

# REPORT OF 040221

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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.

### 2.2 - Browse Visual Inspection

Anomaly related to tile C3 (rows 9 to 13) clearly visible on WSM products.

See example of ASA\_WS\_\_BPZPDK20040221\_105352\_000000852024\_00266\_10340\_7947.N1



### 2.3 - Data Analysis

-Anomaly detected on internal calibration pulses on Tx:  
 -> P1 and P1a (rows 9 to 13) cal. pulses are affected by a drop of 2-4dB.  
 -> Anomaly started over 20-FEB-2004 18:13:09

-Stable raw data statistics.  
 -Nominal Doppler behavior.









### 3 - Module Stepping Mode

-Anomaly detected on tile C3: rows 9 to 13 are affected by a drop of ~32db in MS product See plot below for row 10 tile C3.











Polarisation	Start Time
V	20040220 185339
H	20040220 185219

#### 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

-Anomaly detected on internal calibration pulses on Tx:  
 -> P1 and P1a (rows 9 to 13) cal. pulses are affected by a drop of 2-4dB.  
 -> Anomaly started on 20-FEB-2004 18:13:09 see plot below for the row 9 and 10.

### 4.1 - Daily statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.63661	-22.3780	-8.14196
	stdev	0.00590150	0.0988797	0.00307056
24	mean	-5.10334	-21.0343	-8.14196
	stdev	0.0147093	0.0953673	0.00307056



### 4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.65662	-22.4266	-8.13742
	stdev	0.00679479	0.0746051	0.00309966
24	mean	-5.10629	-21.0864	-8.13742
	stdev	0.0150643	0.0707867	0.00309966



### 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	0.000445883

	stdev	2.70897e-07
MEAN Q	mean	0.000393993
	stdev	3.19139e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.121364
	stdev	0.00133243
STDEV Q	mean	0.121598
	stdev	0.00134716



## 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

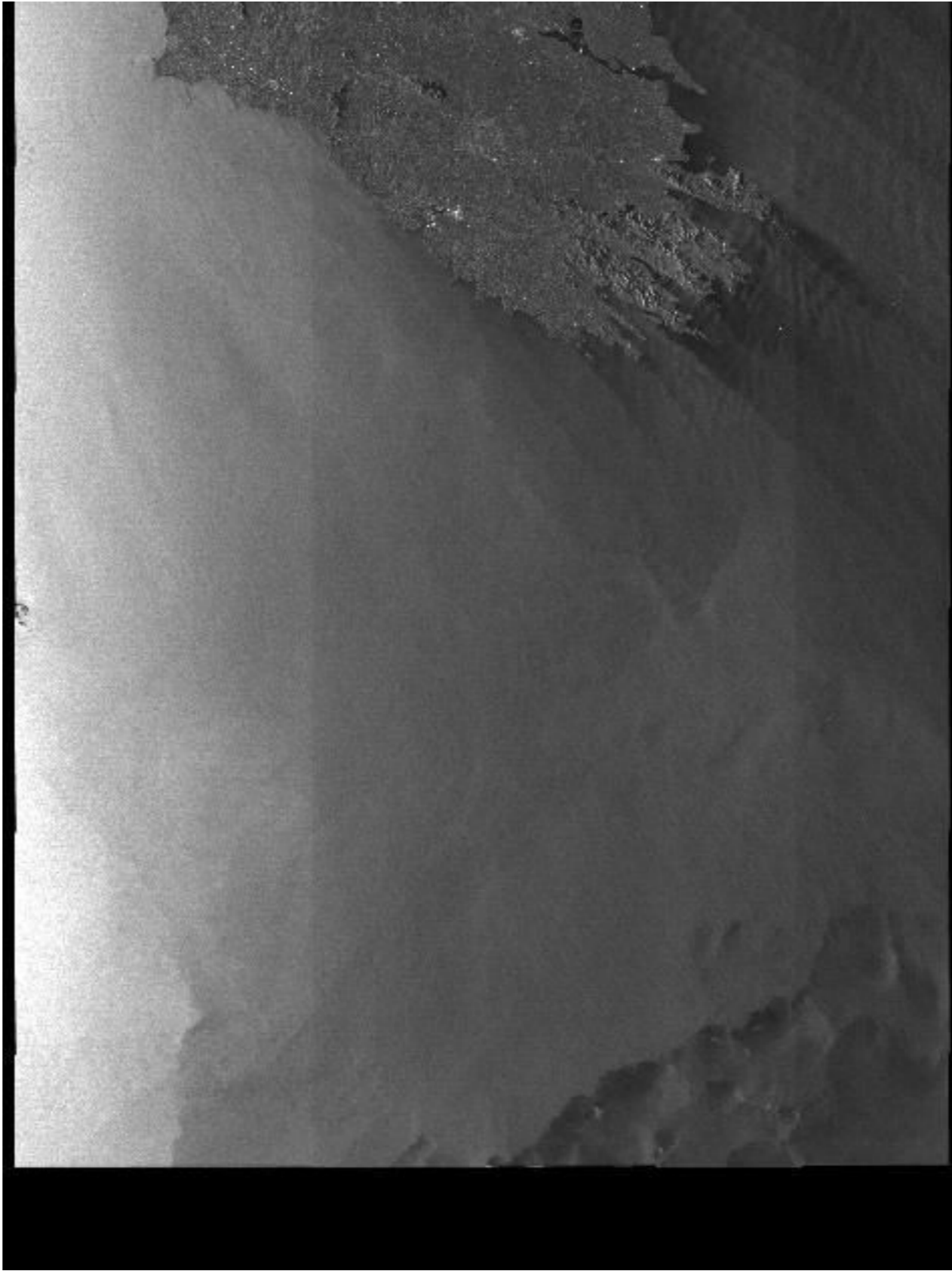
Evolution of Absolute Doppler
Ascending

Descending

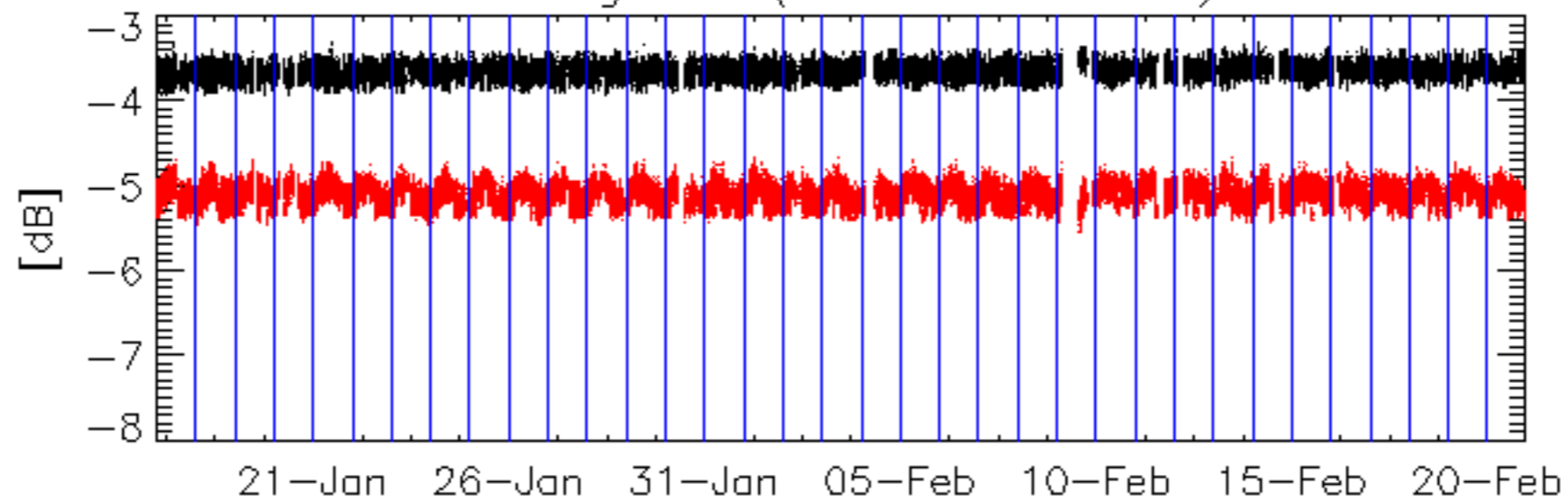
### 6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX

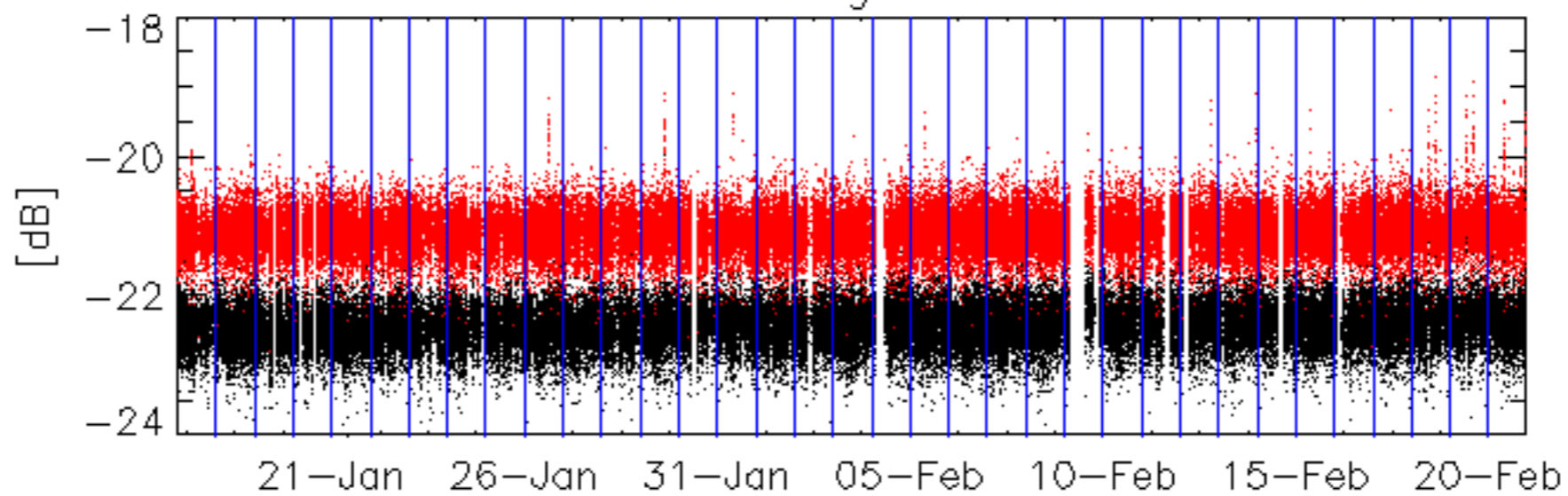




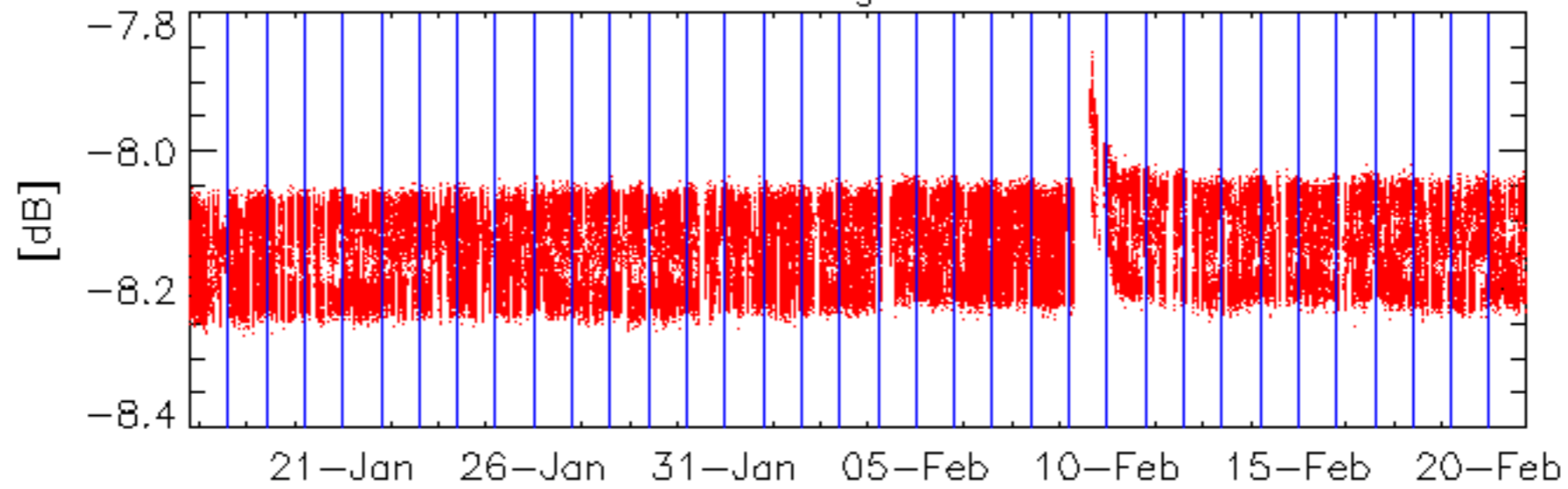
Average P1 (row 3 & row 24)



