

PRELIMINARY REPORT OF 070514

last update on Mon May 14 22:15:13 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 2007-05-13 00:00:00 to 2007-05-14 22:15:13

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	41	80	12	2	24
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	41	80	12	2	24
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	41	80	12	2	24
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	80	12	2	24

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	39	60	24	19	87
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	39	60	24	19	87
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	39	60	24	19	87
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	60	24	19	87

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	20070513 095343
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	-15.178316	0.139821	-0.318694
7	P1a	-17.585815	0.093250	-0.113615
11	P1a	-17.661043	0.354623	-0.460077
15	P1a	-13.114271	0.146662	-0.322650
19	P1a	-15.409931	0.068605	-0.184384
22	P1a	-15.987955	0.369448	-0.130042
26	P1a	-14.961816	0.217624	0.117179
30	P1a	-17.892384	0.397610	-0.565539

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.779323	0.010147	-0.032090
7	P1	-3.159339	0.009111	-0.044075
11	P1	-4.202178	0.015088	0.038431
15	P1	-6.448338	0.020230	-0.123014
19	P1	-3.777374	0.011894	0.011416
22	P1	-4.745860	0.010400	0.025379
26	P1	-3.909084	0.019051	0.008033
30	P1	-5.964126	0.009308	0.004555

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.653362	0.092911	0.043982
7	P2	-21.527012	0.092663	0.107661
11	P2	-15.303865	0.122057	0.148504
15	P2	-7.132271	0.090215	-0.014483
19	P2	-9.121977	0.082946	-0.022407
22	P2	-18.087173	0.078406	-0.001268
26	P2	-16.642427	0.084625	-0.075603
30	P2	-19.259779	0.083929	0.070380

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.245848	0.004900	-0.000807
7	P3	-8.245848	0.004900	-0.000807
11	P3	-8.245848	0.004900	-0.000807
15	P3	-8.245848	0.004900	-0.000807
19	P3	-8.245848	0.004900	-0.000807
22	P3	-8.245848	0.004900	-0.000807
26	P3	-8.245848	0.004900	-0.000807
30	P3	-8.245848	0.004900	-0.000807

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	-11.364960	0.169927	-0.670379
7	P1a	-10.034464	0.165640	0.104832
11	P1a	-10.681723	0.086491	-0.015107
15	P1a	-10.795594	0.149549	0.123421
19	P1a	-15.840871	0.090629	-0.114819
22	P1a	-21.462362	1.440458	-0.086337
26	P1a	-15.550571	0.341453	-0.052979
30	P1a	-18.279182	0.440056	0.025474

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.179815	0.278977	1.258444
7	P1	-2.385408	0.087135	0.089032
11	P1	-2.875296	0.022250	0.028457
15	P1	-3.803580	0.035641	0.041095
19	P1	-3.599420	0.015443	-0.039185
22	P1	-4.955000	0.022927	0.031330
26	P1	-6.051565	0.023670	-0.042711
30	P1	-5.350816	0.031833	-0.040837

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.202225	0.070475	-0.069479
7	P2	-22.057215	0.169822	-0.045488
11	P2	-10.654964	0.045139	-0.059960
15	P2	-4.946654	0.043408	-0.068675
19	P2	-6.880201	0.041261	-0.023488
22	P2	-8.109202	0.081809	0.019463
26	P2	-24.338409	0.133641	-0.055186
30	P2	-21.705820	0.106594	0.009107

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.092697	0.005065	0.000569
7	P3	-8.092621	0.005072	0.000507
11	P3	-8.092555	0.005060	0.000239
15	P3	-8.092546	0.005071	0.000236
19	P3	-8.092657	0.005073	0.000265
22	P3	-8.092555	0.005063	0.000310
26	P3	-8.092493	0.005068	0.000306
30	P3	-8.092605	0.005061	0.000208

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	0.000550646
	stdev	1.93467e-07
MEAN Q	mean	0.000506347
	stdev	2.39188e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136133
	stdev	0.00119093
STDEV Q	mean	0.136522
	stdev	0.00120815



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007051[234]

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_WSM_1PNPDE20070512_114339_00000852058_00066_27174_1906.N1	0	42
ASA_WSM_1PNPDE20070512_160559_000001832058_00069_27177_1966.N1	0	32
ASA_WSM_1PNPDE20070514_145940_000001582058_00097_27205_5551.N1	0	61
ASA_WSM_1PNPDK20070512_071243_000002452058_00063_27171_5047.N1	5	0







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)


Ascending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Ascending

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)


Ascending

<input type="checkbox"/>
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

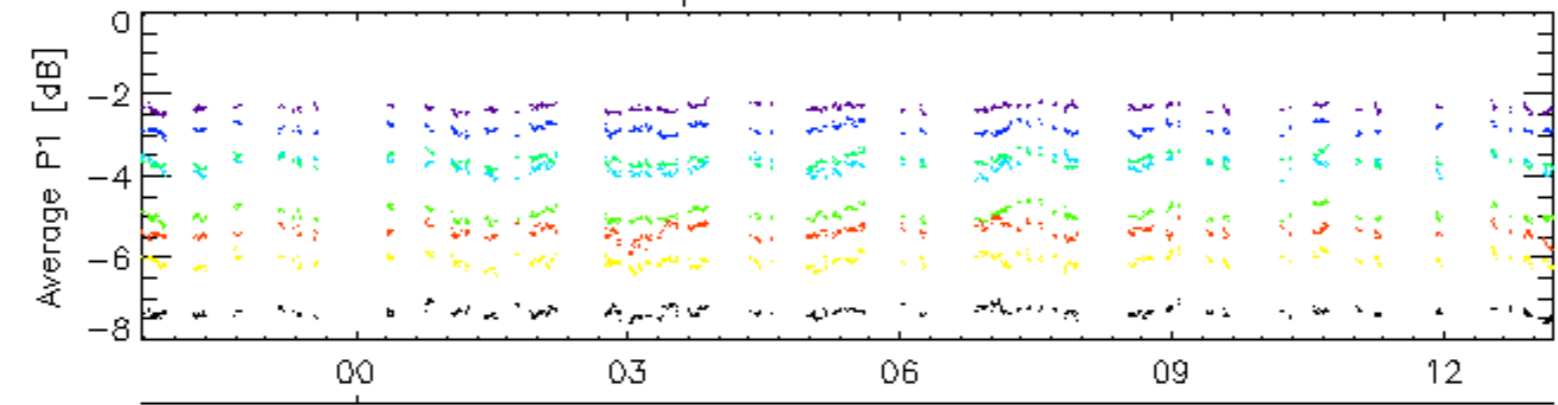
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

