

PRELIMINARY REPORT OF 070423

last update on Mon Apr 23 12:01:36 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 2007-04-22 00:00:00 to 2007-04-23 12:01:36

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	29	56	14	1	20
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	29	56	14	1	20
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	29	56	14	1	20
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	29	56	14	1	20

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	40	47	45	4	33
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	40	47	45	4	33
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	40	47	45	4	33
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	47	45	4	33

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	20070423 044826

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	-15.069985	0.148565	-0.108711
7	P1a	-17.546484	0.111968	-0.079656
11	P1a	-17.440872	0.338117	-0.819552
15	P1a	-12.970801	0.113475	-0.354500
19	P1a	-15.312704	0.068548	-0.395905
22	P1a	-15.882854	0.422946	-0.452898
26	P1a	-15.050006	0.207124	0.585392
30	P1a	-17.648624	0.314695	-0.679890

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.762611	0.010974	-0.023219
7	P1	-3.146546	0.009015	-0.010315
11	P1	-4.207752	0.012445	-0.014012
15	P1	-6.397527	0.019120	-0.137836
19	P1	-3.787247	0.010360	0.053932
22	P1	-4.746023	0.009333	-0.036557
26	P1	-3.923906	0.019290	0.111856
30	P1	-5.967869	0.009569	0.042477

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.660778	0.090641	-0.027155
7	P2	-21.570503	0.086983	0.114751
11	P2	-15.372066	0.114908	0.220503
15	P2	-7.123818	0.088220	-0.006709
19	P2	-9.116414	0.079516	0.055668
22	P2	-18.085455	0.077273	0.041177
26	P2	-16.610502	0.080655	-0.028988
30	P2	-19.282290	0.082358	0.044050

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.244430	0.005519	-0.003513
7	P3	-8.244430	0.005519	-0.003513
11	P3	-8.244430	0.005519	-0.003513
15	P3	-8.244430	0.005519	-0.003513
19	P3	-8.244430	0.005519	-0.003513
22	P3	-8.244430	0.005519	-0.003513
26	P3	-8.244430	0.005519	-0.003513
30	P3	-8.244430	0.005519	-0.003513

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	-11.195042	0.158463	-0.132849
7	P1a	-10.073129	0.249626	-0.095115
11	P1a	-10.691391	0.118056	0.056712
15	P1a	-10.852299	0.178678	0.027998
19	P1a	-15.789895	0.095624	-0.022423
22	P1a	-21.373245	1.443852	-0.845866
26	P1a	-15.493096	0.388852	-0.411696
30	P1a	-18.307098	0.473403	0.526824

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.453426	0.063053	-0.018311
7	P1	-2.417612	0.143068	0.006428
11	P1	-2.894647	0.029770	0.063998
15	P1	-3.823491	0.040353	0.047035
19	P1	-3.584012	0.015019	-0.002191
22	P1	-4.976162	0.023746	0.116243
26	P1	-6.032061	0.030907	-0.028258
30	P1	-5.334808	0.035611	-0.006169

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.170137	0.067336	-0.067455
7	P2	-22.036005	0.242224	-0.027579
11	P2	-10.631621	0.048459	-0.014120
15	P2	-4.917630	0.041280	-0.115924
19	P2	-6.868356	0.040585	-0.044113
22	P2	-8.113812	0.111095	-0.020816
26	P2	-24.319126	0.178558	-0.020735
30	P2	-21.714733	0.121278	0.073886

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091619	0.005003	-0.013255
7	P3	-8.091661	0.005017	-0.012897
11	P3	-8.091476	0.005009	-0.013782
15	P3	-8.091377	0.005014	-0.013683
19	P3	-8.091537	0.005036	-0.012987
22	P3	-8.091473	0.004995	-0.012578
26	P3	-8.091532	0.005013	-0.012758
30	P3	-8.091447	0.005007	-0.013140

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	0.000541194
	stdev	2.03800e-07
MEAN Q	mean	0.000489734
	stdev	2.45047e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135370
	stdev	0.00123951
STDEV Q	mean	0.135763
	stdev	0.00125720



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007042[123]

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_GM1_1PNPDK20070422_132003_000001872057_00282_26889_8760.N1	0	30
ASA_GM1_1PNPDK20070422_145255_000003082057_00283_26890_8885.N1	0	7
ASA_GM1_1PNPDK20070423_080100_000001442057_00293_26900_9584.N1	0	13
ASA_WSM_1PNPDE20070421_010149_000001412057_00260_26867_0194.N1	0	31
ASA_WSM_1PNPDE20070421_051735_000002012057_00263_26870_0558.N1	0	45
ASA_WSM_1PNPDE20070421_170154_000001522057_00270_26877_0873.N1	0	5
ASA_WSM_1PNPDE20070421_184505_000000852057_00271_26878_0922.N1	0	56
ASA_WSM_1PNPDE20070422_145121_000000852057_00283_26890_2353.N1	0	32
ASA_WSM_1PNPDE20070422_171455_000001832057_00284_26891_2412.N1	0	44



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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Acsending
<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

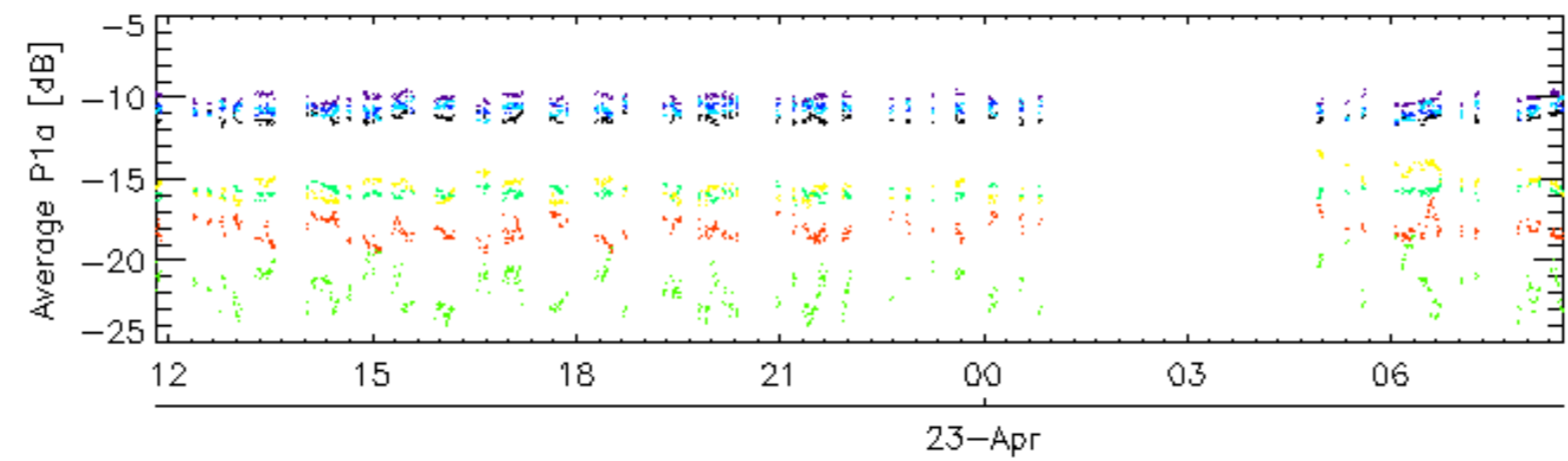
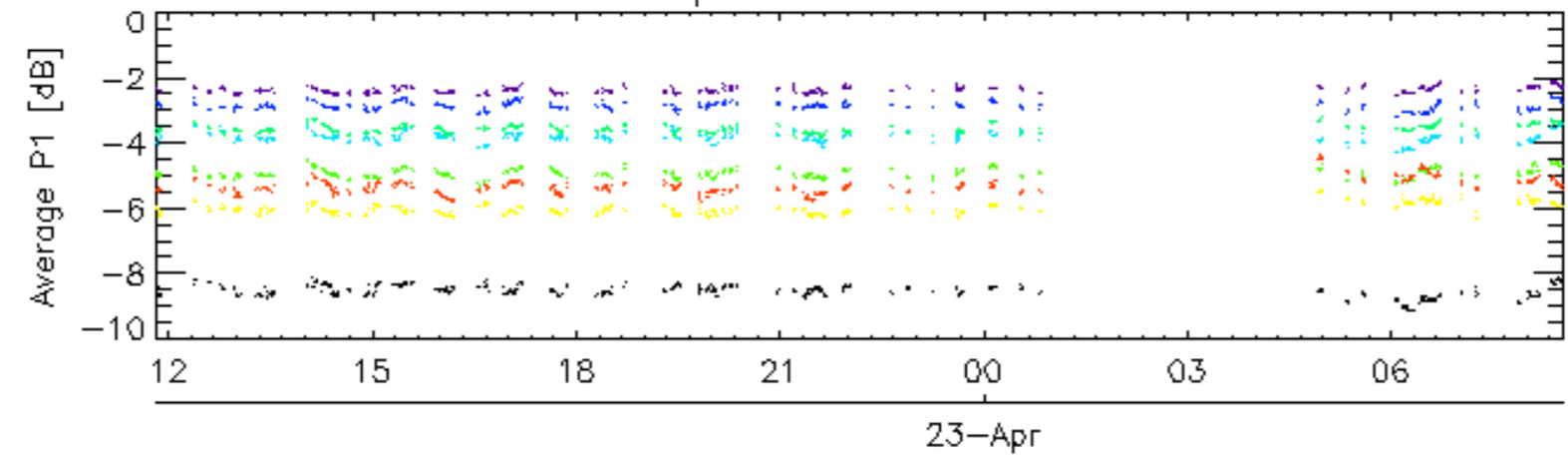
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

7.6 - Doppler evolution versus ANX for GM1

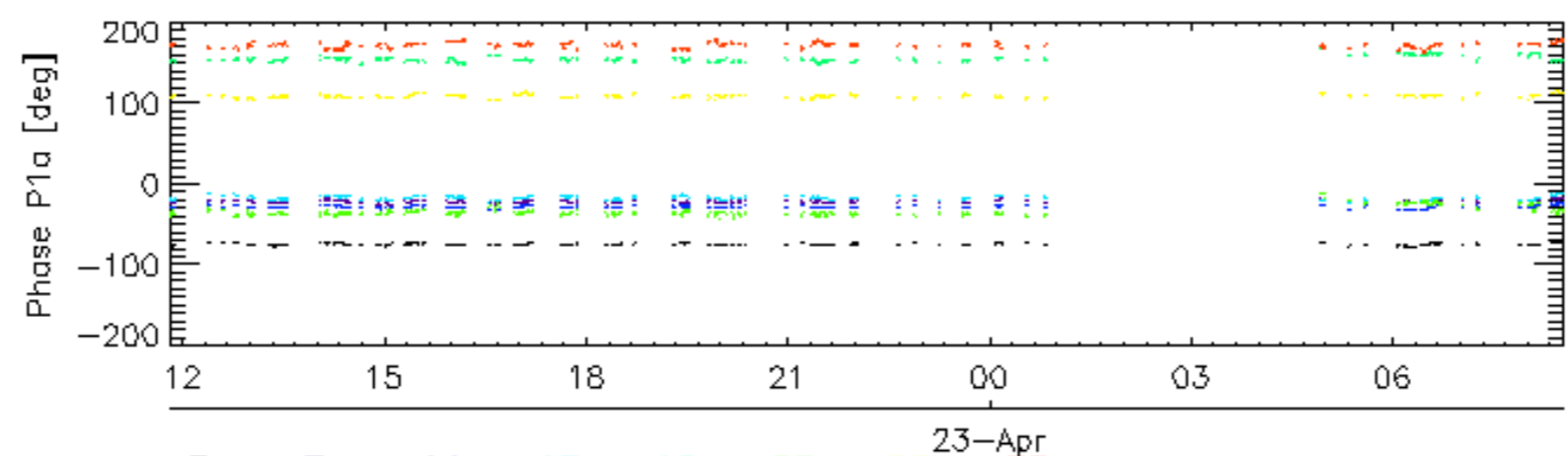
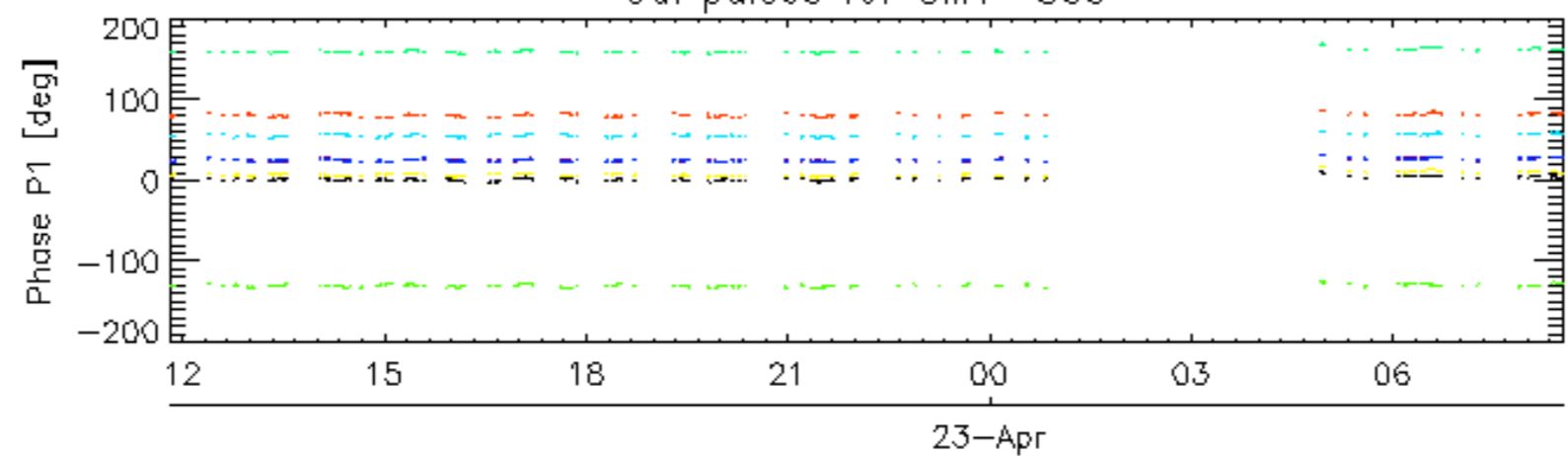
Evolution Doppler error versus ANX

<input type="checkbox"/>	
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Cal pulses for GM1 SS3

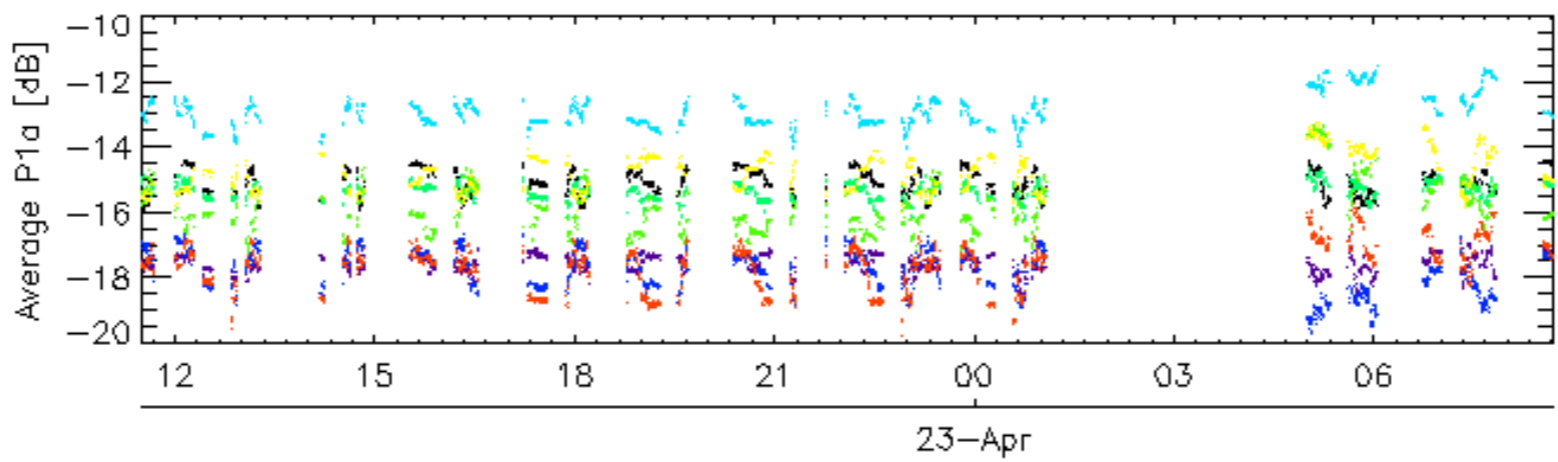
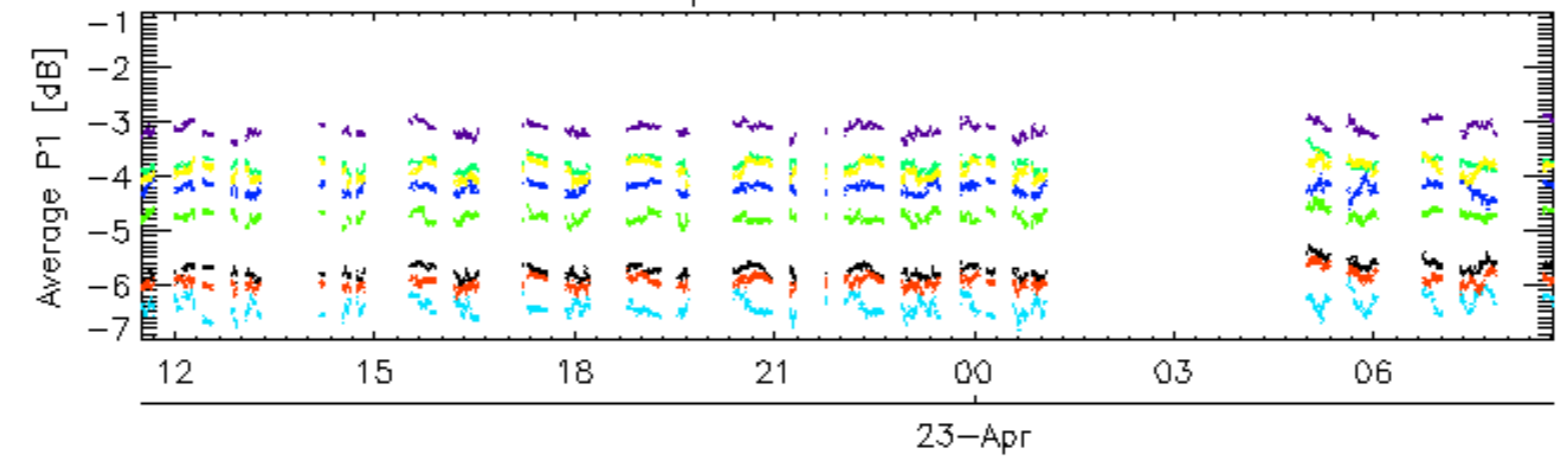