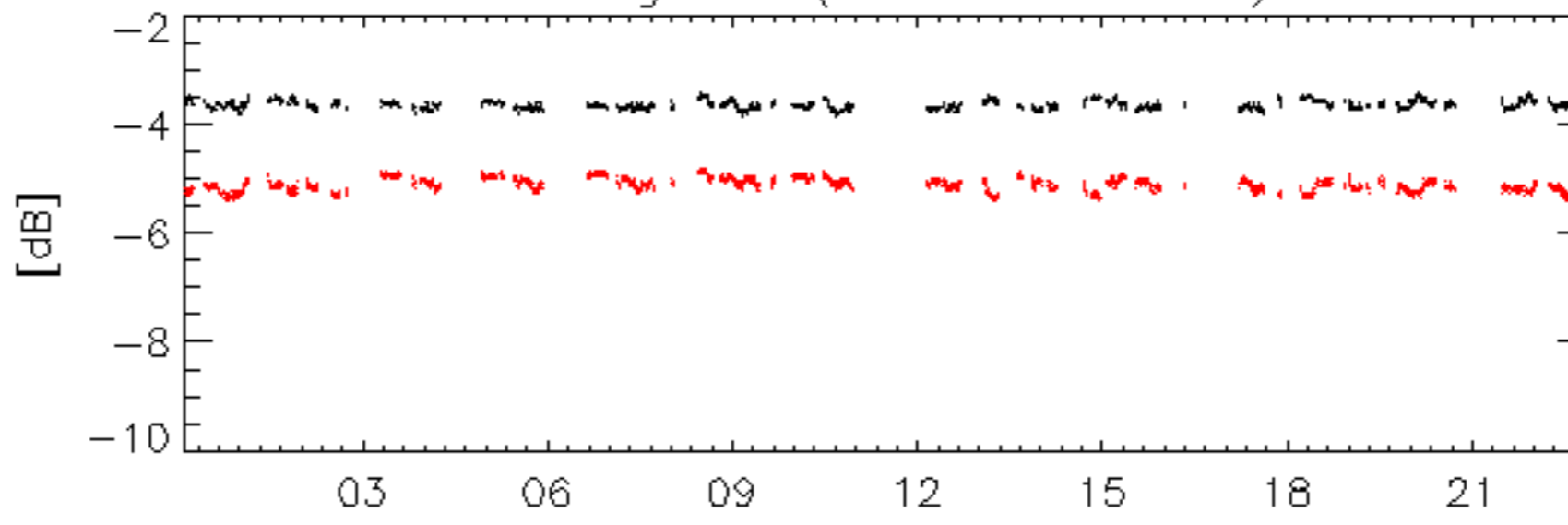
Average P2



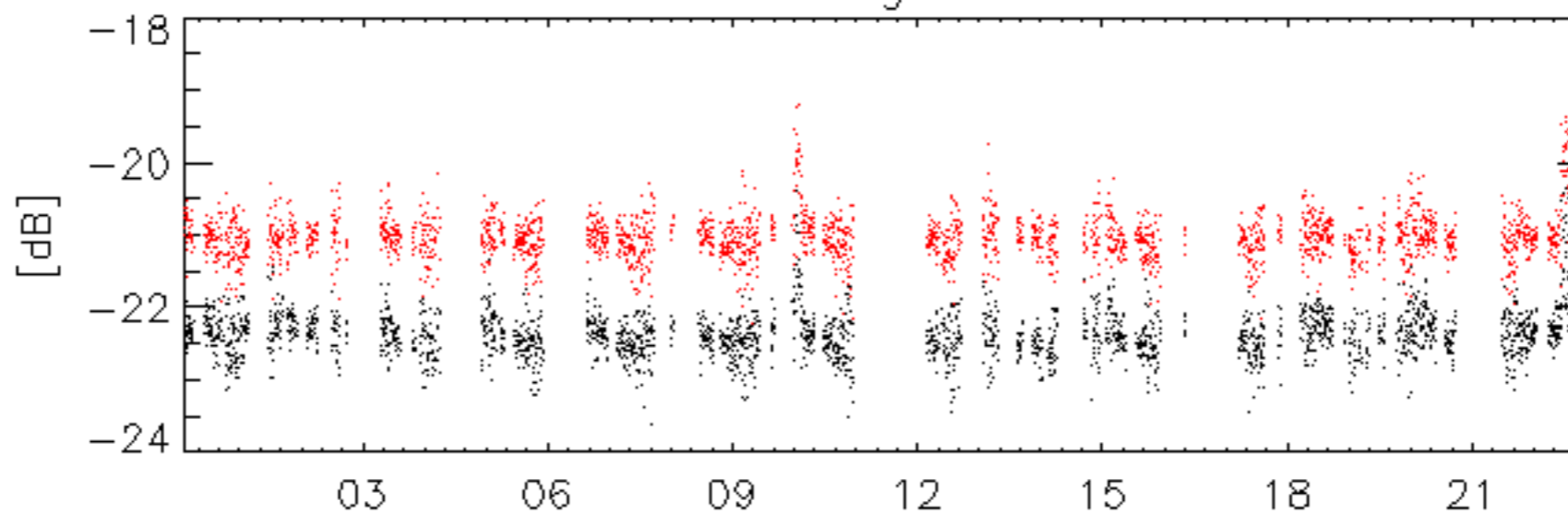
Average P3



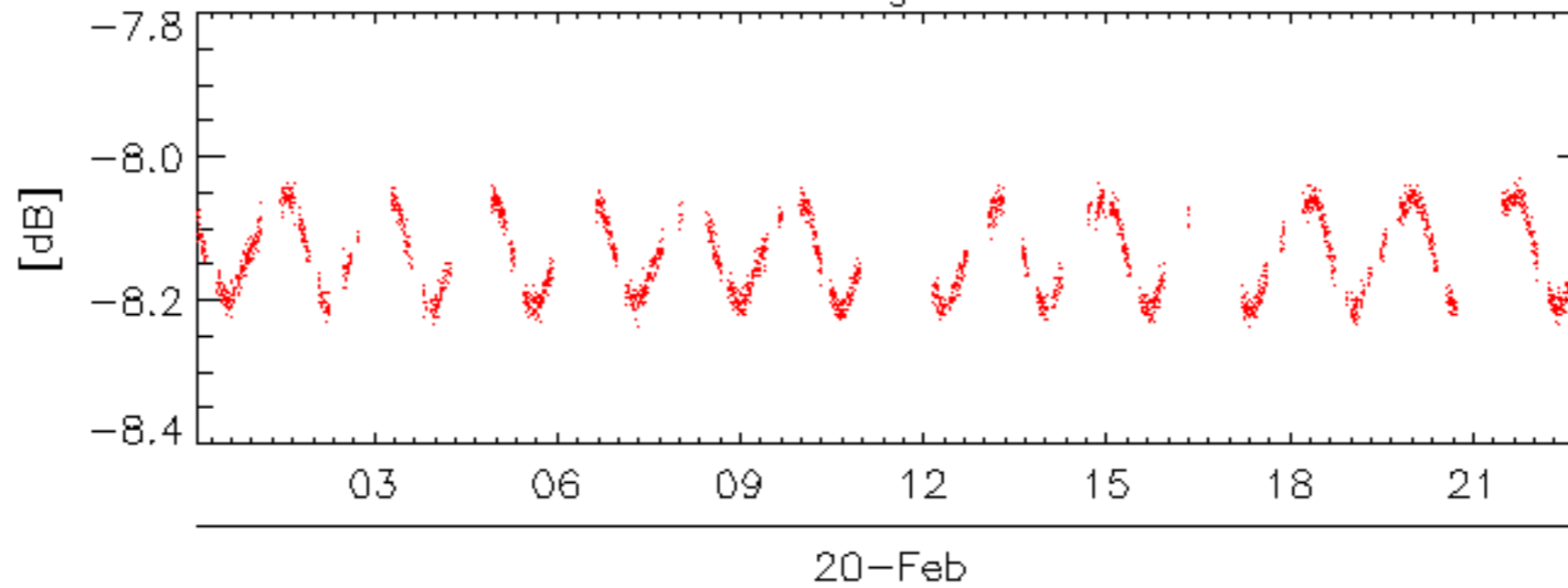
Average P1 (row 3 & row 24)



