

# REPORT OF 040212

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

Wave segment unavailable, due to Module Stepping Mode anomaly which caused an anomalous transition to Pre-op, from 2004-02-11 20:17:40 to 2004-02-11 20:27:06

### 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	20040211 201701
H	20040211 201541

#### 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	-3.63789	-22.4193	-8.12858
	stdev	0.00687771	0.0769003	0.00297910

24	mean	-5.07487	-21.0595	-8.12858
	stdev	0.0140236	0.0764656	0.00297910



## 4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.67116	-22.4562	-8.14272
	stdev	0.00699971	0.0719520	0.00315369
24	mean	-5.10345	-21.1041	-8.14272
	stdev	0.0149502	0.0667783	0.00315369



## 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	0.000433011
	stdev	2.85312e-07
MEAN Q	mean	0.000359533
	stdev	3.31249e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.119330
	stdev	0.00138814

STDEV Q	mean	0.119564
	stdev	0.00140339



### 5.3 - Gain imbalance I/Q



## 6 - Wave Doppler Analysis

Preliminary report. The data is not yet controlled

### 6.1 - Unbiased Doppler Error

Evolution of unbiased Doppler error (Real - Expected)
Ascending
Descending

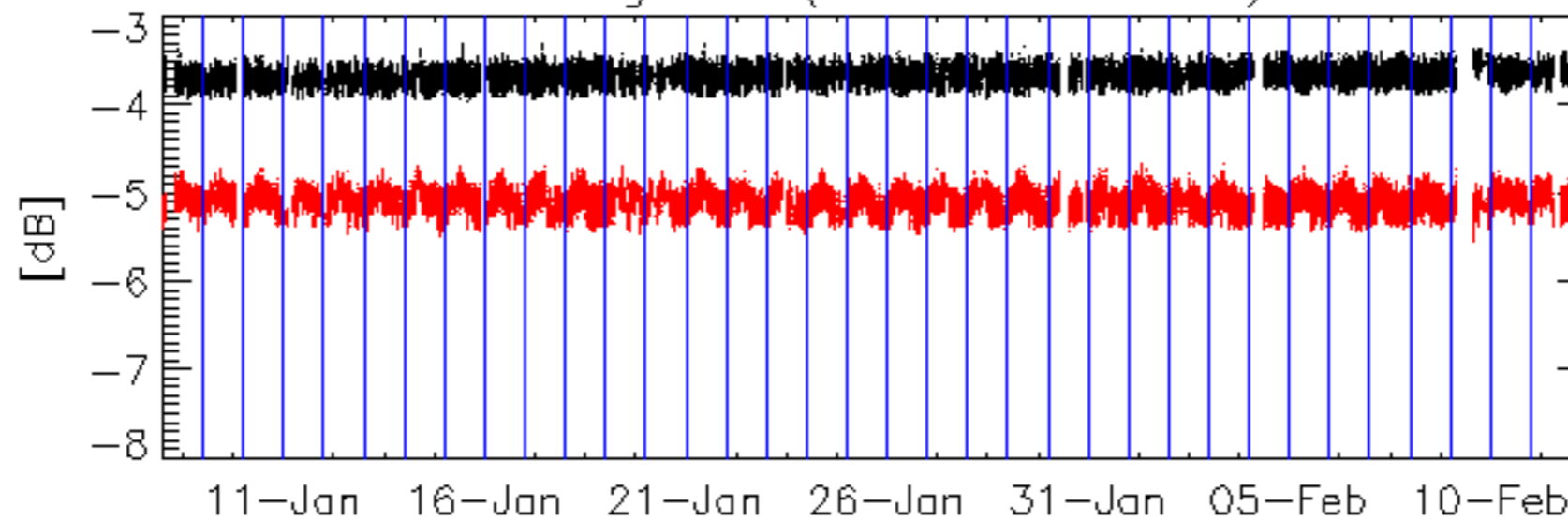
### 6.2 - Absolute Doppler

Evolution of Absolute Doppler
Ascending
Descending

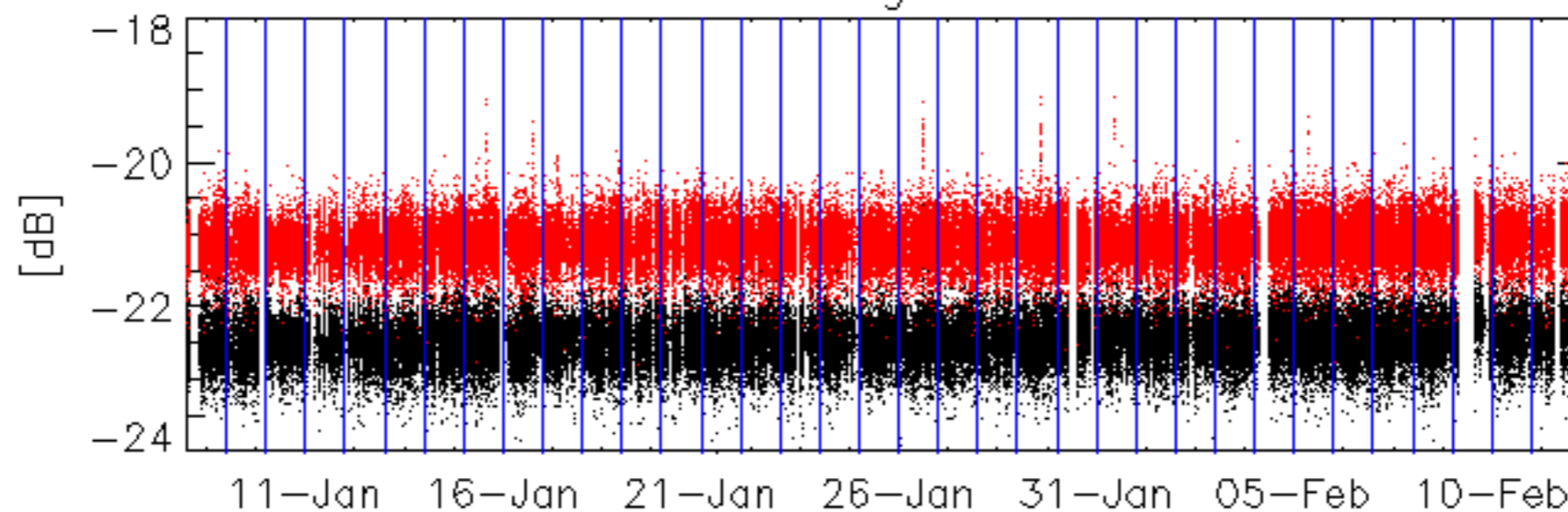
### 6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX

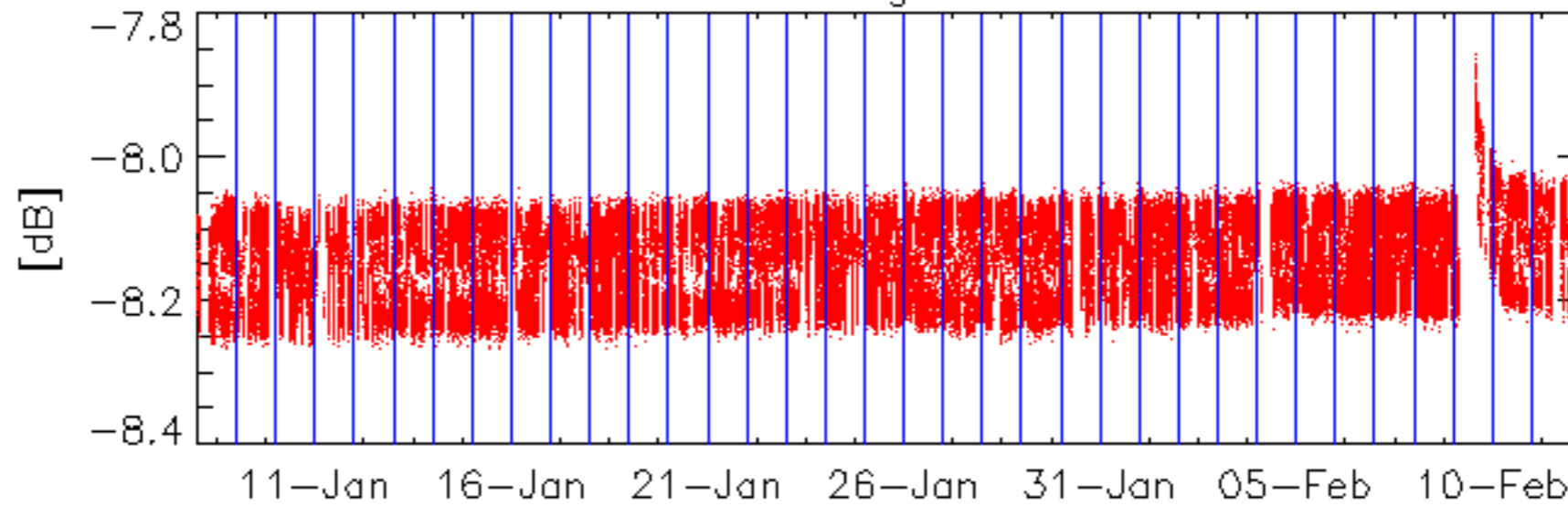

Average P1 (row 3 & row 24)



