

# REPORT OF 031127

1. [Introduction](#)
2. [Summary](#)
  - [Instrument Unavailability](#)
  - [Browse Visual Inspection](#)
  - [Module Stepping Results](#)
  - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
  - [Daily statistics \(row 3 and 24\)](#)
  - [Cyclic statistics \(row 3 and 24\)](#)
  - [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](#)
  - [Absolute Doppler](#)
  - [Doppler evolution versus ANX](#)

## 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

No anomalies observed on available browse products

### 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	20031126 185634
H	20031126 185514

#### MSM in V/V polarisation

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

#### 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	-3.76183	-22.5822	-8.16566
	stdev	0.00633283	0.0611187	0.00335166

24	mean	-5.12774	-21.2616	-8.16566
	stdev	0.0125380	0.0526313	0.00335166



## 4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.77073	-22.5572	-8.15828
	stdev	0.00625950	0.0666390	0.00328098
24	mean	-5.13722	-21.2461	-8.15828
	stdev	0.0130016	0.0602814	0.00328098



## 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	0.000332093
	stdev	9.77668e-06
MEAN Q	mean	0.000158488
	stdev	9.76792e-06



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.112708
	stdev	0.00154131

STDEV Q	mean	0.112960
	stdev	0.00155800



### 5.3 - Gain imbalance I/Q



## 6 - Wave Doppler Analysis

No anomalies observed 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

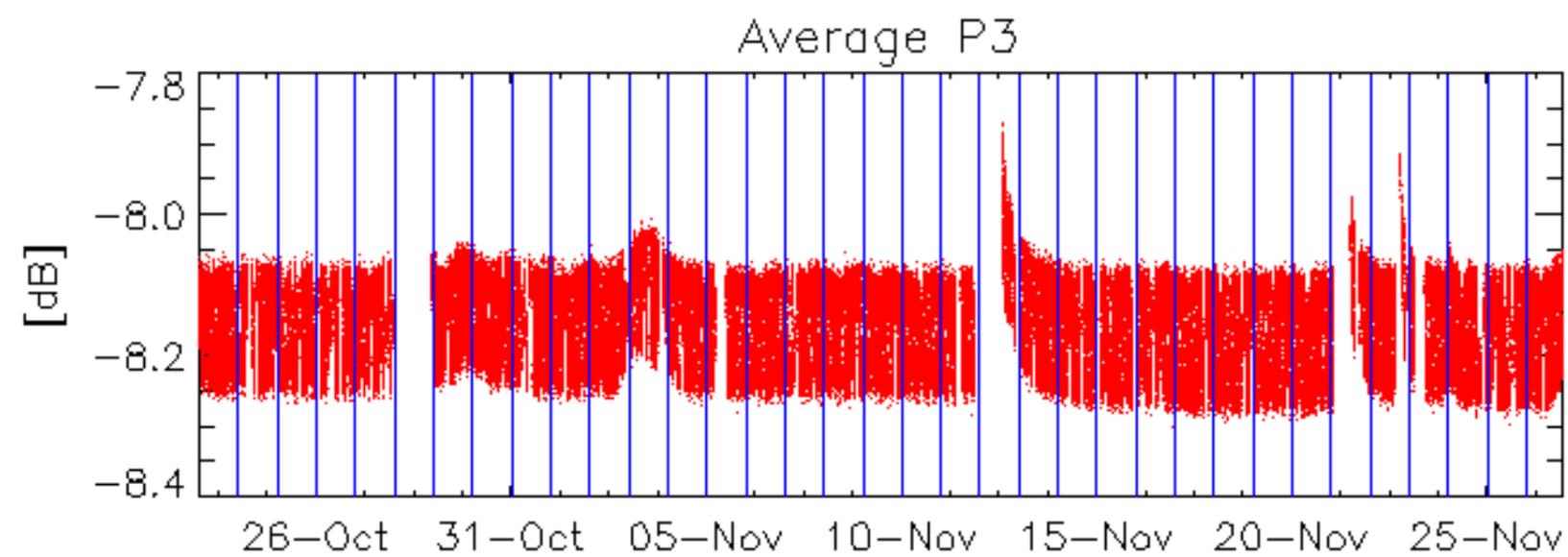
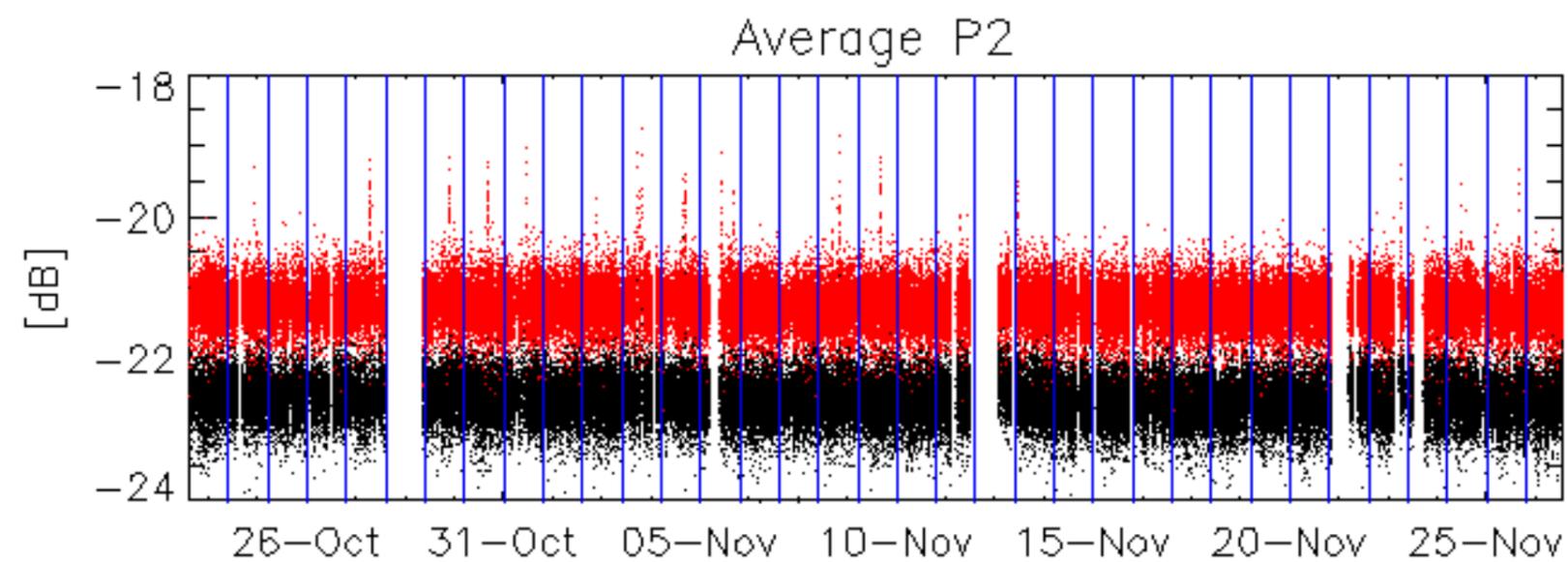
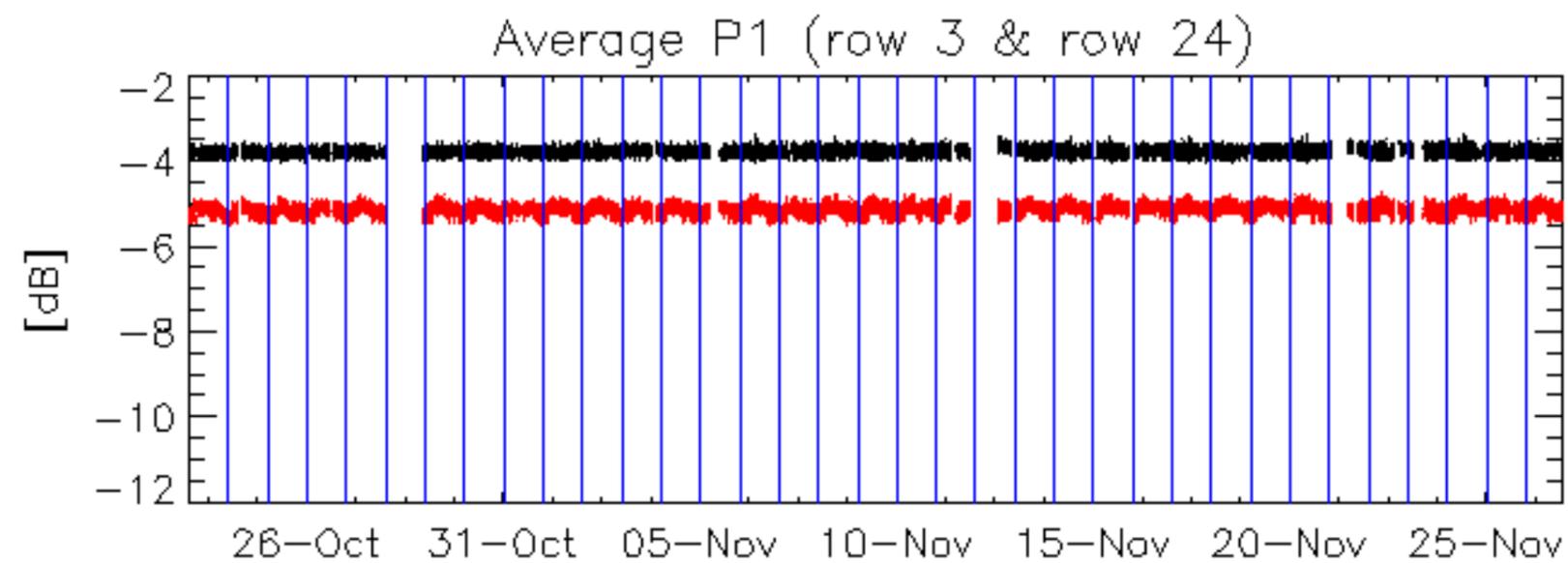
Ascending
Descending