20-Feb  
Average P2

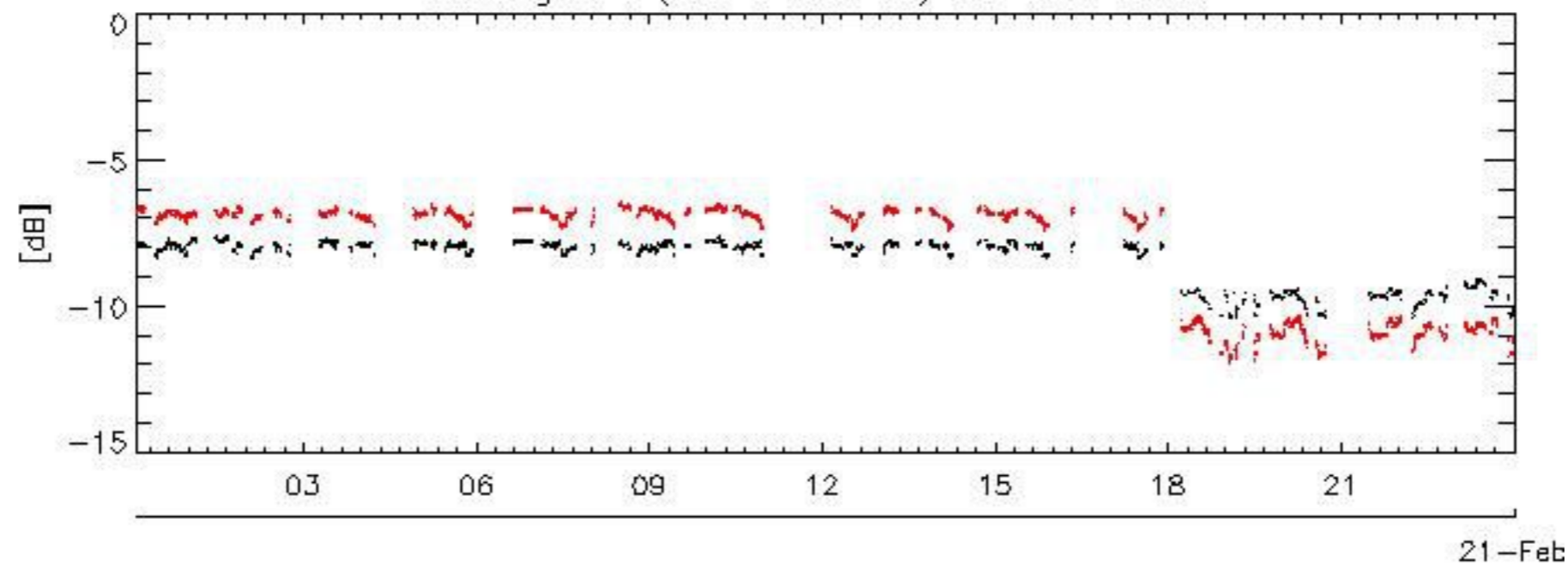


20-Feb  
Average P3

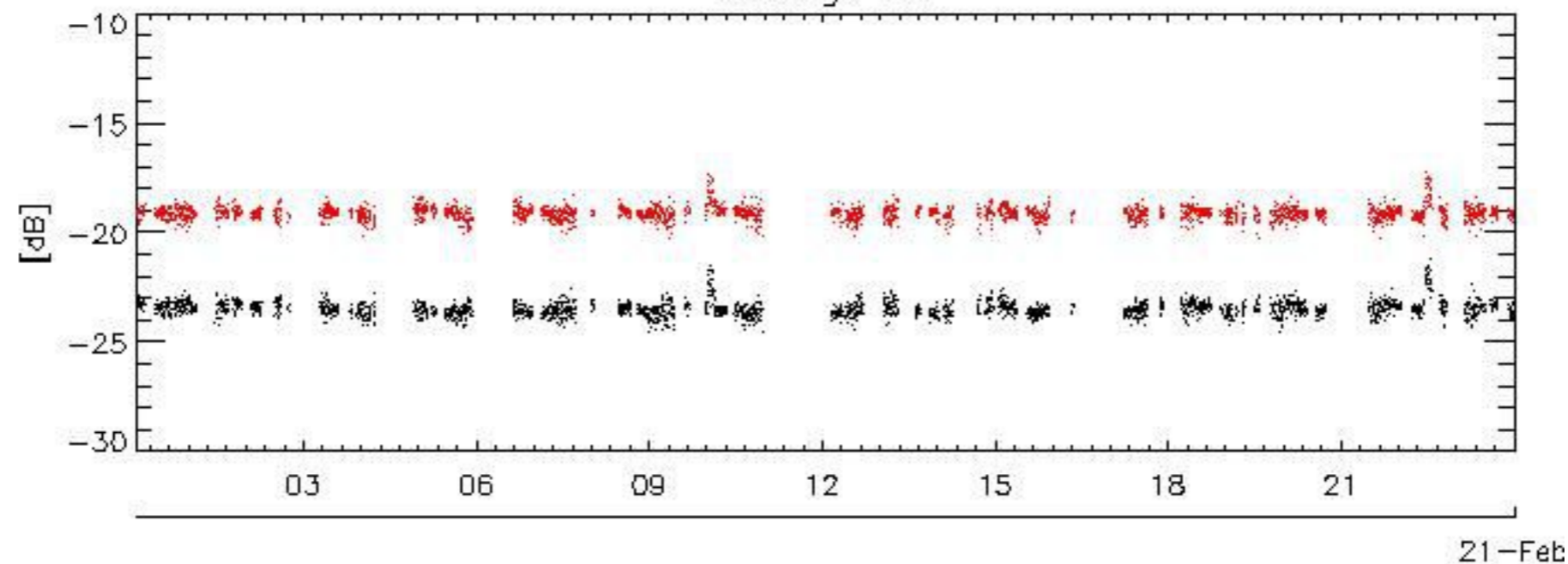




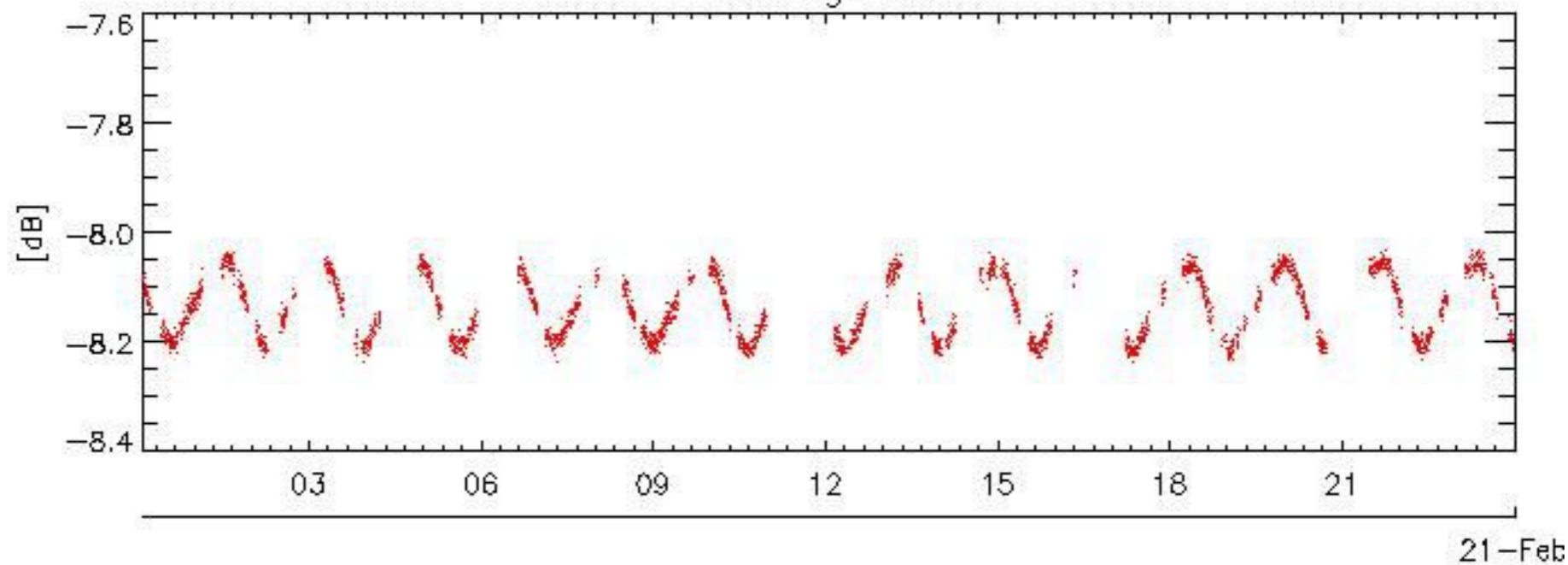
Average P1 (row 9 and 10) 20-FEB-2004

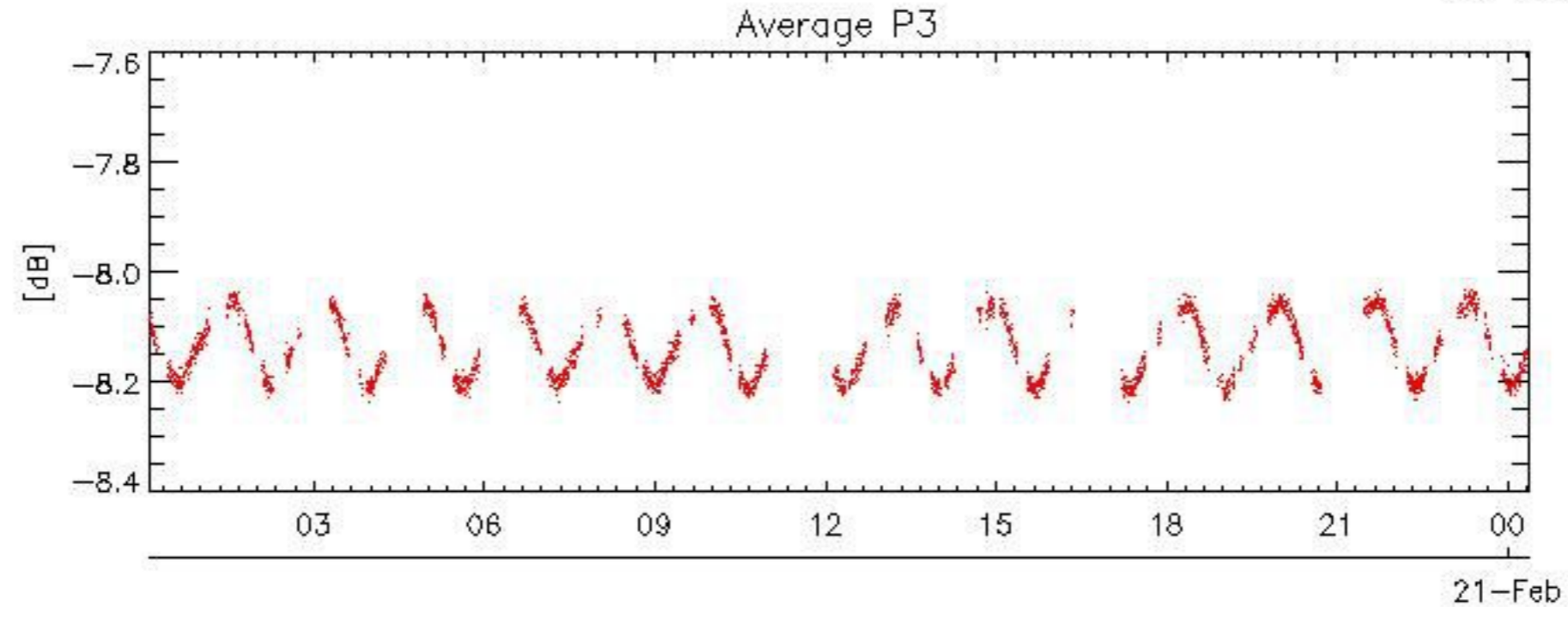
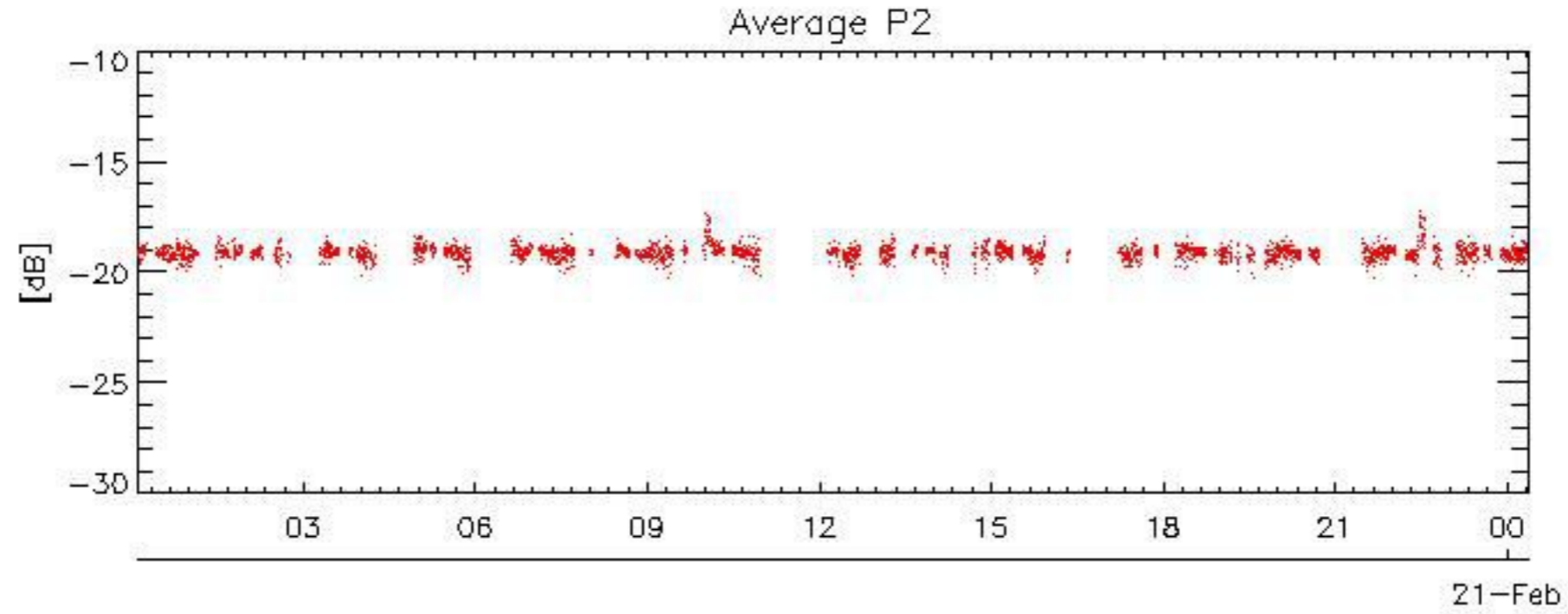
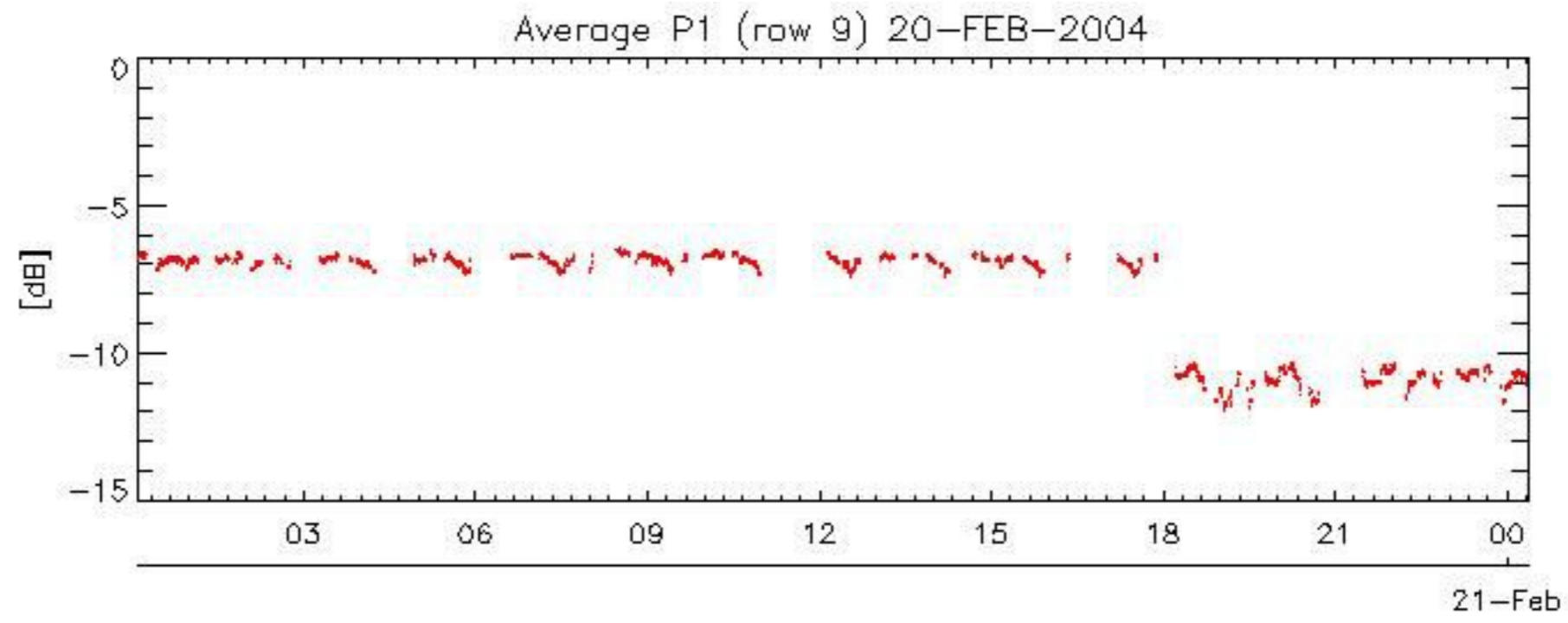


