

SUMMARY

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics \(row 9 and 10\)](#)
 - [Cyclic statistics \(row 8 and 24\)](#)
 - [cal pulses monitoring \(all row\)](#)
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.

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 available browse products.

2.3 - Data Analysis

- Figure of paragraph 4.3 shows variation of P1, P1A amplitude for rows 1 to 12:
 - + For each group of 4 consecutive rows (sharing one PSU) the P1 variation is larger for the first row and very small for the last.
 - + P1 intensity decreases about 5dB for first row to less than 1dB for the fourth of each group.
 - + No significant changes on P1 phase.
 - + P1A intensity increases for rows 5 to 12 between 2-5dB.
 - + P1A phase decreases for rows 1 to 12 with a constant offset for each group of 4 consecutive rows
 - + Anomaly has started on 10-JUL-2003 20:20
- Stable raw data statistics.
 - Nominal Doppler behavior.

3 - Module Stepping Mode

No anomalies observed.

MS data acquired just before the start of the anomaly on the cal pulses.

Polarisation	Start Time
V	20030710 201910
H	20030710 201730

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

Please see paragraph 2.3 for details on the bserved anomaly.

4.1 - Daily statistics

row	stat	AveP1	AveP2	AveP3
8	mean	-2.46161	-22.5112	-8.10493
	stdev	0.0151998	0.0647053	0.00249086
24	mean	-5.14761	-21.2105	-8.10493
	stdev	0.0126764	0.0550772	0.00249086



4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
8	mean	-2.44585	-22.5376	-8.10655
	stdev	0.0128396	0.0683167	0.00303504
24	mean	-5.15772	-21.1993	-8.10655
	stdev	0.0130450	0.0570565	0.00303504



4.3 - cal pulses monitoring (all row)



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000462564
	stdev	3.04057e-07
MEAN Q	mean	0.000299671
	stdev	3.13040e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.112888
	stdev	0.00158509
STDEV Q	mean	0.112989
	stdev	0.00161508



5.3 - Gain imbalance I/Q



6 - Wave Doppler Analysis

No anomalies observed 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

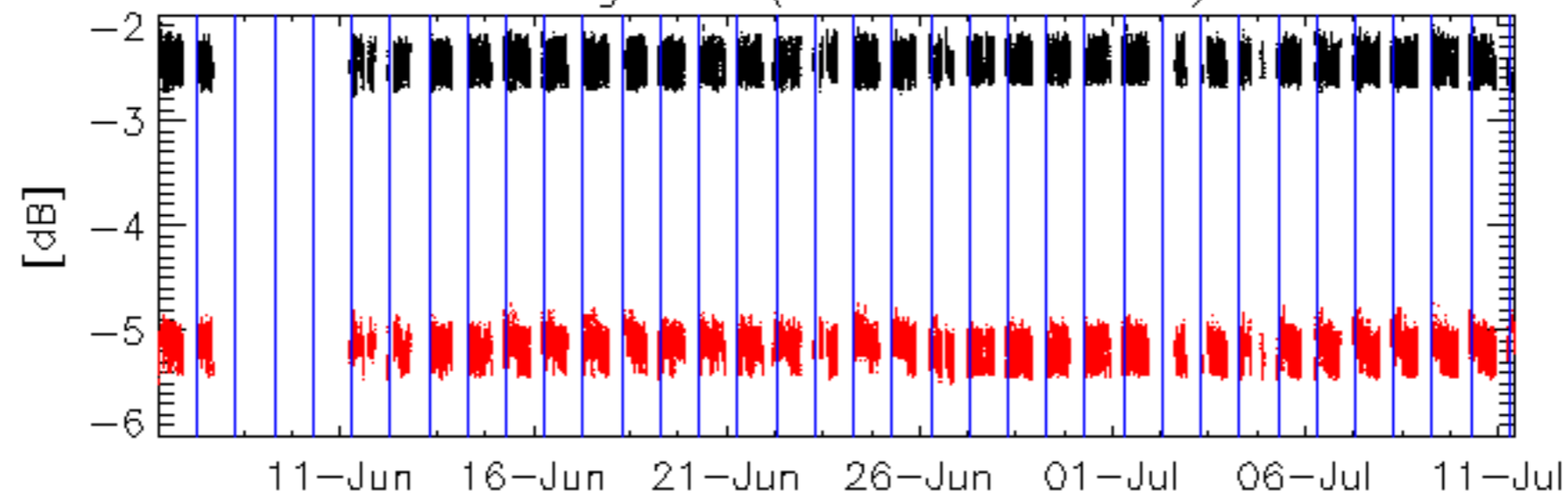
Evolution of Absolute Doppler
Ascending
Descending

6.3 - Doppler evolution versus ANX

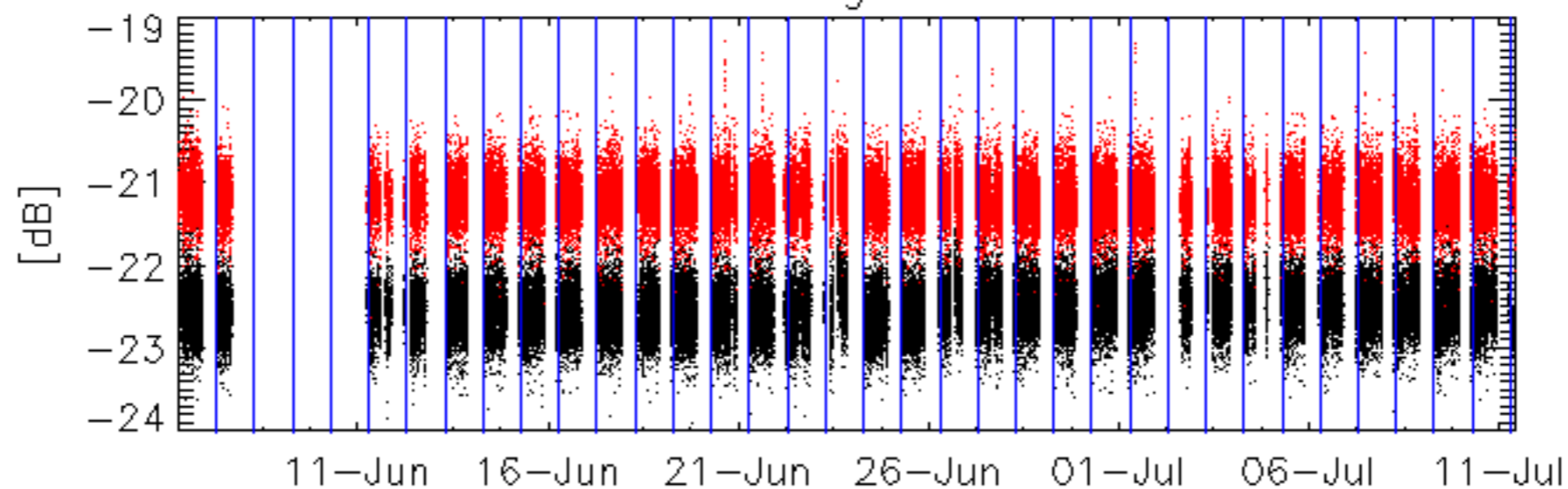
Evolution Doppler error versus ANX



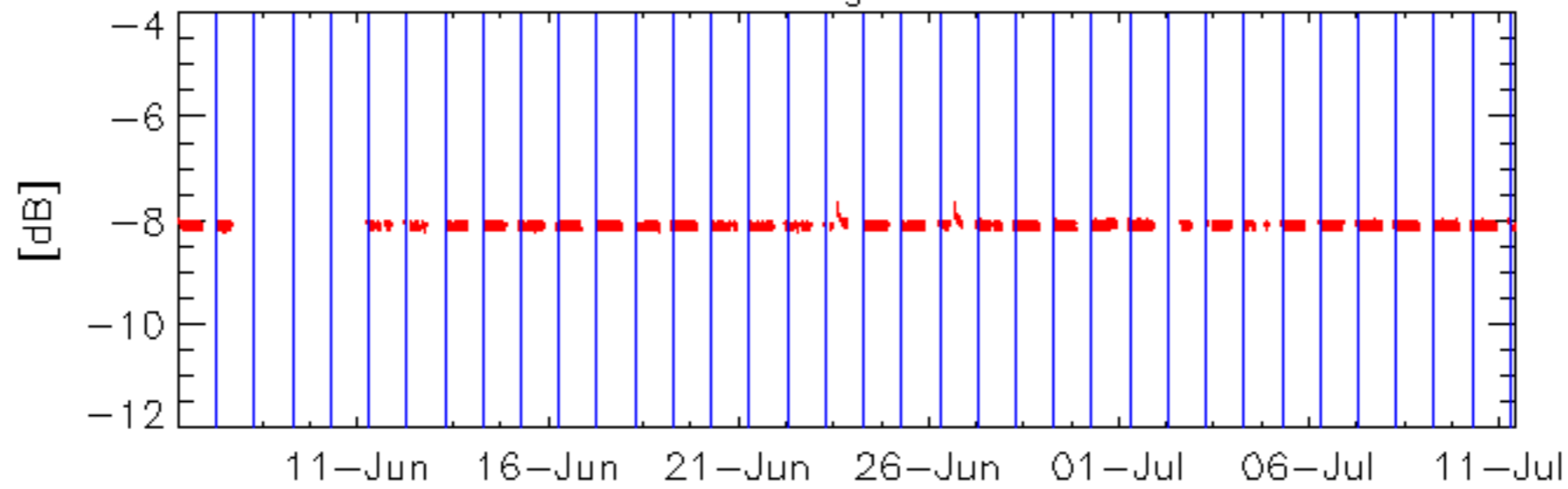
Average P1 (row 8 & row 24)



