

# PRELIMINARY REPORT OF 050127

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

**last update on Thu Jan 27 15:18:30 GMT 2005**

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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 unavailability for the reported period.

### 2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-01-26 00:00:00 to 2005-01-27 15:18:30

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	0	0	2	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	37	0	0	2	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	37	0	0	2	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	0	0	2	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	47	0	4	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	37	47	0	4	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	37	47	0	4	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	47	0	4	0

## 2.3 - Browse Visual Inspection

No anomalies observed on available browse products related to the instrument.  
 A problem has been experienced for LR products in the acquisition chain at ground station. Bad browse products are related to this problem.

## 2.4 - 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:

- ASA\_MS\_\_0PNPDK20050126\_081855\_000000152034\_00121\_15205\_0175.N1

Polarisation	Start Time
V	20050123 095346
H	20050122 084447

### 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	-3.414449	0.007725	0.025801
7	P1	-3.082367	0.009029	0.003845
11	P1	-4.652179	0.019729	-0.021705
15	P1	-5.649538	0.036098	0.002182
19	P1	-3.663410	0.005189	-0.010320
22	P1	-4.563673	0.015729	0.009143
26	P1	-4.939745	0.017987	0.000683
30	P1	-7.135601	0.015306	-0.041782
3	P1	-15.919840	0.105114	0.042681
7	P1	-15.510099	0.081944	0.011582
11	P1	-20.819216	0.261763	-0.099196
15	P1	-11.618758	0.067344	0.016288
19	P1	-14.178501	0.027263	-0.002150
22	P1	-15.960111	0.414246	0.140894
26	P1	-17.654135	0.233001	0.115777
30	P1	-17.886745	0.331311	-0.130079

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.274584	0.085962	0.114585
7	P2	-22.464354	0.136845	0.114337

11	P2	-14.721707	0.134603	0.221843
15	P2	-7.121789	0.105552	0.051253
19	P2	-9.709338	0.141118	0.049727
22	P2	-17.078142	0.096604	0.126262
26	P2	-16.507544	0.103737	0.048297
30	P2	-18.930750	0.081524	0.036660

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.194103	0.006708	0.010771
7	P3	-8.194098	0.006708	0.010761
11	P3	-8.194095	0.006707	0.010749
15	P3	-8.194094	0.006707	0.010735
19	P3	-8.194088	0.006707	0.010694
22	P3	-8.194080	0.006707	0.010656
26	P3	-8.194102	0.006715	0.010707
30	P3	-8.194157	0.006713	0.010237

**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	-2.813925	0.019071	0.026324
7	P1	-2.958898	0.068731	-0.010688
11	P1	-3.952077	0.030508	-0.023655
15	P1	-3.518098	0.030675	-0.046415
19	P1	-3.606236	0.014027	0.019435
22	P1	-5.658597	0.067541	-0.067390

26	P1	-6.729203	0.146612	-0.941284
30	P1	-6.293589	0.046111	-0.018612
3	P1	-10.774519	0.086122	0.036094
7	P1	-10.144381	0.184978	0.000465
11	P1	-12.528451	0.131243	-0.106376
15	P1	-11.758564	0.076067	-0.034800
19	P1	-15.622298	0.055317	0.080178
22	P1	-24.065109	1.771394	0.090540
26	P1	-15.046603	0.444835	-0.868277
30	P1	-20.024521	0.861456	0.219713

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.970648	0.049567	0.077093
7	P2	-22.517668	0.120396	0.147662
11	P2	-10.528662	0.049883	0.201818
15	P2	-5.032456	0.024287	0.031852
19	P2	-6.920974	0.036436	0.038536
22	P2	-7.243490	0.049004	0.061880
26	P2	-23.924961	0.087811	0.082126
30	P2	-21.971399	0.054333	0.043338

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.030185	0.002855	0.010375
7	P3	-8.030198	0.002859	0.010294
11	P3	-8.030177	0.002852	0.009735
15	P3	-8.030320	0.002852	0.010632
19	P3	-8.030169	0.002864	0.009716
22	P3	-8.030248	0.002841	0.010124
26	P3	-8.030128	0.002859	0.010113
30	P3	-8.030207	0.002855	0.010266

## 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	0.000464855
	stdev	2.19740e-07
MEAN Q	mean	0.000537804
	stdev	2.33403e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128436
	stdev	0.000975251
STDEV Q	mean	0.128671
	stdev	0.000986266



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

## 7 - Doppler Analysis

No anomalies observed.  
Doppler analysis performed over the last 35 days.

### 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"/>	

### 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

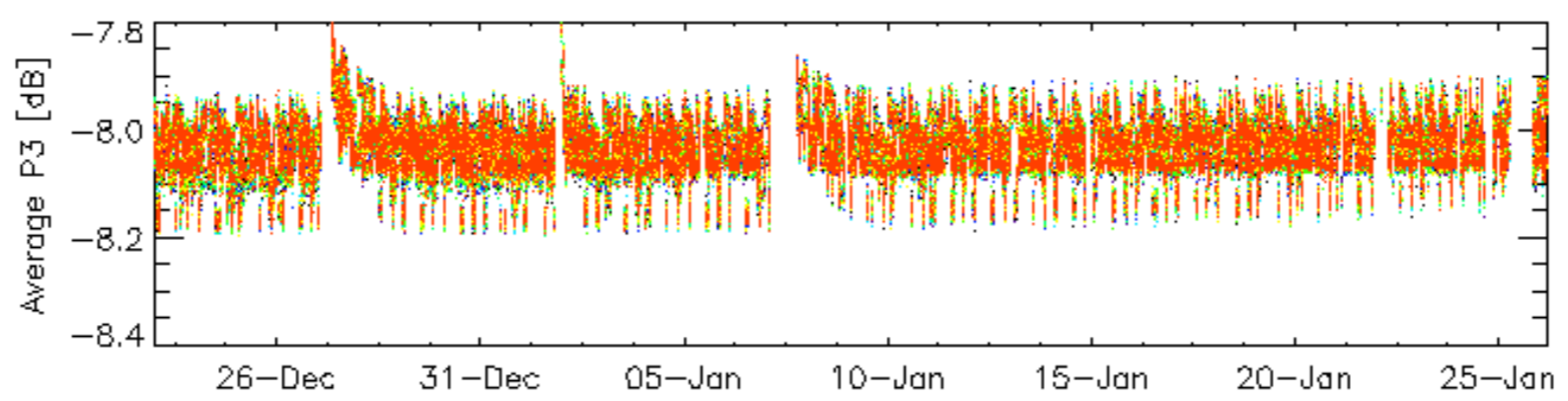
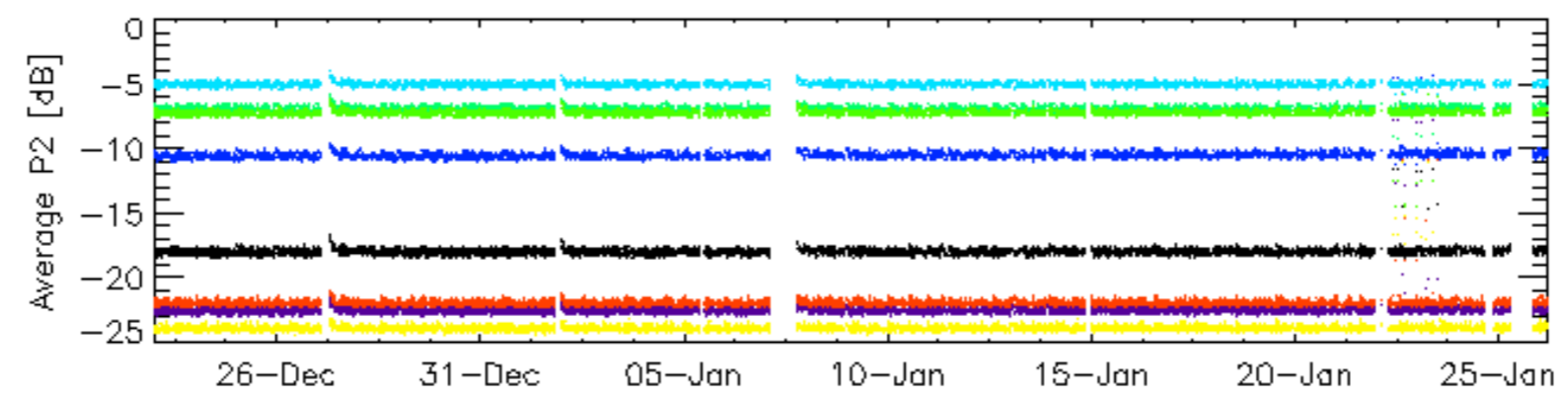
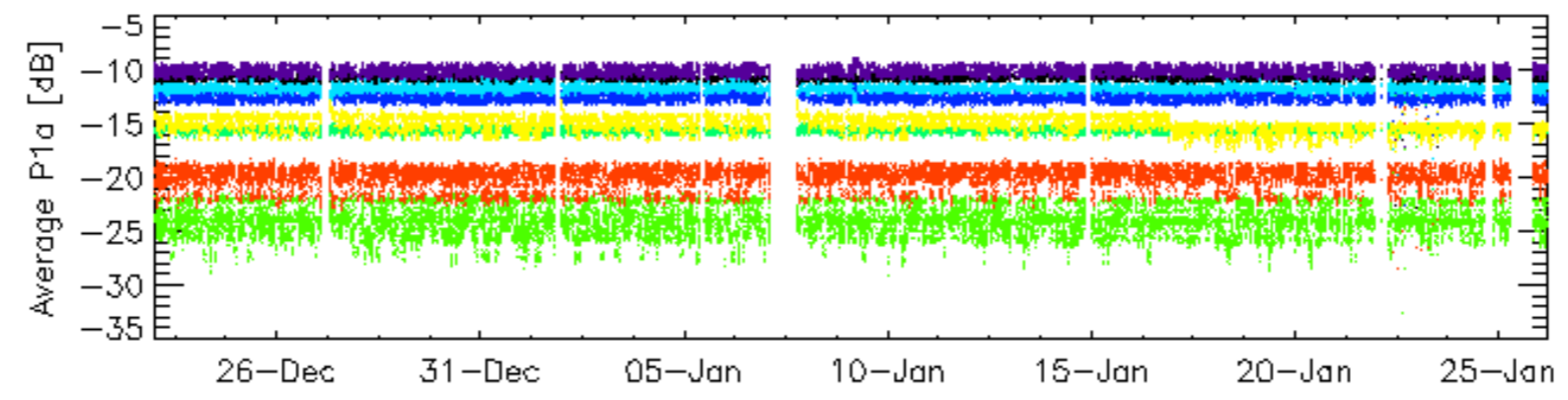
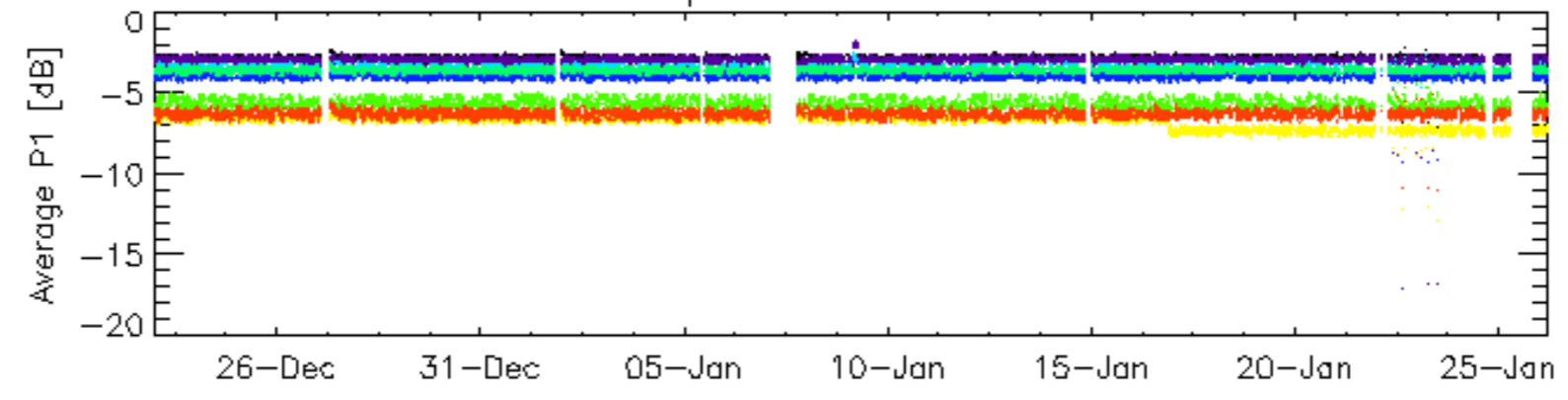
Ascending

Descending

## 7.6 - Doppler evolution versus ANX for GM1

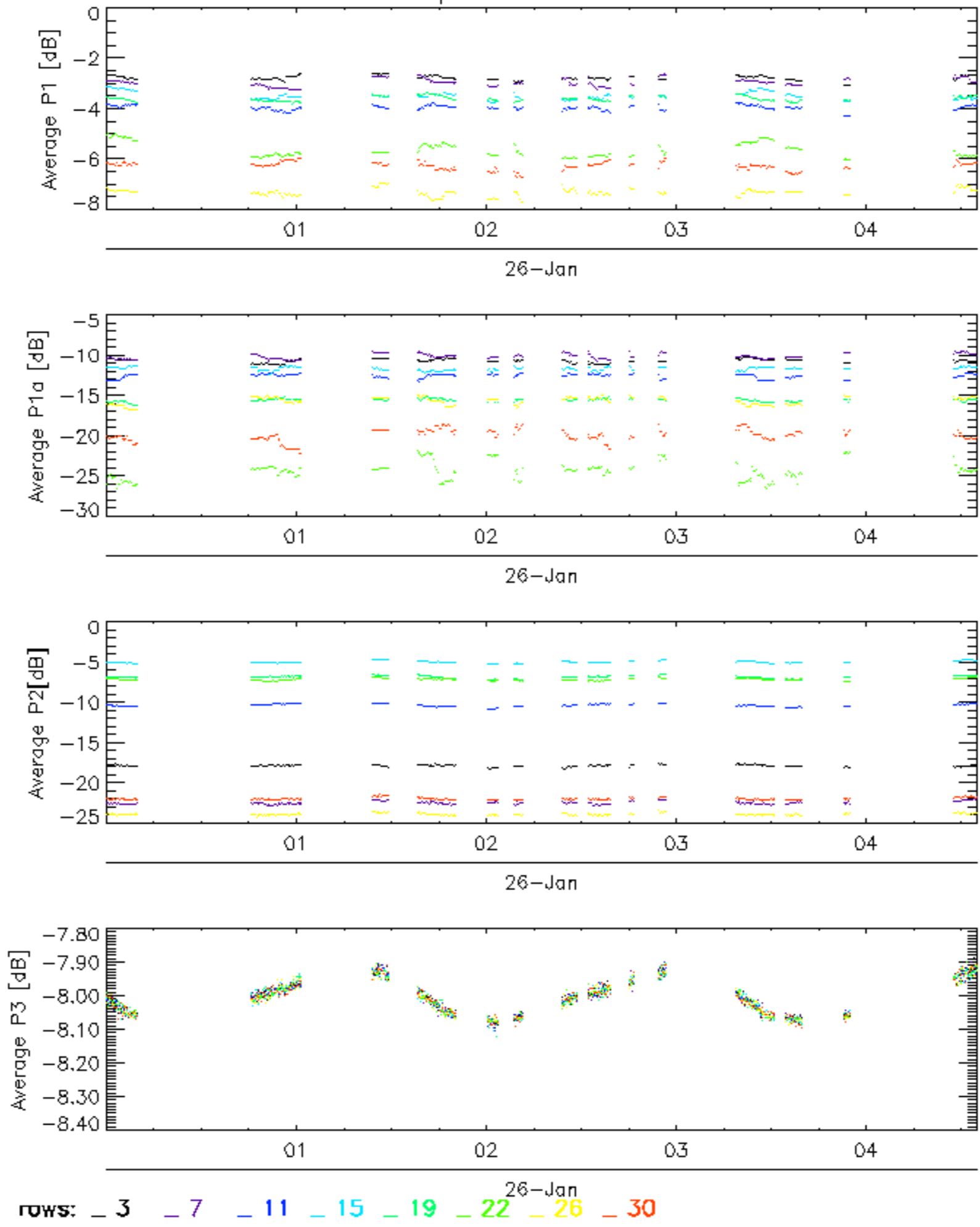
### Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

