

PRELIMINARY REPORT OF 070515

last update on Tue May 15 22:15:24 GMT 2007

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2007-05-14 00:00:00 to 2007-05-15 22:15:24

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	57	103	4	2	37
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	57	103	4	2	37
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	57	103	4	2	37
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	57	103	4	2	37

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	42	68	38	13	79
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	42	68	38	13	79
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	42	68	38	13	79
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	68	38	13	79

2.3 - Browse Visual Inspection

2.4 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20070515 085029
H	20070514 092206

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
<input type="checkbox"/>
<input type="checkbox"/>

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>
<input type="checkbox"/>

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-15.183511	0.138512	-0.325051
7	P1a	-17.587261	0.092863	-0.107878
11	P1a	-17.674503	0.349981	-0.401065
15	P1a	-13.121129	0.147066	-0.306585
19	P1a	-15.416262	0.068010	-0.165092
22	P1a	-15.993759	0.364678	-0.094631
26	P1a	-14.956493	0.217257	0.083608
30	P1a	-17.906820	0.399174	-0.545730

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.780172	0.010117	-0.030145
7	P1	-3.160127	0.009094	-0.045077
11	P1	-4.200997	0.015402	0.047257
15	P1	-6.451237	0.020162	-0.119164
19	P1	-3.776966	0.011945	0.007631
22	P1	-4.745739	0.010486	0.029483
26	P1	-3.908271	0.018993	0.002144
30	P1	-5.963767	0.009321	0.006618

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.653601	0.093238	0.048783
7	P2	-21.523441	0.093582	0.111574
11	P2	-15.298948	0.122676	0.139276
15	P2	-7.132092	0.090749	-0.010341
19	P2	-9.121161	0.083408	-0.017829
22	P2	-18.086853	0.078816	0.002712
26	P2	-16.643333	0.085066	-0.068284
30	P2	-19.258003	0.084659	0.068858

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.245810	0.004865	0.001917
7	P3	-8.245810	0.004865	0.001917
11	P3	-8.245810	0.004865	0.001917
15	P3	-8.245810	0.004865	0.001917
19	P3	-8.245810	0.004865	0.001917
22	P3	-8.245810	0.004865	0.001917
26	P3	-8.245810	0.004865	0.001917
30	P3	-8.245810	0.004865	0.001917

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.386399	0.174012	-0.709581
7	P1a	-10.032501	0.164253	0.105537
11	P1a	-10.681672	0.085647	-0.016140
15	P1a	-10.792810	0.148001	0.117094
19	P1a	-15.843716	0.091405	-0.109553
22	P1a	-21.472780	1.428488	-0.063442
26	P1a	-15.554293	0.338593	-0.053683
30	P1a	-18.274796	0.438259	0.035829

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.140606	0.300091	1.364328
7	P1	-2.383002	0.086503	0.092951
11	P1	-2.874046	0.022055	0.029194
15	P1	-3.801990	0.035628	0.043941
19	P1	-3.600408	0.015577	-0.036061
22	P1	-4.953490	0.023023	0.032613
26	P1	-6.053171	0.023449	-0.038661
30	P1	-5.352071	0.031748	-0.035279

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.204548	0.071556	-0.069548
7	P2	-22.059296	0.168609	-0.051604
11	P2	-10.656459	0.045340	-0.058821
15	P2	-4.949424	0.043625	-0.066144
19	P2	-6.881094	0.041529	-0.019257
22	P2	-8.108780	0.081749	0.022441
26	P2	-24.341419	0.133775	-0.063437
30	P2	-21.705299	0.107178	0.009242

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.092869	0.005082	0.001583
7	P3	-8.092831	0.005088	0.001508
11	P3	-8.092757	0.005080	0.001186
15	P3	-8.092772	0.005085	0.001191
19	P3	-8.092884	0.005090	0.001178
22	P3	-8.092710	0.005082	0.001173
26	P3	-8.092678	0.005088	0.001298
30	P3	-8.092770	0.005079	0.001253

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS



4.3.2 - Evolution for GM1



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000551120
	stdev	1.92842e-07
MEAN Q	mean	0.000508742
	stdev	2.38643e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136180
	stdev	0.00118081
STDEV Q	mean	0.136569
	stdev	0.00119789



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007051[345]

The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070515_014512_000000352058_00103_27211_6080.N1	0	29
ASA_WSM_1PNPDE20070514_145940_000001582058_00097_27205_5551.N1	0	61
ASA_WSM_1PNPDE20070514_182245_000001582058_00099_27207_5646.N1	0	16
ASA_WSM_1PNPDK20070514_132855_000000612058_00096_27204_8337.N1	5	437







7 - Doppler Analysis

Preliminary report. The data is not yet controlled



7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX



7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)


Acsending

<input type="checkbox"/>
Descending

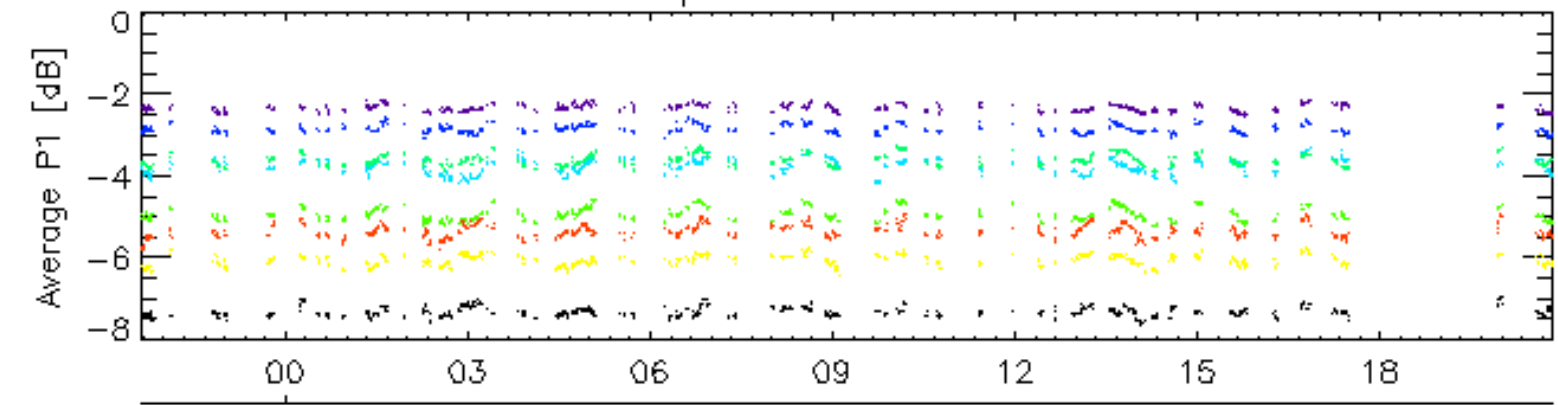
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

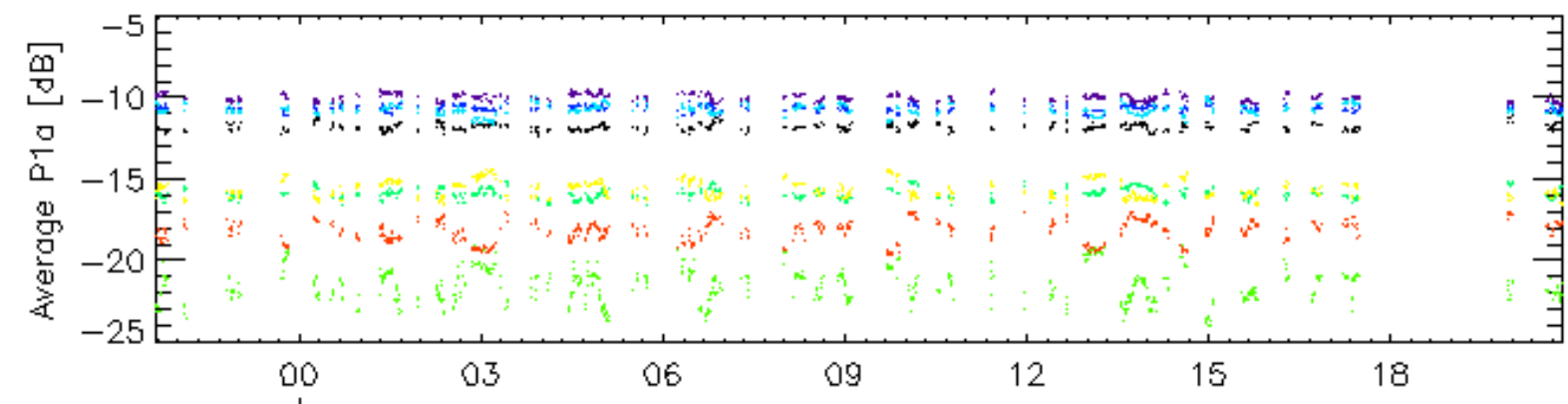
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

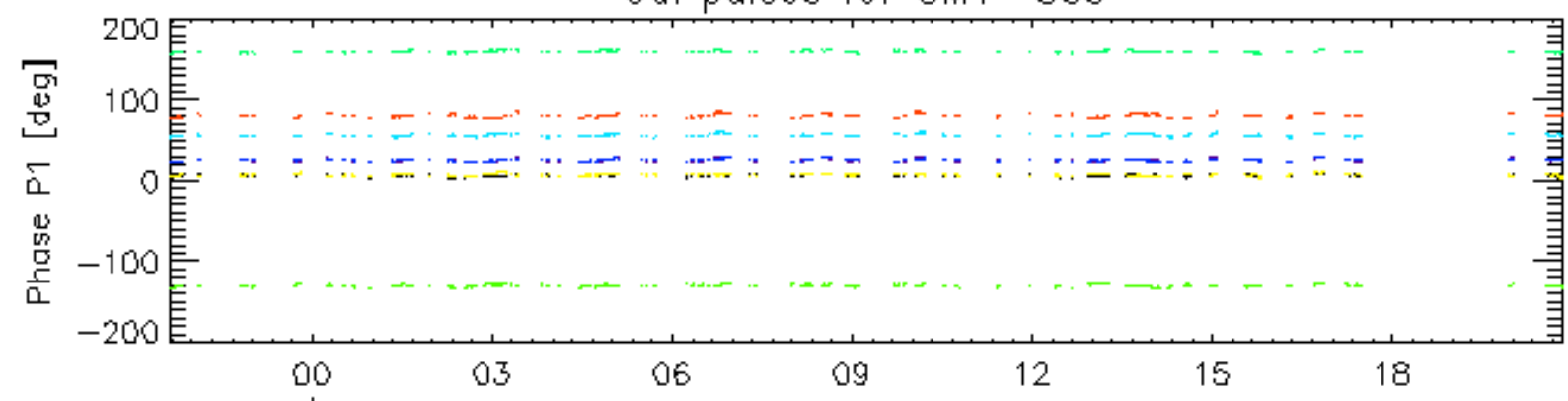


15-May

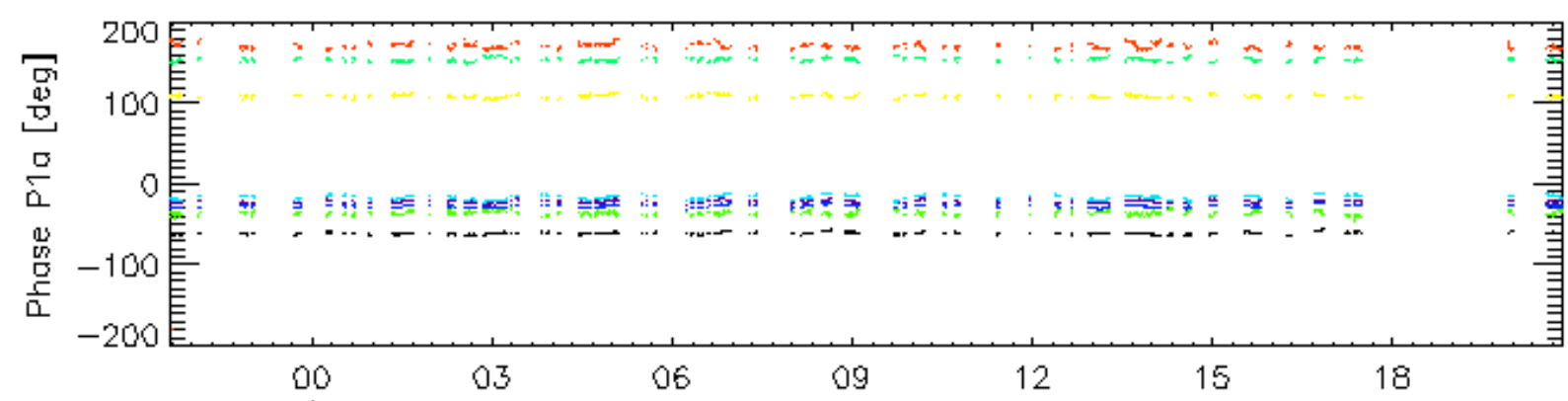


15-May

Cal pulses for GM1 SS3

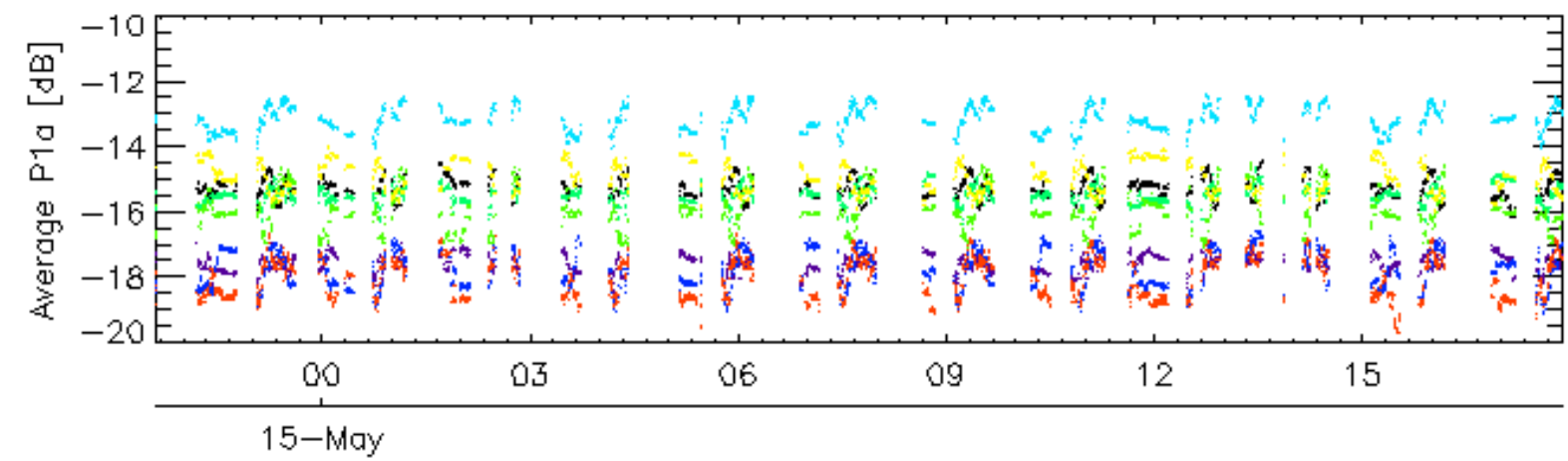
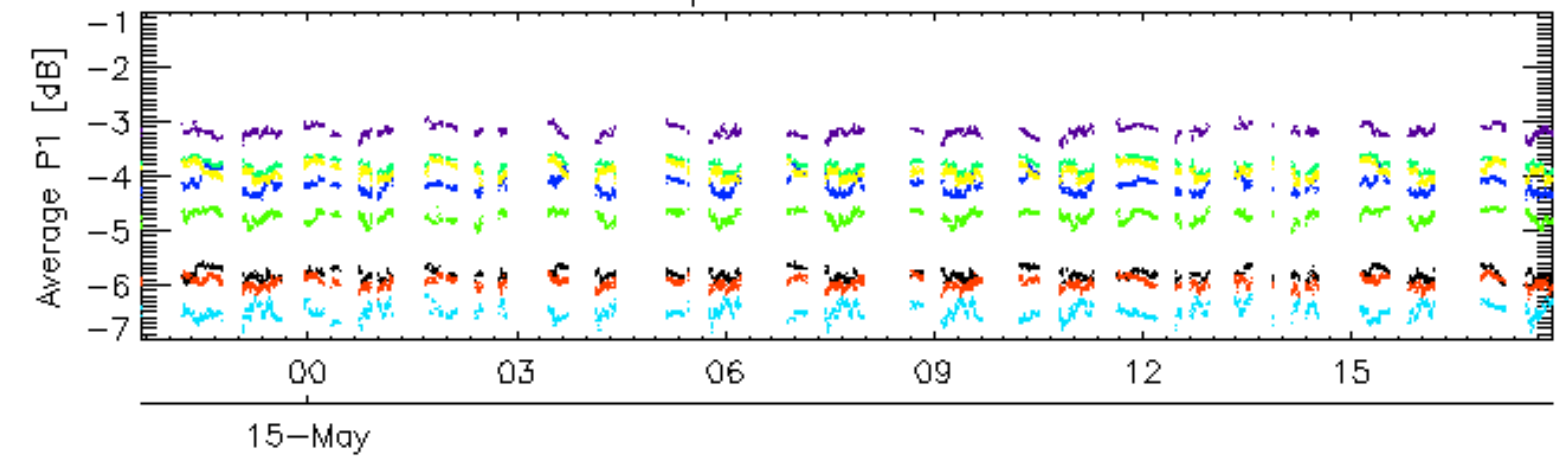


15-May

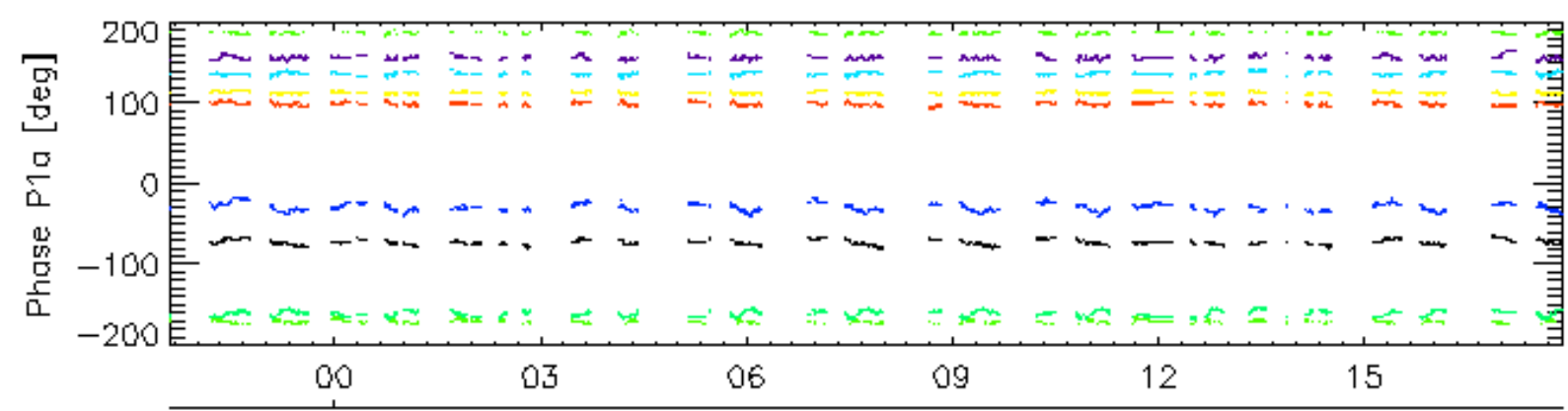
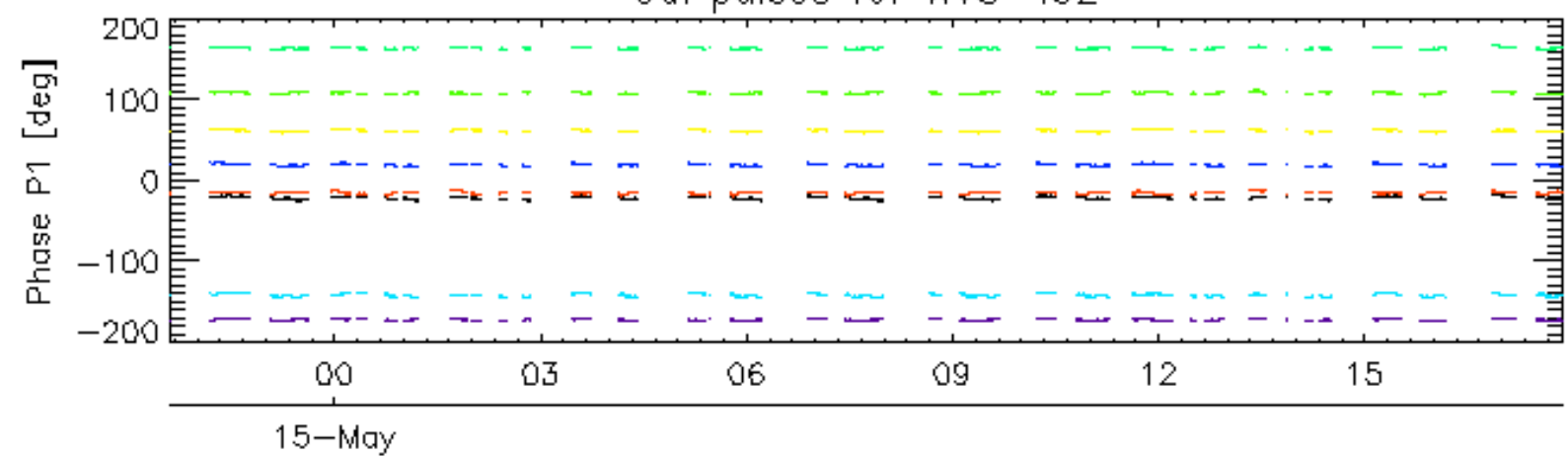


