

PRELIMINARY REPORT OF 070522

last update on Tue May 22 23:32:42 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 2007-05-21 00:00:00 to 2007-05-22 23:32:43

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	48	98	8	2	61
ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000	48	98	8	2	61
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	48	98	8	2	61
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	48	98	8	2	61

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	37	54	33	13	79
ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000	37	54	33	13	79
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	37	54	33	13	79
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	54	33	13	79

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	20070519 064401
H	20070522 050911

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	-15.233436	0.128390	-0.251252
7	P1a	-17.598677	0.071890	-0.059676
11	P1a	-17.733082	0.341553	-0.176622
15	P1a	-13.155350	0.152209	-0.169304
19	P1a	-15.439090	0.068200	-0.065590
22	P1a	-15.994927	0.344680	-0.021738
26	P1a	-14.951416	0.212023	-0.081758
30	P1a	-17.994570	0.418172	-0.433203

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.784957	0.009973	-0.014211
7	P1	-3.165820	0.008495	-0.041637
11	P1	-4.191855	0.017514	0.058376
15	P1	-6.467159	0.019302	-0.070871
19	P1	-3.778065	0.012025	-0.014448
22	P1	-4.740706	0.011325	0.037453
26	P1	-3.909176	0.017906	-0.027724
30	P1	-5.961937	0.009347	0.007077

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.650955	0.093599	0.016520
7	P2	-21.505335	0.093965	0.092064
11	P2	-15.280492	0.121865	0.061584
15	P2	-7.133161	0.091406	-0.003086
19	P2	-9.121448	0.082954	-0.014308
22	P2	-18.085785	0.077945	0.000441
26	P2	-16.653738	0.084729	-0.052060
30	P2	-19.246767	0.084361	0.056043

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.244431	0.004630	0.002929
7	P3	-8.244431	0.004630	0.002929
11	P3	-8.244431	0.004630	0.002929
15	P3	-8.244431	0.004630	0.002929
19	P3	-8.244431	0.004630	0.002929
22	P3	-8.244431	0.004630	0.002929
26	P3	-8.244411	0.004636	0.003090
30	P3	-8.244411	0.004636	0.003090

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	-11.508673	0.204190	-0.855109
7	P1a	-10.030301	0.211076	0.128372
11	P1a	-10.692807	0.100501	-0.013597
15	P1a	-10.782563	0.166898	0.124848
19	P1a	-15.860440	0.110300	-0.139013
22	P1a	-21.503340	1.374175	-0.103948
26	P1a	-15.563250	0.325102	-0.062714
30	P1a	-18.260963	0.430601	0.039758

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-7.918323	0.380043	1.667805
7	P1	-2.374623	0.131121	0.094140
11	P1	-2.871433	0.025730	0.026887
15	P1	-3.794033	0.040653	0.052129
19	P1	-3.606337	0.018889	-0.047766
22	P1	-4.943588	0.024133	0.031411
26	P1	-6.059729	0.026713	-0.048617
30	P1	-5.357811	0.035321	-0.054210

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.210039	0.099188	-0.064406
7	P2	-22.054419	0.273285	-0.061042
11	P2	-10.656968	0.063927	-0.051606
15	P2	-4.962160	0.045795	-0.077753
19	P2	-6.881532	0.046117	-0.027220
22	P2	-8.108372	0.106452	0.003721
26	P2	-24.344992	0.184564	-0.085773
30	P2	-21.698164	0.129703	-0.008136

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.092055	0.005186	-0.003091
7	P3	-8.091920	0.005185	-0.002829
11	P3	-8.091961	0.005177	-0.003181
15	P3	-8.091947	0.005181	-0.003325
19	P3	-8.091961	0.005190	-0.003197
22	P3	-8.091925	0.005186	-0.003518
26	P3	-8.091986	0.005193	-0.003650
30	P3	-8.091885	0.005185	-0.003495

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	0.000551509
	stdev	1.90131e-07
MEAN Q	mean	0.000511767
	stdev	2.36693e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136182
	stdev	0.00116436
STDEV Q	mean	0.136566
	stdev	0.00118143



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007052[012]

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_1PNPDE20070520_005022_000002612058_00174_27282_3191.N1	0	35
ASA_WSM_1PNPDE20070520_151026_000003302058_00183_27291_3737.N1	0	52
ASA_WSM_1PNPDE20070520_165036_000000852058_00184_27292_3767.N1	0	31
ASA_WSM_1PNPDE20070520_183356_000000862058_00185_27293_3810.N1	0	36
ASA_WSM_1PNPDE20070521_162341_000002022058_00198_27306_5002.N1	0	46
ASA_WSM_1PNPDE20070521_180340_000001102058_00199_27307_5028.N1	0	5
ASA_WSM_1PNPDK20070521_150502_000001152058_00197_27305_8922.N1	0	89





7 - Doppler Analysis

No anomalies observed Doppler evolution.
Doppler analysis performed over the last 35 days

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)

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

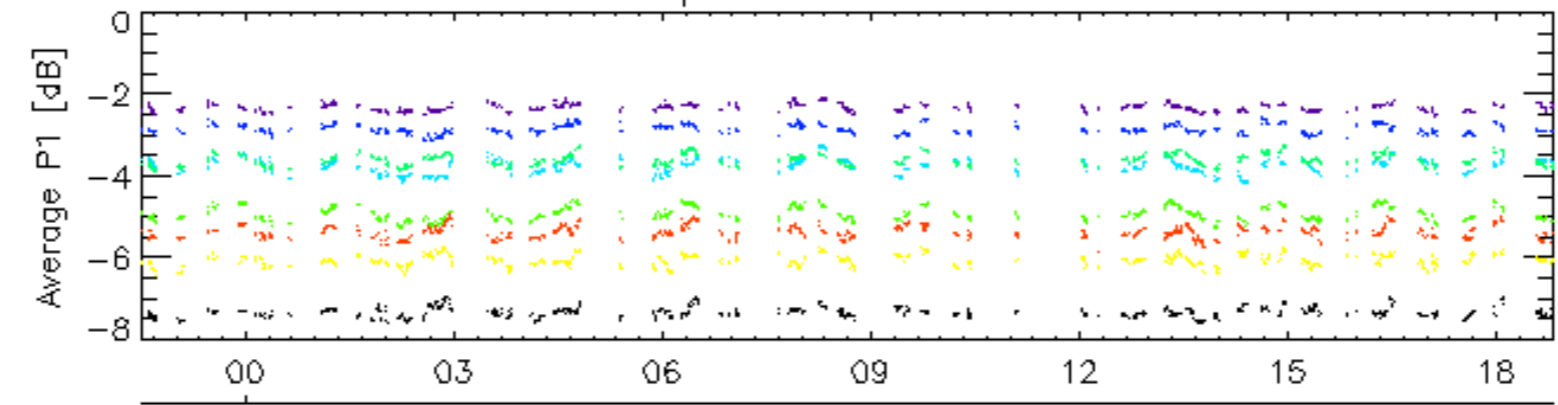
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
<input type="checkbox"/>
Descending

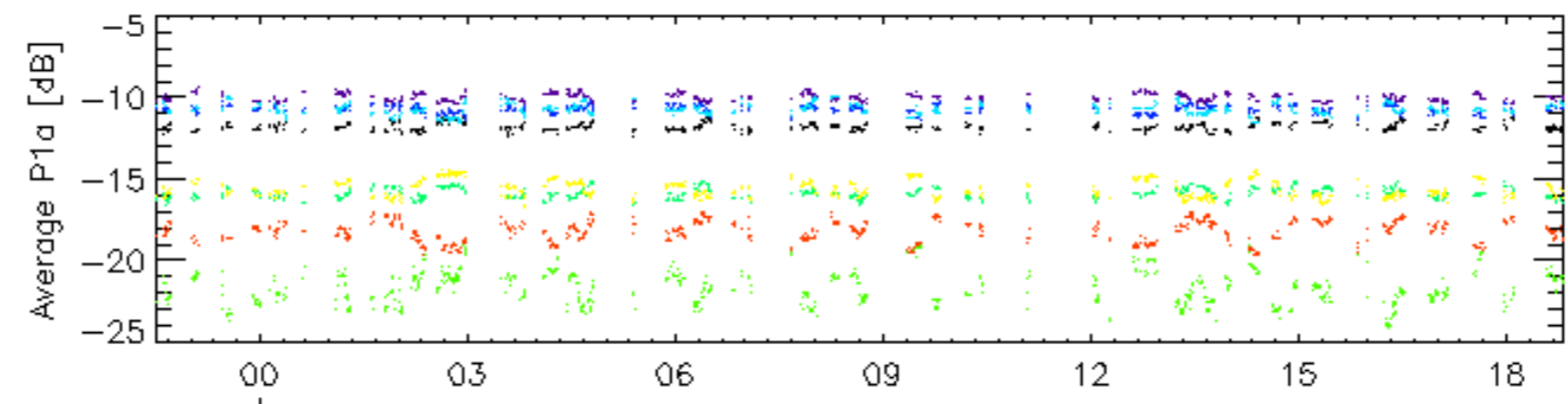
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

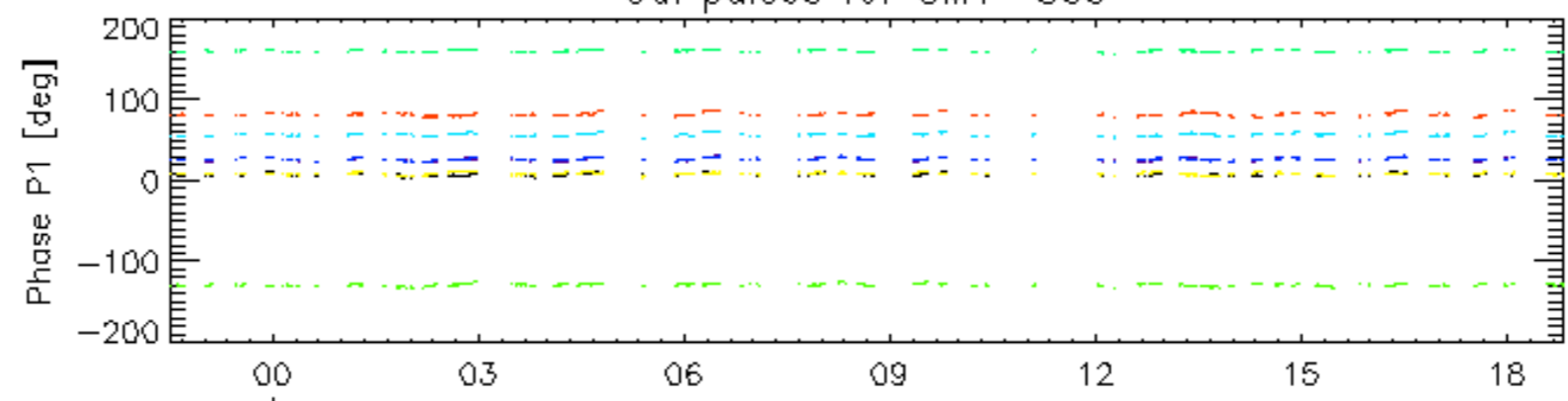


22-May

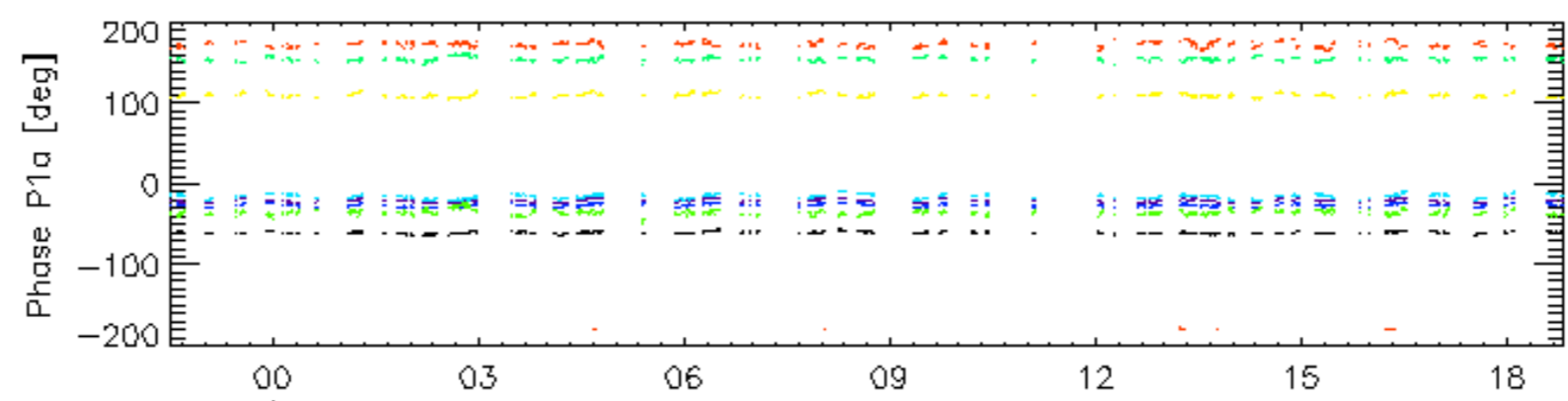


22-May

Cal pulses for GM1 SS3

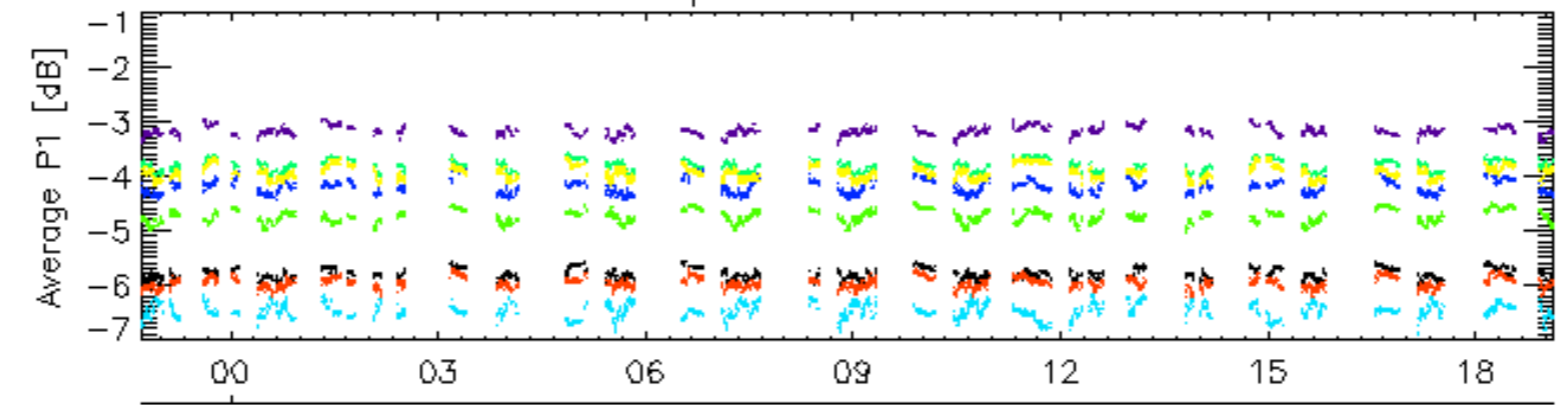


22-May

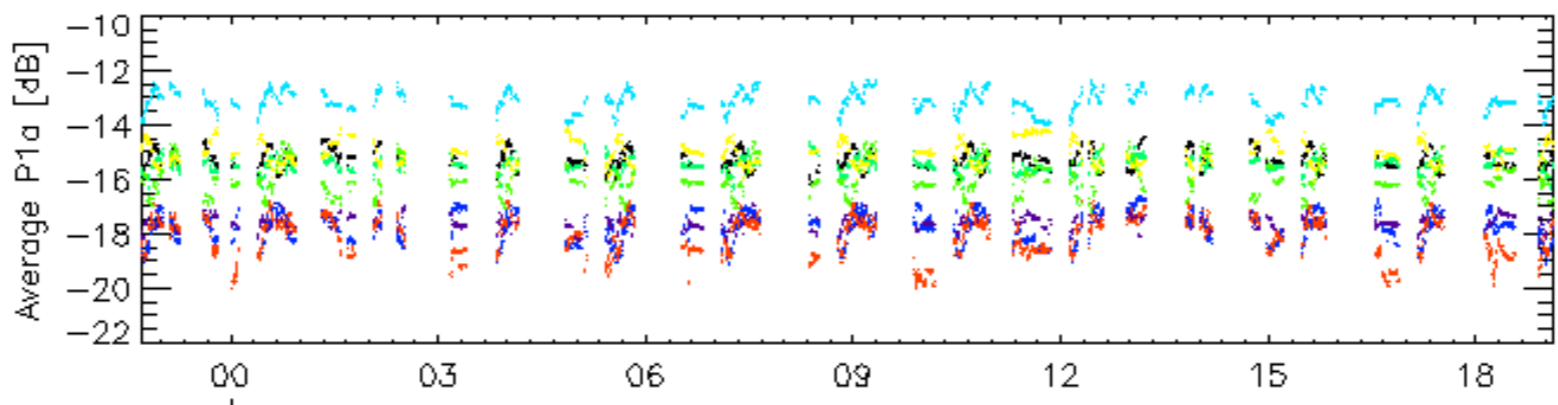


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

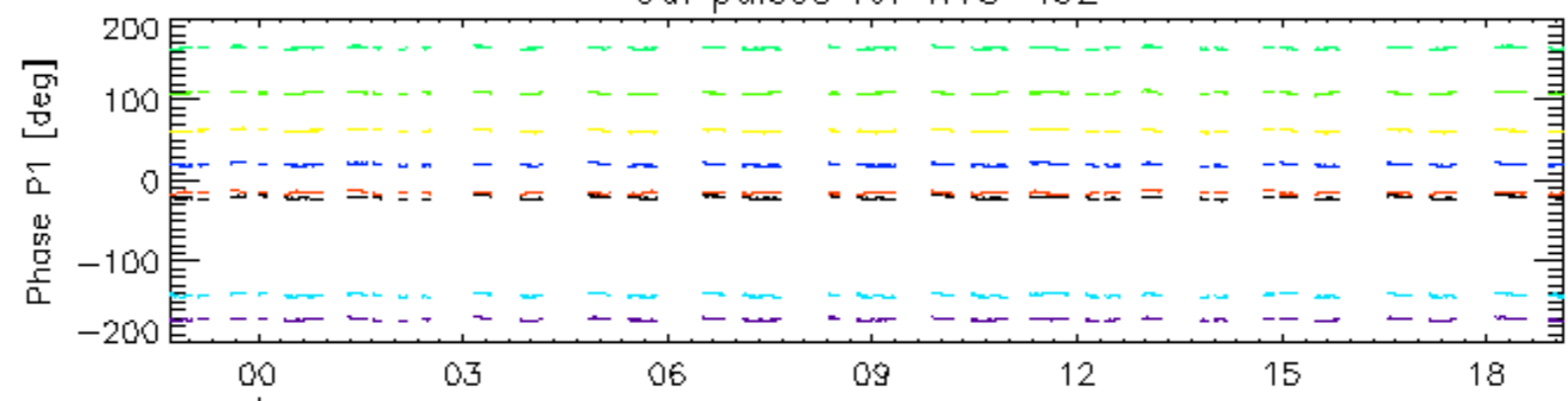


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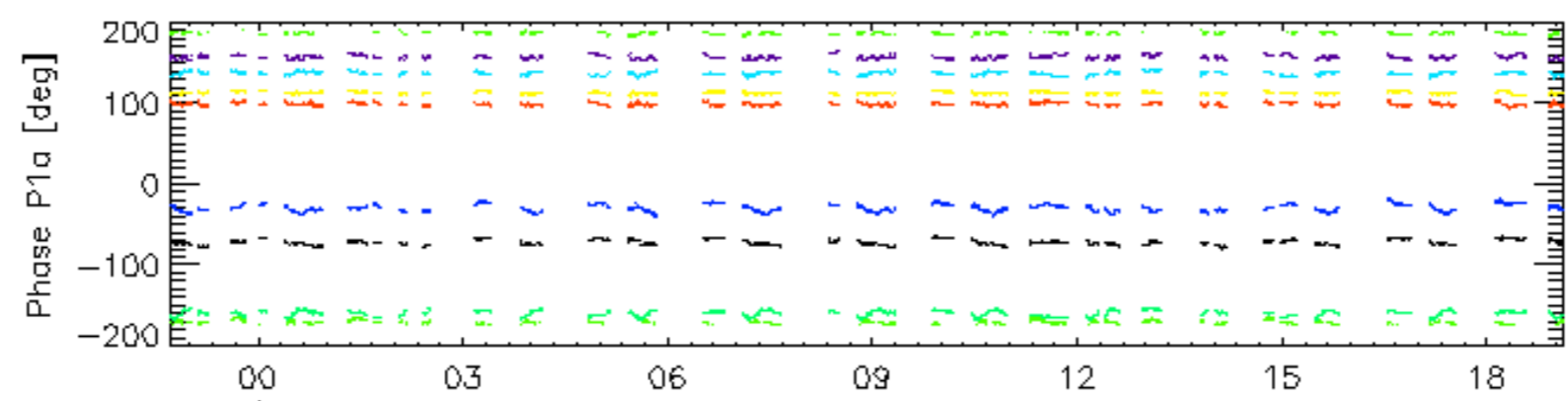


