

PRELIMINARY REPORT OF 070509

last update on Wed May 9 23:07:28 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 2007-05-08 00:00:00 to 2007-05-09 23:07:28

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	45	90	11	0	35
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	45	90	11	0	35
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	45	90	11	0	35
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	90	11	0	35

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	53	72	33	15	87
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	53	72	33	15	87
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	53	72	33	15	87
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	53	72	33	15	87

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	20070509 170159
H	20070508 173336

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	-15.144654	0.145865	-0.298046
7	P1a	-17.571033	0.094333	-0.096496
11	P1a	-17.591759	0.362915	-0.592957
15	P1a	-13.071327	0.138970	-0.354935
19	P1a	-15.379596	0.071583	-0.248789
22	P1a	-15.958105	0.385420	-0.231151
26	P1a	-14.989520	0.218532	0.243252
30	P1a	-17.816418	0.378906	-0.607395

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.775549	0.010270	-0.041294
7	P1	-3.154180	0.009085	-0.033380
11	P1	-4.206285	0.013790	0.014196
15	P1	-6.431886	0.020413	-0.131098
19	P1	-3.780319	0.011496	0.024546
22	P1	-4.747785	0.009806	0.002465
26	P1	-3.913657	0.019407	0.038220
30	P1	-5.966148	0.009274	0.007526

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.655811	0.091186	0.020736
7	P2	-21.542698	0.090065	0.104526
11	P2	-15.325774	0.118964	0.168932
15	P2	-7.131651	0.088379	-0.022328
19	P2	-9.121966	0.080759	-0.019445
22	P2	-18.089298	0.077214	-0.007249
26	P2	-16.634226	0.082302	-0.085738
30	P2	-19.269527	0.082202	0.050525

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.245988	0.005074	-0.004297
7	P3	-8.245988	0.005074	-0.004297
11	P3	-8.245988	0.005074	-0.004297
15	P3	-8.245988	0.005074	-0.004297
19	P3	-8.245988	0.005074	-0.004297
22	P3	-8.245988	0.005074	-0.004297
26	P3	-8.245988	0.005074	-0.004297
30	P3	-8.245988	0.005074	-0.004297

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	-11.277822	0.142631	-0.404933
7	P1a	-10.043967	0.167366	0.088803
11	P1a	-10.684414	0.087159	0.017473
15	P1a	-10.814317	0.155786	0.149131
19	P1a	-15.823536	0.088092	-0.109523
22	P1a	-21.421616	1.451579	-0.264393
26	P1a	-15.525360	0.357762	-0.130143
30	P1a	-18.302025	0.451675	0.079554

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.334935	0.164752	0.633766
7	P1	-2.395227	0.086480	0.080015
11	P1	-2.880853	0.022417	0.047922
15	P1	-3.809881	0.035696	0.052027
19	P1	-3.593588	0.014759	-0.031277
22	P1	-4.960907	0.023232	0.064699
26	P1	-6.044836	0.024358	-0.047361
30	P1	-5.344178	0.031471	-0.039260

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.188417	0.066233	-0.055894
7	P2	-22.050413	0.169108	-0.033355
11	P2	-10.644872	0.043797	-0.043391
15	P2	-4.934114	0.041824	-0.065622
19	P2	-6.874226	0.039790	-0.014062
22	P2	-8.108790	0.079740	0.022835
26	P2	-24.329891	0.130082	-0.024019
30	P2	-21.707590	0.102444	0.033492

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091554	0.004944	0.002954
7	P3	-8.091507	0.004953	0.002950
11	P3	-8.091383	0.004946	0.002763
15	P3	-8.091308	0.004951	0.002759
19	P3	-8.091456	0.004967	0.003019
22	P3	-8.091282	0.004942	0.003089
26	P3	-8.091398	0.004951	0.002870
30	P3	-8.091377	0.004942	0.002656

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	0.000548013
	stdev	1.96426e-07
MEAN Q	mean	0.000501908
	stdev	2.40372e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135832
	stdev	0.00120184
STDEV Q	mean	0.136220
	stdev	0.00121917



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007050[789]

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_GM1_1PNPDK20070507_103322_000006402057_00495_27102_9475.N1	0	28
ASA_WSM_1PNPDE20070507_165905_000000852057_00499_27106_2177.N1	0	72
ASA_WSM_1PNPDE20070509_113620_000002452058_00023_27131_4750.N1	0	61







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)


Ascending


Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

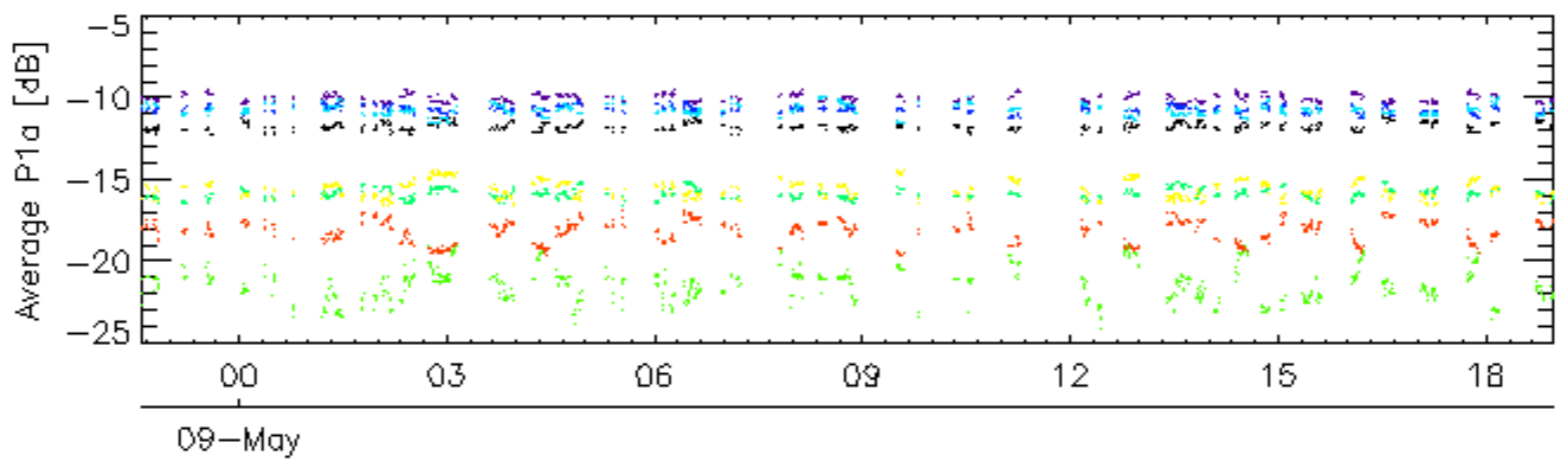
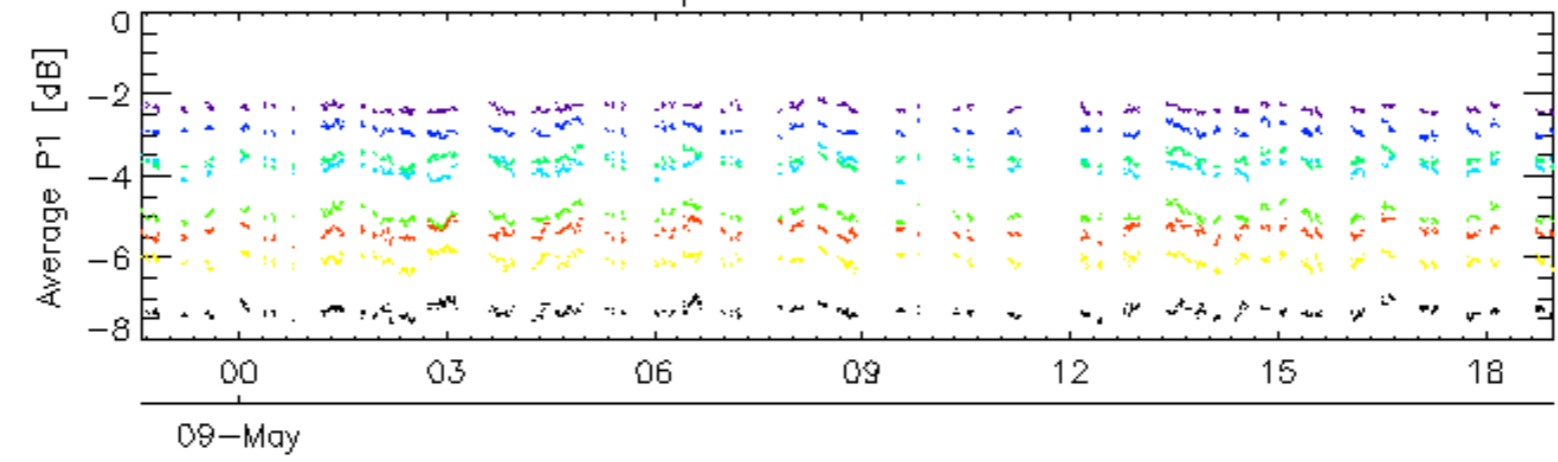
Ascending

Descending

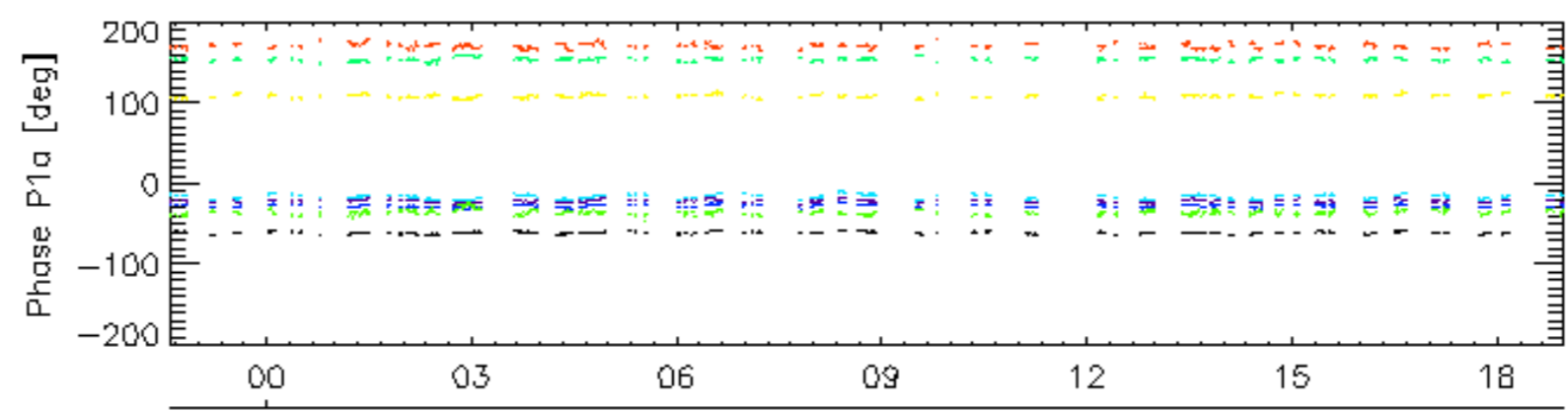
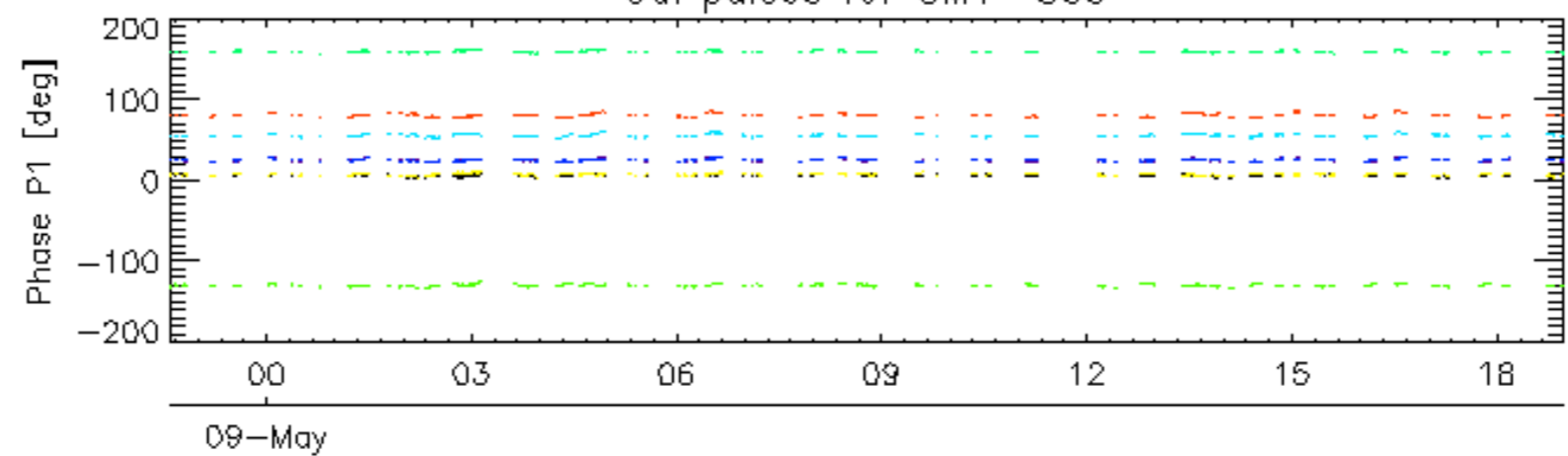
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

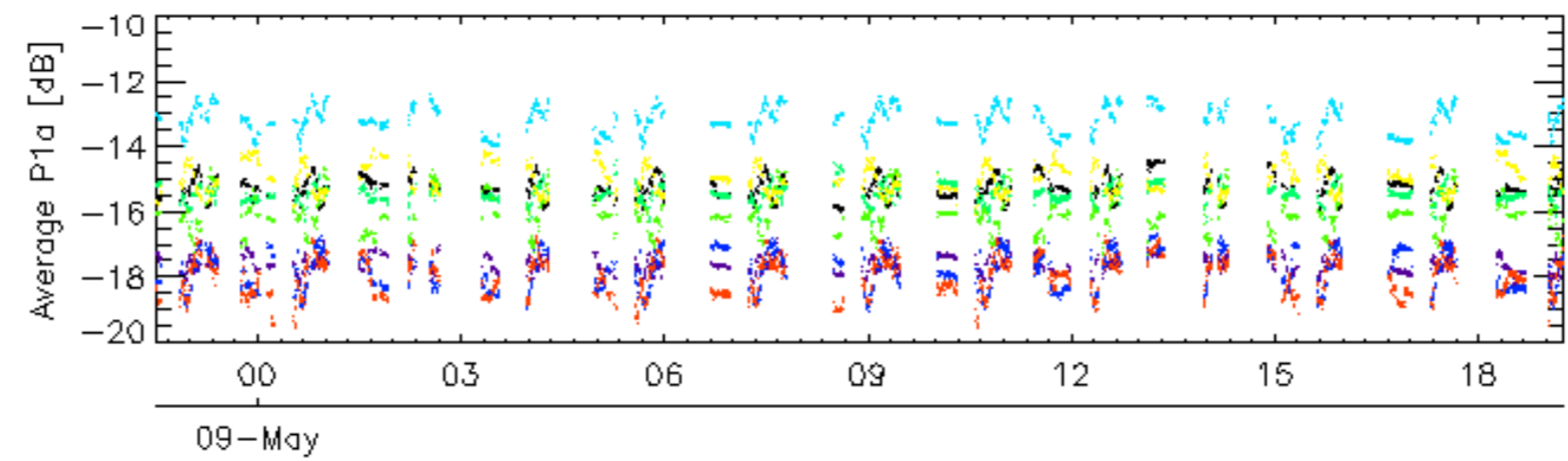
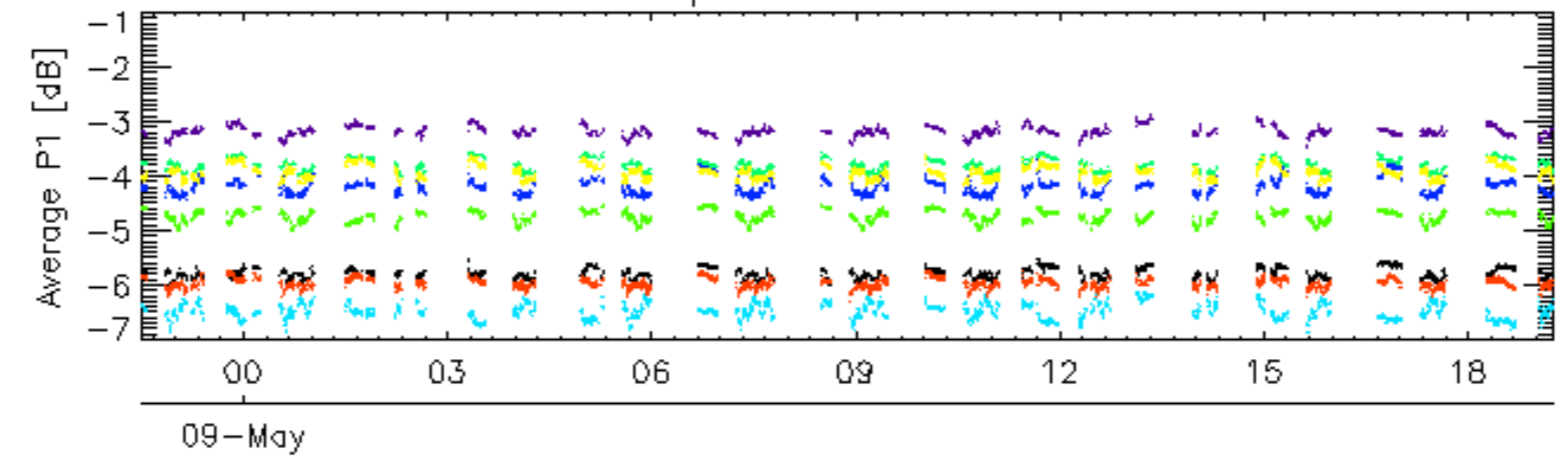


Cal pulses for GM1 SS3

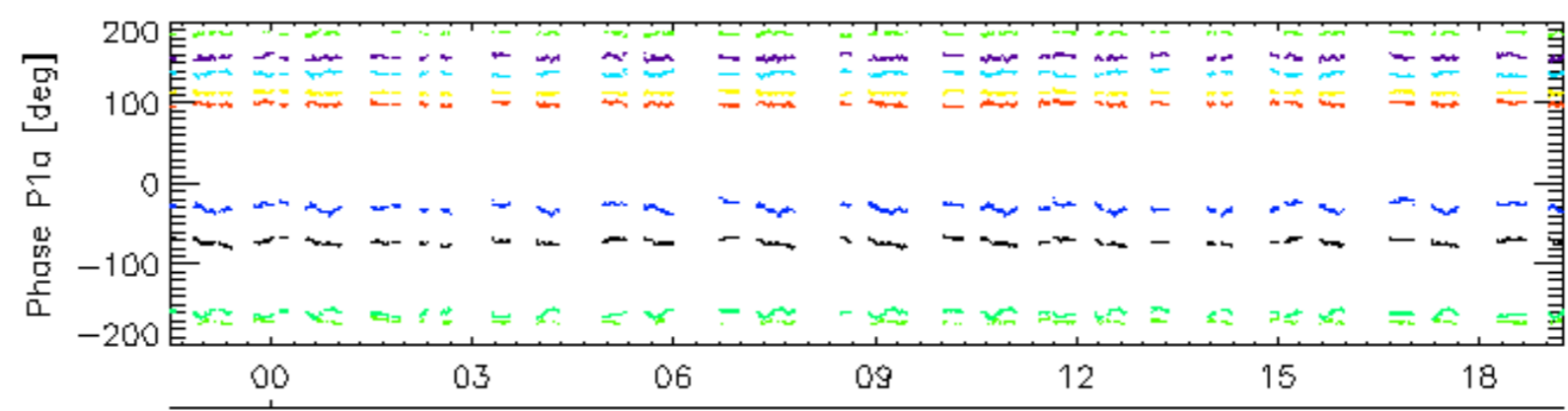
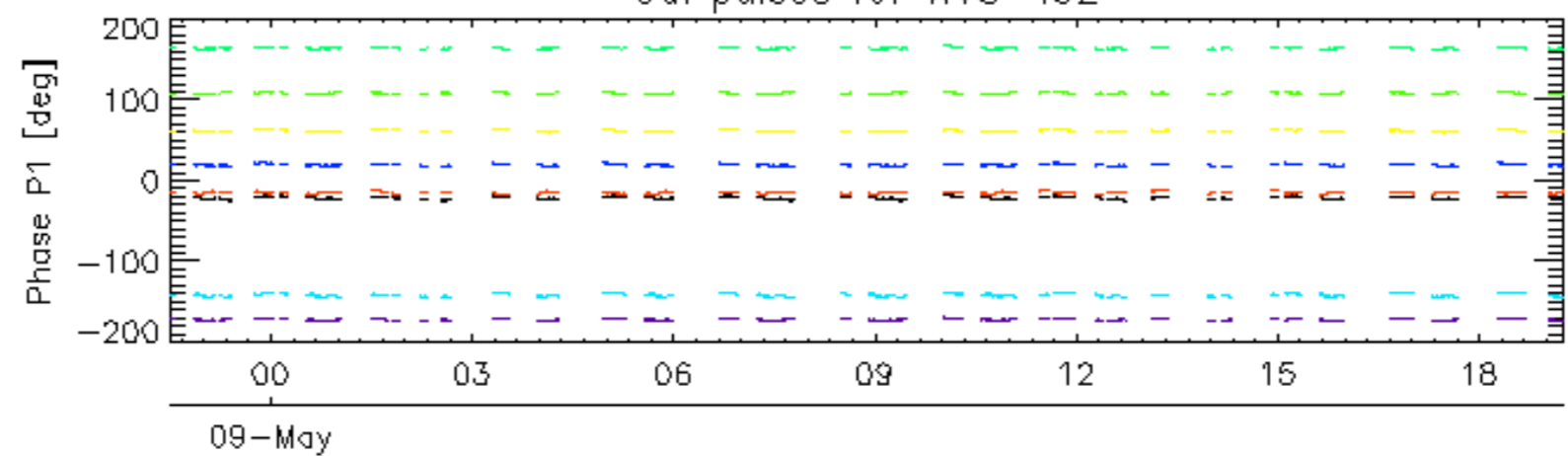


