

# PRELIMINARY REPORT OF 061024

last update on Tue Oct 24 16:46:23 GMT 2006

1. [Introduction](#)
2. [Summary](#)
  - [Instrument Unavailability](#)
  - [Auxiliary files used](#)
  - [Browse Visual Inspection](#)
  - [Module Stepping Results](#)
  - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
  - [Daily statistics](#)
  - [Cyclic statistics](#)
  - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
  - [raw data mean I and Q](#)
  - [raw data stdev I and Q](#)
  - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
  - [Unbiased Doppler Error for WVS](#)
  - [Absolute Doppler for WVS](#)
  - [Doppler evolution versus ANX for WVS](#)
  - [Unbiased Doppler Error for GM1](#)
  - [Absolute Doppler for GM1](#)
  - [Doppler evolution versus ANX for GM1](#)

## 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 2006-10-23 00:00:00 to 2006-10-24 16:46:23

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	65	15	9	1
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	37	65	15	9	1
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	65	15	9	1
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	65	15	9	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	21	40	14	5	26
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	21	40	14	5	26
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	21	40	14	5	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	21	40	14	5	26

### 2.3 - Browse Visual Inspection

No anomalies observed on available browse products

### 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	20061023 054051
H	20061024 050914

### 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
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input 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
<input type="checkbox"/>
<input type="checkbox"/>

#### 4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>
<input type="checkbox"/>

### 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	-3.952163	0.010093	-0.008825
7	P1	-3.084454	0.013005	-0.025843
11	P1	-4.095733	0.023652	-0.022277
15	P1	-6.214764	0.015524	-0.043631
19	P1	-3.559668	0.007854	-0.035000
22	P1	-4.609438	0.010982	-0.006492
26	P1	-3.983251	0.055506	0.006780
30	P1	-5.847716	0.086296	-0.011354
3	P1	-16.612474	0.217217	0.010900
7	P1	-17.120237	0.151600	0.021455
11	P1	-17.002148	0.394407	-0.240577
15	P1	-12.873852	0.103763	-0.054932
19	P1	-14.697595	0.059847	-0.120981
22	P1	-15.649841	0.477128	0.082881
26	P1	-15.107988	0.253945	0.108496
30	P1	-17.016140	0.487231	-0.211955

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.827011	0.087812	-0.013164
7	P2	-21.767588	0.097361	0.068515
11	P2	-15.721527	0.109786	0.054303
15	P2	-7.077496	0.108297	0.021531
19	P2	-9.131600	0.100180	-0.002606
22	P2	-18.148958	0.095089	-0.027742
26	P2	-16.436651	0.104328	-0.022479
30	P2	-19.466154	0.093230	0.016415

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.203367	0.006822	-0.011052
7	P3	-8.203367	0.006822	-0.011052
11	P3	-8.203367	0.006822	-0.011052
15	P3	-8.203367	0.006822	-0.011052
19	P3	-8.203367	0.006822	-0.011052
22	P3	-8.203367	0.006822	-0.011052
26	P3	-8.203334	0.006837	-0.011060
30	P3	-8.203334	0.006837	-0.011060

**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	-3.907631	0.136274	-0.054131
7	P1	-2.607448	0.830672	-0.092028
11	P1	-2.914713	0.107085	-0.018199
15	P1	-3.705696	0.102824	-0.033800
19	P1	-3.477813	0.057474	-0.063283
22	P1	-5.081148	0.049977	0.027468
26	P1	-5.935540	0.190411	-0.102356
30	P1	-5.251682	0.173181	-0.074710
3	P1	-11.735832	0.354218	-0.096169
7	P1	-10.128013	1.079579	-0.139587
11	P1	-10.437529	0.316493	-0.102792
15	P1	-10.929866	0.438864	-0.083503
19	P1	-15.598312	0.758612	-0.207532
22	P1	-21.009365	1.418270	0.006688

26	P1	-15.832589	0.449419	0.068499
30	P1	-18.045973	0.498418	0.010261

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.353846	0.207114	0.058321
7	P2	-22.016991	1.158893	0.198078
11	P2	-10.851255	0.182148	0.073152
15	P2	-4.870179	0.034801	-0.021132
19	P2	-6.845420	0.057193	-0.012842
22	P2	-8.210827	0.362250	-0.089147
26	P2	-24.134235	0.859473	0.083130
30	P2	-21.892817	0.440222	0.134176

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.052631	0.003190	-0.007996
7	P3	-8.052512	0.003179	-0.007820
11	P3	-8.052478	0.003174	-0.007448
15	P3	-8.052559	0.003175	-0.007769
19	P3	-8.052579	0.003175	-0.007352
22	P3	-8.052528	0.003174	-0.007273
26	P3	-8.052402	0.003175	-0.007326
30	P3	-8.052333	0.003174	-0.007435

## 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	0.000563946
	stdev	1.64731e-07
MEAN Q	mean	0.000523556
	stdev	2.15190e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138567
	stdev	0.00112813
STDEV Q	mean	0.138944
	stdev	0.00114633



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006102[234]

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



Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20061023_154305_000005372052_00197_24299_7155.N1	0	7
ASA_WSM_1PNPDE20061023_162157_000001282052_00198_24300_4755.N1	0	52





## 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)

Acsending

Descending

### 7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

Acsending

Descending

### 7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX


### 7.4 - Unbiased Doppler Error for GM1

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

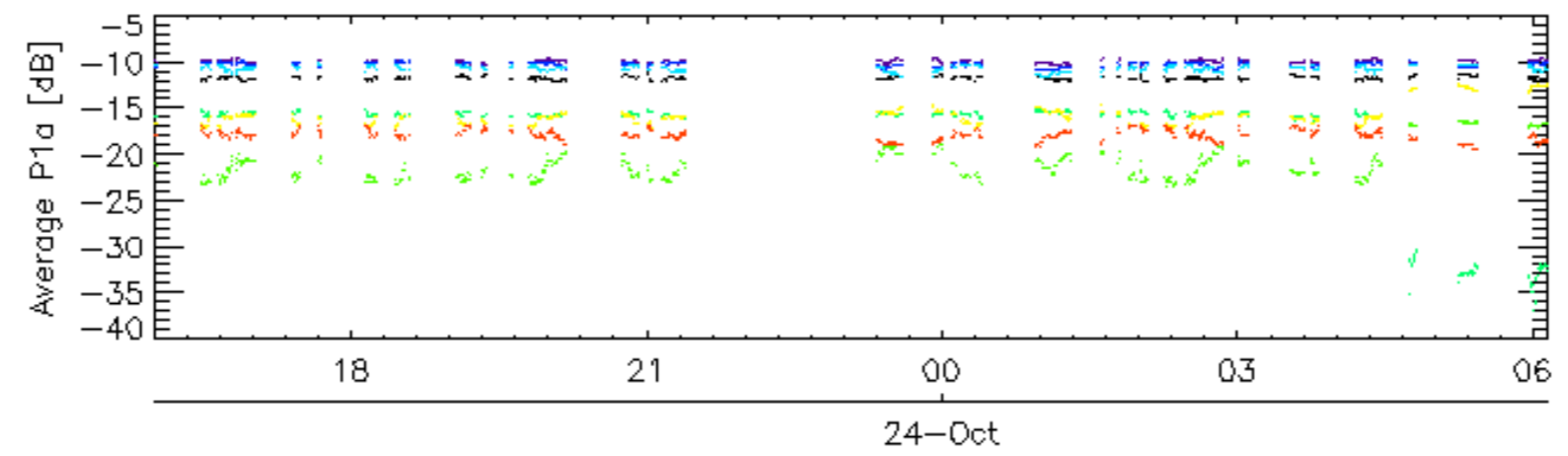
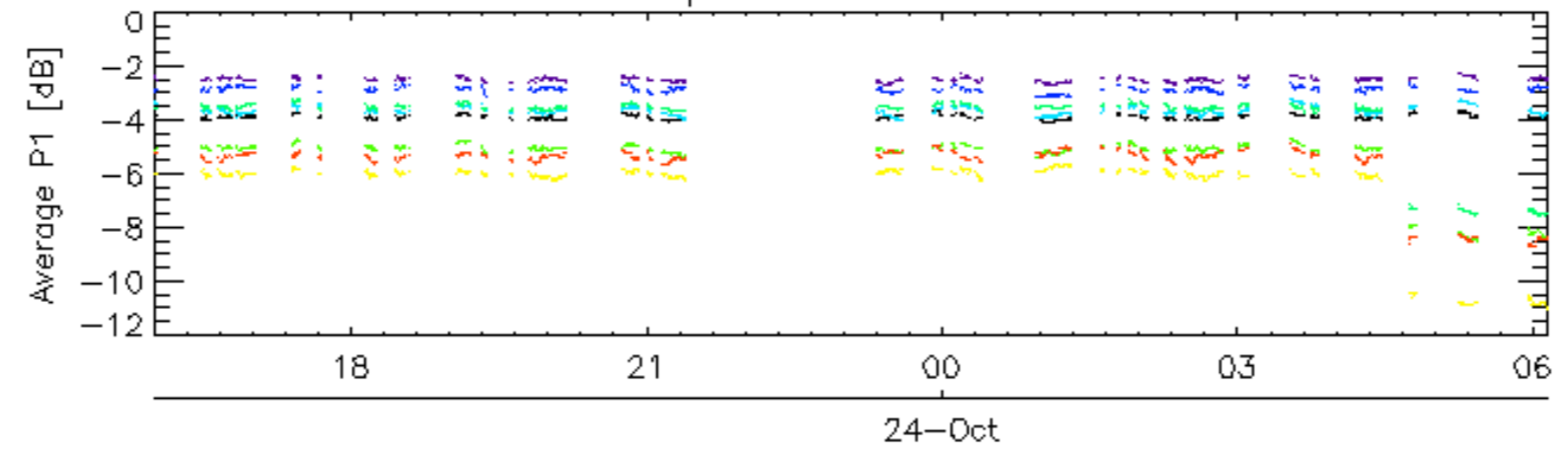
### 7.5 - Absolute Doppler for GM1