Average P2

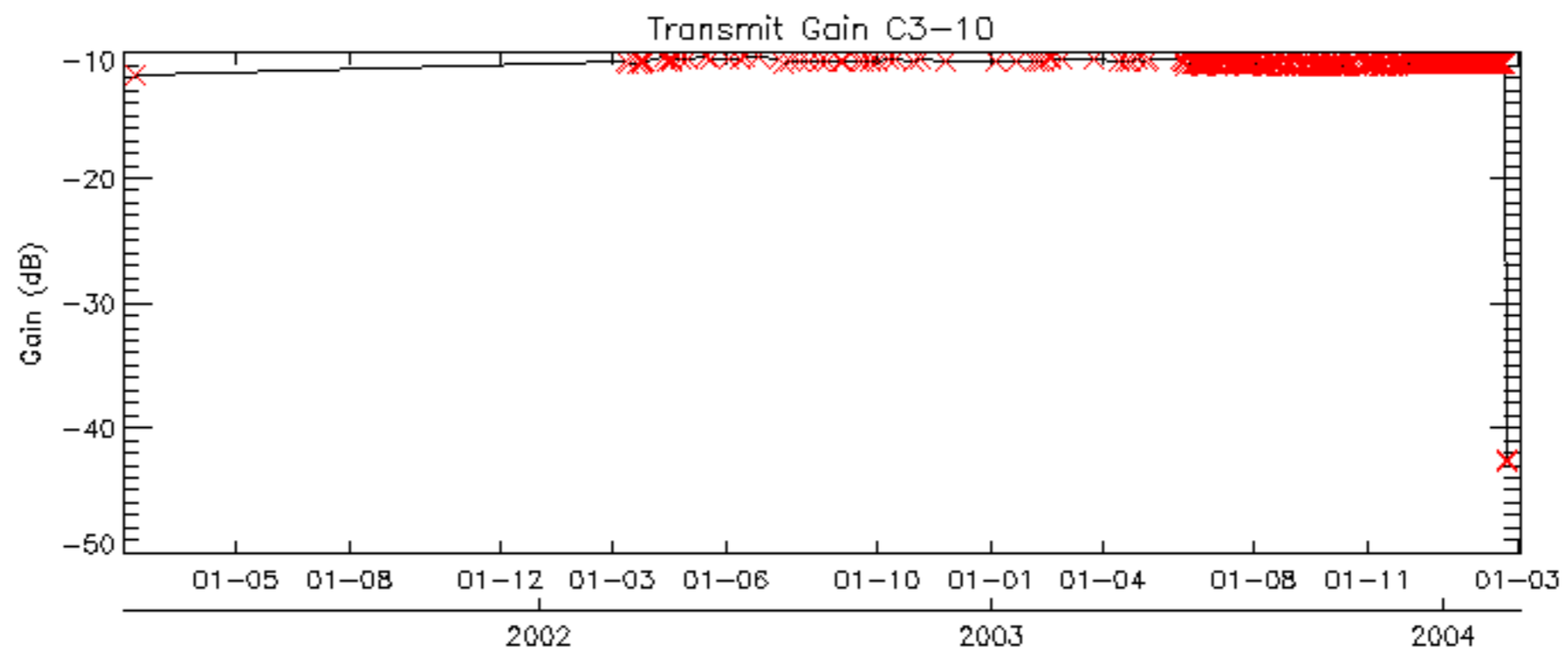


Average P3

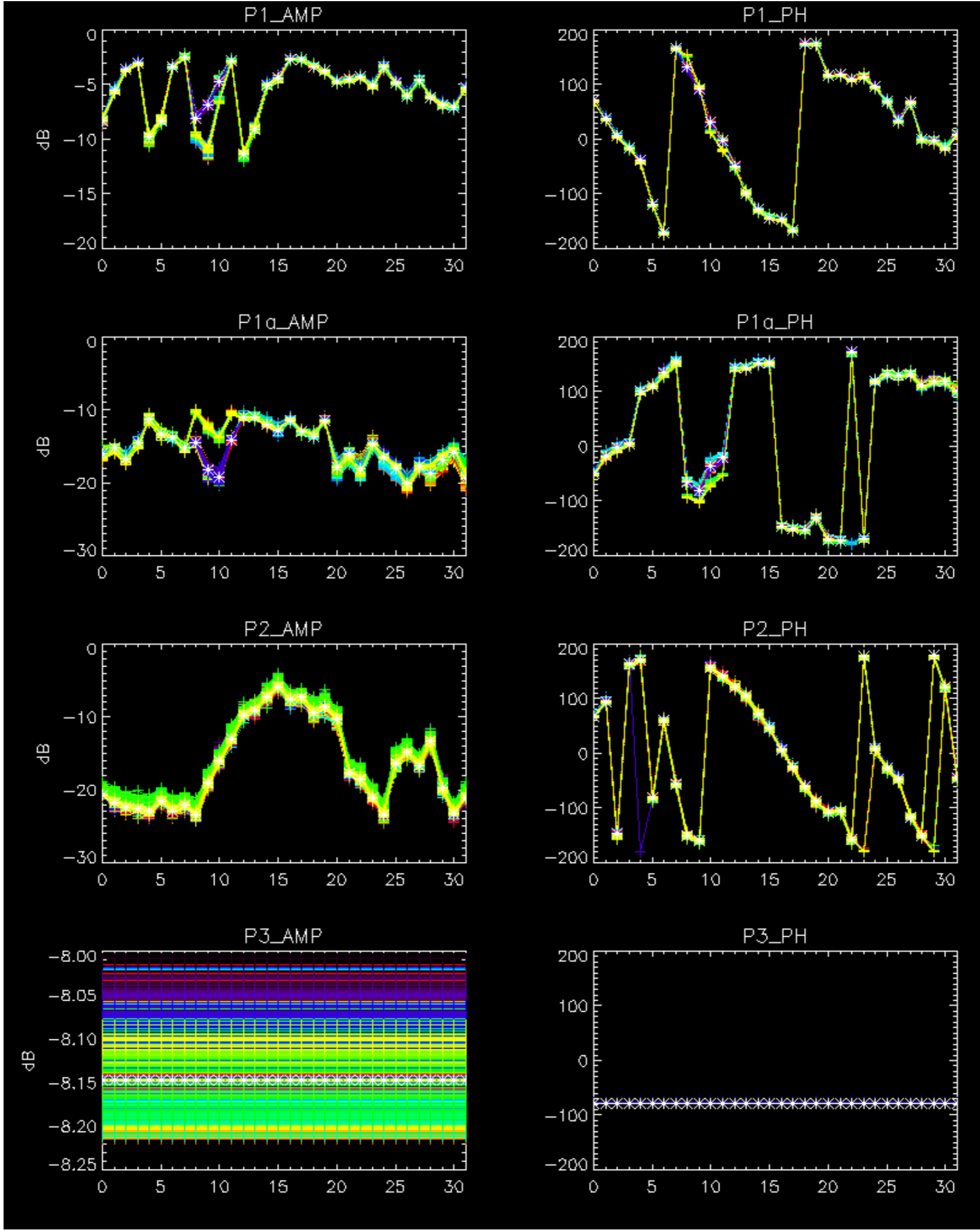




Anomaly related to tile C3 (rows 9 to 13) clearly visible on WSM products.



