

# PRELIMINARY REPORT OF 060210

last update on Fri Feb 10 16:39:03 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 2006-02-09 00:00:00 to 2006-02-10 16:39:03

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	47	0	12	1	26
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	47	0	12	1	26
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	47	0	12	1	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	47	0	12	1	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	28	45	6	37
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	33	28	45	6	37
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	33	28	45	6	37
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	33	28	45	6	37

### 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	20060210 055505
H	20060209 062642

### 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
☒	☒
☒	☒
☒	☒
☒	☒

## 4 - Internal calibration Results

No anomalies observed.

### 4.1 - Daily statistics

#### 4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
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☒

#### 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
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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	-4.015756	0.008208	0.047328
7	P1	-3.001902	0.012984	-0.010364
11	P1	-4.094057	0.022201	0.017109
15	P1	-6.059249	0.017757	0.004869
19	P1	-3.256127	0.006533	-0.015162
22	P1	-4.475771	0.018744	0.020404
26	P1	-4.197889	0.013154	0.049137
30	P1	-5.771452	0.010428	0.007308
3	P1	-16.909552	0.265770	0.072699
7	P1	-16.644348	0.126480	-0.126440
11	P1	-16.596201	0.301795	0.005442
15	P1	-13.182828	0.111647	0.127490
19	P1	-13.889249	0.071990	-0.033258
22	P1	-15.814925	0.564542	0.207314
26	P1	-15.762461	0.249746	0.062343
30	P1	-16.580498	0.315509	0.035503

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.560488	0.092945	0.159906
7	P2	-22.438385	0.096630	0.094647
11	P2	-16.275112	0.102591	0.090344
15	P2	-7.197802	0.103419	0.046791
19	P2	-9.161152	0.097361	0.027163
22	P2	-17.941319	0.094202	-0.006675
26	P2	-16.214621	0.101355	0.015230
30	P2	-19.641932	0.084872	0.024817

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.204345	0.007434	0.026698
7	P3	-8.204345	0.007434	0.026698
11	P3	-8.204345	0.007434	0.026698
15	P3	-8.204345	0.007434	0.026698
19	P3	-8.204345	0.007434	0.026698
22	P3	-8.204345	0.007434	0.026698
26	P3	-8.204345	0.007434	0.026698
30	P3	-8.204345	0.007434	0.026698

**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	-3.731469	0.011330	-0.035880
7	P1	-2.743178	0.007480	0.008776
11	P1	-2.876902	0.012744	-0.067553
15	P1	-3.488222	0.020206	-0.084422
19	P1	-3.378985	0.012356	-0.019849
22	P1	-5.137171	0.021485	-0.062809
26	P1	-5.849344	0.017357	0.009736
30	P1	-5.234155	0.028604	0.051908
3	P1	-11.539249	0.041785	-0.046869
7	P1	-9.920505	0.047771	-0.032490
11	P1	-10.115149	0.053795	-0.178321
15	P1	-10.656745	0.095365	-0.132209
19	P1	-15.460209	0.062111	0.036657
22	P1	-20.478037	1.257896	0.461819

26	P1	-16.665134	0.350133	0.469780
30	P1	-18.199392	0.331102	-0.137573

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.346100	0.037906	0.229980
7	P2	-22.782440	0.069525	0.219067
11	P2	-11.385284	0.025251	0.147460
15	P2	-4.891217	0.028484	0.066625
19	P2	-6.900337	0.025238	0.057162
22	P2	-8.183502	0.025847	0.011111
26	P2	-23.957747	0.026035	0.023456
30	P2	-22.087090	0.019225	0.009952

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.041656	0.002728	0.038496
7	P3	-8.041562	0.002733	0.038156
11	P3	-8.041543	0.002733	0.038697
15	P3	-8.041642	0.002745	0.038307
19	P3	-8.041682	0.002735	0.038517
22	P3	-8.041642	0.002730	0.038487
26	P3	-8.041630	0.002741	0.038387
30	P3	-8.041602	0.002744	0.038765

## 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	0.000567284
	stdev	1.63469e-07
MEAN Q	mean	0.000527557
	stdev	2.09942e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140052
	stdev	0.00114915
STDEV Q	mean	0.140414
	stdev	0.00116877



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006020[890]

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_1PNPDE20060208_155358_000001592045_00025_20620_2377.N1	1	0
ASA_IMM_1PNPDE20060208_194758_000000622045_00028_20623_2412.N1	2	1556
ASA_IMM_1PNPDK20060208_124556_000000692045_00024_20619_0769.N1	1	0
ASA_WSM_1PNPDE20060208_202937_000000672045_00028_20623_4225.N1	0	41





## 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)**

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

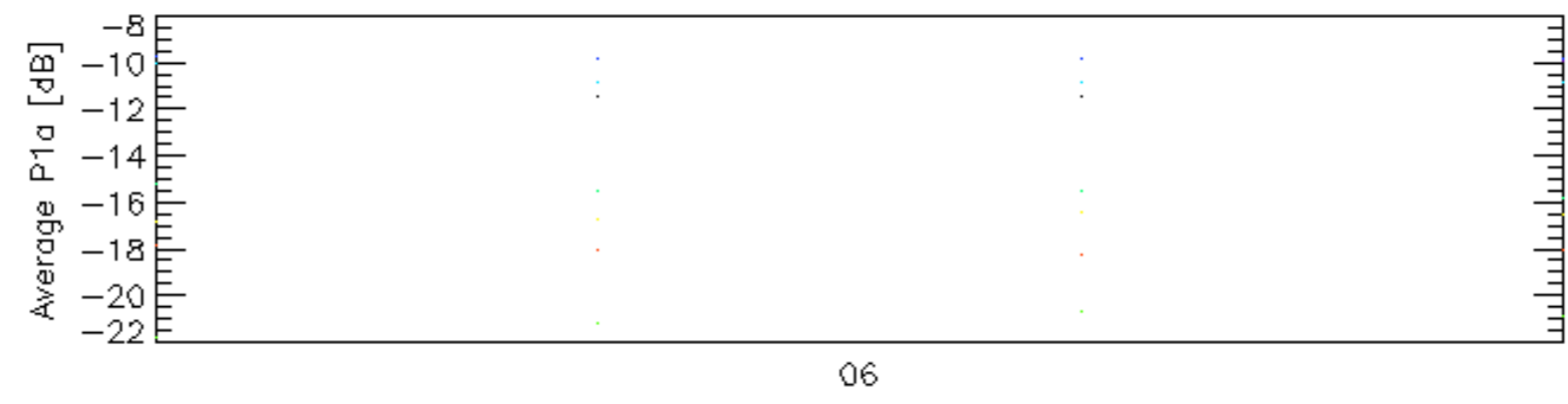
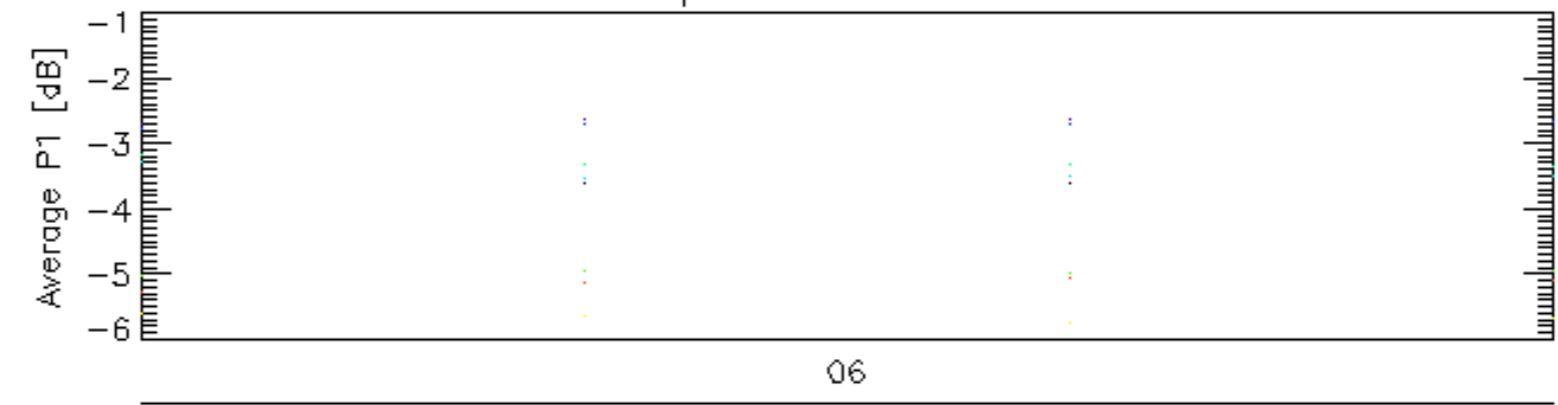
**7.5 - Absolute Doppler for GM1****Evolution of Absolute Doppler**

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

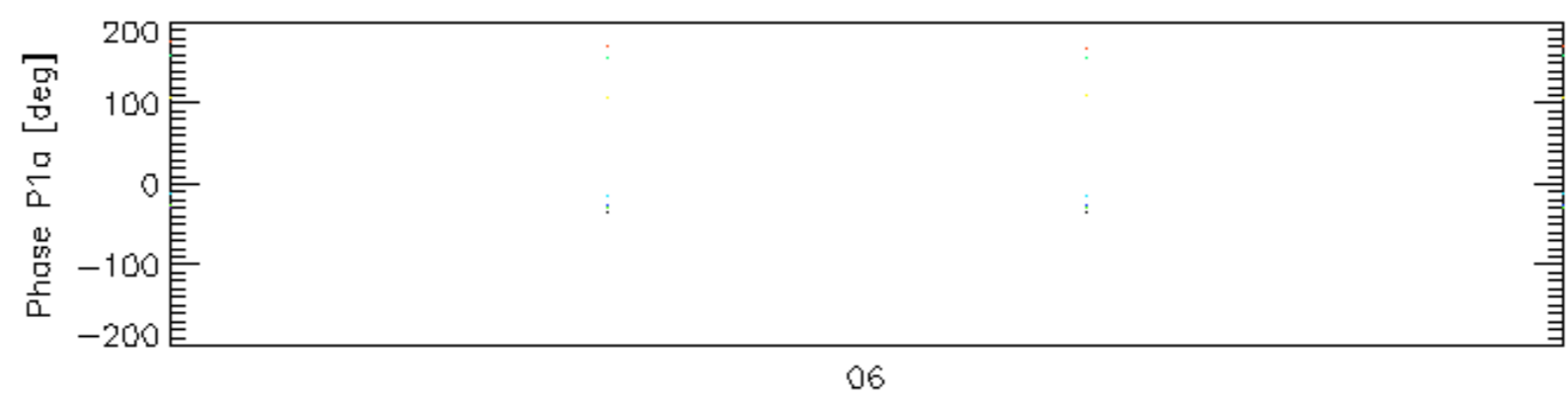
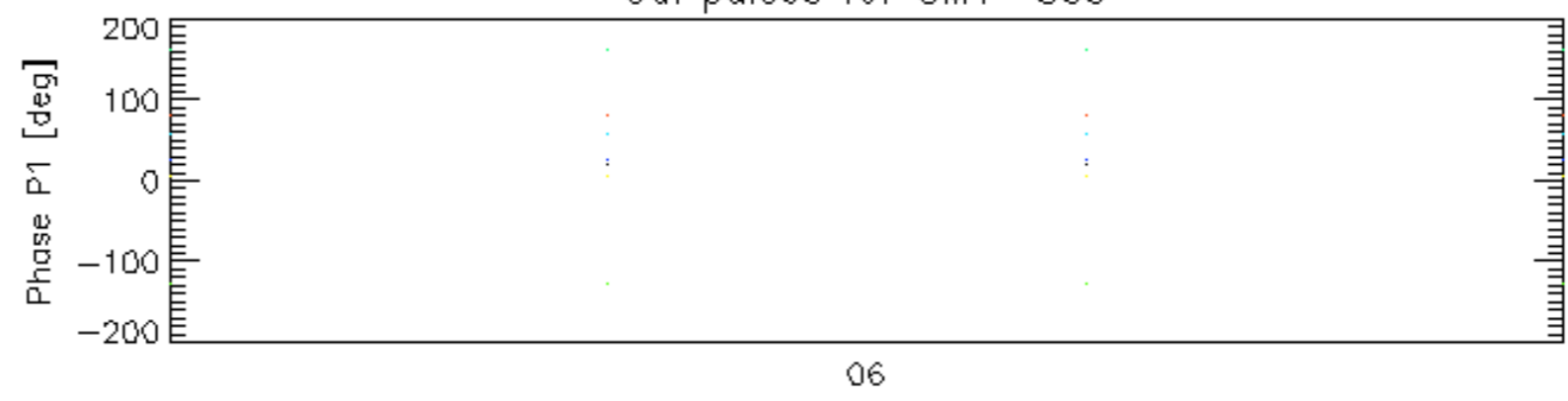
**7.6 - Doppler evolution versus ANX for GM1****Evolution Doppler error versus ANX**

<input type="checkbox"/>
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Cal pulses for GM1 SS3