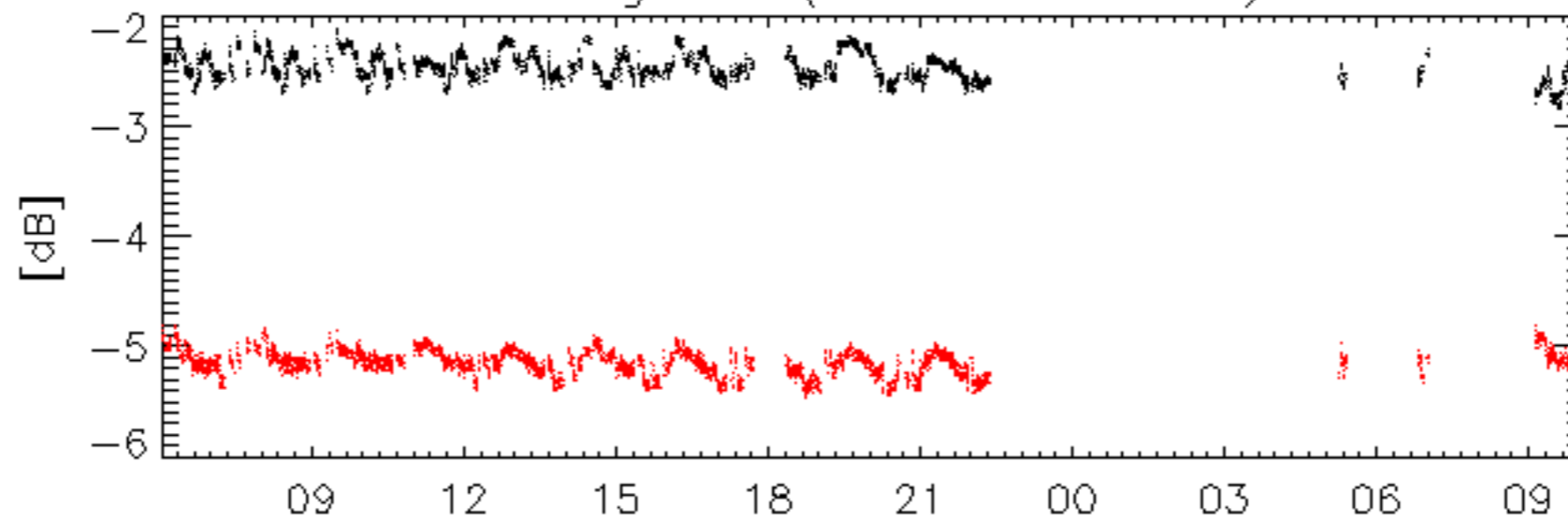
Average P2



Average P3

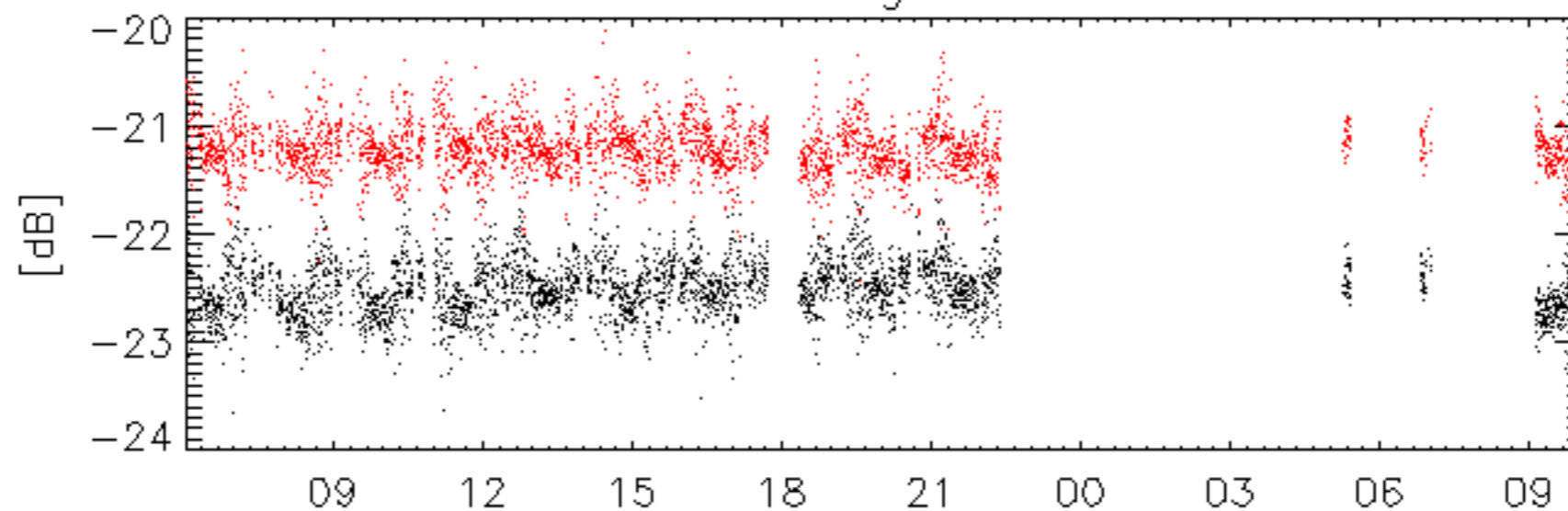


Average P1 (row 8 & row 24)