### 6.3 - Doppler evolution versus ANX

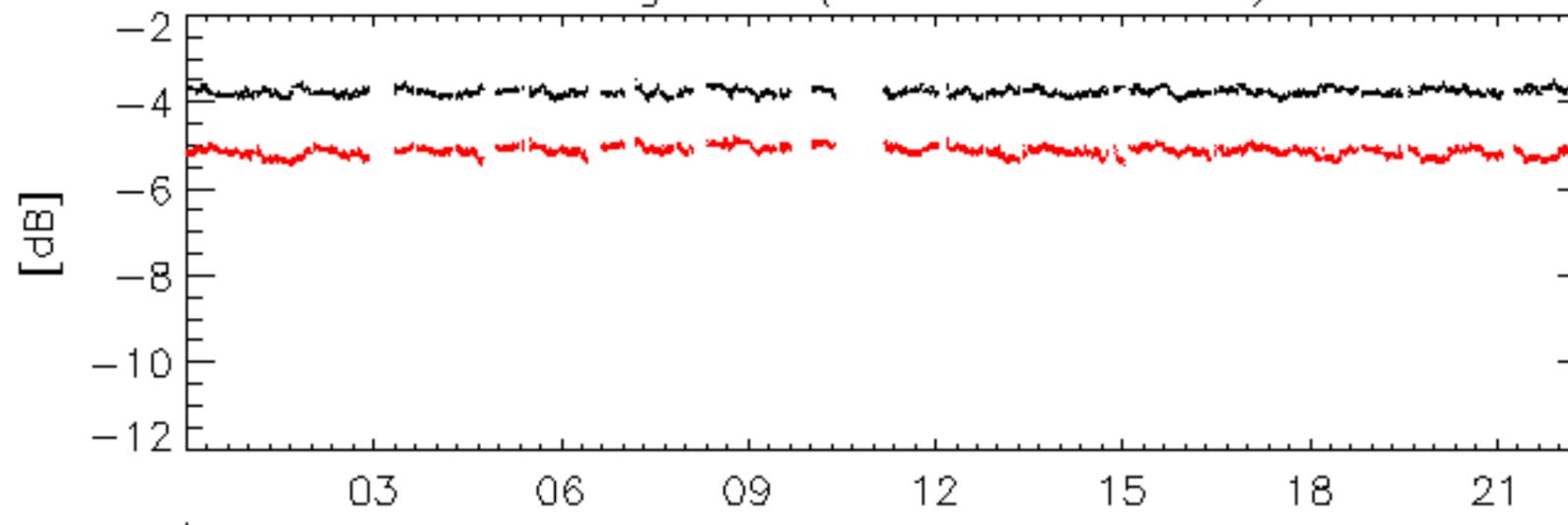
#### Evolution Doppler error versus ANX





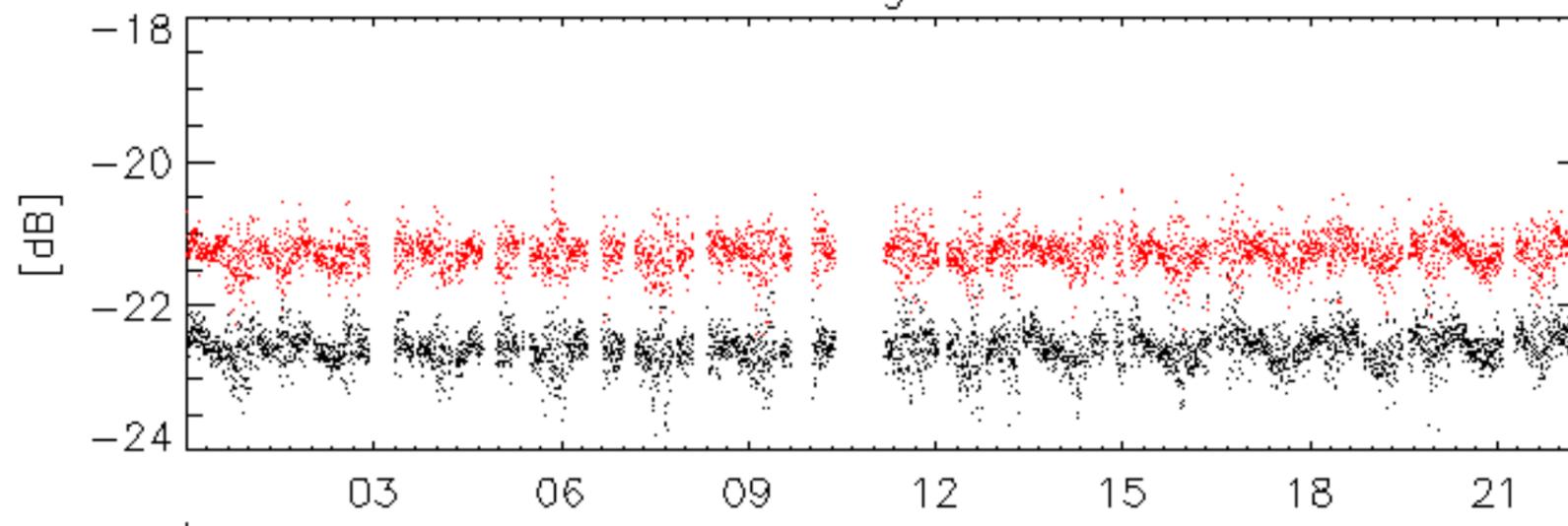


Average P1 (row 3 & row 24)