Cal pulses for GM1 SS3

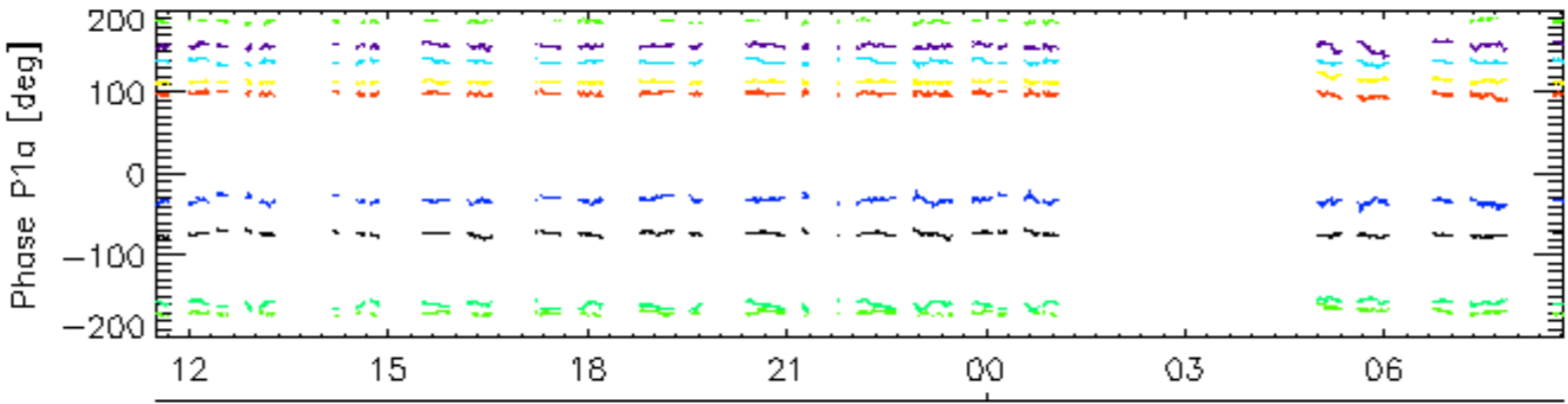
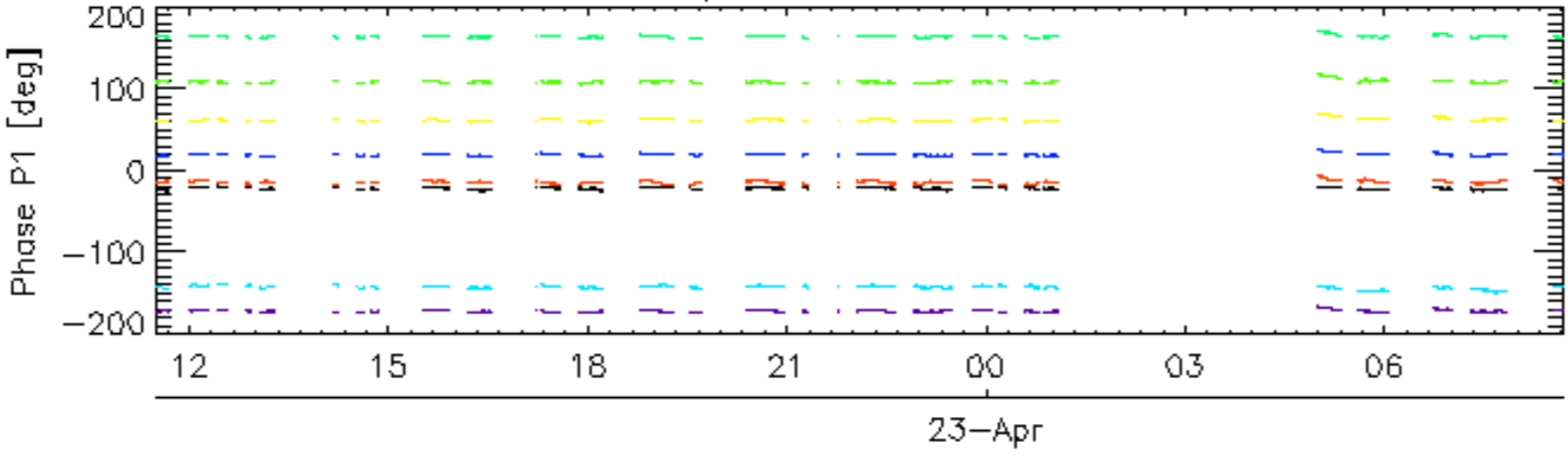


rows: **3** **7** **11** **15** **19** **22** **26** **30** 23-Apr

Cal pulses for WVS IS2

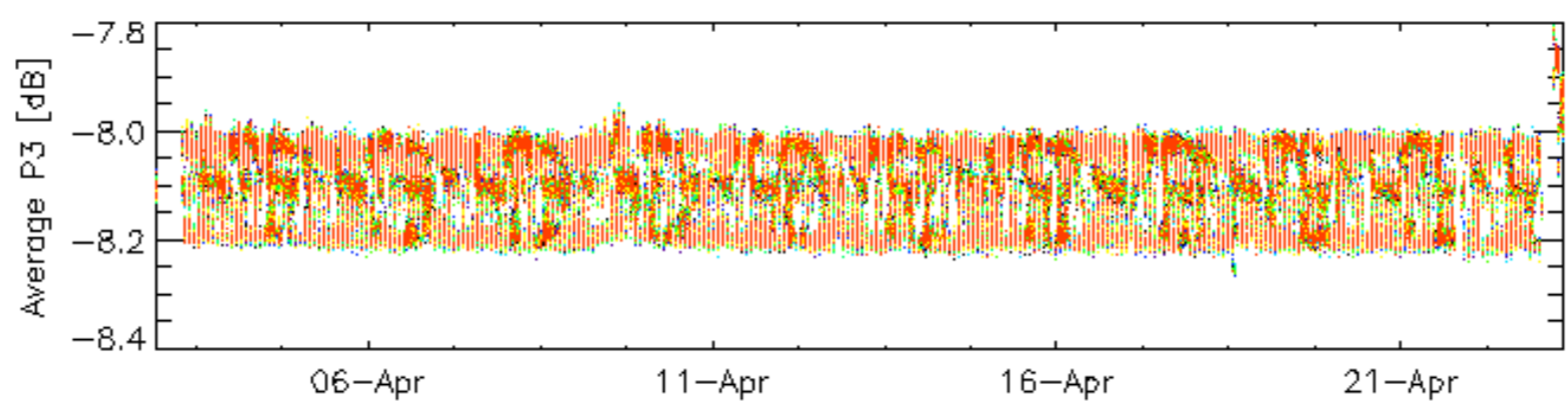
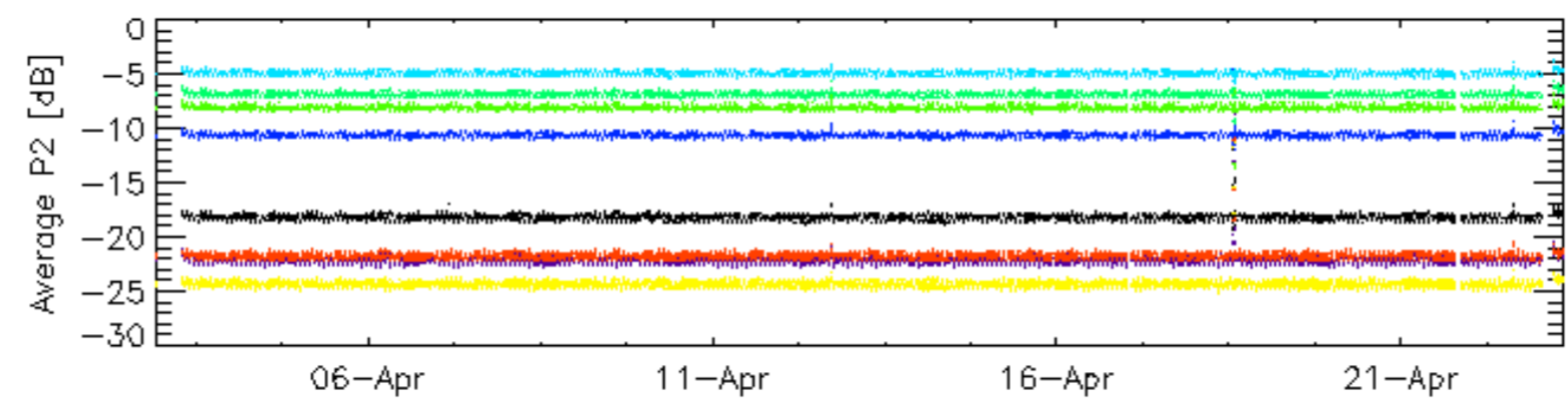
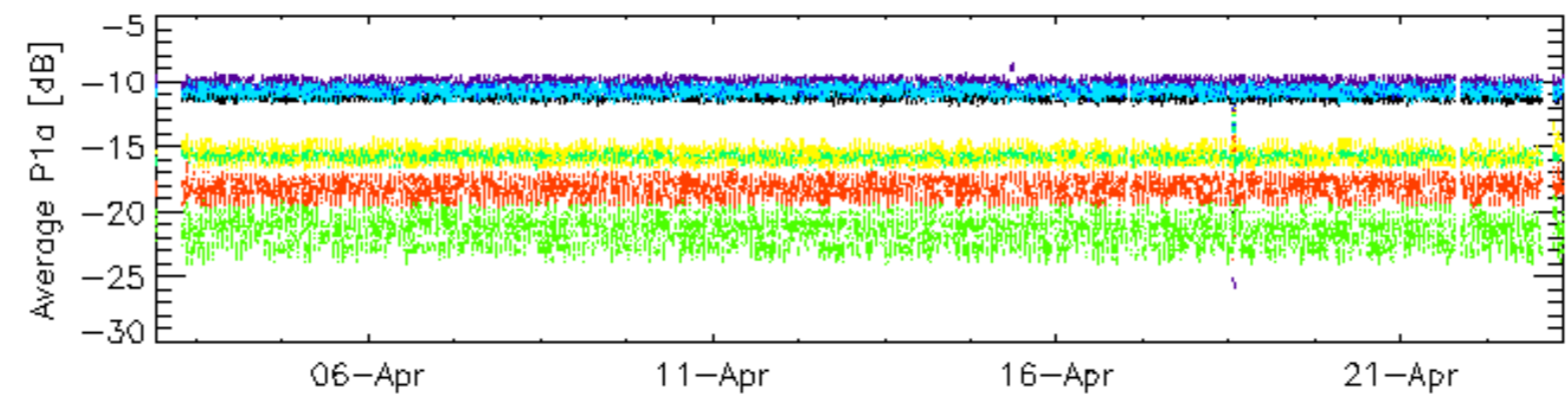
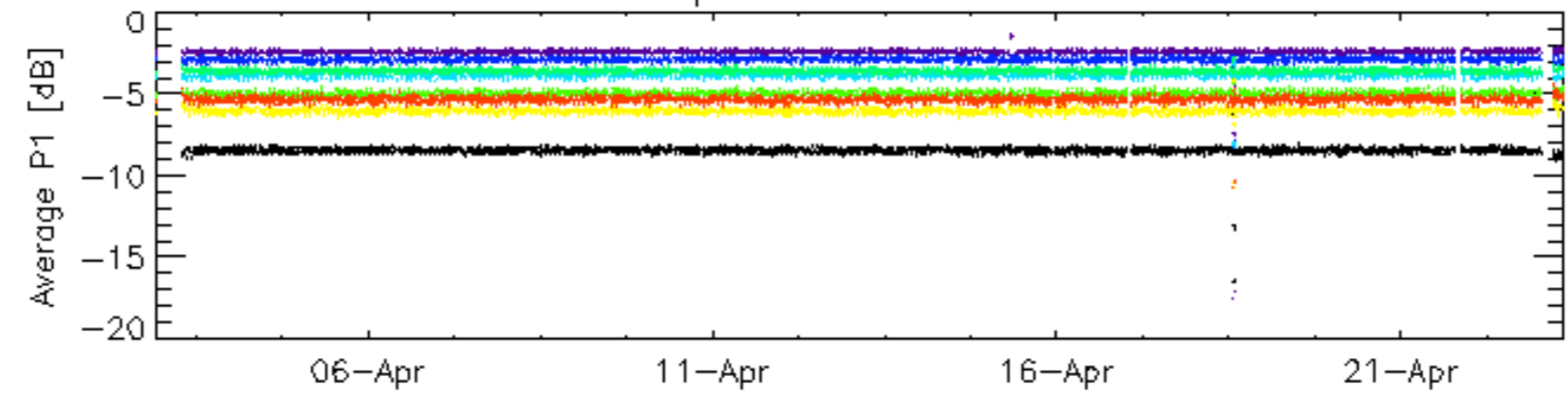


Cal pulses for WVS IS2



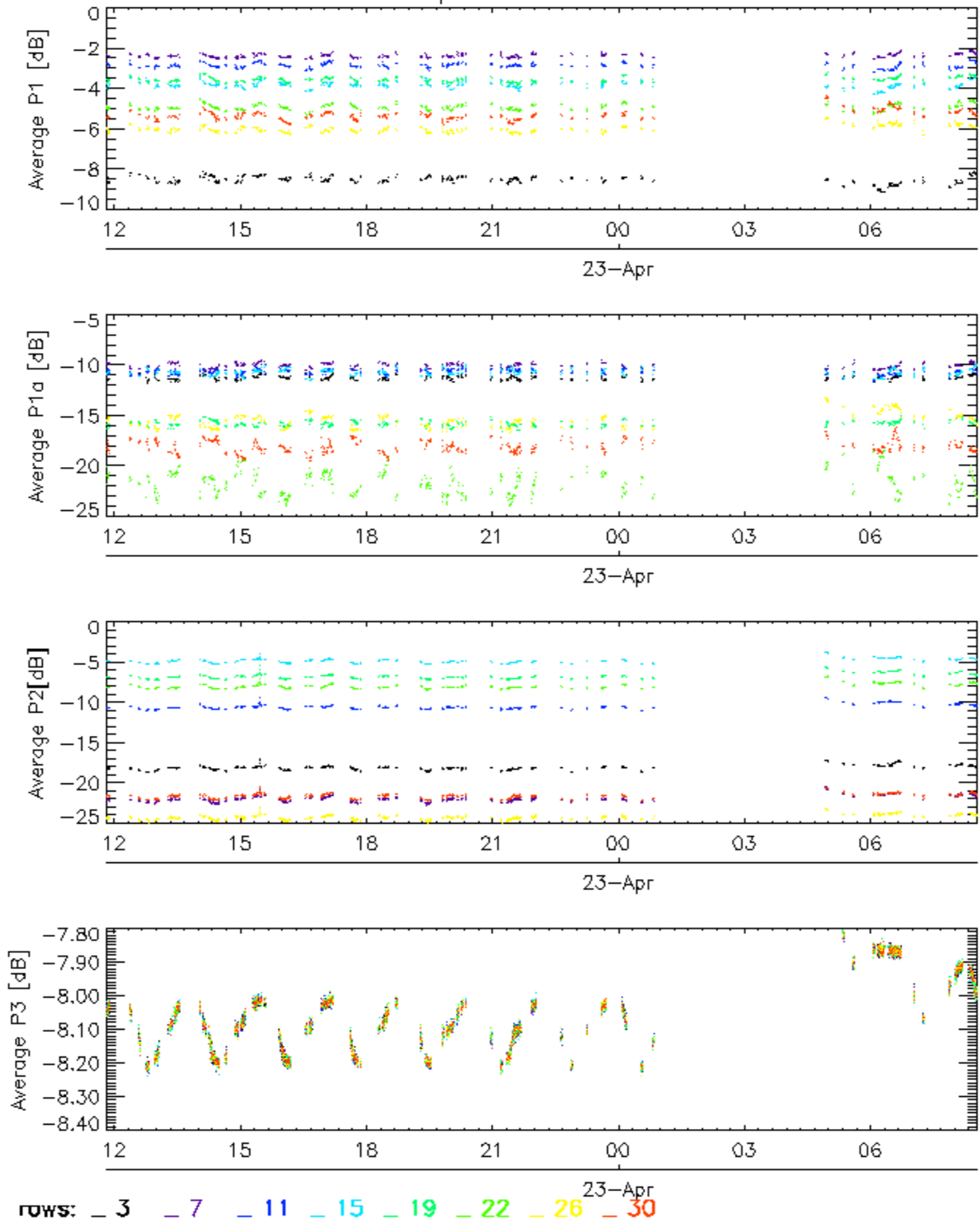
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

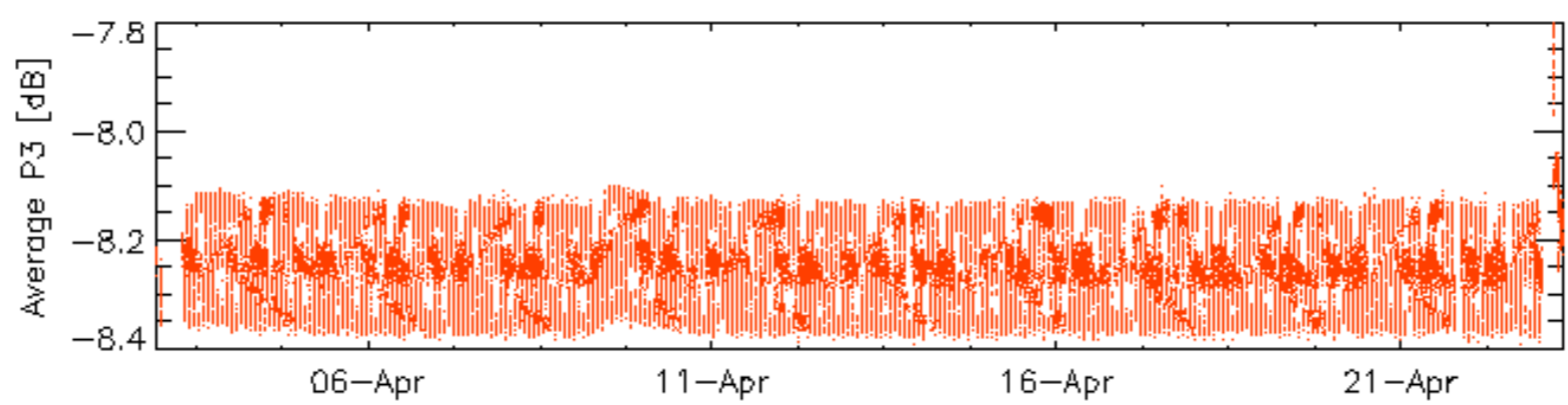
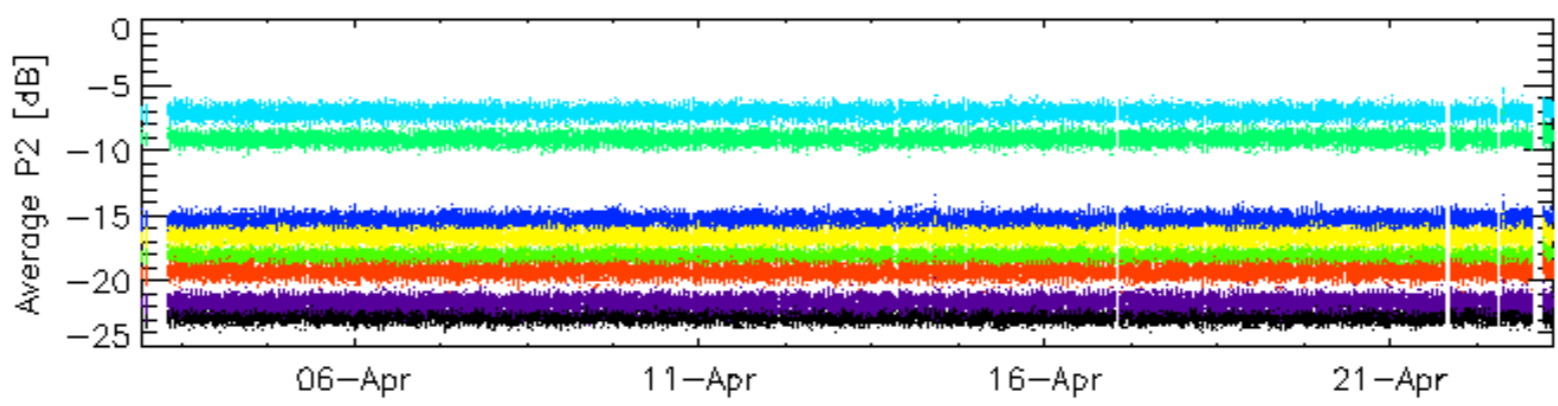
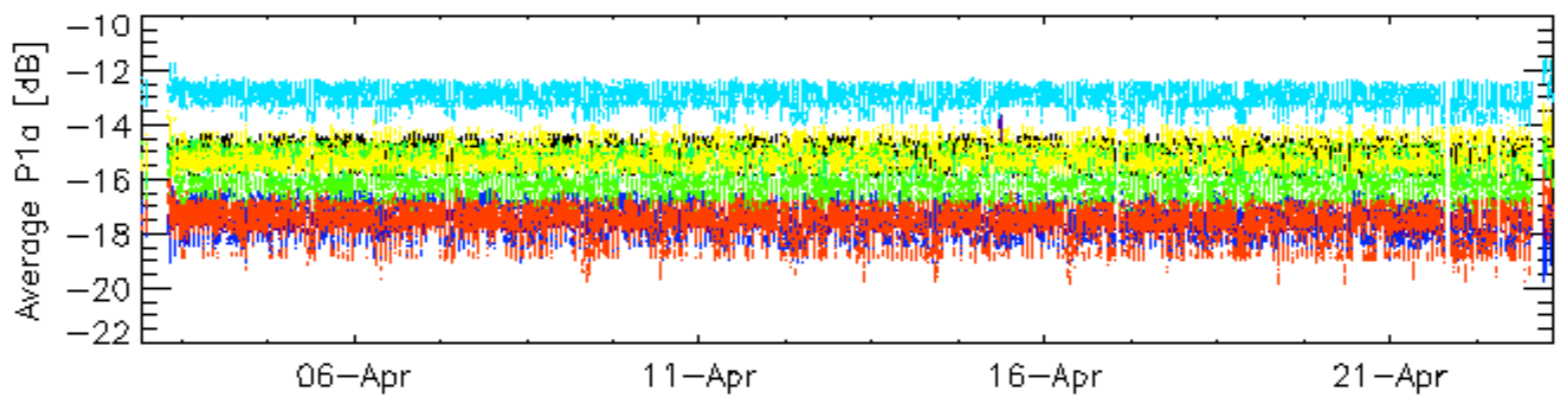
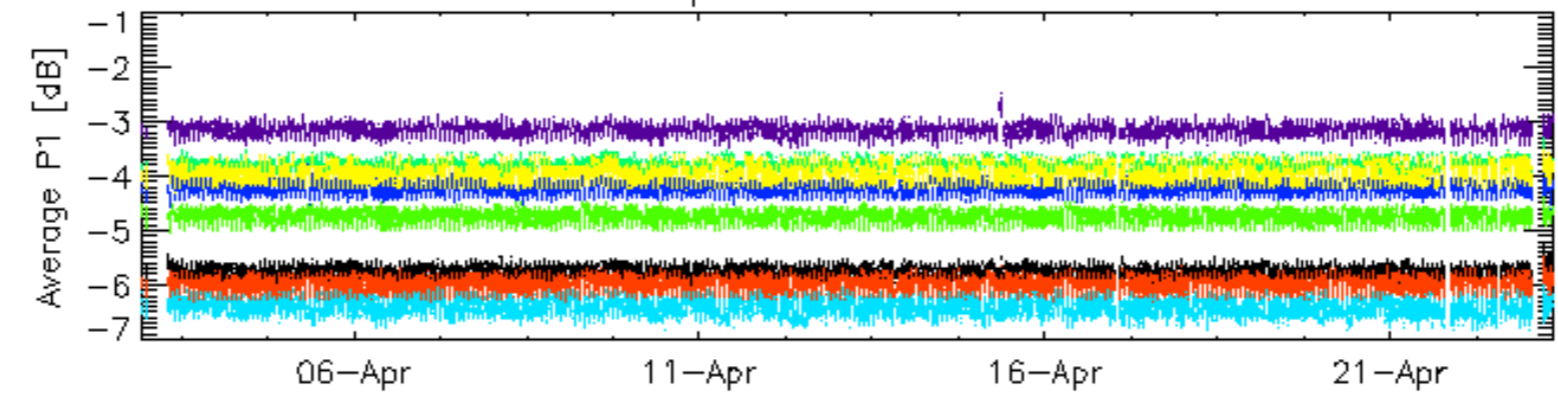


