

PRELIMINARY REPORT OF 050326

last update on Sat Mar 26 10:50:01 GMT 2005

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 2005-03-25 00:00:00 to 2005-03-26 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	20	39	4	1	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	20	39	4	1	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	20	39	4	1	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	20	39	4	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	40	37	5	5	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	40	37	5	5	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	40	37	5	5	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	40	37	5	5	0

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	20050324 100807
H	20050325 143818

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)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.353232	0.013695	0.062513
7	P1	-3.099446	0.008206	-0.029341
11	P1	-4.686176	0.029526	0.061177
15	P1	-5.643936	0.036949	0.059953
19	P1	-3.685846	0.003725	-0.021280
22	P1	-4.517073	0.012288	-0.005458
26	P1	-4.941406	0.017109	0.043274
30	P1	-7.194303	0.018139	-0.008335
3	P1	-15.899097	0.327070	0.364314
7	P1	-15.522193	0.065794	0.011315
11	P1	-20.967607	0.447114	0.067560
15	P1	-11.580781	0.048068	-0.029988
19	P1	-14.301039	0.023764	-0.045828
22	P1	-15.642278	0.308311	-0.031229
26	P1	-17.606276	0.205559	-0.052576
30	P1	-17.981375	0.450407	0.015653

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.083599	0.082445	0.065119
7	P2	-22.268772	0.094559	0.070927
11	P2	-14.380870	0.107647	0.229905
15	P2	-7.042605	0.091069	0.004643
19	P2	-9.630814	0.093755	0.010460
22	P2	-16.912905	0.093133	0.050869
26	P2	-16.443308	0.092382	0.015442
30	P2	-18.851654	0.082993	0.071403

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.165517	0.004907	0.006446
7	P3	-8.165517	0.004907	0.006446
11	P3	-8.165517	0.004907	0.006446
15	P3	-8.165517	0.004907	0.006446
19	P3	-8.165517	0.004907	0.006446
22	P3	-8.165517	0.004907	0.006446
26	P3	-8.165517	0.004907	0.006446
30	P3	-8.165517	0.004907	0.006446

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	-2.713372	0.026019	0.079424
7	P1	-3.018991	0.048683	0.045796
11	P1	-3.982462	0.026812	0.052179
15	P1	-3.556951	0.034468	0.101095
19	P1	-3.596014	0.013231	-0.023457
22	P1	-5.743642	0.035442	0.047581
26	P1	-7.292075	0.025330	-0.000879
30	P1	-6.231031	0.046759	-0.013749
3	P1	-10.709907	0.173919	0.209441
7	P1	-10.327240	0.176649	0.020366
11	P1	-12.534874	0.137990	0.131756
15	P1	-11.741601	0.102037	0.167209
19	P1	-15.566570	0.044179	-0.014025
22	P1	-24.542418	1.185315	-0.349706
26	P1	-15.488212	0.174594	-0.059489
30	P1	-20.210655	1.174853	-0.044291

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.790838	0.033831	0.082708
7	P2	-22.353832	0.038192	0.084244
11	P2	-10.161812	0.050408	0.168249
15	P2	-4.982233	0.022432	-0.018624
19	P2	-6.831545	0.033457	0.000559
22	P2	-7.092685	0.031288	0.057394
26	P2	-23.849939	0.028490	0.014116
30	P2	-21.895338	0.033724	0.029411

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998538	0.002830	0.009338
7	P3	-7.998608	0.002832	0.009146
11	P3	-7.998471	0.002854	0.009154
15	P3	-7.998598	0.002845	0.009478
19	P3	-7.998503	0.002852	0.009247
22	P3	-7.998519	0.002835	0.008922
26	P3	-7.998476	0.002843	0.009290
30	P3	-7.998470	0.002849	0.009311

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	0.000452112
	stdev	2.27815e-07
MEAN Q	mean	0.000478636
	stdev	2.36651e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127835
	stdev	0.00105249
STDEV Q	mean	0.128084
	stdev	0.00106388



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005032[456]

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_1PNPDK20050324_123132_000000372035_00439_16024_1254.N1	1	0
ASA_WSM_1PNPDE20050324_172653_000001032035_00442_16027_2950.N1	0	14



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)

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

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

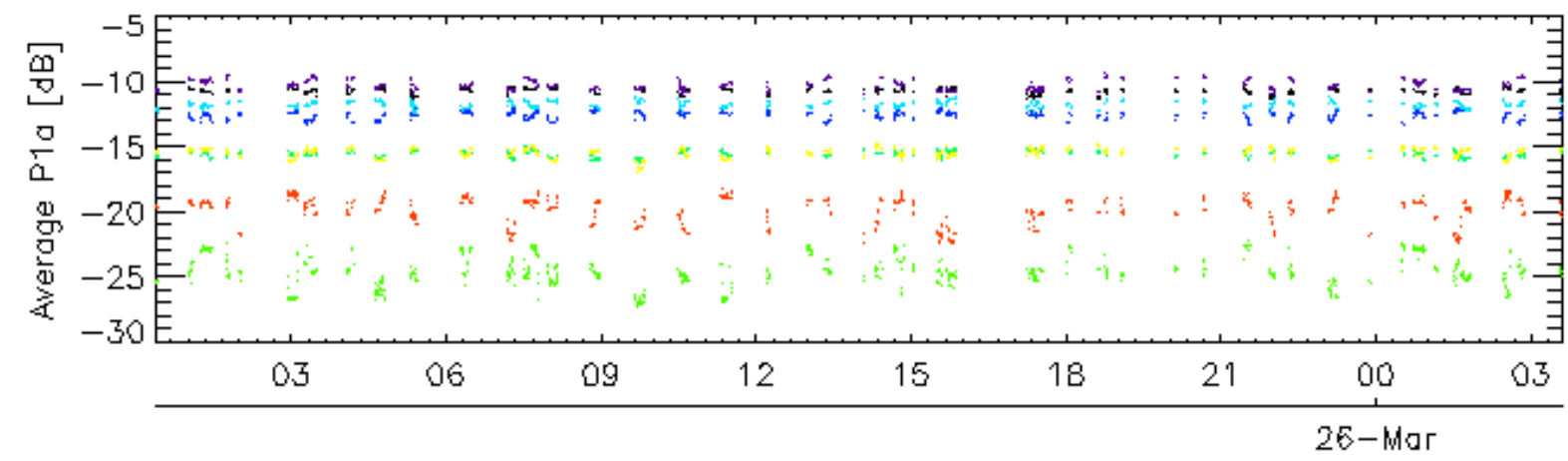
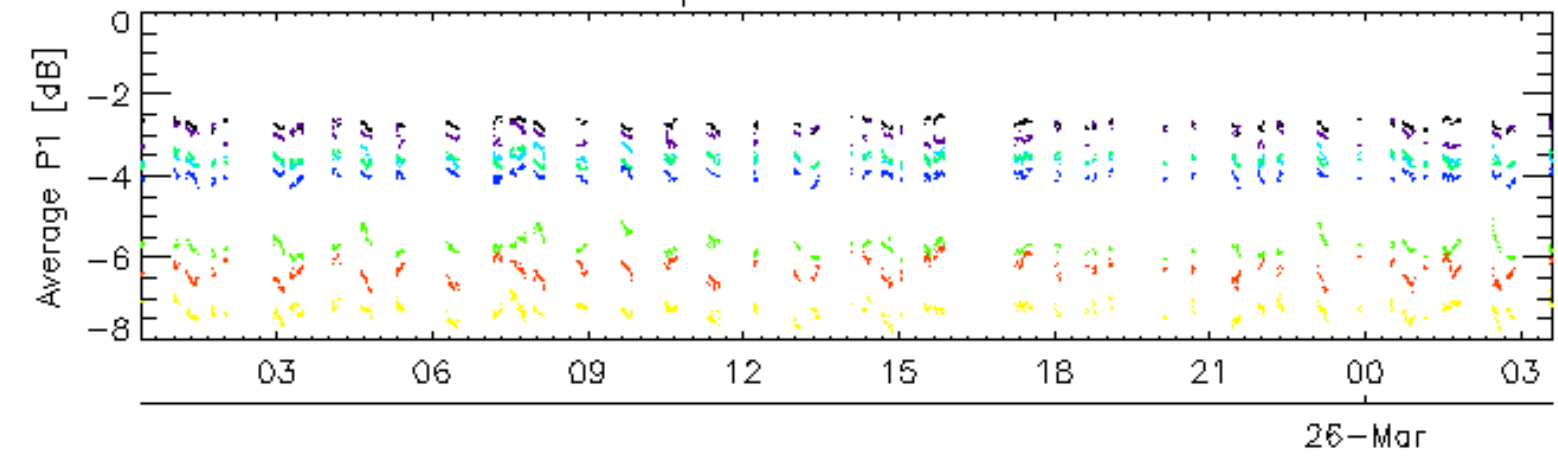
Ascending

Descending

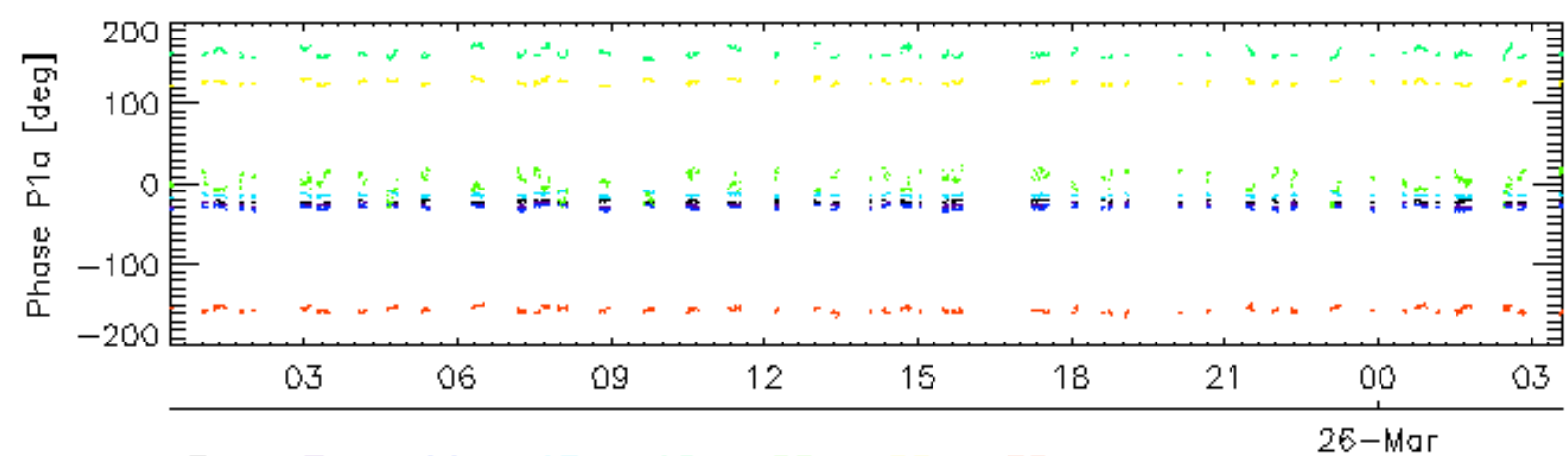
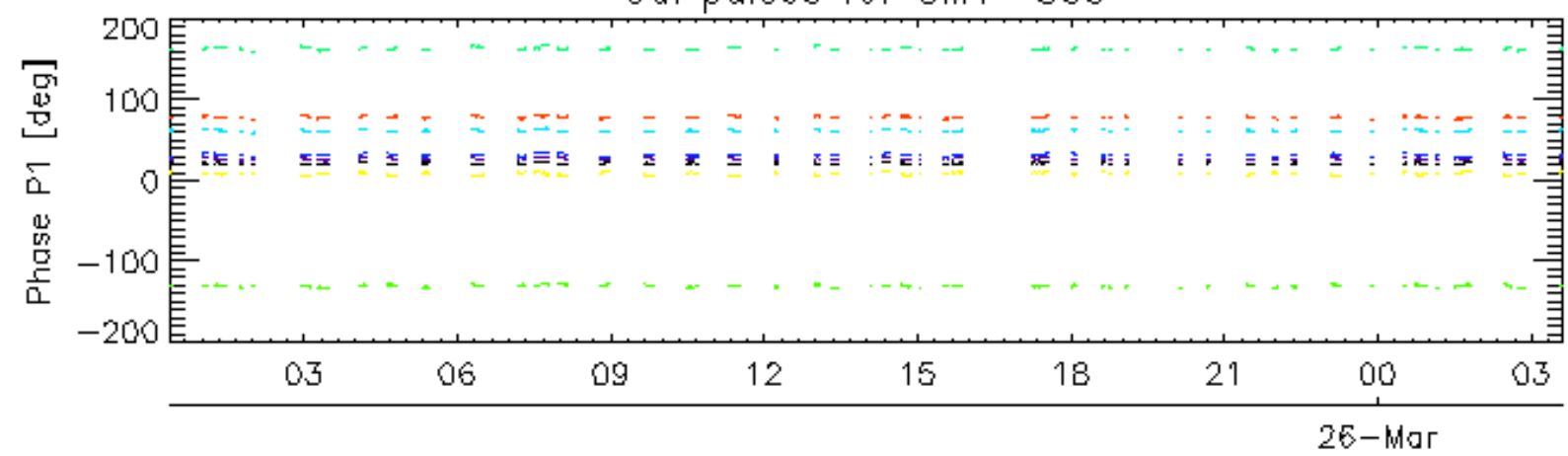
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

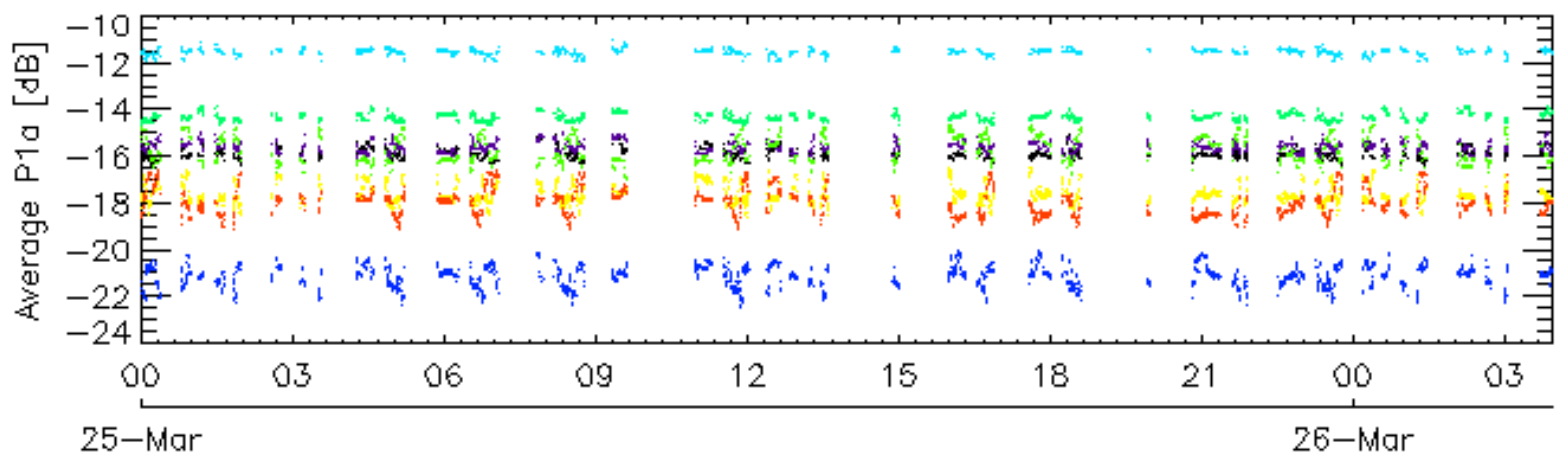
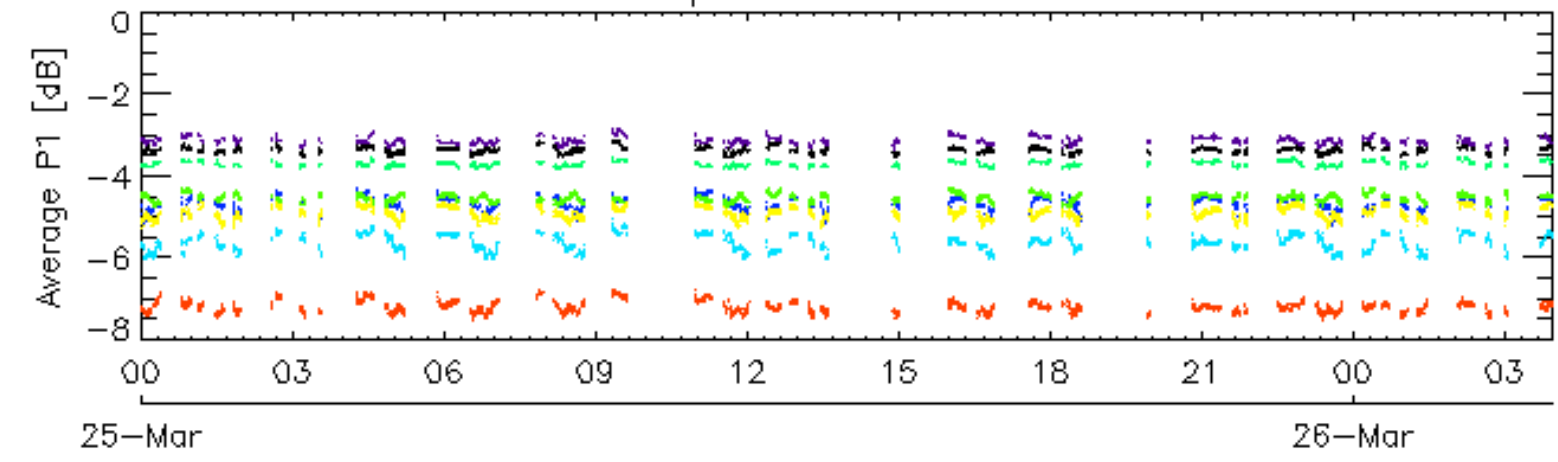