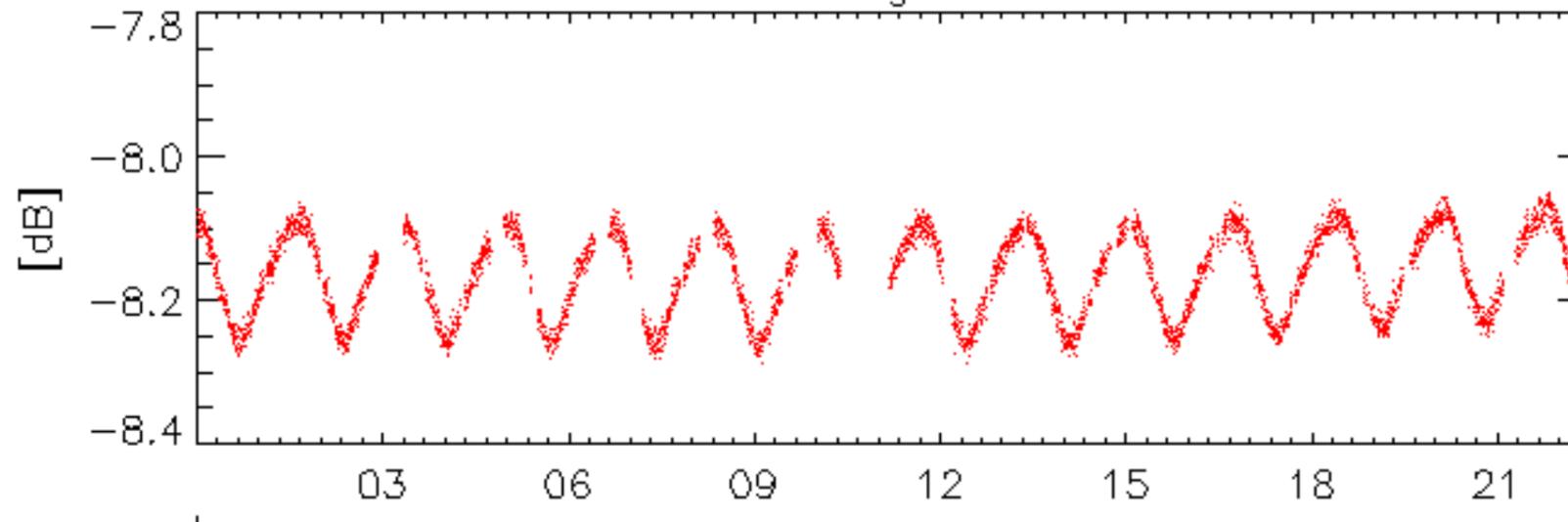
26-Nov

Average P2



26-Nov

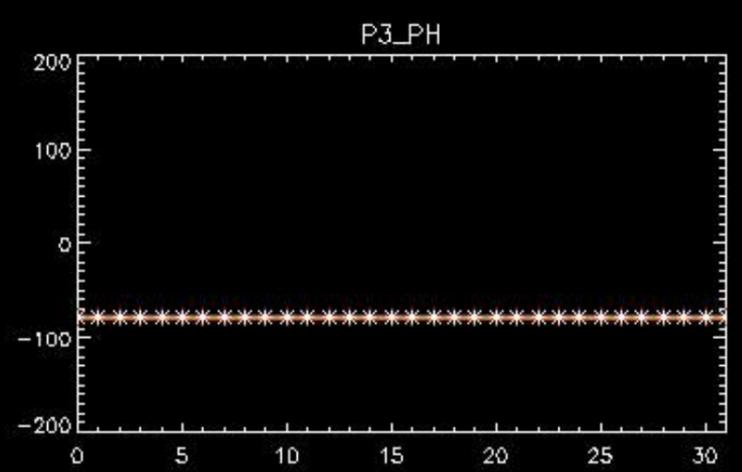
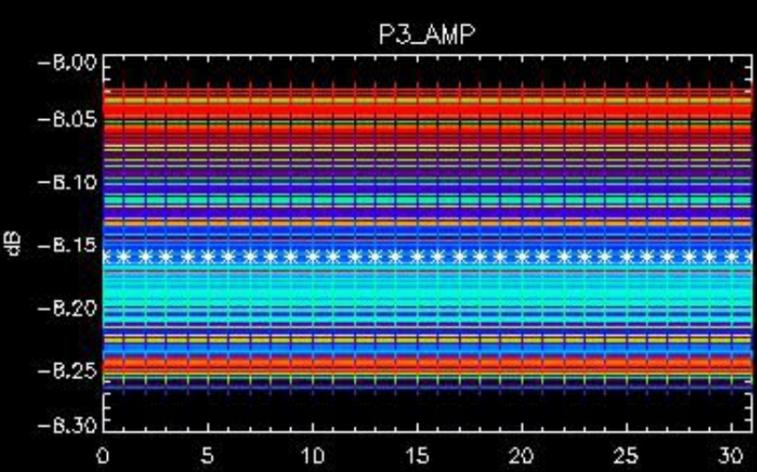
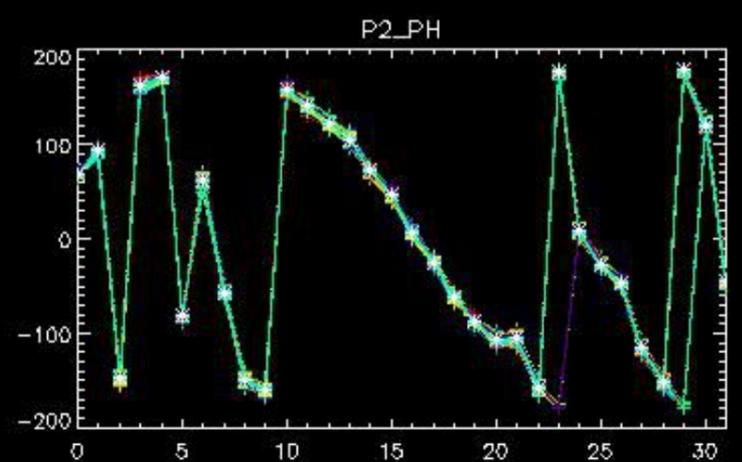
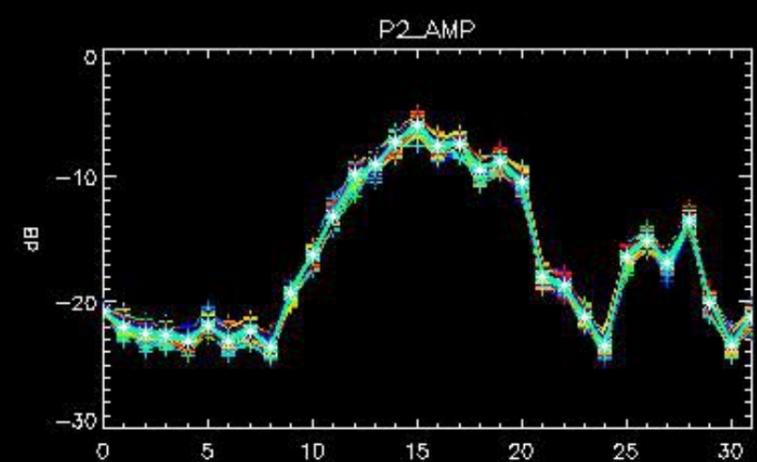
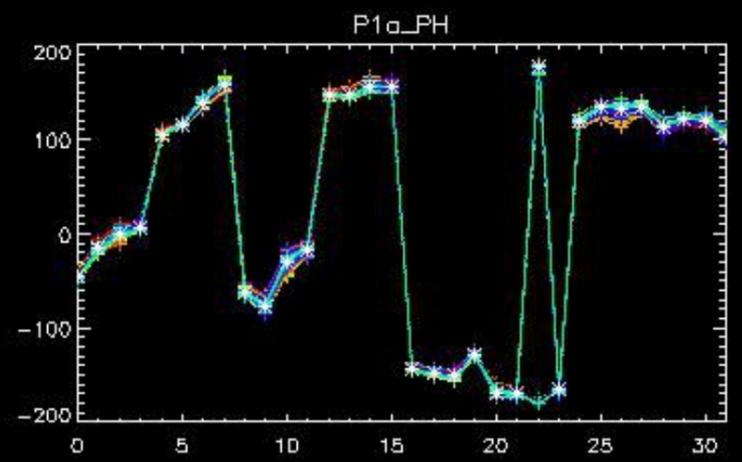
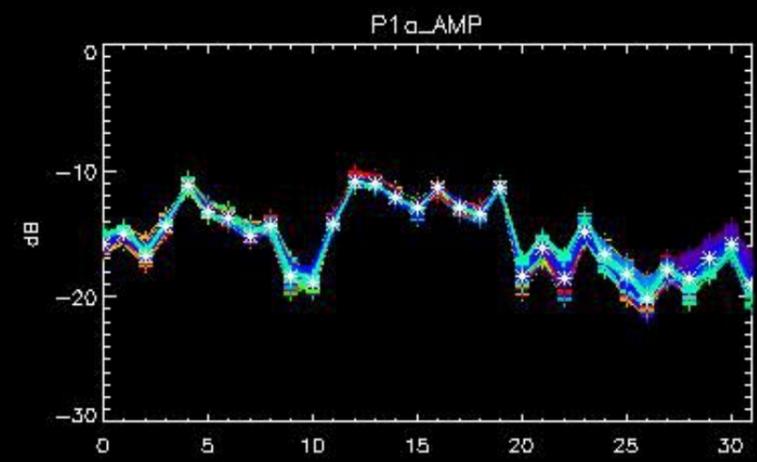
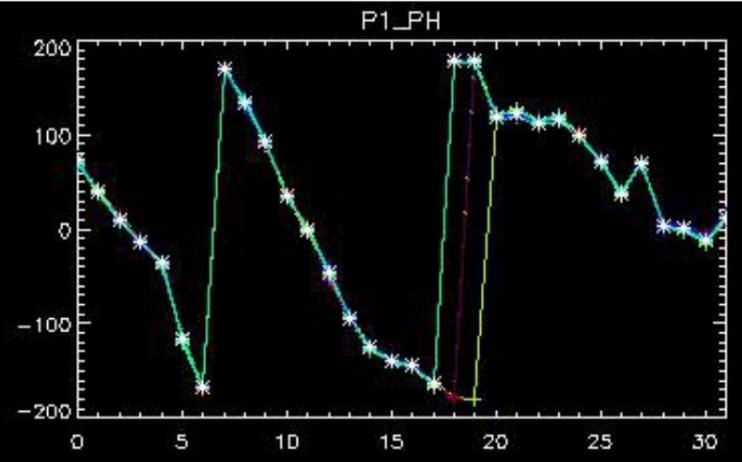
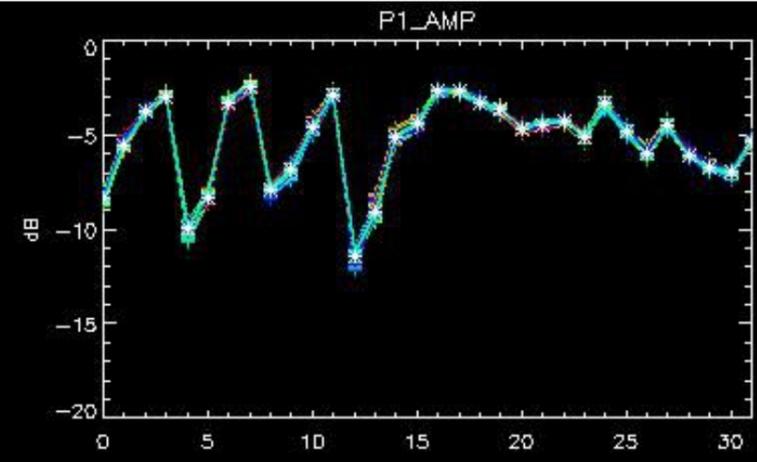
Average P3