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

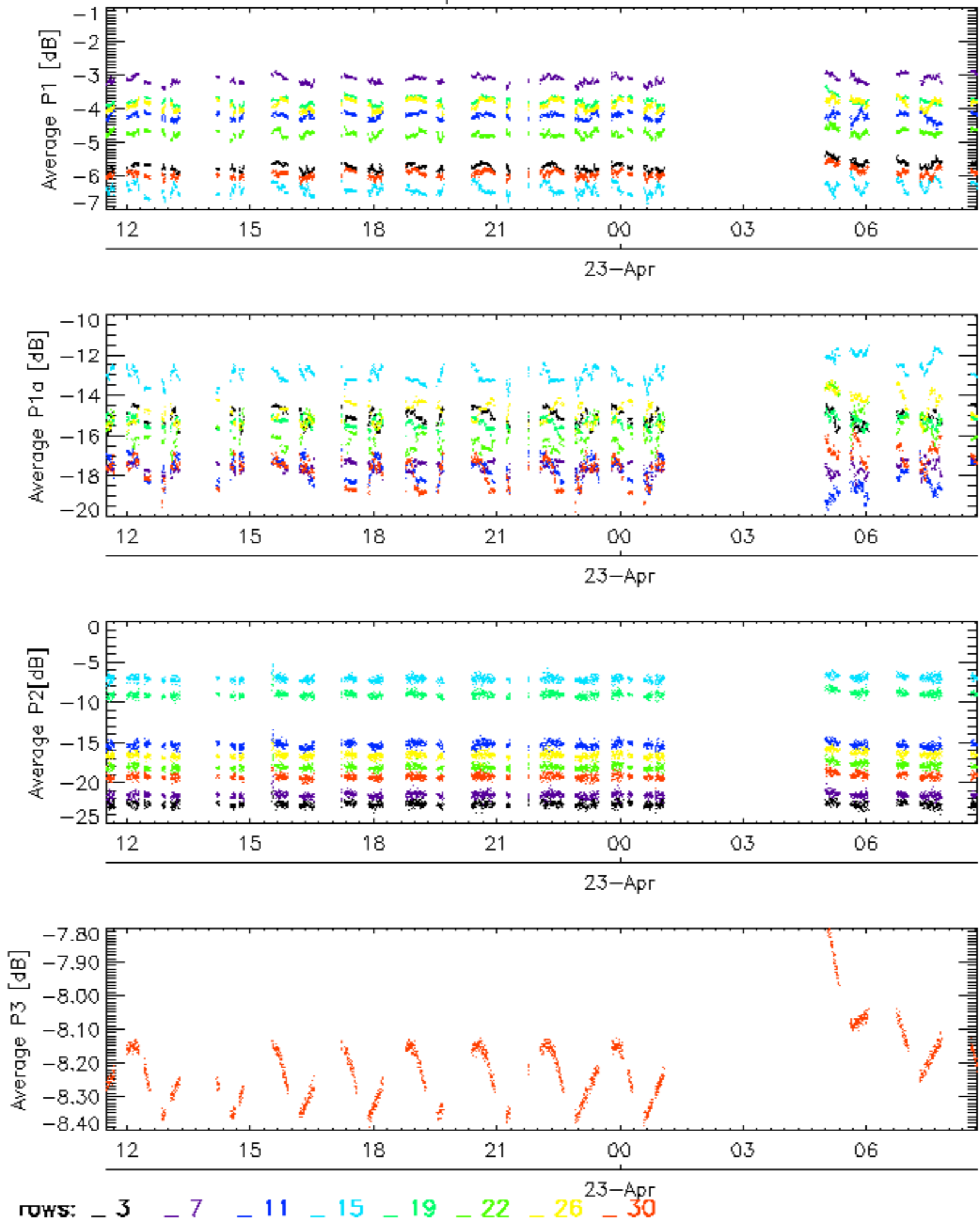


Cal pulses for WVS IS2

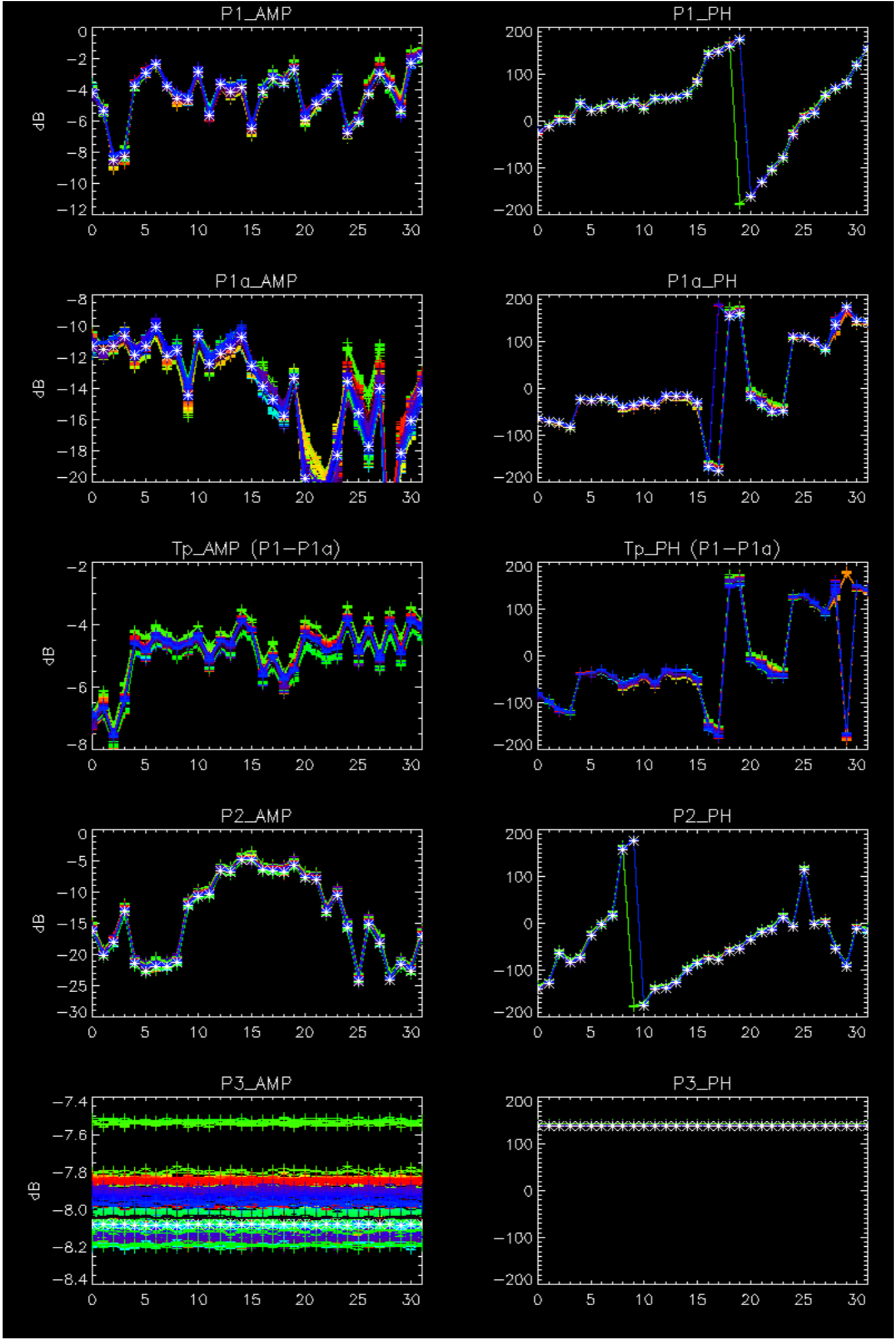


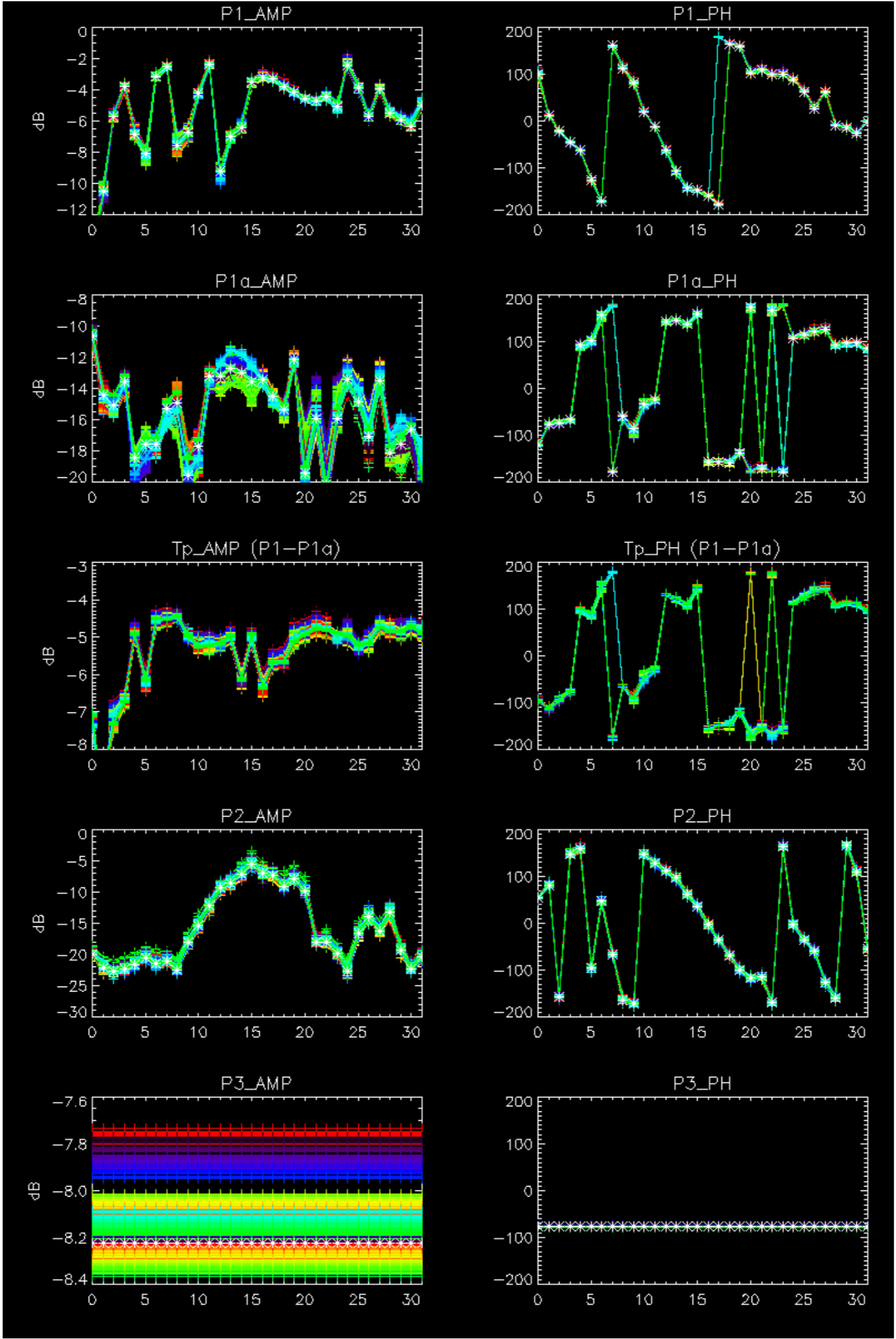
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



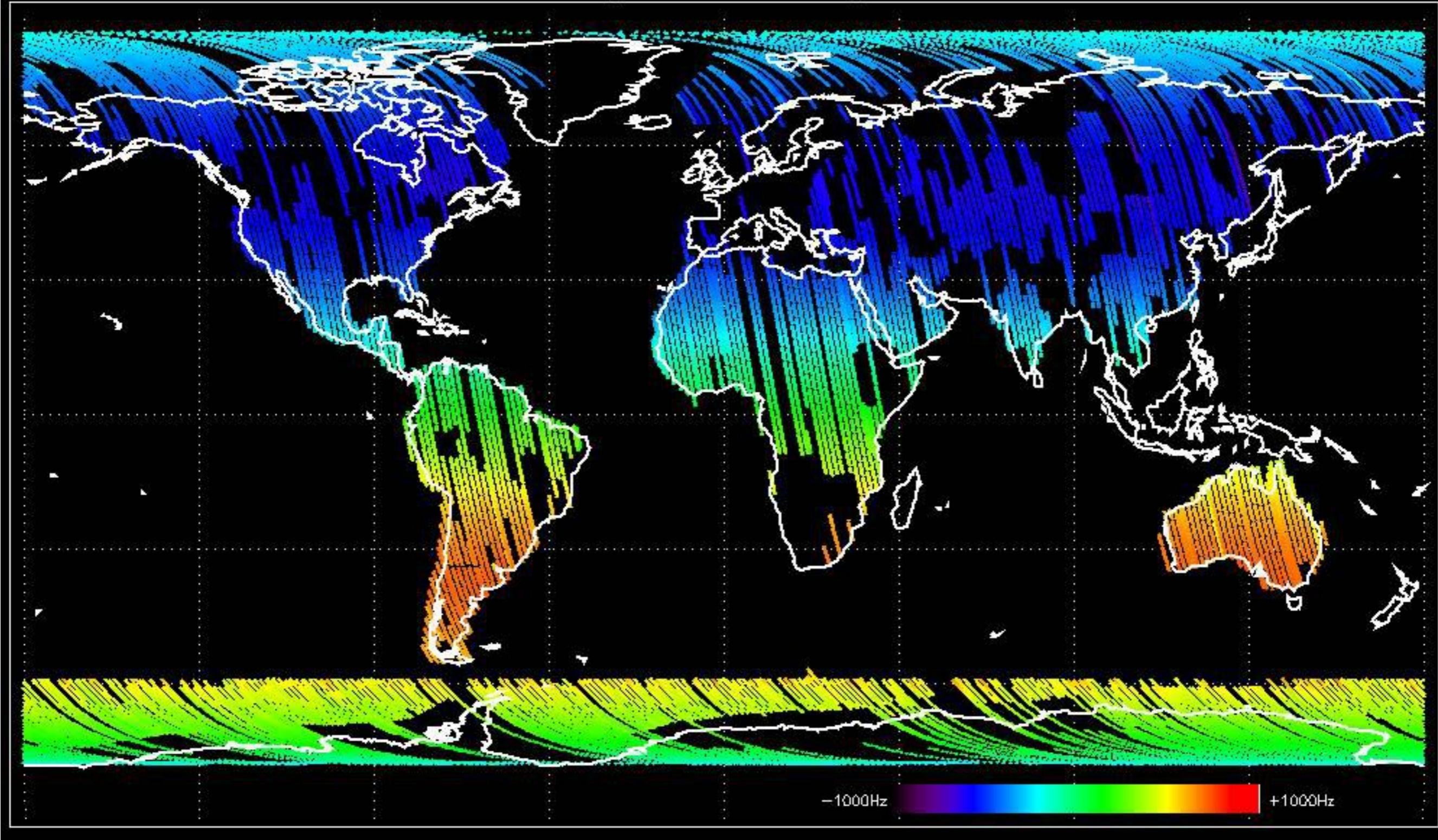
No anomalies observed.



