

PRELIMINARY REPORT OF 070424

last update on Tue Apr 24 18:59:06 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 2007-04-23 00:00:00 to 2007-04-24 18:59:06

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	36	33	16	2	29
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	36	33	16	2	29
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	36	33	16	2	29
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	33	16	2	29

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	36	46	22	6	26
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	36	46	22	6	26
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	36	46	22	6	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	46	22	6	26

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	20070423 084150
H	20070424 081014

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
☒
☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-15.073213	0.148121	-0.120577
7	P1a	-17.547287	0.109830	-0.074042
11	P1a	-17.454226	0.344116	-0.809981
15	P1a	-12.975378	0.115173	-0.339149
19	P1a	-15.317883	0.068974	-0.378749
22	P1a	-15.888829	0.419682	-0.434144
26	P1a	-15.043571	0.209714	0.548614
30	P1a	-17.659101	0.323621	-0.666912

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.763158	0.010861	-0.024887
7	P1	-3.145915	0.009082	-0.003283
11	P1	-4.207474	0.012353	-0.009633
15	P1	-6.398240	0.019198	-0.122277
19	P1	-3.785787	0.010409	0.058464
22	P1	-4.745829	0.009296	-0.028867
26	P1	-3.921932	0.019313	0.111416
30	P1	-5.967263	0.009527	0.040596

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.659269	0.090549	-0.009234
7	P2	-21.567589	0.087194	0.121769
11	P2	-15.366106	0.115205	0.238549
15	P2	-7.123196	0.088404	-0.000749
19	P2	-9.115452	0.079747	0.054664
22	P2	-18.084757	0.077149	0.040447
26	P2	-16.611418	0.080892	-0.033435
30	P2	-19.279833	0.082409	0.059033

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.243459	0.005507	0.005443
7	P3	-8.243459	0.005507	0.005443
11	P3	-8.243459	0.005507	0.005443
15	P3	-8.243459	0.005507	0.005443
19	P3	-8.243459	0.005507	0.005443
22	P3	-8.243459	0.005507	0.005443
26	P3	-8.243459	0.005507	0.005443
30	P3	-8.243459	0.005507	0.005443

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	-11.197333	0.154395	-0.141823
7	P1a	-10.069773	0.242527	-0.052317
11	P1a	-10.689844	0.115296	0.066052
15	P1a	-10.845823	0.178116	0.089204
19	P1a	-15.792570	0.094692	-0.046693
22	P1a	-21.373322	1.461149	-0.759644
26	P1a	-15.492233	0.385740	-0.360698
30	P1a	-18.311323	0.470300	0.430476

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.453957	0.061468	-0.021765
7	P1	-2.415824	0.138308	0.023270
11	P1	-2.893251	0.029162	0.071076
15	P1	-3.822121	0.039890	0.055661
19	P1	-3.584261	0.014948	-0.004581
22	P1	-4.974695	0.023620	0.118547
26	P1	-6.032570	0.030395	-0.030627
30	P1	-5.335129	0.035416	-0.008988

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.168915	0.066604	-0.049024
7	P2	-22.032839	0.236553	0.005937
11	P2	-10.630639	0.047750	-0.003464
15	P2	-4.916078	0.041143	-0.088948
19	P2	-6.866232	0.040617	-0.019273
22	P2	-8.112028	0.108402	-0.001429
26	P2	-24.316959	0.174028	0.001903
30	P2	-21.712000	0.119440	0.092484

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.090505	0.004992	-0.001133
7	P3	-8.090561	0.005004	-0.000890
11	P3	-8.090367	0.004998	-0.001618
15	P3	-8.090285	0.004999	-0.001715
19	P3	-8.090431	0.005023	-0.000912
22	P3	-8.090368	0.004982	-0.000663
26	P3	-8.090432	0.005003	-0.000774
30	P3	-8.090328	0.004998	-0.000843

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	0.000542279
	stdev	2.02745e-07
MEAN Q	mean	0.000491253
	stdev	2.44583e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135451
	stdev	0.00123511
STDEV Q	mean	0.135843
	stdev	0.00125285



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007042[234]

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_WVS_1PNPDK20070424_070914_000005242057_00307_26914_0654.N1	0	16
ASA_GM1_1PNPDK20070422_132003_000001872057_00282_26889_8760.N1	0	30
ASA_GM1_1PNPDK20070422_145255_000003082057_00283_26890_8885.N1	0	7
ASA_GM1_1PNPDK20070422_145255_000003202057_00283_26890_0097.N1	0	7
ASA_GM1_1PNPDK20070423_080100_000001442057_00293_26900_9584.N1	0	13
ASA_WSM_1PNPDE20070422_145121_000000852057_00283_26890_2353.N1	0	32
ASA_WSM_1PNPDE20070422_171455_000001832057_00284_26891_2412.N1	0	44
ASA_WSM_1PNPDE20070422_181428_000001772057_00285_26892_2406.N1	0	57
ASA_WSM_1PNPDE20070424_052315_000002022057_00306_26913_4879.N1	0	72

ASA_APM_1PNPDE20070424_021349_000000402057_00304_26911_4412.N1	13	0
ASA_APM_1PNPDK20070424_084924_000000402057_00308_26915_0777.N1	15	257



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)

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

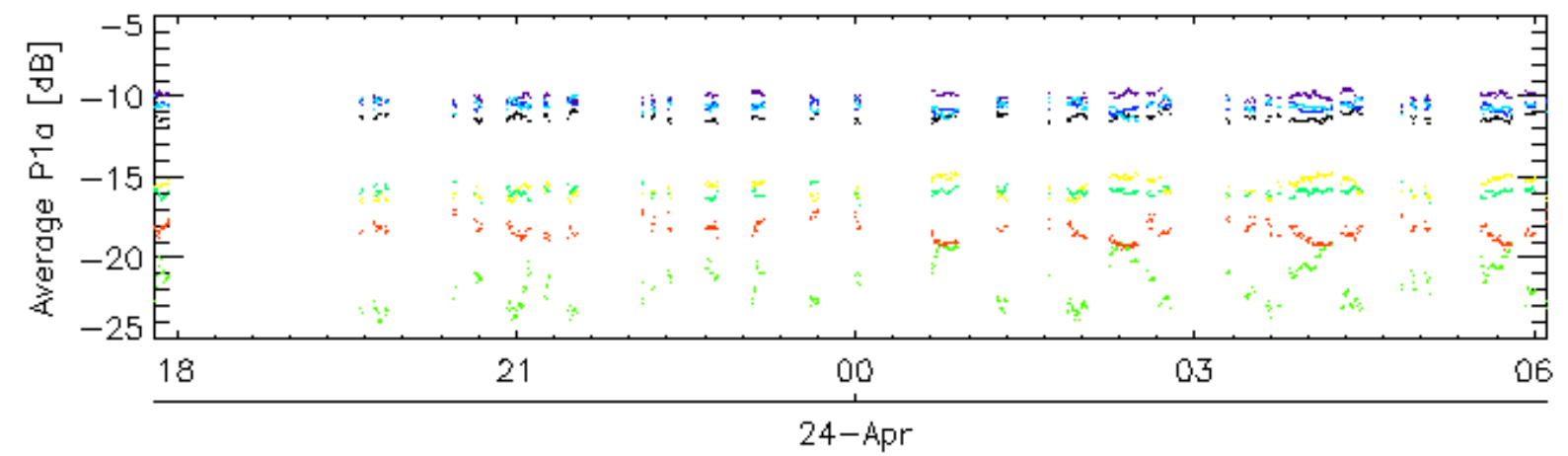
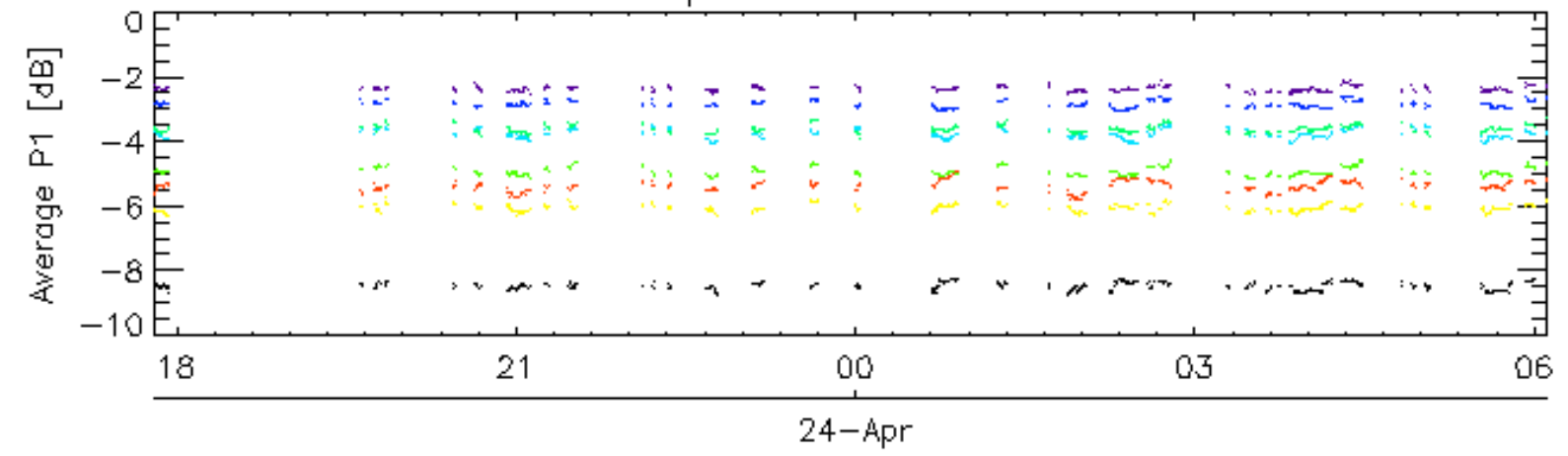
7.5 - Absolute Doppler for GM1

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

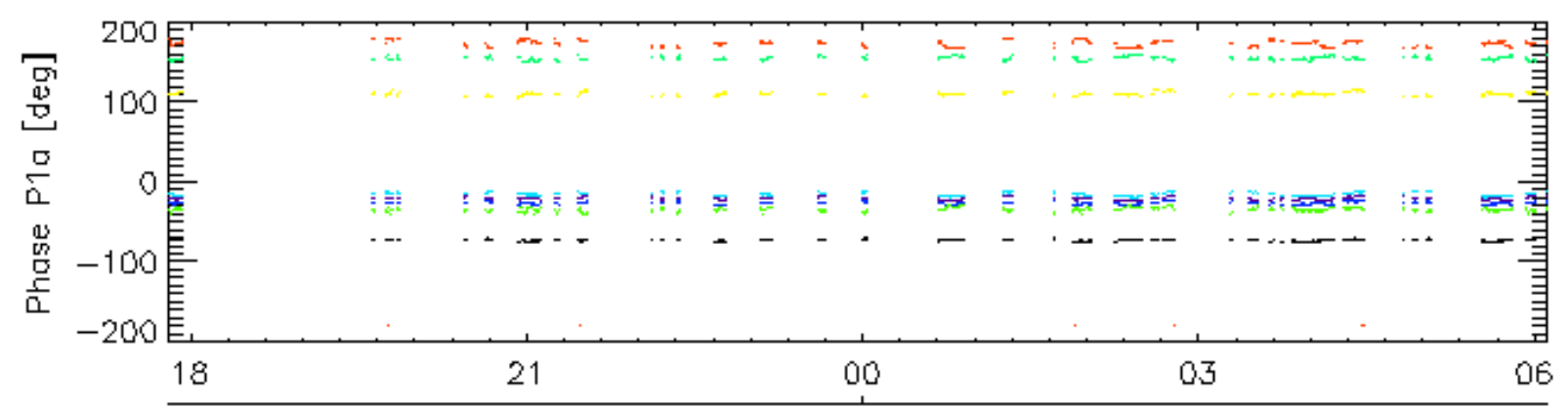
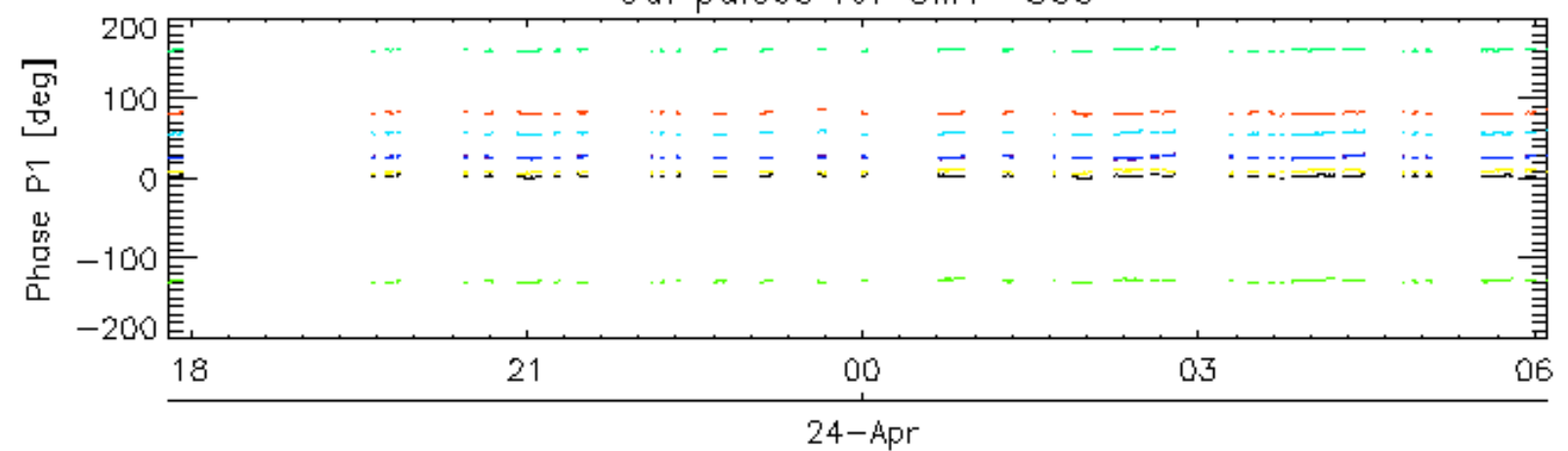
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

