

PRELIMINARY REPORT OF 070421

last update on Sat Apr 21 18:17:51 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 2007-04-20 00:00:00 to 2007-04-21 18:17:51

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	34	70	3	2	29
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	34	70	3	2	29
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	34	70	3	2	29
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	34	70	3	2	29

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	45	58	28	9	77
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	45	58	28	9	77
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	45	58	28	9	77
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	58	28	9	77

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	20070420 033417
H	20070421 030240

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	-15.059333	0.149418	-0.019569
7	P1a	-17.540623	0.115583	-0.036676
11	P1a	-17.403868	0.322761	-0.667499
15	P1a	-12.961507	0.103285	-0.390354
19	P1a	-15.299715	0.067407	-0.392746
22	P1a	-15.880778	0.415983	-0.614663
26	P1a	-15.073274	0.194013	0.513572
30	P1a	-17.627947	0.293740	-0.705319

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.762349	0.010812	-0.032625
7	P1	-3.145672	0.008878	-0.004808
11	P1	-4.207720	0.012273	-0.018860
15	P1	-6.391891	0.018524	-0.125378
19	P1	-3.789166	0.009987	0.050076
22	P1	-4.746399	0.009175	-0.056322
26	P1	-3.927310	0.018958	0.111785
30	P1	-5.969940	0.009293	0.031128

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.662279	0.090261	-0.058613
7	P2	-21.573904	0.086335	0.114986
11	P2	-15.380304	0.113318	0.202604
15	P2	-7.124298	0.087392	-0.019775
19	P2	-9.118554	0.078329	0.046237
22	P2	-18.089039	0.075469	0.006550
26	P2	-16.610088	0.078894	-0.039466
30	P2	-19.285017	0.081443	0.021409

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.245119	0.005261	-0.016330
7	P3	-8.245119	0.005261	-0.016330
11	P3	-8.245119	0.005261	-0.016330
15	P3	-8.245119	0.005261	-0.016330
19	P3	-8.245119	0.005261	-0.016330
22	P3	-8.245119	0.005261	-0.016330
26	P3	-8.245119	0.005261	-0.016330
30	P3	-8.245119	0.005261	-0.016330

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	-11.194930	0.171152	-0.176337
7	P1a	-10.071875	0.270912	-0.116270
11	P1a	-10.693668	0.125380	0.047994
15	P1a	-10.855457	0.184881	-0.007768
19	P1a	-15.790756	0.097093	-0.039385
22	P1a	-21.348446	1.443948	-0.844008
26	P1a	-15.482833	0.383089	-0.445238
30	P1a	-18.326279	0.473171	0.477239

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.453869	0.067276	-0.025305
7	P1	-2.421153	0.158350	-0.037161
11	P1	-2.897236	0.031246	0.054182
15	P1	-3.825407	0.041710	0.041740
19	P1	-3.585306	0.014888	-0.019754
22	P1	-4.980606	0.023521	0.101611
26	P1	-6.032938	0.032003	-0.050975
30	P1	-5.336879	0.035833	-0.035536

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.169695	0.067049	-0.092796
7	P2	-22.033993	0.256625	-0.022570
11	P2	-10.633903	0.047382	-0.053207
15	P2	-4.916727	0.039206	-0.152329
19	P2	-6.870847	0.037541	-0.099244
22	P2	-8.119085	0.116715	-0.099895
26	P2	-24.317921	0.189602	-0.020743
30	P2	-21.716631	0.125205	0.069936

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.092520	0.004578	-0.032232
7	P3	-8.092558	0.004592	-0.031762
11	P3	-8.092355	0.004592	-0.032584
15	P3	-8.092271	0.004590	-0.032141
19	P3	-8.092407	0.004615	-0.031456
22	P3	-8.092401	0.004571	-0.031347
26	P3	-8.092439	0.004586	-0.031539
30	P3	-8.092353	0.004582	-0.031835

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	0.000540366
	stdev	2.04857e-07
MEAN Q	mean	0.000490295
	stdev	2.45099e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135324
	stdev	0.00123593
STDEV Q	mean	0.135717
	stdev	0.00125390



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007042[901]

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_WVS_1PNPDK20070420_201256_000004052057_00257_26864_6221.N1	0	8
ASA_GM1_1PNPDK20070420_205323_000005612057_00257_26864_6240.N1	0	90
ASA_WSM_1PNPDE20070420_141551_000000852057_00254_26861_9529.N1	0	73
ASA_WSM_1PNPDE20070420_155726_000001222057_00255_26862_9551.N1	0	2
ASA_WSM_1PNPDE20070421_010149_000001412057_00260_26867_0194.N1	0	31
ASA_WSM_1PNPDE20070421_051735_000002012057_00263_26870_0558.N1	0	45





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)

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

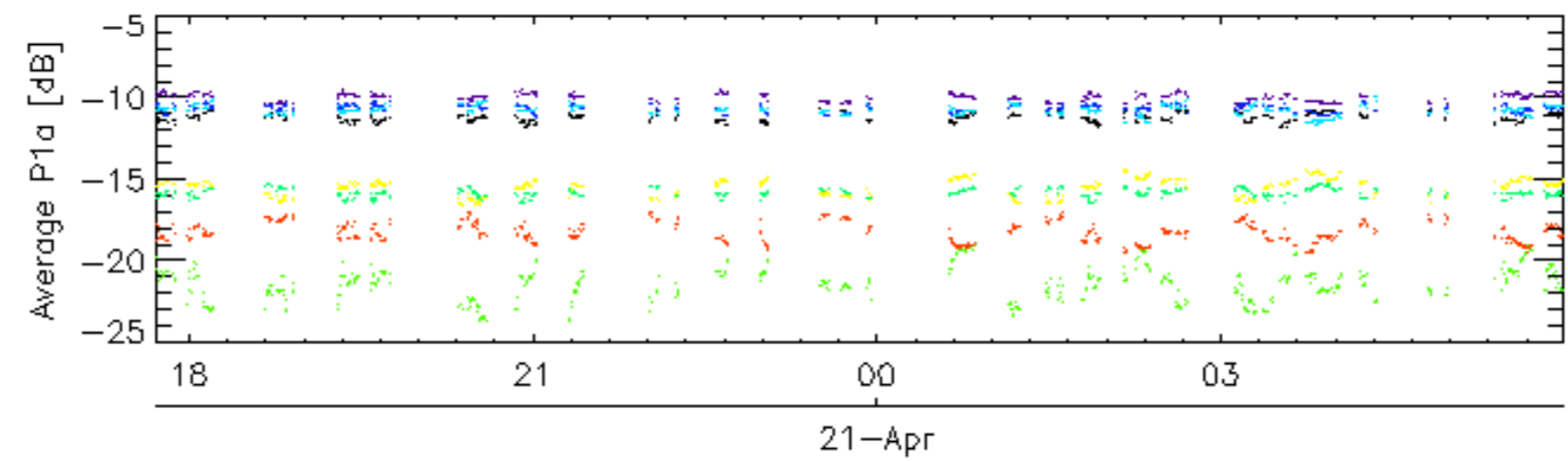
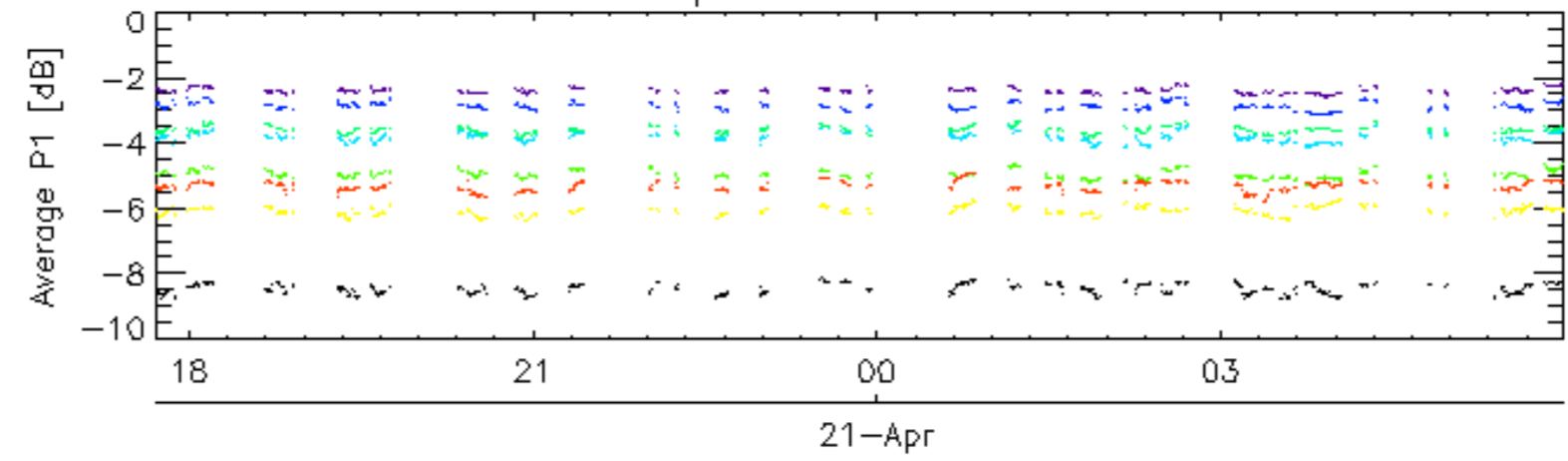
7.5 - Absolute Doppler for GM1

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

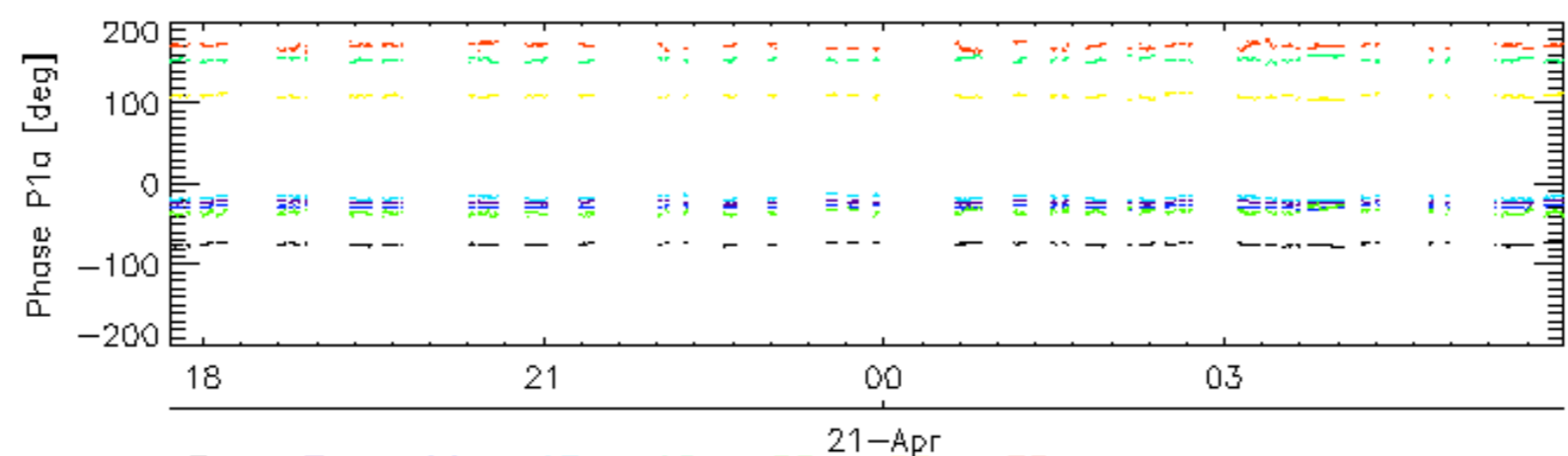
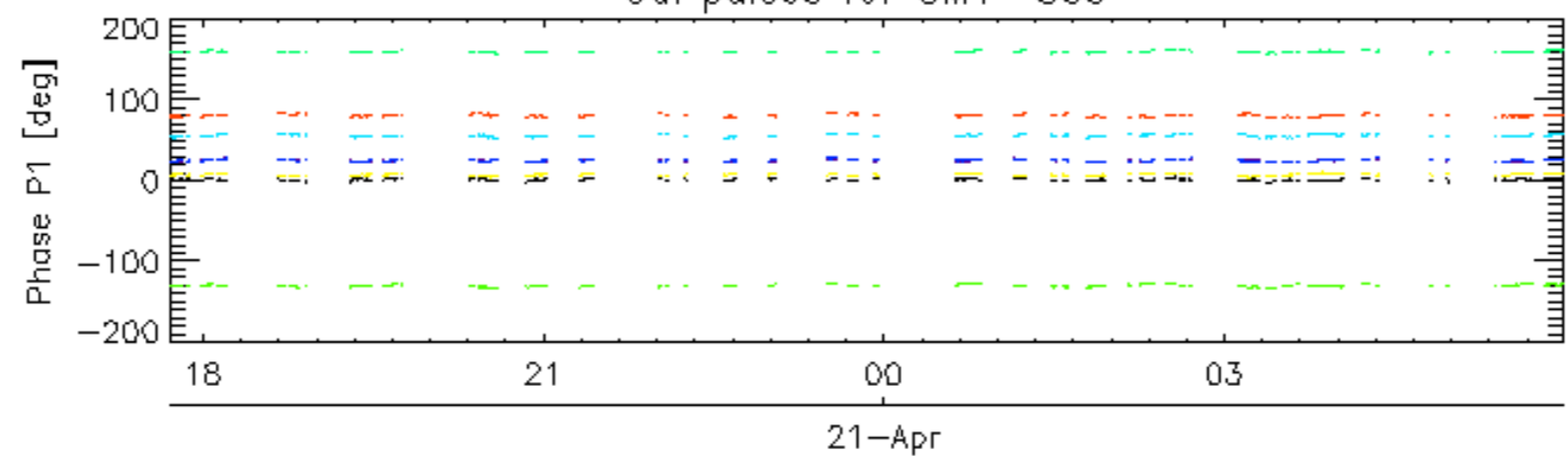
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

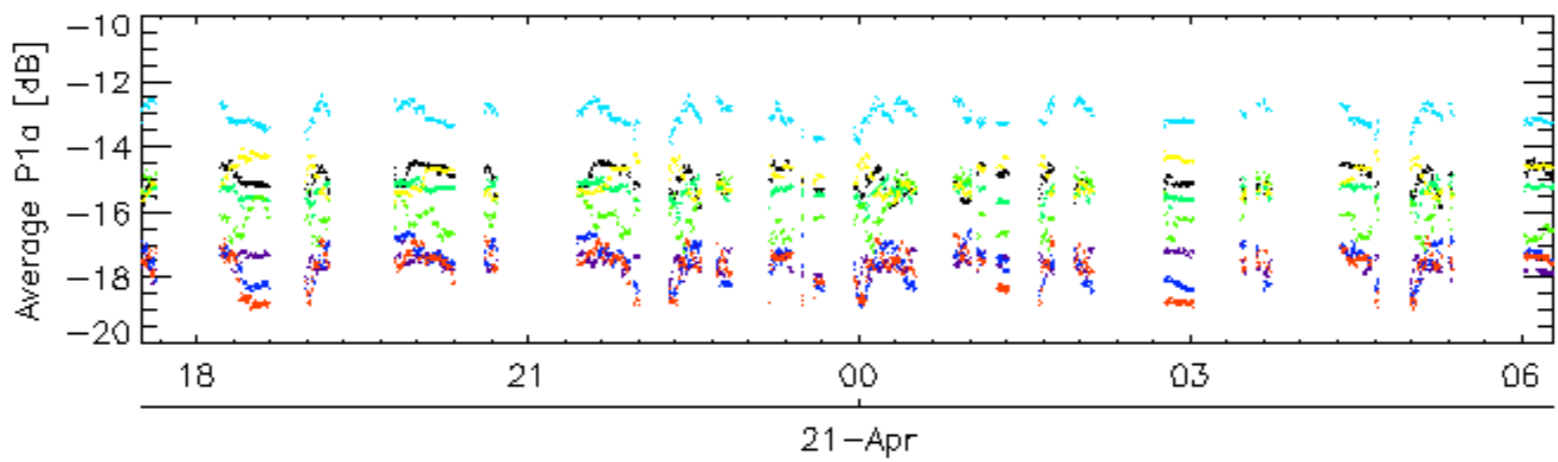
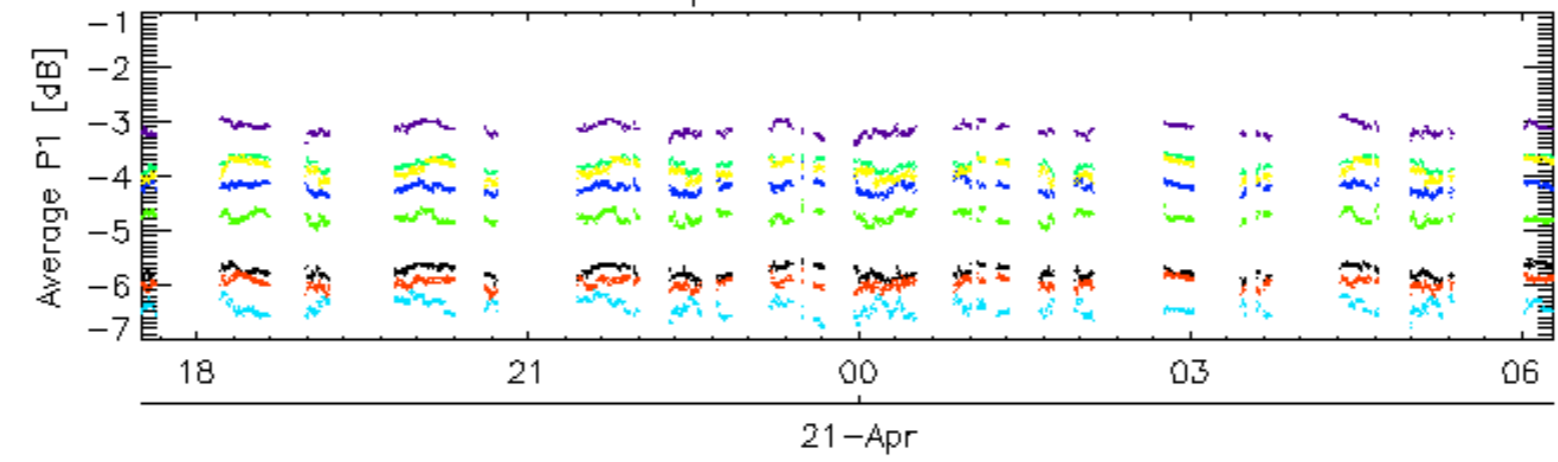


Cal pulses for GM1 SS3

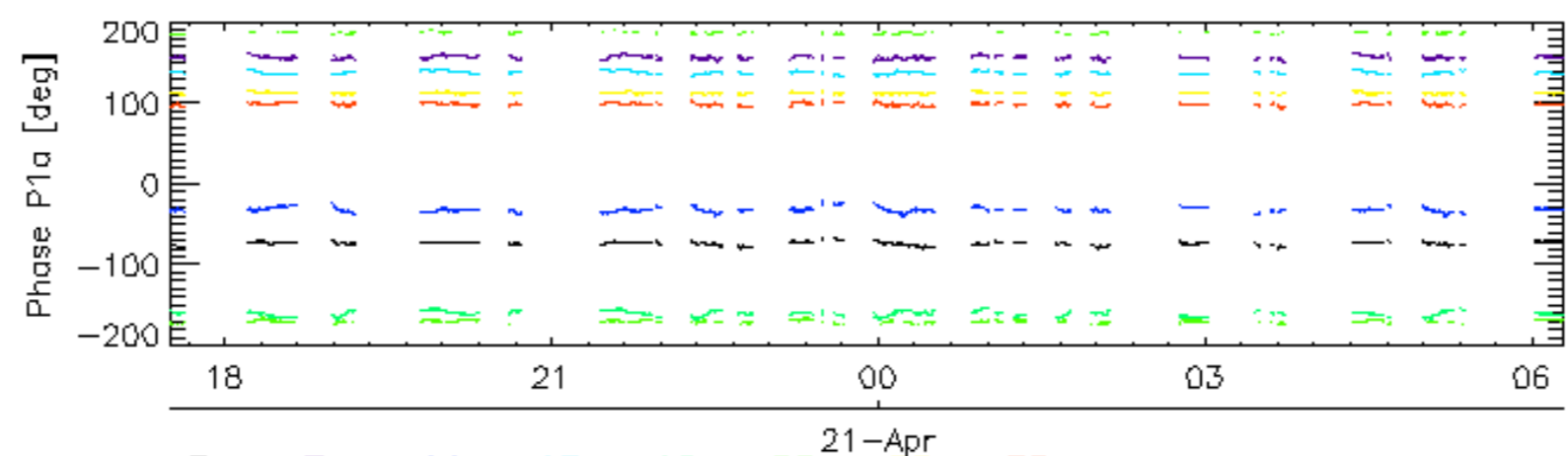
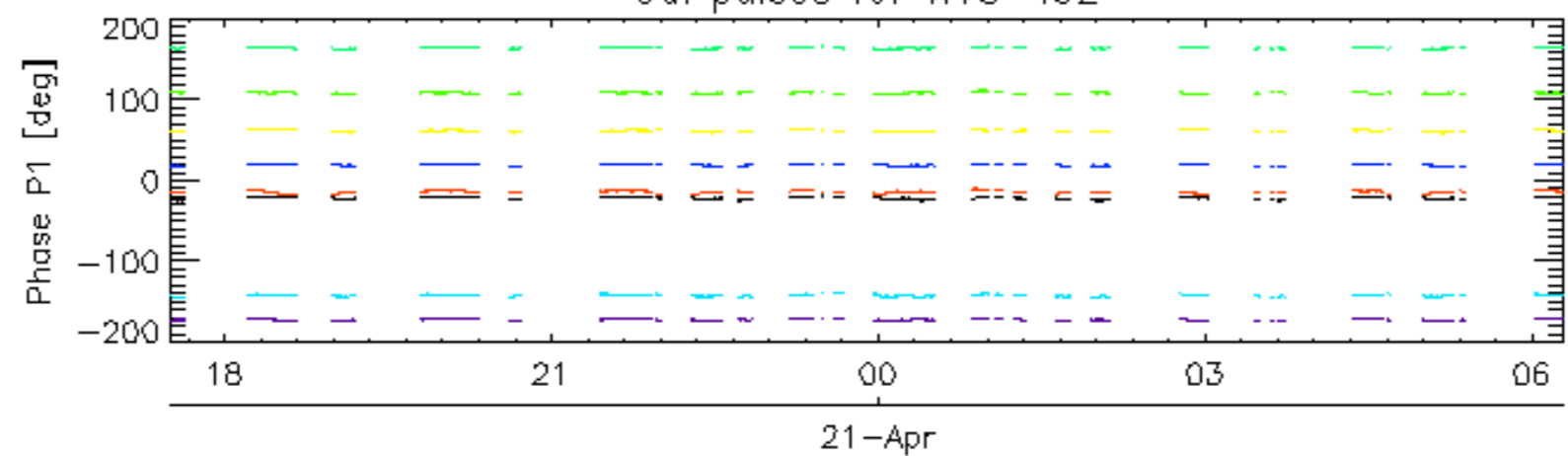