Cal pulses for GM1 SS3

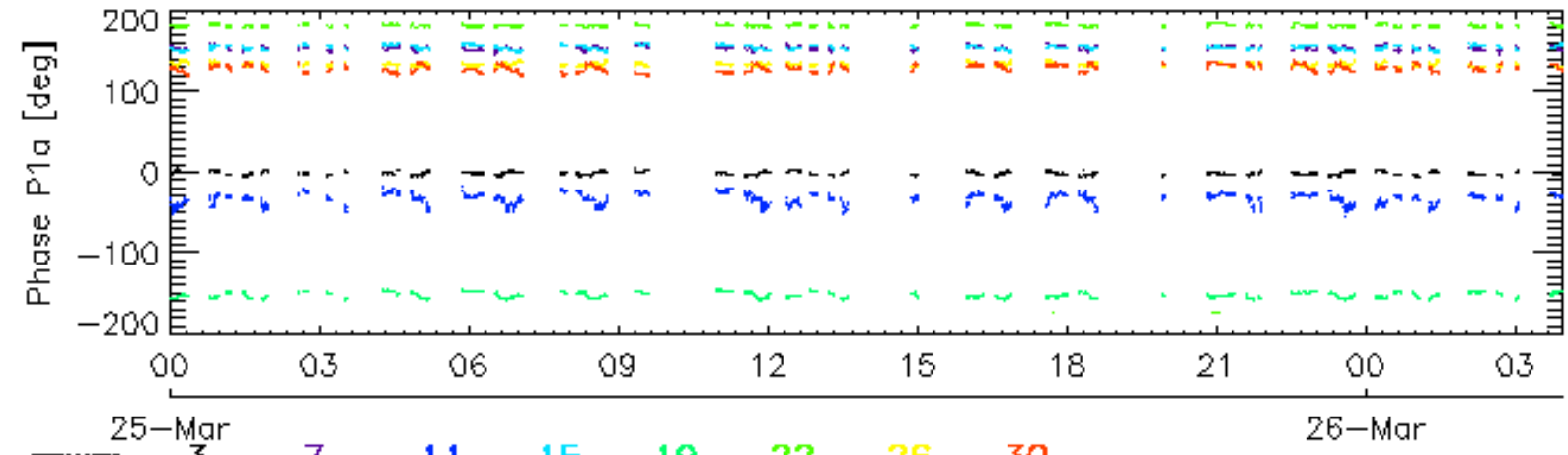
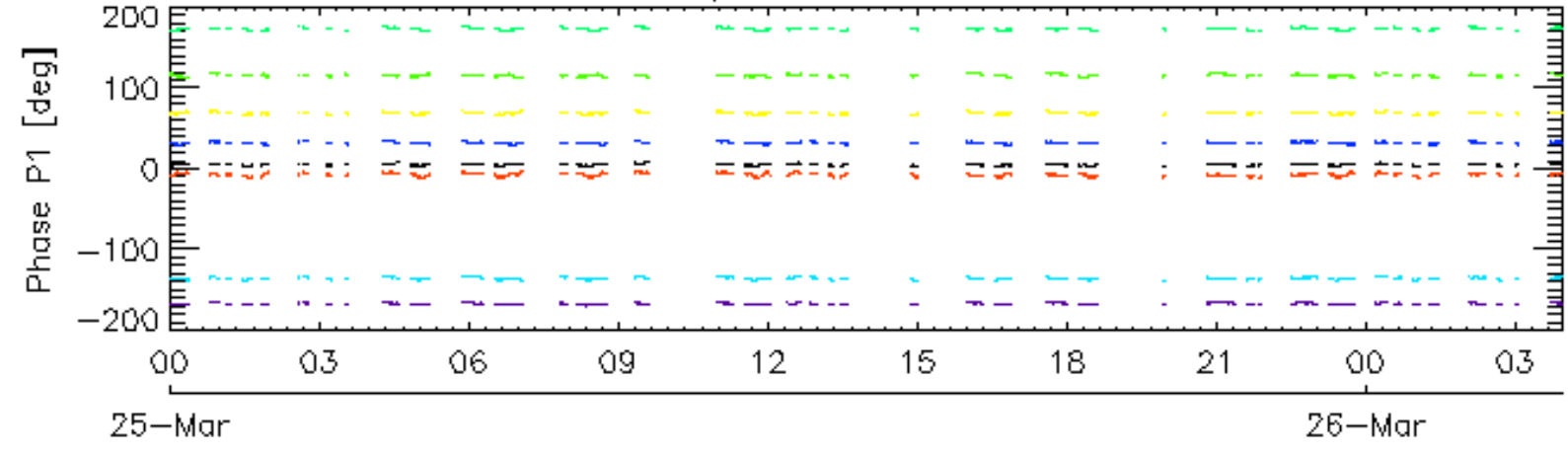


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

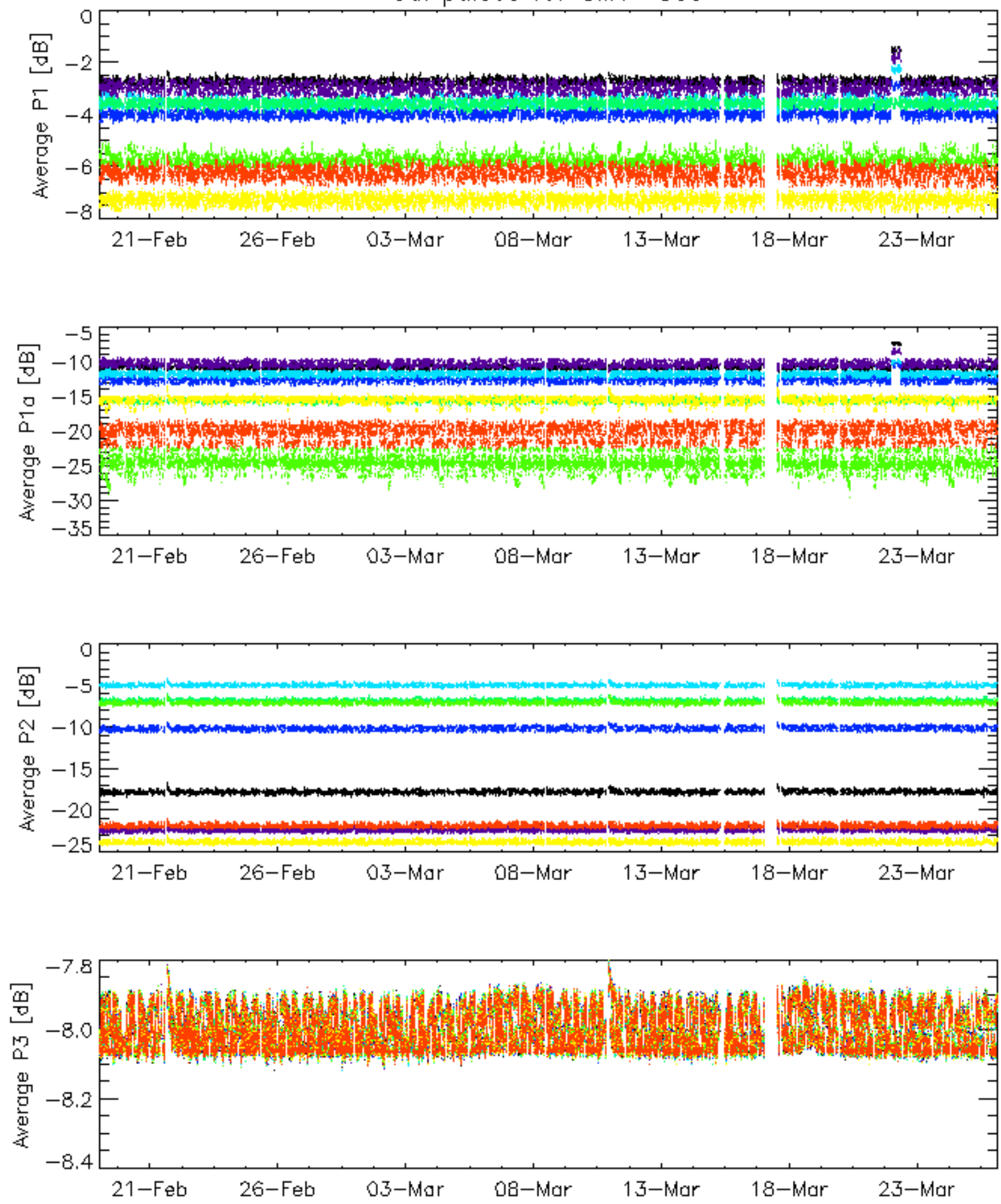


Cal pulses for WVS IS2



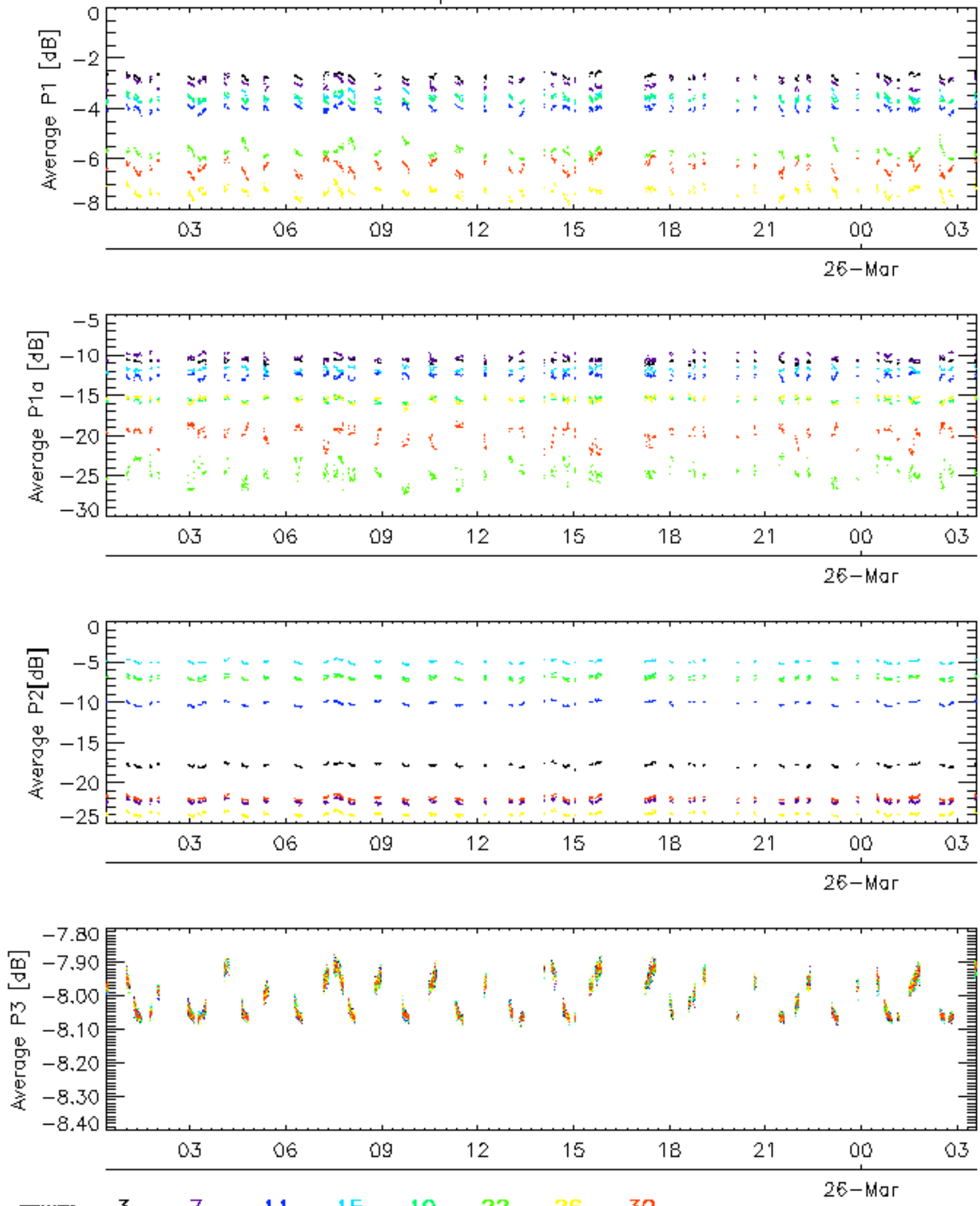
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3