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

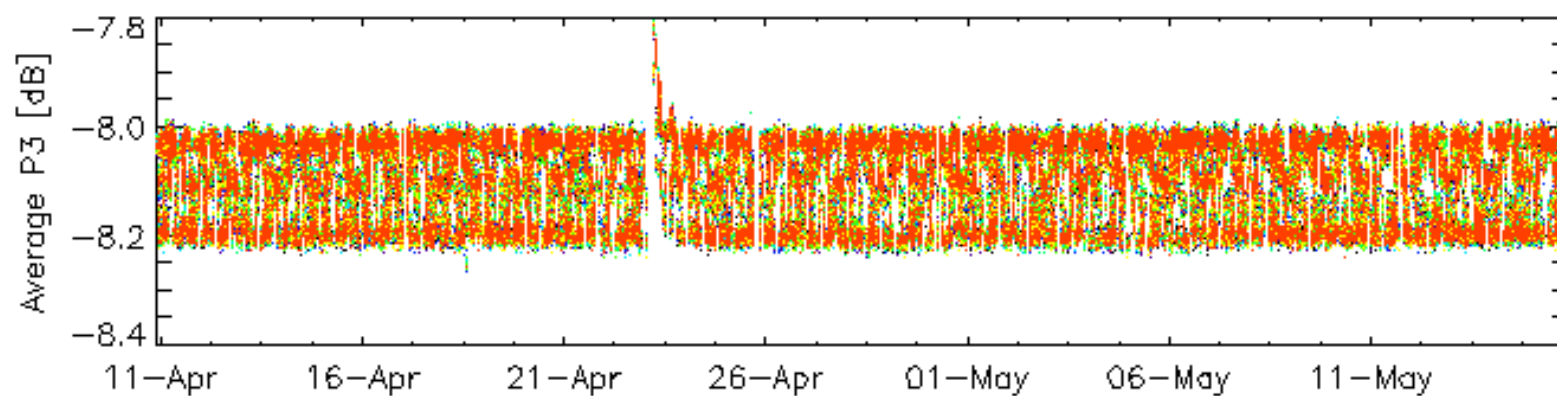
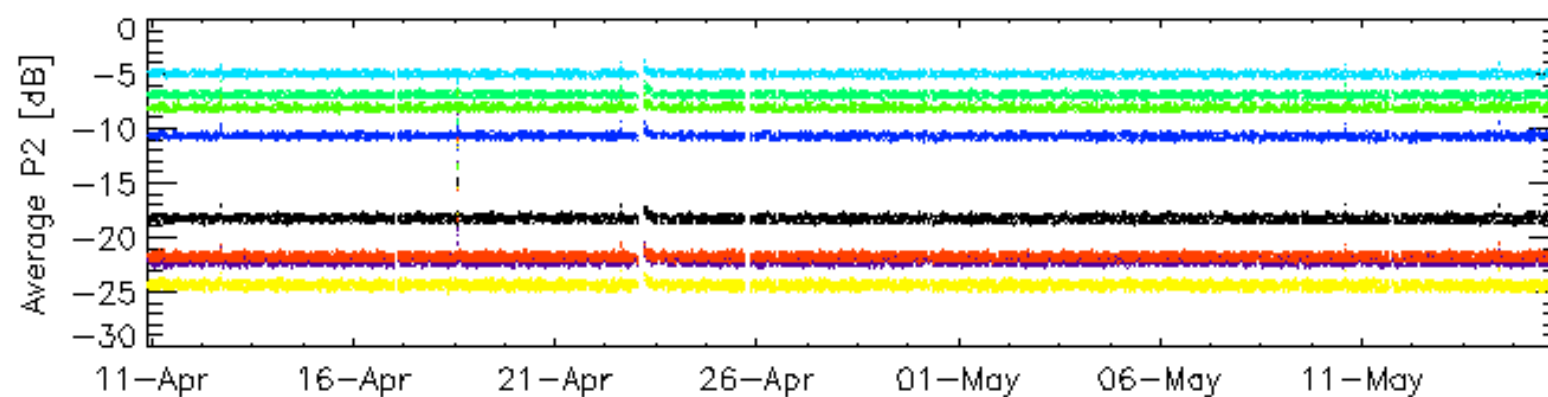
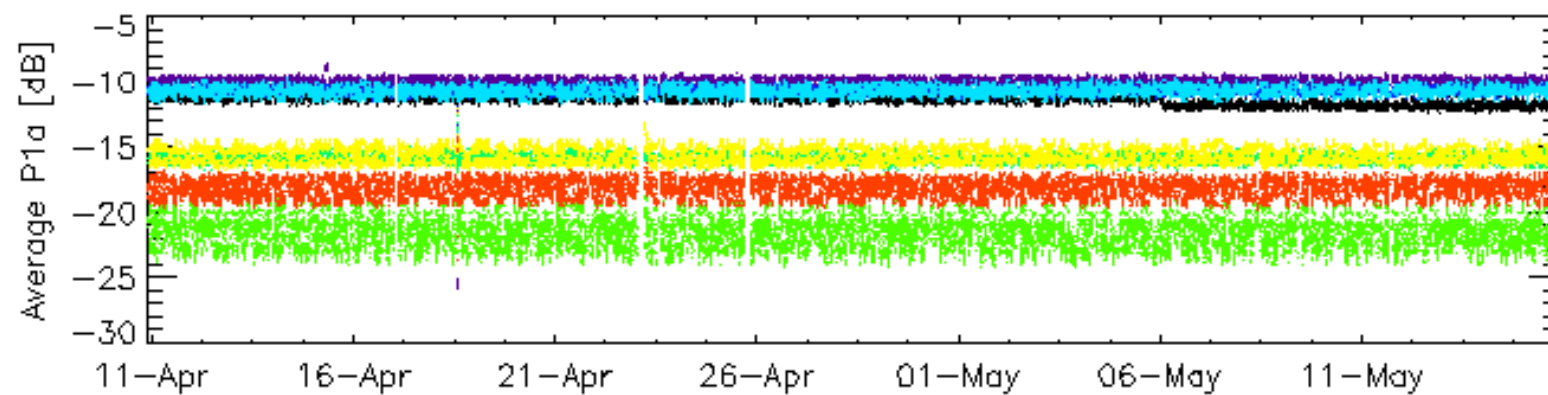
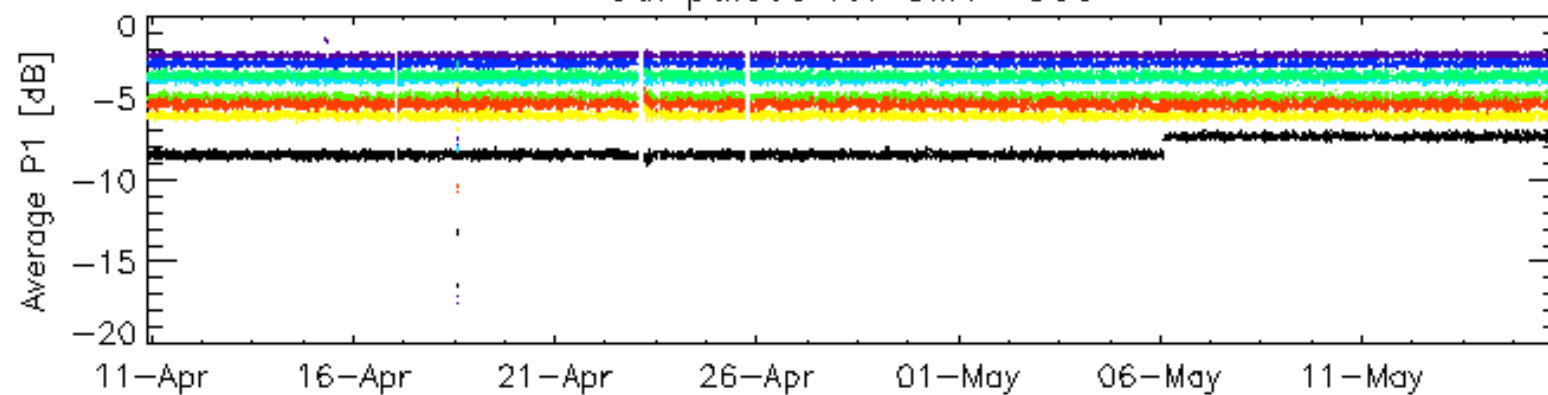


Cal pulses for WVS IS2



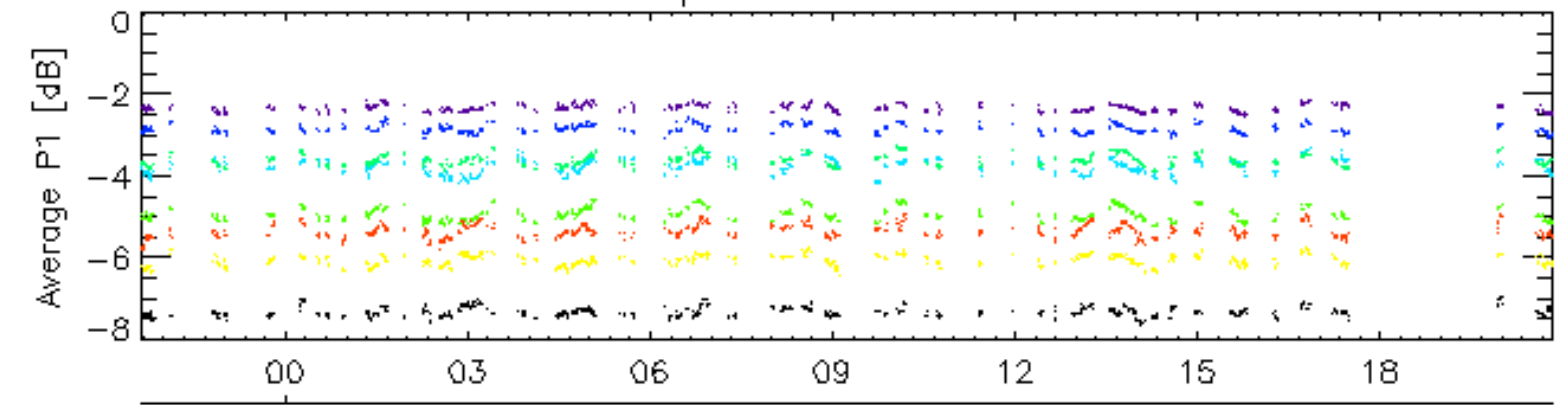
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3

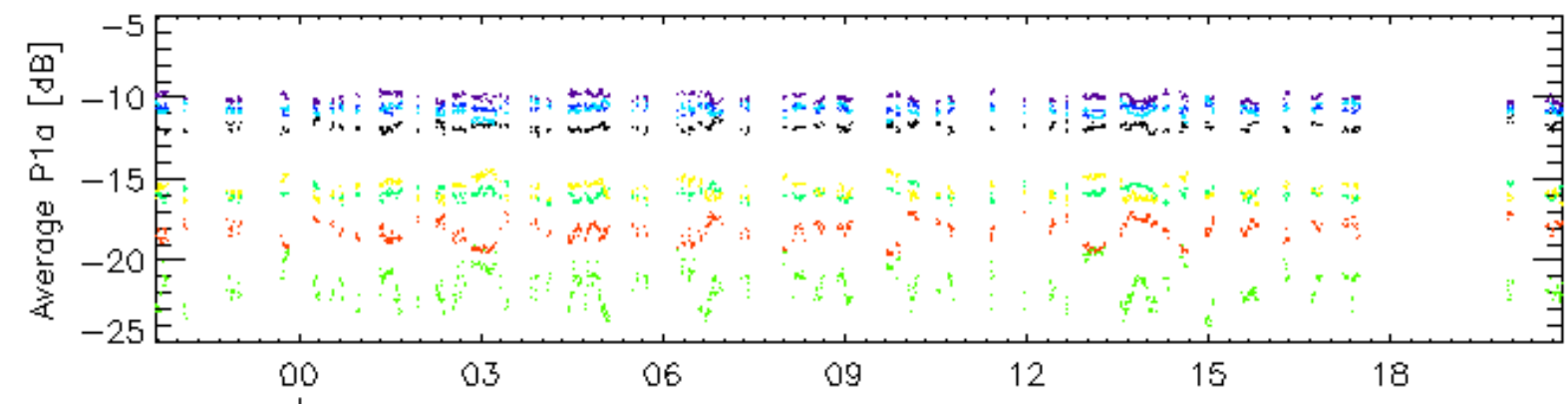


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

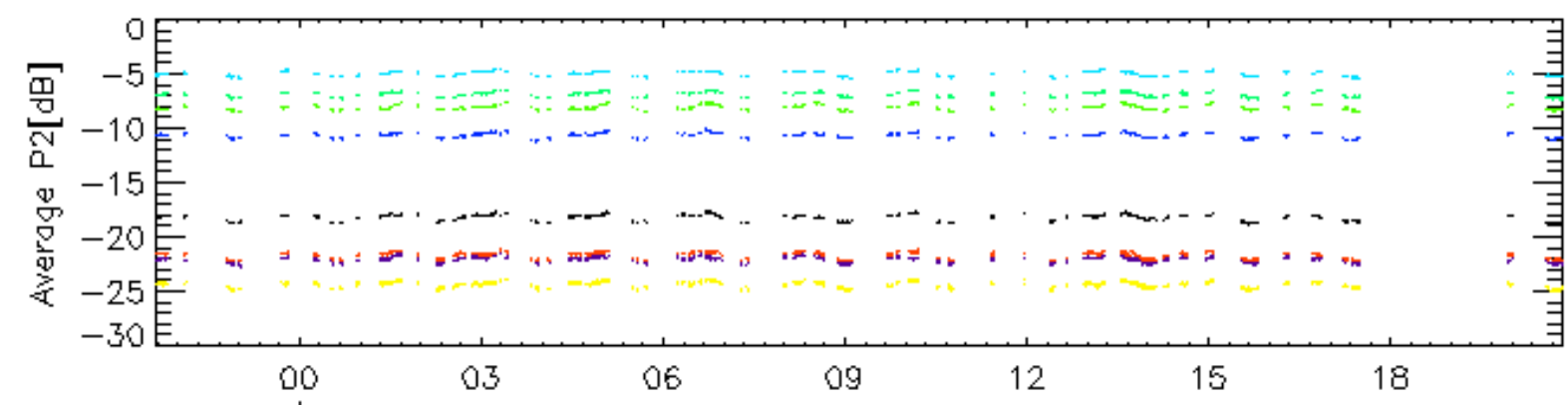
Cal pulses for GM1 SS3



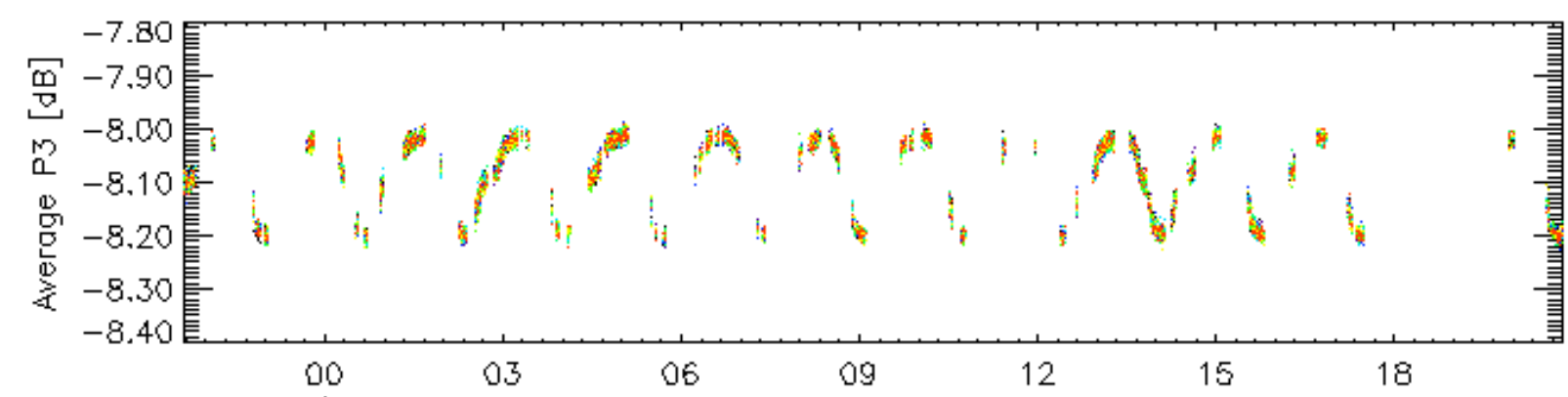
15-May



15-May



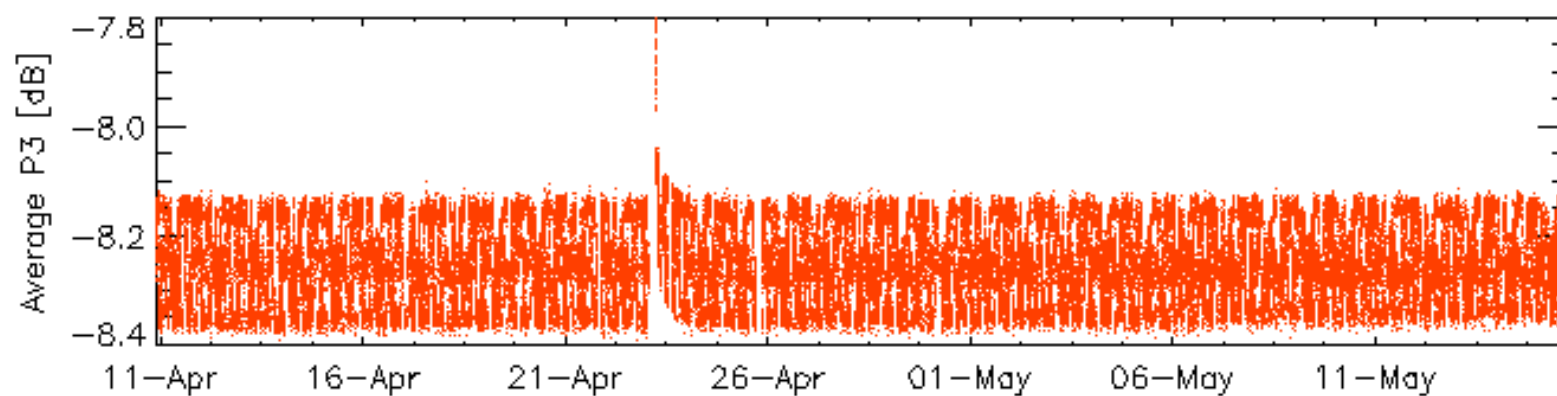
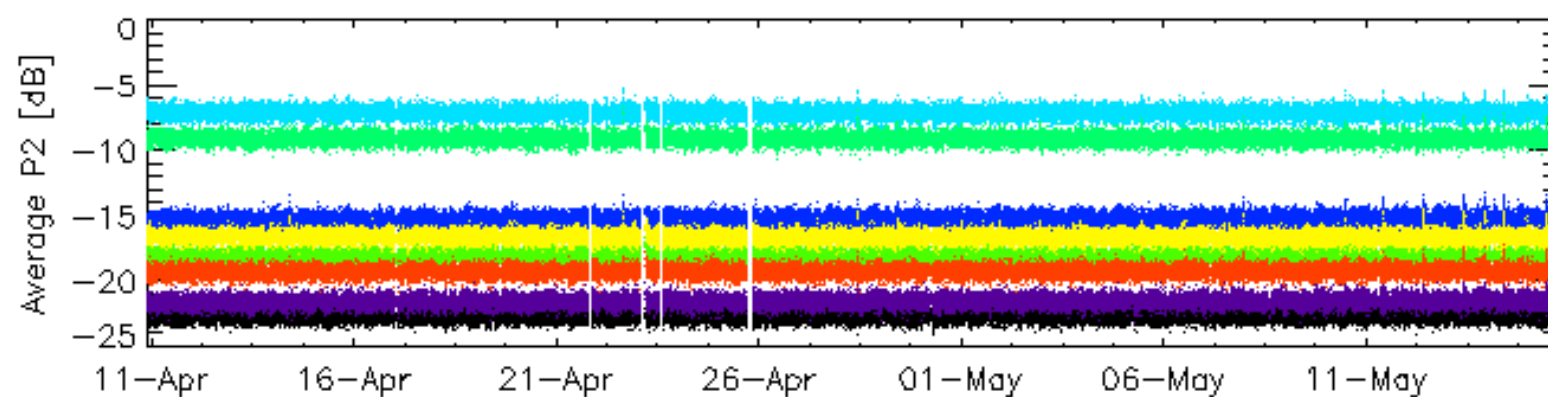
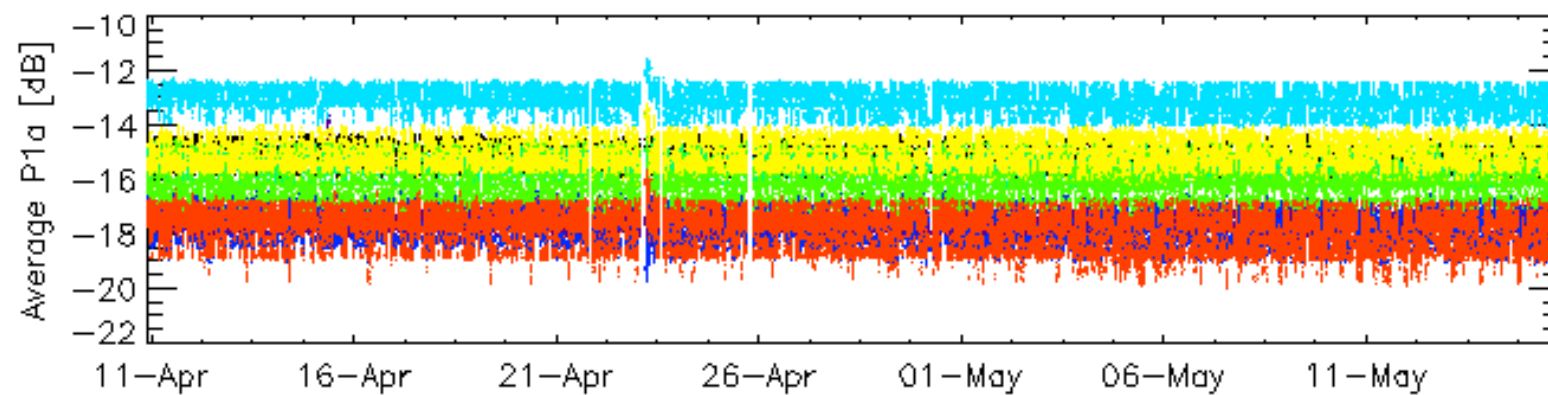
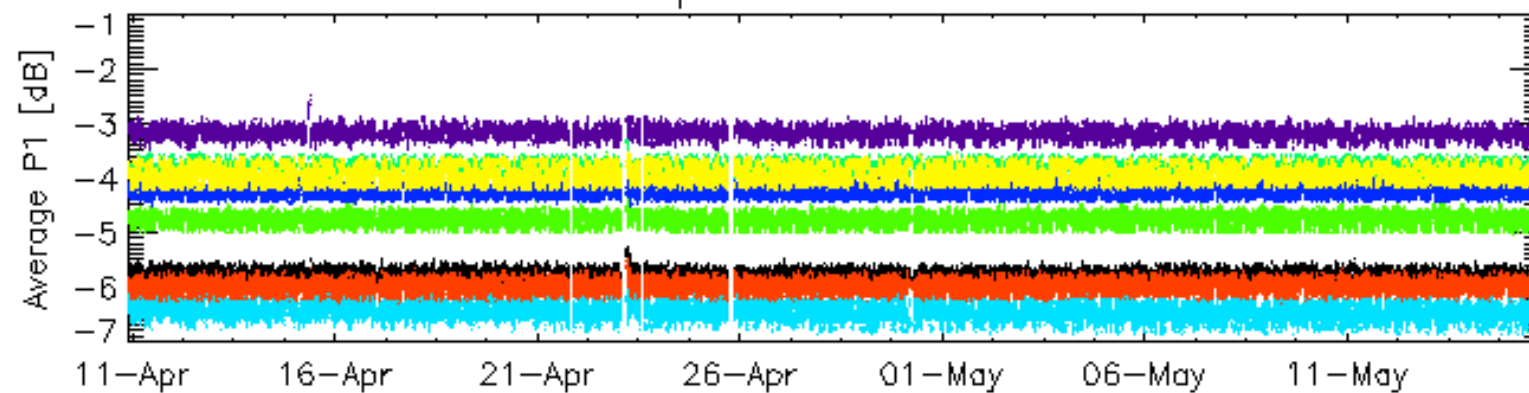
15-May