22-May

Cal pulses for WVS IS2

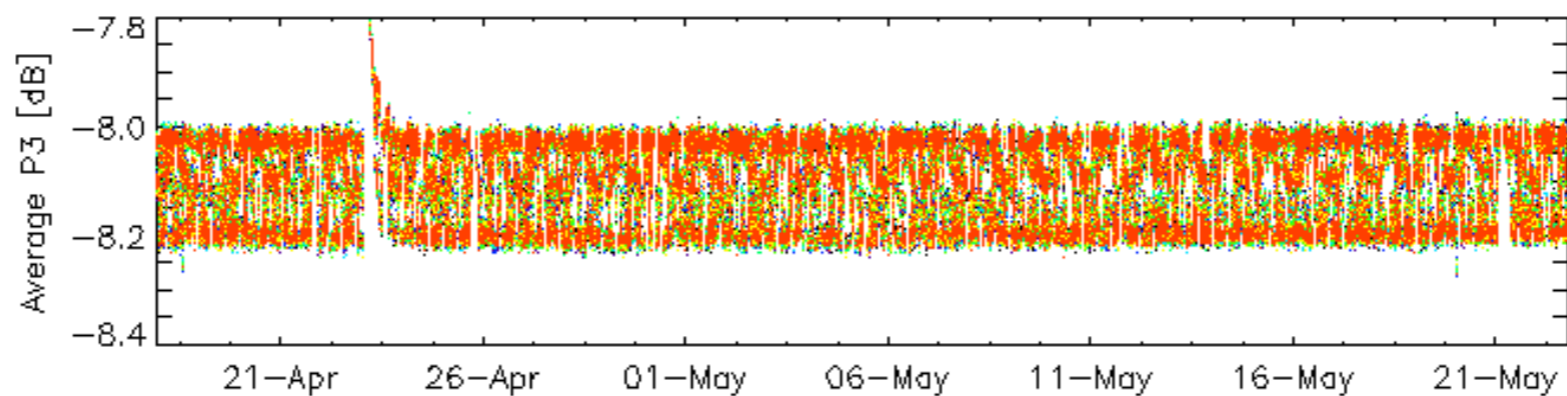
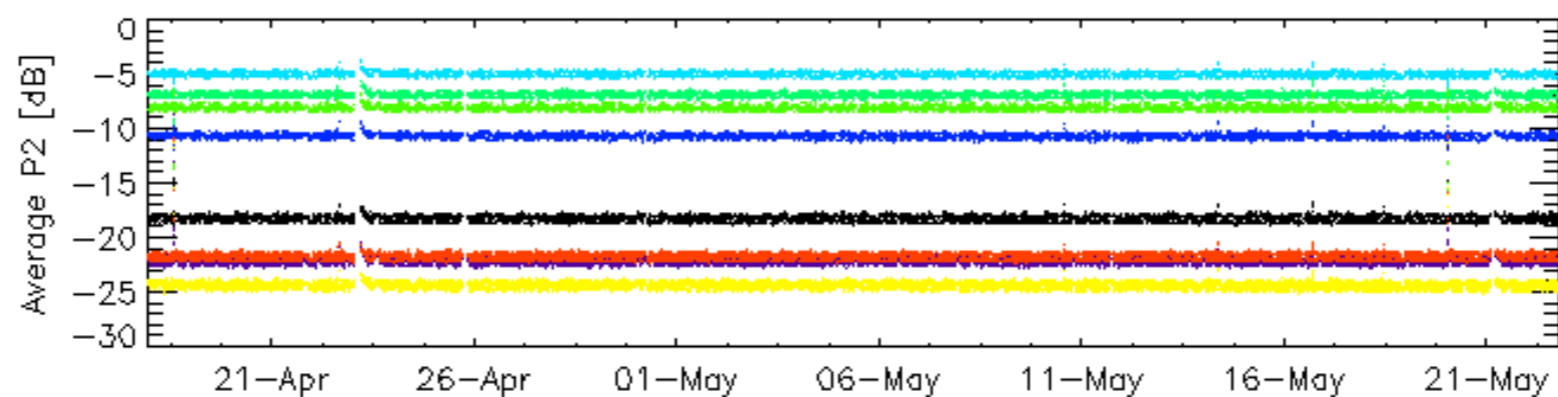
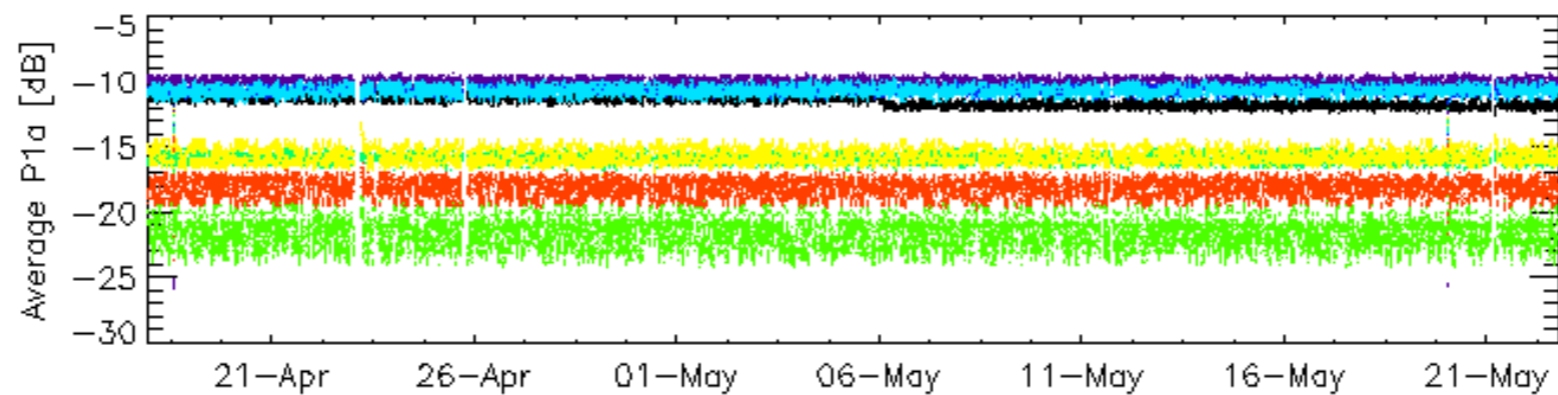
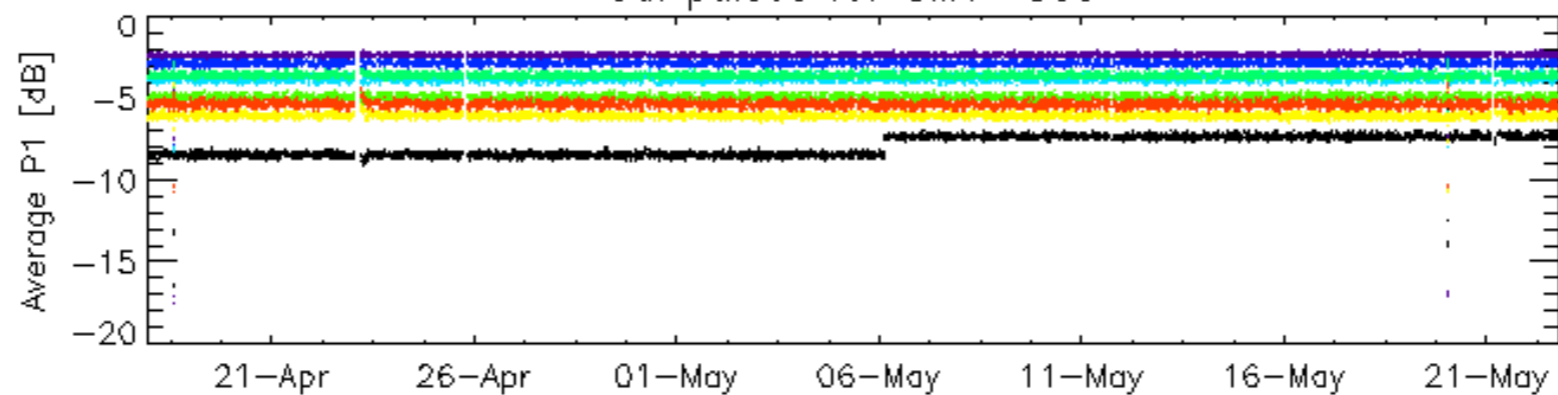


22-May



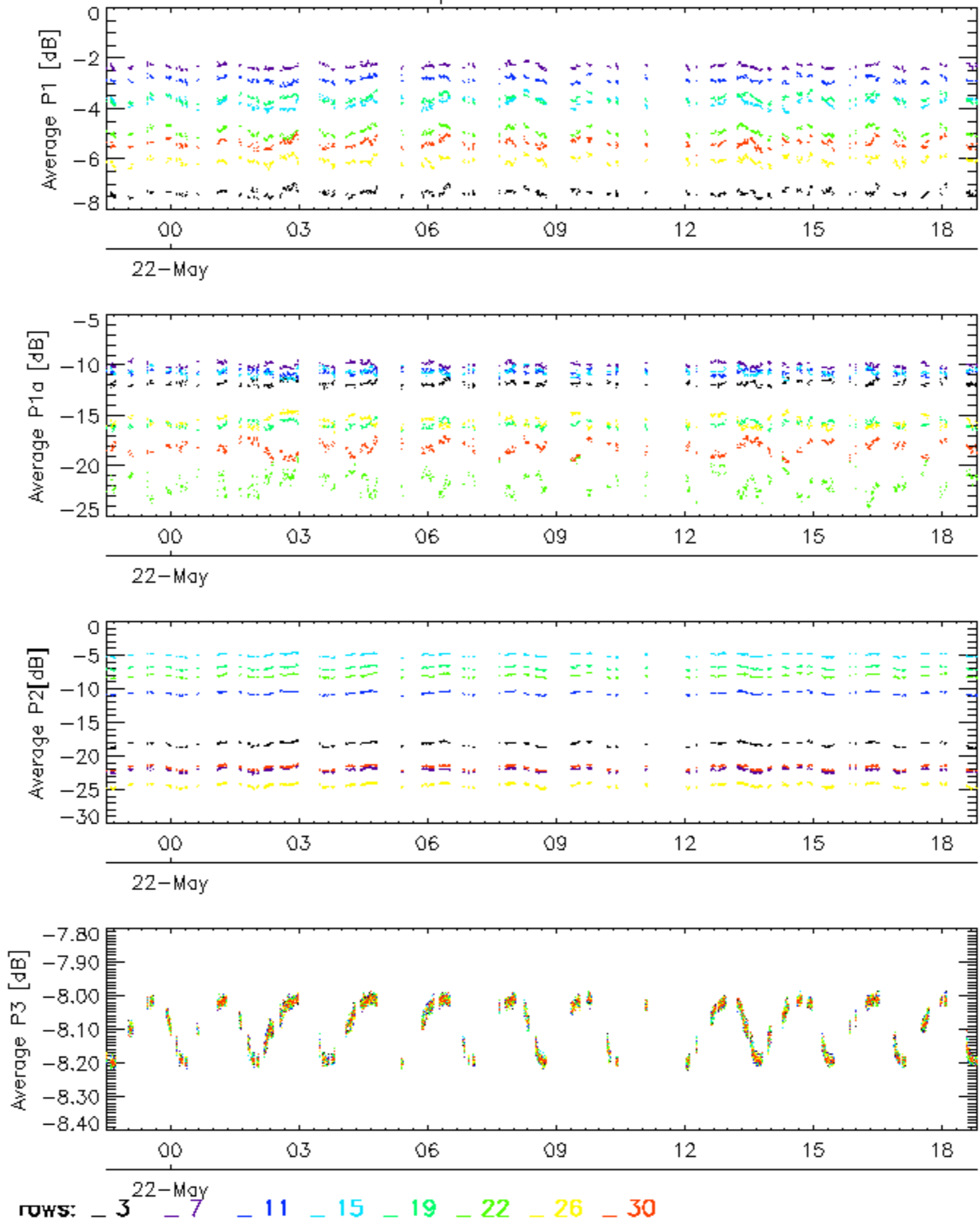
rows: 22-May
3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