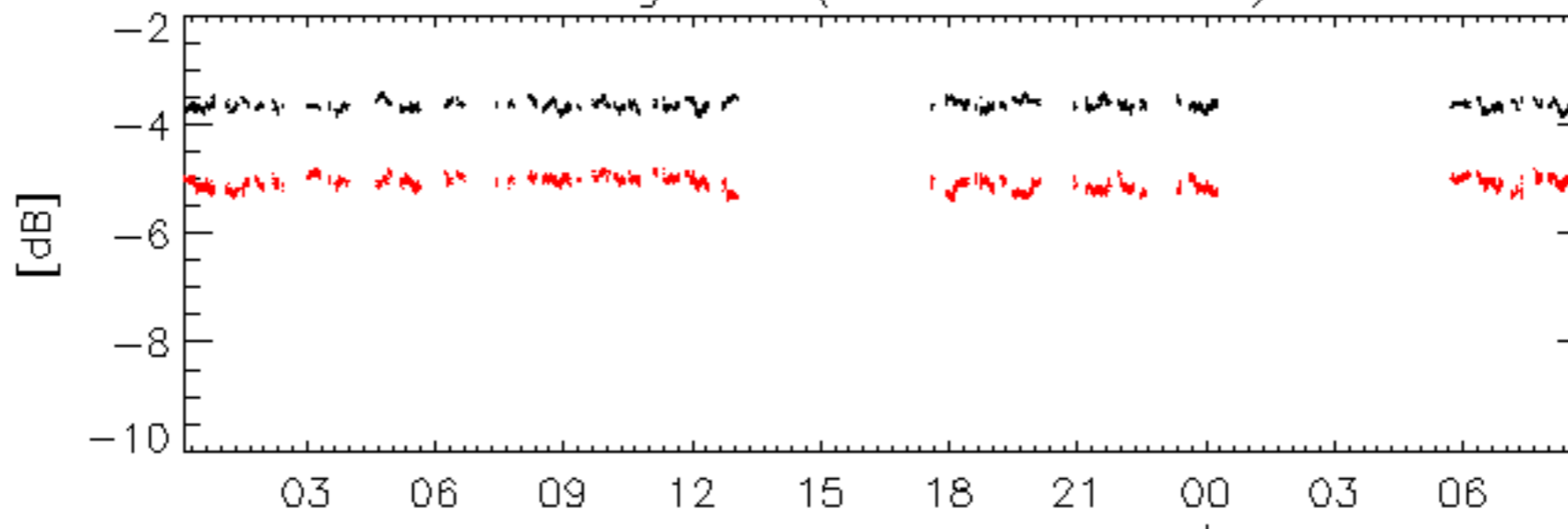
Average P2



Average P3

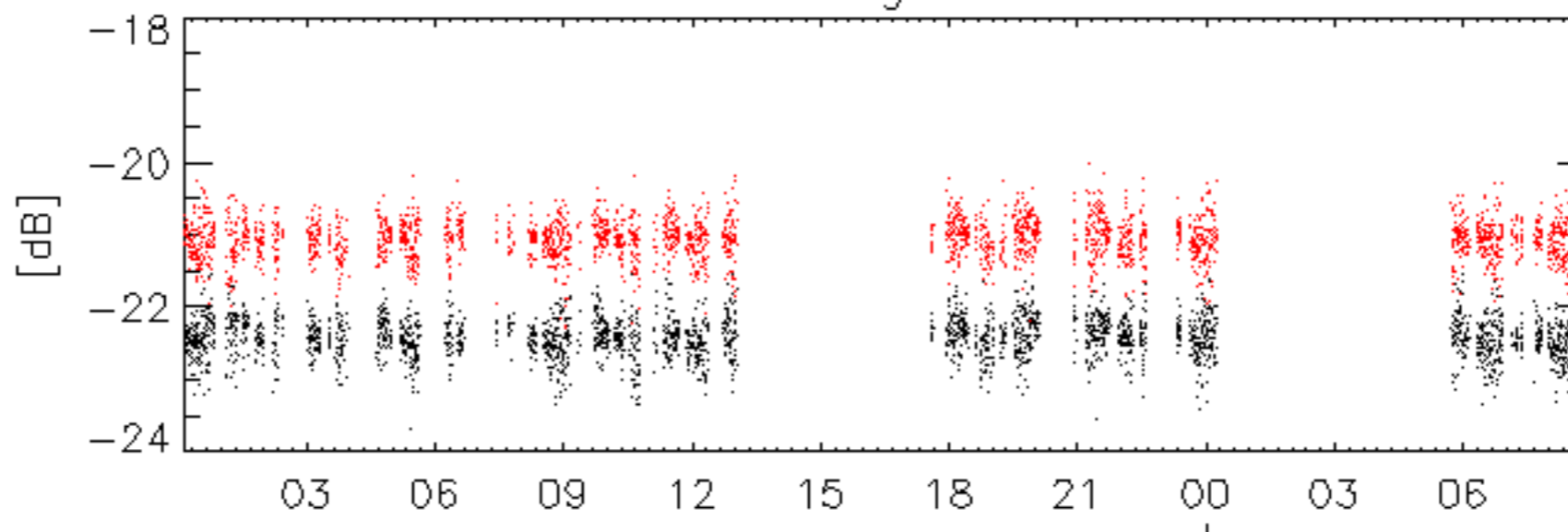


Average P1 (row 3 & row 24)