26-Nov

No anomalies observed on available browse products

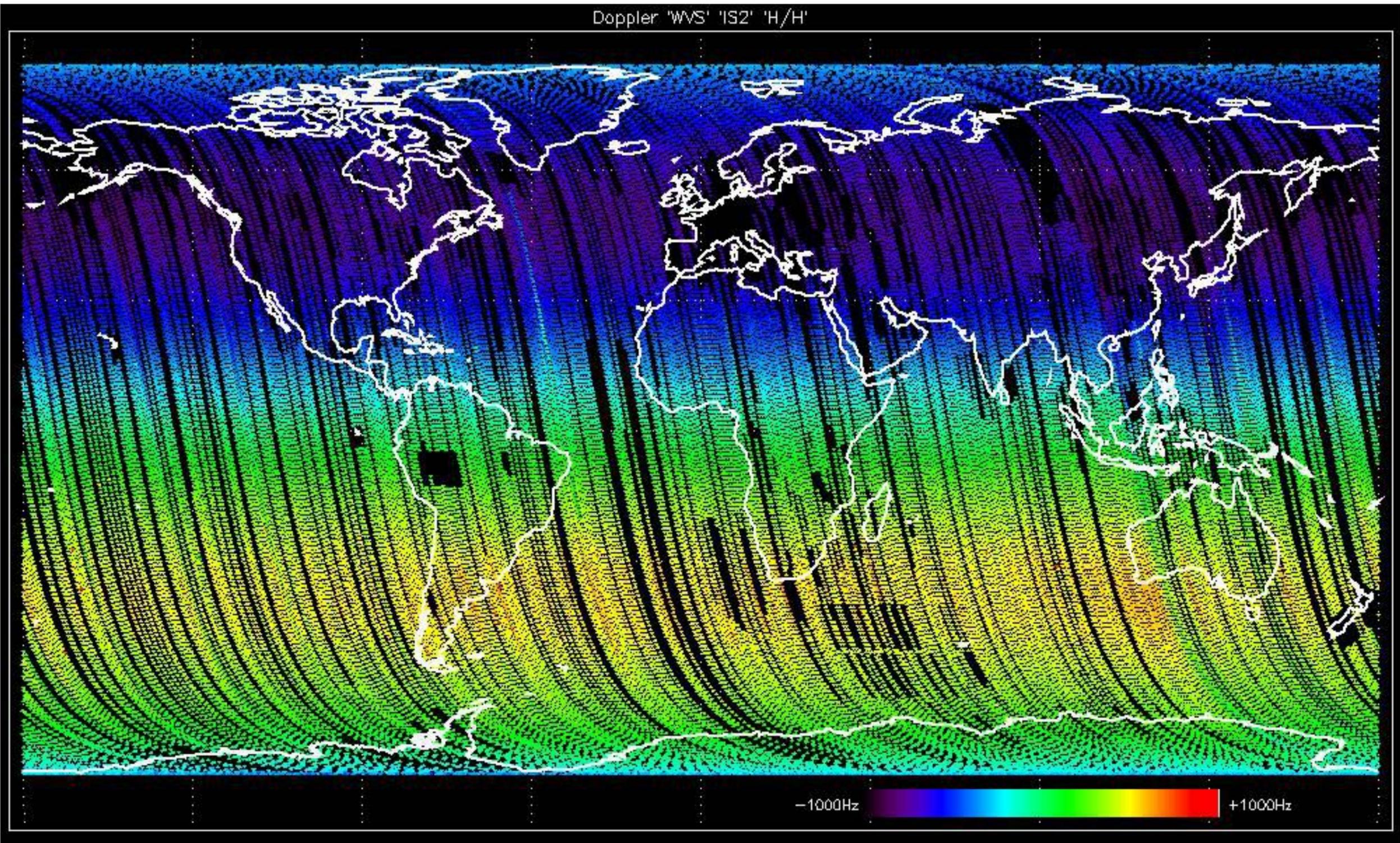
No anomalies observed.



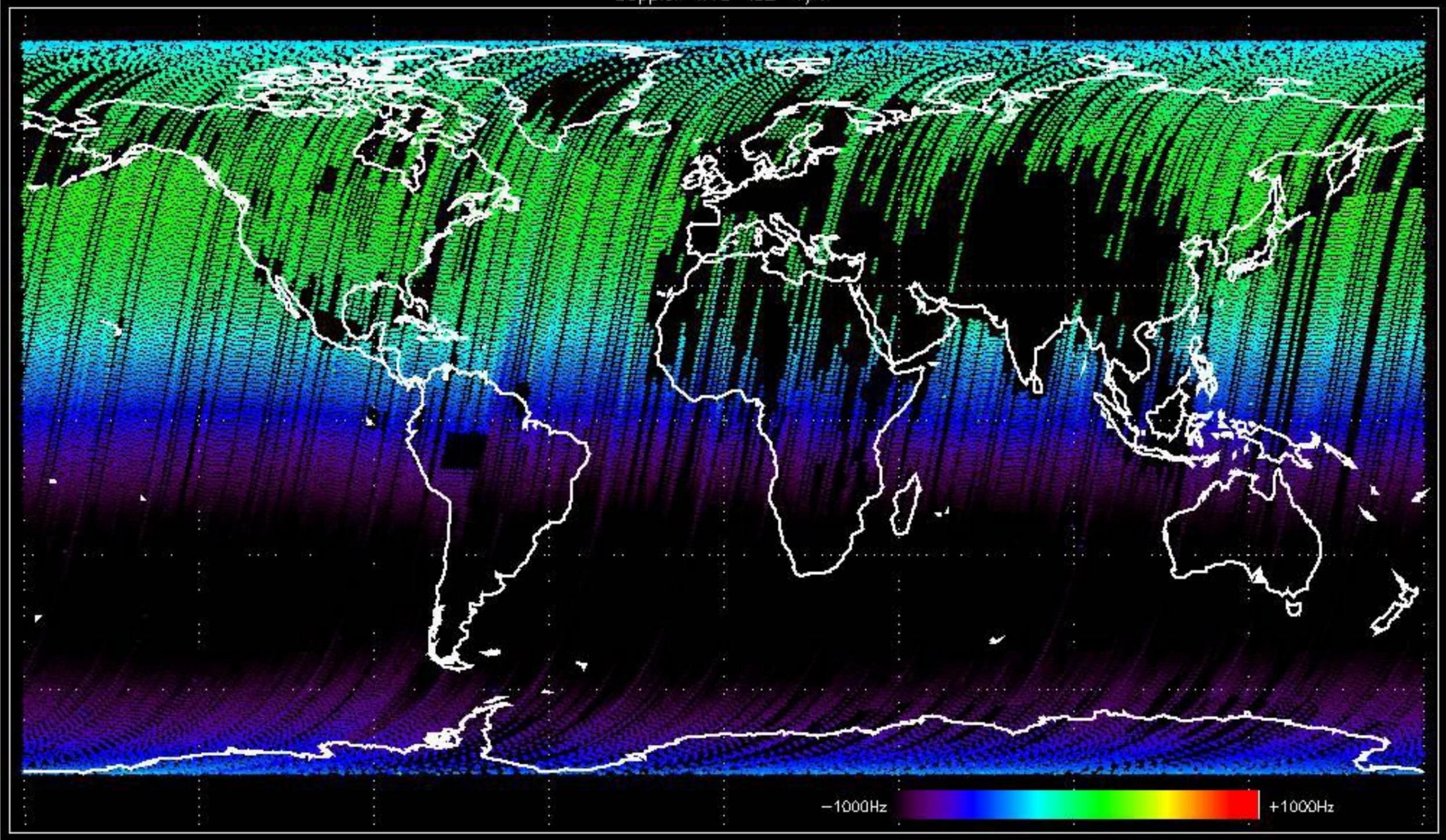
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

