

PRELIMINARY REPORT OF 060809

last update on Wed Aug 9 16:39:24 GMT 2006

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2006-08-08 00:00:00 to 2006-08-09 16:39:24

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	67	7	5	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	37	67	7	5	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	67	7	5	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	67	7	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	60	24	23	74
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	37	60	24	23	74
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	60	24	23	74
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	60	24	23	74

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20060808 085034
H	20060809 081857

MSM in V/V 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"/>

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



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.939589	0.010439	-0.015212
7	P1	-3.114041	0.048358	-0.067928
11	P1	-4.100789	0.061636	-0.086161
15	P1	-6.197727	0.091286	-0.125759
19	P1	-3.419492	0.009951	-0.064611
22	P1	-4.554871	0.010092	-0.025206
26	P1	-3.923092	0.019976	0.010946
30	P1	-5.764397	0.009532	-0.000342
3	P1	-16.531864	0.247563	-0.028020
7	P1	-17.188944	0.129511	0.047095
11	P1	-16.955301	0.285862	0.162984
15	P1	-13.061482	0.181305	0.240433
19	P1	-14.479946	0.053925	-0.053814
22	P1	-15.981637	0.430077	0.130866
26	P1	-15.116834	0.232459	-0.017572
30	P1	-17.092113	0.339043	0.066679

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.936457	0.086558	0.123543
7	P2	-21.887894	0.102697	0.083718
11	P2	-15.779211	0.119417	0.040394
15	P2	-7.121908	0.098531	0.034127
19	P2	-9.129397	0.089948	0.026686
22	P2	-18.149172	0.085790	0.007790
26	P2	-16.401802	0.091710	0.007325
30	P2	-19.507965	0.091581	0.048470

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173041	0.003134	0.005076
7	P3	-8.173041	0.003134	0.005076
11	P3	-8.173041	0.003134	0.005076
15	P3	-8.173041	0.003134	0.005076
19	P3	-8.173041	0.003134	0.005076
22	P3	-8.173041	0.003134	0.005076
26	P3	-8.173041	0.003134	0.005076
30	P3	-8.173041	0.003134	0.005076

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.823153	0.008870	-0.010366
7	P1	-2.589871	0.121777	-0.178016
11	P1	-2.884901	0.120162	-0.168761
15	P1	-3.611552	0.137089	-0.213561
19	P1	-3.424632	0.024033	-0.008482
22	P1	-5.084563	0.019584	0.007776
26	P1	-5.861312	0.015940	-0.004768
30	P1	-5.197561	0.033354	0.010345
3	P1	-11.618352	0.043387	-0.014545
7	P1	-9.973552	0.046715	-0.044079
11	P1	-10.257314	0.061306	-0.067728
15	P1	-10.754877	0.144294	-0.014644
19	P1	-15.557450	0.498679	-0.022612
22	P1	-20.924538	1.304958	0.043266

26	P1	-16.244818	0.385496	0.217873
30	P1	-17.947670	0.409341	-0.146513

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.563097	0.073076	0.182199
7	P2	-22.354923	0.118667	0.152087
11	P2	-11.023450	0.041059	0.089532
15	P2	-4.899920	0.044659	0.047743
19	P2	-6.867132	0.039832	0.028104
22	P2	-8.190497	0.035103	0.016301
26	P2	-24.180367	0.060018	0.017384
30	P2	-21.997463	0.047987	0.054687

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.011496	0.003741	0.007609
7	P3	-8.011461	0.003743	0.007321
11	P3	-8.011483	0.003744	0.006854
15	P3	-8.011500	0.003741	0.007133
19	P3	-8.011430	0.003755	0.007601
22	P3	-8.011534	0.003734	0.007203
26	P3	-8.011476	0.003735	0.007154
30	P3	-8.011469	0.003744	0.007268

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	0.000562350
	stdev	1.71375e-07
MEAN Q	mean	0.000537697
	stdev	2.13841e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137574
	stdev	0.00108014
STDEV Q	mean	0.137930
	stdev	0.00109753



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006080[789]

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_IMM_1PNPDE20060807_002903_000000512050_00088_23188_3070.N1	1	0
ASA_WSM_1PNPDE20060808_000918_000000852050_00102_23202_6545.N1	0	35
ASA_WSM_1PNPDE20060808_014653_000001462050_00103_23203_6563.N1	0	40
ASA_WSM_1PNPDE20060808_233741_000003292050_00116_23216_6720.N1	0	35





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)


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

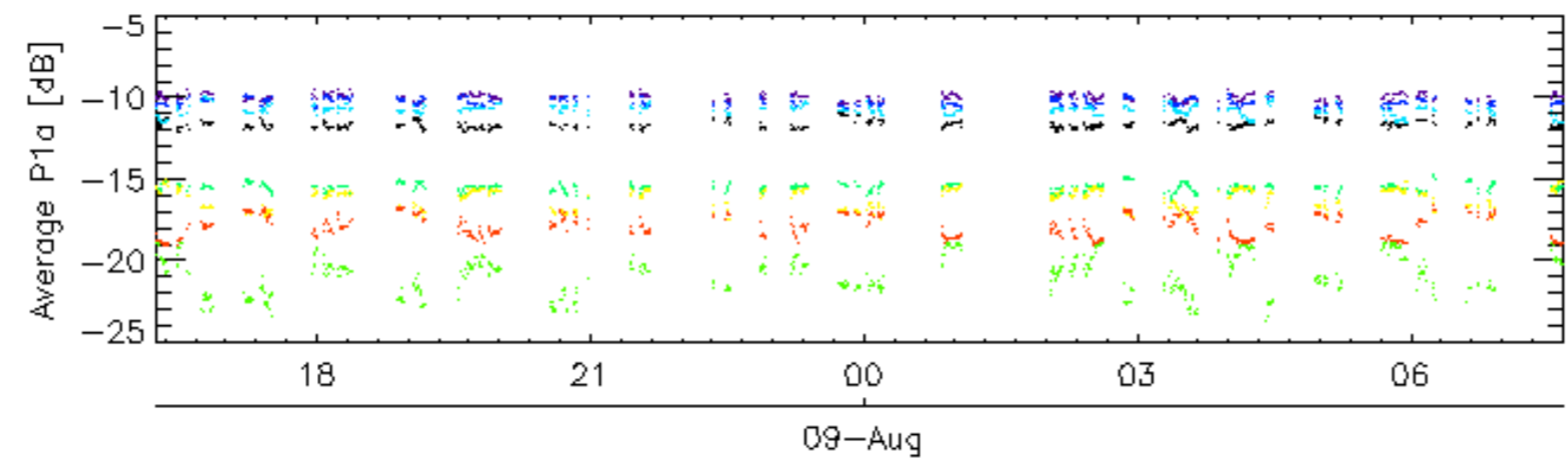
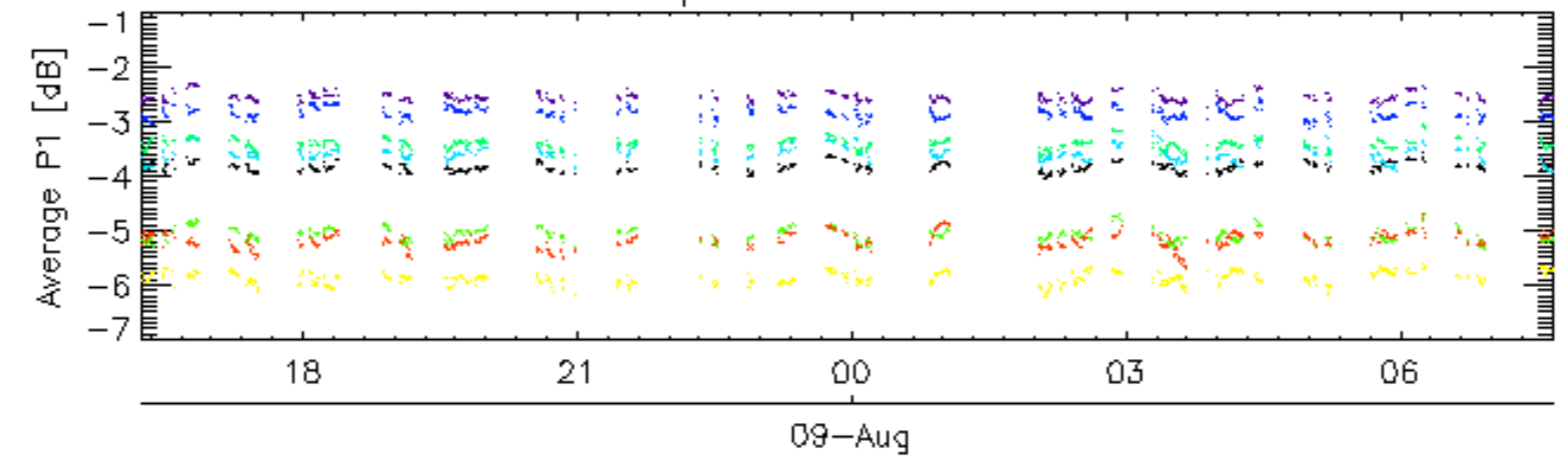
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

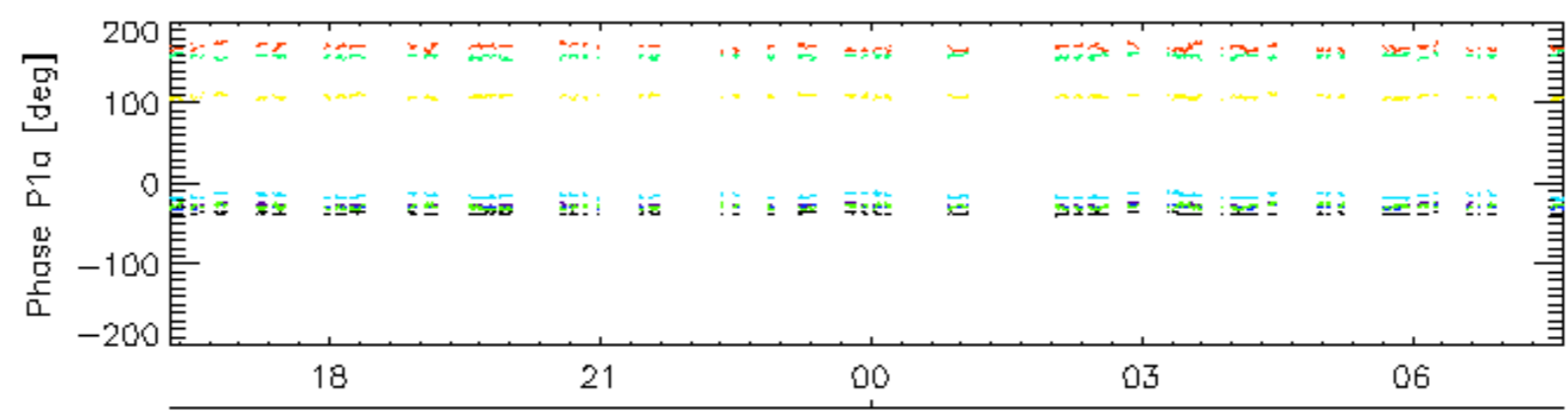
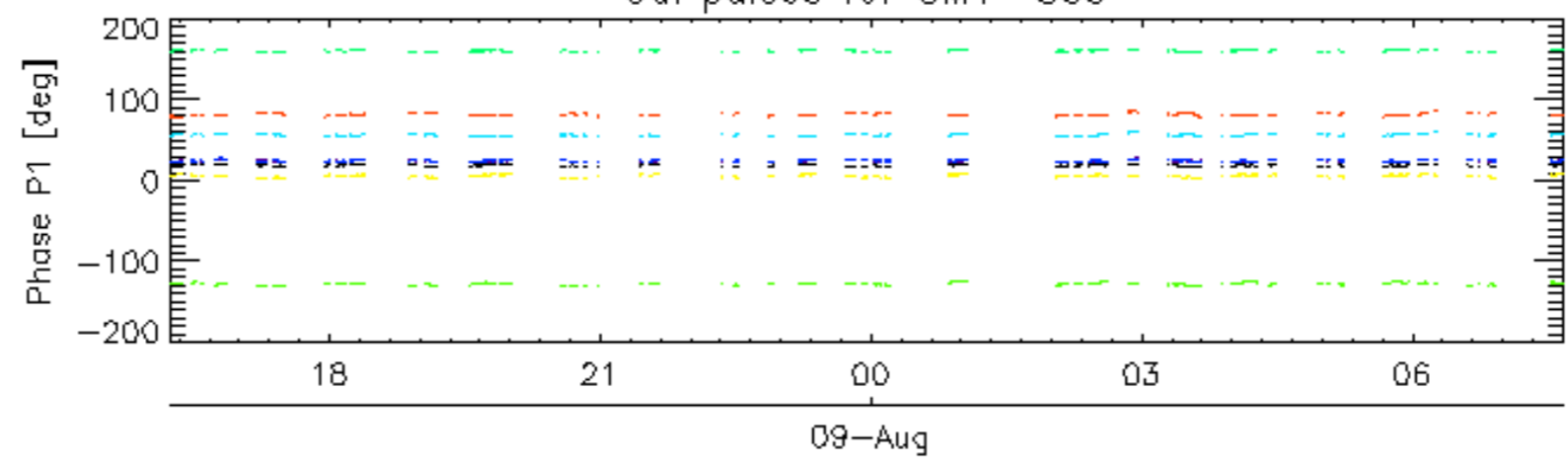
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

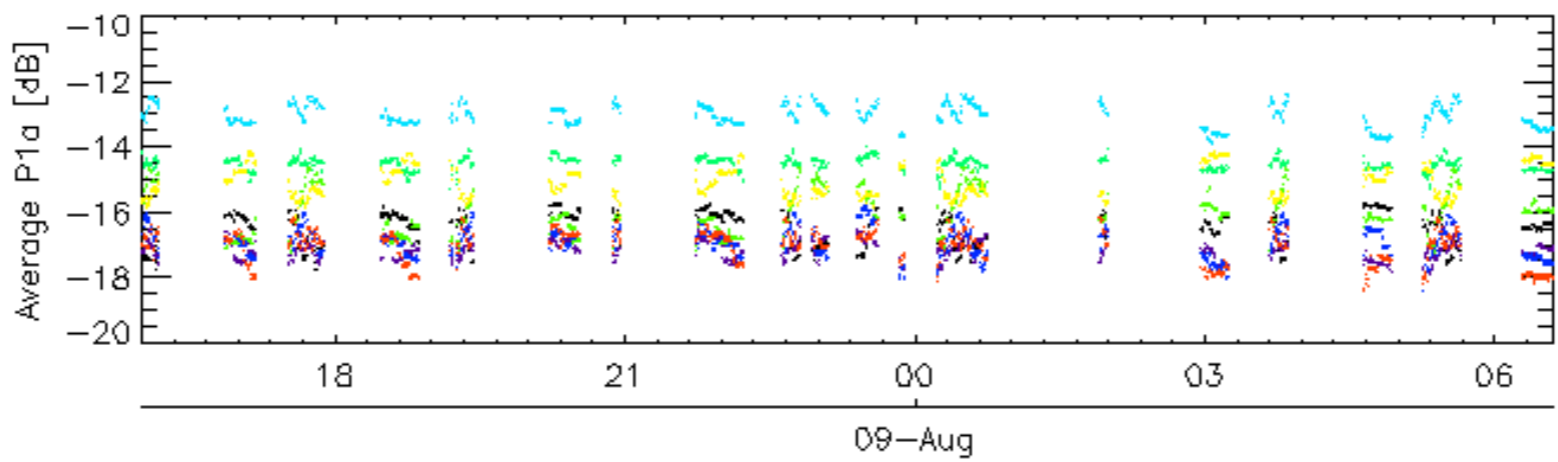
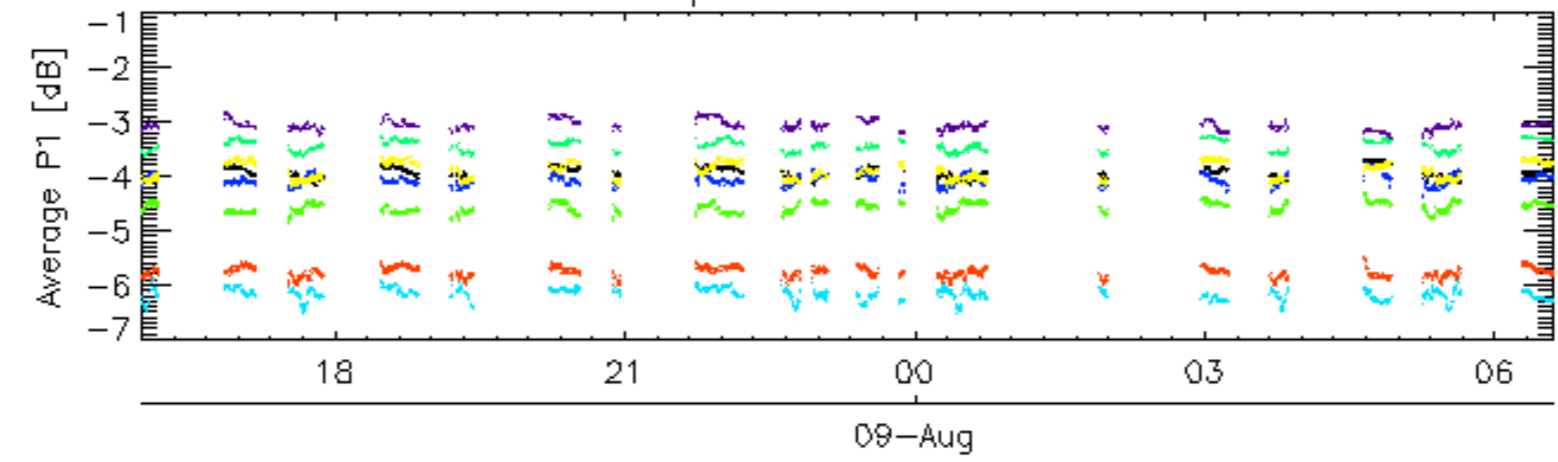