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

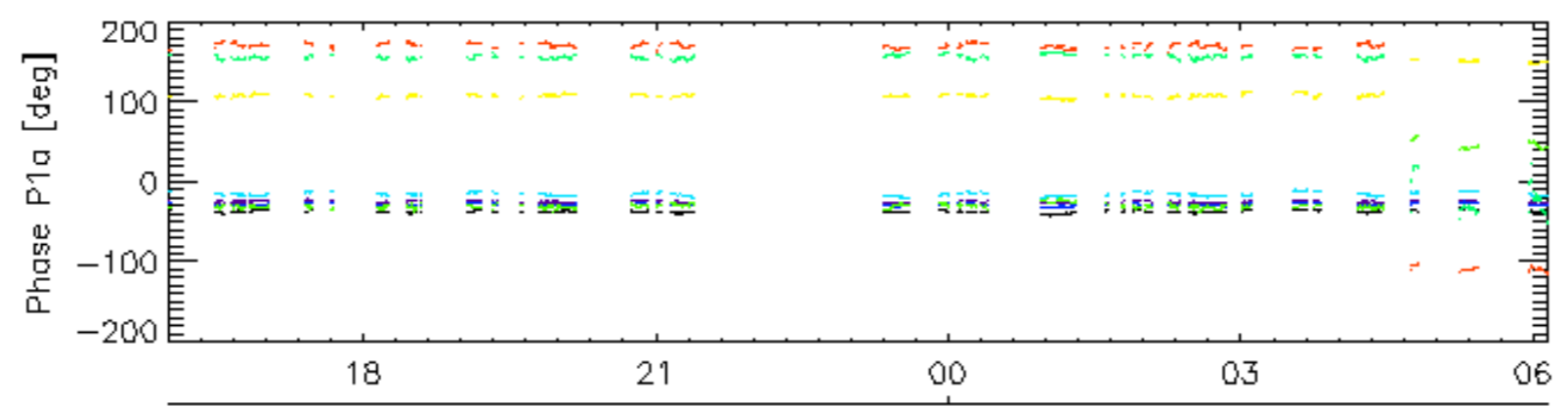
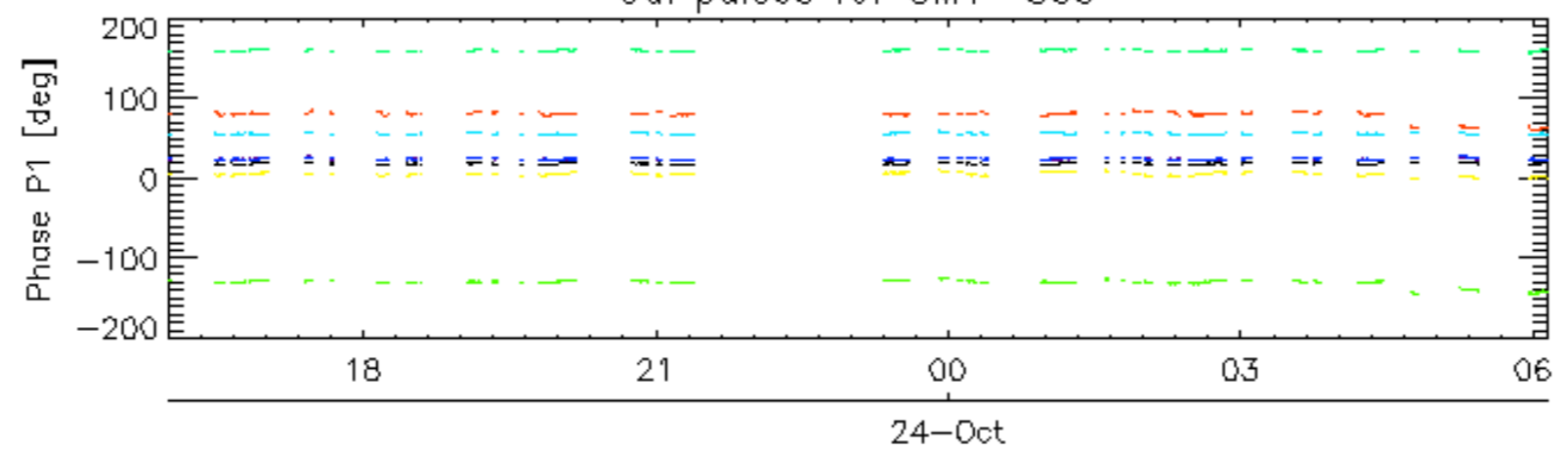
### 7.6 - Doppler evolution versus ANX for GM1

<b>Evolution Doppler error versus ANX</b>
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Cal pulses for GM1 SS3

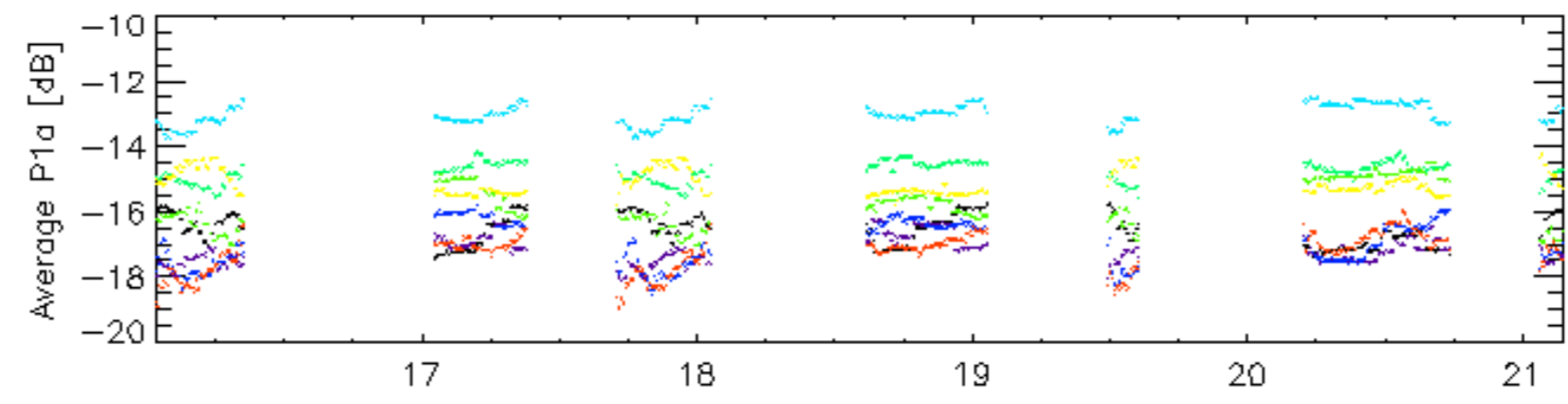
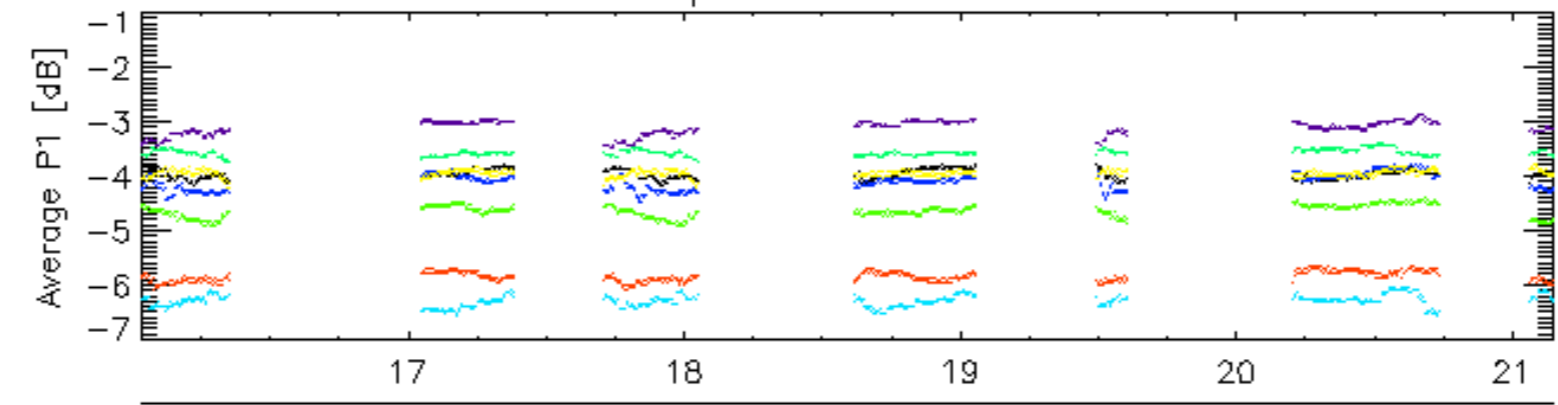