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

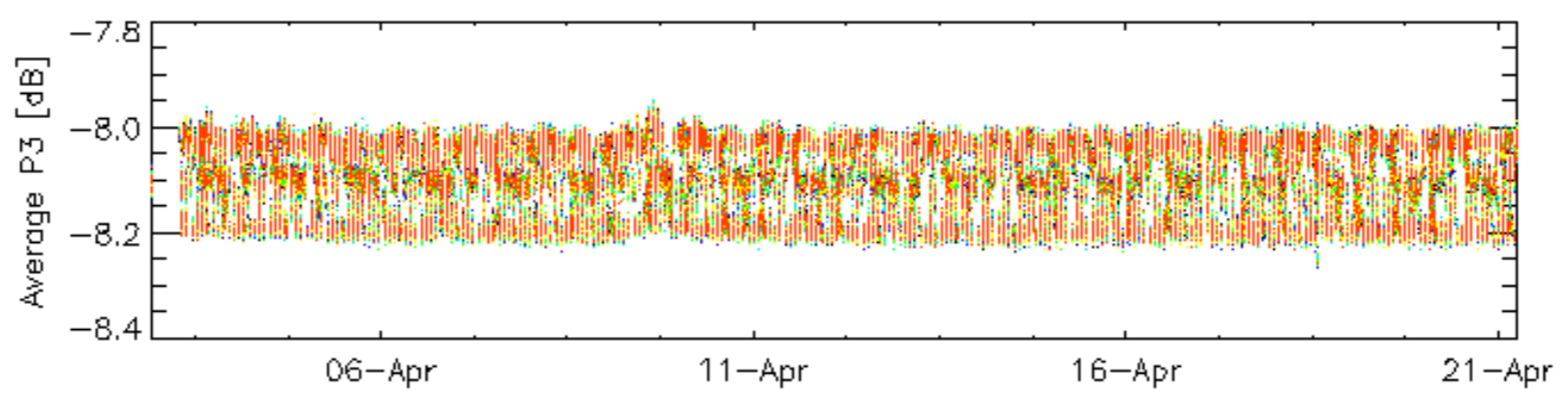
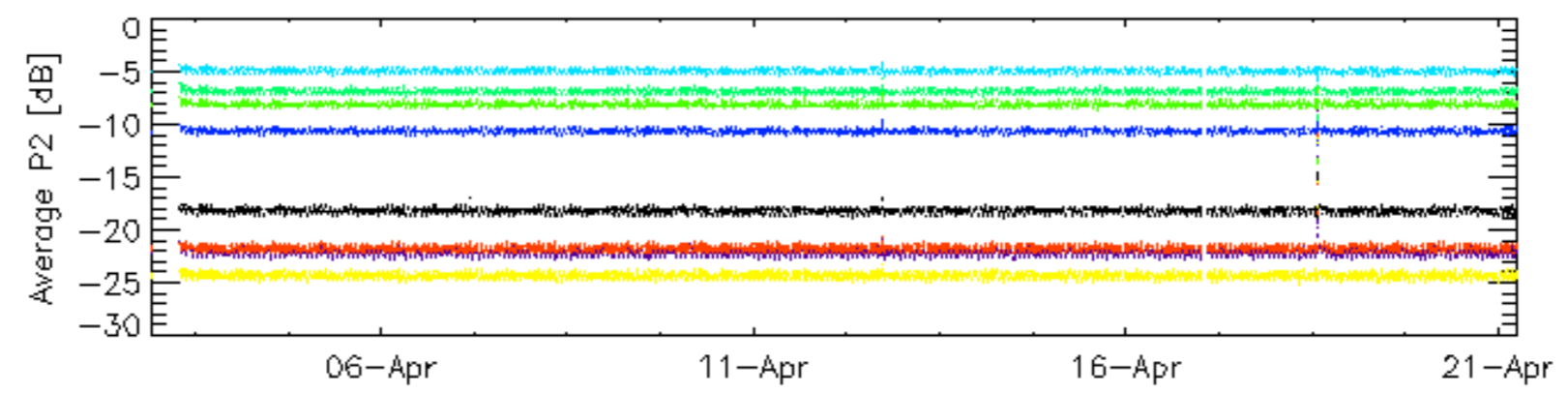
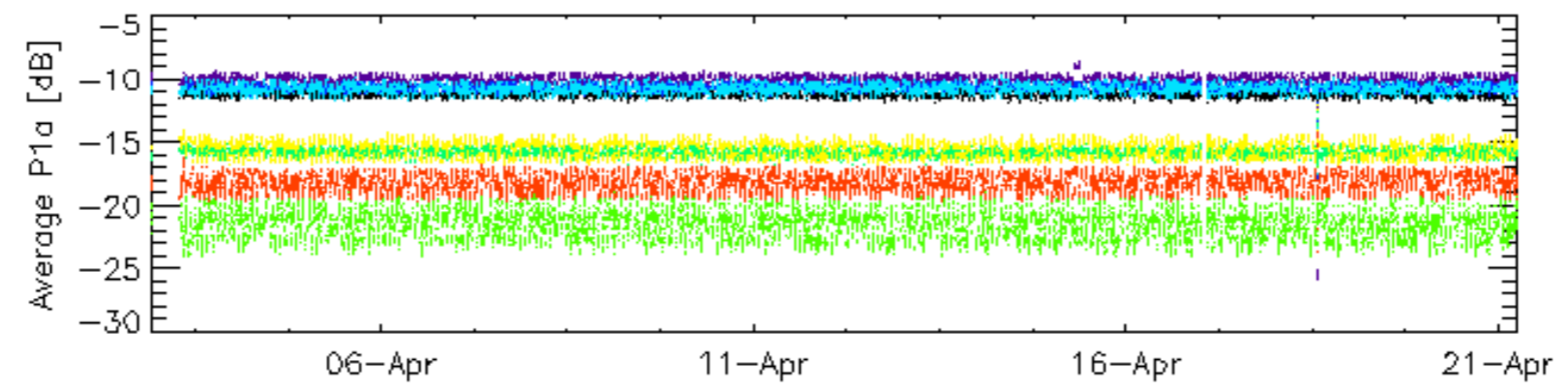
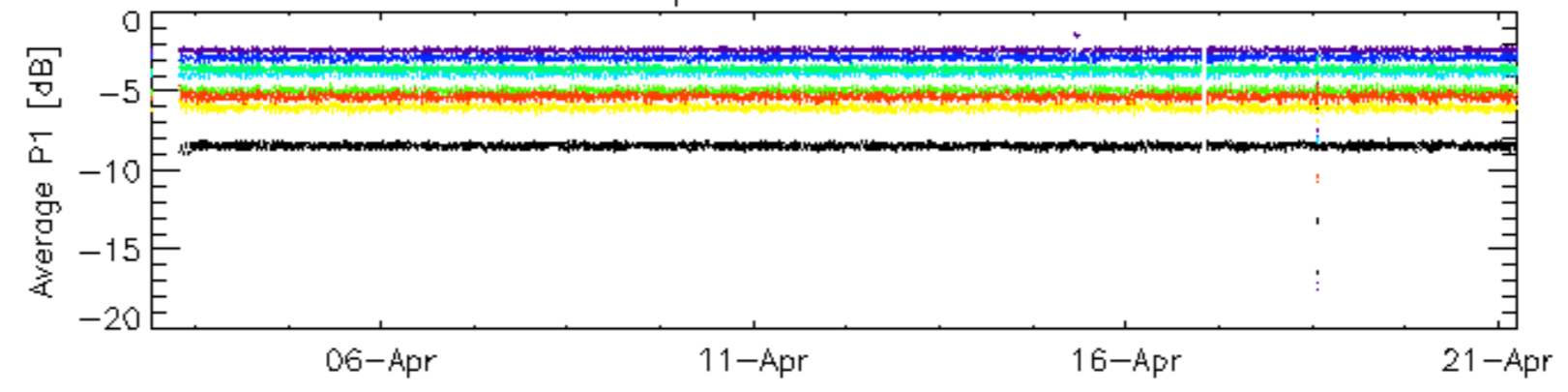


Cal pulses for WVS IS2



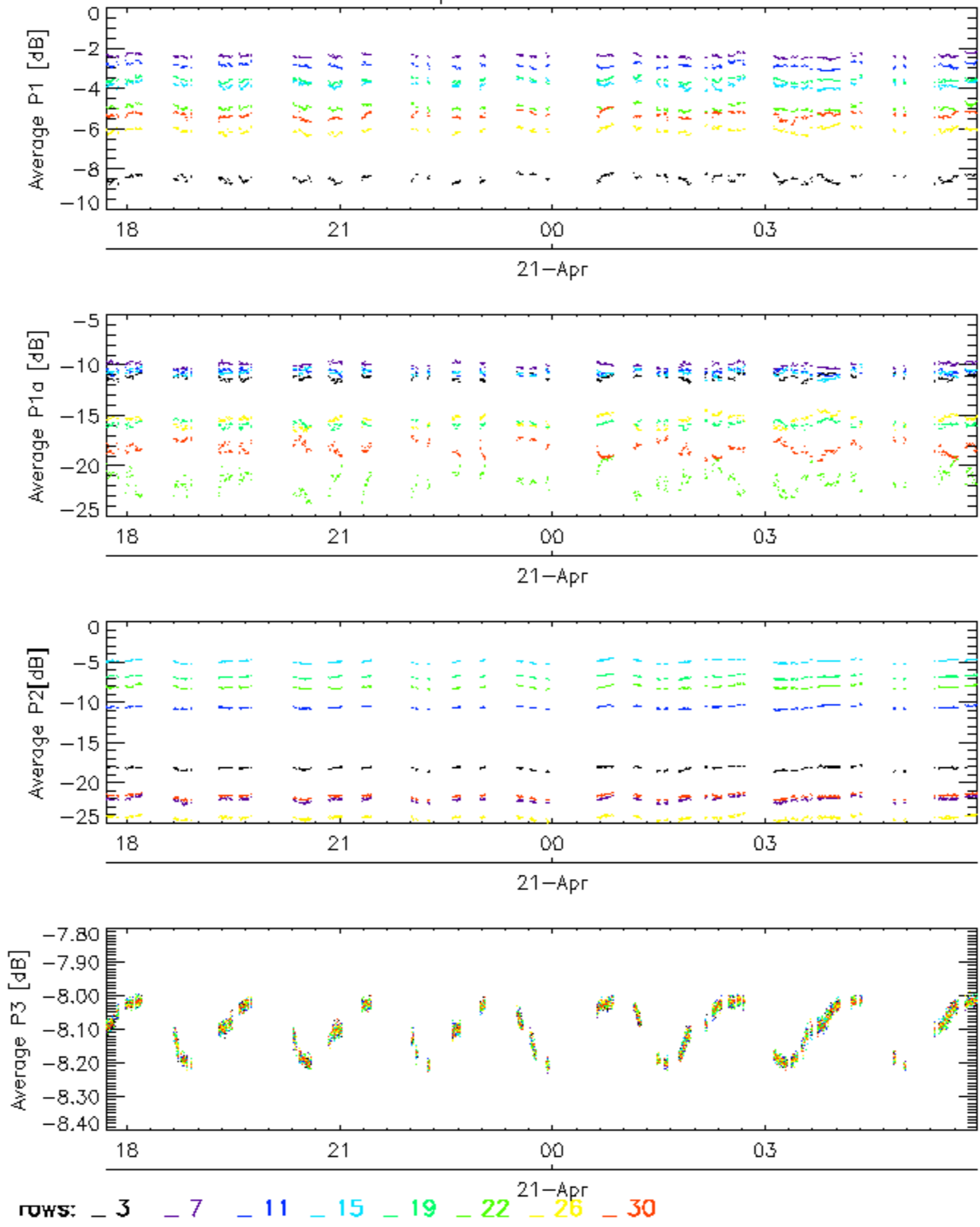
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

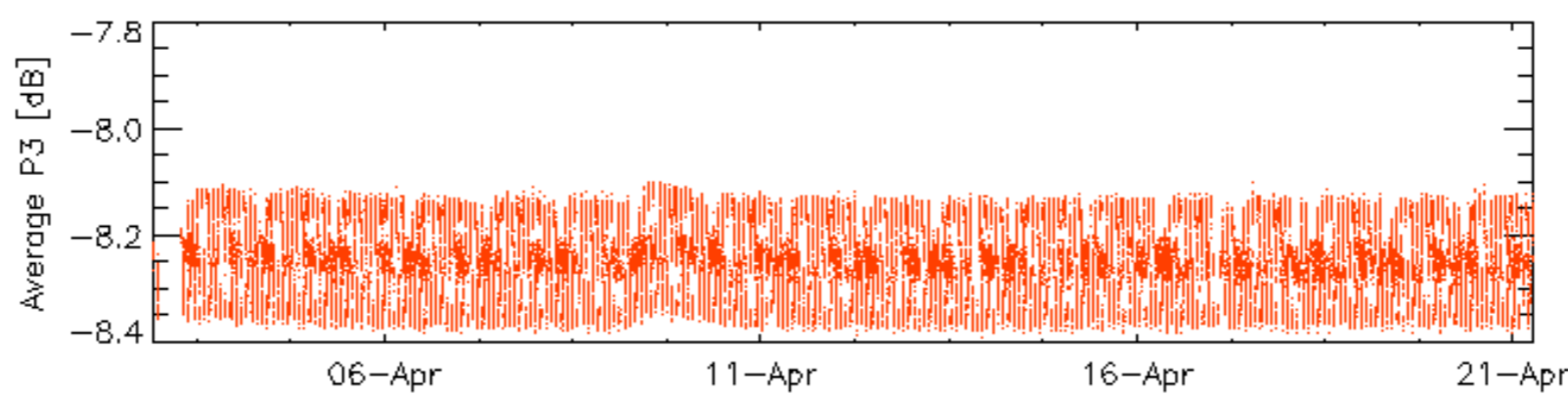
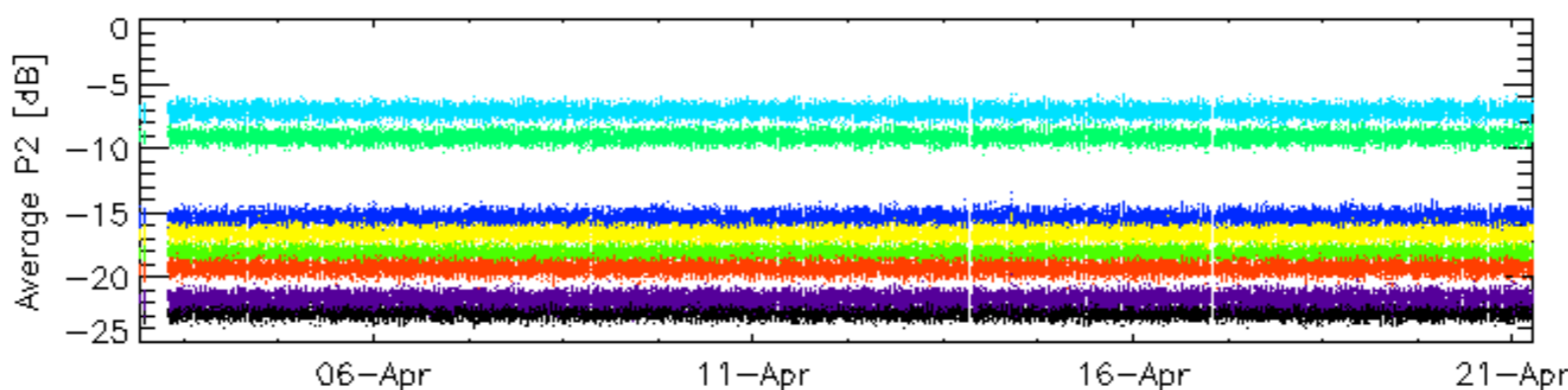
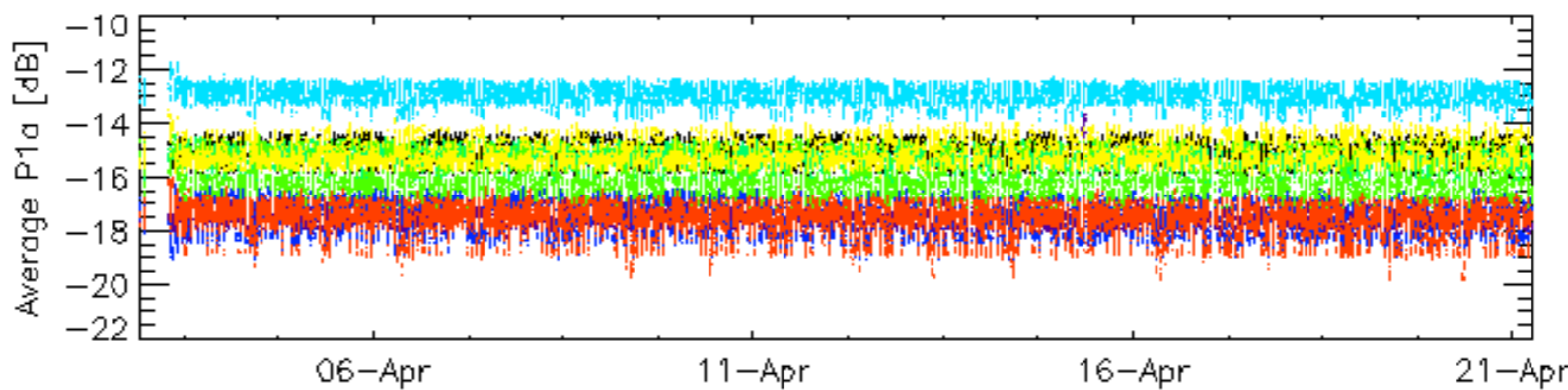
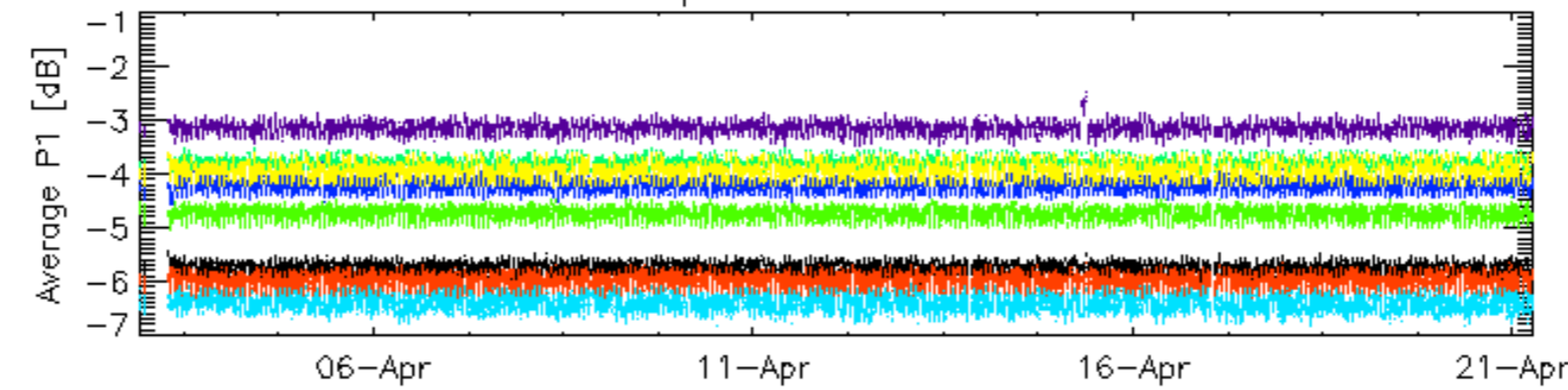


