

# PRELIMINARY REPORT OF 040423

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Fri Apr 23 13:02:13 GMT 2004

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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

## 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 to identify any malfunctionning modules and  
 to identify modules for which calibration offsets are to be applied.  
 No anomalies observed on available MS products:

Polarisation	Start Time
V	20040422 194524
H	20040422 194404

### MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## 4 - Internal calibration Results

No anomalies observed.

## 4.1 - Daily statistics

### 4.1.1 - Evolution for WVS

[Evolution of cal pulses for WVS](#)

### 4.1.2 - Evolution for GM1

[Evolution of cal pulses for GM1](#)

## 4.2 - Cyclic statistics

### 4.2.1 - Evolution for WVS

[Evolution of cal pulses for WVS](#)



### P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.577797	0.005378	0.014423
7	P1	-3.299783	0.010583	0.004725
11	P1	-4.632198	0.021907	0.018364
15	P1	-4.983265	0.038436	0.026208
19	P1	-3.347855	0.006342	-0.040827
22	P1	-4.516289	0.014593	0.011402
24	P1	-5.029546	0.015060	0.059549
28	P1	-4.589502	0.013538	-0.026945

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.396452	0.079897	-0.019072

7	P2	-22.873787	0.122296	-0.038631
11	P2	-15.906403	0.153540	0.118419
15	P2	-7.159593	0.089170	0.015336
19	P2	-9.513508	0.164685	0.035319
22	P2	-17.655695	0.099104	0.050061
24	P2	-20.993547	0.112078	0.023983
28	P2	-16.603794	0.081622	-0.012640

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.130470	0.003073	-0.016928
7	P3	-8.130472	0.003074	-0.016931
11	P3	-8.130477	0.003073	-0.016921
15	P3	-8.130490	0.003072	-0.016838
19	P3	-8.130500	0.003072	-0.016766
22	P3	-8.130509	0.003073	-0.016704
24	P3	-8.130507	0.003073	-0.016713
28	P3	-8.130510	0.003065	-0.016265

### 4.2.2 - Evolution for GM1

**Evolution of cal pulses for GM1**



### P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.184744	0.099565	-0.121414
7	P1	-3.407955	0.348046	-0.213621
11	P1	-4.650735	0.072421	0.064369
15	P1	-3.607561	0.511069	-0.271265
19	P1	-2.875634	0.080849	-0.127443
22	P1	-4.690663	0.102167	0.042042
24	P1	-7.075409	0.040987	-0.001794
28	P1	-6.625135	0.114631	0.041050

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.604990	0.247478	0.063100
7	P2	-13.448676	0.195310	0.012283
11	P2	-12.063550	0.145065	0.144562
15	P2	-5.727050	0.022896	-0.027572
19	P2	-6.551757	0.052344	-0.123674
22	P2	-15.011925	0.600360	-0.018832
24	P2	-19.704142	0.042732	0.077931
28	P2	-17.105339	0.058742	-0.019607

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024720	0.003151	-0.010310
7	P3	-8.024747	0.003150	-0.010358
11	P3	-8.024681	0.003150	-0.010105
15	P3	-8.024658	0.003155	-0.010493
19	P3	-8.024705	0.003158	-0.010391
22	P3	-8.024691	0.003143	-0.010503
24	P3	-8.024757	0.003174	-0.010260
28	P3	-8.024733	0.003181	-0.010478

## 4.3 - cal pulses monitoring (all rows)

### 4.3.1 - Evolution for WVS



### 4.3.2 - Evolution for GM1



## 5 - RAW data statistics

No anomalies observed.

### 5.1 - Input mean I/Q

channel	stat	DSS-B
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MEAN I	mean	0.000478720
	stdev	2.38171e-07
MEAN Q	mean	0.000482425
	stdev	2.72217e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127432
	stdev	0.00118427
STDEV Q	mean	0.127684
	stdev	0.00119757



## 5.3 - Gain imbalance I/Q



# 6 - Doppler Analysis

Preliminary report. The data is not yet controlled

## 6.1 - Unbiased Doppler Error for WVS

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

## 6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 6.3 - Doppler evolution versus ANX for WVS

<b>Evolution Doppler error versus ANX</b>
<input type="checkbox"/>

### 6.4 - Unbiased Doppler Error for GM1

<b>Evolution of unbiased Doppler error (Real - Expected)</b>
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 6.5 - Absolute Doppler for GM1

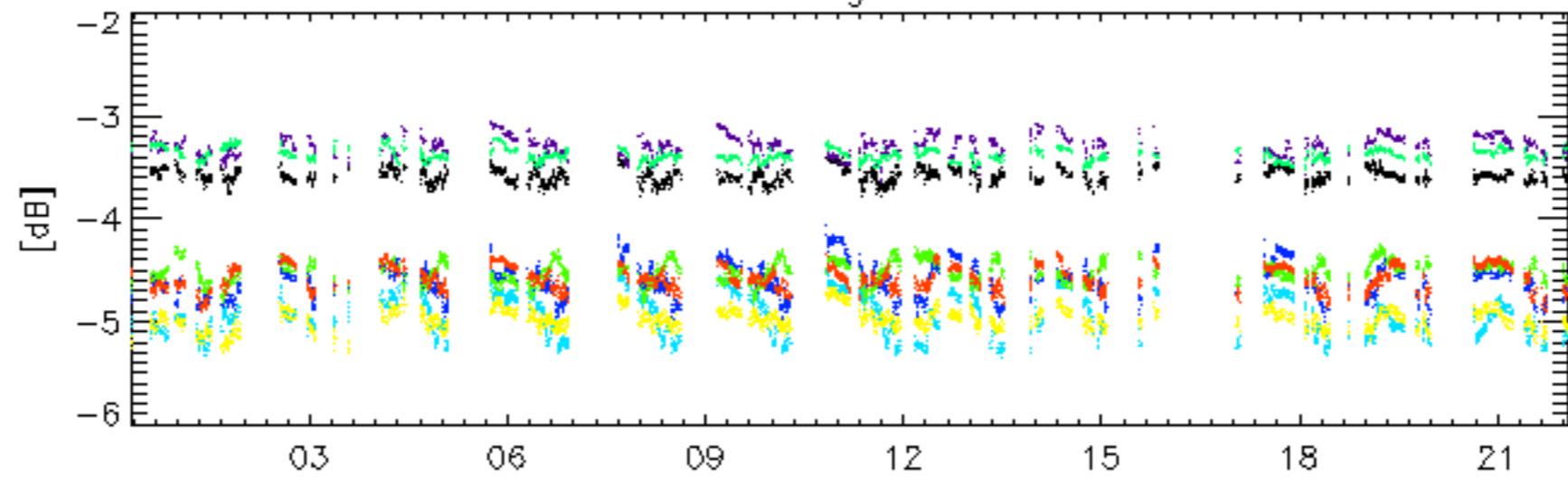
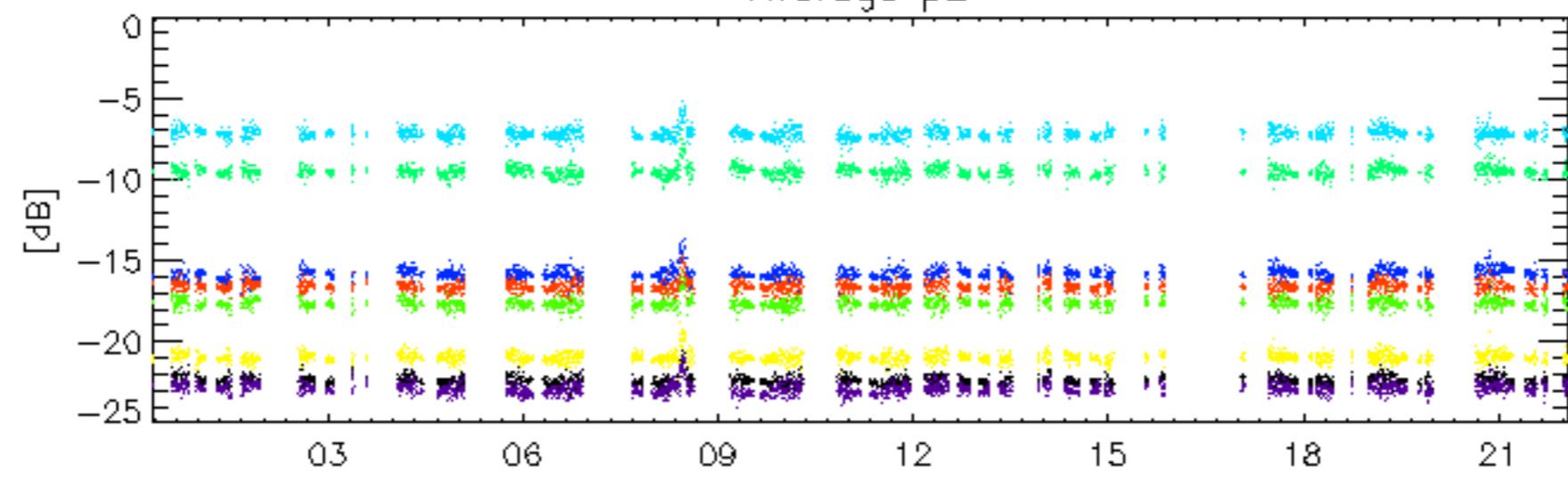
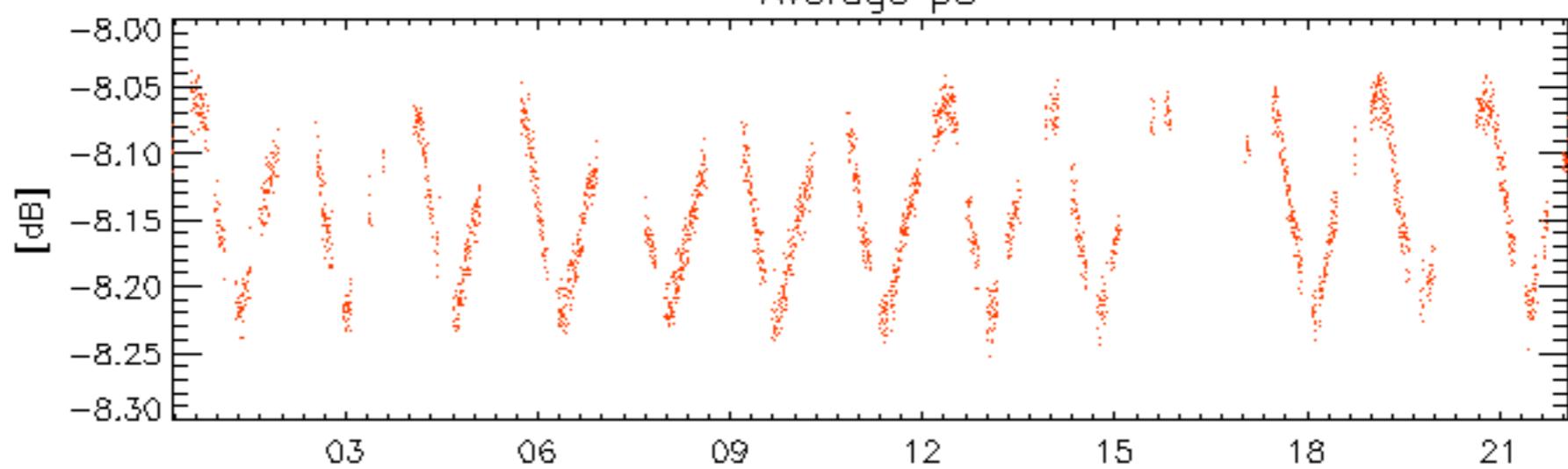
<b>Evolution of Absolute Doppler</b>
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Ascending
<input type="checkbox"/>
Descending

### 6.6 - Doppler evolution versus ANX for GM1

<b>Evolution Doppler error versus ANX</b>
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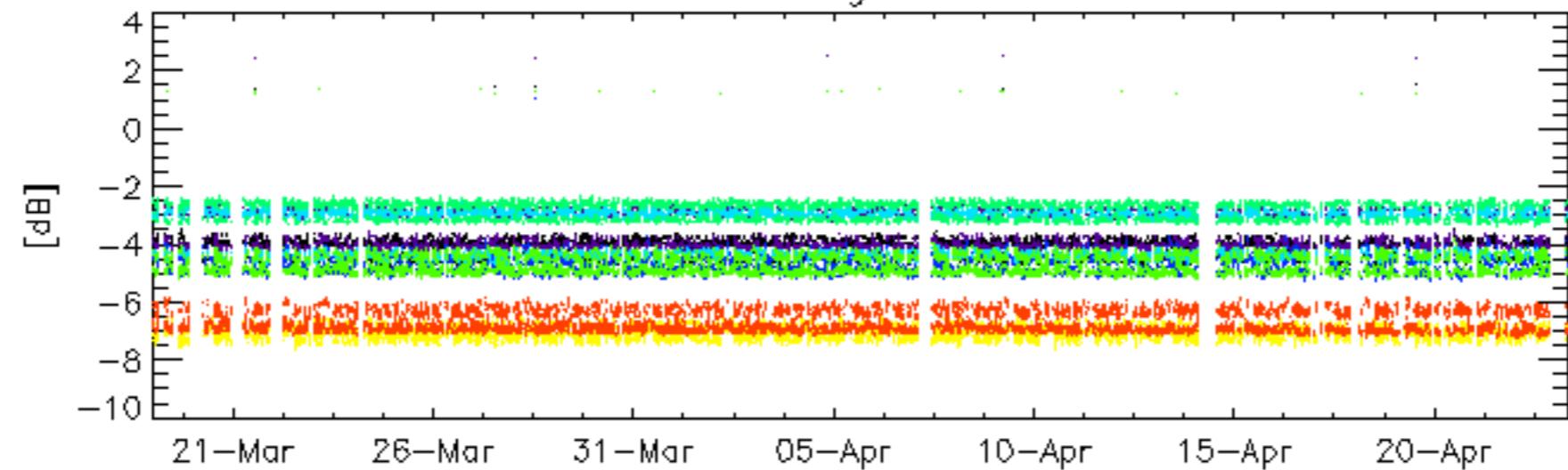