Cal pulses for GM1 SS3

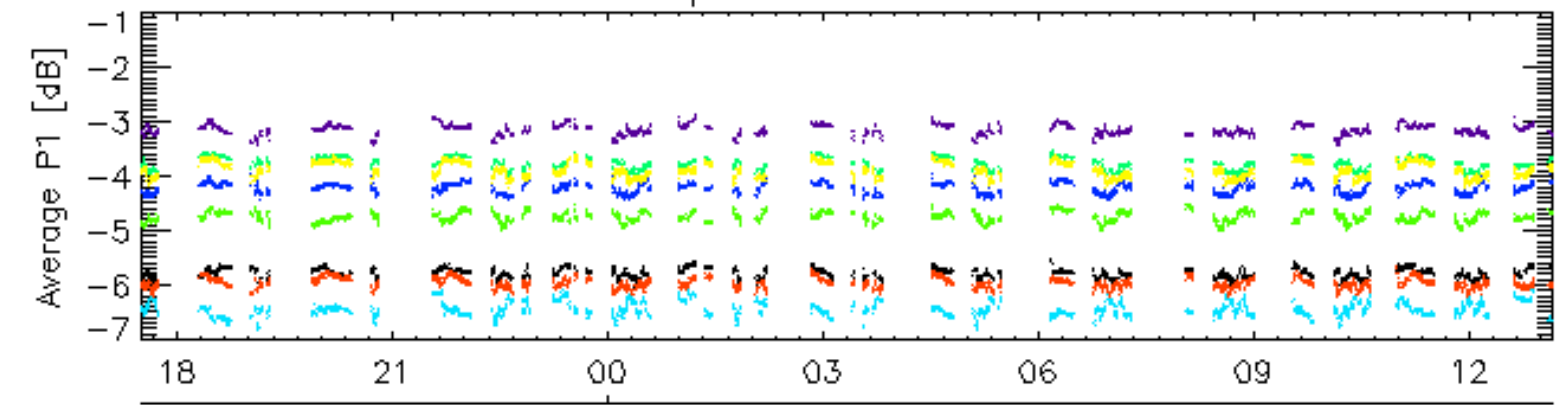


Cal pulses for GM1 SS3

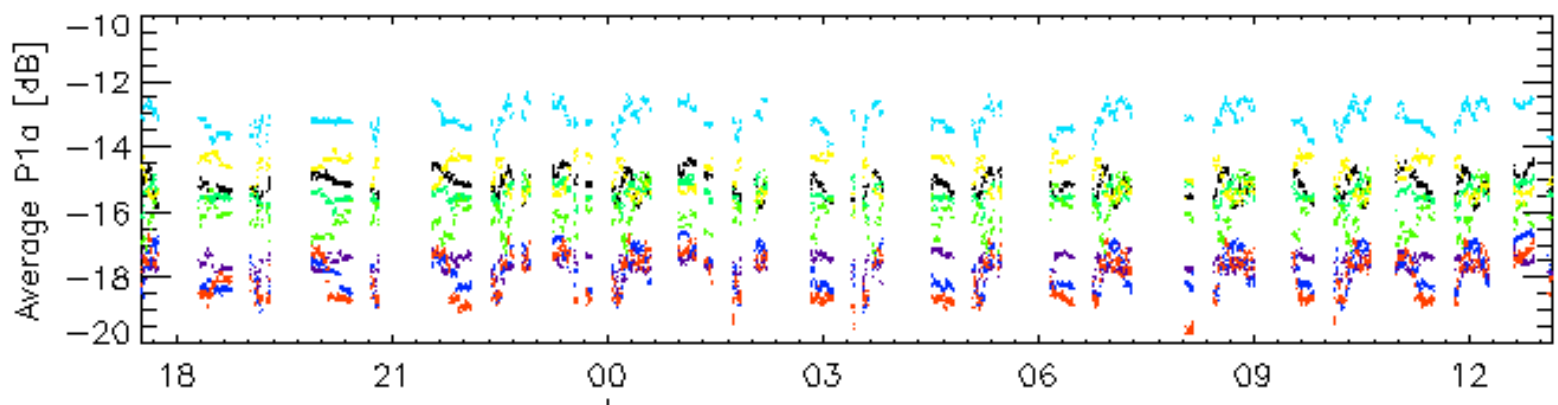


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

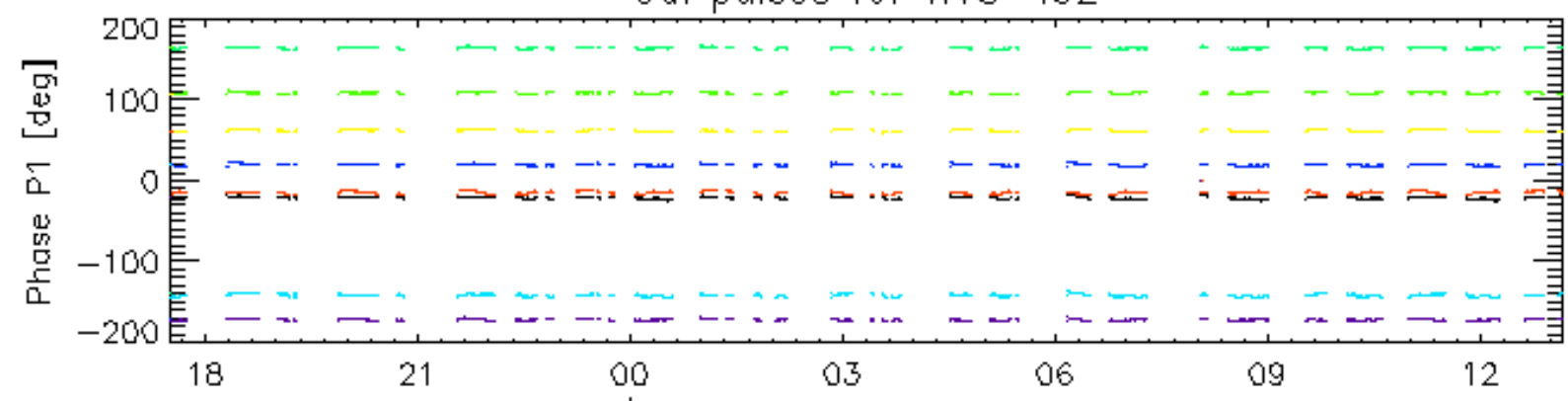


24-Apr

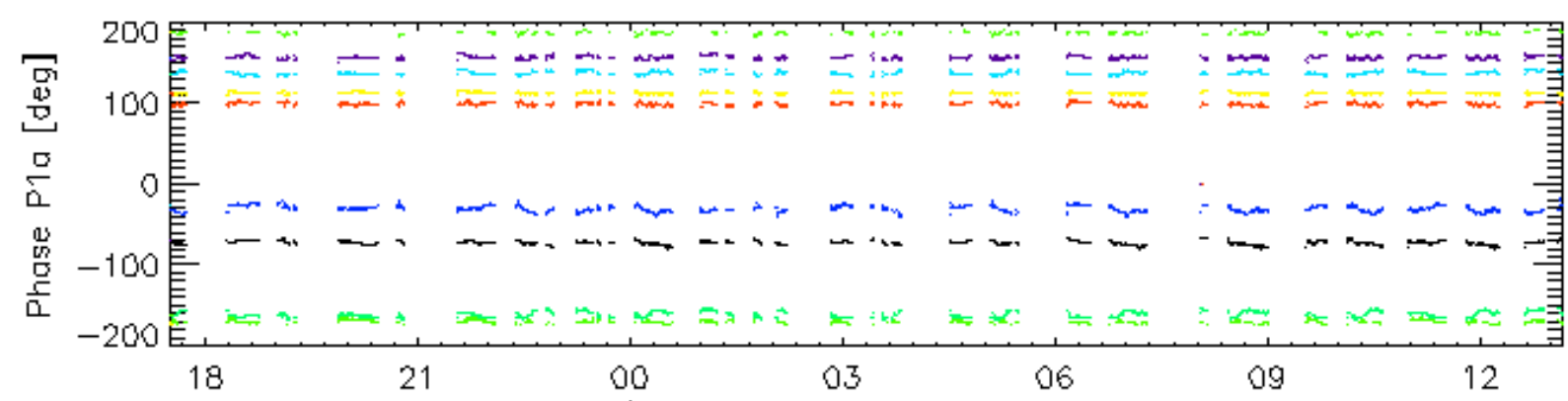


24-Apr

Cal pulses for WVS IS2



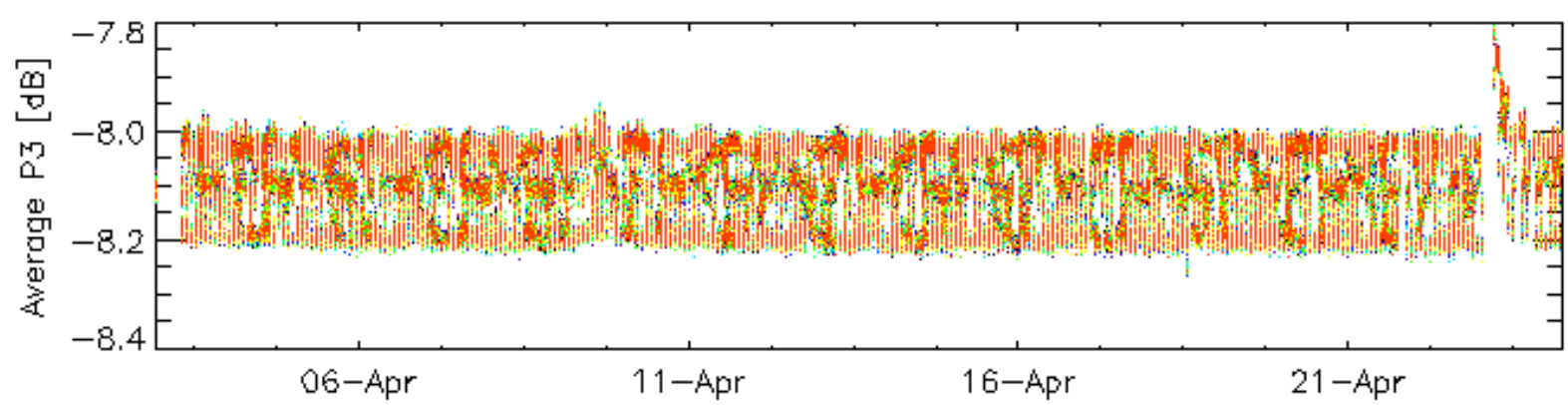
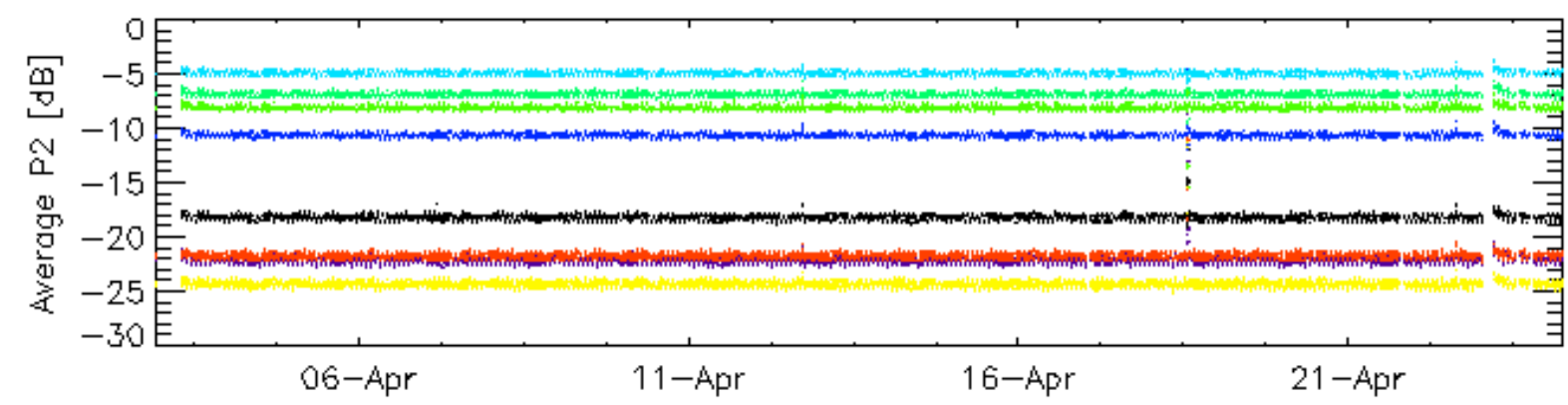
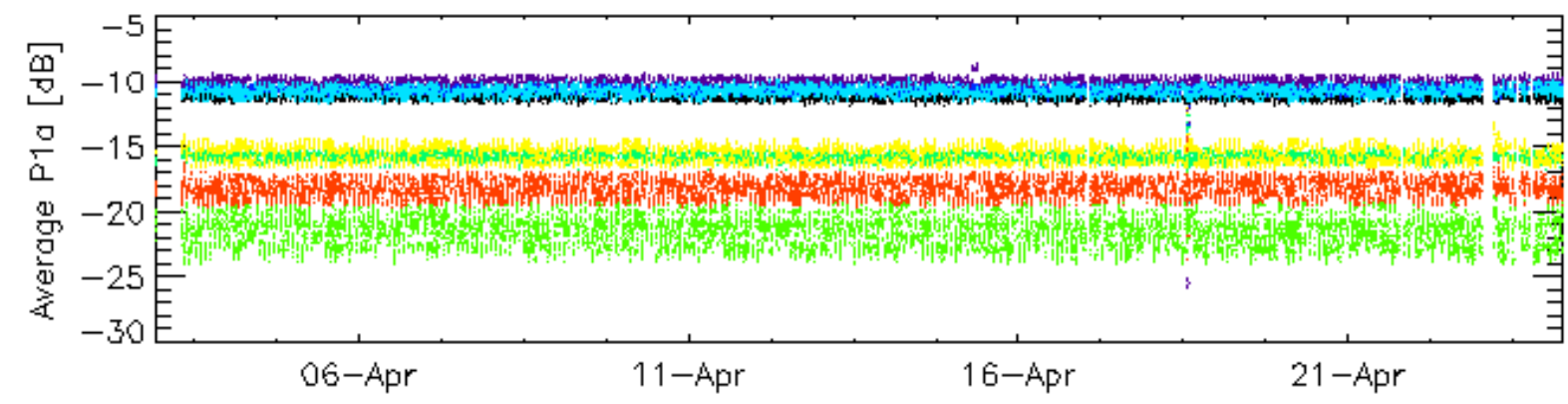
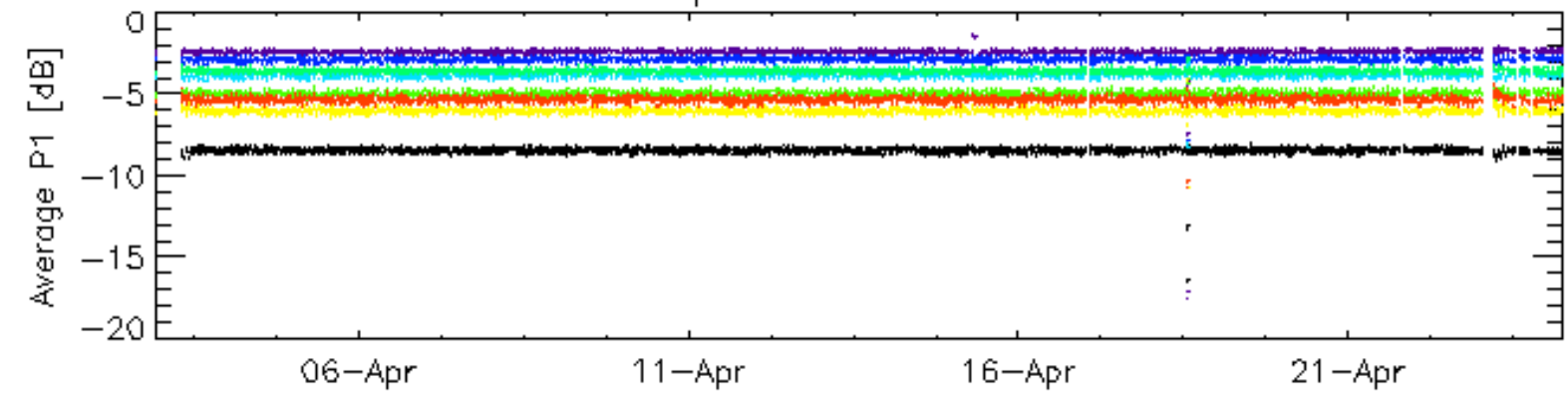
24-Apr



24-Apr

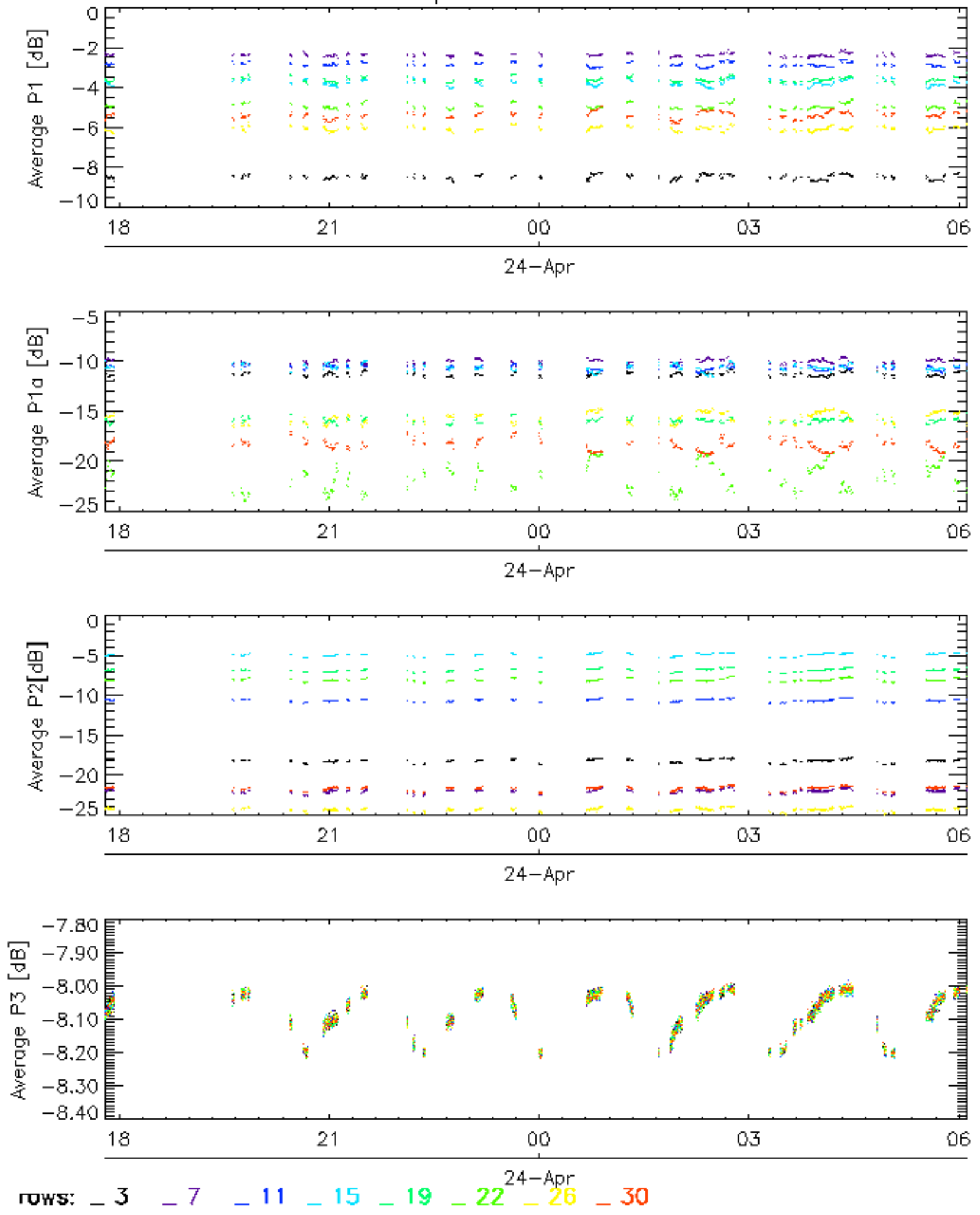
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

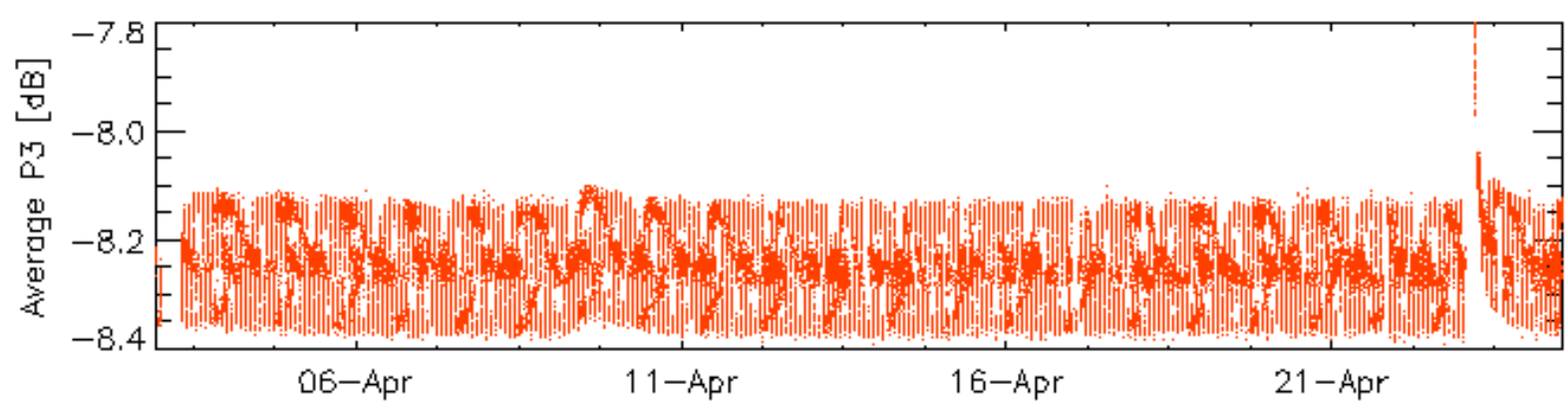
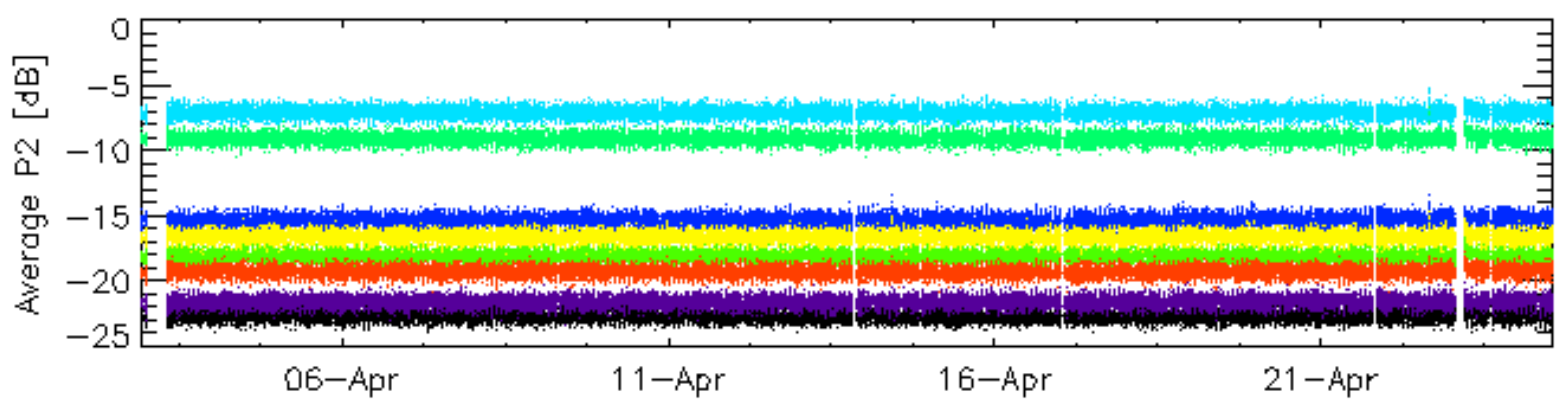
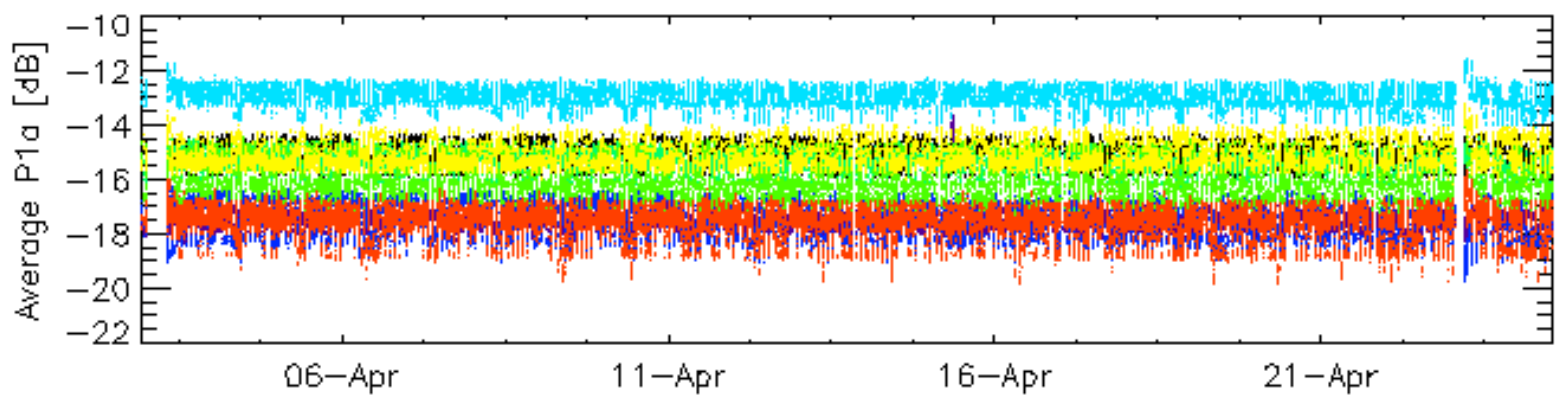
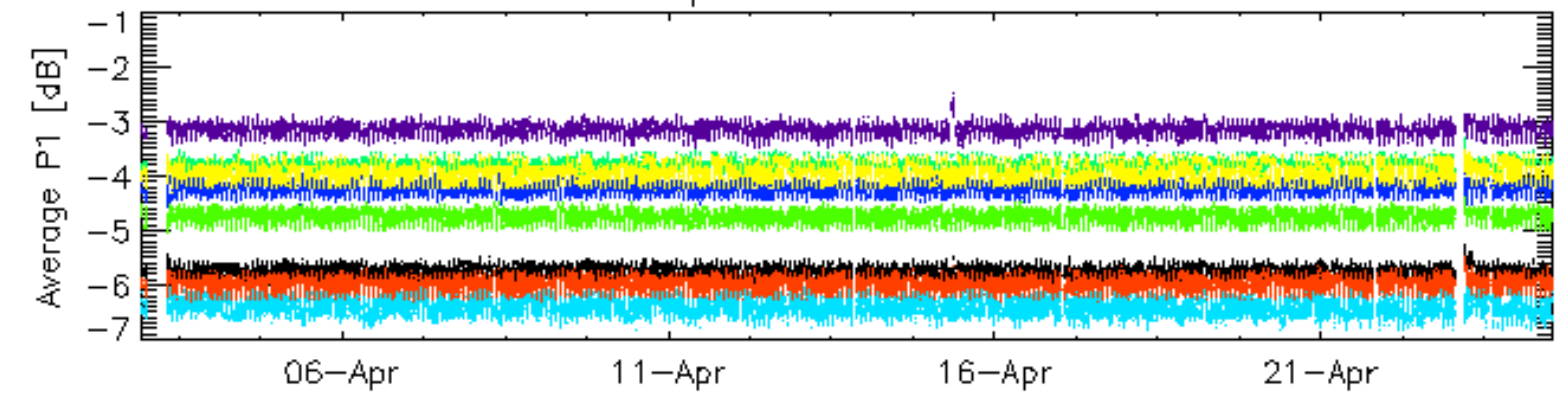


