

REPORT OF 060523

last update on Tue May 23 16:56:41 GMT 2006

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1 - Introduction

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 2006-05-22 00:00:00 to 2006-05-23 16:56:41

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	51	100	11	0	17
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	51	100	11	0	17
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	51	100	11	0	17
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	51	100	11	0	17

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	51	36	25	61
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	51	36	25	61
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	51	36	25	61
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	51	36	25	61

2.3 - Browse Visual Inspection

2.2 - Browse Visual Inspection

The following ASAR product shows processing artefacts:

ASA_AP__BPZPDE20060522_073155_000000432047_00493_22090_2510.N1

2.4 - Data Analysis

2.3 - 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	20060522 180513
H	20060521 183650

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.966856	0.016822	0.011021
7	P1	-3.086790	0.016894	-0.101248
11	P1	-4.106040	0.018286	-0.042458
15	P1	-6.128203	0.012680	-0.077127
19	P1	-3.313426	0.008333	-0.026783
22	P1	-4.524538	0.010784	0.013099
26	P1	-4.003166	0.020127	0.074941
30	P1	-5.742623	0.019415	-0.040858
3	P1	-16.616062	0.296343	0.188128
7	P1	-17.074764	0.165267	-0.322922
11	P1	-16.862194	0.338690	-0.278914
15	P1	-13.172534	0.167779	-0.154707
19	P1	-14.223639	0.047915	-0.184260
22	P1	-16.133053	0.413669	-0.132466
26	P1	-15.316649	0.266025	0.225612
30	P1	-16.928743	0.339751	-0.324161

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.245638	0.083143	0.127691
7	P2	-22.136200	0.100118	0.172807
11	P2	-15.978718	0.111817	0.141980
15	P2	-7.167633	0.093491	-0.004642

19	P2	-9.160241	0.086087	-0.031945
22	P2	-18.095846	0.084840	-0.108857
26	P2	-16.346357	0.089759	-0.105949
30	P2	-19.595650	0.085433	0.038801

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.190204	0.003885	0.000431
7	P3	-8.190204	0.003885	0.000431
11	P3	-8.190204	0.003885	0.000431
15	P3	-8.190204	0.003885	0.000431
19	P3	-8.190204	0.003885	0.000431
22	P3	-8.190204	0.003885	0.000431
26	P3	-8.190228	0.003886	0.000507
30	P3	-8.190228	0.003886	0.000507

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.765237	0.085818	-0.101115
7	P1	-2.635476	0.118921	0.059886
11	P1	-2.870663	0.040037	-0.001896
15	P1	-3.508122	0.051479	-0.002601
19	P1	-3.389954	0.014515	-0.025567
22	P1	-5.095475	0.021764	0.046859
26	P1	-5.831599	0.021144	-0.041642
30	P1	-5.182266	0.043657	-0.046443

3	P1	-11.603174	0.137657	-0.018573
7	P1	-9.964986	0.167598	0.040314
11	P1	-10.195241	0.111326	0.079156
15	P1	-10.623075	0.154599	0.196038
19	P1	-15.485044	0.086448	-0.097531
22	P1	-20.818617	1.274583	-0.327173
26	P1	-16.455263	0.378396	-0.190996
30	P1	-18.100397	0.481554	0.298898

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.916700	0.070699	0.071454
7	P2	-22.513905	0.175306	-0.022207
11	P2	-11.187992	0.050326	-0.005017
15	P2	-4.890528	0.042573	-0.072772
19	P2	-6.868845	0.042127	-0.041014
22	P2	-8.179972	0.053400	-0.056458
26	P2	-24.074818	0.125756	-0.107676
30	P2	-22.055353	0.087497	-0.040244

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.022401	0.003810	0.000780
7	P3	-8.022474	0.003821	0.000738
11	P3	-8.022500	0.003792	0.000572
15	P3	-8.022324	0.003813	0.000799
19	P3	-8.022513	0.003812	0.001163
22	P3	-8.022477	0.003807	0.000639
26	P3	-8.022293	0.003798	0.000522
30	P3	-8.022434	0.003809	0.000865

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	0.000533786
	stdev	1.90190e-07
MEAN Q	mean	0.000514096
	stdev	2.27042e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134805
	stdev	0.00116853
STDEV Q	mean	0.135148
	stdev	0.00118537



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006052[123]

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
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ASA_IMM_1PNPDE20060521_004019_000001342047_00474_22071_5837.N1	1	0
ASA_IMM_1PNPDE20060521_022552_000000362047_00476_22073_5844.N1	1	0
ASA_WSM_1PNPDE20060521_113142_000001652047_00481_22078_0109.N1	0	14



7 - Doppler Analysis

Preliminary report. The data is not yet controlled

6.1 - Unbiased Doppler Error for WVS

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

6.2 - Absolute Doppler for WVS

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

6.3 - Doppler evolution versus ANX for WVS

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

6.4 - Unbiased Doppler Error for GM1

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

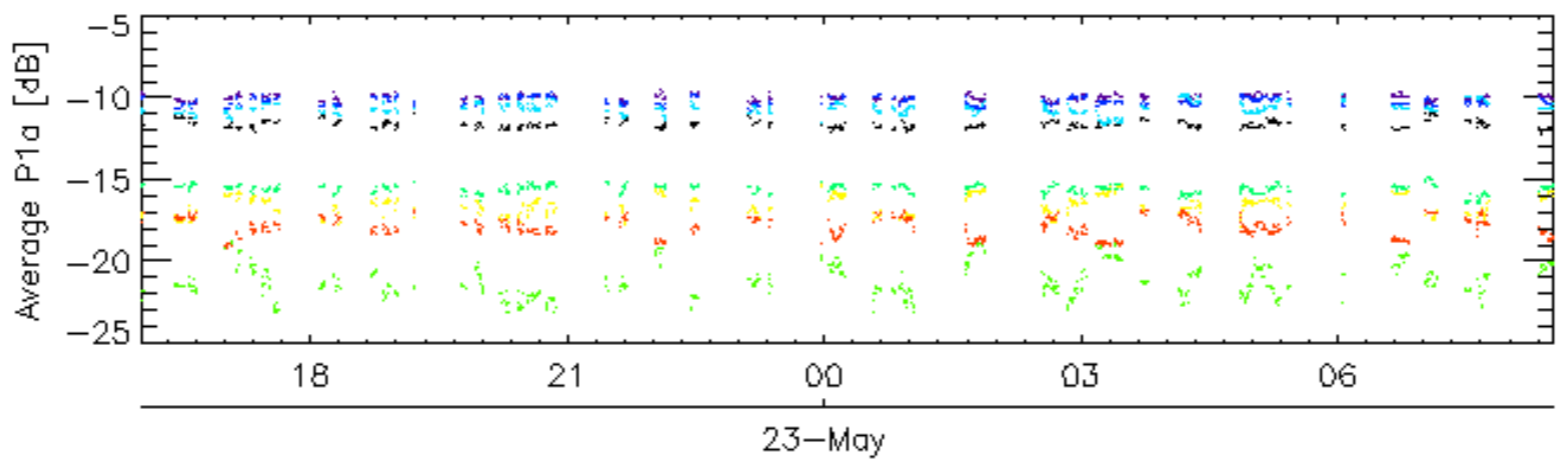
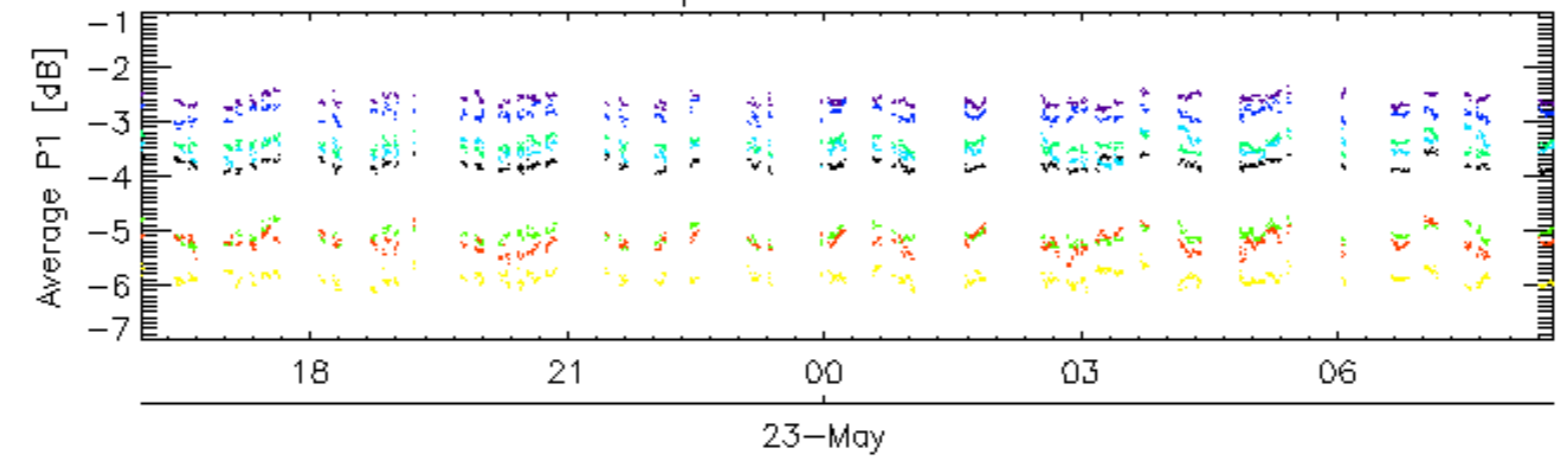
6.5 - Absolute Doppler for GM1

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

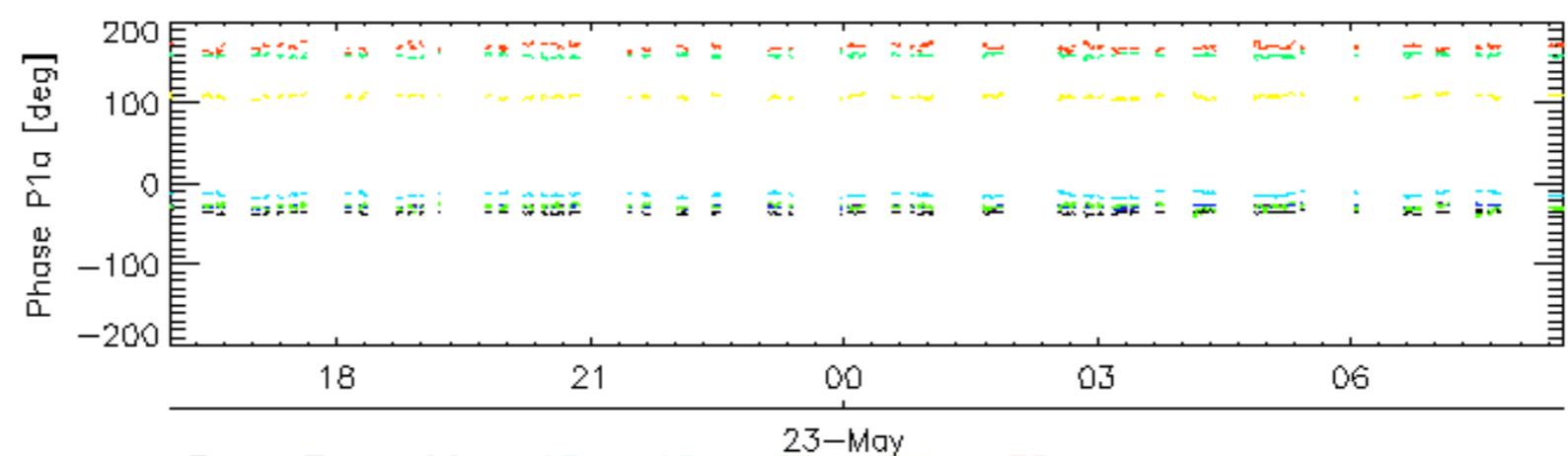
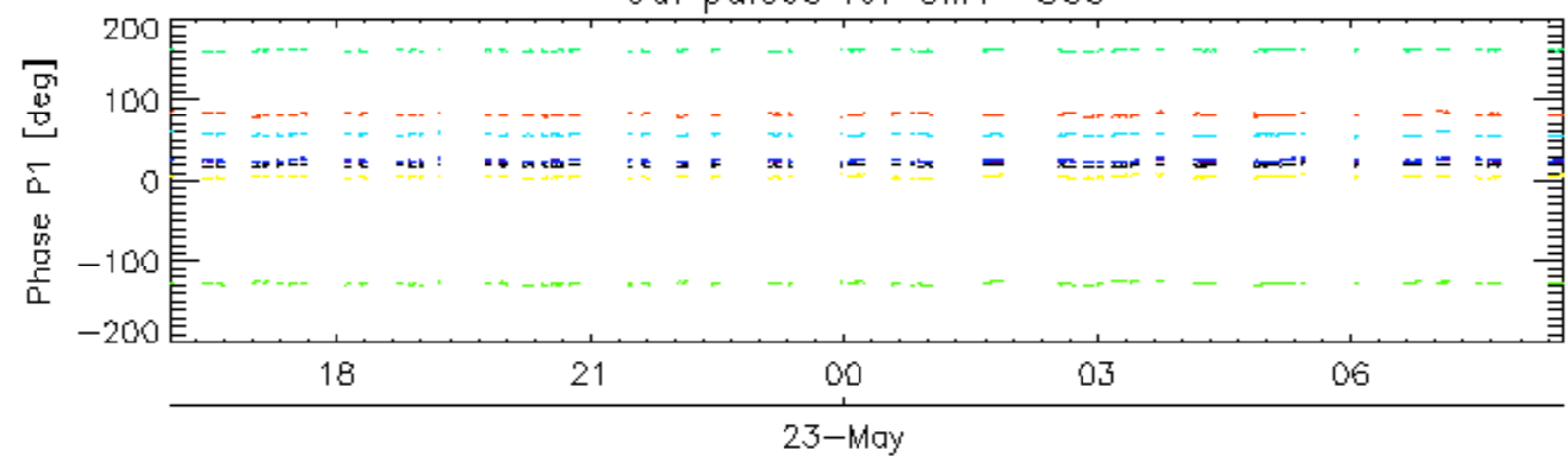
6.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

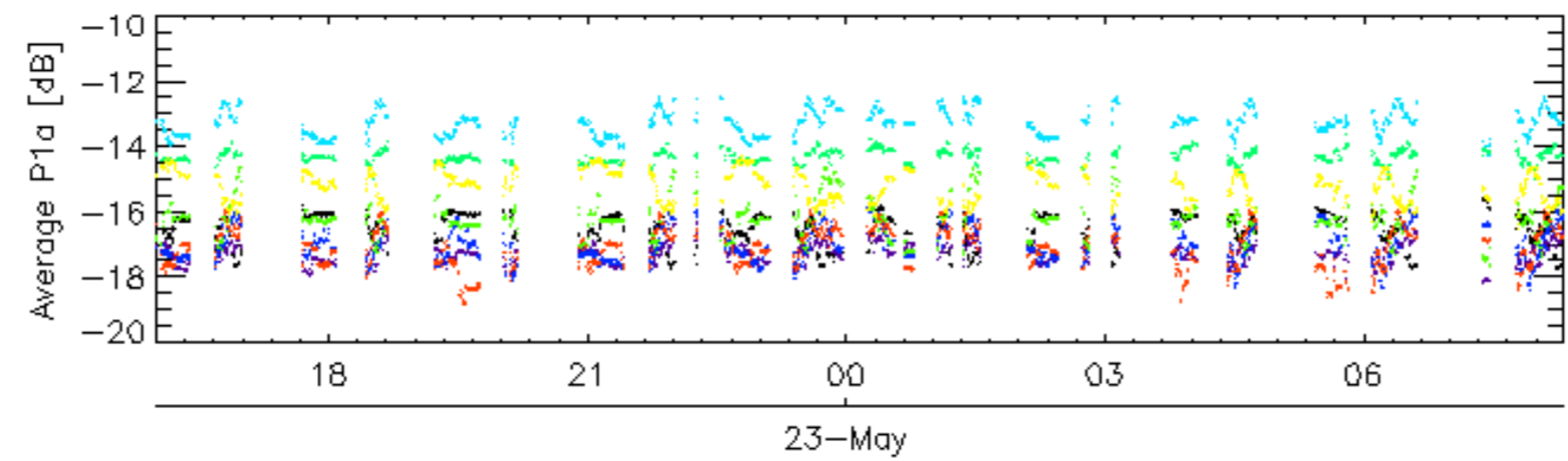
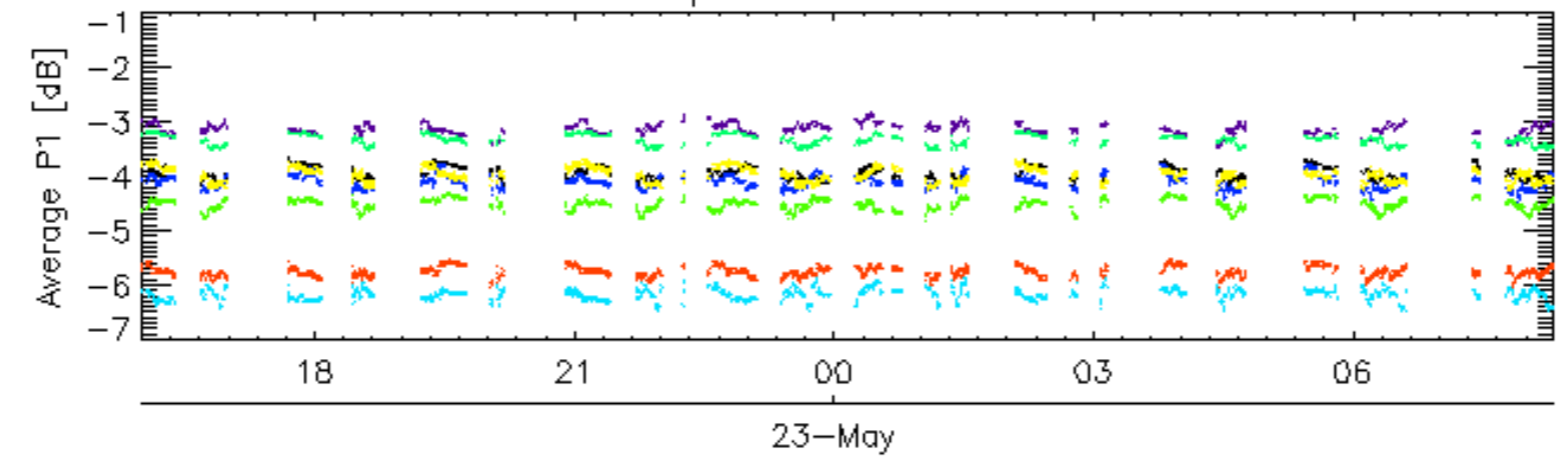