15-May

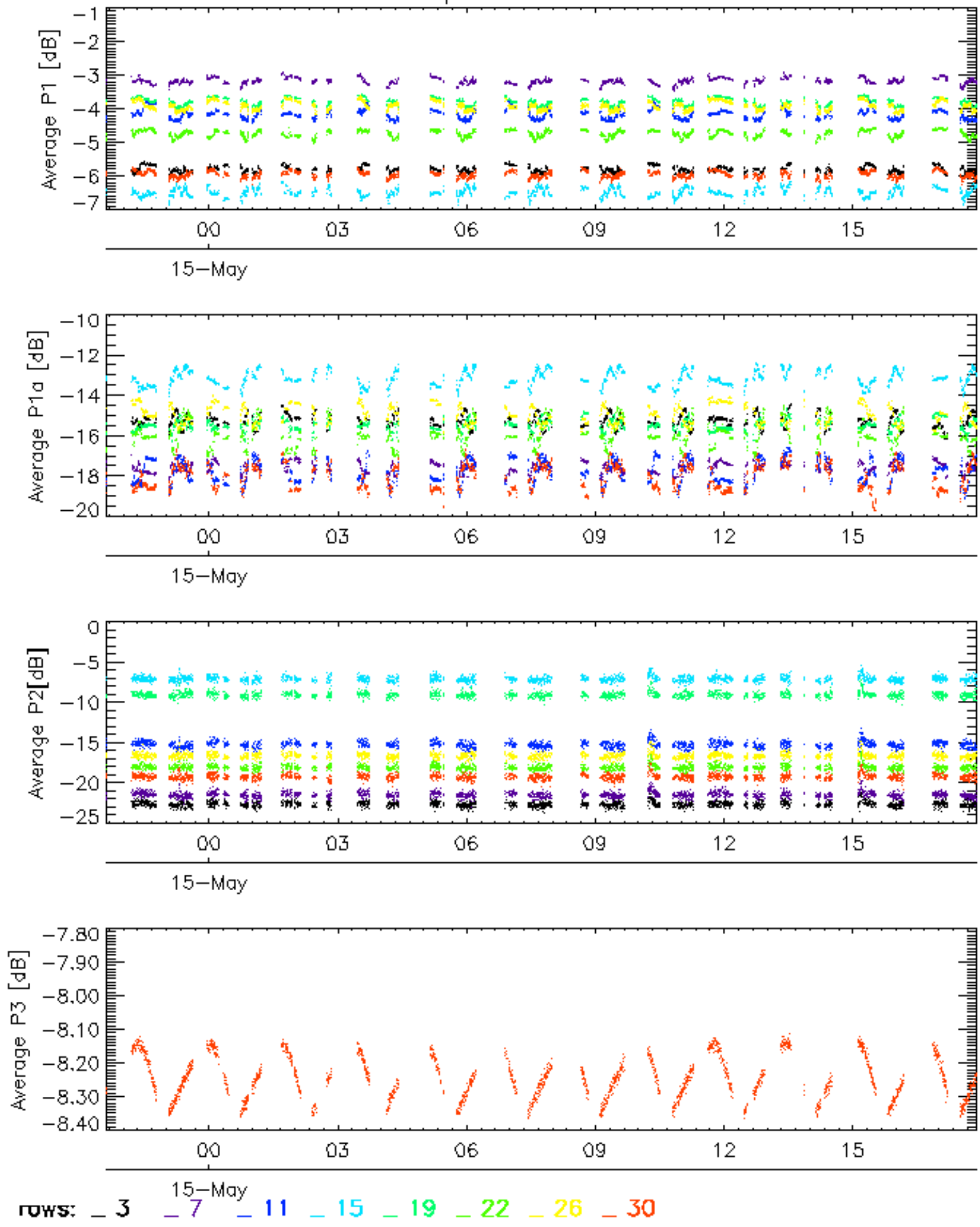
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

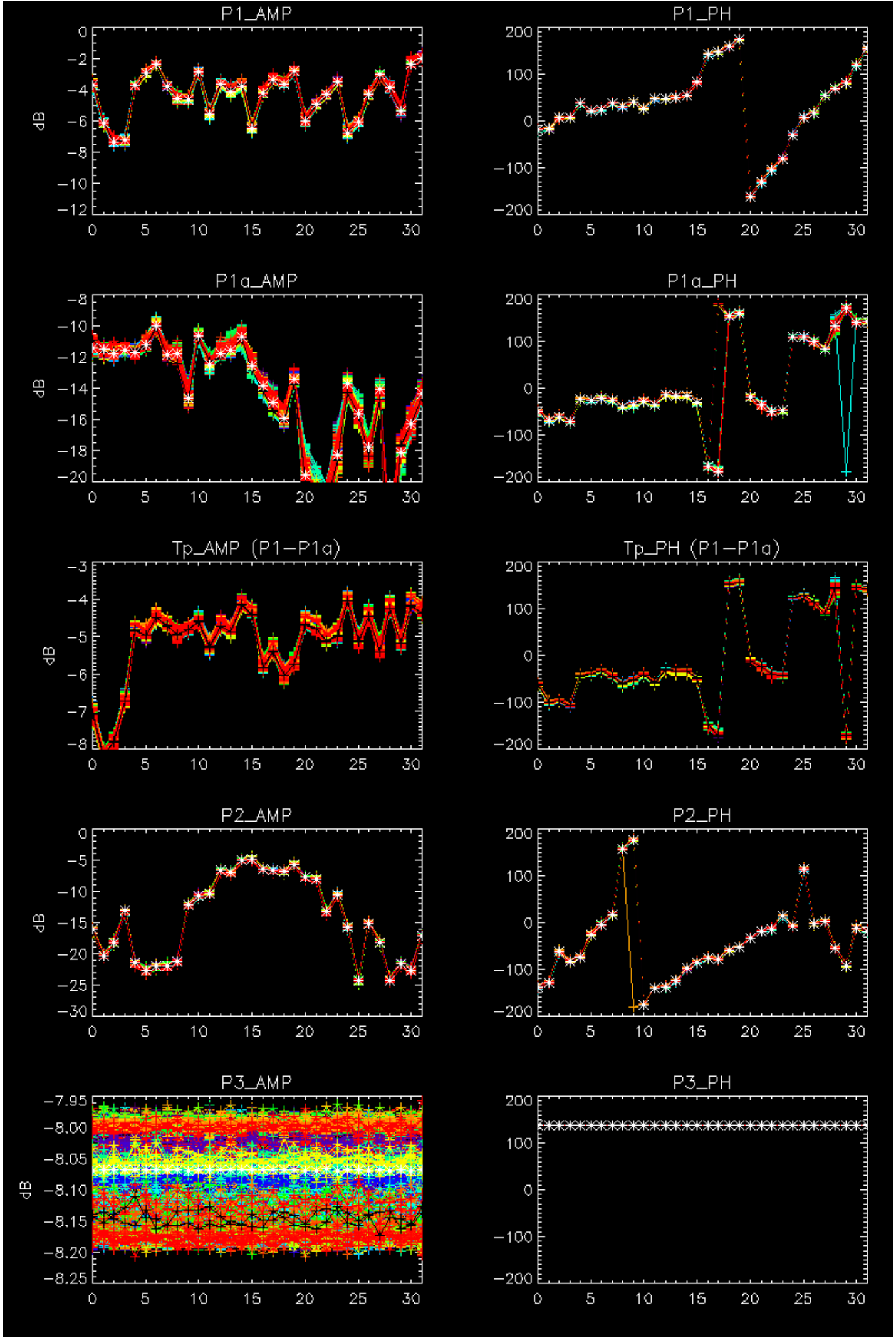


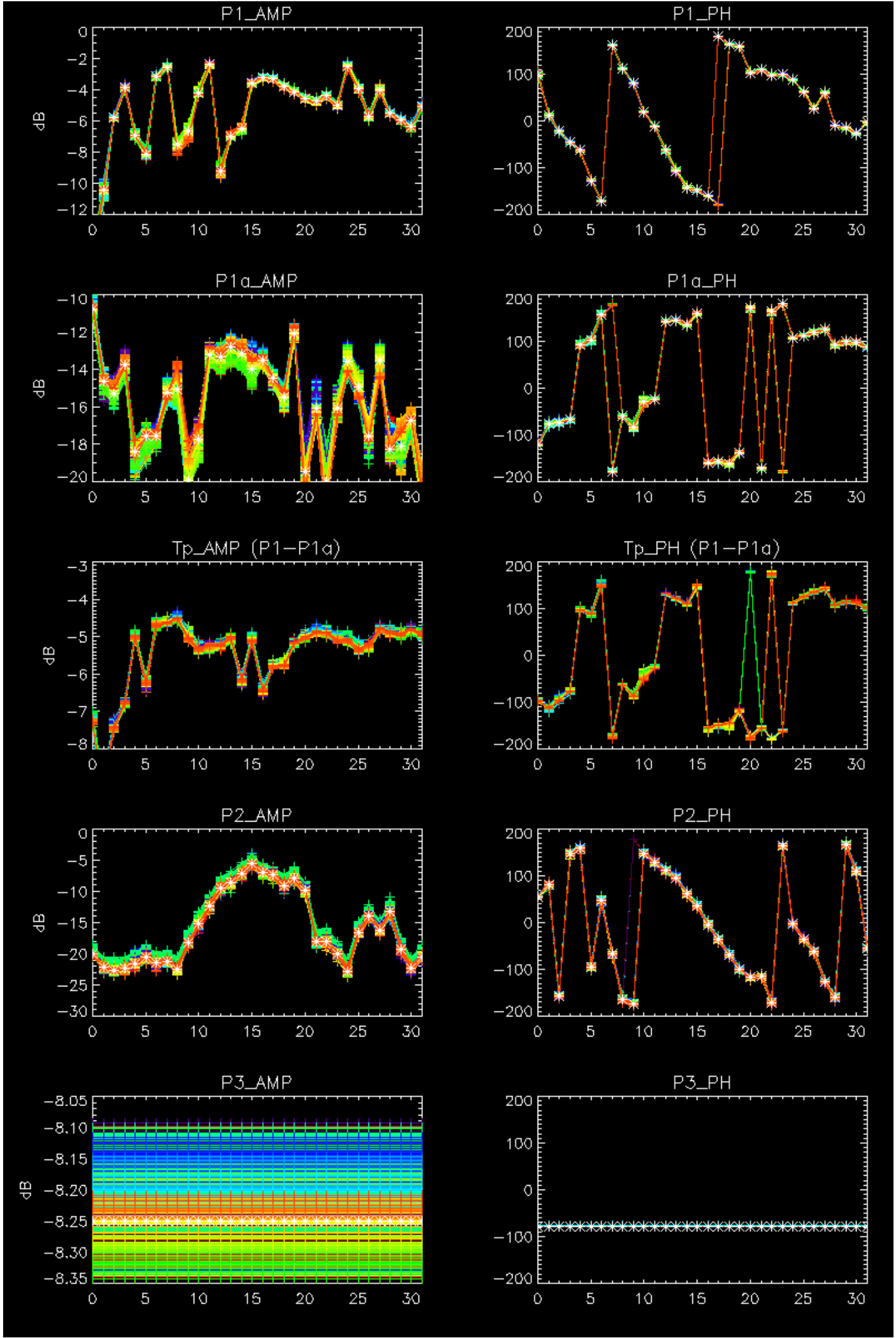
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



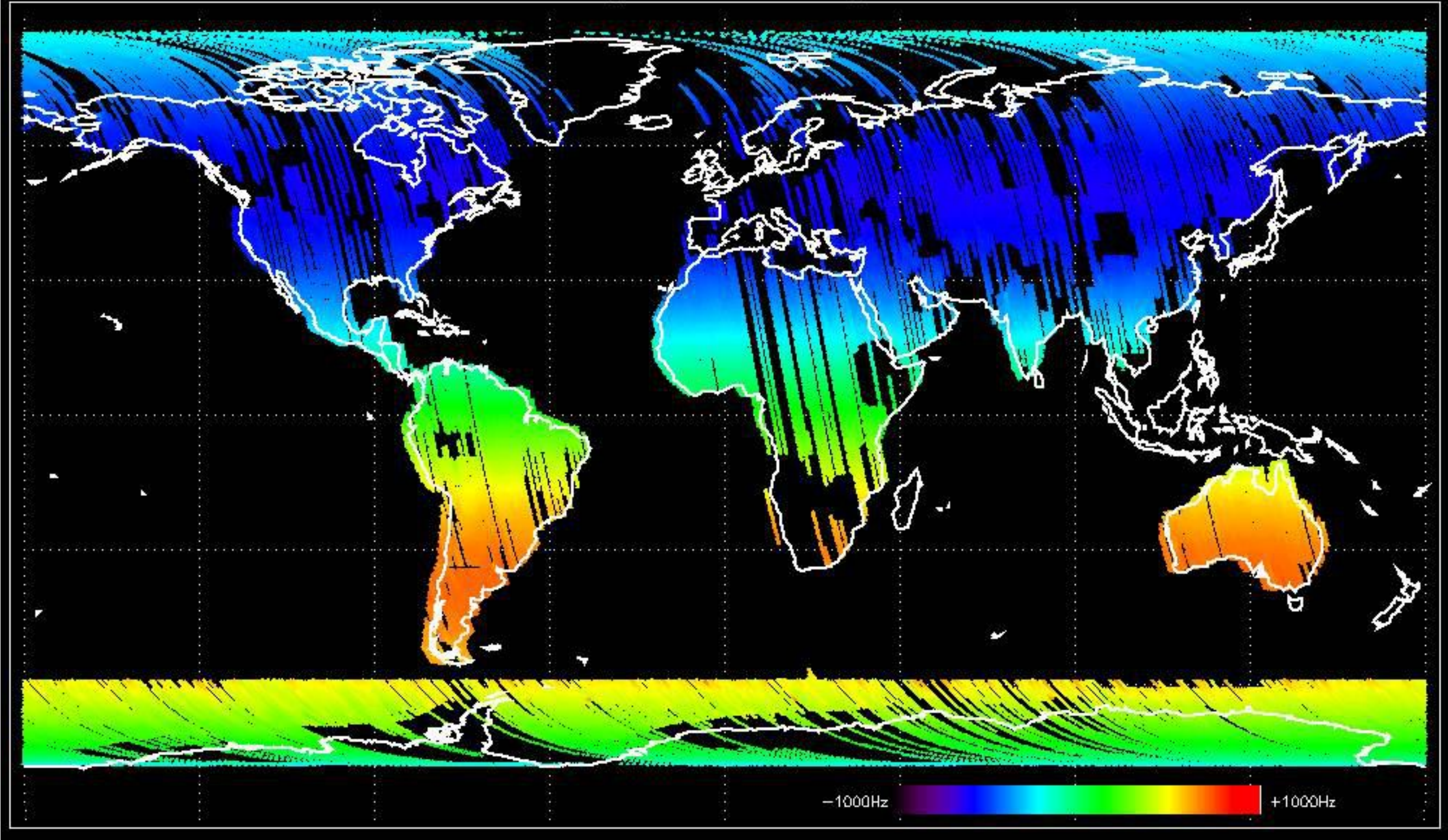
No anomalies observed.