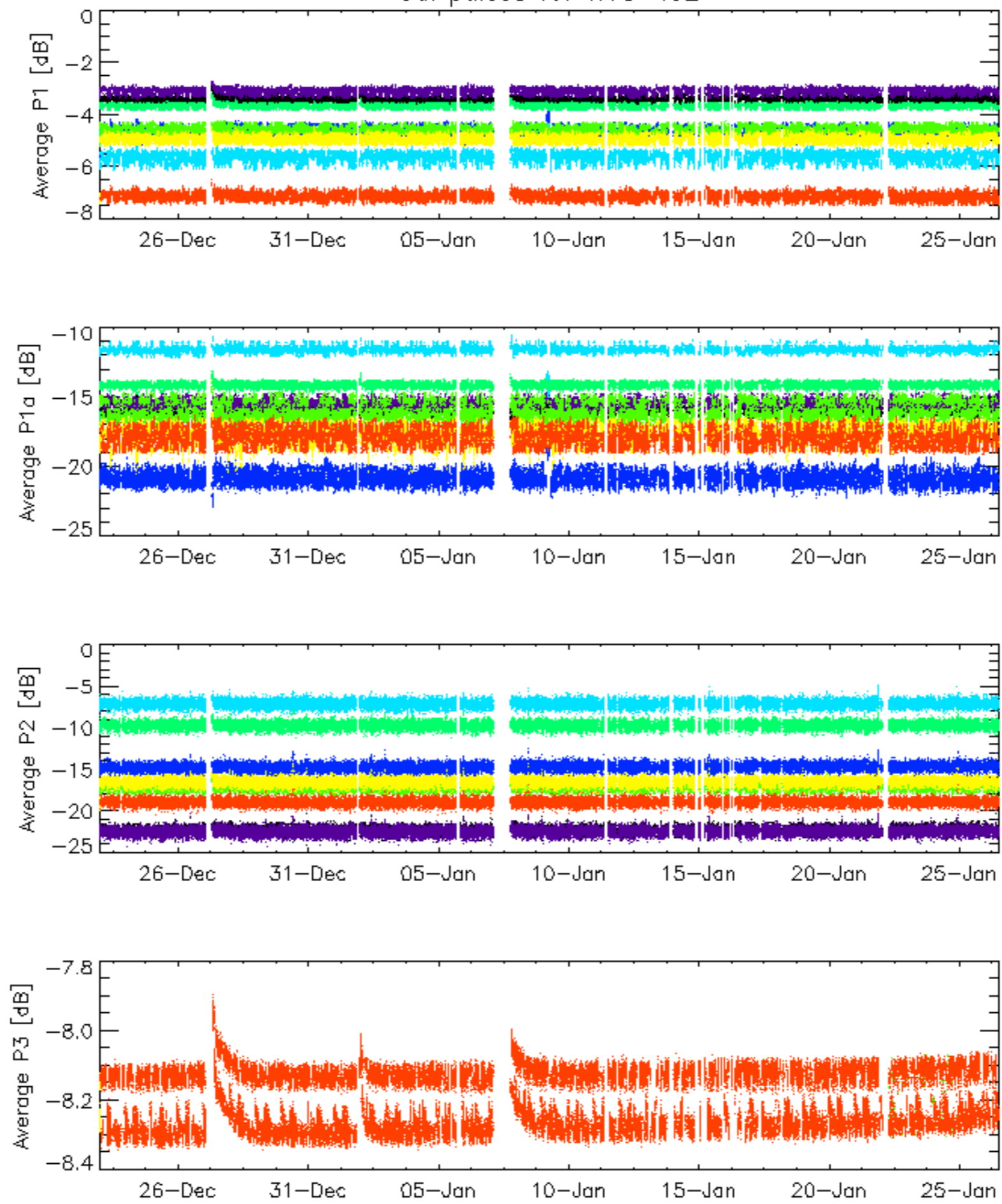


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

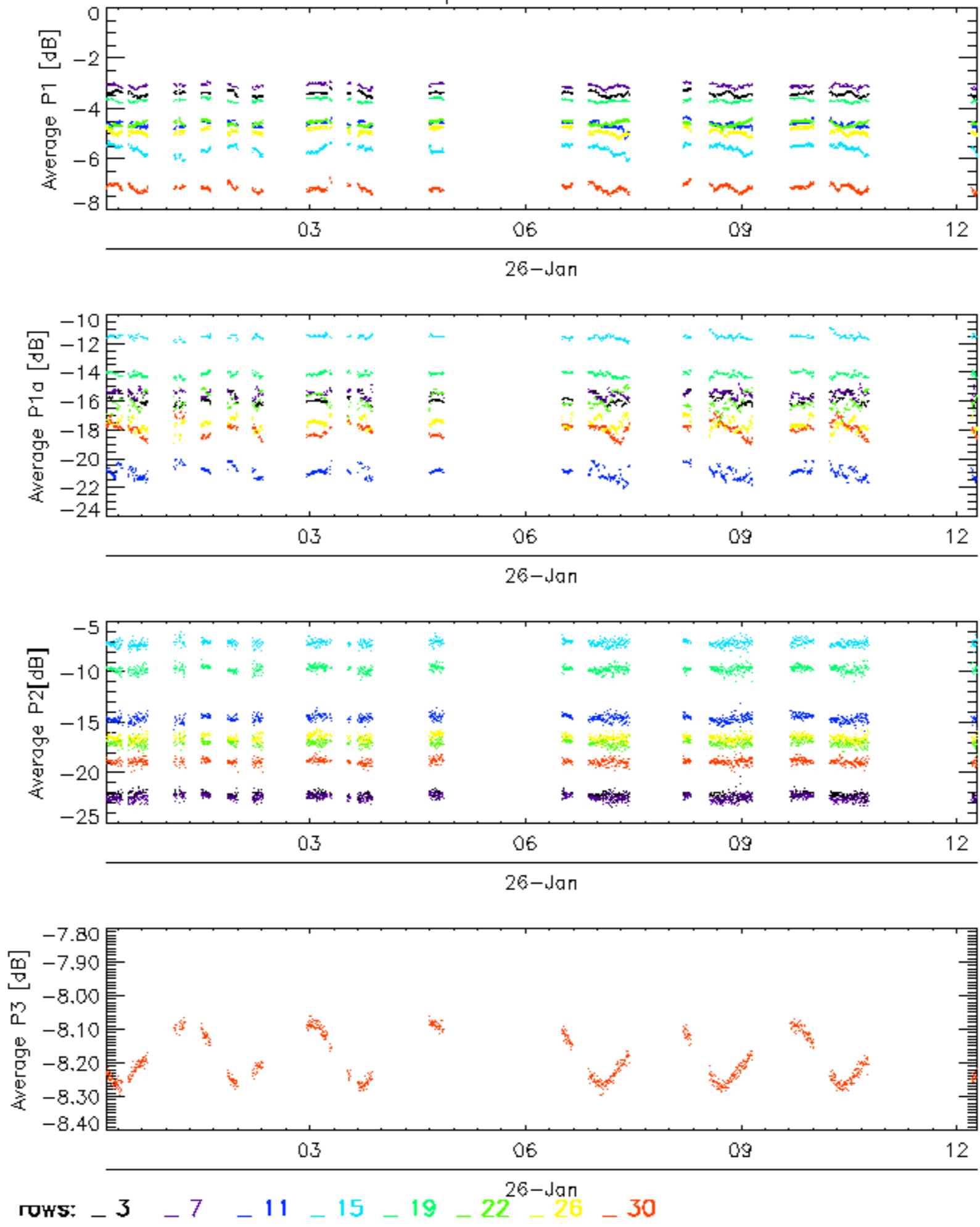


Cal pulses for WVS IS2



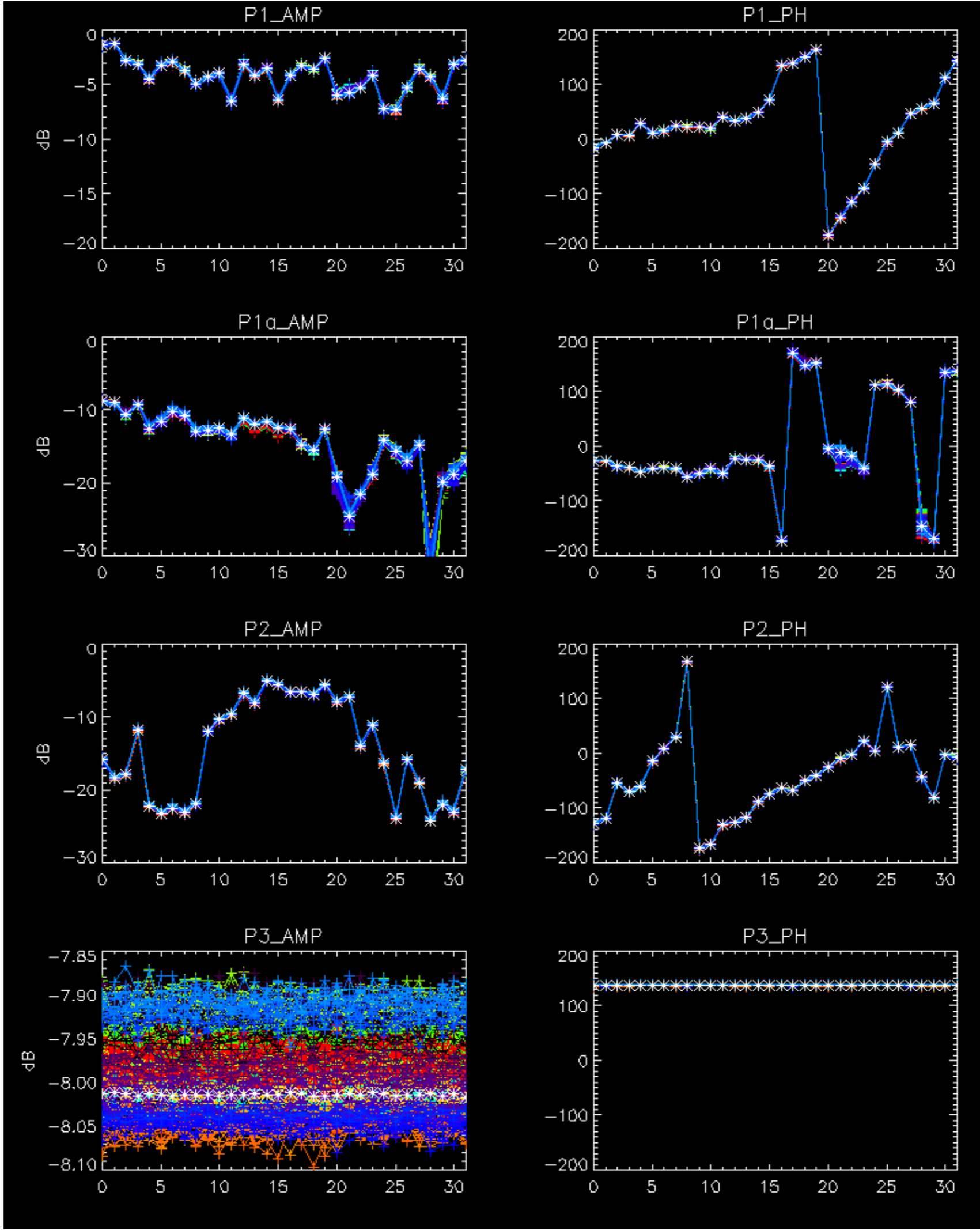
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

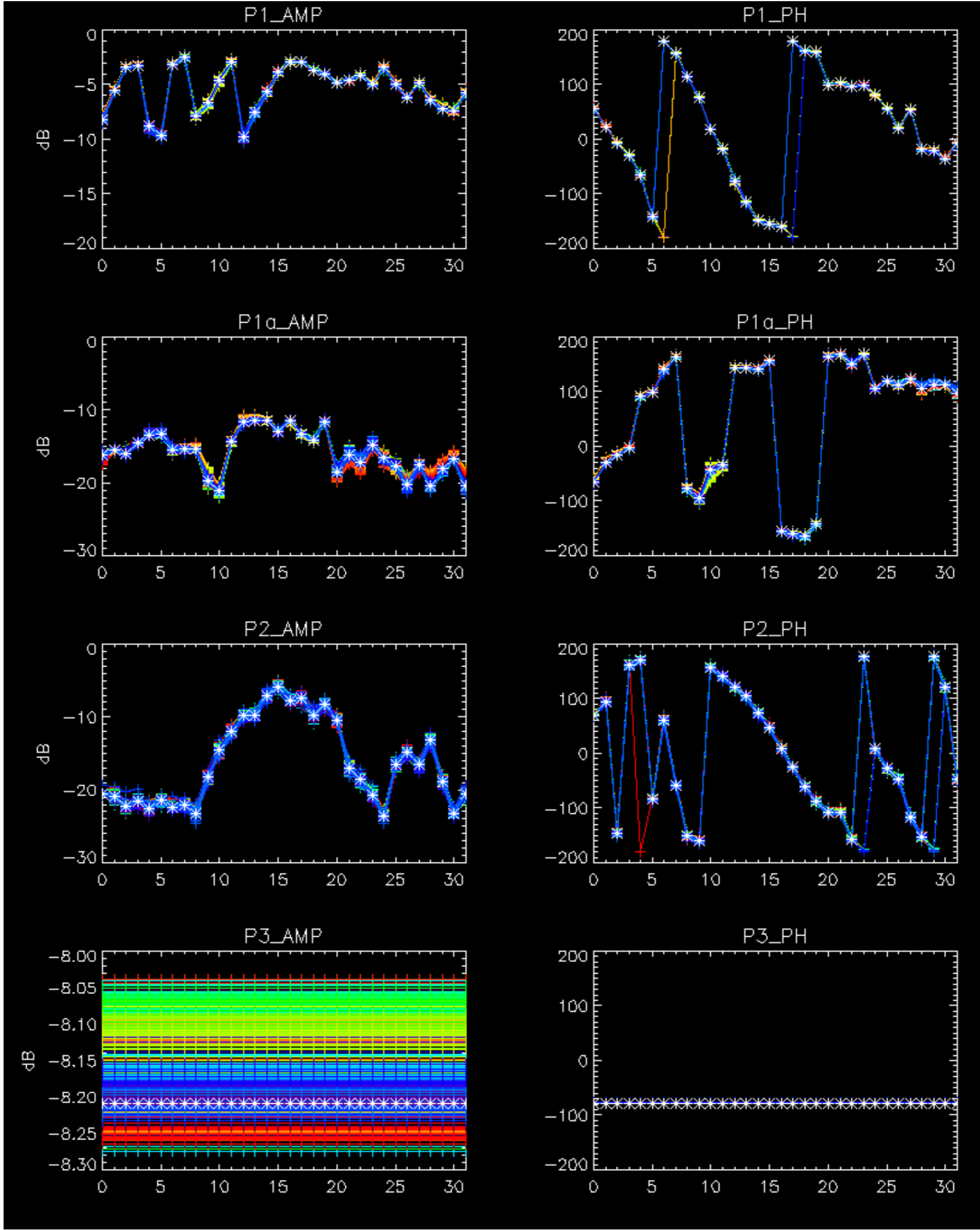


No anomalies observed on available browse products related to the instrument.  
A problem has been experienced for LR products in the acquisition chain at ground station. Bad browse products are related to this problem.

