

PRELIMINARY REPORT OF 070427

last update on Fri Apr 27 18:07:11 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 2007-04-26 00:00:00 to 2007-04-27 18:07:11

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	45	69	8	1	44
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	45	69	8	1	44
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	45	69	8	1	44
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	69	8	1	44

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	55	70	33	9	65
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	55	70	33	9	65
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	55	70	33	9	65
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	55	70	33	9	65

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	20070427 063523
H	20070426 070700

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
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

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☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

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☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

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P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-15.082143	0.147470	-0.151394
7	P1a	-17.548607	0.104438	-0.060662
11	P1a	-17.477657	0.346878	-0.723935
15	P1a	-12.988707	0.118793	-0.329664
19	P1a	-15.328236	0.069354	-0.334480
22	P1a	-15.899057	0.417213	-0.367117
26	P1a	-15.034297	0.212454	0.439168
30	P1a	-17.680727	0.331897	-0.614811

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.766798	0.010747	-0.044726
7	P1	-3.146150	0.008886	-0.004453
11	P1	-4.208682	0.012236	-0.015194
15	P1	-6.403524	0.019337	-0.123008
19	P1	-3.785120	0.010699	0.043960
22	P1	-4.747783	0.009424	-0.033828
26	P1	-3.920146	0.019416	0.088127
30	P1	-5.967579	0.009443	0.024633

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.661123	0.090223	-0.020951
7	P2	-21.564005	0.087844	0.108001
11	P2	-15.359740	0.115833	0.208916
15	P2	-7.125228	0.088516	-0.016190
19	P2	-9.116708	0.079944	0.027603
22	P2	-18.085798	0.076774	0.019840
26	P2	-16.615677	0.081169	-0.054372
30	P2	-19.278522	0.082295	0.049542

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.244266	0.005418	-0.002563
7	P3	-8.244266	0.005418	-0.002563
11	P3	-8.244266	0.005418	-0.002563
15	P3	-8.244266	0.005418	-0.002563
19	P3	-8.244266	0.005418	-0.002563
22	P3	-8.244266	0.005418	-0.002563
26	P3	-8.244266	0.005418	-0.002563
30	P3	-8.244266	0.005418	-0.002563

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.200351	0.139723	-0.113910
7	P1a	-10.068127	0.217271	-0.018793
11	P1a	-10.687529	0.105261	0.059700
15	P1a	-10.842526	0.171773	0.081070
19	P1a	-15.798099	0.091798	-0.073081
22	P1a	-21.385757	1.442278	-0.572434
26	P1a	-15.501525	0.382526	-0.297530
30	P1a	-18.308706	0.471503	0.293736

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.453760	0.055608	-0.013465
7	P1	-2.412733	0.120433	0.037820
11	P1	-2.890836	0.026996	0.063541
15	P1	-3.820078	0.038780	0.050461
19	P1	-3.586213	0.014799	-0.018116
22	P1	-4.973385	0.023645	0.085078
26	P1	-6.034363	0.028520	-0.033595
30	P1	-5.336178	0.033765	-0.013761

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.176407	0.066153	-0.087332
7	P2	-22.037861	0.214989	-0.034013
11	P2	-10.634153	0.046117	-0.029116
15	P2	-4.920600	0.041549	-0.090515
19	P2	-6.869237	0.040418	-0.034496
22	P2	-8.111179	0.098593	0.004974
26	P2	-24.322844	0.159498	-0.043495
30	P2	-21.714157	0.113498	0.043284

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091597	0.004999	-0.009116
7	P3	-8.091579	0.005003	-0.008591
11	P3	-8.091403	0.004998	-0.008958
15	P3	-8.091311	0.005000	-0.009046
19	P3	-8.091504	0.005023	-0.008901
22	P3	-8.091434	0.004984	-0.008729
26	P3	-8.091459	0.005003	-0.008454
30	P3	-8.091366	0.004997	-0.008604

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	0.000544160
	stdev	2.00670e-07
MEAN Q	mean	0.000493518
	stdev	2.43450e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135555
	stdev	0.00122751
STDEV Q	mean	0.135946
	stdev	0.00124505



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007042[567]

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_1PNPDE20070426_000621_000002022057_00331_26938_7094.N1	0	31
ASA_WSM_1PNPDE20070426_233444_000002632057_00345_26952_8526.N1	0	31
ASA_WSM_1PNPDK20070427_135549_000000852057_00354_26961_5249.N1	0	52
ASA_APM_1PNPDE20070426_011026_000001332057_00332_26939_7224.N1	6	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)


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

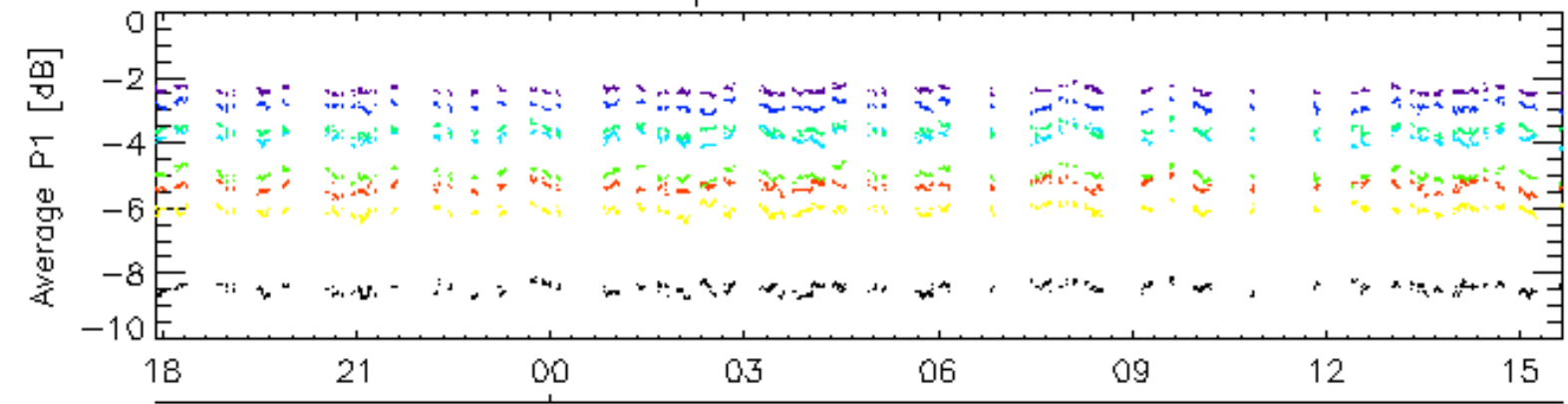
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

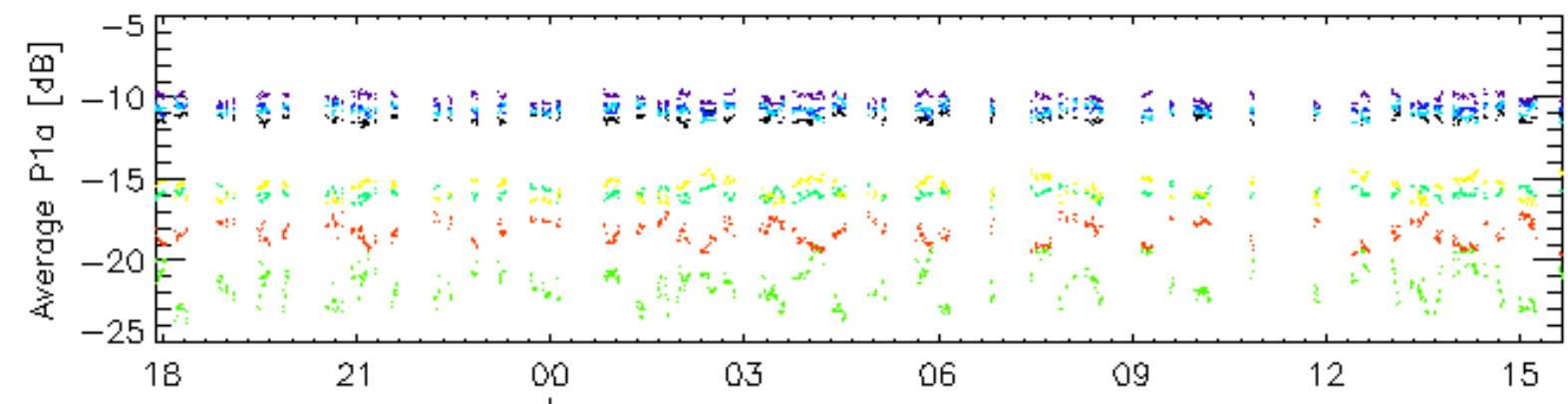
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