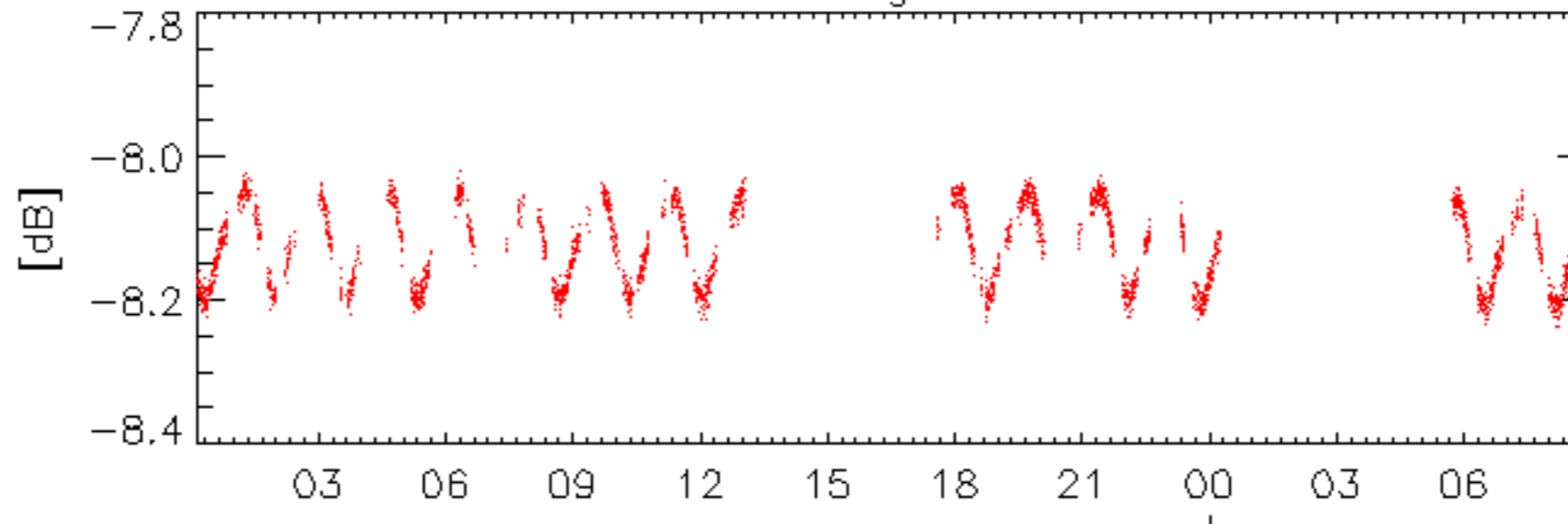
12-Feb

Average P2



12-Feb

Average P3

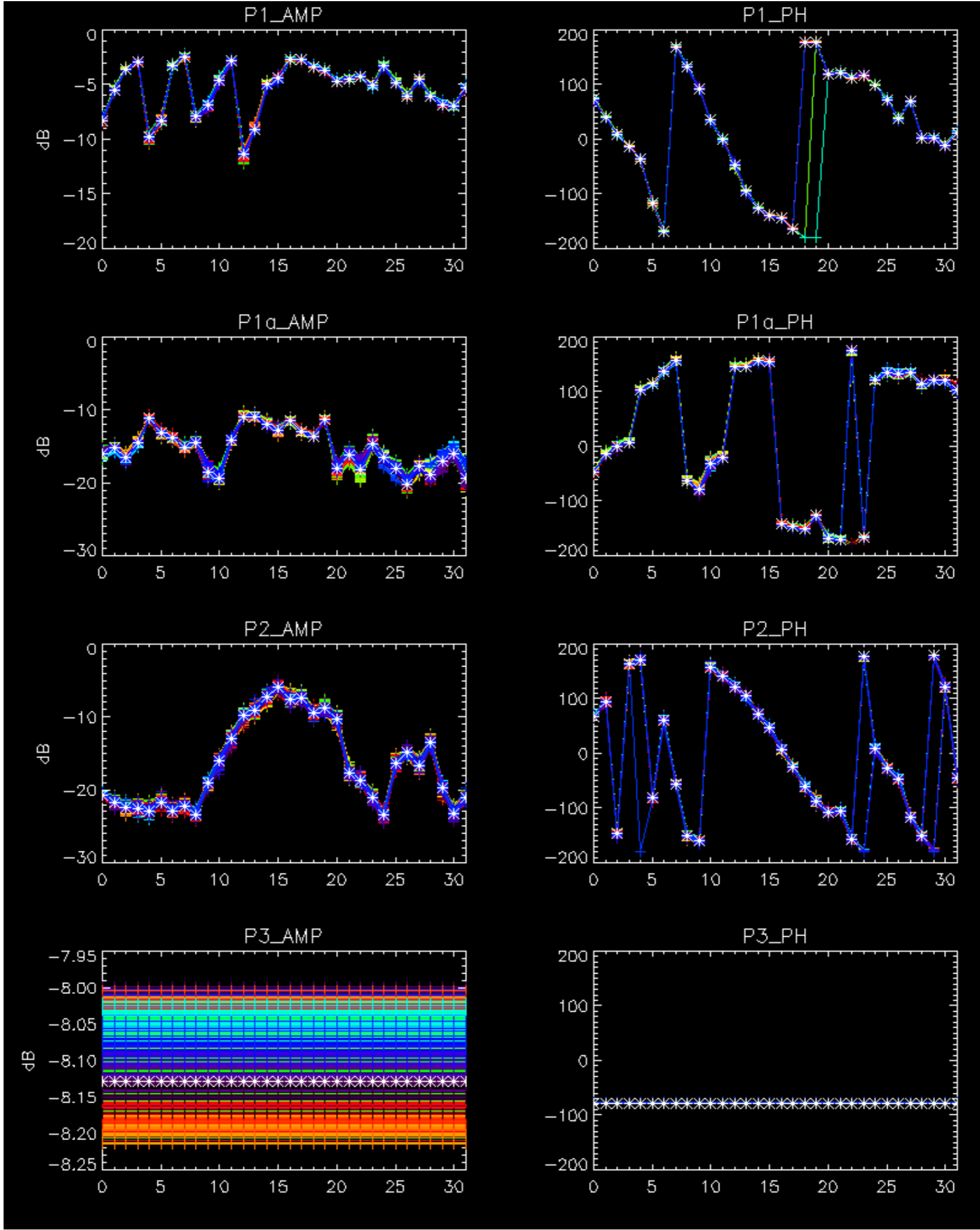


12-Feb

No anomalies observed on available browse products

No anomalies observed.