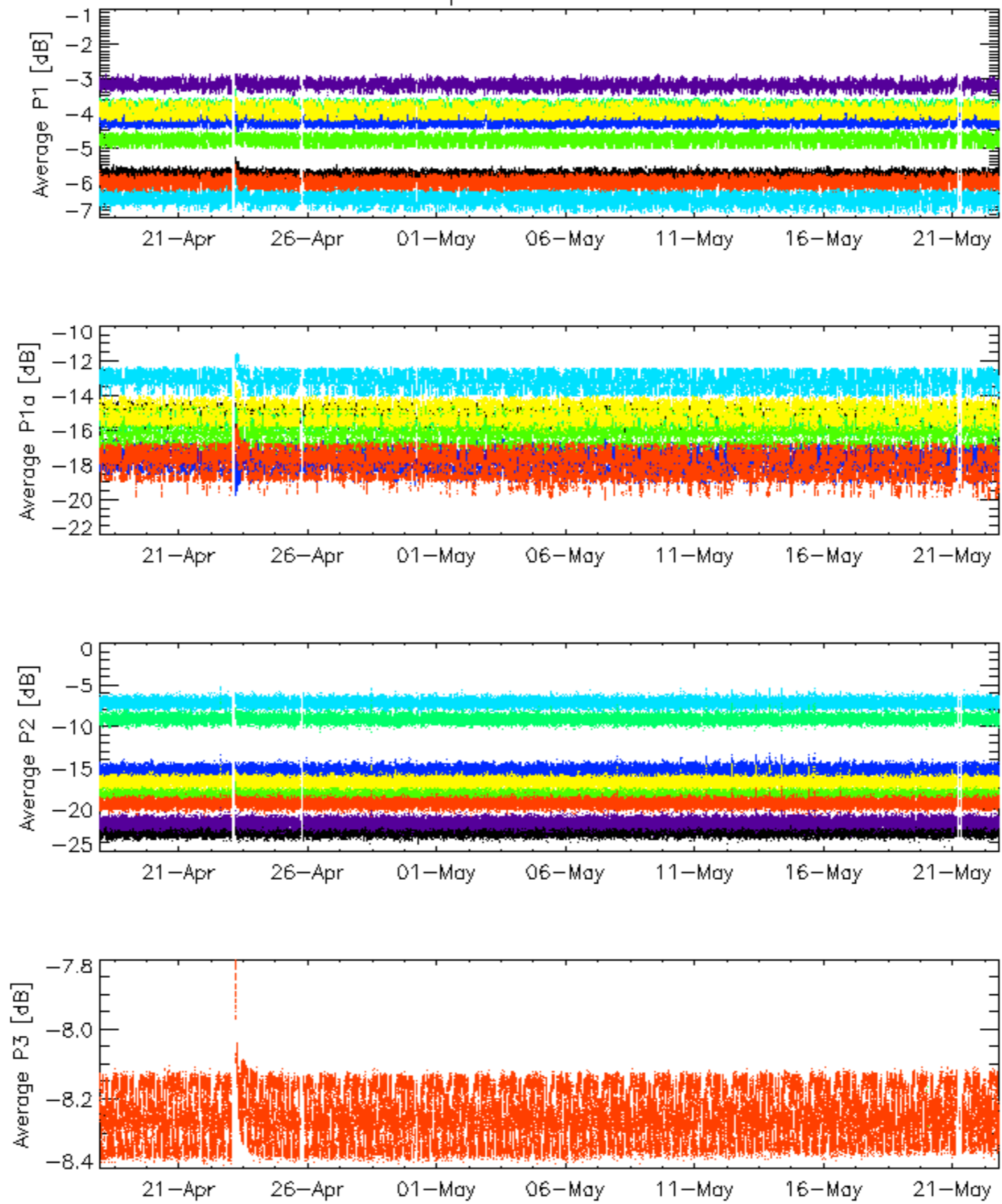


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

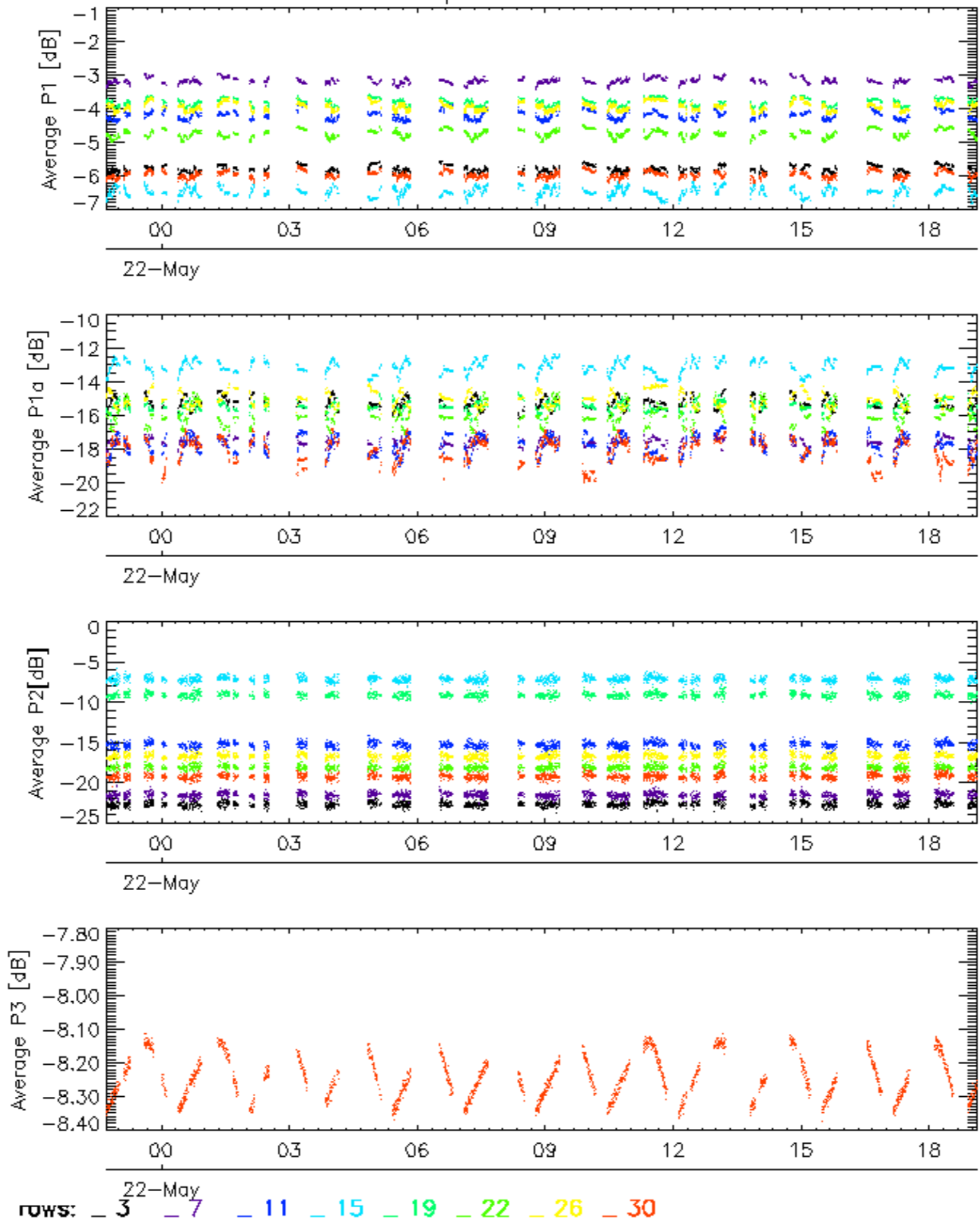


Cal pulses for WVS IS2

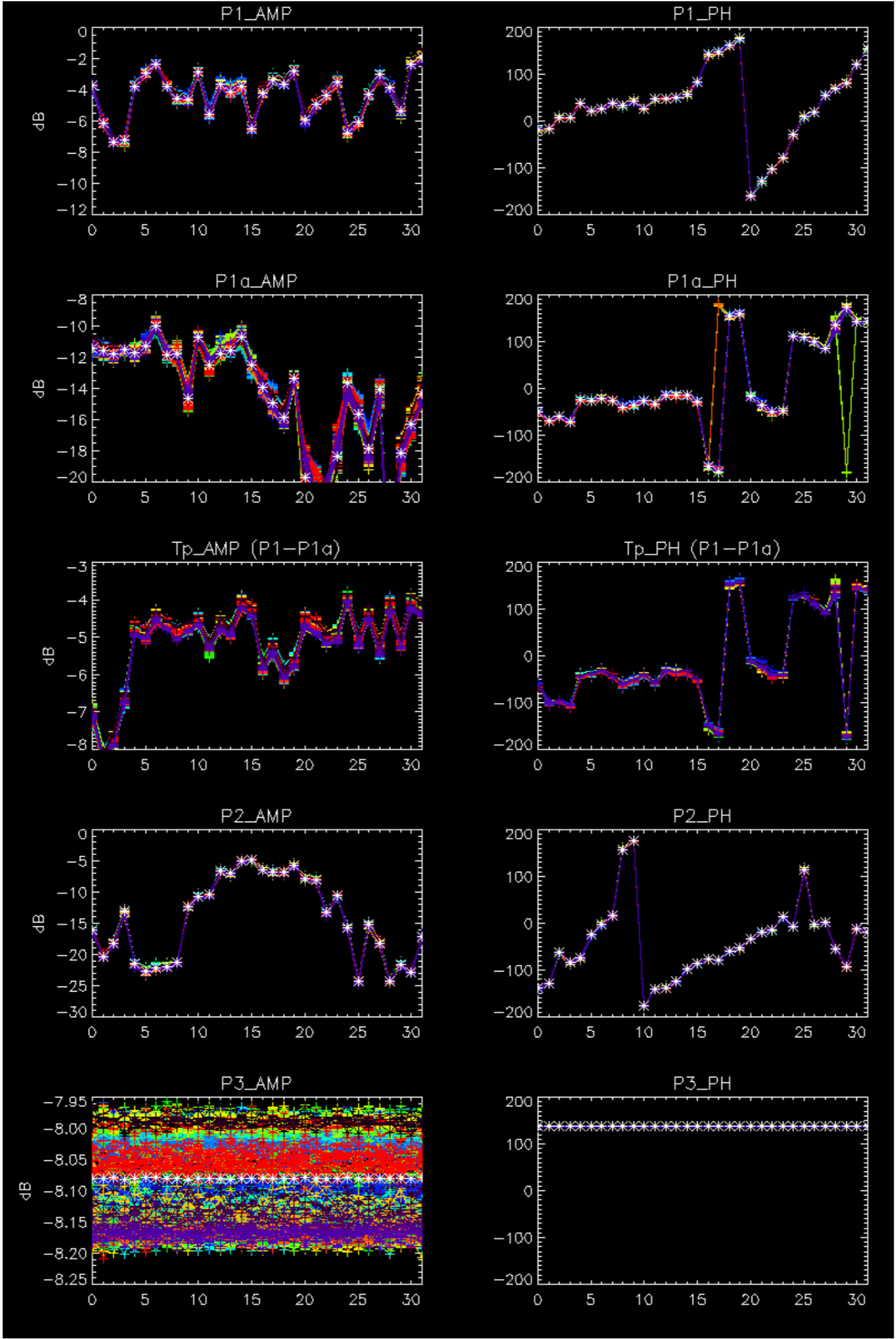


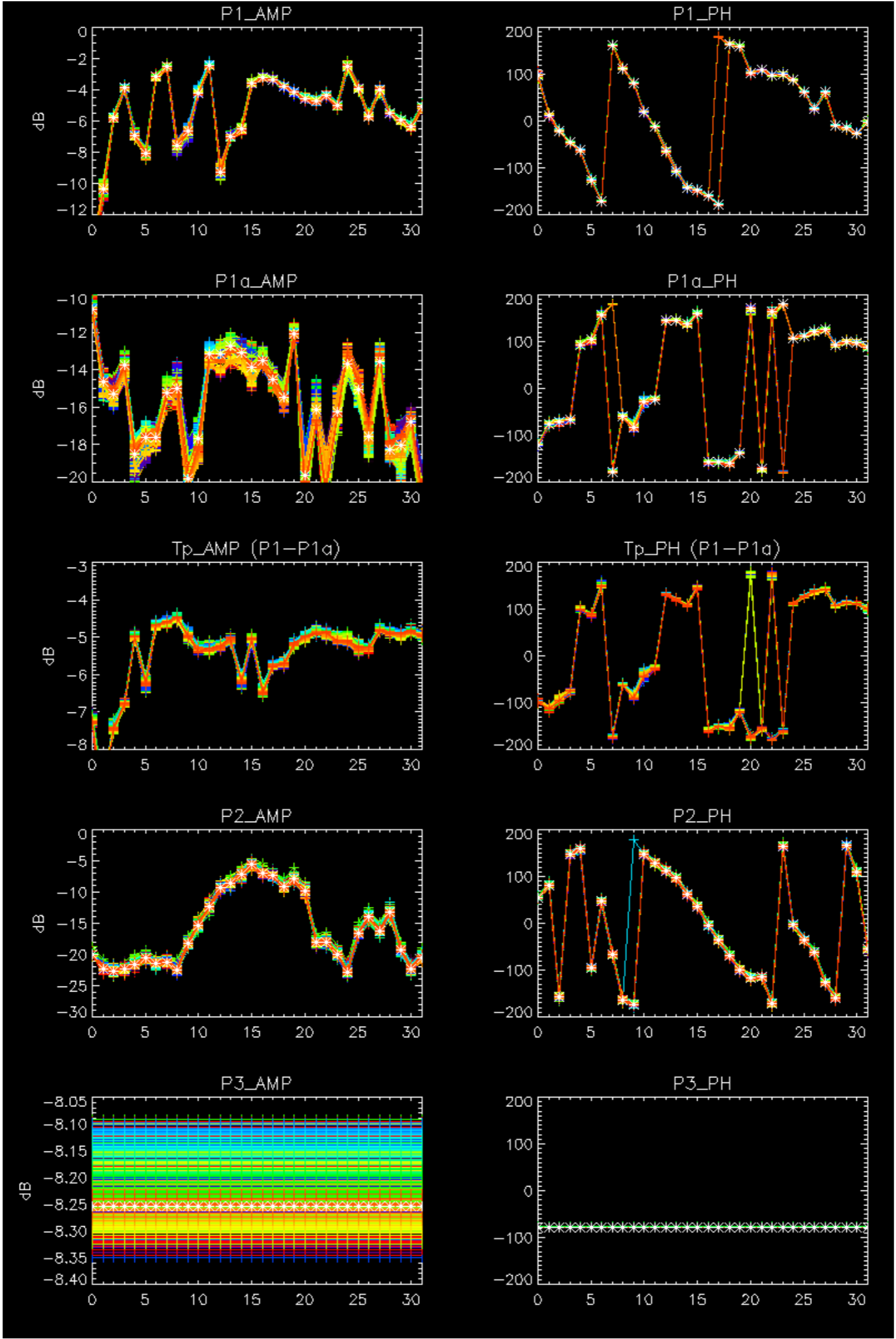
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



No anomalies observed.

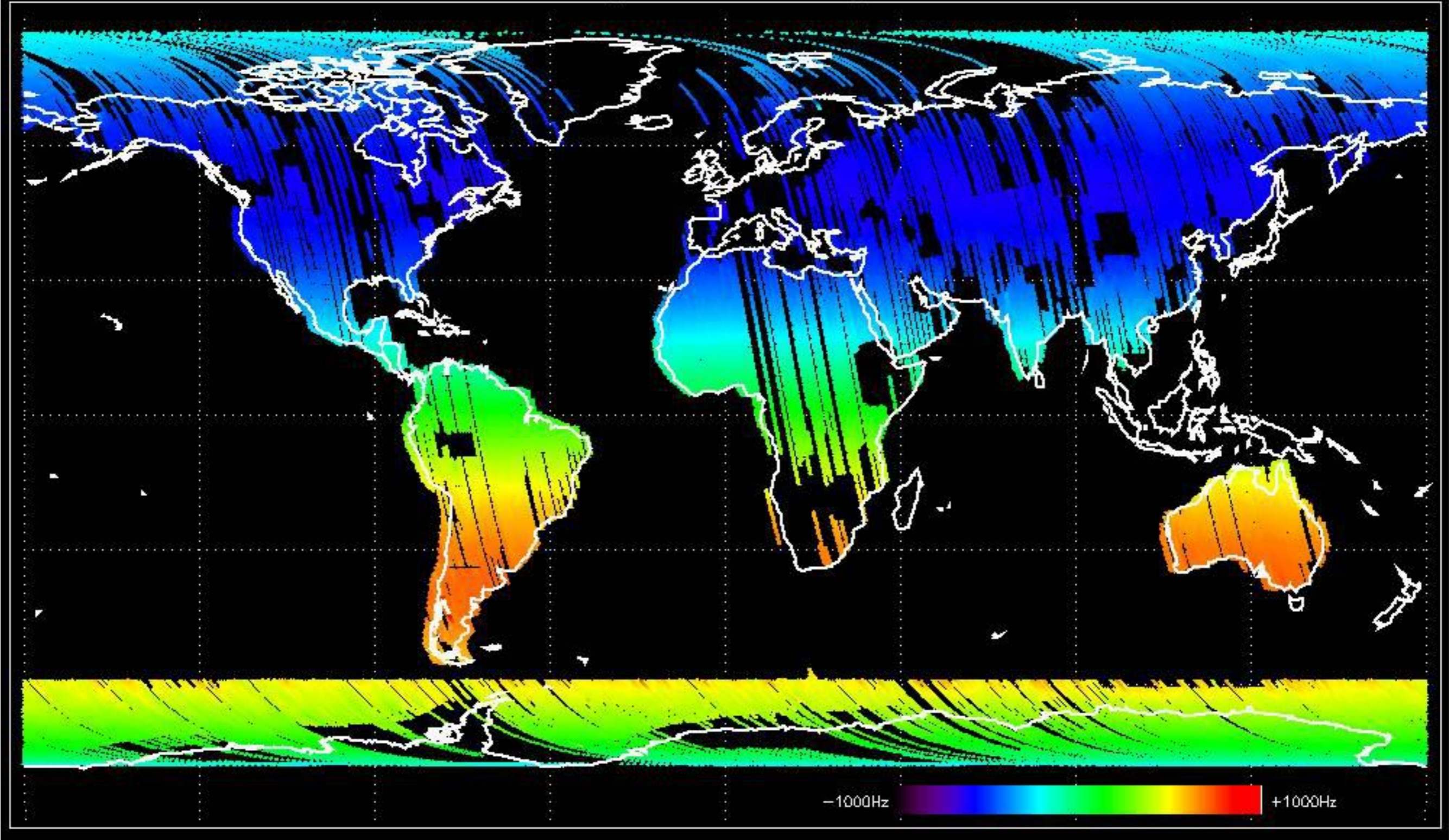




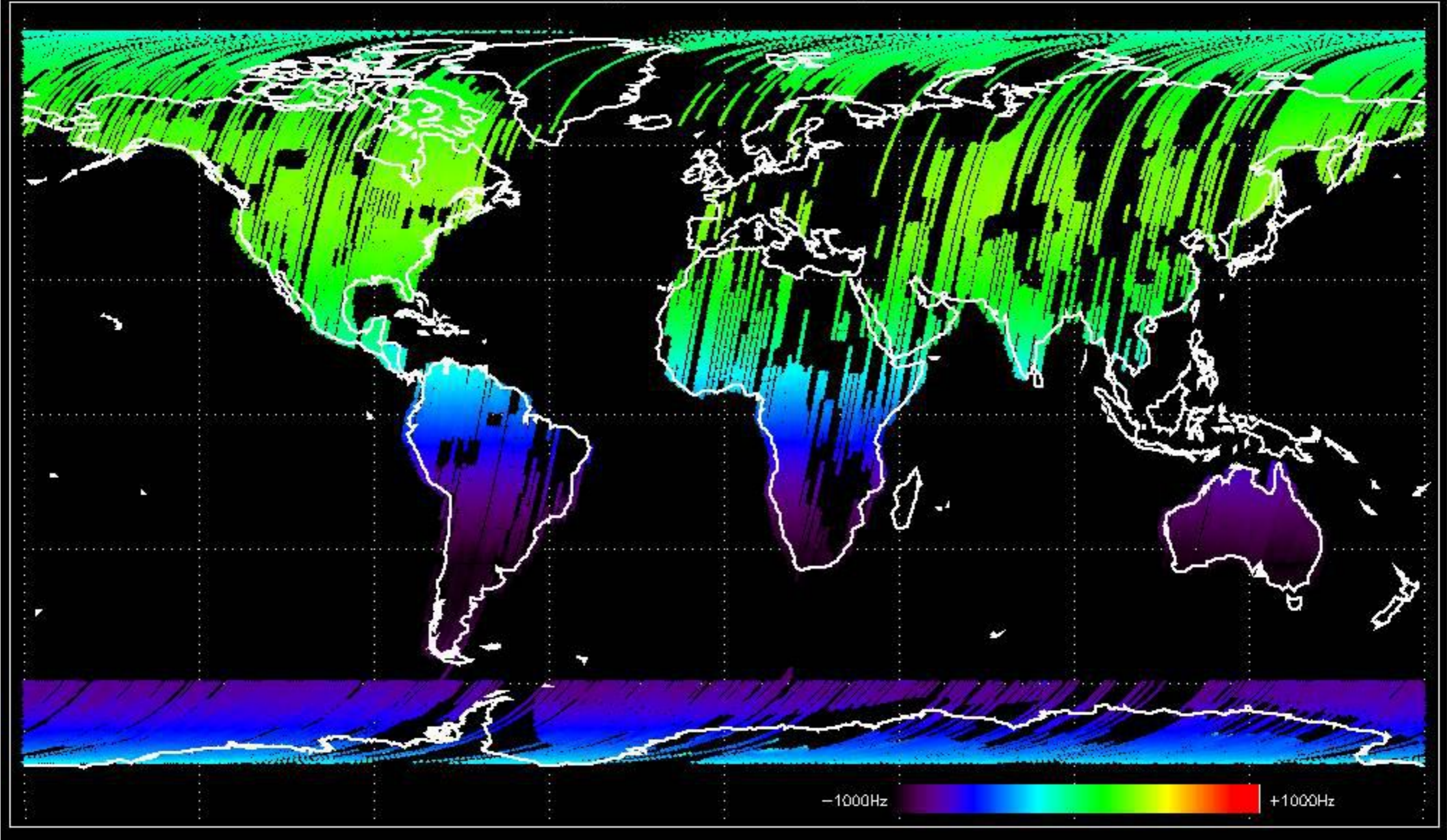
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

No anomalies observed Doppler evolution.
Doppler analysis performed over the last 35 days

