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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

| Sub-system | Start               | Stop                | Planned |
|------------|---------------------|---------------------|---------|
| ASAR       | YYYY-MM-DD hh:mm:ss | YYYY-MM-DD hh:mm:ss | ---     |

### 2.2 - Browse Visual Inspection

No anomalies observed available browse products.

## 2.3 - Data Analysis

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

## 3 - Module Stepping Mode

No anomalies observed on available MS products:

- ASA\_MS\_\_0PNPDK20030731\_191533\_000000152018\_00342\_07410\_0052.N1
- ASA\_MS\_\_0PNPDK20030731\_191713\_000000152018\_00342\_07410\_0051.N1

The drift in phase for TR module 3 on Tile B3 has decreased to a stable configuration as shown in the figure below.



| Polarisation | Start Time      |
|--------------|-----------------|
| V            | 20030731 191713 |
| H            | 20030731 191533 |

### 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. Nominal behaviour.

### 4.1 - Daily statistics

| row | stat  | AveP1      | AveP2     | AveP3      |
|-----|-------|------------|-----------|------------|
| 3   | mean  | -3.81400   | -22.5605  | -8.10479   |
|     | stdev | 0.00559539 | 0.0640804 | 0.00208661 |
| 10  | mean  | -6.88617   | -19.3275  | -8.10479   |
|     | stdev | 0.0239271  | 0.0608494 | 0.00208661 |



### 4.2 - Cyclic statistics

| row | stat  | AveP1     | AveP2     | AveP3      |
|-----|-------|-----------|-----------|------------|
| 3   | mean  | -3.86952  | -22.5690  | -8.10134   |
|     | stdev | 0.0850296 | 0.0622093 | 0.00263846 |
| 10  | mean  | -6.97813  | -19.3254  | -8.10134   |
|     | stdev | 0.406146  | 0.0615080 | 0.00263846 |



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



## 5 - RAW data statistics

No anomalies observed. Nominal behaviour

### 5.1 - Input mean I/Q

| channel | stat  | DSS-B       |
|---------|-------|-------------|
| MEAN I  | mean  | 0.000477977 |
|         | stdev | 3.03344e-07 |
| MEAN Q  | mean  | 0.000310989 |

|       |             |
|-------|-------------|
| stdev | 3.16361e-07 |
|-------|-------------|



## 5.2 - Input stdev I/Q

| channel | stat  | DSS-B      |
|---------|-------|------------|
| STDEV I | mean  | 0.115096   |
|         | stdev | 0.00160918 |
| STDEV Q | mean  | 0.115212   |
|         | stdev | 0.00164080 |



## 5.3 - Gain imbalance I/Q



## 6 - Wave Doppler Analysis

No anomalies observed Doppler evolution.  
Doppler analysis performed over the last 60 days.  
Data gap is relative to missing data from Svalbard station.

### 6.1 - Unbiased Doppler Error

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

### 6.2 - Absolute Doppler

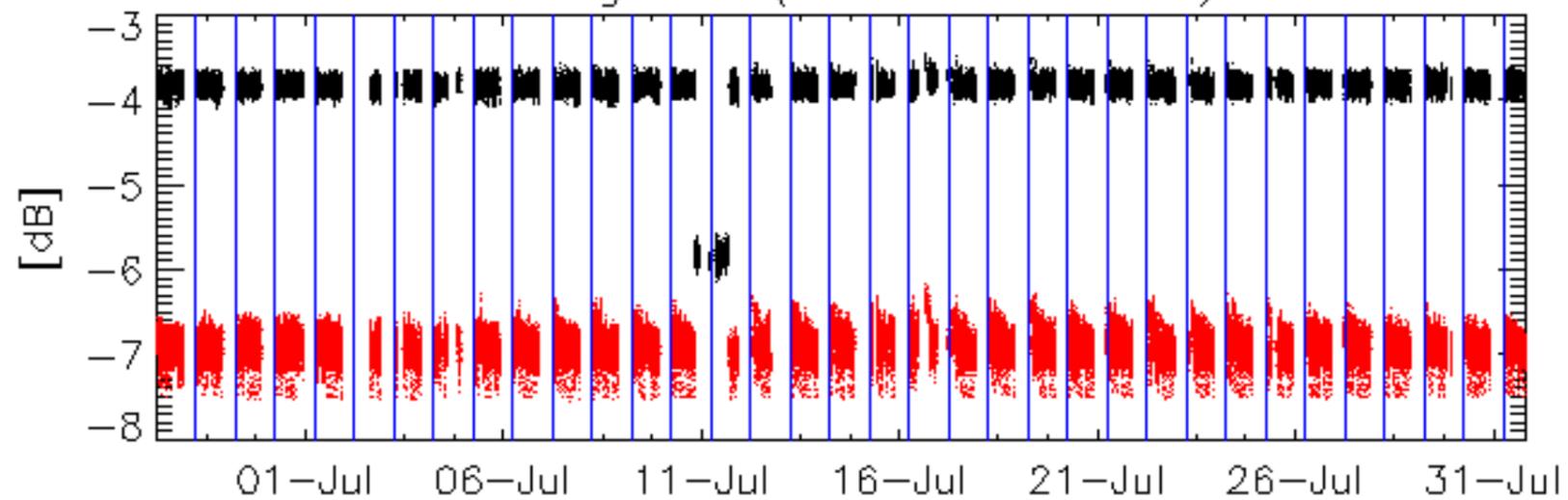
| Evolution of Absolute Doppler |
|-------------------------------|
| Ascending                     |
| Descending                    |