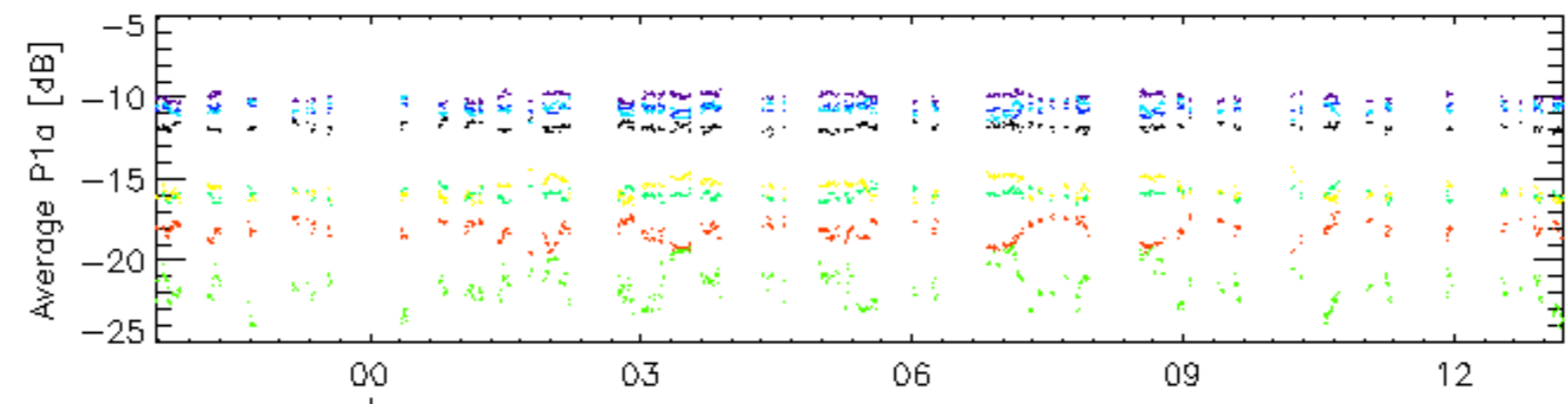
Evolution Doppler error versus ANX

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Cal pulses for GM1 SS3

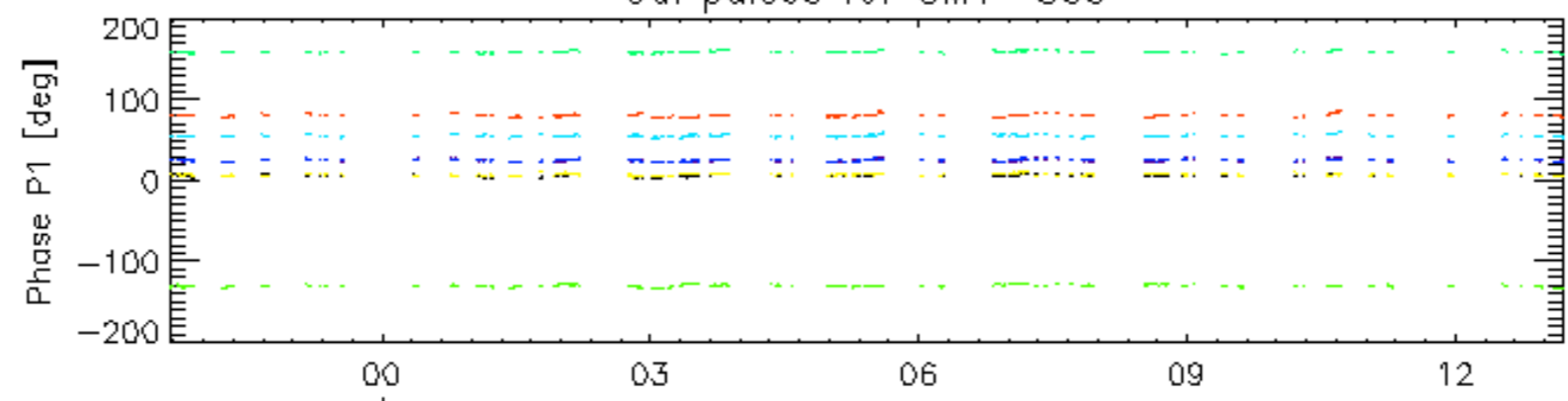


14-May

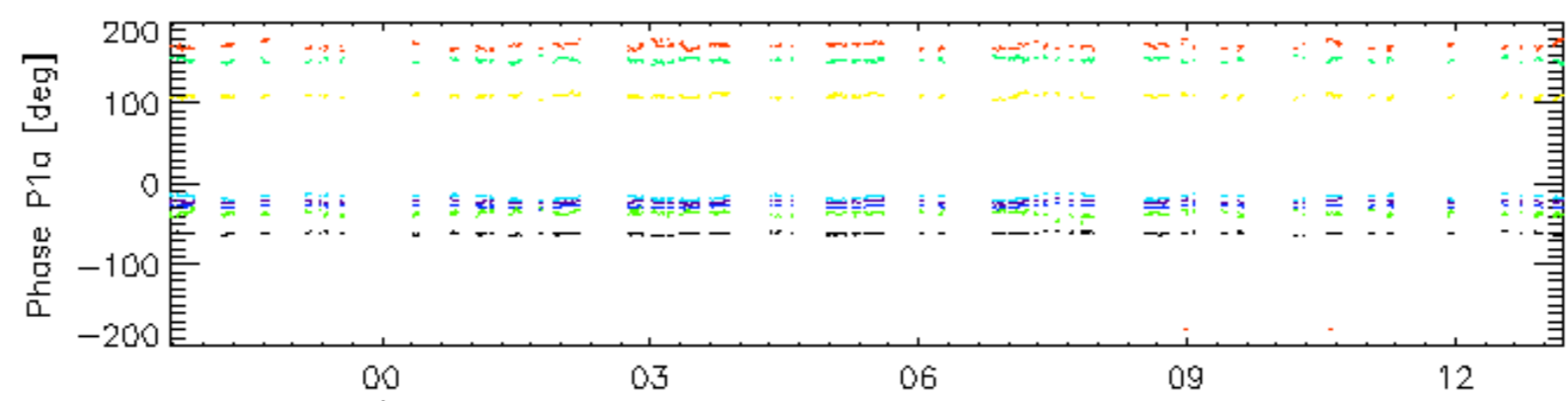


14-May

Cal pulses for GM1 SS3

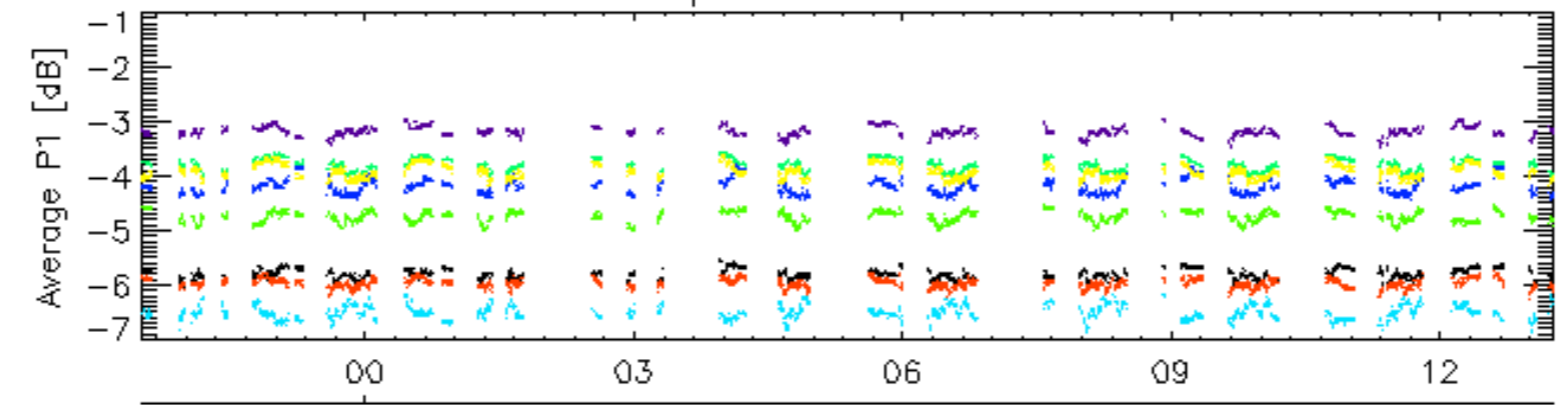


14-May

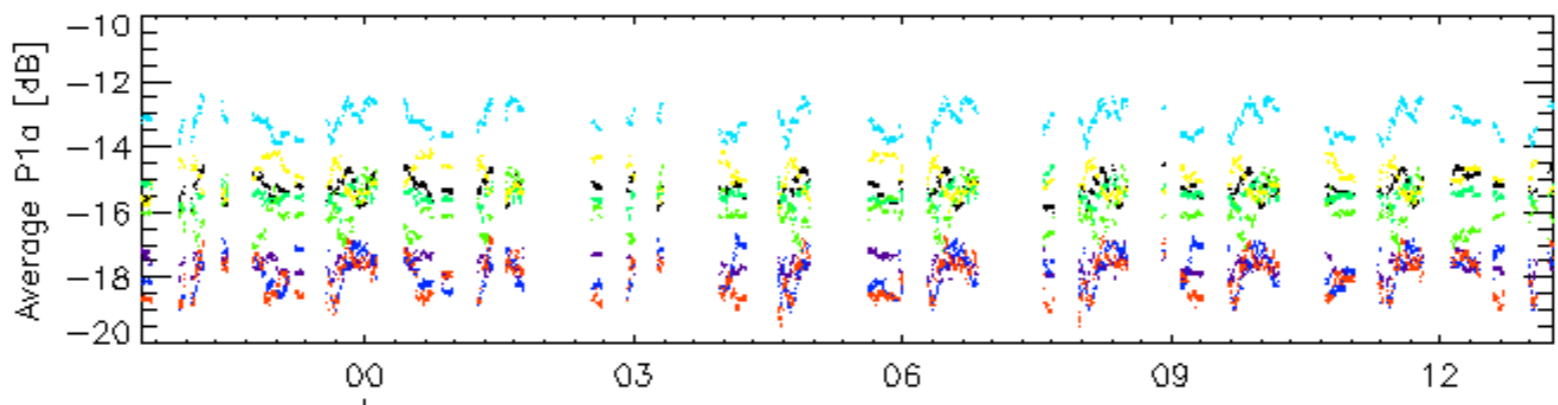


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

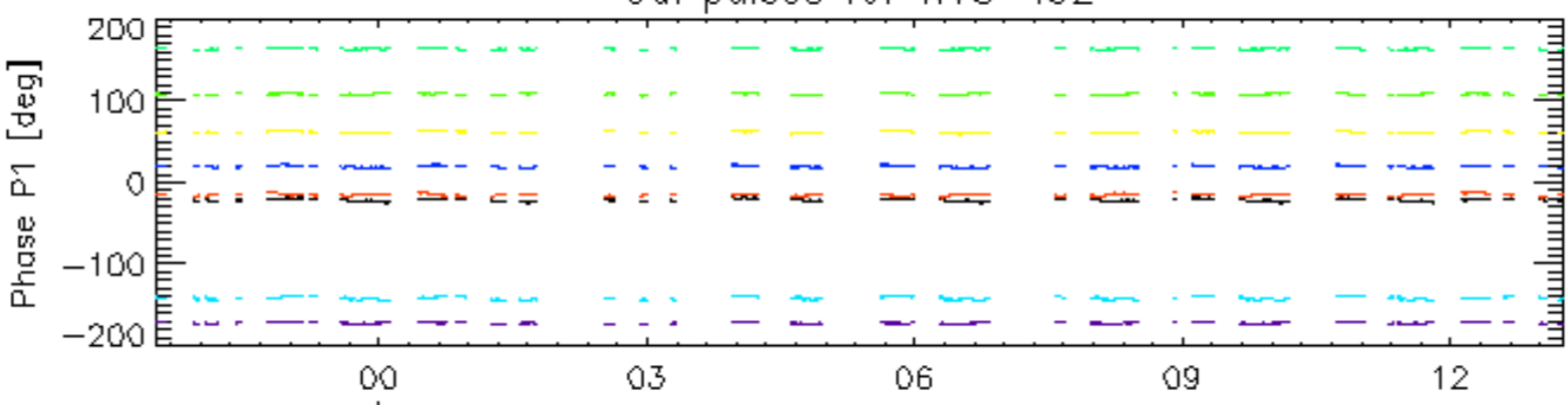


14-May

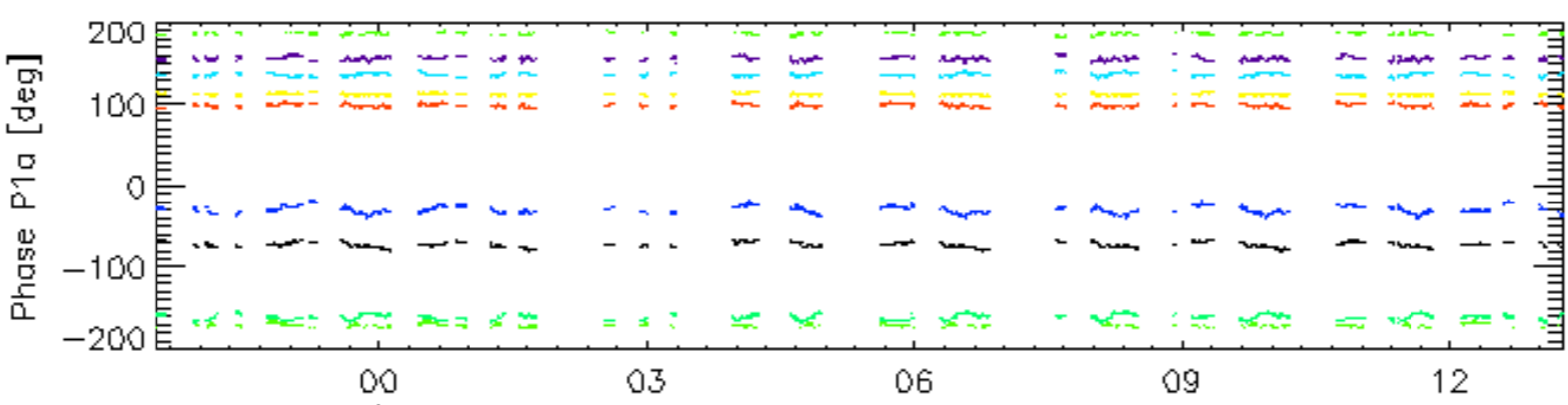


14-May

Cal pulses for WVS IS2

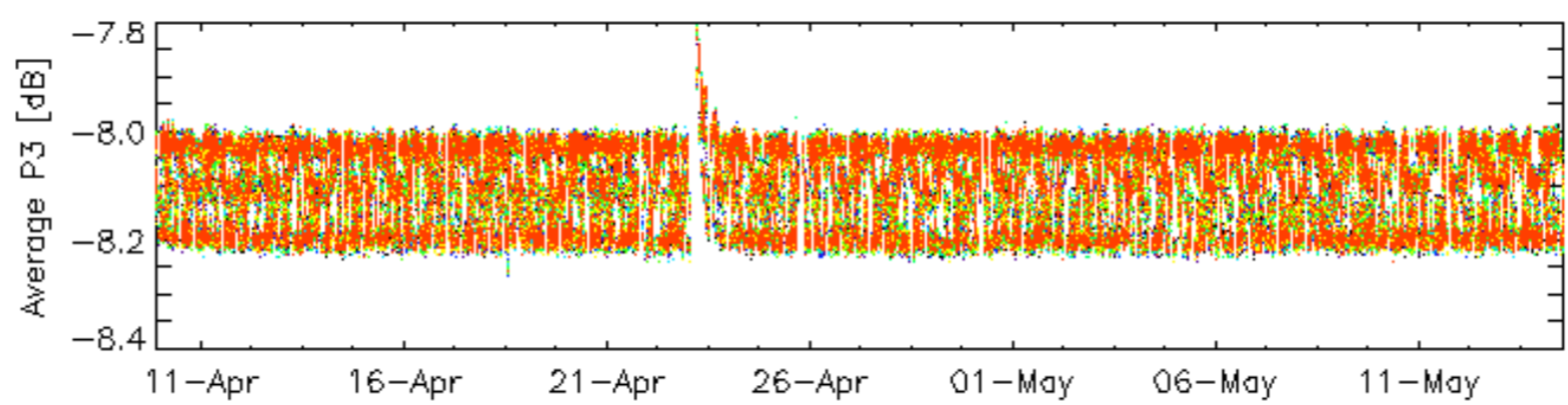
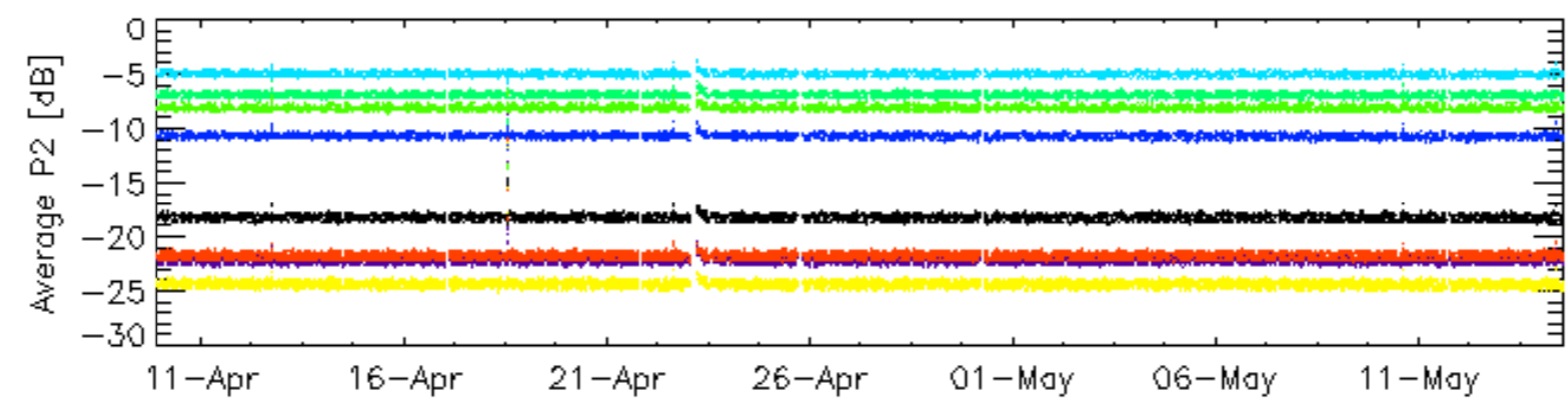
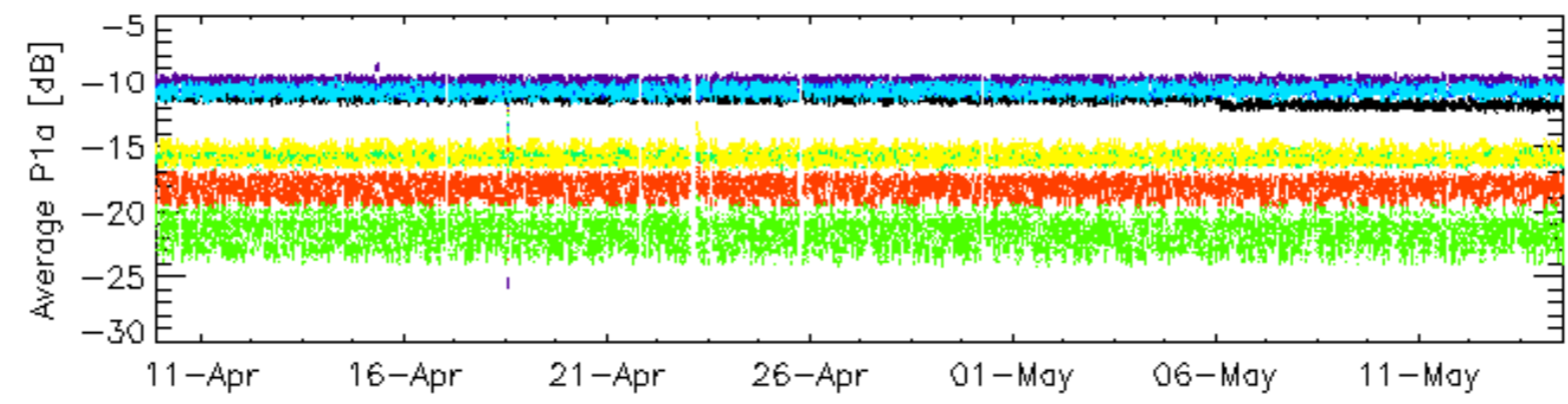
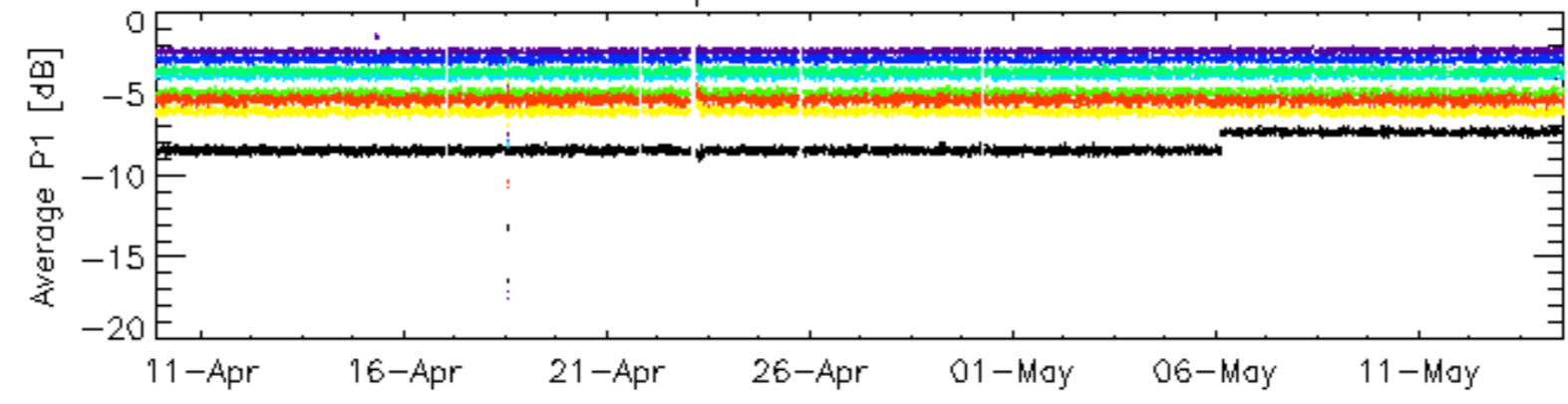


14-May



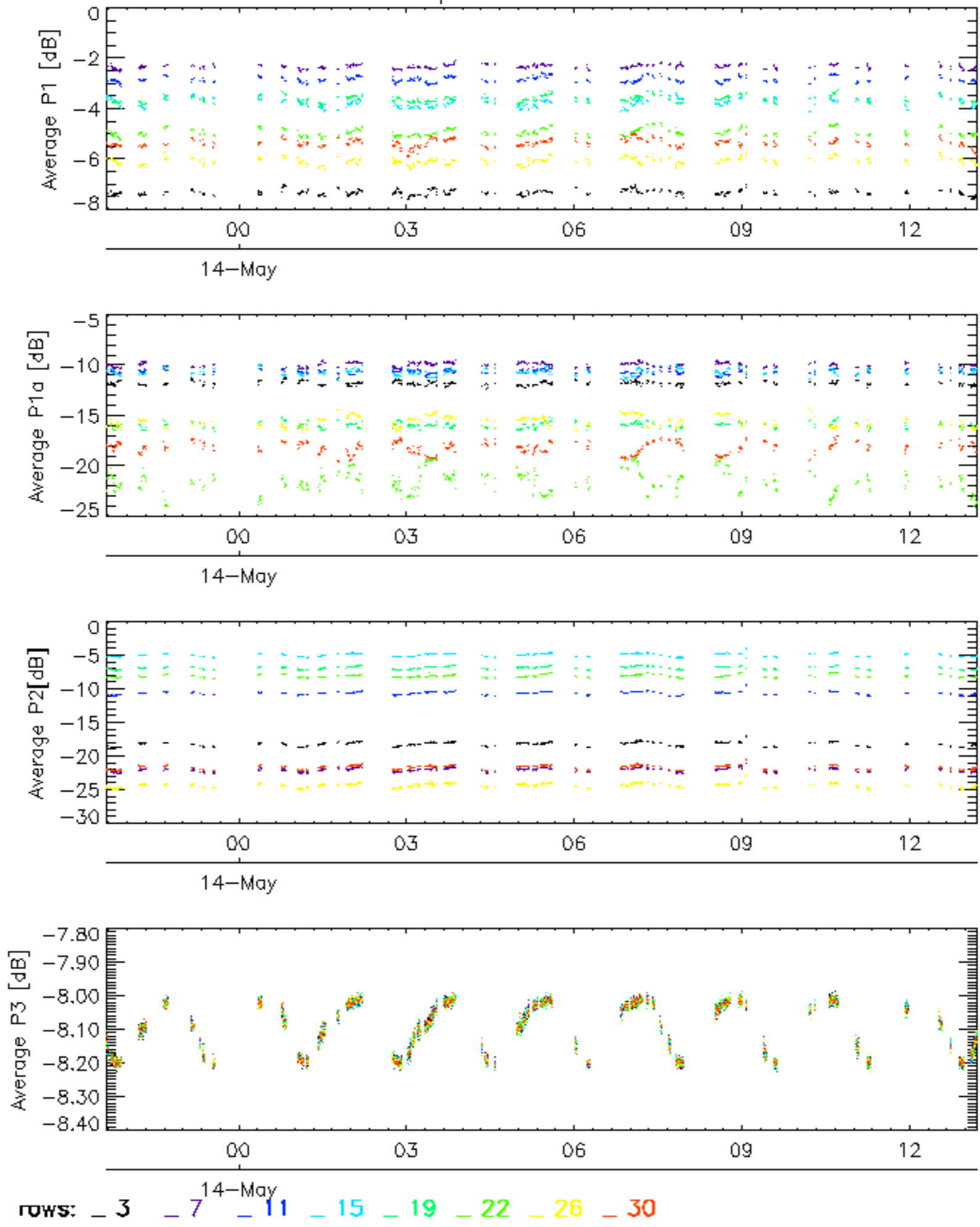
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

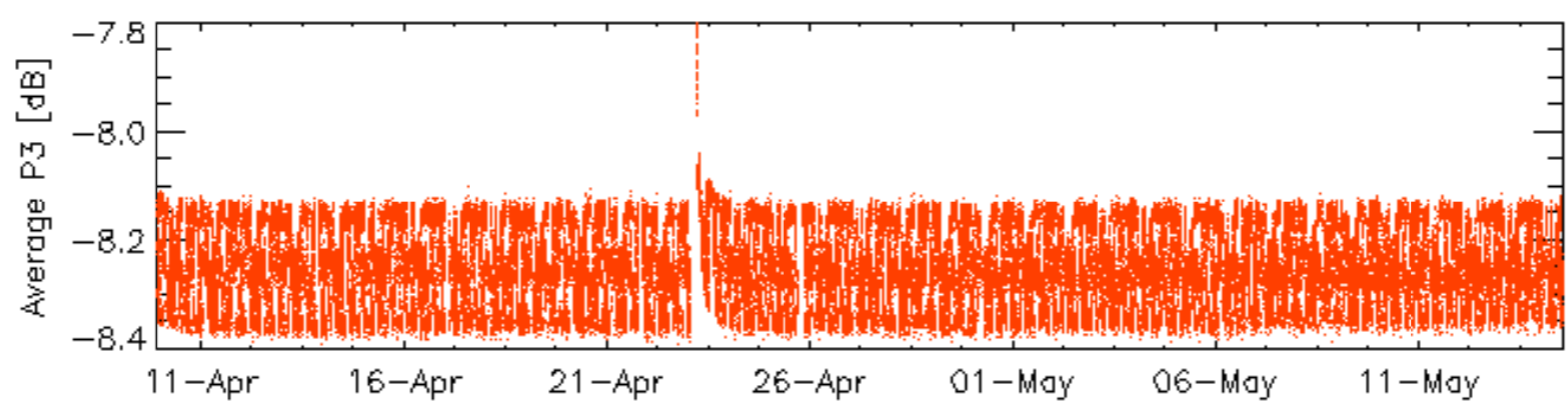
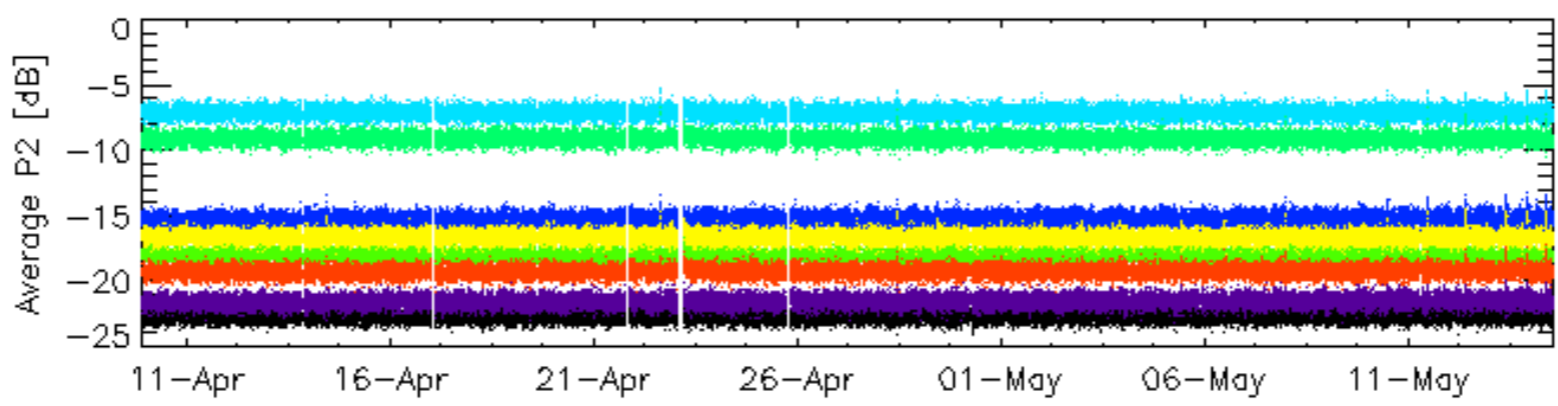
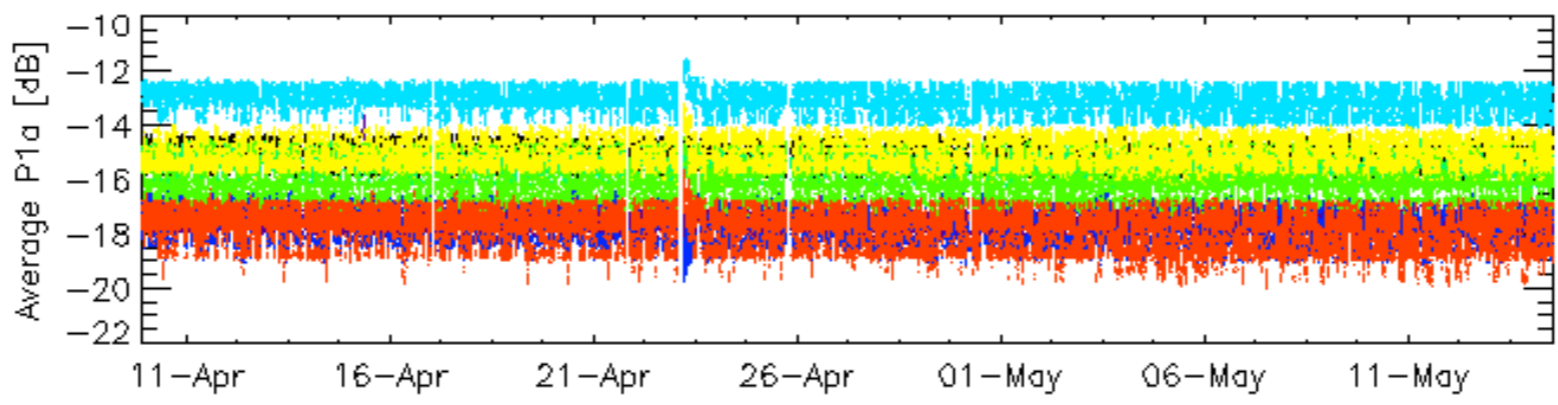
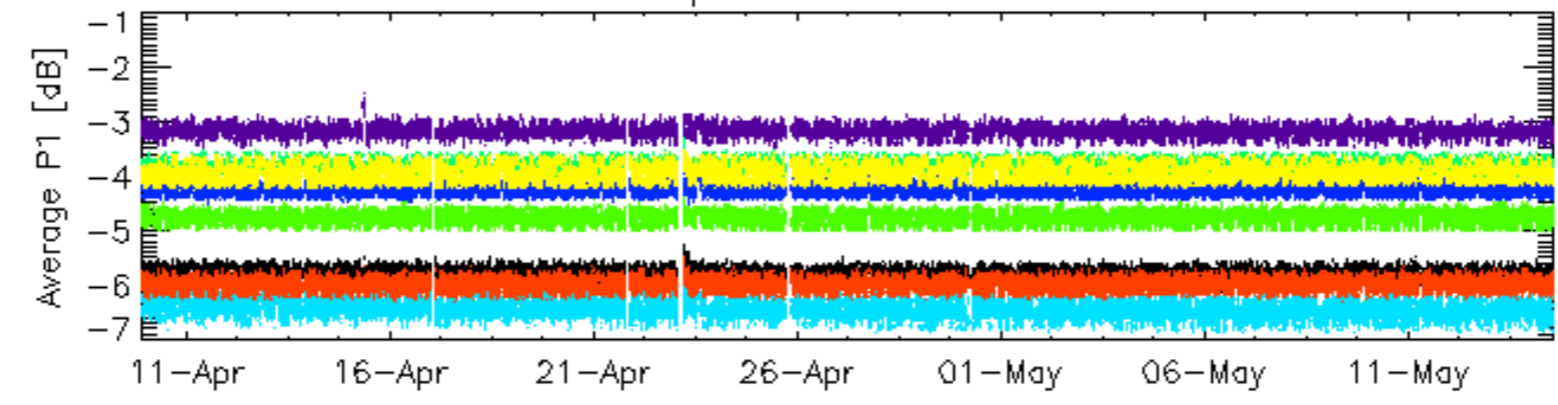


