

# PRELIMINARY REPORT OF 050509

last update on Mon May 9 10:50:01 GMT 2005

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## 1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA\_WVS\_1P), global monitoring products (ASA\_GM1\_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

## 2 - Summary

### 2.1 - Instrument Unavailability

No unavailabilities during the reported period.

### 2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-05-08 00:00:00 to 2005-05-09 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	0	2	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	0	2	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	0	2	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	0	2	0

<b>PDHS-E</b>					
<b>AUXILIARY FILE</b>	<b>WVS</b>	<b>GM1</b>	<b>IMM</b>	<b>APM</b>	<b>WSM</b>

## 2.3 - Browse Visual Inspection

## 2.4 - Data Analysis

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

## 3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20050506 055519
H	20050505 062656

### 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
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☒	
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☒	

## 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

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#### P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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**P1 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.347942	0.006853	-0.007879
7	P1	-3.111294	0.013020	0.009790
11	P1	-4.662728	0.027003	0.024326
15	P1	-5.562801	0.044625	0.098677
19	P1	-3.717054	0.004095	-0.030054
22	P1	-4.582102	0.012932	-0.056990
26	P1	-4.888222	0.019529	0.042474
30	P1	-7.149437	0.027892	0.041293
3	P1	-15.743062	0.081795	0.154753
7	P1	-15.508139	0.091556	0.062674
11	P1	-21.237997	0.237082	-0.180749
15	P1	-11.453980	0.032936	0.123626
19	P1	-14.328884	0.032855	-0.049620
22	P1	-15.902681	0.335620	-0.227677
26	P1	-17.624647	0.187082	-0.018876
30	P1	-17.875624	0.277061	0.008961

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.050253	0.081949	-0.033550
7	P2	-22.227610	0.102970	-0.035690
11	P2	-14.156116	0.106059	0.164176
15	P2	-7.088037	0.090752	-0.069829
19	P2	-9.651414	0.093809	0.000551
22	P2	-16.885843	0.095092	-0.021392
26	P2	-16.479540	0.095036	-0.052426
30	P2	-18.824089	0.083079	0.011980

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.167856	0.003869	-0.008292
7	P3	-8.167856	0.003869	-0.008292
11	P3	-8.167855	0.003869	-0.008296
15	P3	-8.167855	0.003869	-0.008296
19	P3	-8.167855	0.003869	-0.008296
22	P3	-8.167855	0.003869	-0.008296

26	P3	-8.167855	0.003869	-0.008296
30	P3	-8.167855	0.003869	-0.008294

#### 4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1


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#### P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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#### P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-2.763015	0.011872	-0.044964
7	P1	-2.997157	0.030780	0.048072
11	P1	-3.972787	0.017476	0.042954
15	P1	-3.534634	0.022884	0.029867
19	P1	-3.625310	0.014629	-0.019116
22	P1	-5.668239	0.048934	0.050347
26	P1	-7.311732	0.024075	-0.008465
30	P1	-6.282949	0.059887	0.021593
3	P1	-10.769228	0.044781	-0.098566
7	P1	-10.401409	0.152626	-0.046047
11	P1	-12.558203	0.101649	0.025308
15	P1	-11.660351	0.069115	0.095164
19	P1	-15.616571	0.062337	-0.030783
22	P1	-25.259817	2.038470	-0.935664
26	P1	-15.645831	0.307578	-0.092718
30	P1	-20.178185	1.212077	-0.164099

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.766352	0.037326	-0.063069
7	P2	-22.278103	0.046724	0.077554

11	P2	-10.054426	0.055337	0.103238
15	P2	-5.069710	0.037511	-0.078066
19	P2	-6.895047	0.051890	-0.045374
22	P2	-7.101403	0.035774	-0.028776
26	P2	-23.907846	0.036734	-0.053764
30	P2	-21.934263	0.040626	-0.050917

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.005043	0.003518	0.002628
7	P3	-8.005086	0.003506	0.002928
11	P3	-8.005077	0.003515	0.002765
15	P3	-8.005103	0.003517	0.002828
19	P3	-8.005179	0.003517	0.003122
22	P3	-8.005085	0.003498	0.002593
26	P3	-8.005065	0.003507	0.003067
30	P3	-8.005095	0.003527	0.002647

## 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
MEAN I	mean	0.000467536
	stdev	2.21698e-07
MEAN Q	mean	0.000485706
	stdev	2.38282e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127955
	stdev	0.00105476
STDEV Q	mean	0.128211
	stdev	0.00106580



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005050[789]

The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
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## 7 - Doppler Analysis

Preliminary report. The data is not yet controlled

### 7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)
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Ascending
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Descending
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## 7.2 - Absolute Doppler for WVS

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

## 7.3 - Doppler evolution versus ANX for WVS

## 7.4 - Unbiased Doppler Error for GM1

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

## 7.5 - Absolute Doppler for GM1

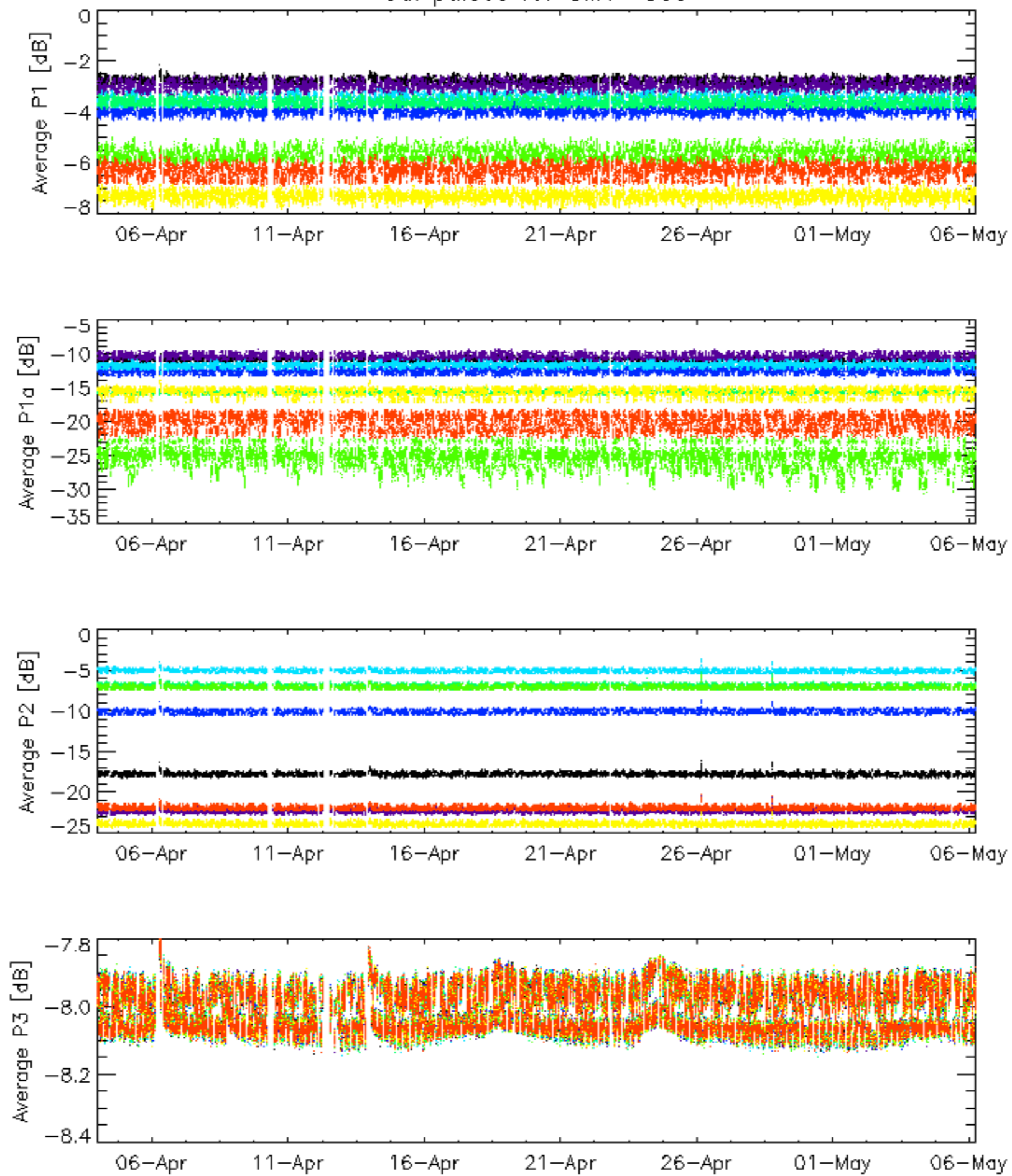
Evolution of Absolute Doppler	
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

