

# REPORT OF 031105

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## 1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA\_WVS\_1P) products, which are the available few hours after the acquisition, on the high rate browse (BP) products and on the Module Stepping (MS) product.

## 2 - Summary

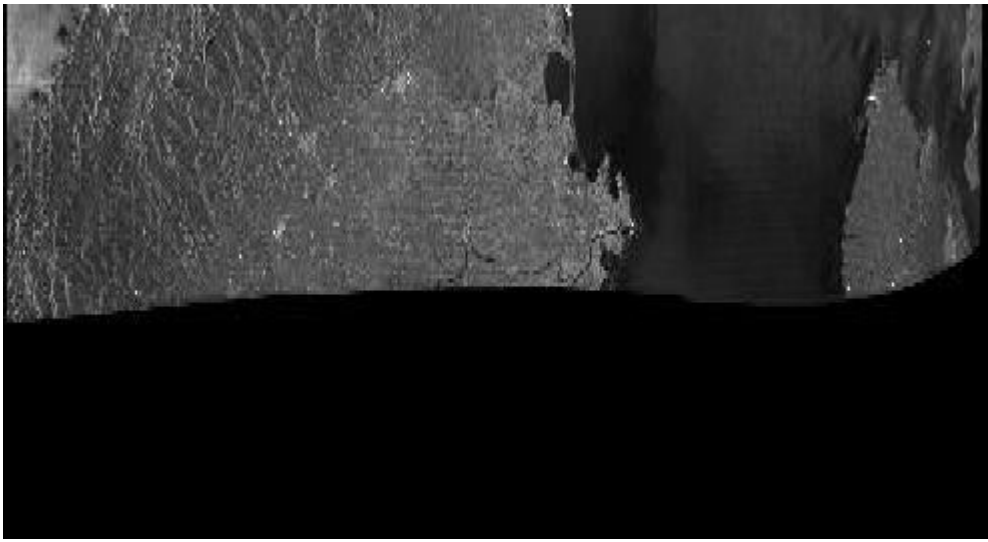
### 2.1 - Instrument Unavailability

No unavailabilities during the reported period.

### 2.2 - Browse Visual Inspection

Anomalies observed from browse products visual inspection:

-ASA\_WS\_\_BPZPK20031104\_210002\_000000182021\_00215\_08786\_2733.N1



The problem is under investigation.

### 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:

- ASA\_MS\_\_0PNPDK20031104\_203349\_000000152021\_00214\_08785\_0104.N1
- ASA\_MS\_\_0PNPDK20031104\_203509\_000000152021\_00214\_08785\_0103.N1

Stabilization of the B3-3 module drift in transmit phase on H polarisation as shown below.



Polarisation	Start Time
V	20031104 203509
H	20031104 203349

**MSM in V/V polarisation**

Pre-launch Reference	DDS-B (2003-06-12) reference
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⊗	
⊗	
⊗	
⊗	

**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**

row	stat	AveP1	AveP2	AveP3
3	mean	-3.78000	-22.5324	-8.15234
	stdev	0.00492243	0.0678034	0.00267921
24	mean	-5.14635	-21.2245	-8.15234
	stdev	0.0124680	0.0632367	0.00267921

⊗

**4.2 - Cyclic statistics**

row	stat	AveP1	AveP2	AveP3
3	mean	-3.79048	-22.5434	-8.14598
	stdev	0.00542665	0.0632190	0.00262293
24	mean	-5.35441	-21.2549	-8.14598
	stdev	0.887402	0.0602590	0.00262293

⊗

### 4.3 - cal pulses monitoring (all rows)



## 5 - RAW data statistics

No anomalies observed.

### 5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000373481
	stdev	3.57484e-07
MEAN Q	mean	0.000273529
	stdev	3.40216e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.113719
	stdev	0.00144187
STDEV Q	mean	0.113959
	stdev	0.00145921



### 5.3 - Gain imbalance I/Q



## 6 - Wave Doppler Analysis

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

### 6.1 - Unbiased Doppler Error

Evolution of unbiased Doppler error (Real - Expected)