No anomalies observed.



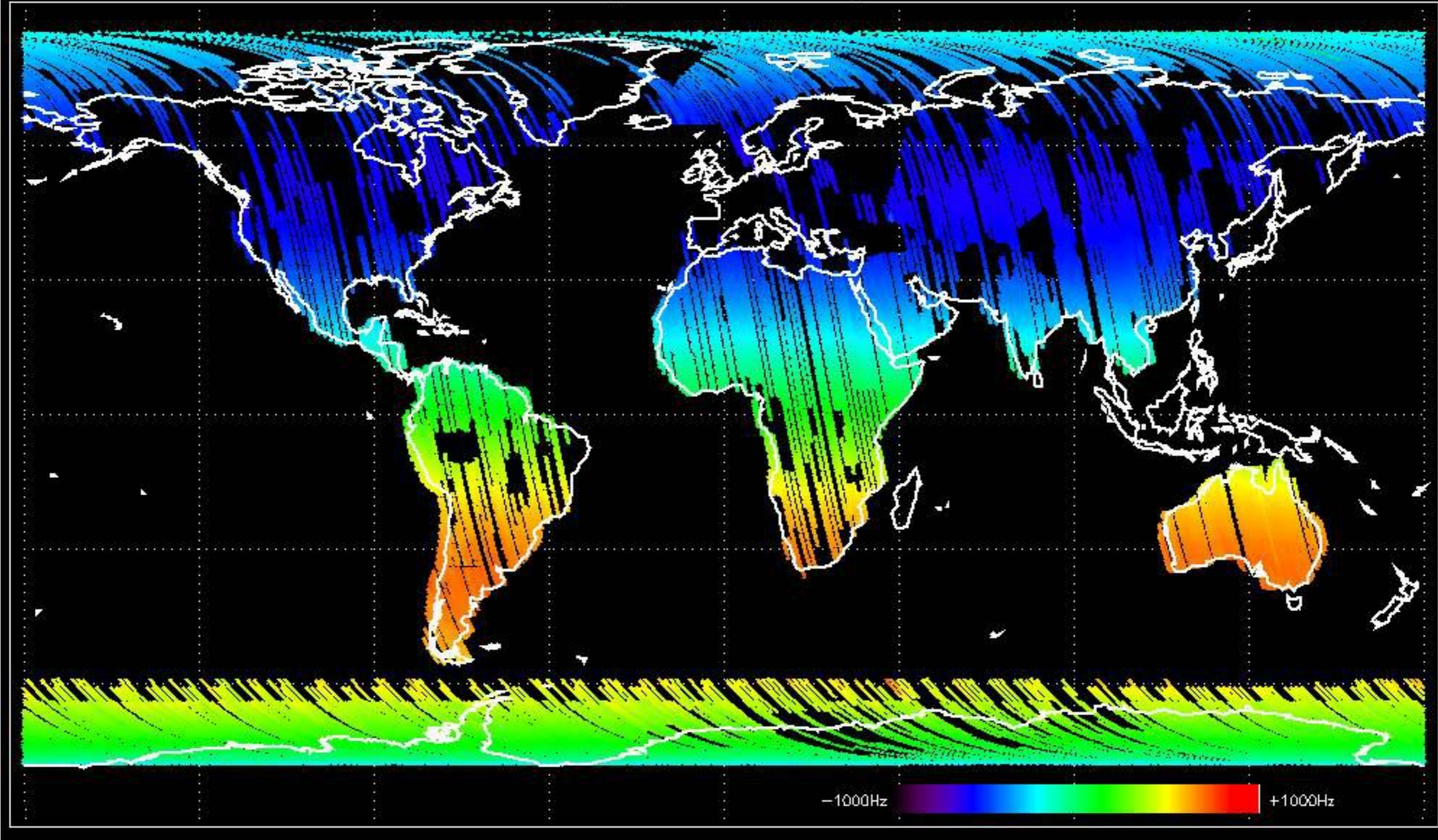




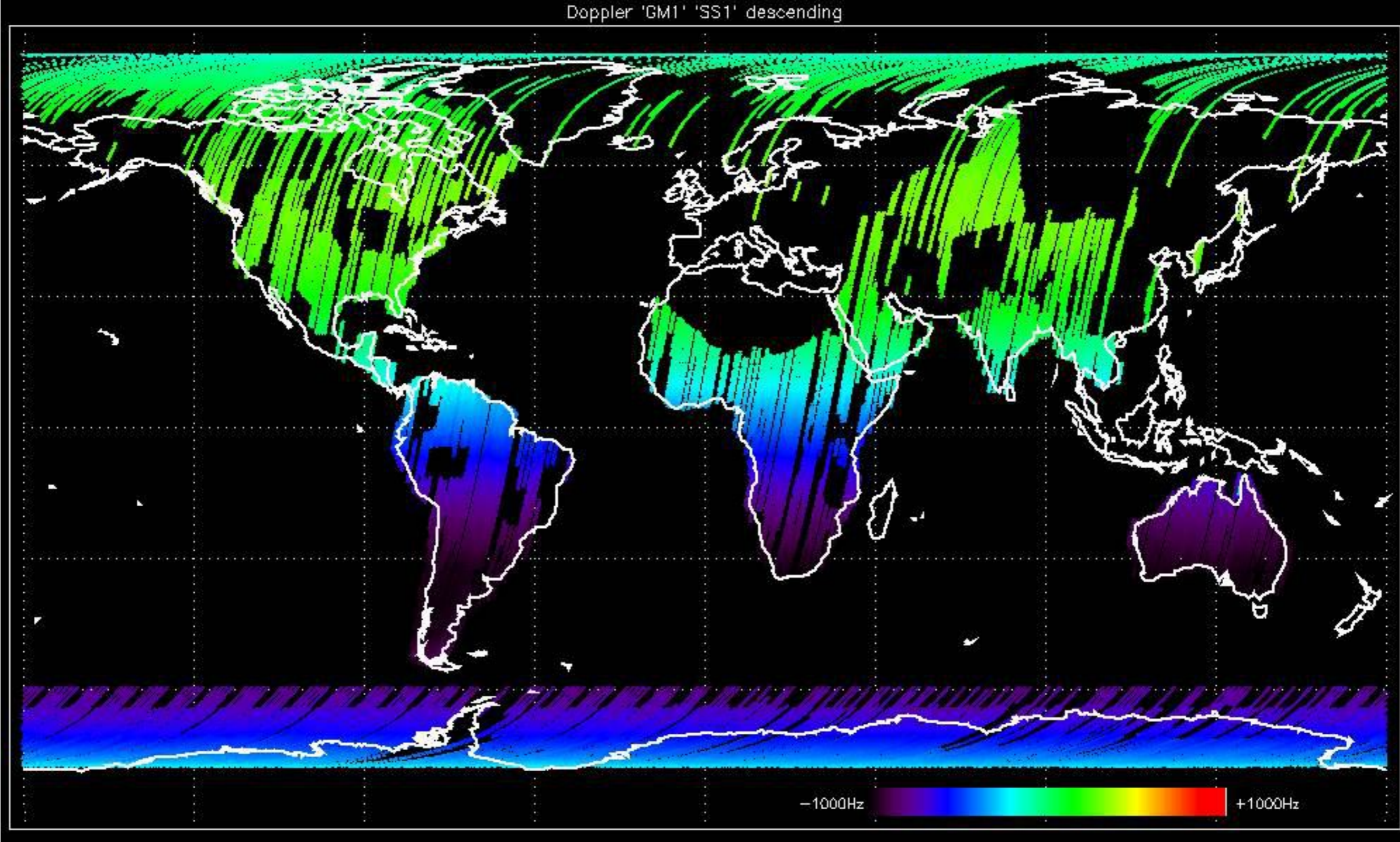
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

No anomalies observed.  
Doppler analysis performed over the last 35 days.