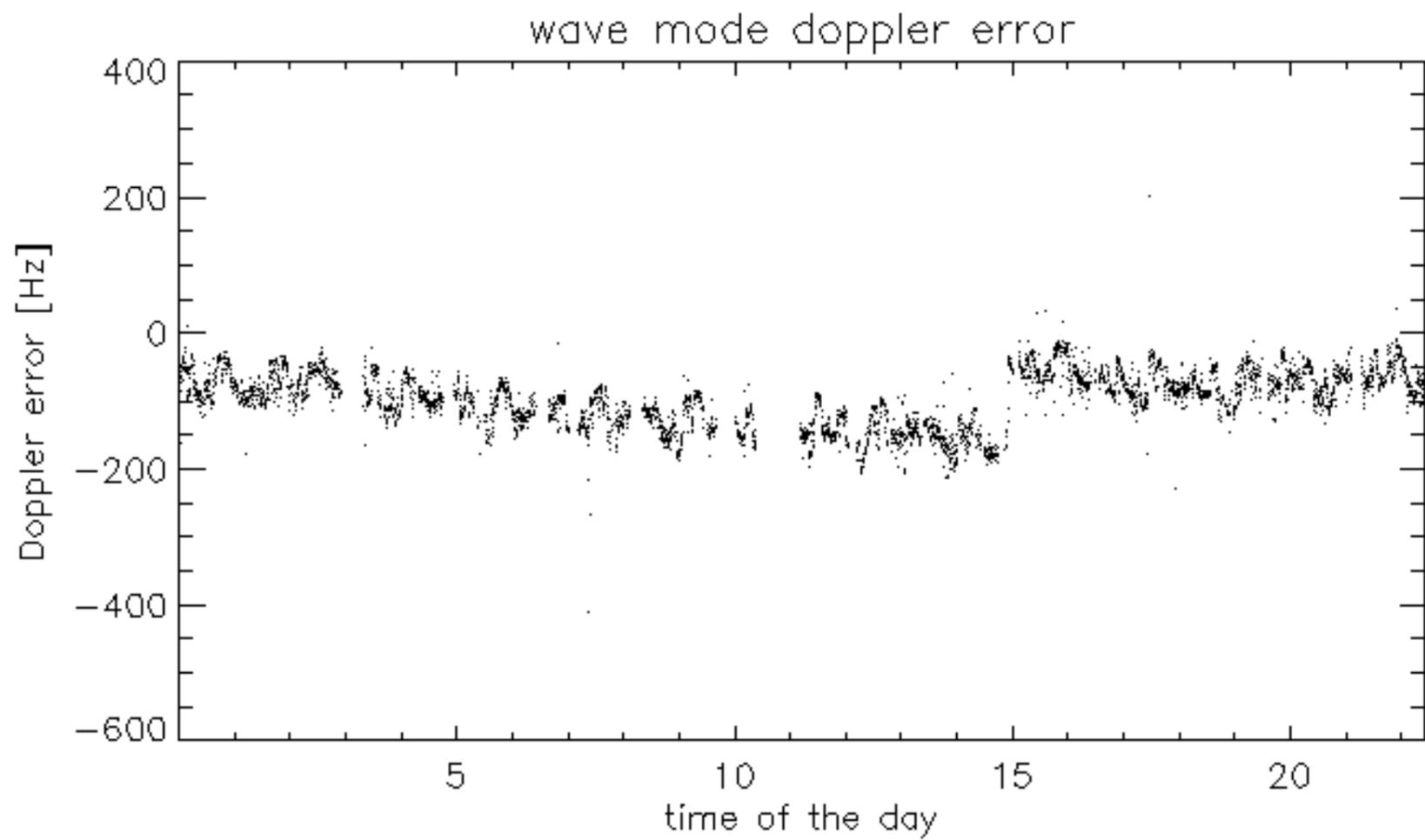
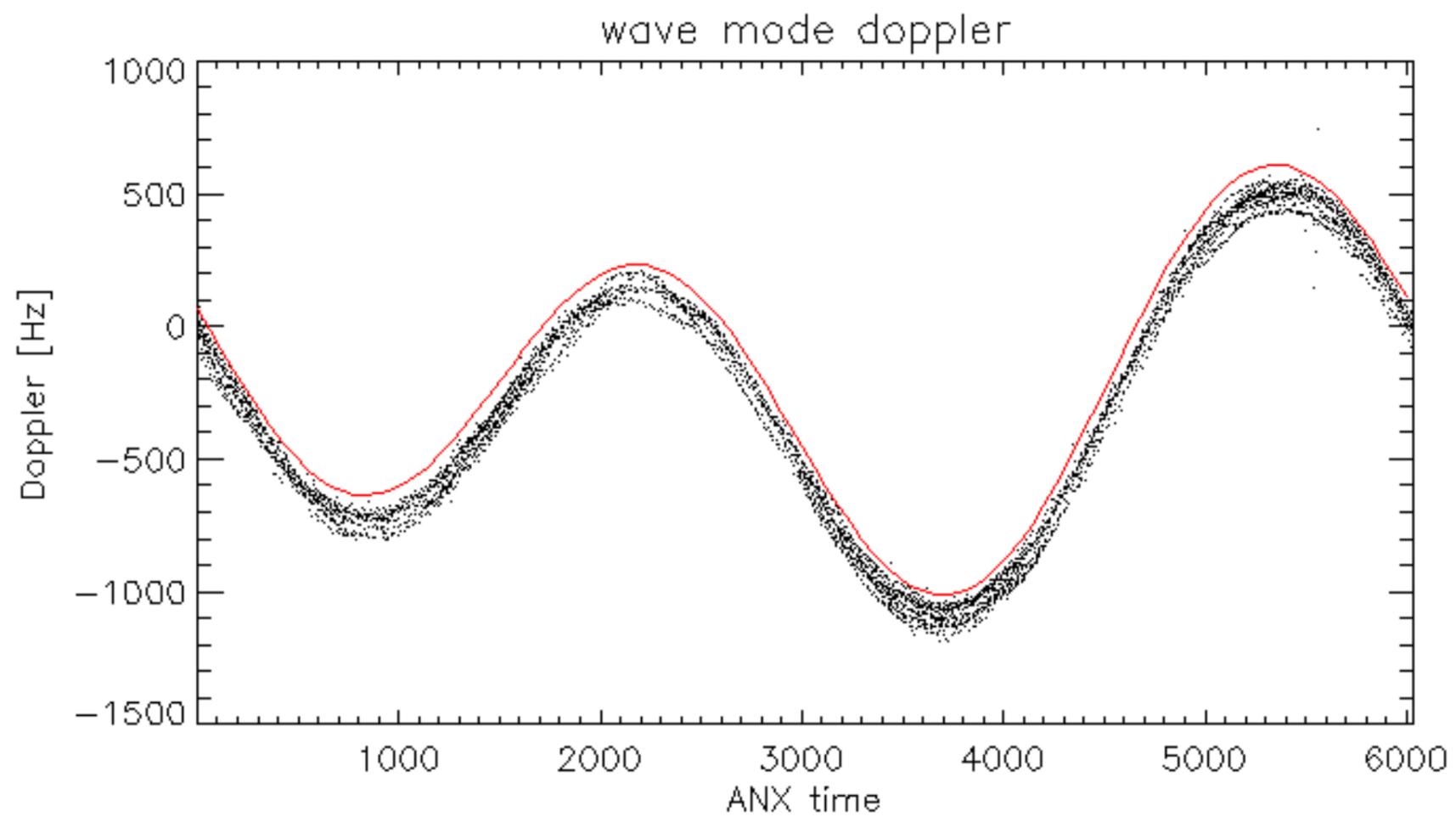
No anomalies observed Doppler evolution.  
Doppler analysis performed over the last 35 days