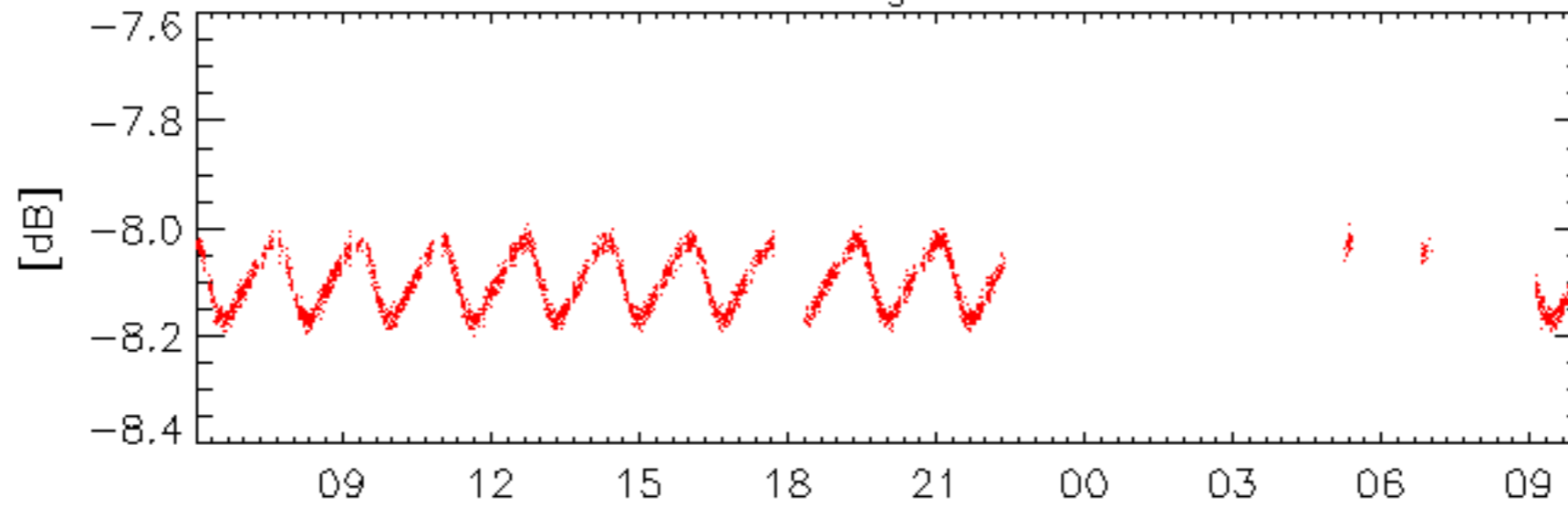
11-Jul

Average P2

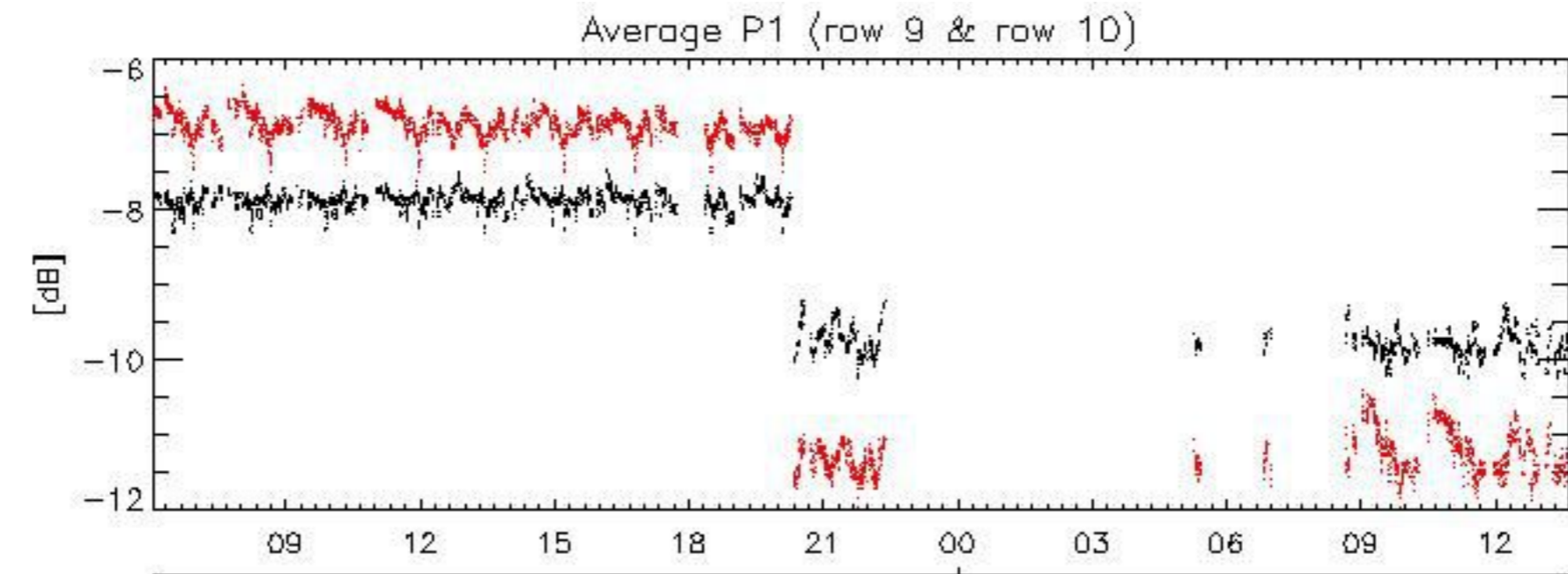


11-Jul

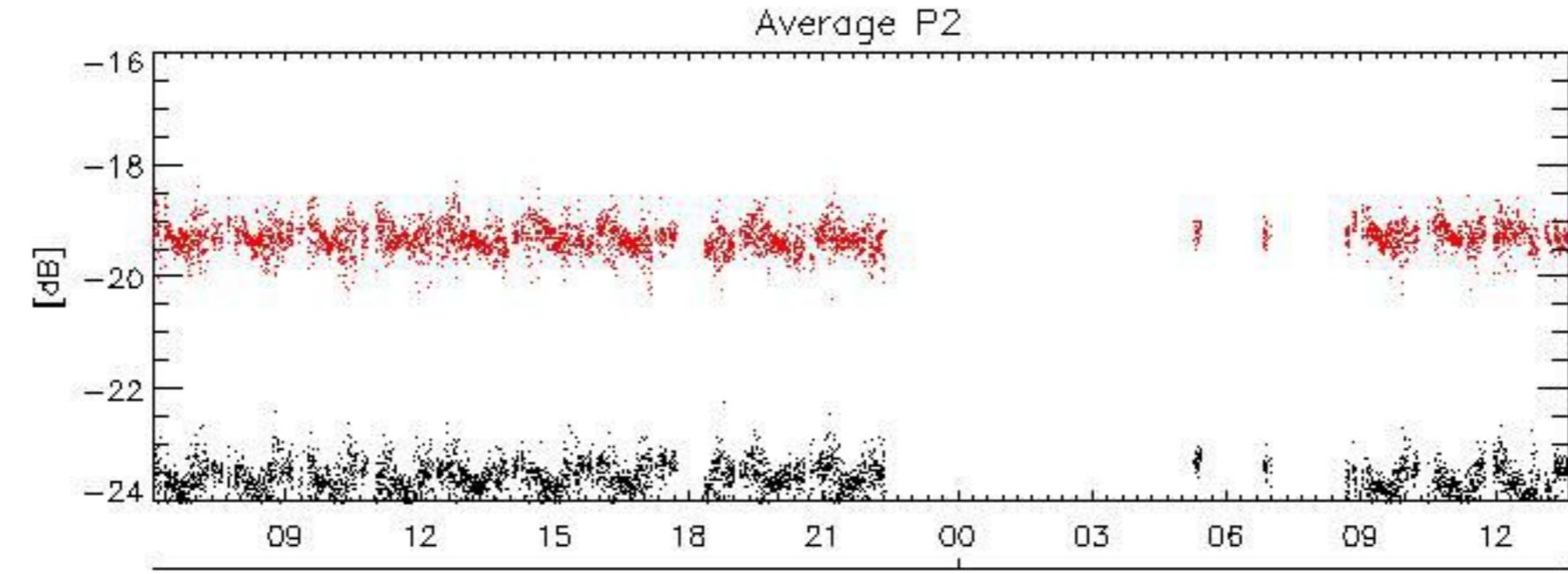
Average P3



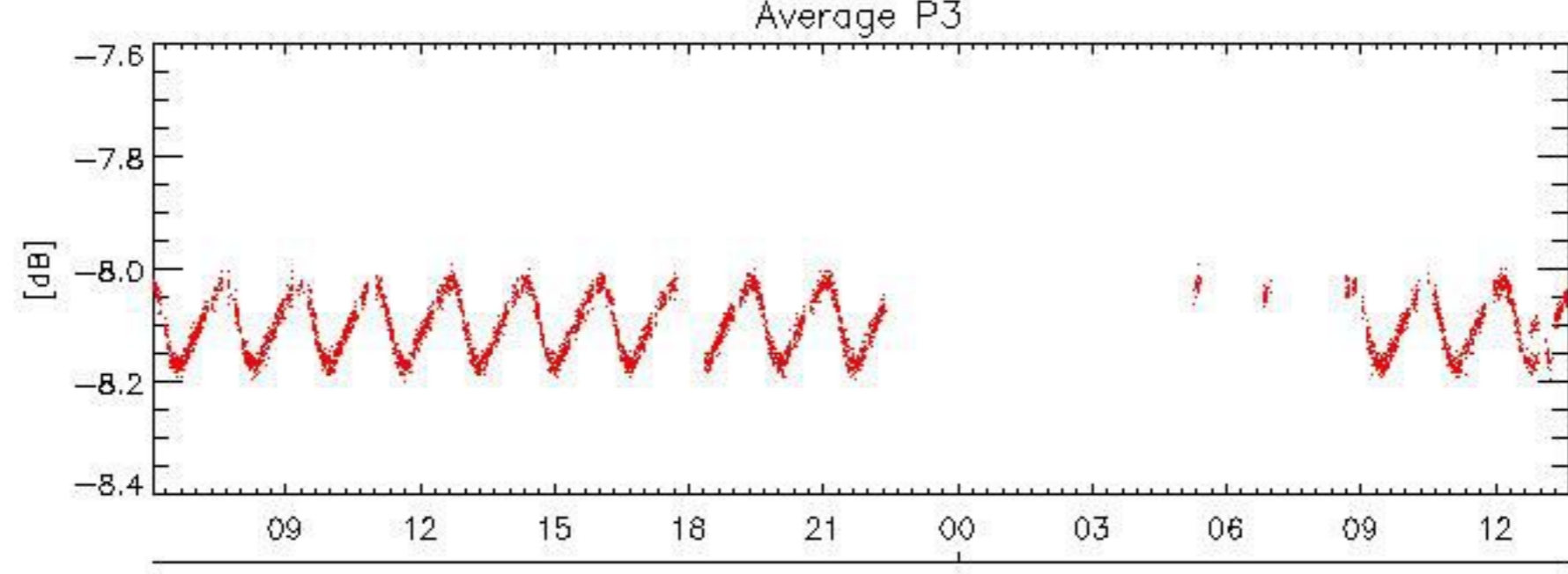
11-Jul



11-Jul



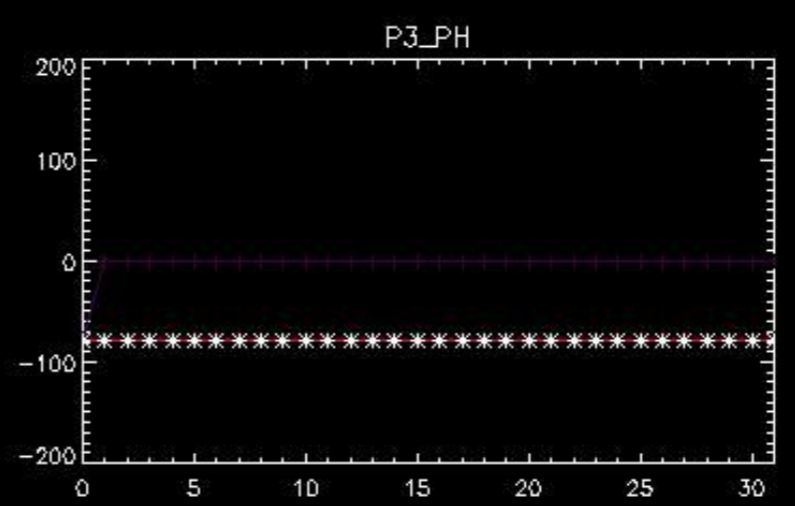
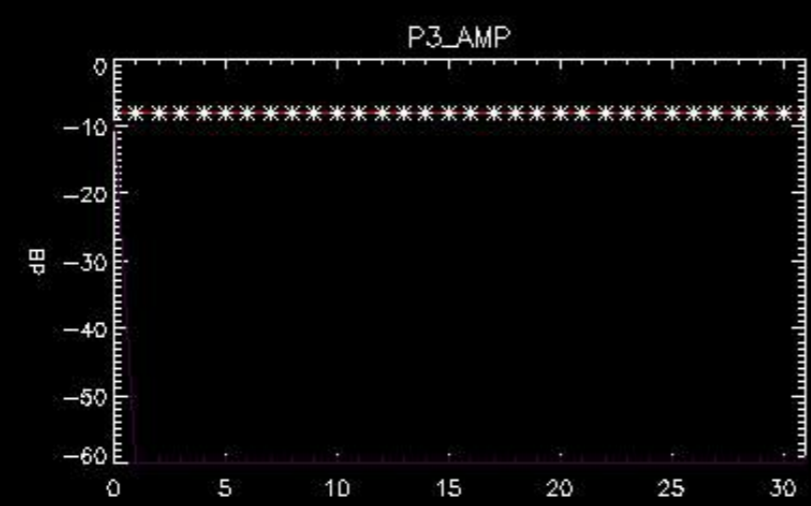
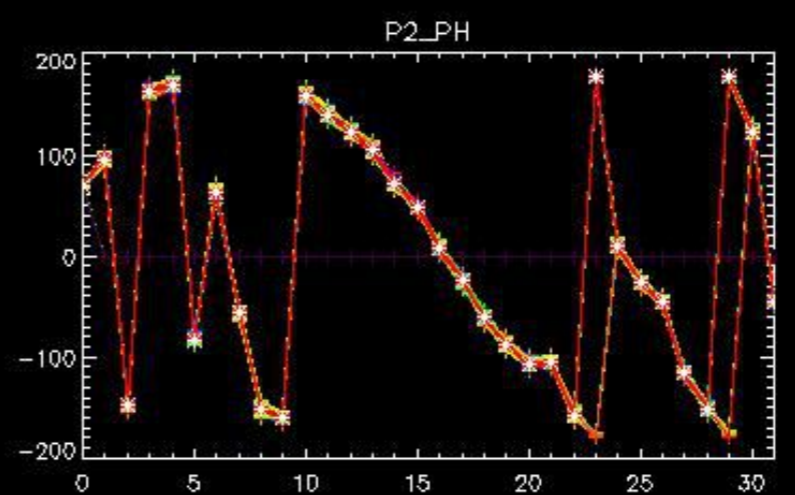
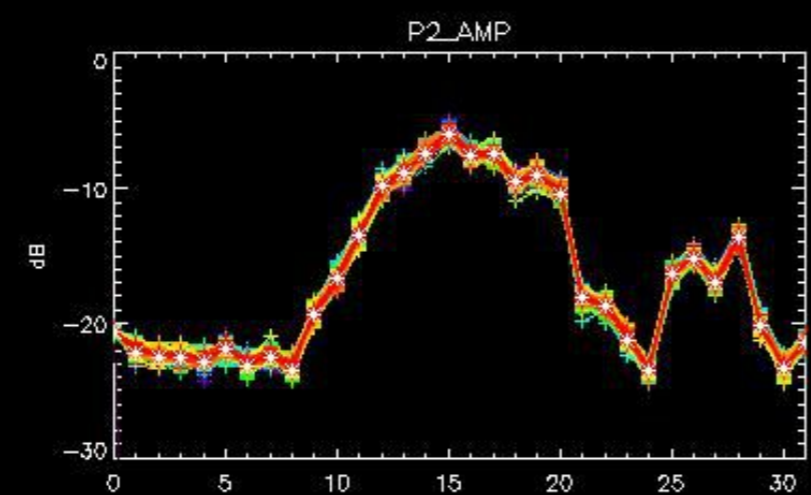
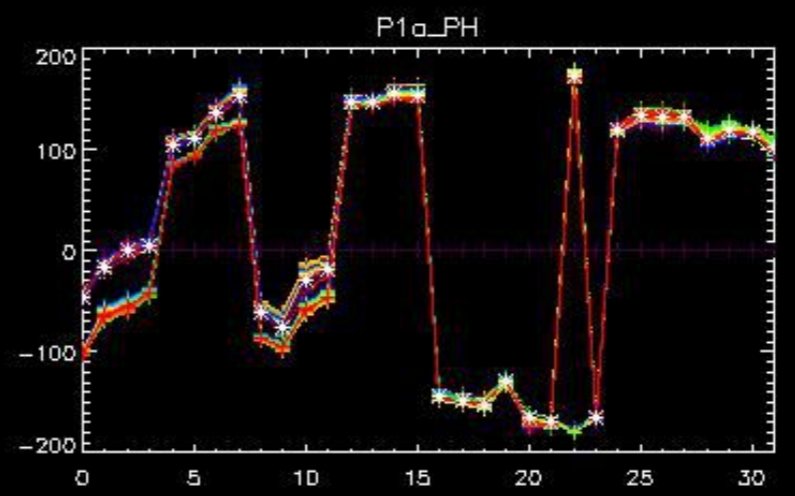
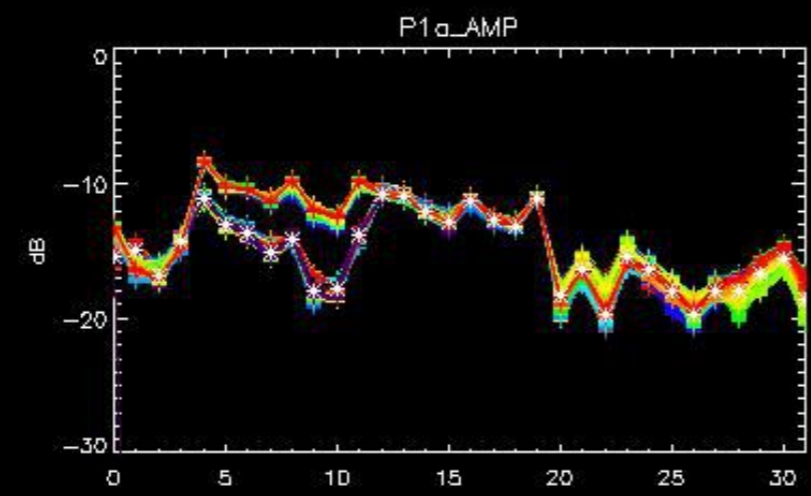
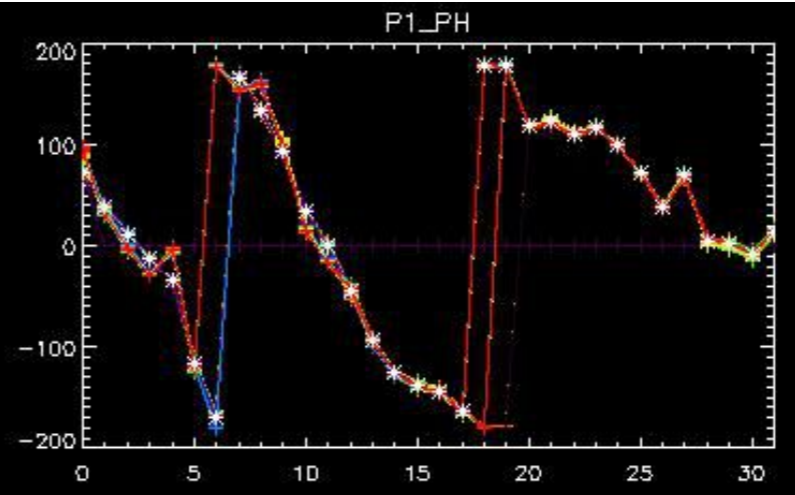
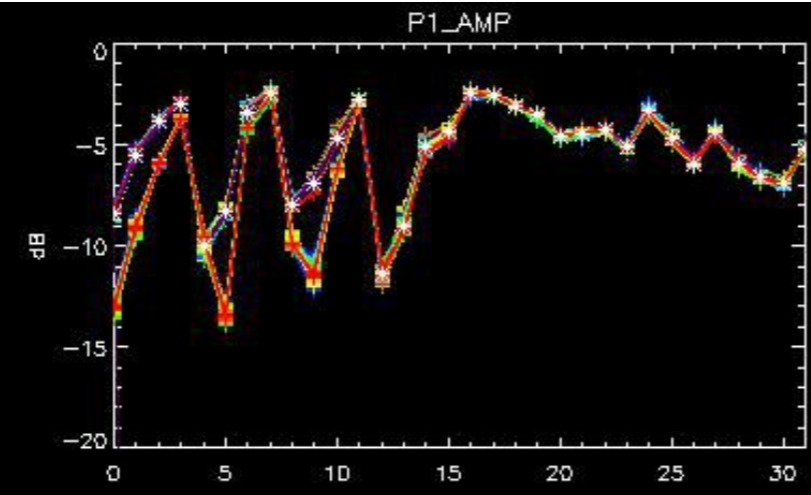
11-Jul



11-Jul

No anomalies observed on available browse products.