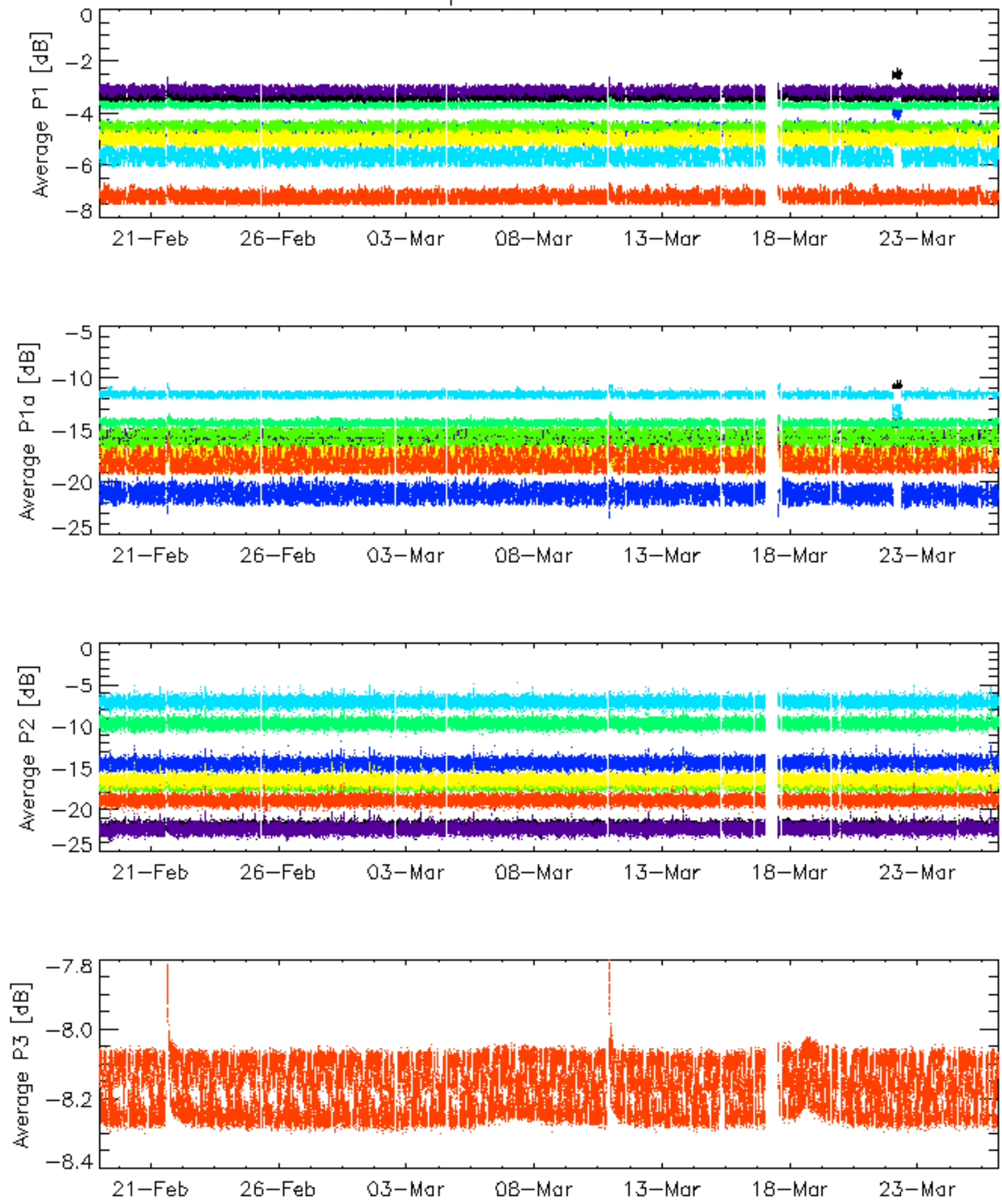


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

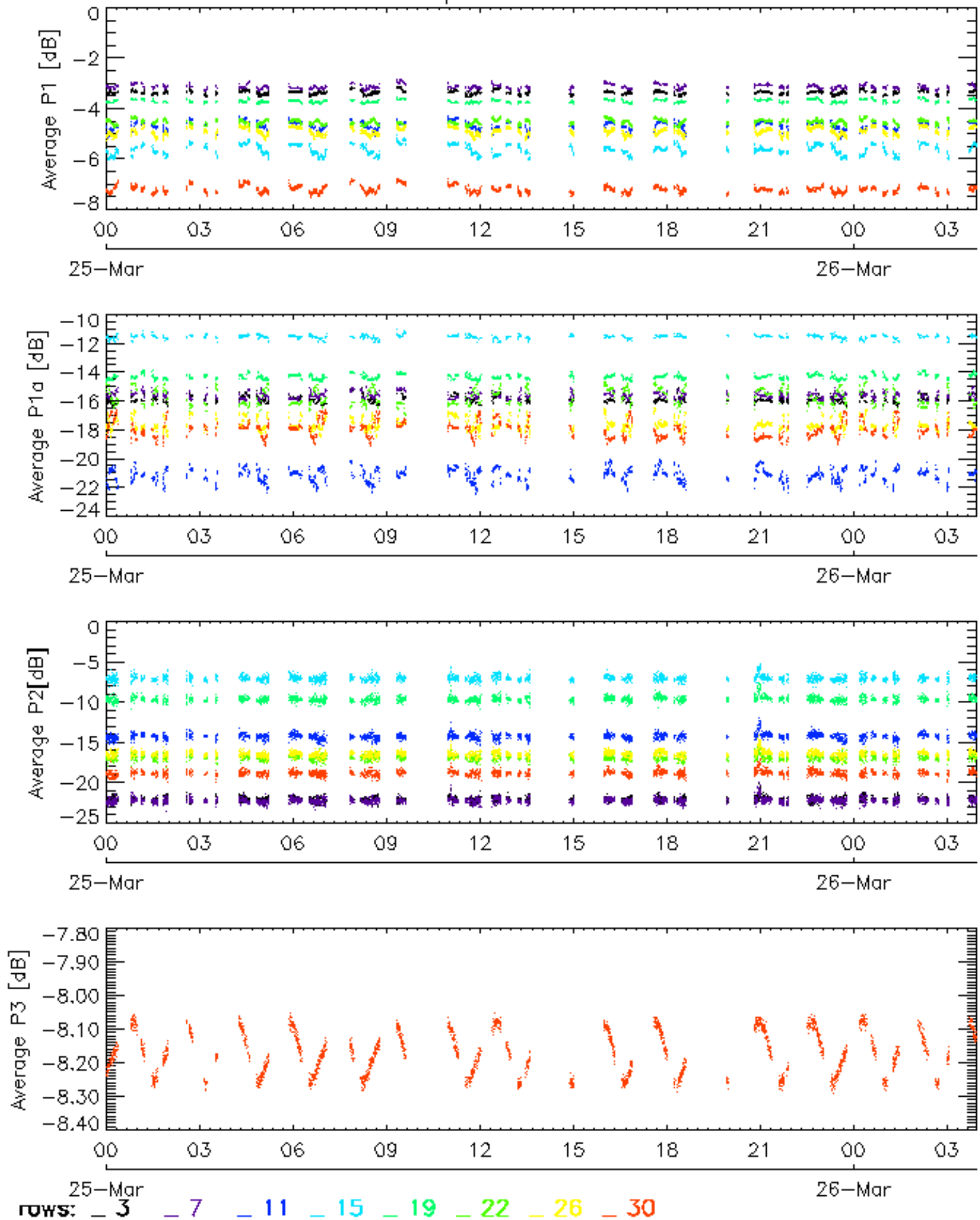


Cal pulses for WVS IS2

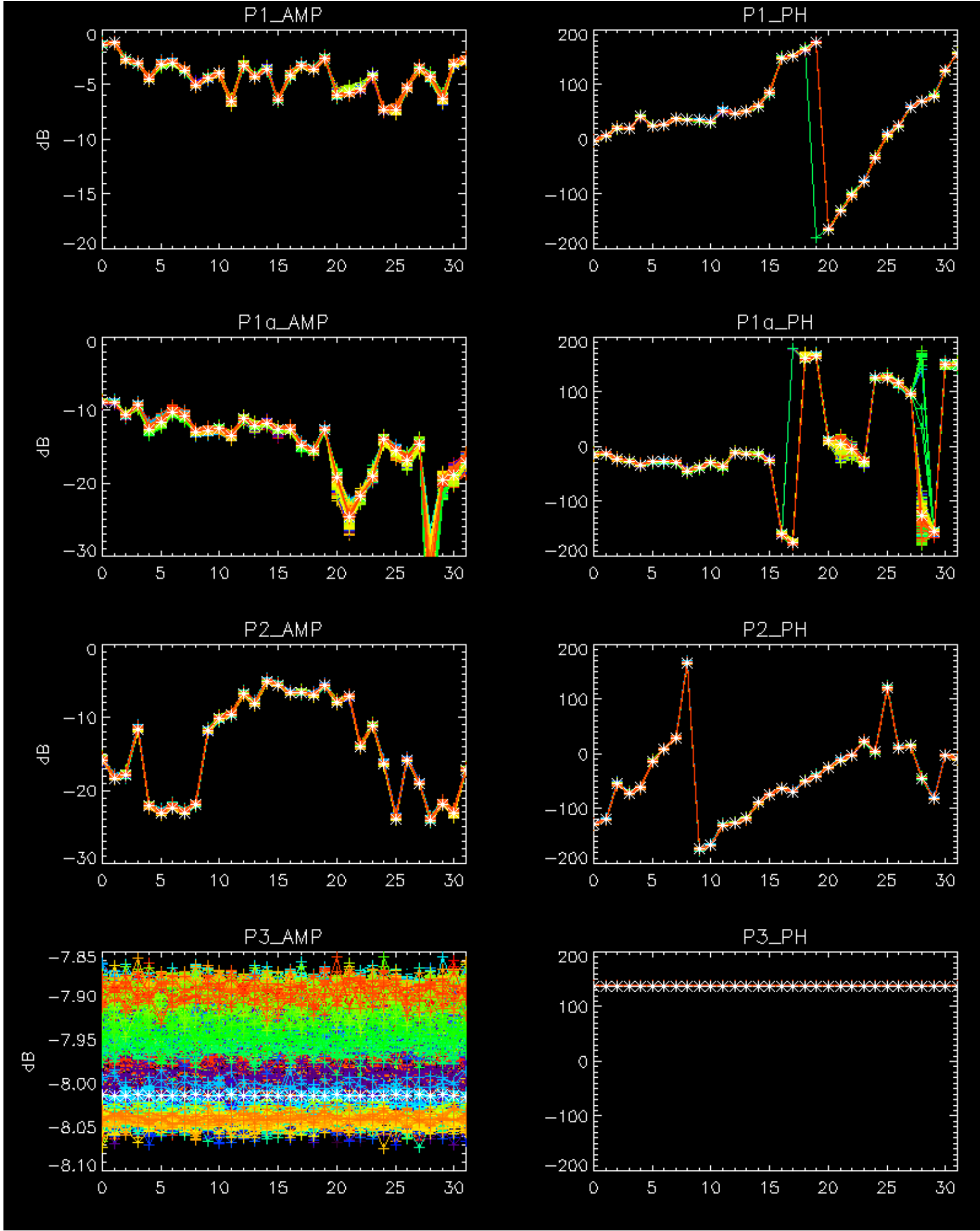


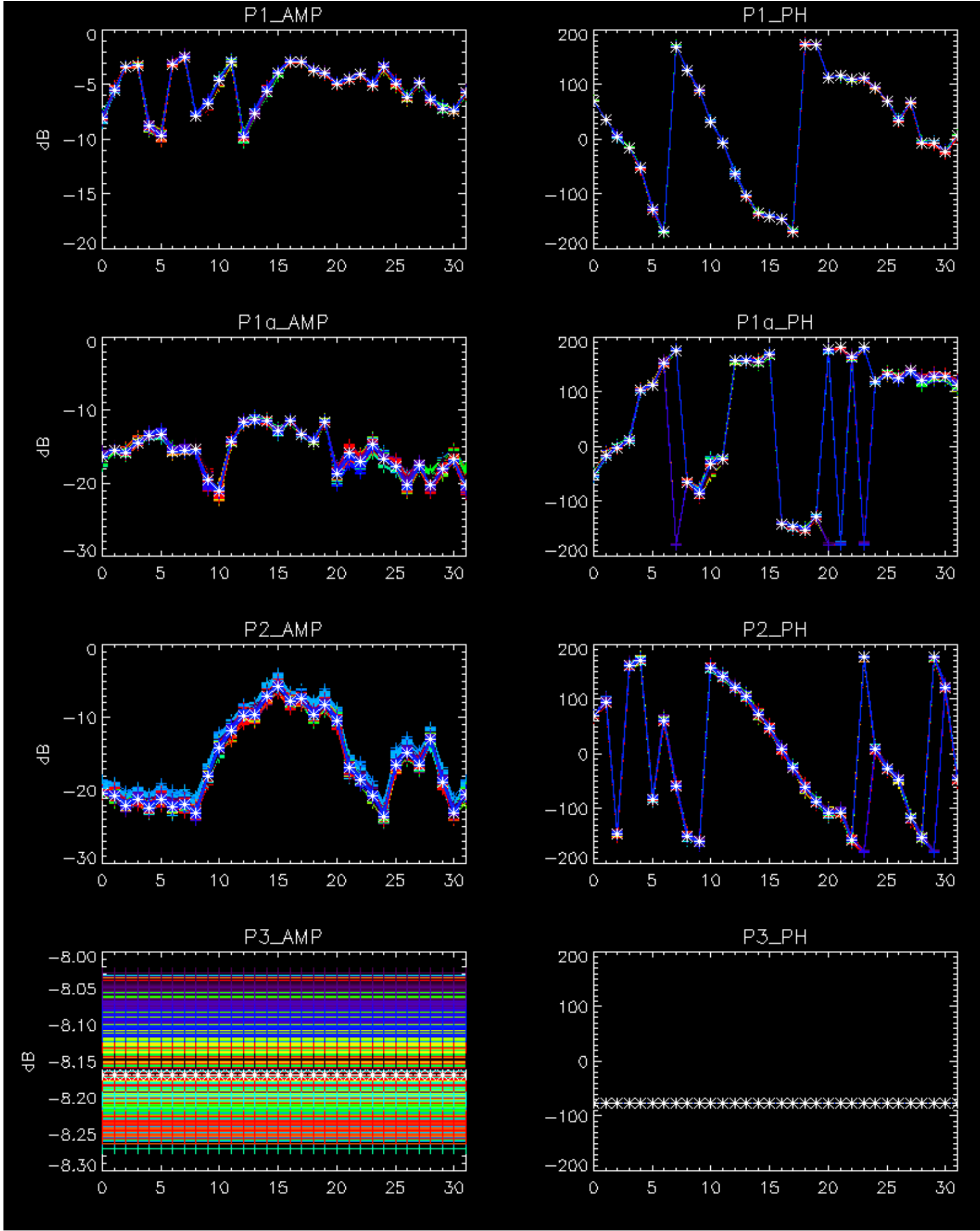
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



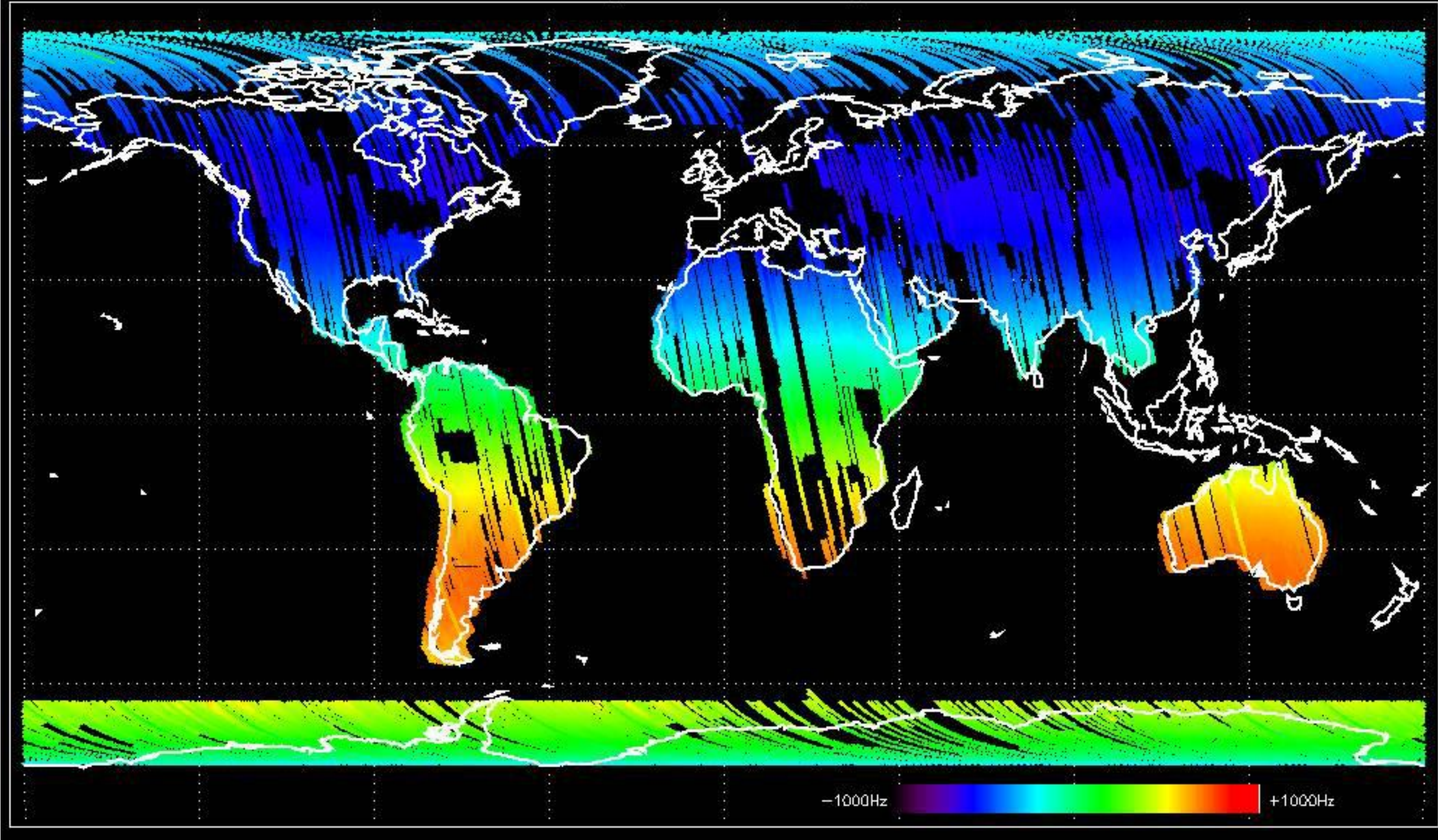
No anomalies observed.



