

# PRELIMINARY REPORT OF 061129

last update on Wed Nov 29 16:39:29 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 2006-11-28 00:00:00 to 2006-11-29 16:39:29

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
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	19	24	8	4	13
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	19	24	8	4	13
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	19	24	8	4	13
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	19	24	8	4	13

## 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	20061127 054051
H	20061128 050914

### 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"/>

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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

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#### 4.1.2 - Evolution for GM1

##### Evolution of cal pulses for GM1

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### 4.2 - Cyclic statistics

#### 4.2.1 - Evolution for WVS

##### Evolution of cal pulses for WVS

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**P1 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.960221	0.008328	-0.026595
7	P1	-3.153407	0.023579	-0.011120
11	P1	-4.131088	0.024788	0.004230
15	P1	-6.299335	0.014398	-0.049221
19	P1	-3.611026	0.006381	-0.057690
22	P1	-4.646544	0.012786	-0.019559
26	P1	-3.949872	0.010661	0.005606
30	P1	-5.865753	0.009418	-0.047441
3	P1	-16.513556	0.235696	-0.103407
7	P1	-17.282598	0.175703	-0.035558
11	P1	-17.173042	0.458027	-0.159856
15	P1	-13.071035	0.132703	-0.027543
19	P1	-14.908098	0.090566	-0.166385
22	P1	-15.861143	0.509184	0.139838
26	P1	-15.055109	0.197131	0.067362
30	P1	-17.477634	0.473027	-0.082490

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.842855	0.091165	0.029365
7	P2	-21.731722	0.094076	-0.008801
11	P2	-15.650301	0.102167	0.032461
15	P2	-7.124038	0.106181	-0.004710
19	P2	-9.192016	0.104241	0.004642
22	P2	-18.235798	0.096418	-0.033530
26	P2	-16.553568	0.110798	-0.047344
30	P2	-19.476429	0.087984	-0.000335

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.241633	0.008414	-0.030000
7	P3	-8.241633	0.008414	-0.030000
11	P3	-8.241633	0.008414	-0.030000

15	P3	-8.241633	0.008414	-0.030000
19	P3	-8.241633	0.008414	-0.030000
22	P3	-8.241633	0.008414	-0.030000
26	P3	-8.241670	0.008428	-0.030179
30	P3	-8.241670	0.008428	-0.030179

#### 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	-3.912850	0.052094	0.015805
7	P1	-2.519987	0.308088	0.134736
11	P1	-2.860671	0.048635	0.050207
15	P1	-3.683973	0.055997	0.005501
19	P1	-3.523370	0.020613	-0.036481
22	P1	-5.034508	0.024167	0.022150
26	P1	-6.002564	0.038680	-0.044223
30	P1	-5.321677	0.049431	-0.040661
3	P1	-11.727521	0.138547	0.000206
7	P1	-10.063593	0.418356	0.104922
11	P1	-10.328184	0.162761	0.054234
15	P1	-10.751674	0.211314	0.130884
19	P1	-15.692660	0.138755	-0.089306
22	P1	-21.465231	1.455788	-0.357896
26	P1	-16.067486	0.321672	-0.006588
30	P1	-17.889956	0.408643	0.061866

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.458372	0.129887	-0.045103
7	P2	-22.214252	0.456602	-0.130202
11	P2	-10.937084	0.137118	-0.027209
15	P2	-4.971663	0.183015	-0.049499
19	P2	-6.953866	0.218821	-0.022640
22	P2	-8.263838	0.215243	0.022502
26	P2	-24.314692	0.333588	-0.119241
30	P2	-21.943277	0.216040	-0.034718

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.088153	0.003297	-0.029982
7	P3	-8.088224	0.003284	-0.029937
11	P3	-8.088274	0.003293	-0.030027
15	P3	-8.088150	0.003290	-0.030091
19	P3	-8.088202	0.003295	-0.029925
22	P3	-8.088139	0.003296	-0.030177
26	P3	-8.088312	0.003292	-0.030440
30	P3	-8.088337	0.003295	-0.029897

## 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	0.000545161
	stdev	1.78691e-07
MEAN Q	mean	0.000522721
	stdev	2.20646e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136118
	stdev	0.00111060
STDEV Q	mean	0.136477
	stdev	0.00112764



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006112[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_1PNPDK20061127_154433_000009242053_00197_24800_9420.N1	0	36



## 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"/>
Ascending
<input type="checkbox"/>
Descending

### 7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

### 7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>
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### 7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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



## 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

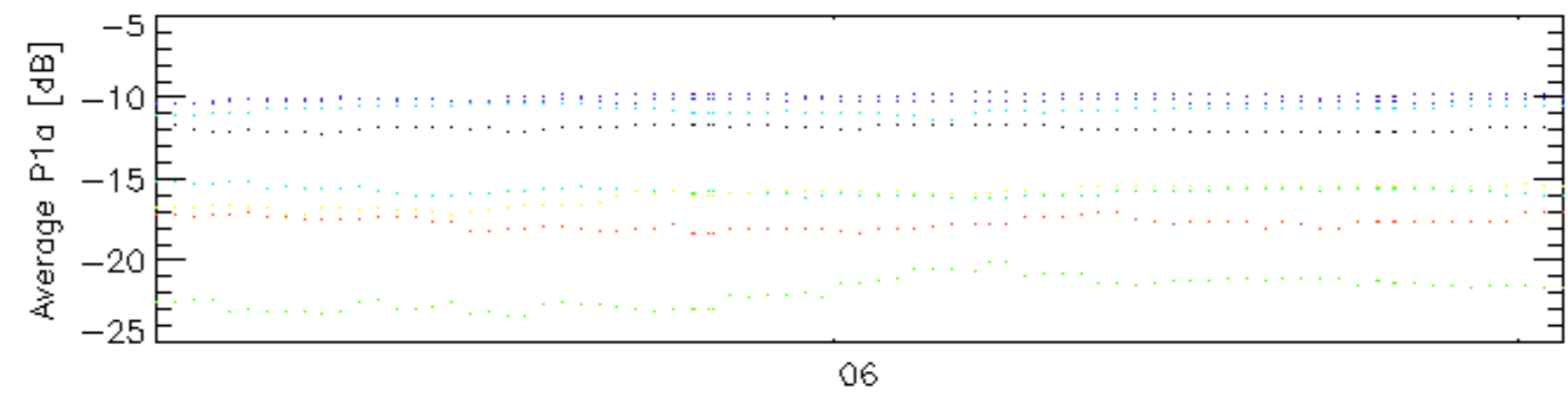
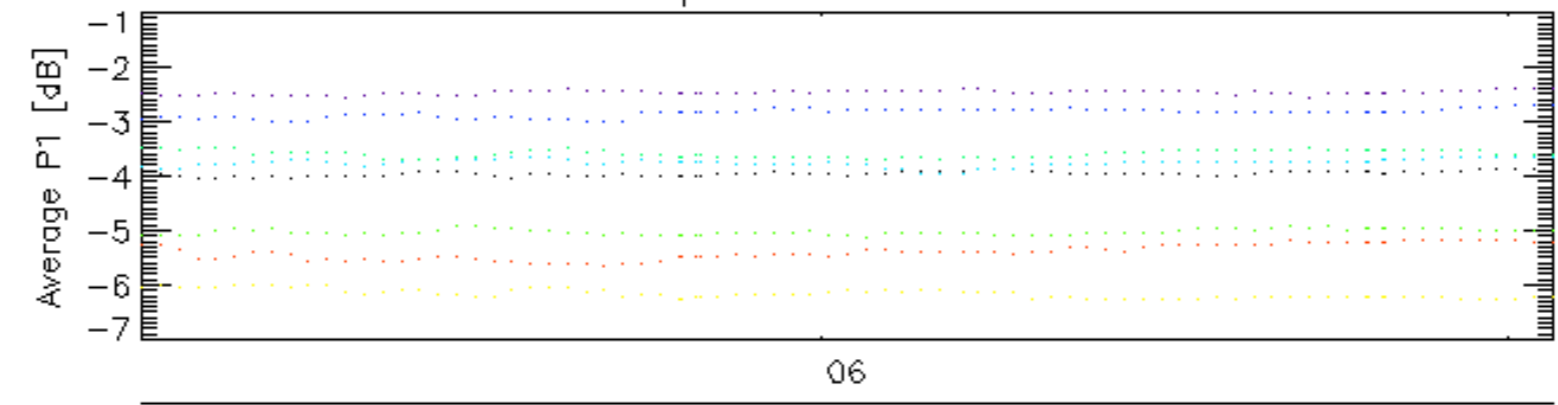
Ascending

Descending

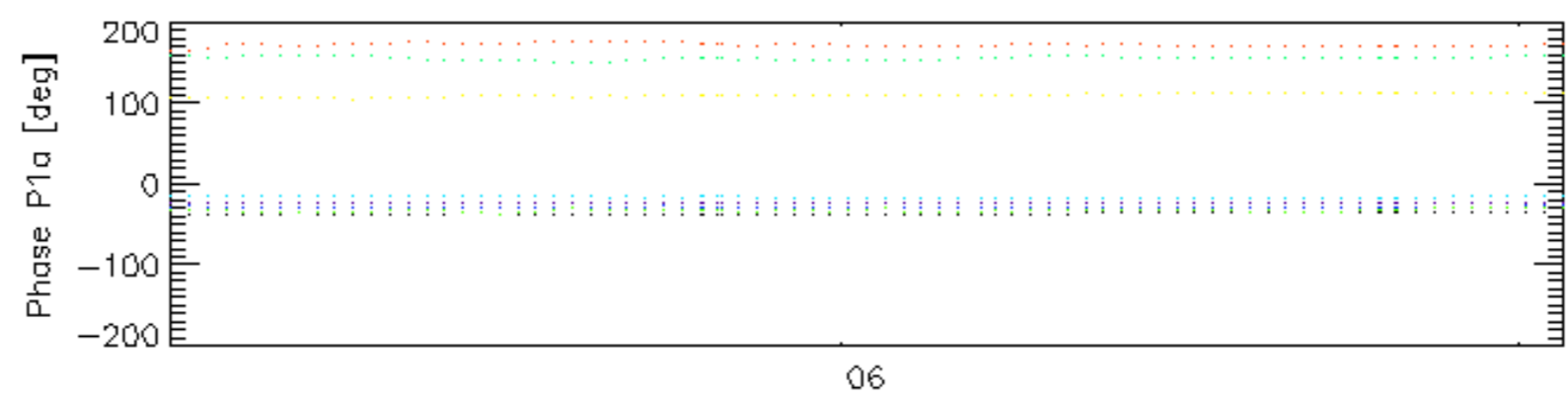
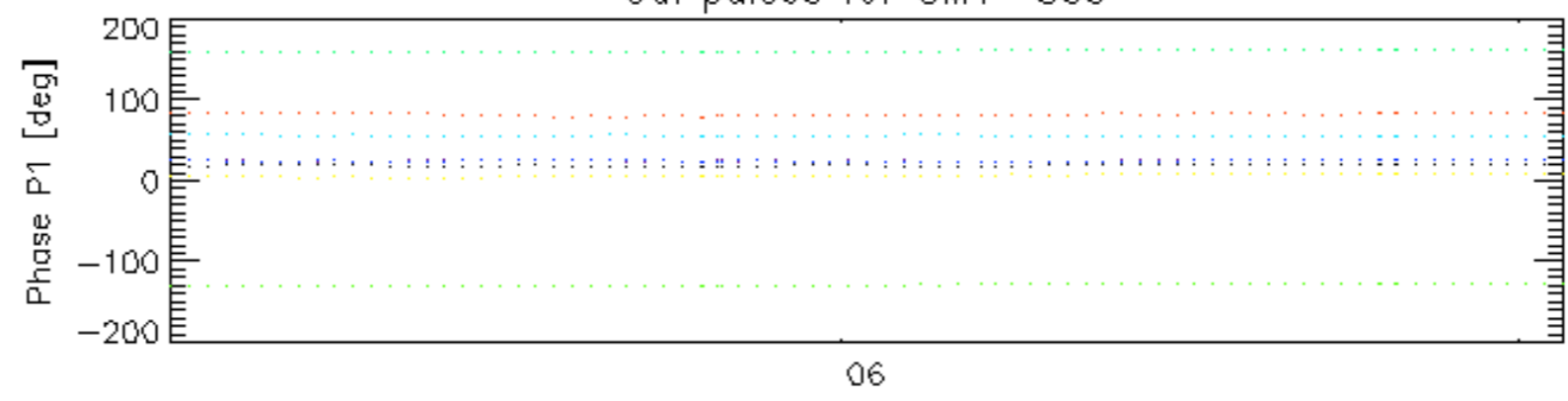
## 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

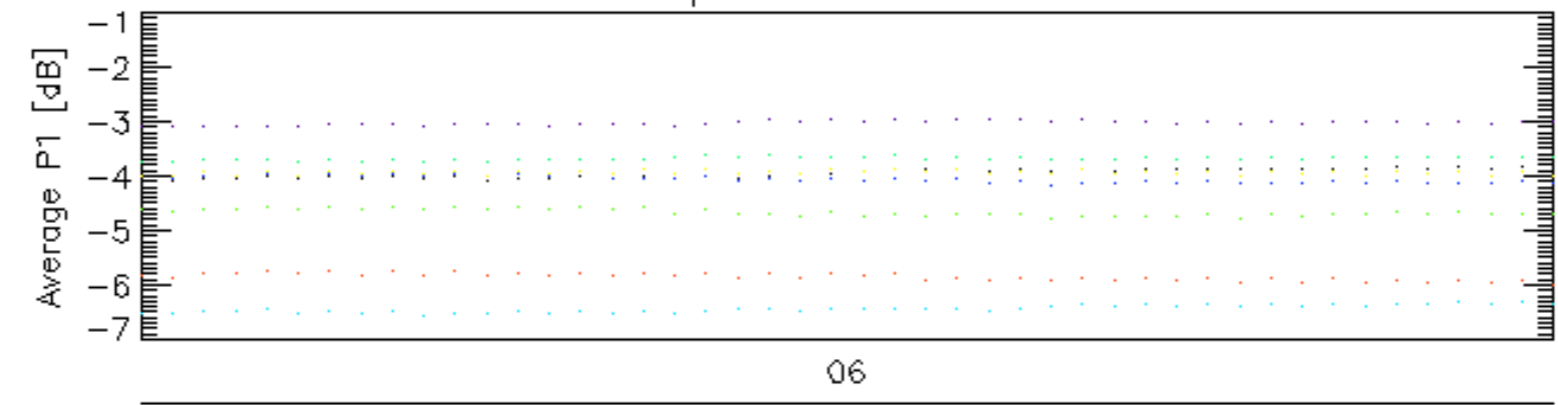


Cal pulses for GM1 SS3

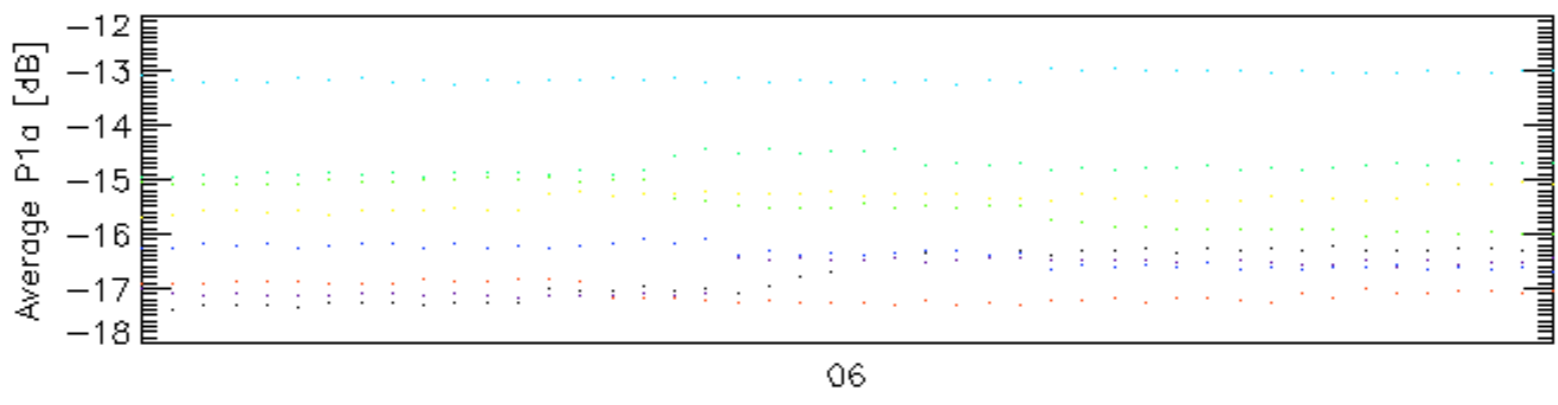


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 <sup>28-Nov</sup> \_ 26 \_ 30

