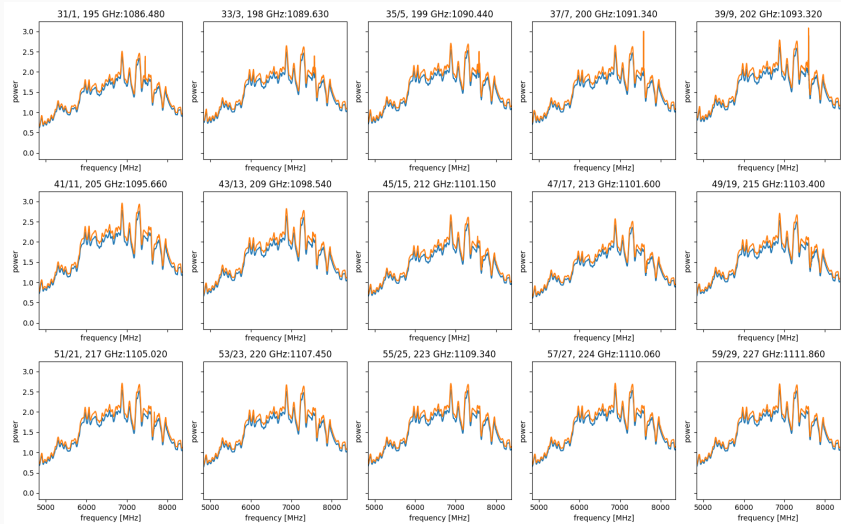


Figure 107: Hot/cold spectra

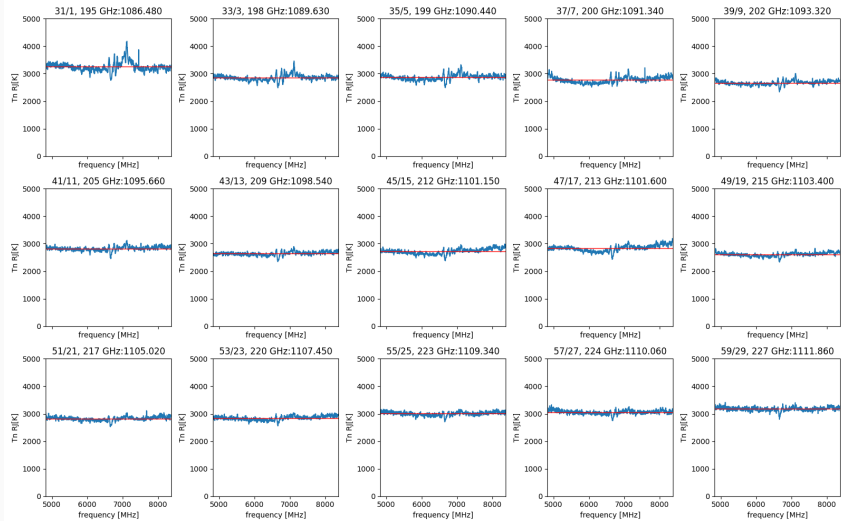


Figure 108: Tsys spectra

Table 22: List of observations 00197 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	SKY	2024-07-04 14:20:47	0	553.140	549	1	1113.120	229	208.121
measacscch	SKY	2024-07-04 14:20:53	2	553.680	255	3	1114.740	231	208.124
measacscch	SKY	2024-07-04 14:20:59	4	554.265	553	5	1115.730	232	208.124
measacscch	SKY	2024-07-04 14:21:06	6	554.850	554	7	1116.900	233	208.121
measacscch	SKY	2024-07-04 14:21:12	8	555.525	561	9	1119.330	236	208.121
measacscch	SKY	2024-07-04 14:21:19	10	557.145	265	11	1121.220	238	208.121
measacscch	SKY	2024-07-04 14:21:25	12	557.685	271	13	1122.120	239	208.121
measacscch	SKY	2024-07-04 14:21:31	14	558.000	273	15	1123.830	241	208.135
measacscch	SKY	2024-07-04 14:21:39	16	559.350	275	17	1126.890	245	208.135
measacscch	SKY	2024-07-04 14:21:45	18	560.745	582	19	1127.700	246	208.129
measacscch	SKY	2024-07-04 14:21:52	20	561.645	588	21	1130.850	249	208.129
measacscch	SKY	2024-07-04 14:21:58	22	562.950	288	23	1140.570	257	208.132
measacscch	SKY	2024-07-04 14:22:05	24	564.120	293	25	1145.700	261	208.132
measacscch	SKY	2024-07-04 14:22:11	26	565.110	294	27	1147.140	262	208.135
measacscch	SKY	2024-07-04 14:22:17	28	566.505	299	29	1151.640	266	208.135
measacscch	HOT	2024-07-04 14:20:47	30	553.140	549	31	1113.120	229	208.121
measacscch	HOT	2024-07-04 14:20:53	32	553.680	255	33	1114.740	231	208.124
measacscch	HOT	2024-07-04 14:20:59	34	554.265	553	35	1115.730	232	208.124
measacscch	HOT	2024-07-04 14:21:06	36	554.850	554	37	1116.900	233	208.121
measacscch	HOT	2024-07-04 14:21:12	38	555.525	561	39	1119.330	236	208.121
measacscch	HOT	2024-07-04 14:21:19	40	557.145	265	41	1121.220	238	208.121
measacscch	HOT	2024-07-04 14:21:25	42	557.685	271	43	1122.120	239	208.121
measacscch	HOT	2024-07-04 14:21:31	44	558.000	273	45	1123.830	241	208.135
measacscch	HOT	2024-07-04 14:21:39	46	559.350	275	47	1126.890	245	208.135
measacscch	HOT	2024-07-04 14:21:45	48	560.745	582	49	1127.700	246	208.129
measacscch	HOT	2024-07-04 14:21:52	50	561.645	588	51	1130.850	249	208.129
measacscch	HOT	2024-07-04 14:21:58	52	562.950	288	53	1140.570	257	208.132
measacscch	HOT	2024-07-04 14:22:05	54	564.120	293	55	1145.700	261	208.132
measacscch	HOT	2024-07-04 14:22:11	56	565.110	294	57	1147.140	262	208.135
measacscch	HOT	2024-07-04 14:22:17	58	566.505	299	59	1151.640	266	208.135