## 7.6 - Doppler evolution versus ANX for GM1



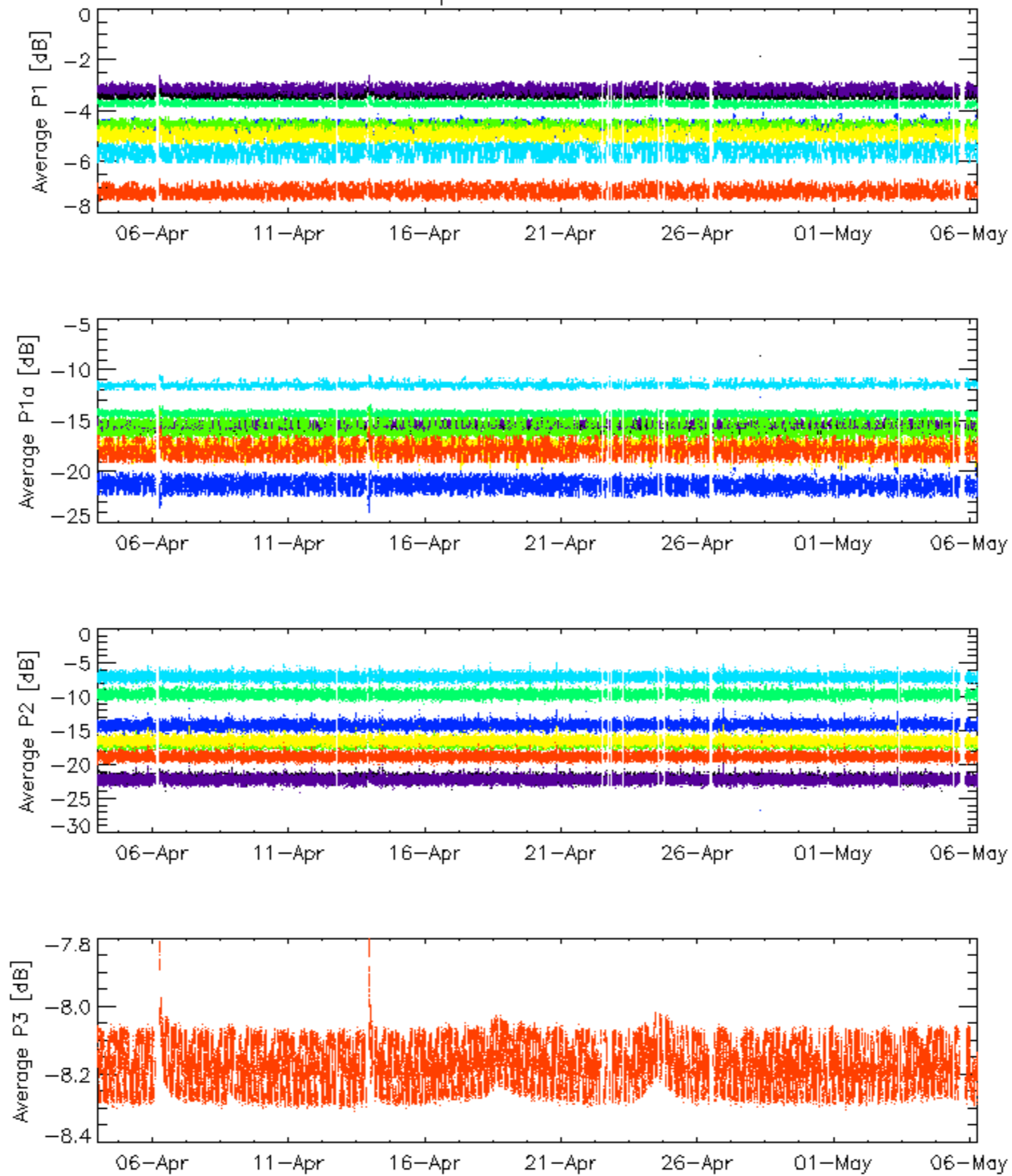


Cal pulses for GM1 SS3



rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2



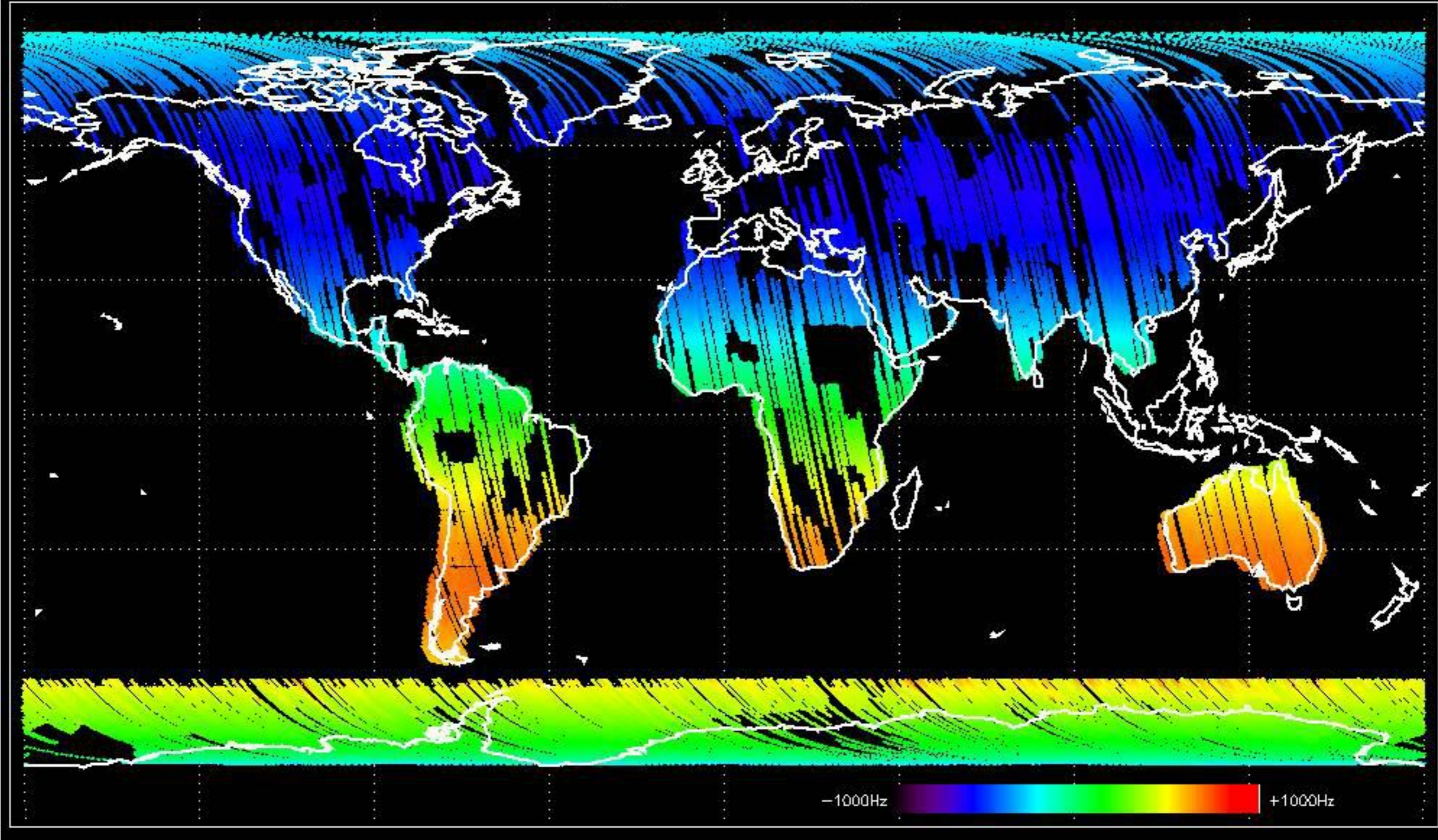
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No anomalies observed.

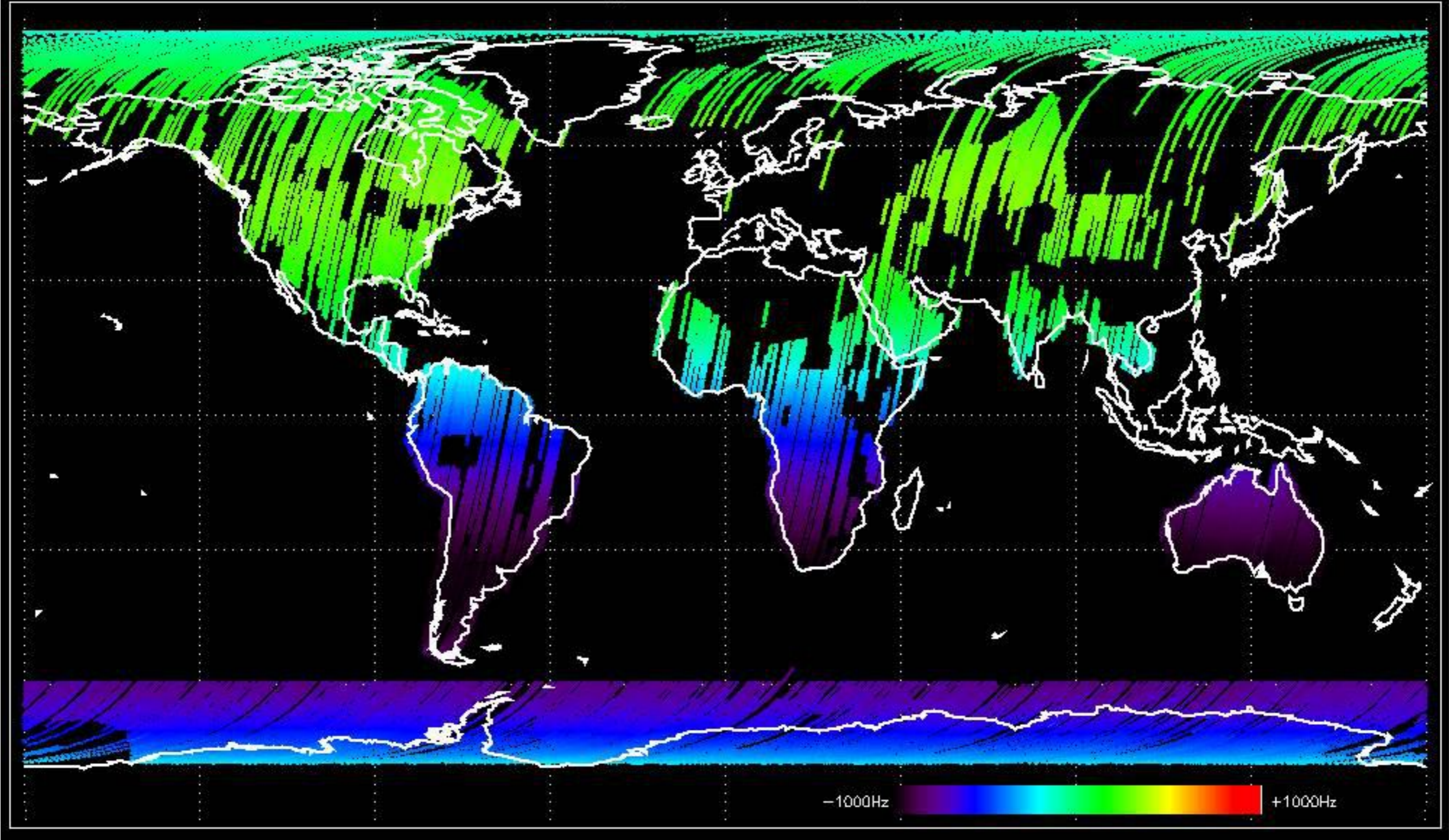
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