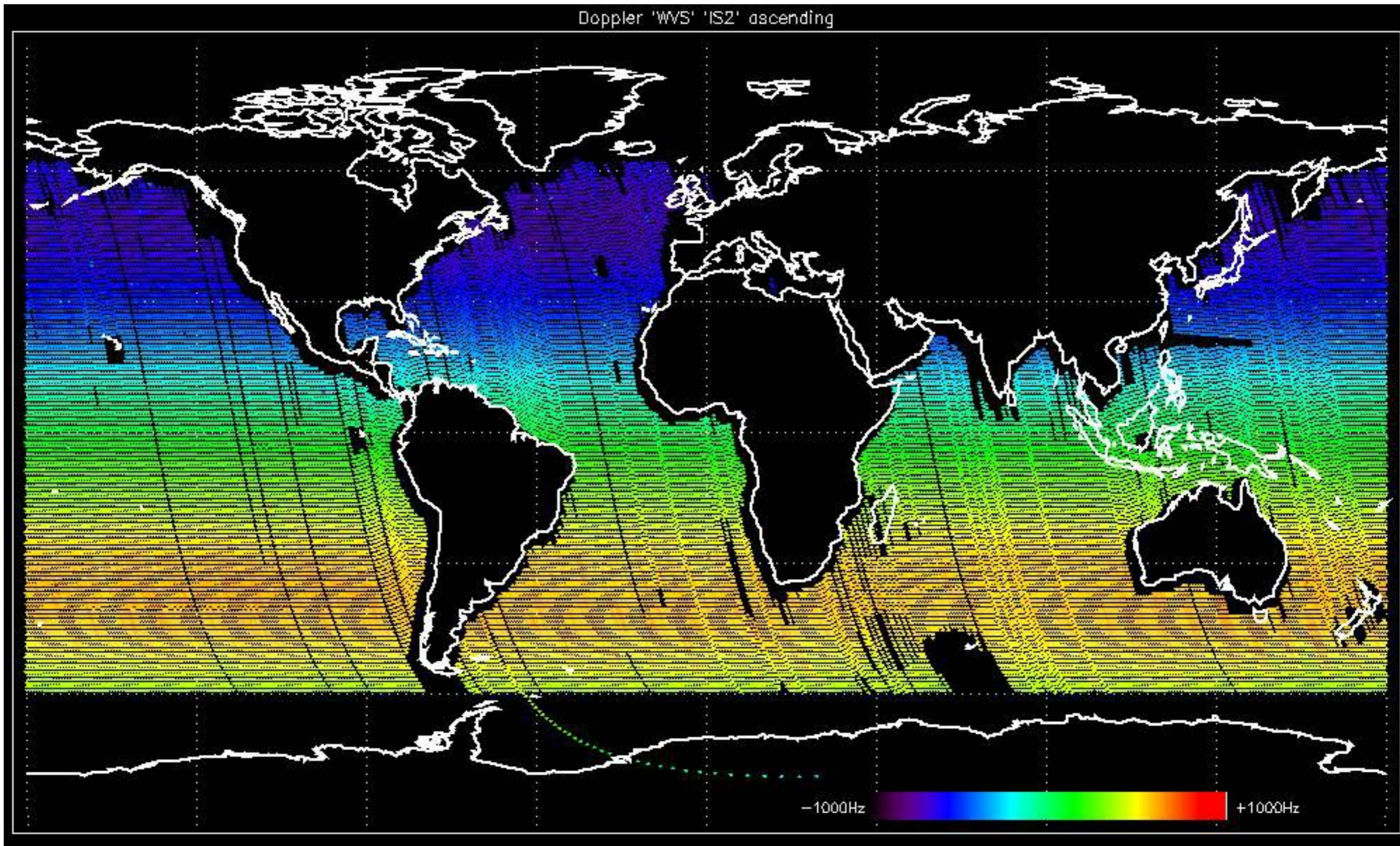
Doppler 'GM1' 'SS1' ascending



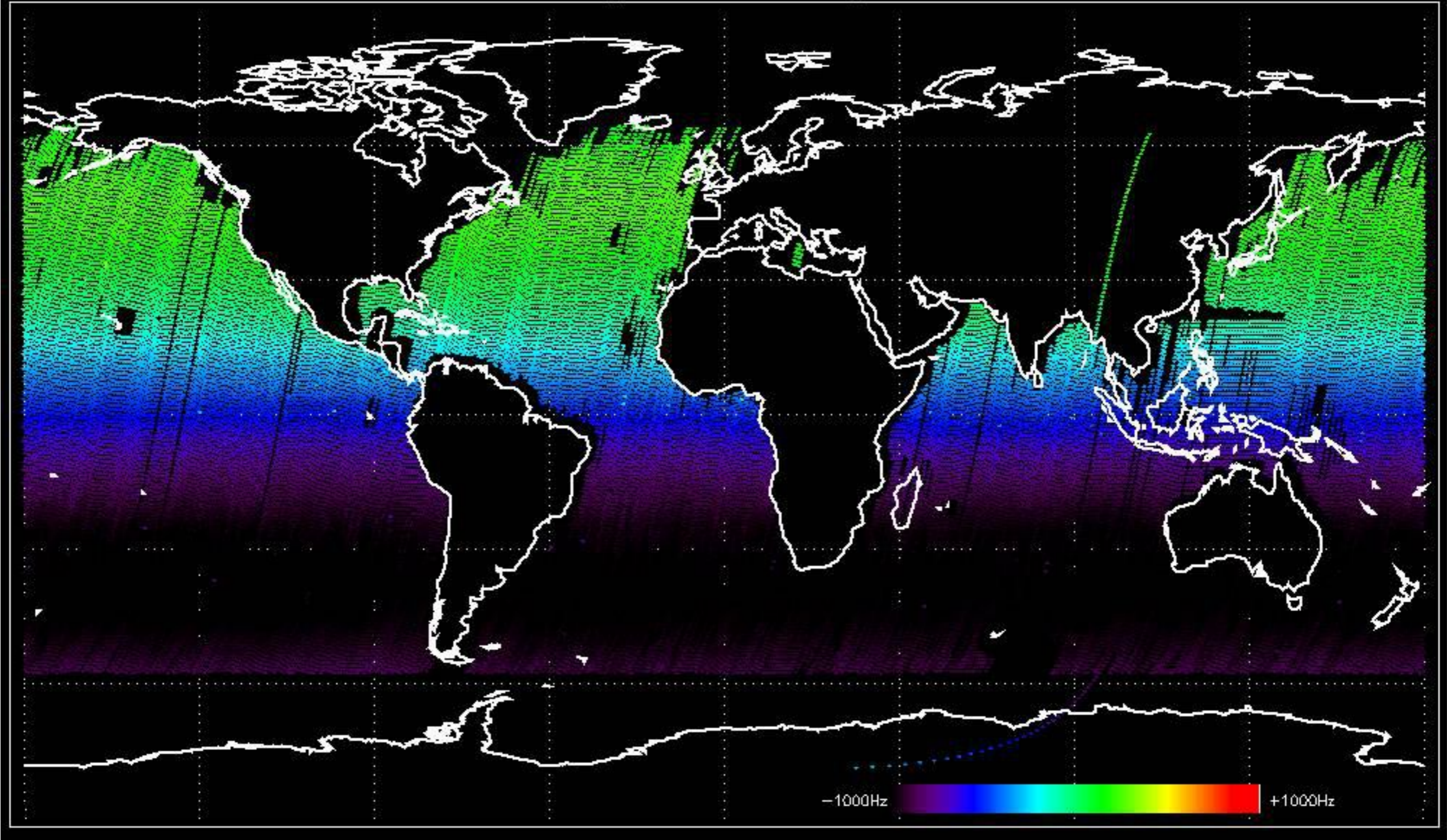
Doppler 'GM1' 'SS1' descending



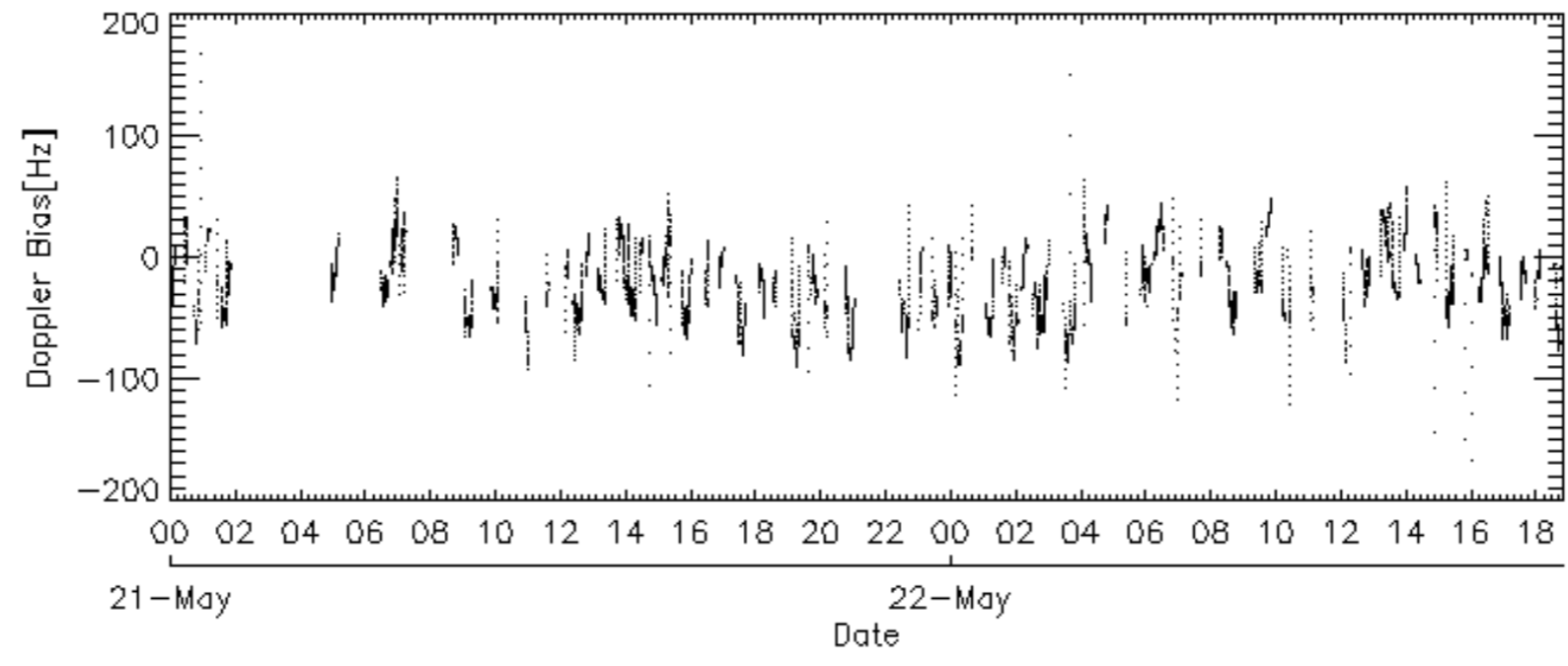
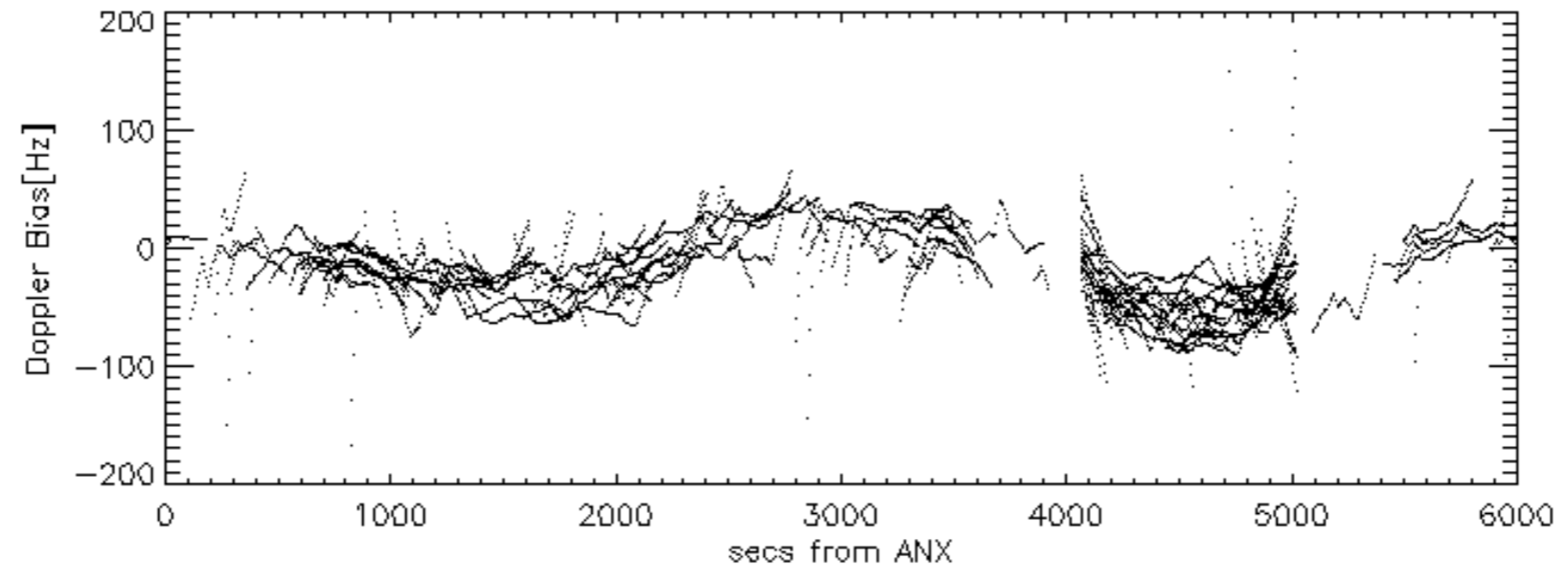
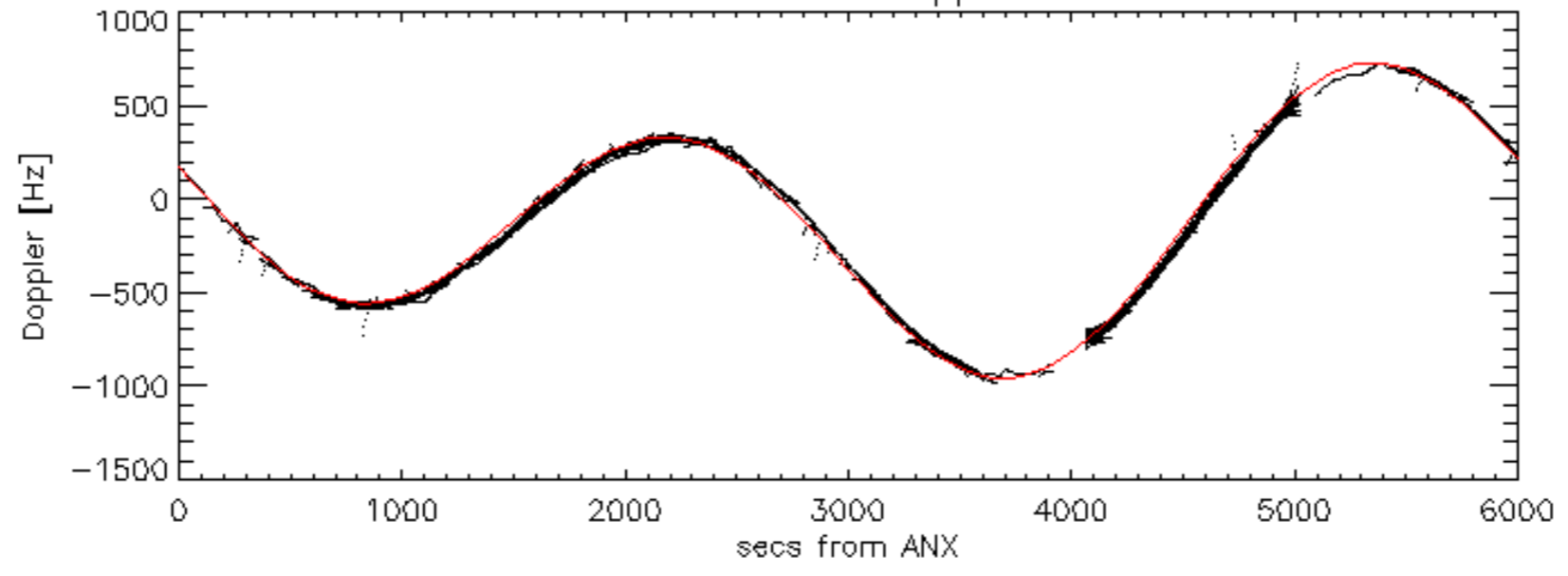
Doppler 'WVS' 'IS2' ascending

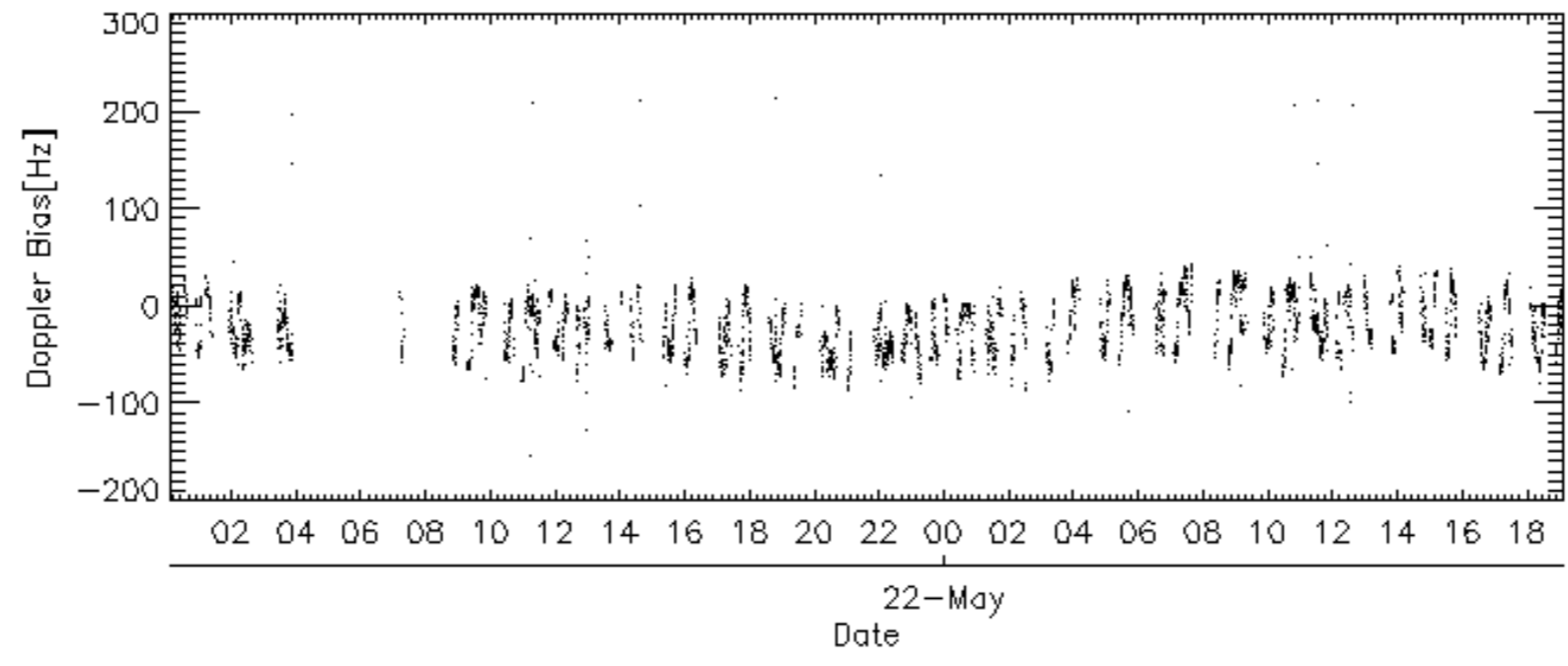
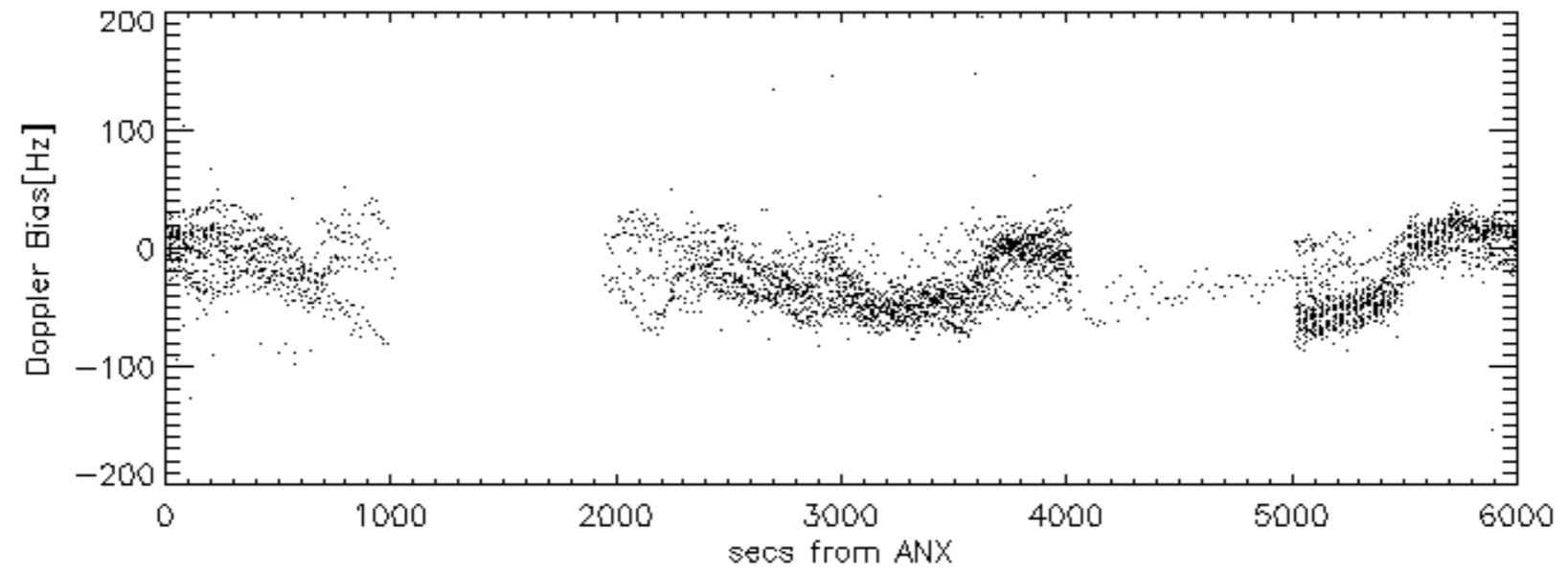
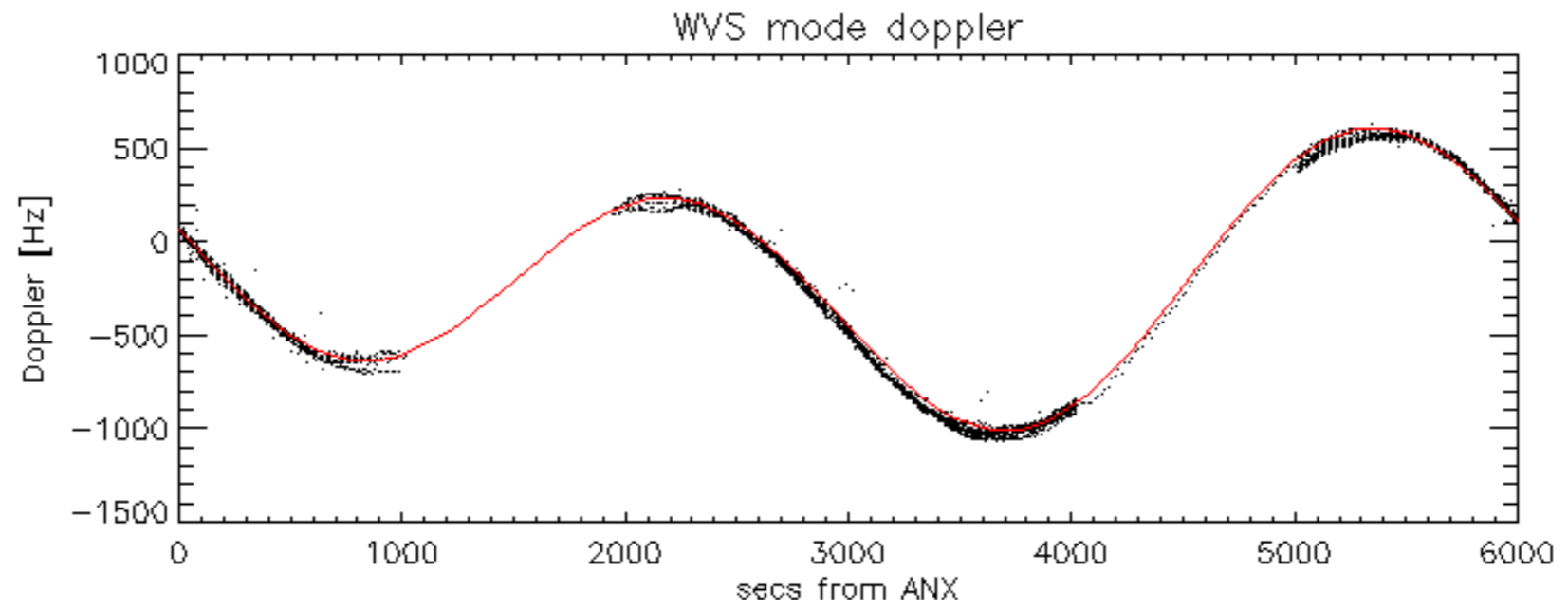


