

# PRELIMINARY REPORT OF 041023

ATTENTION: This report is automatically generated no comments are provided on data analysis

**last update on Sat Oct 23 10:50:01 GMT 2004**

1. [Introduction](#)
2. [Summary](#)
  - [Instrument Unavailability](#)
  - [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. [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 - Browse Visual Inspection

## 2.3 - Data Analysis

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

## 3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied. No anomalies observed on available MS products:

Polarisation	Start Time
V	20041022 033427
H	20041021 040604

### 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

#### 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



#### 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	-3.472170	0.006758	-0.030506
7	P1	-3.344875	0.011706	-0.049268
11	P1	-4.624094	0.020248	0.073056
15	P1	-5.711804	0.034484	0.112322
19	P1	-3.533350	0.006255	-0.115716
22	P1	-4.557273	0.013179	-0.083449
24	P1	-4.970445	0.009658	0.035377
30	P1	-7.044090	0.017288	-0.033039

3	P1	-16.110817	0.086431	0.151489
7	P1	-14.038246	0.061957	-0.021105
11	P1	-20.409912	0.211409	-0.364204
15	P1	-11.725794	0.035599	0.107784
19	P1	-13.999702	0.026256	-0.077034
22	P1	-16.123199	0.399857	-0.486991
24	P1	-14.550623	0.263857	-0.277514
30	P1	-18.033892	0.344984	-0.007801

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.335474	0.089480	-0.102525
7	P2	-22.597372	0.119227	-0.067611
11	P2	-15.131052	0.114594	0.067102
15	P2	-7.091255	0.104558	-0.118728
19	P2	-9.623686	0.121371	-0.195412
22	P2	-17.278215	0.106363	0.025944
24	P2	-20.787460	0.090102	-0.056061
30	P2	-19.097618	0.083515	0.108400

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173219	0.005626	-0.054815
7	P3	-8.173220	0.005626	-0.054811
11	P3	-8.173218	0.005626	-0.054815
15	P3	-8.173218	0.005626	-0.054813
19	P3	-8.173217	0.005626	-0.054814
22	P3	-8.173217	0.005626	-0.054818
24	P3	-8.173217	0.005626	-0.054818
30	P3	-8.173169	0.005626	-0.054923

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1	
<input type="checkbox"/>	
<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	-2.820236	0.014068	0.027301
7	P1	-2.986681	0.052786	0.085719
11	P1	-3.886919	0.020811	-0.016359
15	P1	-3.493418	0.021589	0.032110
19	P1	-3.539853	0.013688	-0.114796
22	P1	-5.665480	0.057392	0.112264
24	P1	-3.968370	0.022155	-0.005053
30	P1	-6.209563	0.050372	-0.086888
3	P1	-10.788306	0.094233	0.415086
7	P1	-10.087373	0.173054	0.058254
11	P1	-12.240440	0.122847	-0.180976
15	P1	-11.685595	0.076500	0.039071
19	P1	-15.592944	0.060978	-0.062719
22	P1	-23.618568	1.414520	-0.538899
24	P1	-18.130325	0.234224	-0.071944
30	P1	-20.373913	1.118173	0.236114

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.010153	0.049063	-0.111025
7	P2	-22.697502	0.066257	0.011505
11	P2	-10.867270	0.051278	-0.038925
15	P2	-4.994600	0.030556	-0.107521
19	P2	-6.834174	0.045059	-0.229518
22	P2	-7.390515	0.041730	-0.003431
24	P2	-11.108868	0.055322	-0.143578
30	P2	-22.106297	0.038929	0.024991

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

3	P3	-8.018812	0.003875	-0.043435
7	P3	-8.018746	0.003874	-0.043211
11	P3	-8.018925	0.003857	-0.043094
15	P3	-8.018812	0.003860	-0.043011
19	P3	-8.018851	0.003864	-0.043088
22	P3	-8.018790	0.003860	-0.042843
24	P3	-8.018898	0.003891	-0.043408
30	P3	-8.018861	0.003875	-0.042918

### 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	0.000478576
	stdev	2.15031e-07
MEAN Q	mean	0.000553201
	stdev	2.32432e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127372
	stdev	0.000911594

STDEV Q	mean	0.127586
	stdev	0.000920415



### 5.3 - Gain imbalance I/Q



## 6 - Doppler Analysis

Preliminary report. The data is not yet controlled

### 6.1 - Unbiased Doppler Error for WVS

#### Evolution of unbiased Doppler error (Real - Expected)

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

### 6.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler

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

### 6.3 - Doppler evolution versus ANX for WVS

#### Evolution Doppler error versus ANX

<input type="checkbox"/>	
--------------------------	--

### 6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)	
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

### 6.5 - Absolute Doppler for GM1

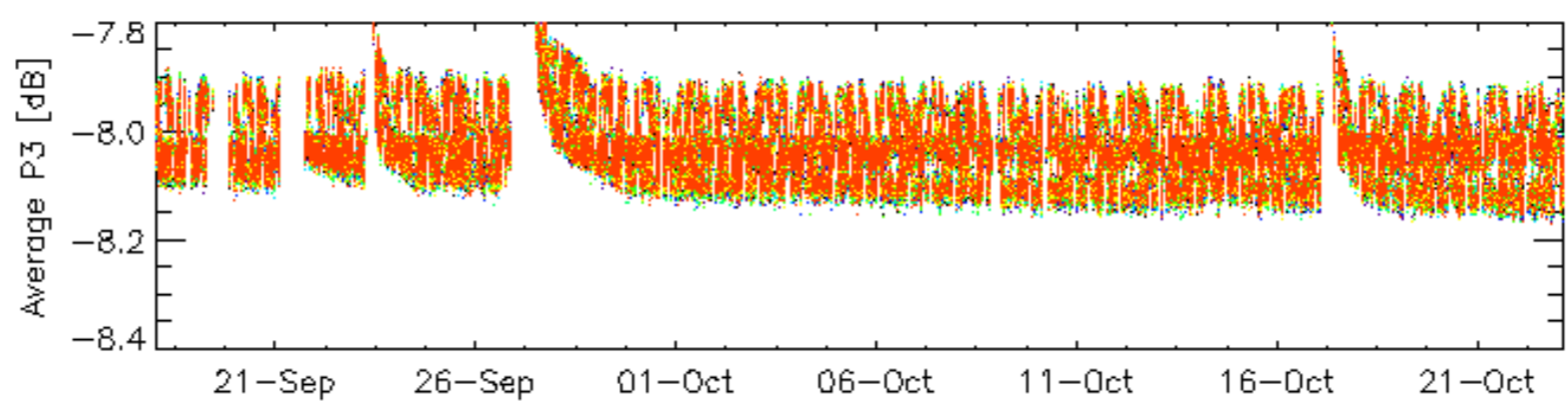
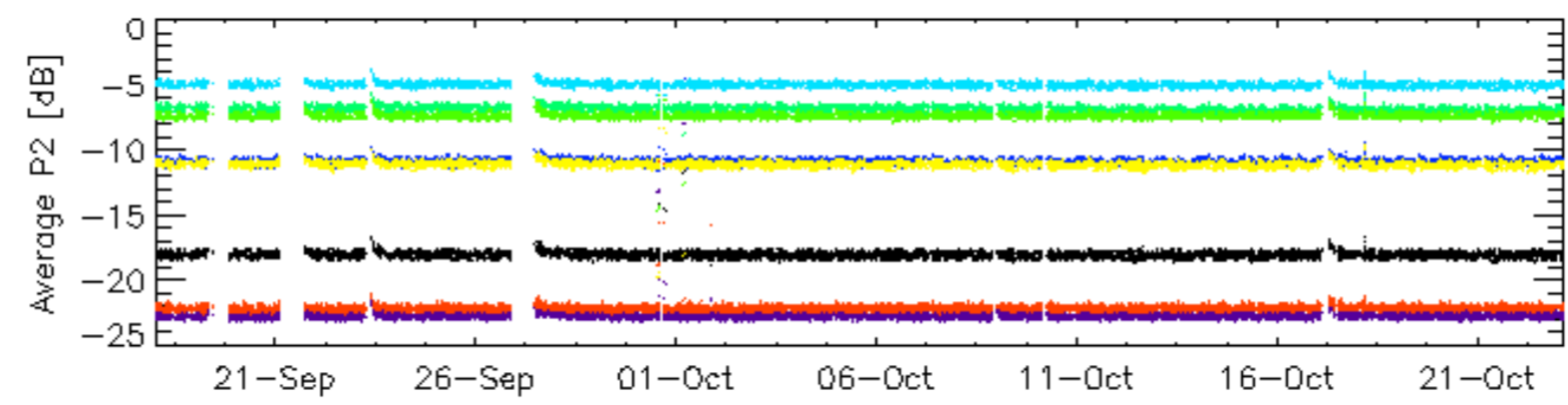
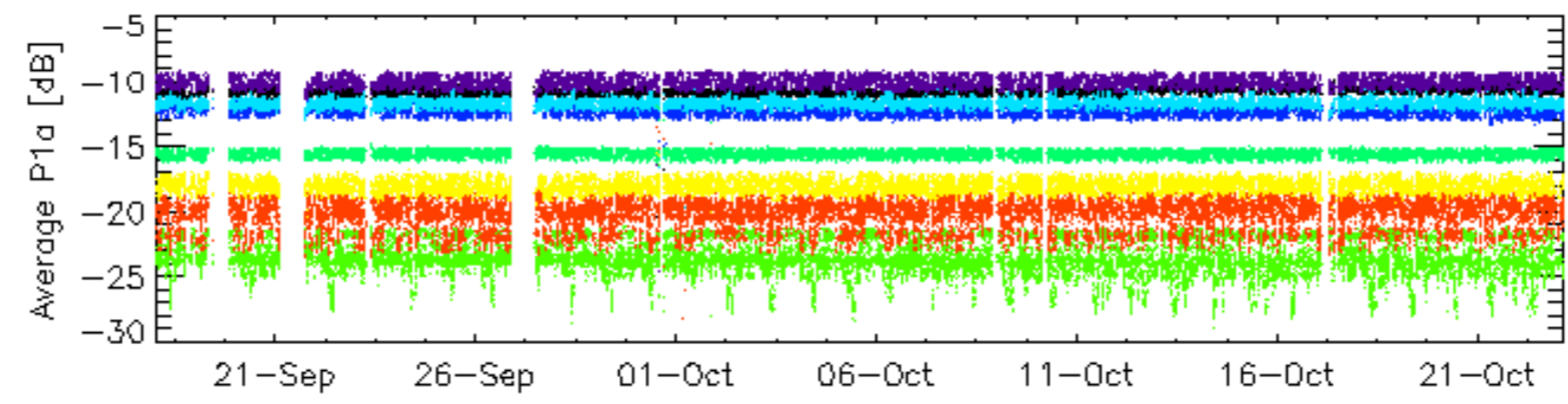
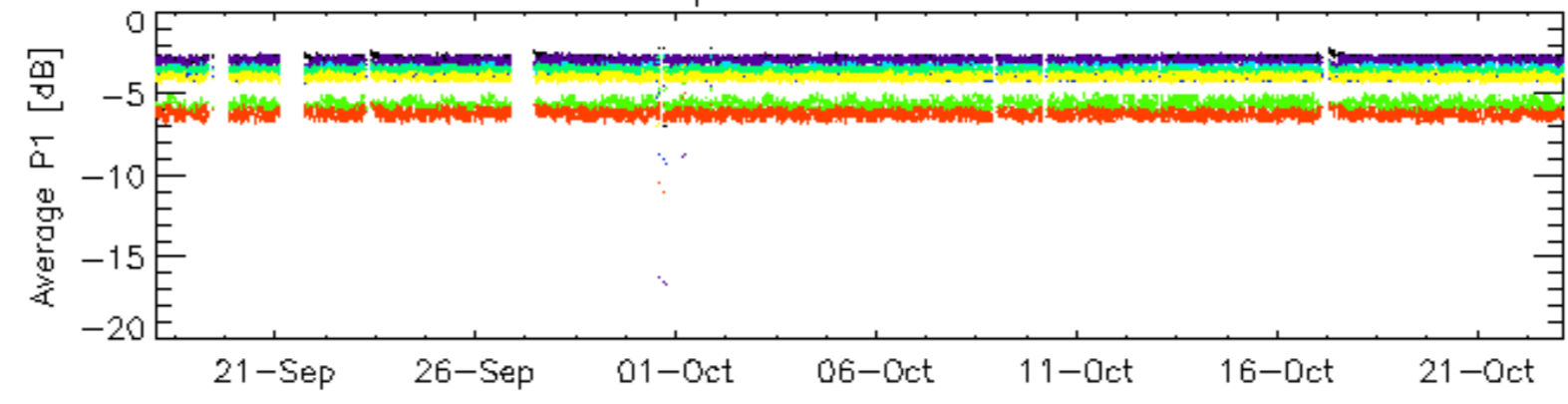
Evolution of Absolute Doppler	
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