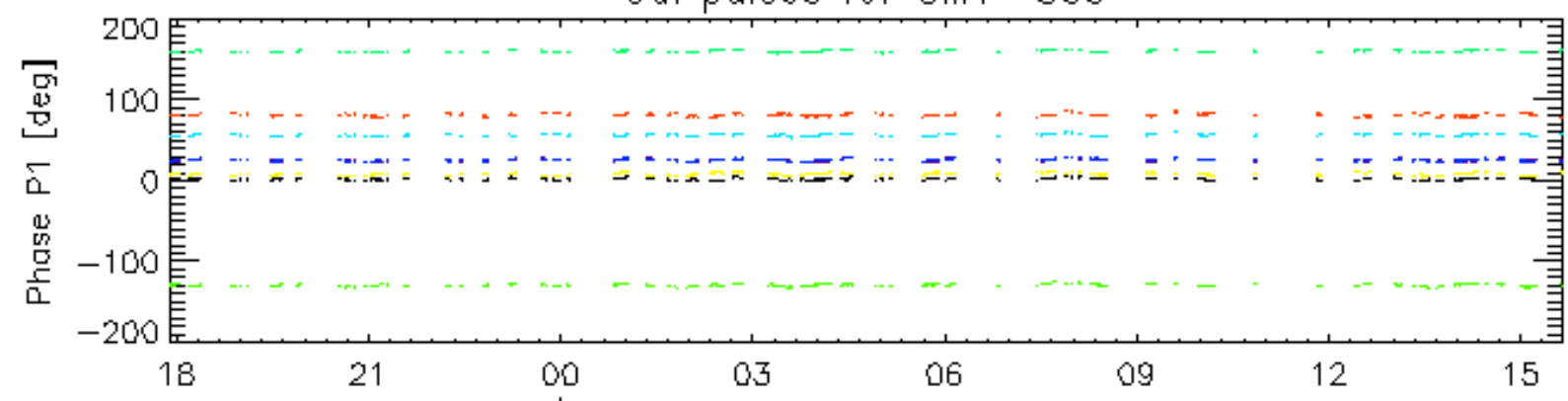


27-Apr

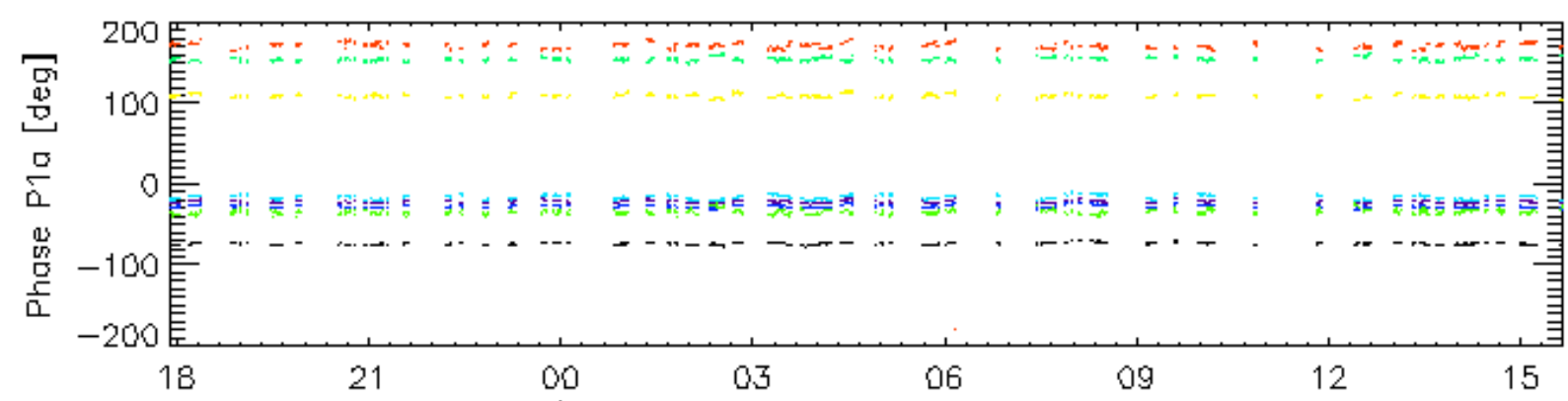


27-Apr

Cal pulses for GM1 SS3

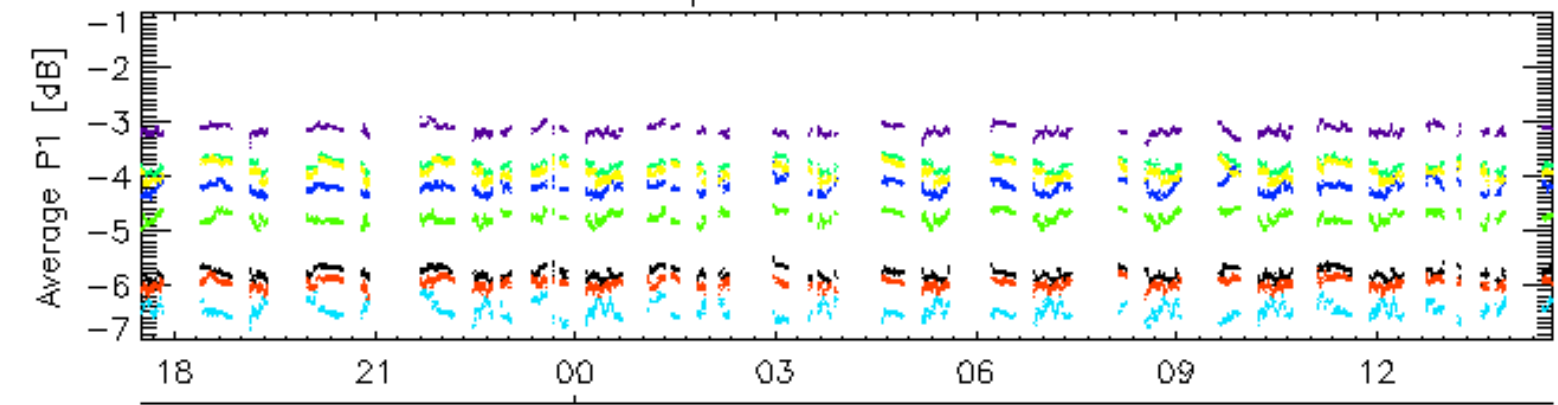


27-Apr

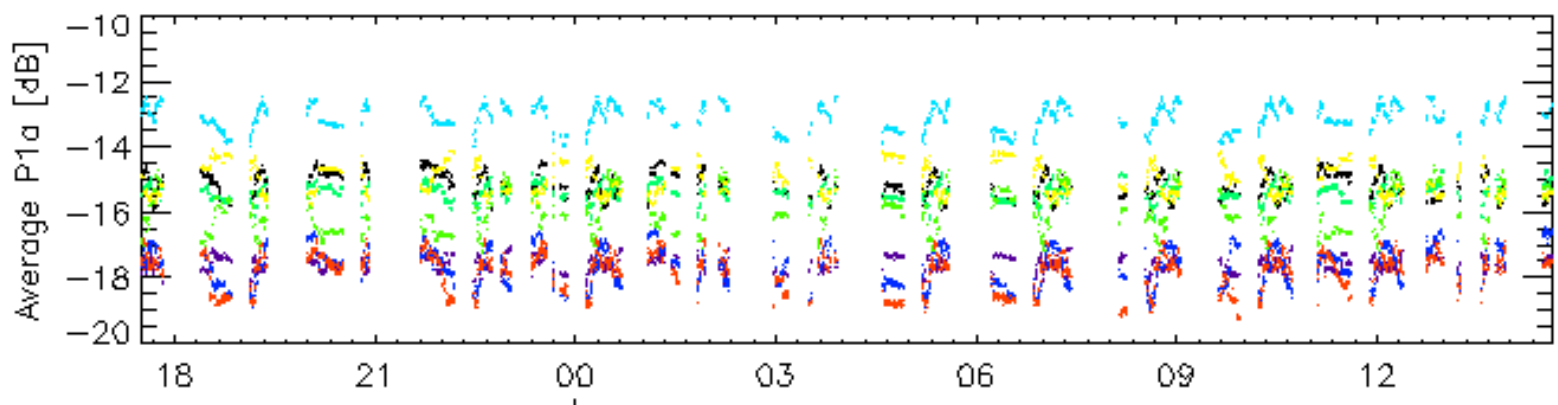


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

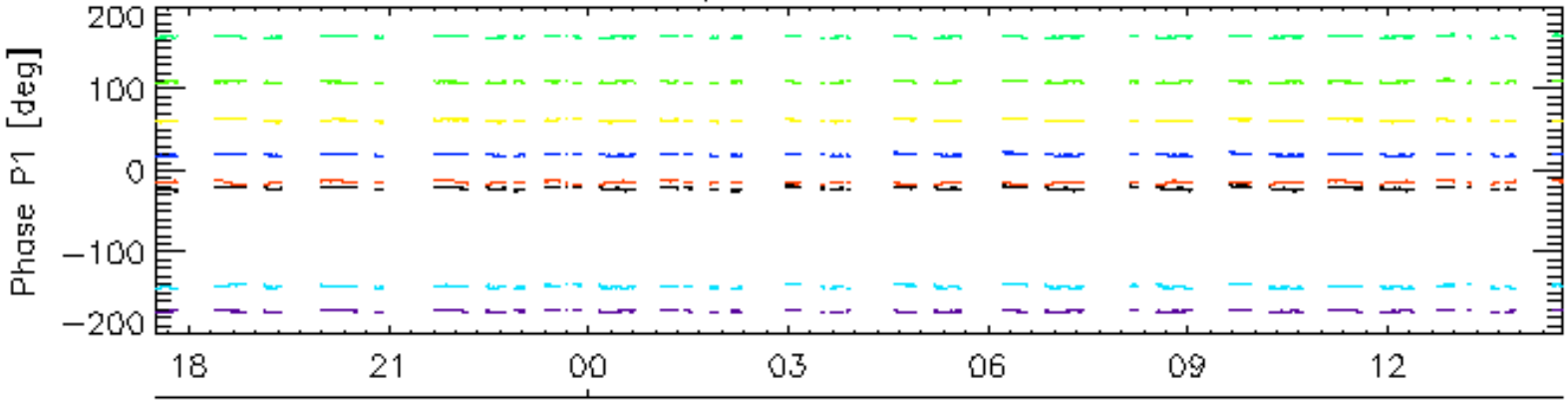


27-Apr

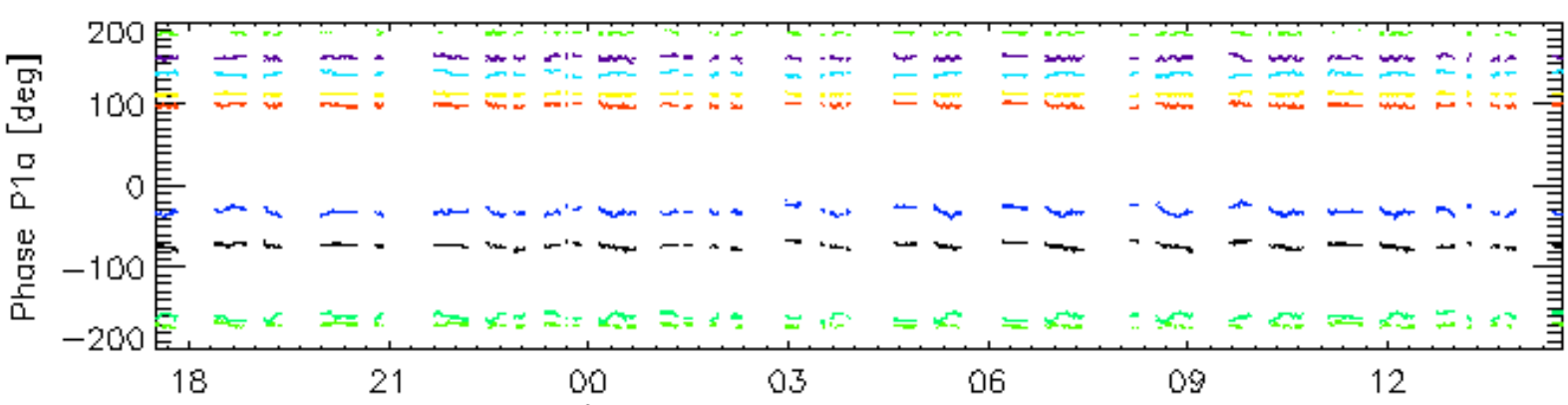


27-Apr

Cal pulses for WVS IS2

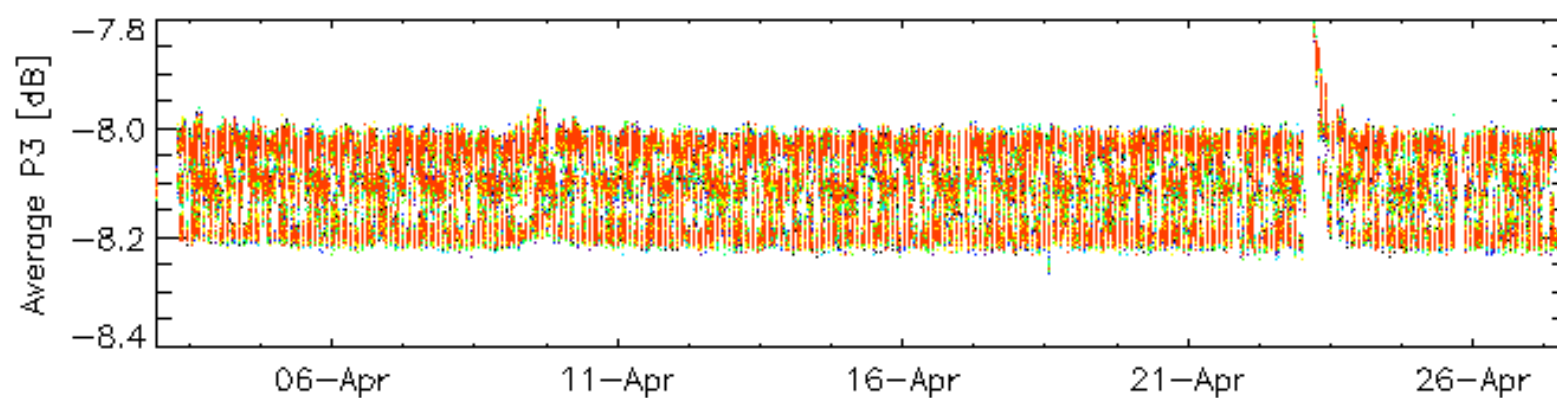
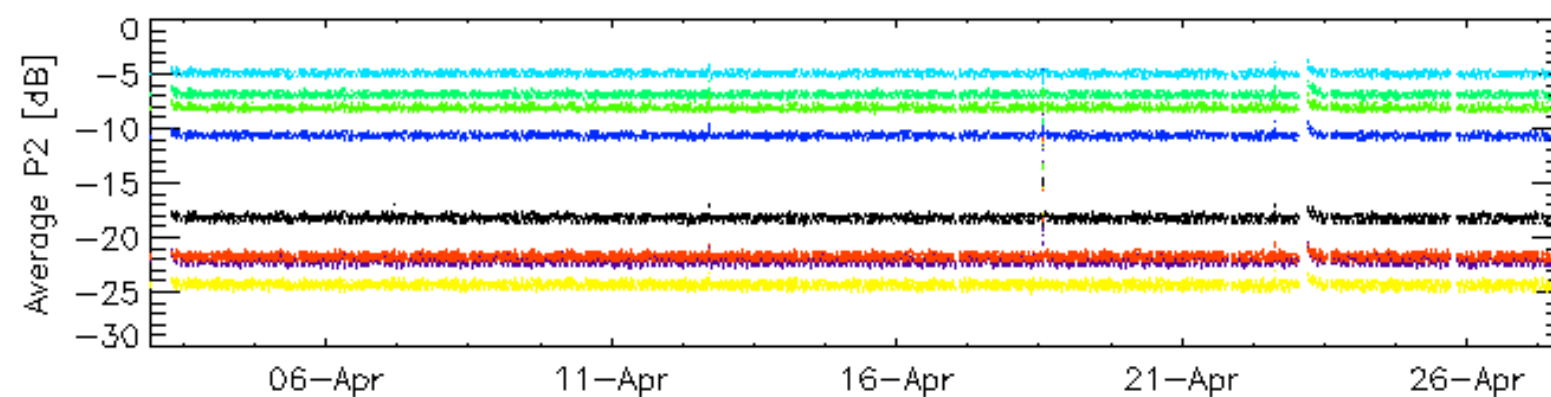
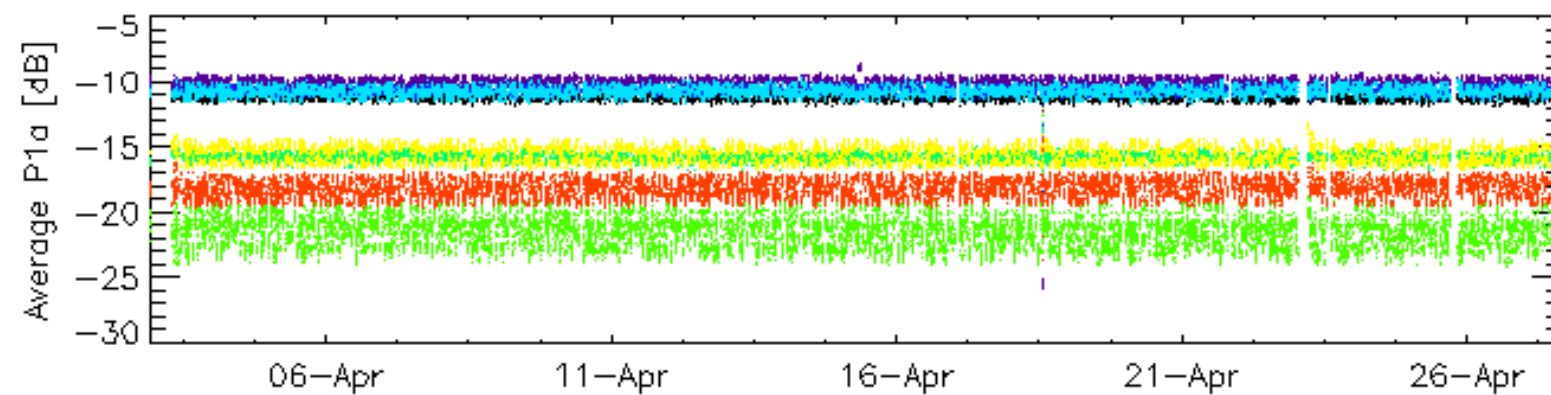
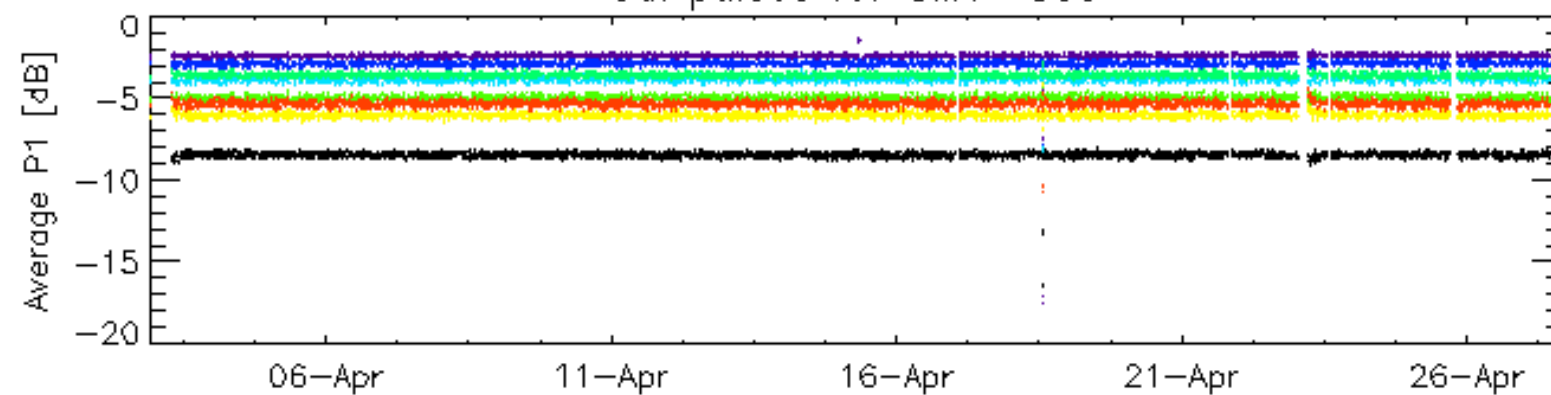


27-Apr



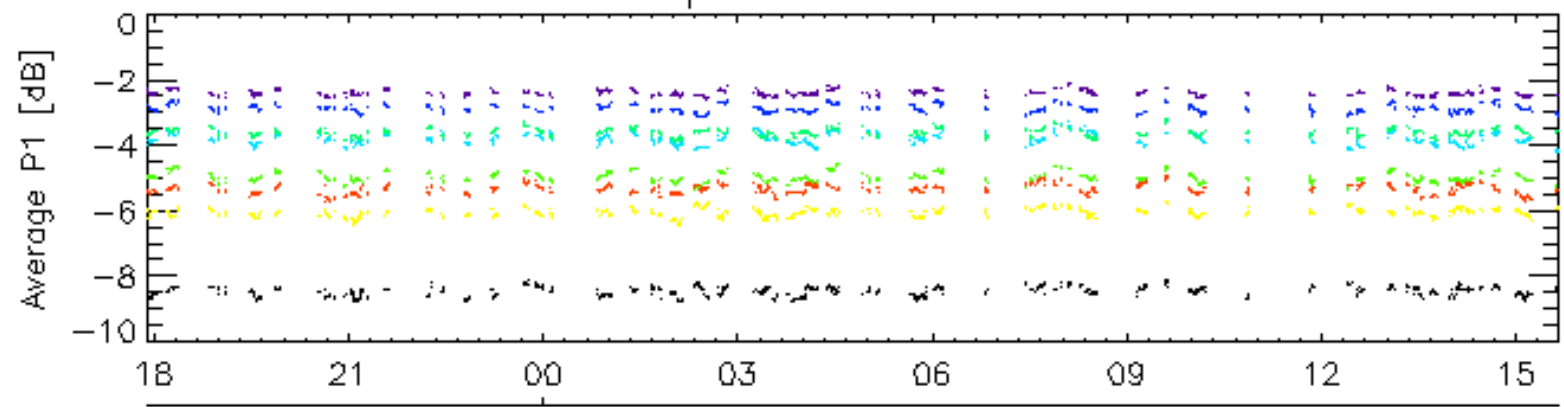
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

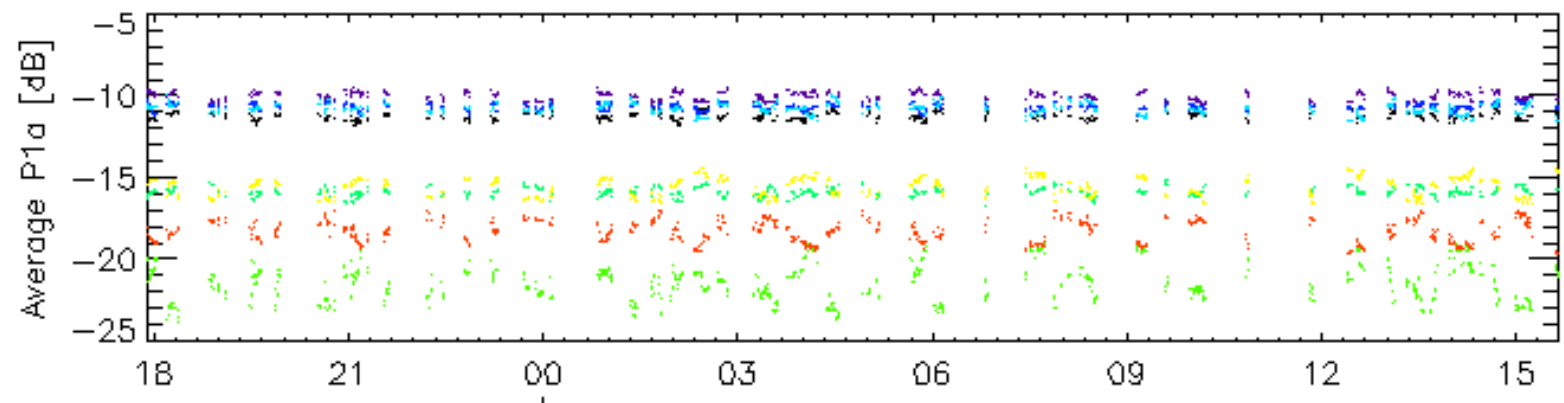


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

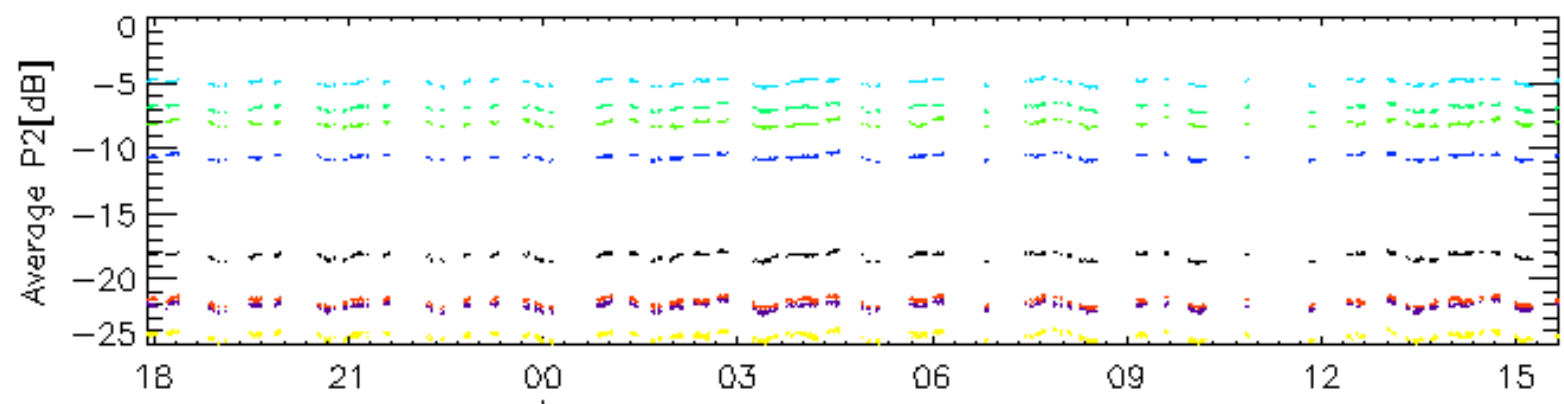
Cal pulses for GM1 SS3



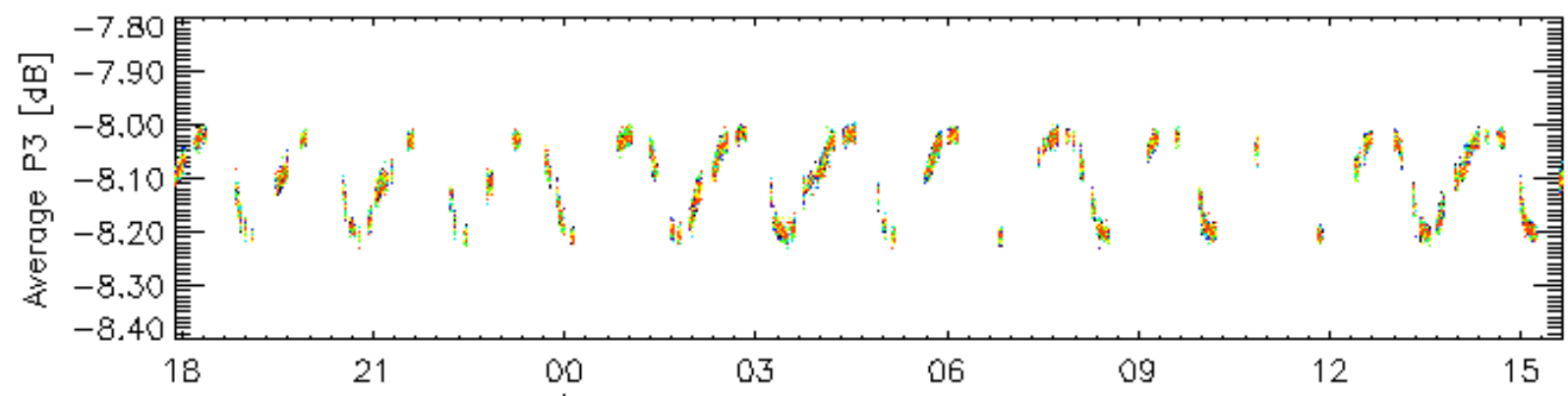
27-Apr



27-Apr

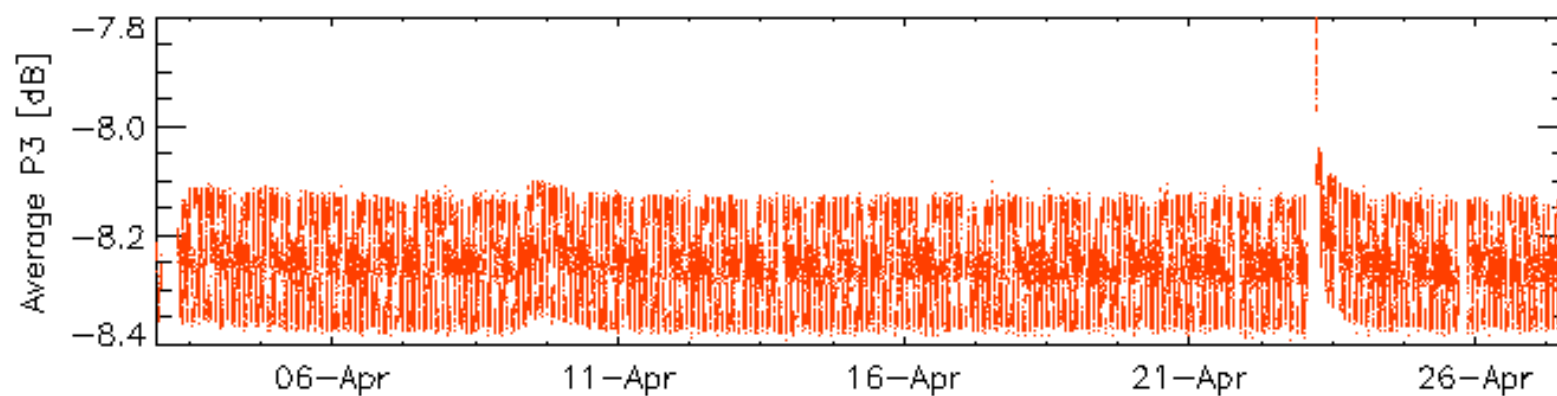
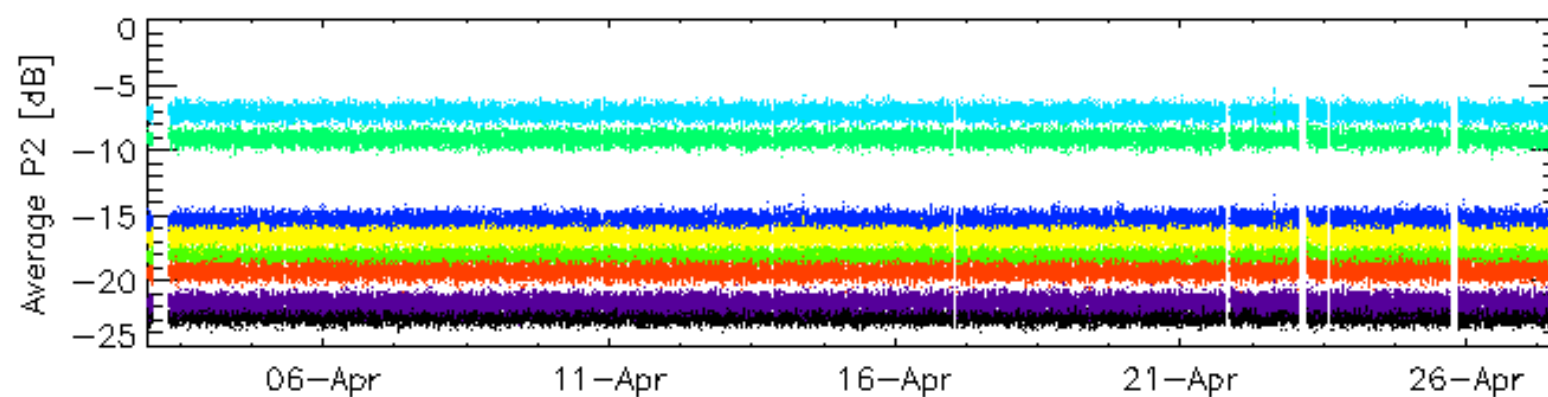
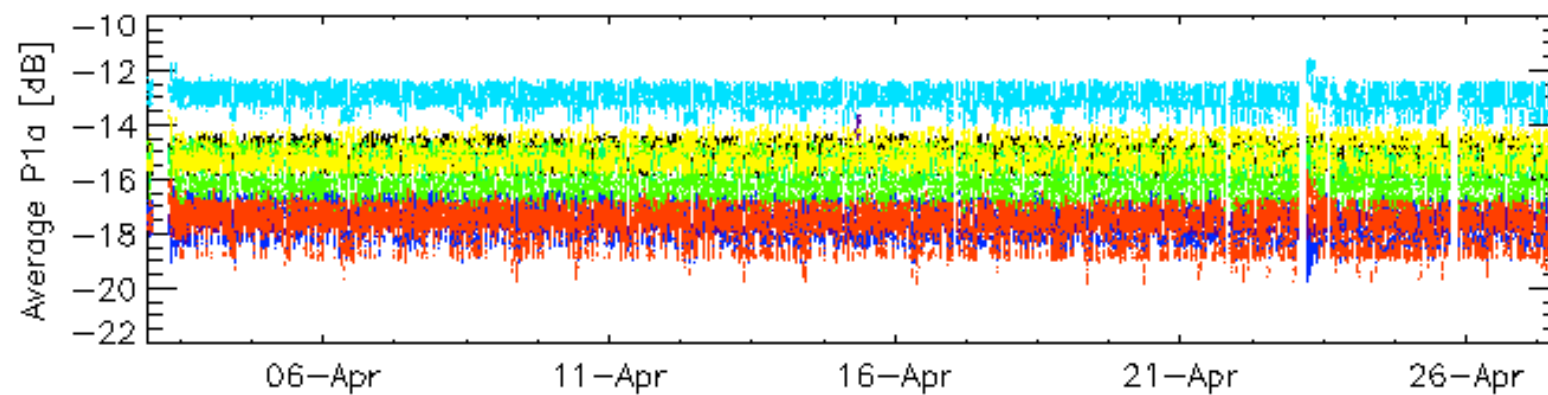
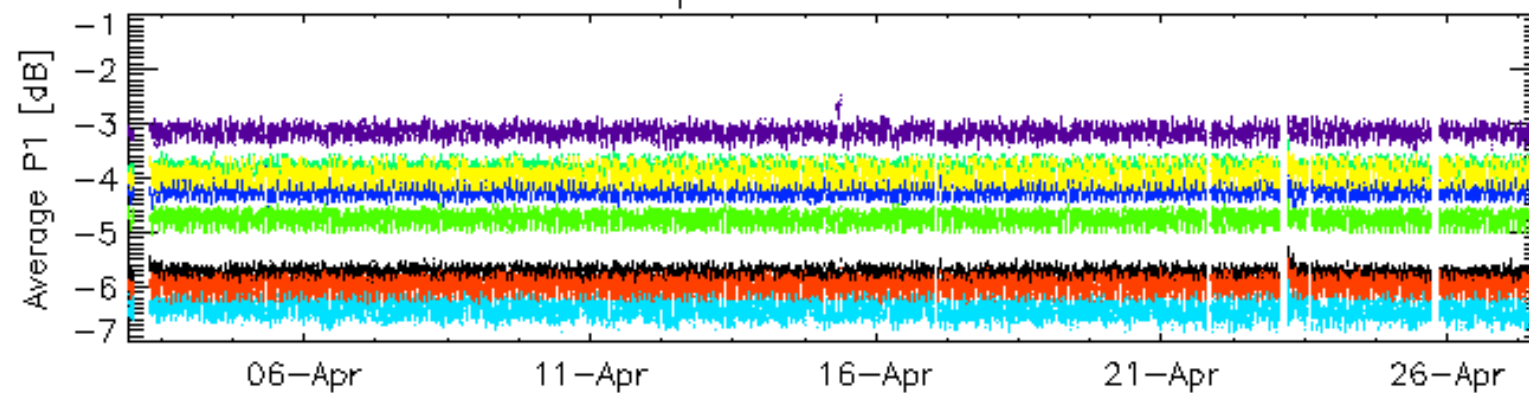