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

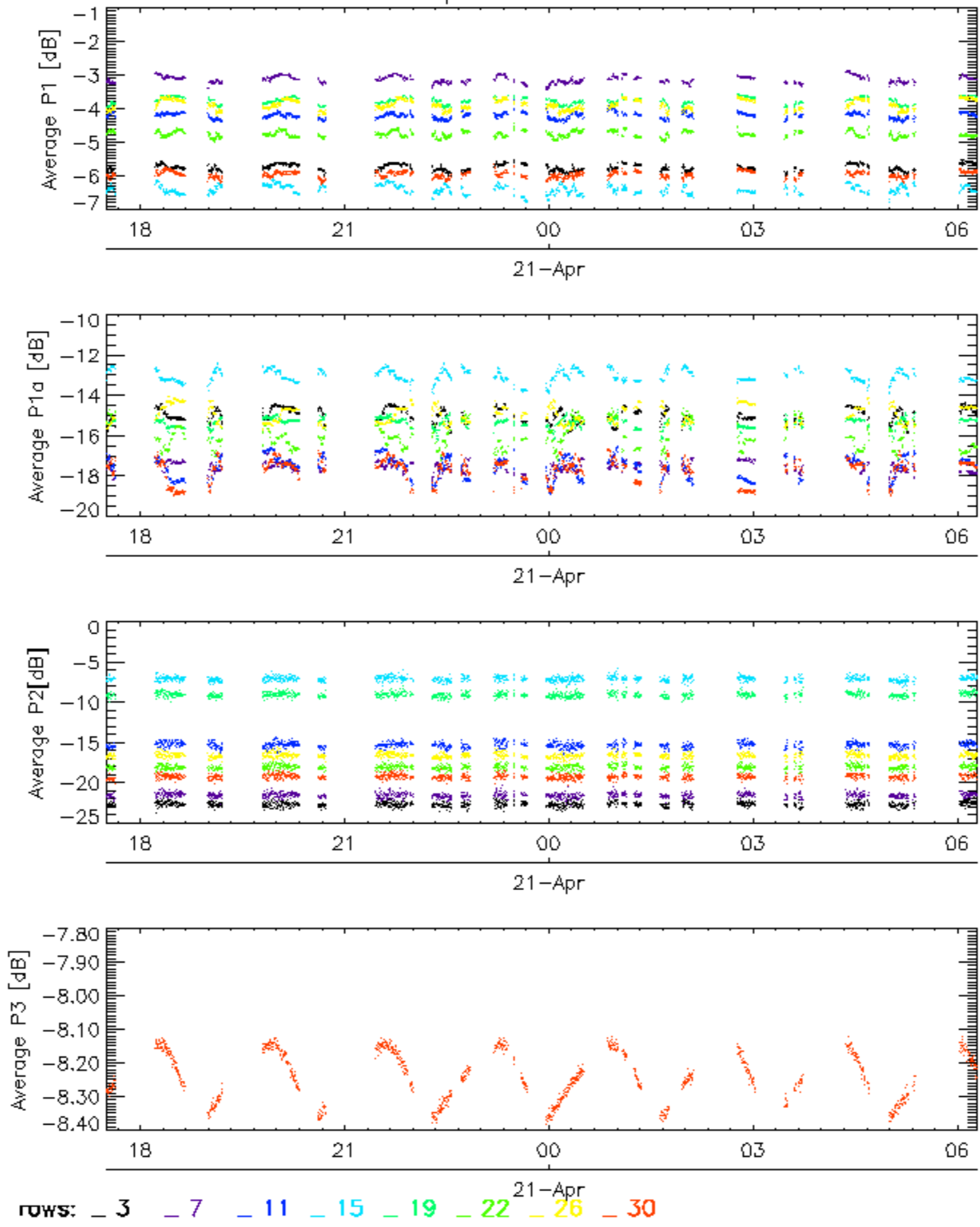


Cal pulses for WVS IS2

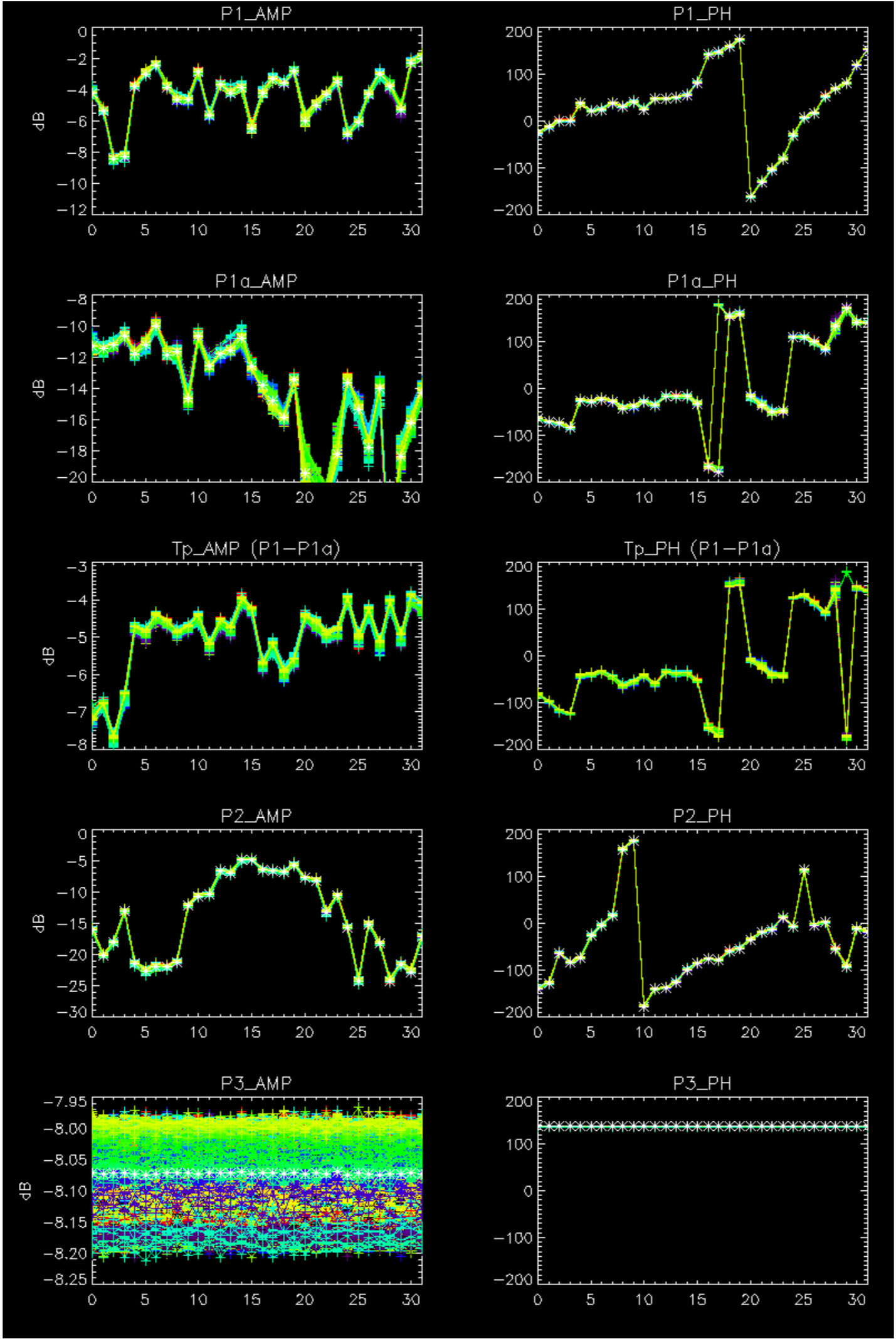


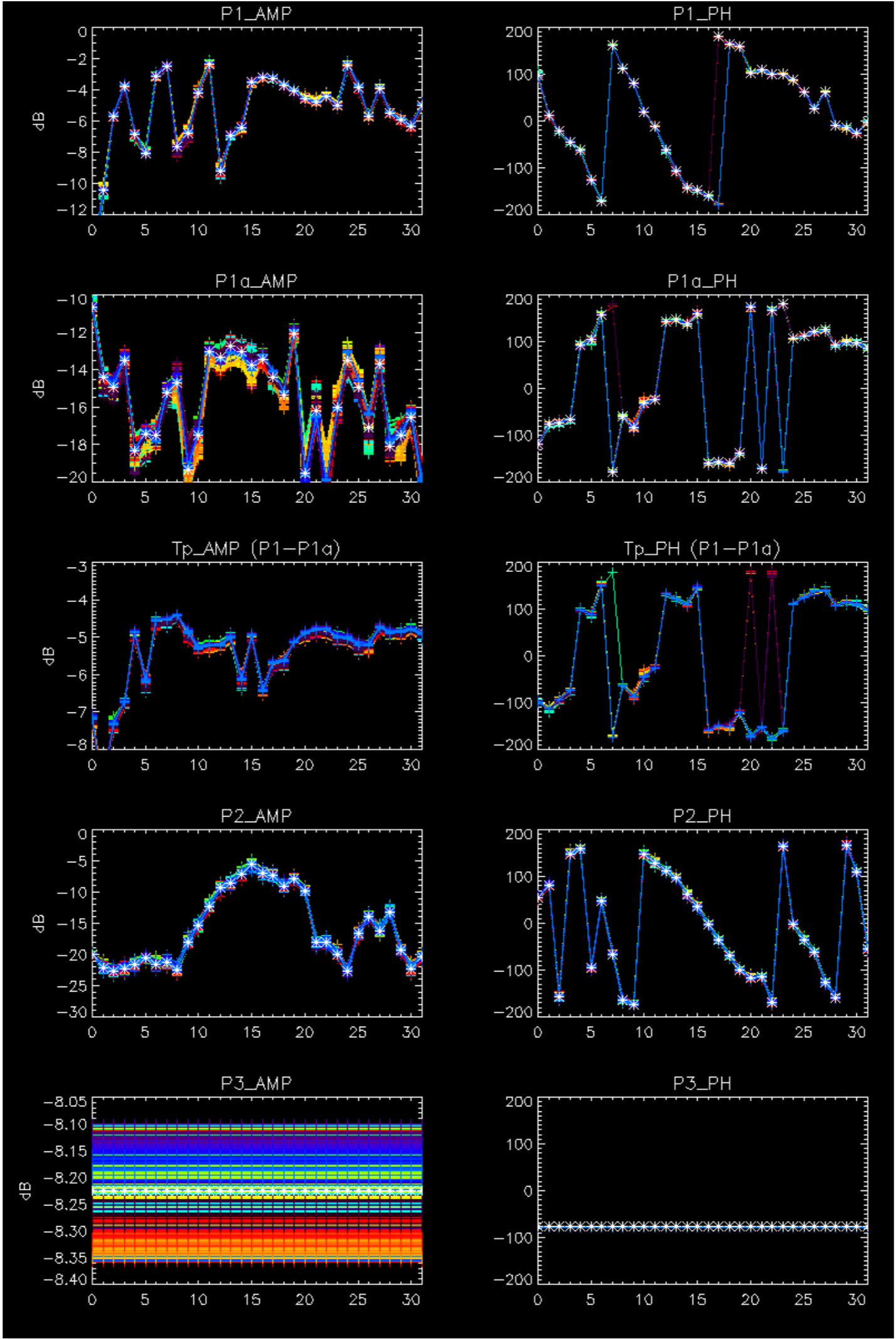
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



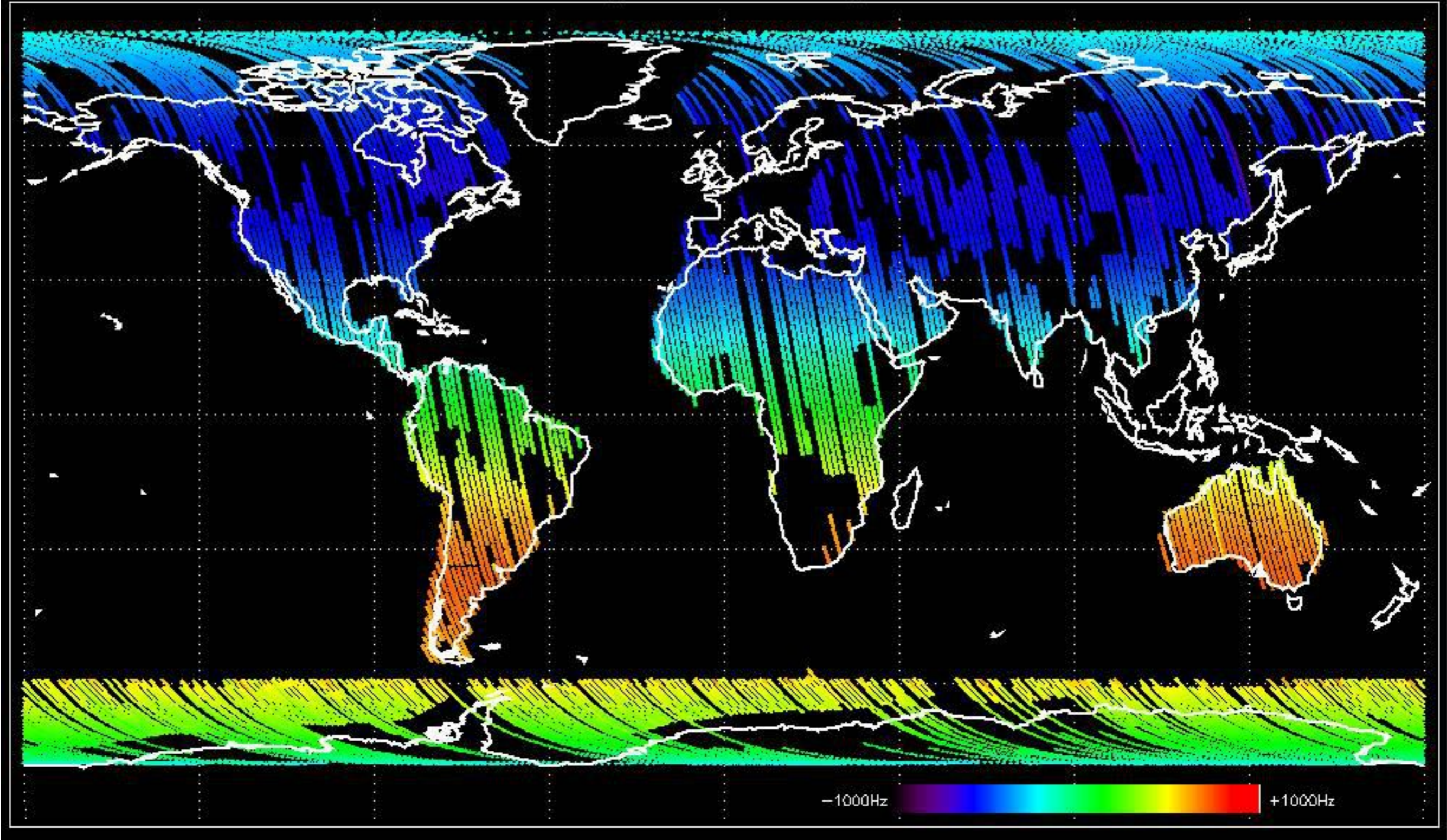
No anomalies observed.