### 6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX	
<input type="checkbox"/>	

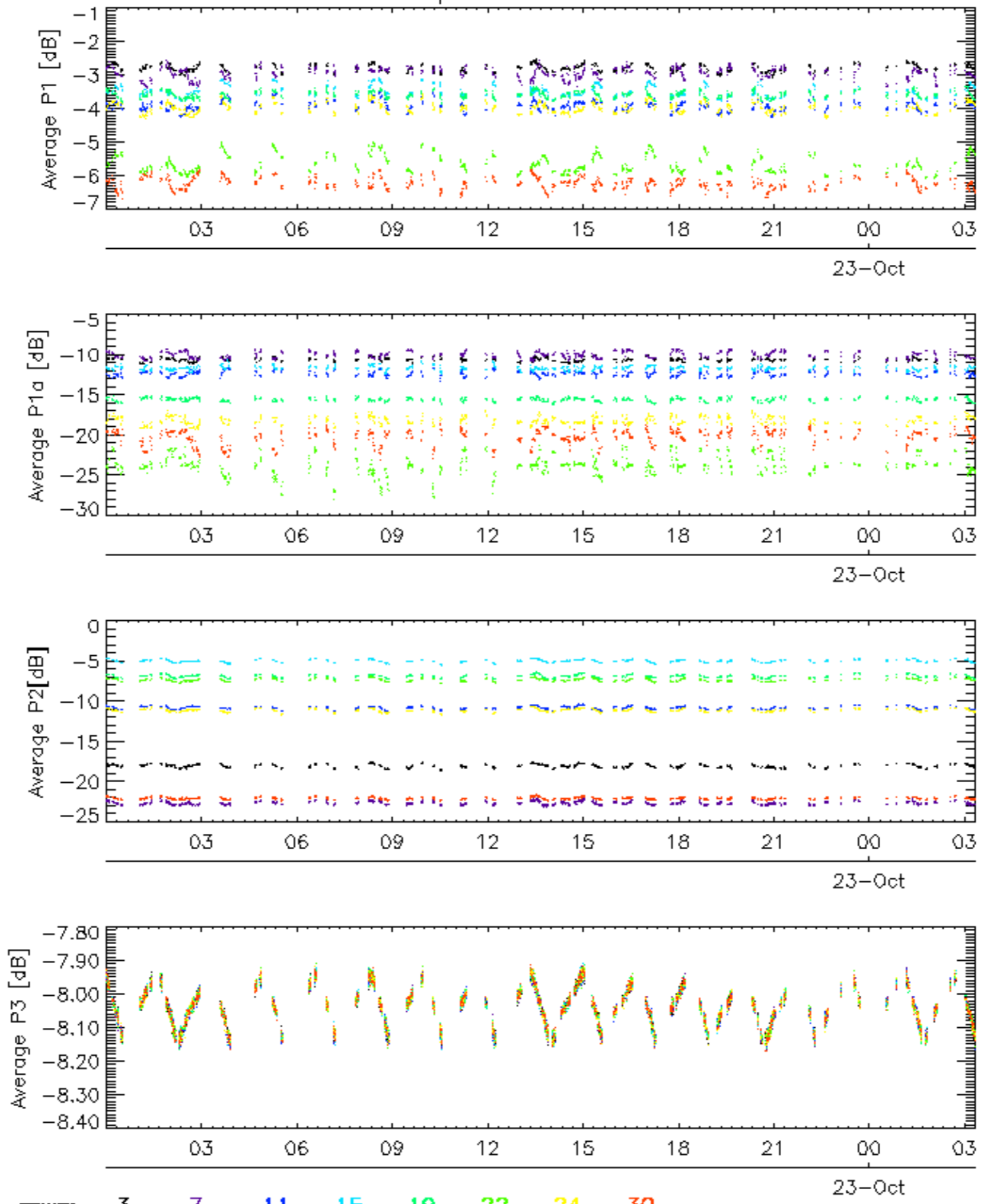


### Cal pulses for GM1 SS3

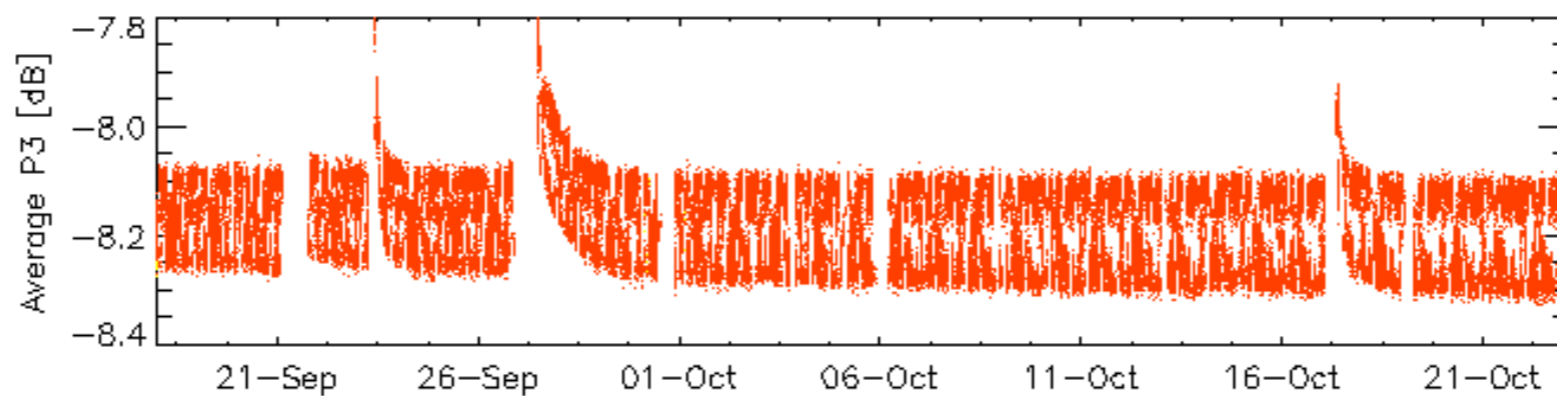
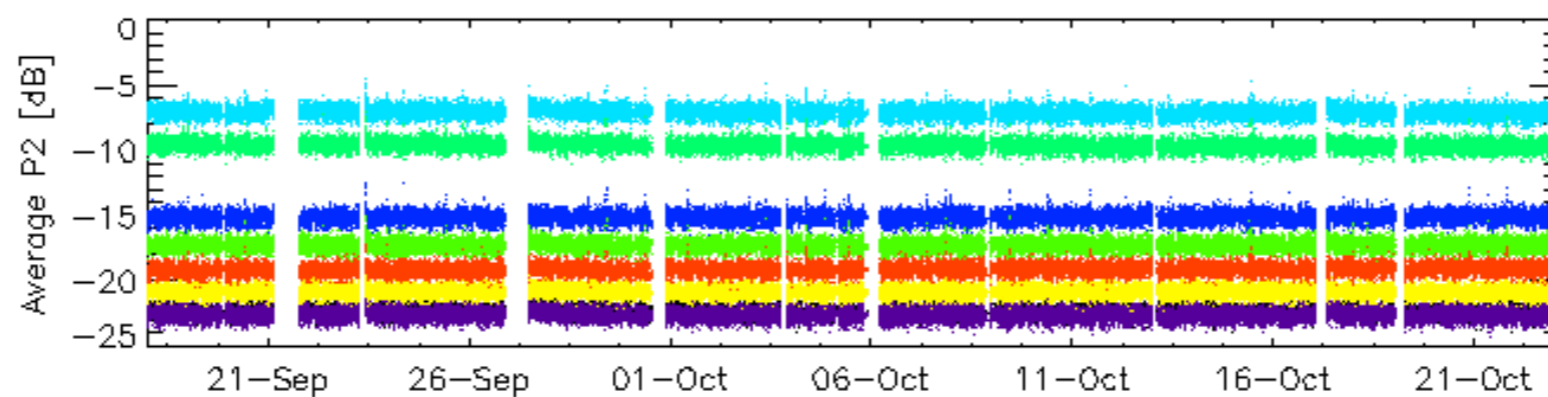
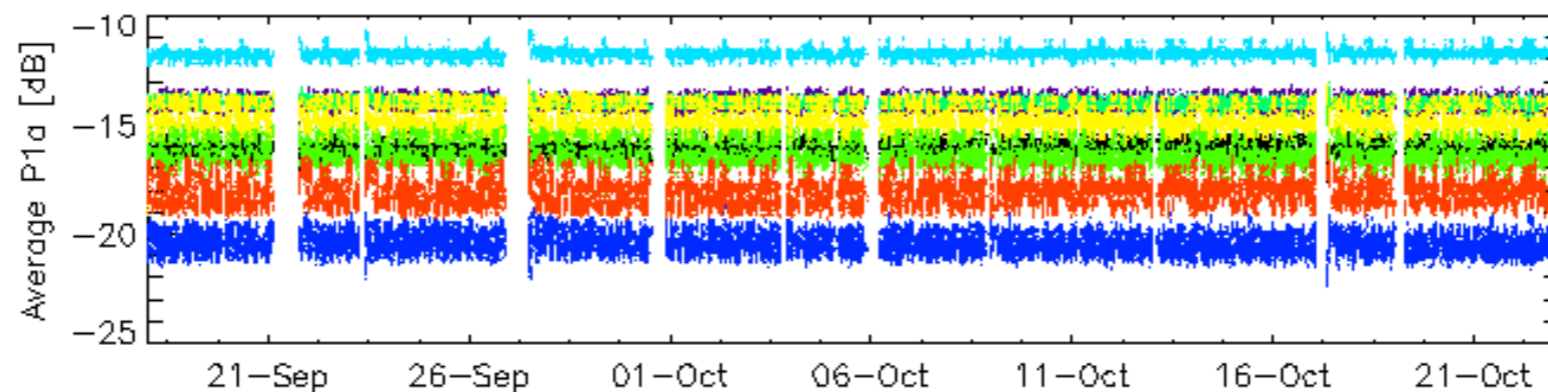
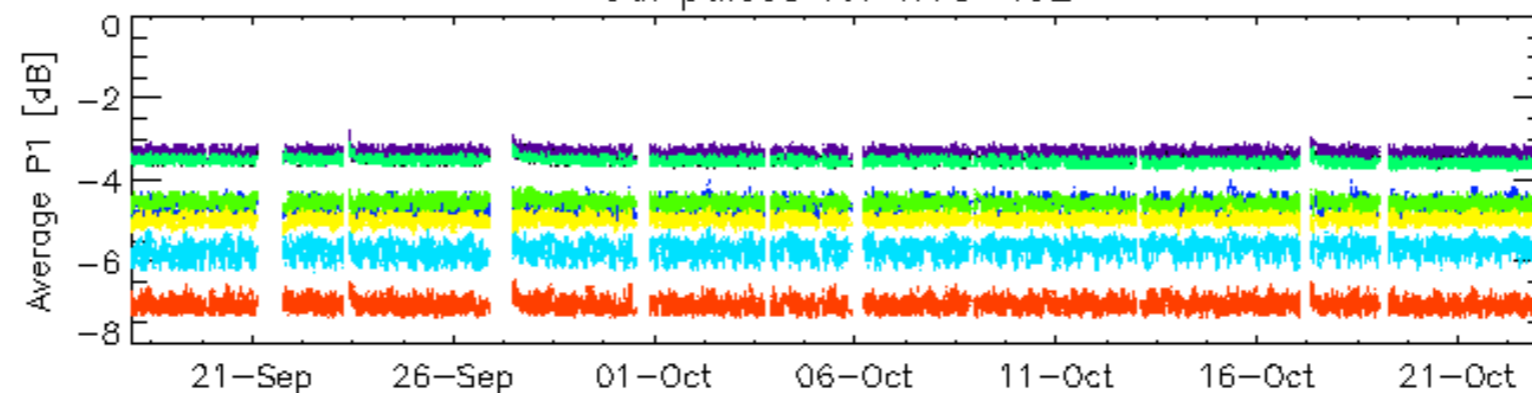


rows: [3](#) [7](#) [11](#) [15](#) [19](#) [22](#) [24](#) [30](#)