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

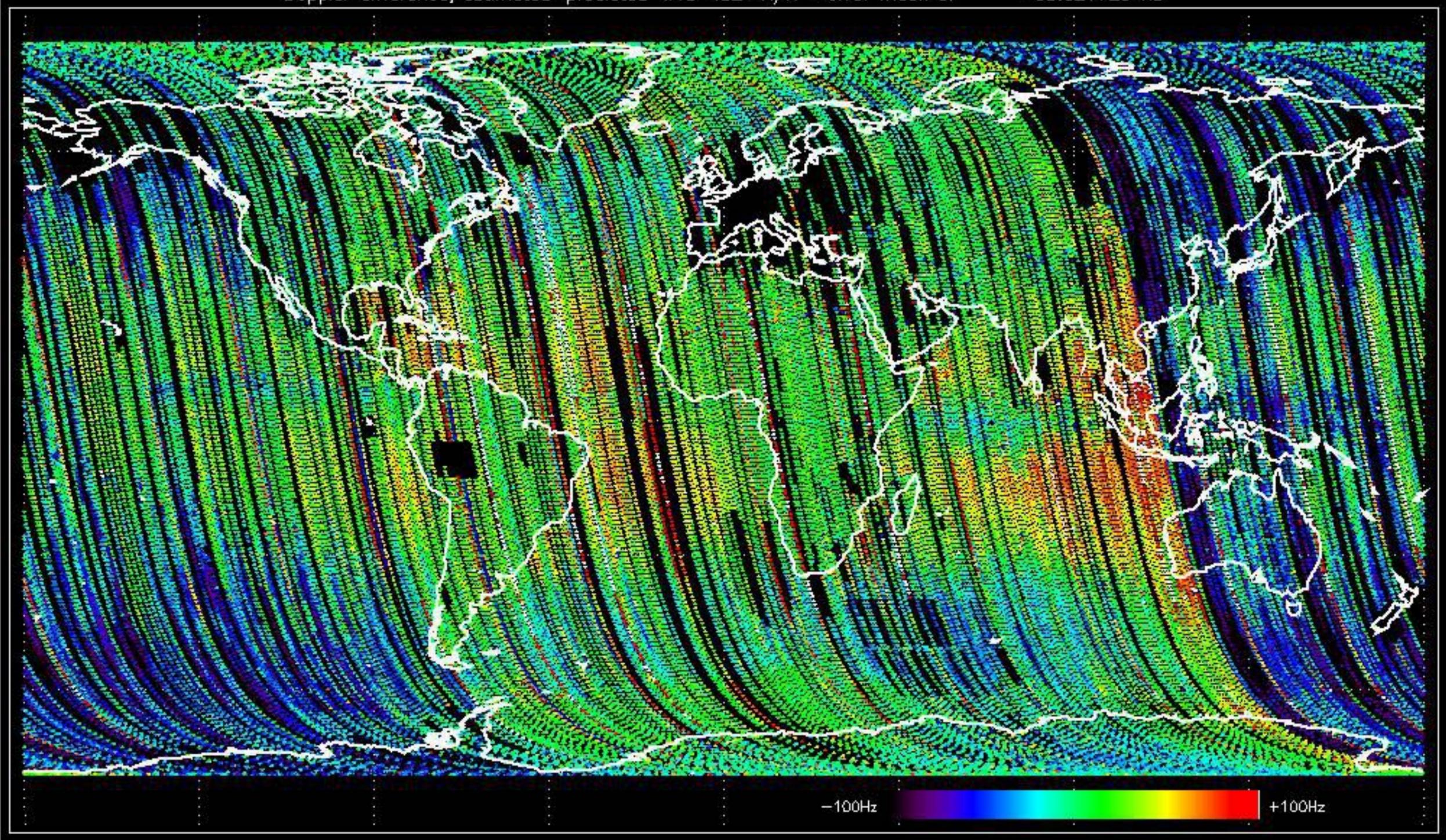


Doppler 'WVS' 'ISZ' 'V/V'

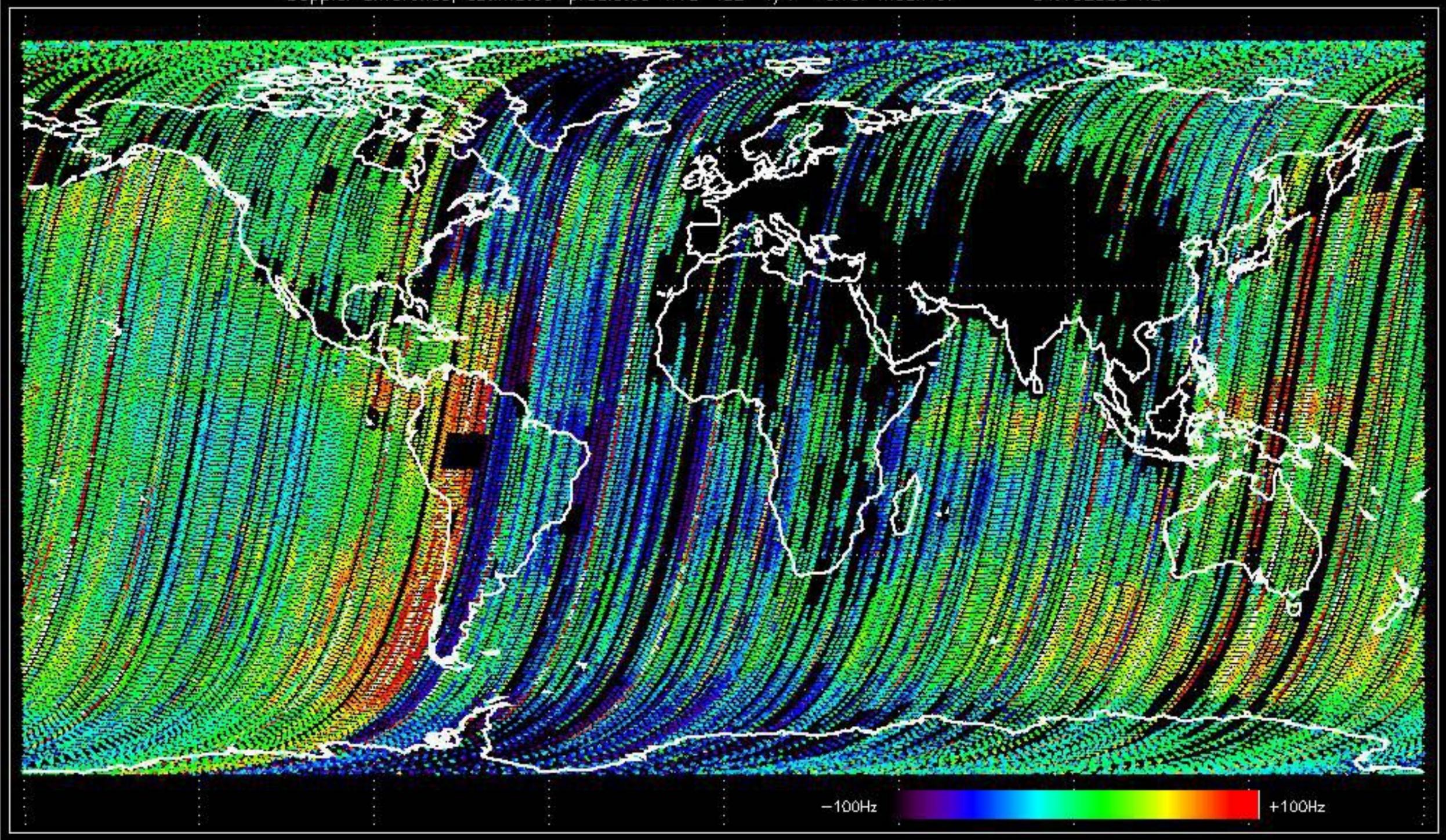




Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of -89.021723 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' 'V/V' -error mean of -84.162535 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 foe which calibration offsets are to be applied.  
No anomalies observed on available MS products:

No anomalies observed.