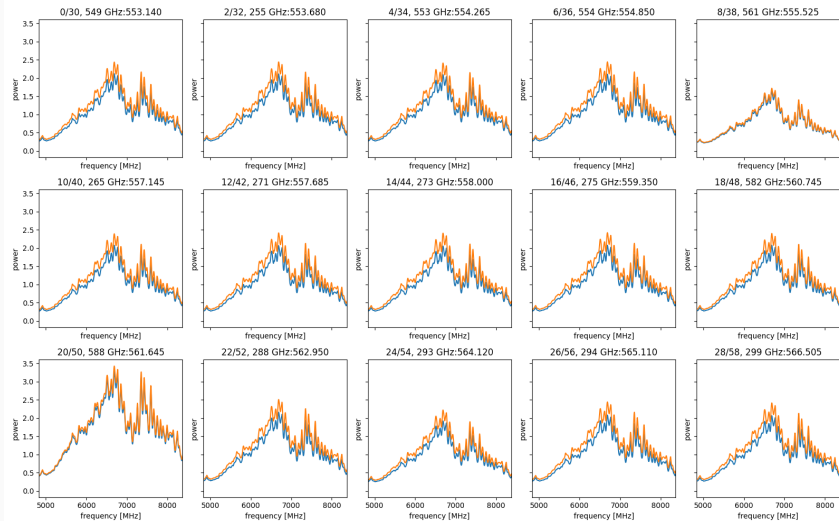


Figure 109: Hot/cold spectra

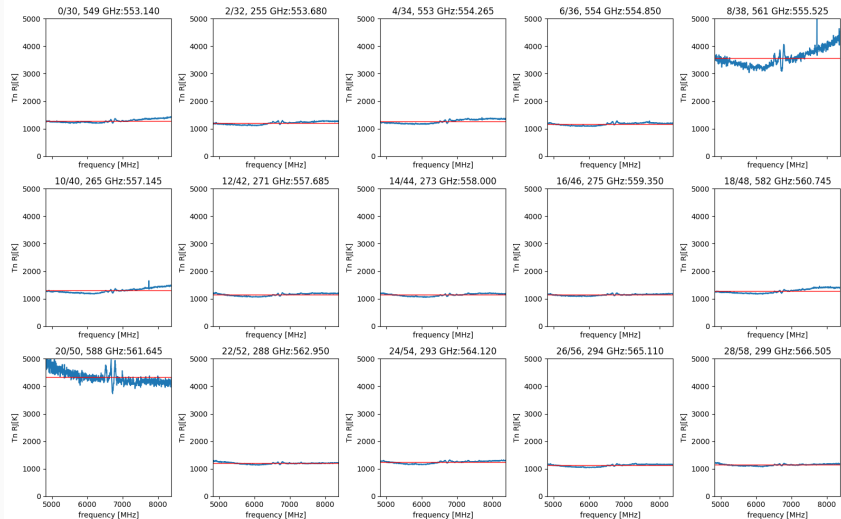


Figure 110: Tsys spectra

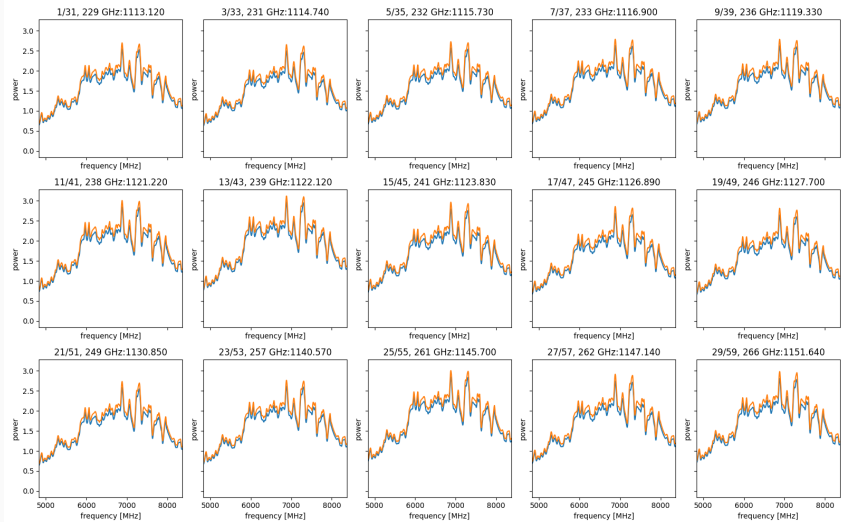


Figure 111: Hot/cold spectra

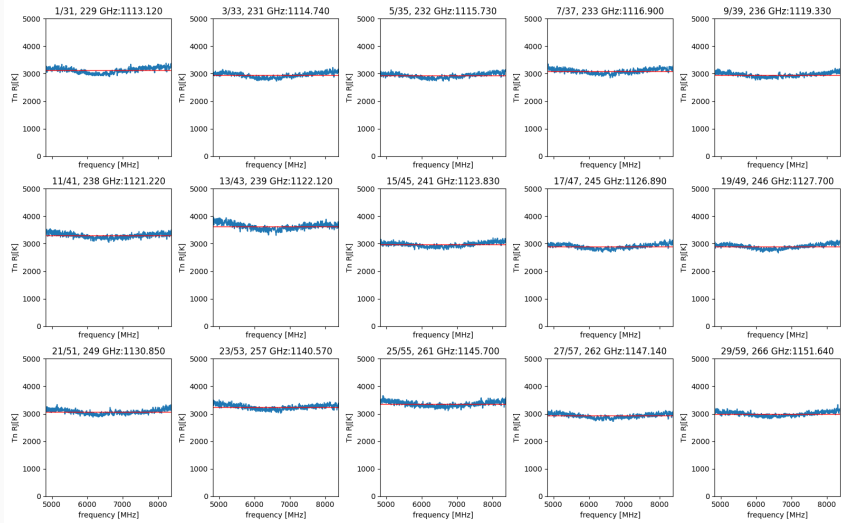


Figure 112: Tsys spectra

Table 23: List of observations 00198 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	HOT	2024-07-04 14:22:36	0	567.540	304	1	1156.140	270	208.137
measacscch	HOT	2024-07-04 14:22:42	2	569.520	313	3	1156.950	271	208.137
measacscch	HOT	2024-07-04 14:22:49	4	570.330	322	5	1157.670	272	208.143
measacscch	HOT	2024-07-04 14:22:55	6	572.220	326	7	1159.110	273	208.143
measacscch	HOT	2024-07-04 14:23:01	8	573.210	327	9	1162.350	277	208.137
measacscch	HOT	2024-07-04 14:23:08	10	575.865	671	11	1163.700	278	208.137
measacscch	HOT	2024-07-04 14:23:14	12	576.765	674	13	1165.680	280	208.148
measacscch	HOT	2024-07-04 14:23:21	14	578.520	678	15	1168.110	283	208.148
measacscch	HOT	2024-07-04 14:23:28	16	579.780	681	17	1168.920	284	208.146
measacscch	HOT	2024-07-04 14:23:35	18	581.625	339	19	1170.810	286	208.146
measacscch	HOT	2024-07-04 14:23:41	20	582.255	344	21	1171.710	287	208.140
measacscch	HOT	2024-07-04 14:23:47	22	583.065	698	23	1172.880	288	208.140
measacscch	HOT	2024-07-04 14:23:54	24	583.965	706	25	1174.410	290	208.143
measacscch	HOT	2024-07-04 14:24:00	26	585.450	715	27	1179.540	294	208.143
measacscch	HOT	2024-07-04 14:24:07	28	586.665	352	29	1183.770	297	208.148
measacscch	SKY	2024-07-04 14:22:36	30	567.540	304	31	1156.140	270	208.137
measacscch	SKY	2024-07-04 14:22:42	32	569.520	313	33	1156.950	271	208.137
measacscch	SKY	2024-07-04 14:22:49	34	570.330	322	35	1157.670	272	208.143
measacscch	SKY	2024-07-04 14:22:55	36	572.220	326	37	1159.110	273	208.143
measacscch	SKY	2024-07-04 14:23:01	38	573.210	327	39	1162.350	277	208.137
measacscch	SKY	2024-07-04 14:23:08	40	575.865	671	41	1163.700	278	208.137
measacscch	SKY	2024-07-04 14:23:14	42	576.765	674	43	1165.680	280	208.148
measacscch	SKY	2024-07-04 14:23:21	44	578.520	678	45	1168.110	283	208.148
measacscch	SKY	2024-07-04 14:23:28	46	579.780	681	47	1168.920	284	208.146
measacscch	SKY	2024-07-04 14:23:35	48	581.625	339	49	1170.810	286	208.146
measacscch	SKY	2024-07-04 14:23:41	50	582.255	344	51	1171.710	287	208.140
measacscch	SKY	2024-07-04 14:23:47	52	583.065	698	53	1172.880	288	208.140
measacscch	SKY	2024-07-04 14:23:54	54	583.965	706	55	1174.410	290	208.143
measacscch	SKY	2024-07-04 14:24:00	56	585.450	715	57	1179.540	294	208.143
measacscch	SKY	2024-07-04 14:24:07	58	586.665	352	59	1183.770	297	208.148

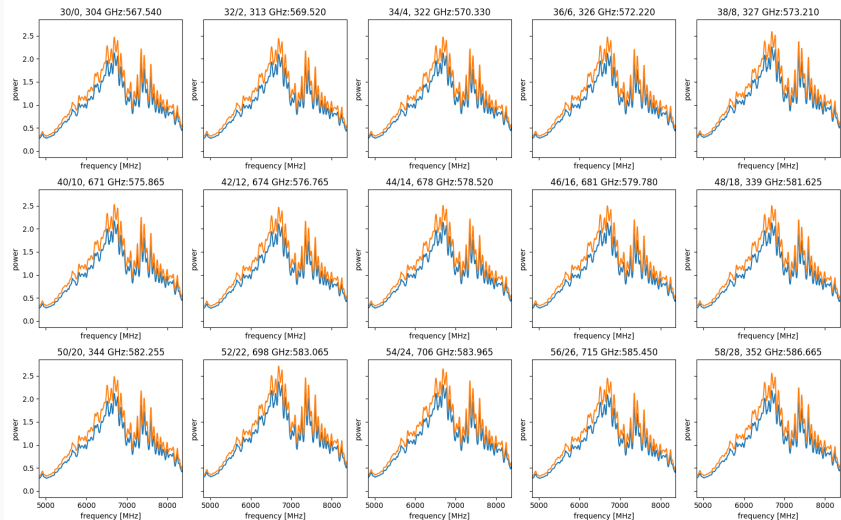


Figure 113: Hot/cold spectra

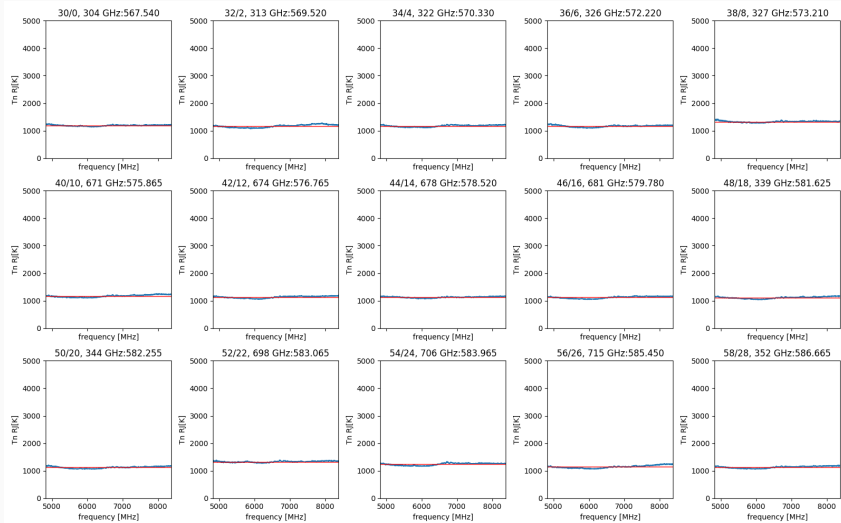


Figure 114: Tsys spectra

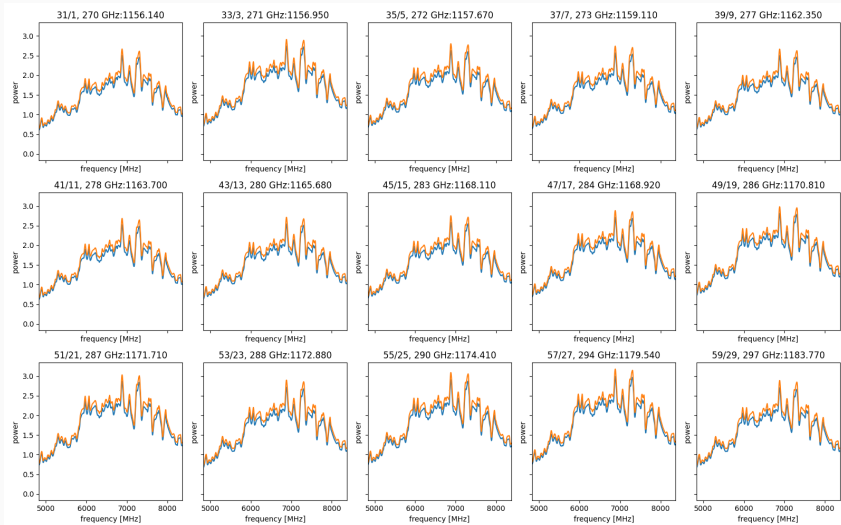


Figure 115: Hot/cold spectra

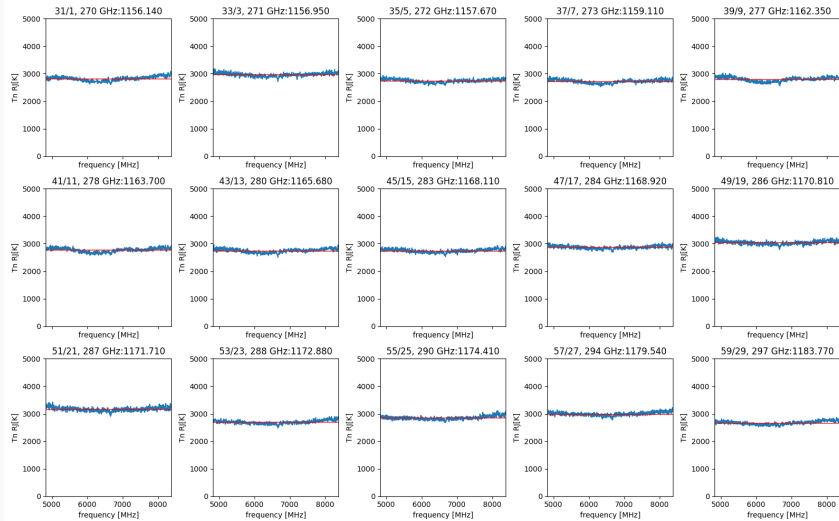


Figure 116: Tsys spectra

Table 24: List of observations 00199 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	SKY	2024-07-04 14:24:23	0	587.970	720	1	1184.940	298	208.153
measacscch	SKY	2024-07-04 14:24:29	2	588.780	723	3	1186.200	299	208.148
measacscch	SKY	2024-07-04 14:24:35	4	590.445	725	5	1189.980	302	208.148
measacscch	SKY	2024-07-04 14:24:42	6	593.010	739	7	1193.040	305	208.156
measacscch	SKY	2024-07-04 14:24:48	8	593.955	756	9	1200.690	310	208.156
measacscch	SKY	2024-07-04 14:24:55	10	594.720	370	11	1201.680	311	208.151
measacscch	SKY	2024-07-04 14:25:01	12	596.295	373	13	1203.210	313	208.151
measacscch	SKY	2024-07-04 14:25:07	14	597.645	768	15	1205.100	315	208.153
measacscch	SKY	2024-07-04 14:25:15	16	598.275	377	17	1209.060	318	208.153
measacscch	SKY	2024-07-04 14:25:21	18	598.815	378	19	1211.220	320	208.159
measacscch	SKY	2024-07-04 14:25:28	20	601.425	784	21	1212.750	321	208.159
measacscch	SKY	2024-07-04 14:25:34	22	603.540	790	23	1213.650	322	208.161
measacscch	SKY	2024-07-04 14:25:41	24	605.295	793	25	1215.720	323	208.161
measacscch	SKY	2024-07-04 14:25:47	26	605.925	795	27	1217.070	325	208.161
measacscch	SKY	2024-07-04 14:25:53	28	608.265	807	29	1221.030	327	208.161
measacscch	HOT	2024-07-04 14:24:23	30	587.970	720	31	1184.940	298	208.153
measacscch	HOT	2024-07-04 14:24:29	32	588.780	723	33	1186.200	299	208.148
measacscch	HOT	2024-07-04 14:24:35	34	590.445	725	35	1189.980	302	208.148
measacscch	HOT	2024-07-04 14:24:42	36	593.010	739	37	1193.040	305	208.156
measacscch	HOT	2024-07-04 14:24:48	38	593.955	756	39	1200.690	310	208.156
measacscch	HOT	2024-07-04 14:24:55	40	594.720	370	41	1201.680	311	208.151
measacscch	HOT	2024-07-04 14:25:01	42	596.295	373	43	1203.210	313	208.151
measacscch	HOT	2024-07-04 14:25:07	44	597.645	768	45	1205.100	315	208.153
measacscch	HOT	2024-07-04 14:25:15	46	598.275	377	47	1209.060	318	208.153
measacscch	HOT	2024-07-04 14:25:21	48	598.815	378	49	1211.220	320	208.159
measacscch	HOT	2024-07-04 14:25:28	50	601.425	784	51	1212.750	321	208.159
measacscch	HOT	2024-07-04 14:25:34	52	603.540	790	53	1213.650	322	208.161
measacscch	HOT	2024-07-04 14:25:41	54	605.295	793	55	1215.720	323	208.161
measacscch	HOT	2024-07-04 14:25:47	56	605.925	795	57	1217.070	325	208.161
measacscch	HOT	2024-07-04 14:25:53	58	608.265	807	59	1221.030	327	208.161