Cal pulses for GM1 SS3

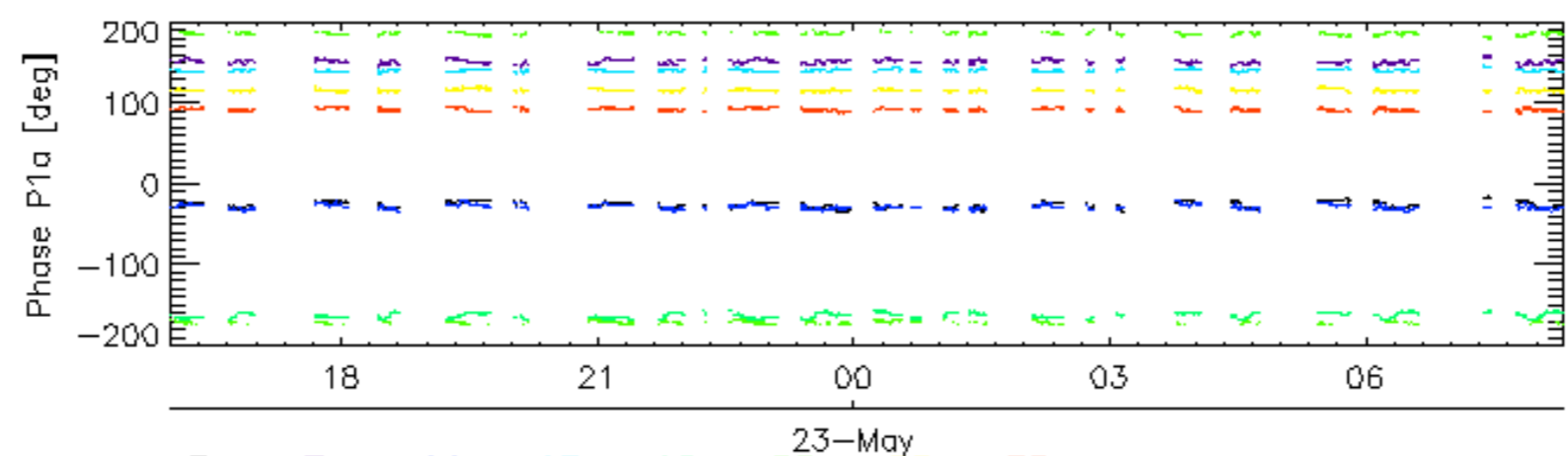
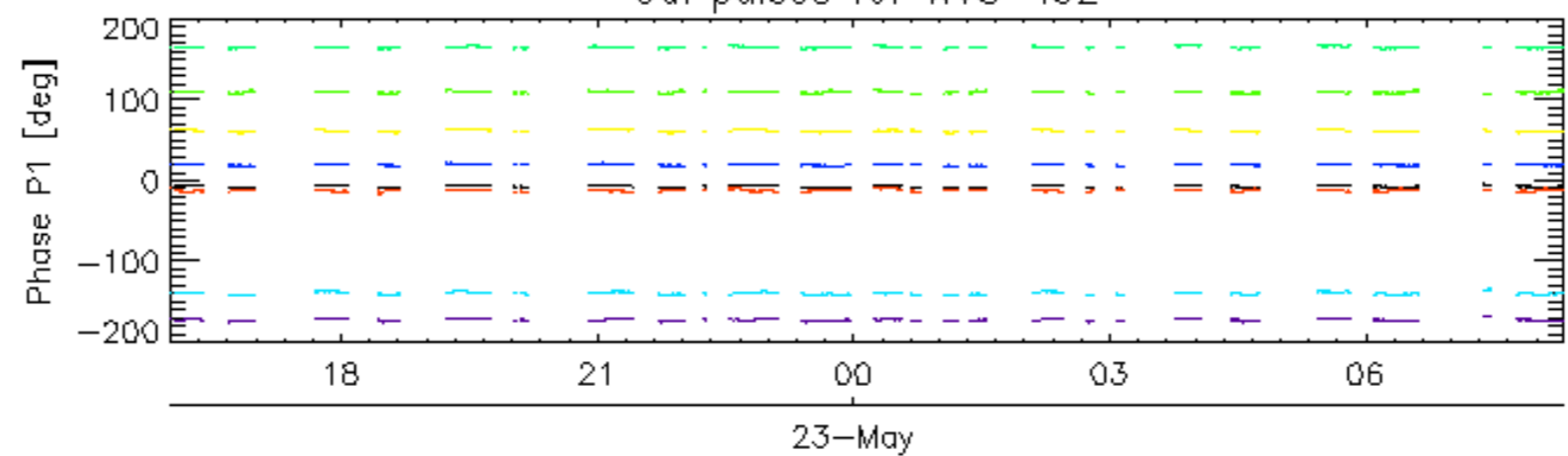


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

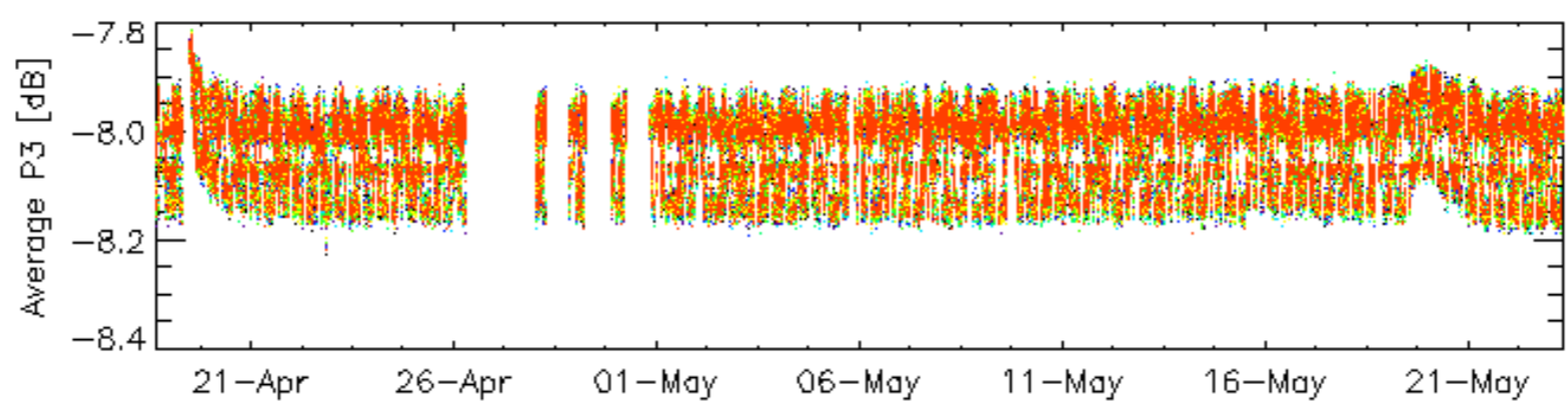
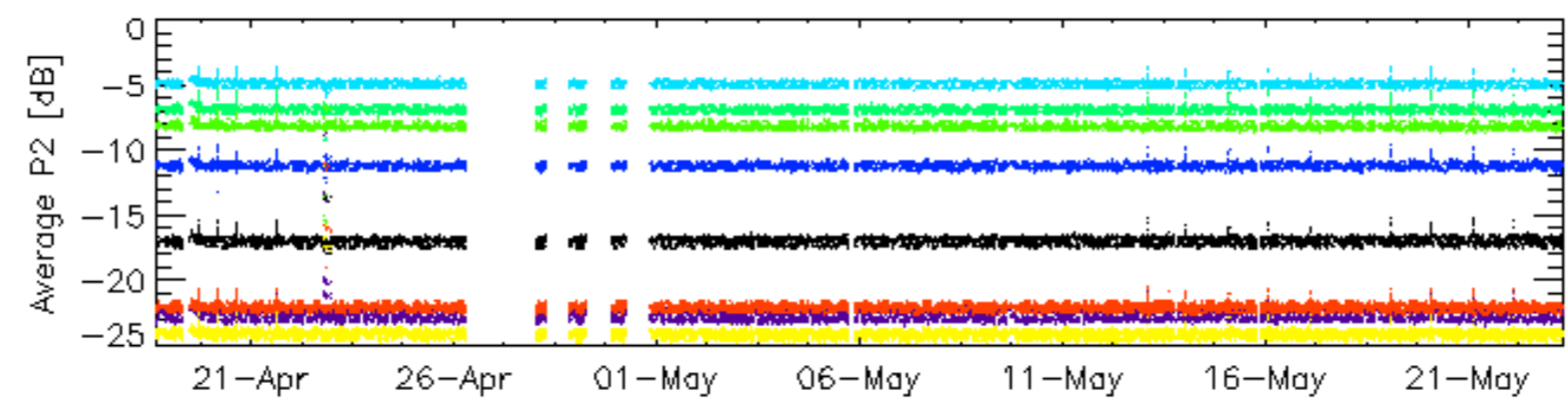
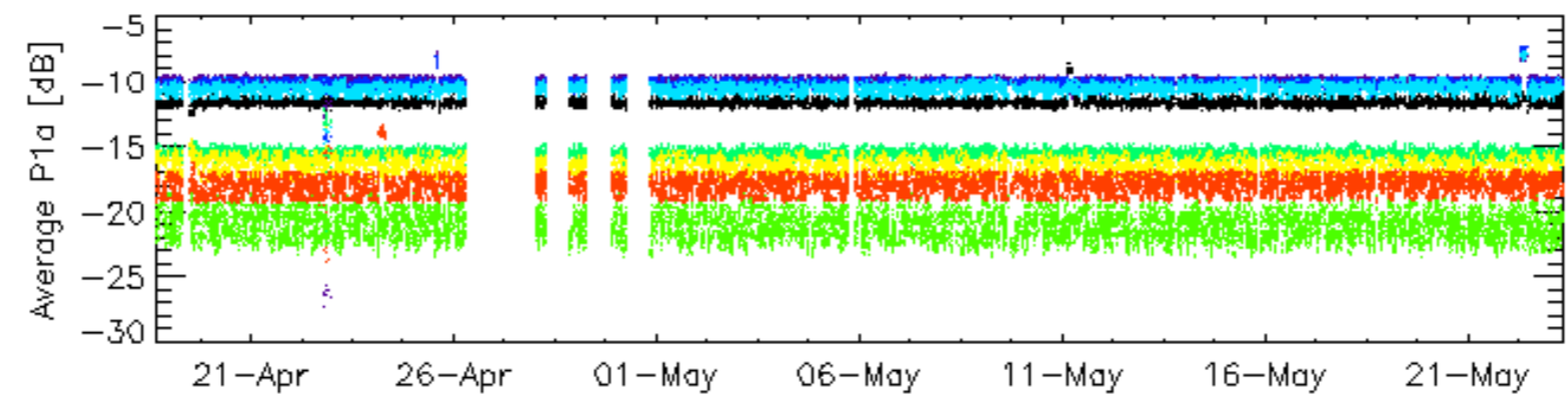
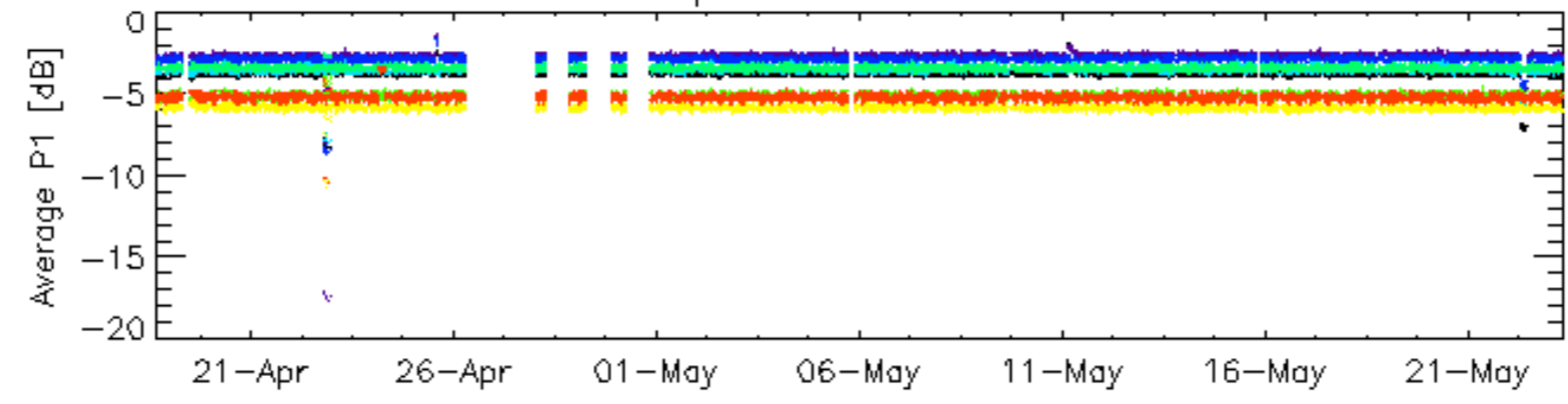


Cal pulses for WVS IS2



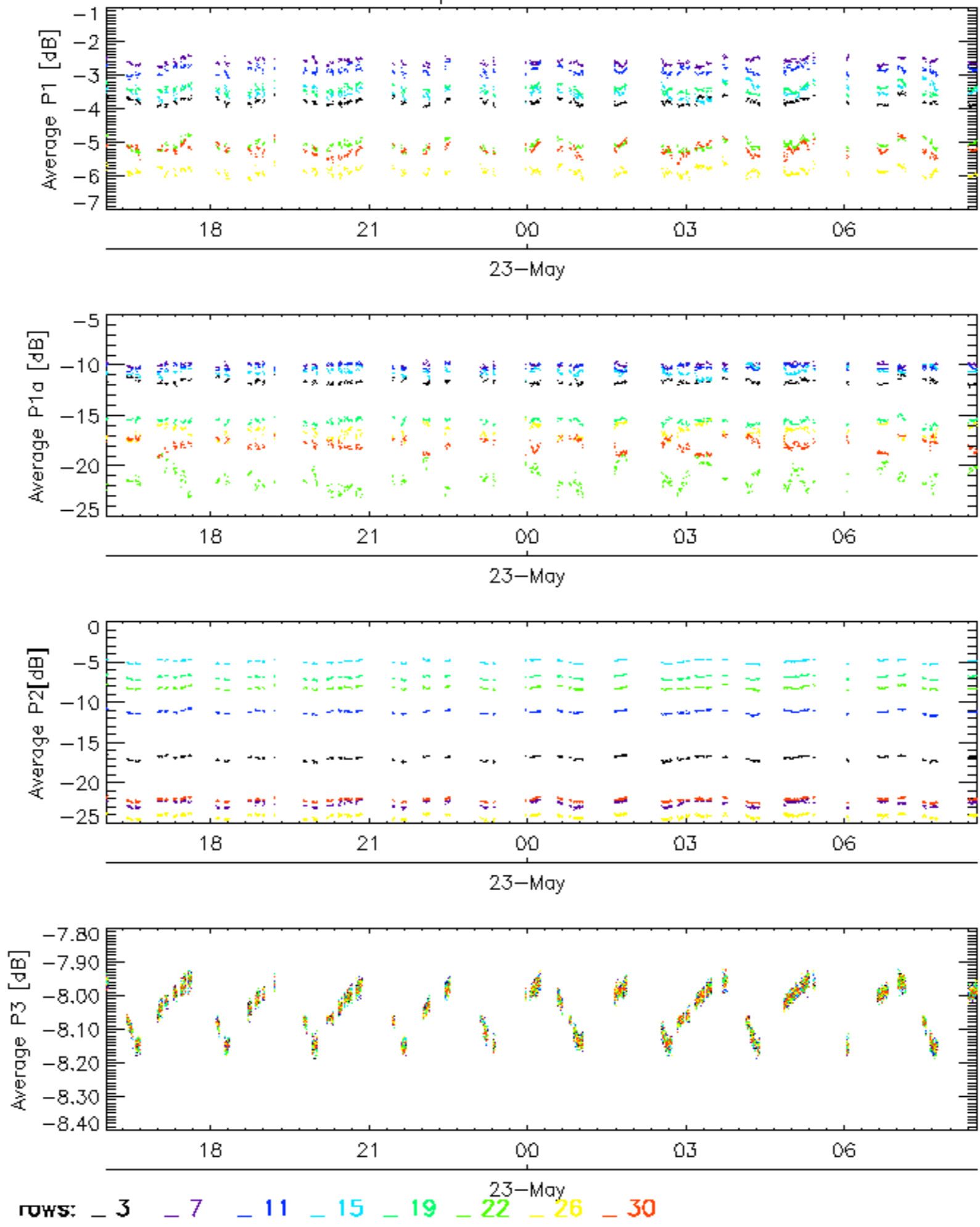
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