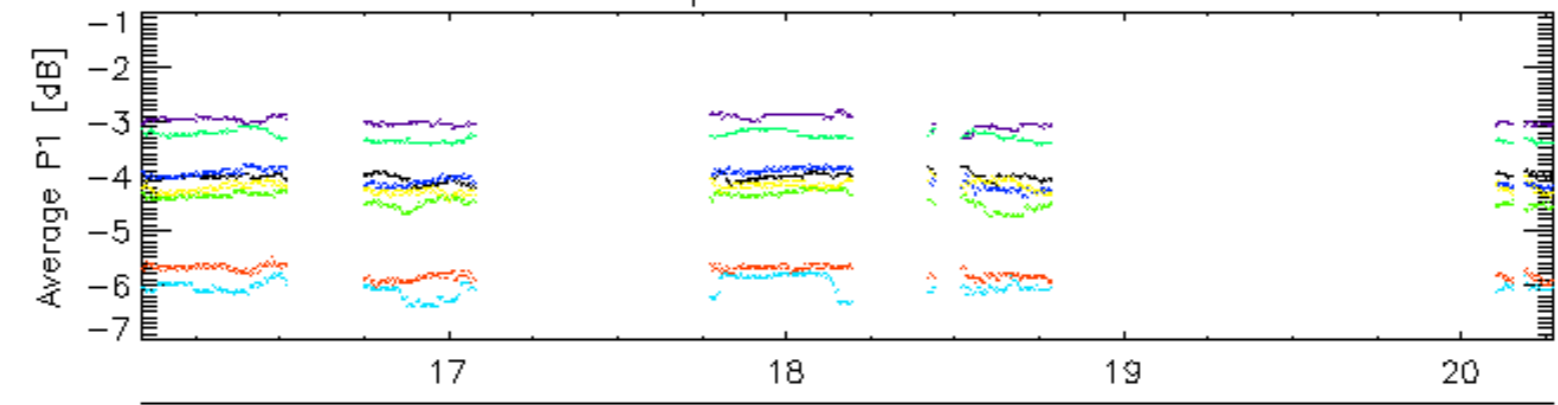


Cal pulses for GM1 SS3

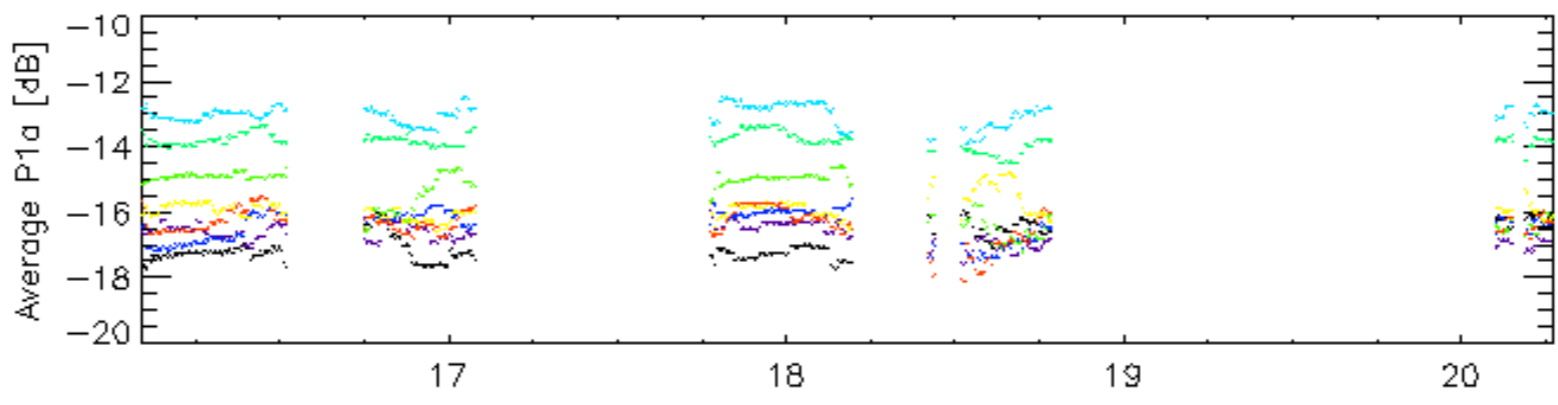


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

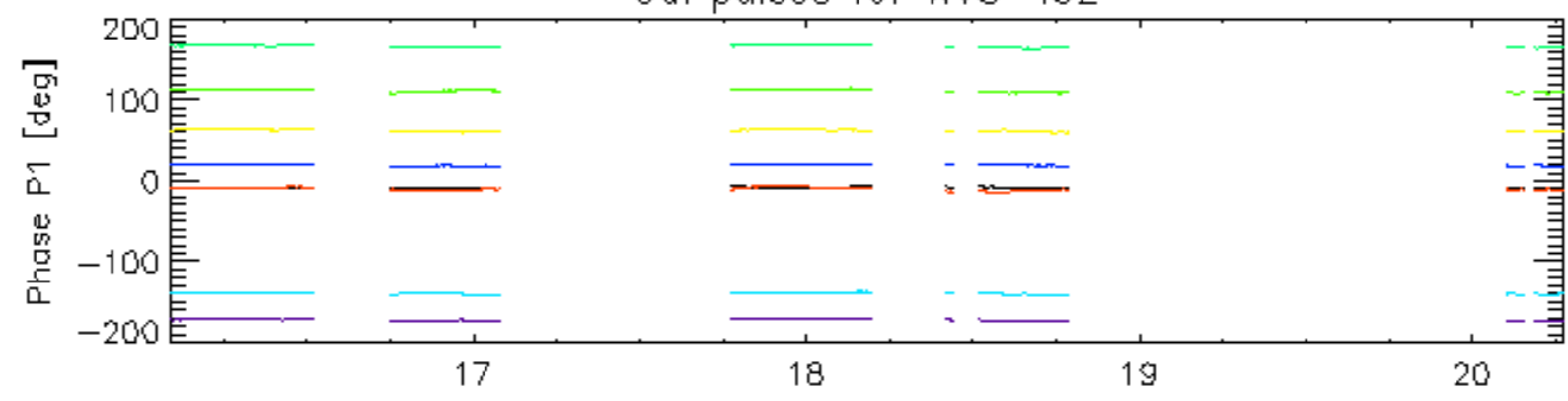


09-Feb

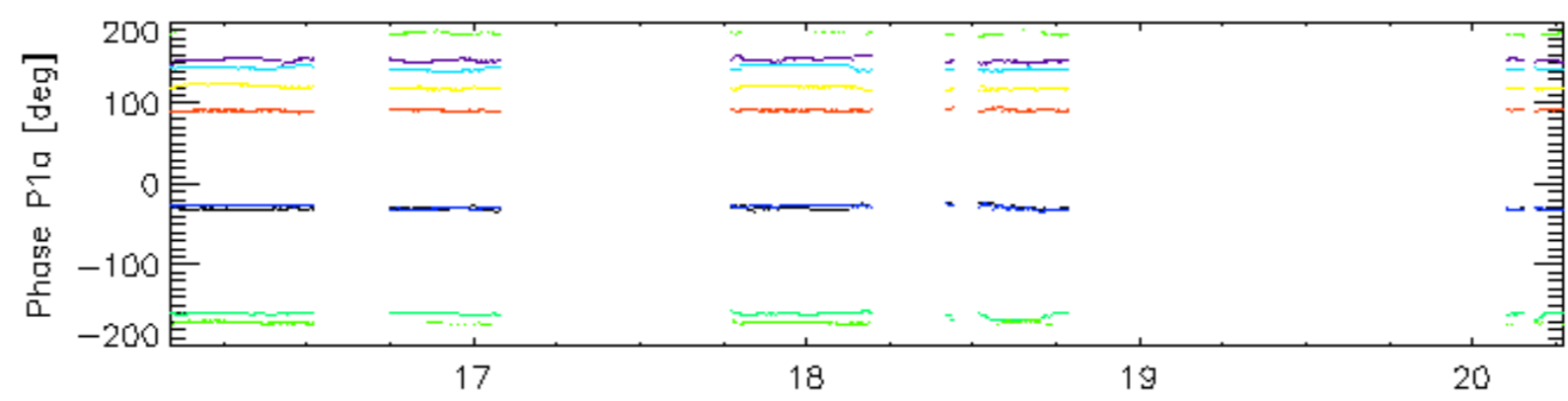


09-Feb

Cal pulses for WVS IS2

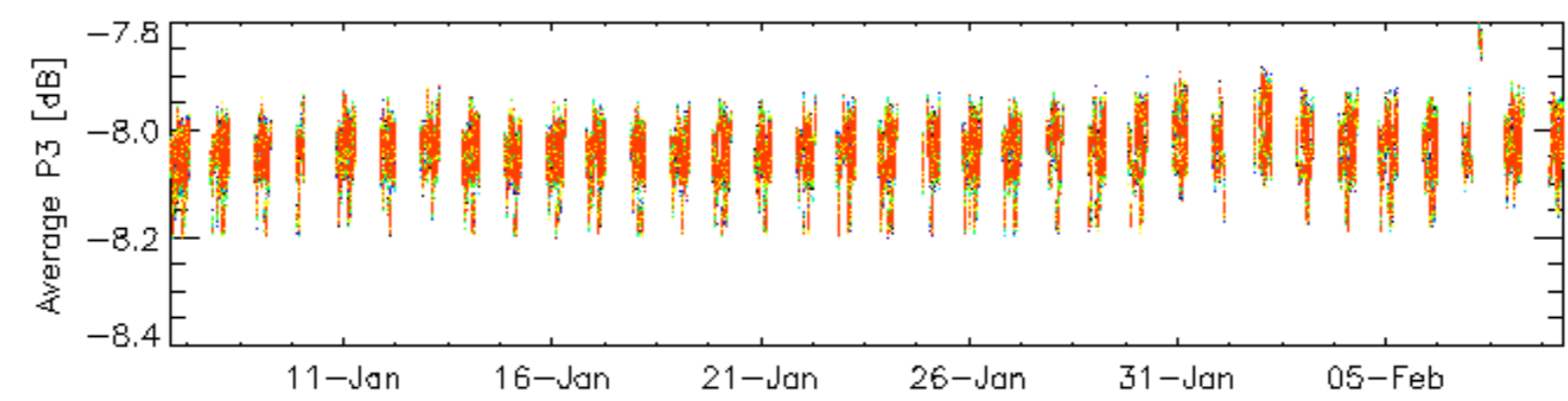
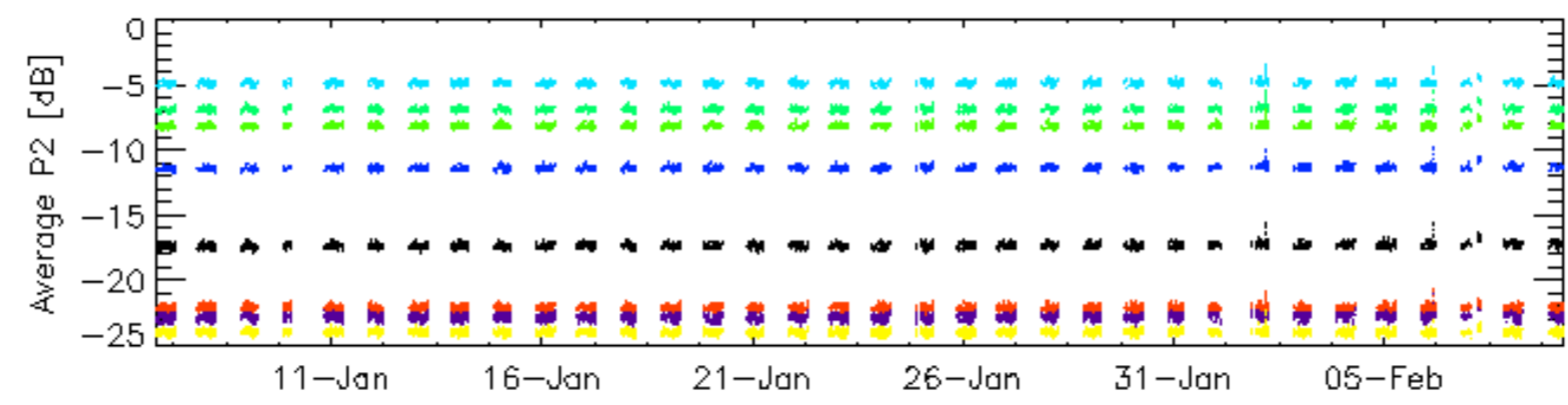
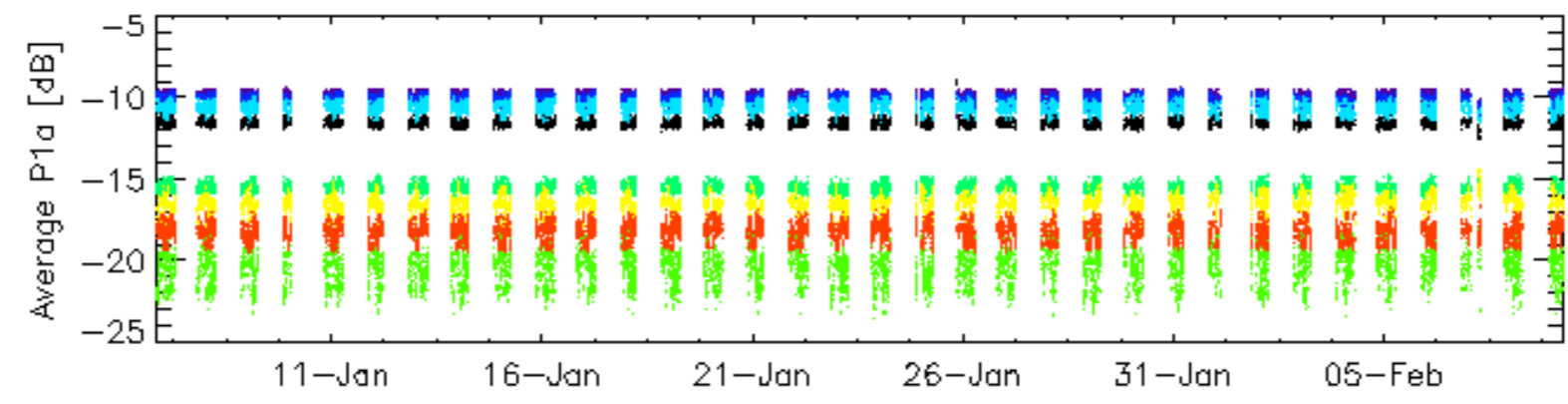
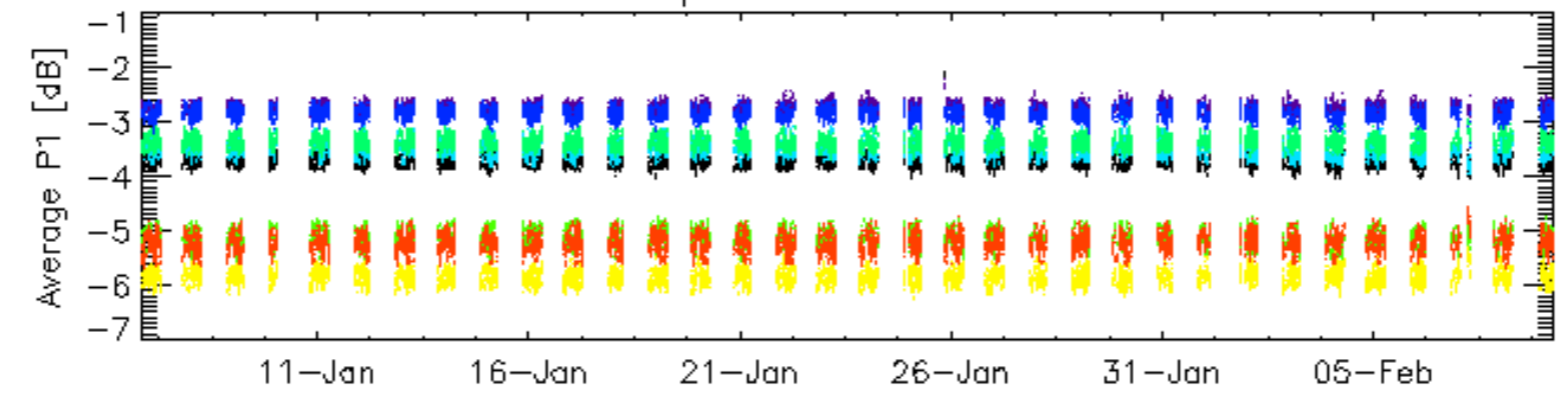


09-Feb



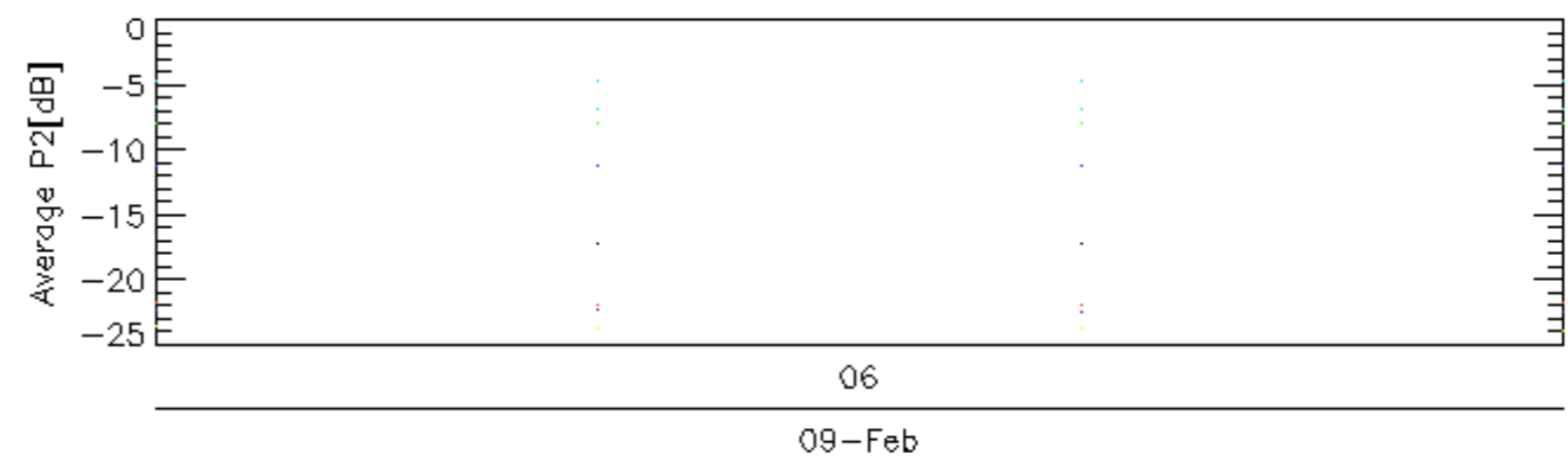
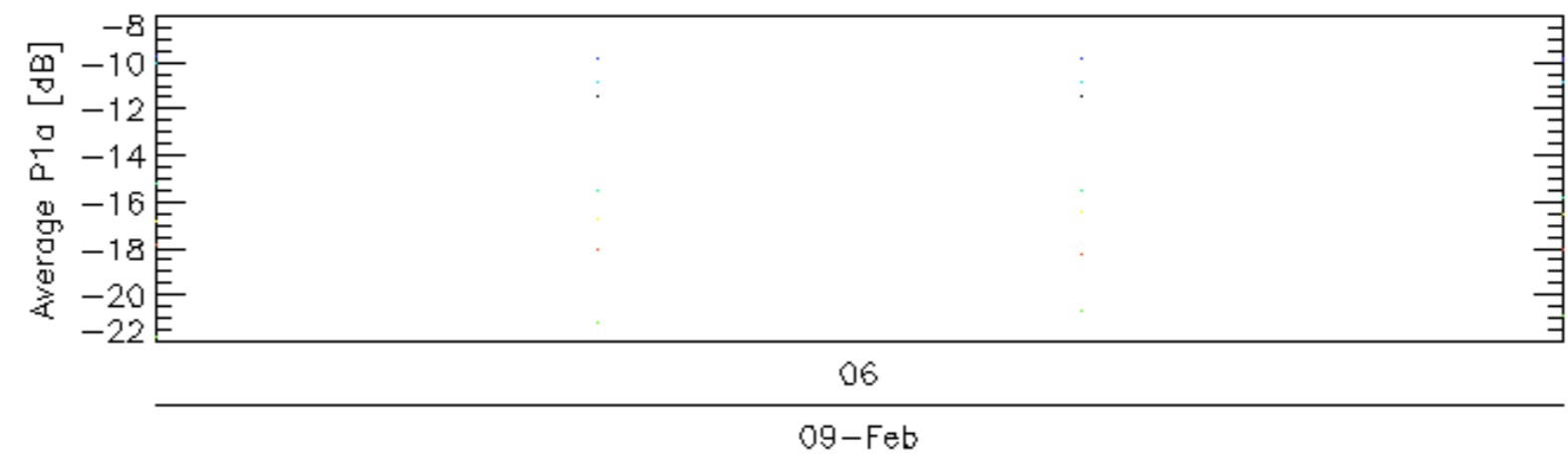
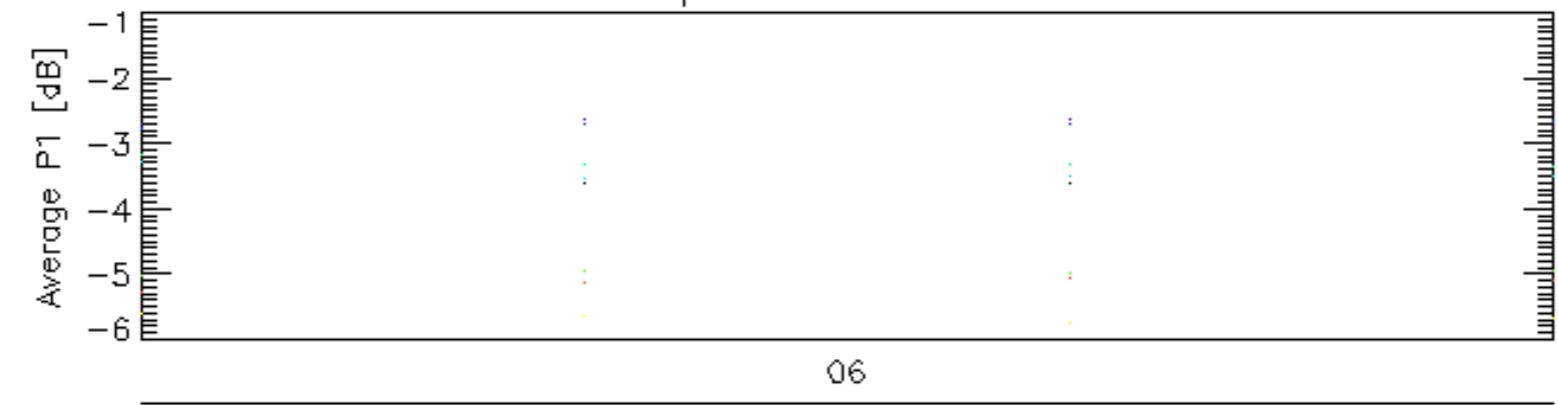
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3



