

# REPORT OF 031009

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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 for 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 on browse products on EOLI.

## 2.3 - Data Analysis

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

## 3 - Module Stepping Mode

Two MS products (H and V polarization) analised on 08-OCT-2003:

- ASA\_MS\_\_0PNPDK20031008\_194709\_000000152020\_00328\_08398\_0118.N1
- ASA\_MS\_\_0PNPDK20031008\_194849\_000000152020\_00328\_08398\_0117.N1

No anomalies observed.

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            | 20031008 194849 |
| H            | 20031008 194709 |

### 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 from wave mode analysis.

### 4.1 - Daily statistics

| row | stat  | AveP1      | AveP2     | AveP3      |
|-----|-------|------------|-----------|------------|
| 3   | mean  | -3.79374   | -22.5327  | -8.14144   |
|     | stdev | 0.00482551 | 0.0618288 | 0.00234488 |
| 10  | mean  | -6.89729   | -19.3215  | -8.14144   |
|     | stdev | 0.0247607  | 0.0596990 | 0.00234488 |



### 4.2 - Cyclic statistics

| row | stat  | AveP1      | AveP2     | AveP3      |
|-----|-------|------------|-----------|------------|
| 3   | mean  | -3.79883   | -22.5270  | -8.12870   |
|     | stdev | 0.00558280 | 0.0629580 | 0.00255128 |
| 10  | mean  | -6.89600   | -19.3161  | -8.12870   |
|     | stdev | 0.0271835  | 0.0610561 | 0.00255128 |



### 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  | 0.000363924 |
|         | stdev | 3.60024e-07 |

|        |       |             |
|--------|-------|-------------|
| MEAN Q | mean  | 0.000299961 |
|        | stdev | 3.23429e-07 |



## 5.2 - Input stdev I/Q

| channel | stat  | DSS-B      |
|---------|-------|------------|
| STDEV I | mean  | 0.115355   |
|         | stdev | 0.00143325 |
| STDEV Q | mean  | 0.115594   |
|         | stdev | 0.00145135 |



## 5.3 - Gain imbalance I/Q



# 6 - Wave Doppler Analysis

No anomalies observed in Doppler evolution.  
Doppler analysis performed over the last 60 days.

## 6.1 - Unbiased Doppler Error

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

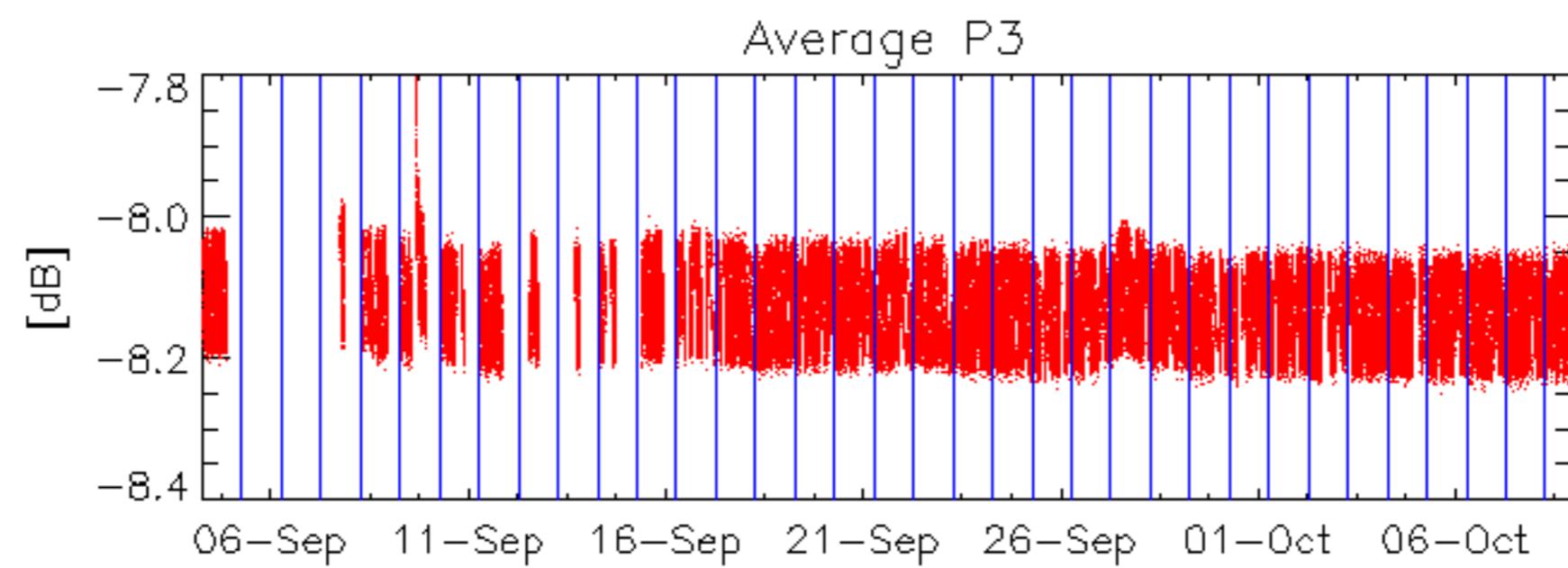
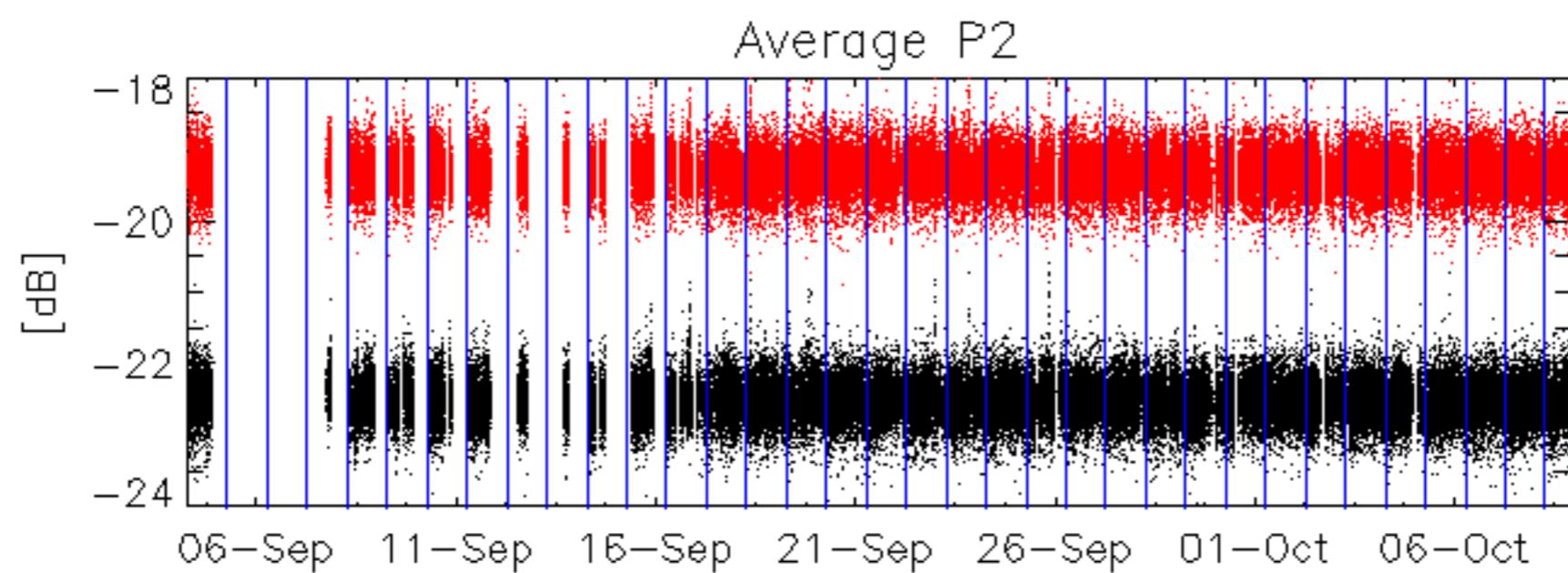
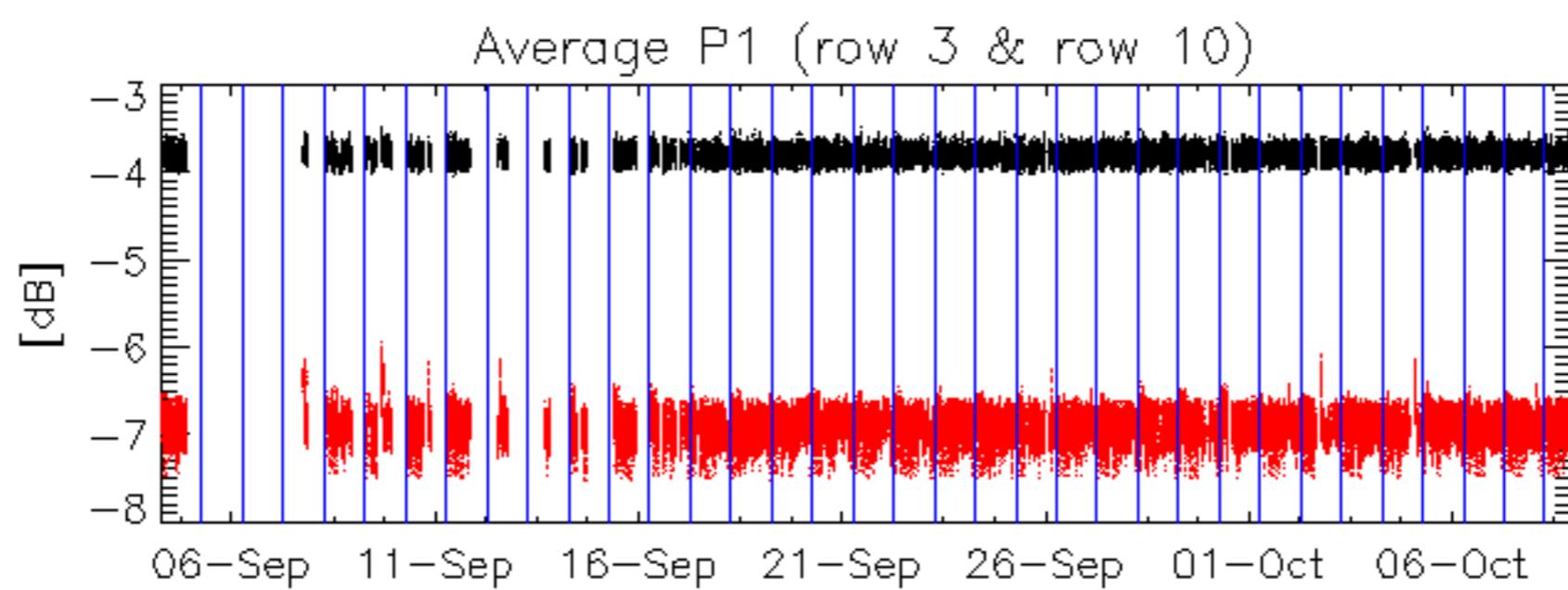
## 6.2 - Absolute Doppler