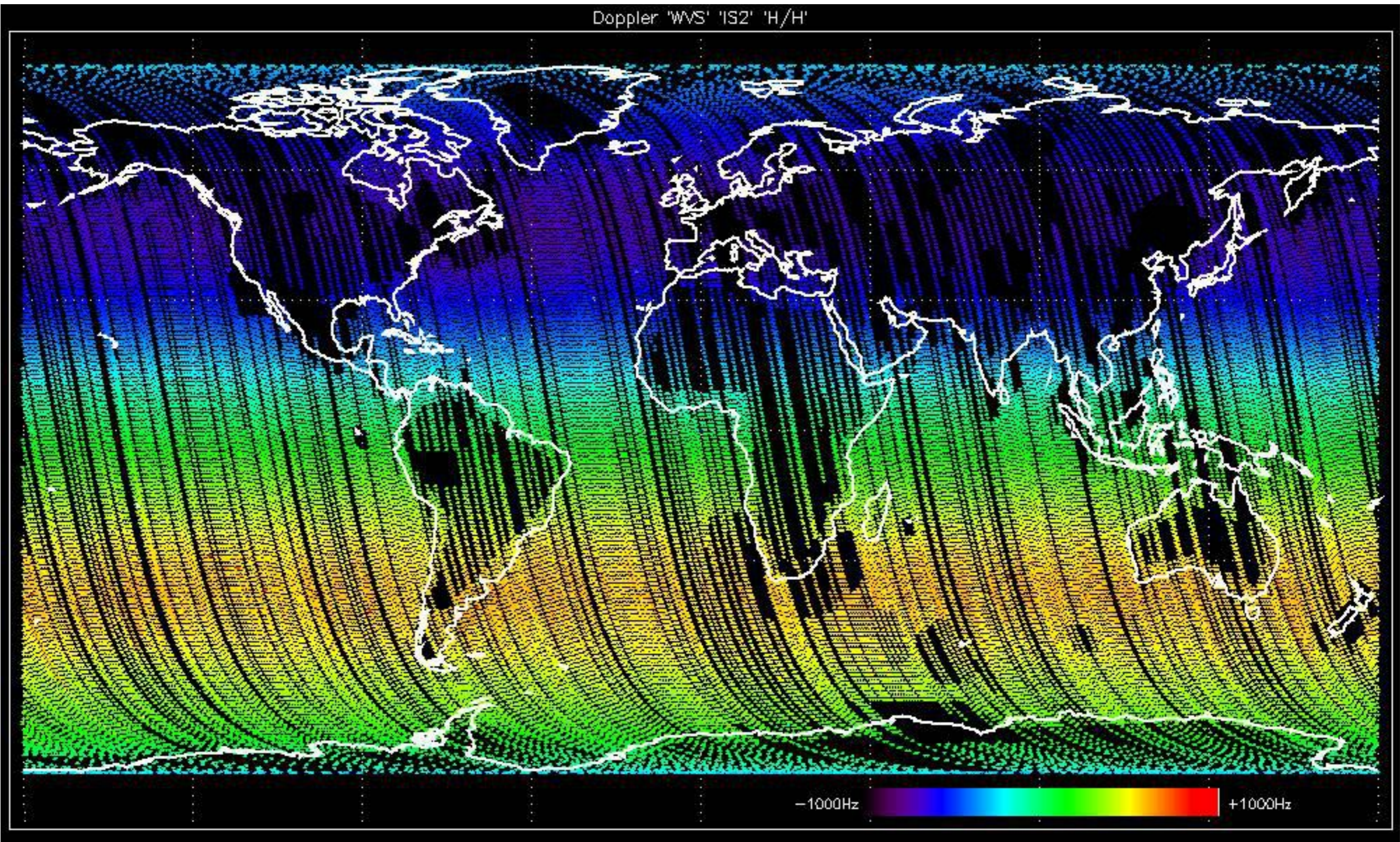




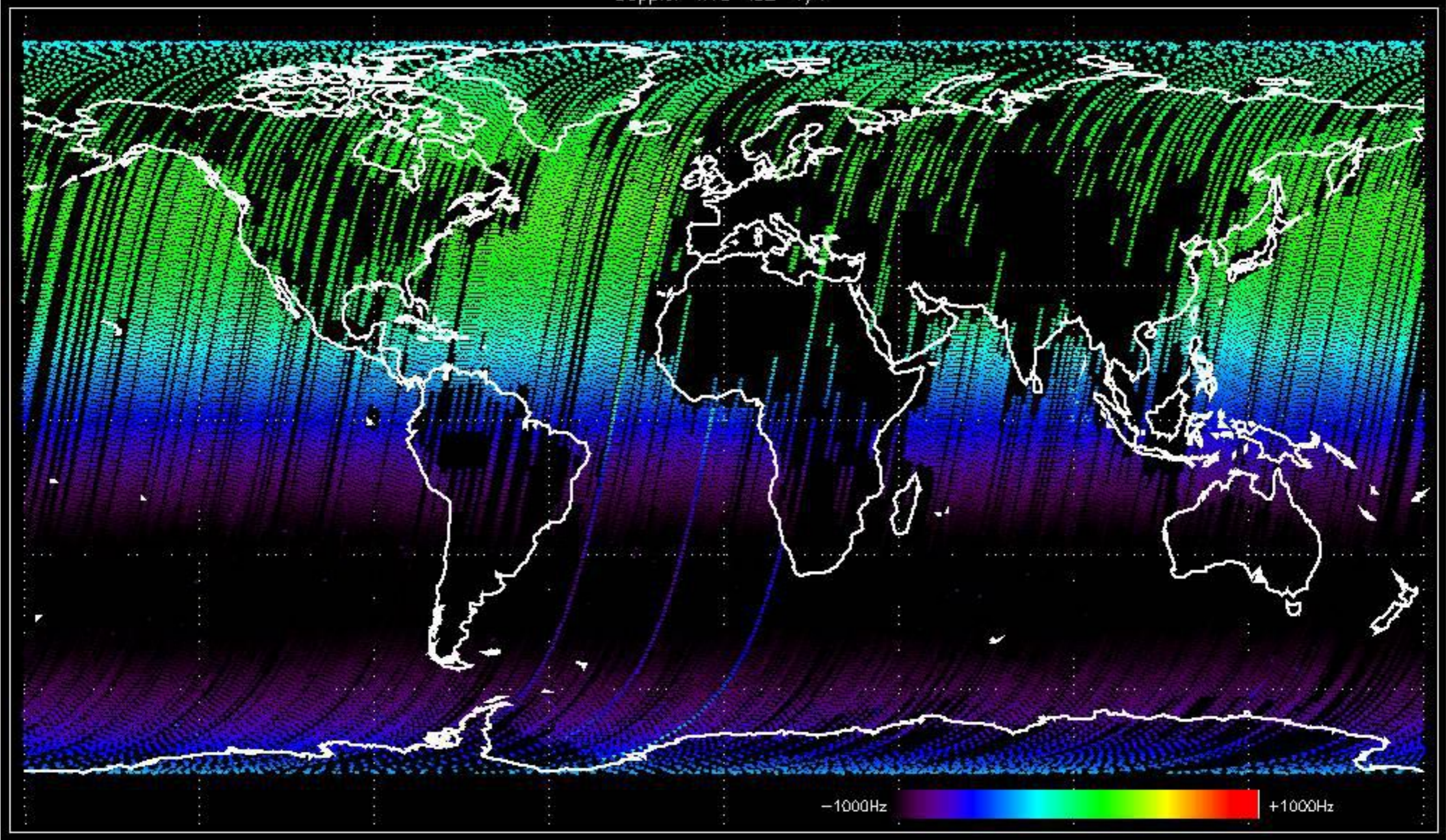
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

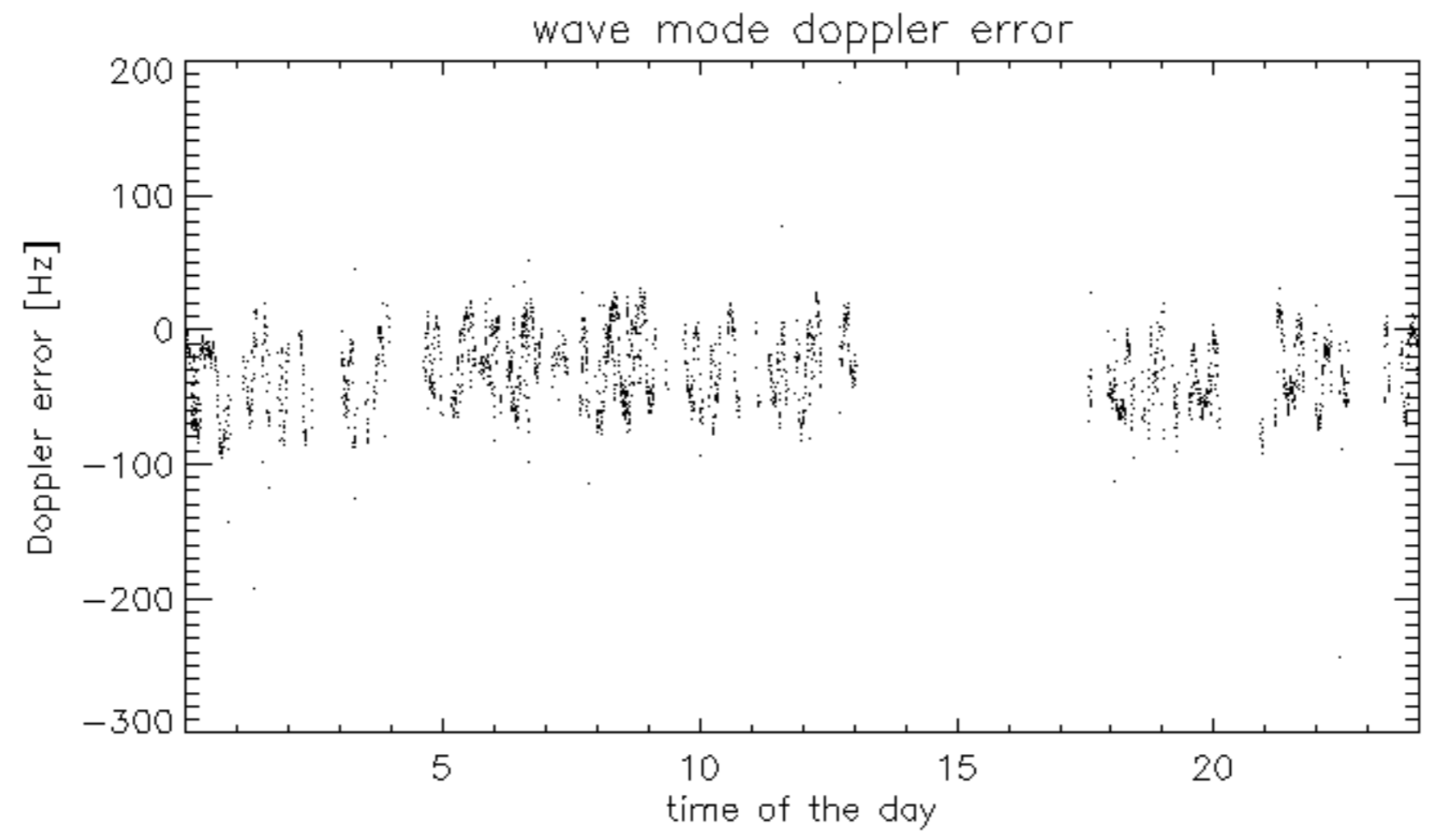
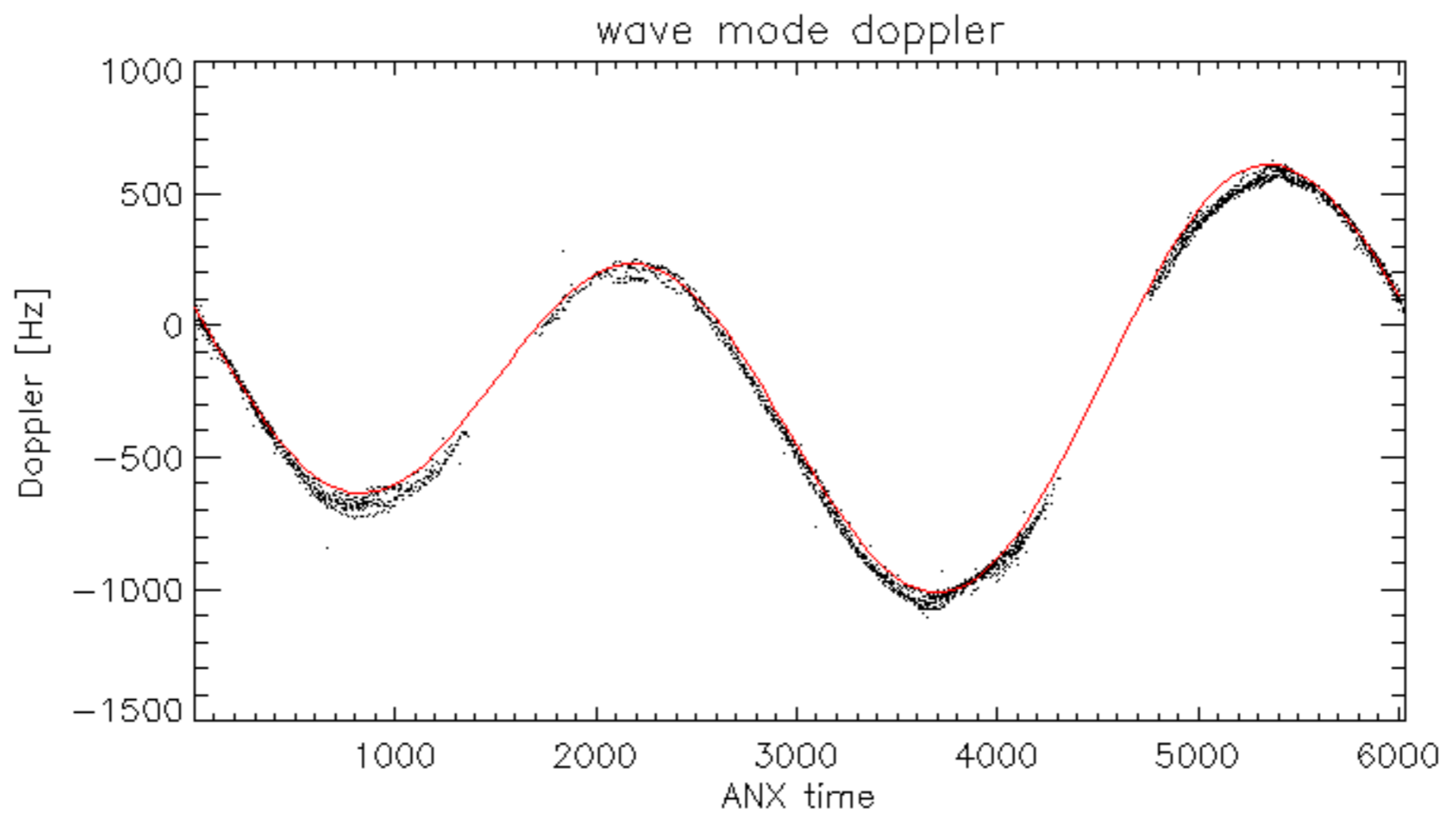