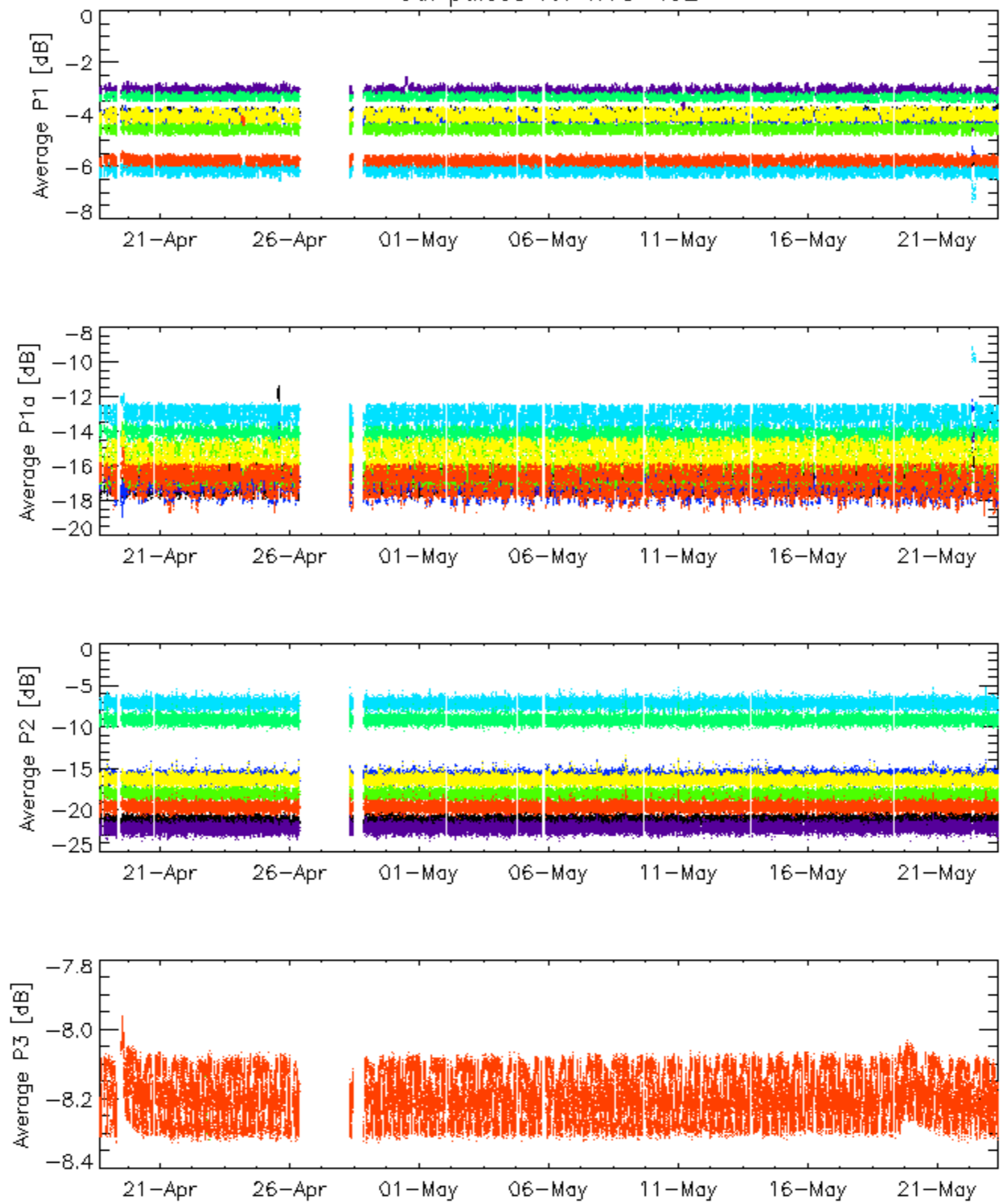


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

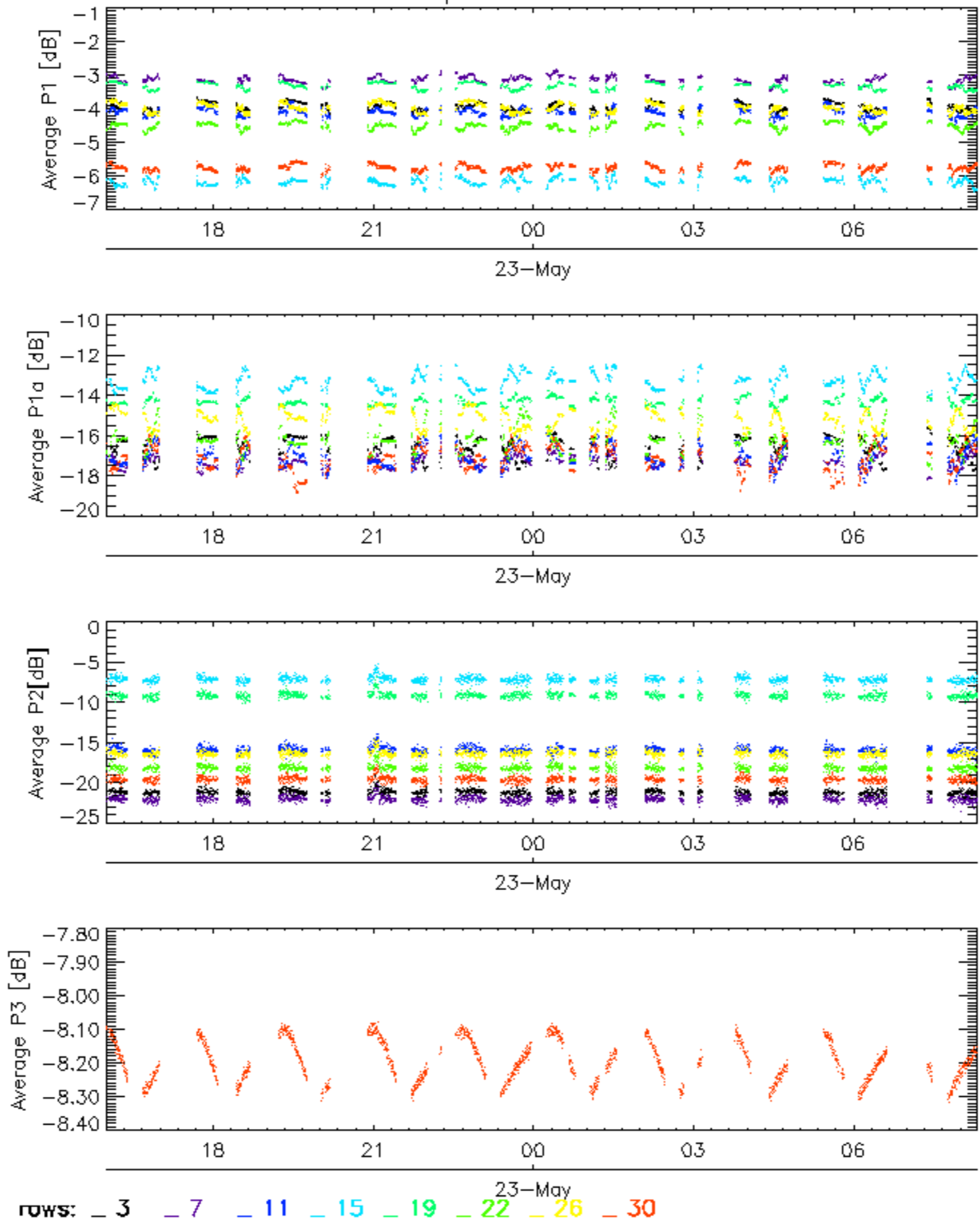


Cal pulses for WVS IS2



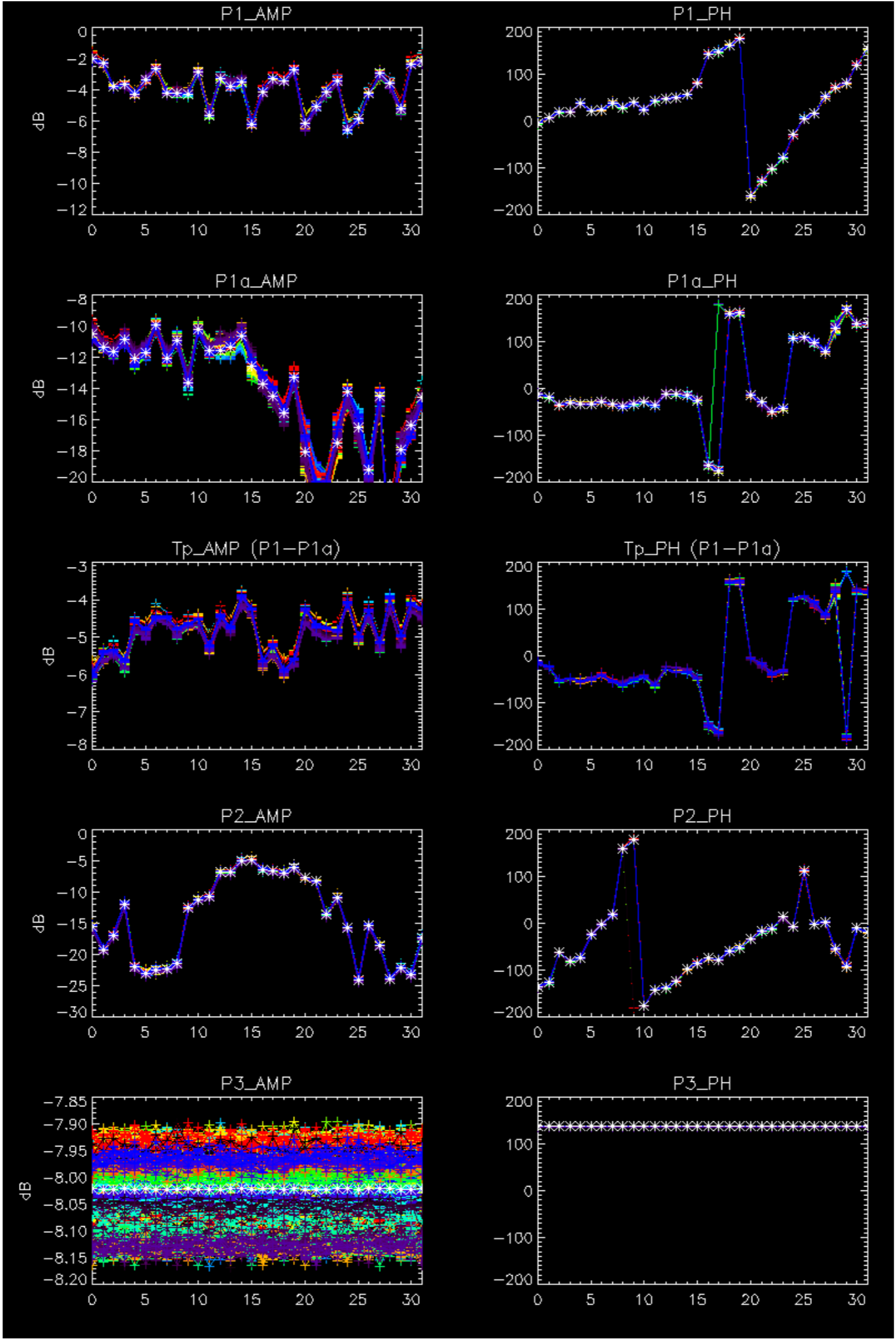
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

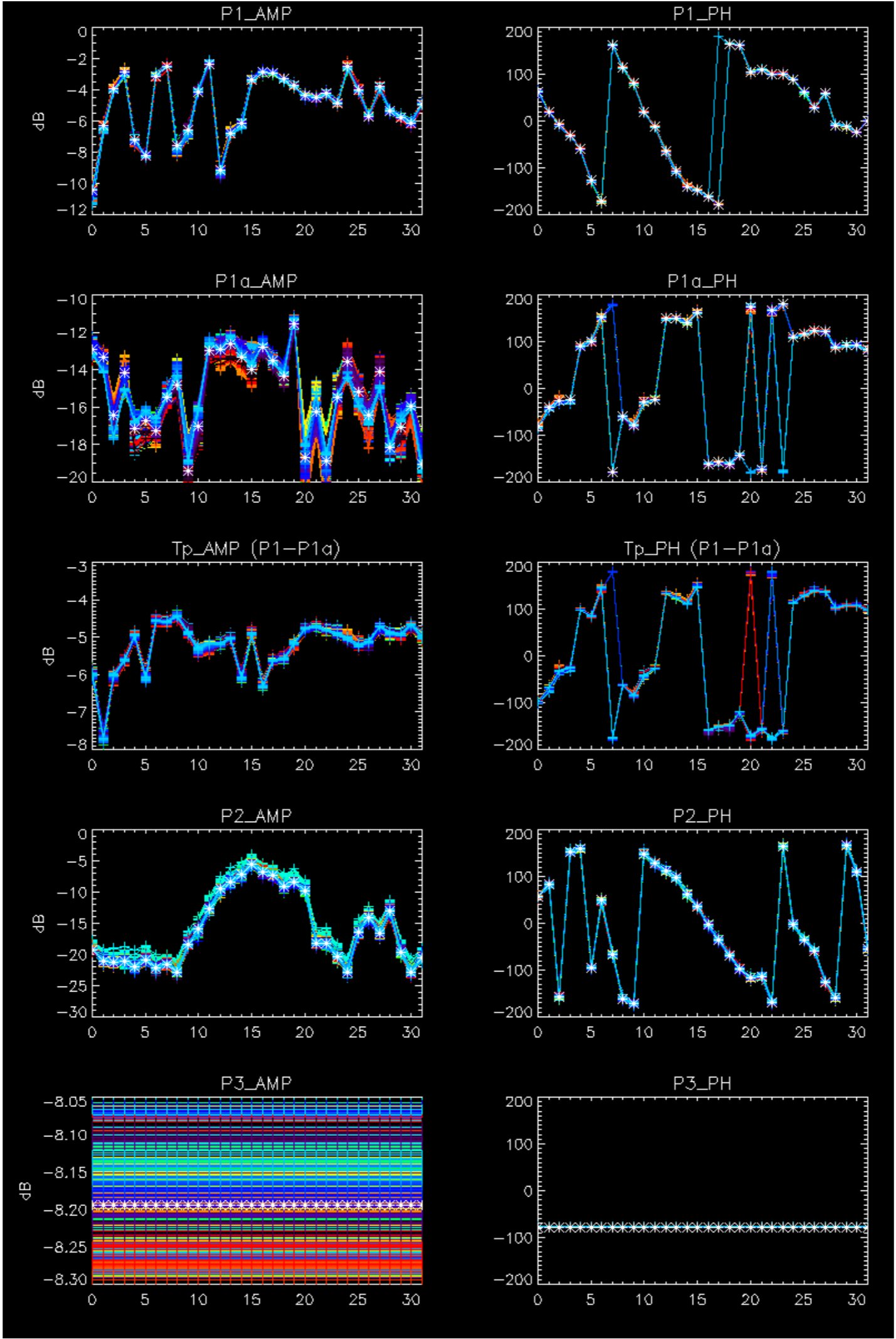
Cal pulses for WVS IS2



The following ASAR product shows processing artefacts:
ASA_AP__BPZPDE20060522_073155_000000432047_00493_22090_2510.N1

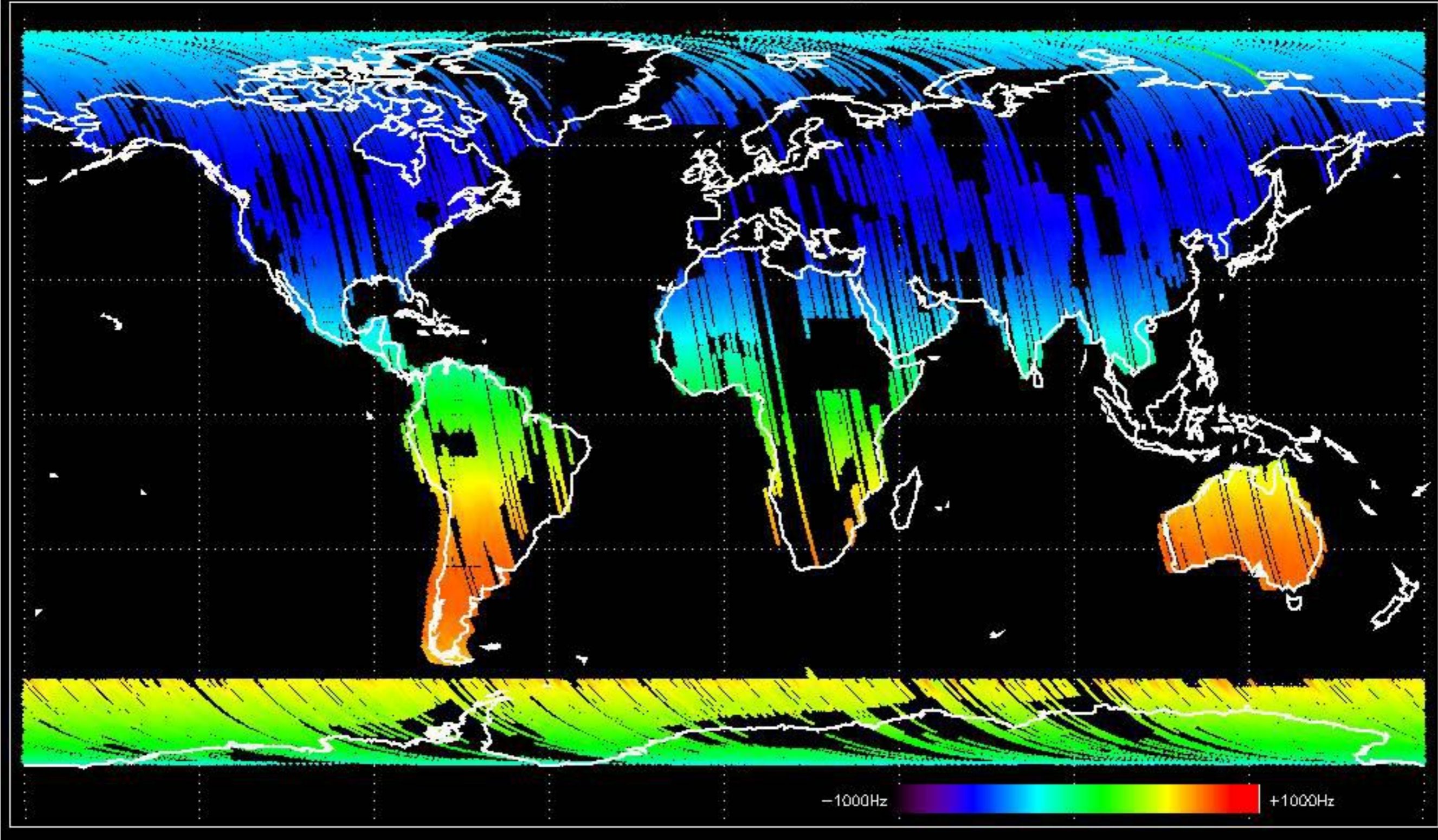
No anomalies observed.