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

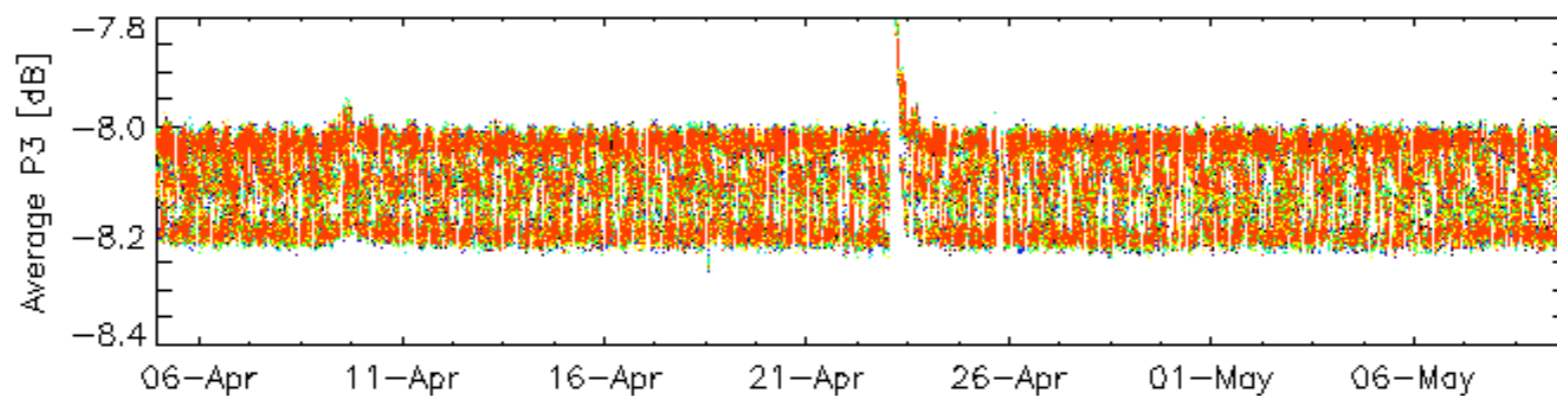
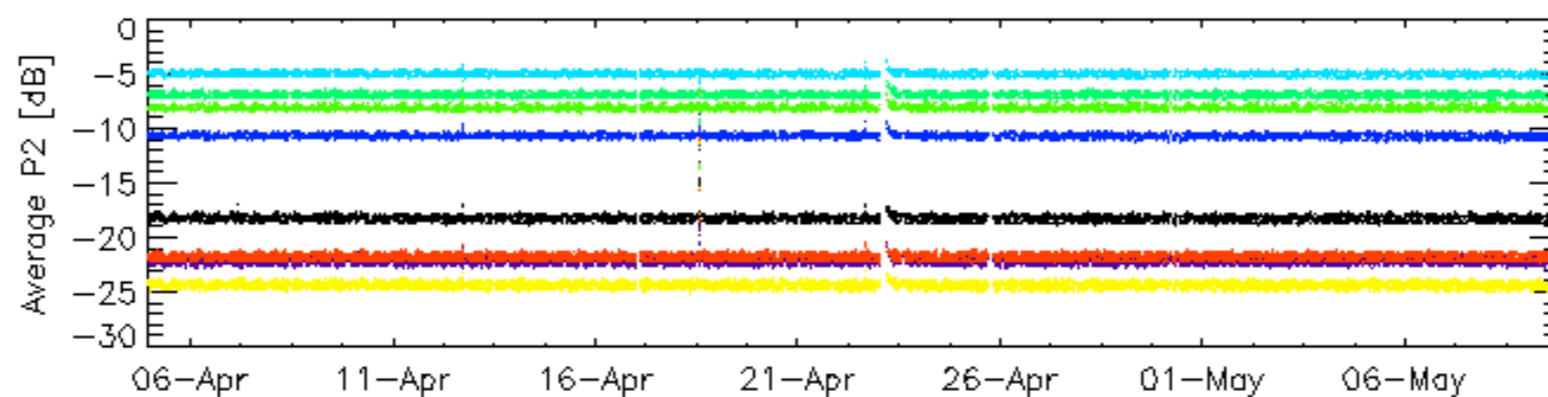
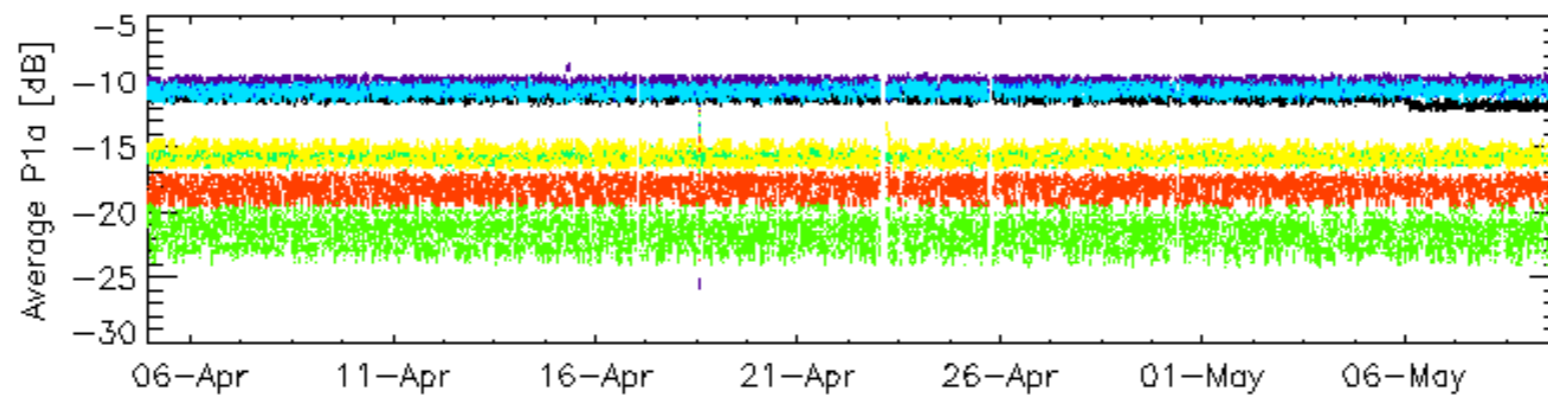
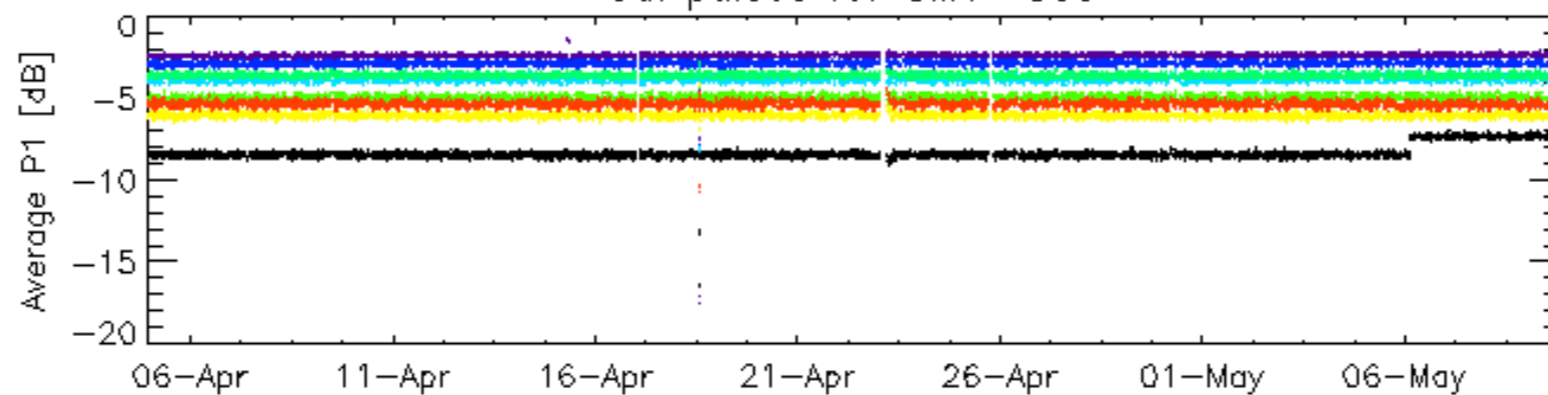


Cal pulses for WVS IS2



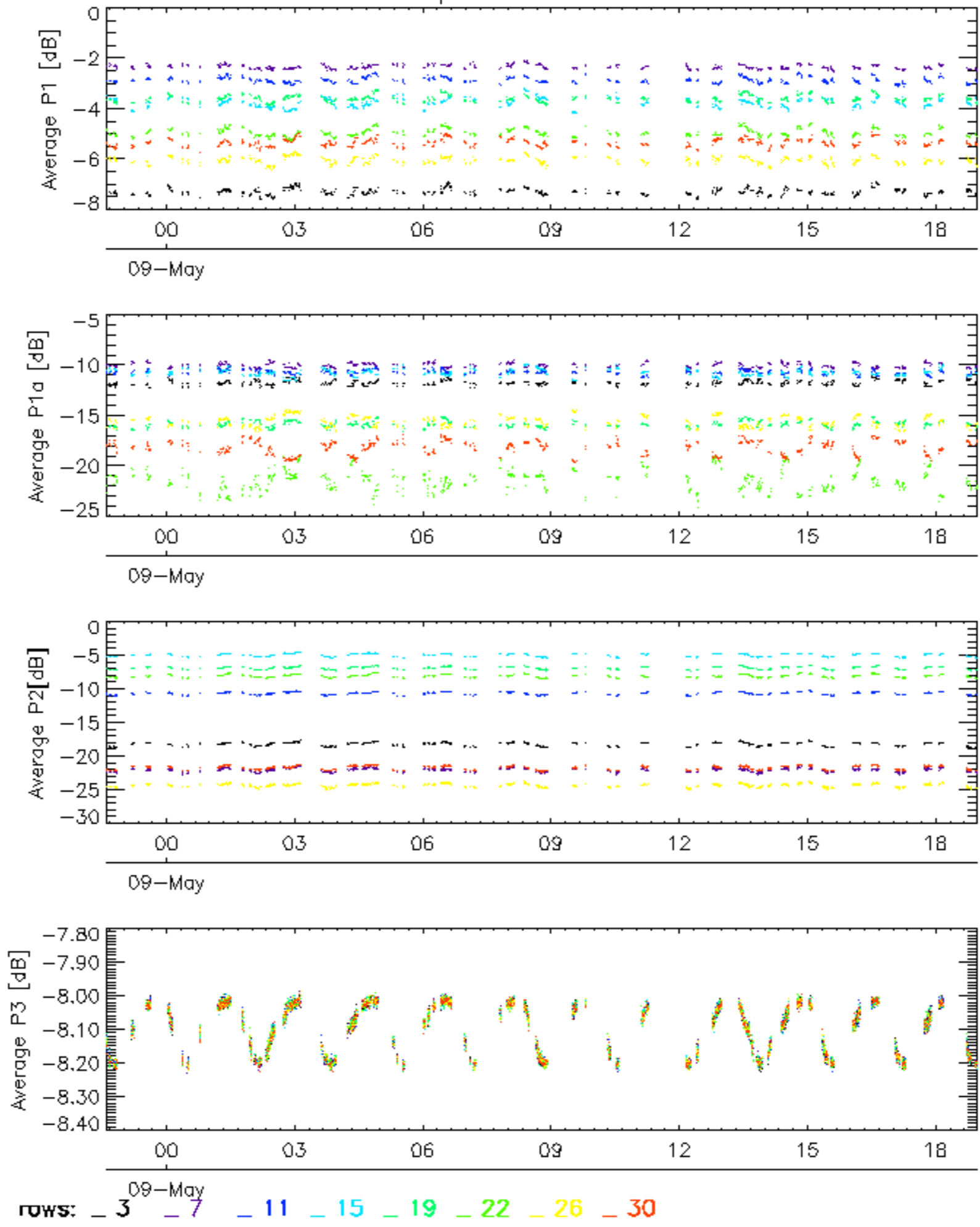
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

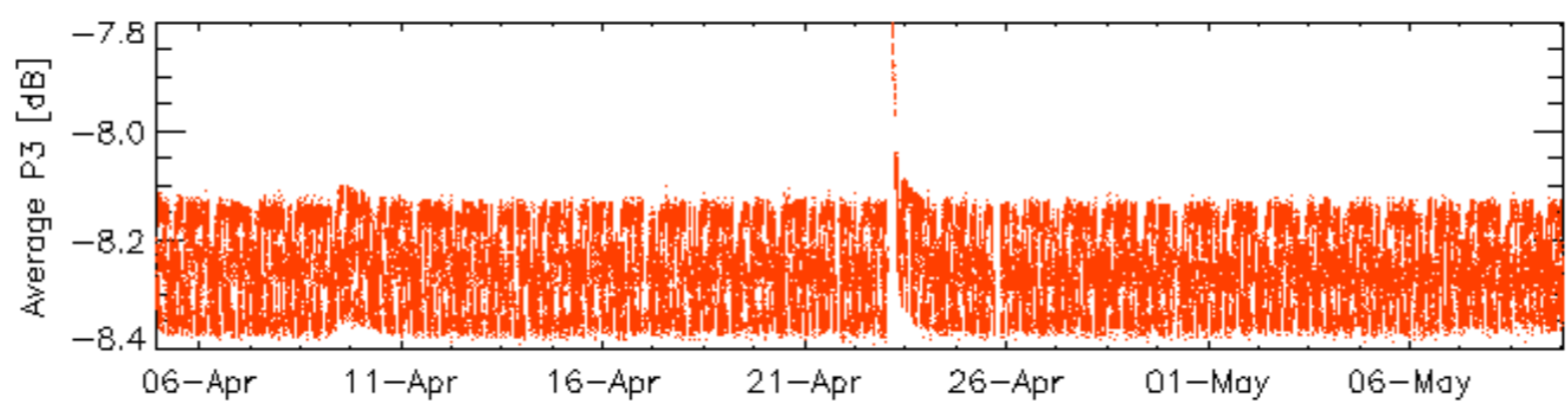
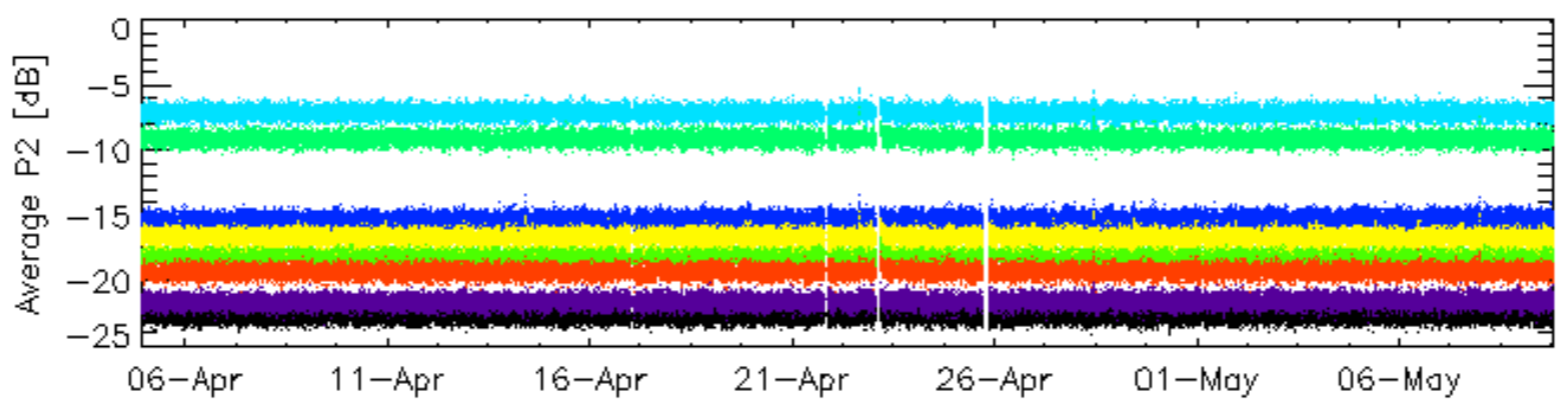
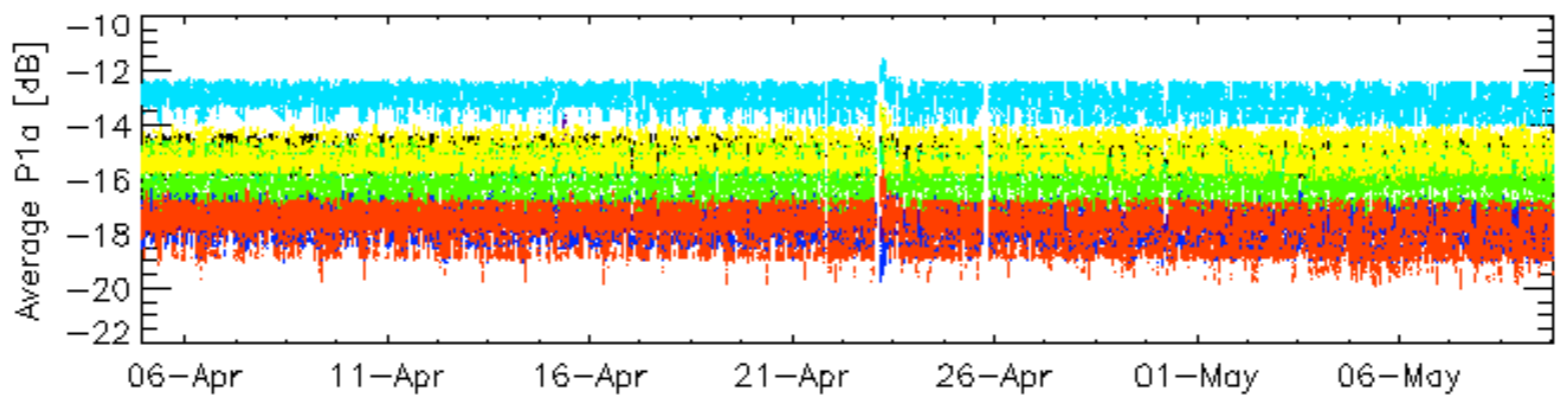
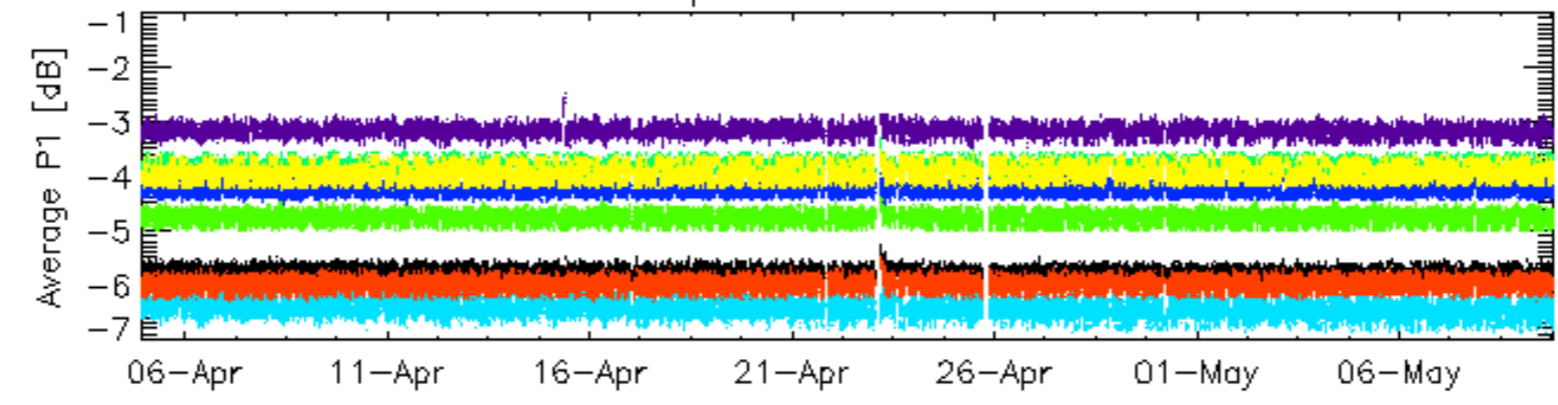