Cal pulses for WVS IS2

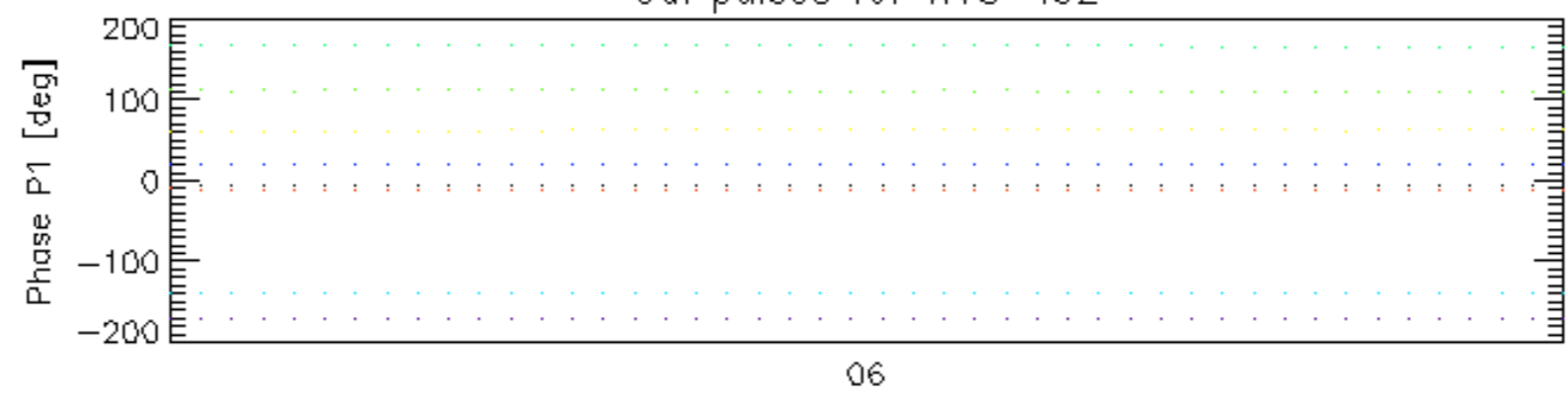


28-Nov

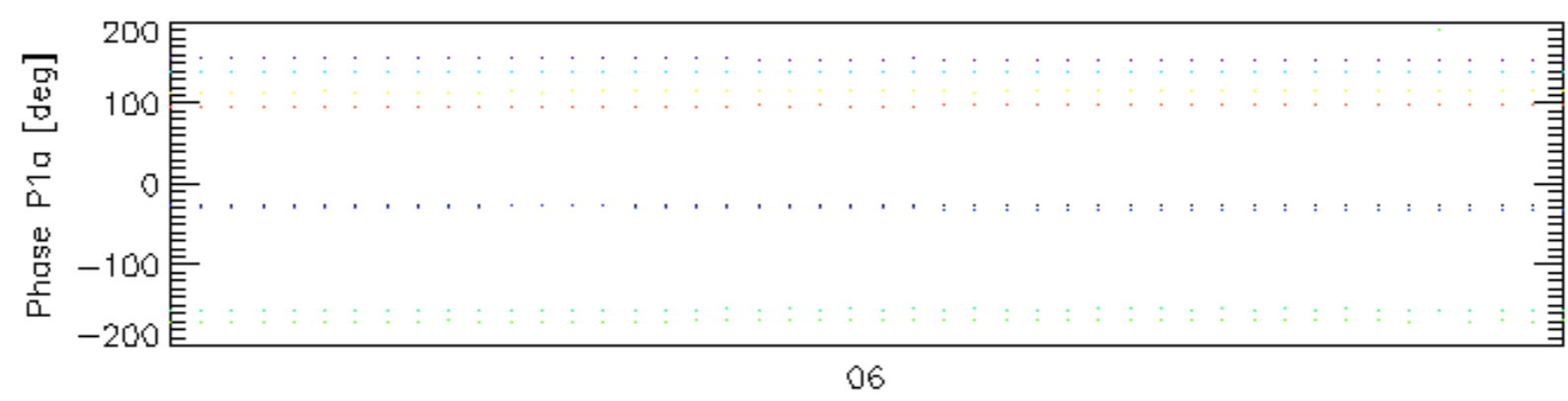


28-Nov

Cal pulses for WVS IS2

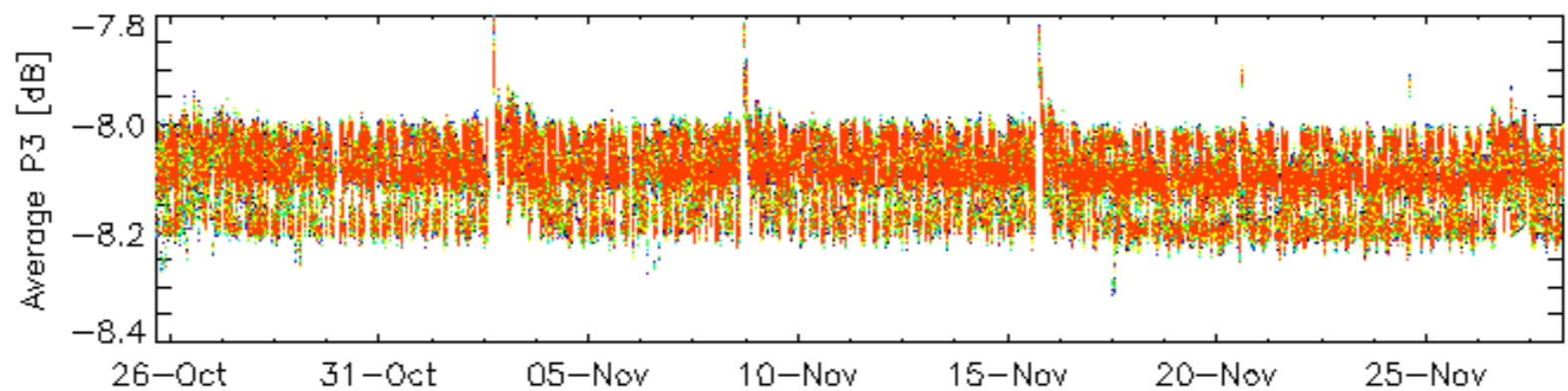
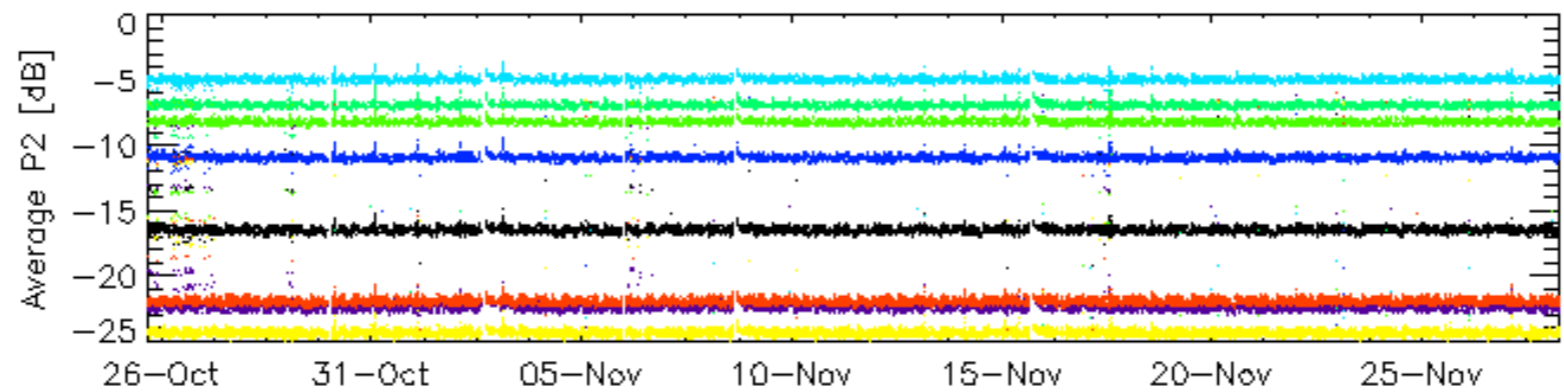
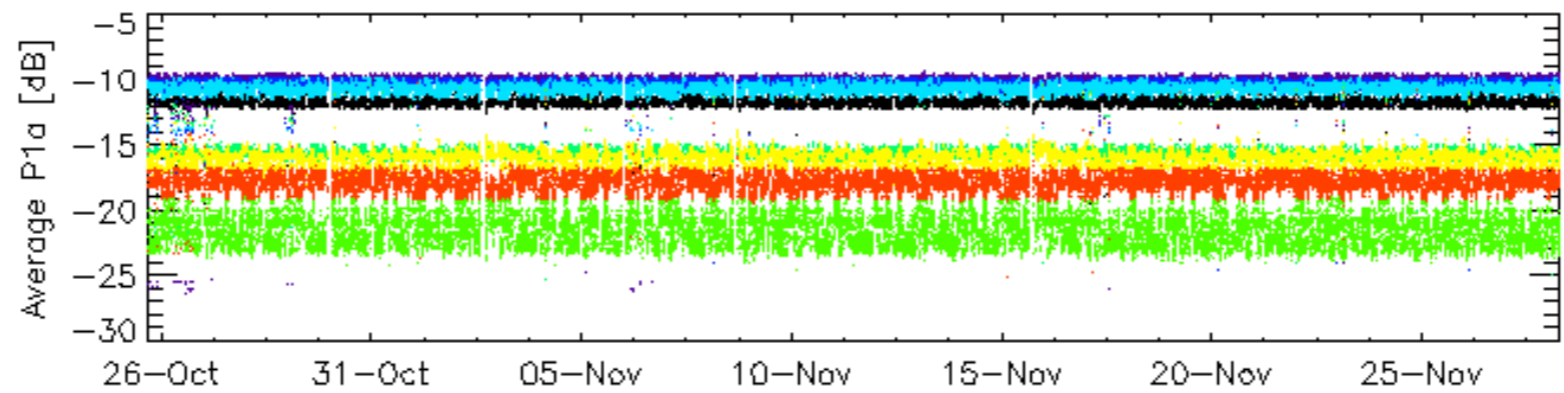
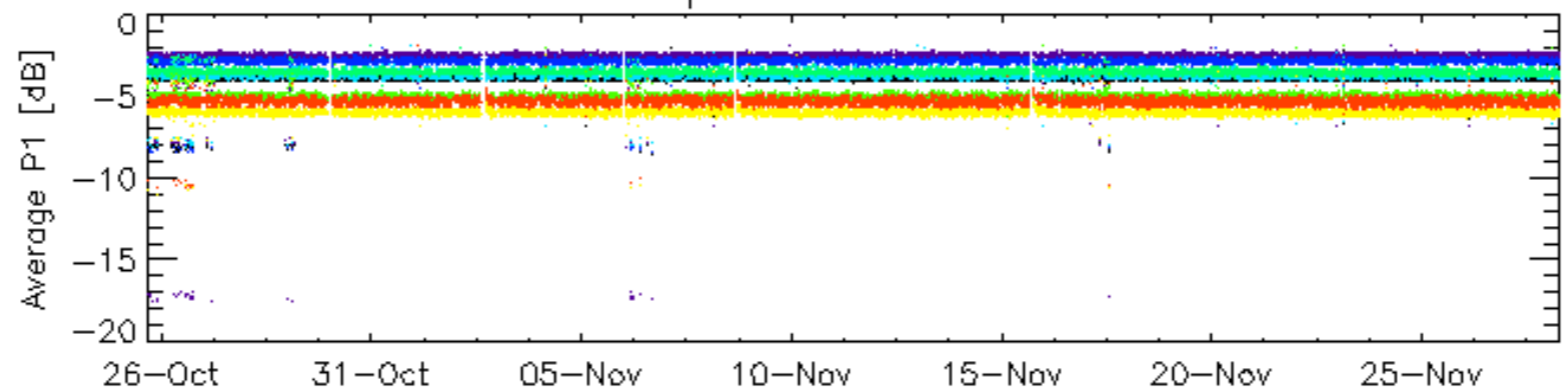


28-Nov



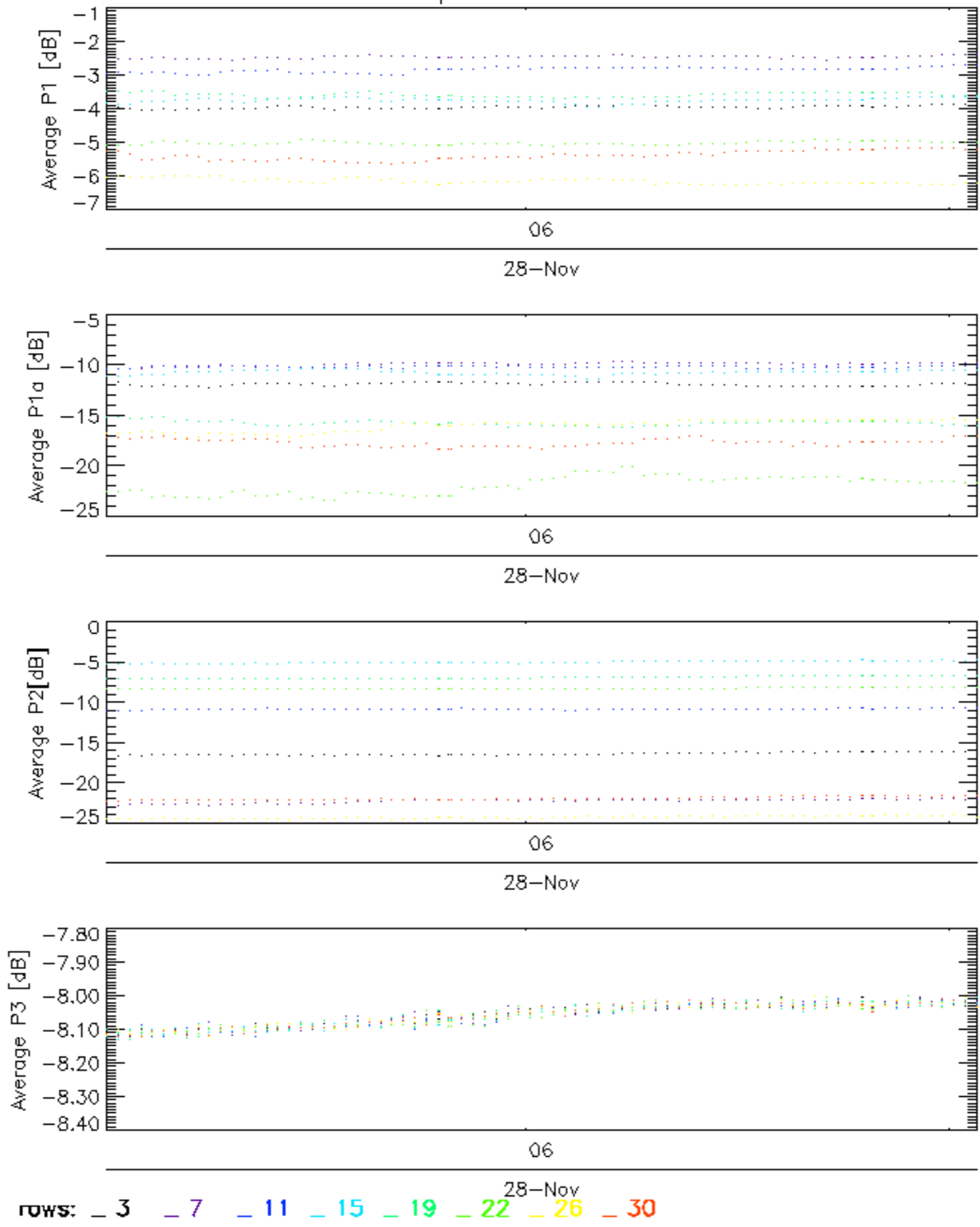
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

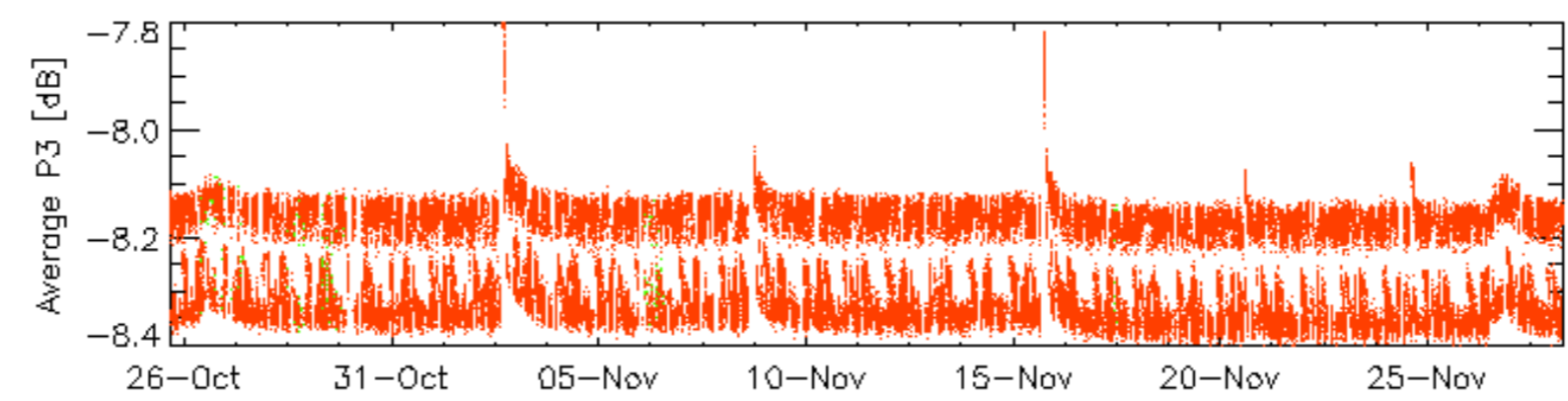
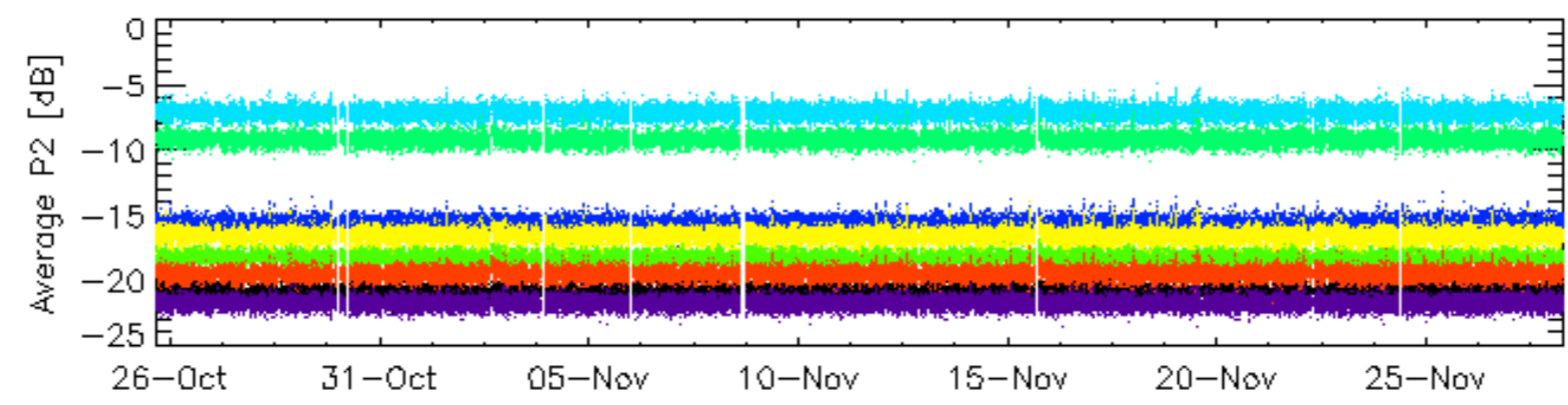
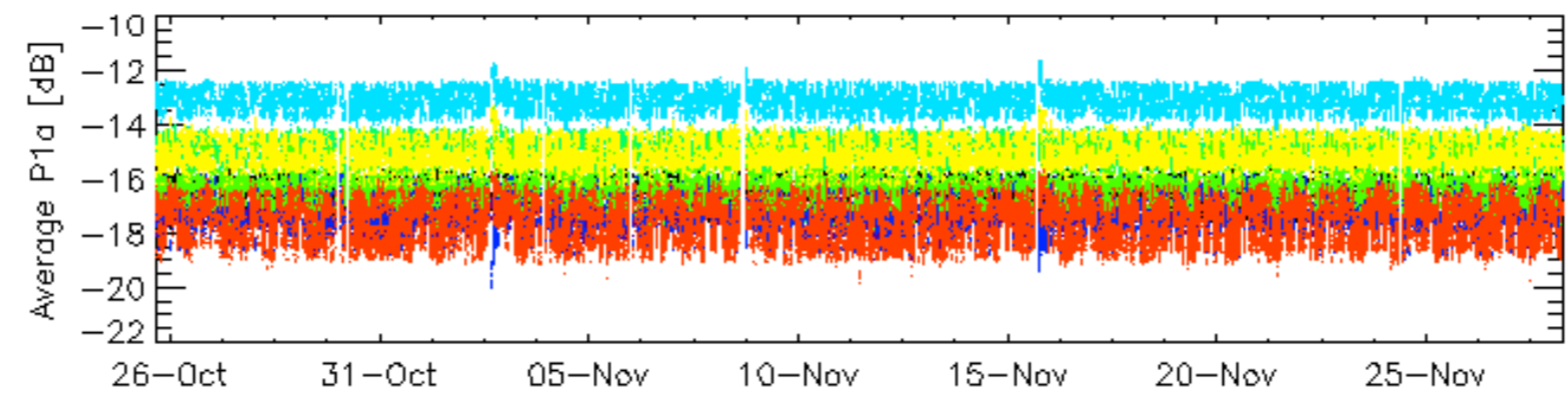
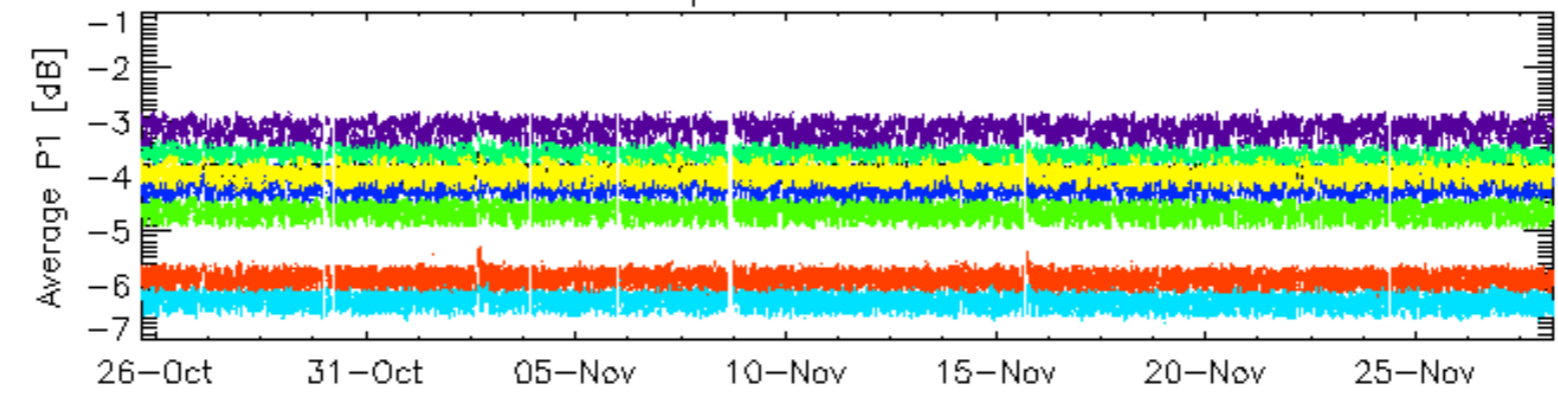


