

# PRELIMINARY REPORT OF 051207

last update on Wed Dec 7 16:41:33 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 2005-12-06 00:00:00 to 2005-12-07 16:41:33

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	41	0	14	1	6
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	41	0	14	1	6
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	0	14	1	6
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	41	0	14	1	6

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	56	50	35	9	48
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	56	50	35	9	48
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	56	50	35	9	48
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	56	50	35	9	48

### 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	20051124 100809
H	20051207 081853

### 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)
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**P1 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.561435	0.137045	0.194075
7	P1	-2.842205	0.095513	0.715260
11	P1	-4.142216	0.017407	-0.010278
15	P1	-5.485156	1.269711	2.943353
19	P1	-3.095858	0.045185	0.499695
22	P1	-4.461228	0.019119	0.181234
26	P1	-4.332636	0.047586	-0.503015
30	P1	-5.693273	0.026552	0.320329
3	P1	-15.323508	1.534239	0.784717
7	P1	-15.757185	1.949095	3.543599
11	P1	-16.420889	0.419629	0.776578
15	P1	-13.080618	0.752562	2.027773
19	P1	-13.557343	0.262346	1.162824
22	P1	-16.187065	0.553418	0.904473
26	P1	-15.411373	0.896470	2.147609
30	P1	-16.011196	1.884112	3.284770

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.876083	0.102403	-0.056135
7	P2	-22.567139	0.101108	0.052740
11	P2	-16.590834	0.113944	-0.090310
15	P2	-7.272971	0.100665	-0.056829
19	P2	-9.225013	0.098261	0.023989
22	P2	-17.870556	0.105360	0.105975
26	P2	-16.297325	0.123068	-0.458518
30	P2	-19.740246	0.108612	-0.349607

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.231904	0.007251	-0.017779
7	P3	-8.231904	0.007251	-0.017779
11	P3	-8.231904	0.007251	-0.017779
15	P3	-8.231904	0.007251	-0.017779
19	P3	-8.231904	0.007251	-0.017779
22	P3	-8.231904	0.007251	-0.017779
26	P3	-8.231904	0.007251	-0.017779
30	P3	-8.231904	0.007251	-0.017779

**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	-3.690243	0.007840	-0.034455
7	P1	-2.783858	0.010789	0.006724
11	P1	-2.873627	0.013613	-0.020692
15	P1	-3.395051	0.021440	-0.054456
19	P1	-3.376901	0.013193	-0.032816
22	P1	-5.113724	0.019766	-0.043929
26	P1	-5.820747	0.015980	-0.055502
30	P1	-5.264287	0.032182	-0.049185
3	P1	-11.463903	0.041493	-0.042526
7	P1	-9.969040	0.045495	-0.001280
11	P1	-10.046529	0.060820	-0.022542
15	P1	-10.565118	0.083866	-0.067637
19	P1	-15.501989	0.073307	-0.014320
22	P1	-20.919300	0.970177	-0.096754

26	P1	-17.223341	0.304532	0.156568
30	P1	-18.343172	0.315954	-0.001102

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.655088	0.030603	0.086625
7	P2	-23.064442	0.062653	0.069974
11	P2	-11.680547	0.022986	0.114932
15	P2	-4.974533	0.021370	-0.029450
19	P2	-6.953469	0.021783	-0.026395
22	P2	-8.170769	0.023773	-0.067685
26	P2	-24.030924	0.032198	-0.065142
30	P2	-22.111528	0.020624	-0.017369

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.071633	0.002487	-0.014575
7	P3	-8.071660	0.002492	-0.015123
11	P3	-8.071580	0.002481	-0.014964
15	P3	-8.071601	0.002490	-0.014641
19	P3	-8.071858	0.002493	-0.014384
22	P3	-8.071691	0.002487	-0.014733
26	P3	-8.071564	0.002474	-0.015103
30	P3	-8.071544	0.002488	-0.014392

## 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	0.000496079
	stdev	2.05742e-07
MEAN Q	mean	0.000502619
	stdev	2.34313e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.131831
	stdev	0.00111323
STDEV Q	mean	0.132141
	stdev	0.00112724



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005120[567]

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_1PNPDE20051205_182347_000000352043_00099_19692_3137.N1	0	3
ASA_WSM_1PNPDE20051206_014940_000002812043_00103_19696_2963.N1	0	3
ASA_WSM_1PNPDE20051206_042641_000001832043_00105_19698_2974.N1	0	61
ASA_WSM_1PNPDE20051206_143021_000000852043_00111_19704_3065.N1	0	40
ASA_WSM_1PNPDE20051207_011642_000003672043_00117_19710_3119.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)

<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"/>
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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

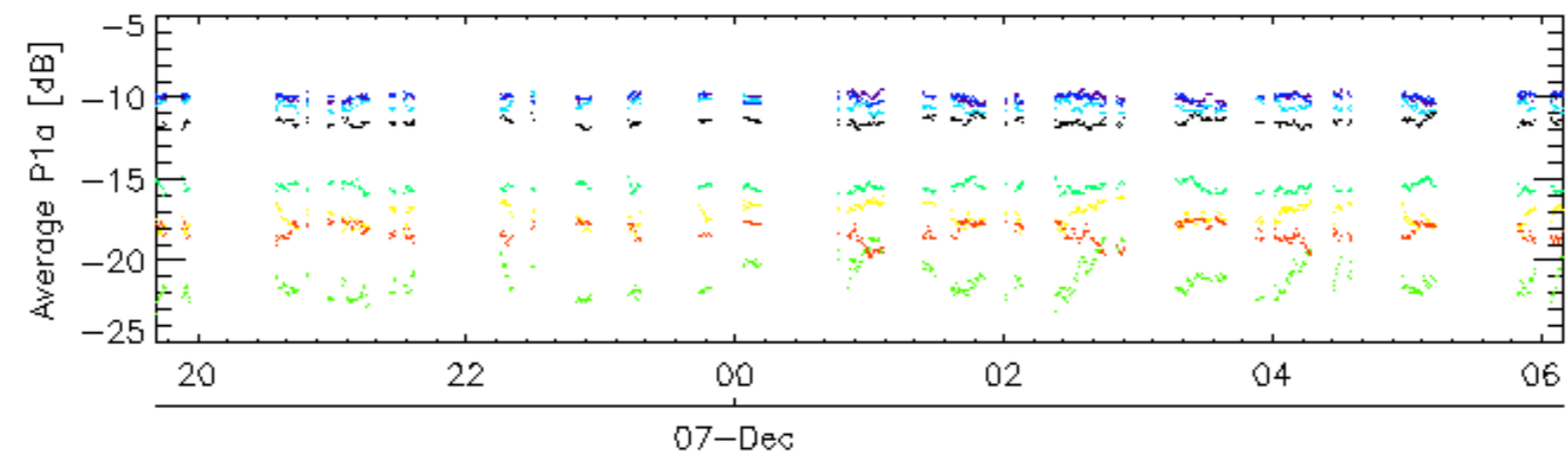
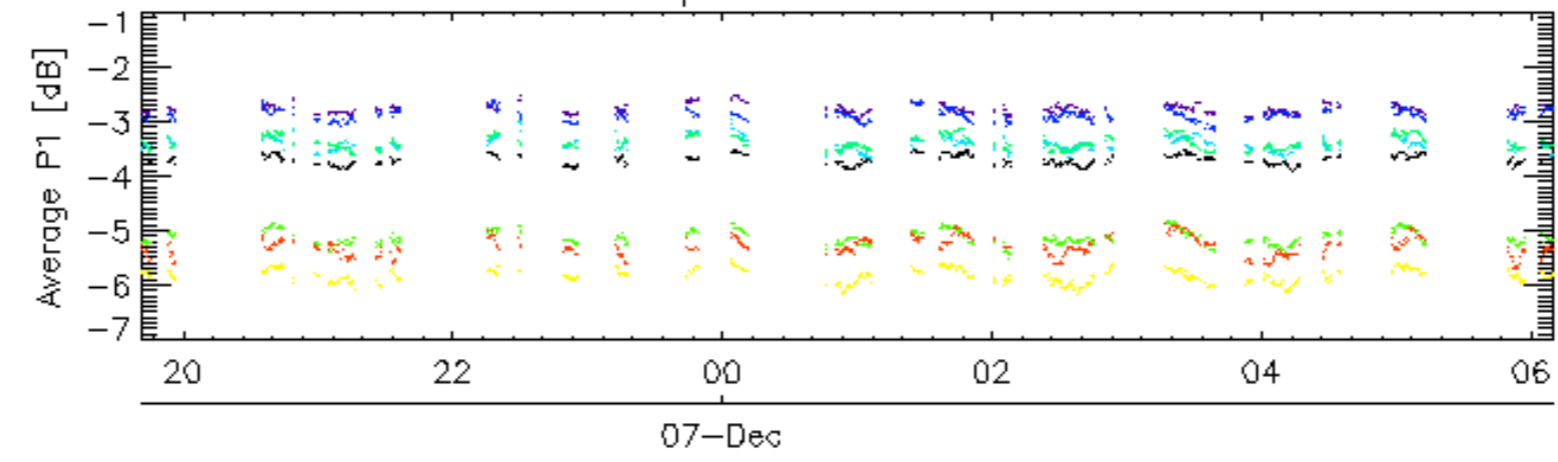
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

### 7.6 - Doppler evolution versus ANX for GM1

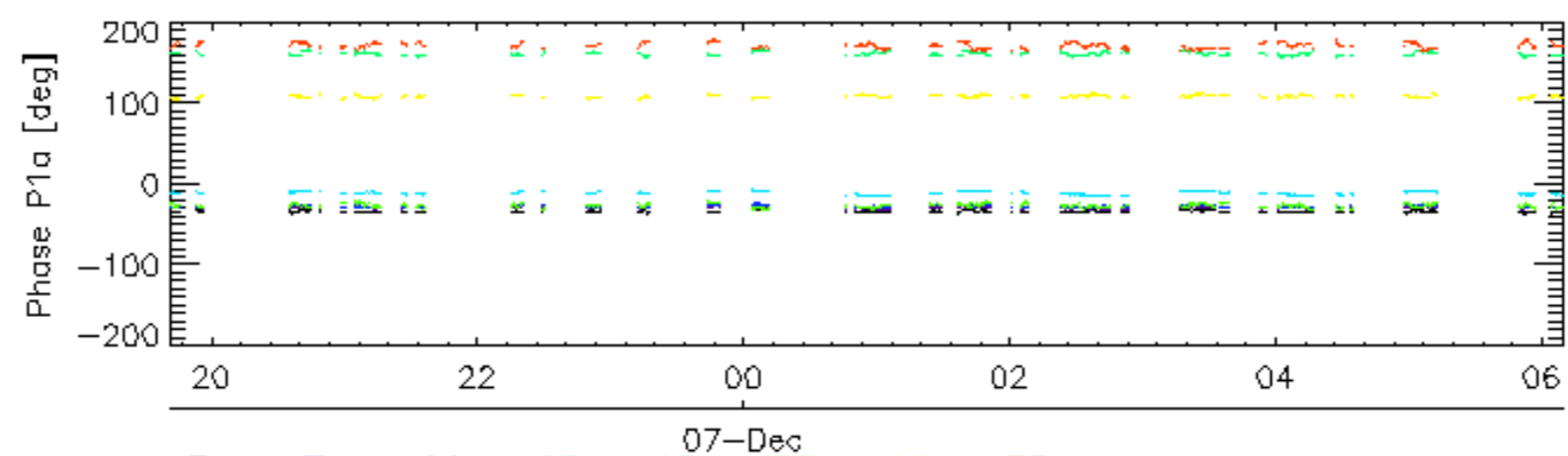
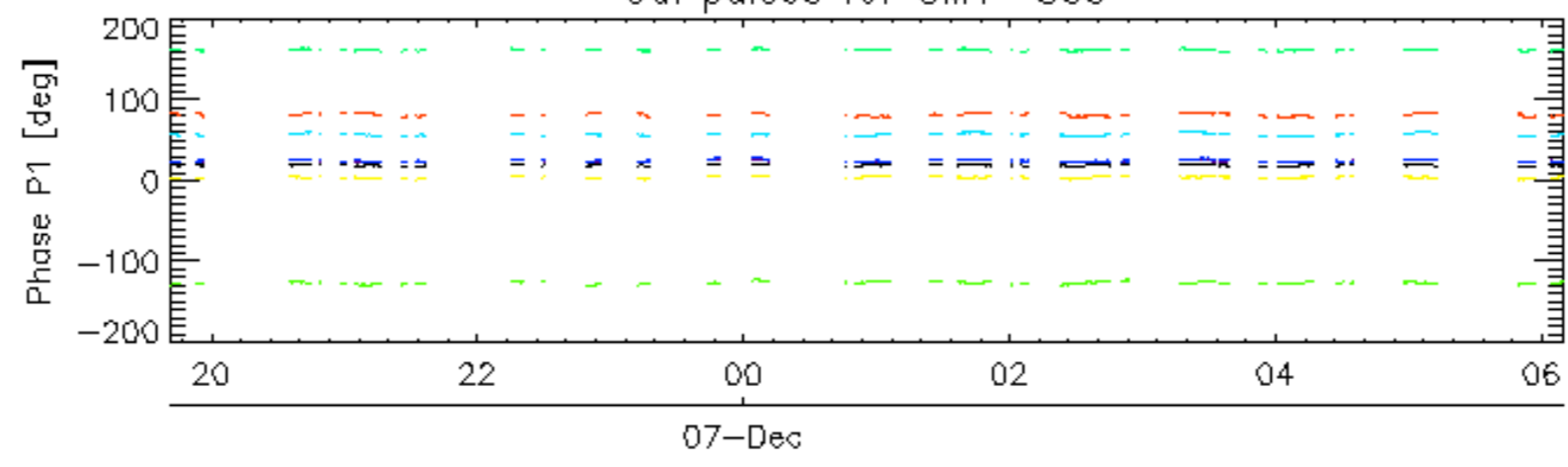
Evolution Doppler error versus ANX

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

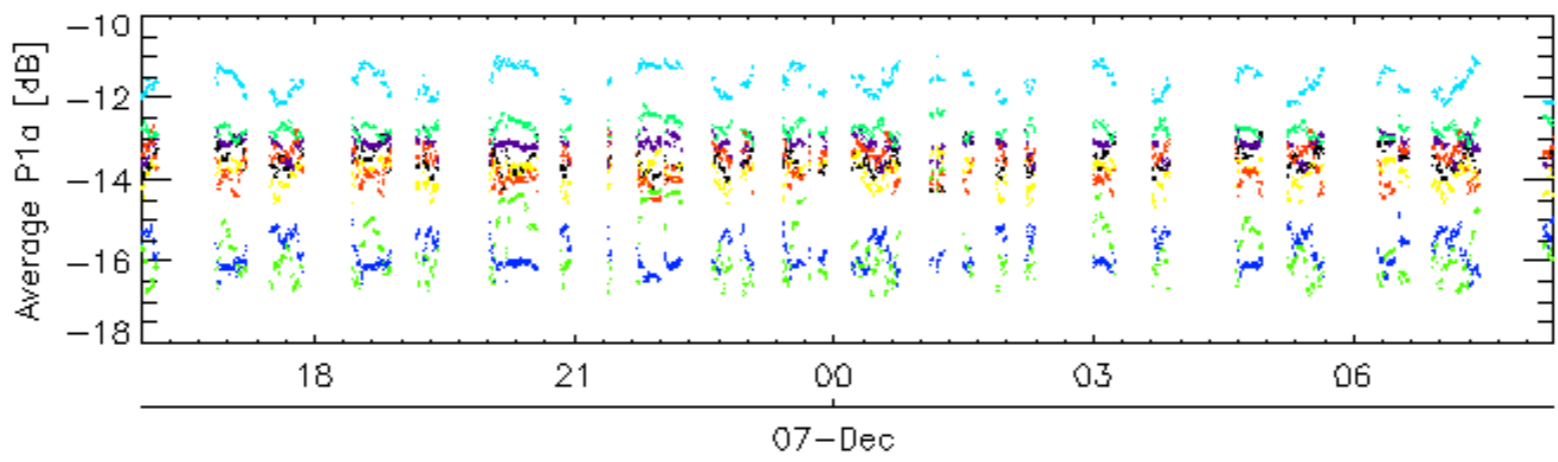
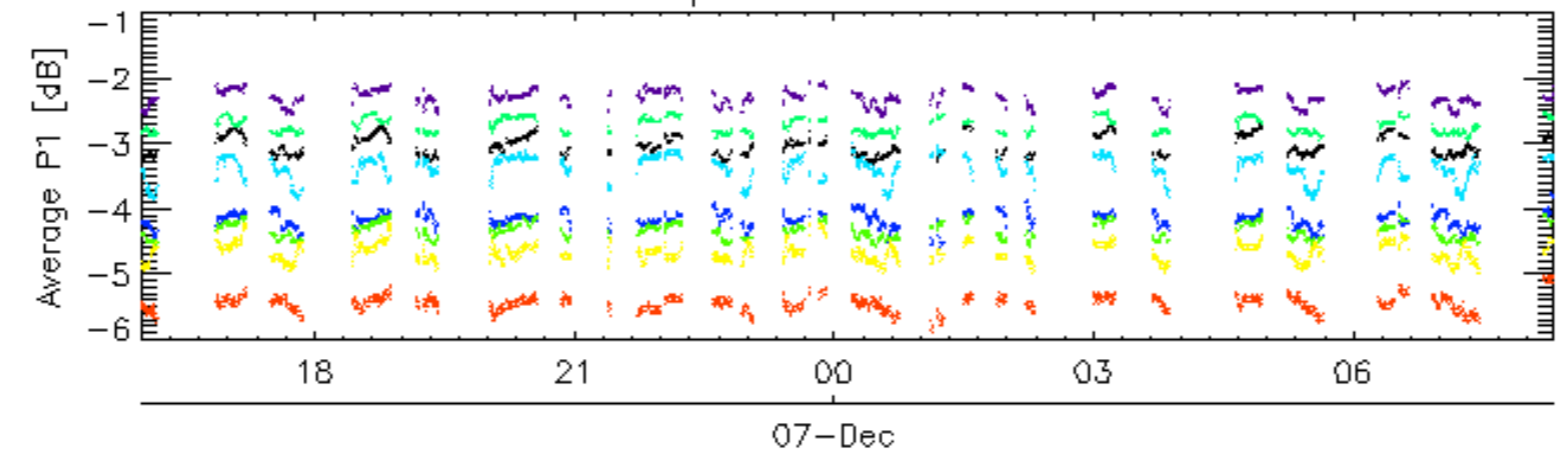