### 6.3 - Doppler evolution versus ANX

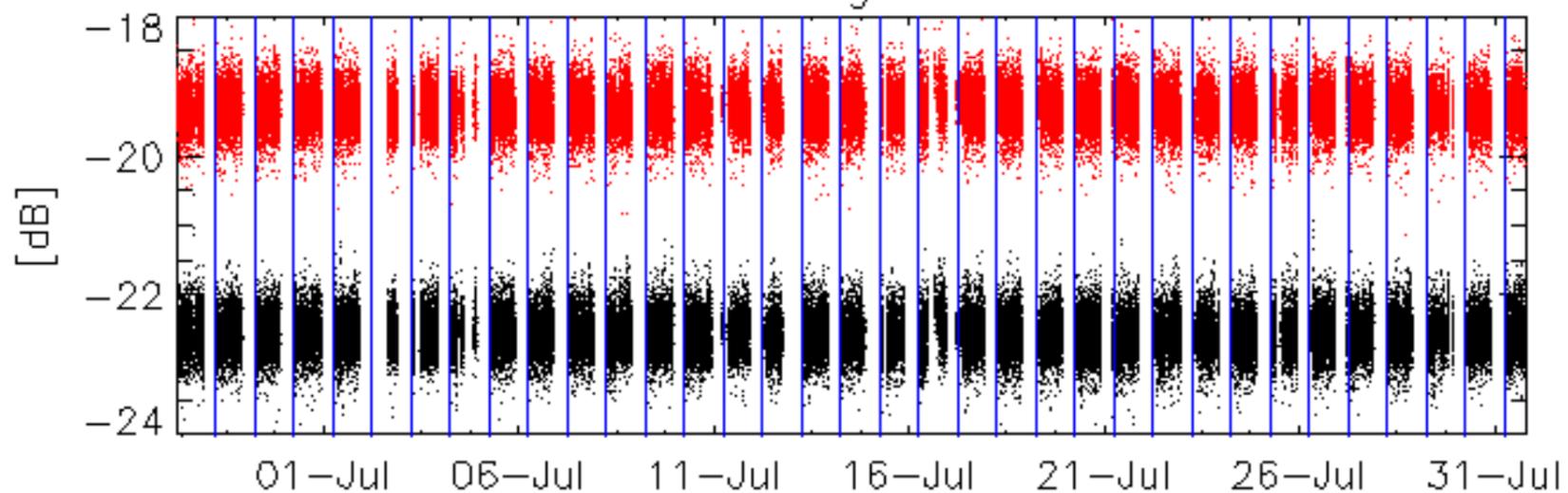
Evolution Doppler error versus ANX



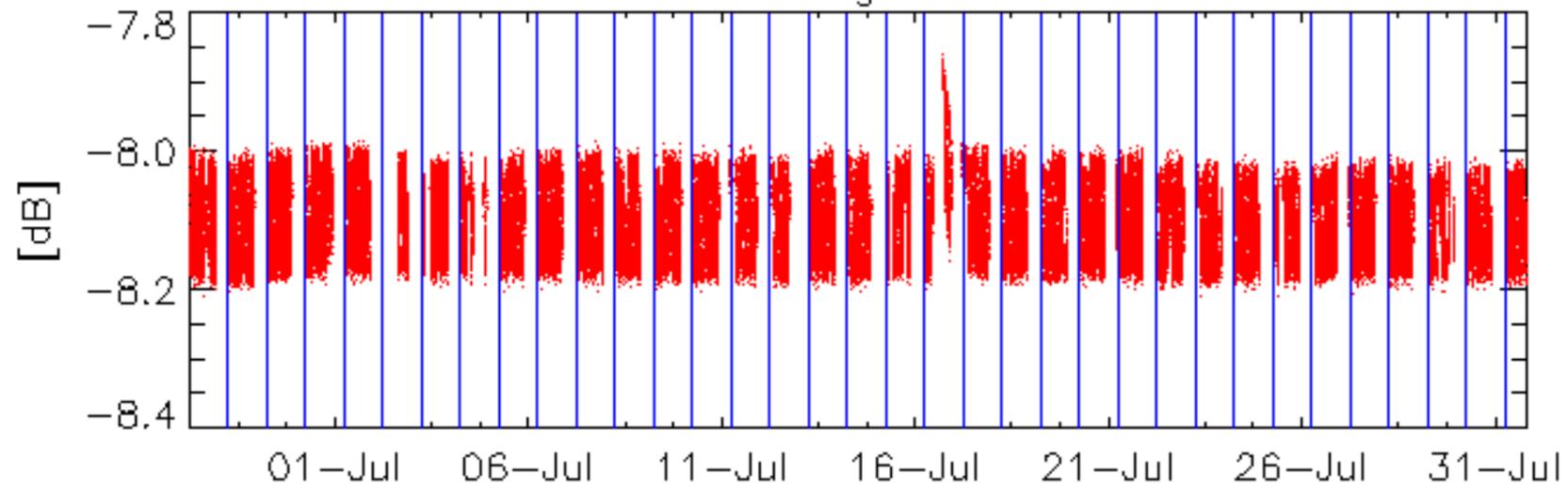
Average P1 (row 3 & row 10)



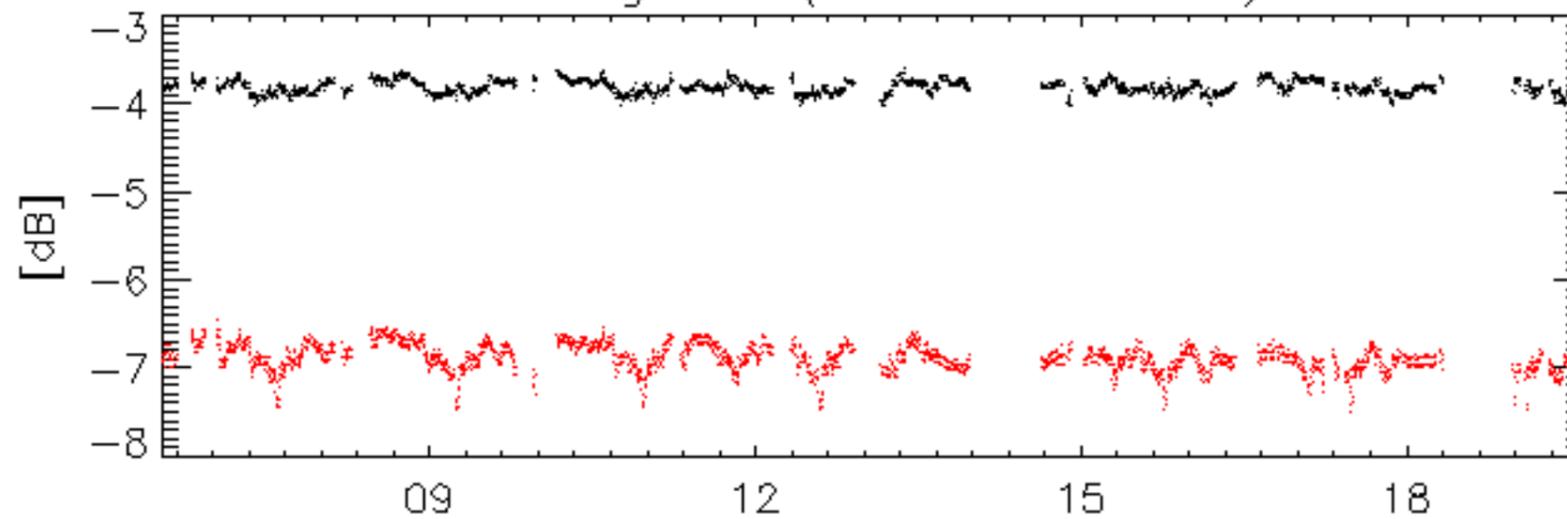
Average P2



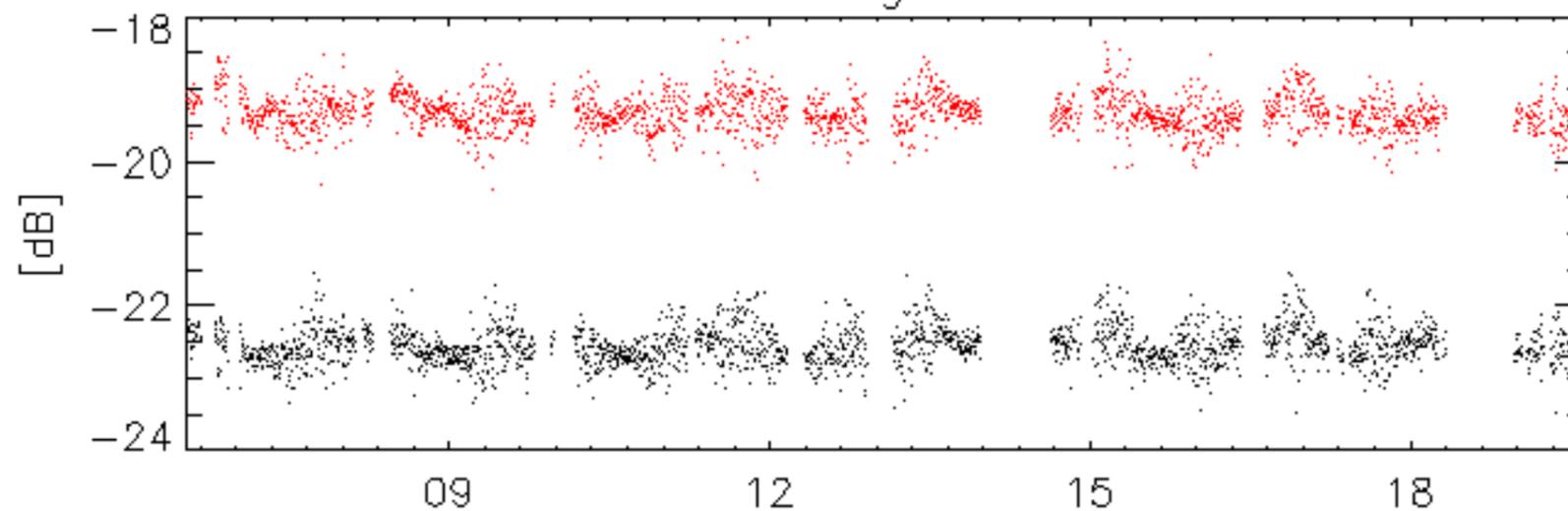
Average P3



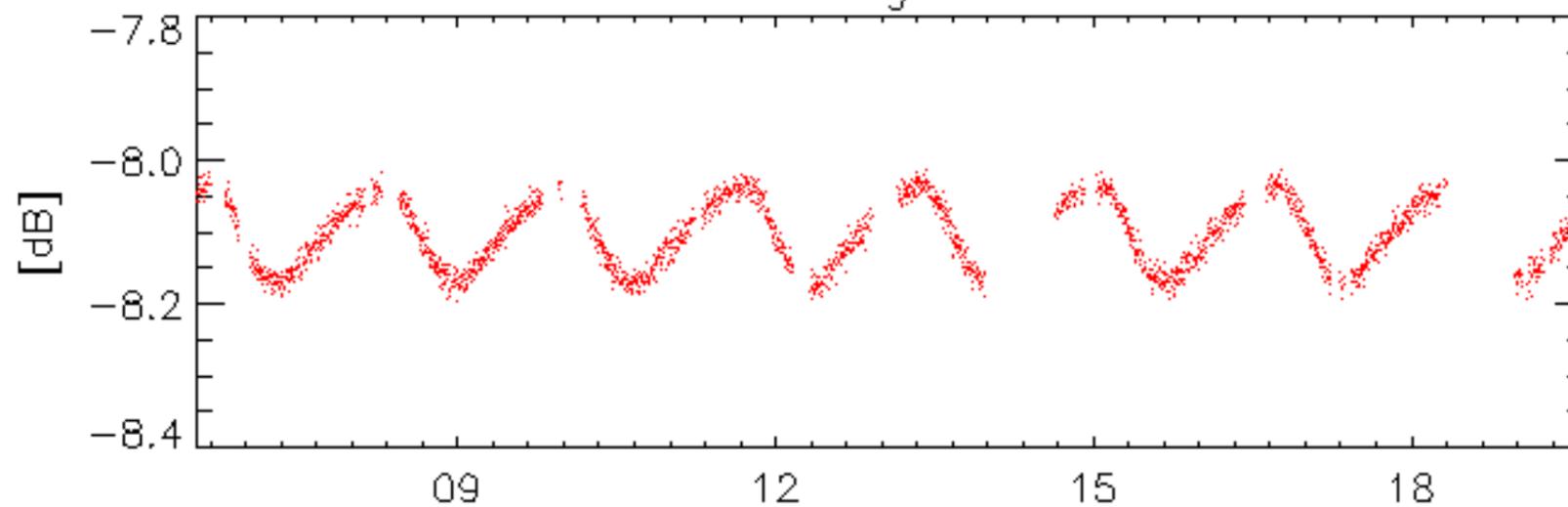
Average P1 (row 3 & row 10)