27-Apr



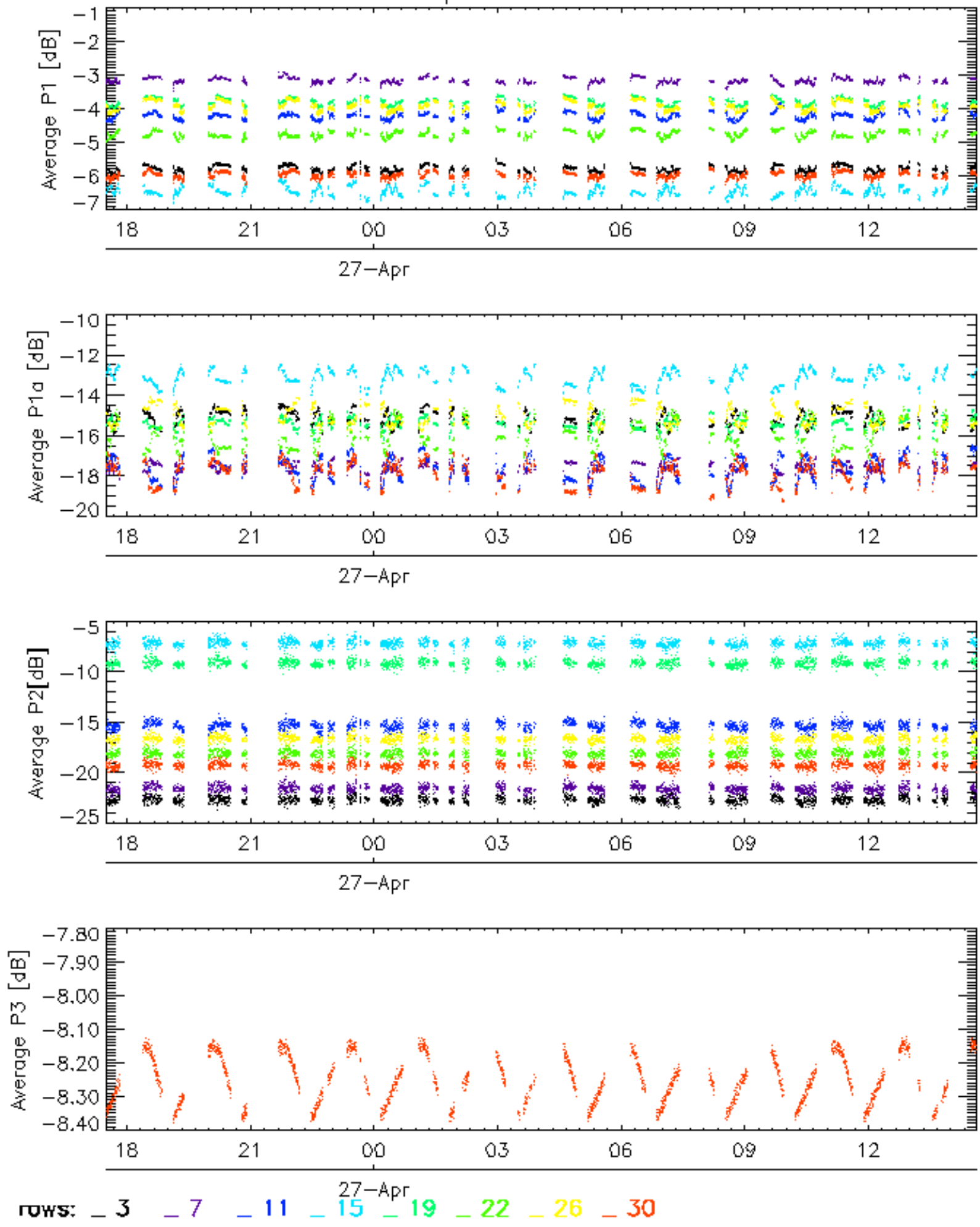
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

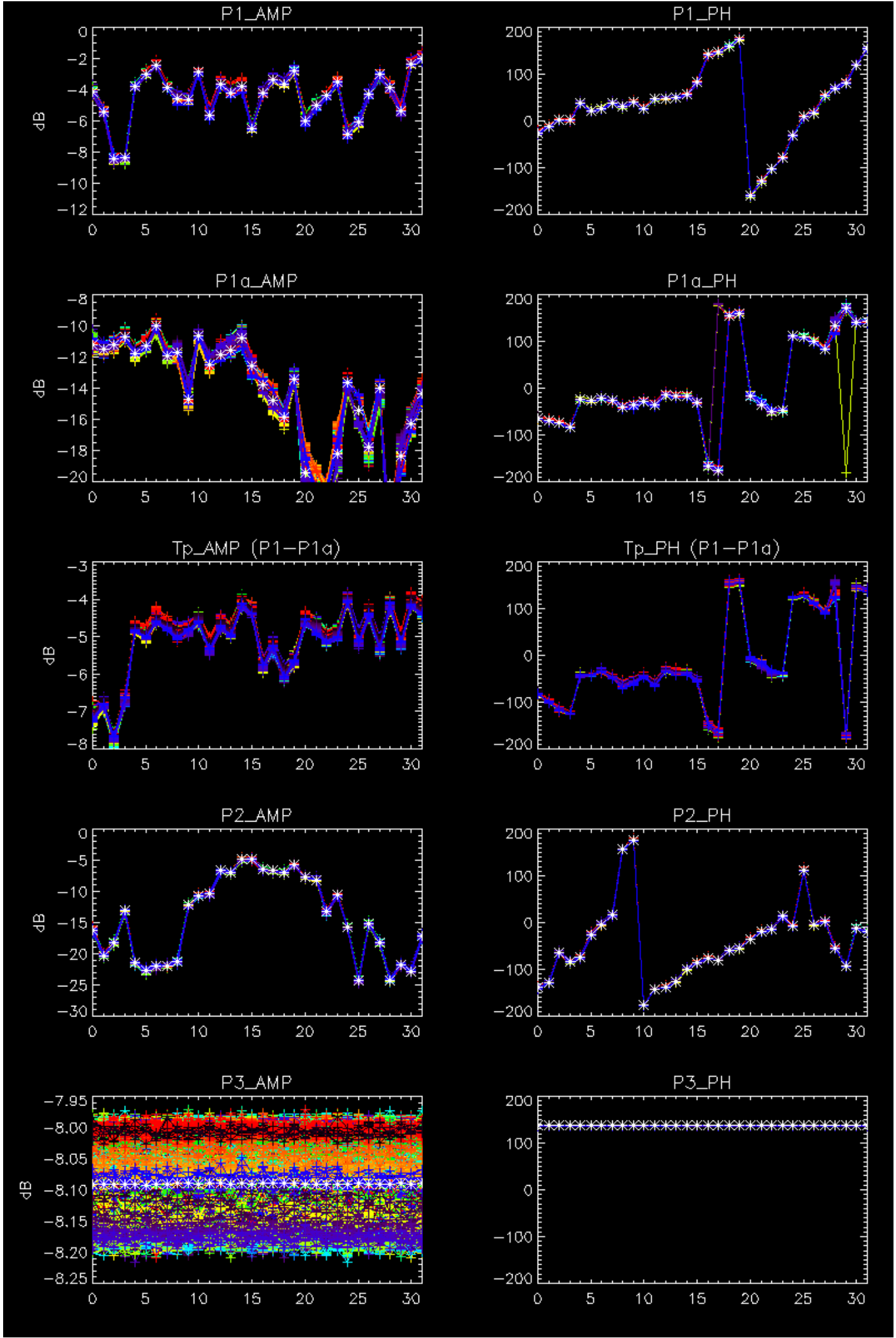


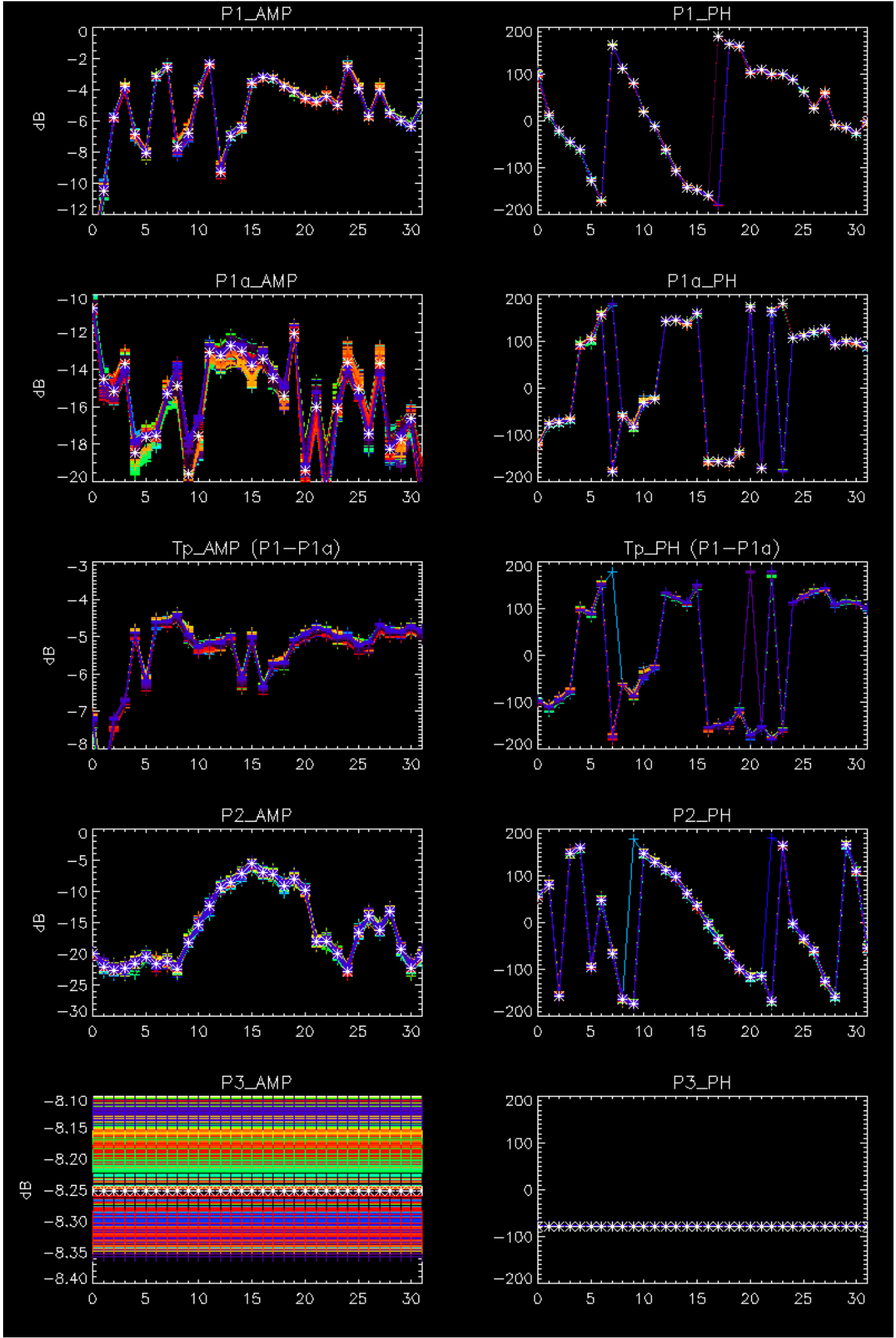
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



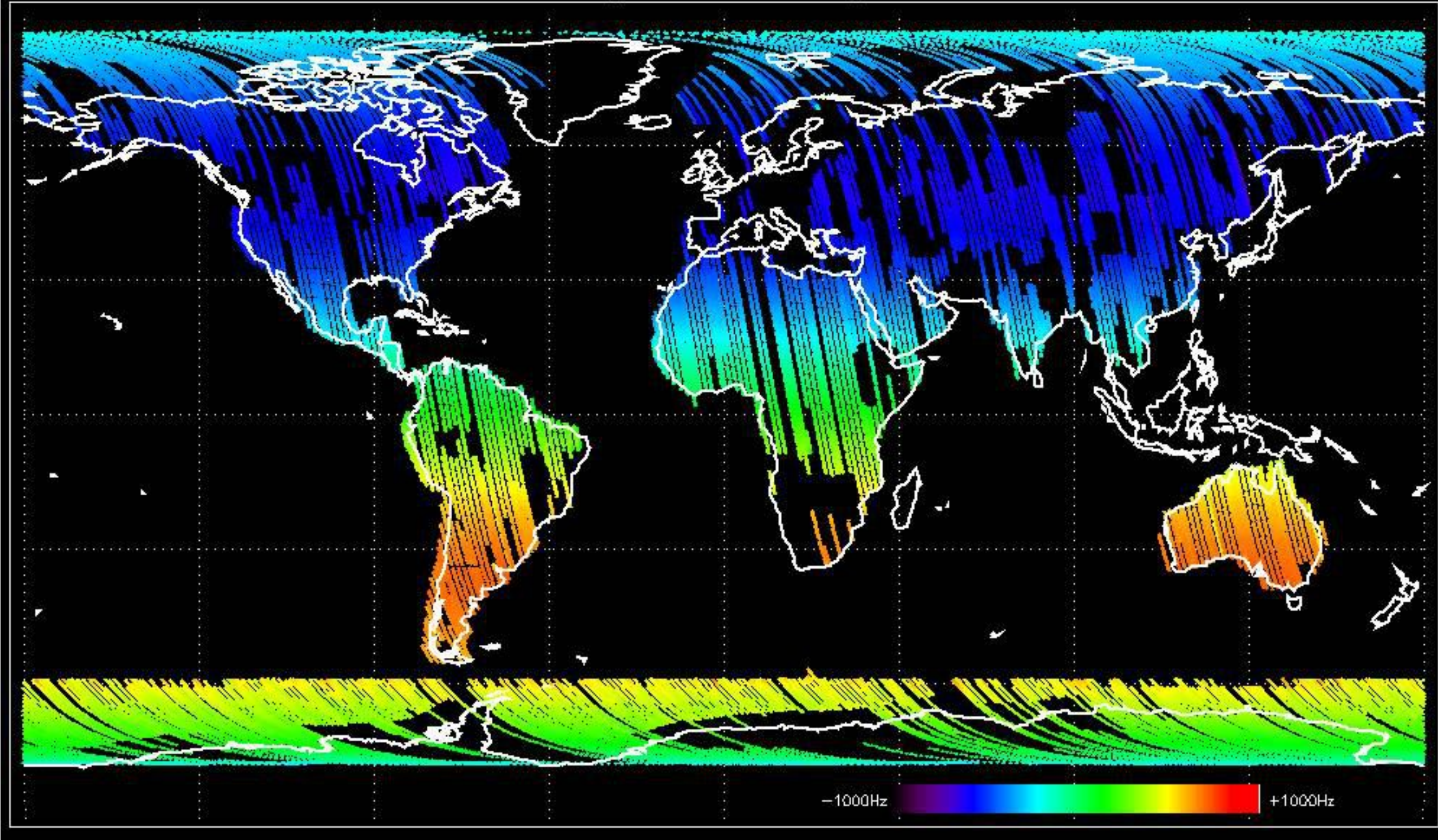
No anomalies observed.