No anomalies observed.

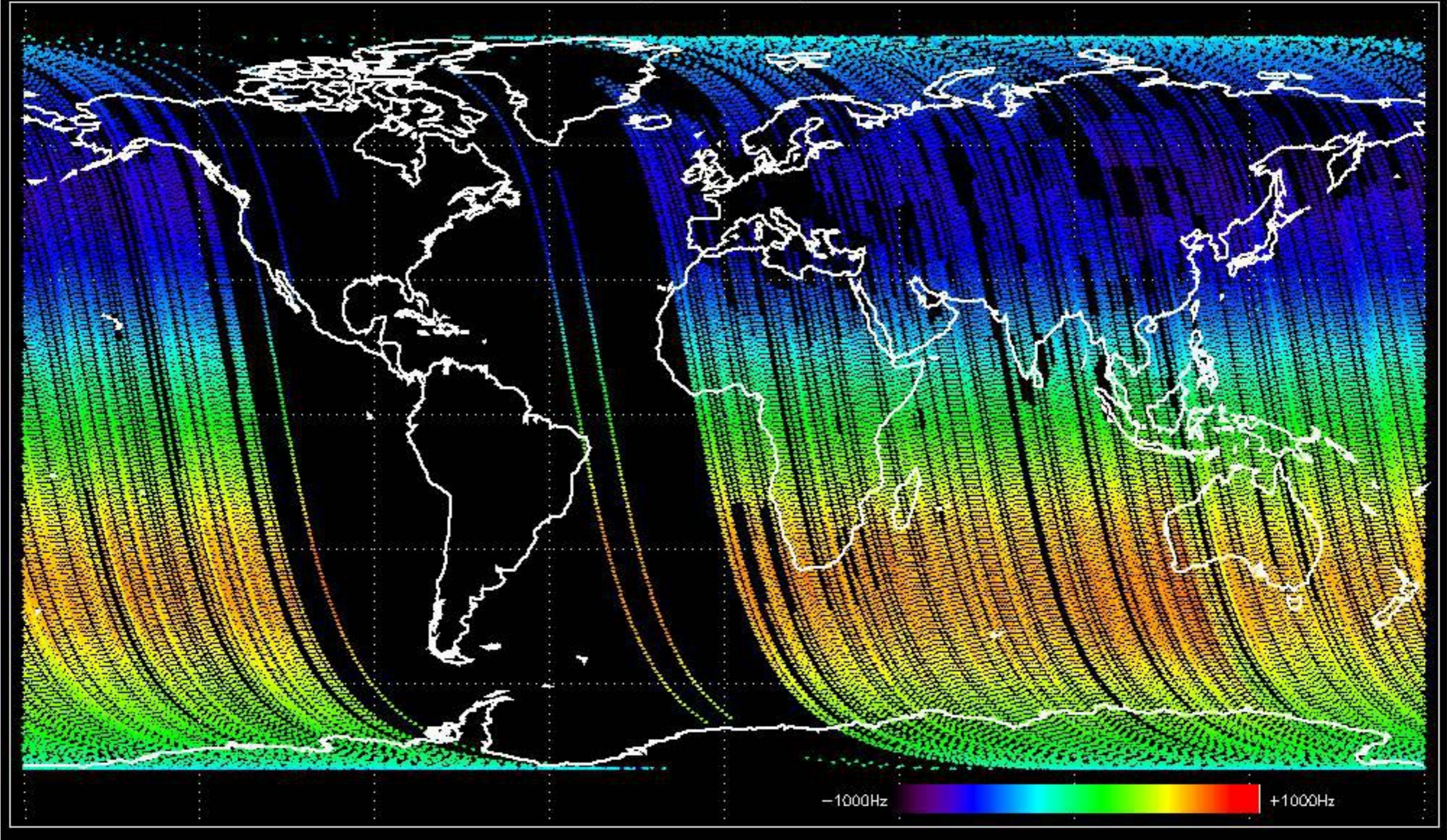


- Figure of paragraph 4.3 shows variation of P1, P1A amplitude for rows 1 to 12:
- + For each group of 4 consecutive rows (sharing one PSU) the P1 variation is larger for the first row and very small for the last.
- + P1 intensity decreases about 5dB for first row to less than 1dB for the fourth of each group.
- + No significant changes on P1 phase.
- + P1A intensity increases for rows 5 to 12 between 2-5dB.
- + P1A phase decreases for rows 1 to 12 with a constant offset for each group of 4 consecutive rows
- + Anomaly has started on 10-JUL-2003 20:20