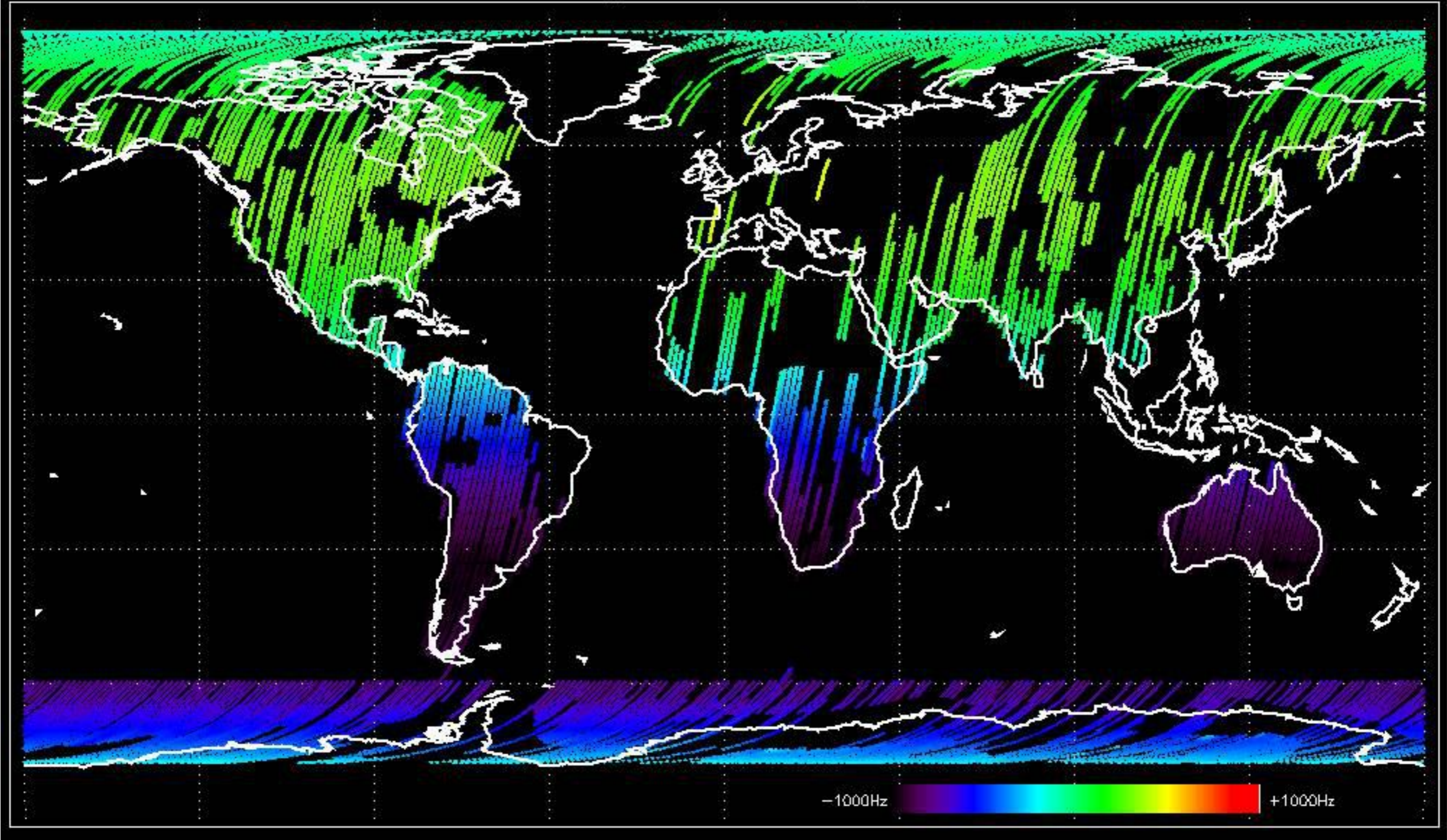


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

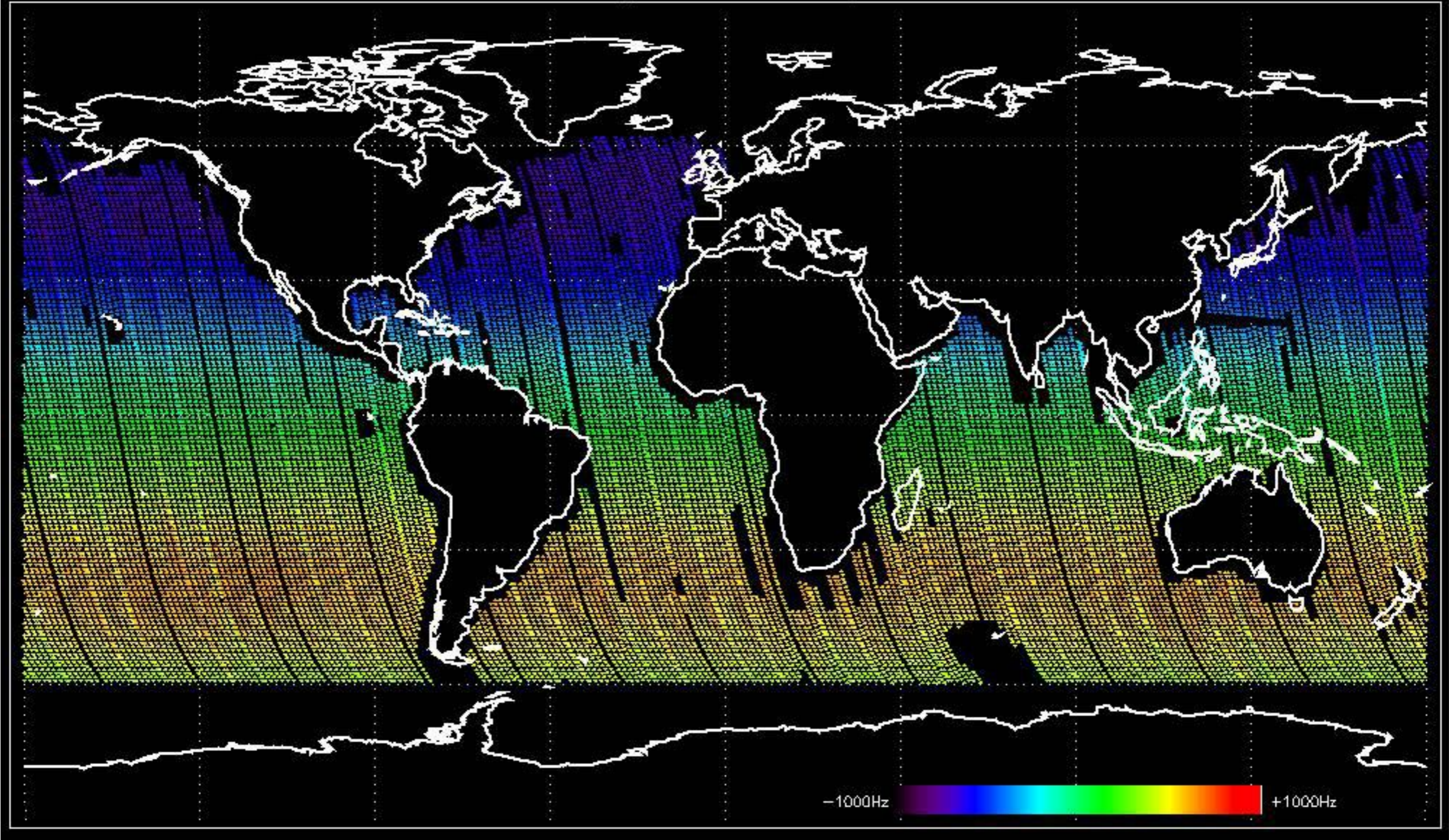
Doppler 'GM1' 'SS1' ascending



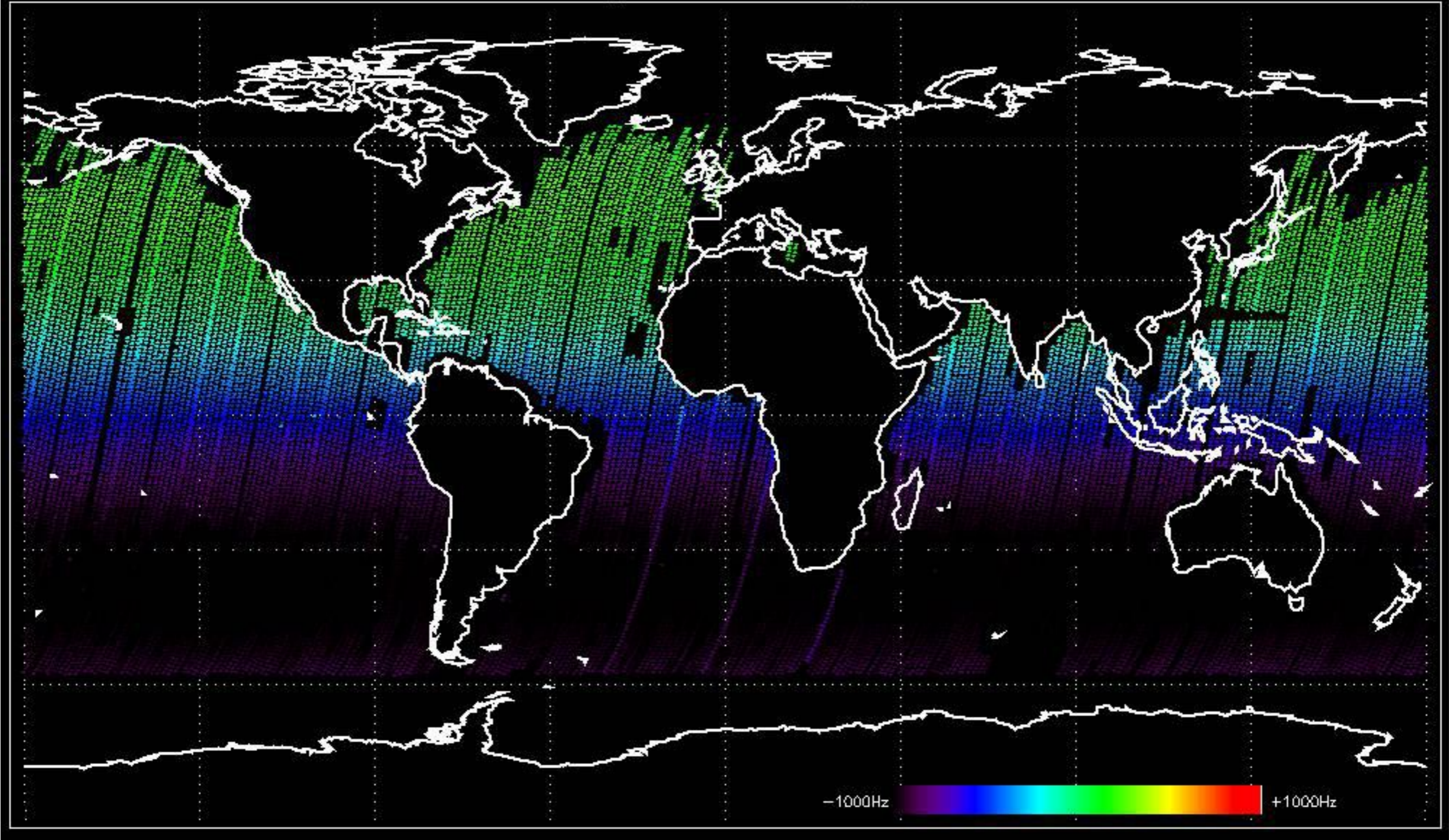
Doppler 'GM1' 'SS1' descending

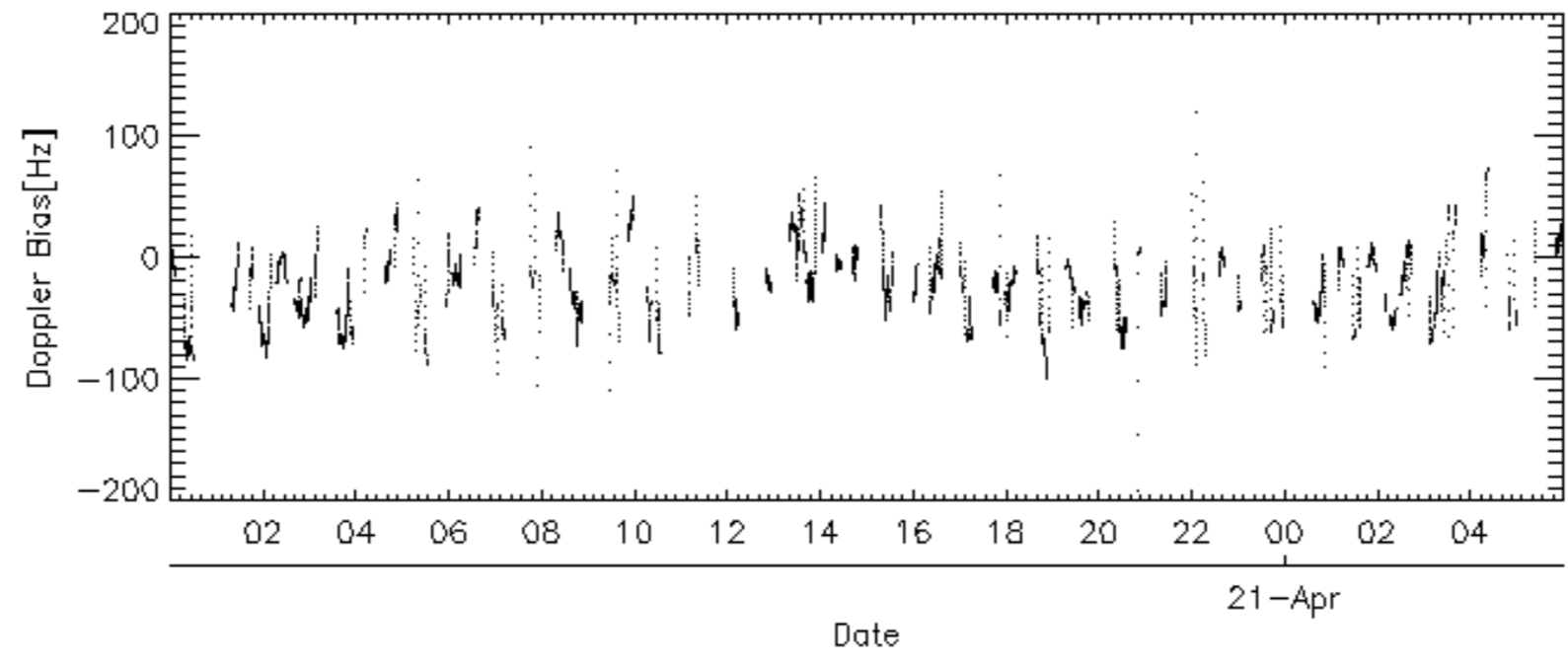
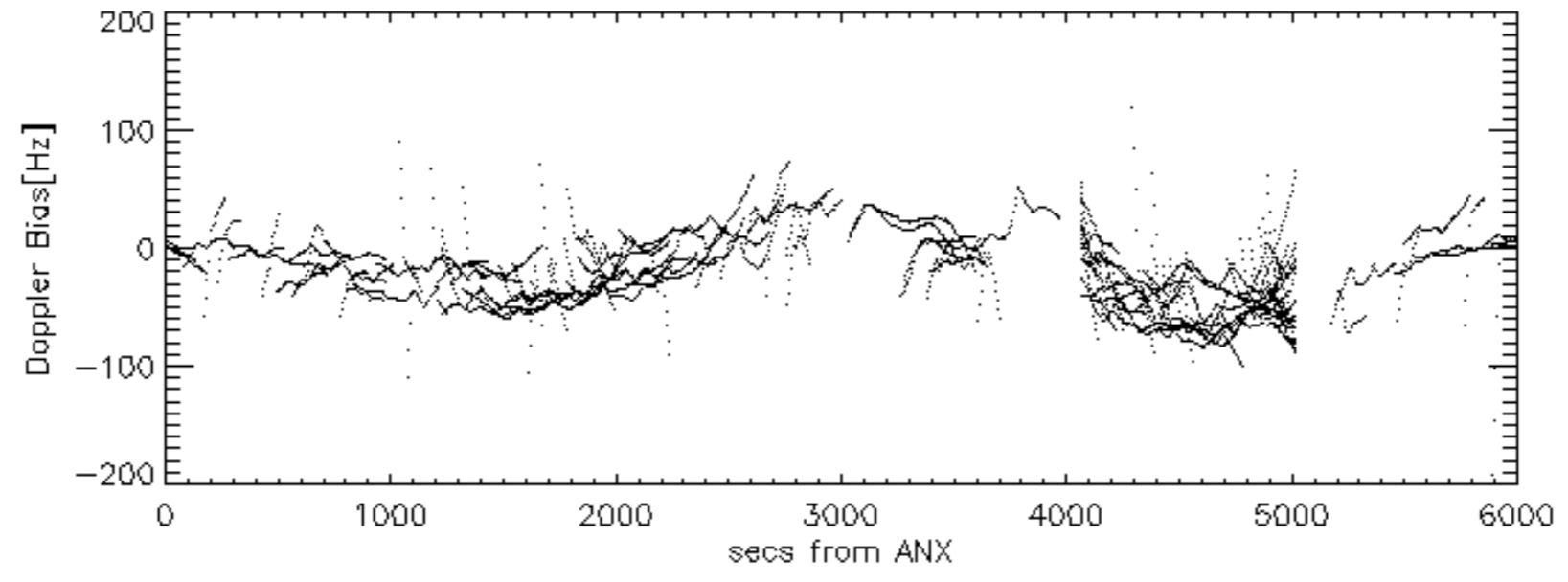
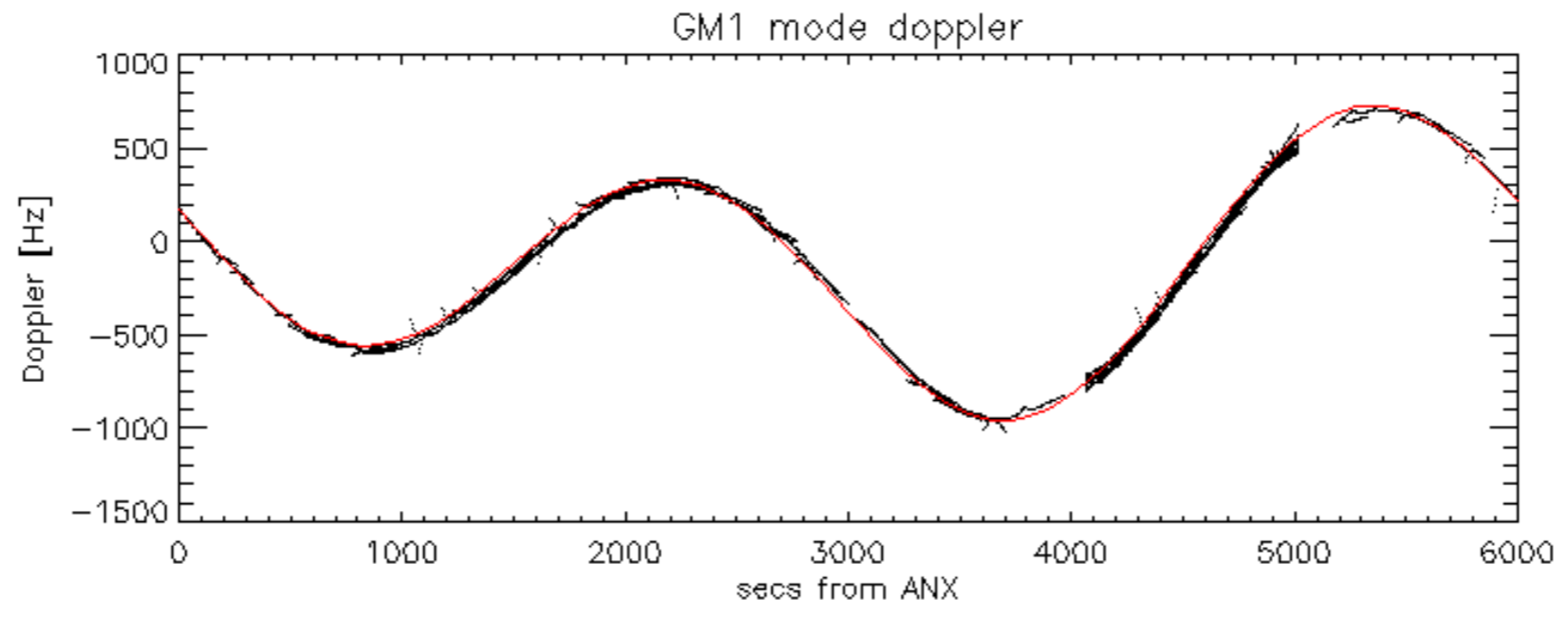


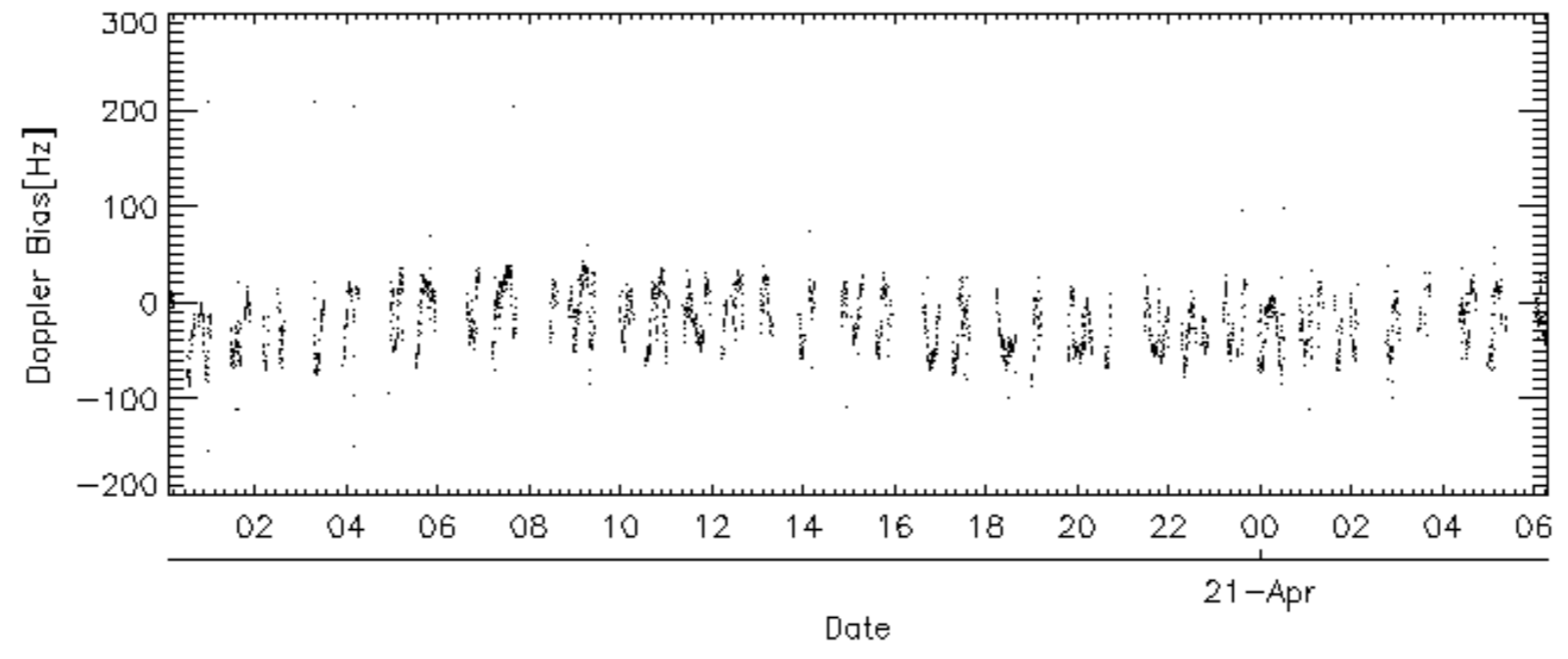
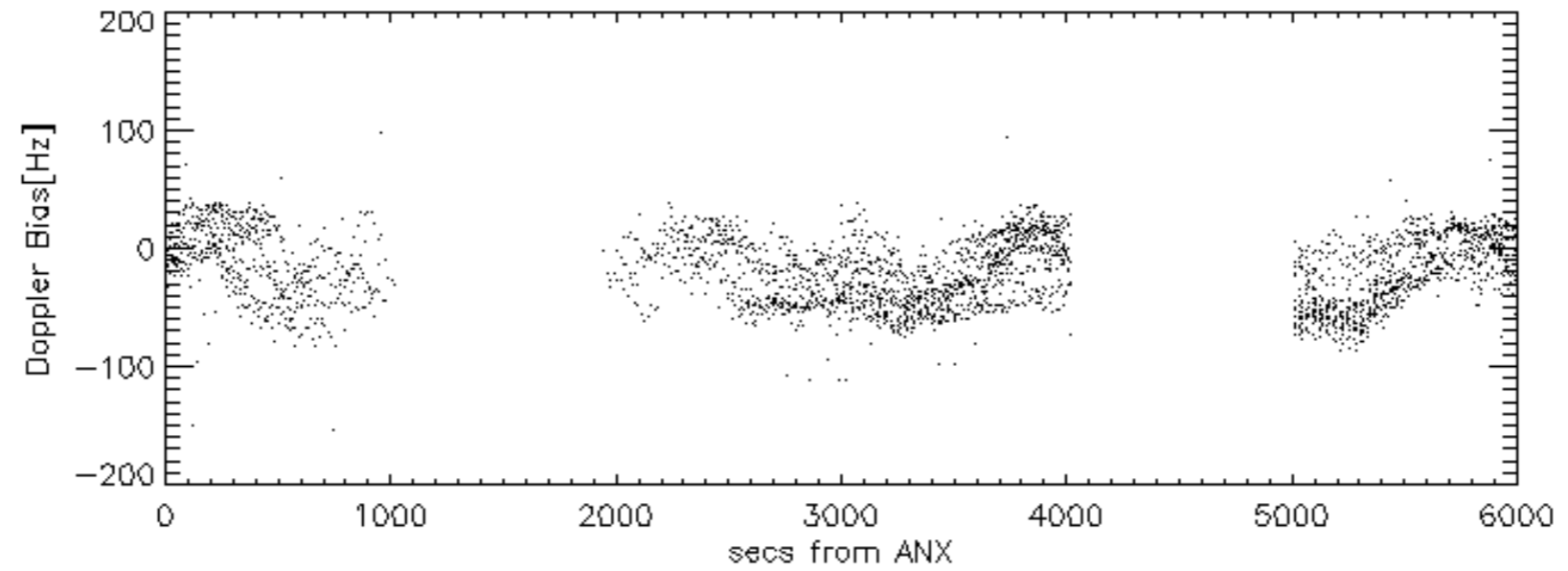
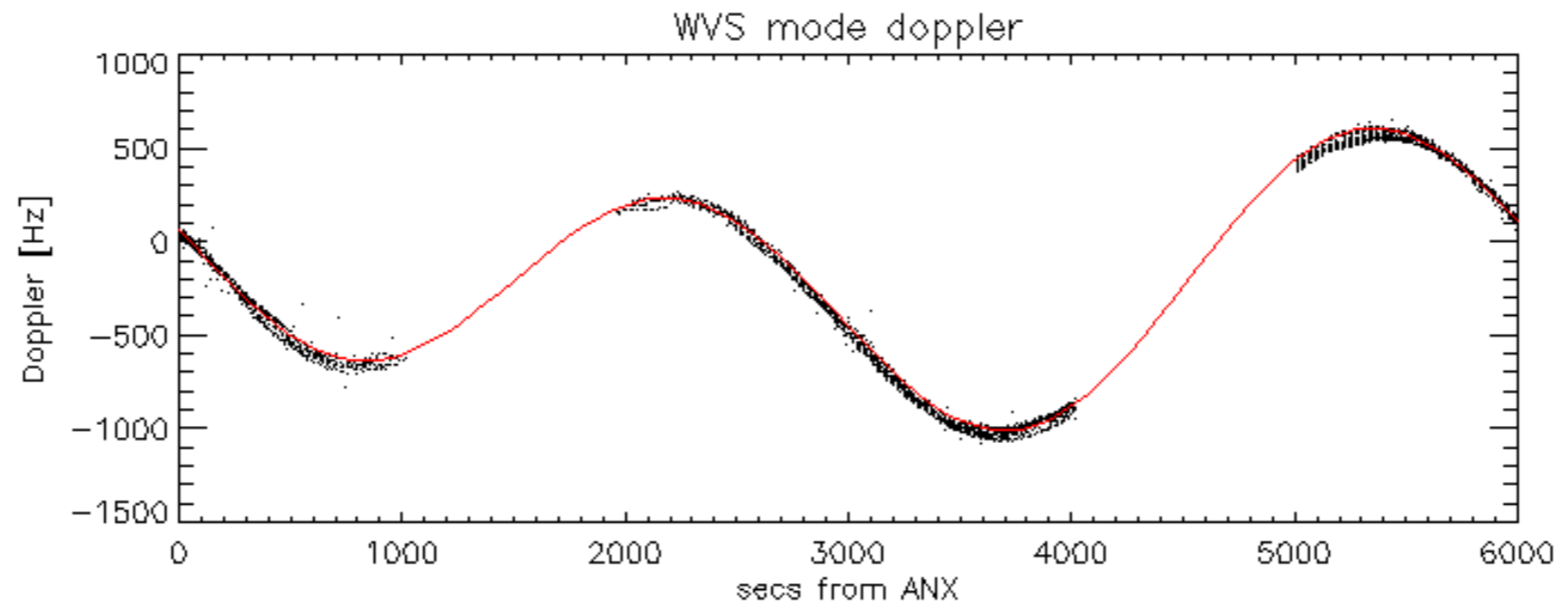
Doppler 'WVS' 'IS2' ascending