Ascending

Descending

### 6.2 - Absolute Doppler

Evolution of Absolute Doppler

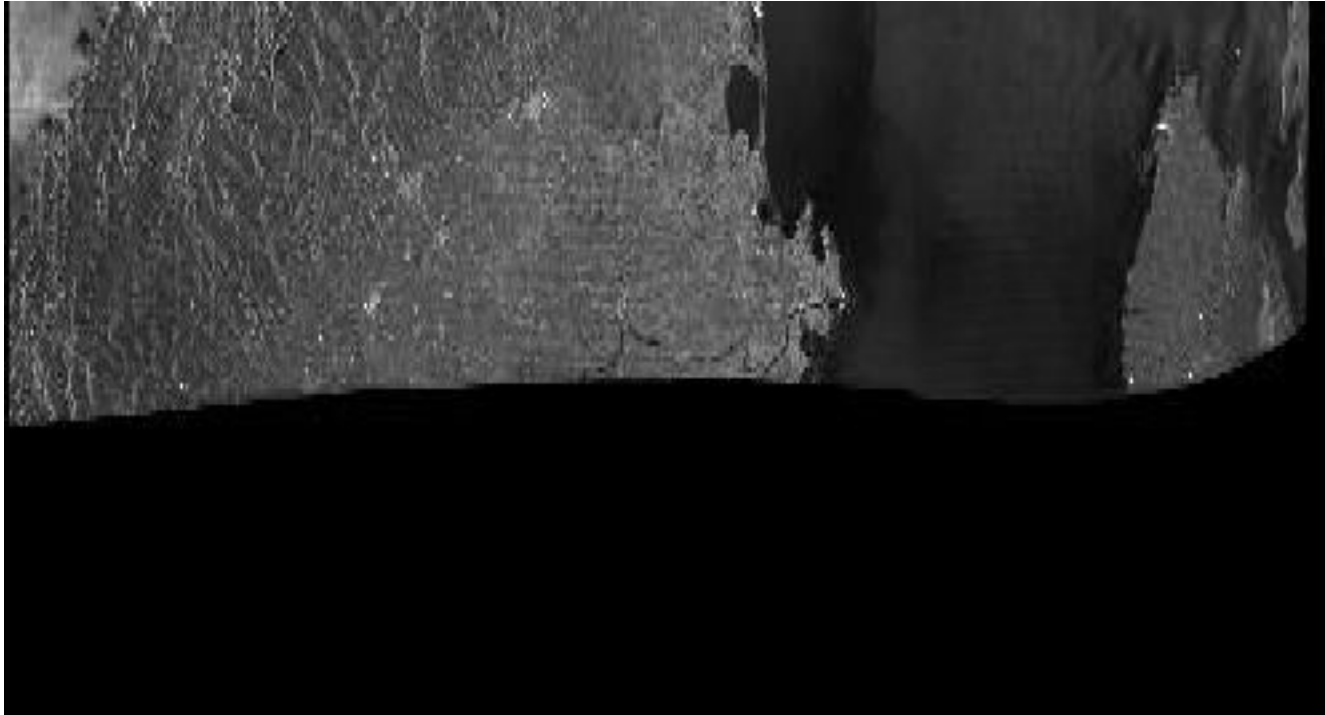
Ascending

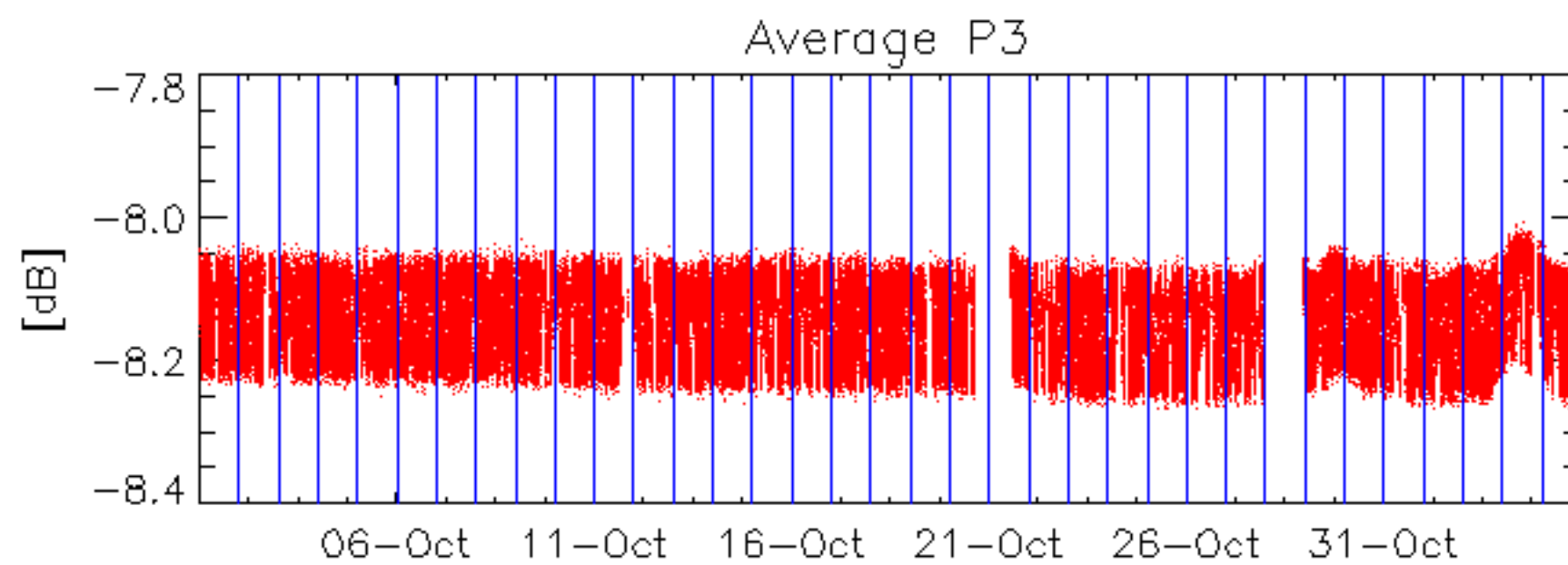
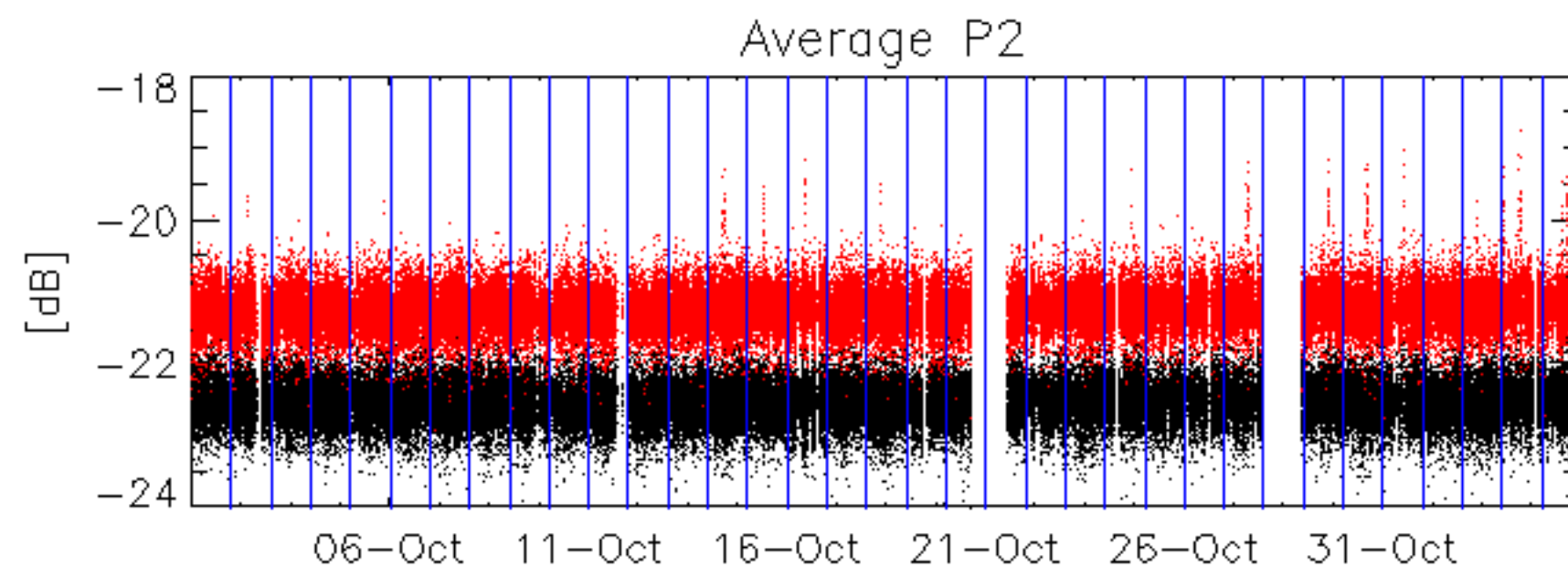
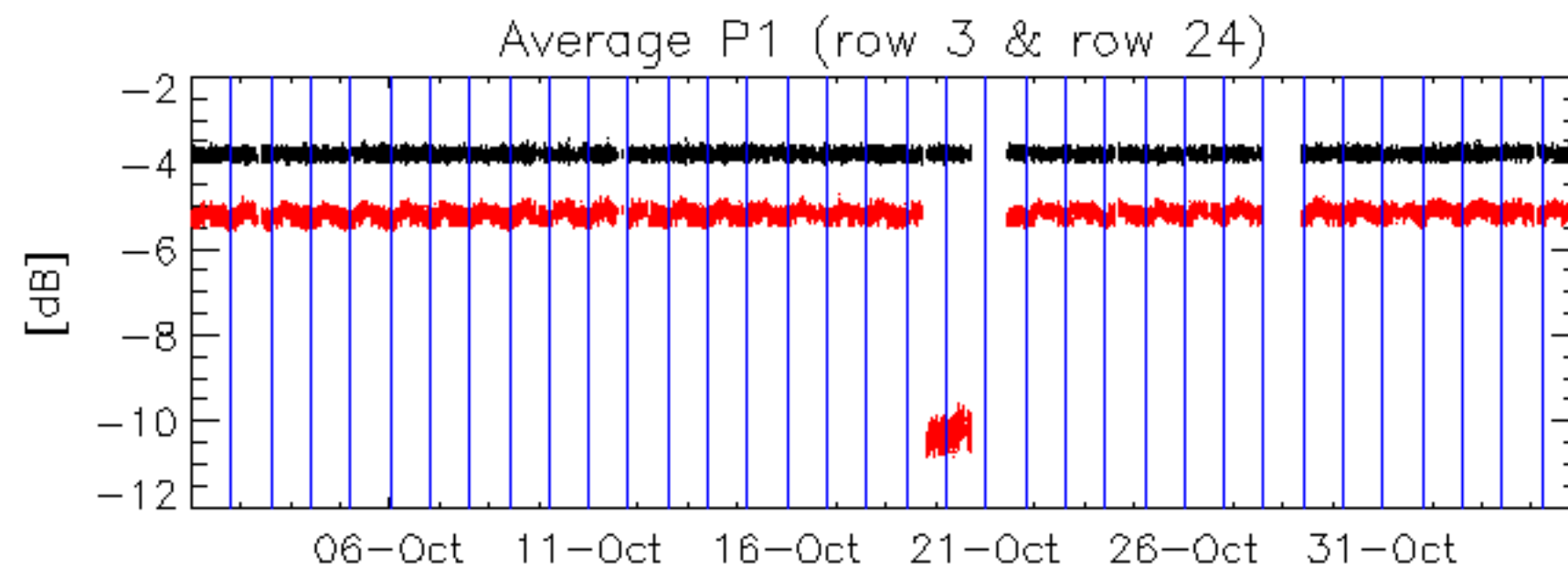
Descending