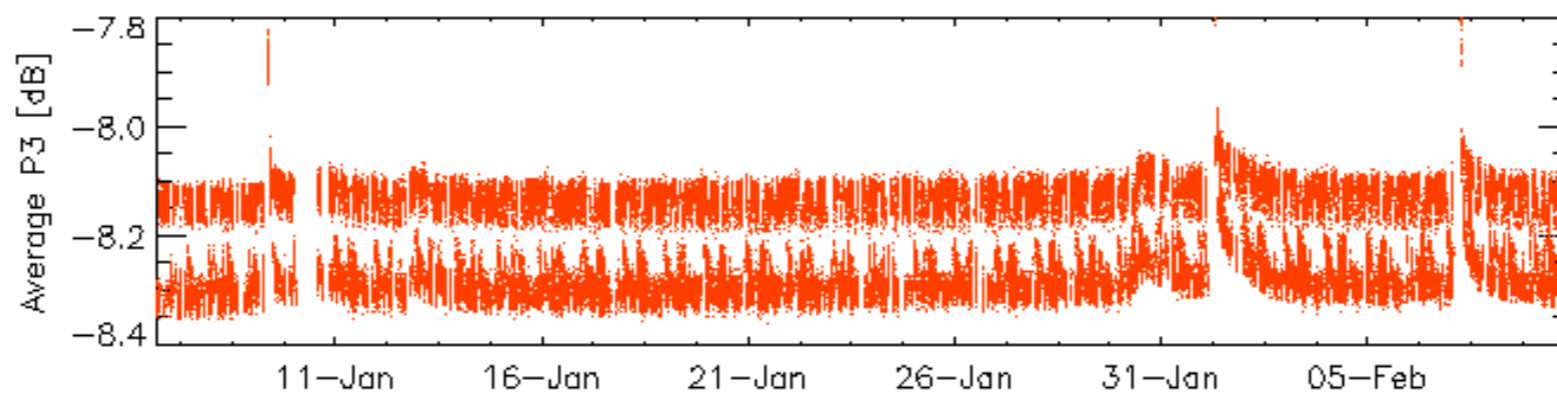
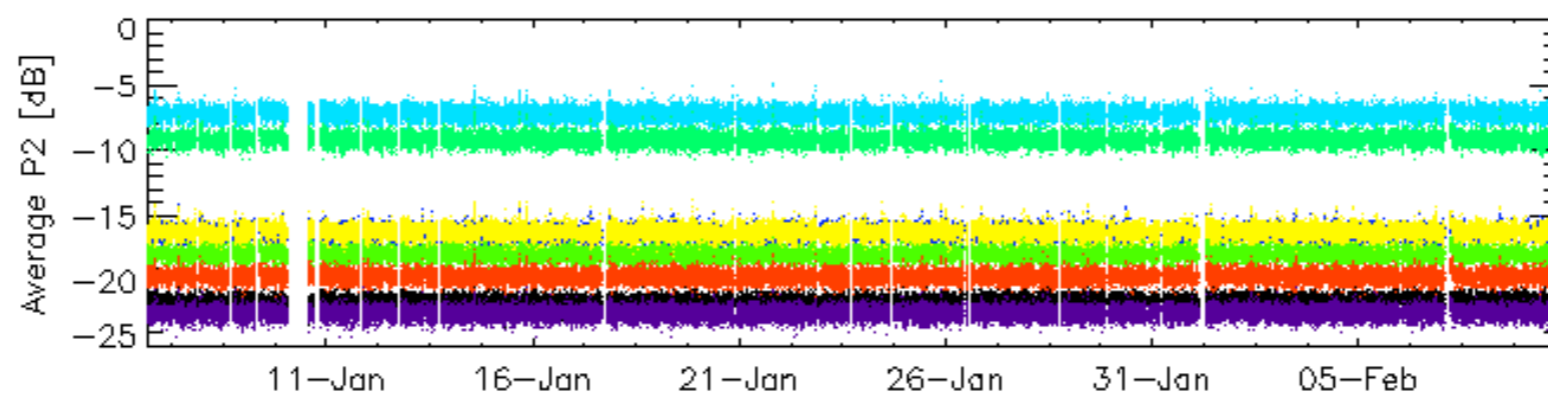
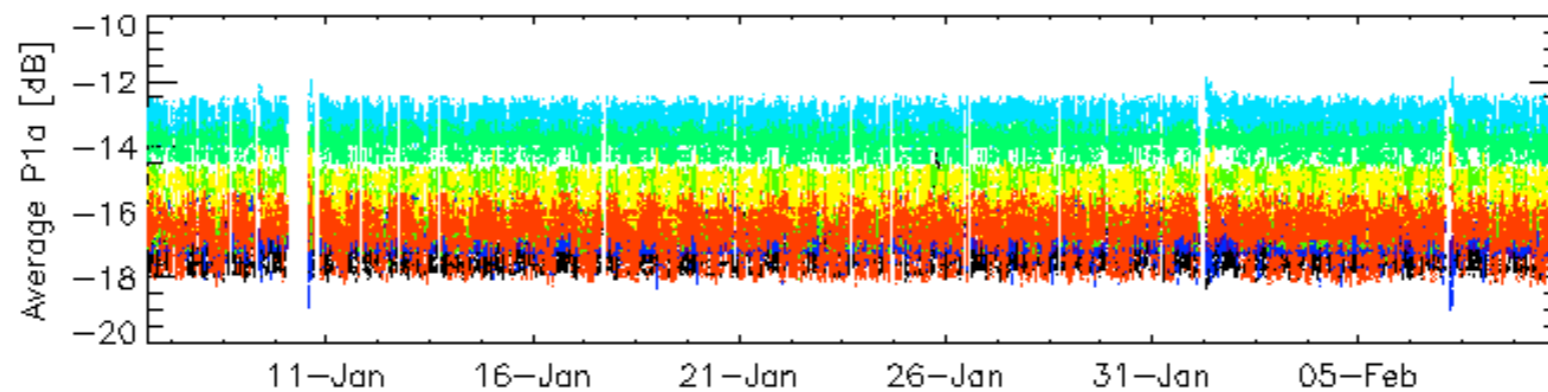
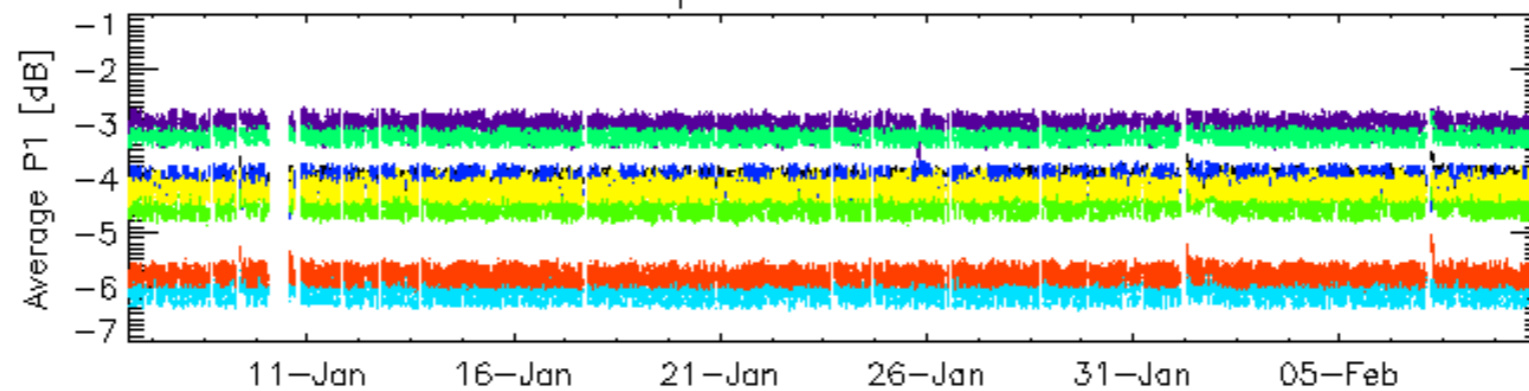
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



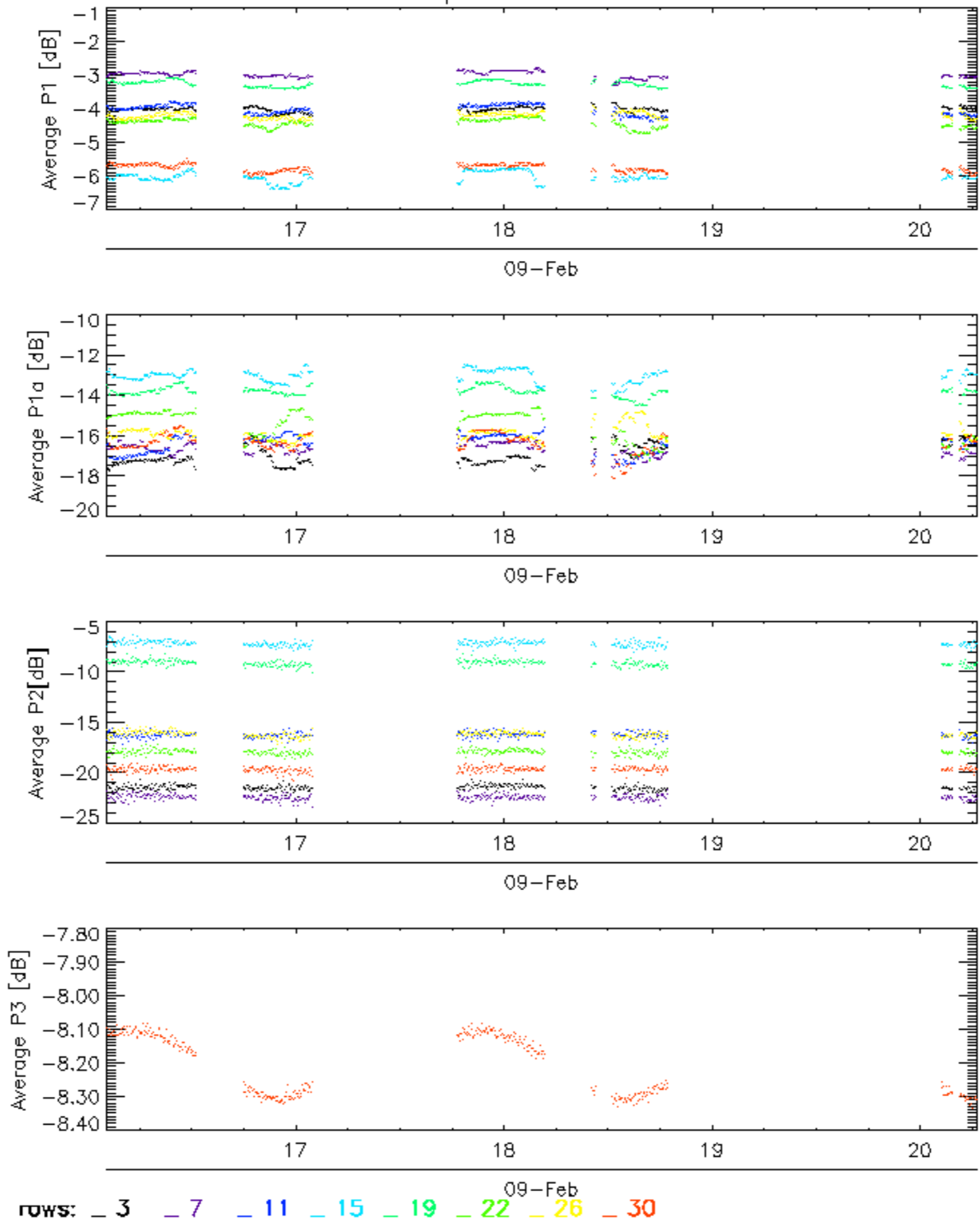
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2



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

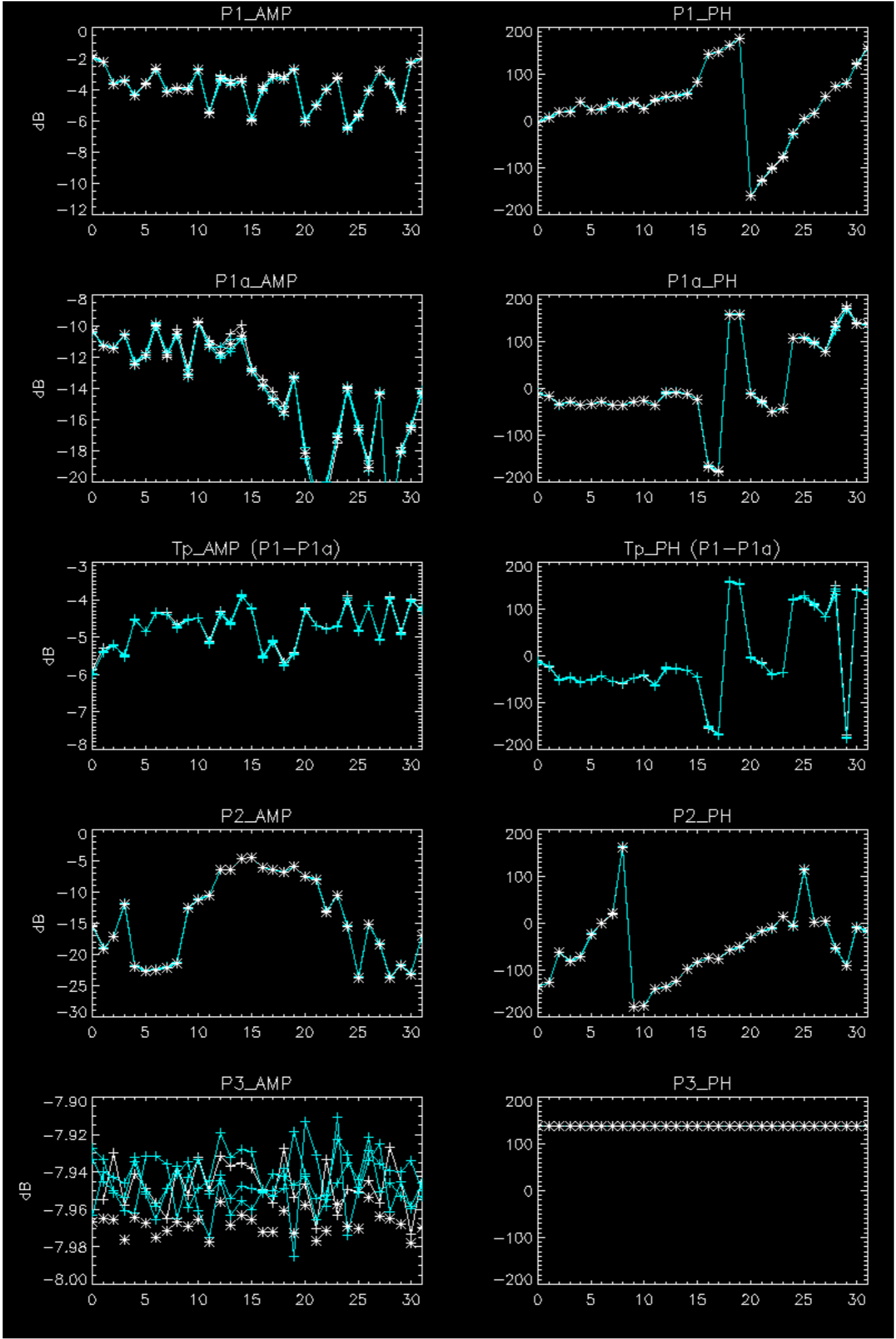
Cal pulses for WVS IS2

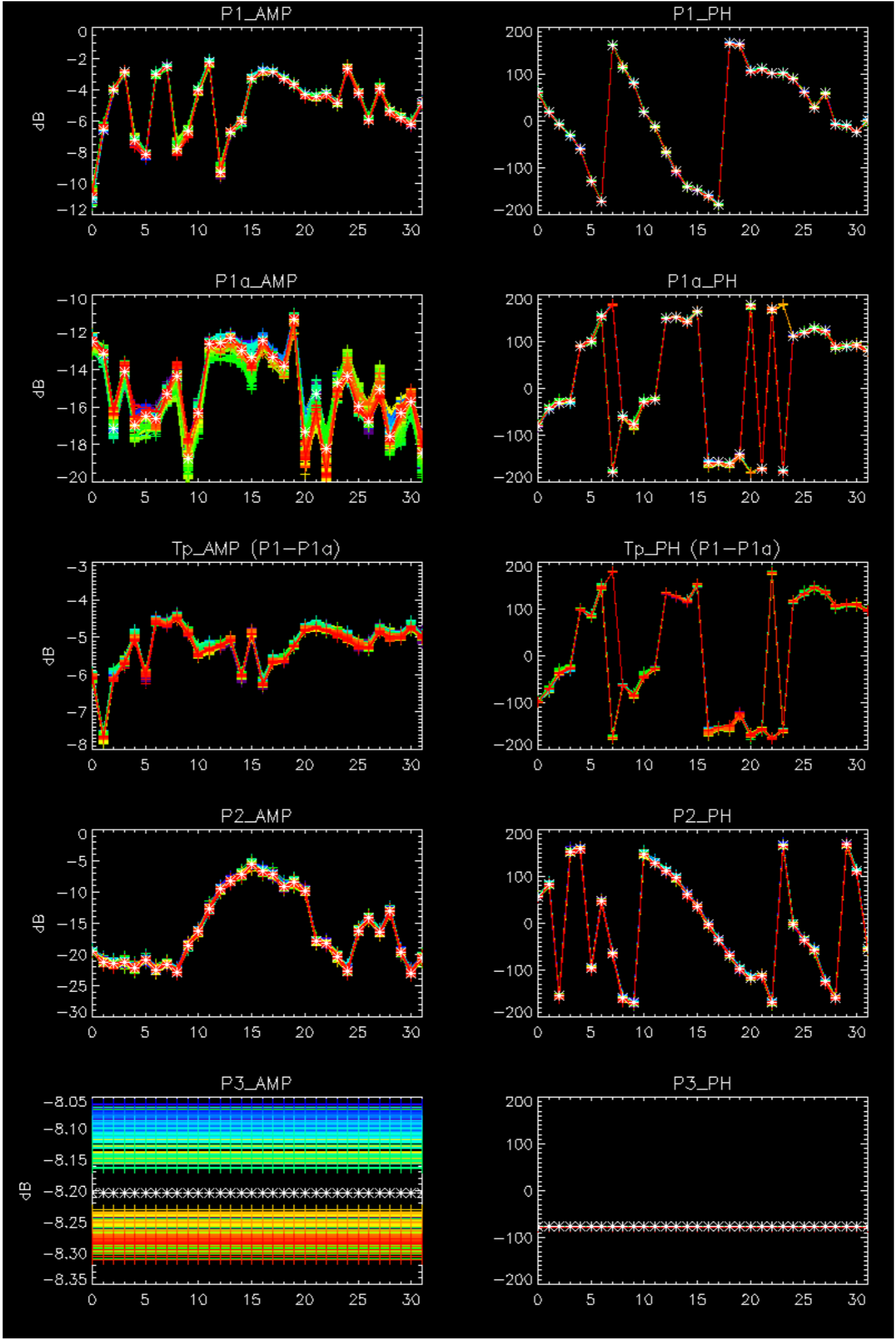


No anomalies observed on available browse products



No anomalies observed.