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

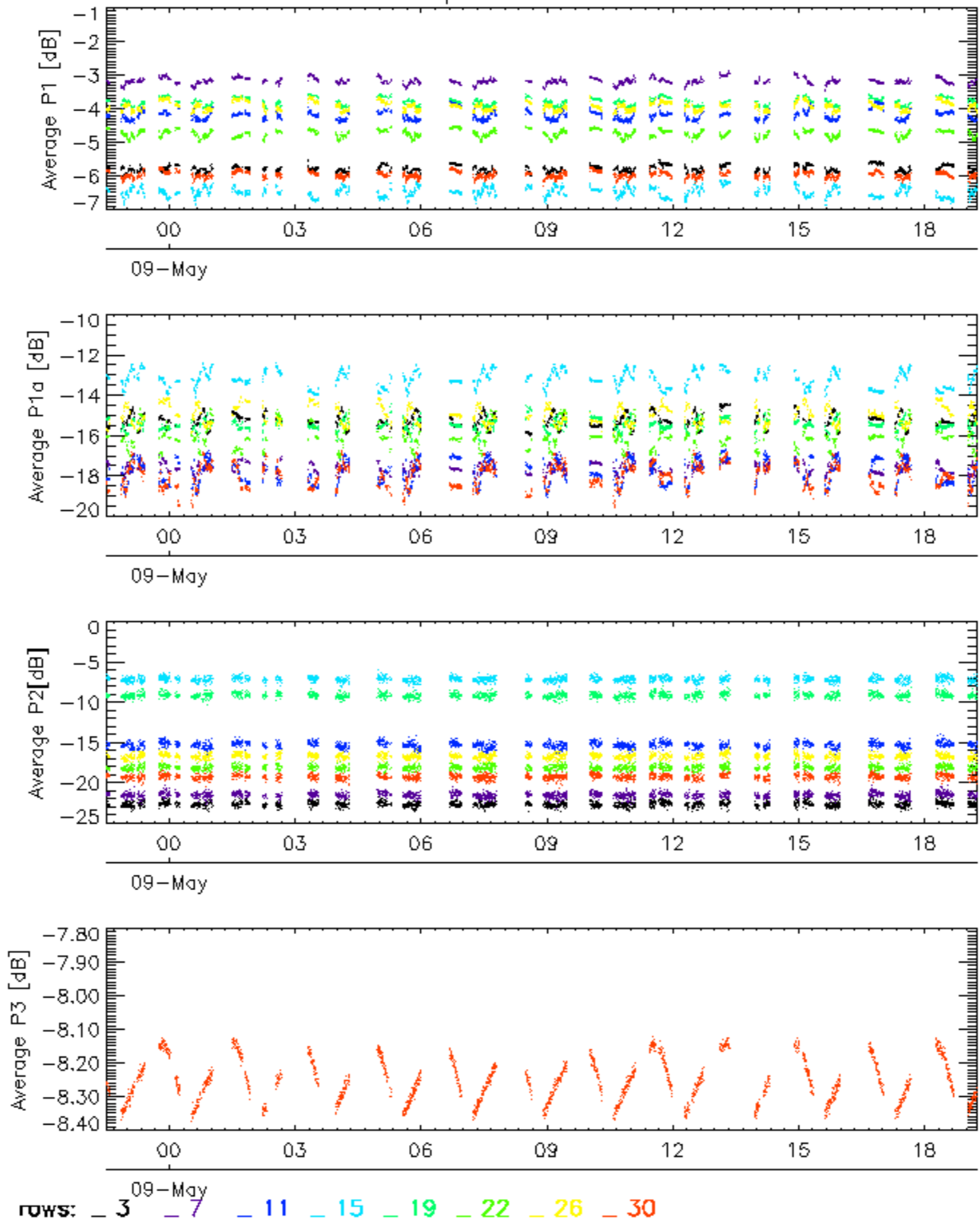


Cal pulses for WVS IS2

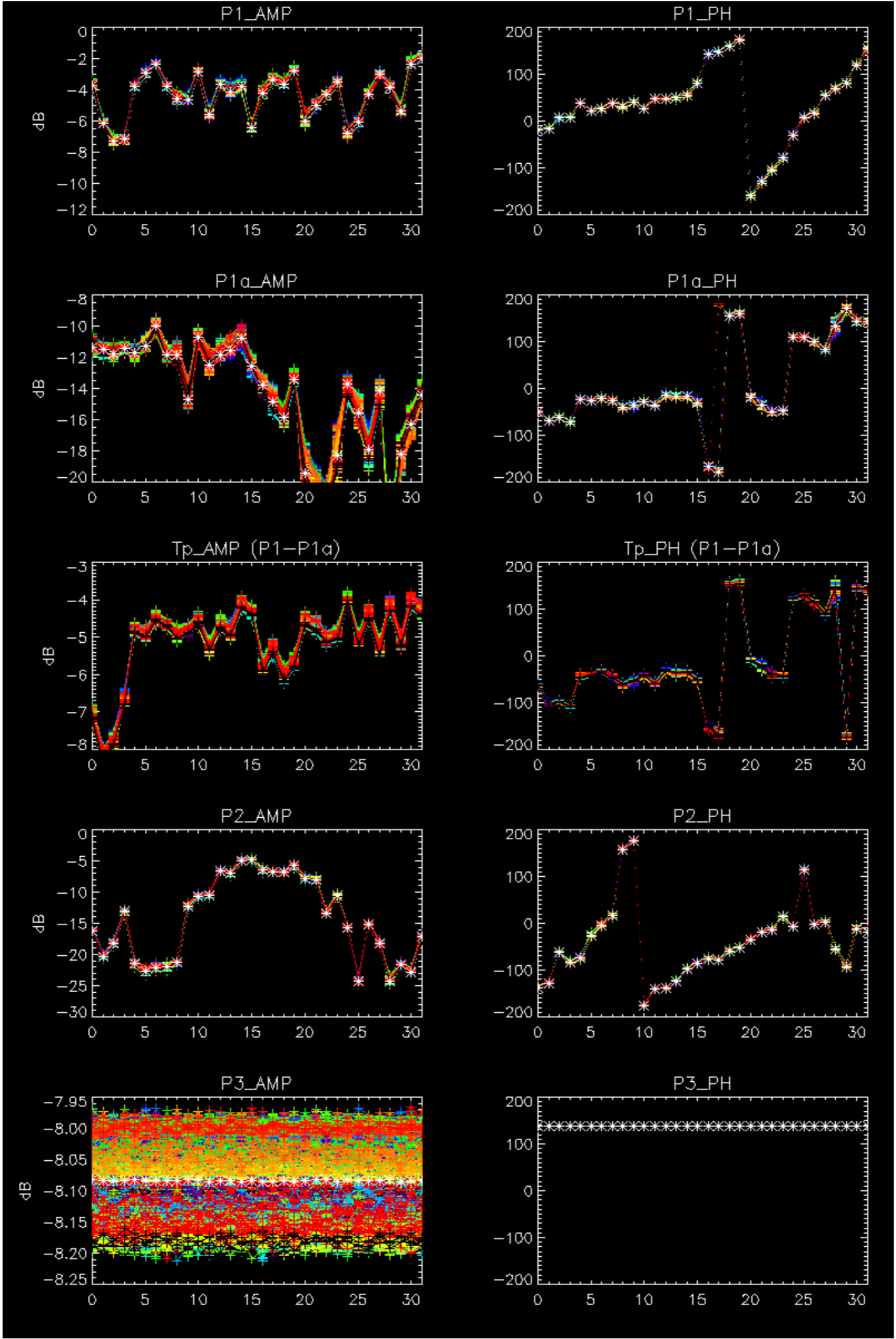


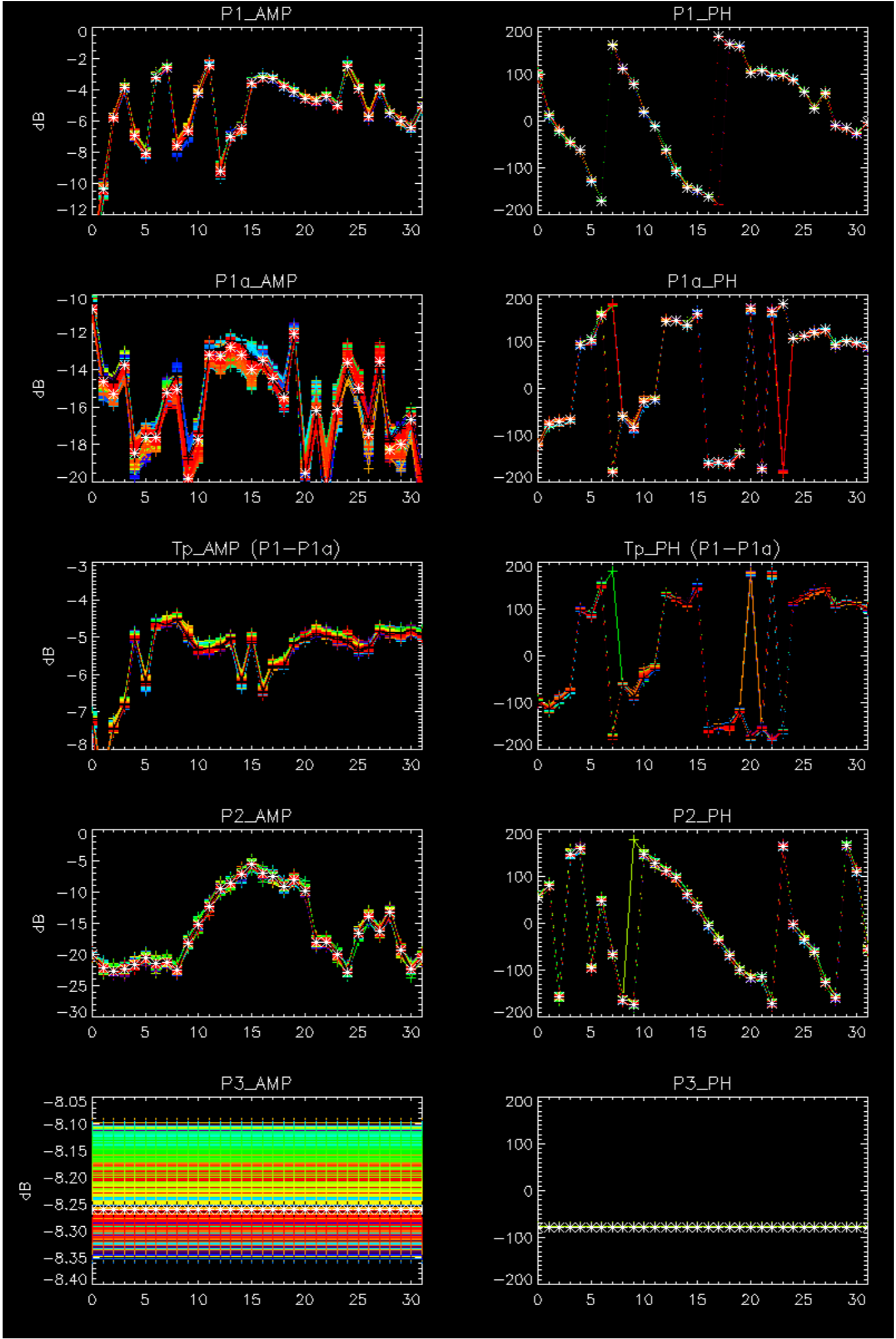
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



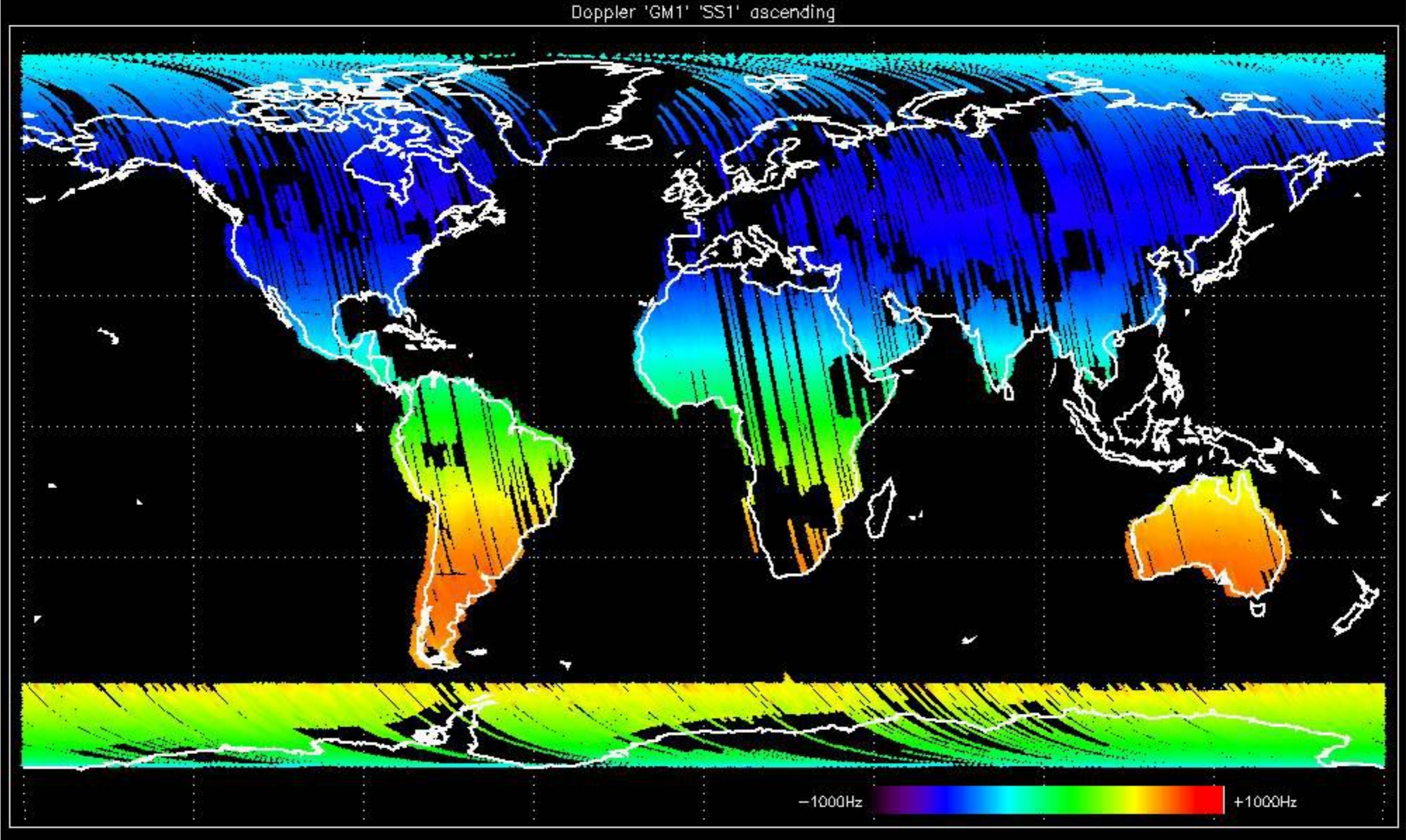
No anomalies observed.