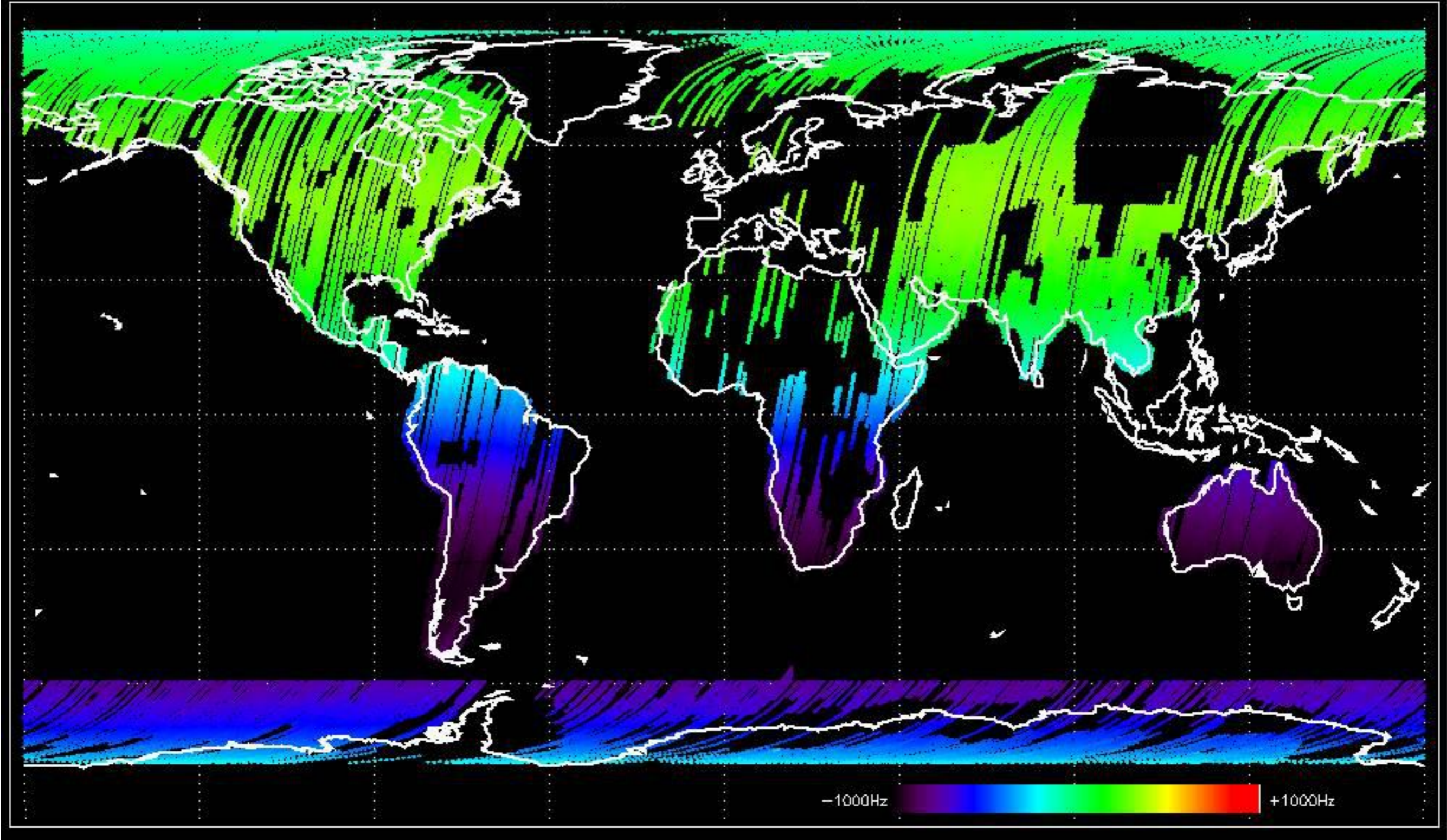


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

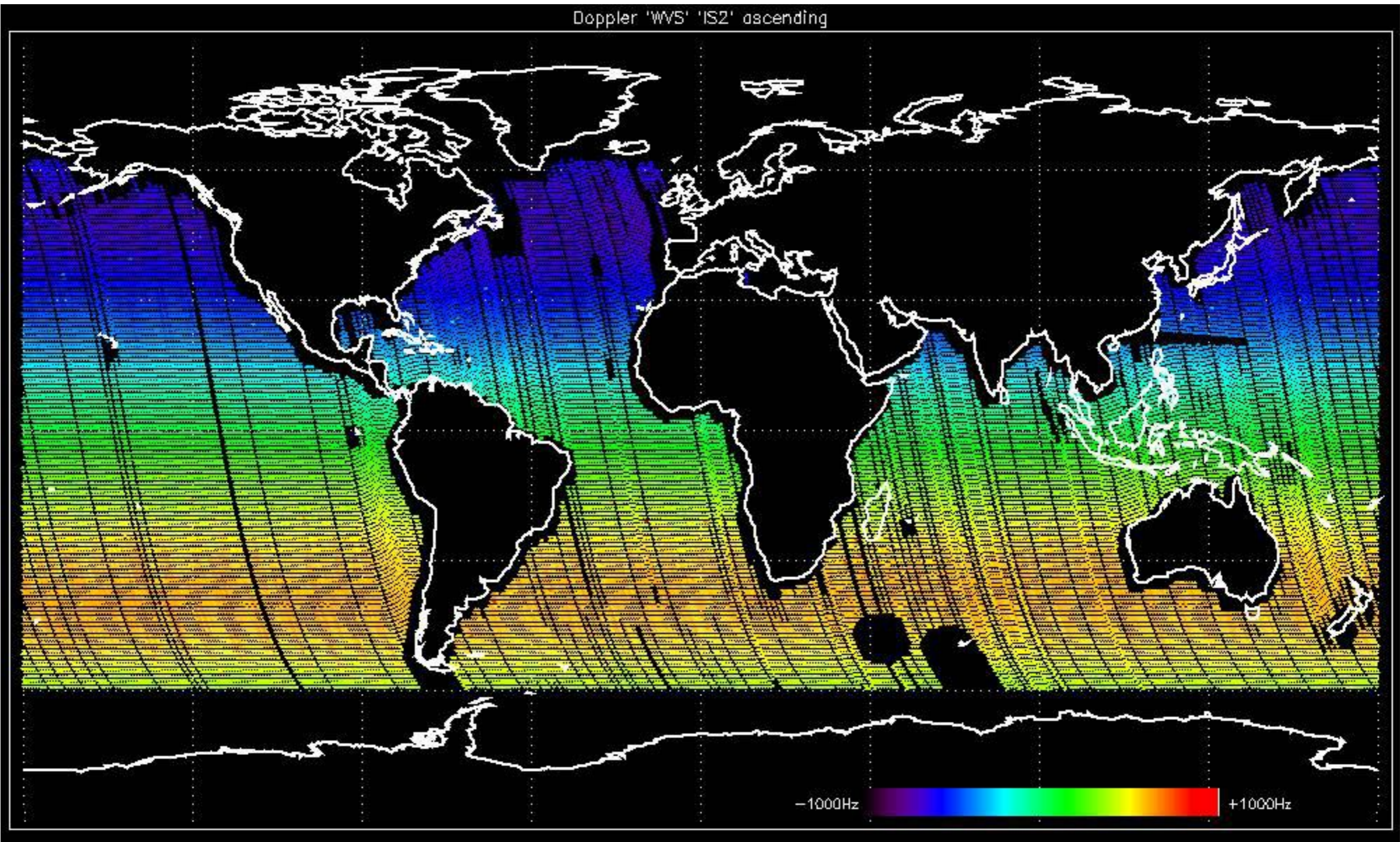
Doppler 'GM1' 'SS1' ascending



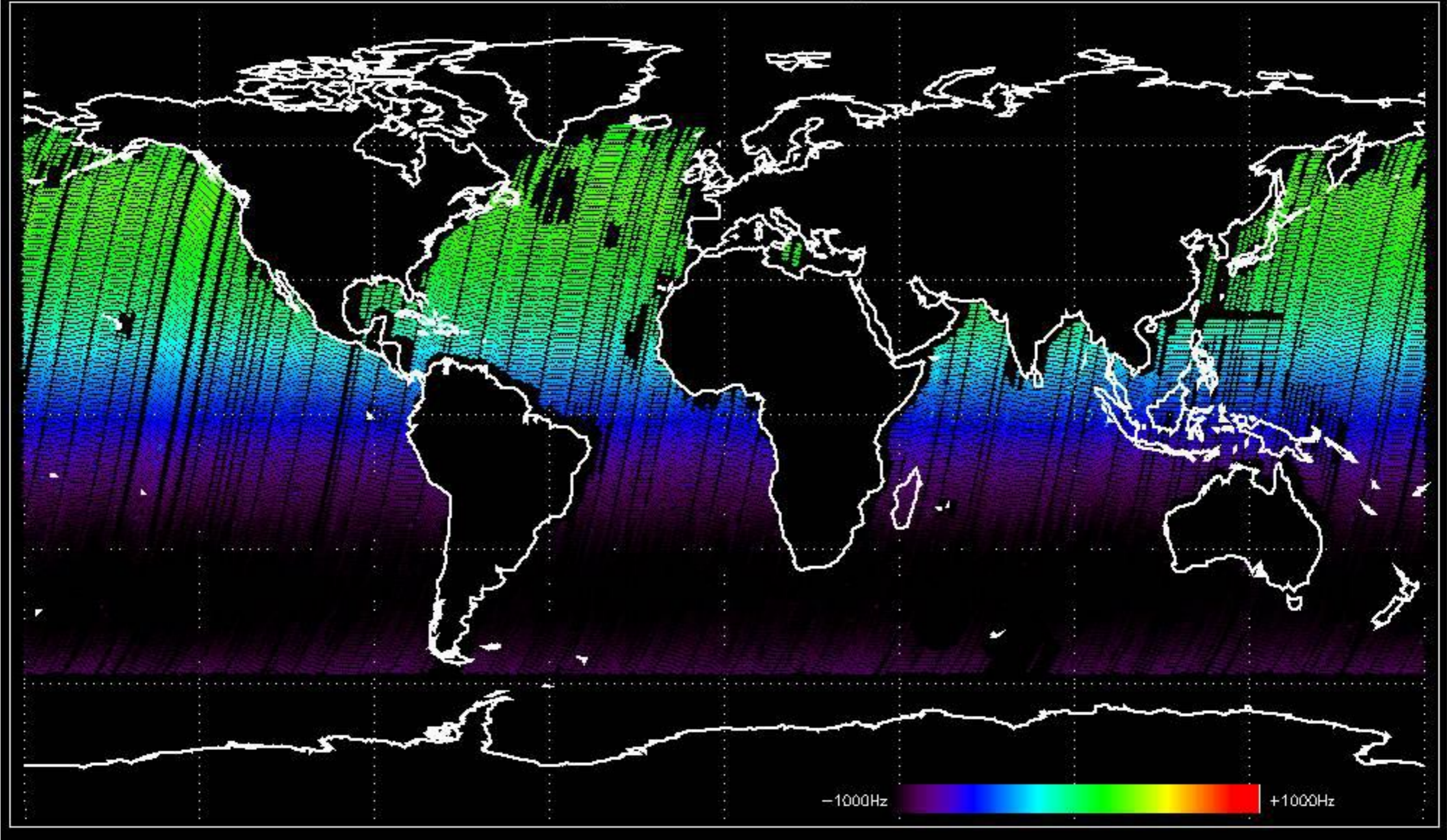
Doppler 'GM1' 'SS1' descending



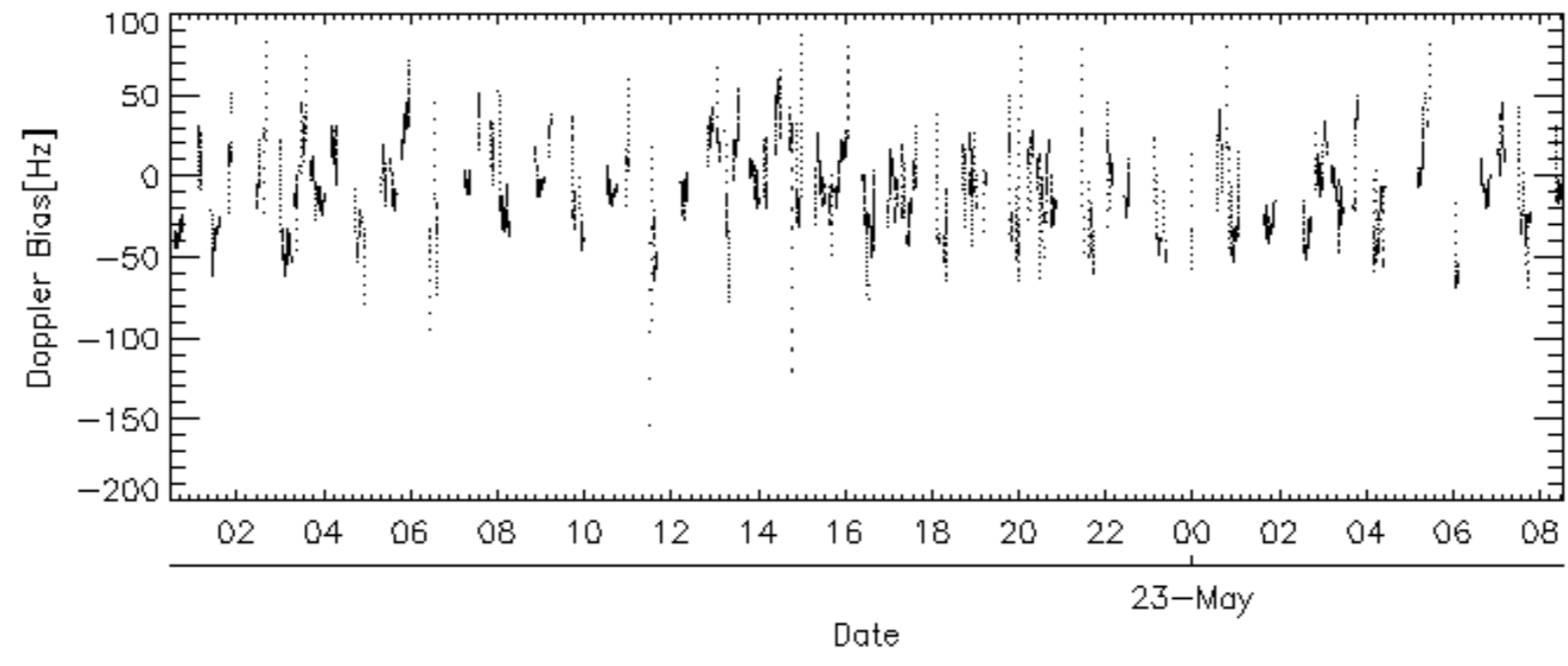
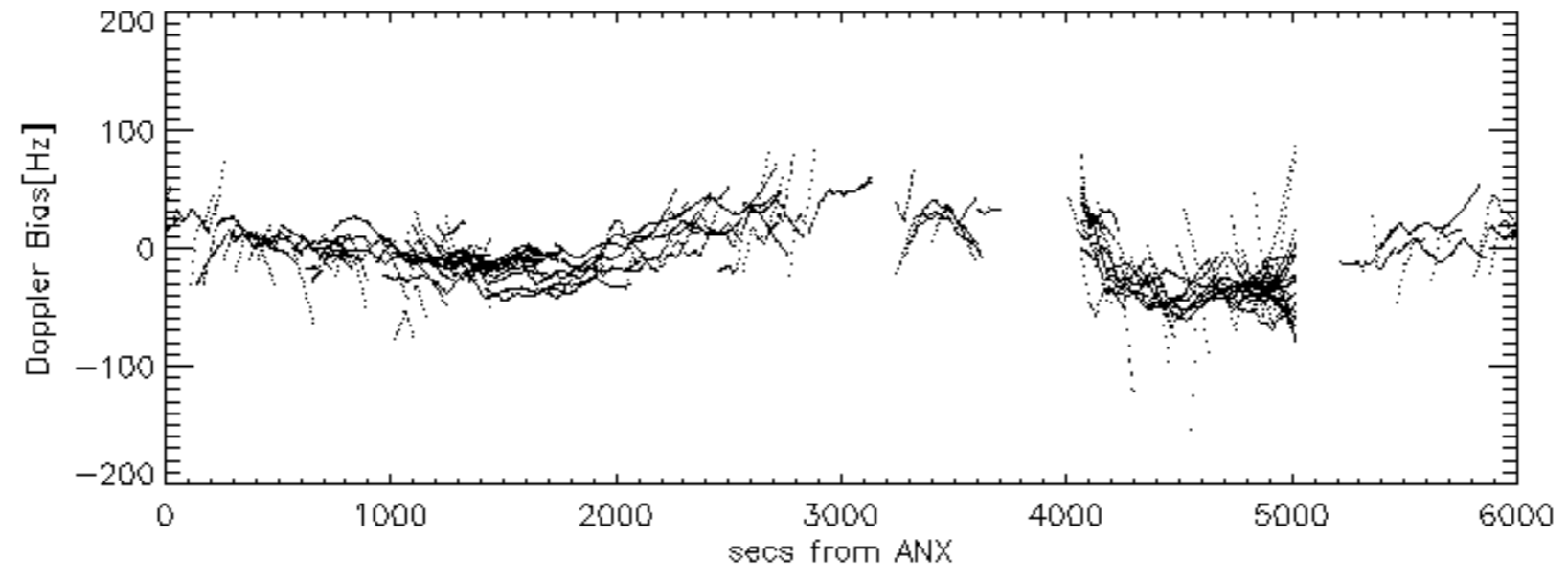
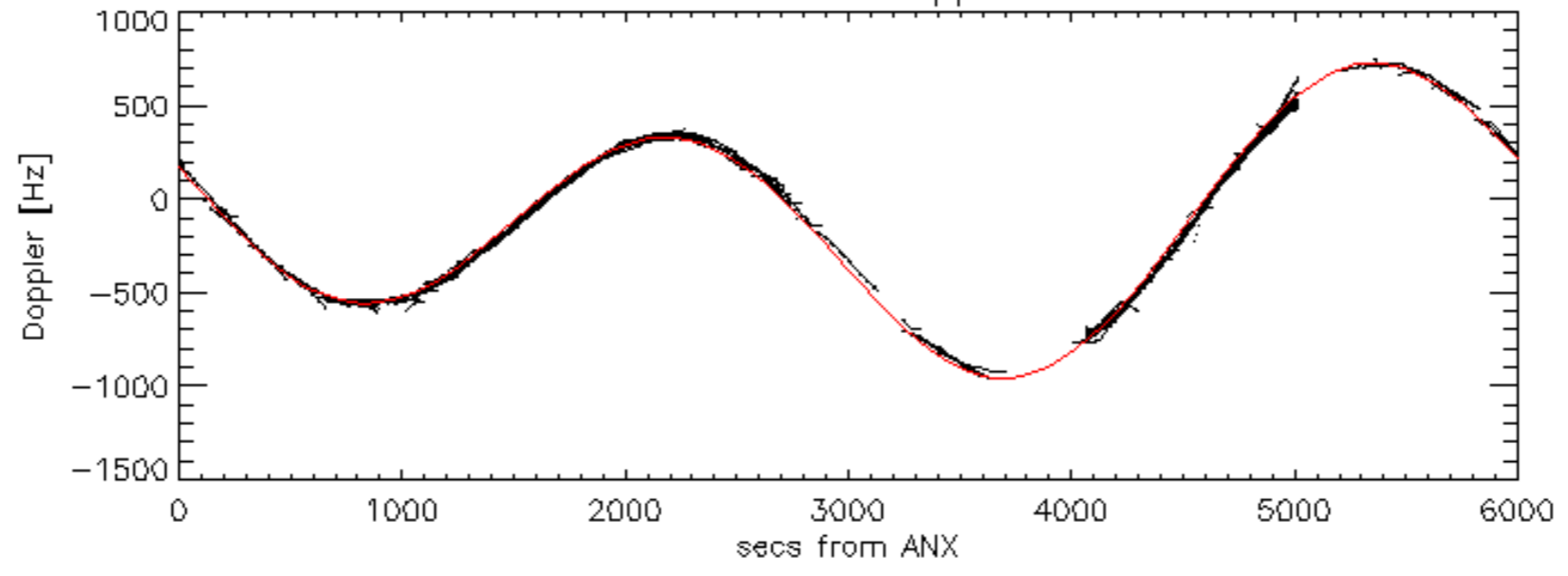
Doppler 'WVS' 'IS2' ascending