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

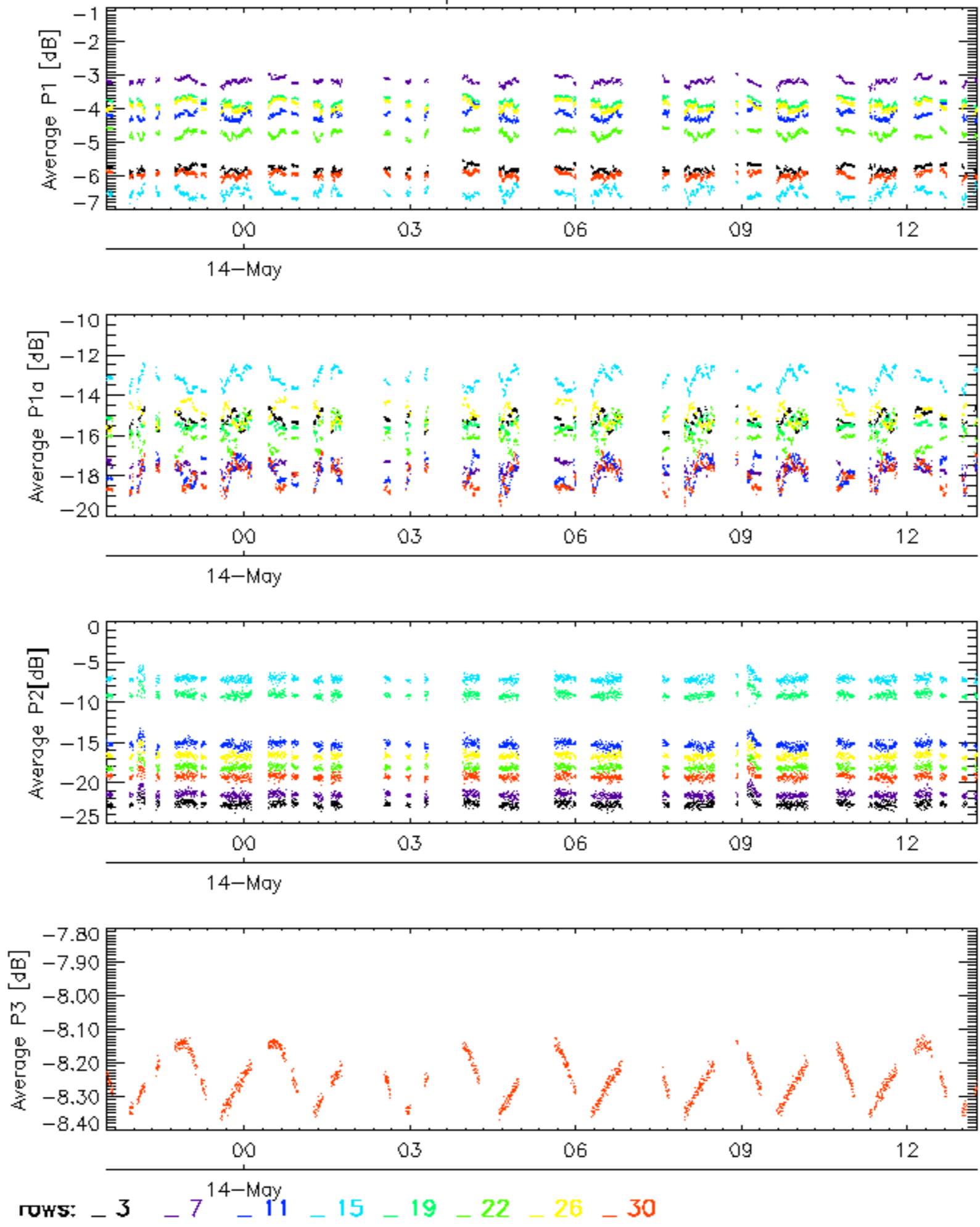


Cal pulses for WVS IS2

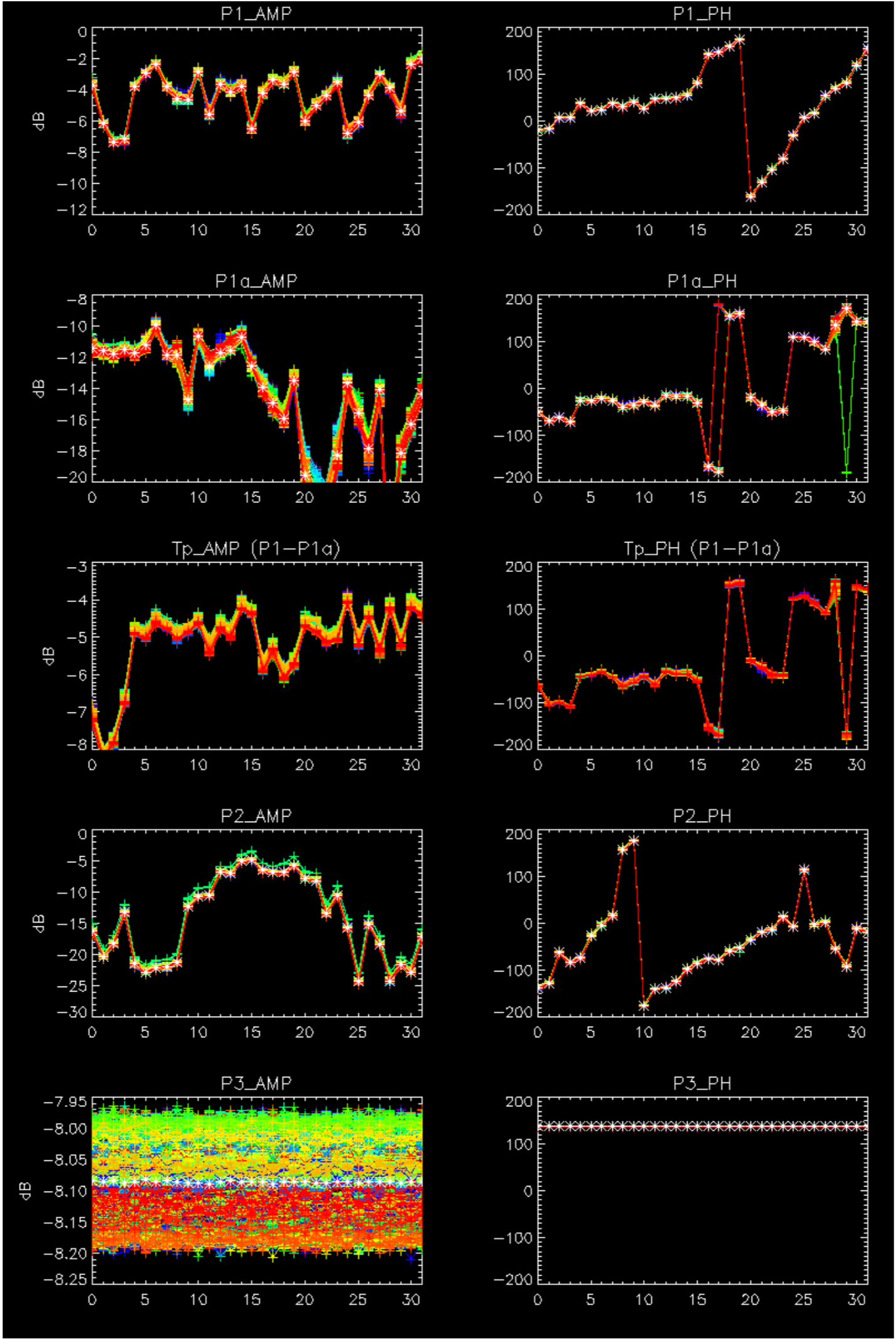


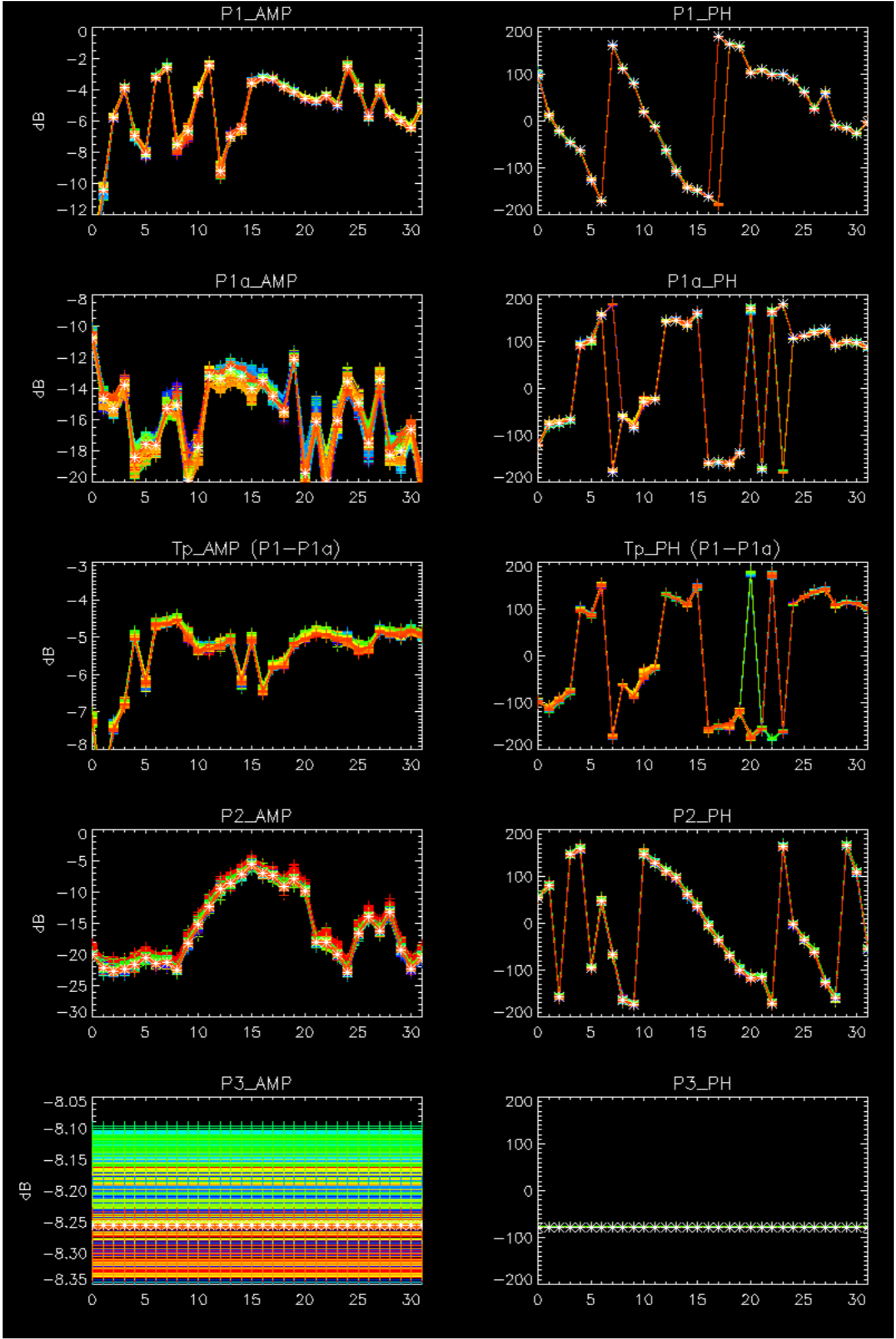
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Cal pulses for WVS IS2



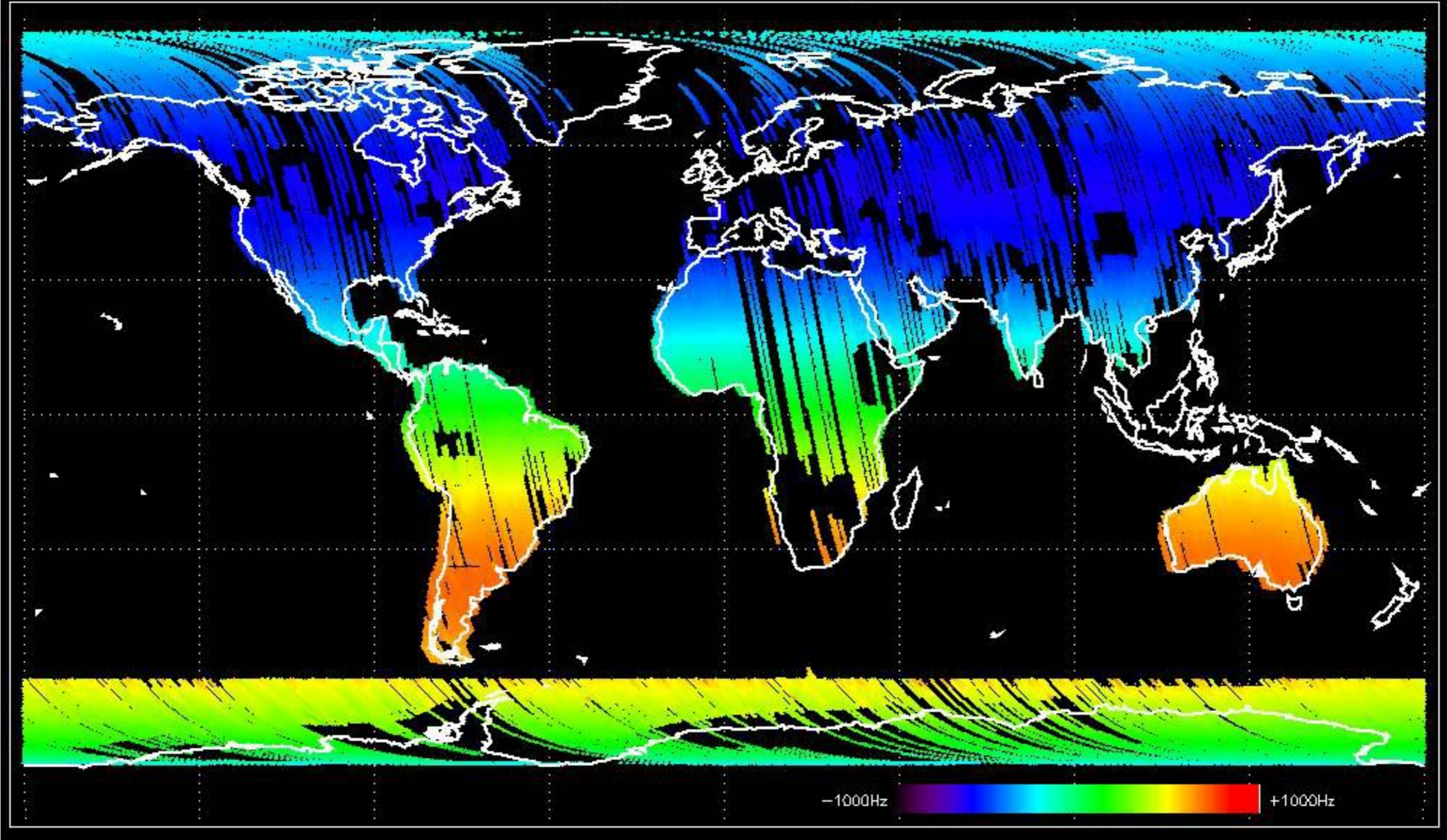
No anomalies observed.