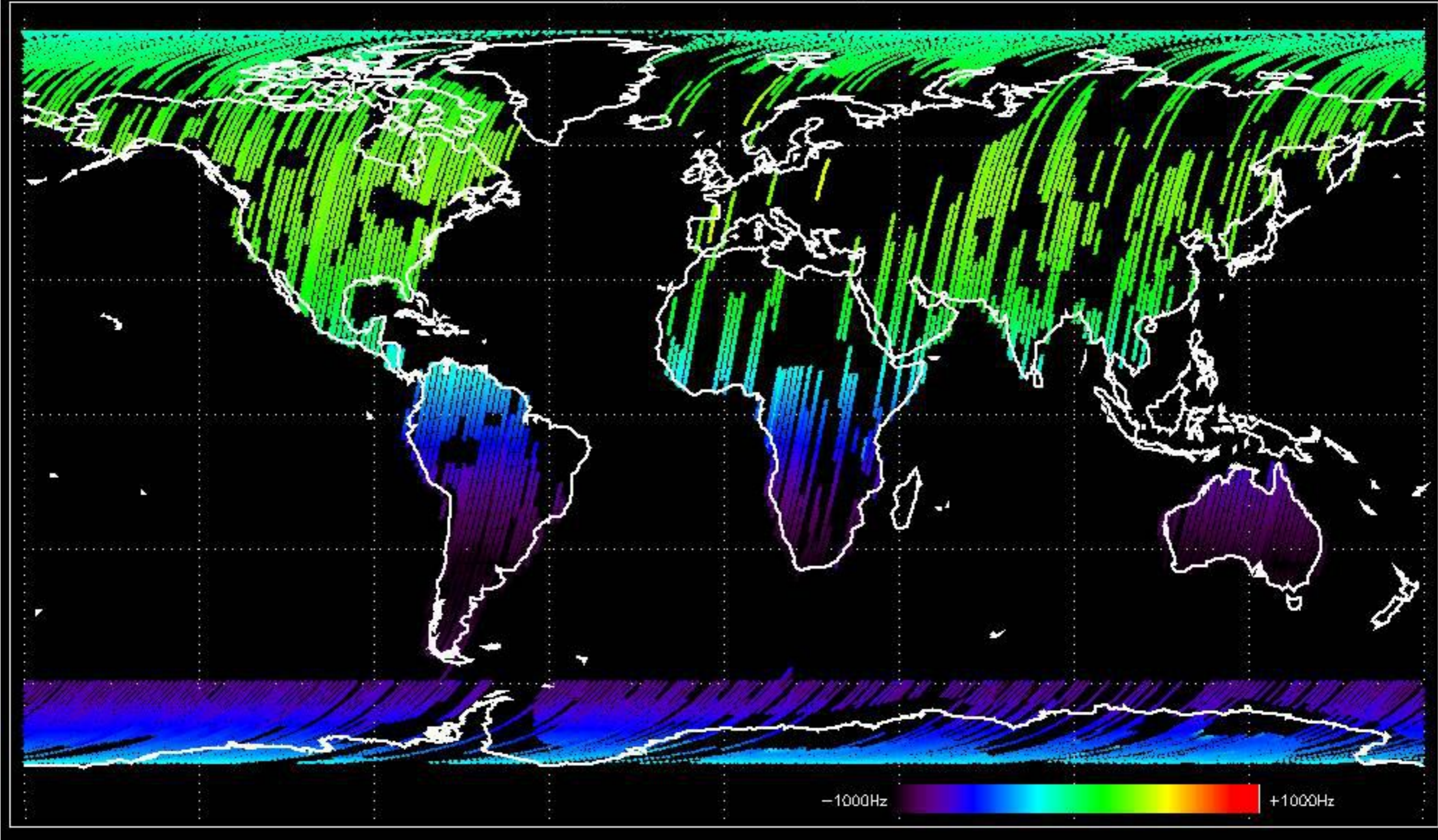


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

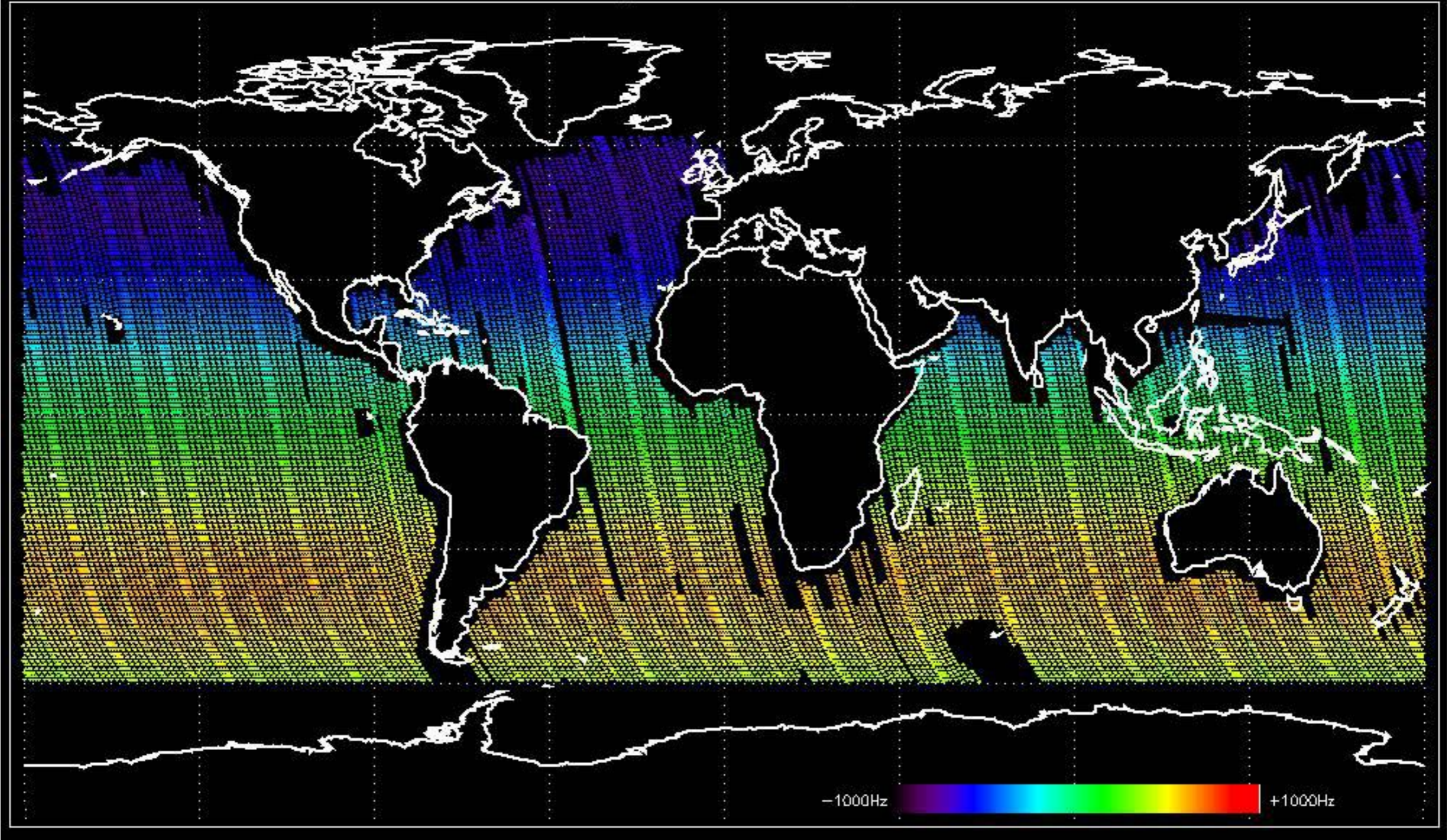
Doppler 'GM1' 'SS1' ascending



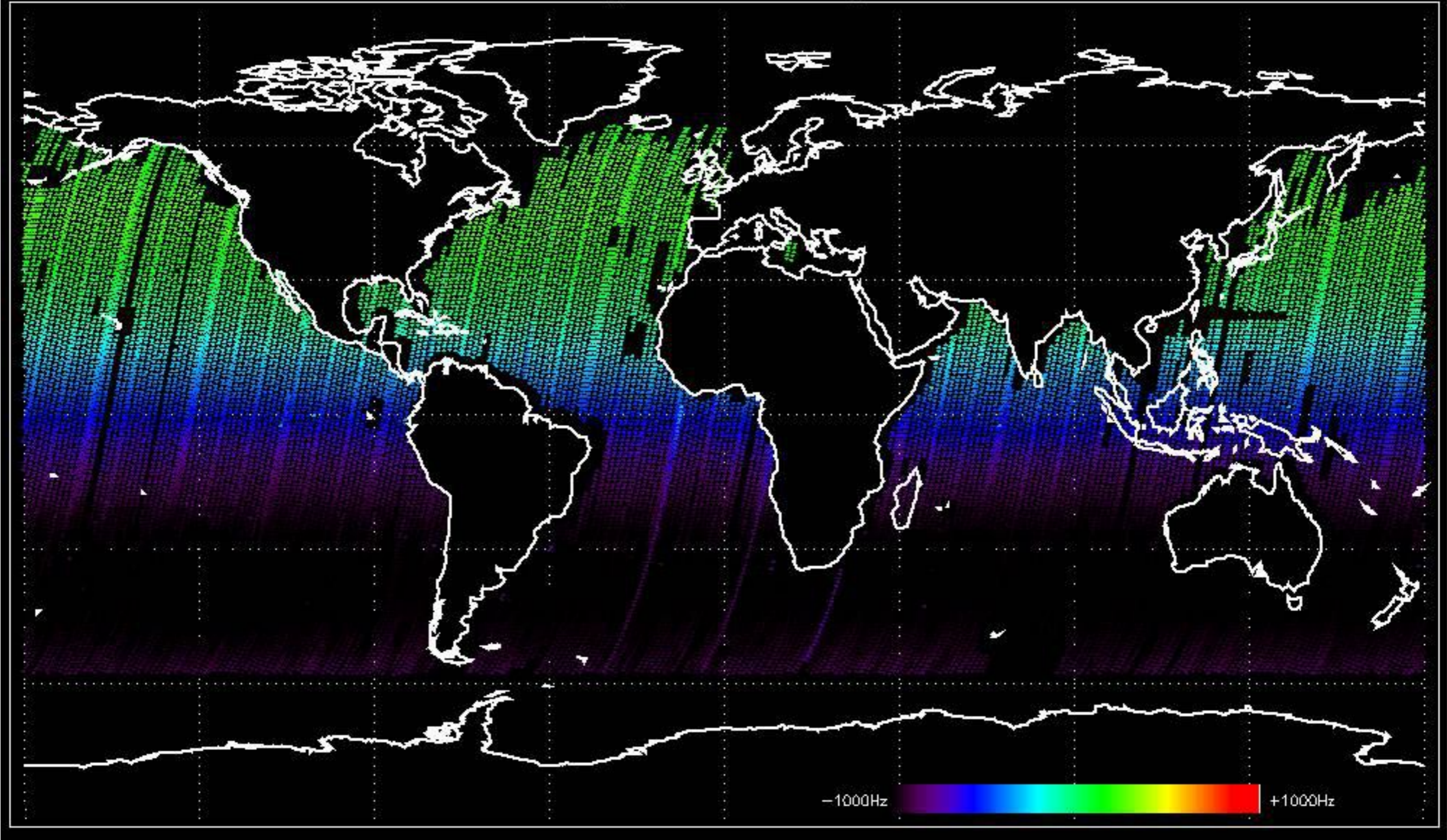
Doppler 'GM1' 'SS1' descending



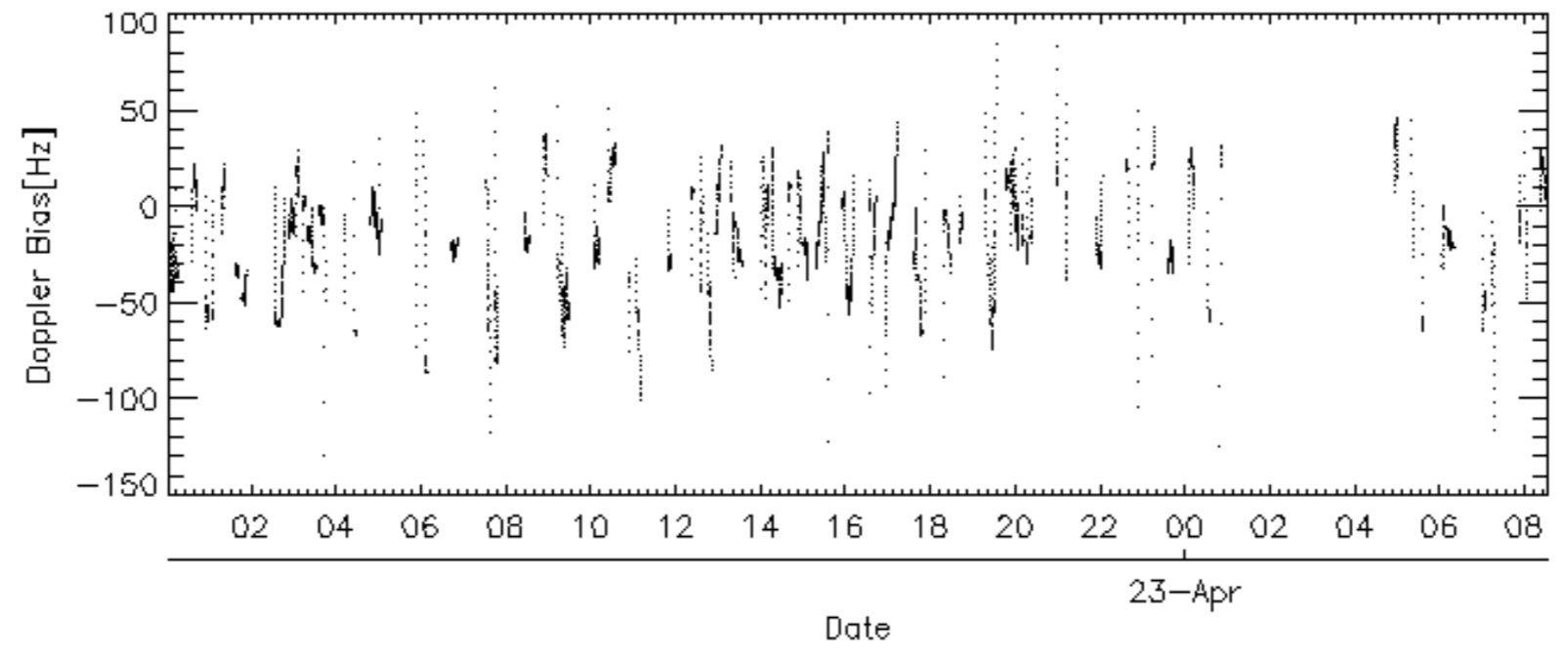
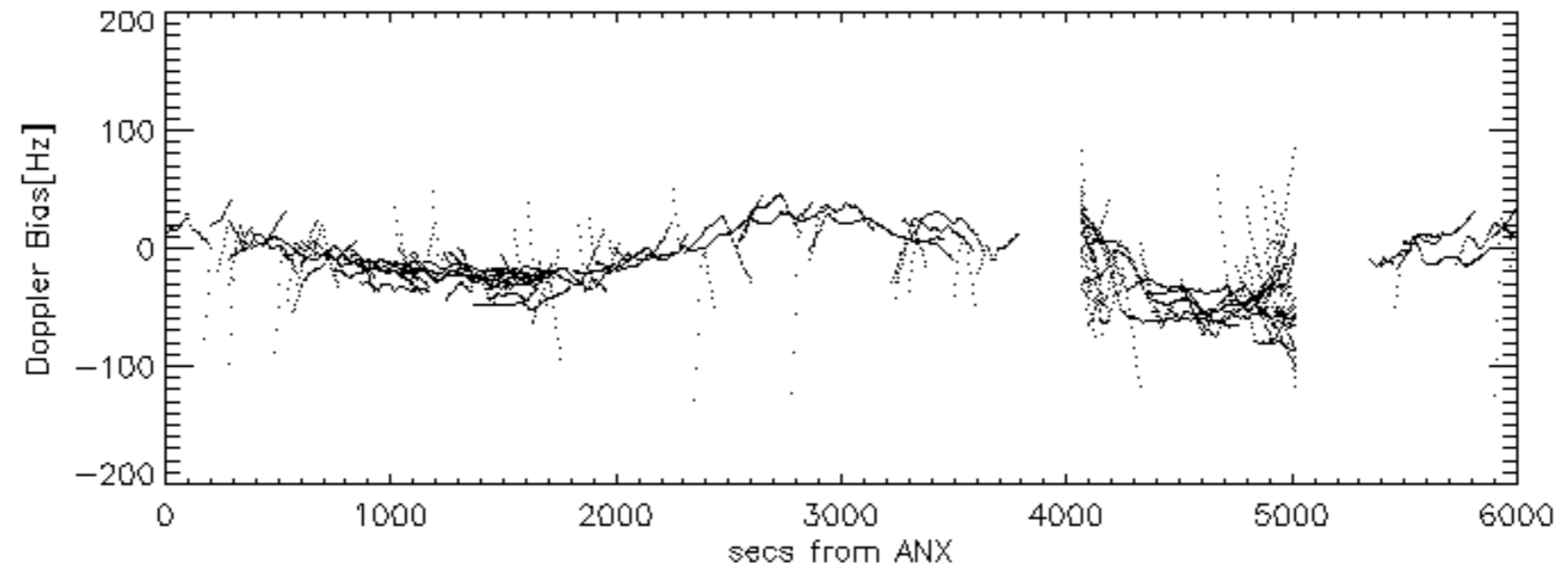
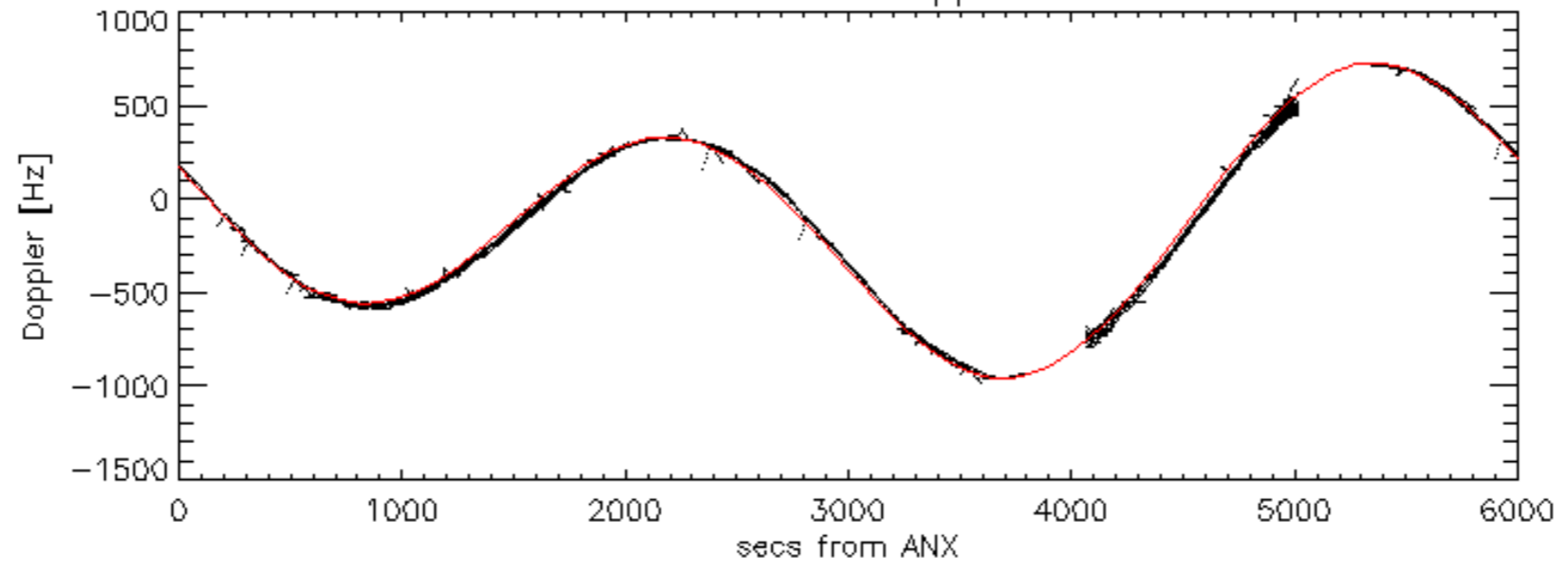
Doppler 'WVS' 'IS2' ascending

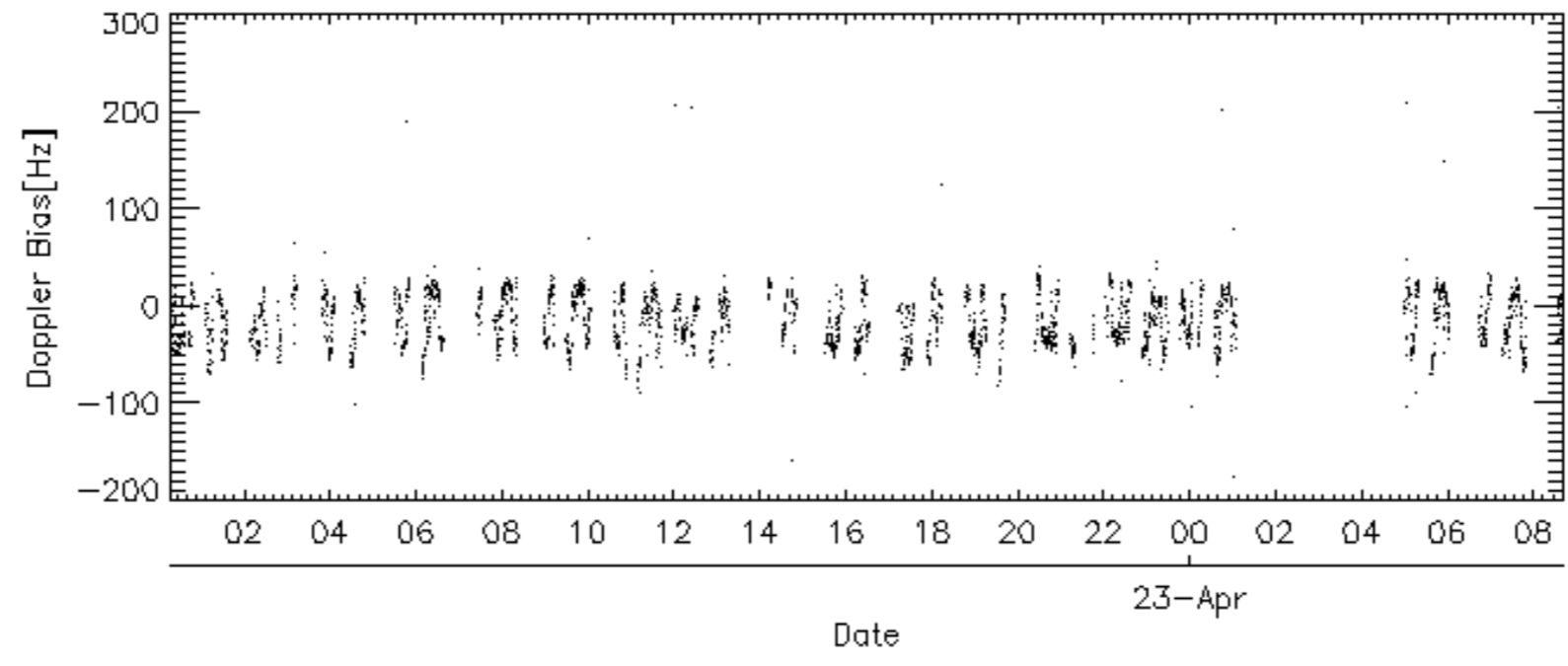
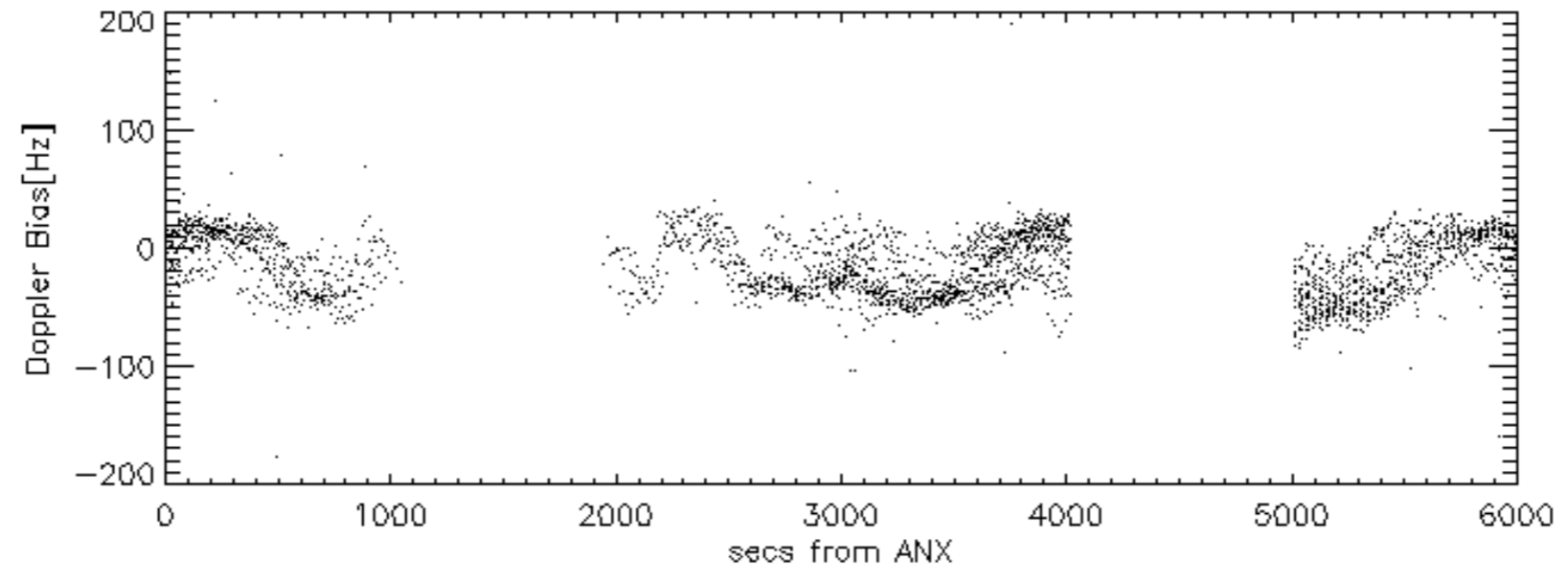
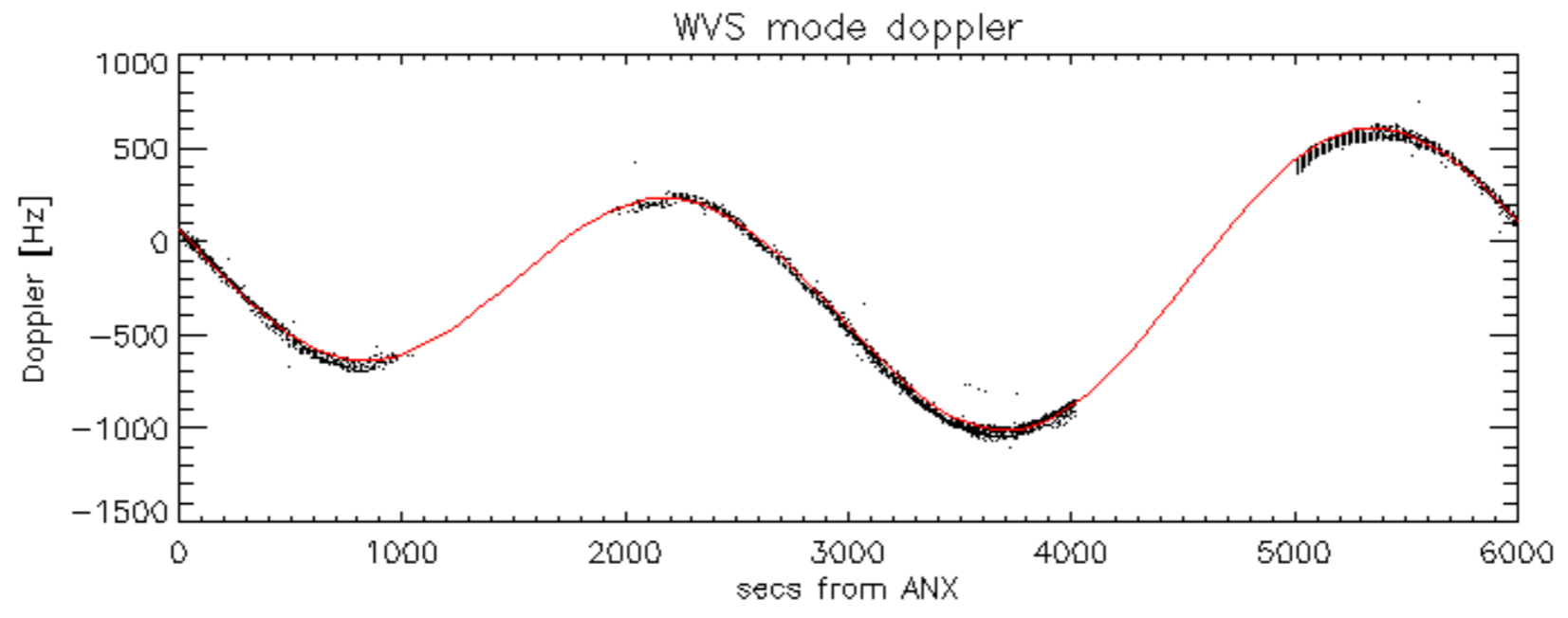