Doppler 'GM1' 'SS1' ascending

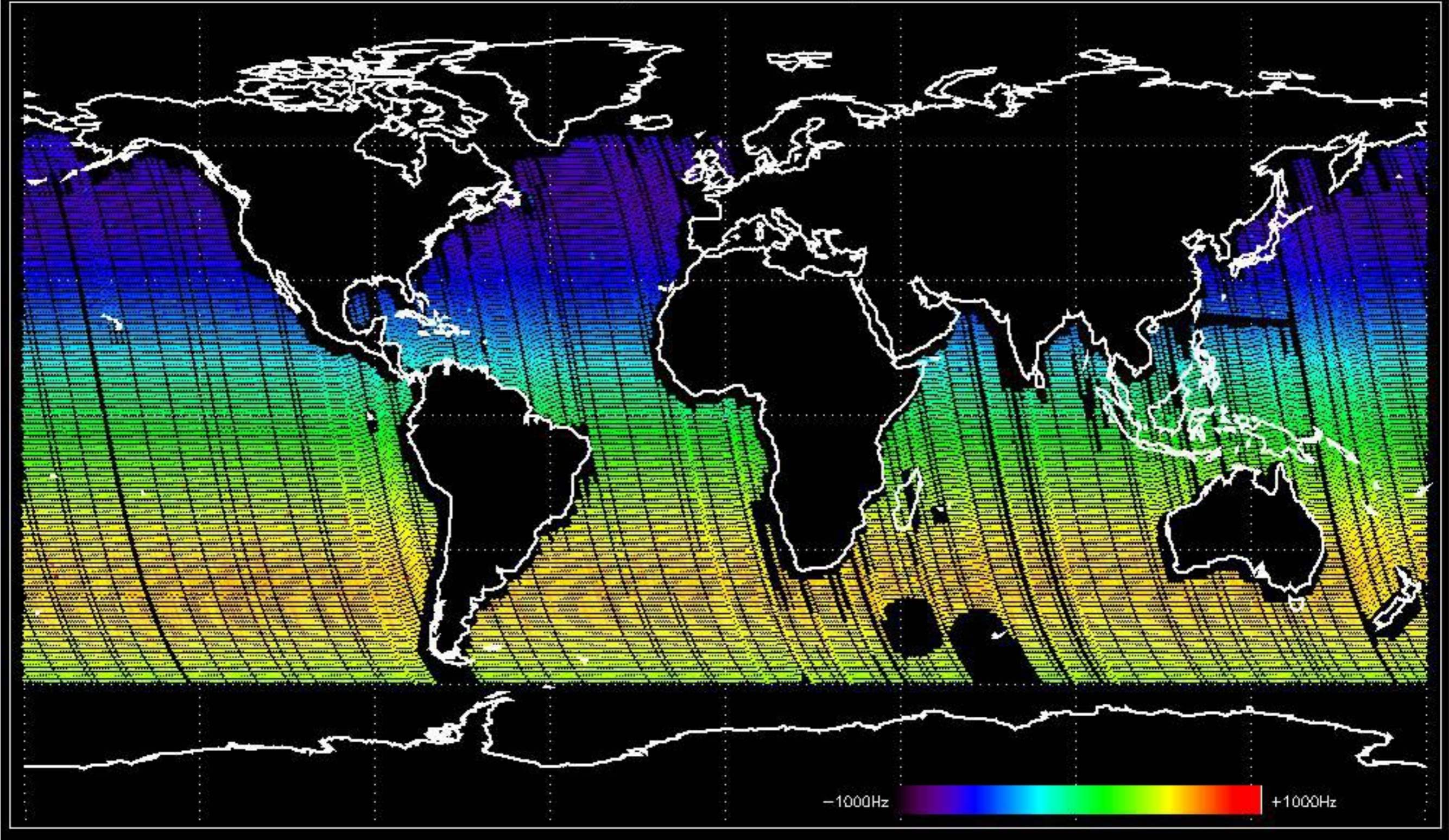


Doppler 'GM1' 'SS1' descending

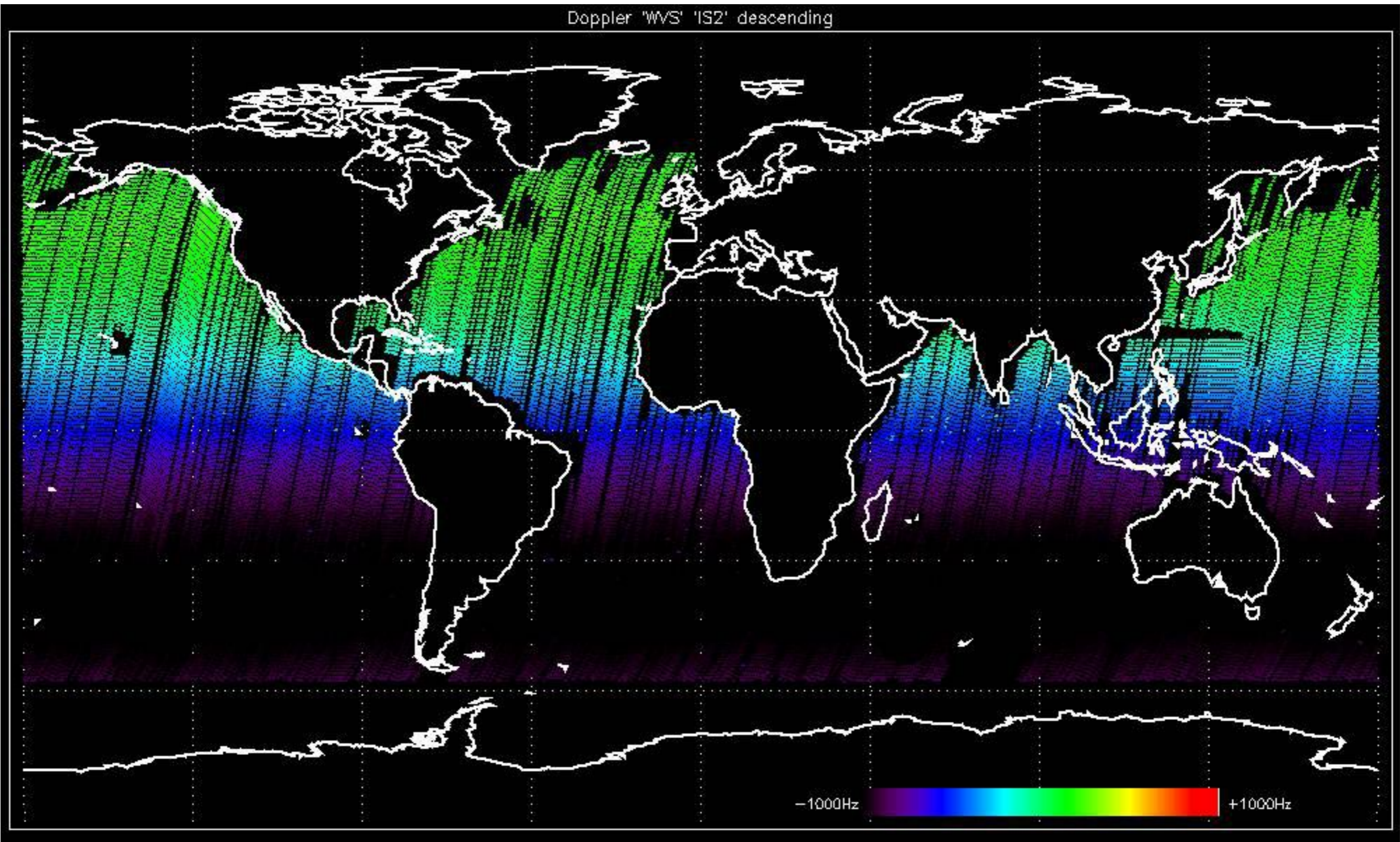




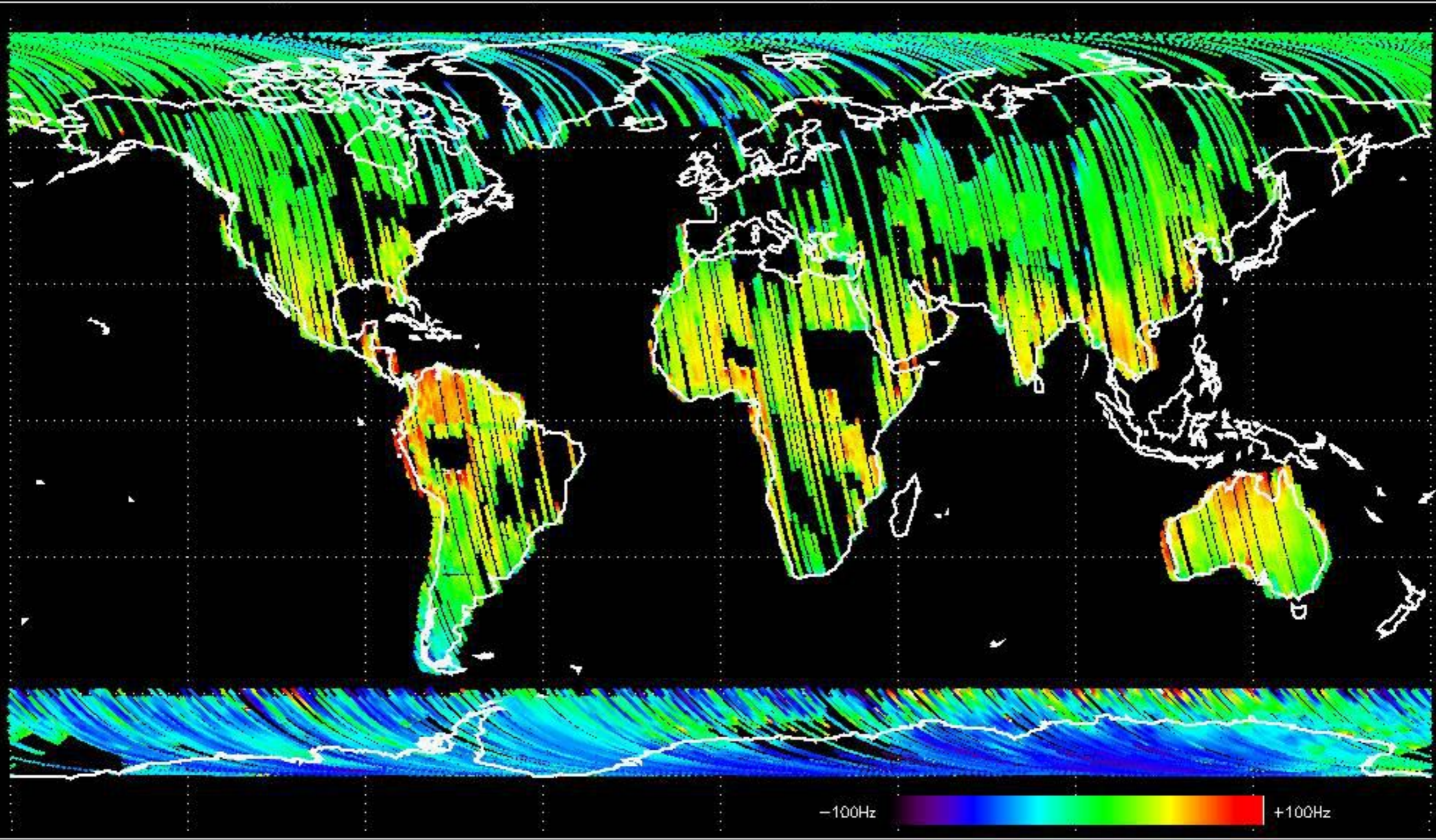
Doppler 'WVS' 'IS2' ascending



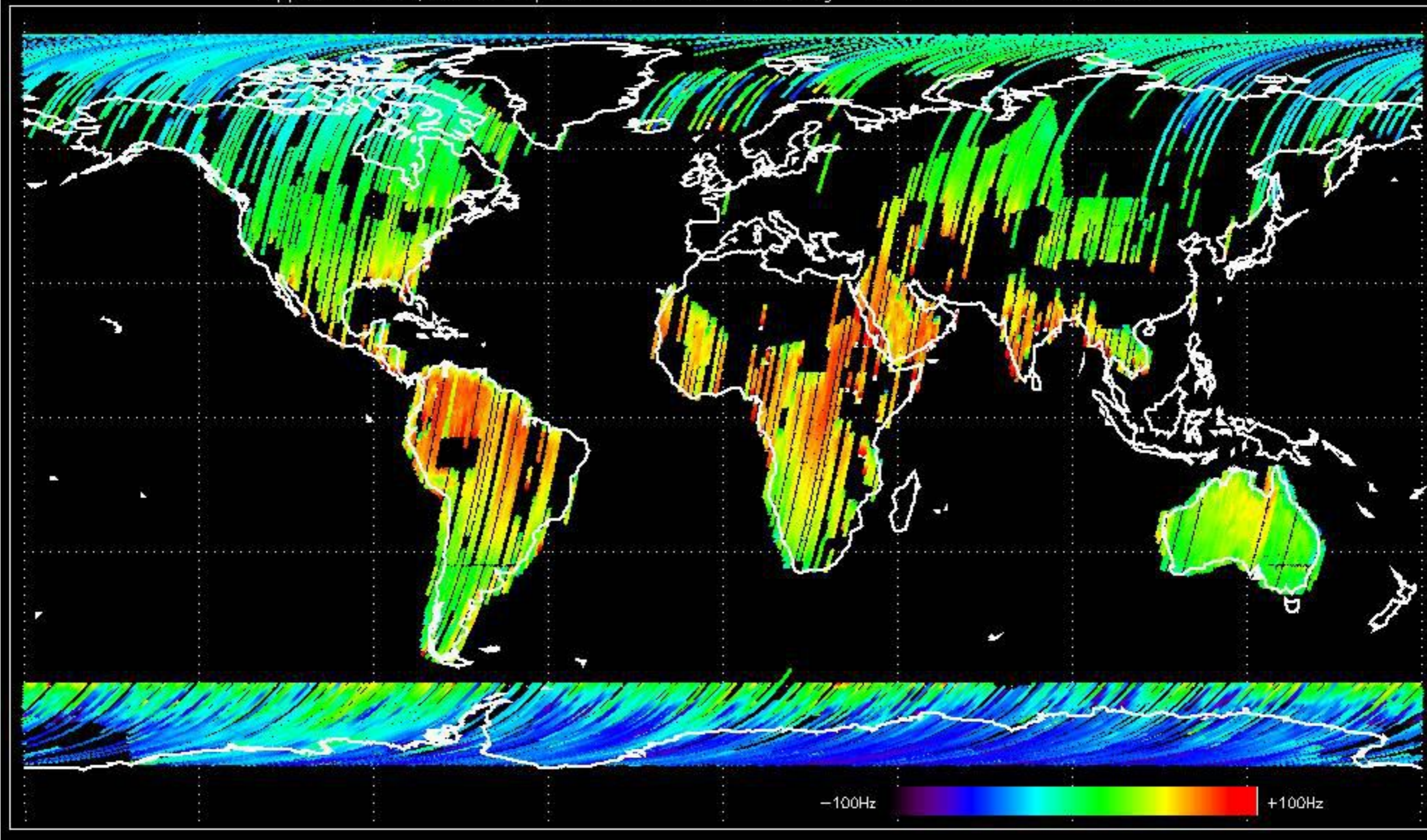
Doppler 'WVS' 'IS2' descending



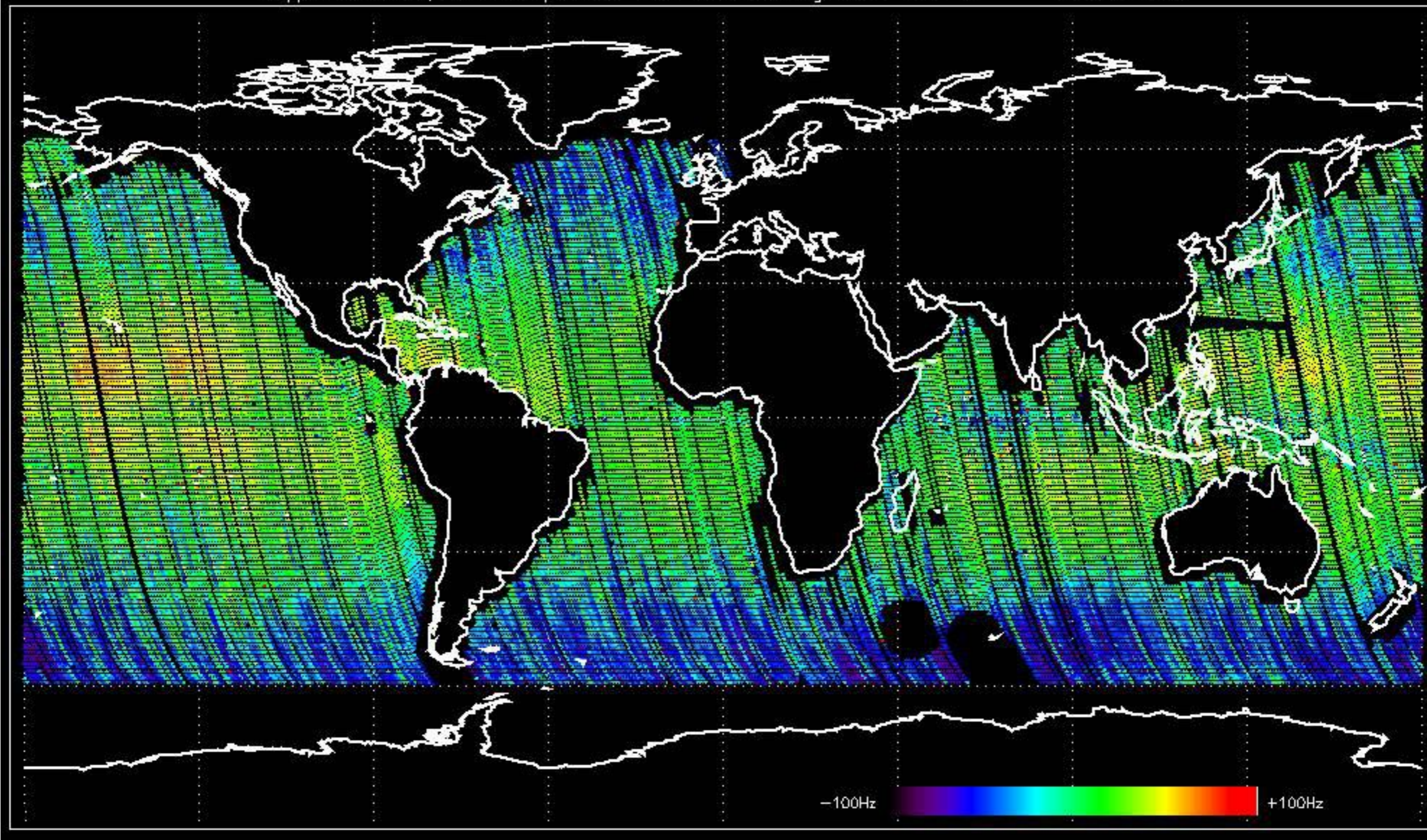