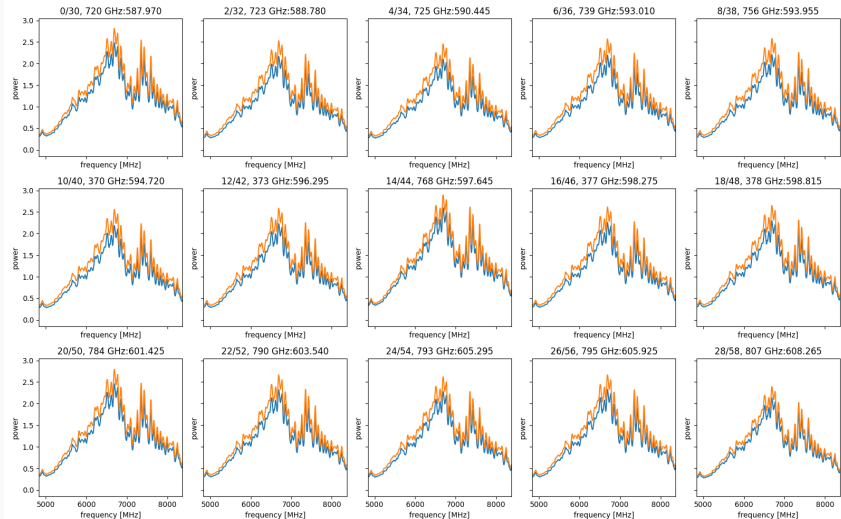


Figure 117: Hot/cold spectra

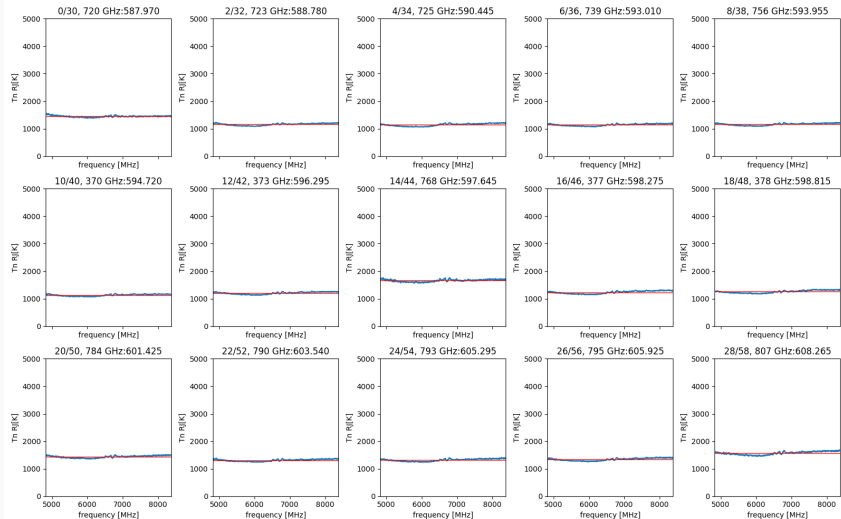


Figure 118: Tsys spectra

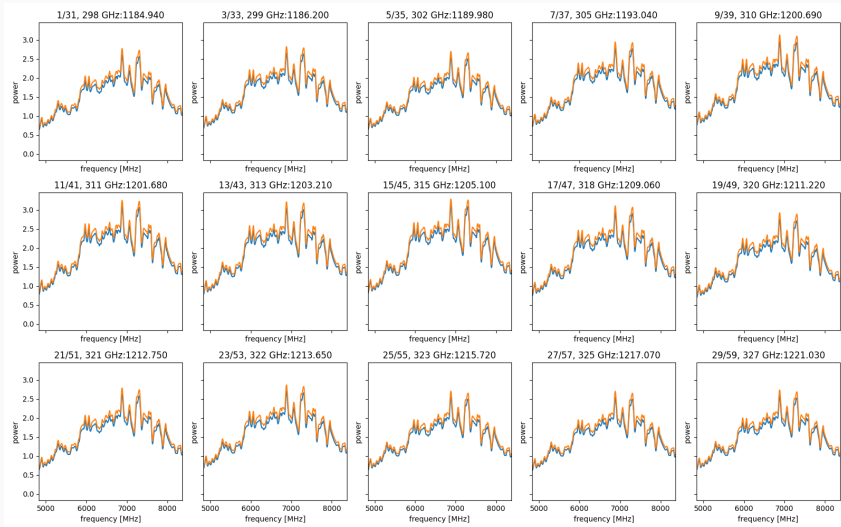


Figure 19: Hot/cold spectra

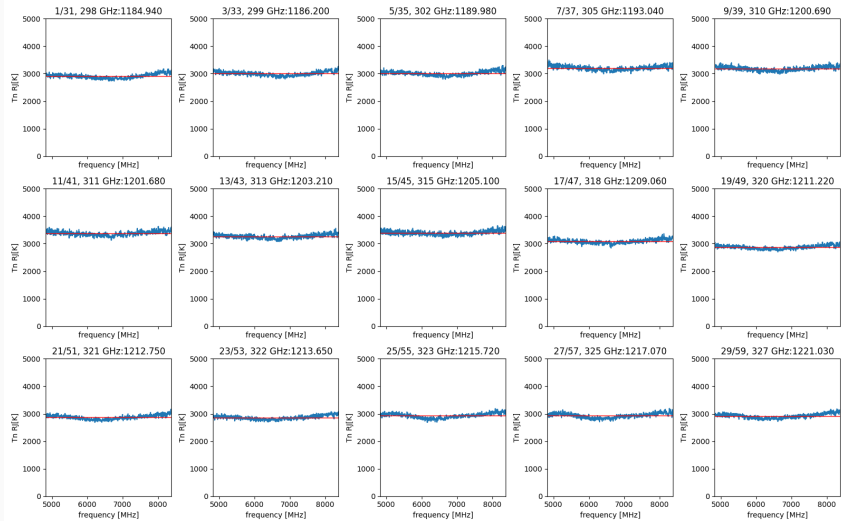


Figure 120: Tsys spectra

Table 25: List of observations 00200 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	HOT	2024-07-04 14:26:12	0	610.290	394	1	1222.920	328	208.161
measacscch	HOT	2024-07-04 14:26:18	2	613.485	815	3	1226.340	331	208.161
measacscch	HOT	2024-07-04 14:26:25	4	614.295	400	5	1228.050	332	208.164
measacscch	HOT	2024-07-04 14:26:31	6	616.590	402	7	1233.900	335	208.164
measacscch	HOT	2024-07-04 14:26:37	8	617.445	822	9	1234.800	336	208.169
measacscch	HOT	2024-07-04 14:26:44	10	618.210	824	11	1238.310	339	208.169
measacscch	HOT	2024-07-04 14:26:50	12	618.975	405	13	1240.110	340	208.167
measacscch	HOT	2024-07-04 14:26:57	14	619.920	828	15	1243.530	343	208.167
measacscch	HOT	2024-07-04 14:27:04	16	622.395	410	17	1245.780	345	208.164
measacscch	HOT	2024-07-04 14:27:11	18	623.295	411	19	1250.100	348	208.164
measacscch	HOT	2024-07-04 14:27:17	20	626.310	843	21	1252.080	350	208.169
measacscch	HOT	2024-07-04 14:27:23	22	628.515	423	23	1257.480	356	208.169
measacscch	HOT	2024-07-04 14:27:30	24	630.225	855	25	1260.990	358	208.172
measacscch	HOT	2024-07-04 14:27:36	26	630.990	858	27	1262.070	359	208.172
measacscch	HOT	2024-07-04 14:27:43	28	631.935	861	29	1273.050	366	208.169
measacscch	SKY	2024-07-04 14:26:12	30	610.290	394	31	1222.920	328	208.161
measacscch	SKY	2024-07-04 14:26:18	32	613.485	815	33	1226.340	331	208.161
measacscch	SKY	2024-07-04 14:26:25	34	614.295	400	35	1228.050	332	208.164
measacscch	SKY	2024-07-04 14:26:31	36	616.590	402	37	1233.900	335	208.164
measacscch	SKY	2024-07-04 14:26:37	38	617.445	822	39	1234.800	336	208.169
measacscch	SKY	2024-07-04 14:26:44	40	618.210	824	41	1238.310	339	208.169
measacscch	SKY	2024-07-04 14:26:50	42	618.975	405	43	1240.110	340	208.167
measacscch	SKY	2024-07-04 14:26:57	44	619.920	828	45	1243.530	343	208.167
measacscch	SKY	2024-07-04 14:27:04	46	622.395	410	47	1245.780	345	208.164
measacscch	SKY	2024-07-04 14:27:11	48	623.295	411	49	1250.100	348	208.164
measacscch	SKY	2024-07-04 14:27:17	50	626.310	843	51	1252.080	350	208.169
measacscch	SKY	2024-07-04 14:27:23	52	628.515	423	53	1257.480	356	208.169
measacscch	SKY	2024-07-04 14:27:30	54	630.225	855	55	1260.990	358	208.172
measacscch	SKY	2024-07-04 14:27:36	56	630.990	858	57	1262.070	359	208.172
measacscch	SKY	2024-07-04 14:27:43	58	631.935	861	59	1273.050	366	208.169