No anomalies observed.



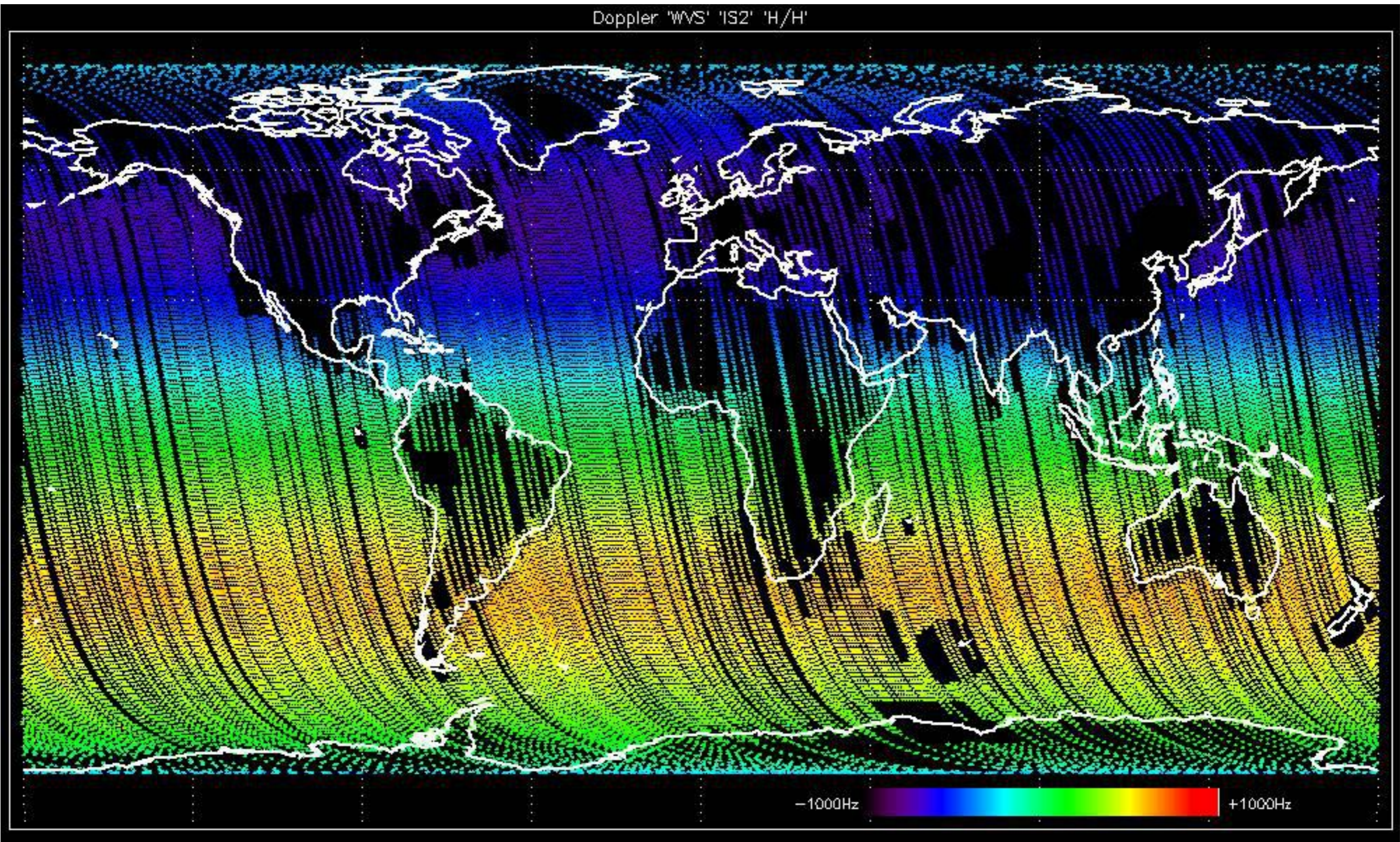
-Anomaly detected on internal calibration pulses on Tx:  
-> P1 and P1a (rows 9 to 13) cal. pulses are affected by a drop of 2-4dB.  
-> Anomaly started over 20-FEB-2004 18:13:09

-Stable raw data statistics.  
-Nominal Doppler behavior.

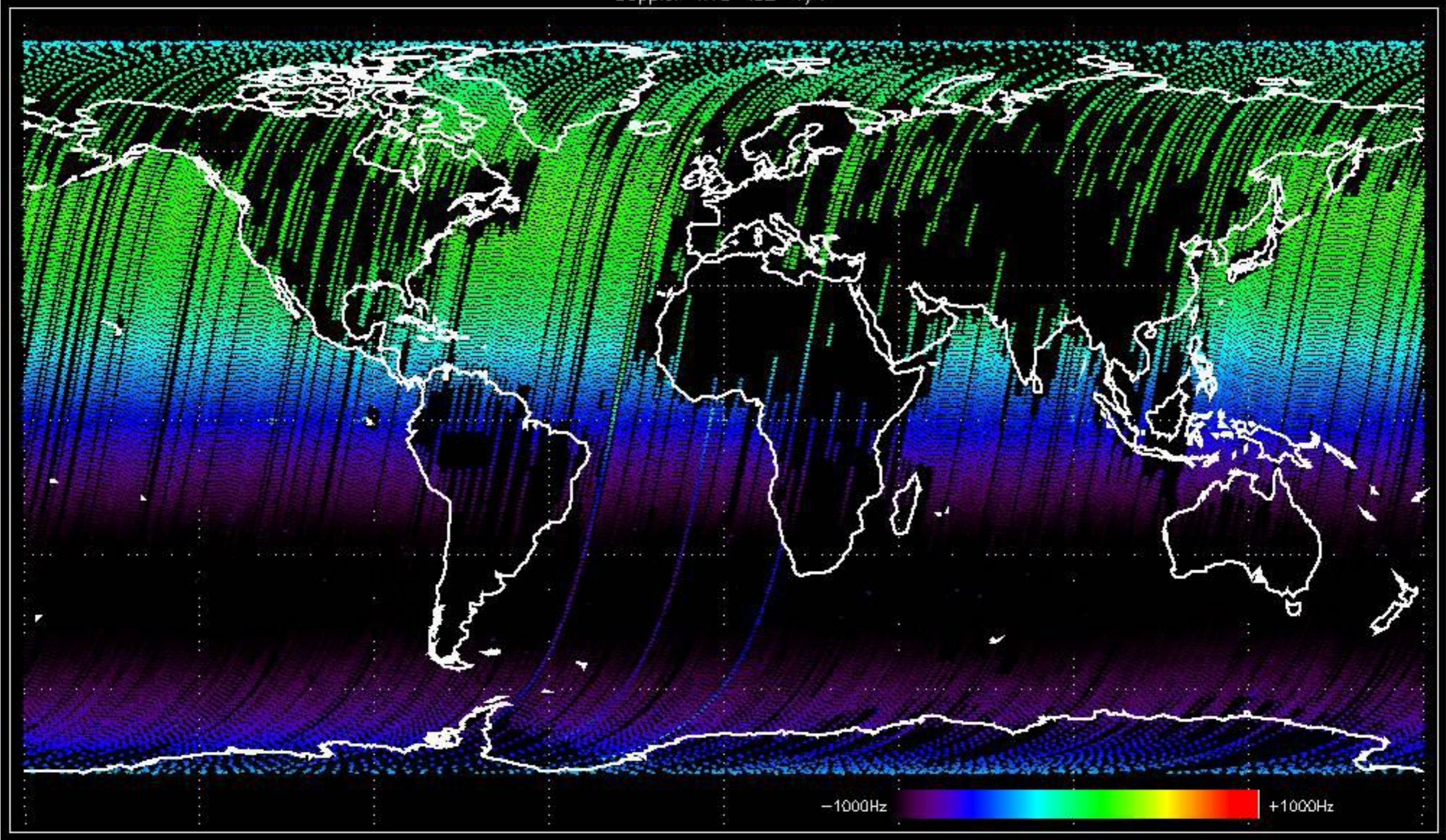
No anomalies observed Doppler evolution.  
Doppler analysis performed over the last 35 days