Cal pulses for GM1 SS3

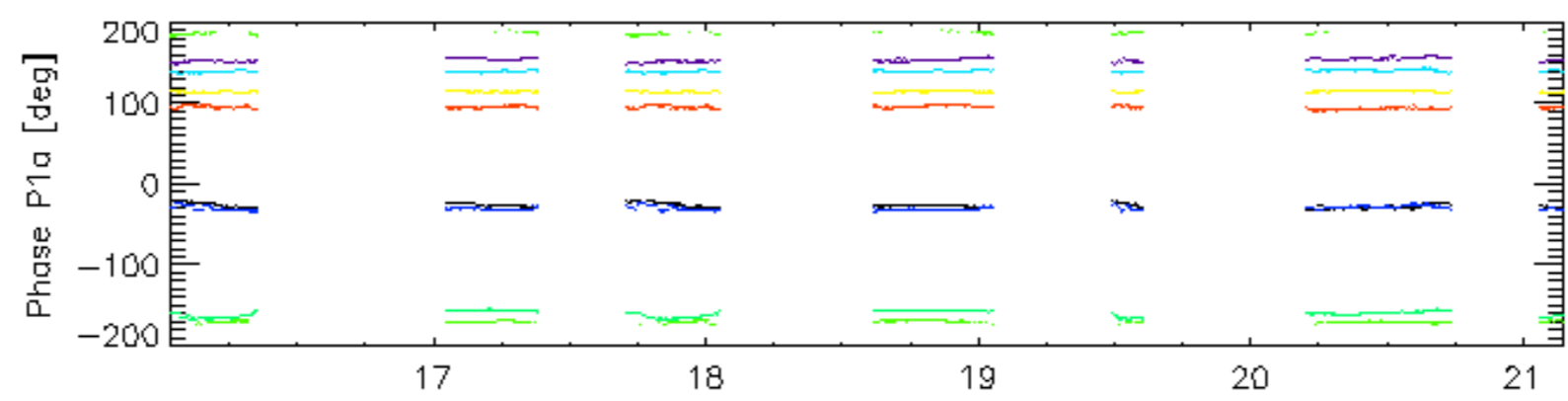
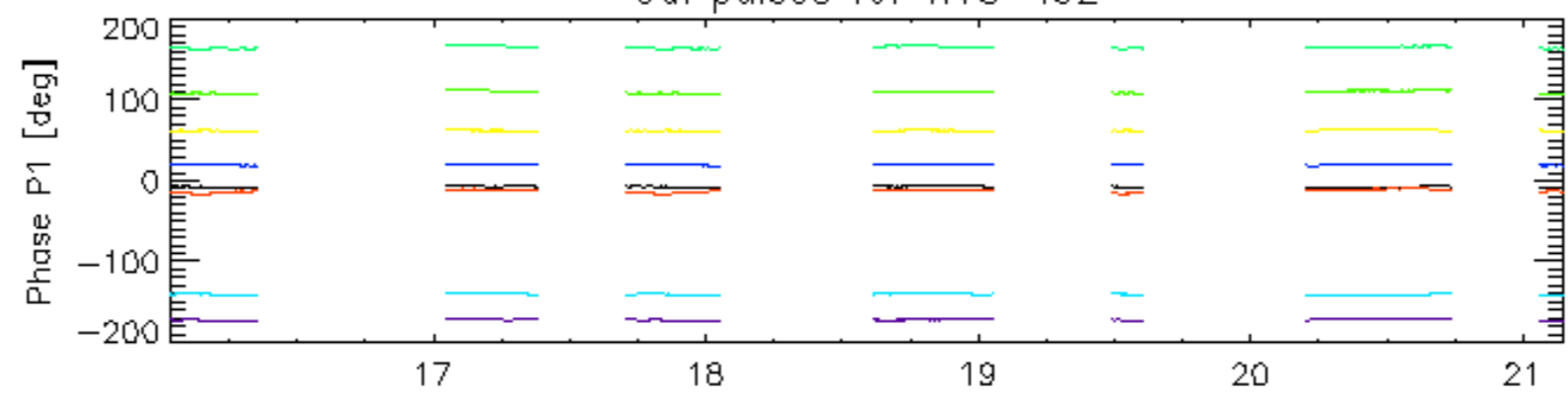