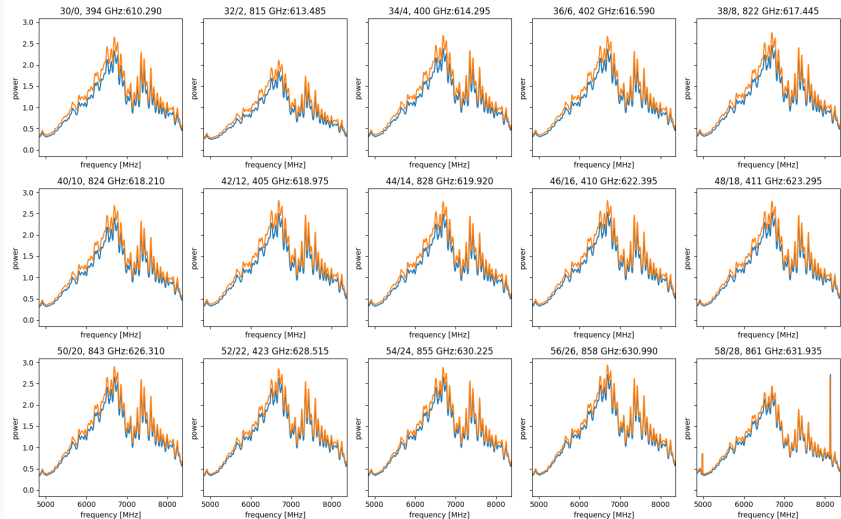


Figure 121: Hot/cold spectra

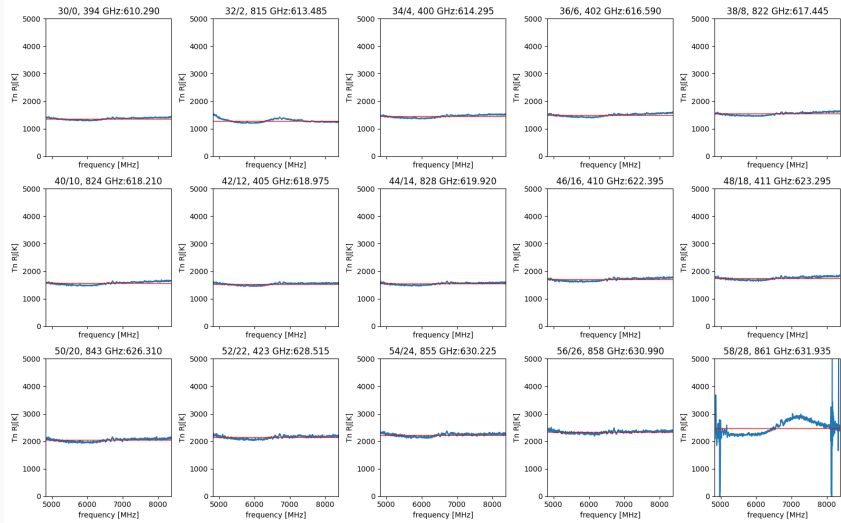


Figure 122: Tsys spectra

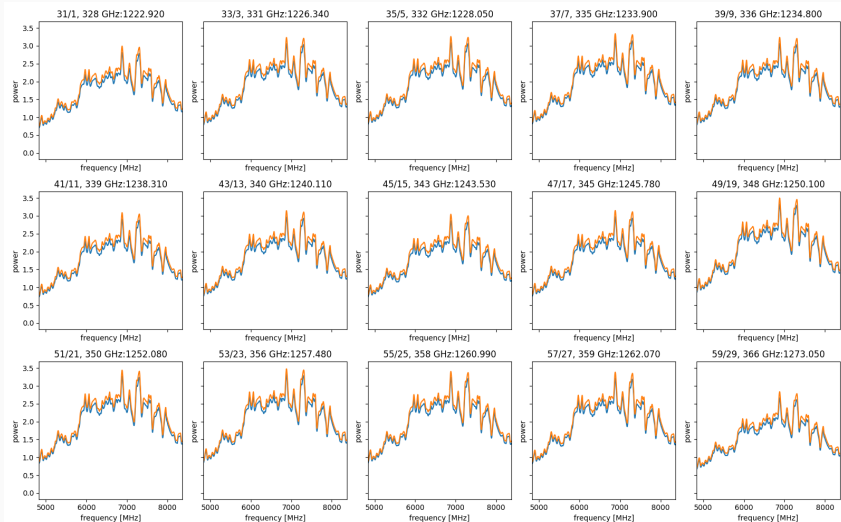


Figure 123: Hot/cold spectra

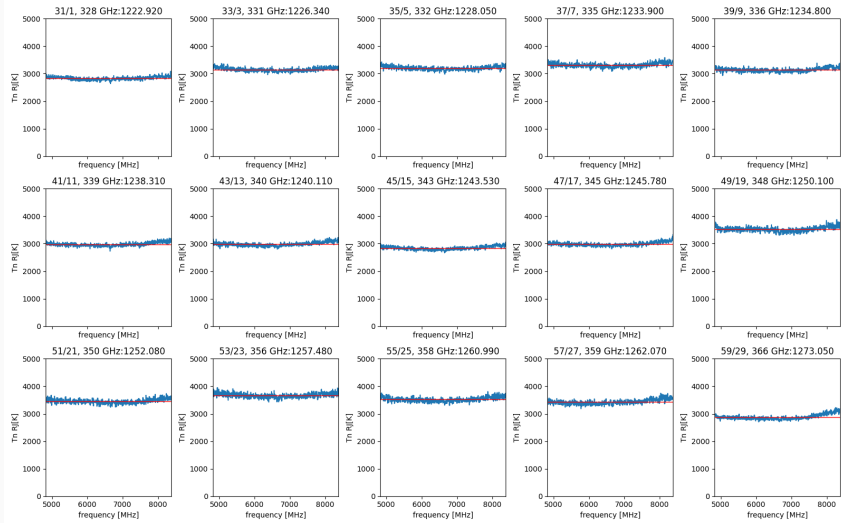


Figure 124: Tsys spectra

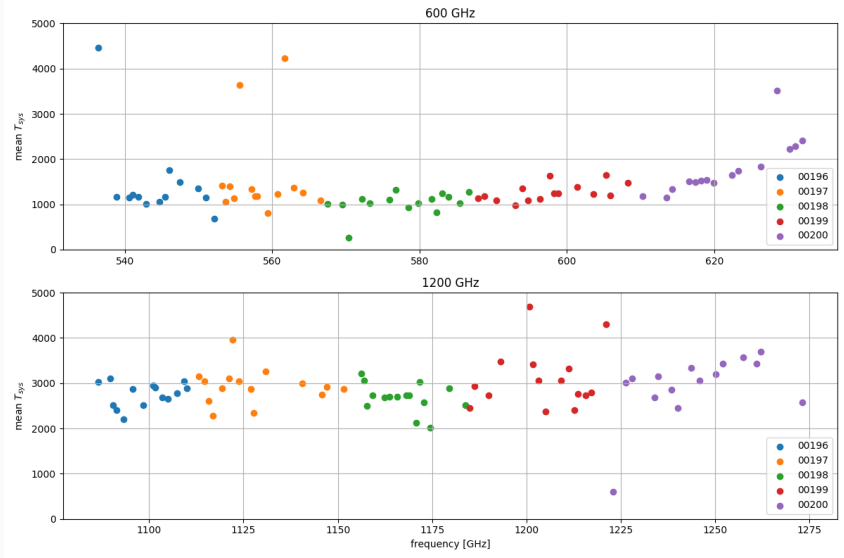


Figure 125: Results from 2024-07-04

- 600 GHz
 - ▶ Strong disturbances seen in IF near 7500 MHz.
 - ▶ Sub-optimal performance at 555.525 and 561.645 GHz
- 1200 GHz
 - ▶

Table 26: List of observations 00414 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	HOT	2024-08-23 12:30:22	0	550.980	541	1	1107.450	220	215.758
measacscch	HOT	2024-08-23 12:30:41	2	560.745	582	3	1126.890	245	215.758
measacscch	HOT	2024-08-23 12:31:00	4	619.920	828	5	1095.660	205	215.758
measacscch	HOT	2024-08-23 12:31:18	6	582.255	344	7	1157.670	272	215.753
measacscch	HOT	2024-08-23 12:31:37	8	593.955	756	9	1222.920	328	215.764
measacscch	HOT	2024-08-23 12:31:56	10	569.520	313	11	1101.600	213	215.764
measacscch	HOT	2024-08-23 12:32:15	12	558.000	273	13	1213.650	322	215.763
measacscch	HOT	2024-08-23 12:32:34	14	565.110	294	15	1111.860	227	215.766
measacscch	HOT	2024-08-23 12:32:52	16	614.295	400	17	1226.340	331	215.775
measacscch	HOT	2024-08-23 12:33:12	18	596.295	373	19	1109.340	223	215.780
measacscch	HOT	2024-08-23 12:33:31	20	601.425	784	21	1184.940	298	215.772
measacscch	HOT	2024-08-23 12:33:50	22	545.445	235	23	1162.350	277	215.777
measacscch	HOT	2024-08-23 12:34:09	24	538.875	503	25	1273.050	366	215.780
measacscch	HOT	2024-08-23 12:34:28	26	579.780	681	27	1140.570	257	215.782
measacscch	HOT	2024-08-23 12:34:46	28	553.680	255	29	1262.070	359	215.785
measacscch	HOT	2024-08-23 12:35:05	30	536.355	219	31	1086.480	195	215.779
measacscch	HOT	2024-08-23 12:35:24	32	541.800	229	33	1089.630	198	215.783
measacscch	SKY	2024-08-23 12:30:22	34	550.980	541	35	1107.450	220	215.758
measacscch	SKY	2024-08-23 12:30:41	36	560.745	582	37	1126.890	245	215.758
measacscch	SKY	2024-08-23 12:31:00	38	619.920	828	39	1095.660	205	215.758
measacscch	SKY	2024-08-23 12:31:18	40	582.255	344	41	1157.670	272	215.753
measacscch	SKY	2024-08-23 12:31:37	42	593.955	756	43	1222.920	328	215.764
measacscch	SKY	2024-08-23 12:31:56	44	569.520	313	45	1101.600	213	215.764
measacscch	SKY	2024-08-23 12:32:15	46	558.000	273	47	1213.650	322	215.763
measacscch	SKY	2024-08-23 12:32:34	48	565.110	294	49	1111.860	227	215.766
measacscch	SKY	2024-08-23 12:32:52	50	614.295	400	51	1226.340	331	215.775
measacscch	SKY	2024-08-23 12:33:12	52	596.295	373	53	1109.340	223	215.780
measacscch	SKY	2024-08-23 12:33:31	54	601.425	784	55	1184.940	298	215.772
measacscch	SKY	2024-08-23 12:33:50	56	545.445	235	57	1162.350	277	215.777
measacscch	SKY	2024-08-23 12:34:09	58	538.875	503	59	1273.050	366	215.780
measacscch	SKY	2024-08-23 12:34:28	60	579.780	681	61	1140.570	257	215.782
measacscch	SKY	2024-08-23 12:34:46	62	553.680	255	63	1262.070	359	215.785
measacscch	SKY	2024-08-23 12:35:05	64	536.355	219	65	1086.480	195	215.779
measacscch	SKY	2024-08-23 12:35:24	66	541.800	229	67	1089.630	198	215.783