Average P1

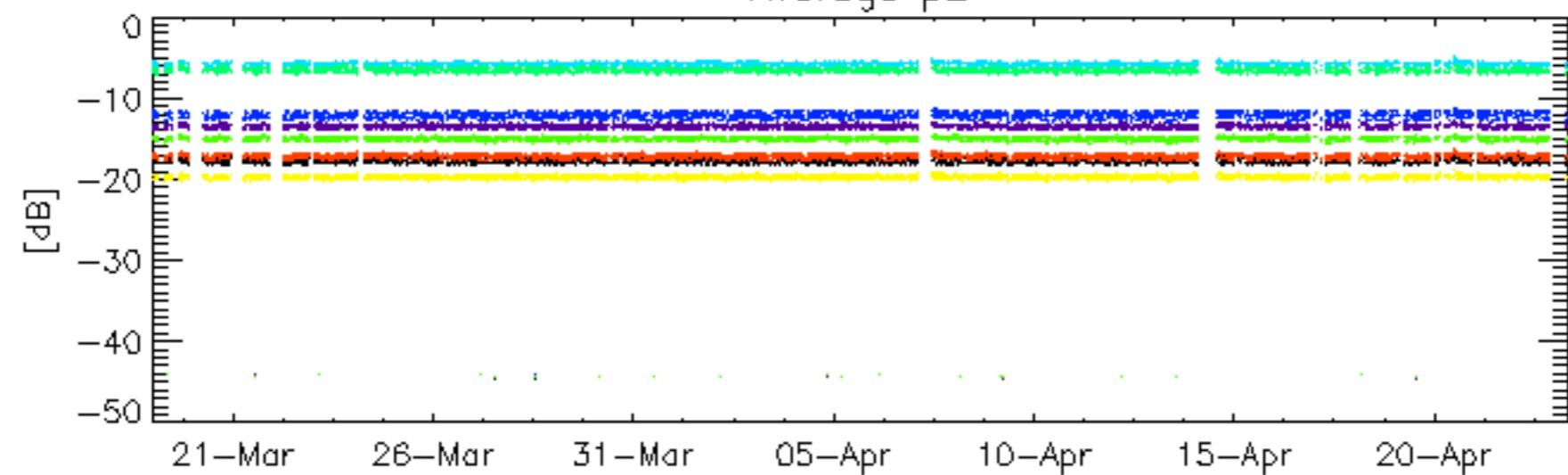
22-Apr  
Average p222-Apr  
Average p3

rows: — 3 — 7 — 11 — 15 — 19 — 22 — 24 — 28

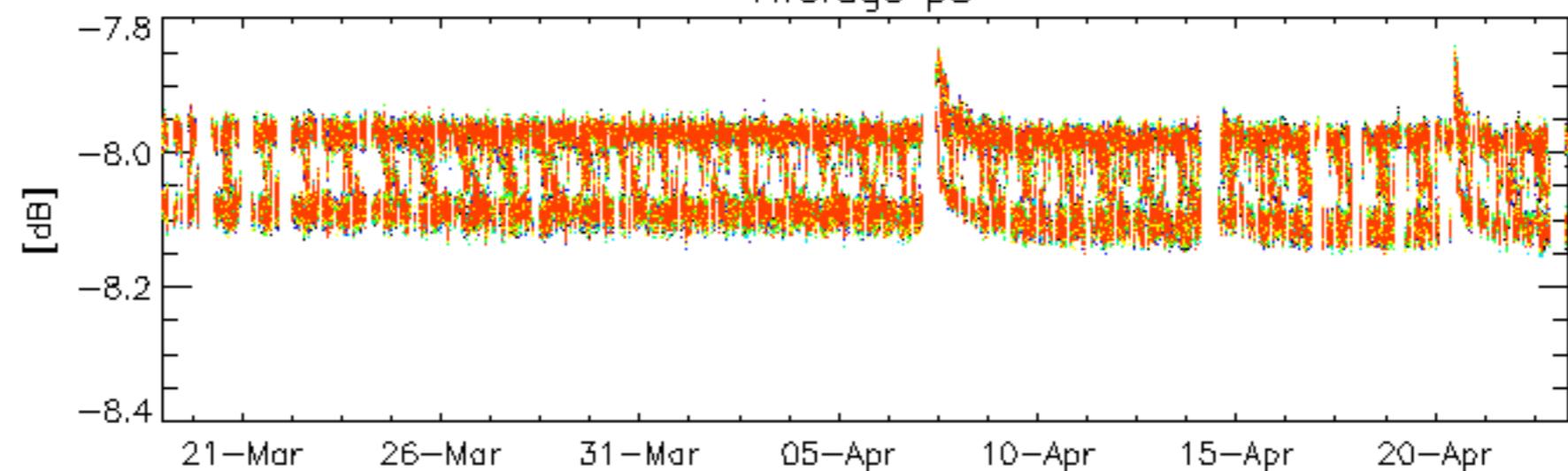
Average P1



Average p2

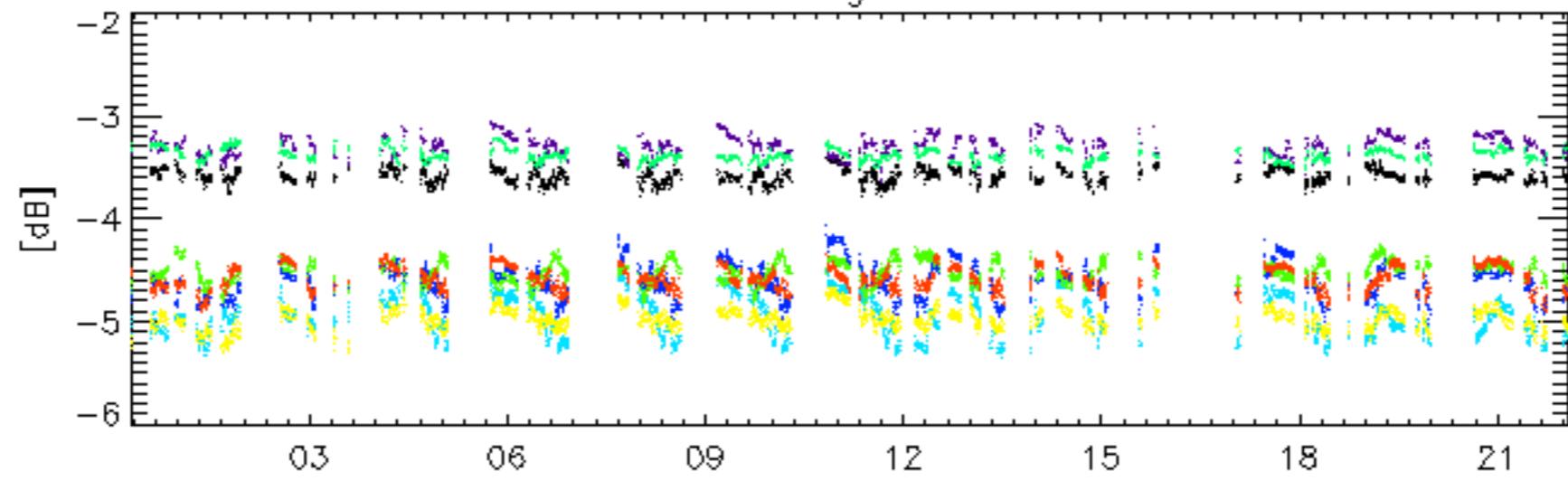
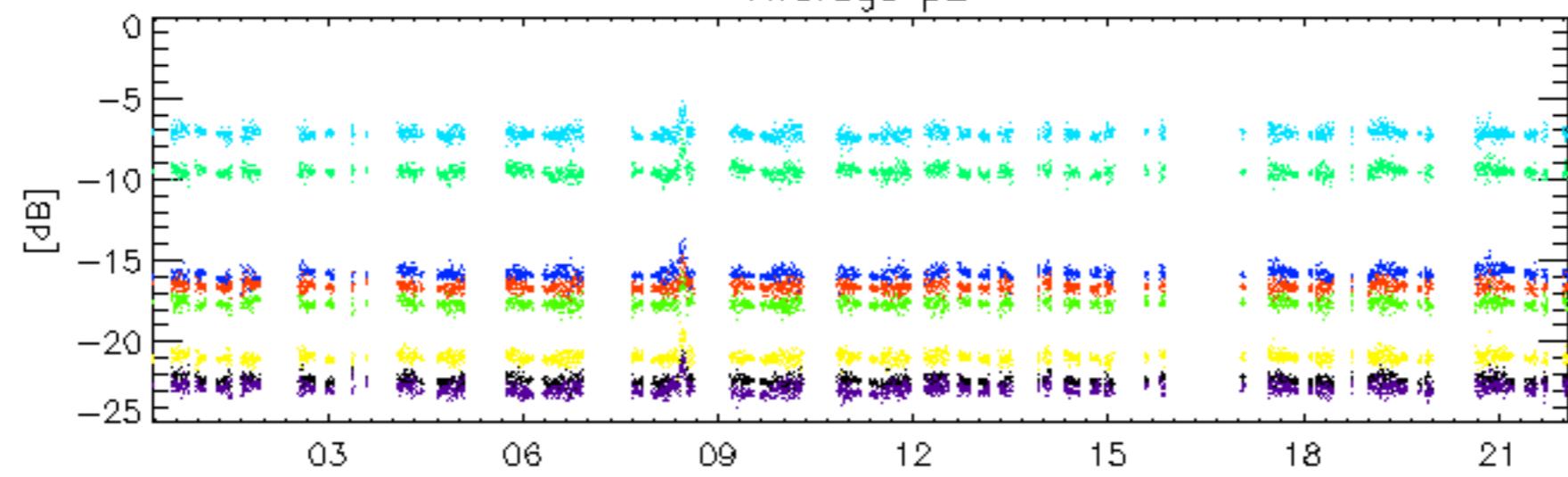
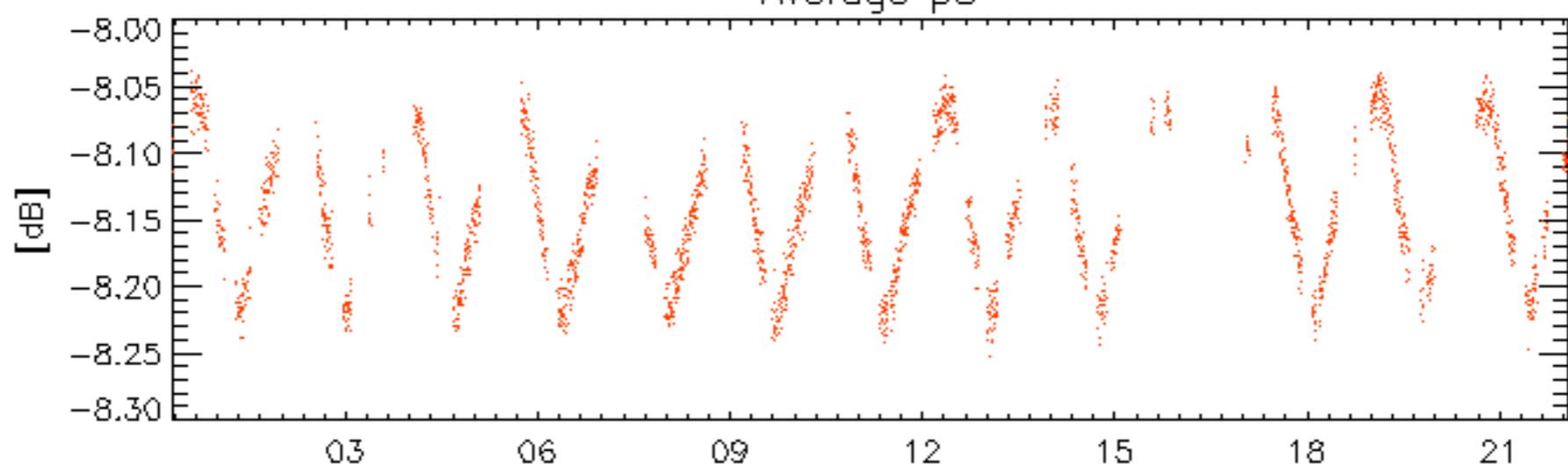