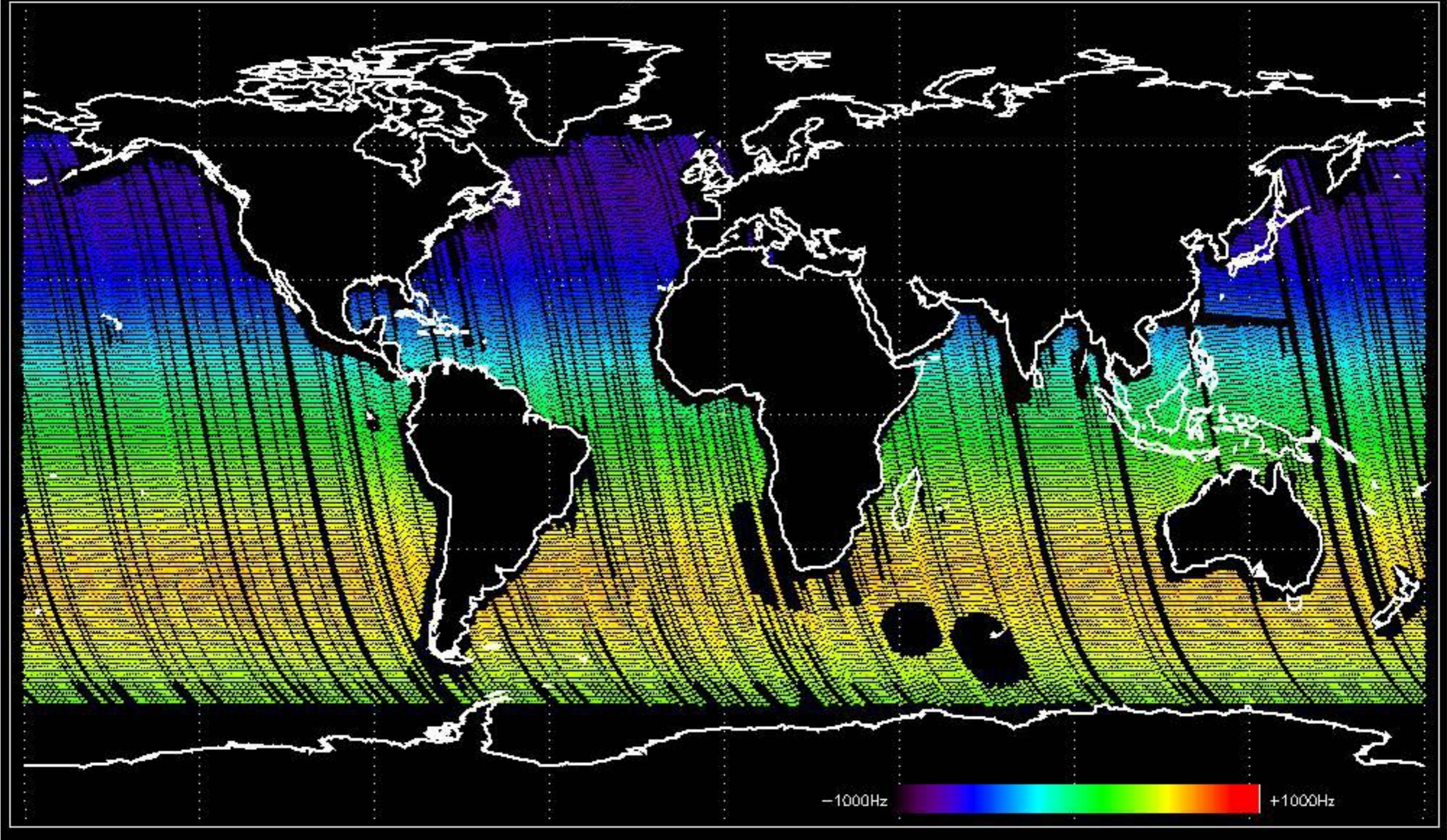
Doppler 'GM1' 'SS1' ascending



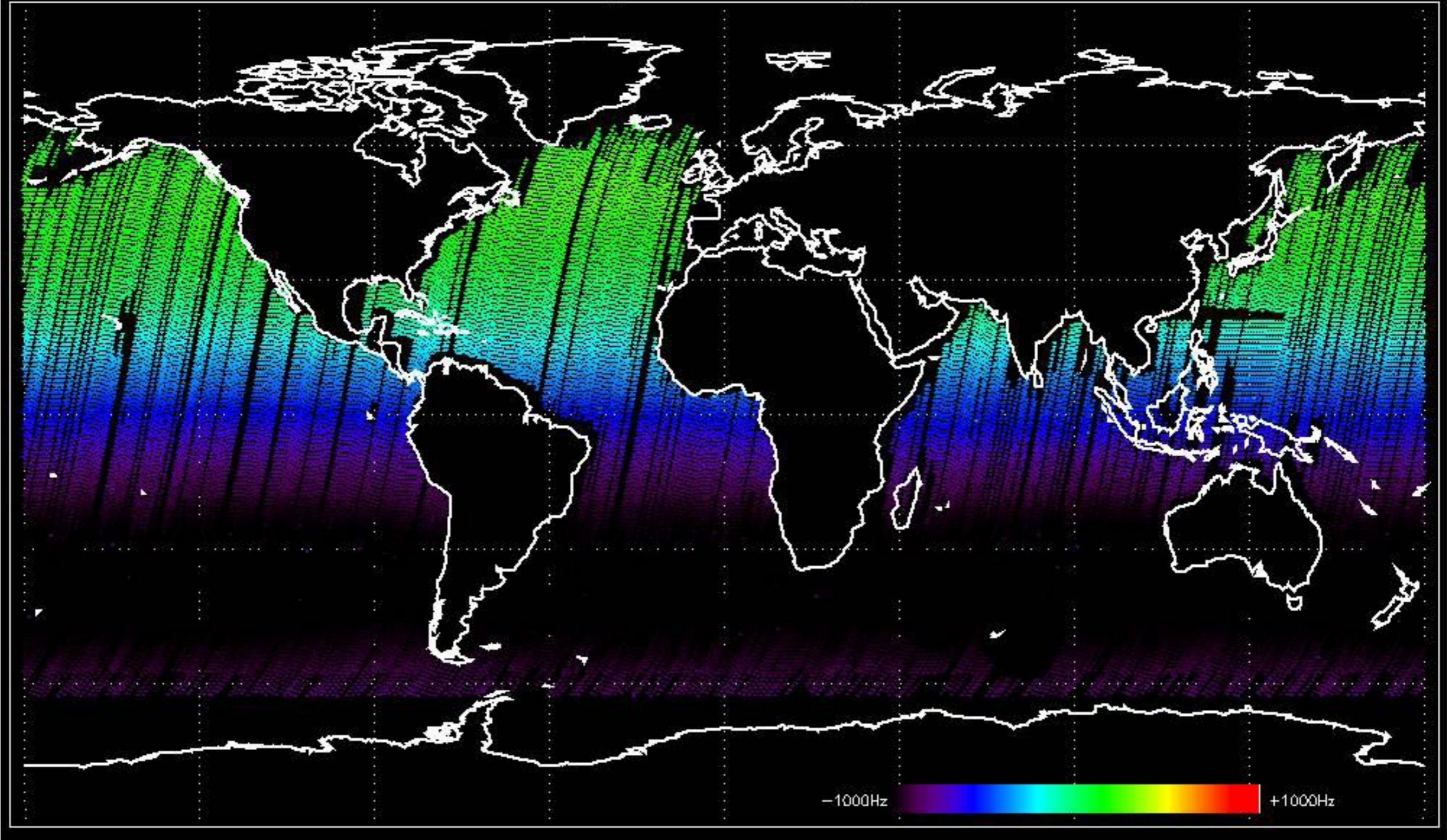
Doppler 'GM1' 'SS1' descending



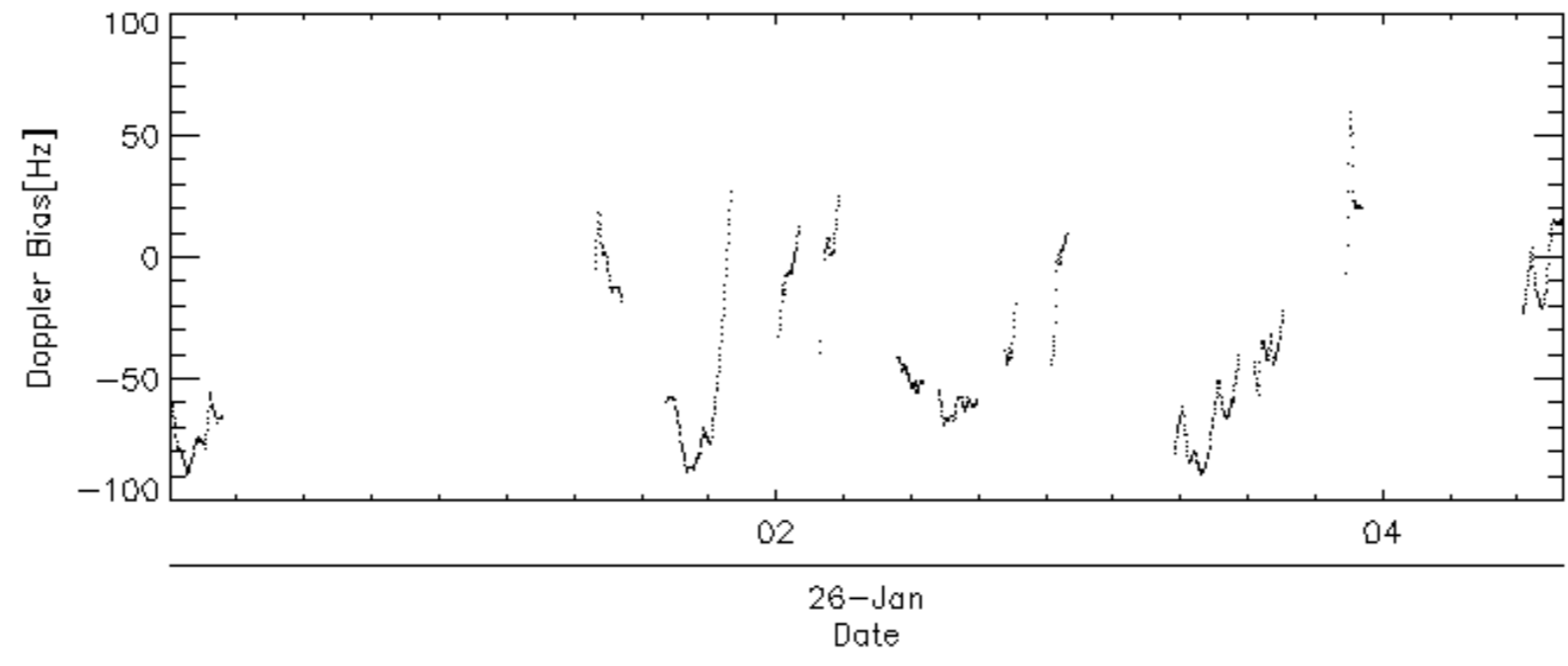
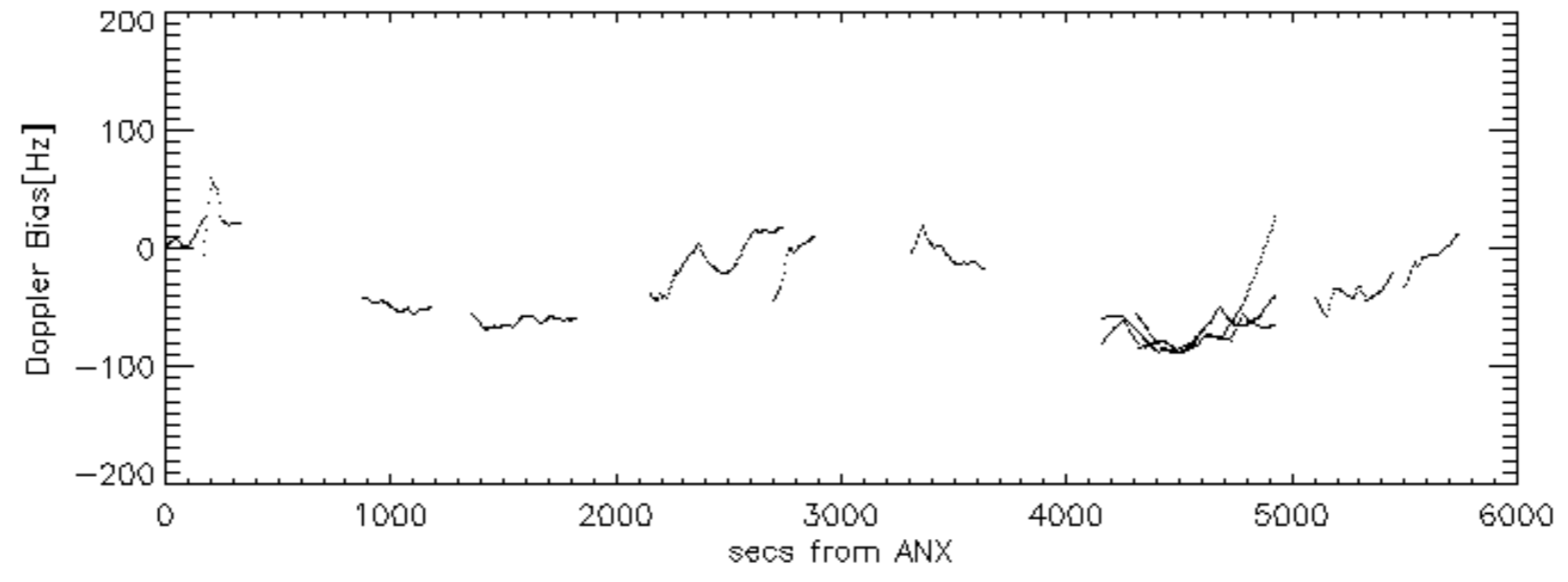
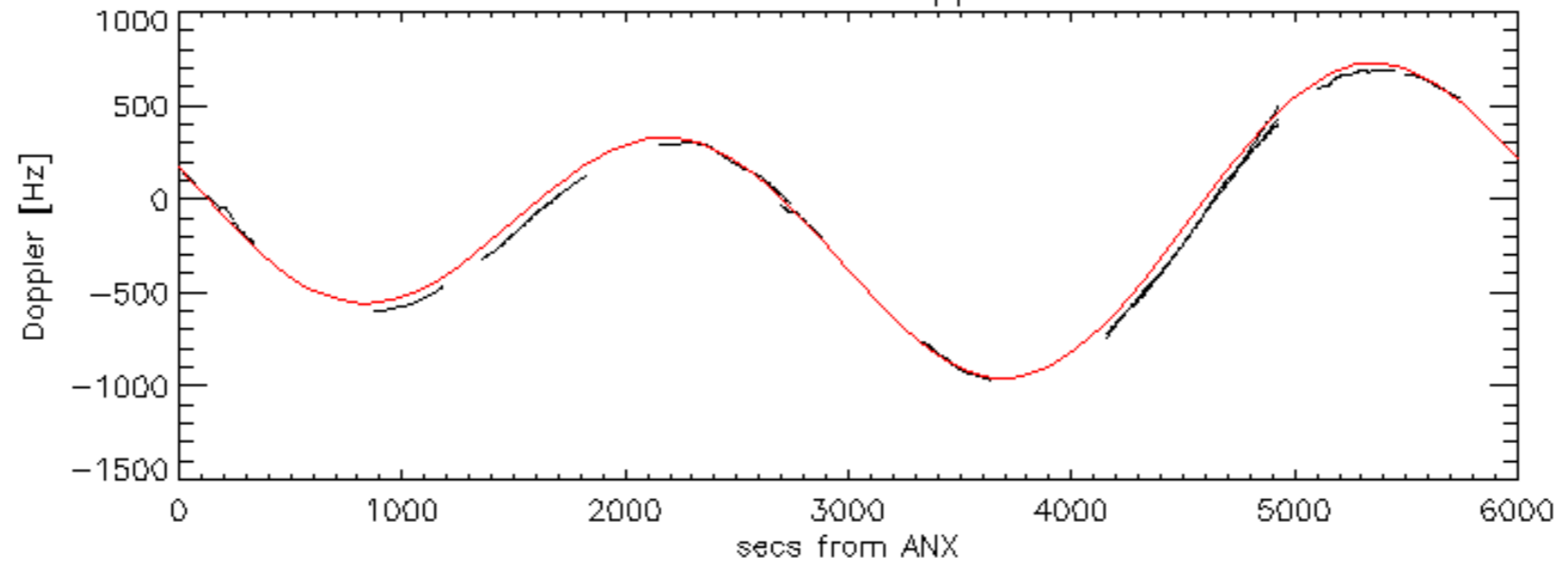
Doppler 'WVS' 'IS2' ascending