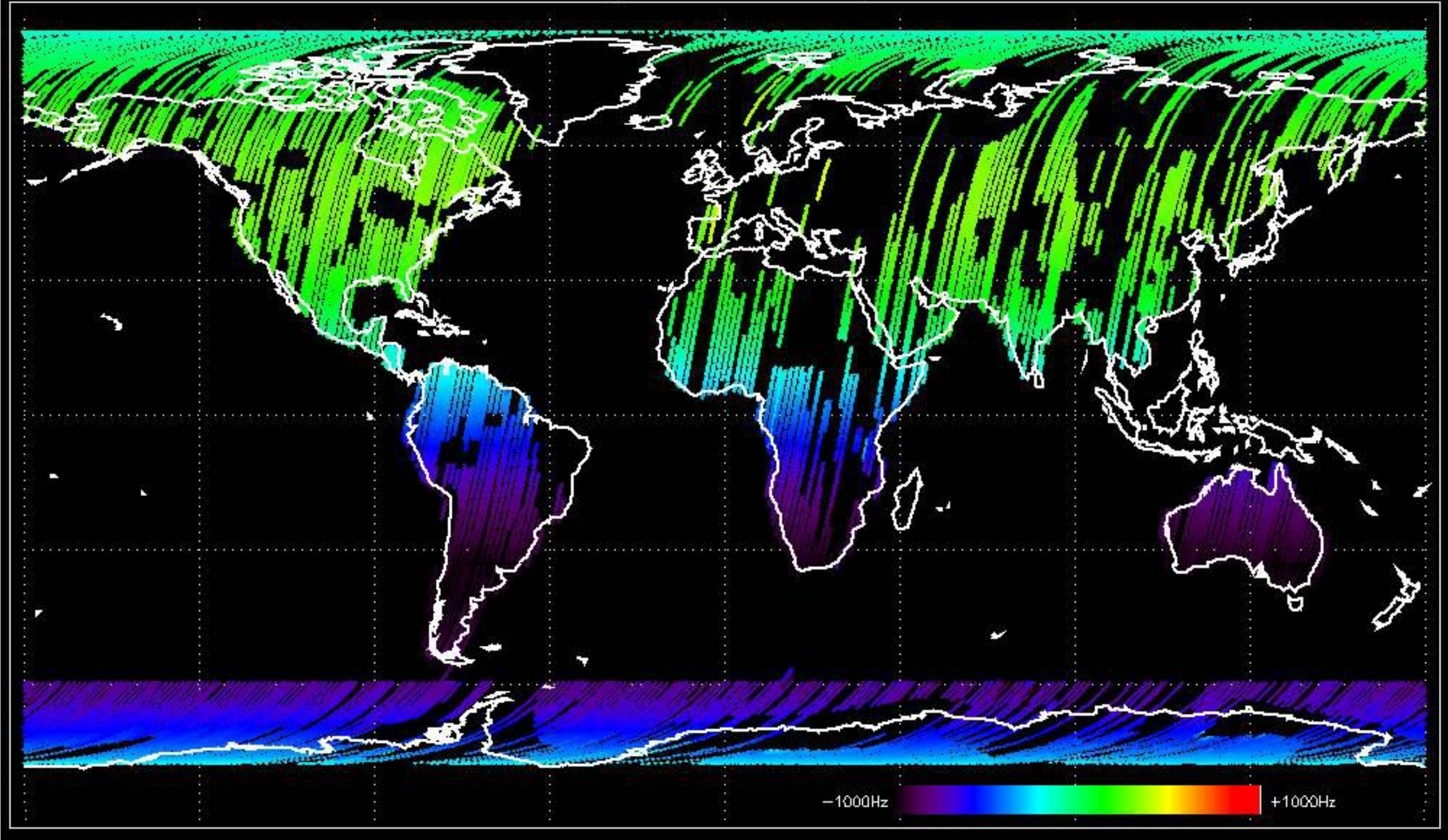


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

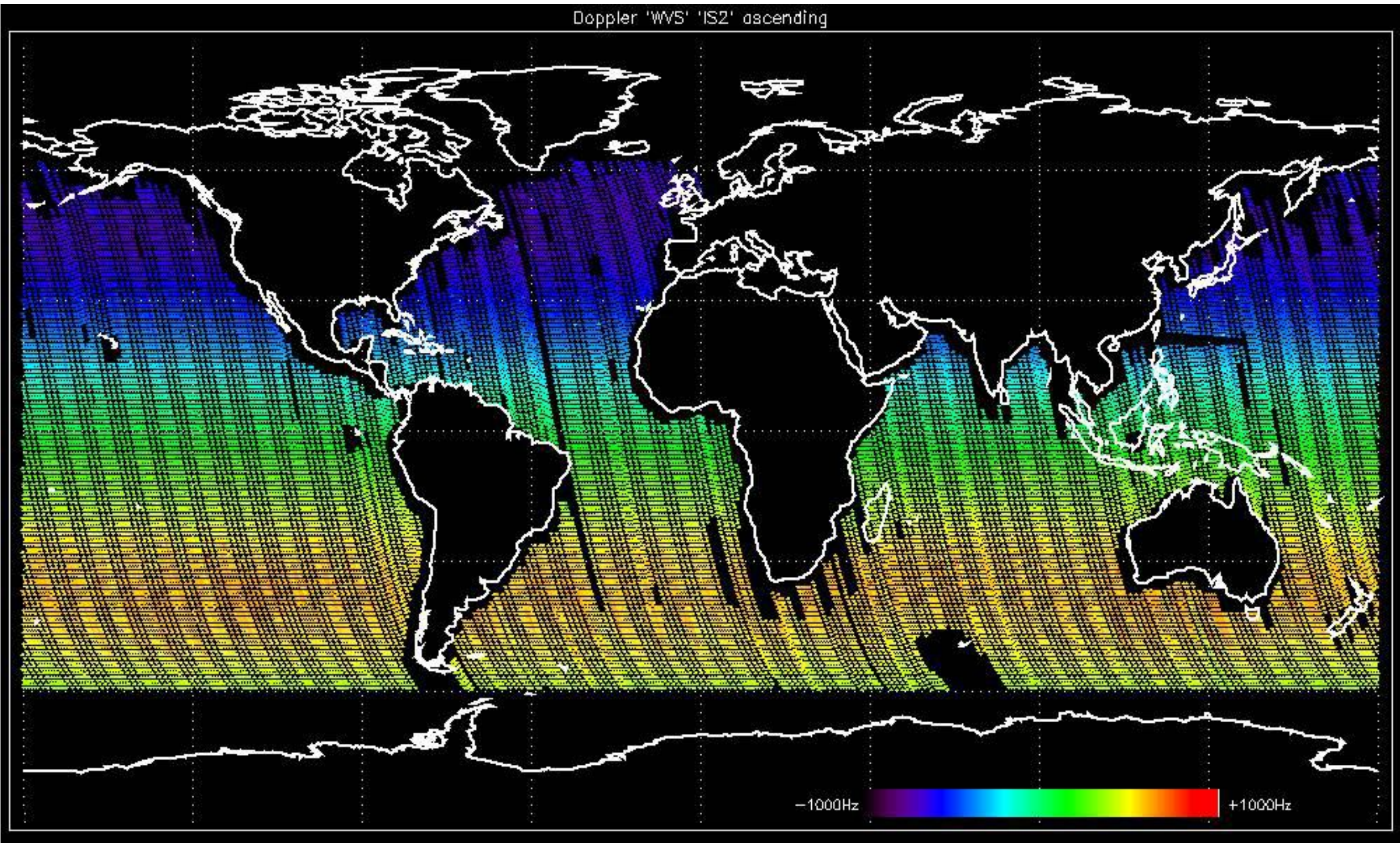
Doppler 'GM1' 'SS1' ascending



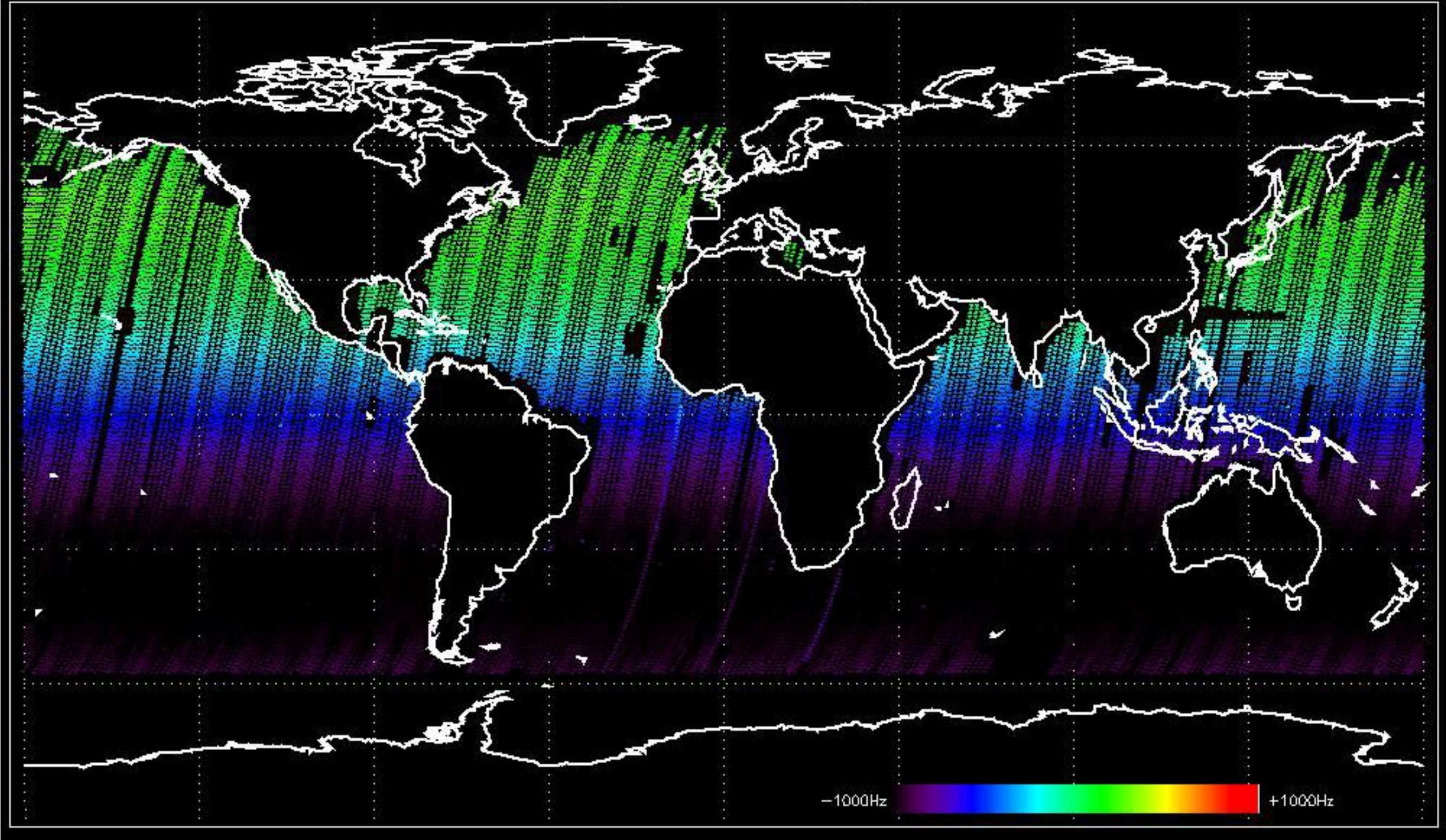
Doppler 'GM1' 'SS1' descending



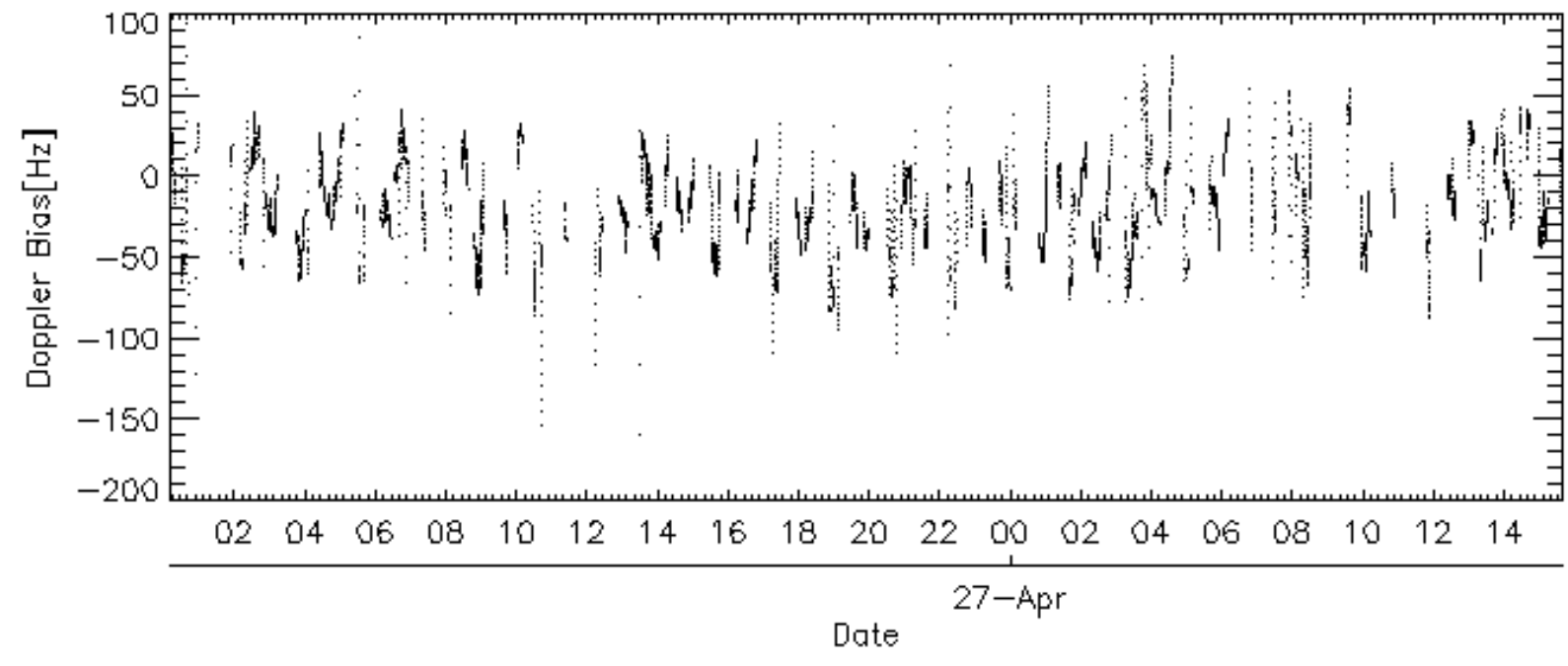
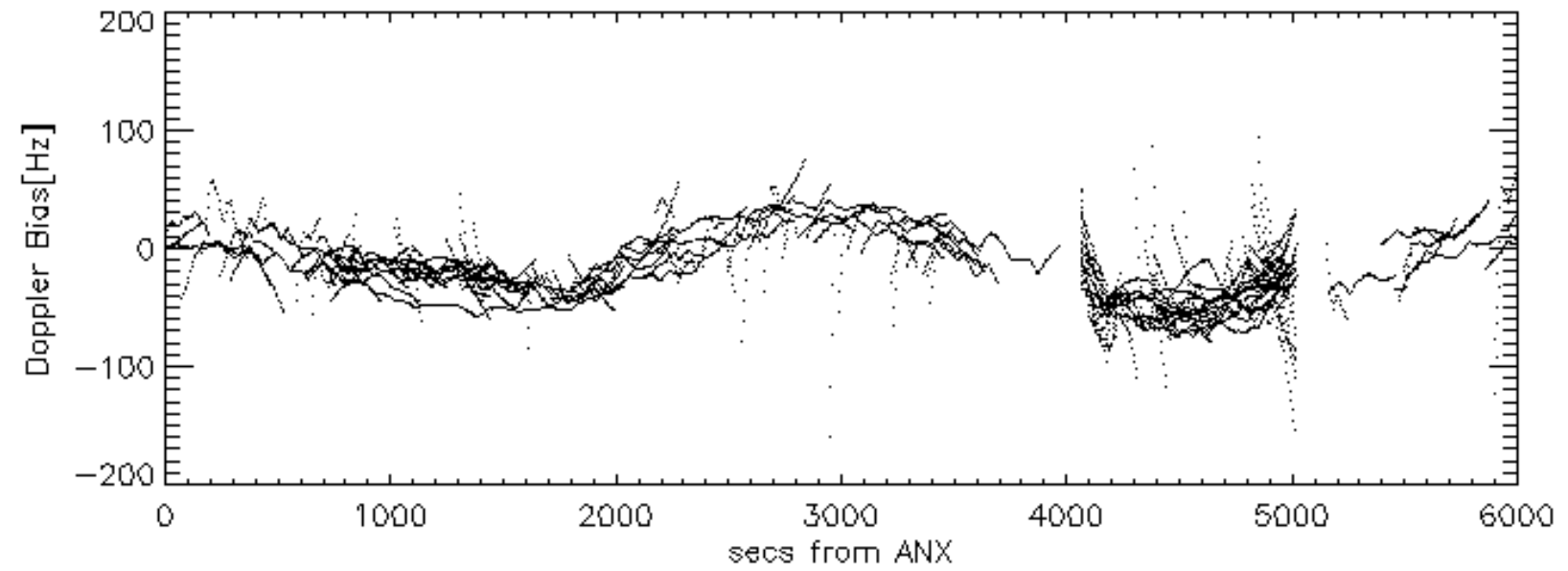
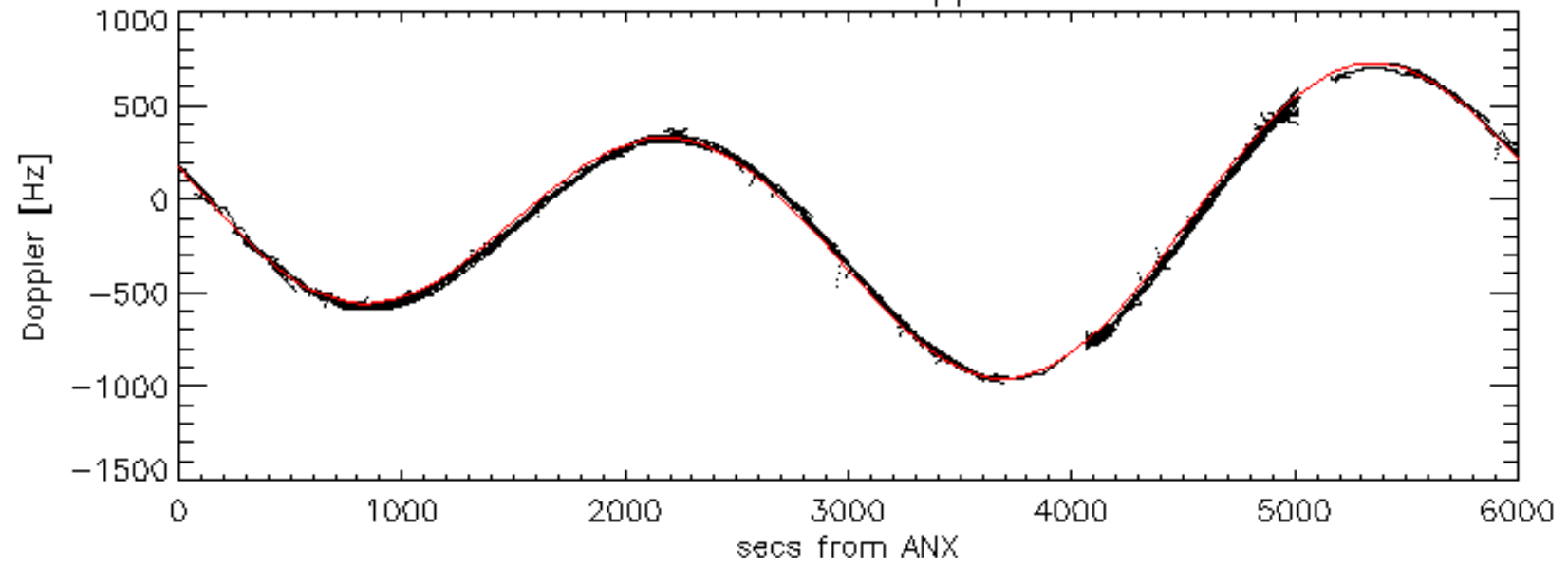
Doppler 'WVS' 'IS2' ascending

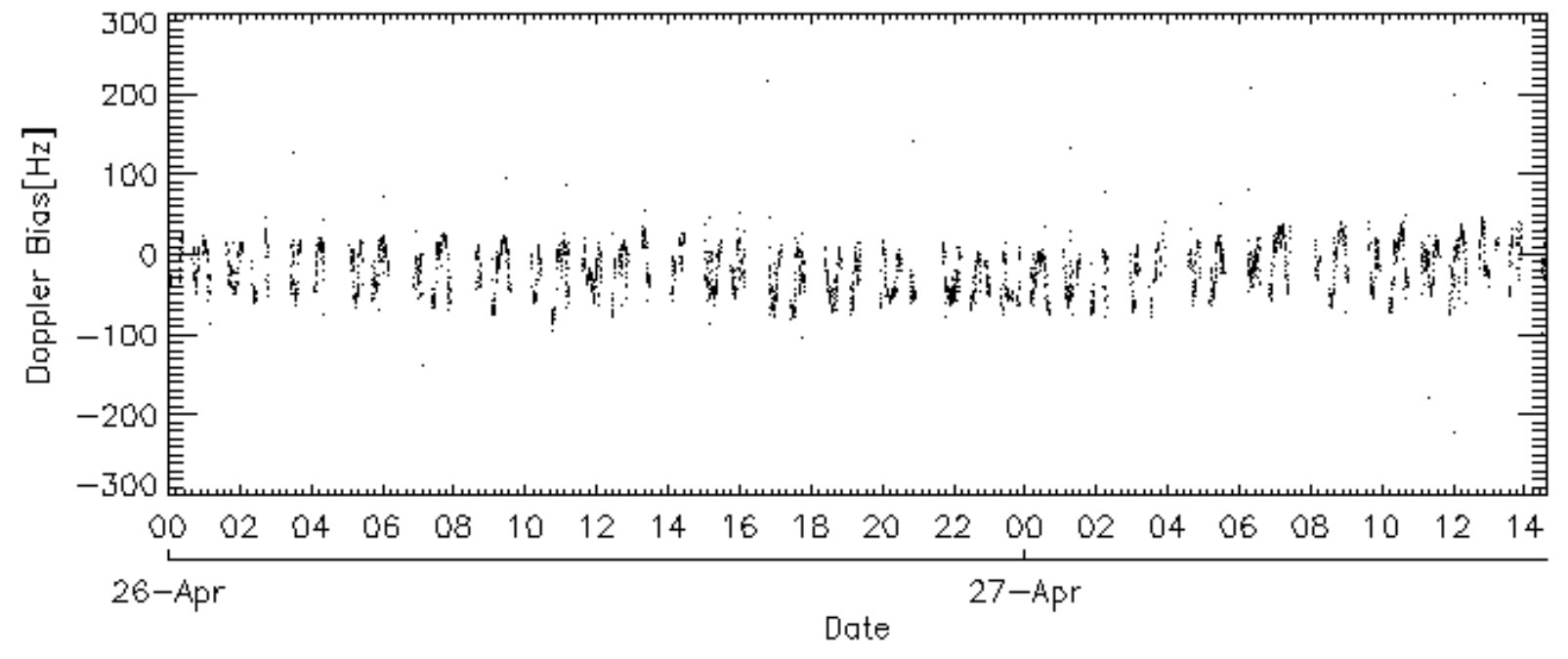
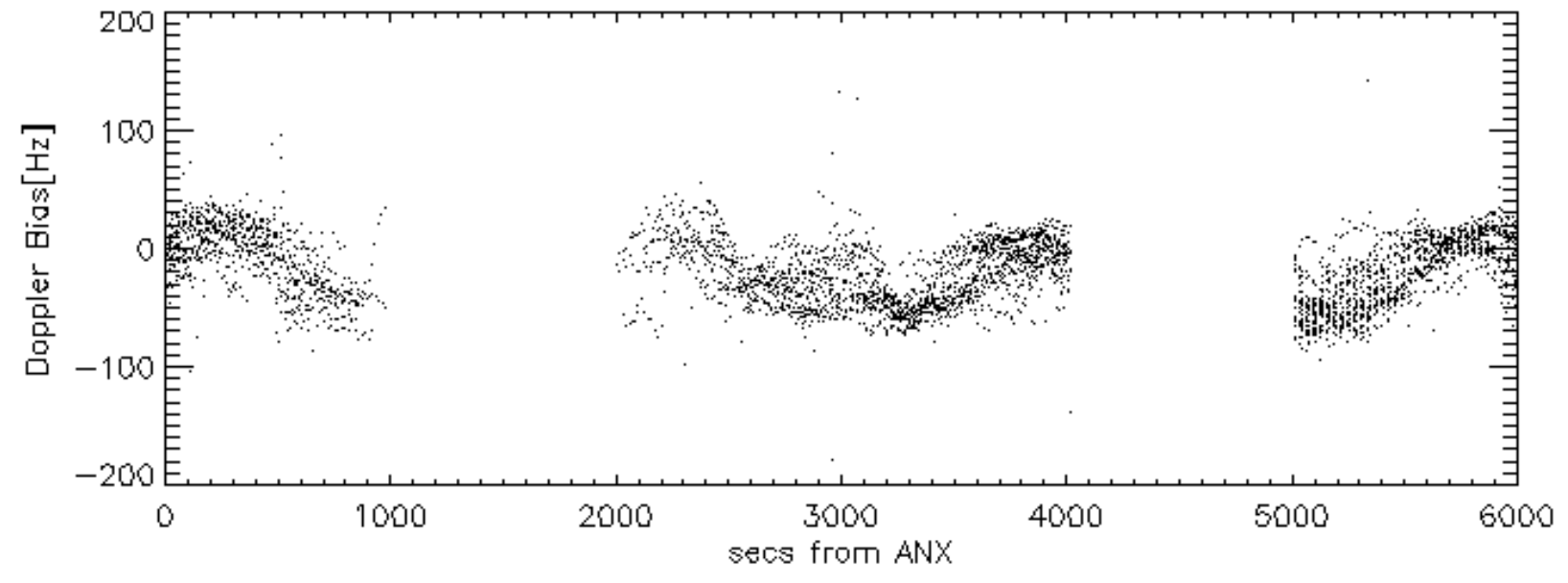
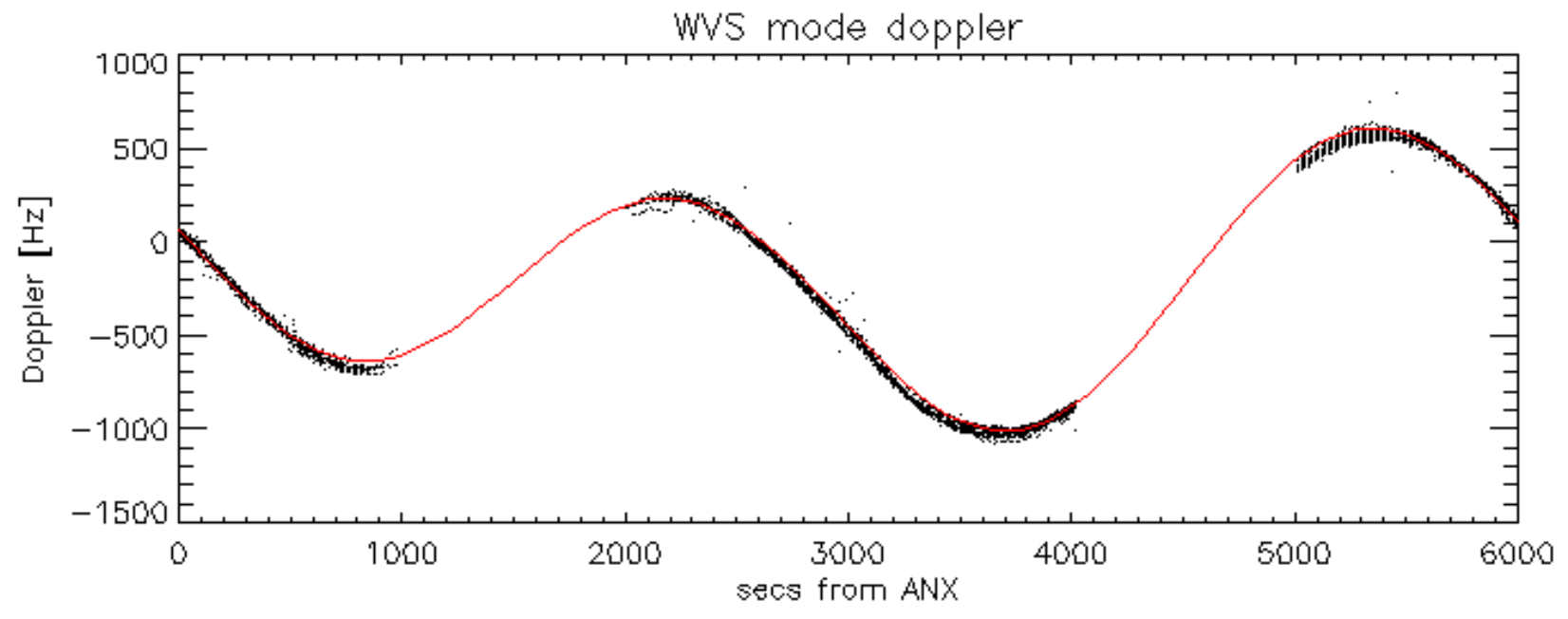