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

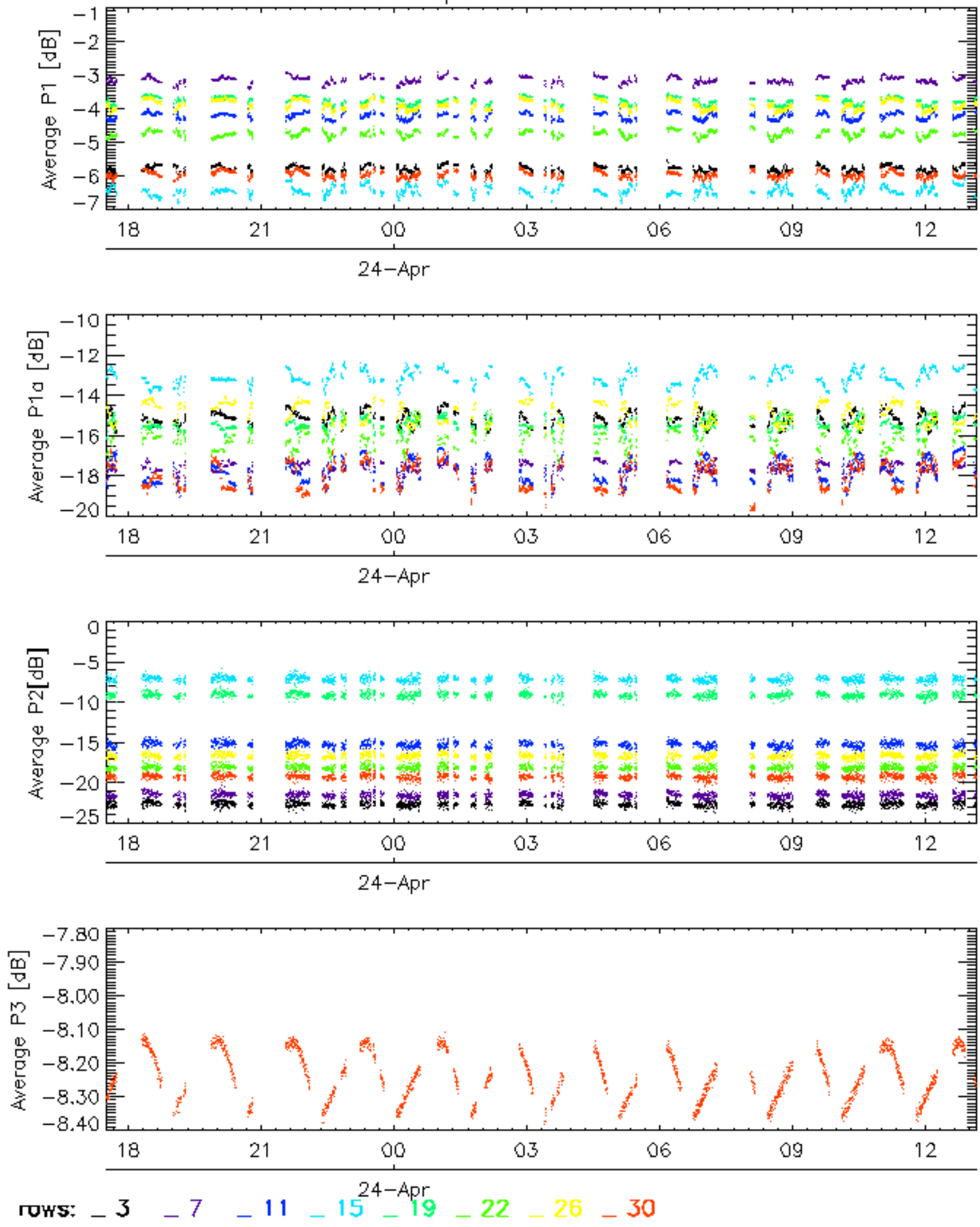


Cal pulses for WVS IS2

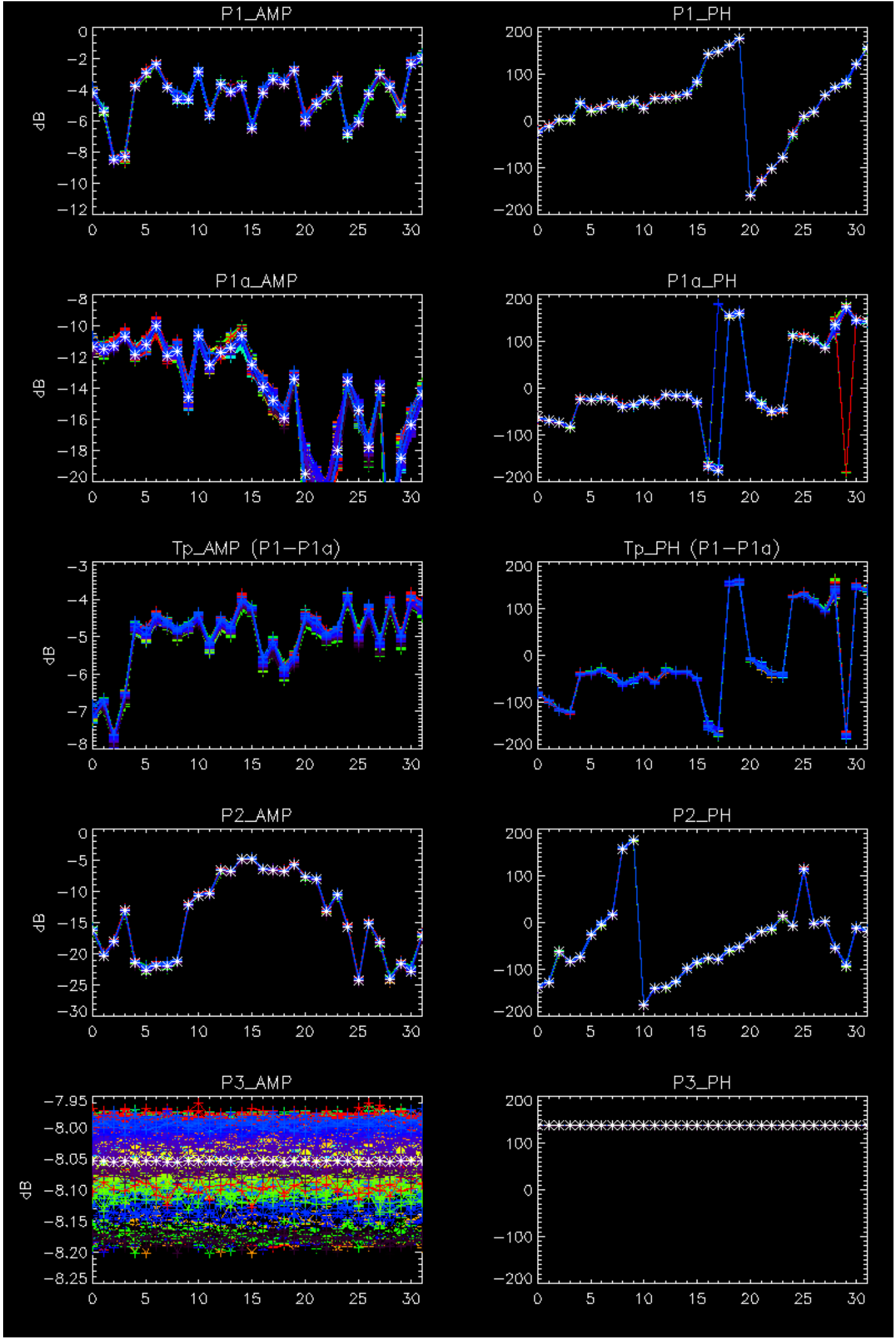


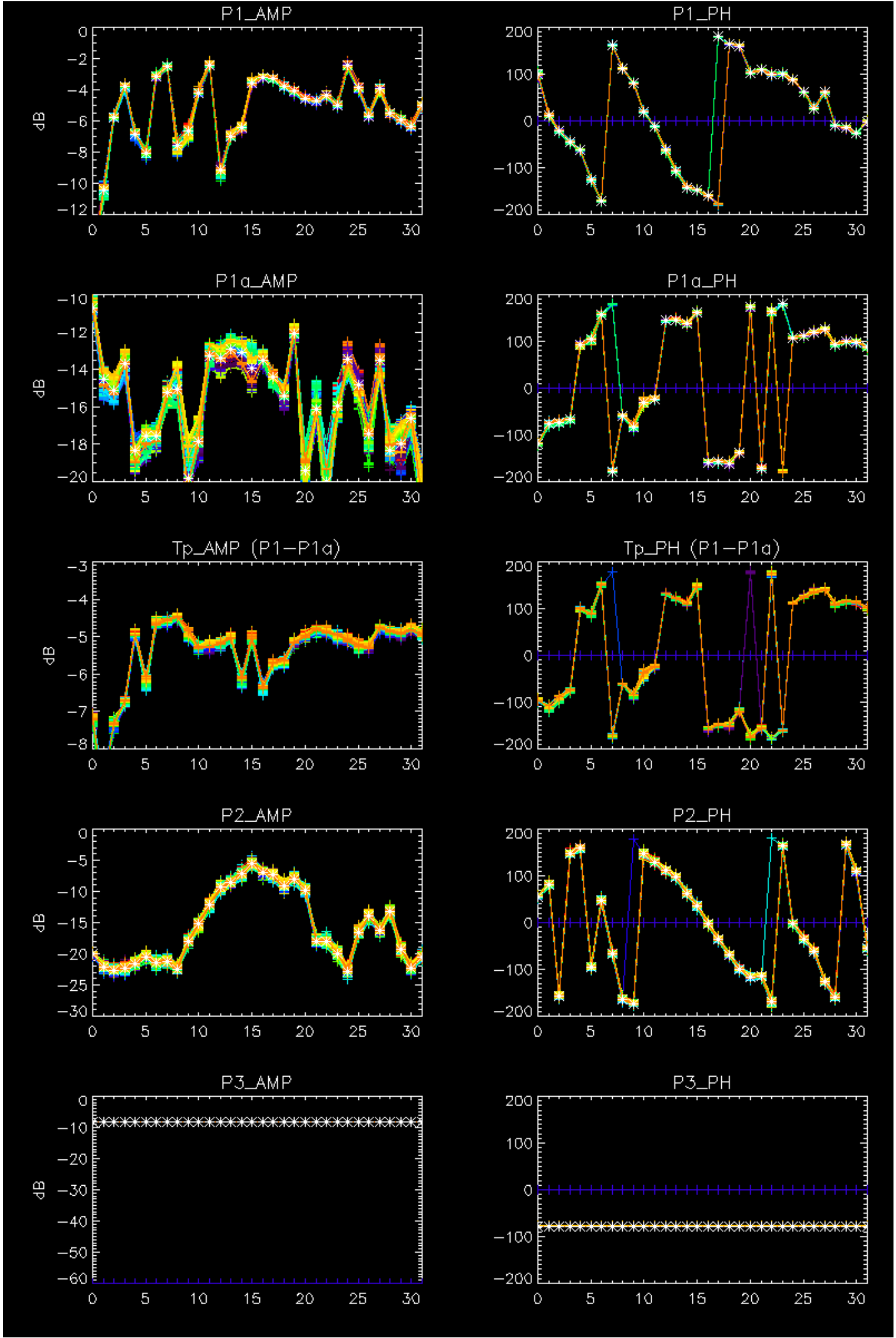
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



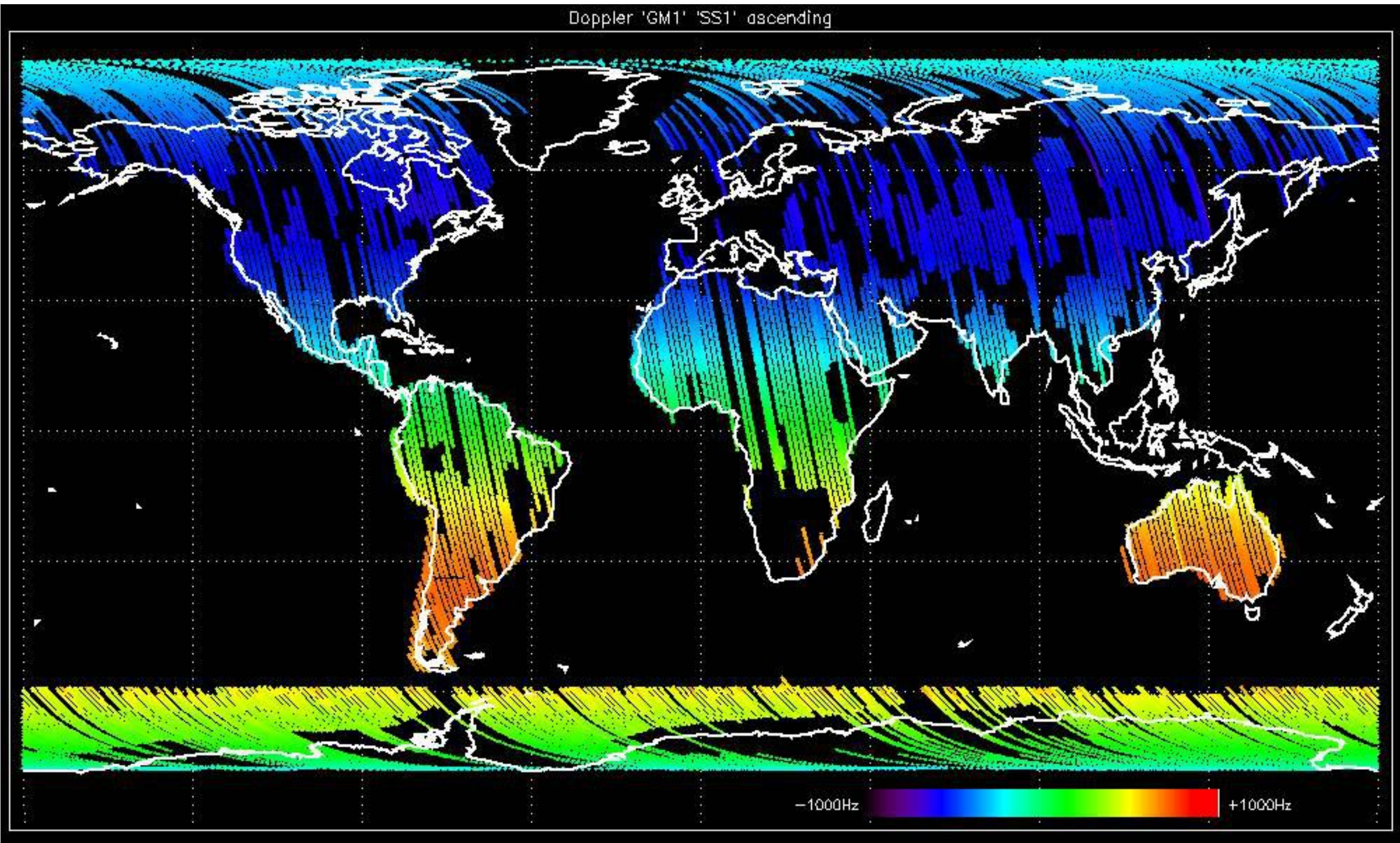
No anomalies observed.