### Cal pulses for GM1 SS3

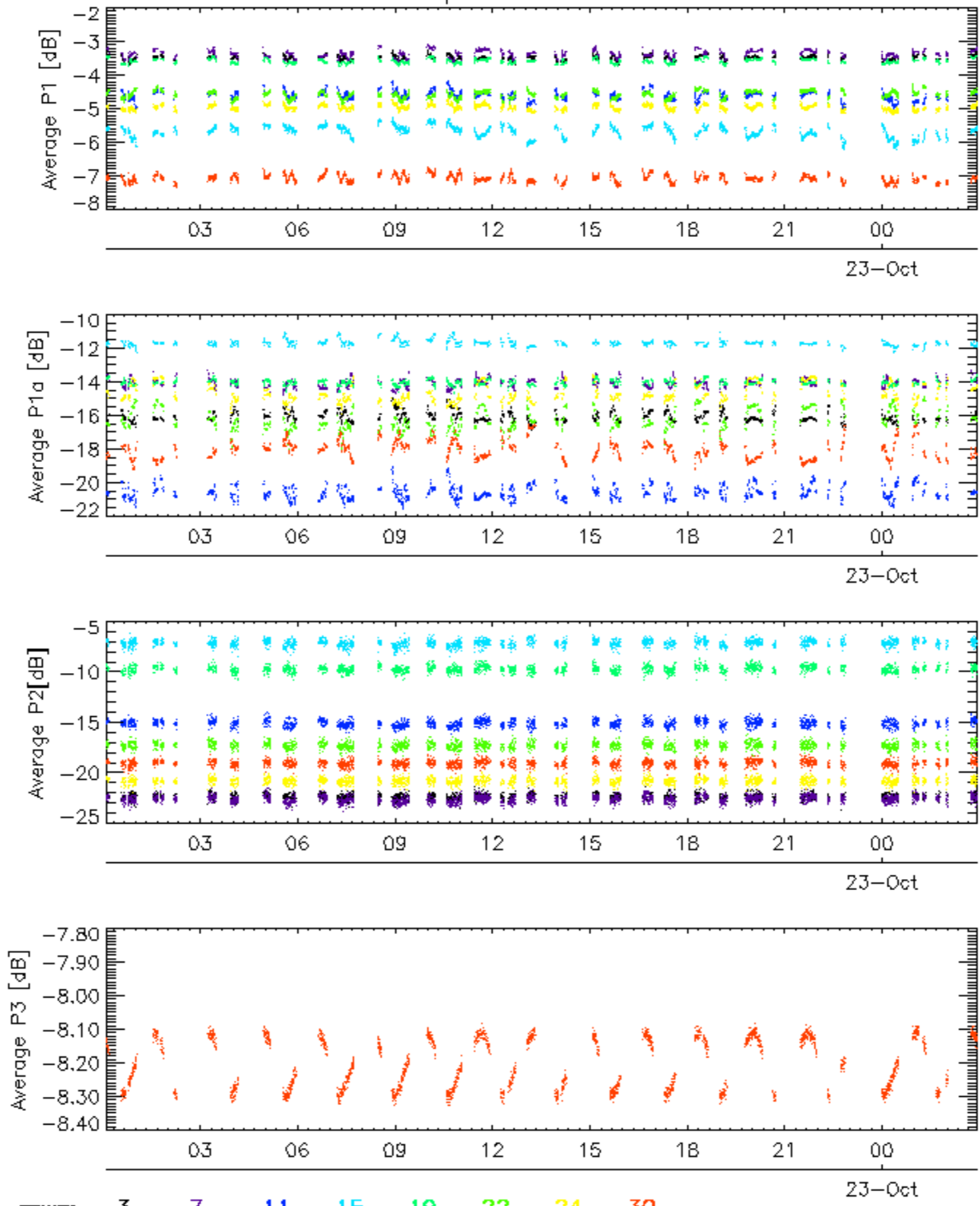


Cal pulses for WVS IS2



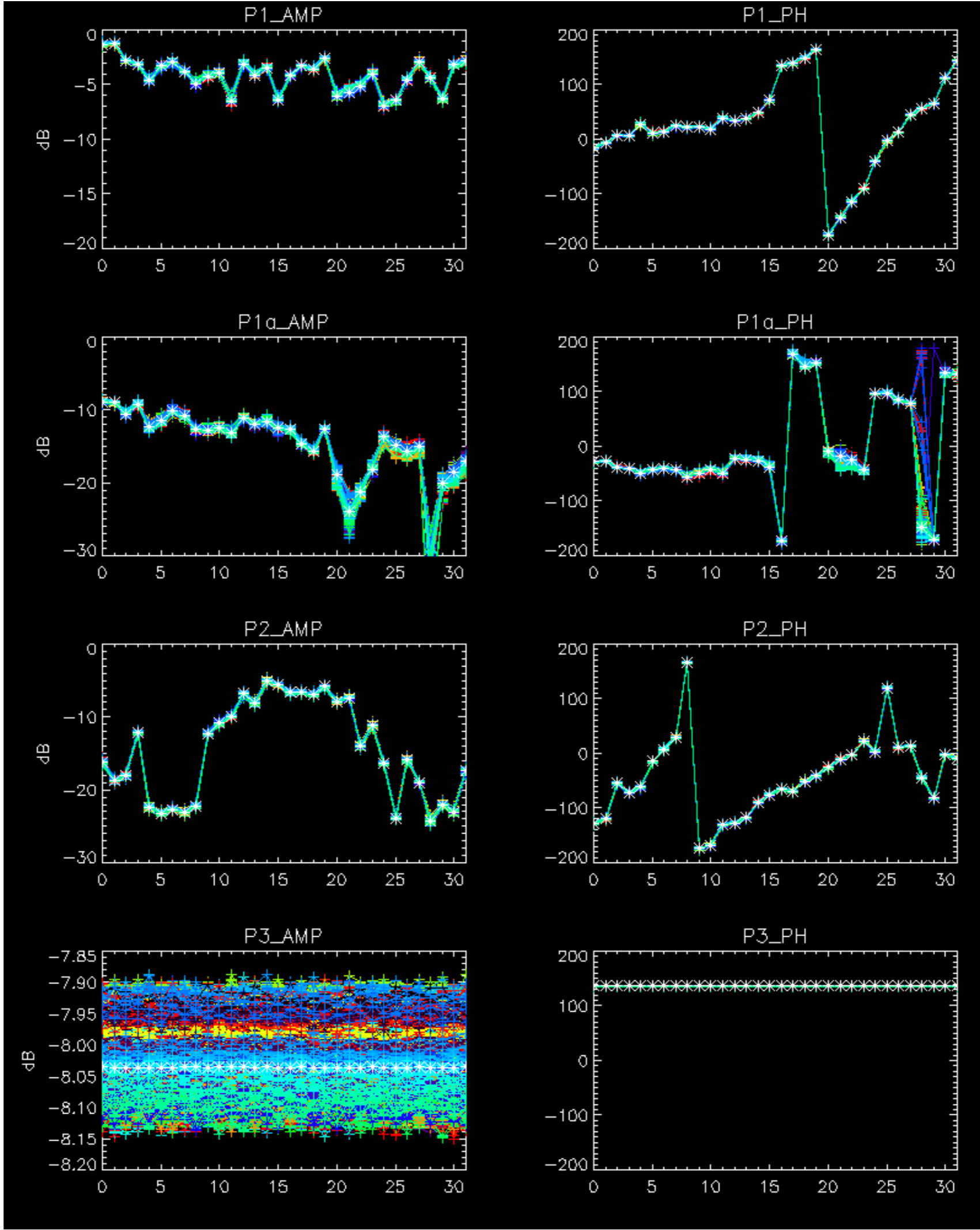
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

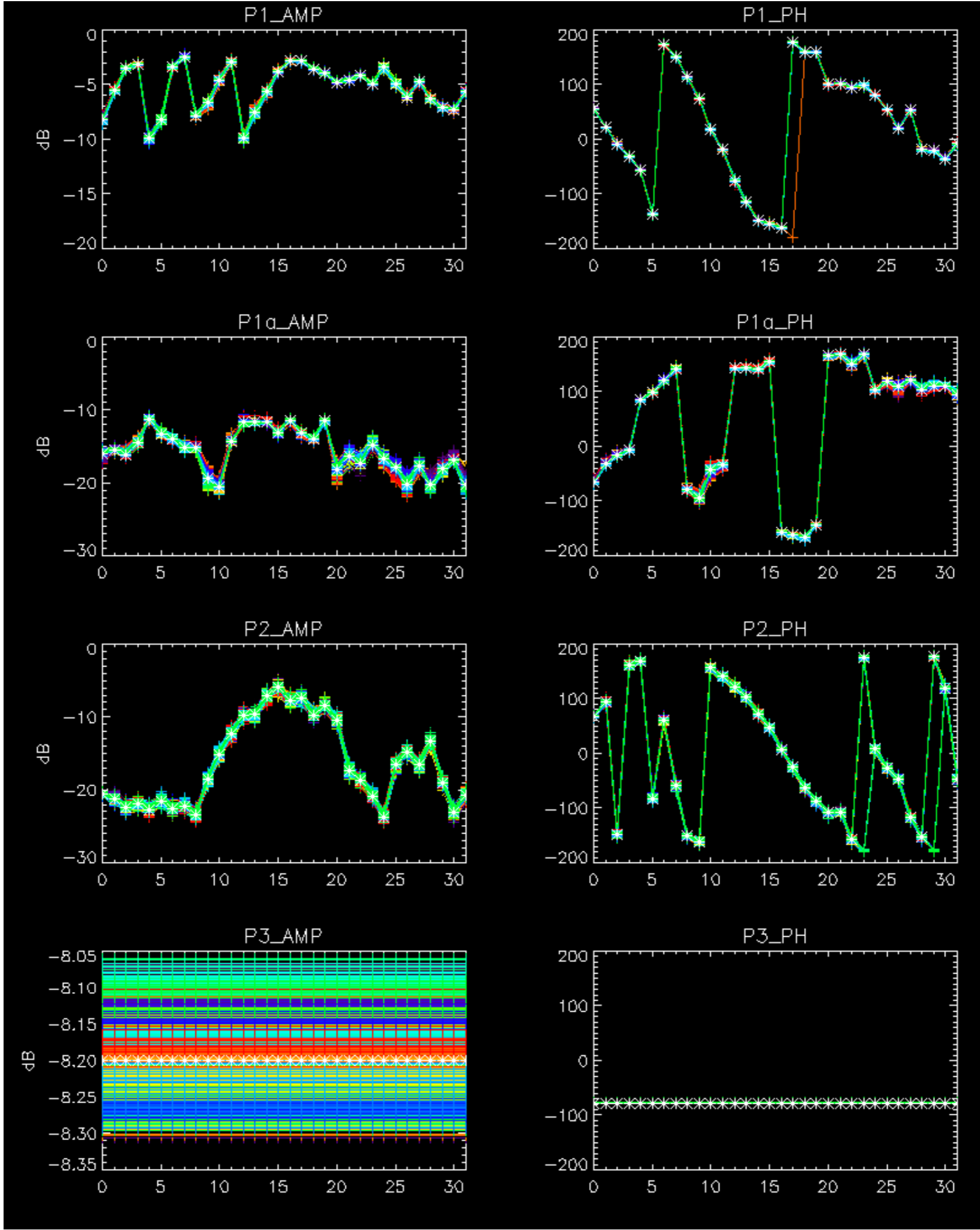
Cal pulses for WVS IS2



No anomalies observed.