Doppler 'WVS' 'IS2' 'H/H'

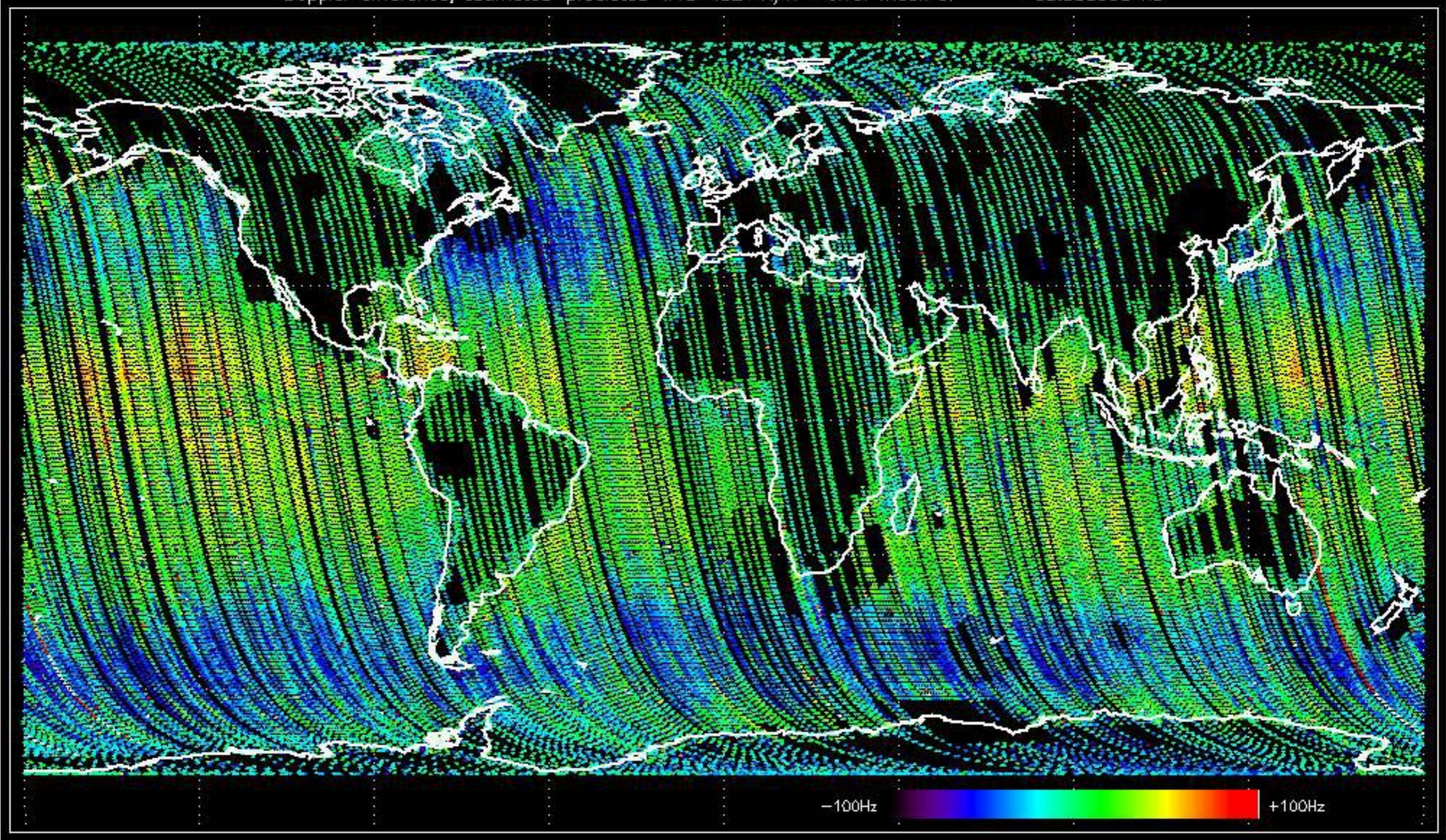


Doppler 'WVS' 'IS2' 'V/V'