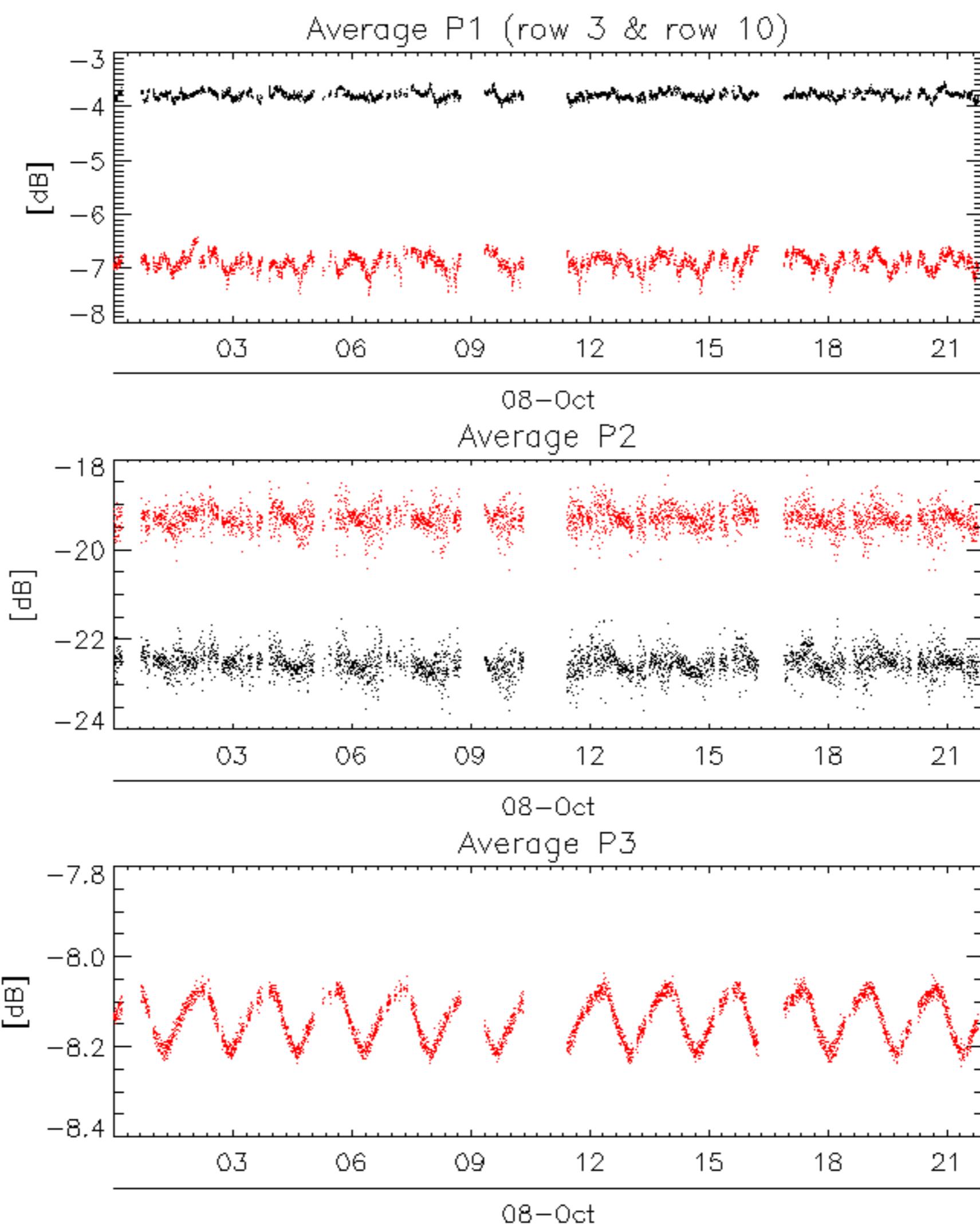
| Evolution of Absolute Doppler |            |
|-------------------------------|------------|
|                               | Ascending  |
|                               | Descending |