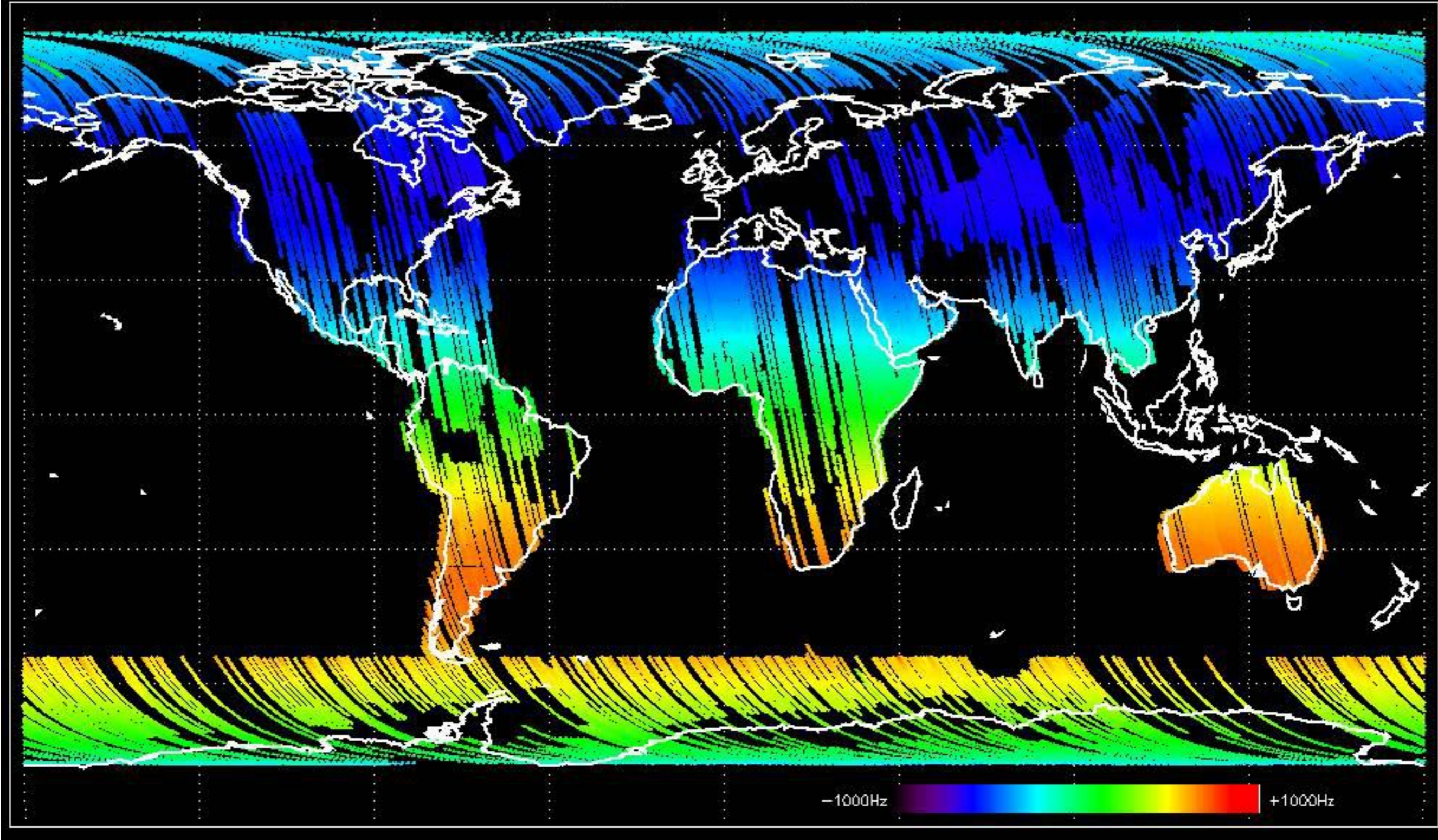


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



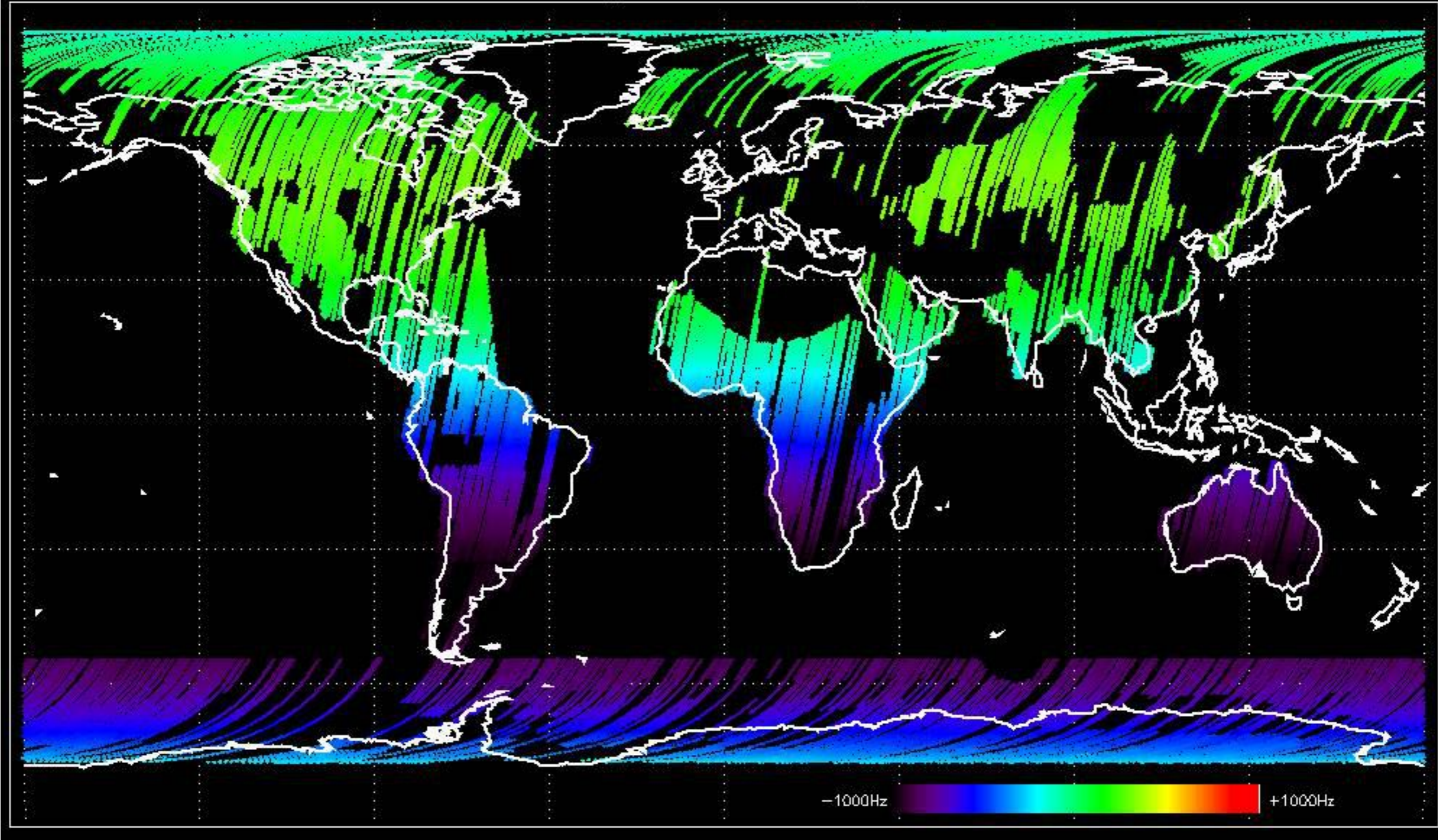


Doppler 'GM1' 'SS1' ascending



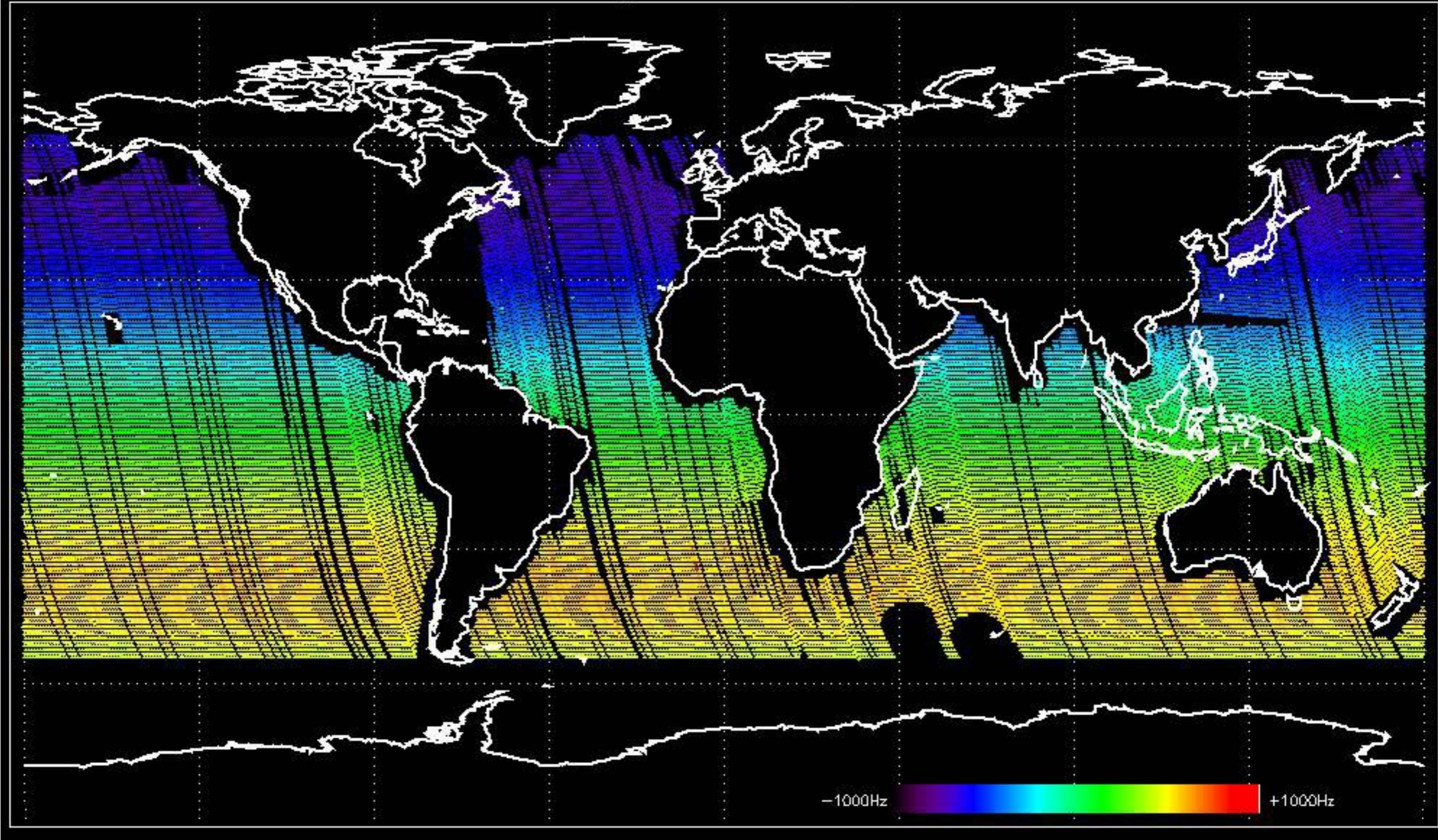


Doppler 'GM1' 'SS1' descending



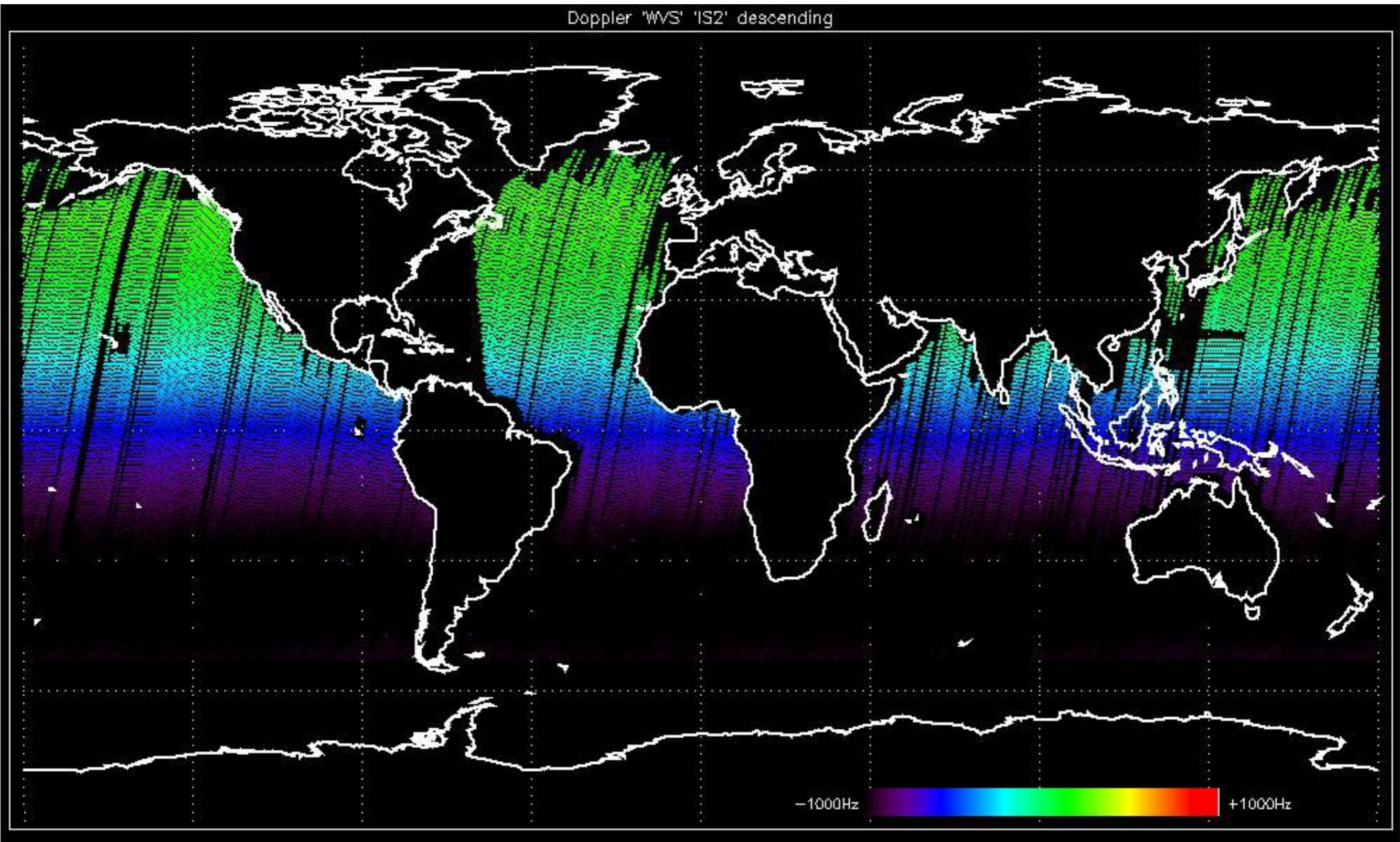


Doppler 'WVS' 'IS2' ascending

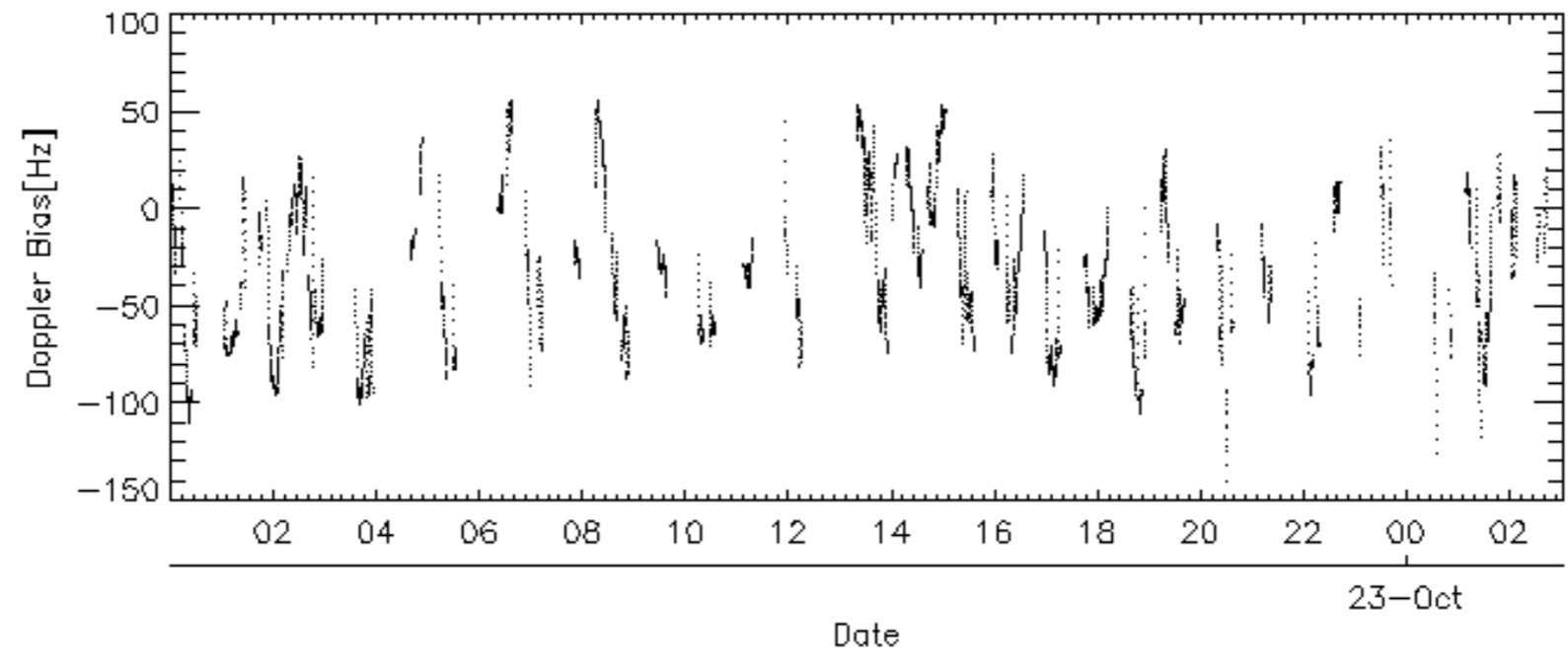
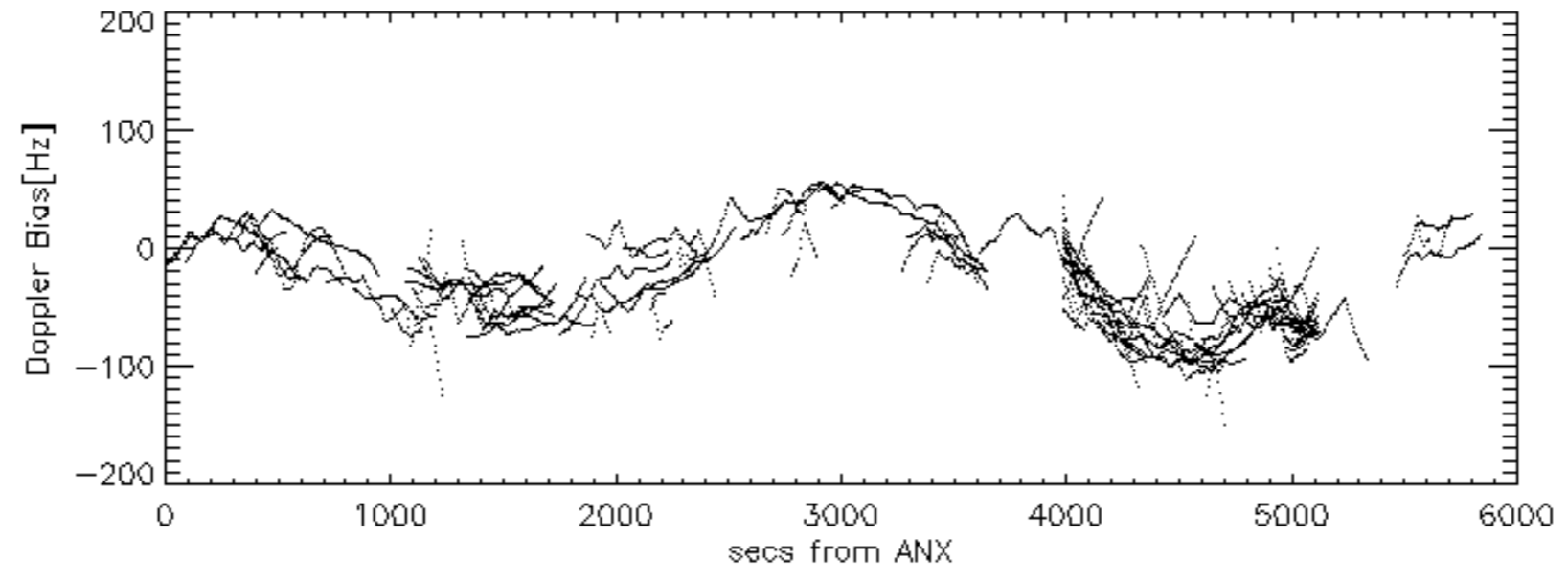
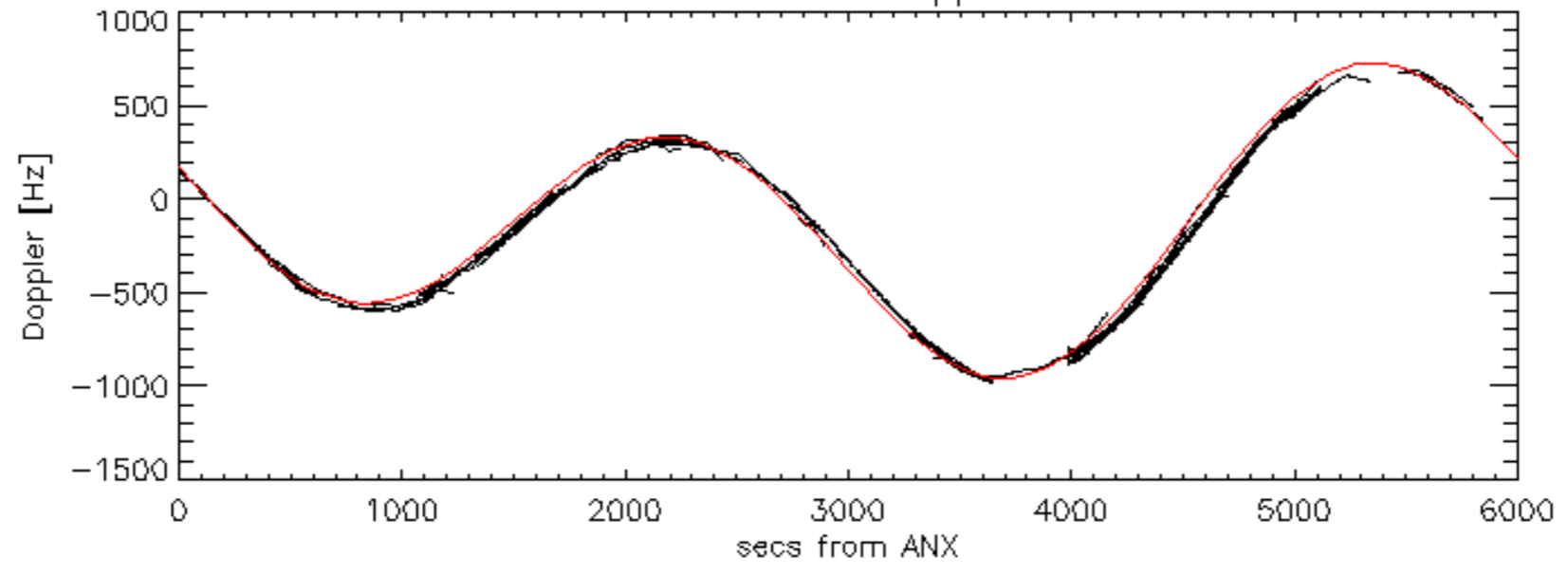