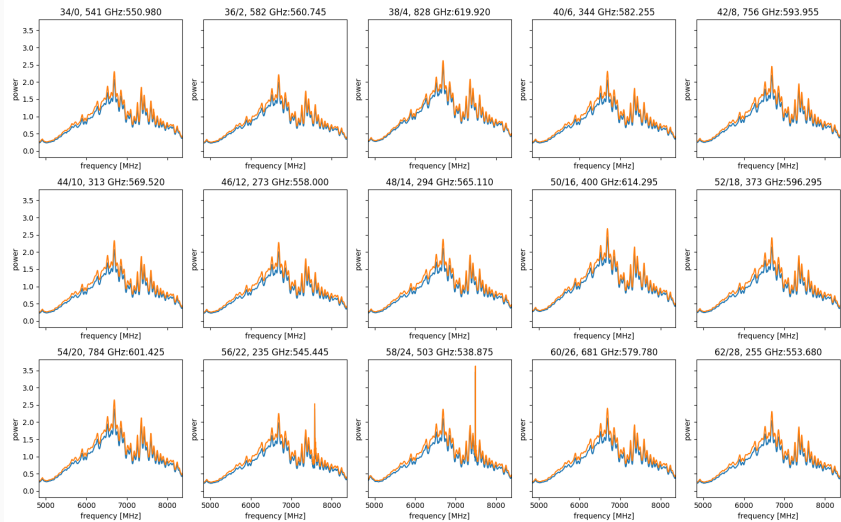


Figure 126: Hot/cold spectra

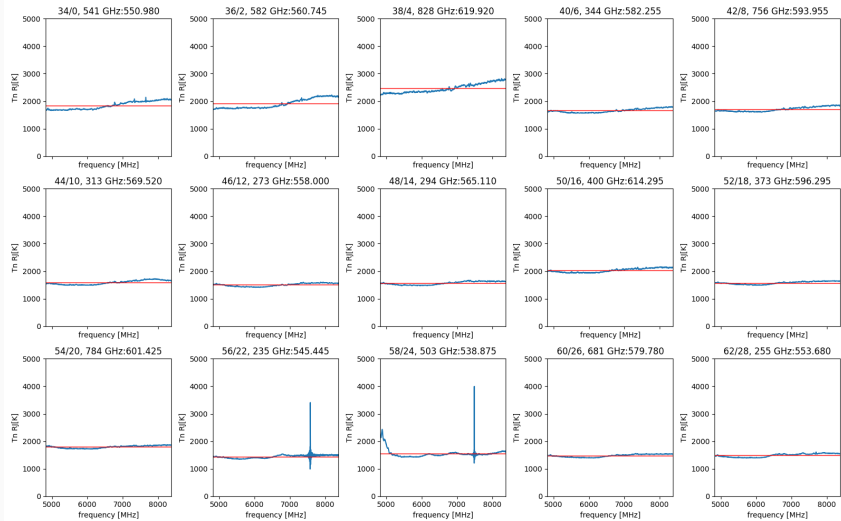


Figure 127: Tsys spectra

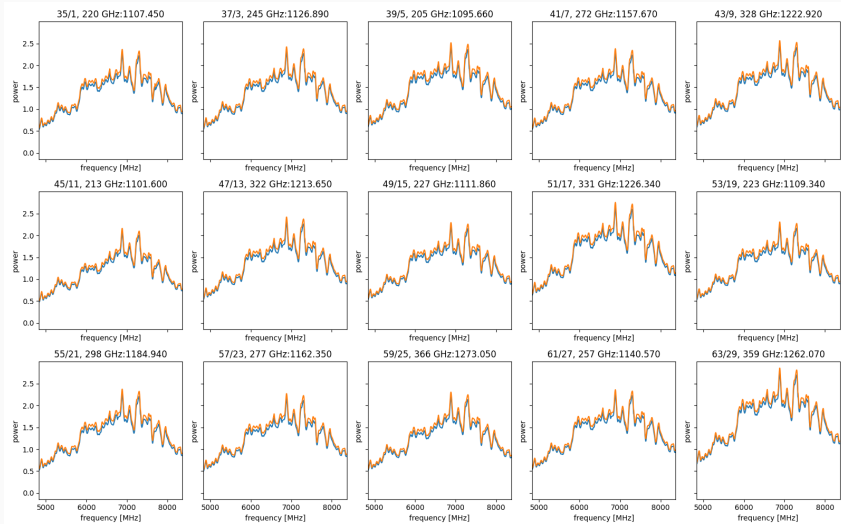


Figure 128: Hot/cold spectra

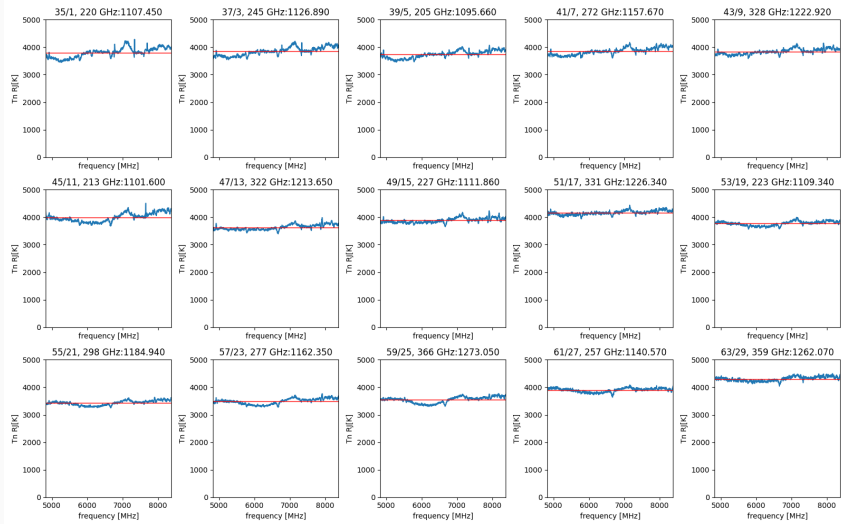


Figure 129: Tsys spectra

Table 27: List of observations 00415 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	SKY	2024-08-23 12:36:21	0	542.835	231	1	1093.320	202	215.788
measacscch	SKY	2024-08-23 12:36:39	2	544.680	521	3	1095.660	205	215.796
measacscch	SKY	2024-08-23 12:36:58	4	547.425	242	5	1098.540	209	215.793
measacscch	SKY	2024-08-23 12:37:17	6	549.900	246	7	1101.150	212	215.793
measacscch	SKY	2024-08-23 12:37:36	8	552.105	545	9	1103.400	215	215.798
measacscch	SKY	2024-08-23 12:37:55	10	555.525	561	11	1105.020	217	215.804
measacscch	SKY	2024-08-23 12:38:13	12	557.145	265	13	1114.740	231	215.804
measacscch	SKY	2024-08-23 12:38:32	14	557.685	271	15	1116.900	233	215.798
measacscch	SKY	2024-08-23 12:38:51	16	562.950	288	17	1119.330	236	215.809
measacscch	SKY	2024-08-23 12:39:11	18	564.120	293	19	1121.220	238	215.809
measacscch	SKY	2024-08-23 12:39:30	20	566.505	299	21	1123.830	241	215.798
measacscch	SKY	2024-08-23 12:39:49	22	567.540	304	23	1130.850	249	215.809
measacscch	SKY	2024-08-23 12:40:07	24	570.330	322	25	1151.640	266	215.817
measacscch	SKY	2024-08-23 12:40:26	26	572.220	326	27	1156.140	270	215.814
measacscch	SKY	2024-08-23 12:40:45	28	573.210	327	29	1159.110	273	215.822
measacscch	SKY	2024-08-23 12:41:04	30	575.865	671	31	1165.680	280	215.815
measacscch	SKY	2024-08-23 12:41:23	32	576.765	674	33	1168.110	283	215.825
measacscch	HOT	2024-08-23 12:36:21	34	542.835	231	35	1093.320	202	215.788
measacscch	HOT	2024-08-23 12:36:39	36	544.680	521	37	1095.660	205	215.796
measacscch	HOT	2024-08-23 12:36:58	38	547.425	242	39	1098.540	209	215.793
measacscch	HOT	2024-08-23 12:37:17	40	549.900	246	41	1101.150	212	215.793
measacscch	HOT	2024-08-23 12:37:36	42	552.105	545	43	1103.400	215	215.798
measacscch	HOT	2024-08-23 12:37:55	44	555.525	561	45	1105.020	217	215.804
measacscch	HOT	2024-08-23 12:38:13	46	557.145	265	47	1114.740	231	215.804
measacscch	HOT	2024-08-23 12:38:32	48	557.685	271	49	1116.900	233	215.798
measacscch	HOT	2024-08-23 12:38:51	50	562.950	288	51	1119.330	236	215.809
measacscch	HOT	2024-08-23 12:39:11	52	564.120	293	53	1121.220	238	215.809
measacscch	HOT	2024-08-23 12:39:30	54	566.505	299	55	1123.830	241	215.798
measacscch	HOT	2024-08-23 12:39:49	56	567.540	304	57	1130.850	249	215.809
measacscch	HOT	2024-08-23 12:40:07	58	570.330	322	59	1151.640	266	215.817
measacscch	HOT	2024-08-23 12:40:26	60	572.220	326	61	1156.140	270	215.814
measacscch	HOT	2024-08-23 12:40:45	62	573.210	327	63	1159.110	273	215.822
measacscch	HOT	2024-08-23 12:41:04	64	575.865	671	65	1165.680	280	215.815
measacscch	HOT	2024-08-23 12:41:23	66	576.765	674	67	1168.110	283	215.825