### 6.3 - Doppler evolution versus ANX

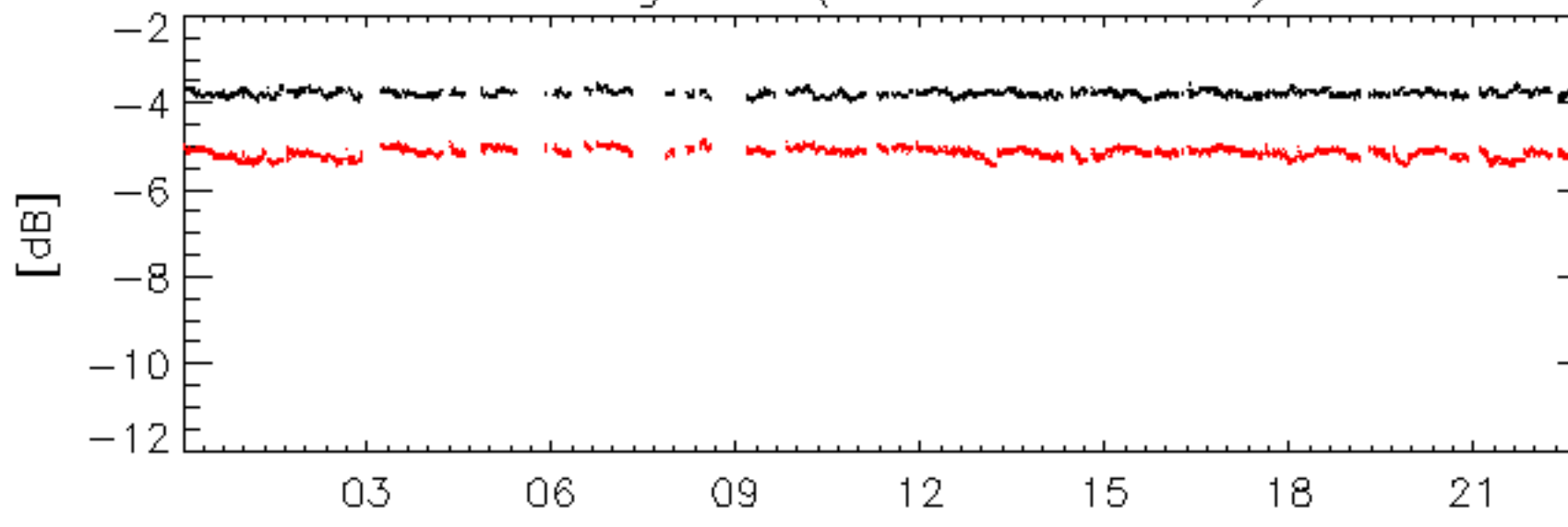
Evolution Doppler error versus ANX



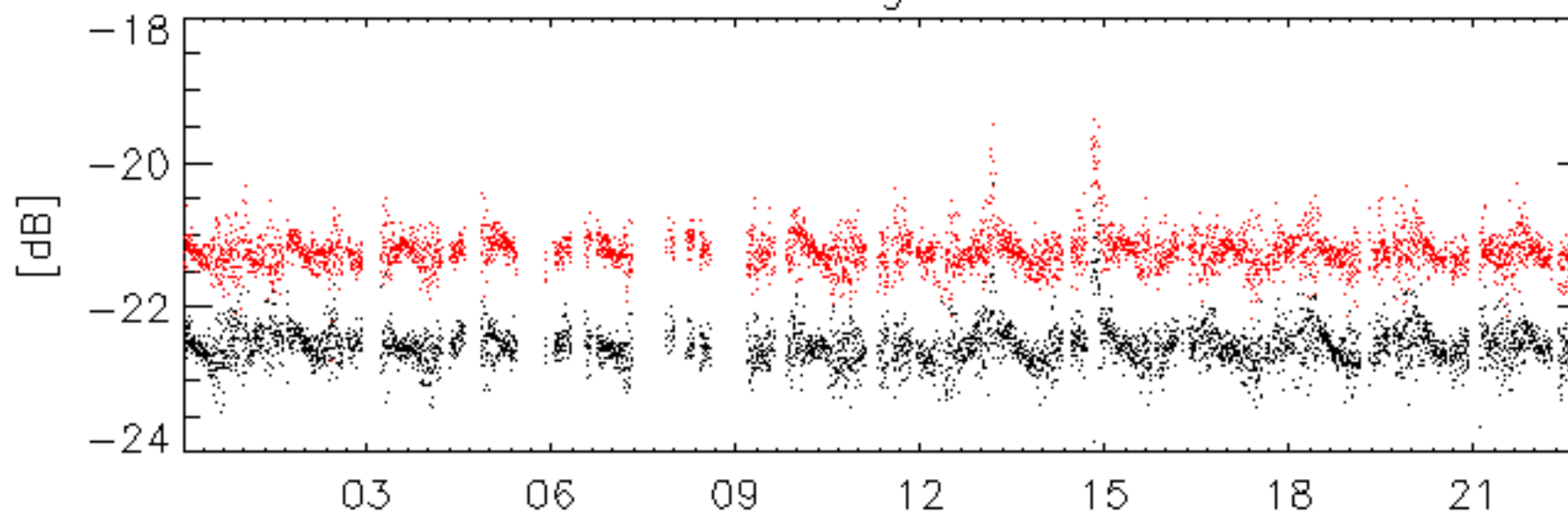




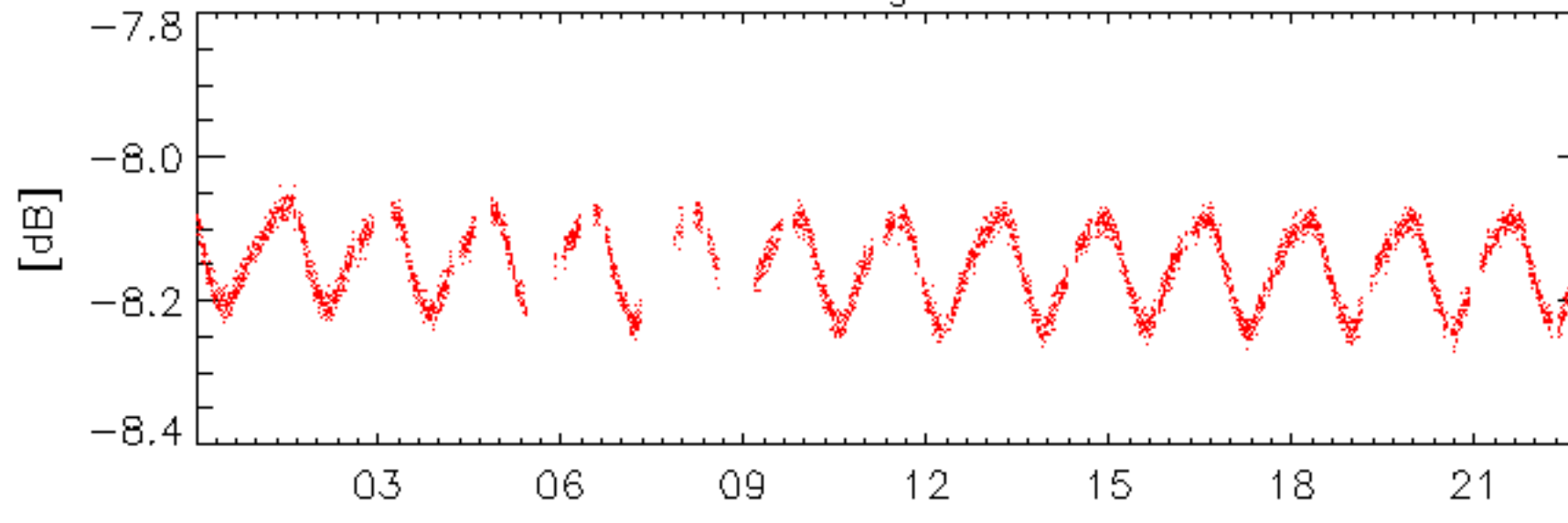
Average P1 (row 3 & row 24)



04-Nov  
Average P2

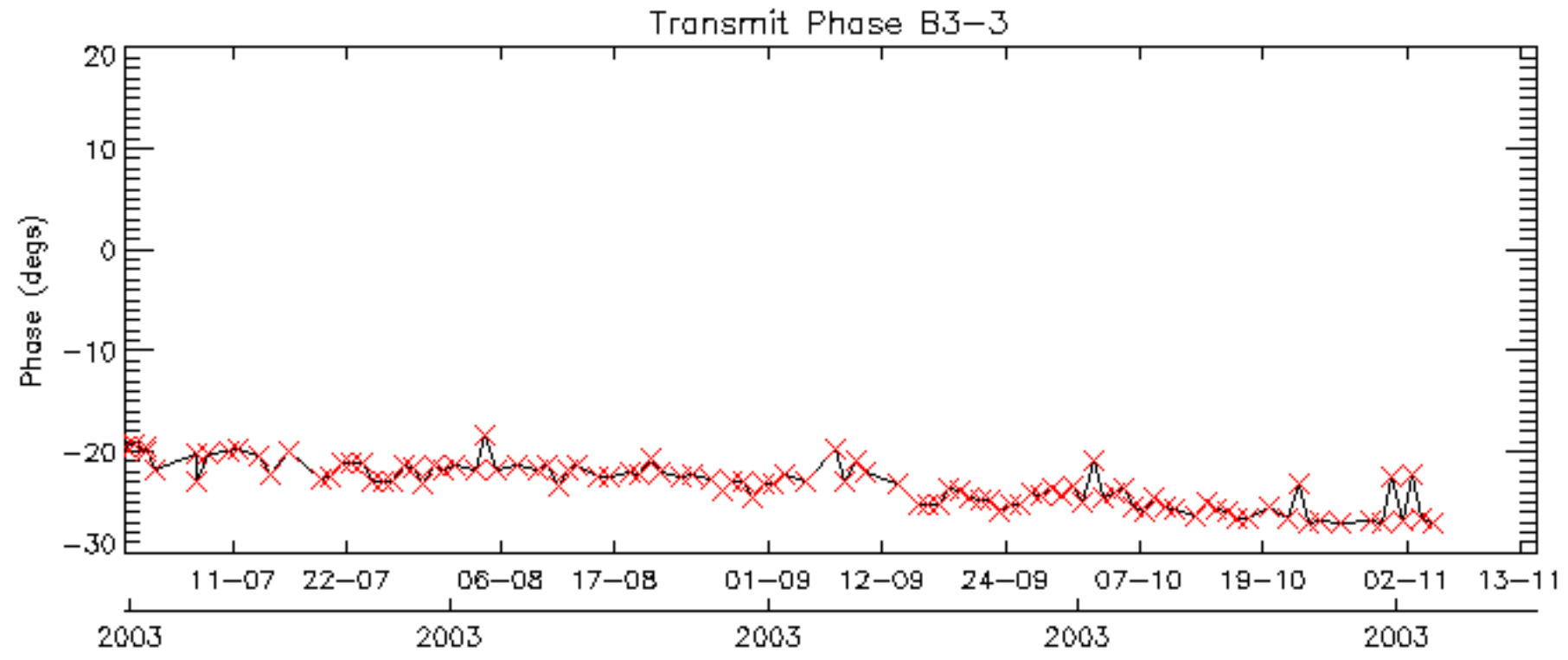


04-Nov  
Average P3



04-Nov

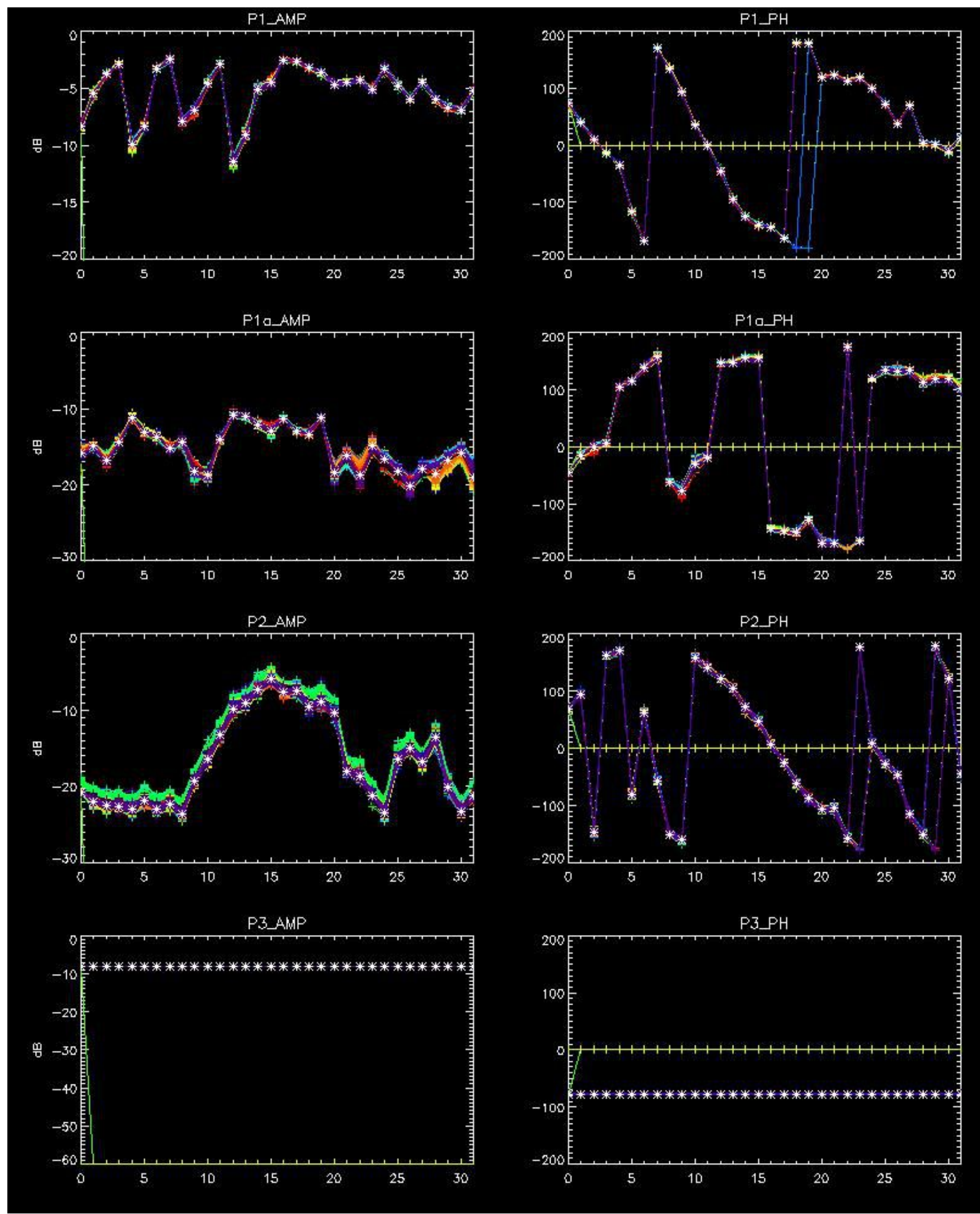




Anomalies observed from browse products visual inspection:  
-ASA\_WS\_\_BPZPK20031104\_210002\_000000182021\_00215\_08786\_2733.N1

The problem is under investigation.