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

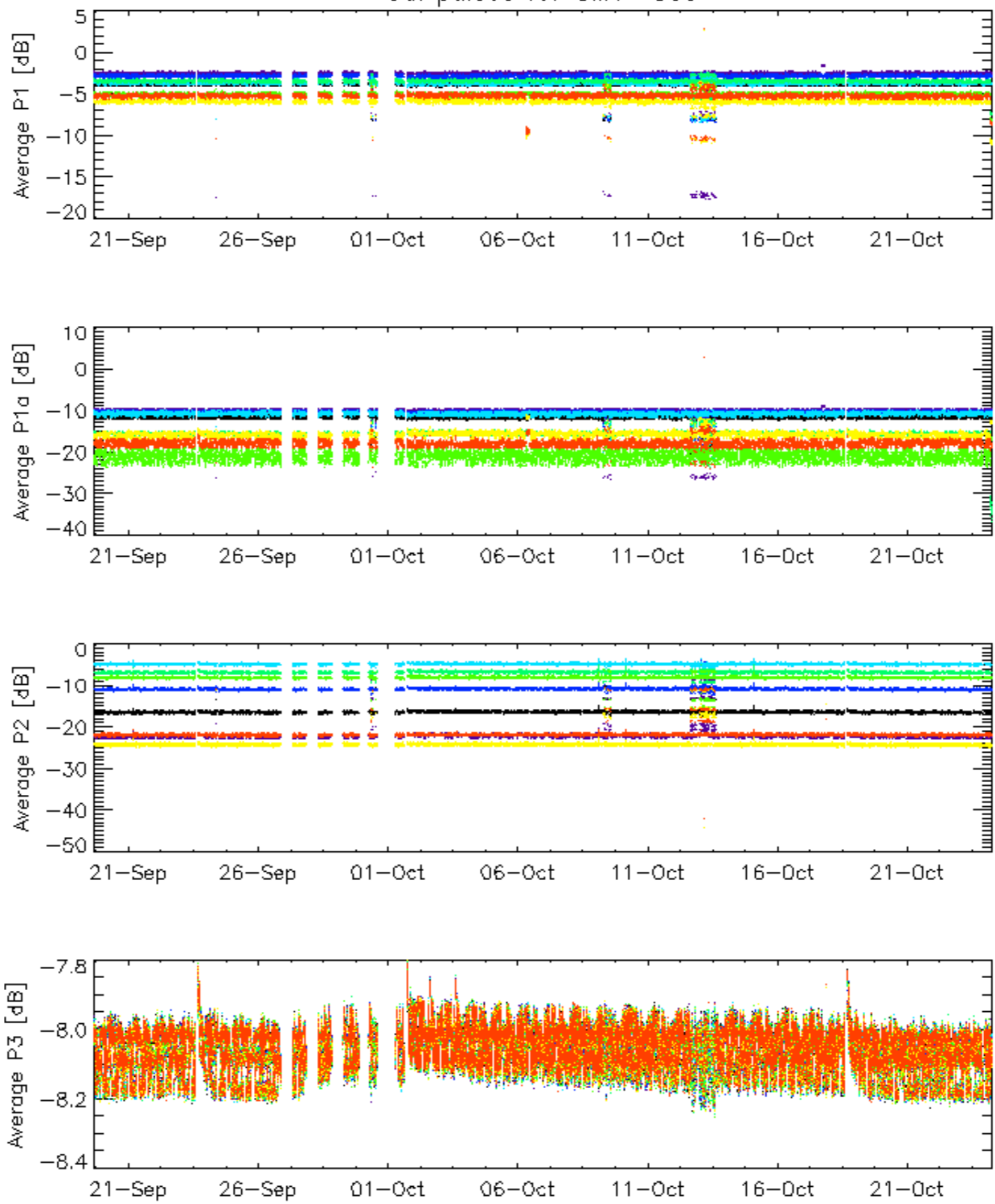


Cal pulses for WVS IS2



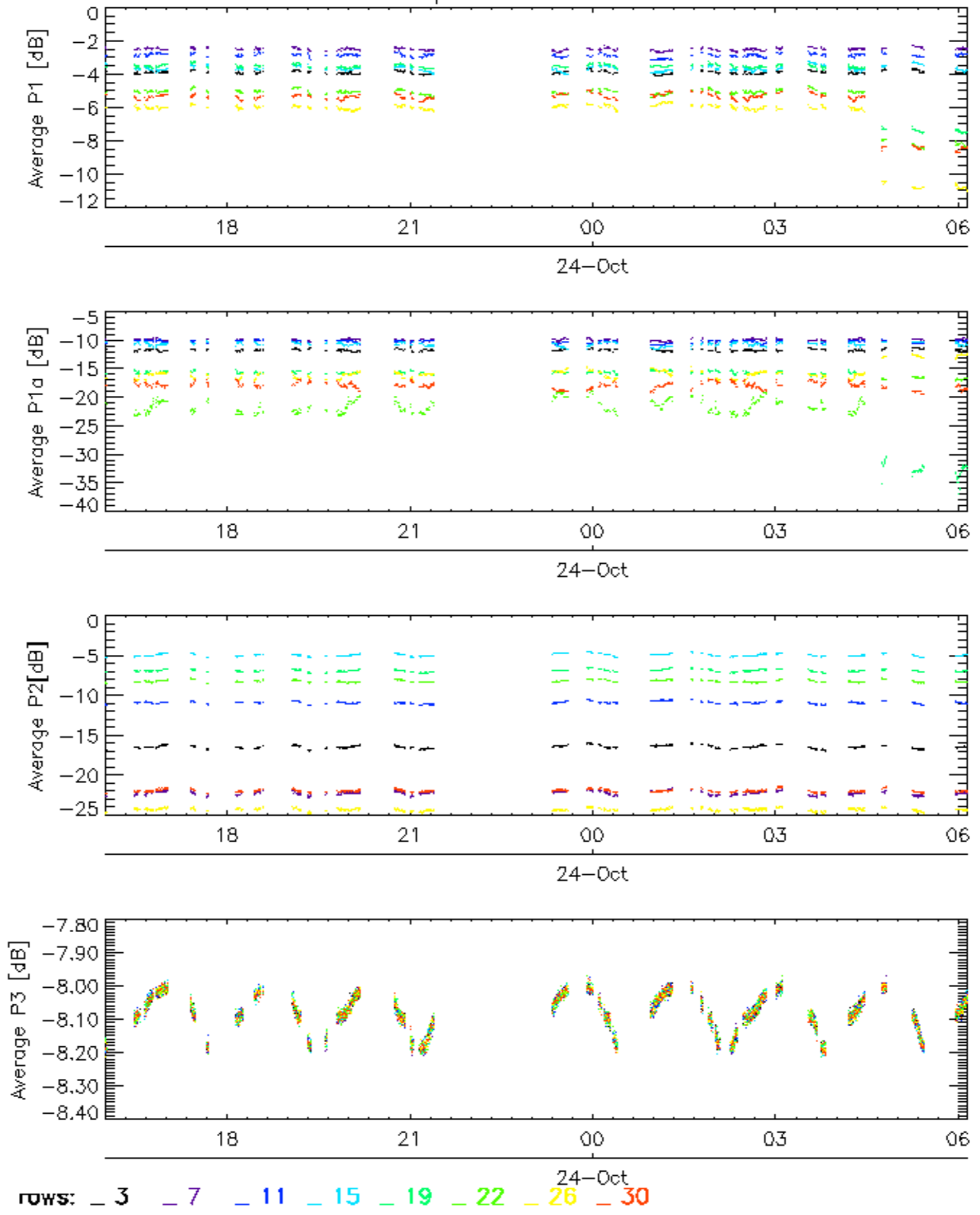
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