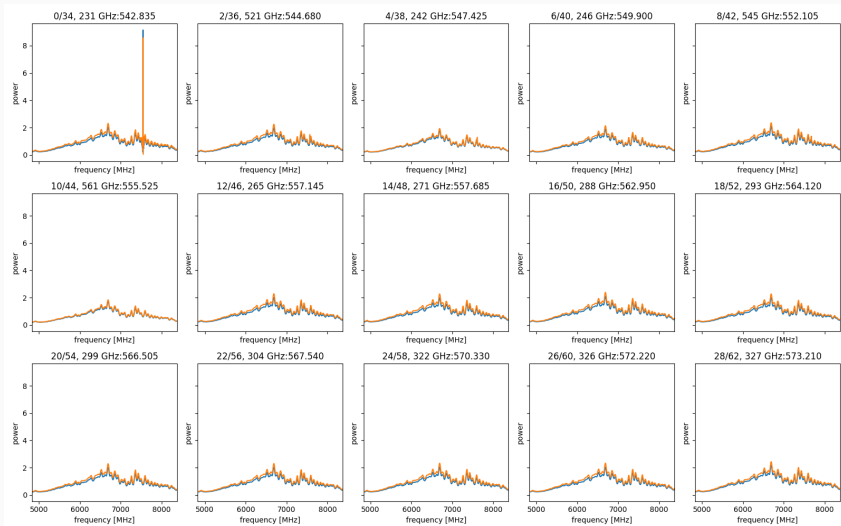


Figure 130: Hot/cold spectra

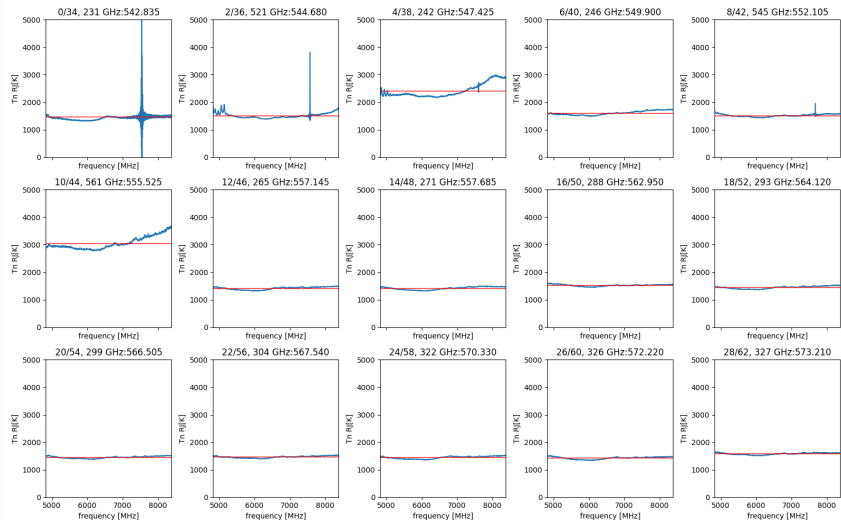


Figure 131: Tsys spectra

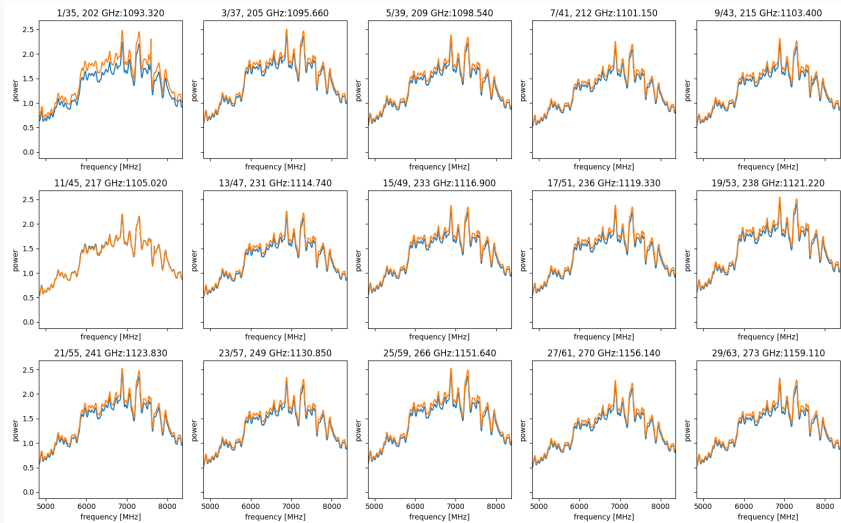


Figure 132: Hot/cold spectra

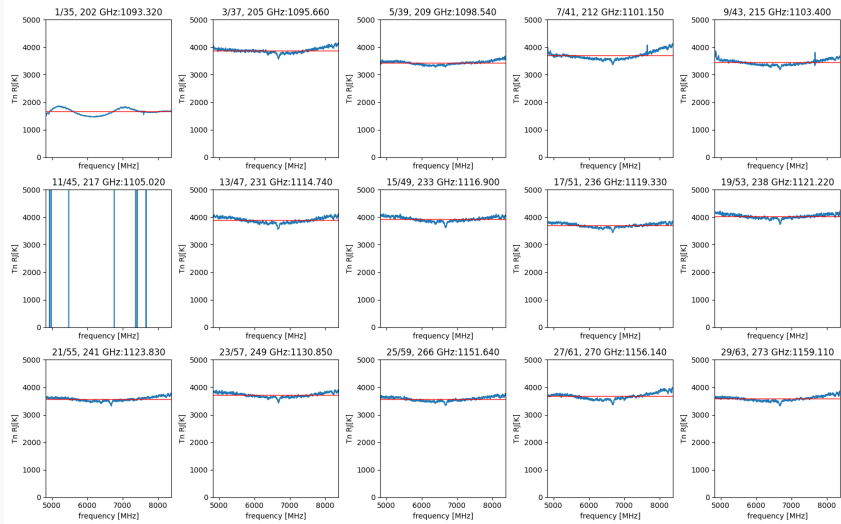


Figure 133: Tsys spectra

Table 28: List of observations 00416 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	HOT	2024-08-23 12:42:22	0	578.520	678	1	1171.710	287	215.828
measacscch	HOT	2024-08-23 12:42:41	2	581.625	339	3	1174.410	290	215.822
measacscch	HOT	2024-08-23 12:42:59	4	583.965	706	5	1179.540	294	215.836
measacscch	HOT	2024-08-23 12:43:18	6	585.450	715	7	1183.770	297	215.836
measacscch	HOT	2024-08-23 12:43:37	8	586.665	352	9	1186.200	299	215.828
measacscch	HOT	2024-08-23 12:43:56	10	588.780	723	11	1189.980	302	215.839
measacscch	HOT	2024-08-23 12:44:15	12	590.445	725	13	1193.040	305	215.836
measacscch	HOT	2024-08-23 12:44:33	14	593.010	739	15	1200.690	310	215.847
measacscch	HOT	2024-08-23 12:44:52	16	597.645	768	17	1201.680	311	215.841
measacscch	HOT	2024-08-23 12:45:12	18	598.815	378	19	1205.100	315	215.849
measacscch	HOT	2024-08-23 12:45:31	20	603.540	790	21	1209.060	318	215.841
measacscch	HOT	2024-08-23 12:45:50	22	605.295	793	23	1211.220	320	215.852
measacscch	HOT	2024-08-23 12:46:09	24	605.925	795	25	1215.720	323	215.852
measacscch	HOT	2024-08-23 12:46:27	26	608.265	807	27	1217.070	325	215.847
measacscch	HOT	2024-08-23 12:46:46	28	610.290	394	29	1221.030	327	215.844
measacscch	HOT	2024-08-23 12:47:05	30	613.485	815	31	1228.050	332	215.849
measacscch	HOT	2024-08-23 12:47:24	32	616.590	402	33	1233.900	335	215.857
measacscch	SKY	2024-08-23 12:42:22	34	578.520	678	35	1171.710	287	215.828
measacscch	SKY	2024-08-23 12:42:41	36	581.625	339	37	1174.410	290	215.822
measacscch	SKY	2024-08-23 12:42:59	38	583.965	706	39	1179.540	294	215.836
measacscch	SKY	2024-08-23 12:43:18	40	585.450	715	41	1183.770	297	215.836
measacscch	SKY	2024-08-23 12:43:37	42	586.665	352	43	1186.200	299	215.828
measacscch	SKY	2024-08-23 12:43:56	44	588.780	723	45	1189.980	302	215.839
measacscch	SKY	2024-08-23 12:44:15	46	590.445	725	47	1193.040	305	215.836
measacscch	SKY	2024-08-23 12:44:33	48	593.010	739	49	1200.690	310	215.847
measacscch	SKY	2024-08-23 12:44:52	50	597.645	768	51	1201.680	311	215.841
measacscch	SKY	2024-08-23 12:45:12	52	598.815	378	53	1205.100	315	215.849
measacscch	SKY	2024-08-23 12:45:31	54	603.540	790	55	1209.060	318	215.841
measacscch	SKY	2024-08-23 12:45:50	56	605.295	793	57	1211.220	320	215.852
measacscch	SKY	2024-08-23 12:46:09	58	605.925	795	59	1215.720	323	215.852
measacscch	SKY	2024-08-23 12:46:27	60	608.265	807	61	1217.070	325	215.847
measacscch	SKY	2024-08-23 12:46:46	62	610.290	394	63	1221.030	327	215.844
measacscch	SKY	2024-08-23 12:47:05	64	613.485	815	65	1228.050	332	215.849
measacscch	SKY	2024-08-23 12:47:24	66	616.590	402	67	1233.900	335	215.857

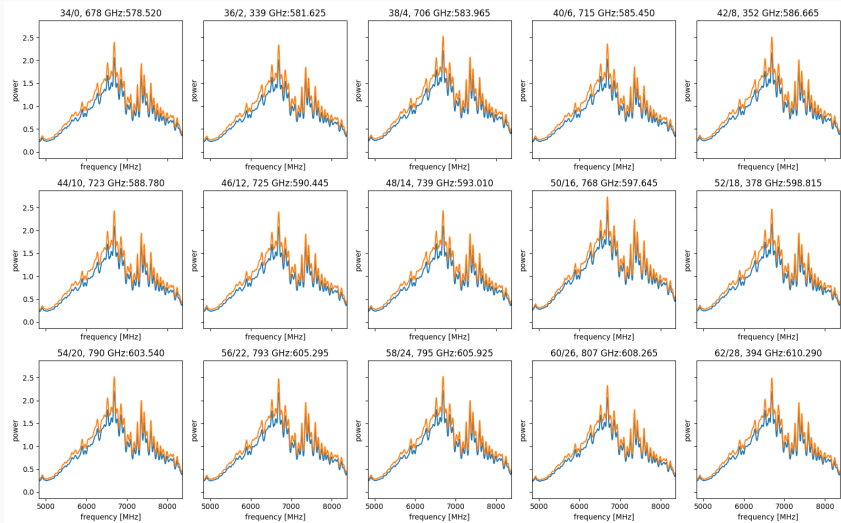


Figure 134: Hot/cold spectra

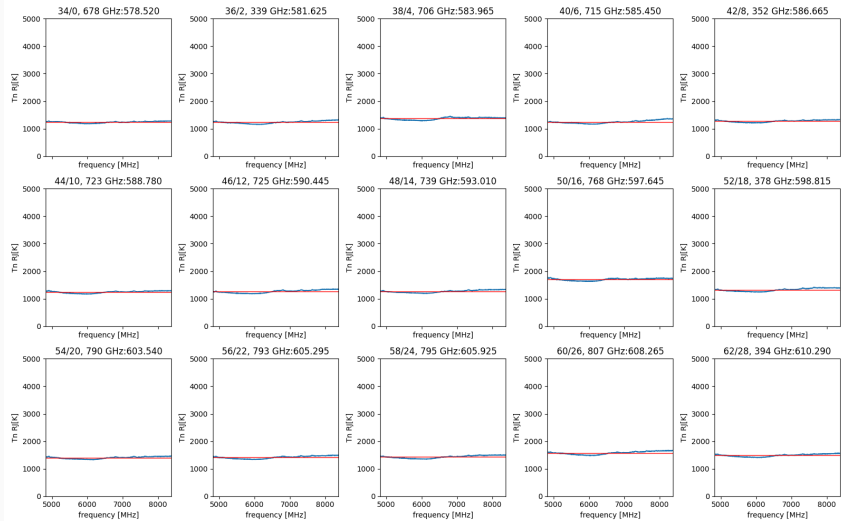


Figure 135: Tsys spectra

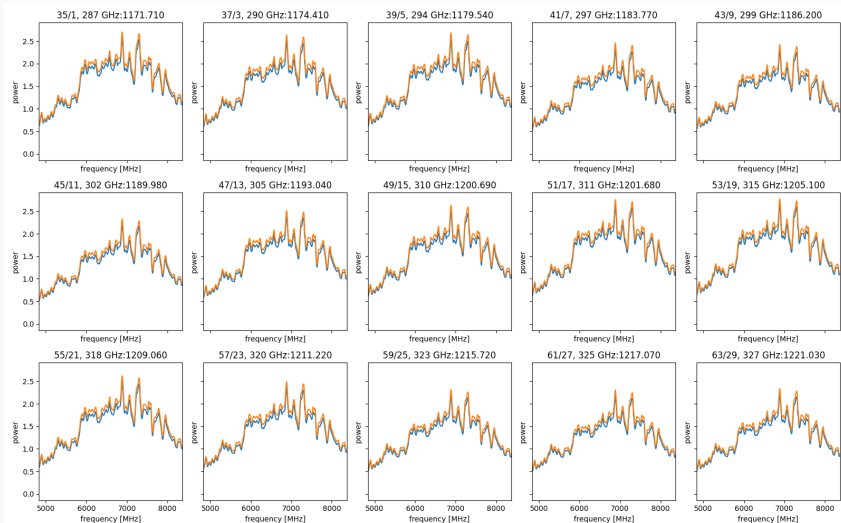


Figure 136: Hot/cold spectra

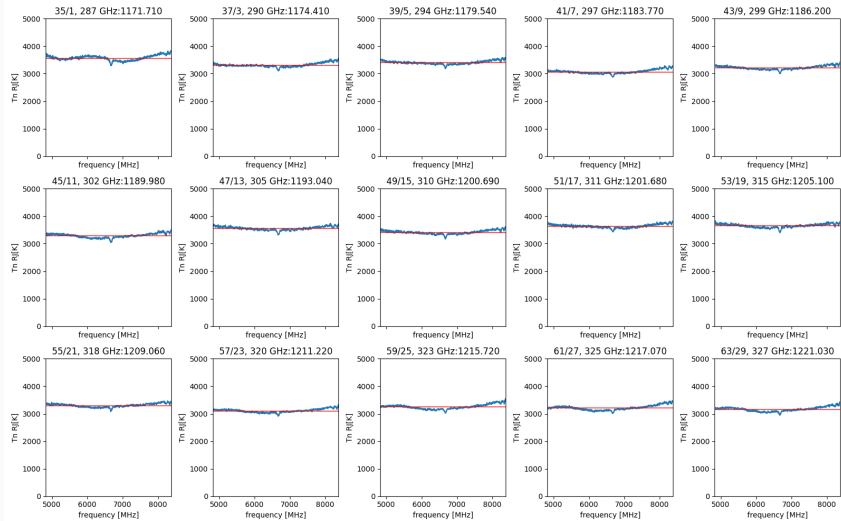


Figure 137: Tsys spectra

Table 29: List of observations 00417 0x04054800 SWI TSYS ACS CCH V1.