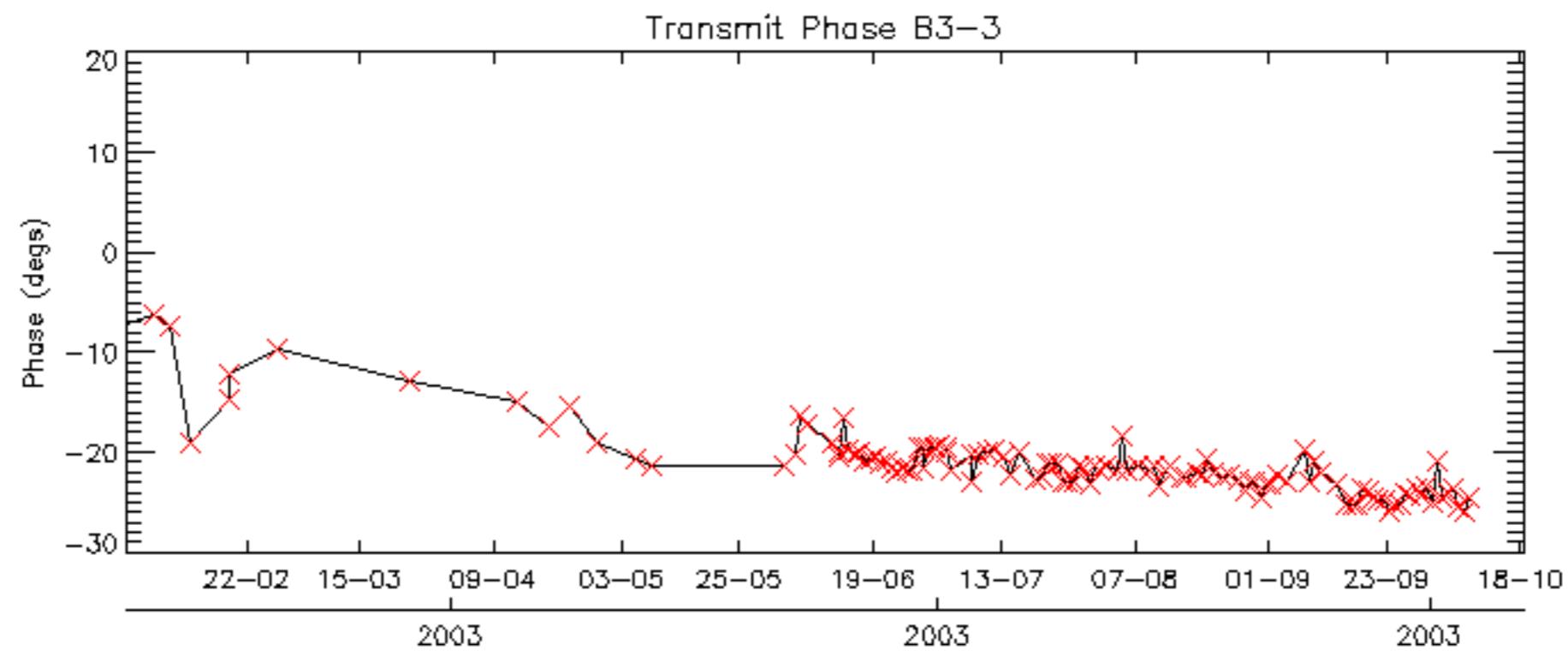
### 6.3 - Doppler evolution versus ANX

**Evolution Doppler error versus ANX**







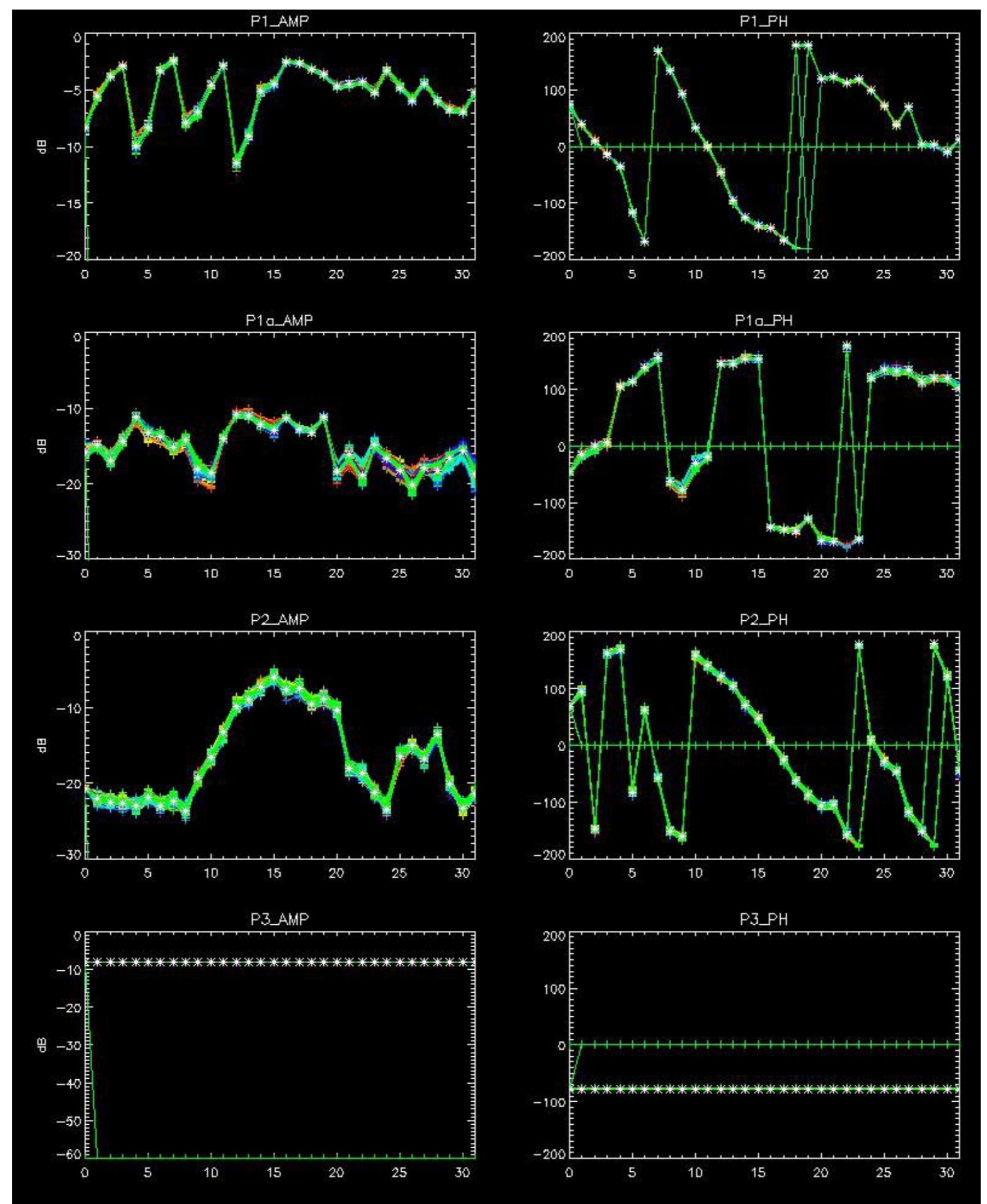


No anomalies observed on browse products on EOLI.



No anomalies observed from wave mode analysis.



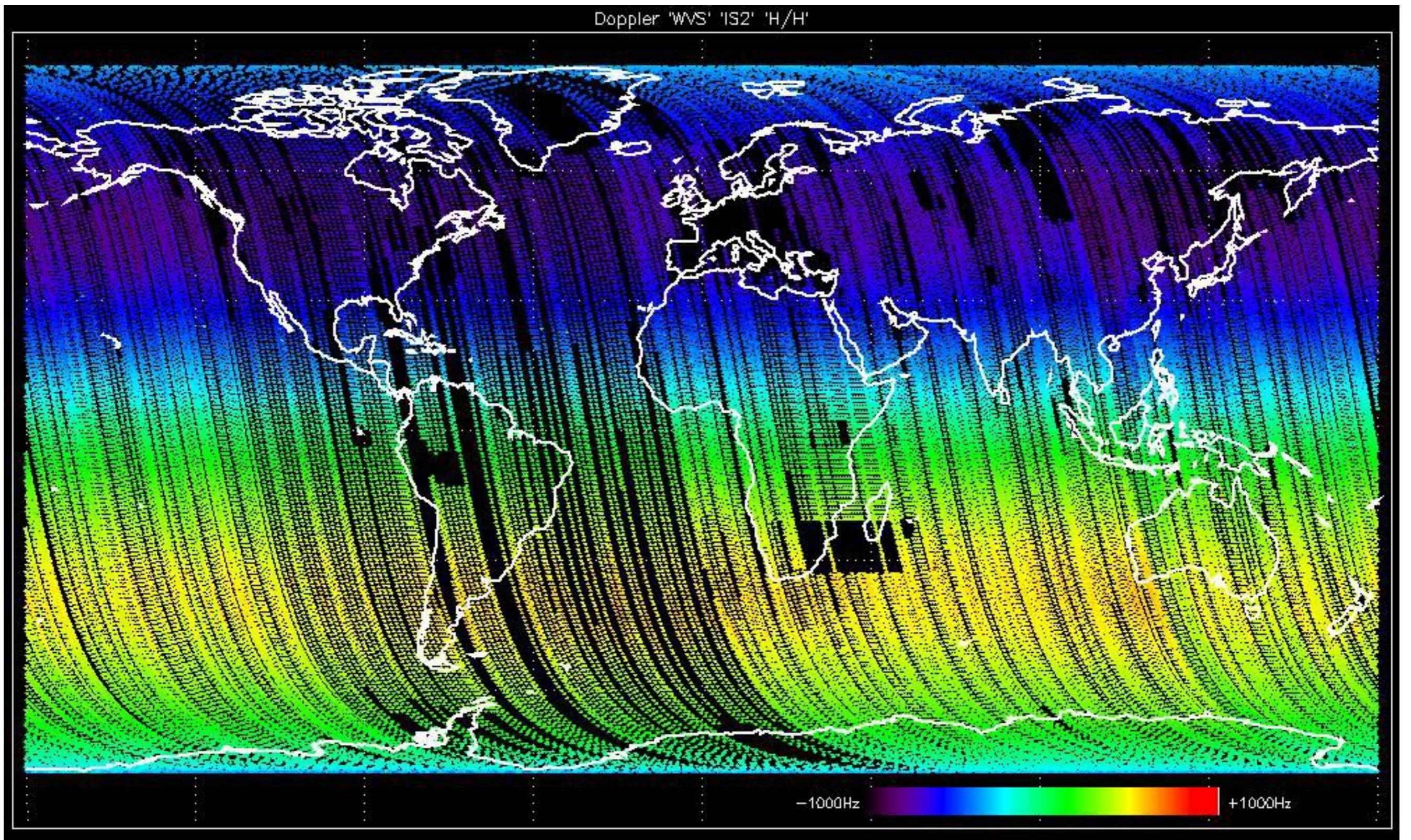


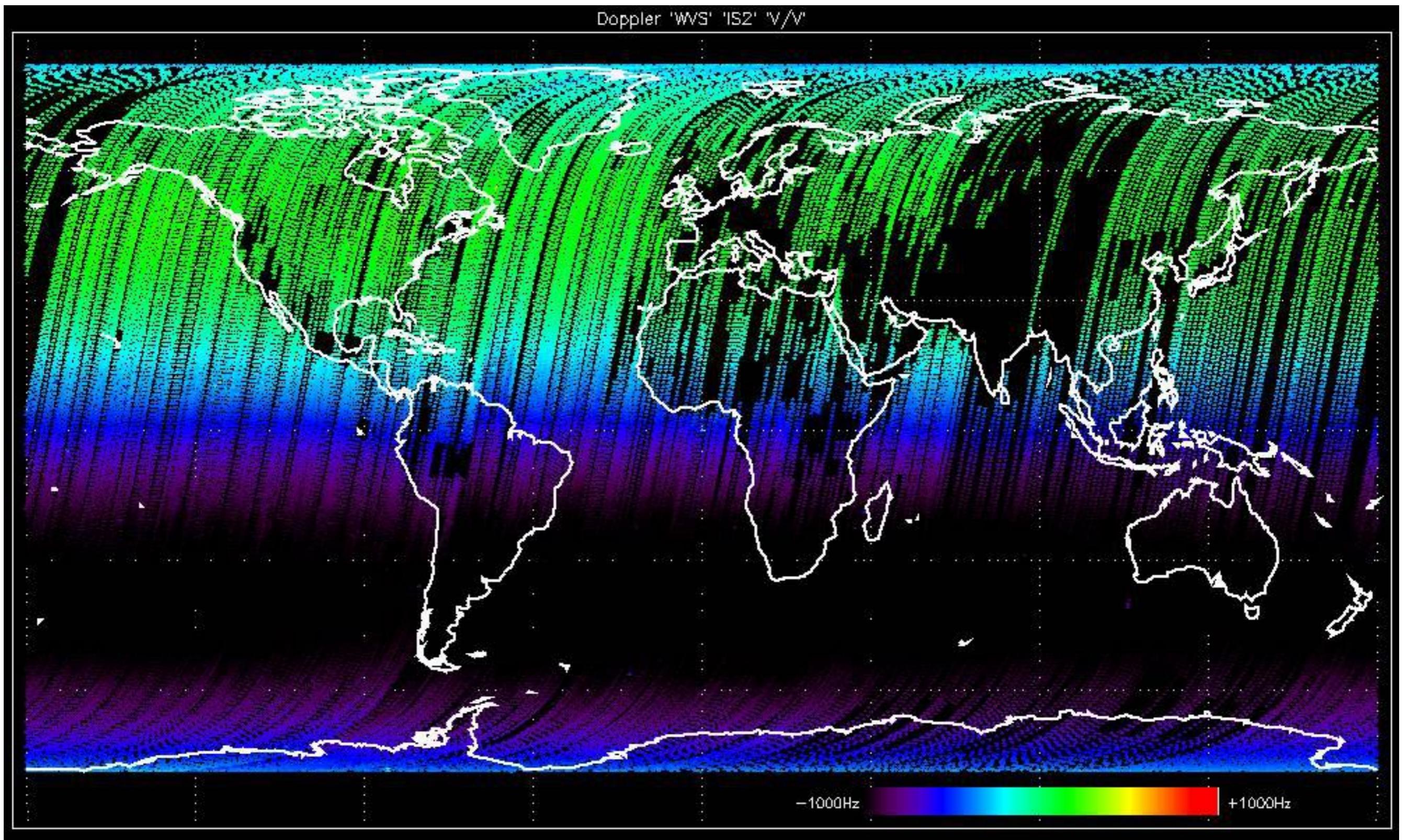
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