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -40.302645 Hz



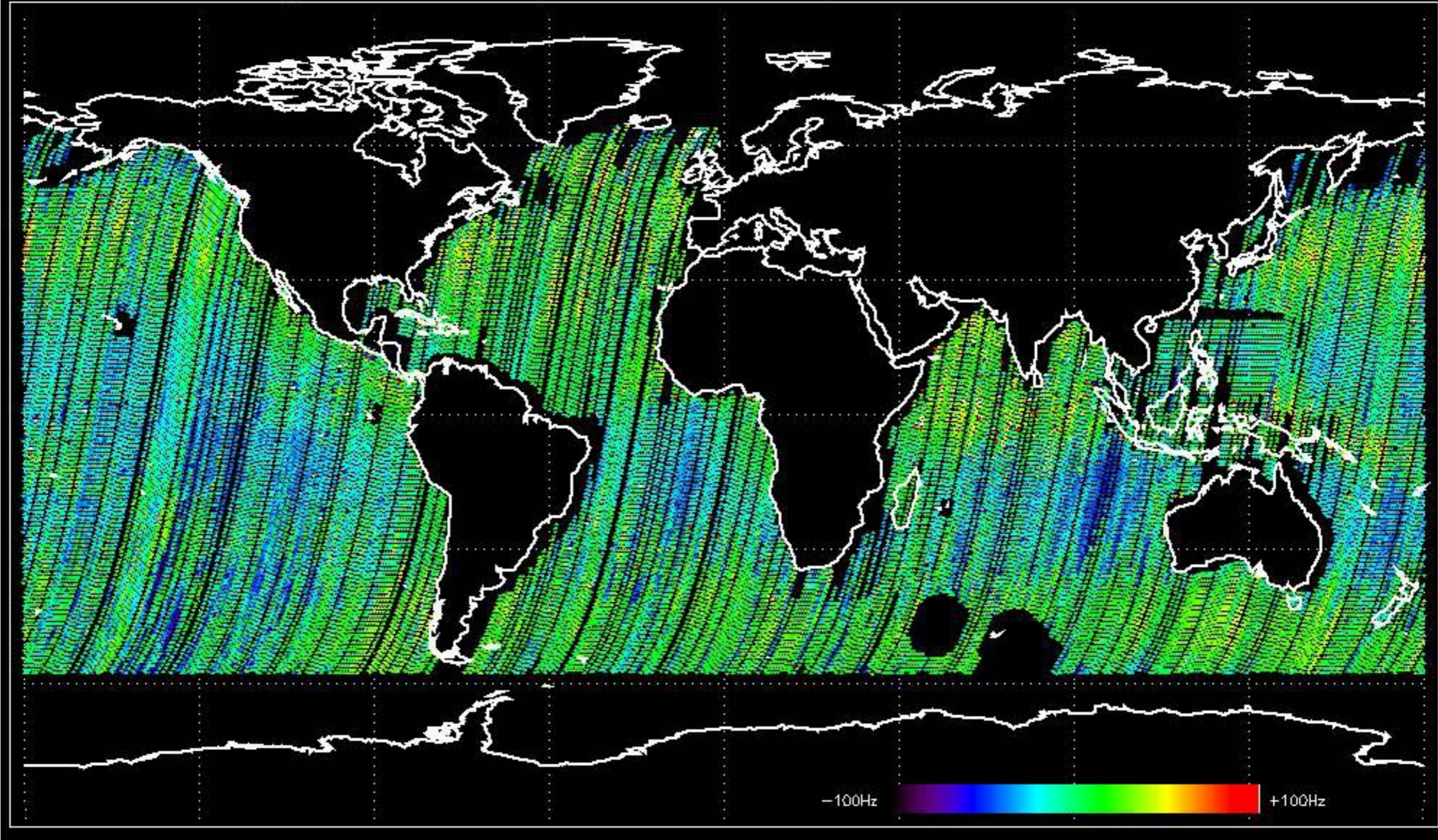
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -31.920857 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -32.735770 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.509419 Hz



No anomalies observed on available MS products:

No anomalies observed.