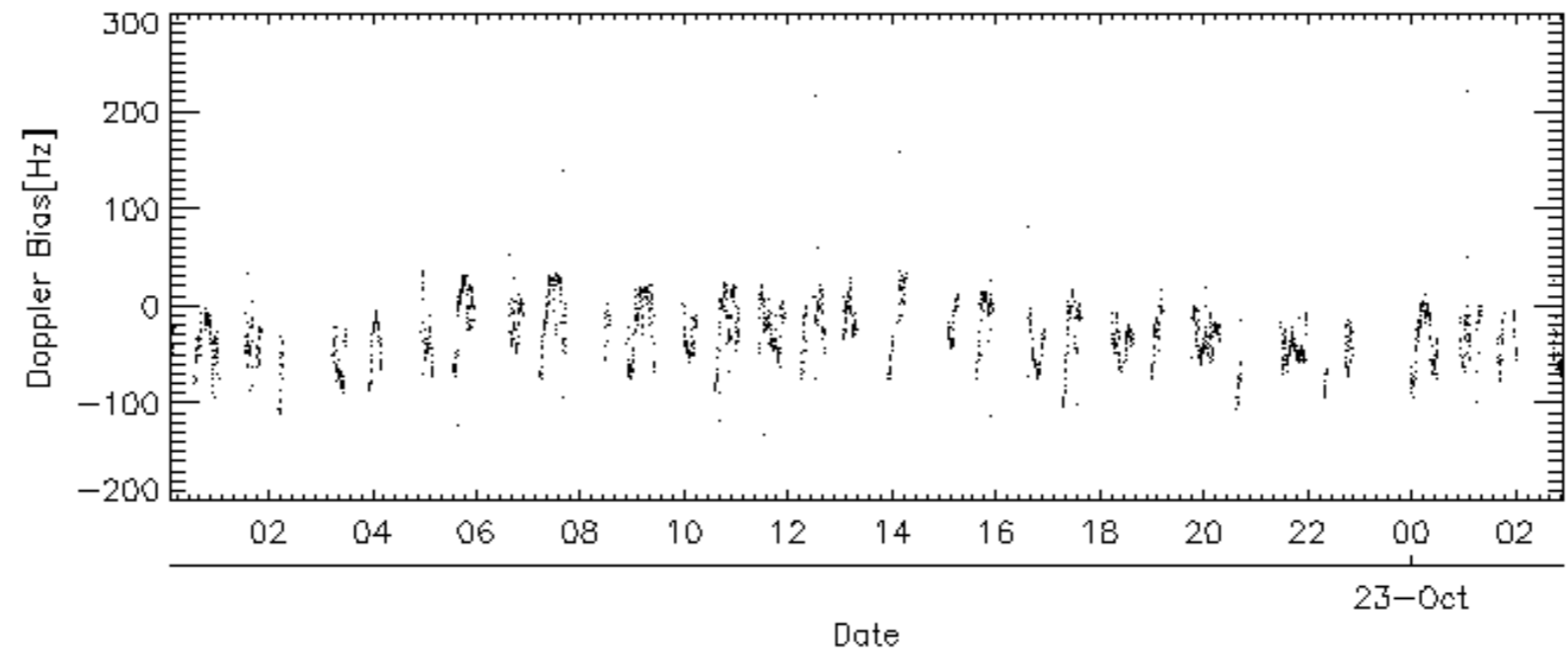
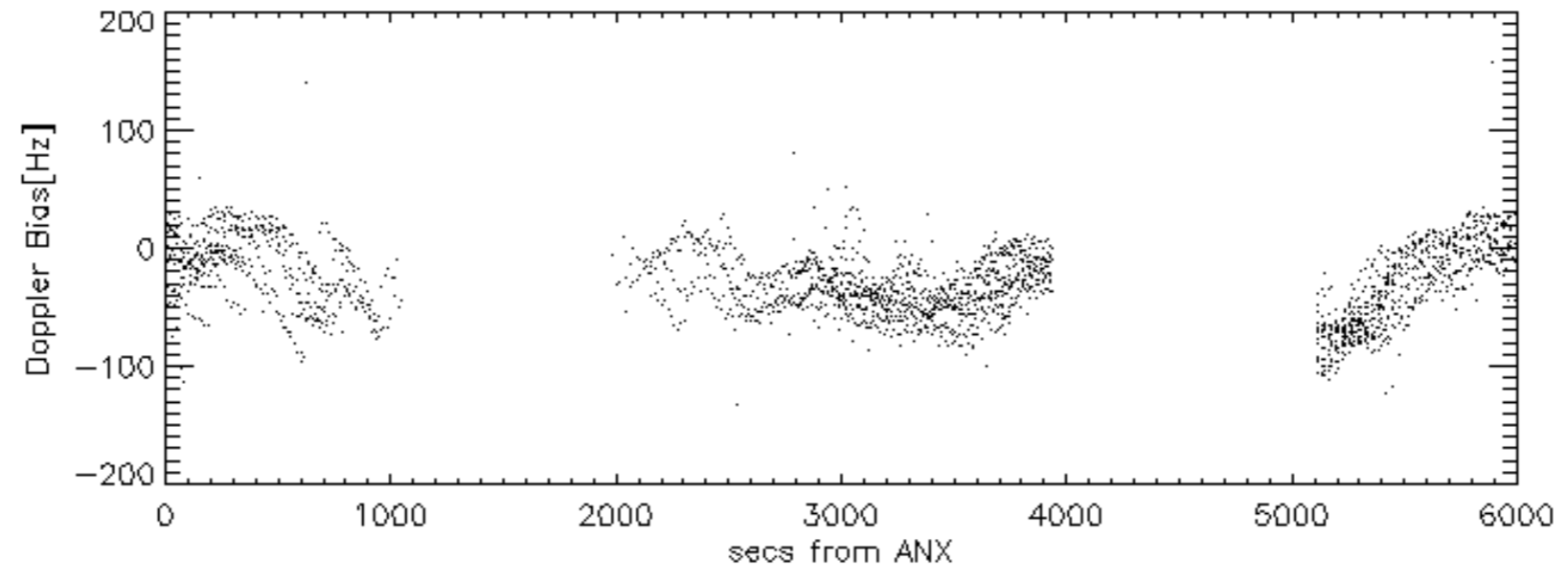
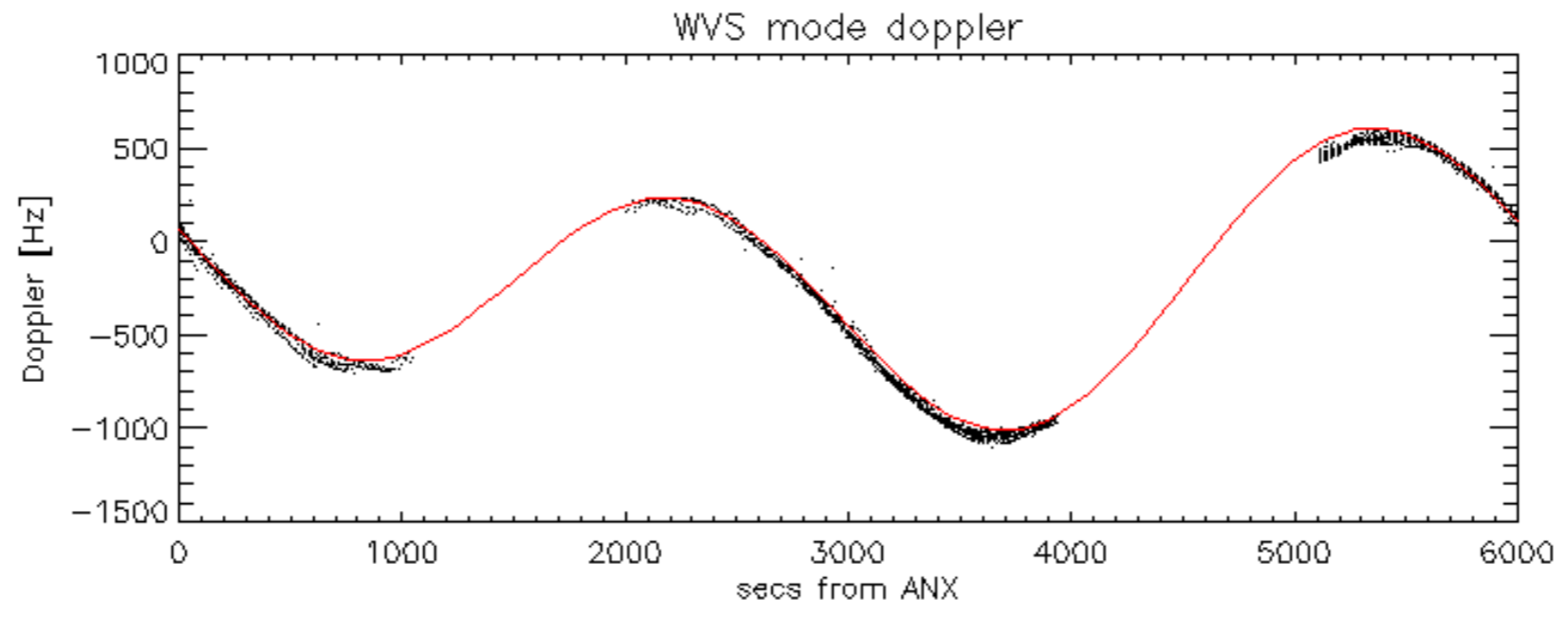