Doppler 'WVS' 'IS2' descending

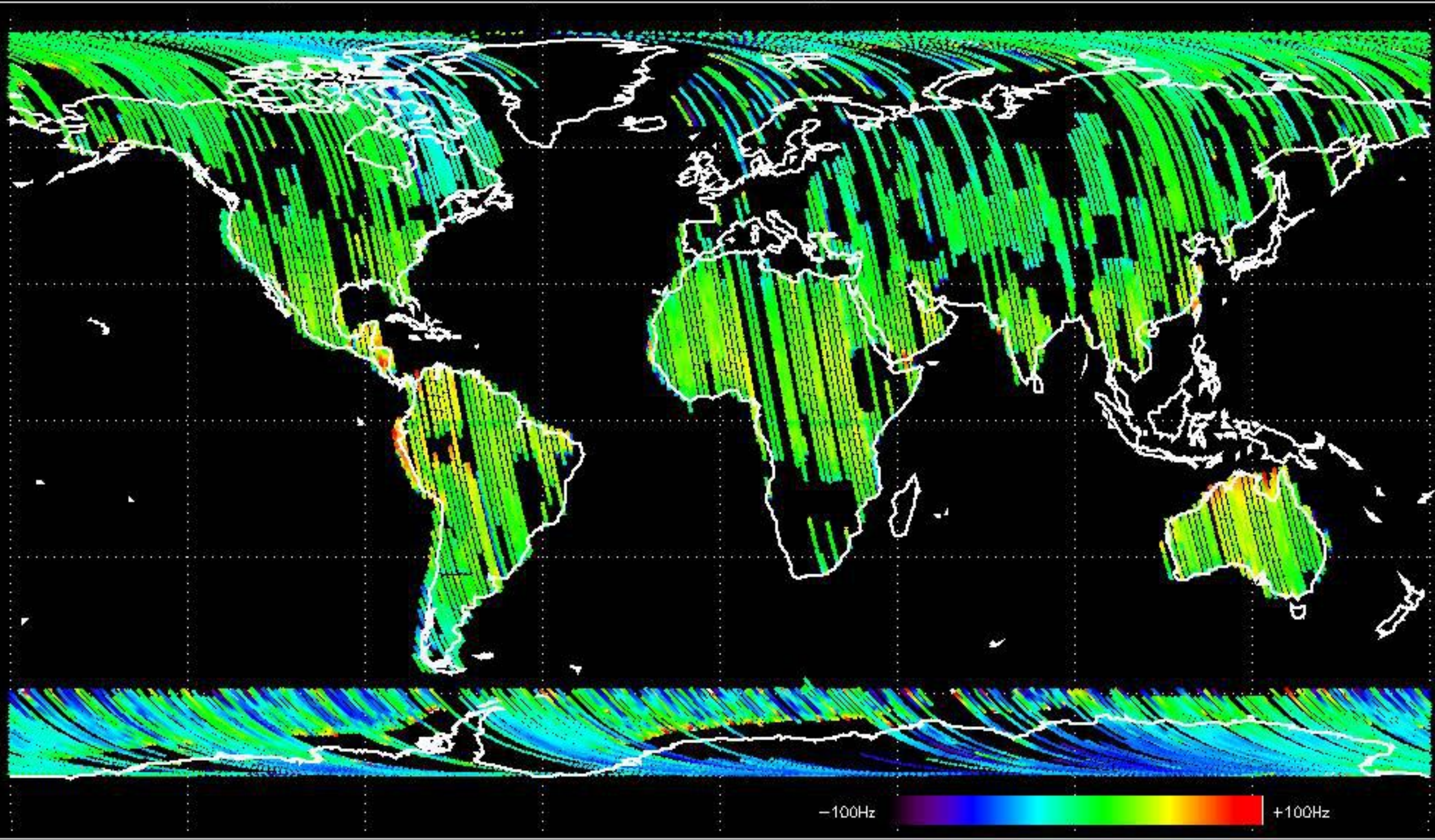


GM1 mode doppler

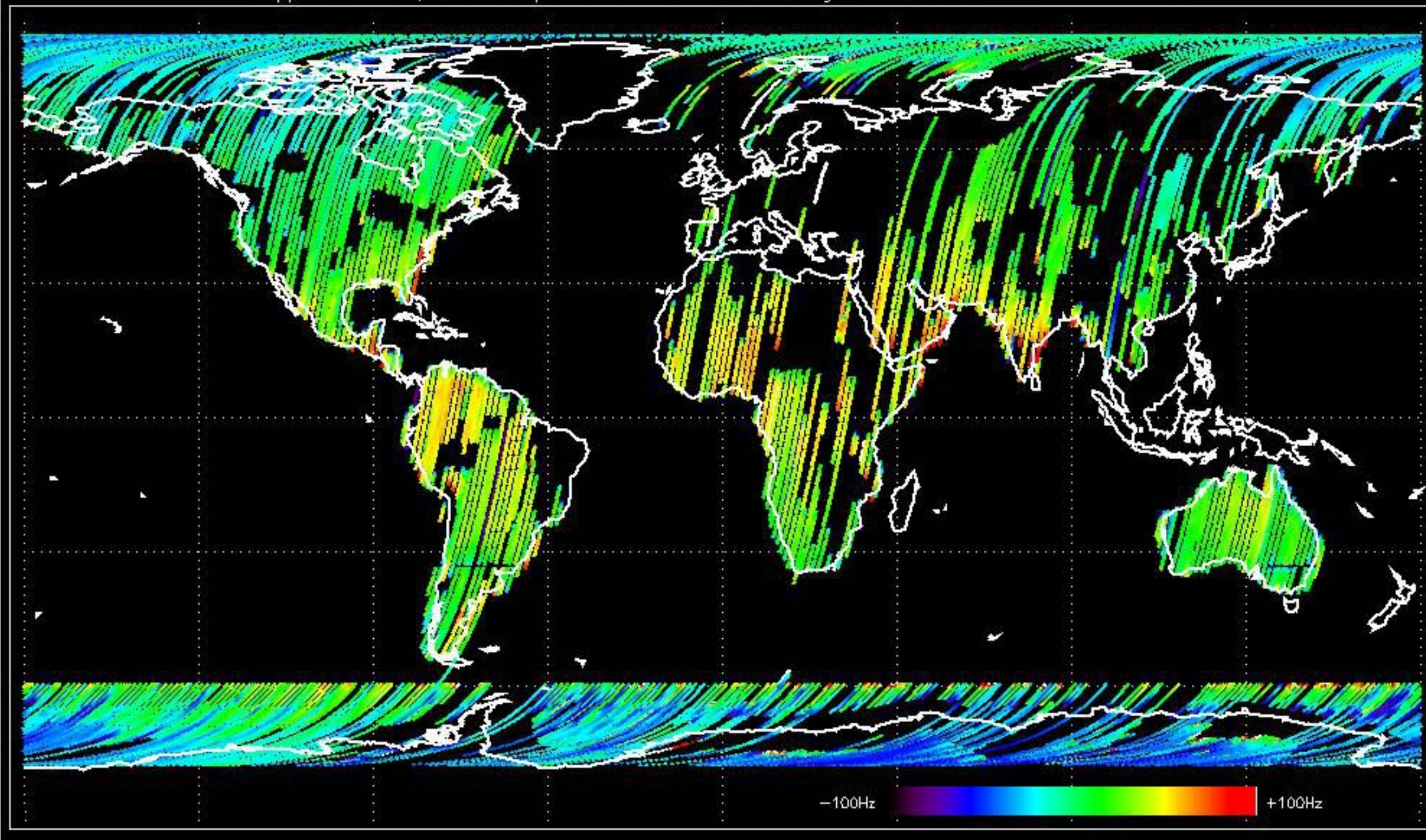




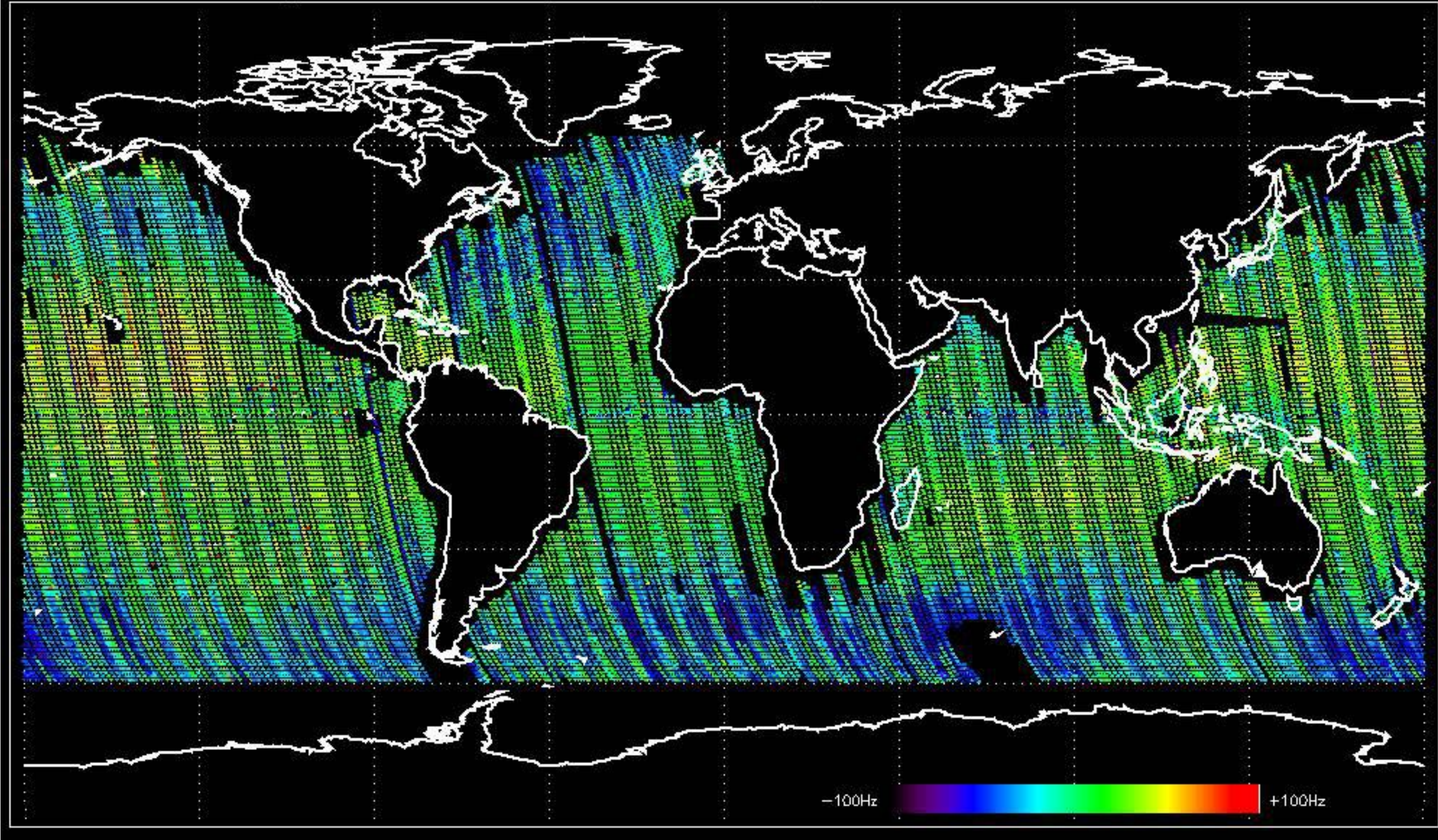
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -26.238338 Hz



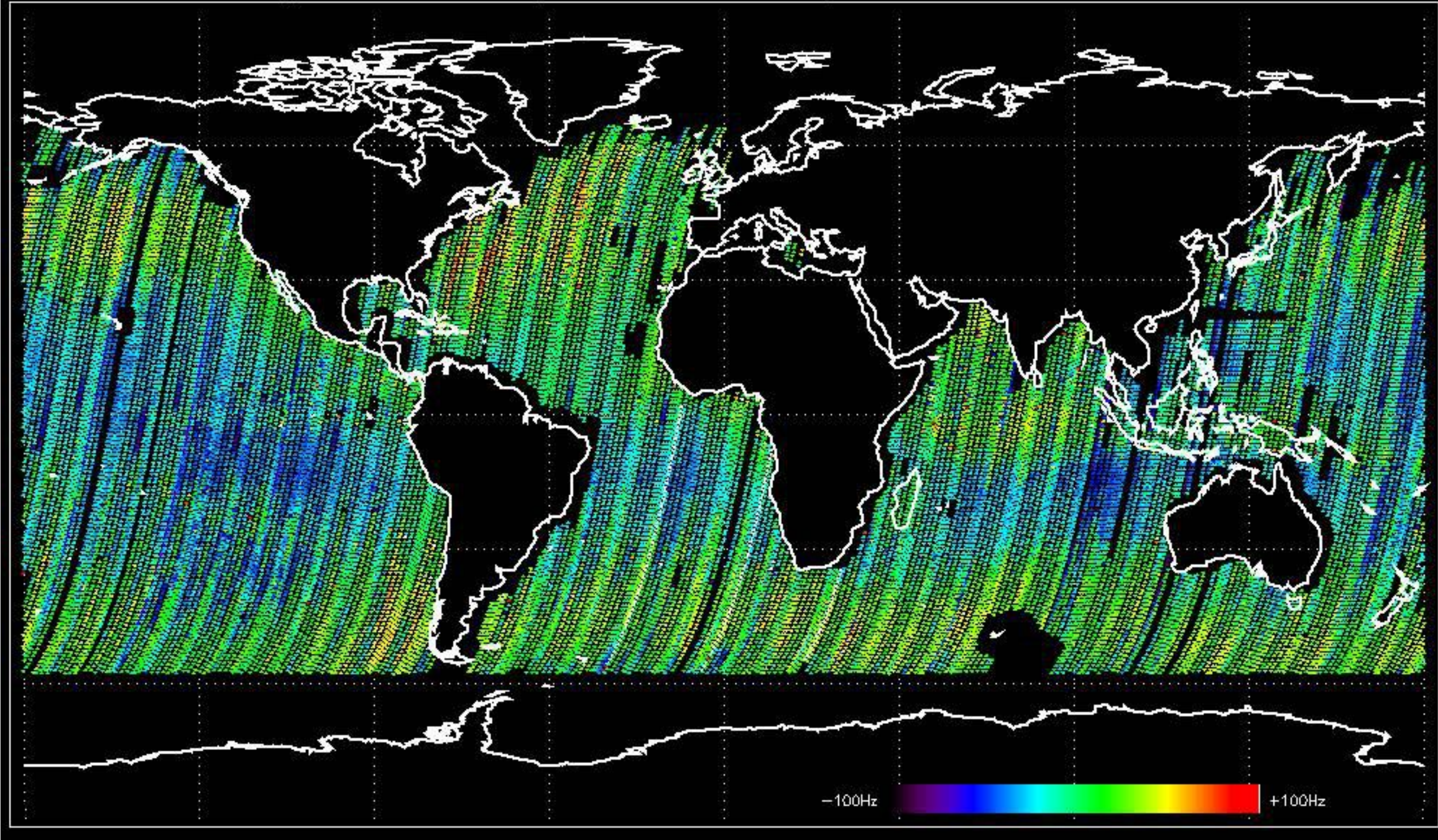
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.789936 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -20.391990 Hz