No anomalies observed.

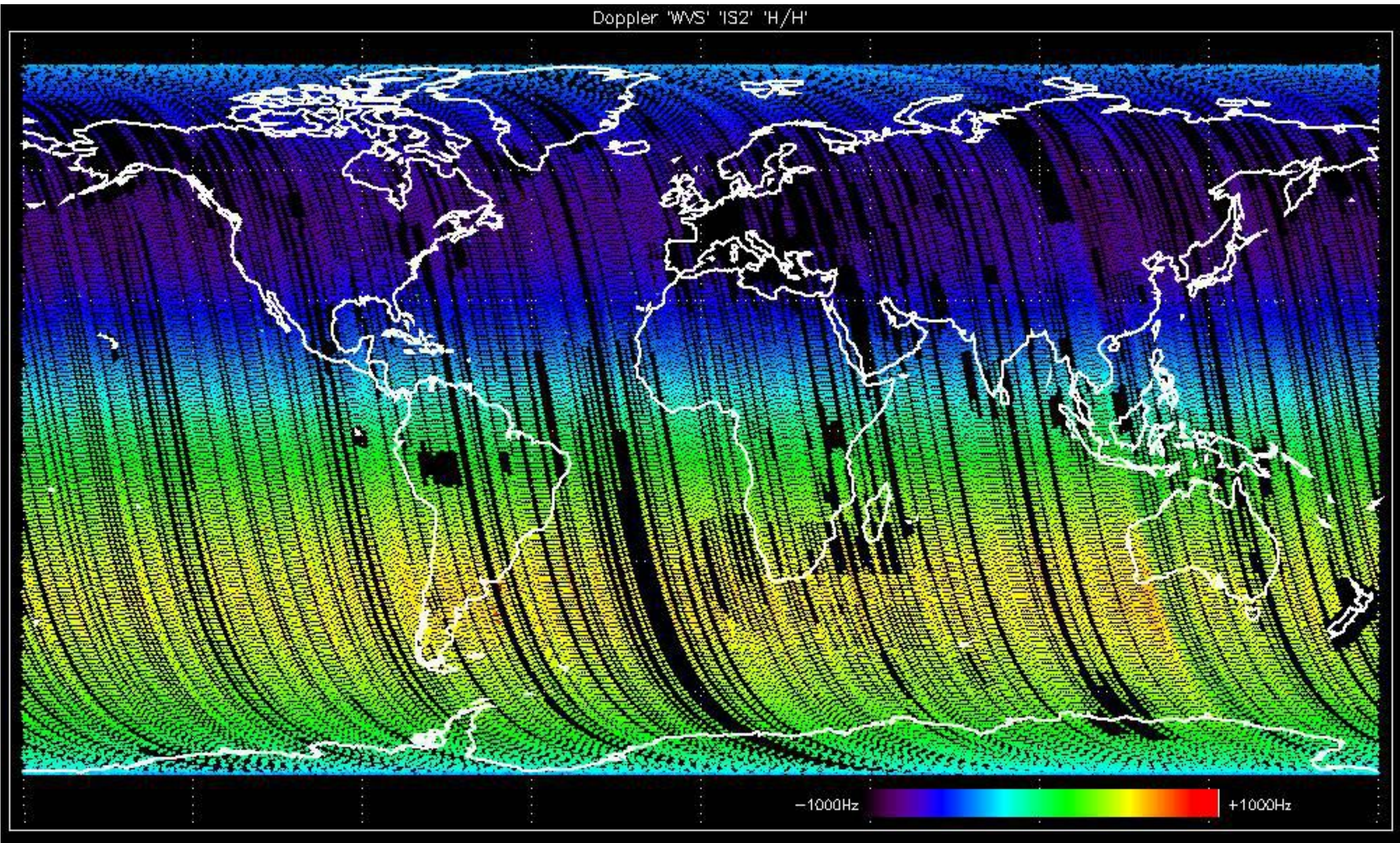


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

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

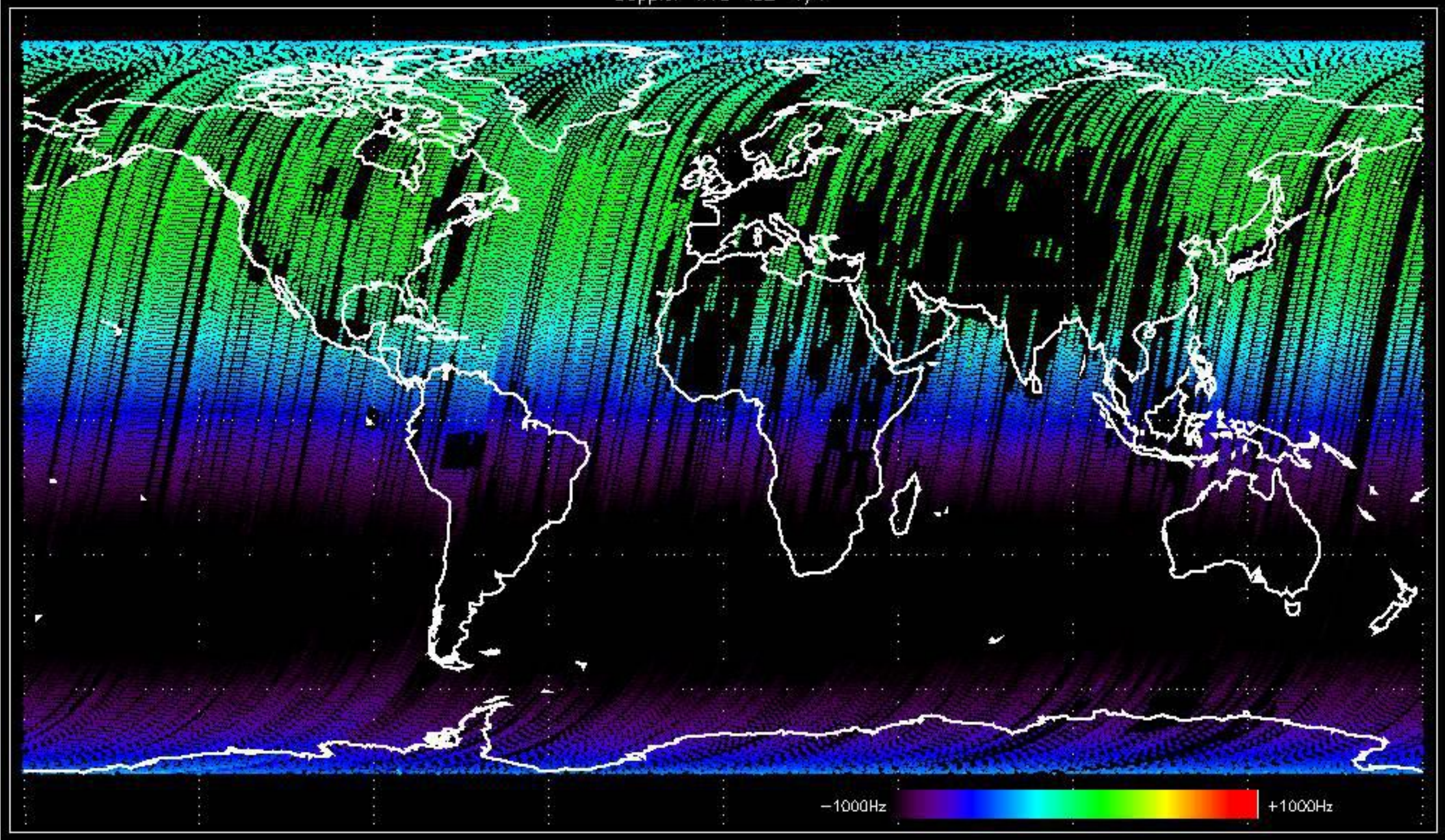


Doppler 'WVS' 'IS2' 'H/H'