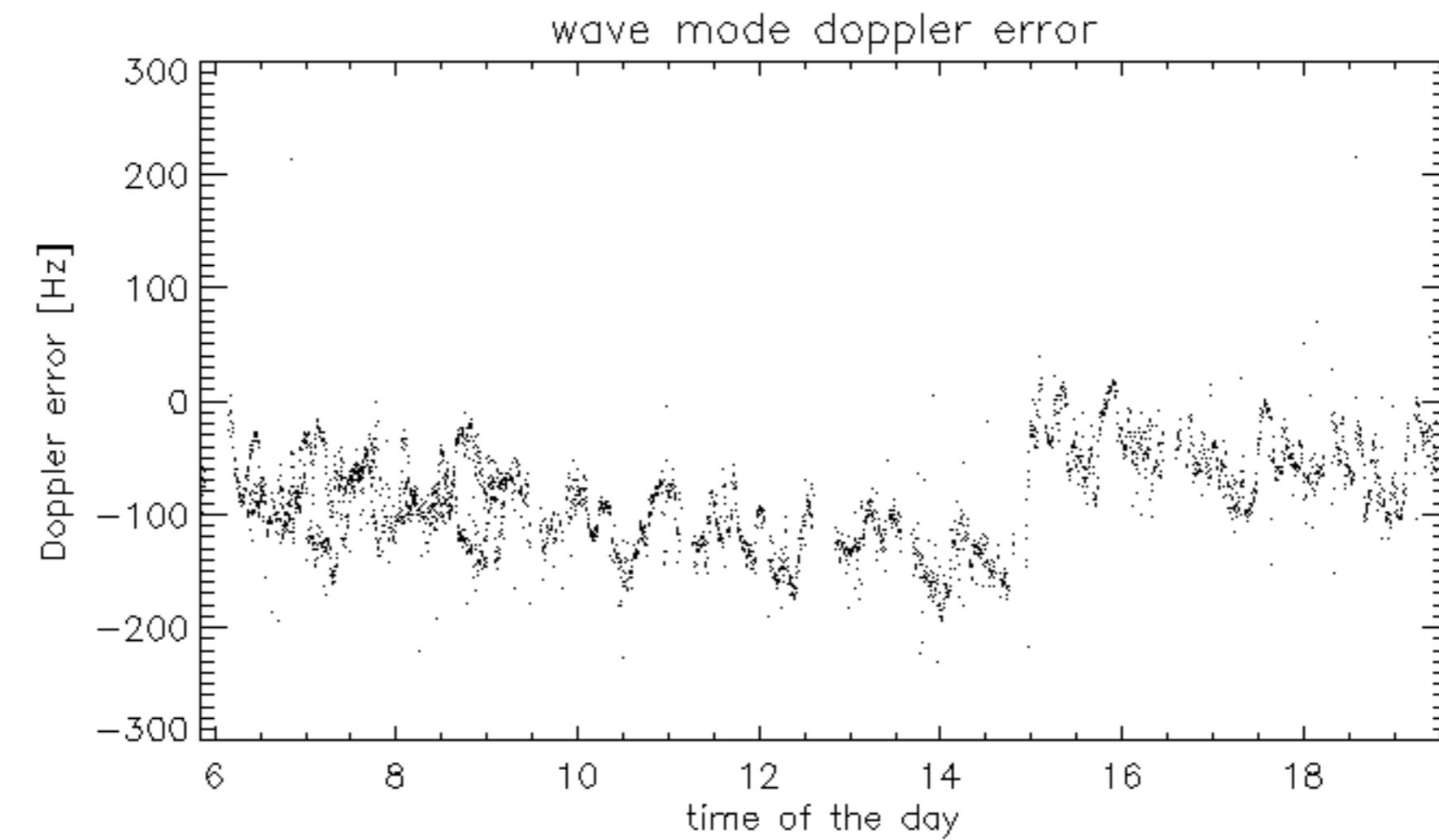
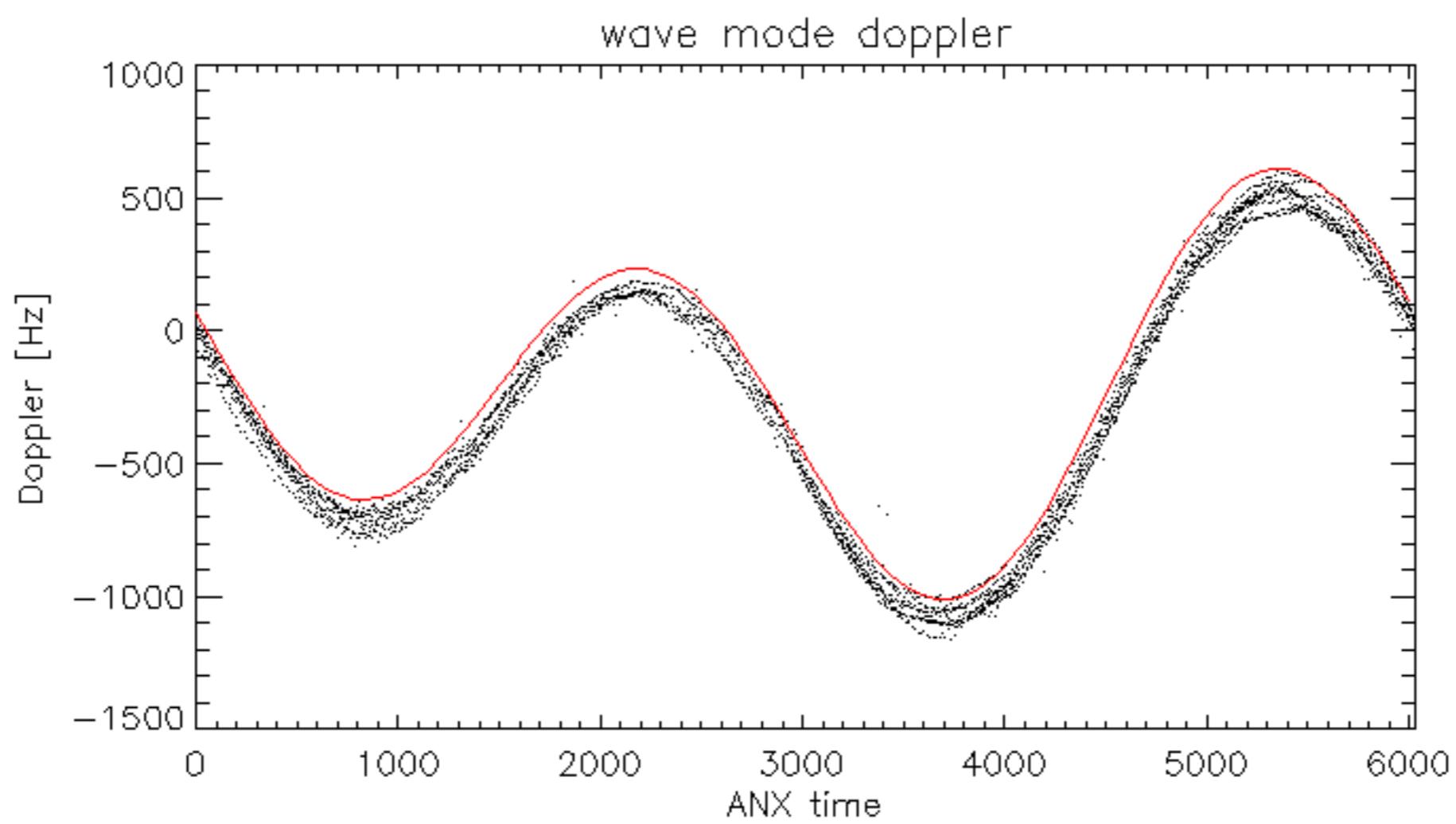