Cal pulses for GM1 SS3

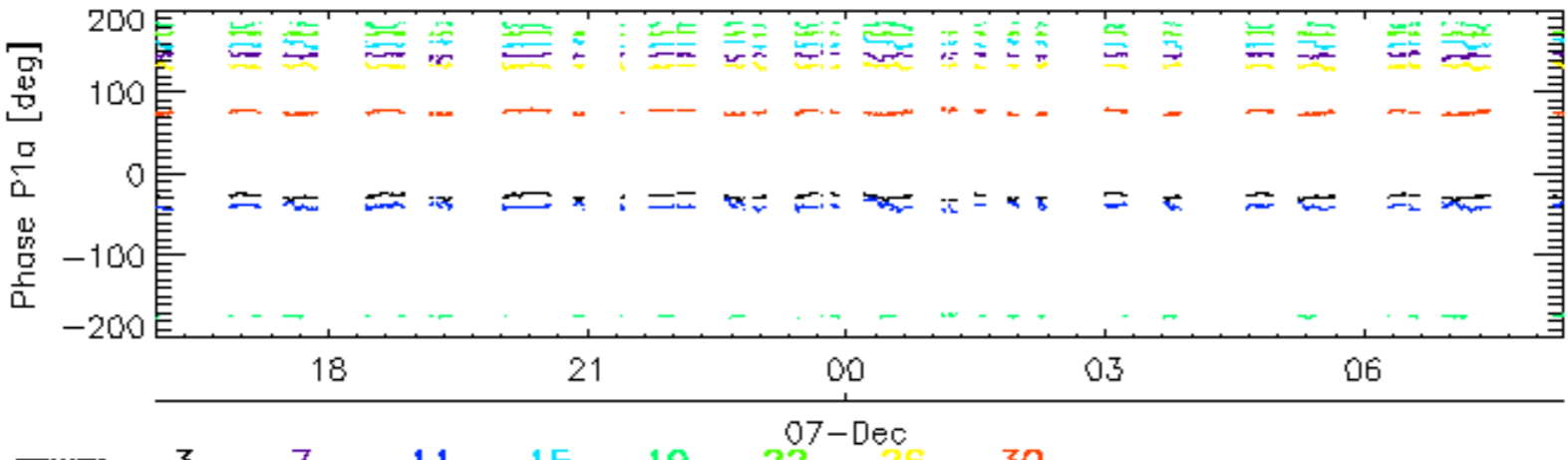
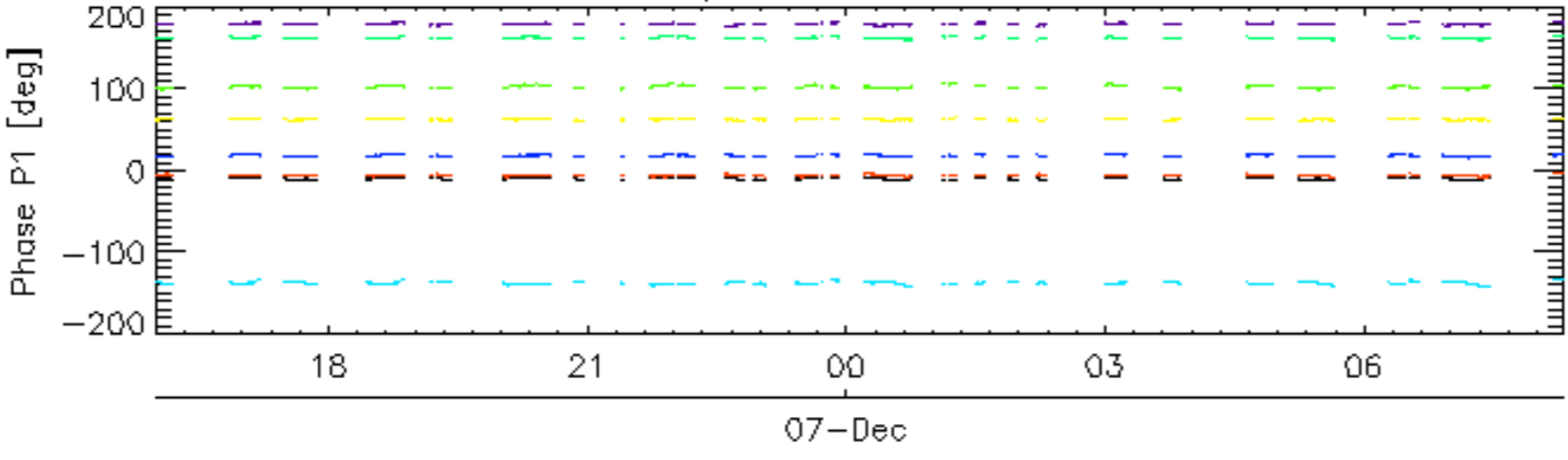


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

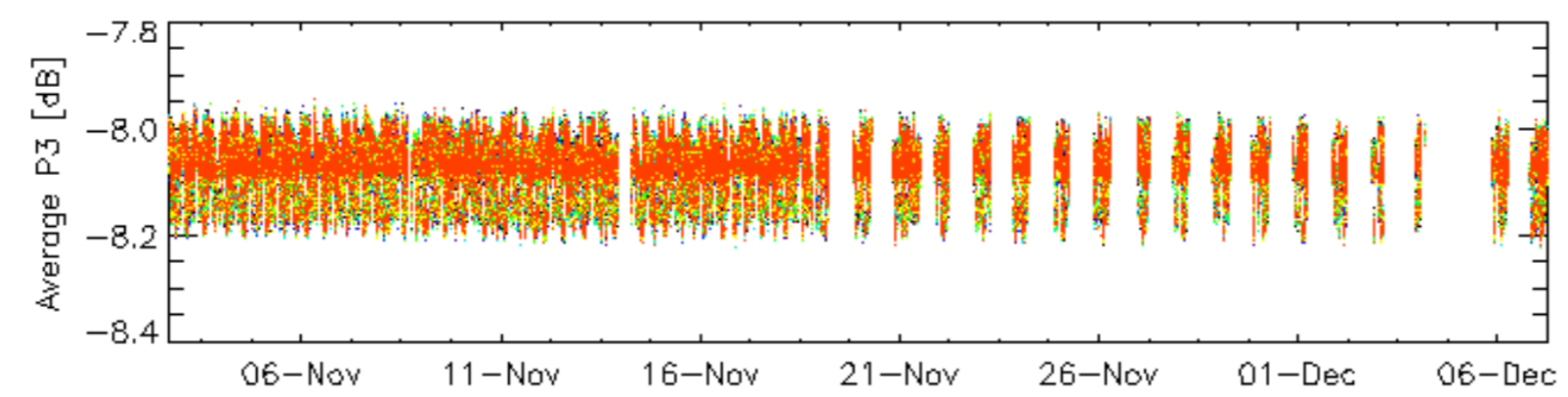
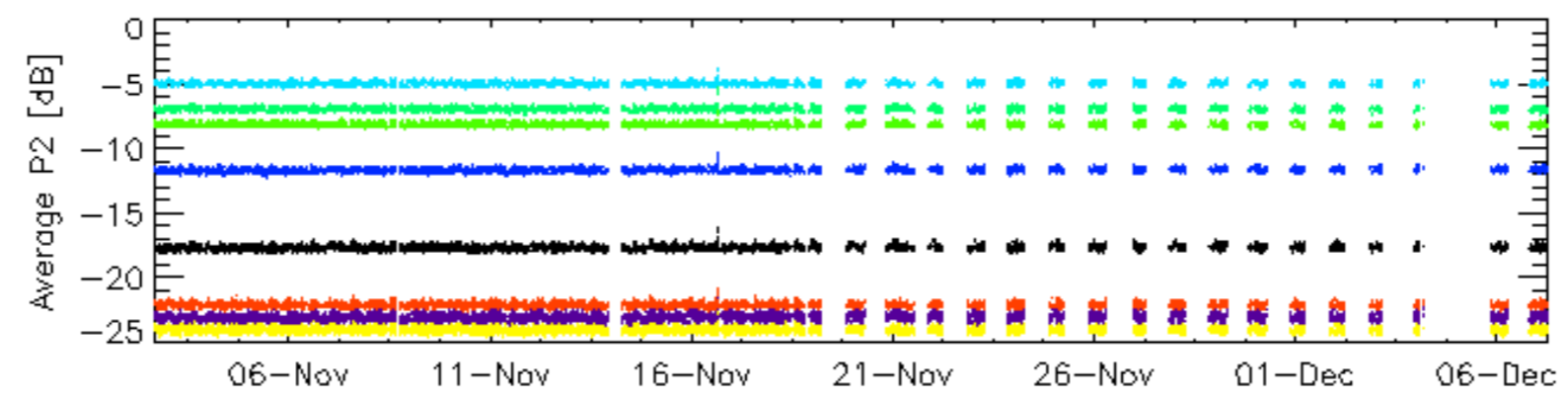
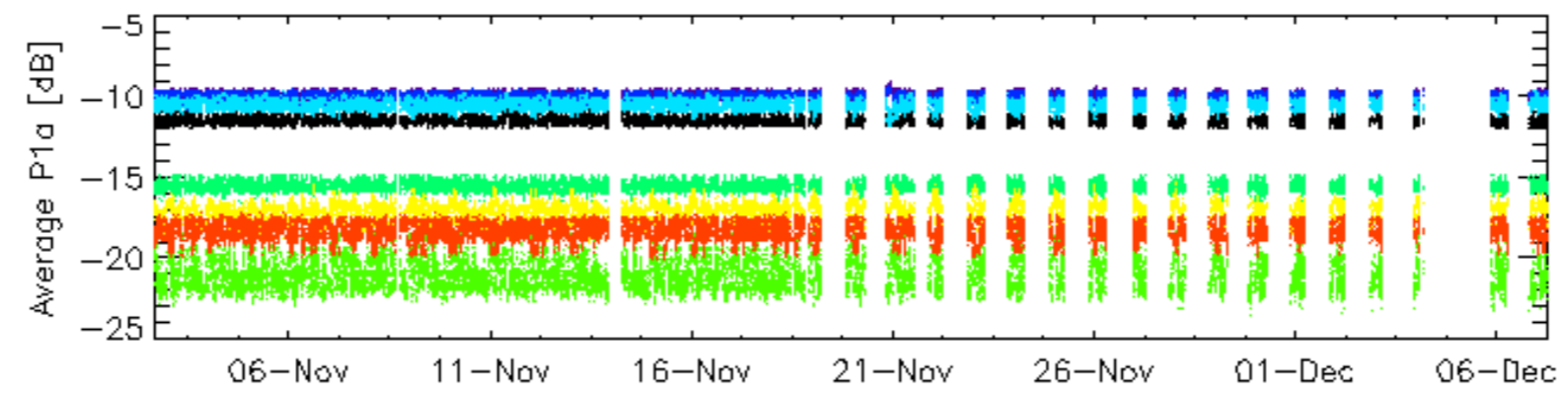
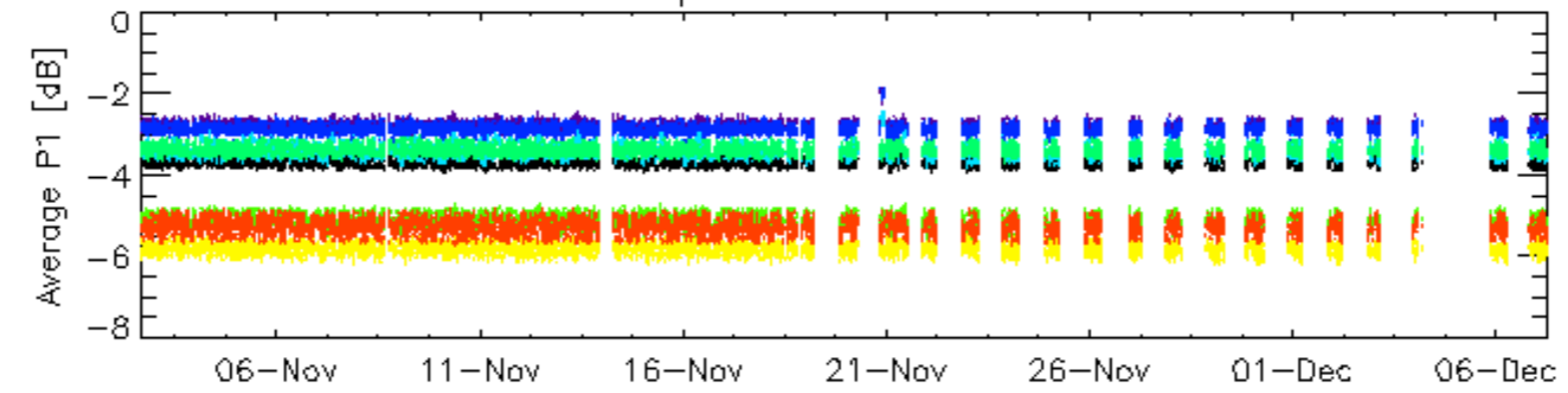


Cal pulses for WVS IS2



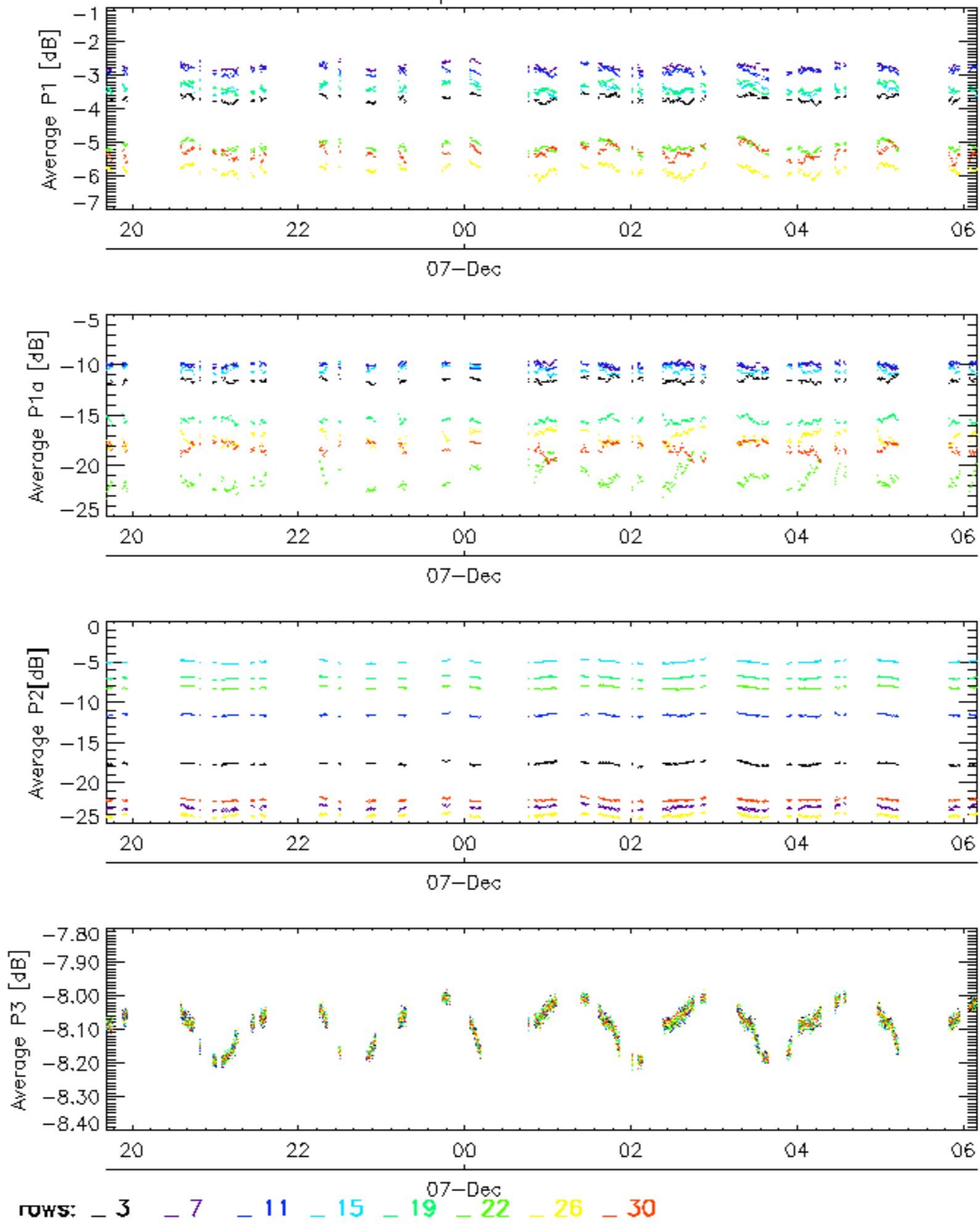
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