Doppler 'WVS' 'IS2' descending

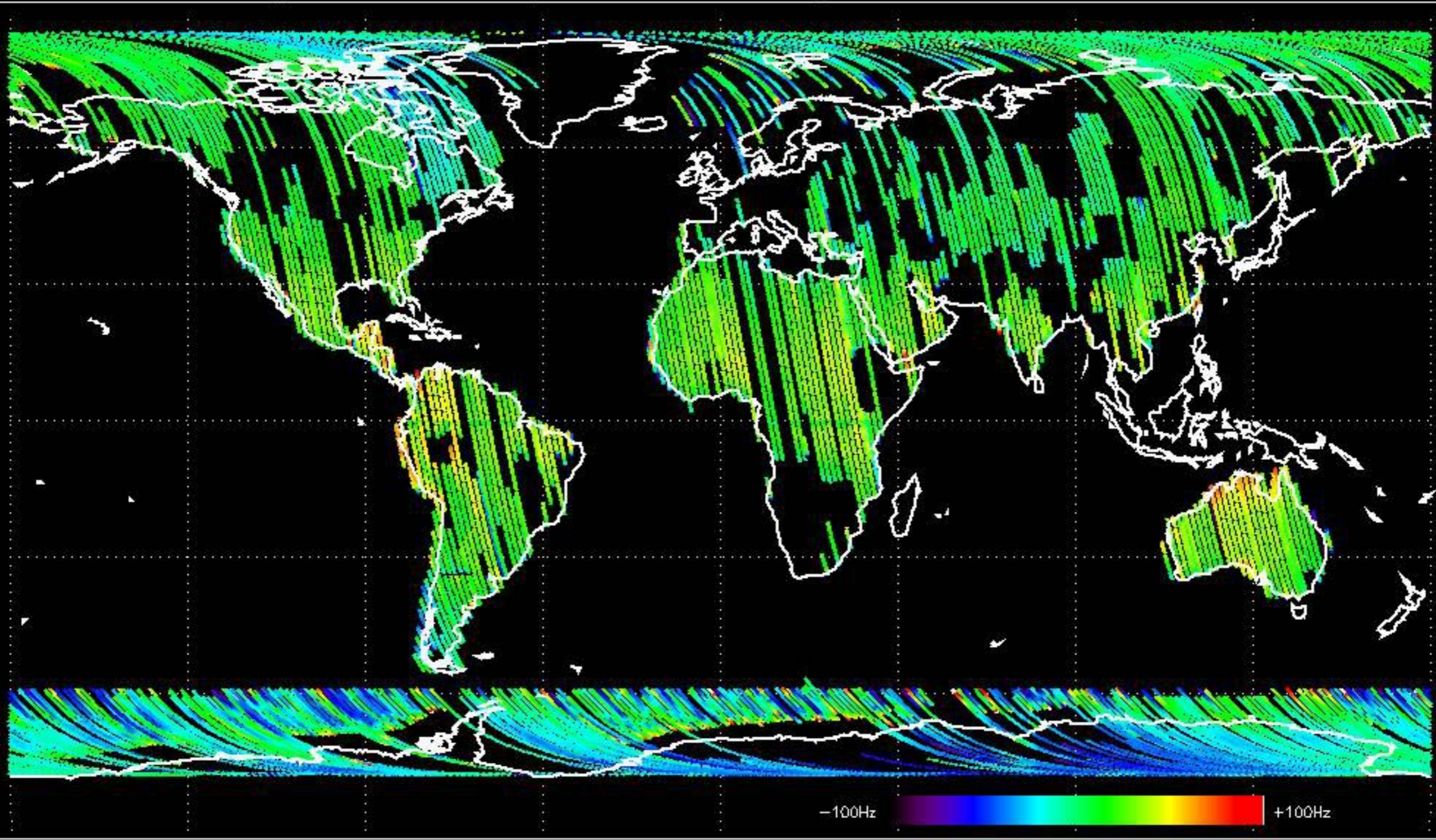


GM1 mode doppler

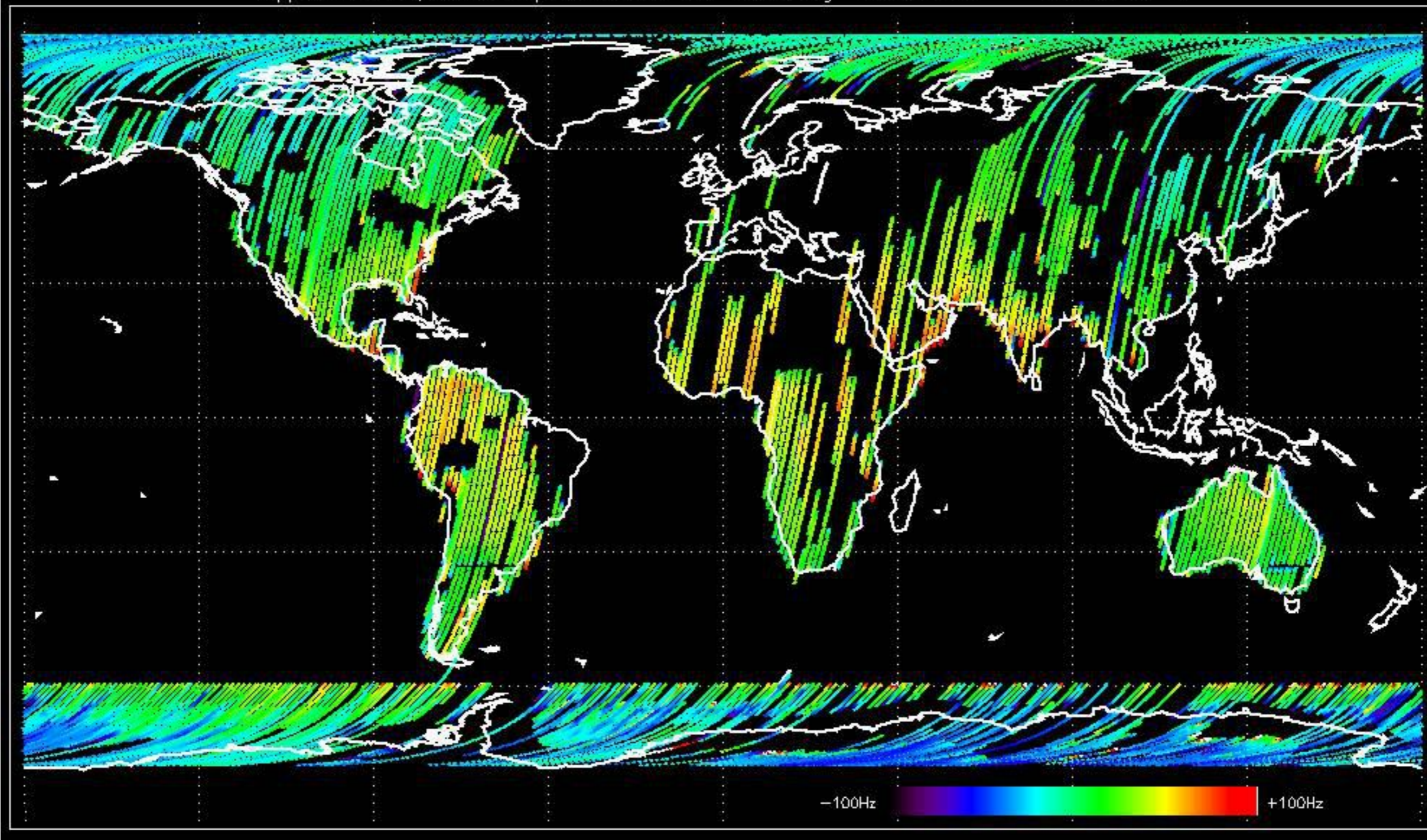




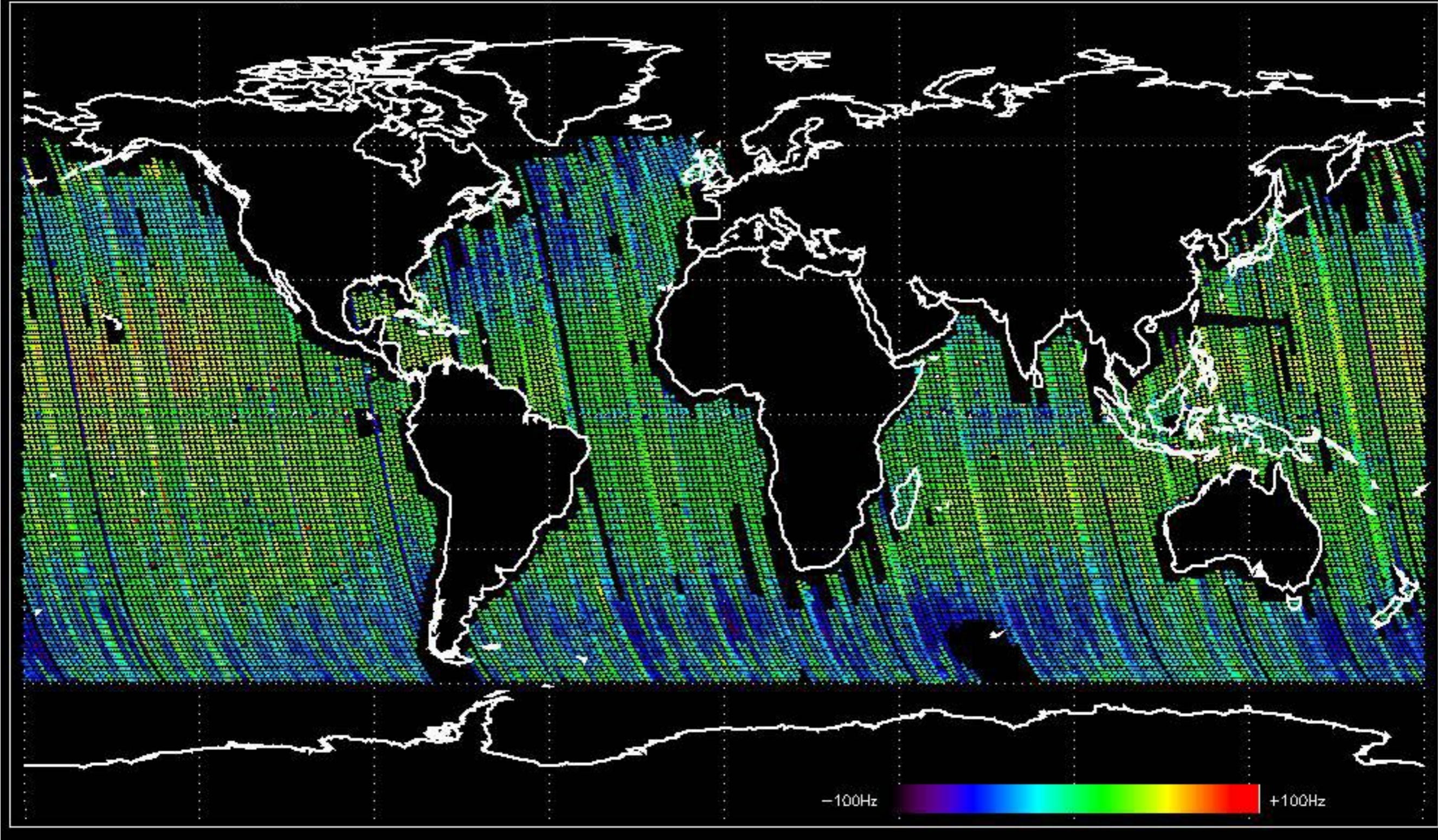
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -27.222277 Hz



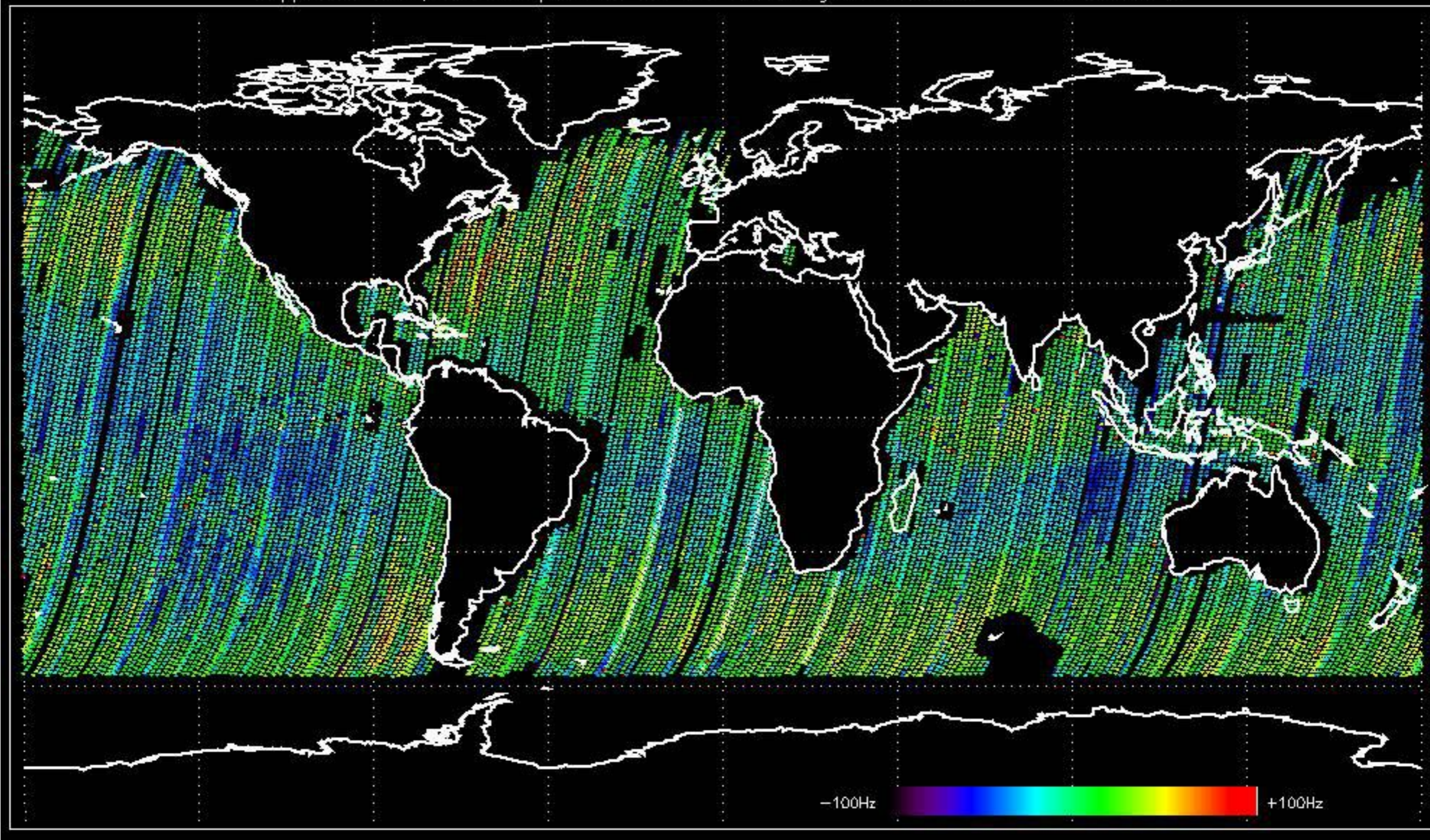
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.467681 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -21.342958 Hz