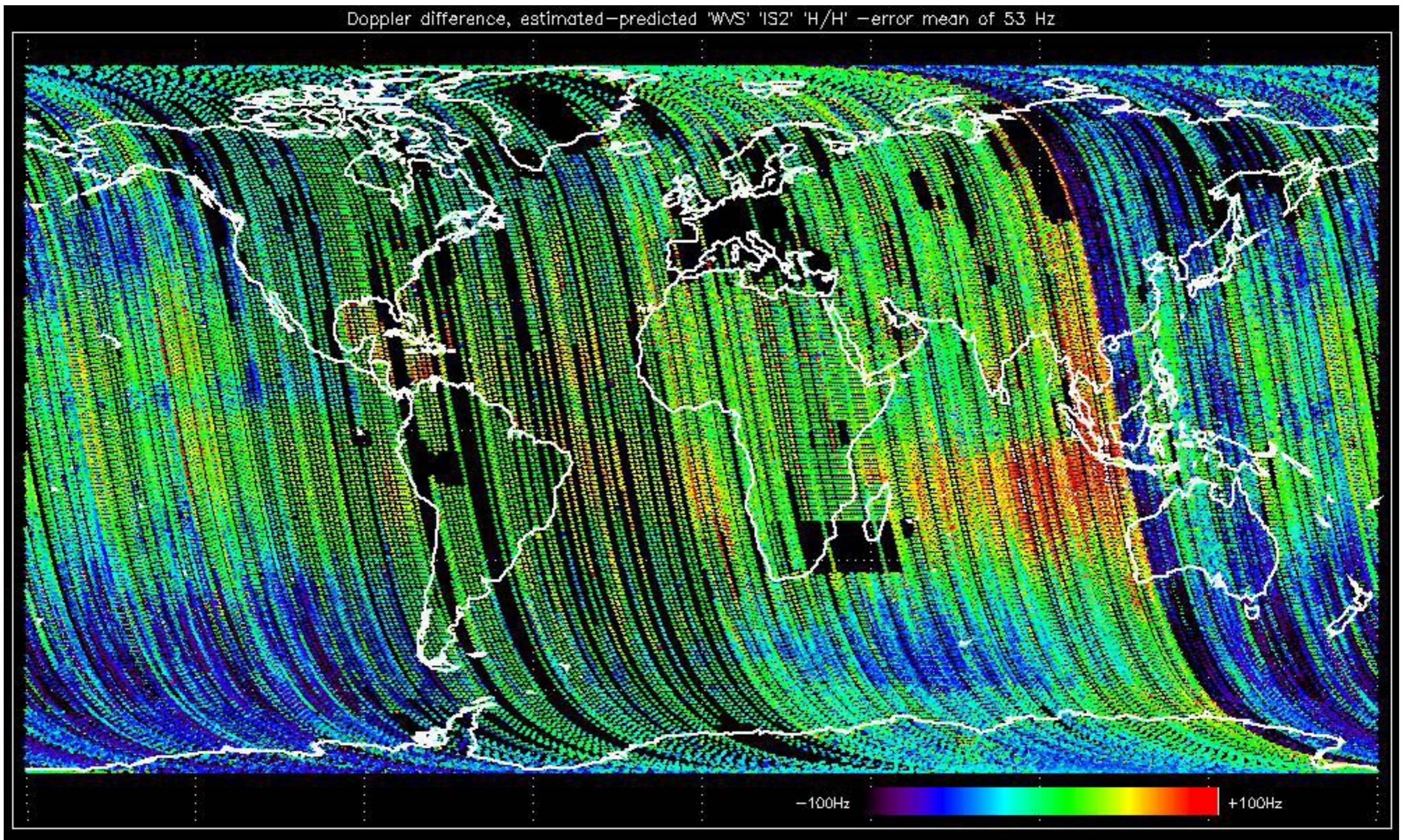
No anomalies observed in Doppler evolution.  
Doppler analysis performed over the last 60 days.

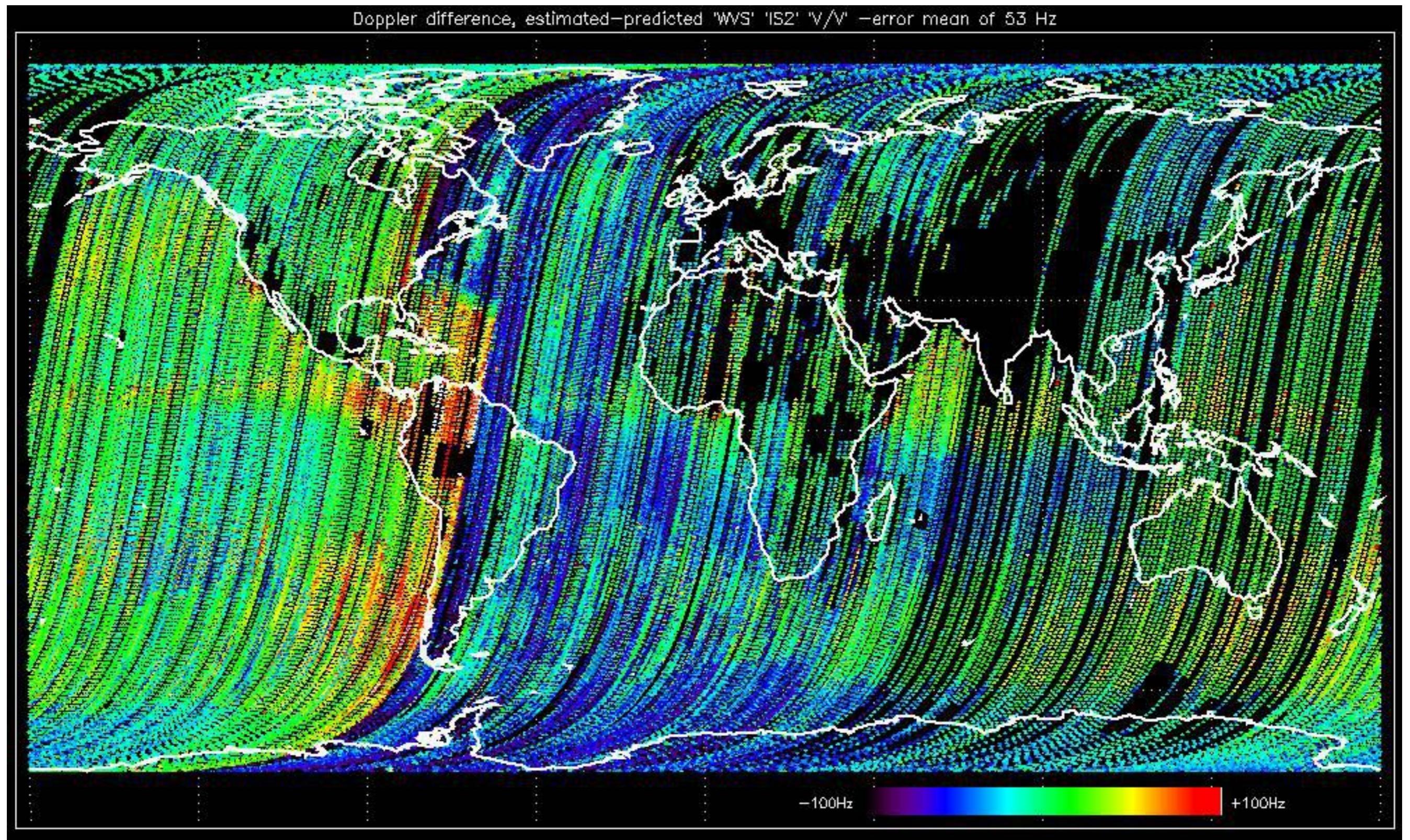












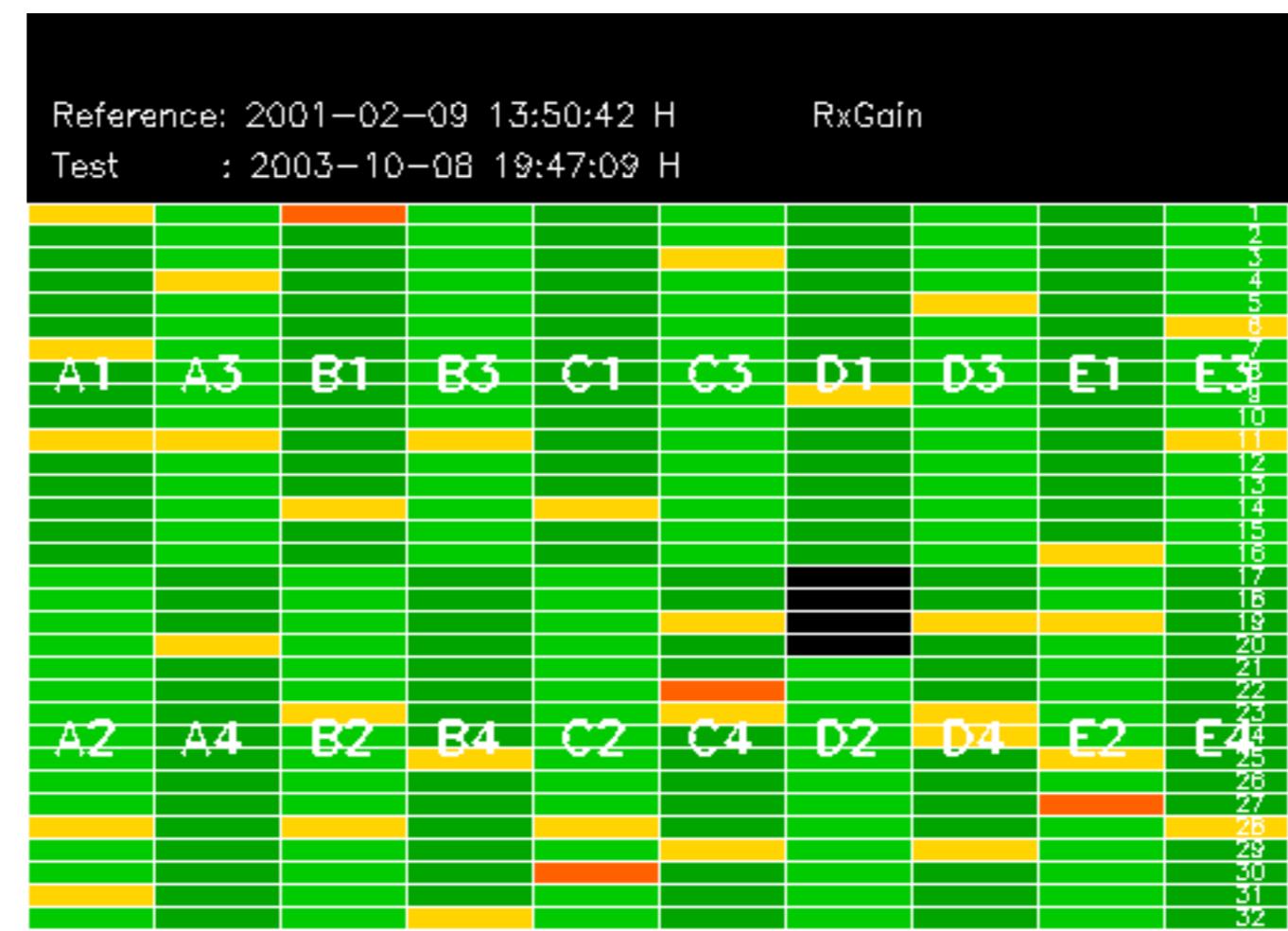
Two MS products (H and V polarization) analised on 08-OCT-2003:  
-ASA\_MS\_0PNPDK20031008\_194709\_00000152020\_00328\_08398\_0118.N1  
-ASA\_MS\_0PNPDK20031008\_194849\_00000152020\_00328\_08398\_0117.N1

No anomalies observed.