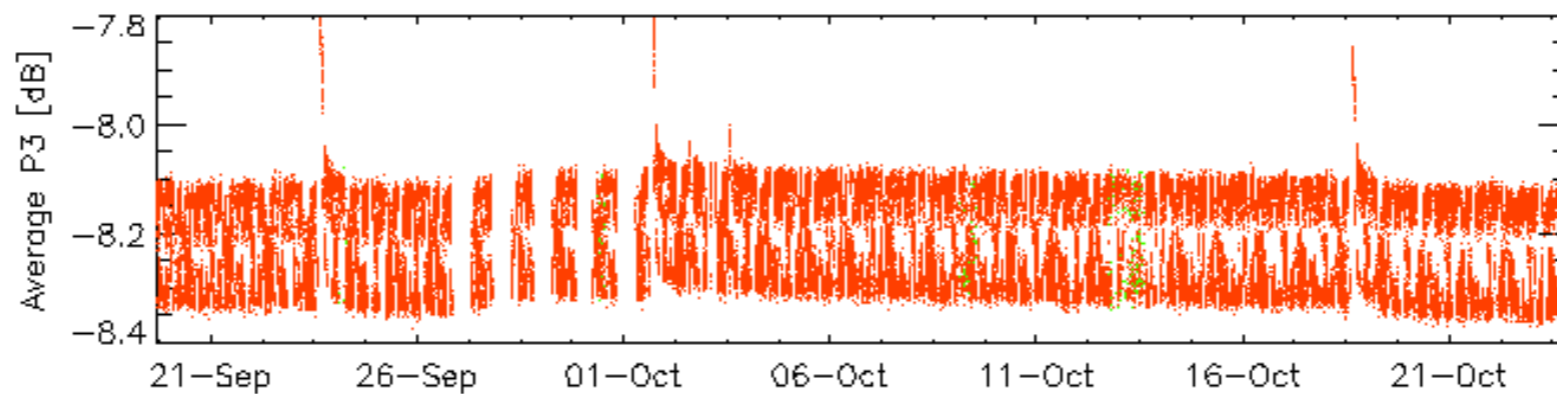
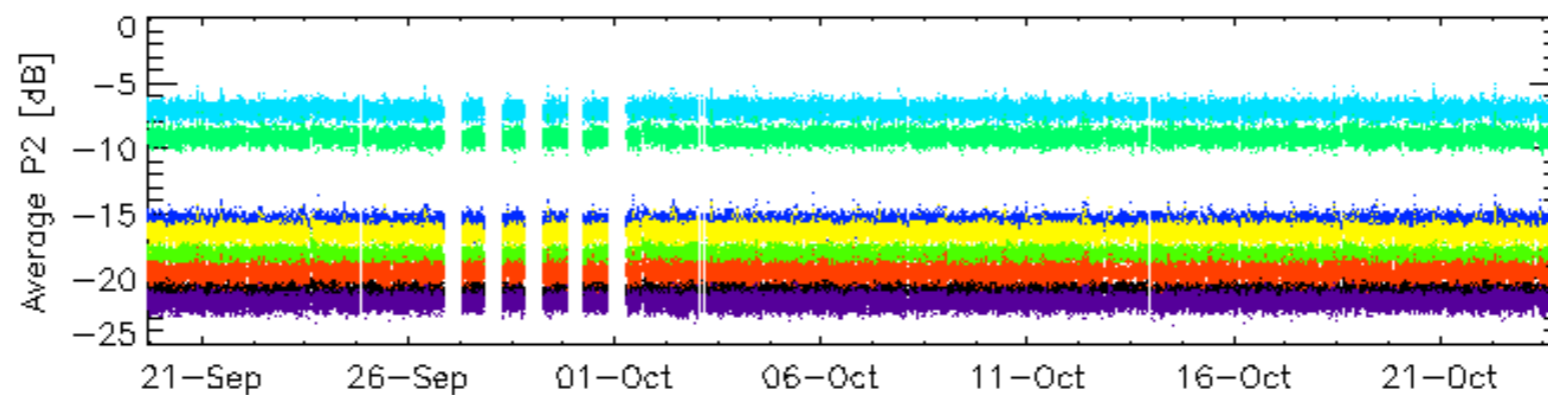
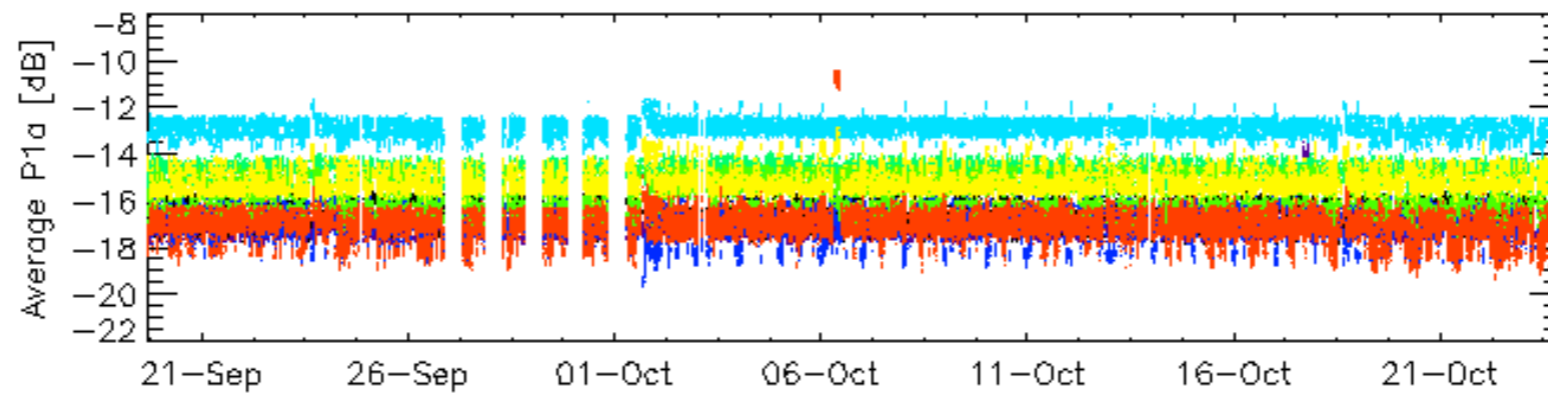
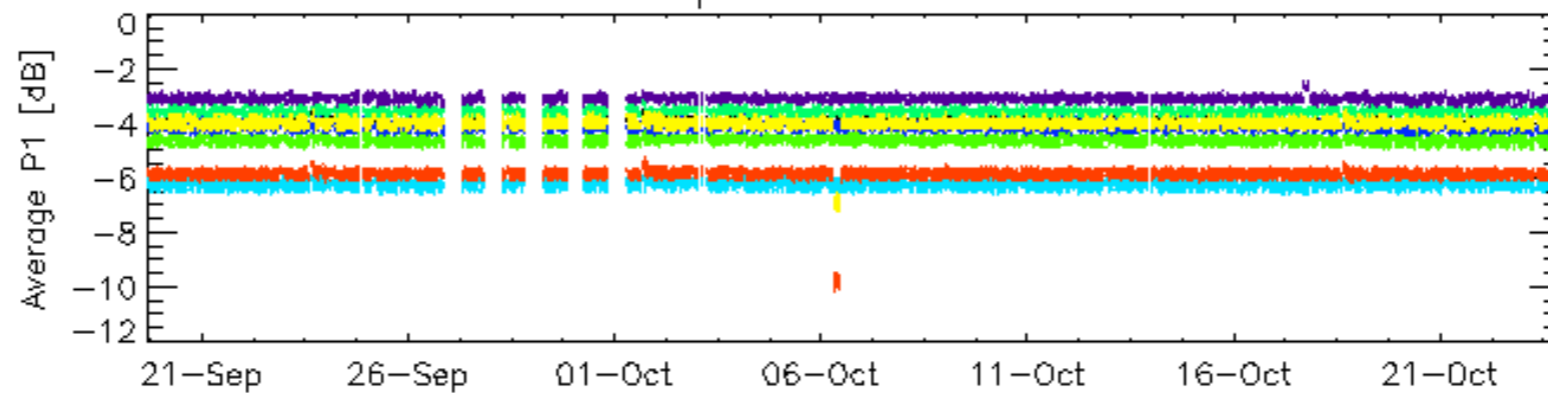