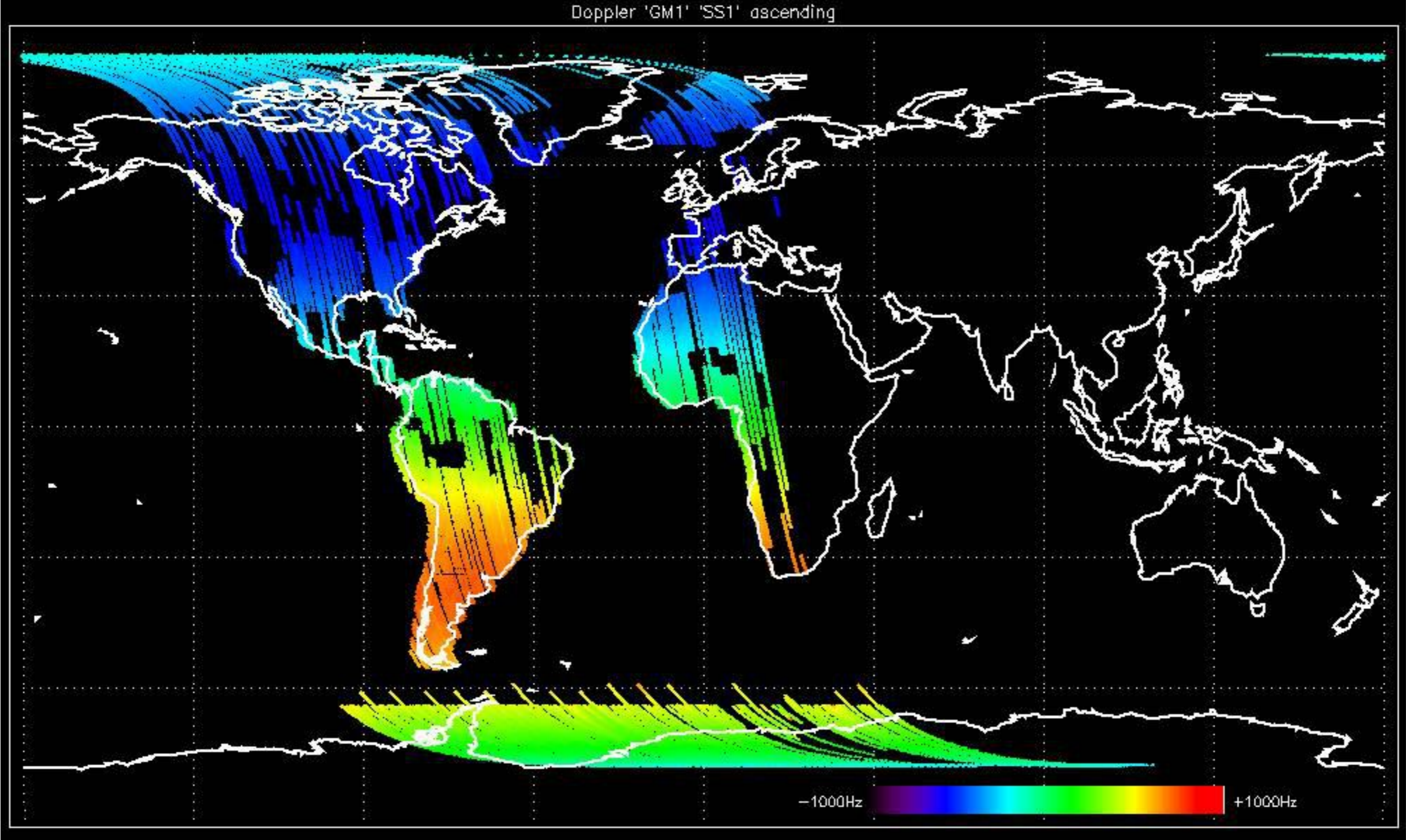




- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

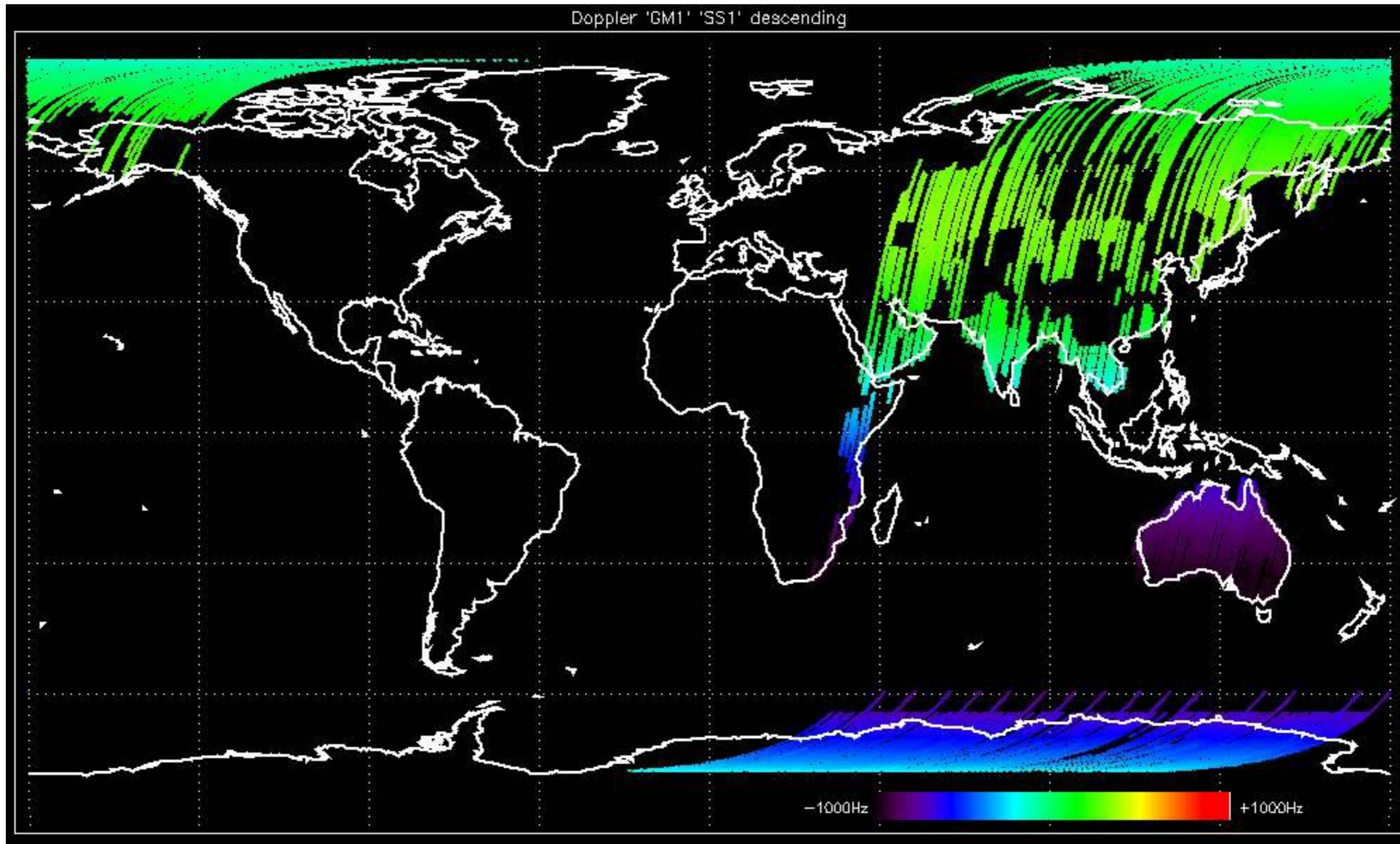


Doppler 'GM1' 'SS1' ascending



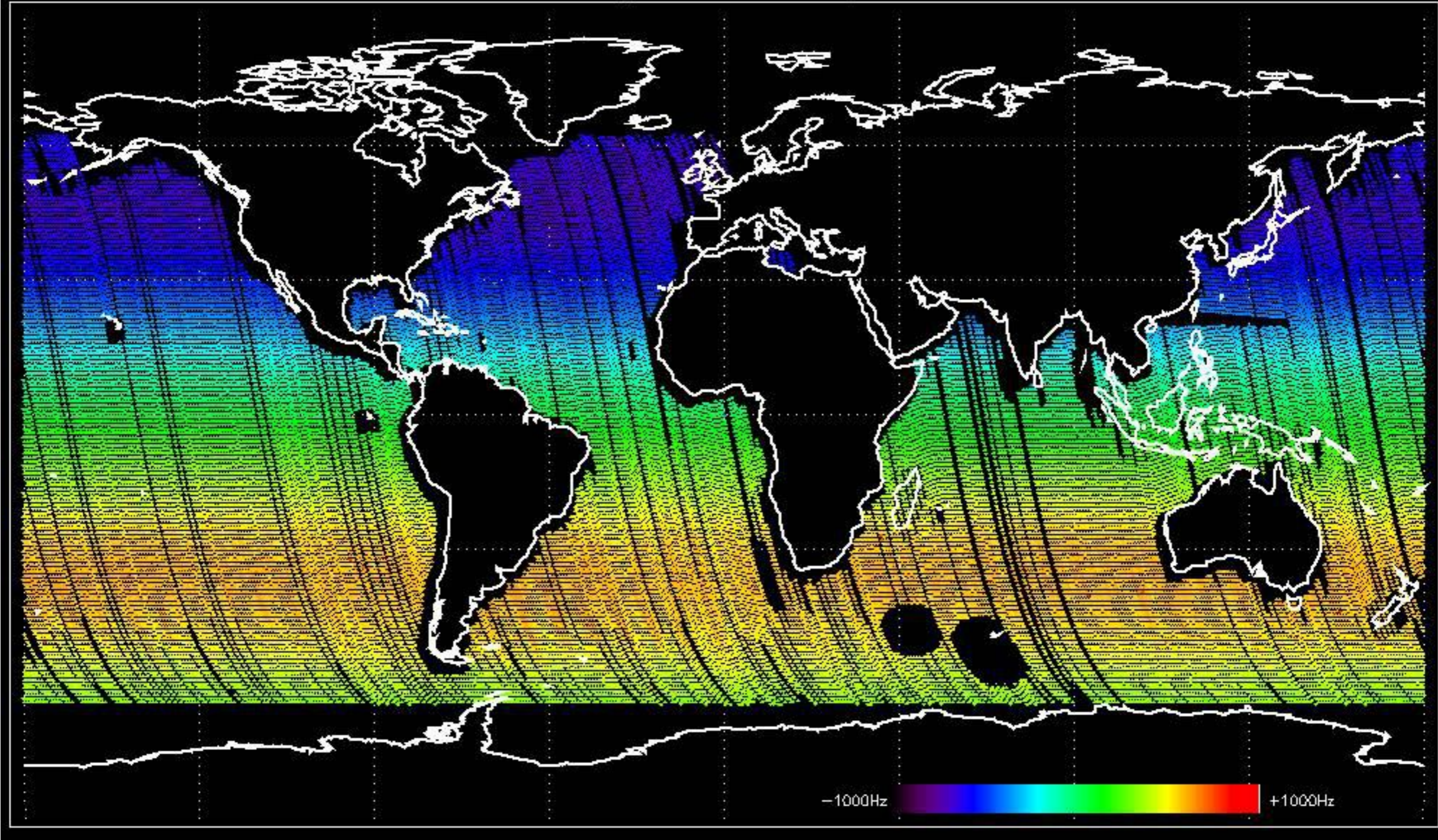


Doppler 'GM1' 'SS1' descending



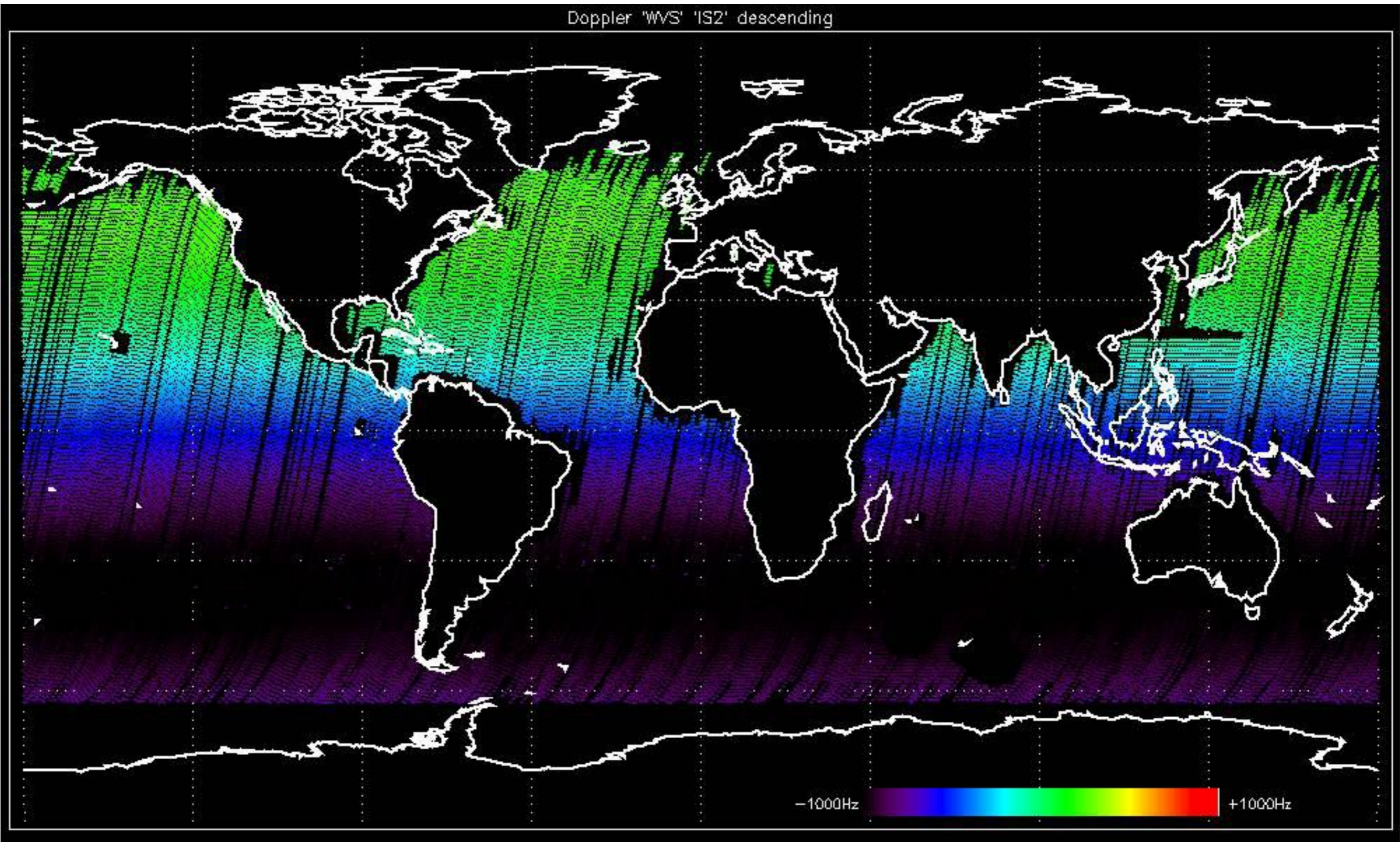


Doppler 'WVS' 'IS2' ascending

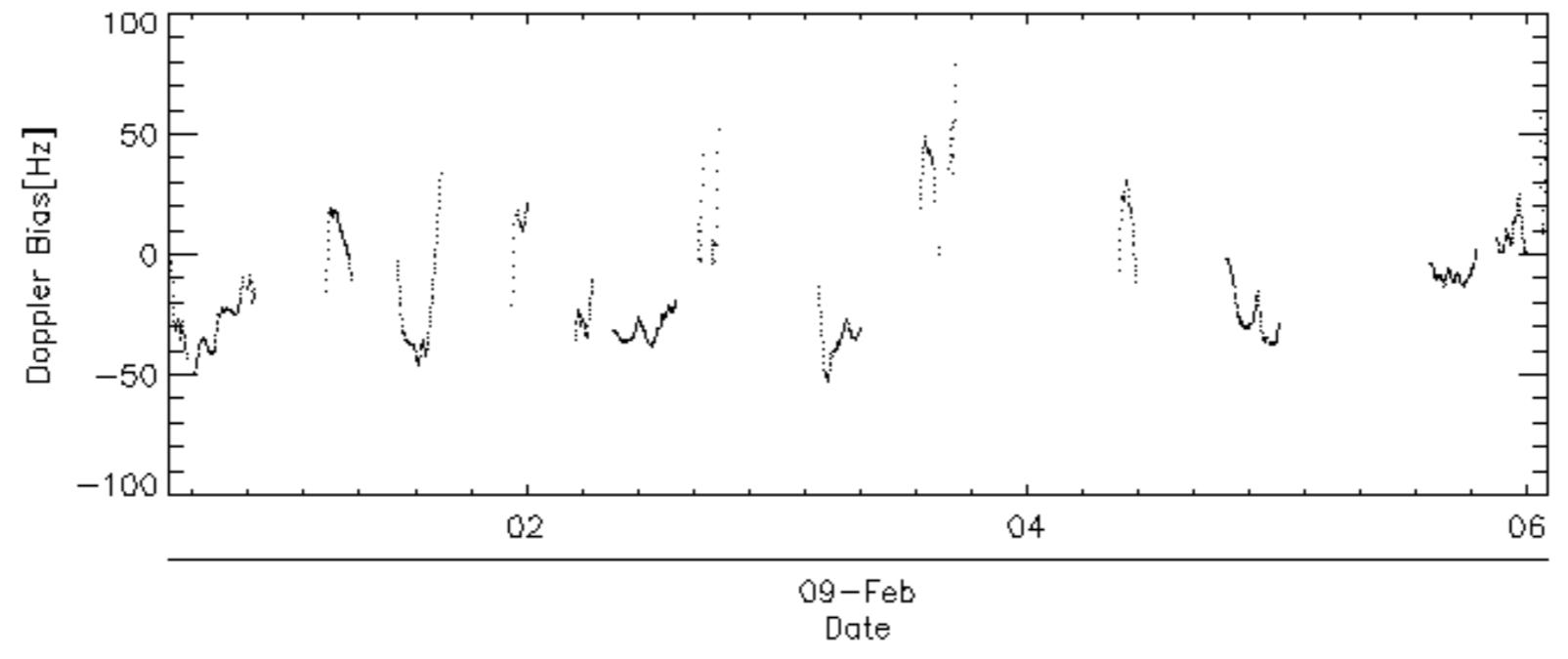
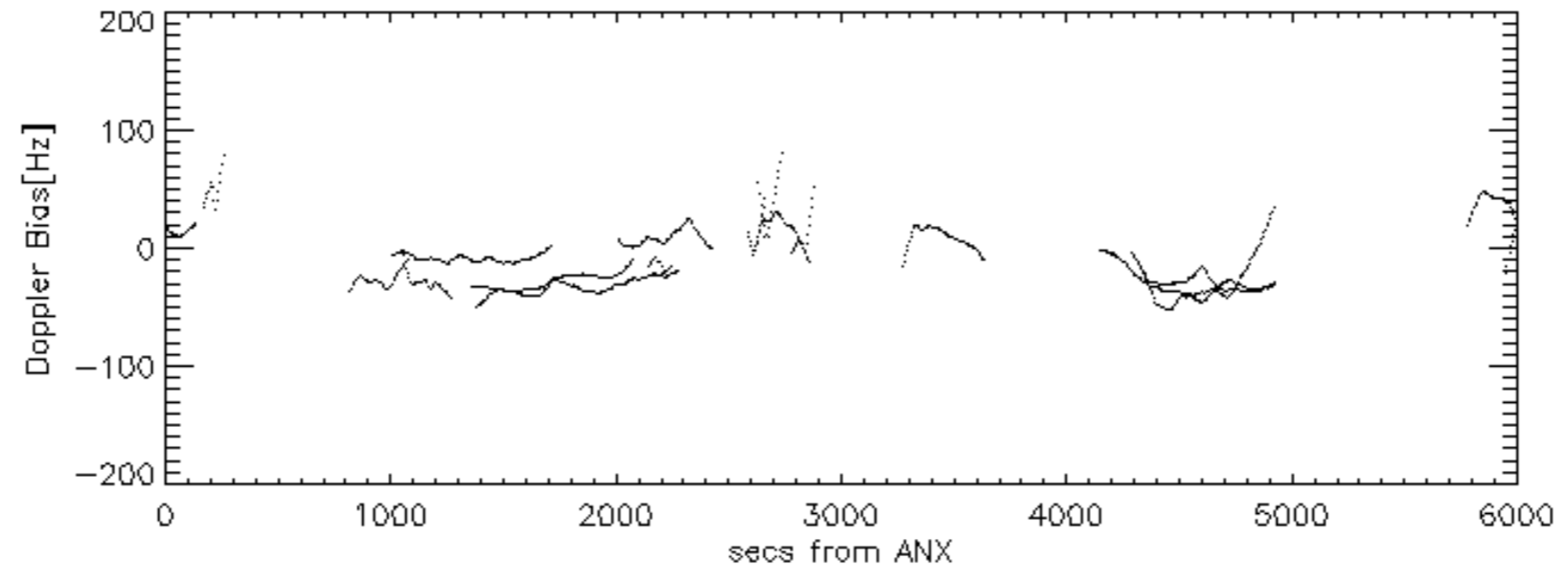
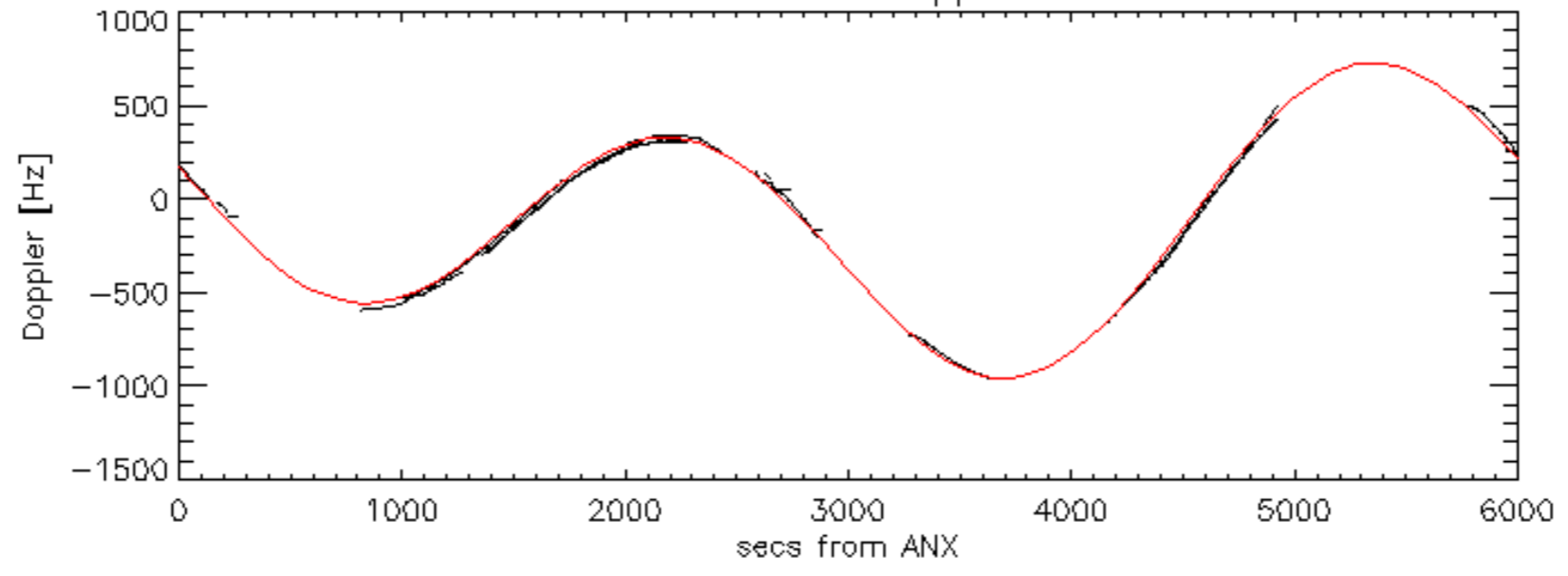