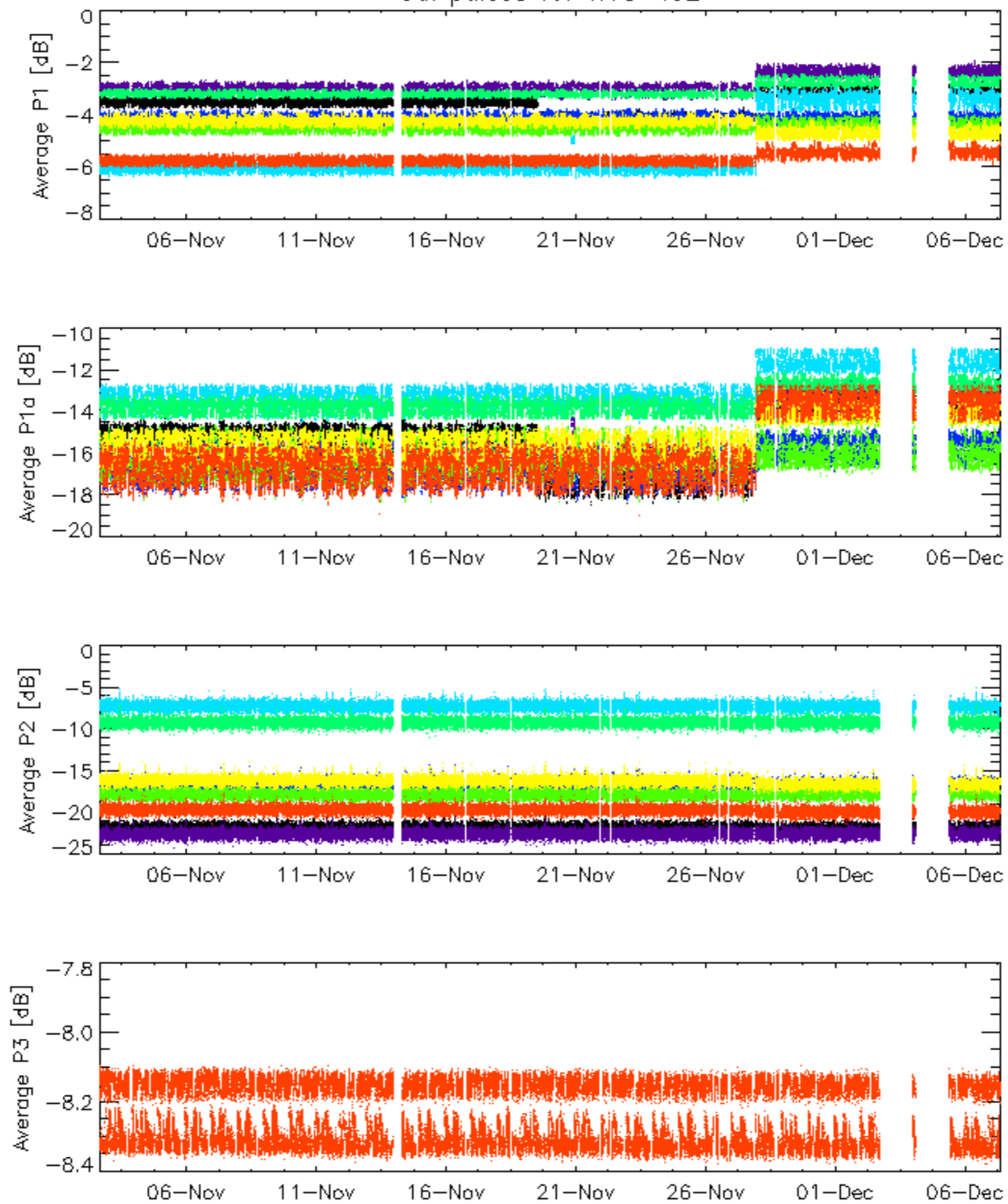


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



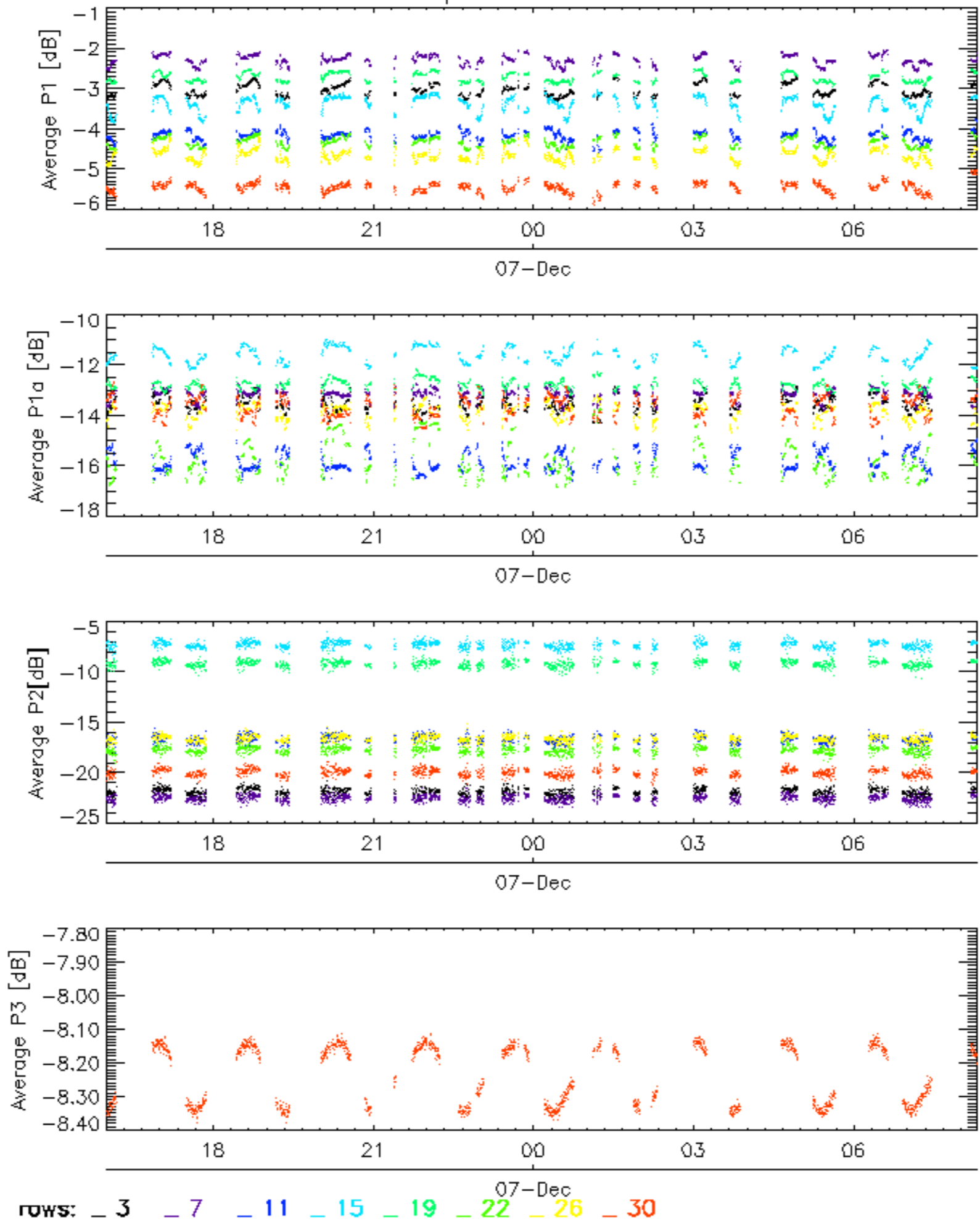
Cal pulses for WVS IS2



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



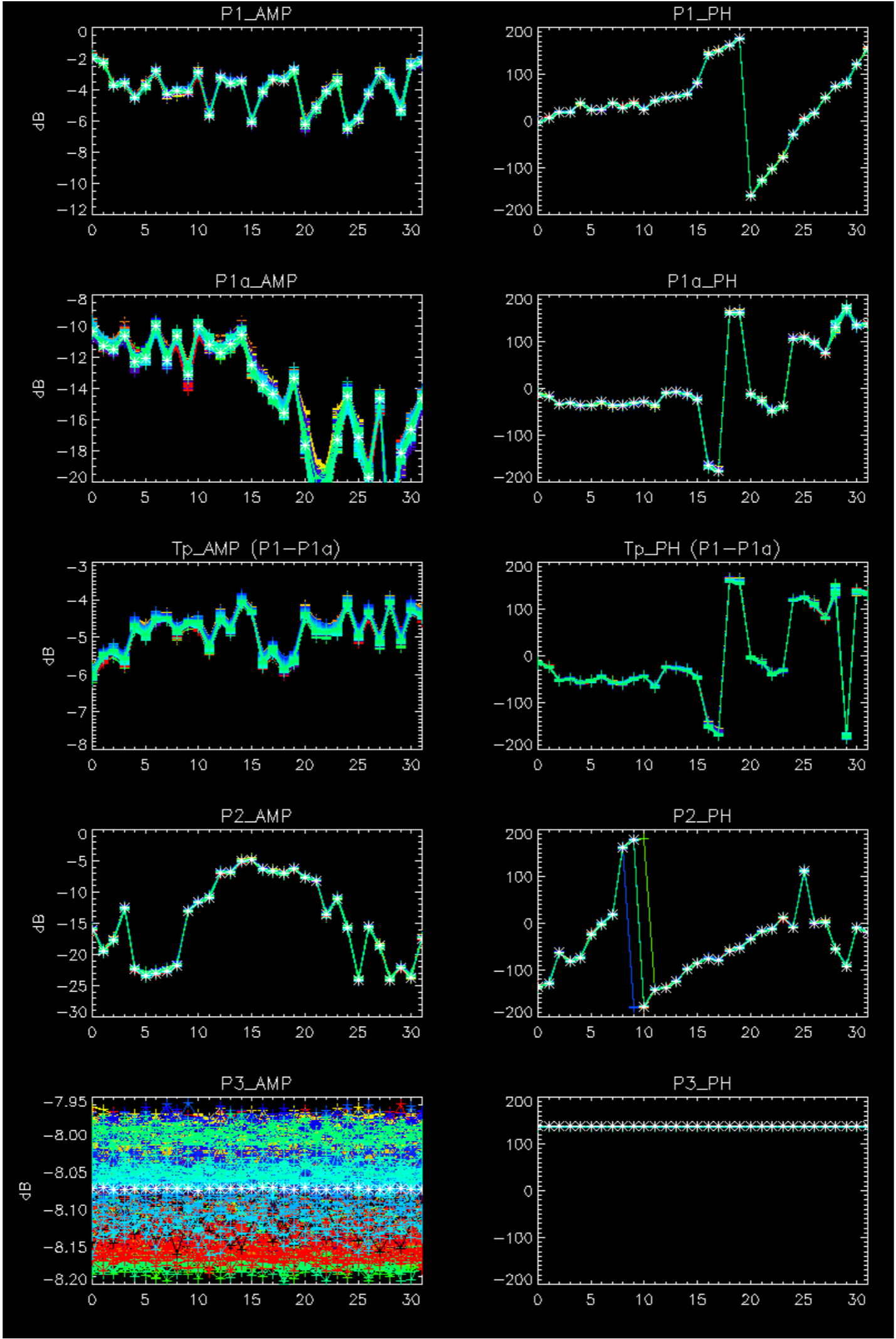
Cal pulses for WVS IS2

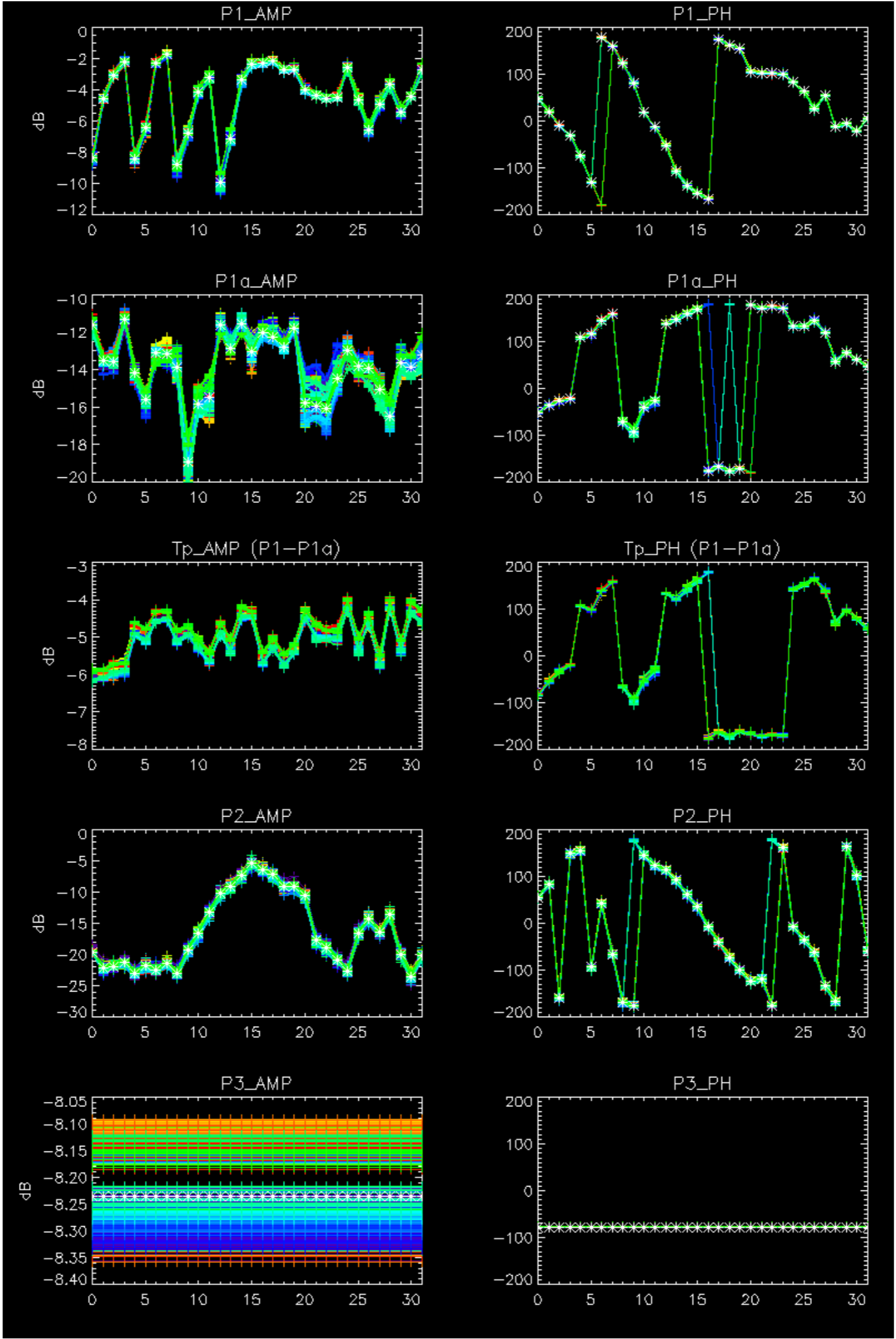


No anomalies observed on available browse products



No anomalies observed.