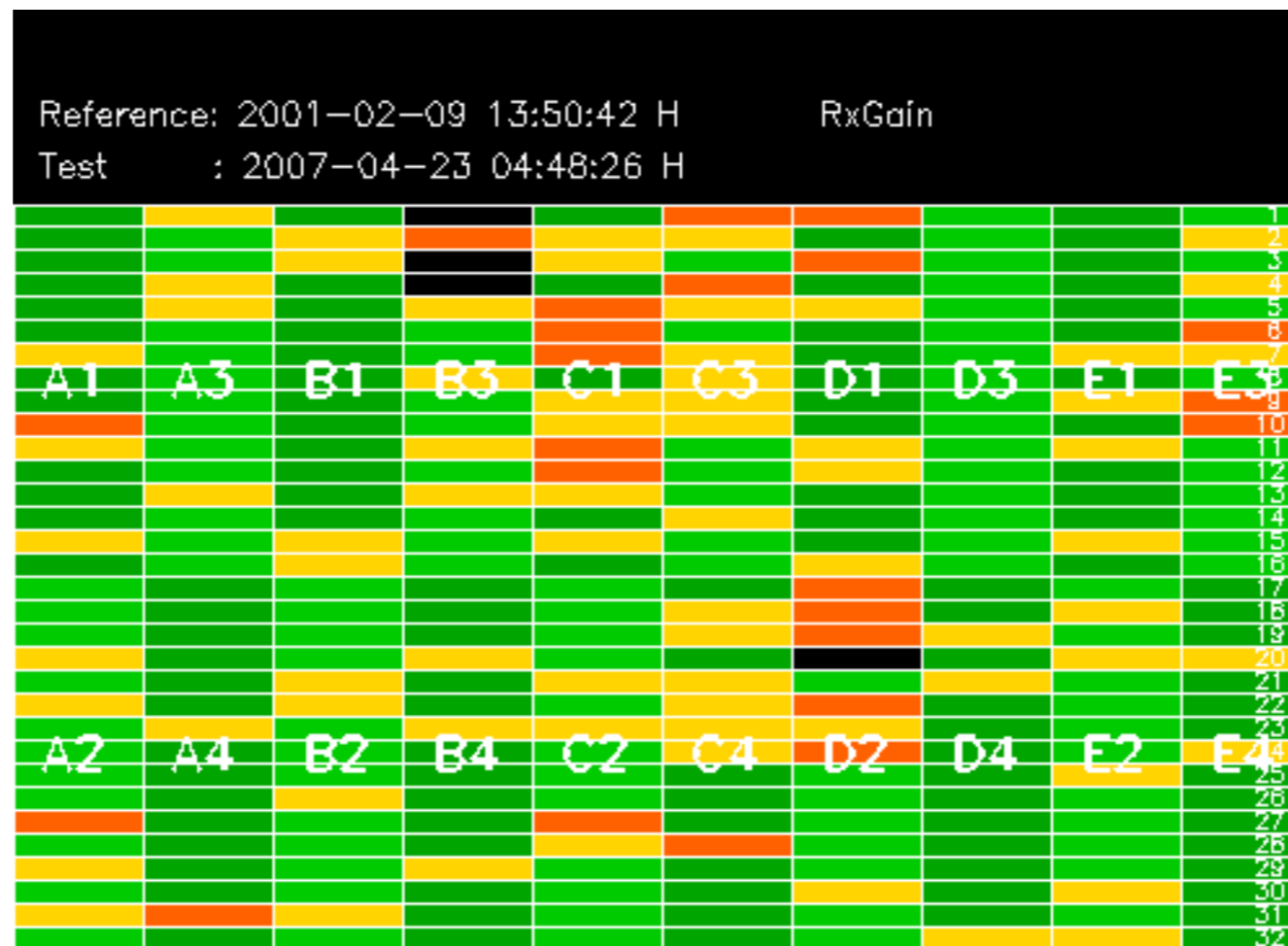


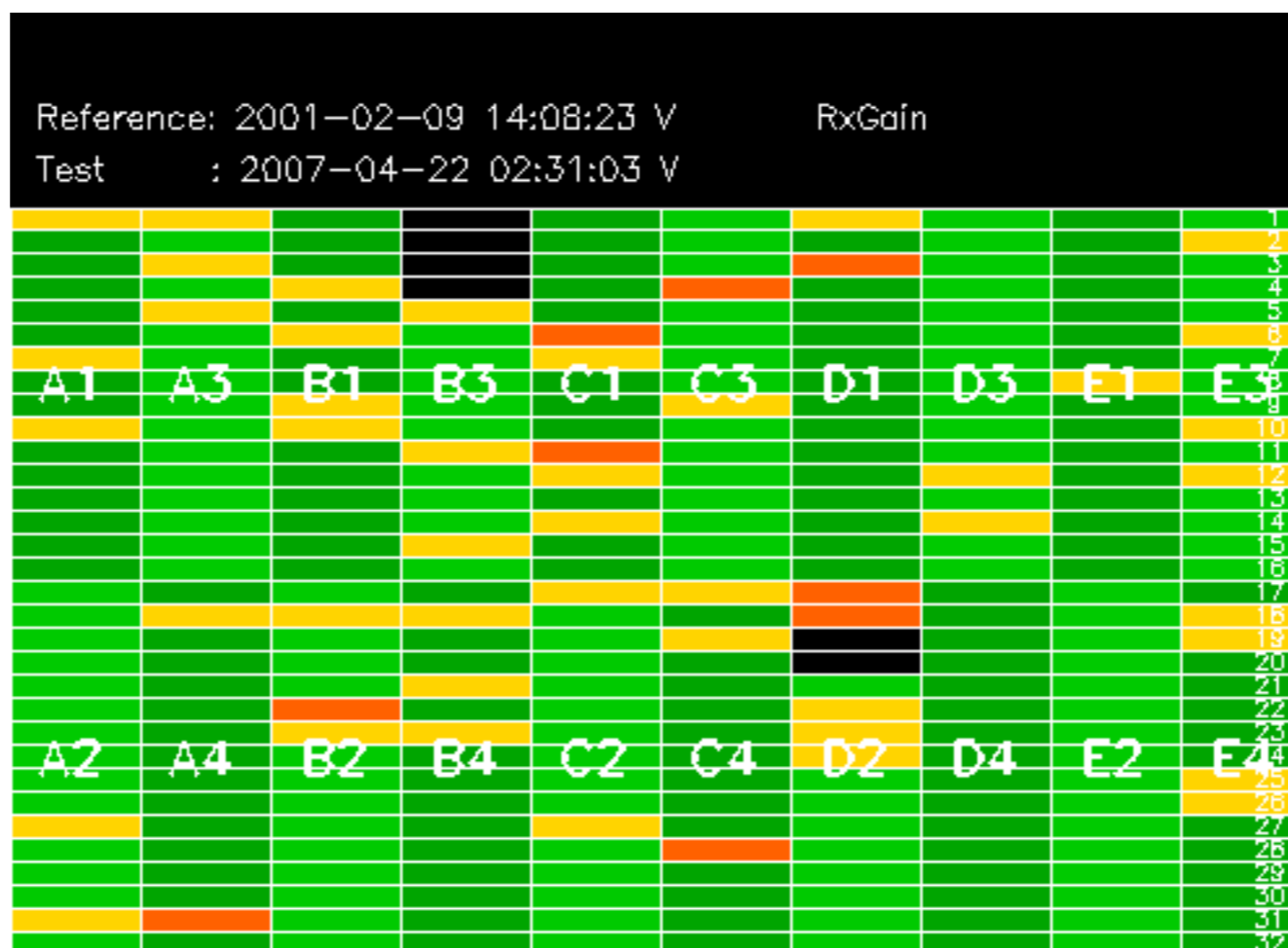
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.573544 Hz

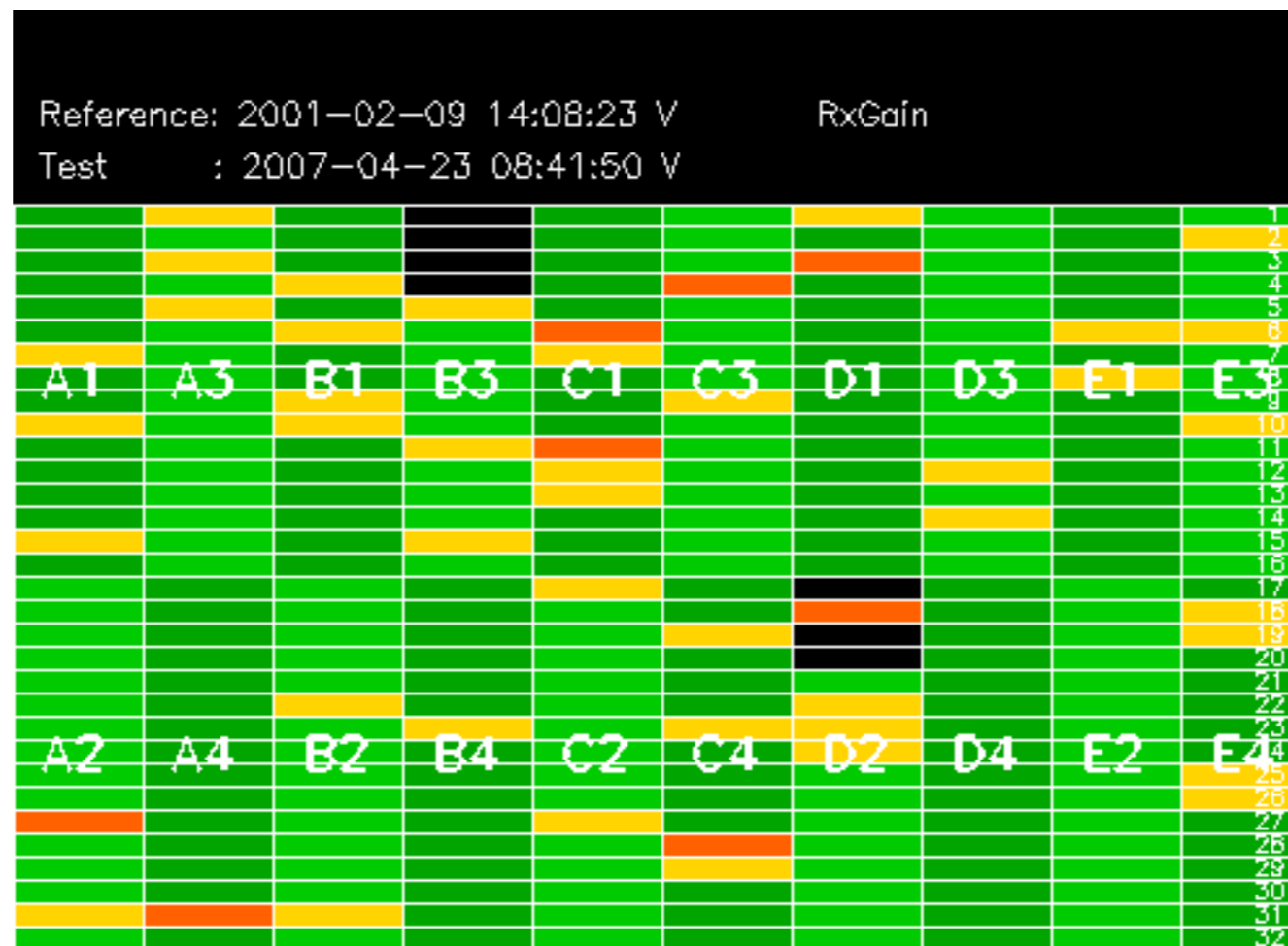


No anomalies observed on available MS products:

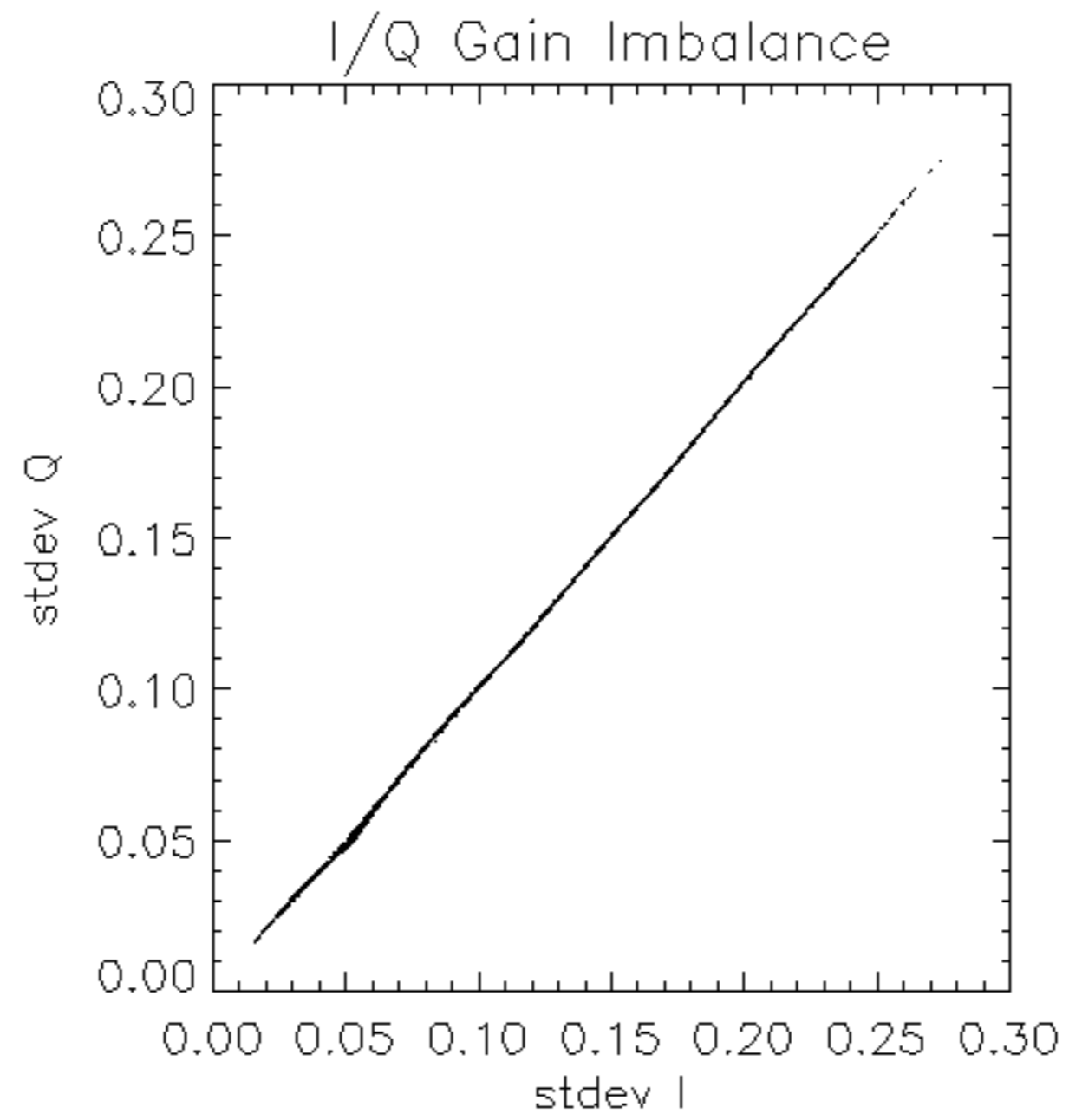
No anomalies observed.

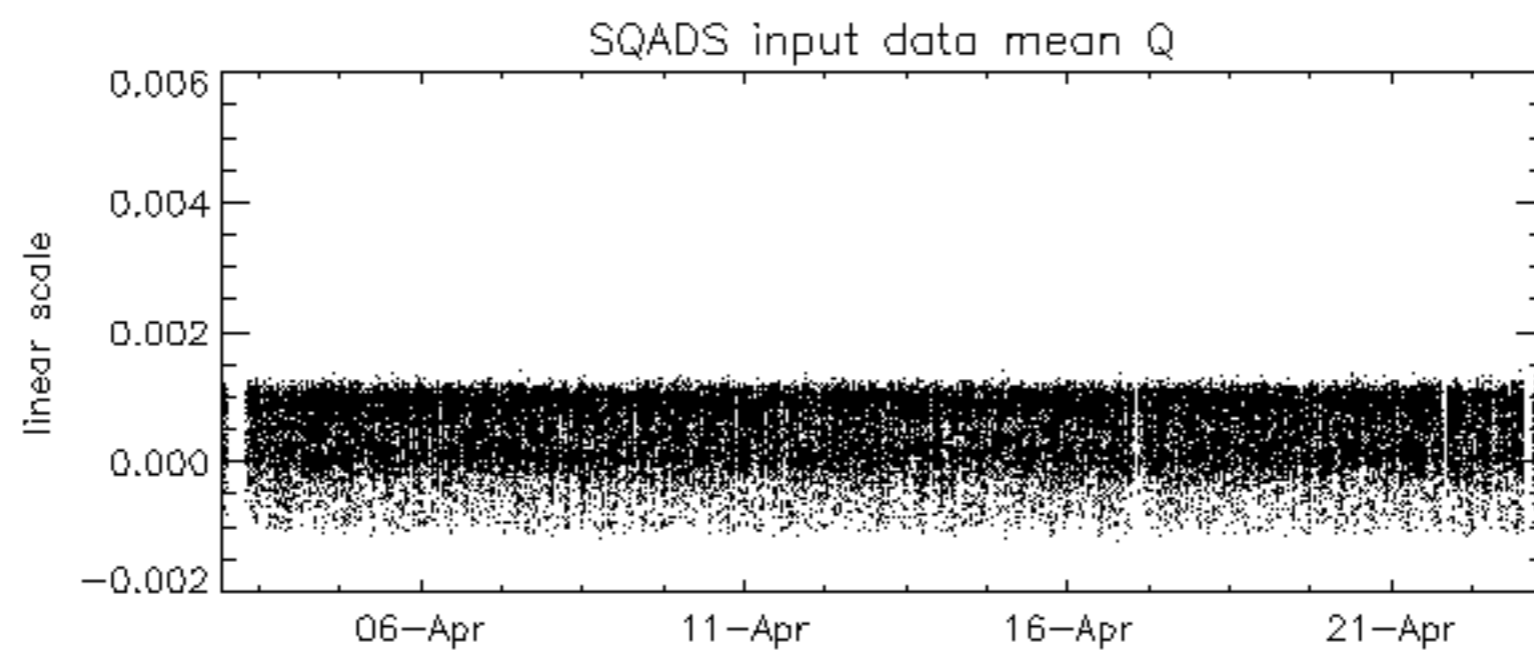
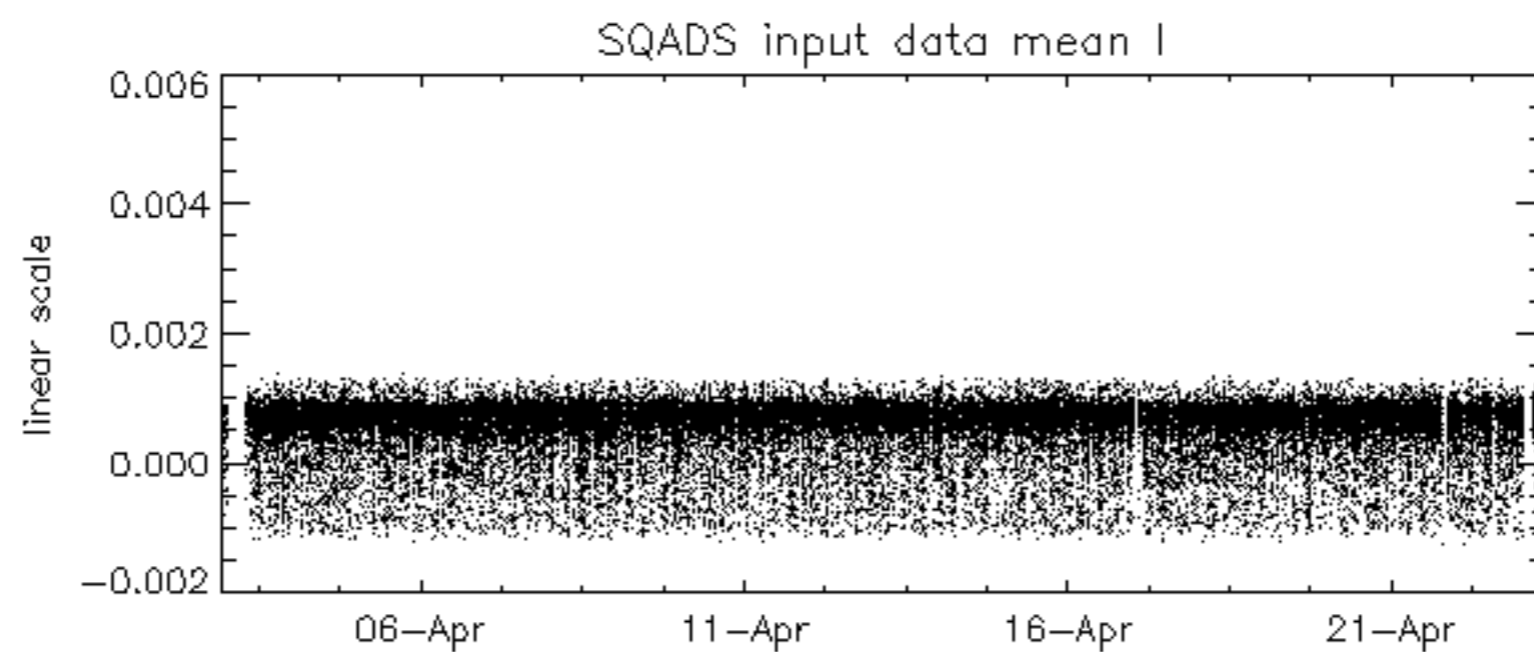
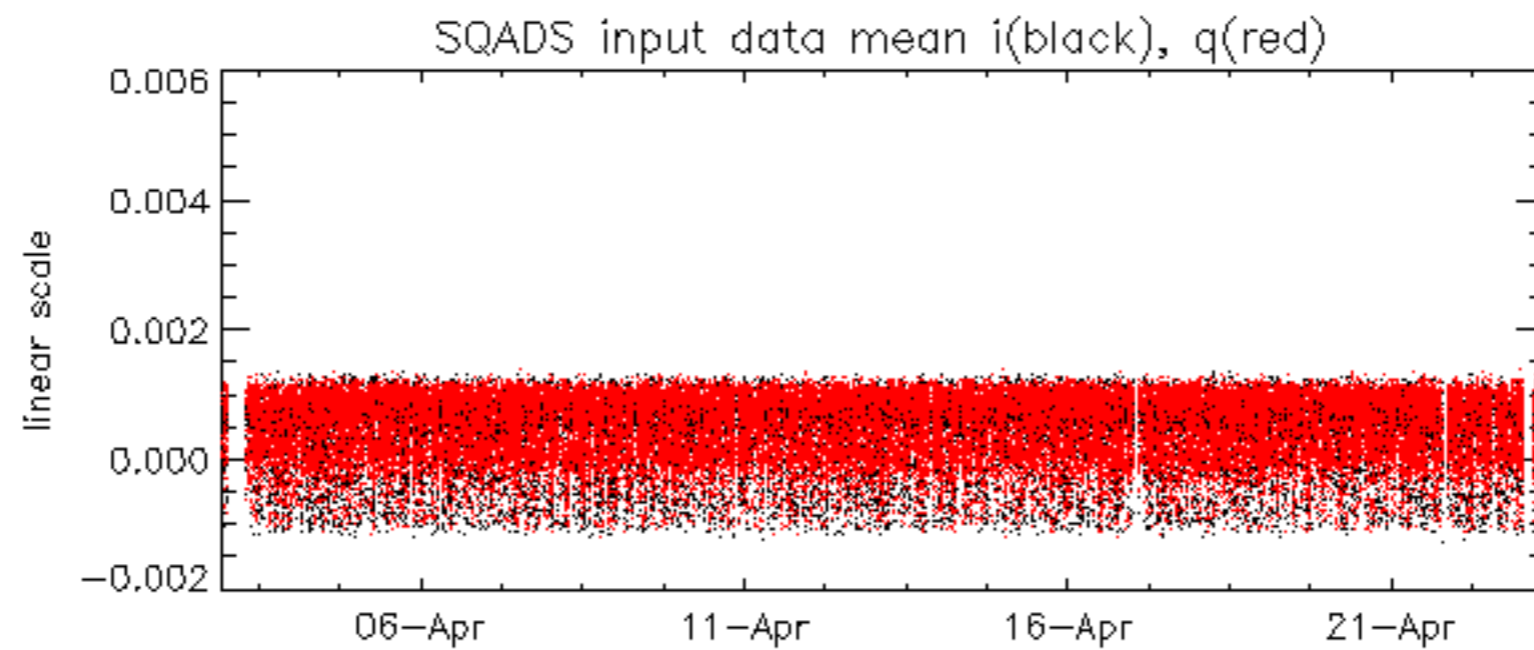