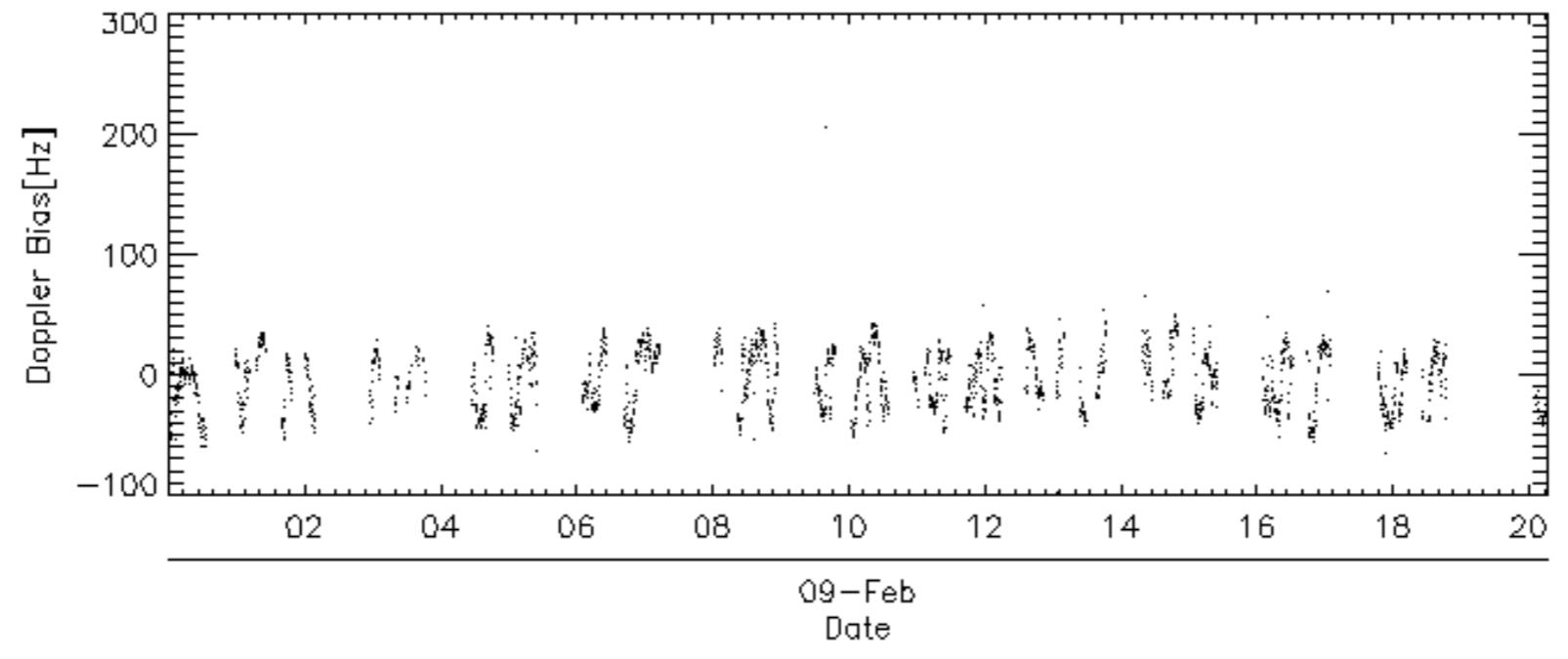
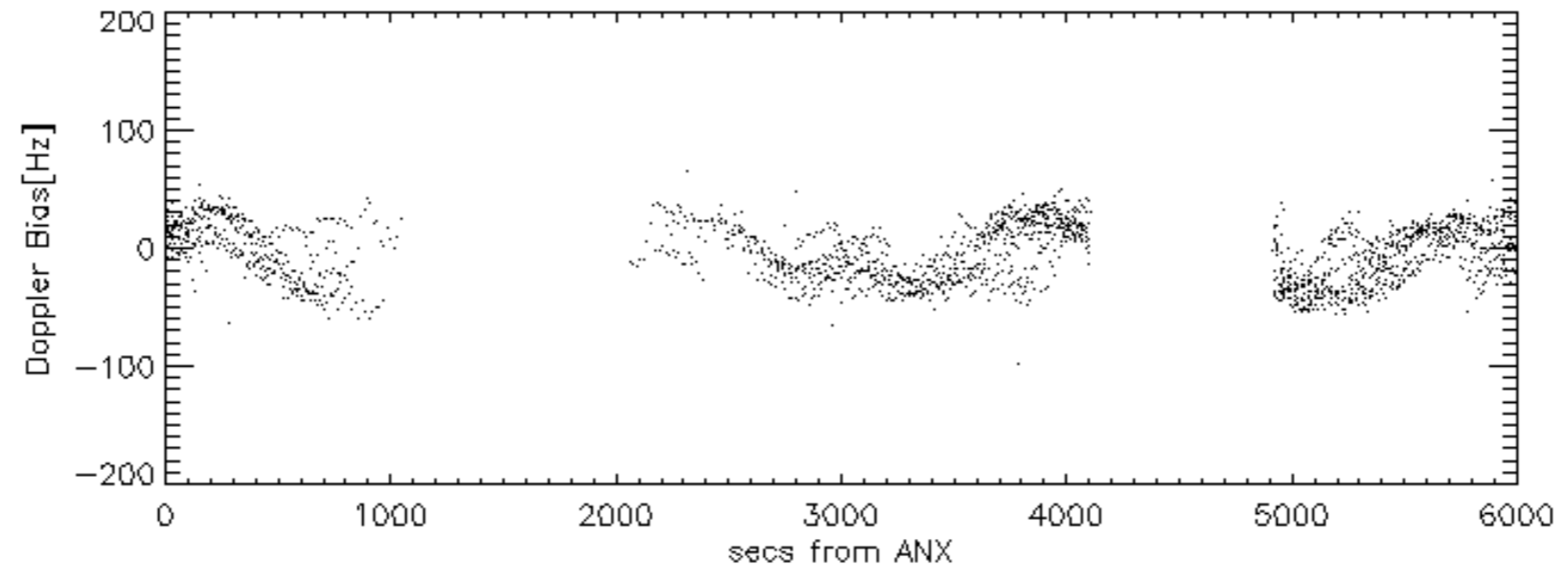
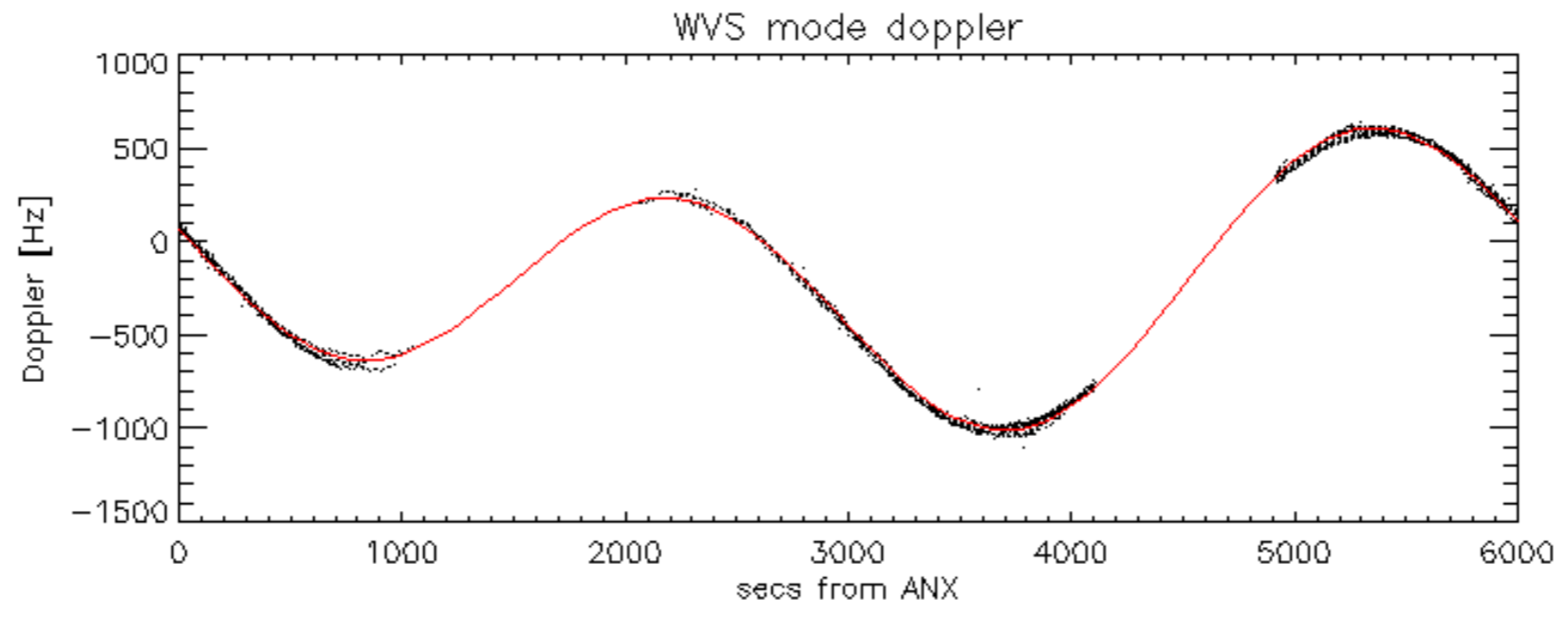
Doppler 'WVS' 'IS2' descending