Cal pulses for GM1 SS3

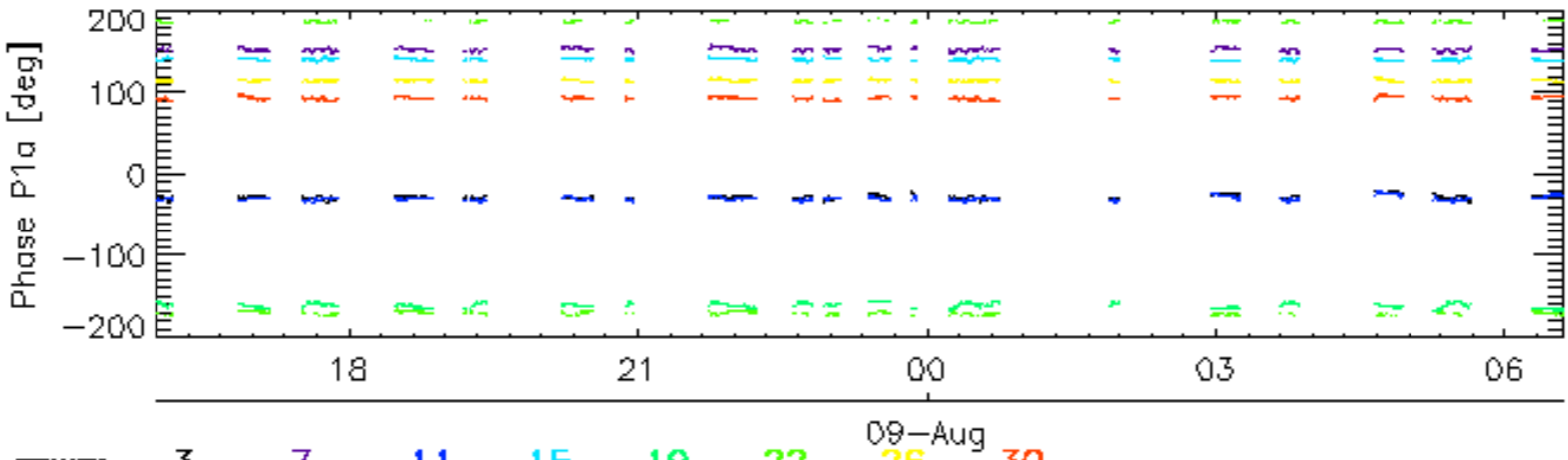
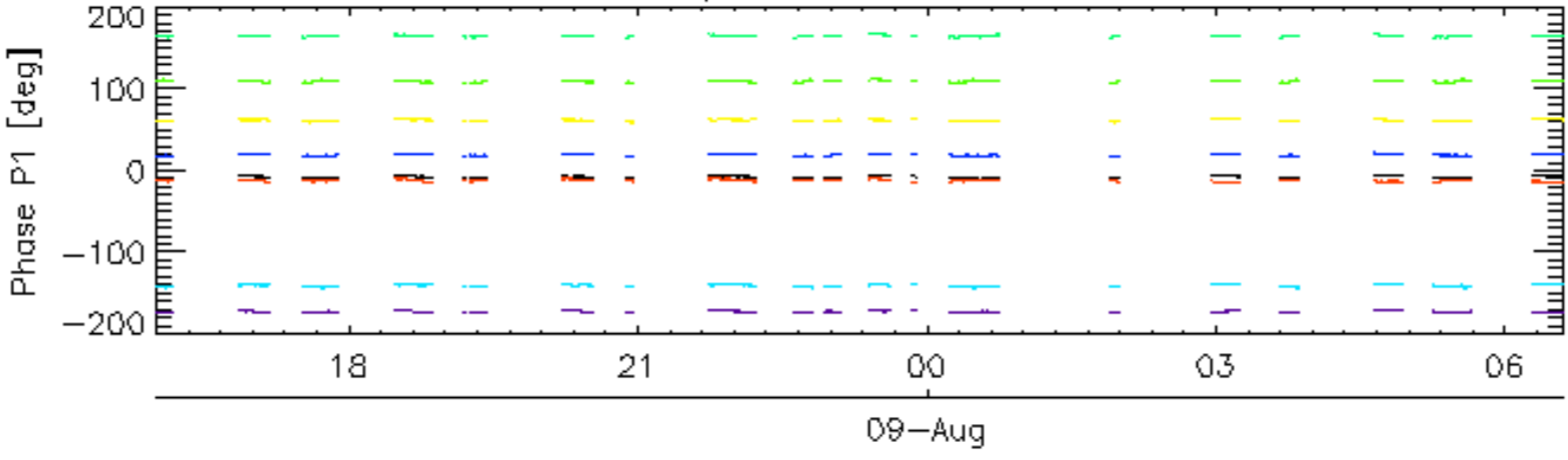


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

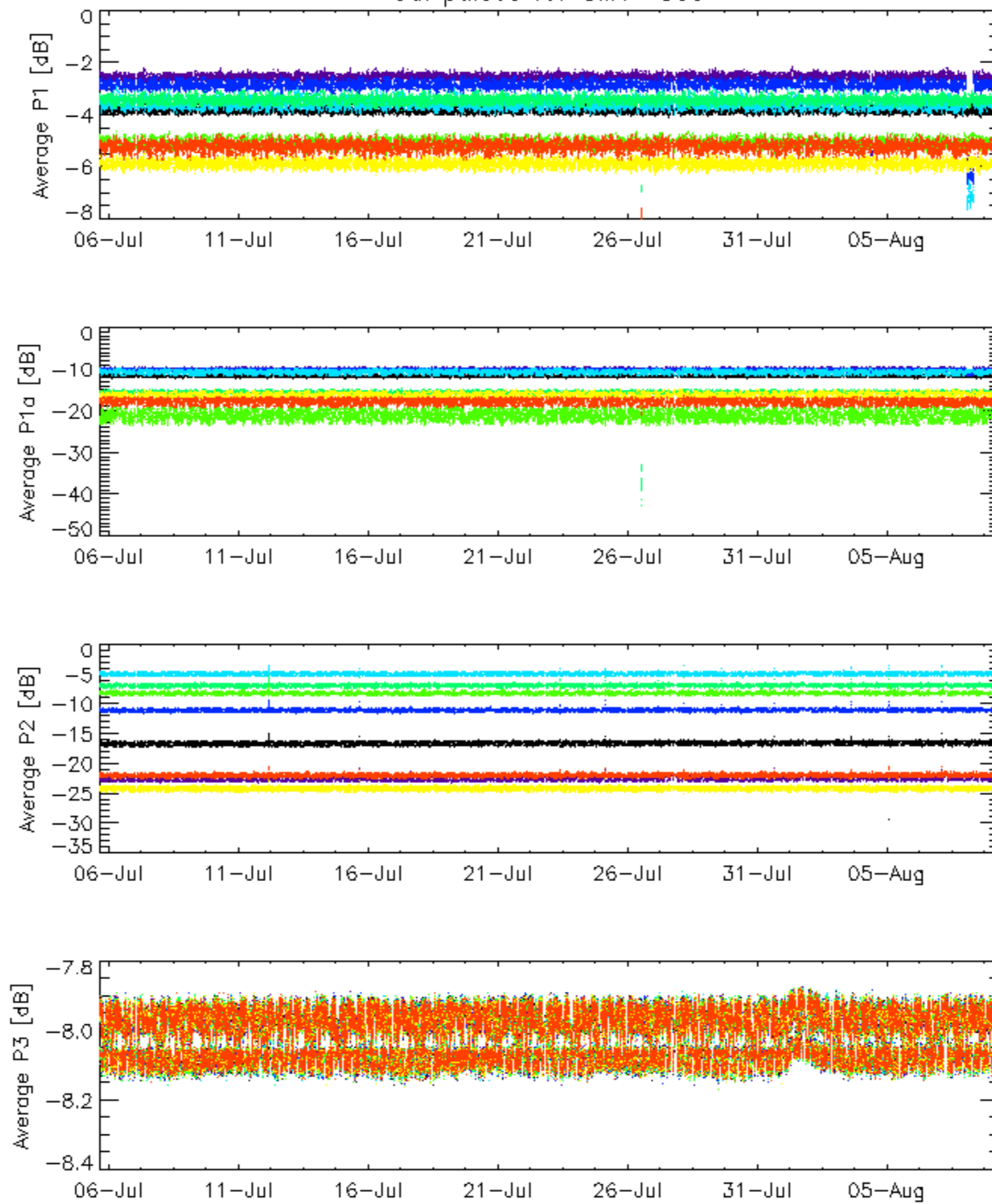


Cal pulses for WVS IS2

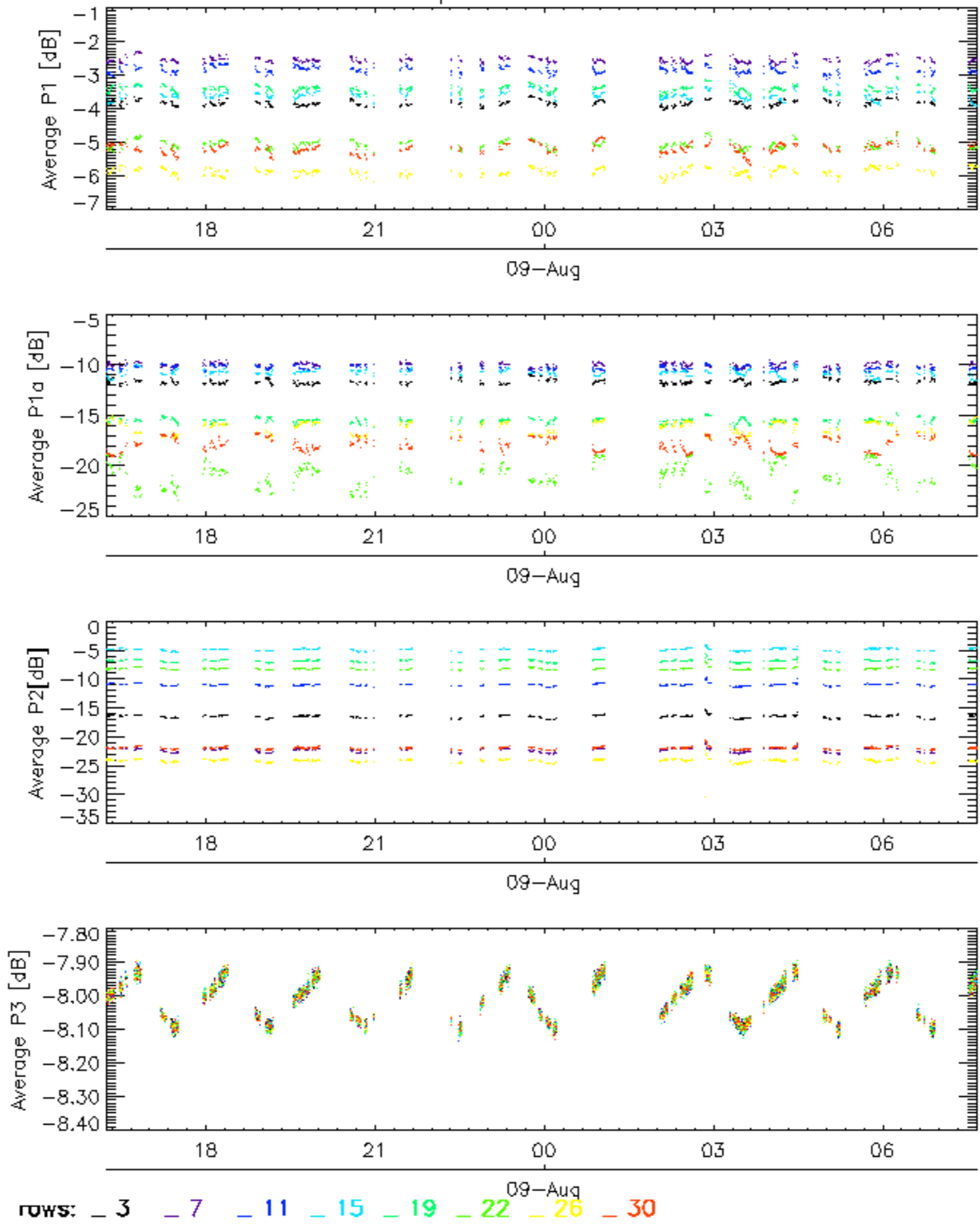


rows: 3 7 11 15 19 22 26 30

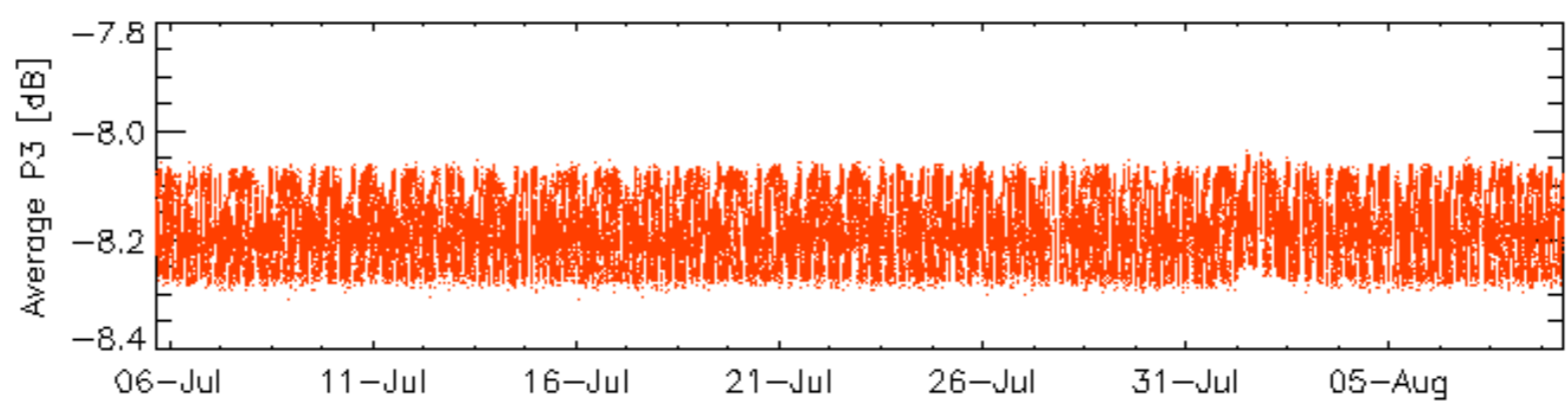
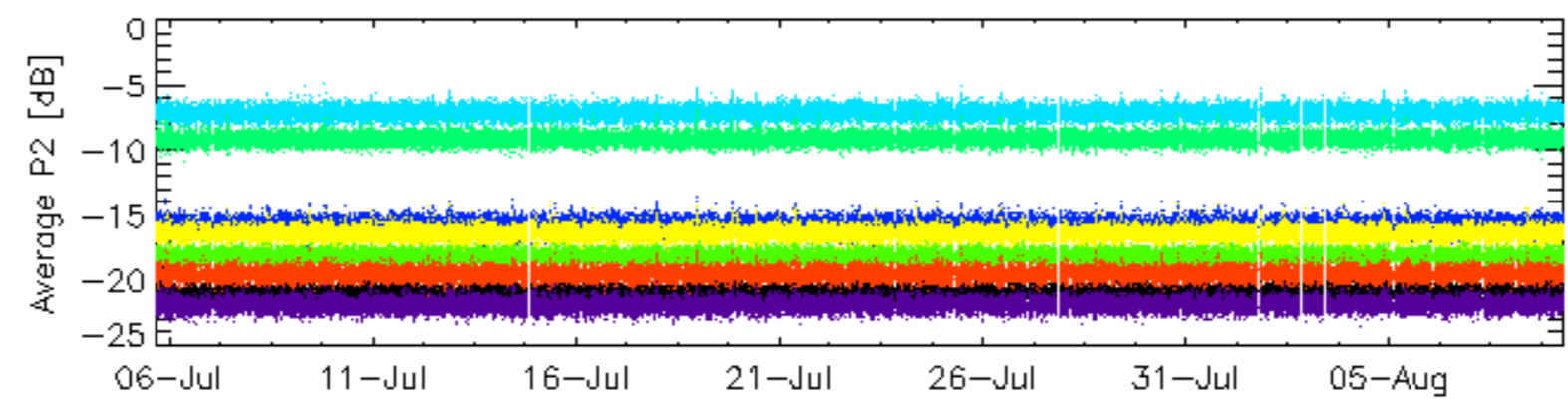
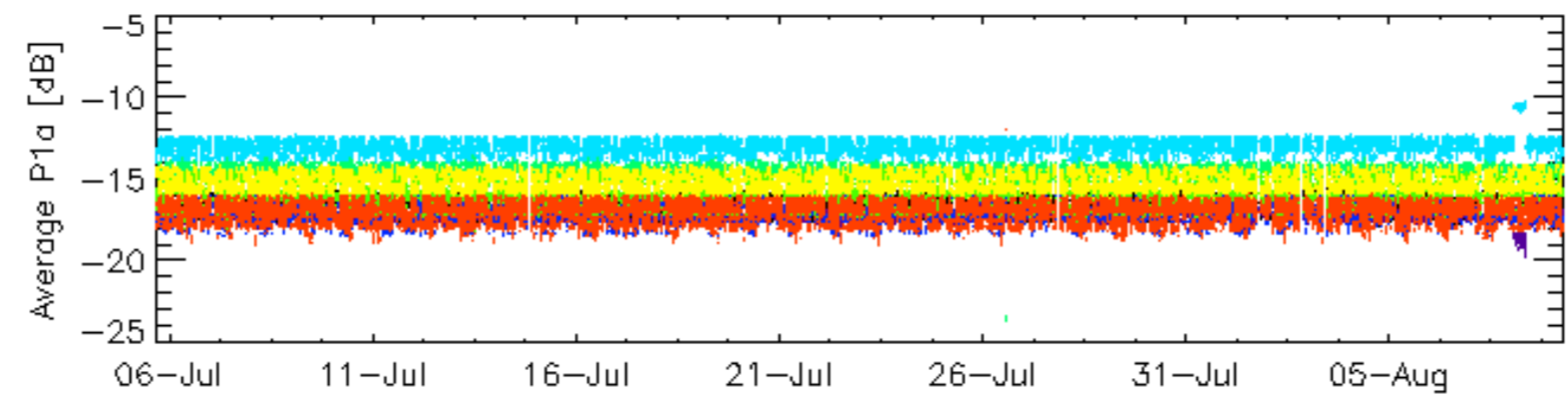
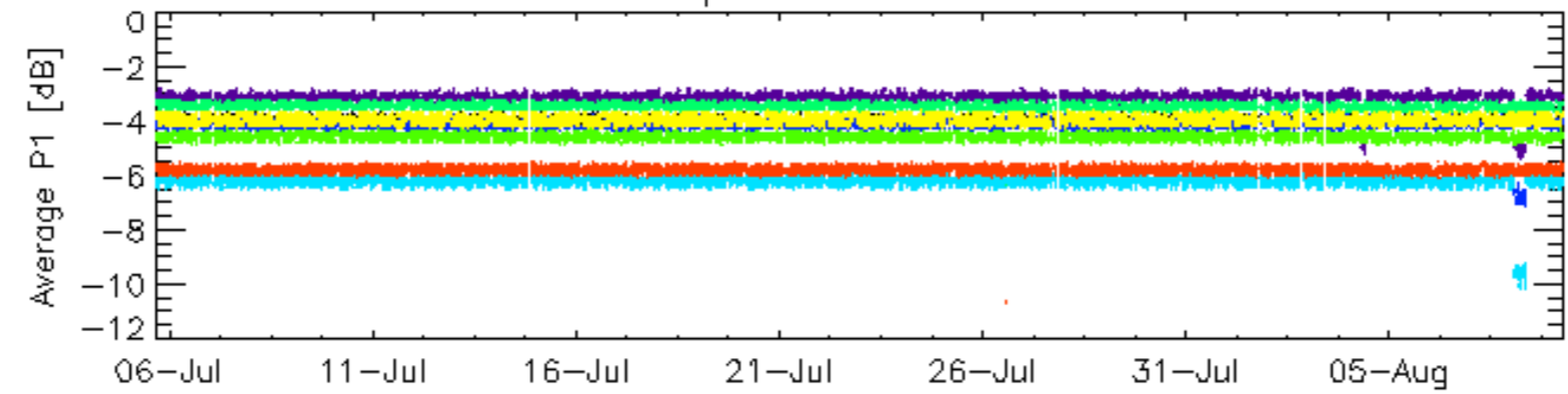
Cal pulses for GM1 SS3