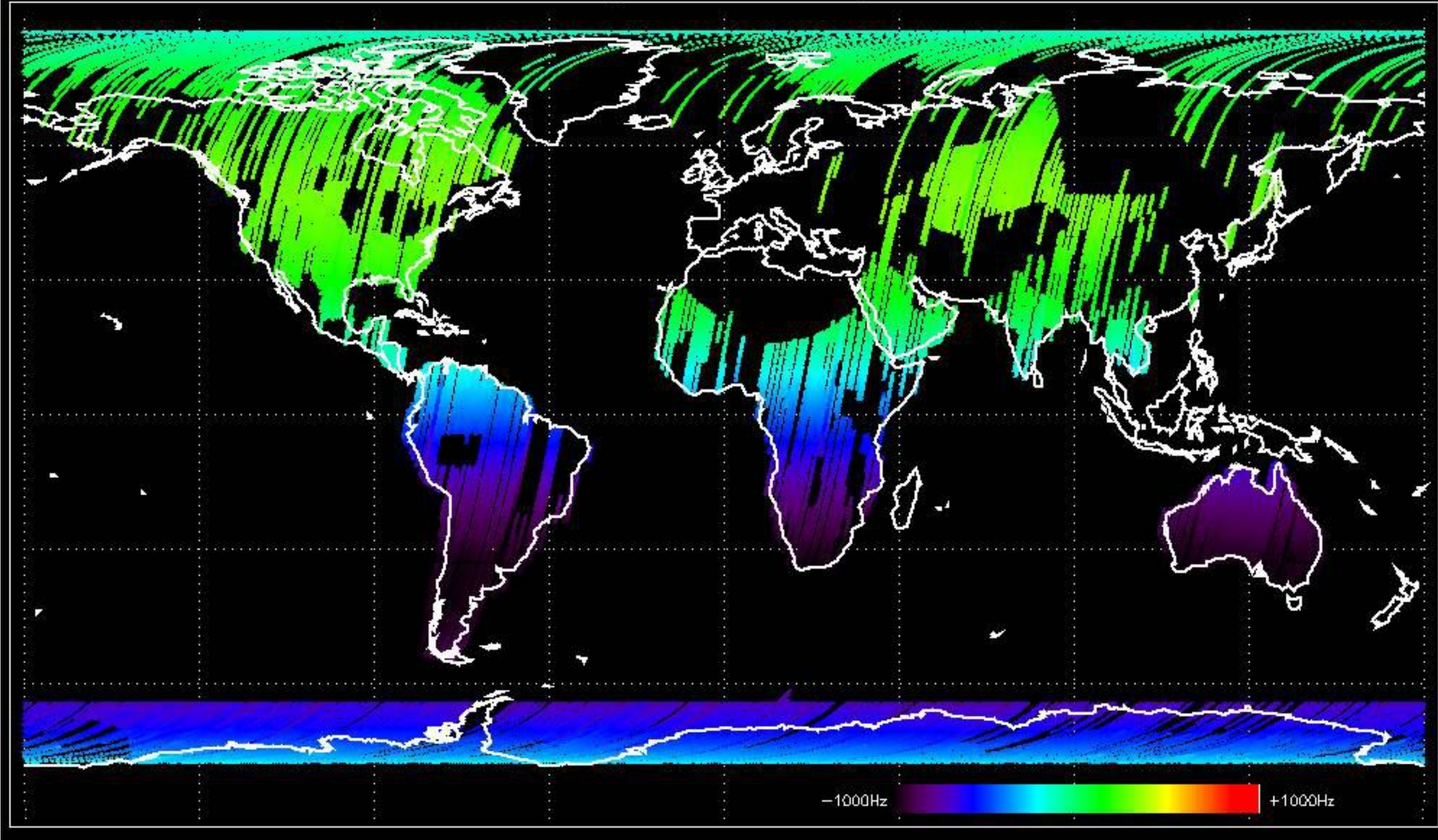


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

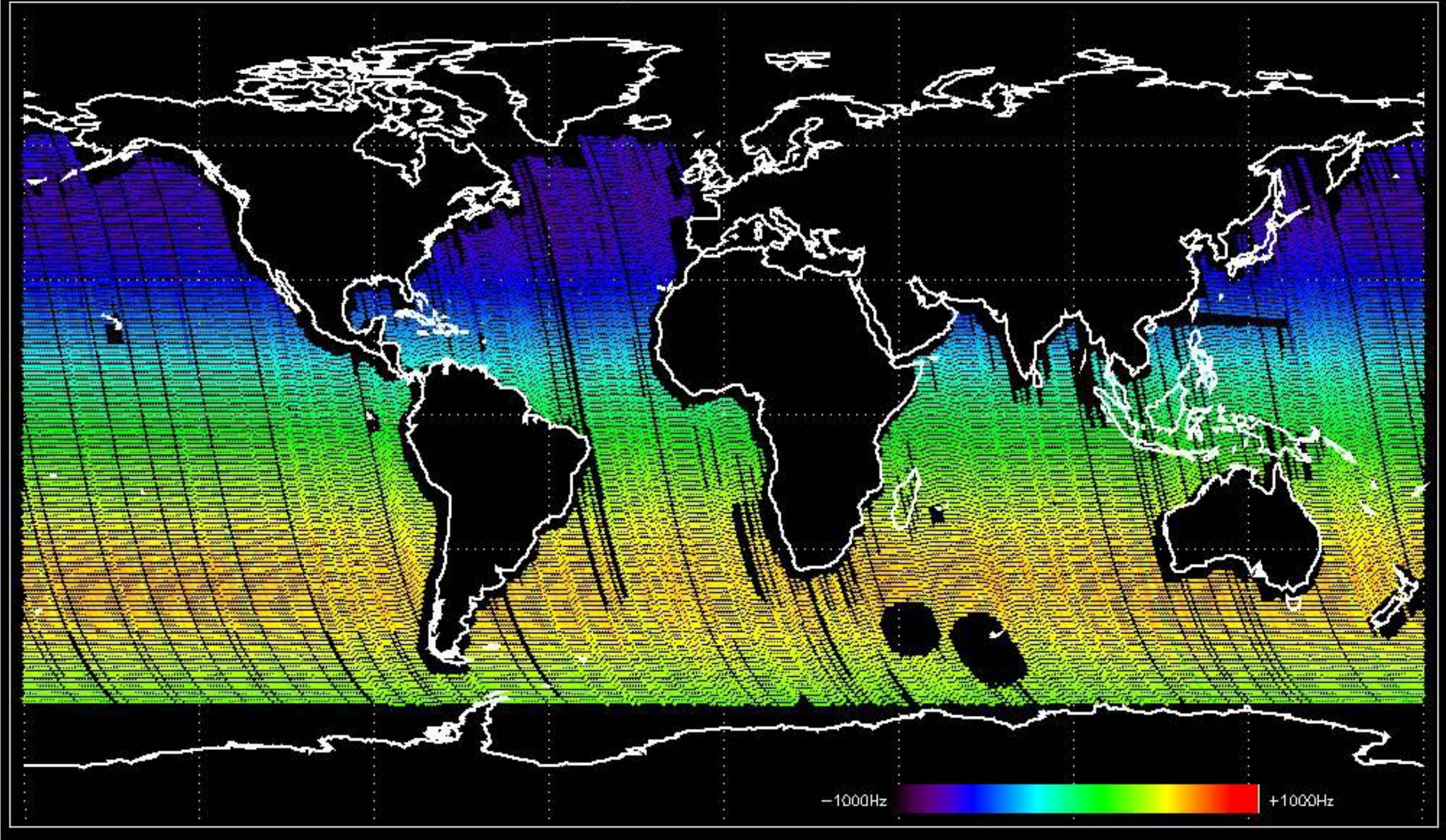
Doppler 'GM1' 'SS1' ascending



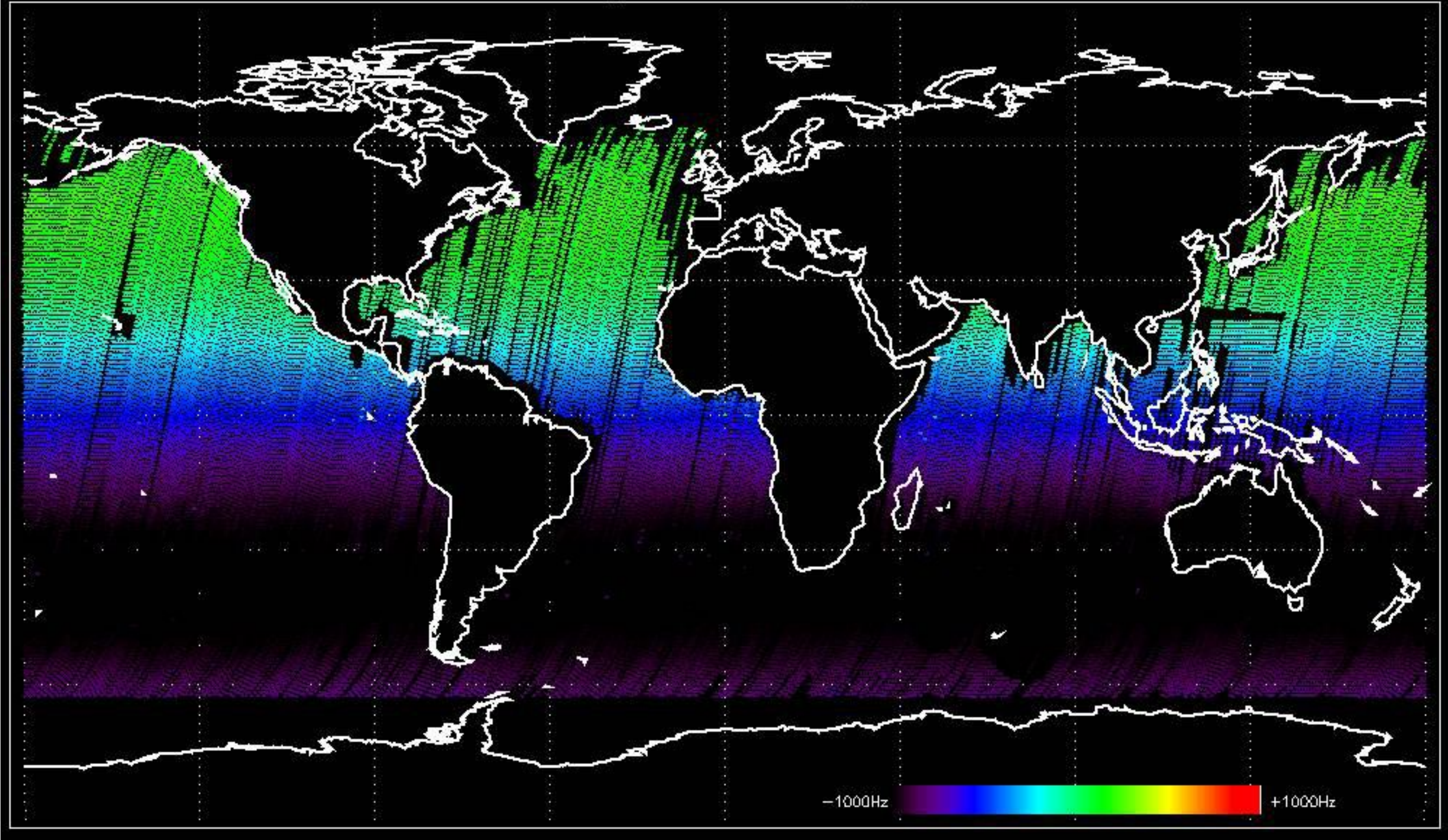
Doppler 'GM1' 'SS1' descending



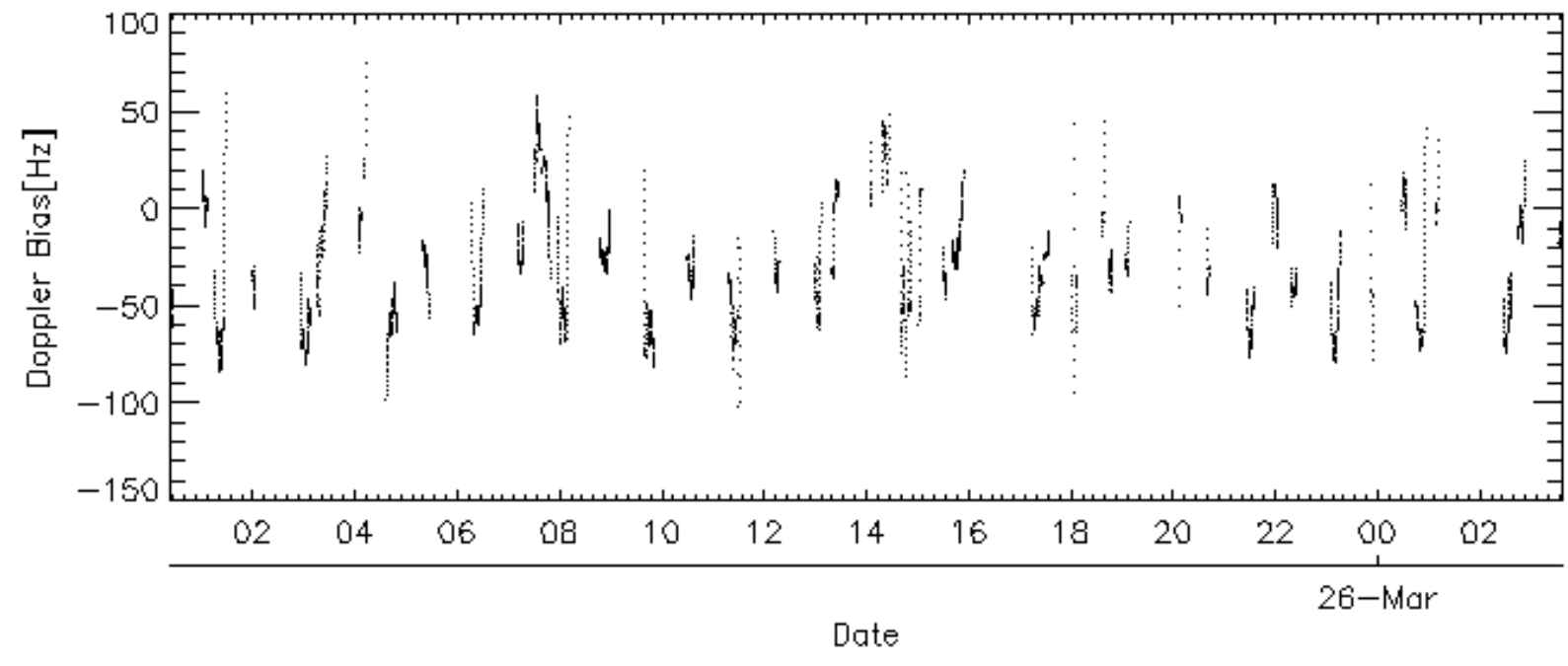
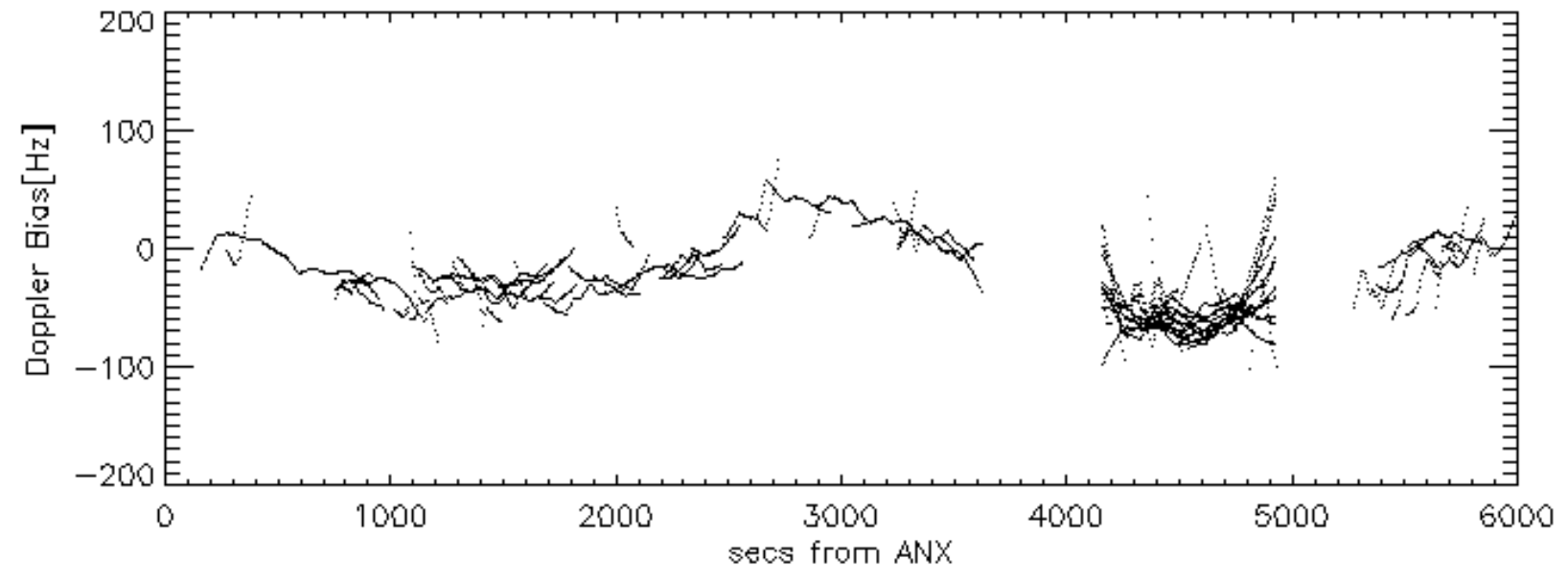
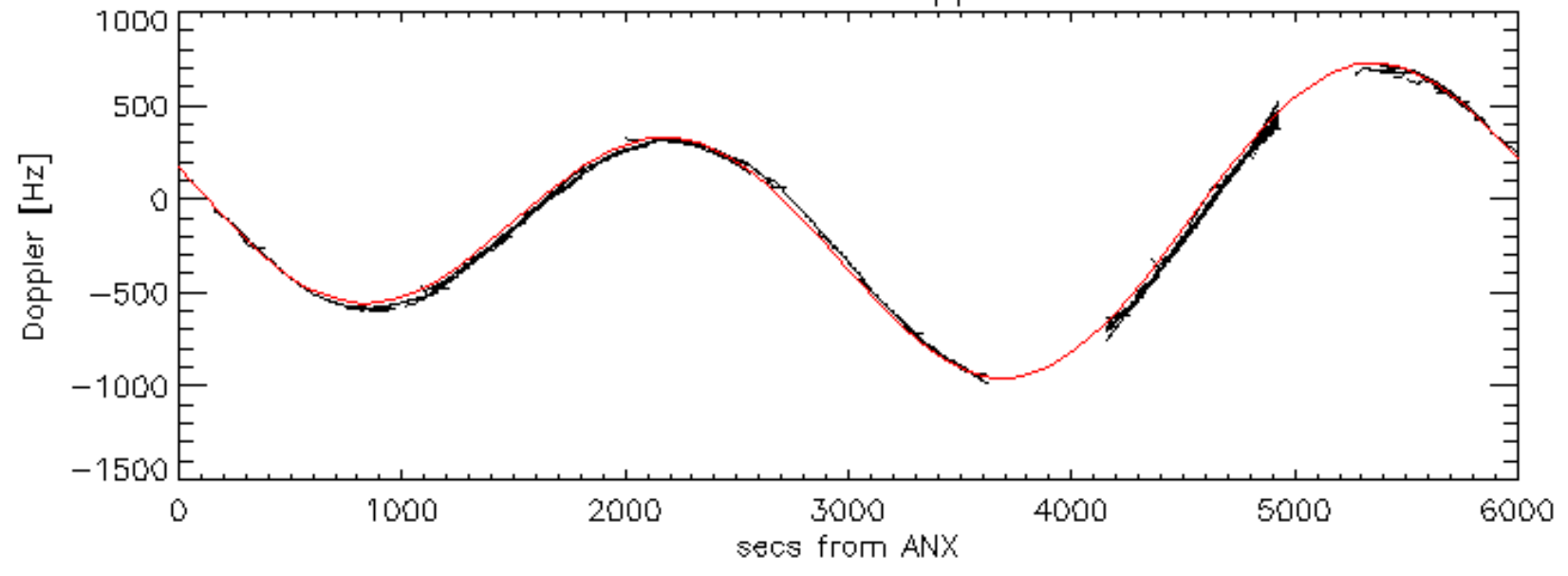
Doppler 'WVS' 'IS2' ascending