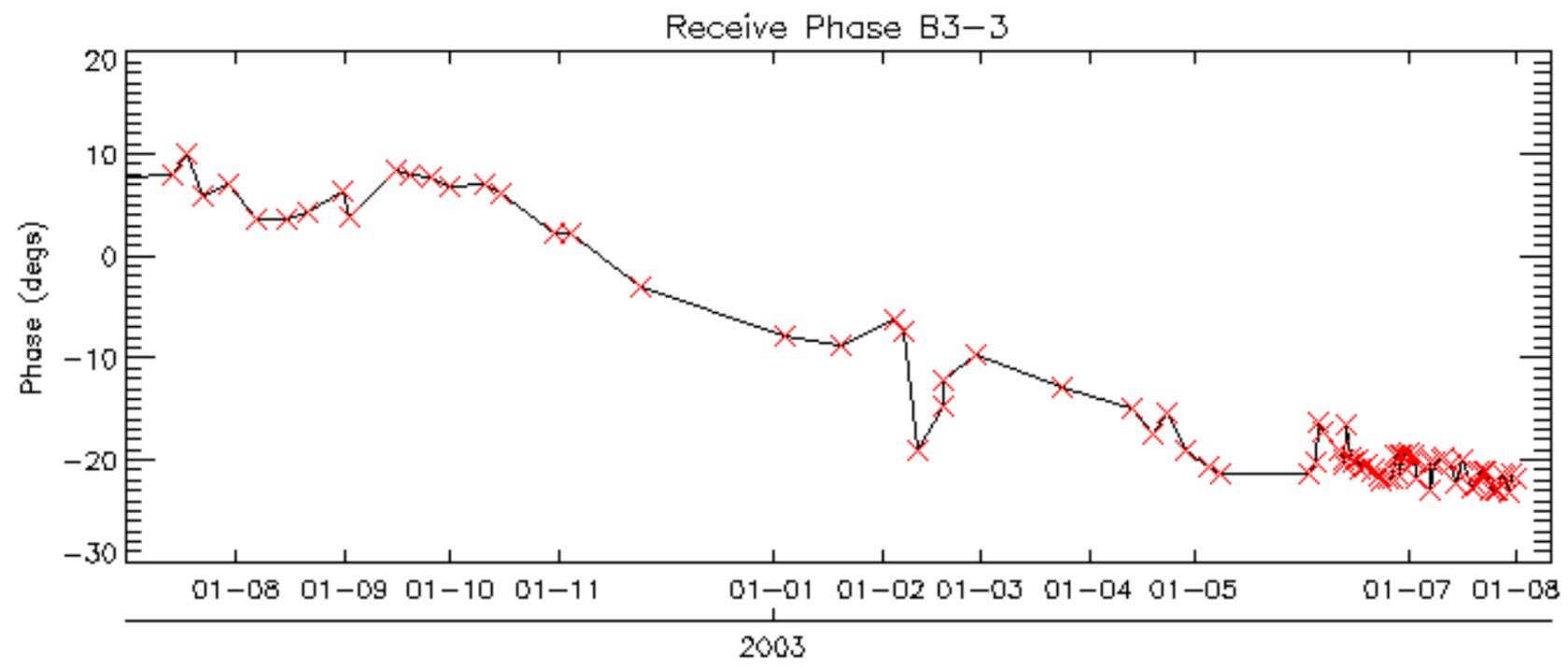
31-Jul  
Average P2



31-Jul  
Average P3

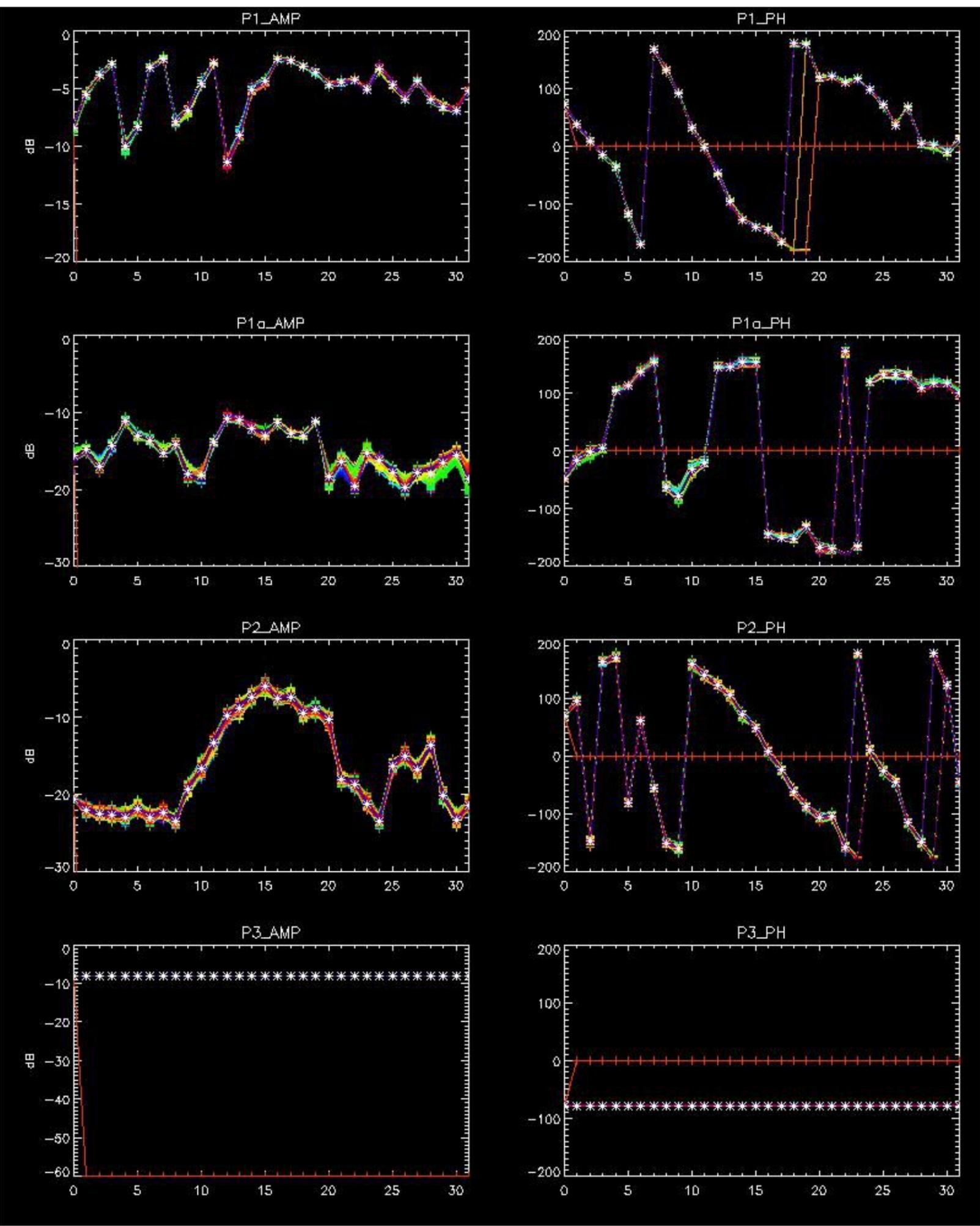


31-Jul



No anomalies observed available browse products.