Cal pulses for GM1 SS3

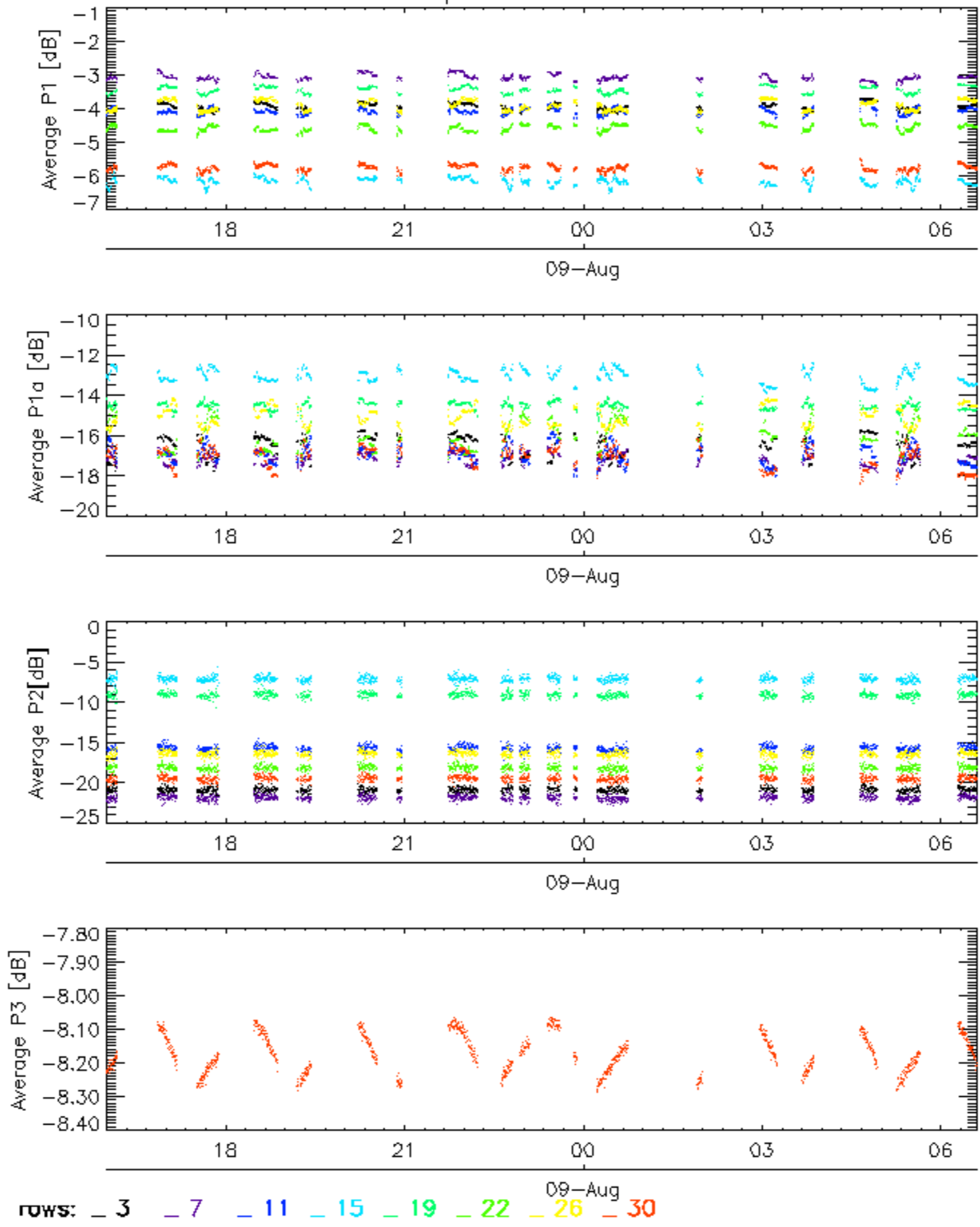


Cal pulses for WVS IS2



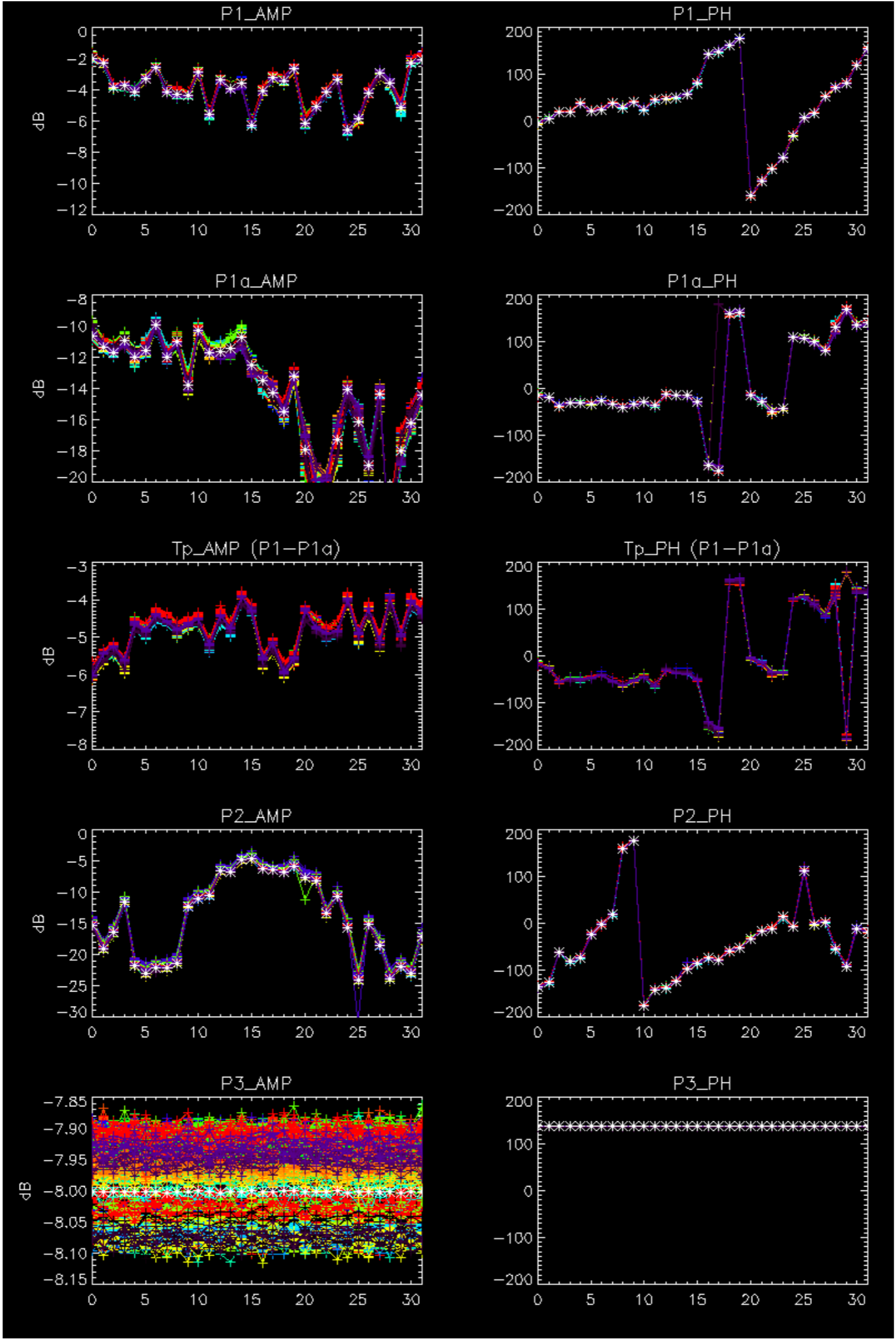
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

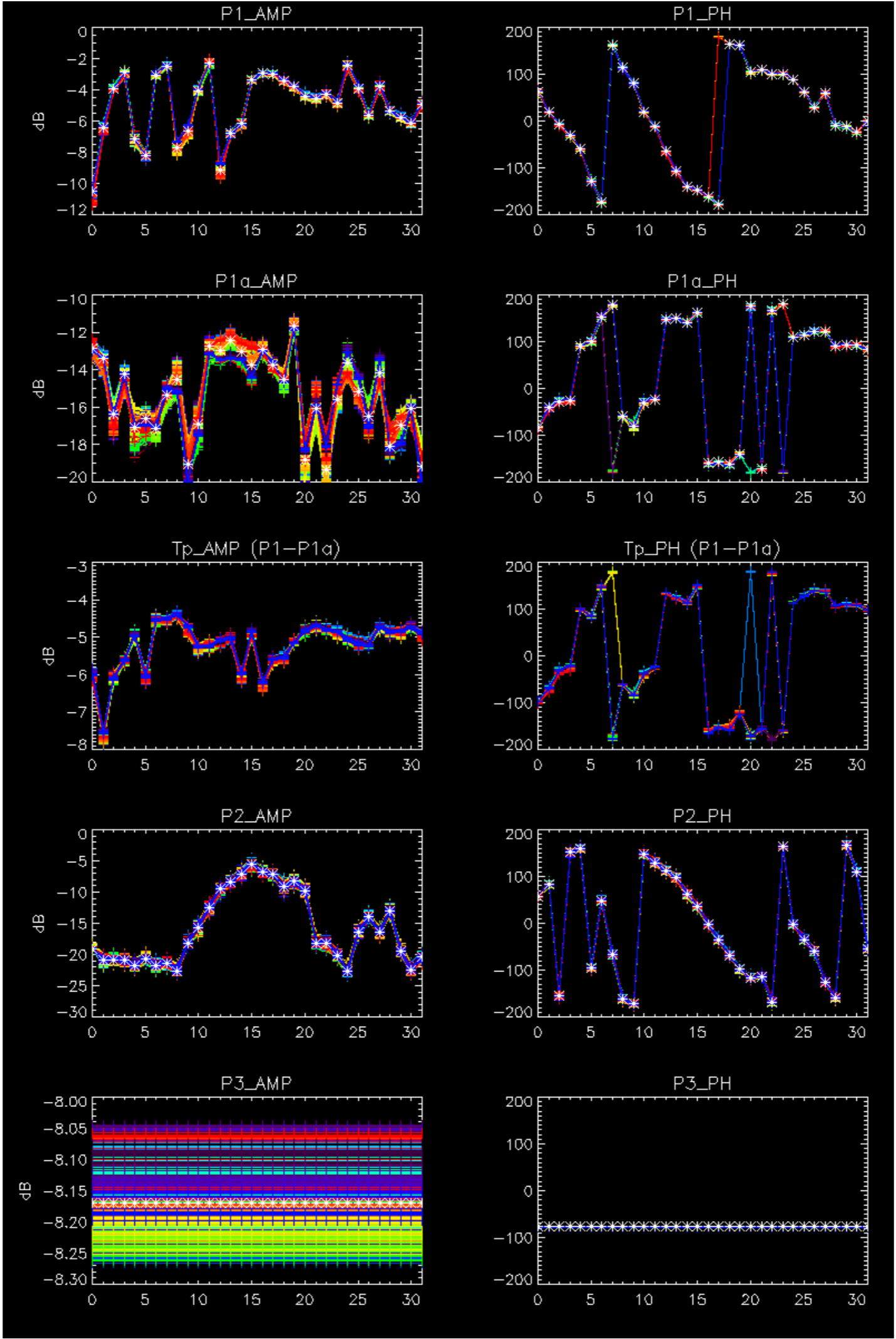
Cal pulses for WVS IS2



No anomalies observed on available browse products

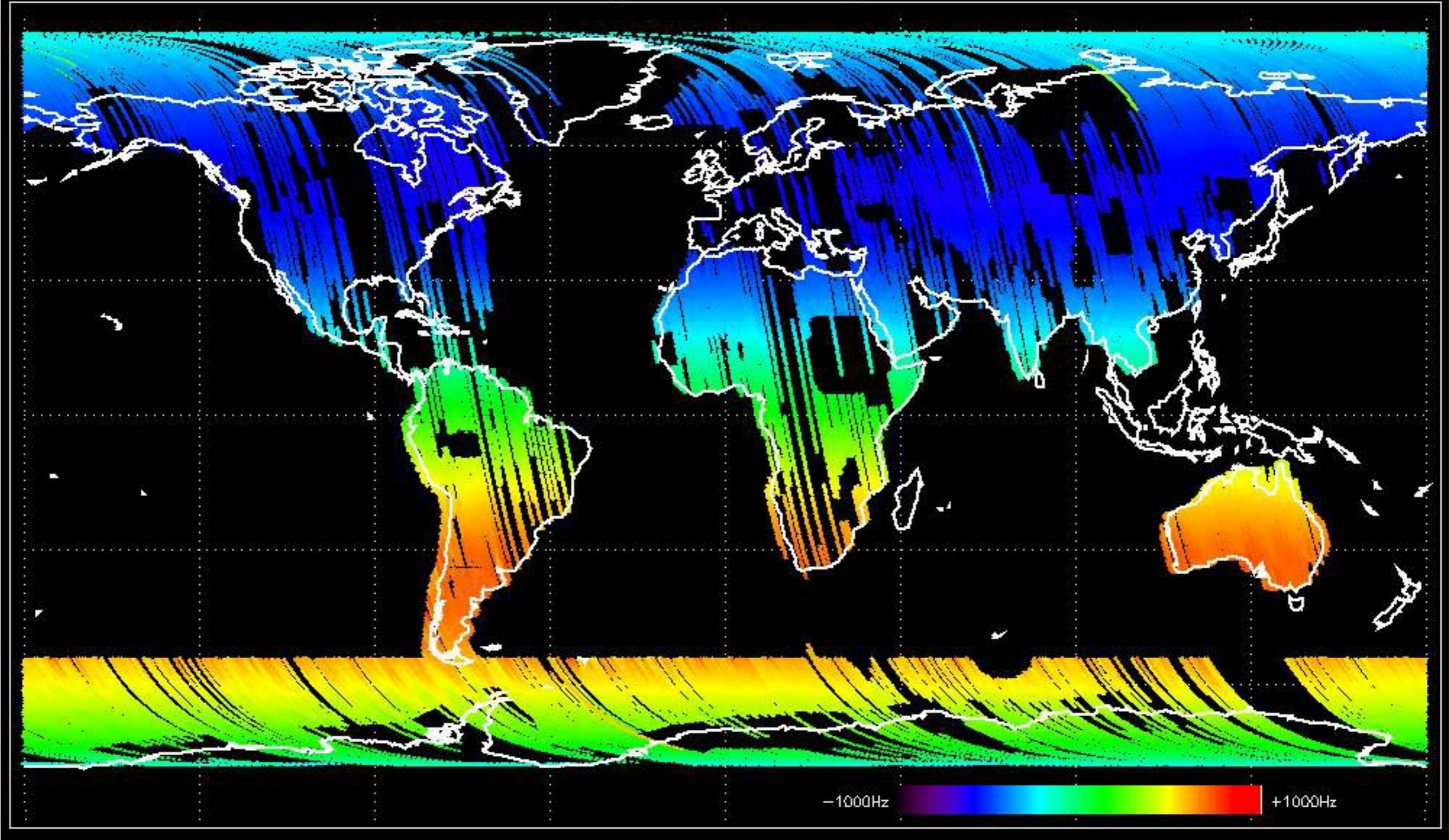
No anomalies observed.