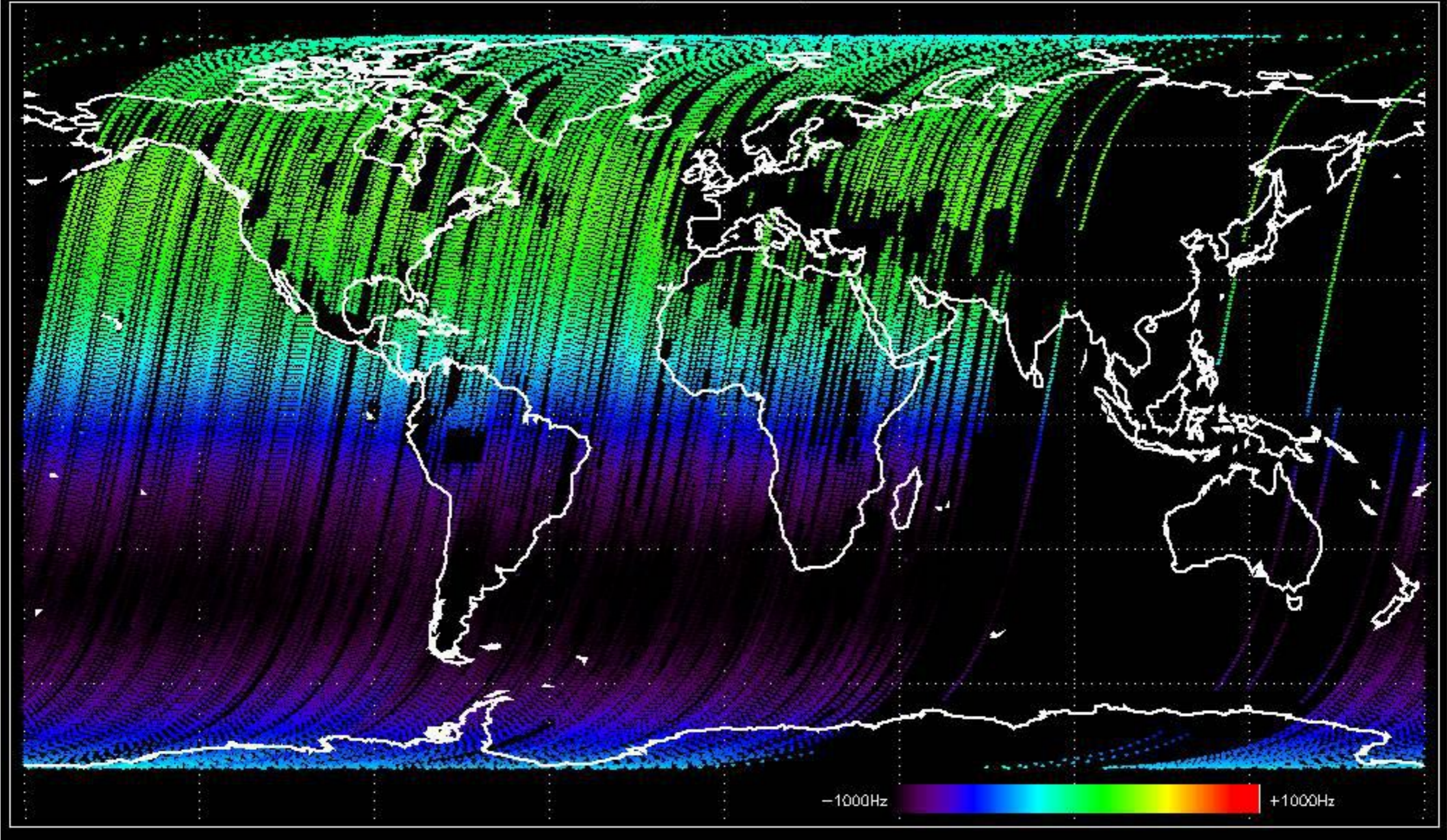
- Stable raw data statistics.
- Nominal Doppler behavior.

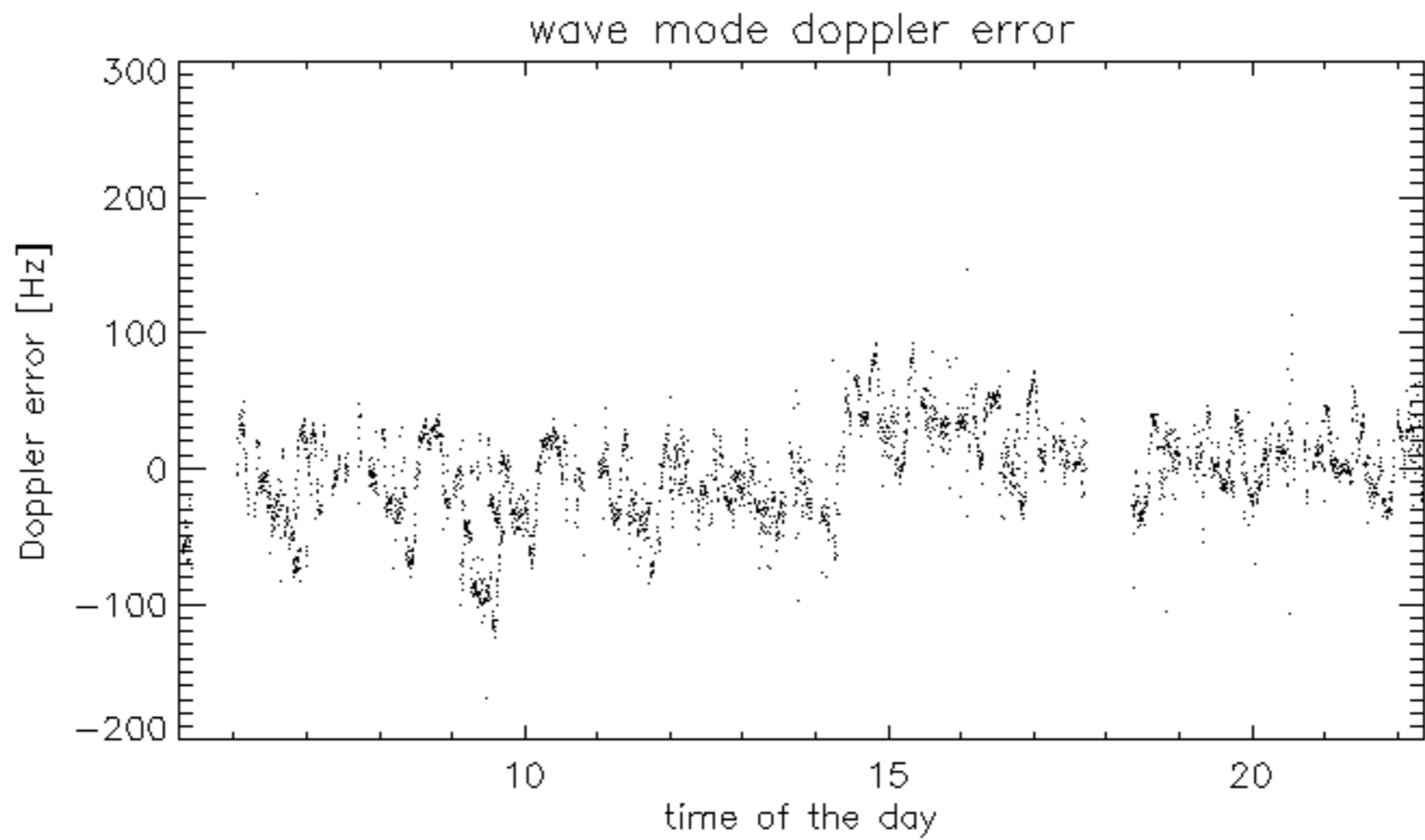
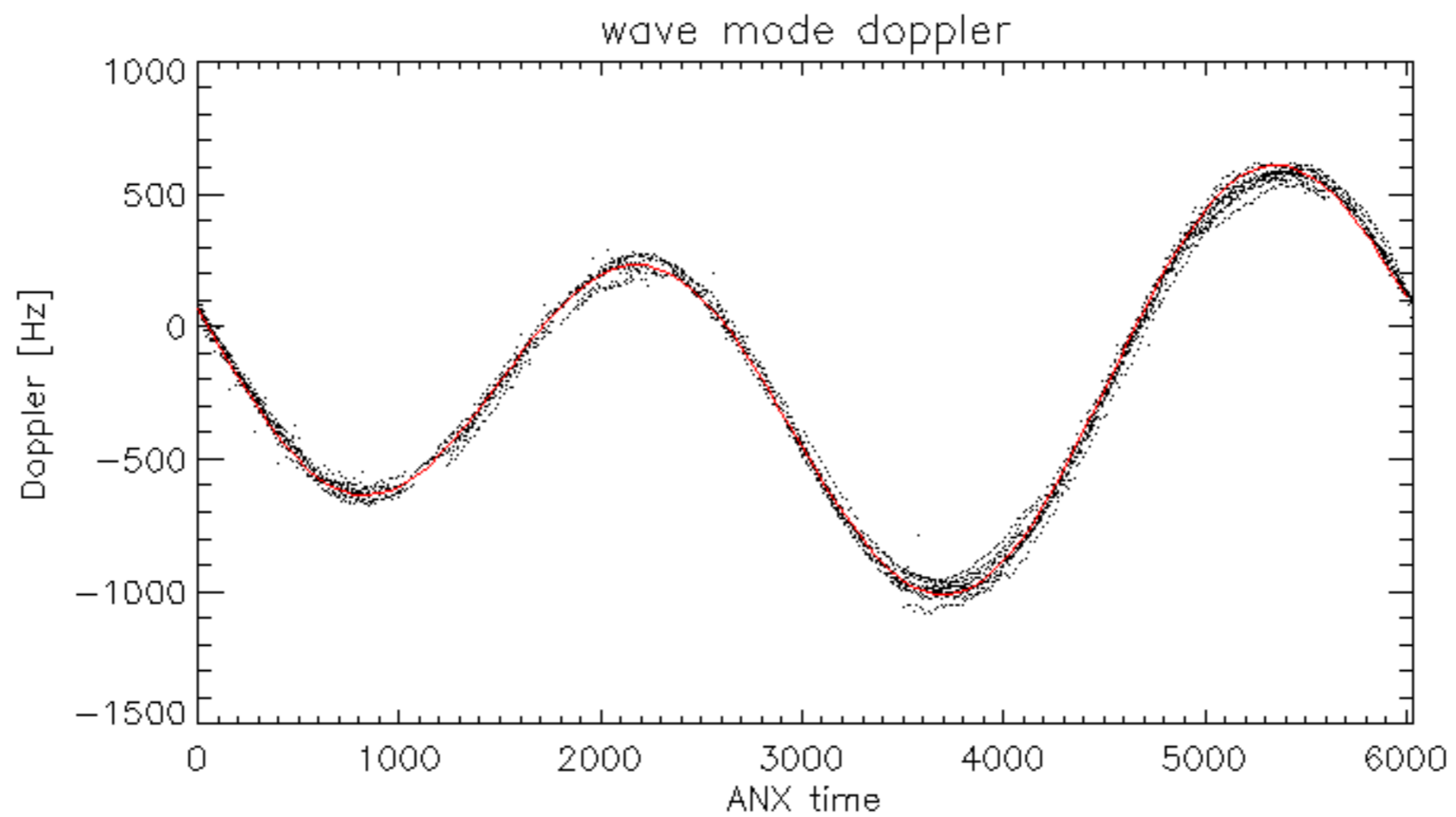
No anomalies observed Doppler evolution.
Doppler analysis performed over the last 60 days