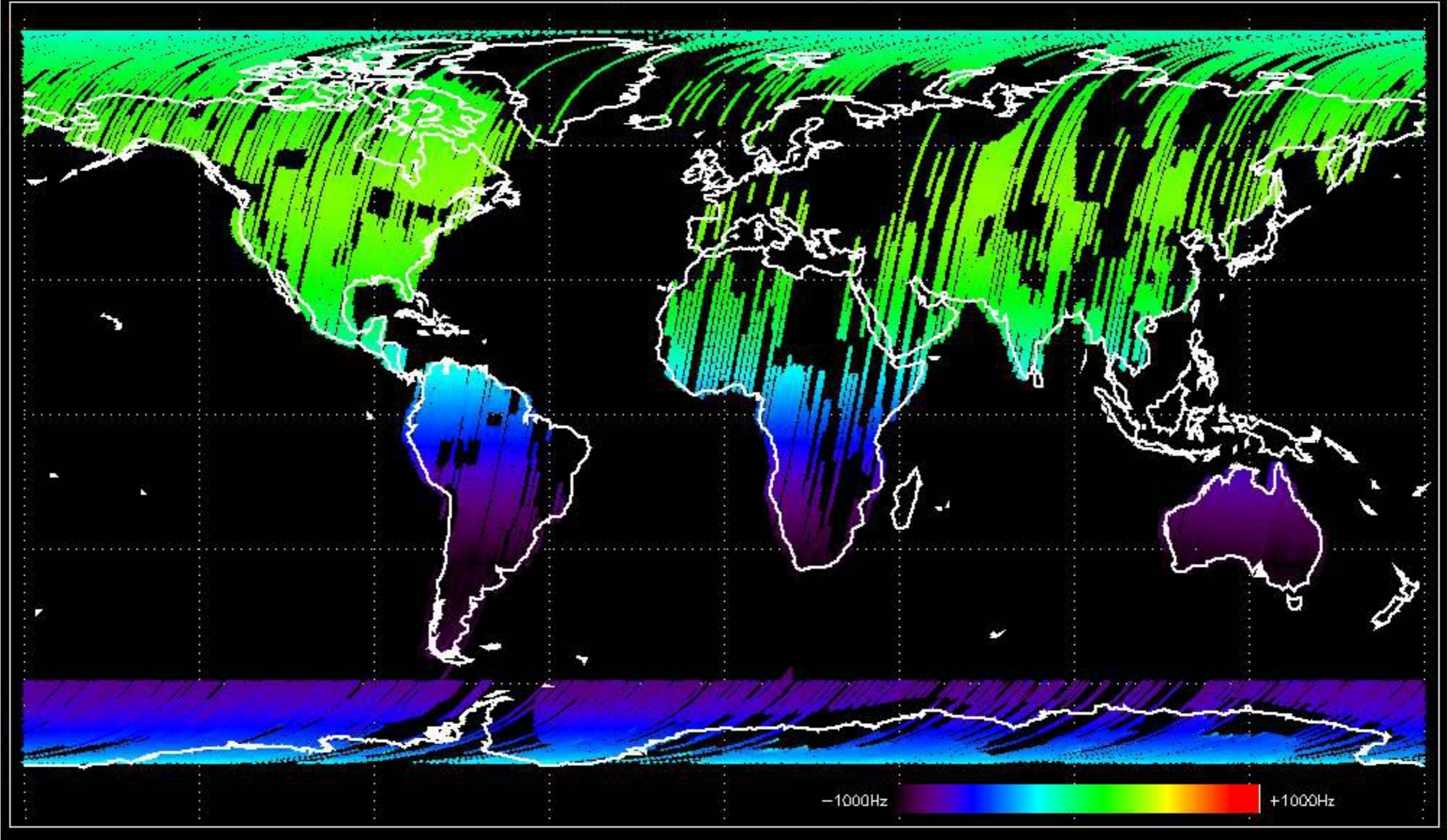


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

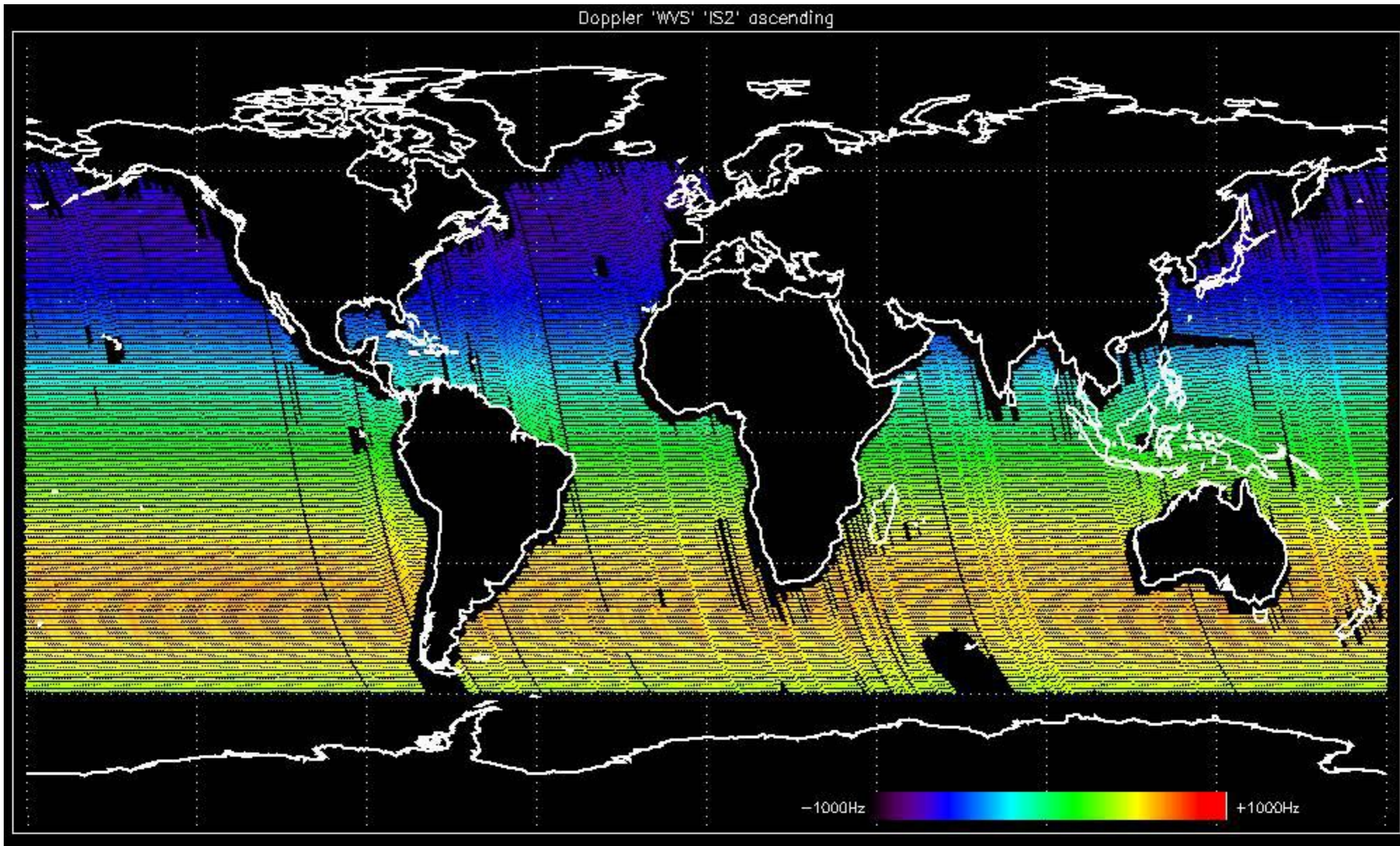
Doppler 'GM1' 'SS1' ascending



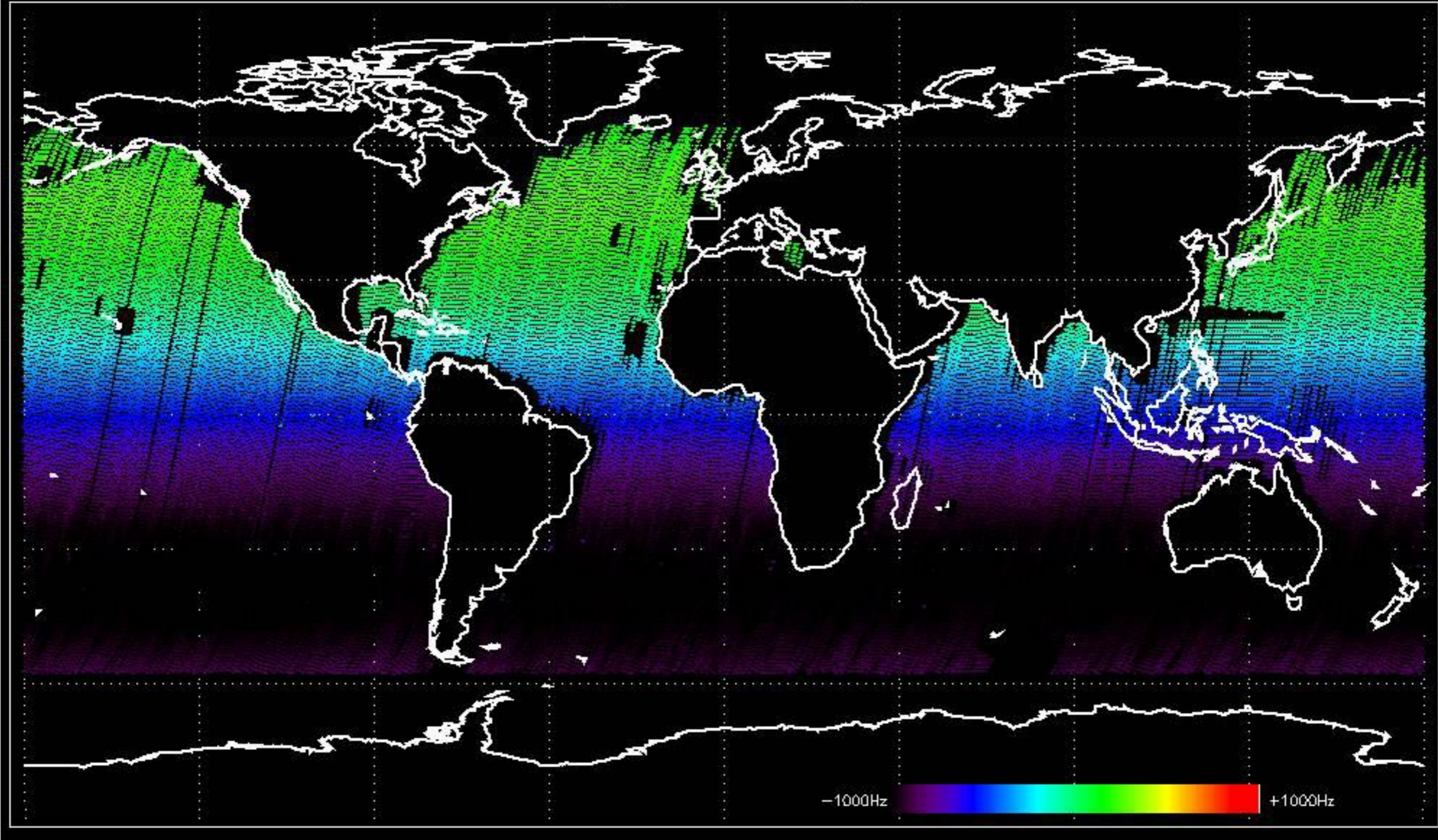
Doppler 'GM1' 'SS1' descending



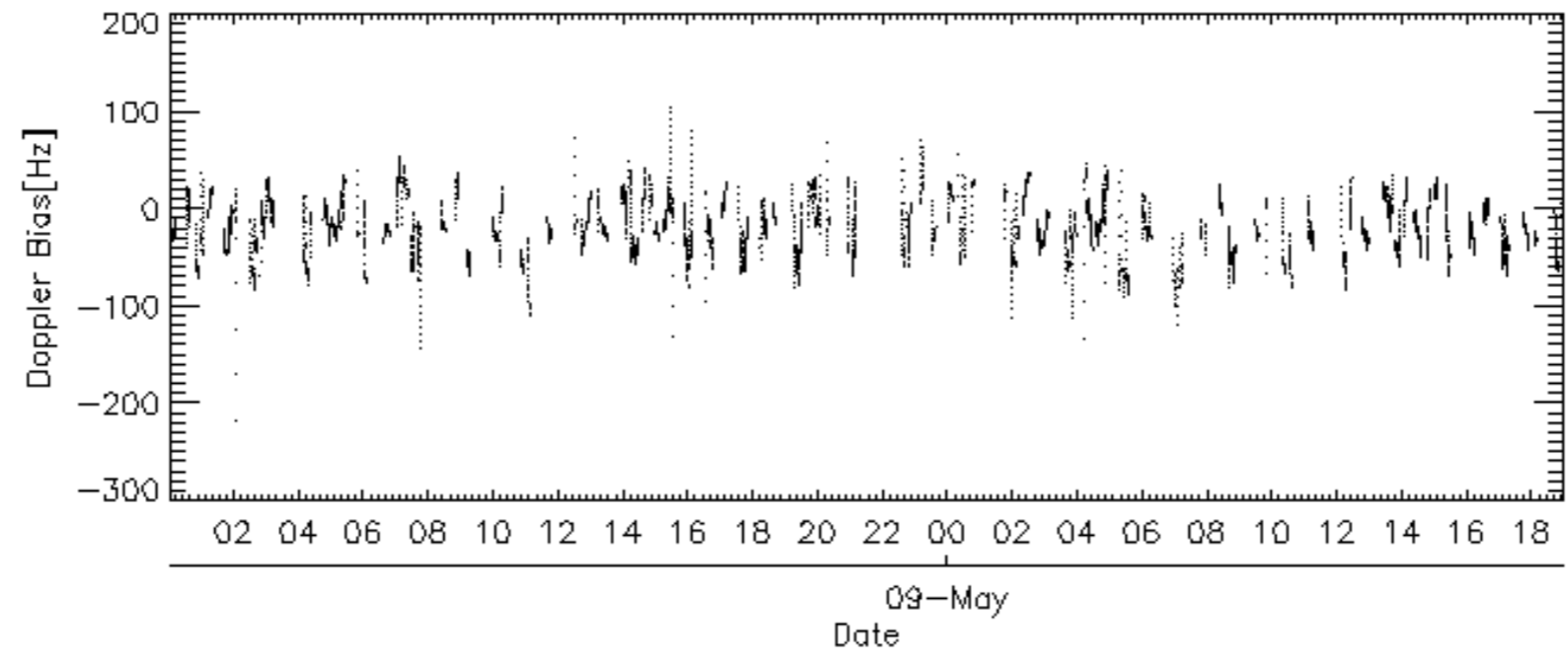
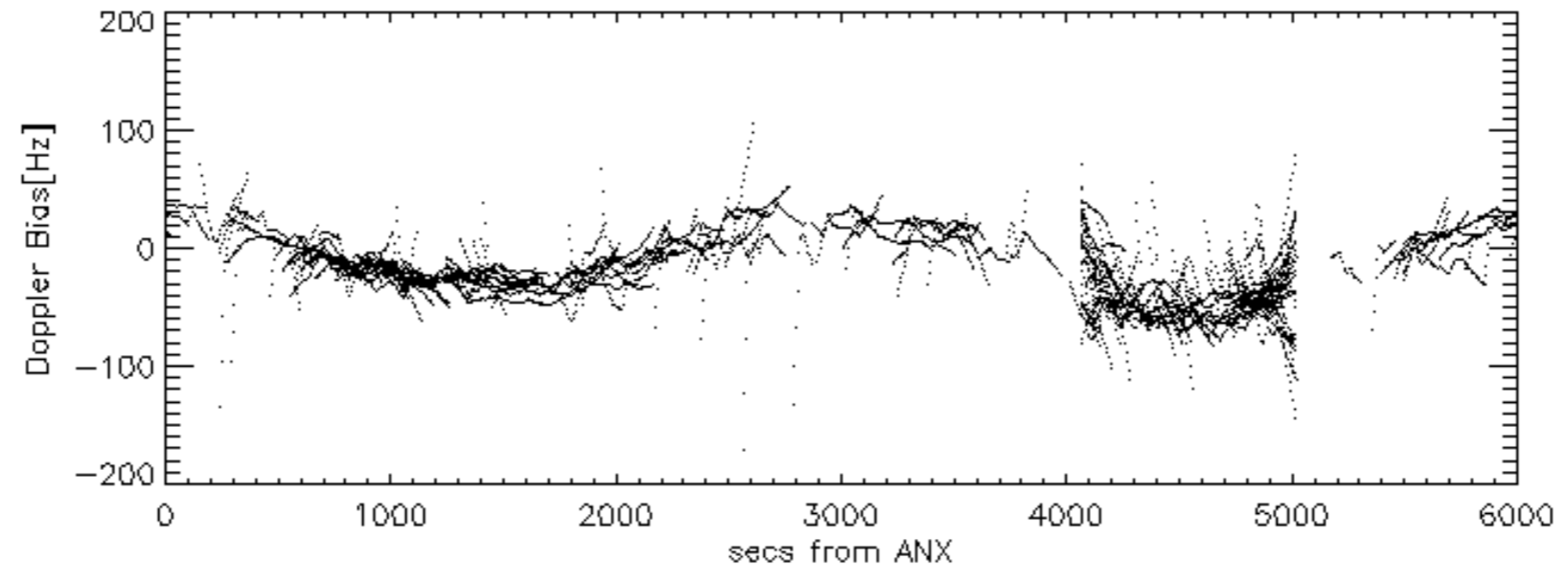
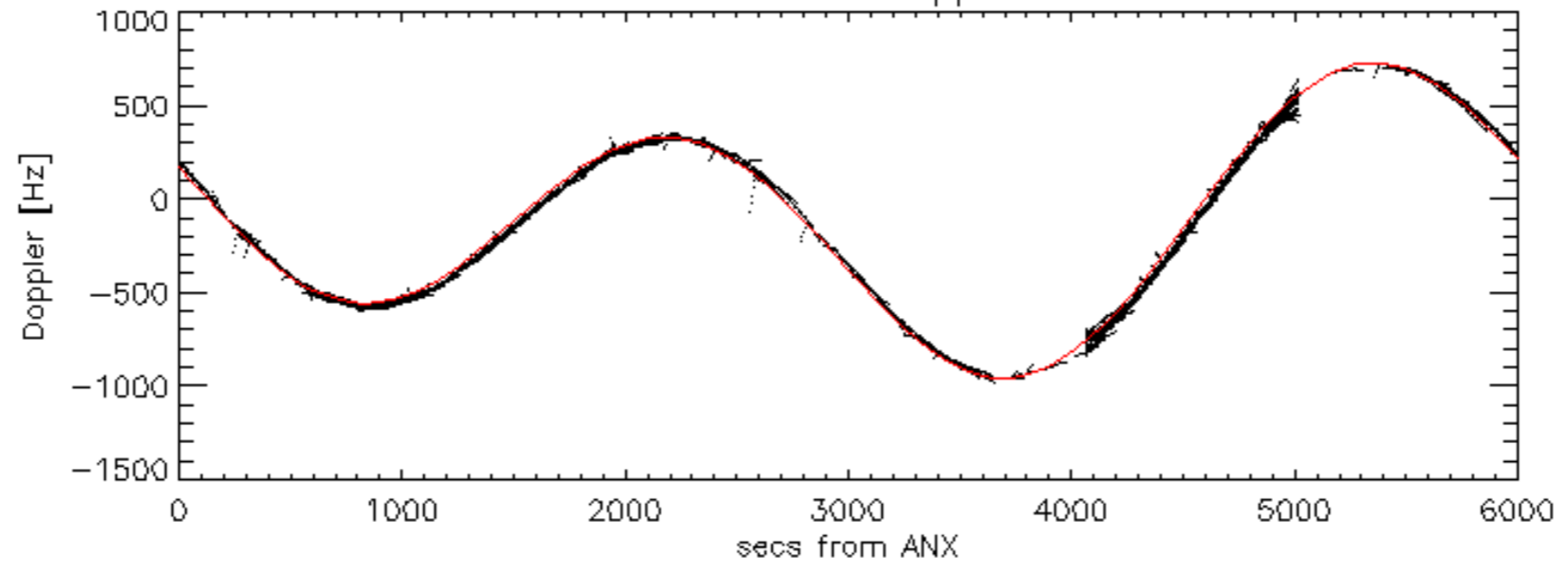
Doppler 'WVS' 'IS2' ascending

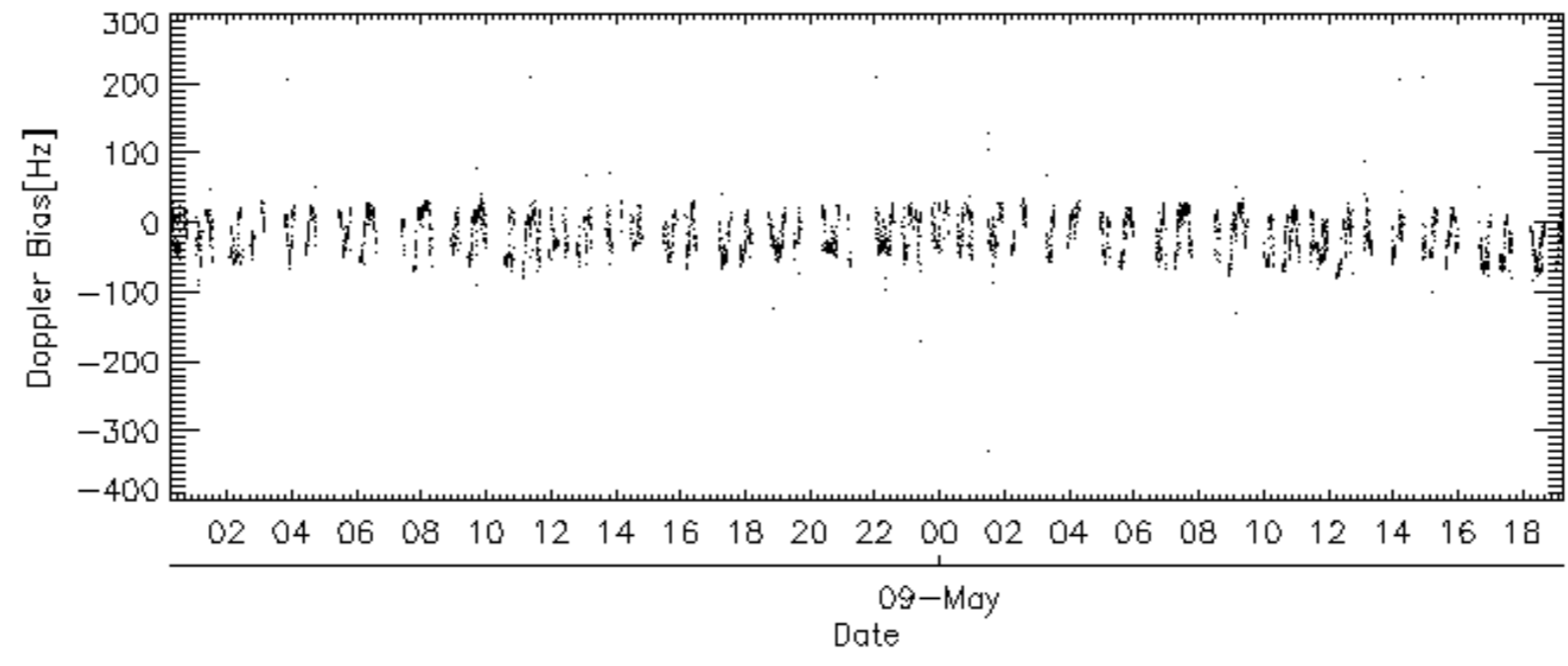
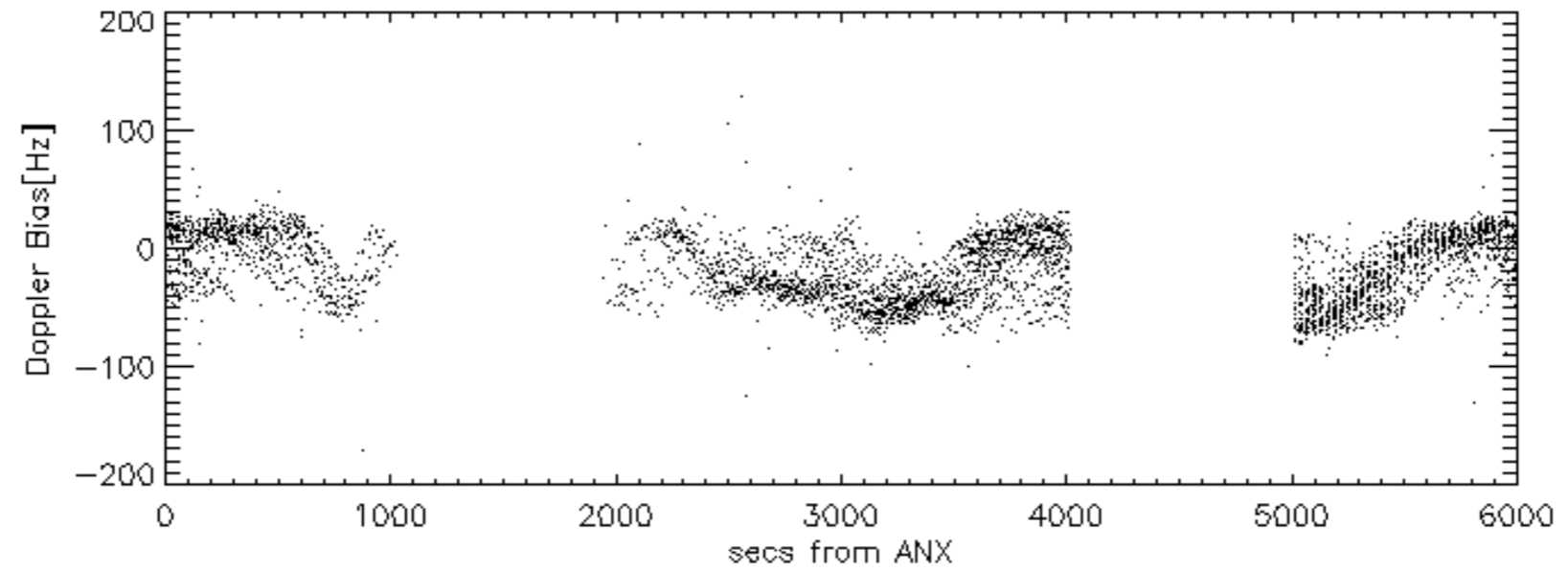
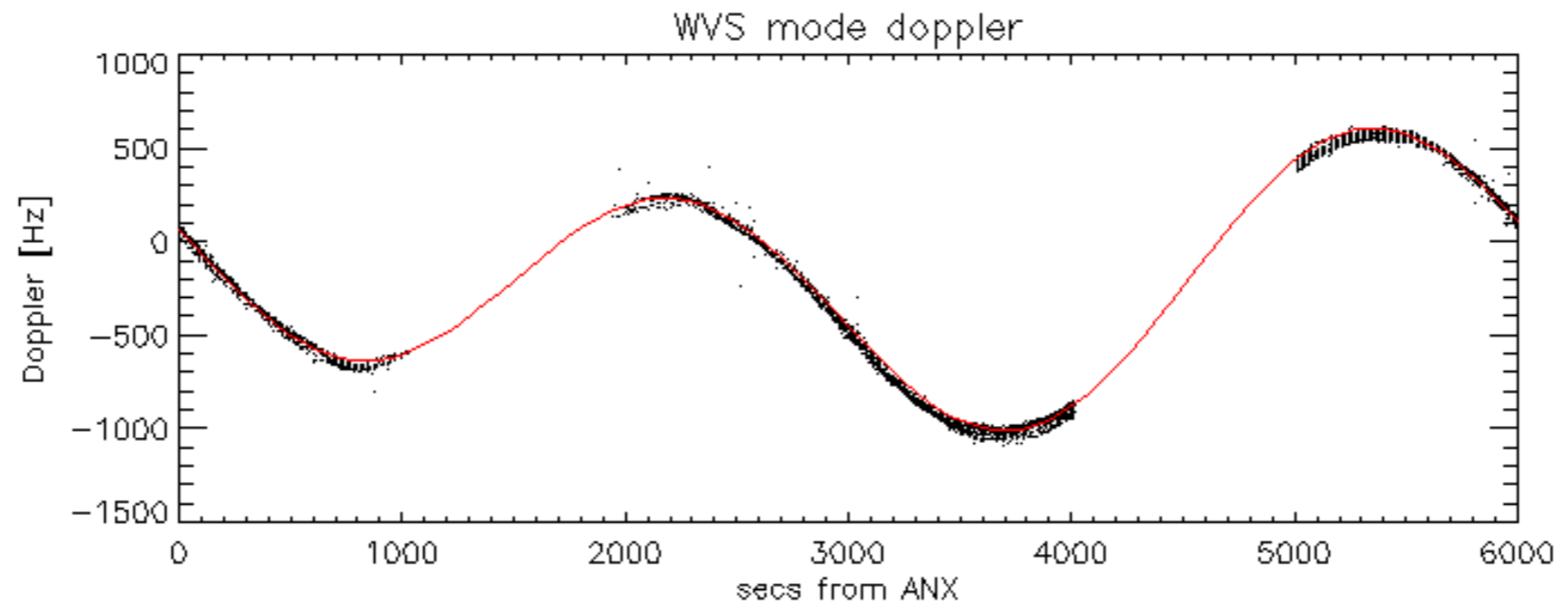