Doppler 'WVS' 'IS2' descending



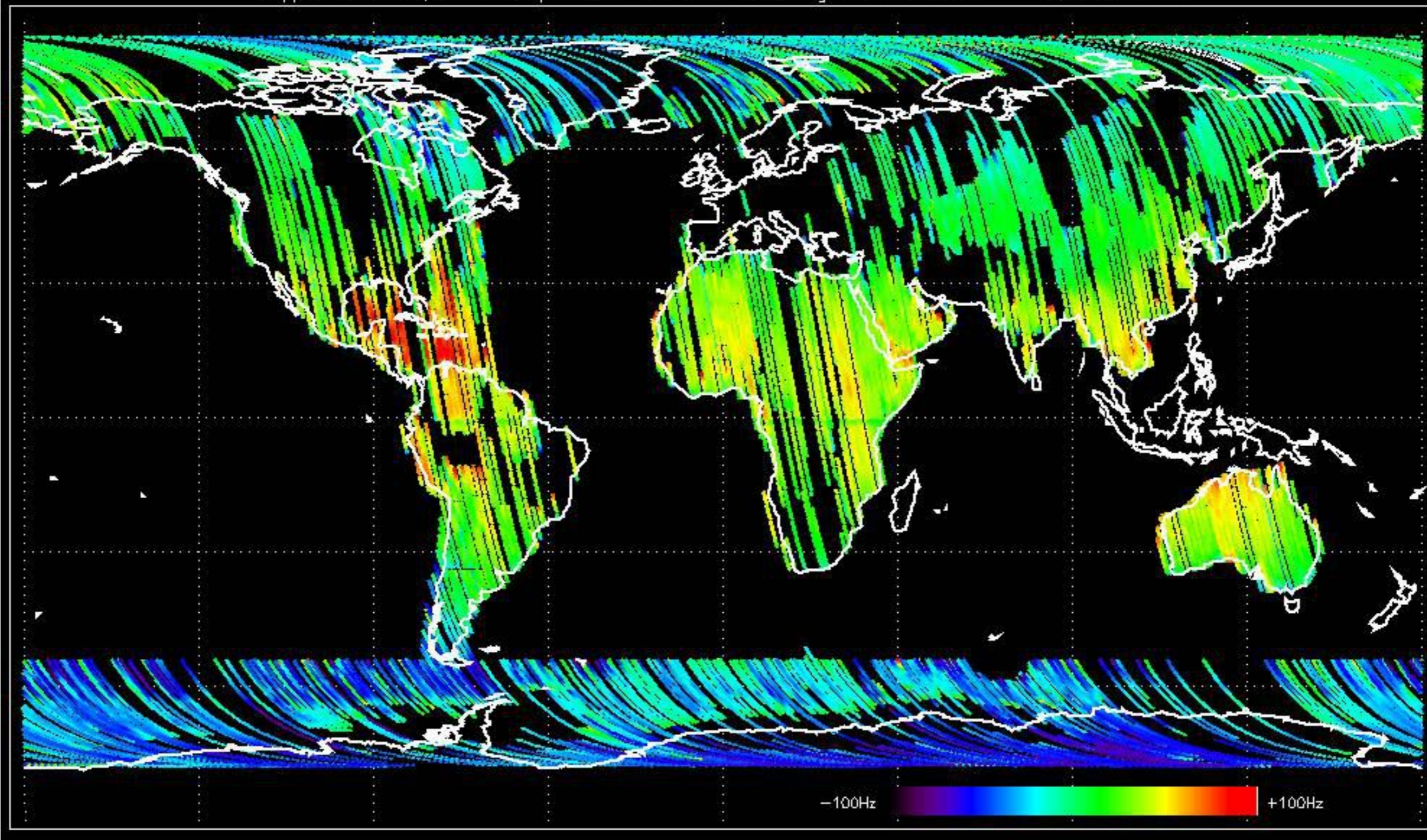
GM1 mode doppler





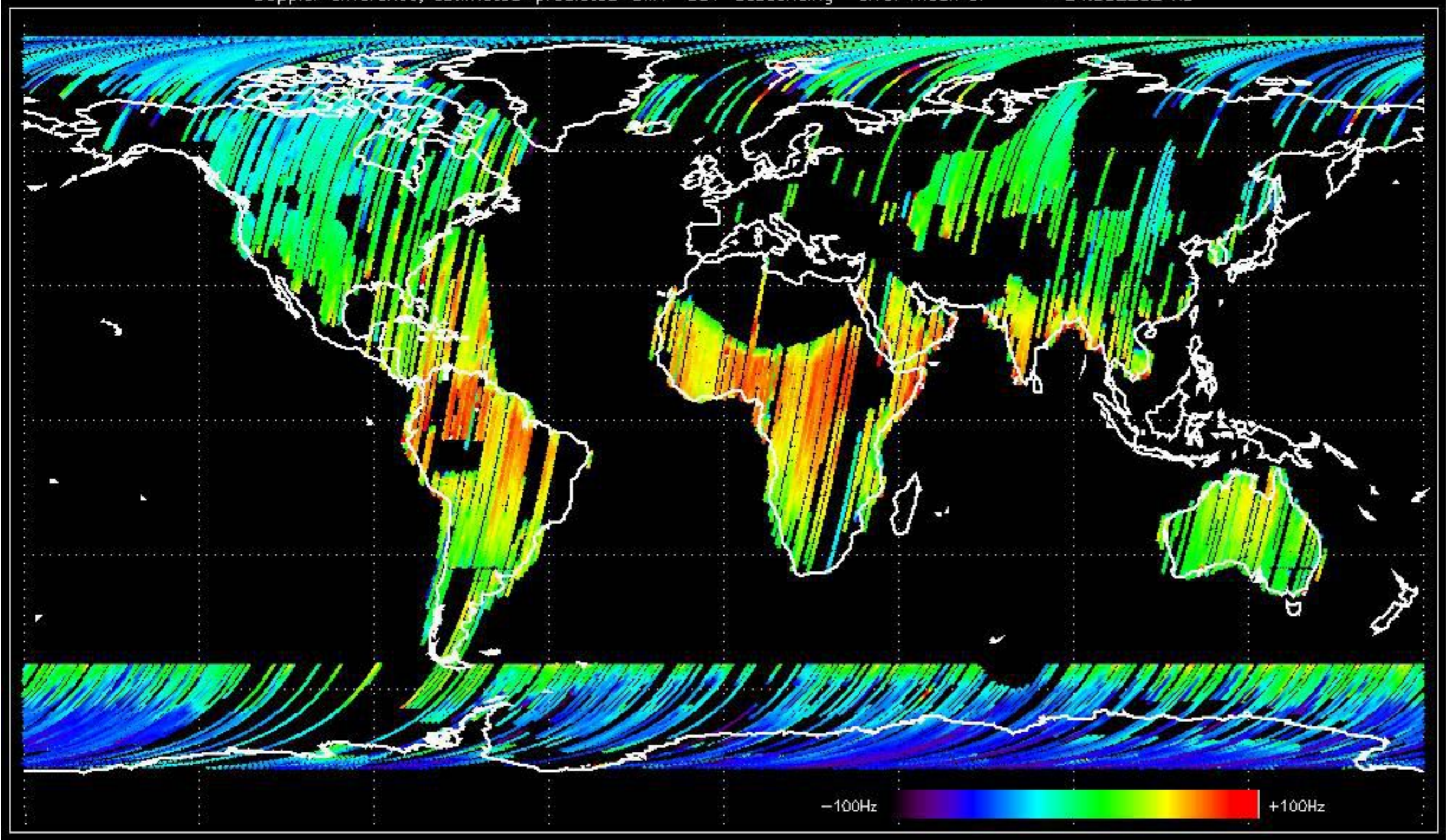


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -31.303708 Hz



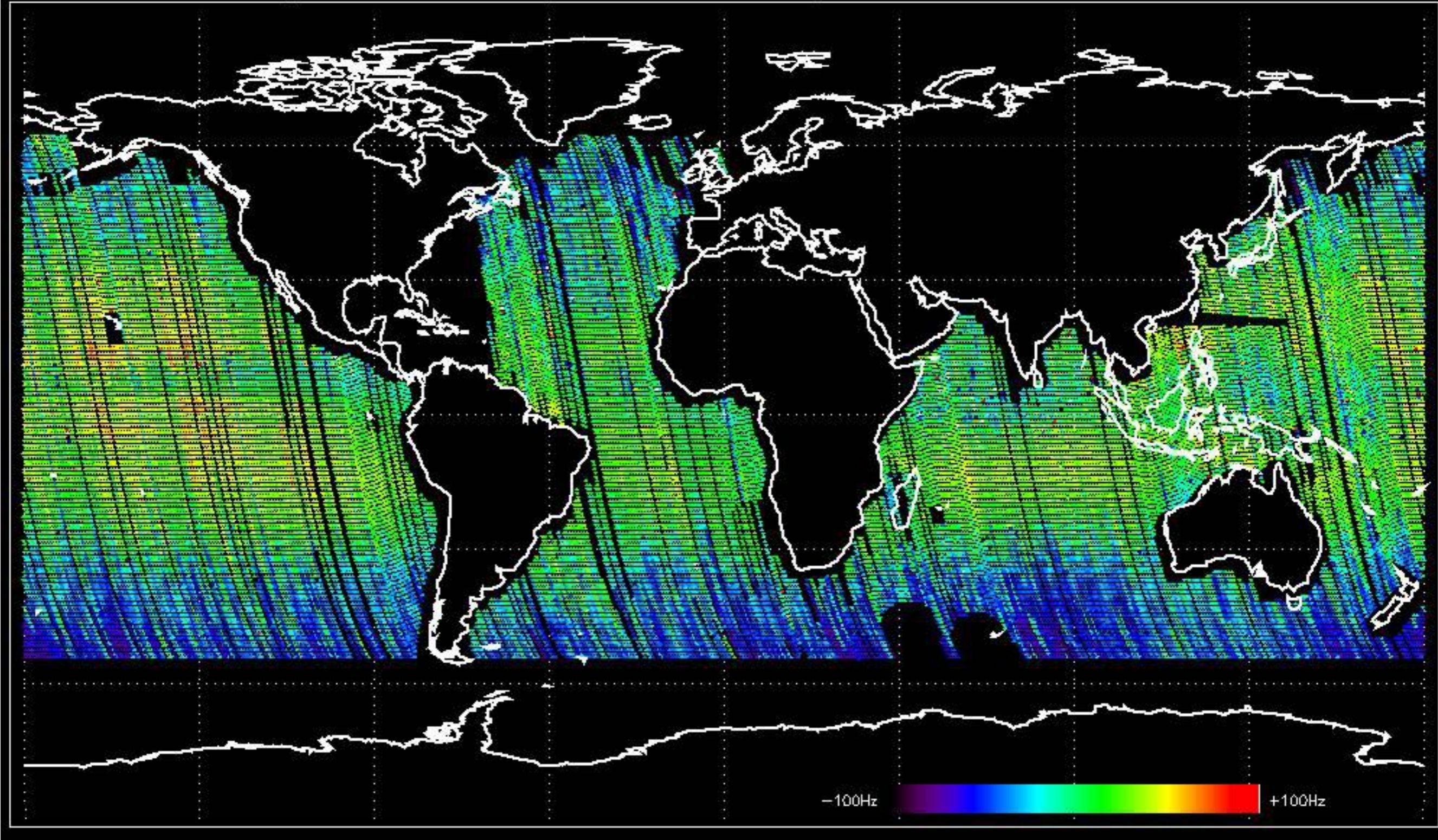


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.382282 Hz



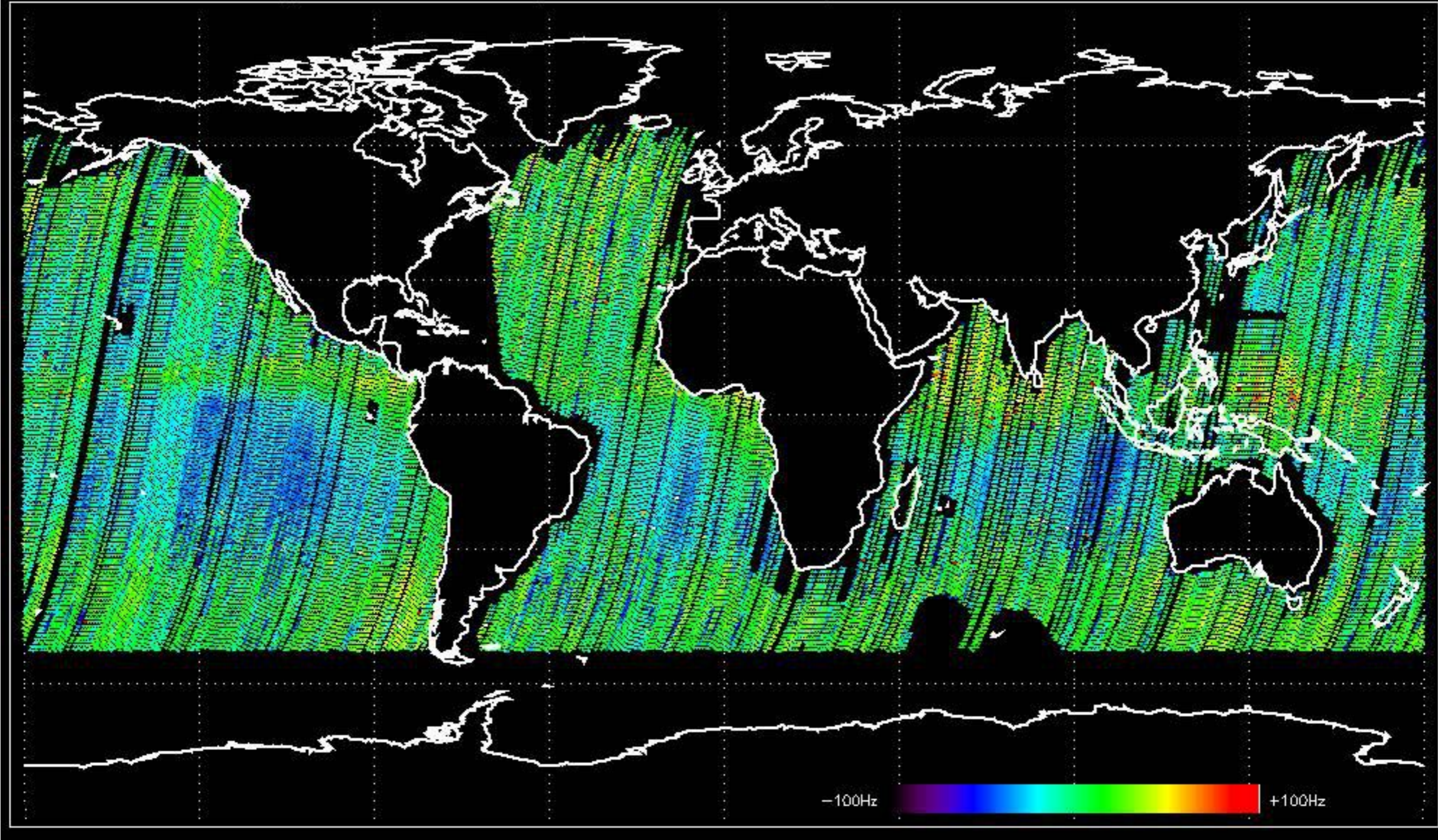


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -29.833437 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -33.514488 Hz





The MS mode provides an internal health check on an individual module basis.  
The purpose of this mode is to identify to identify any malfunctioning modules and  
to identify modules for which calibration offsets are to be applied.  
No anomalies observed on available MS products:

No anomalies observed.









