

# PRELIMINARY REPORT OF 060328

last update on Tue Mar 28 16:44:32 GMT 2006

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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 2006-03-27 00:00:00 to 2006-03-28 16:44:32

PDHS-K
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AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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**PDHS-E**

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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### 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	20060325 064353
H	20060326 061216

#### 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"/>
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## 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"/>
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#### 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	-4.001176	0.009123	0.008583
7	P1	-3.013453	0.008475	-0.021775
11	P1	-4.059324	0.018102	-0.010653
15	P1	-6.097416	0.020067	-0.055379
19	P1	-3.303520	0.006475	-0.046152
22	P1	-4.463439	0.014206	-0.025619
26	P1	-4.173111	0.114459	0.268388
30	P1	-5.784202	0.173325	0.184035
3	P1	-16.964939	0.256801	0.081313
7	P1	-16.750723	0.102200	-0.104103
11	P1	-16.474442	0.308672	0.032922
15	P1	-13.054842	0.093437	-0.024686
19	P1	-13.962567	0.050201	-0.093684
22	P1	-15.591927	0.458898	-0.094757
26	P1	-15.747046	0.358291	-0.028056
30	P1	-16.513603	0.317606	-0.158638

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.374876	0.086824	0.070536
7	P2	-22.341642	0.096380	0.132655
11	P2	-16.215012	0.100707	0.037313
15	P2	-7.166296	0.097517	-0.011735
19	P2	-9.135147	0.089589	-0.025750
22	P2	-17.957788	0.087917	-0.074636
26	P2	-16.224104	0.093747	-0.075463
30	P2	-19.652668	0.084024	-0.011915

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.195725	0.005528	-0.001934
7	P3	-8.195725	0.005528	-0.001934
11	P3	-8.195725	0.005528	-0.001934
15	P3	-8.195725	0.005528	-0.001934
19	P3	-8.195725	0.005528	-0.001934
22	P3	-8.195725	0.005528	-0.001934

26	P3	-8.195725	0.005528	-0.001934
30	P3	-8.195725	0.005528	-0.001931

#### 4.2.2 - Evolution for GM1

##### Evolution of cal pulses for GM1

✕
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#### 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	-3.828815	2.490879	0.419913
7	P1	-2.805329	2.616152	0.480319
11	P1	-3.007195	2.634174	0.479569
15	P1	-3.652705	2.611175	0.516658
19	P1	-3.451165	2.529281	0.435438
22	P1	-5.251814	2.325936	0.403732
26	P1	-5.903667	2.494998	0.786721
30	P1	-5.251488	2.364434	0.518017
3	P1	-11.639522	1.642402	0.304266
7	P1	-10.030011	1.820128	0.339574
11	P1	-10.337232	1.813443	0.356461
15	P1	-10.887476	1.830683	0.349273
19	P1	-15.446894	1.353713	0.287875
22	P1	-20.324587	2.024048	0.066377
26	P1	-16.265242	1.835393	0.076070
30	P1	-18.314293	1.574246	0.323293

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.066675	1.727773	0.088492
7	P2	-22.517822	2.030486	-0.081474

11	P2	-11.252482	1.875094	0.213873
15	P2	-4.897457	2.434865	0.407467
19	P2	-6.904809	2.191180	0.374098
22	P2	-8.199206	2.054641	0.324116
26	P2	-23.920317	2.071574	-0.342891
30	P2	-22.043276	1.952479	-0.204536

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.022762	0.002334	0.005802
7	P3	-8.022703	0.002331	0.006166
11	P3	-8.022698	0.002346	0.006019
15	P3	-8.022807	0.002336	0.006445
19	P3	-8.022748	0.002339	0.005972
22	P3	-8.022852	0.002333	0.006284
26	P3	-8.022826	0.002331	0.005964
30	P3	-8.022686	0.002341	0.005908

## 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	0.000567855
	stdev	1.68355e-07
MEAN Q	mean	0.000525547

stdev	2.16856e-07
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## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139247
	stdev	0.00116927
STDEV Q	mean	0.139620
	stdev	0.00118814



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006032[678]

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_1PNPDE20060328_003704_000001362046_00202_21298_1625.N1	1	0
ASA_WSM_1PNPDE20060327_001933_000002262046_00188_21284_2752.N1	0	35
ASA_WSM_1PNPDE20060327_065041_000000672046_00192_21288_2792.N1	0	7
ASA_WSM_1PNPDE20060327_162329_000002082046_00198_21294_2814.N1	0	49



## 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

✘
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### 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

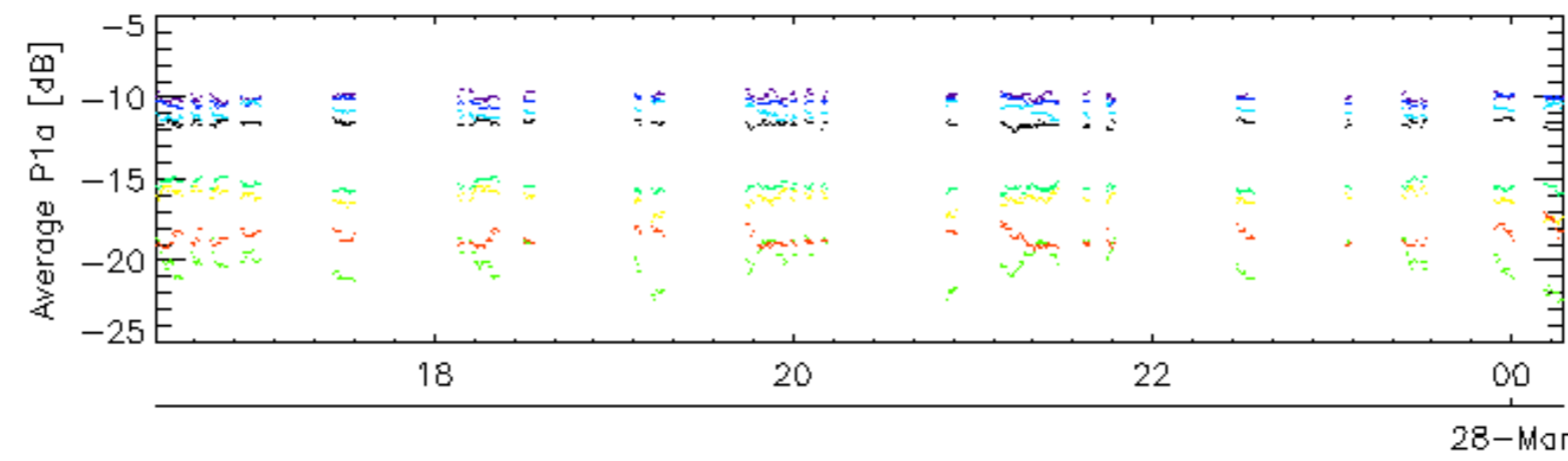
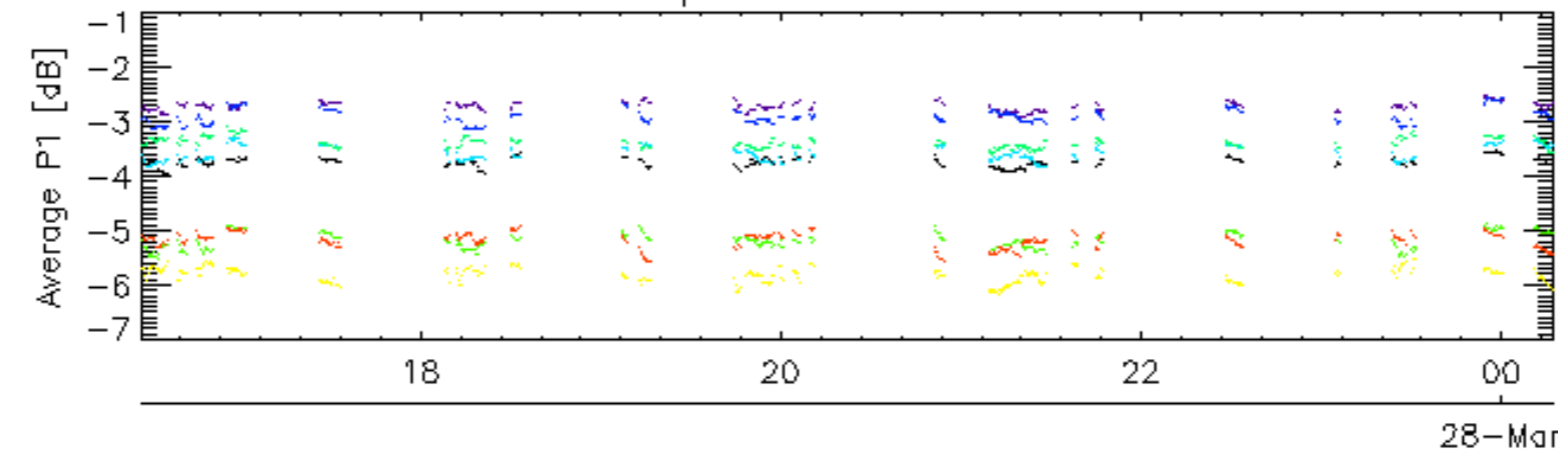
Ascending

Descending

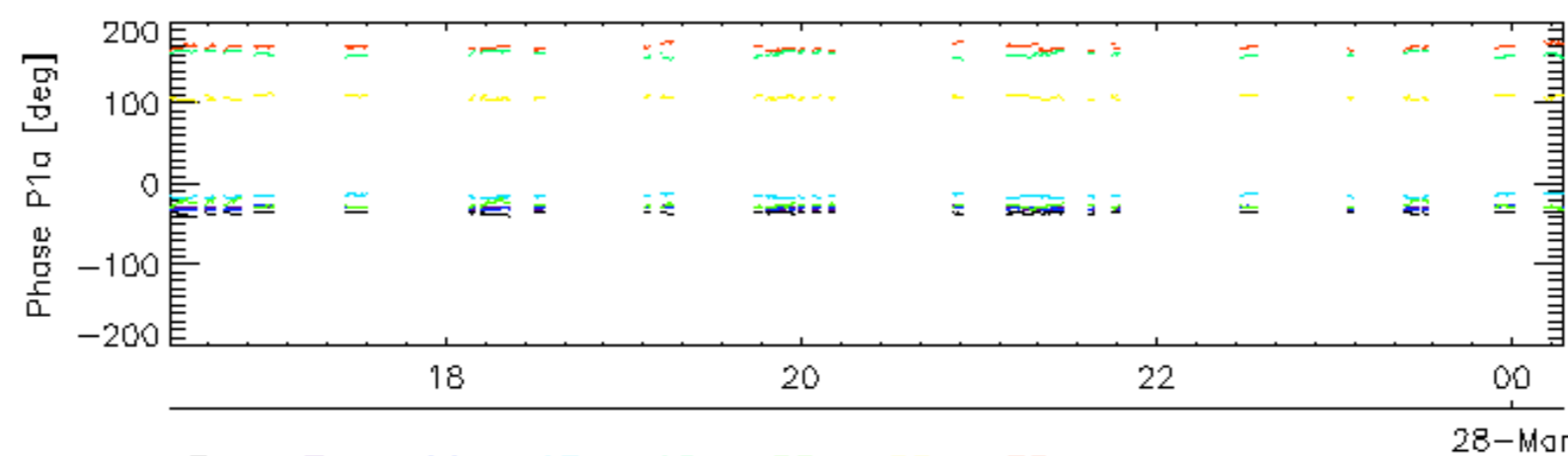
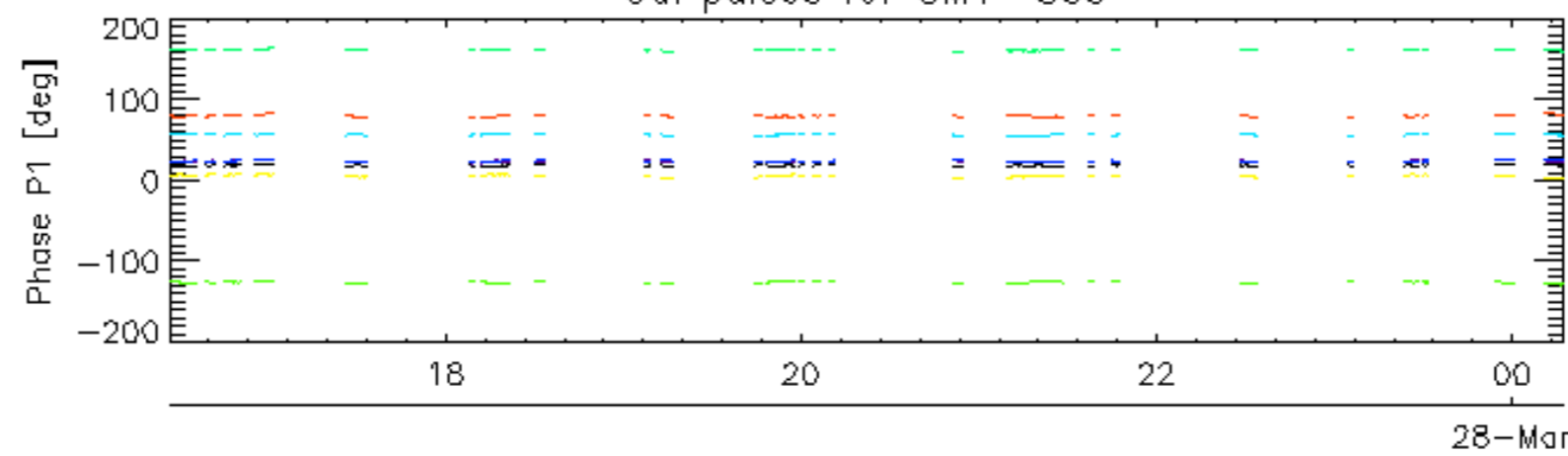
## 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

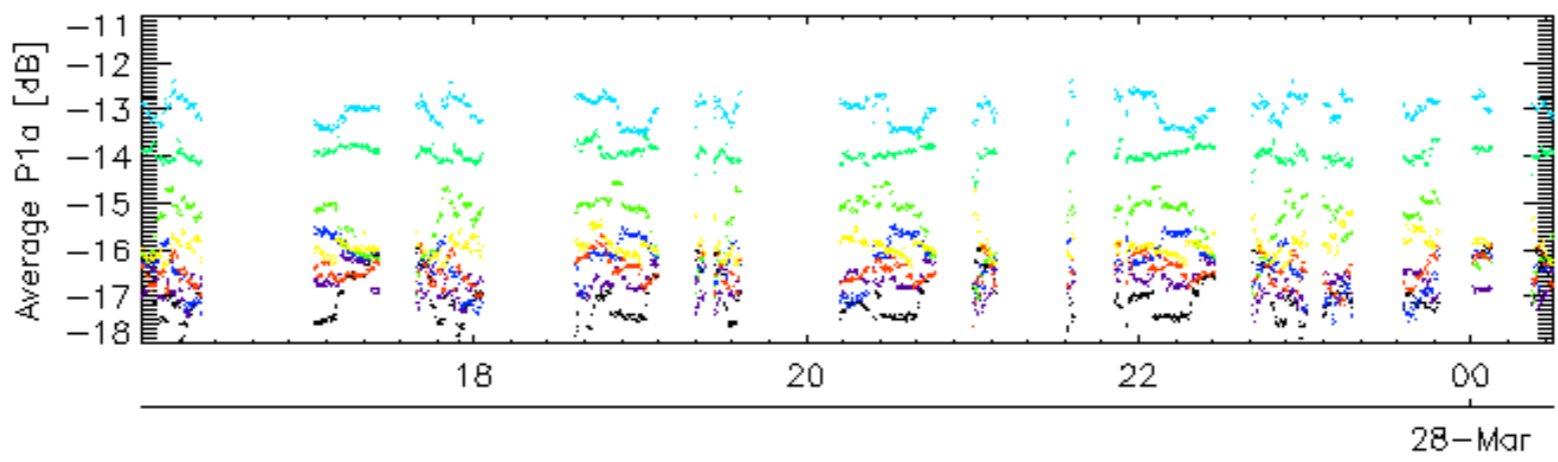
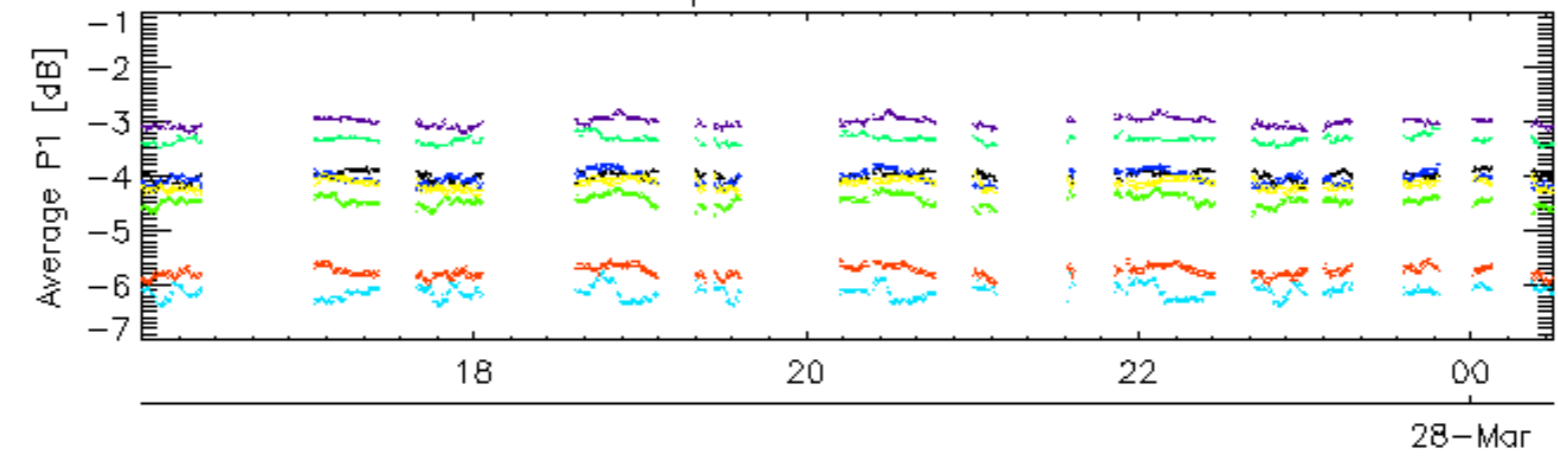