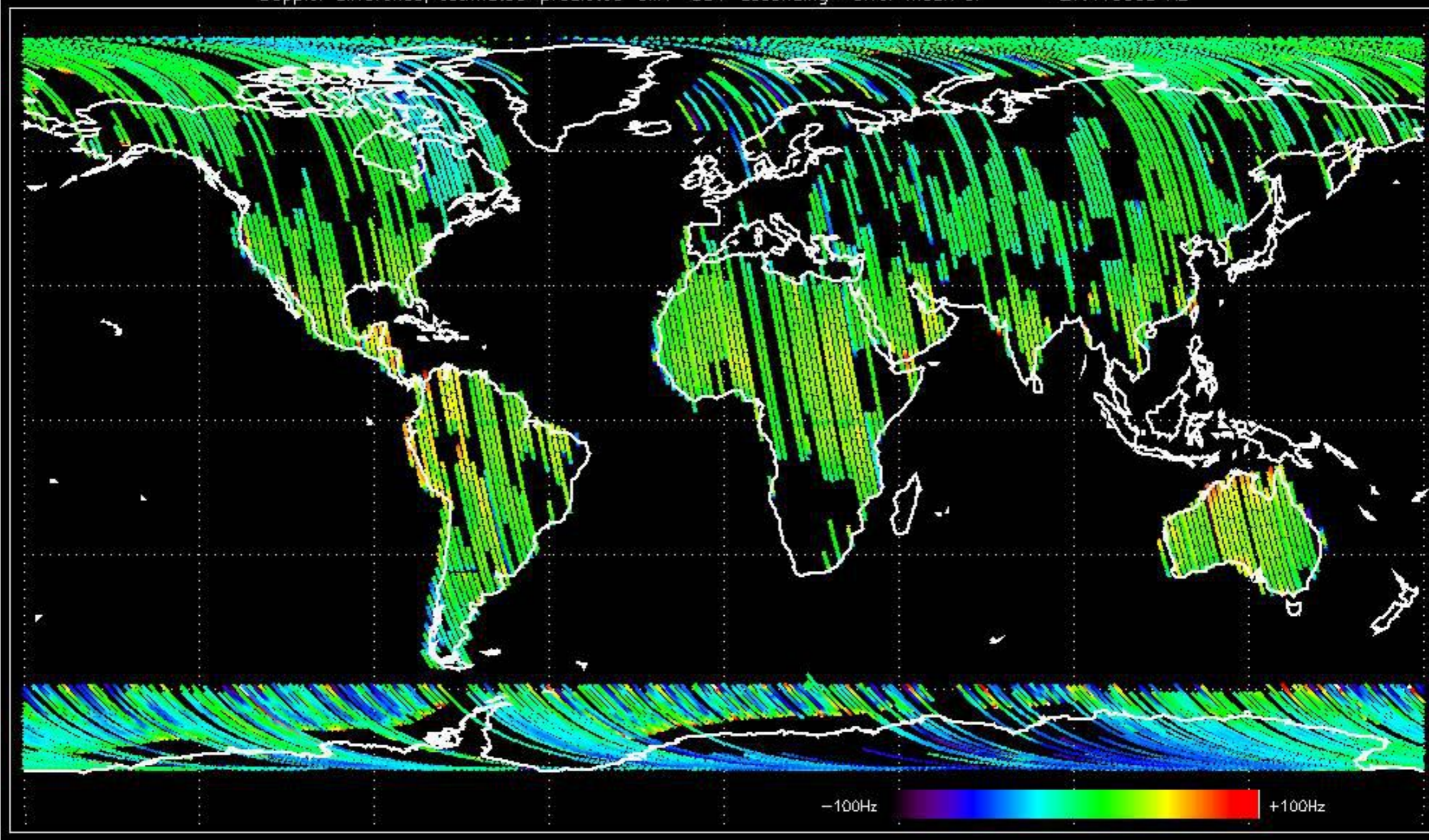
Doppler 'WVS' 'IS2' descending



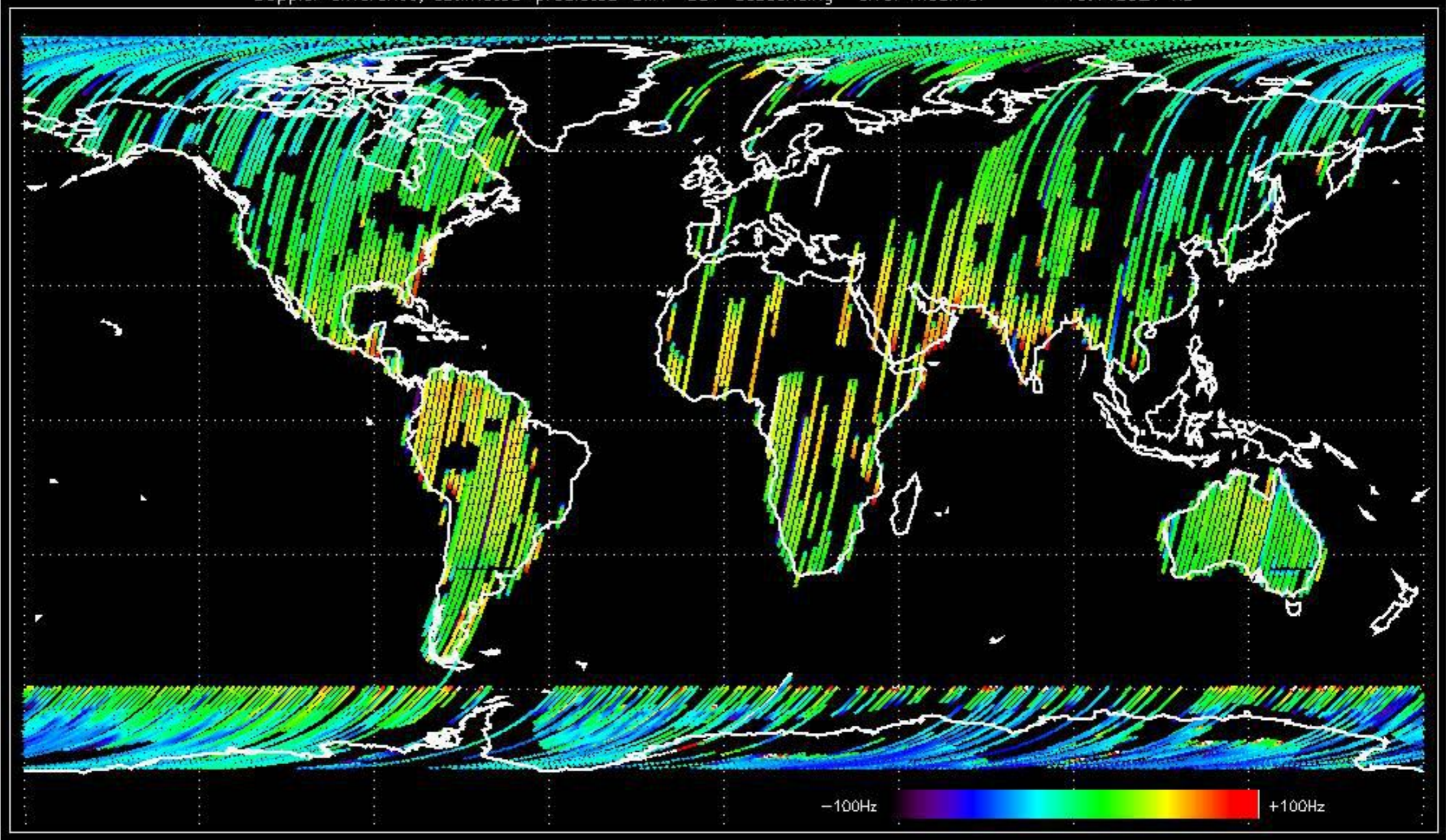




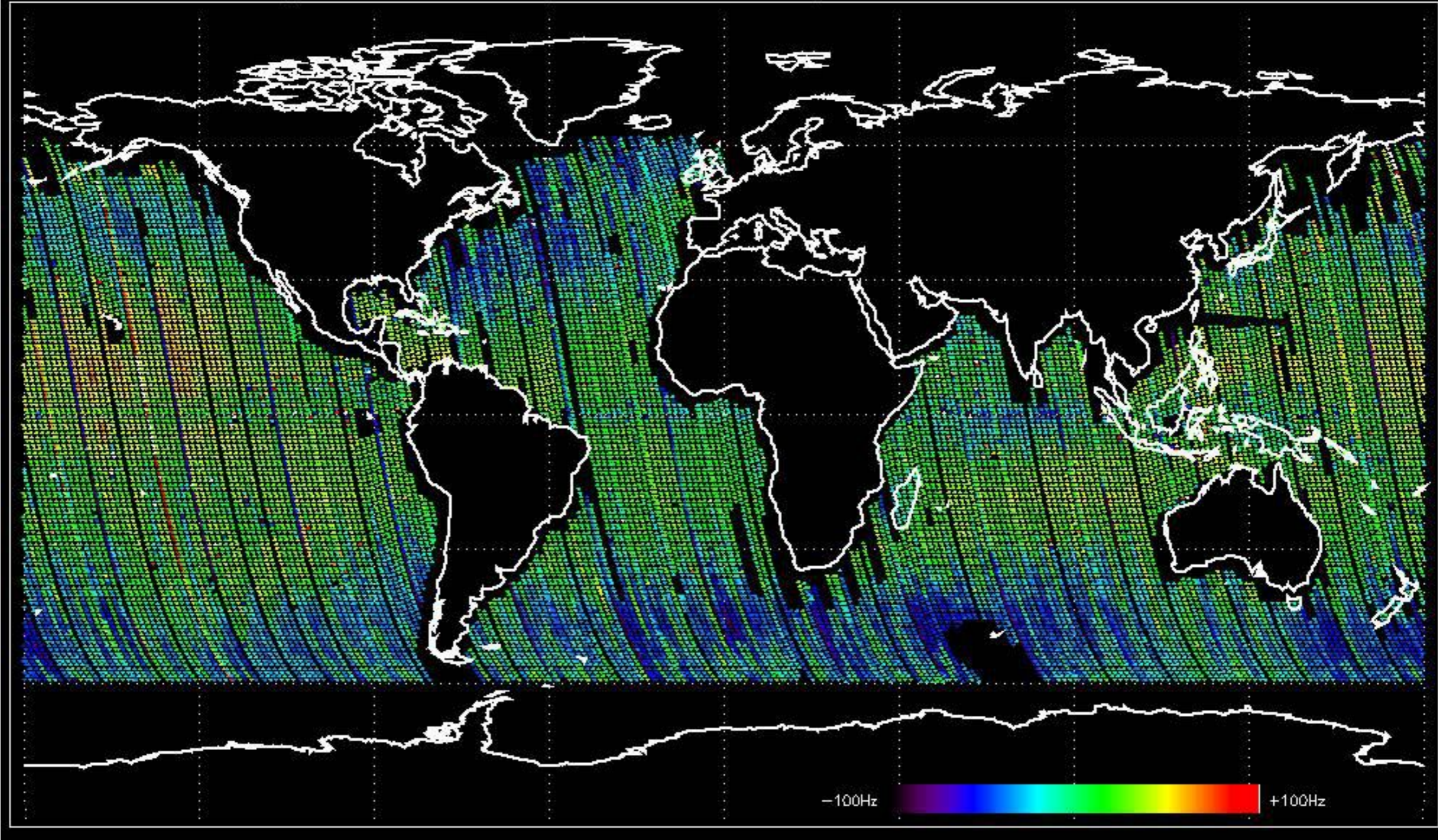
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -27.413803 Hz



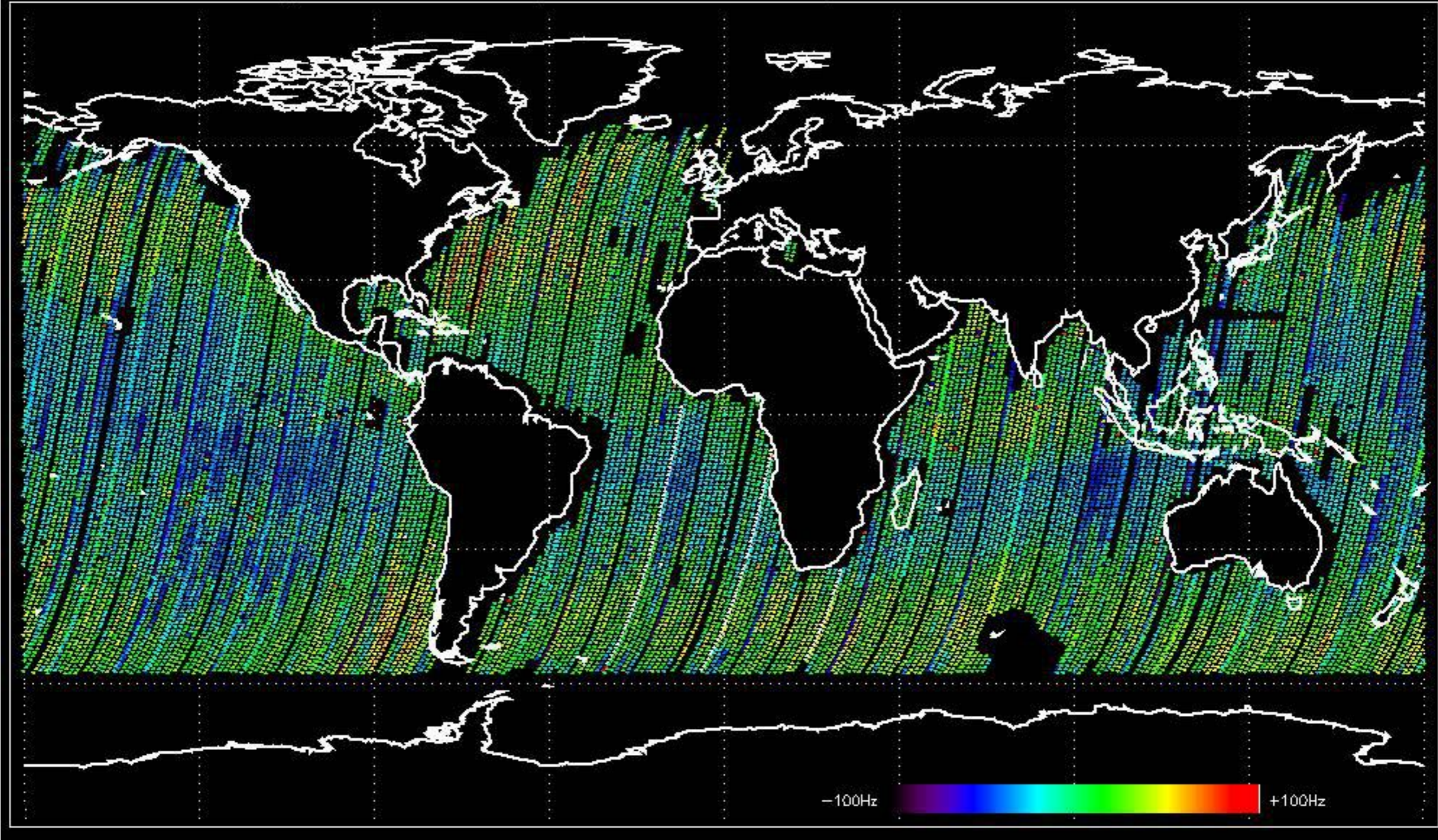
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.148921 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -22.535756 Hz