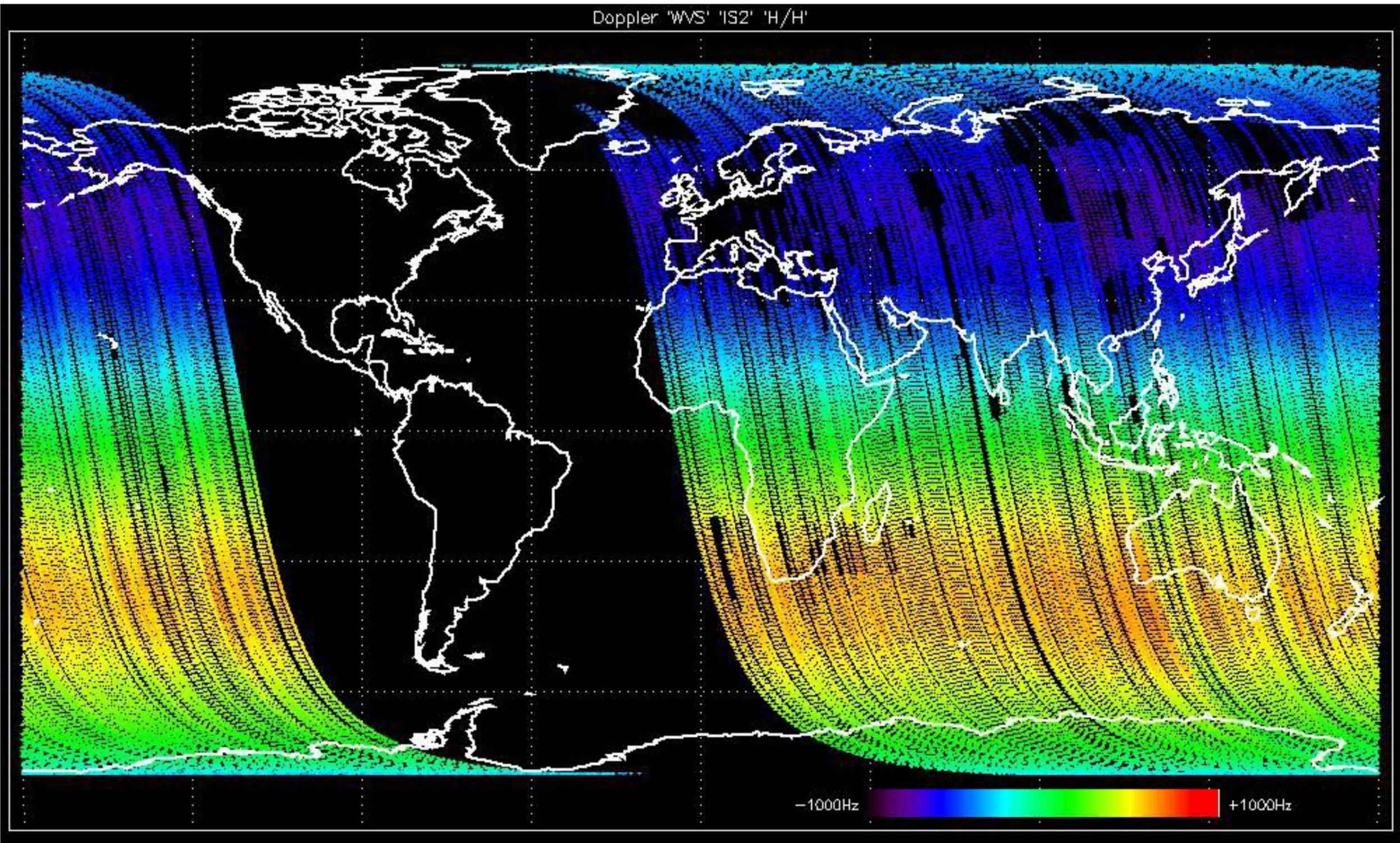
No anomalies observed. Nominal behaviour.