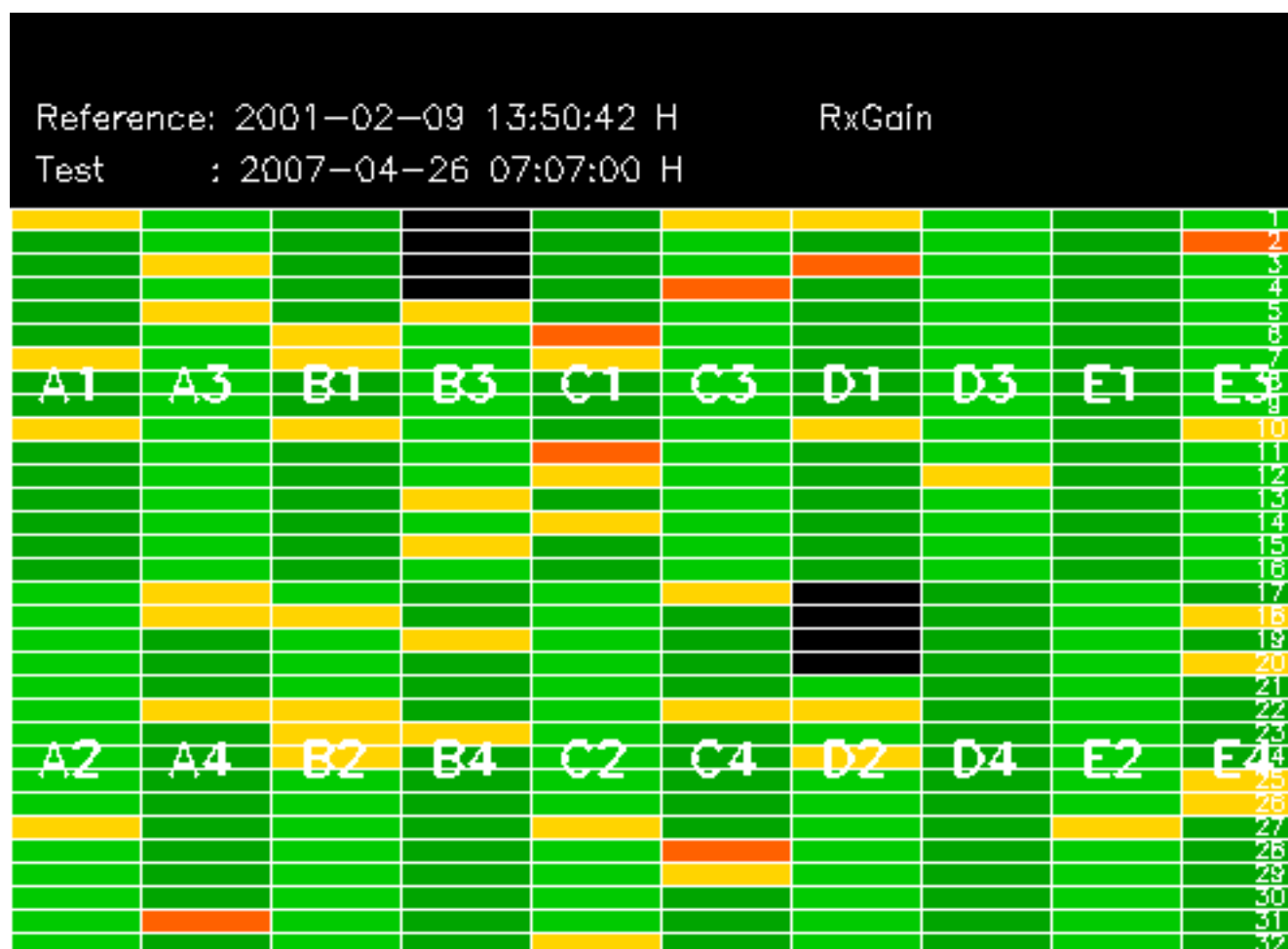


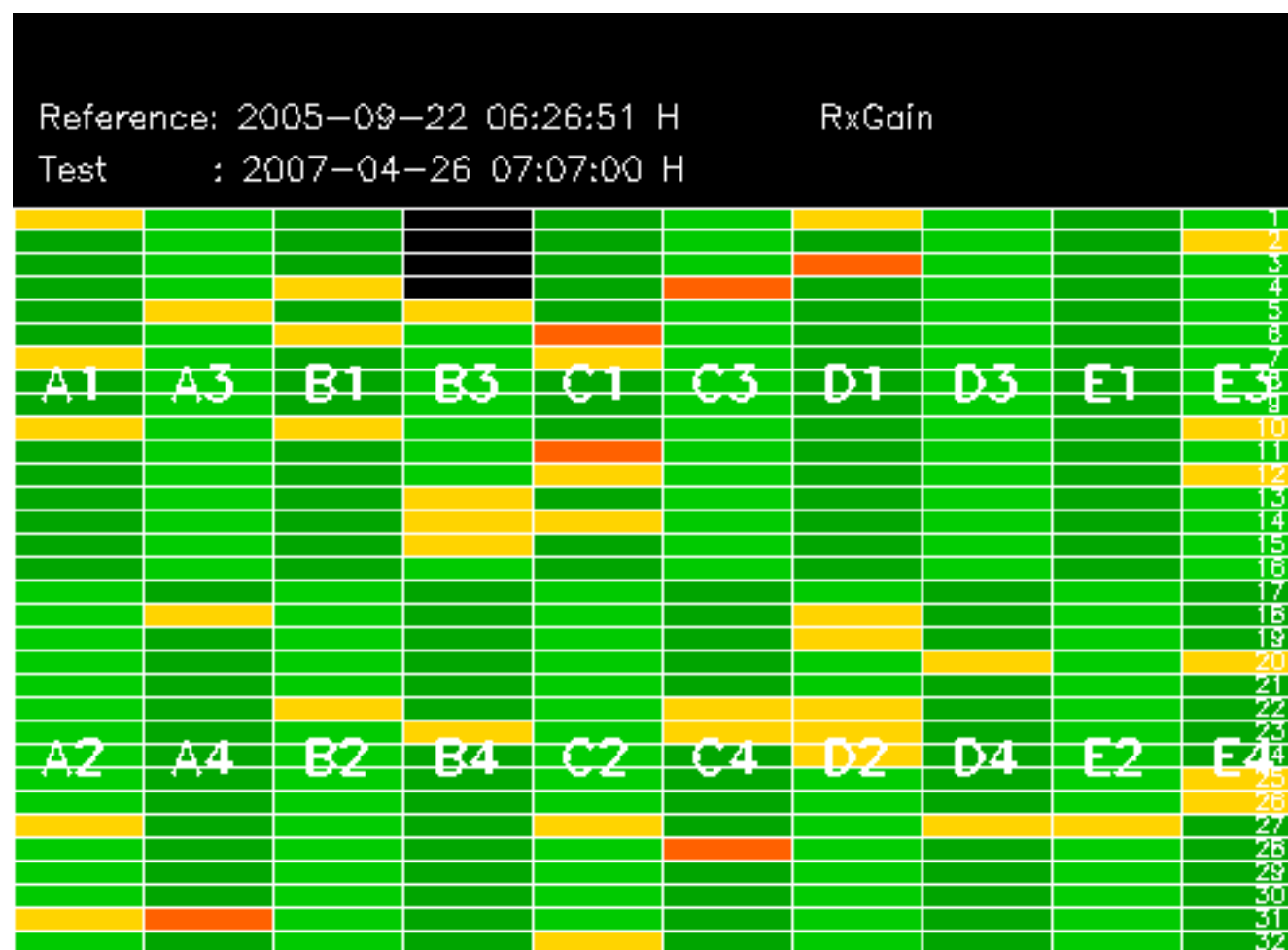
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.313414 Hz

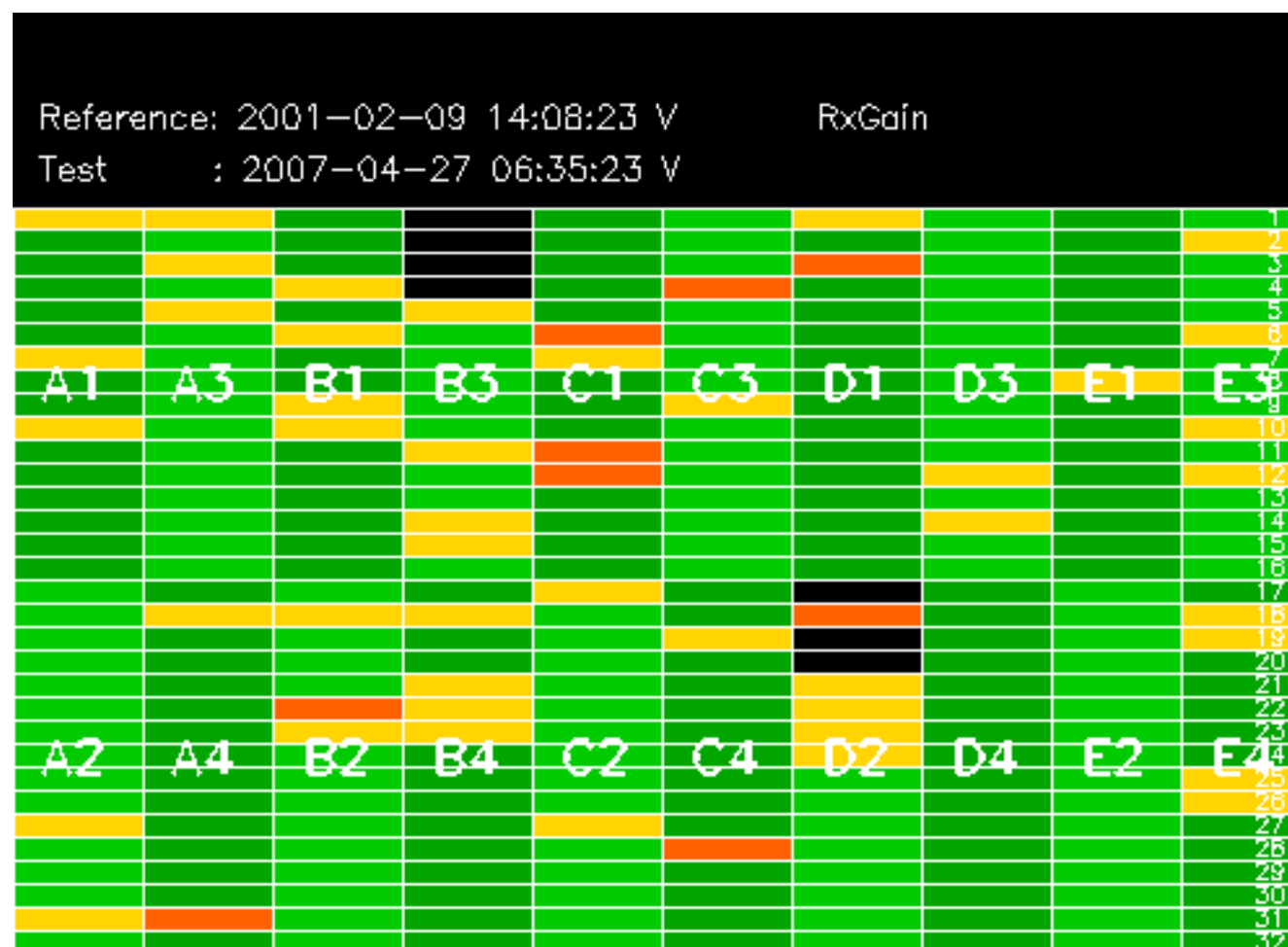


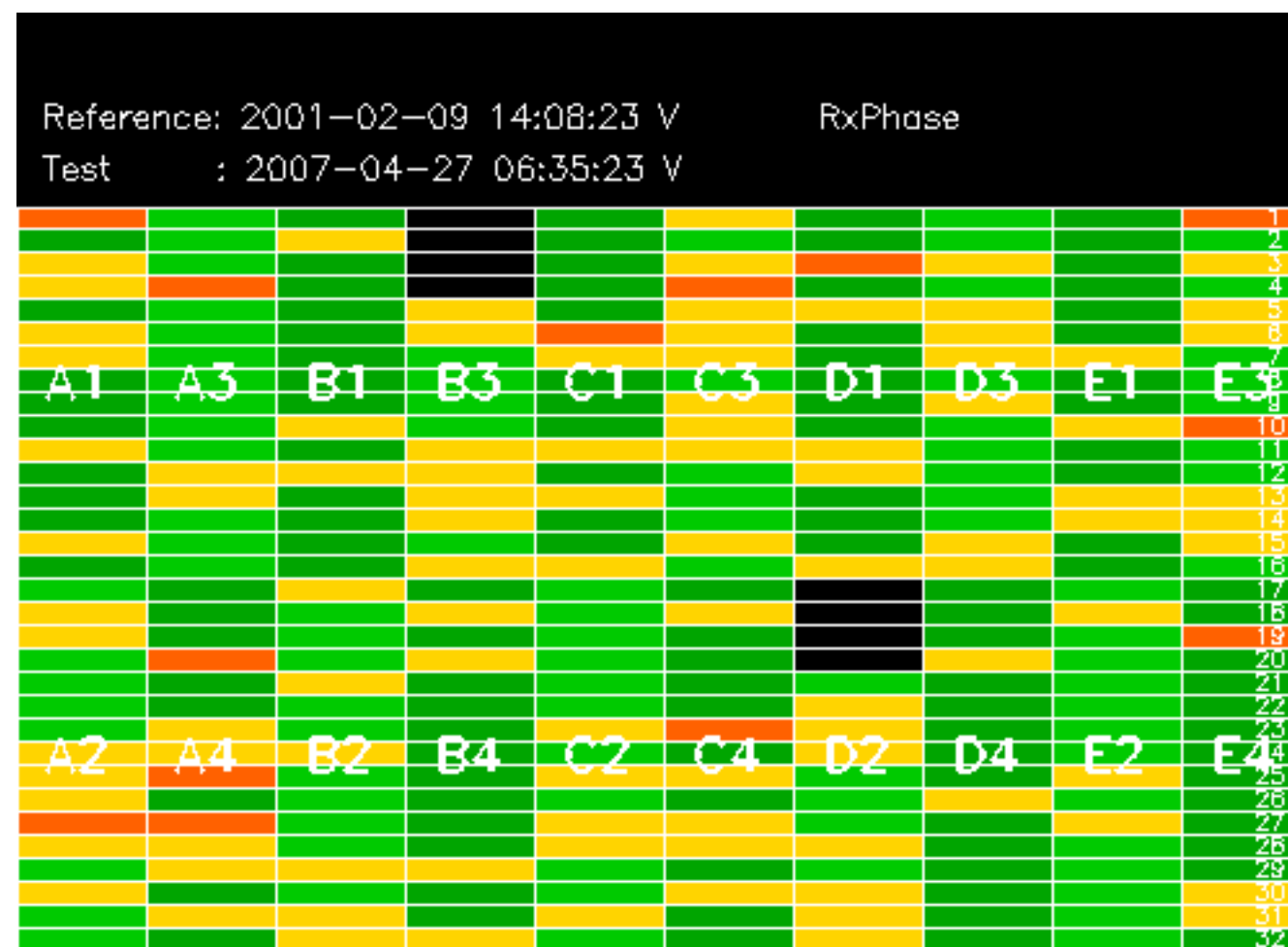
No anomalies observed on available MS products:

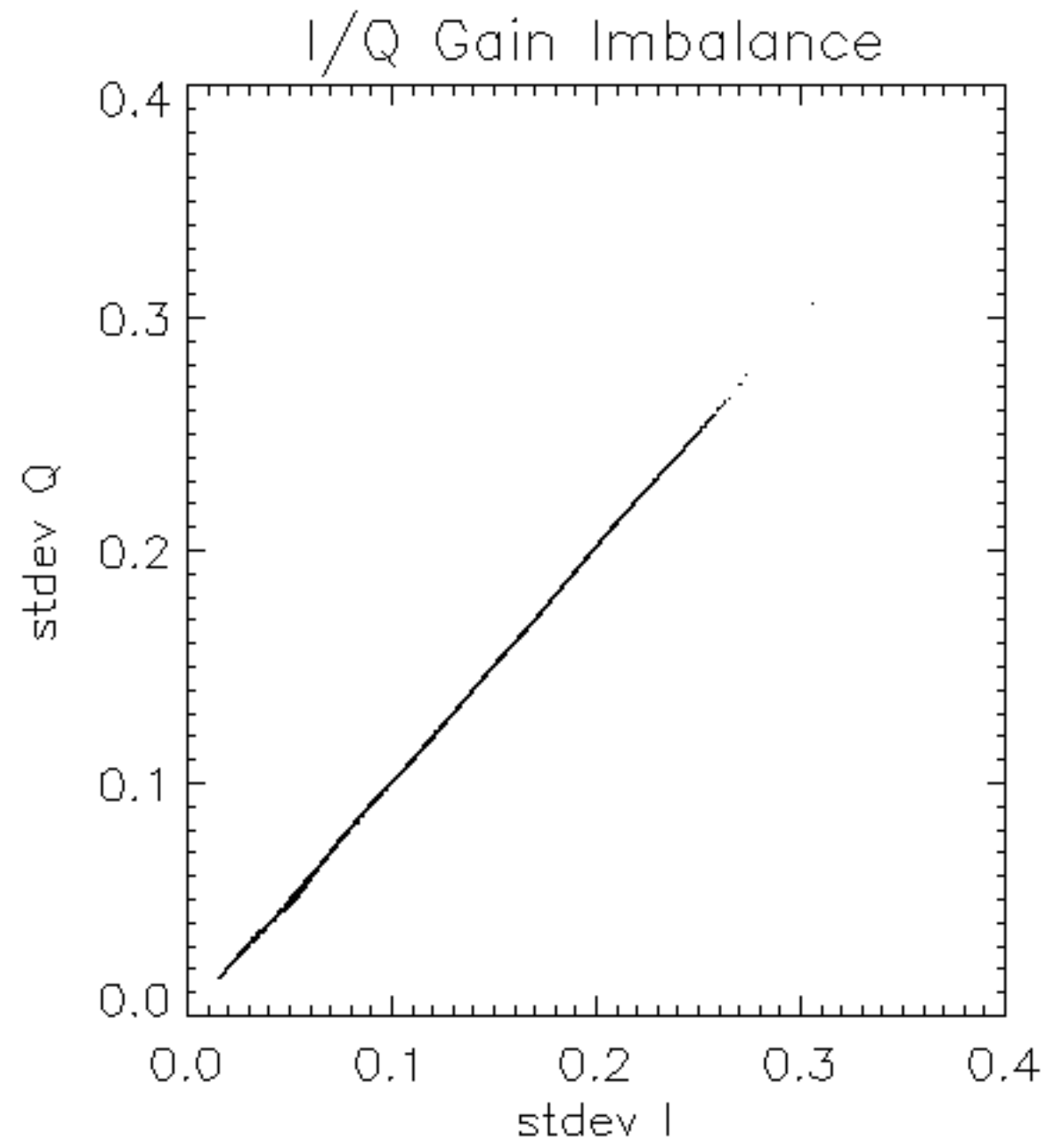
No anomalies observed.

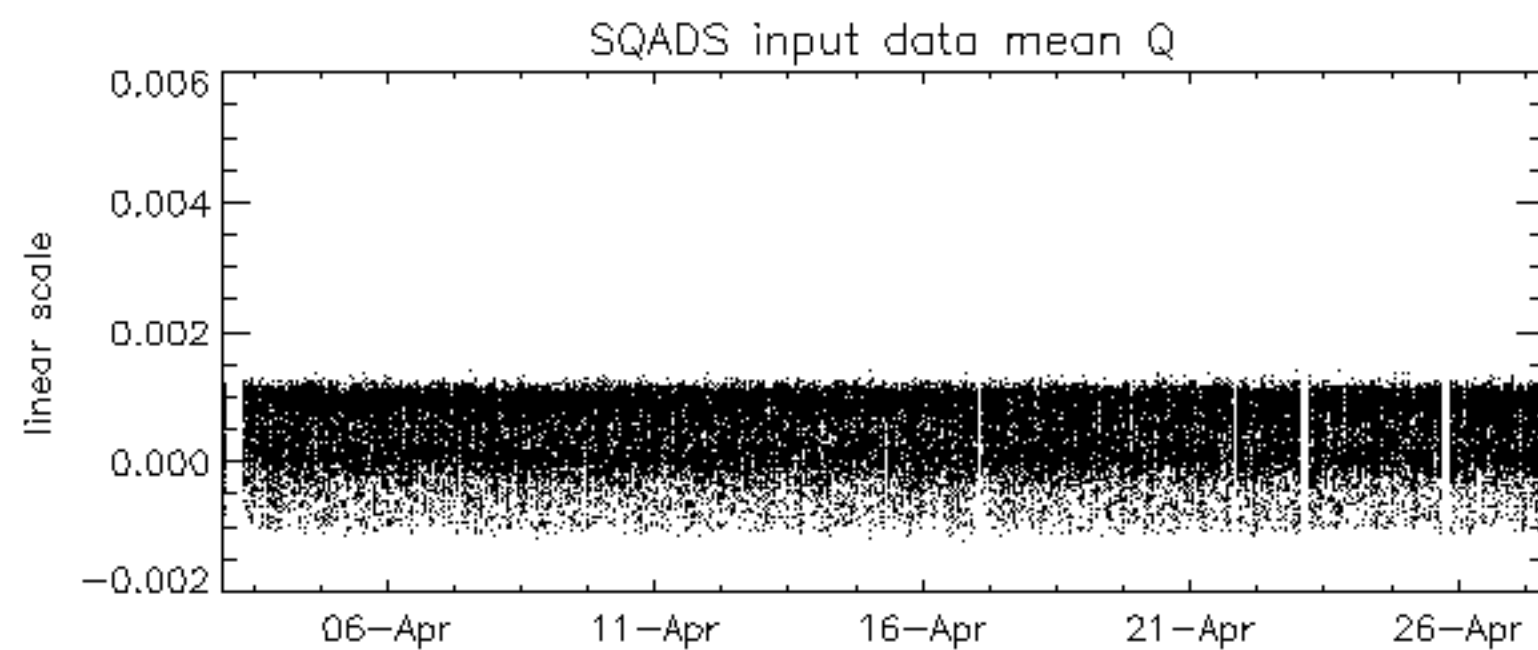
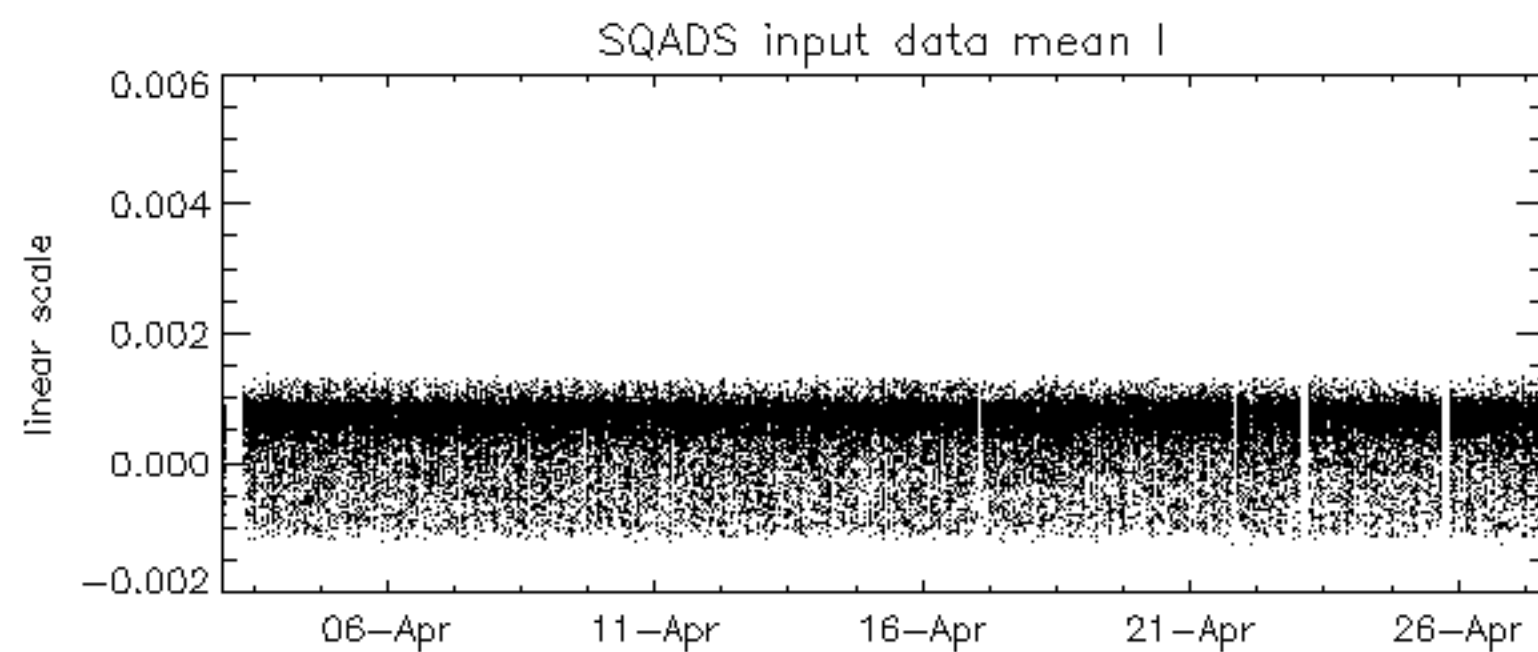
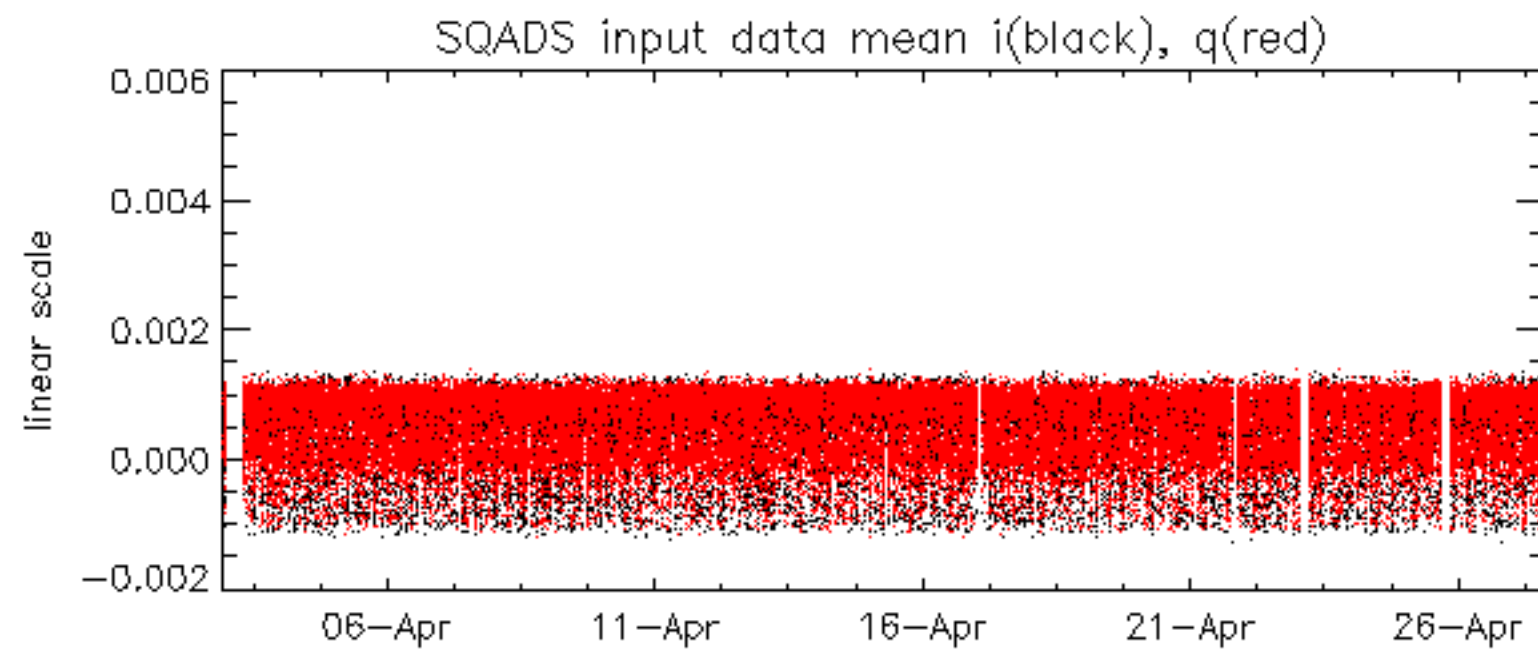