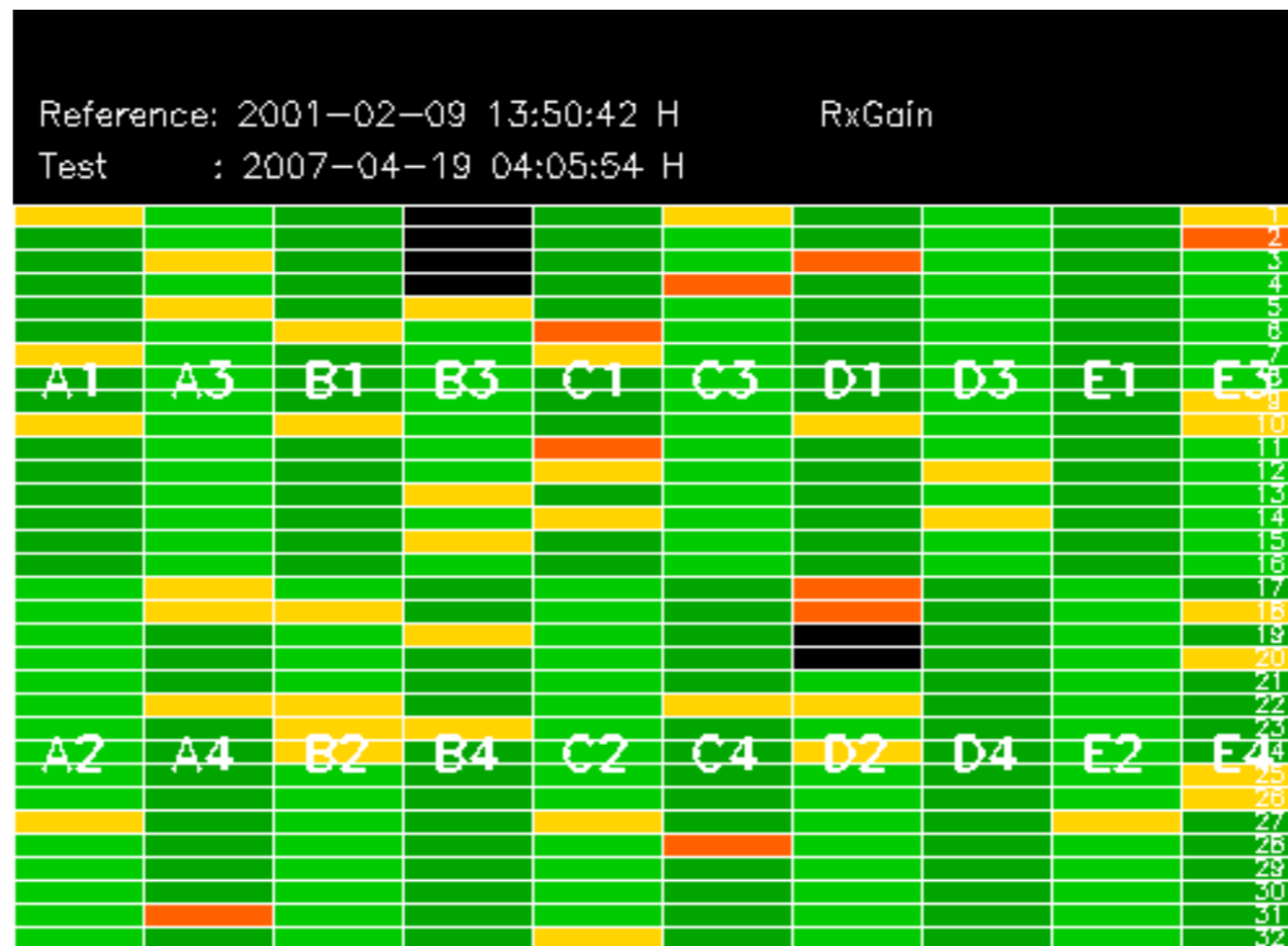


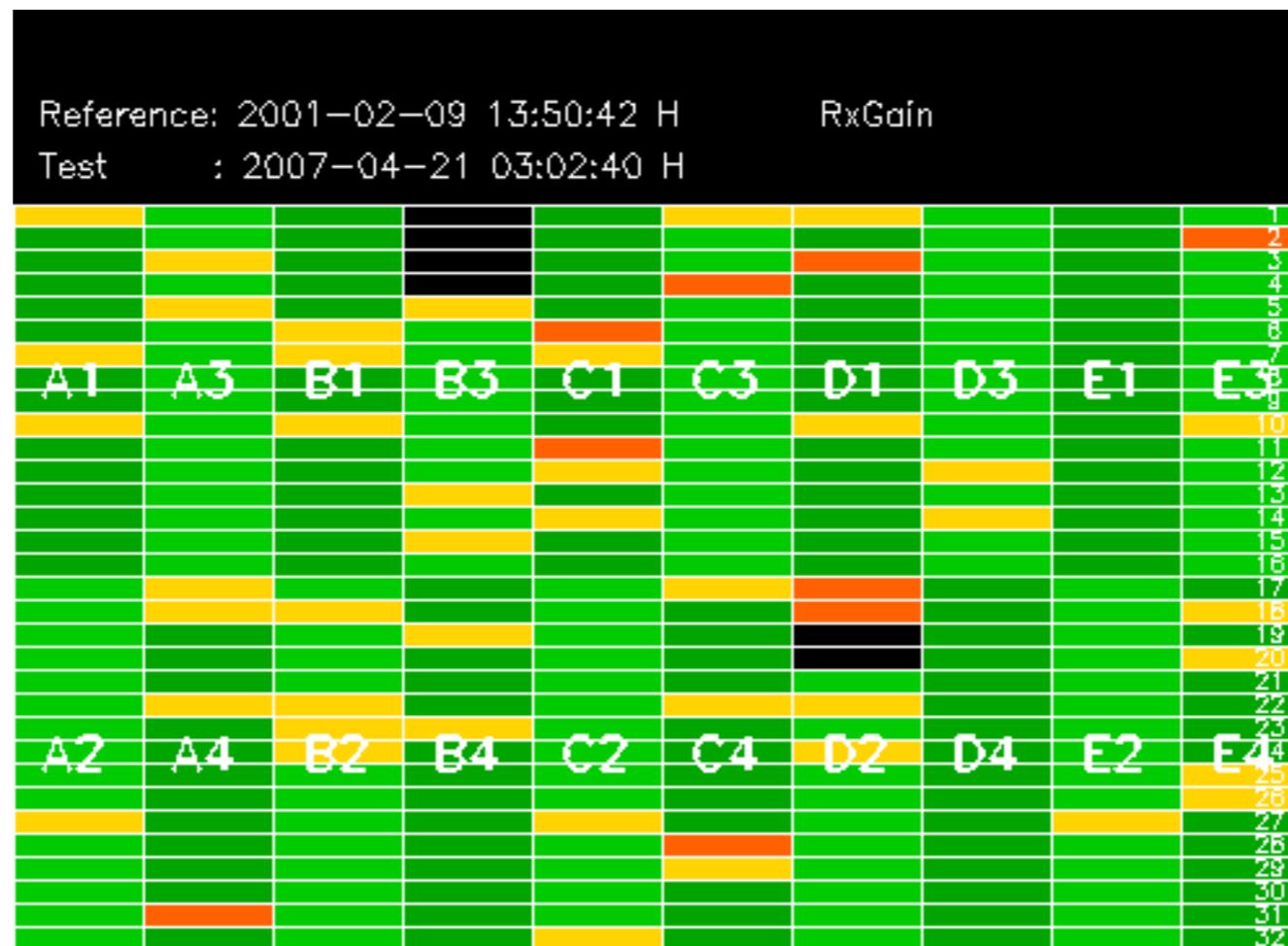
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -22.189186 Hz

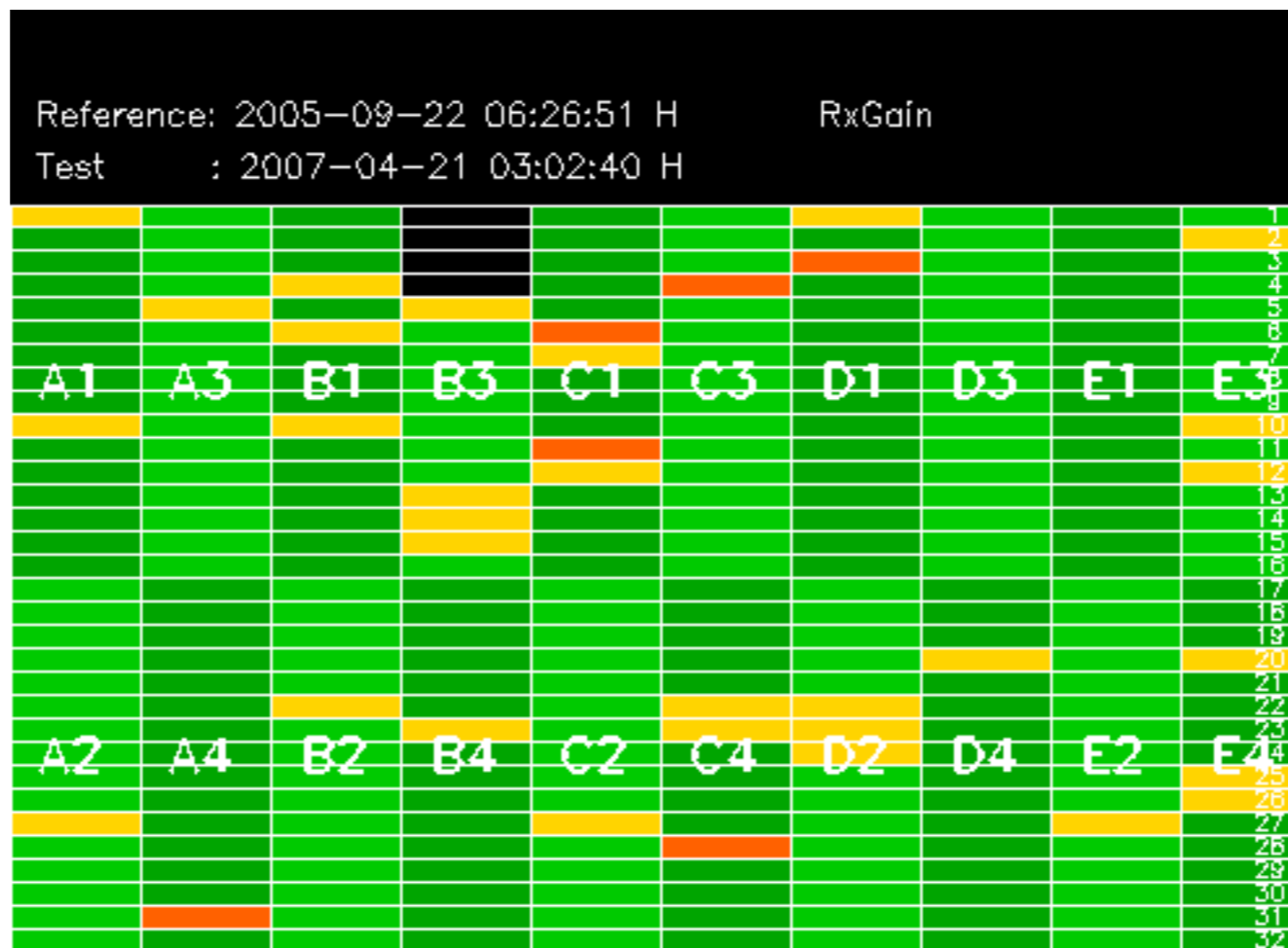


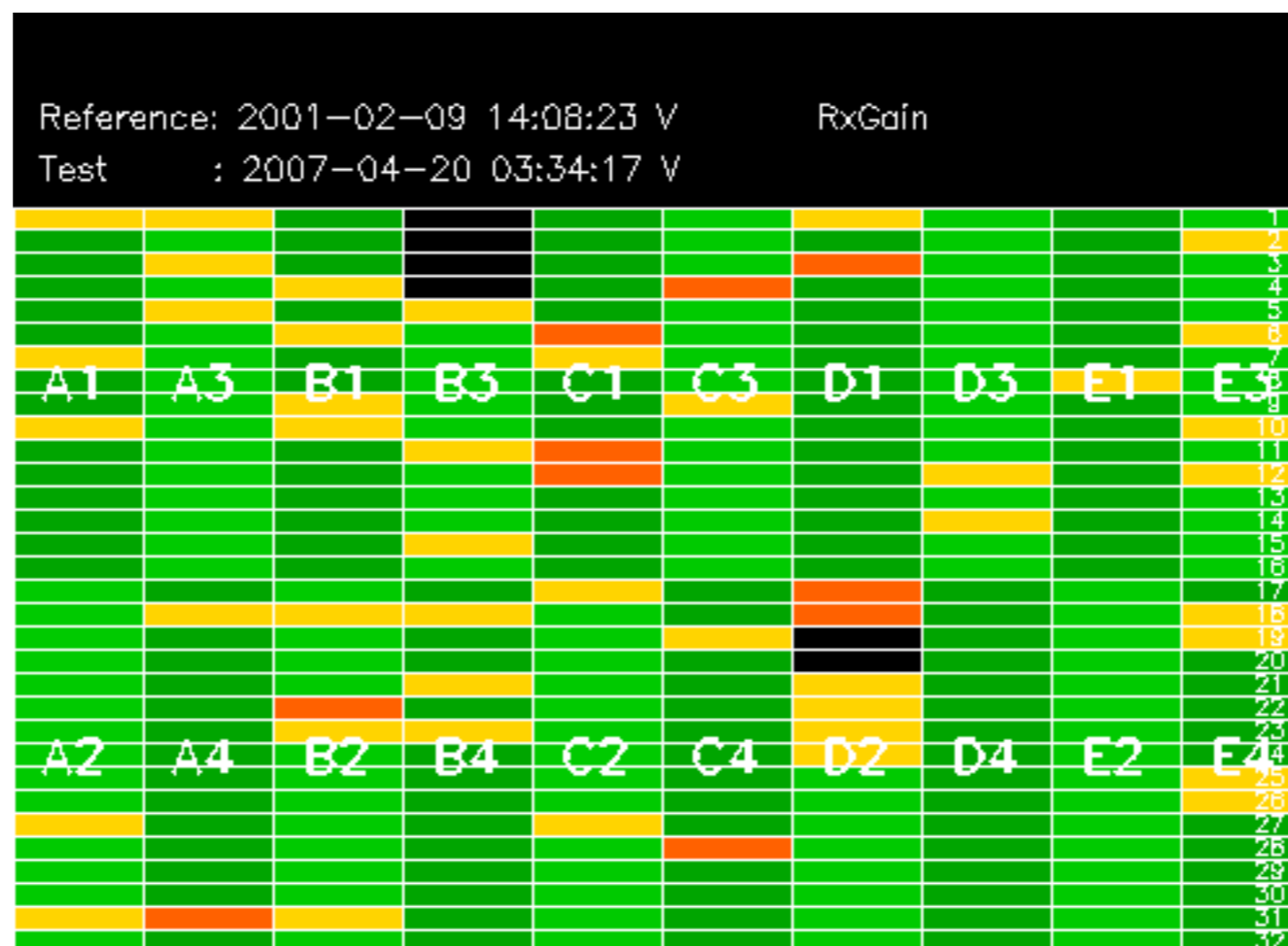
No anomalies observed on available MS products:

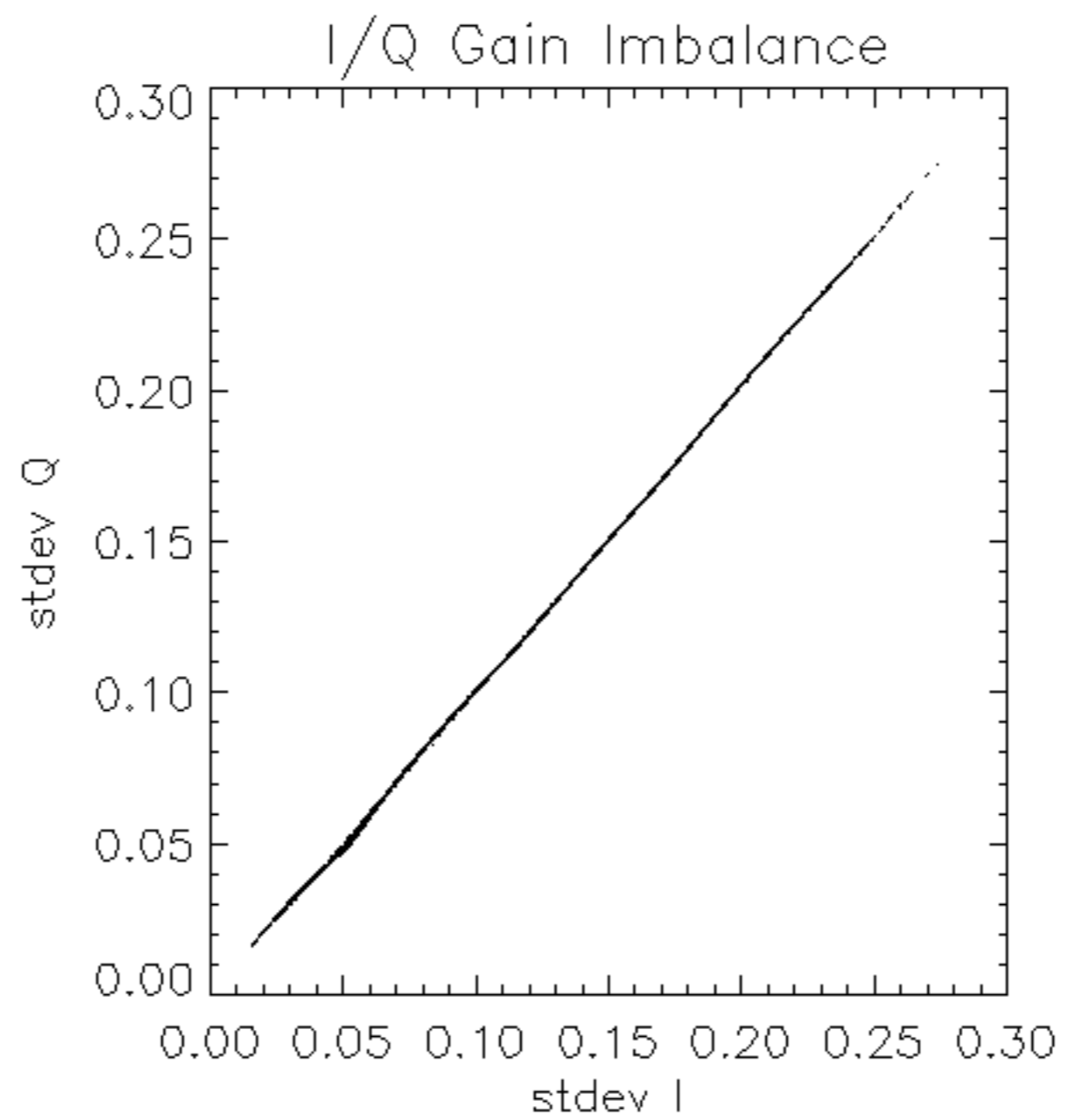
No anomalies observed.

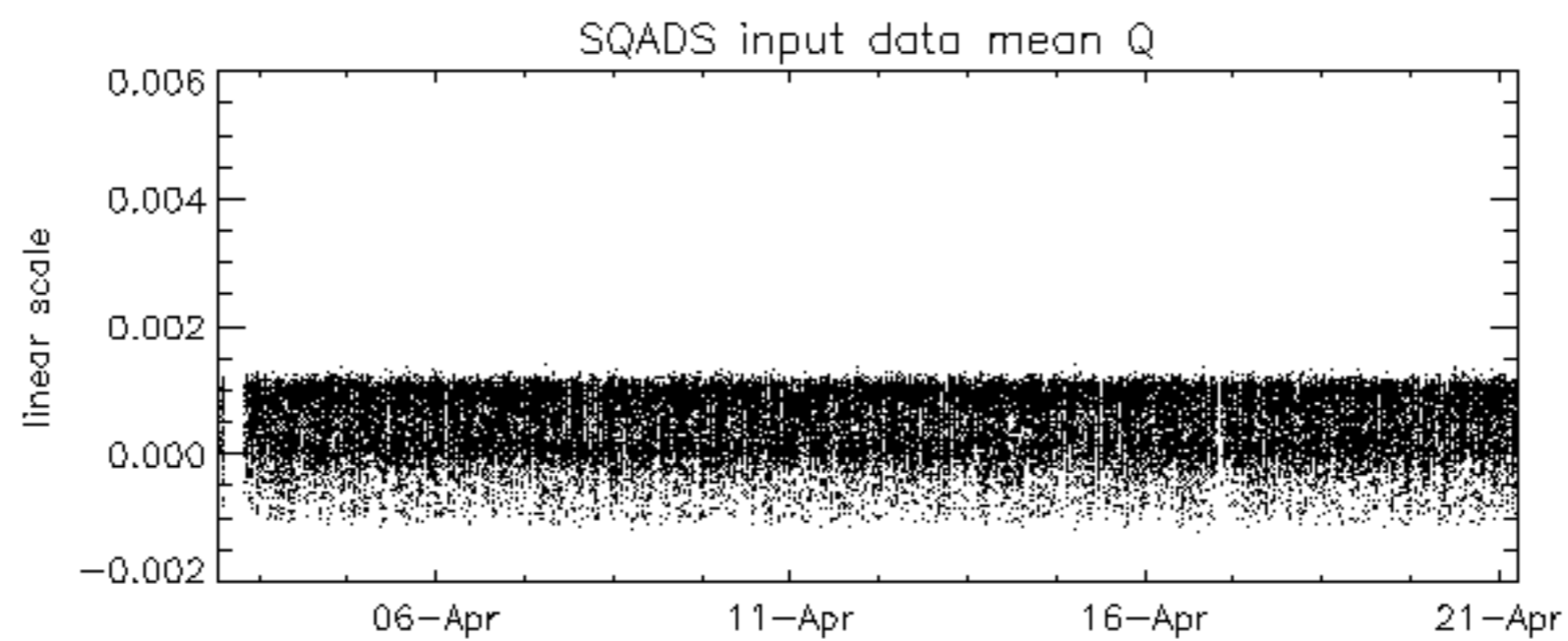
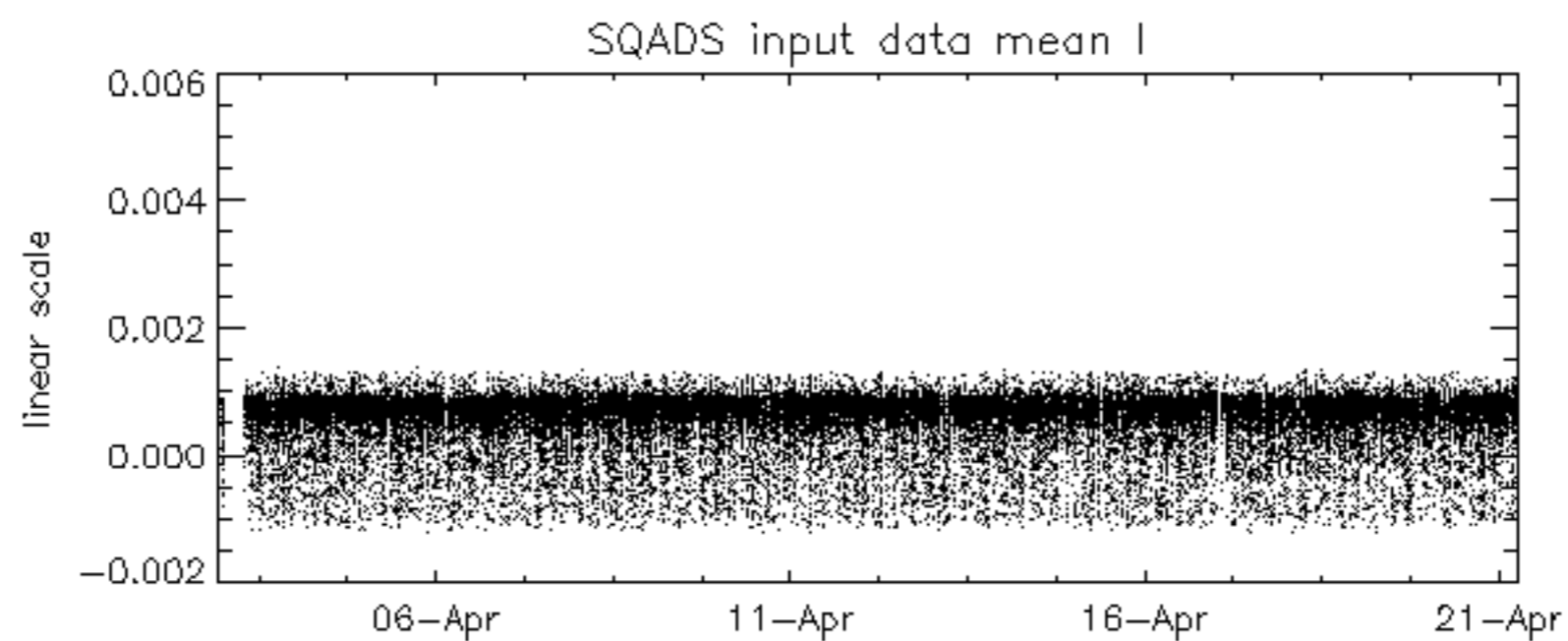
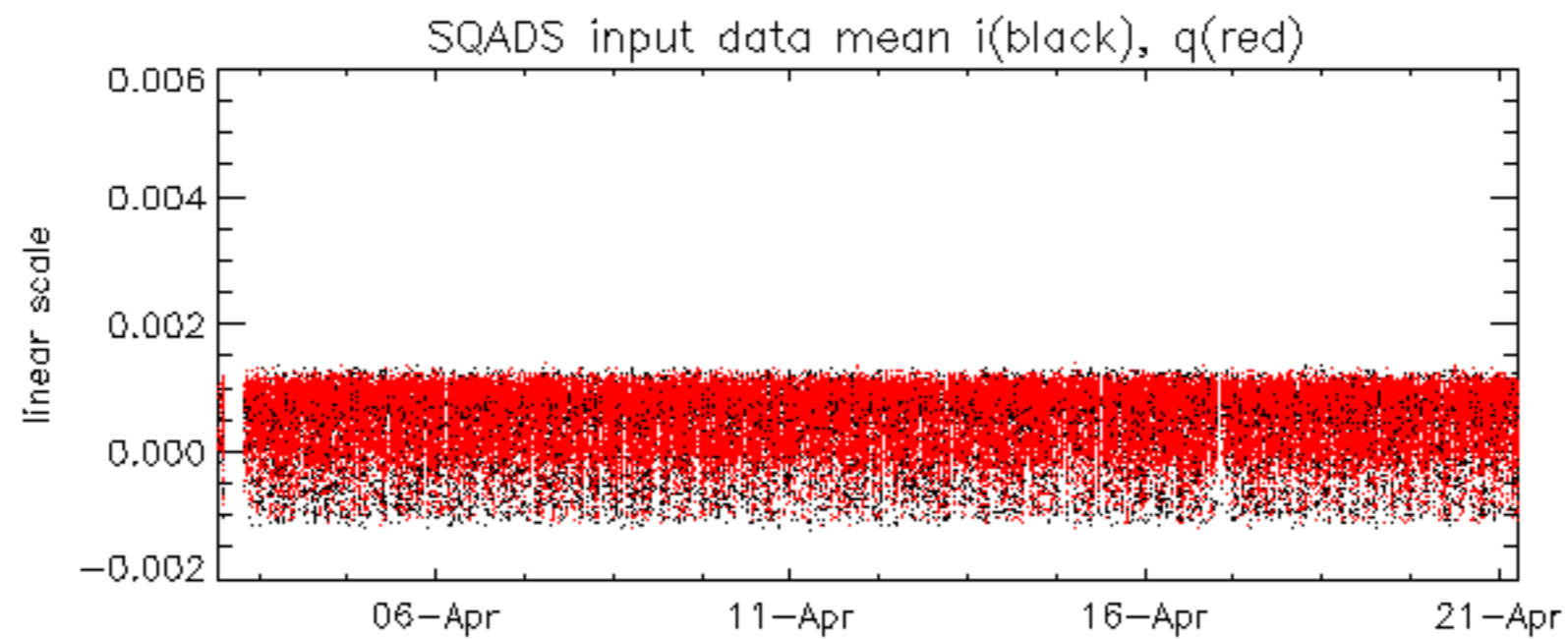