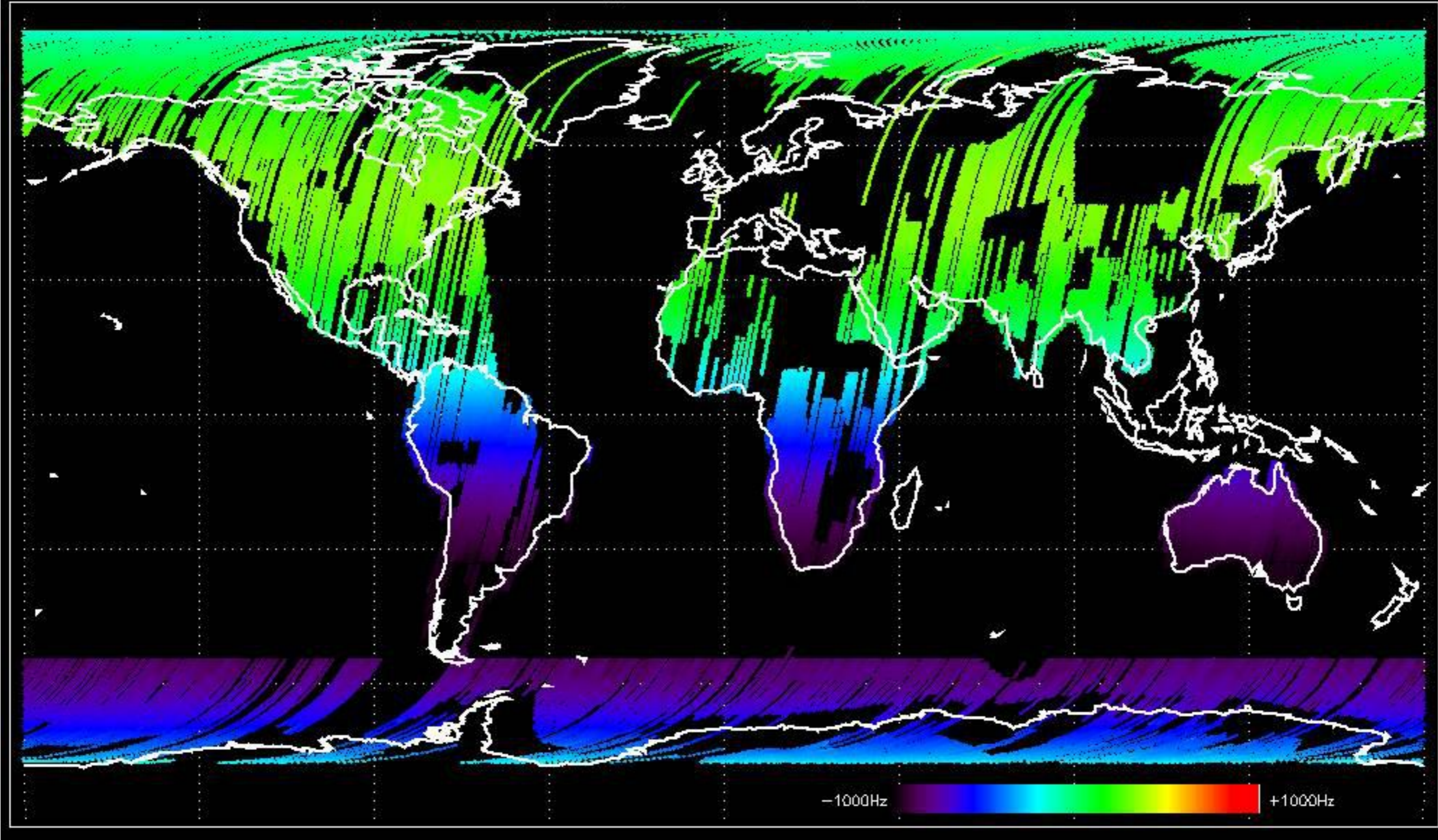


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

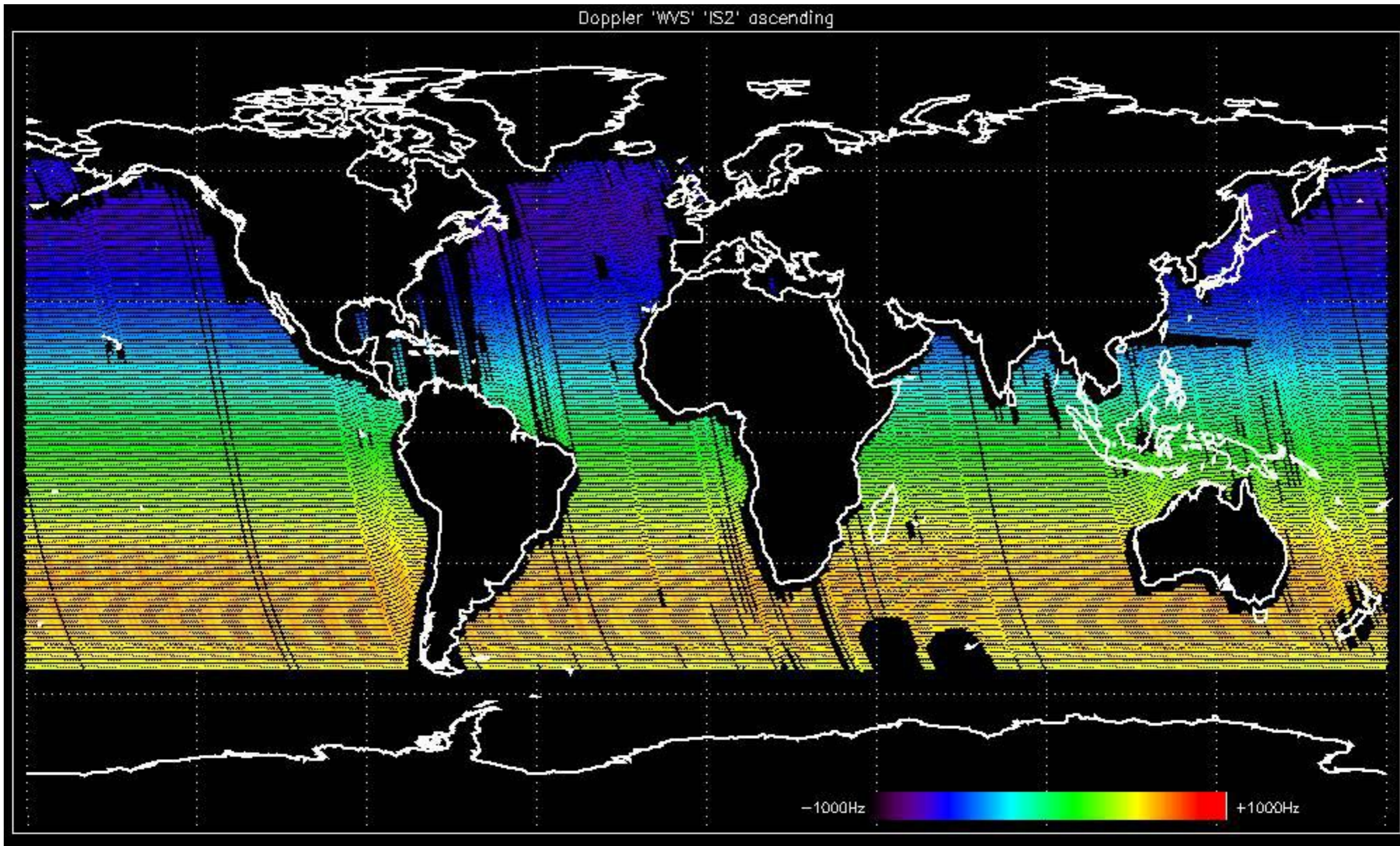
Doppler 'GM1' 'SS1' ascending



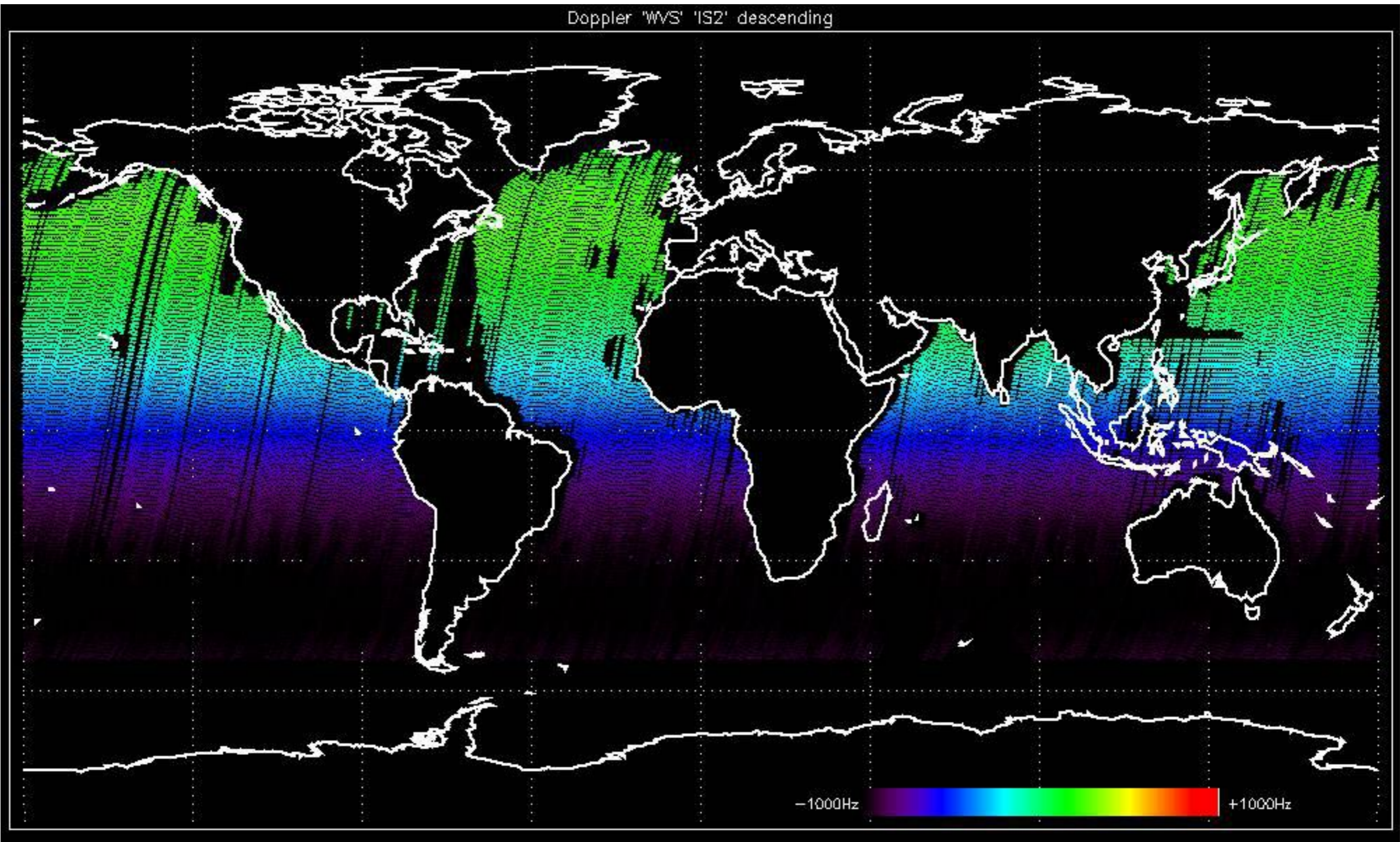
Doppler 'GM1' 'SS1' descending



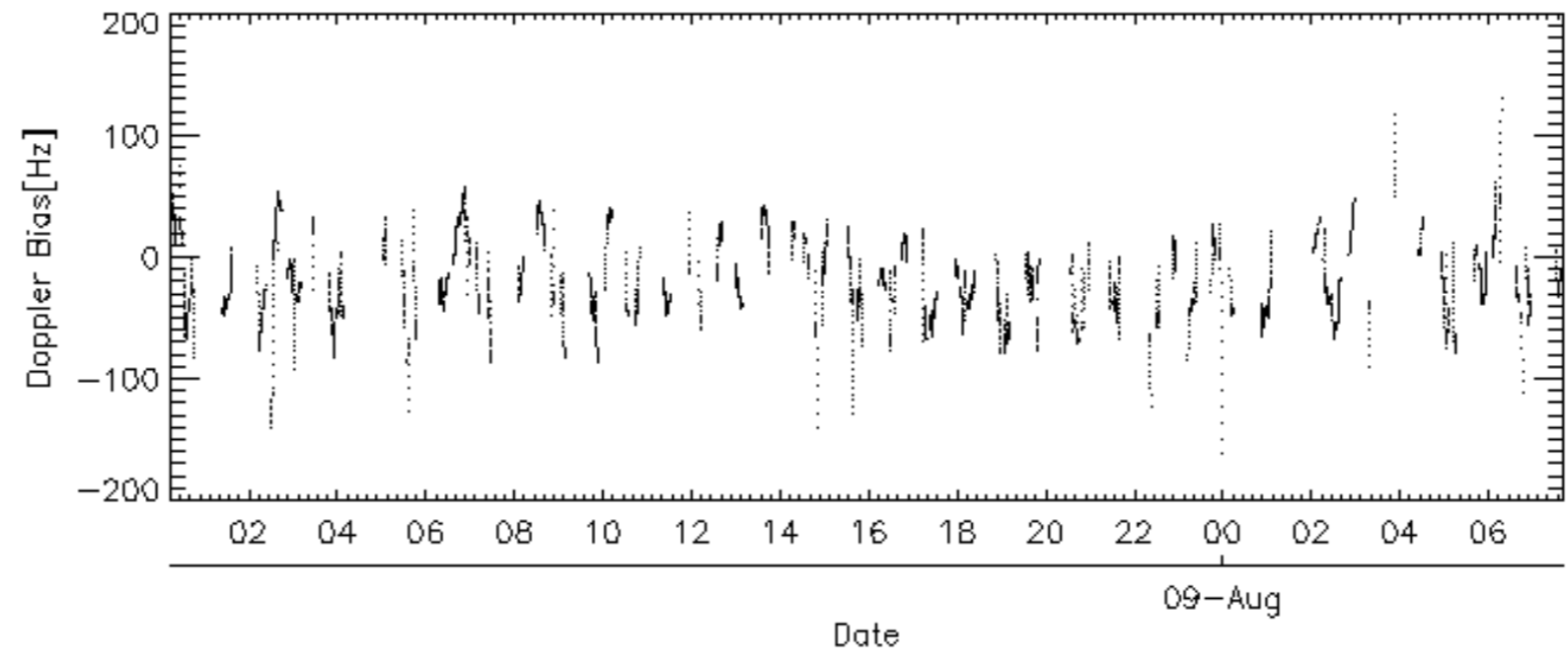
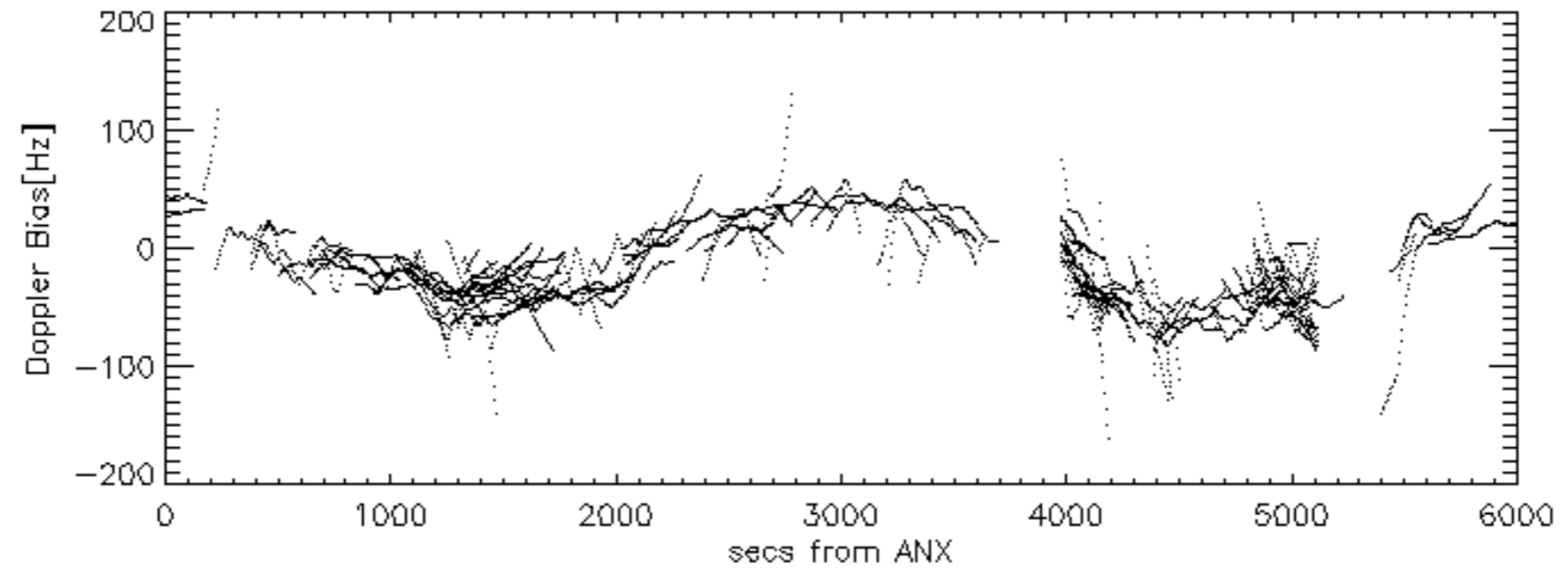
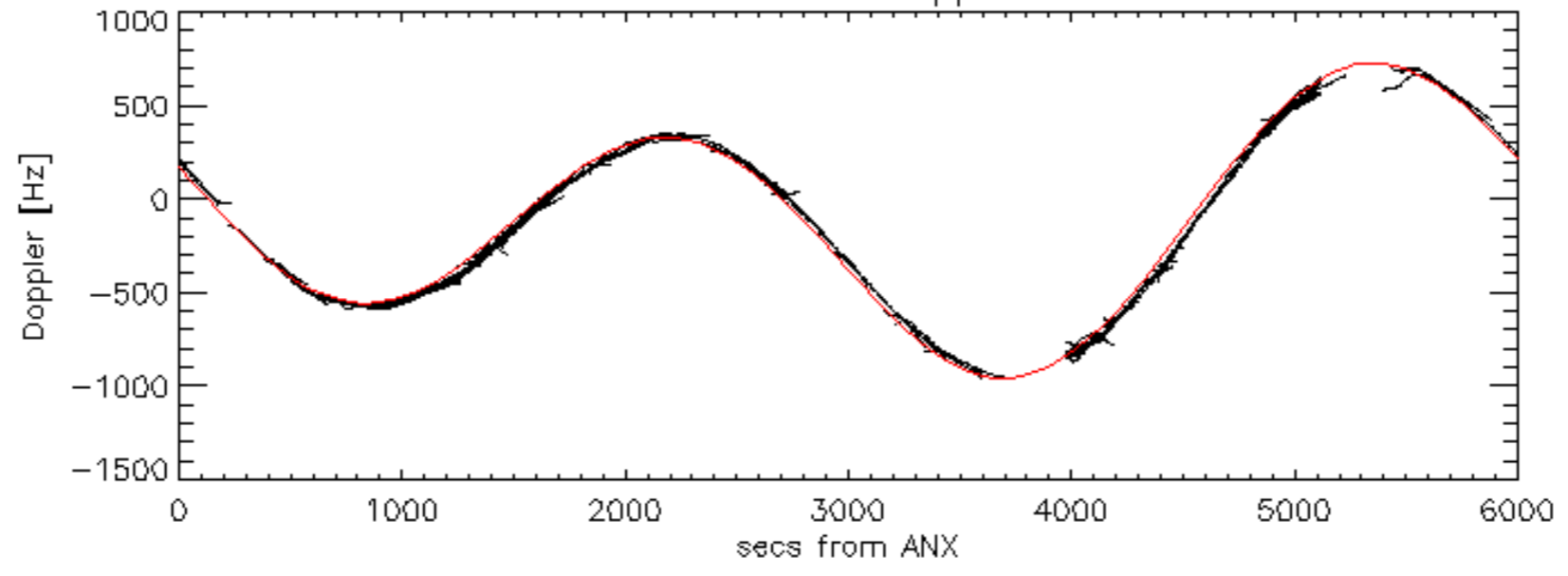
Doppler 'WVS' 'IS2' ascending