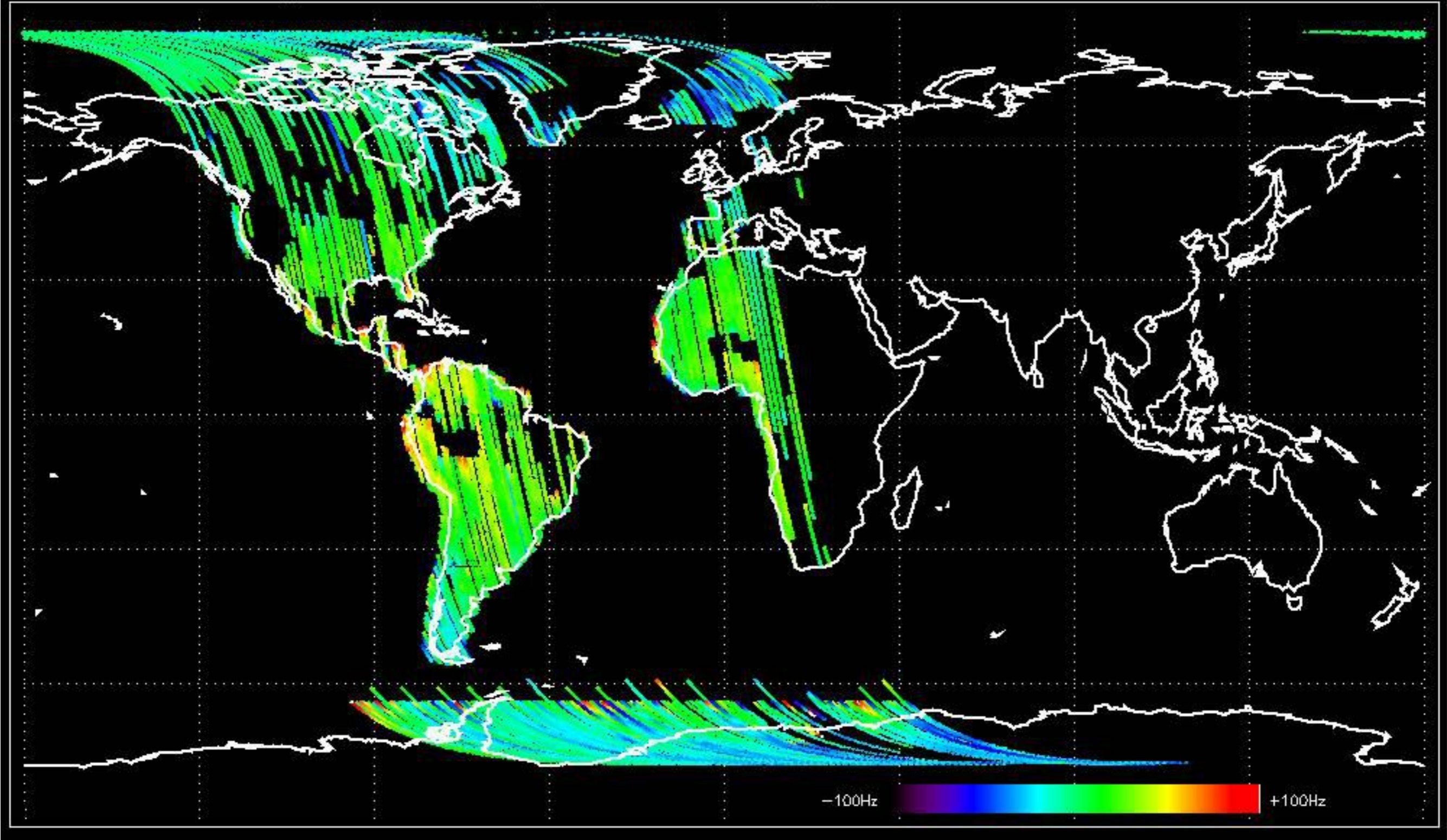
GM1 mode doppler





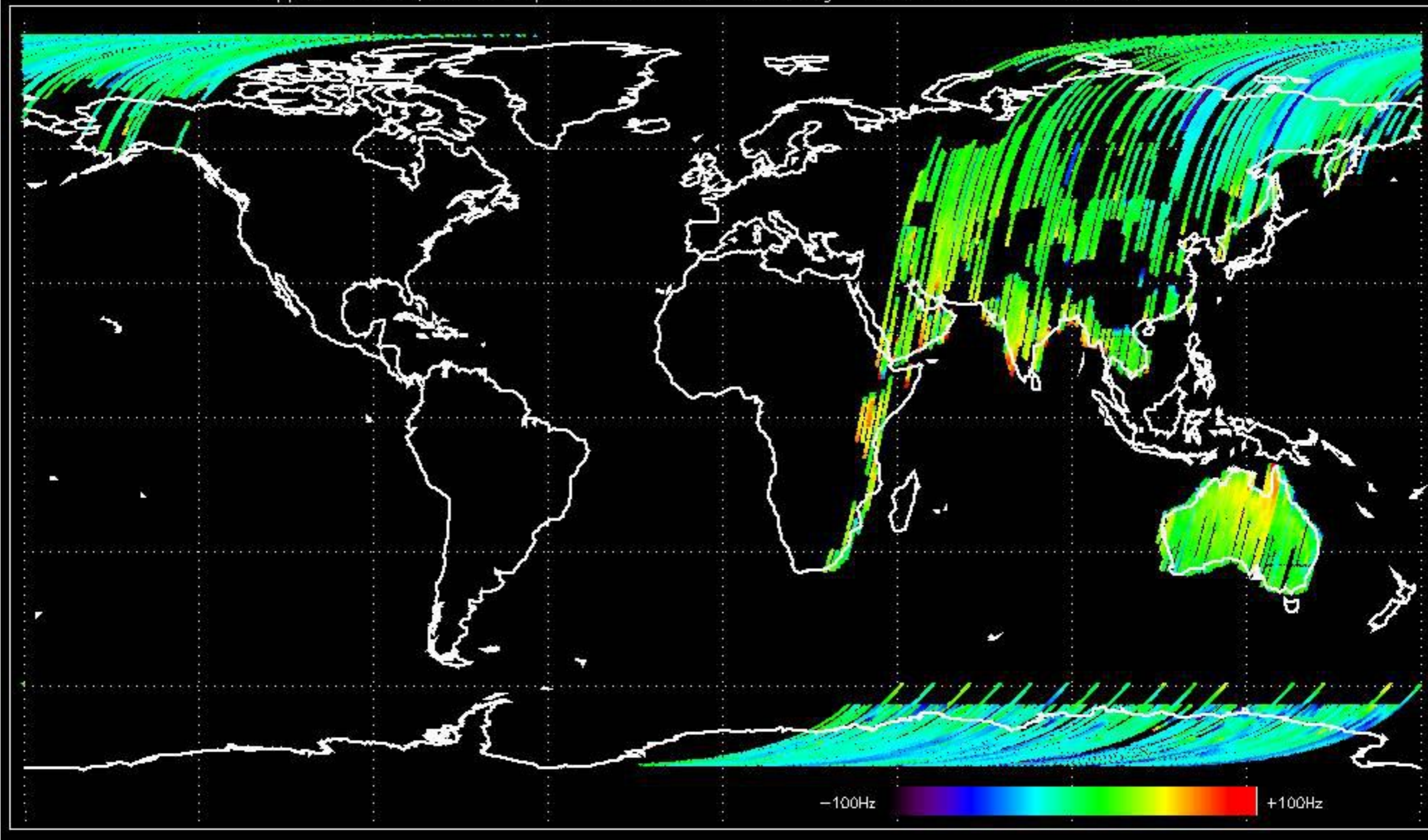


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.710618 Hz



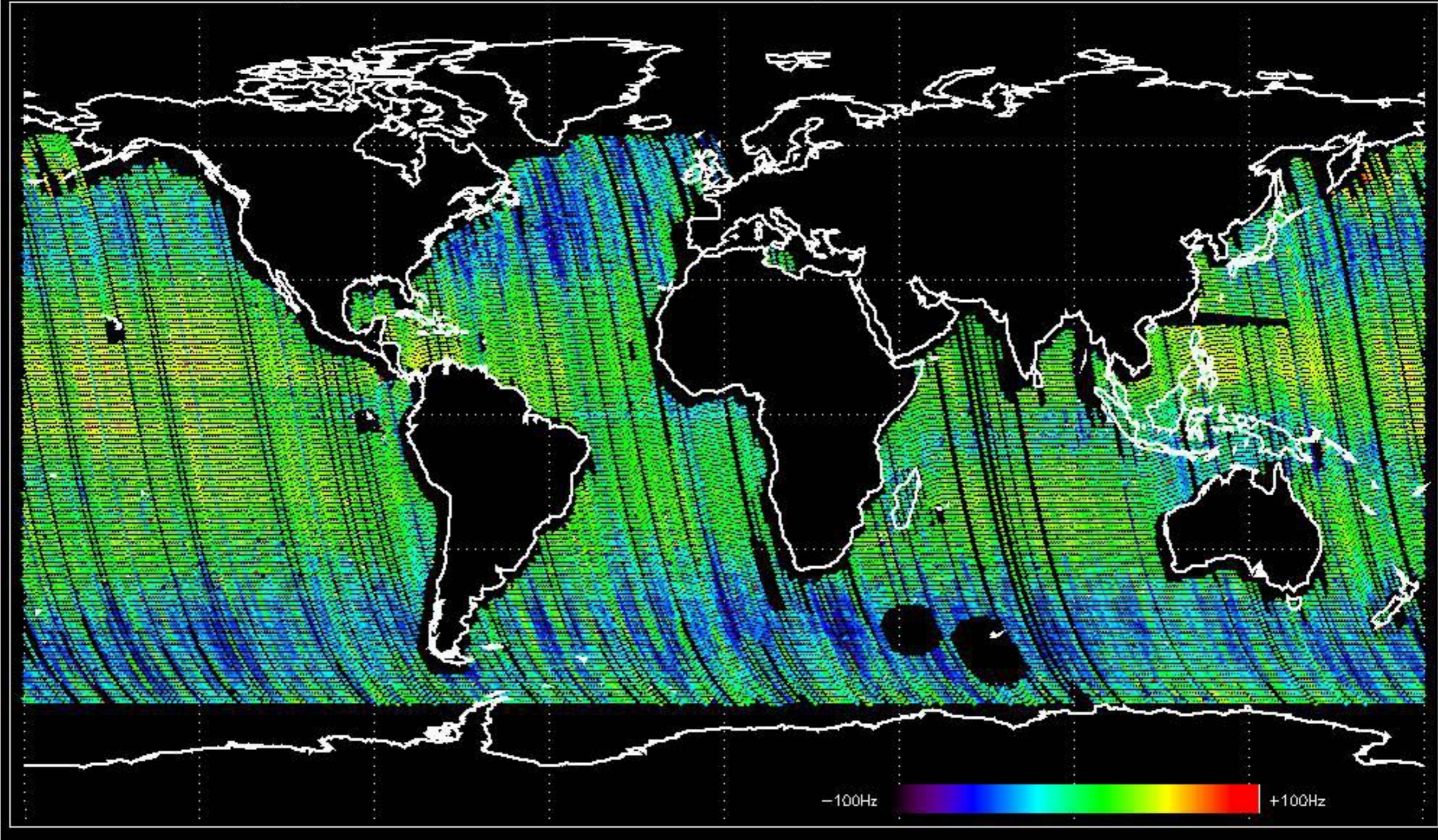


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.774024 Hz



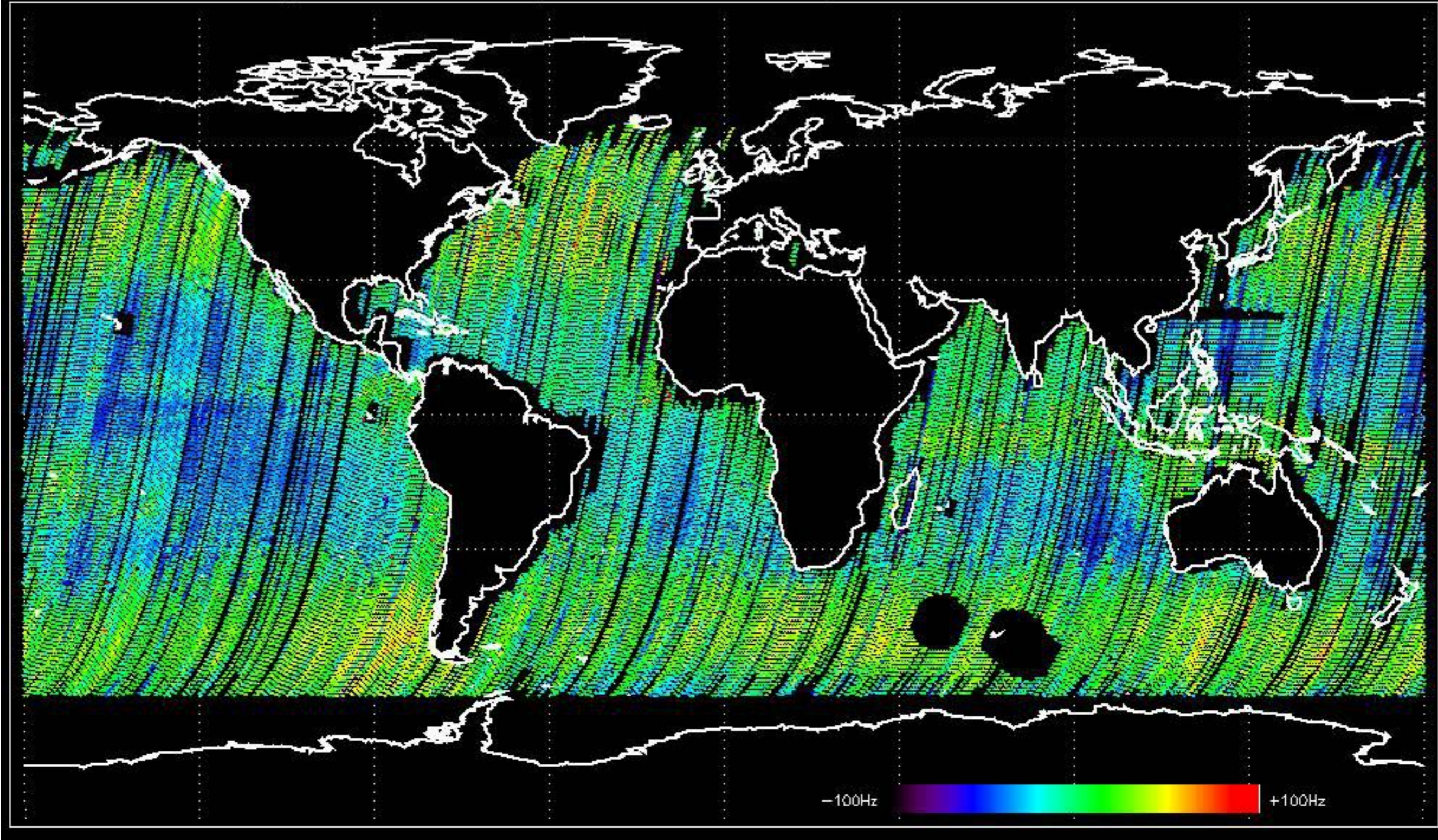


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.2528593 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.325781 Hz





No anomalies observed on available MS products:



No anomalies observed.



















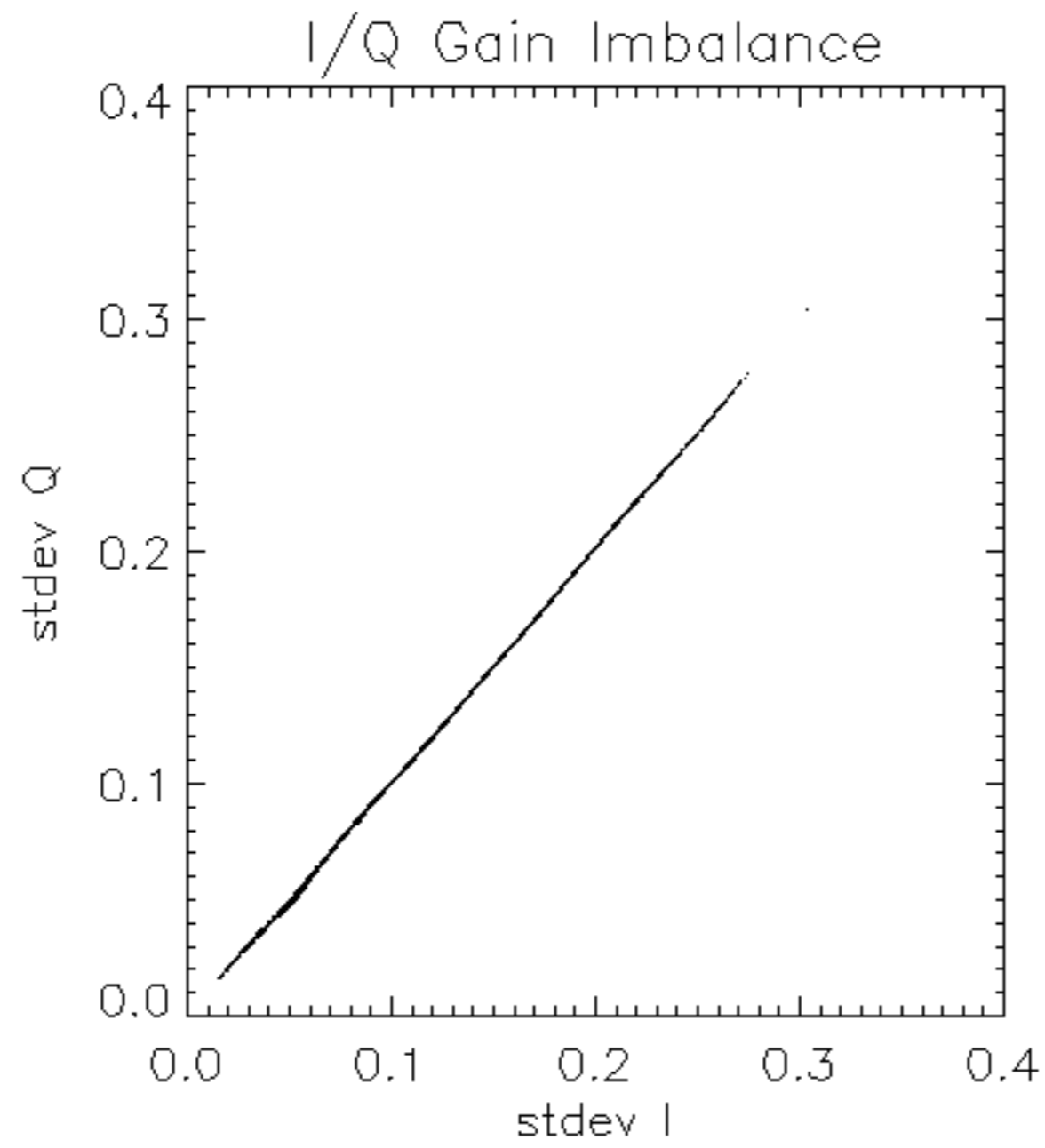


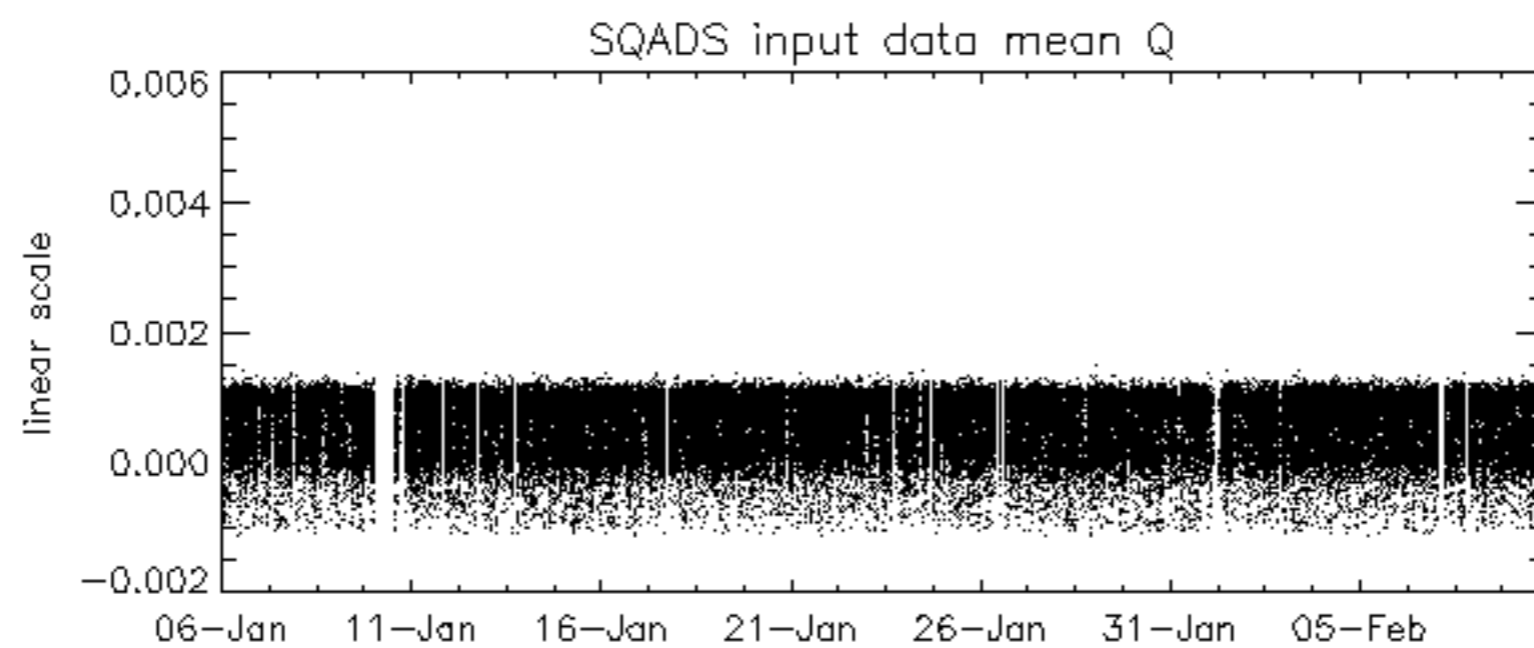
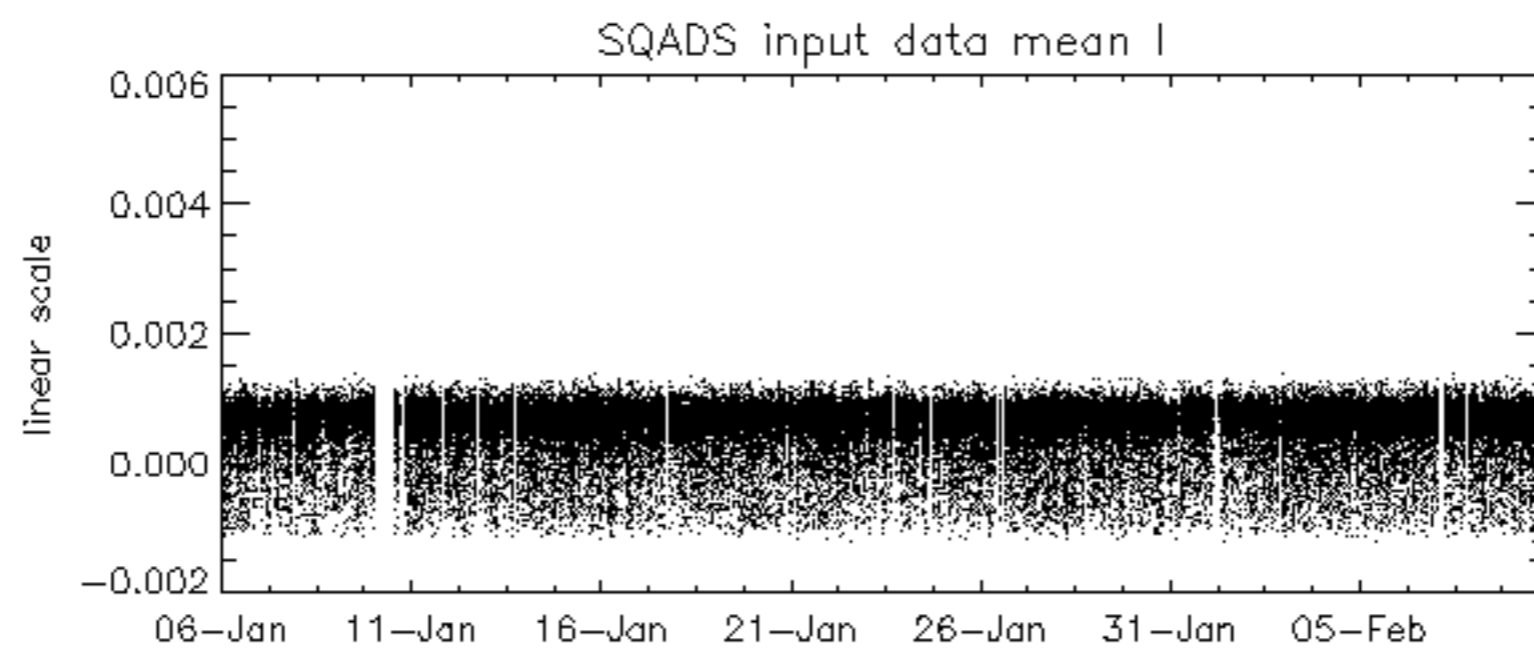
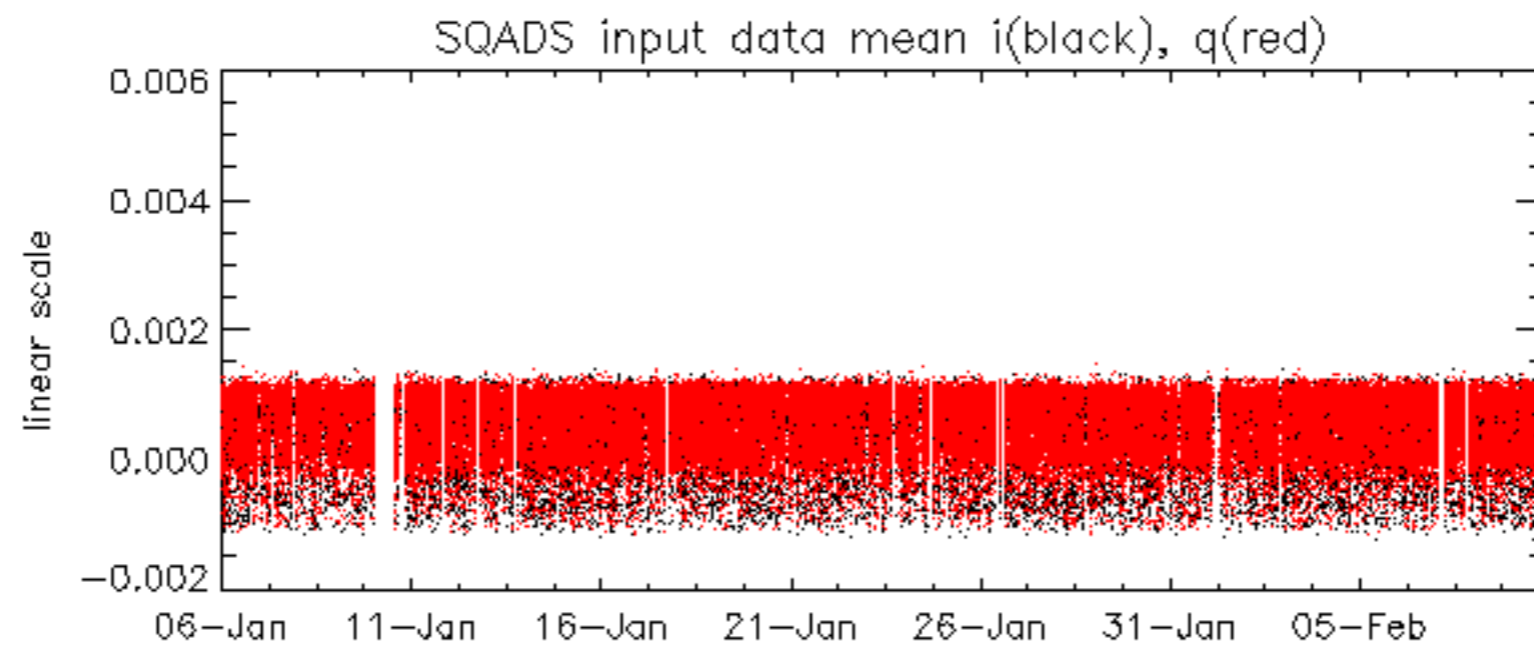