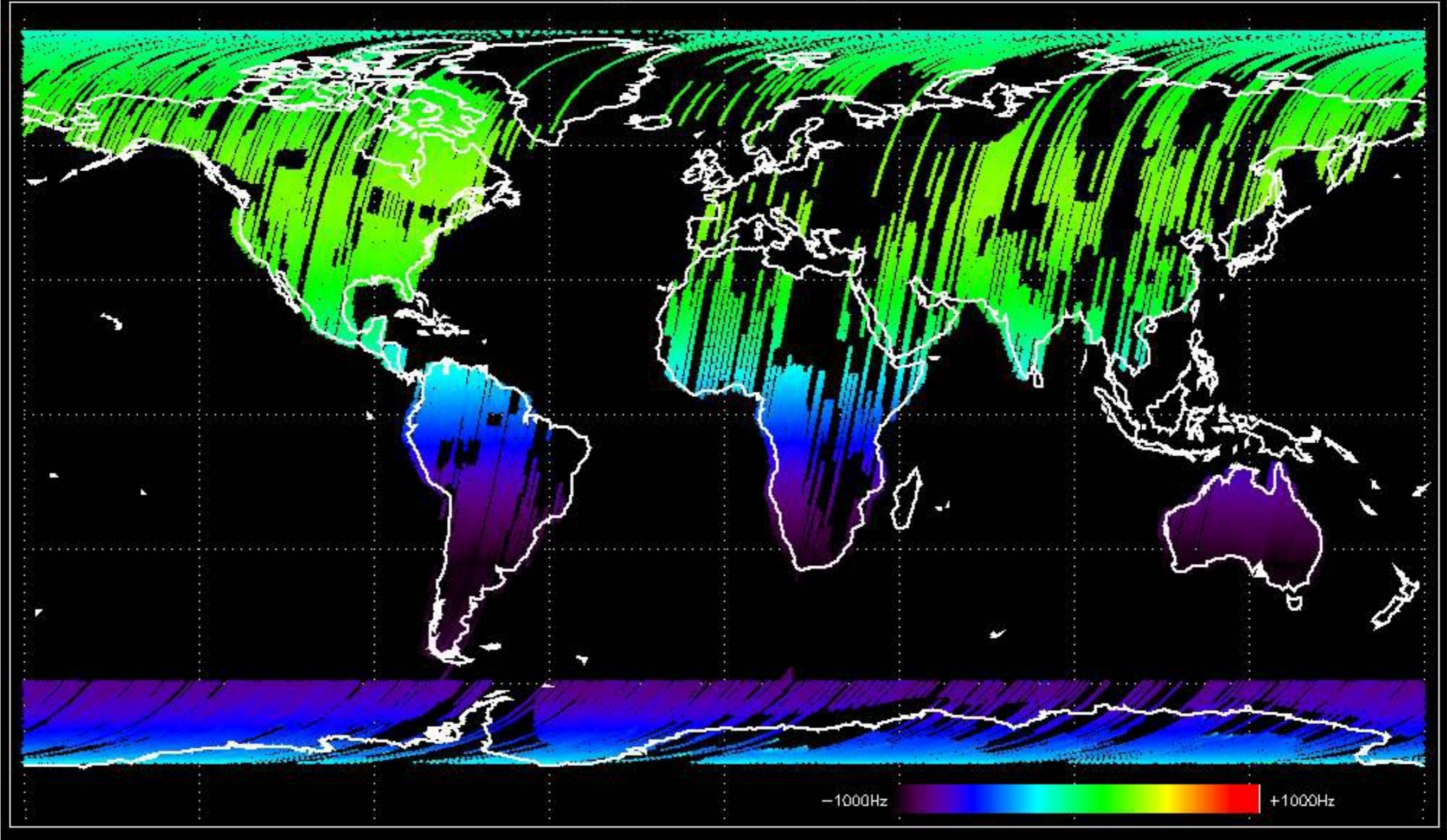


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

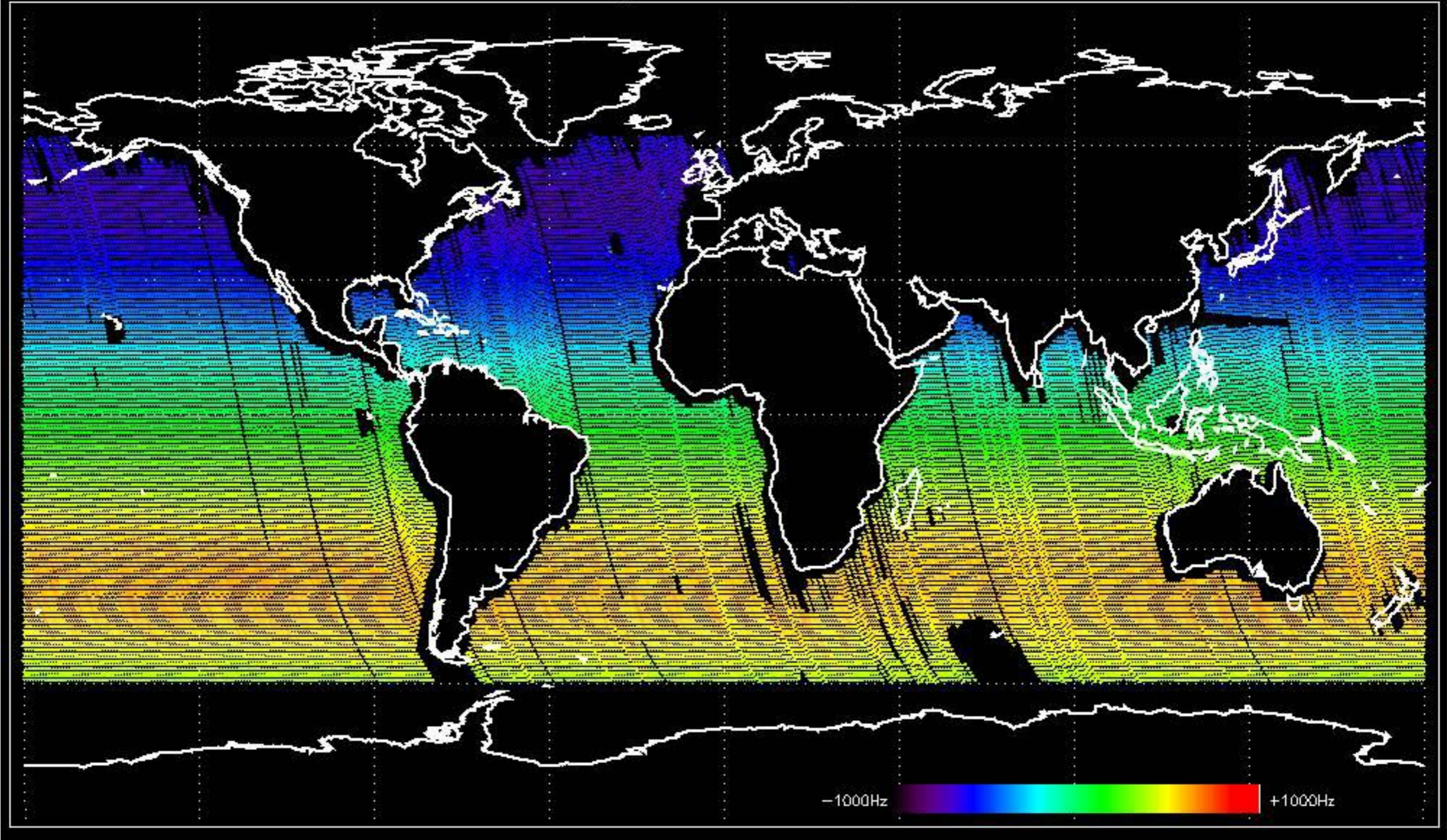
Doppler 'GM1' 'SS1' ascending



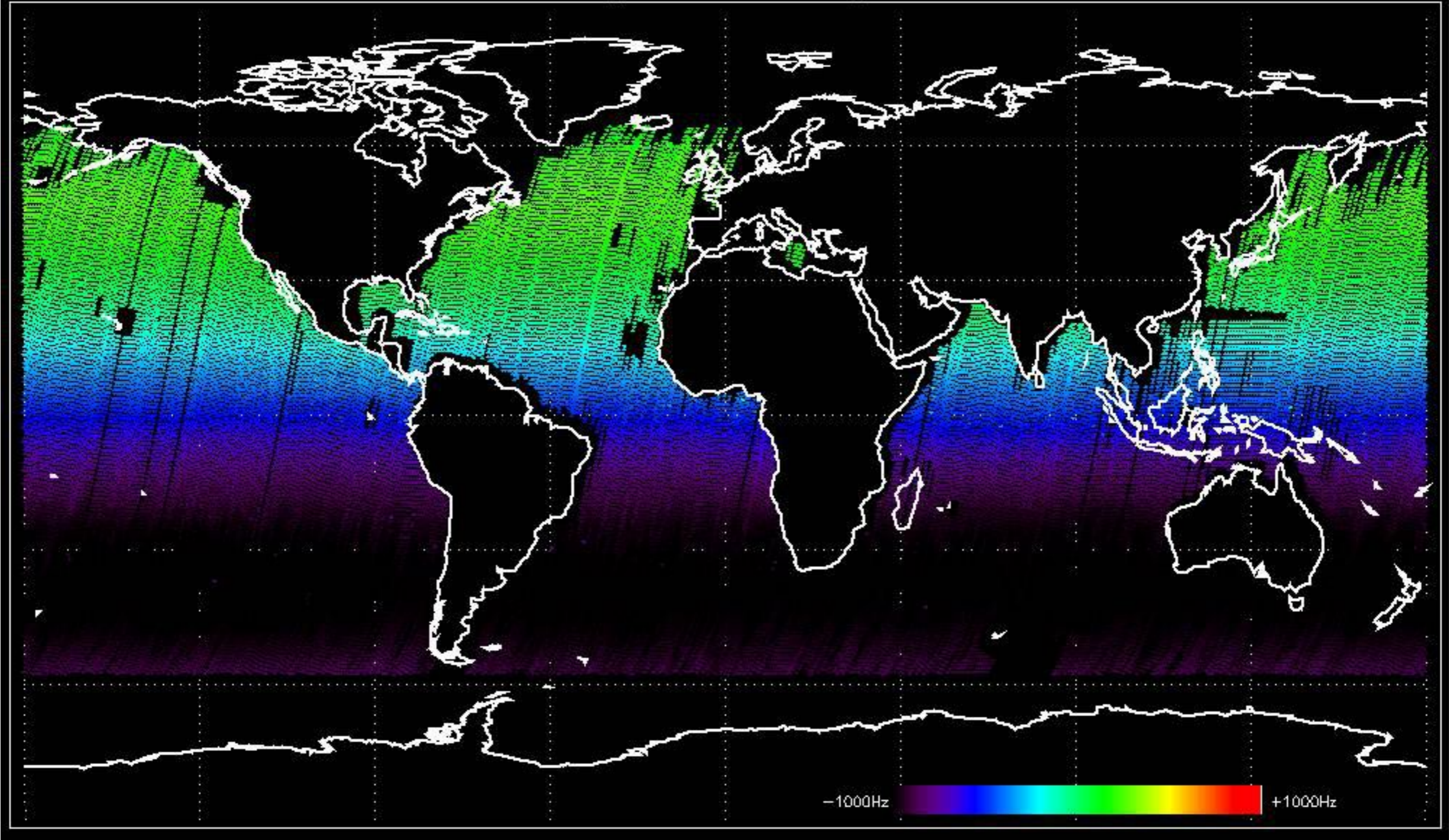
Doppler 'GM1' 'SS1' descending

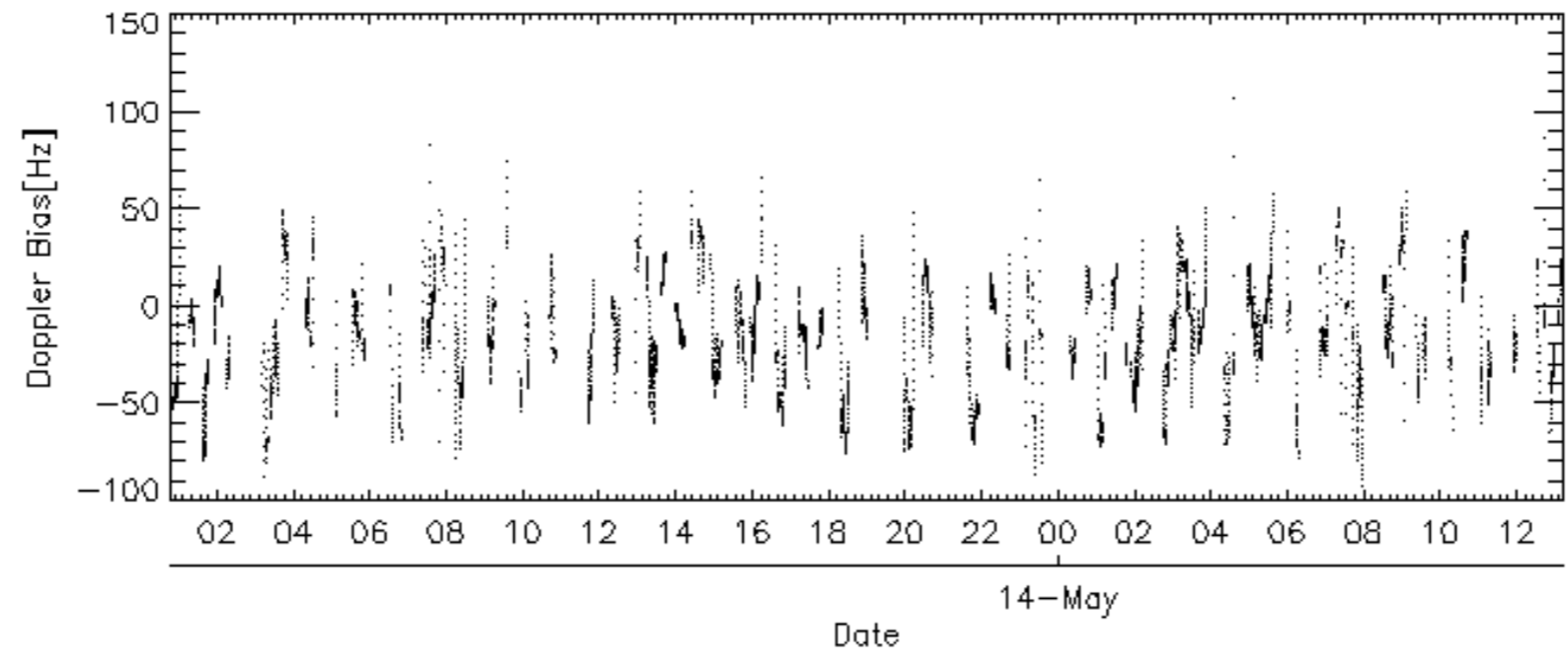
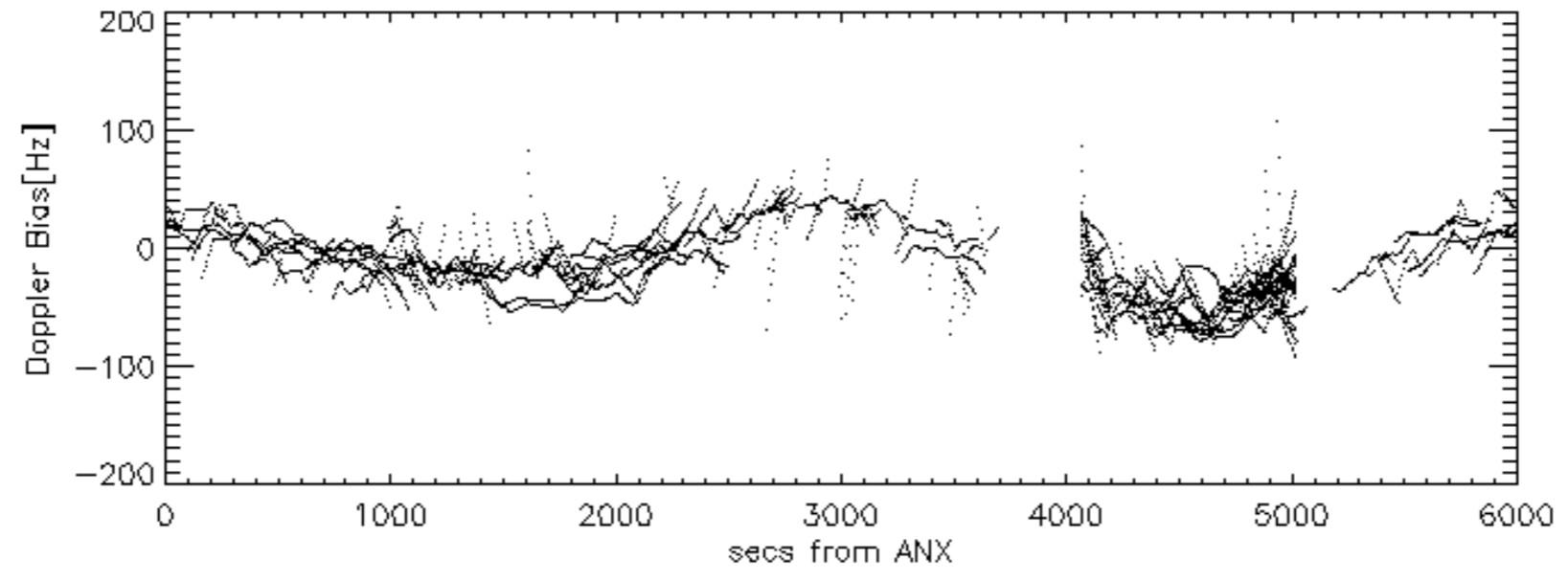
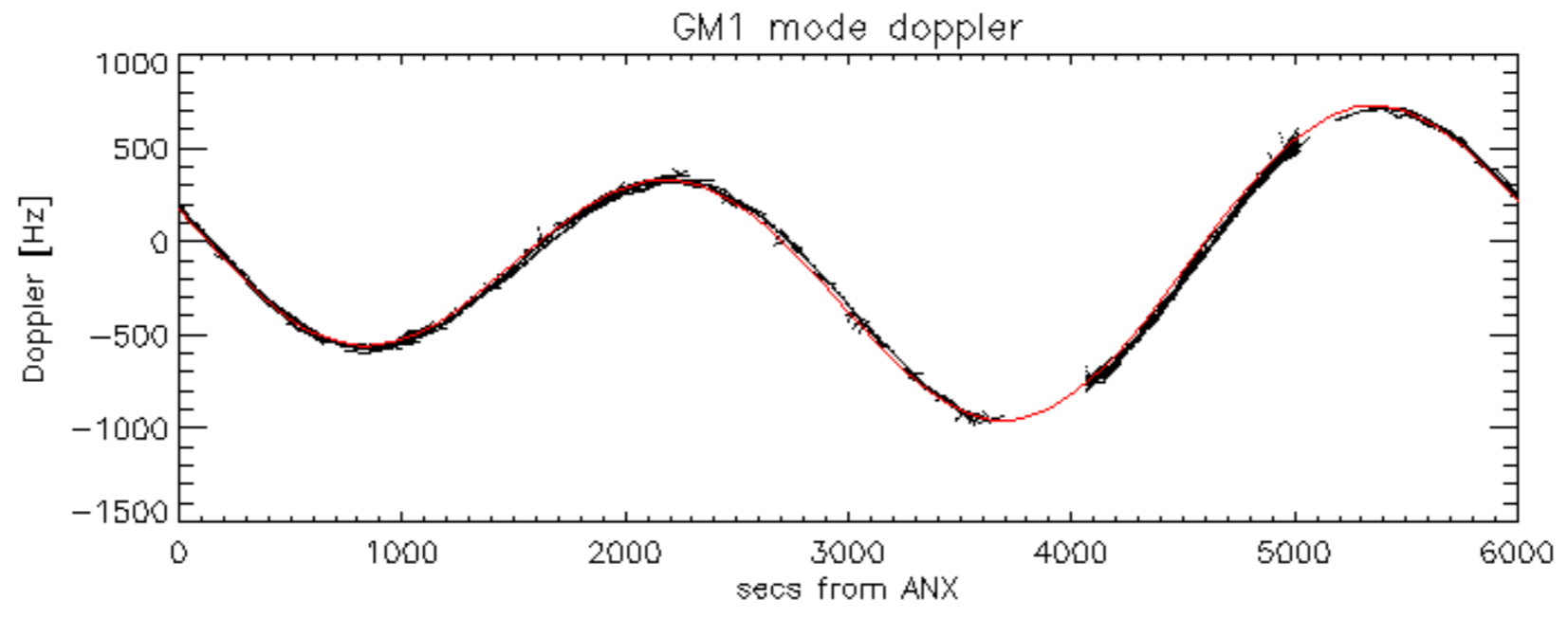


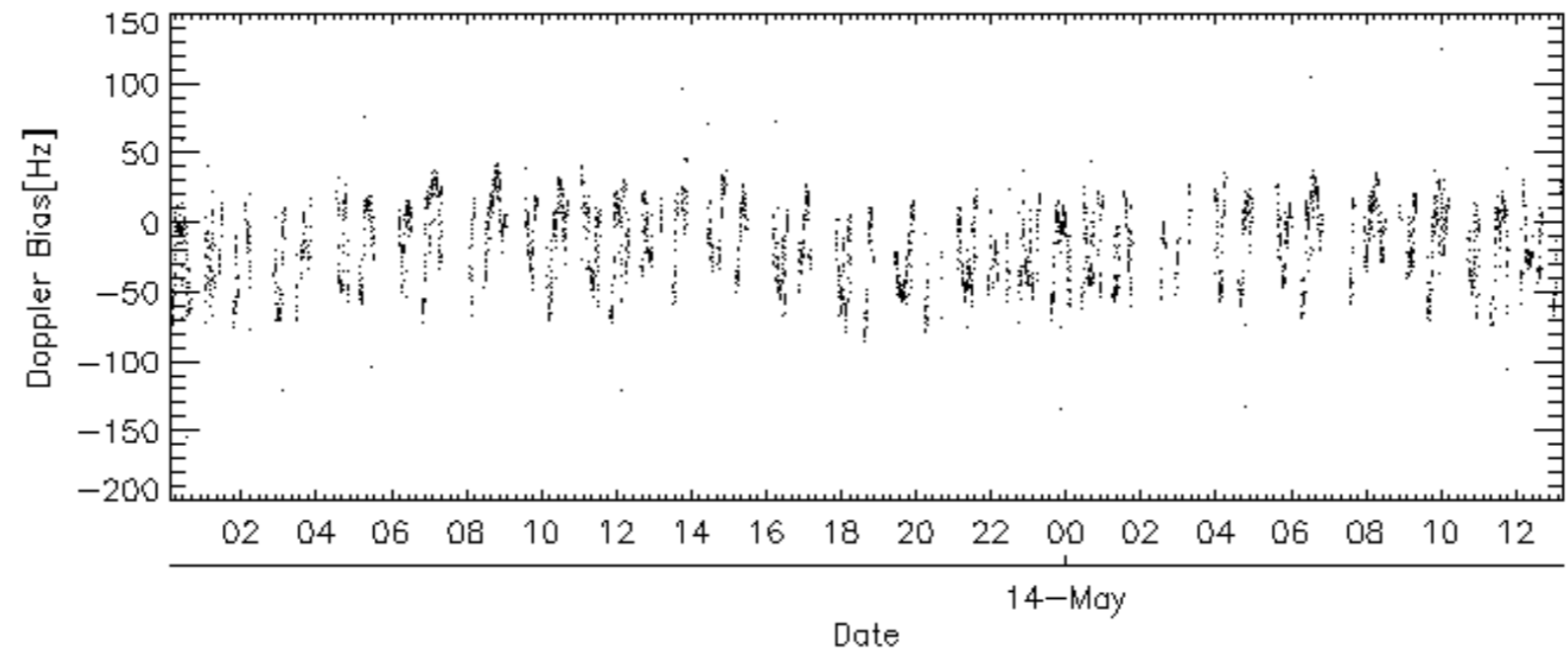
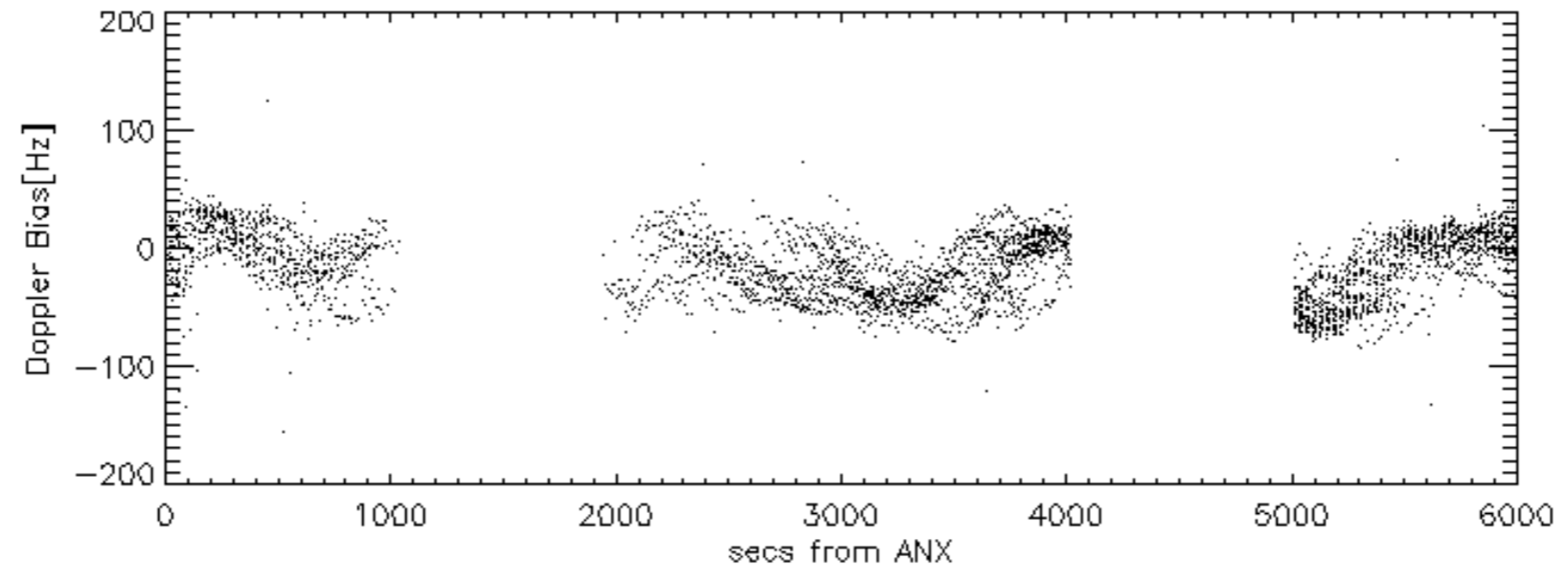
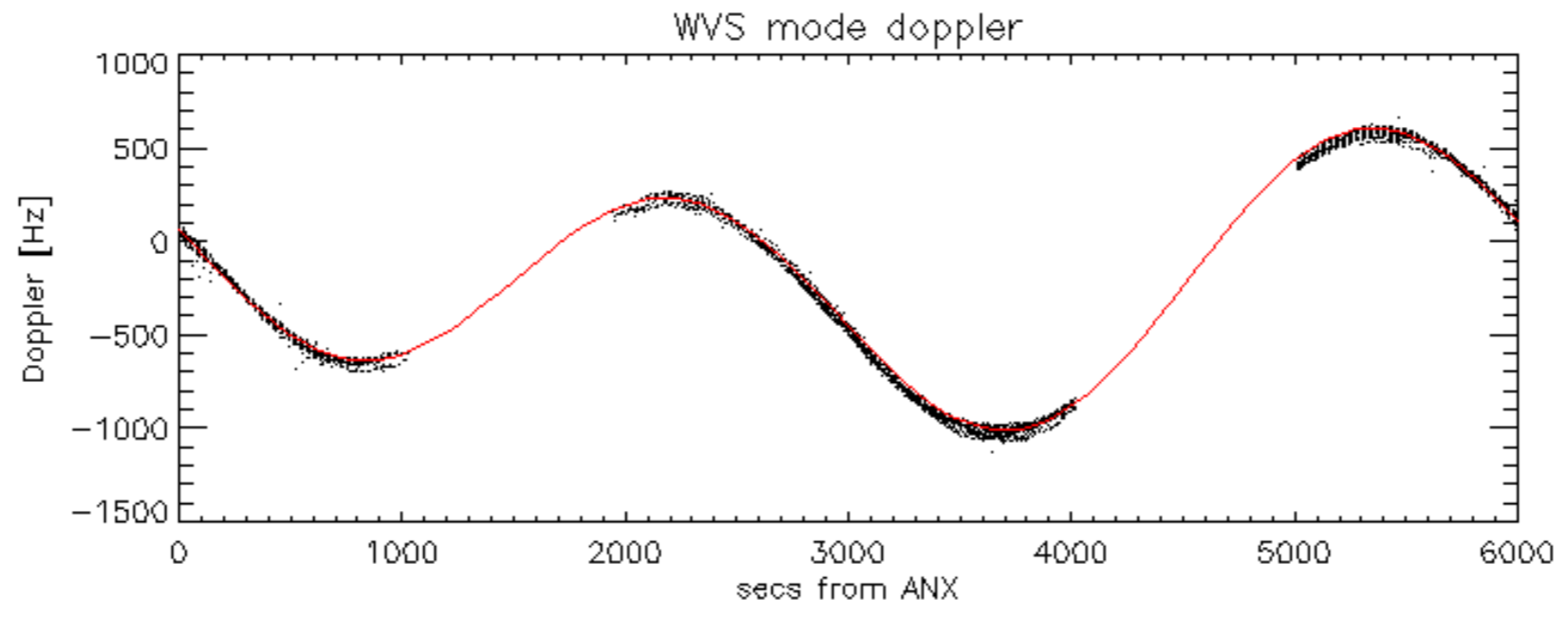
Doppler 'WVS' 'IS2' ascending