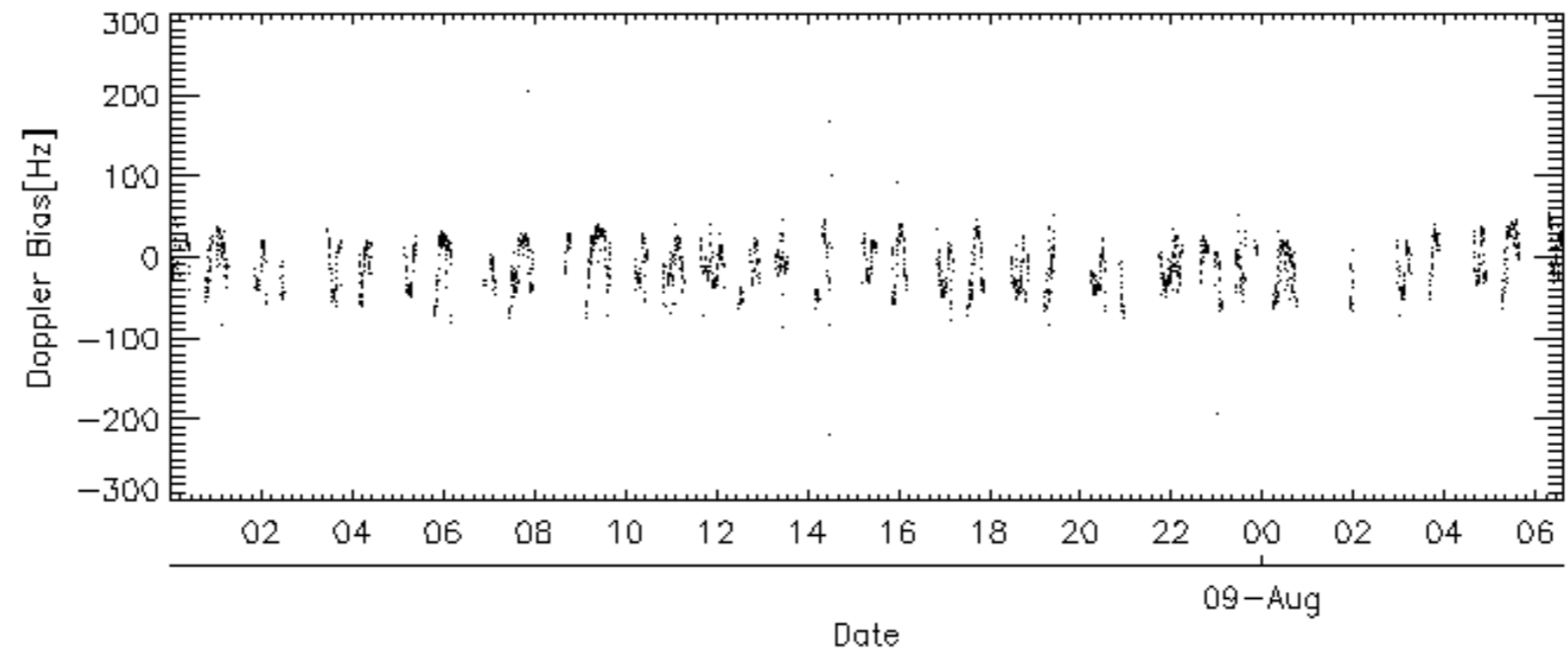
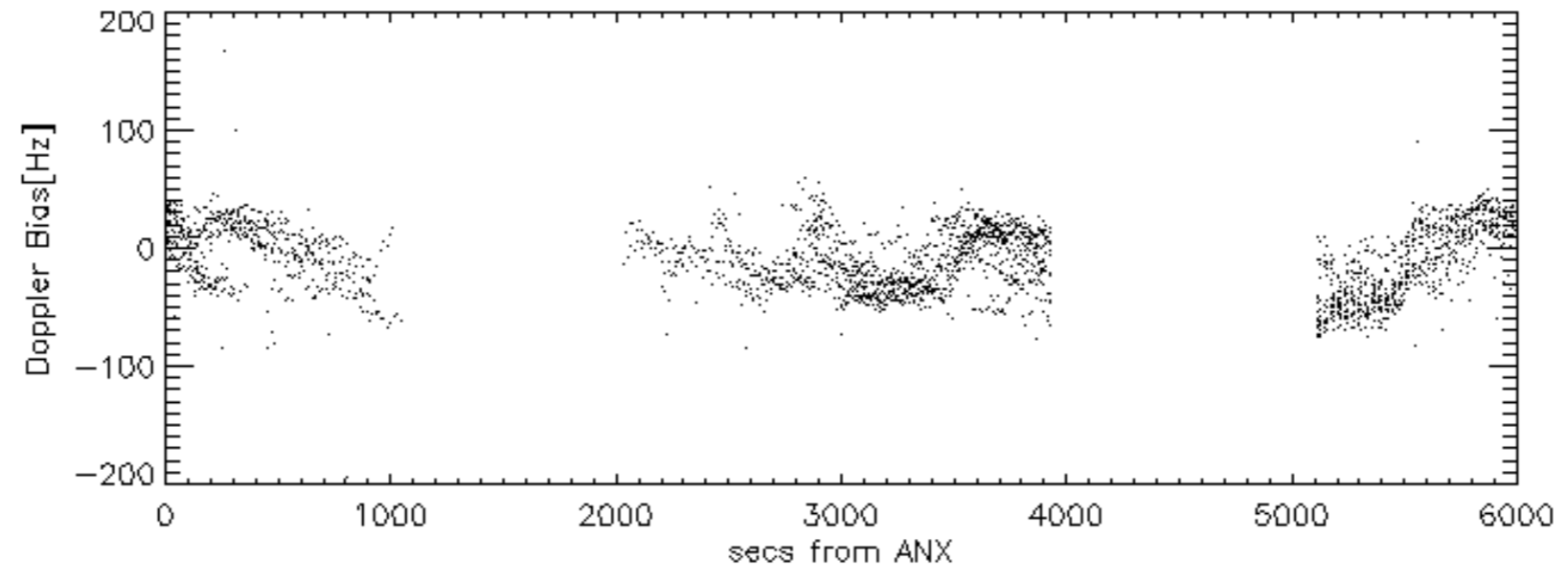
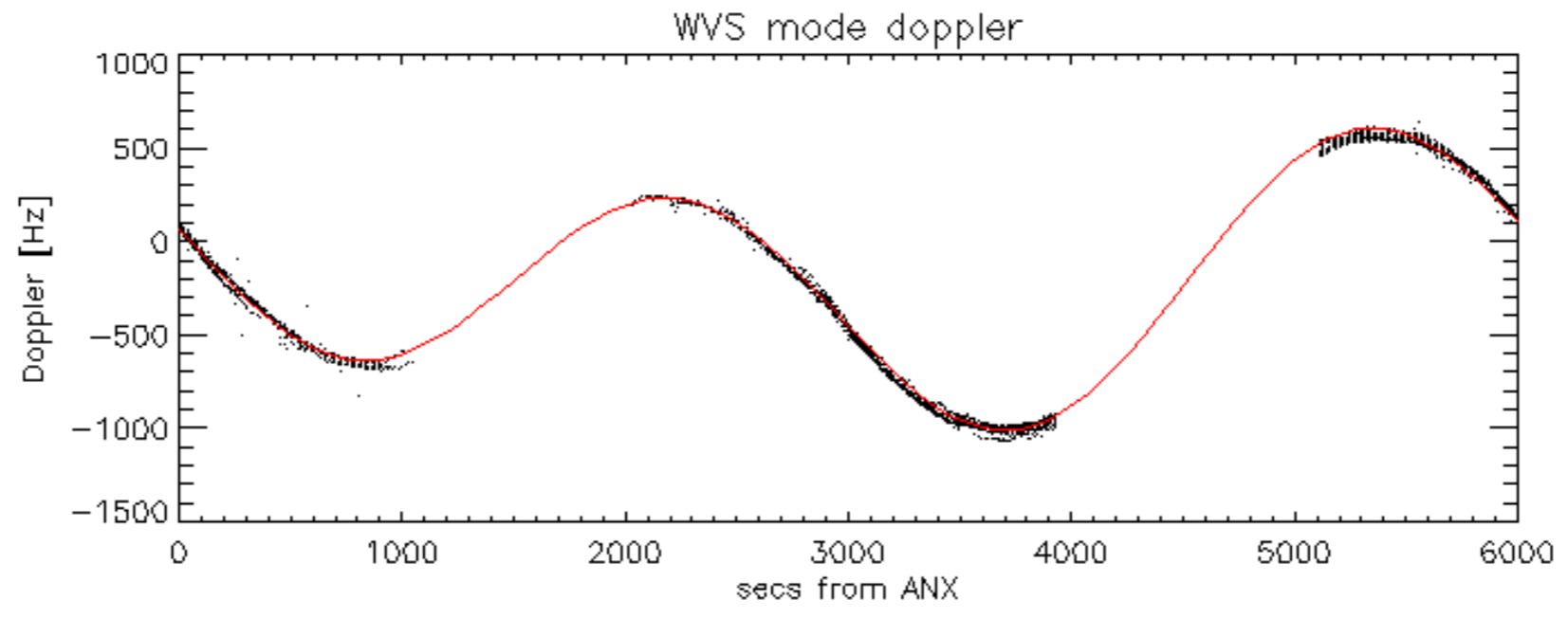


Doppler 'WVS' 'IS2' descending

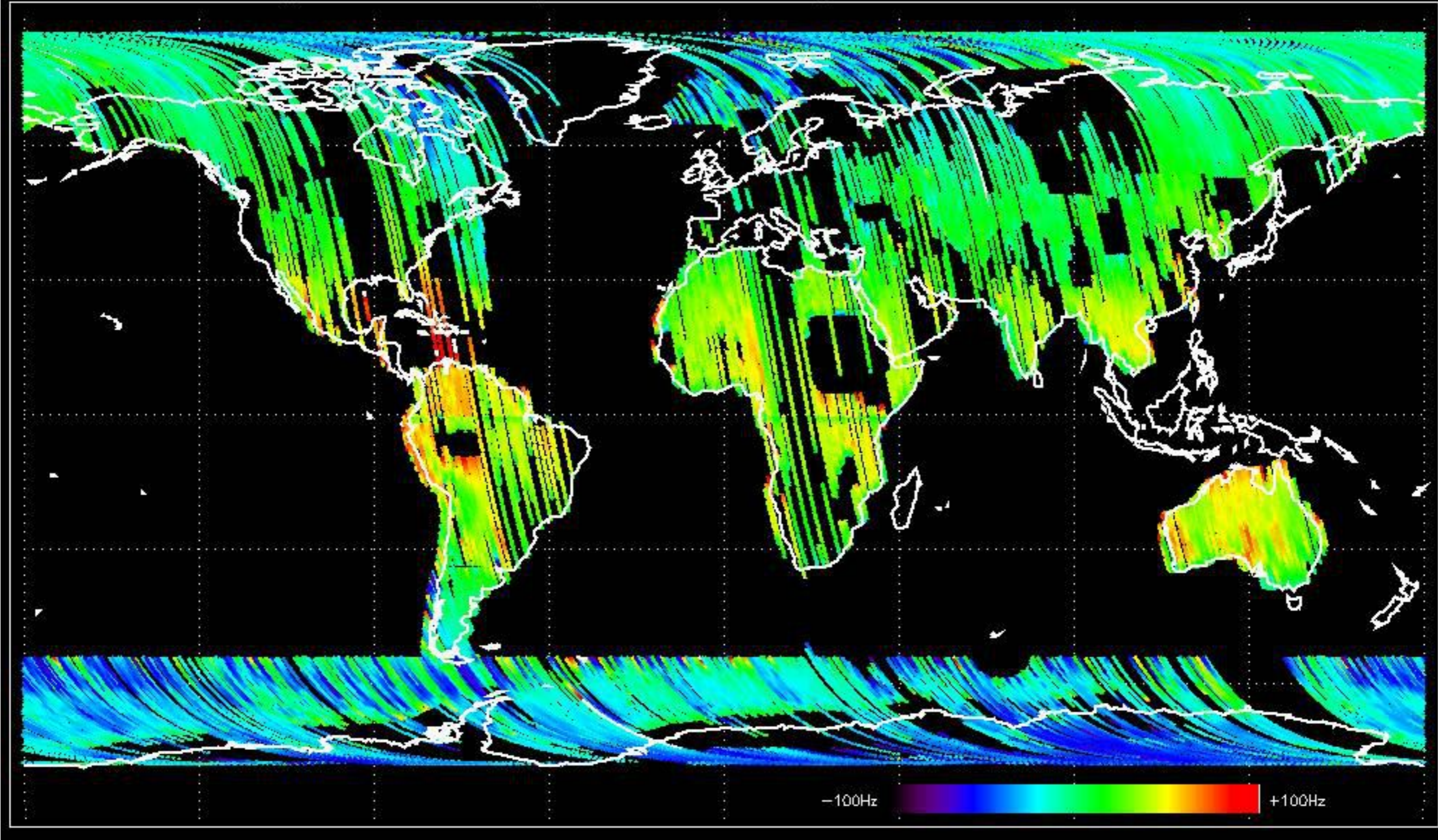


GM1 mode doppler

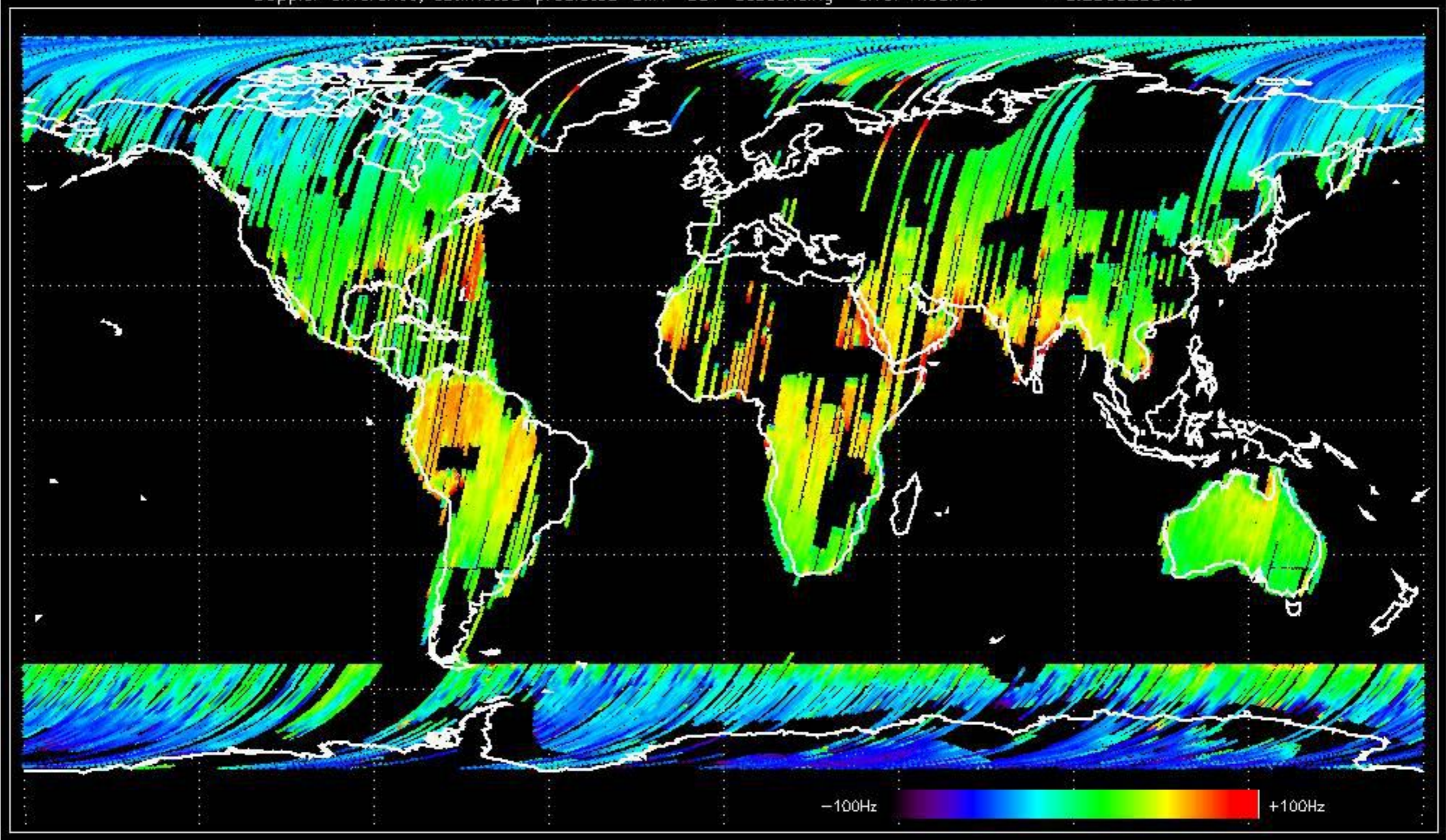




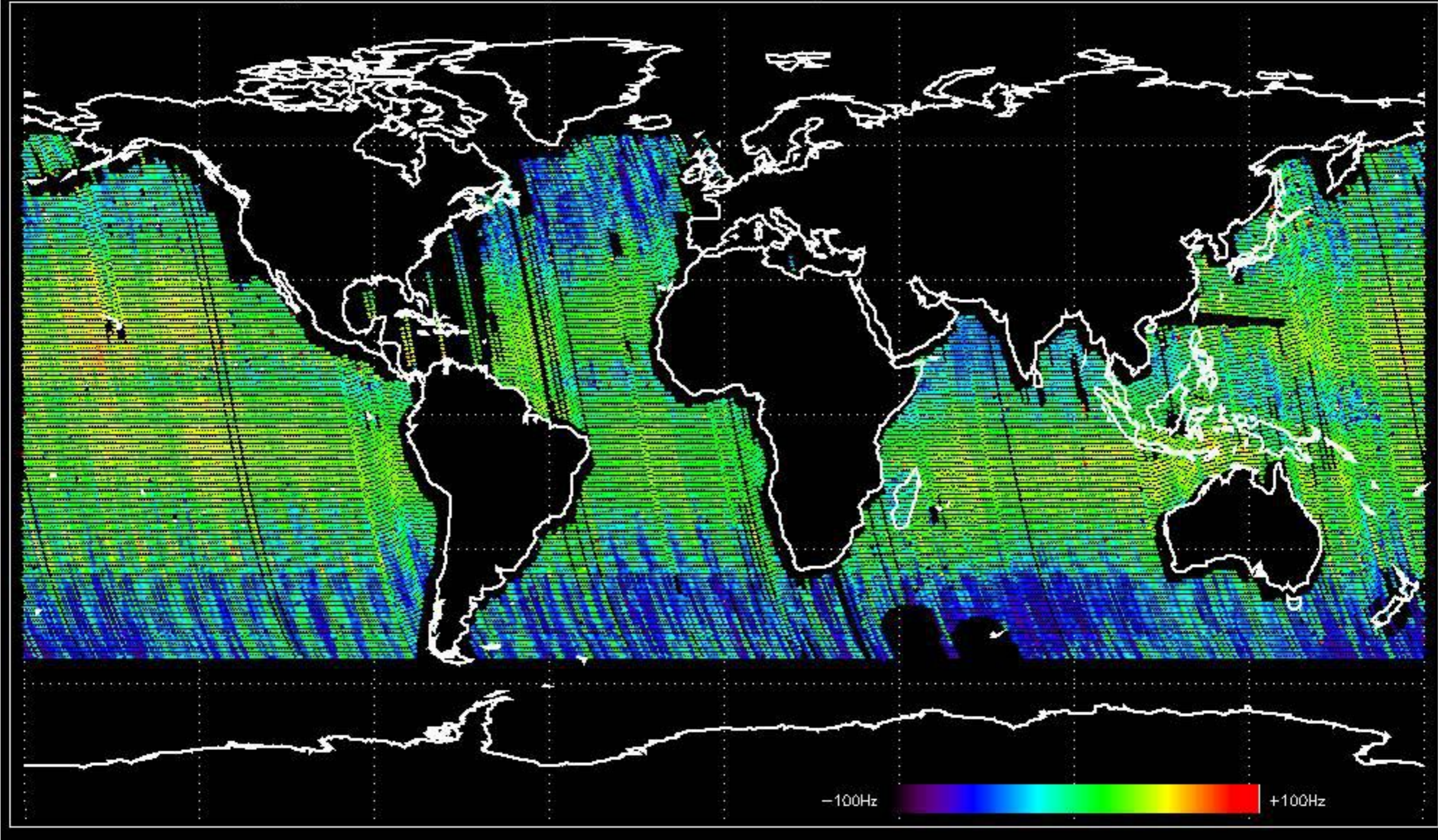
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.047285 Hz



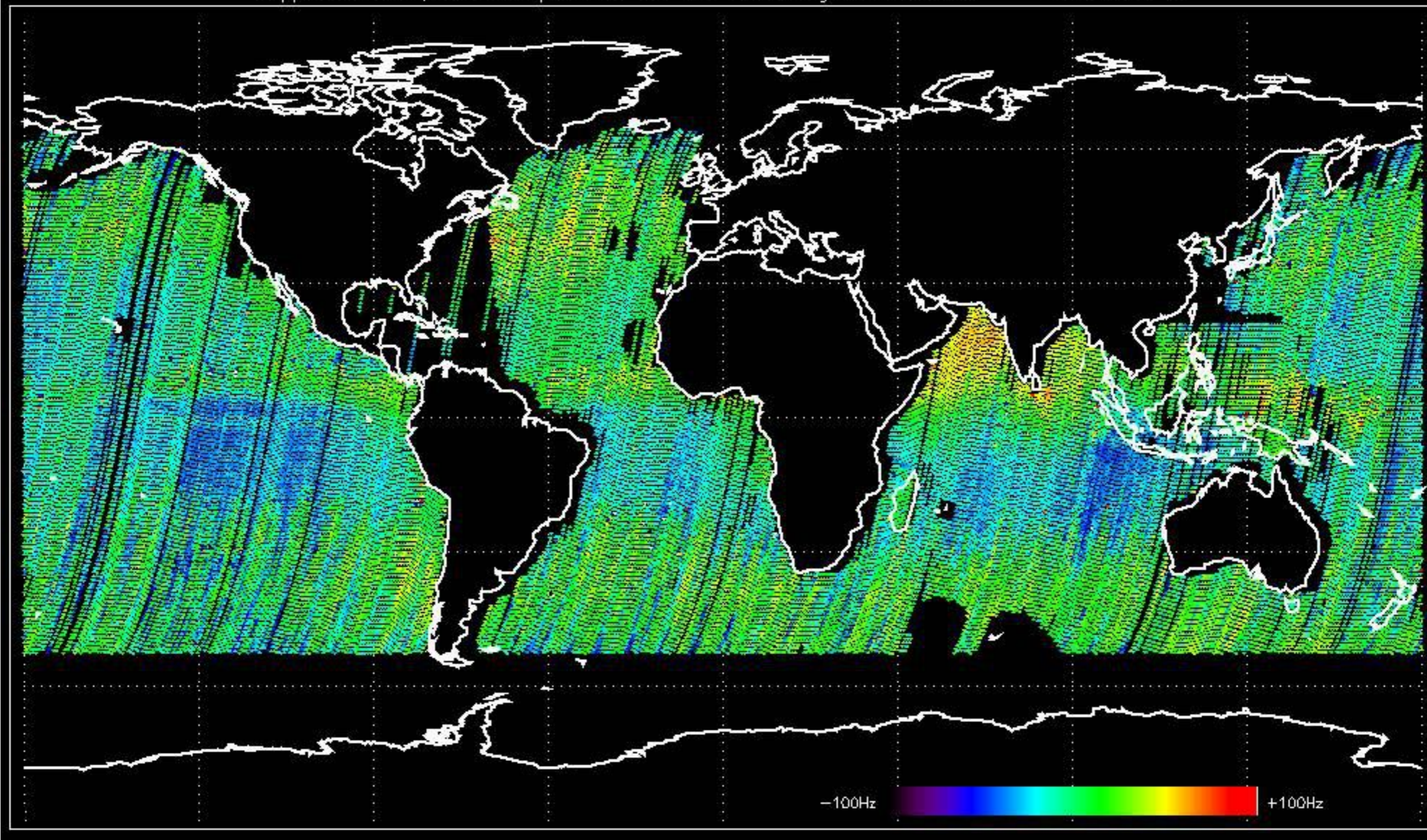
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.2503238 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -2.3553823 Hz