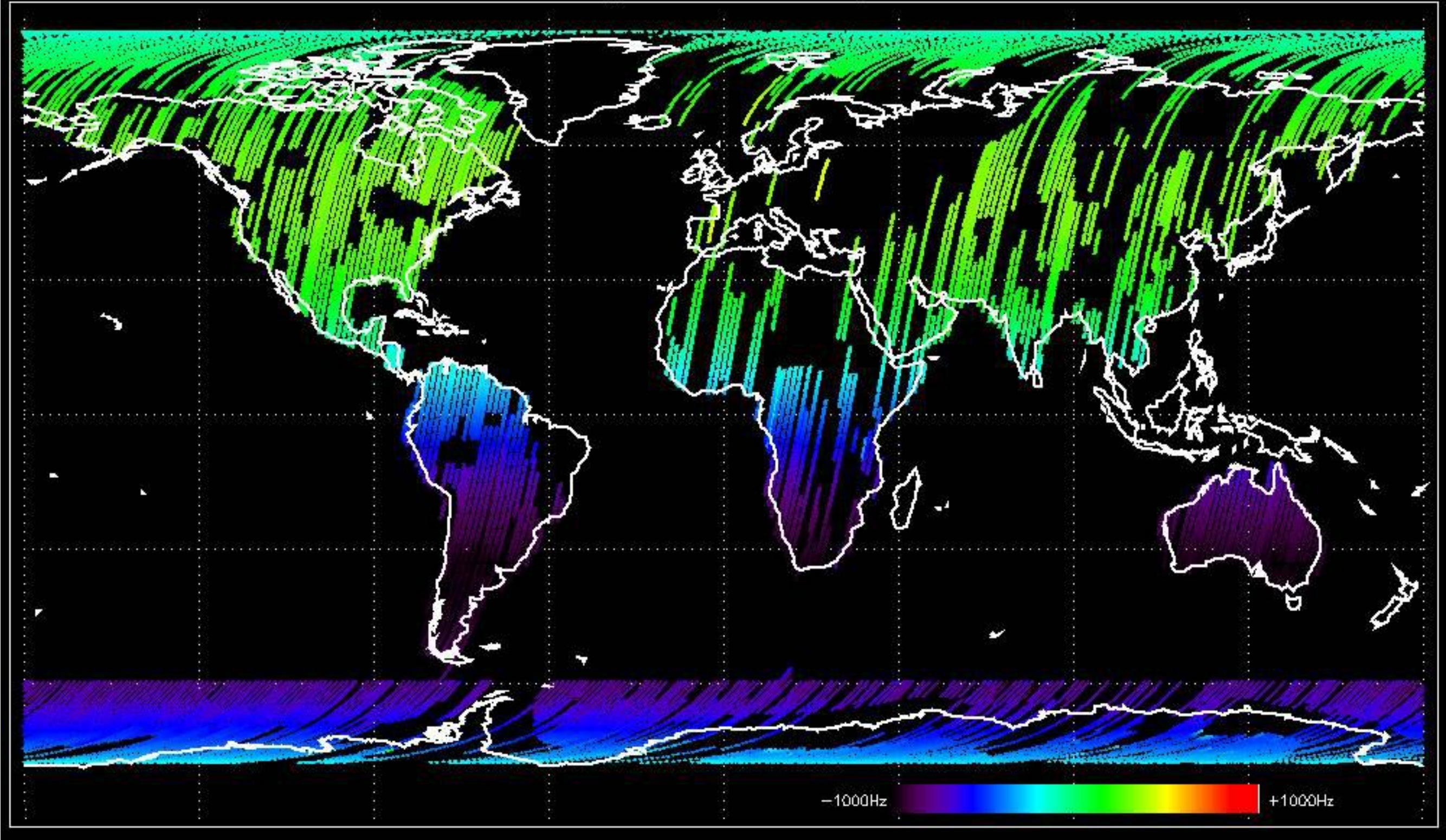


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

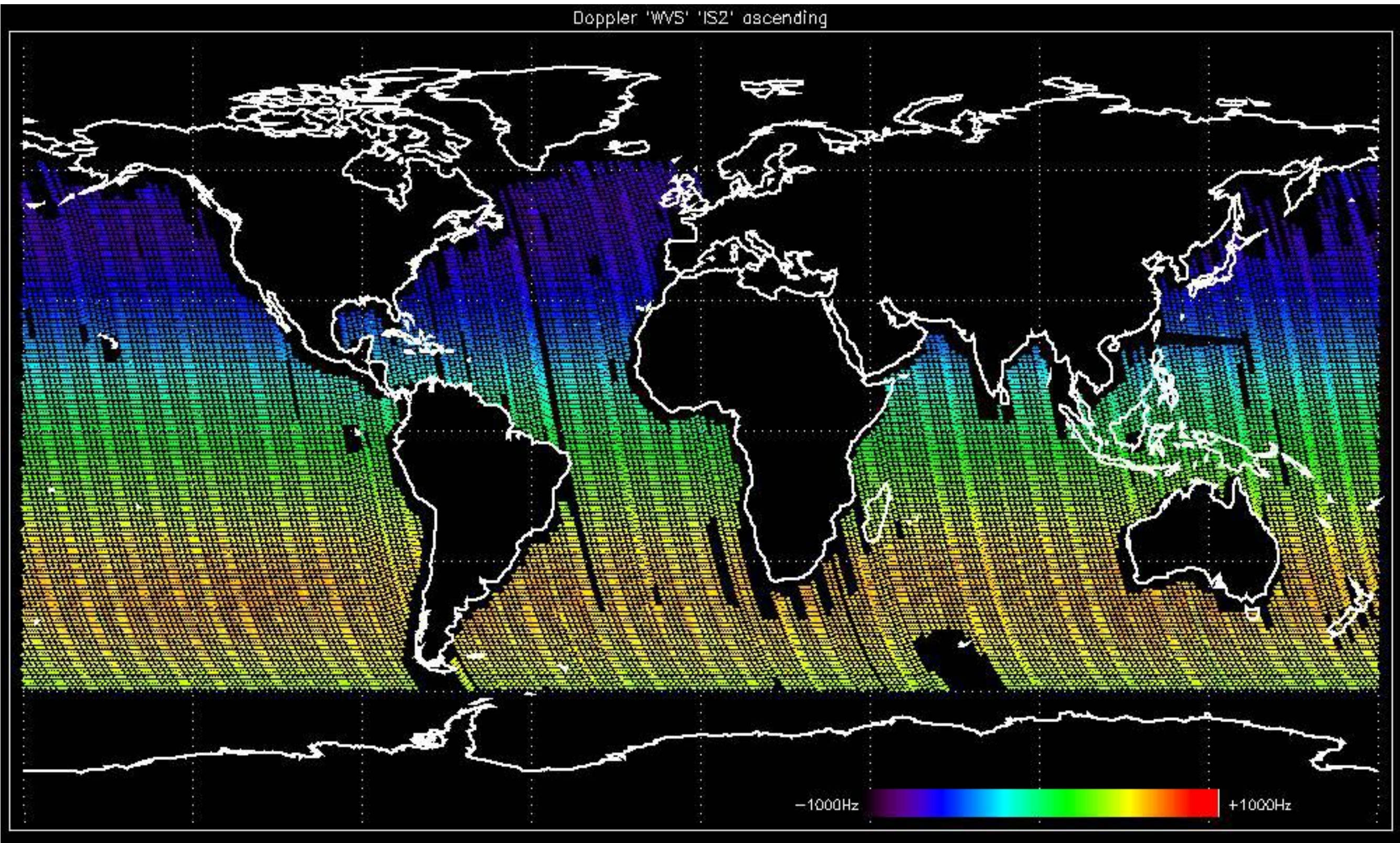
Doppler 'GM1' 'SS1' ascending



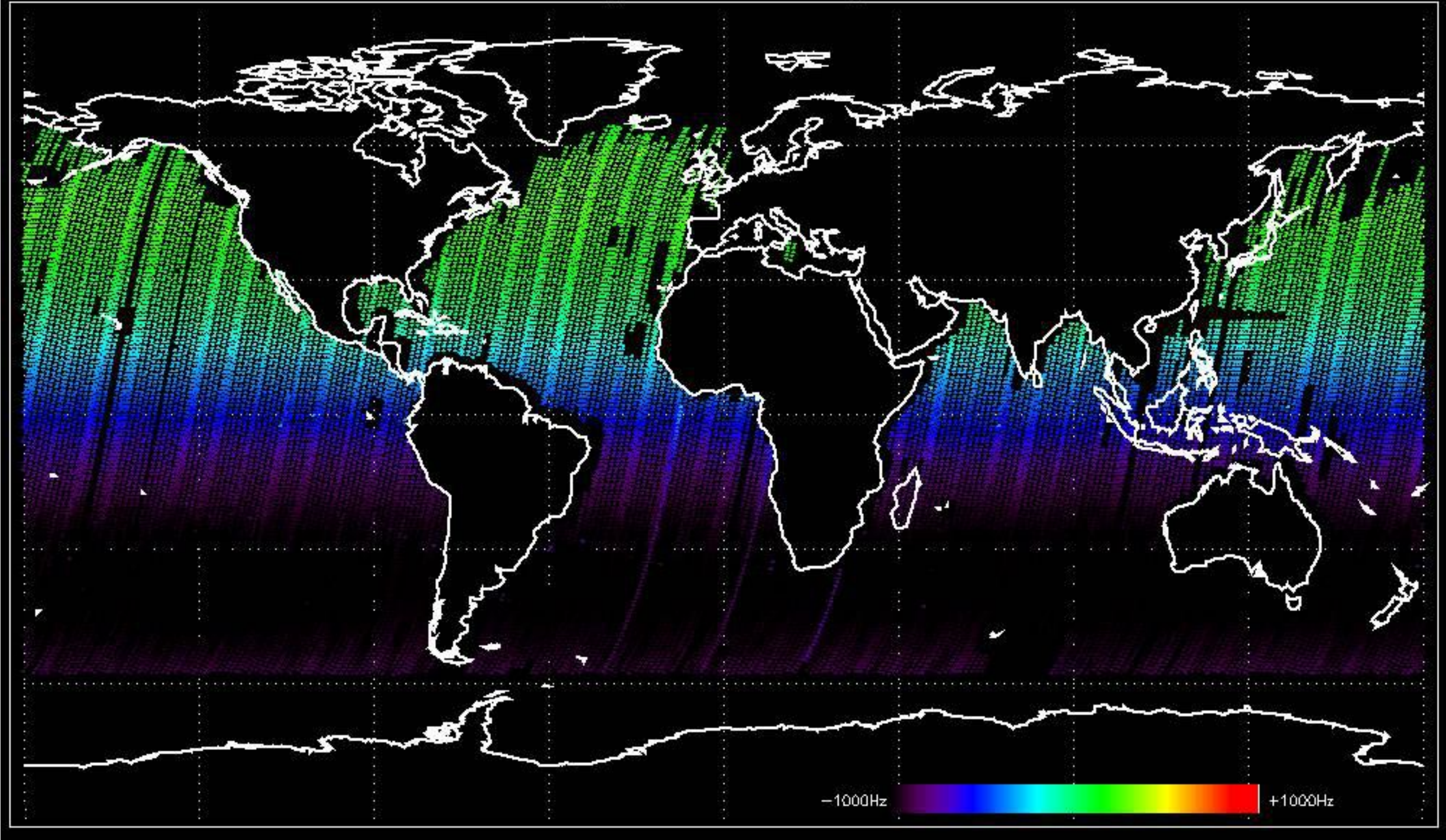
Doppler 'GM1' 'SS1' descending

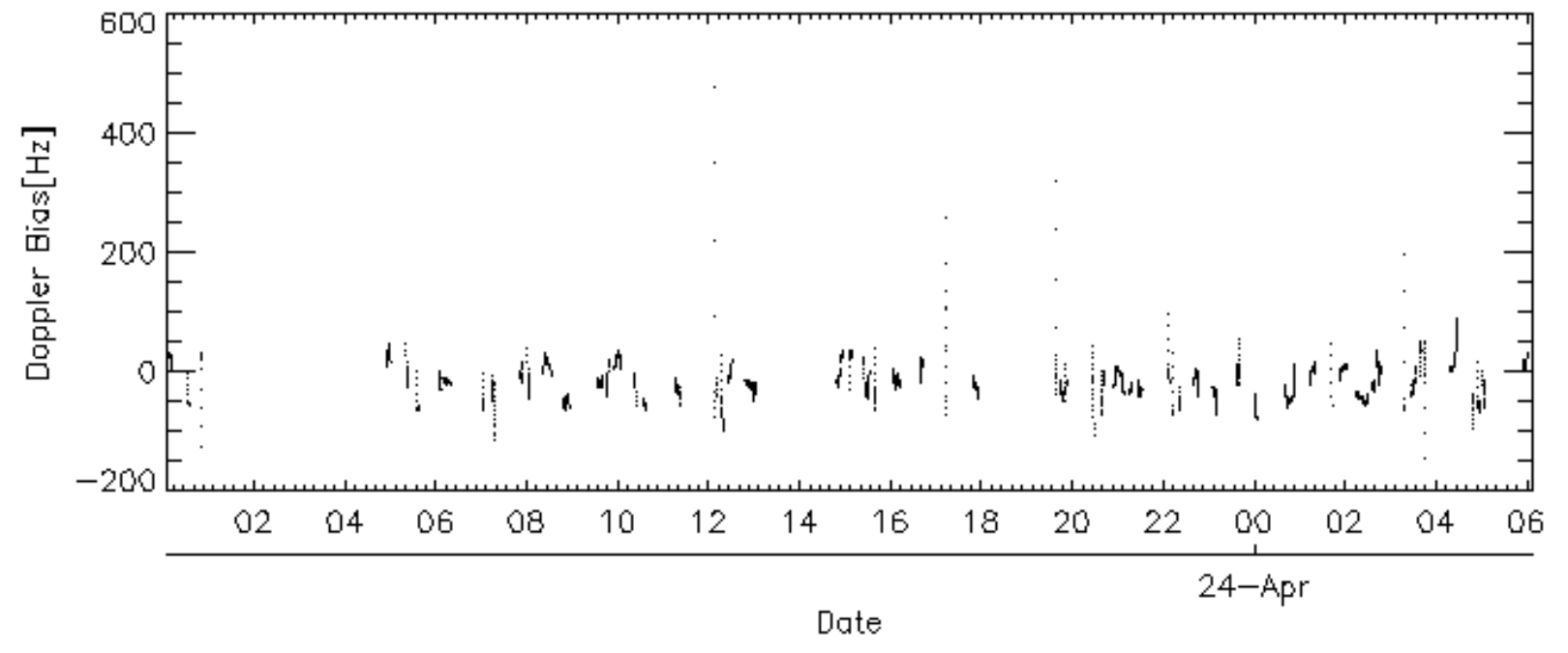
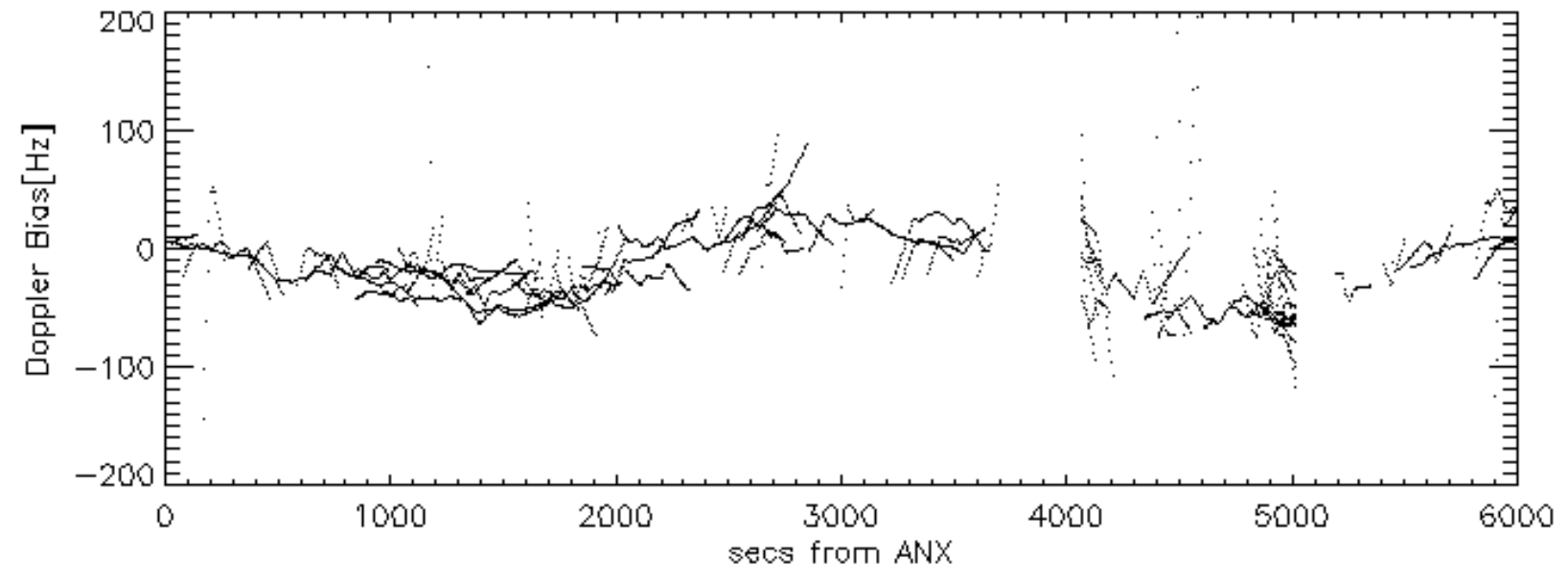
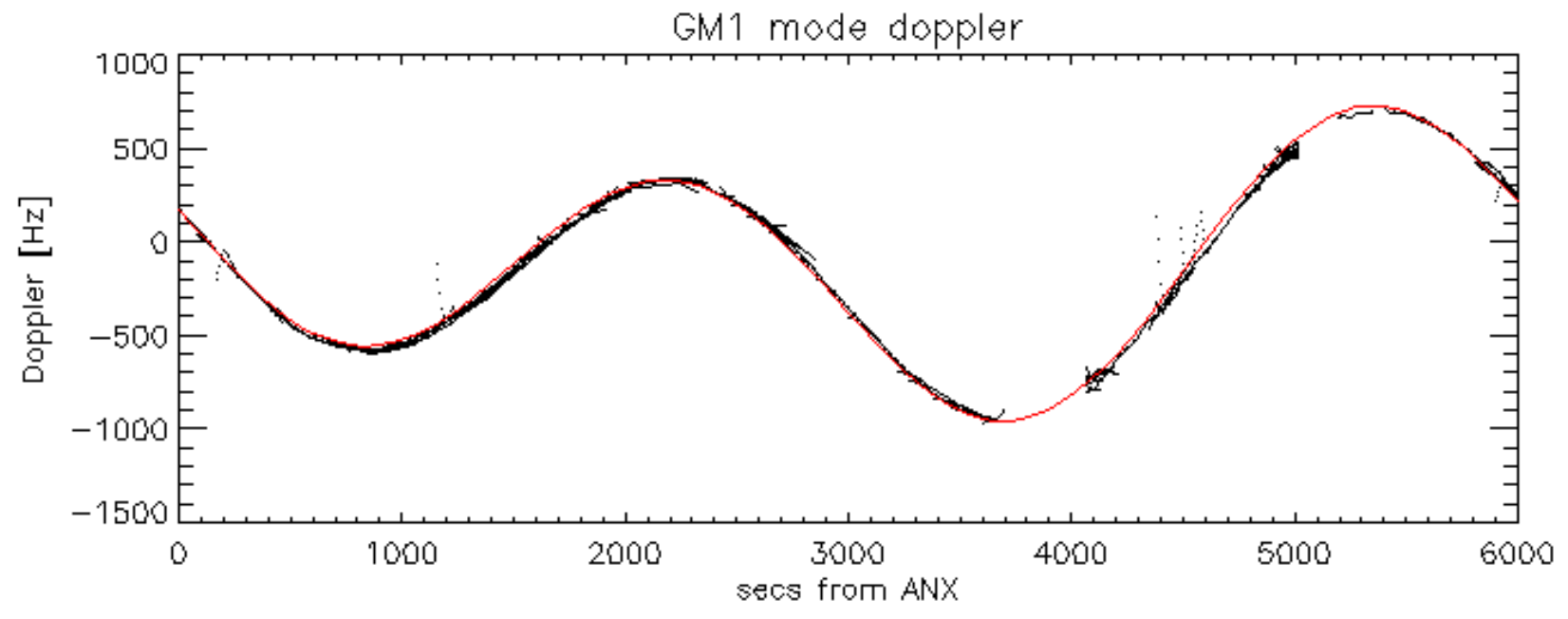


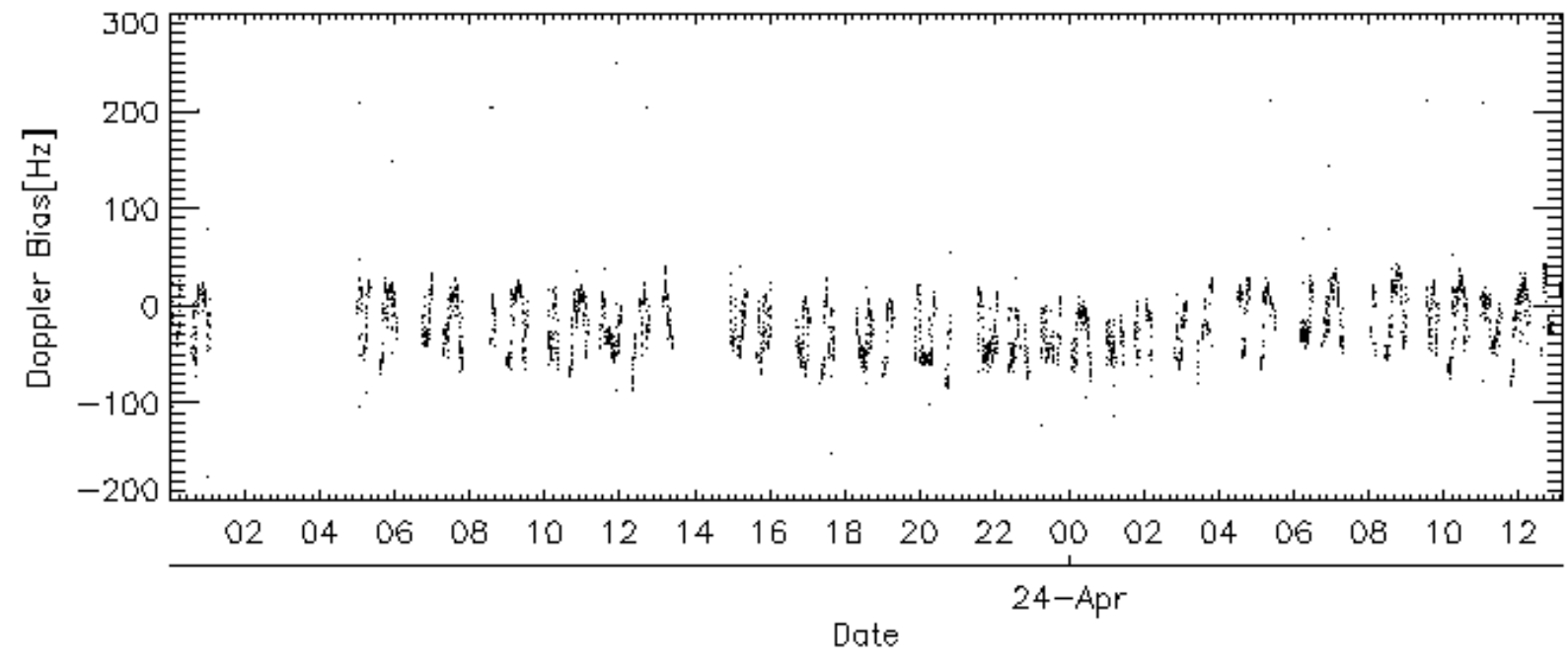
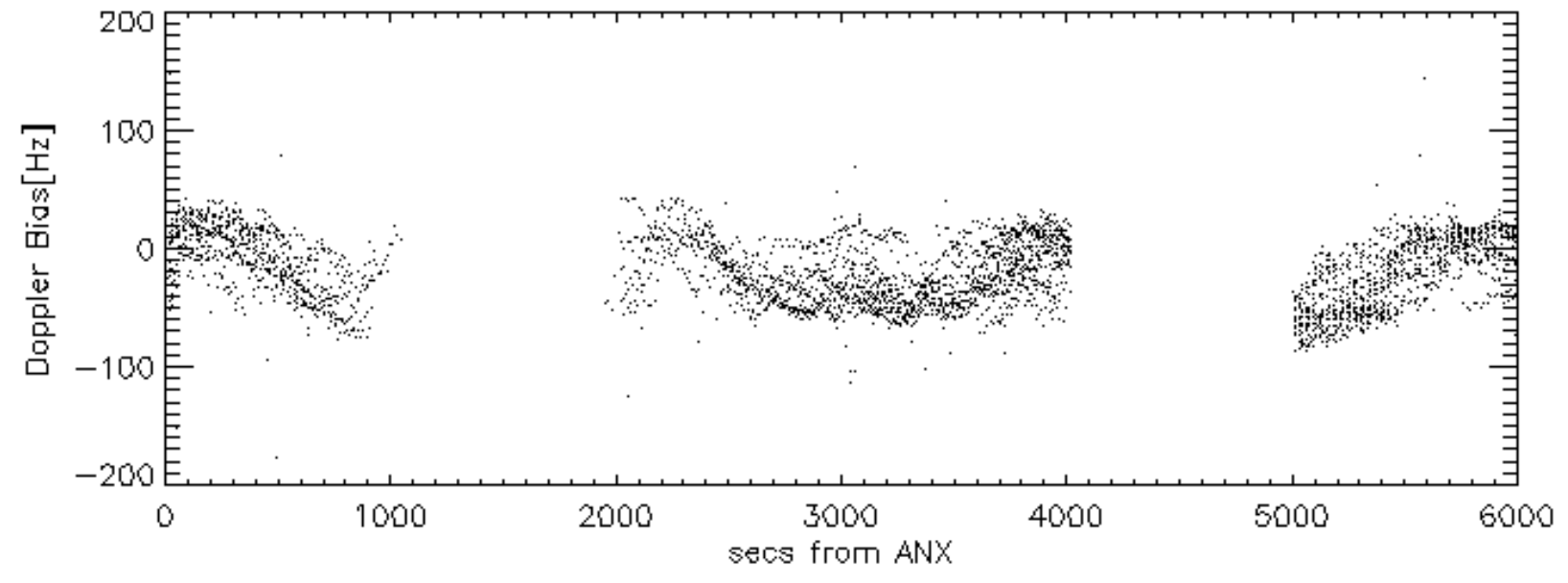
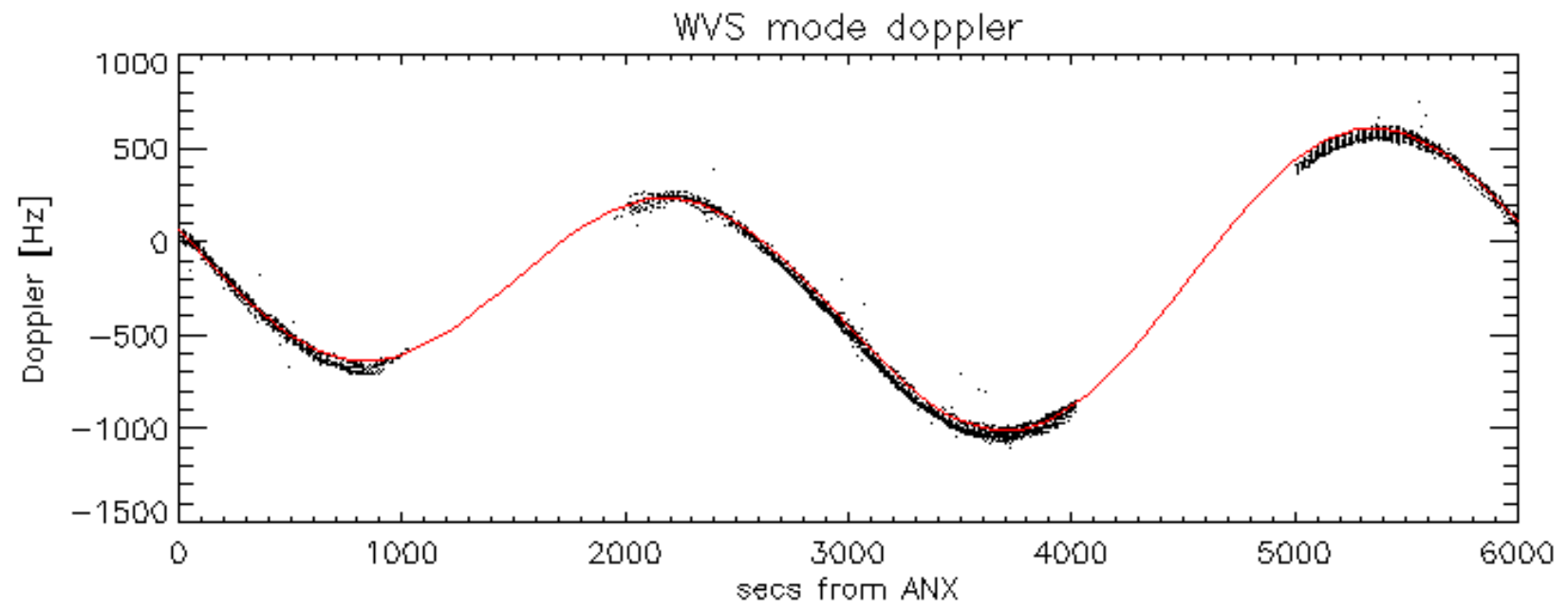
Doppler 'WVS' 'IS2' ascending