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

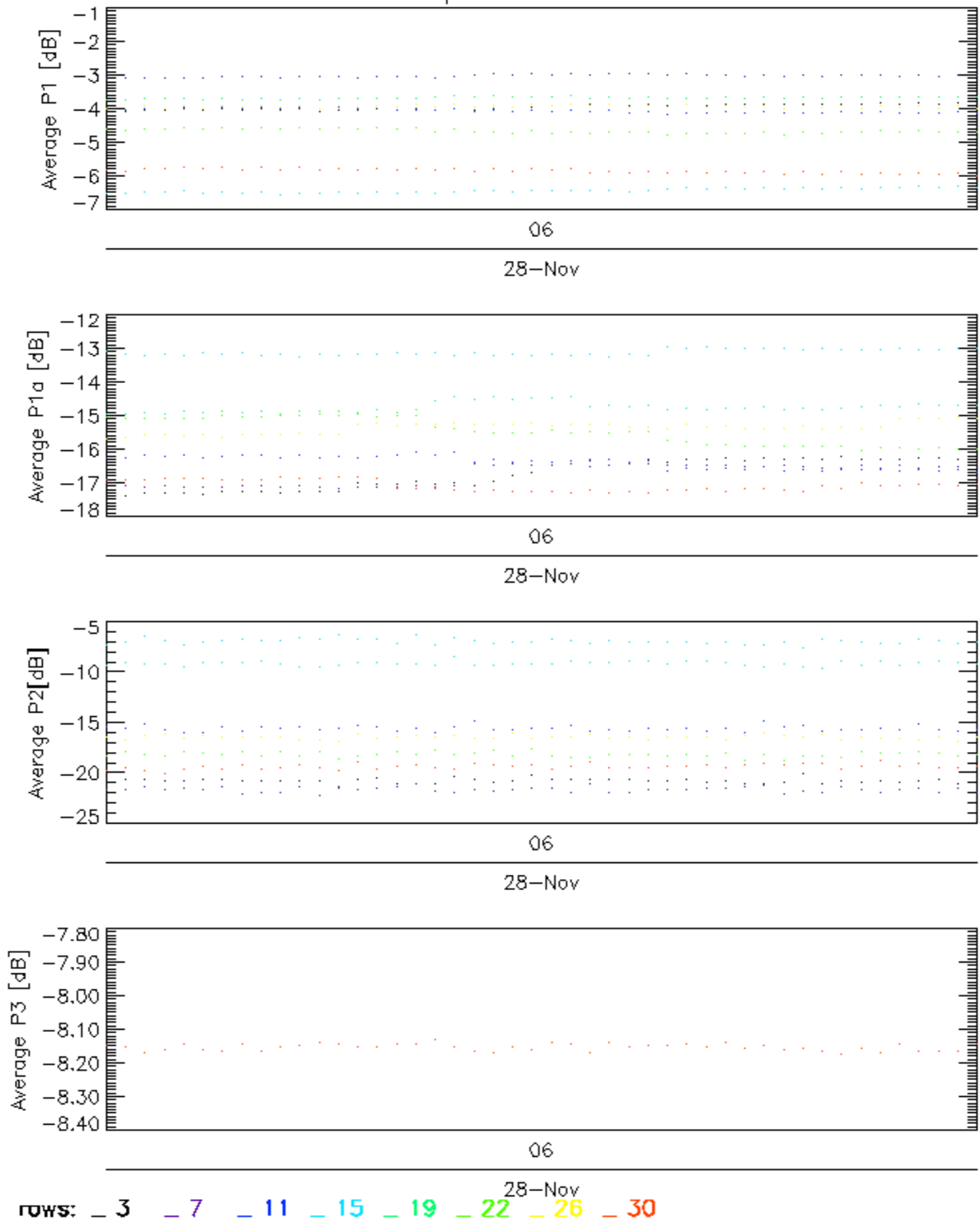


Cal pulses for WVS IS2



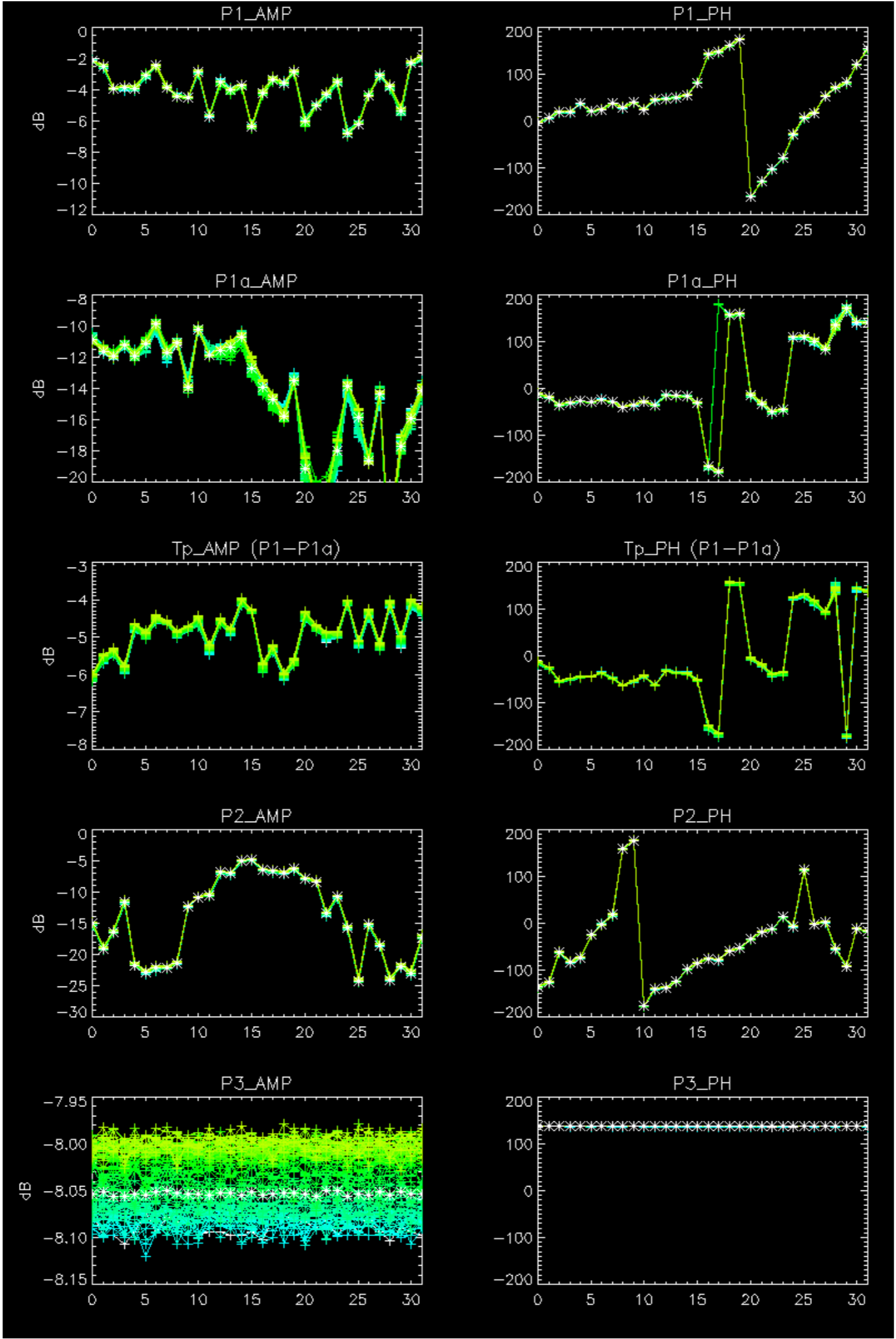
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

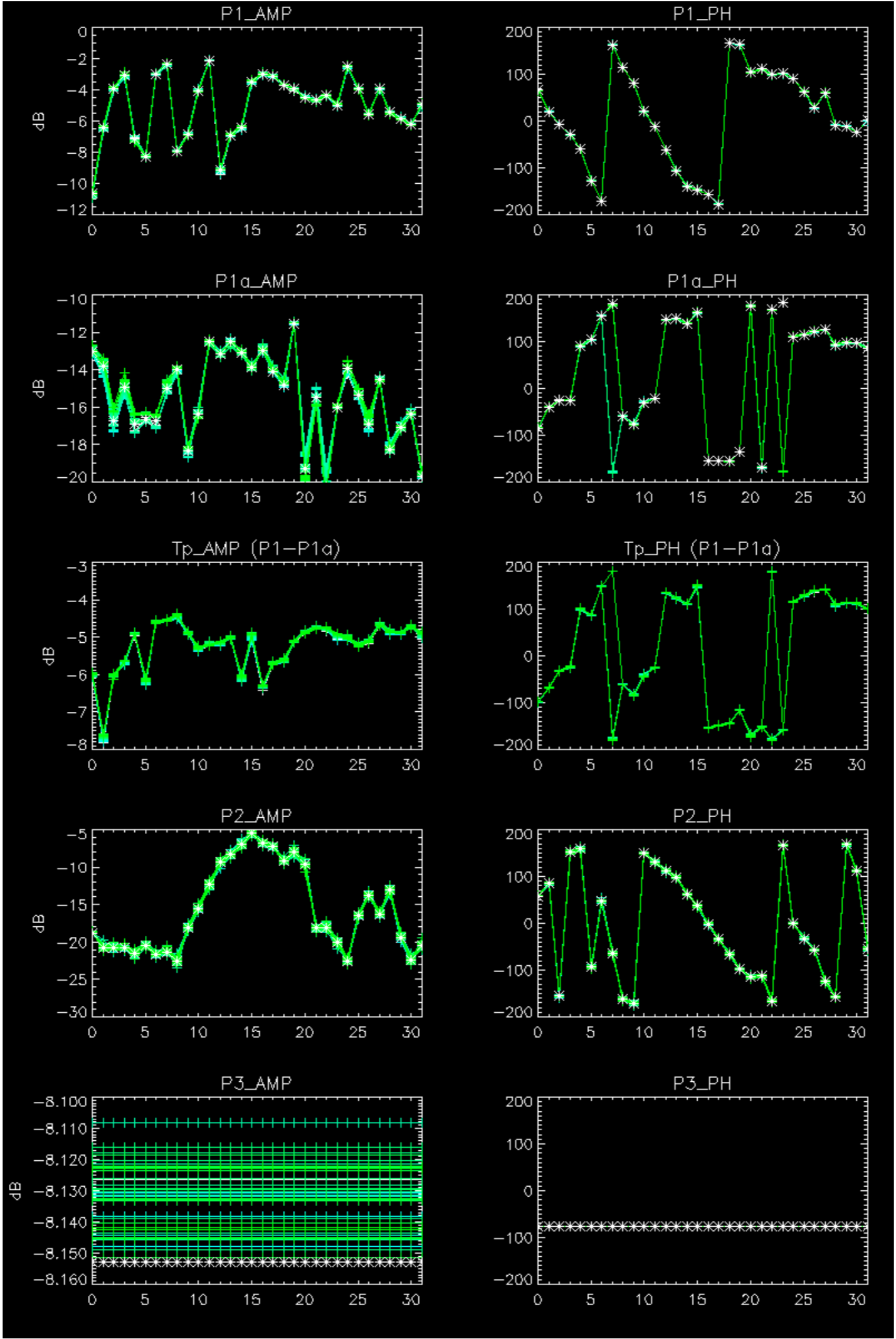
Cal pulses for WVS IS2



No anomalies observed.



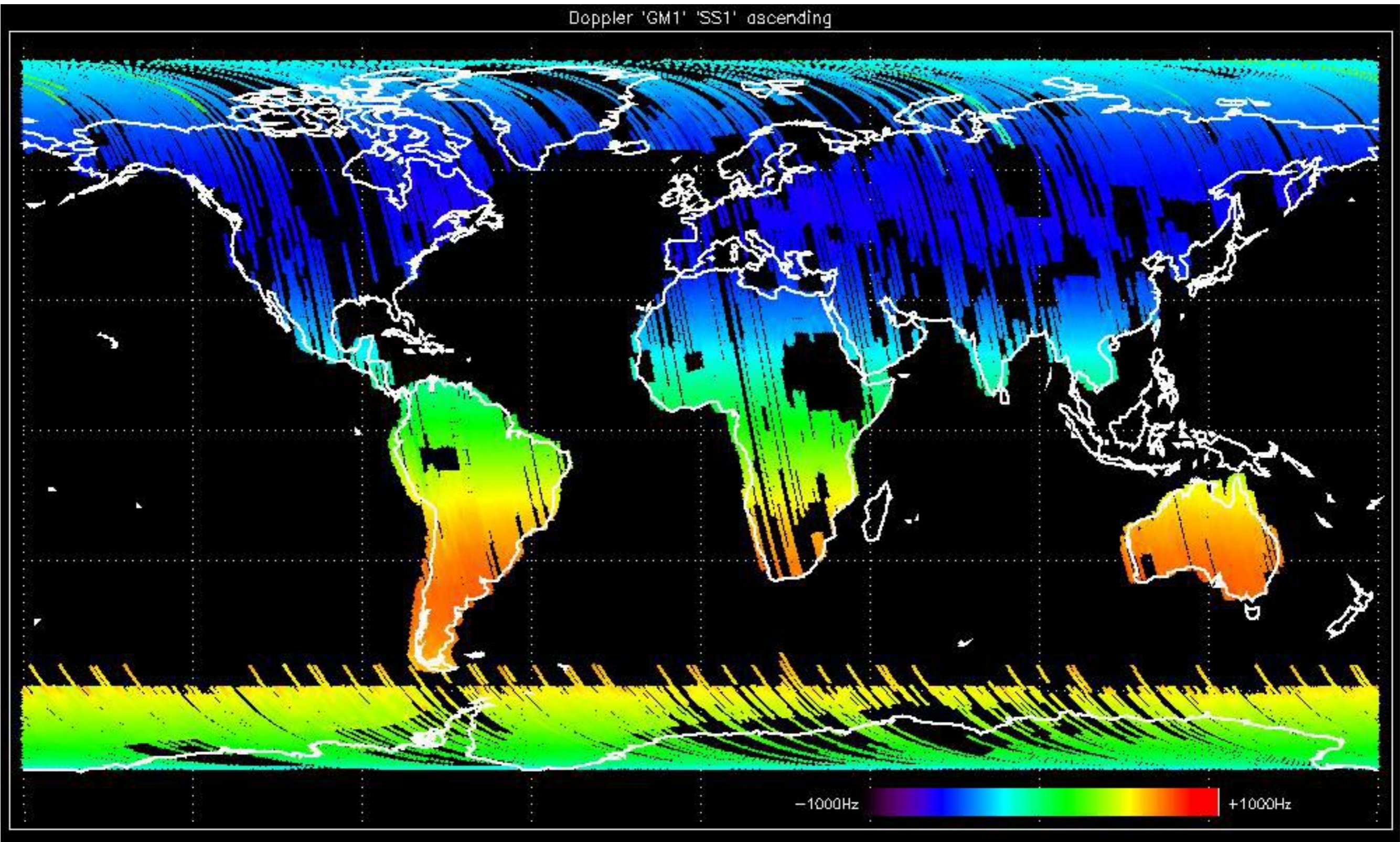




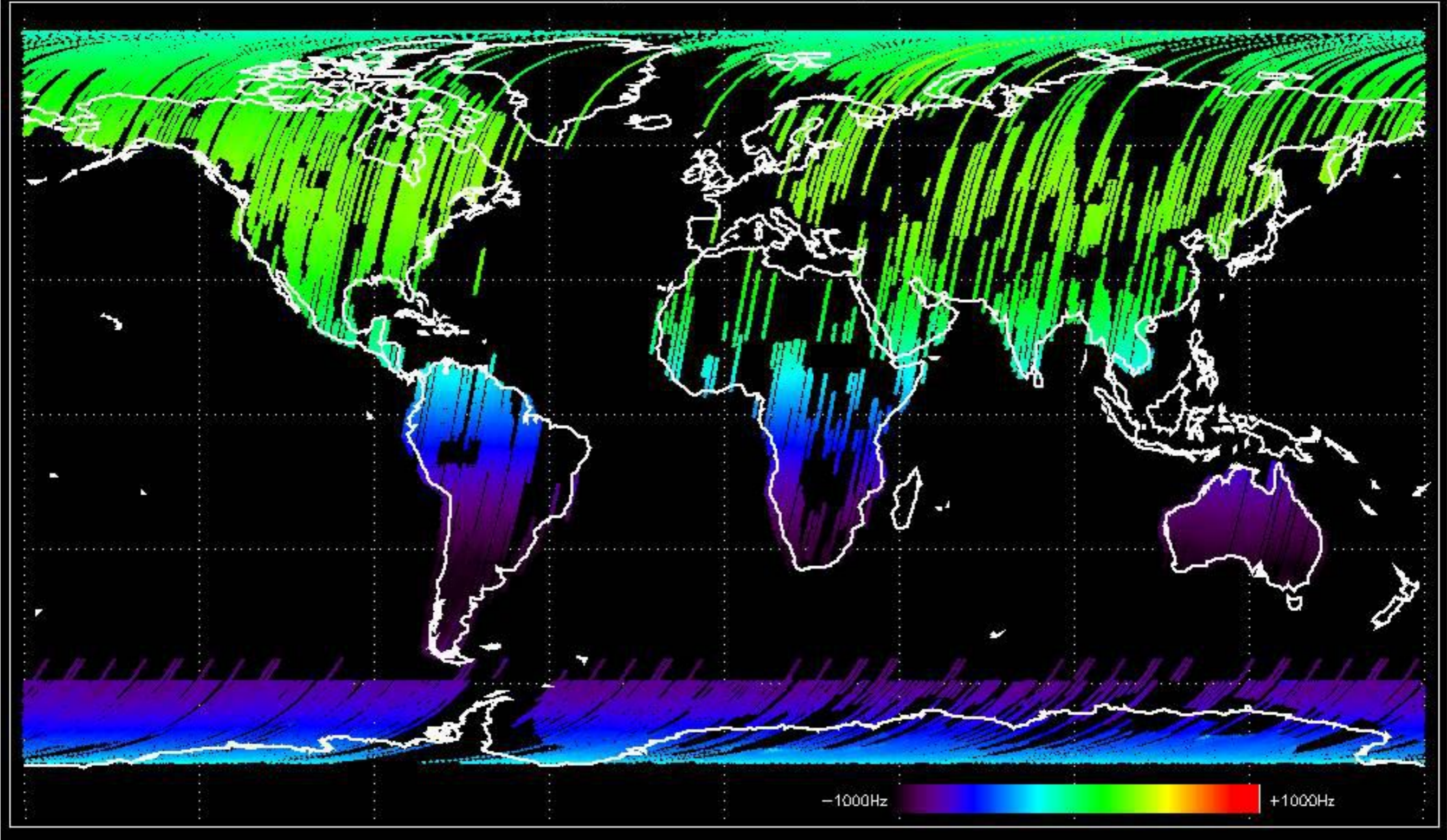
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