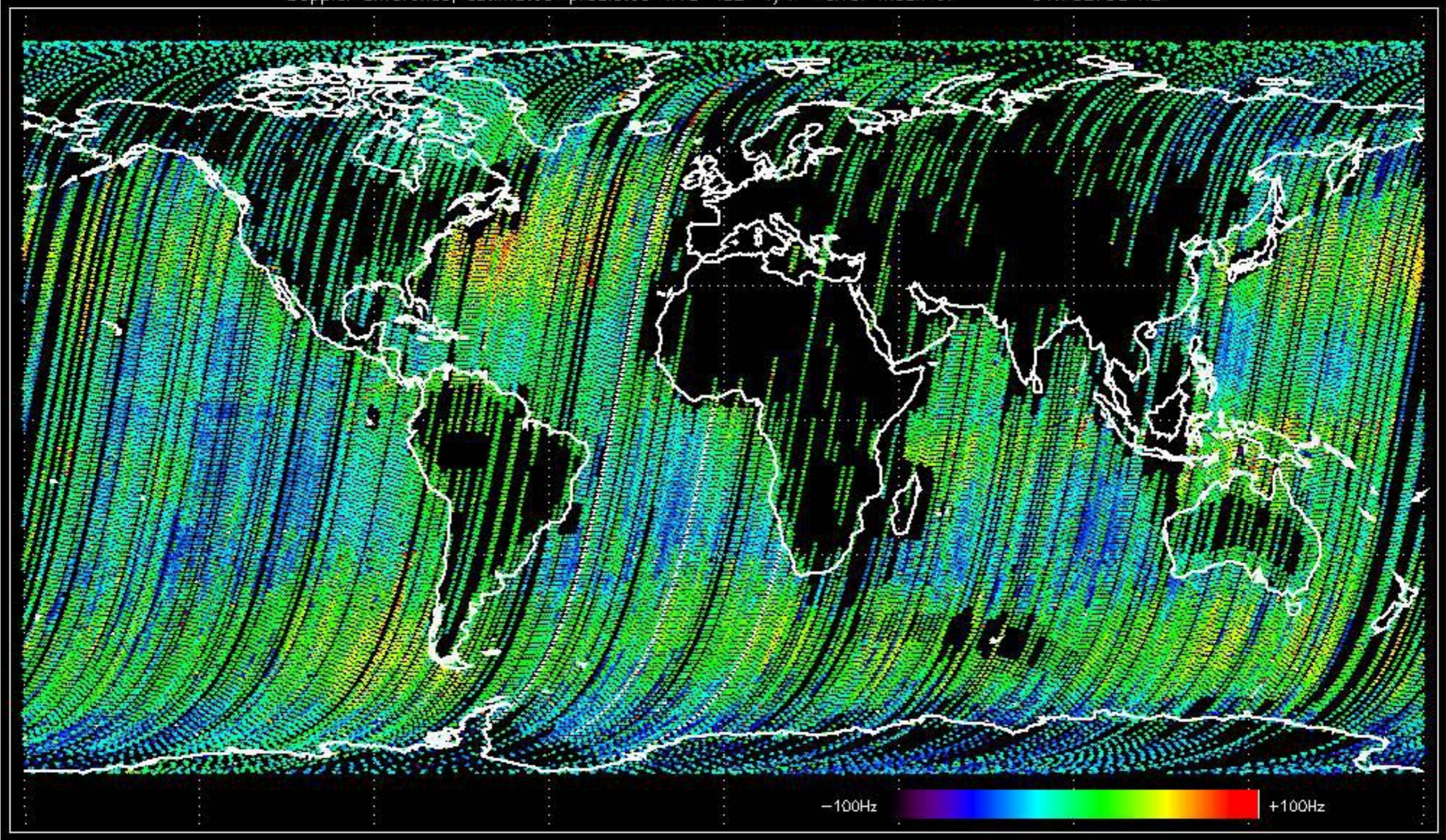




Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of -33.583338 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' 'V/V' -error mean of -31.792798 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.



