Cal pulses for GM1 SS3

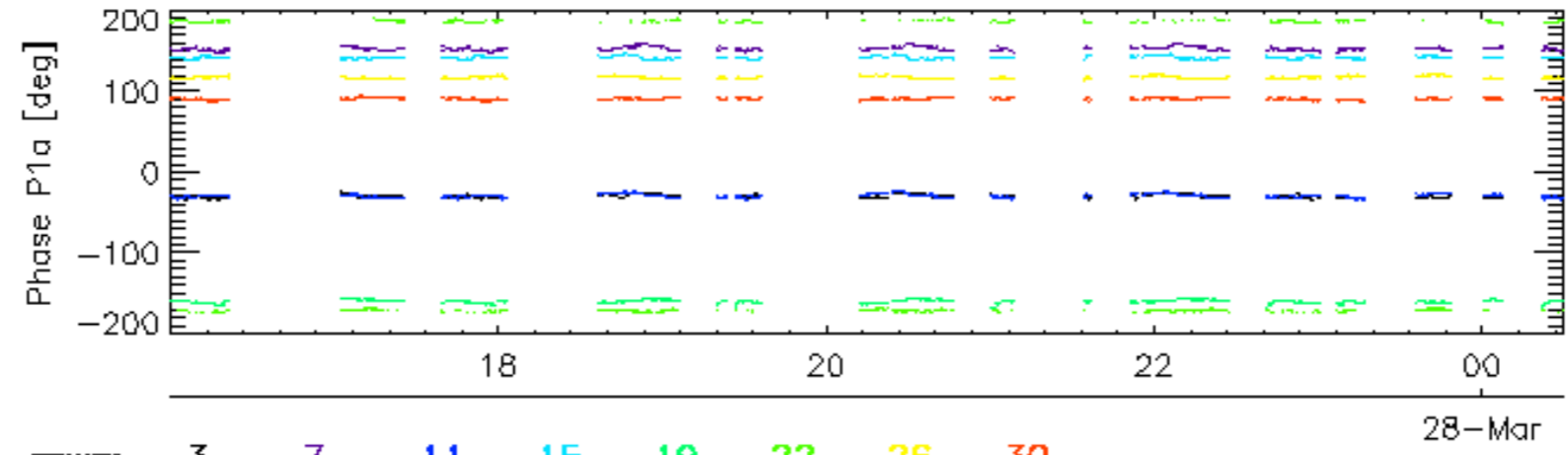
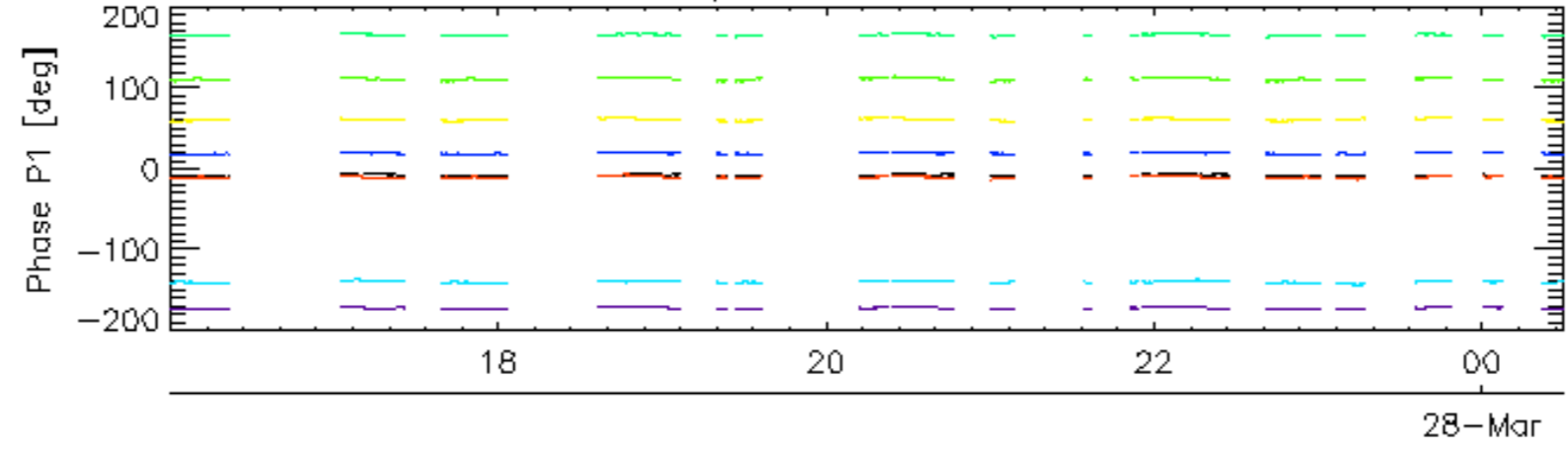


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

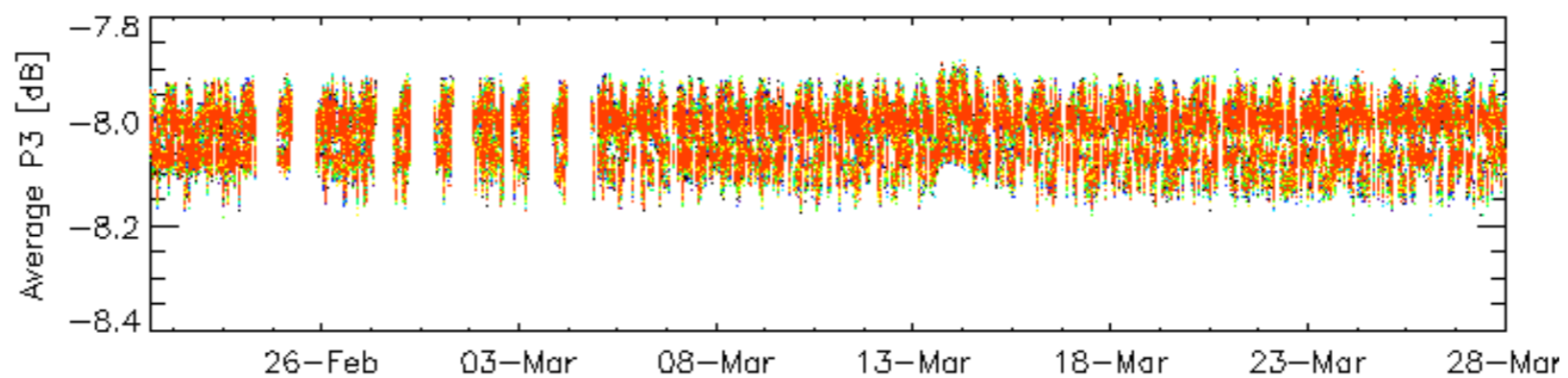
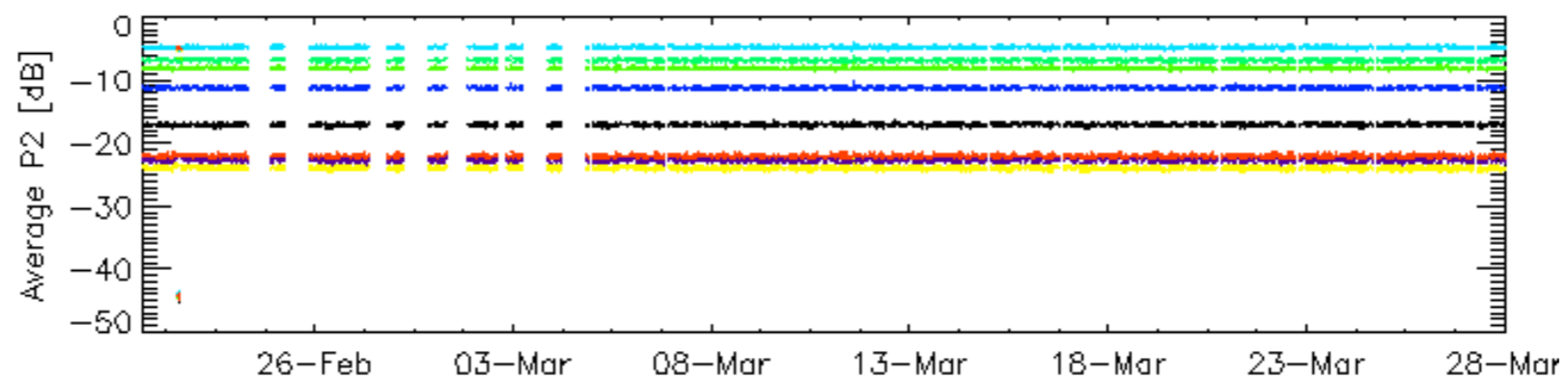
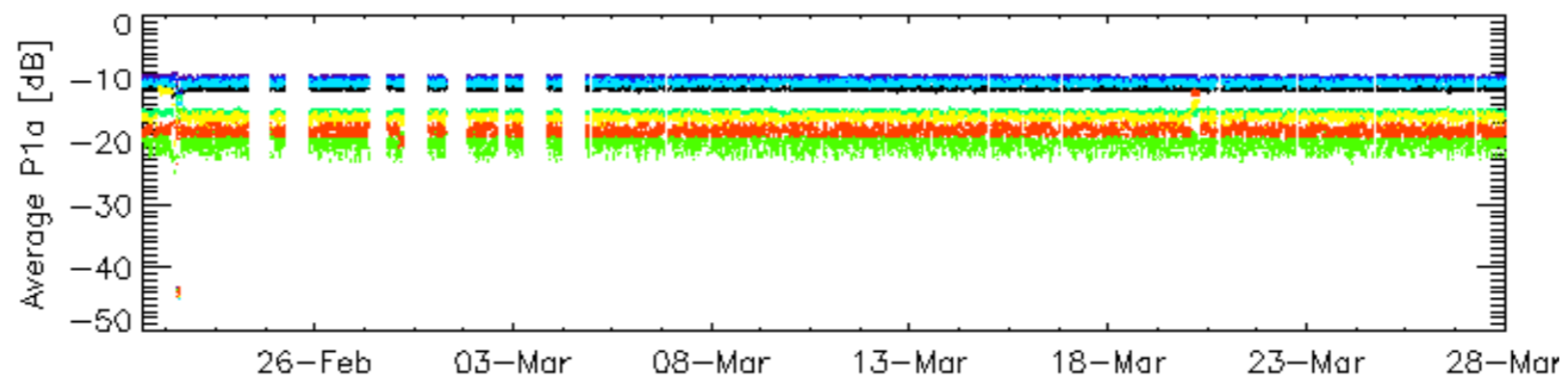
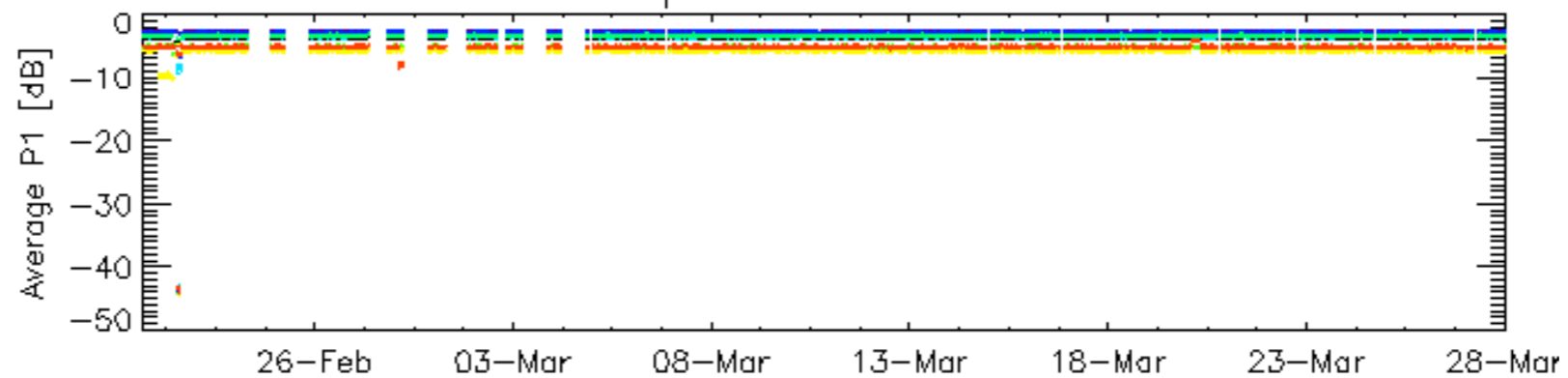


Cal pulses for WVS IS2



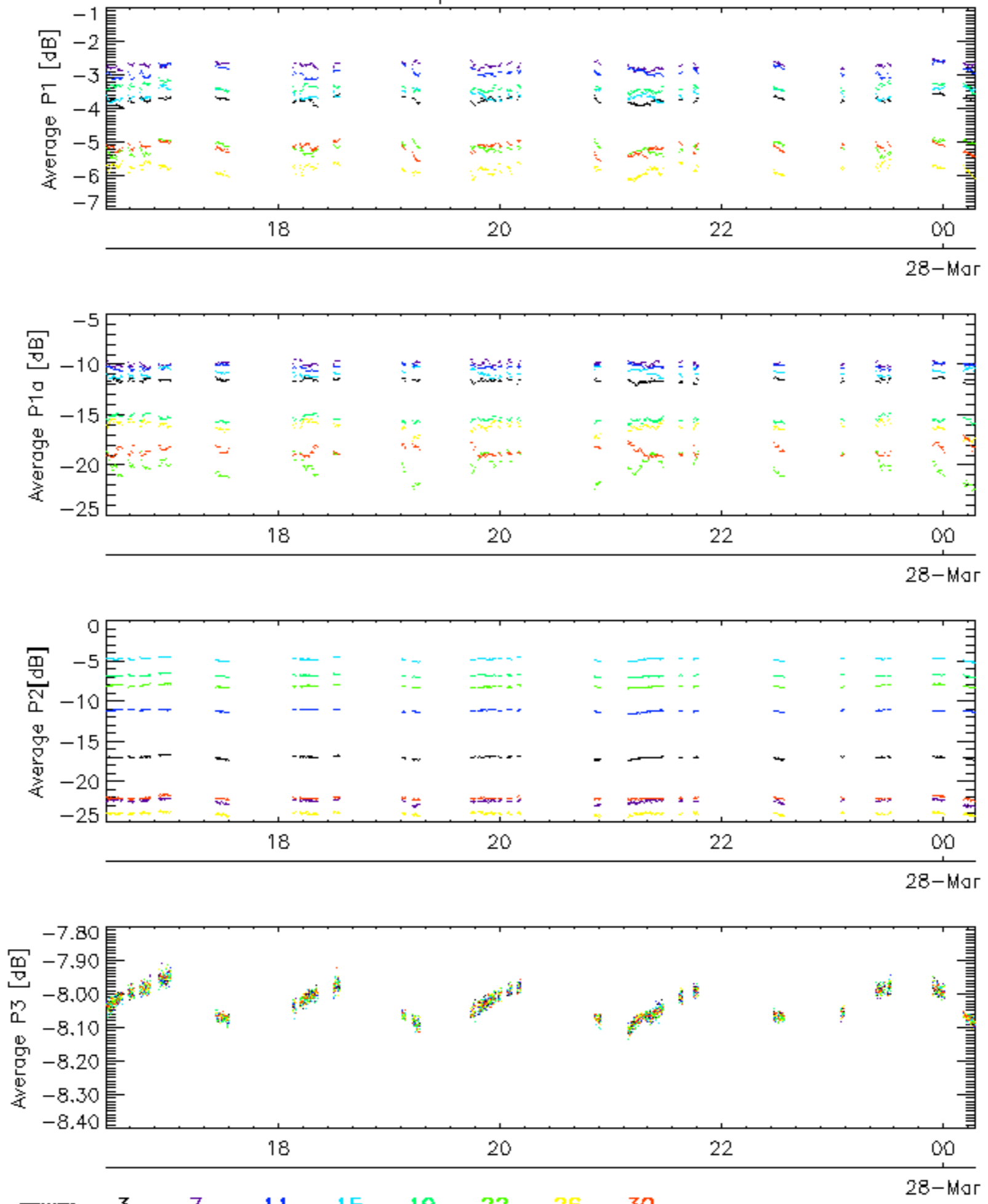
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



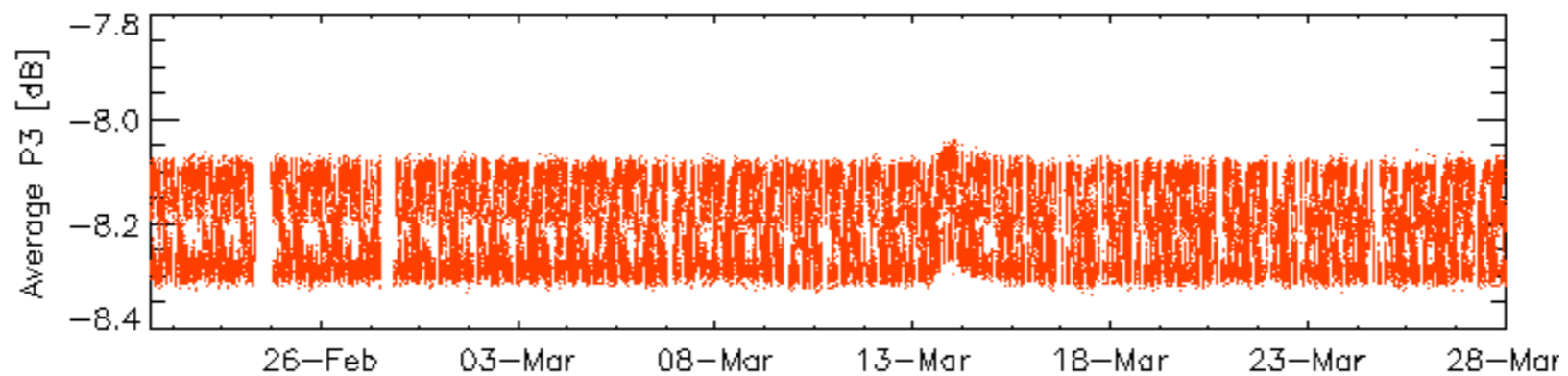
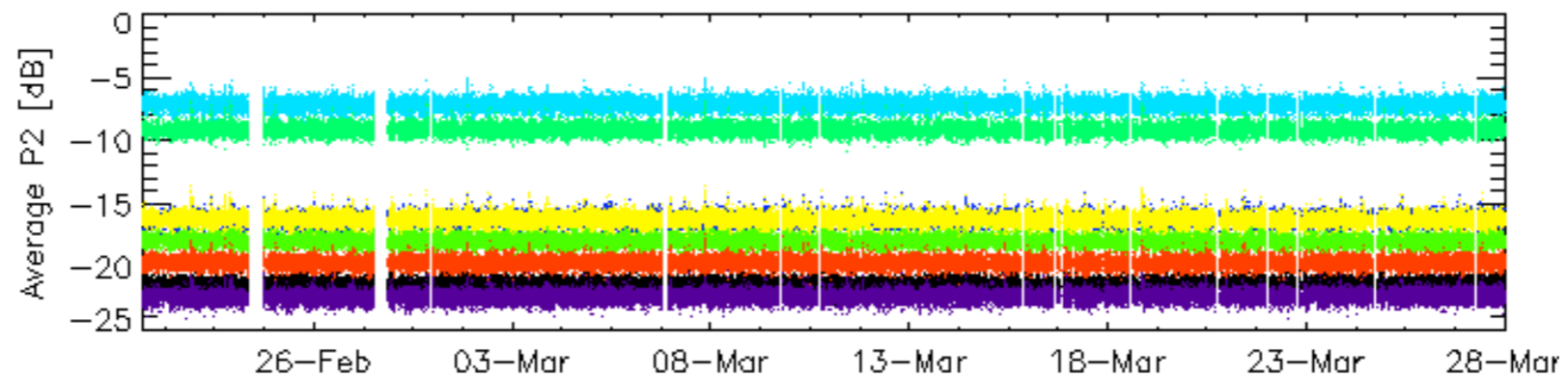
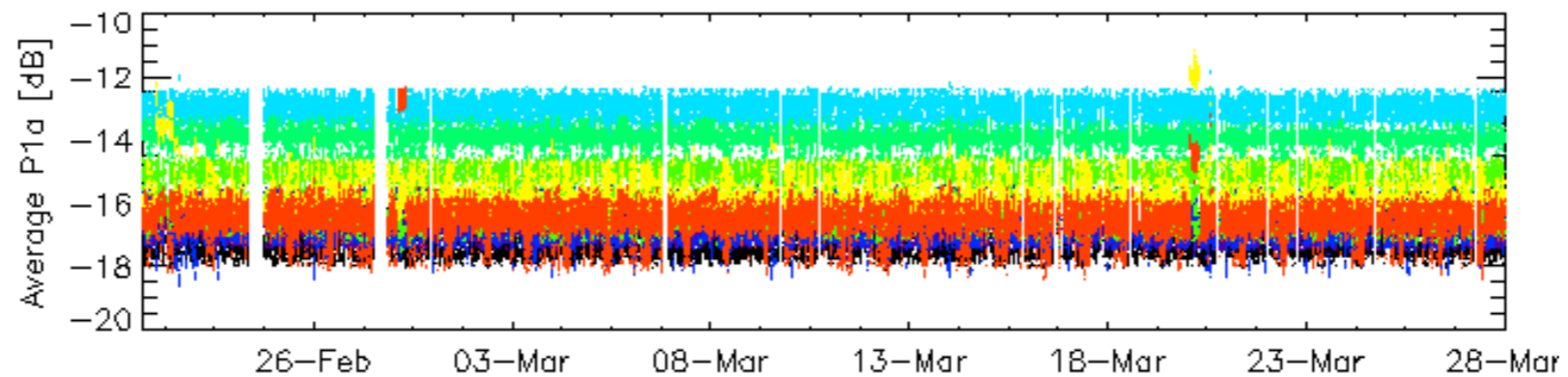
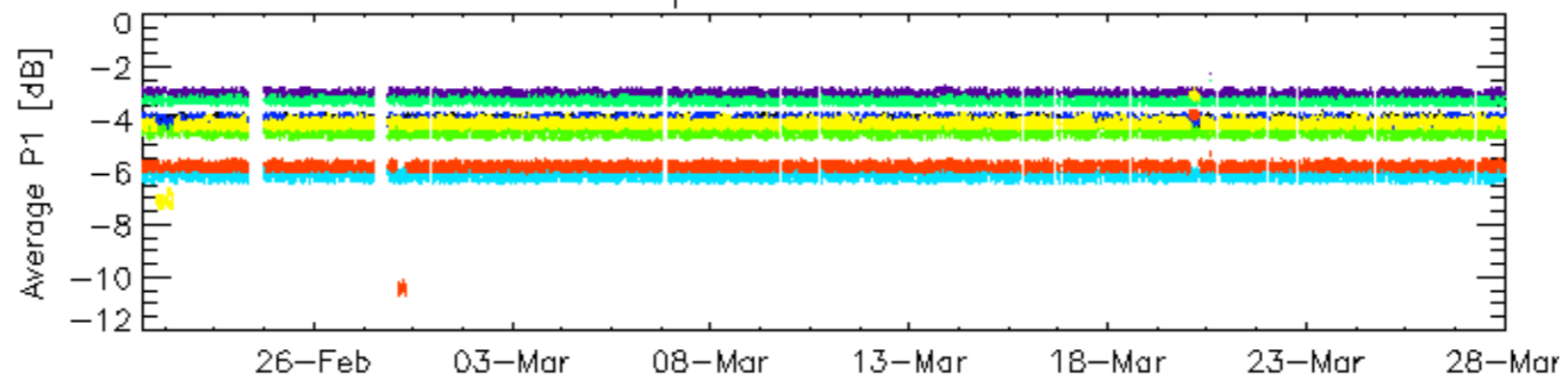
rows: [\\_ 3](#) [\\_ 7](#) [\\_ 11](#) [\\_ 15](#) [\\_ 19](#) [\\_ 22](#) [\\_ 26](#) [\\_ 30](#)