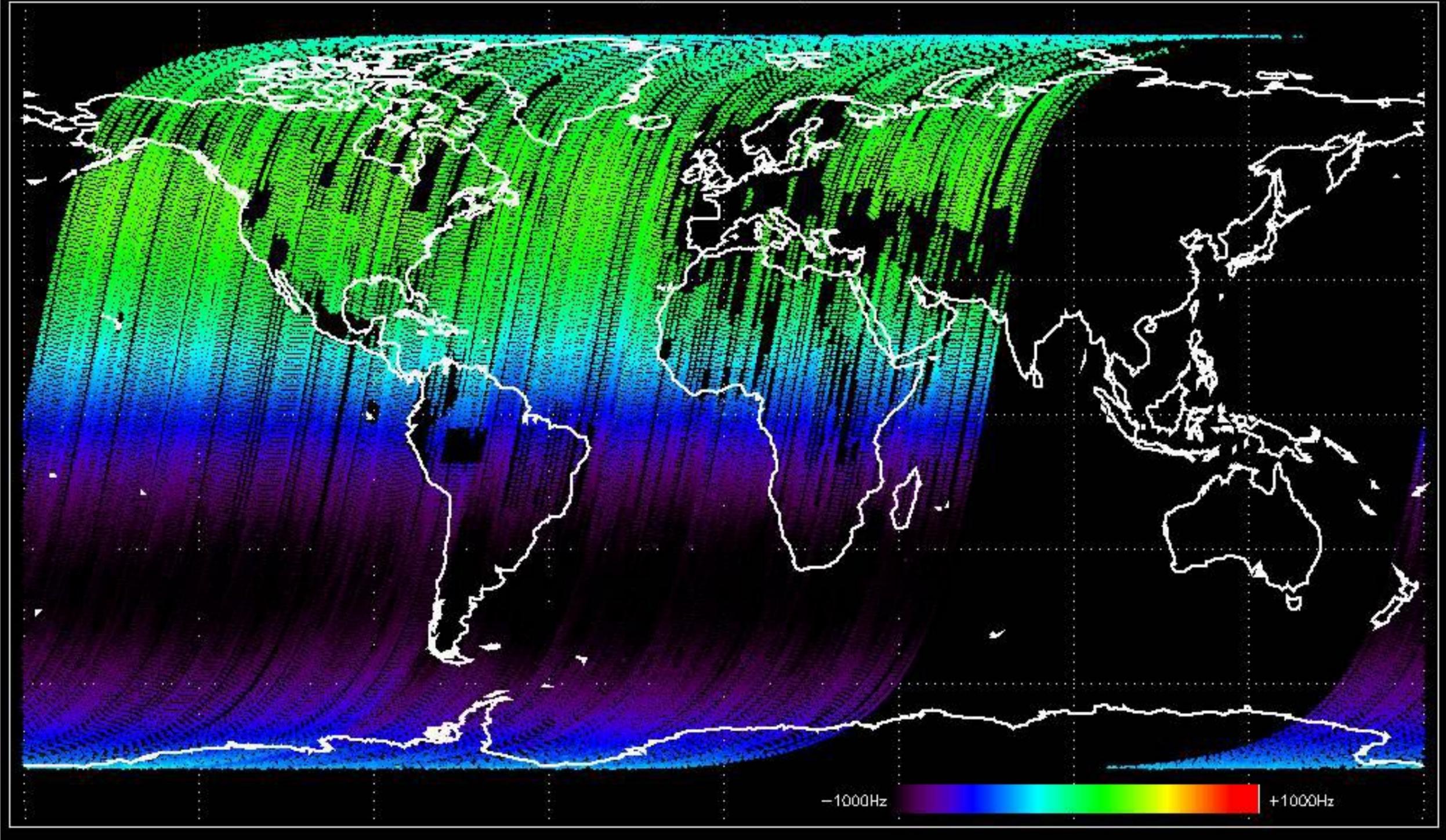
- Stable wave internal calibration pulses gain and phase.
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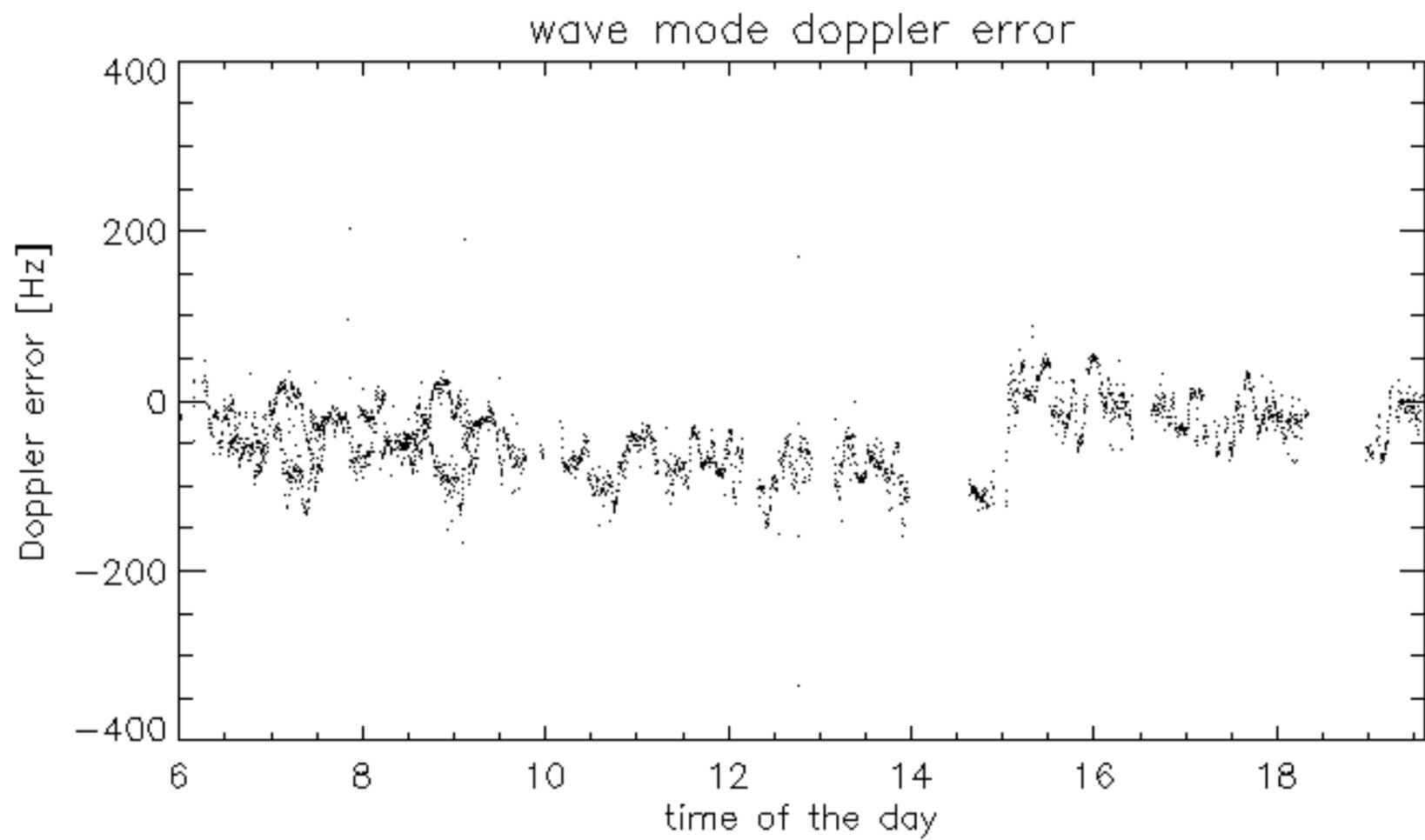
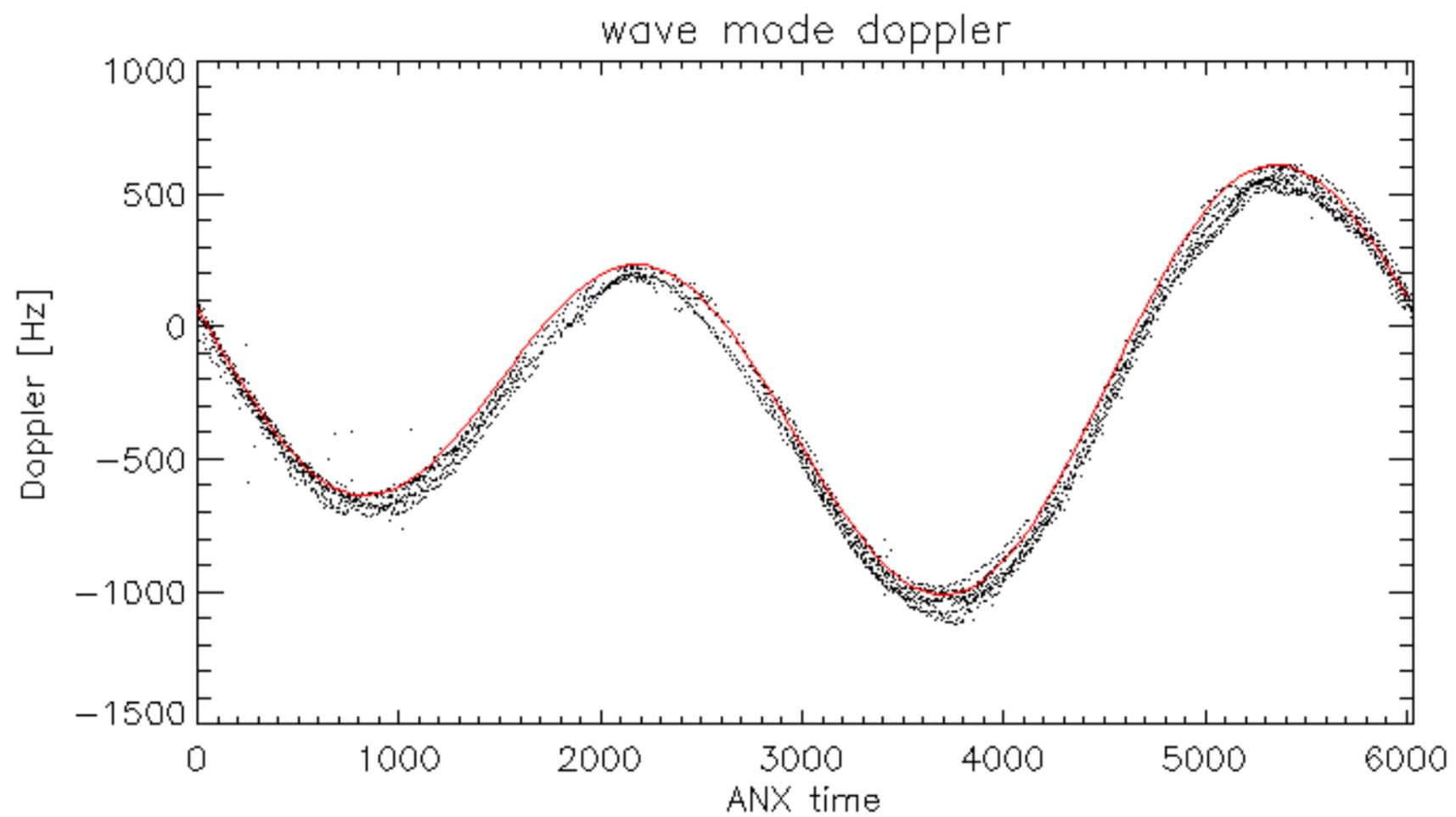
No anomalies observed Doppler evolution.  
Doppler analysis performed over the last 60 days.  
Data gap is relative to missing data from Svalbard station.