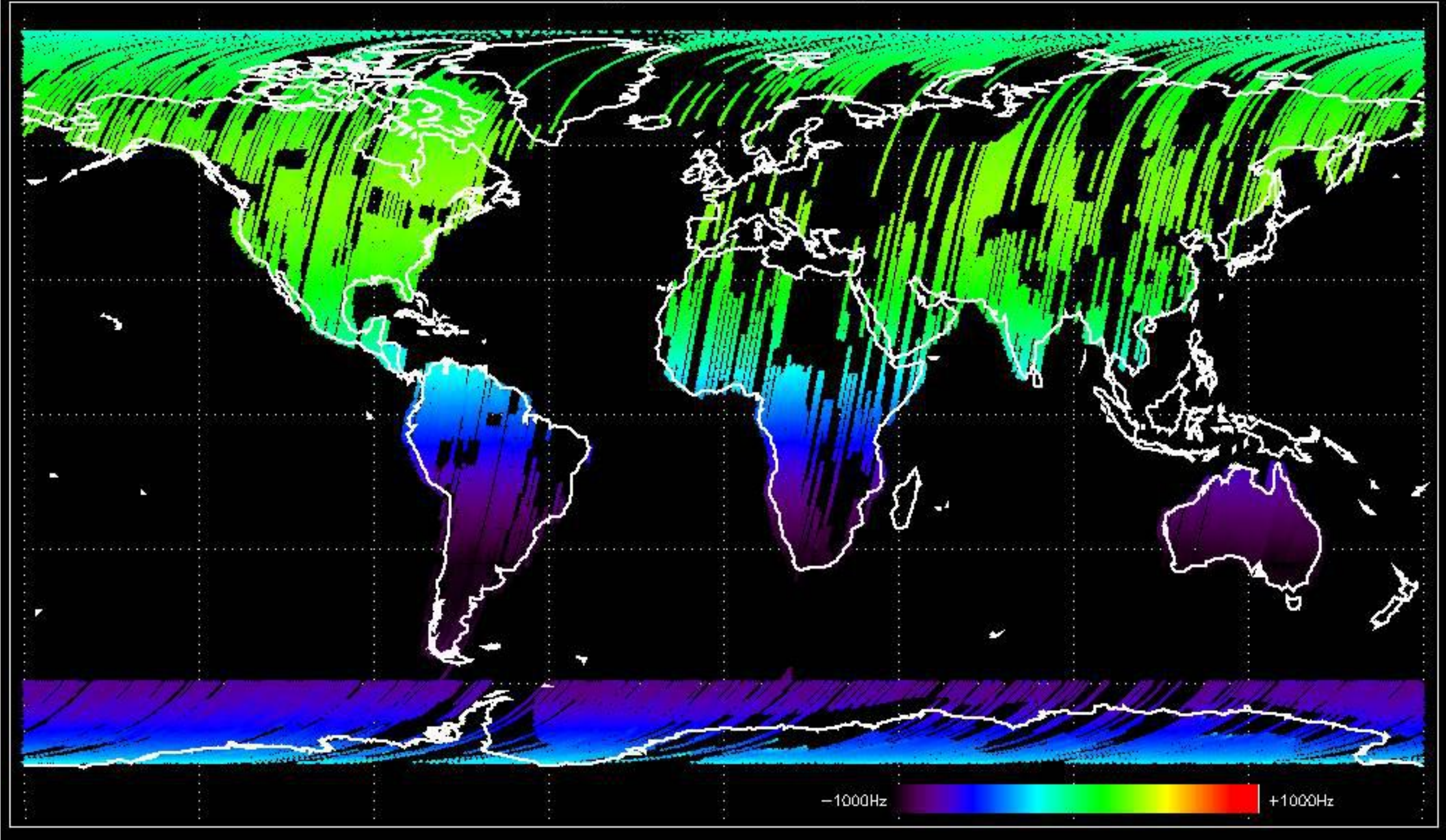


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

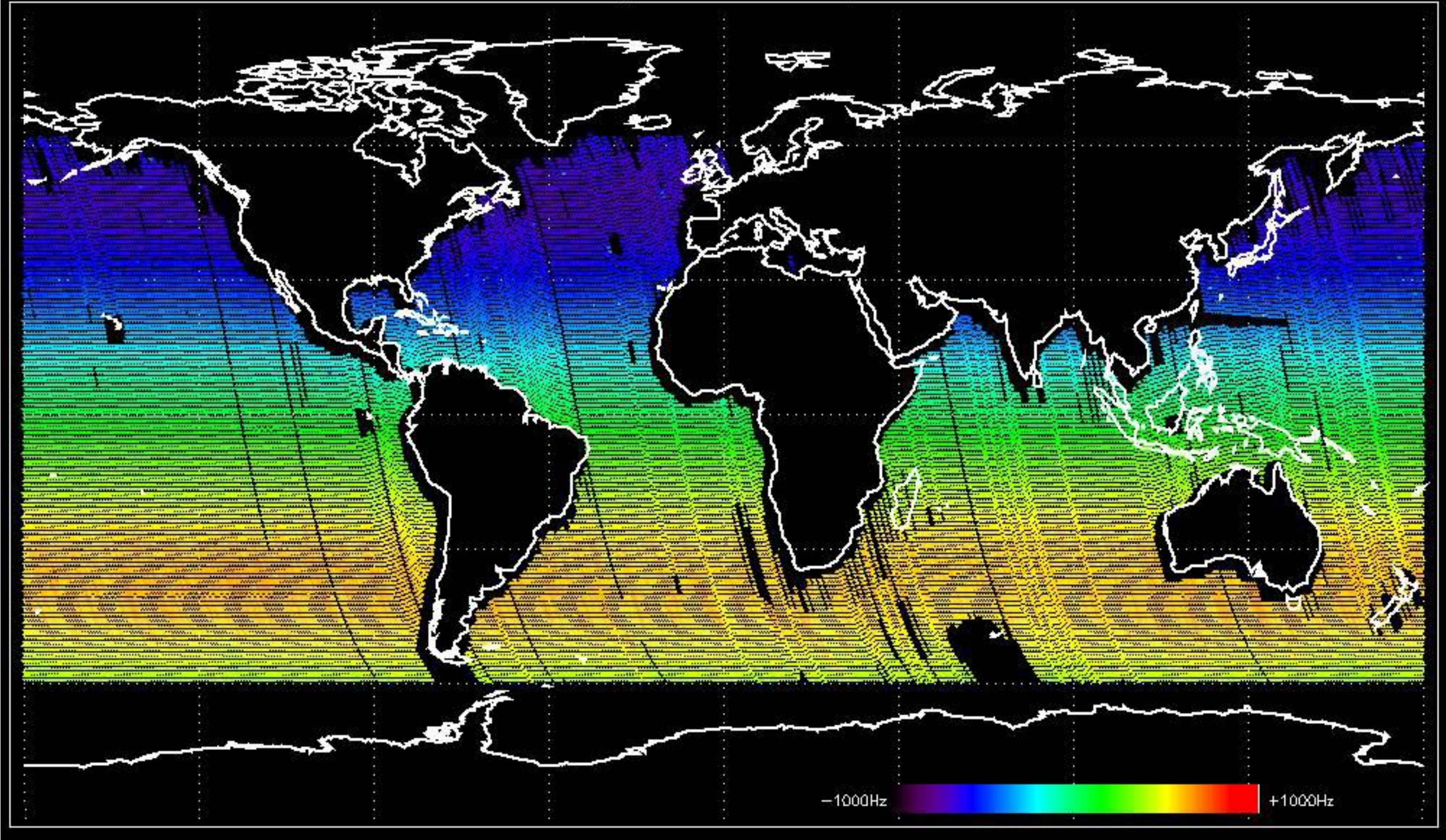
Doppler 'GM1' 'SS1' ascending



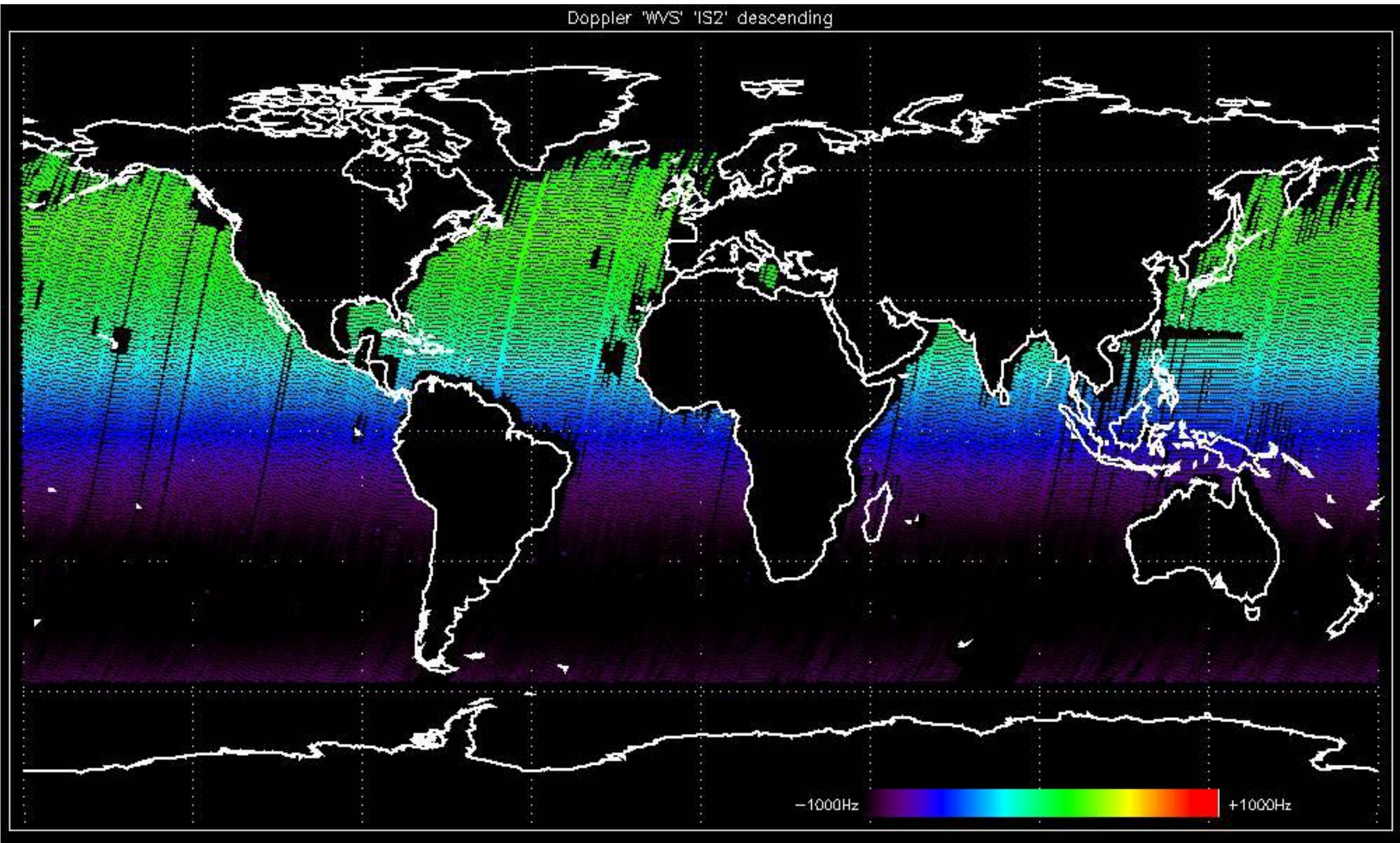
Doppler 'GM1' 'SS1' descending



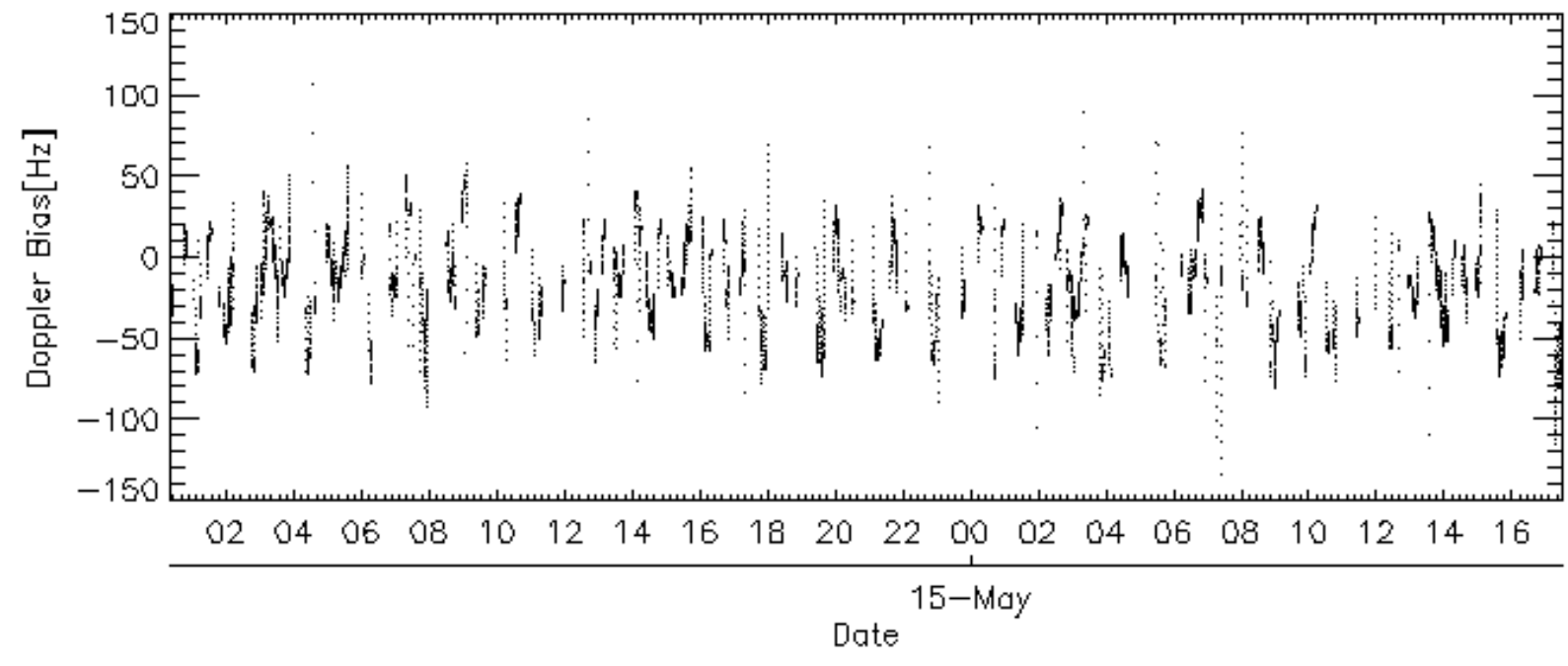
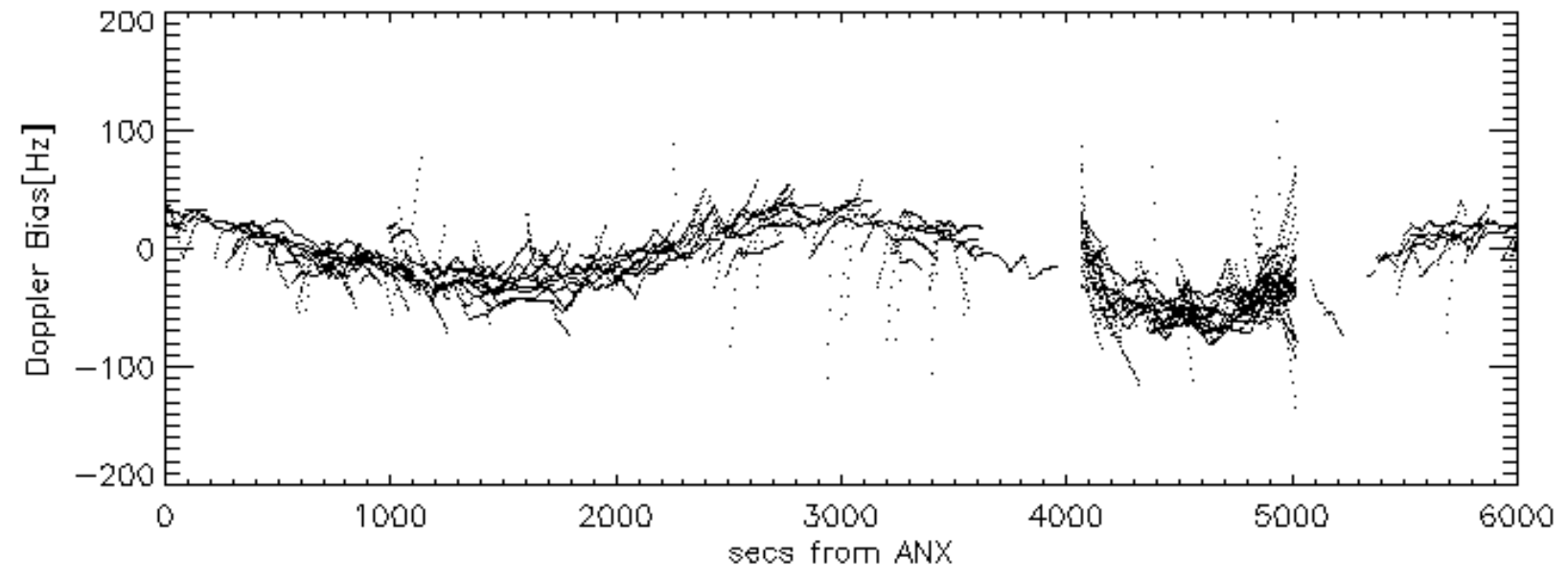
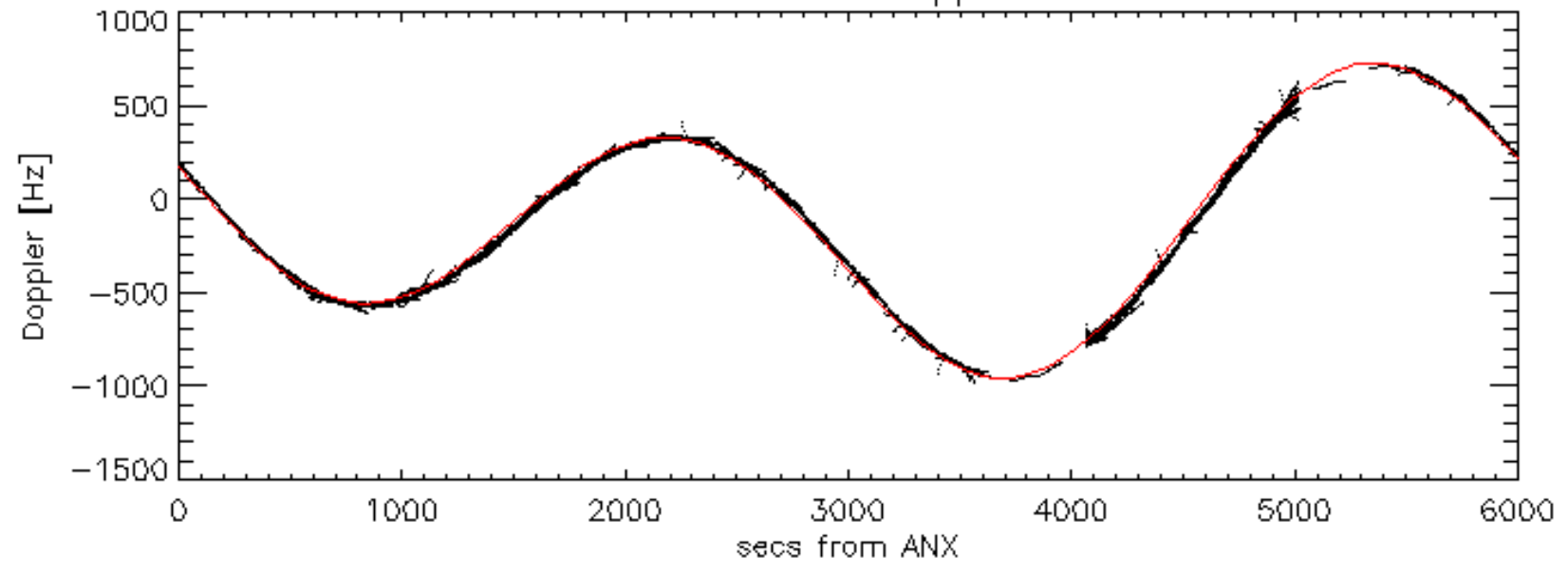
Doppler 'WVS' 'IS2' ascending

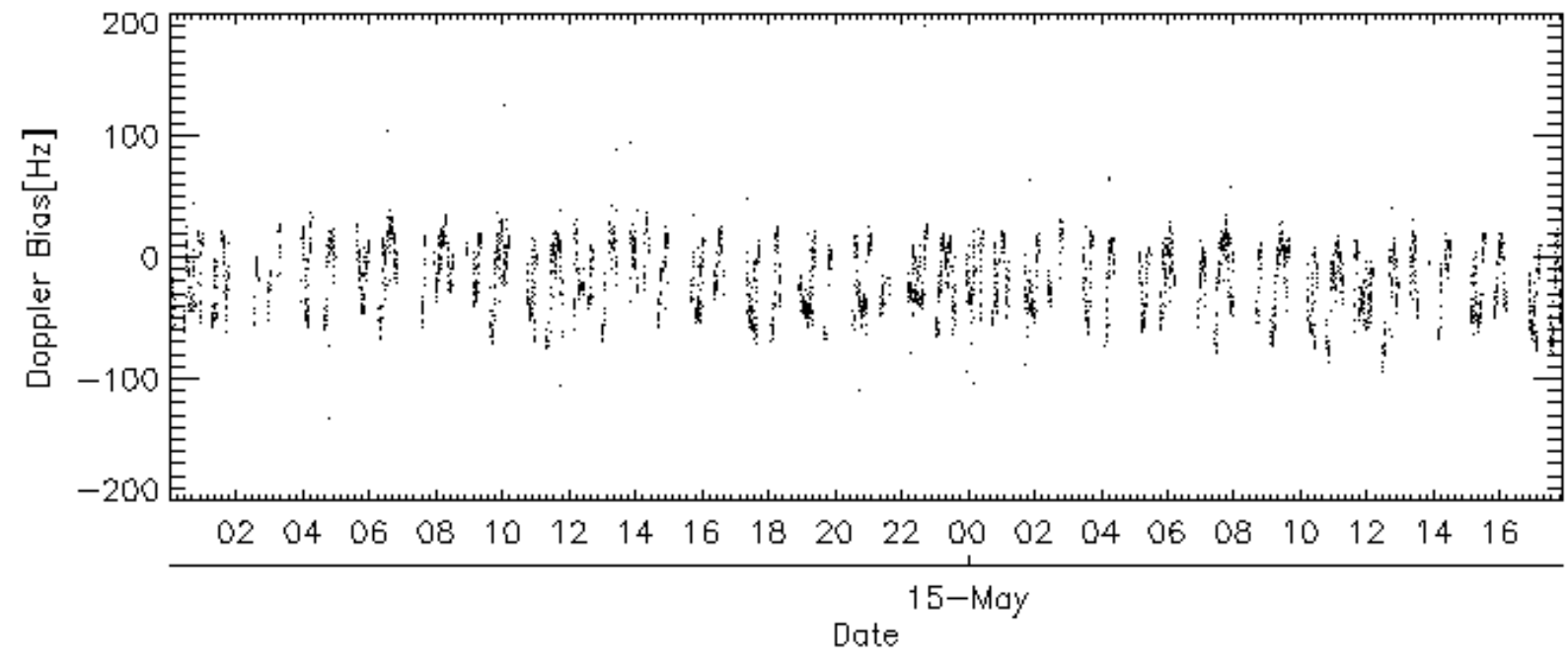
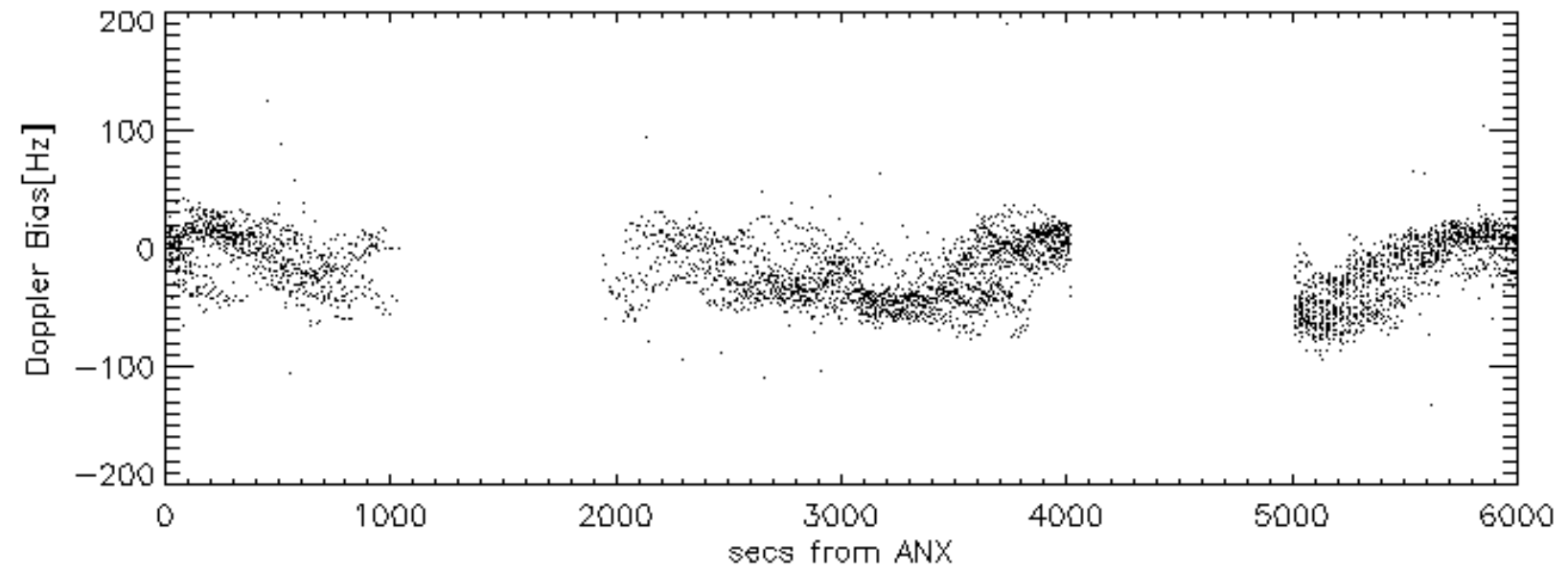
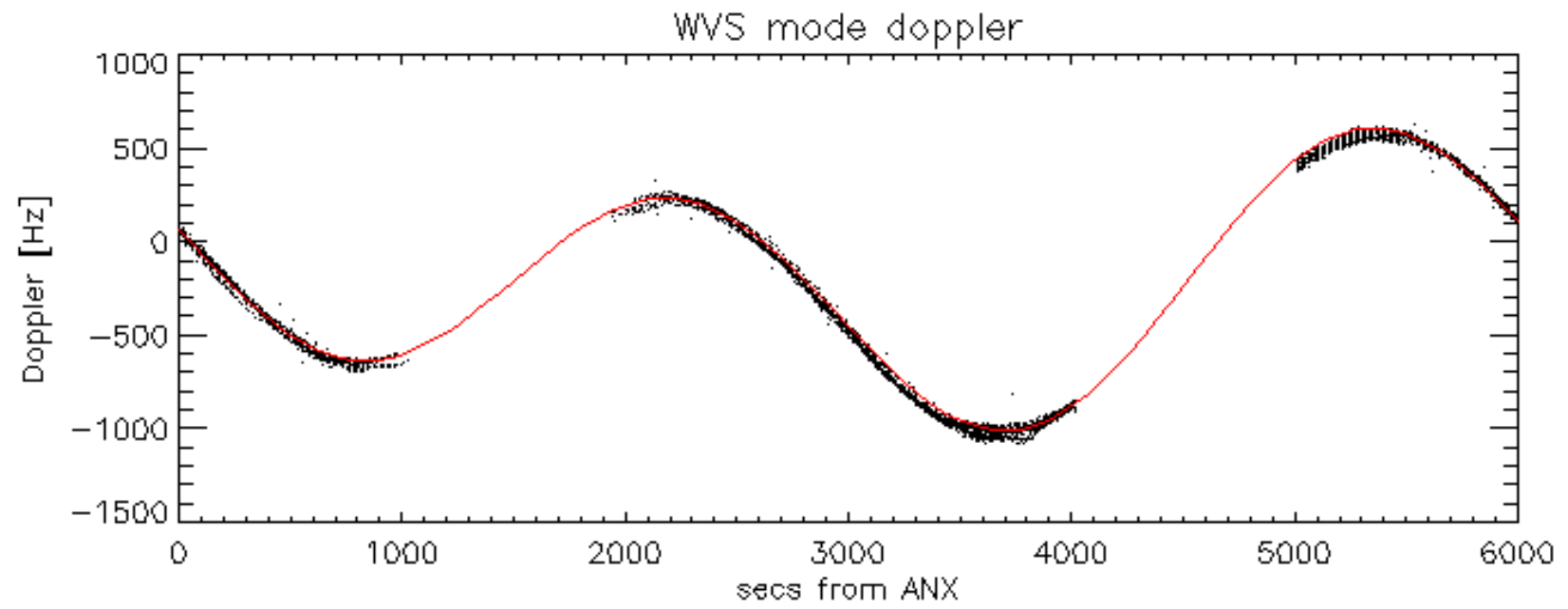