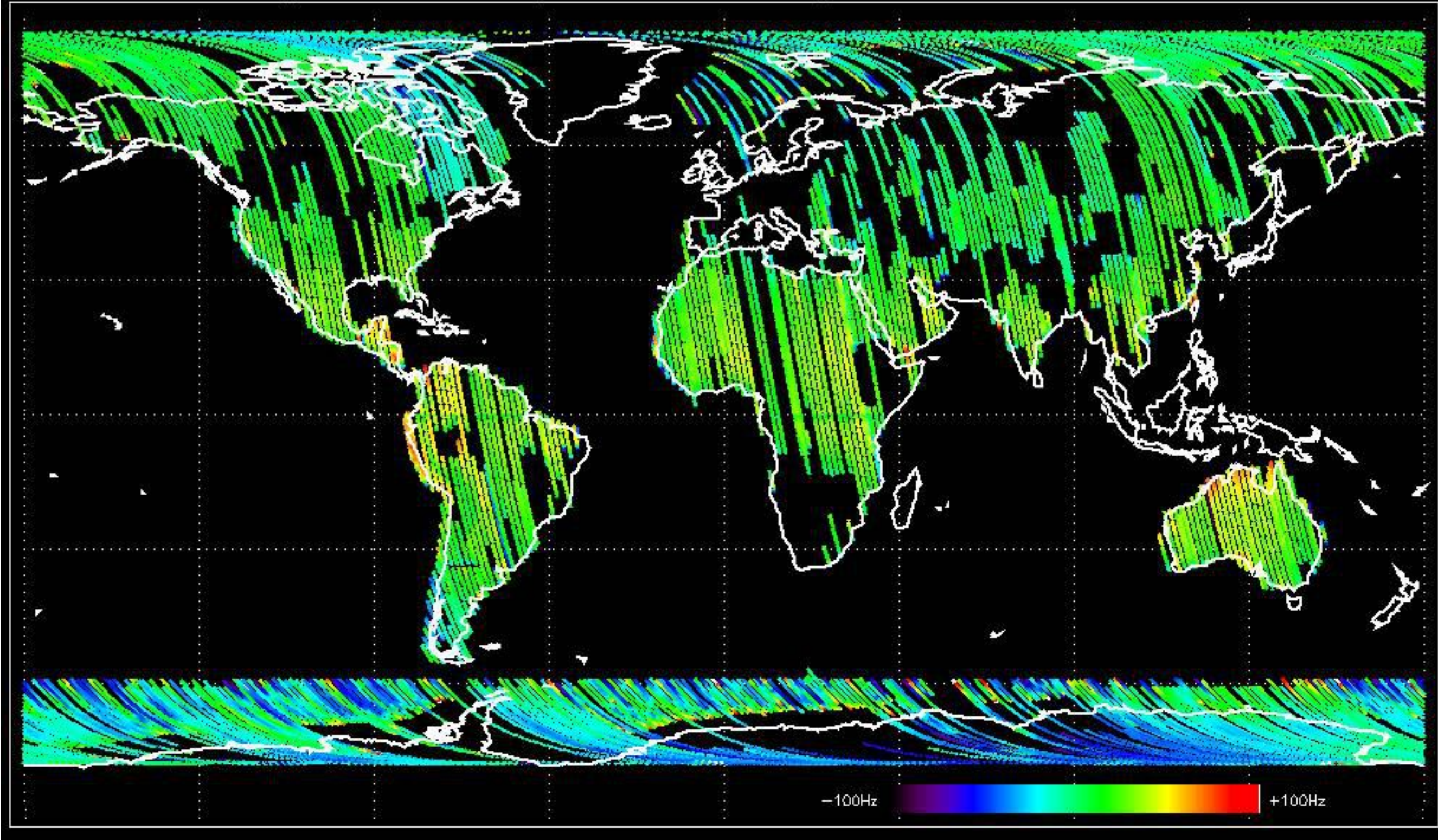
Doppler 'WVS' 'IS2' descending



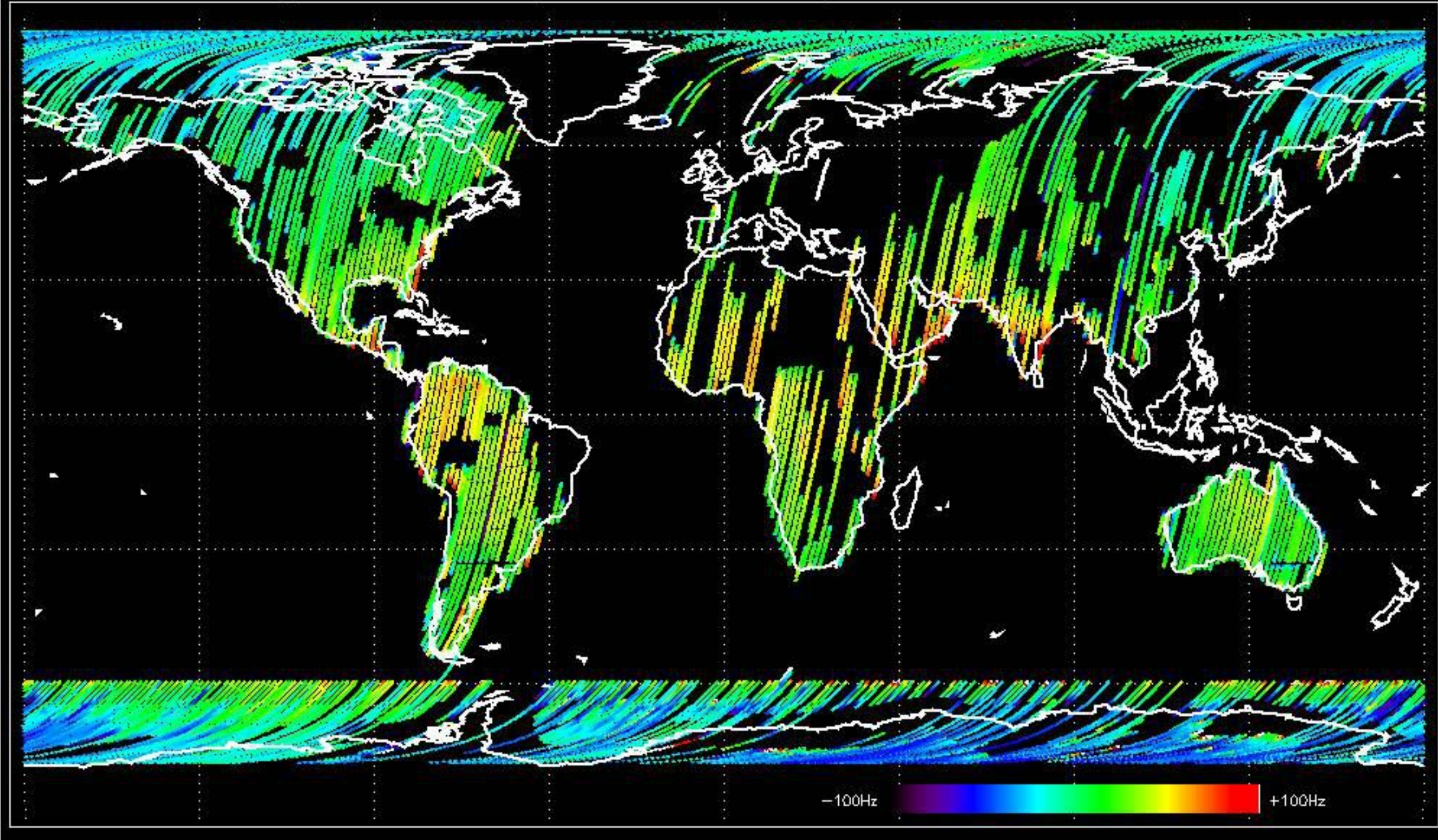




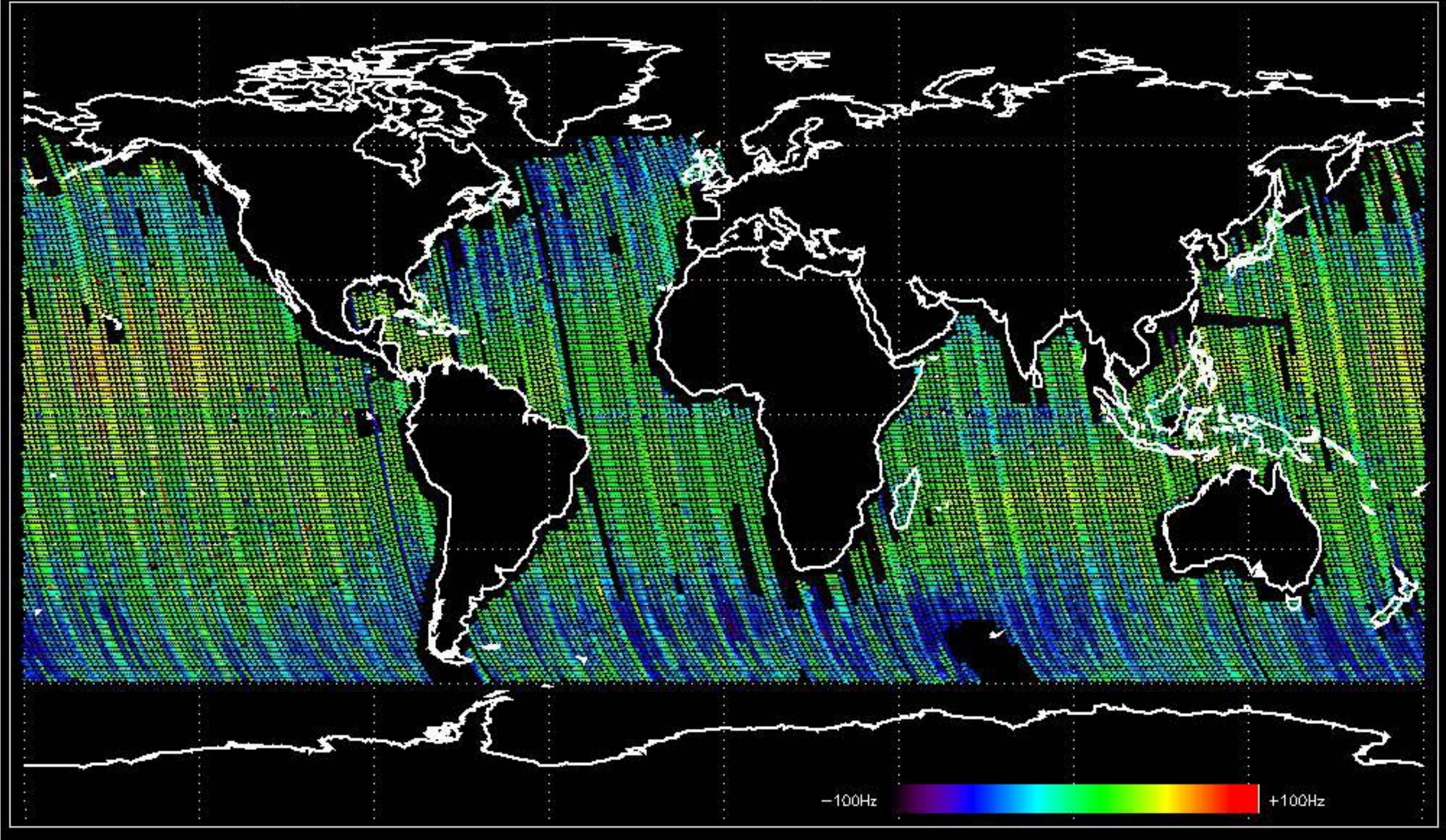
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -27.094588 Hz



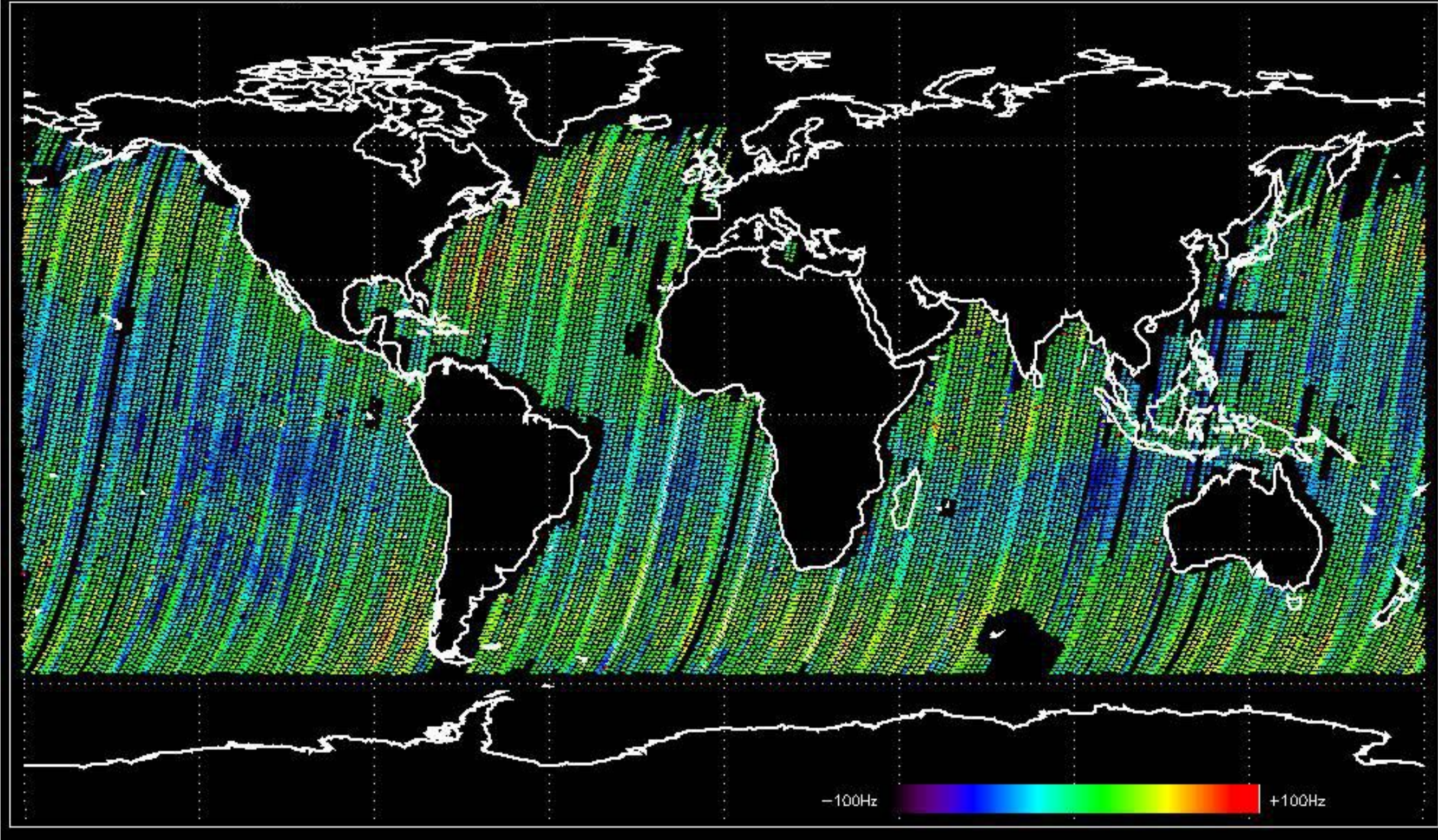
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.200520 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -21.121899 Hz

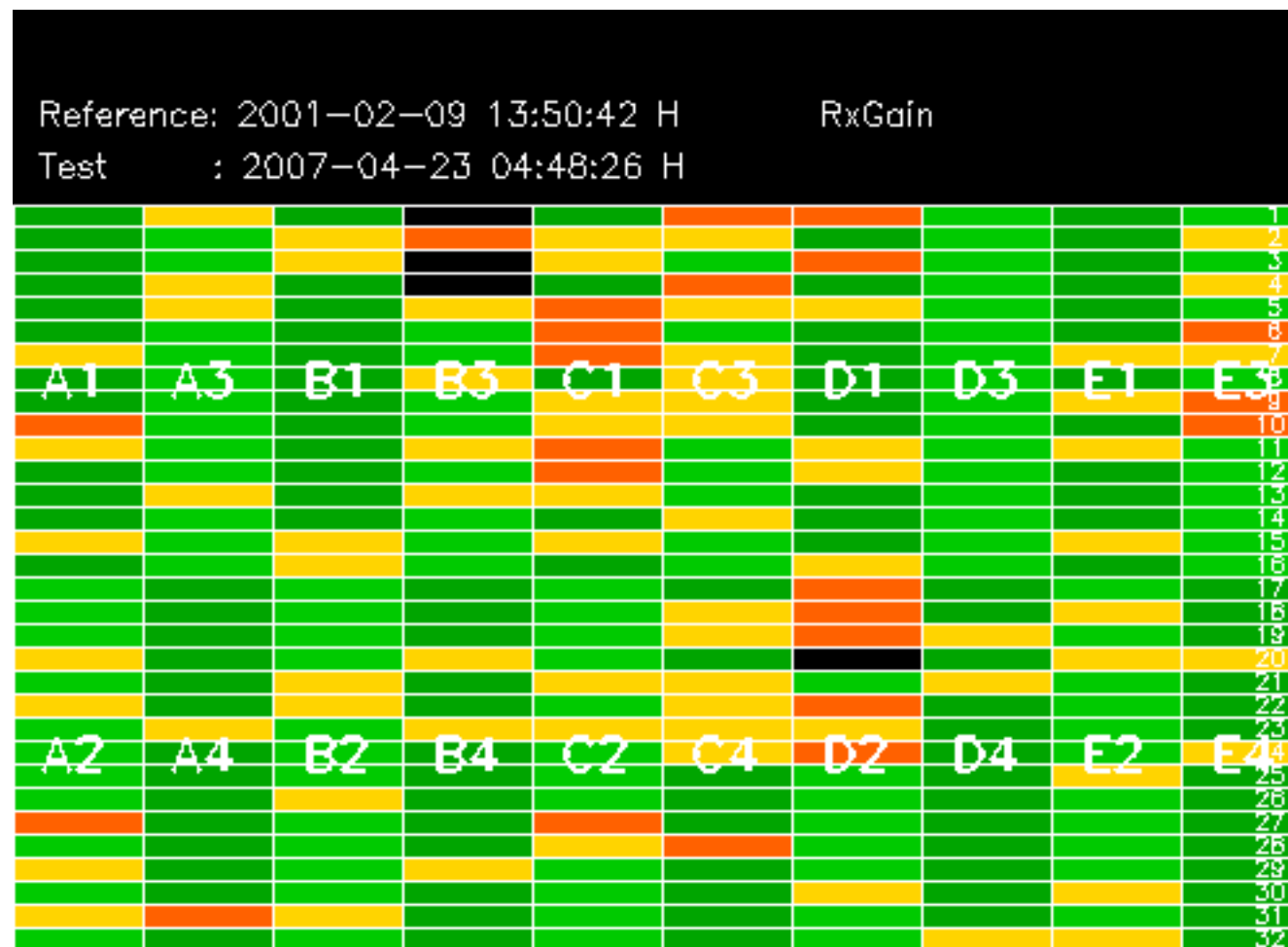


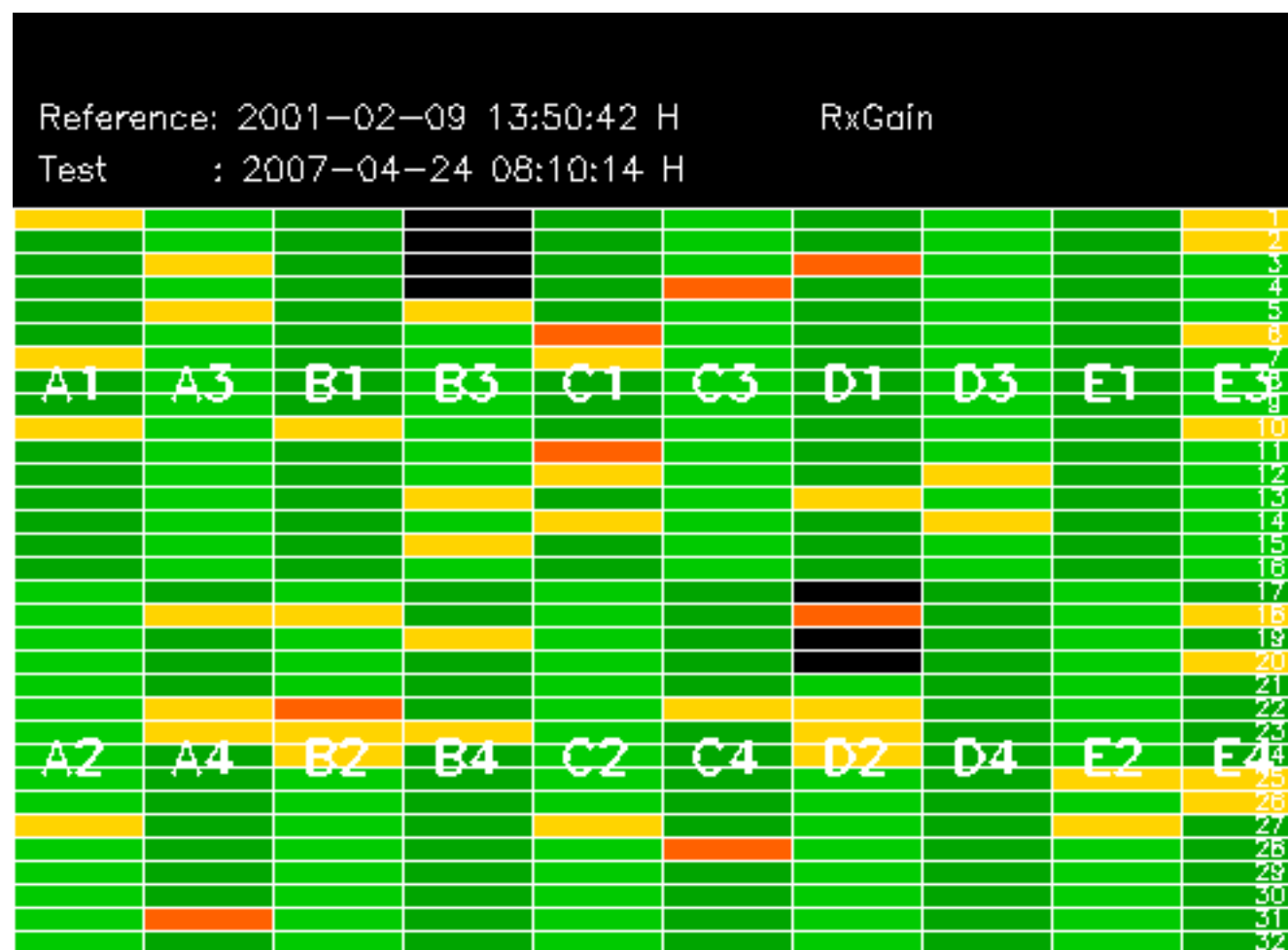
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.552361 Hz

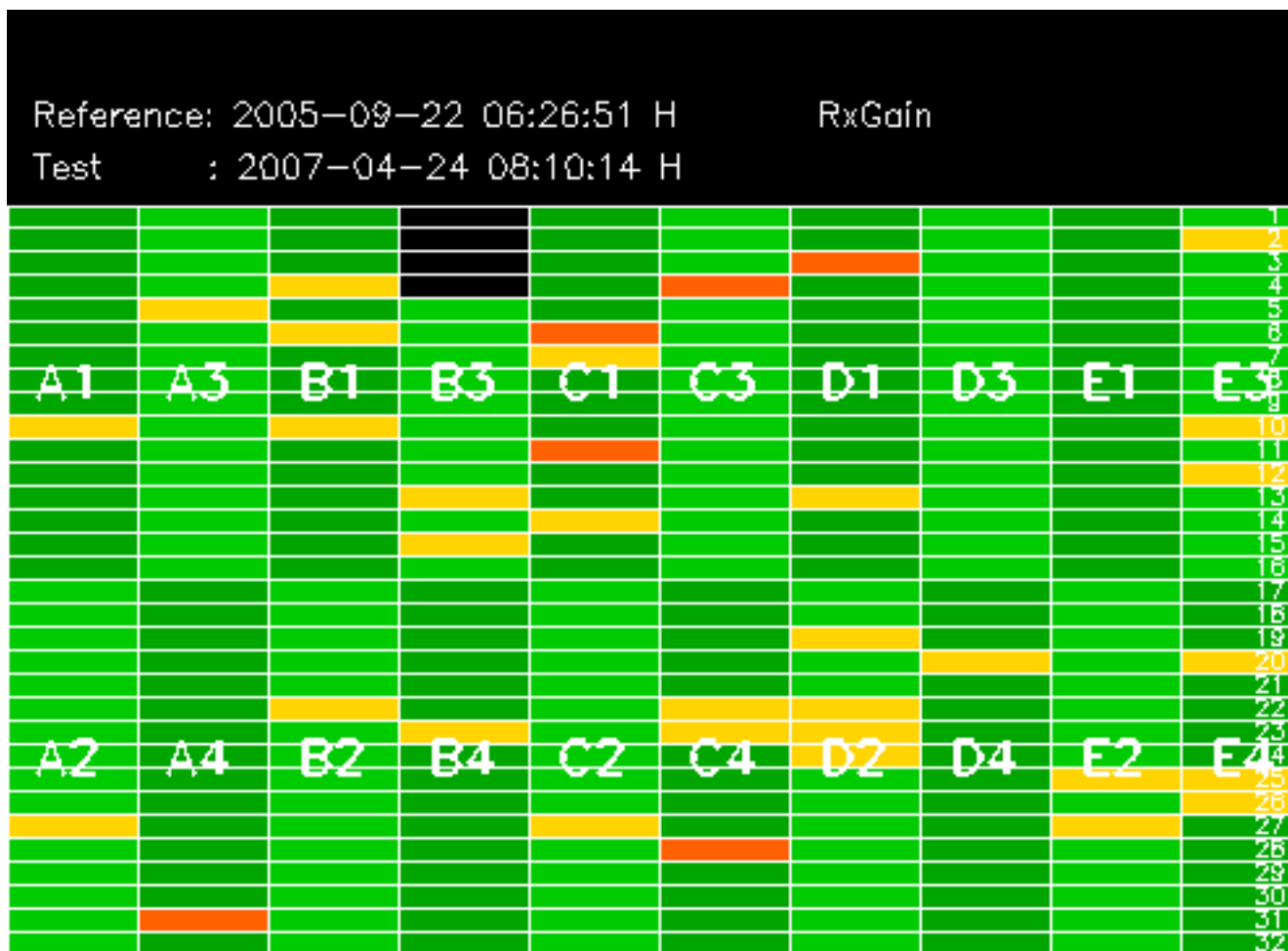


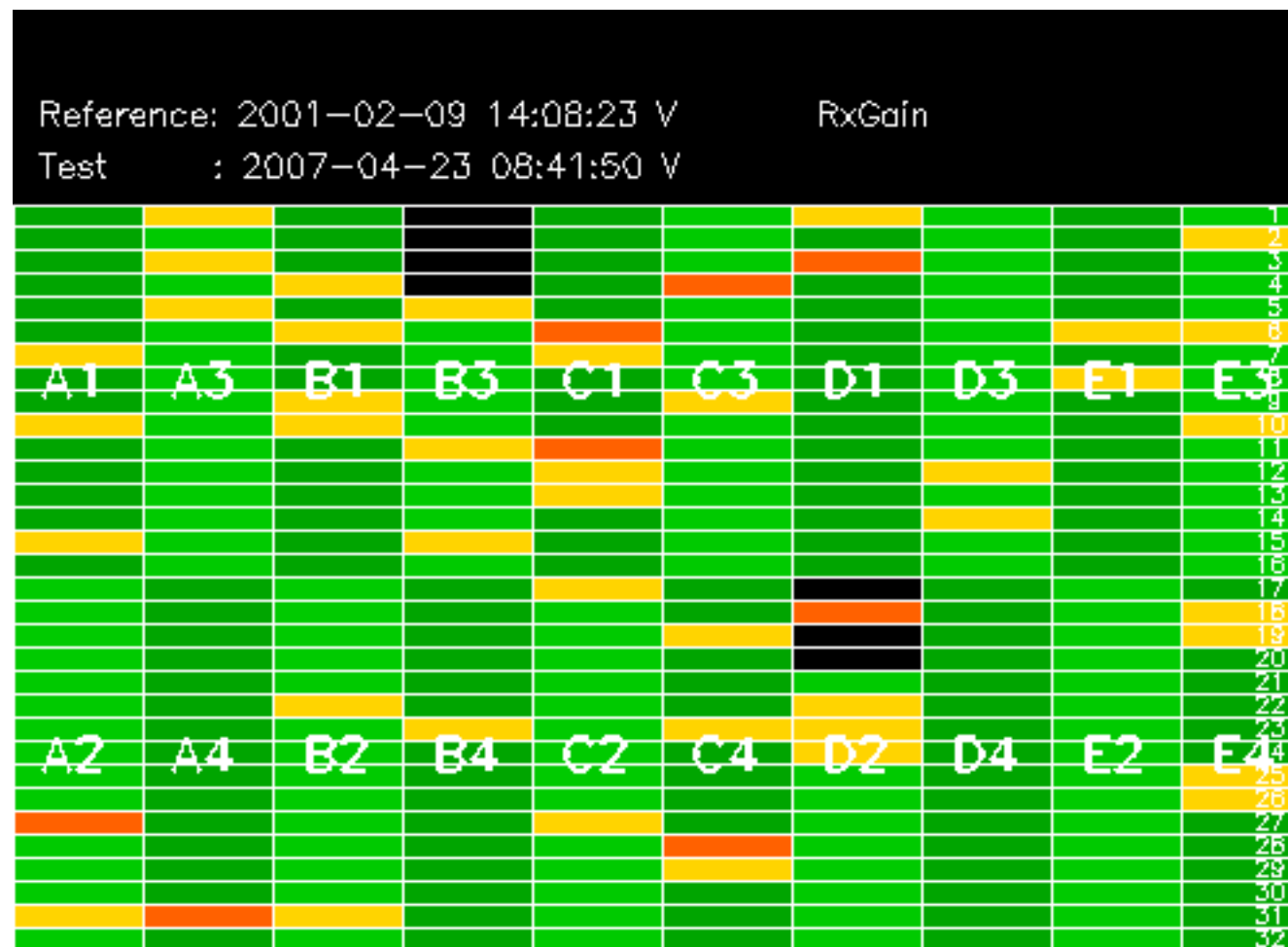
No anomalies observed on available MS products:

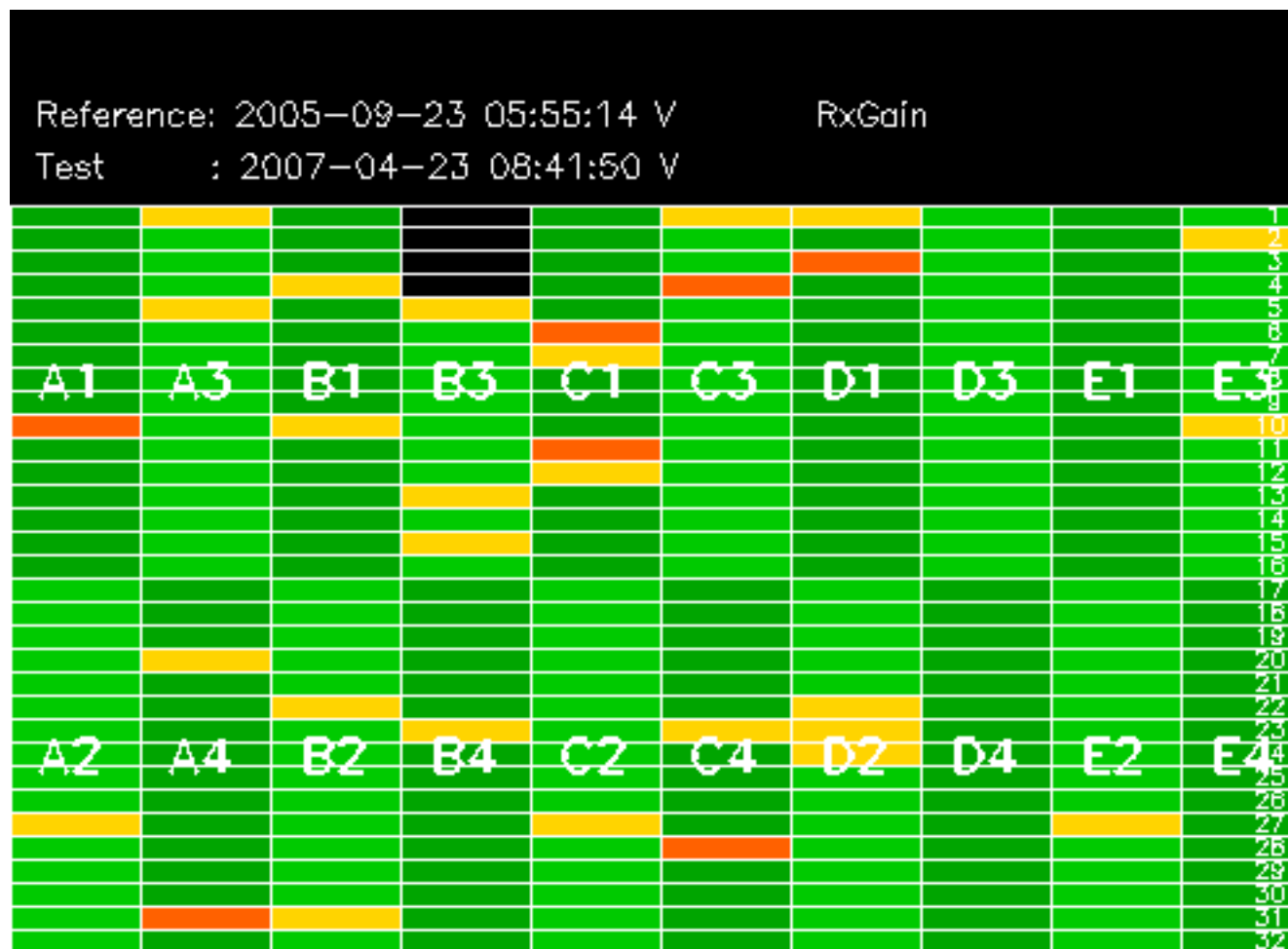
No anomalies observed.

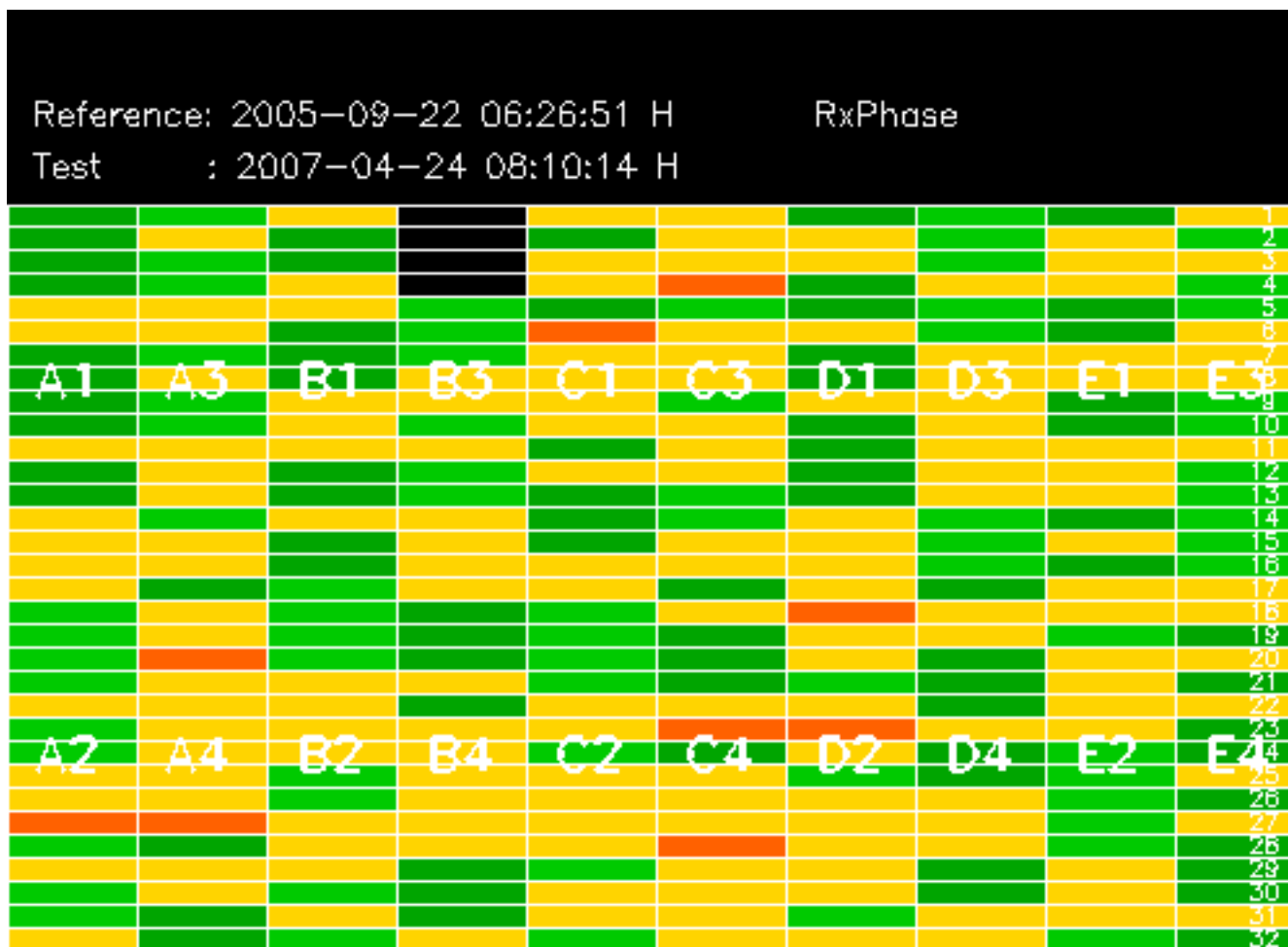


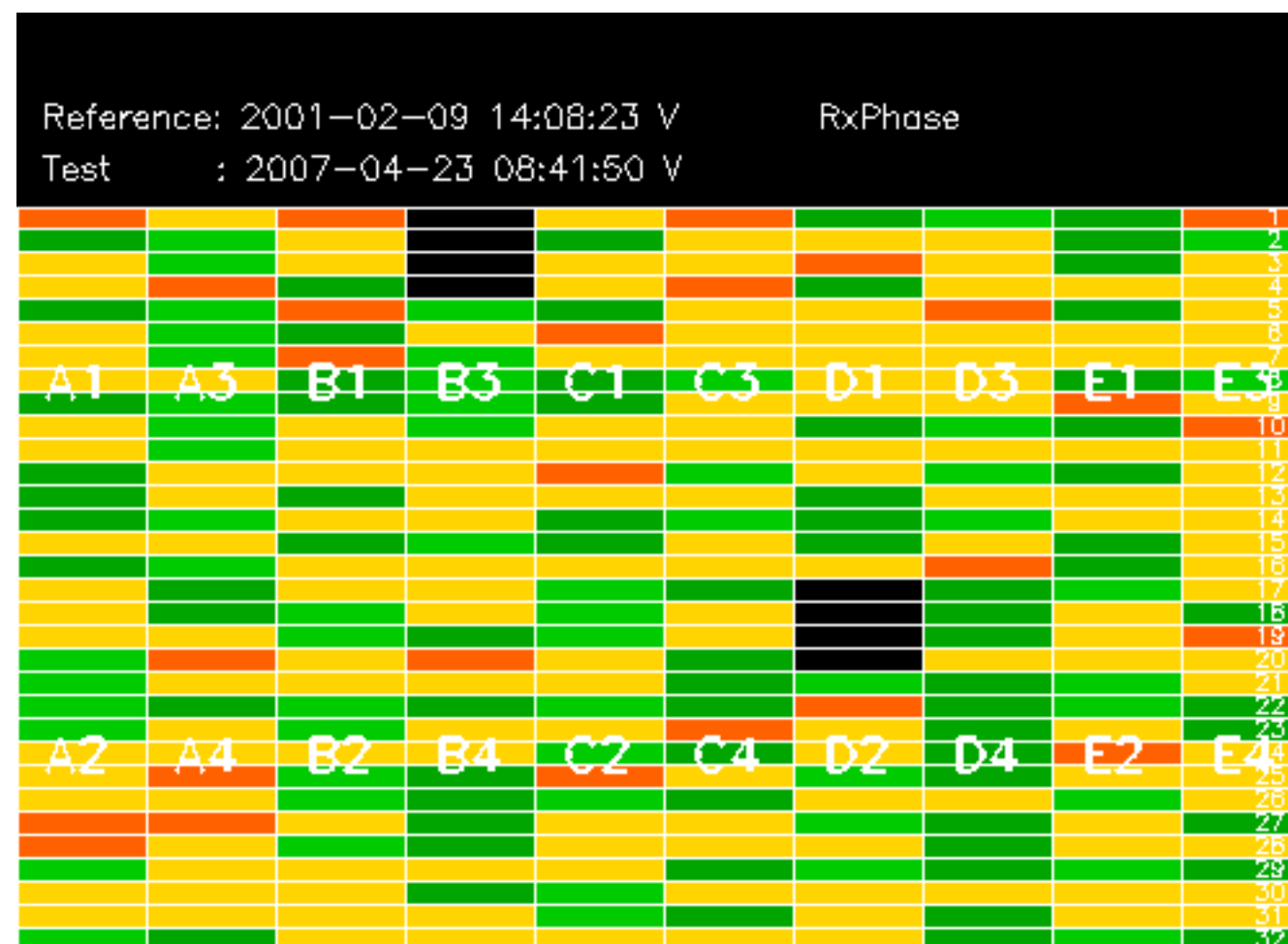


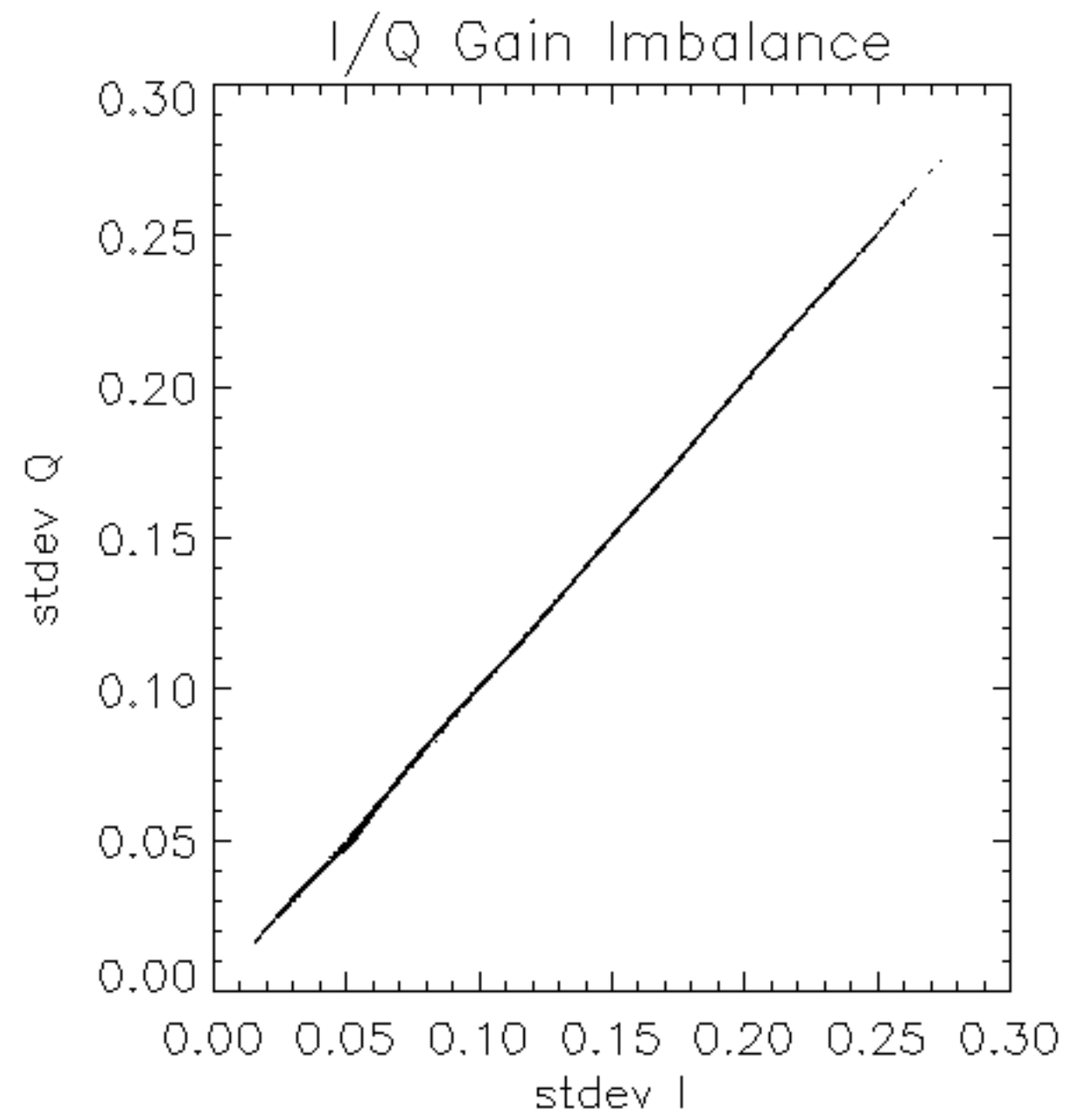


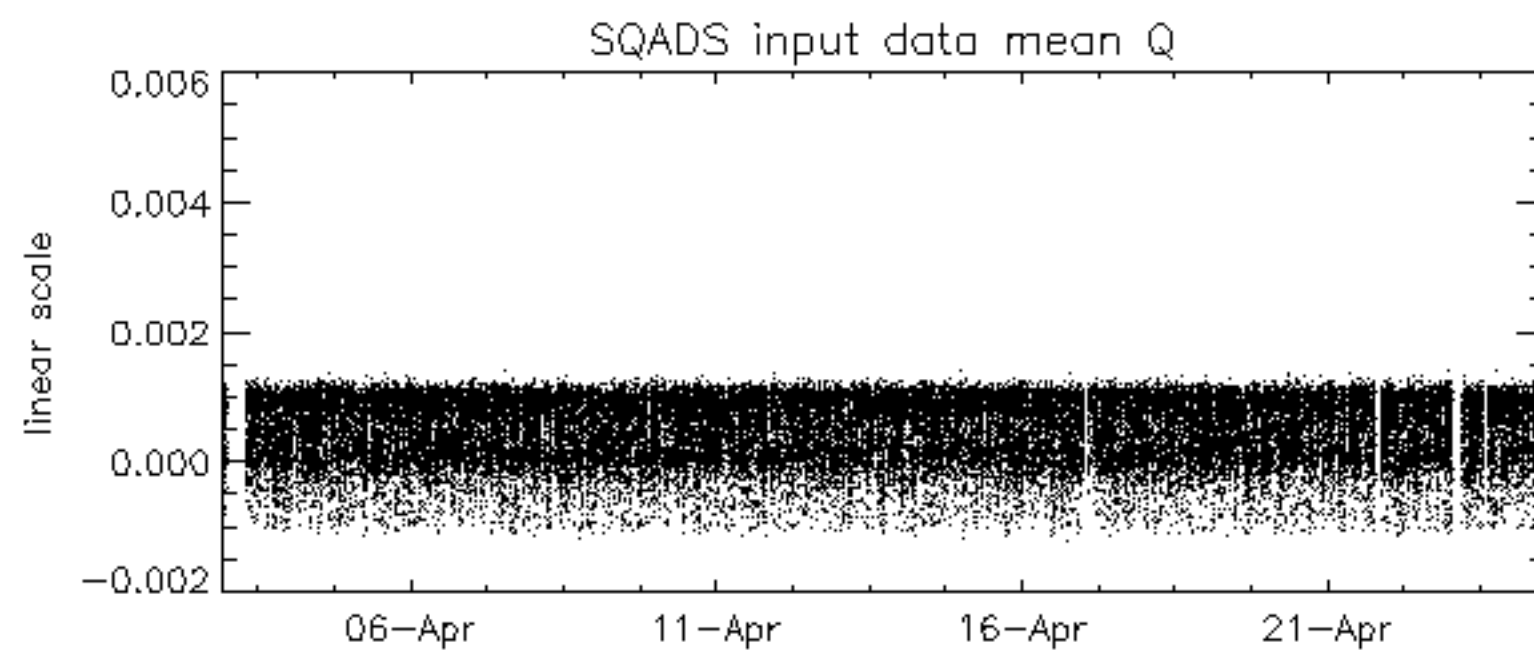
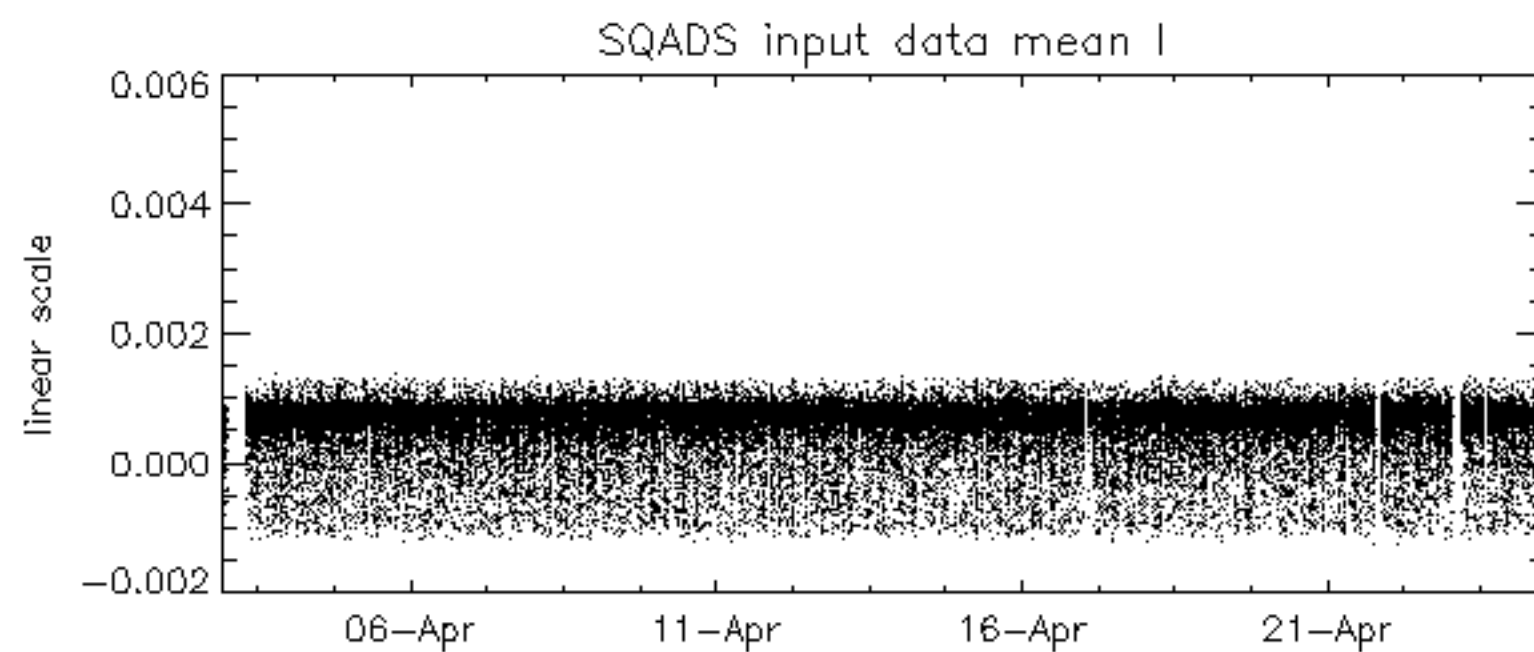
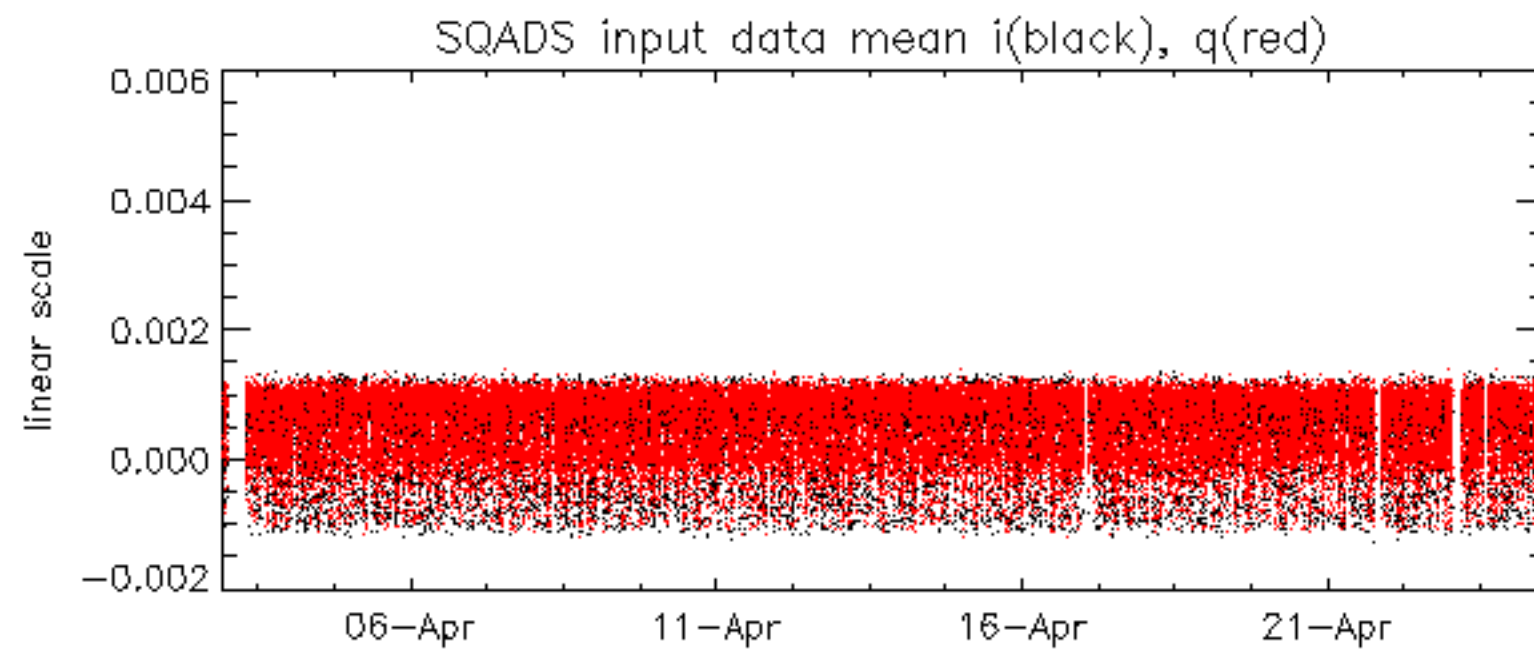