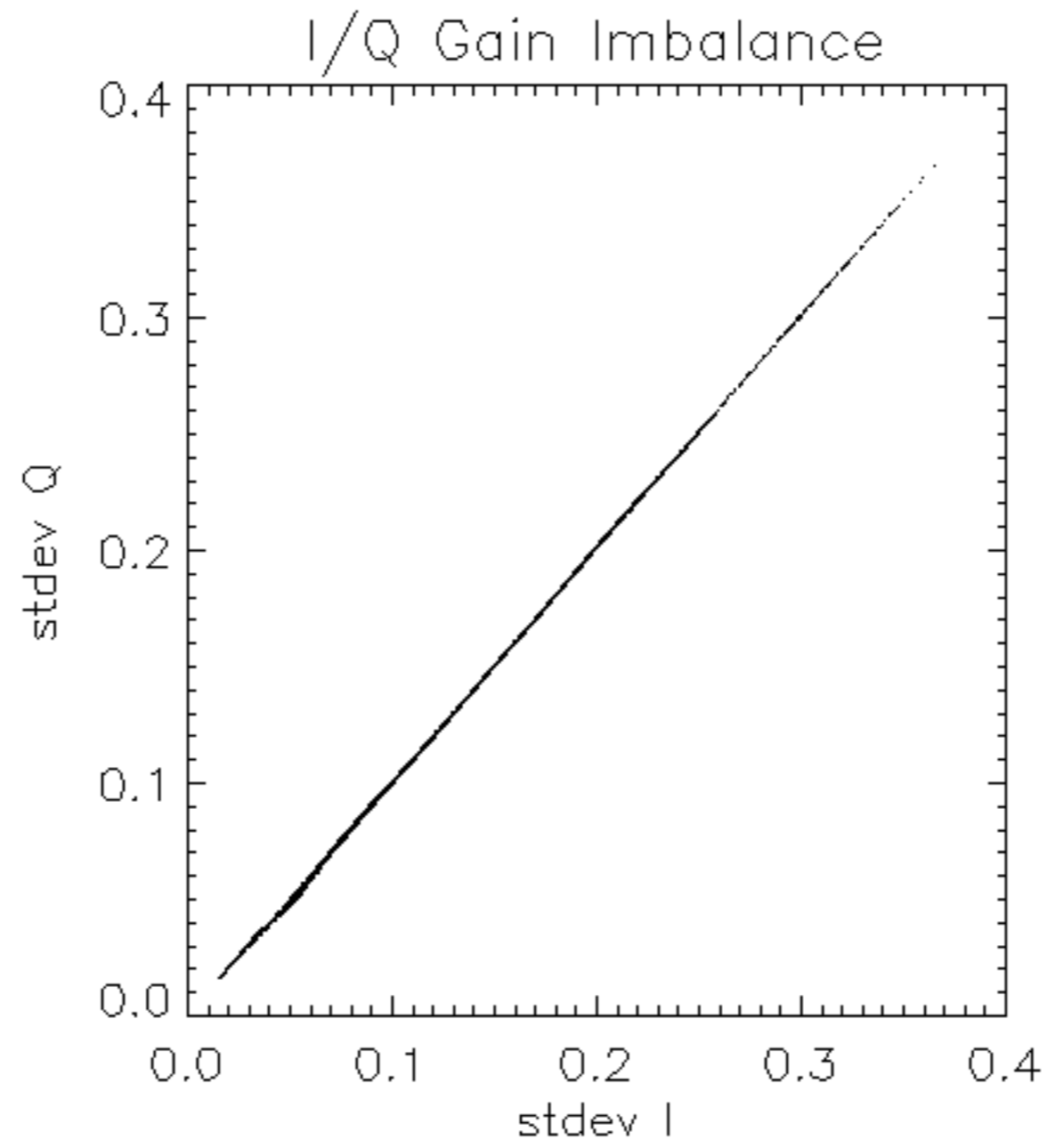


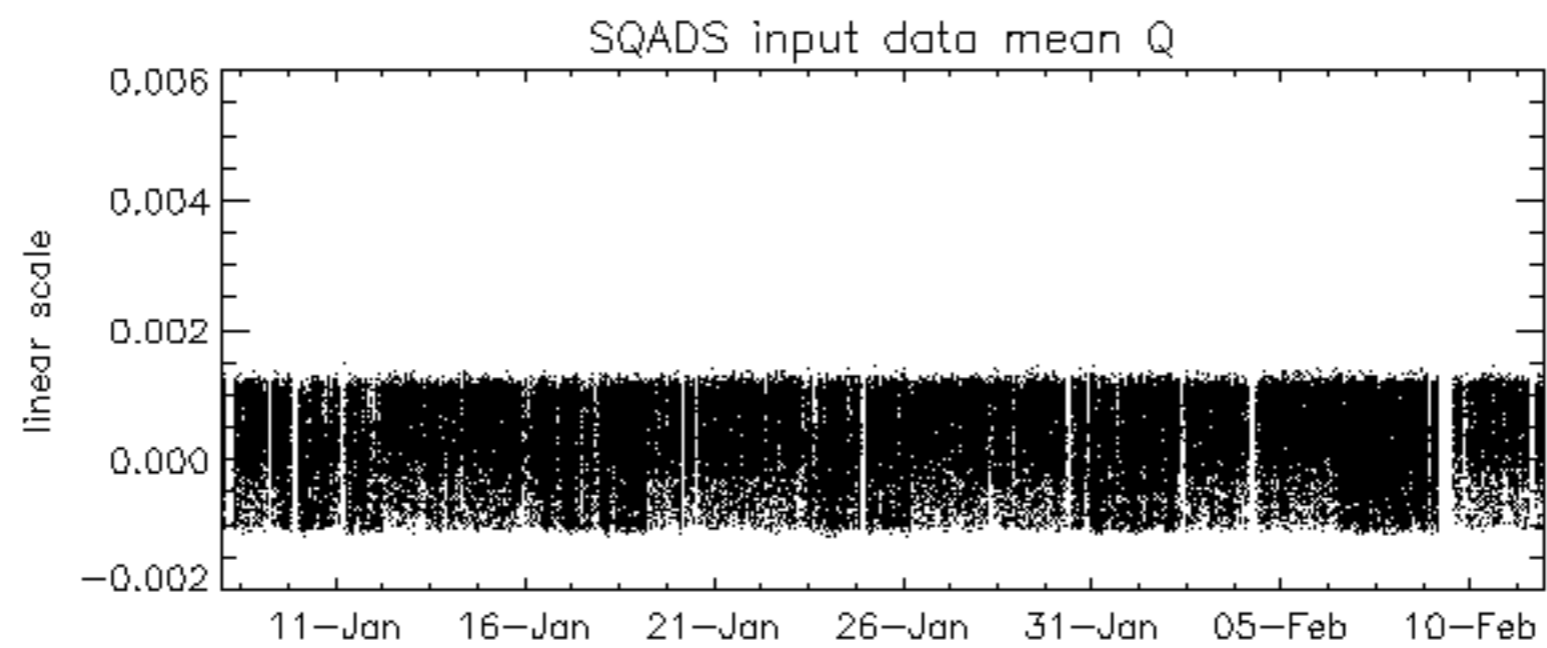
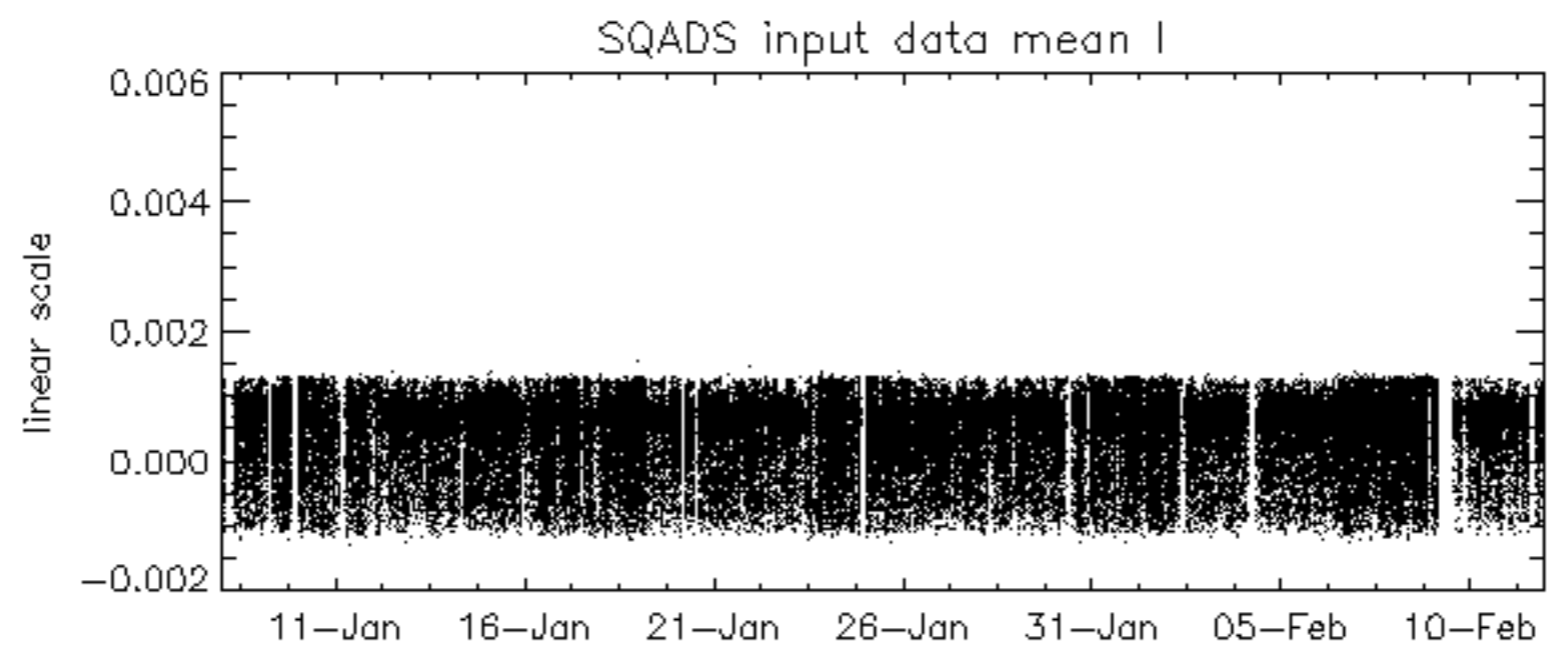
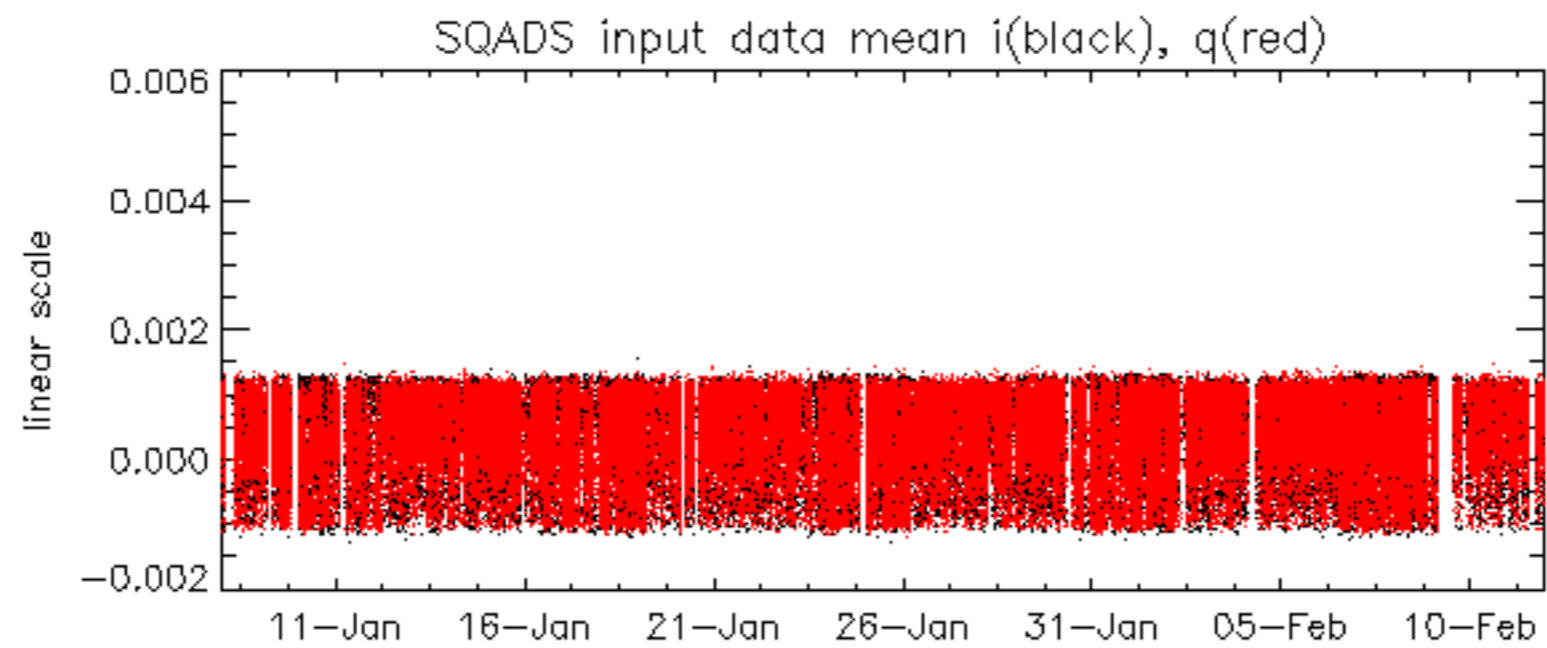