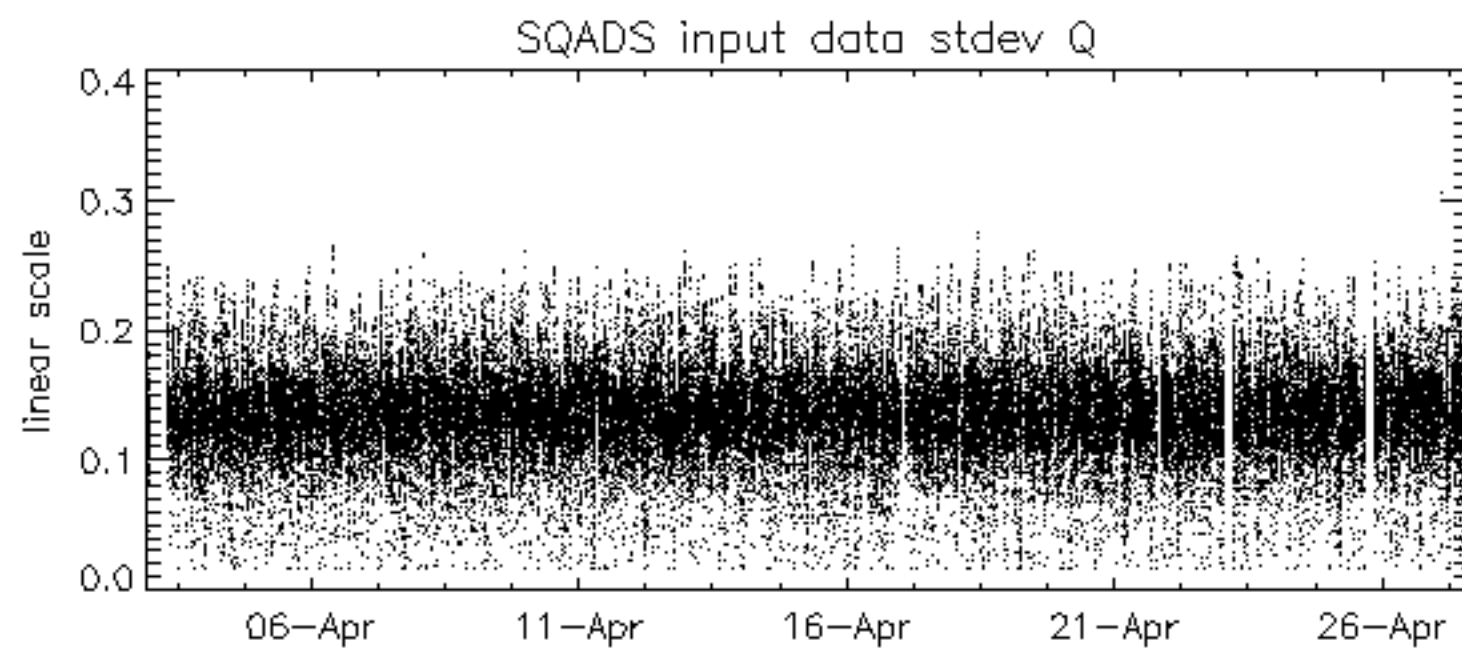
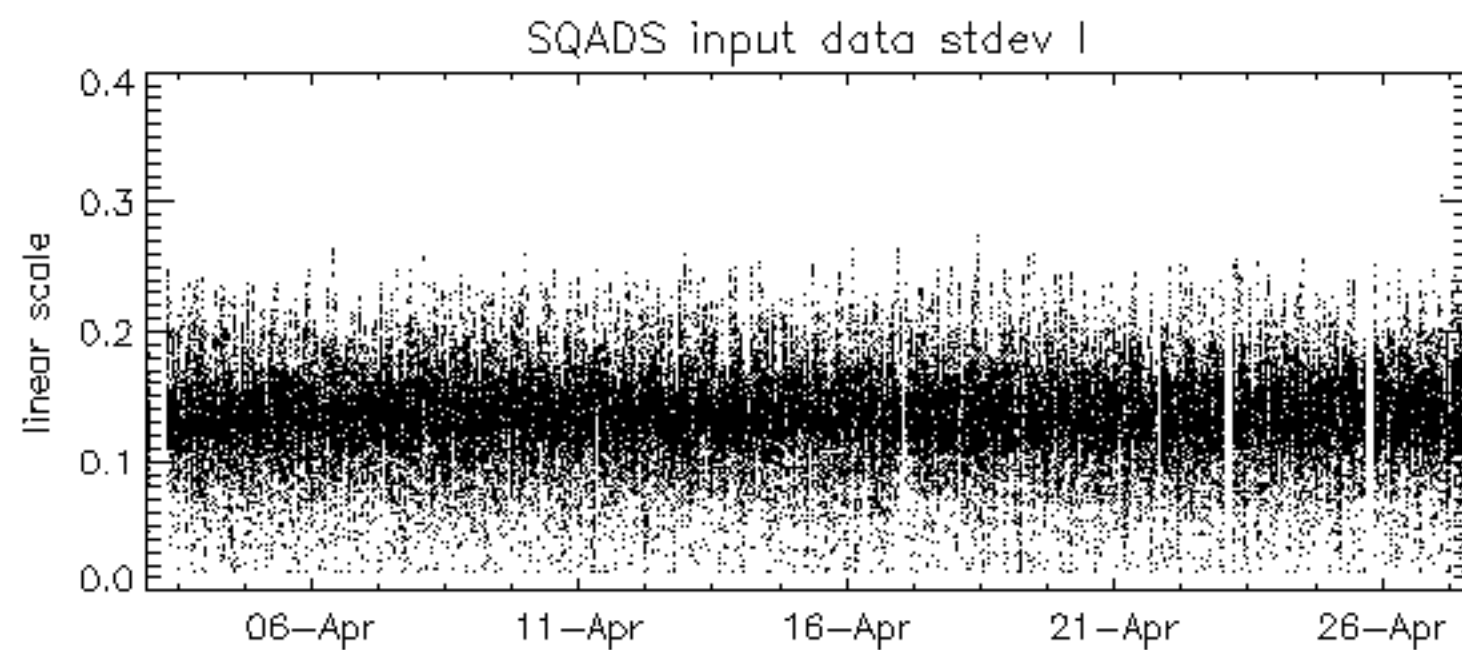
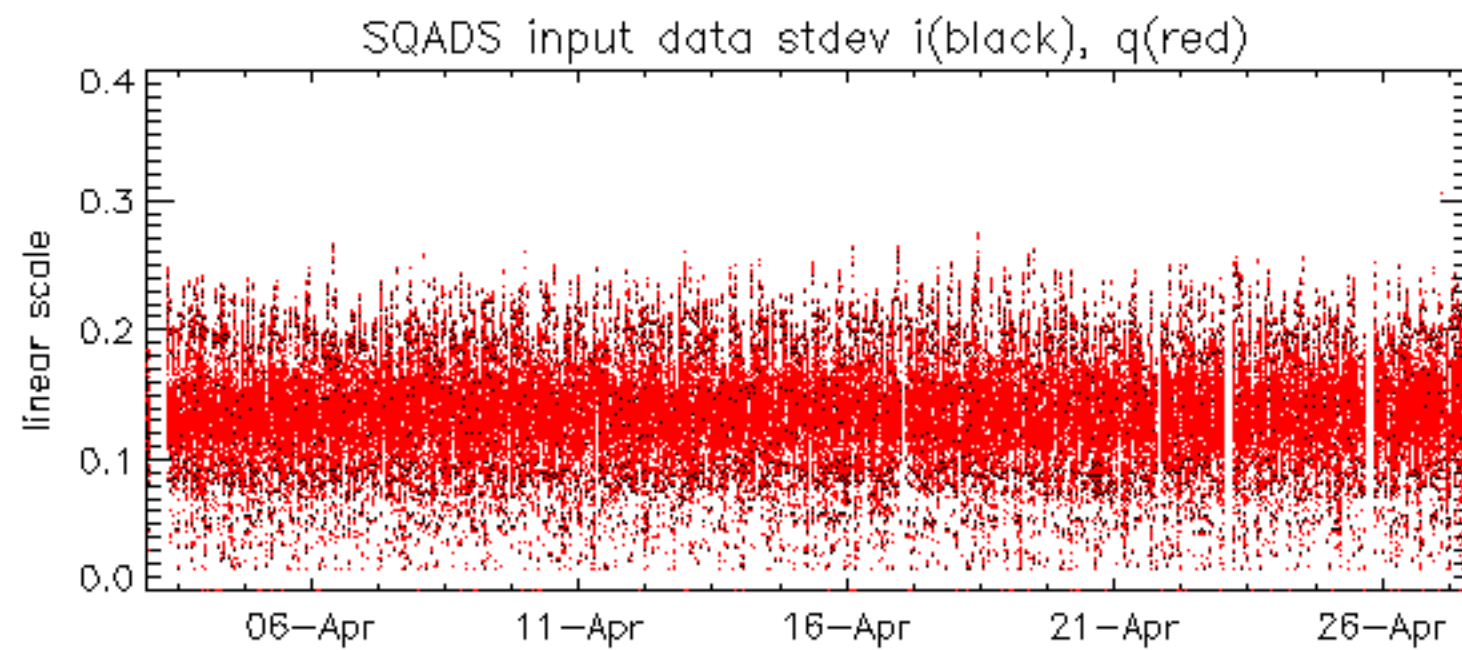








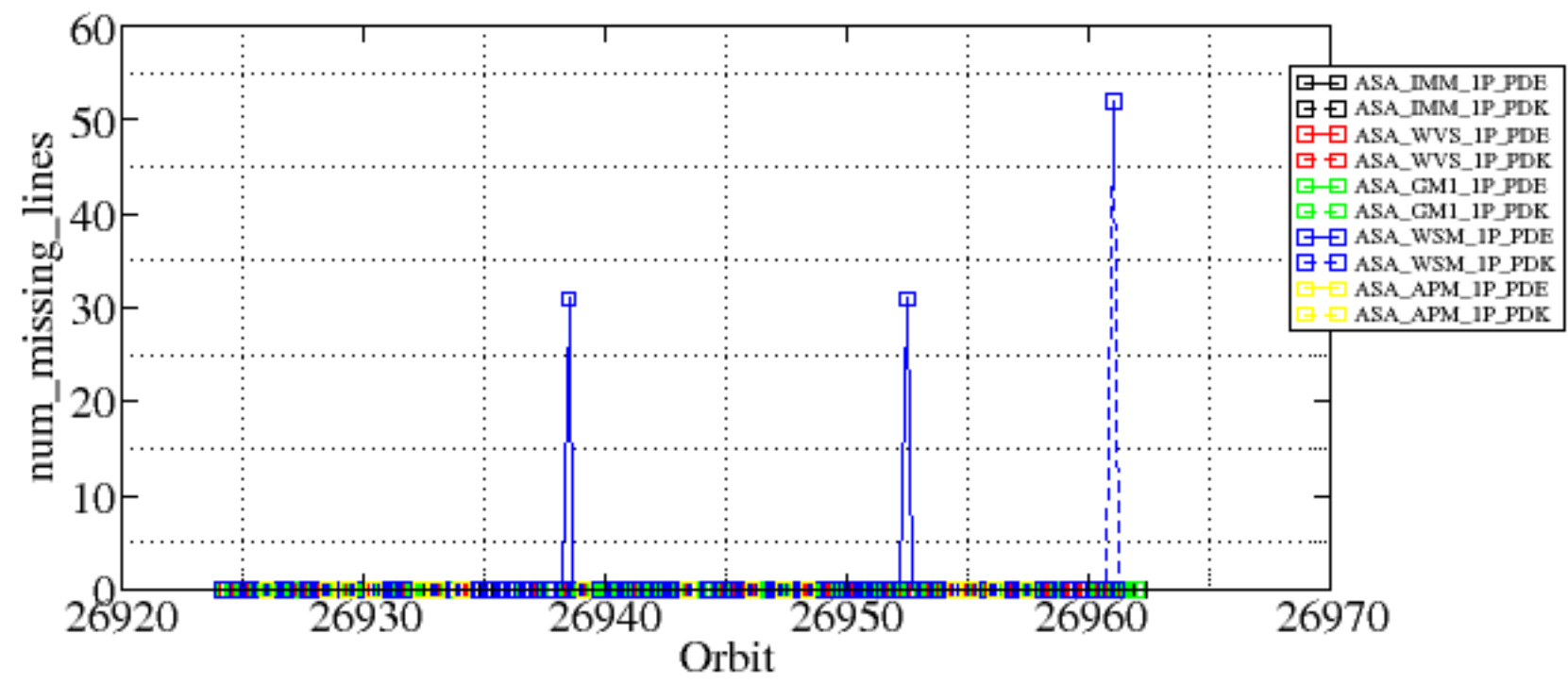


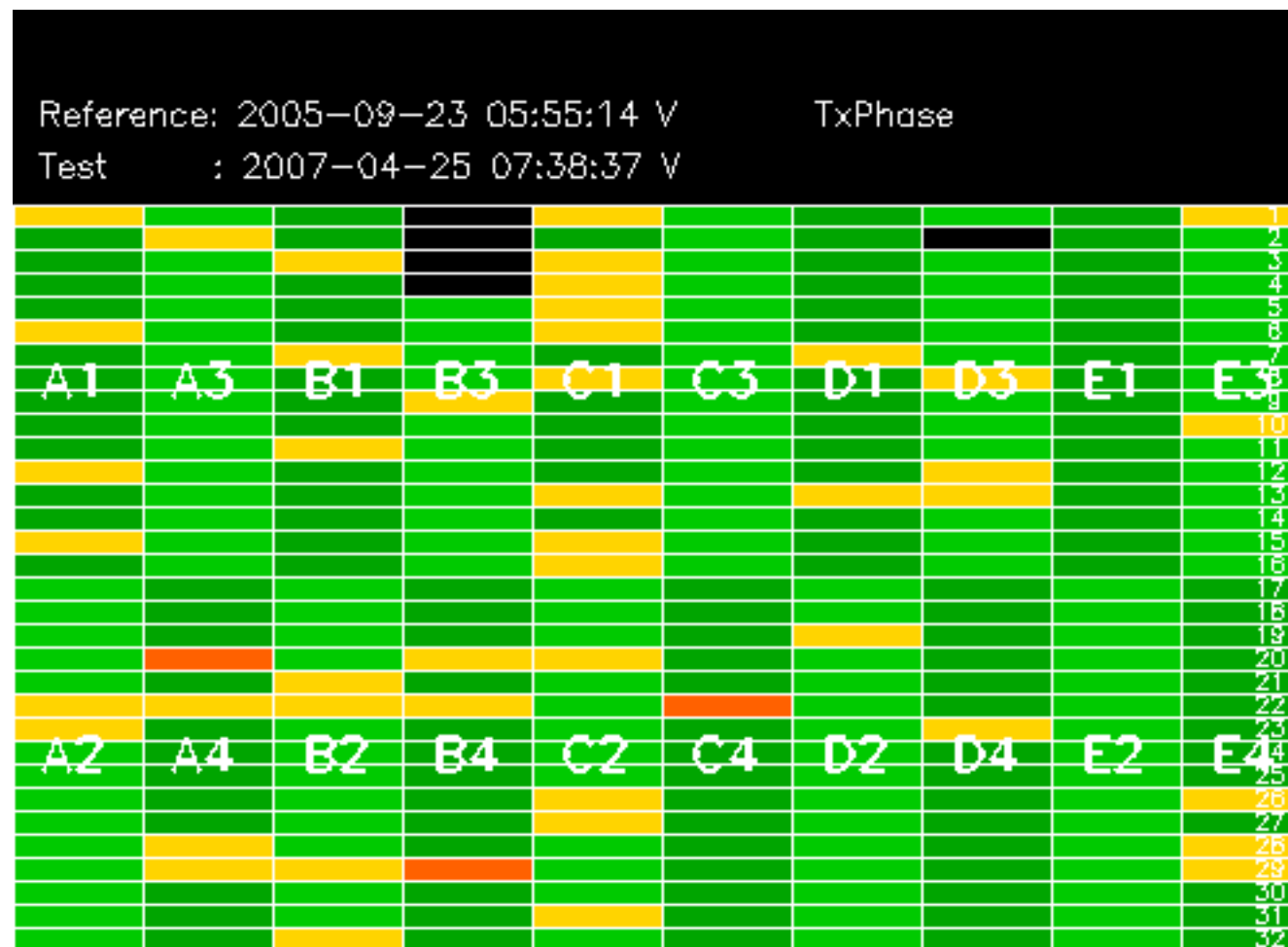


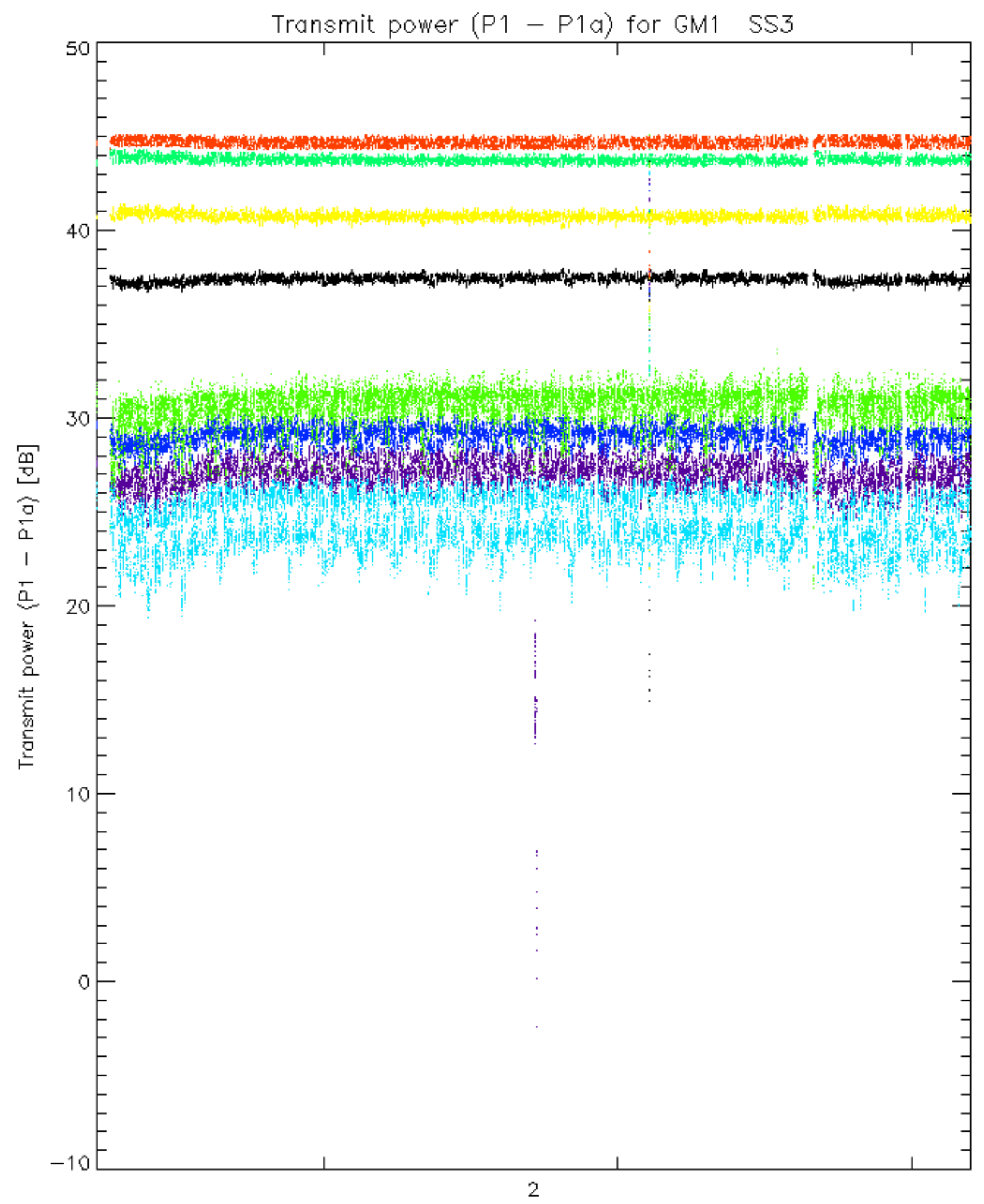
Summary of analysis for the last 3 days 2007042[567]