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

No anomalies observed.





Reference: 2003-06-12 14:08:52 H RxGain

Test : 2003-10-08 19:47:09 H



Reference: 2003-06-12 14:10:32 V

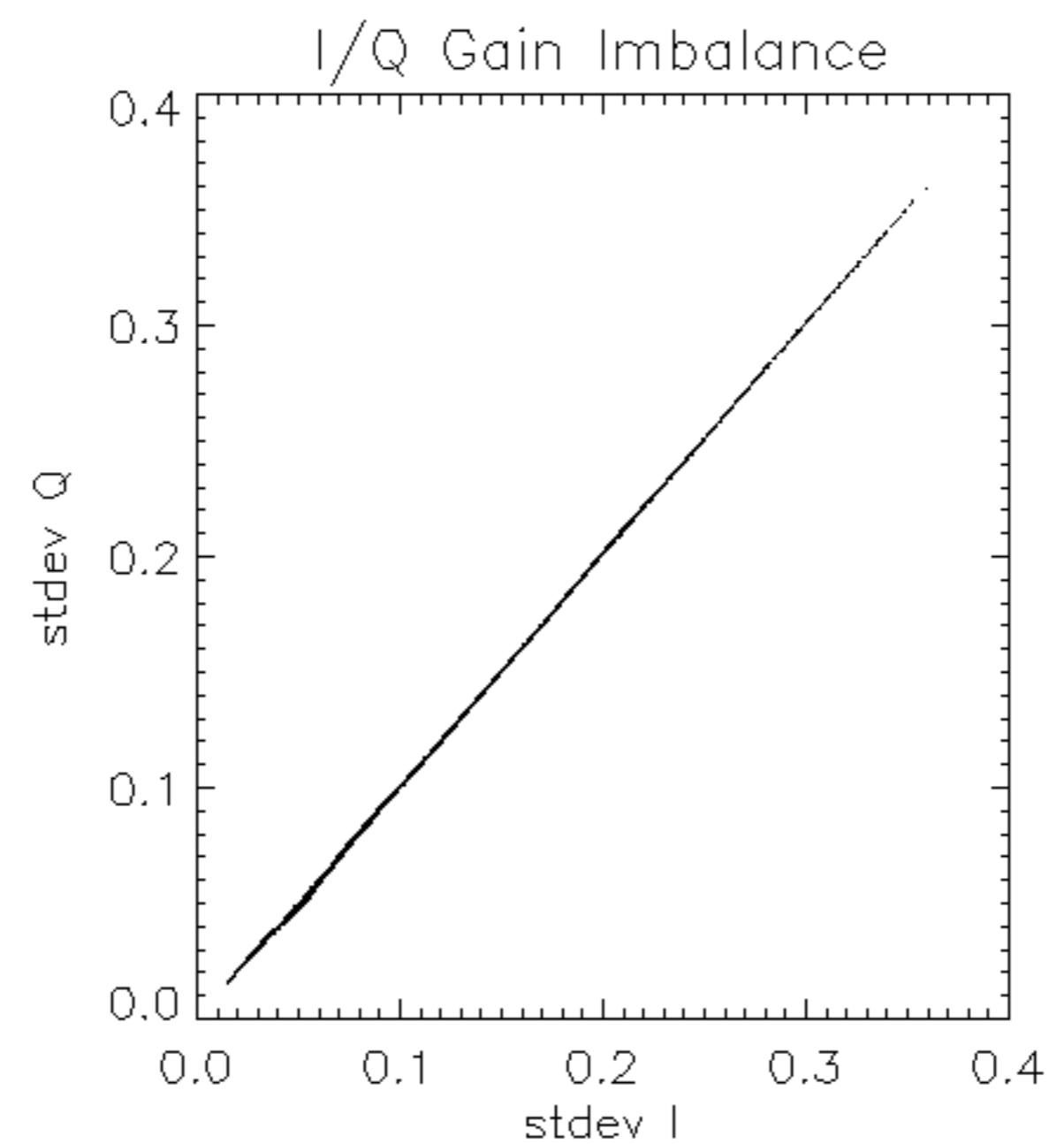
Test : 2003-10-08 19:48:49 V

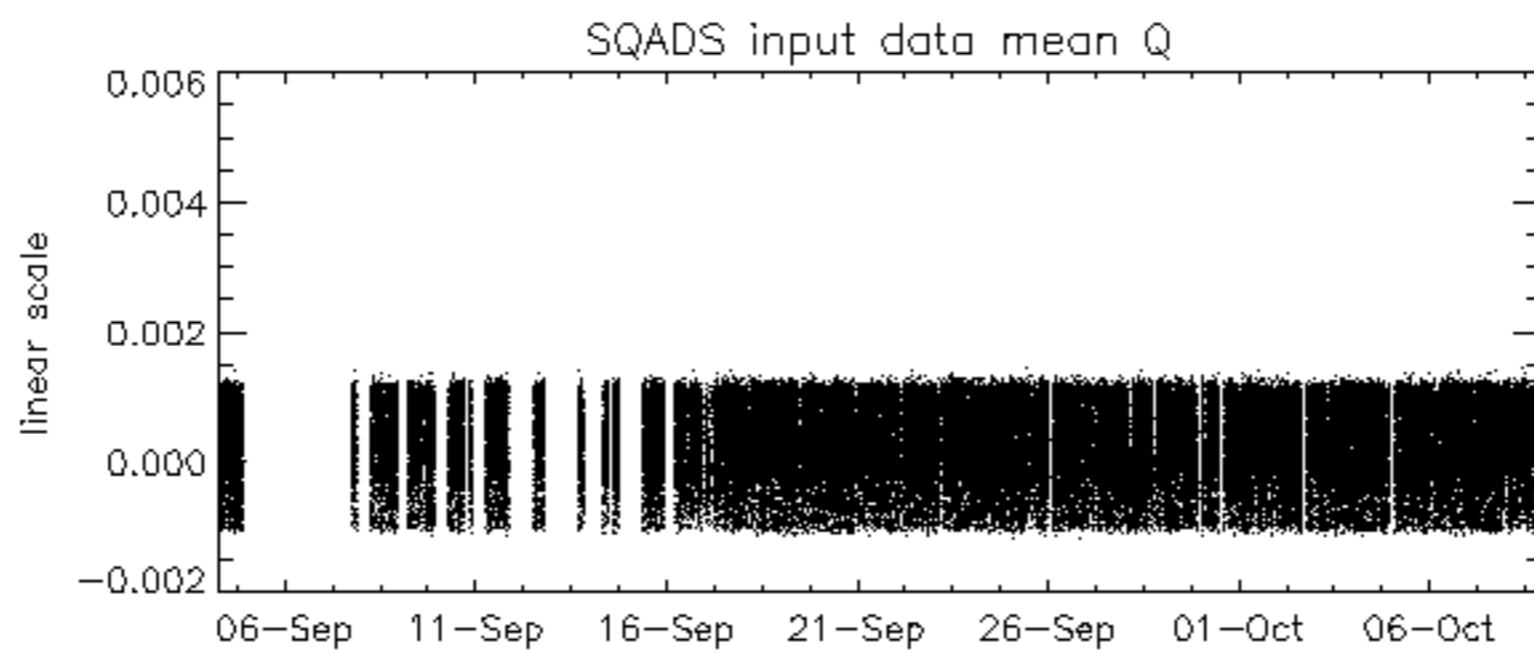
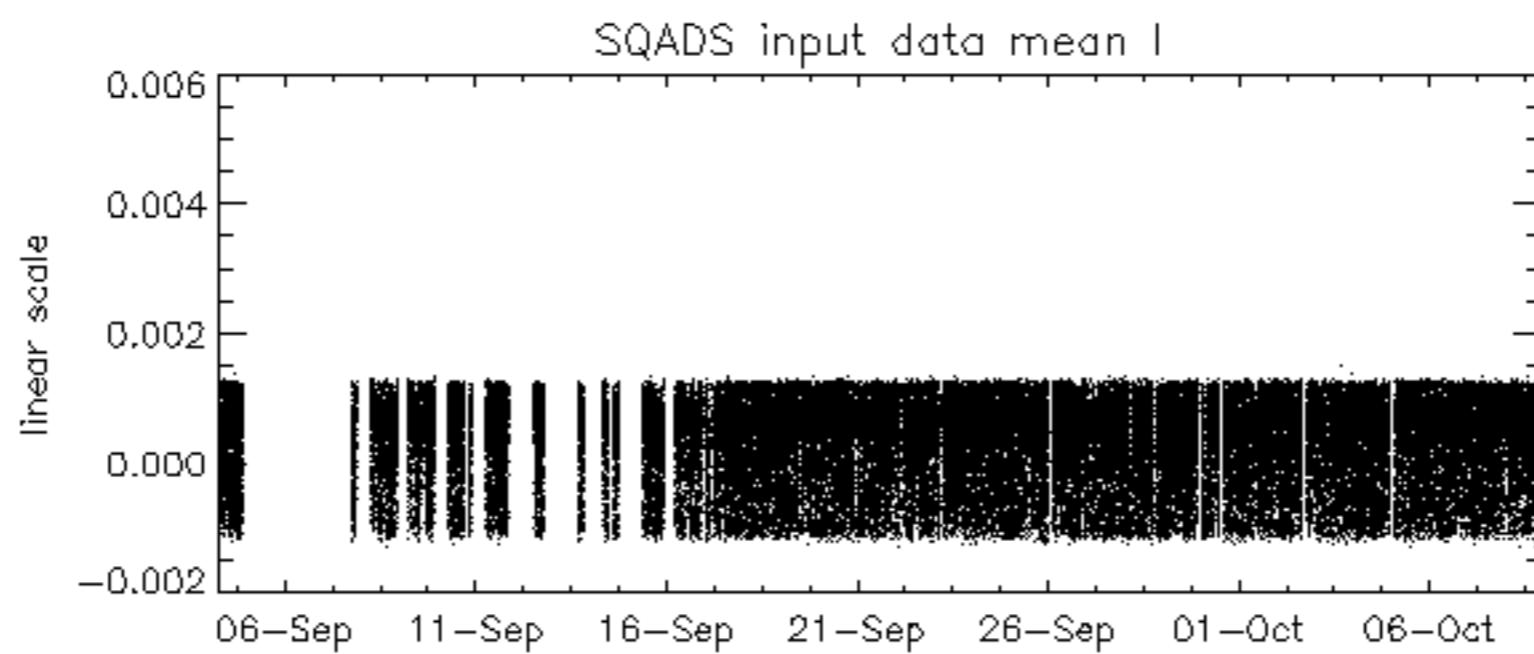
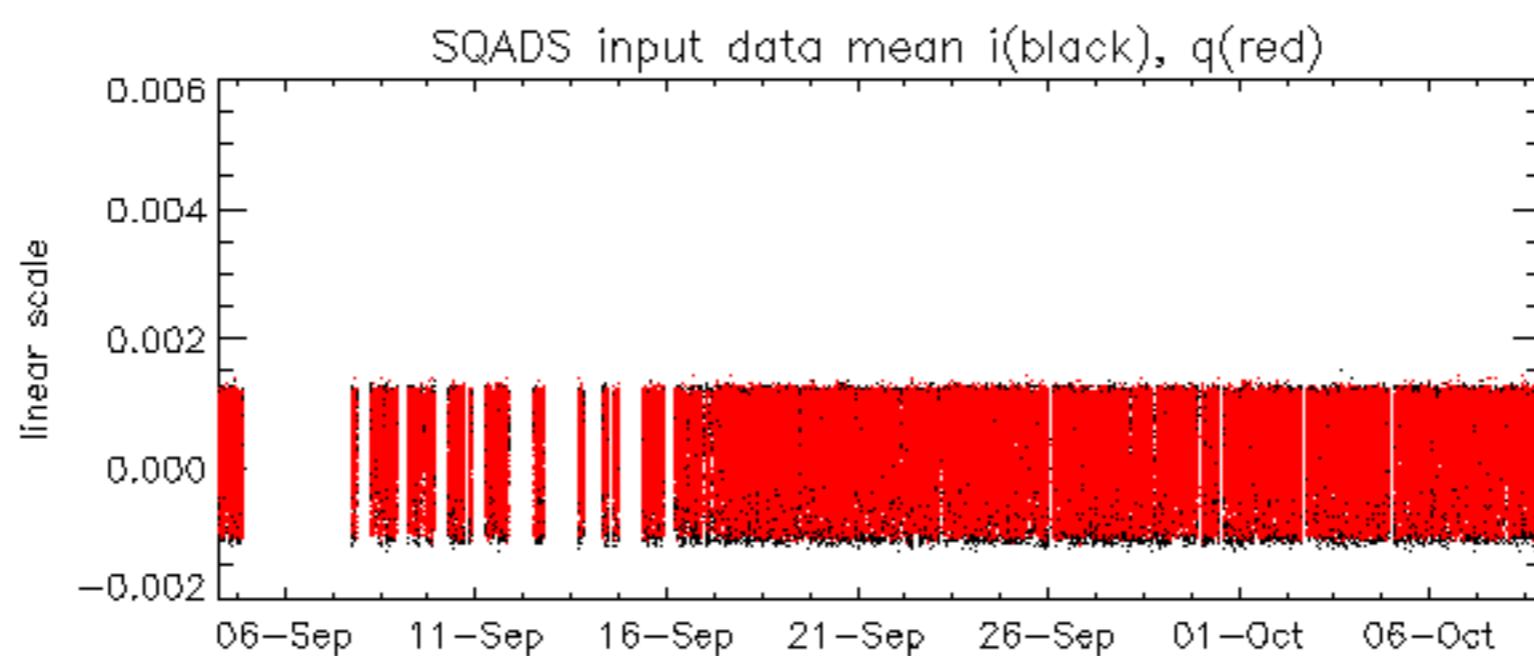