Doppler 'WVS' 'IS2' descending

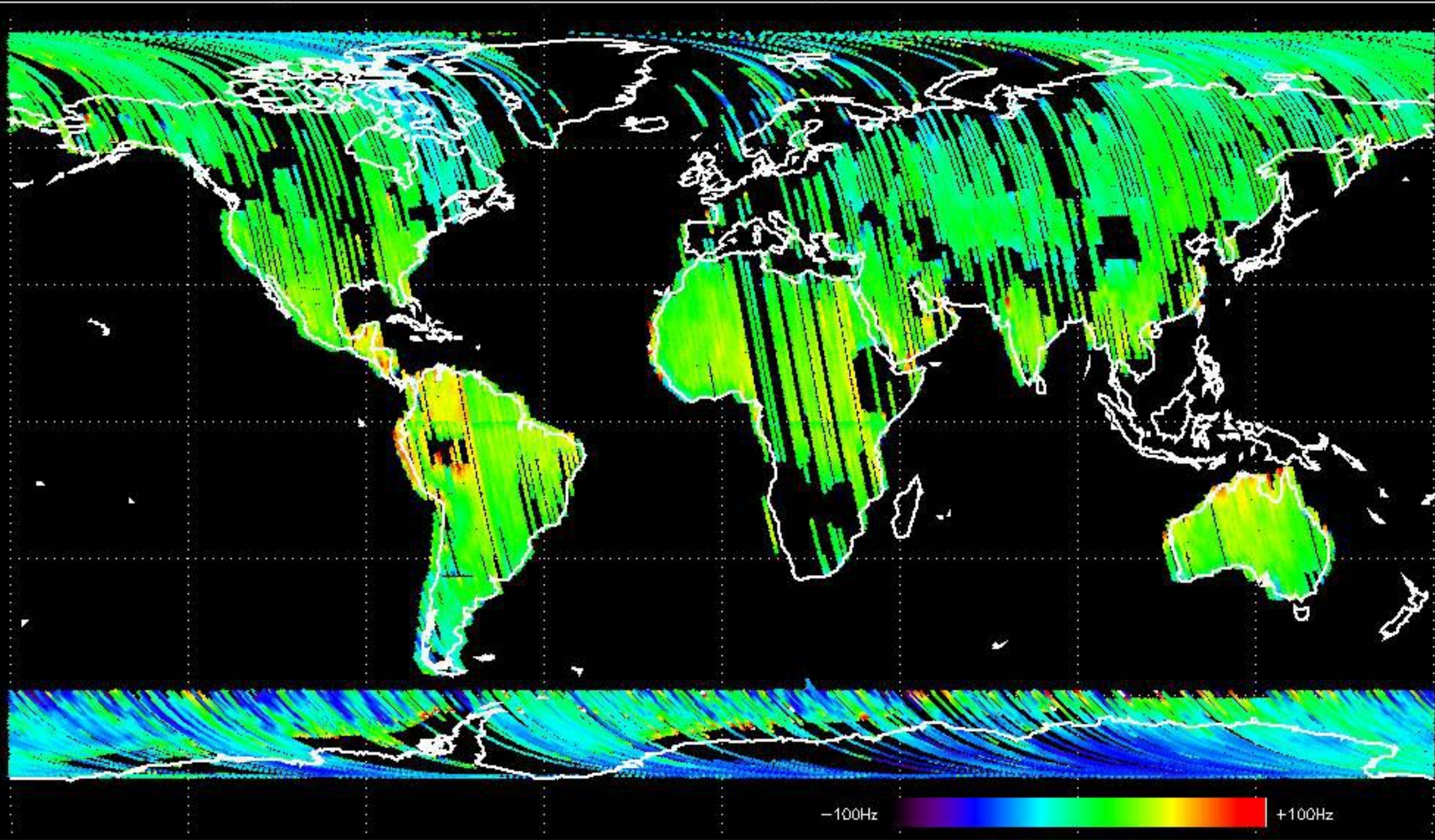


GM1 mode doppler

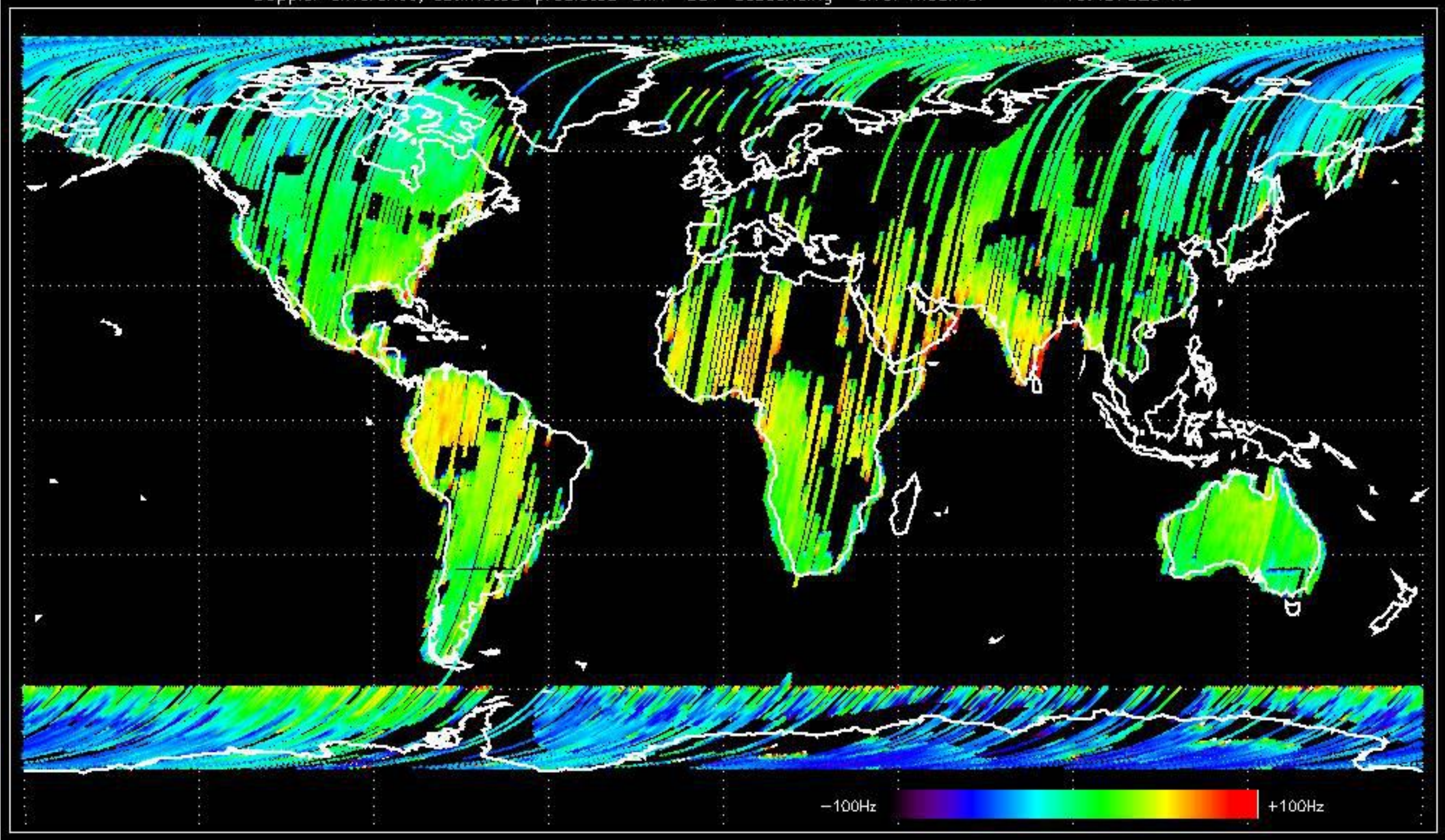




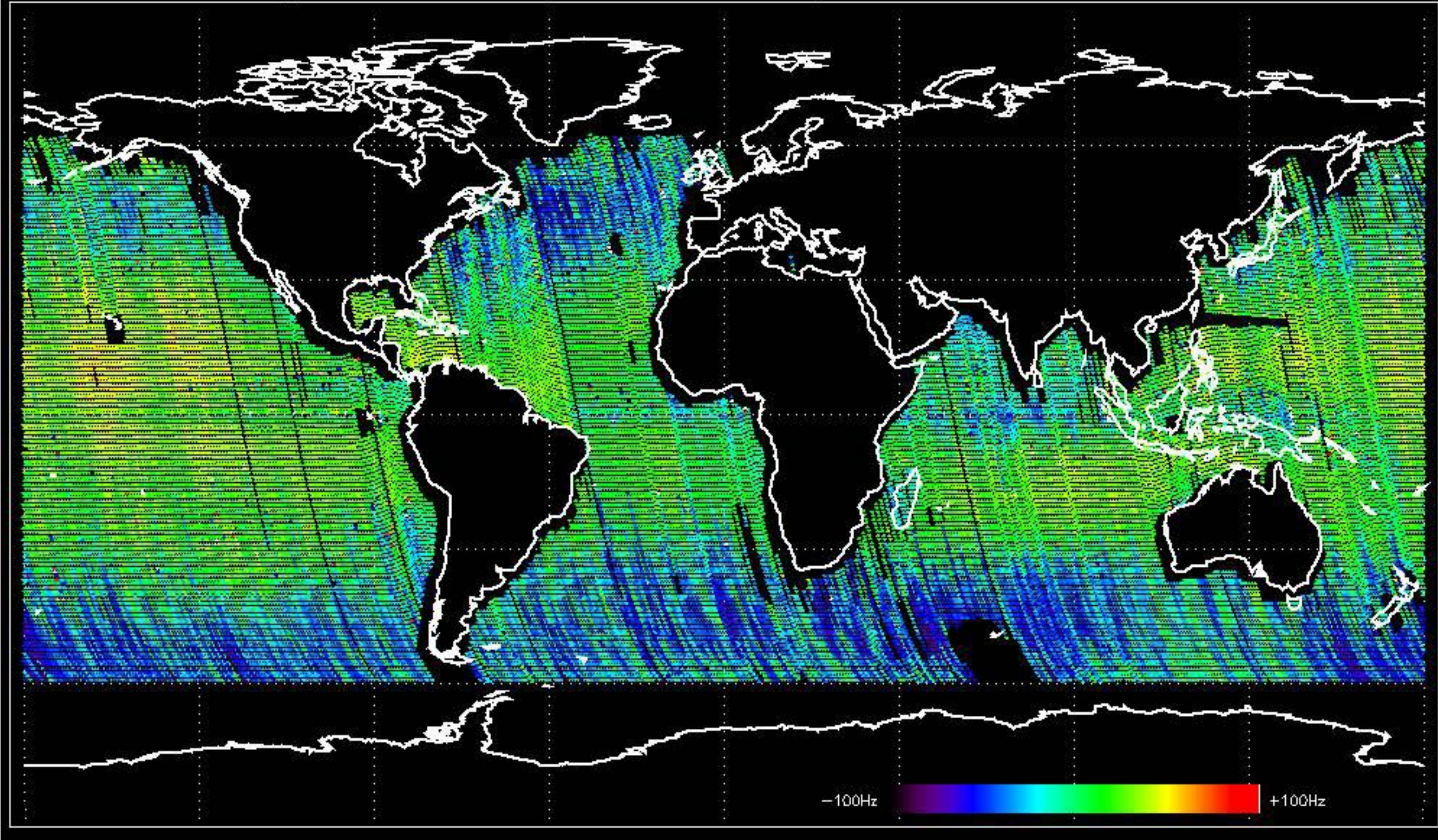
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.426702 Hz



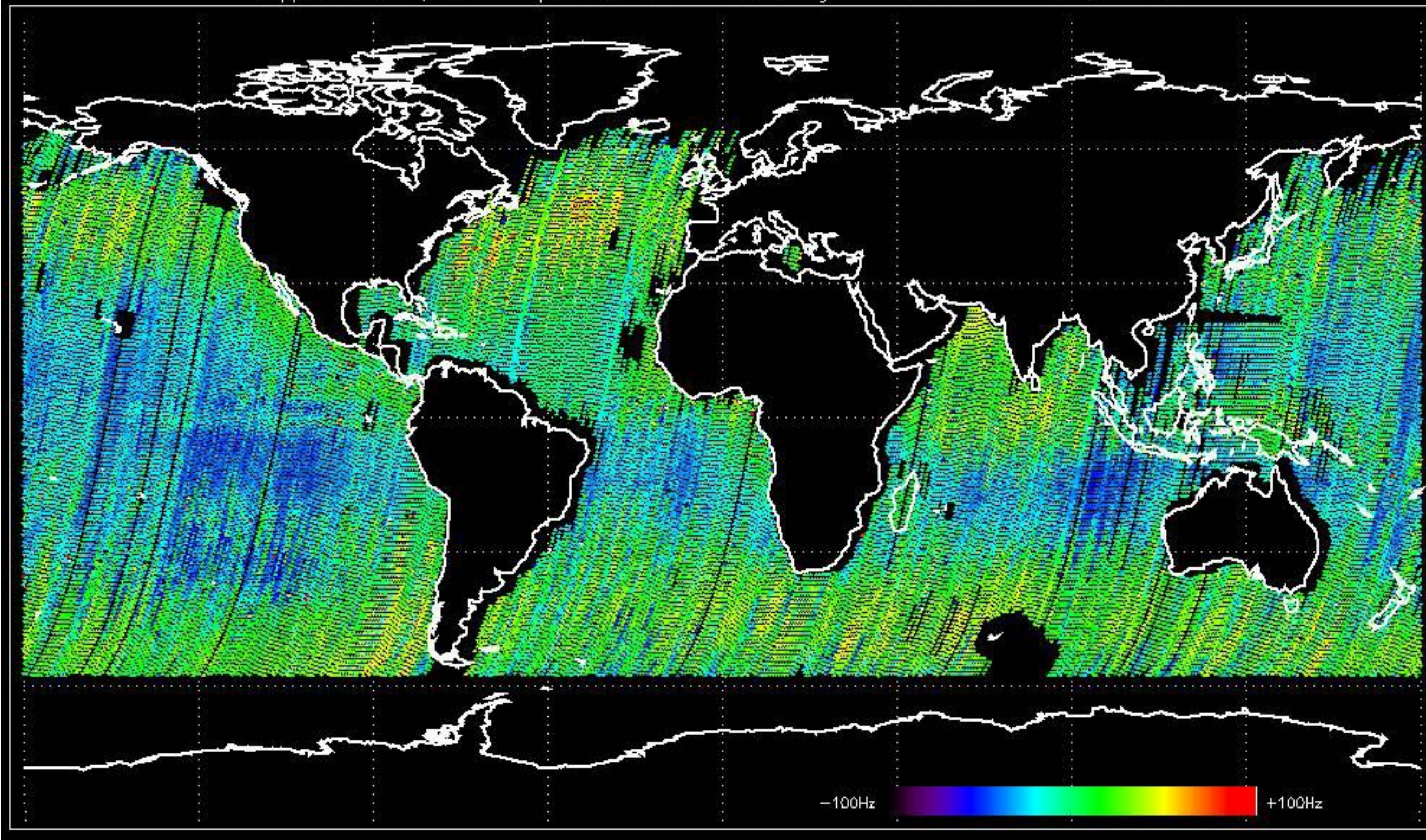
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.457329 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.698682 Hz

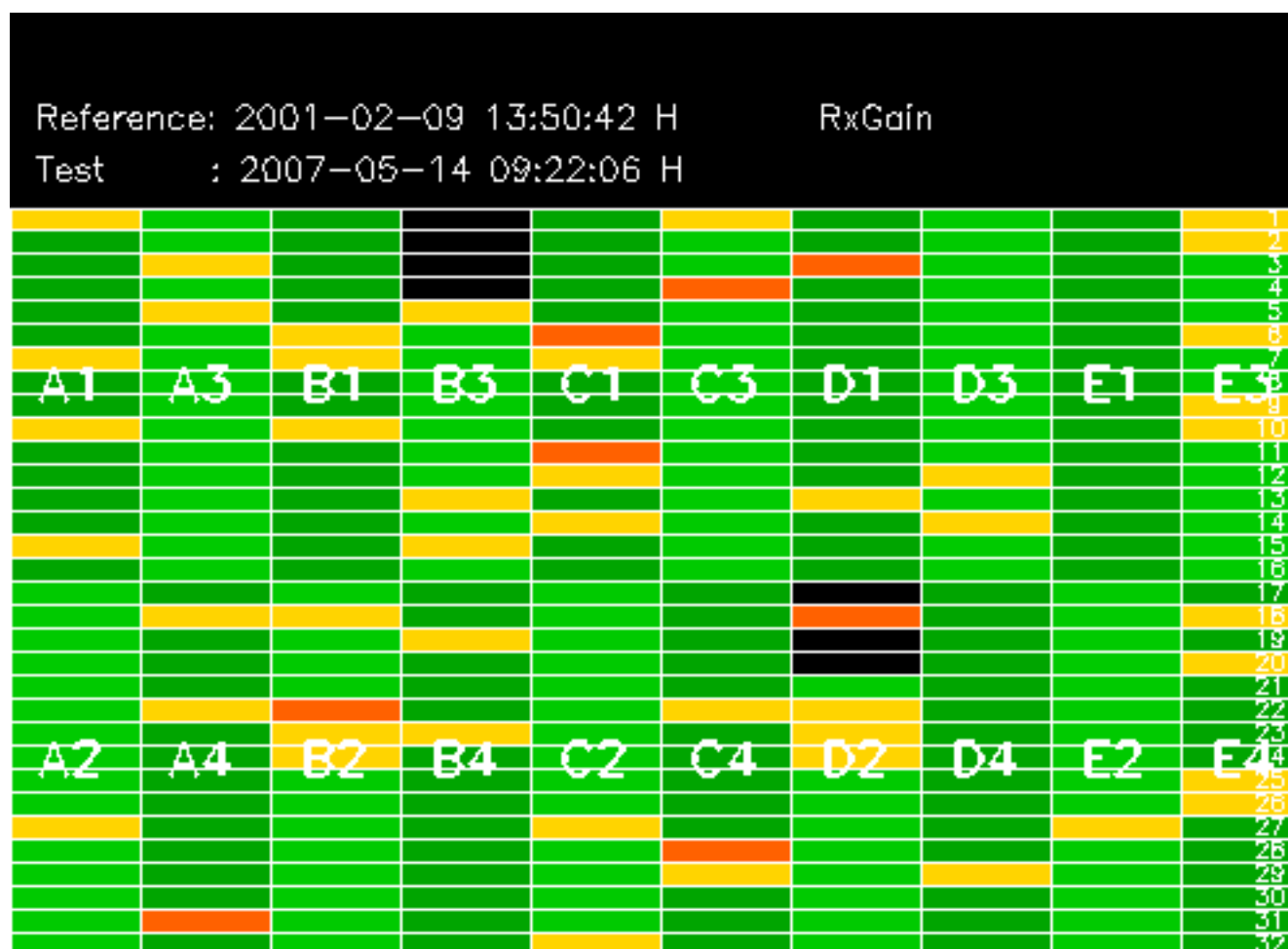


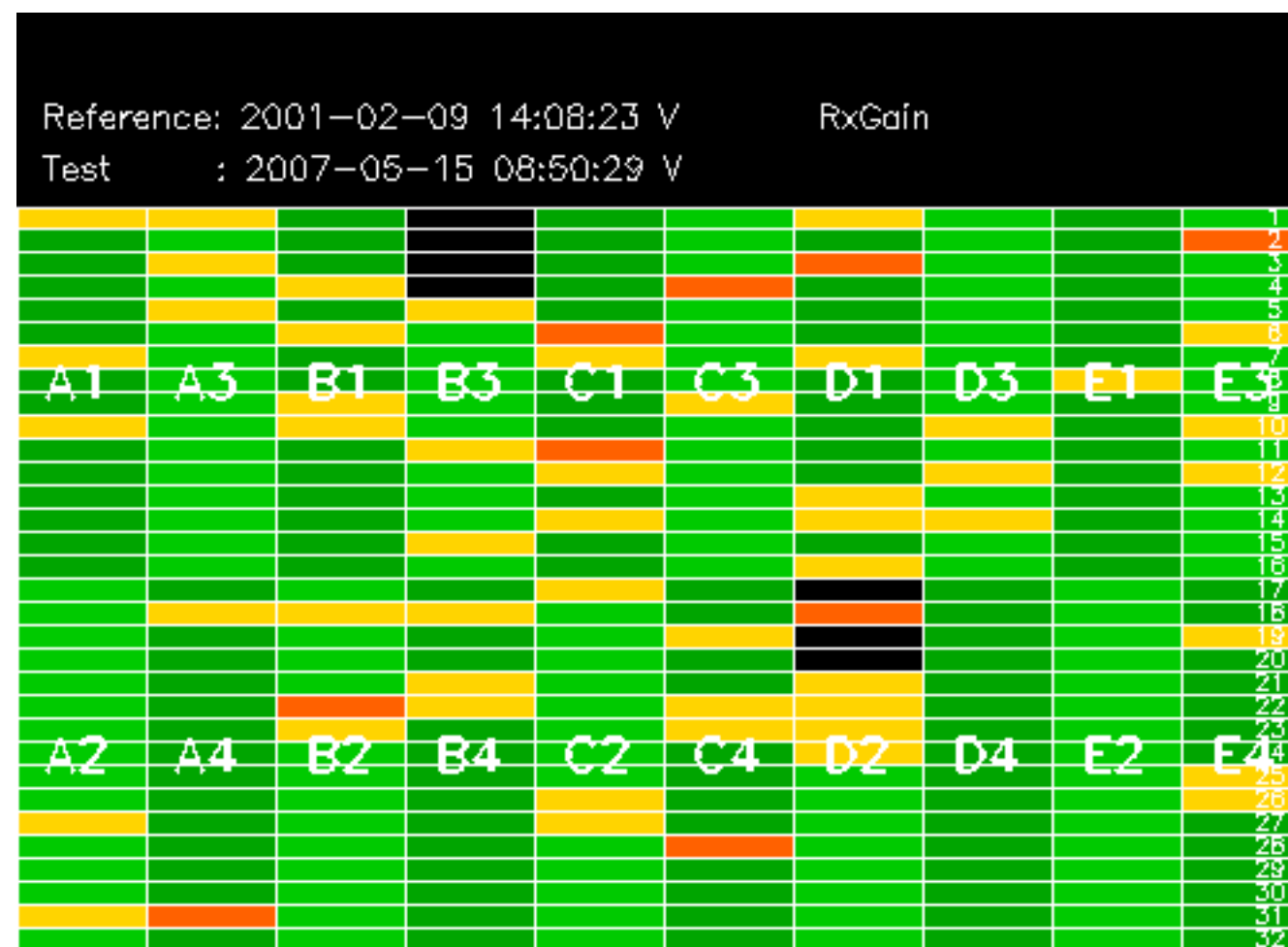
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.390092 Hz

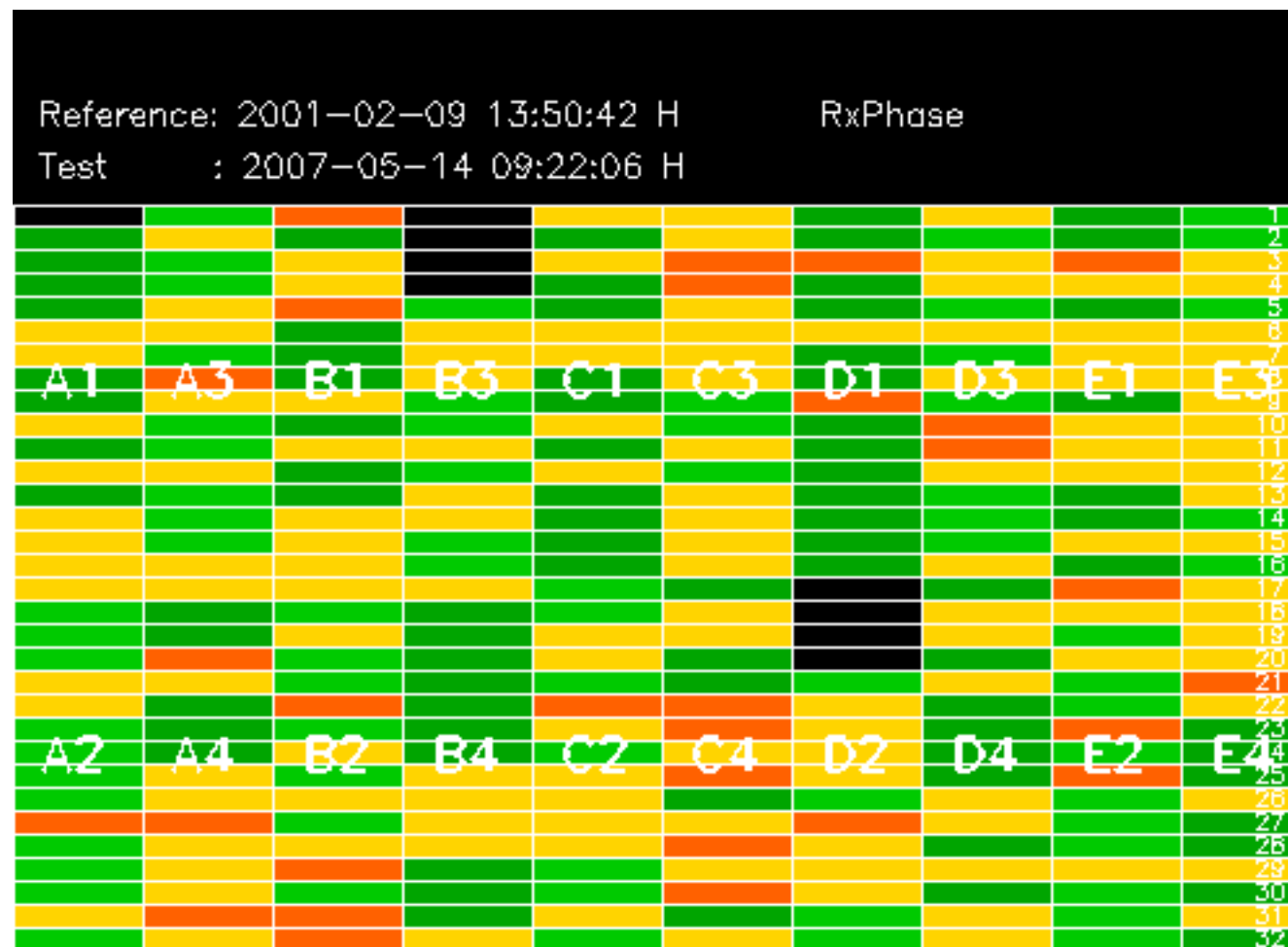


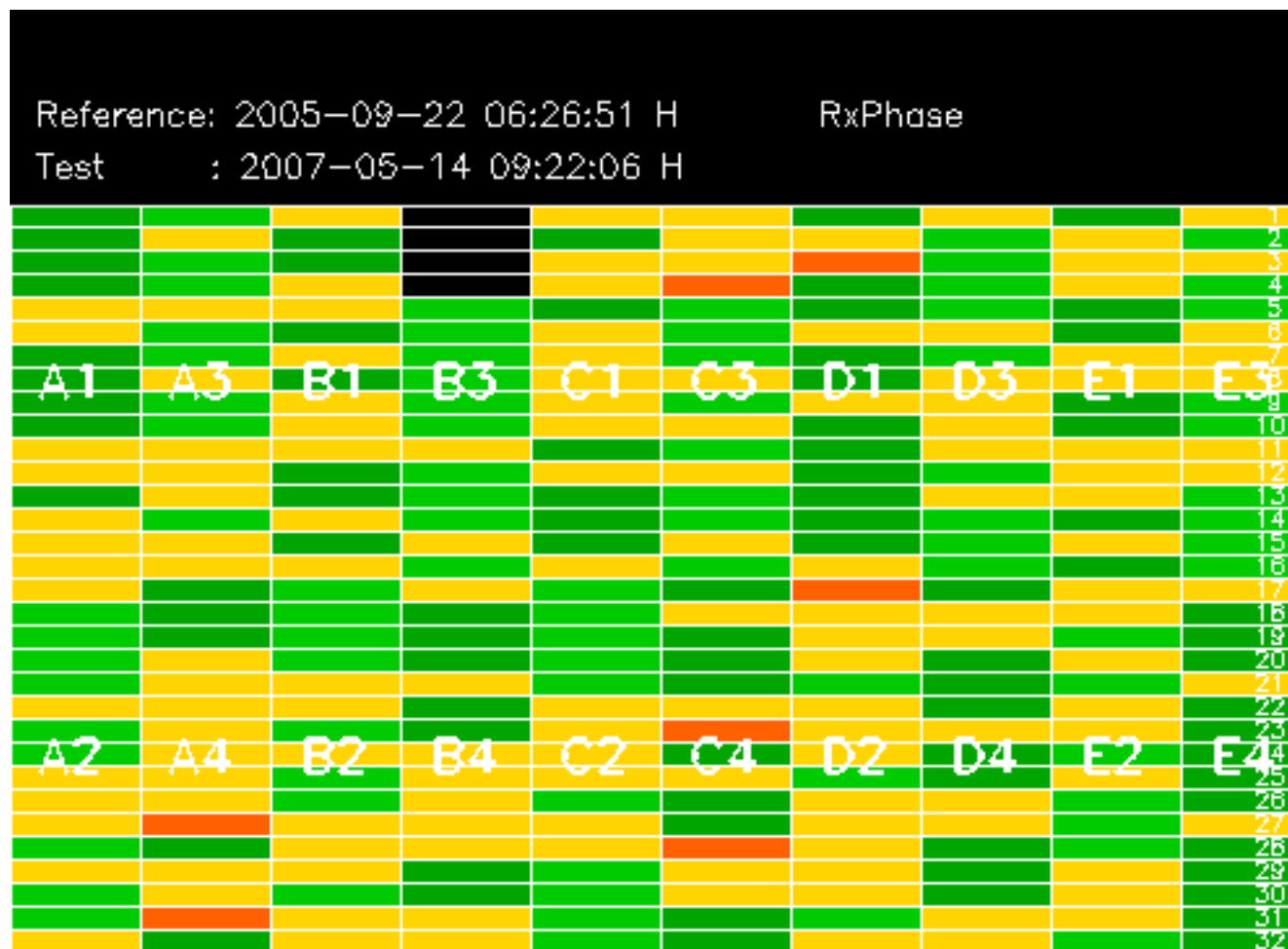
No anomalies observed on available MS products:

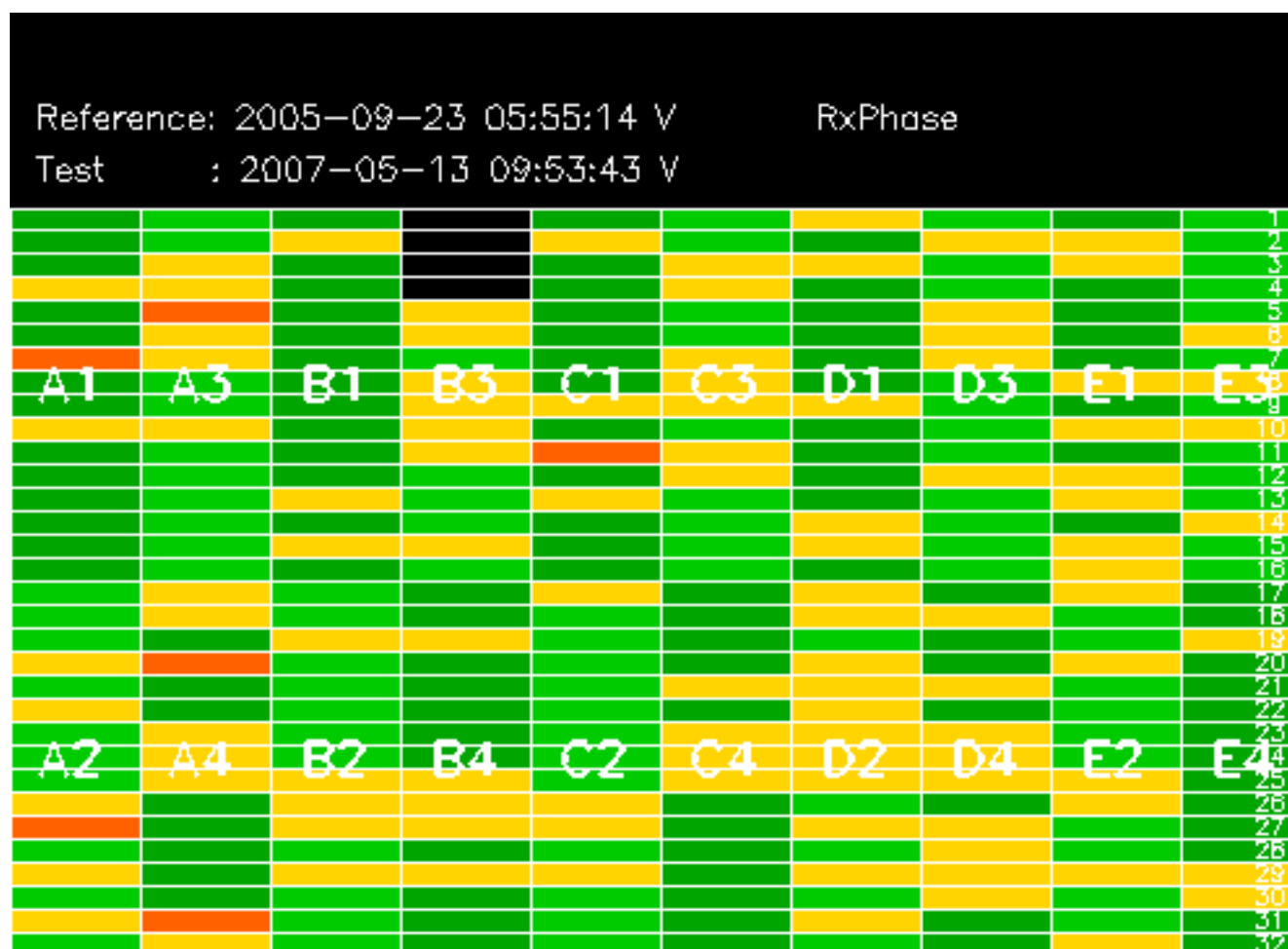
No anomalies observed.

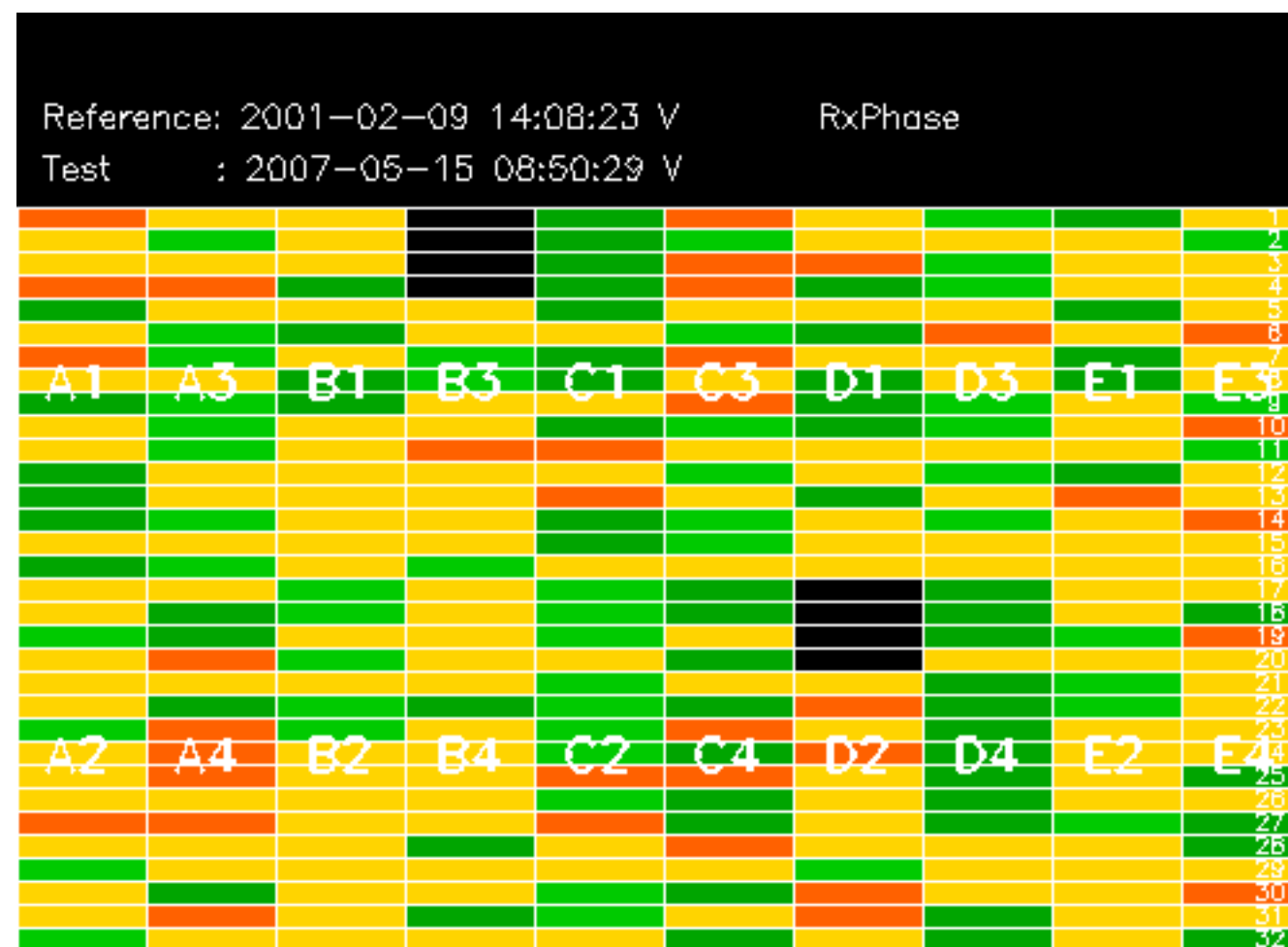


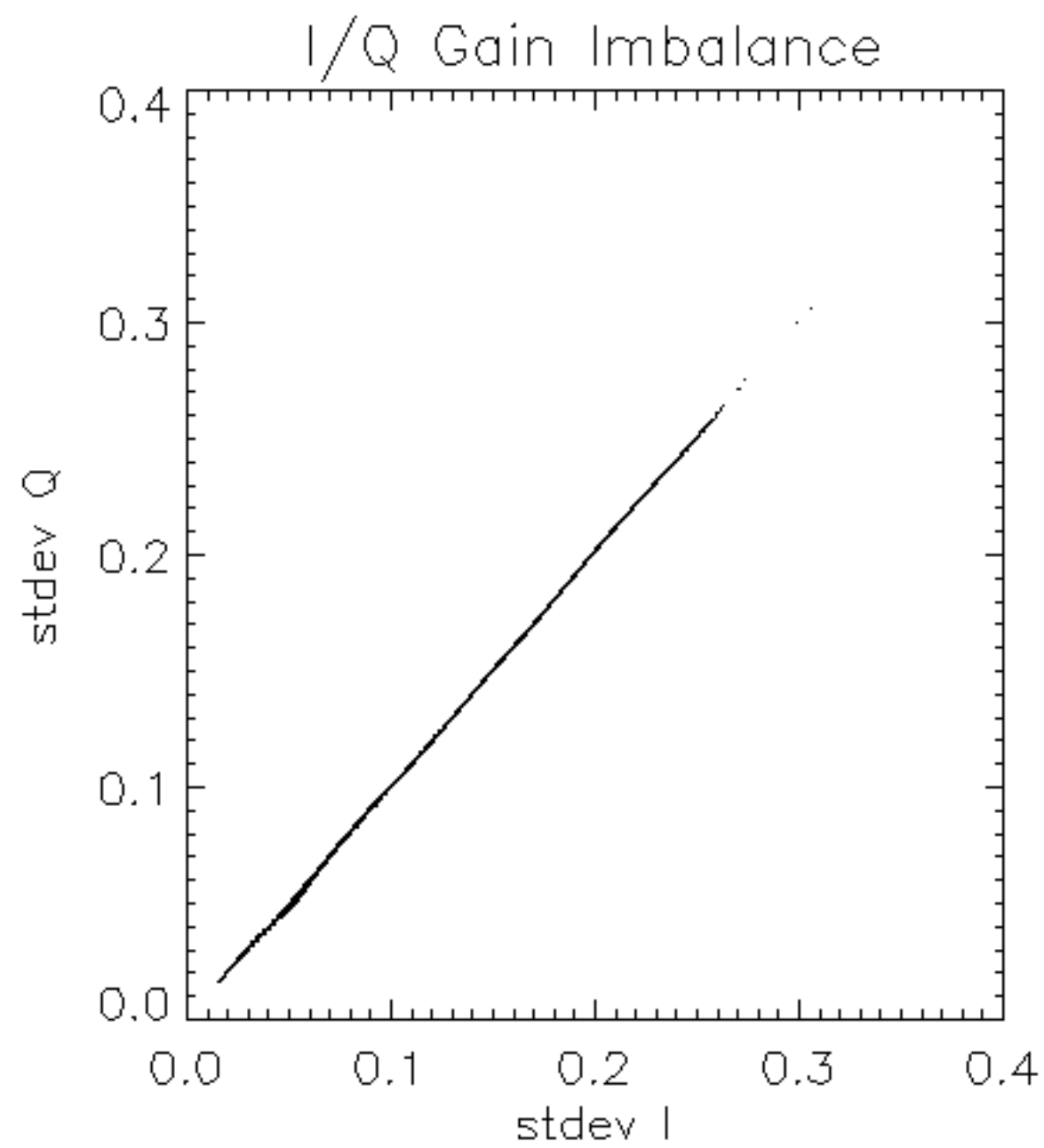


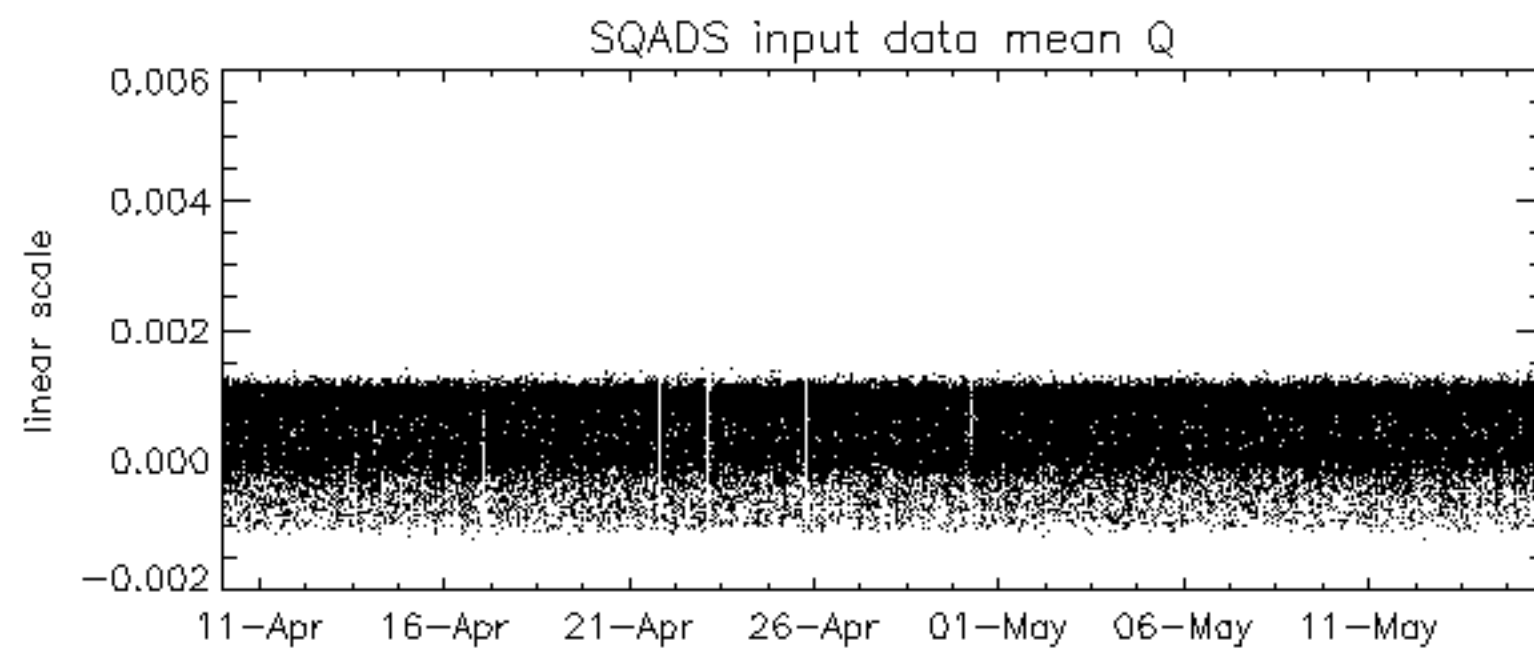
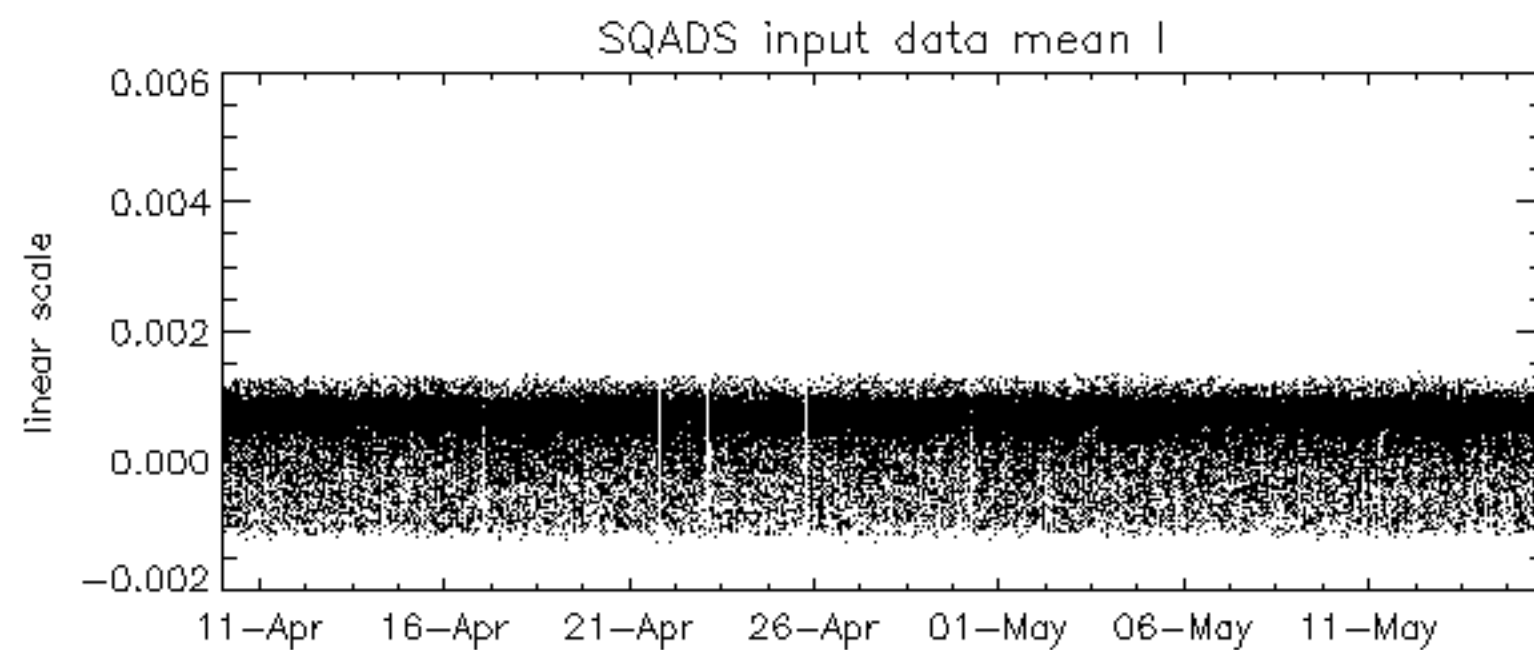
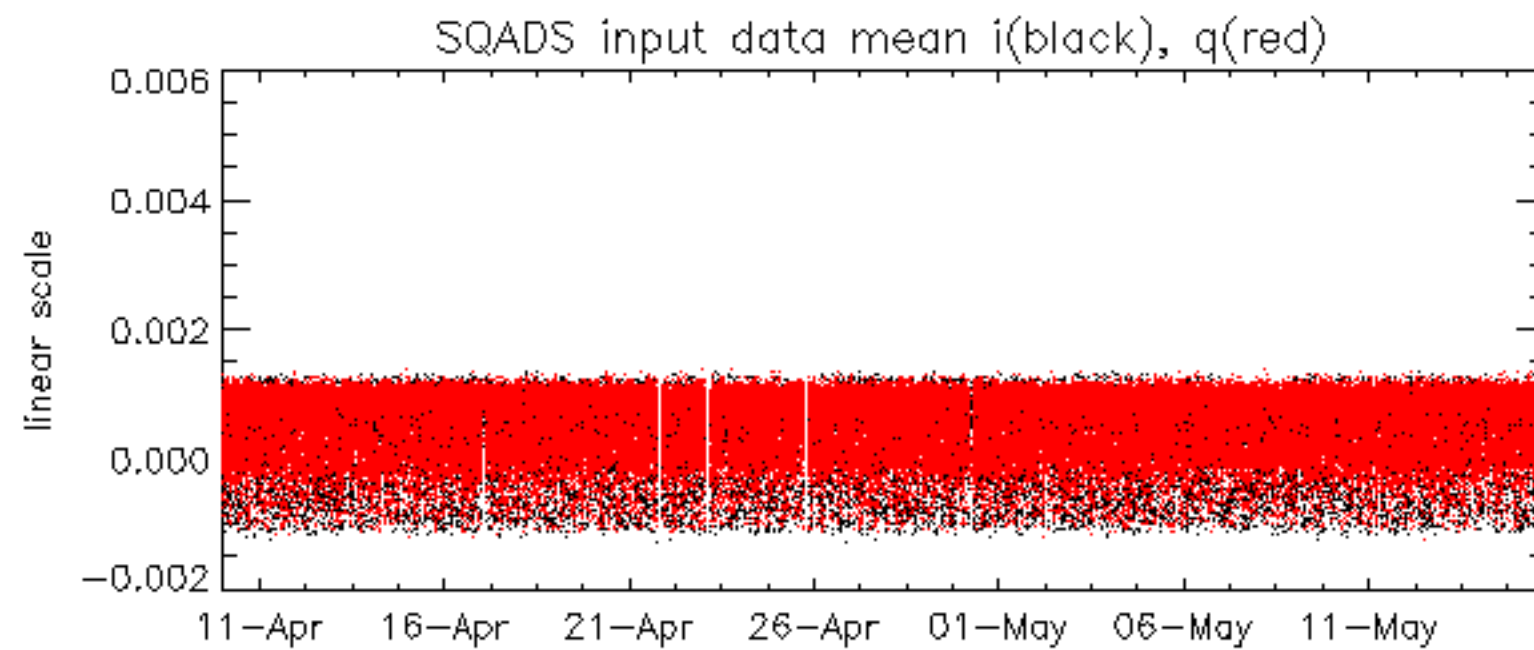