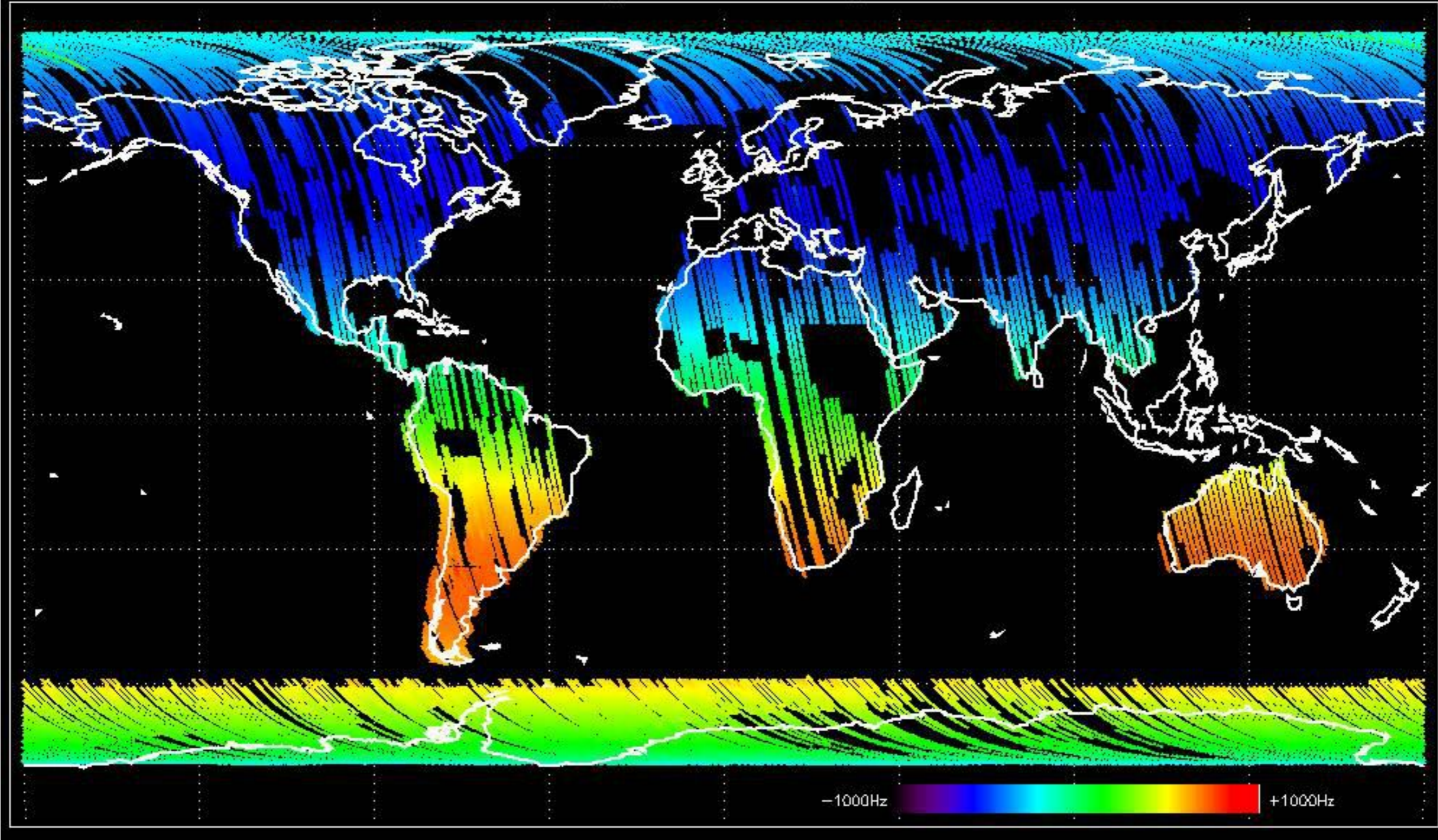


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



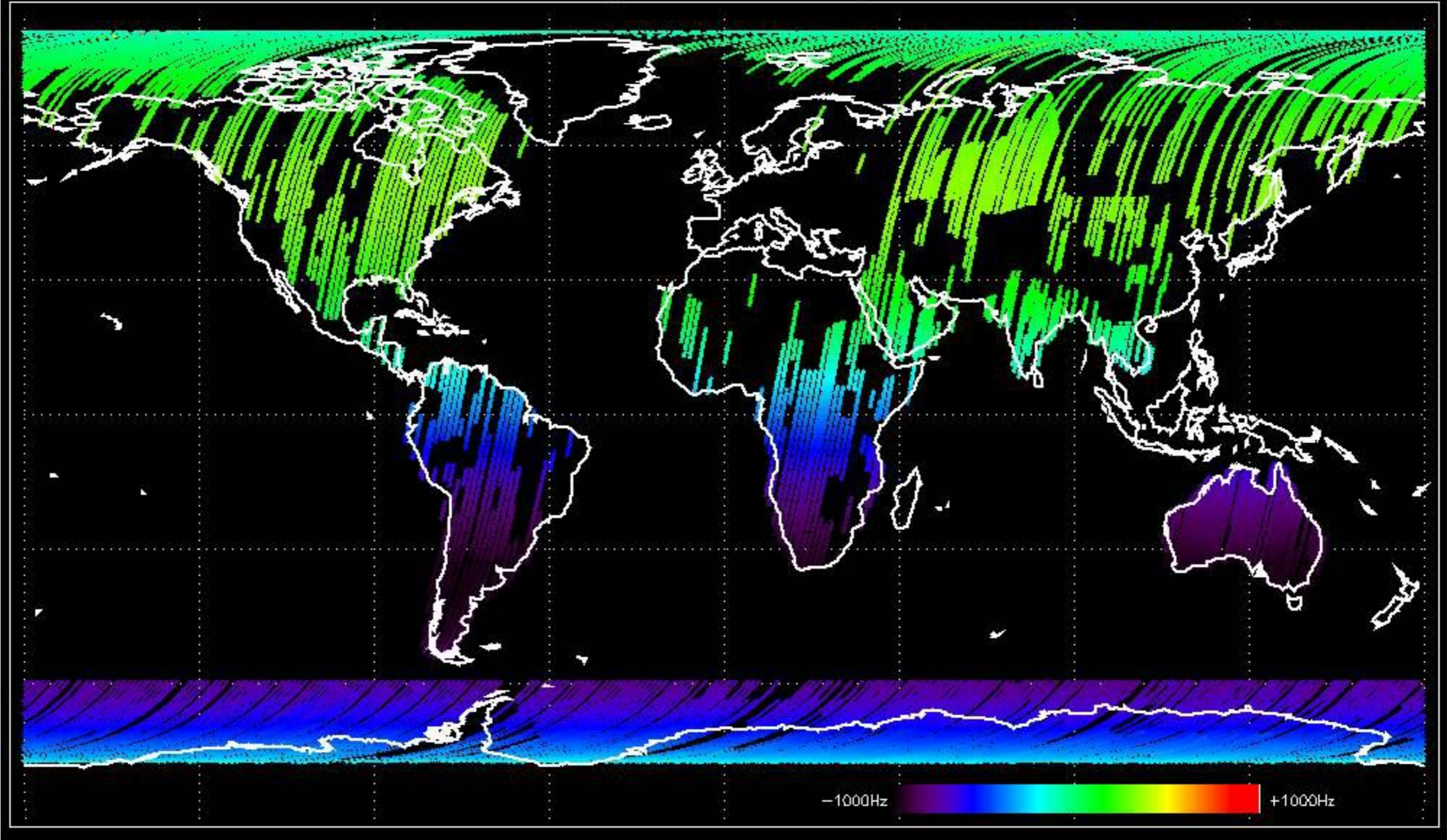


Doppler 'GM1' 'SS1' ascending



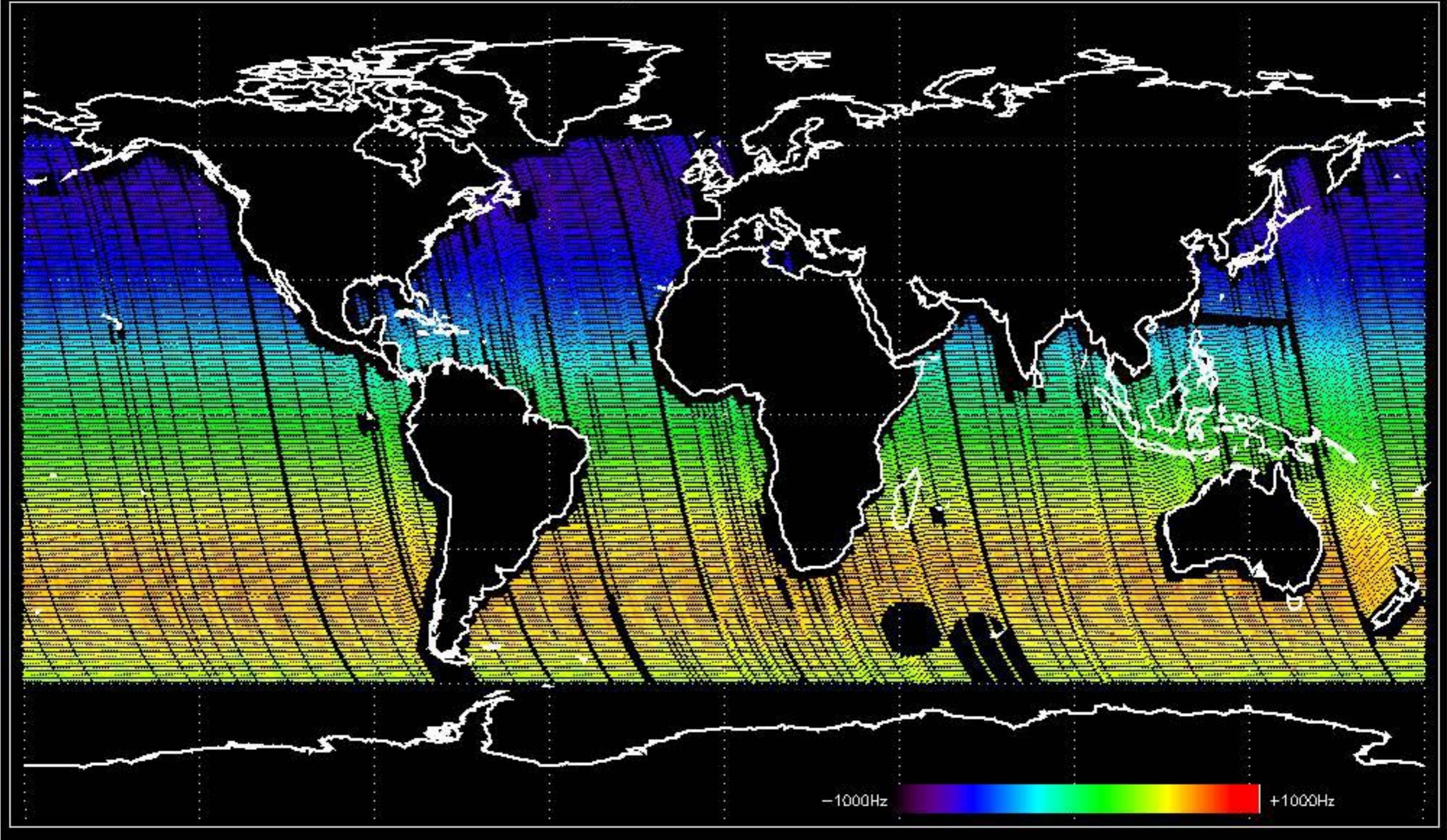


Doppler 'GM1' 'SS1' descending



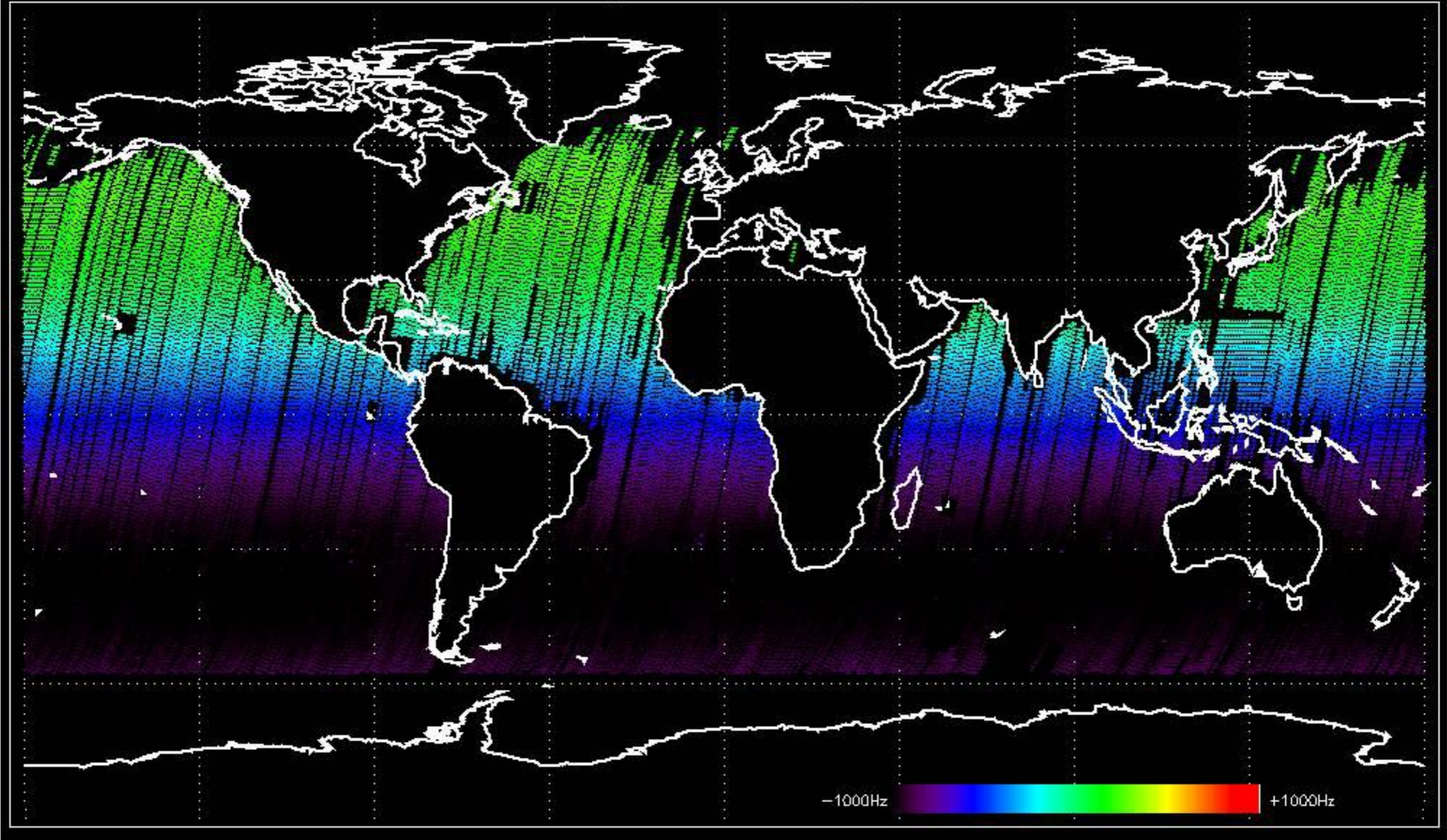


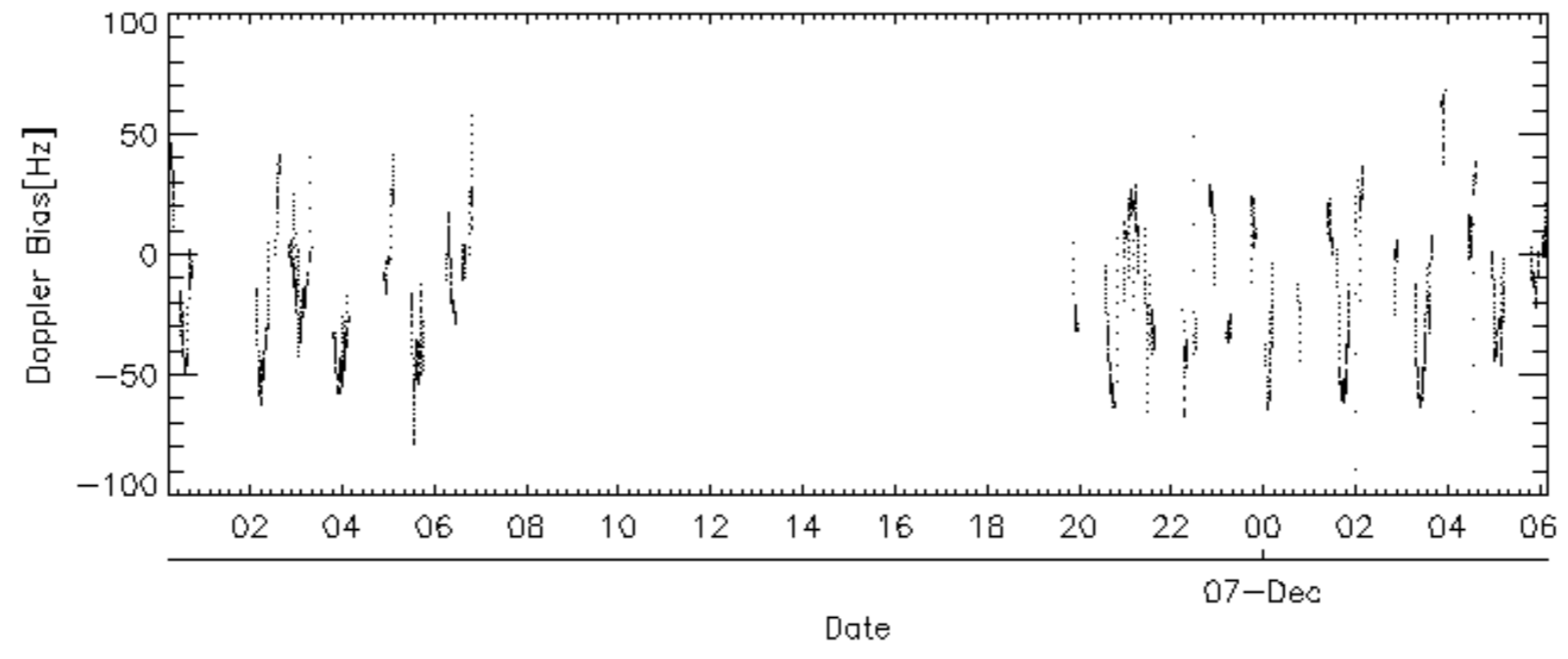
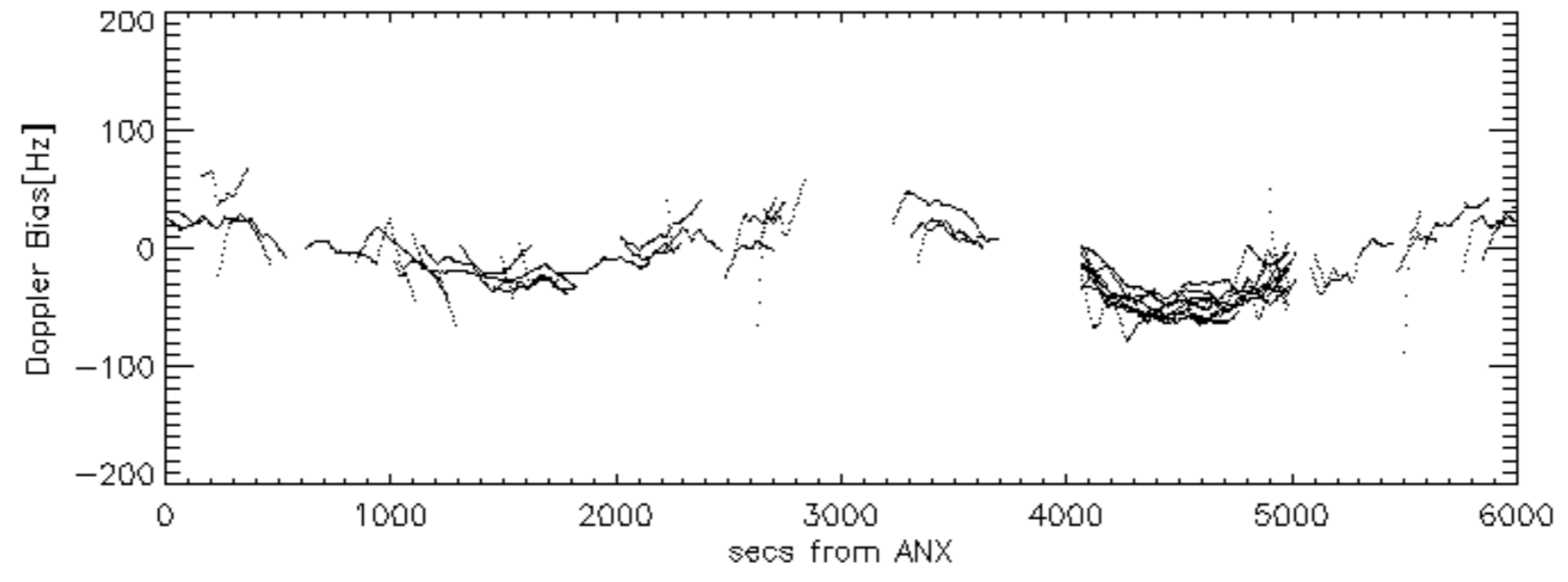
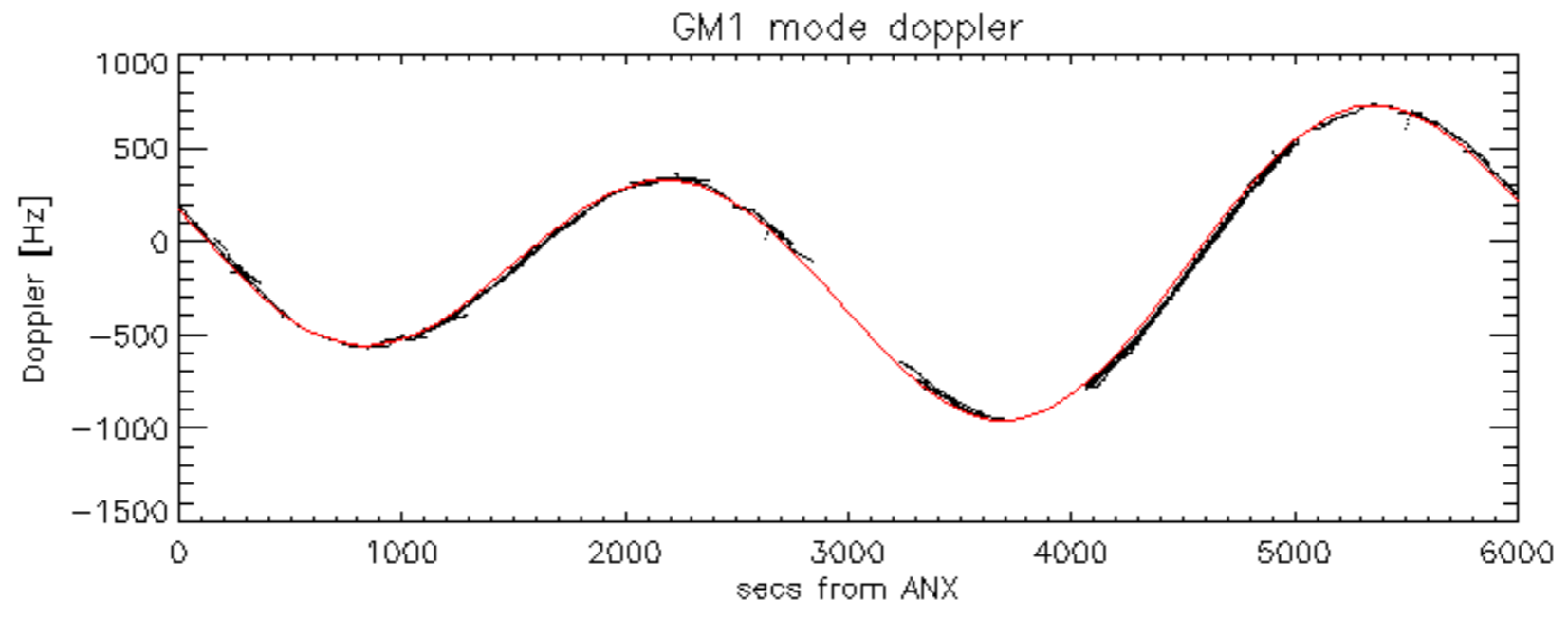
Doppler 'WVS' 'IS2' ascending