CMD	FLM	TSTAMP	IDX1	LO1	BIAS1	IDX2	LO2	BIAS2	THOT
measacscch	SKY	2024-08-23 12:48:21	0	618.210	824	1	1234.800	336	215.860
measacscch	SKY	2024-08-23 12:48:39	2	622.395	410	3	1238.310	339	215.860
measacscch	SKY	2024-08-23 12:48:58	4	623.295	411	5	1240.110	340	215.863
measacscch	SKY	2024-08-23 12:49:17	6	626.310	843	7	1243.530	343	215.865
measacscch	SKY	2024-08-23 12:49:36	8	628.515	423	9	1250.100	348	215.862
measacscch	SKY	2024-08-23 12:49:55	10	630.225	855	11	1252.080	350	215.865
measacscch	SKY	2024-08-23 12:50:13	12	630.990	858	13	1260.990	358	215.868
measacscch	SKY	2024-08-23 12:50:32	14	631.935	861	15	1090.440	199	215.862
measacscch	SKY	2024-08-23 12:50:51	16	618.975	405	17	1091.340	200	215.868
measacscch	SKY	2024-08-23 12:51:11	18	617.445	822	19	1110.060	224	215.871
measacscch	SKY	2024-08-23 12:51:30	20	598.275	377	21	1113.120	229	215.868
measacscch	SKY	2024-08-23 12:51:49	22	594.720	370	23	1115.730	232	215.871
measacscch	SKY	2024-08-23 12:52:07	24	587.970	720	25	1122.120	239	215.882
measacscch	SKY	2024-08-23 12:52:26	26	583.065	698	27	1127.700	246	215.876
measacscch	SKY	2024-08-23 12:52:45	28	561.645	588	29	1156.950	271	215.879
measacscch	SKY	2024-08-23 12:53:04	30	559.350	275	31	1163.700	278	215.882
measacscch	SKY	2024-08-23 12:53:23	32	554.850	554	33	1168.920	284	215.887
measacscch	HOT	2024-08-23 12:48:21	34	618.210	824	35	1234.800	336	215.860
measacscch	HOT	2024-08-23 12:48:39	36	622.395	410	37	1238.310	339	215.860
measacscch	HOT	2024-08-23 12:48:58	38	623.295	411	39	1240.110	340	215.863
measacscch	HOT	2024-08-23 12:49:17	40	626.310	843	41	1243.530	343	215.865
measacscch	HOT	2024-08-23 12:49:36	42	628.515	423	43	1250.100	348	215.862
measacscch	HOT	2024-08-23 12:49:55	44	630.225	855	45	1252.080	350	215.865
measacscch	HOT	2024-08-23 12:50:13	46	630.990	858	47	1260.990	358	215.868
measacscch	HOT	2024-08-23 12:50:32	48	631.935	861	49	1090.440	199	215.862
measacscch	HOT	2024-08-23 12:50:51	50	618.975	405	51	1091.340	200	215.868
measacscch	HOT	2024-08-23 12:51:11	52	617.445	822	53	1110.060	224	215.871
measacscch	HOT	2024-08-23 12:51:30	54	598.275	377	55	1113.120	229	215.868
measacscch	HOT	2024-08-23 12:51:49	56	594.720	370	57	1115.730	232	215.871
measacscch	HOT	2024-08-23 12:52:07	58	587.970	720	59	1122.120	239	215.882
measacscch	HOT	2024-08-23 12:52:26	60	583.065	698	61	1127.700	246	215.876
measacscch	HOT	2024-08-23 12:52:45	62	561.645	588	63	1156.950	271	215.879
measacscch	HOT	2024-08-23 12:53:04	64	559.350	275	65	1163.700	278	215.882
measacscch	HOT	2024-08-23 12:53:23	66	554.850	554	67	1168.920	284	215.887

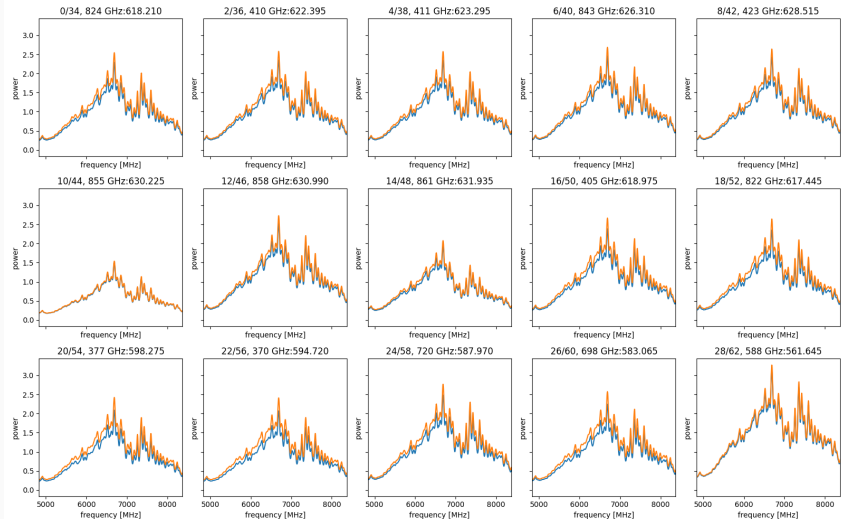


Figure 138: Hot/cold spectra

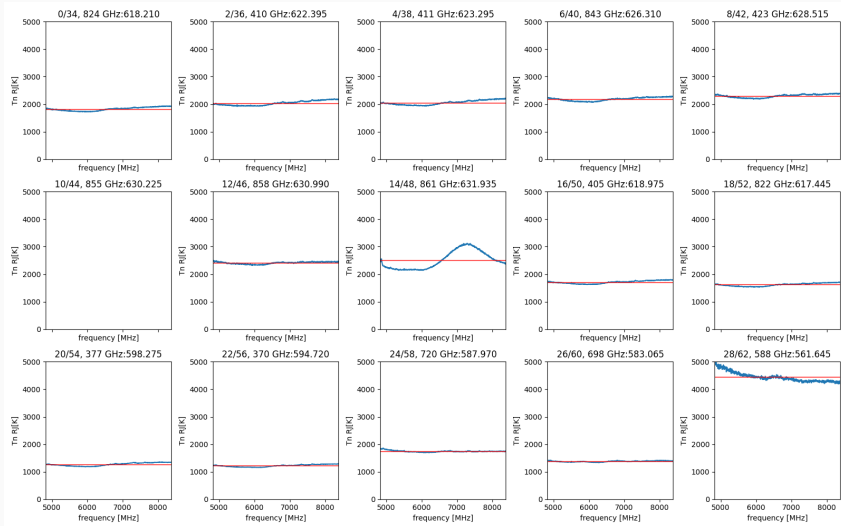


Figure 139: Tsys spectra

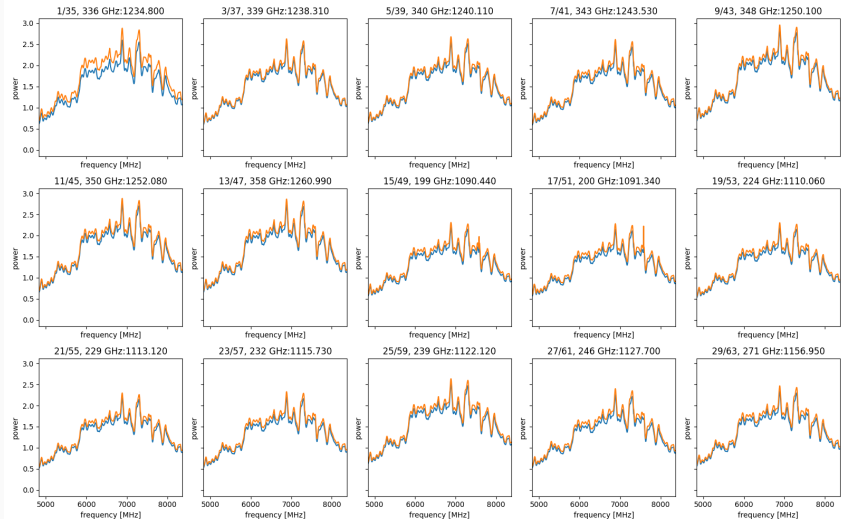


Figure 140: Hot/cold spectra

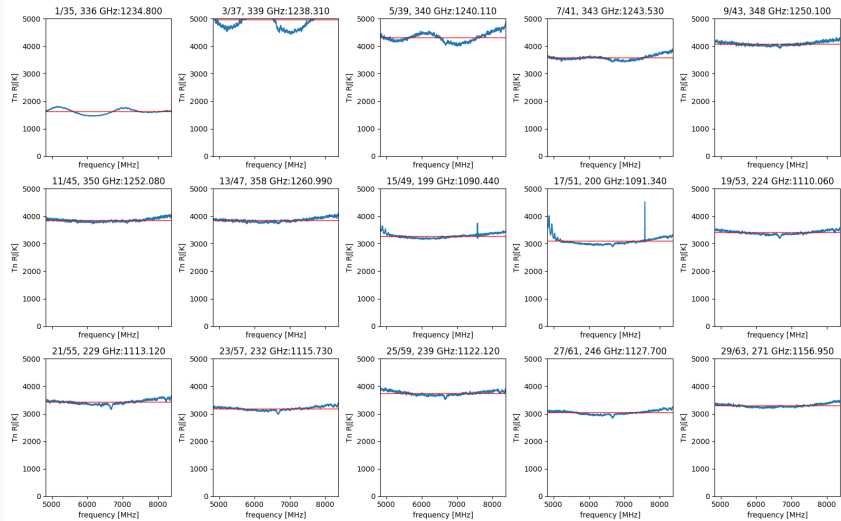


Figure 141: Tsys spectra

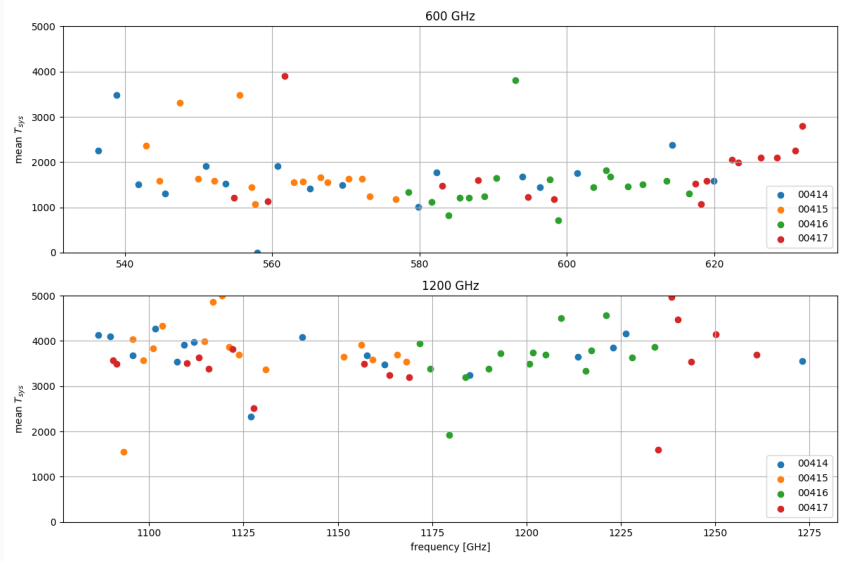


Figure 142: Results from 2024-08-23

- 600 GHz
 - ▶ Strong disturbances seen in IF near 7500 MHz, but not as frequently as on 2024-07-04.
 - ▶ Failed tuning at 630.225 GHz.
 - ▶ Sub-optimal performance at 561.645 GHz
 - ▶ Overall, results look surprisingly reasonable, given that the CTS basically didn't see anything.
- 1200 GHz
 - ▶ Failed tuning at 1105.020 GHz.
 - ▶ Sub-optimal performance at 1238.310 GHz