Average p3



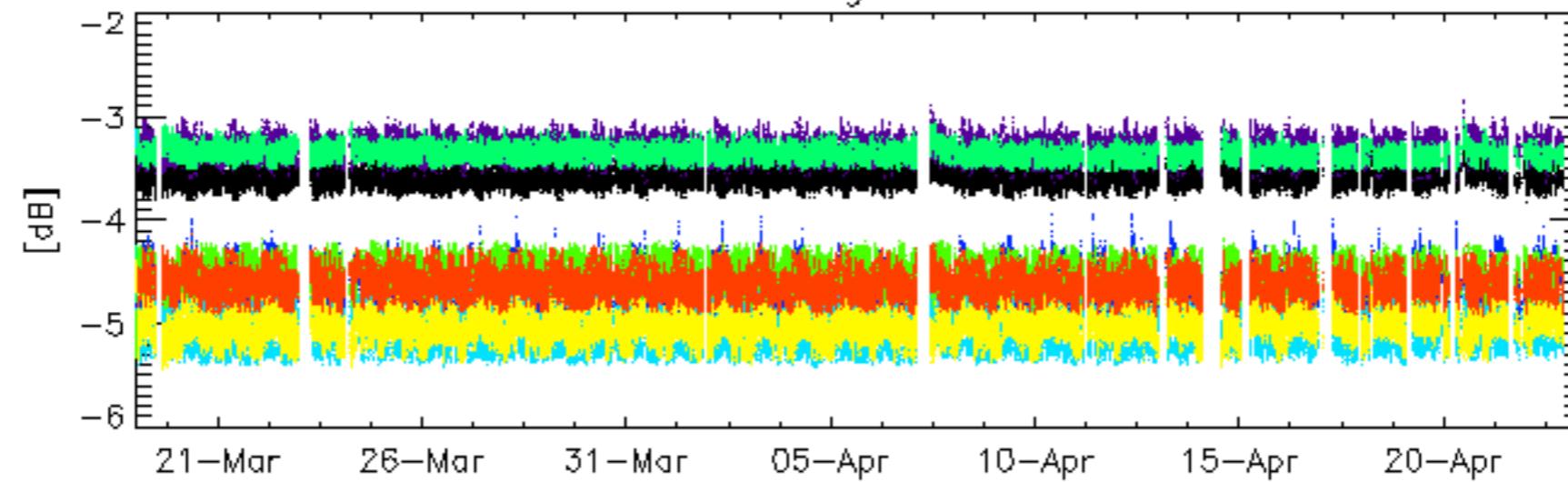
rows:  $\textcolor{red}{\_} 3 \textcolor{blue}{\_} 7 \textcolor{purple}{\_} 11 \textcolor{teal}{\_} 15 \textcolor{green}{\_} 19 \textcolor{orange}{\_} 22 \textcolor{yellow}{\_} 24 \textcolor{brown}{\_} 28$

Average P1

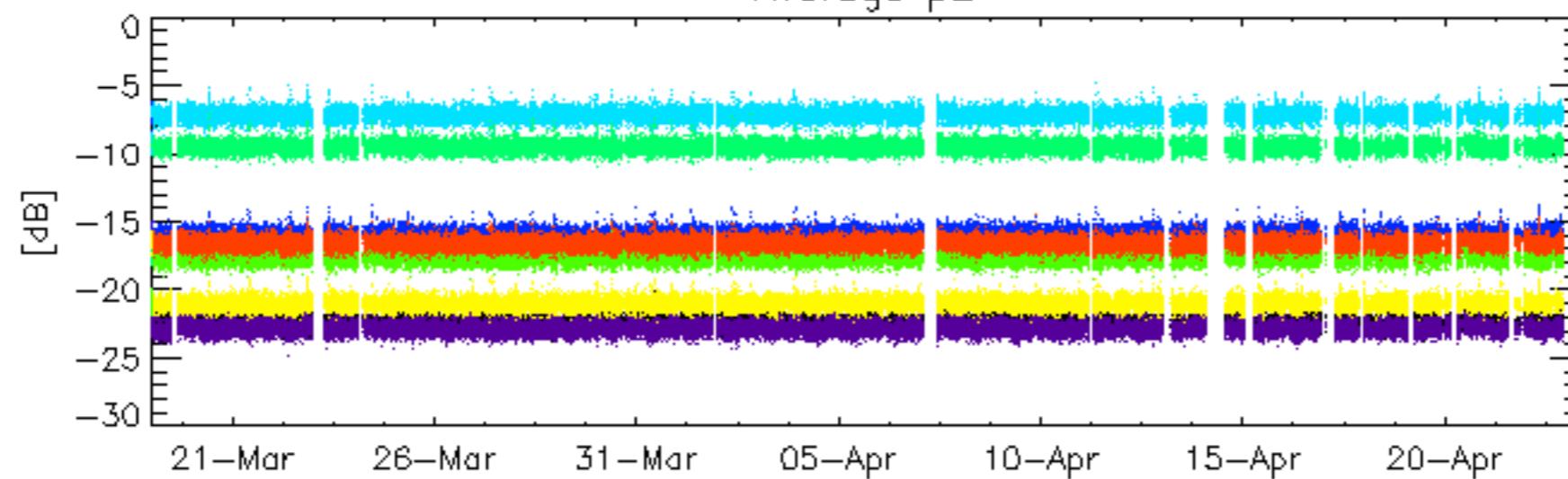
22-Apr  
Average p222-Apr  
Average p3

rows: — 3 — 7 — 11 — 15 — 19 — 22 — 24 — 28

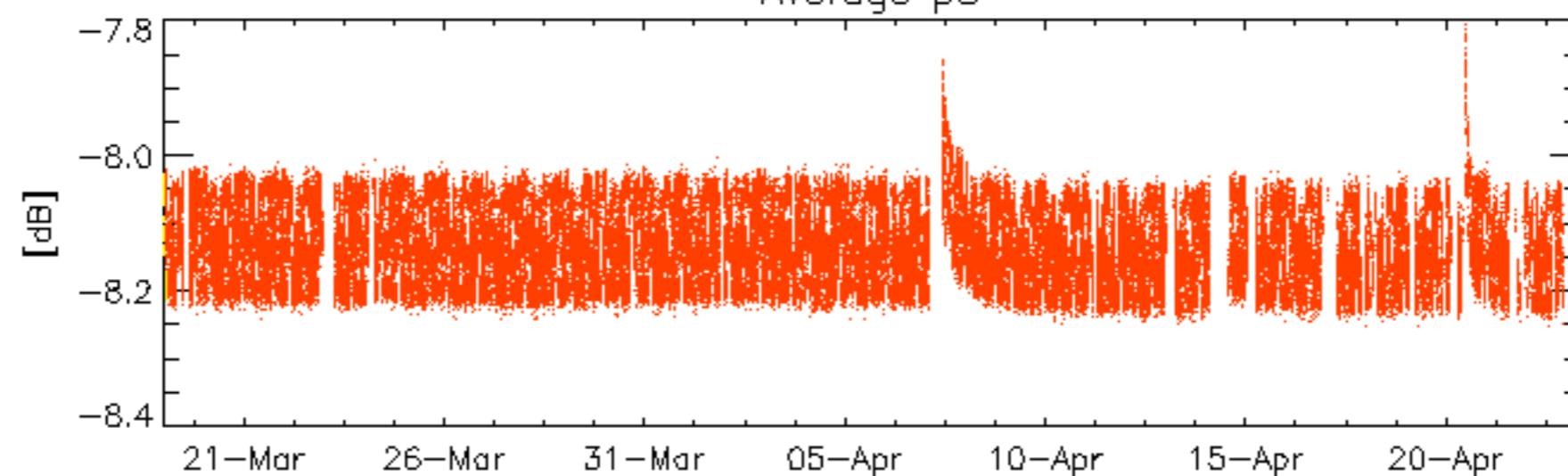
Average P1



Average p2



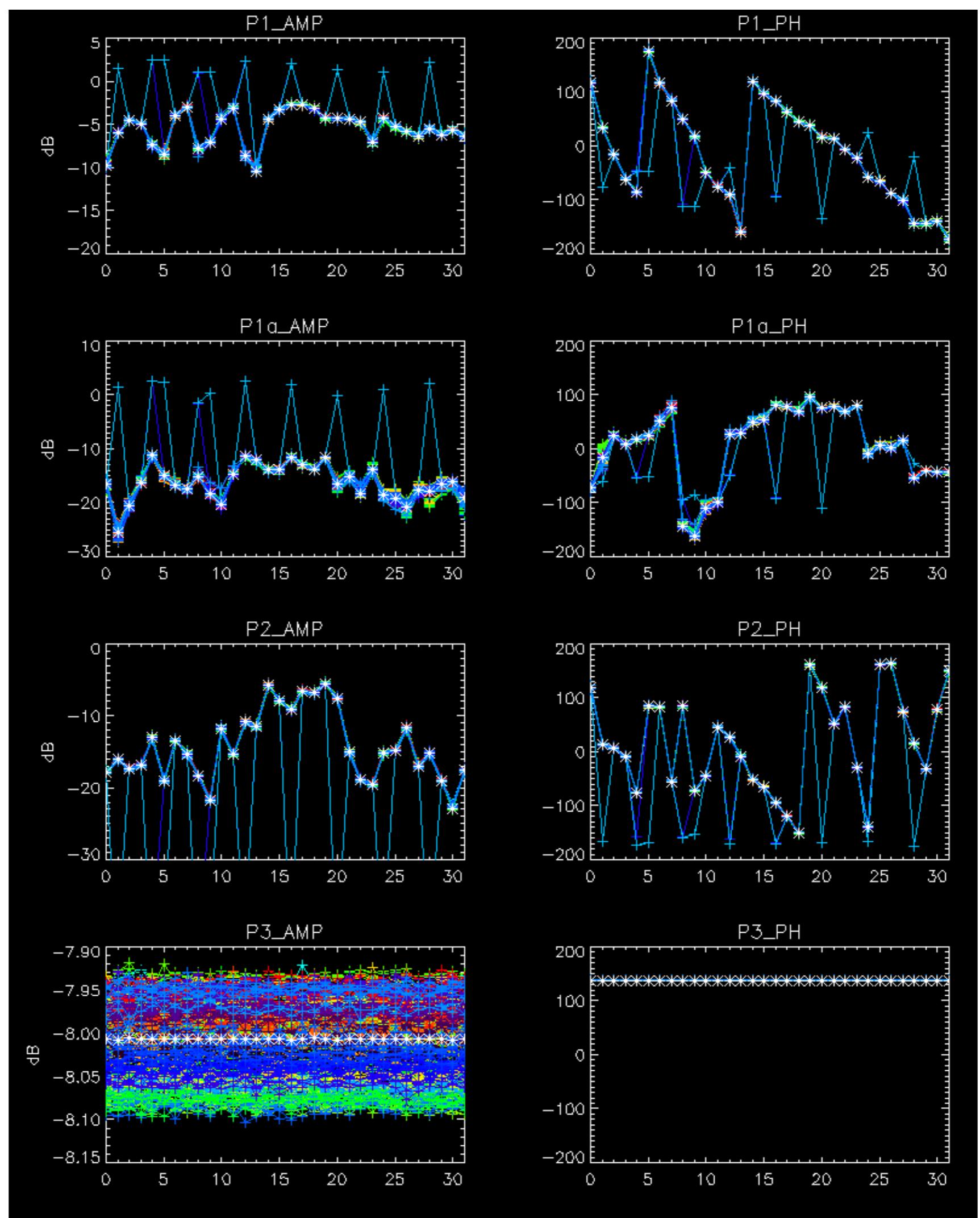
Average p3

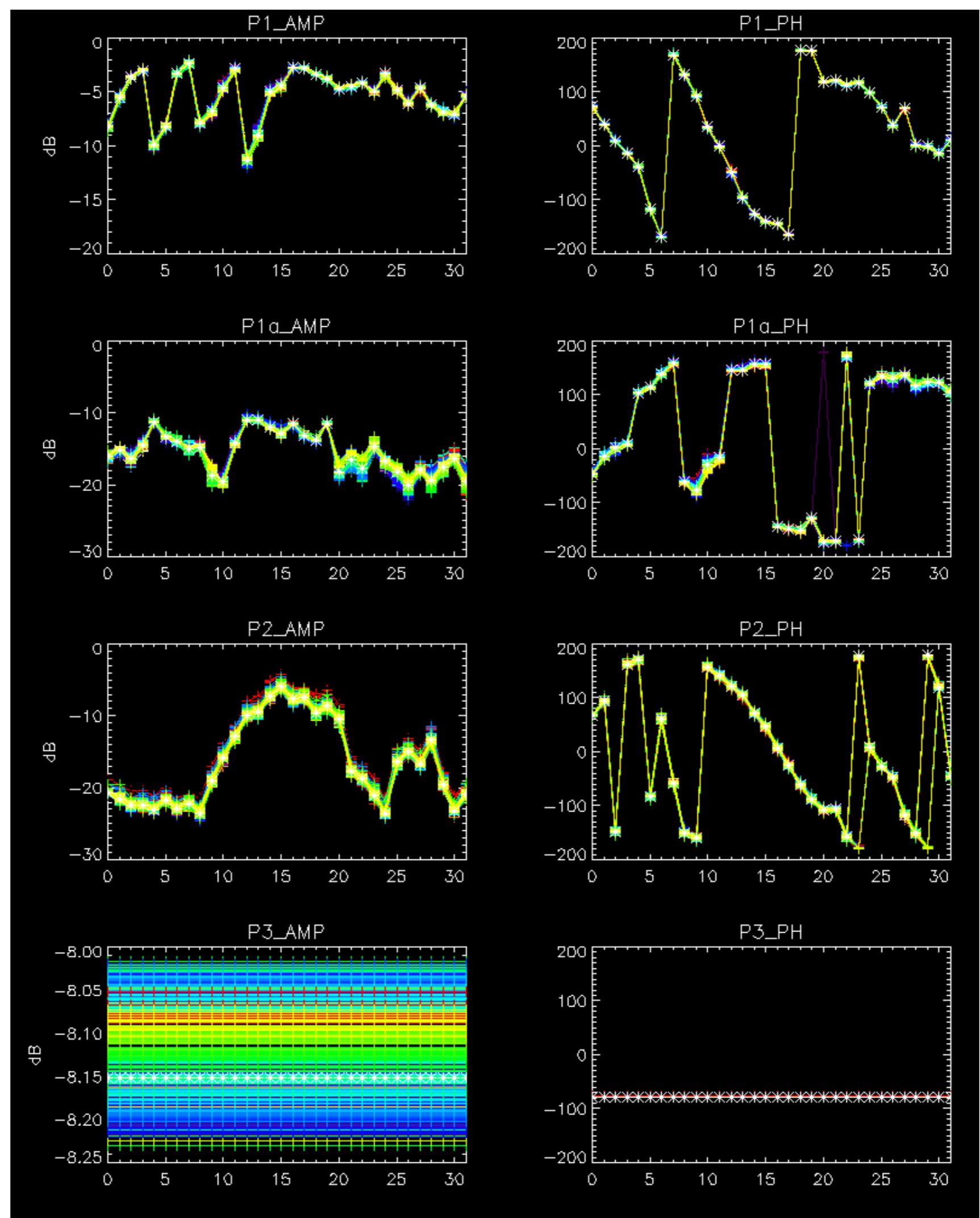


rows:  $\textcolor{black}{\_3}$   $\textcolor{black}{\_7}$   $\textcolor{black}{\_11}$   $\textcolor{blue}{\_15}$   $\textcolor{cyan}{\_19}$   $\textcolor{green}{\_22}$   $\textcolor{yellow}{\_24}$   $\textcolor{red}{\_28}$

No anomalies observed.