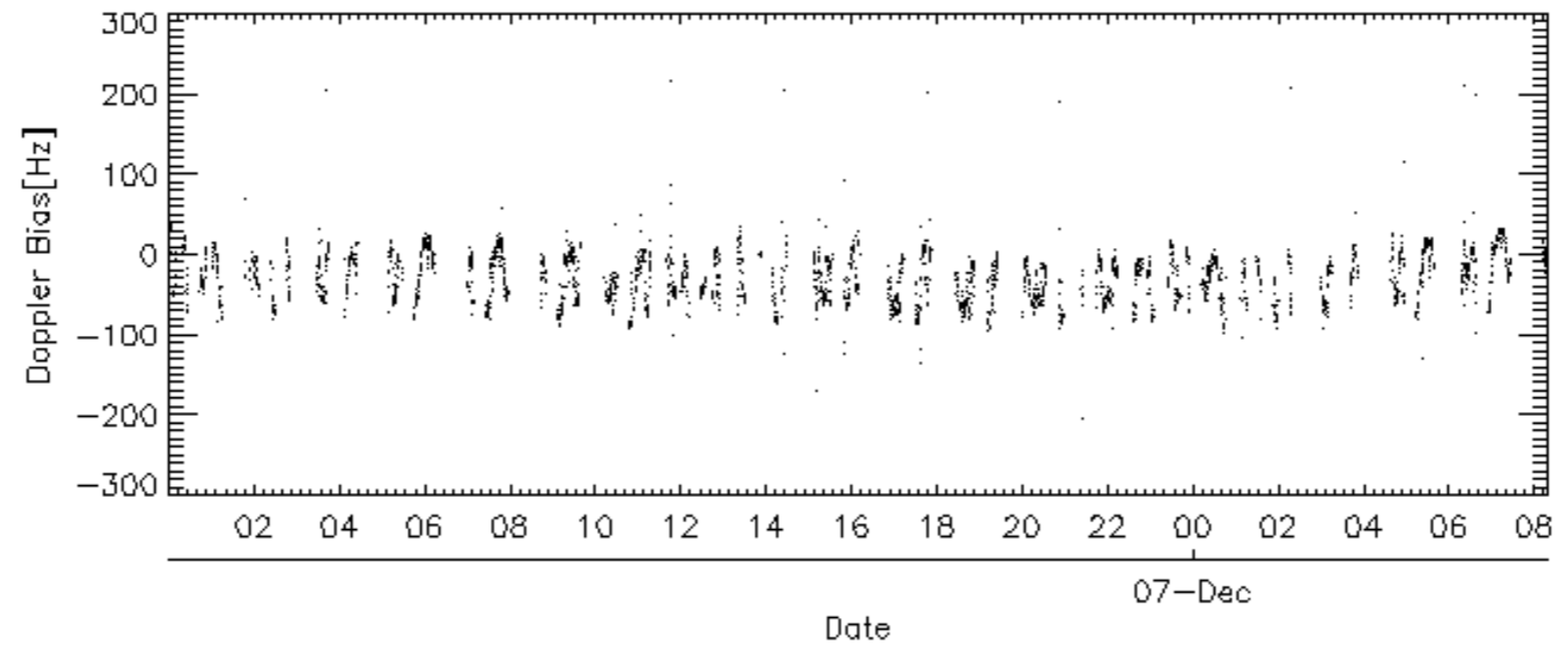
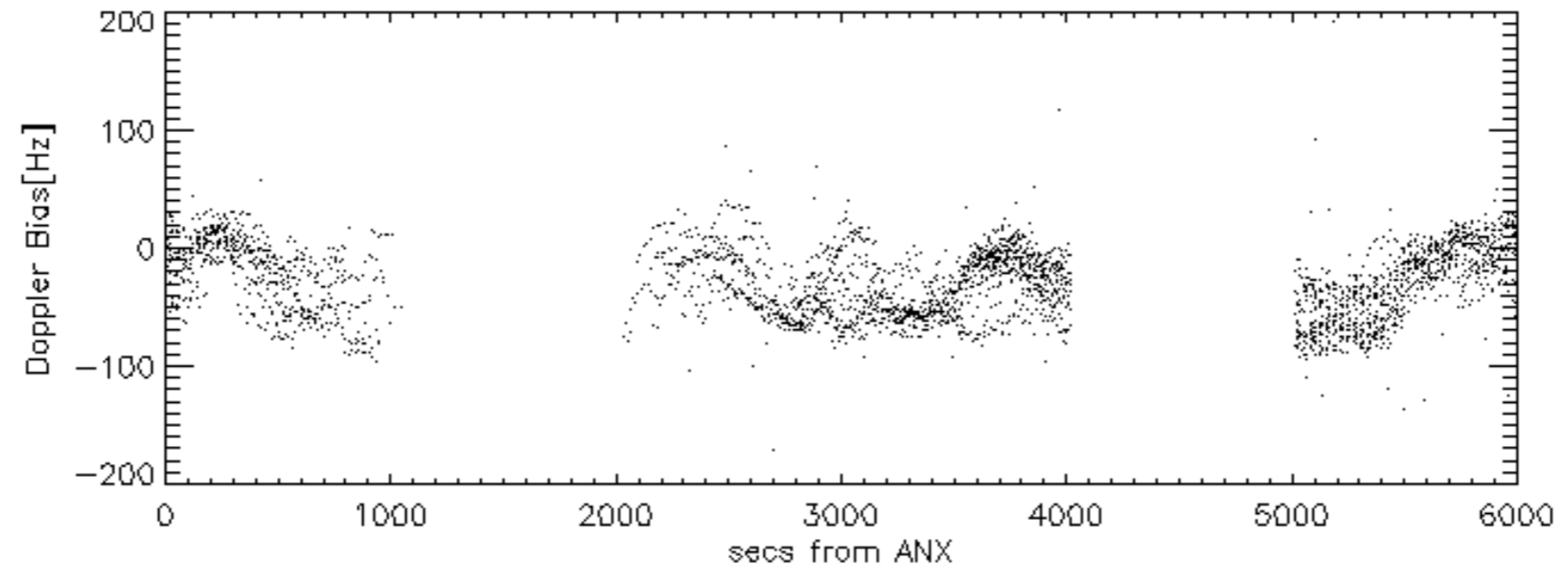
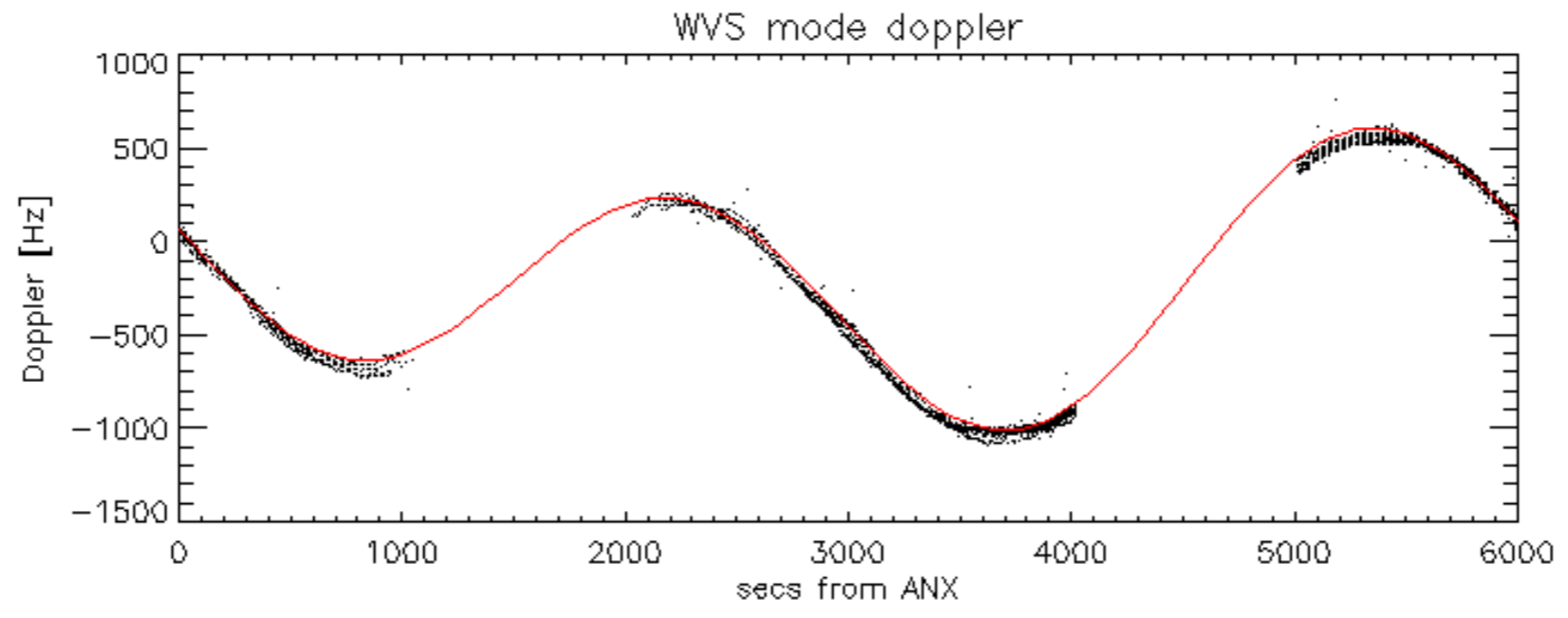