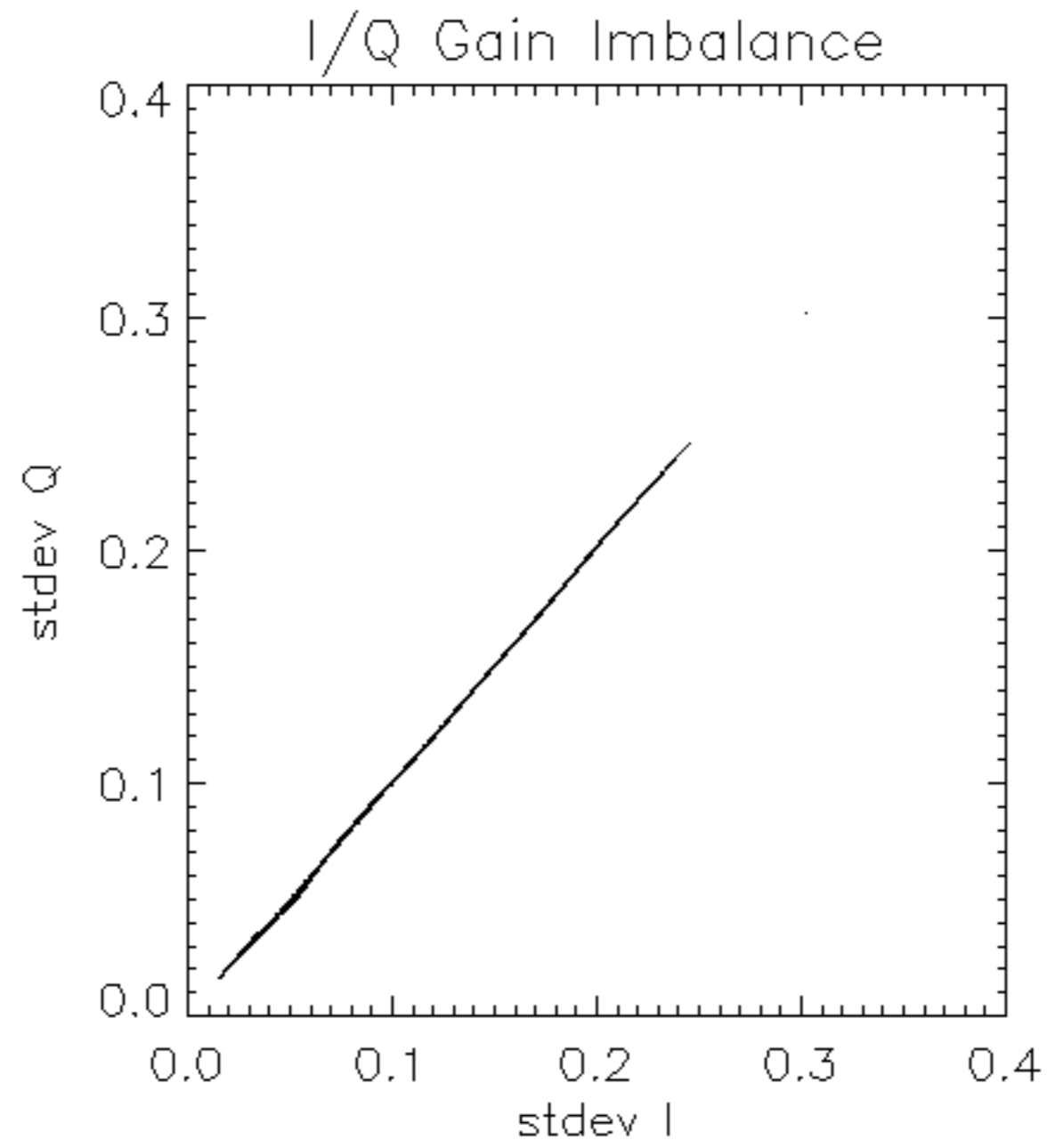


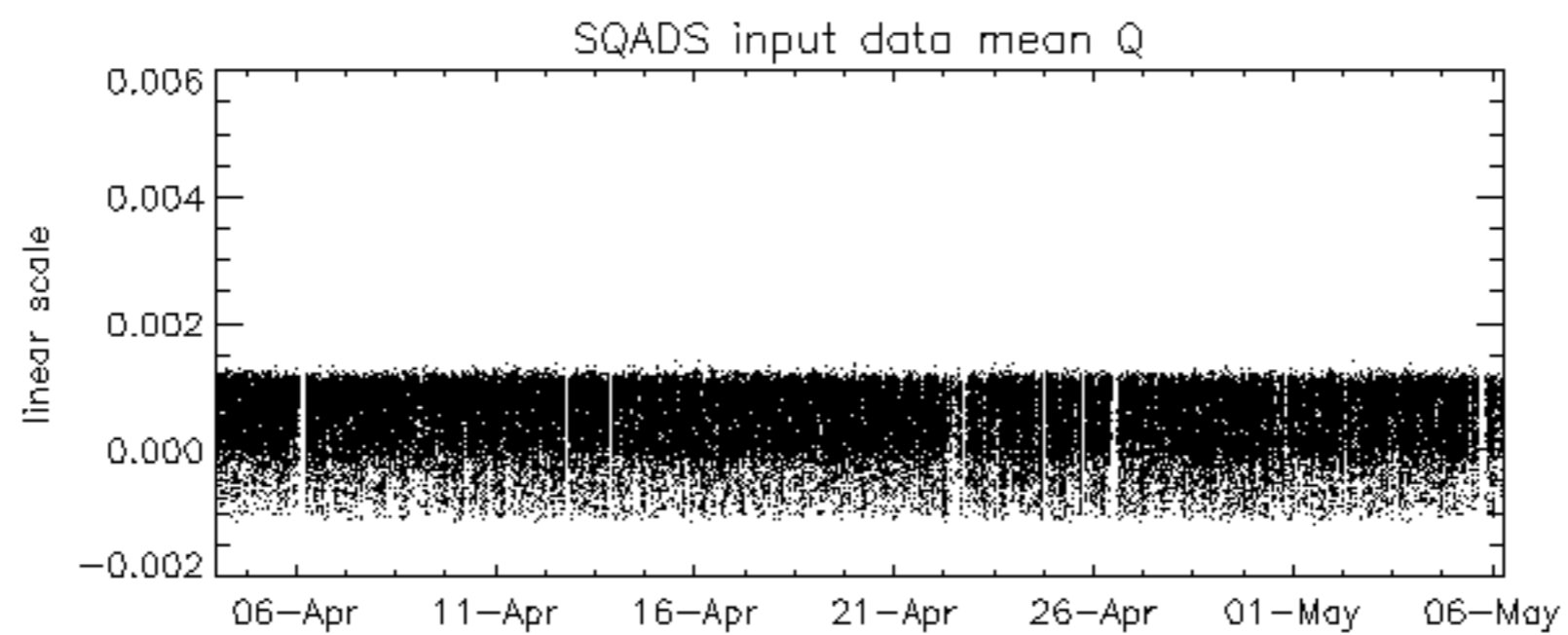
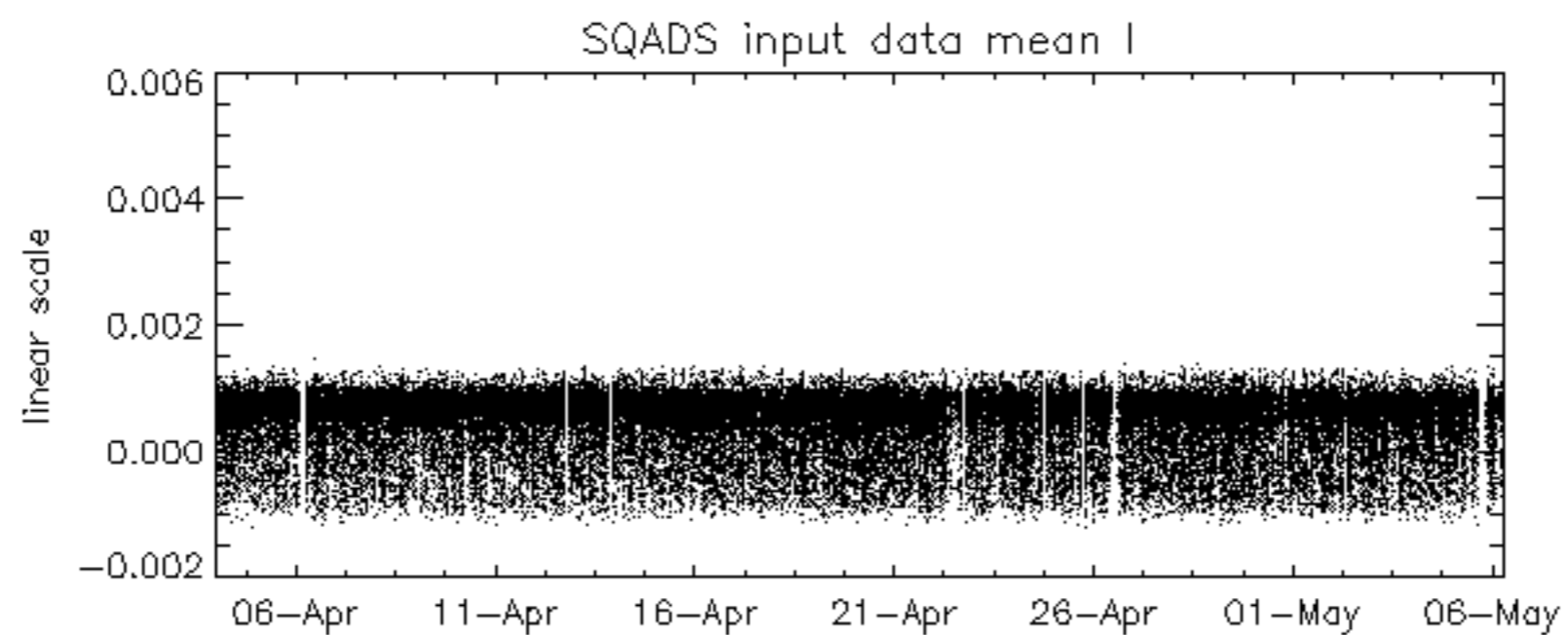
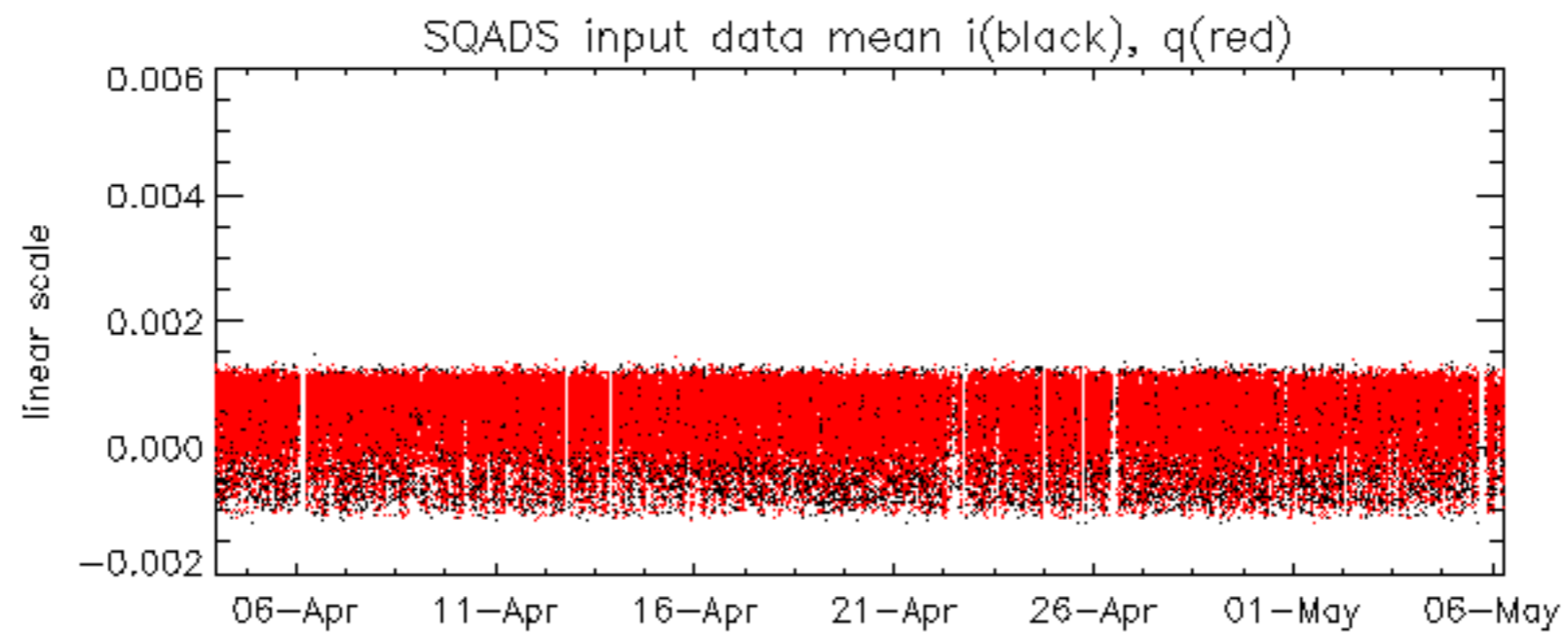