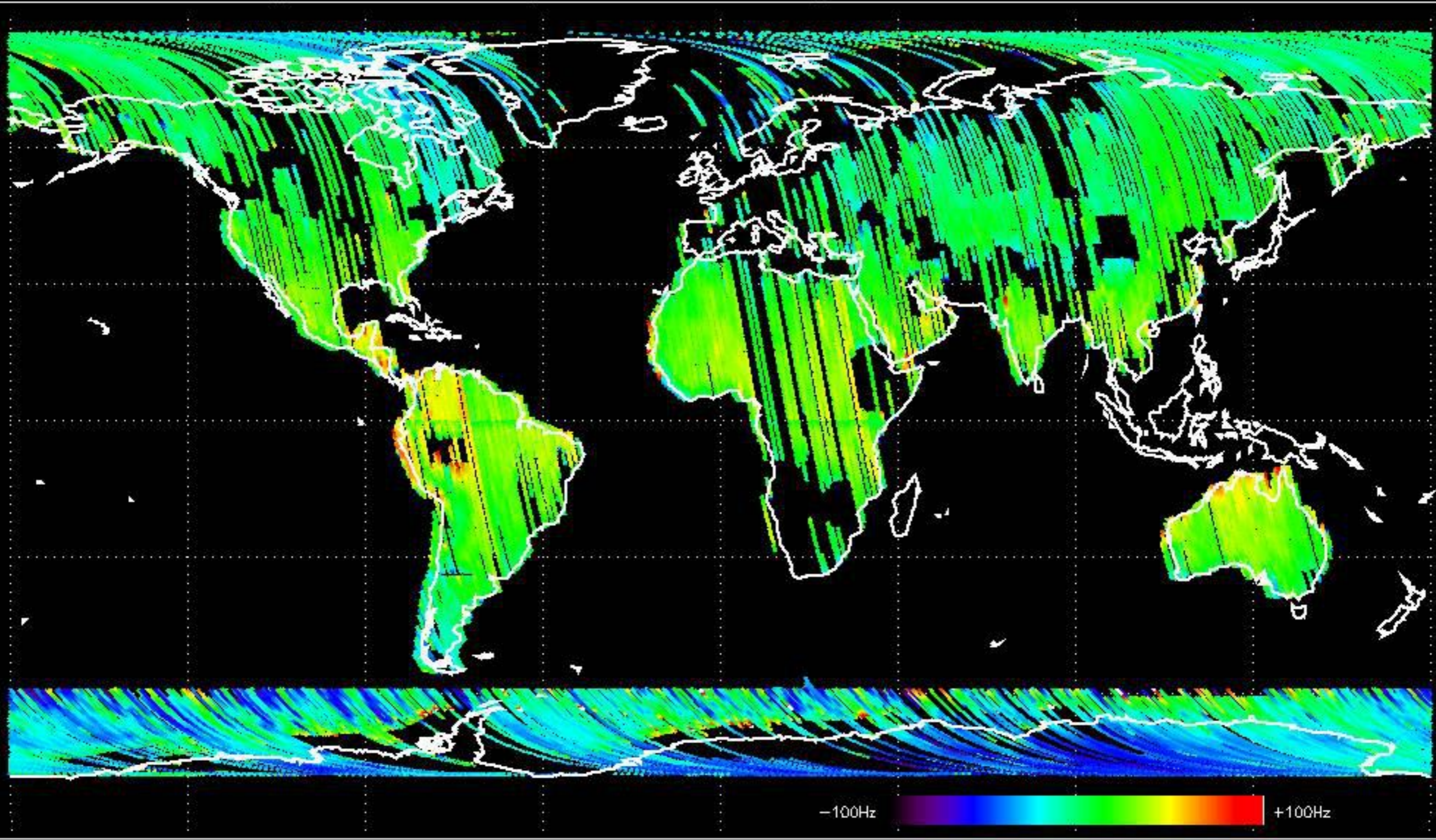
Doppler 'WVS' 'IS2' descending



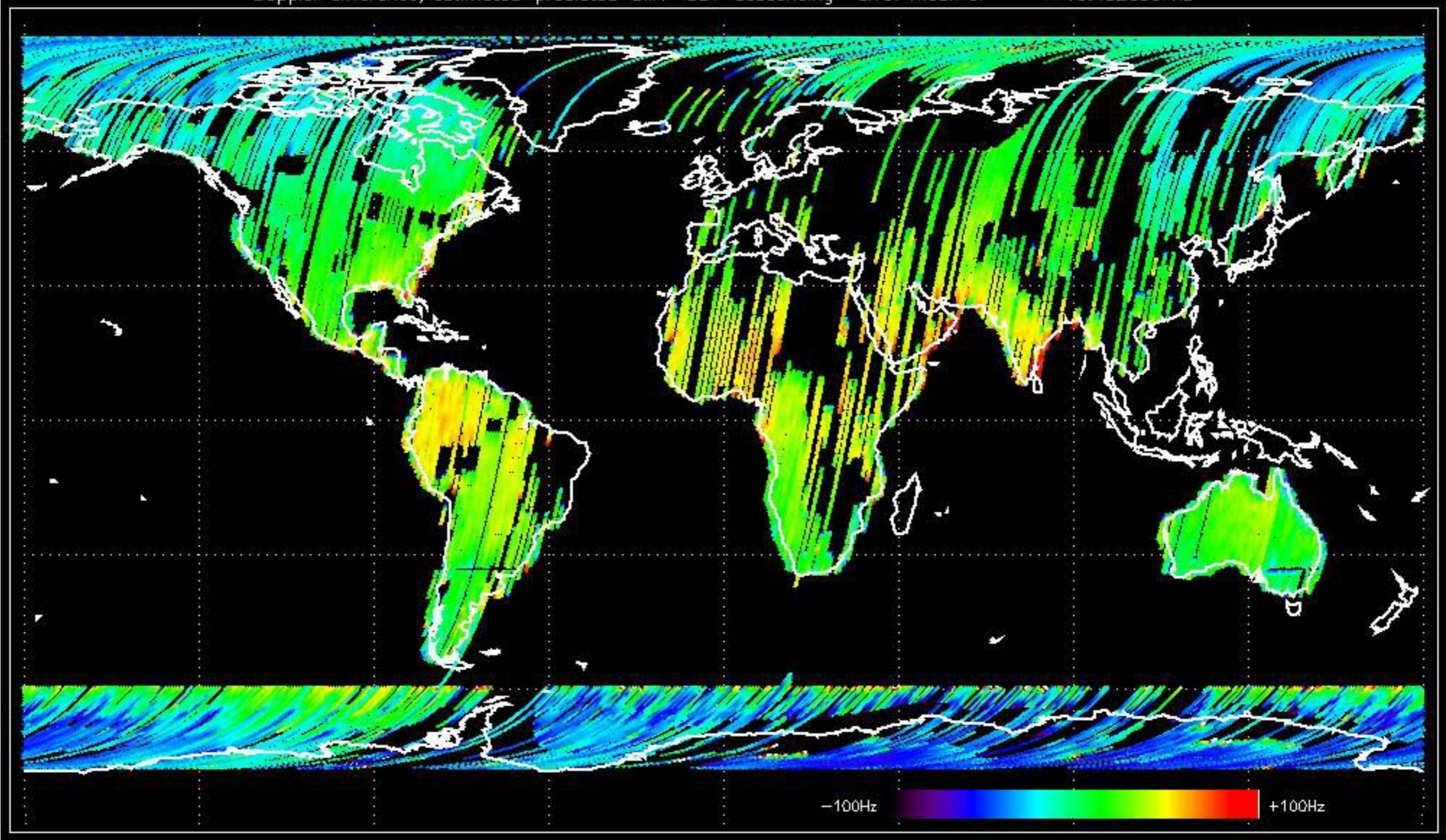




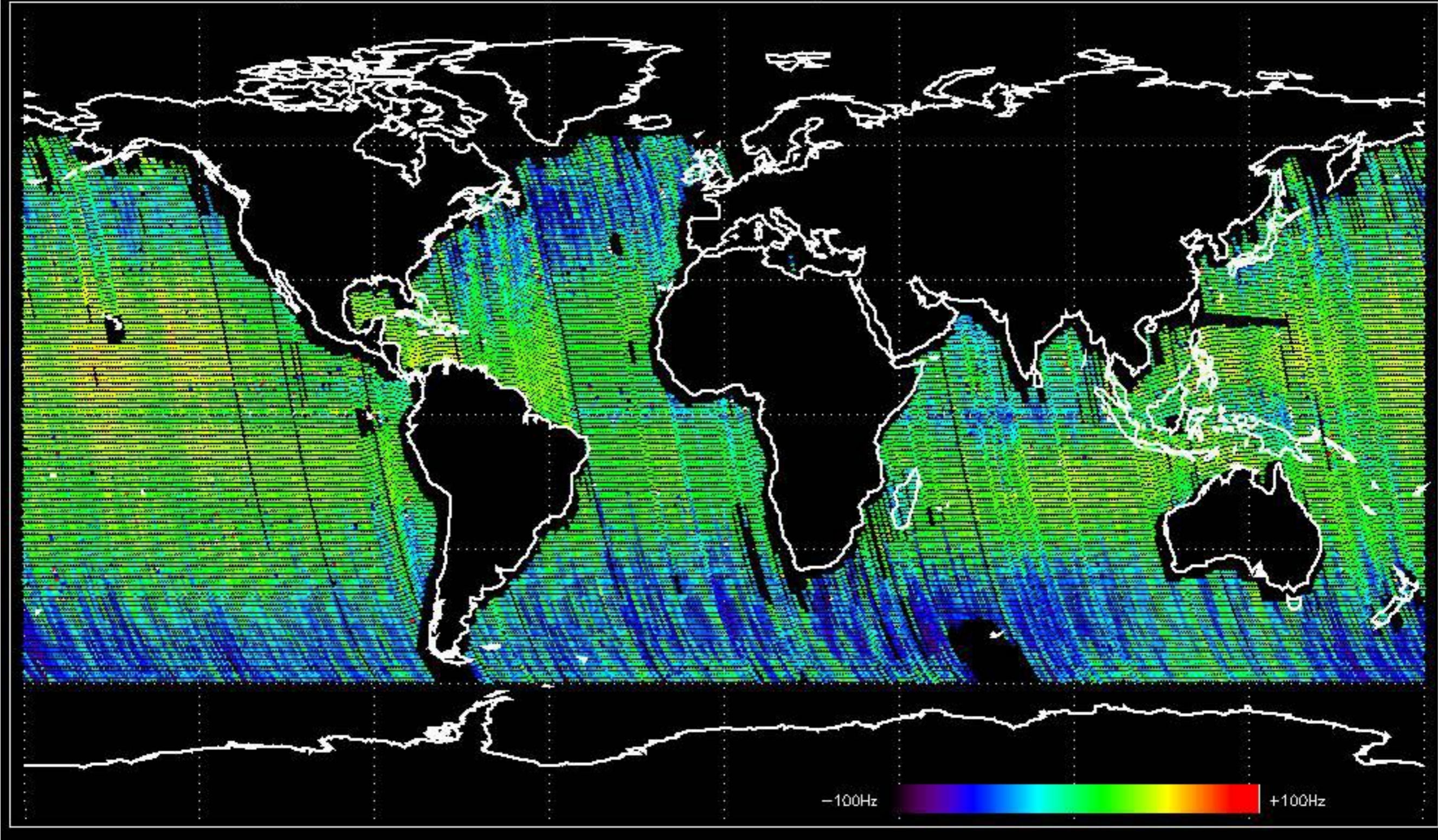
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.272125 Hz



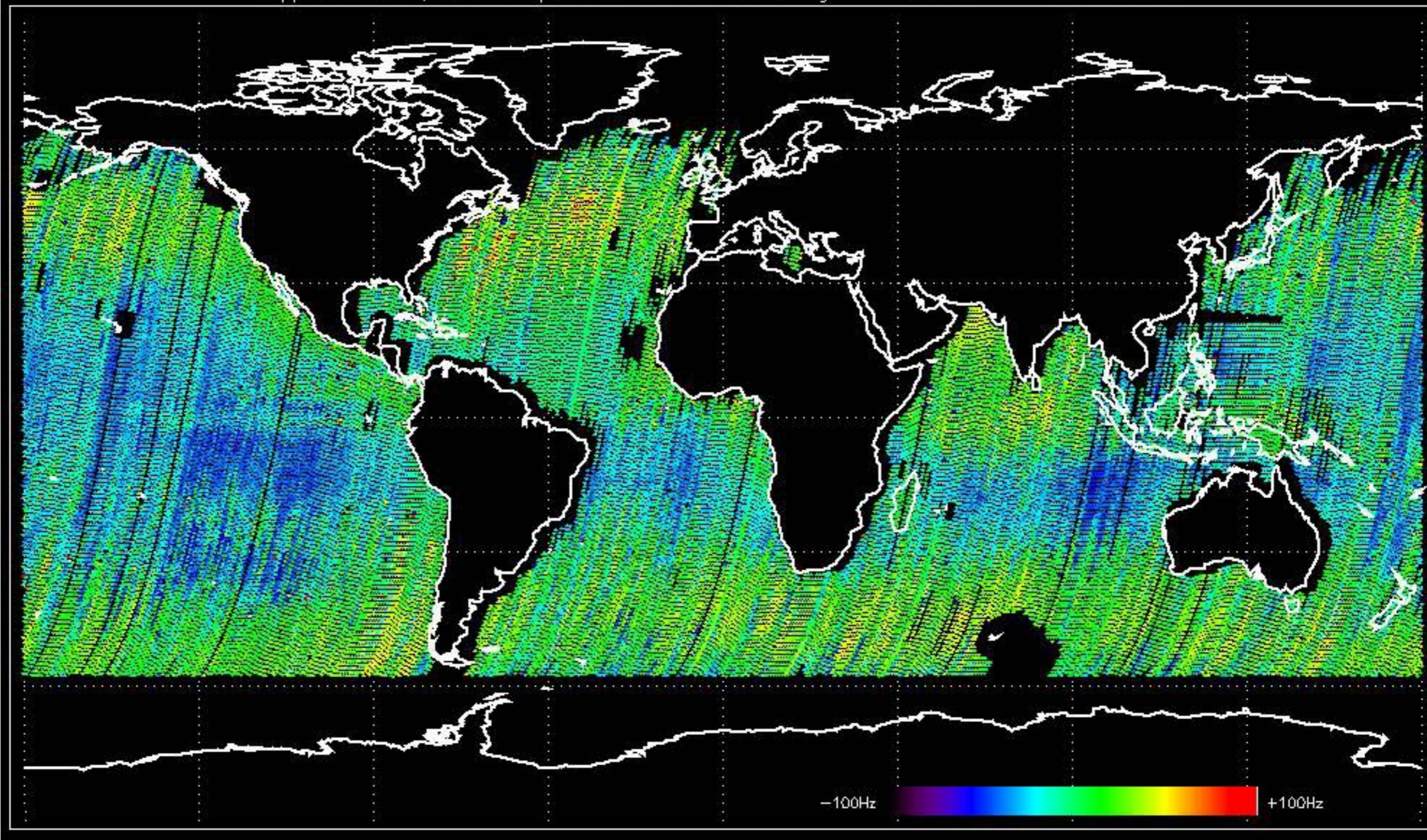
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.452690 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.795325 Hz

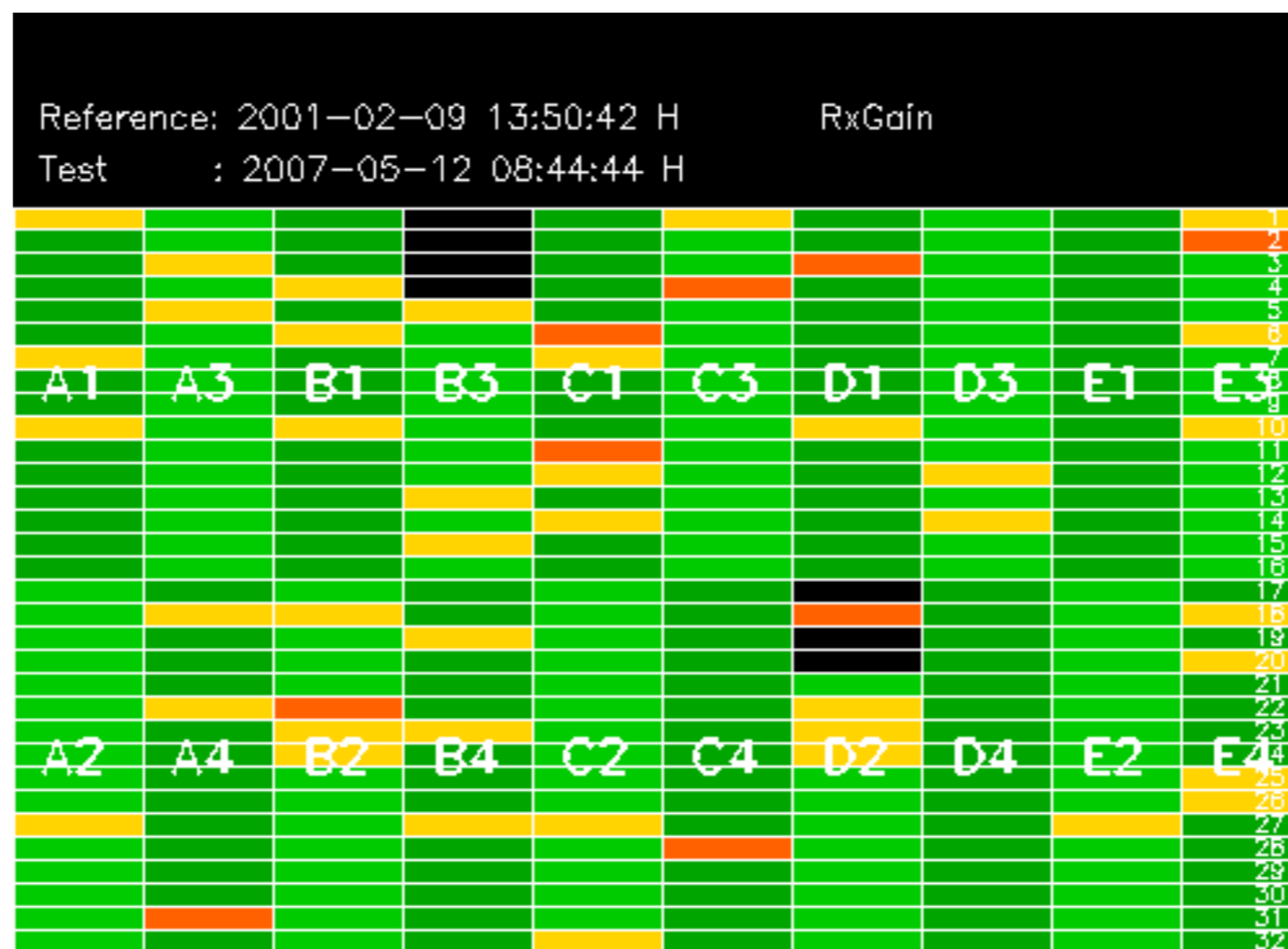


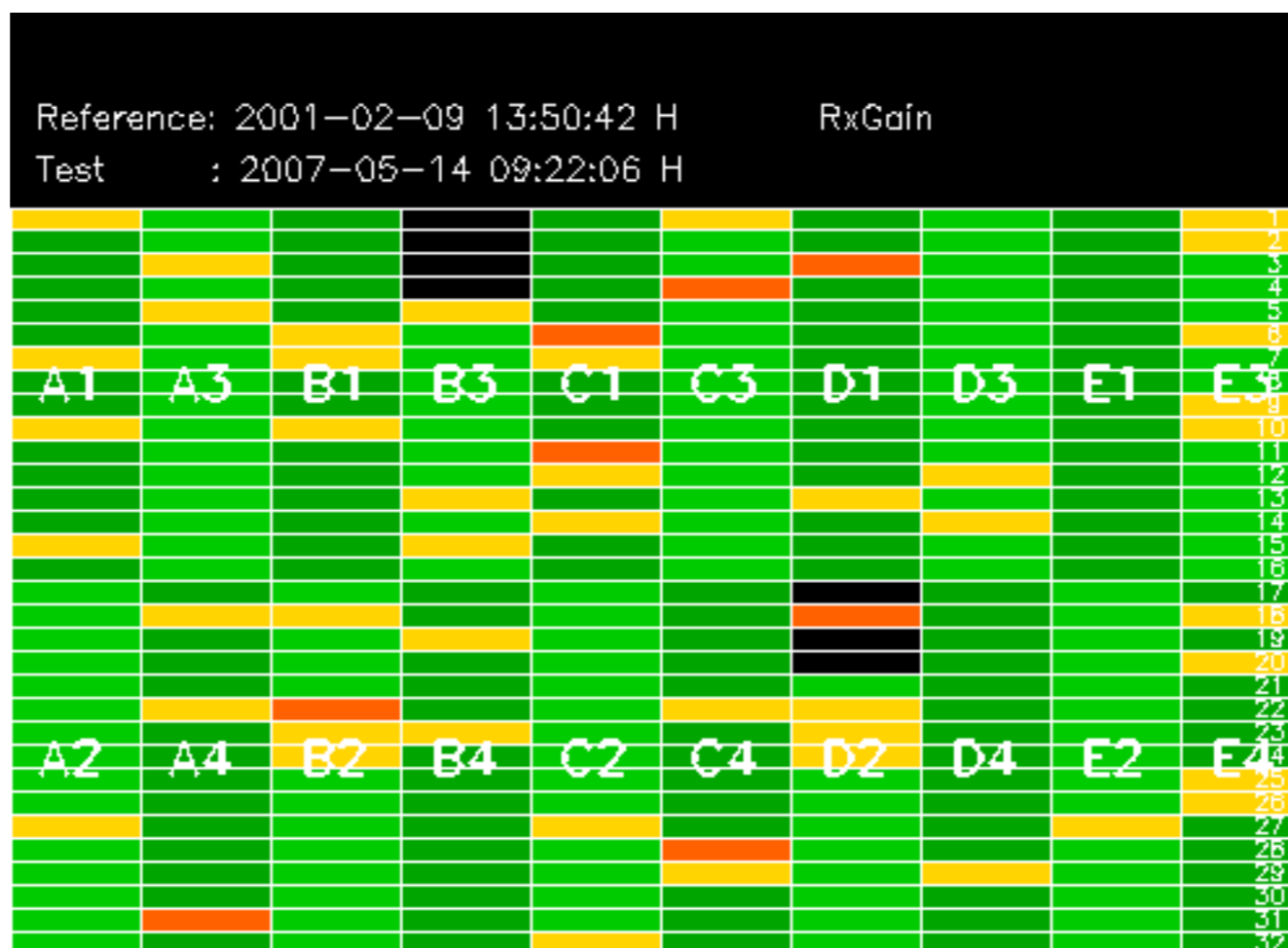
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.097937 Hz