Doppler 'WVS' 'IS2' descending



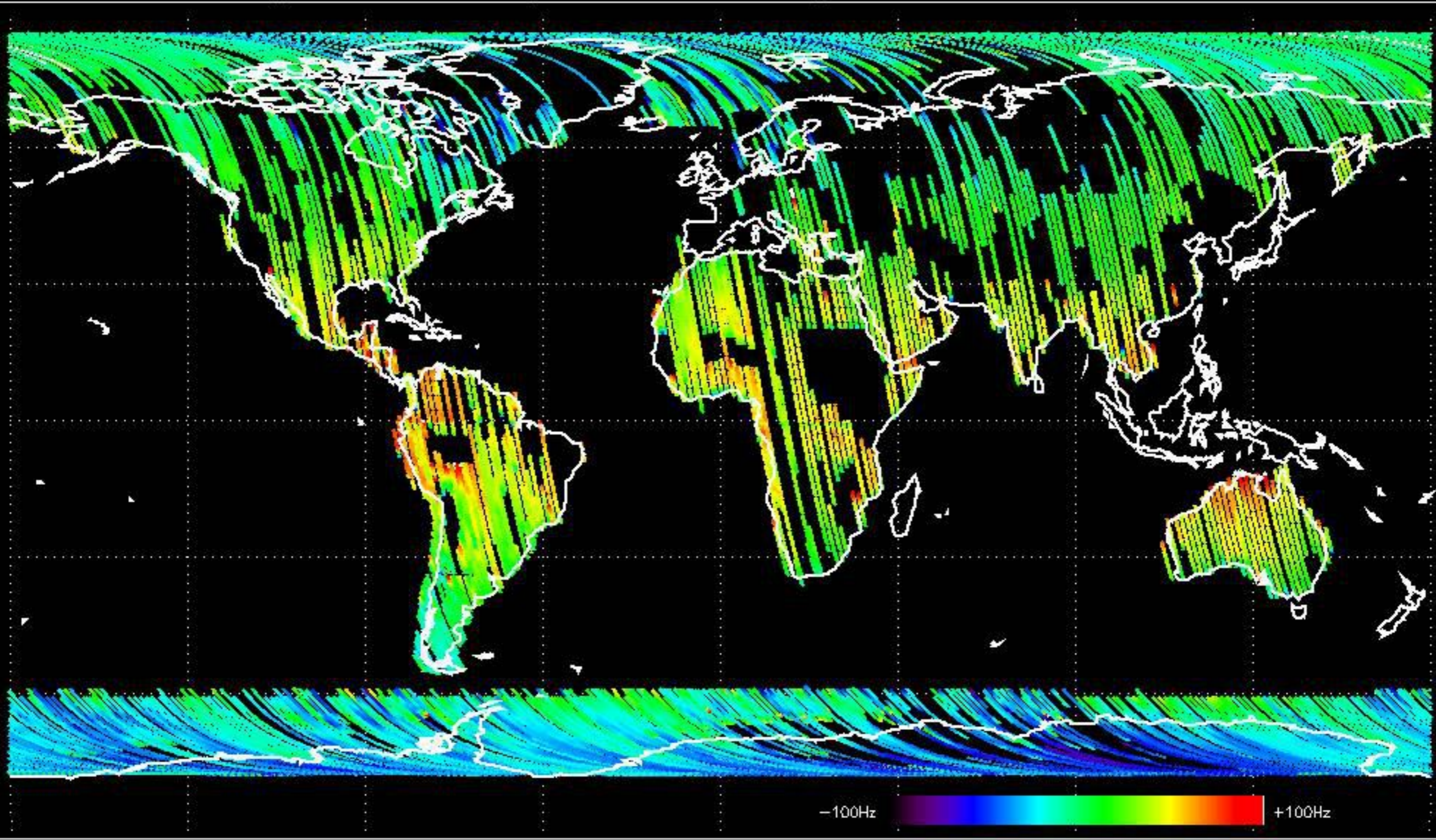






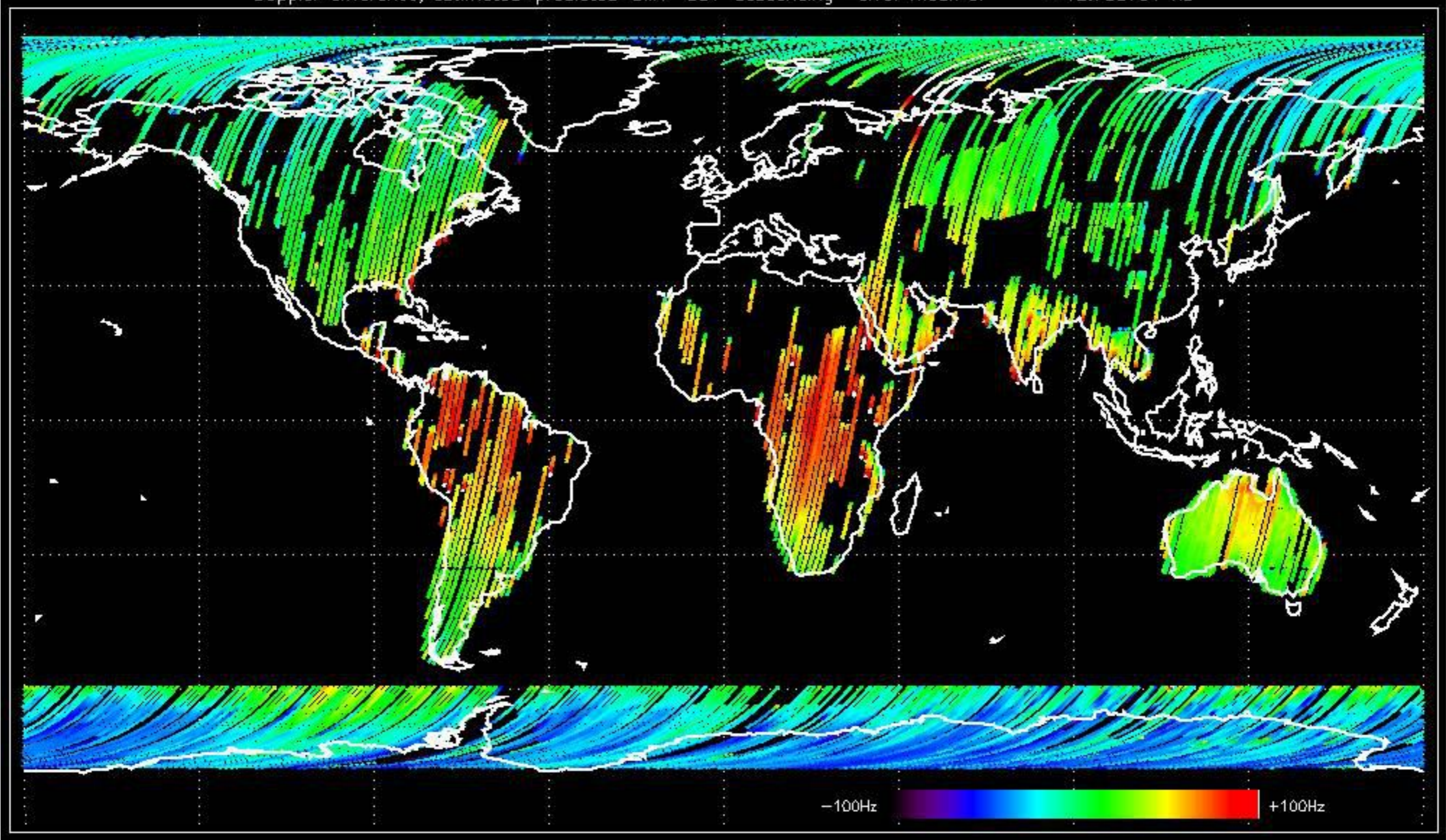


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.138837 Hz



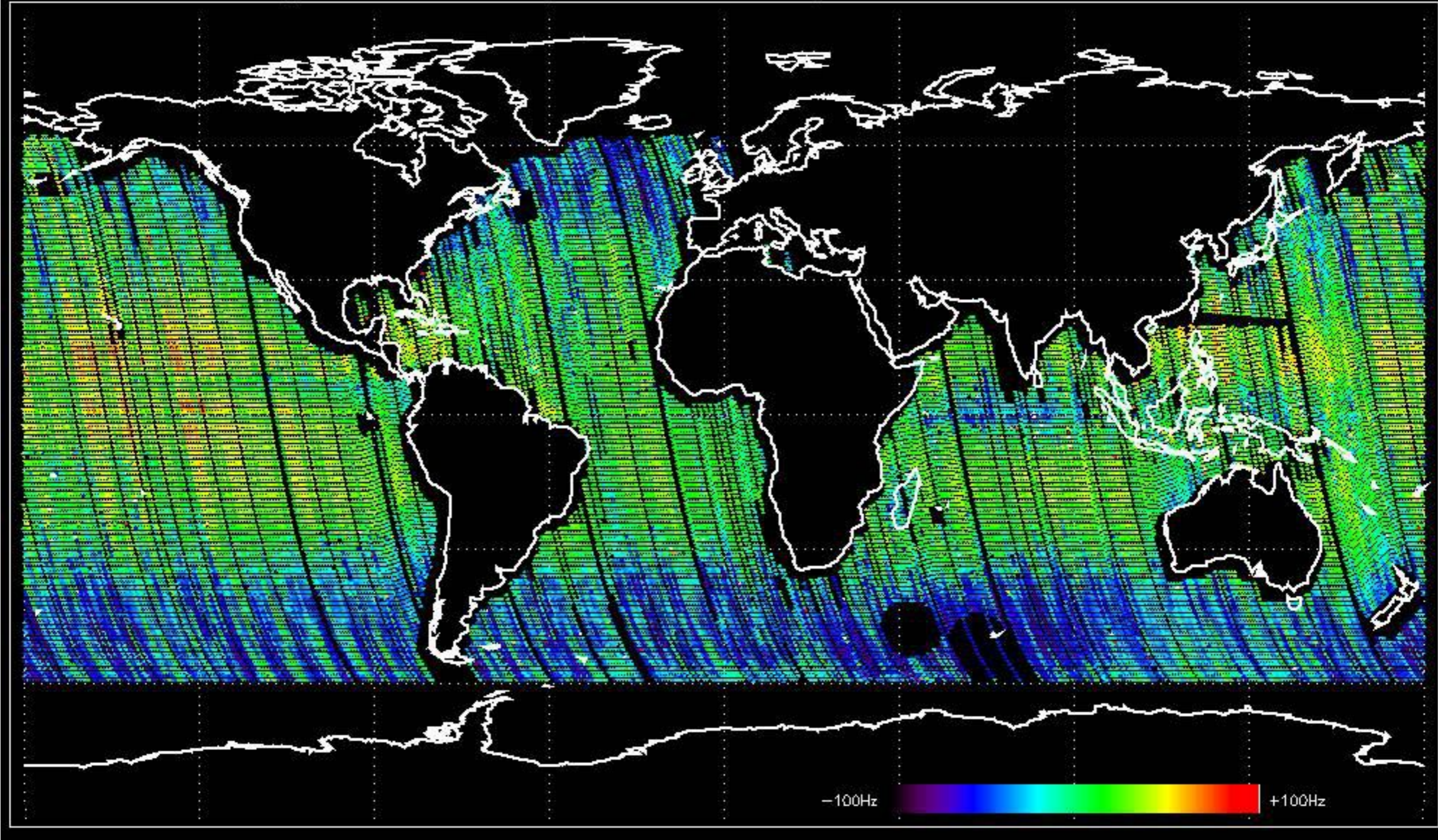


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -12.753791 Hz



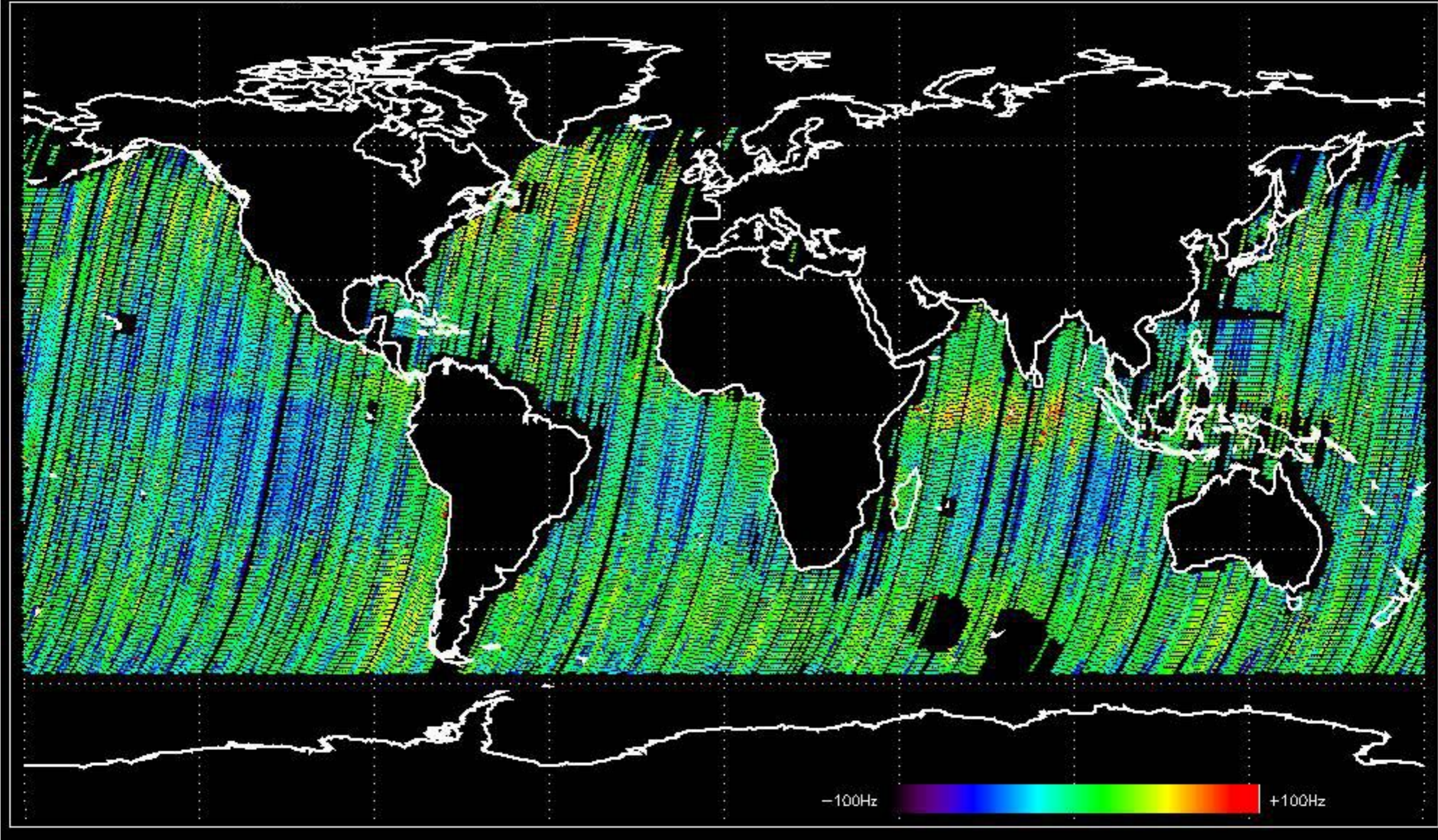


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.3977955 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.6145542 Hz





No anomalies observed on available MS products:



No anomalies observed.



















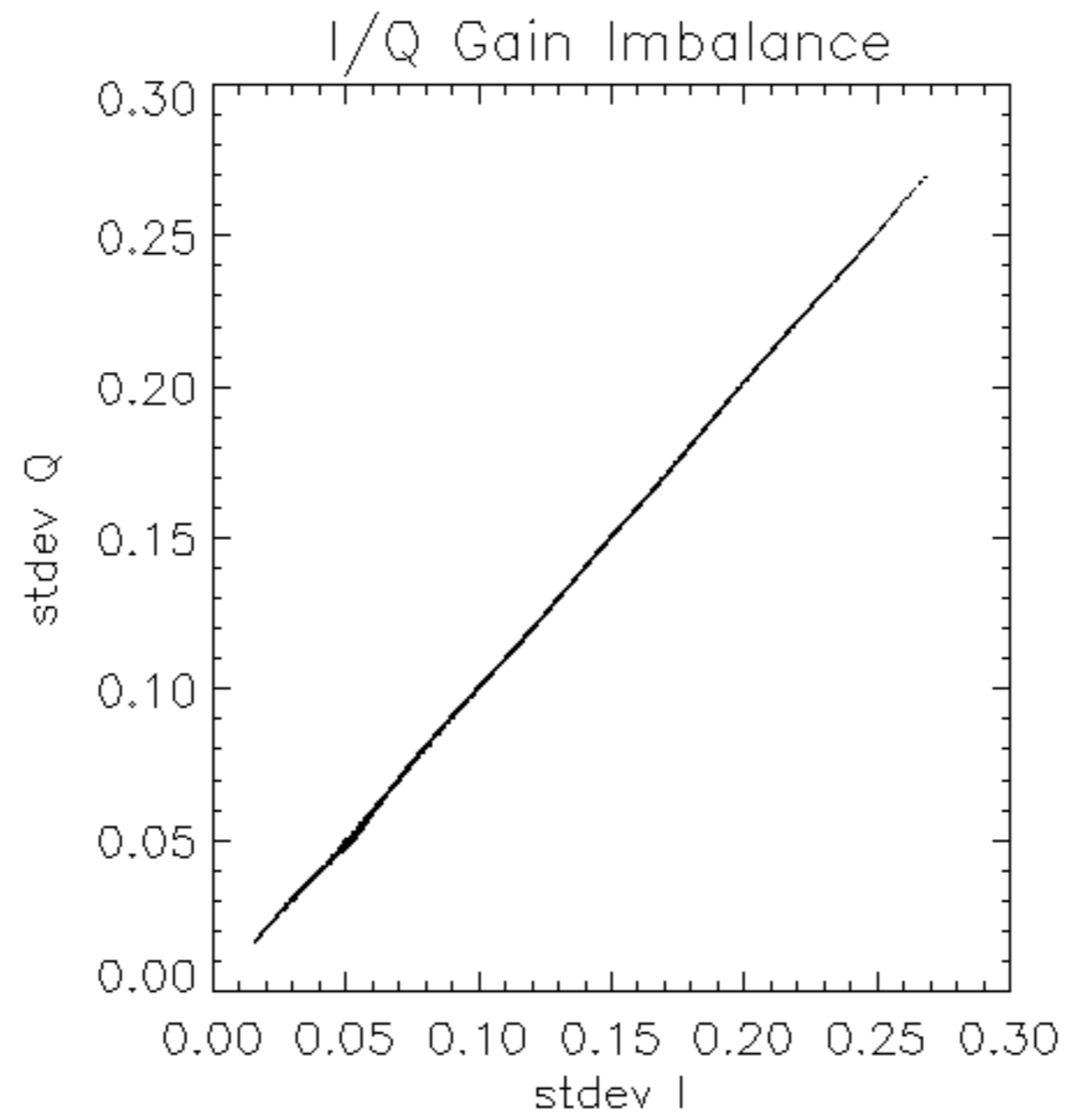




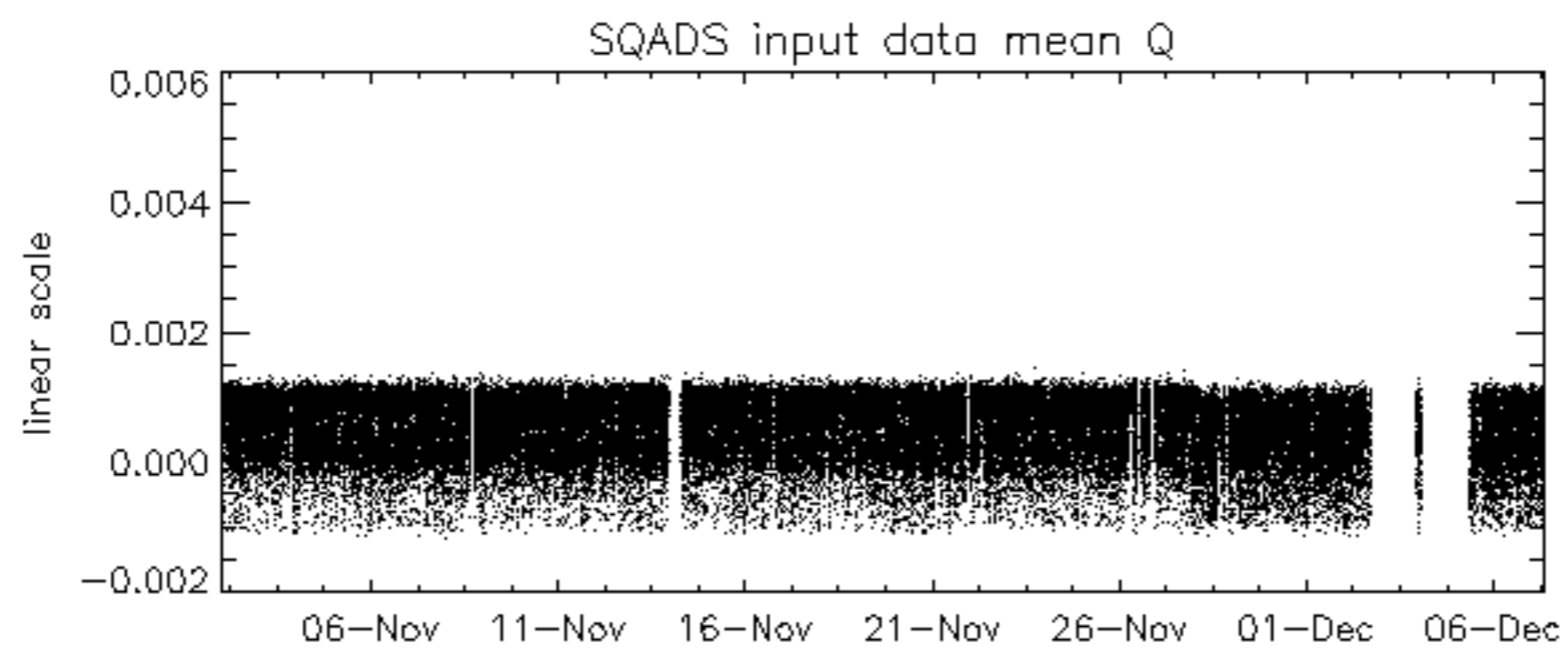
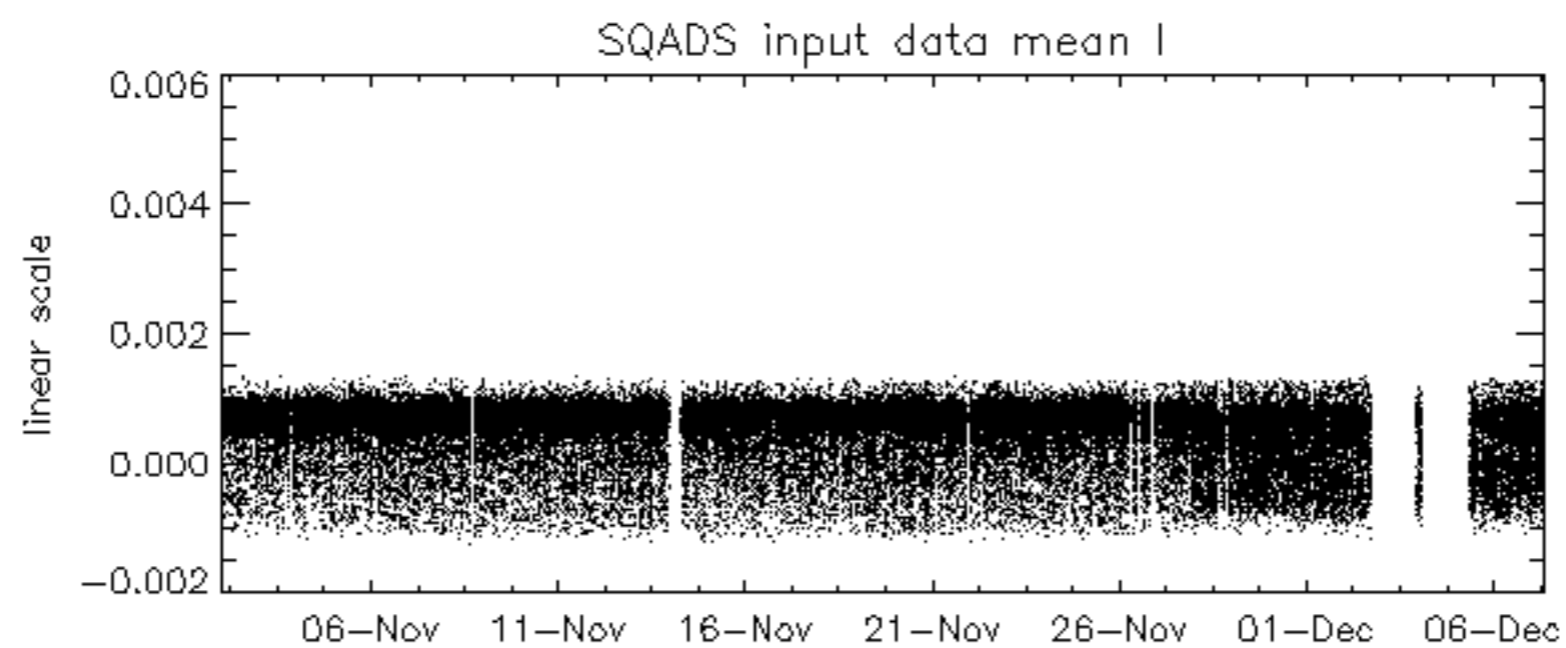
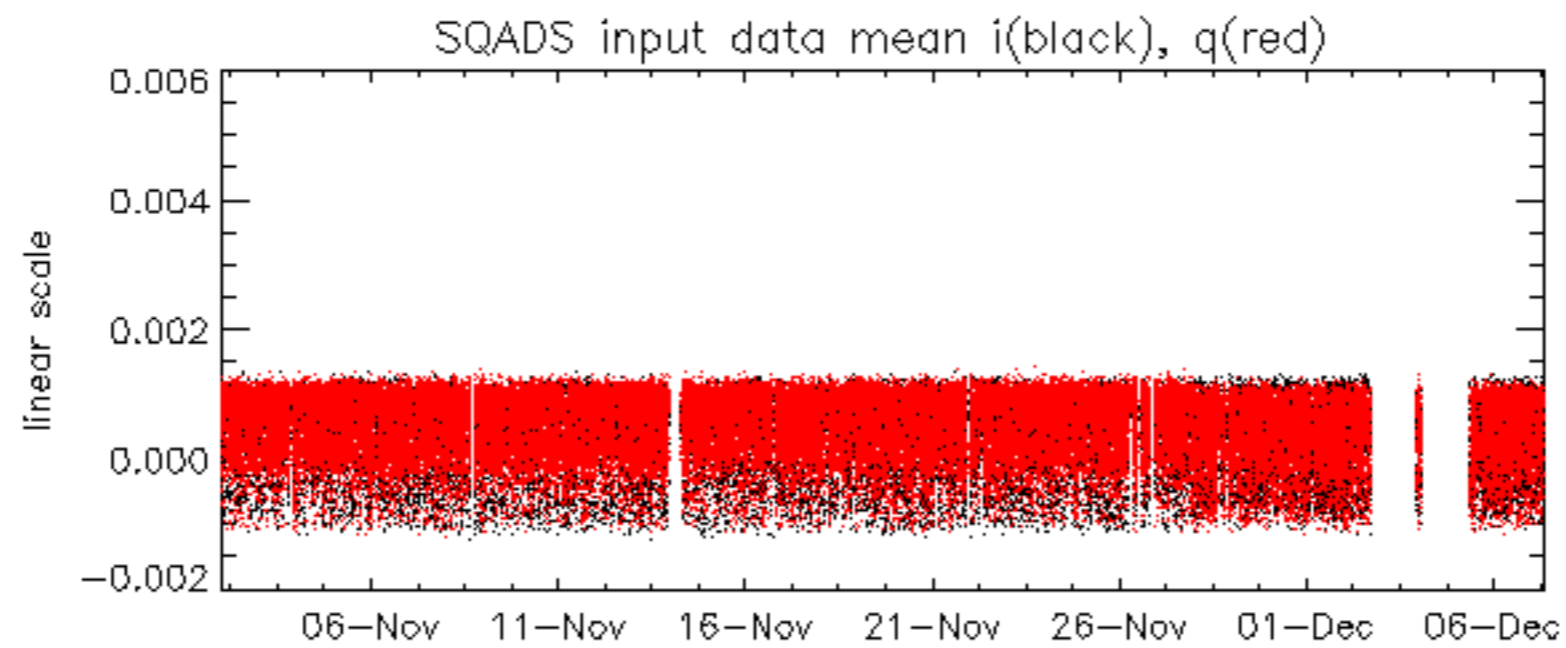