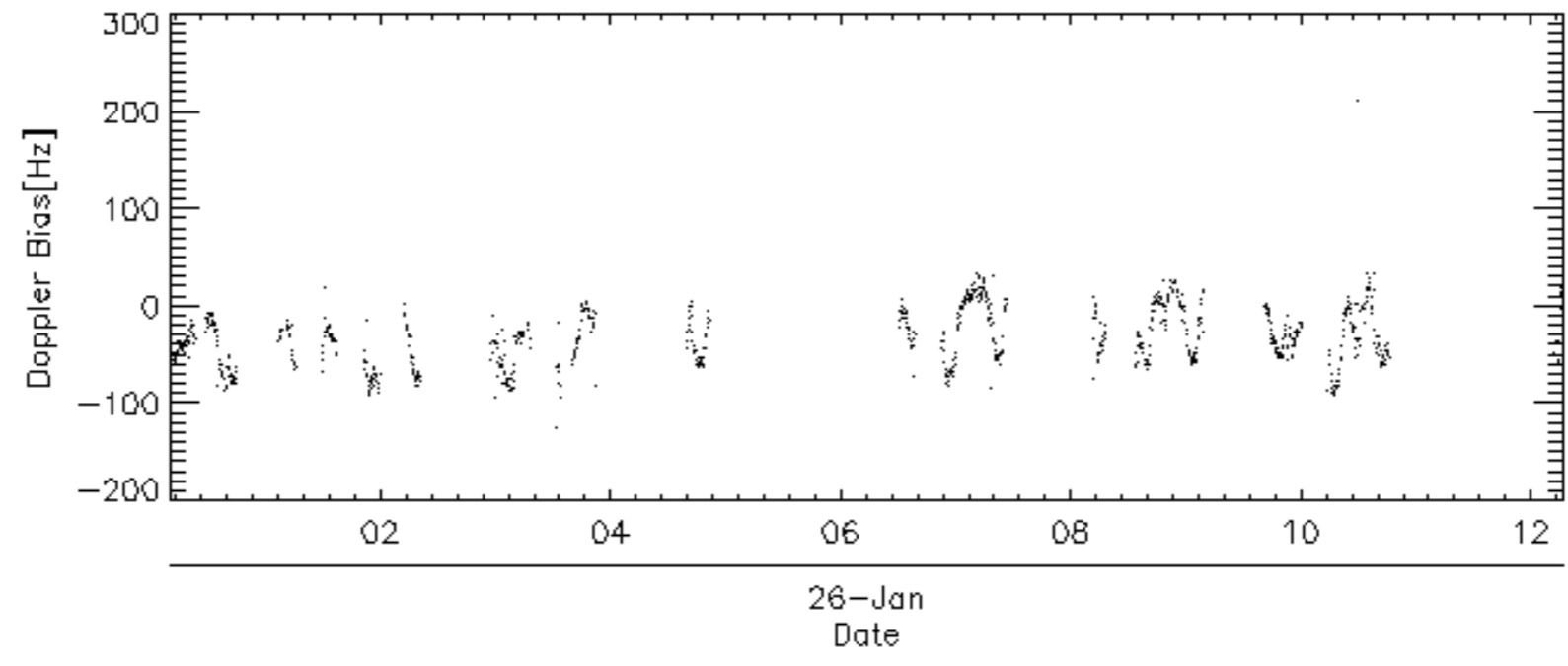
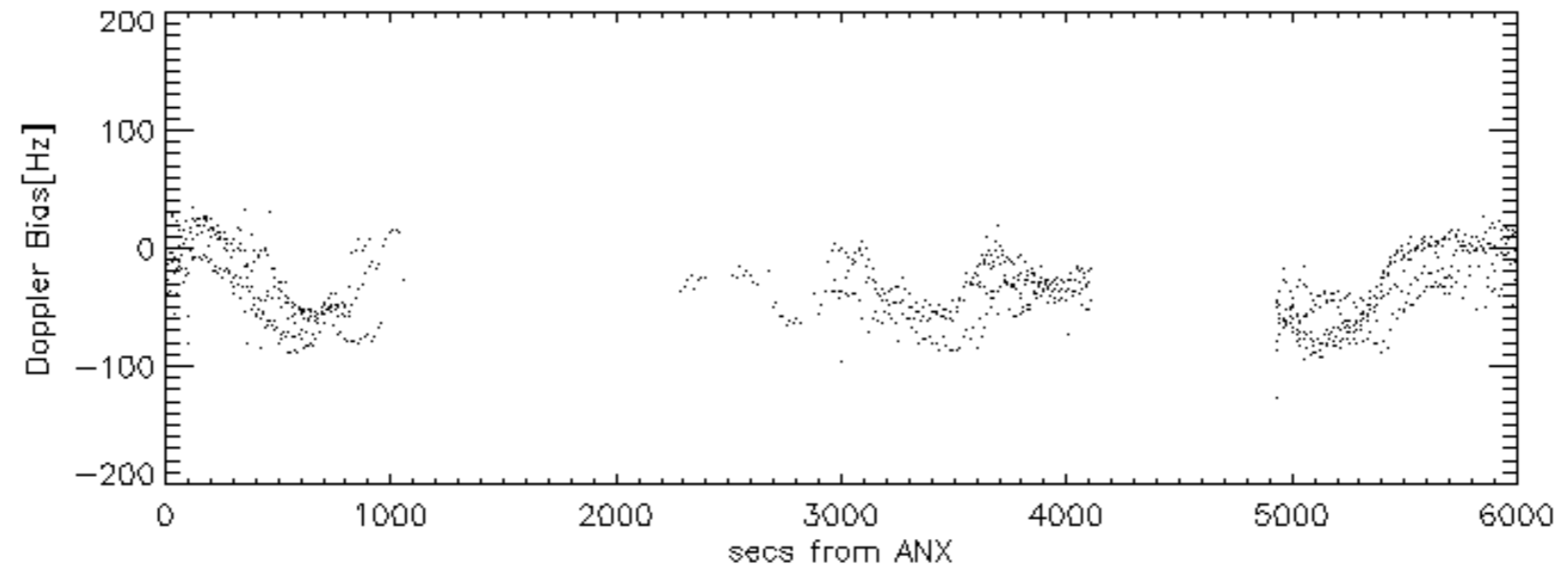
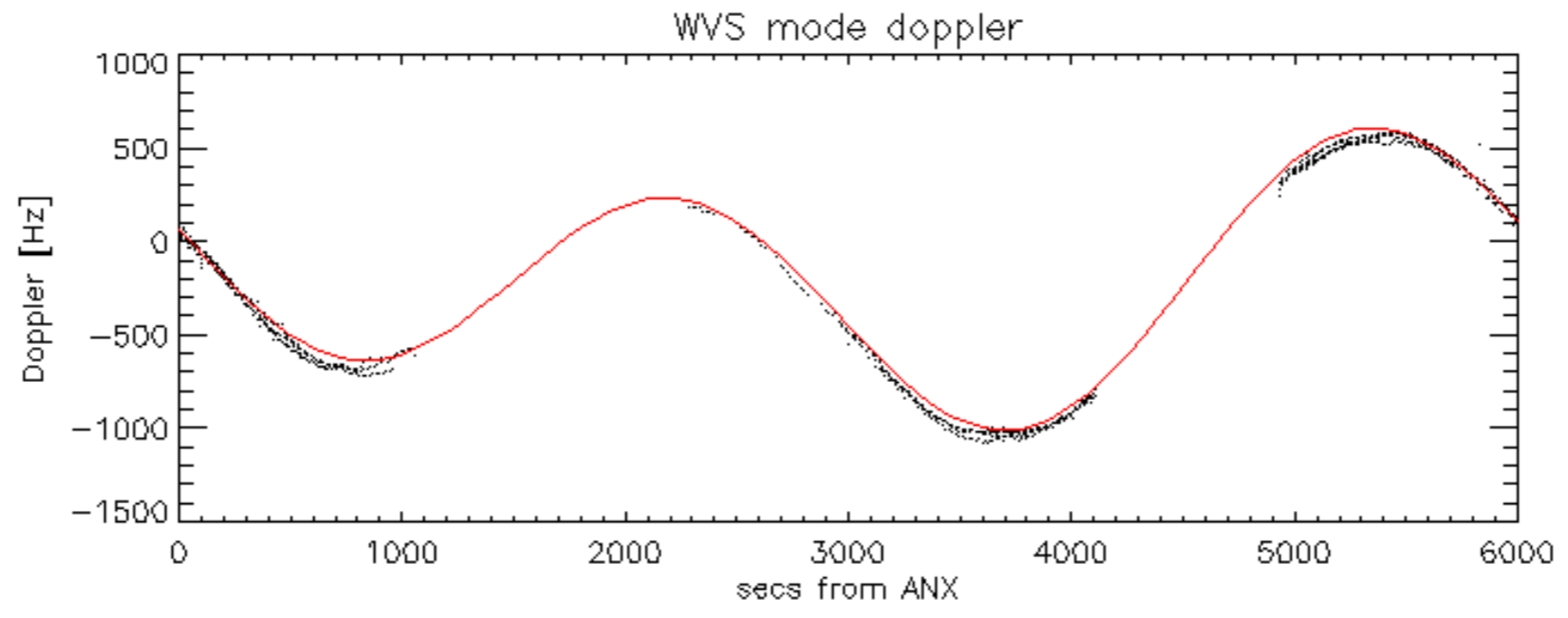
Doppler 'WVS' 'IS2' descending



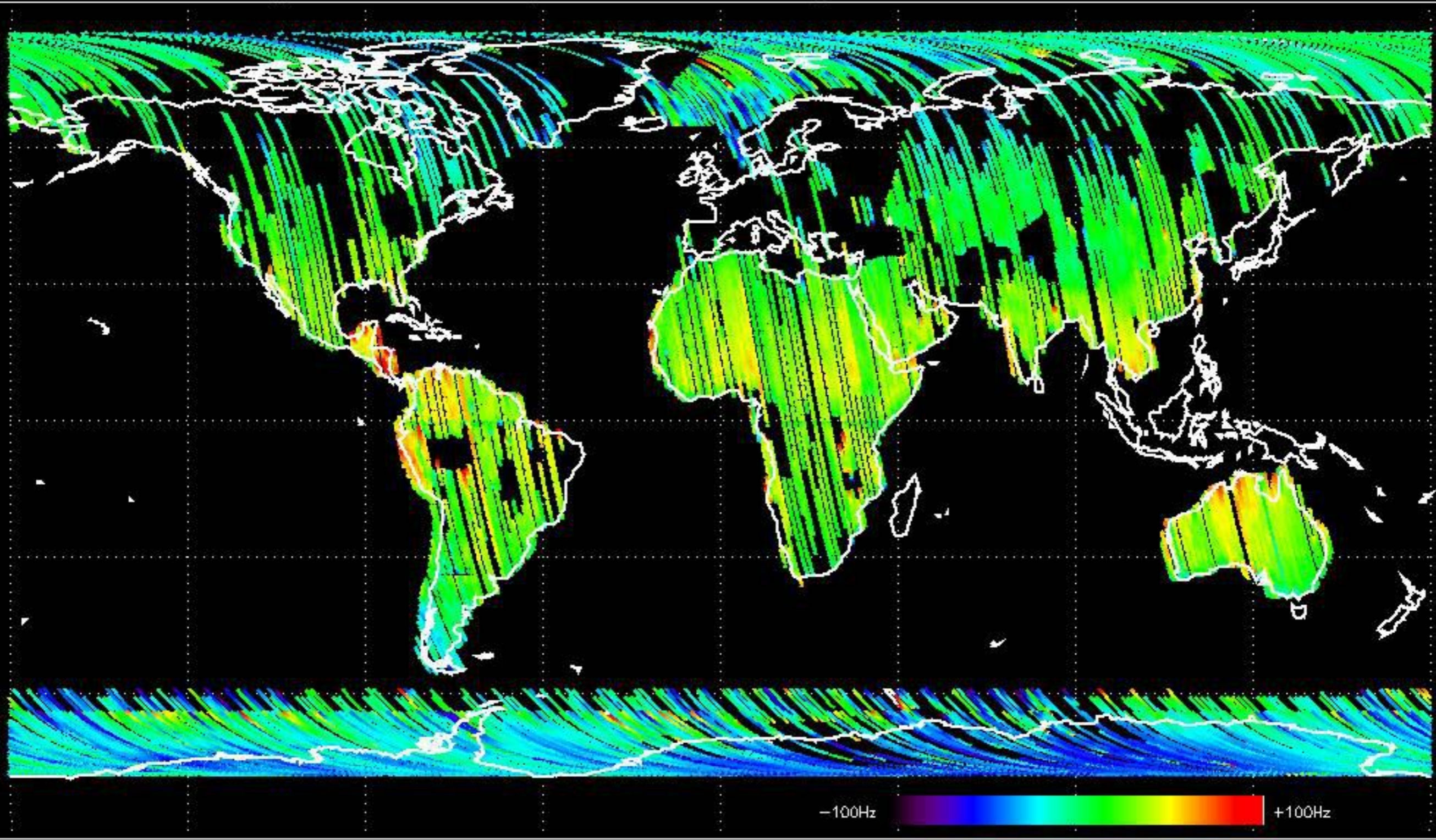
GM1 mode doppler



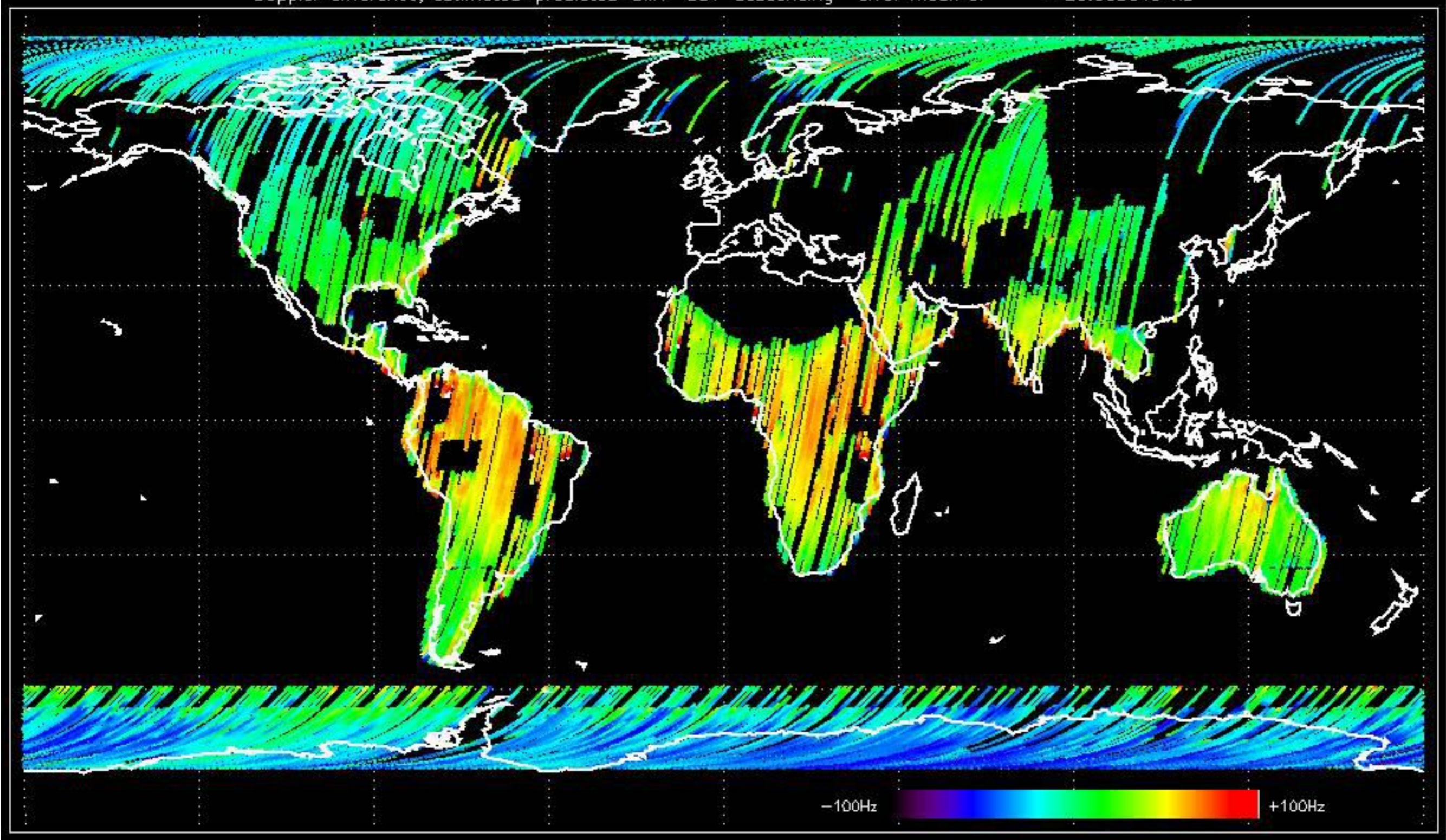




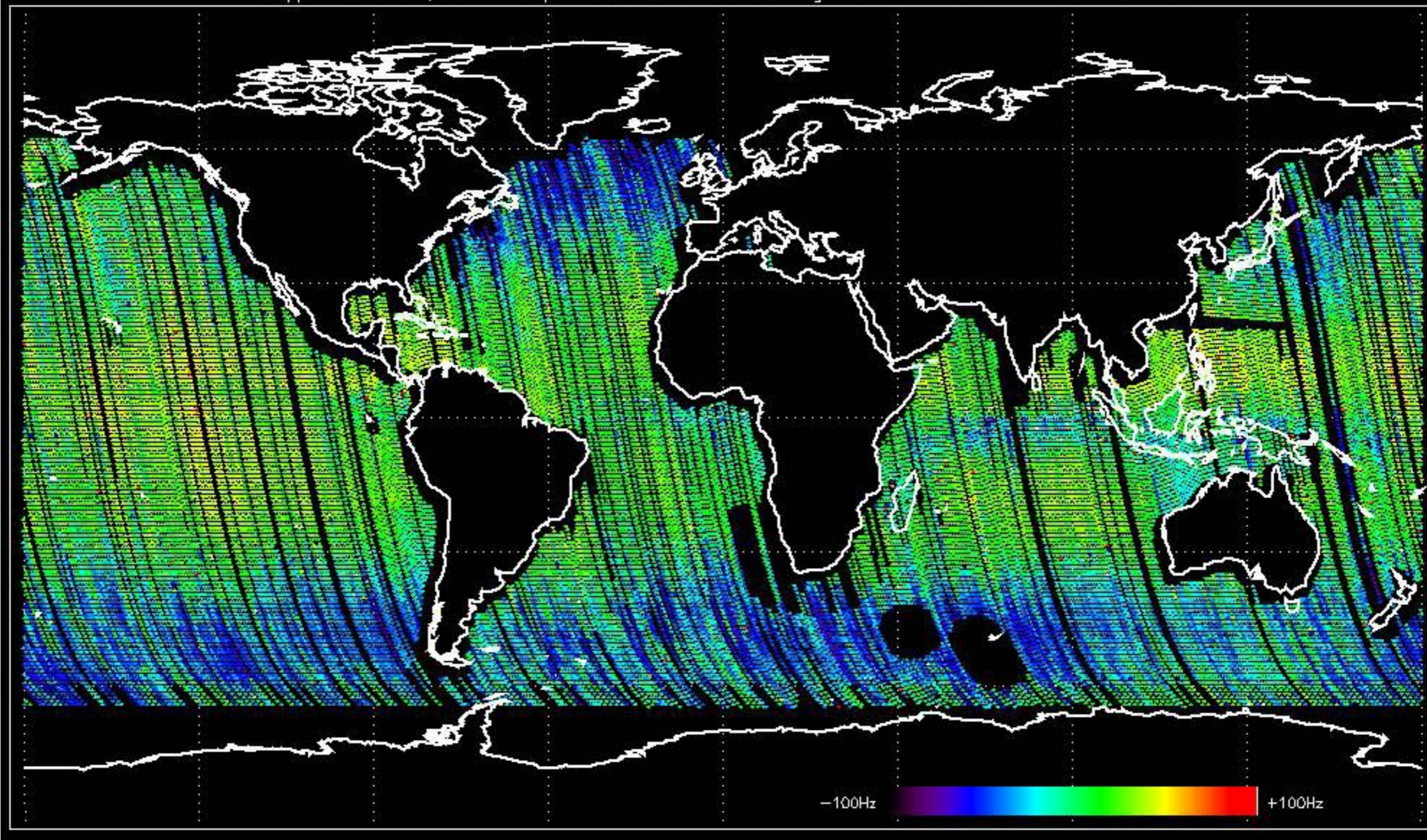
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -32.886090 Hz