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

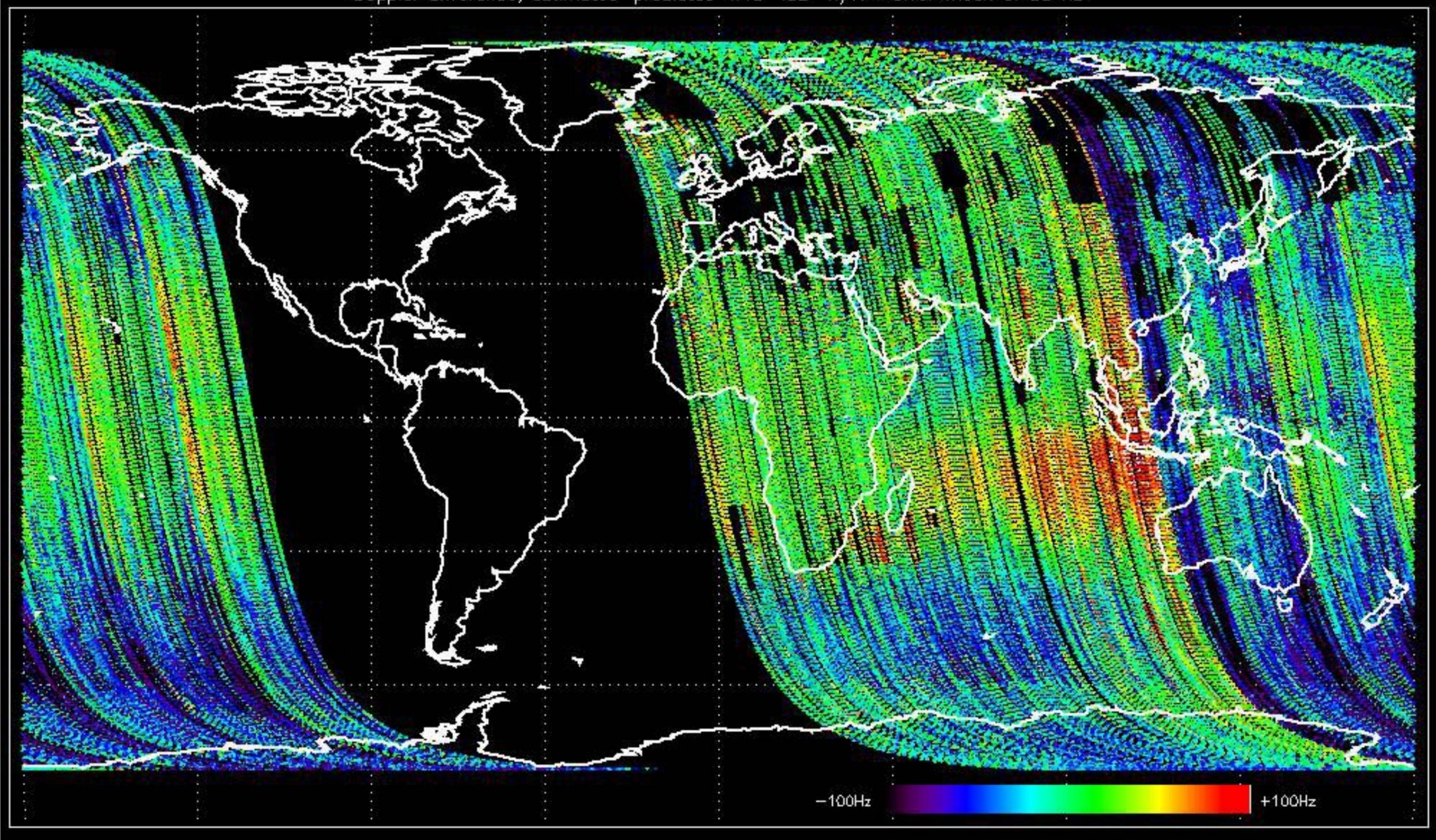


Doppler 'WVS' 'ISZ' 'V/V'

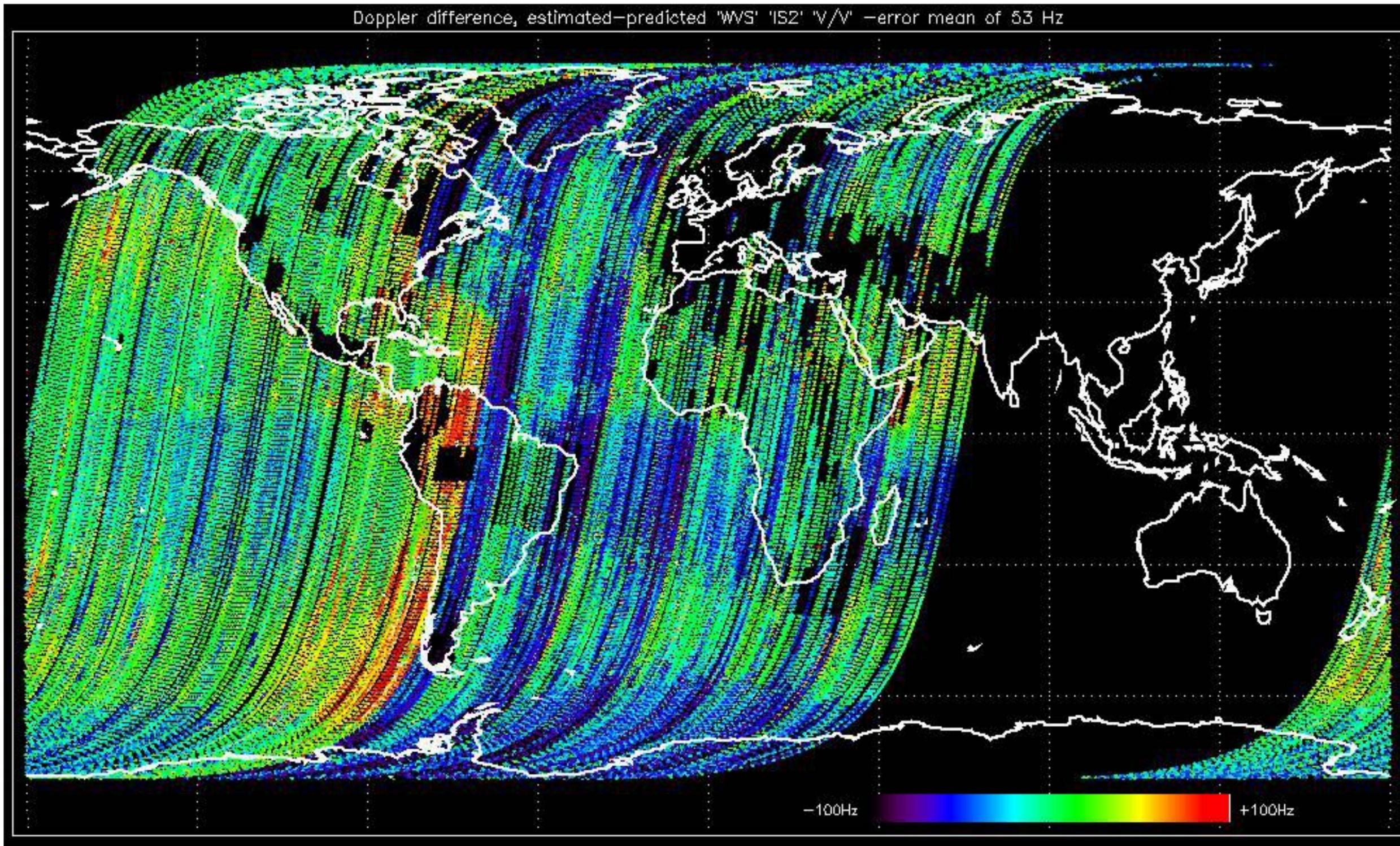




Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of 53 Hz



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



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- ASA\_MS\_\_0PNPDK20030731\_191713\_000000152018\_00342\_07410\_0051.N1

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No anomalies observed. Nominal behaviour