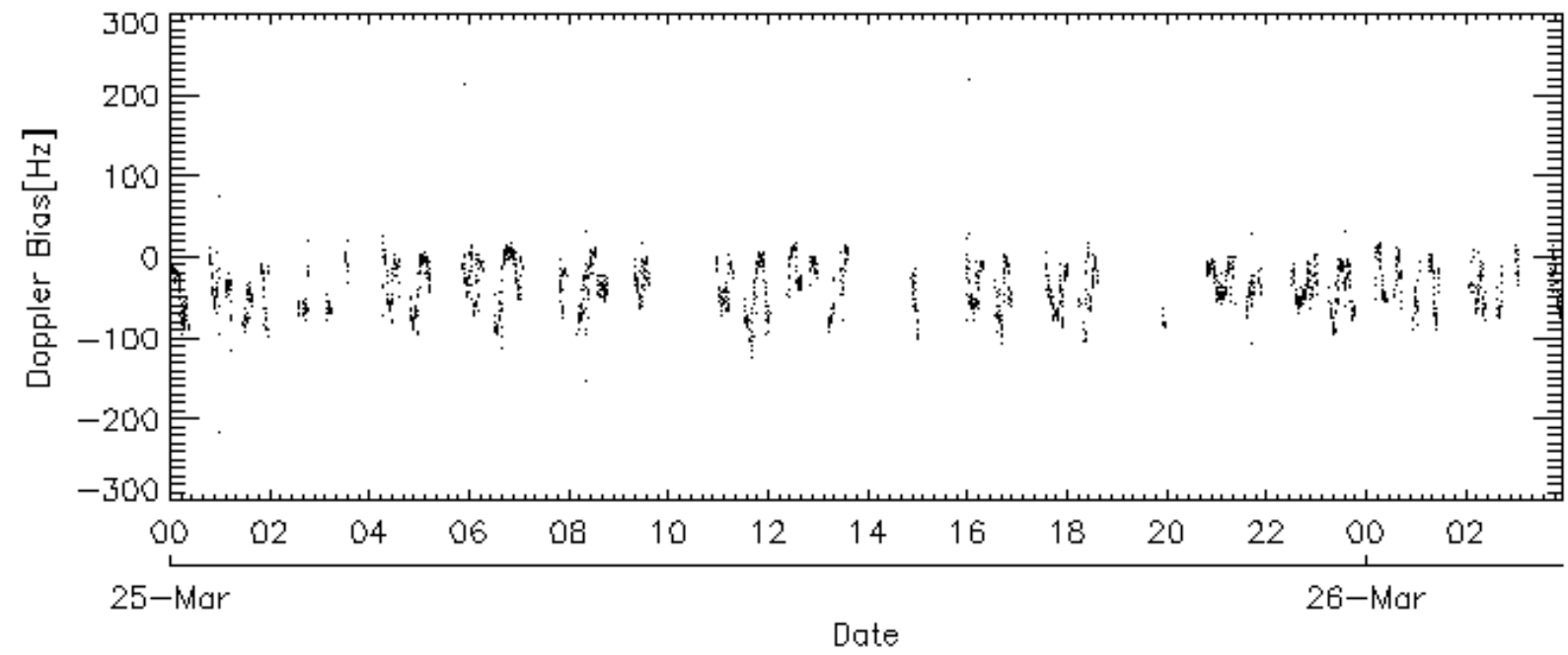
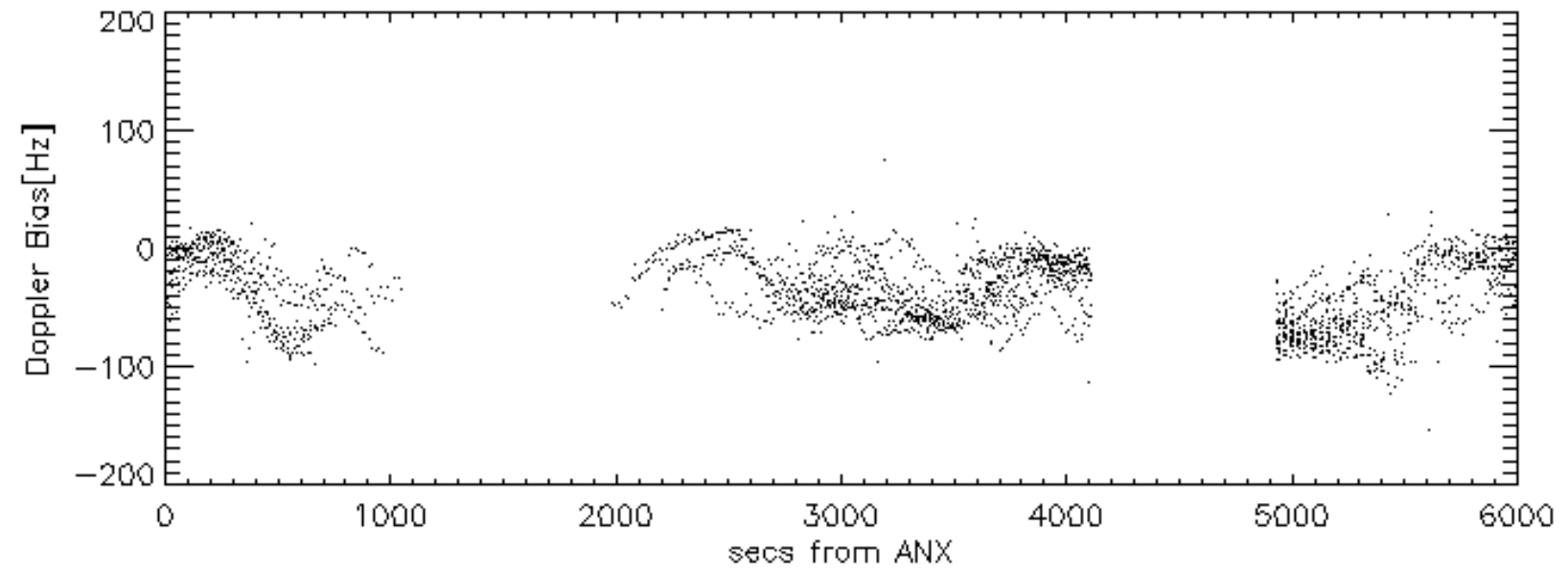
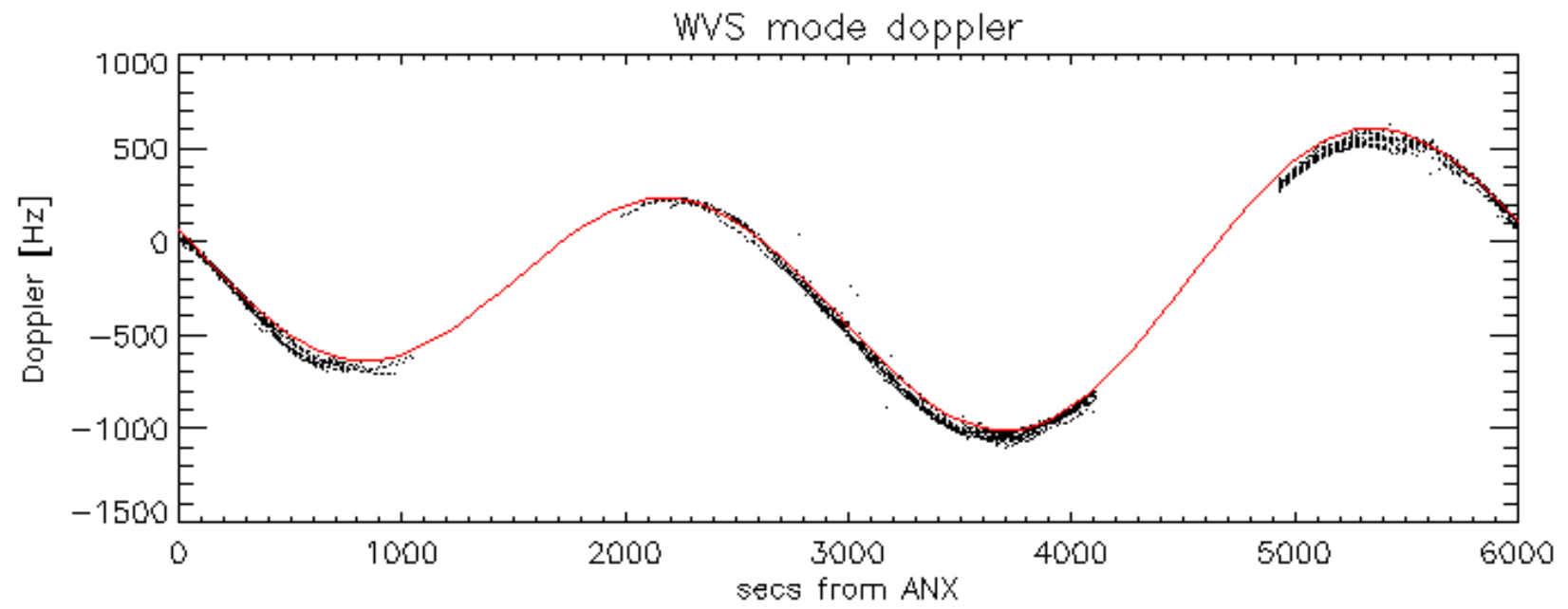