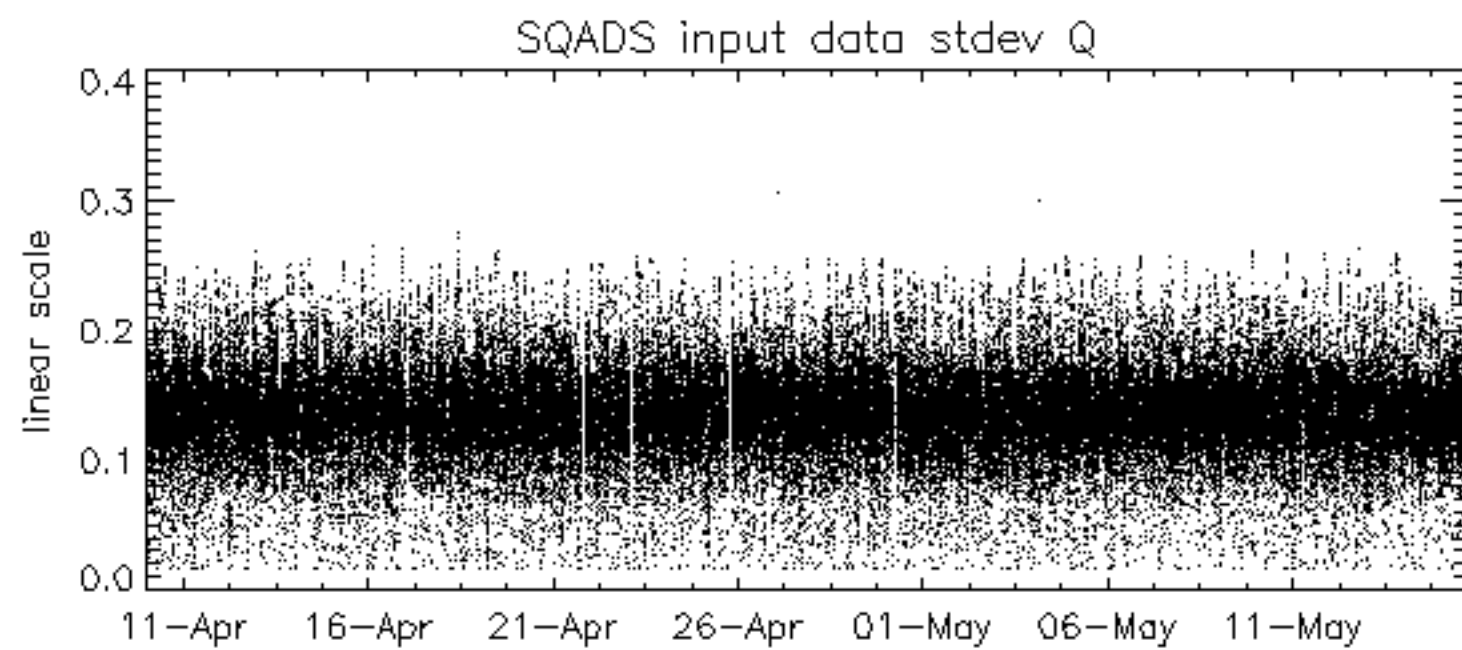
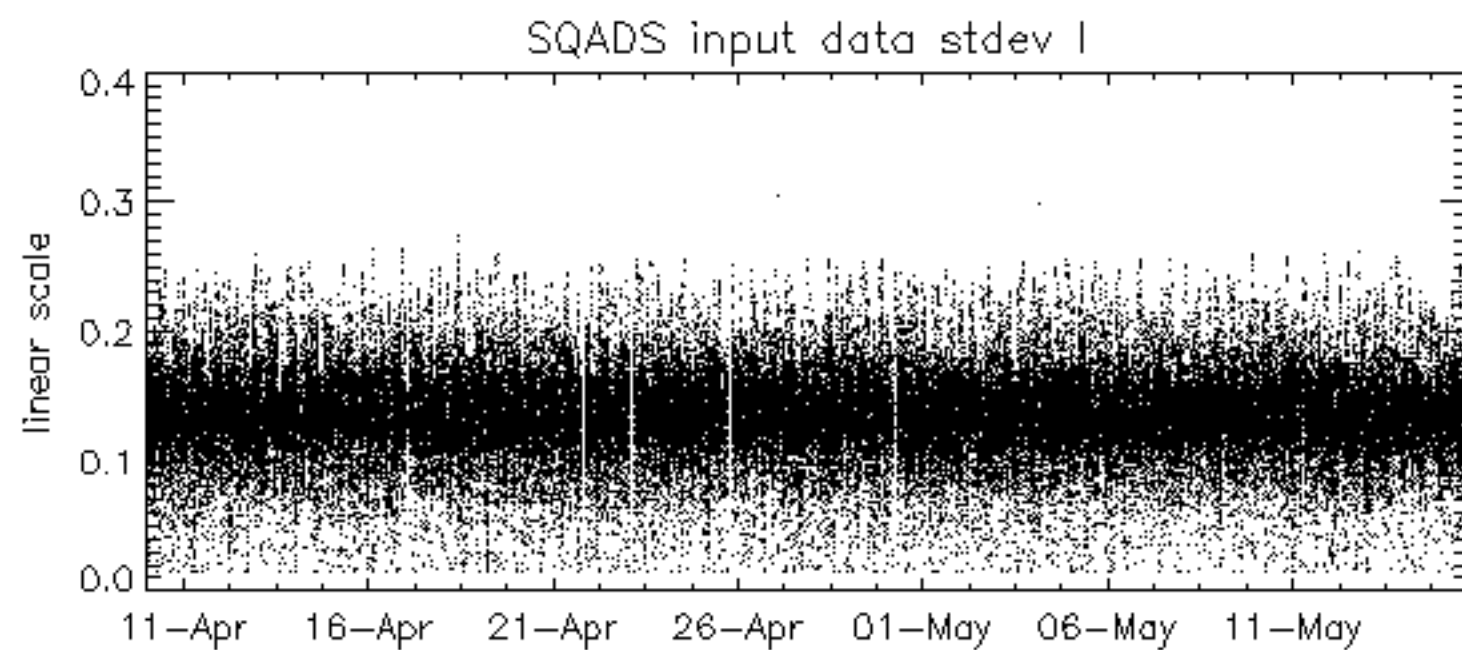
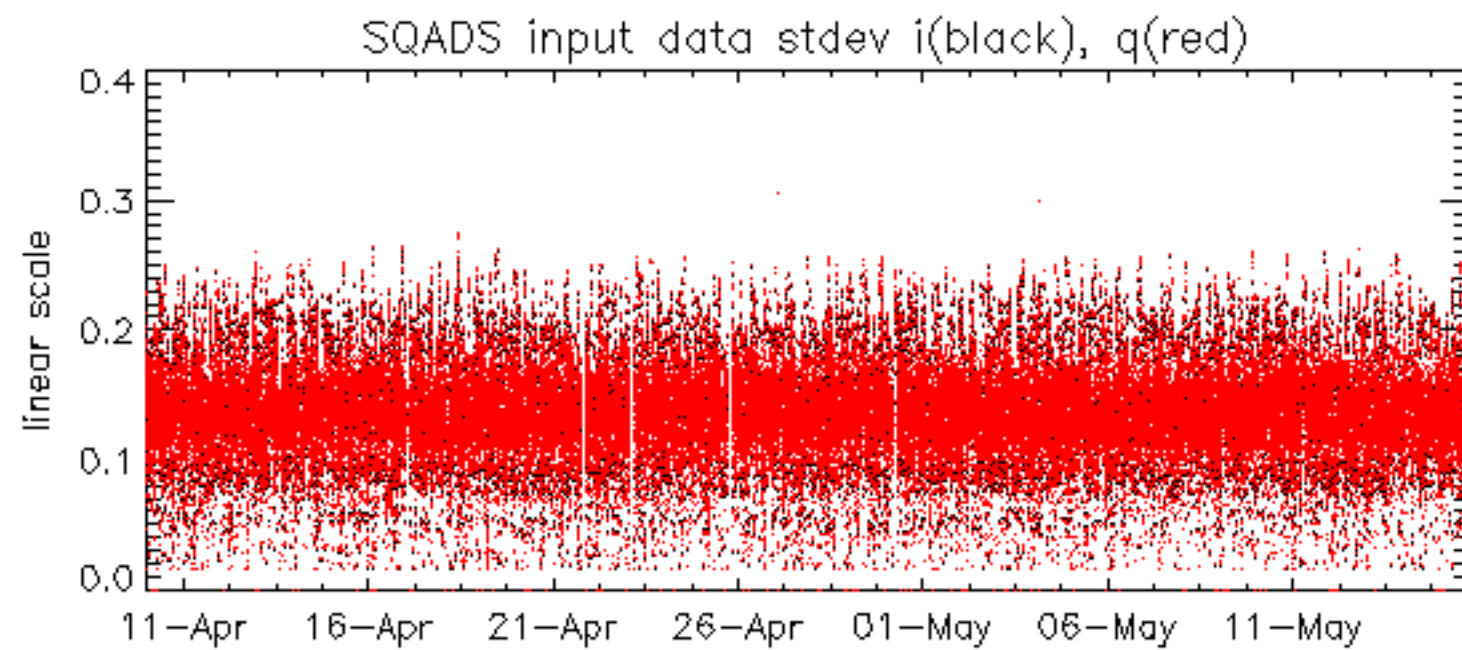








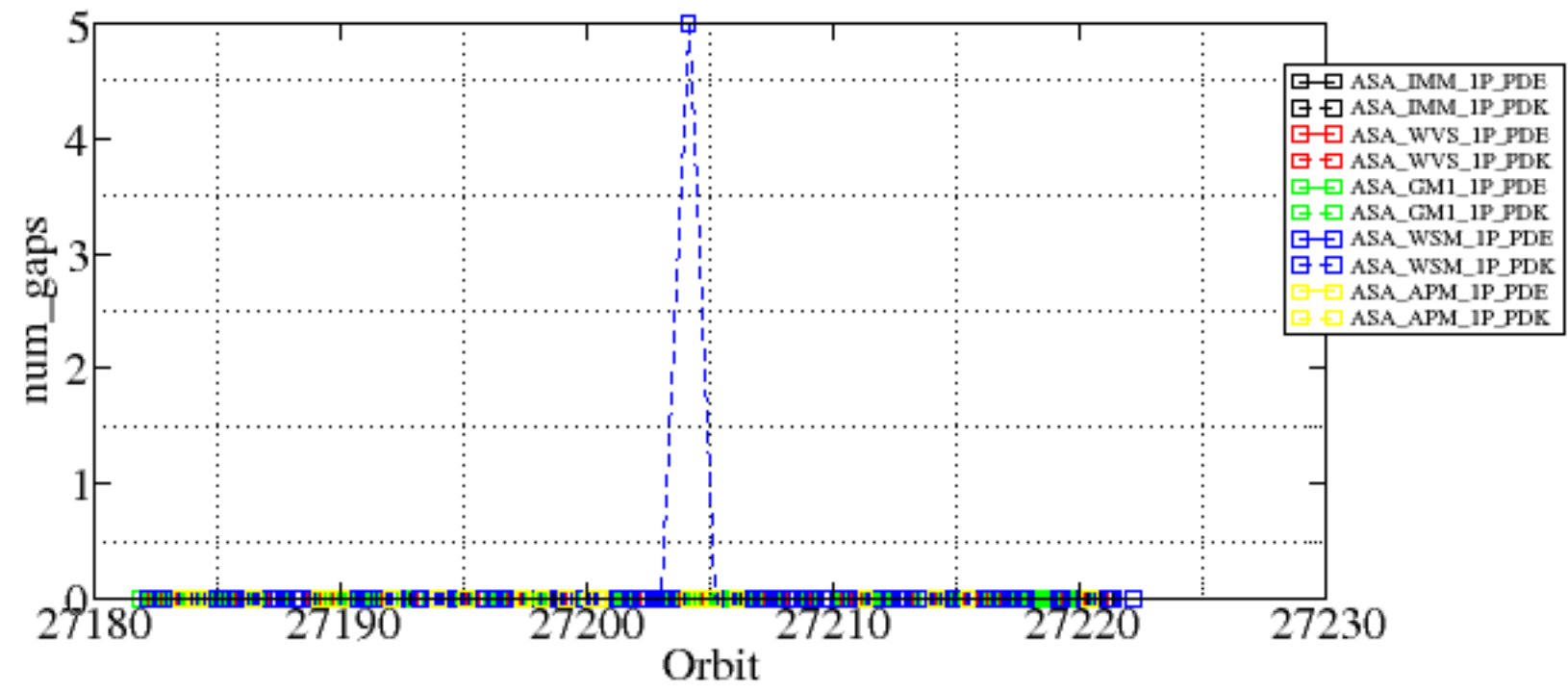


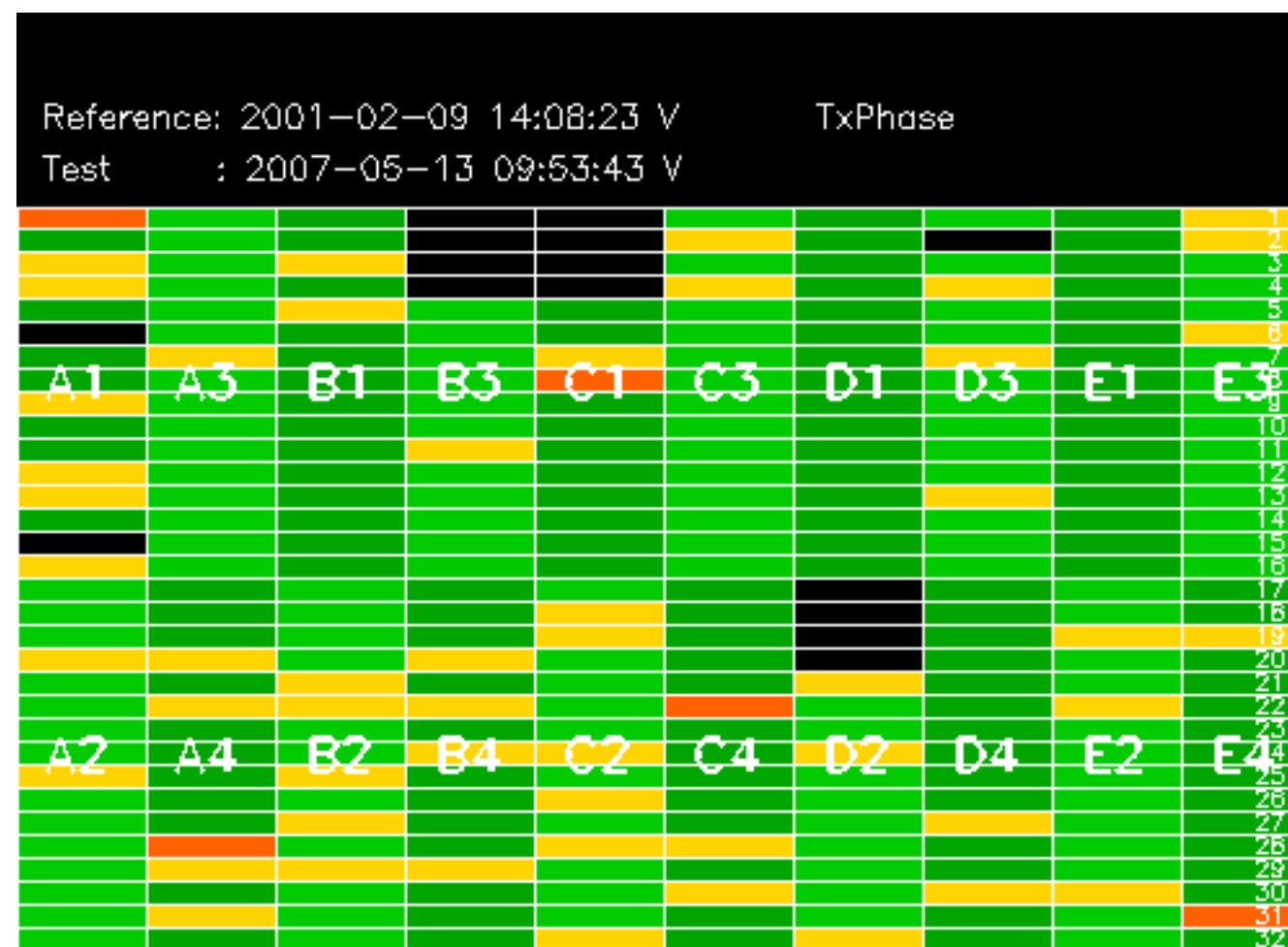


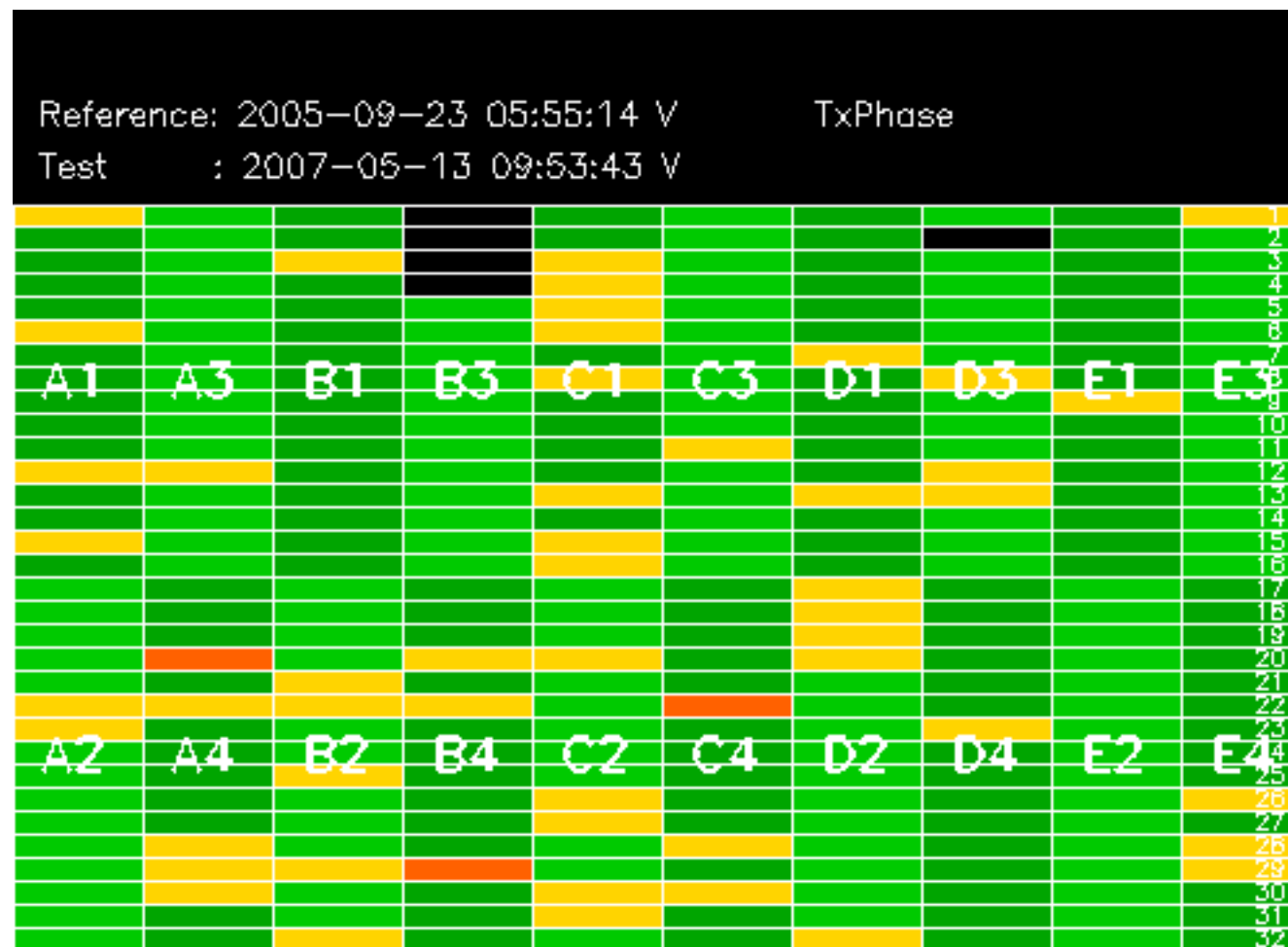
Summary of analysis for the last 3 days 2007051[345]

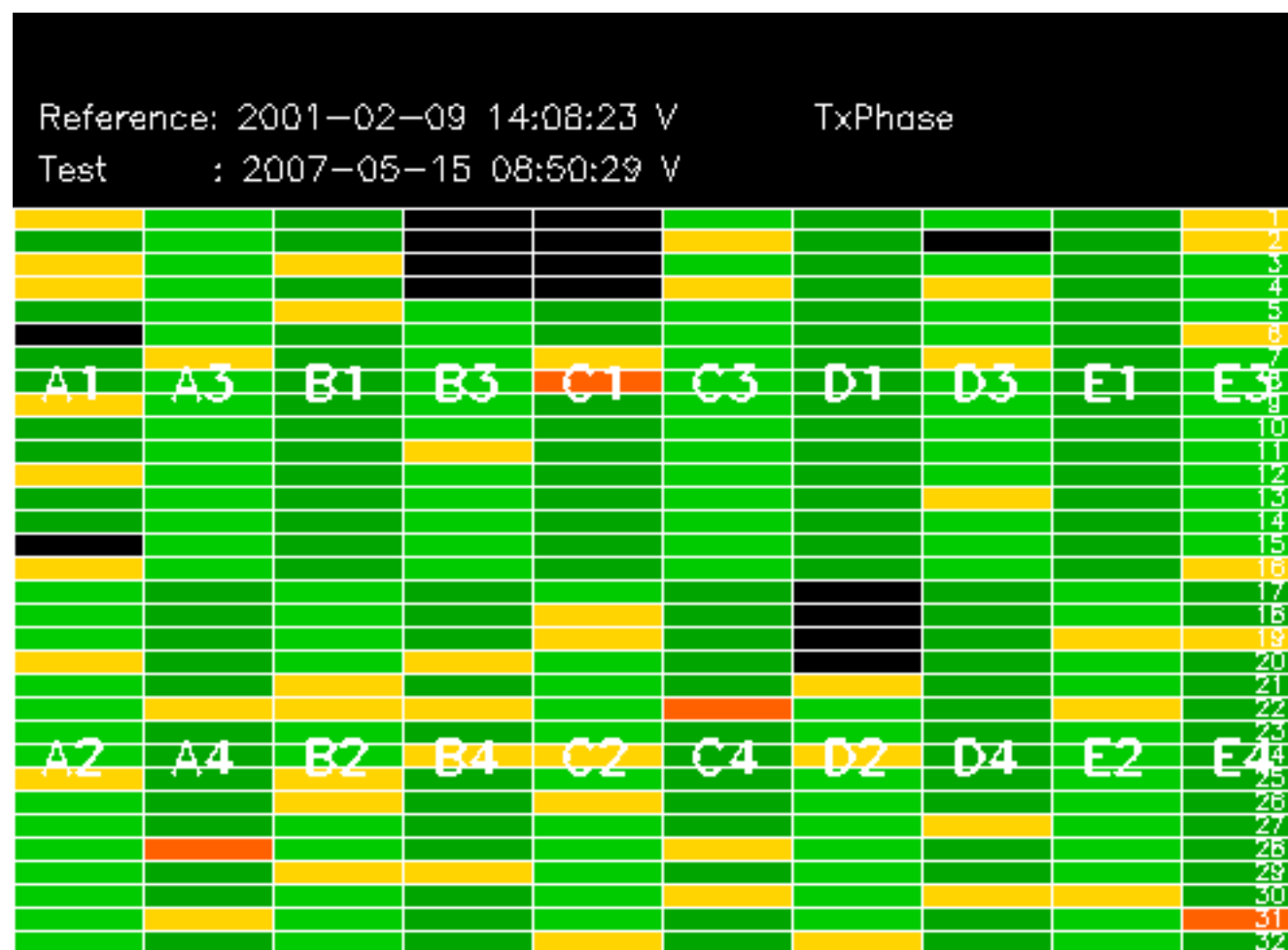
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070515_014512_000000352058_00103_27211_6080.N1	0	29
ASA_WSM_1PNPDE20070514_145940_000001582058_00097_27205_5551.N1	0	61
ASA_WSM_1PNPDE20070514_182245_000001582058_00099_27207_5646.N1	0	16
ASA_WSM_1PNPDK20070514_132855_000000612058_00096_27204_8337.N1	5	437