### Cal pulses for GM1 SS3



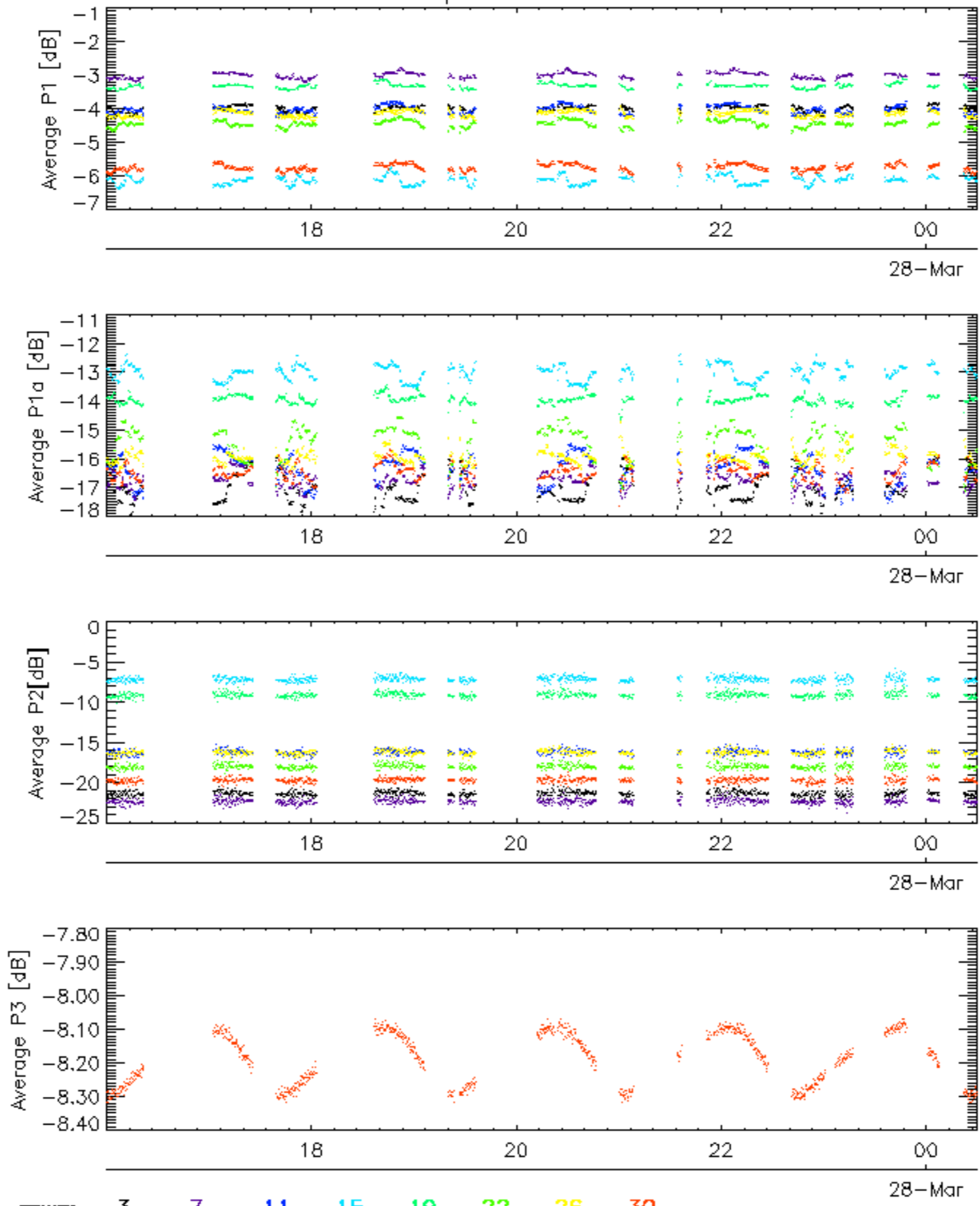
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2



rows: [\\_ 3](#) [\\_ 7](#) [\\_ 11](#) [\\_ 15](#) [\\_ 19](#) [\\_ 22](#) [\\_ 26](#) [\\_ 30](#)

Cal pulses for WVS IS2

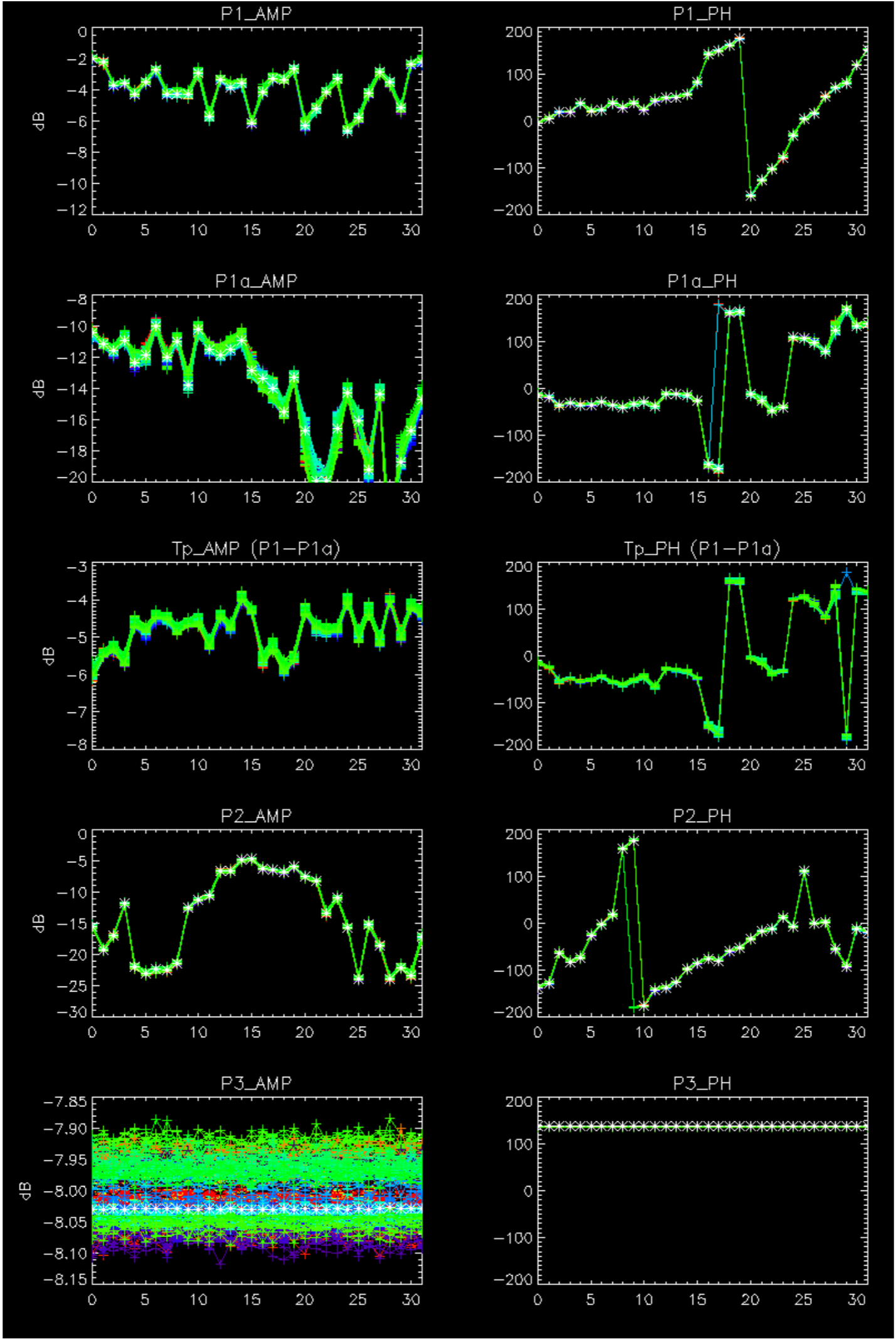


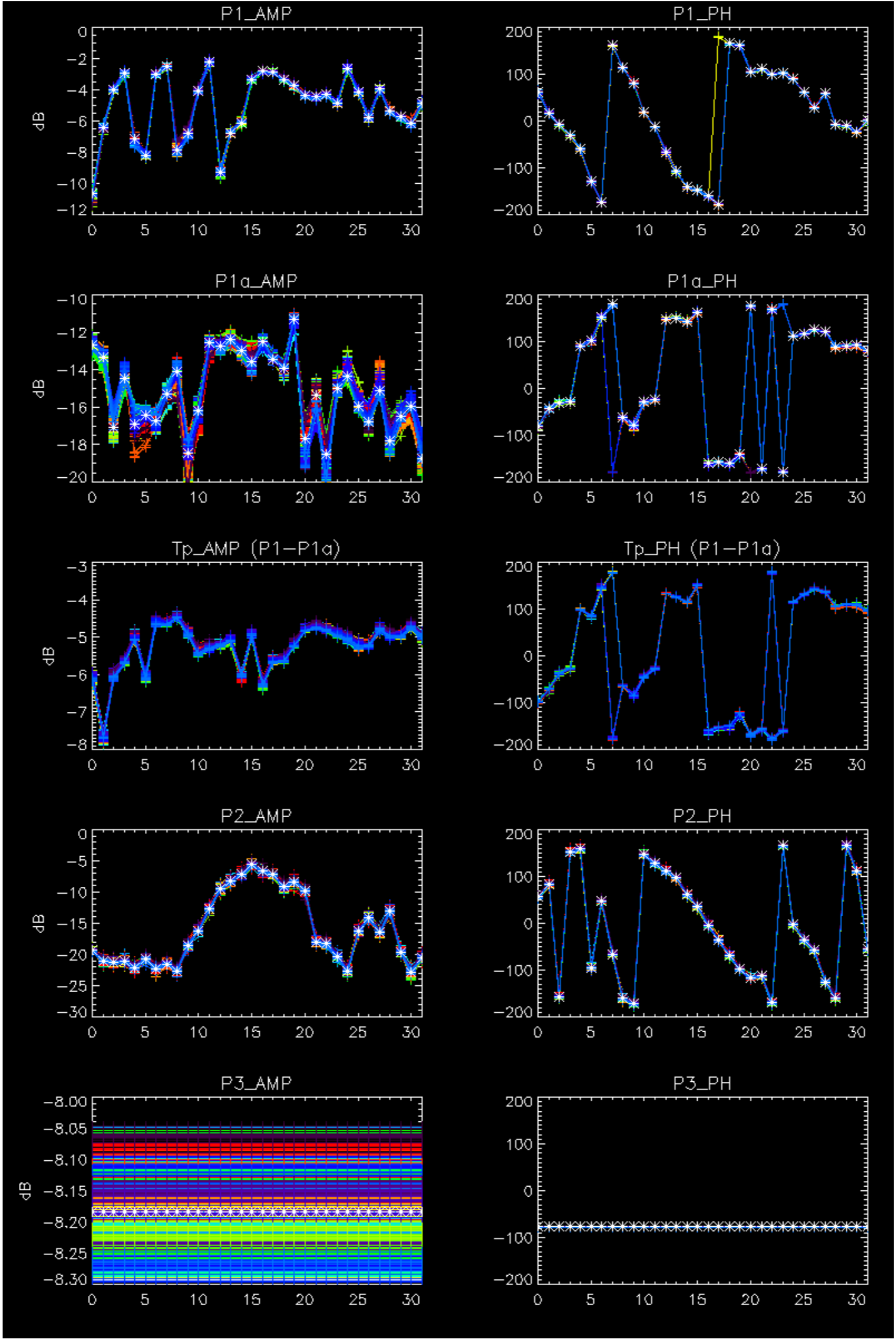
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No anomalies observed on available browse products



No anomalies observed.