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

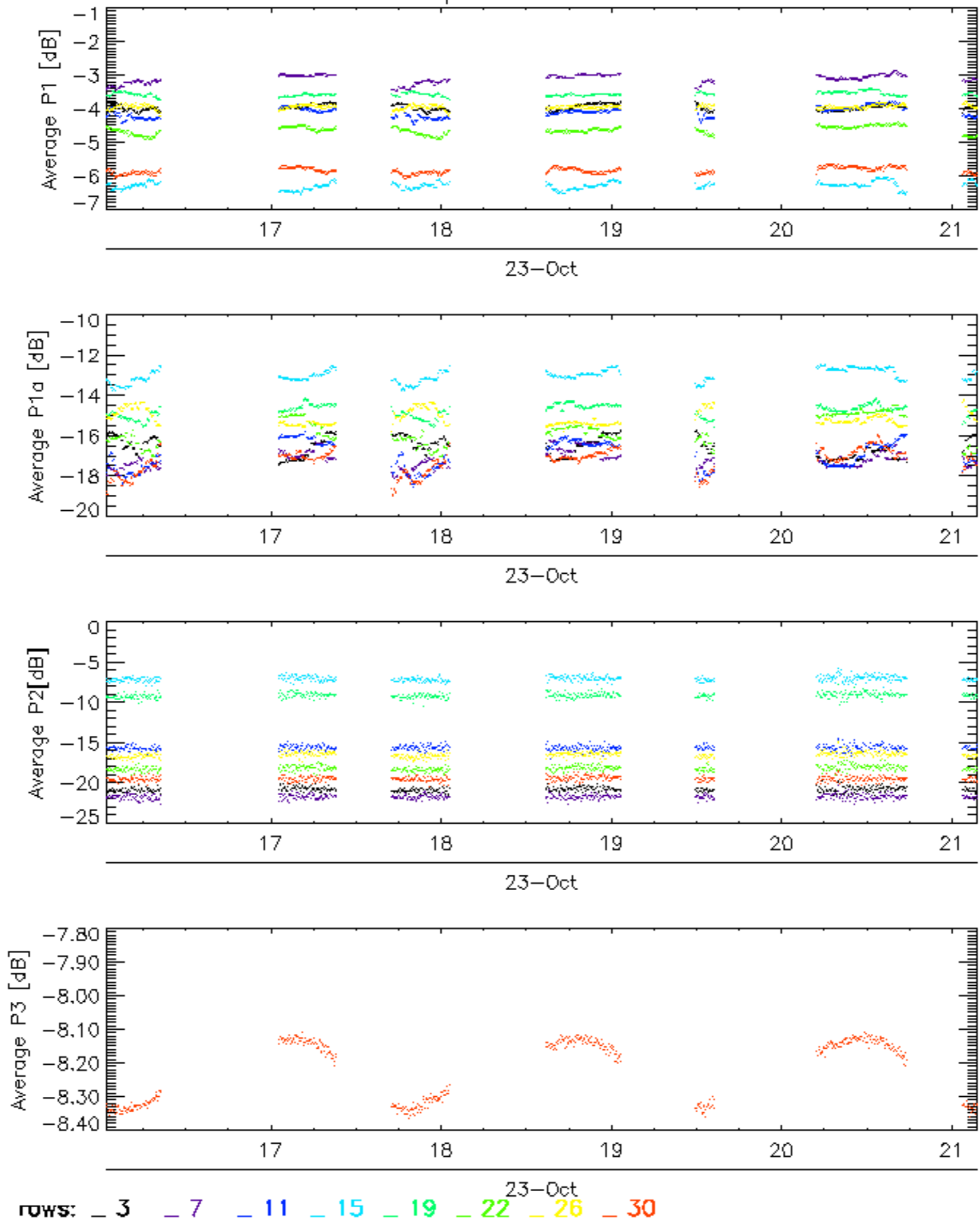


Cal pulses for WVS IS2



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

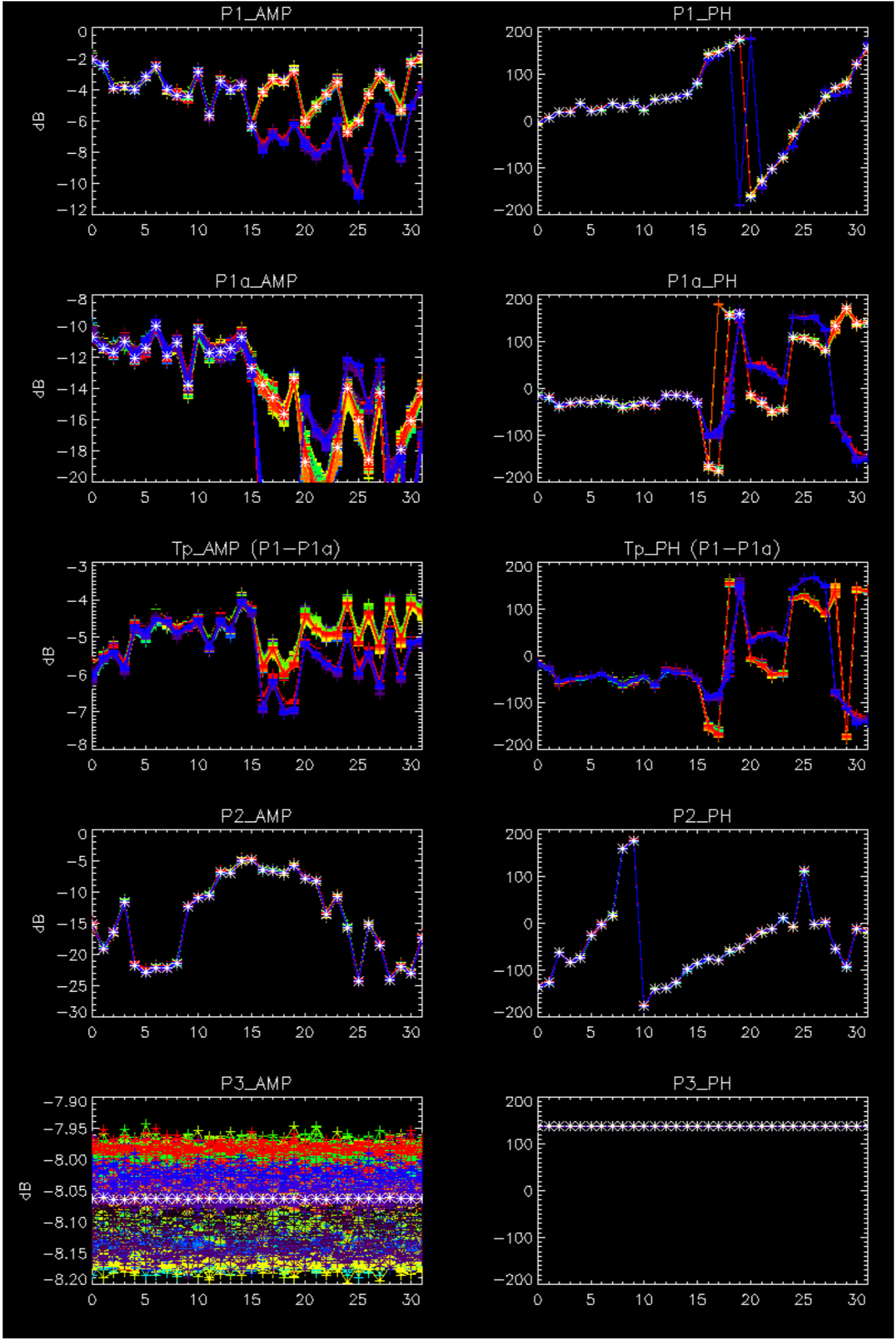
Cal pulses for WVS IS2

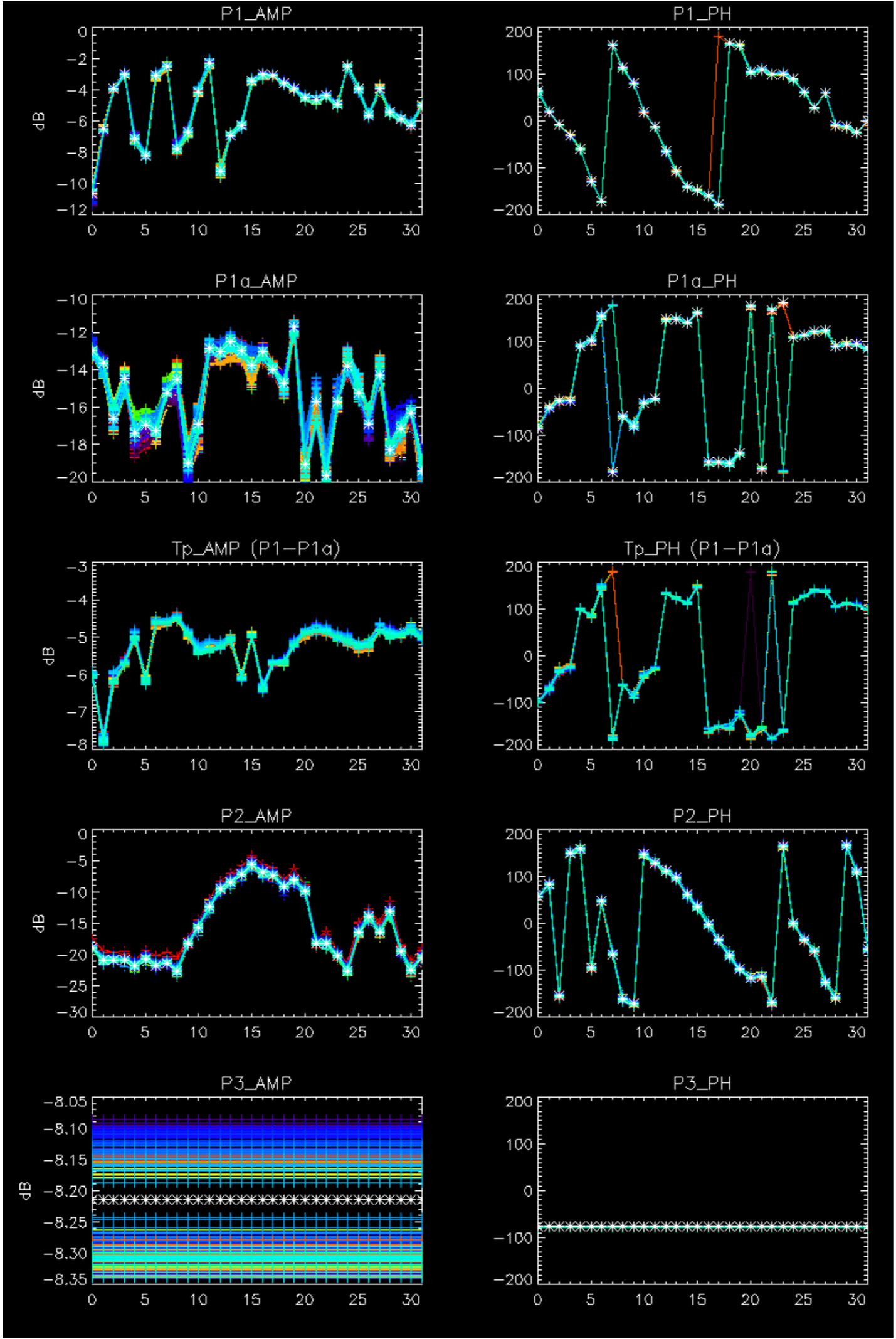


No anomalies observed on available browse products



No anomalies observed.