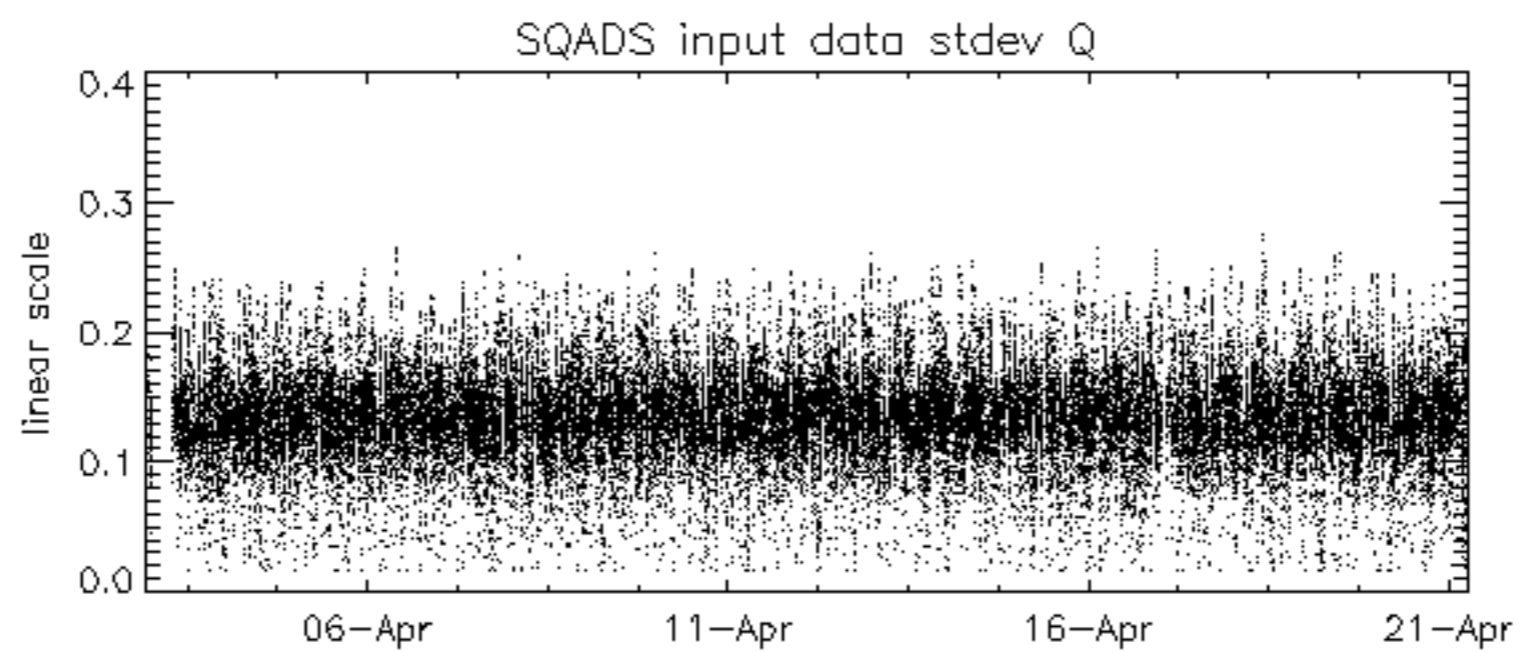
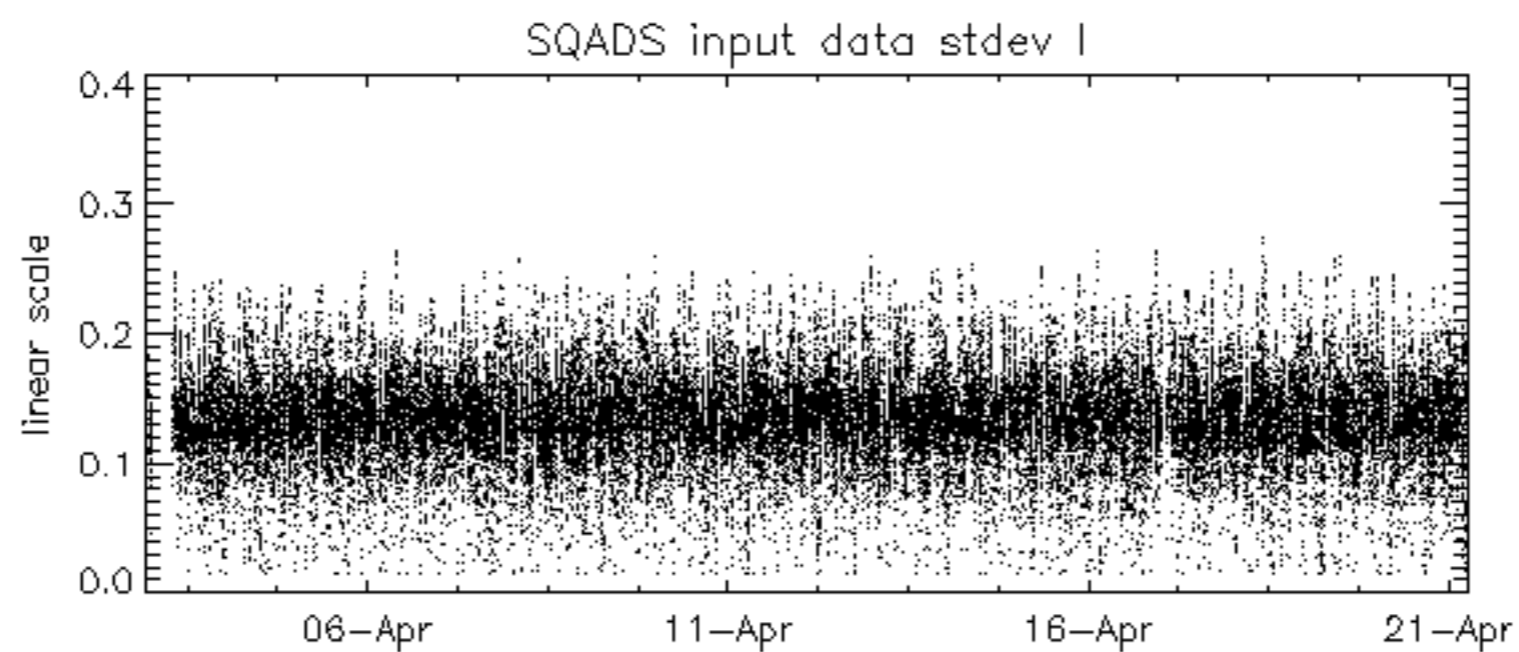
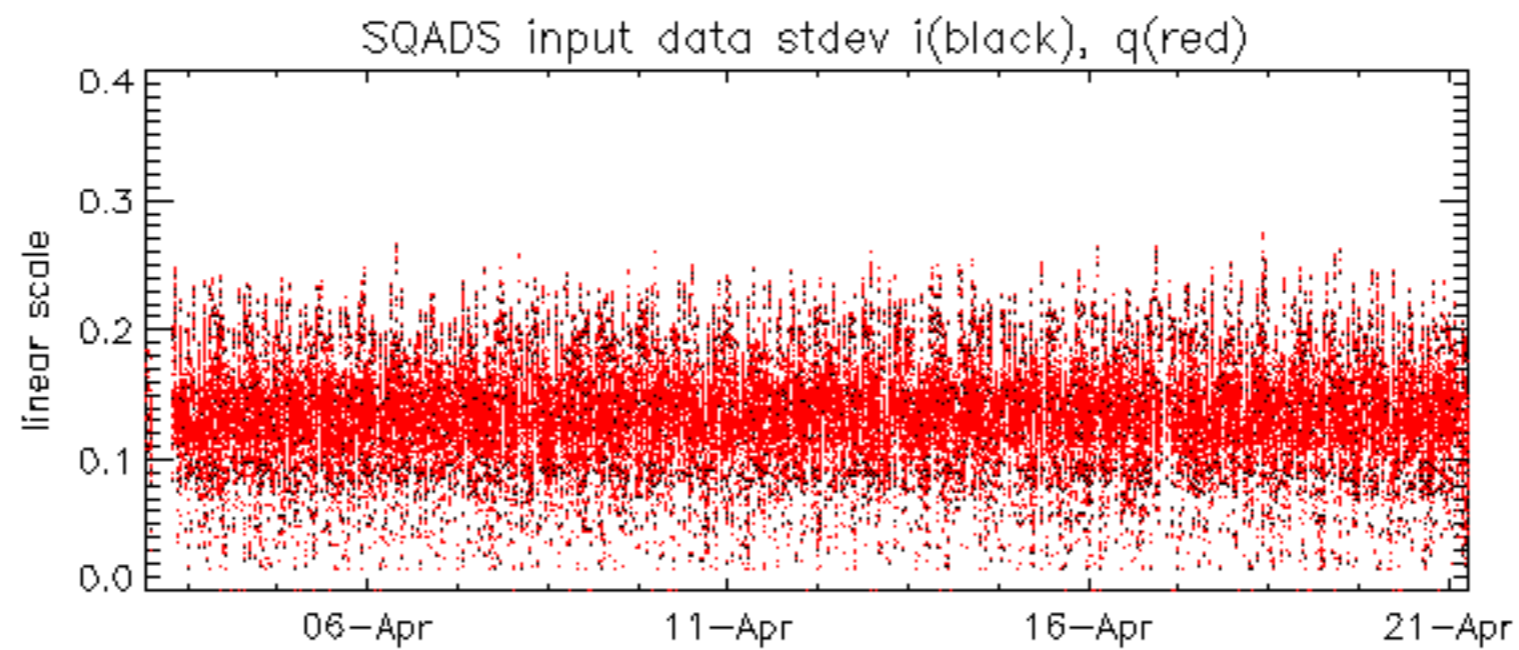








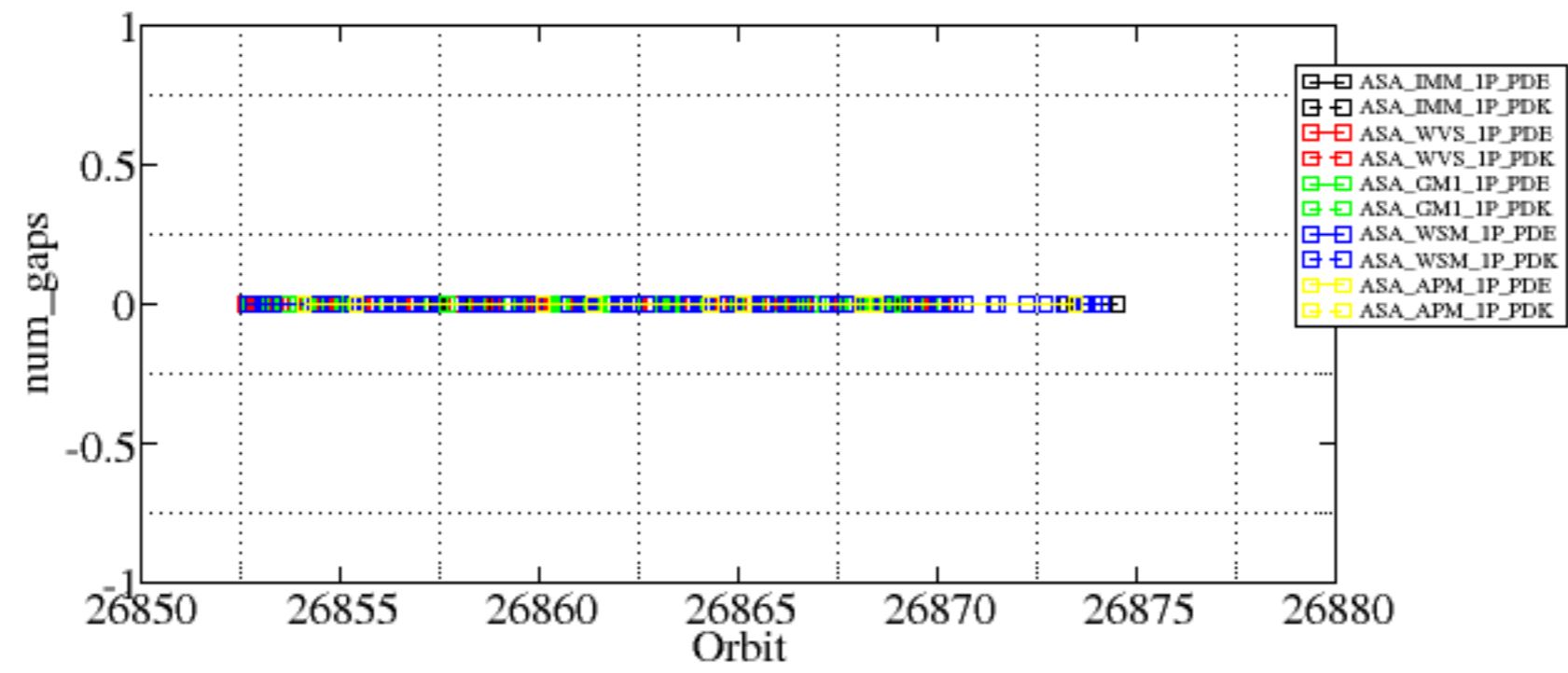


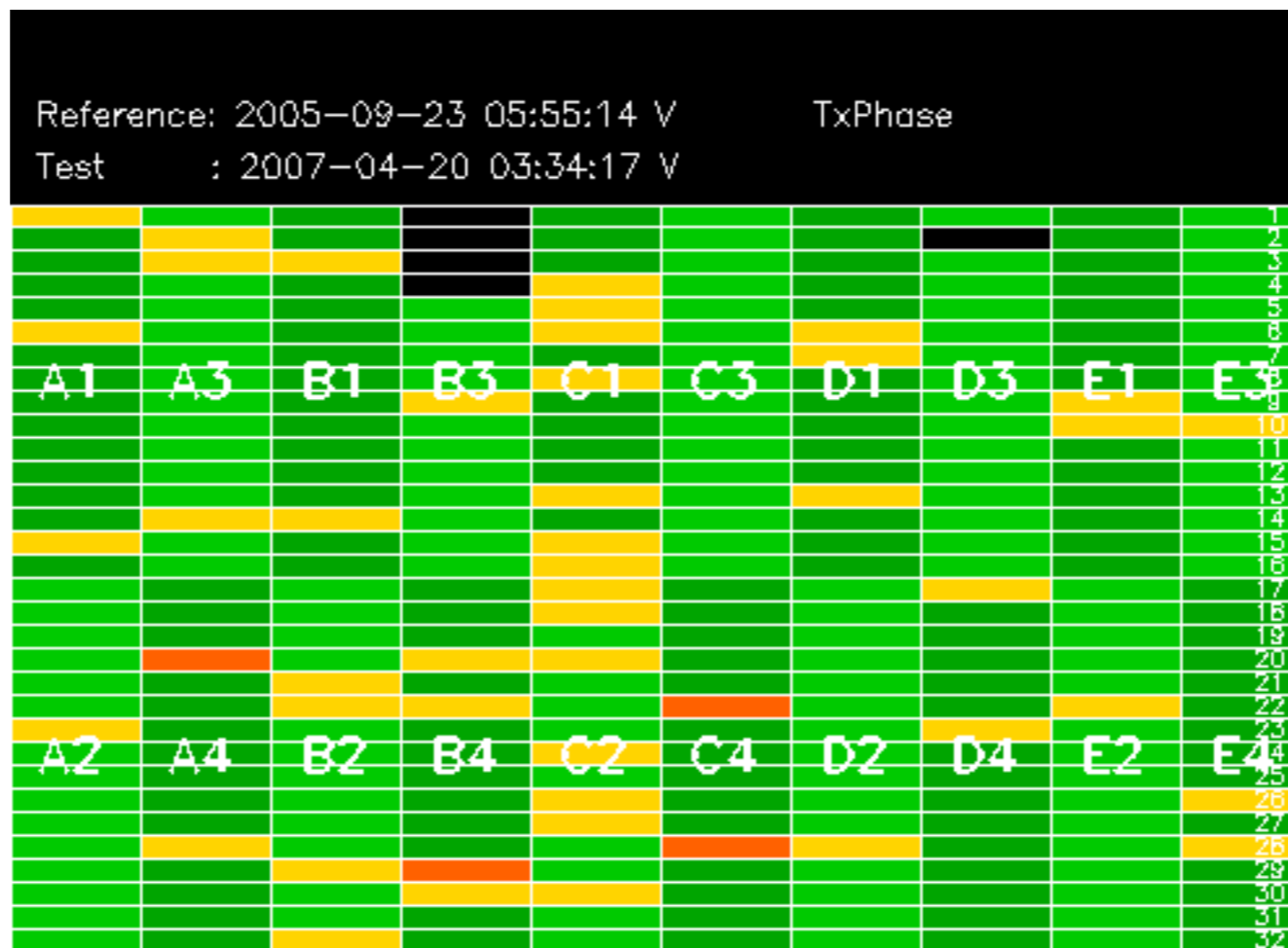


Summary of analysis for the last 3 days 2007042[901]