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

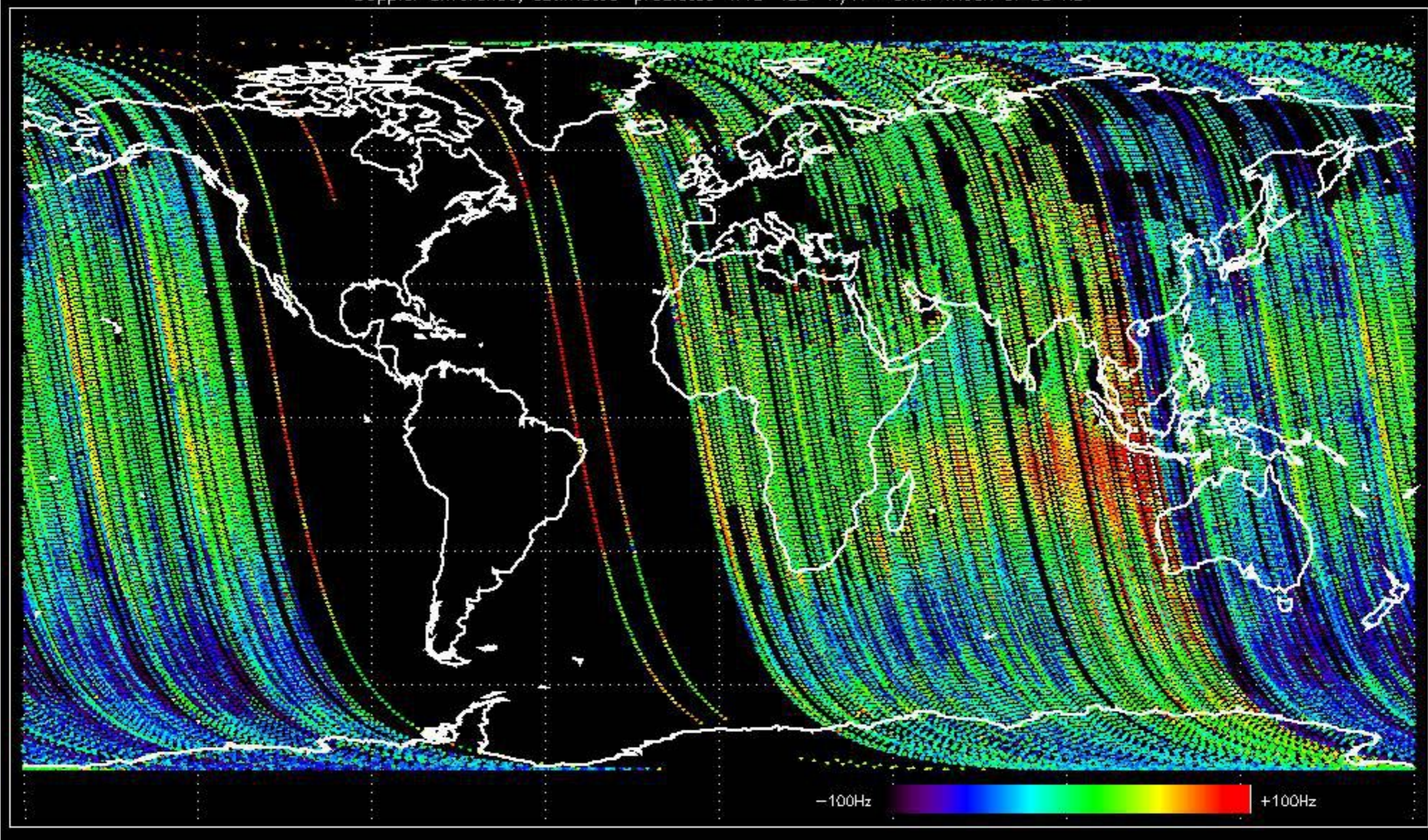


Doppler 'WVS' 'ISZ' 'V/V'