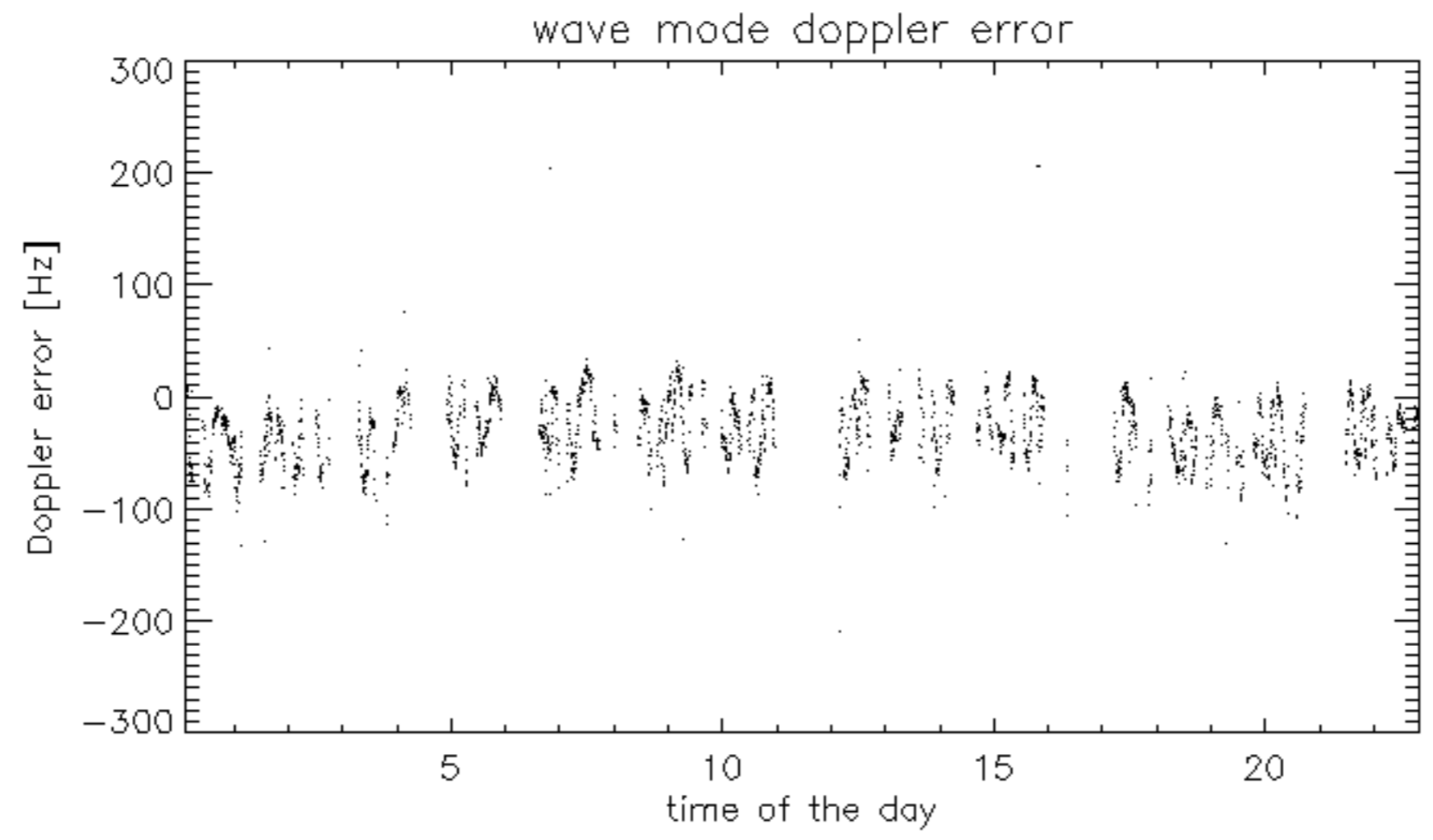
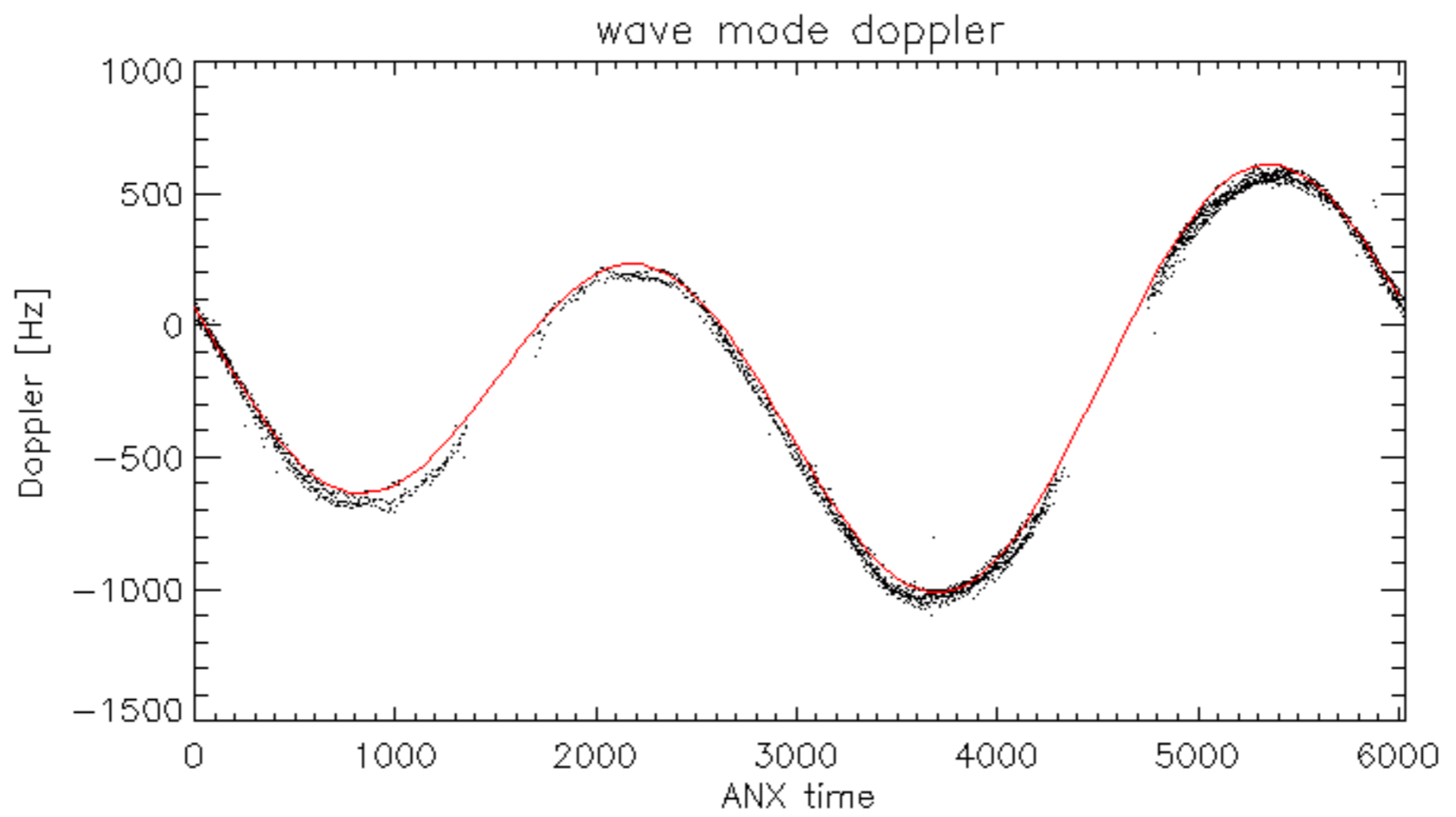


Doppler 'WVS' 'IS2' 'H/H'

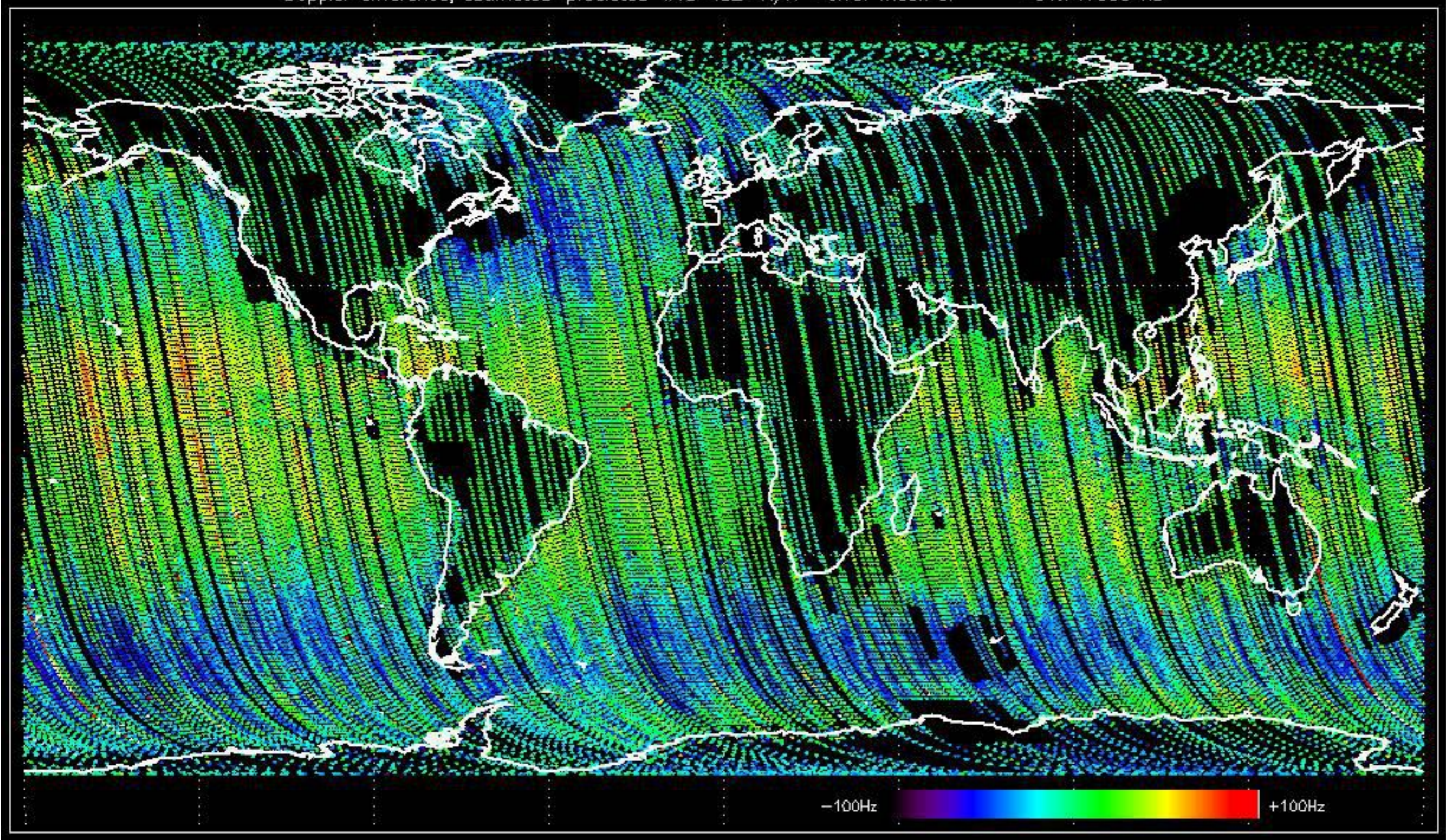


Doppler 'WVS' 'IS2' 'V/V'

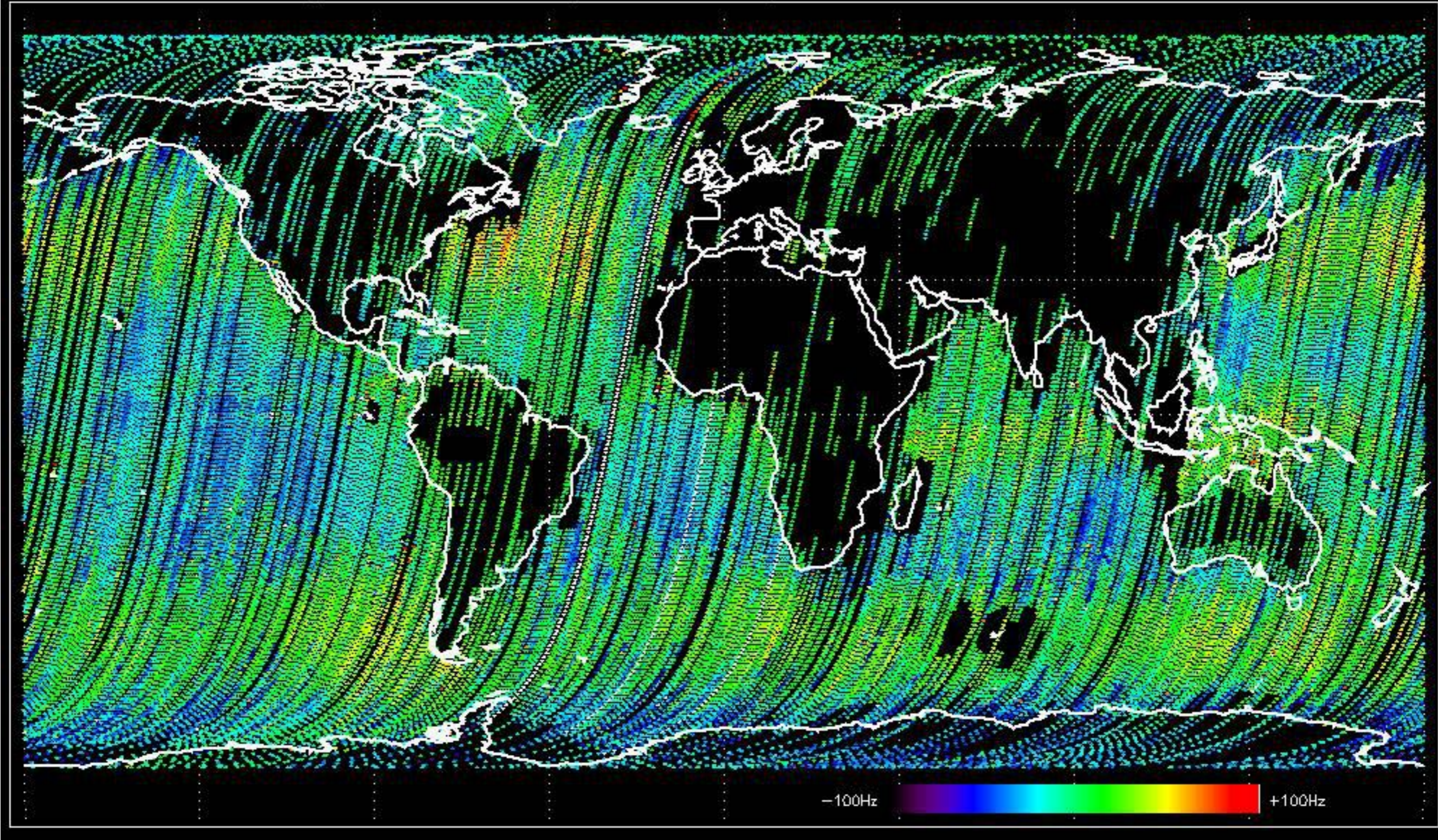




Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of -31.747339 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' 'V/V' -error mean of -30.099288 Hz



-Anomaly detected on tile C3: rows 9 to 13 are affected by a drop of ~32db in MS product

No anomalies observed.