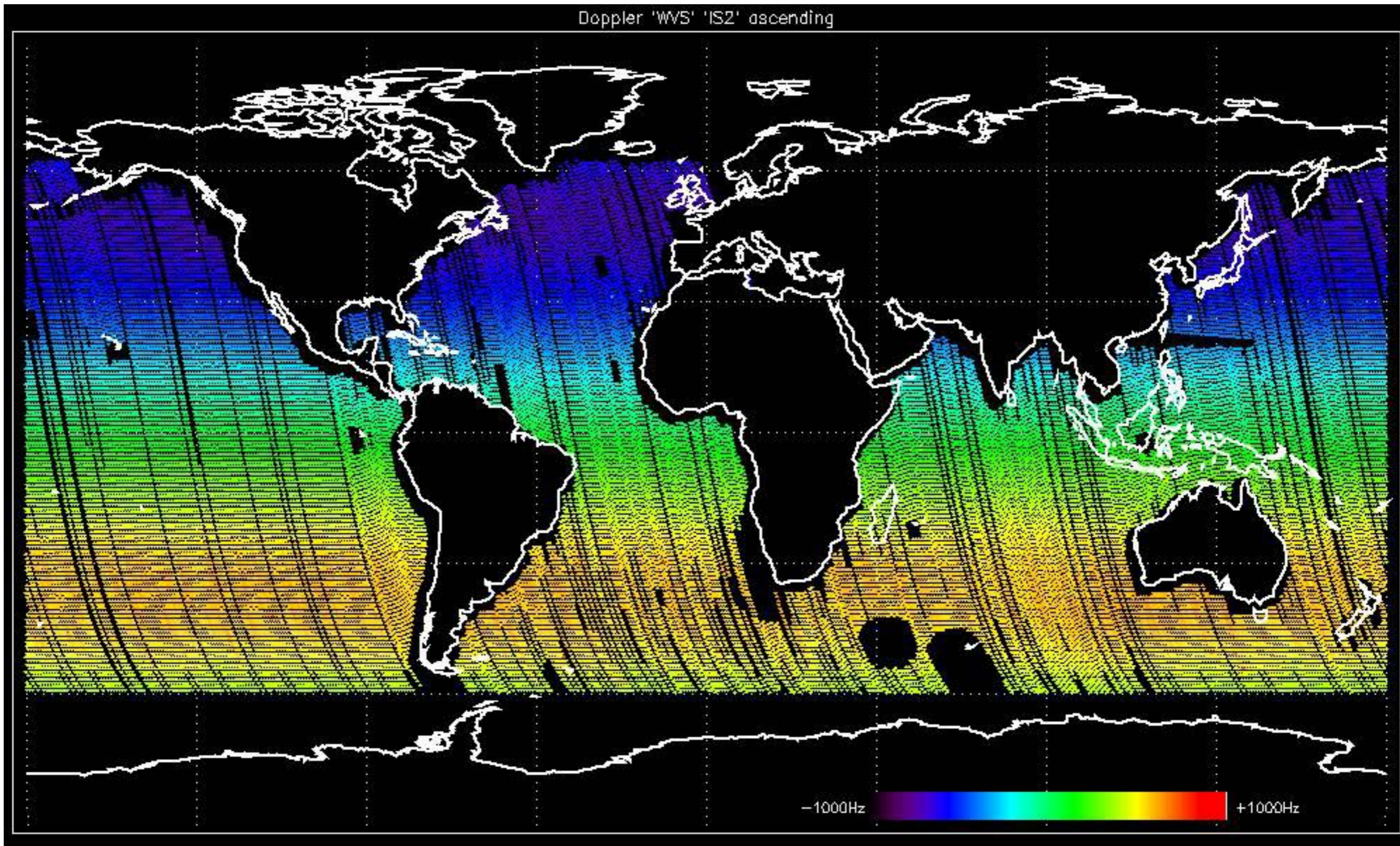
Doppler 'GM1' 'SS1' ascending



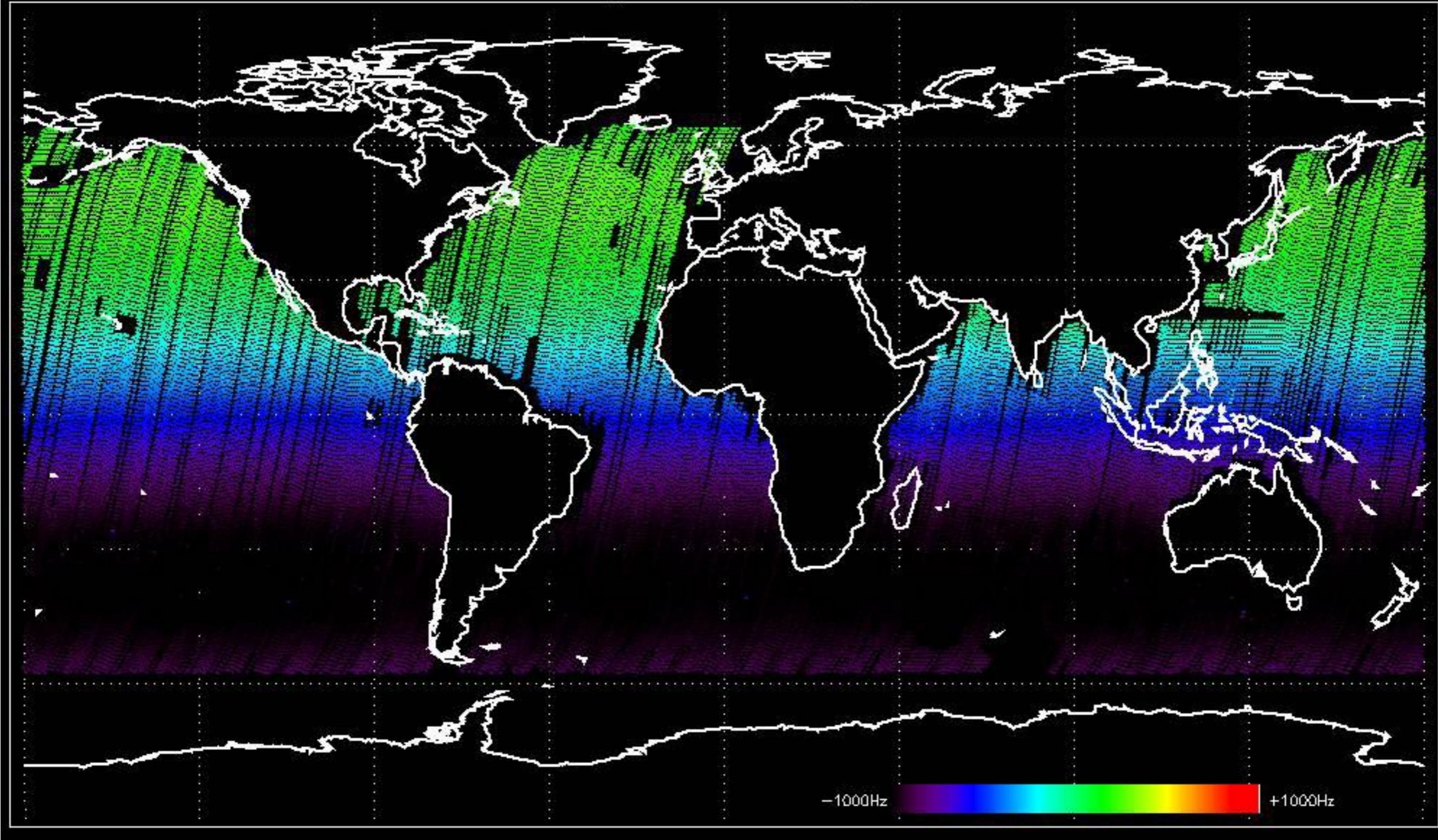
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

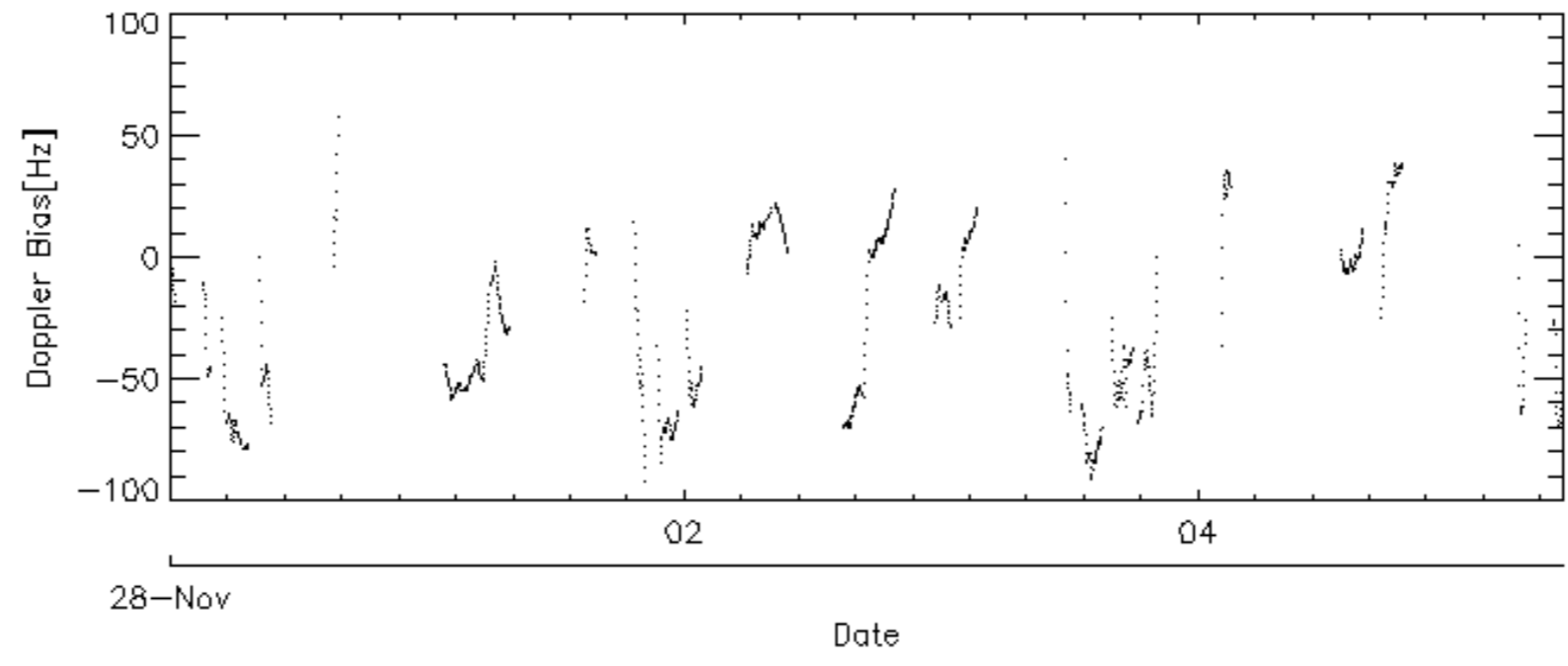
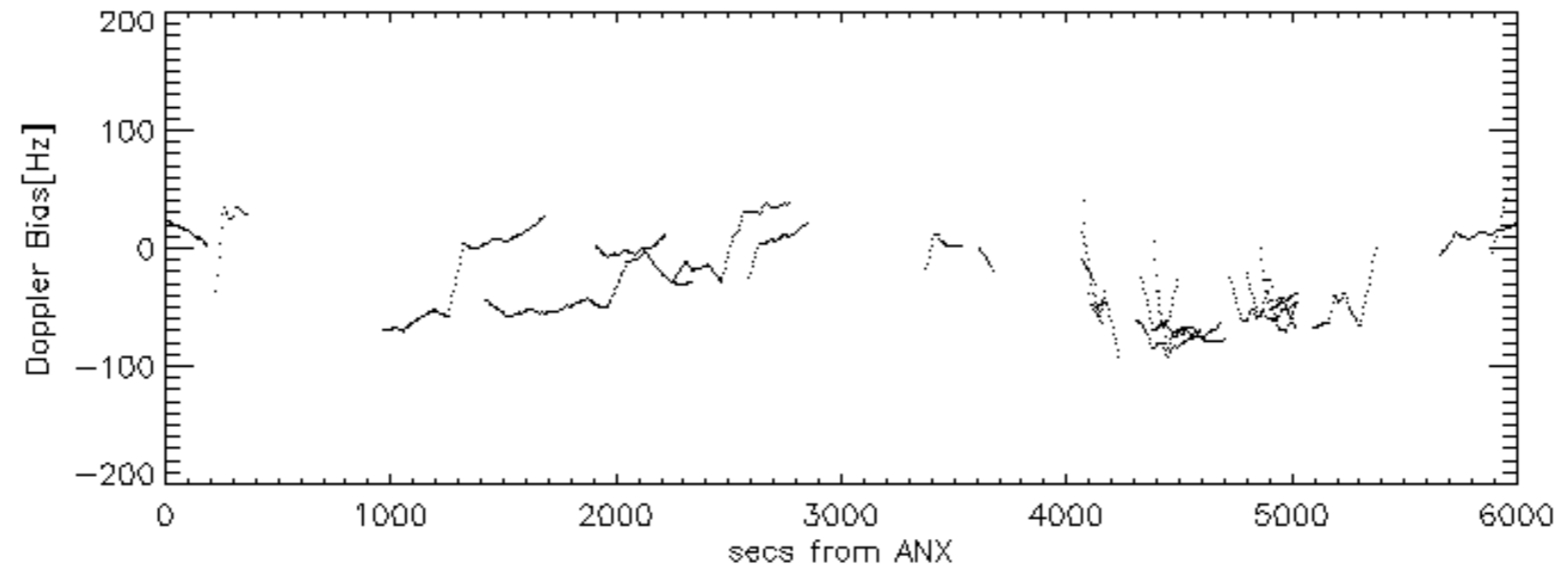
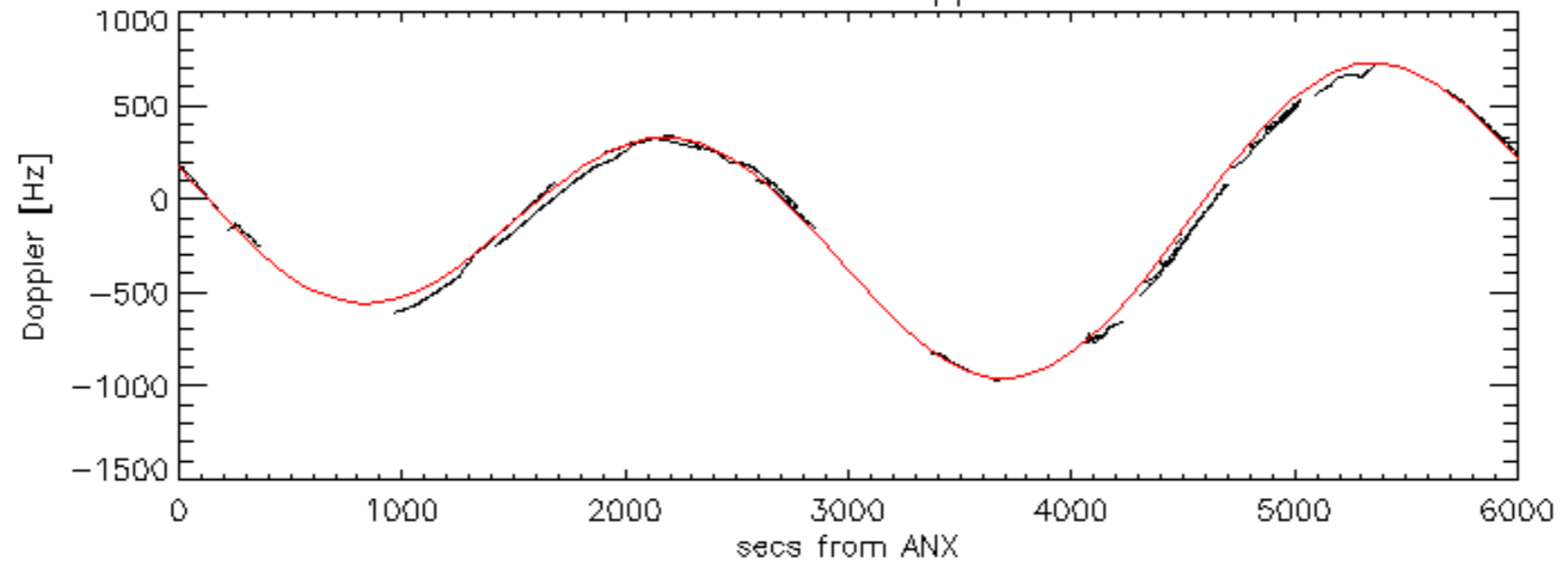