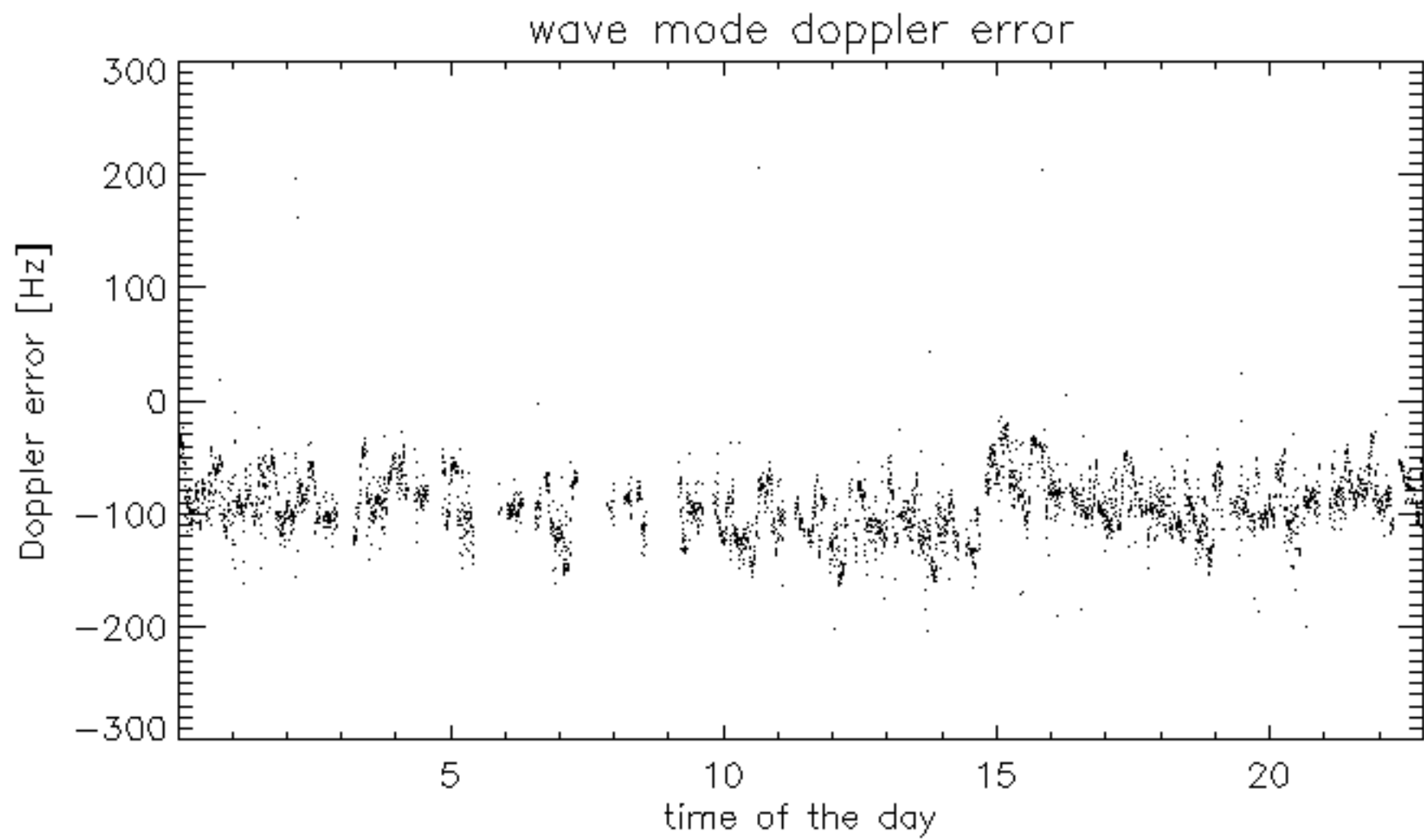
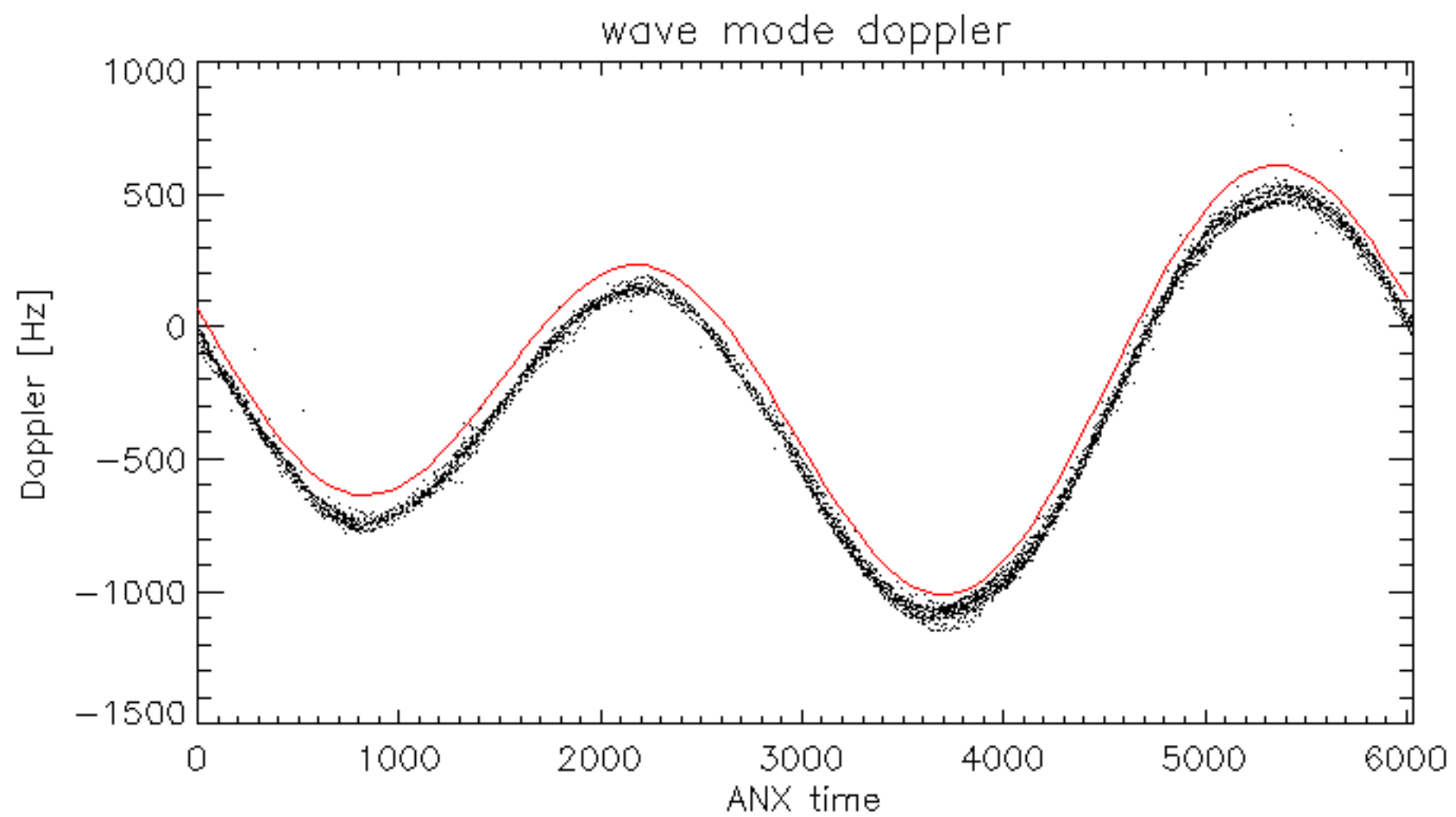




Doppler 'WVS' 'IS2' 'V/V'