Doppler 'WVS' 'IS2' descending

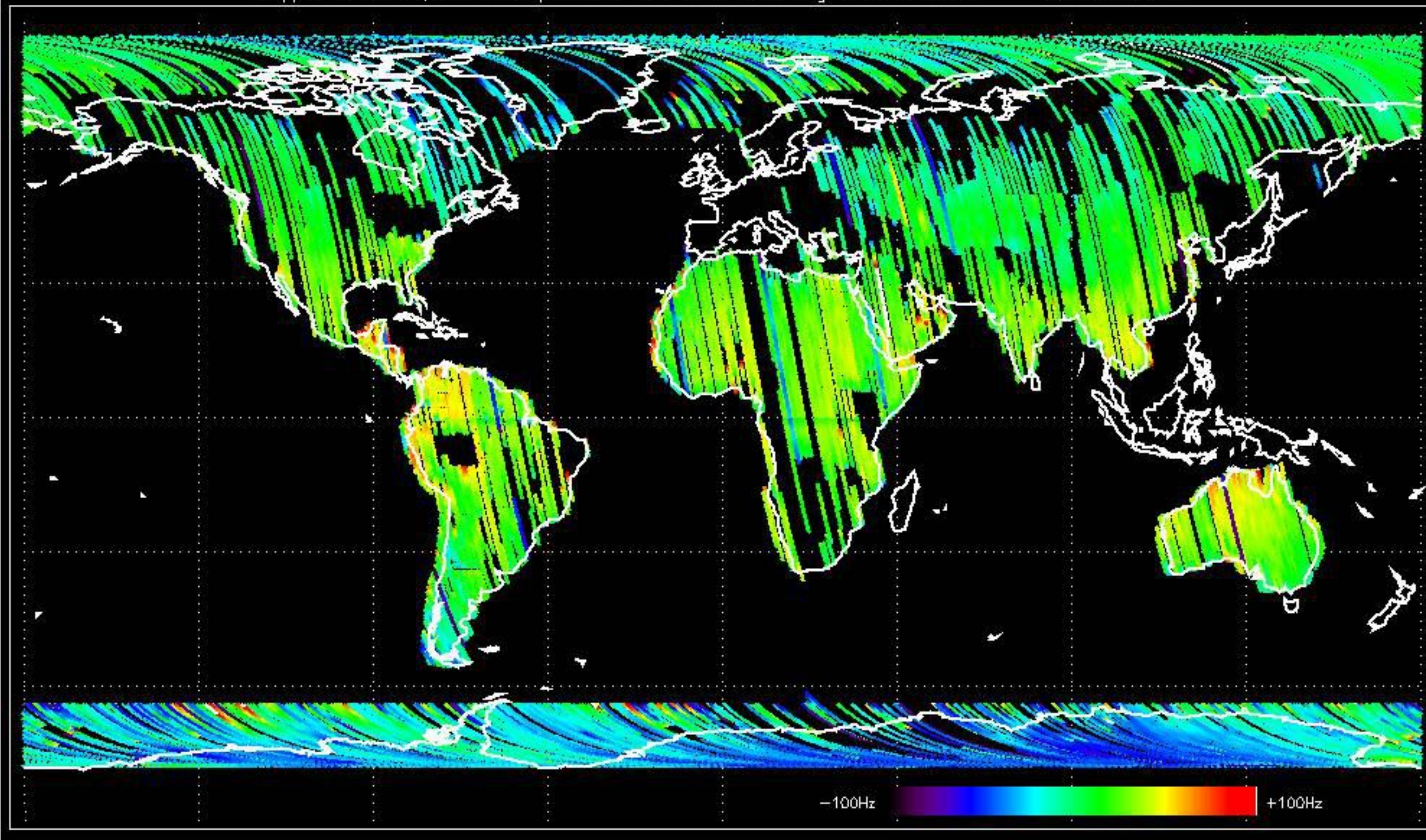


GM1 mode doppler

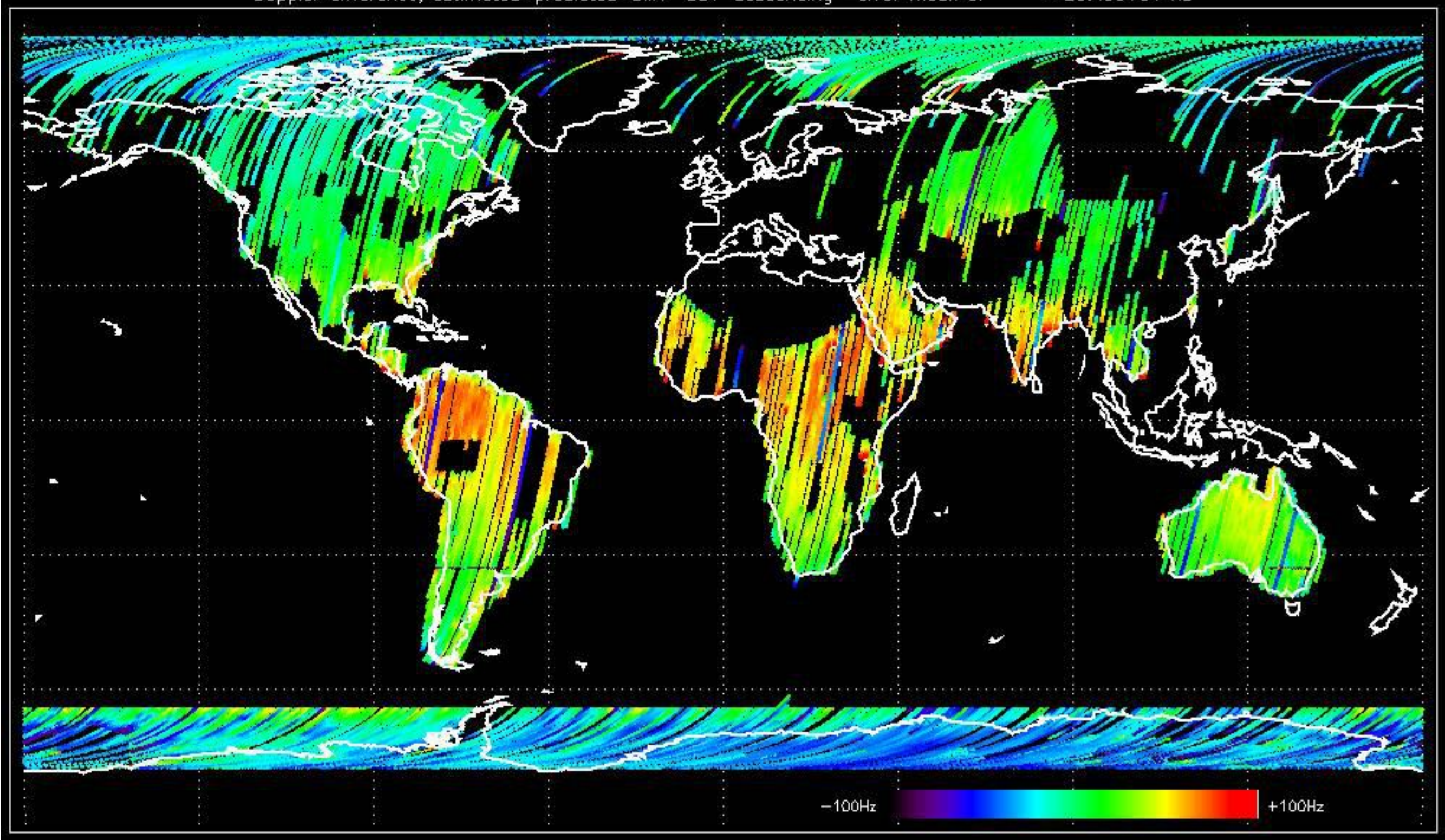




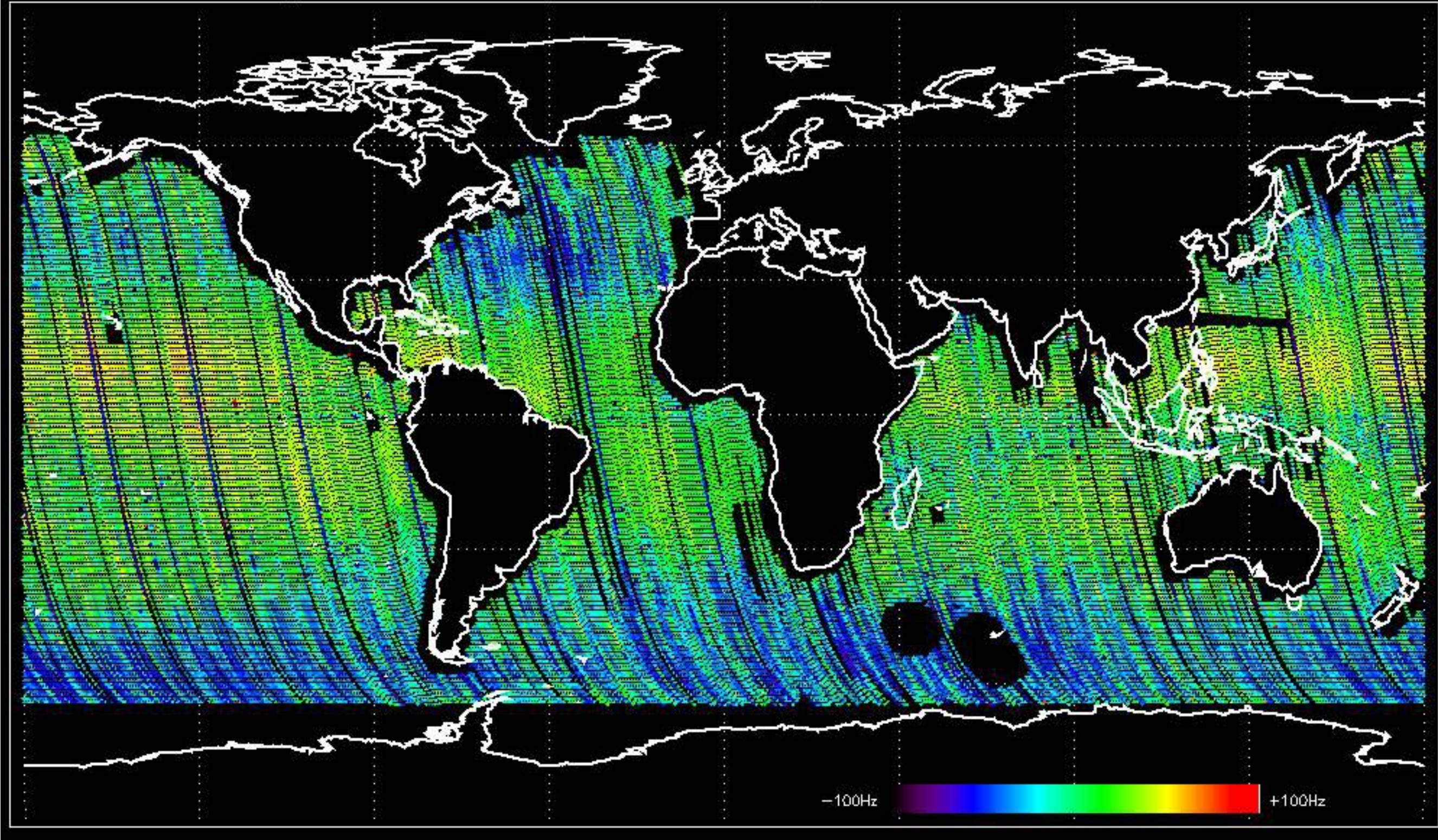
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -32.575025 Hz



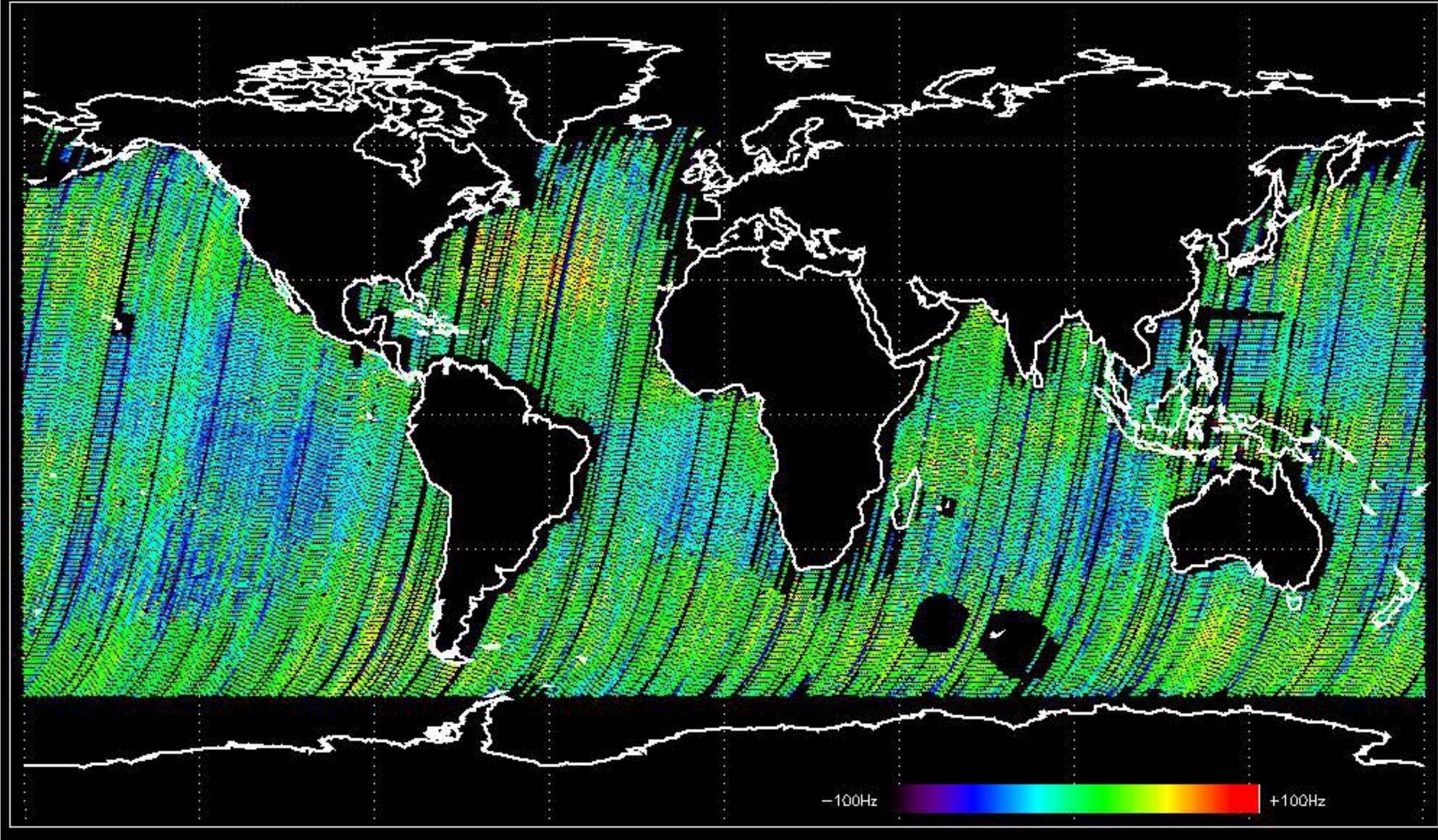
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.499164 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -38.020528 Hz

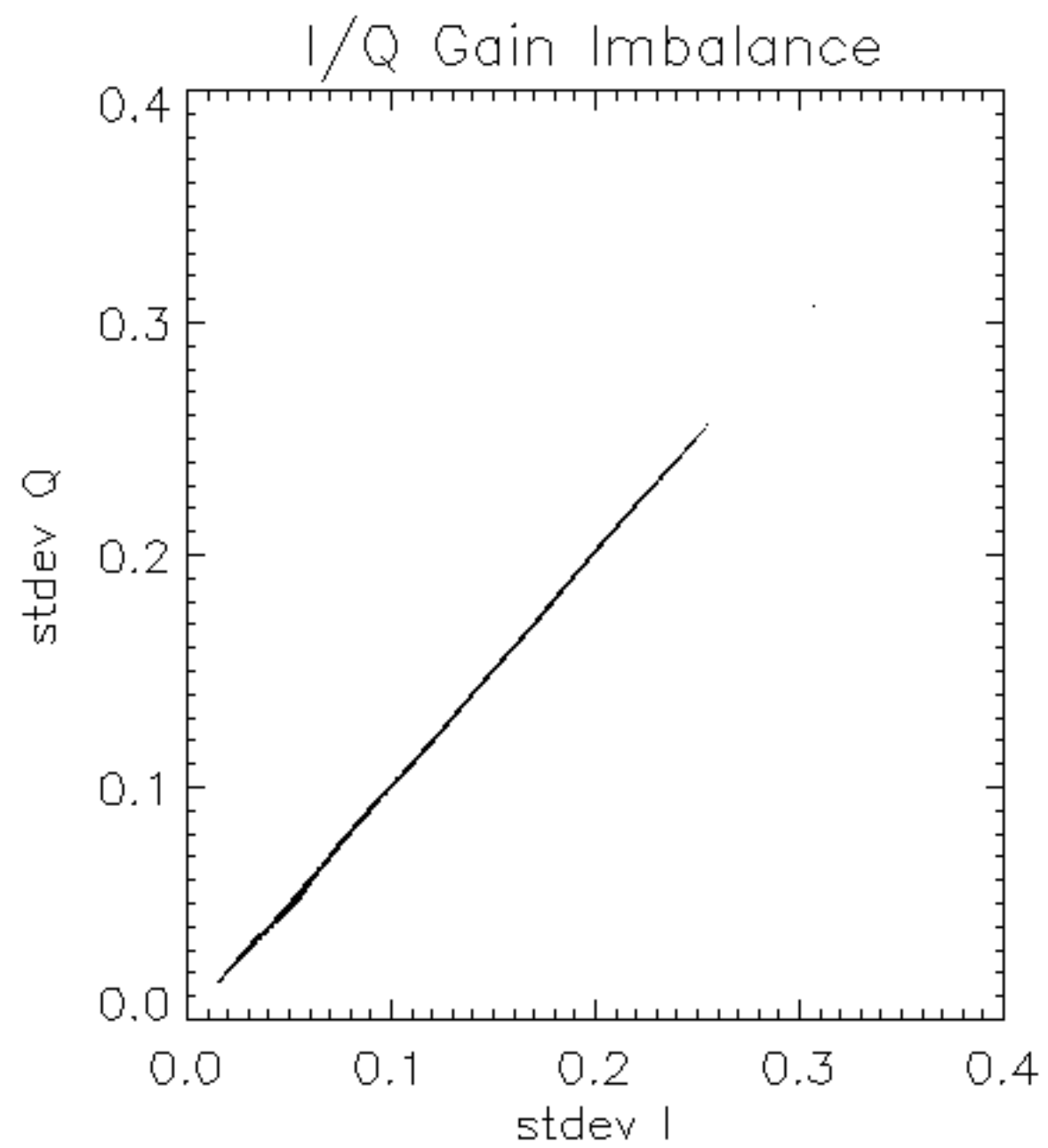


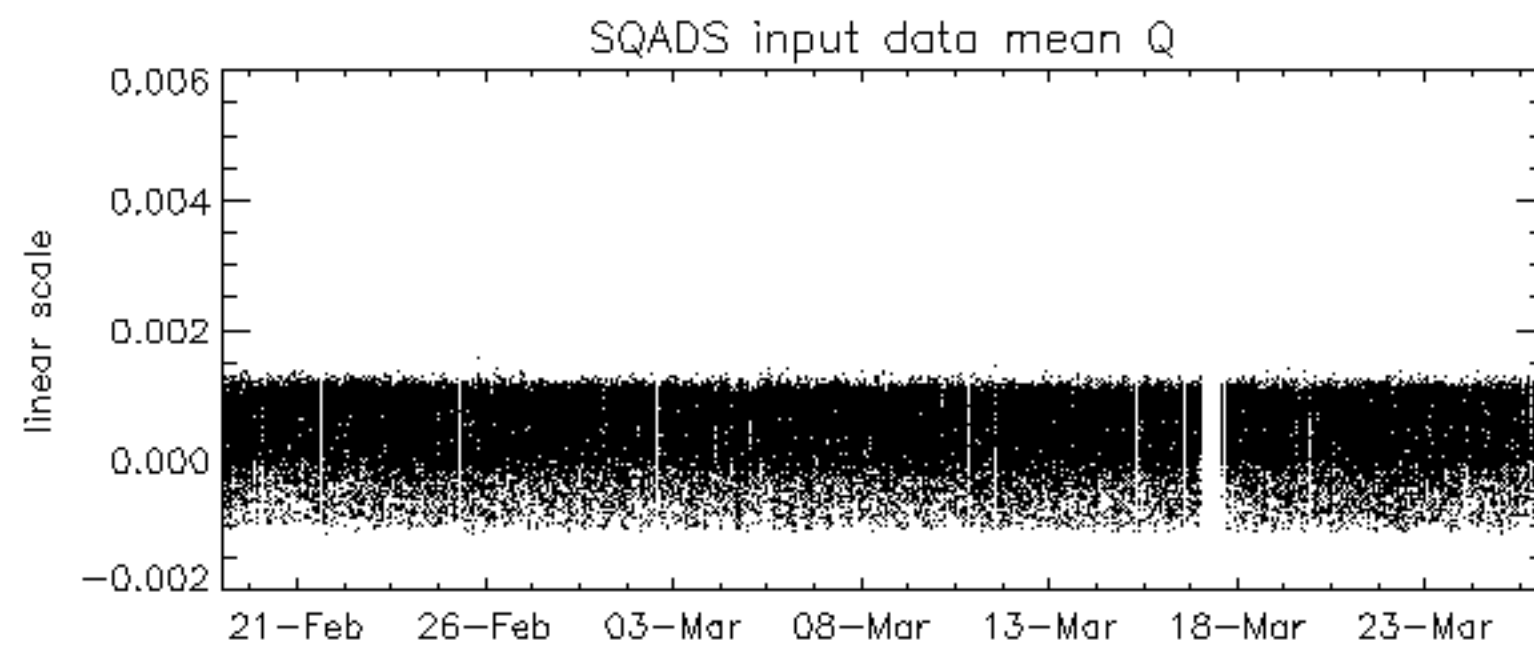
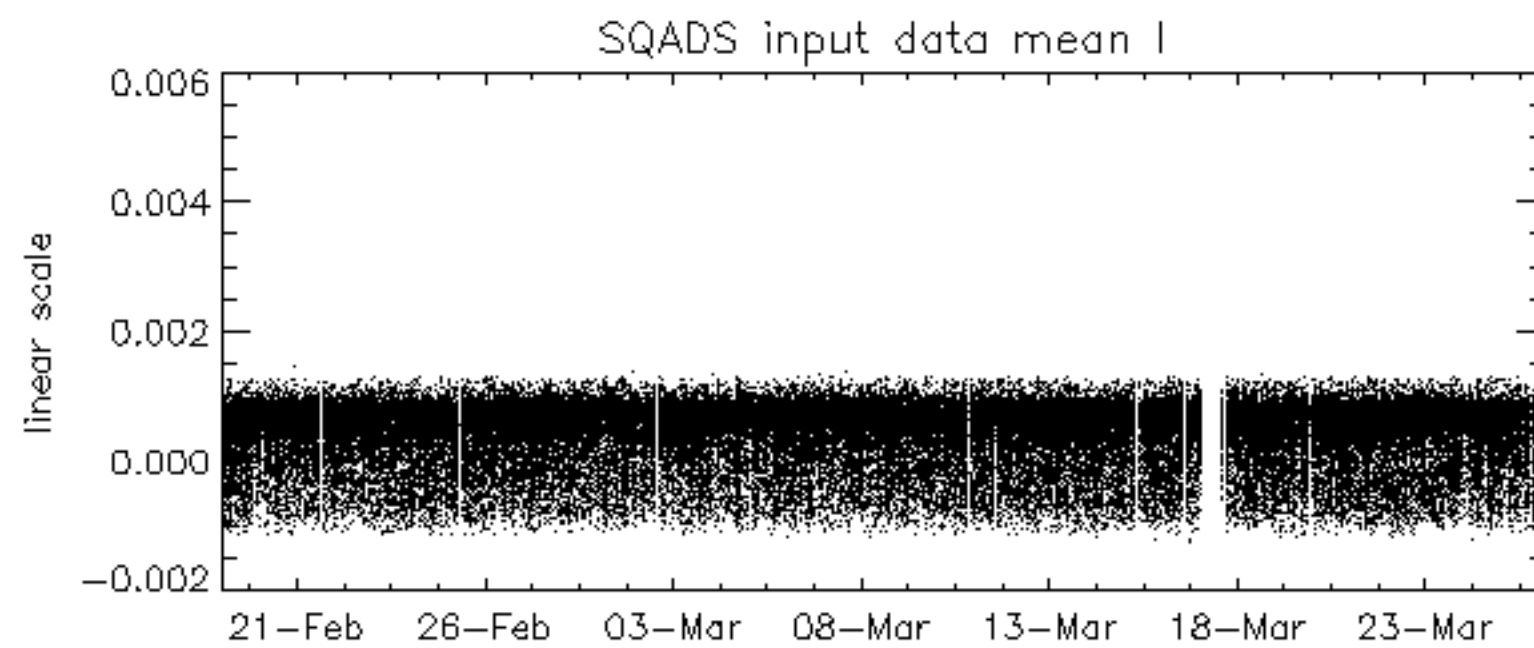
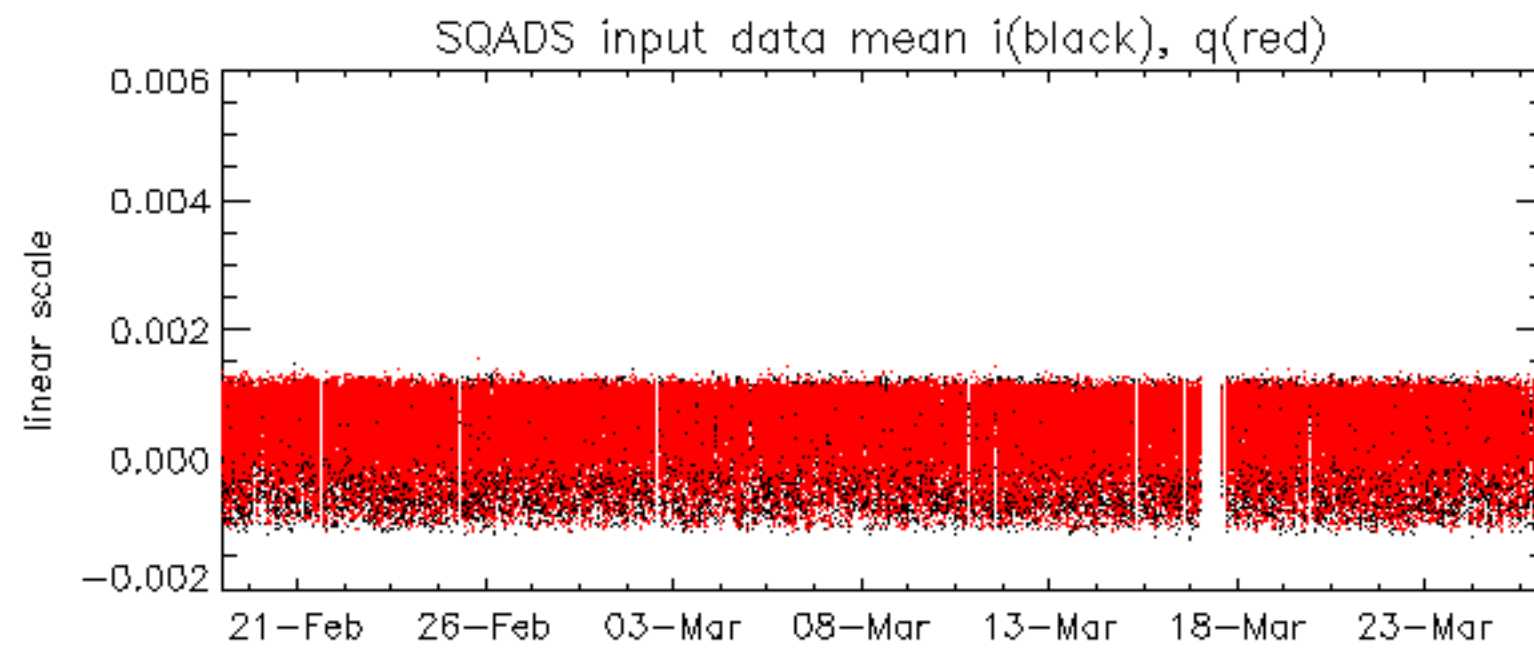
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.947460 Hz