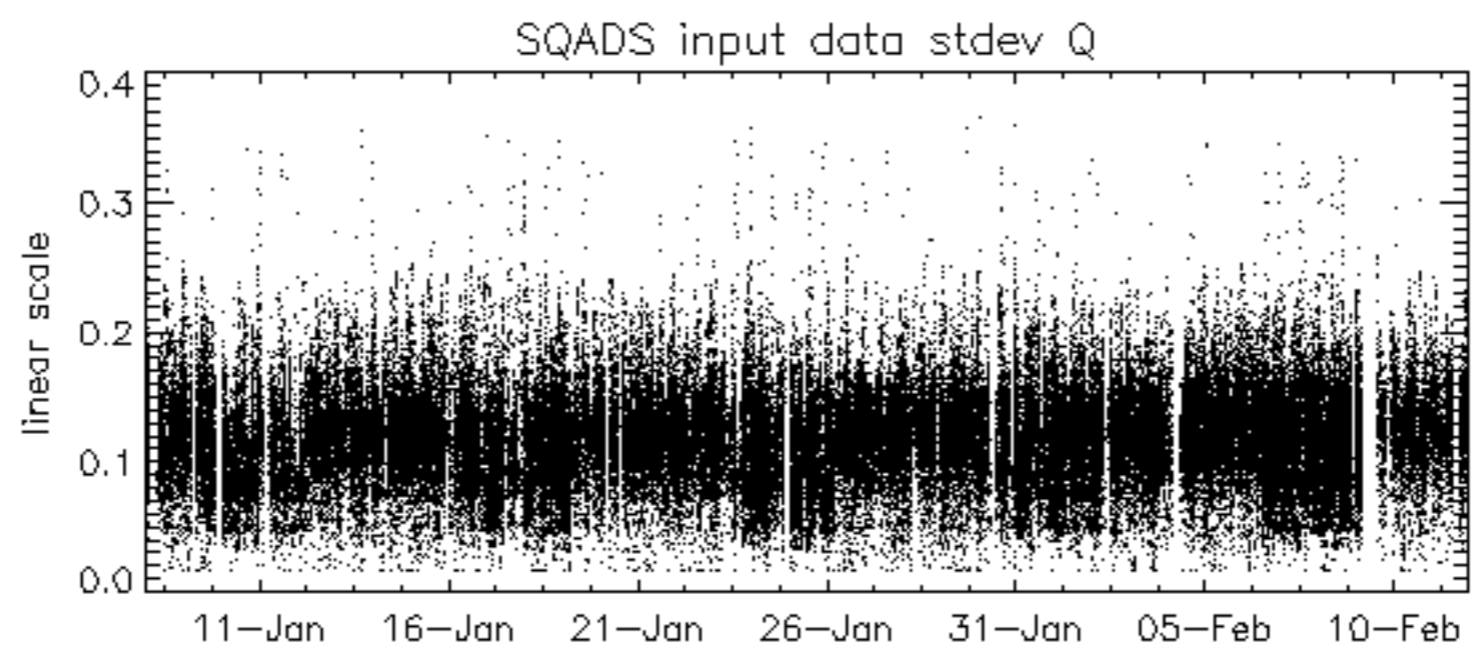
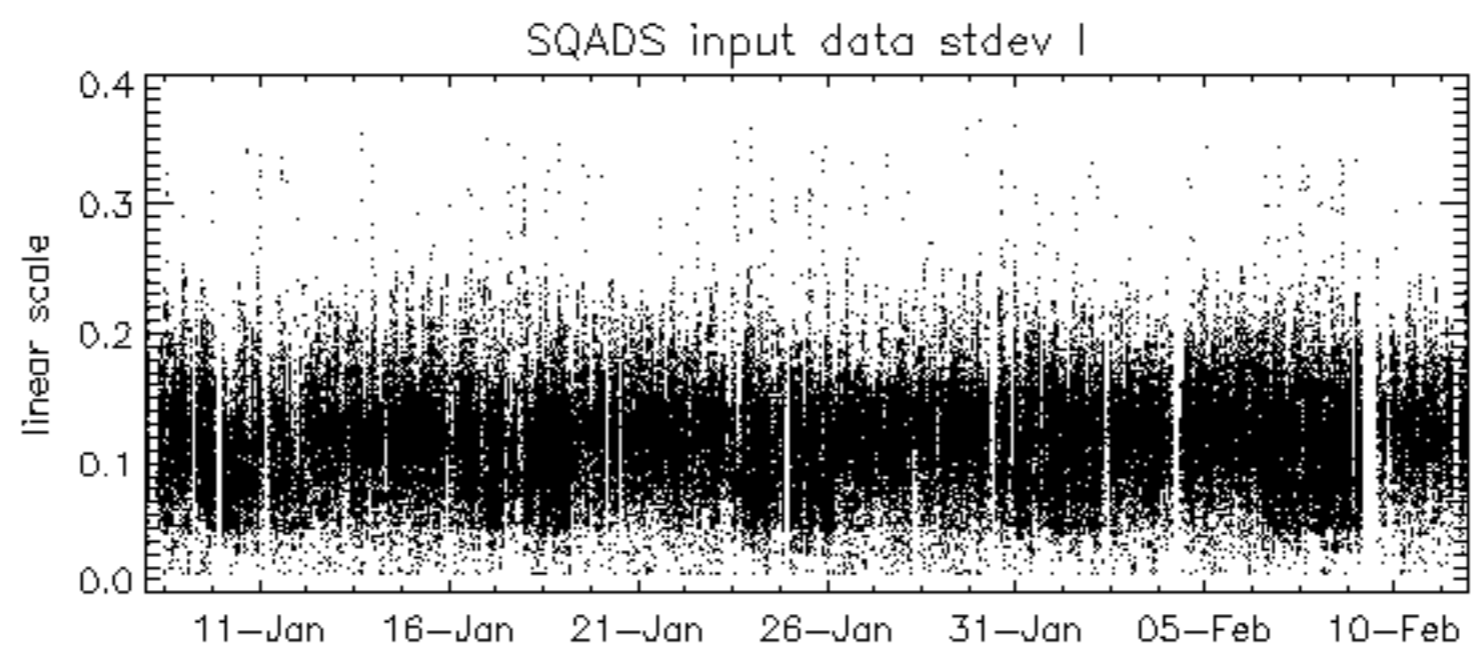
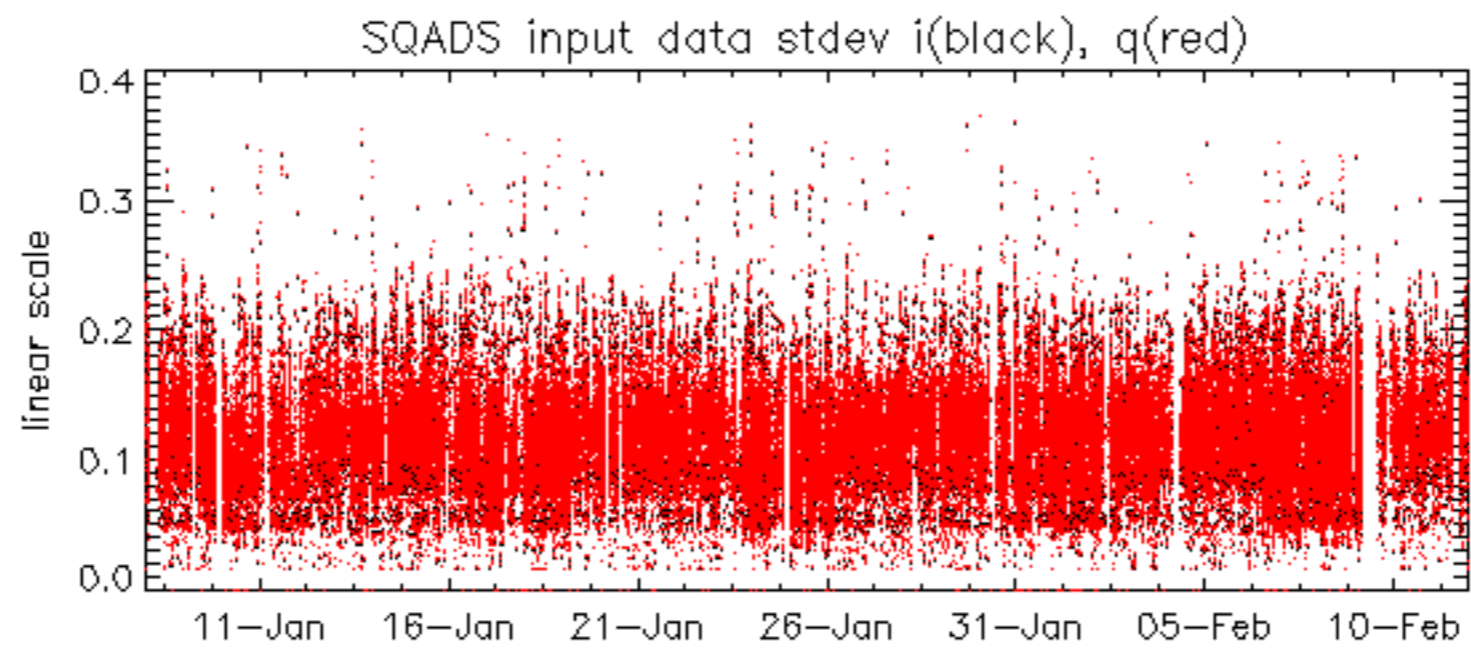
















































Wave segment unavailable, due to Module Stepping Mode anomaly which caused an anomalous transition to Pre-op,  
from 2004-02-11 20:17:40 to 2004-02-11 20:27:06