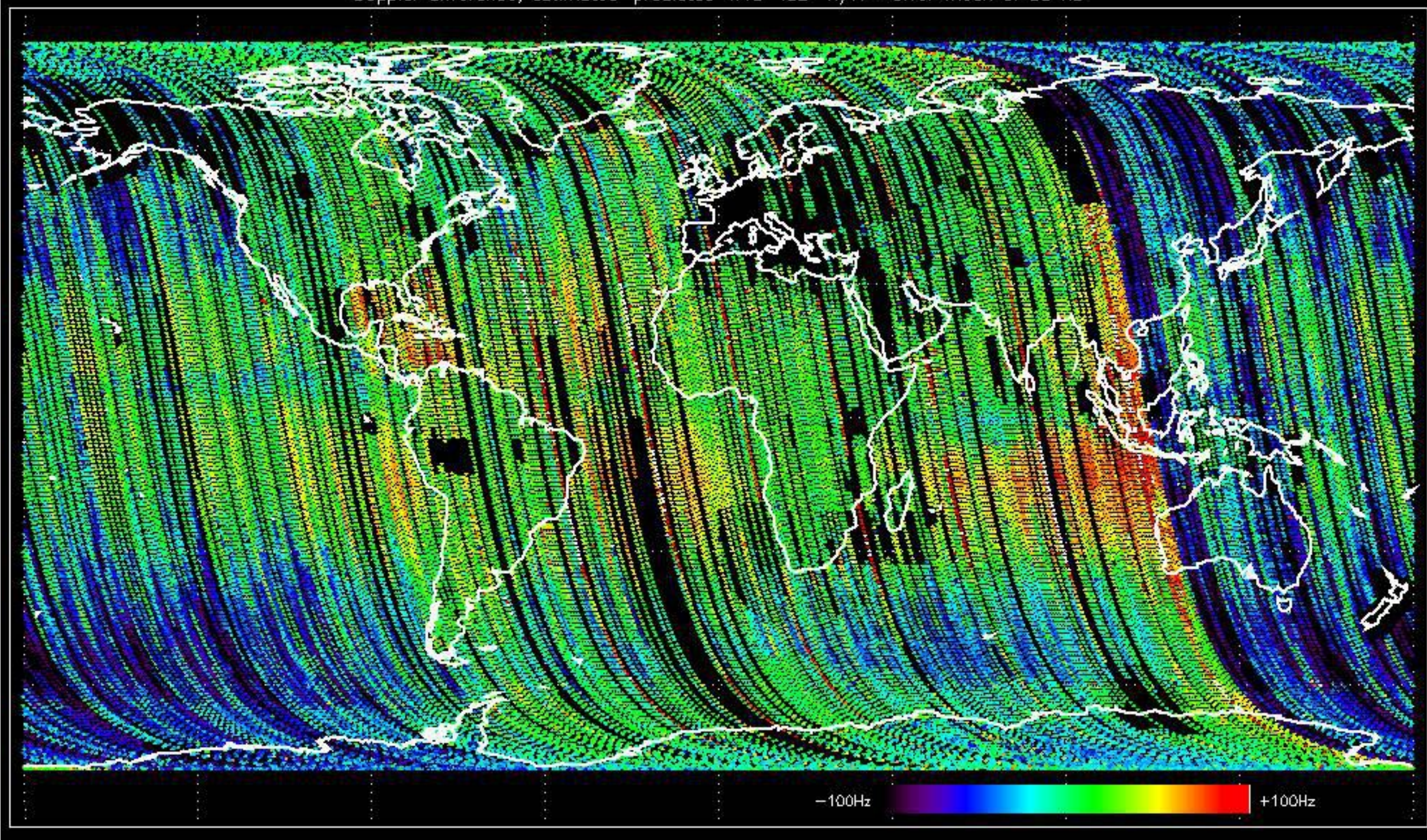






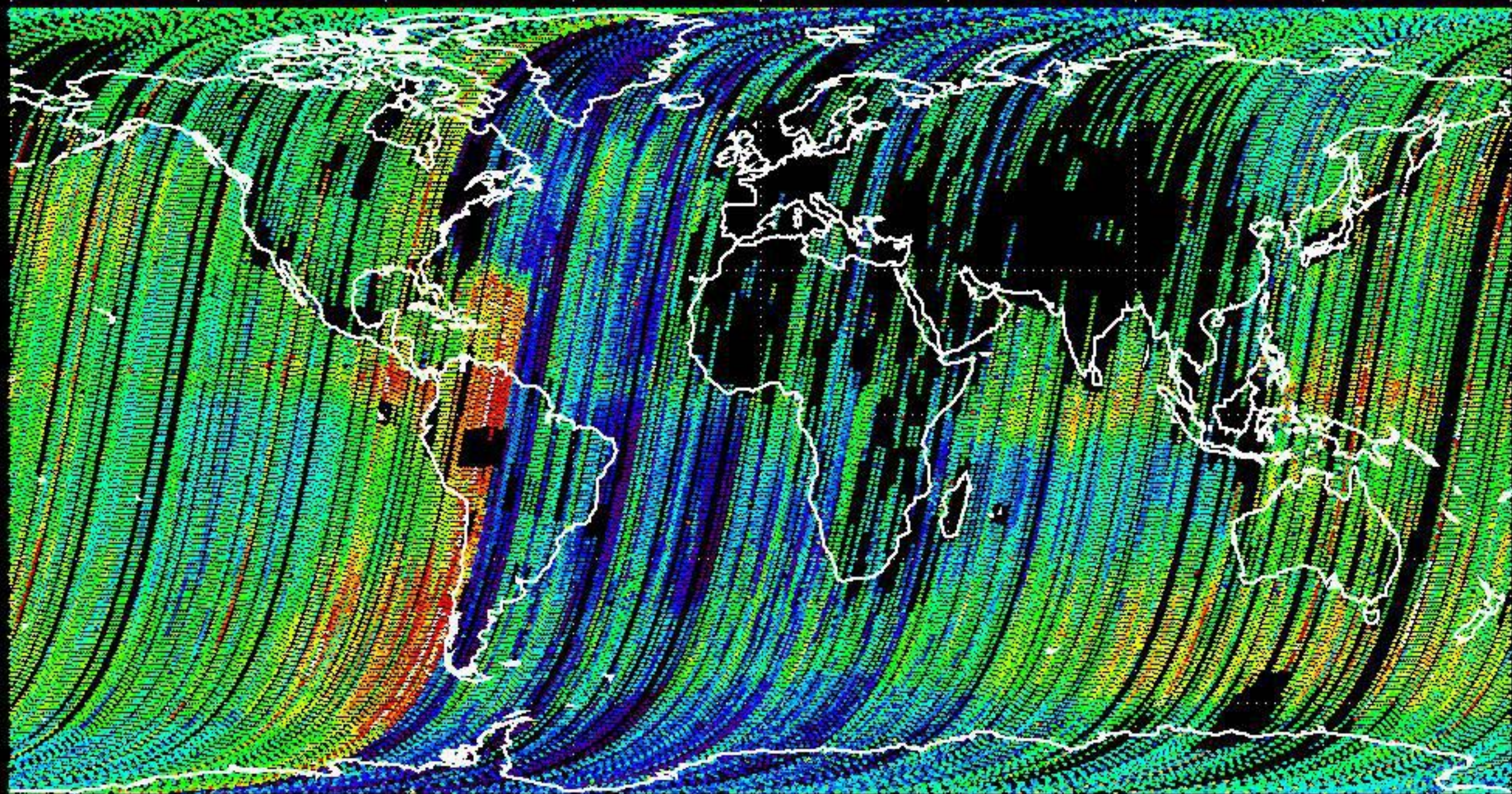


Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of 53 Hz





Doppler difference, estimated-predicted 'WS' 'IS2' 'V/V' -error mean of 53 Hz



-100Hz

+100Hz



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- ASA\_MS\_\_0PNPDK20031104\_203509\_000000152021\_00214\_08785\_0103.N1

Stabilization of the B3-3 module drift in transmit phase on H polarisation as shown below.

No anomalies observed.