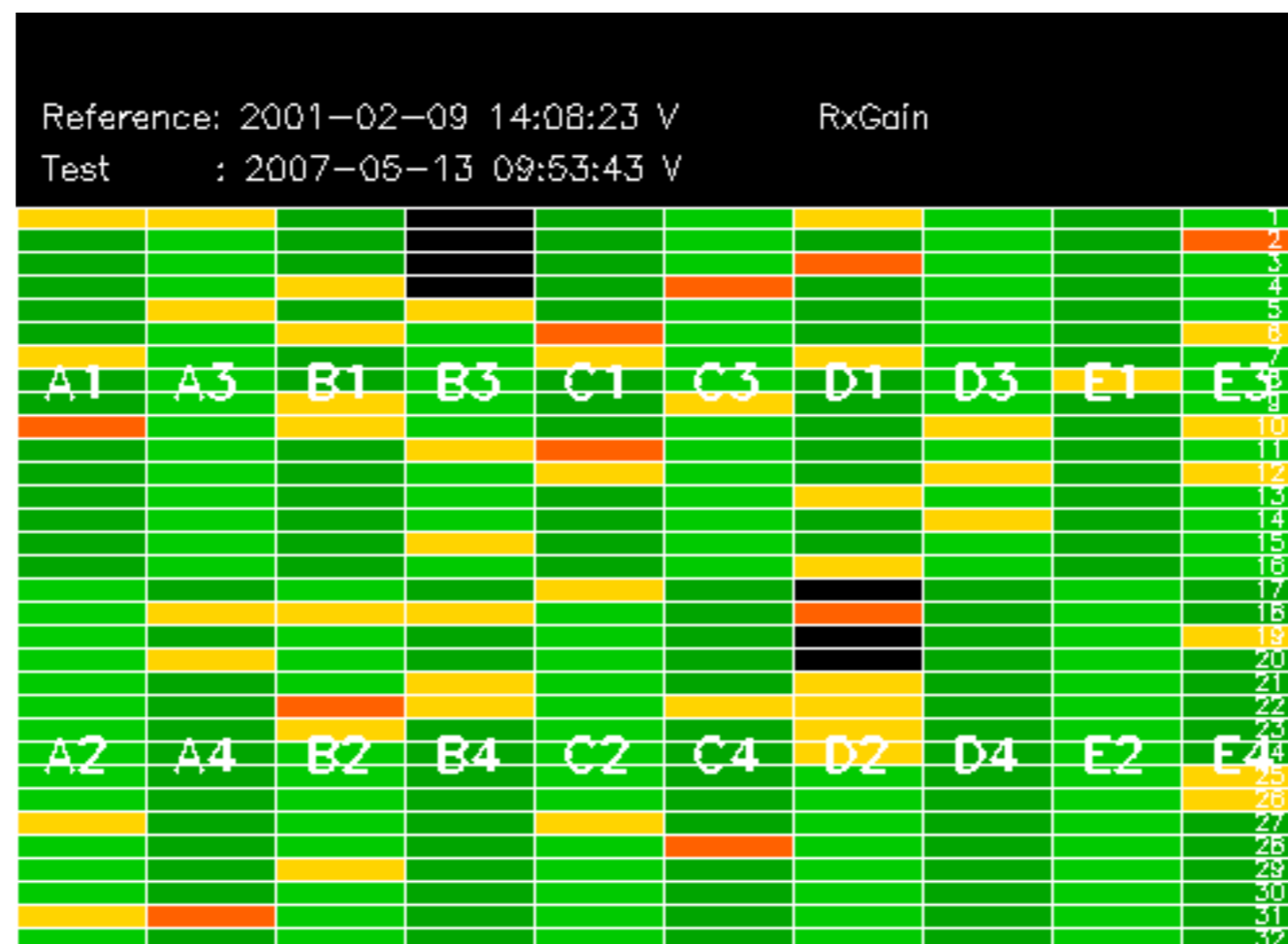


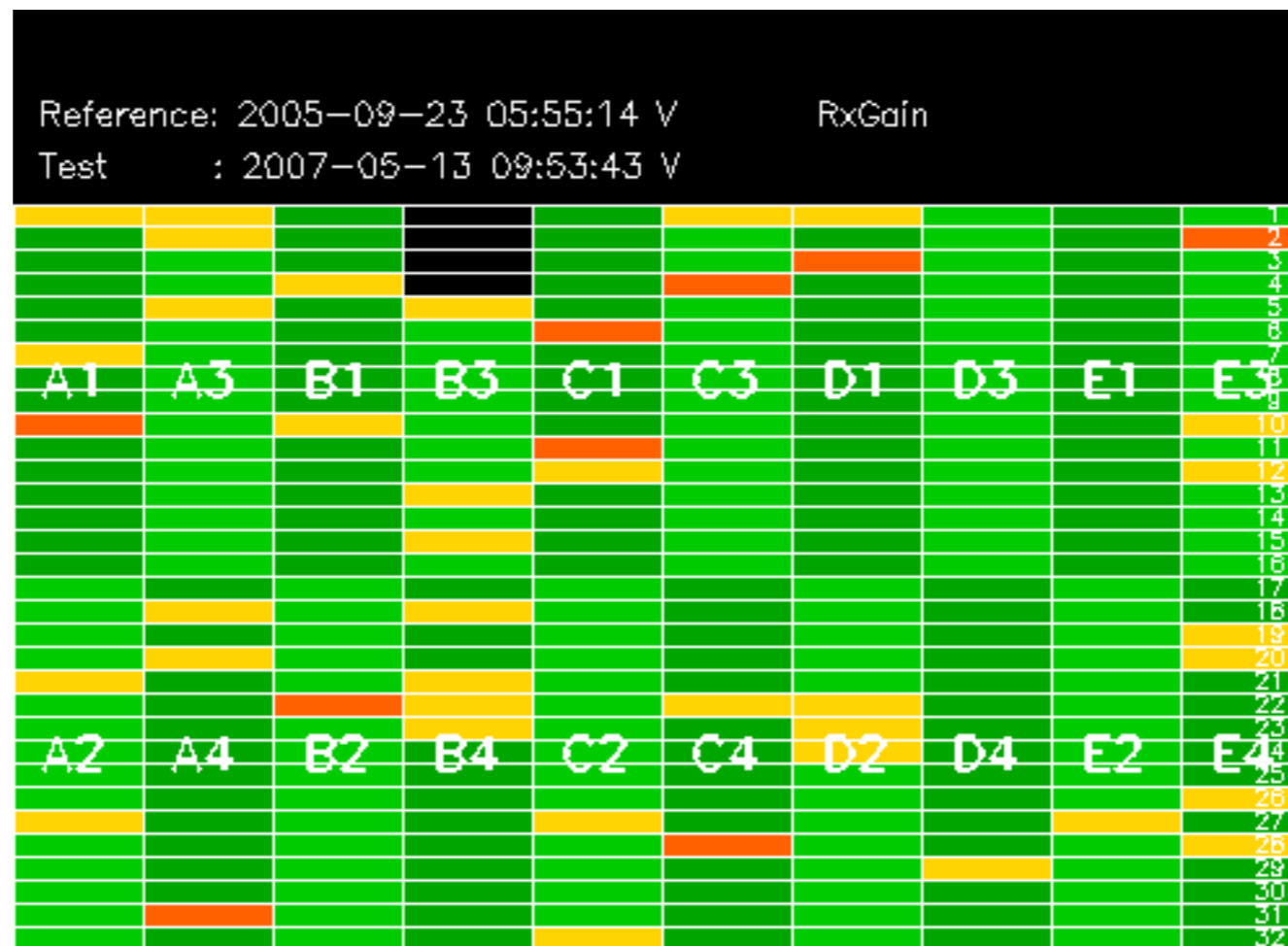
No anomalies observed on available MS products:

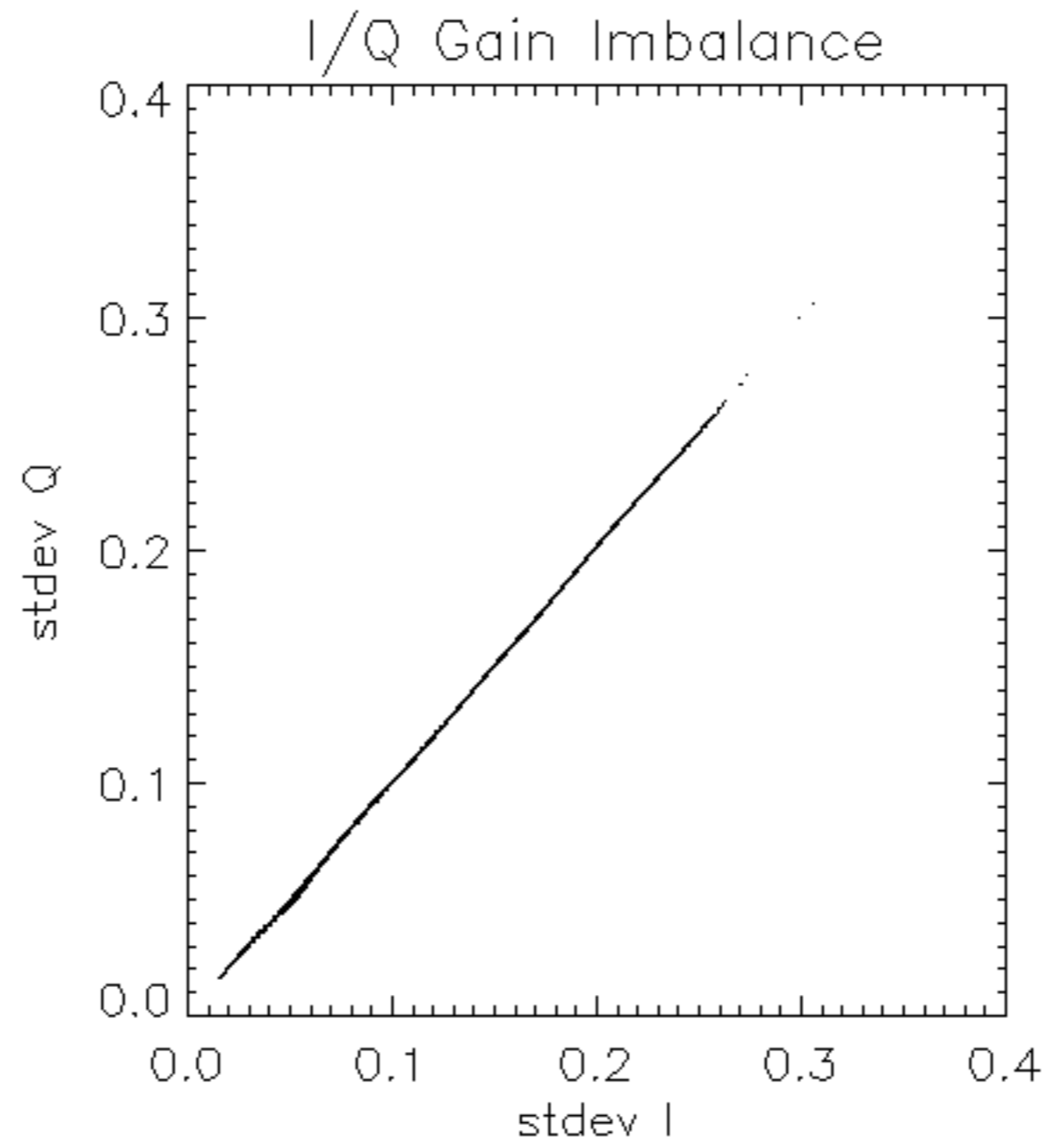
No anomalies observed.

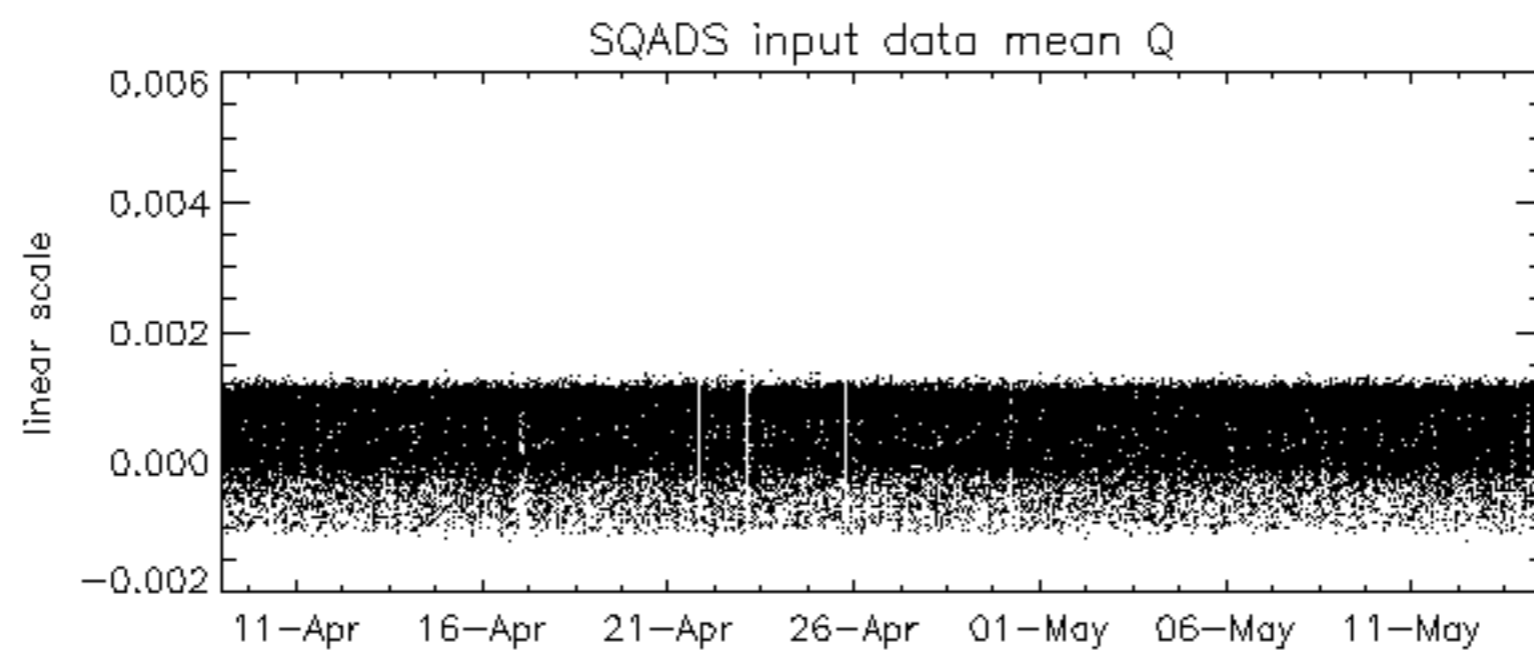
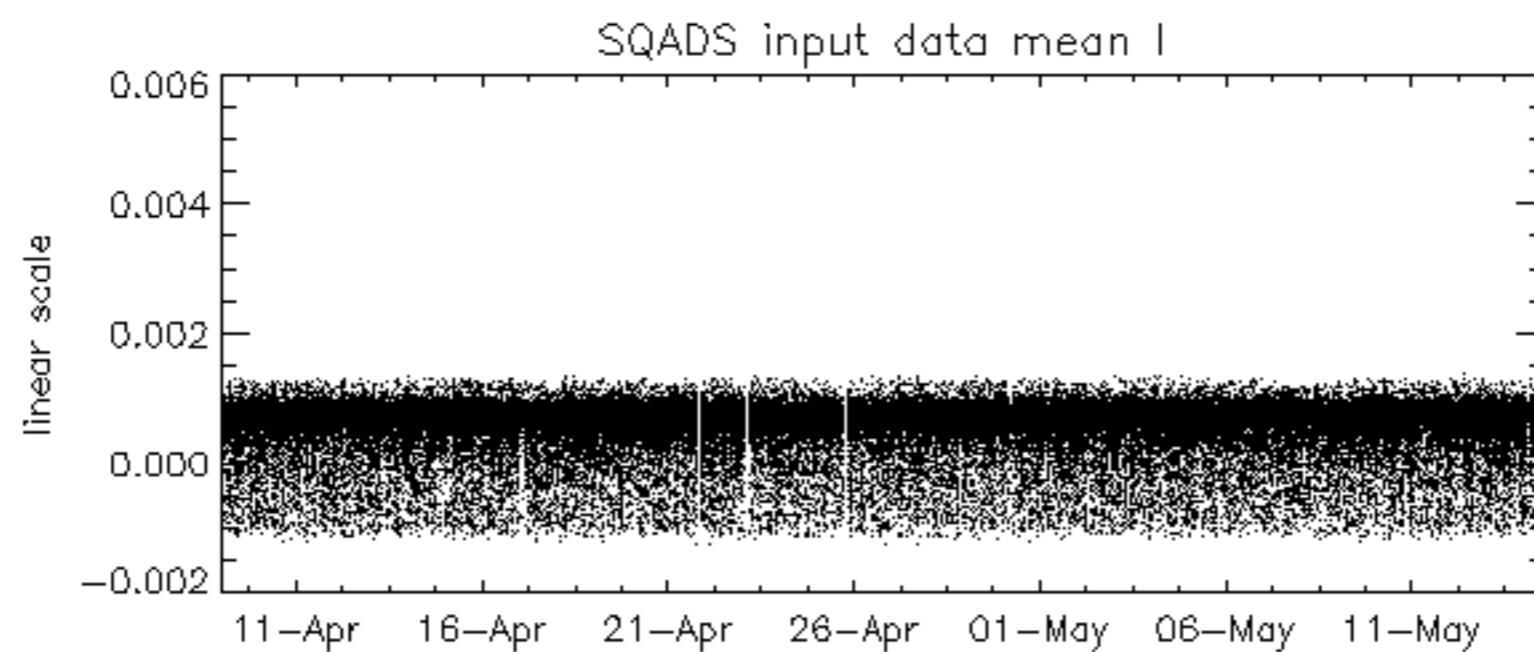
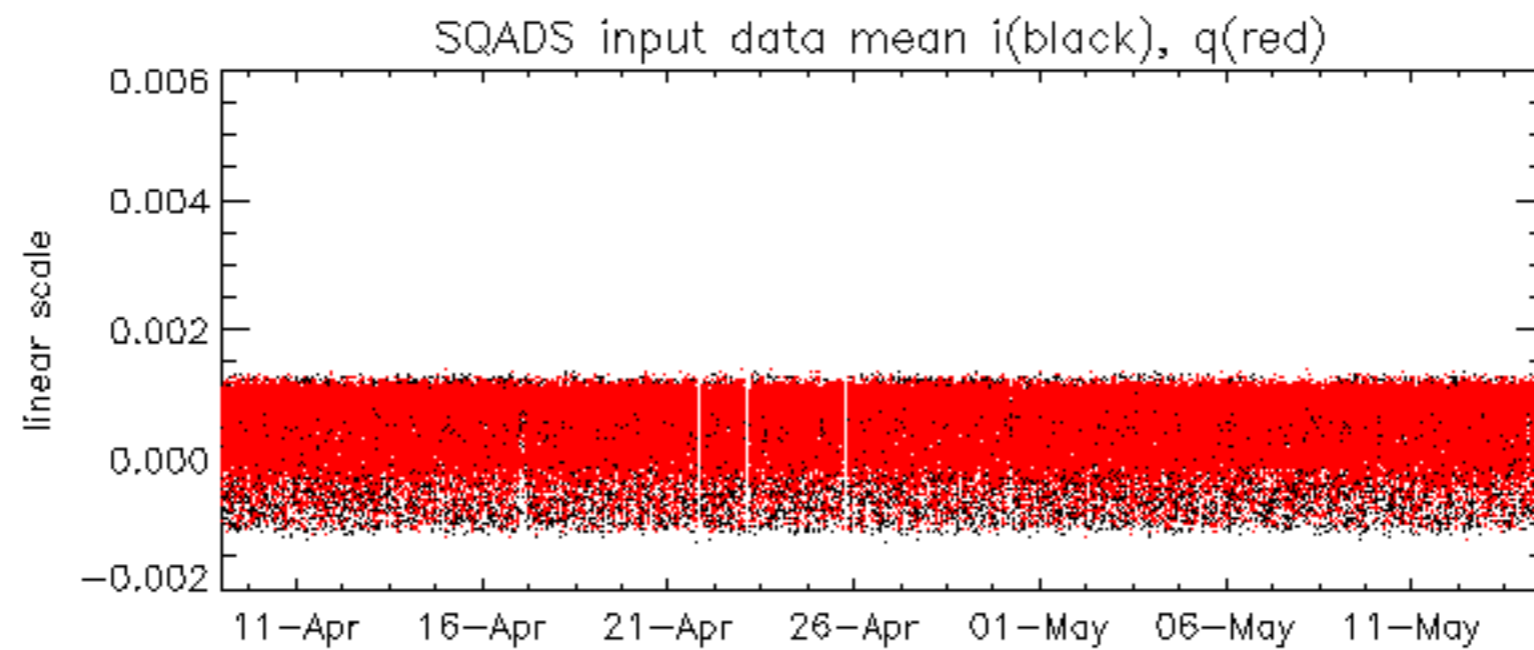