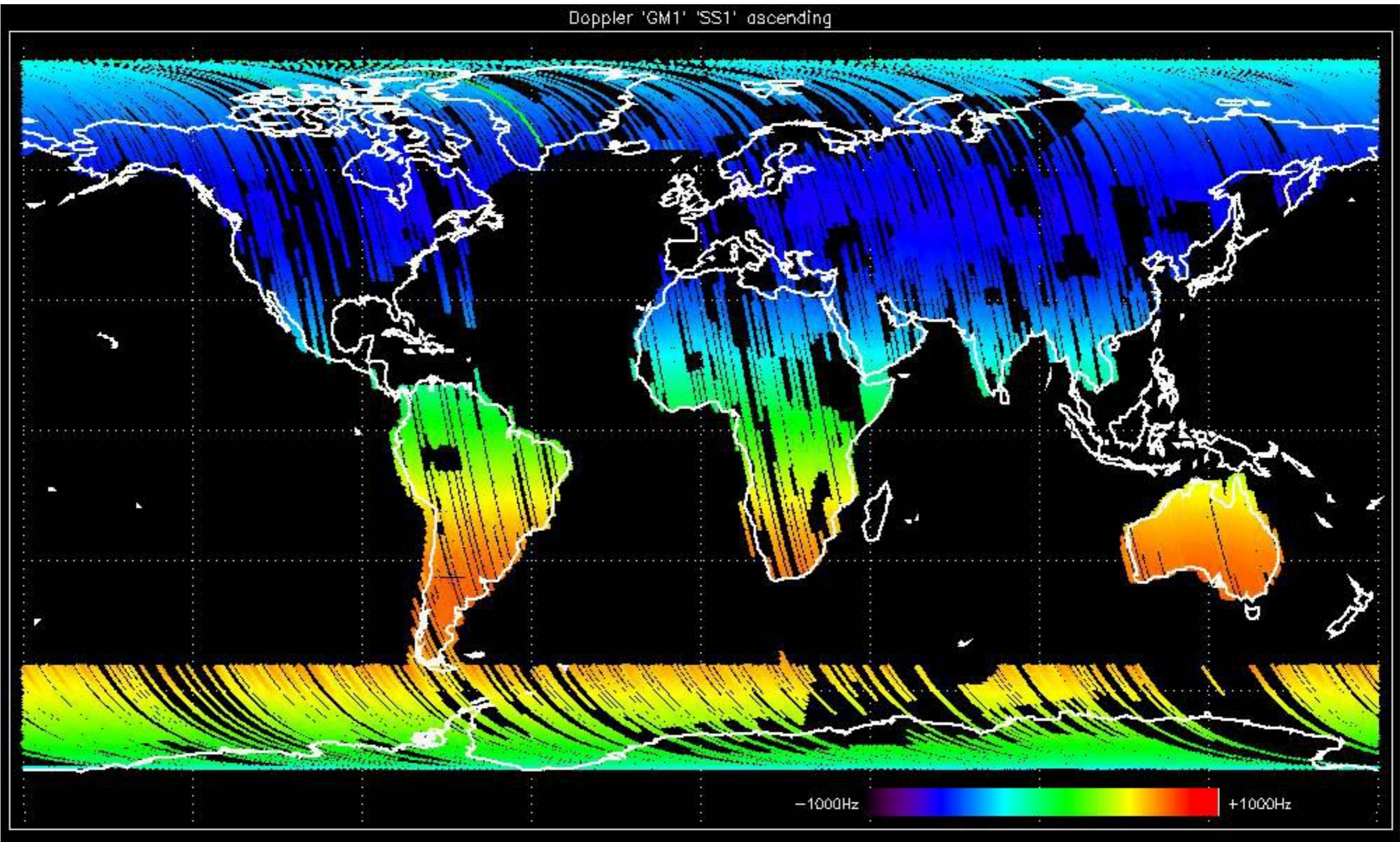




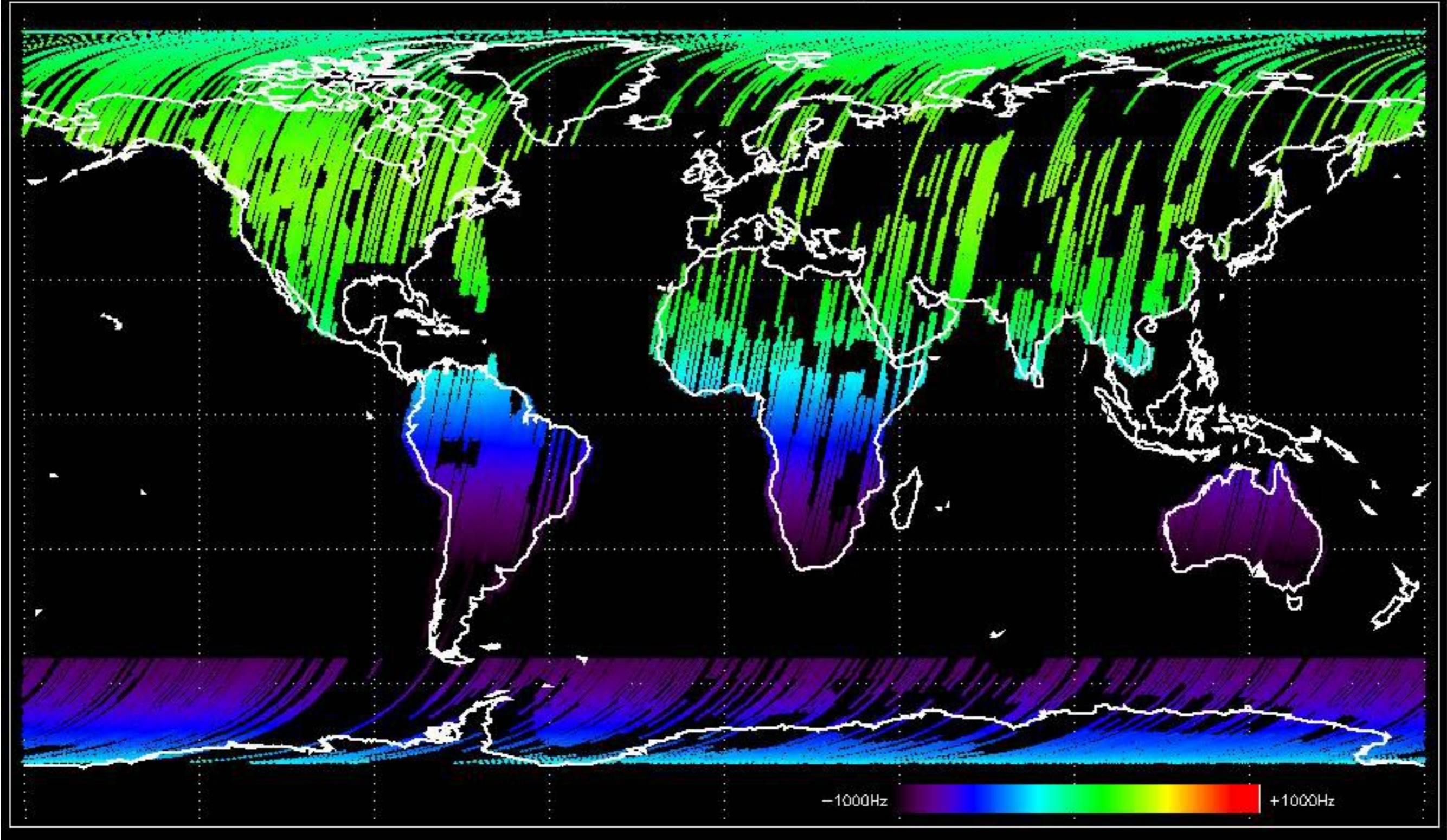
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



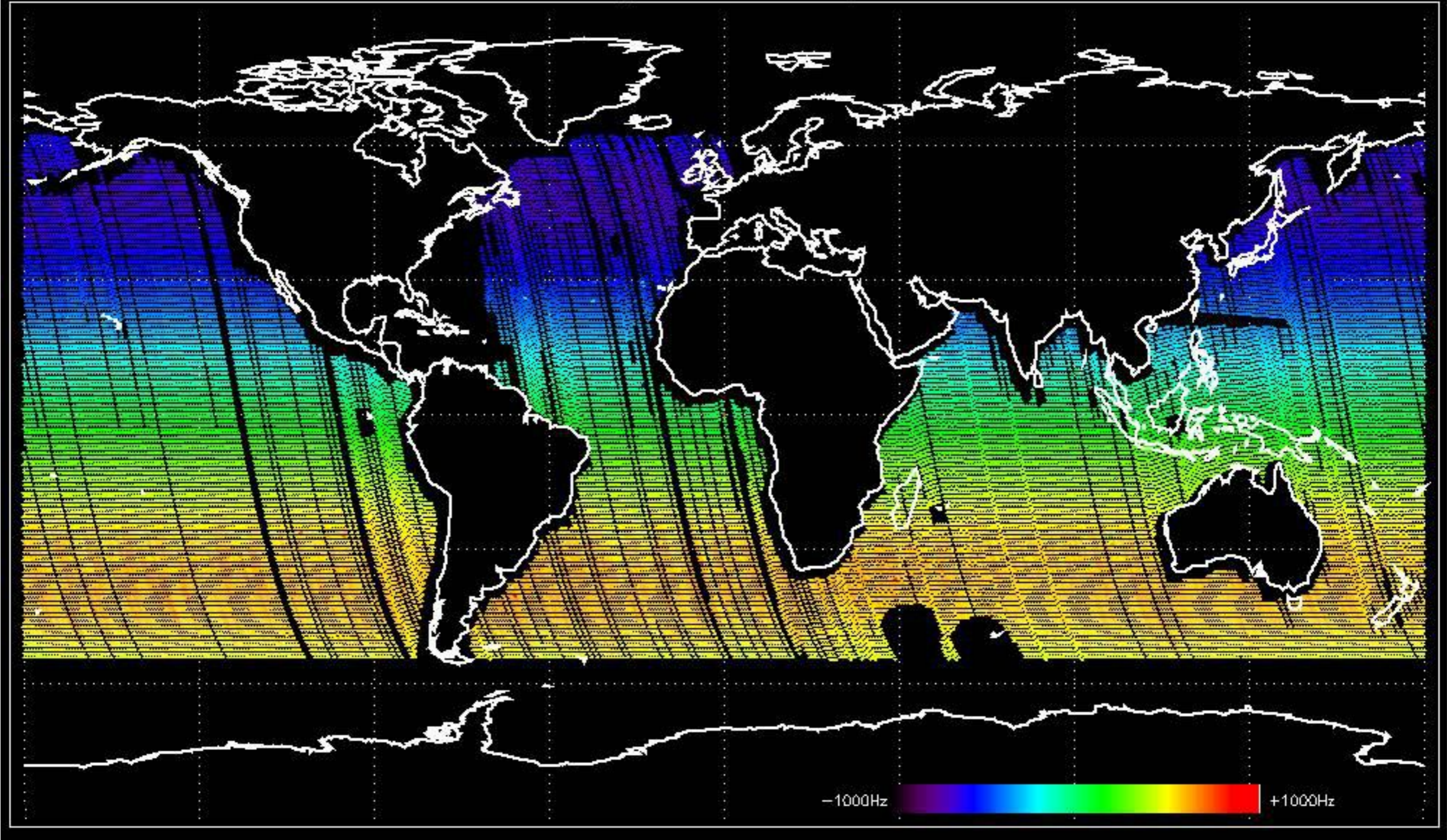
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