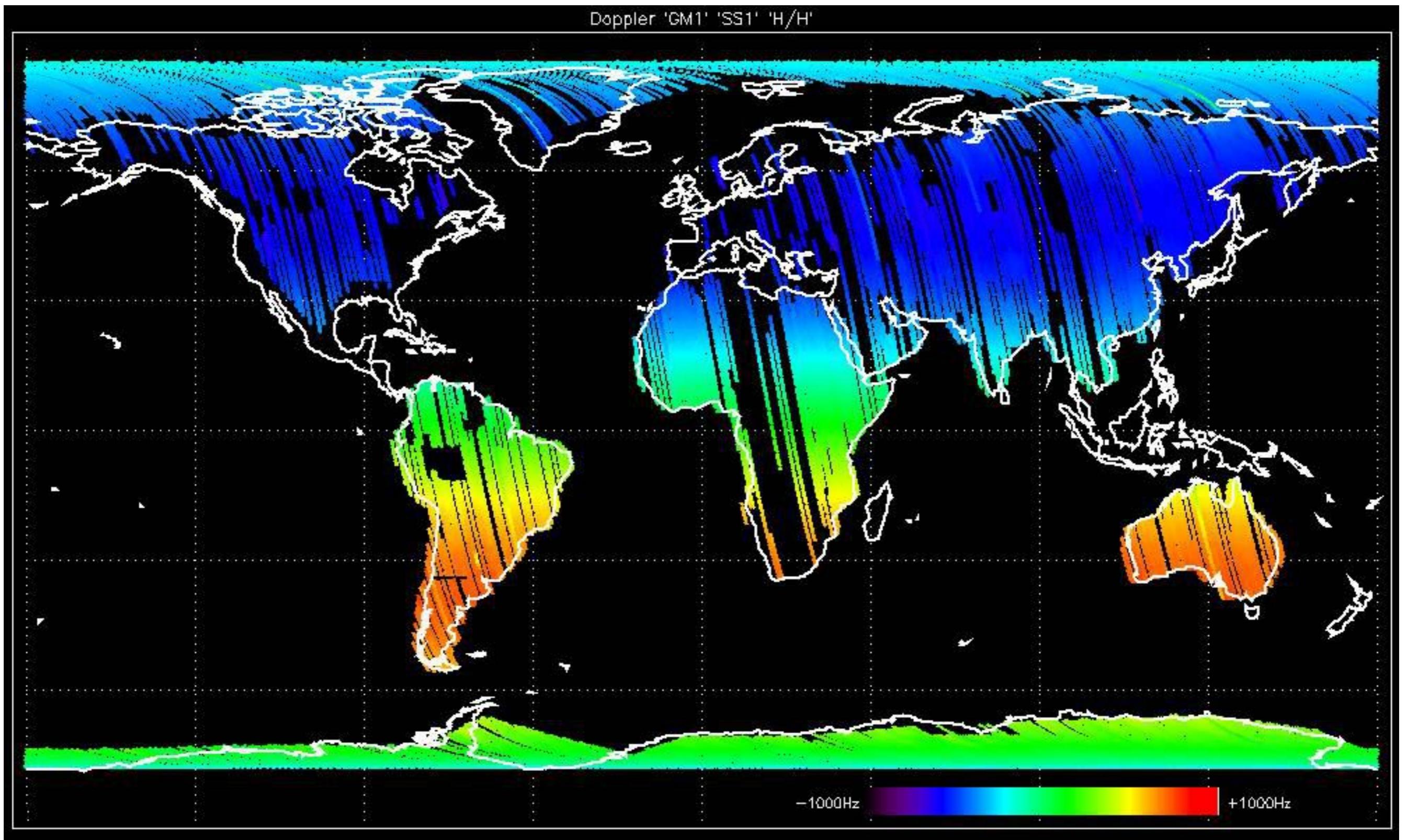


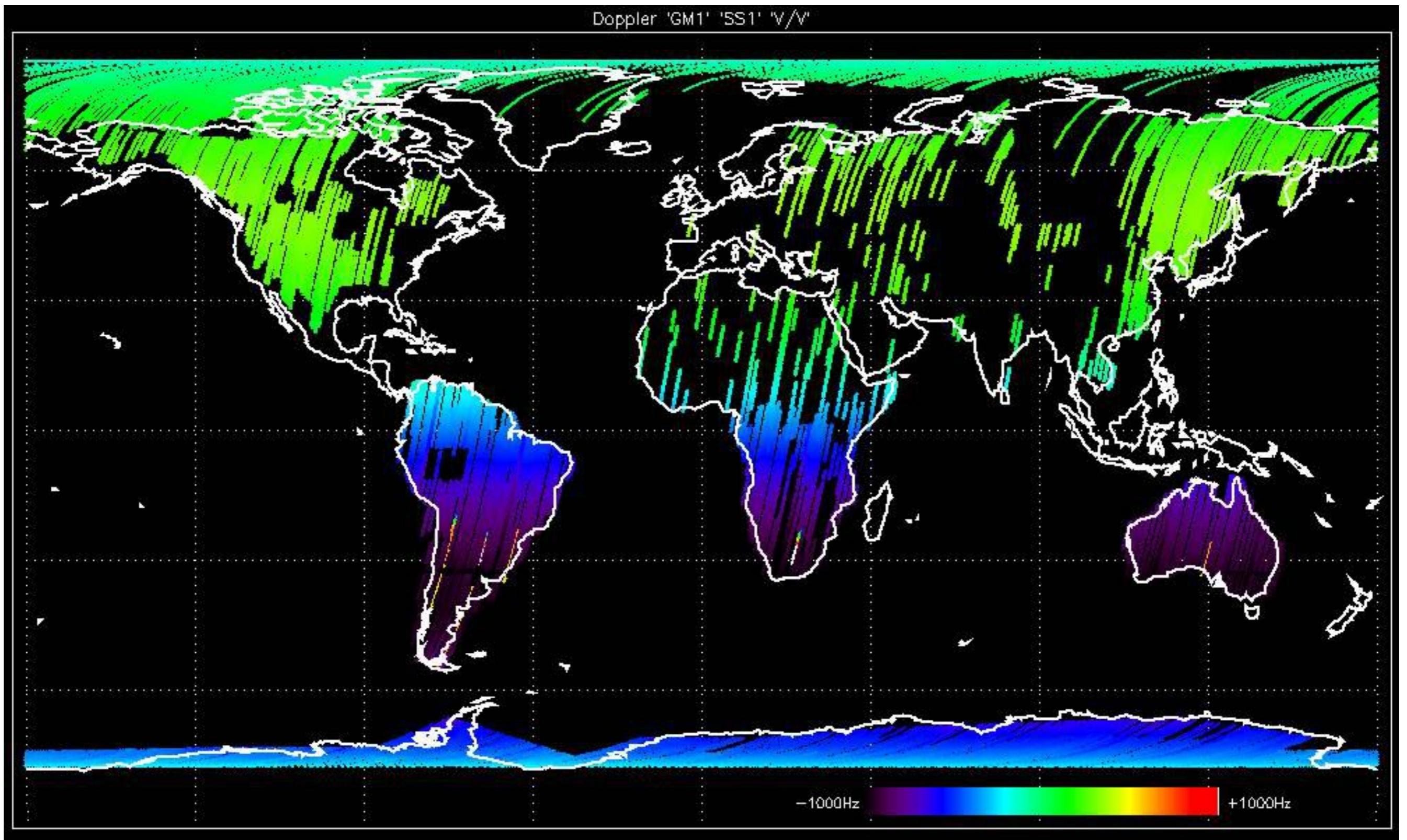


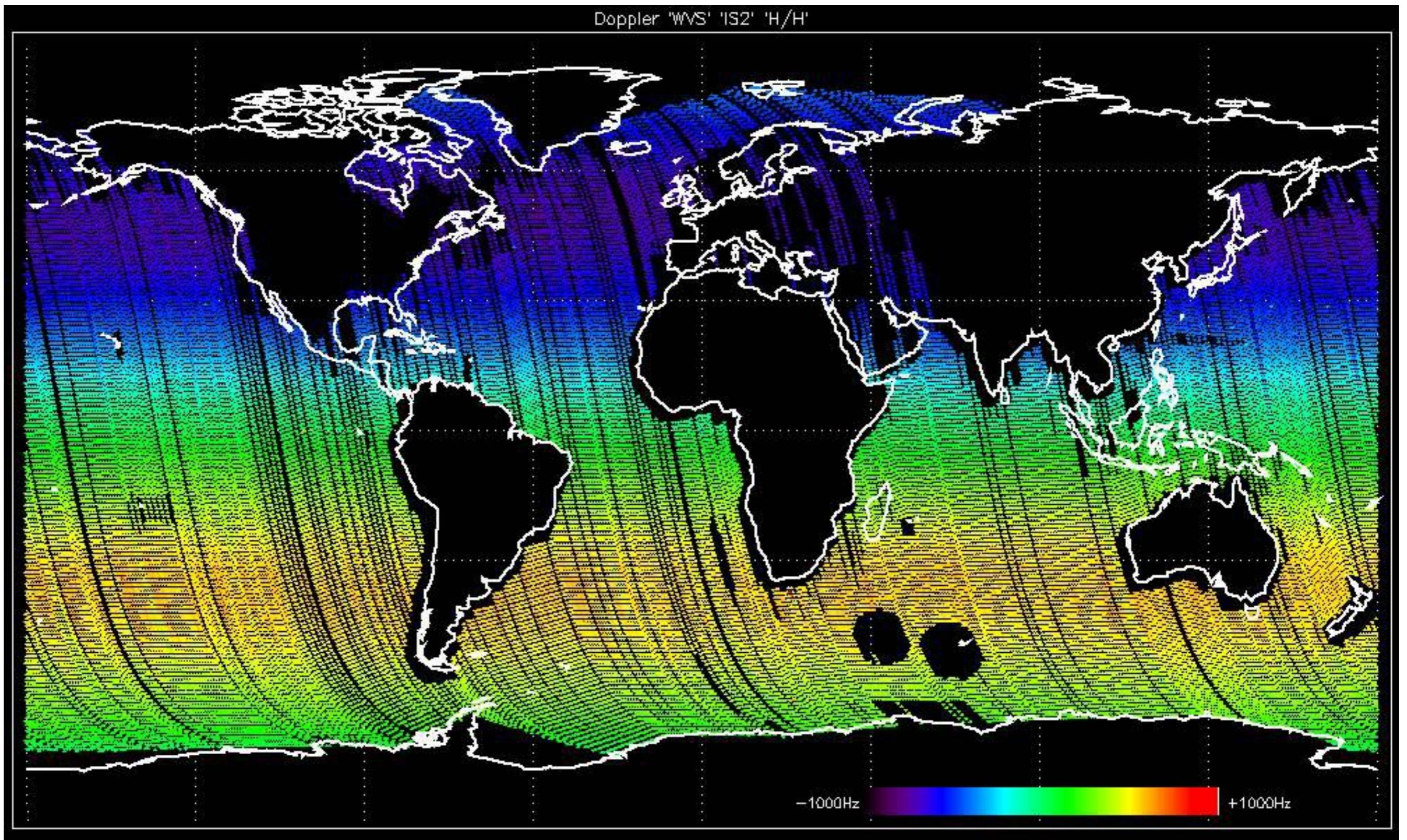
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