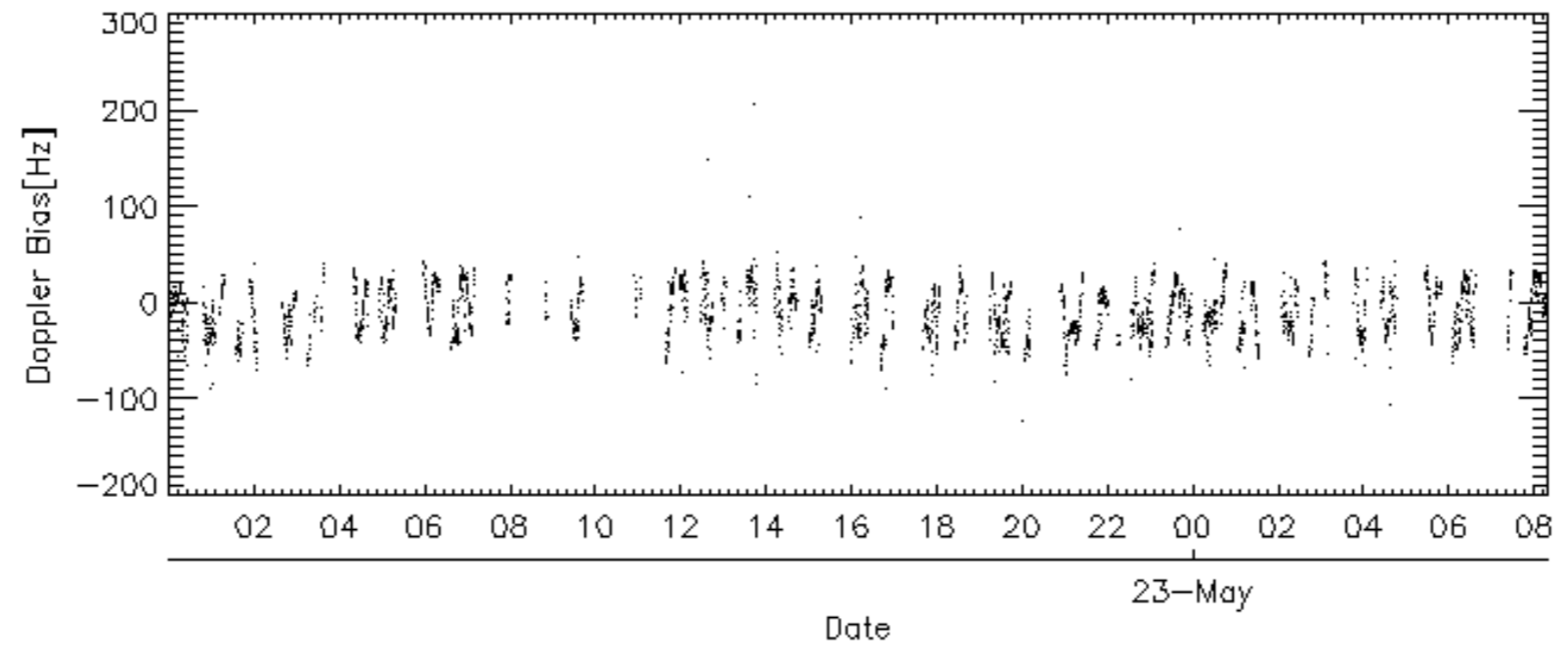
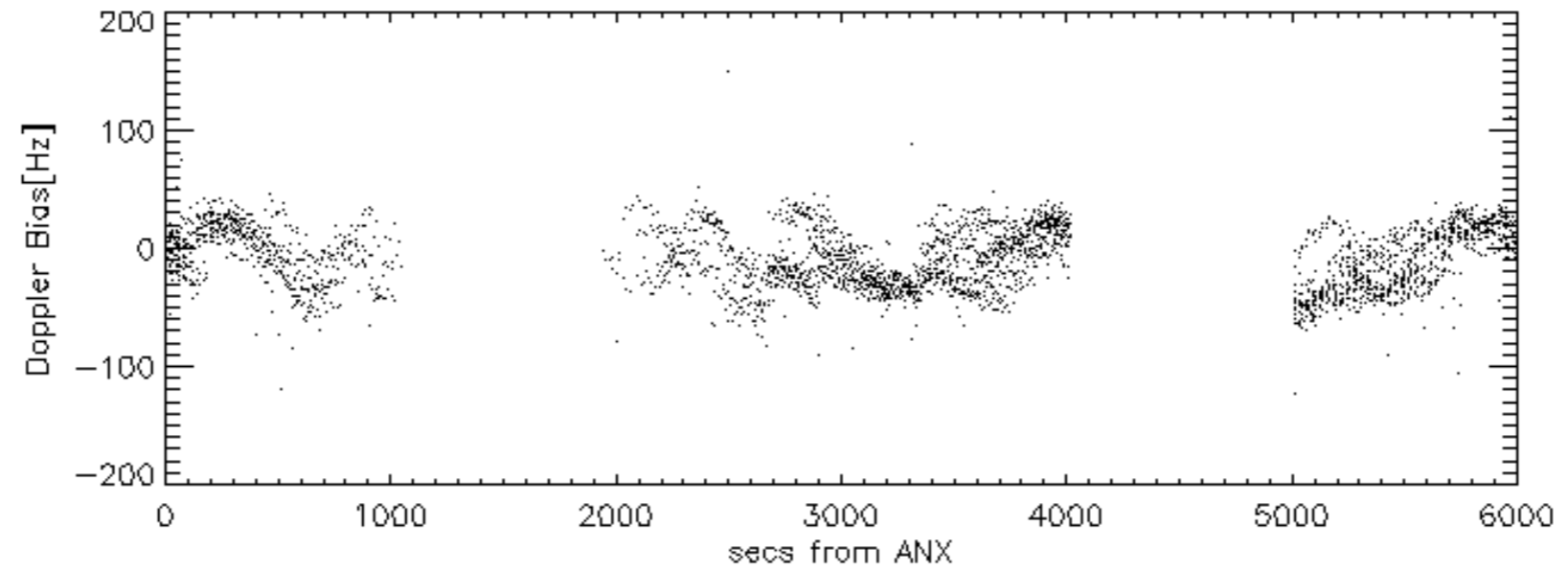
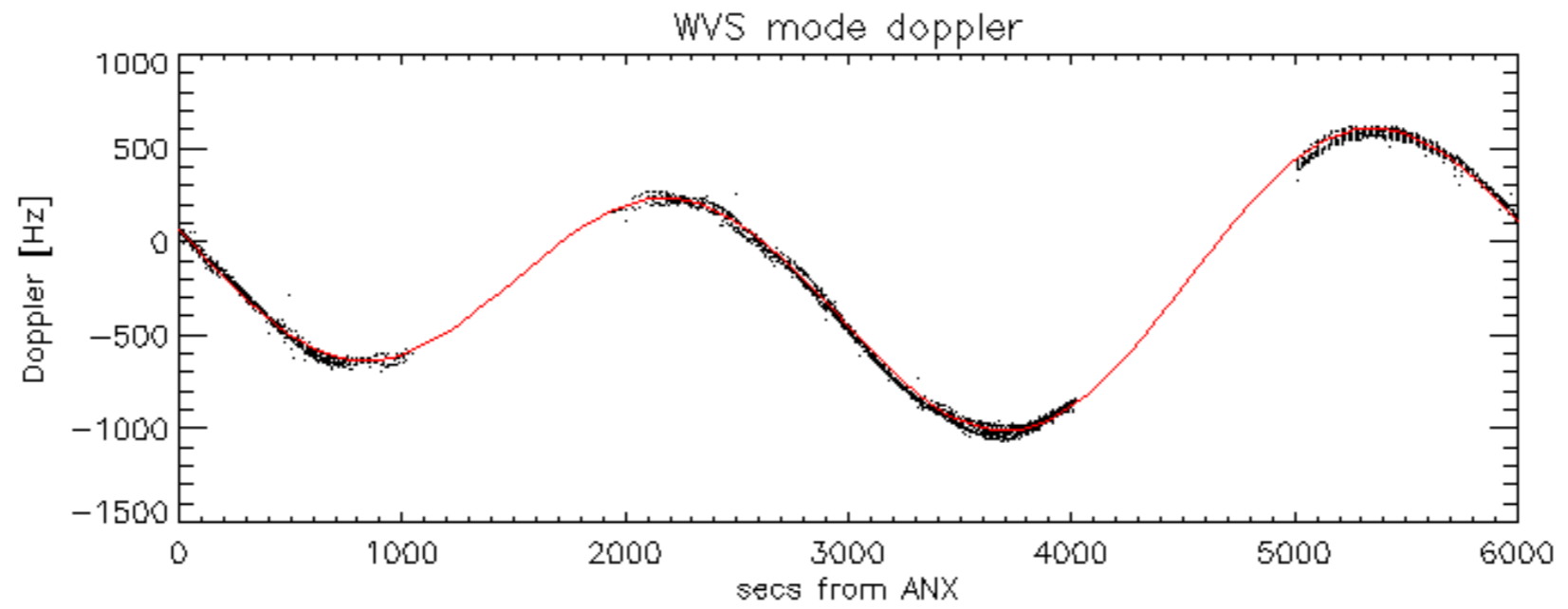


Doppler 'WVS' 'IS2' descending

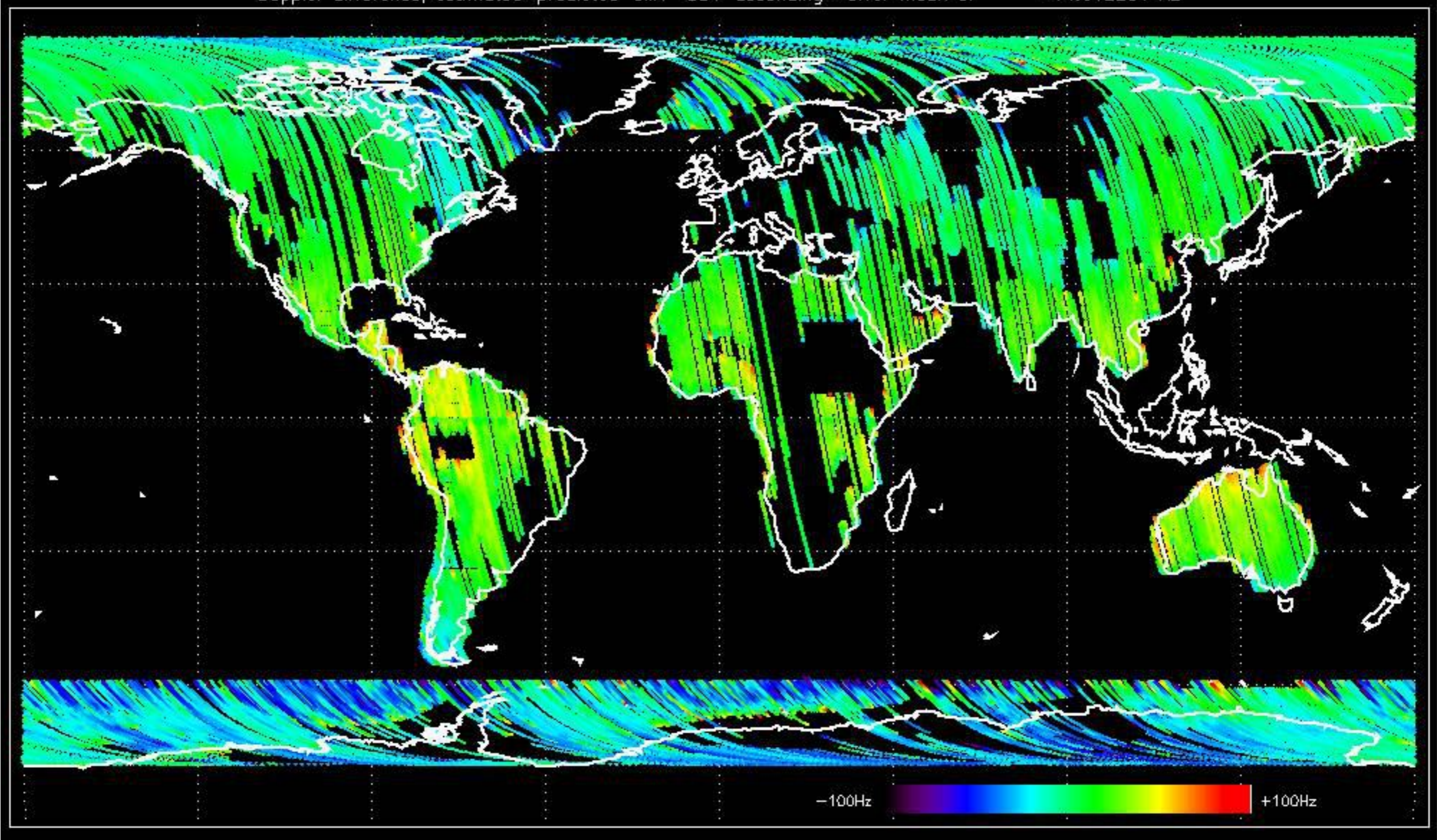


GM1 mode doppler

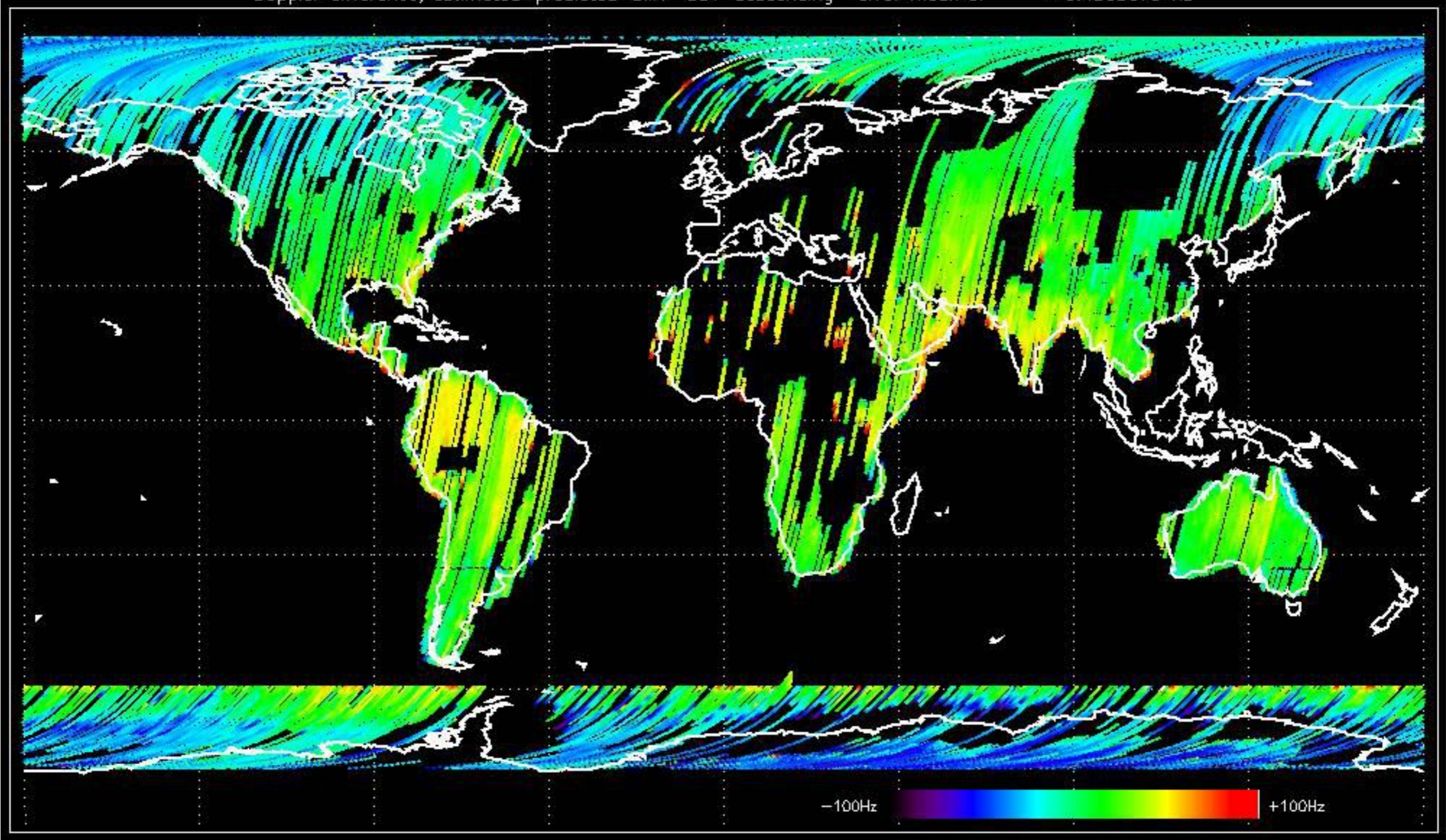




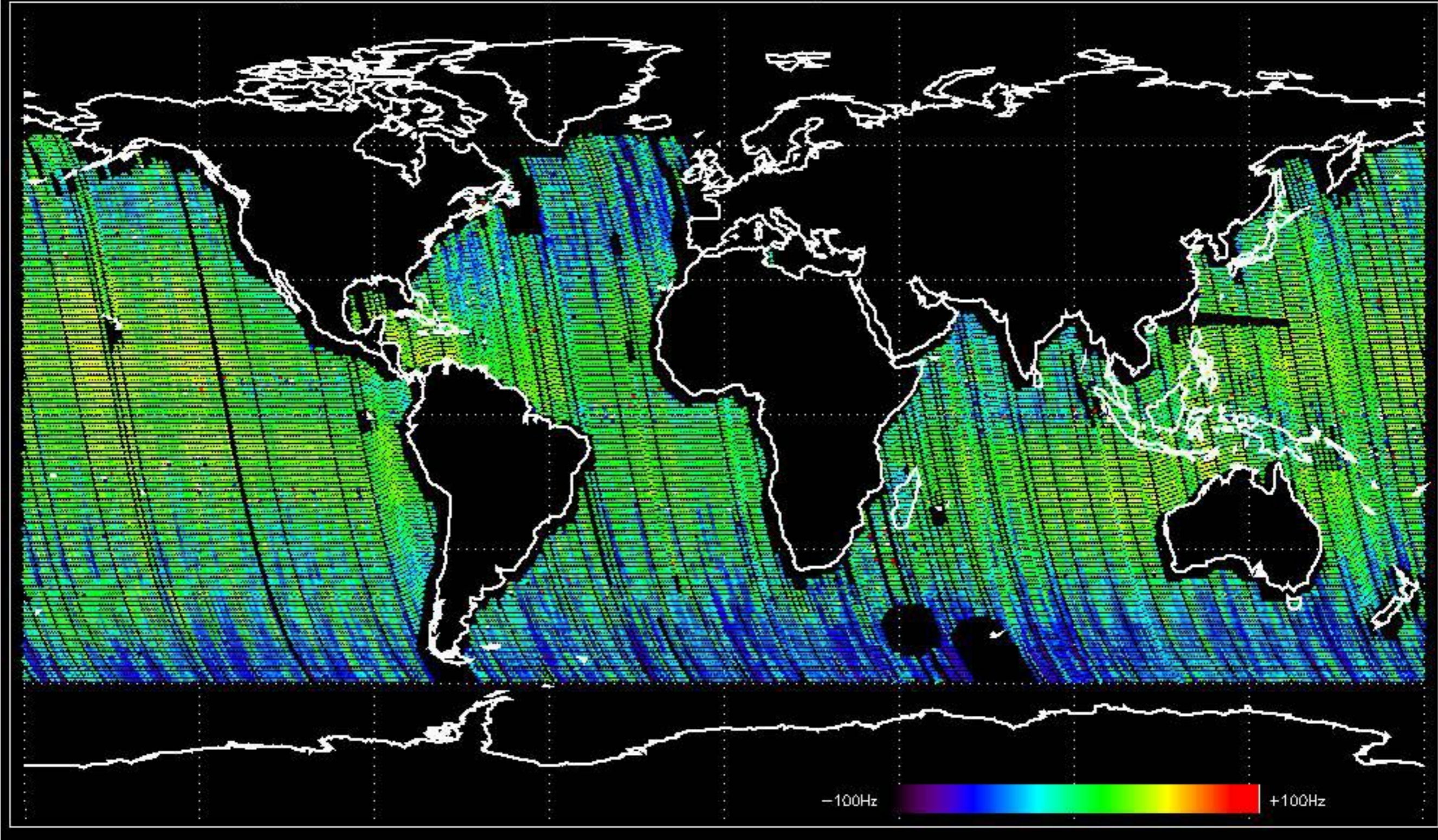
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.612264 Hz