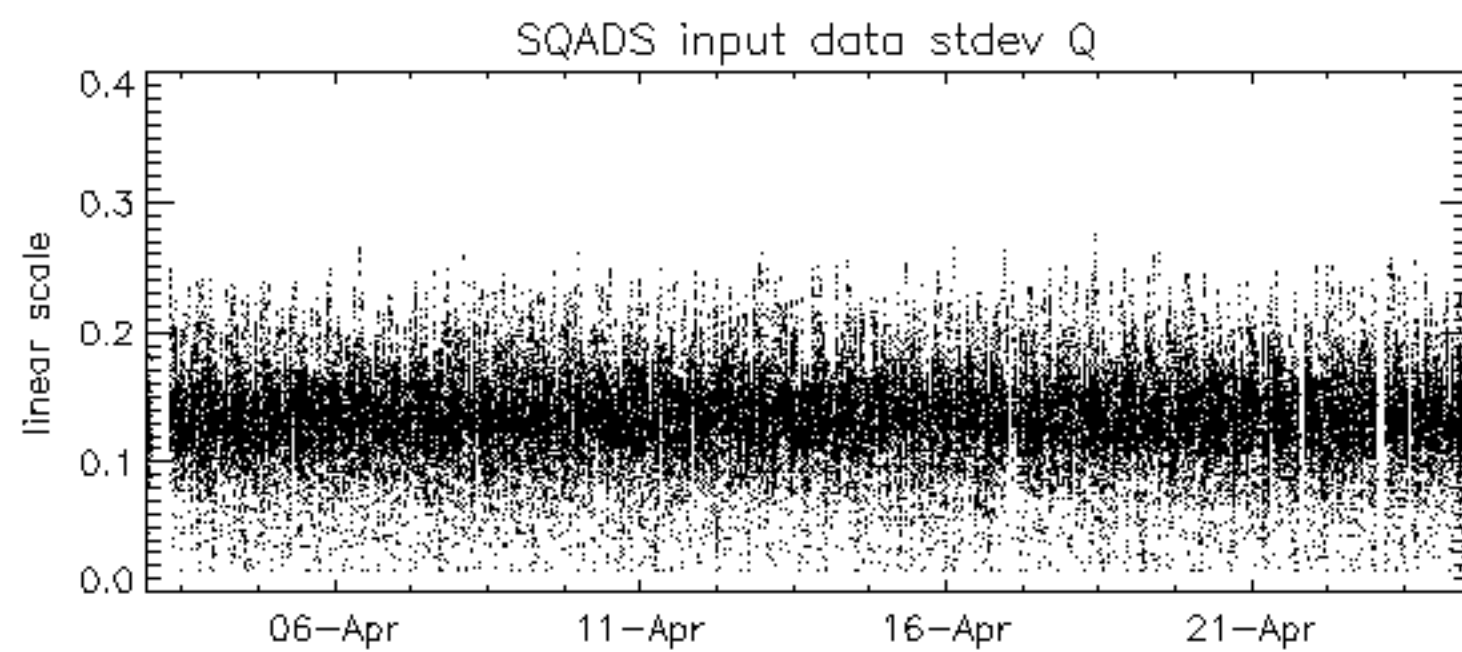
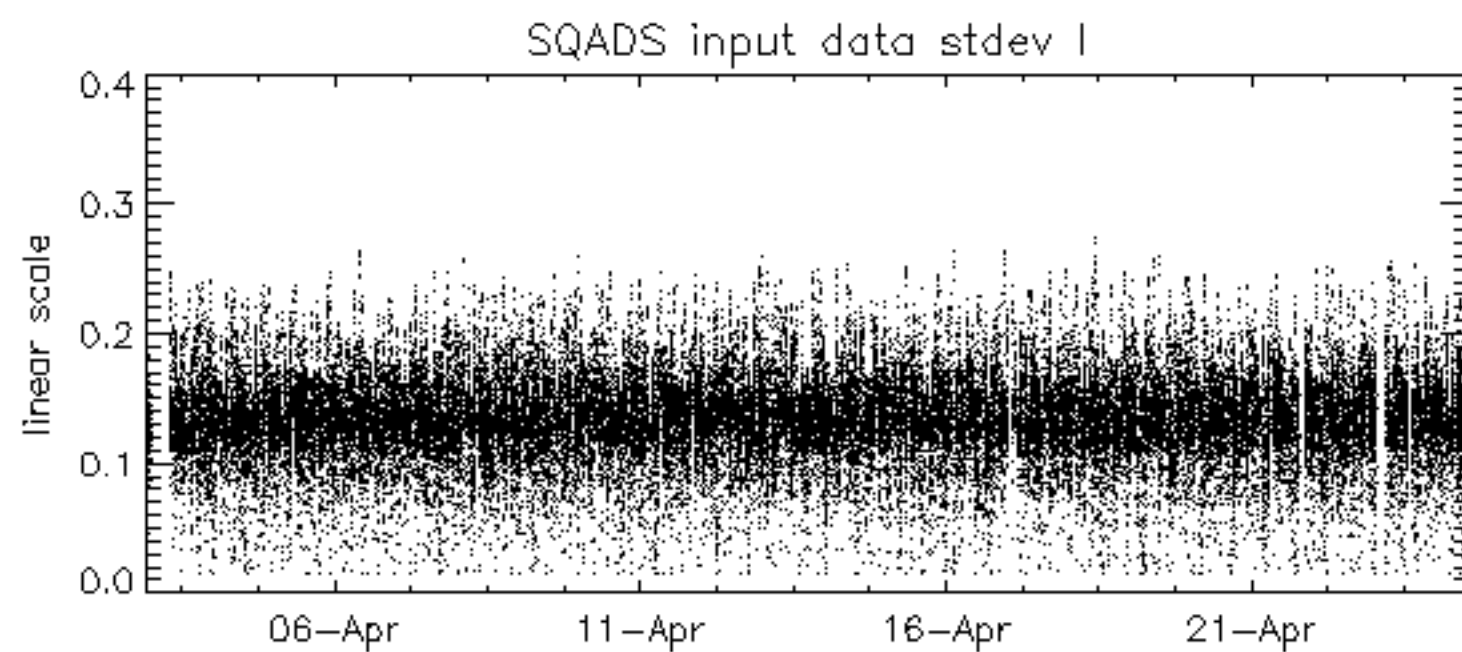
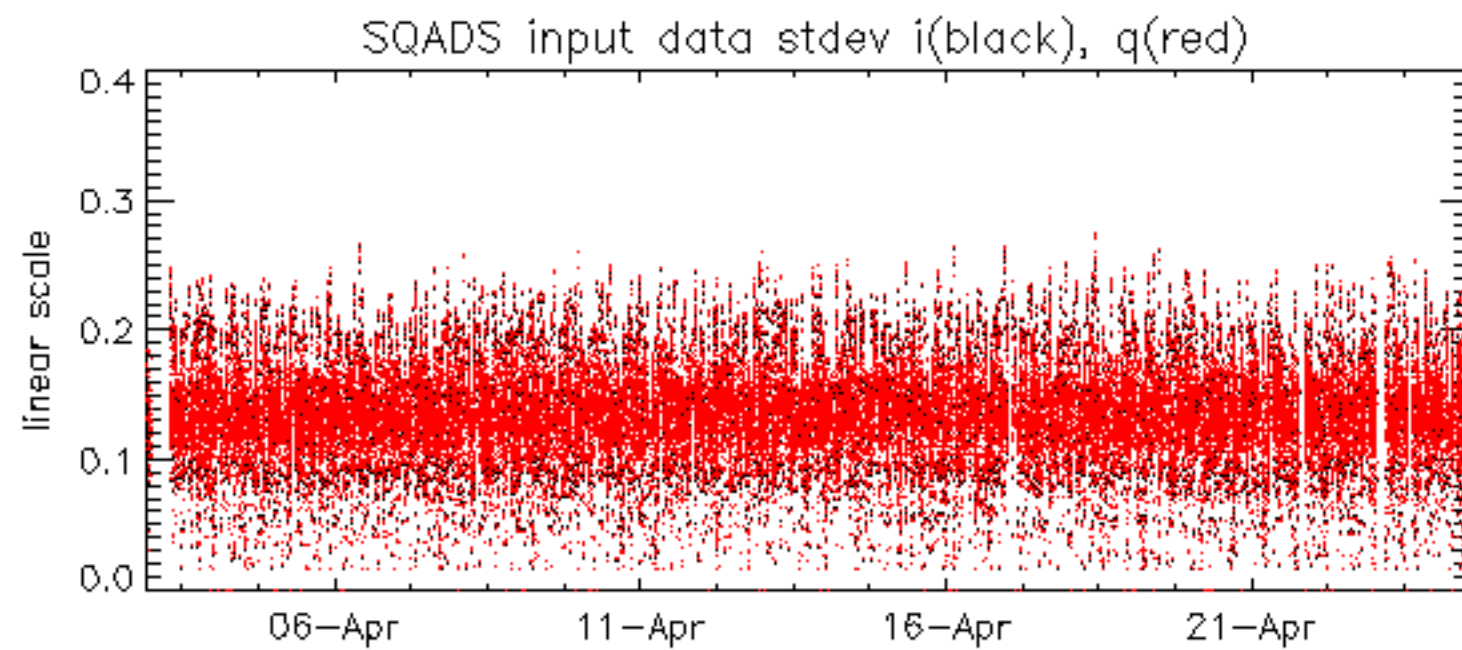


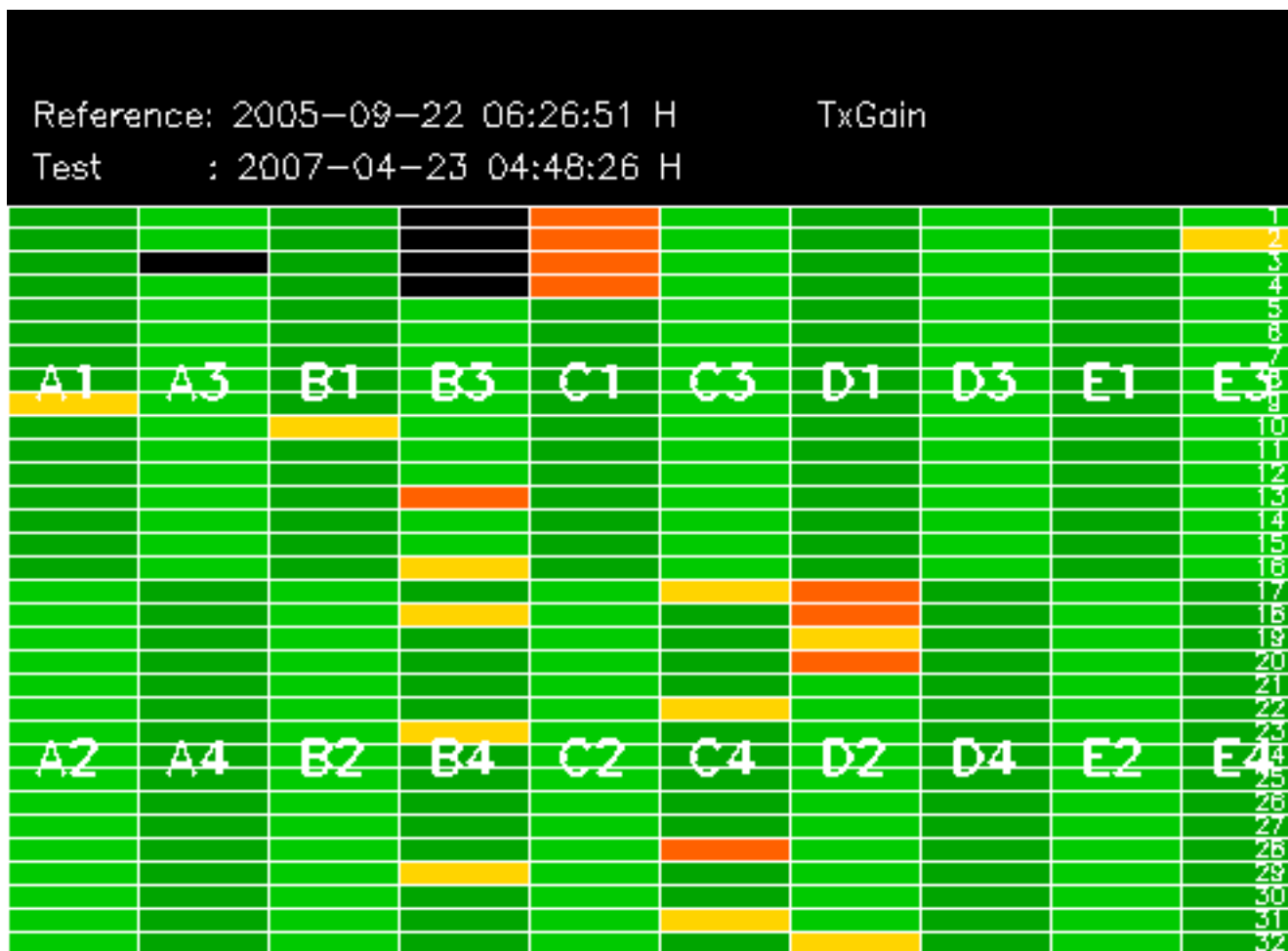








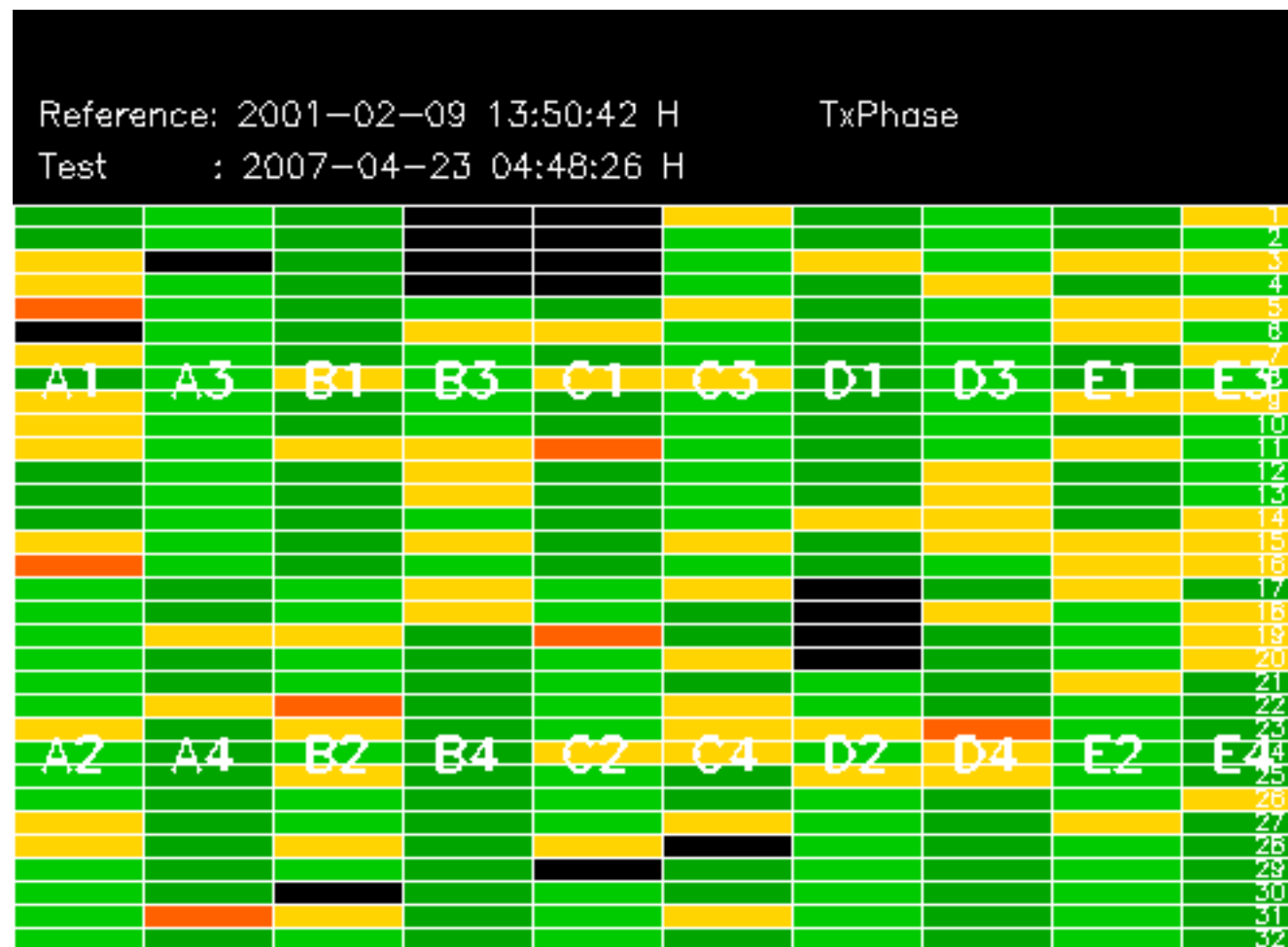


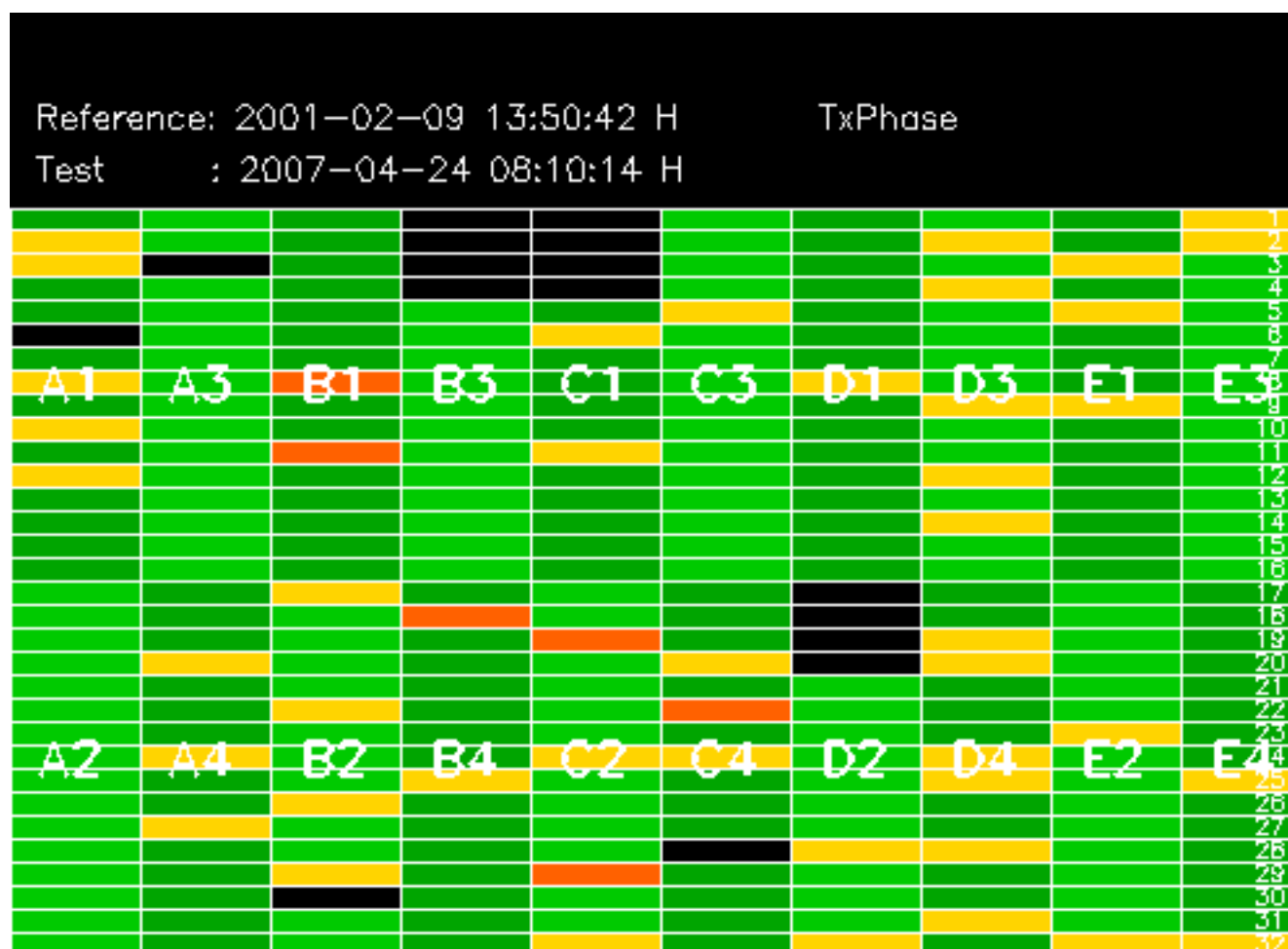


Summary of analysis for the last 3 days 2007042[234]