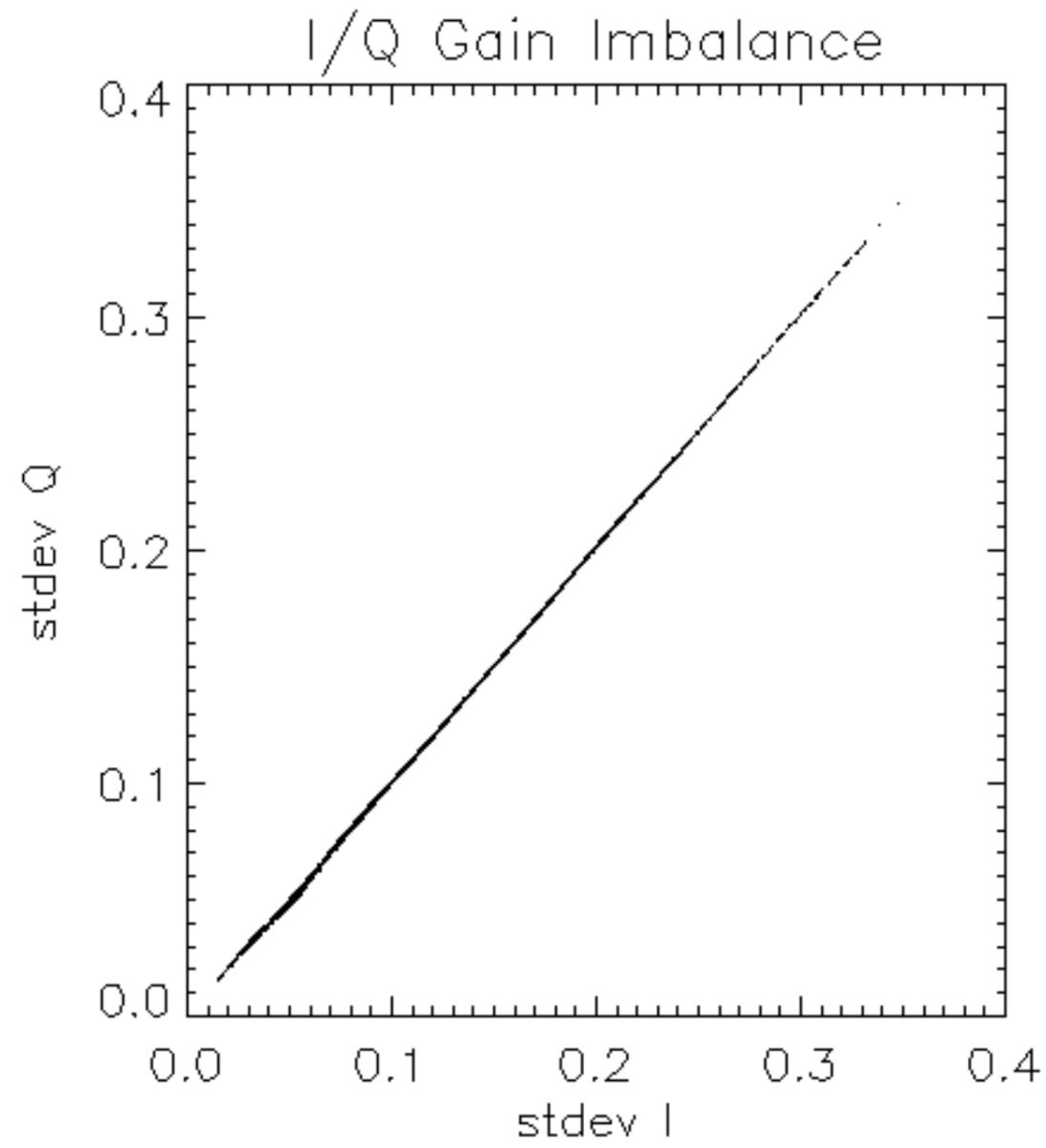


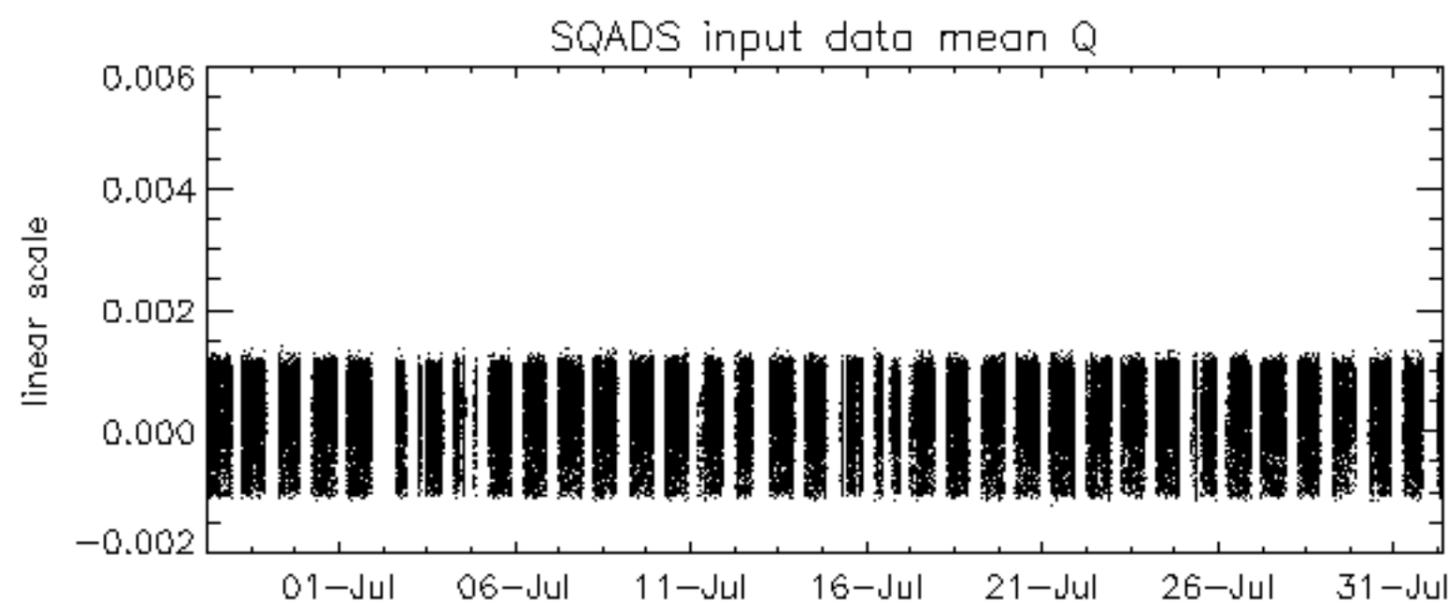
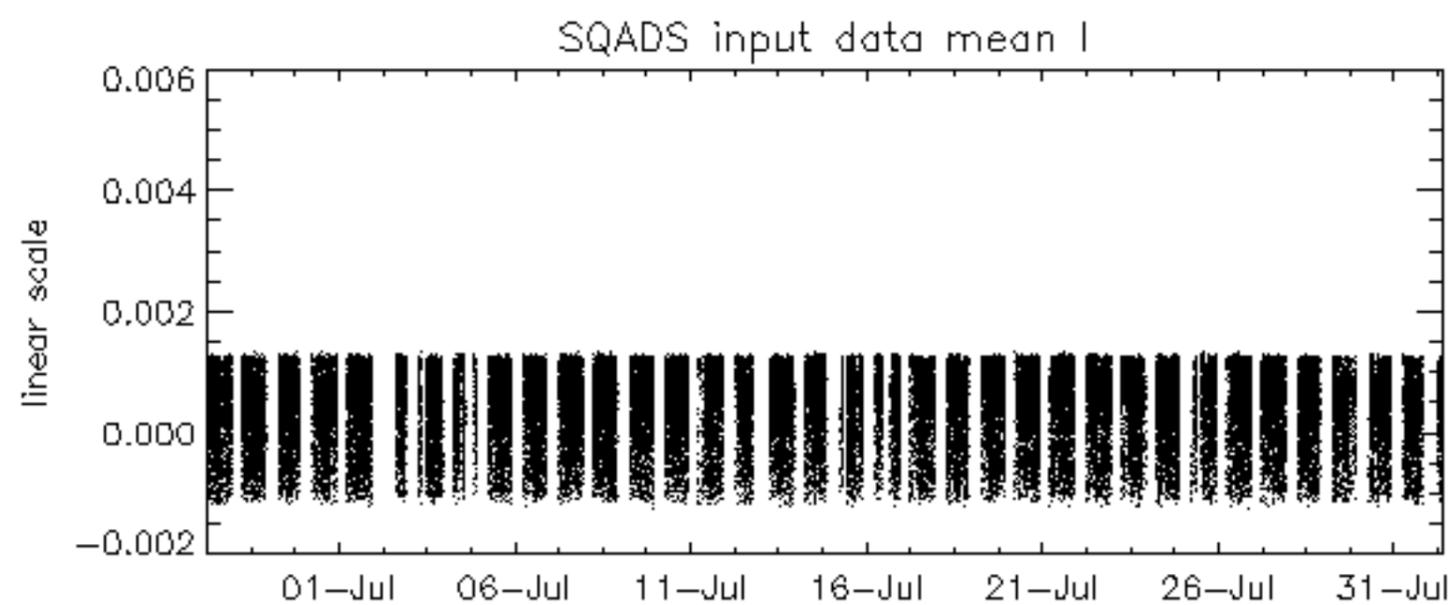
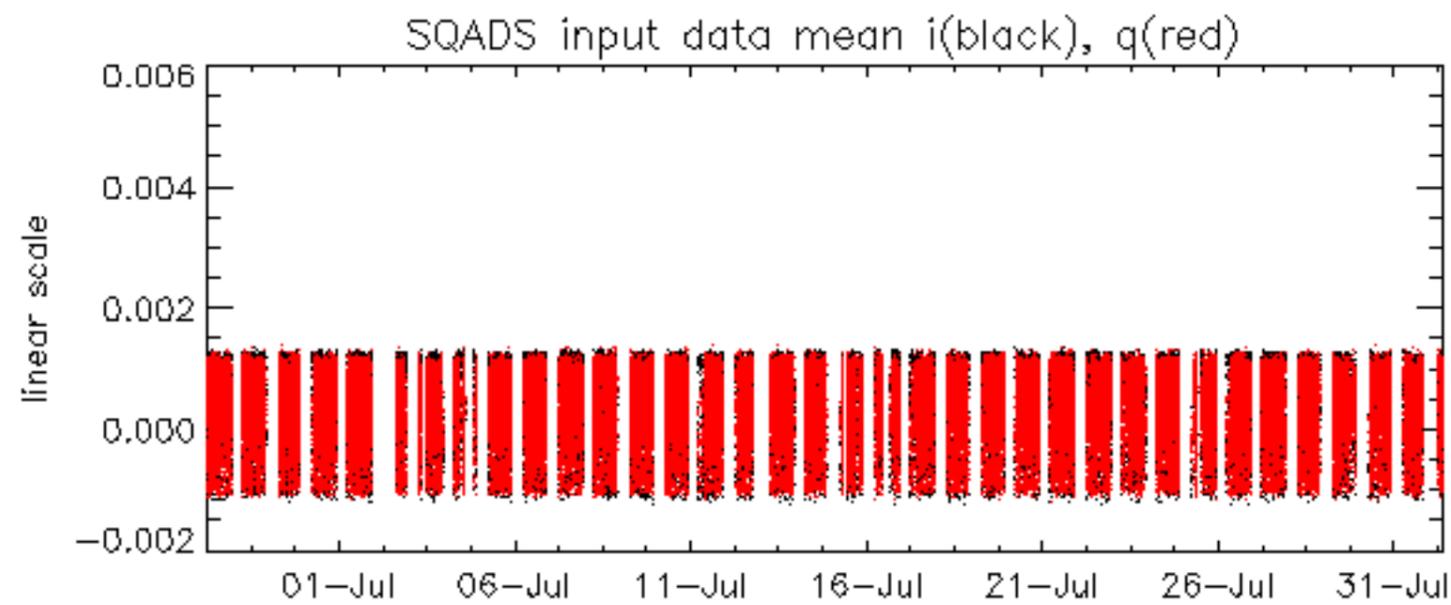