Doppler 'WVS' 'IS2' descending

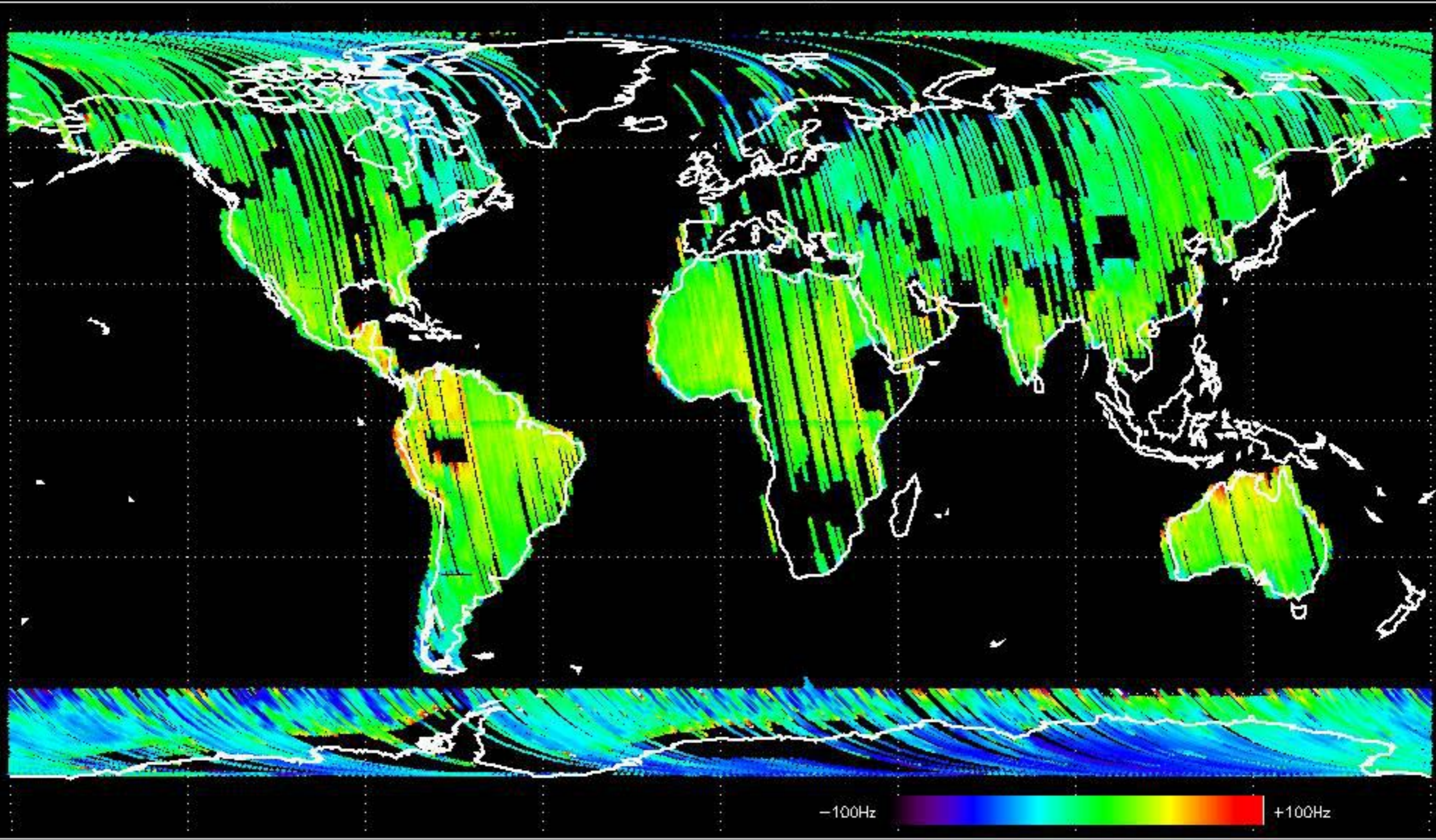


GM1 mode doppler

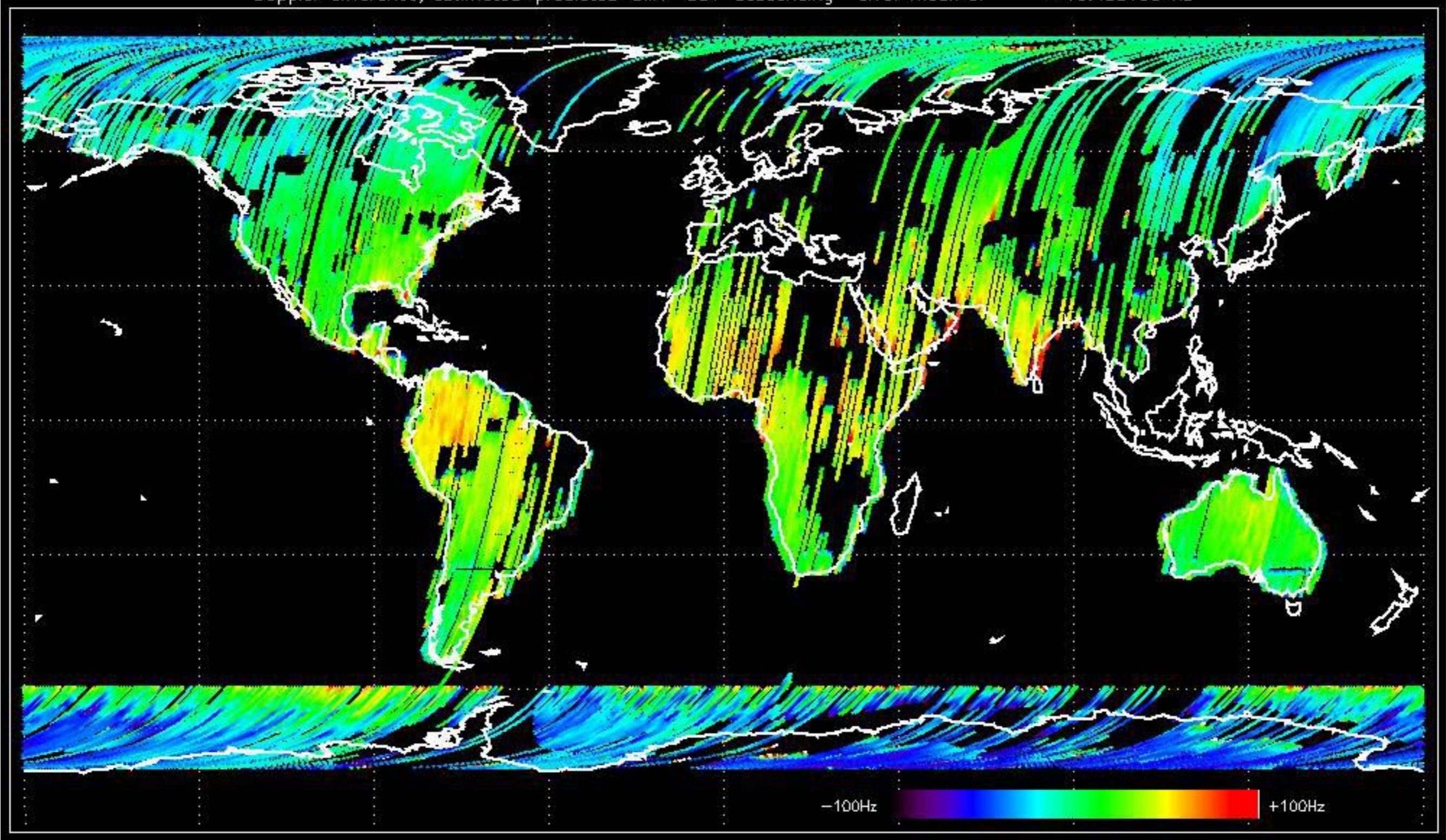




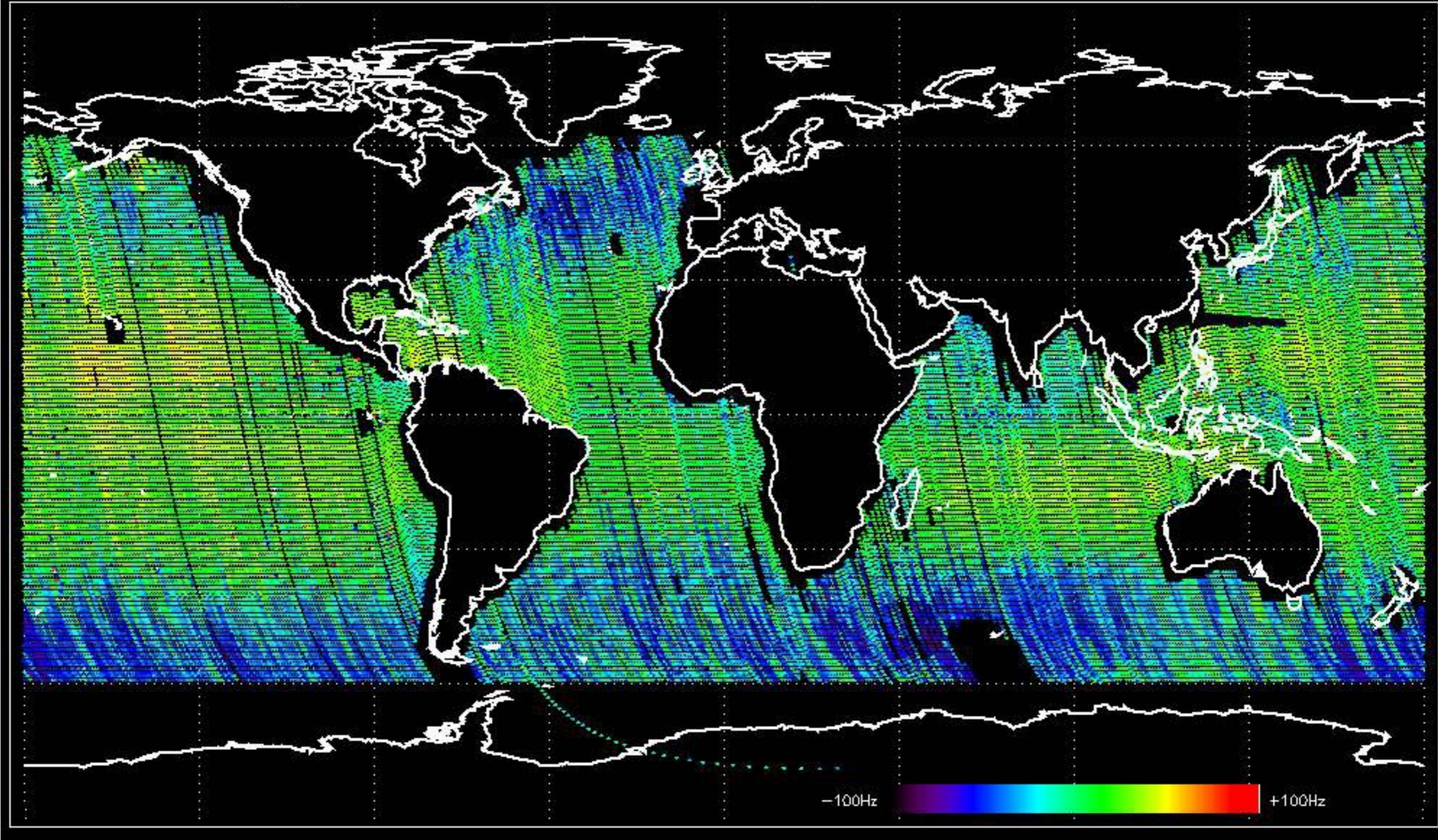
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.292182 Hz



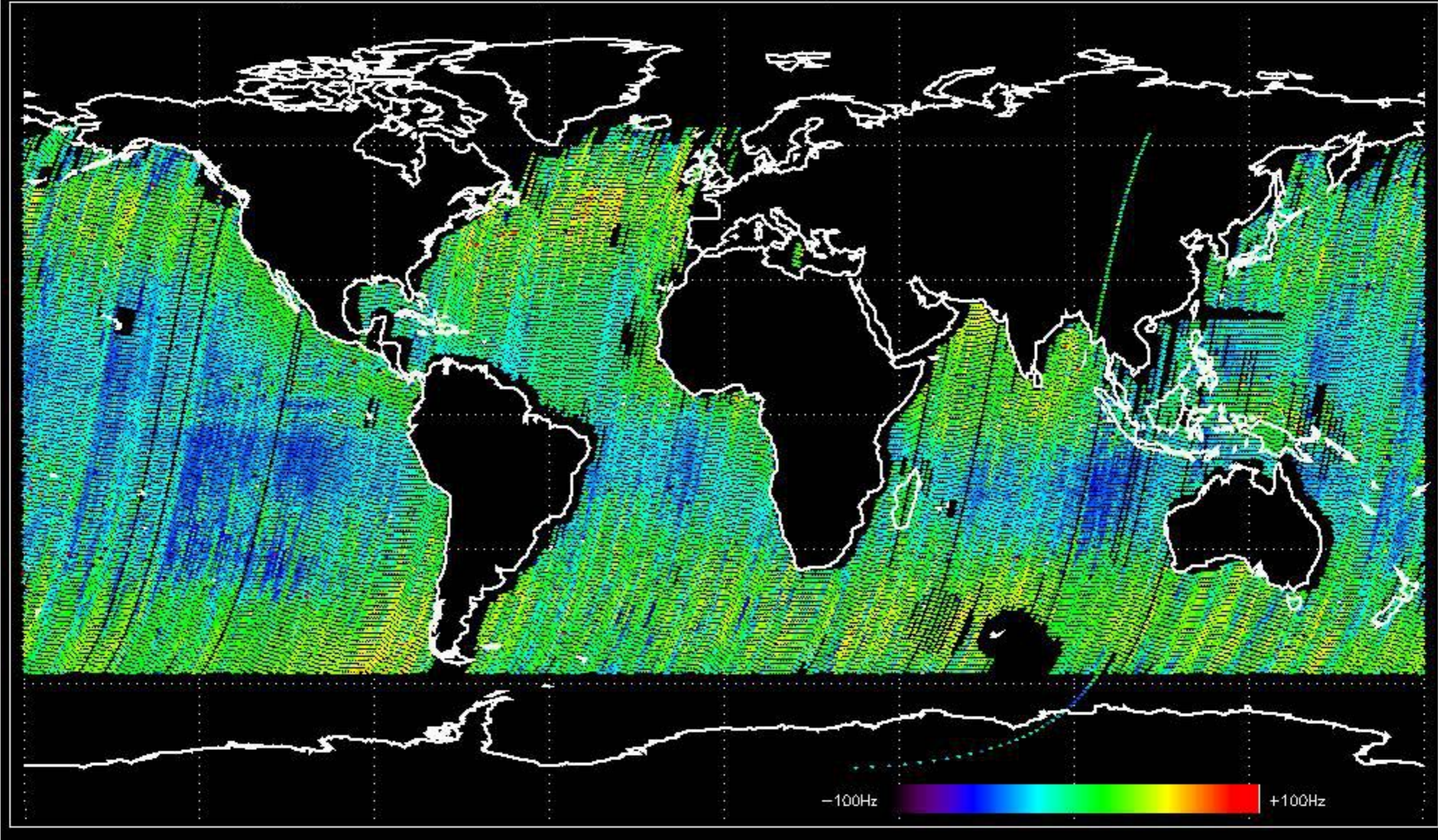
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.453199 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.795304 Hz

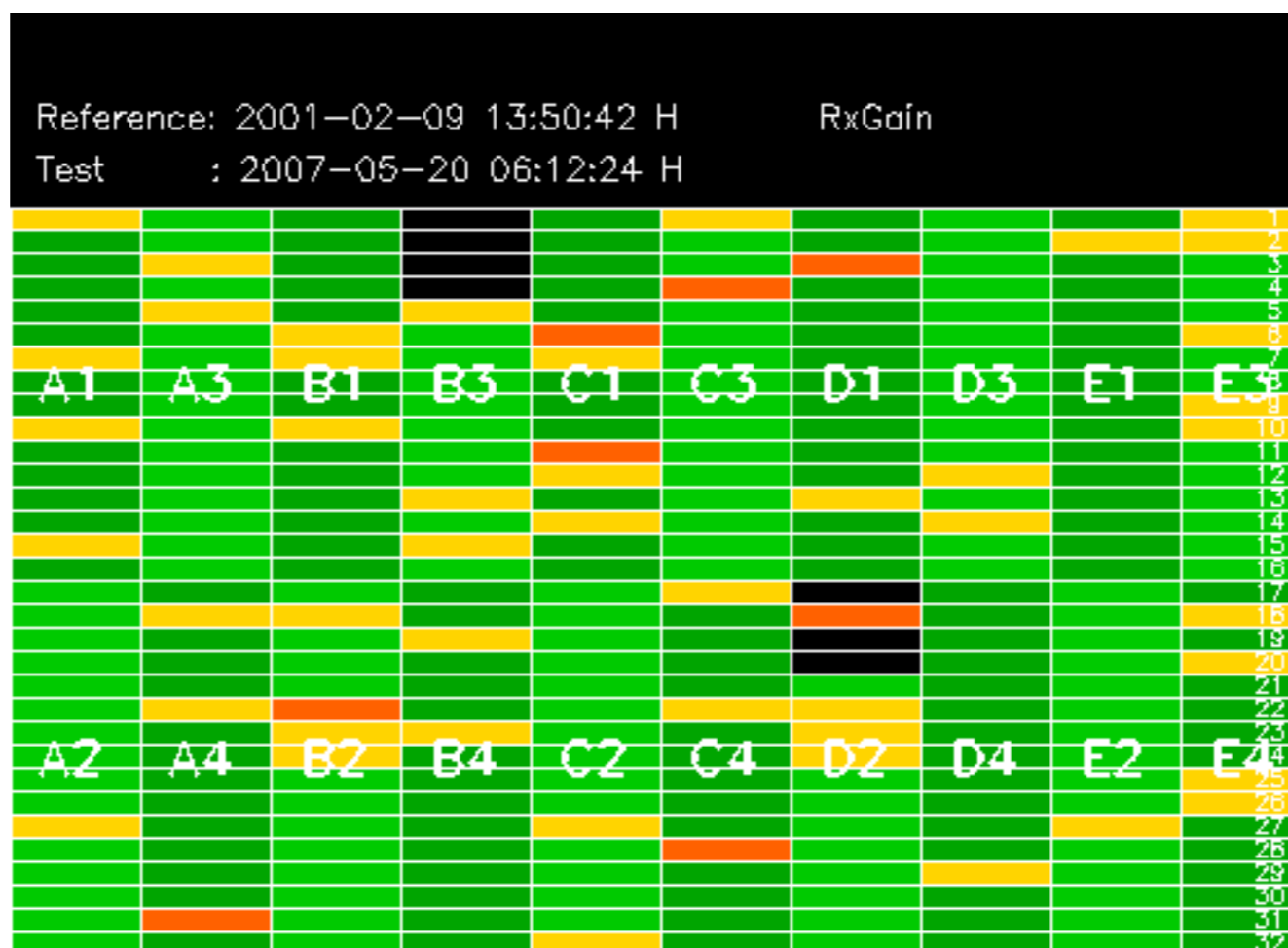


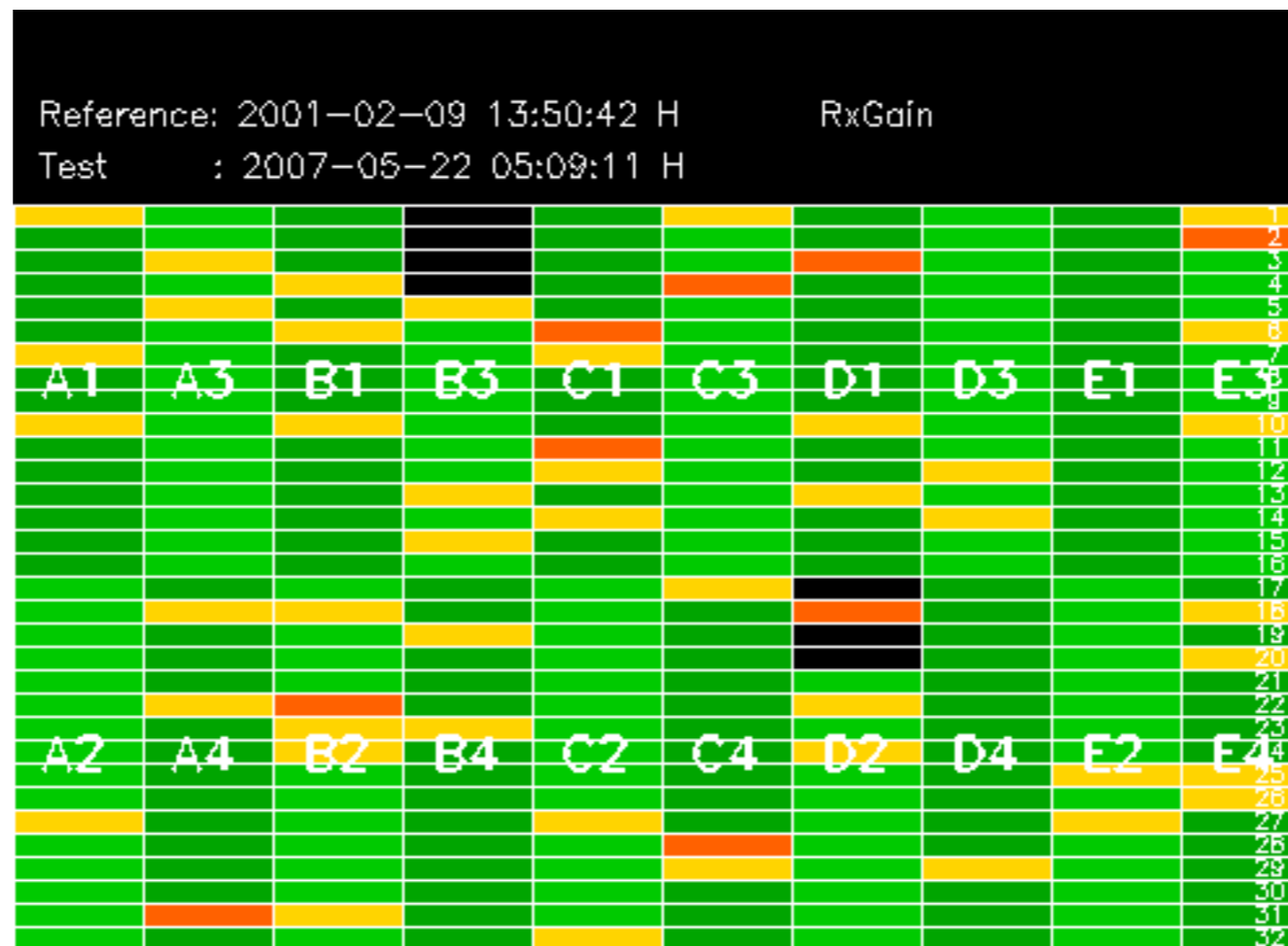
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.815376 Hz