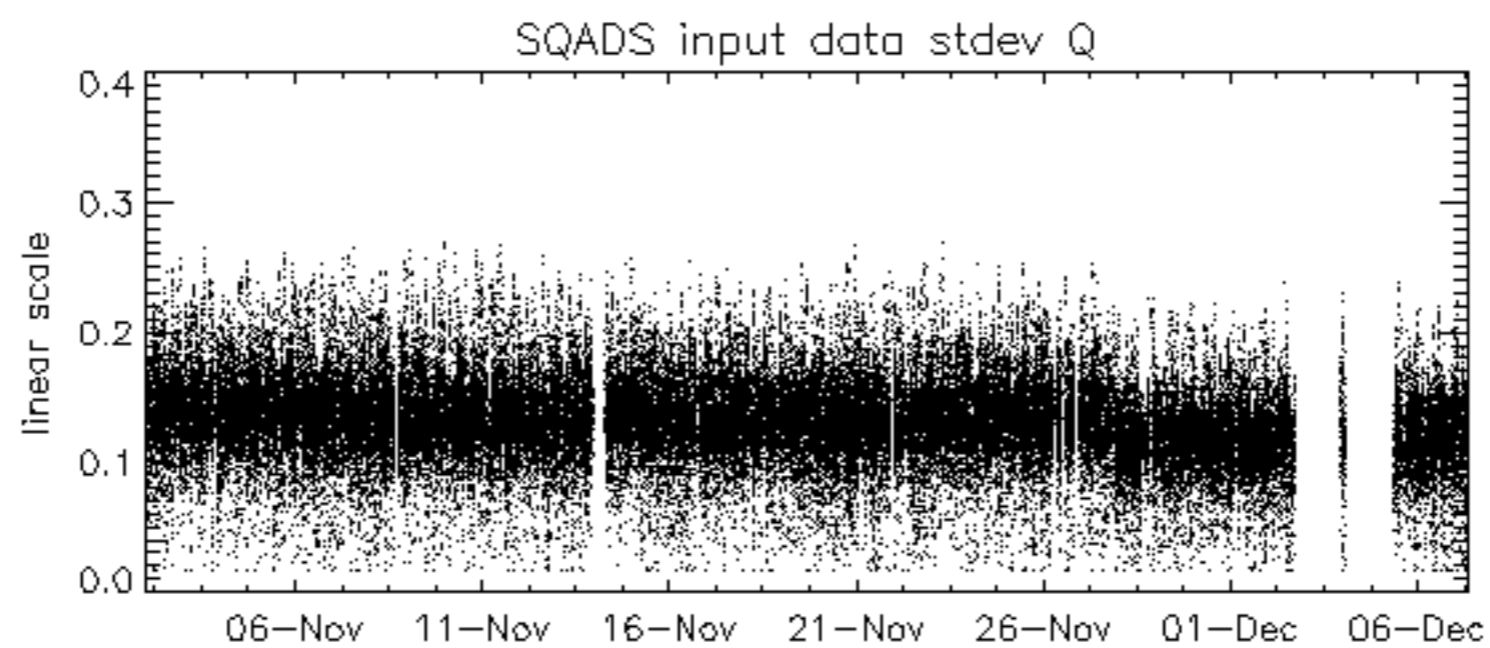
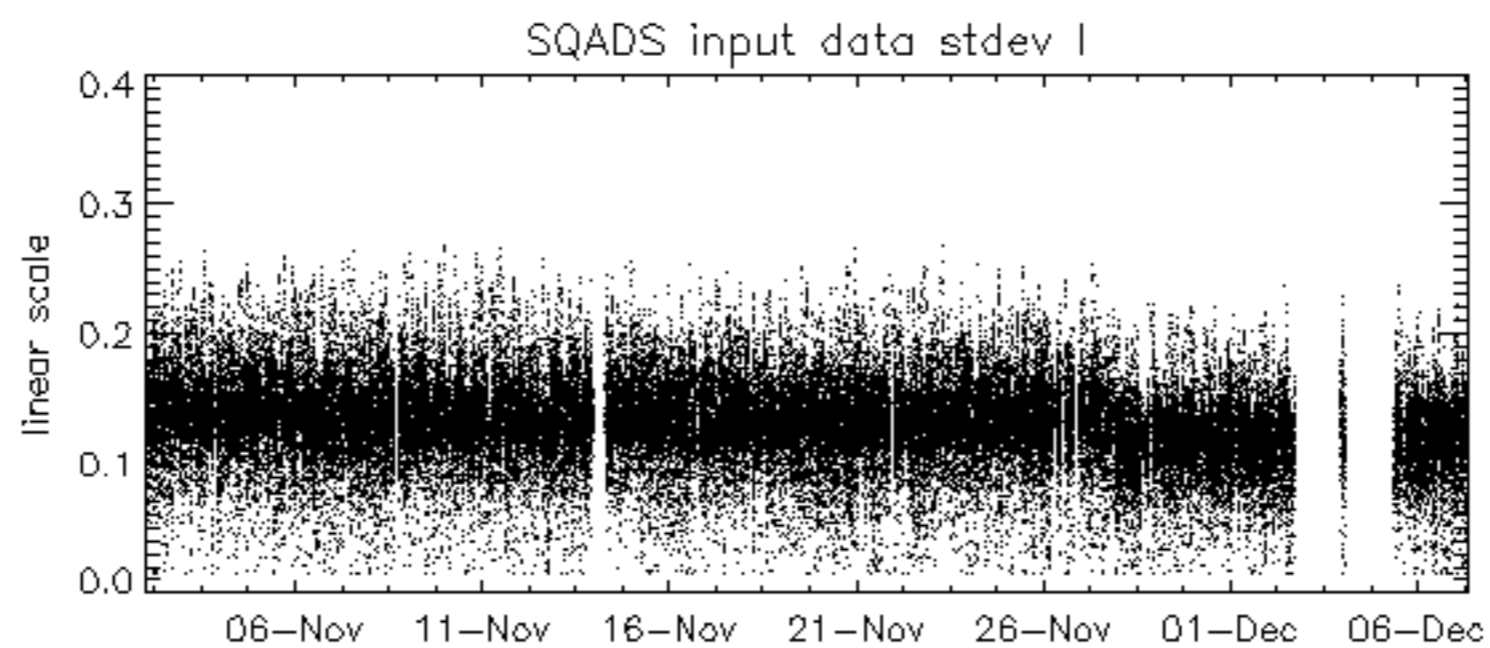
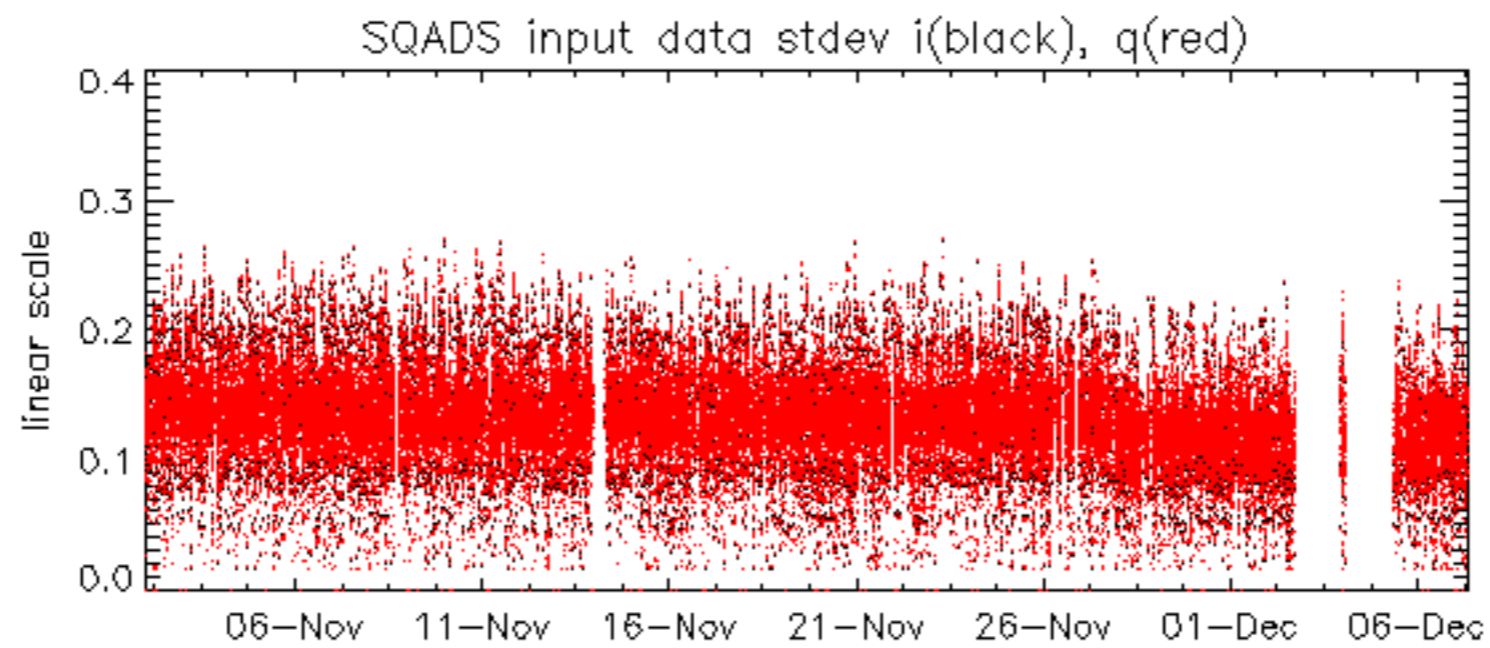




























Summary of analysis for the last 3 days 2005120[567]

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_1PNPDE20051205_182347_00000352043_00099_19692_3137.N1	0	3
ASA_WSM_1PNPDE20051206_014940_000002812043_00103_19696_2963.N1	0	3
ASA_WSM_1PNPDE20051206_042641_000001832043_00105_19698_2974.N1	0	61
ASA_WSM_1PNPDE20051206_143021_000000852043_00111_19704_3065.N1	0	40
ASA_WSM_1PNPDE20051207_011642_000003672043_00117_19710_3119.N1	0	35
ASA_WSM_1PNPDE20051207_062903_000001402043_00120_19713_3149.N1	0	18