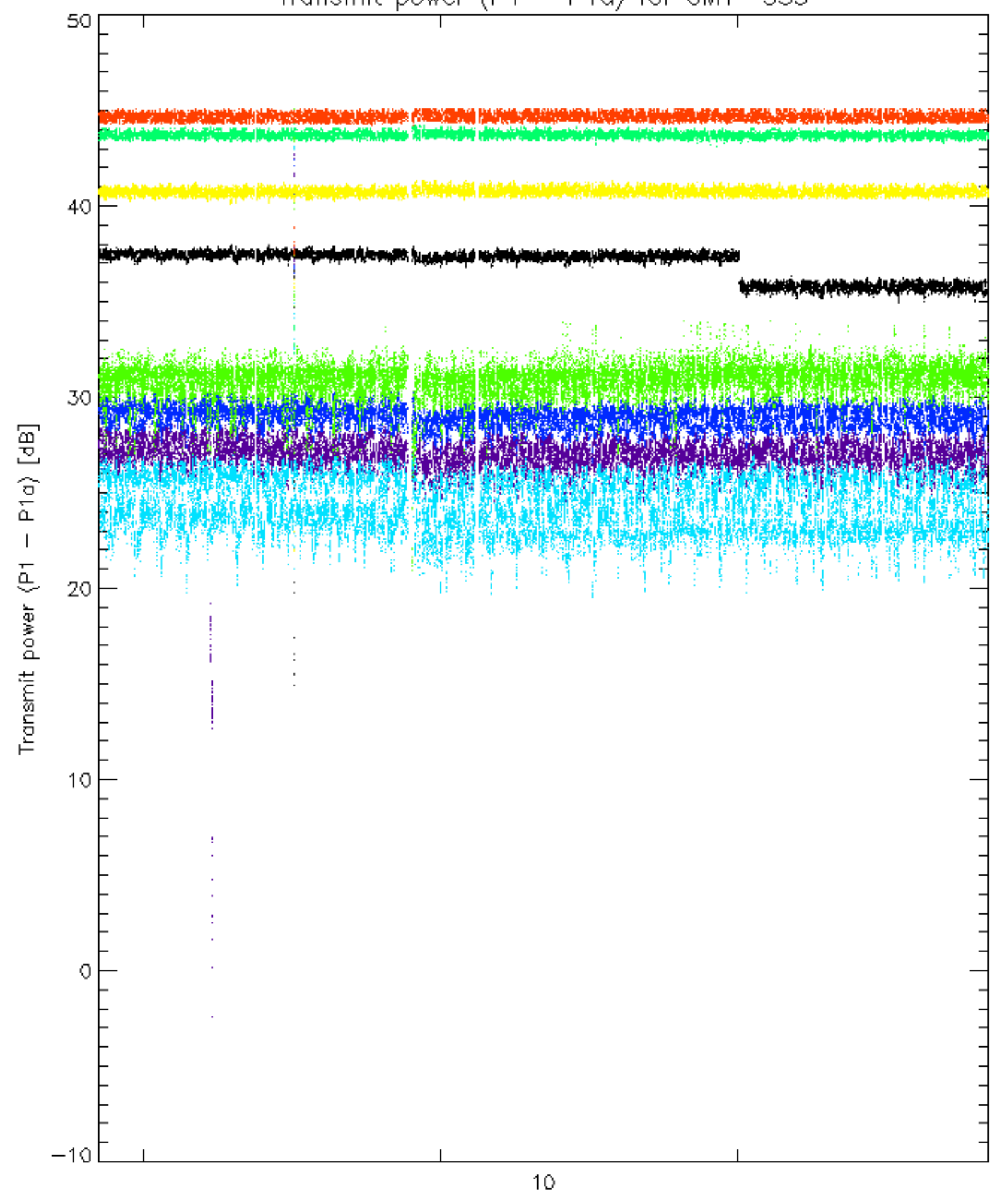




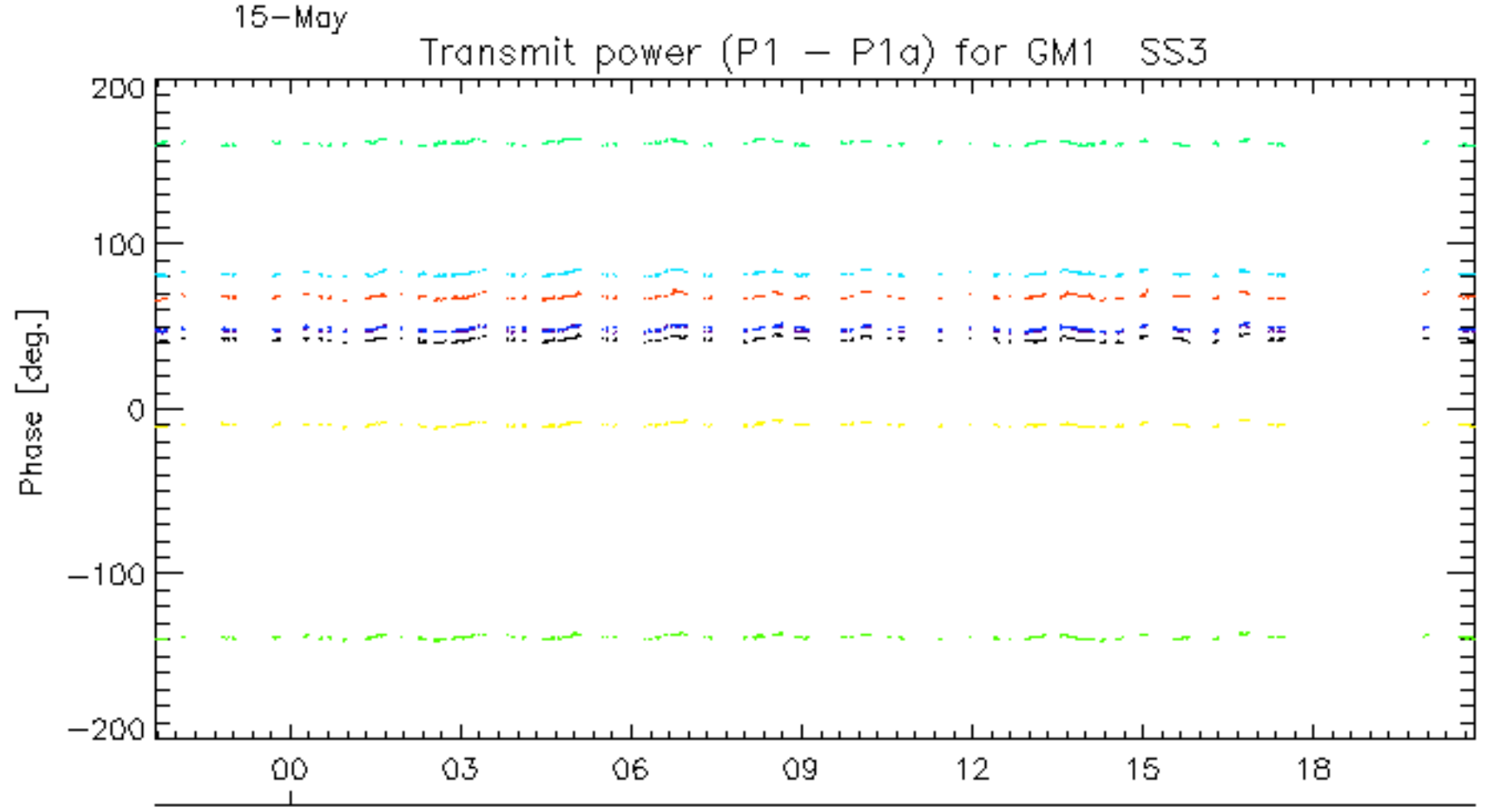
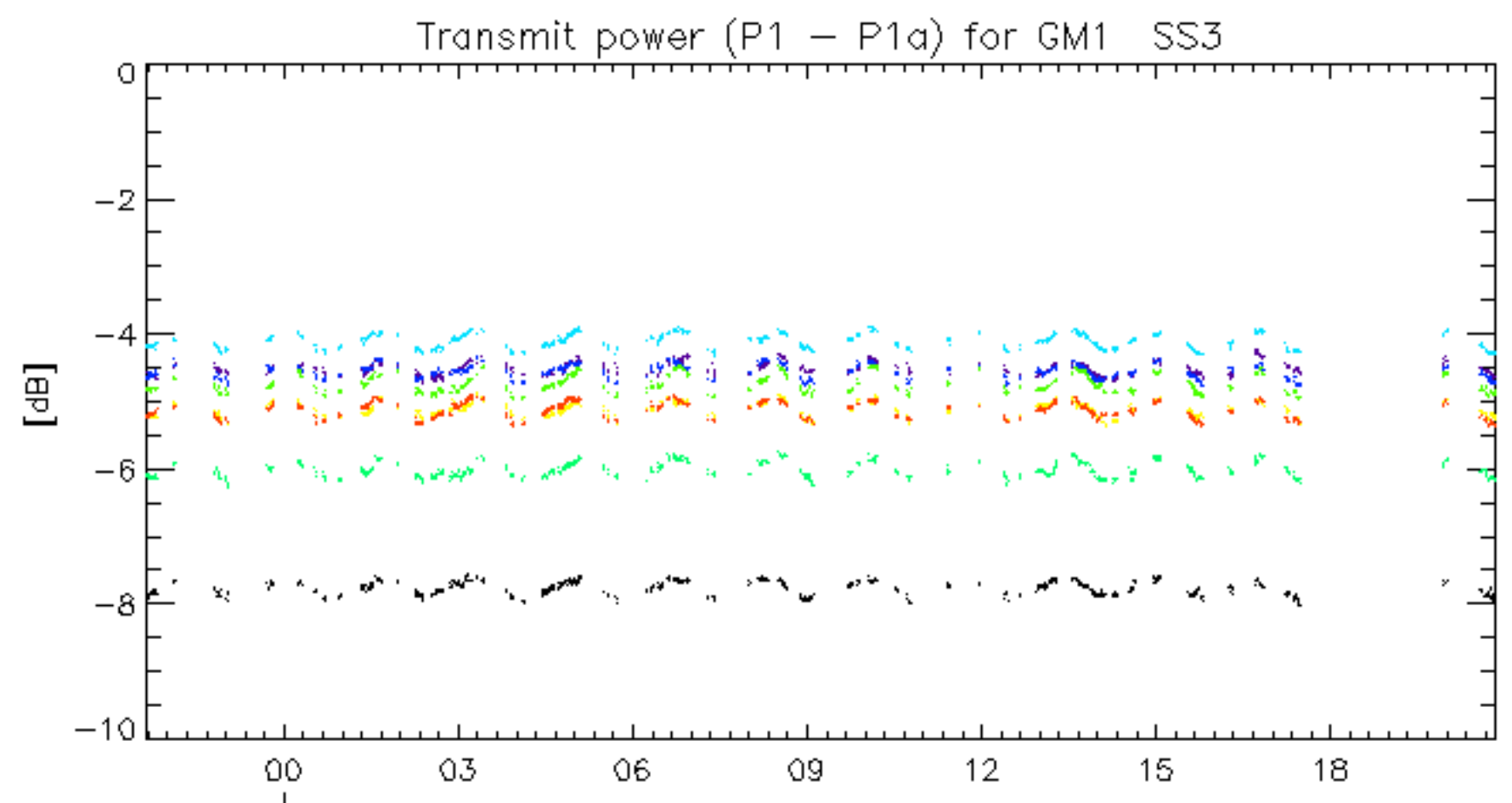




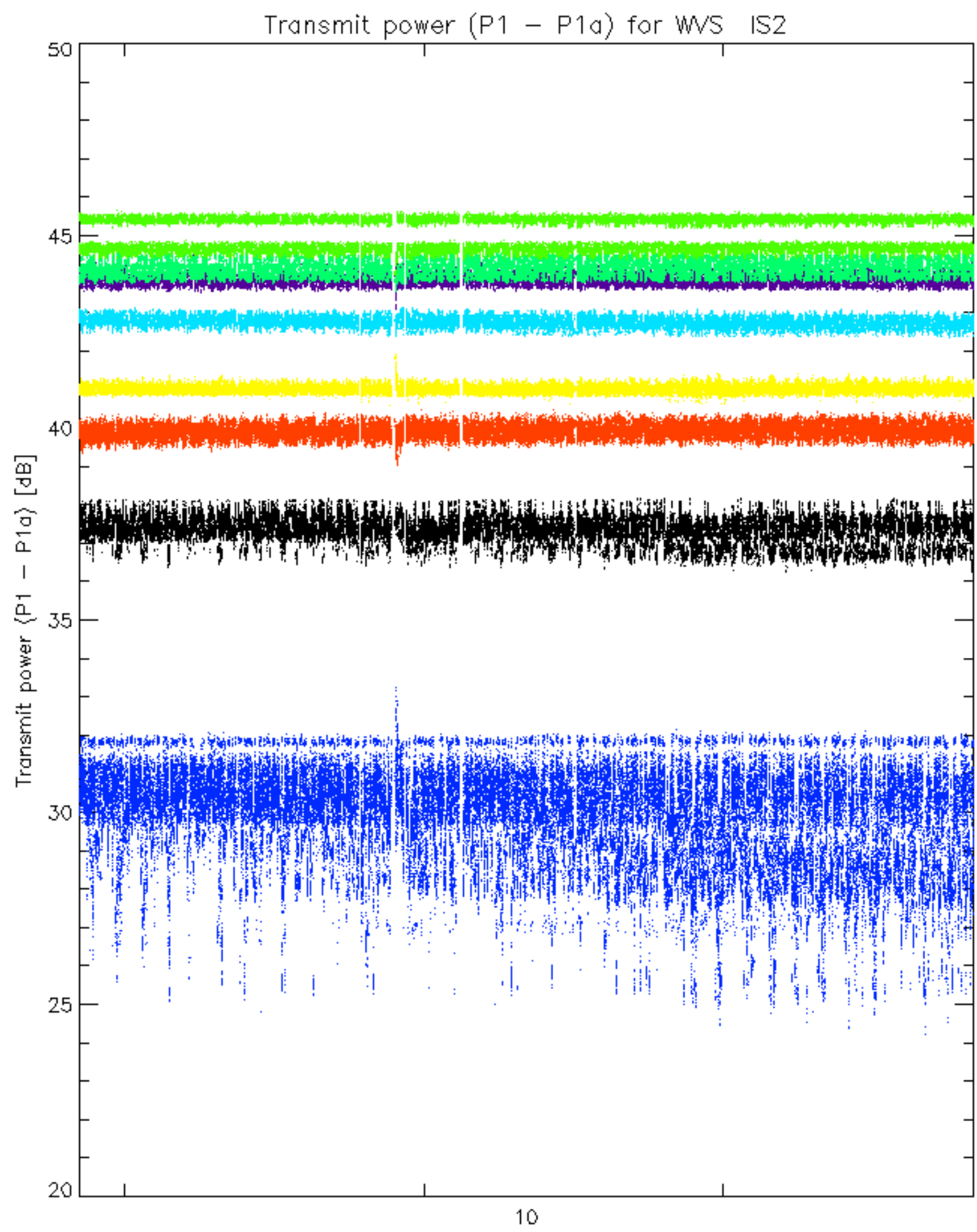
Transmit power (P1 - P1a) for GM1 SS3



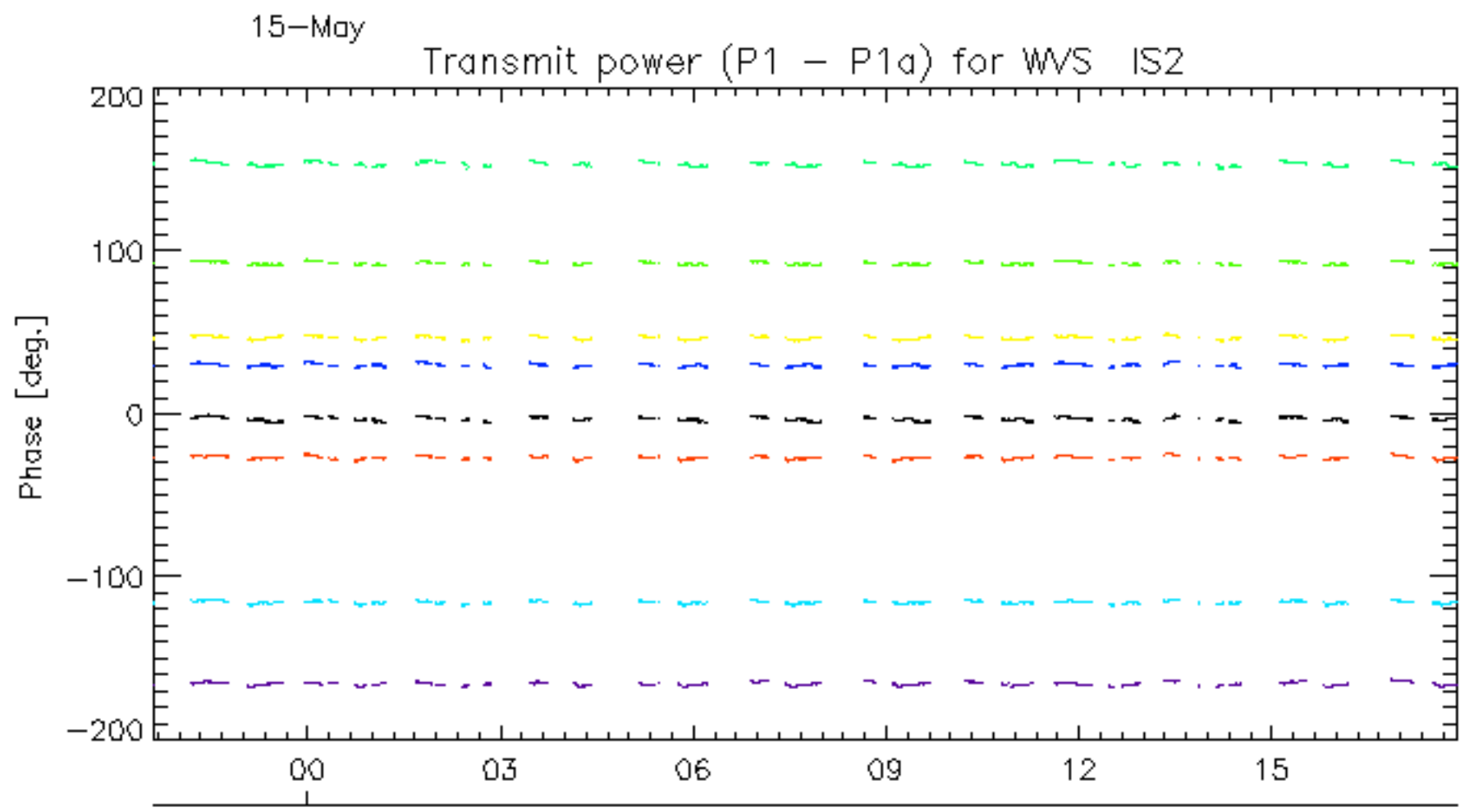
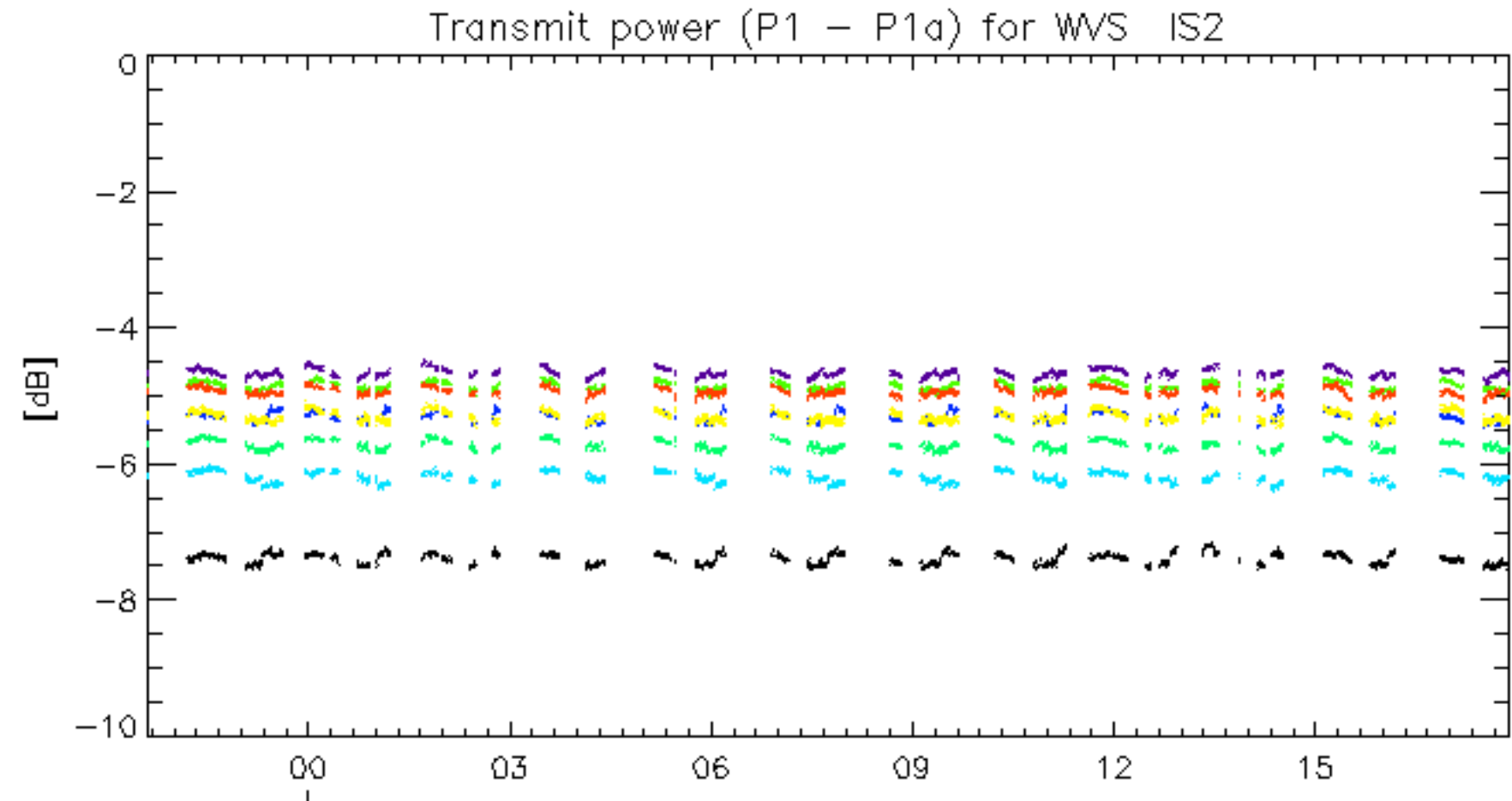
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.