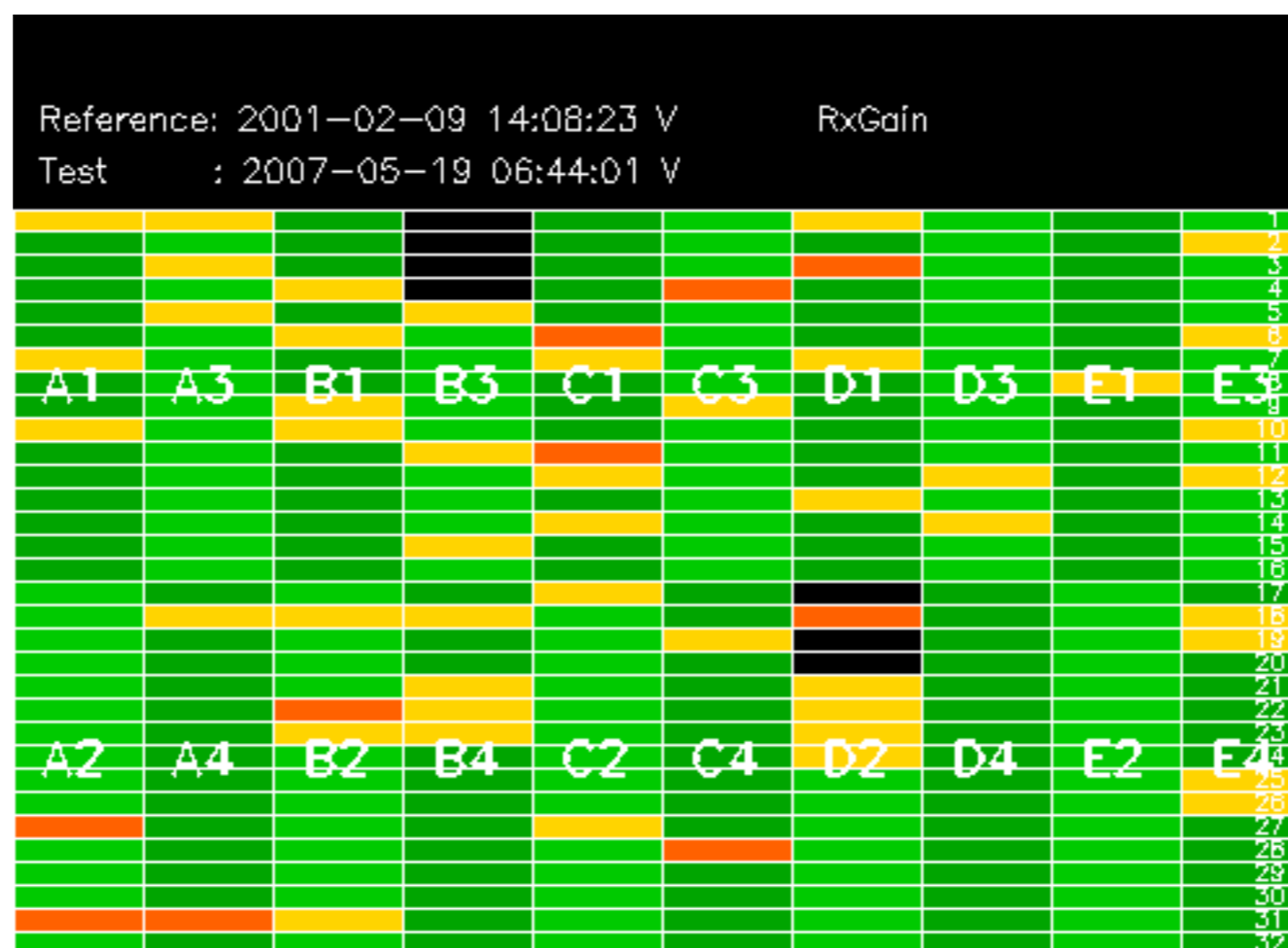


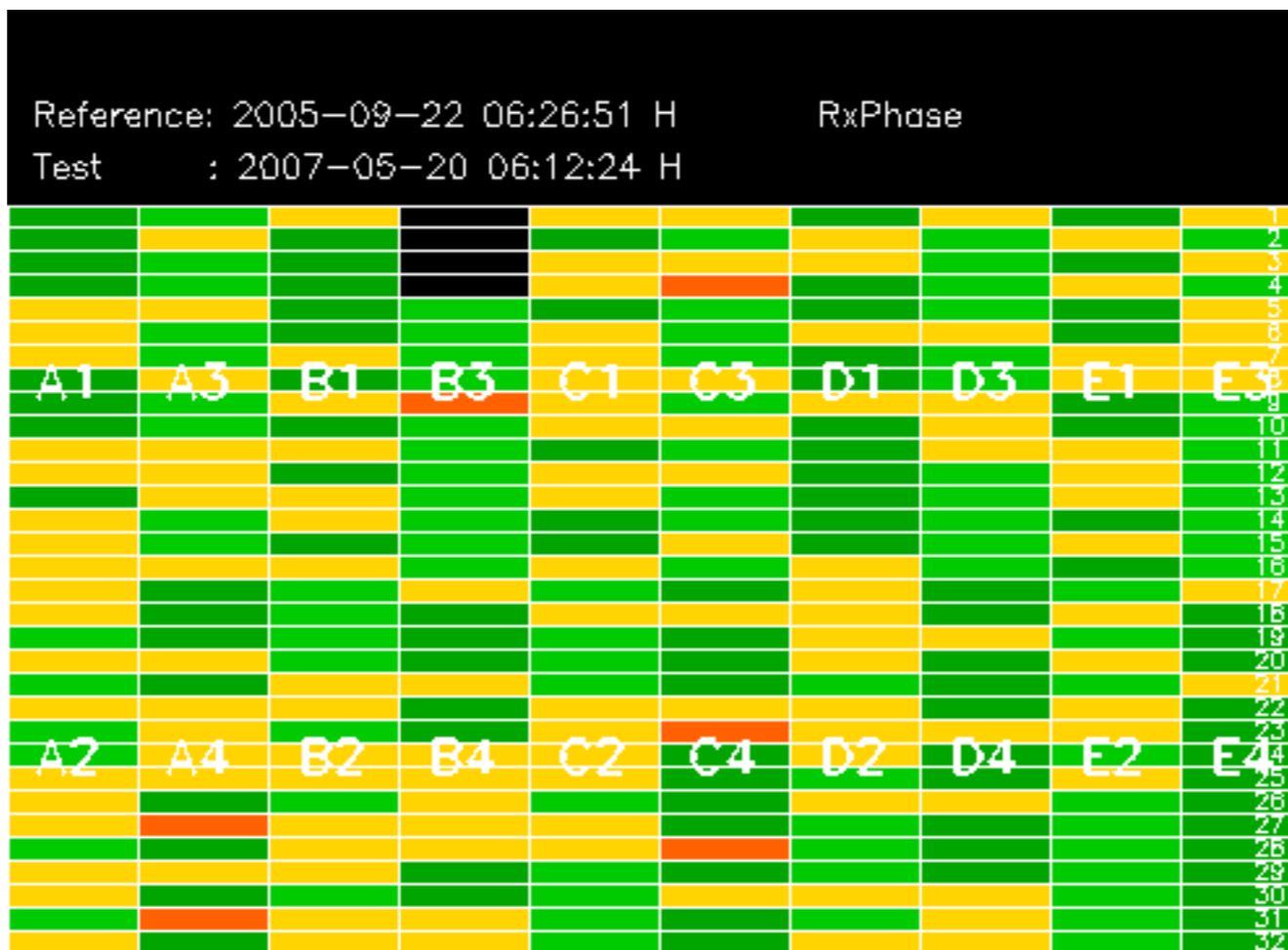
No anomalies observed on available MS products:

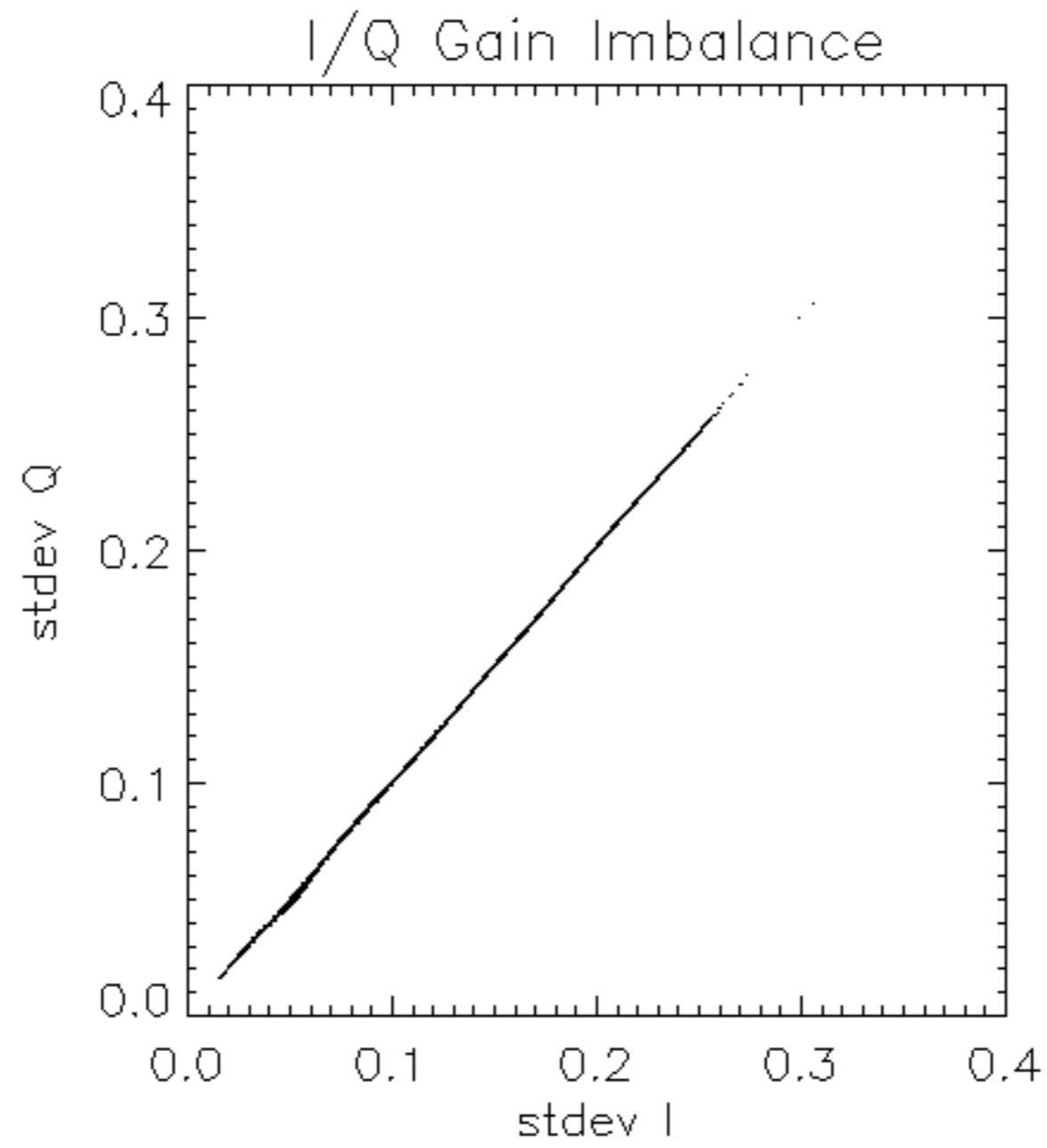
No anomalies observed.

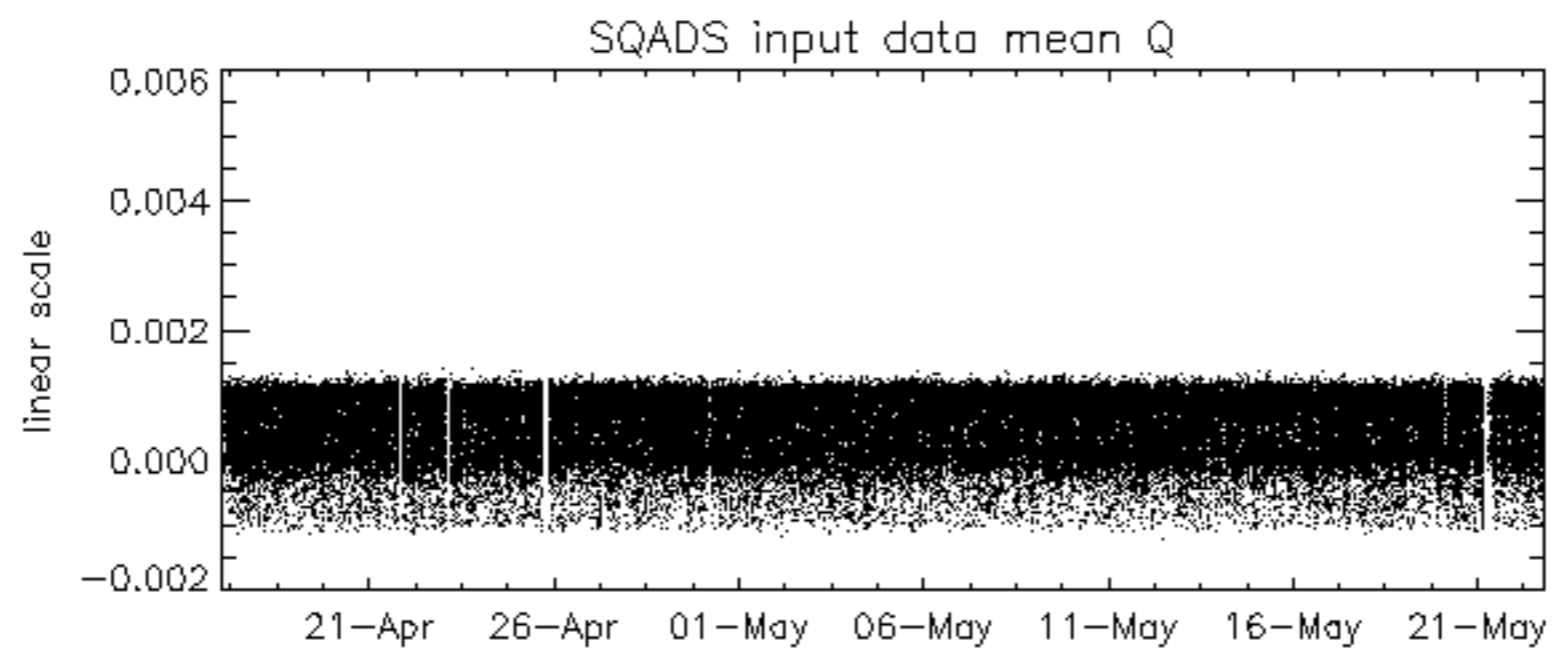
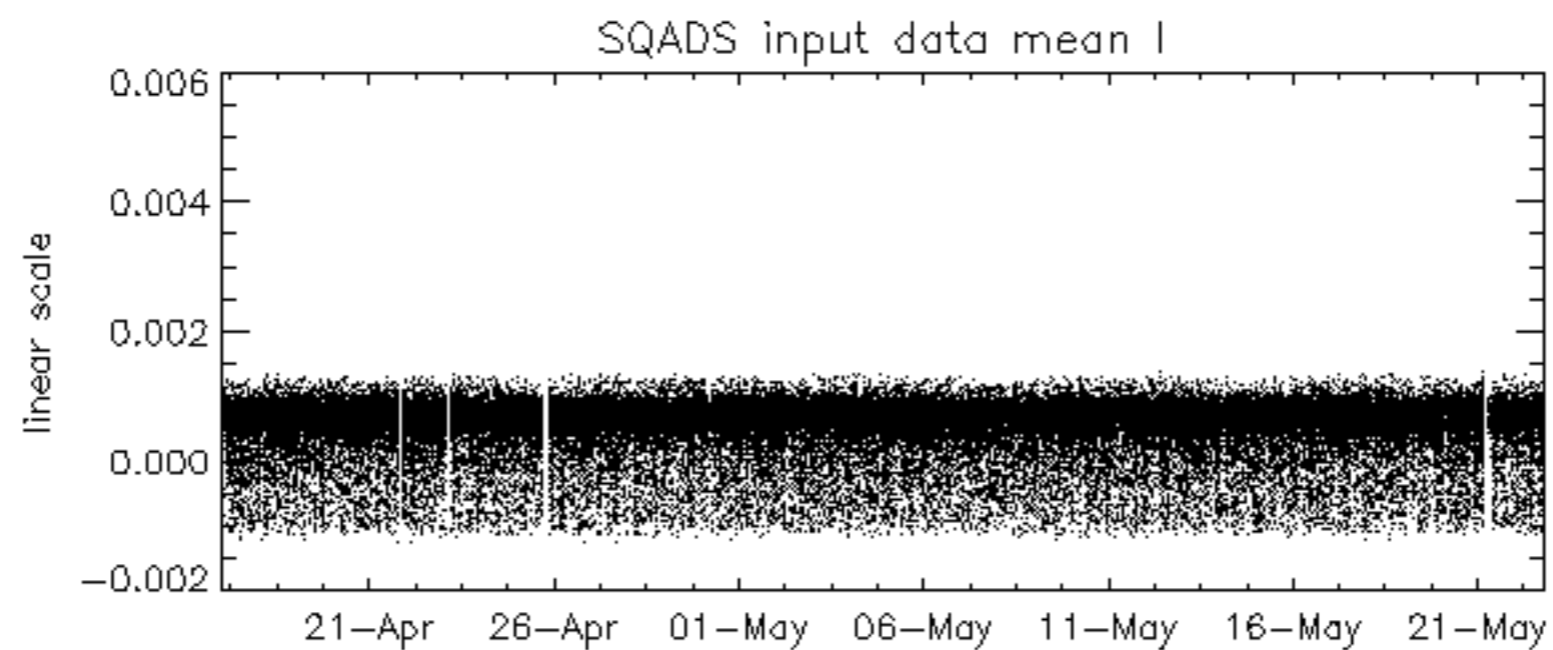
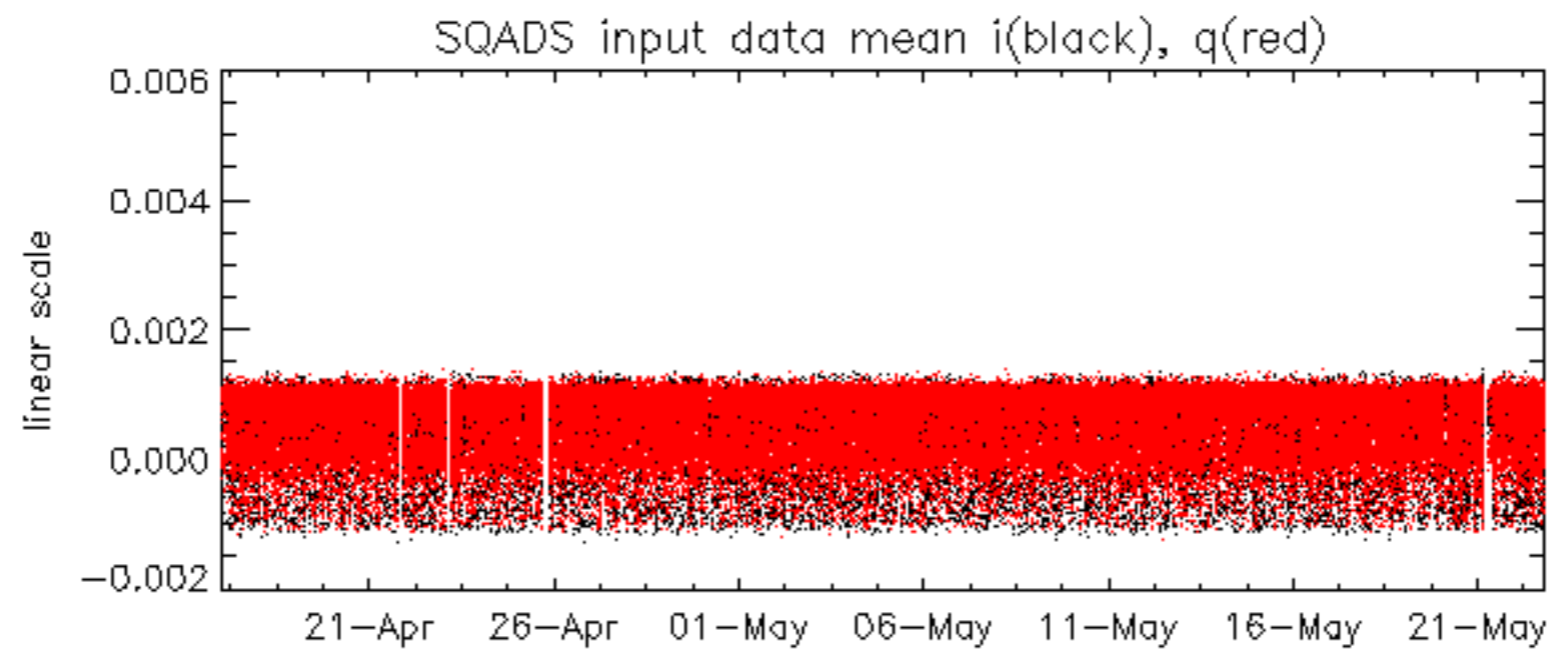