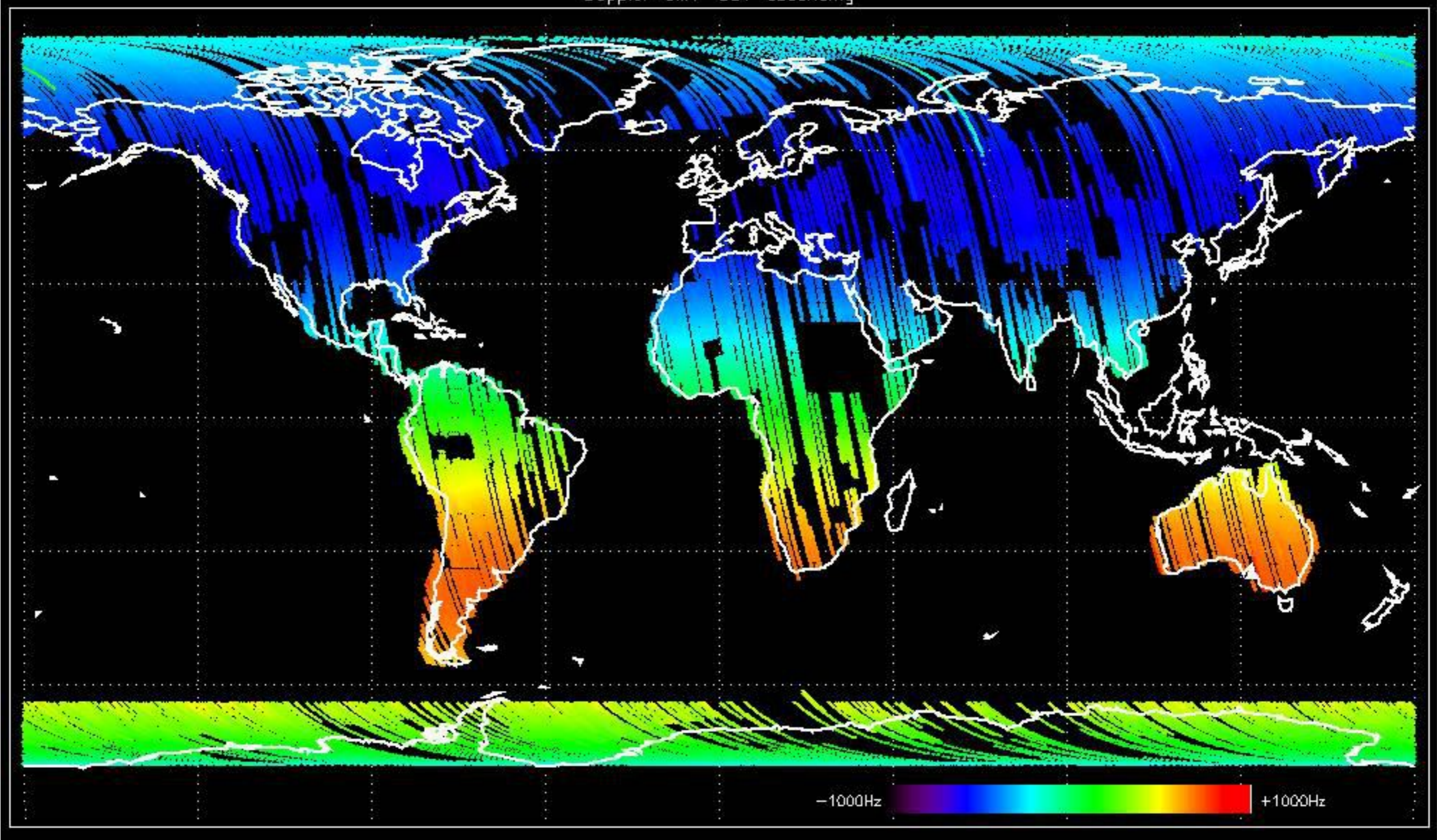




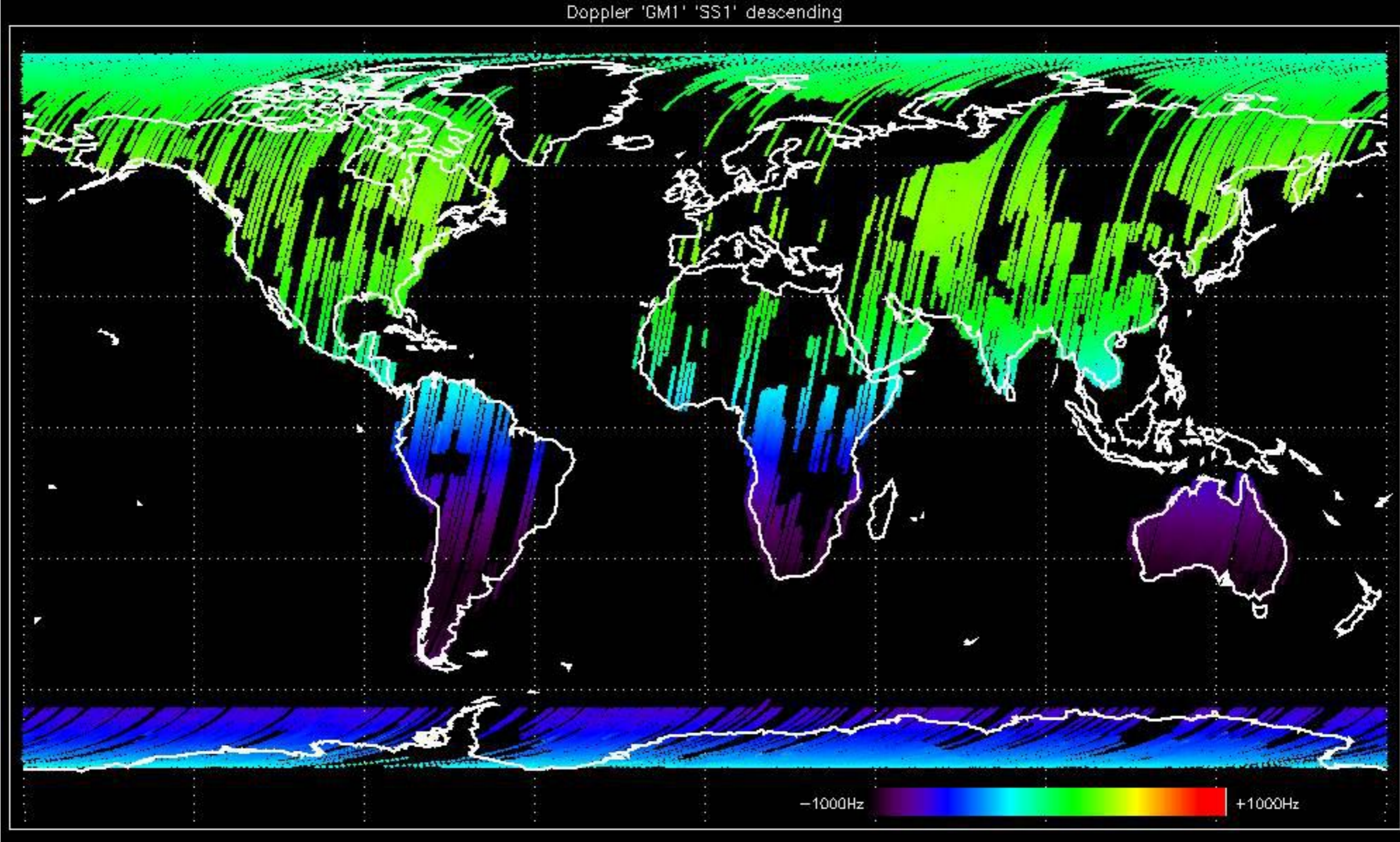
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



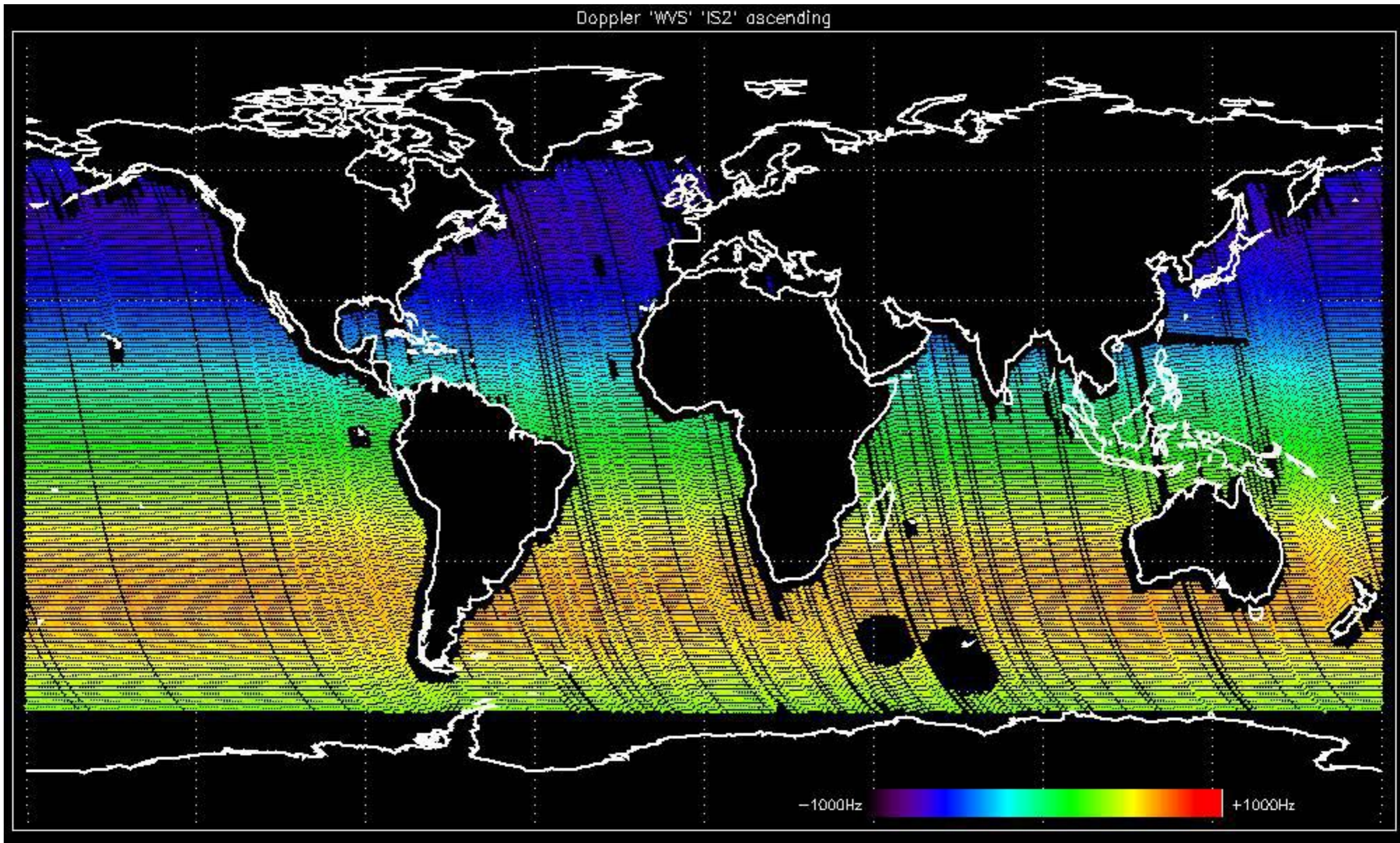
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

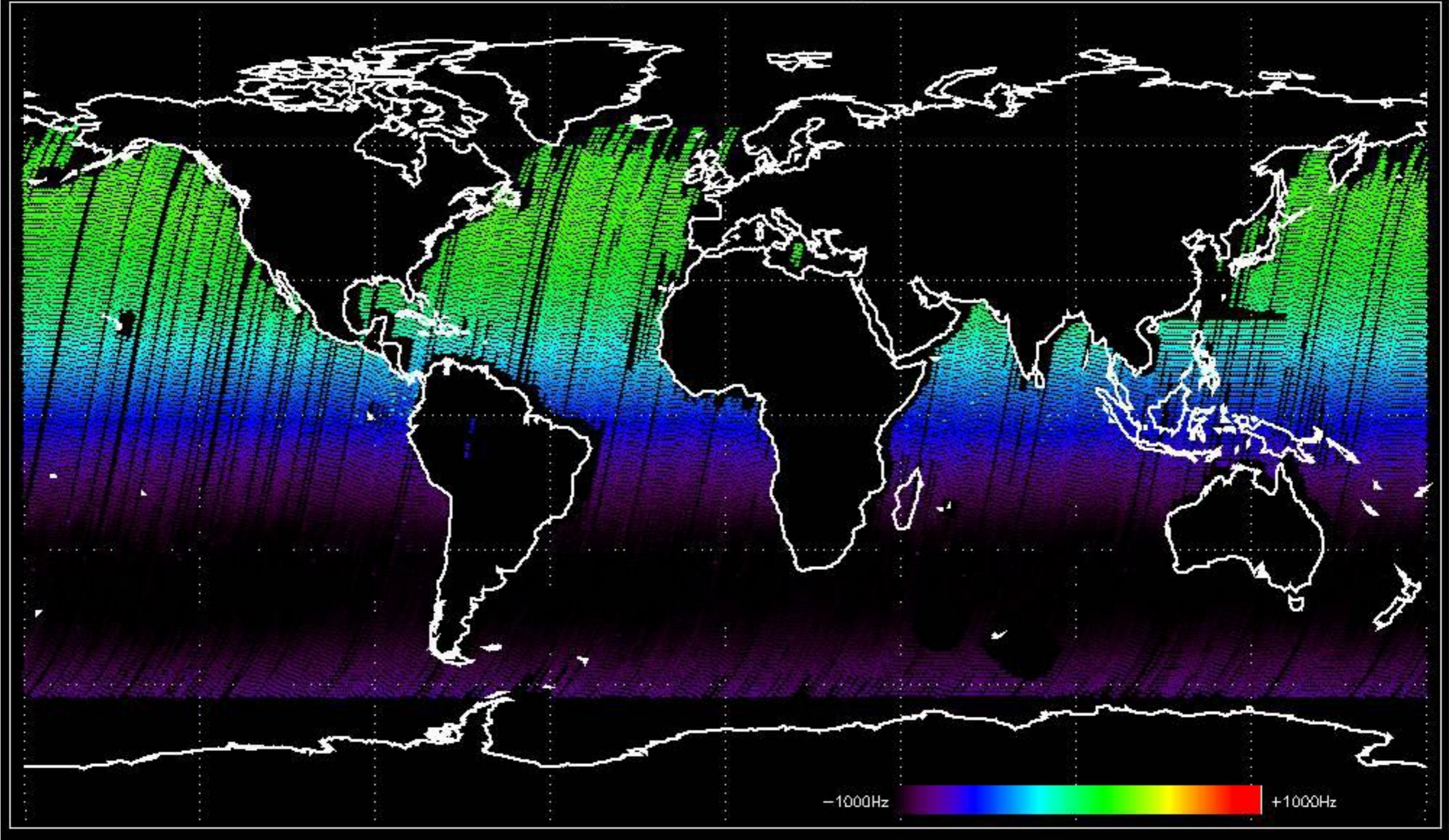


Doppler 'WVS' 'IS2' ascending

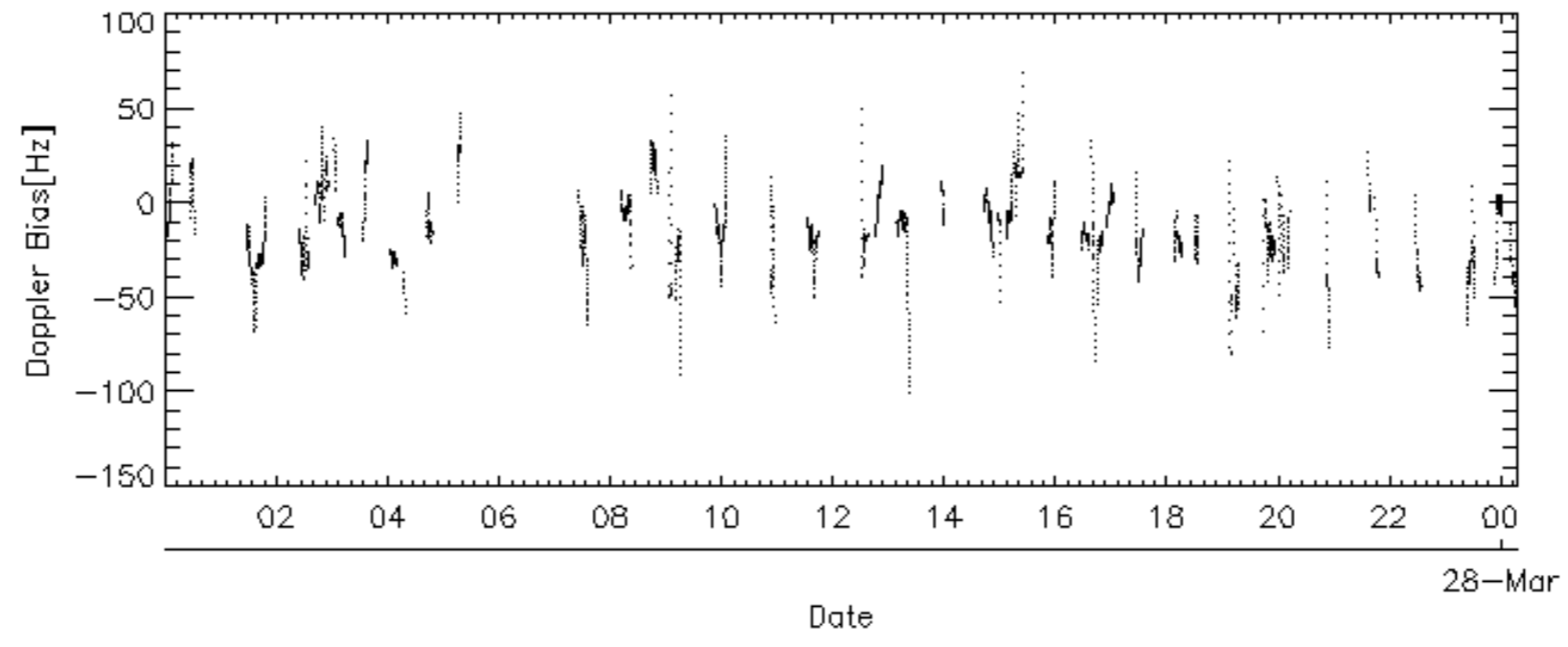
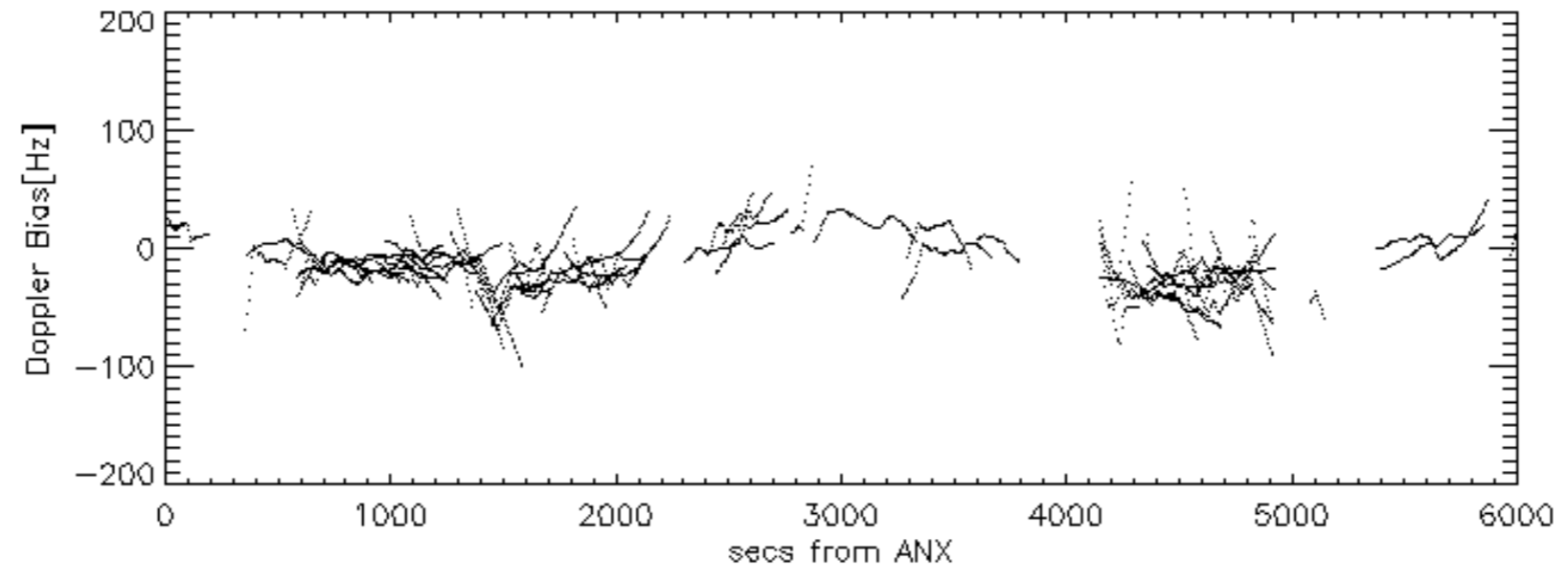
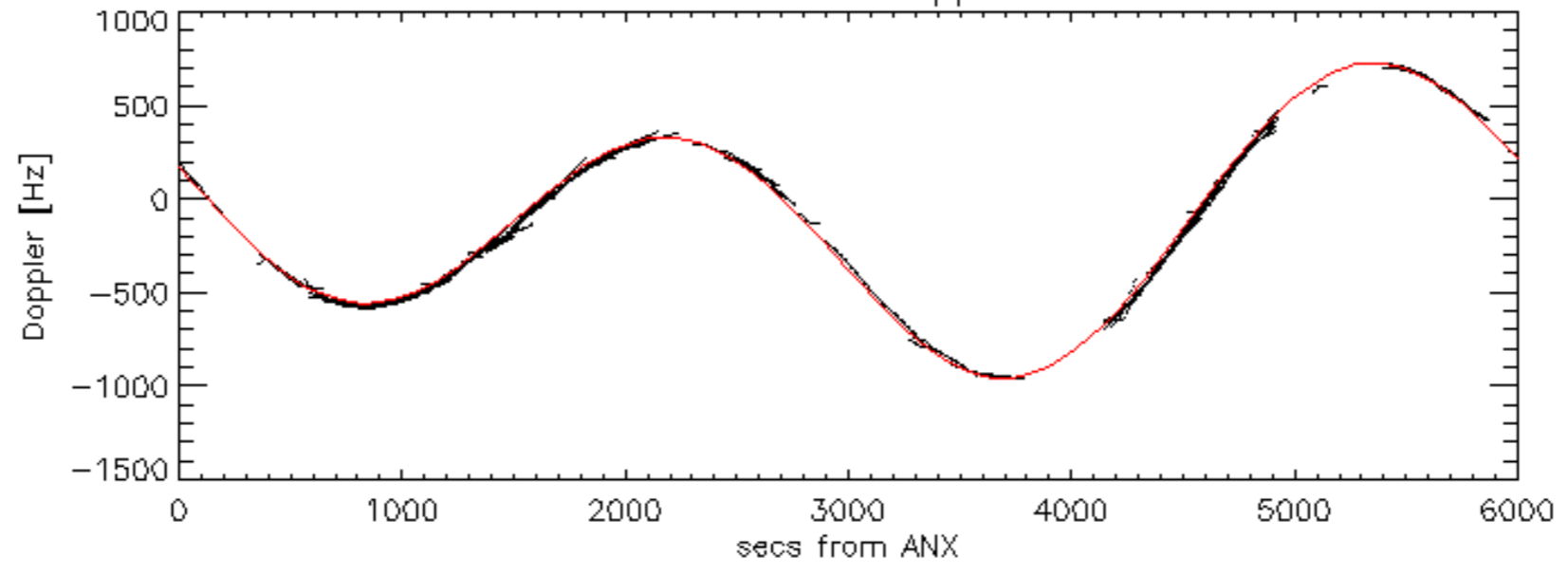