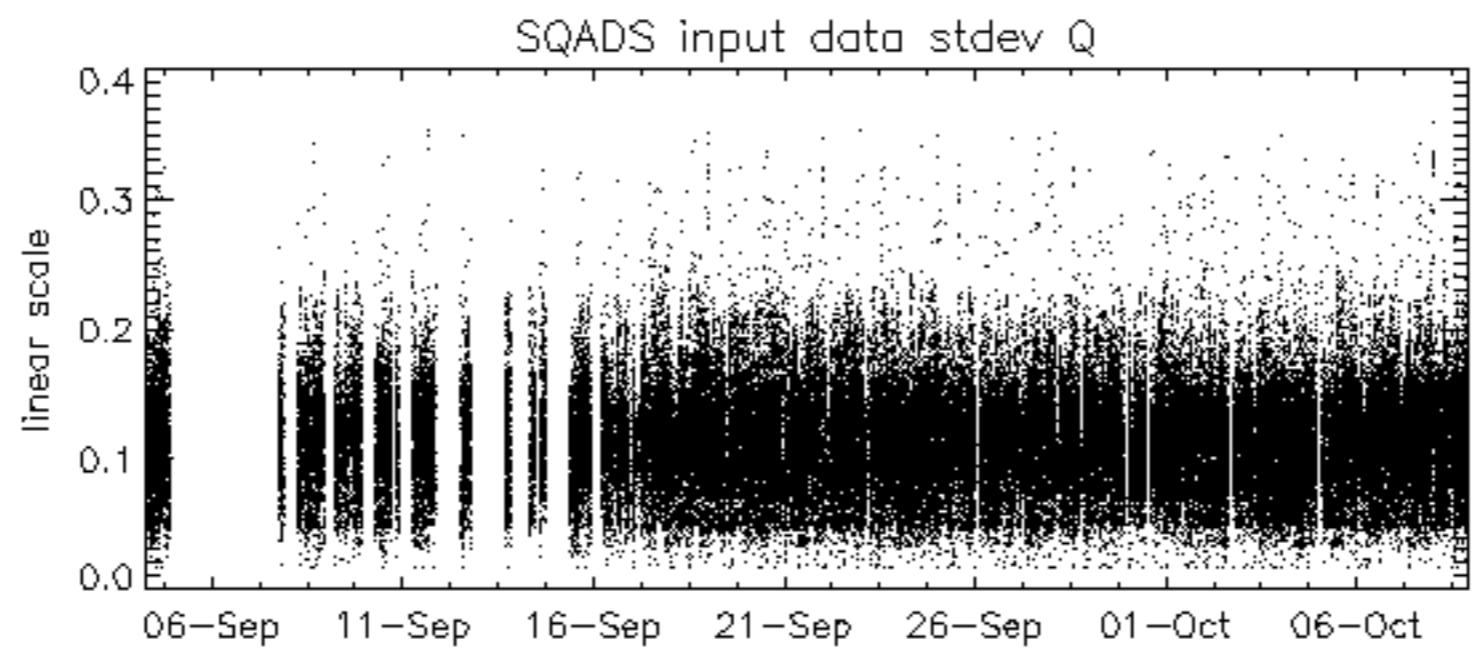
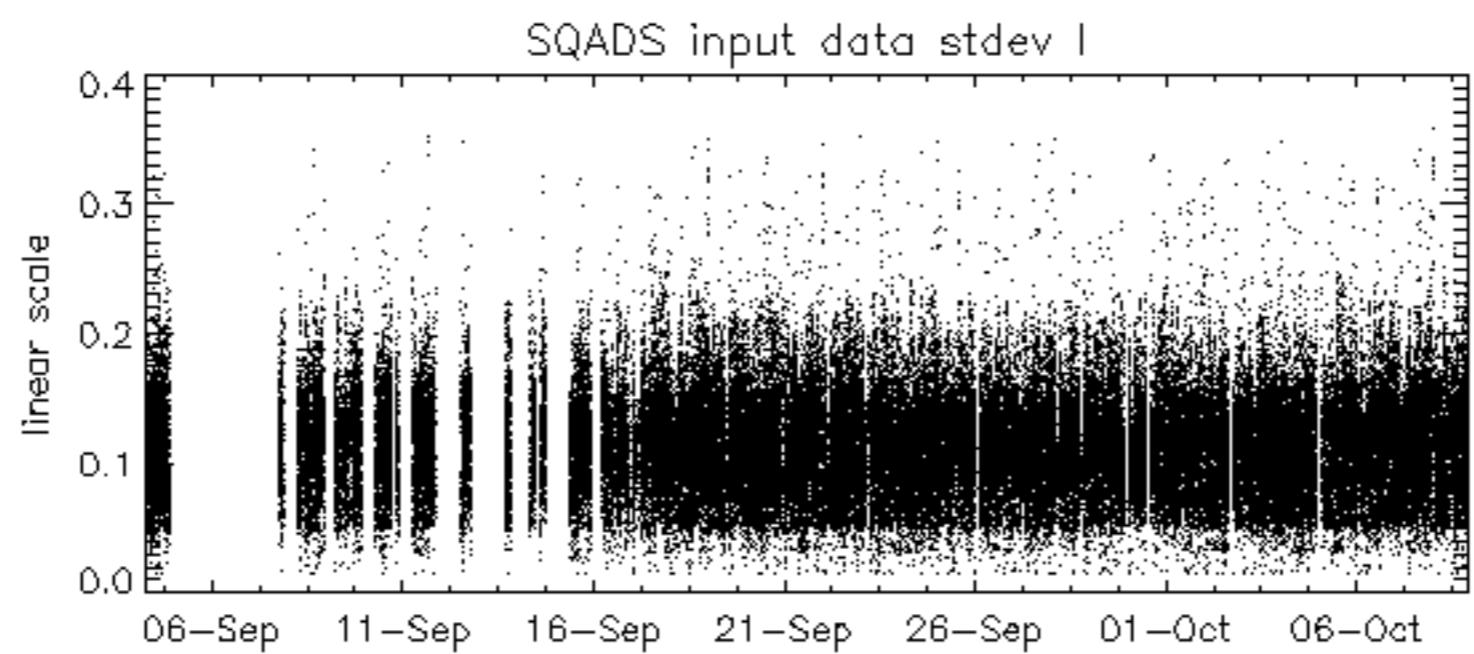
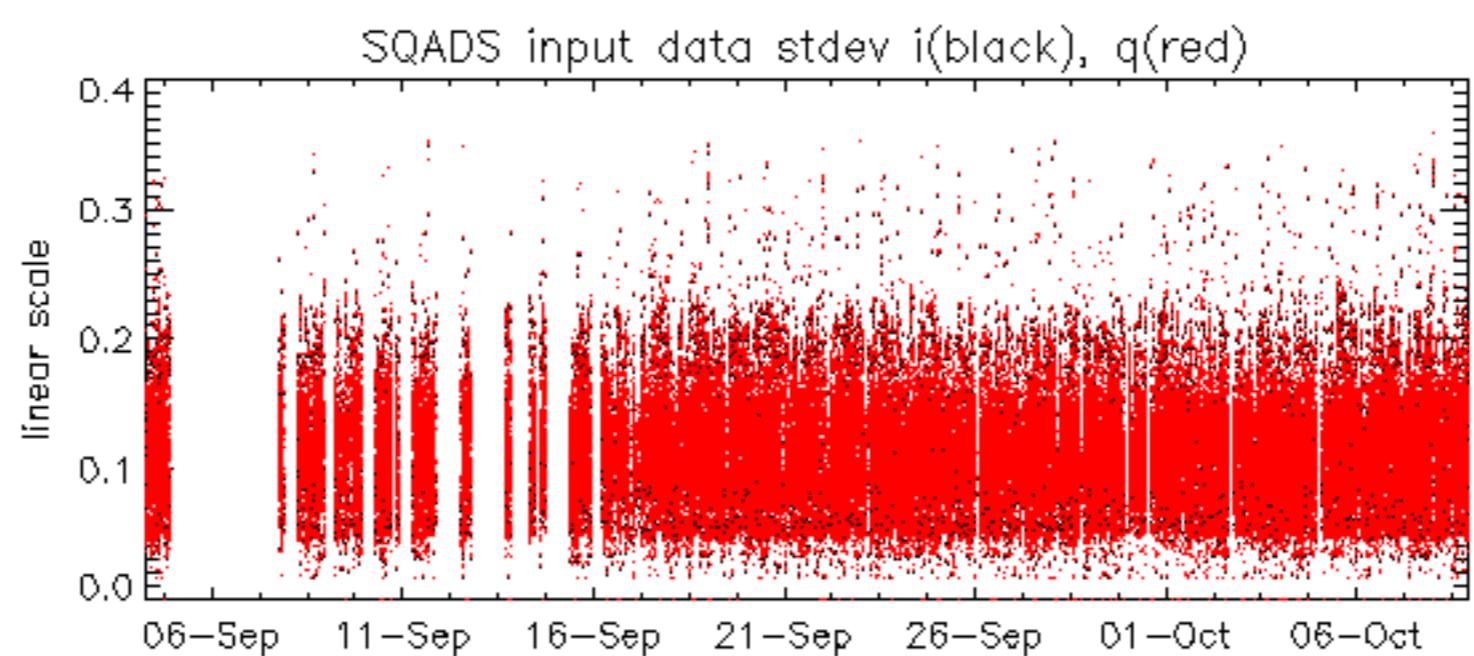