Doppler 'WVS' 'IS2' descending

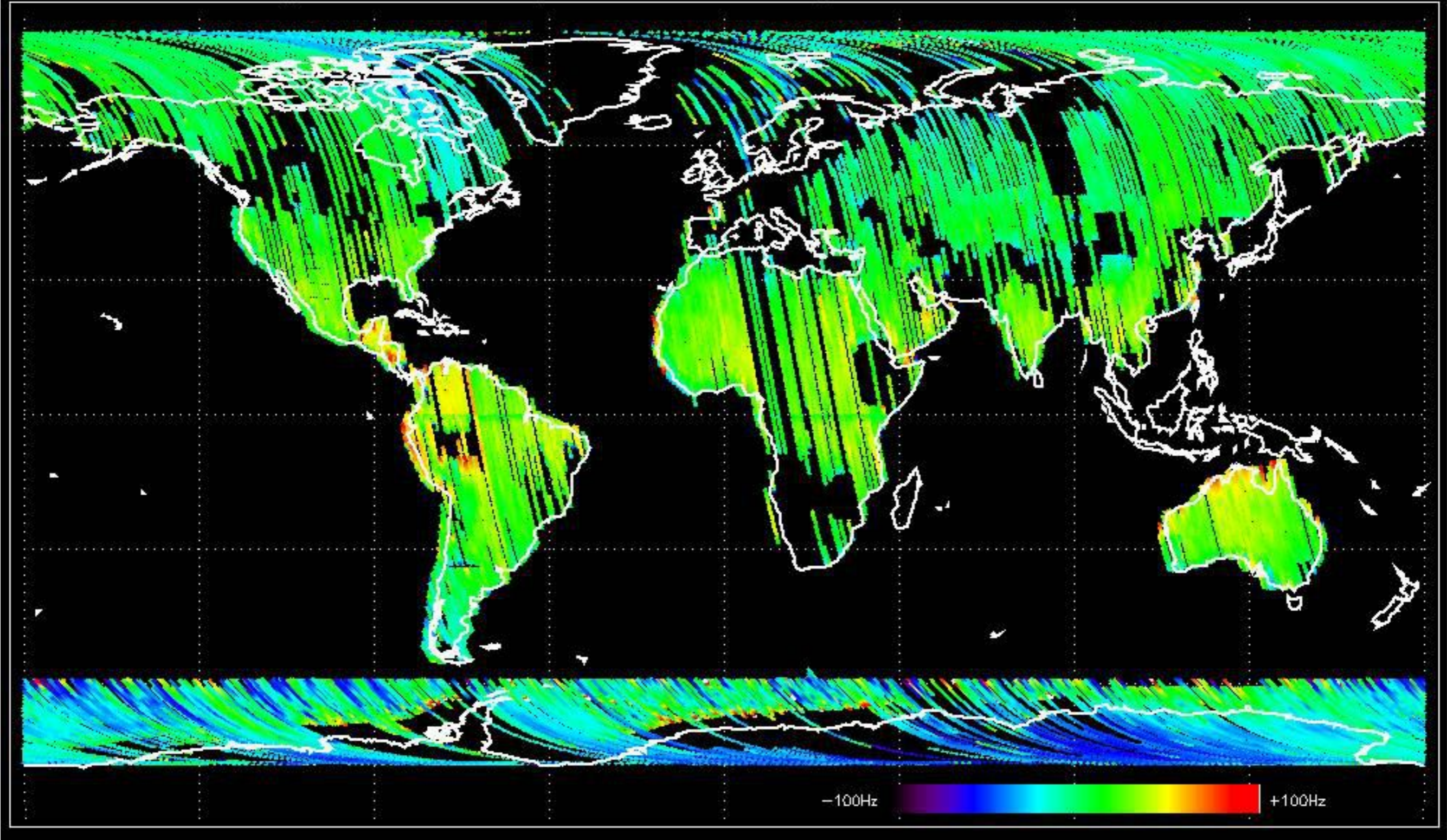


GM1 mode doppler

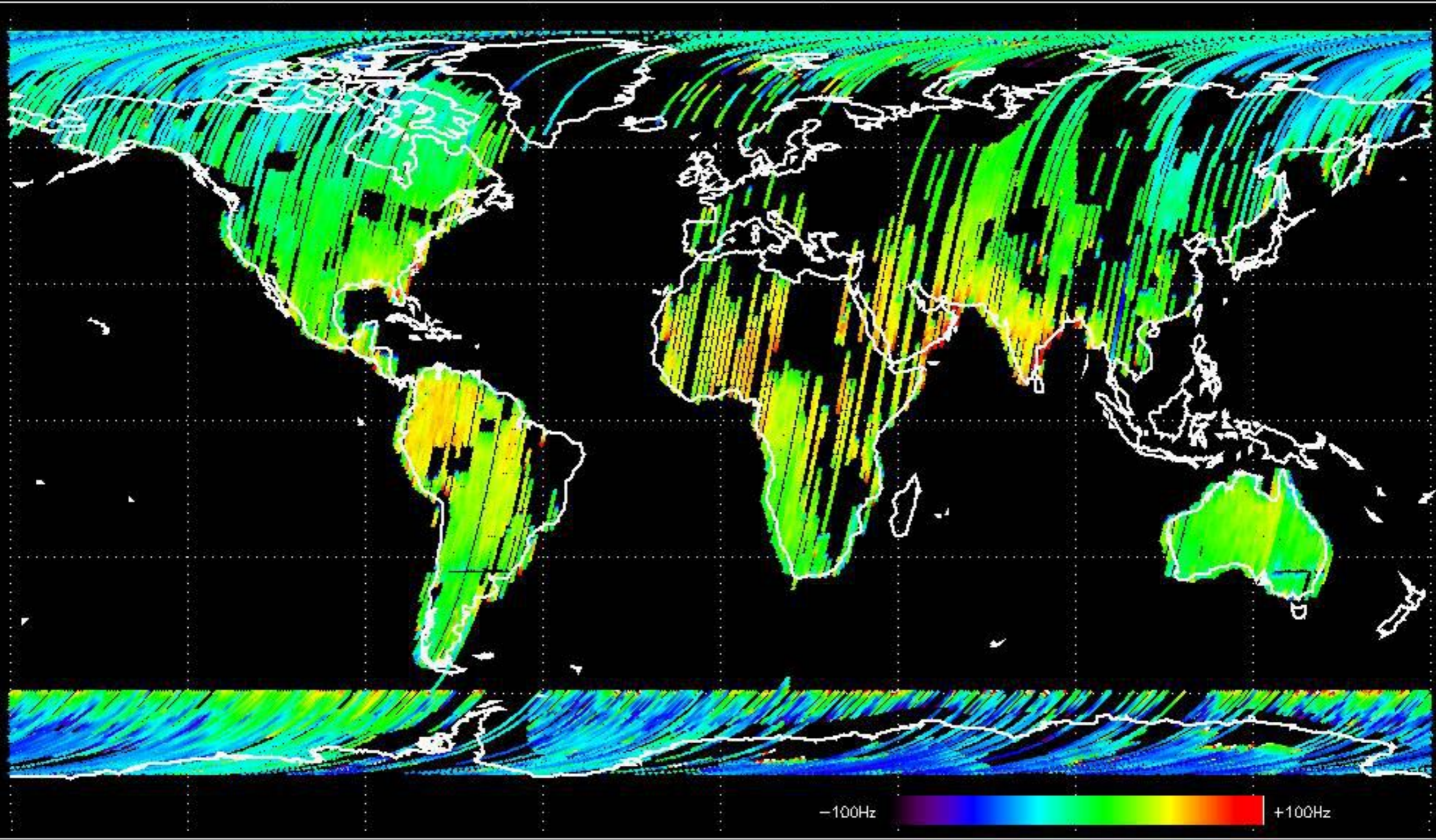




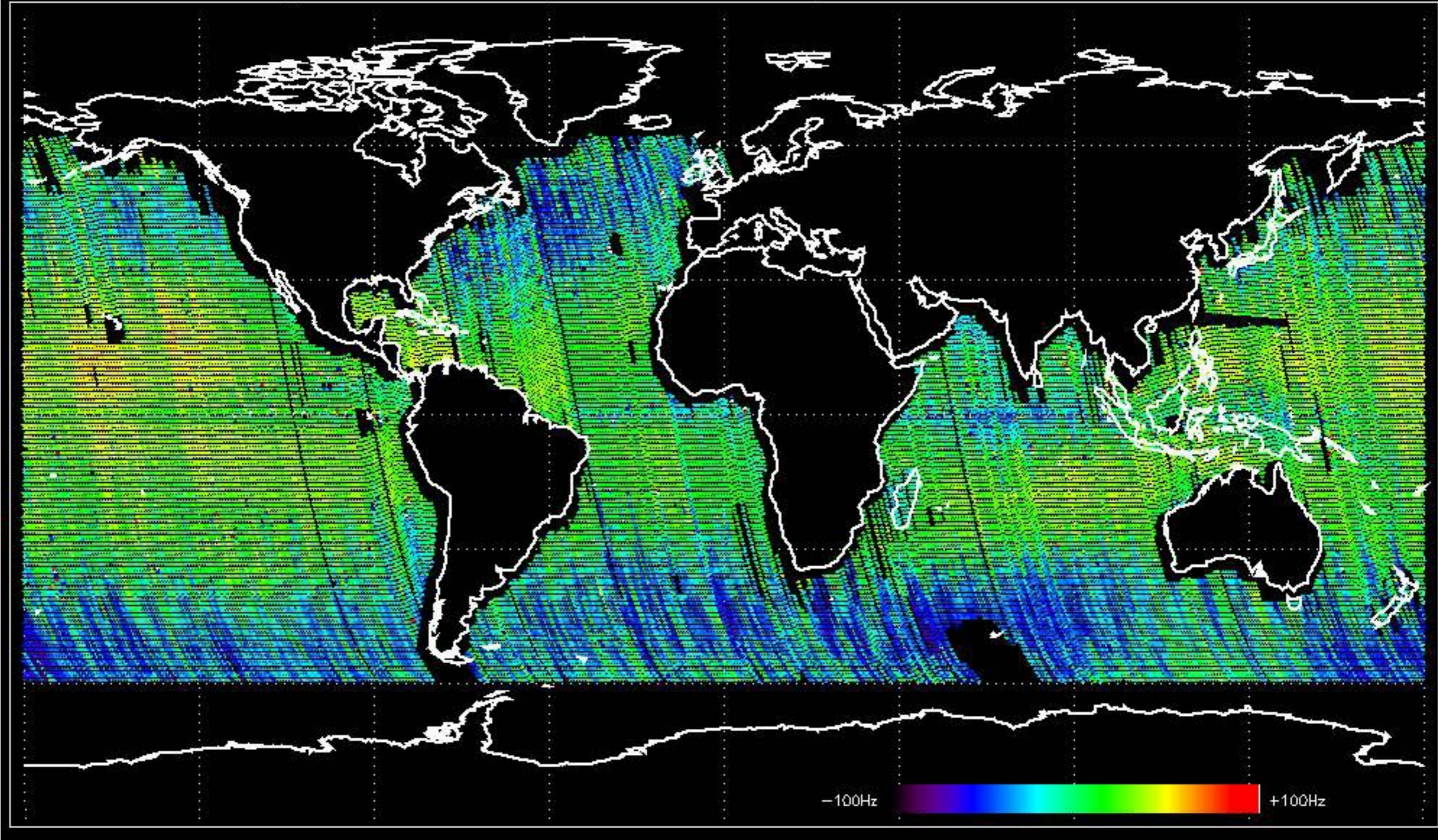
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -24.422039 Hz



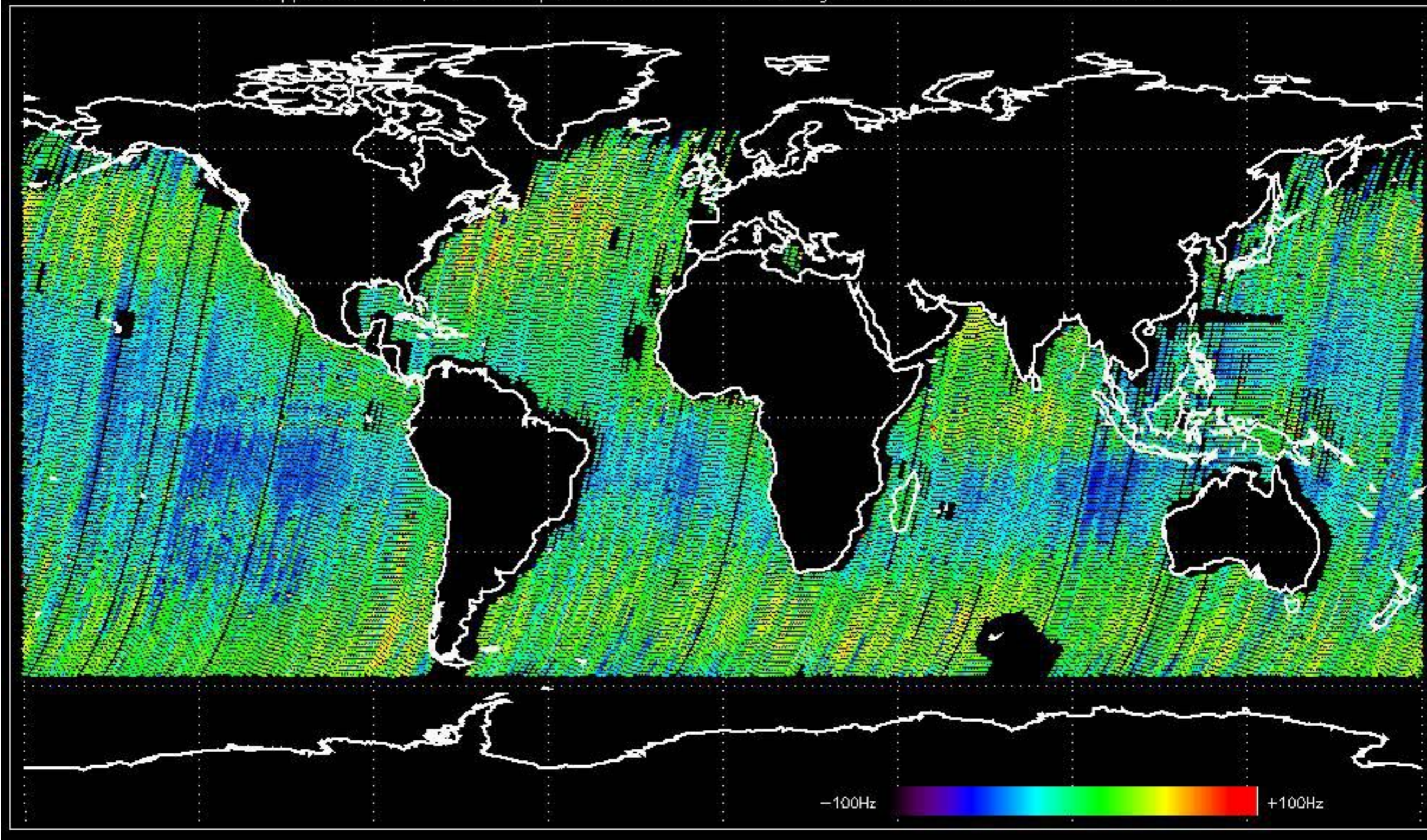
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.965143 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -18.371710 Hz