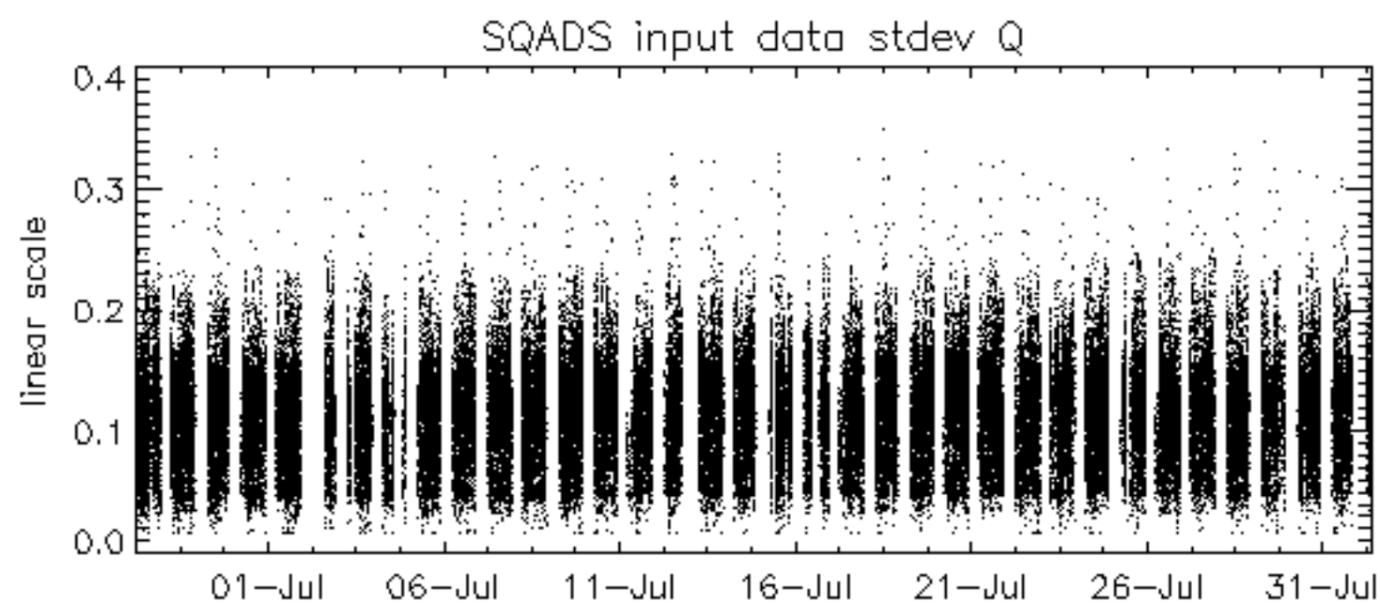
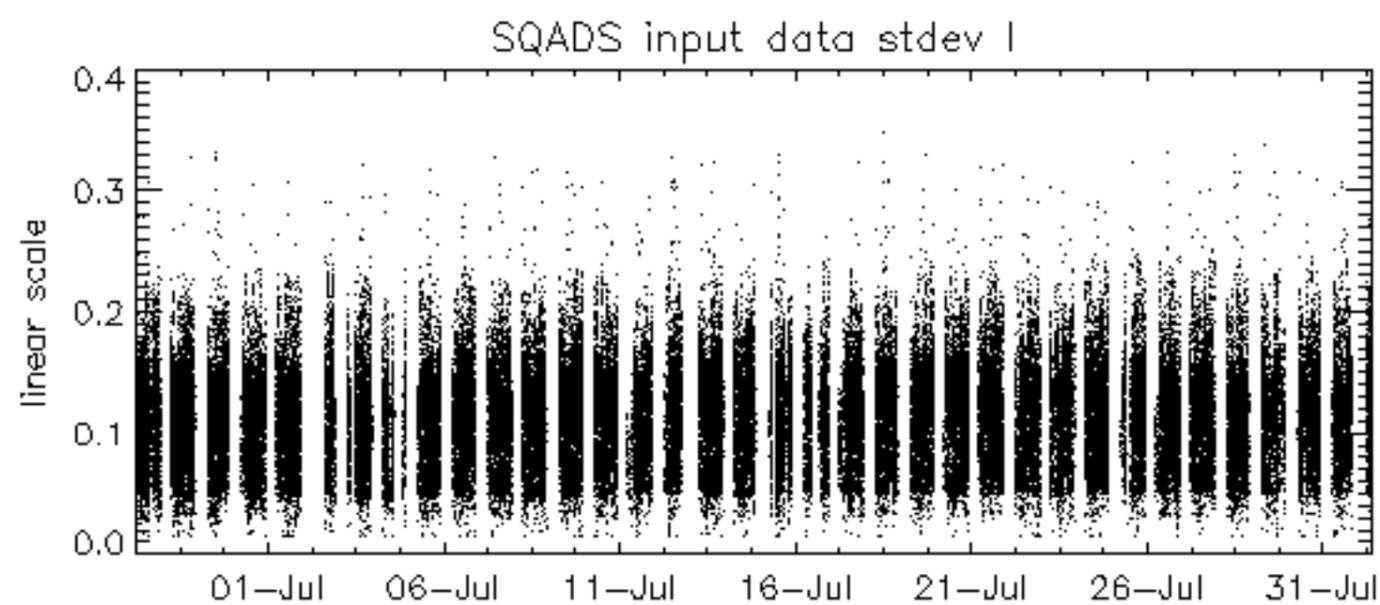
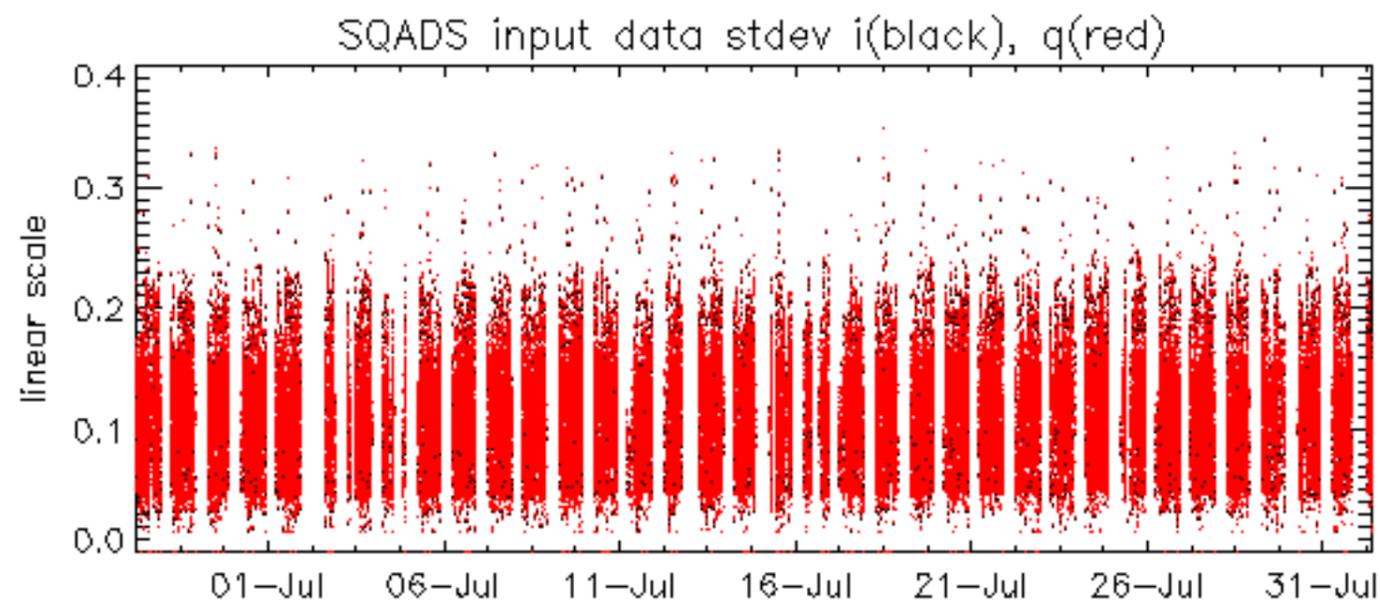




























No unavailabilities during the reported period