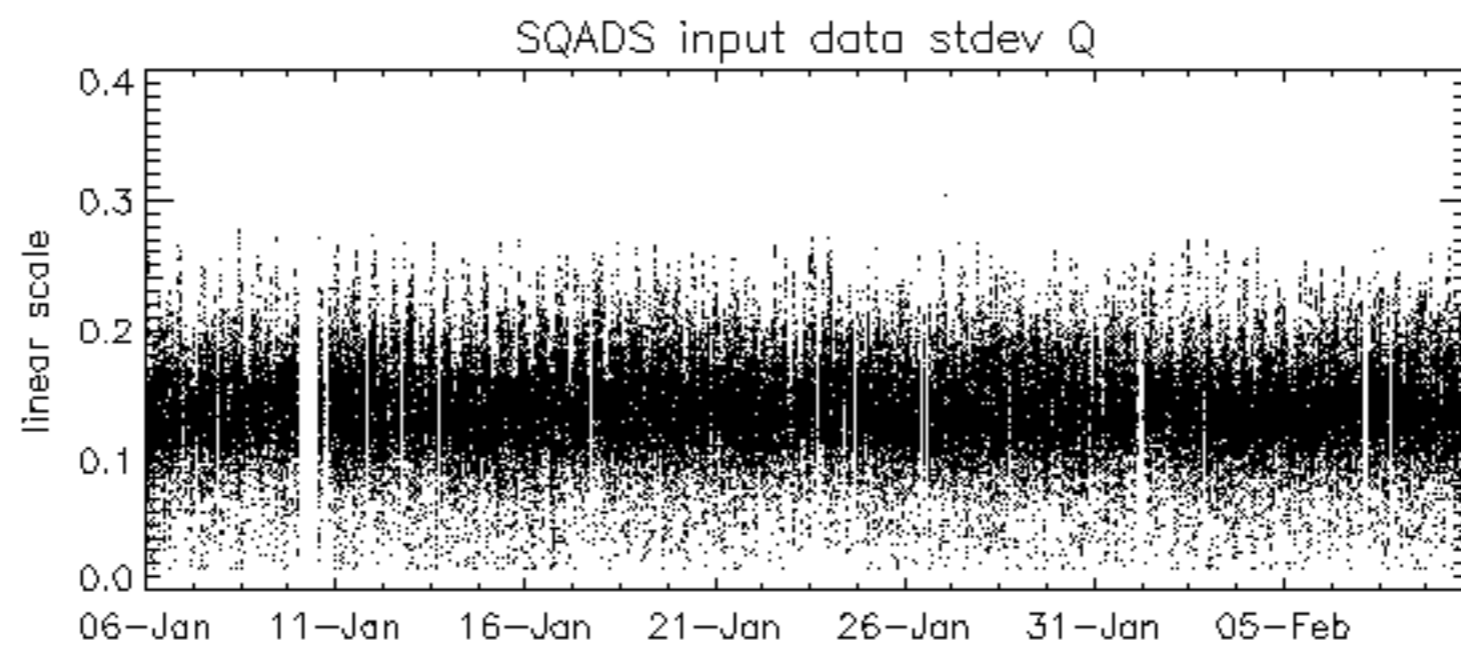
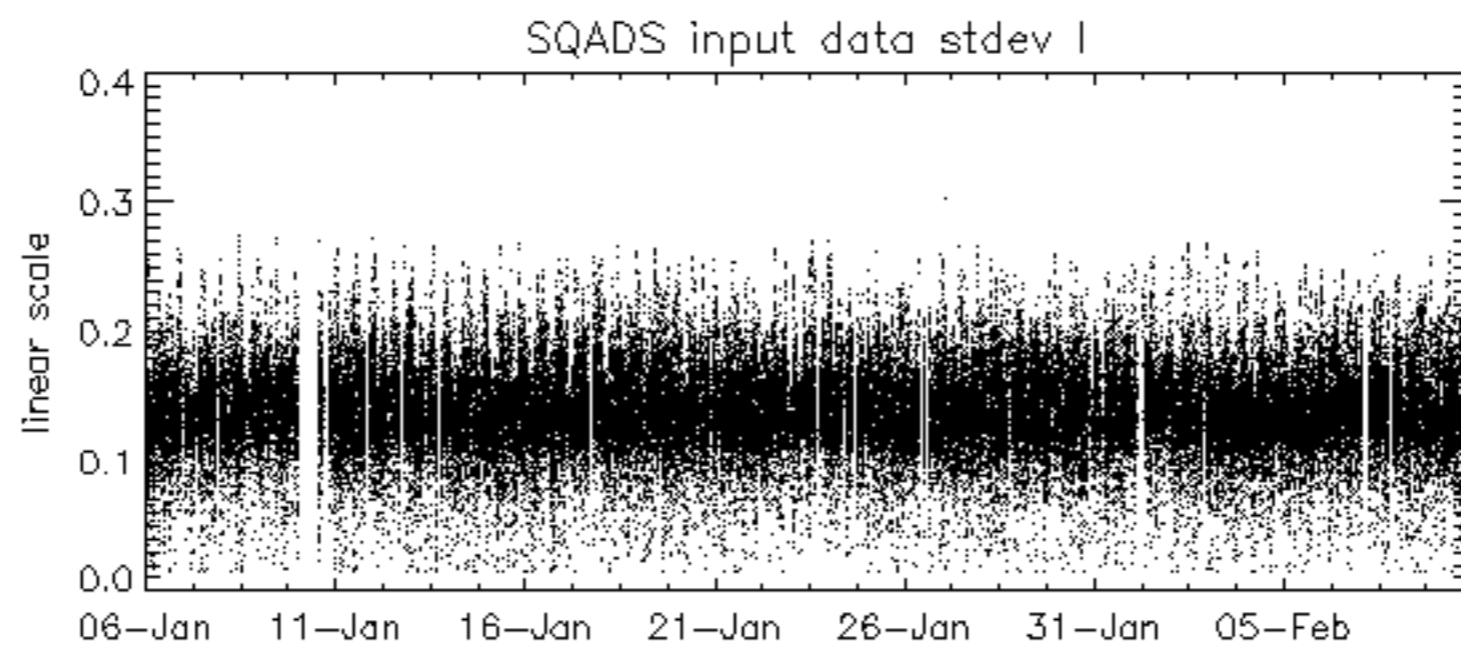
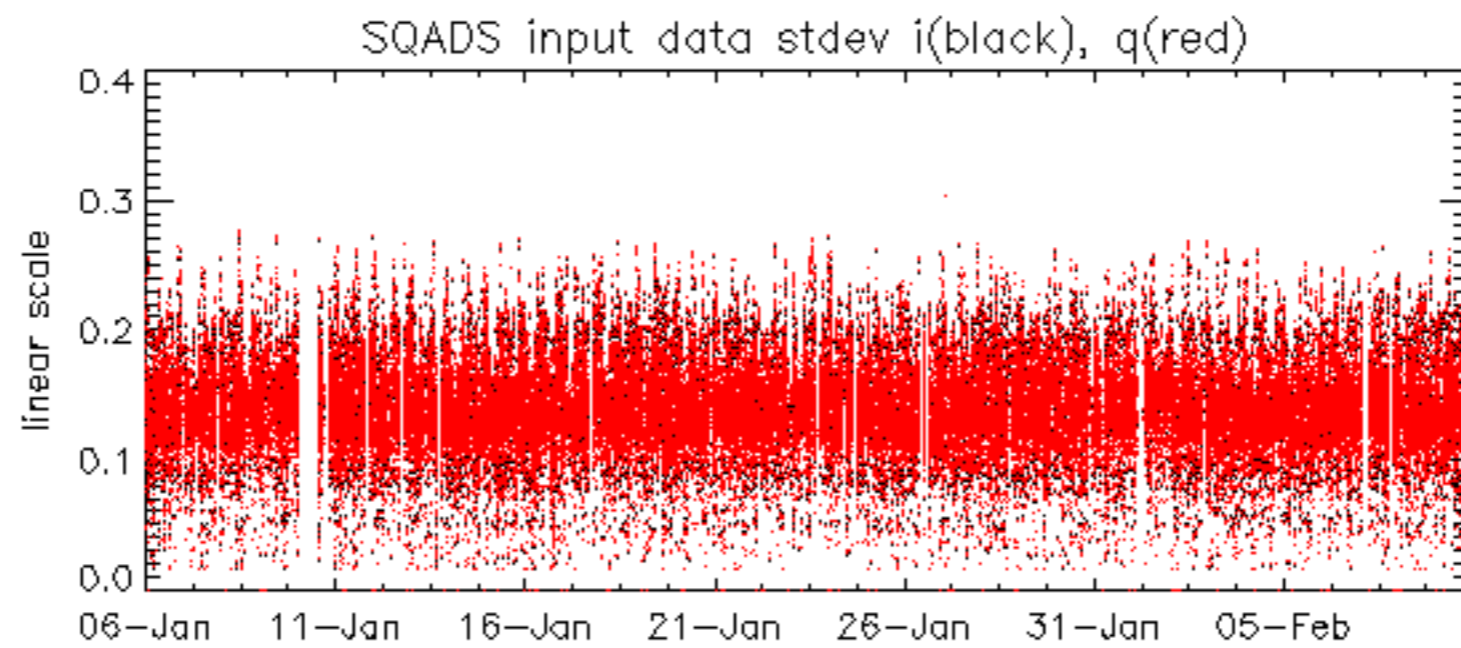
























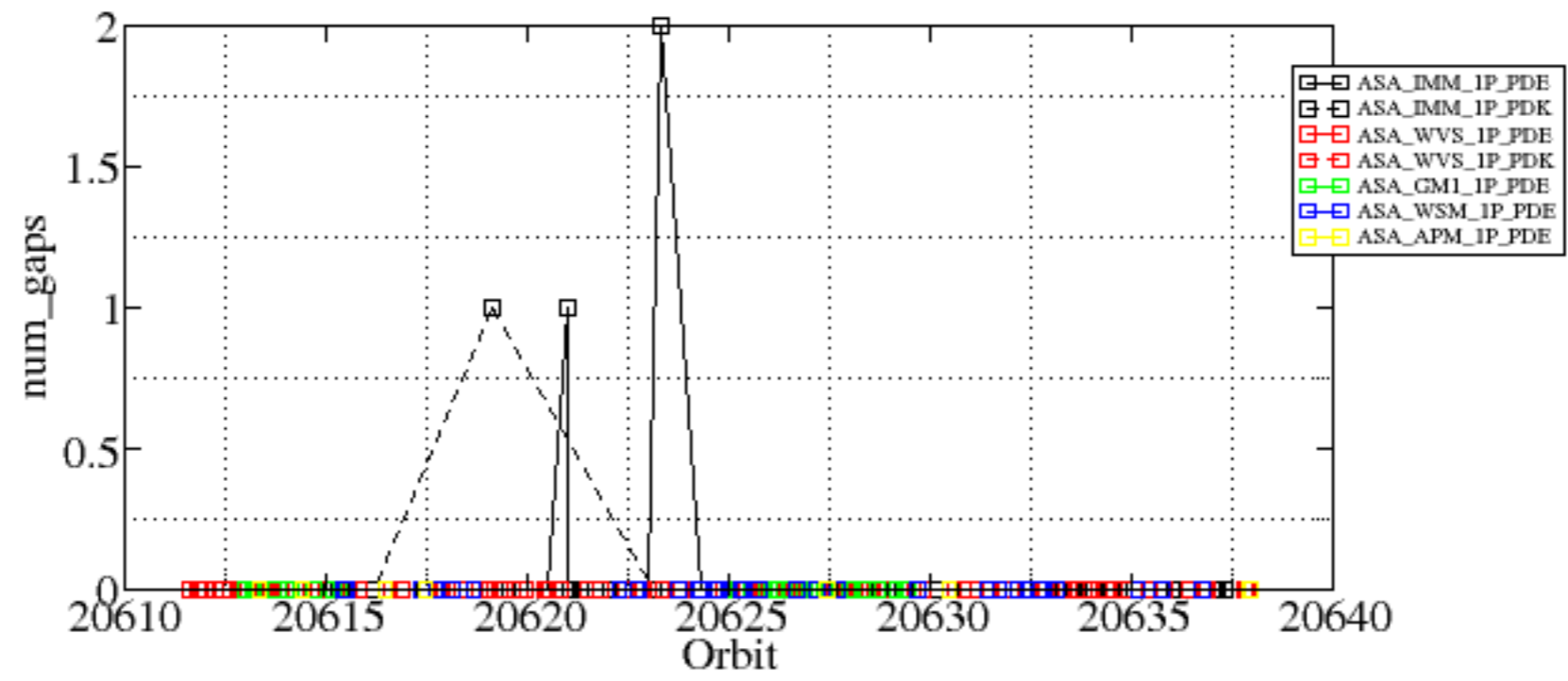




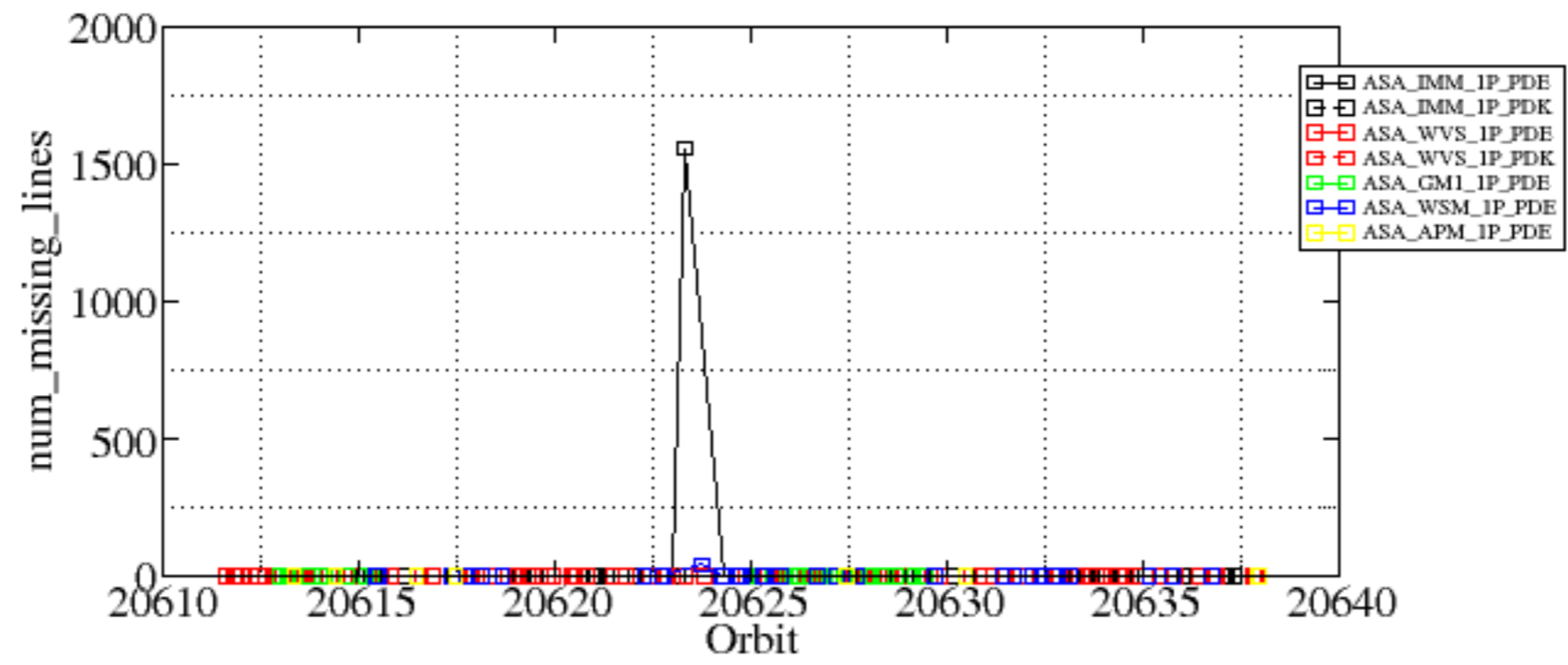
Summary of analysis for the last 3 days 2006020[890]

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_1PNPDE20060208_155358_000001592045_00025_20620_2377.N1	1	0
ASA_IMM_1PNPDE20060208_194758_000000622045_00028_20623_2412.N1	2	1556
ASA_IMM_1PNPDK20060208_124556_000000692045_00024_20619_0769.N1	1	0
ASA_WSM_1PNPDE20060208_202937_000000672045_00028_20623_4225.N1	0	41