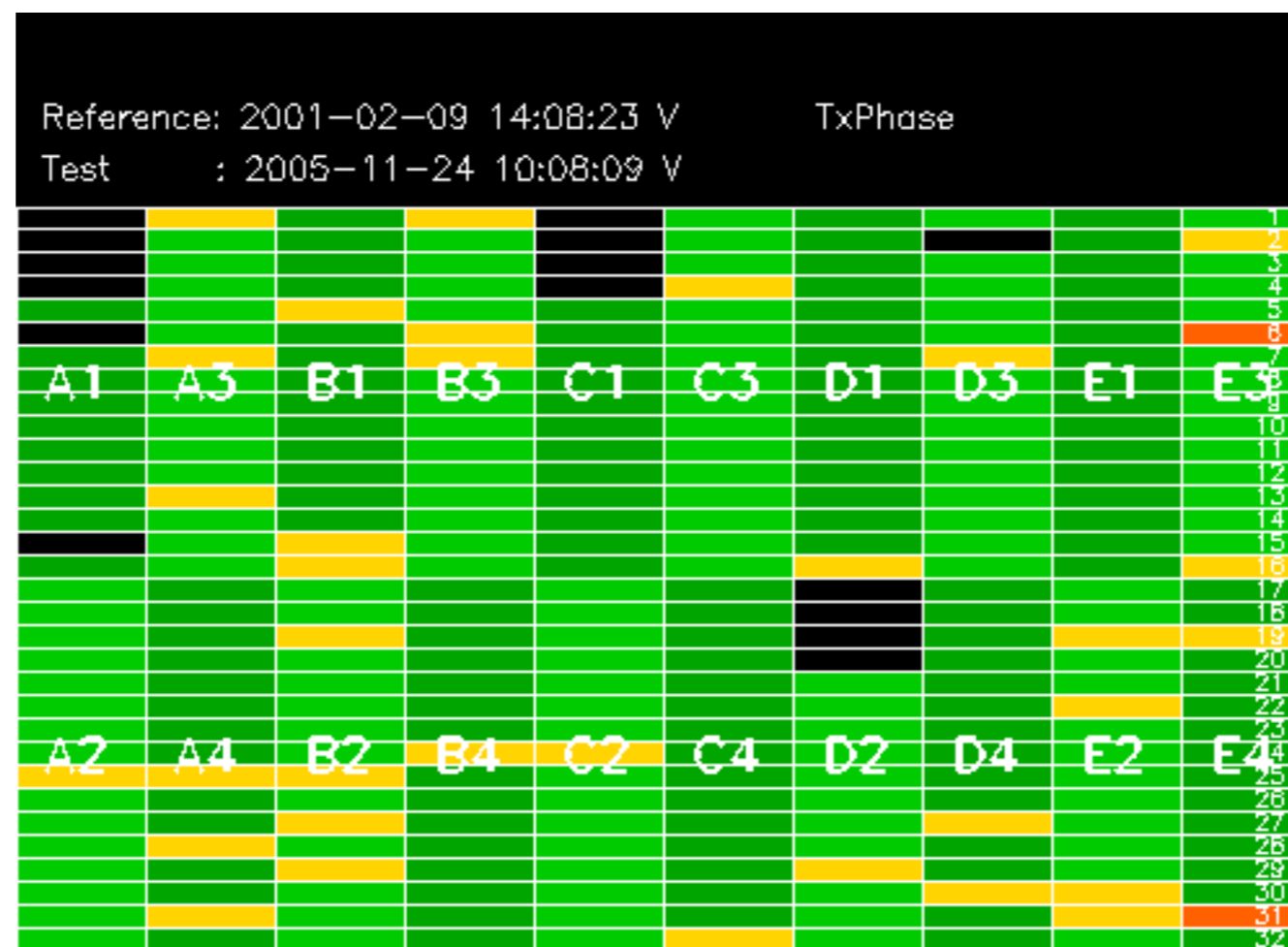




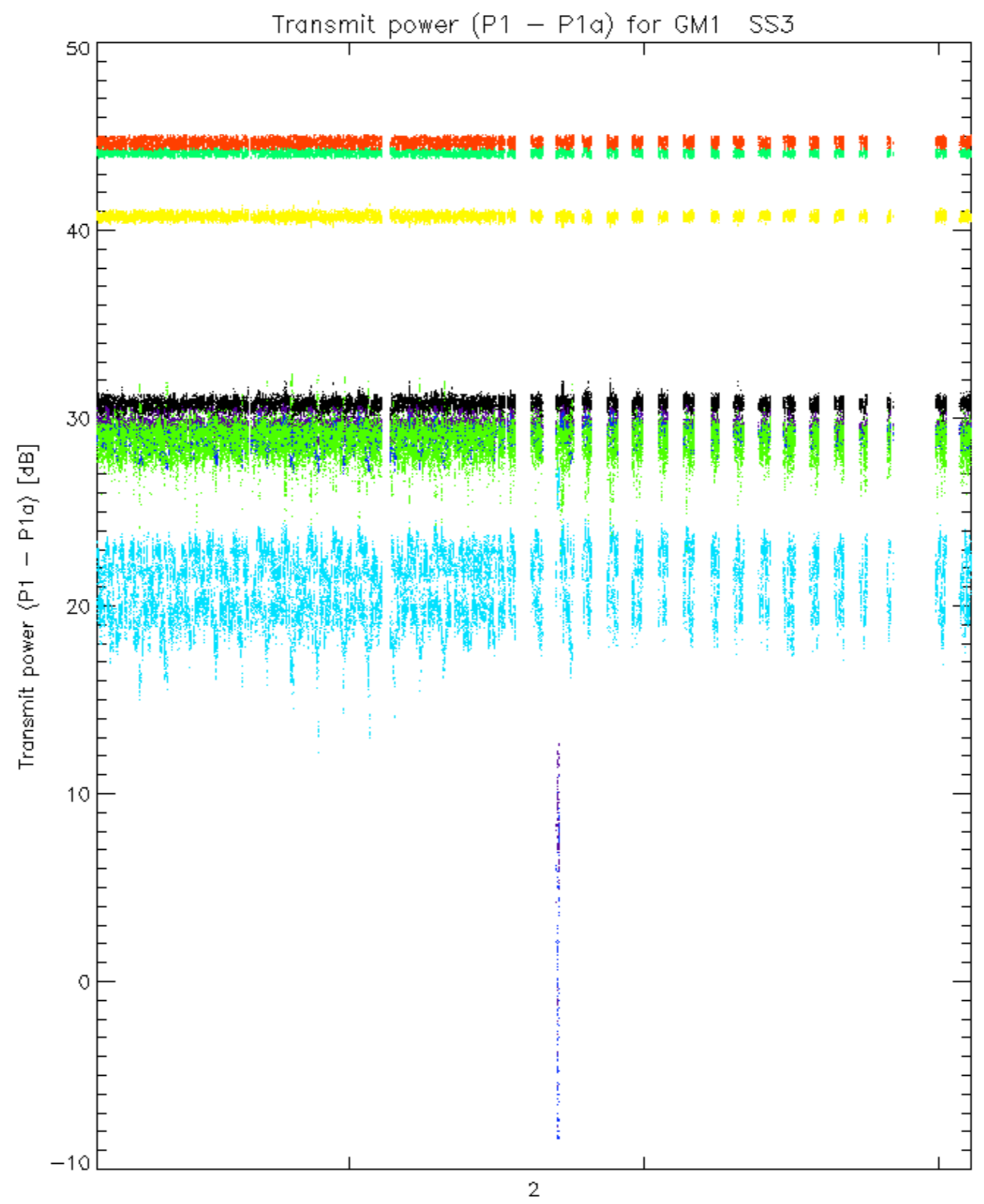






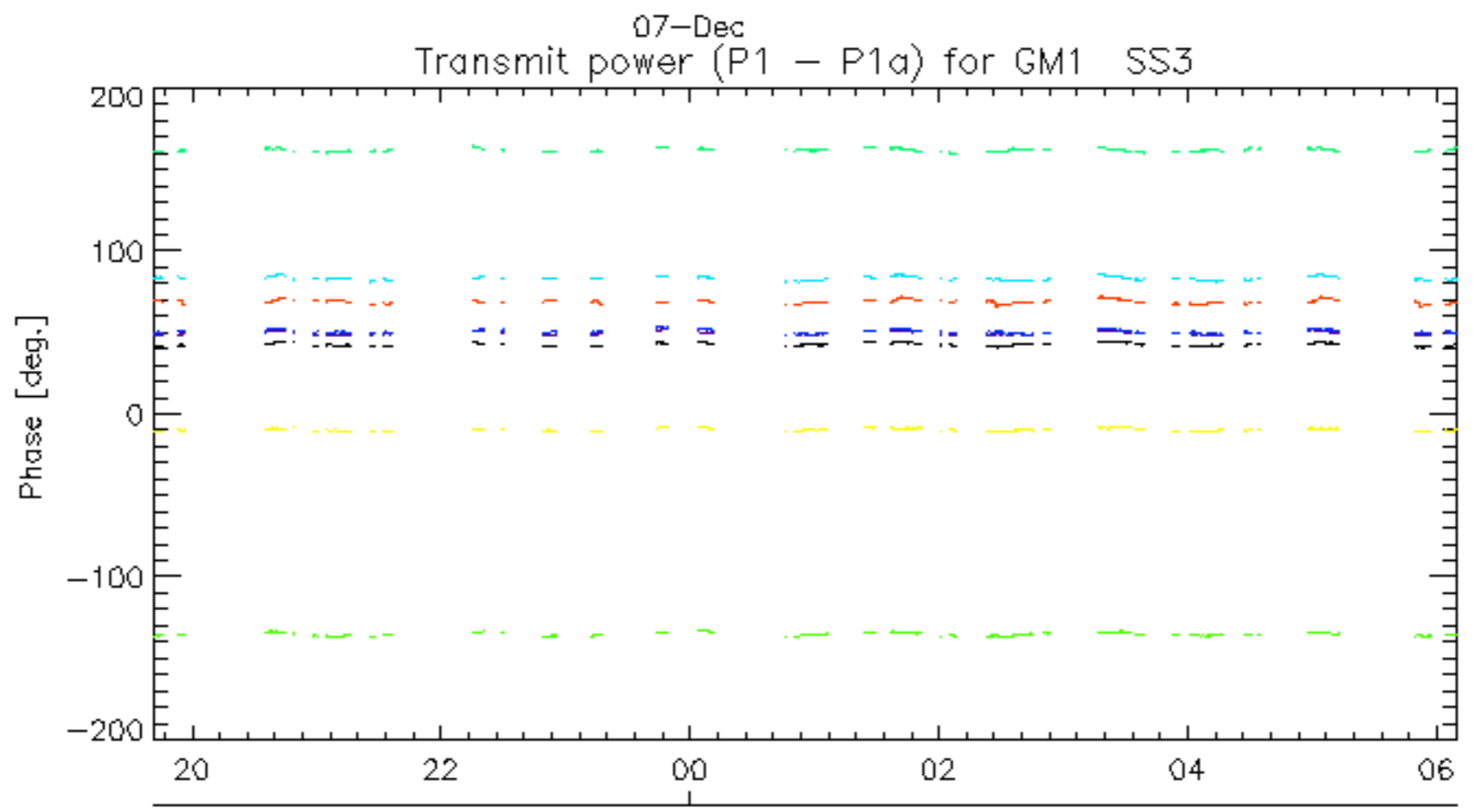
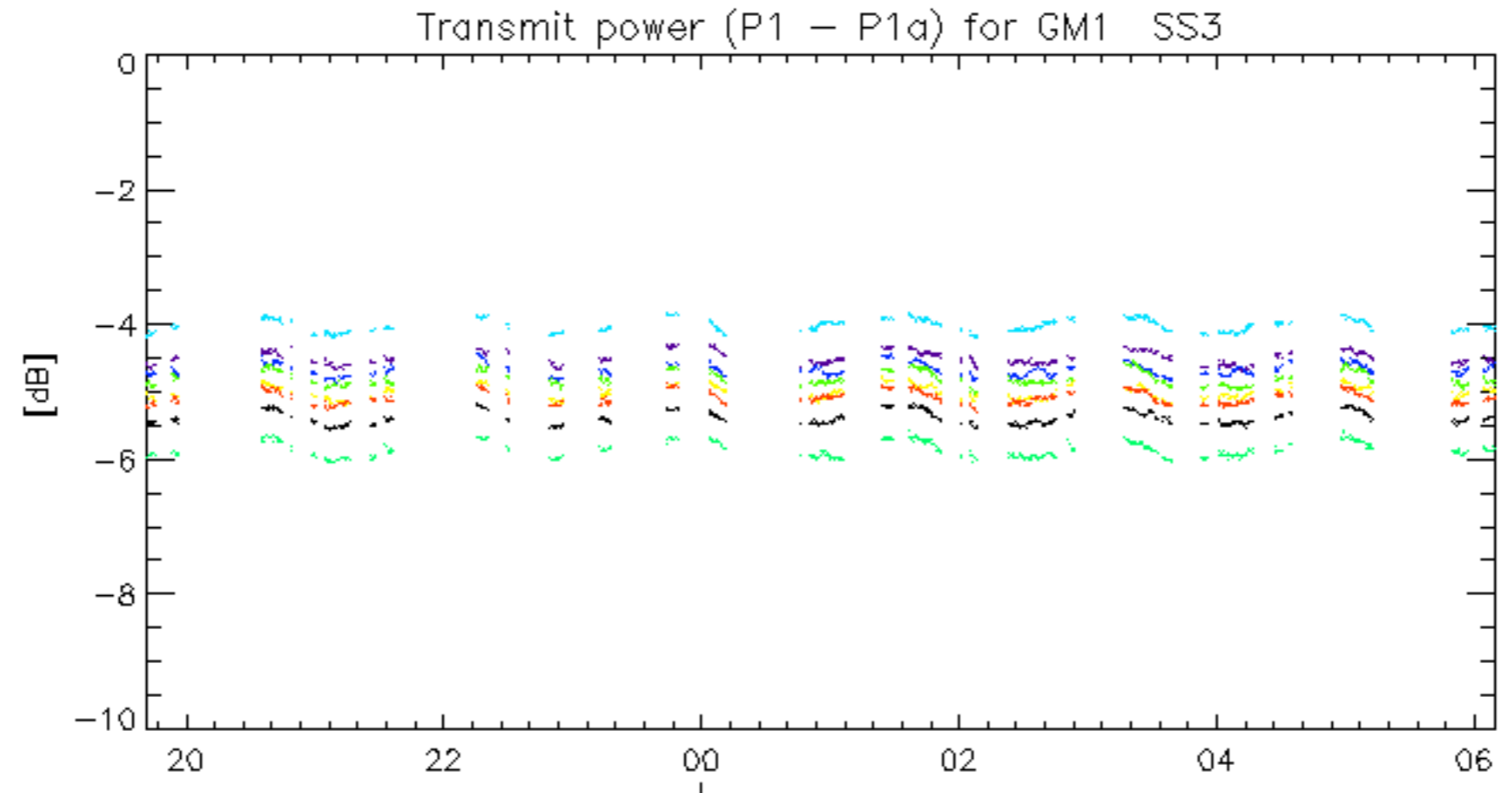




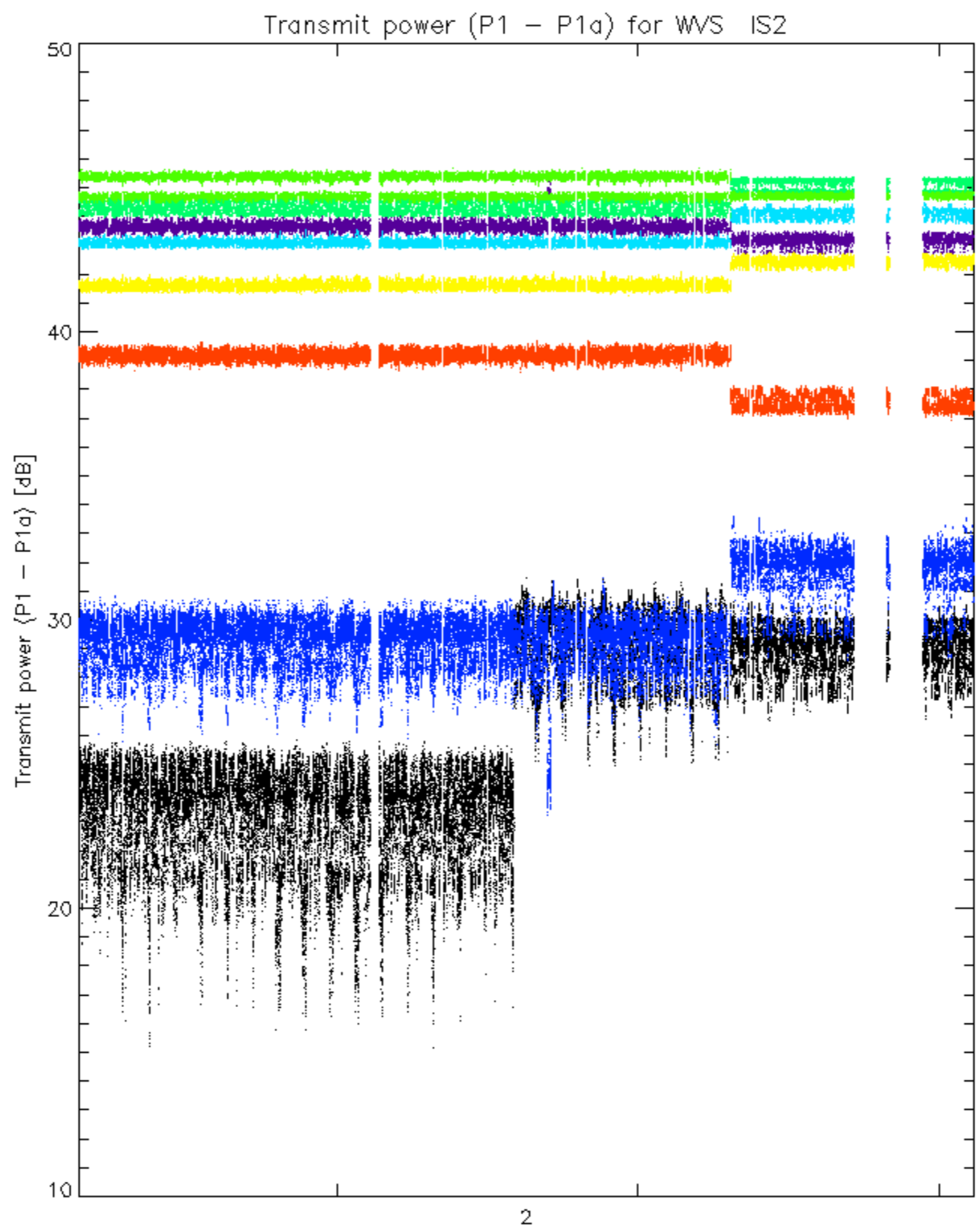


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

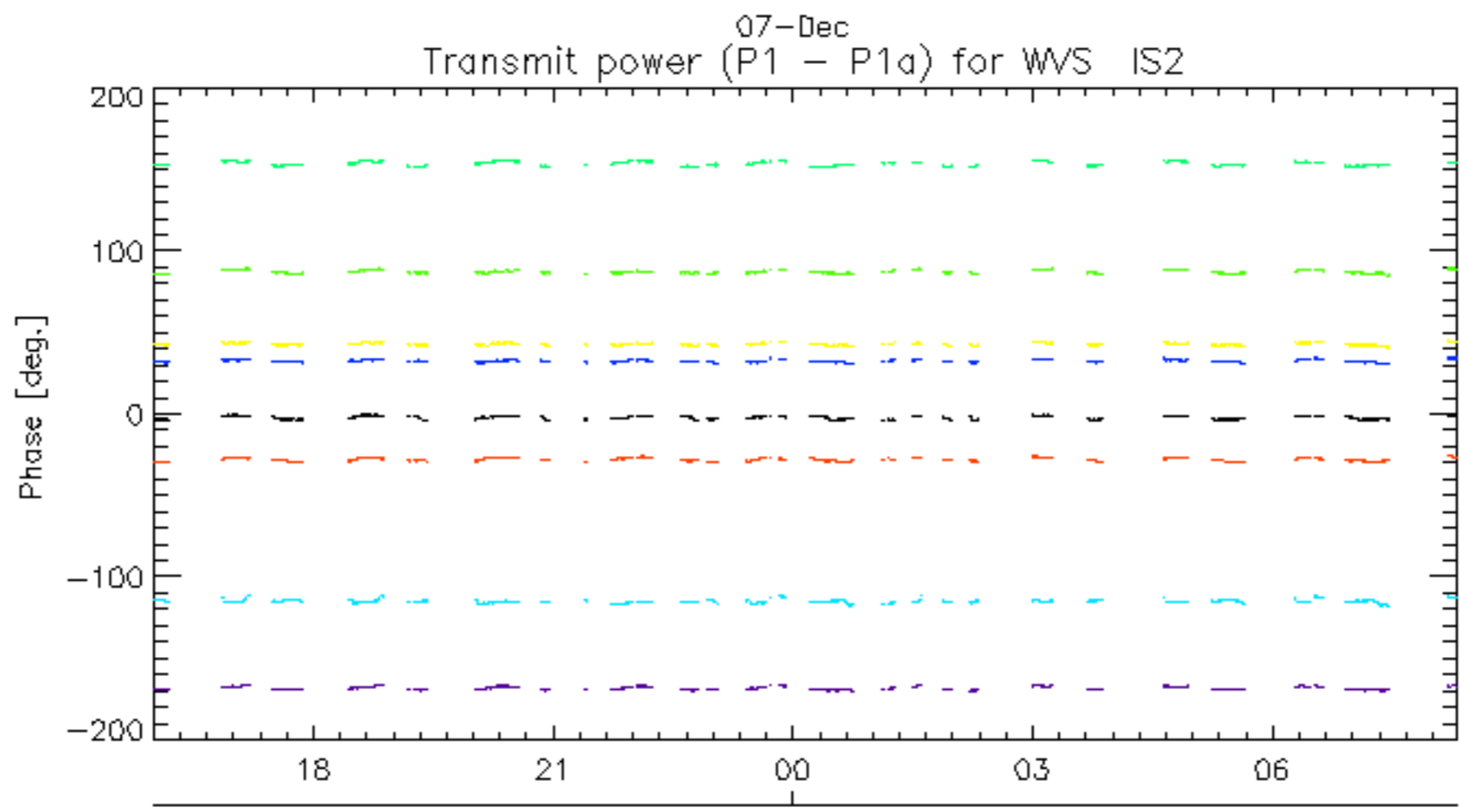
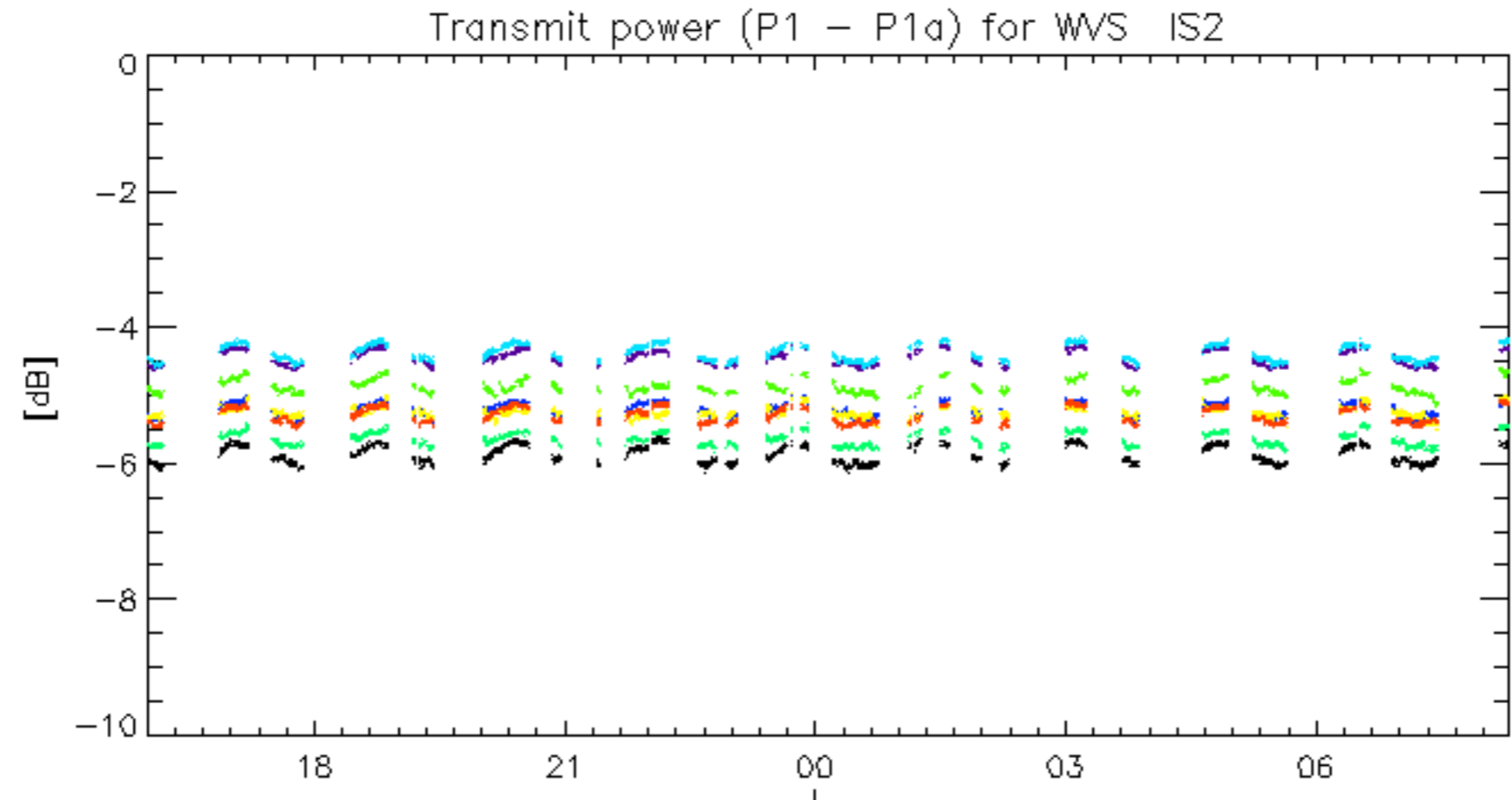




rows: **3** **7** **11** **15** **19** **22** **26** **30**



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



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

No unavailabilities during the reported period.