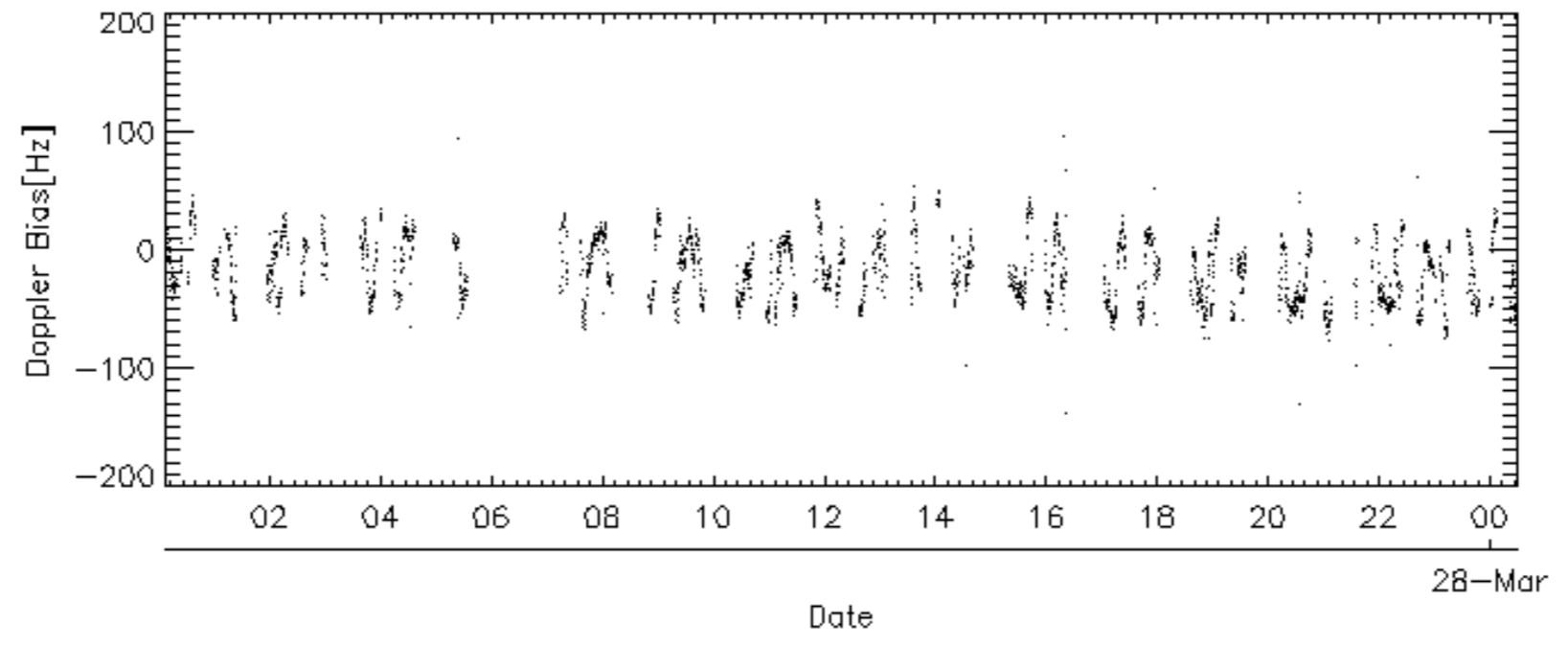
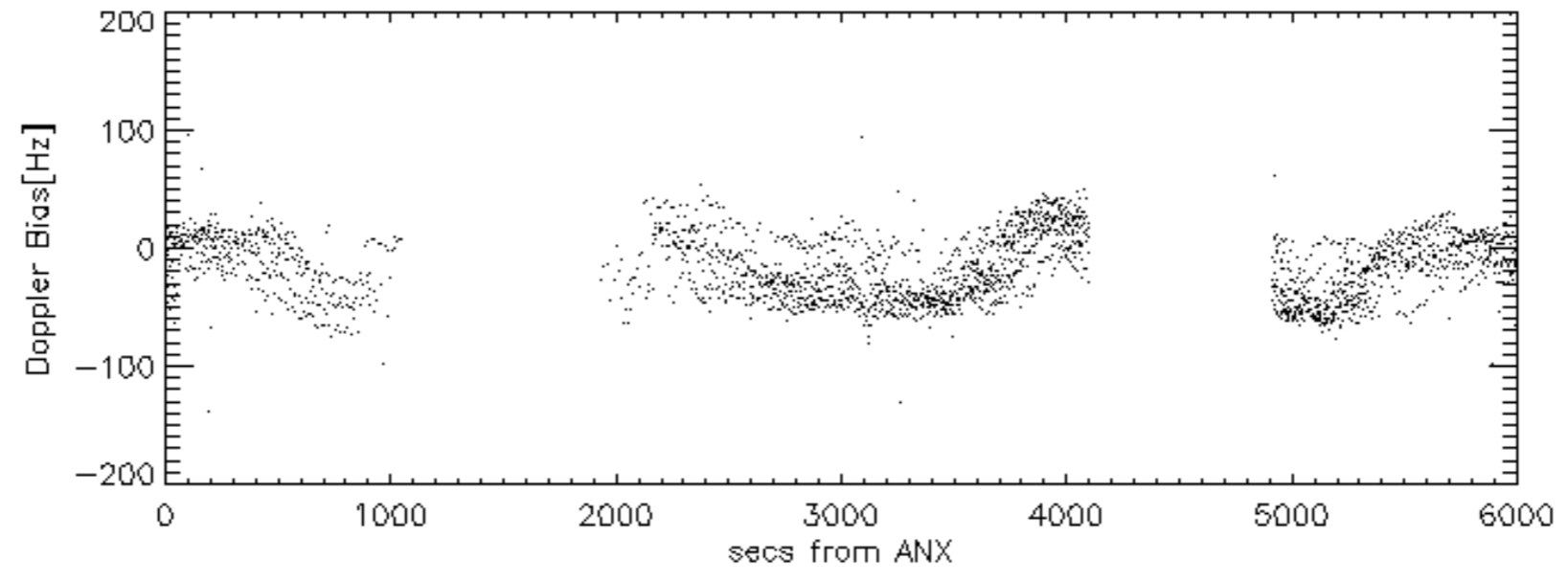
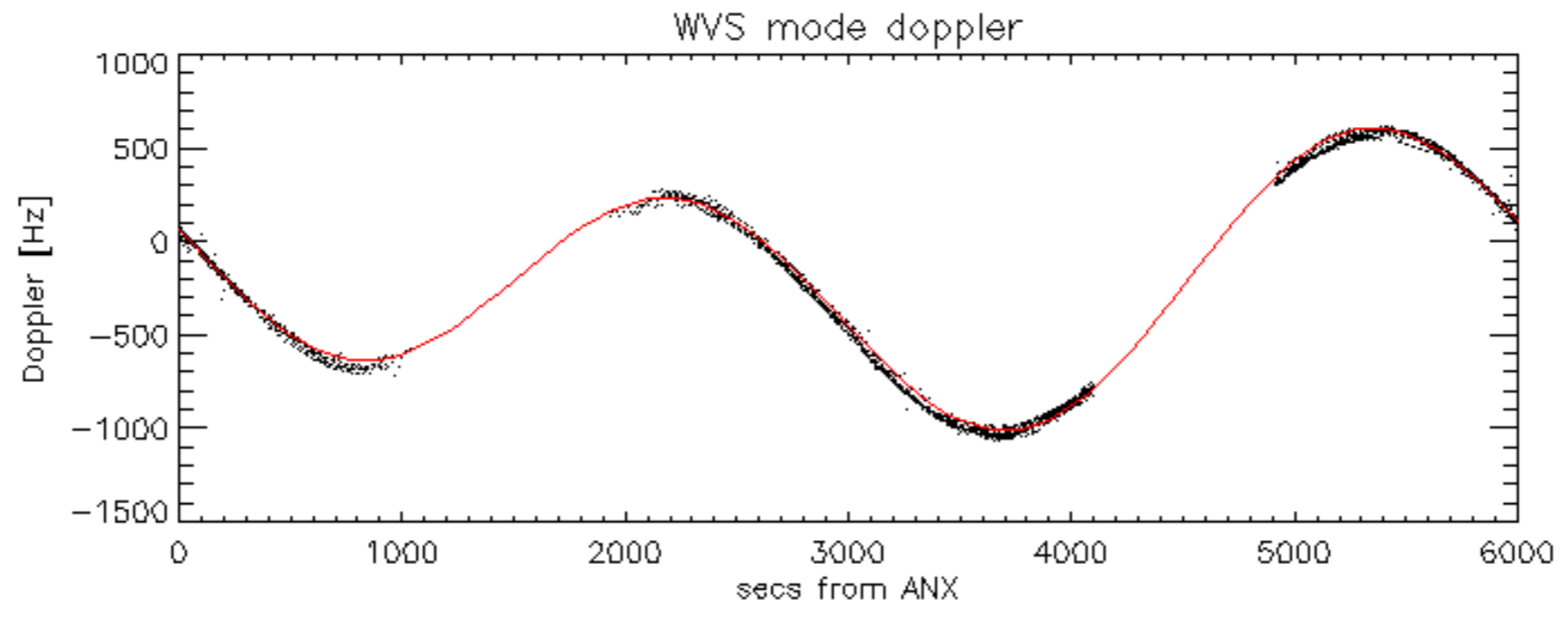
Doppler 'WVS' 'IS2' descending



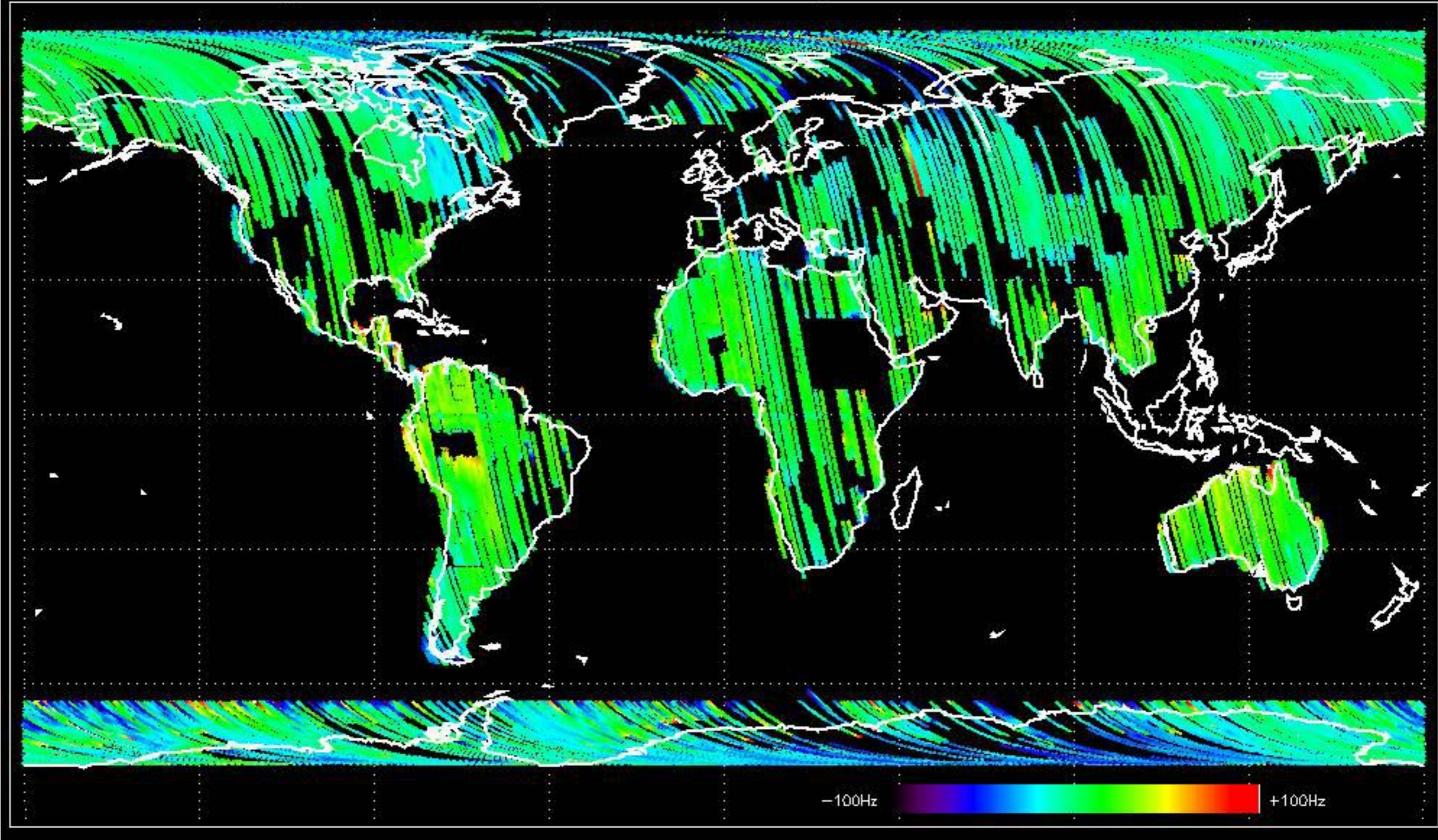
GM1 mode doppler



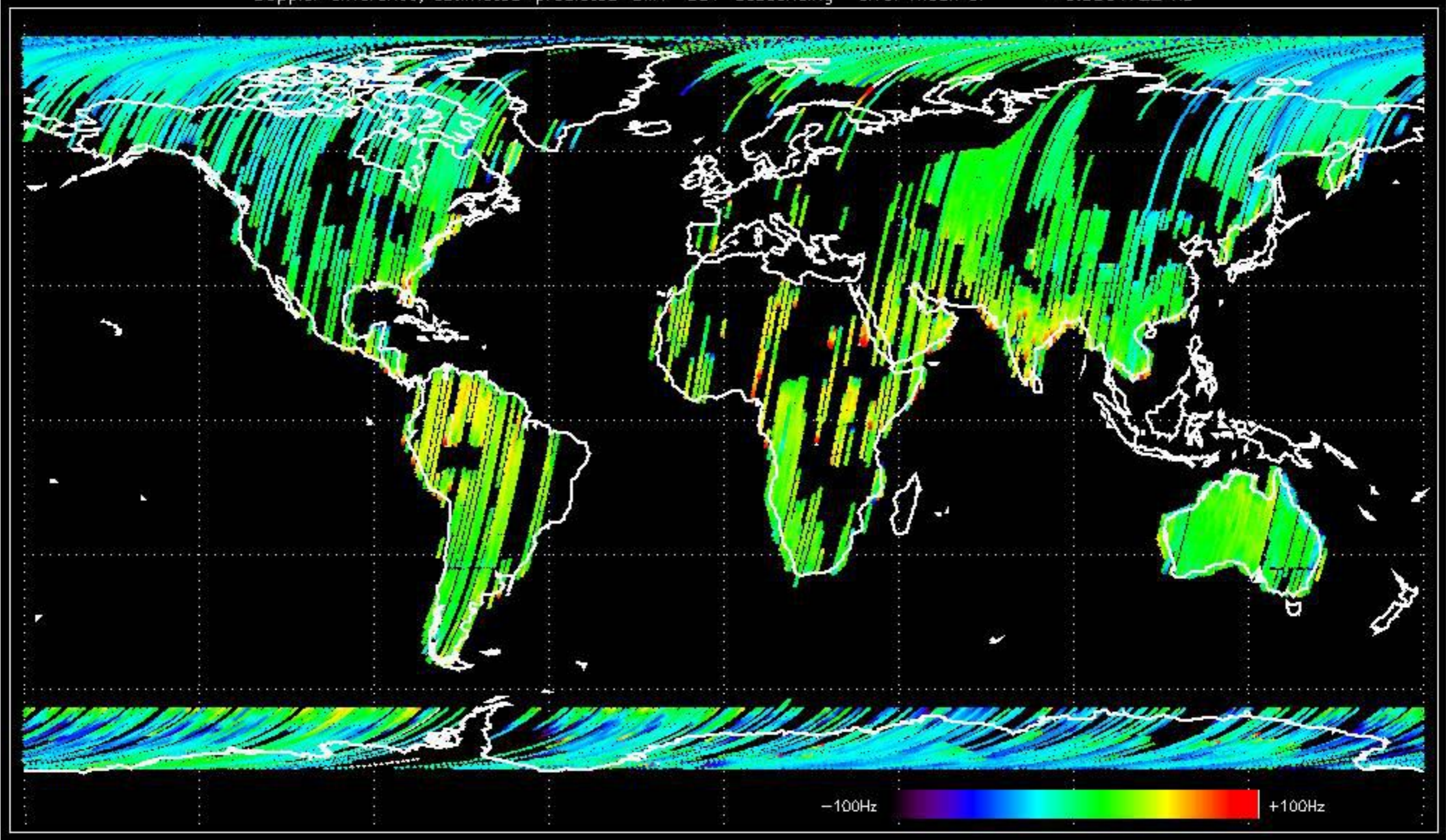
28-Mar



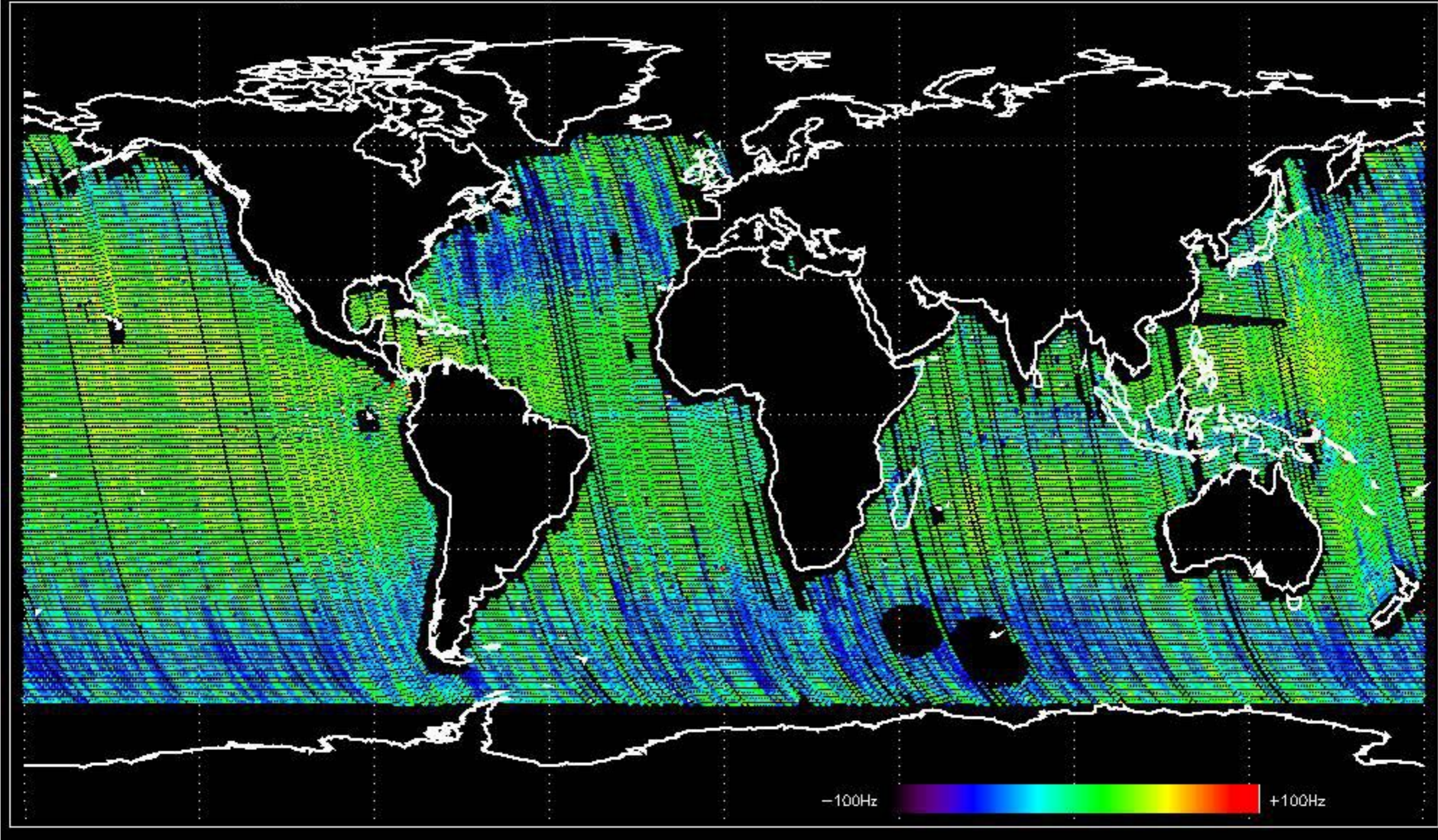
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -8.2210652 Hz