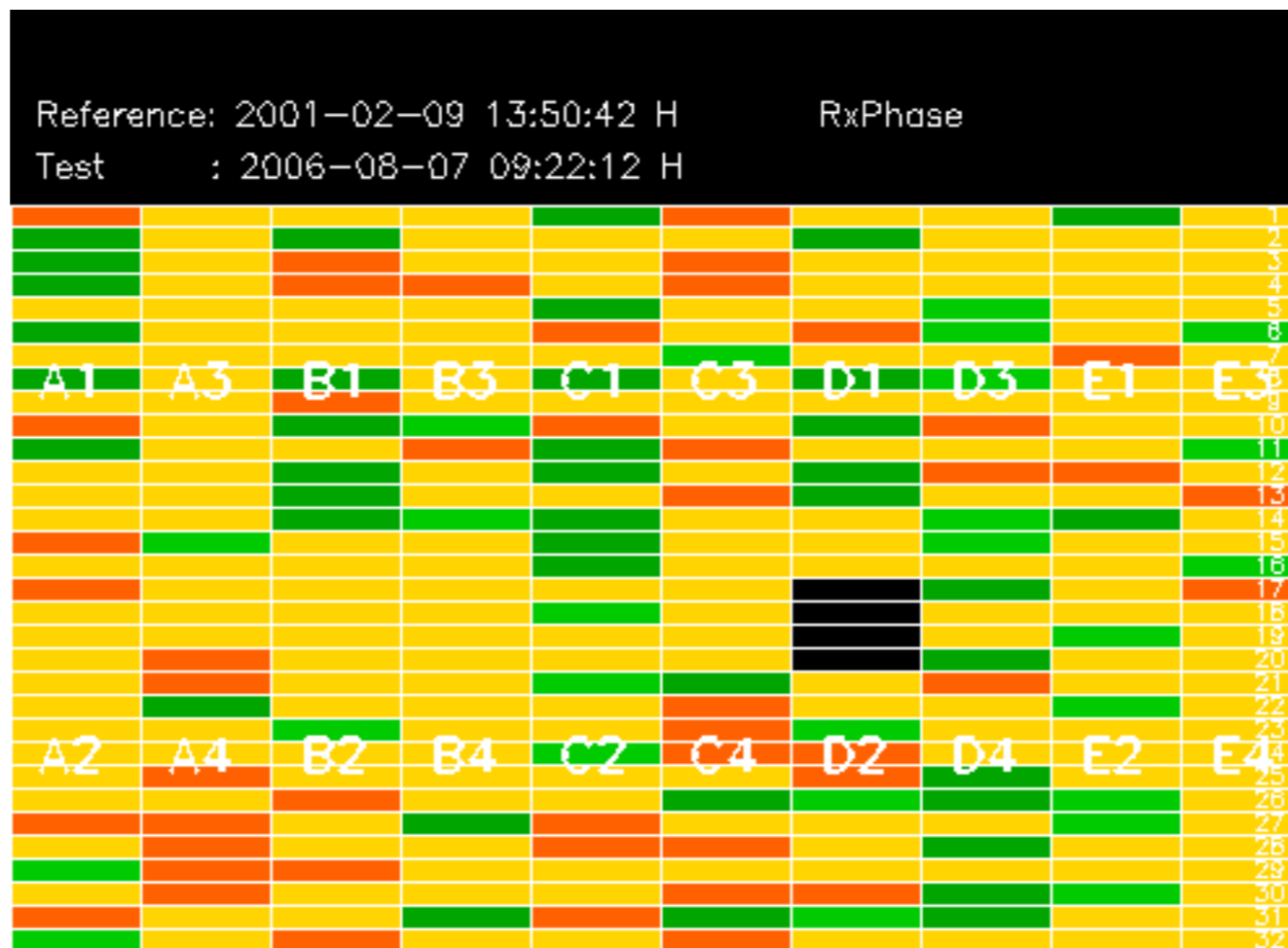


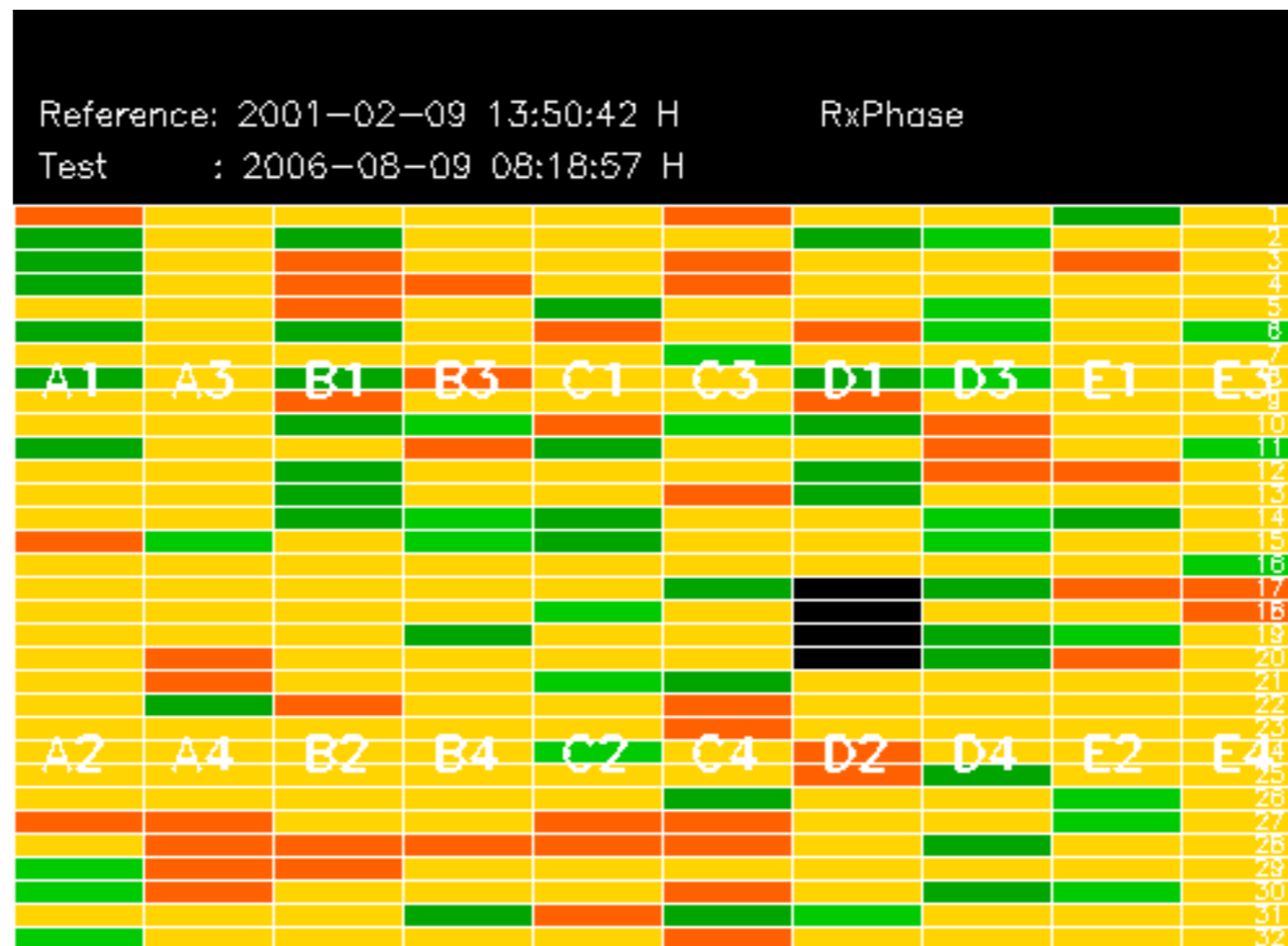
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.2501306 Hz

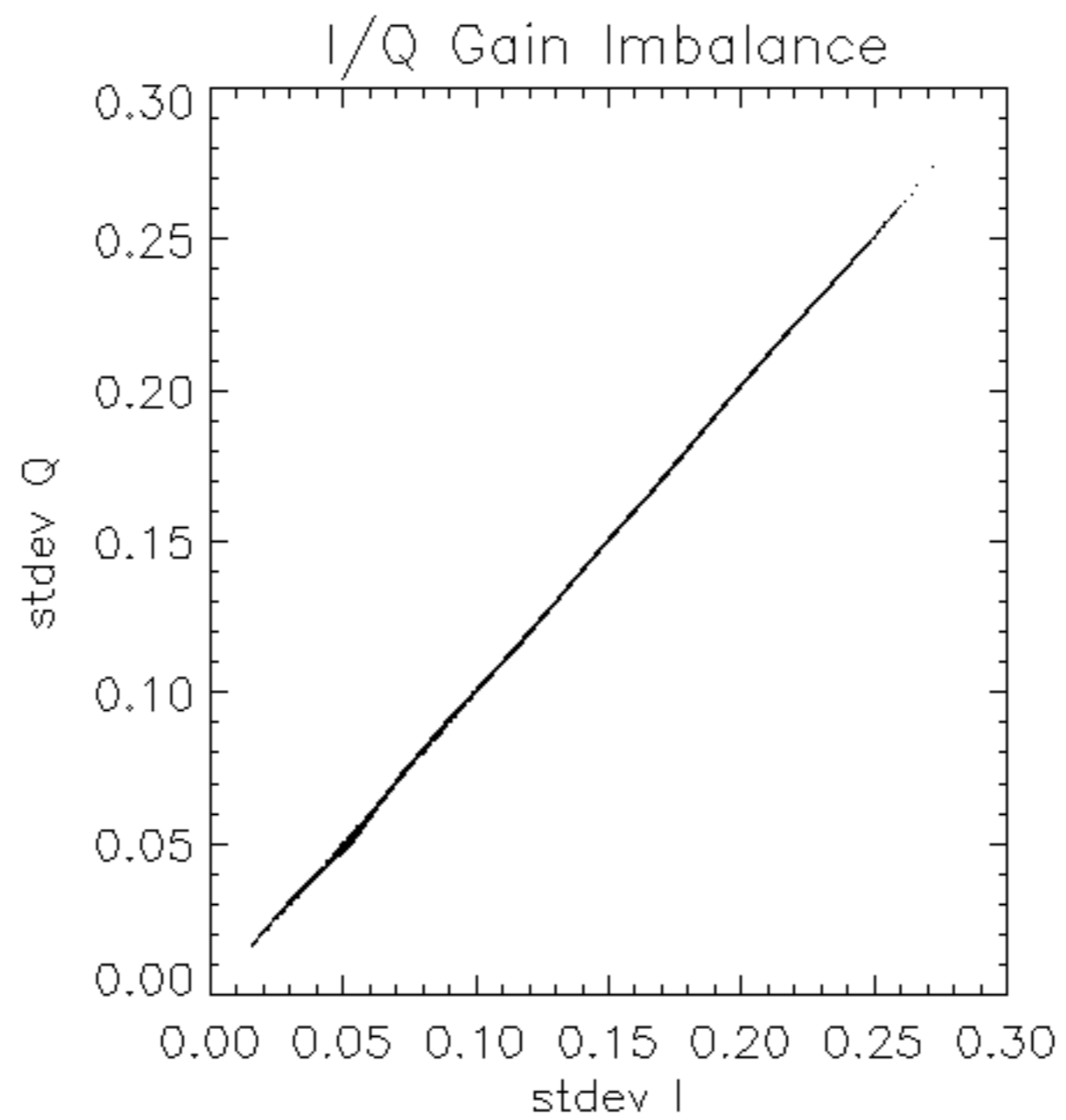


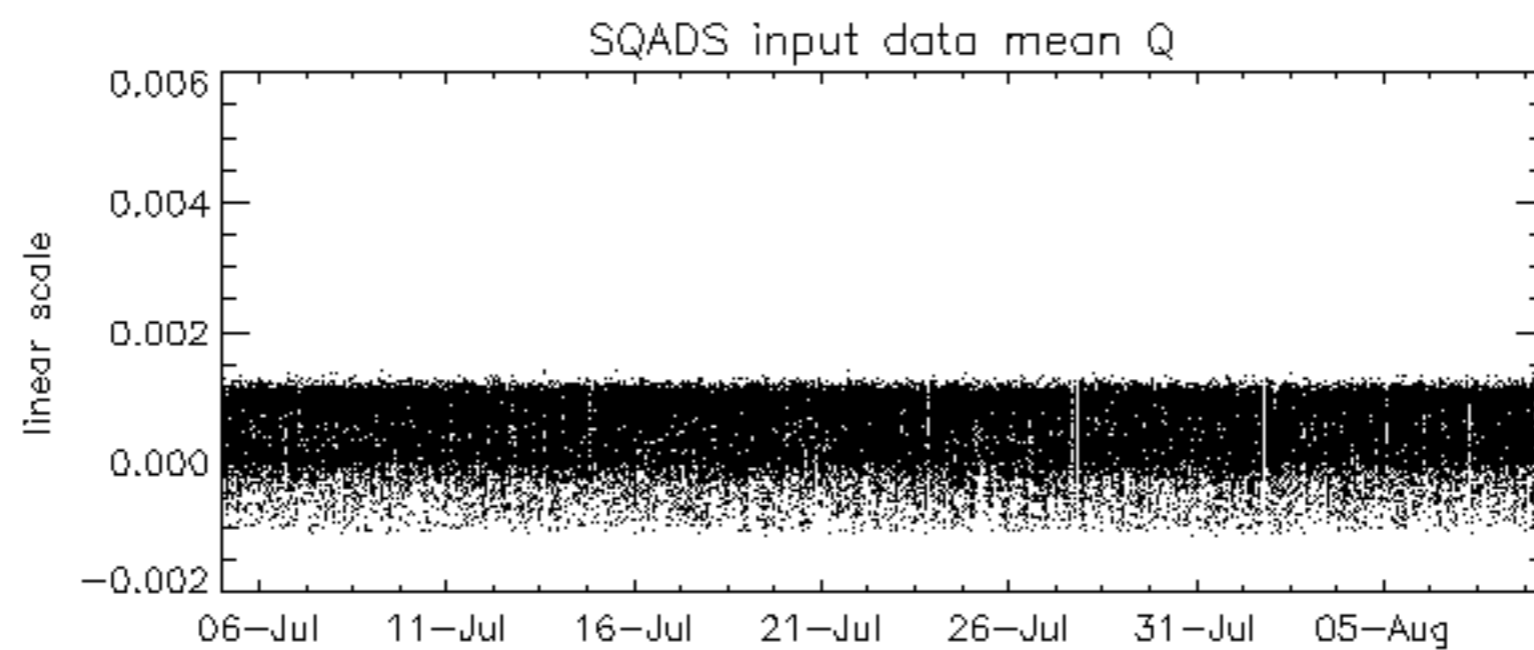
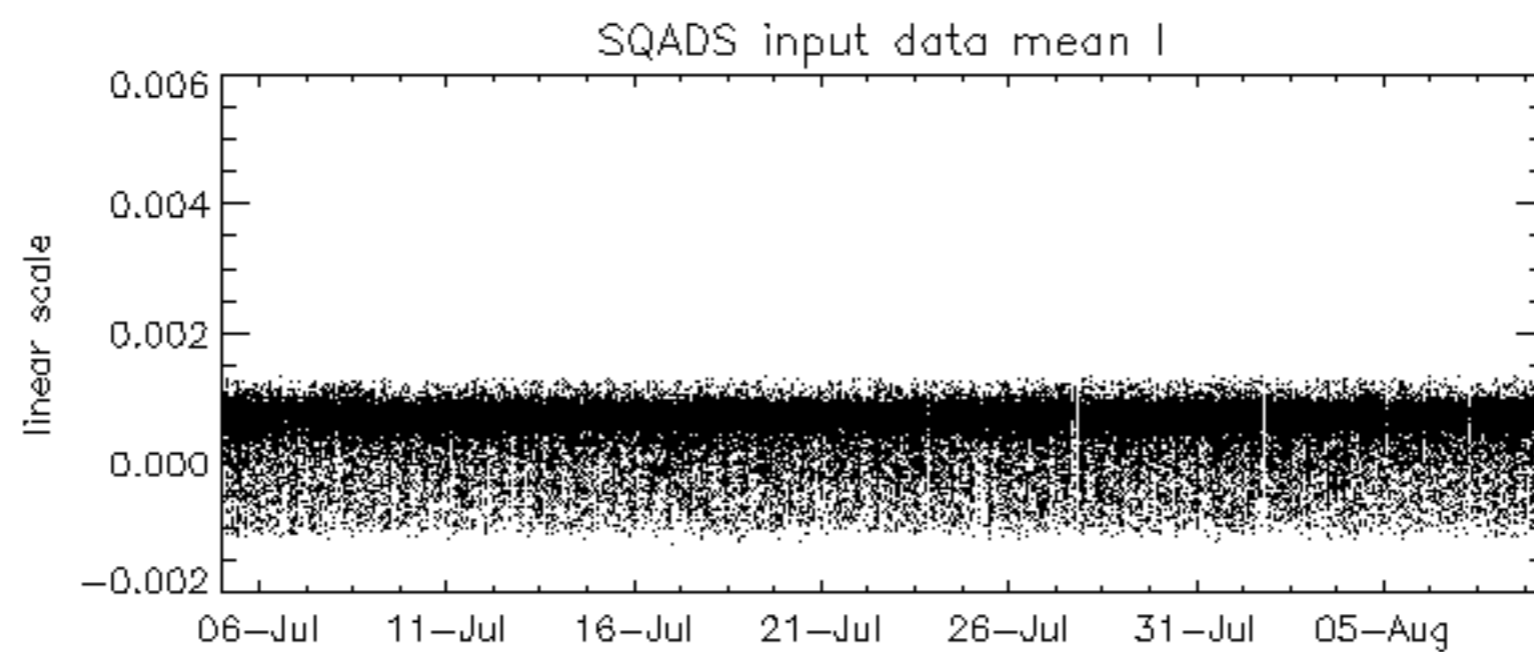
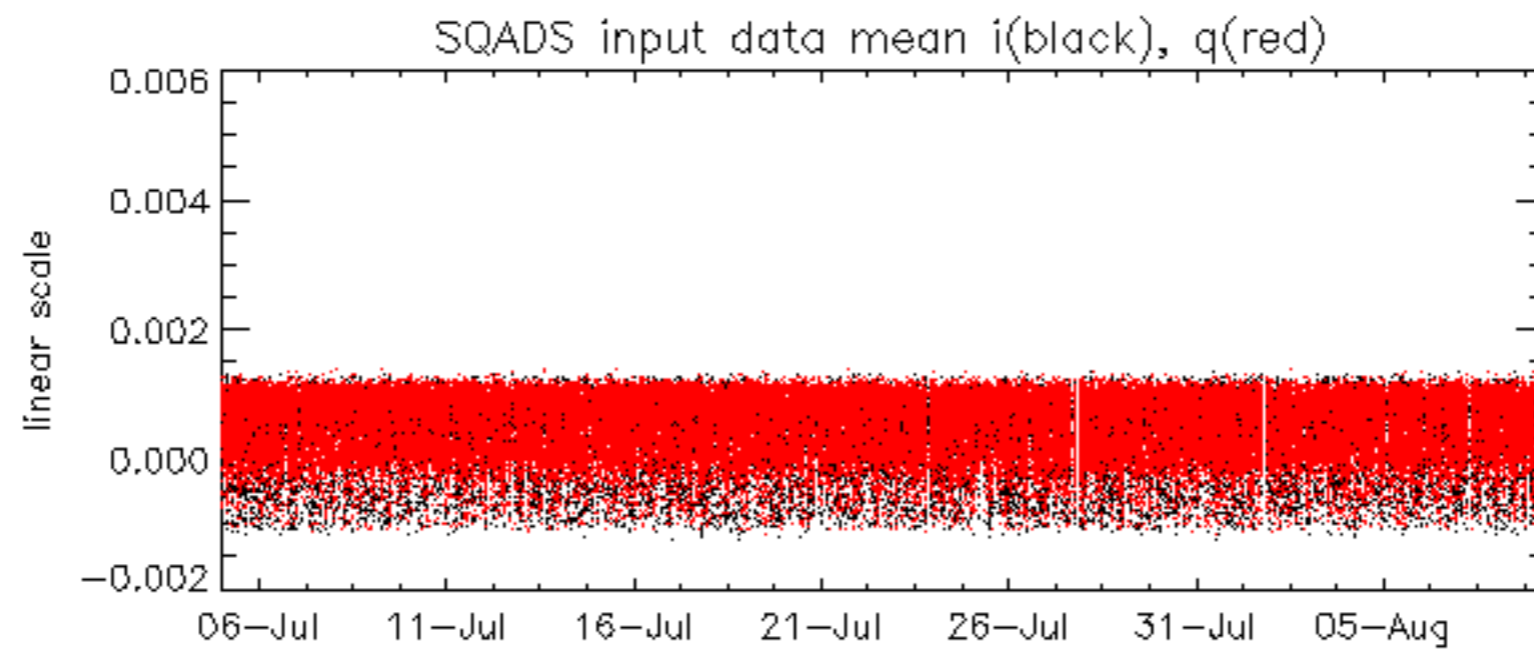
No anomalies observed on available MS products:

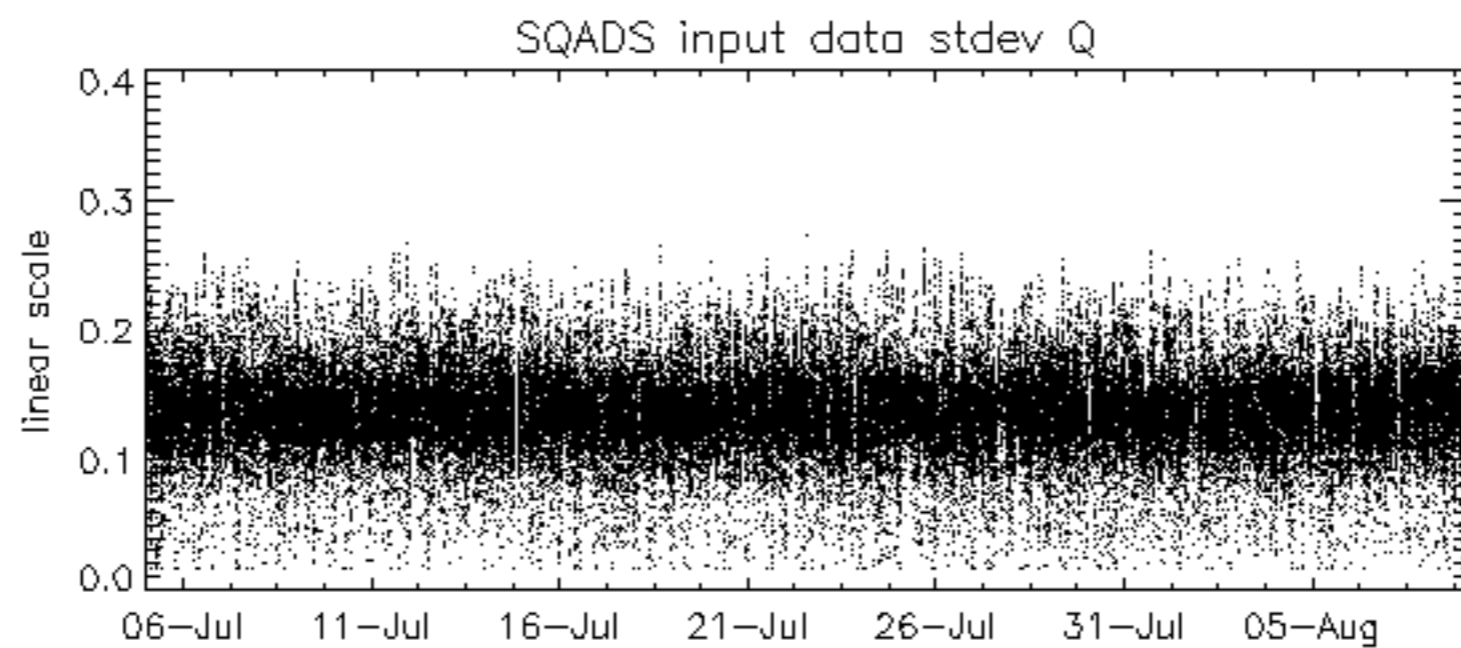
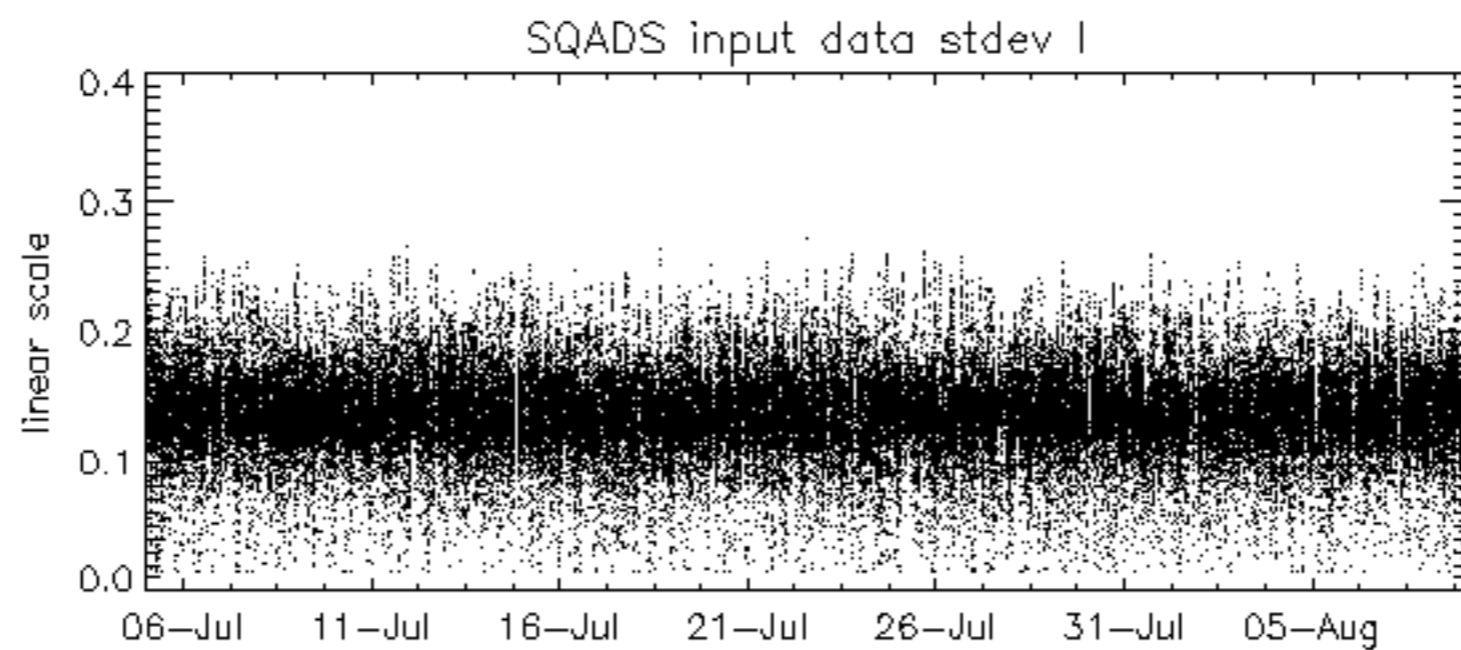
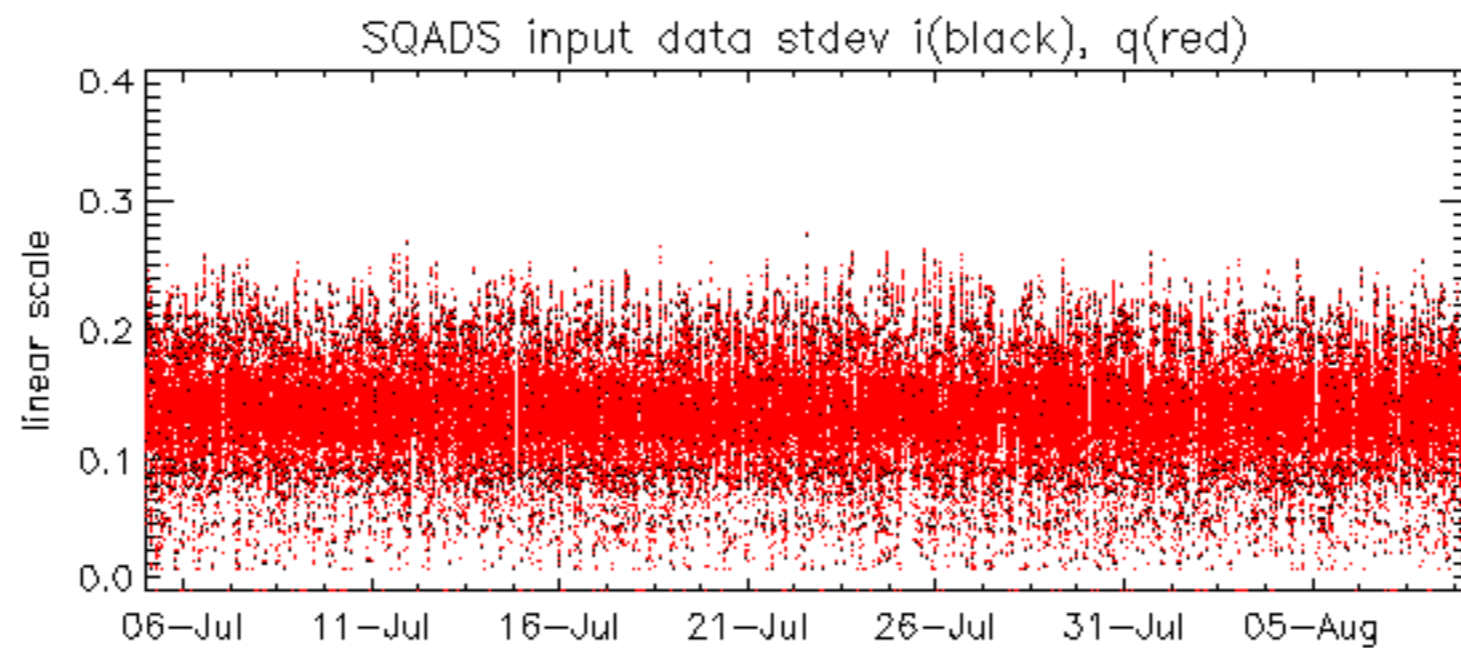
No anomalies observed.