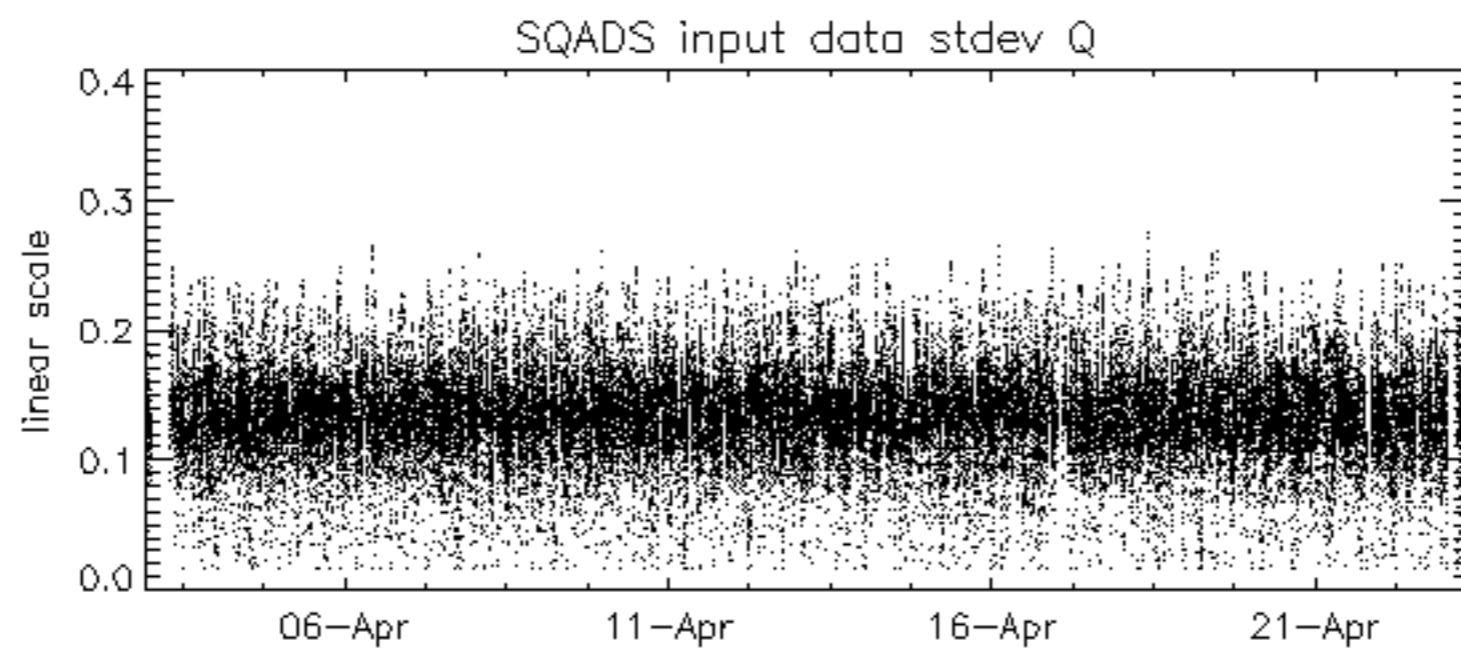
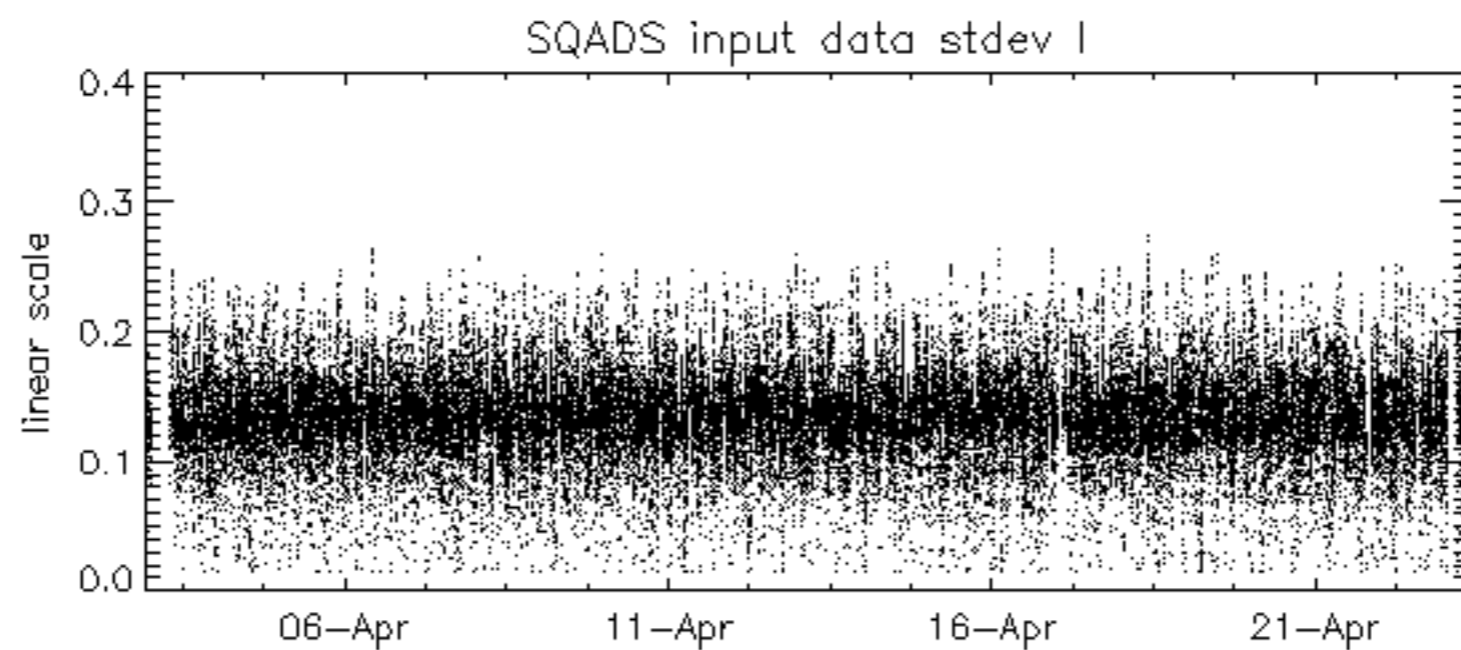
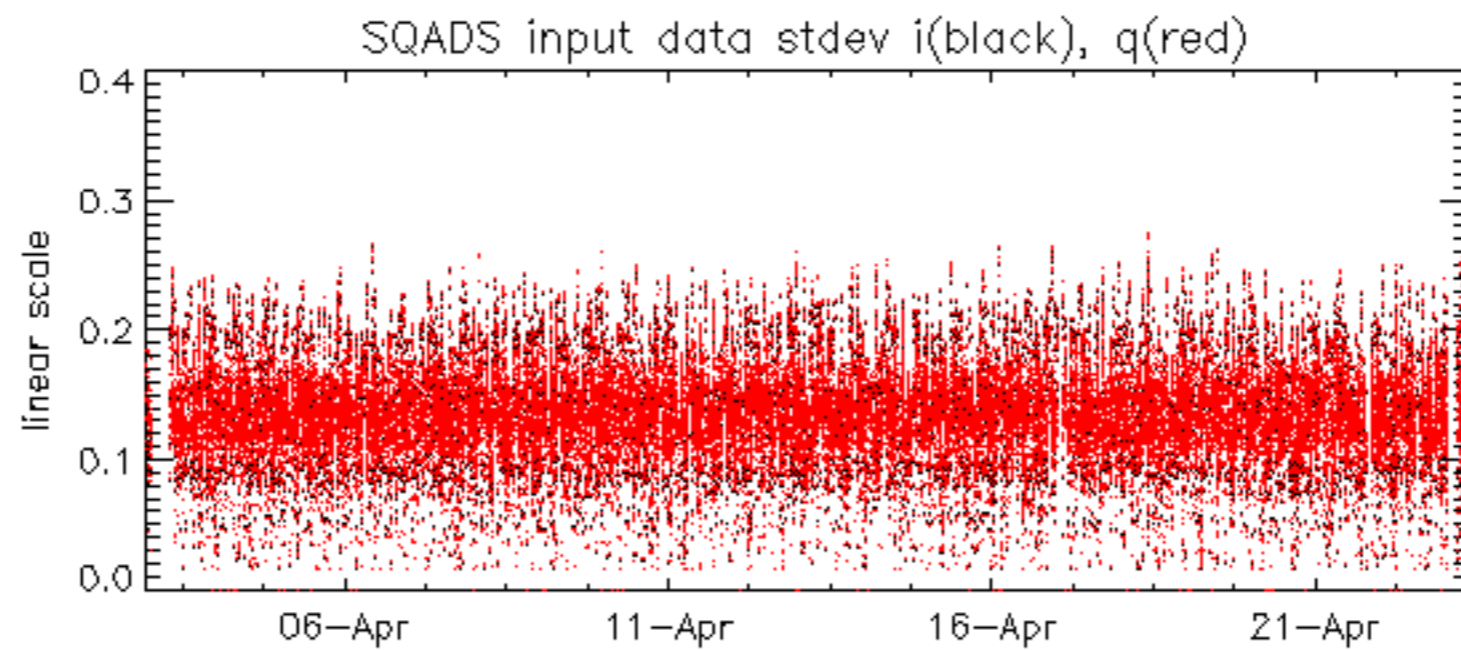








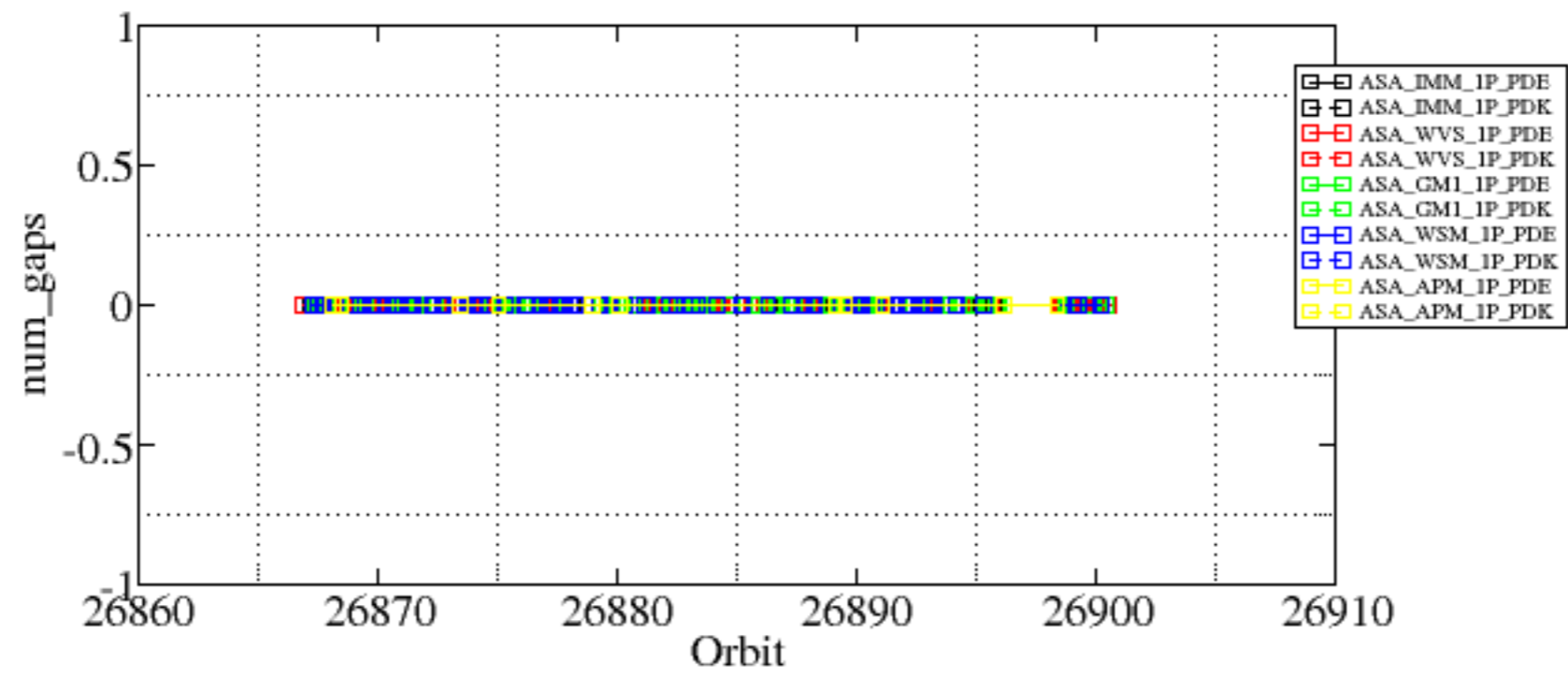


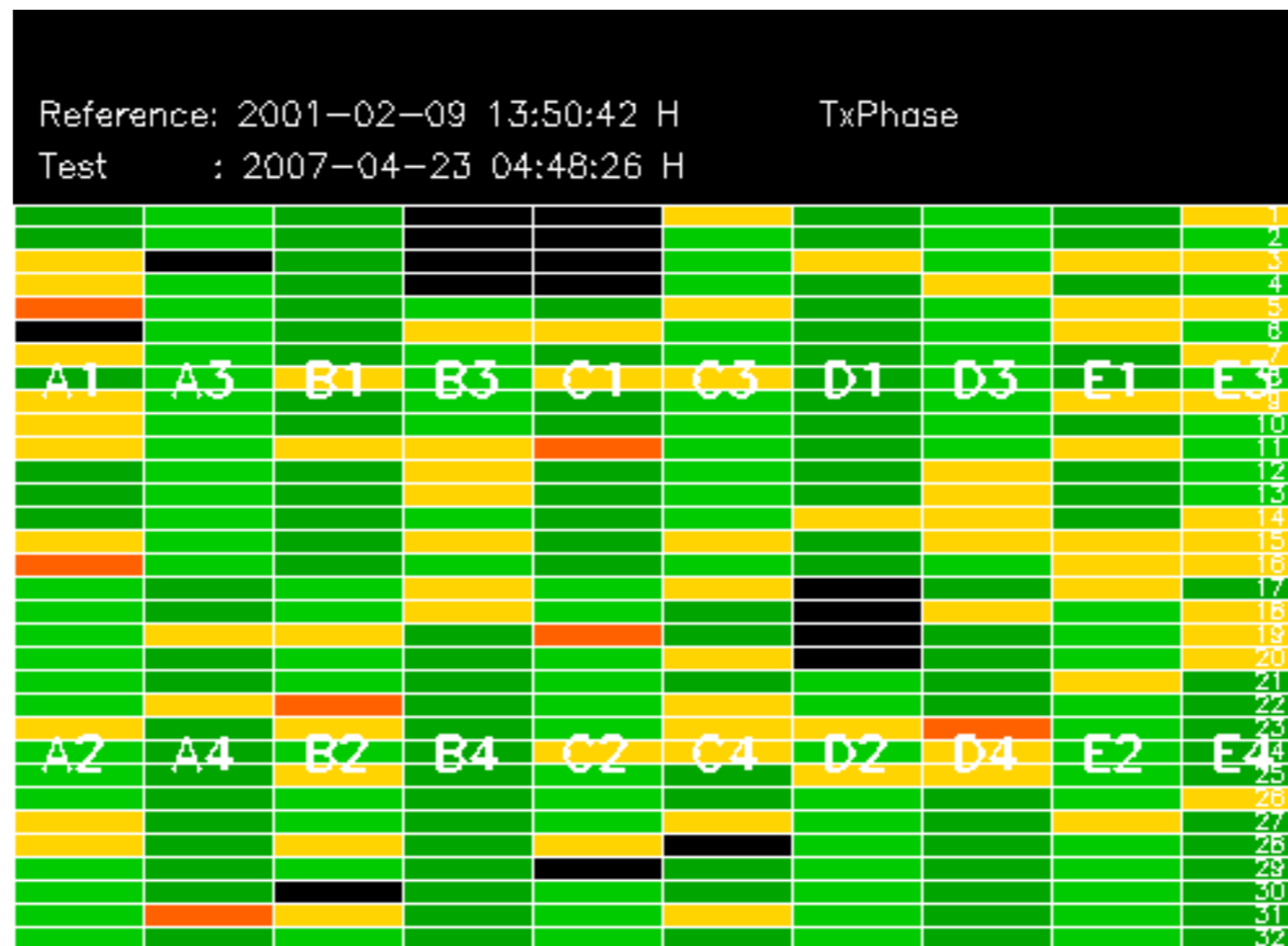


Summary of analysis for the last 3 days 2007042[123]

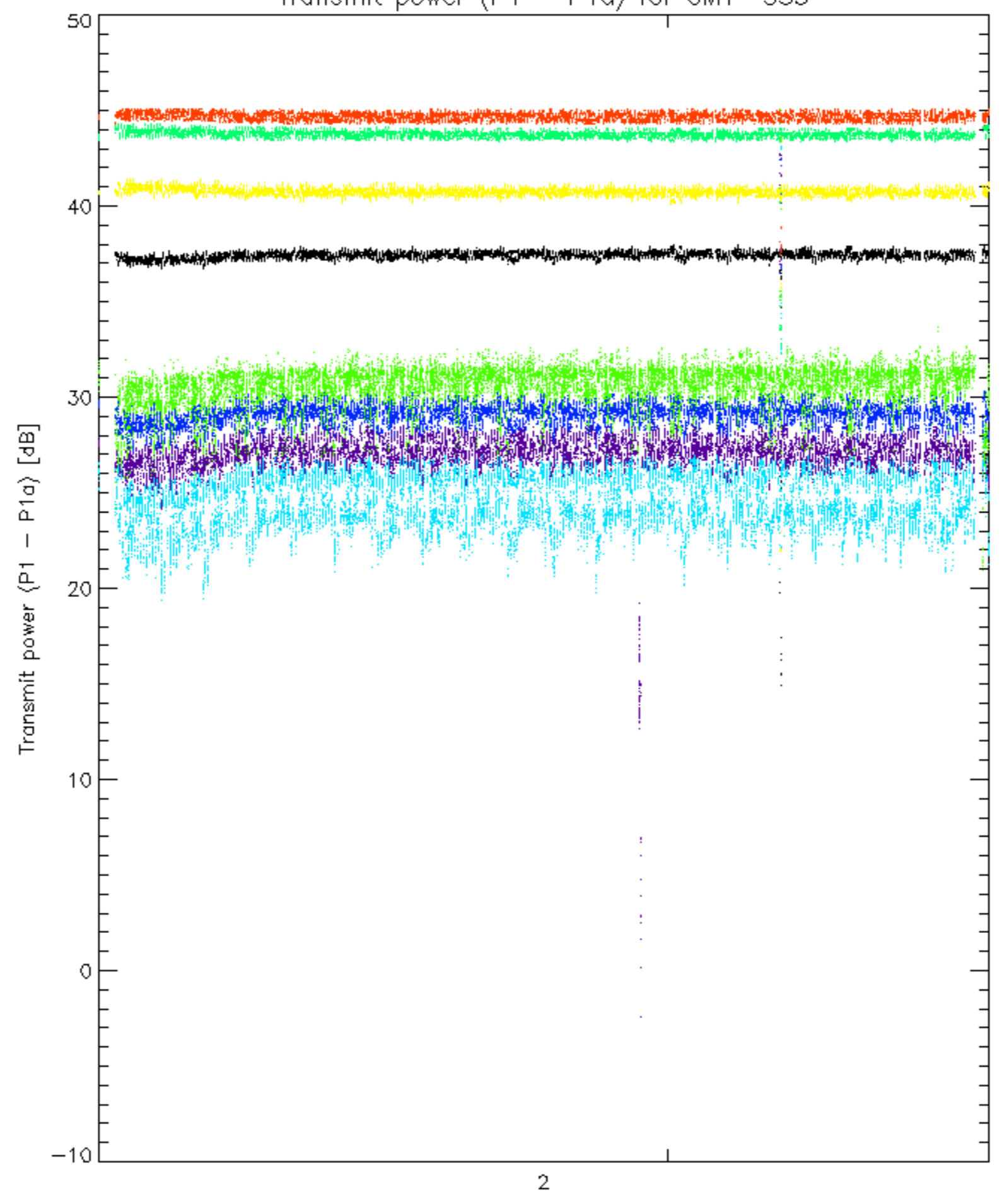
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070422_132003_000001872057_00282_26889_8760.N1	0	30
ASA_GM1_1PNPDK20070422_145255_000003082057_00283_26890_8885.N1	0	7
ASA_GM1_1PNPDK20070423_080100_000001442057_00293_26900_9584.N1	0	13
ASA_WSM_1PNPDE20070421_010149_000001412057_00260_26867_0194.N1	0	31
ASA_WSM_1PNPDE20070421_051735_000002012057_00263_26870_0558.N1	0	45
ASA_WSM_1PNPDE20070421_170154_000001522057_00270_26877_0873.N1	0	5
ASA_WSM_1PNPDE20070421_184505_000000852057_00271_26878_0922.N1	0	56
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