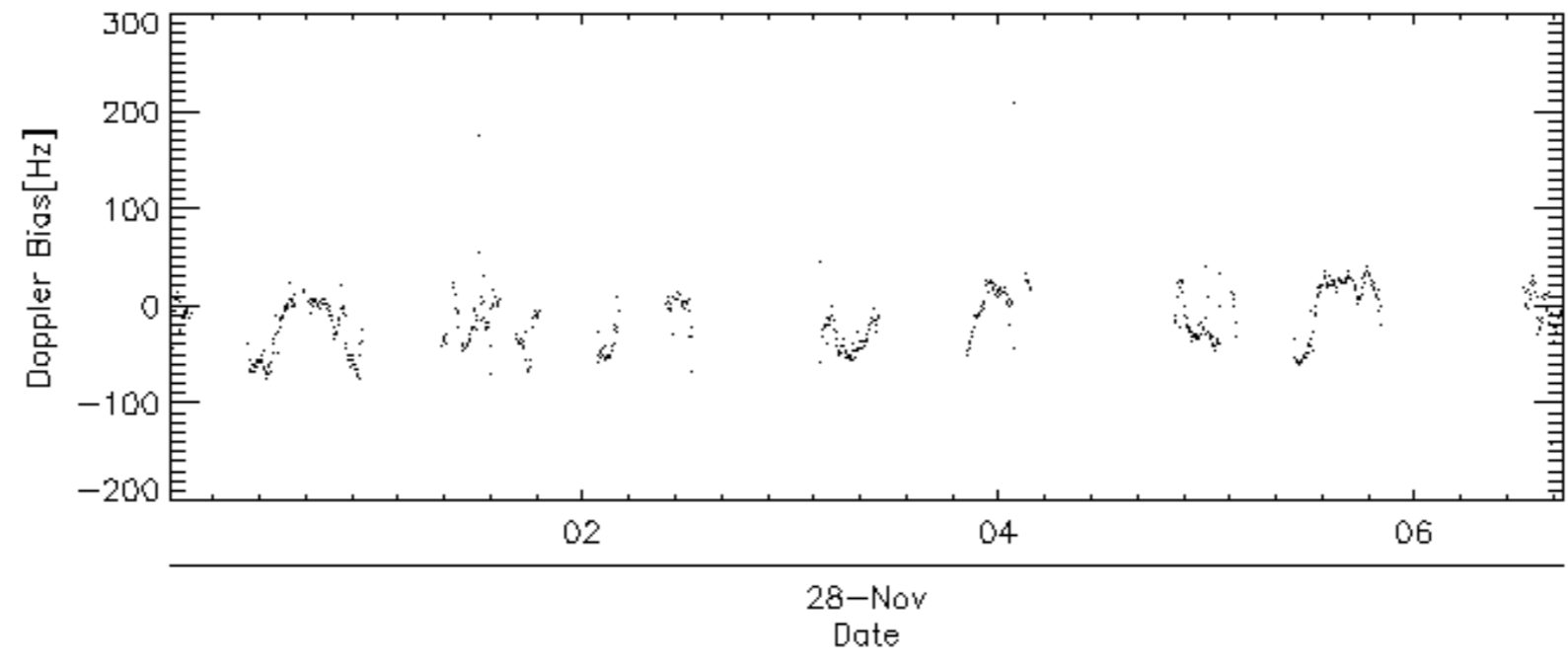
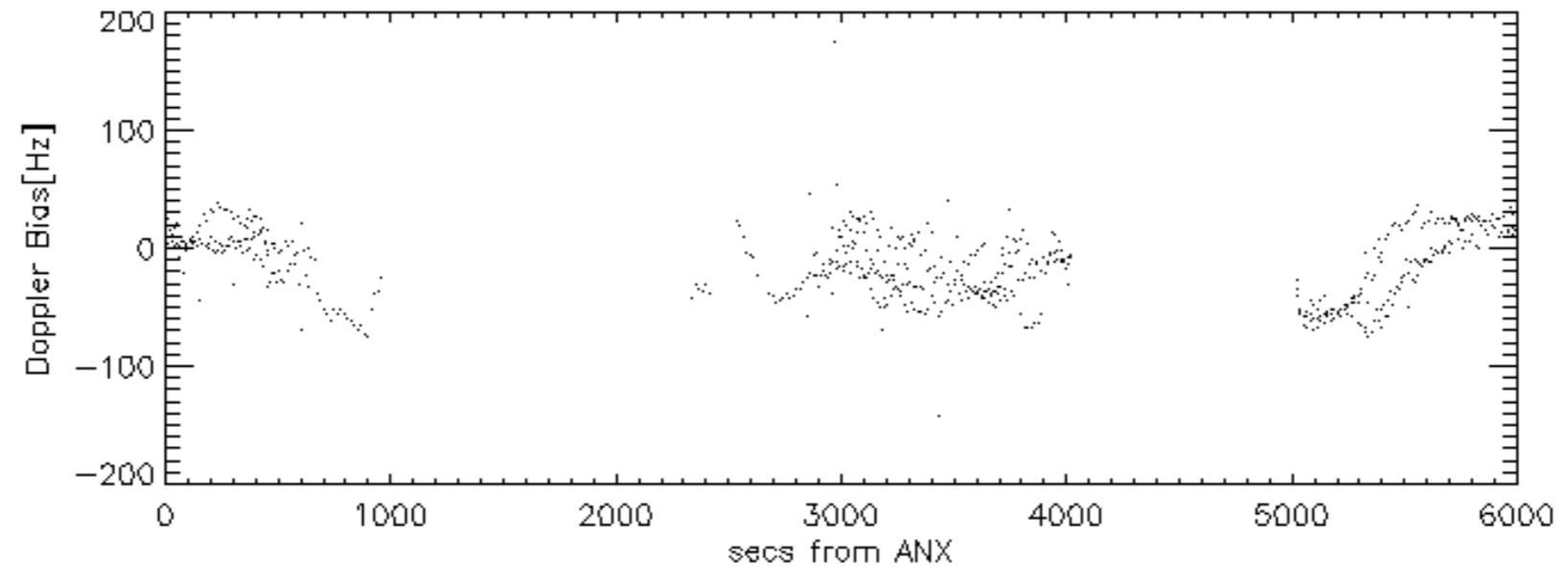
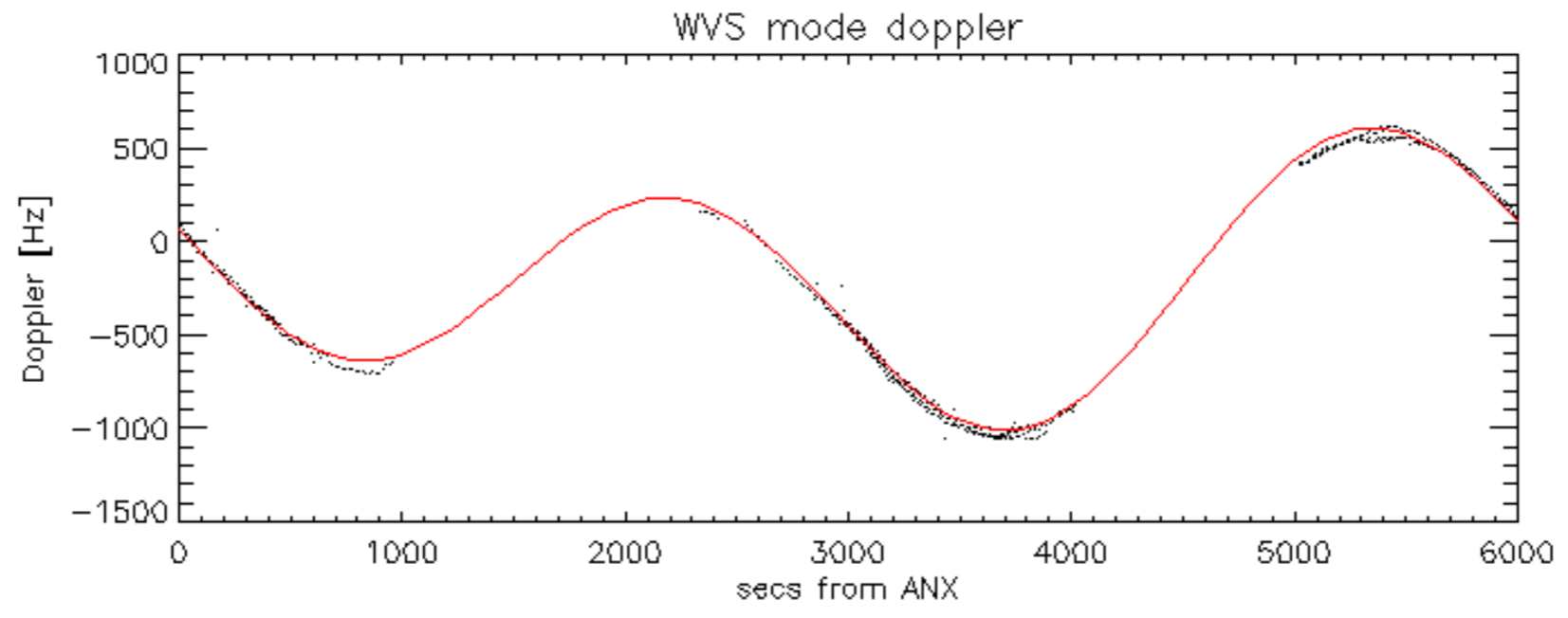
Doppler 'WVS' 'IS2' descending



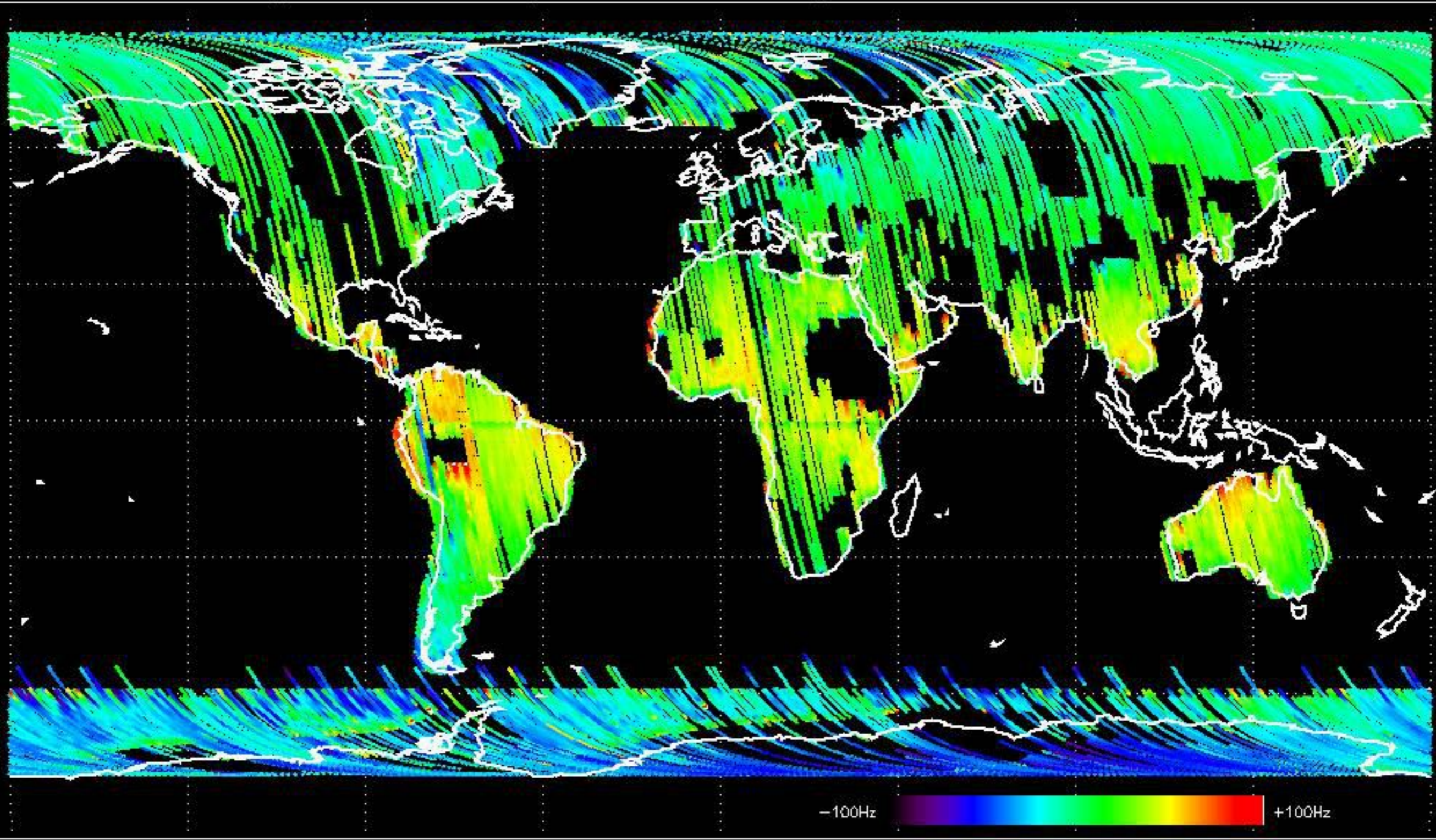


GM1 mode doppler

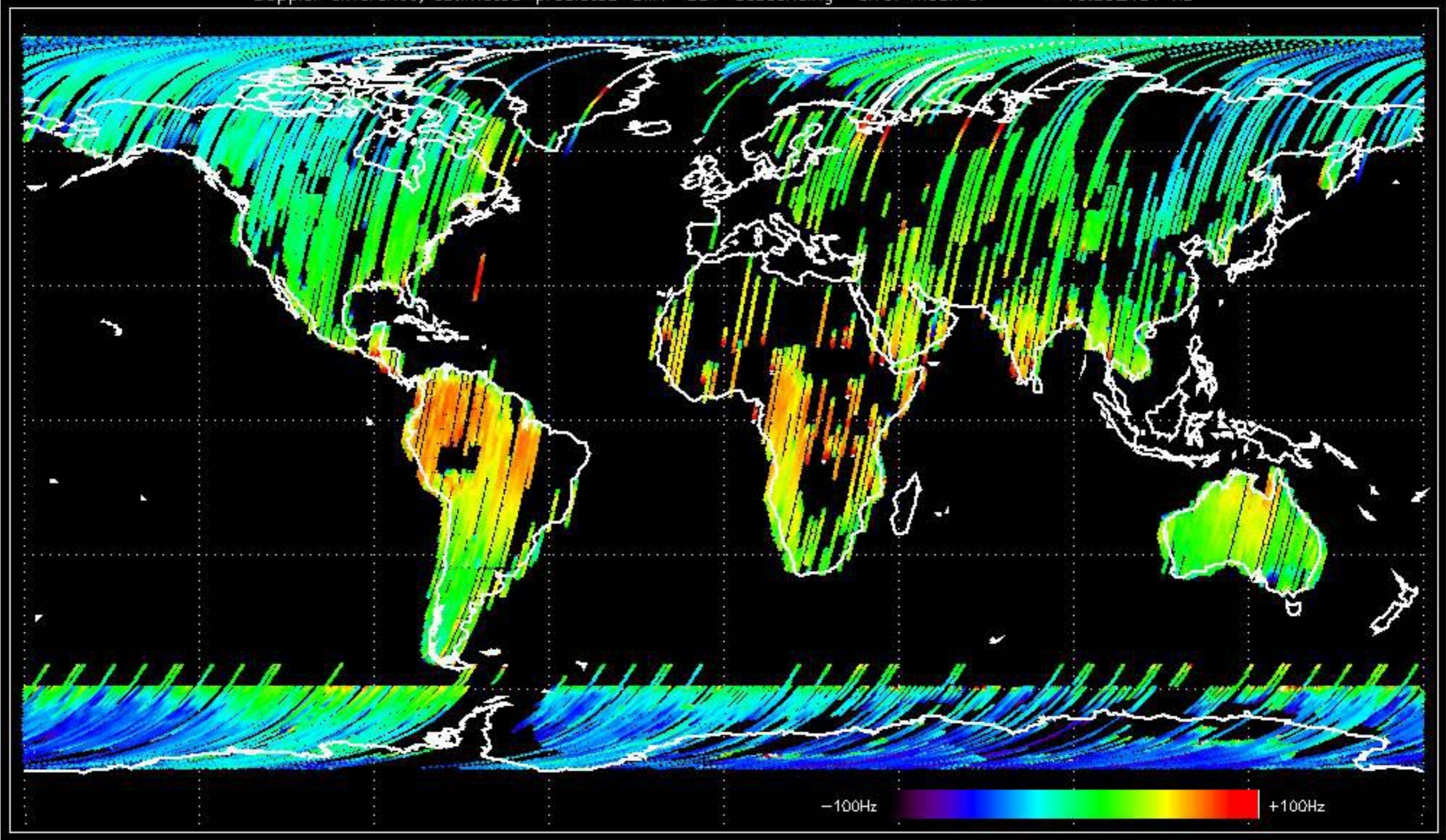




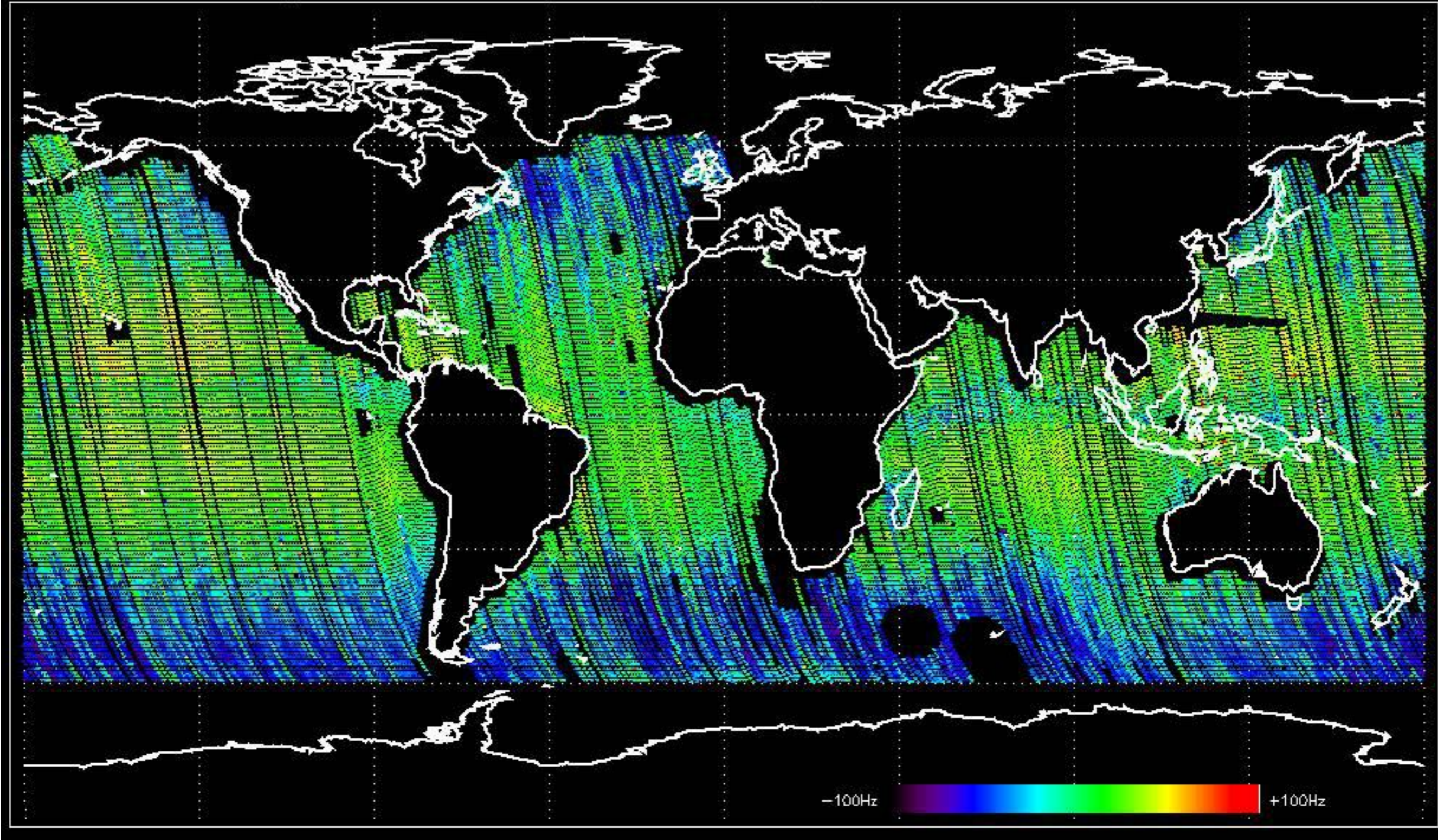
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.928532 Hz