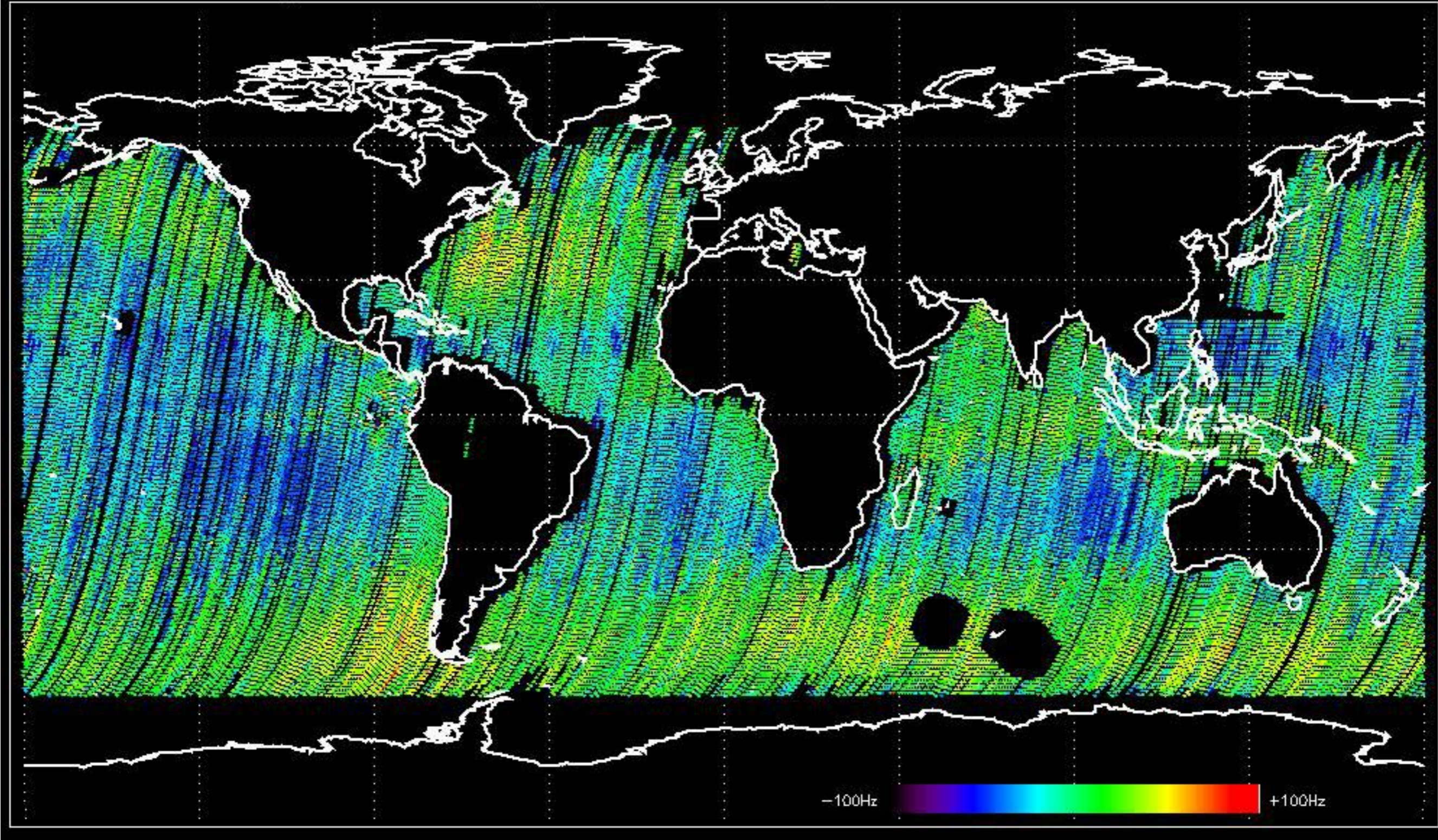
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -6.5804722 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.3571876 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.8950603 Hz



No anomalies observed on available MS products:



No anomalies observed.









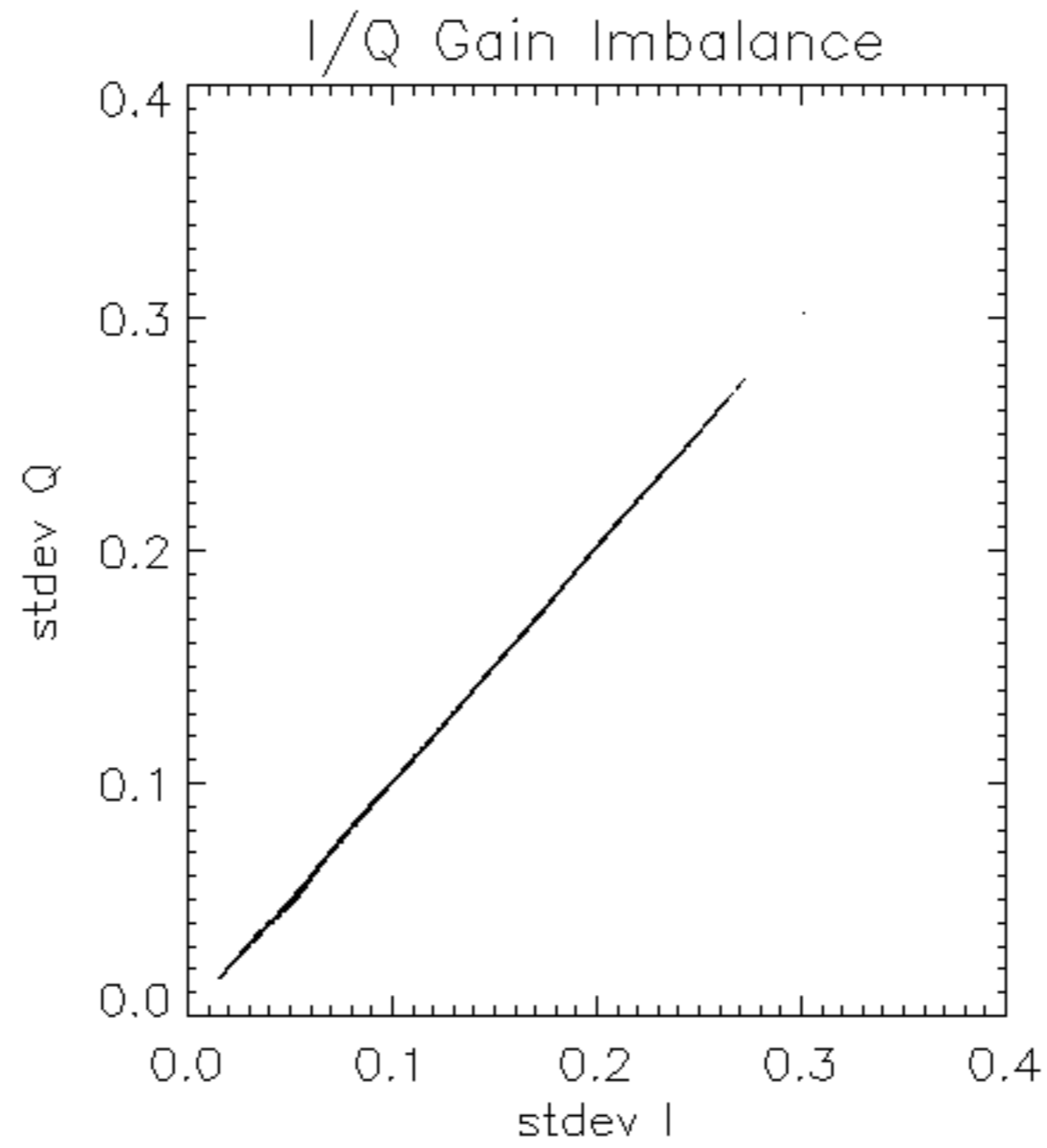


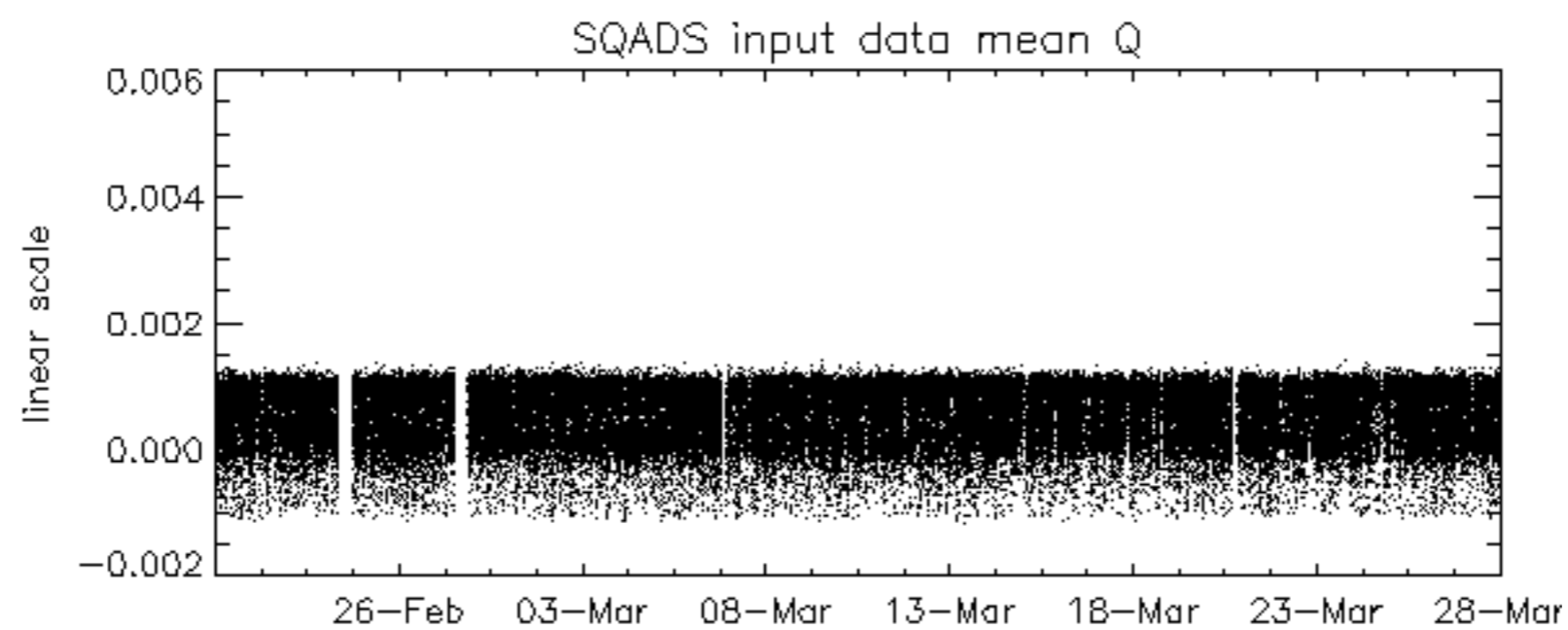
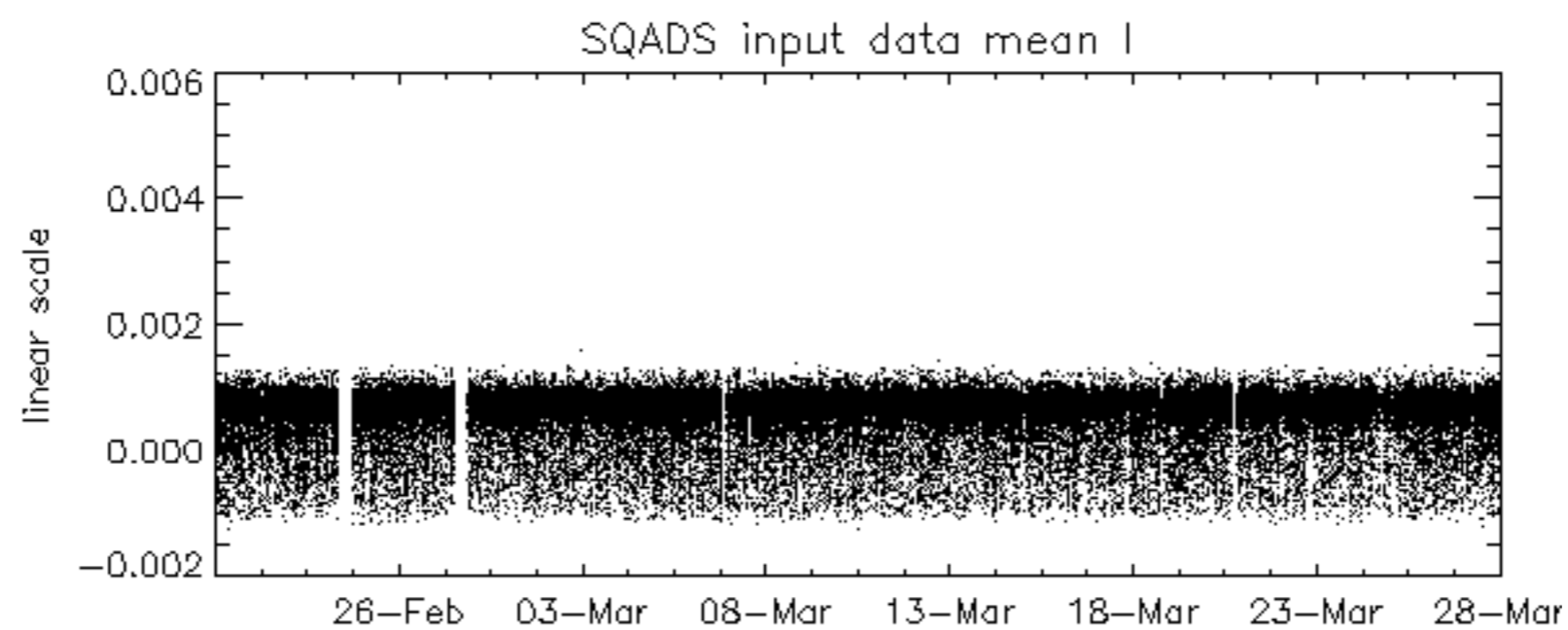
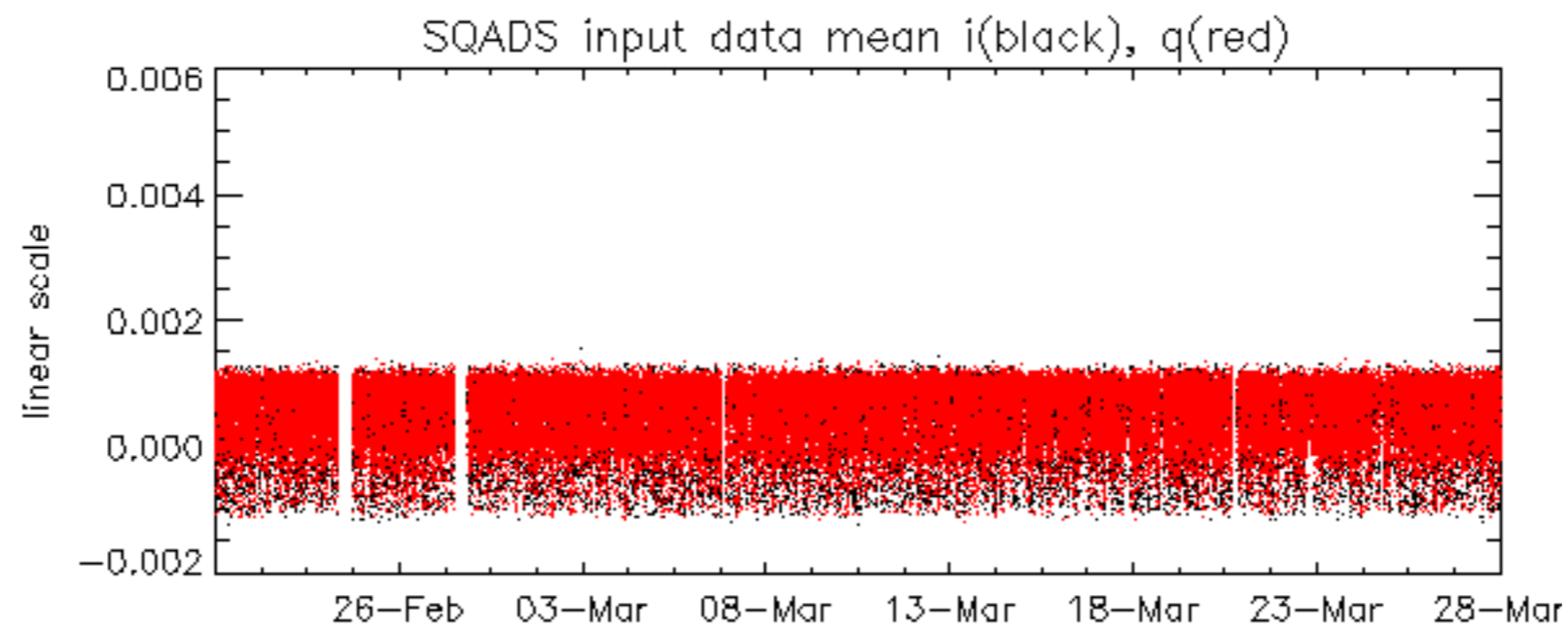