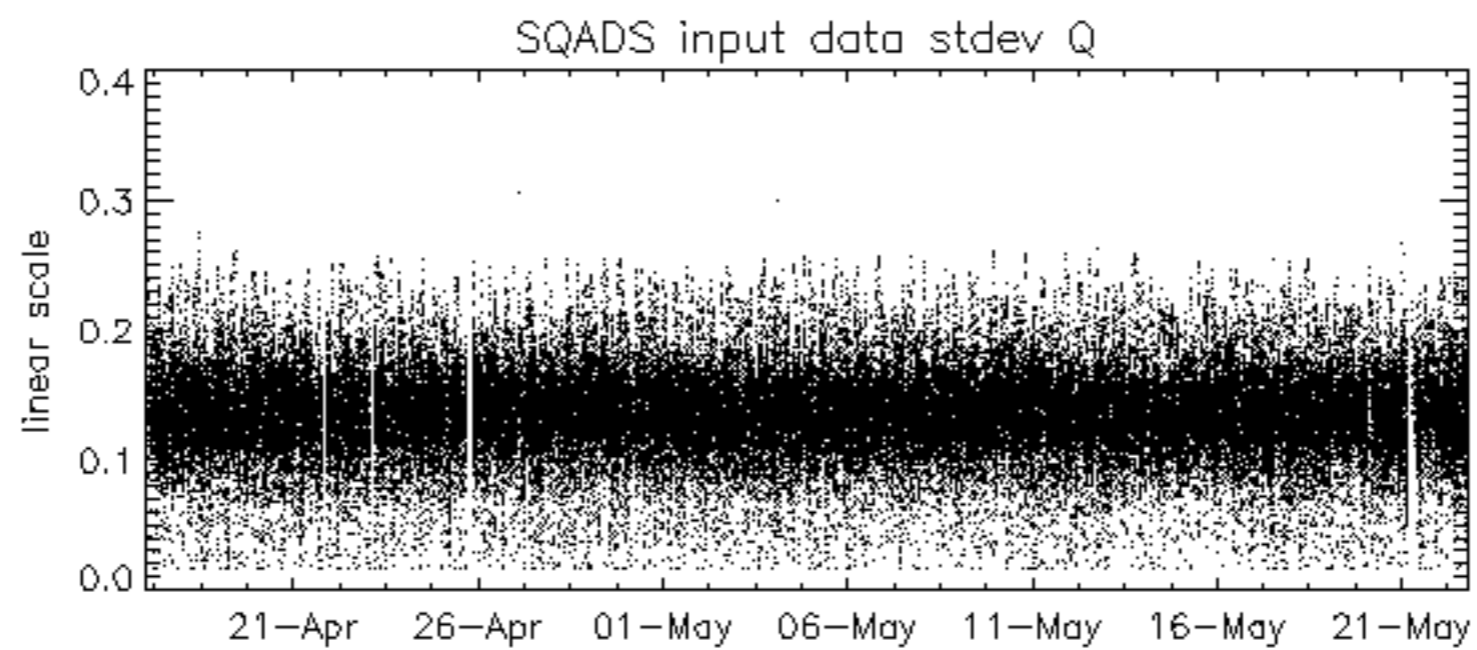
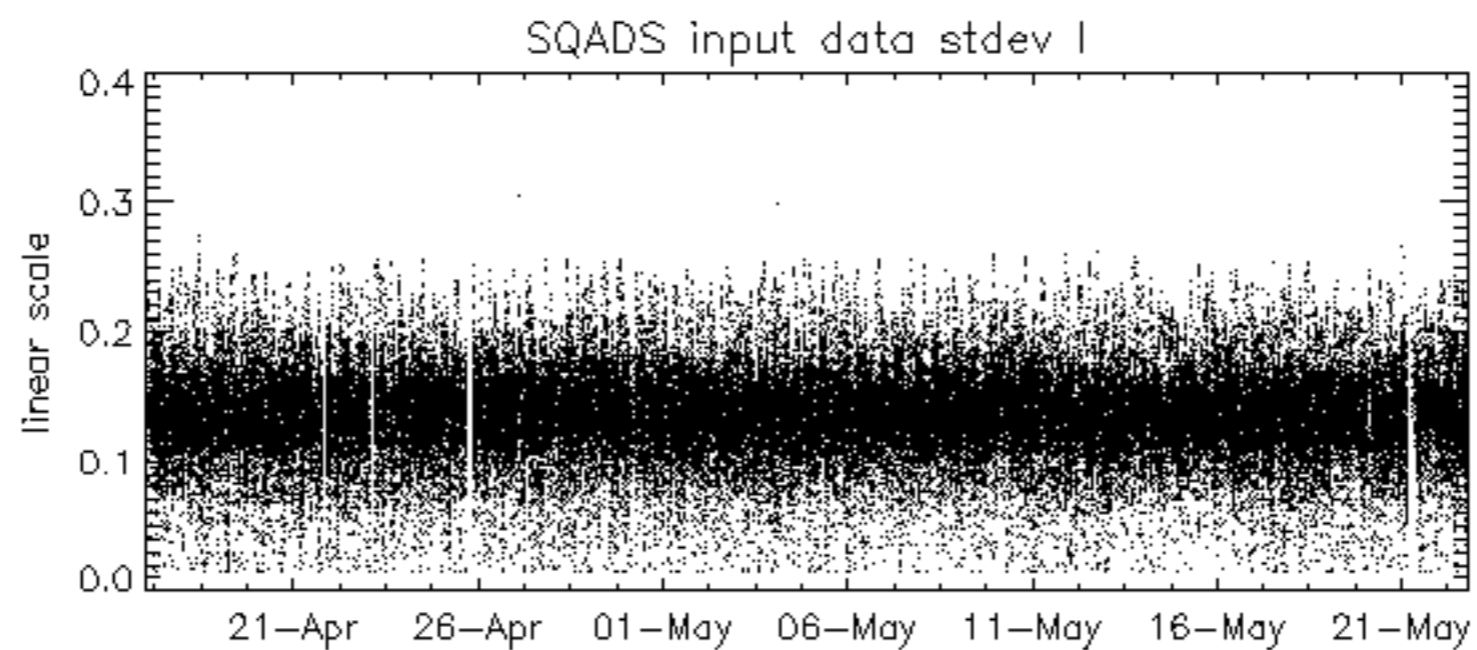
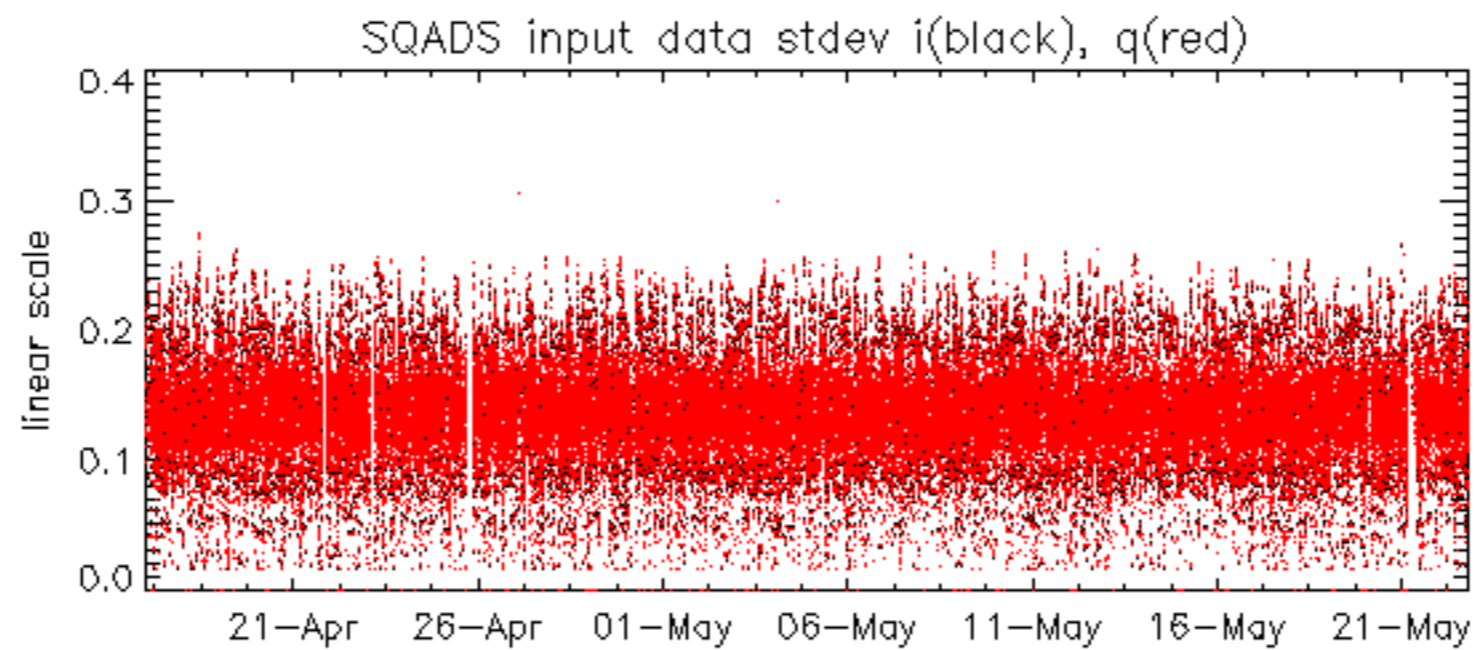








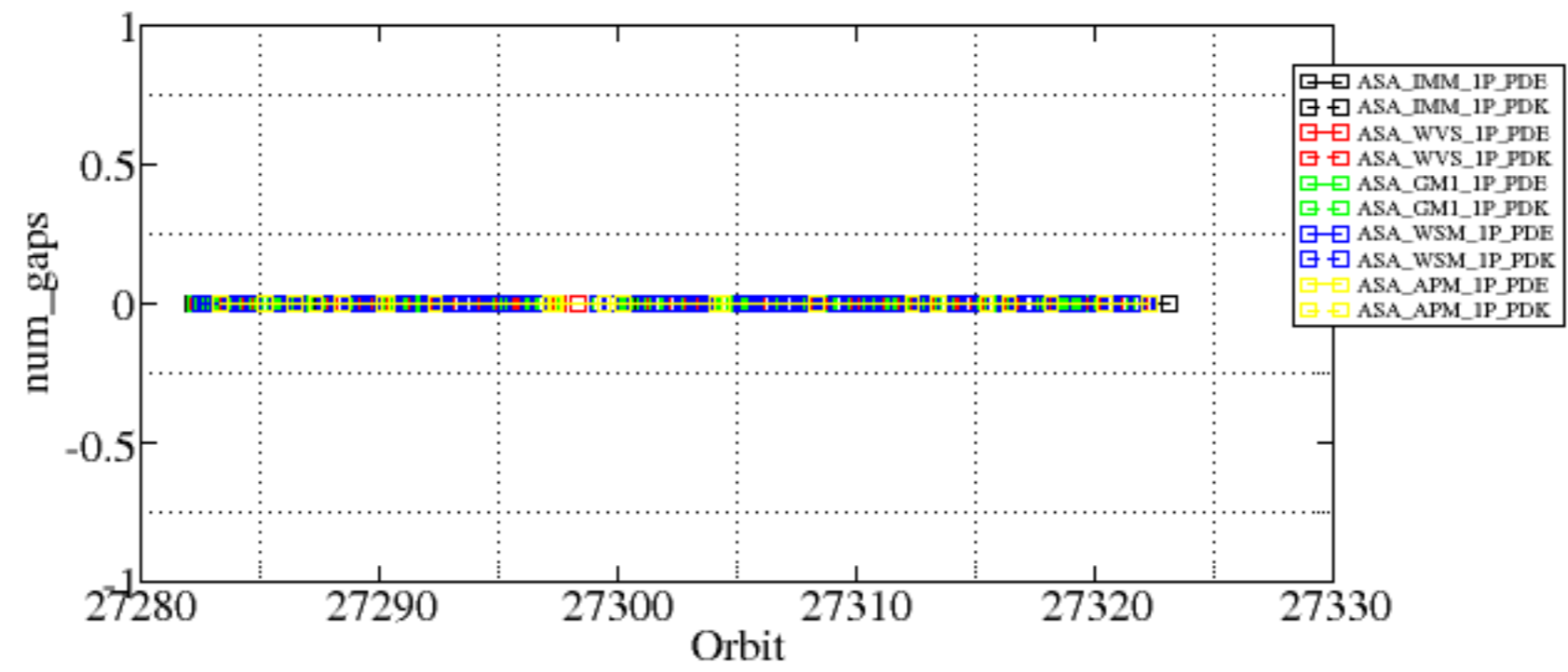


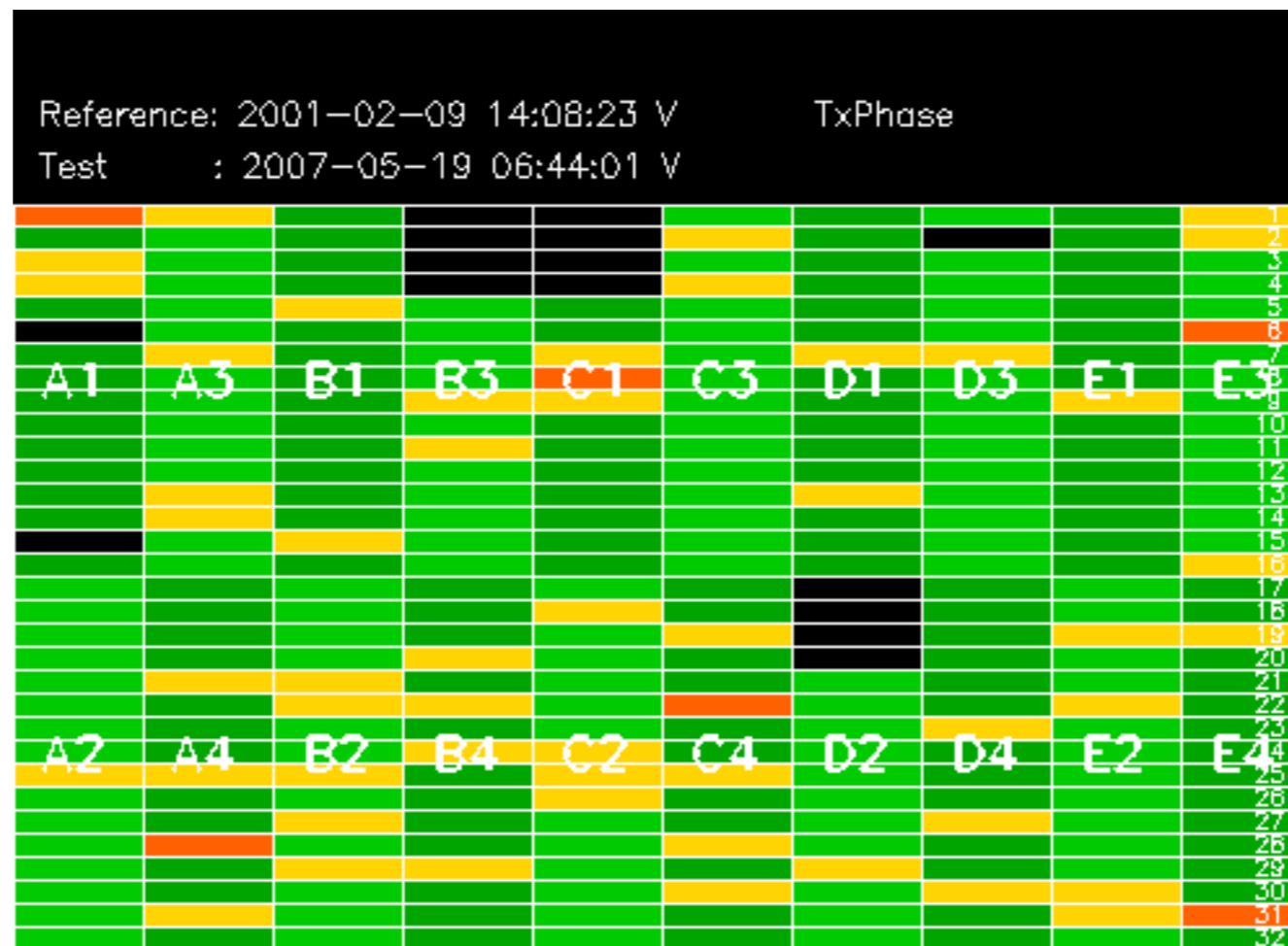


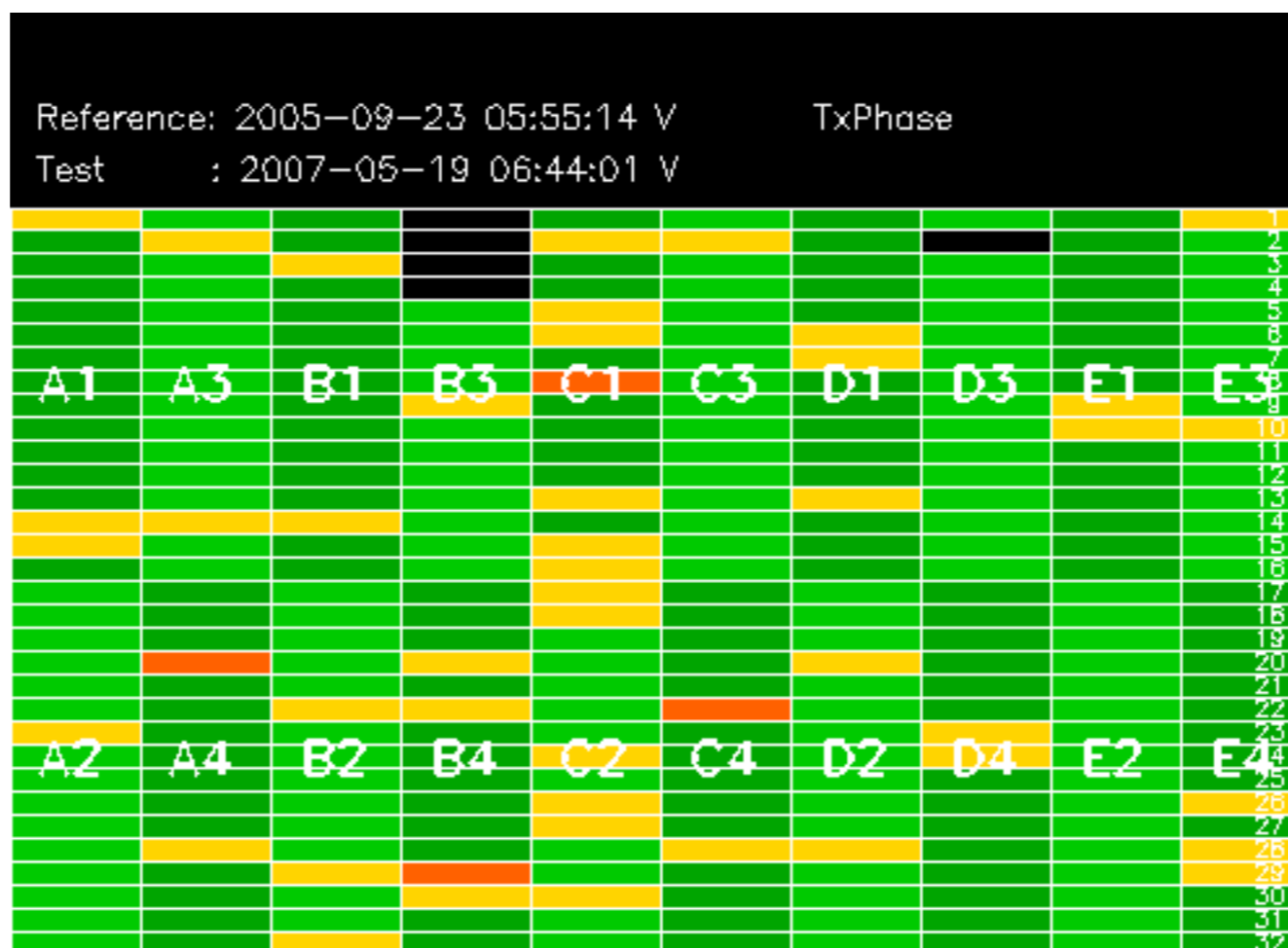
Summary of analysis for the last 3 days 2007052[012]