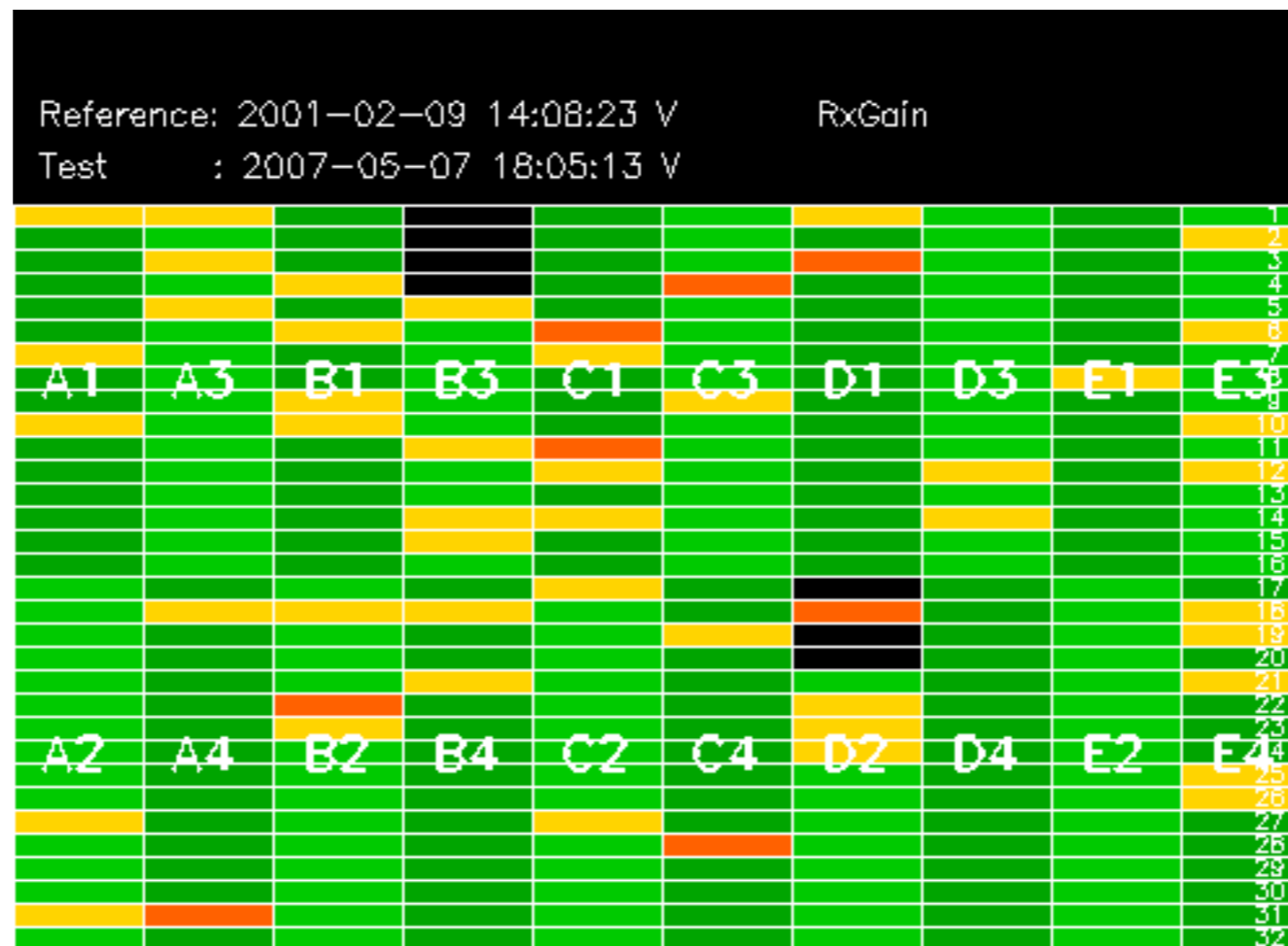


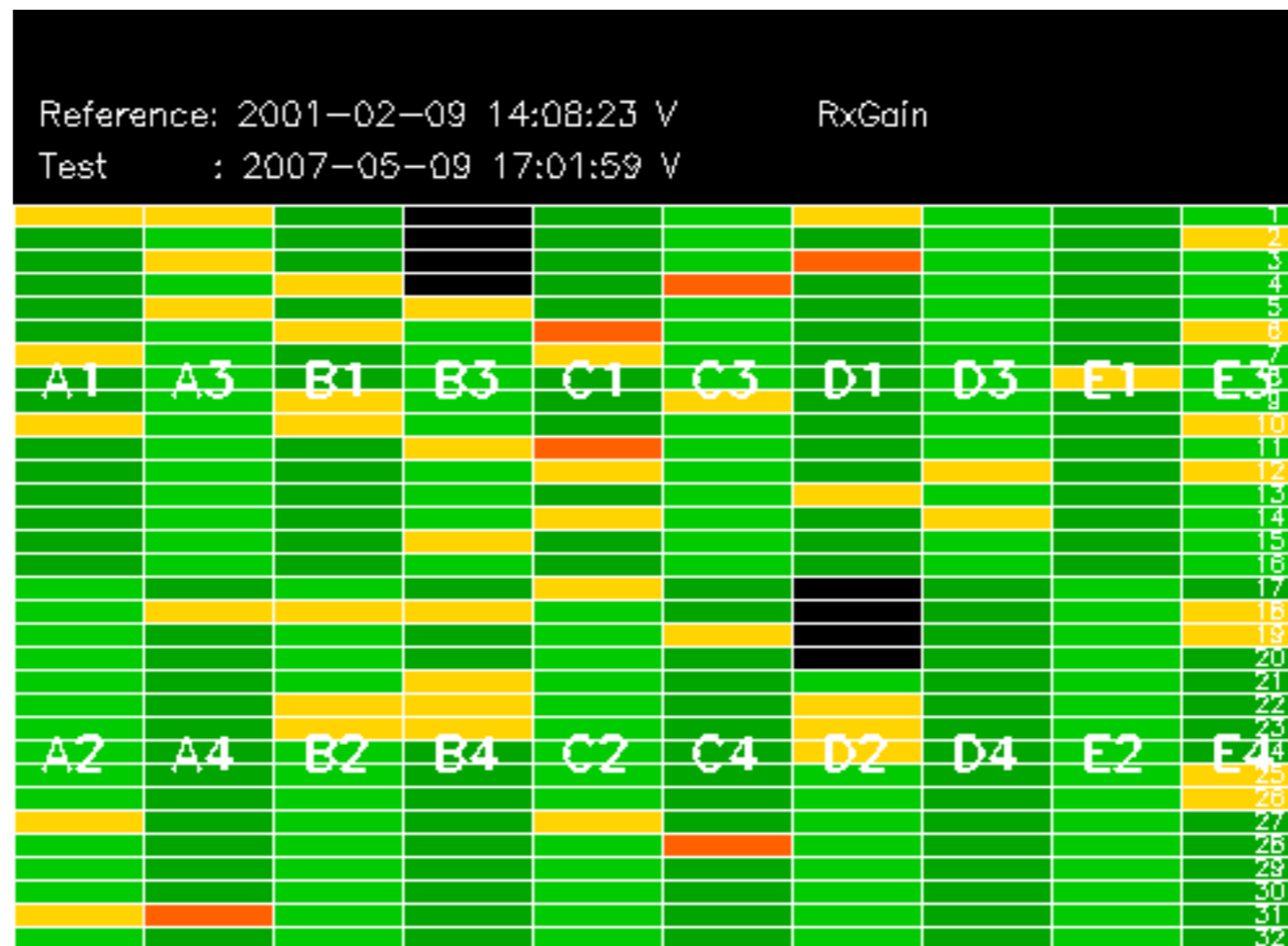
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.793659 Hz

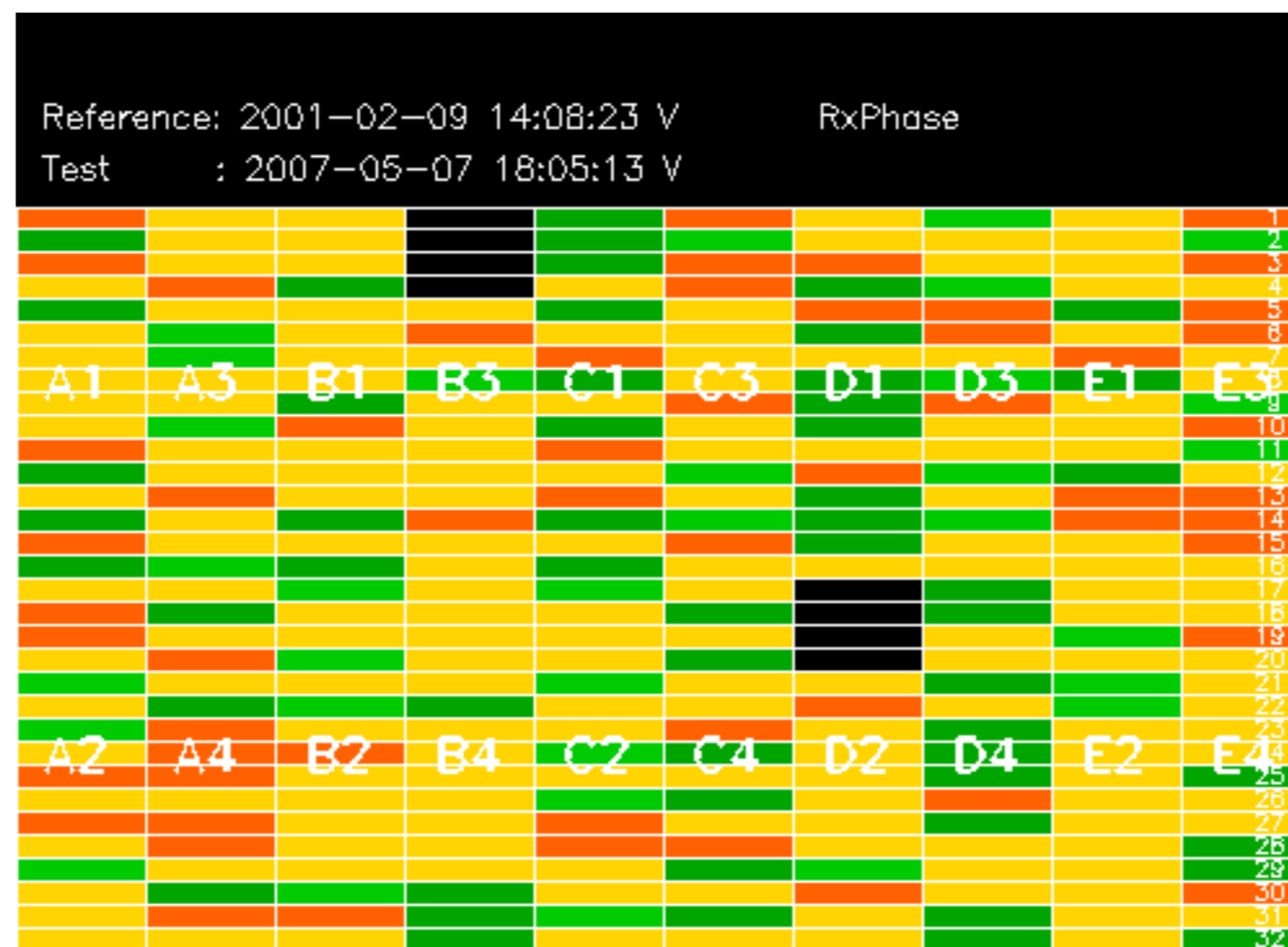


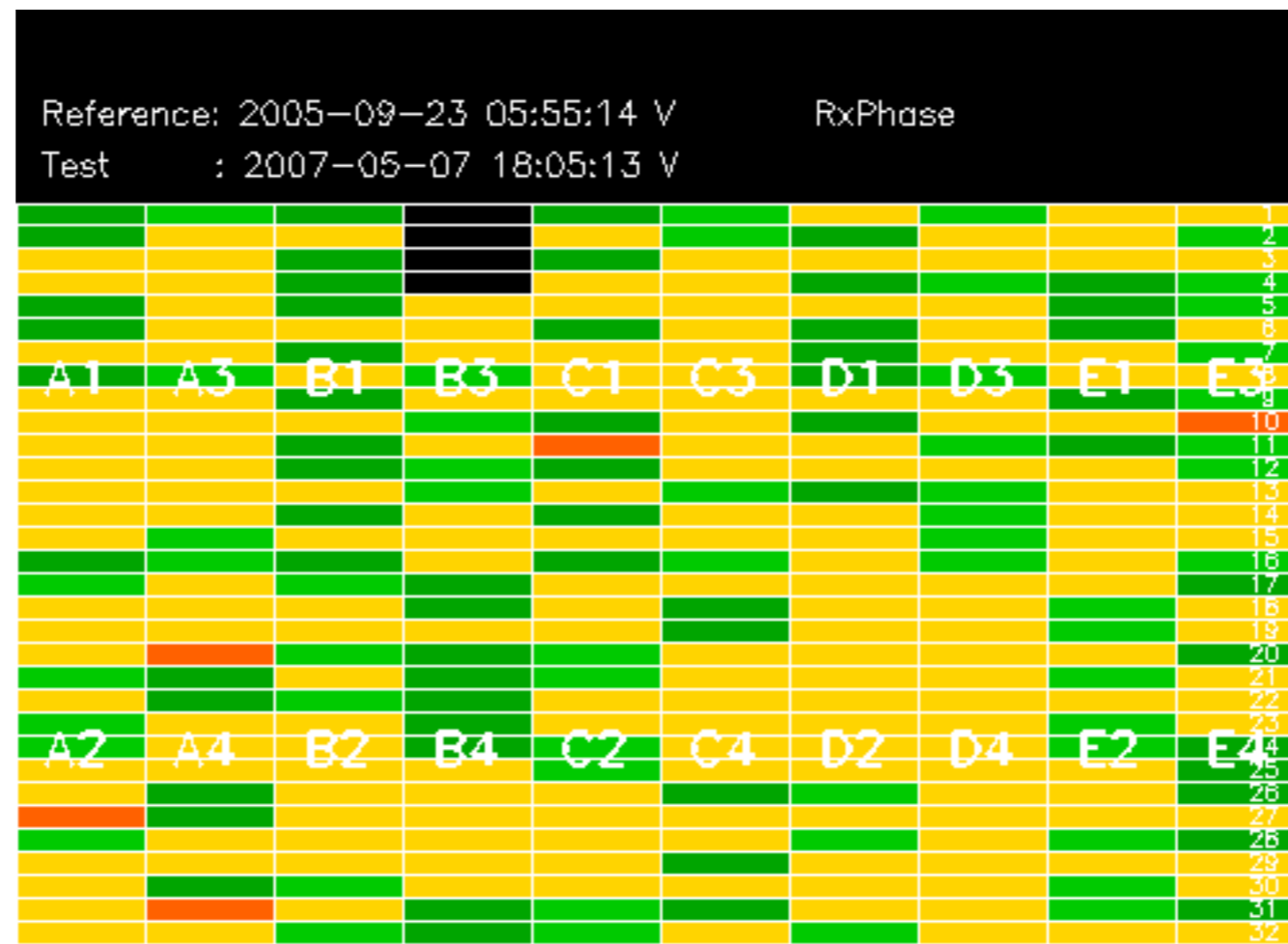
No anomalies observed on available MS products:

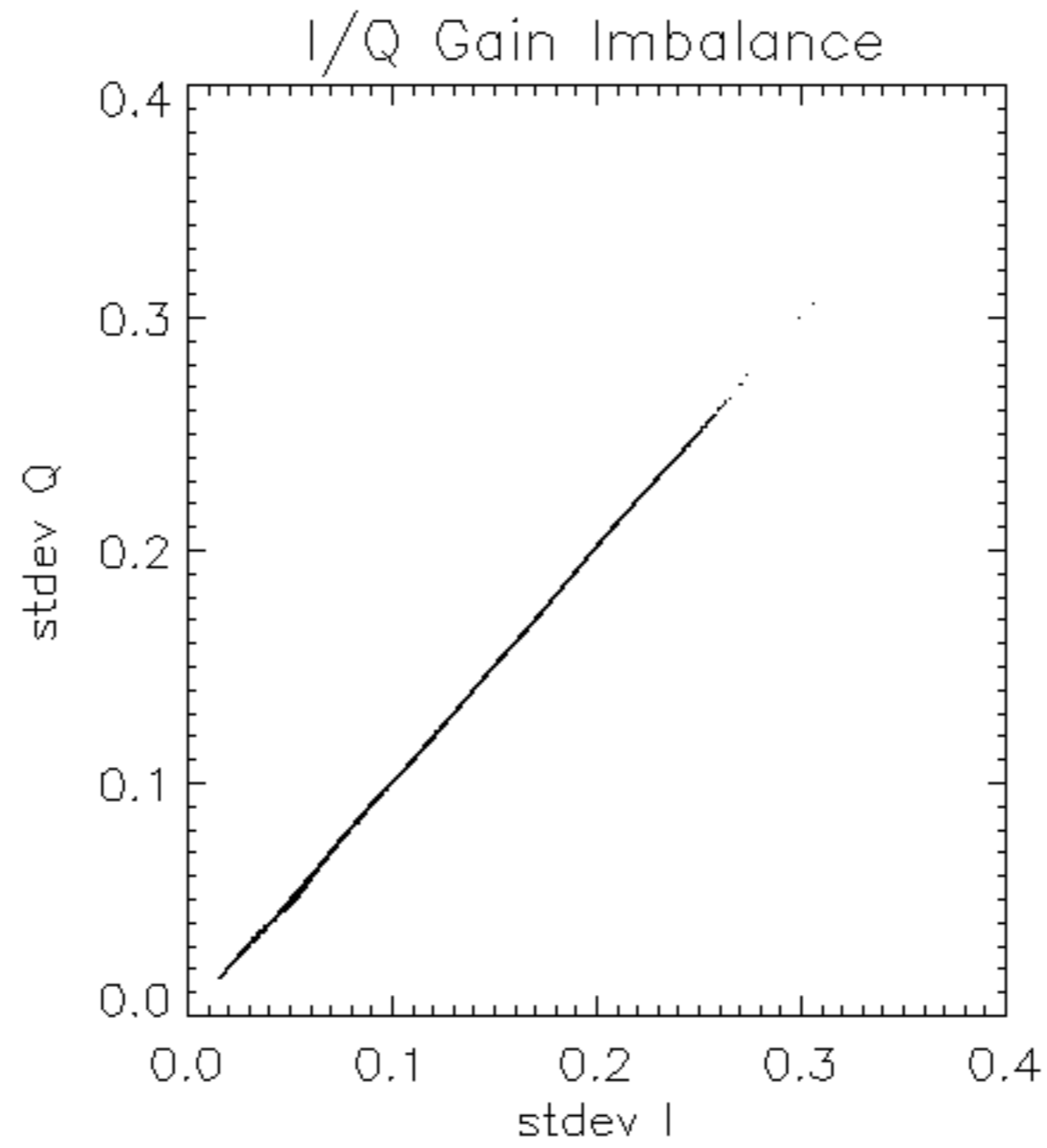
No anomalies observed.