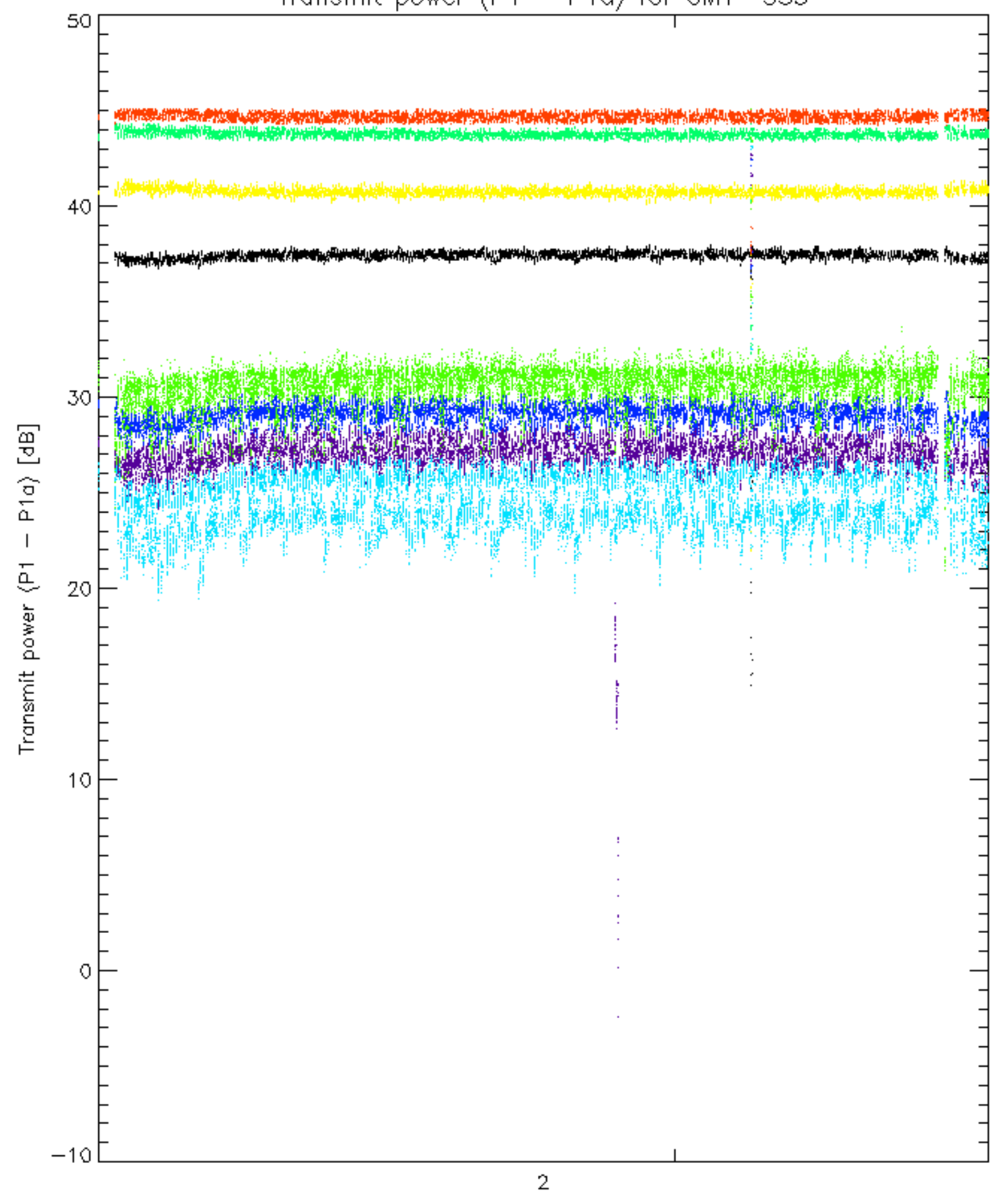
The assumptions is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WVS_1PNPDK20070424_070914_000005242057_00307_26914_0654.N1	0	16
ASA_GM1_1PNPDK20070422_132003_000001872057_00282_26889_8760.N1	0	30
ASA_GM1_1PNPDK20070422_145255_000003082057_00283_26890_8885.N1	0	7
ASA_GM1_1PNPDK20070422_145255_000003202057_00283_26890_0097.N1	0	7
ASA_GM1_1PNPDK20070423_080100_000001442057_00293_26900_9584.N1	0	13
ASA_WSM_1PNPDE20070422_145121_000000852057_00283_26890_2353.N1	0	32
ASA_WSM_1PNPDE20070422_171455_000001832057_00284_26891_2412.N1	0	44
ASA_WSM_1PNPDE20070422_181428_000001772057_00285_26892_2406.N1	0	57
ASA_WSM_1PNPDE20070424_052315_000002022057_00306_26913_4879.N1	0	72
ASA_APM_1PNPDE20070424_021349_000000402057_00304_26911_4412.N1	13	0
ASA_APM_1PNPDK20070424_084924_000000402057_00308_26915_0777.N1	15	257

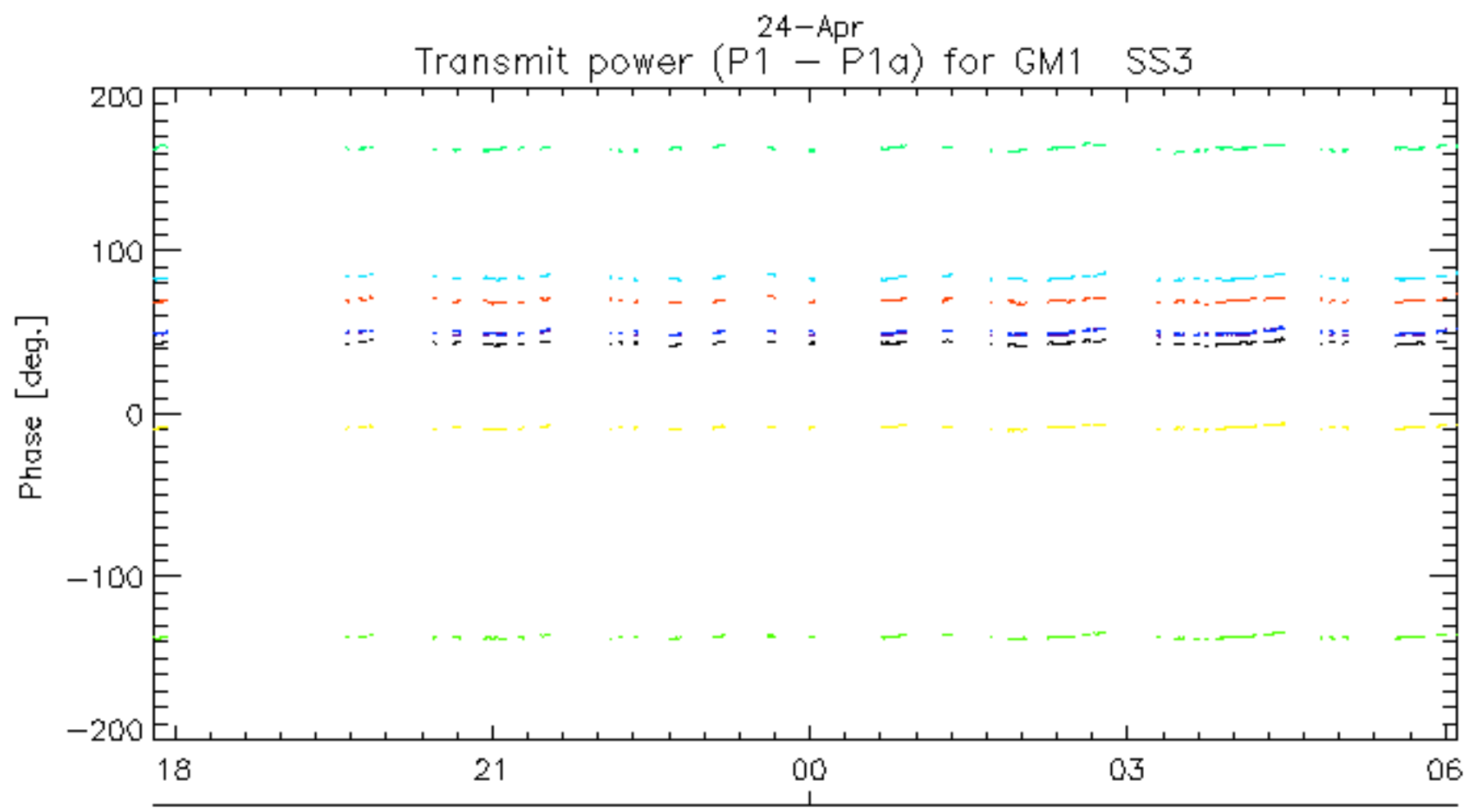
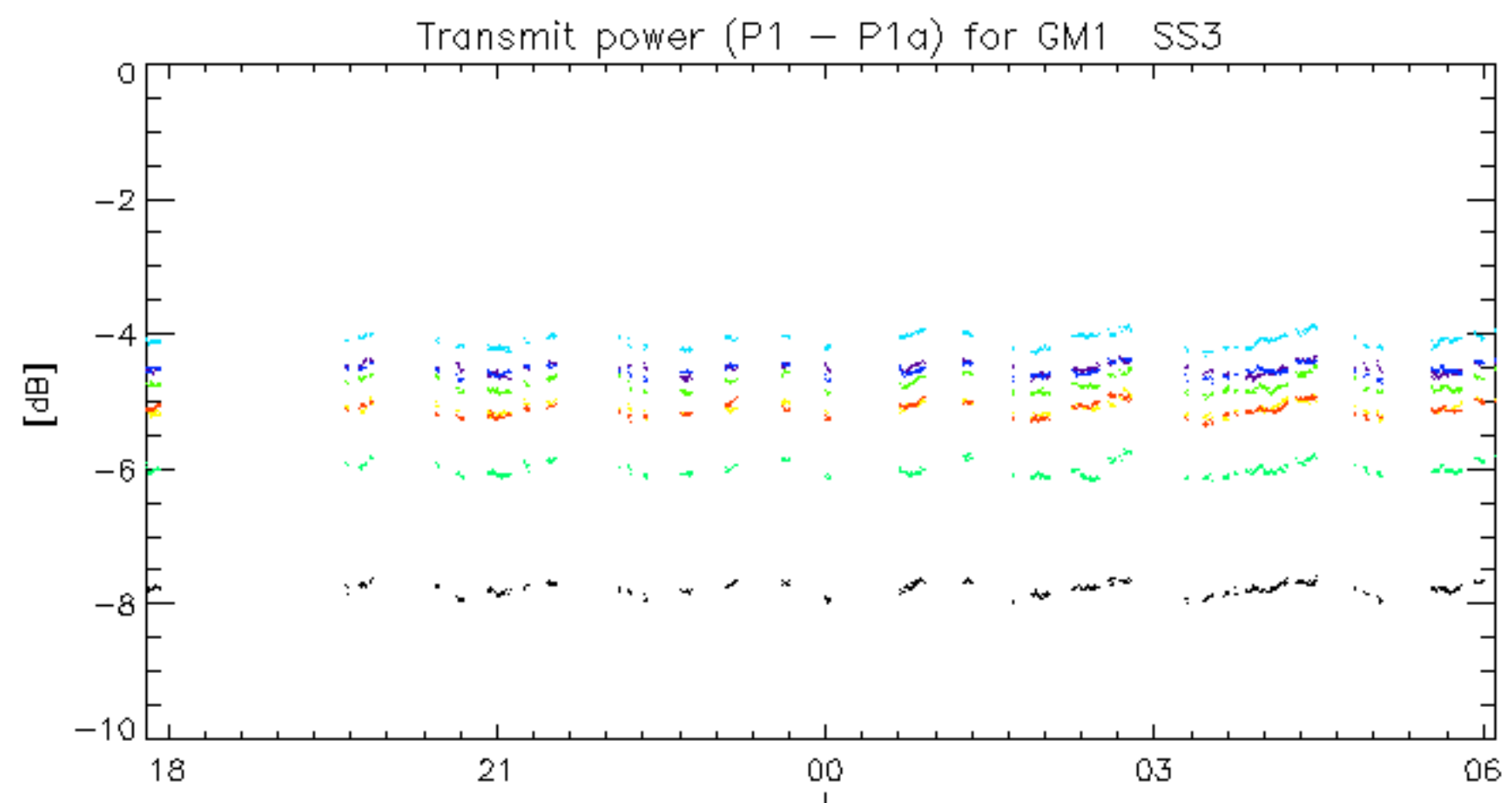




Transmit power (P1 - P1a) for GM1 SS3

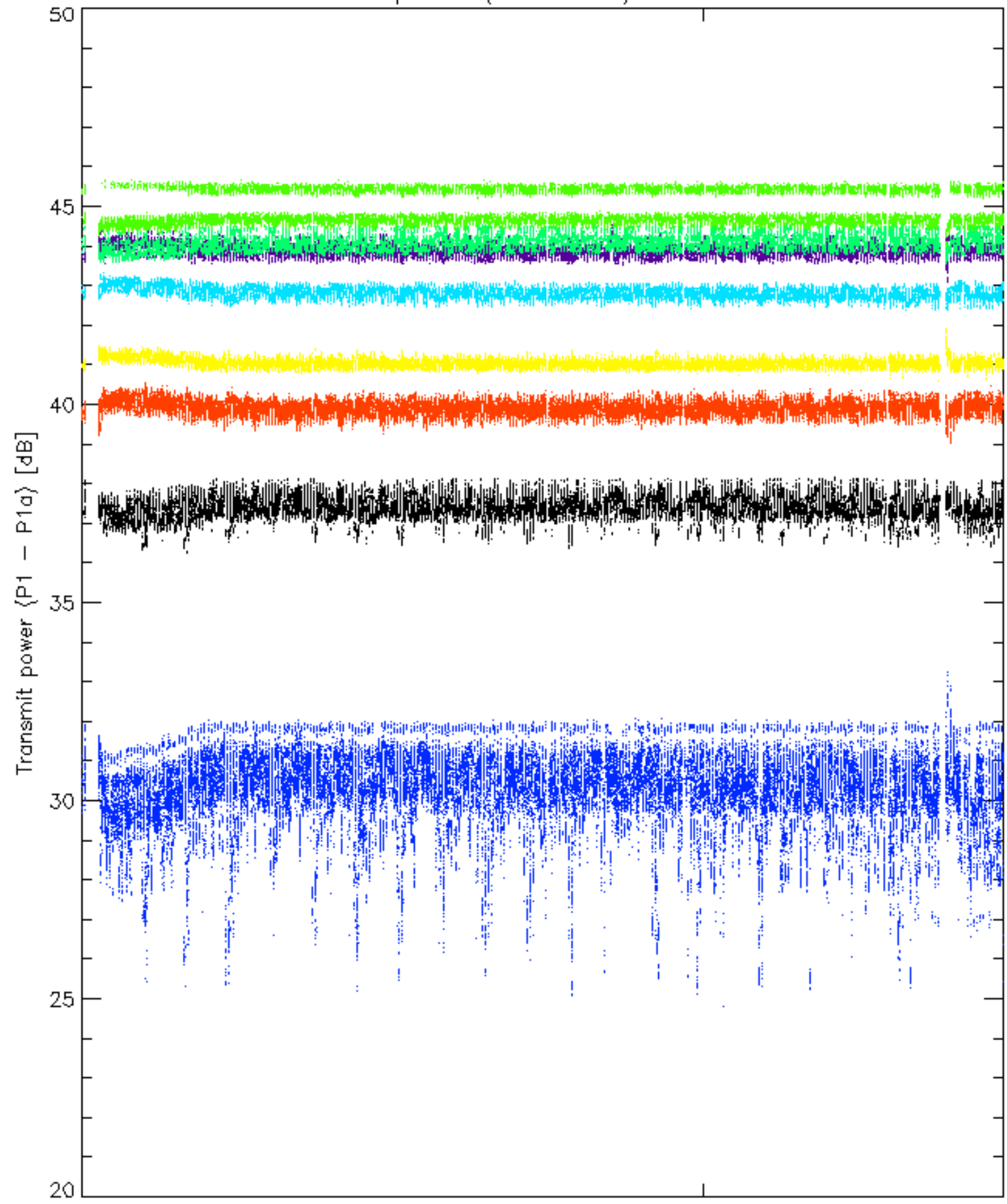


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

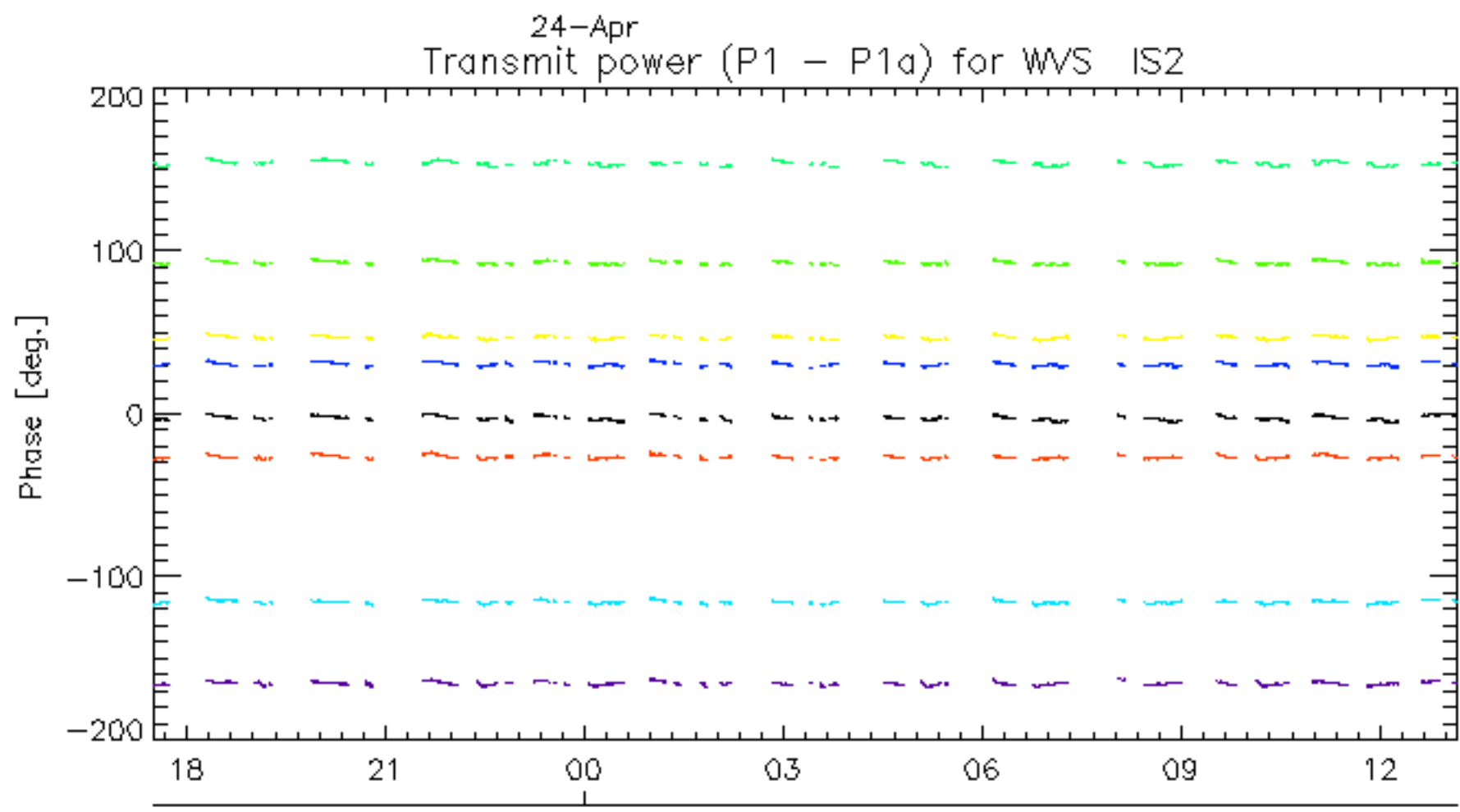
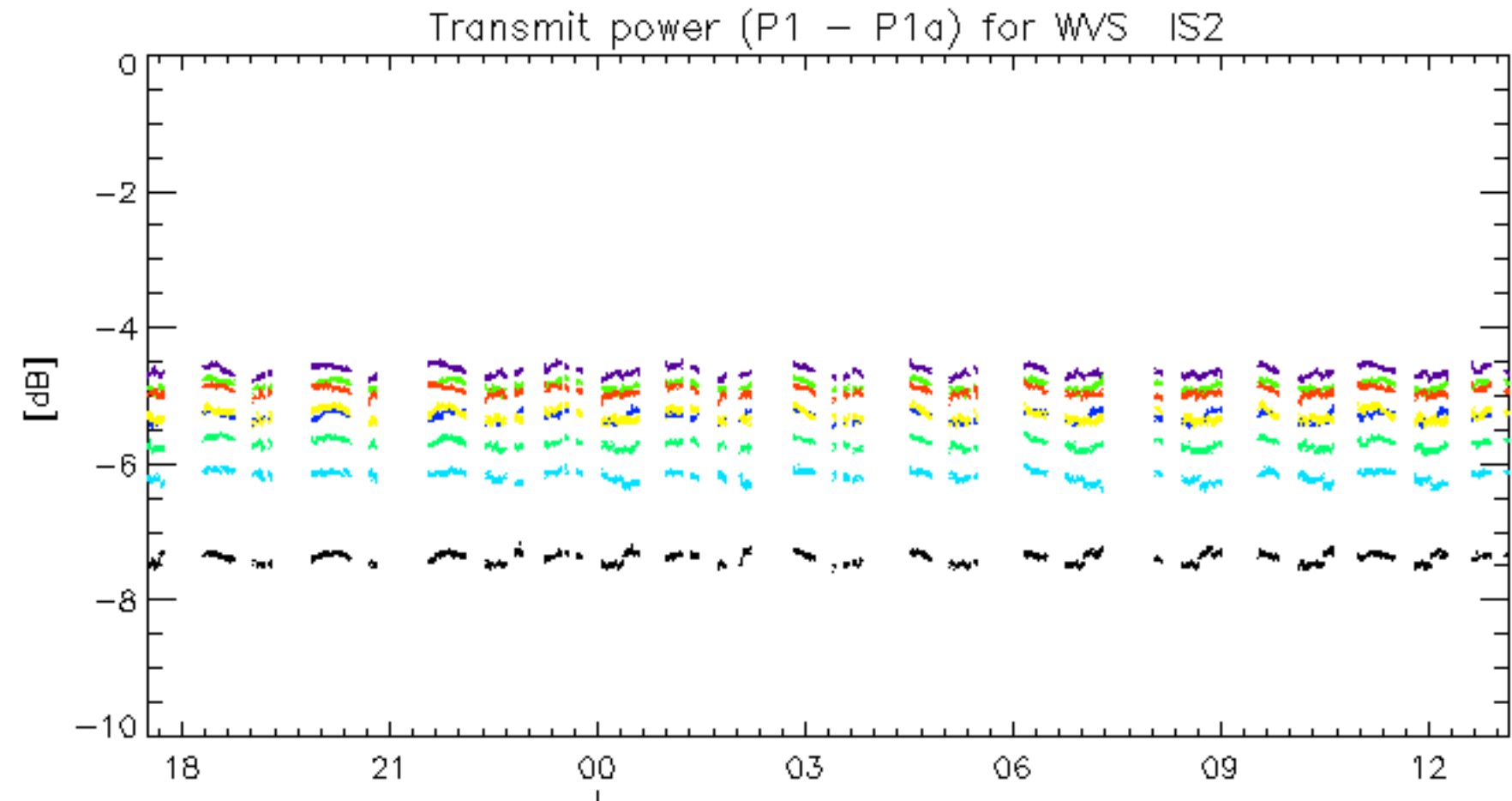


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



rows: 3 7 11 15 19 22 26 30



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

No unavailabilities during the reported period.