| RxPhase    |            |            |          |    |    |    |    |    |    |
|------------|------------|------------|----------|----|----|----|----|----|----|
| Reference: | 2001-02-09 | 14:08:23   | V        |    |    |    |    |    |    |
| Test       | :          | 2003-10-08 | 19:48:49 | V  |    |    |    |    |    |
| A1         | A3         | B1         | B3       | C1 | C3 | D1 | D3 | E1 | E3 |
| A2         | A4         | B2         | B4       | C2 | C4 | D2 | D4 | E2 | E4 |

|            |                         |         |
|------------|-------------------------|---------|
| Reference: | 2003-06-12 14:10:32 V   | RxPhase |
| Test       | : 2003-10-08 19:48:49 V |         |
|            |                         | 1       |
|            |                         | 2       |
|            |                         | 4       |
|            |                         | 3       |
|            |                         | 4       |
|            |                         | 5       |
|            |                         | 8       |
|            |                         | 7       |
| A1         | A3                      | B1      |
| B3         | C1                      | C3      |
| D1         | D3                      | E1      |
|            |                         | E3      |
|            |                         | 9       |
|            |                         | 10      |
|            |                         | 11      |
|            |                         | 12      |
|            |                         | 13      |
|            |                         | 14      |
|            |                         | 15      |
|            |                         | 16      |
|            |                         | 17      |
|            |                         | 18      |
|            |                         | 19      |
|            |                         | 20      |
|            |                         | 21      |
|            |                         | 22      |
| A2         | A4                      | B2      |
| B4         | C2                      | C4      |
| D2         | D4                      | E2      |
|            |                         | E4      |
|            |                         | 23      |
|            |                         | 24      |
|            |                         | 25      |
|            |                         | 26      |
|            |                         | 27      |
|            |                         | 28      |
|            |                         | 29      |
|            |                         | 30      |
|            |                         | 31      |
|            |                         | 32      |









|            |                         |        |
|------------|-------------------------|--------|
| Reference: | 2003-06-12 14:08:52 H   | TxGain |
| Test       | : 2003-10-08 19:47:09 H |        |
| A1         | A3                      | B1     |
| B3         | C1                      | C3     |
| D1         | D3                      | E1     |
| E3         |                         |        |
| A2         | A4                      | B2     |
| B4         | C2                      | C4     |
| D2         | D4                      | E2     |
| E4         |                         |        |



Reference: 2003-06-12 14:10:32 V

Test : 2003-10-08 19:48:49 V



|            |                         |         |
|------------|-------------------------|---------|
| Reference: | 2003-06-12 14:08:52 H   | TxPhase |
| Test       | : 2003-10-08 19:47:09 H |         |
|            |                         | 1       |
|            |                         | 2       |
|            |                         | 3       |
|            |                         | 4       |
|            |                         | 5       |
|            |                         | 6       |
|            |                         | 7       |
| A1         | A3                      | B1      |
|            |                         | B3      |
|            |                         | C1      |
|            |                         | C3      |
|            |                         | D1      |
|            |                         | D3      |
|            |                         | E1      |
|            |                         | E3      |
|            |                         | 8       |
|            |                         | 9       |
|            |                         | 10      |
|            |                         | 11      |
|            |                         | 12      |
|            |                         | 13      |
|            |                         | 14      |
|            |                         | 15      |
|            |                         | 16      |
|            |                         | 17      |
|            |                         | 18      |
|            |                         | 19      |
|            |                         | 20      |
|            |                         | 21      |
|            |                         | 22      |
|            |                         | 23      |
| A2         | A4                      | B2      |
|            |                         | B4      |
|            |                         | C2      |
|            |                         | C4      |
|            |                         | D2      |
|            |                         | D4      |
|            |                         | E2      |
|            |                         | E4      |
|            |                         | 24      |
|            |                         | 25      |
|            |                         | 26      |
|            |                         | 27      |
|            |                         | 28      |
|            |                         | 29      |
|            |                         | 30      |
|            |                         | 31      |
|            |                         | 32      |

|            |                         |         |    |    |    |    |    |    |    |
|------------|-------------------------|---------|----|----|----|----|----|----|----|
| Reference: | 2001-02-09 14:08:23 V   | TxPhase |    |    |    |    |    |    |    |
| Test       | : 2003-10-08 19:48:49 V |         |    |    |    |    |    |    |    |
| A1         | A3                      | B1      | B3 | C1 | C3 | D1 | D3 | E1 | E3 |
| A2         | A4                      | B2      | B4 | C2 | C4 | D2 | D4 | E2 | E4 |

|            |                         |         |
|------------|-------------------------|---------|
| Reference: | 2003-06-12 14:10:32 V   | TxPhase |
| Test       | : 2003-10-08 19:48:49 V |         |
|            |                         | 1       |
|            |                         | 2       |
|            |                         | 3       |
|            |                         | 4       |
|            |                         | 5       |
|            |                         | 6       |
| A1         | A3                      | B1      |
| B3         | C1                      | C3      |
| D1         | D3                      | E1      |
| E3         |                         | 7       |
|            |                         | 8       |
|            |                         | 9       |
|            |                         | 10      |
|            |                         | 11      |
|            |                         | 12      |
|            |                         | 13      |
|            |                         | 14      |
|            |                         | 15      |
|            |                         | 16      |
|            |                         | 17      |
|            |                         | 18      |
|            |                         | 19      |
|            |                         | 20      |
|            |                         | 21      |
|            |                         | 22      |
|            |                         | 23      |
| A2         | A4                      | B2      |
| B4         | C2                      | C4      |
| D2         | D4                      | E2      |
| E4         |                         | 24      |
|            |                         | 25      |
|            |                         | 26      |
|            |                         | 27      |
|            |                         | 28      |
|            |                         | 29      |
|            |                         | 30      |
|            |                         | 31      |
|            |                         | 32      |

No unavailabilities for the reported period.