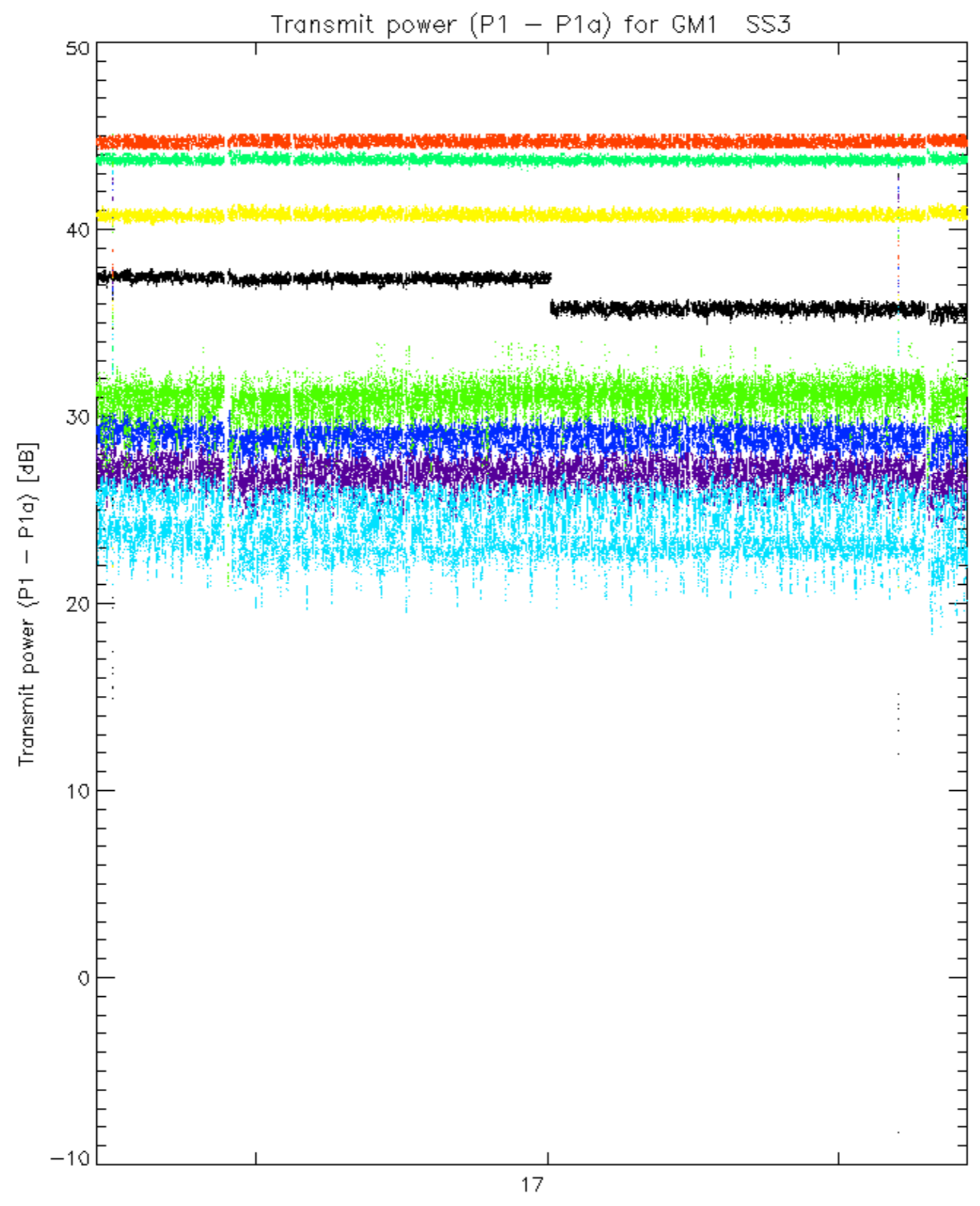
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070520_005022_000002612058_00174_27282_3191.N1	0	35
ASA_WSM_1PNPDE20070520_151026_000003302058_00183_27291_3737.N1	0	52
ASA_WSM_1PNPDE20070520_165036_000000852058_00184_27292_3767.N1	0	31
ASA_WSM_1PNPDE20070520_183356_000000862058_00185_27293_3810.N1	0	36
ASA_WSM_1PNPDE20070521_162341_000002022058_00198_27306_5002.N1	0	46
ASA_WSM_1PNPDE20070521_180340_000001102058_00199_27307_5028.N1	0	5
ASA_WSM_1PNPDK20070521_150502_000001152058_00197_27305_8922.N1	0	89

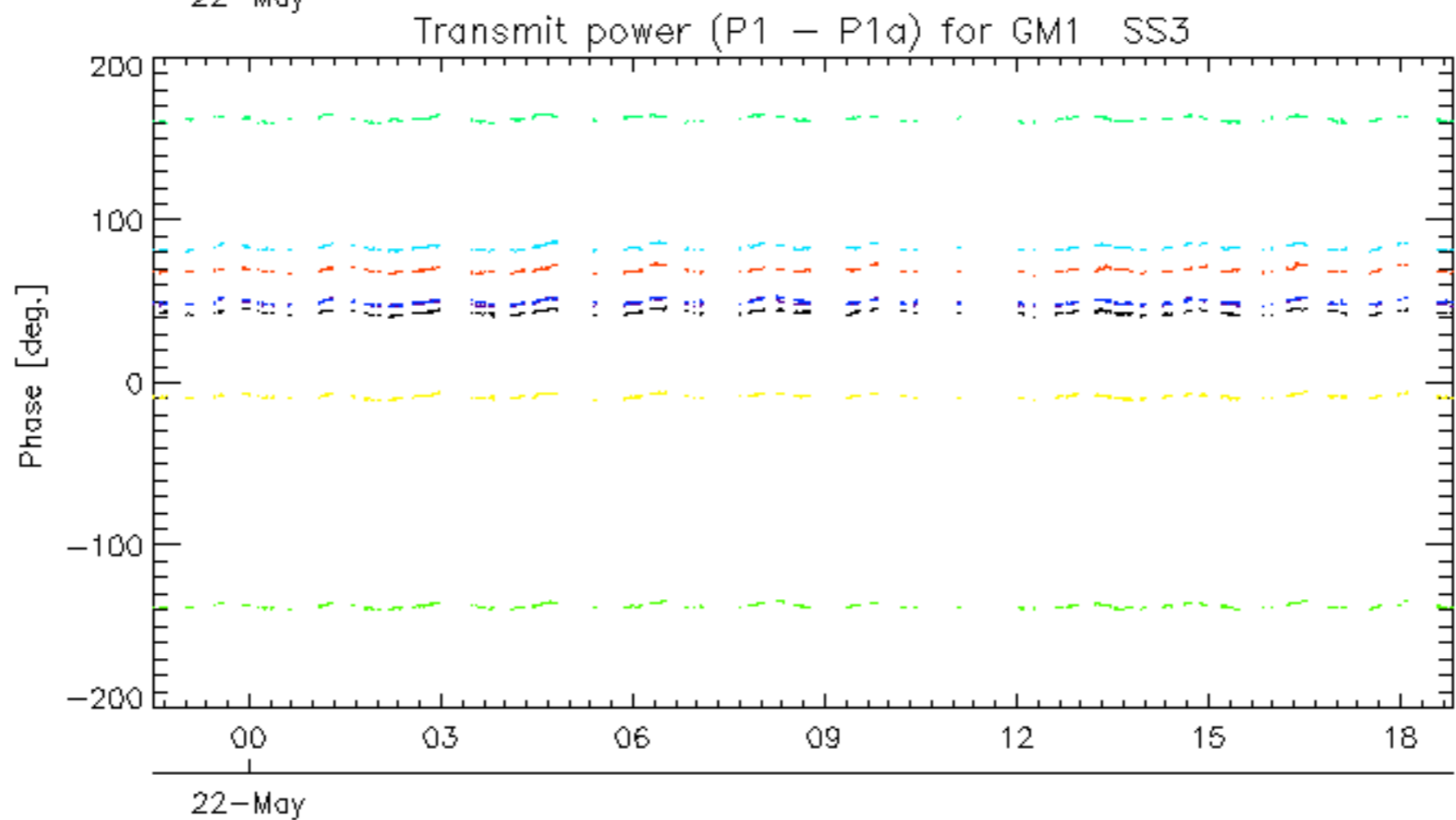
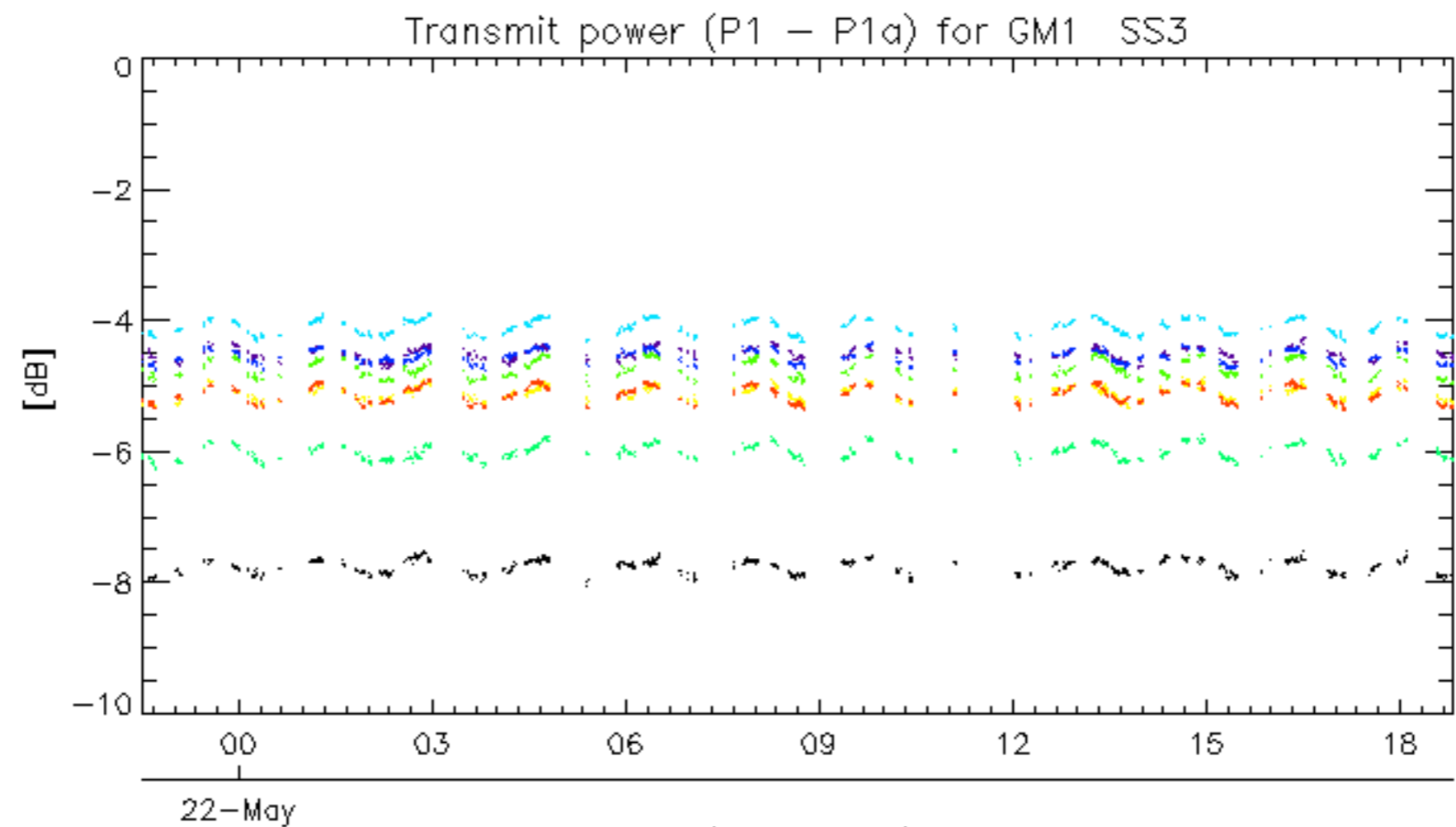




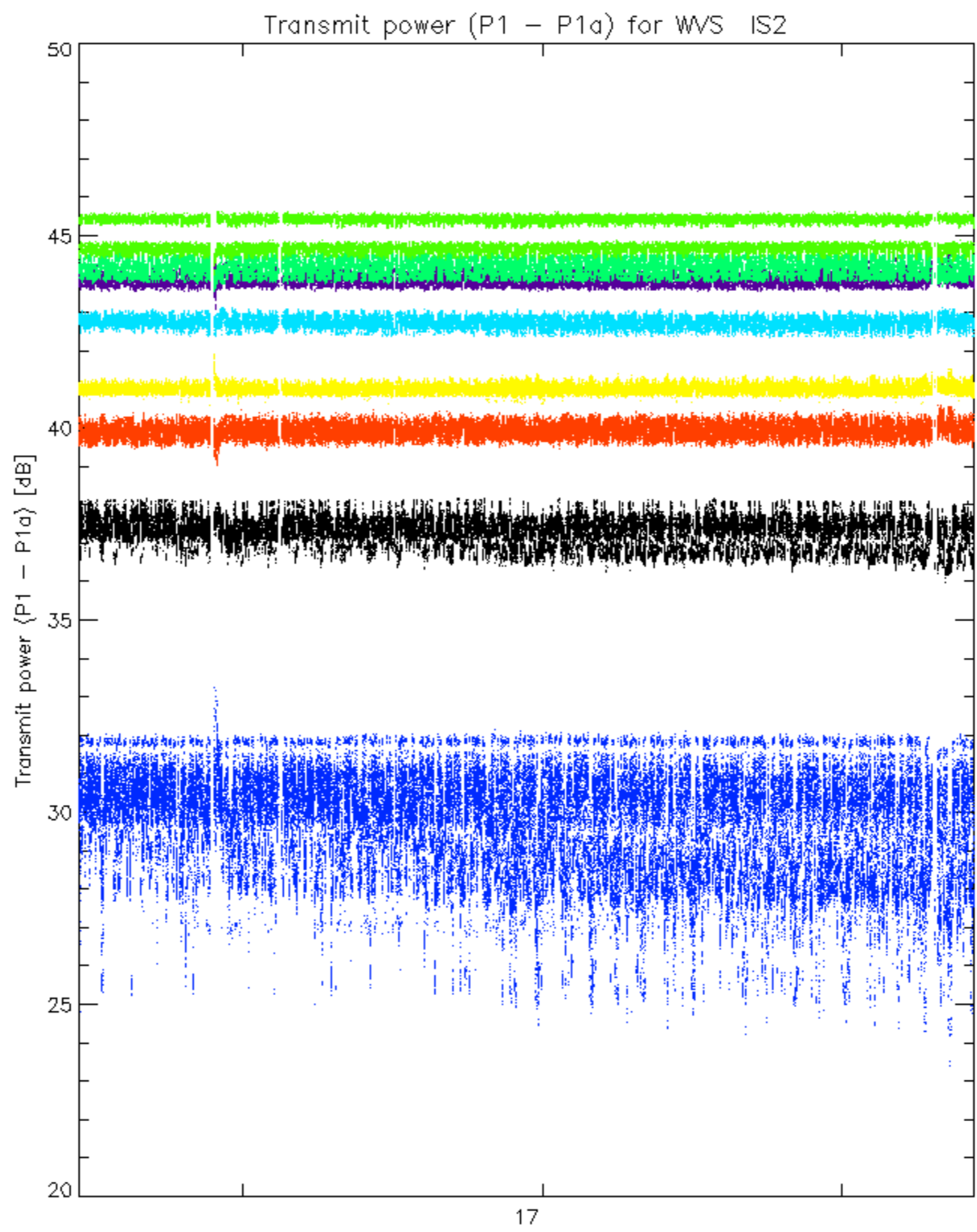




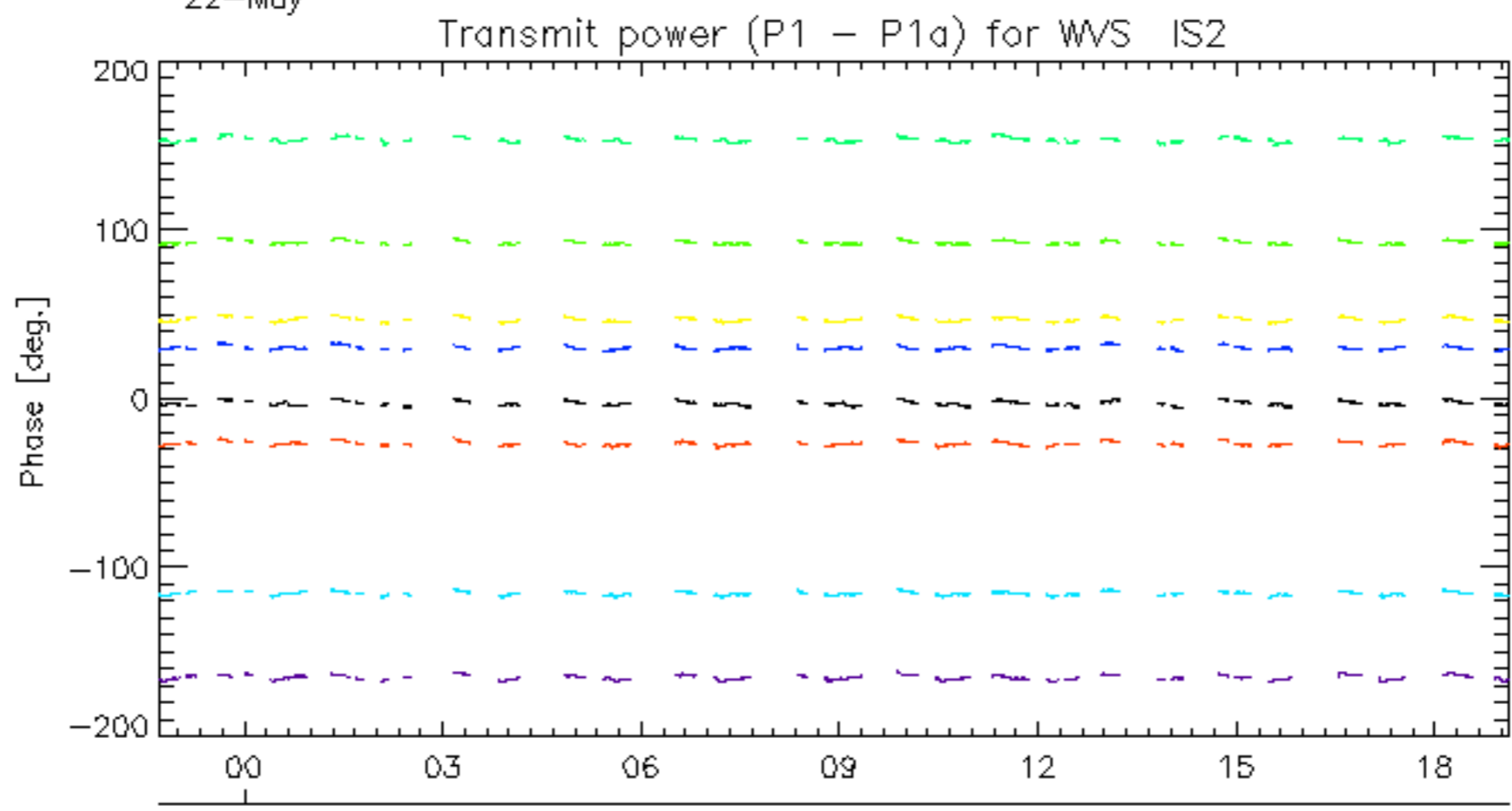
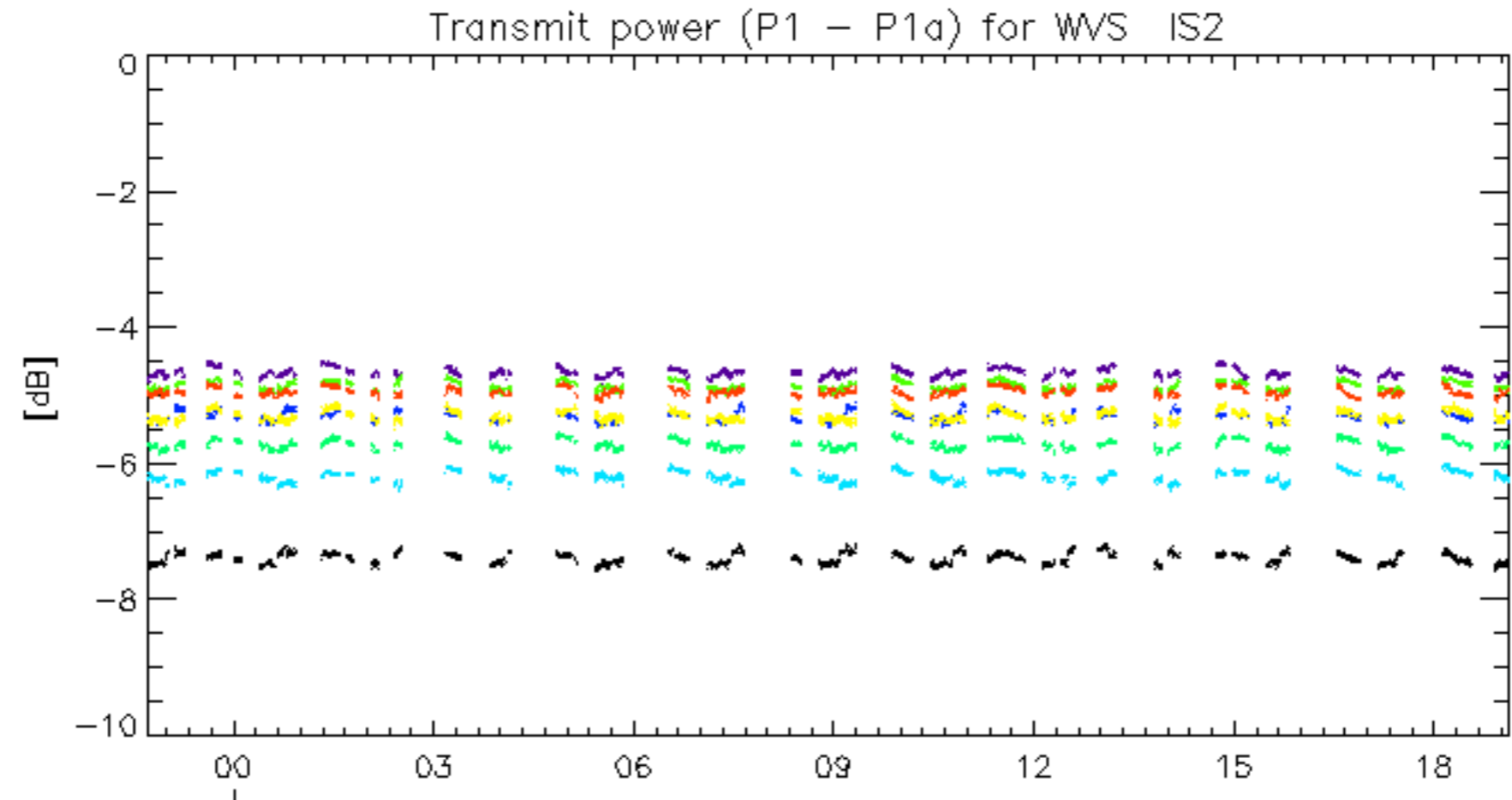
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.