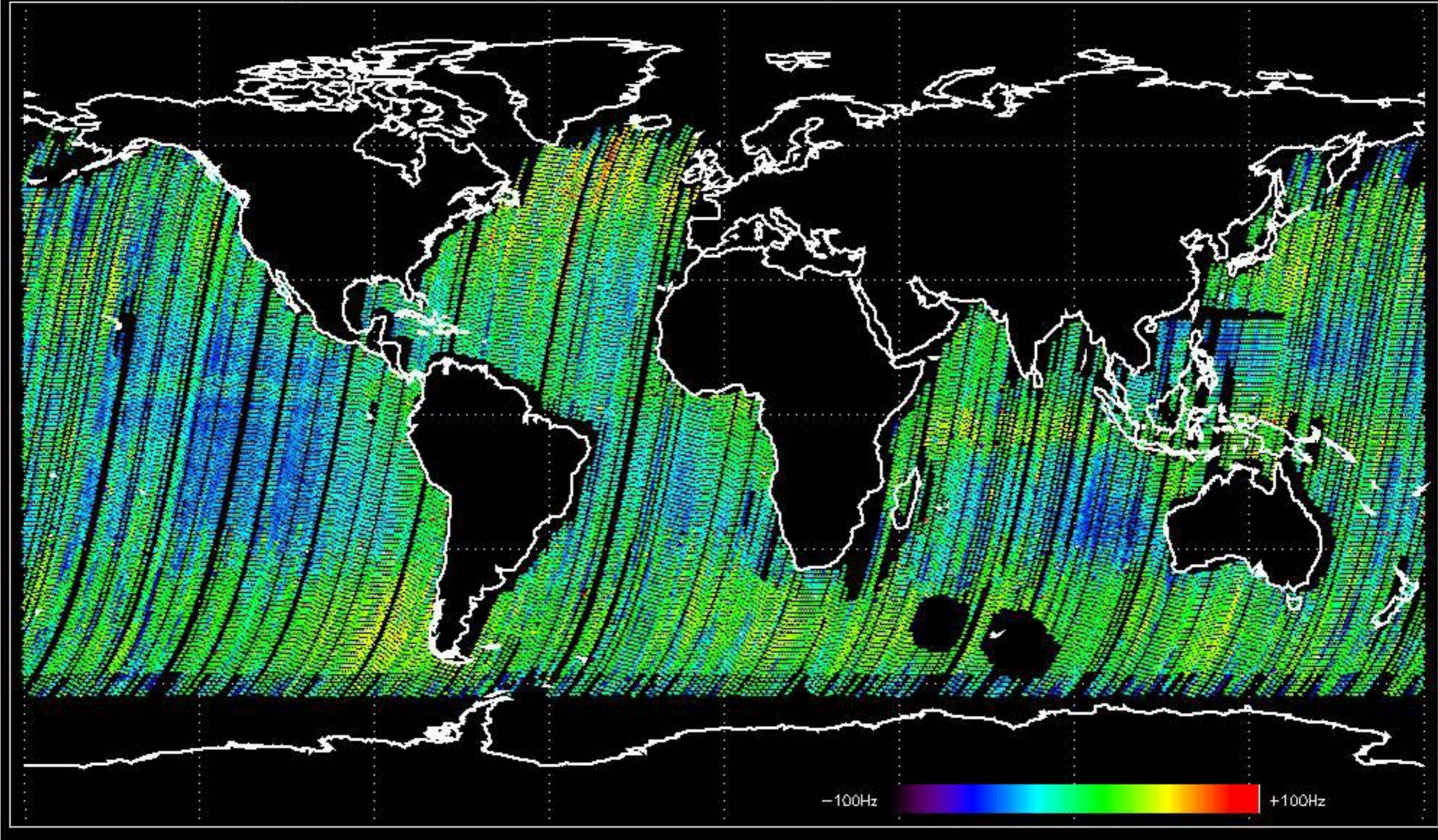
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.663640 Hz



Doppler difference, estimated-predicted 'WS' 'IS2' ascending -error mean of -35.621911 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.033168 Hz



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:

- ASA\_MS\_\_0PNPDK20050126\_081855\_000000152034\_00121\_15205\_0175.N1

No anomalies observed.









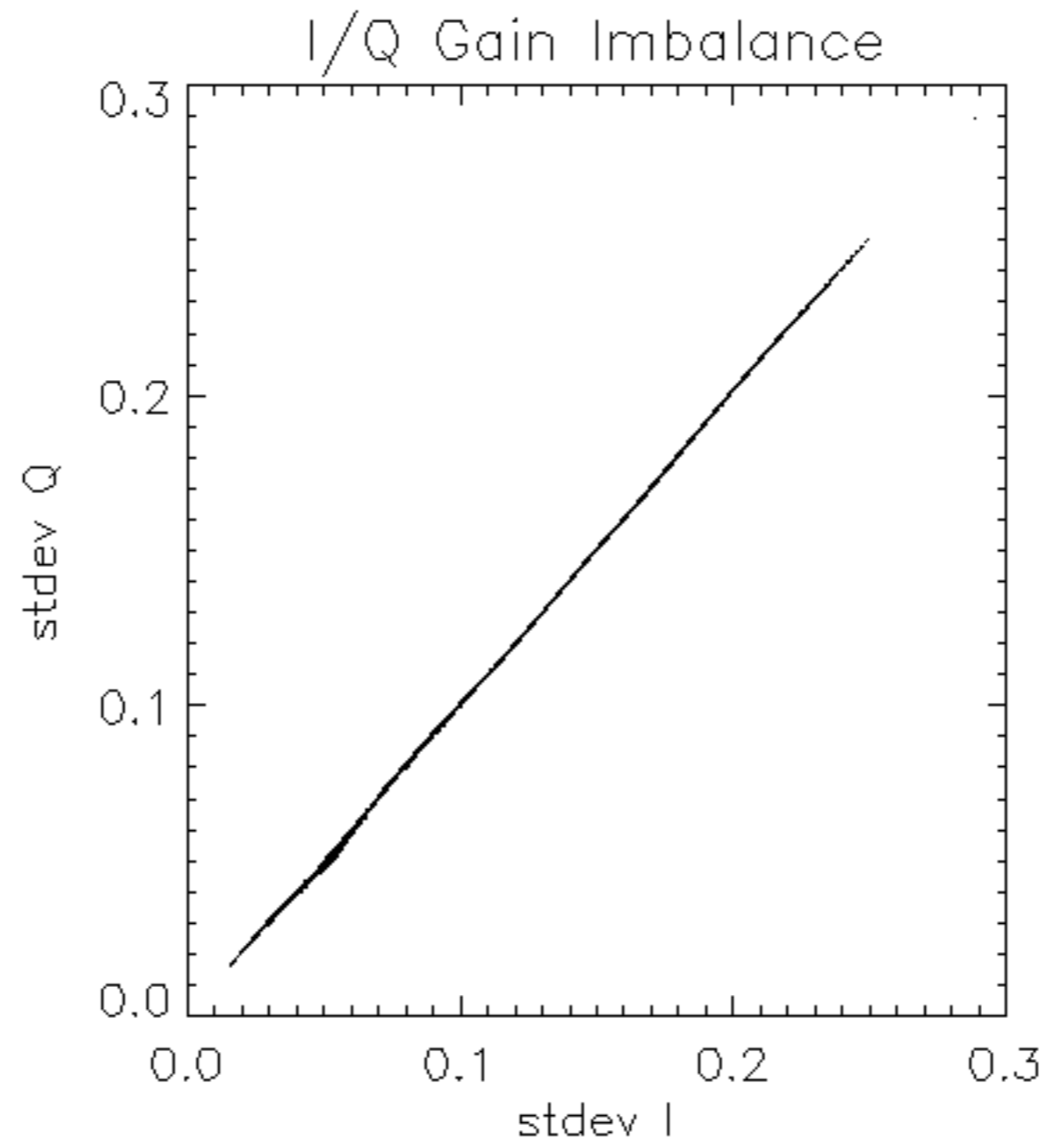




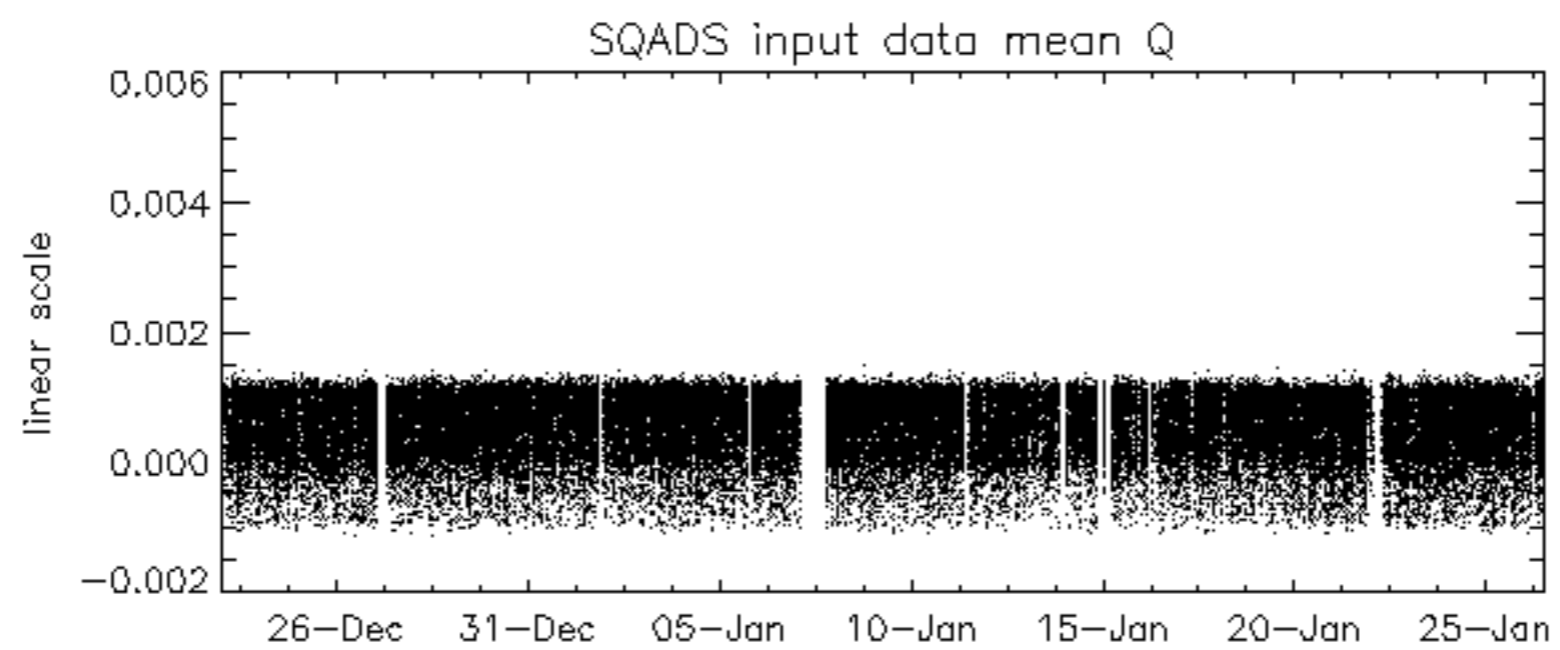
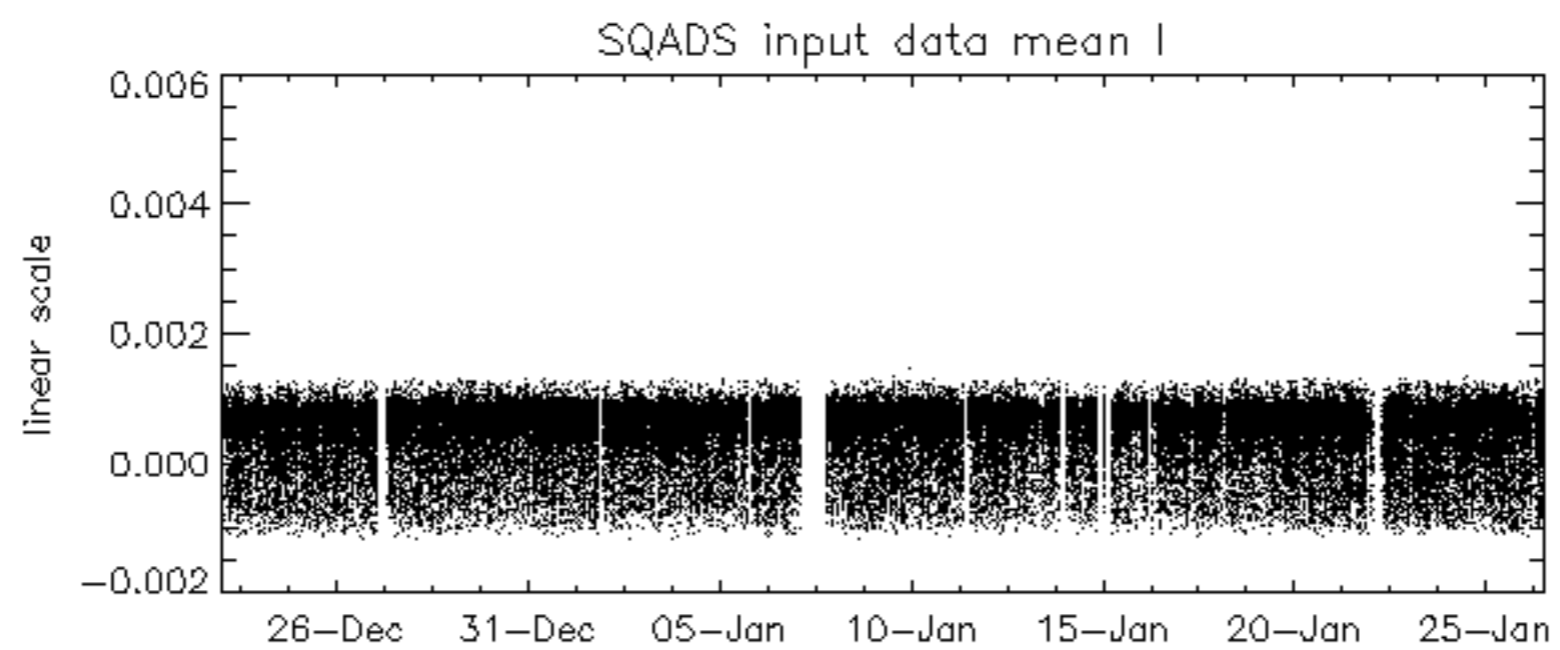
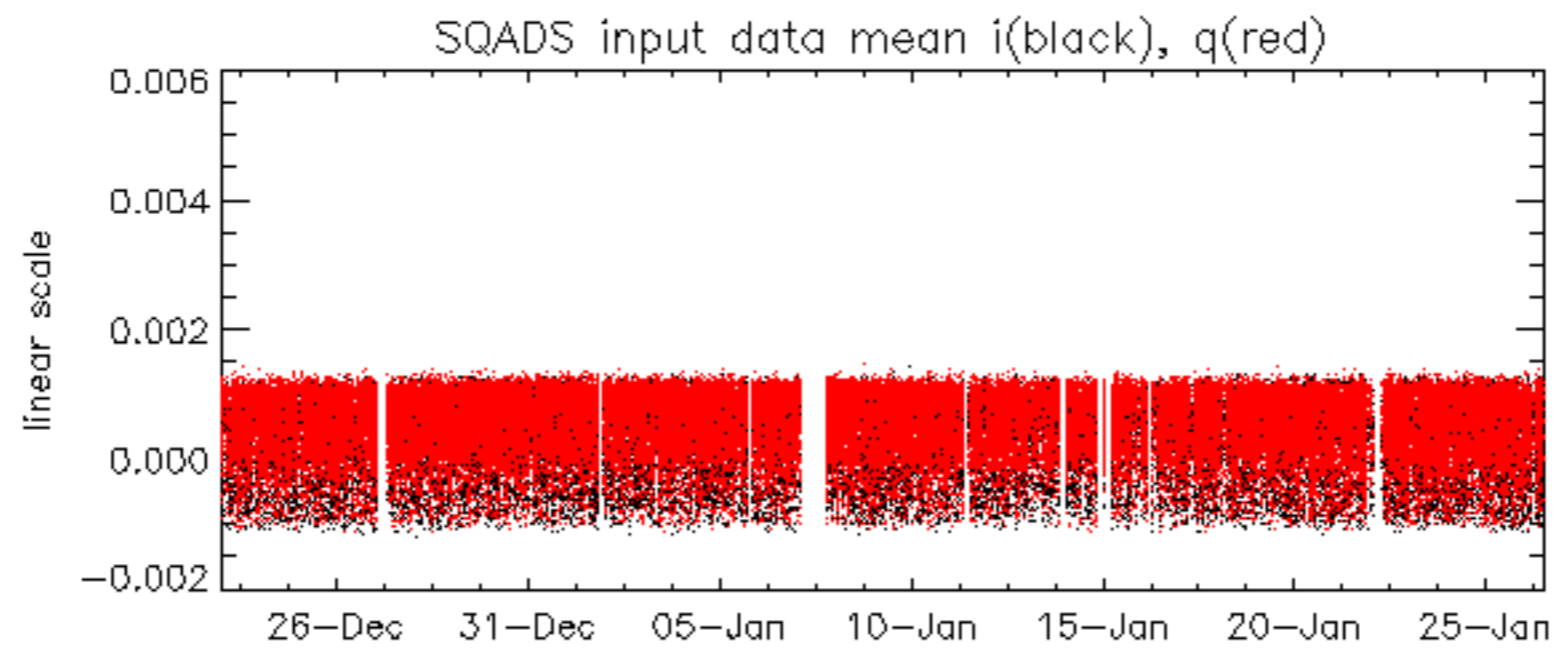