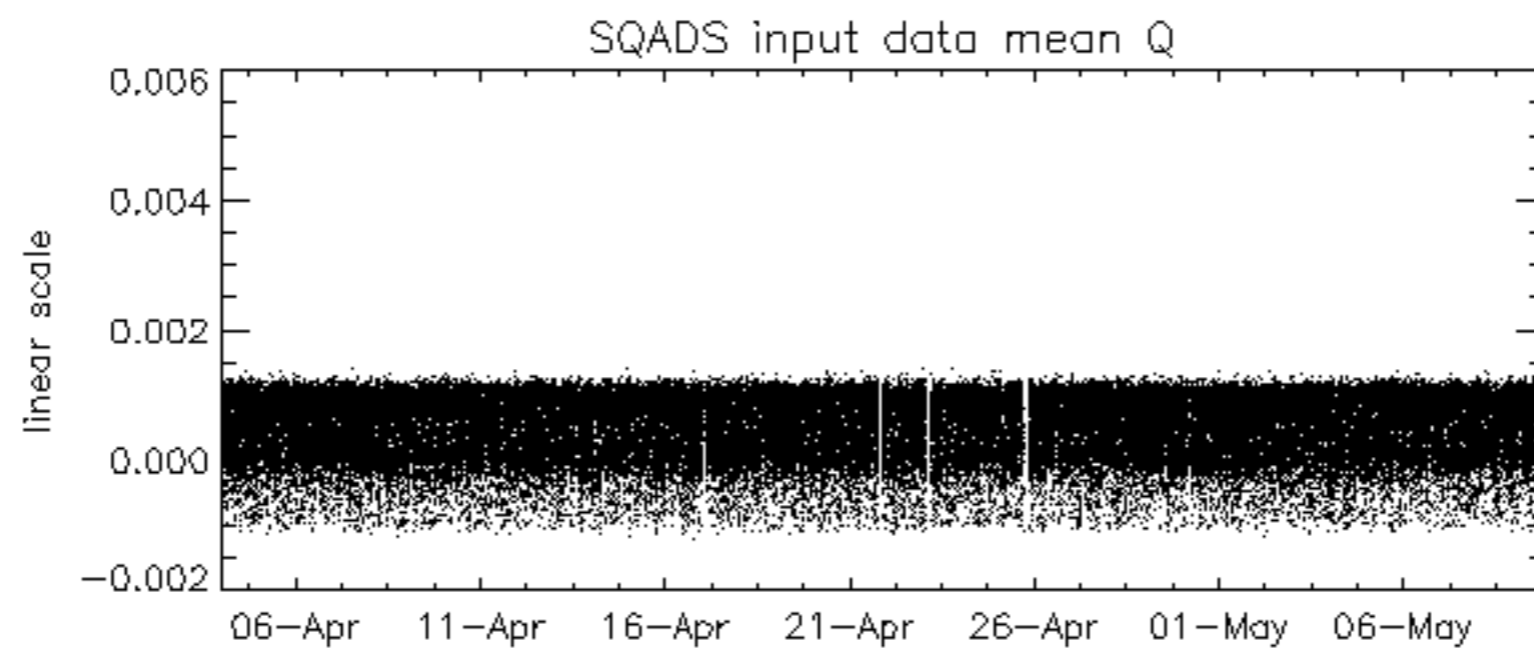
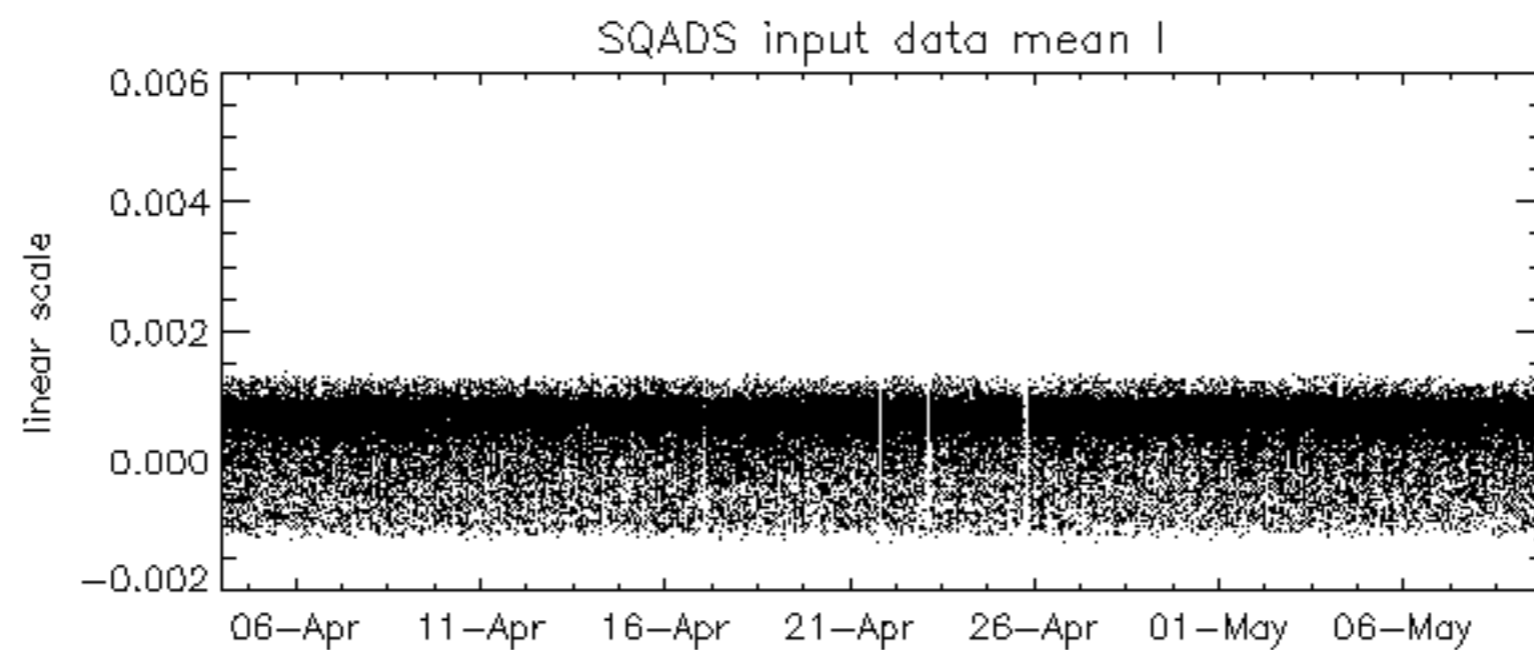
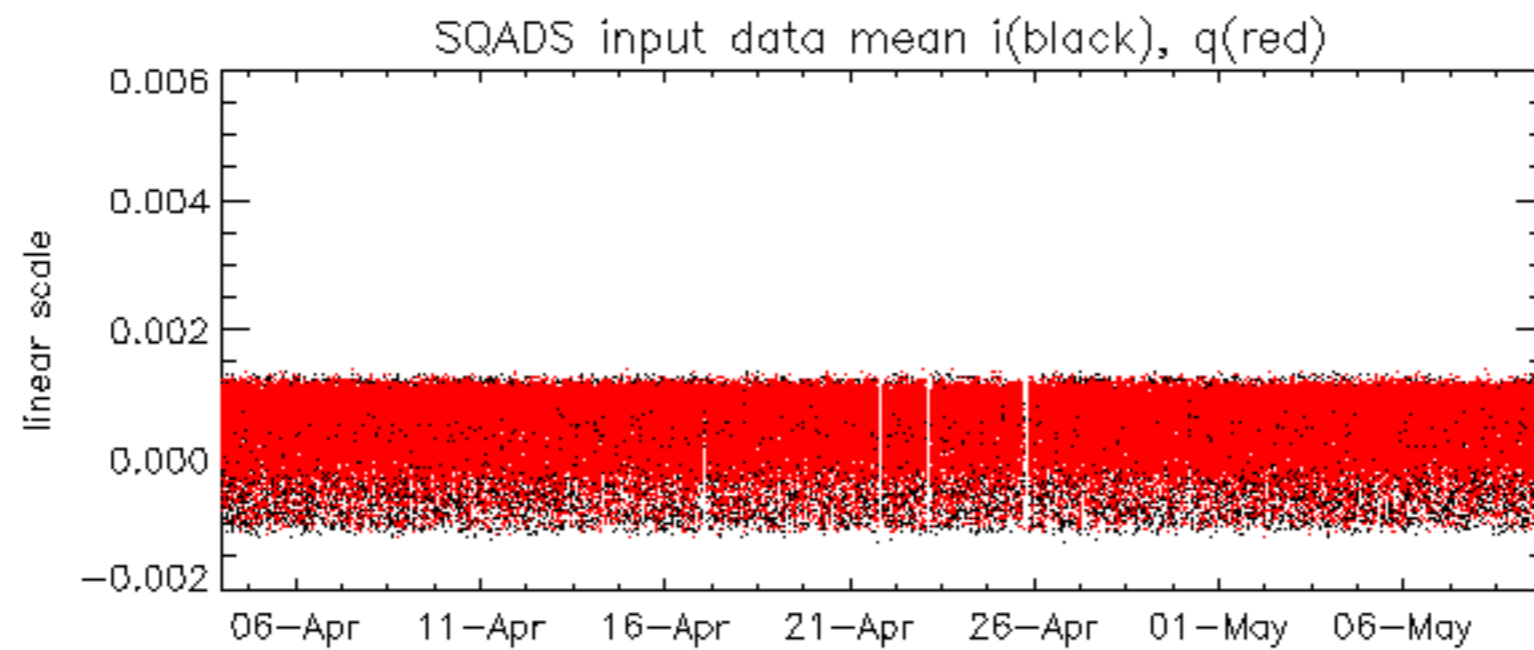


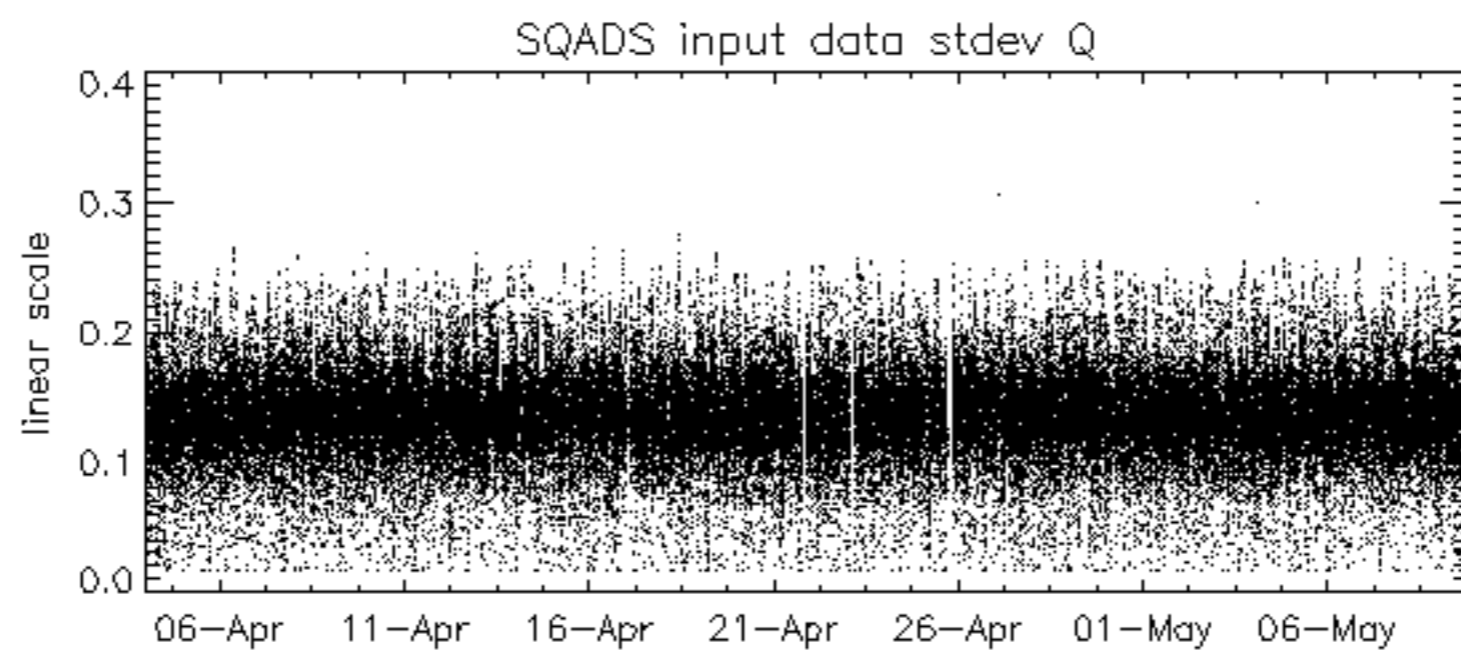
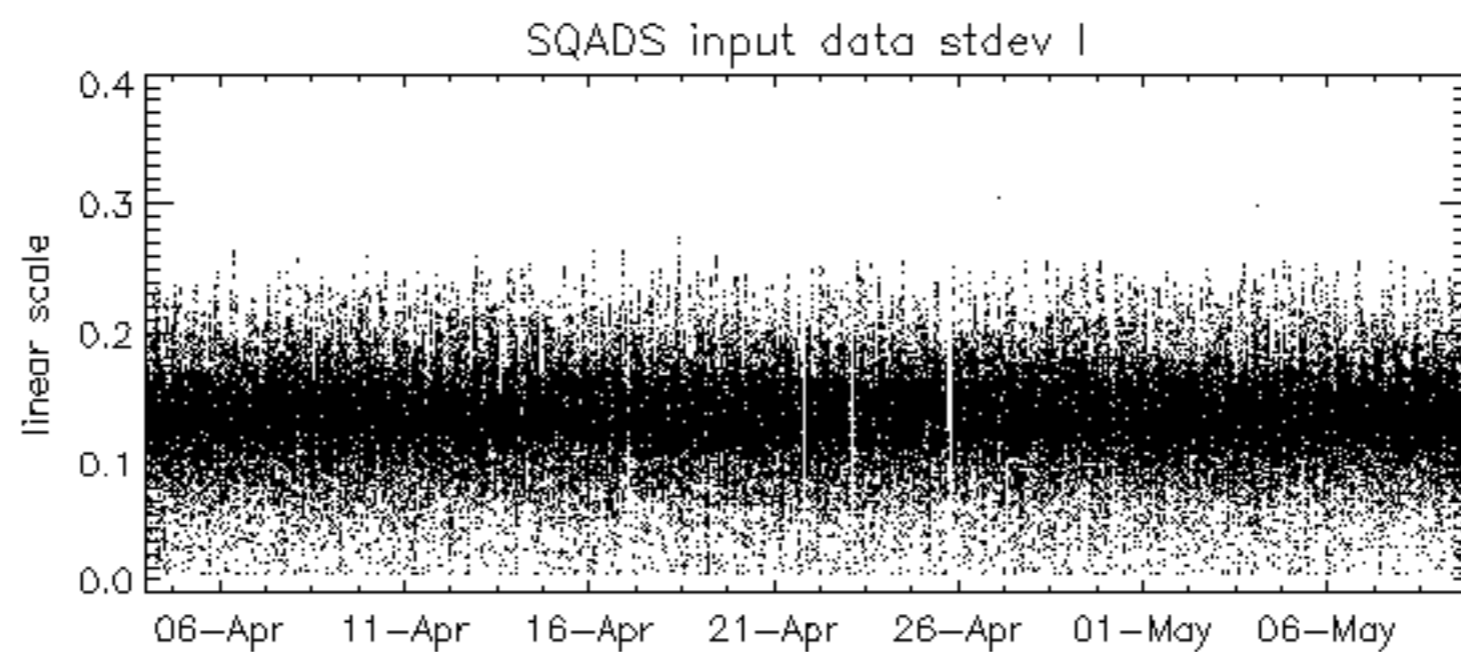
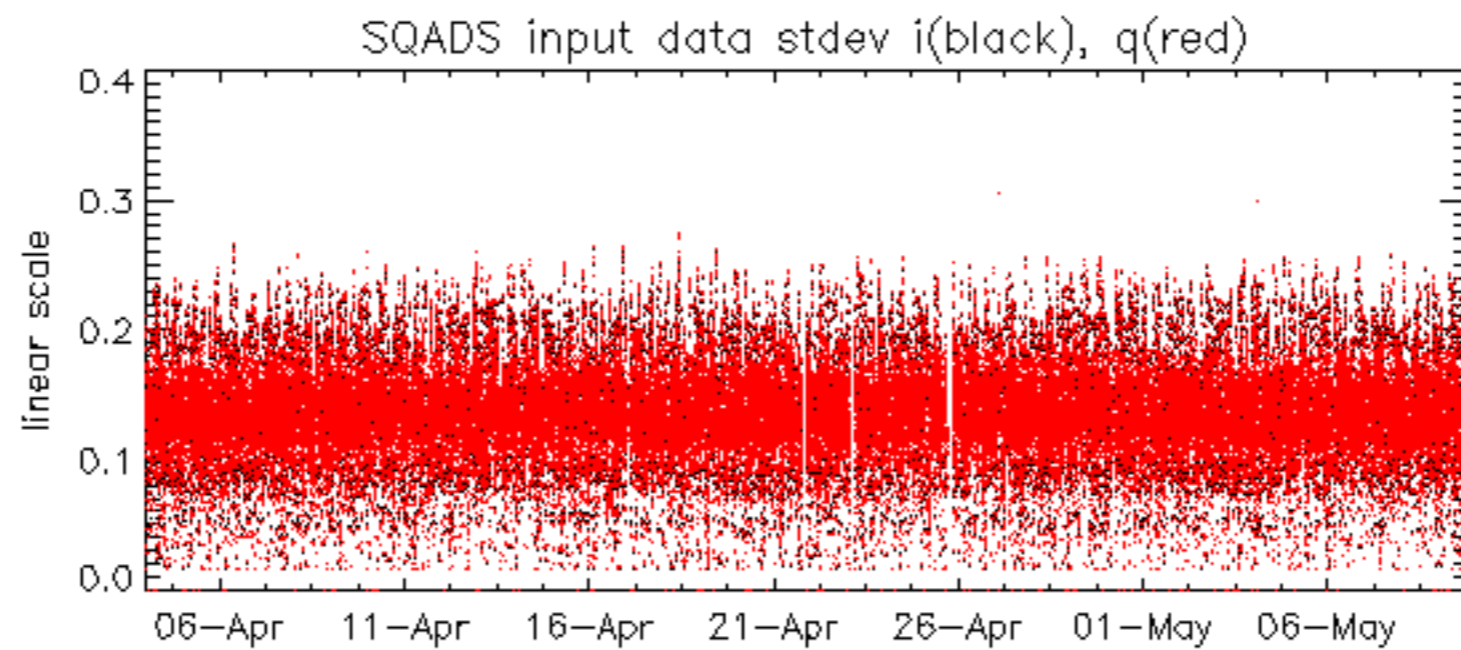








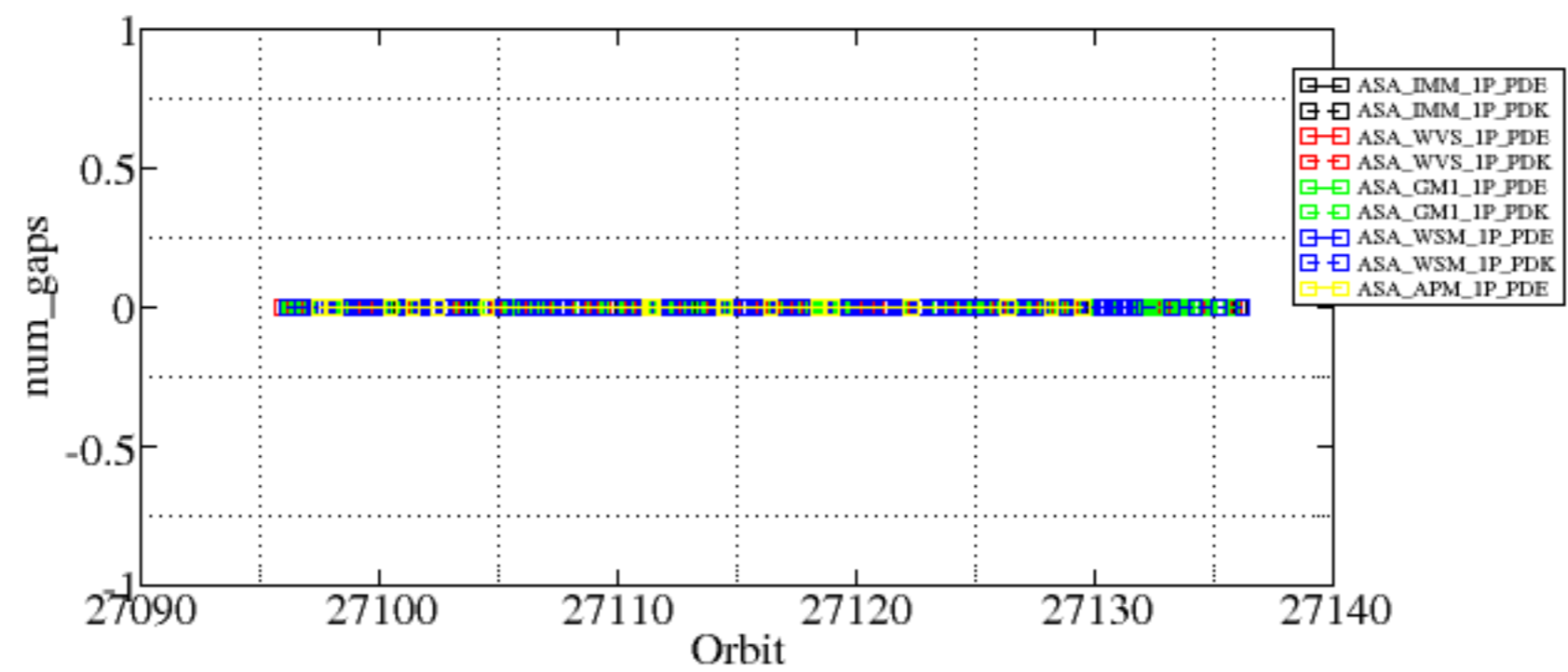


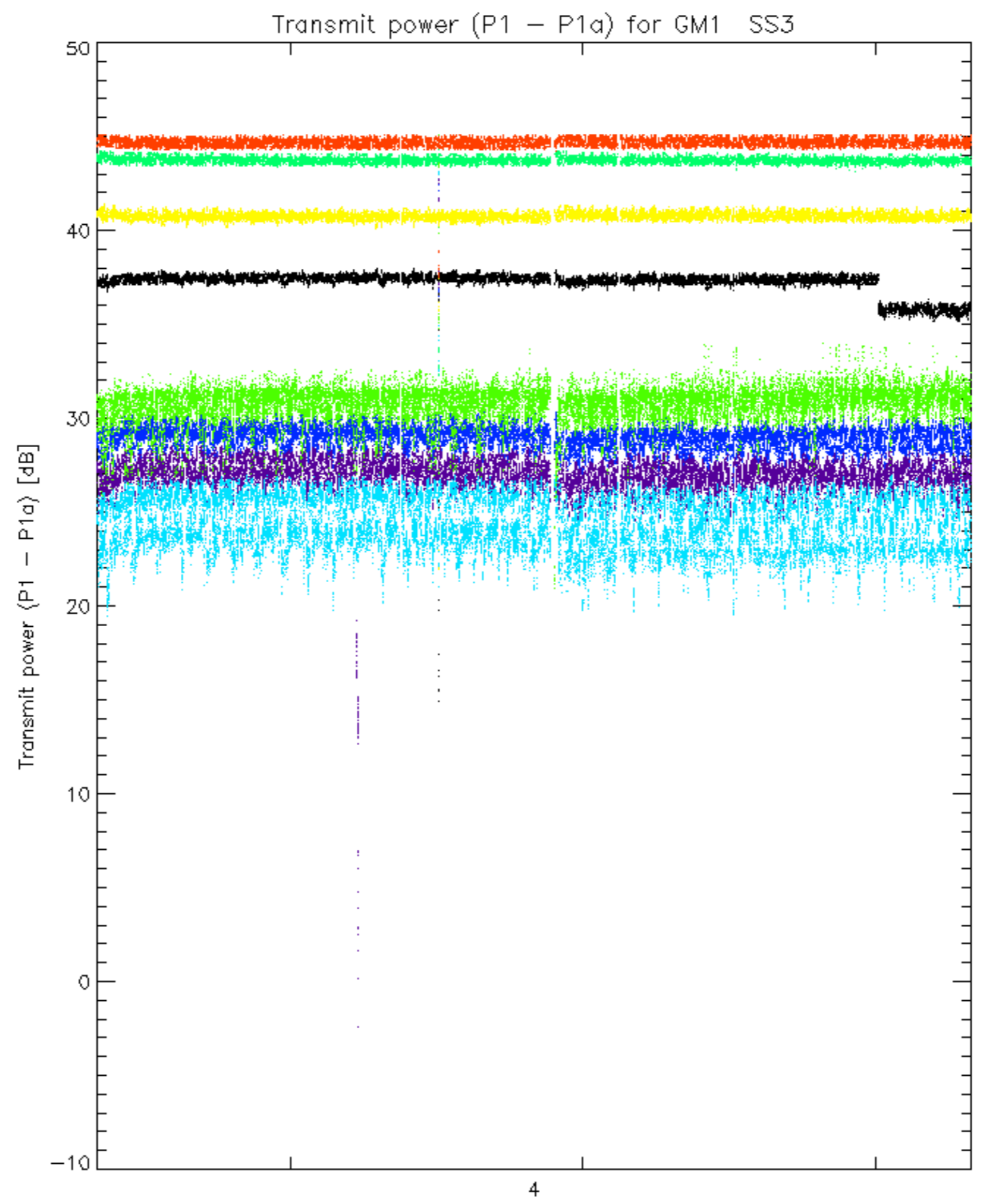


Summary of analysis for the last 3 days 2007050[789]