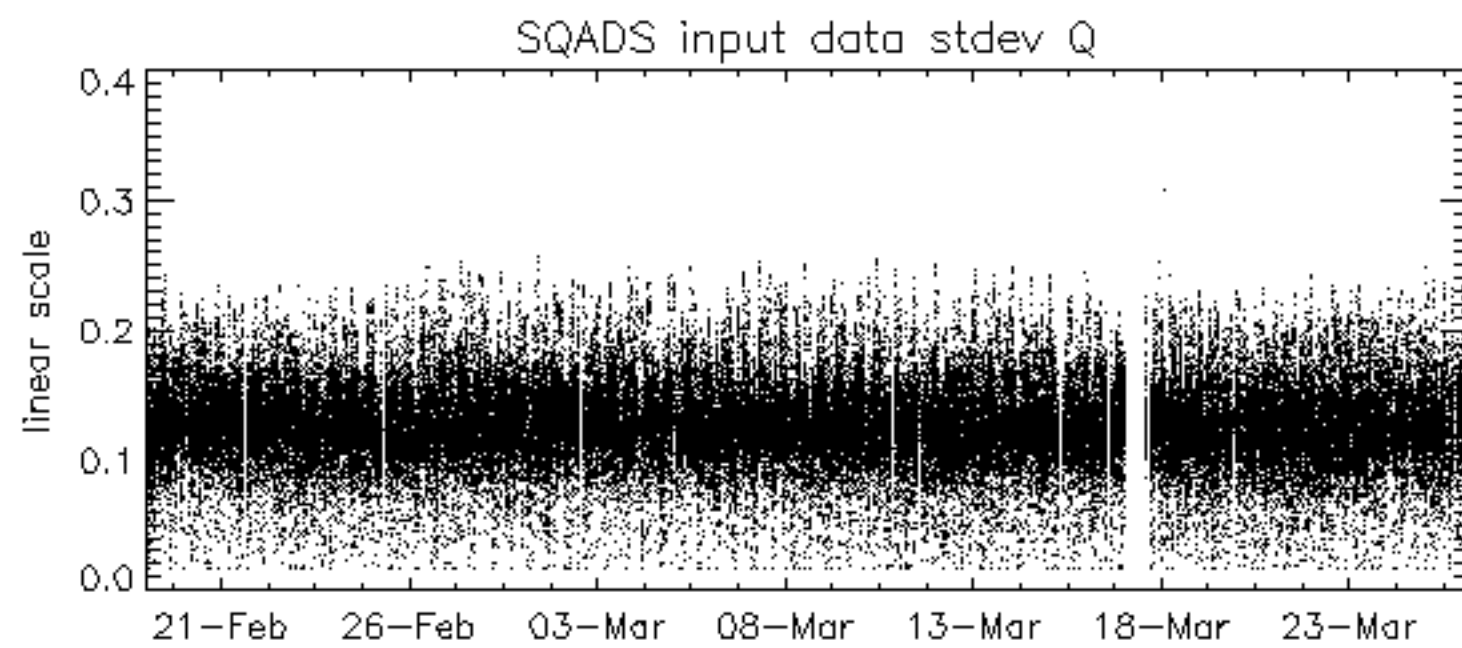
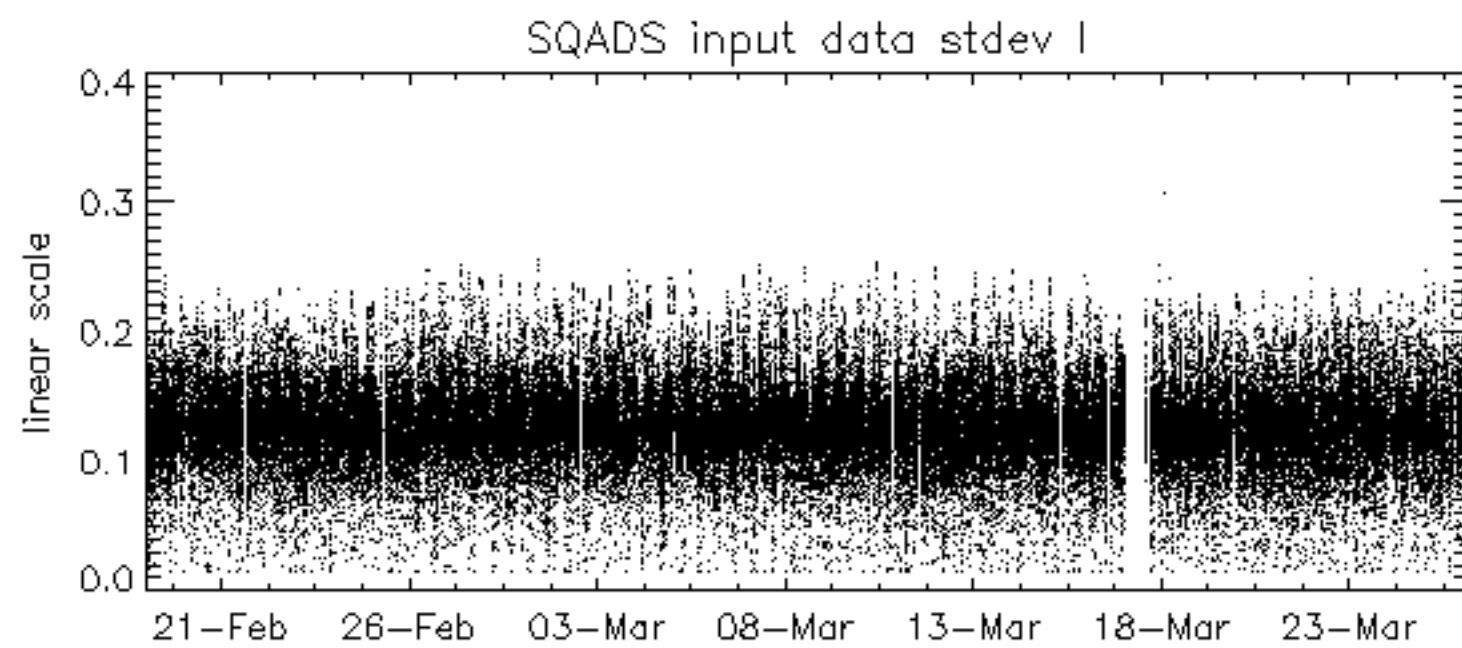
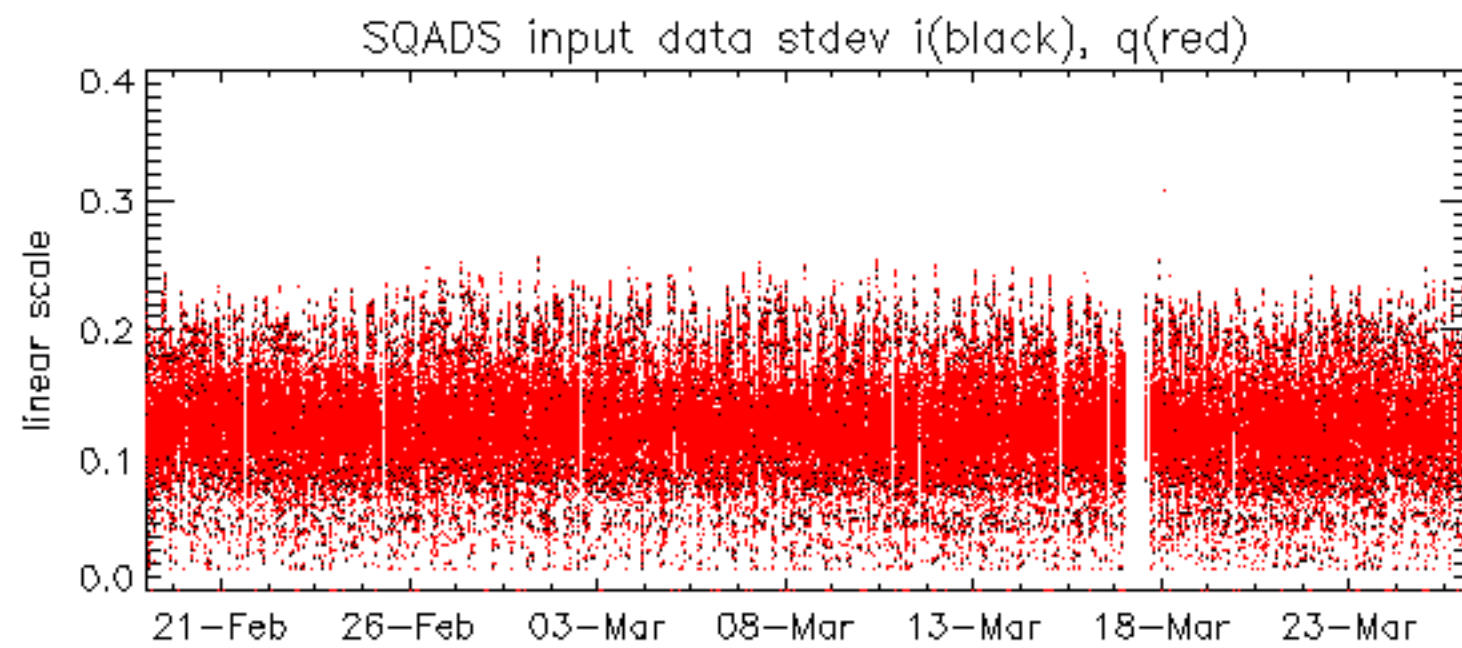


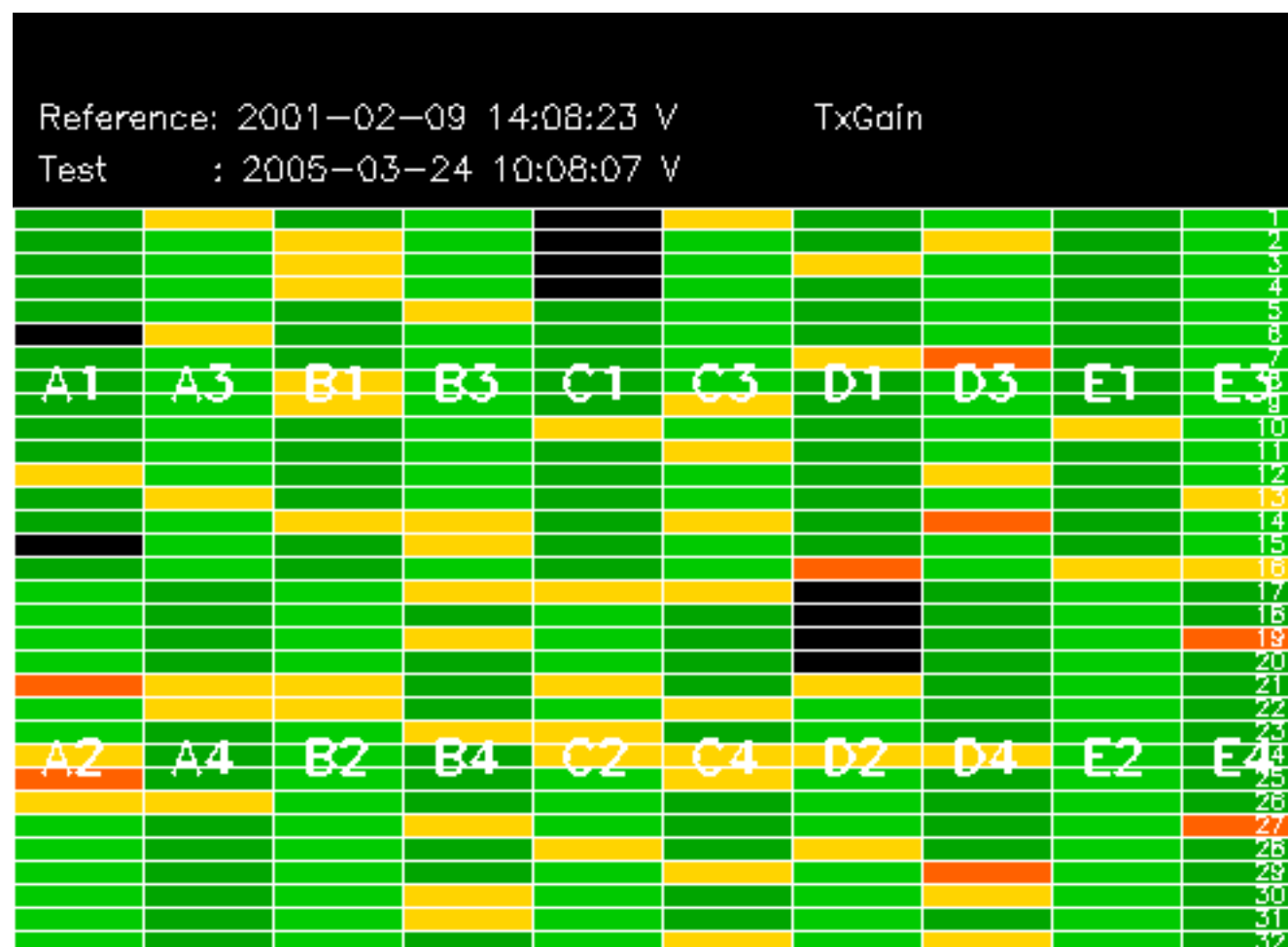
No anomalies observed on available MS products:

No anomalies observed.