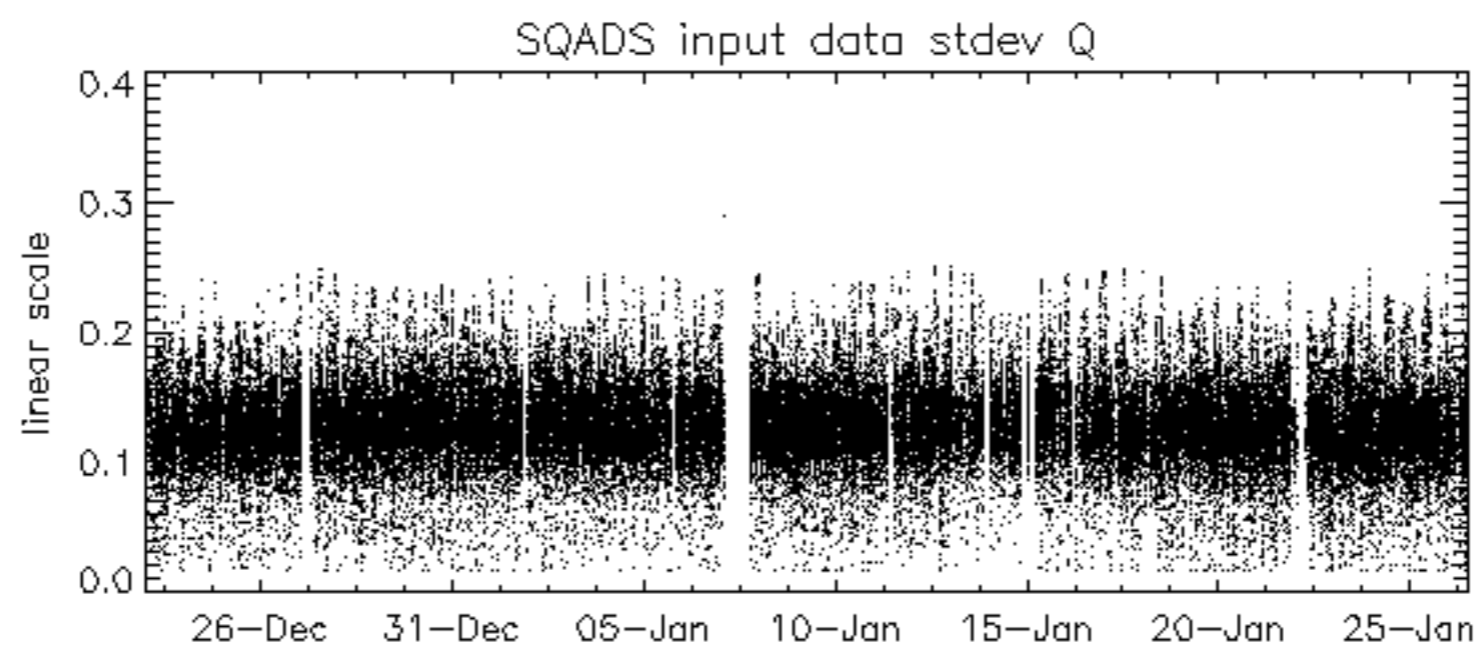
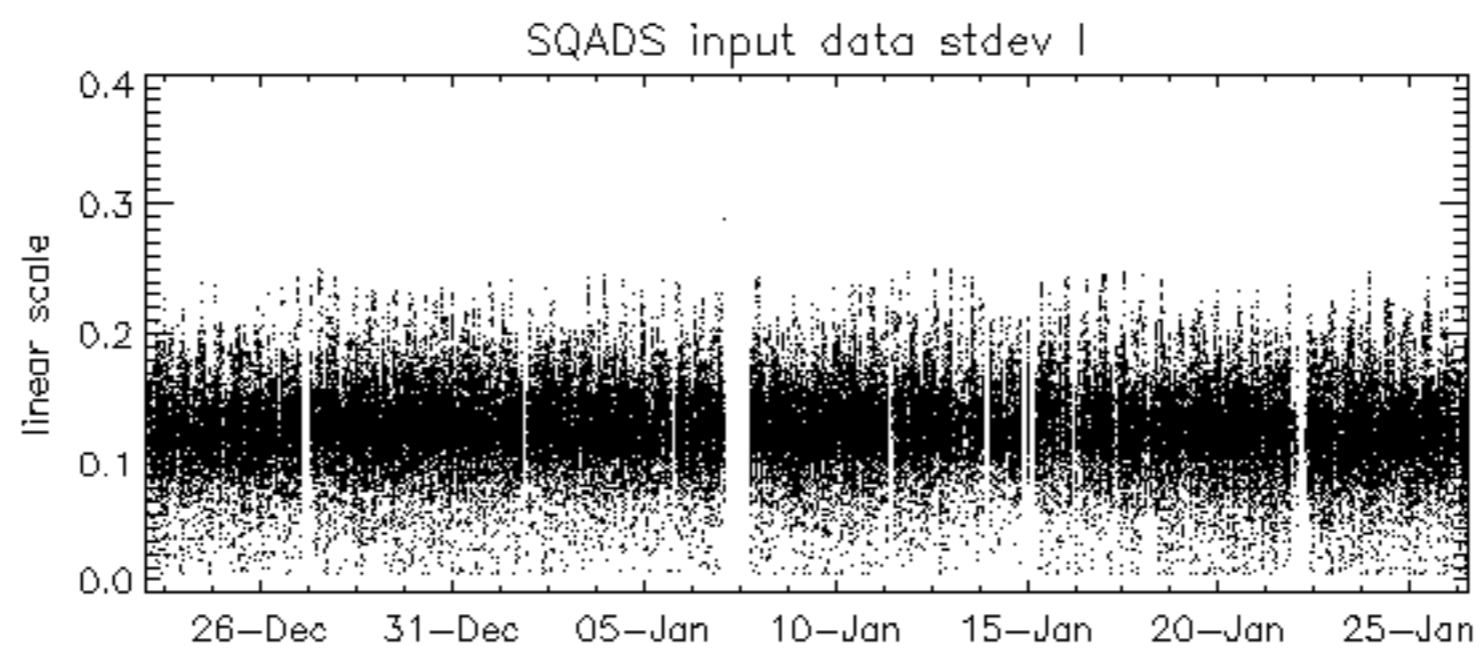
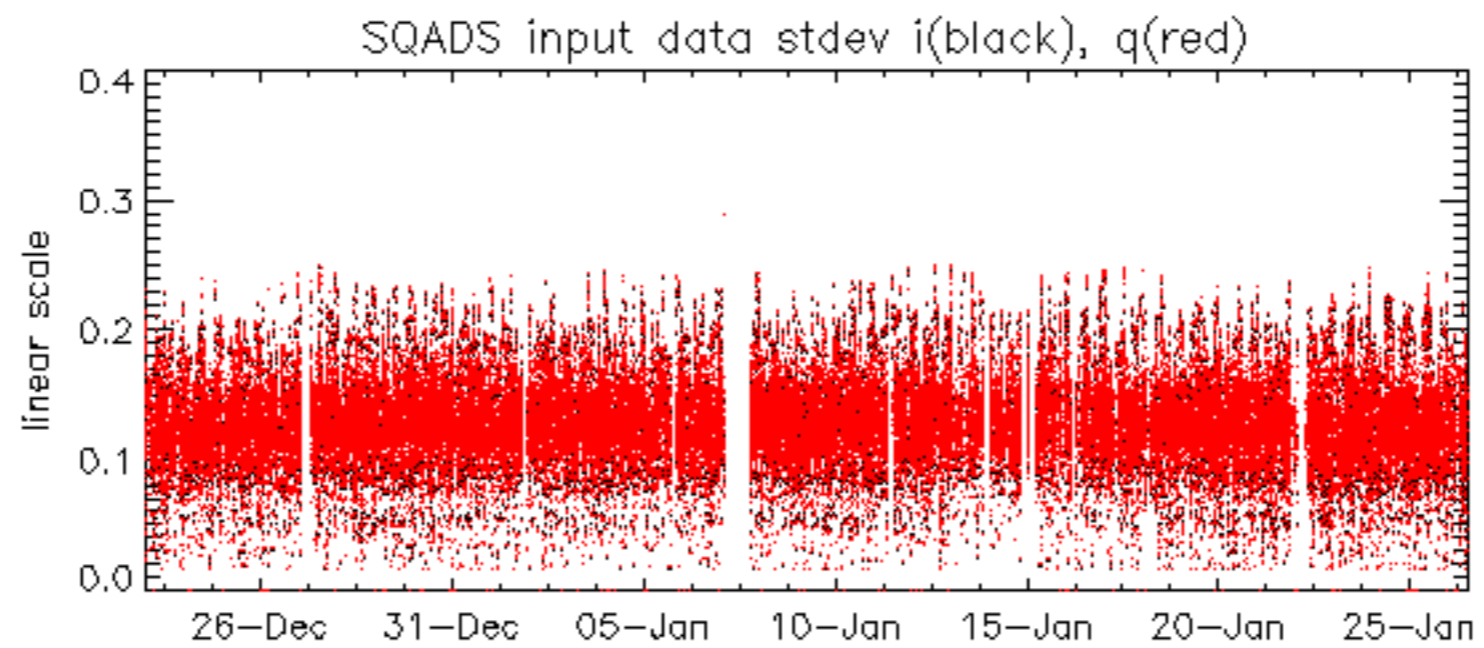
