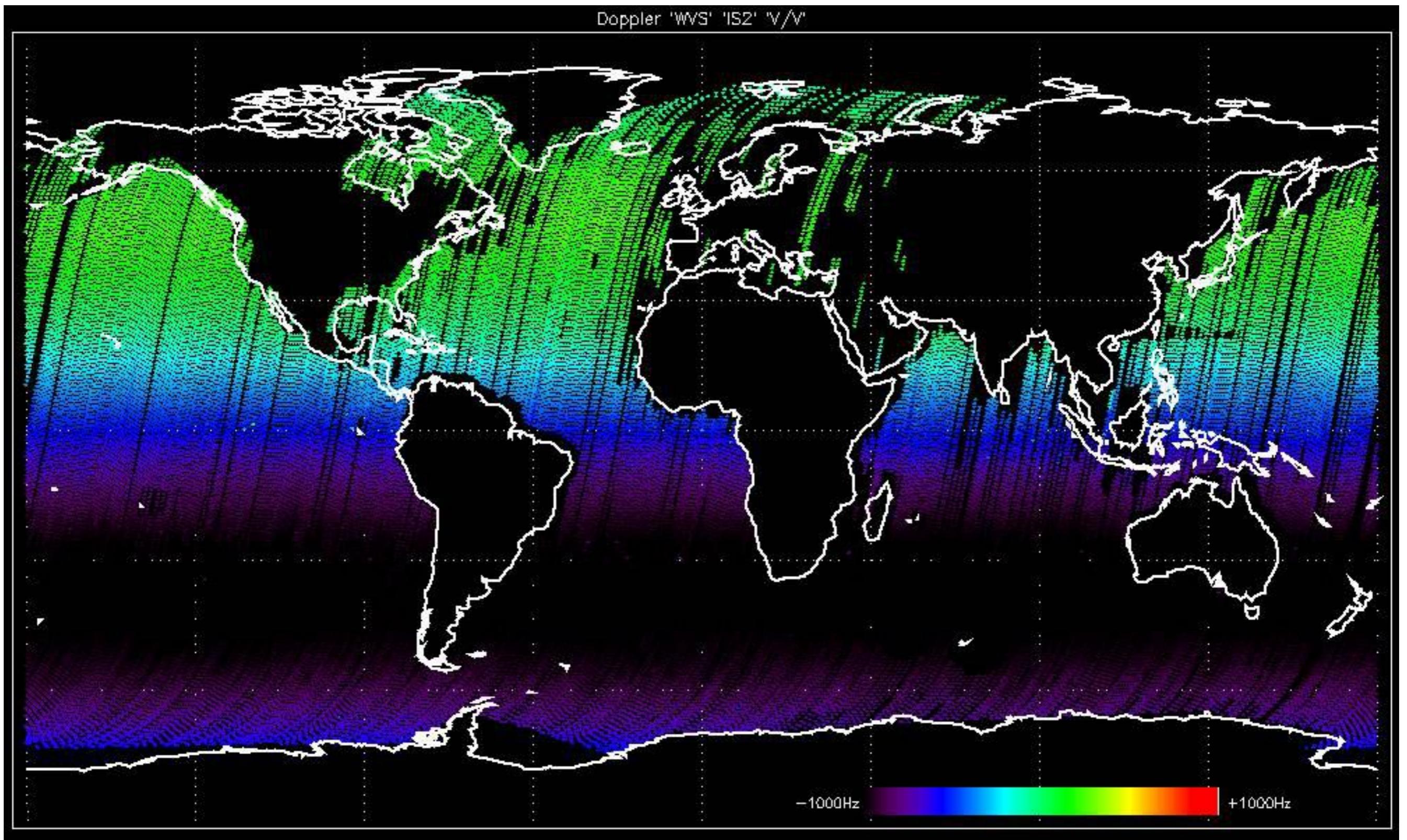


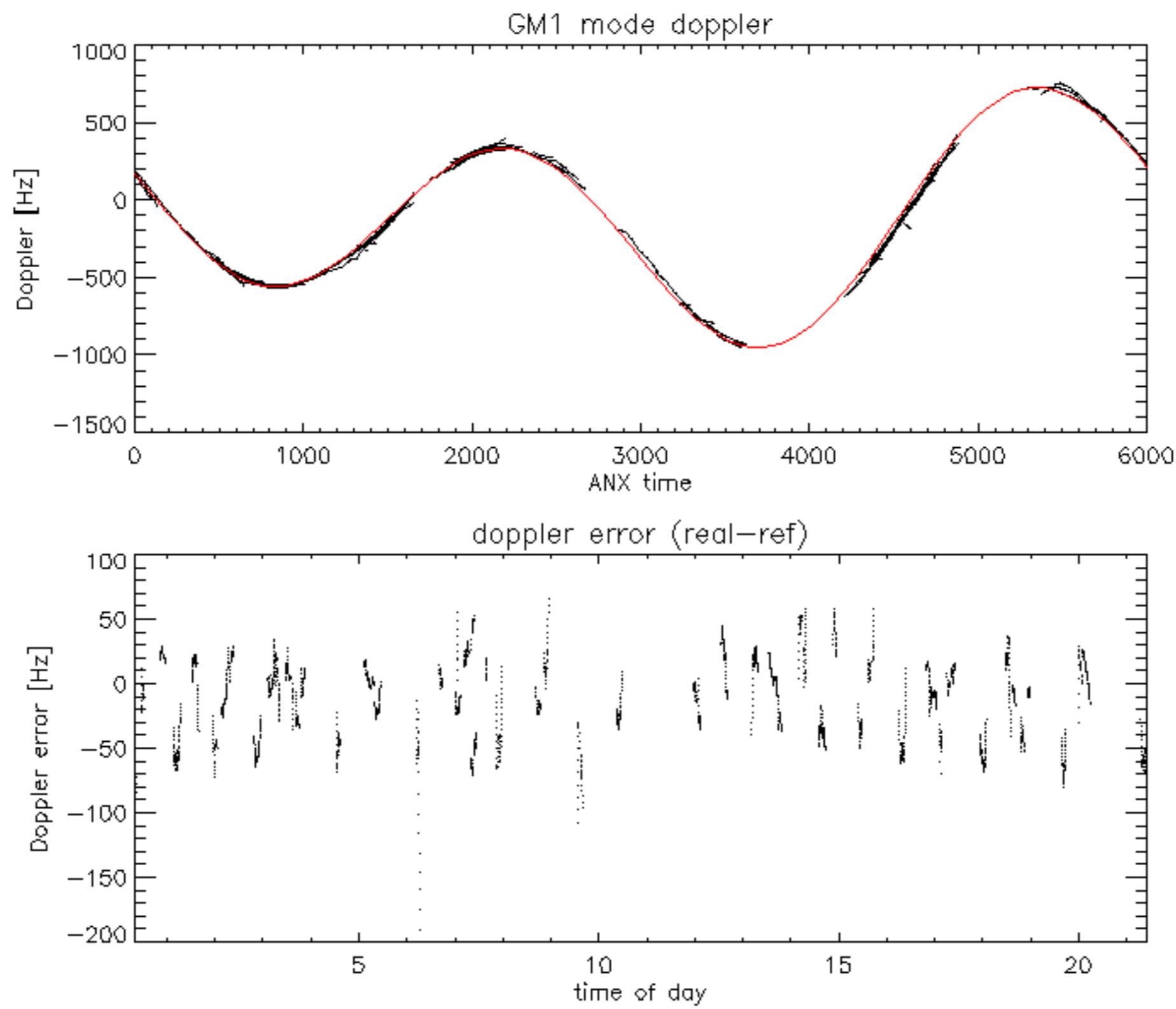


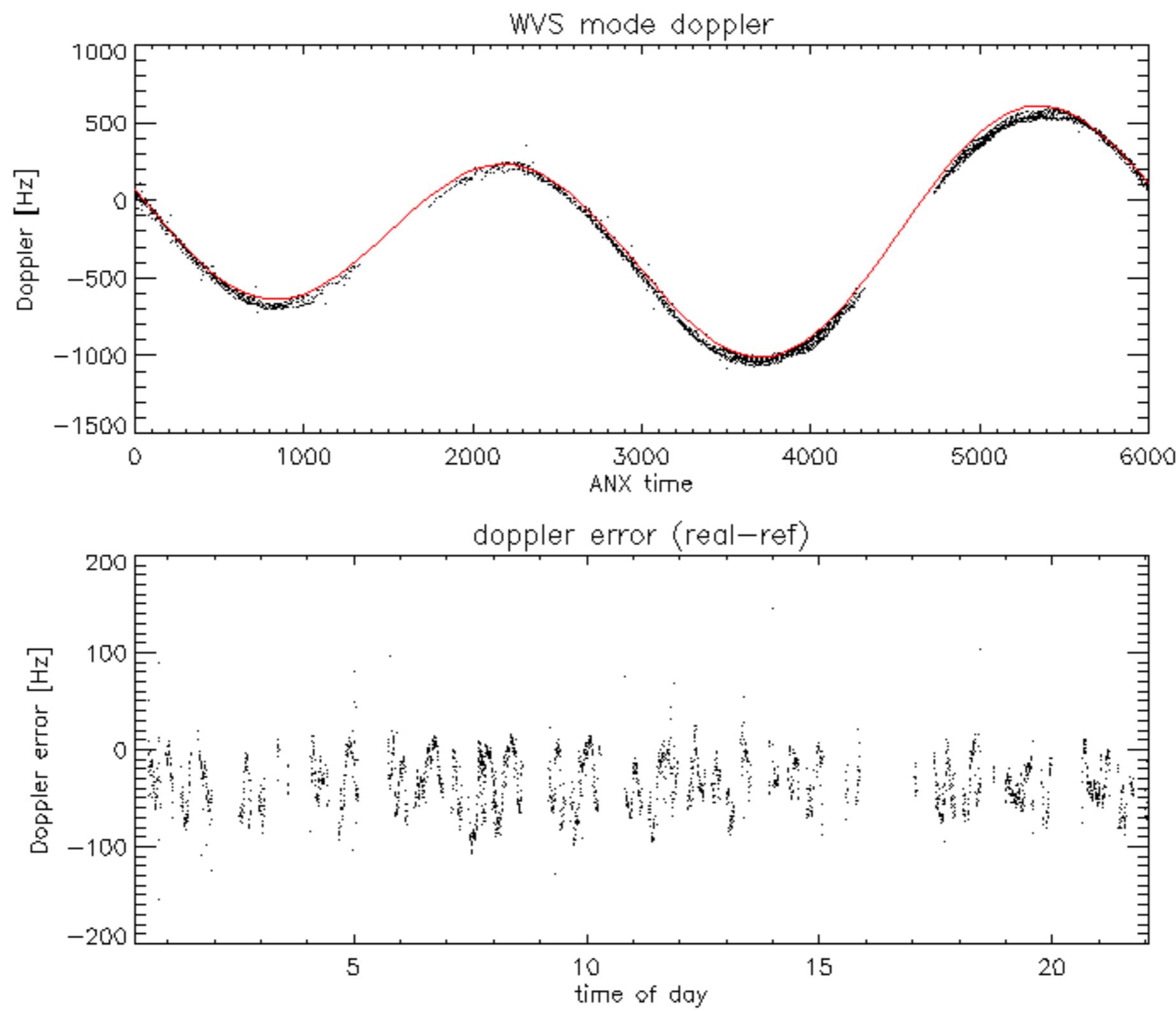


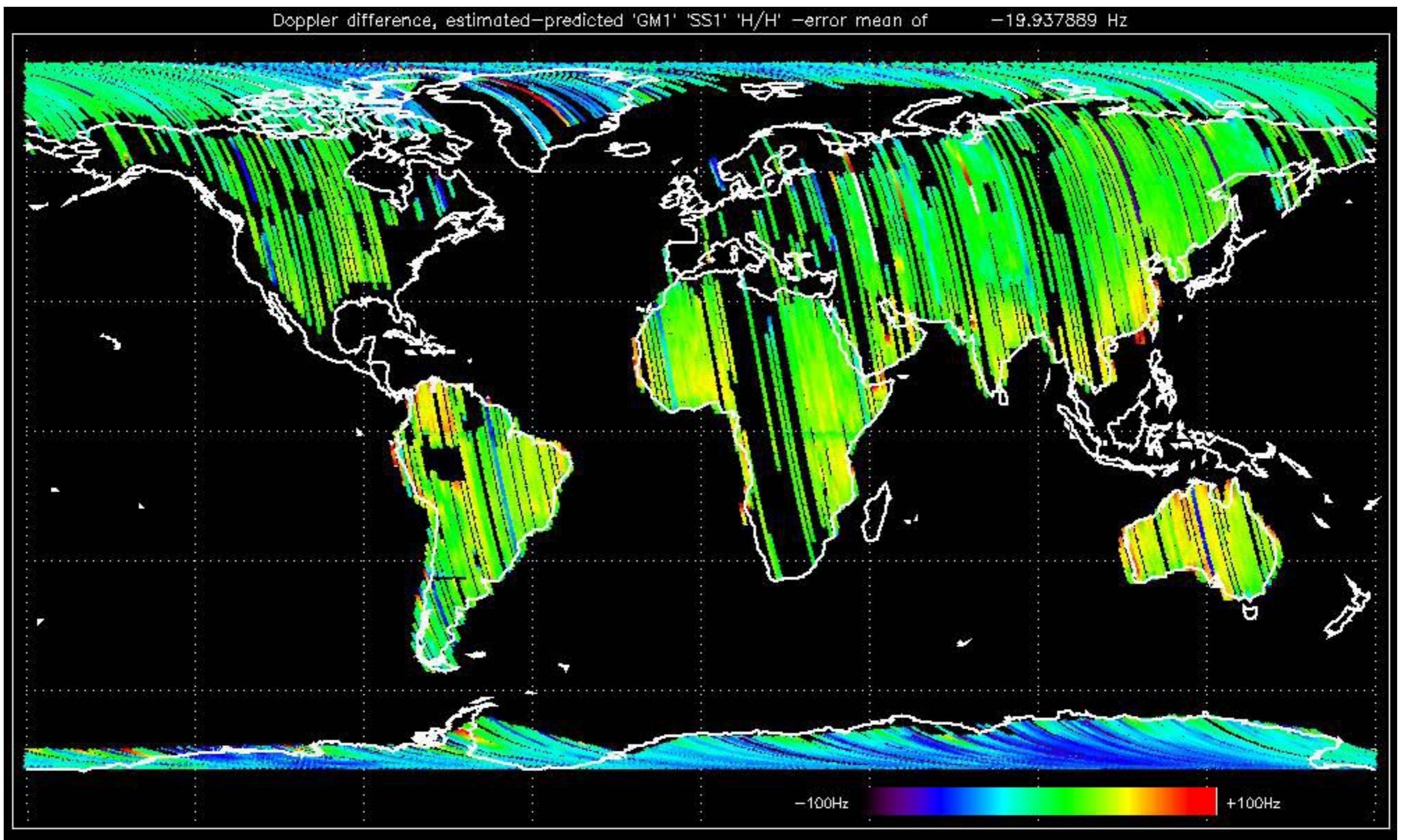


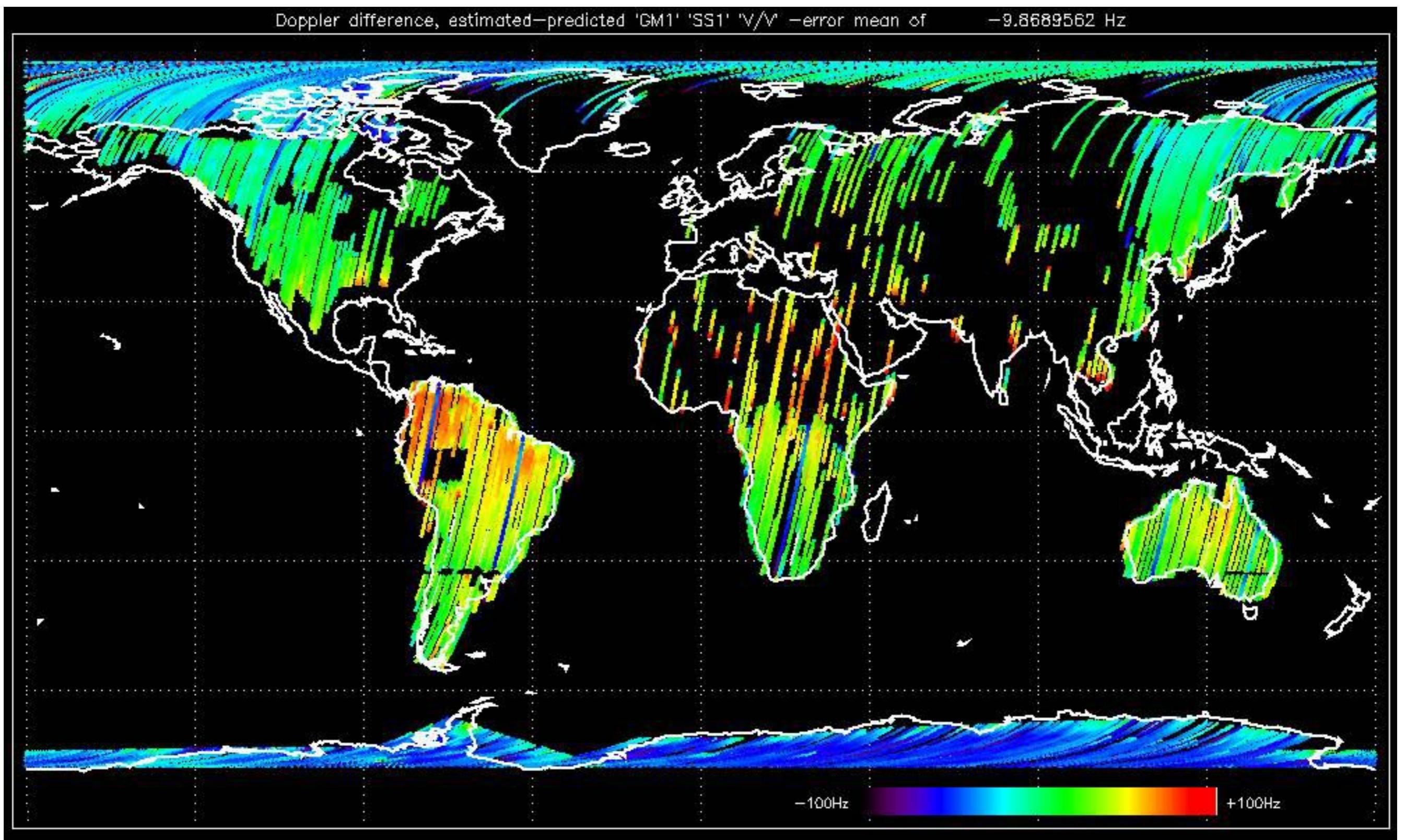


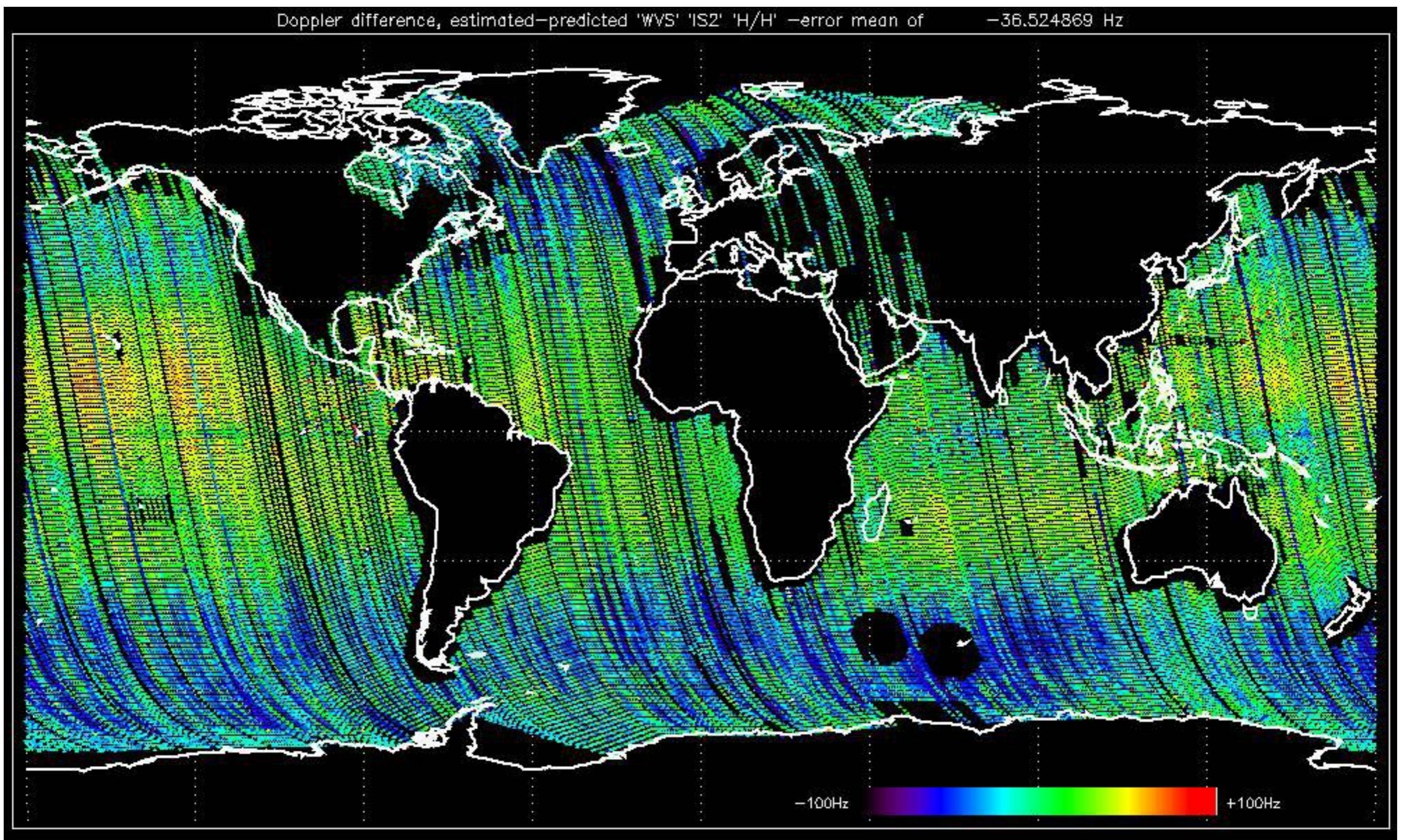


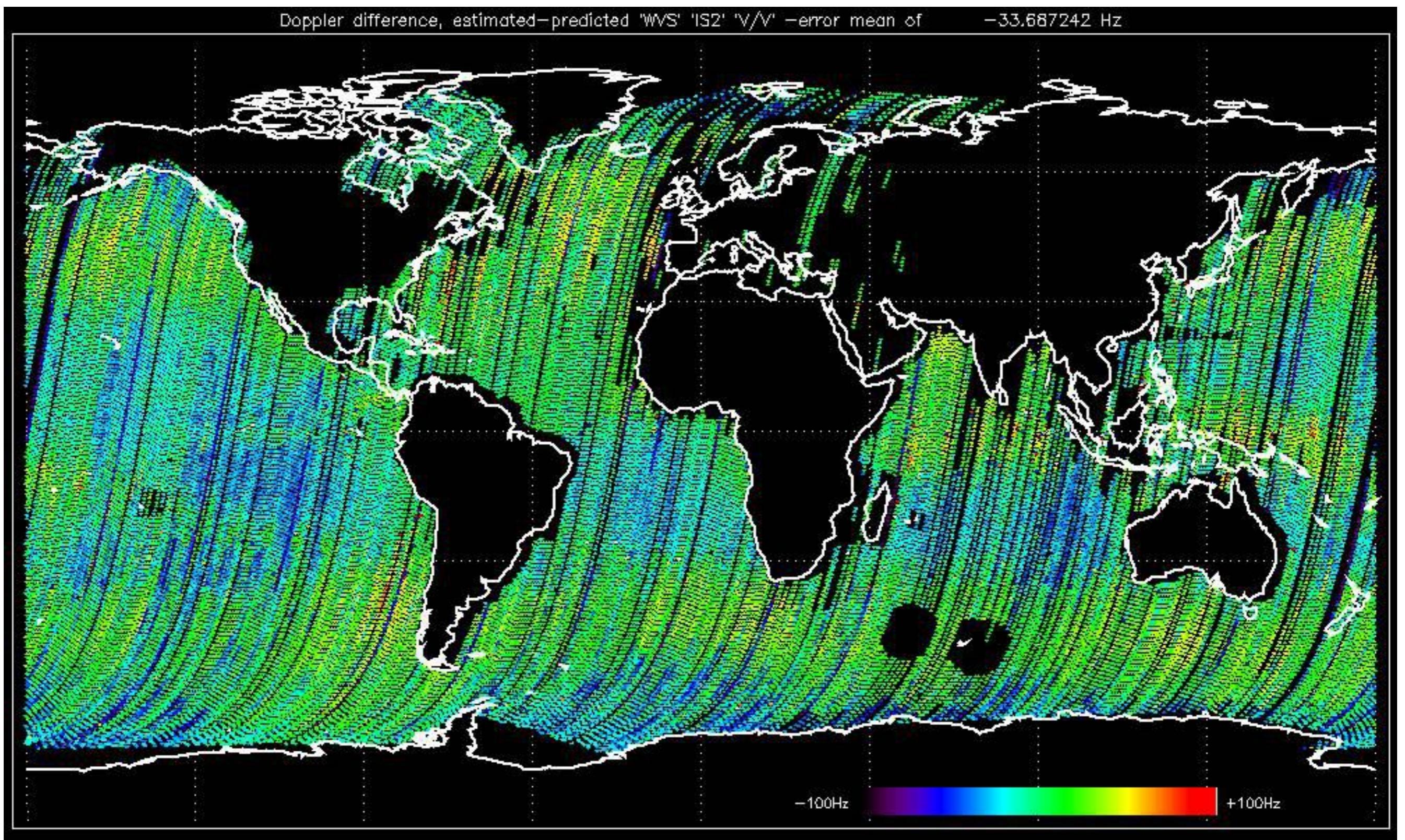












The MS mode provides an internal health check on an individual module basis.  
The purpose of this mode is to identify any malfunctionning modules and  
to identify modules for which calibration offsets are to be applied.  
No anomalies observed on available MS products:

No anomalies observed.