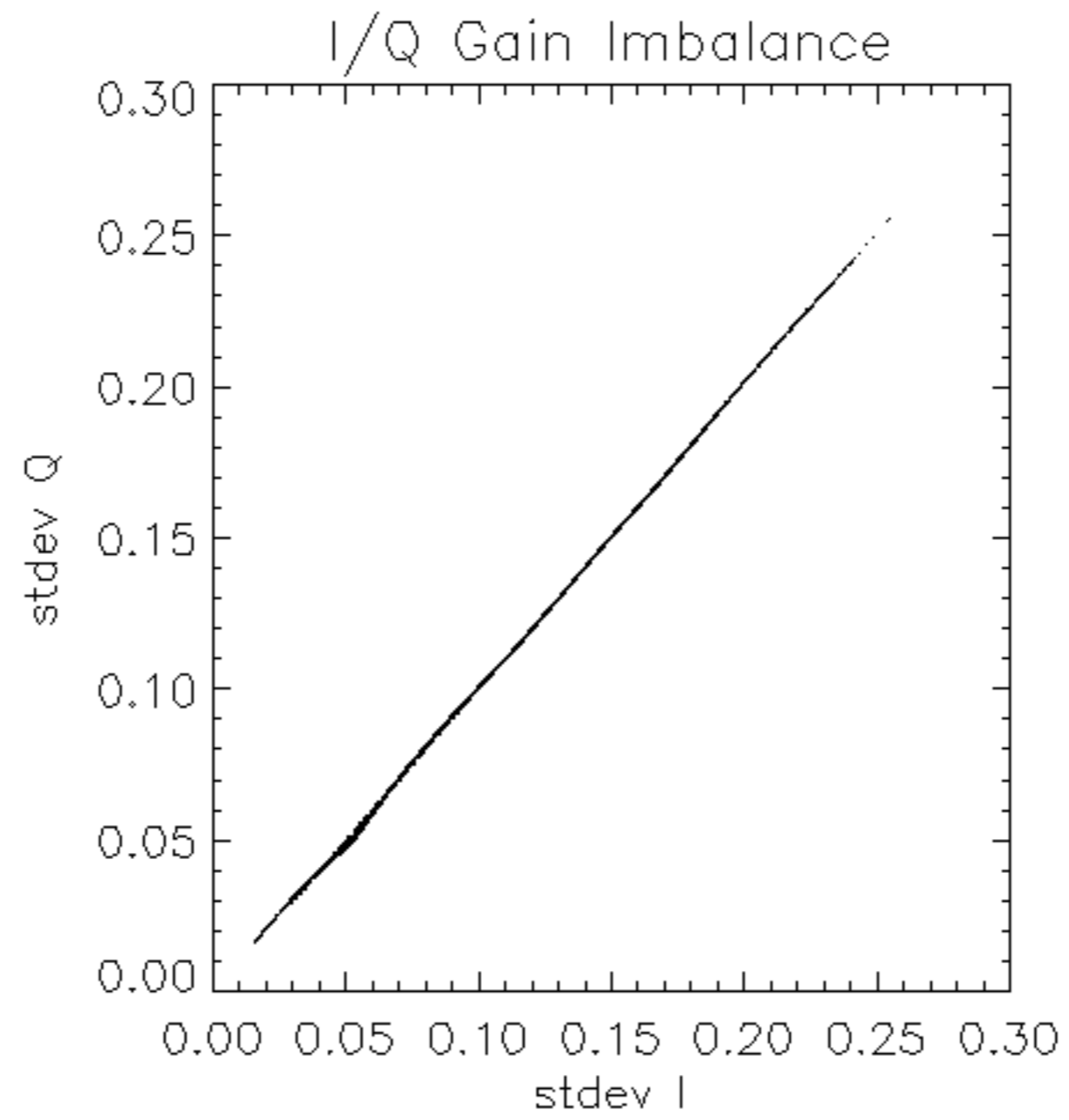


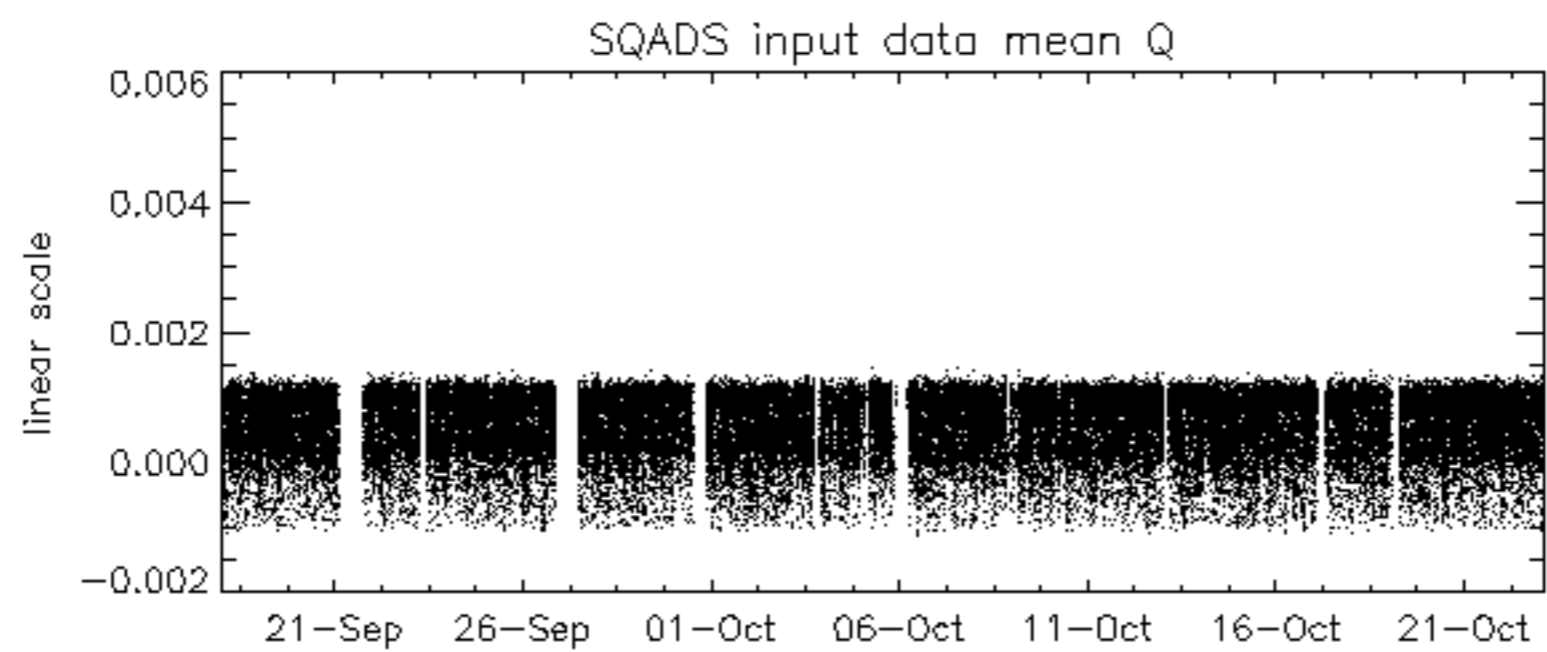
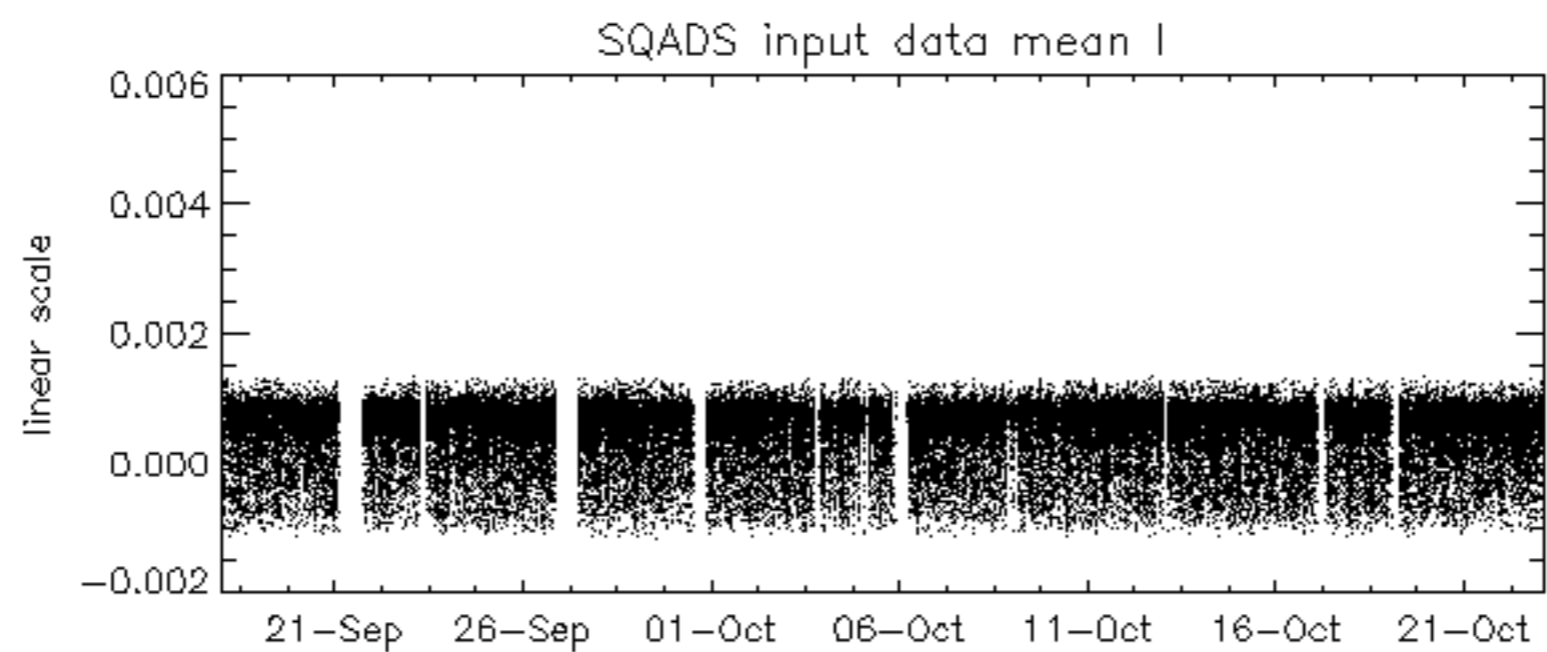
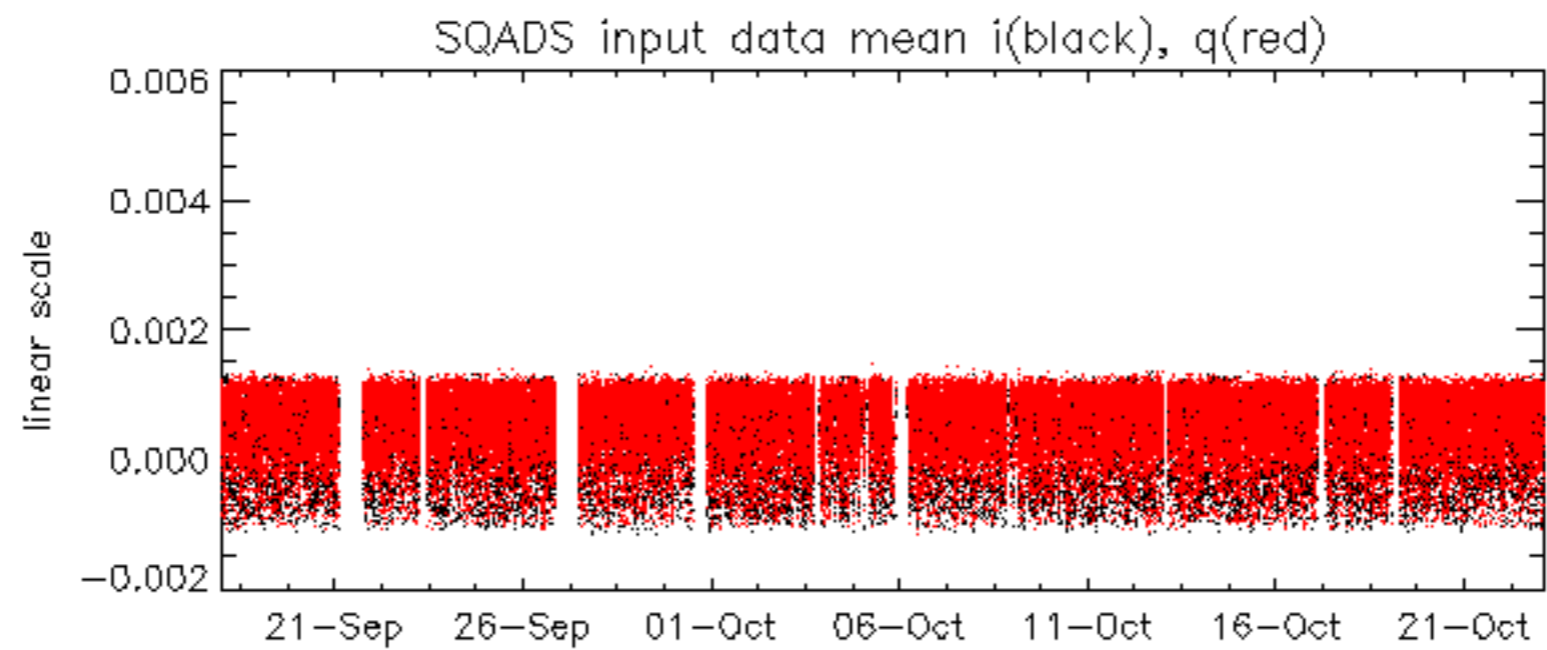


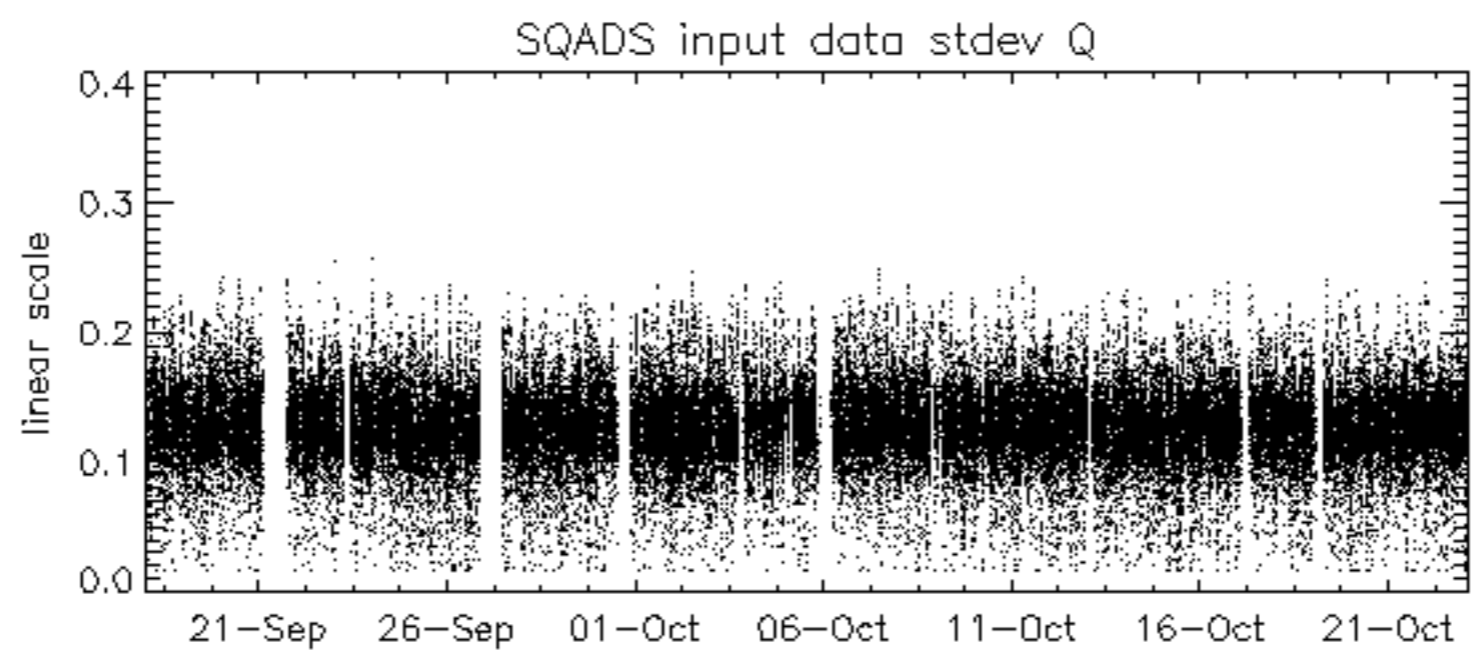
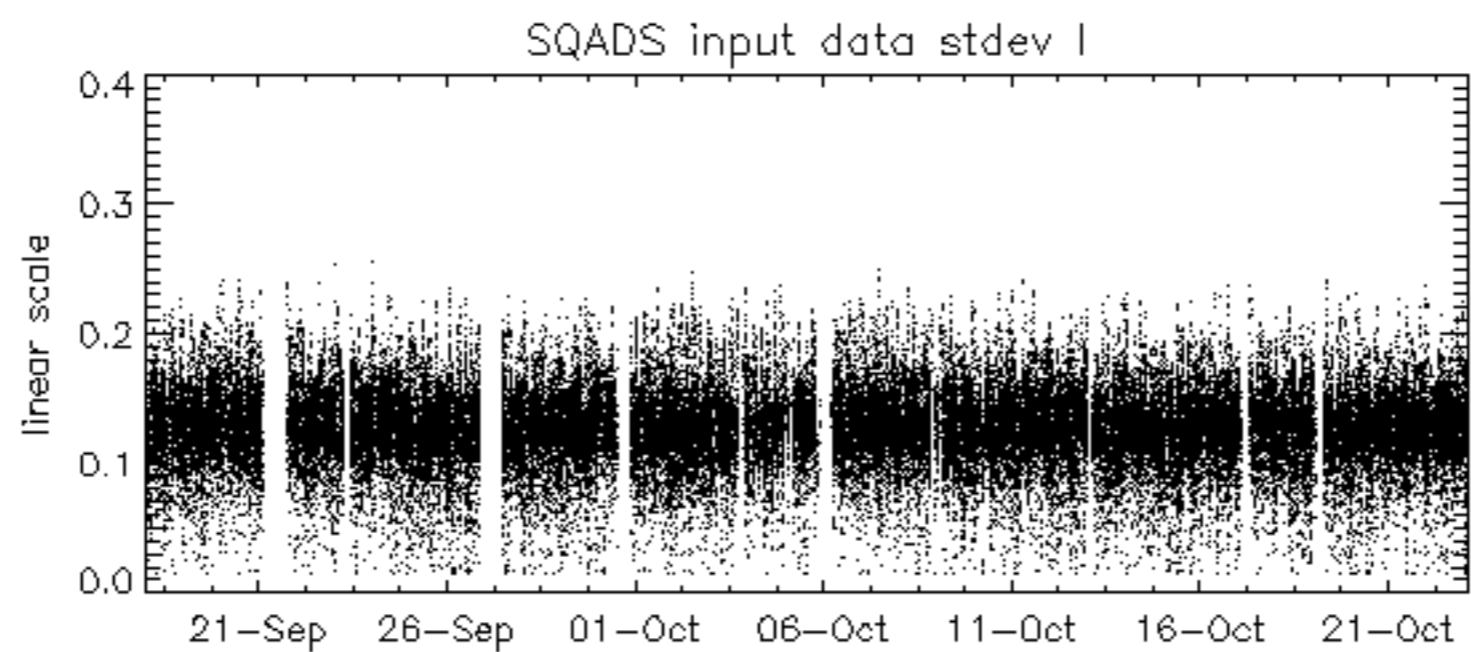
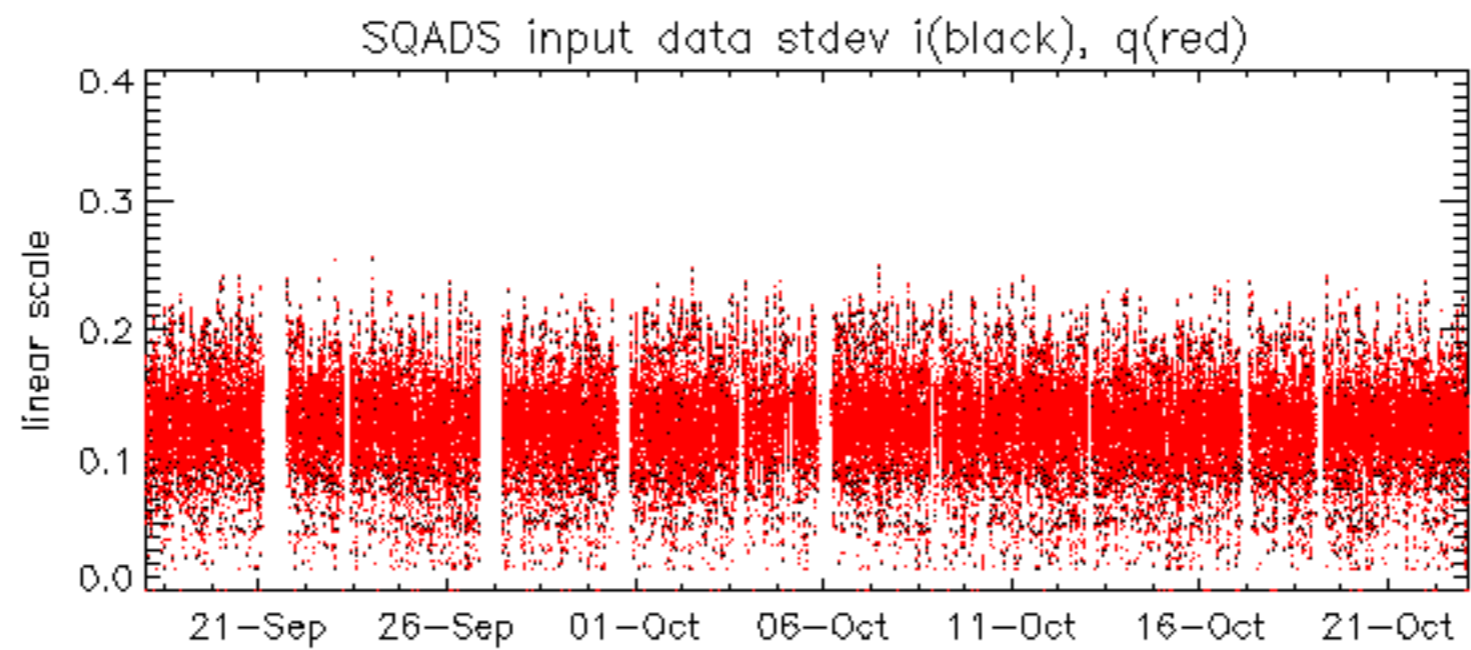
