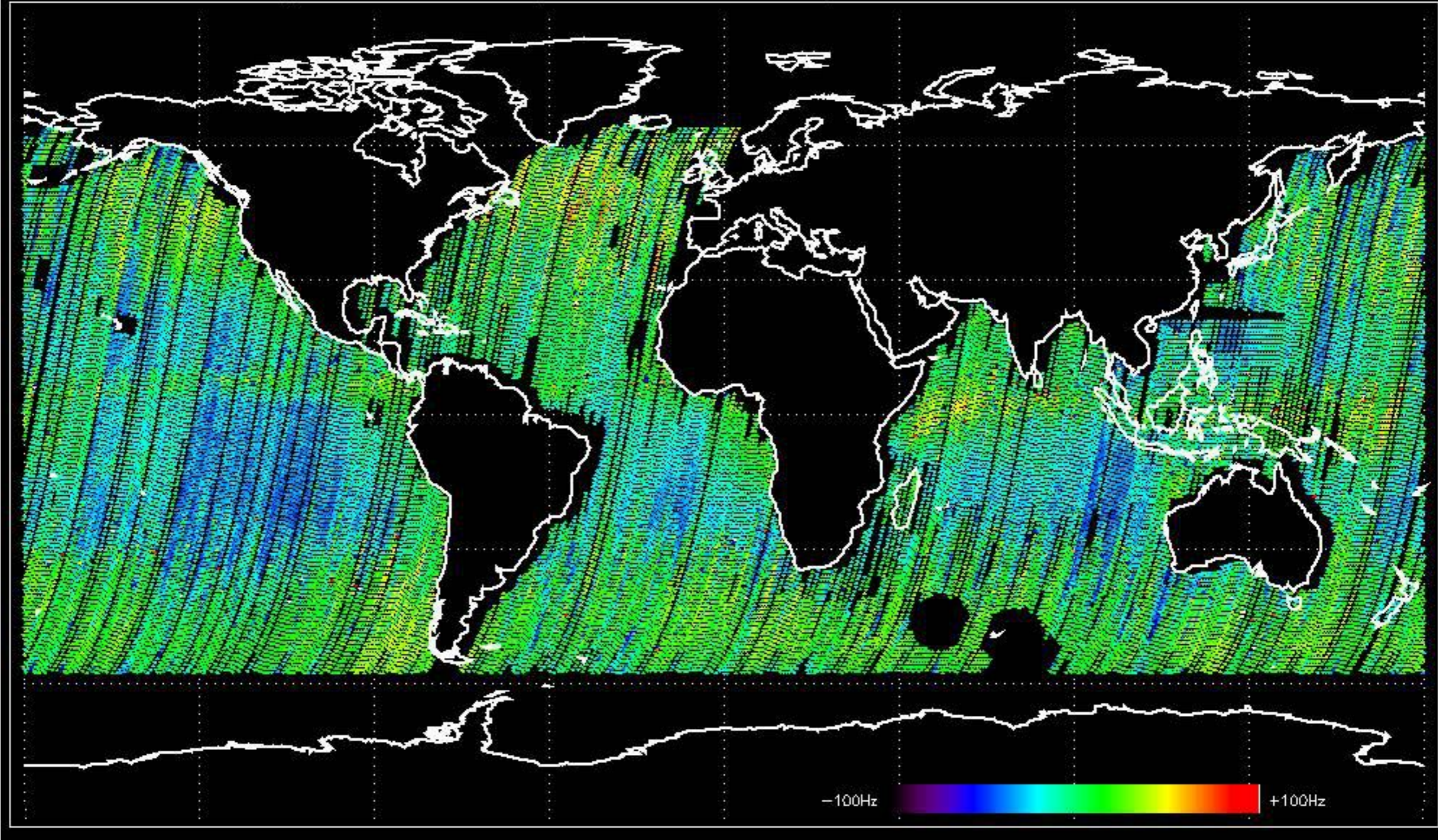
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.392401 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.8671564 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.5771849 Hz



No anomalies observed on available MS products:

No anomalies observed.





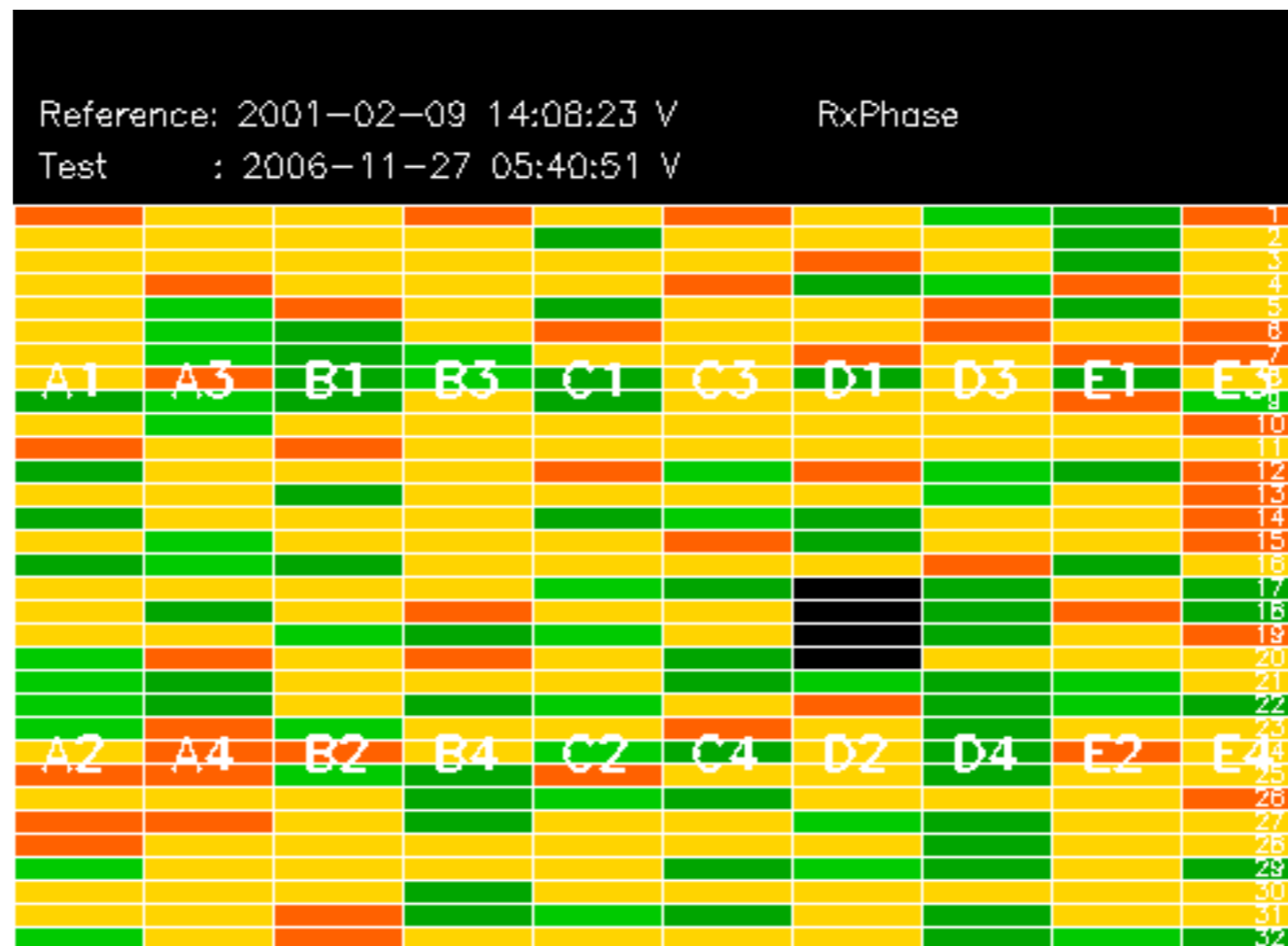






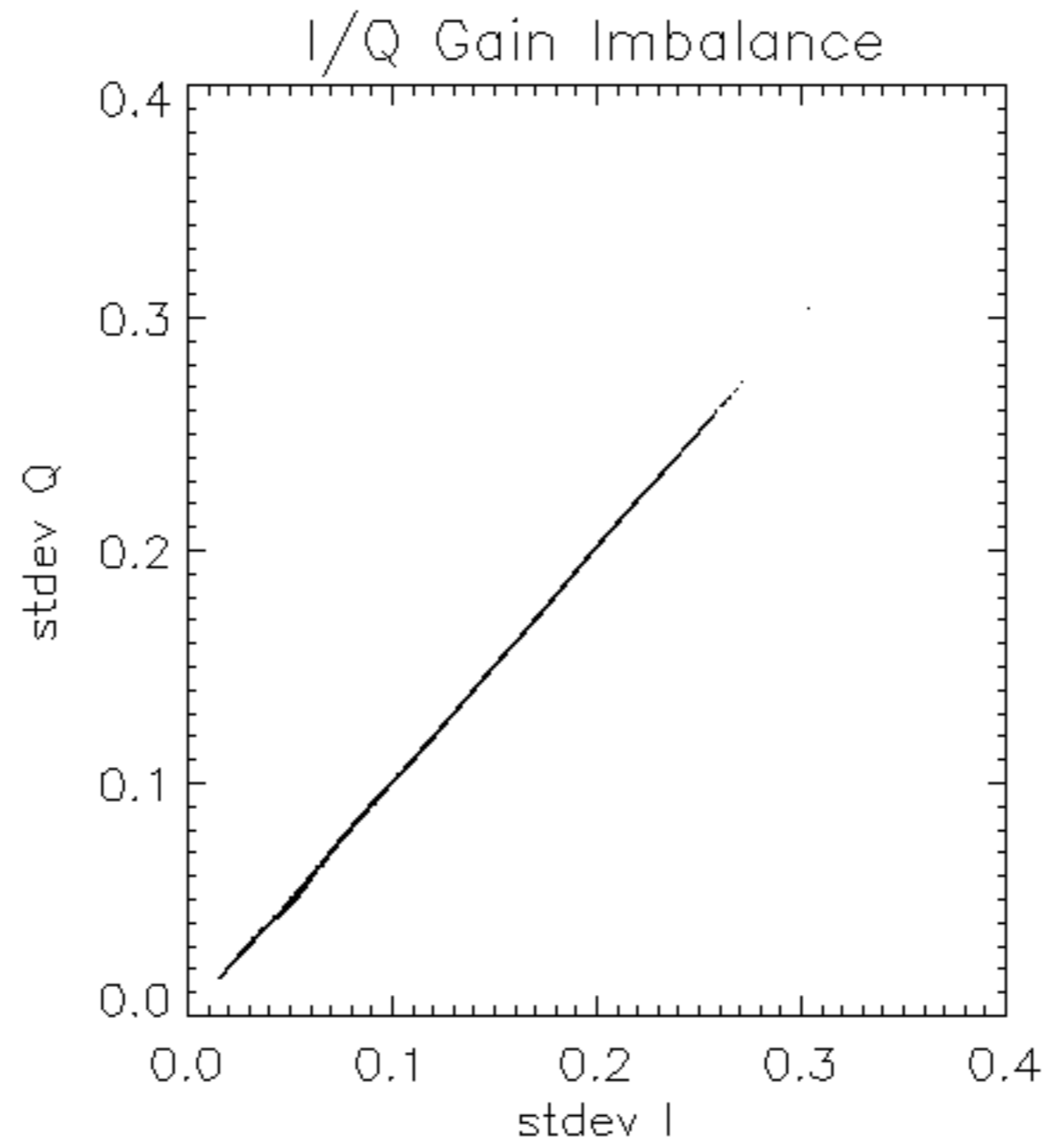


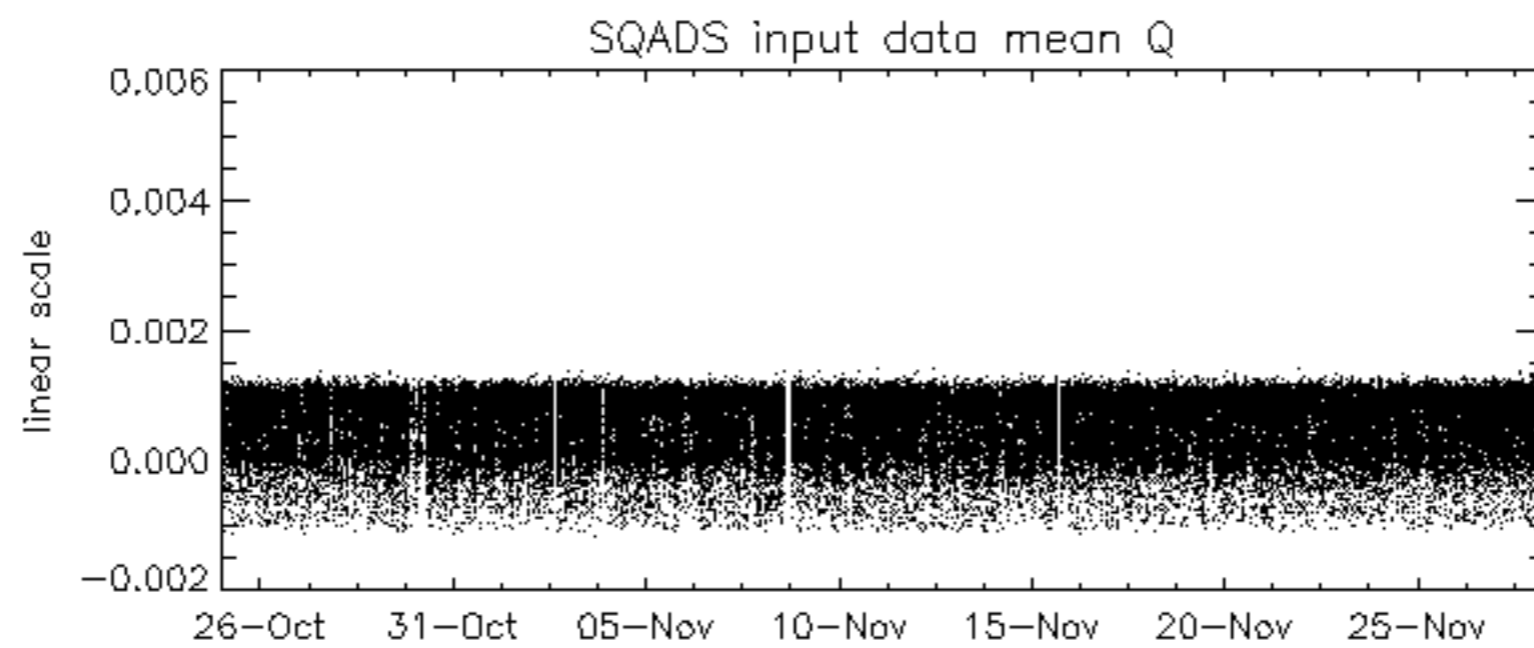
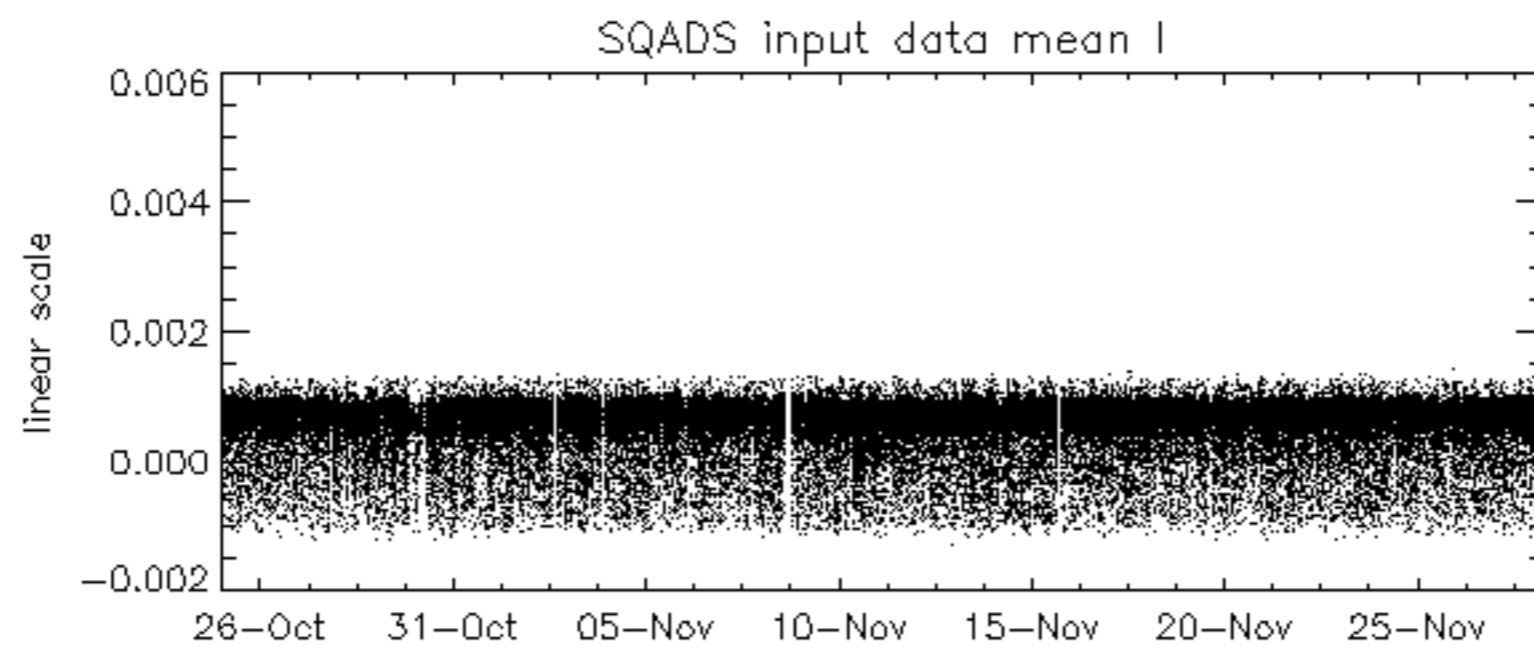
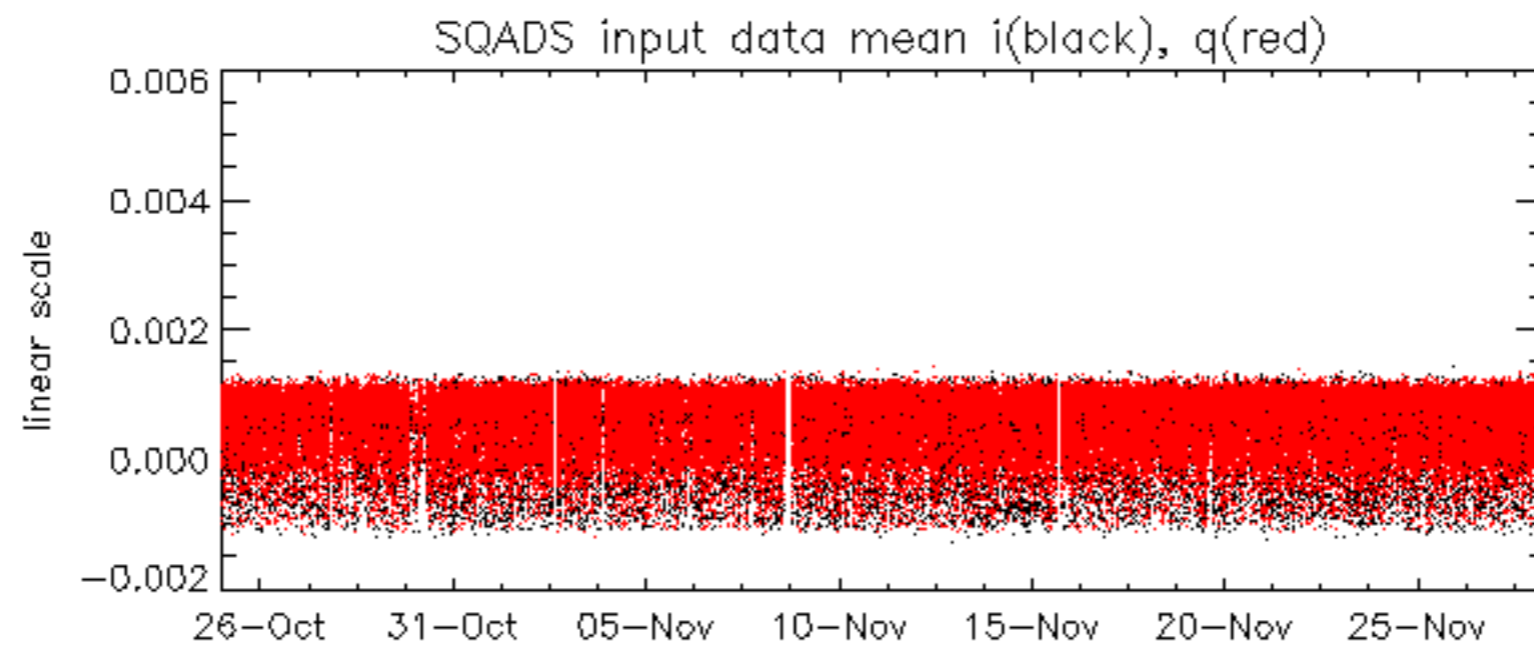