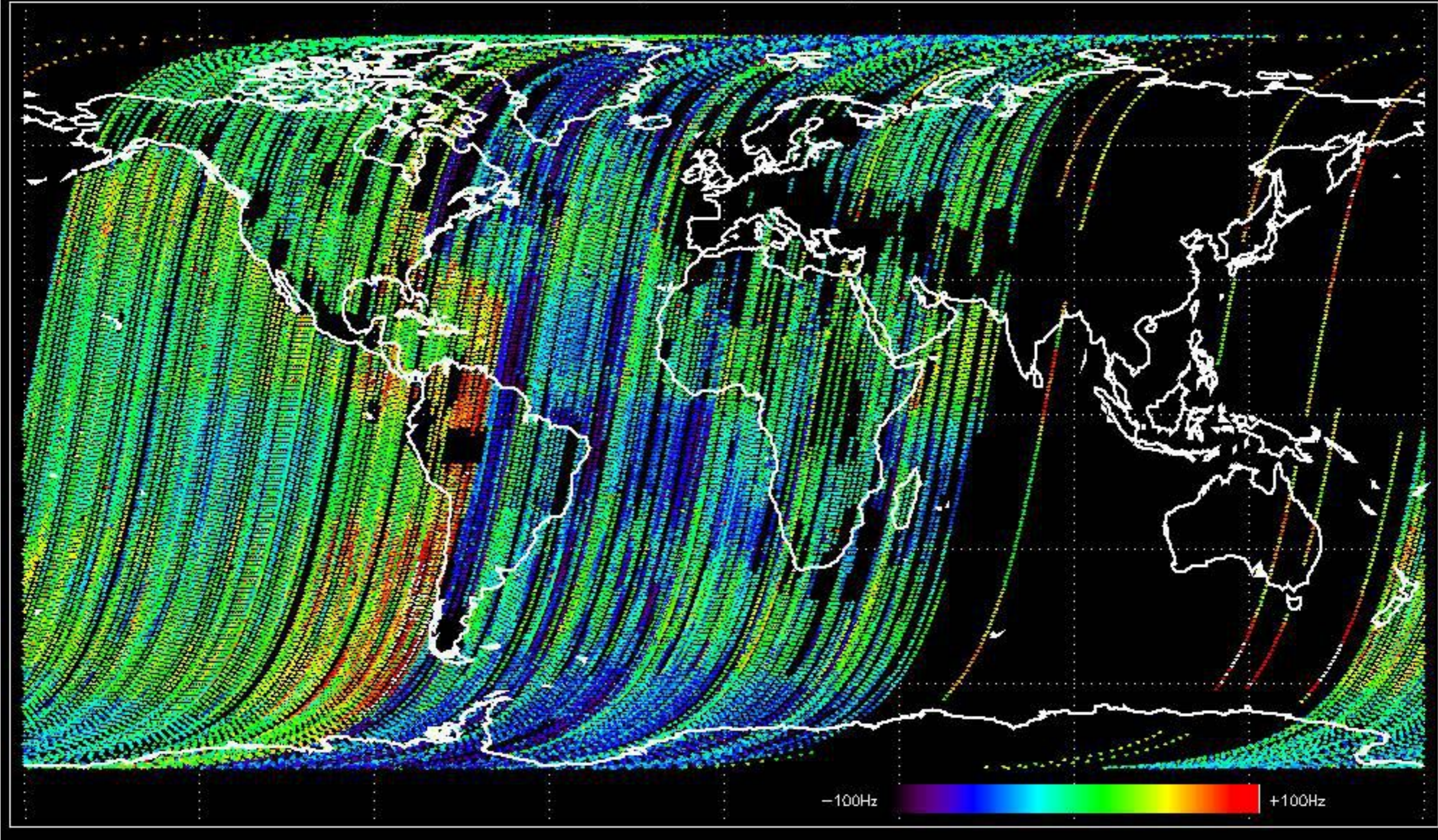




Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of 53 Hz

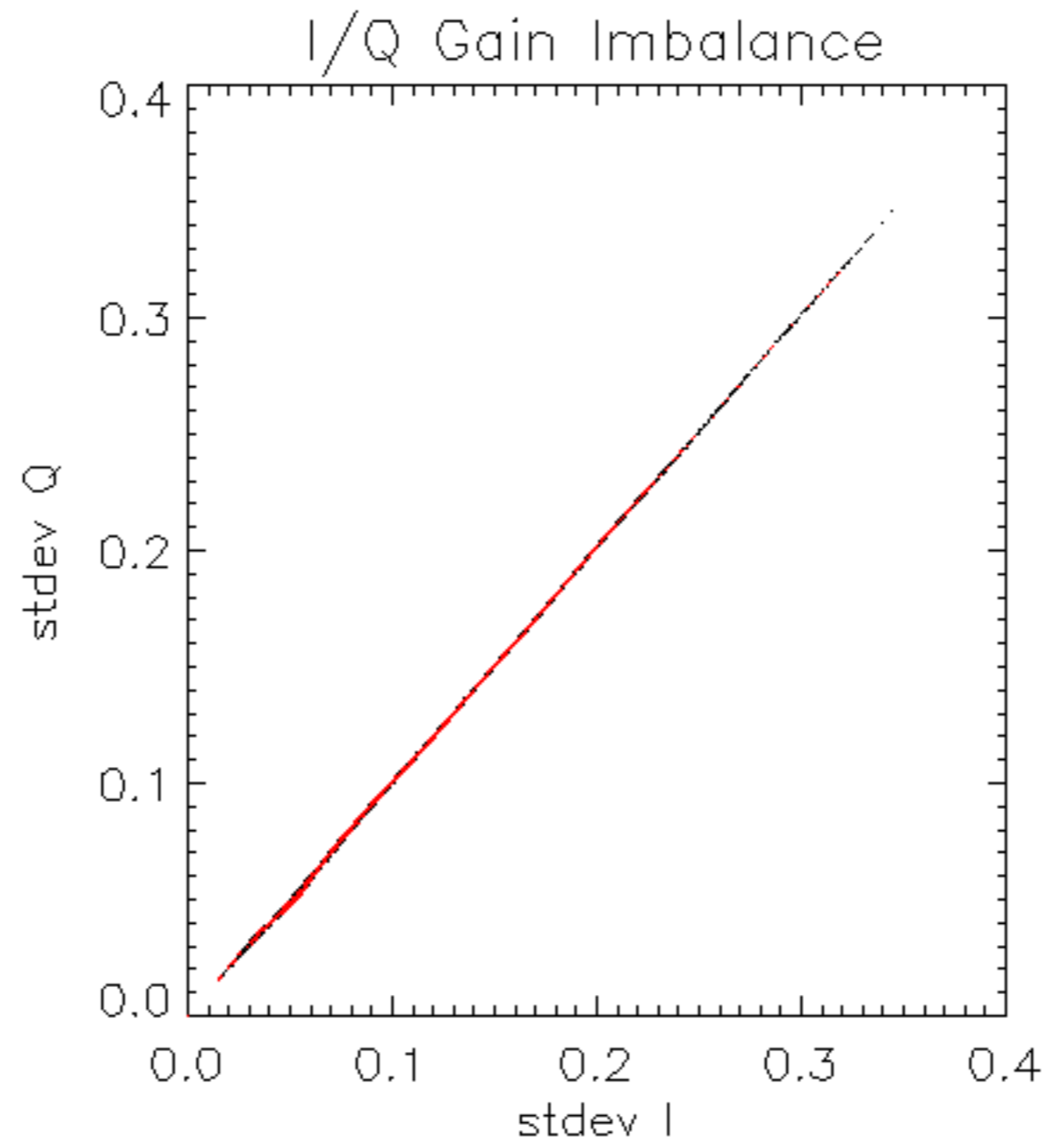


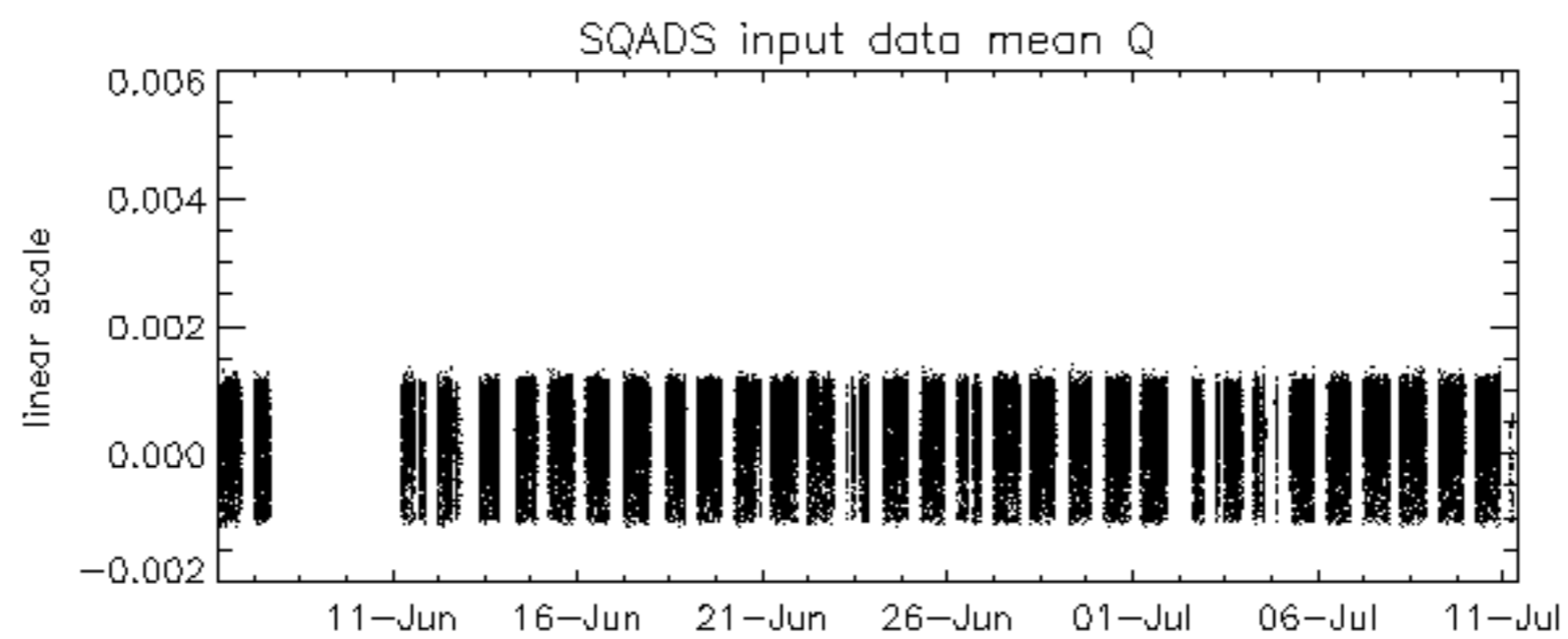
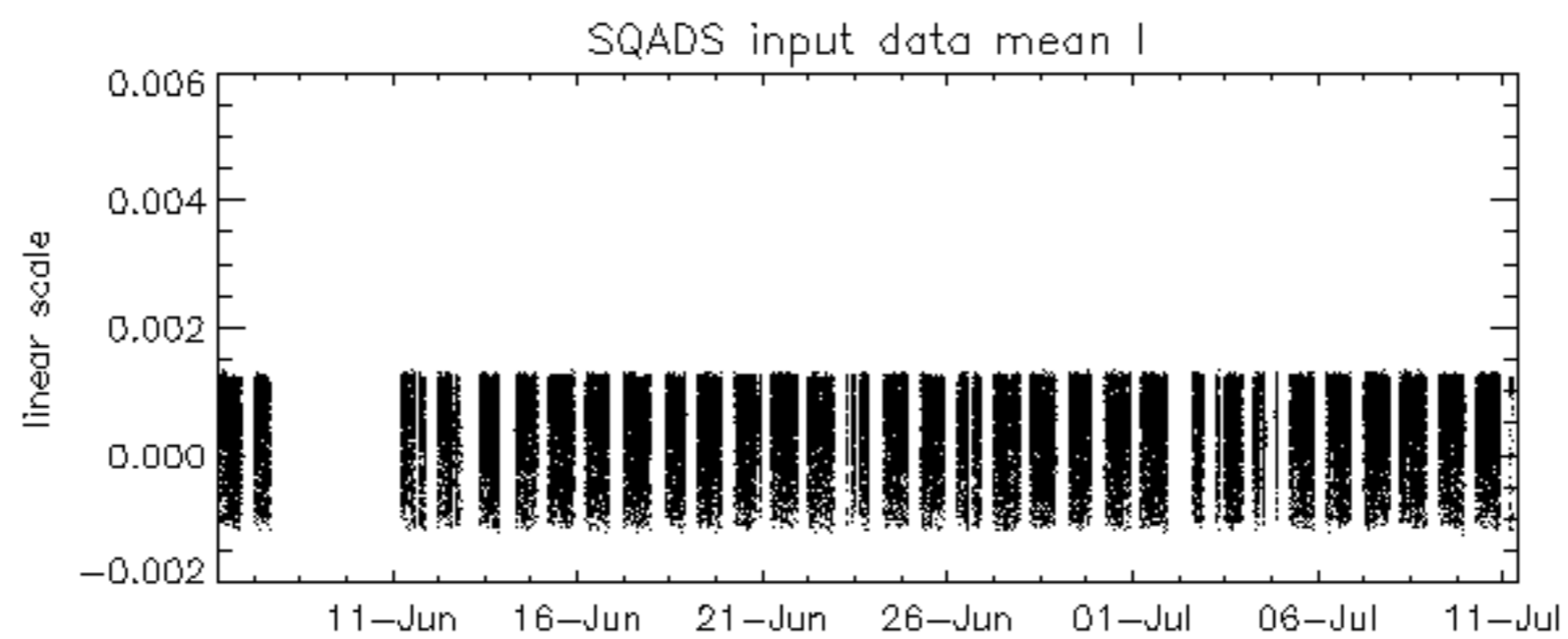
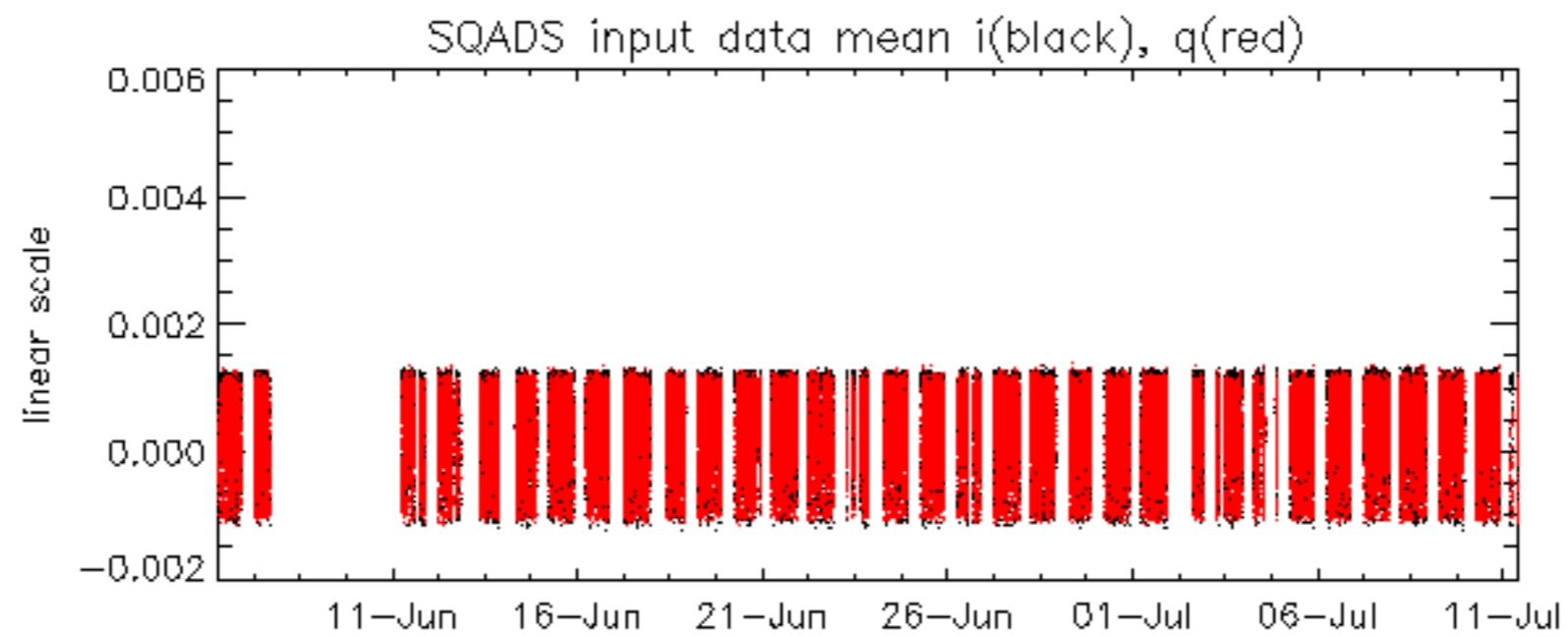
Doppler difference, estimated-predicted 'WS' 'IS2' 'V/V' -error mean of 53 Hz