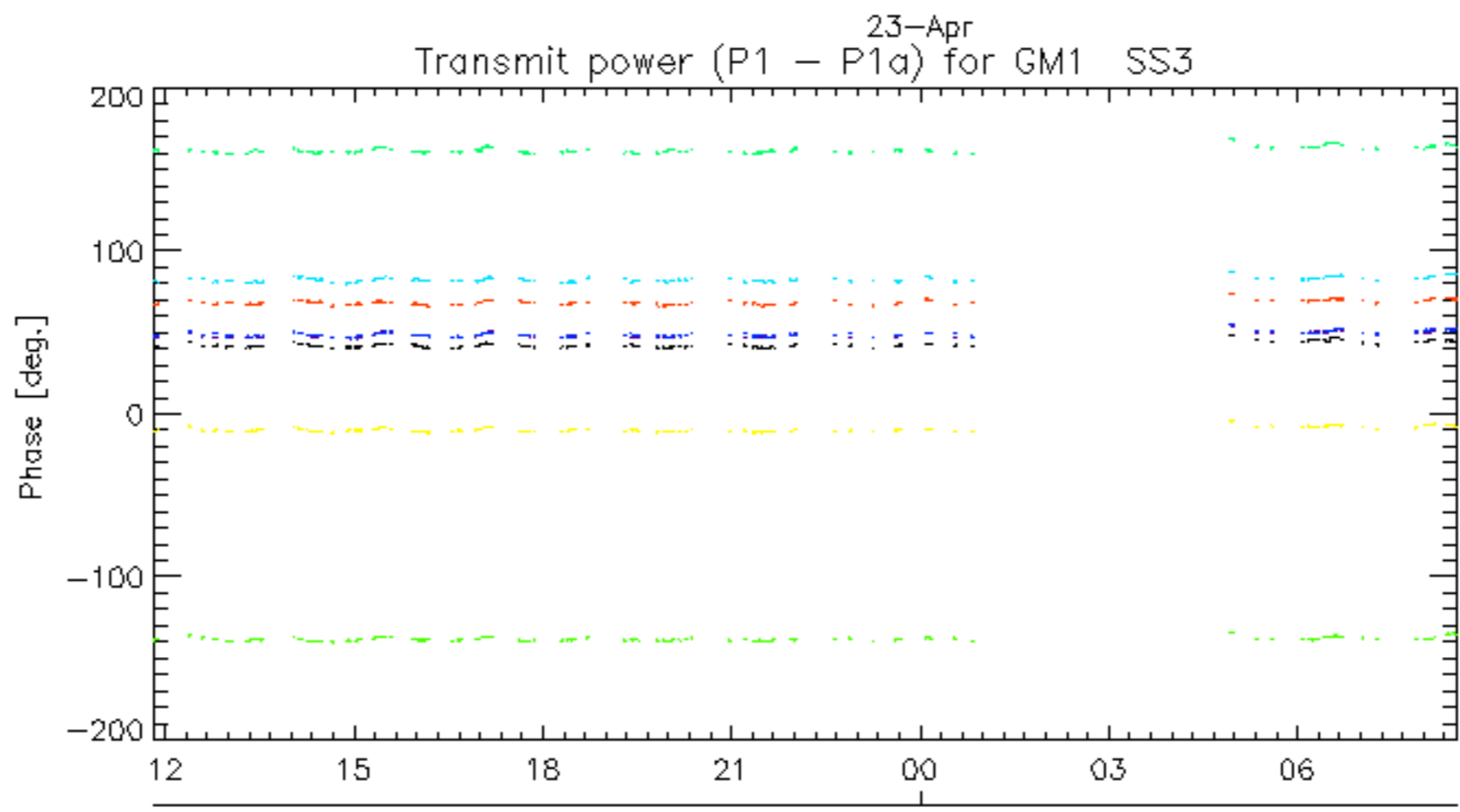
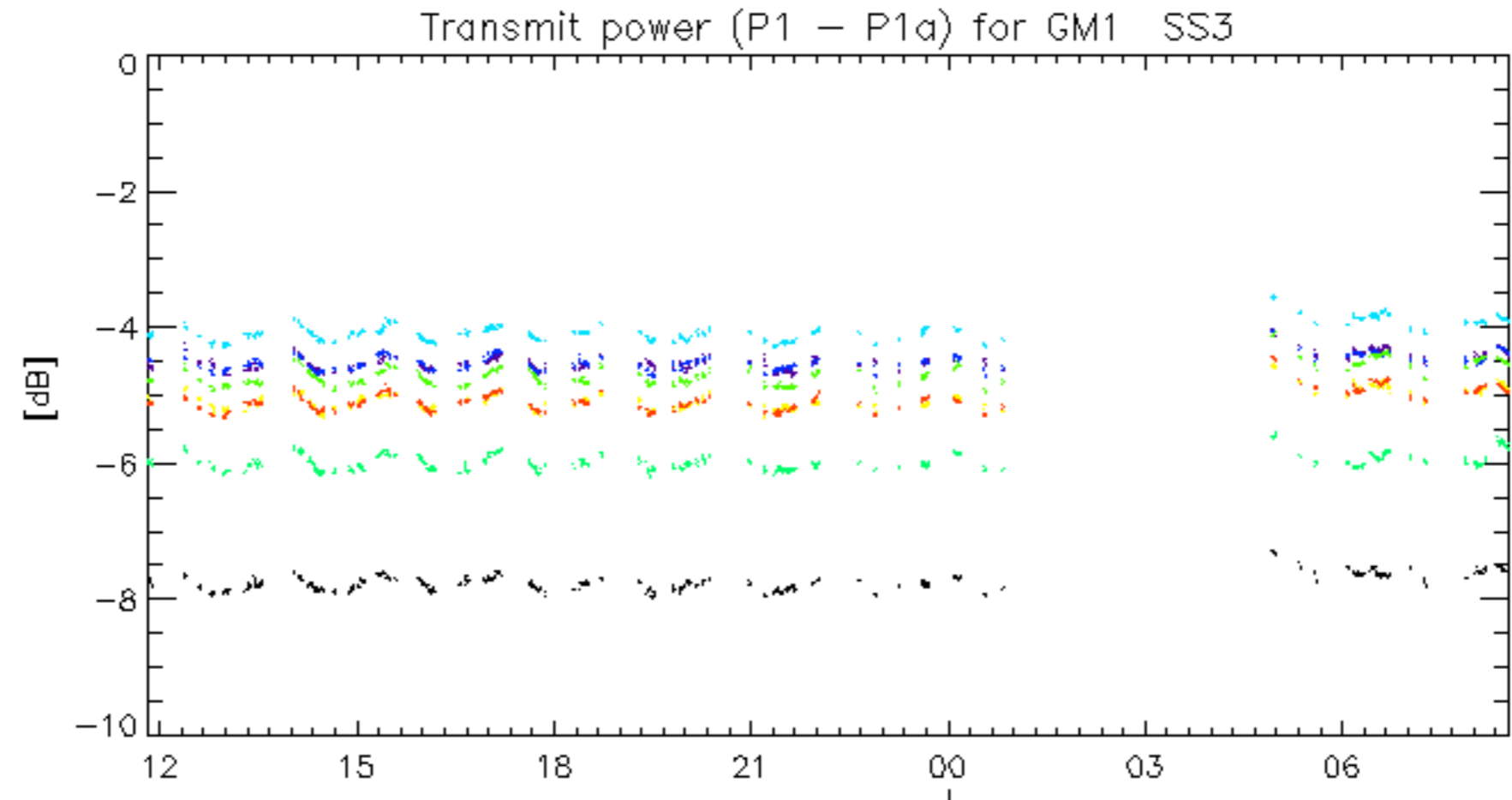




Transmit power (P1 - P1a) for GM1 SS3

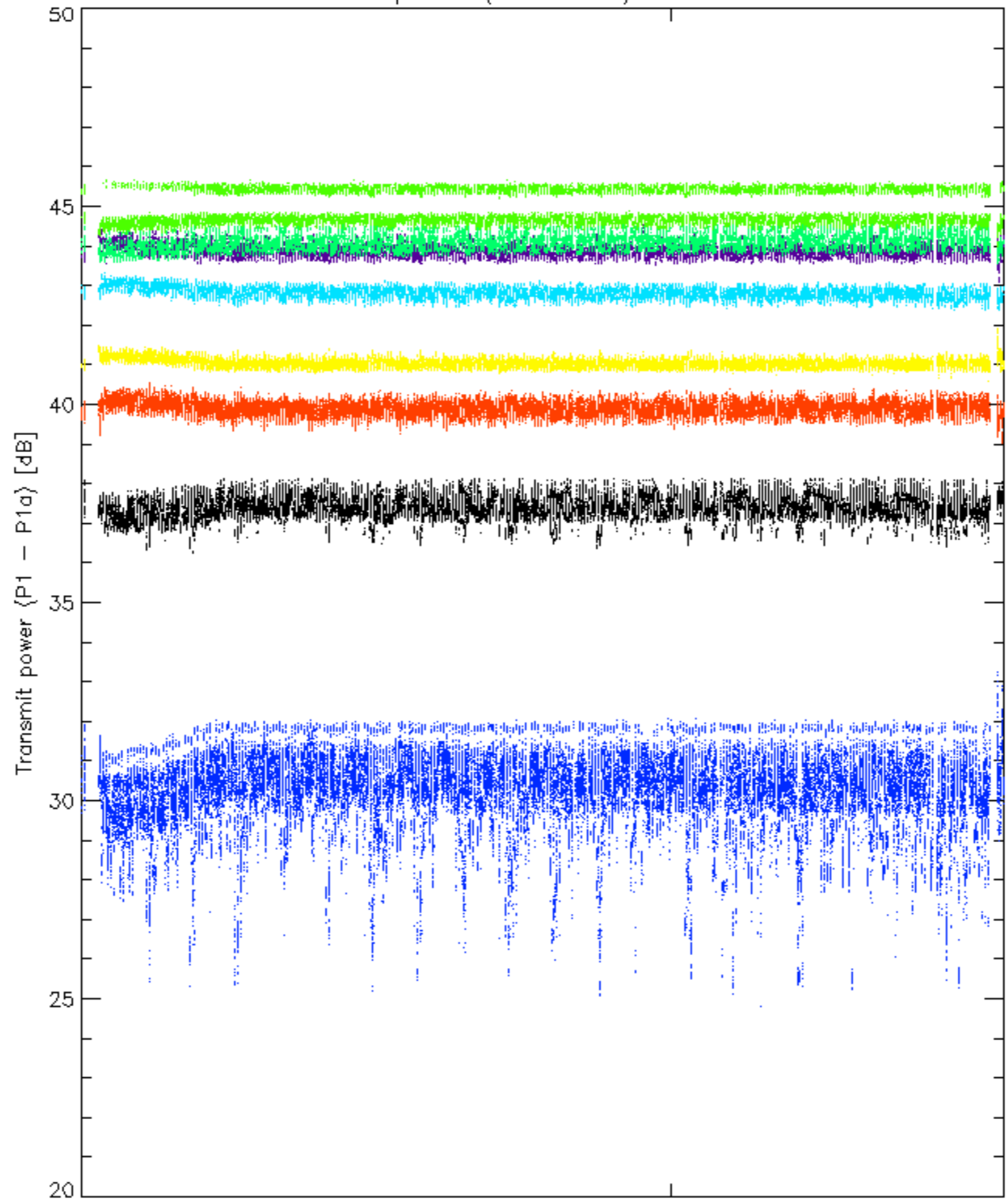


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



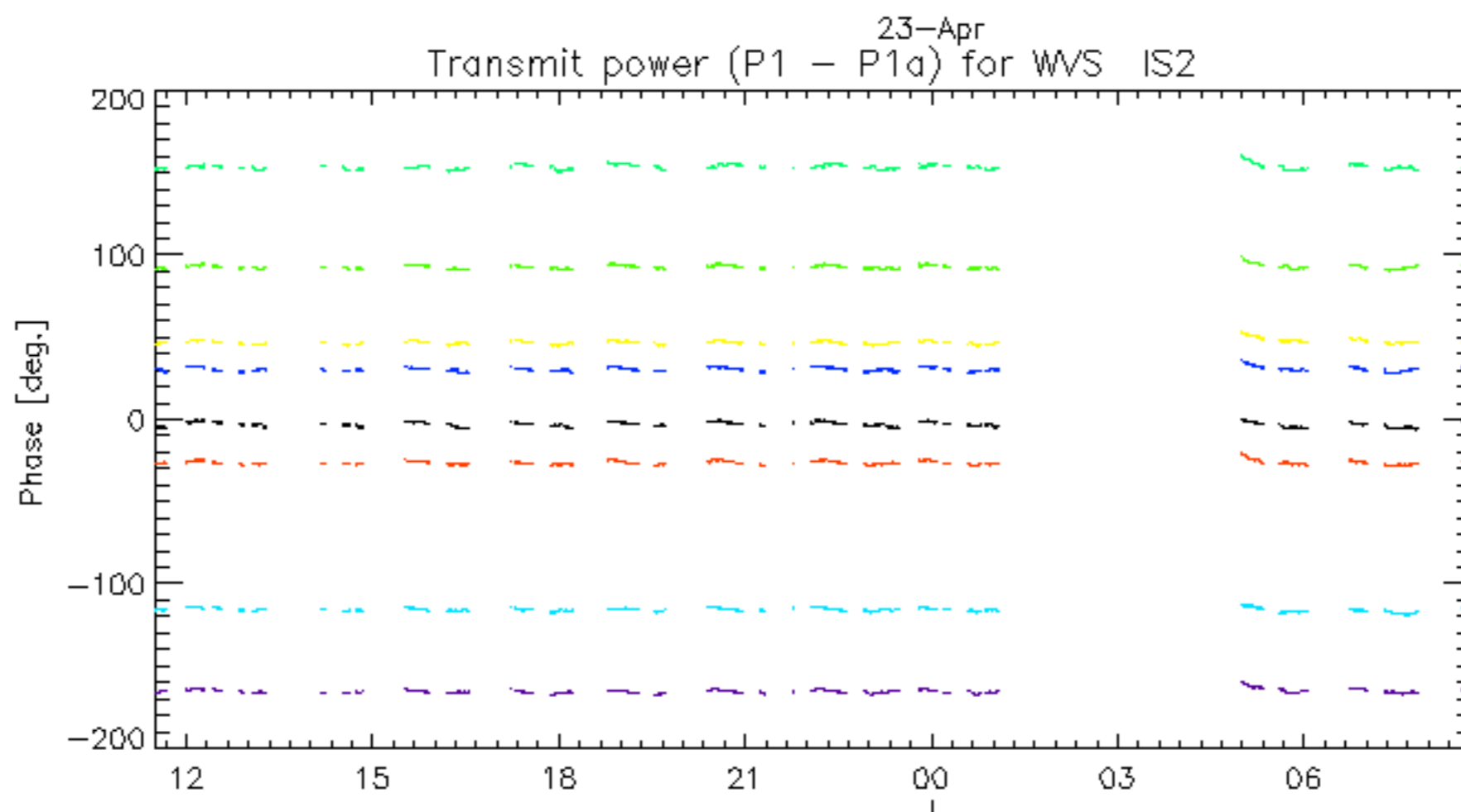
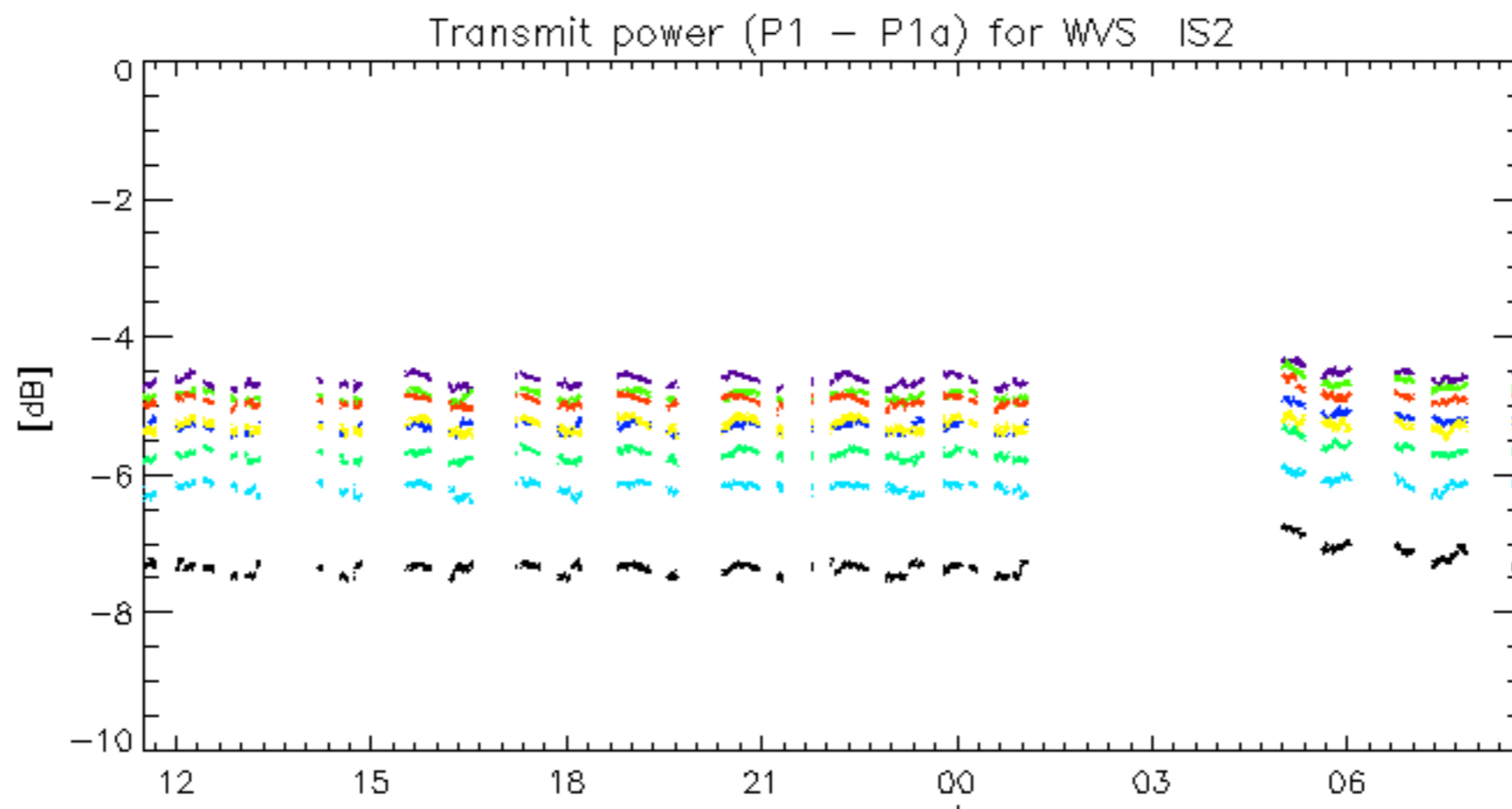
23-Apr
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



2

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



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

No unavailabilities during the reported period.