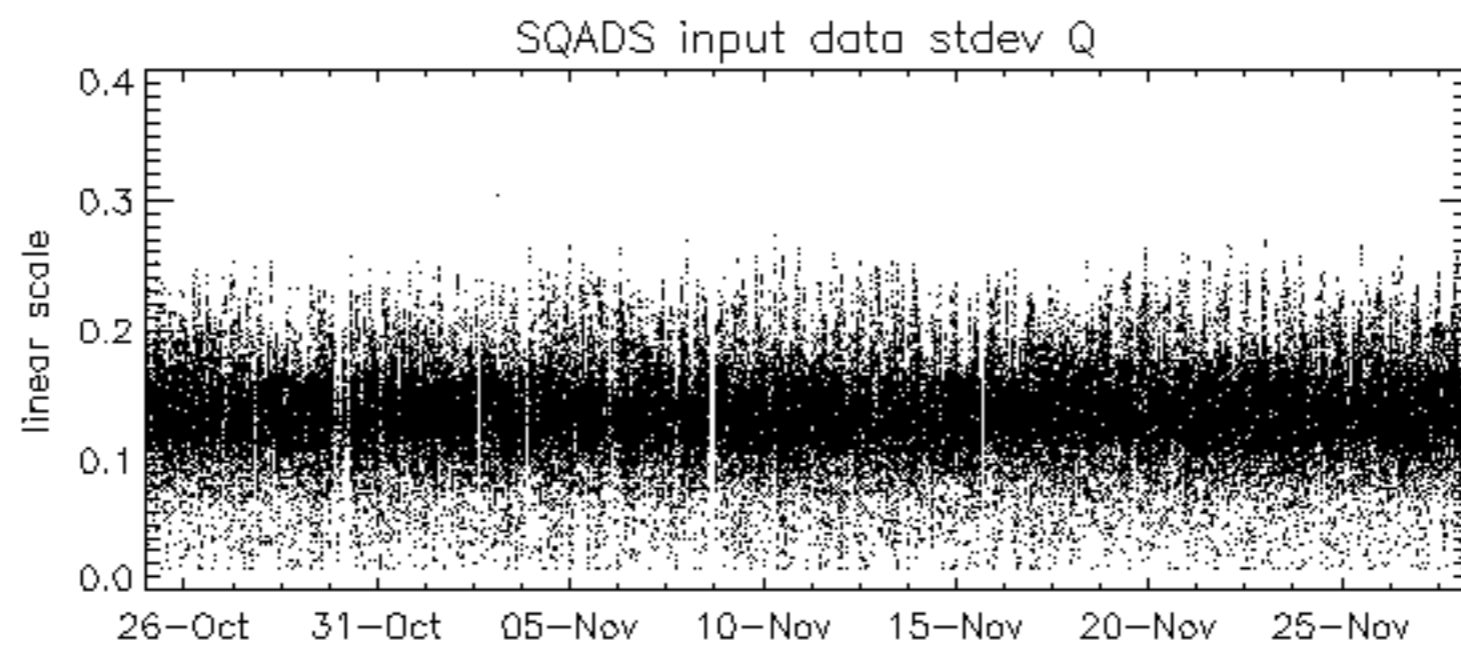
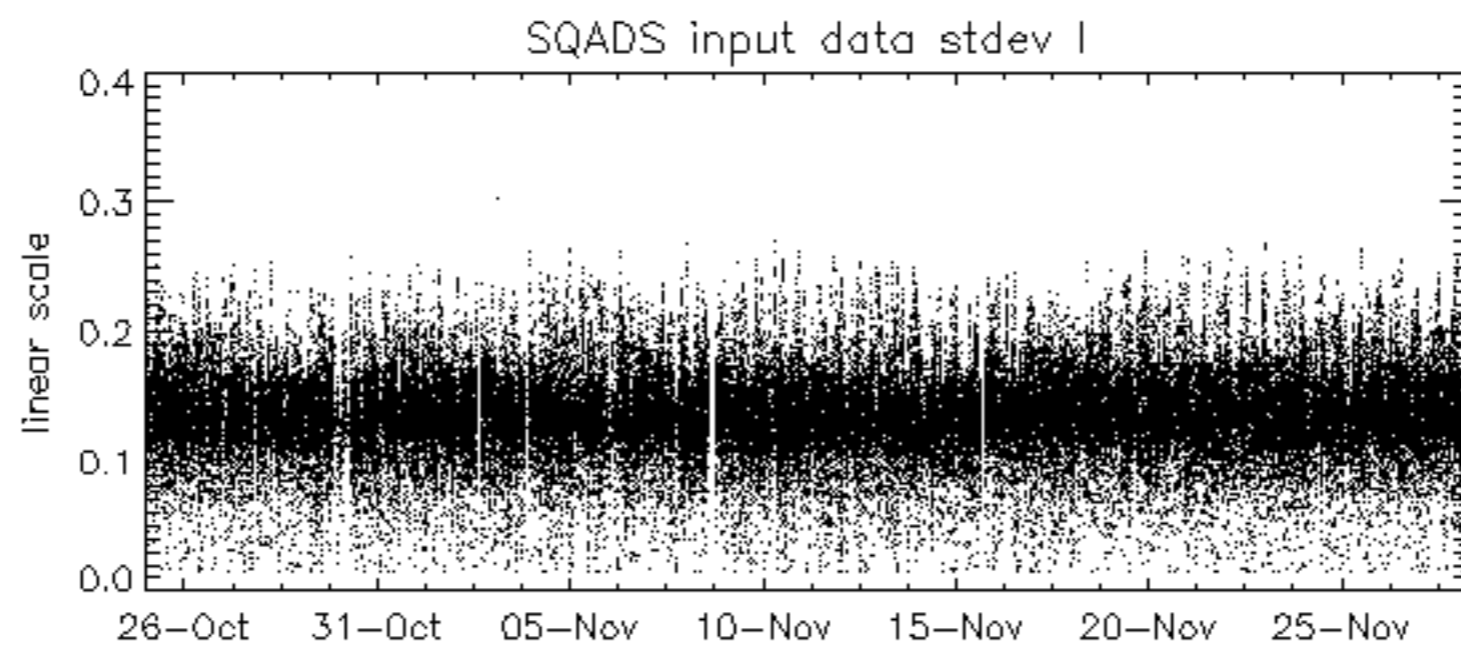
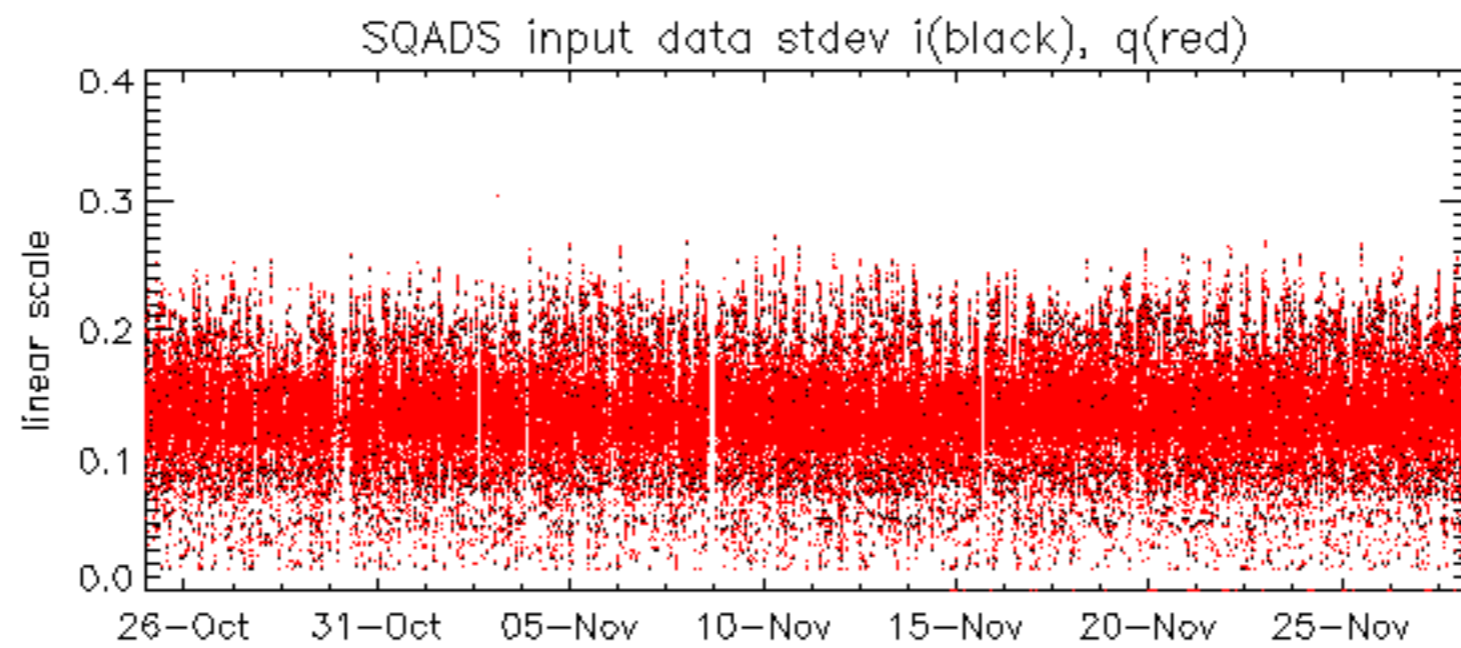


















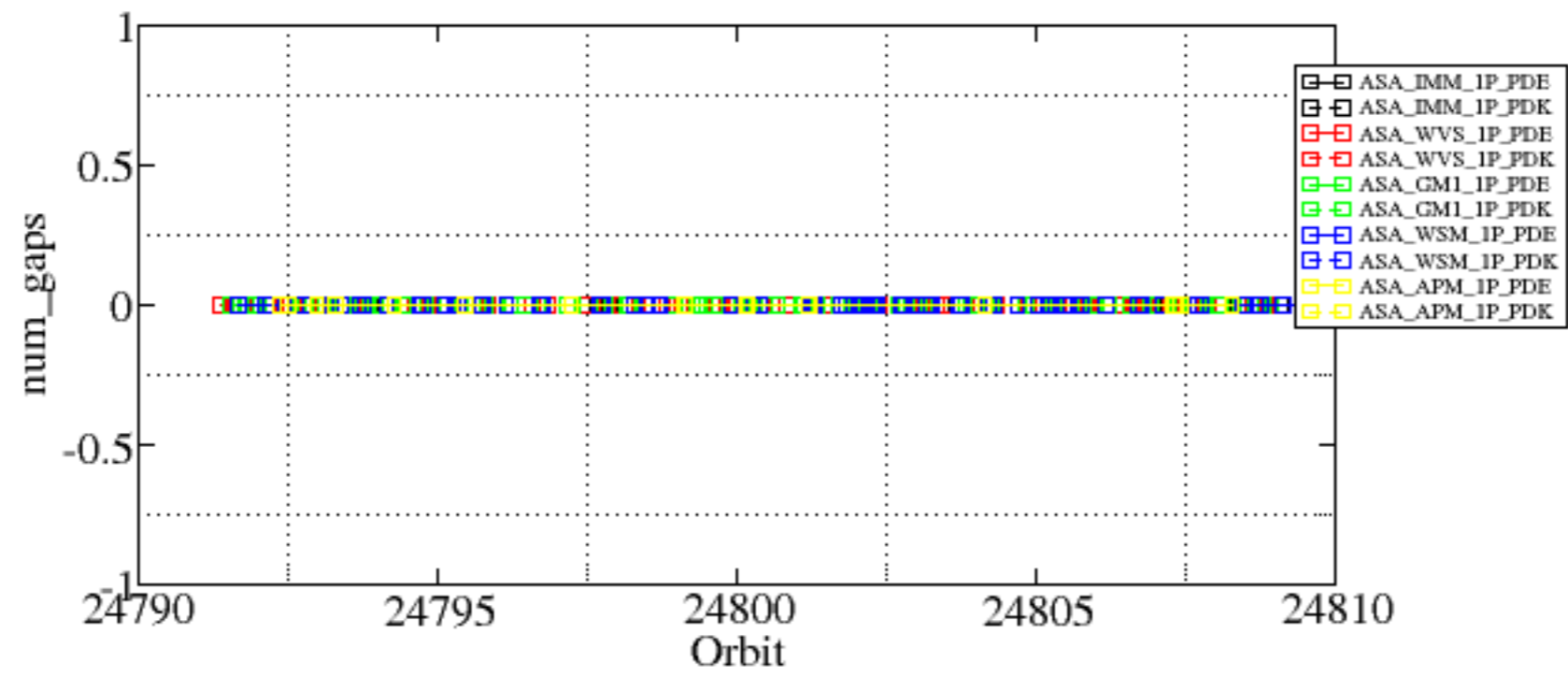


Summary of analysis for the last 3 days 2006112[789]

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_1PNPDK20061127_154433_00009242053_00197_24800_9420.N1	0	36