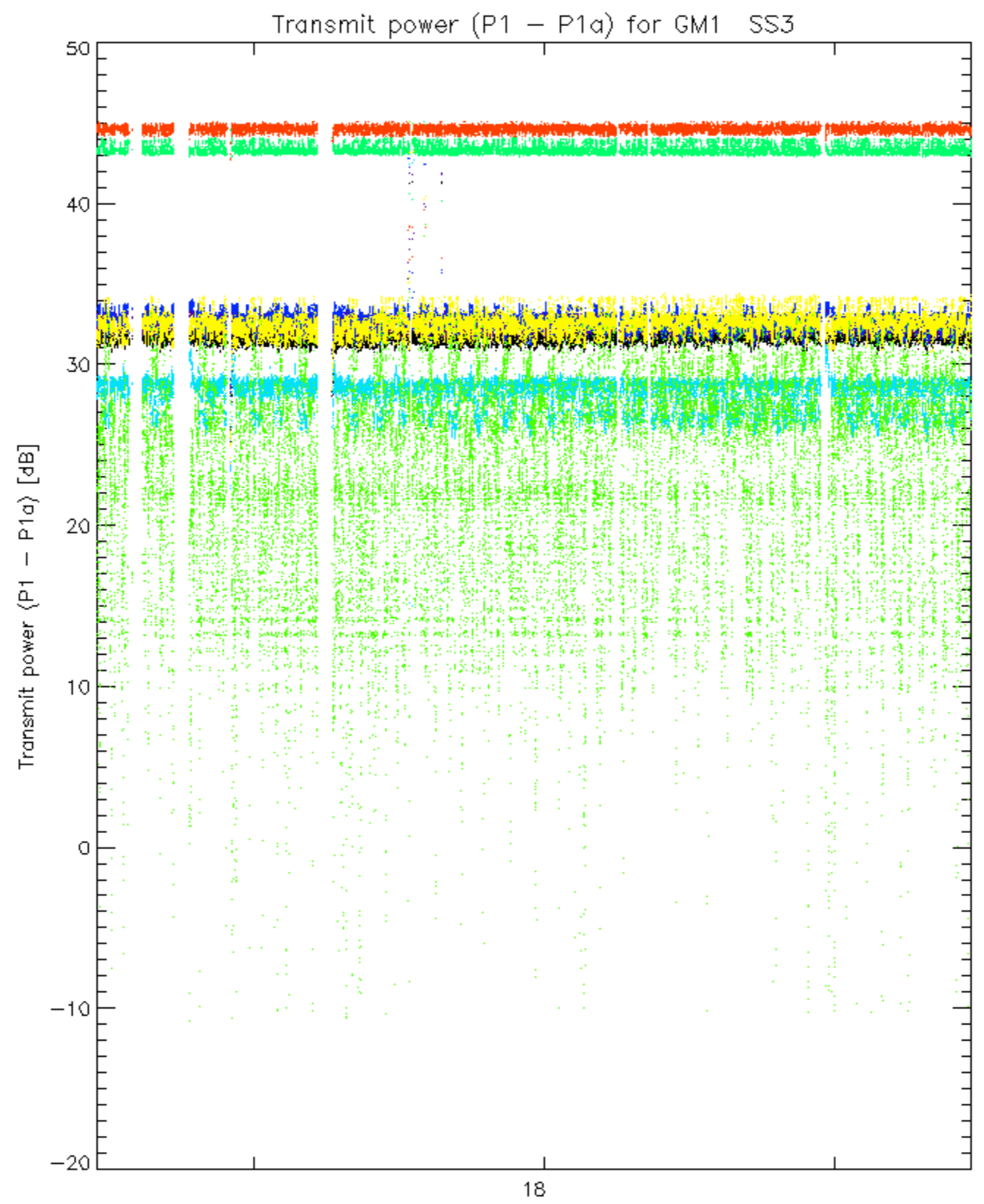






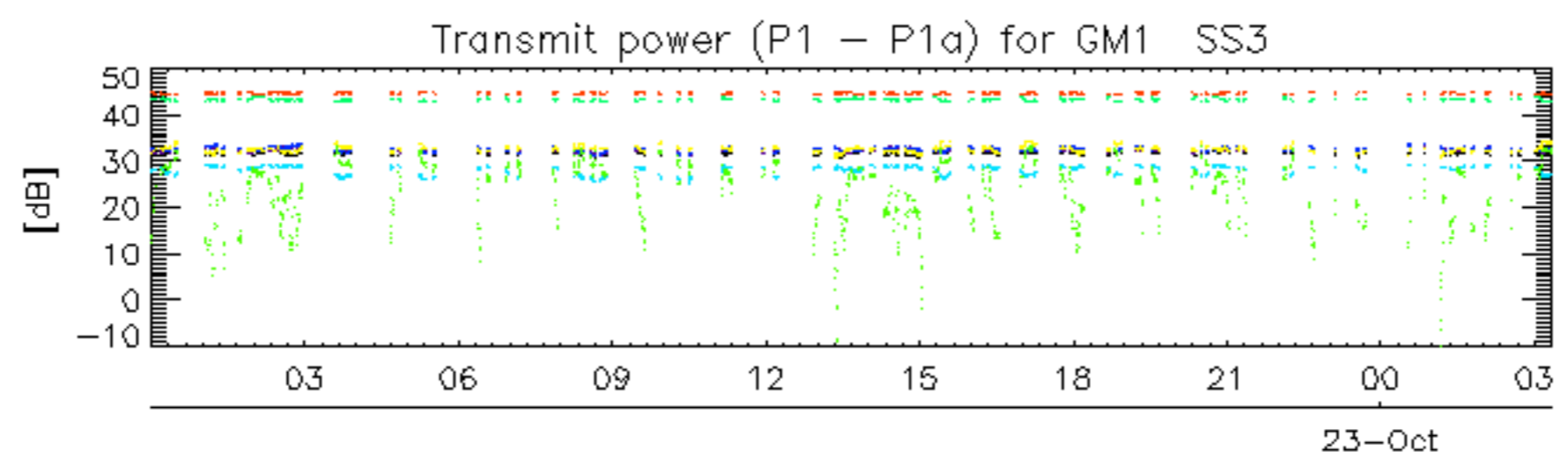




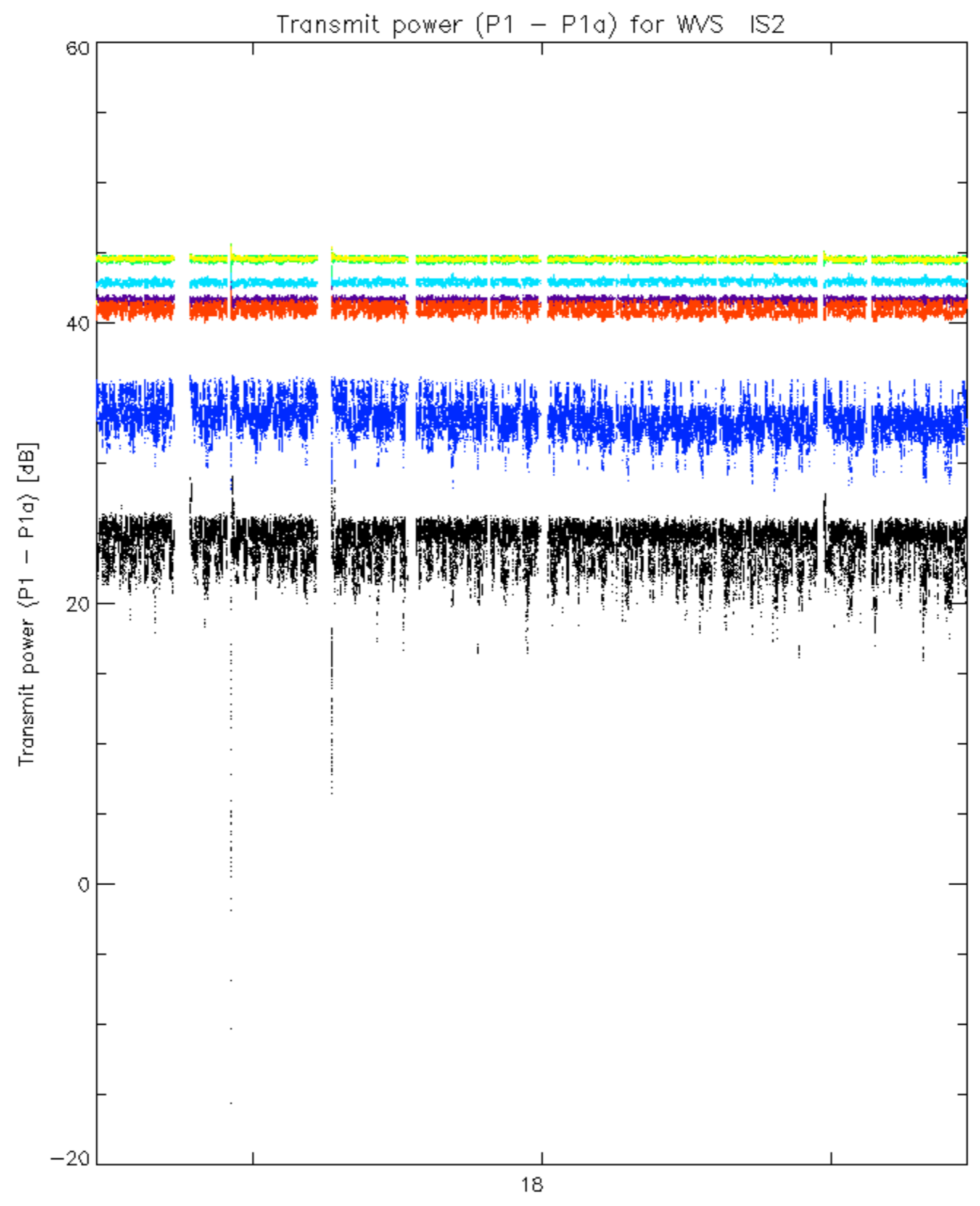


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

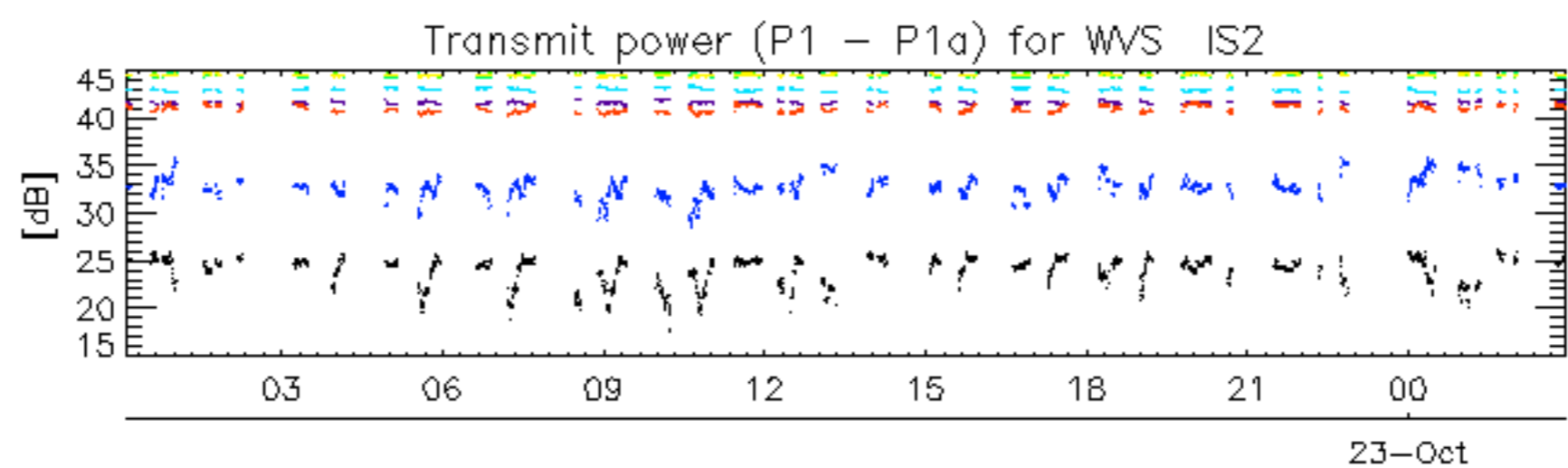




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30



rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30



rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30



No unavailabilities during the reported period.