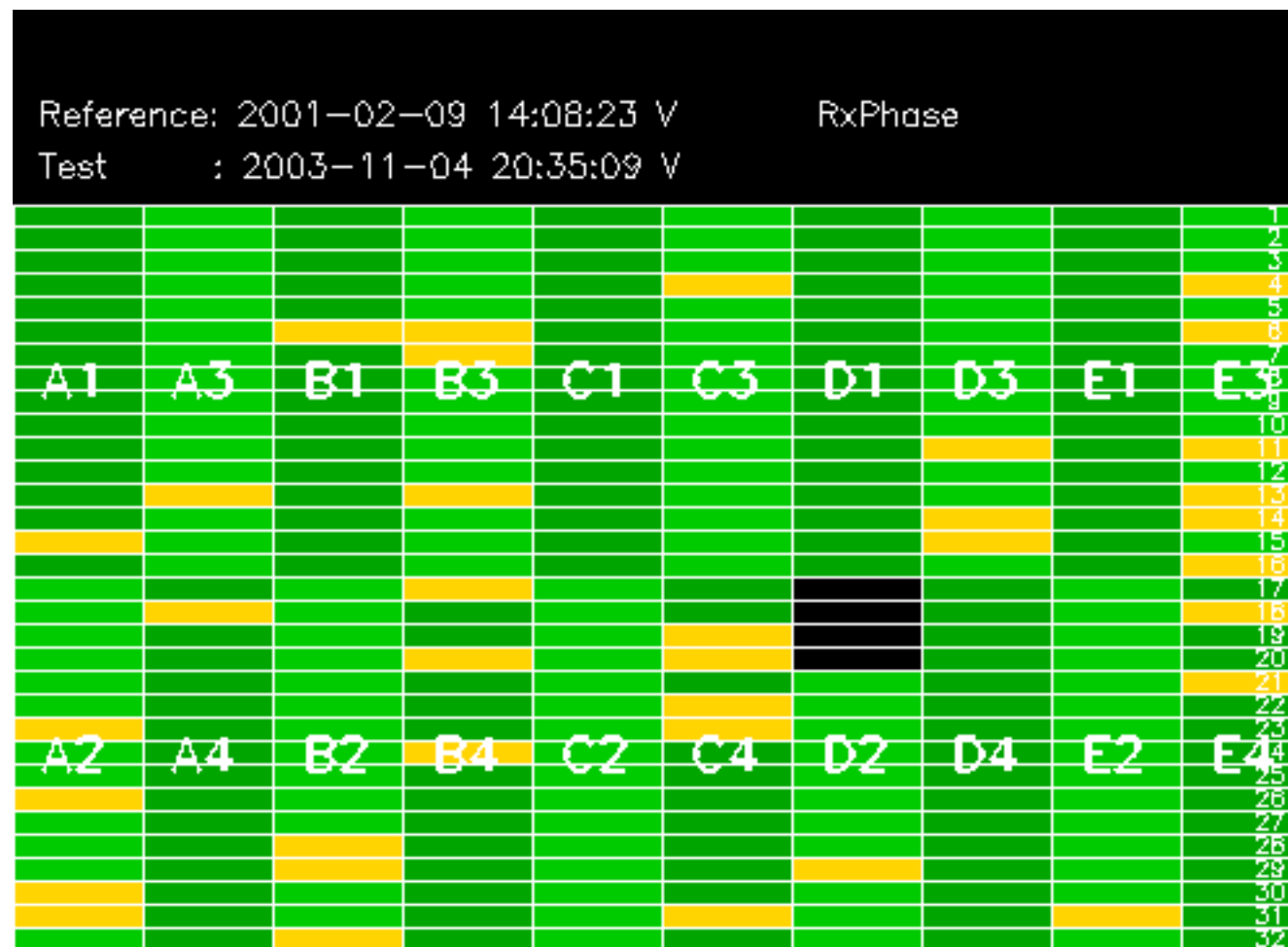




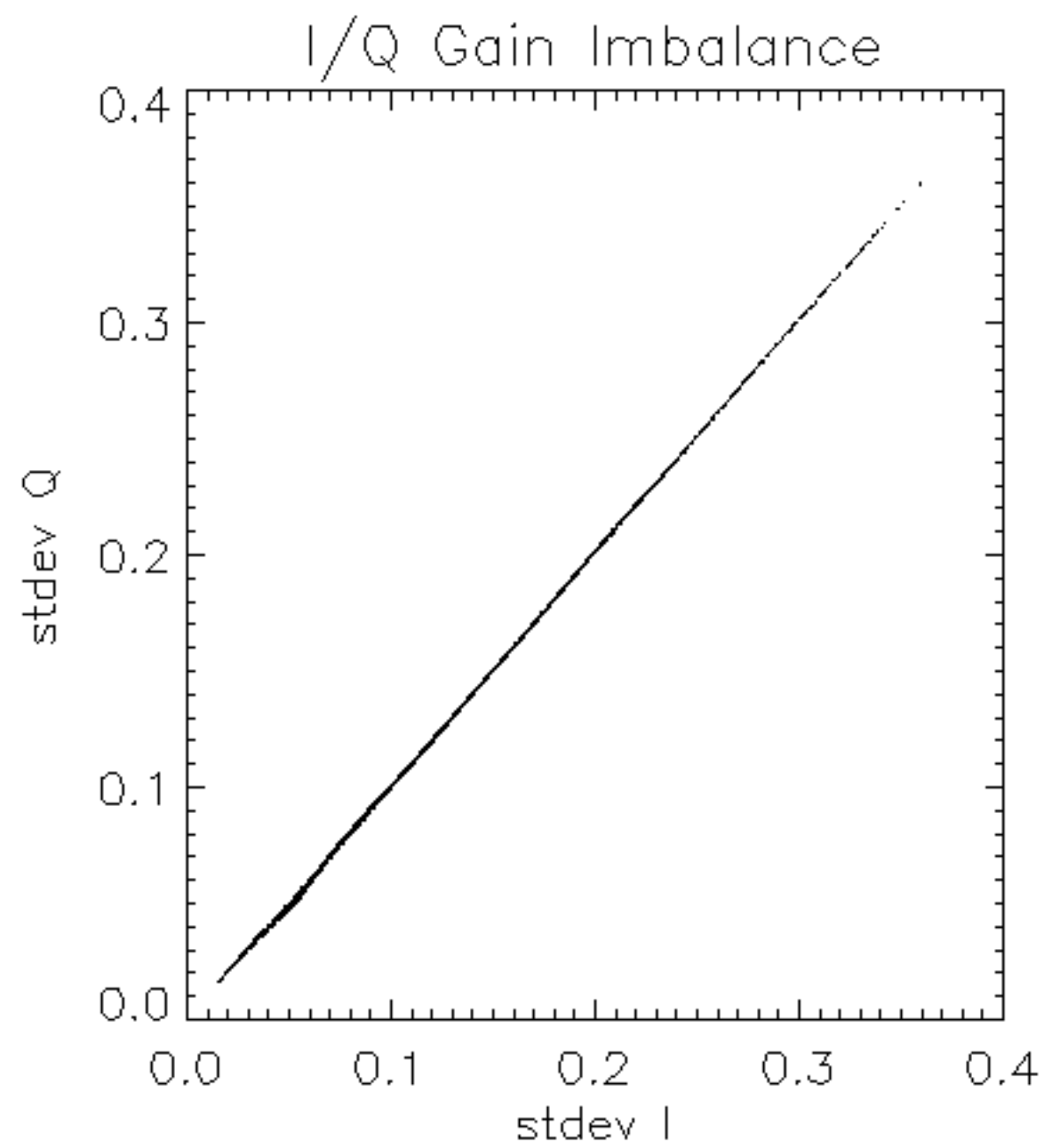


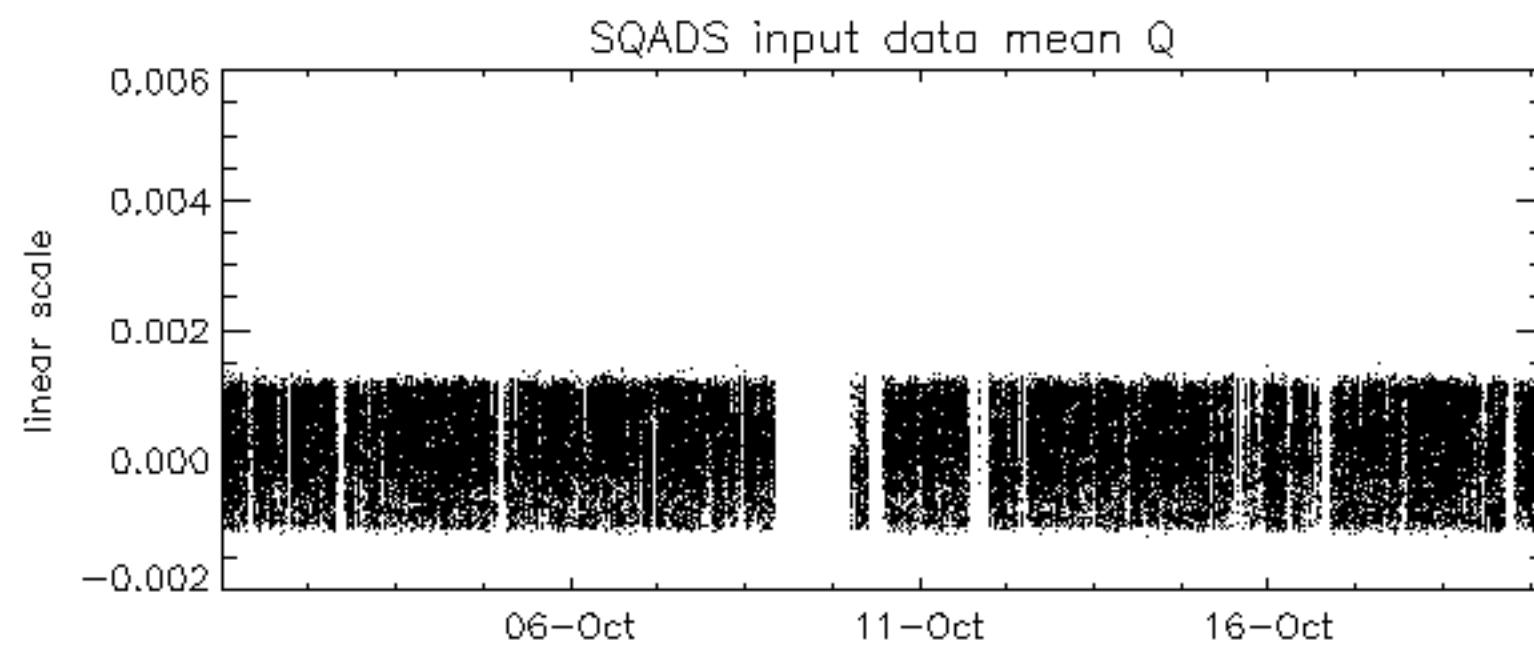
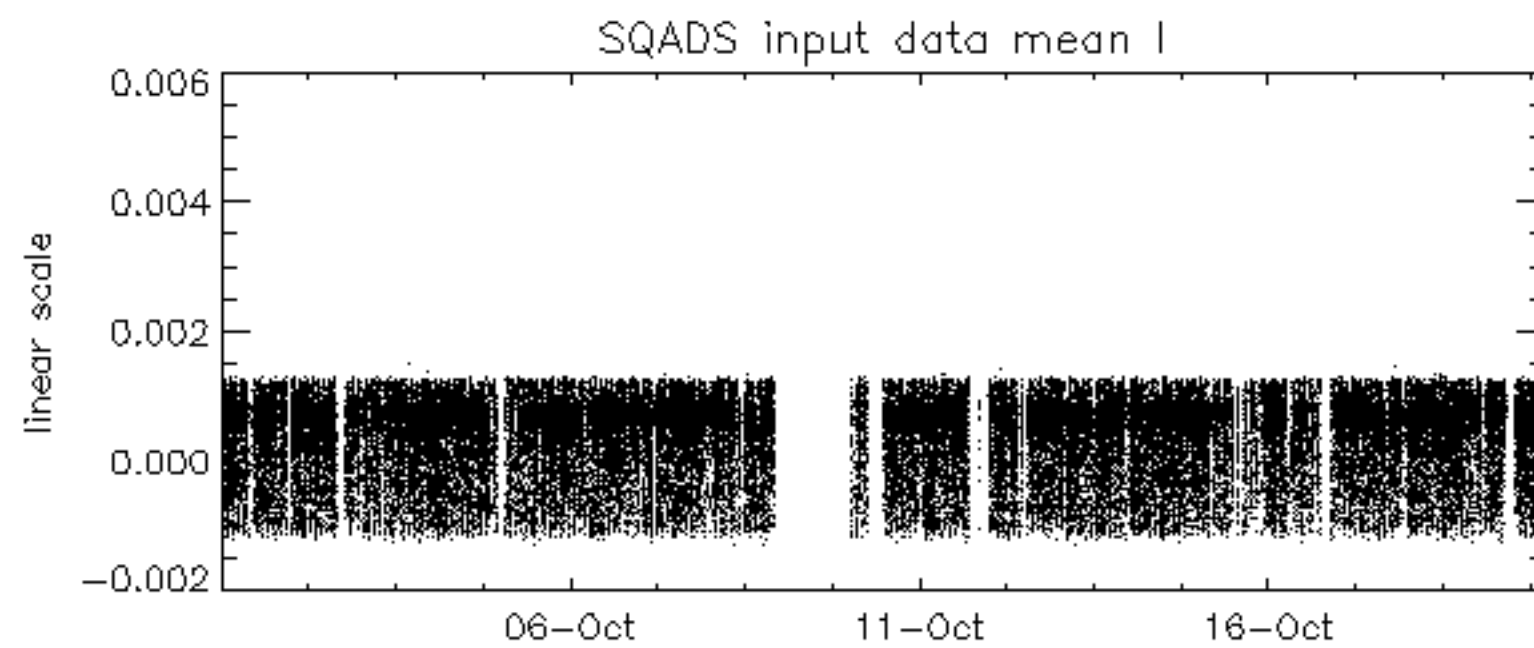
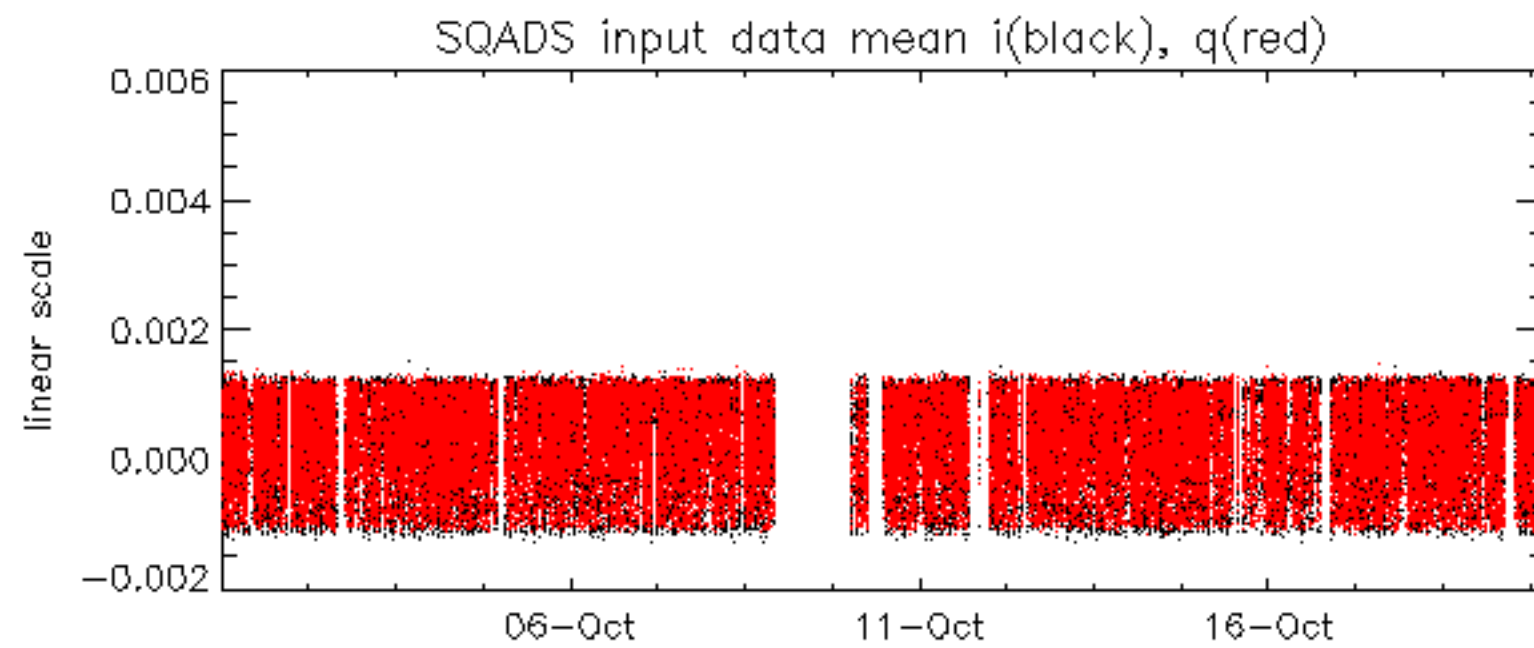