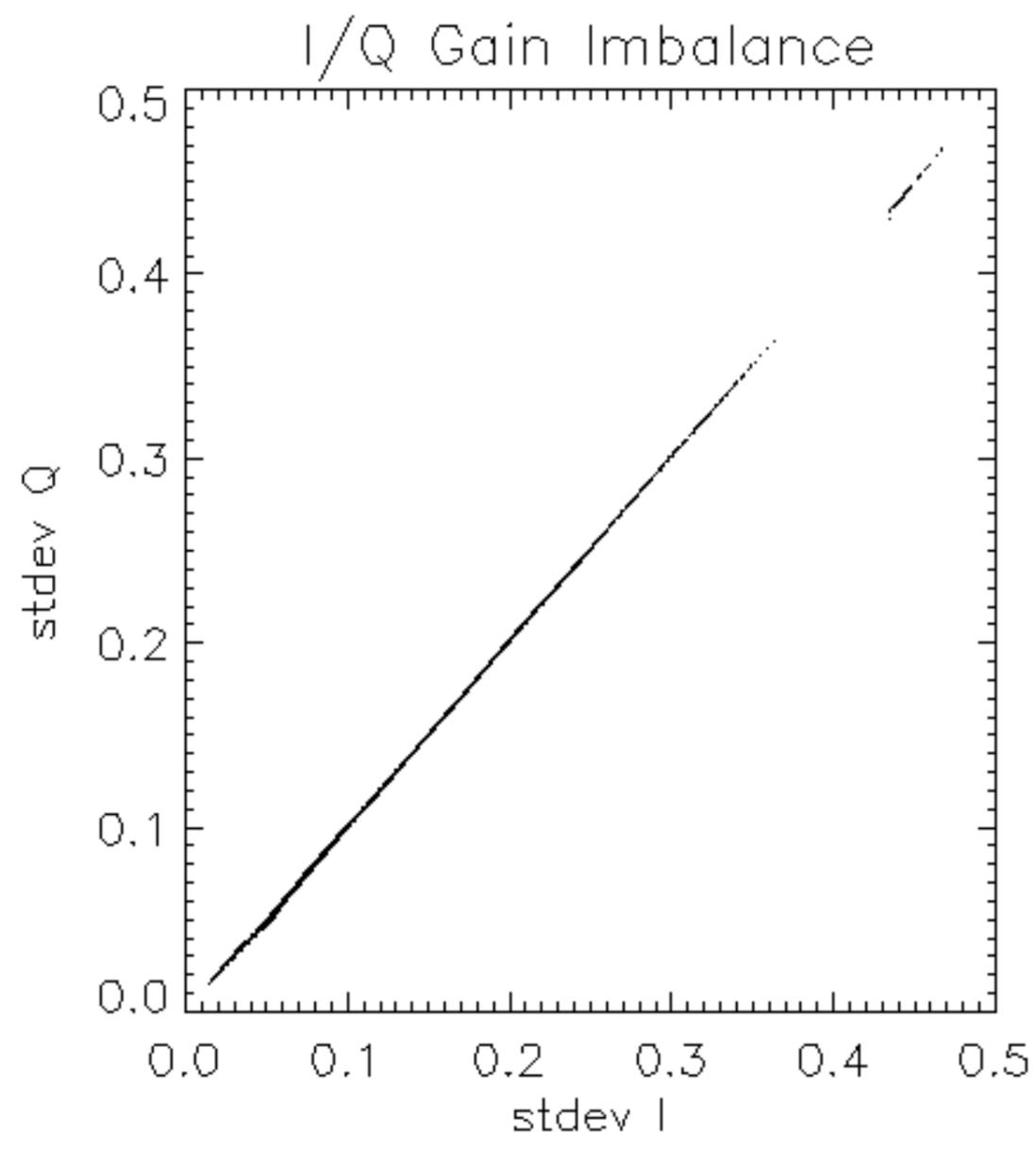


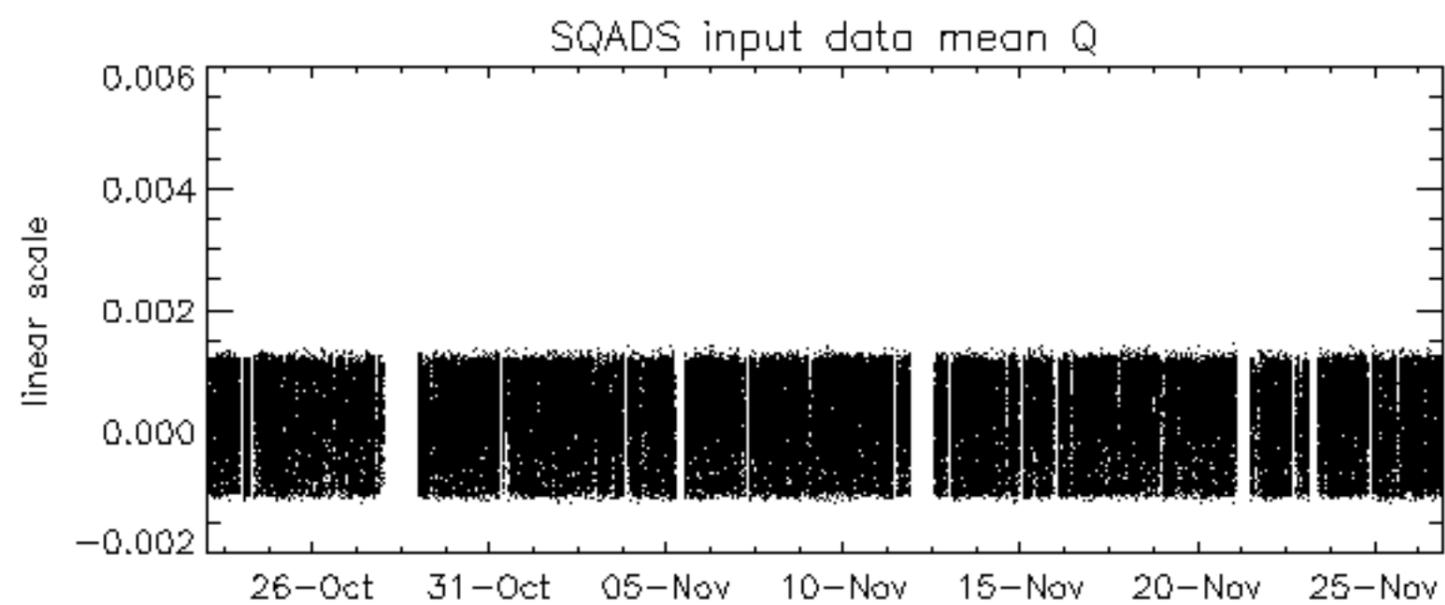
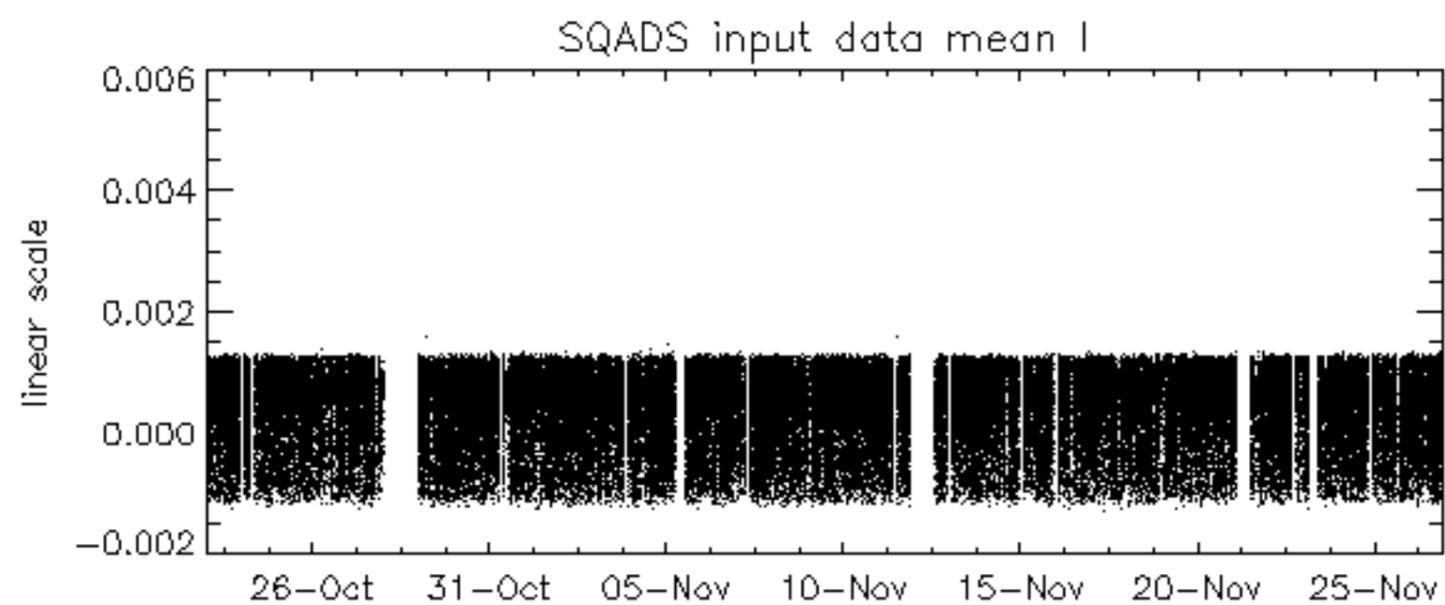
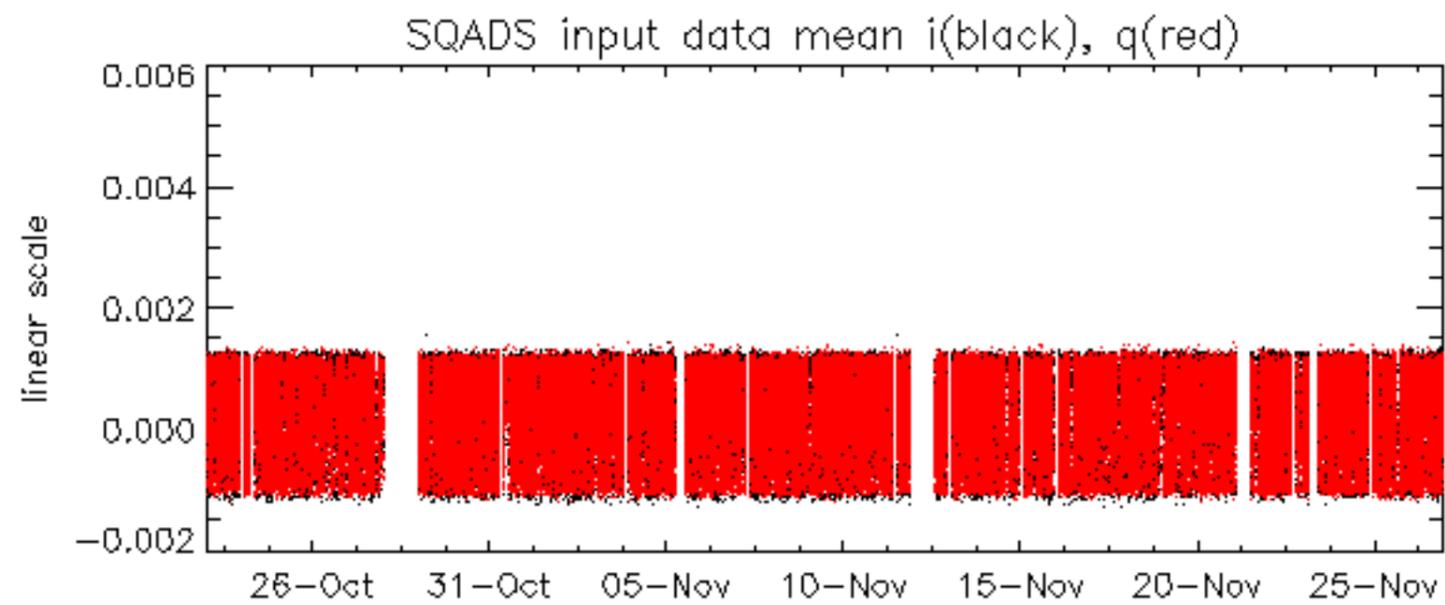