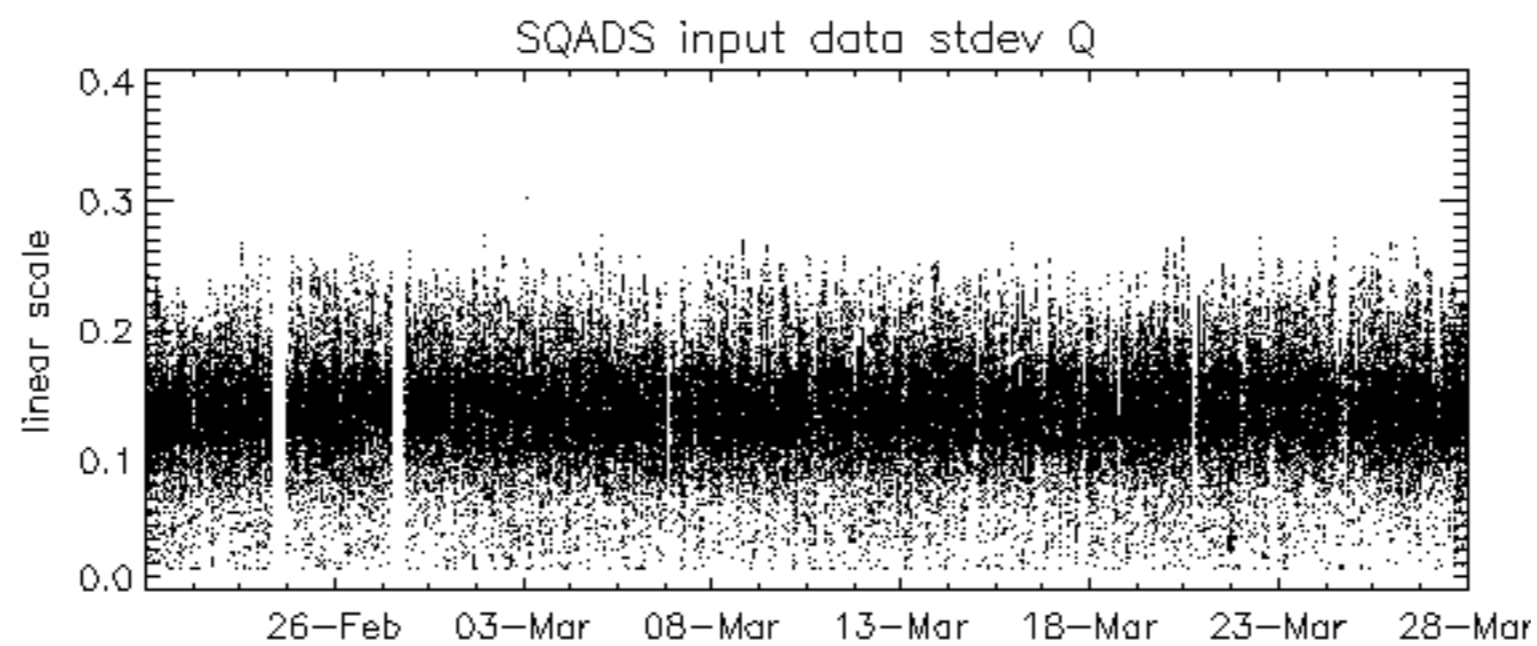
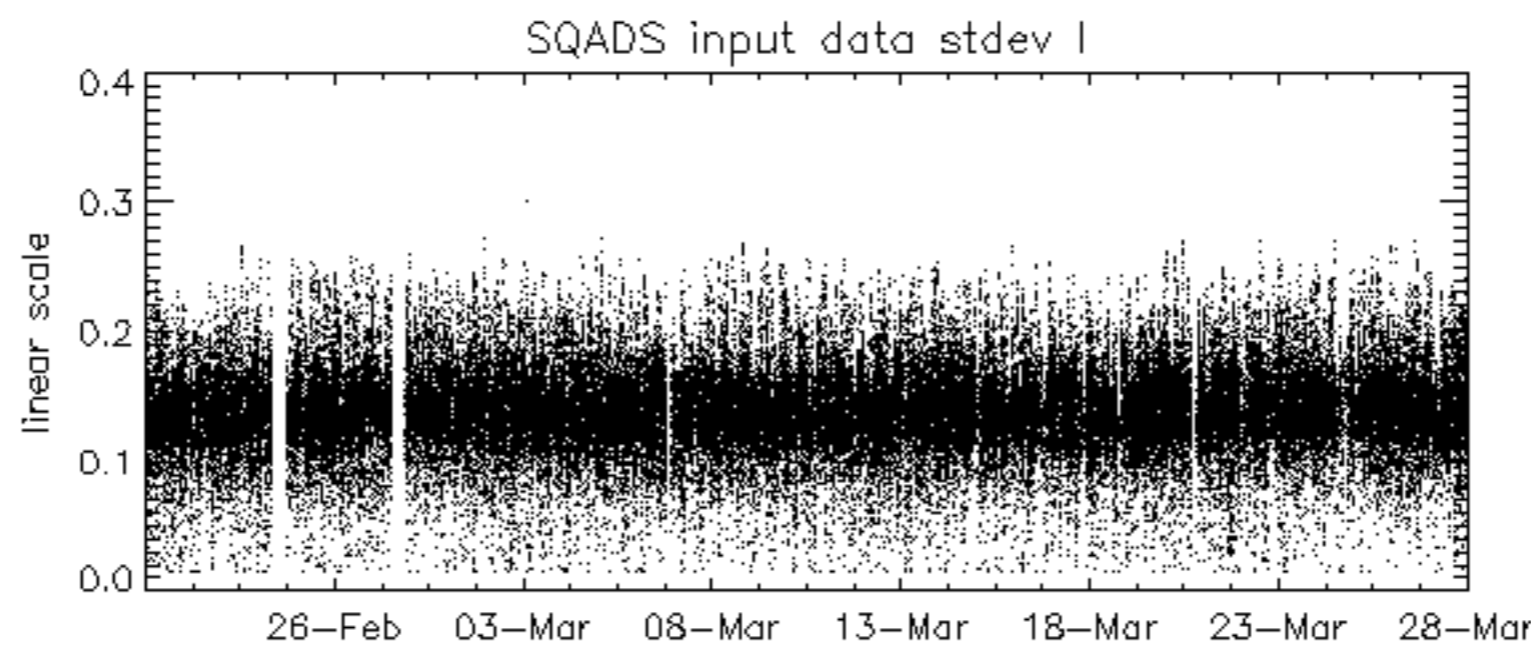
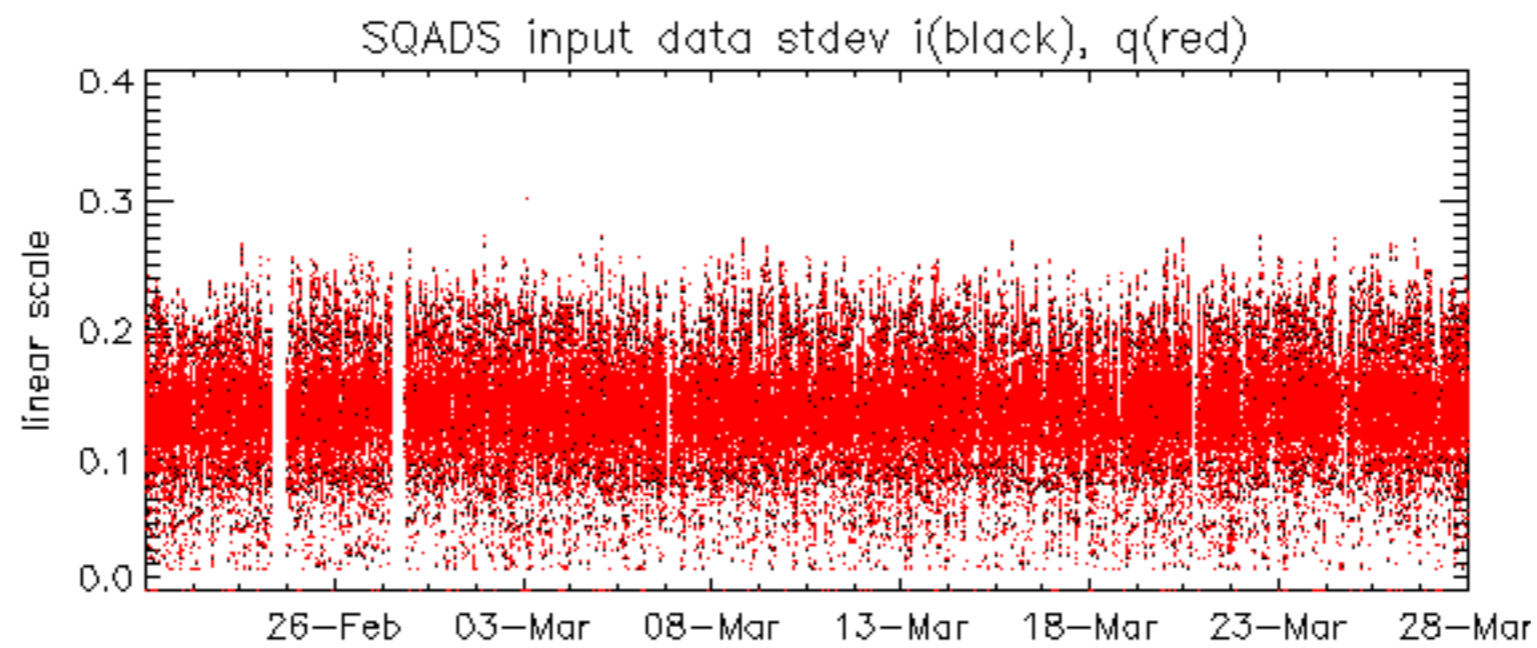


















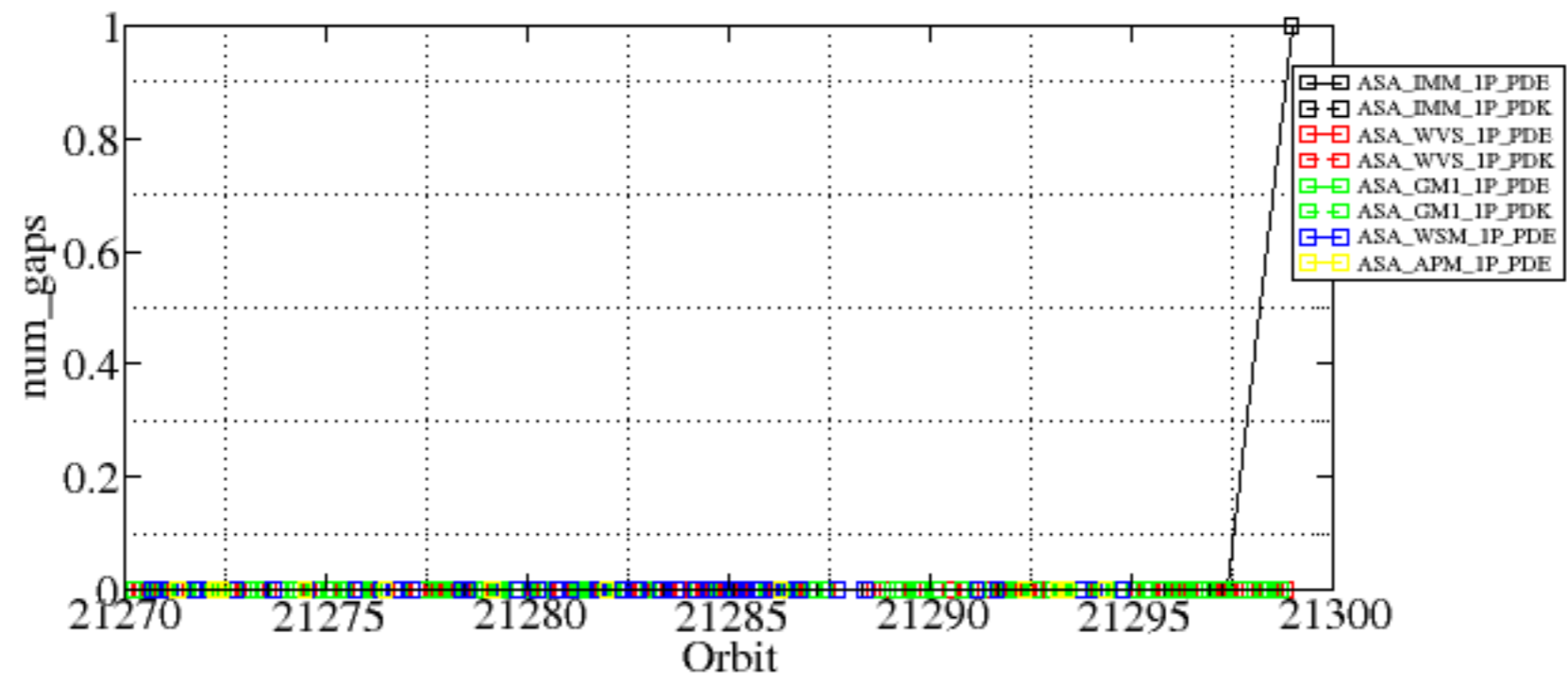




Summary of analysis for the last 3 days 2006032[678]

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_1PNPDE20060328_003704_000001362046_00202_21298_1625.N1	1	0
ASA_WSM_1PNPDE20060327_001933_000002262046_00188_21284_2752.N1	0	35
ASA_WSM_1PNPDE20060327_065041_000000672046_00192_21288_2792.N1	0	7
ASA_WSM_1PNPDE20060327_162329_000002082046_00198_21294_2814.N1	0	49