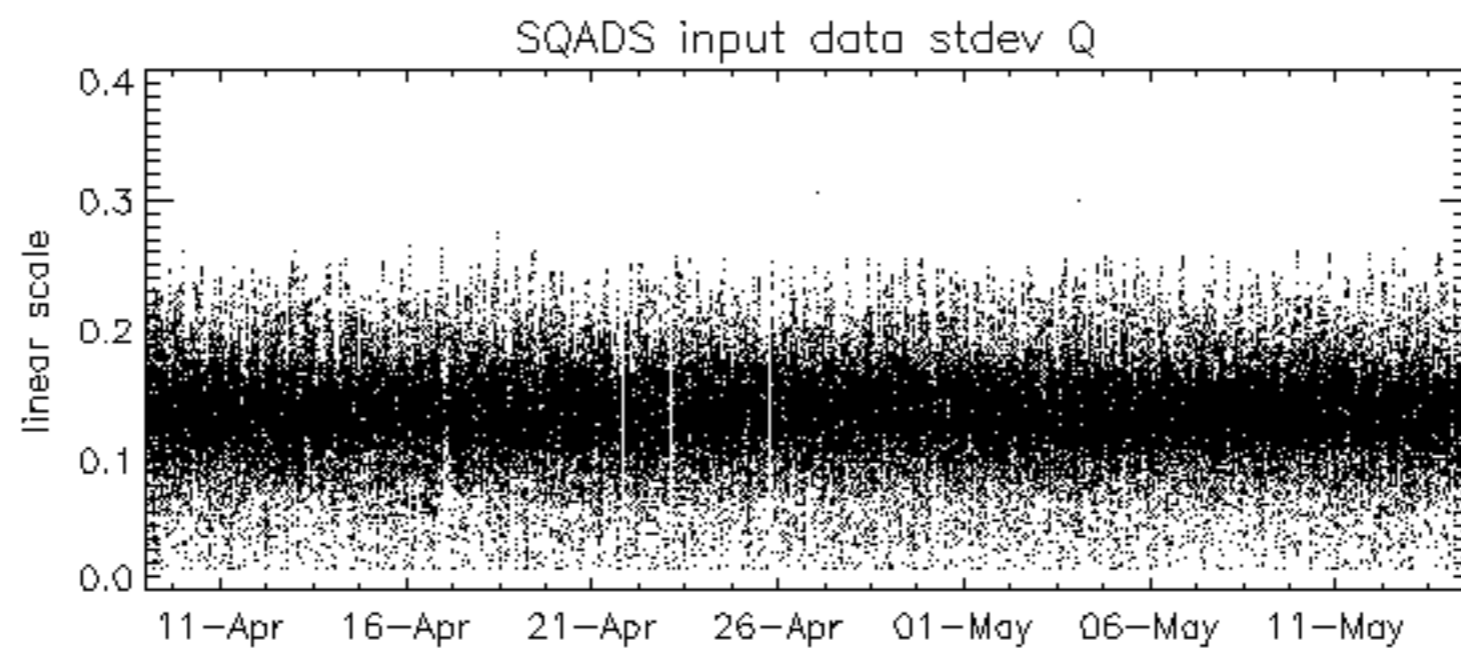
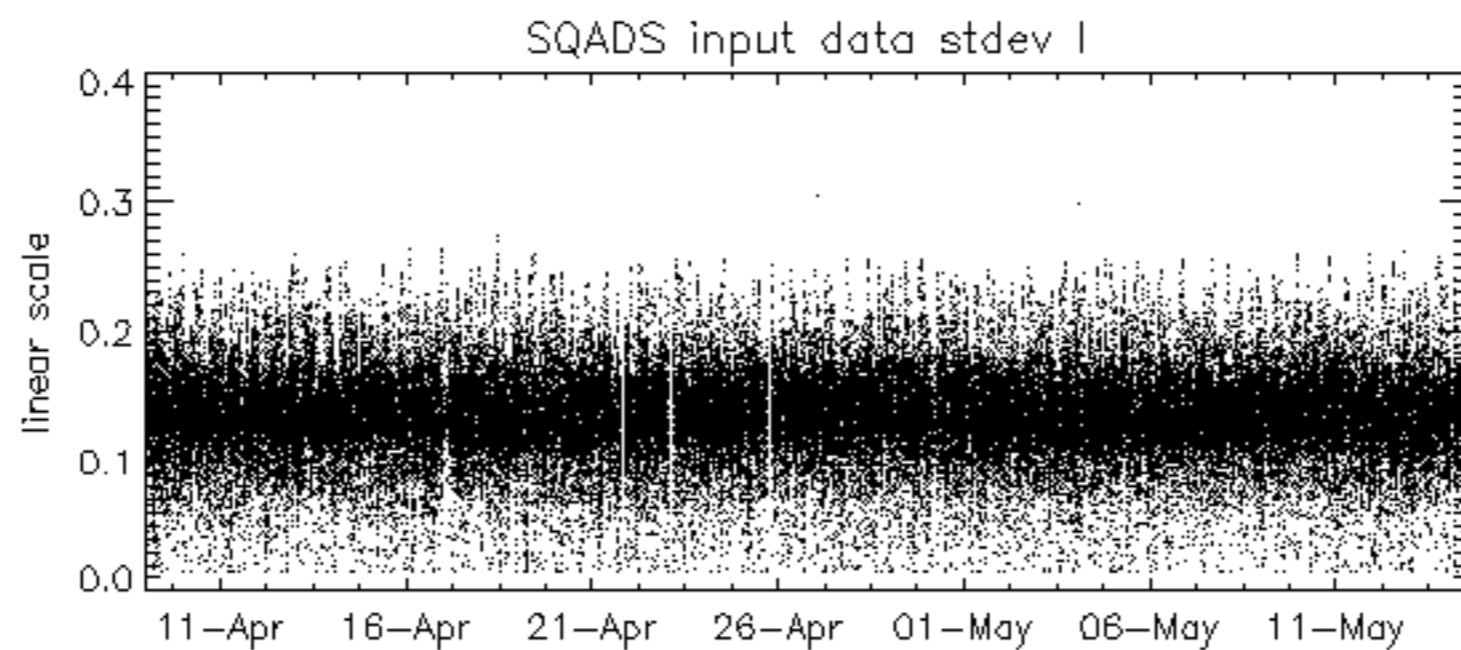
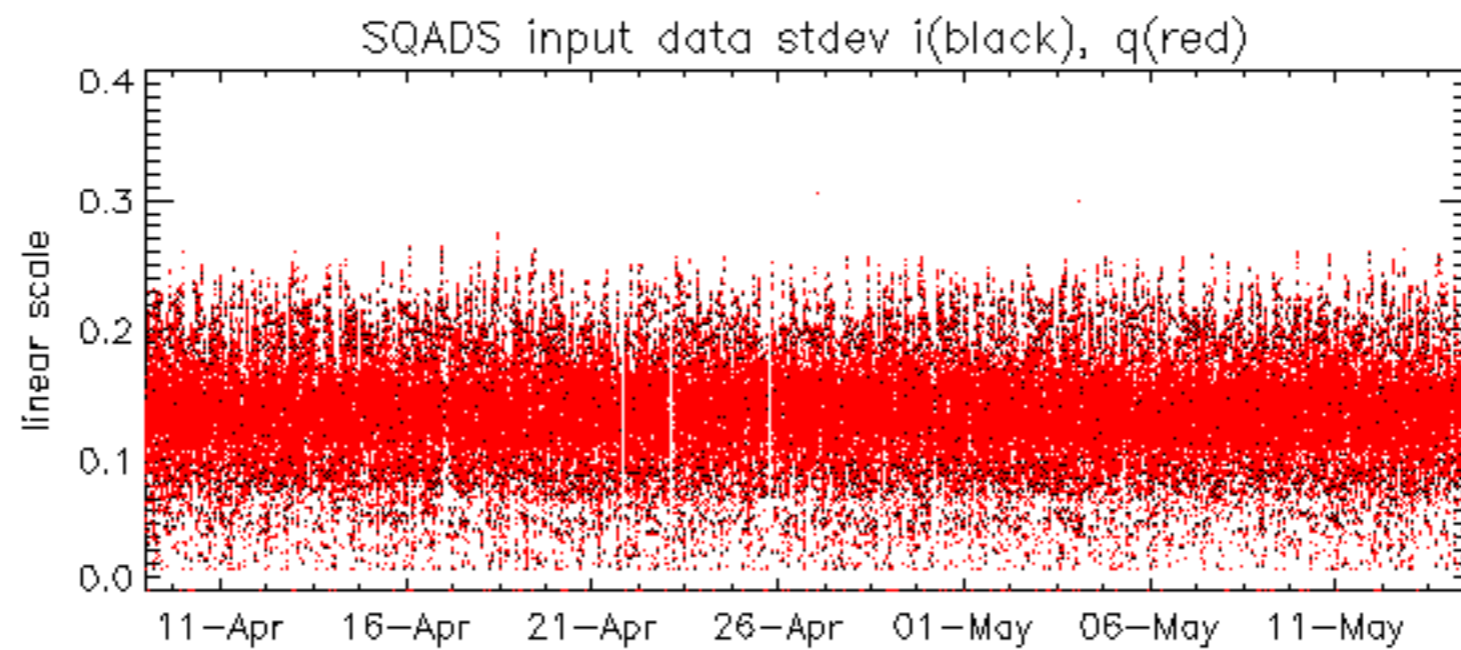








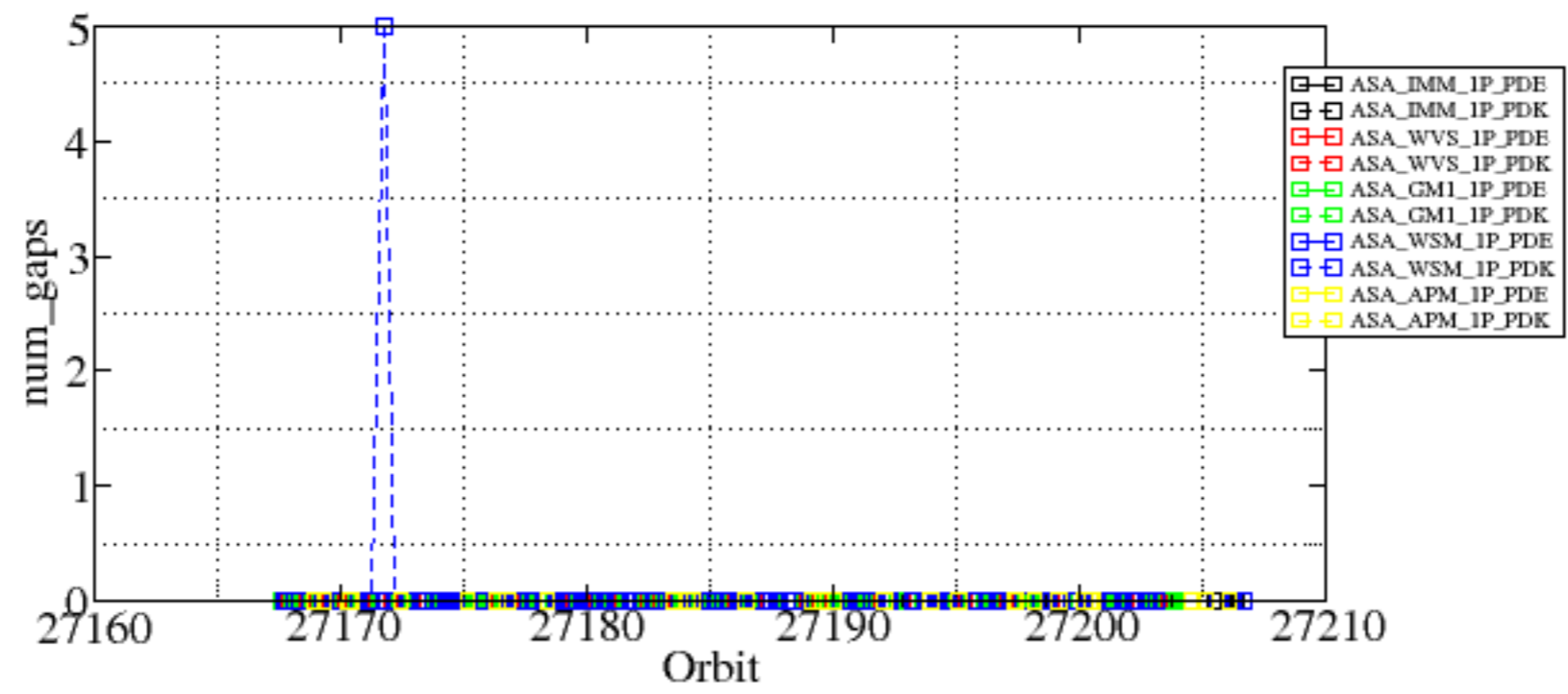


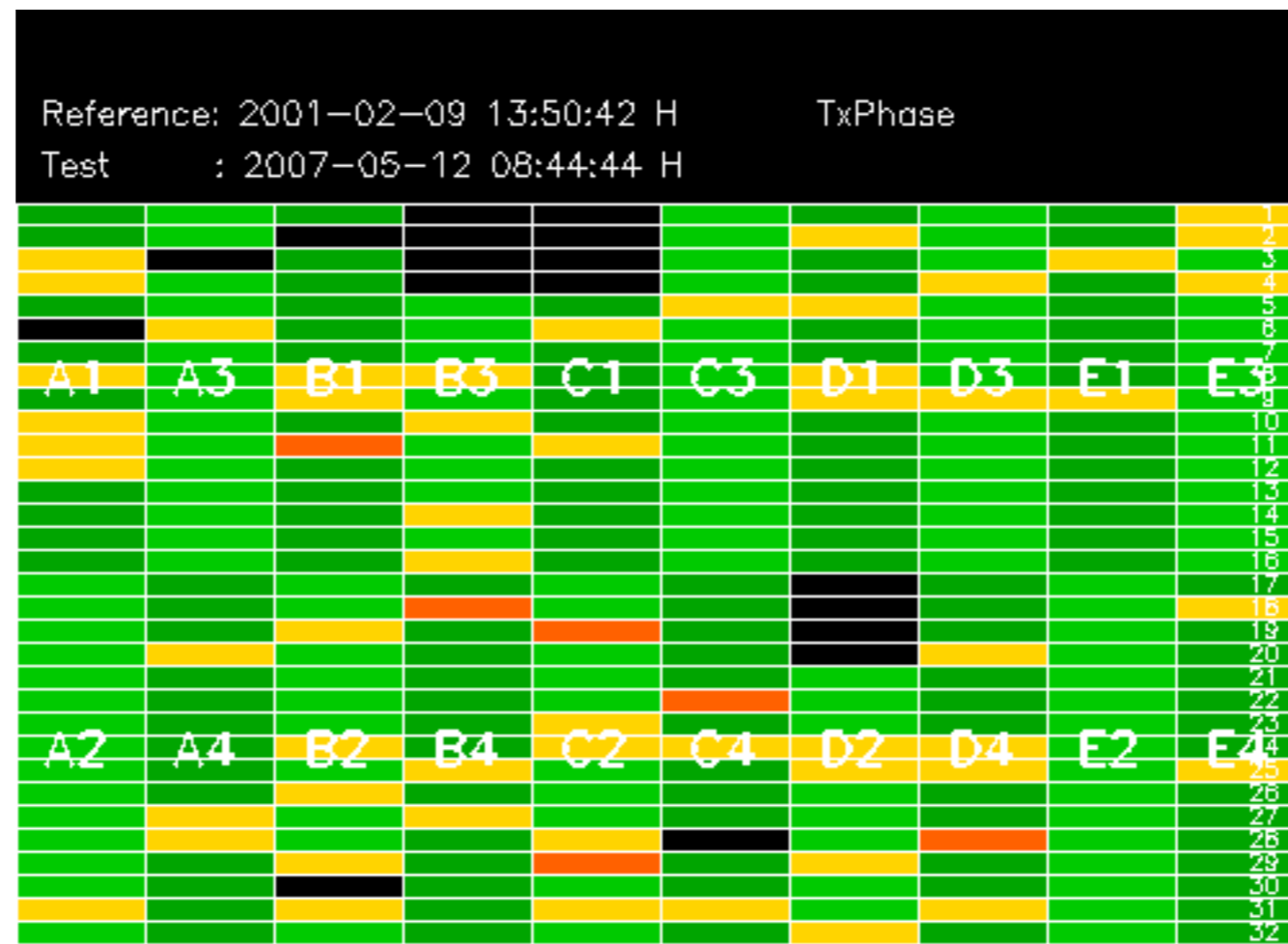


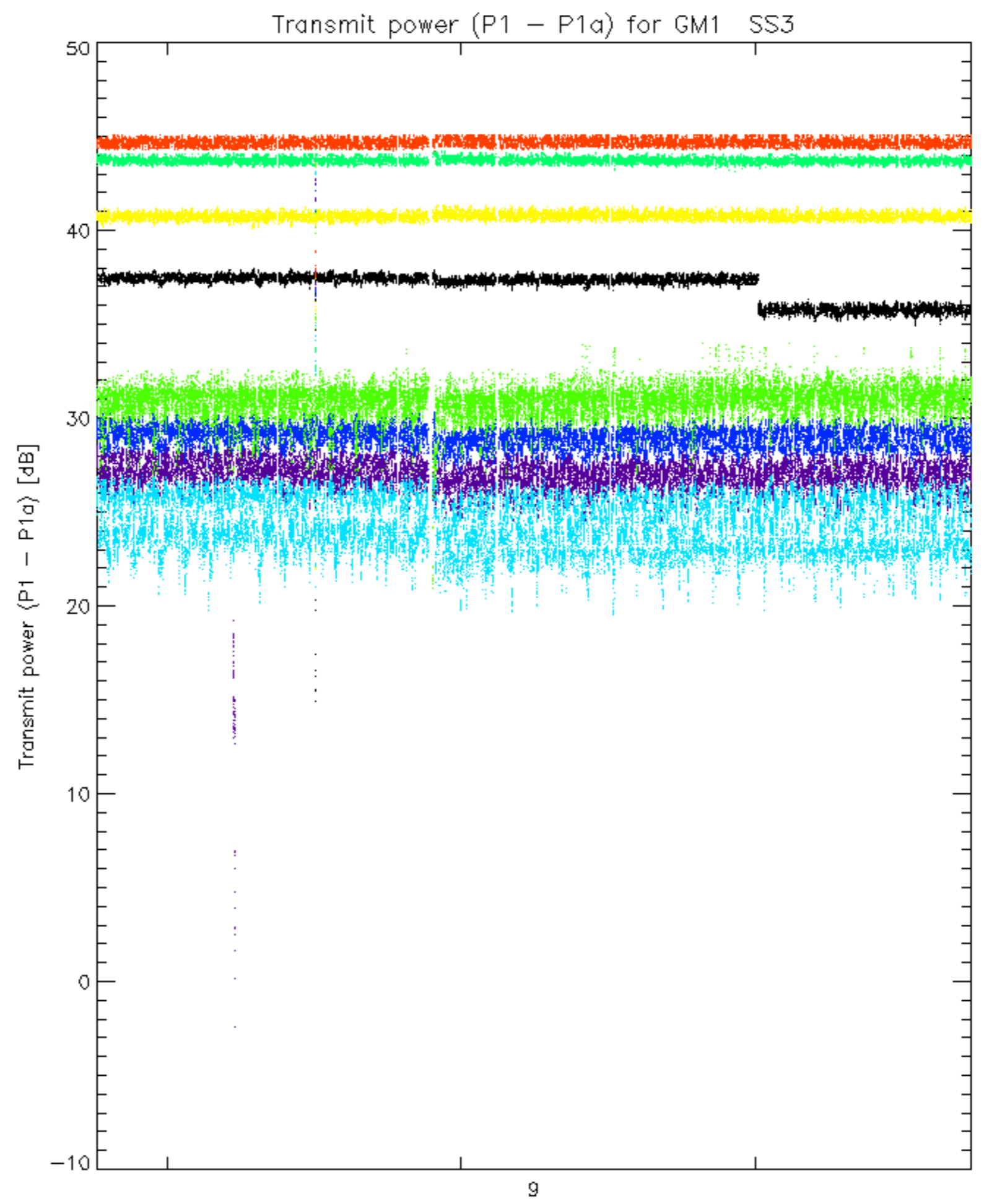
Summary of analysis for the last 3 days 2007051[234]