Section 3

**HK data during measurements of noise
temperatures**

HK data during measurements of noise temperatures

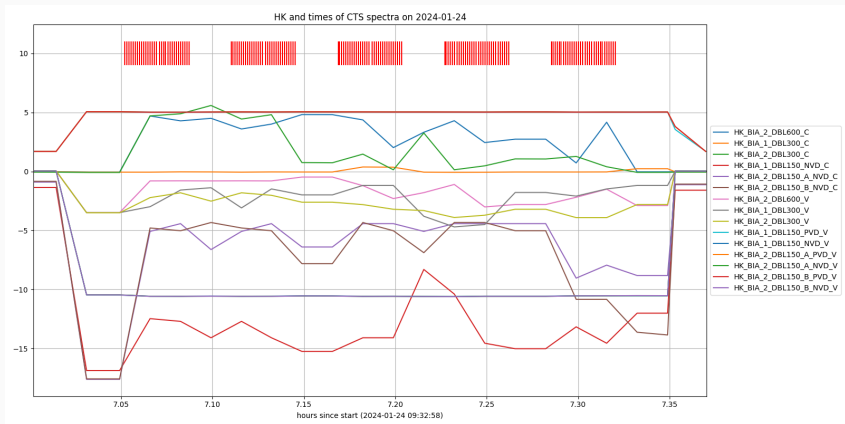


Figure 143: HK during CTS measurement on 2024-01-24

HK data during measurements of noise temperatures

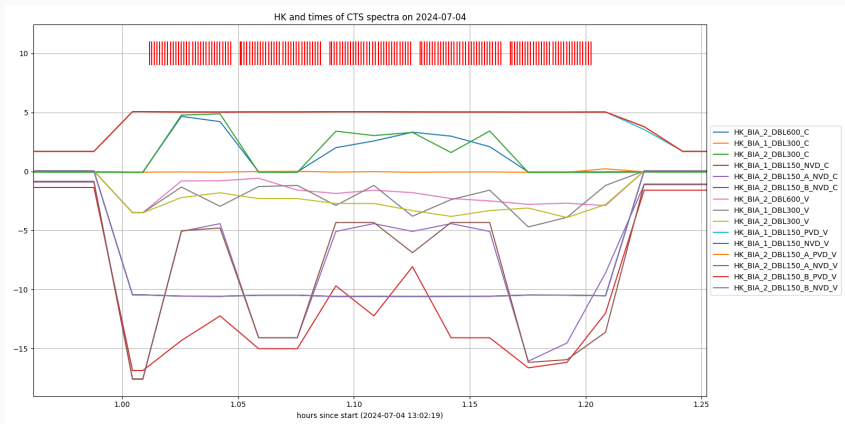


Figure 144: HK during CTS measurement on 2024-07-04

HK data during measurements of noise temperatures

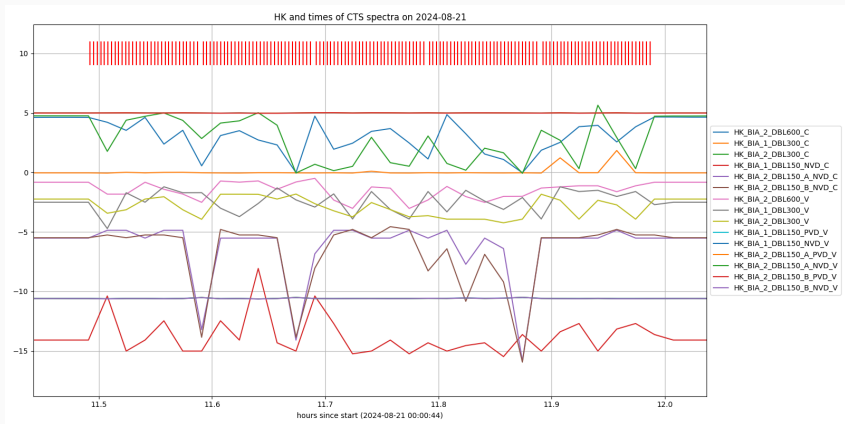


Figure 145: HK during CTS measurement on 2024-08-21

HK data during measurements of noise temperatures

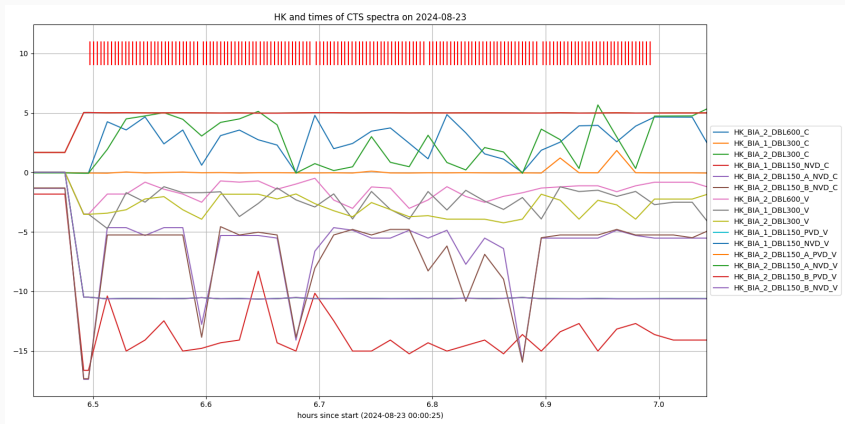


Figure 146: HK during CTS measurement on 2024-08-23

HK data during measurements of noise temperatures

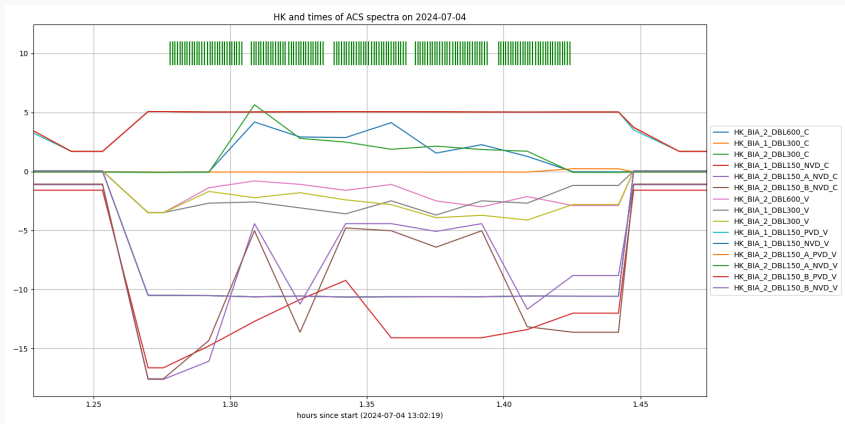


Figure 147: HK during ACS measurement on 2024-07-04

HK data during measurements of noise temperatures

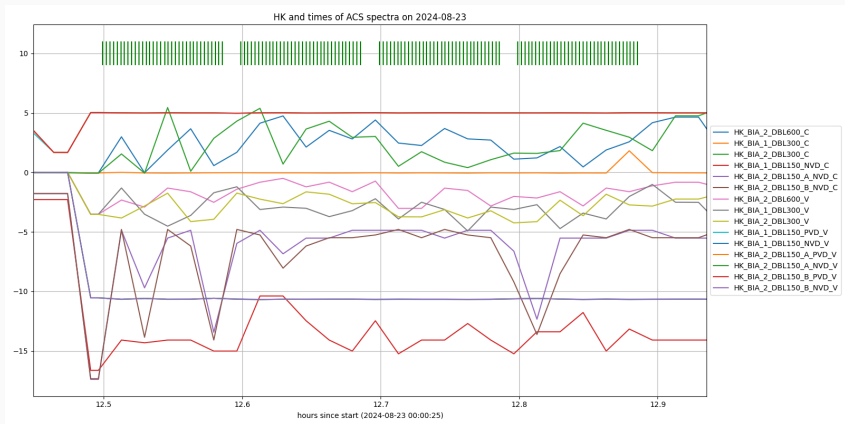


Figure 148: HK during ACS measurement on 2024-08-23

Section 4

Comparison of noise temperatures

Comparison of 600 GHz noise temperatures

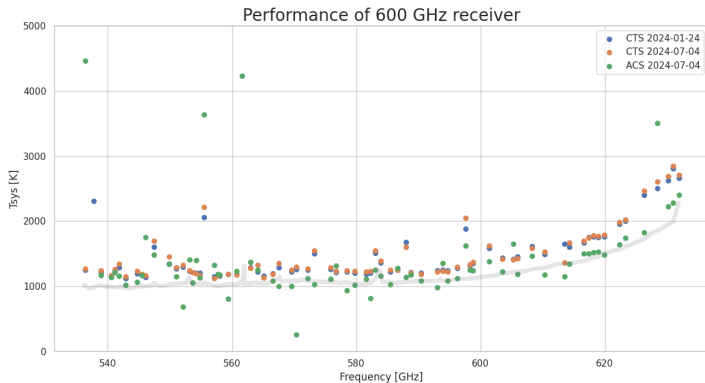


Figure 149: Observed noise temperatures on different dates and comparison with lab performance for the 600 GHz frontend.

Comparison of 600 GHz noise temperatures

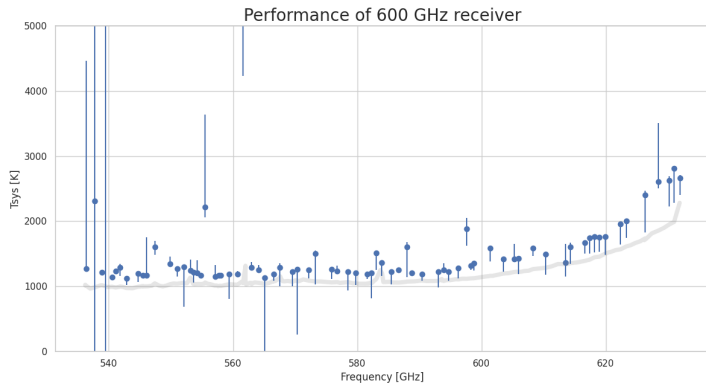


Figure 150: Same figure as on previous slide, but using error bars to represent the range of noise temperatures observed.

Comparison of 1200 GHz noise temperatures

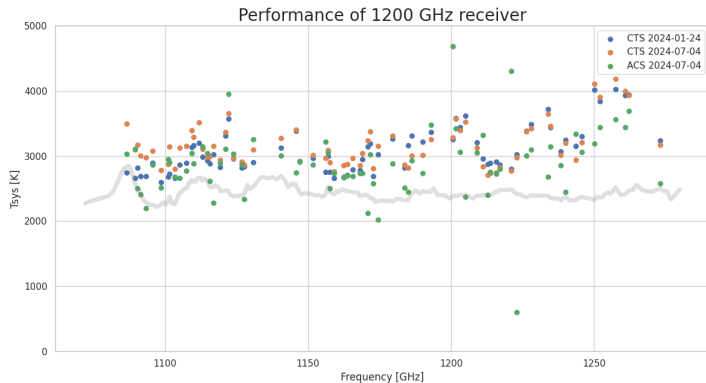


Figure 151: Observed noise temperatures on different dates and comparison with lab performance for the 1200 GHz frontend.

Comparison of 1200 GHz noise temperatures

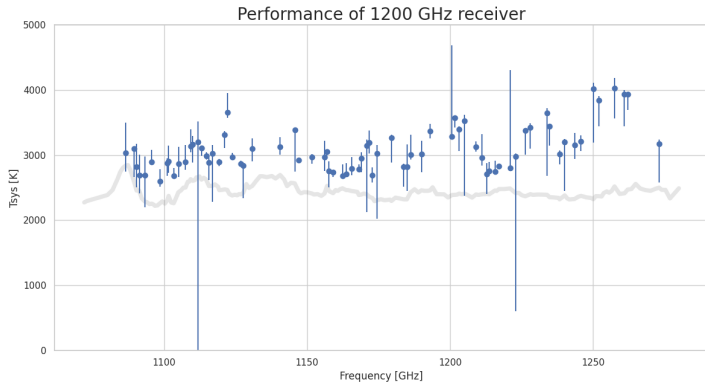


Figure 152: Same figure as on previous slide, but using error bars to represent the range of noise temperatures observed.

Section 5

Summary

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- Typically failed or poor tunings at 537.705, 555.525 and 561.645 GHz
- Sub-optimal performance at 537.705, 555.525 and 561.645 GHz
- Most frequencies show similar performance in repeated measurements, but some scatter is seen.
- Something went seriously wrong with CTS measurements on 23 August. Some ACS results from that date look reasonable, these set of spectra were taken six hours later. In July, CTS and ACS measurements were taken back-to-back.
- Spurious signals are seen in the CTS on a number of occasions and at various frequencies in both the 600 and 1200 GHz frontend. They always appear at the first observed frequency. *Is the comb generator affecting these?*
- Strong spike seen in ACS at IF near 7500 MHz in July and August.
- HK data are sampled at low frequency (1/min) and do not allow to look at possible variations *during* T_{sys} measurements.