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

### RxGain

Test : 2004-04-22 19:45:24 V



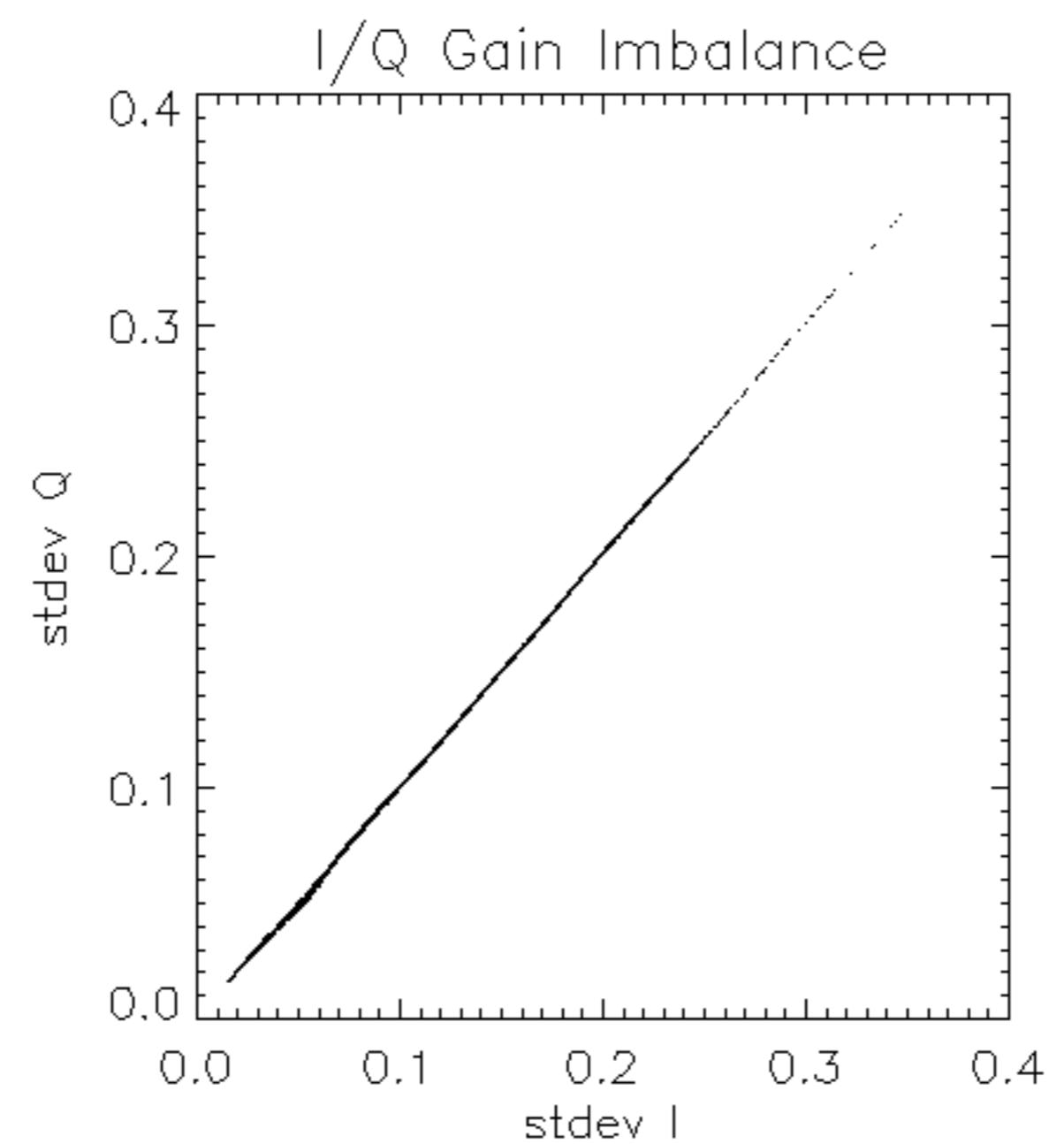


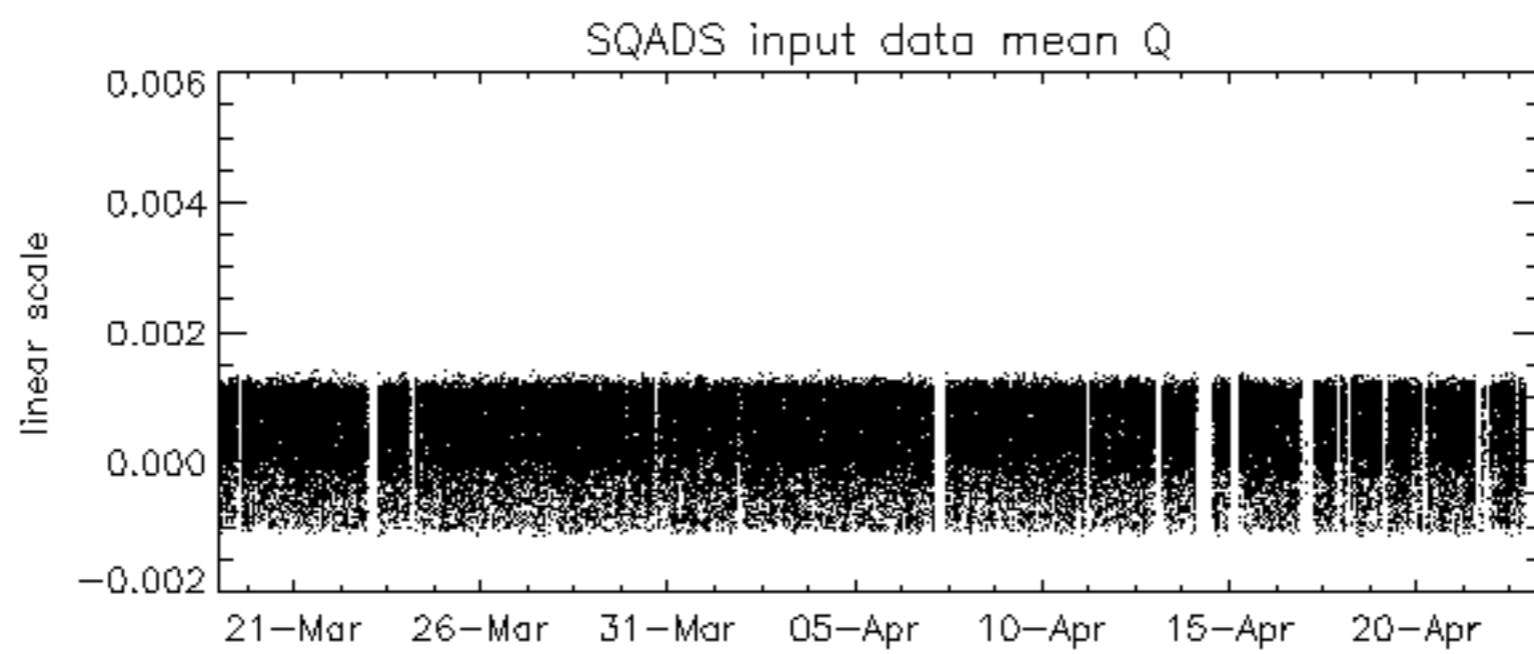
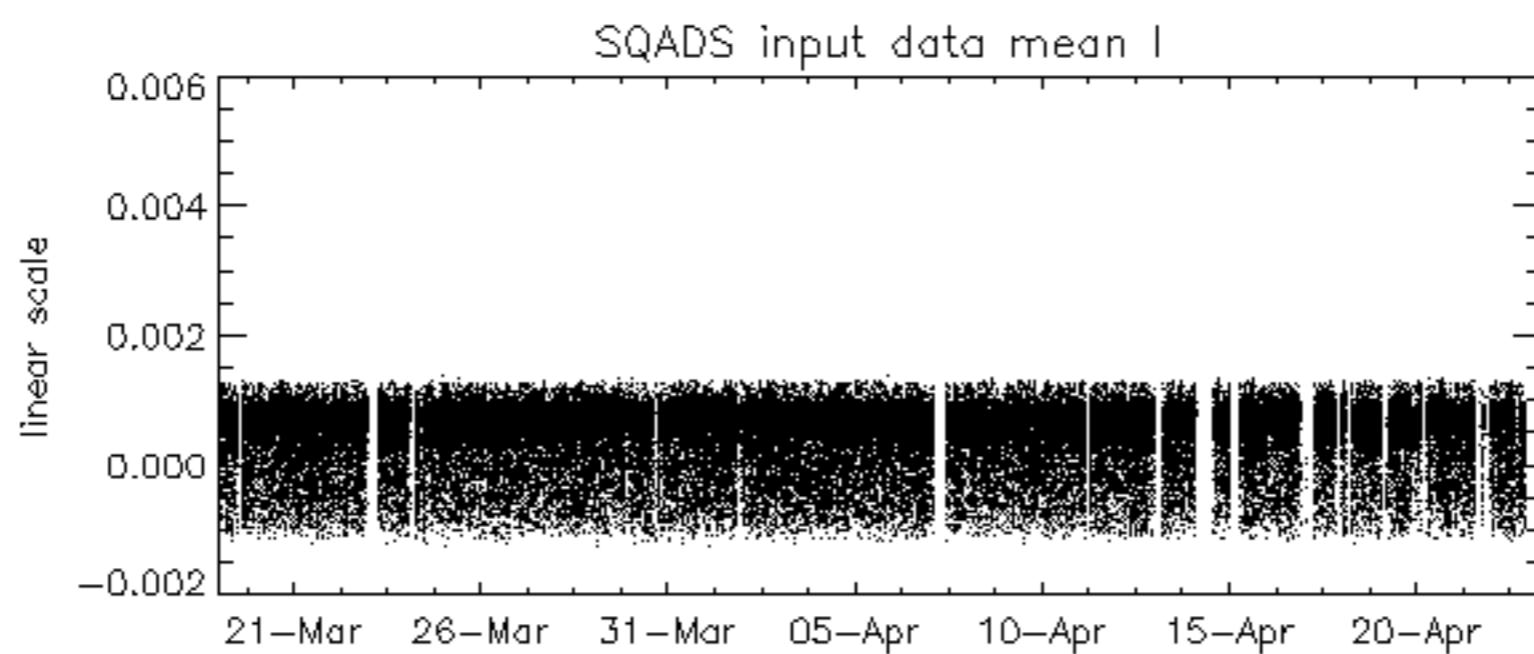
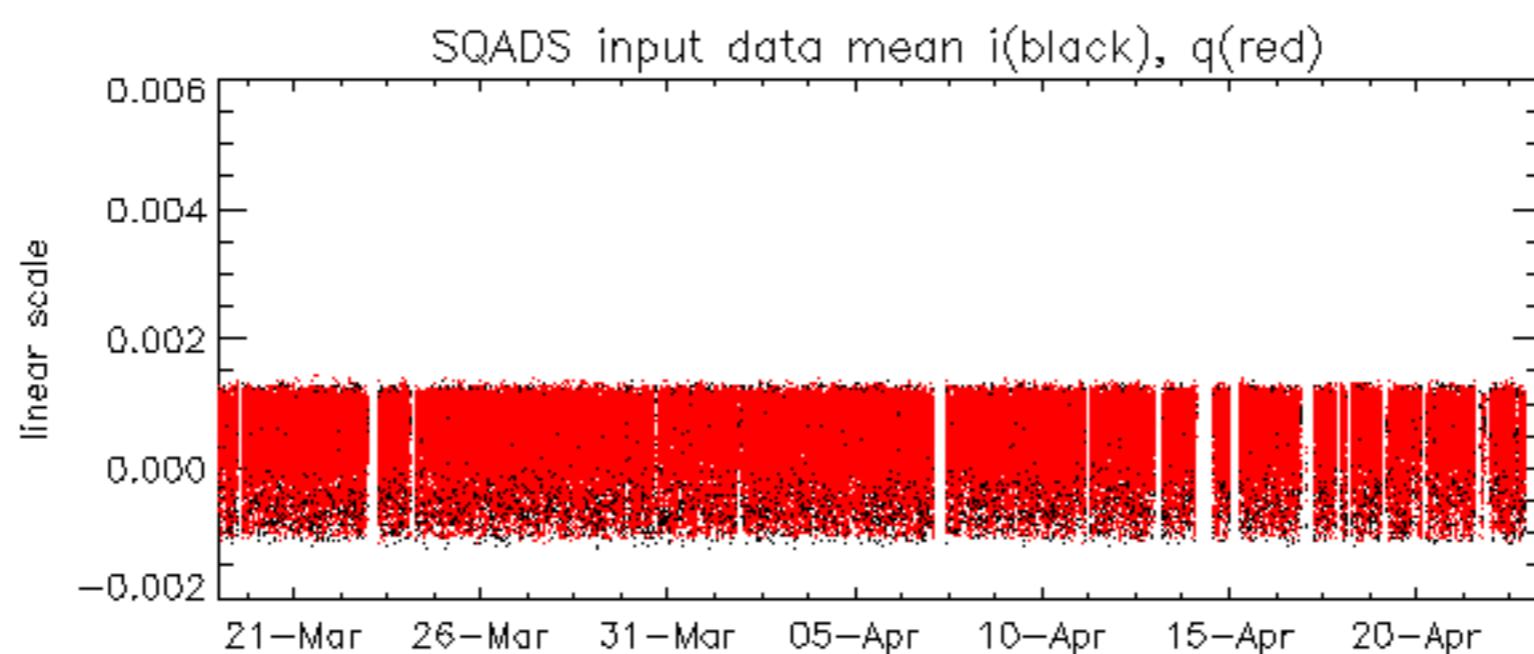
Reference: 2001-02-09 14:08:23 V RxPhase