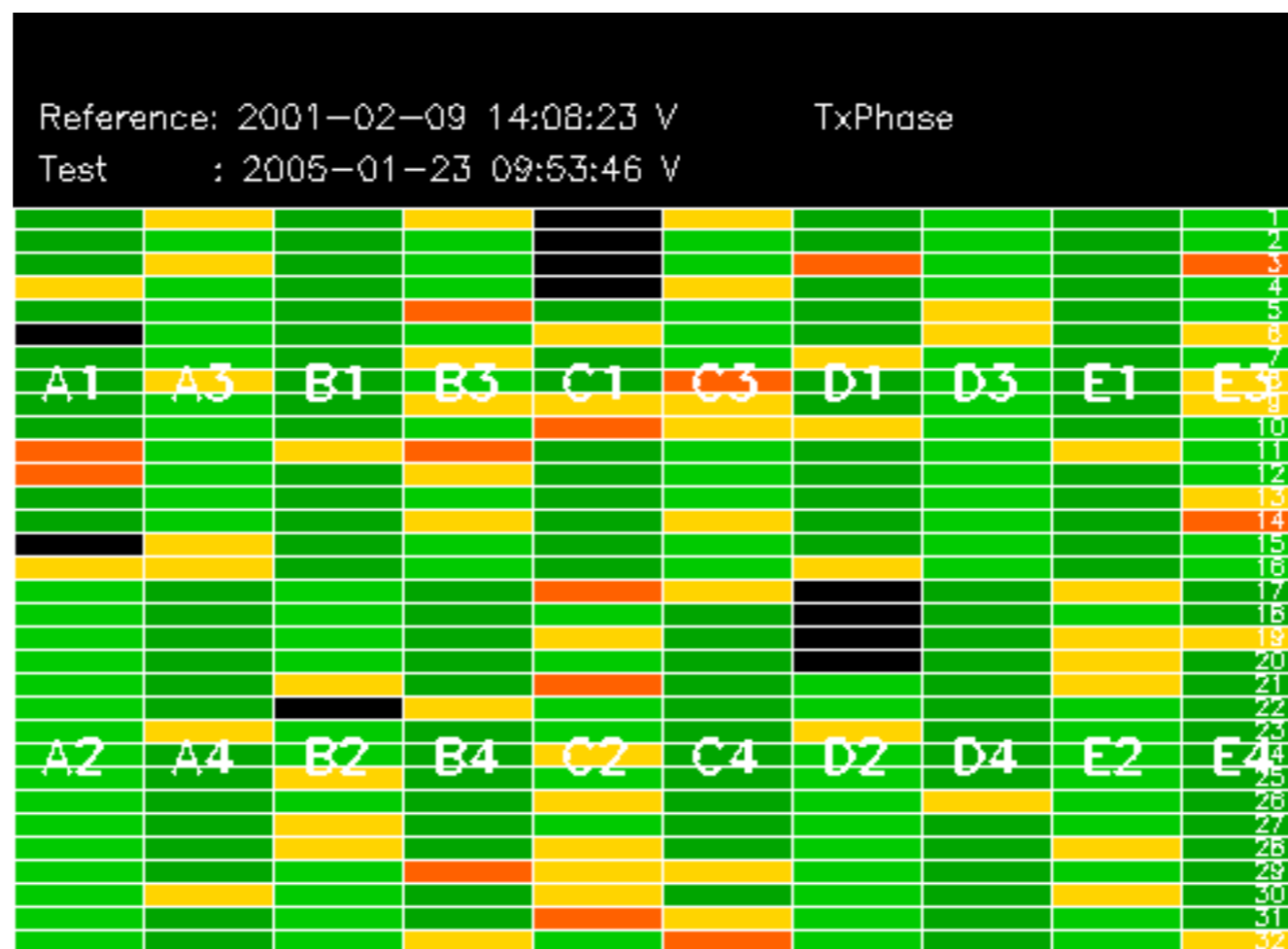




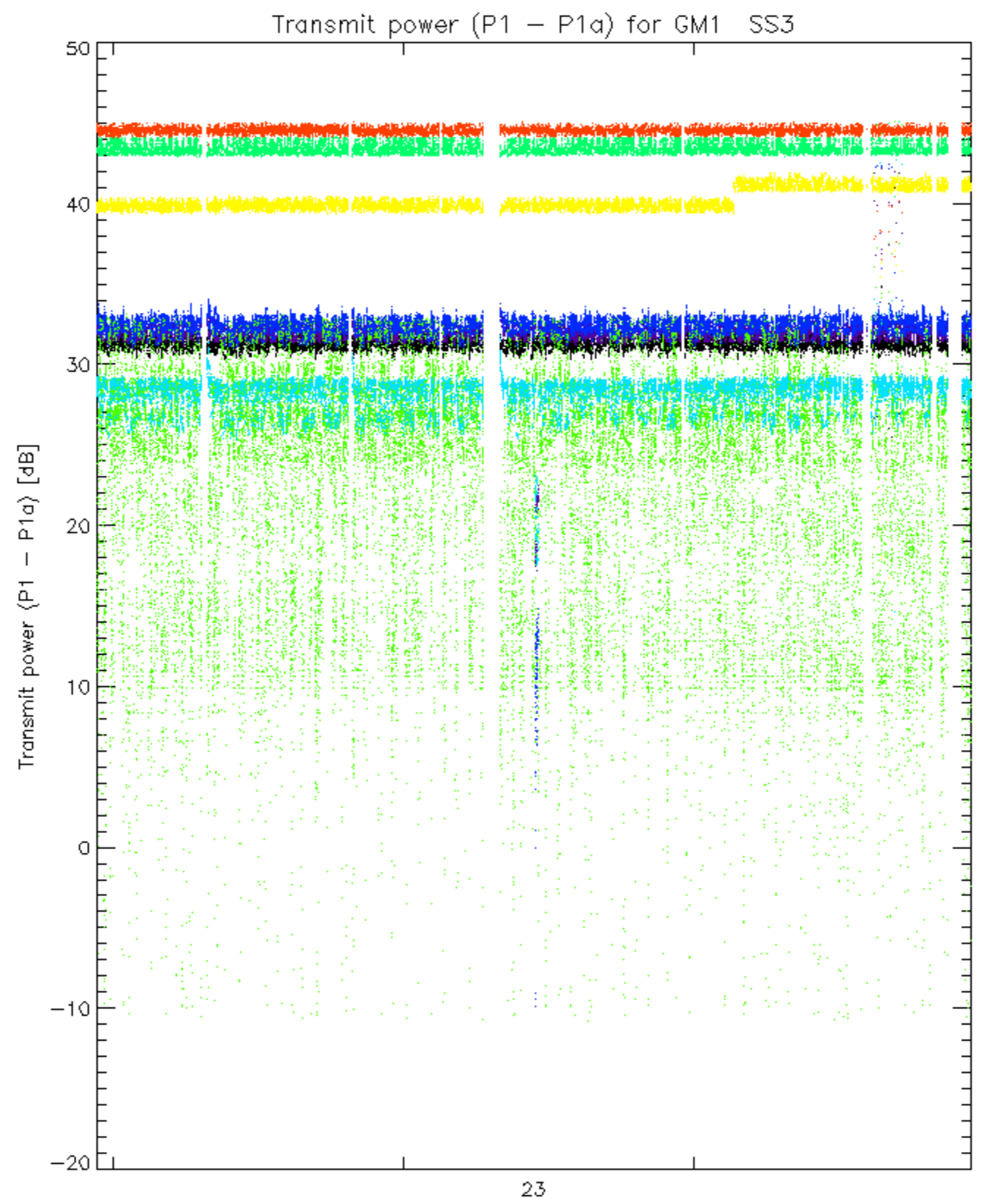




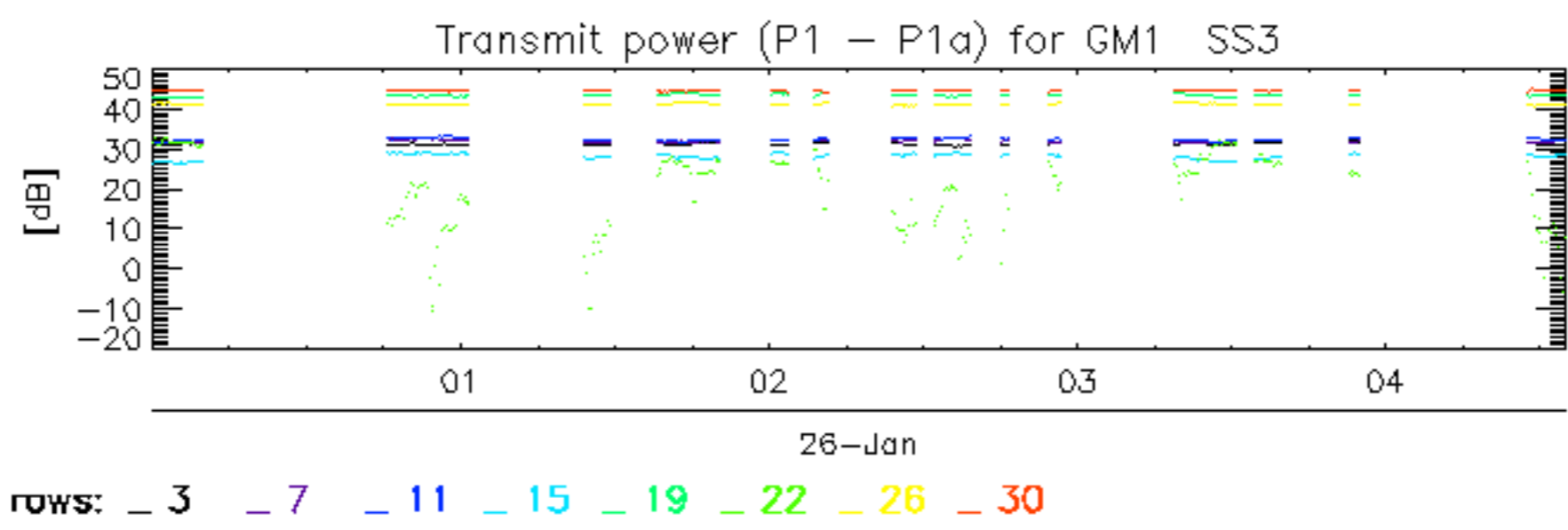


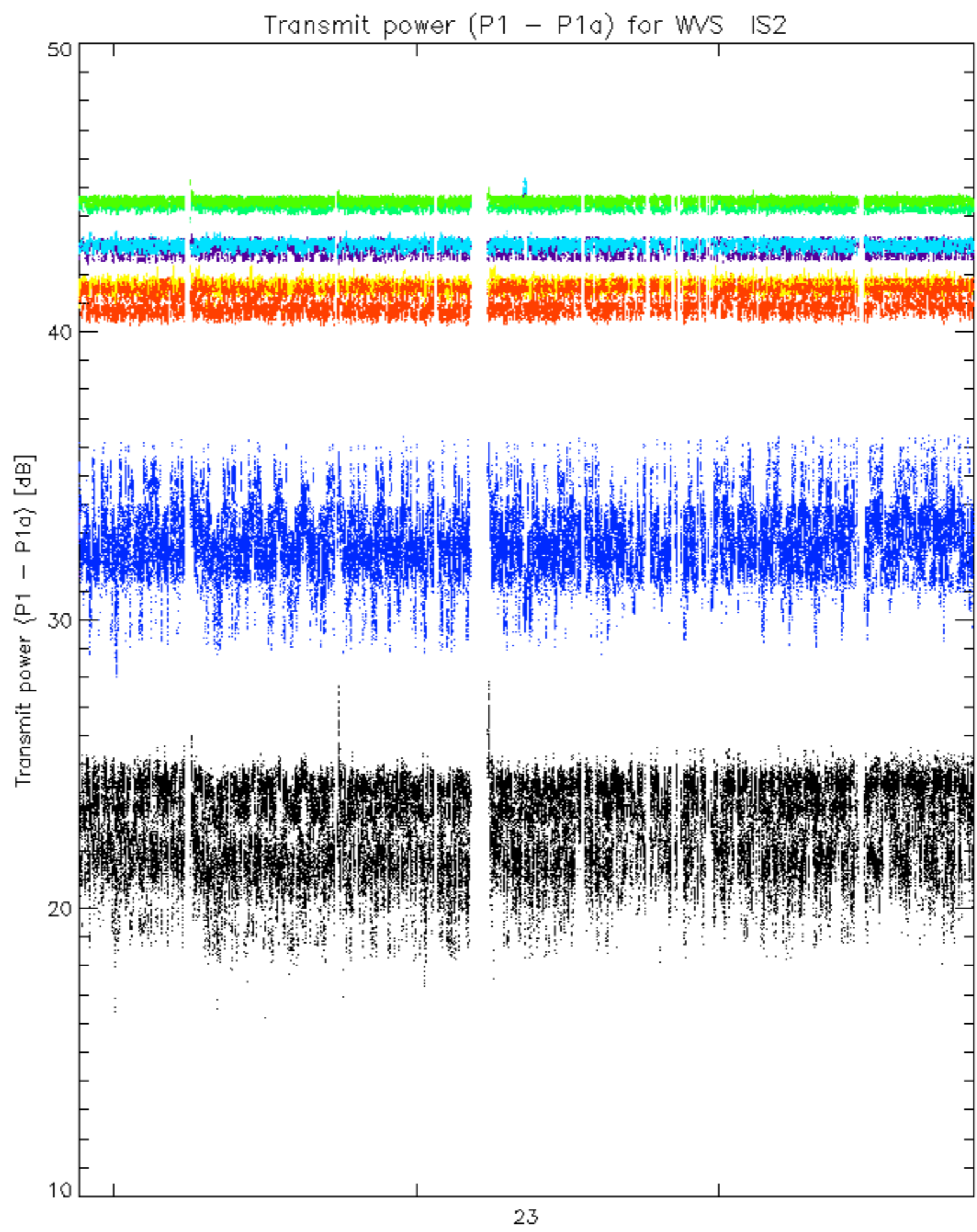




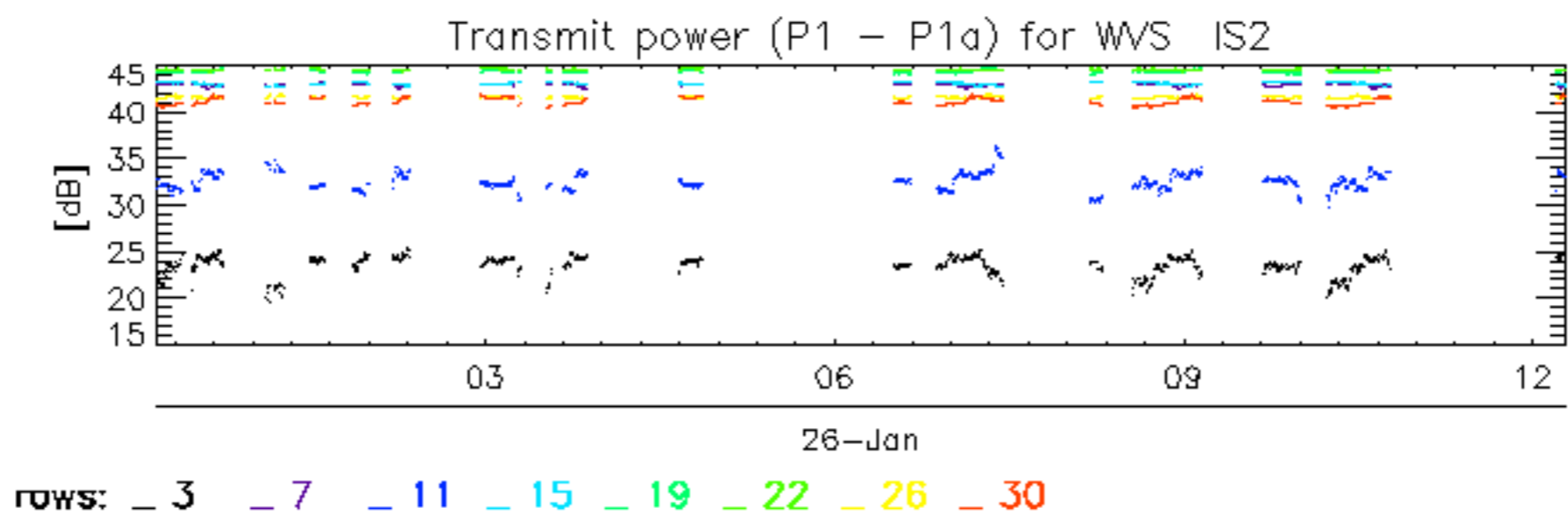


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rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



No unavailability for the reported period.