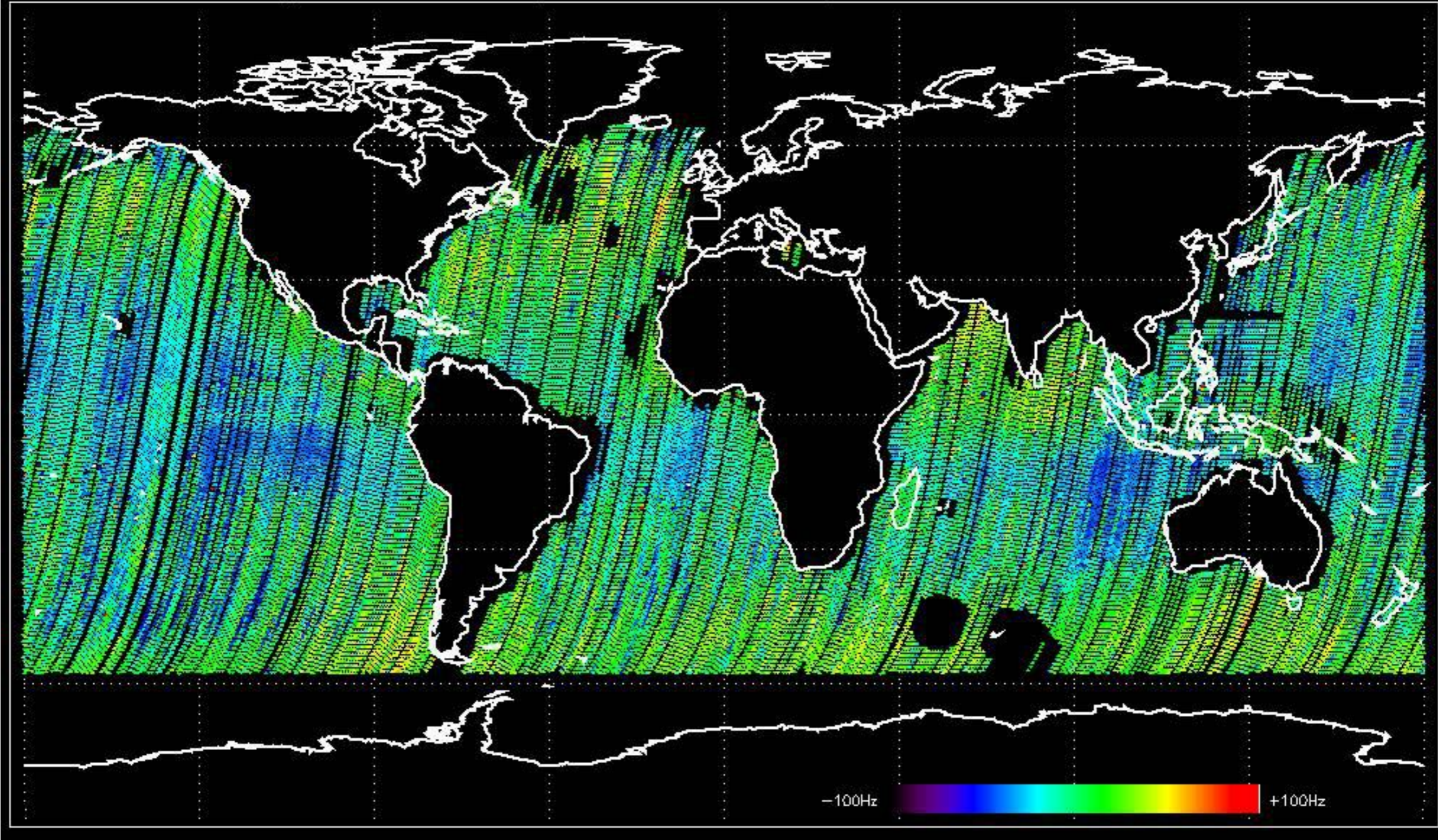
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -3.4863673 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.0130207 Hz

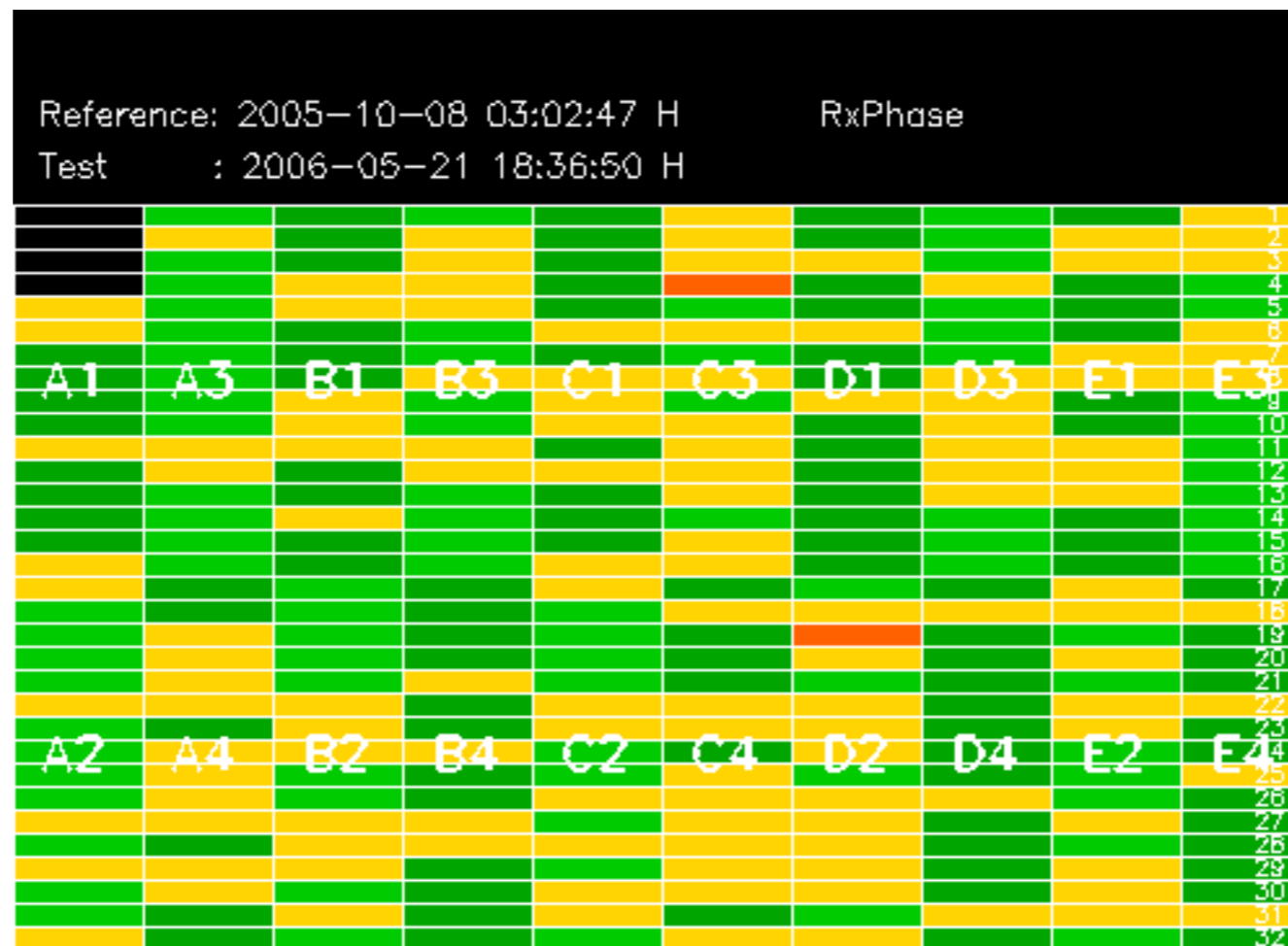


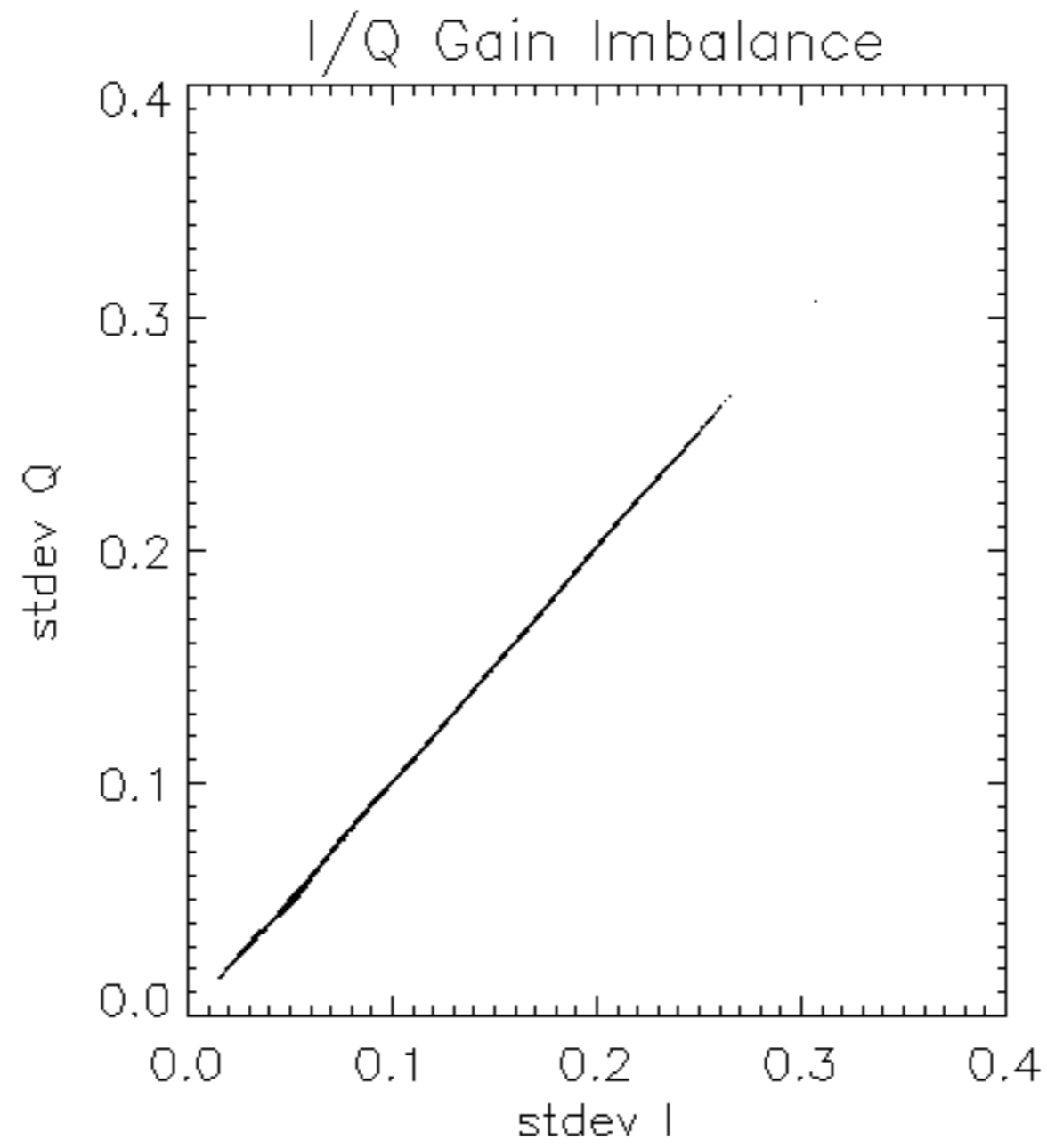
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.760393 Hz

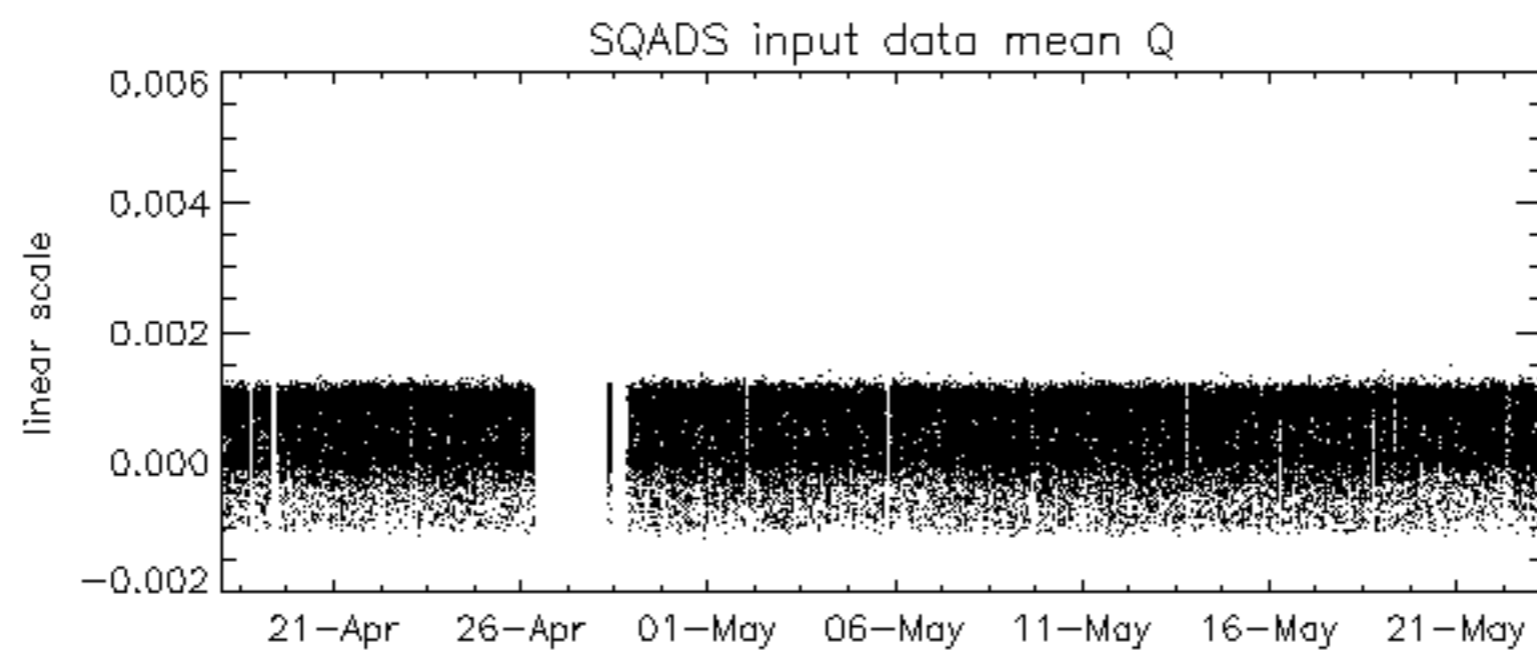
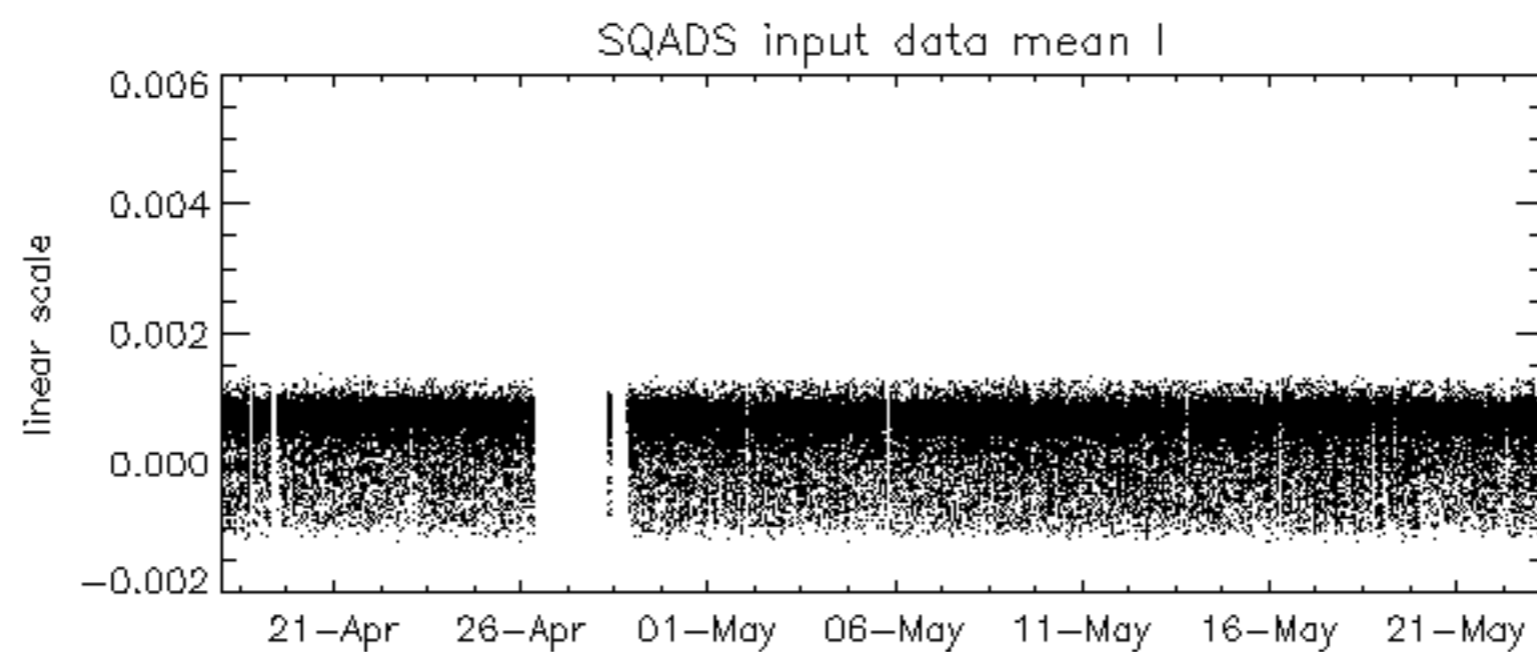
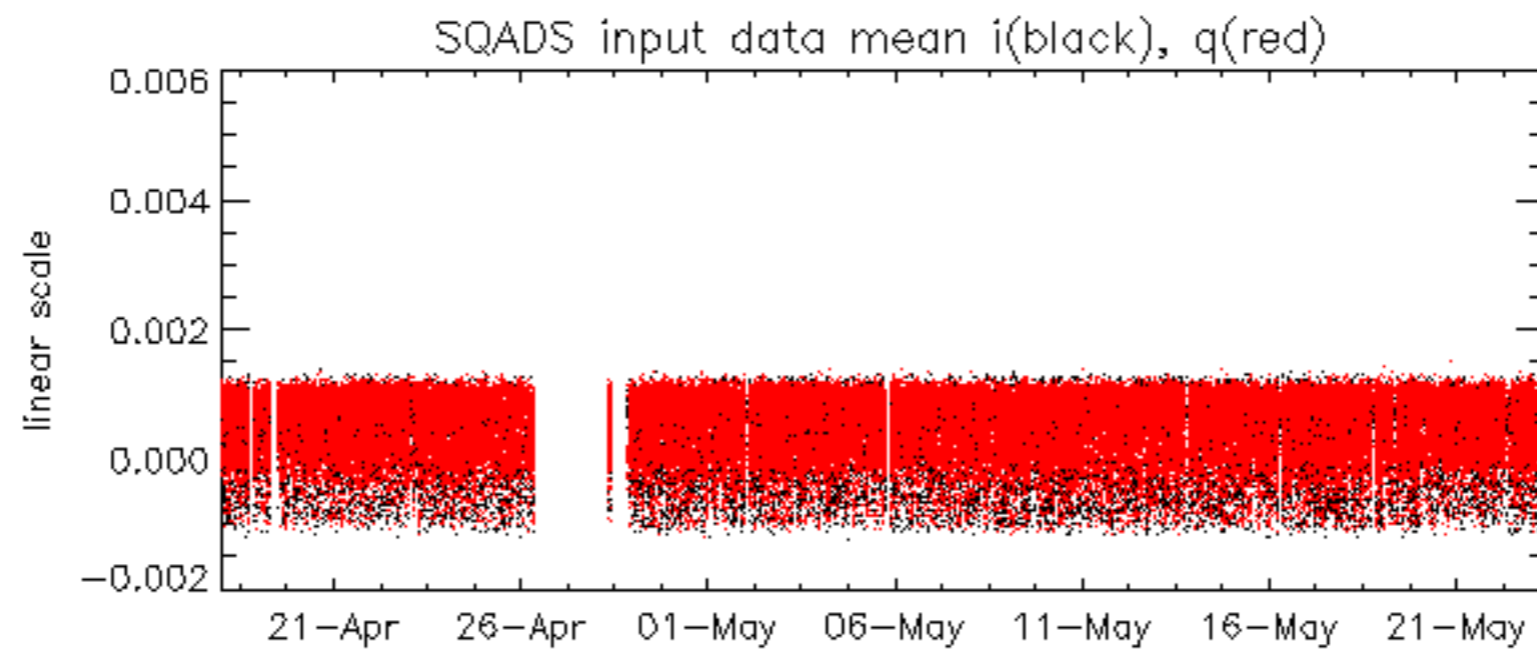