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

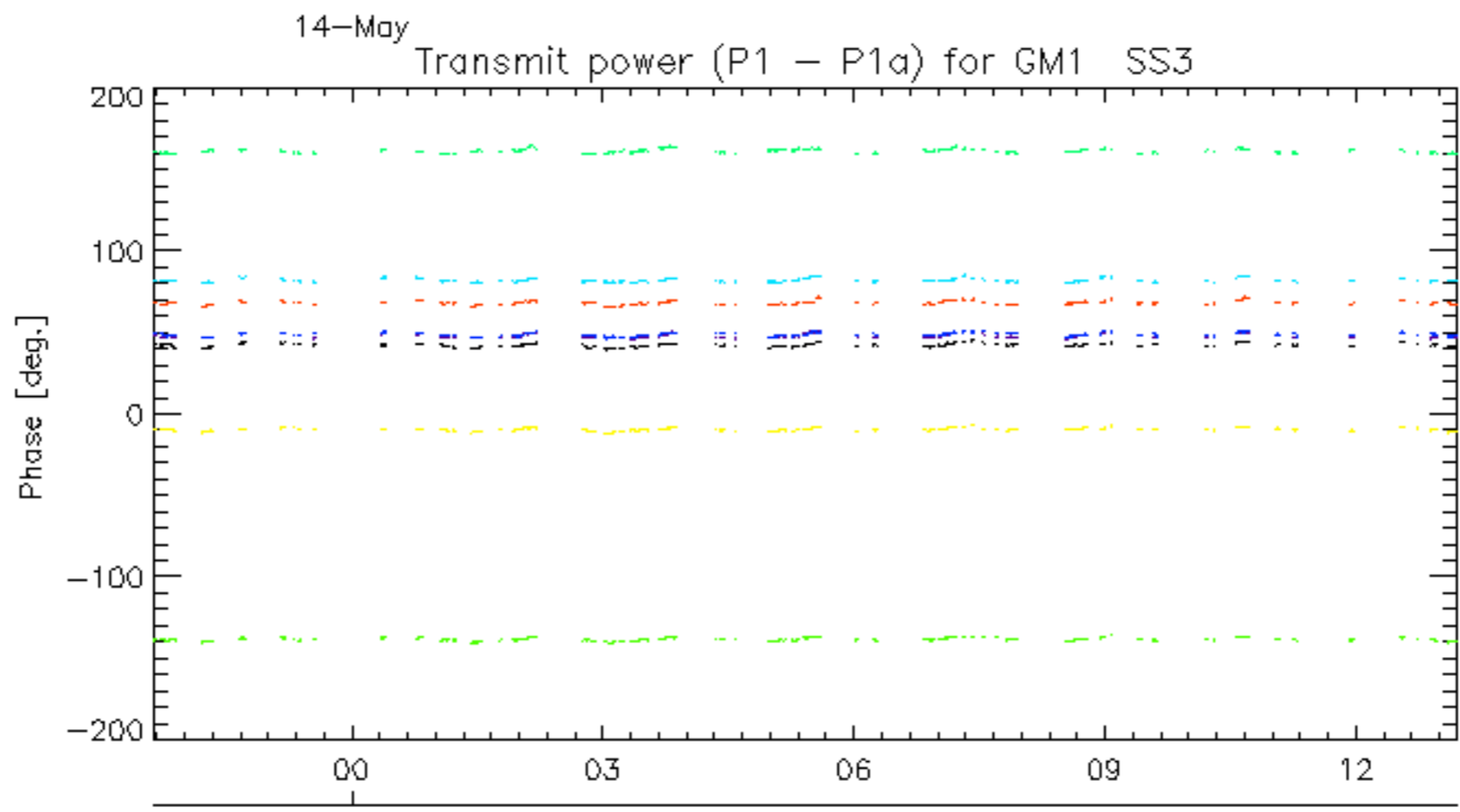
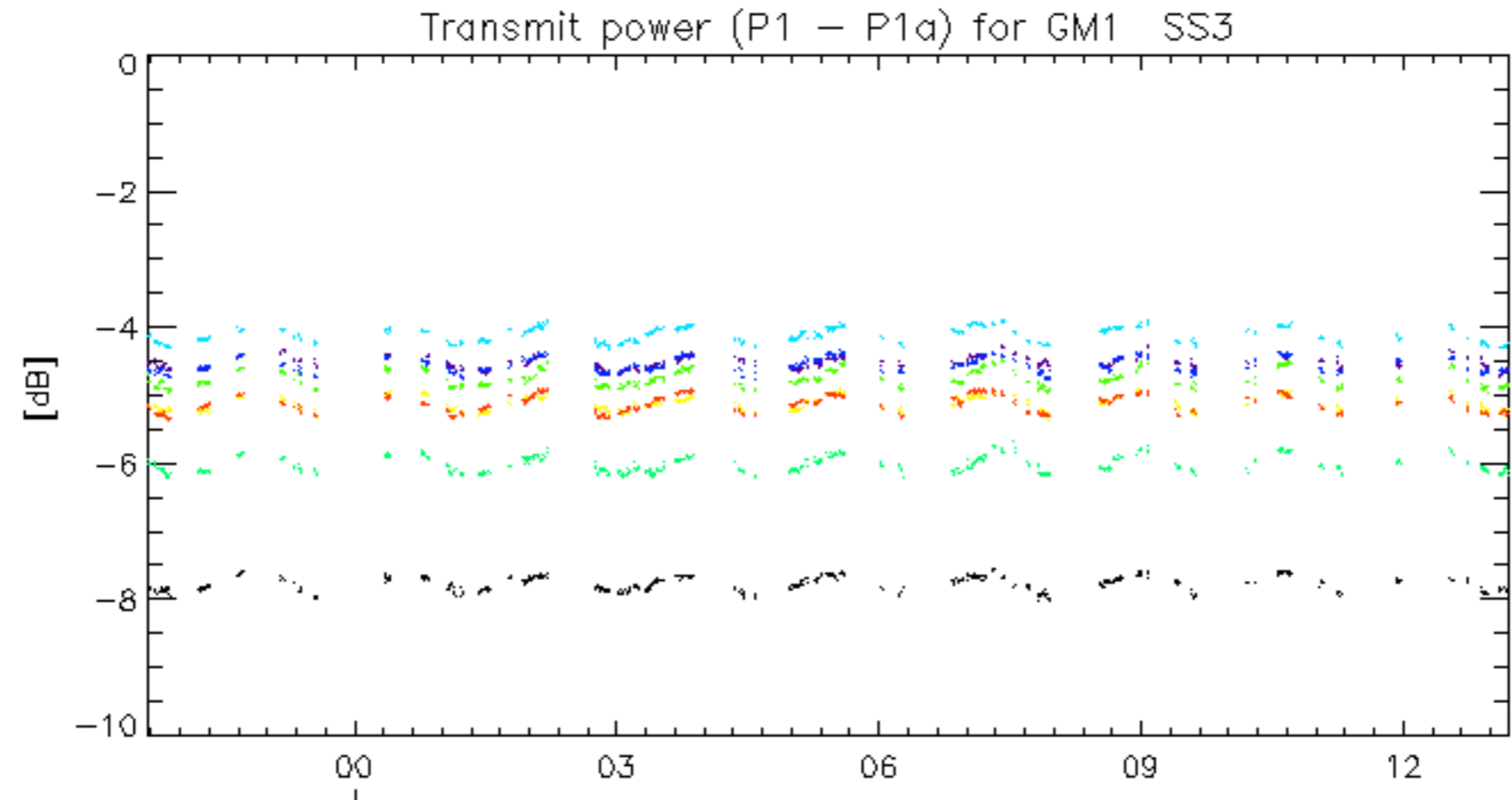
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070512_114339_00000852058_00066_27174_1906.N1	0	42
ASA_WSM_1PNPDE20070512_160559_000001832058_00069_27177_1966.N1	0	32
ASA_WSM_1PNPDE20070514_145940_000001582058_00097_27205_5551.N1	0	61
ASA_WSM_1PNPDE20070514_182245_000001582058_00099_27207_5646.N1	0	16
ASA_WSM_1PNPDK20070512_071243_000002452058_00063_27171_5047.N1	5	0



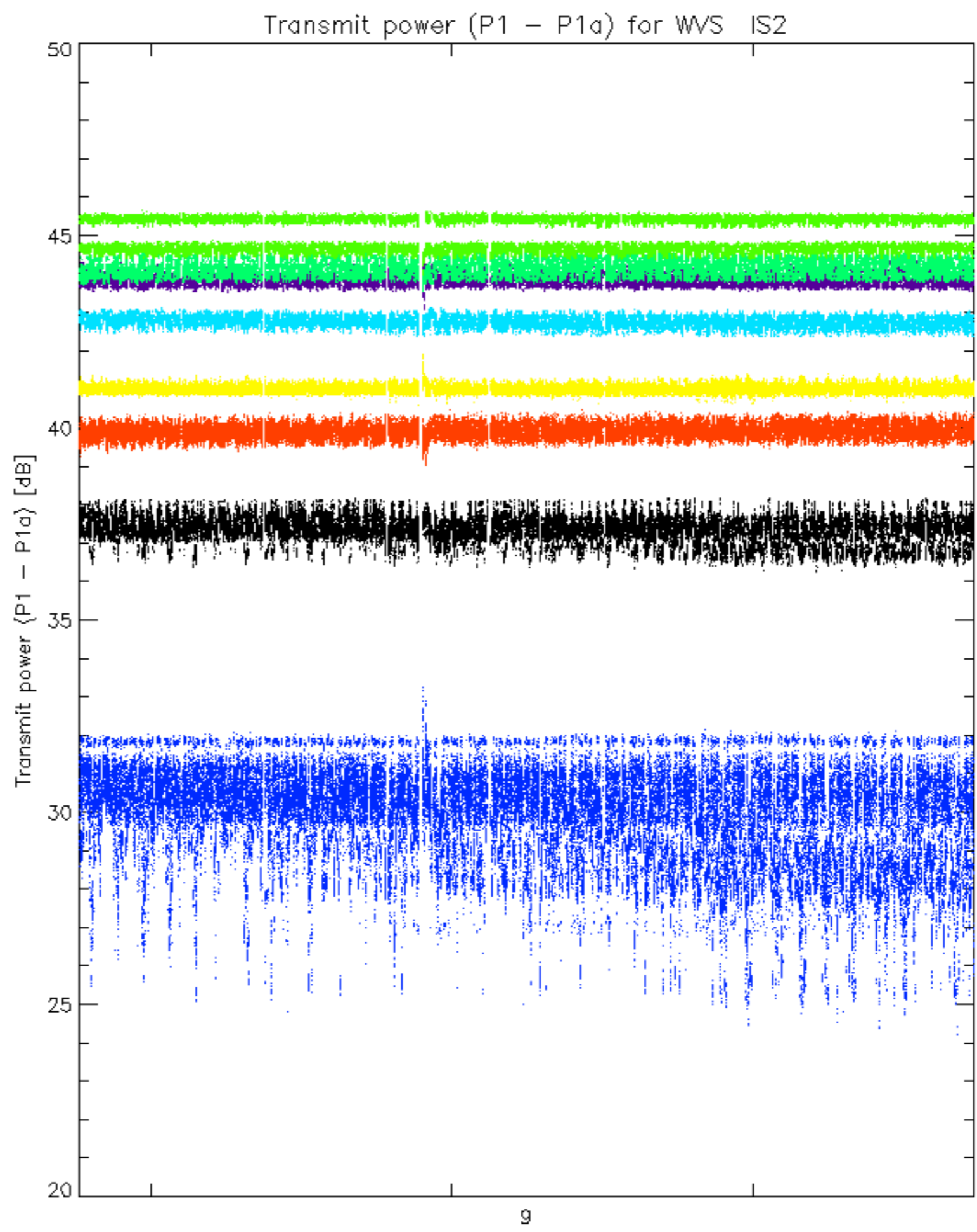




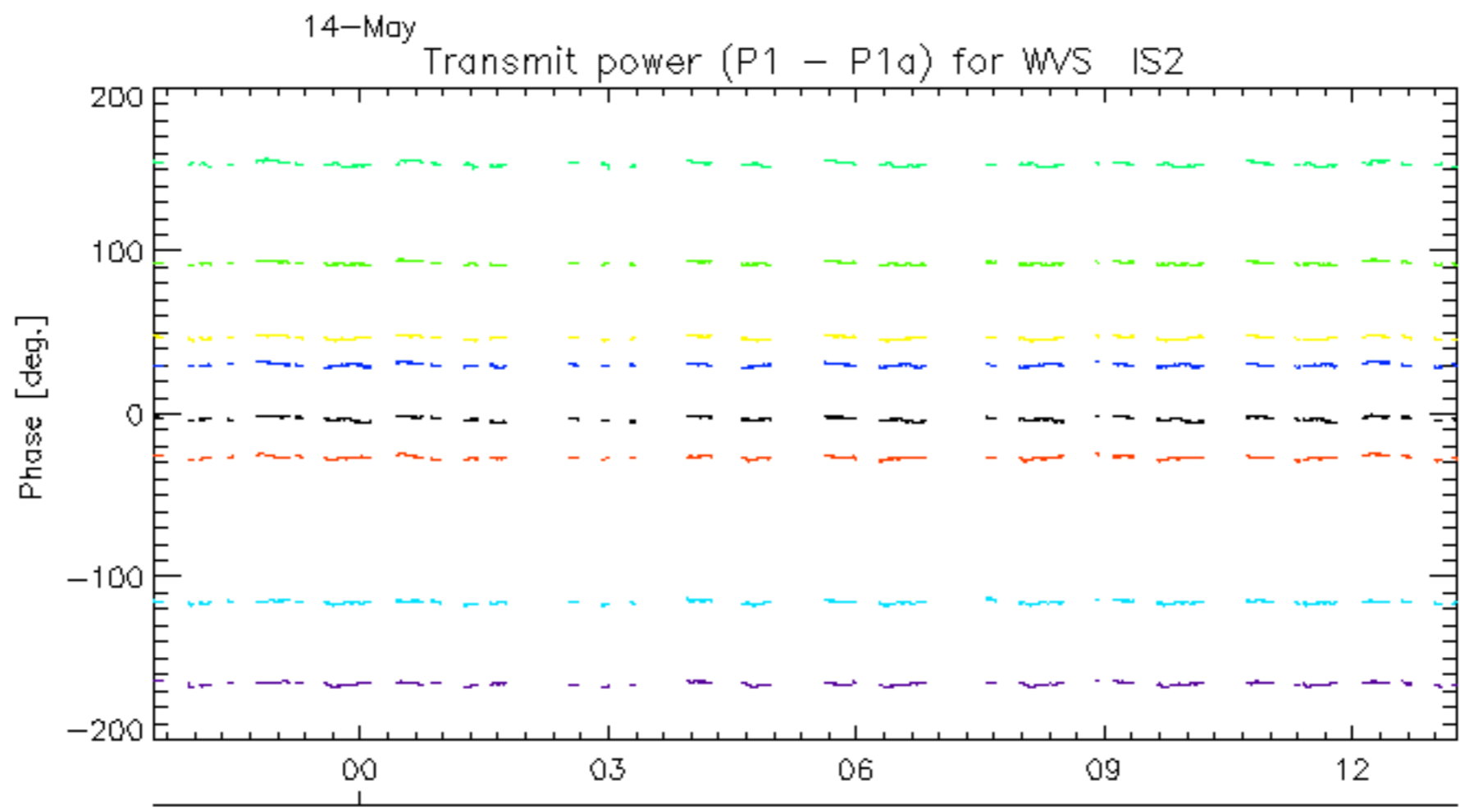
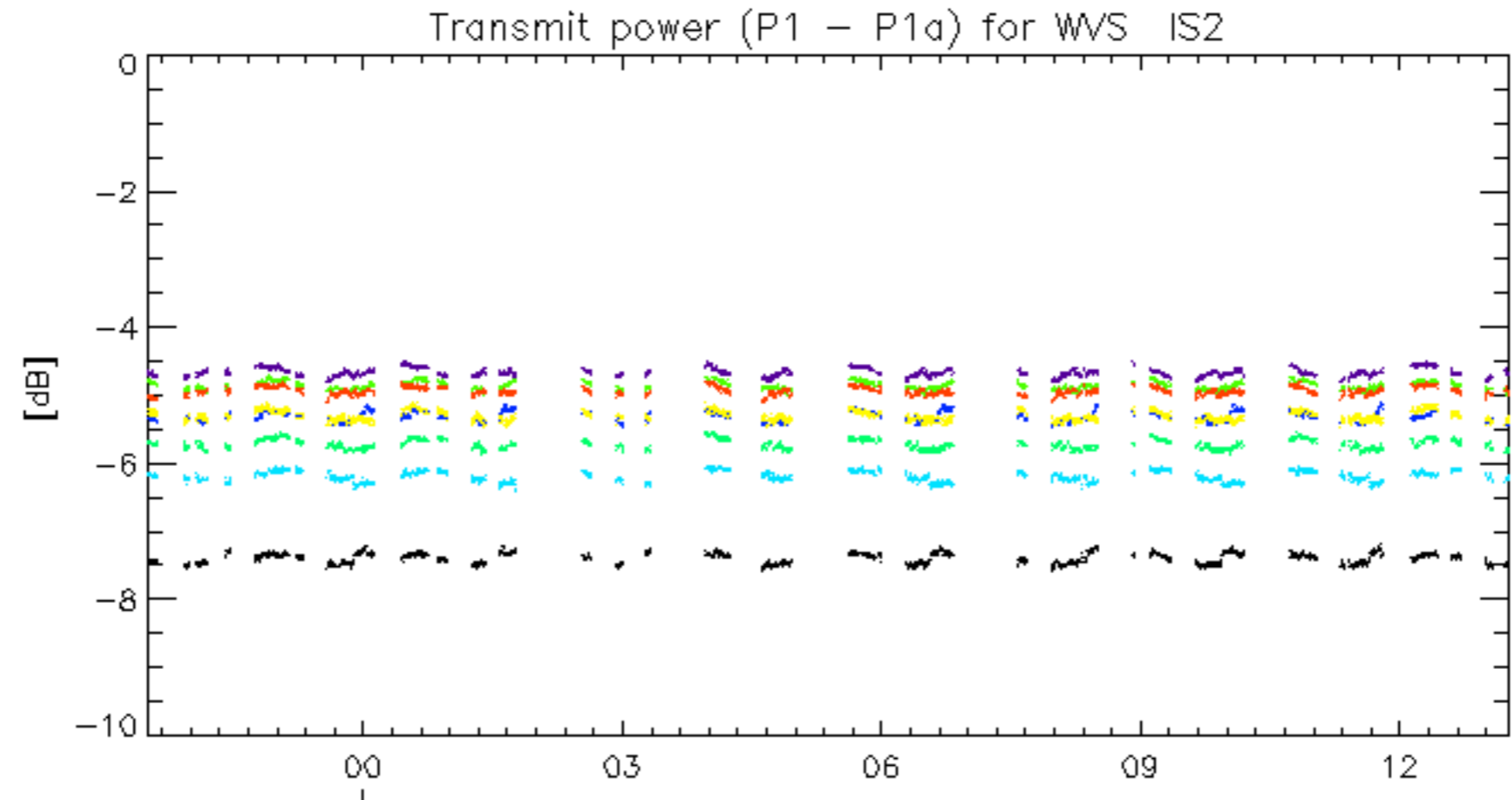
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.