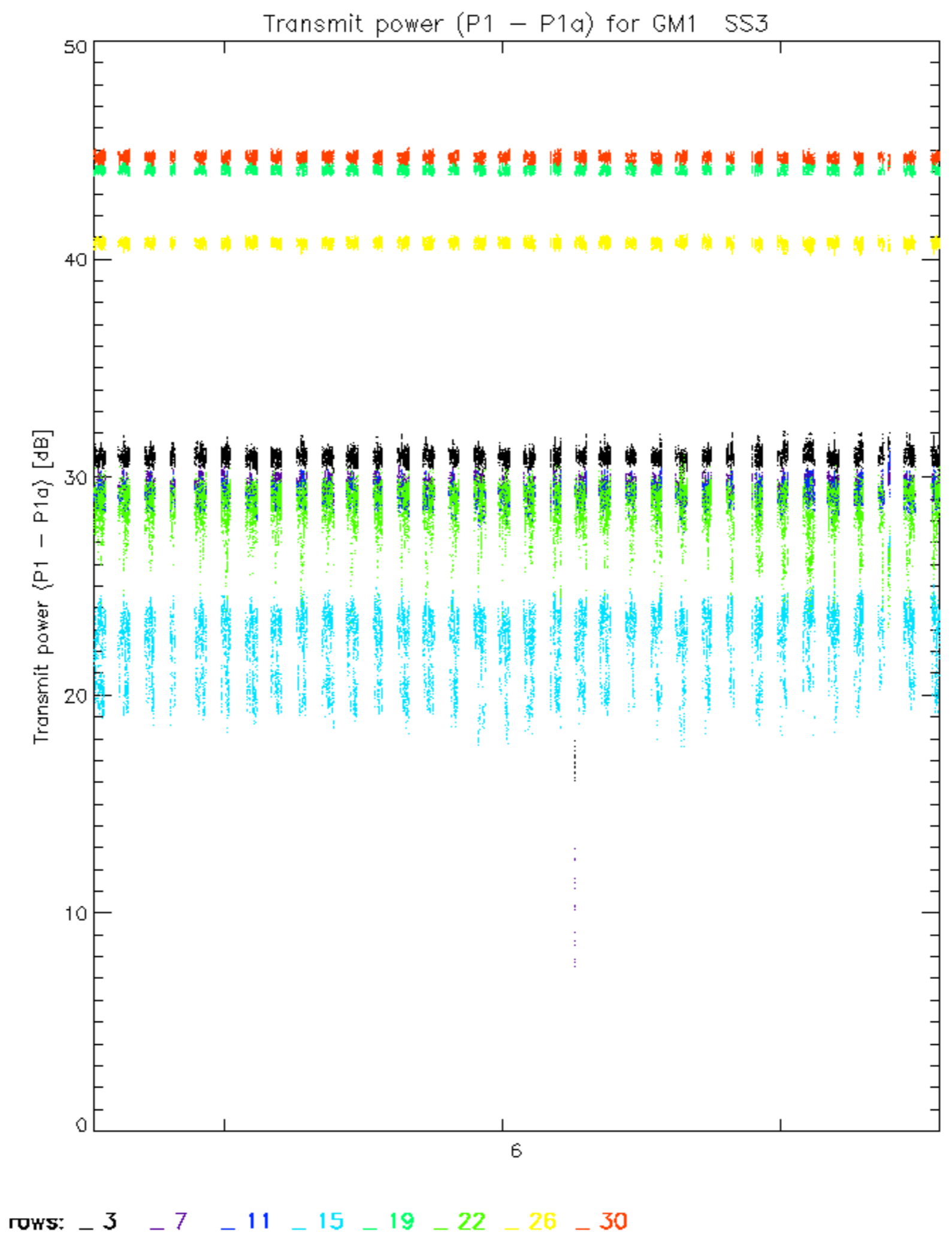


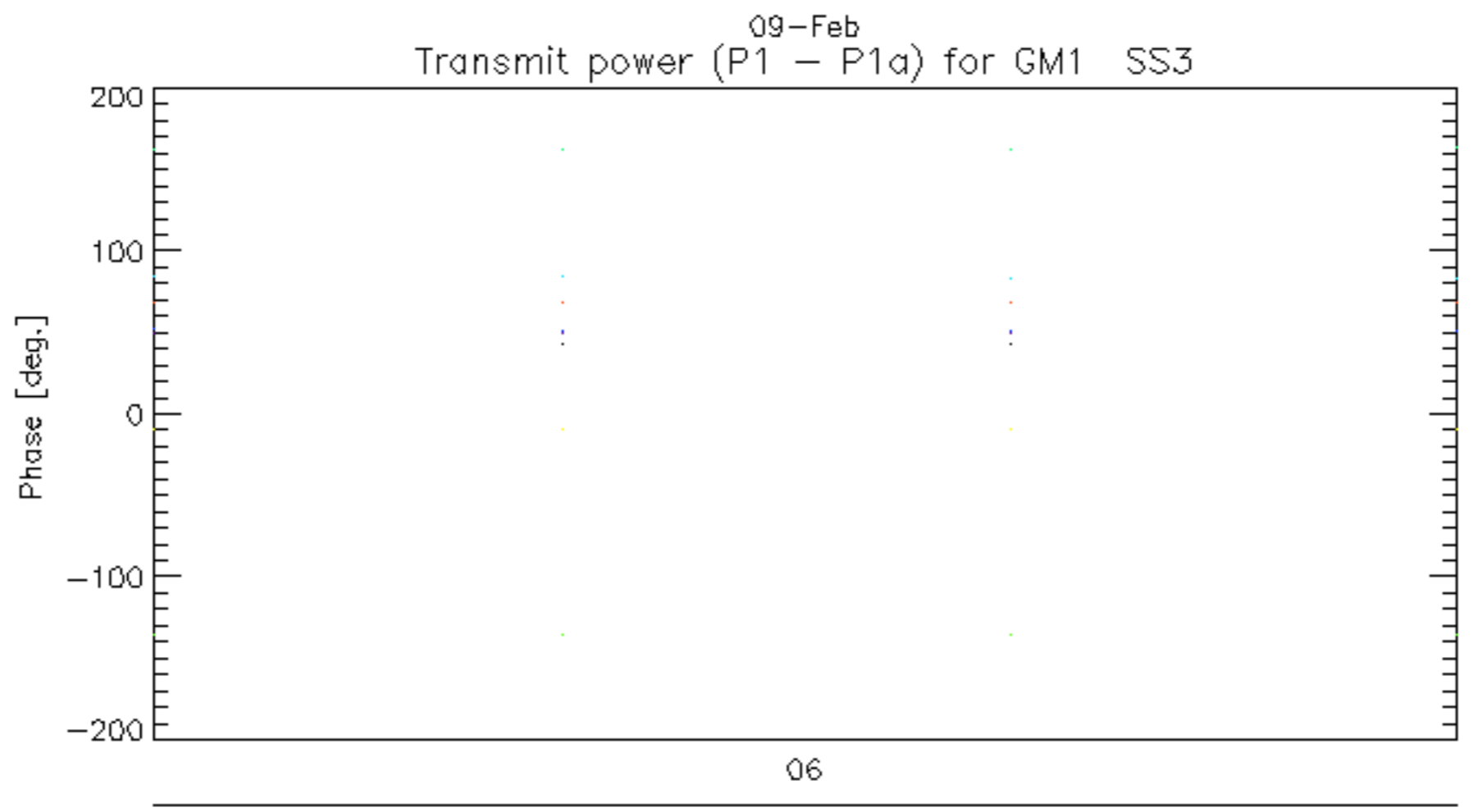
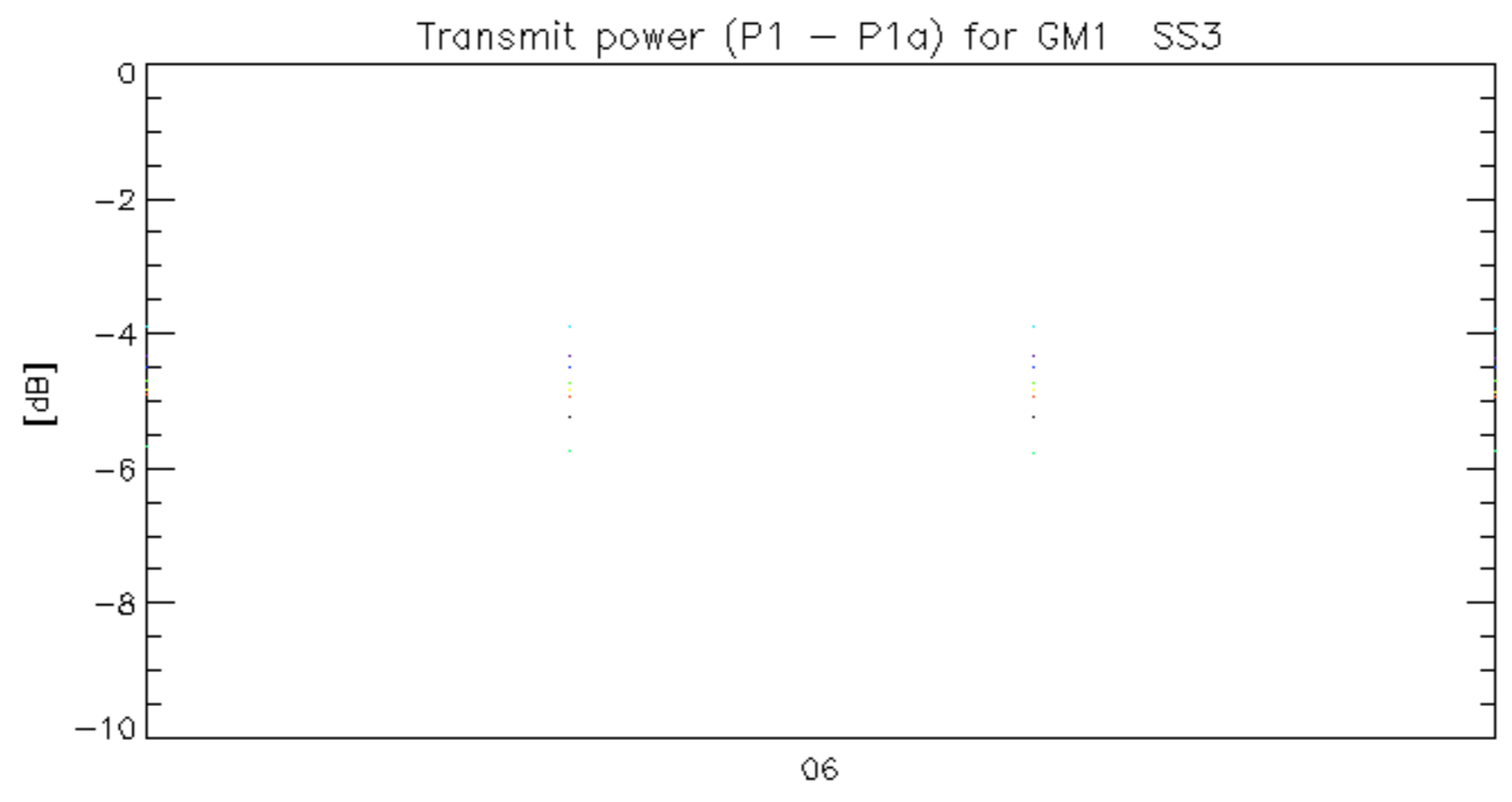




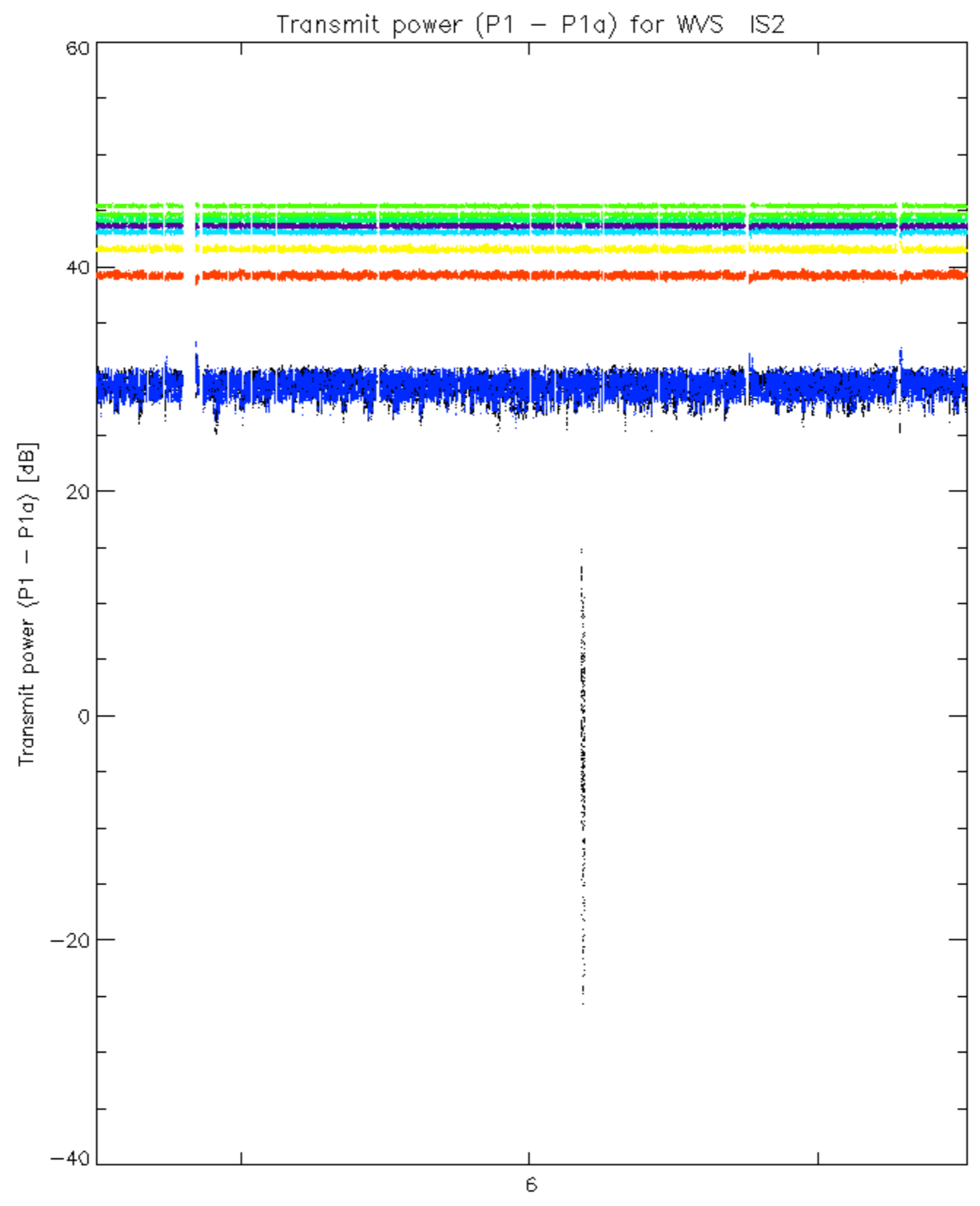






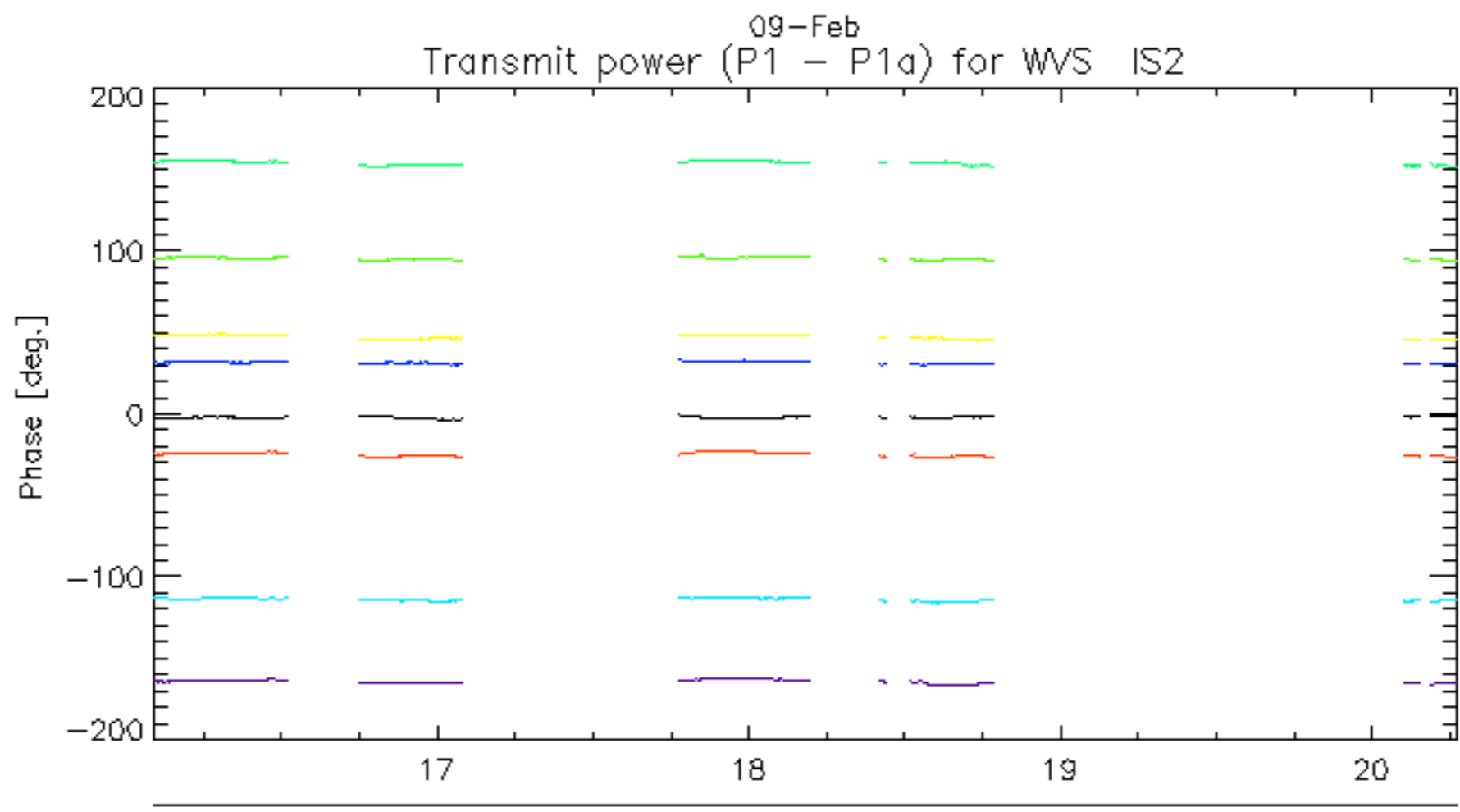
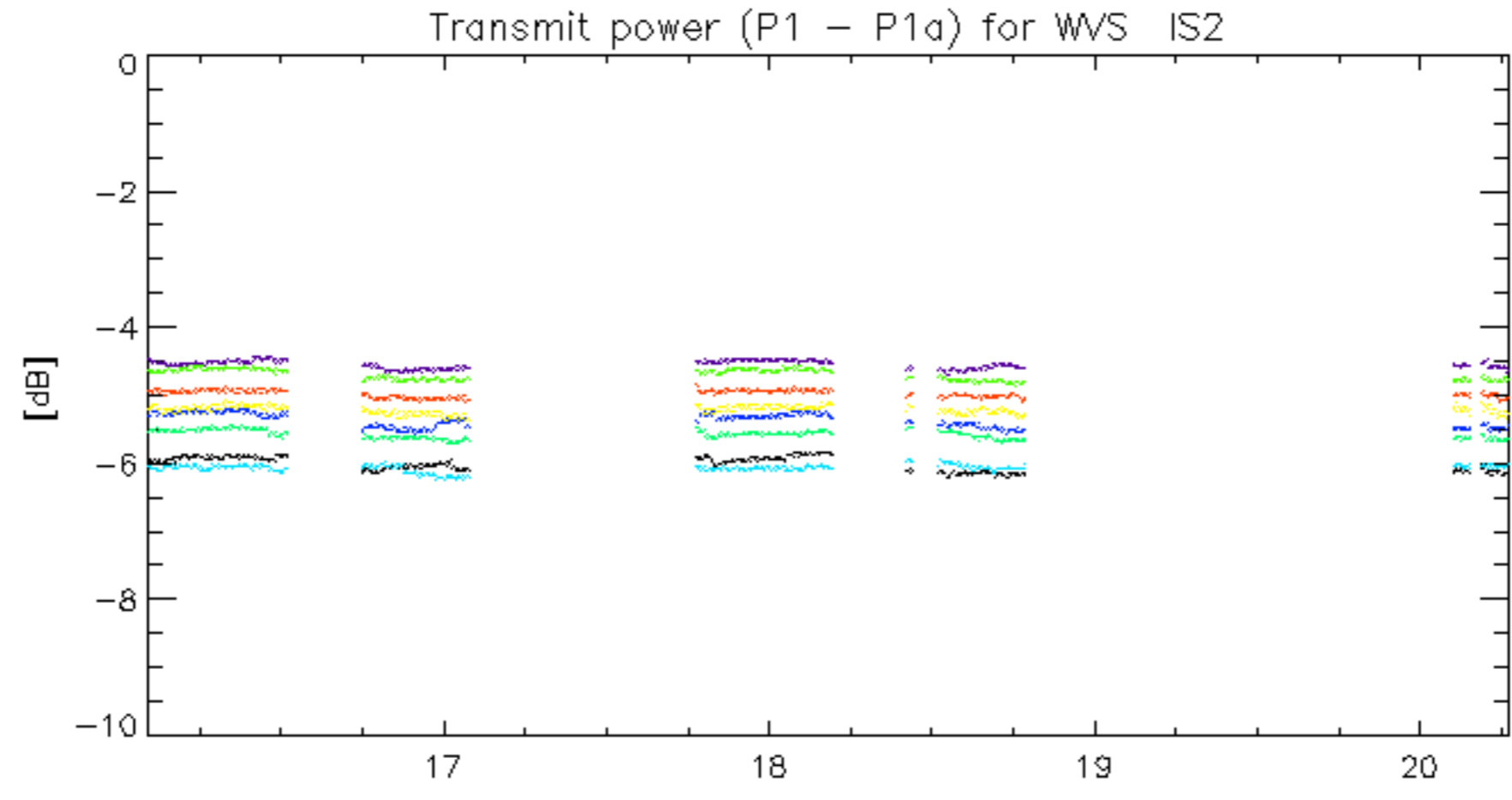


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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





rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.