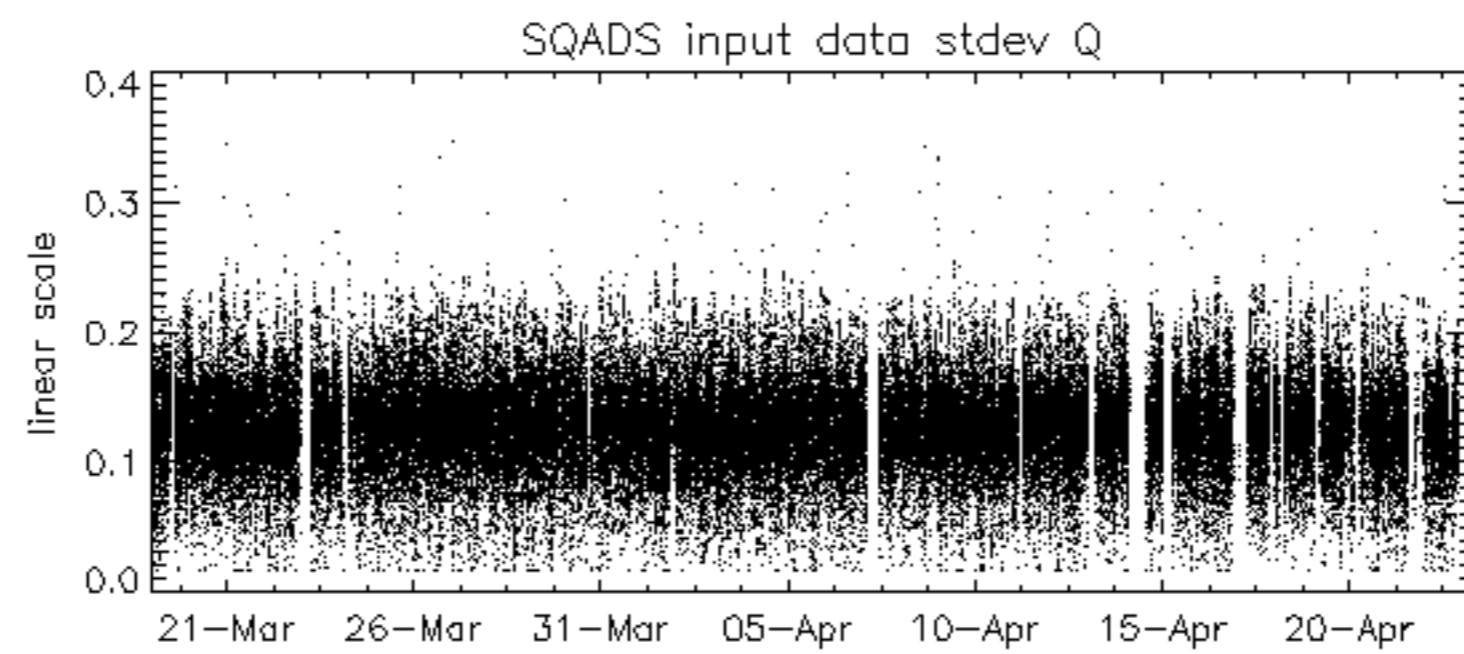
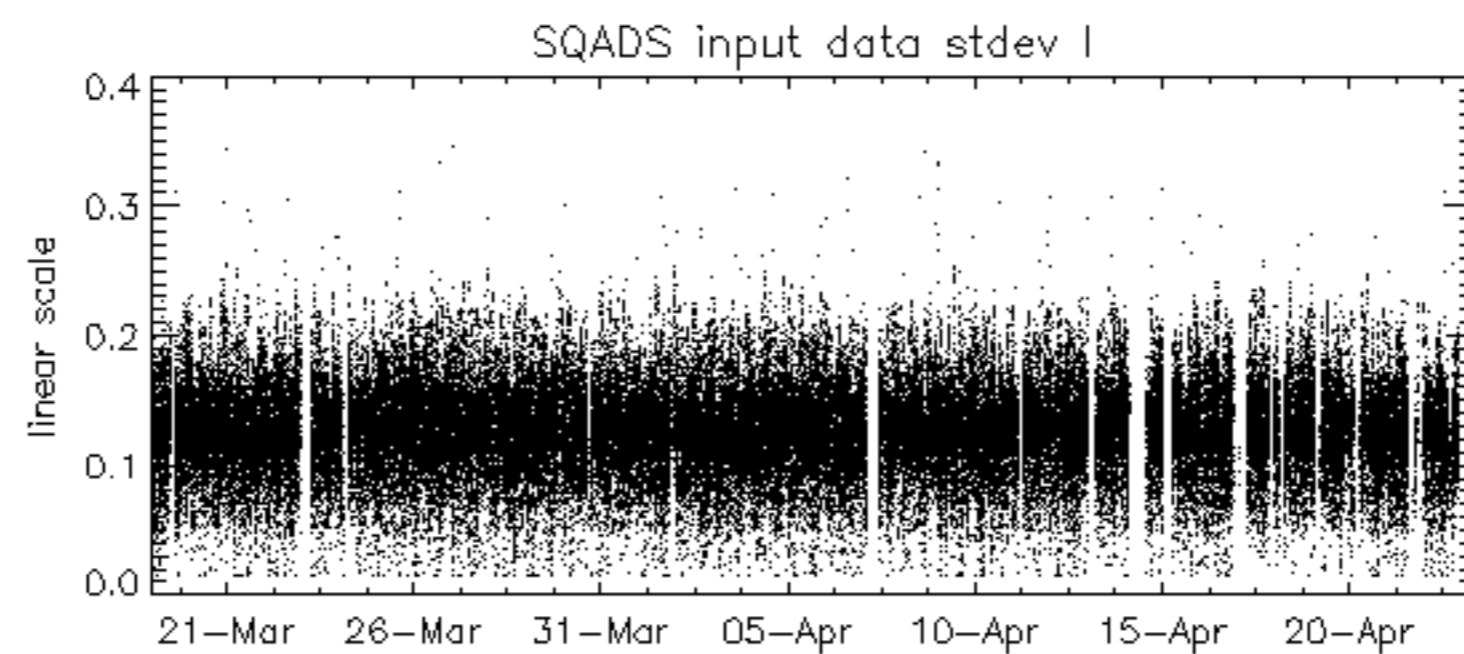
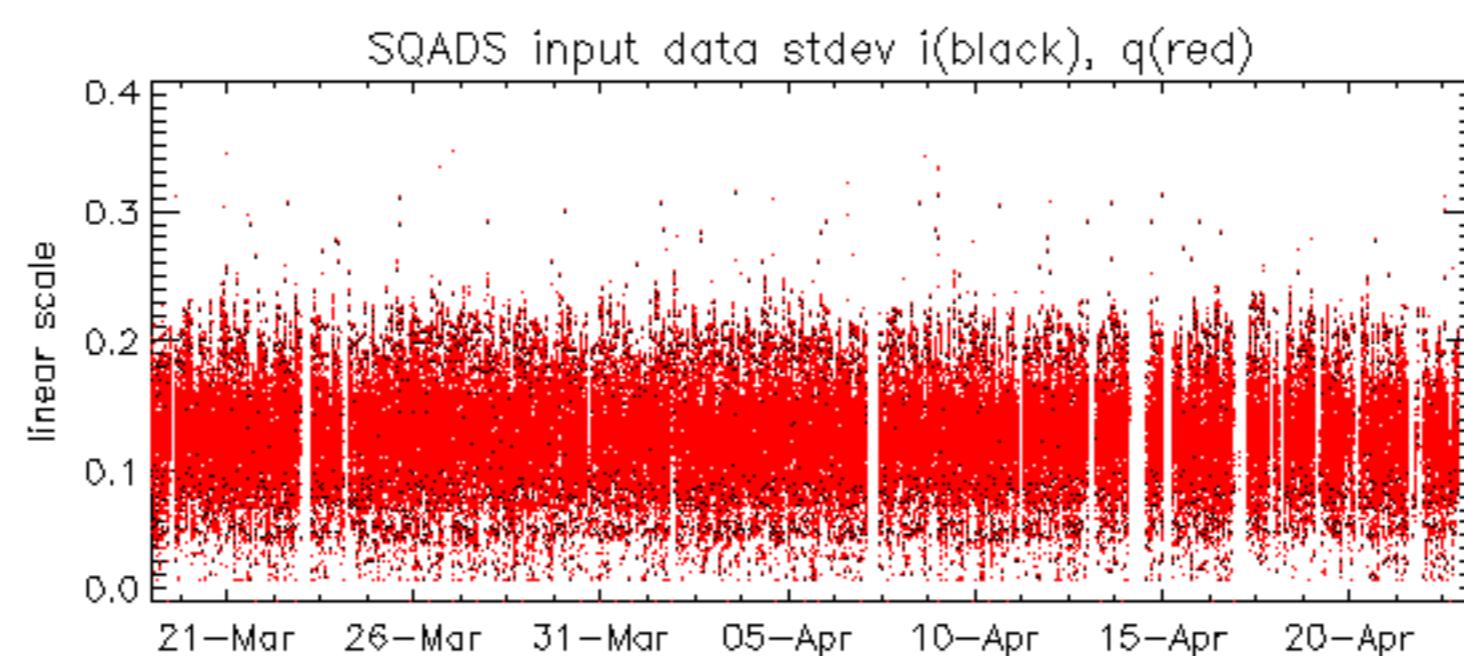
Test : 2004-04-22 19:45:24 V

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

Test : 2004-04-22 19:45:24 V







Reference: 2001-02-09 13:50:42 H TxGain

Test : 2004-04-22 19:44:04 H

<img alt="A 10x30 grid of colored cells representing a matrix. The columns are labeled A1 through E3 and the rows are labeled 1 through 32. Yellow cells are located at (A1, 1), (A3, 1), (B1, 1), (B3, 1), (C1, 1), (C3, 1), (D1, 1), (D3, 1), (E1, 1), (E3, 1), (A2, 2), (A4, 2), (B2, 2), (B4, 2), (C2, 2), (C4, 2), (D2, 2), (D4, 2), (E2, 2), (E4, 2), (A1, 3), (A3, 3), (B1, 3), (B3, 3), (C1, 3), (C3, 3), (D1, 3), (D3, 3), (E1, 3), (E3, 3), (A2, 3), (A4, 3), (B2, 3), (B4, 3), (C2, 3), (C4, 3), (D2, 3), (D4, 3), (E2, 3), (E4, 3), (A1, 4), (A3, 4), (B1, 4), (B3, 4), (C1, 4), (C3, 4), (D1, 4), (D3, 4), (E1, 4), (E3, 4), (A2, 4), (A4, 4), (B2, 4), (B4, 4), (C2, 4), (C4, 4), (D2, 4), (D4, 4), (E2, 4), (E4, 4), (A1, 5), (A3, 5), (B1, 5), (B3, 5), (C1, 5), (C3, 5), (D1, 5), (D3, 5), (E1, 5), (E3, 5), (A2, 5), (A4, 5), (B2, 5), (B4, 5), (C2, 5), (C4, 5), (D2, 5), (D4, 5), (E2, 5), (E4, 5), (A1, 6), (A3, 6), (B1, 6), (B3, 6), (C1, 6), (C3, 6), (D1, 6), (D3, 6), (E1, 6), (E3, 6), (A2, 6), (A4, 6), (B2, 6), (B4, 6), (C2, 6), (C4, 6), (D2, 6), (D4, 6), (E2, 6), (E4, 6), (A1, 7), (A3, 7), (B1, 7), (B3, 7), (C1, 7), (C3, 7), (D1, 7), (D3, 7), 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(B4, 22), (C2, 22), (C4, 22), (D2, 22), (D4, 22), (E2, 22), (E4, 22), (A1, 23), (A3, 23), (B1, 23), (B3, 23), (C1, 23), (C3, 23), (D1, 23), (D3, 23), (E1, 23), (E3, 23), (A2, 23), (A4, 23), (B2, 23), (B4, 23), (C2, 23), (C4, 23), (D2, 23), (D4, 23), (E2, 23), (E4, 23), (A1, 24), (A3, 24), (B1, 24), (B3, 24), (C1, 24), (C3, 24), (D1, 24), (D3, 24), (E1, 24), (E3, 24), (A2, 24), (A4, 24), (B2, 24), (B4, 24), (C2, 24), (C4, 24), (D2, 24), (D4, 24), (E2, 24), (E4, 24), (A1, 25), (A3, 25), (B1, 25), (B3, 25), (C1, 25), (C3, 25), (D1, 25), (D3, 25), (E1, 25), (E3, 25), (A2, 25), (A4, 25), (B2, 25), (B4, 25), (C2, 25), (C4, 25), (D2, 25), (D4, 25), (E2, 25), (E4, 25), (A1, 26), (A3, 26), (B1, 26), (B3, 26), (C1, 26), (C3, 26), (D1, 26), (D3, 26), (E1, 26), (E3, 26), (A2, 26), (A4, 26), (B2, 26), (B4, 26), (C2, 26), (C4, 26), (D2, 26), (D4, 26), (E2, 26), (E4, 26), (A1, 27), (A3, 27), (B1, 27), (B3, 27), (C1, 27), (C3, 27), (D1, 27), (D3, 27), (E1, 27), (E3, 27), (A2, 27), (A4, 27), (B2, 27), (B4, 27), (C2, 27), (C4, 27), (D2, 27), (D4, 27), (E2, 27), (E4, 27), (A1, 28), (A3, 28), (B1, 28), (B3, 28), (C1, 28), (C3, 28), (D1, 28), (D3, 28), (E1, 28), (E3, 28), (A2, 28), (A4, 28), (B2, 28), (B4, 28), (C2, 28), (C4, 28), (D2, 28), (D4, 28), (E2, 28), (E4, 28), (A1, 29), (A3, 29), (B1, 29), (B3, 29), (C1, 29), (C3, 29), (D1, 29), (D3, 29), (E1, 29), (E3, 29), (A2, 29), (A4, 29), (B2, 29), (B4, 29), (C2, 29), (C4, 29), (D2, 29), (D4, 29), (E2, 29), (E4, 29), (A1, 30), (A3, 30), (B1, 30), (B3, 30), (C1, 30), (C3, 30), (D1, 30), (D3, 30), (E1, 30), (E3, 30), (A2, 30), (A4, 30), (B2, 30), (B4, 30), (C2, 30), (C4, 30), (D2, 30), (D4, 30), (E2, 30), (E4, 30), (A1, 31), (A3, 31), (B1, 31), (B3, 31), (C1, 31), (C3, 31), (D1, 31), (D3, 31), (E1, 31), (E3, 31), (A2, 31), (A4, 31), (B2, 31), (B4, 31), (C2, 31), (C4, 31), (D2, 31), (D4, 31), (E2, 31), (E4, 31), (A1, 32), (A3, 32), (B1, 32), (B3, 32), (C1, 32), (C3, 32), (D1, 32), (D3, 32), (E1, 32), (E3, 32), (A2, 32), (A4, 32), (B2, 32), (B4, 32), (C2, 32), (C4, 32), (D2, 32), (D4, 32), (E2, 32), (E4, 32)</p>

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

Test : 2004-04-22 19:44:04 H



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

Test : 2004-04-22 19:45:24 V









No unavailabilities during the reported period.