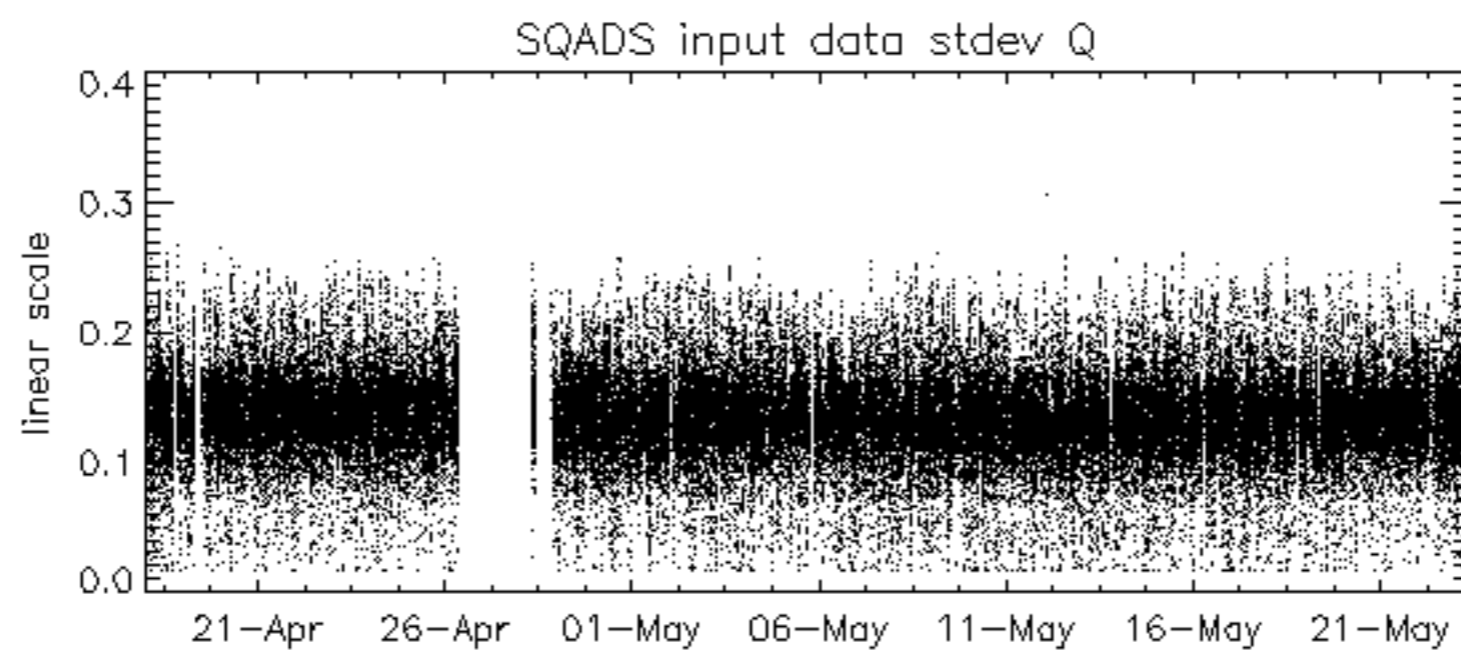
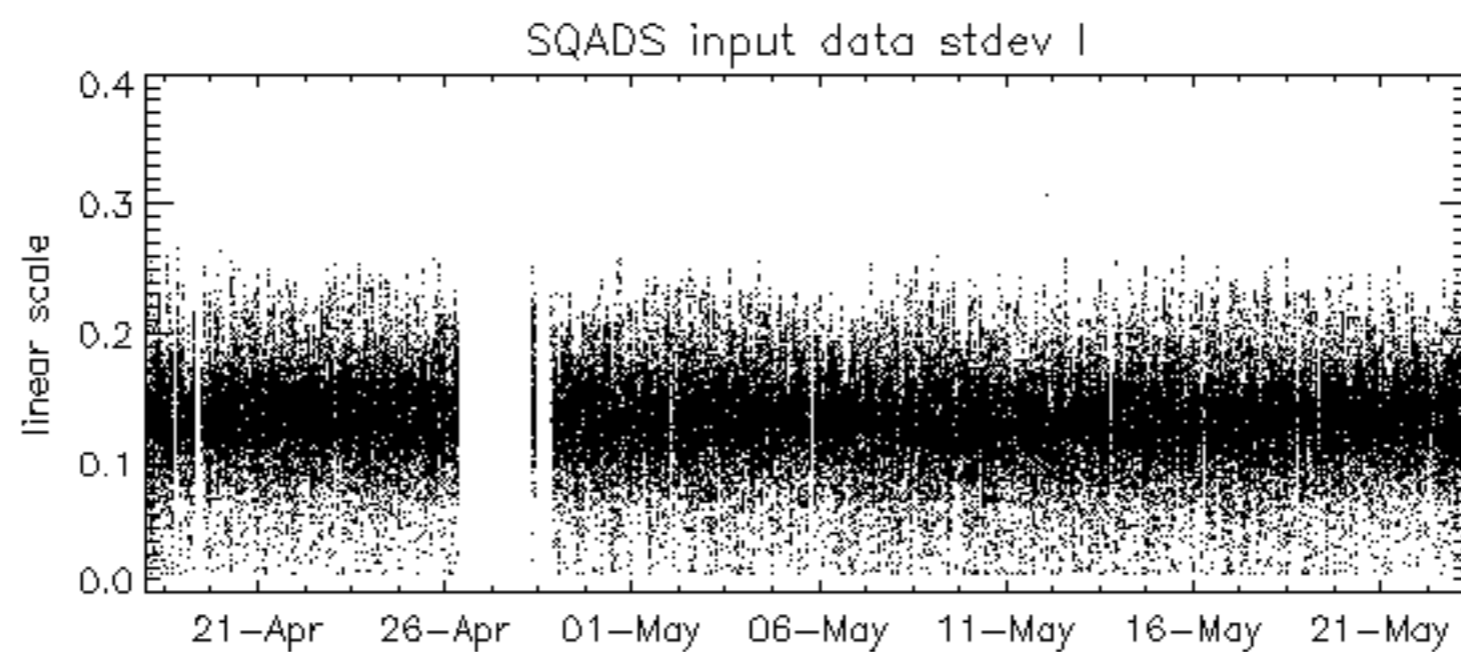
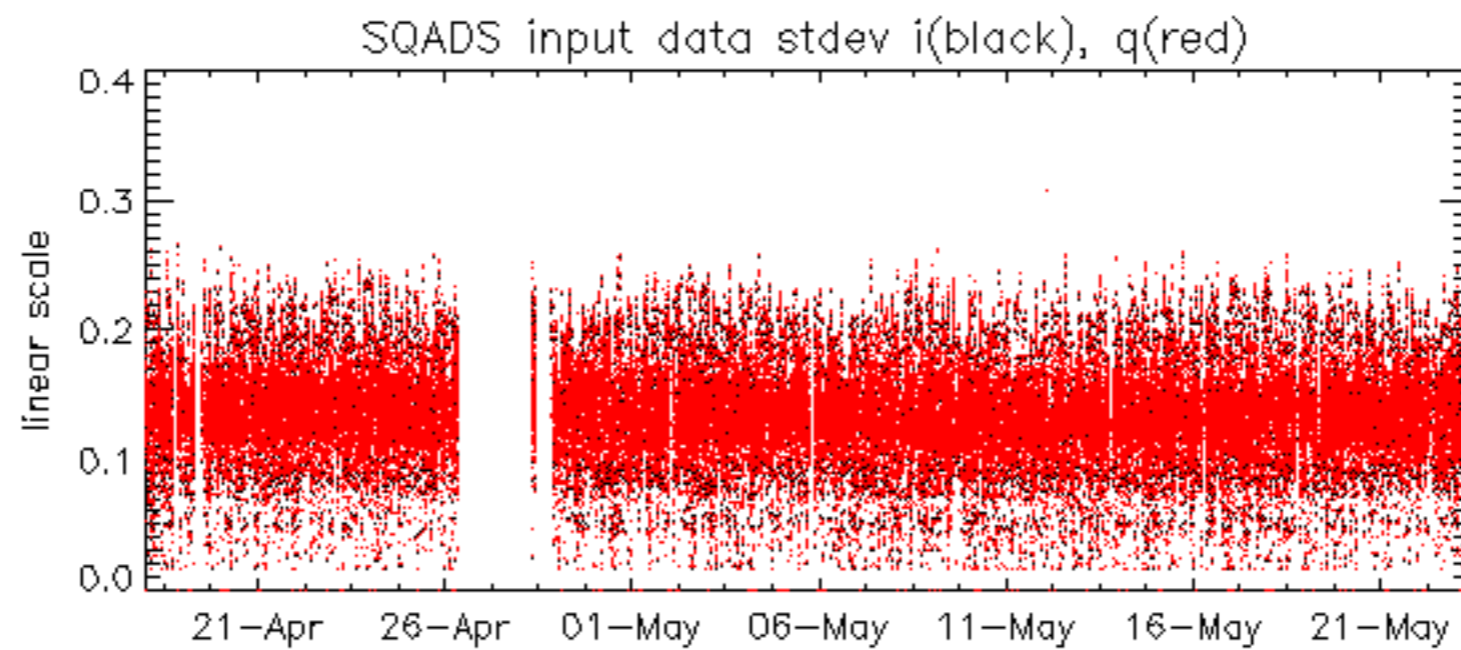
No anomalies observed on available MS products:

No anomalies observed.





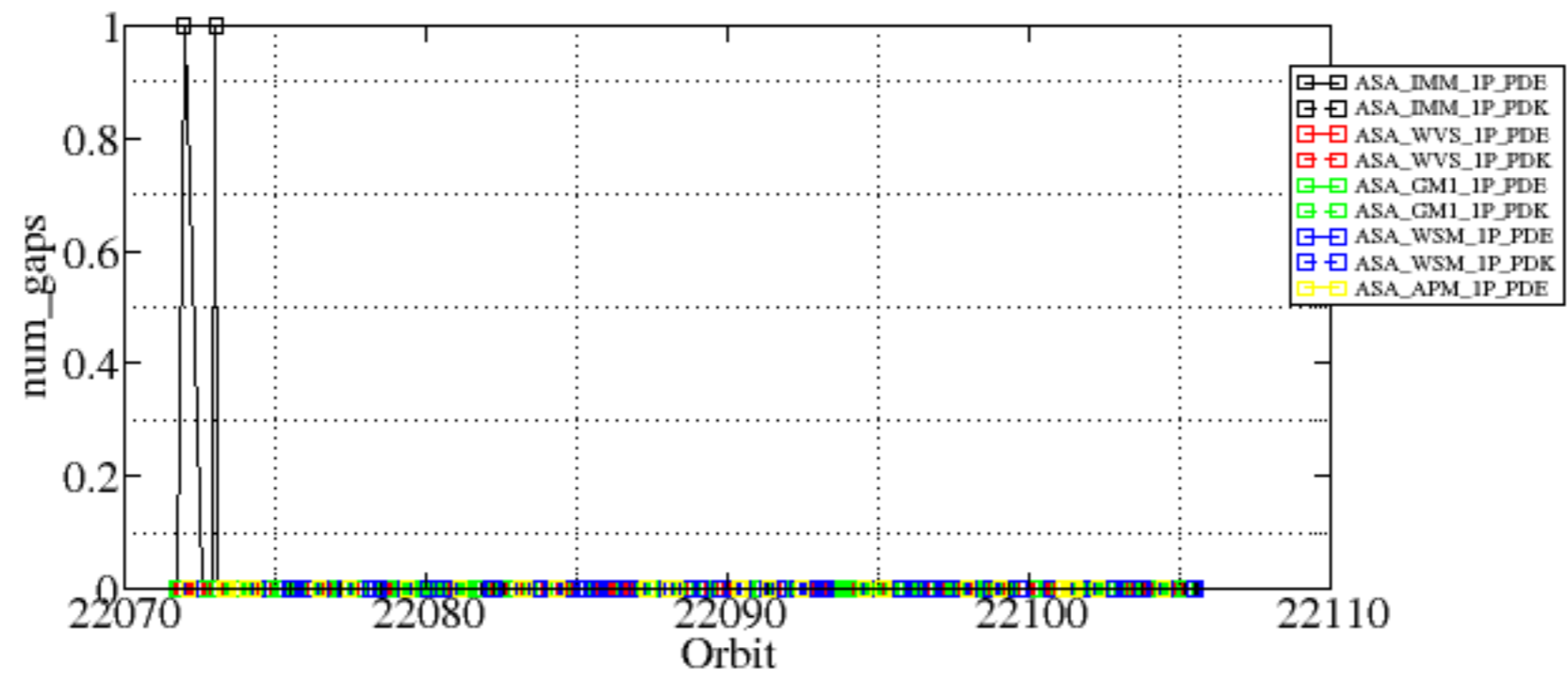




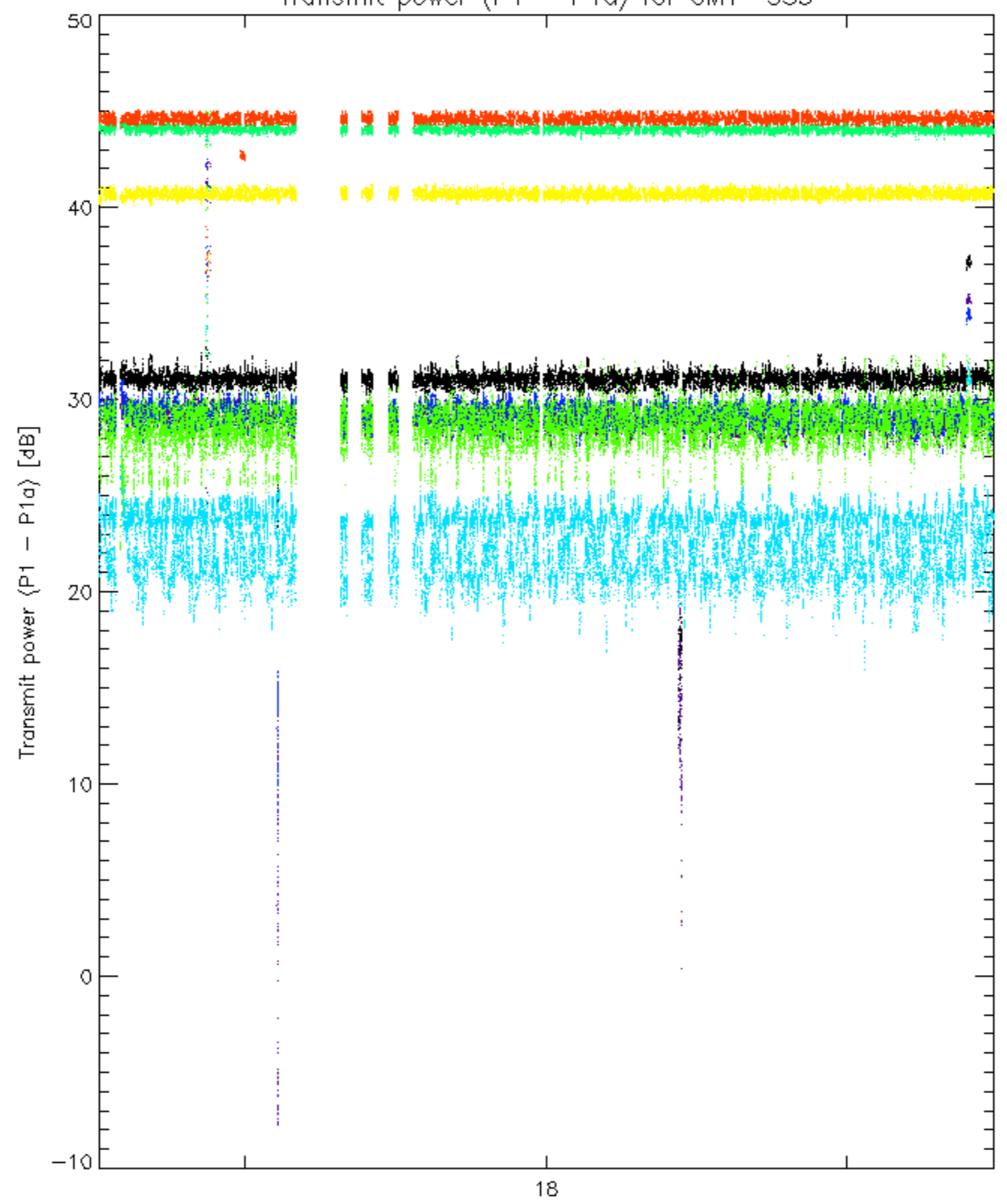
Summary of analysis for the last 3 days 2006052[123]