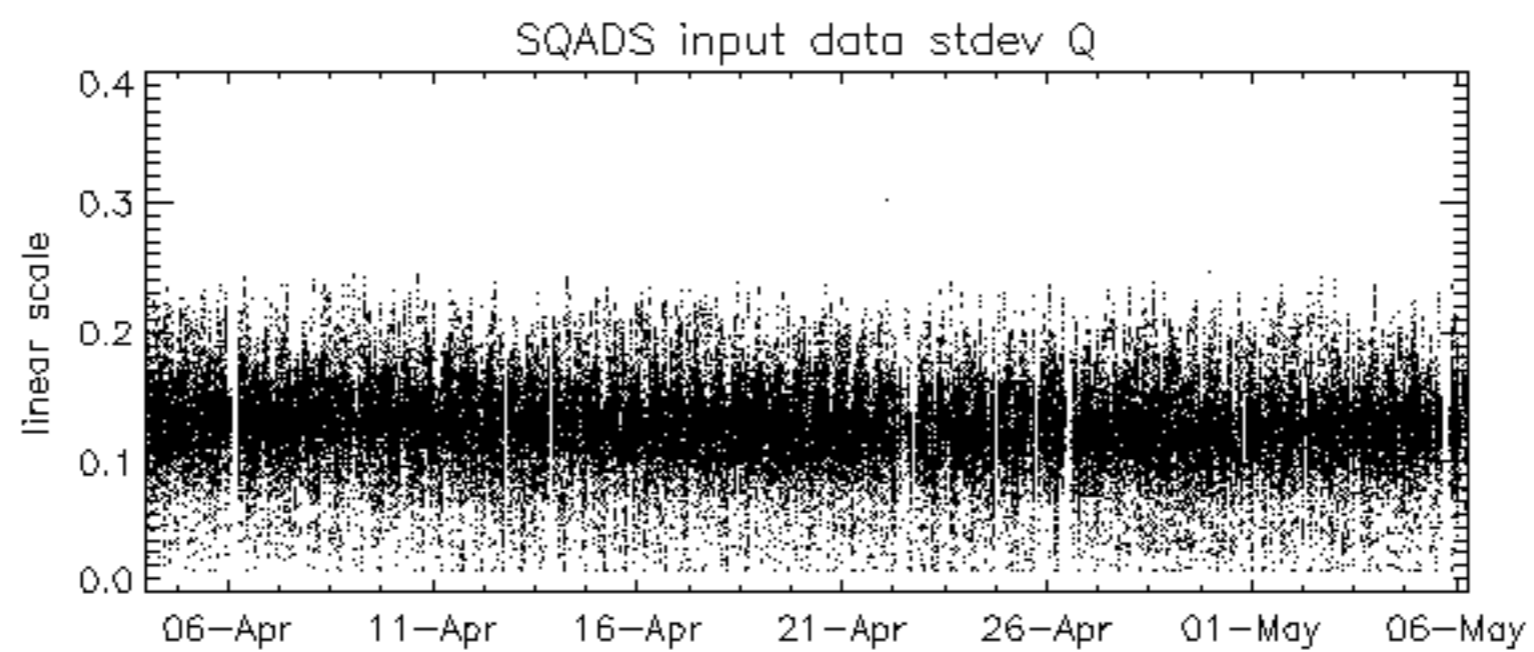
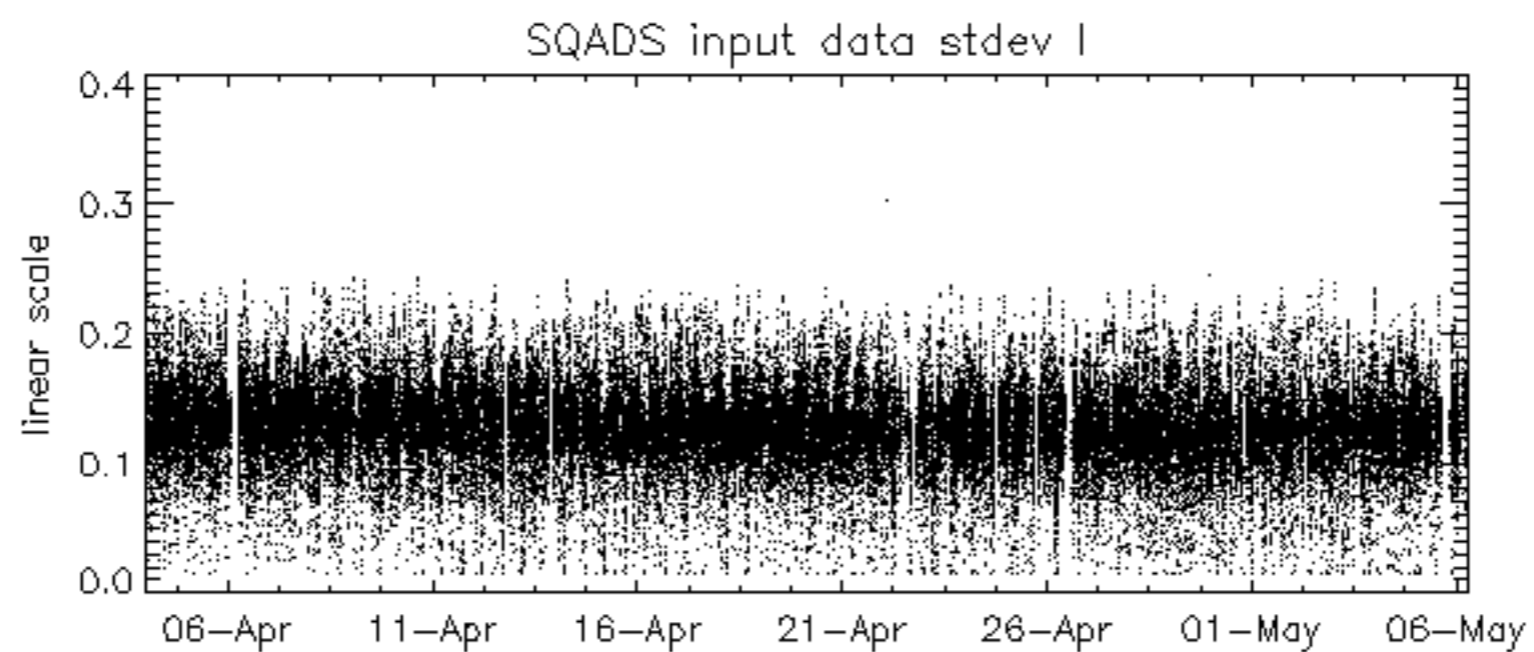
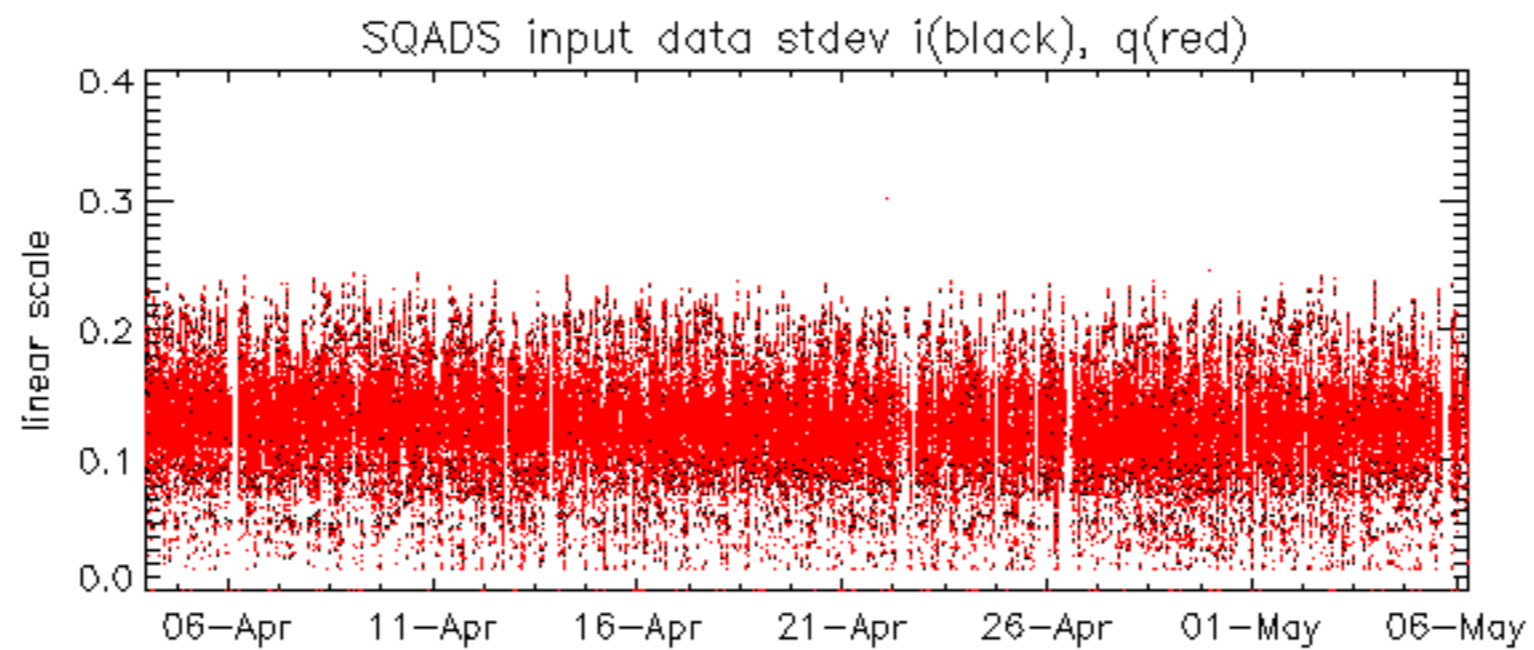