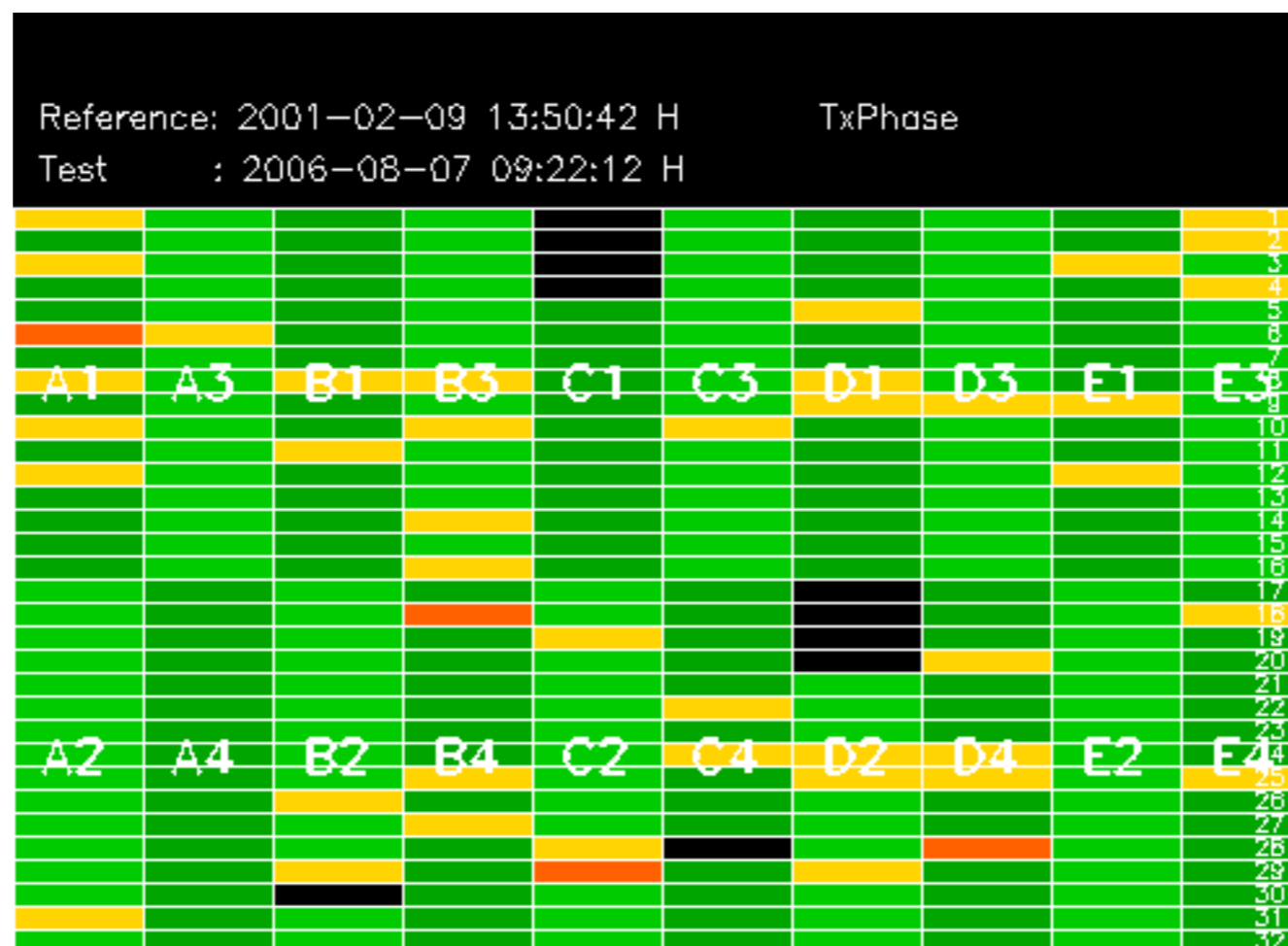


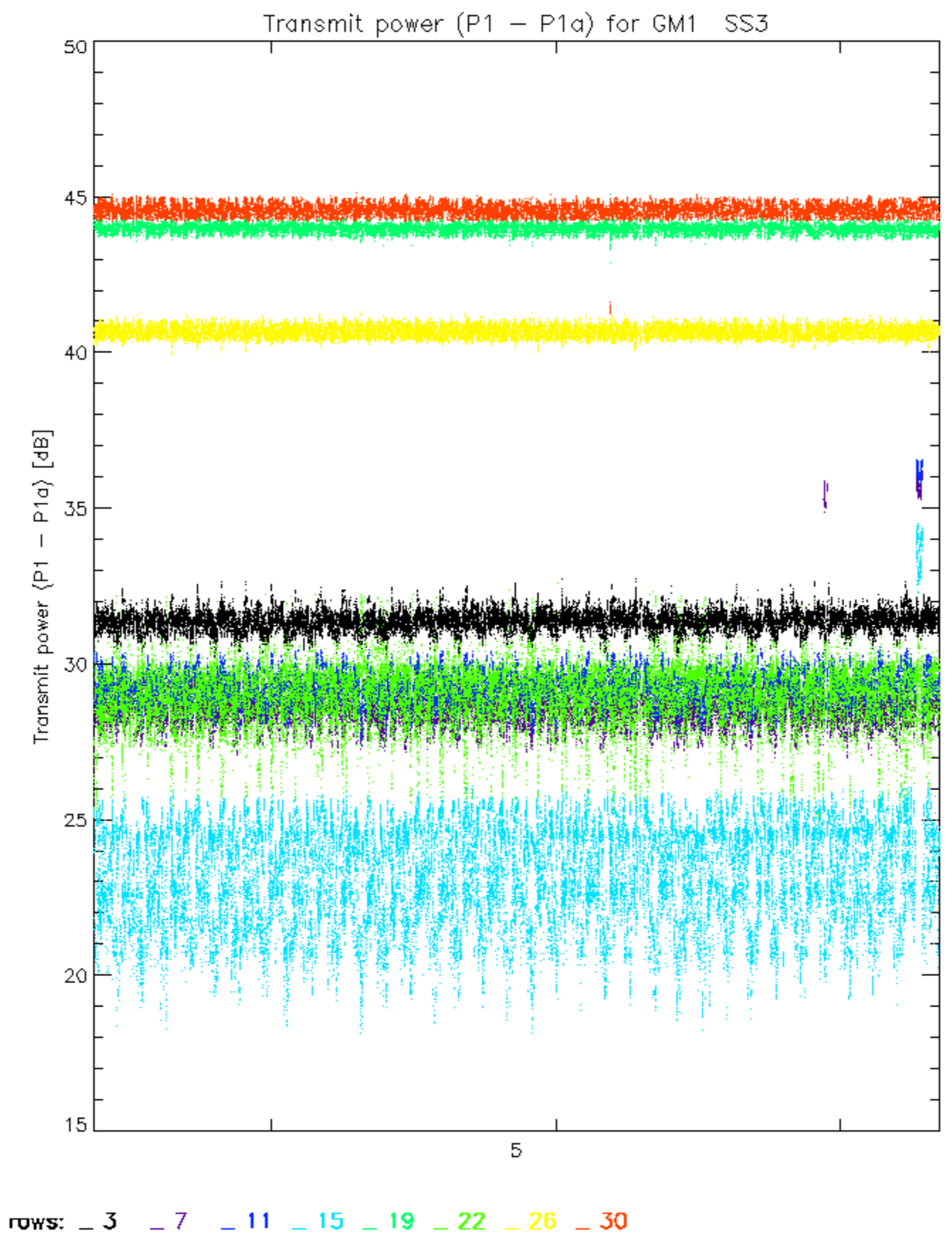


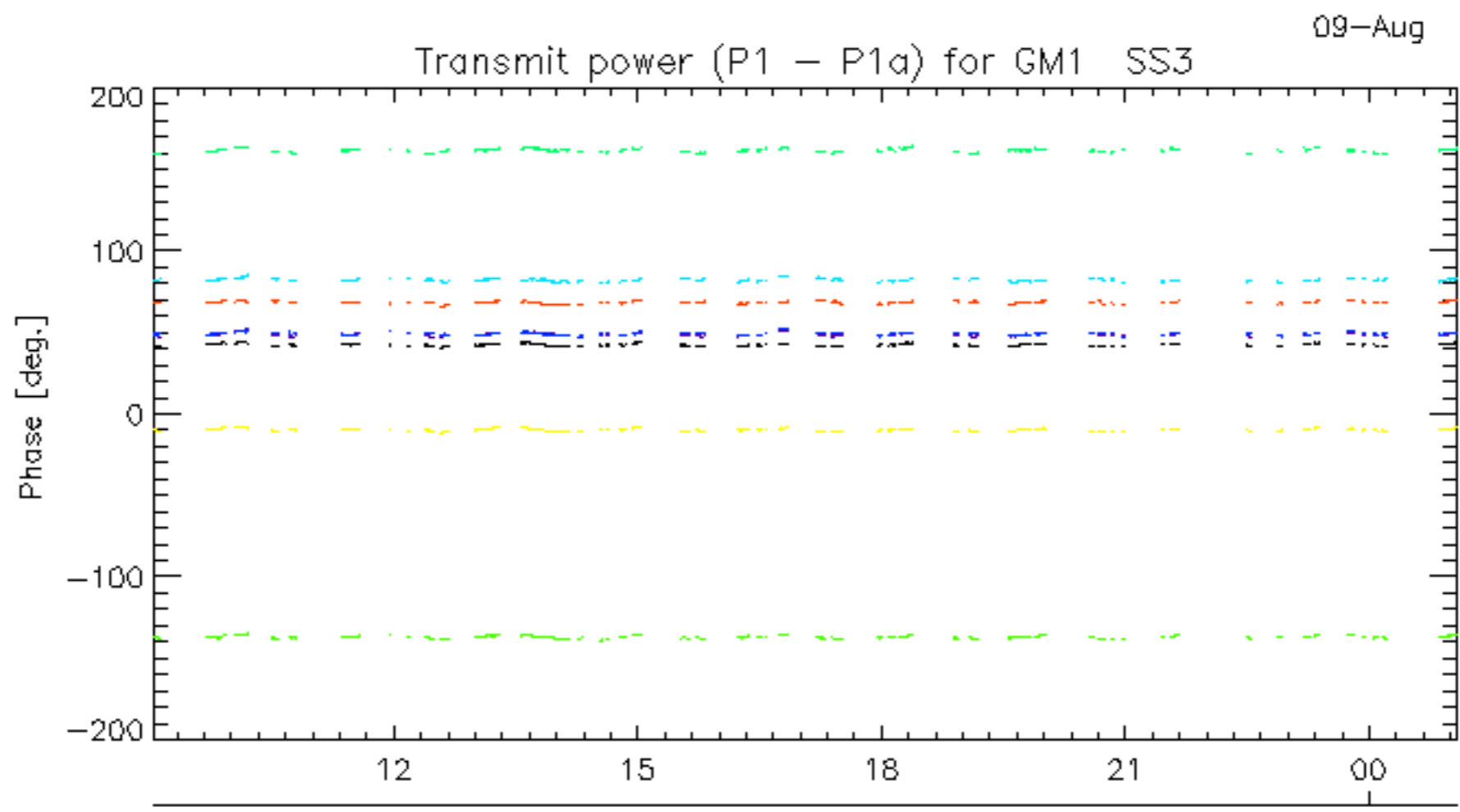
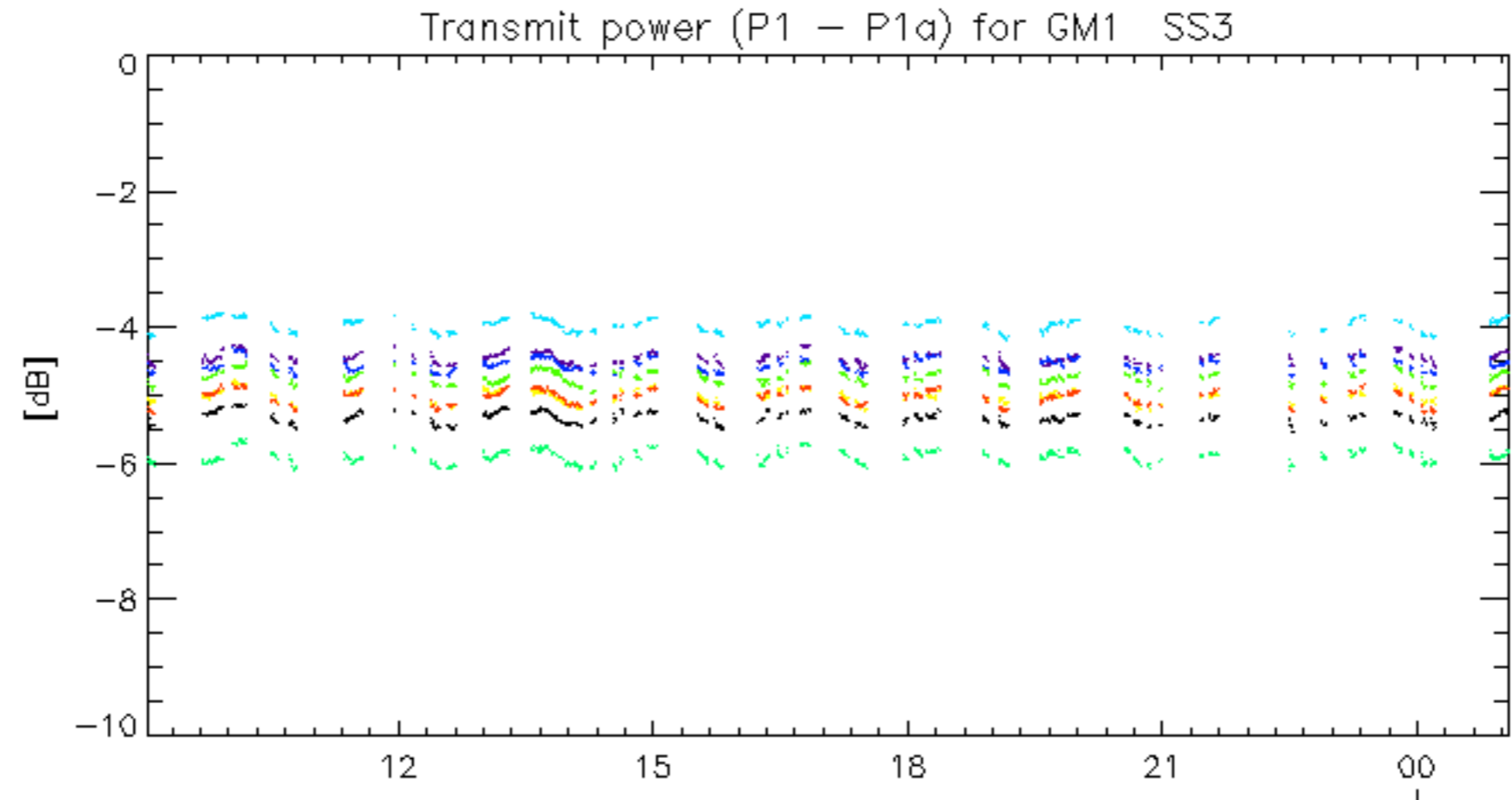
Summary of analysis for the last 3 days 2006080[789]

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_IMM_1PNPDE20060807_002903_000000512050_00088_23188_3070.N1	1	0
ASA_WSM_1PNPDE20060808_000918_000000852050_00102_23202_6545.N1	0	35
ASA_WSM_1PNPDE20060808_014653_000001462050_00103_23203_6563.N1	0	40
ASA_WSM_1PNPDE20060808_233741_000003292050_00116_23216_6720.N1	0	35

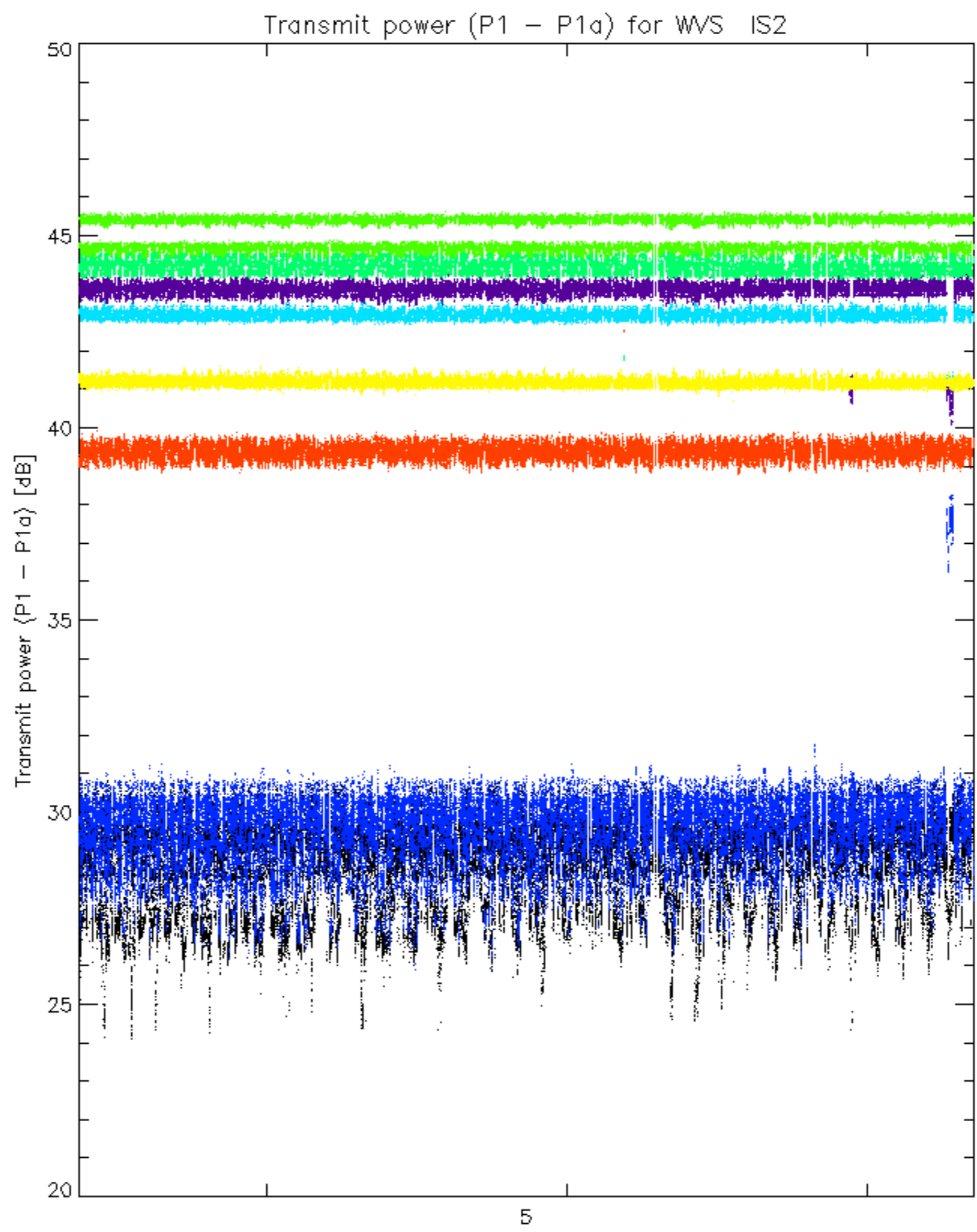




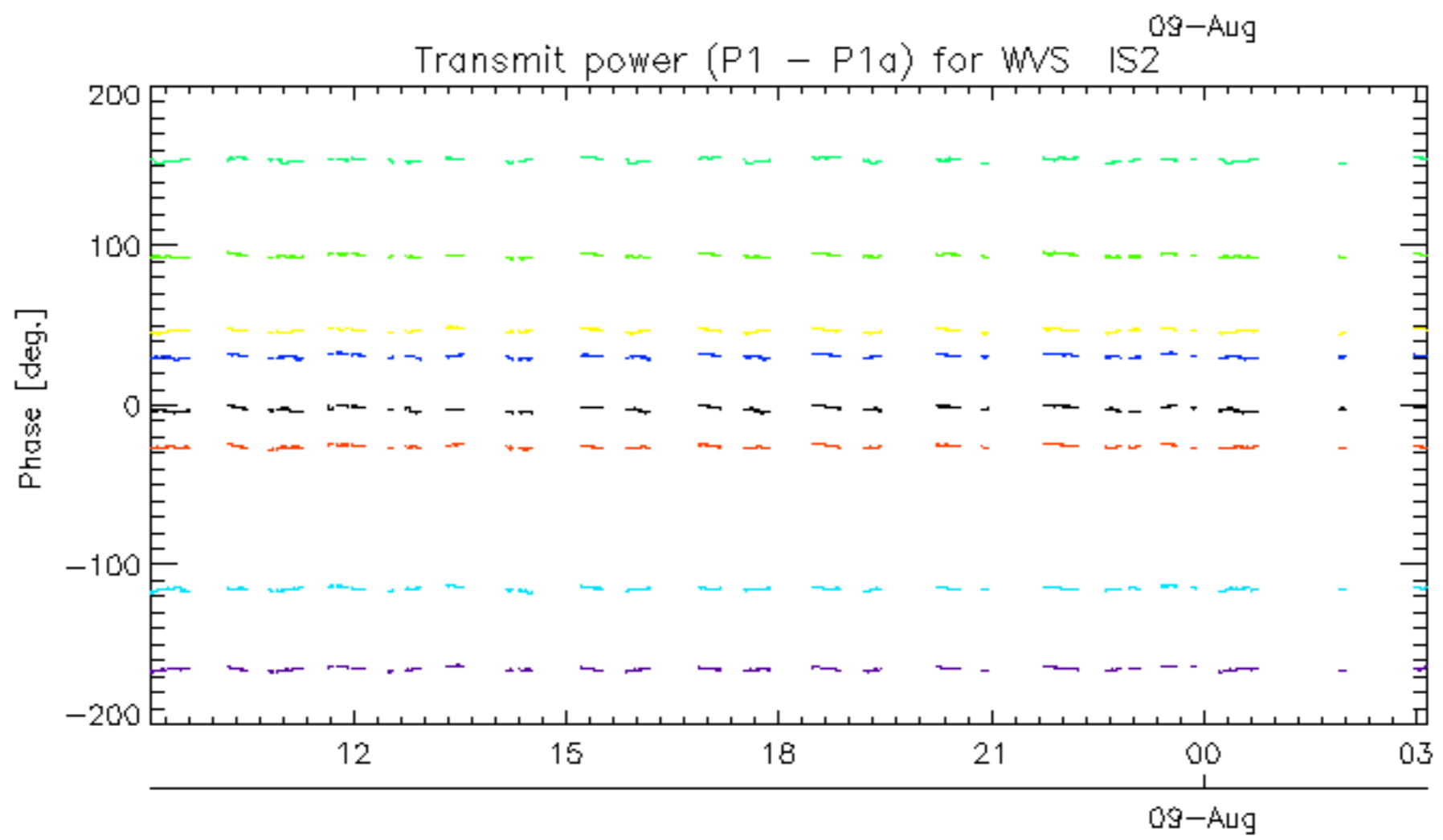
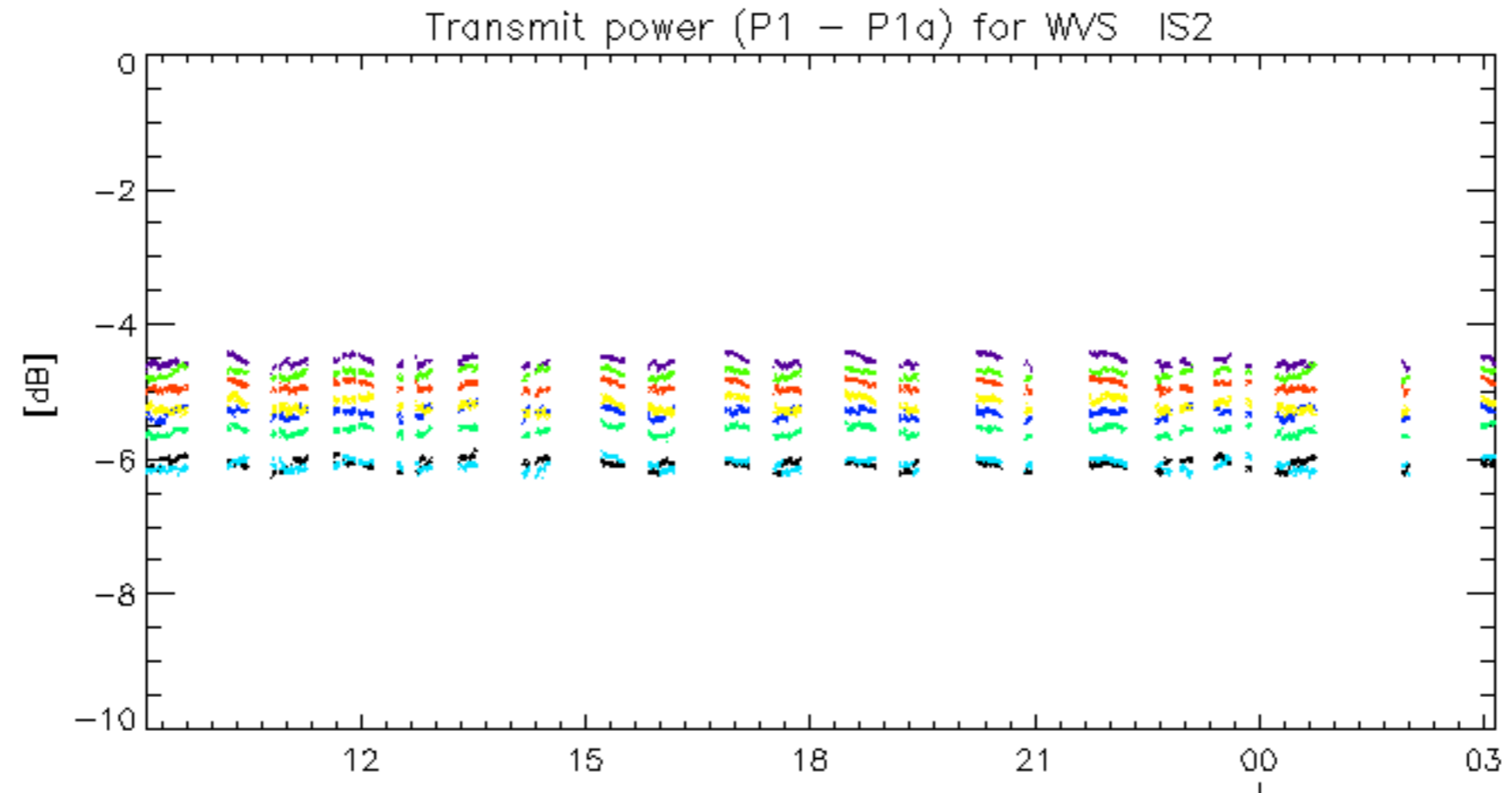


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

09-Aug



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



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

No unavailabilities during the reported period.