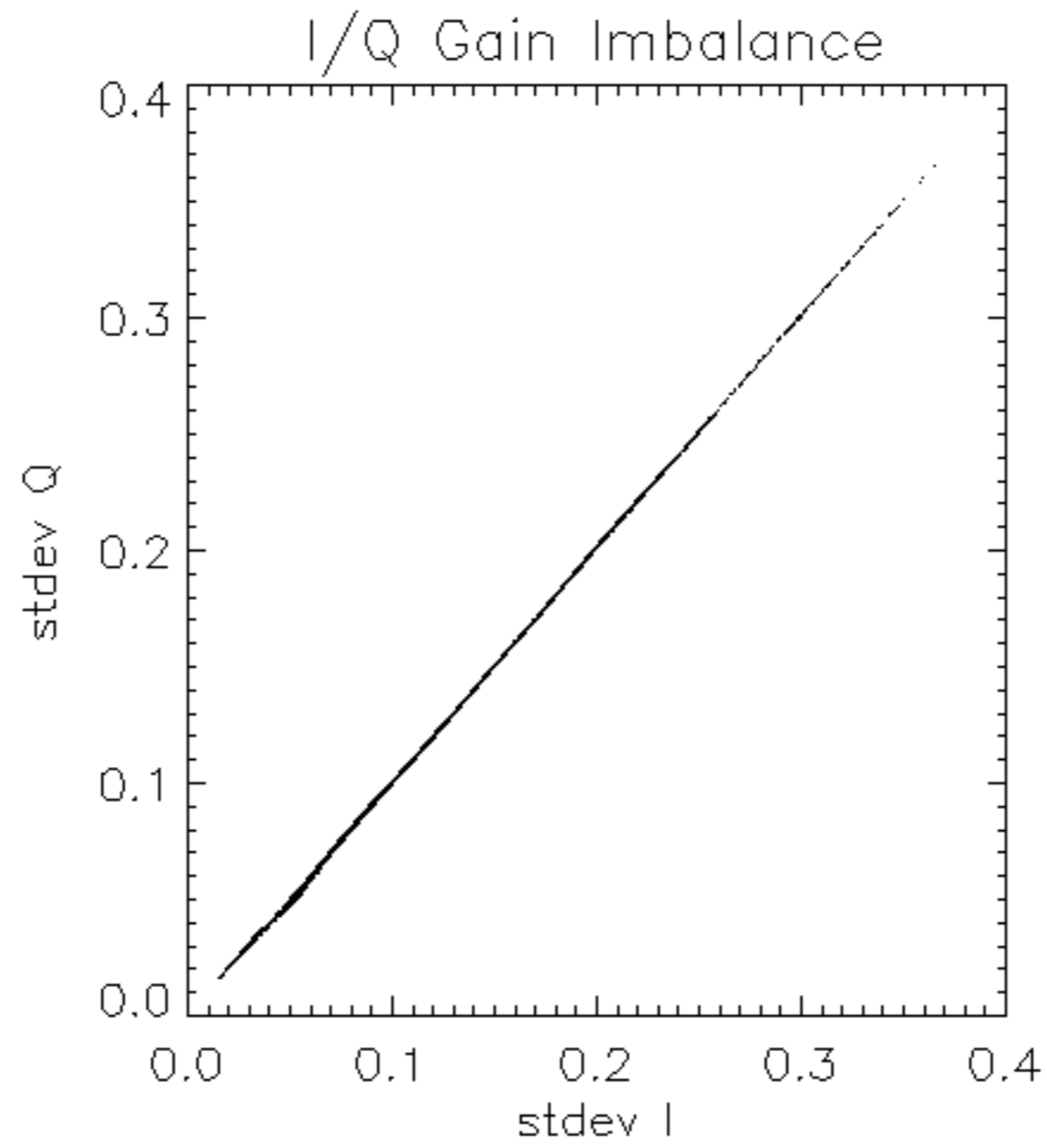




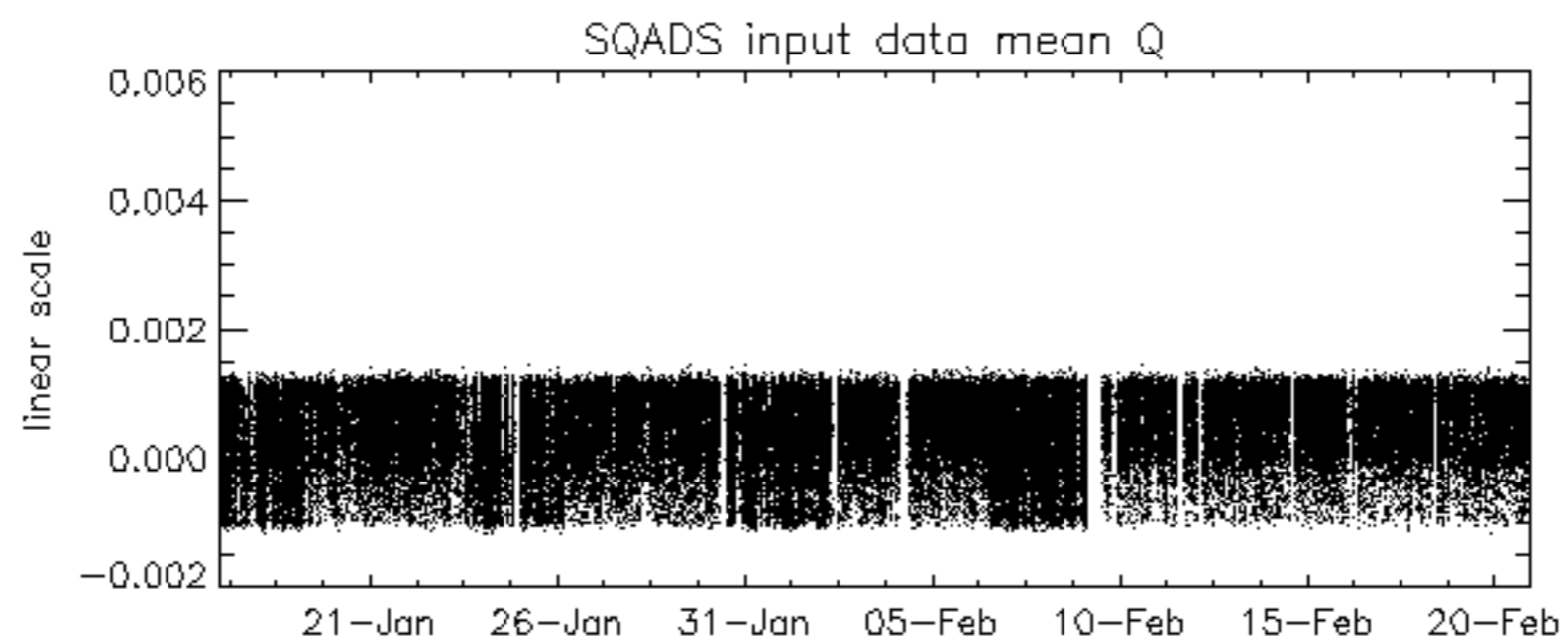
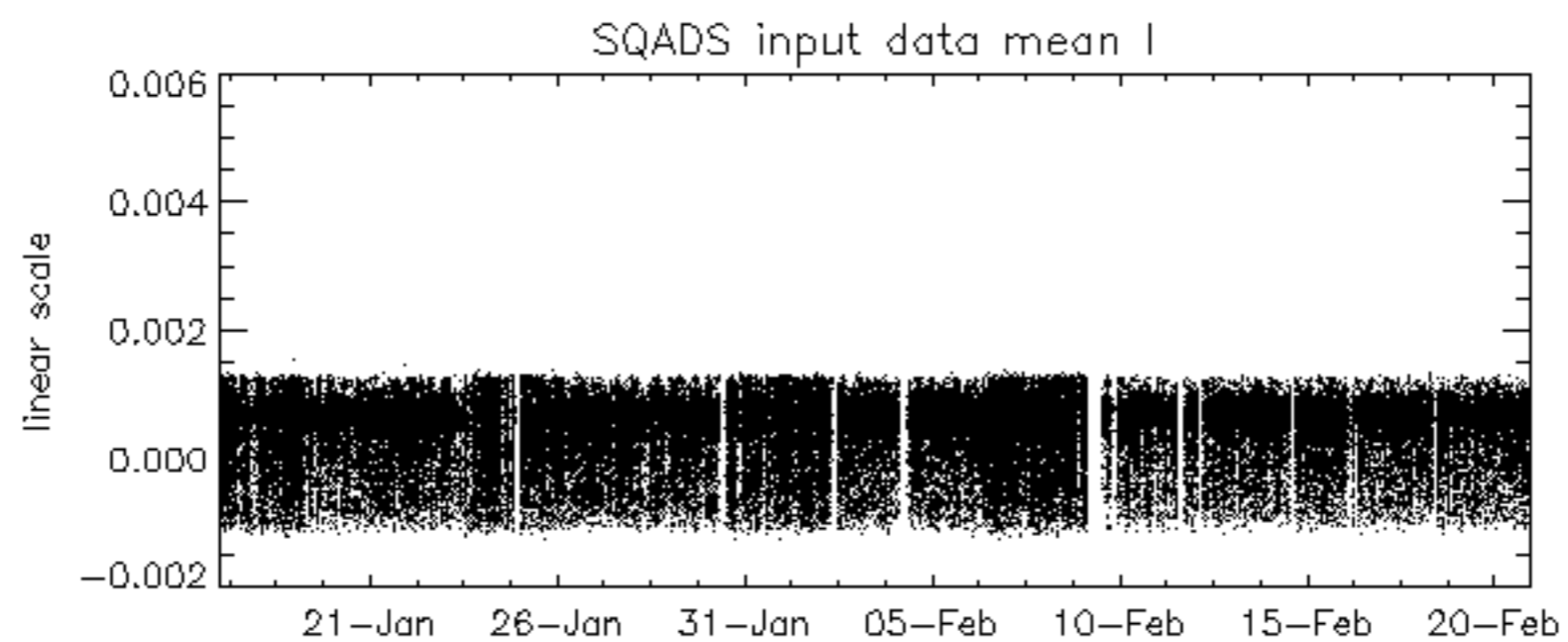
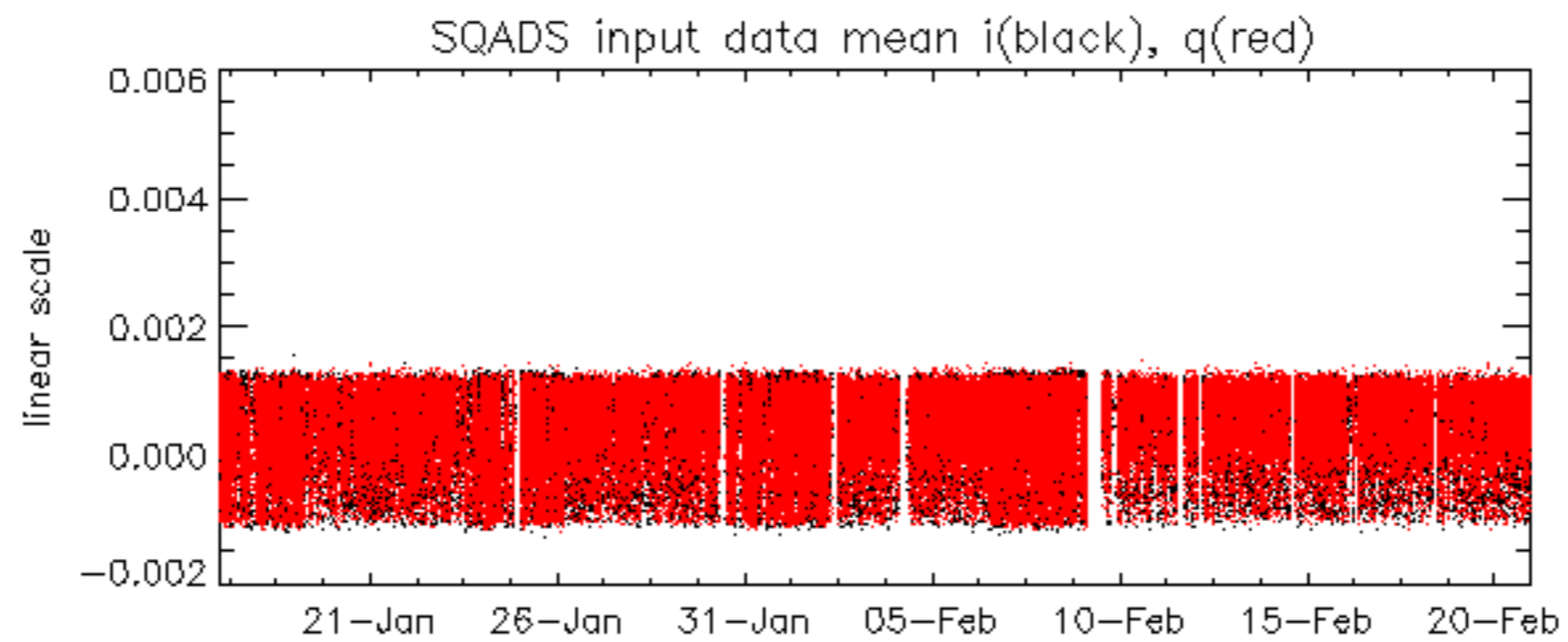