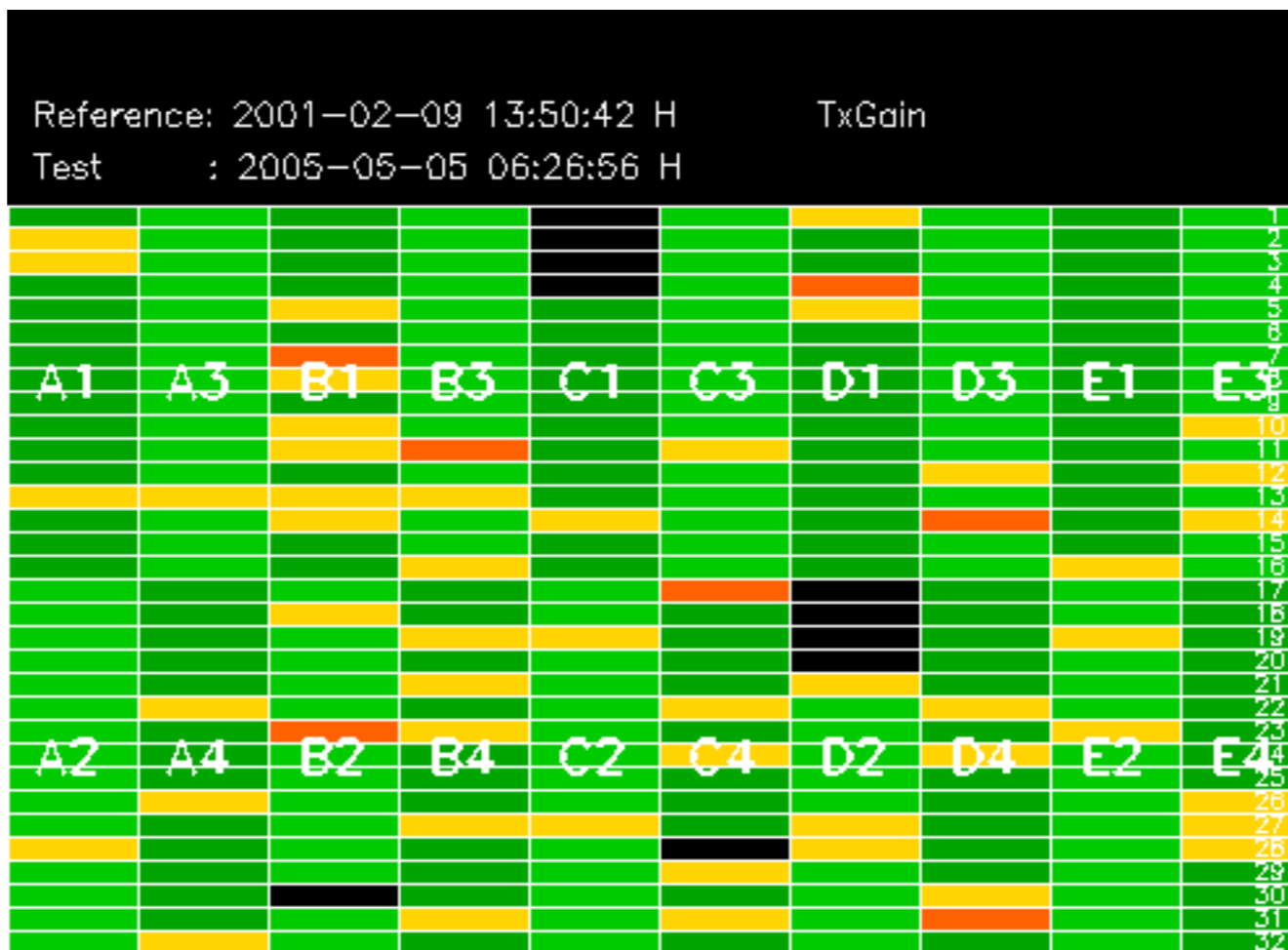




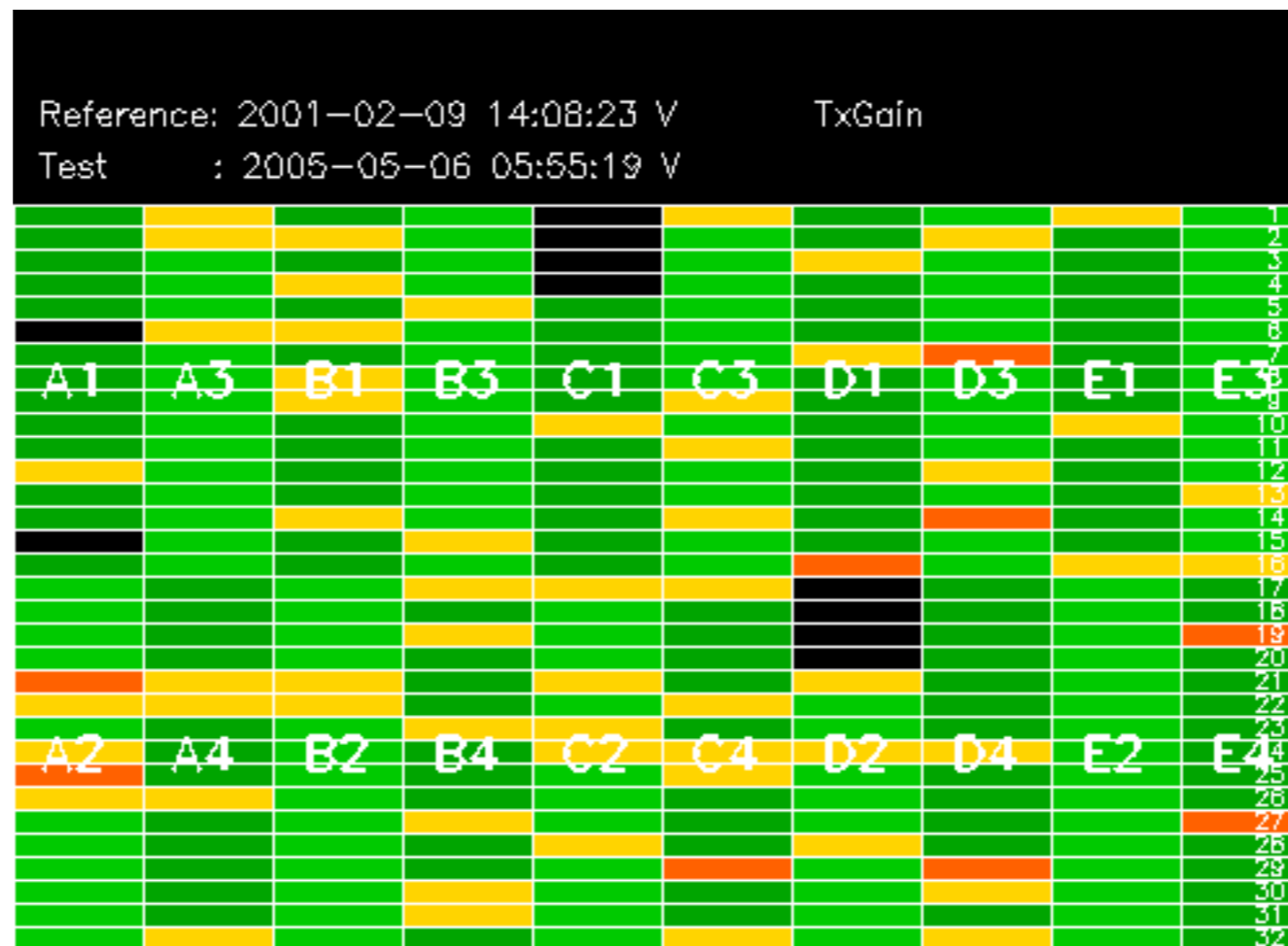












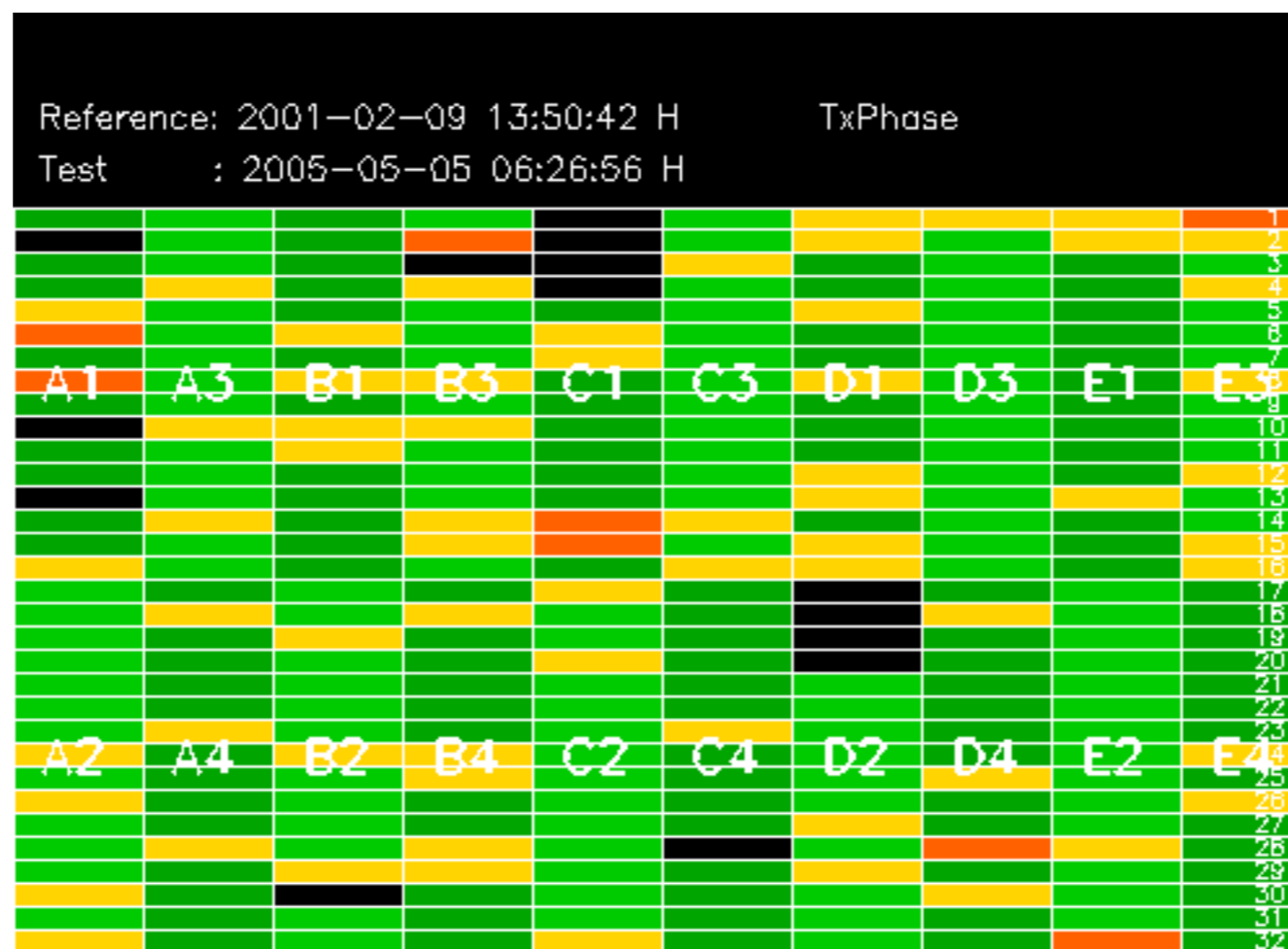


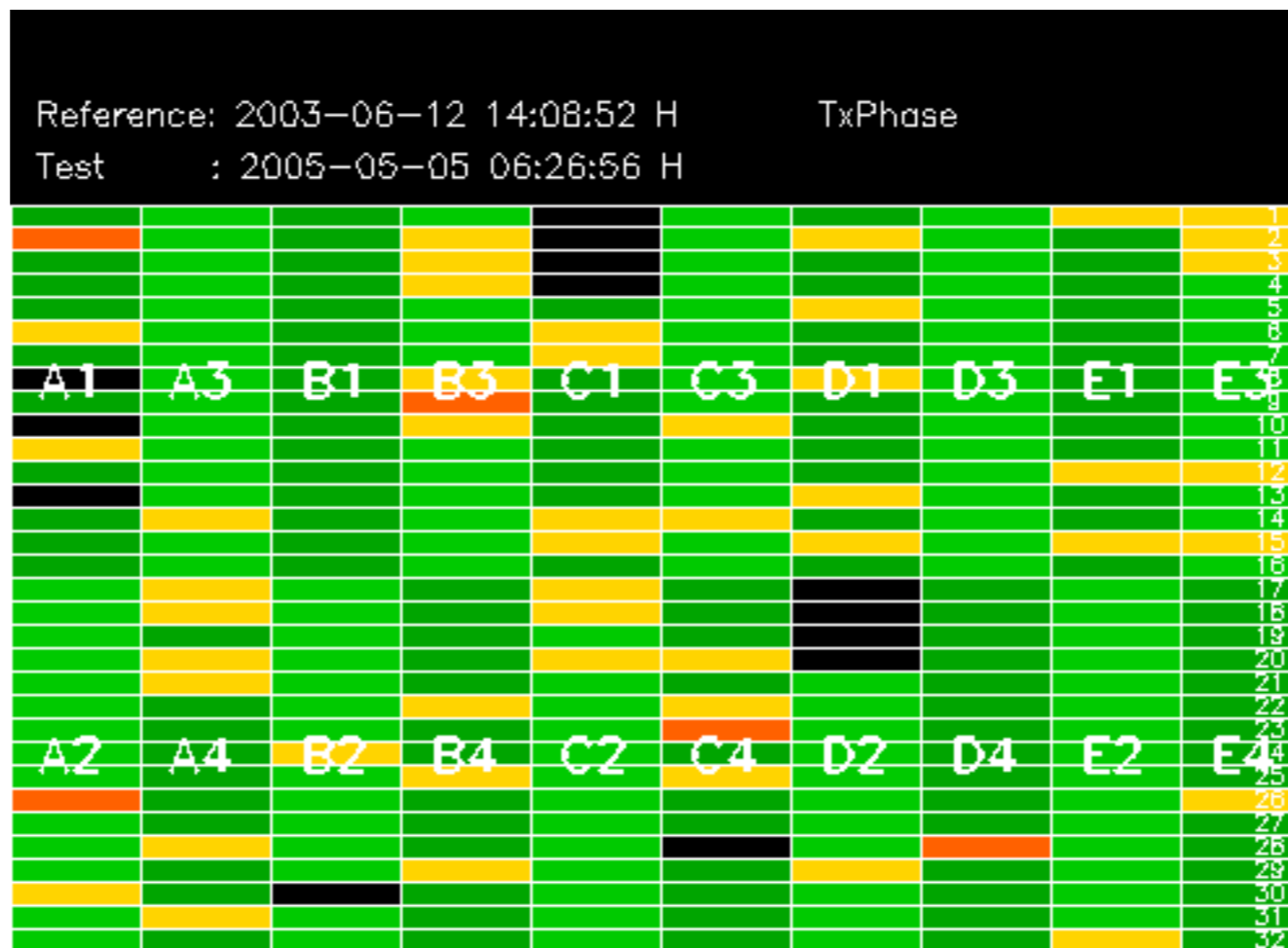
Summary of analysis for the last 3 days 2005050[789]