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

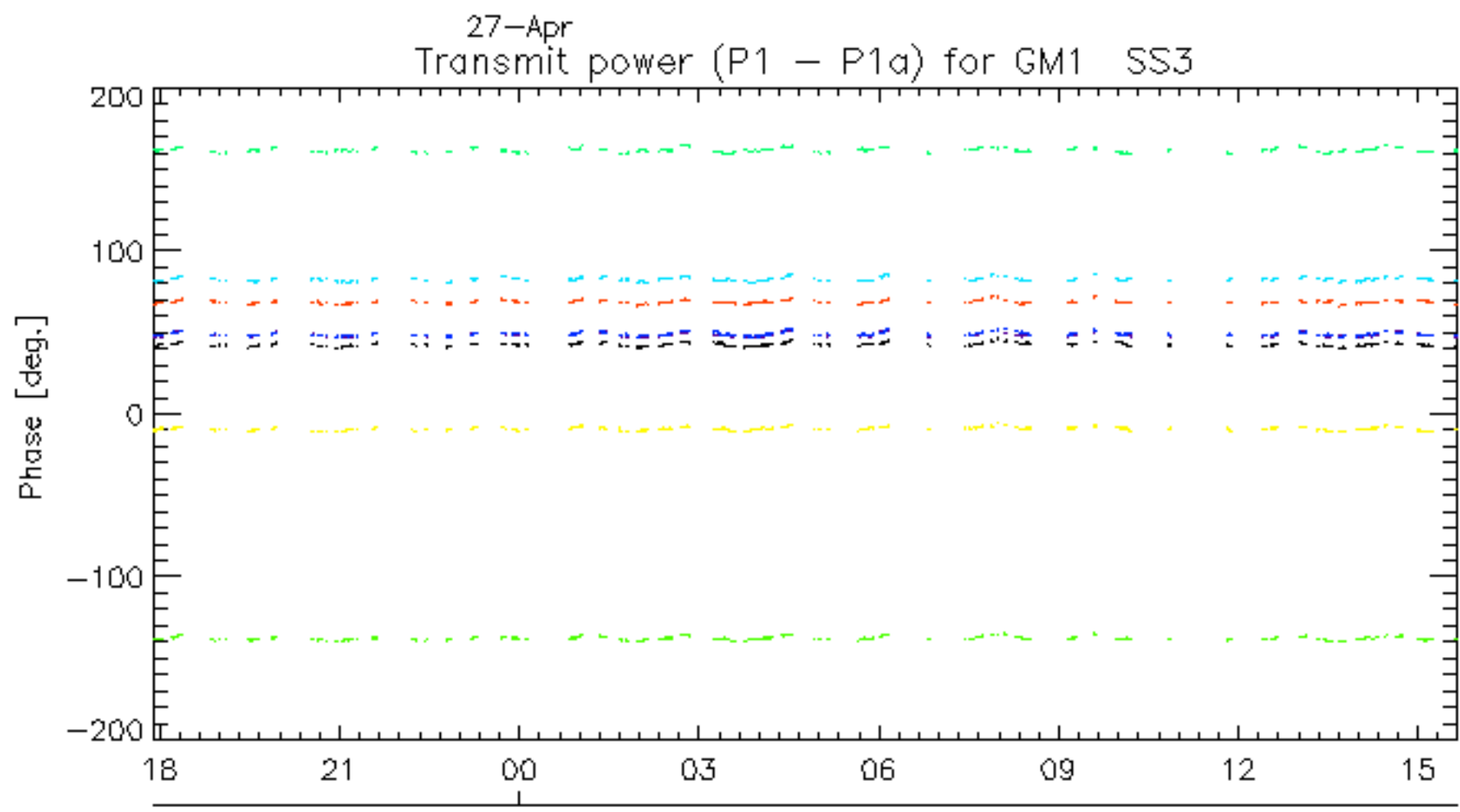
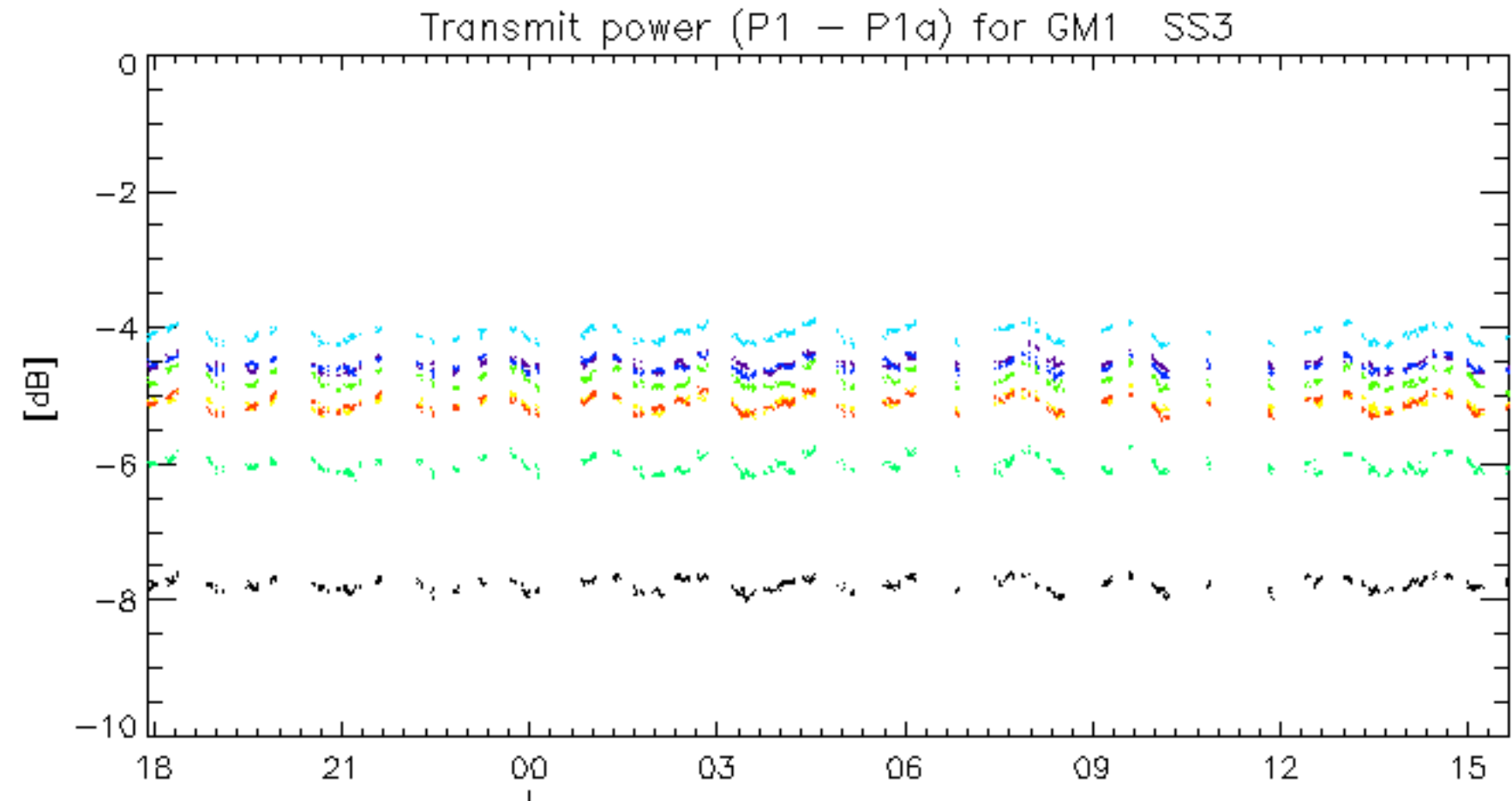
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070426_000621_000002022057_00331_26938_7094.N1	0	31
ASA_WSM_1PNPDE20070426_233444_000002632057_00345_26952_8526.N1	0	31
ASA_WSM_1PNPDK20070427_135549_000000852057_00354_26961_5249.N1	0	52
ASA_APM_1PNPDE20070426_011026_000001332057_00332_26939_7224.N1	6	0



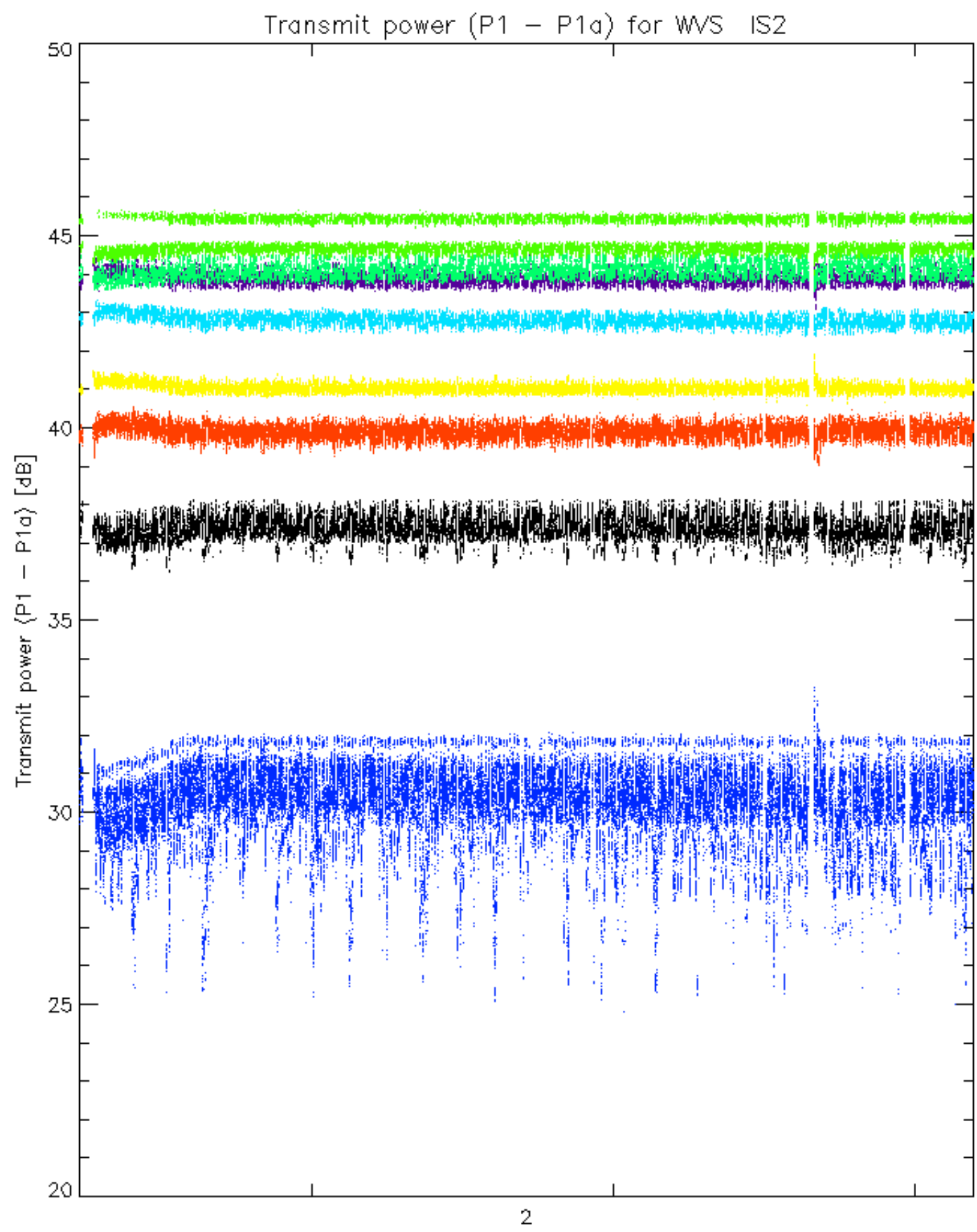




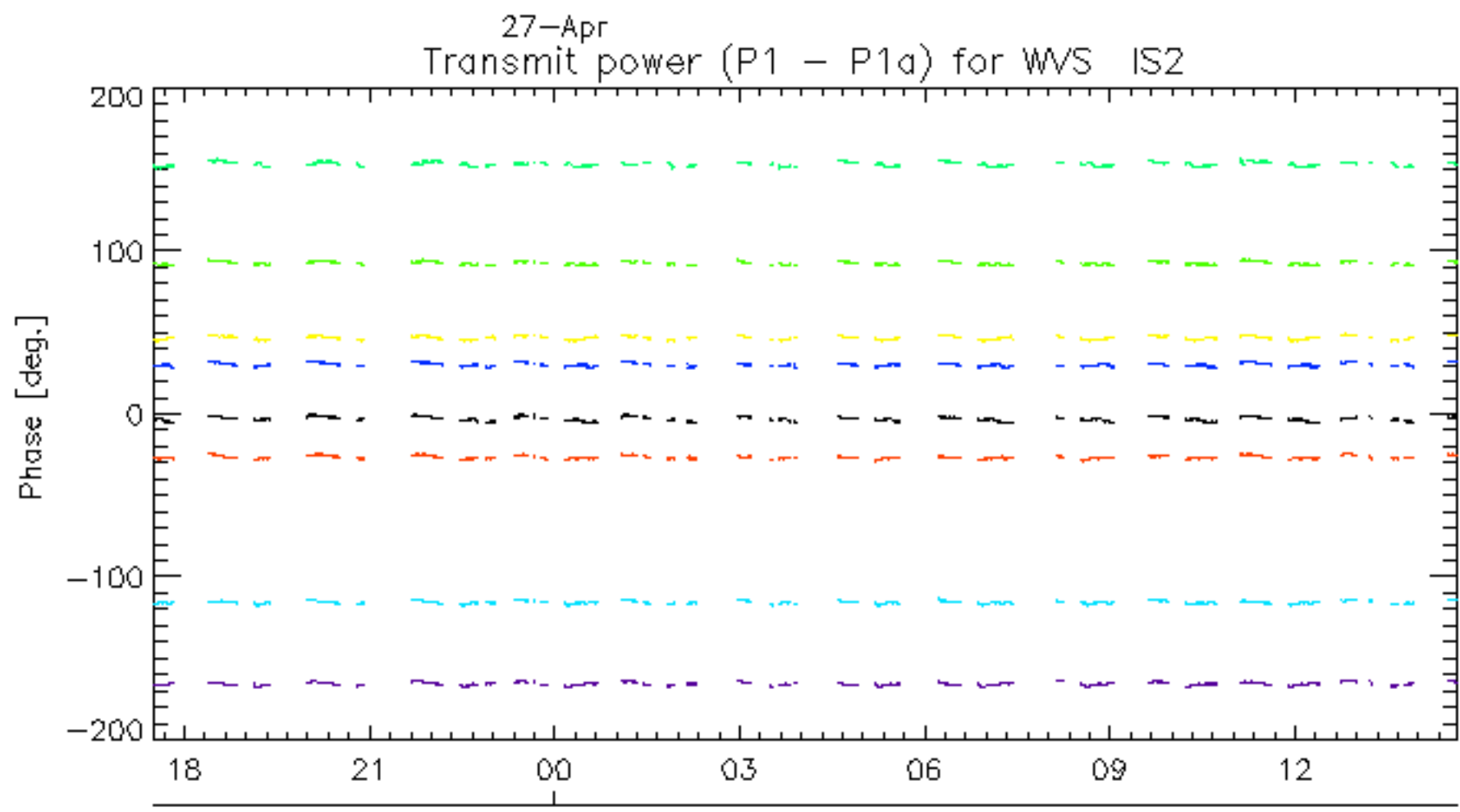
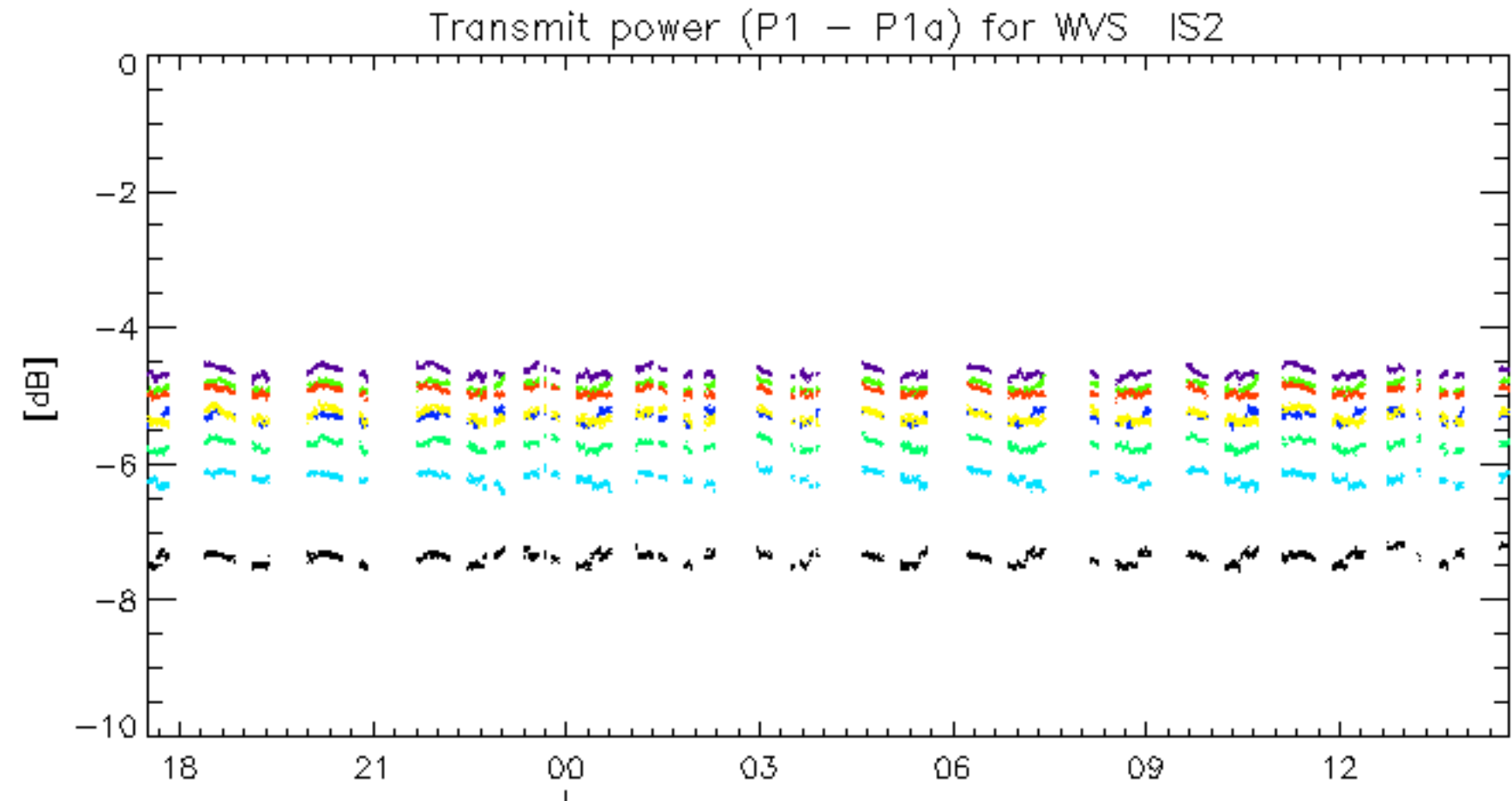
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.