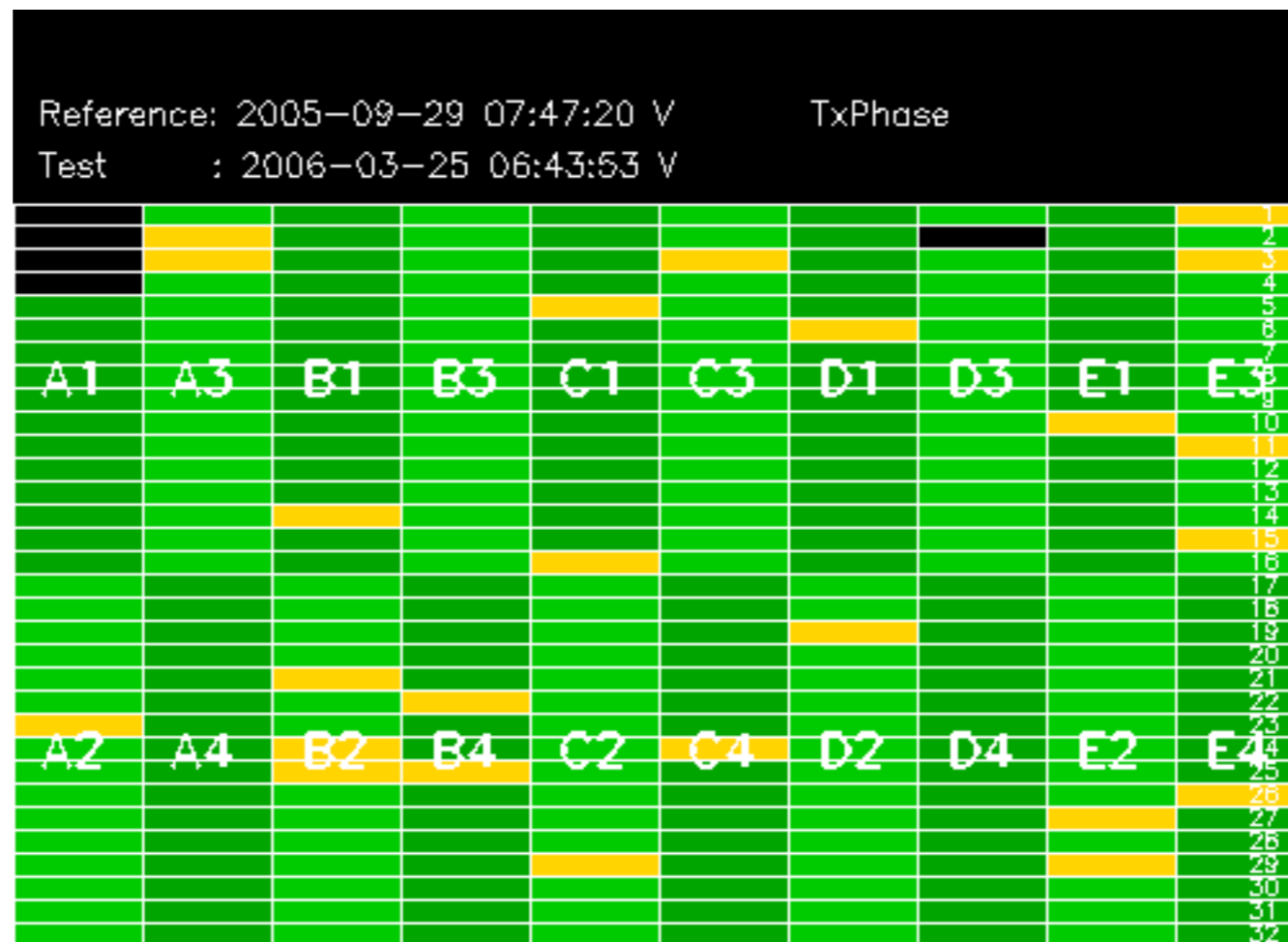


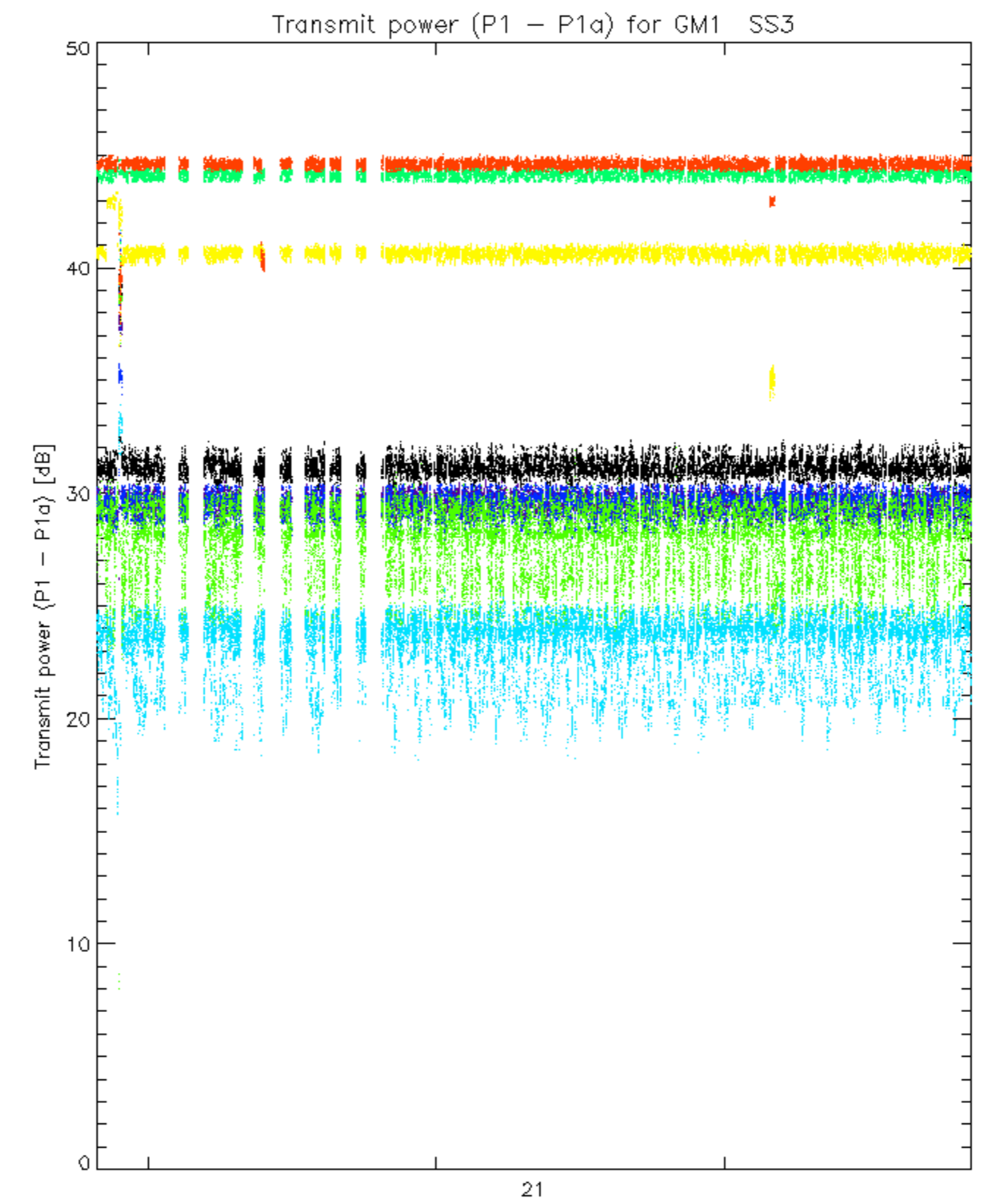




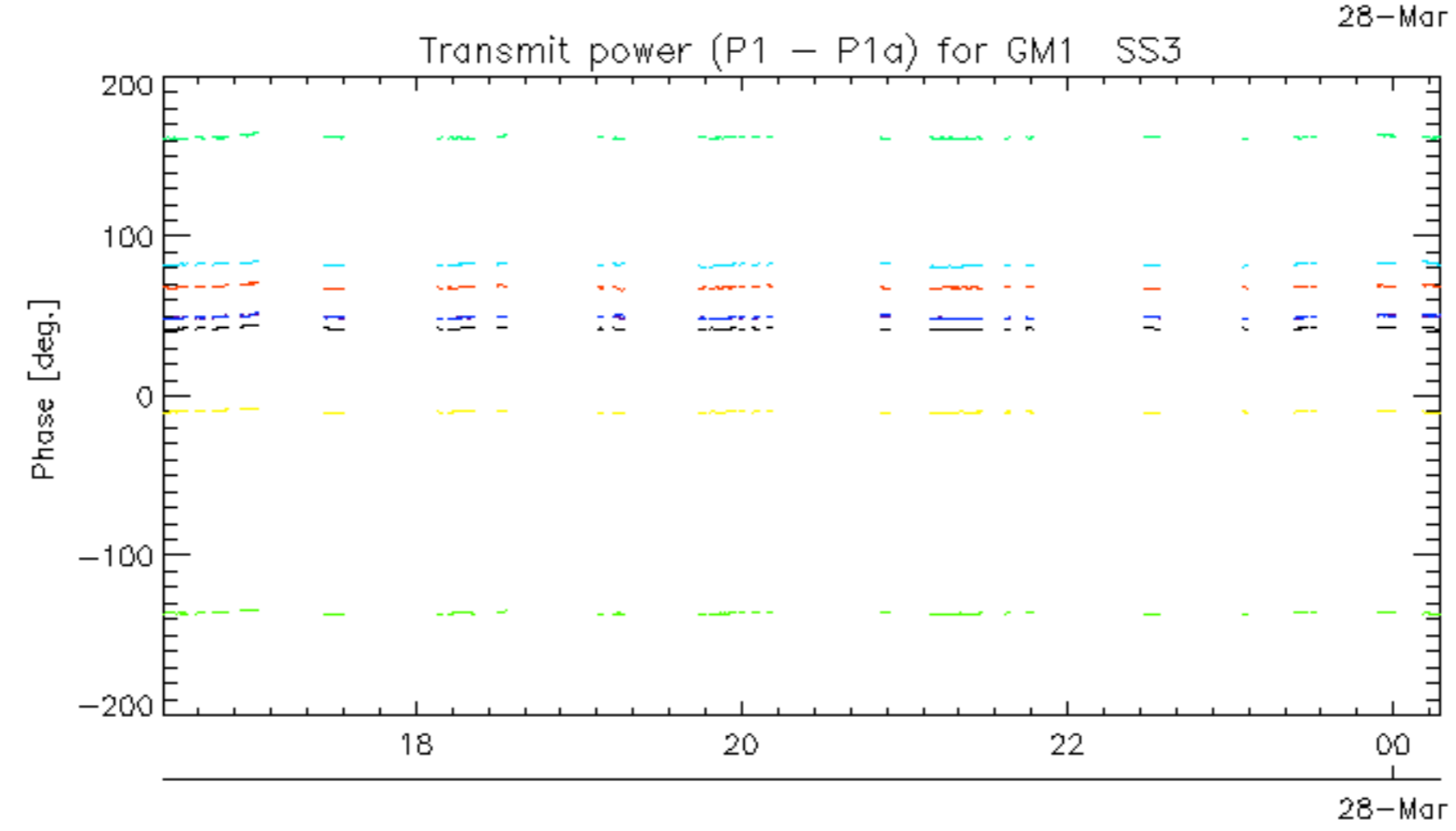
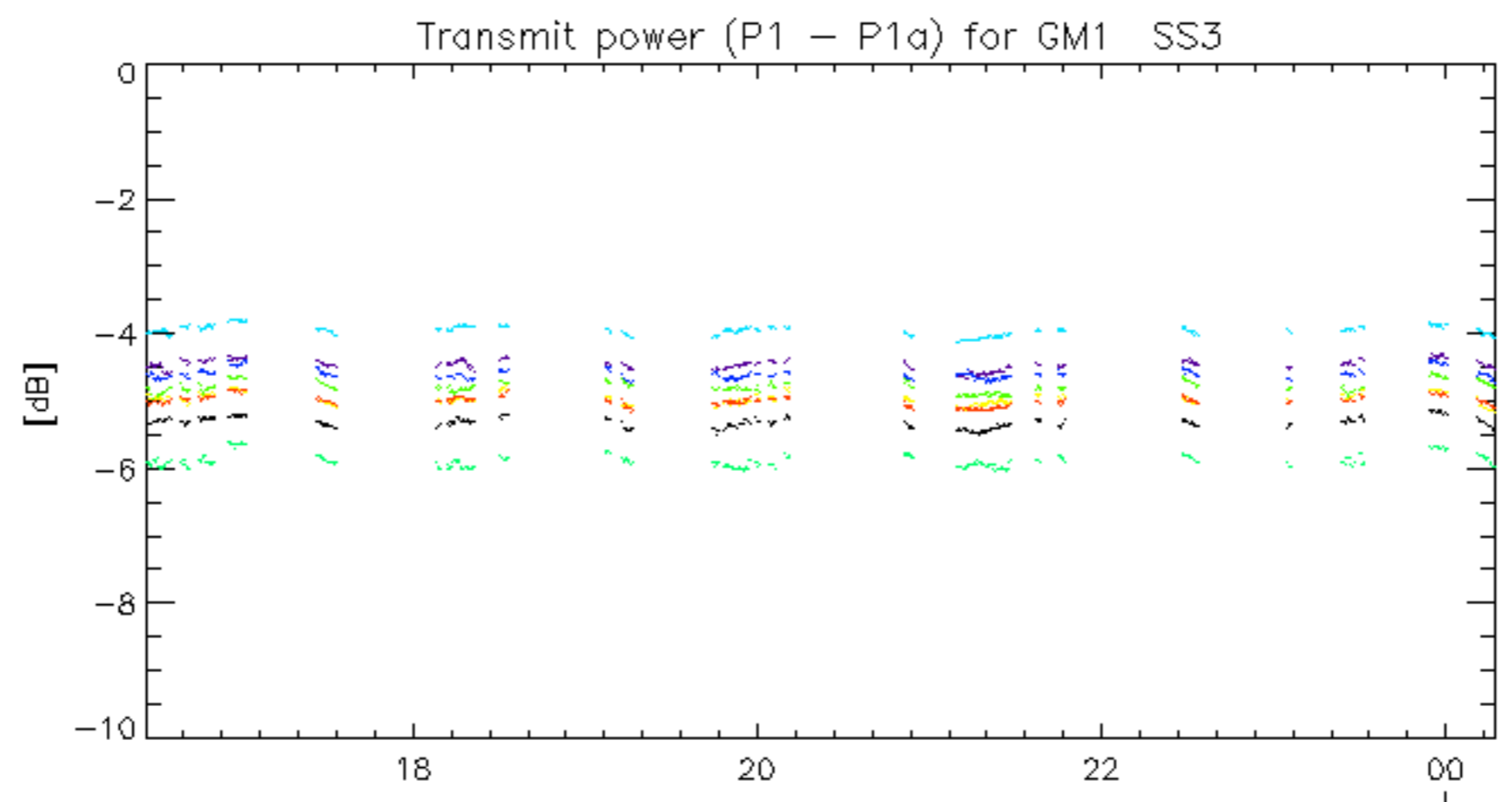




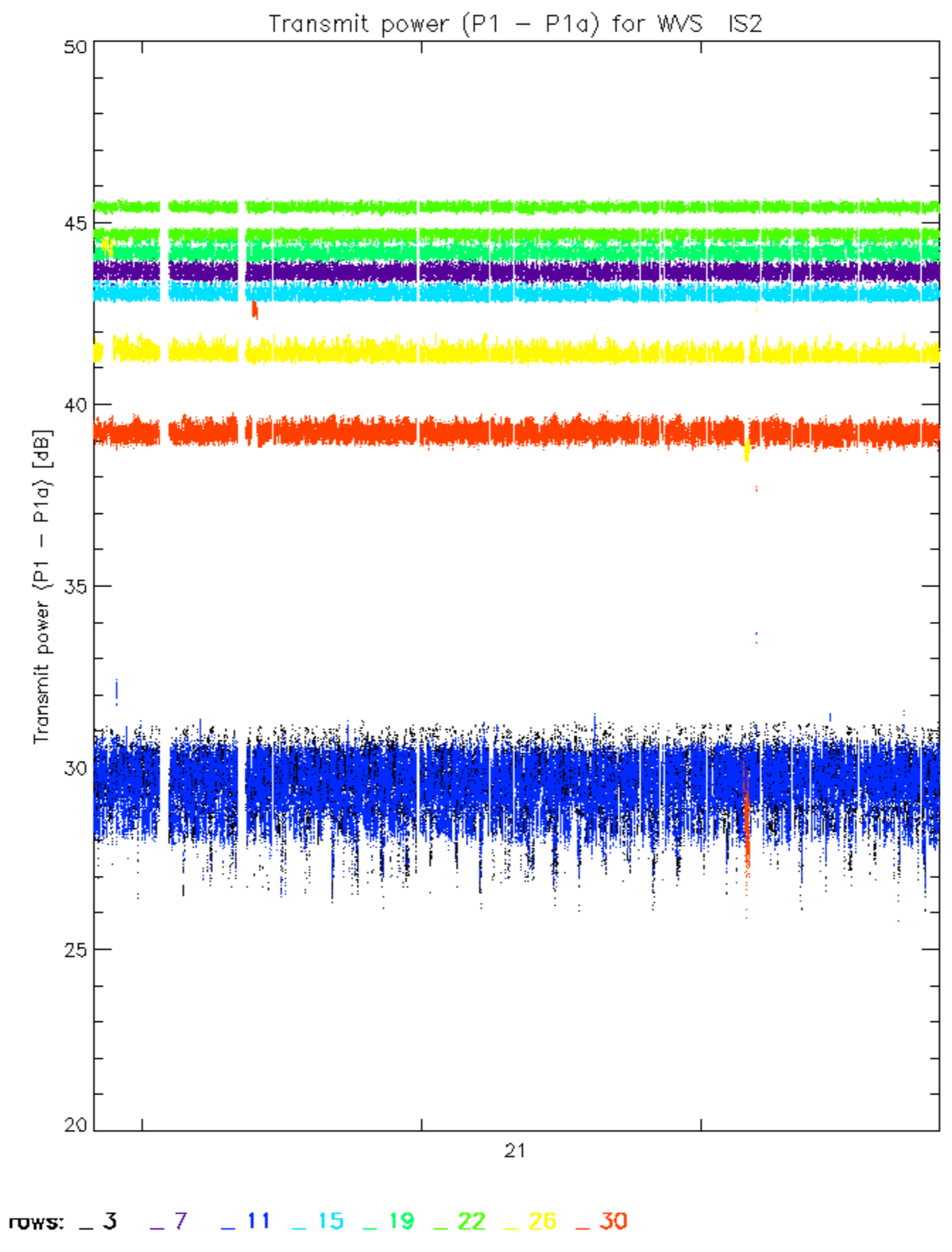


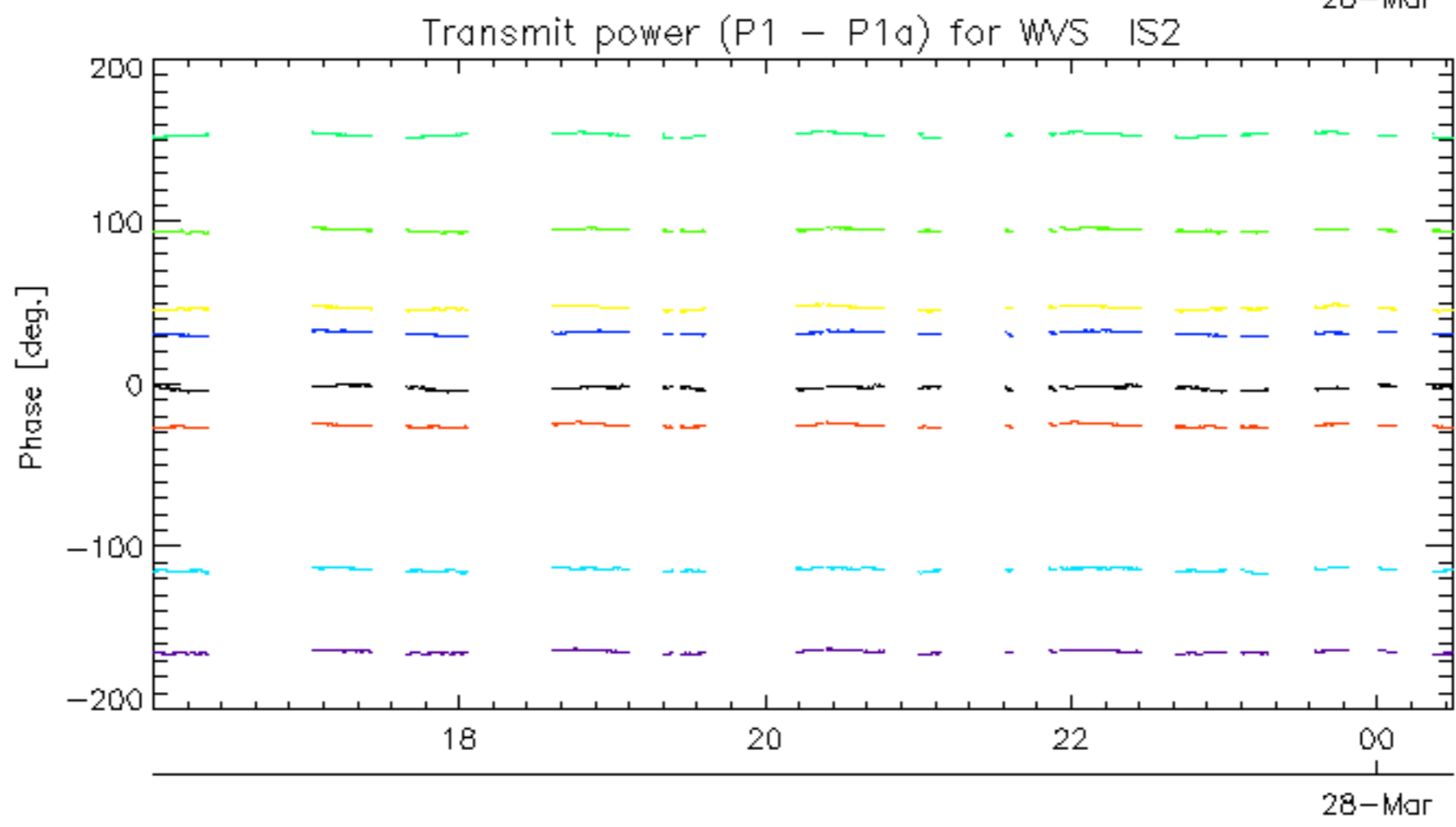
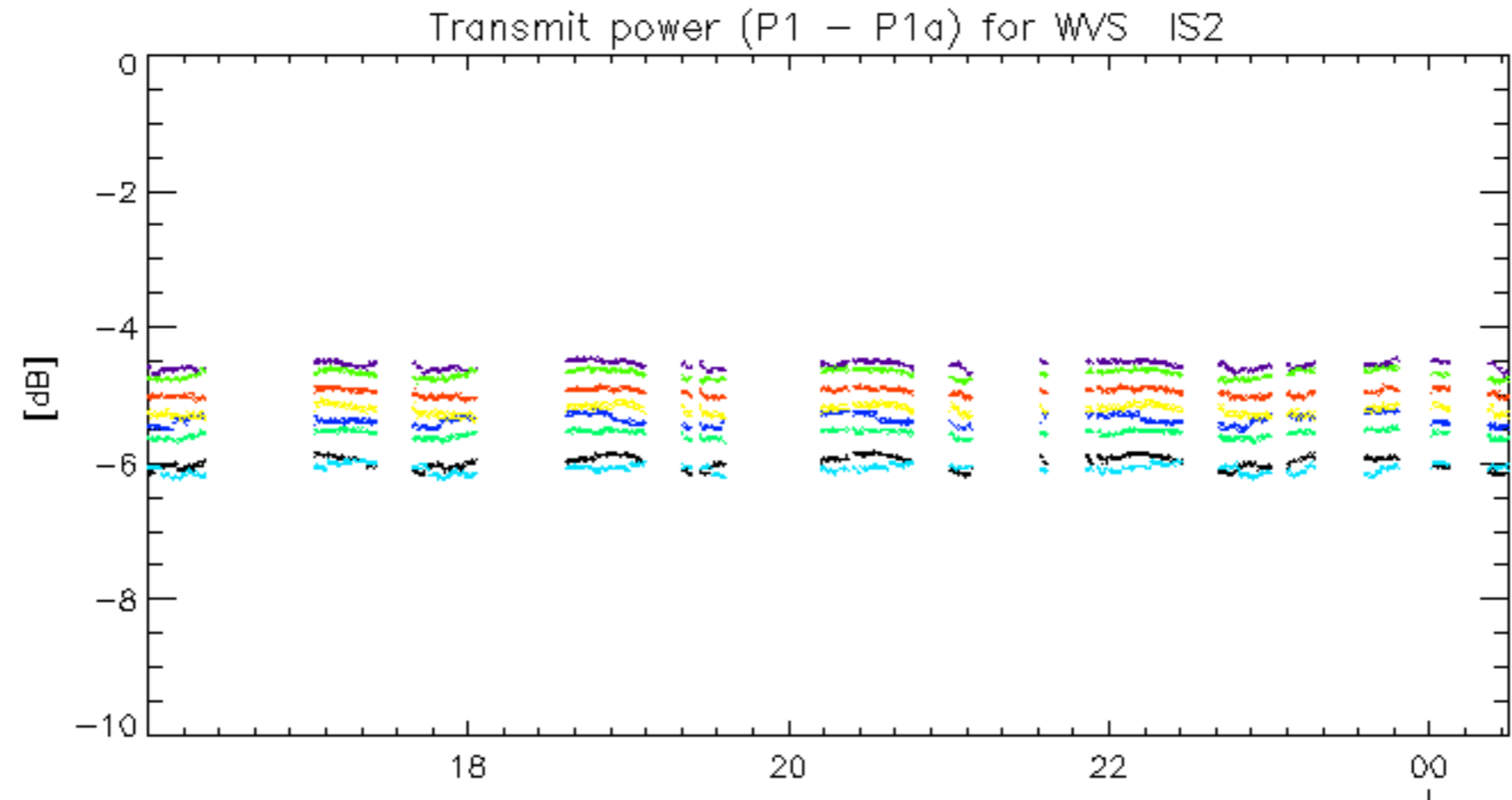






rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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

No unavailabilities during the reported period.