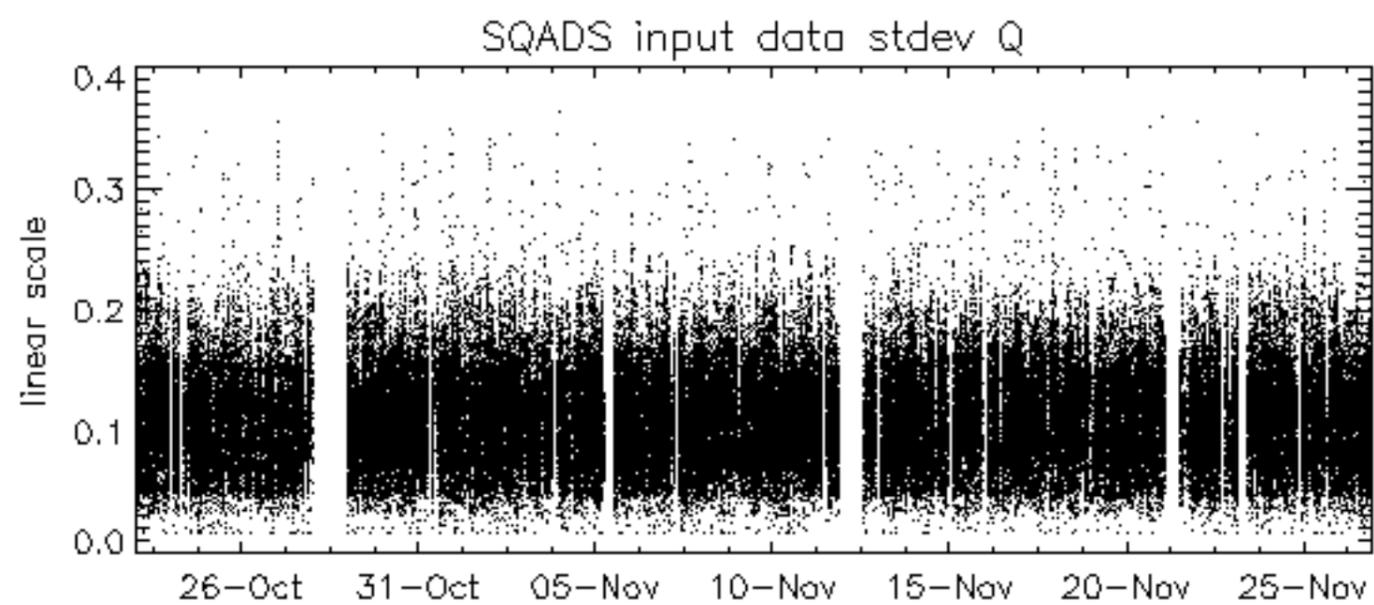
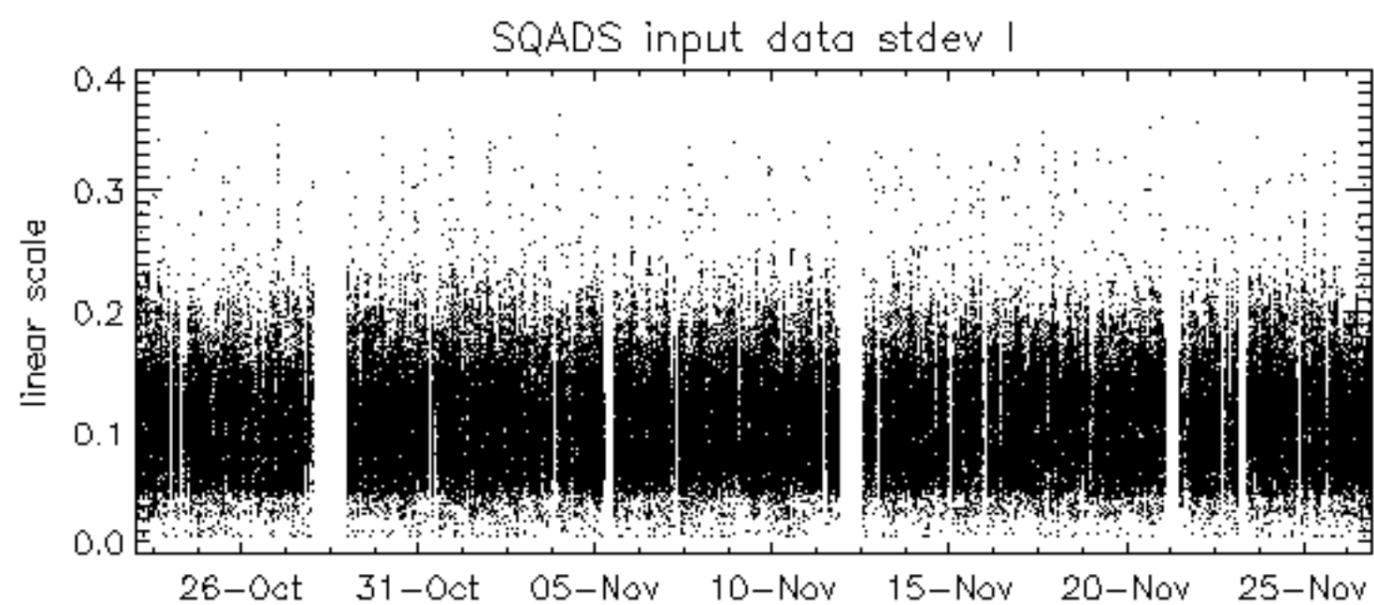
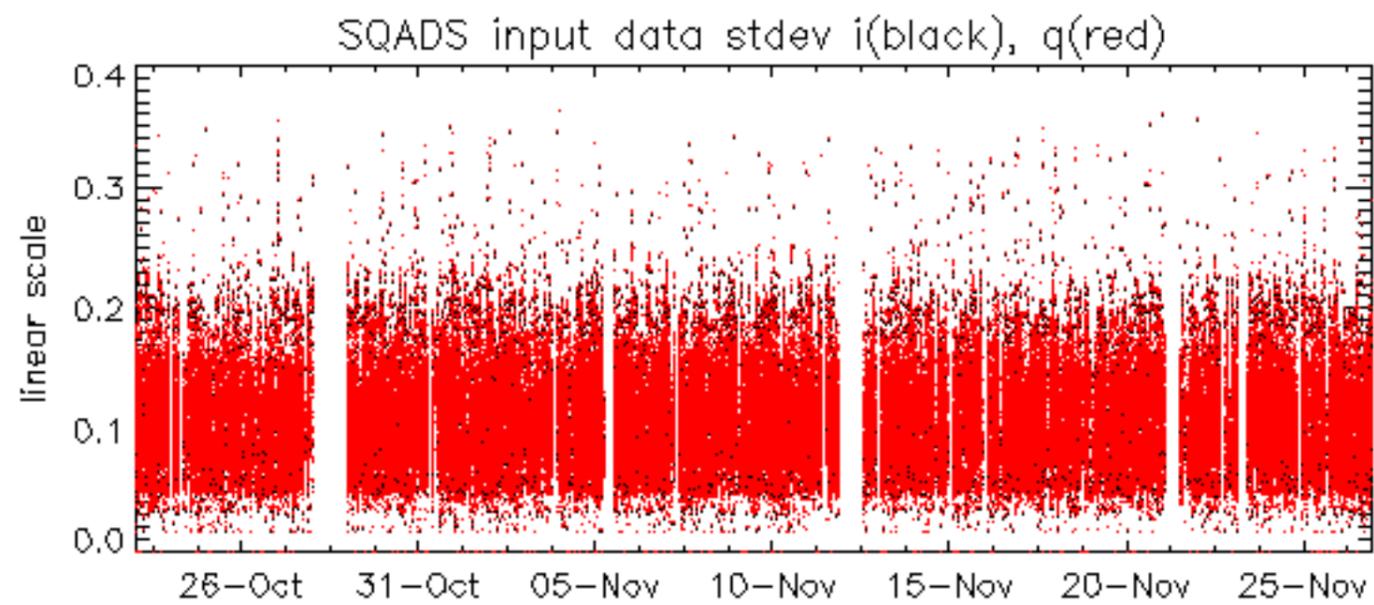




























No unavailabilities during the reported period.