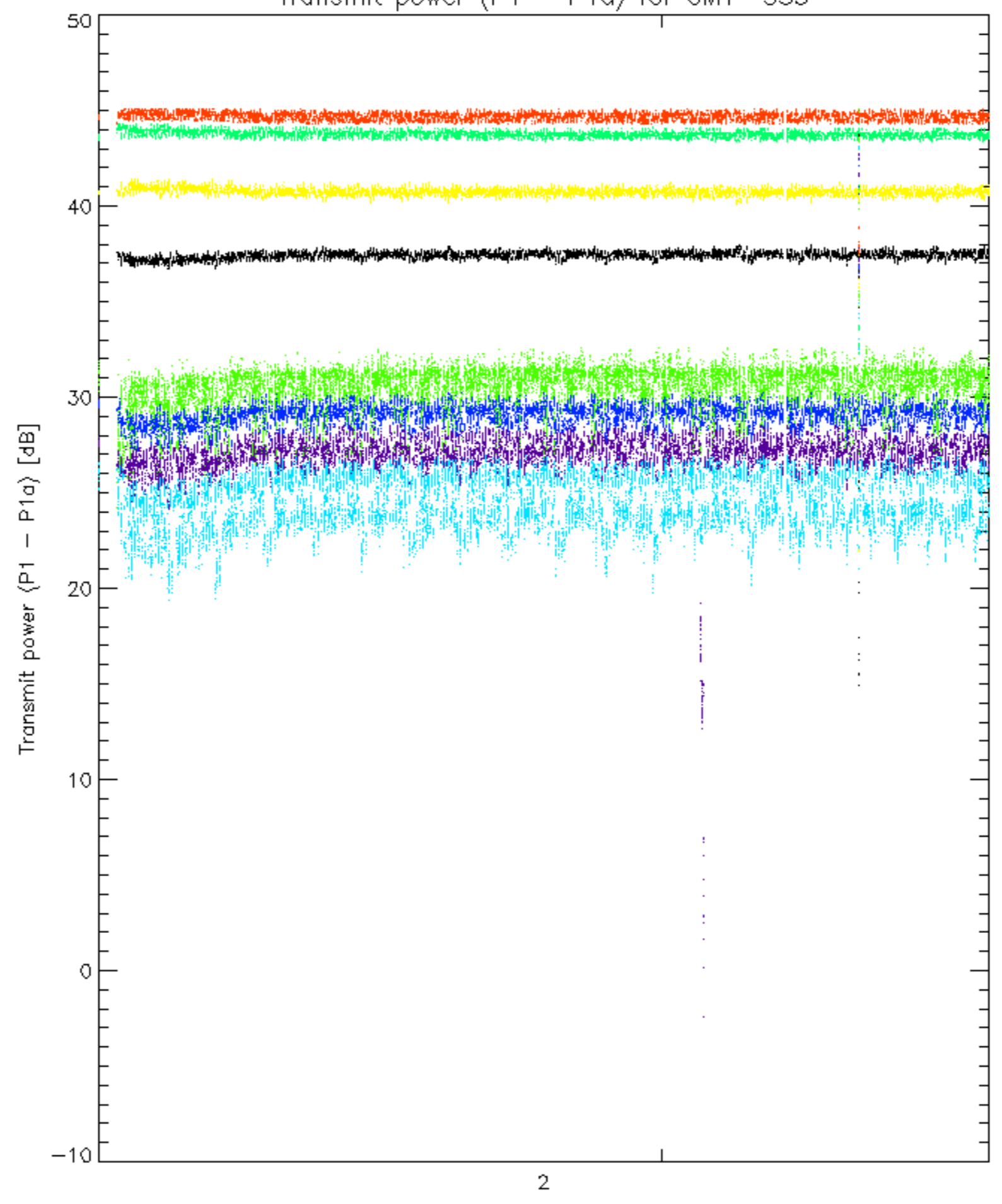
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WVS_1PNPDK20070420_201256_000004052057_00257_26864_6221.N1	0	8
ASA_GM1_1PNPDK20070420_205323_000005612057_00257_26864_6240.N1	0	90
ASA_WSM_1PNPDE20070420_141551_000000852057_00254_26861_9529.N1	0	73
ASA_WSM_1PNPDE20070420_155726_000001222057_00255_26862_9551.N1	0	2
ASA_WSM_1PNPDE20070421_010149_000001412057_00260_26867_0194.N1	0	31
ASA_WSM_1PNPDE20070421_051735_000002012057_00263_26870_0558.N1	0	45

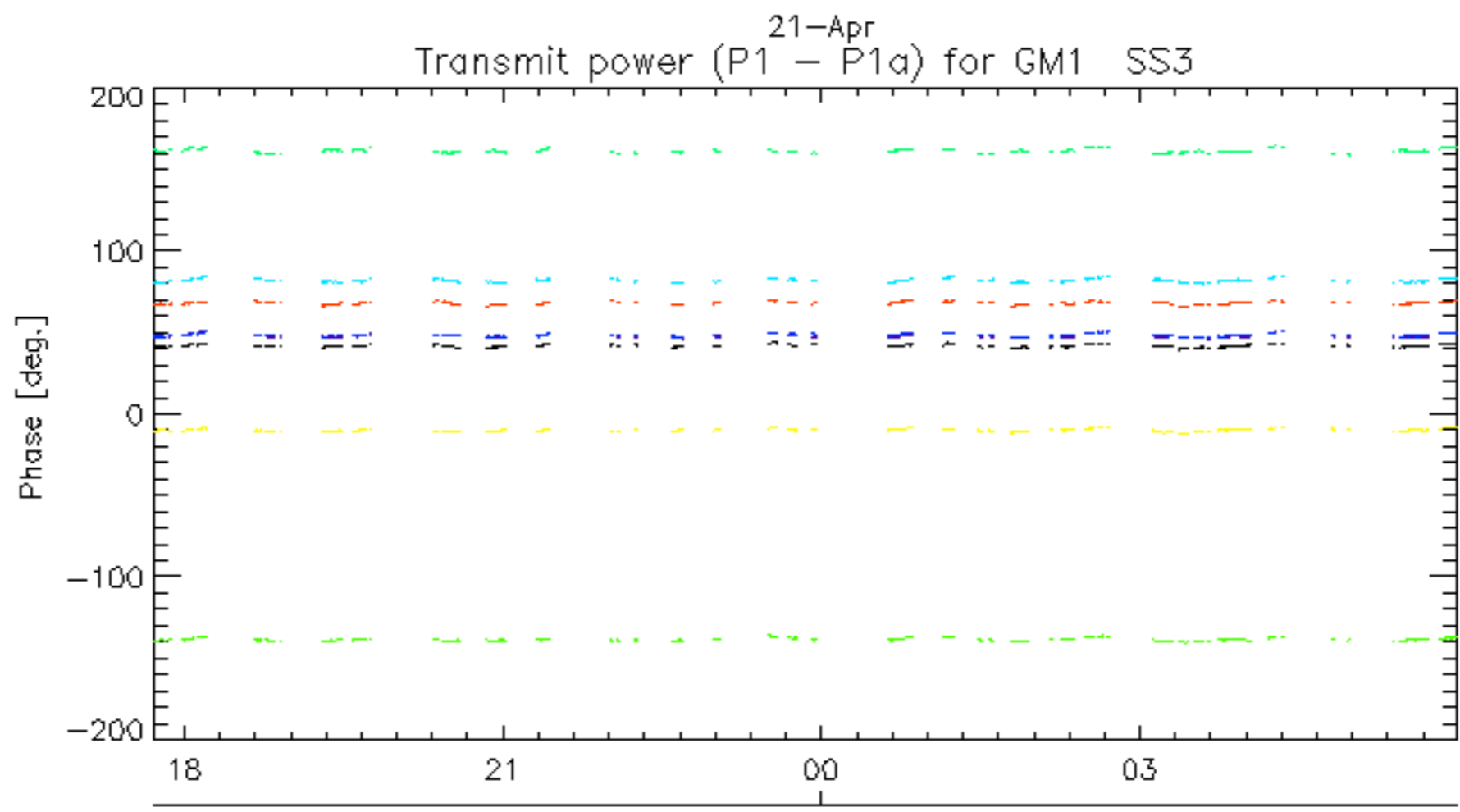
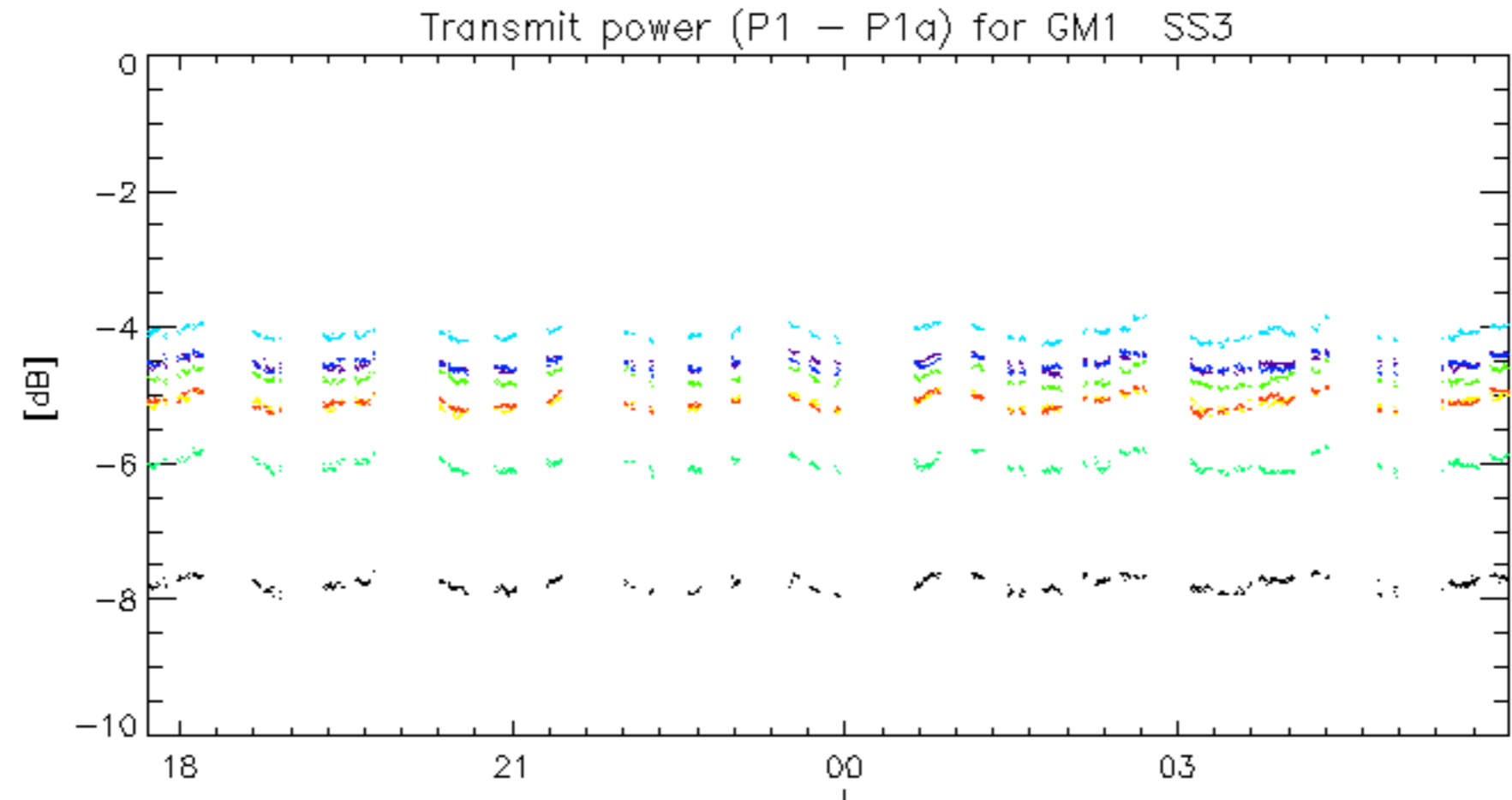




Transmit power (P1 - P1a) for GM1 SS3

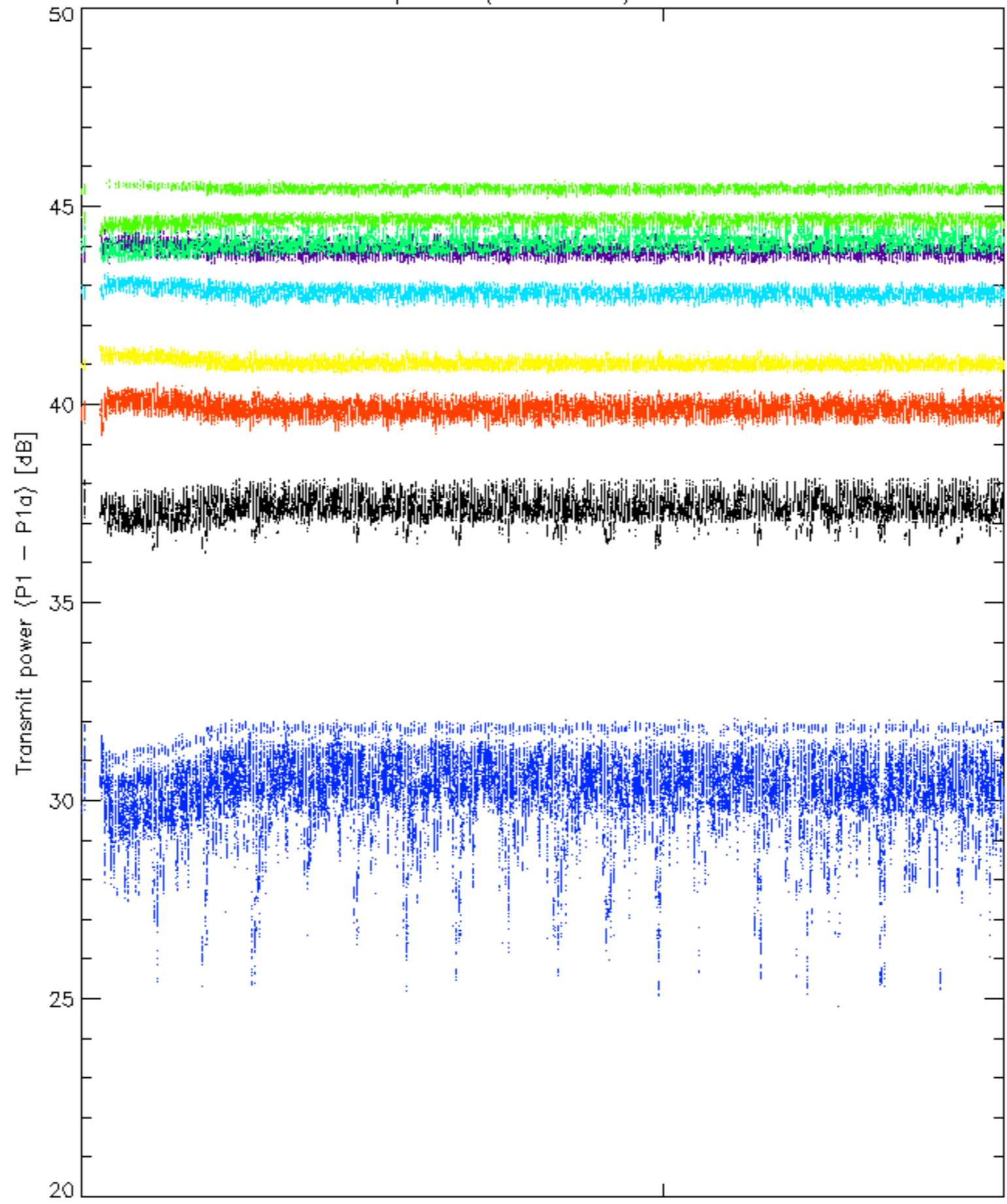


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



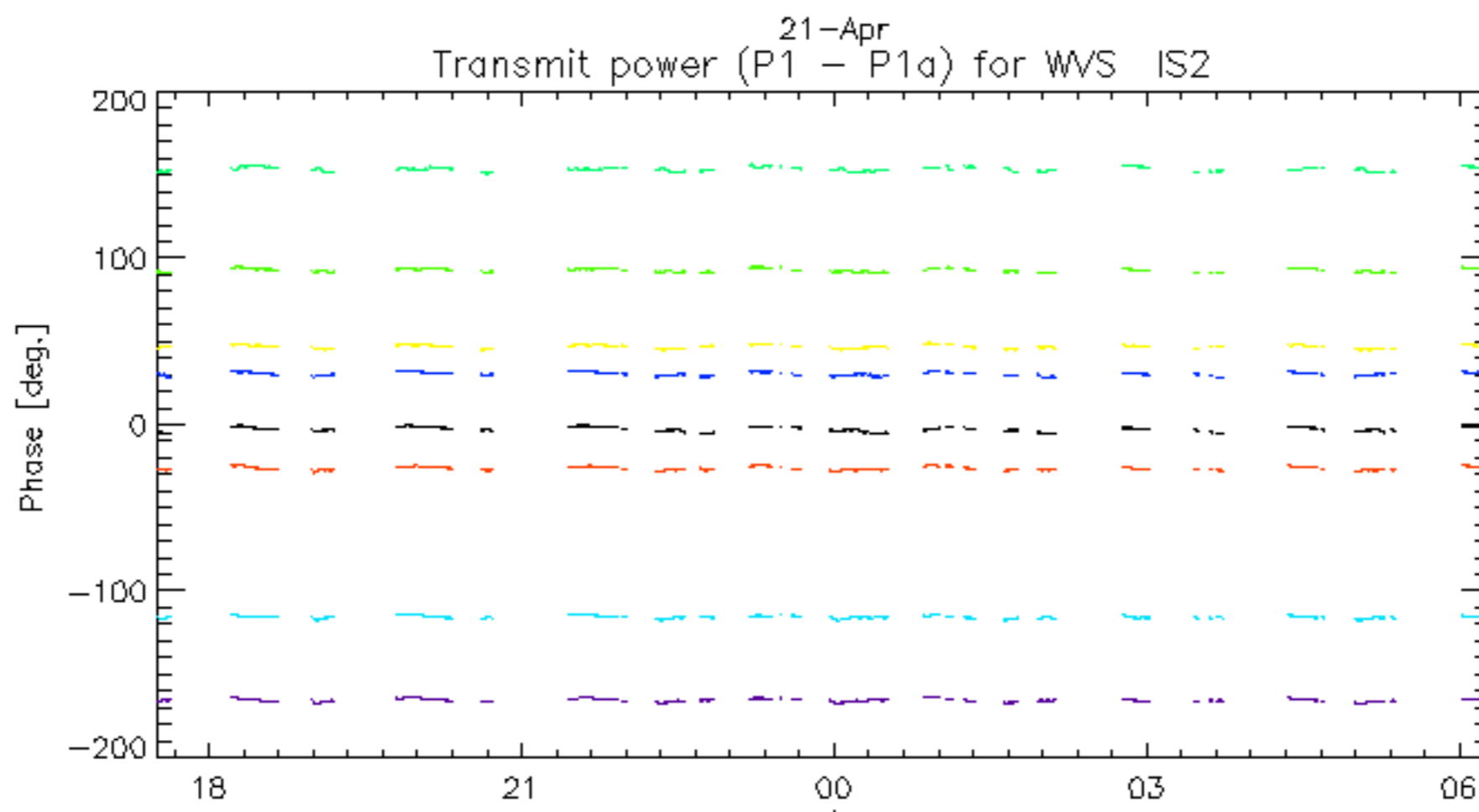
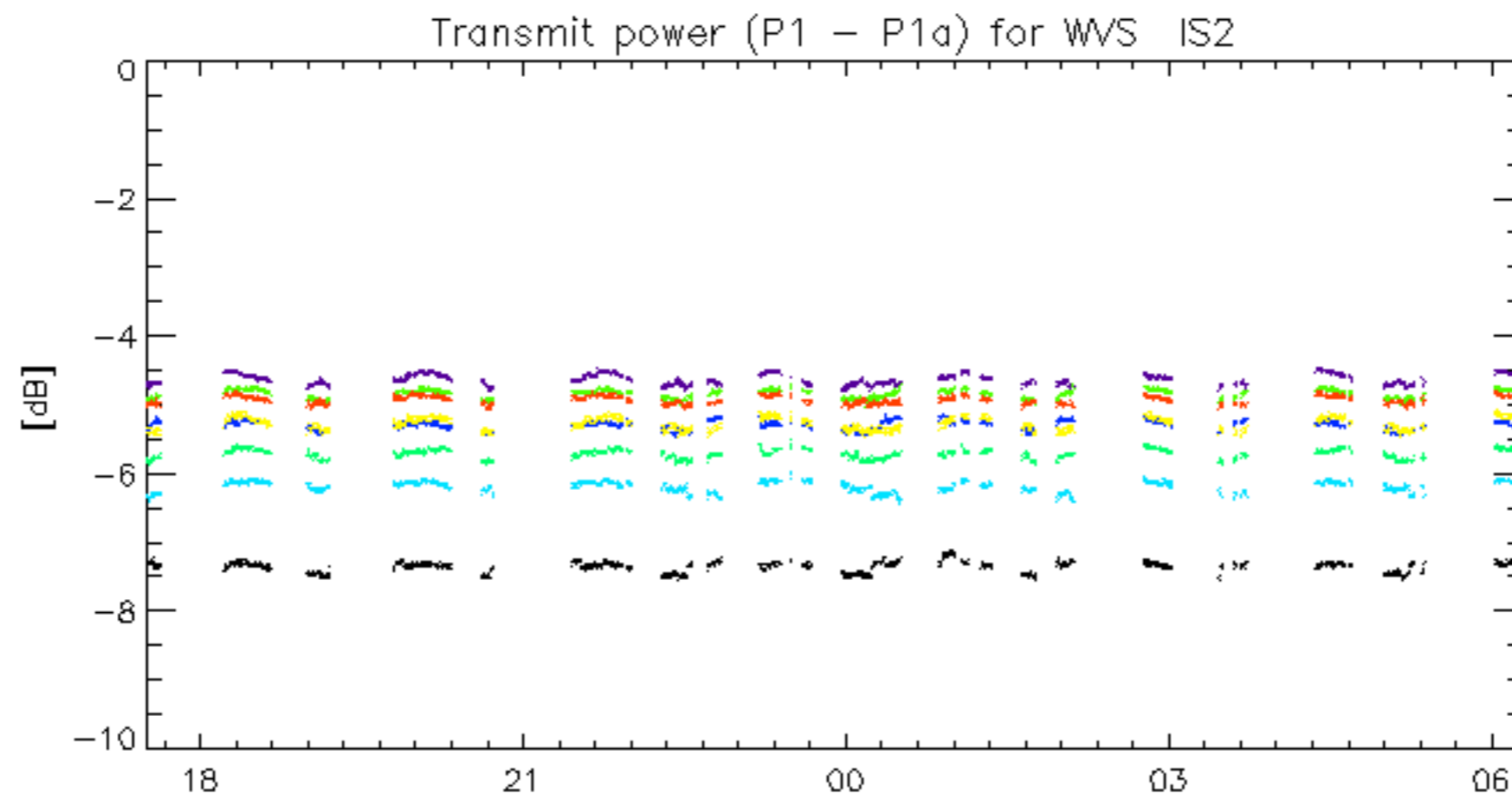
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Transmit power (P1 - P1a) for WWS 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.