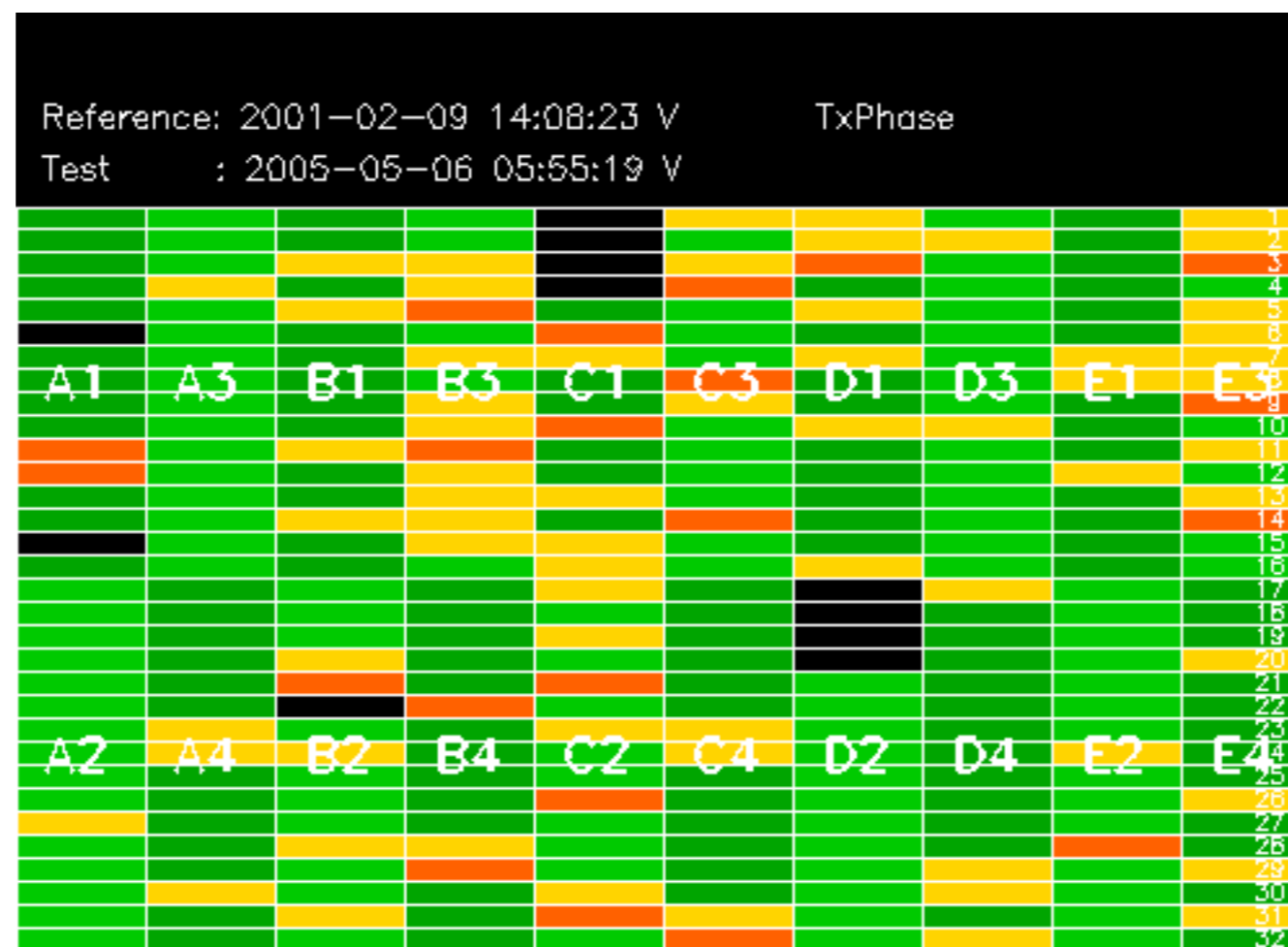
The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

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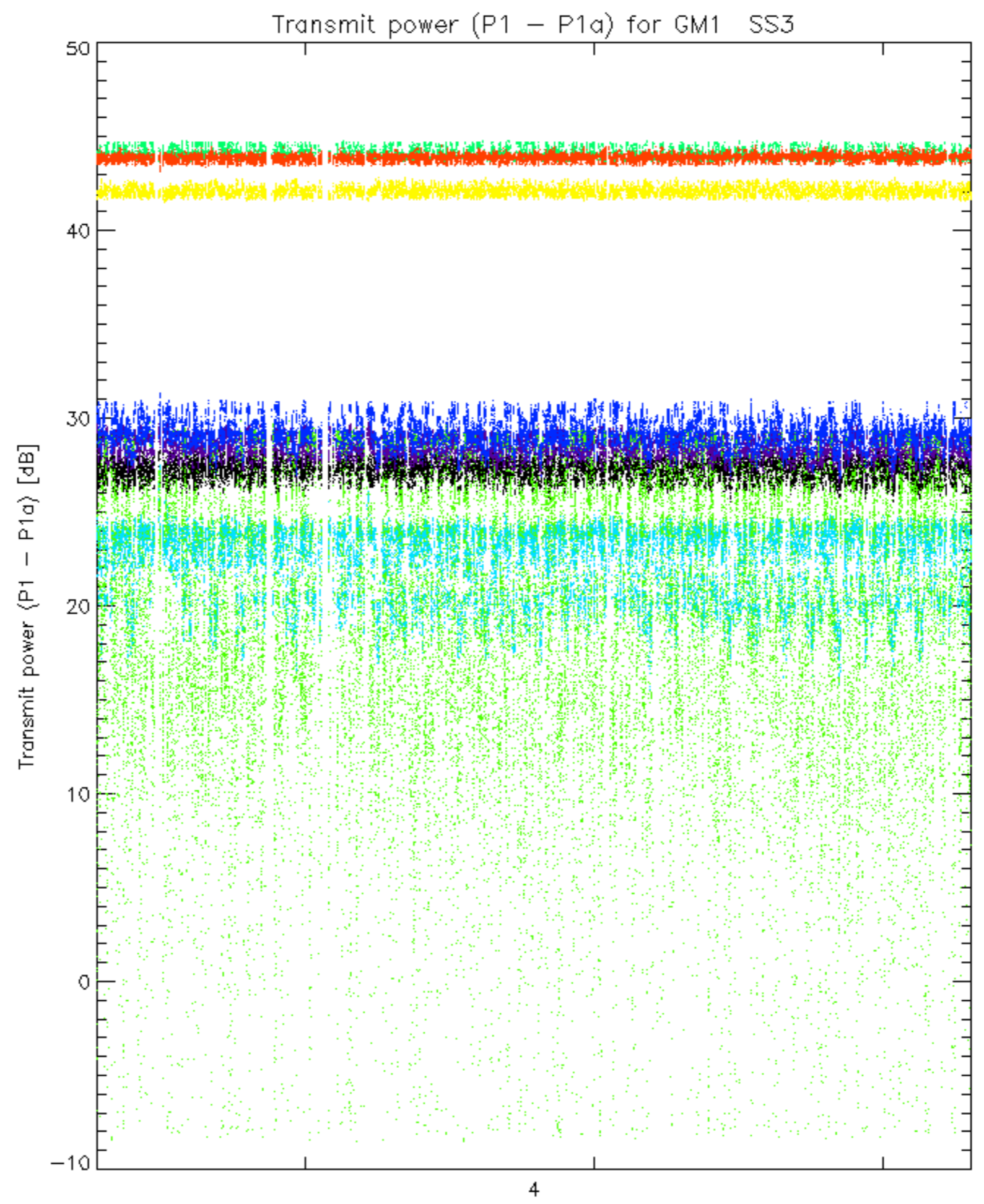




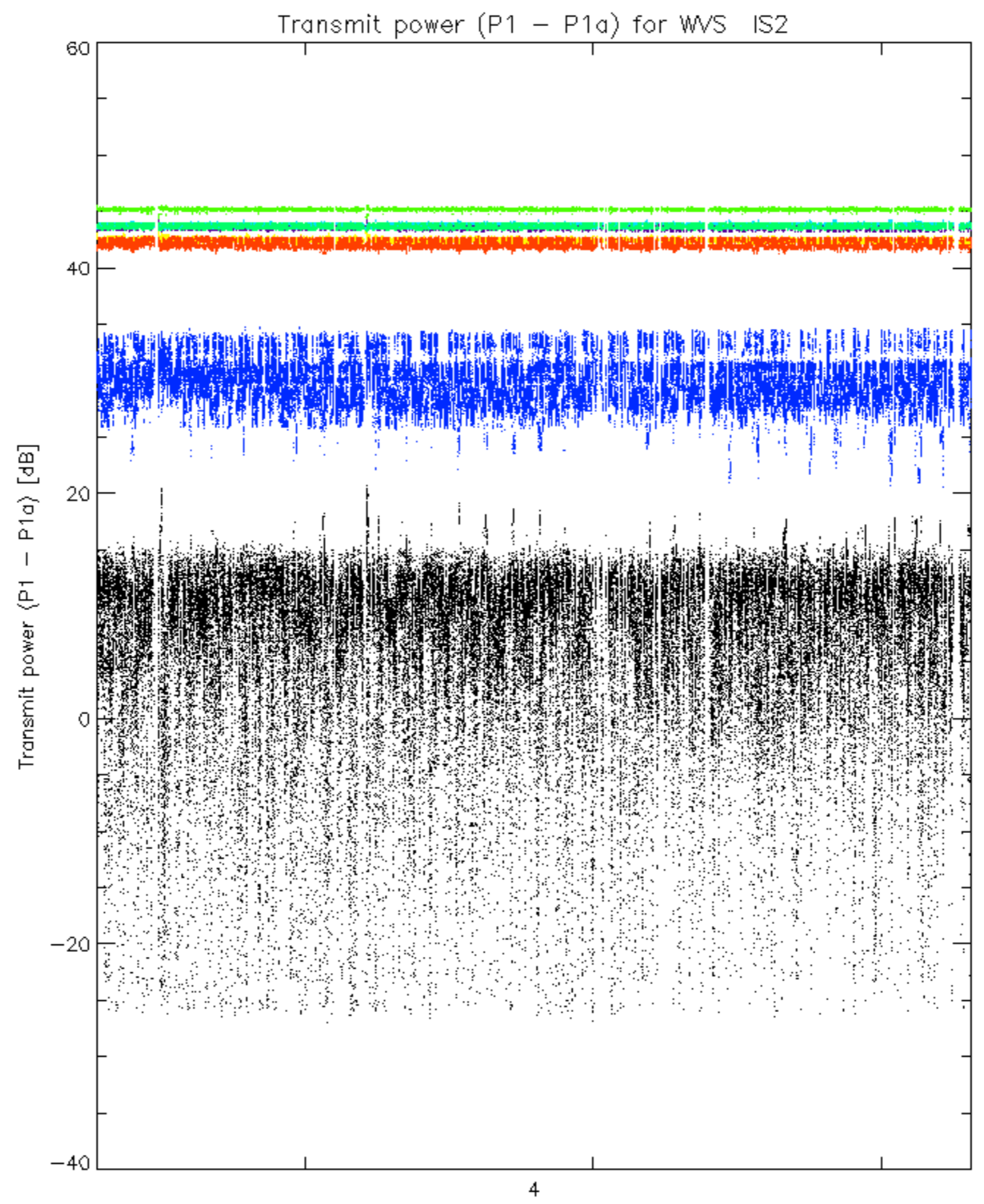








rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No unavailabilities during the reported period.