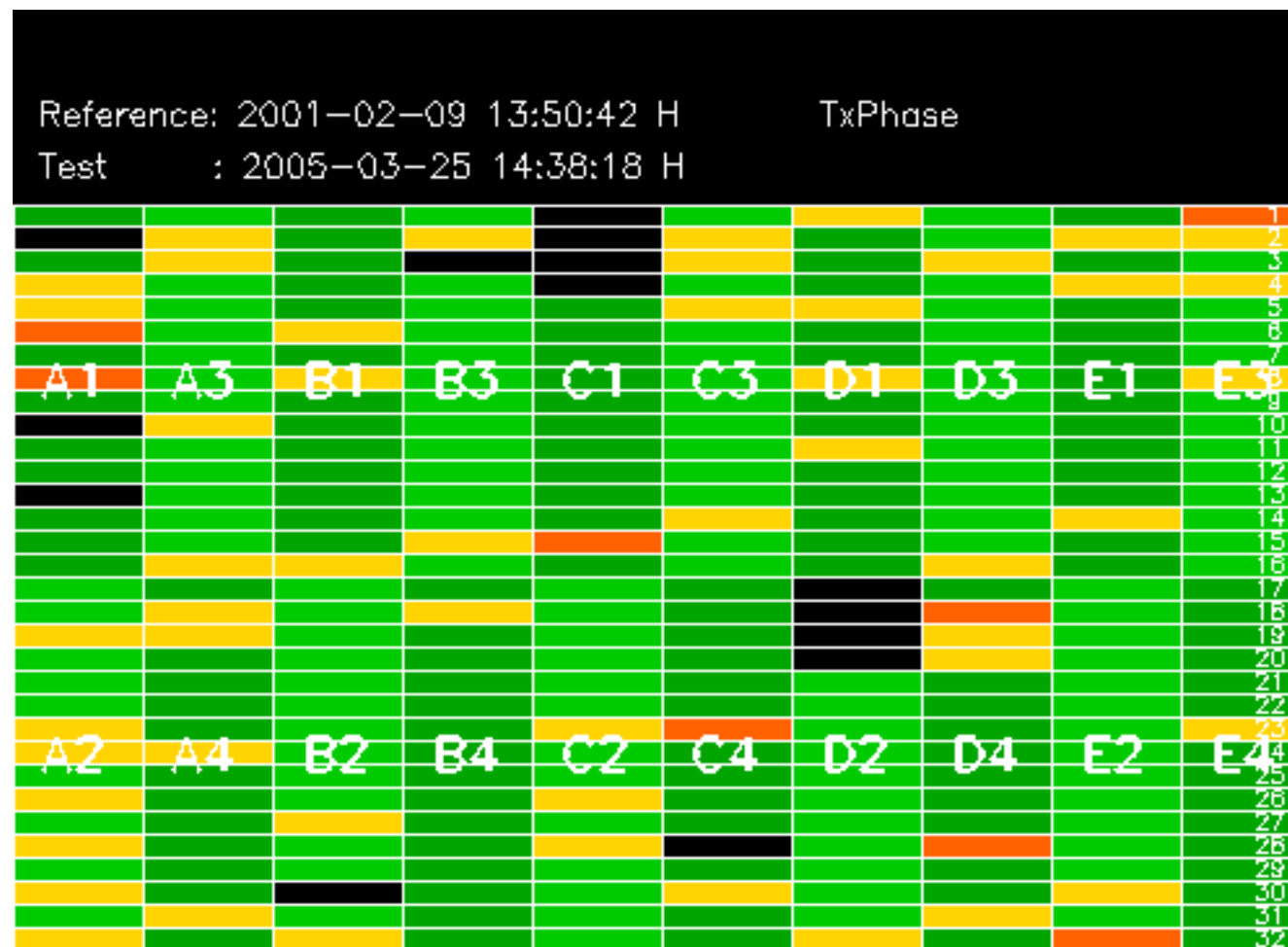


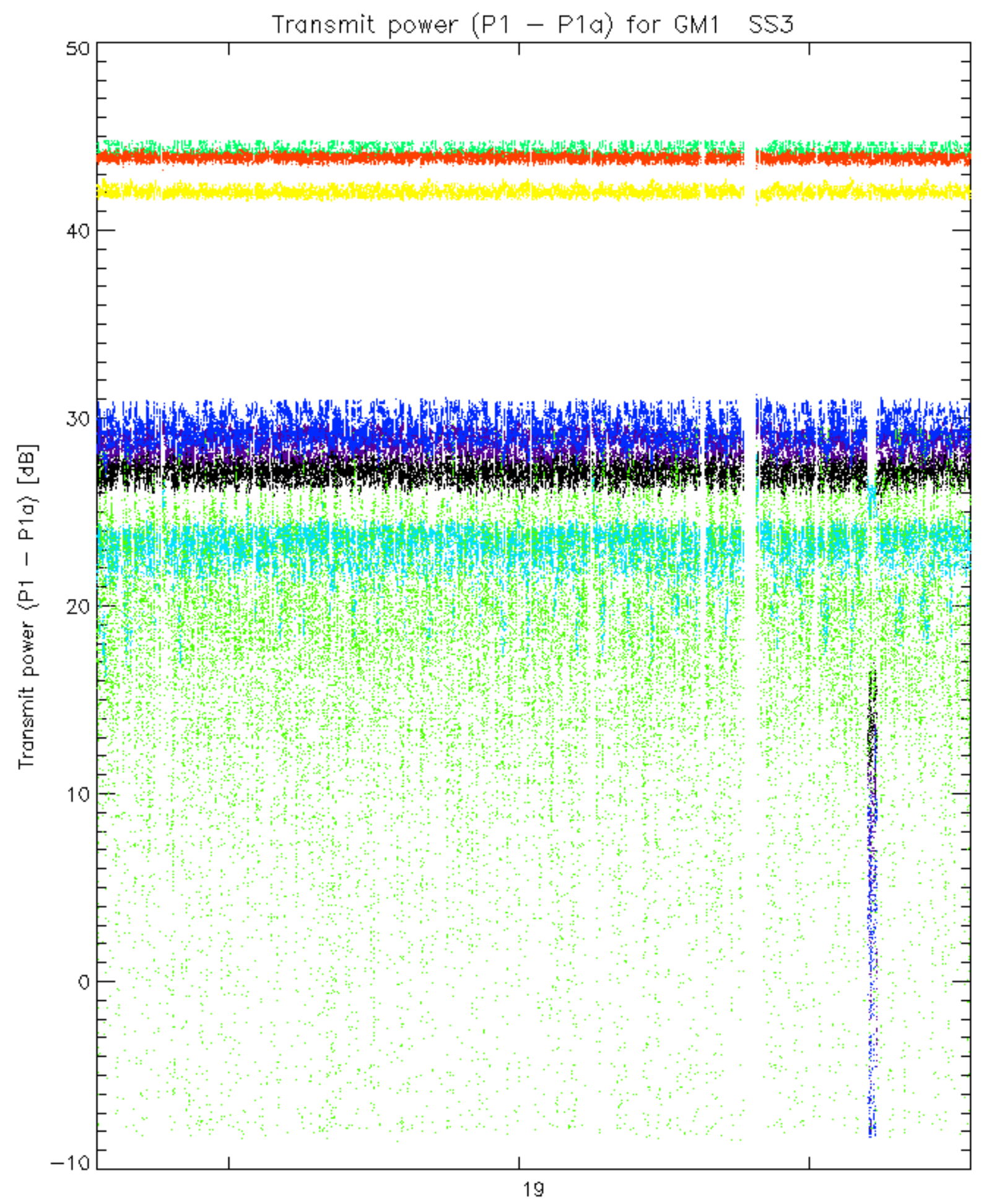


Summary of analysis for the last 3 days 2005032[456]

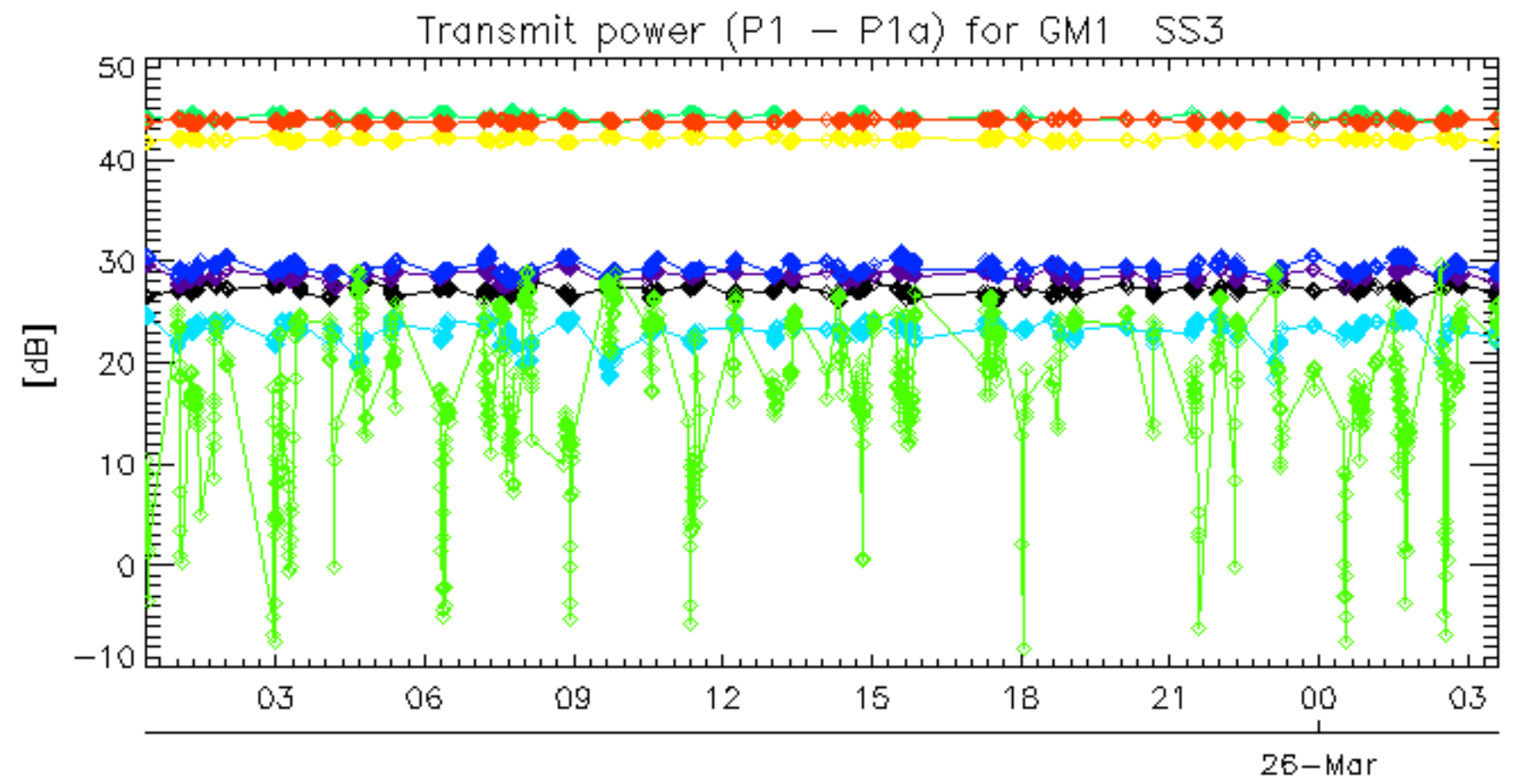
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050324_123132_000000372035_00439_16024_1254.N1	1	0
ASA_WSM_1PNPDE20050324_172653_000001032035_00442_16027_2950.N1	0	14

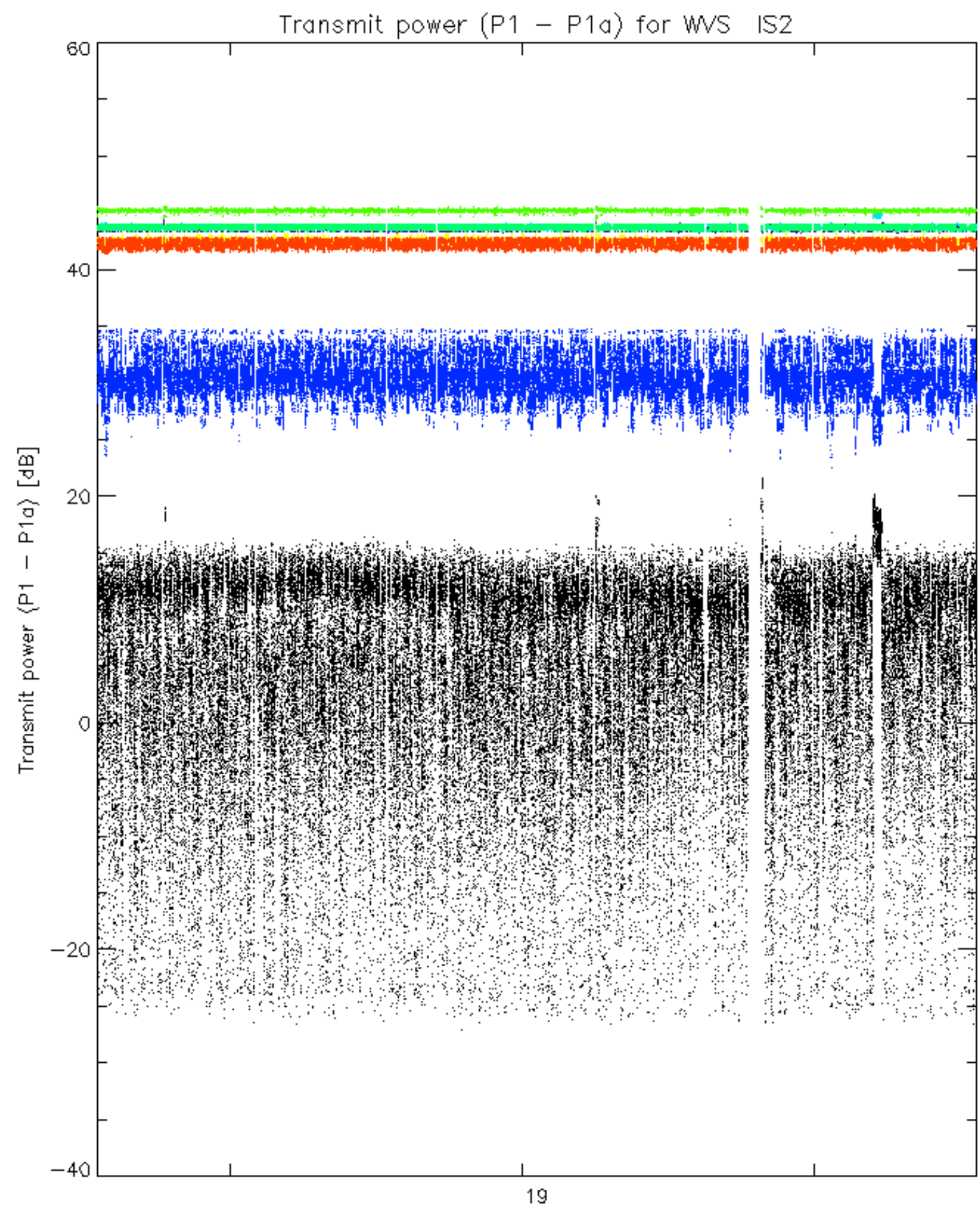




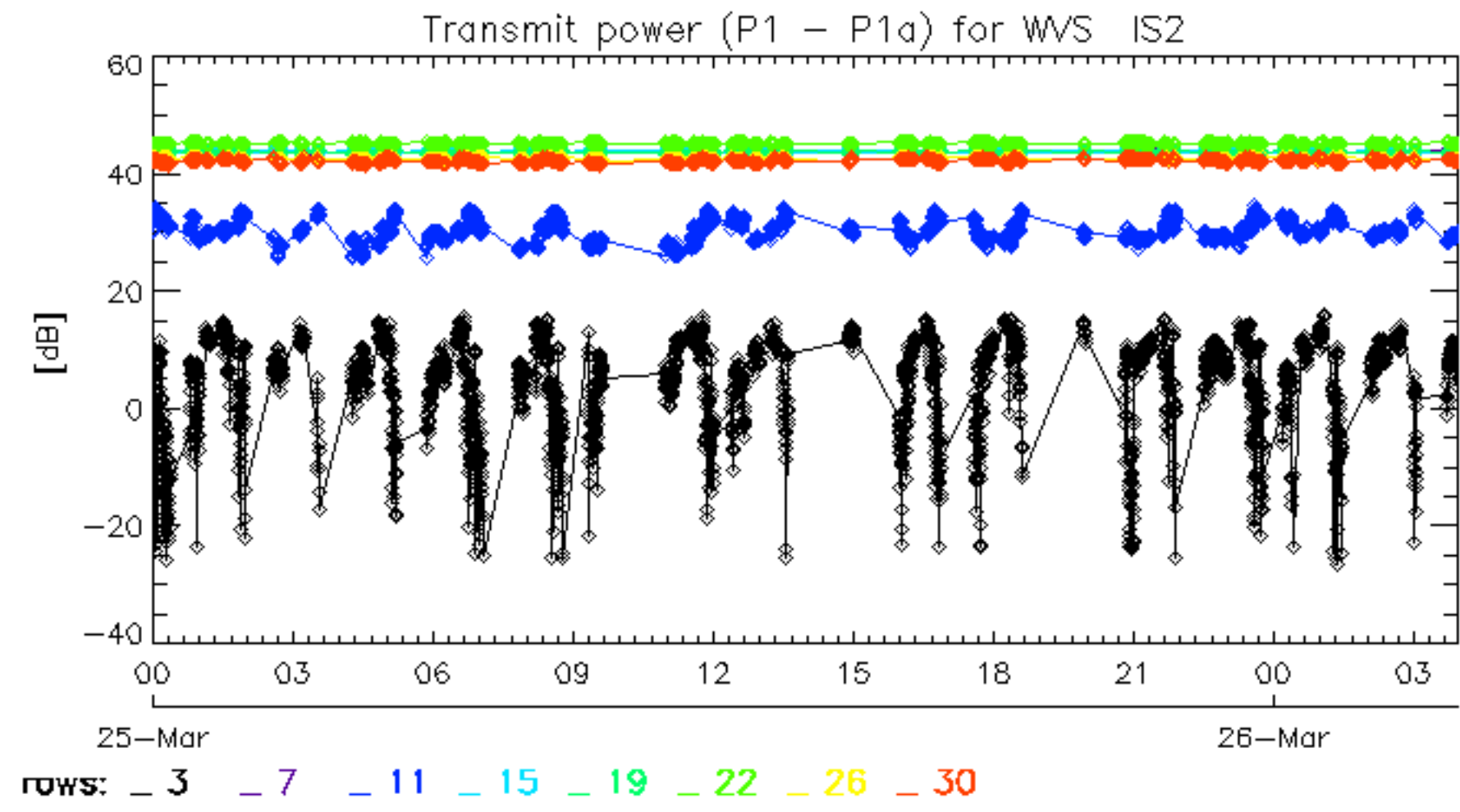
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



No unavailabilities during the reported period.