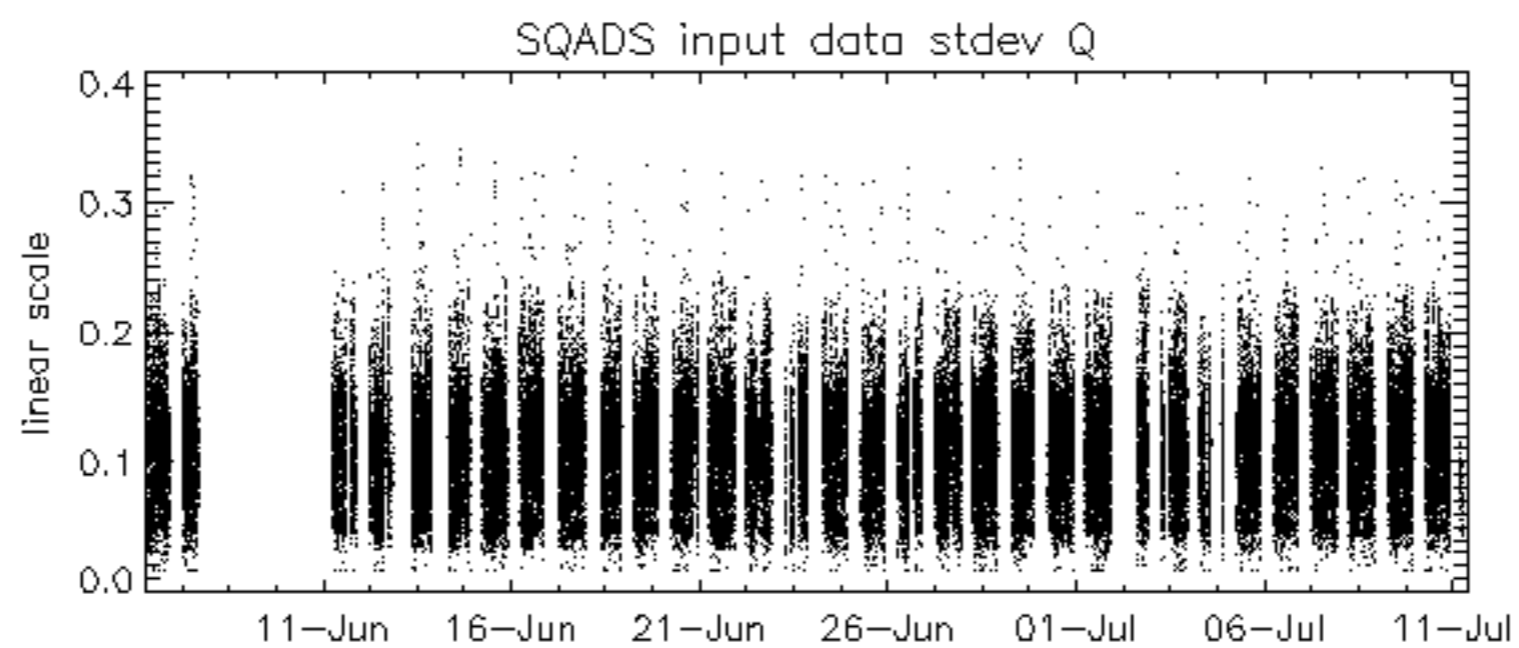
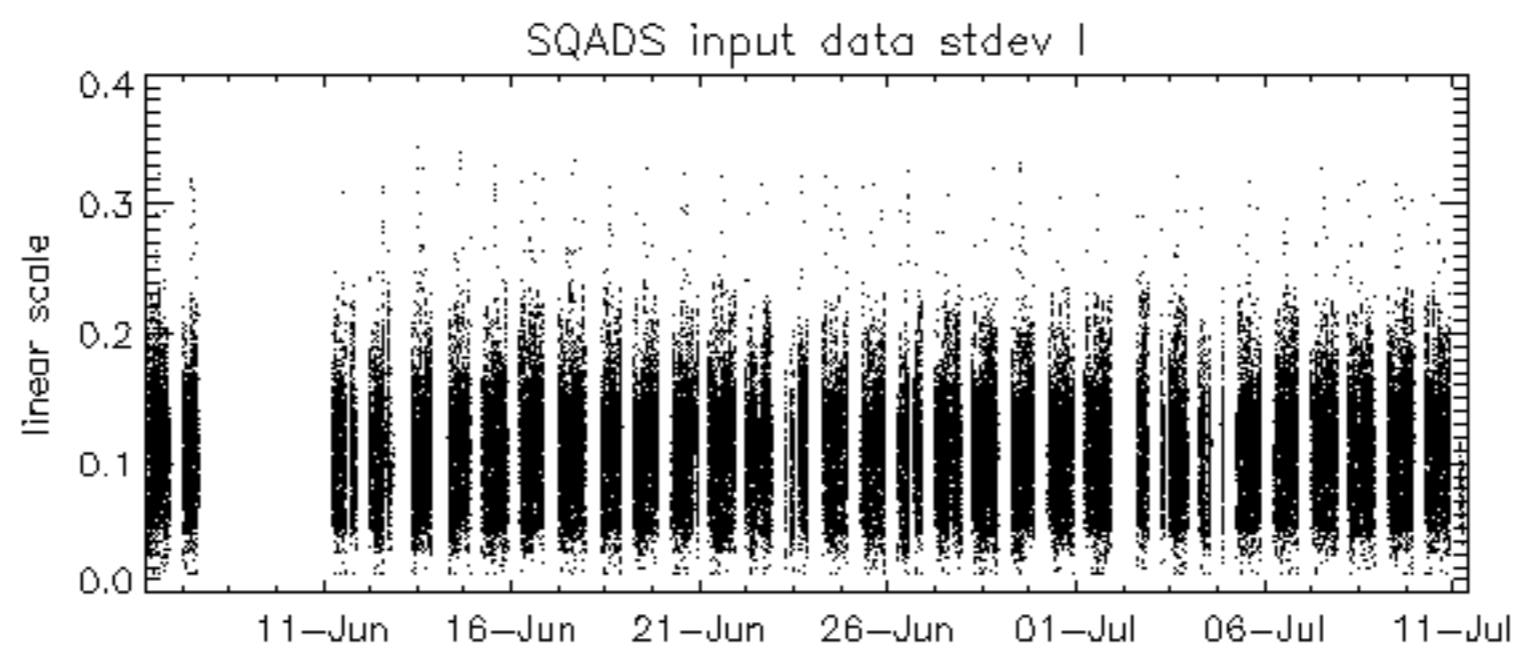
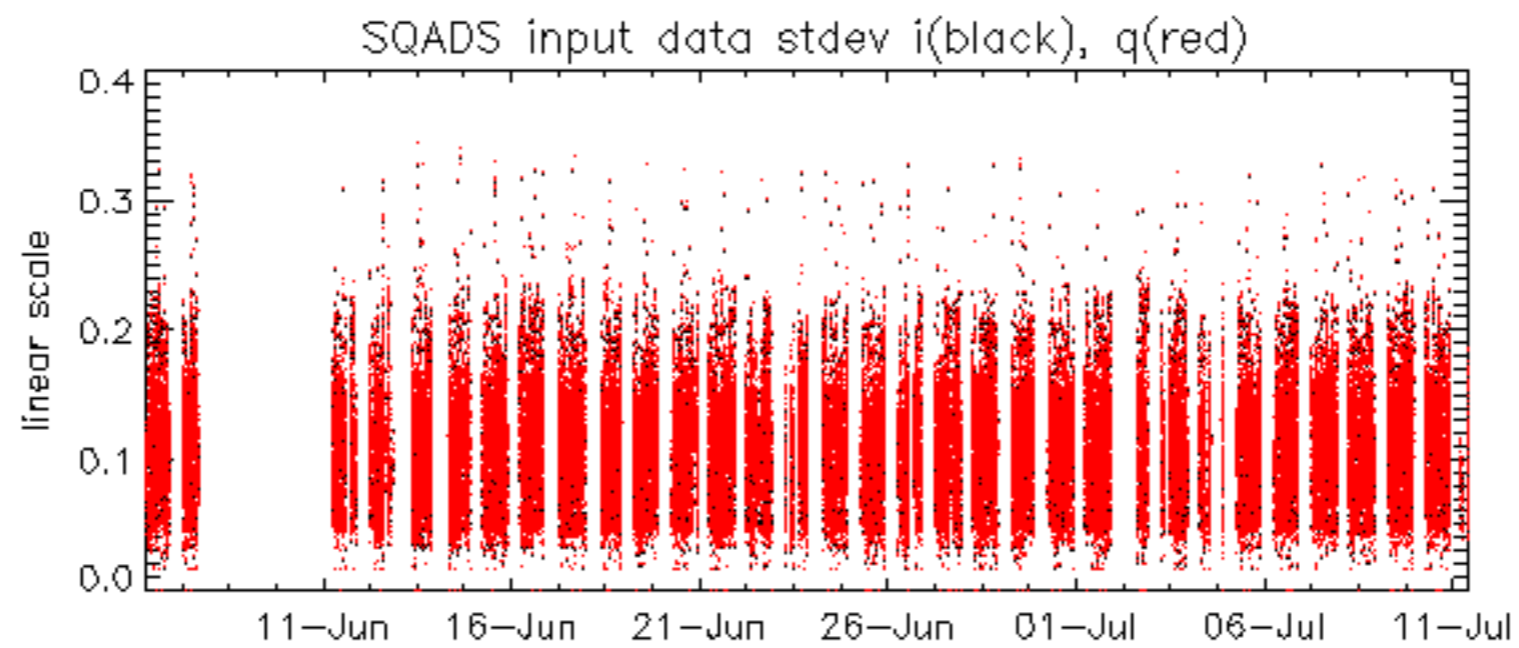


No anomalies observed.
MS data acquired just before the start of the anomaly on the cal pulses.

No anomalies observed.







No unavailabilities during the reported period.