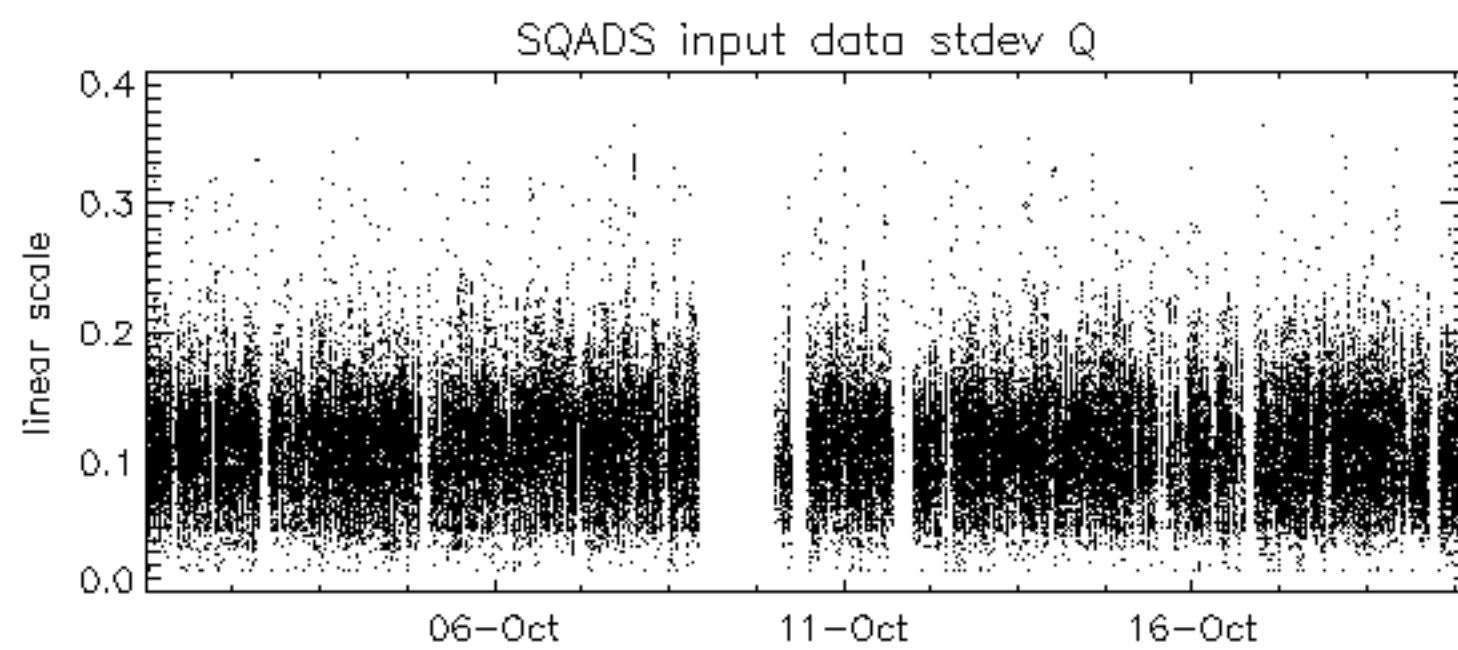
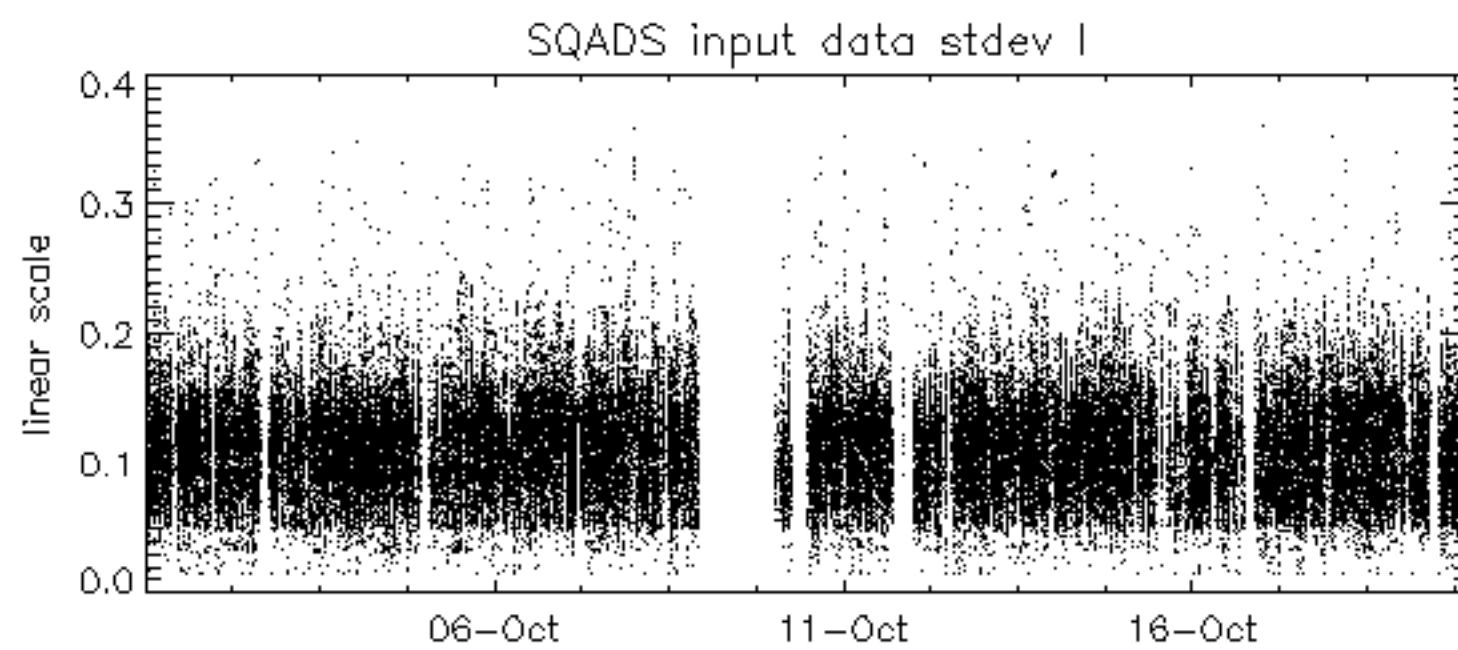
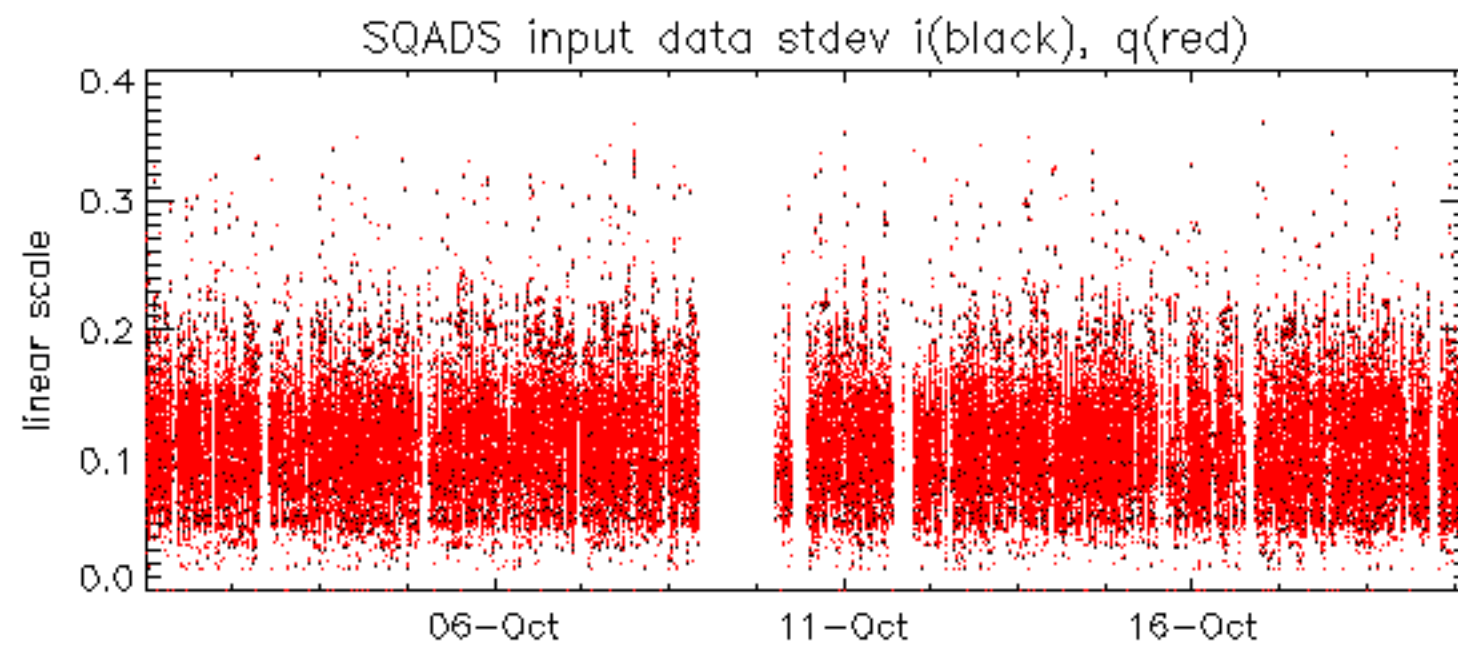
































No unavailabilities during the reported period.