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

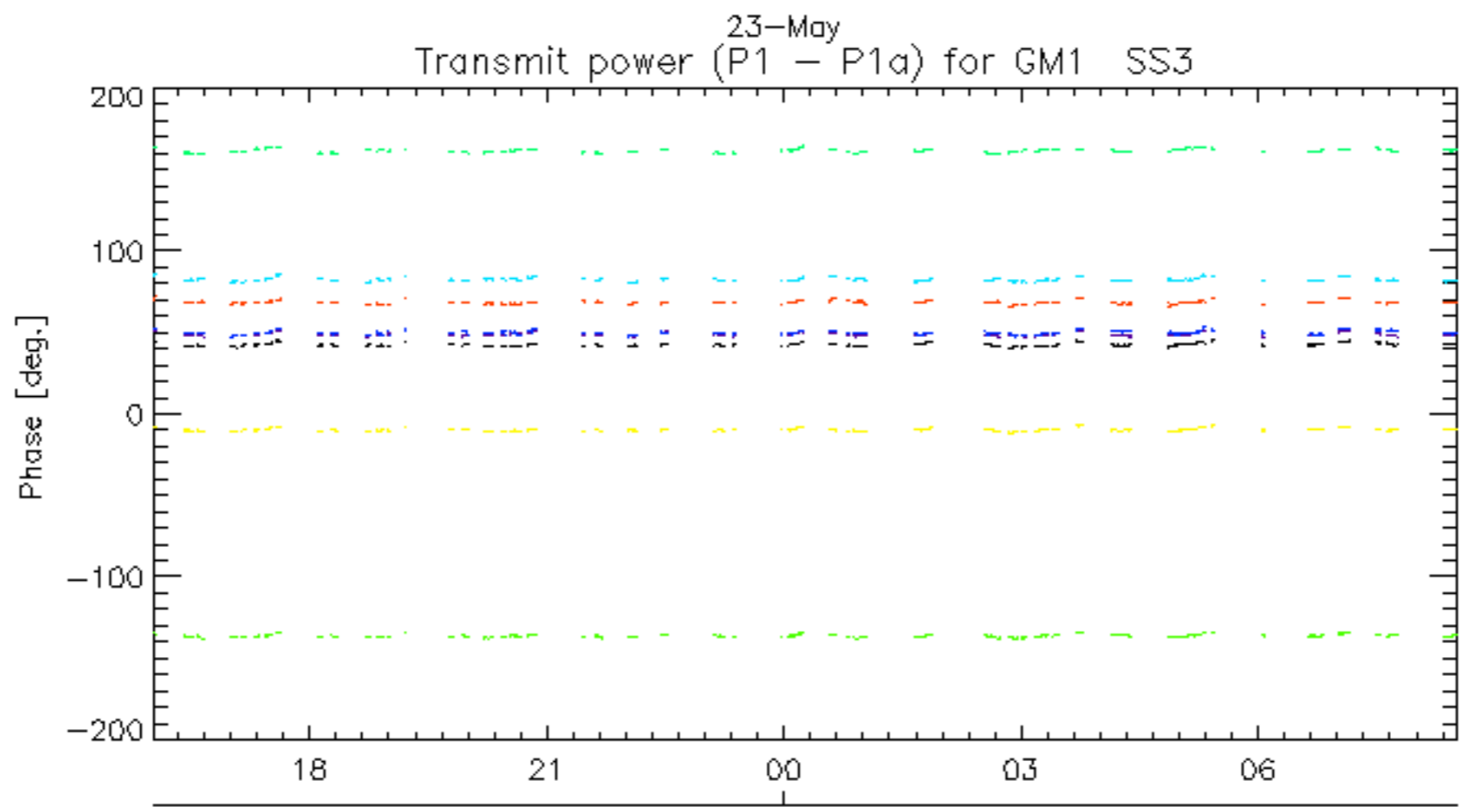
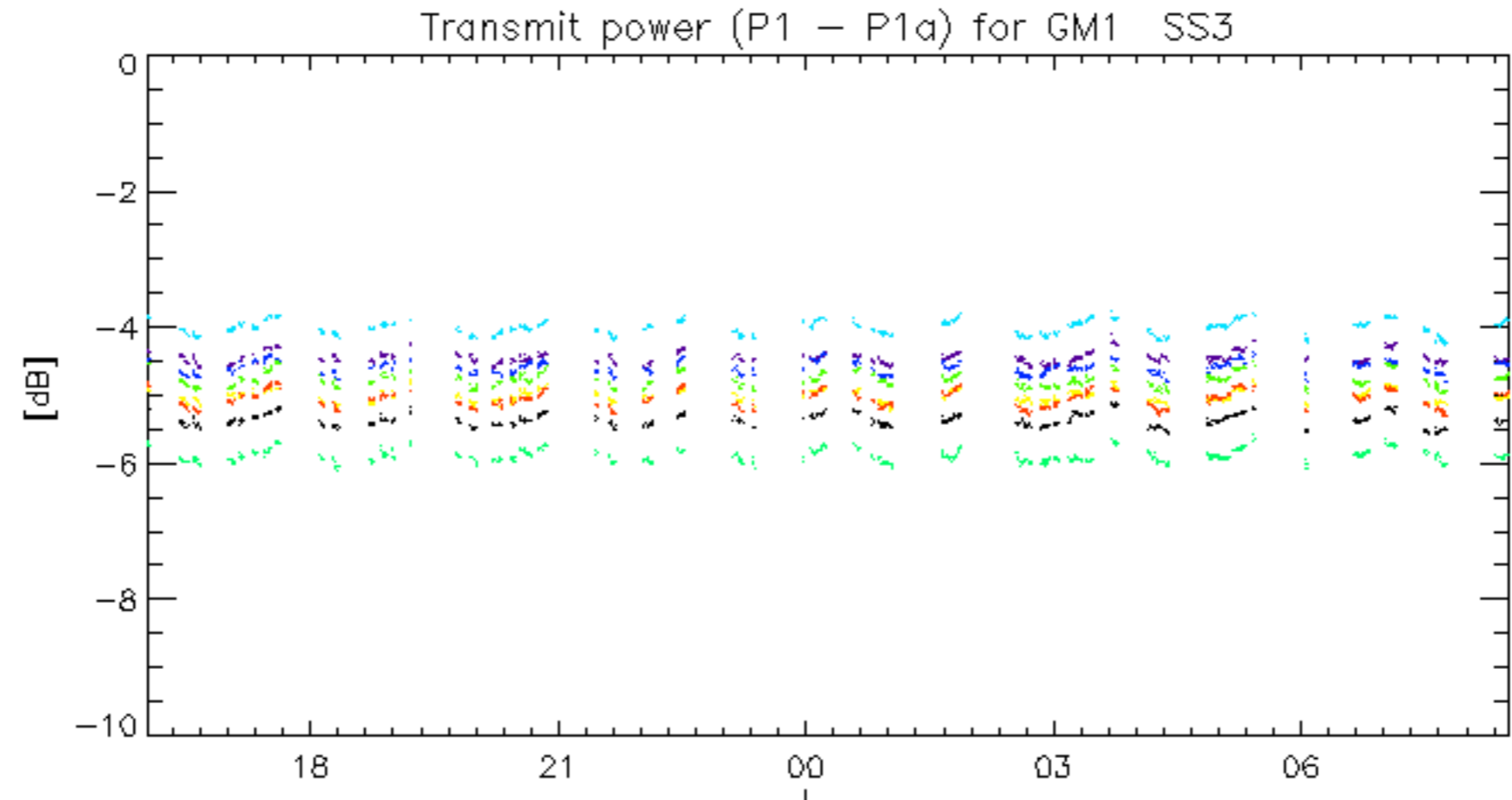
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060521_004019_000001342047_00474_22071_5837.N1	1	0
ASA_IMM_1PNPDE20060521_022552_000000362047_00476_22073_5844.N1	1	0
ASA_WSM_1PNPDE20060521_113142_000001652047_00481_22078_0109.N1	0	14



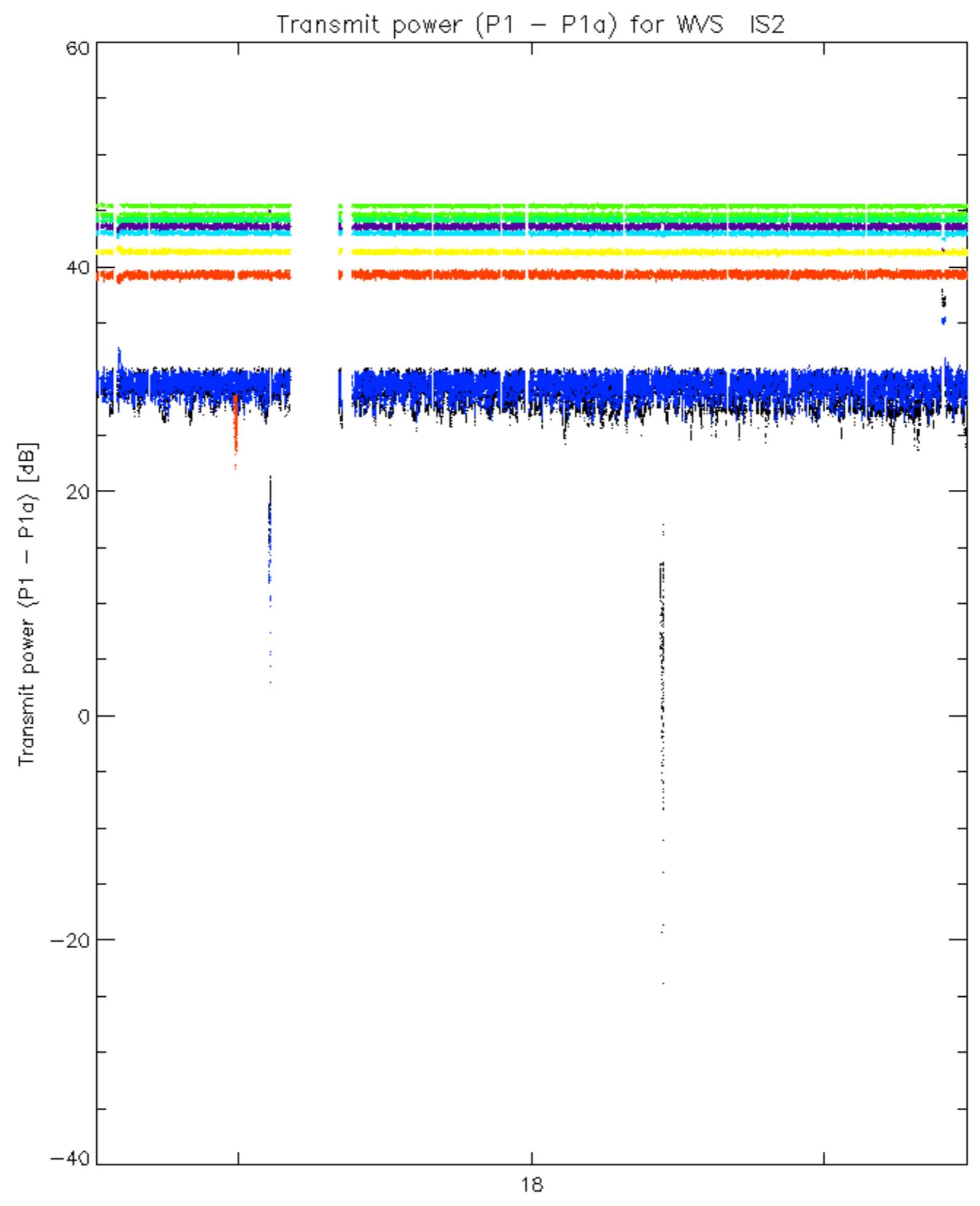
Transmit power (P1 - P1a) for GM1 SS3



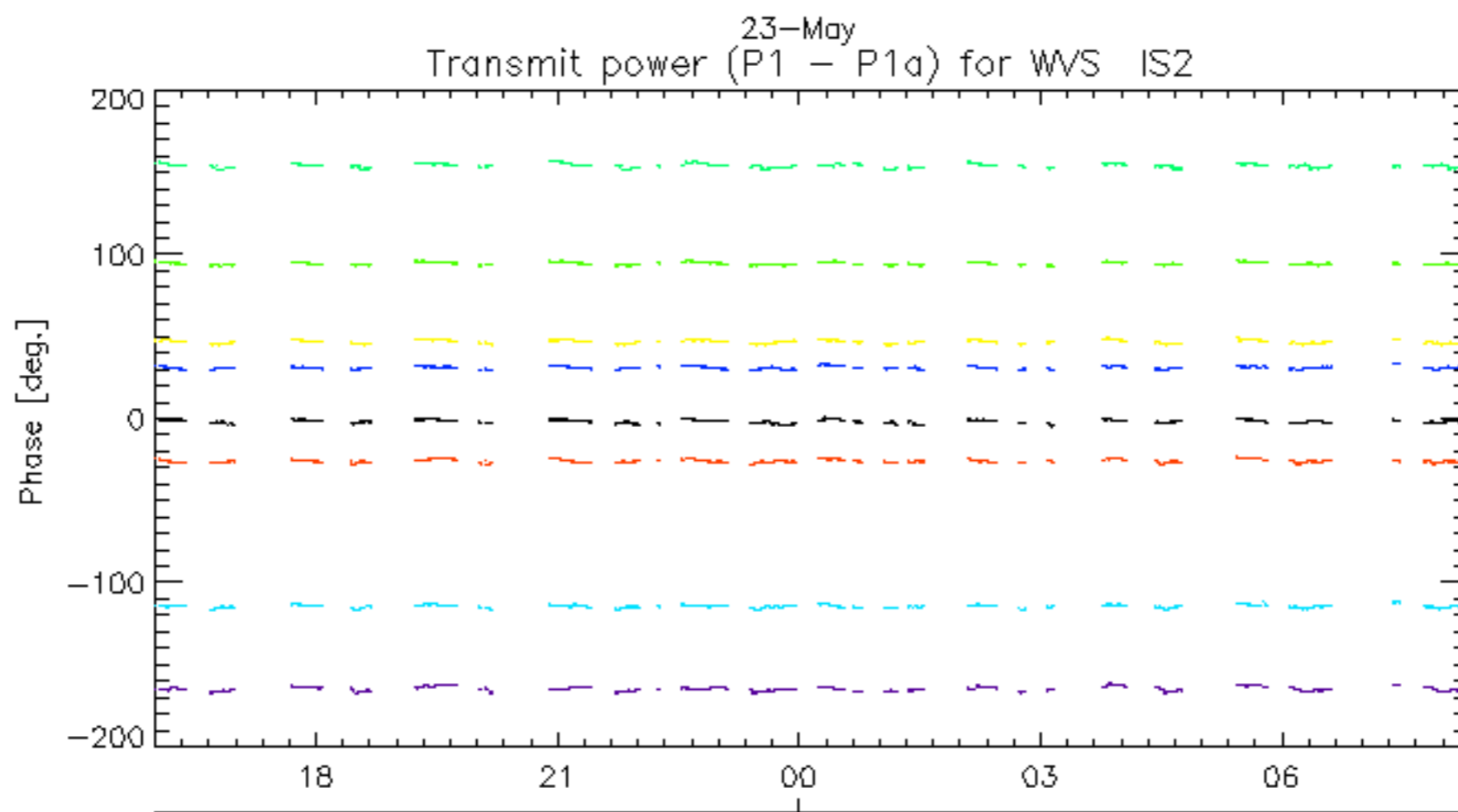
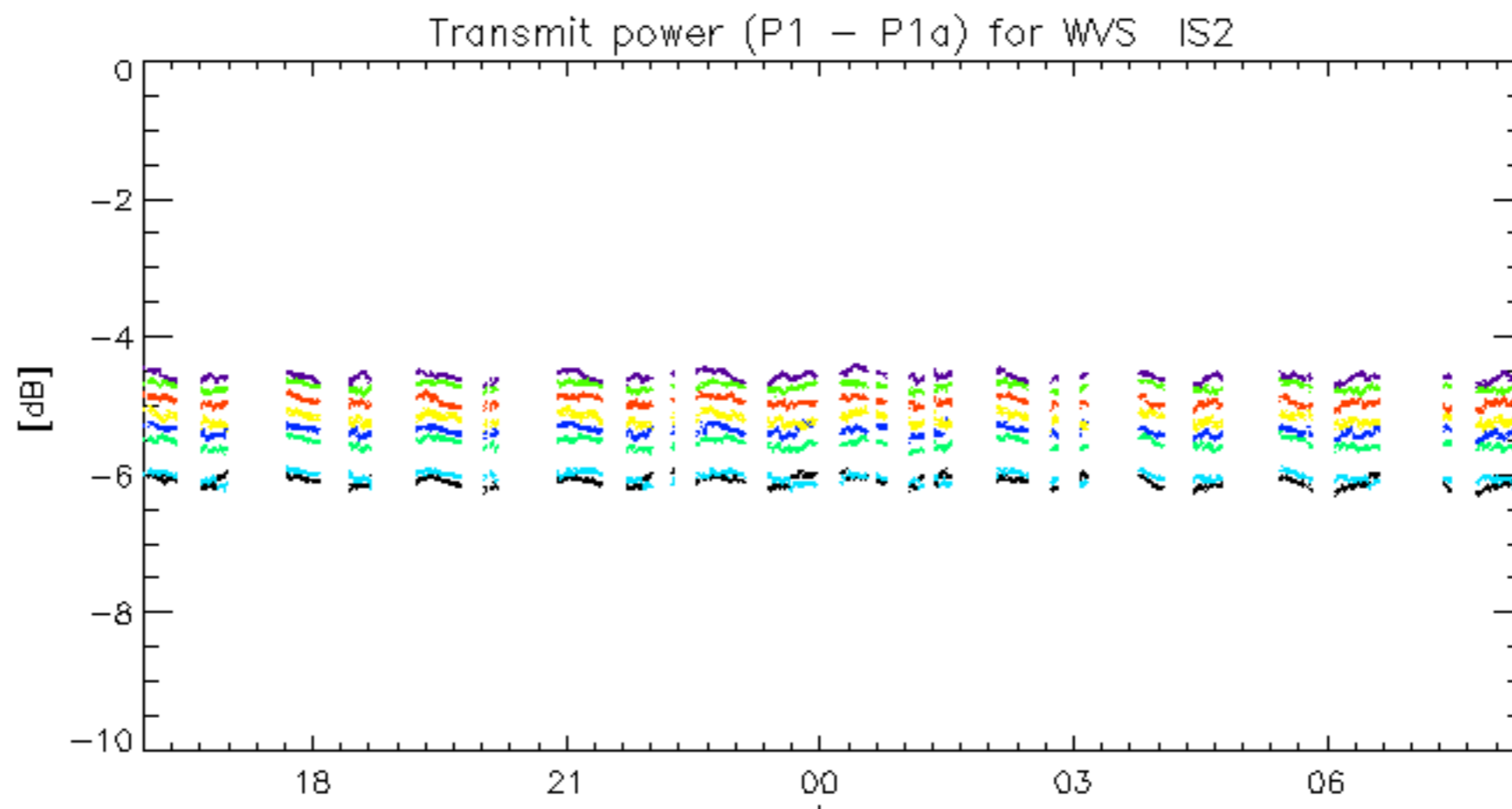
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: 3 7 11 15 19 22 26 30



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



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

No unavailabilities during the reported period.