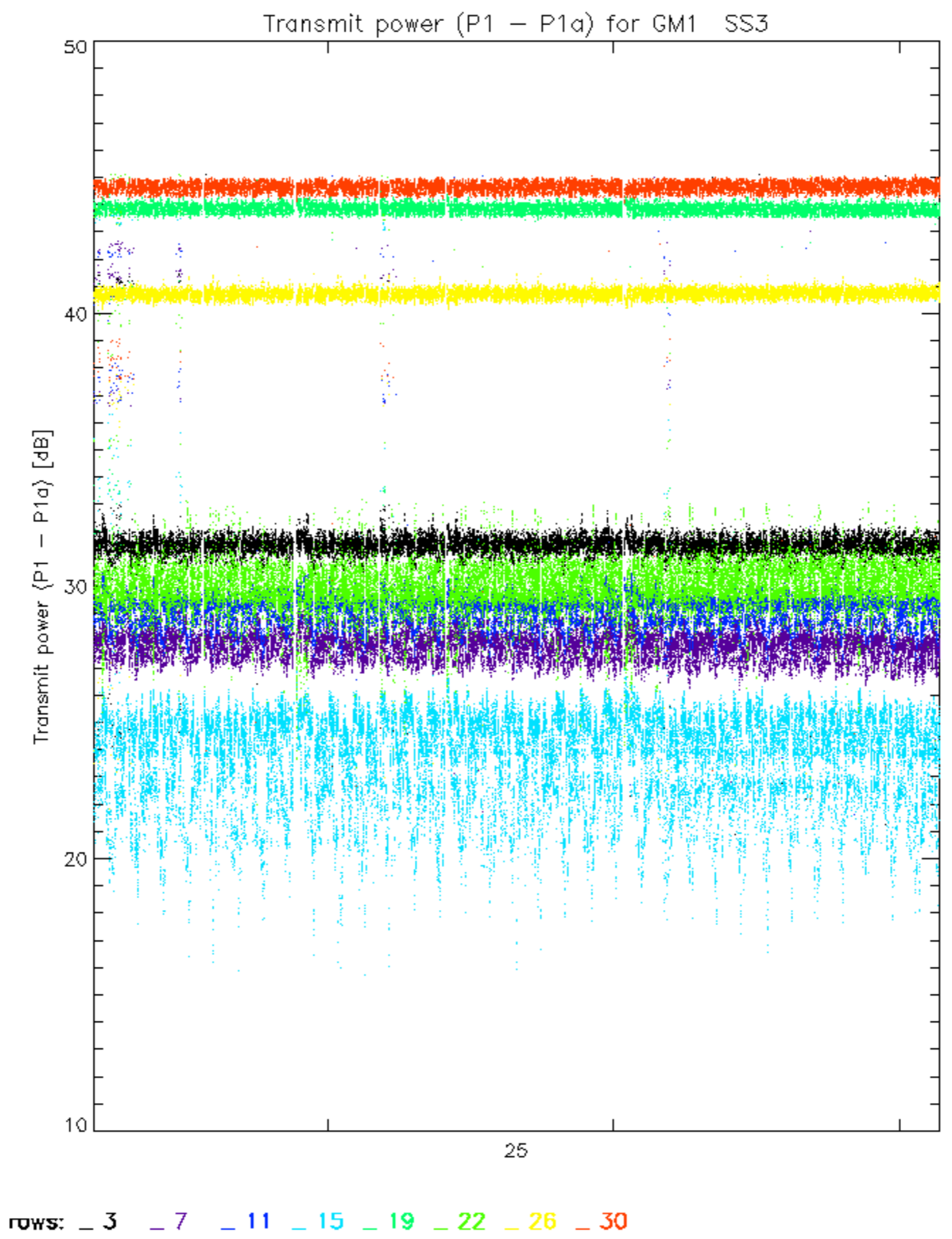


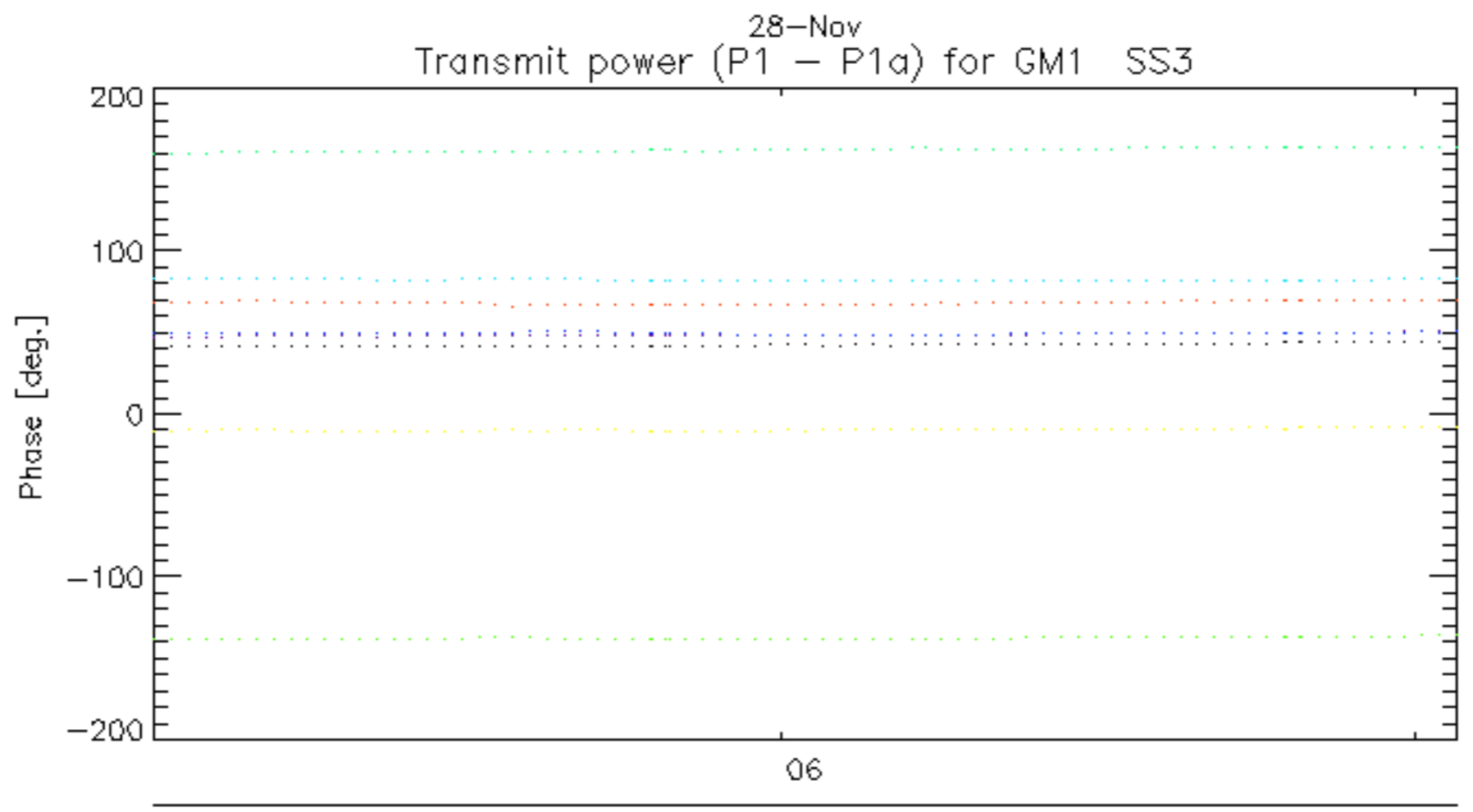
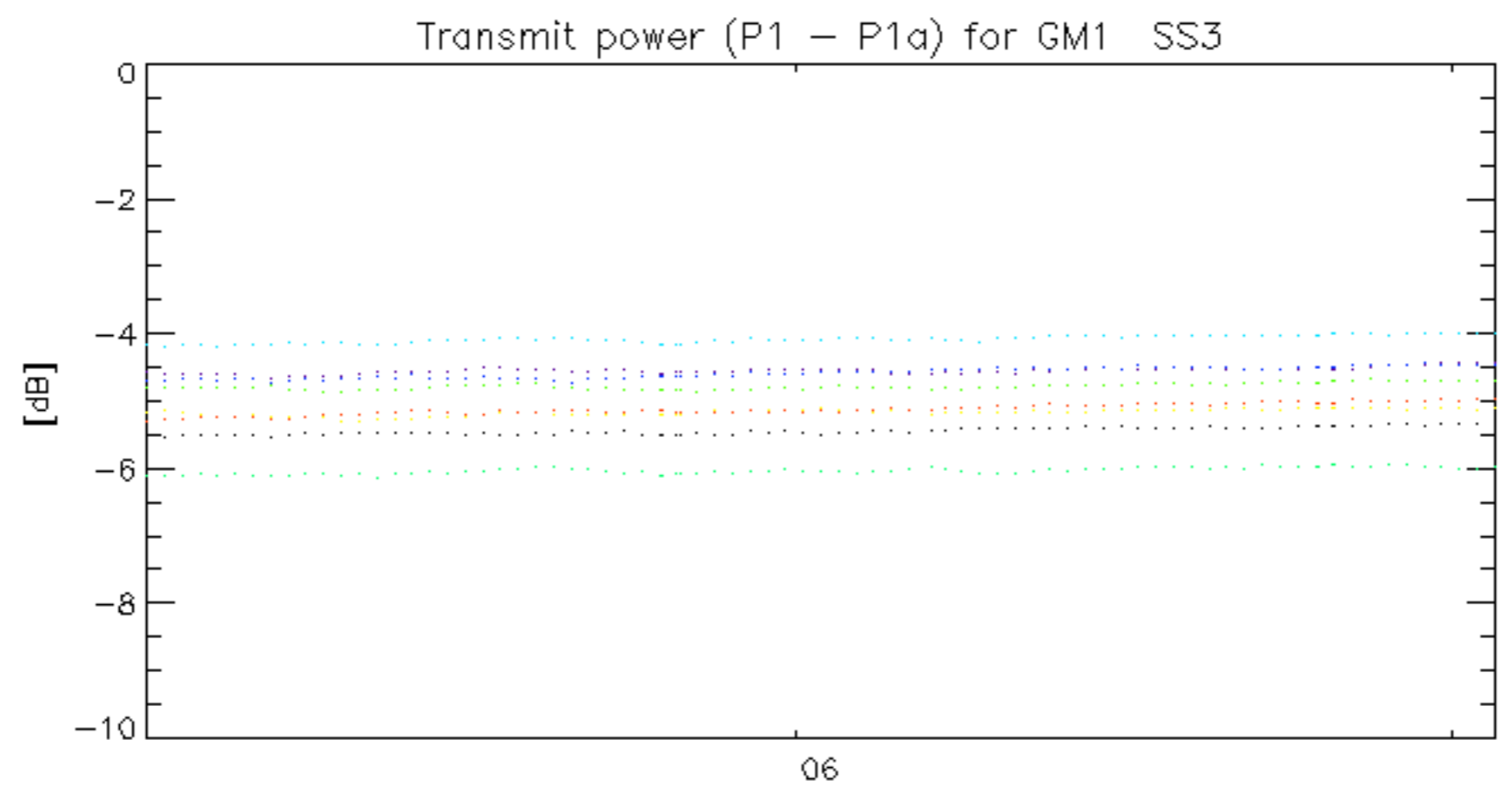






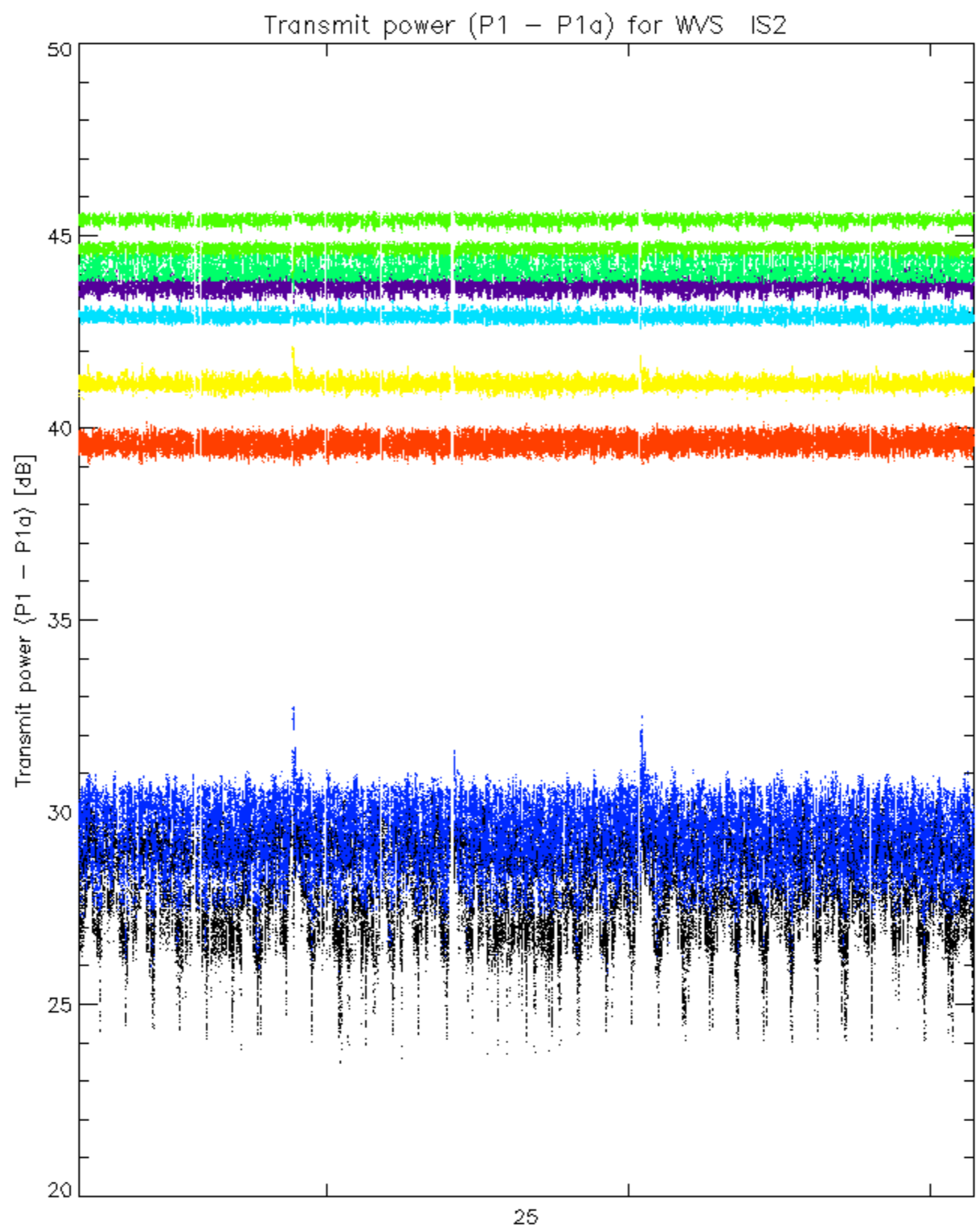




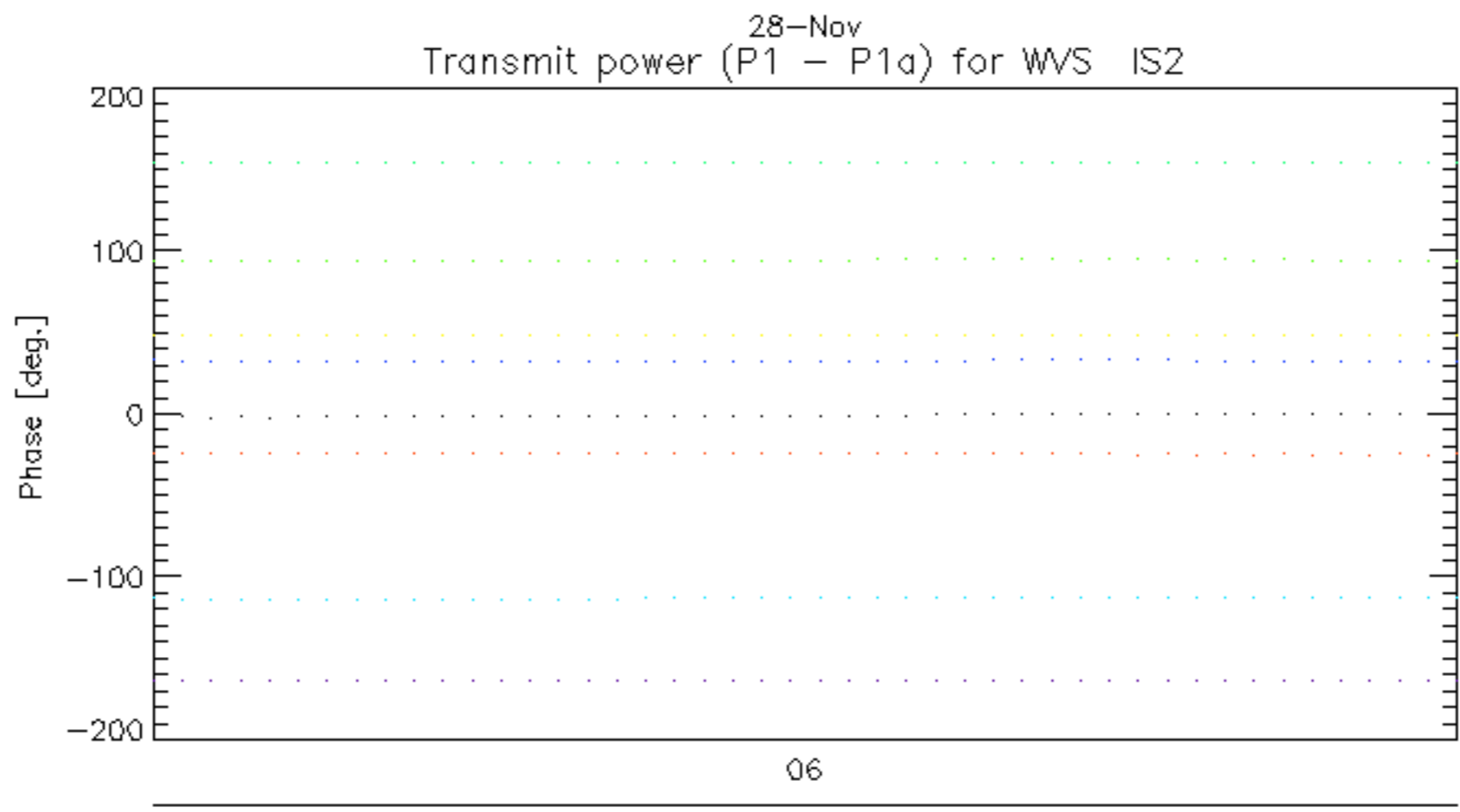
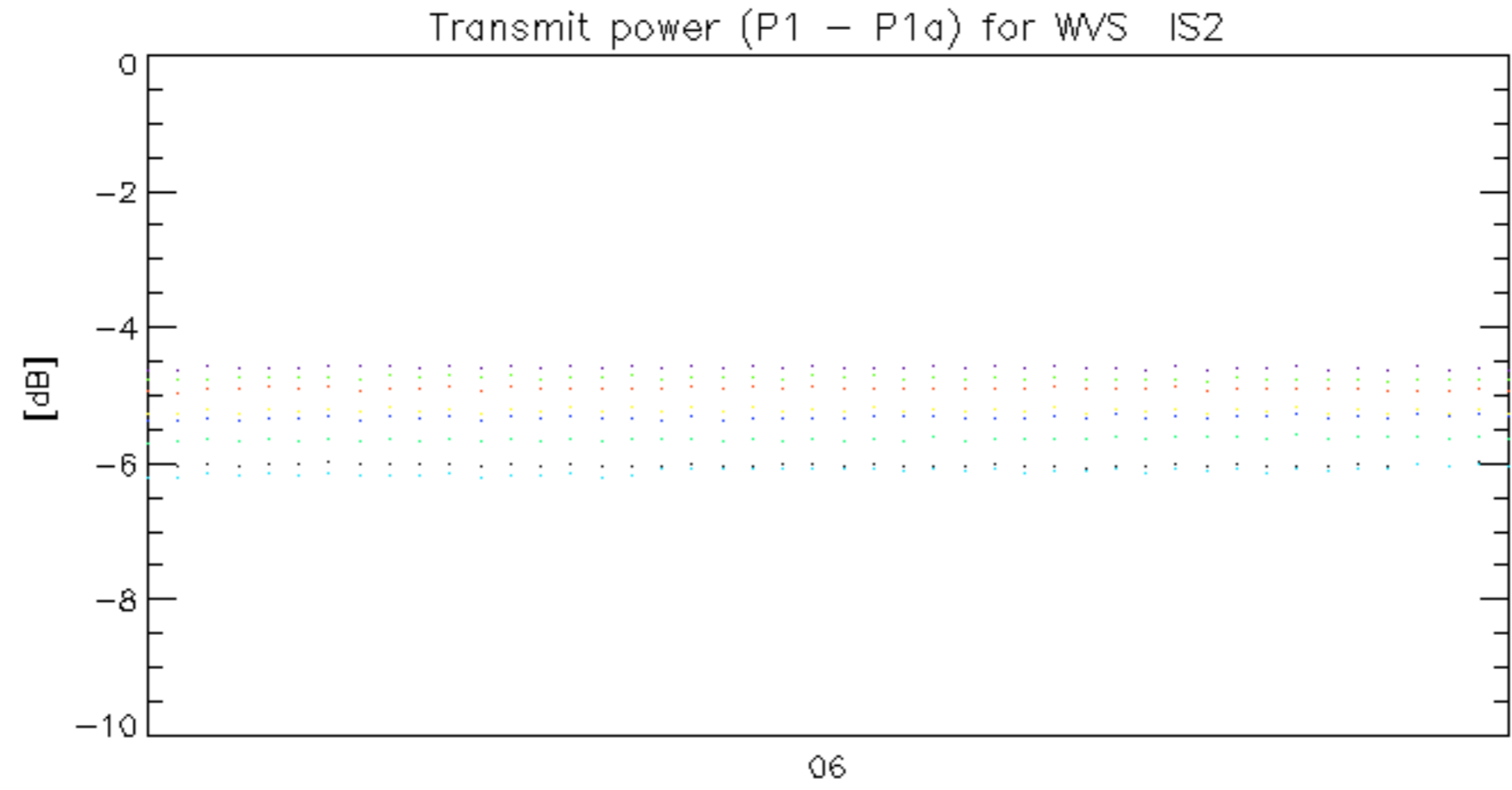


rows: **3** **7** **11** **15** **19** **22** **26** **30**





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



rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.