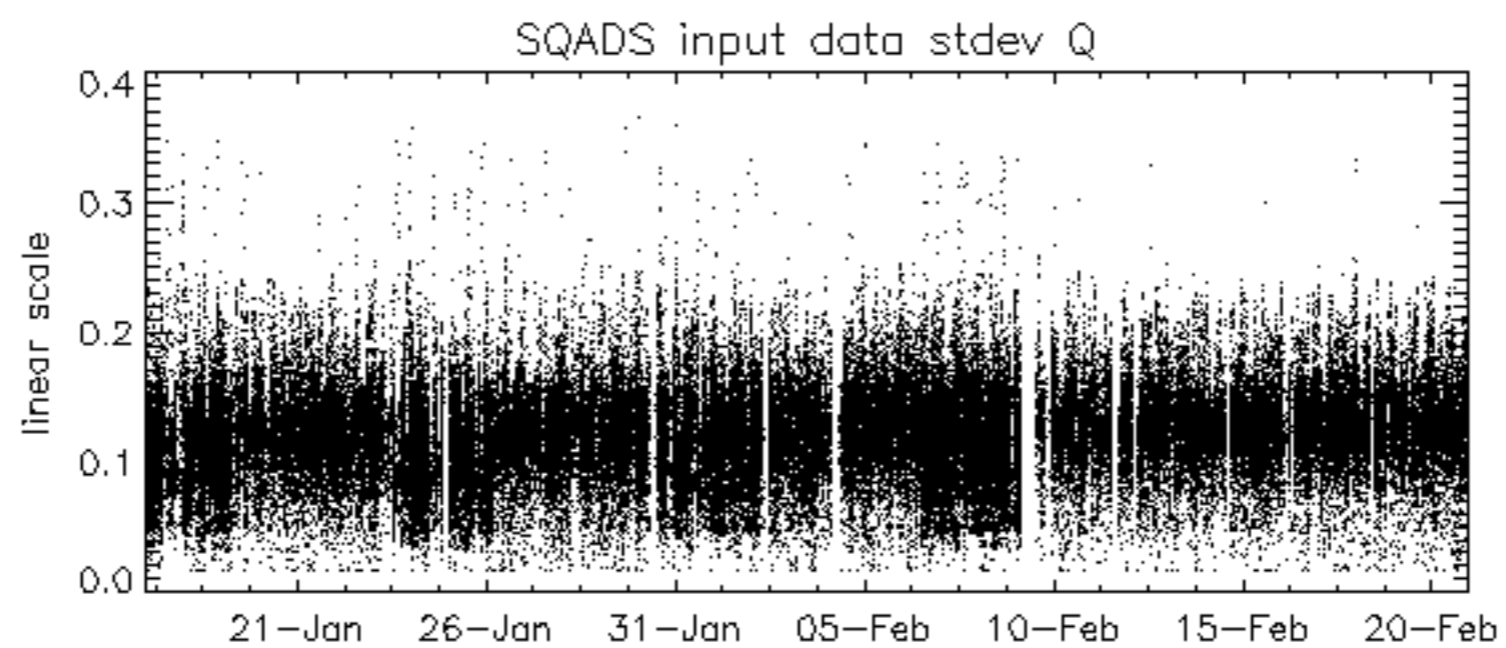
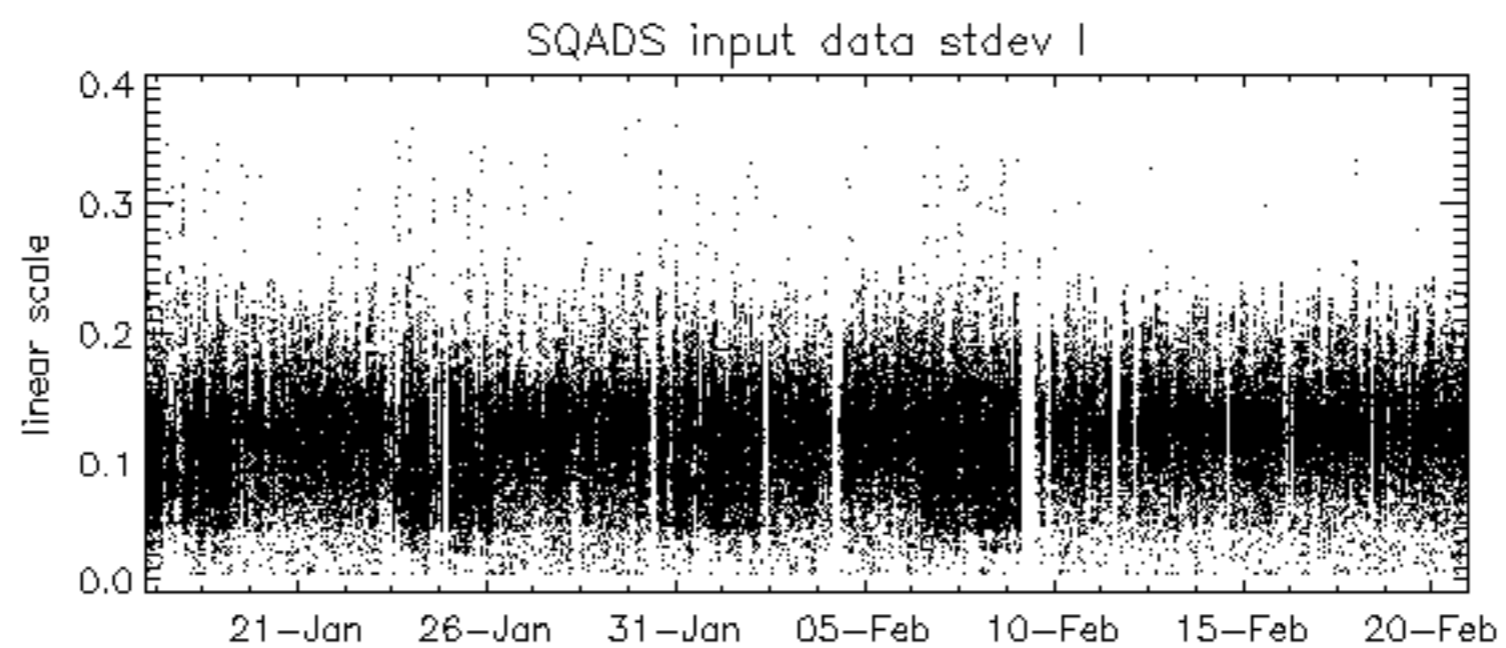
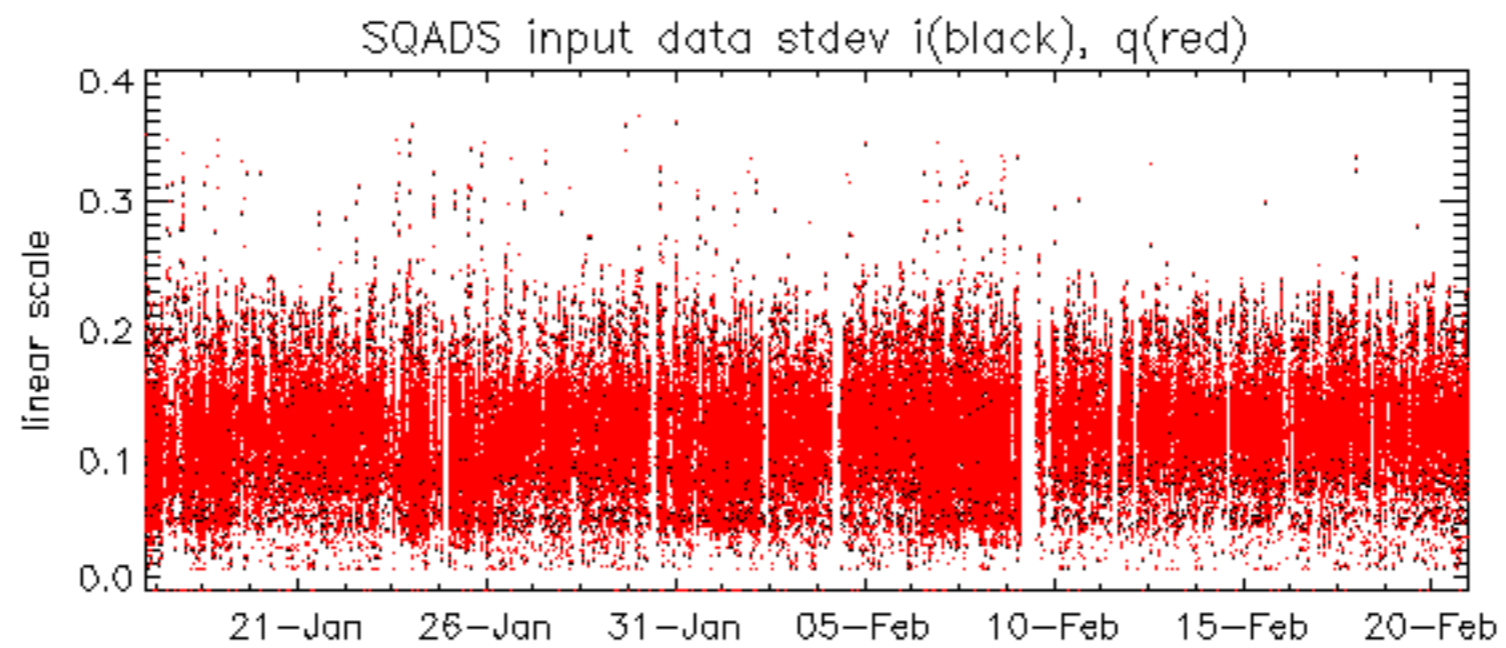






























No unavailabilities during the reported period.