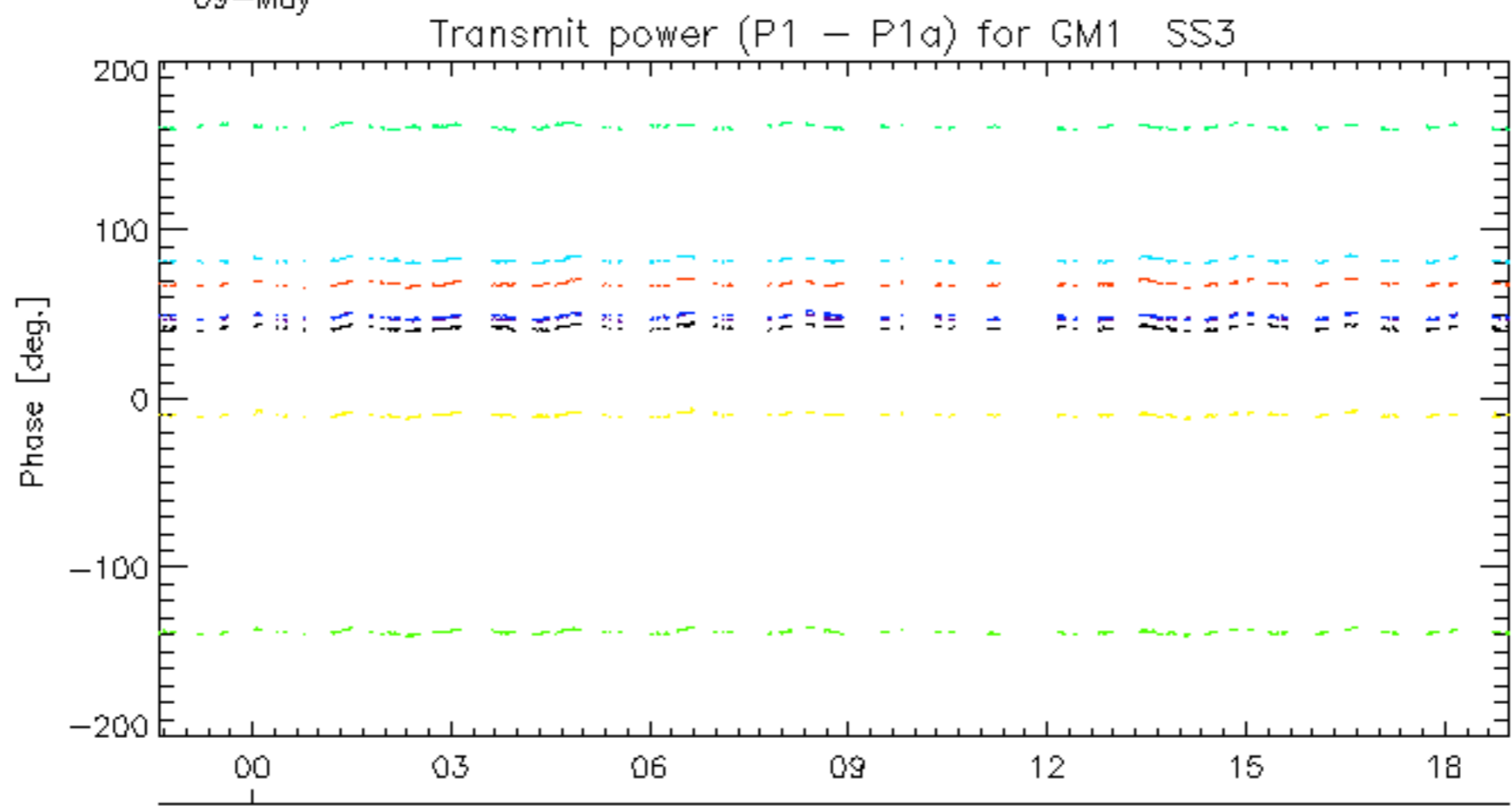
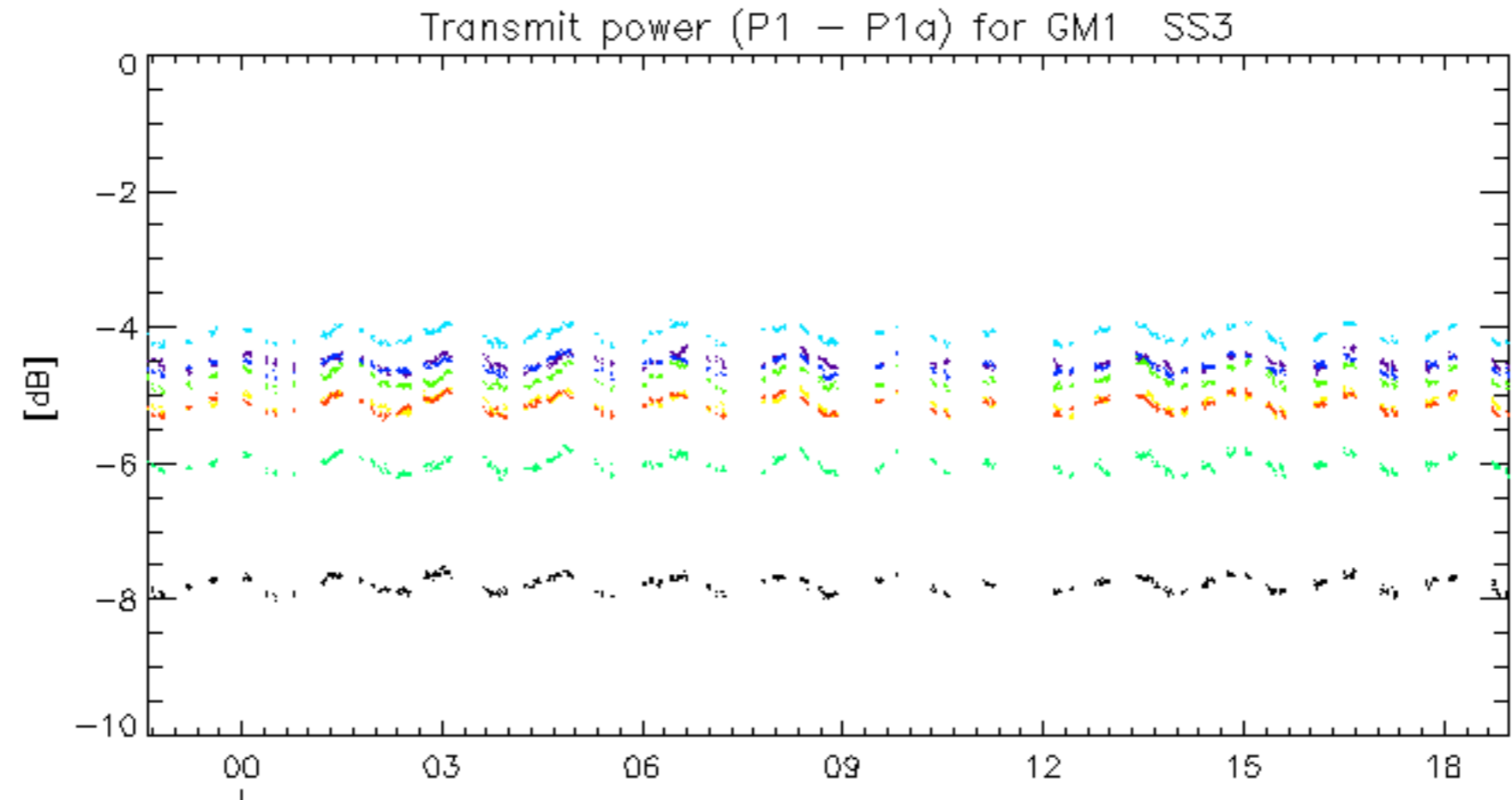
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070507_103322_000006402057_00495_27102_9475.N1	0	28
ASA_WSM_1PNPDE20070507_165905_00000852057_00499_27106_2177.N1	0	72
ASA_WSM_1PNPDE20070509_113620_000002452058_00023_27131_4750.N1	0	61

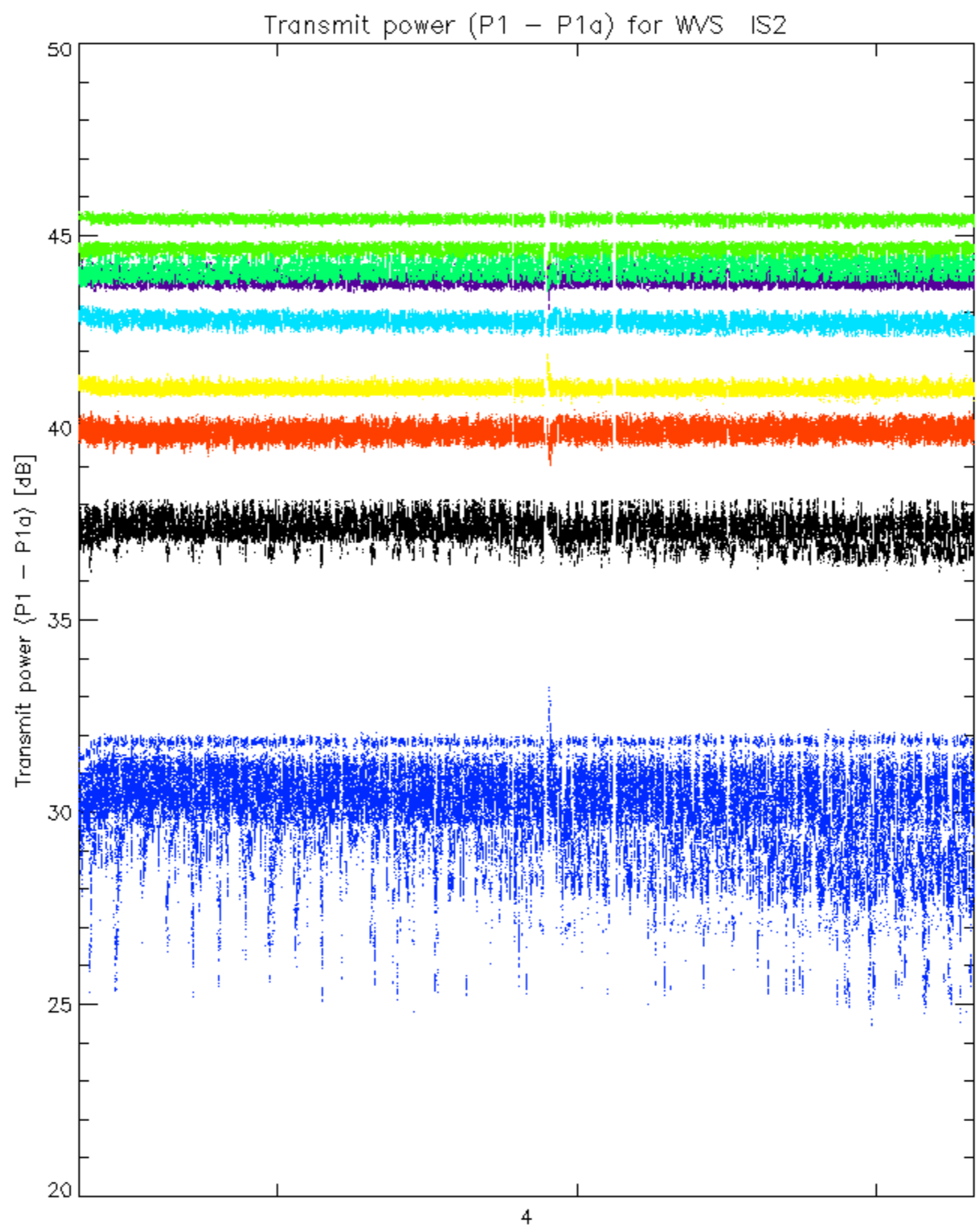




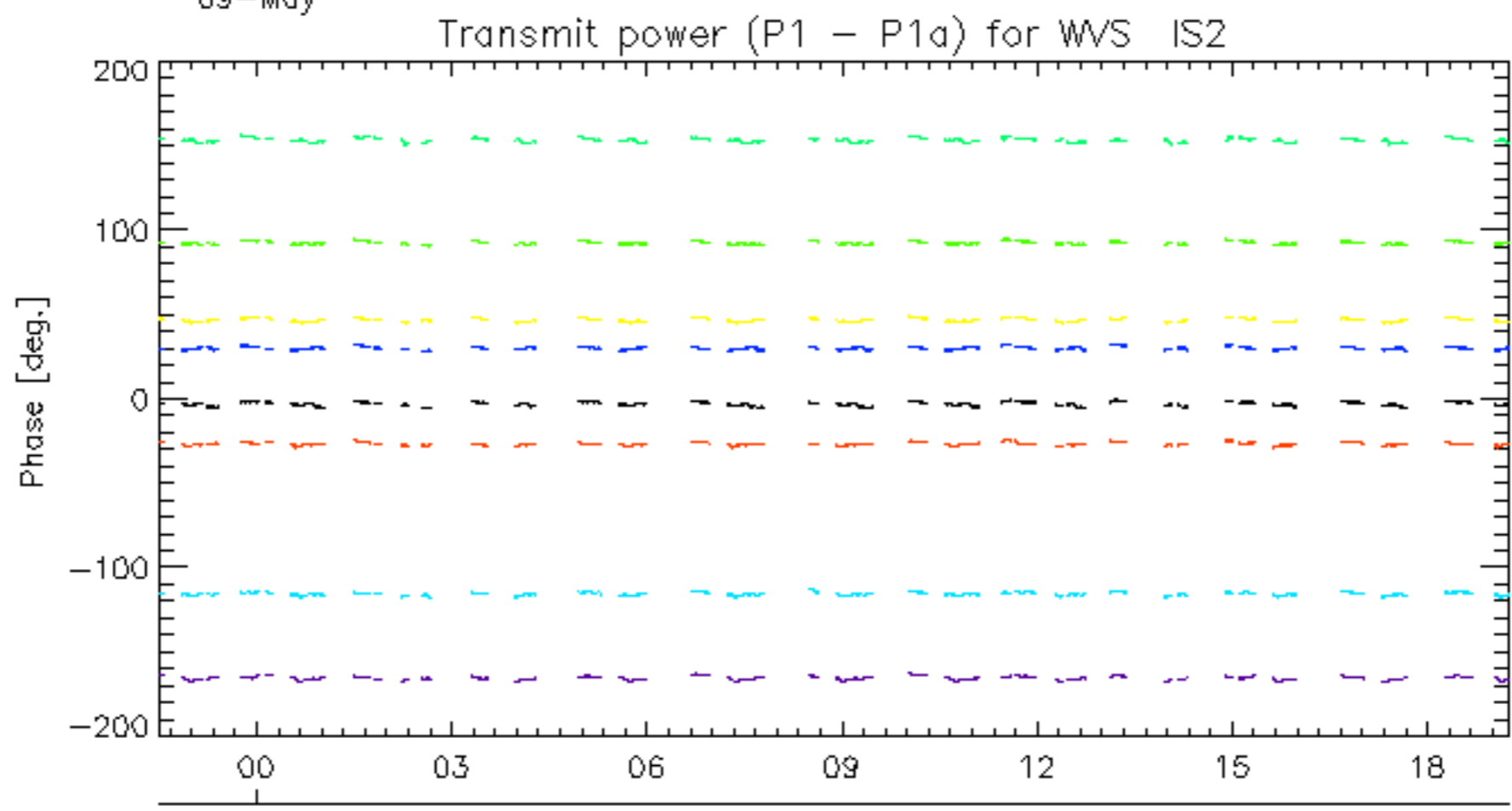
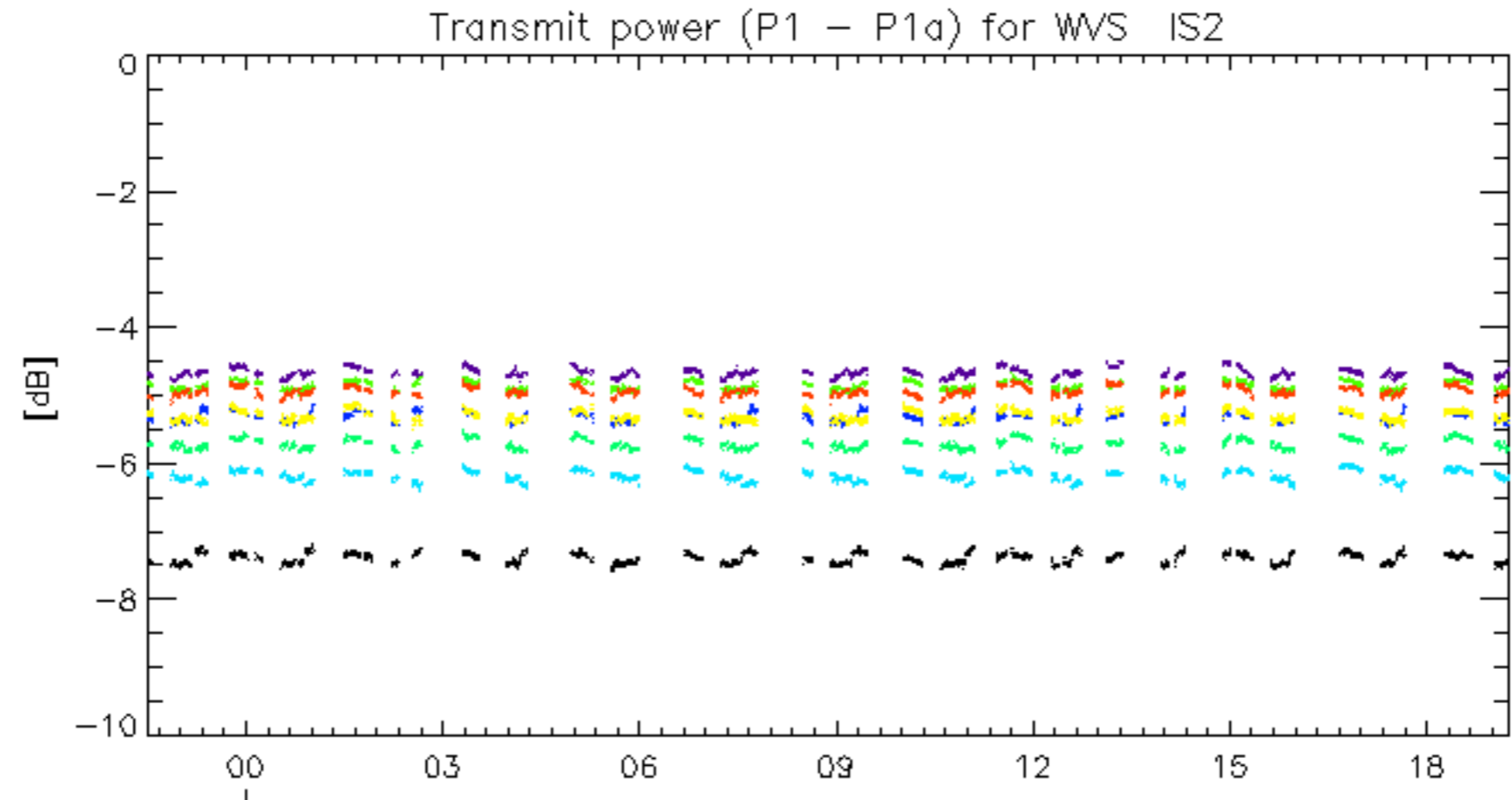
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.