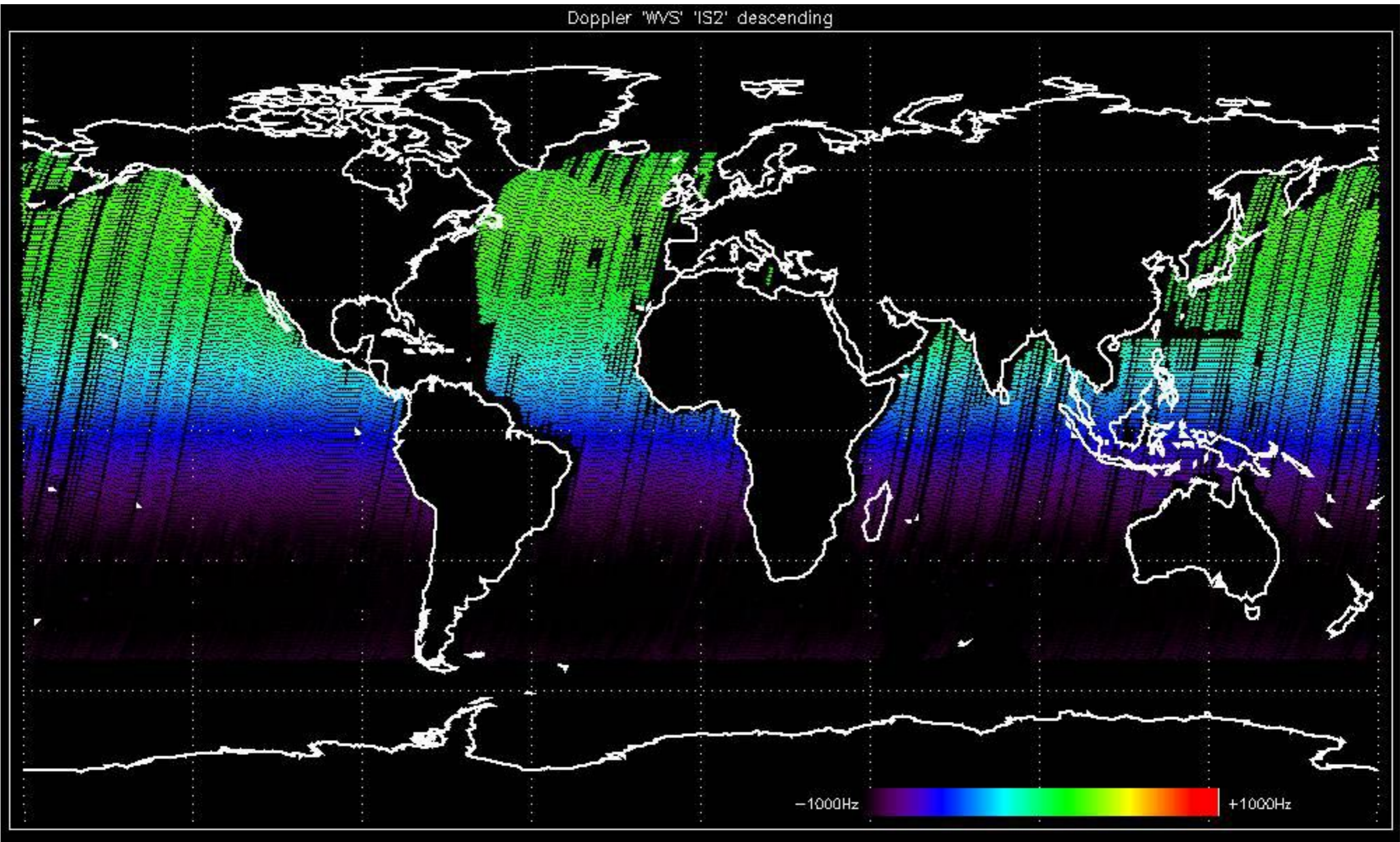


Doppler 'WVS' 'IS2' ascending

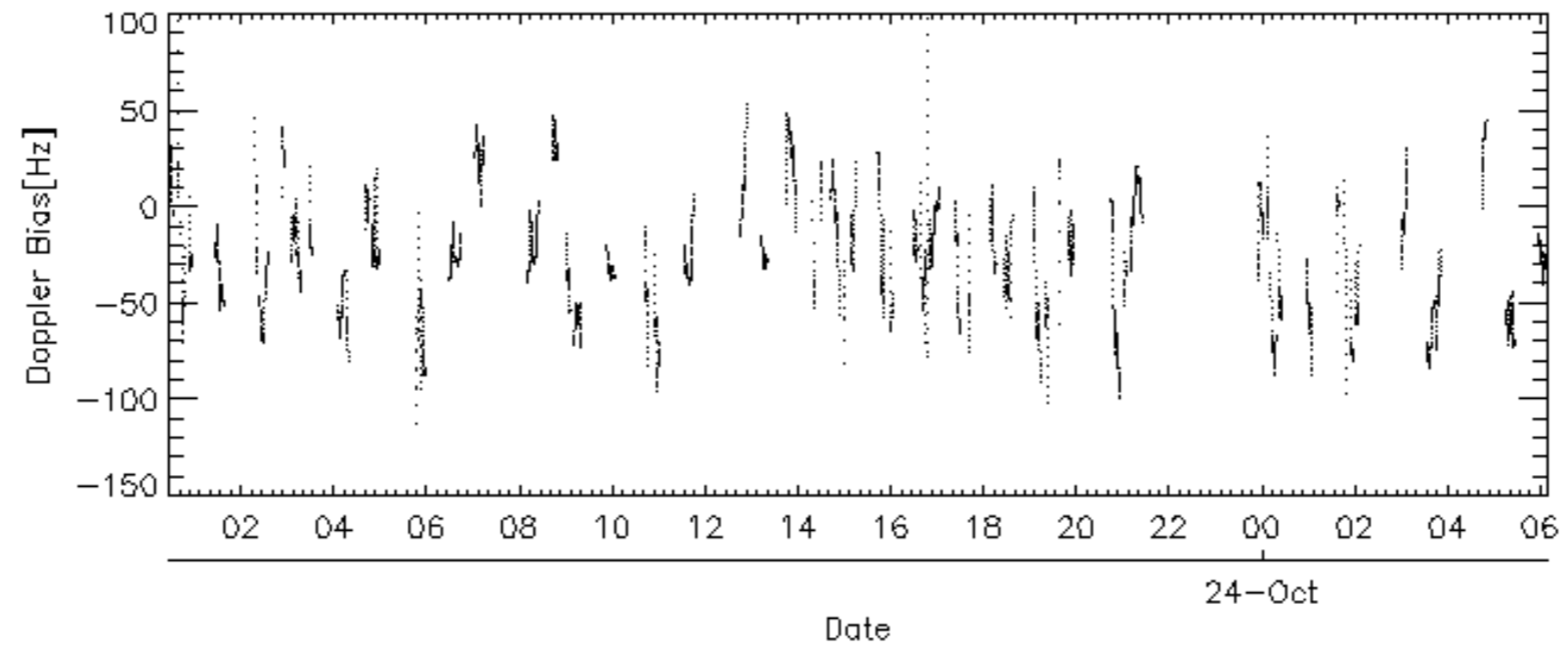
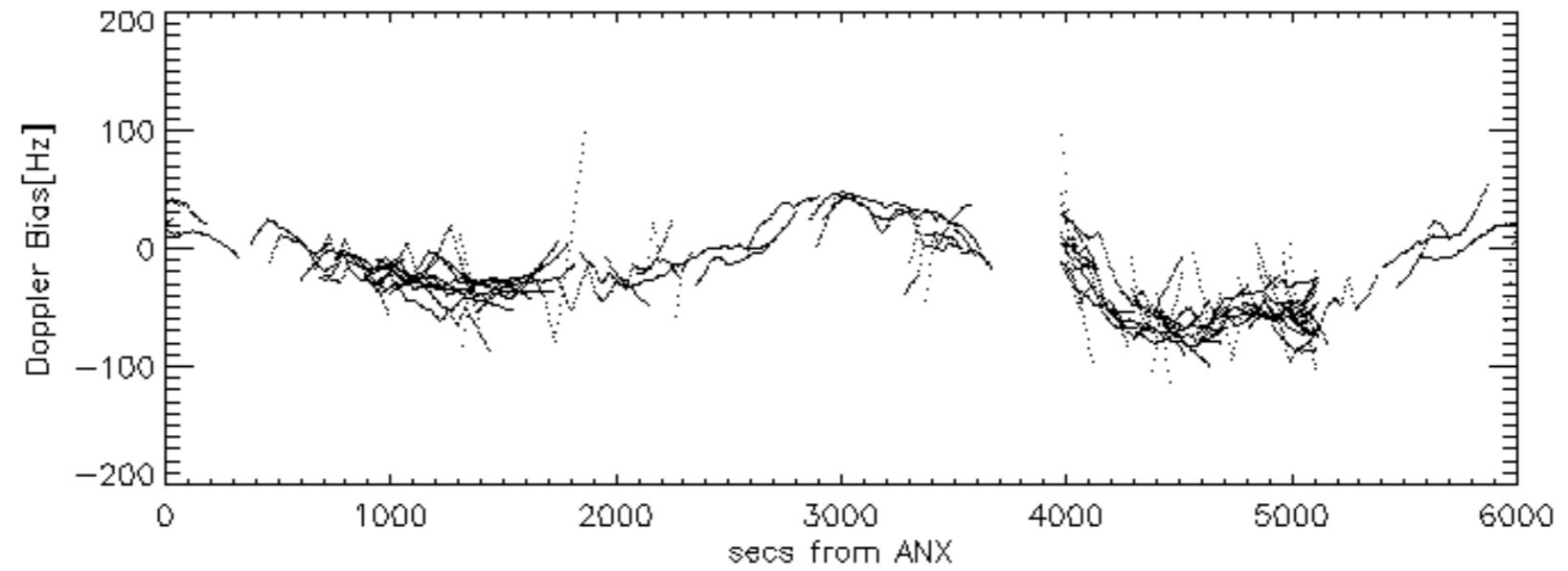
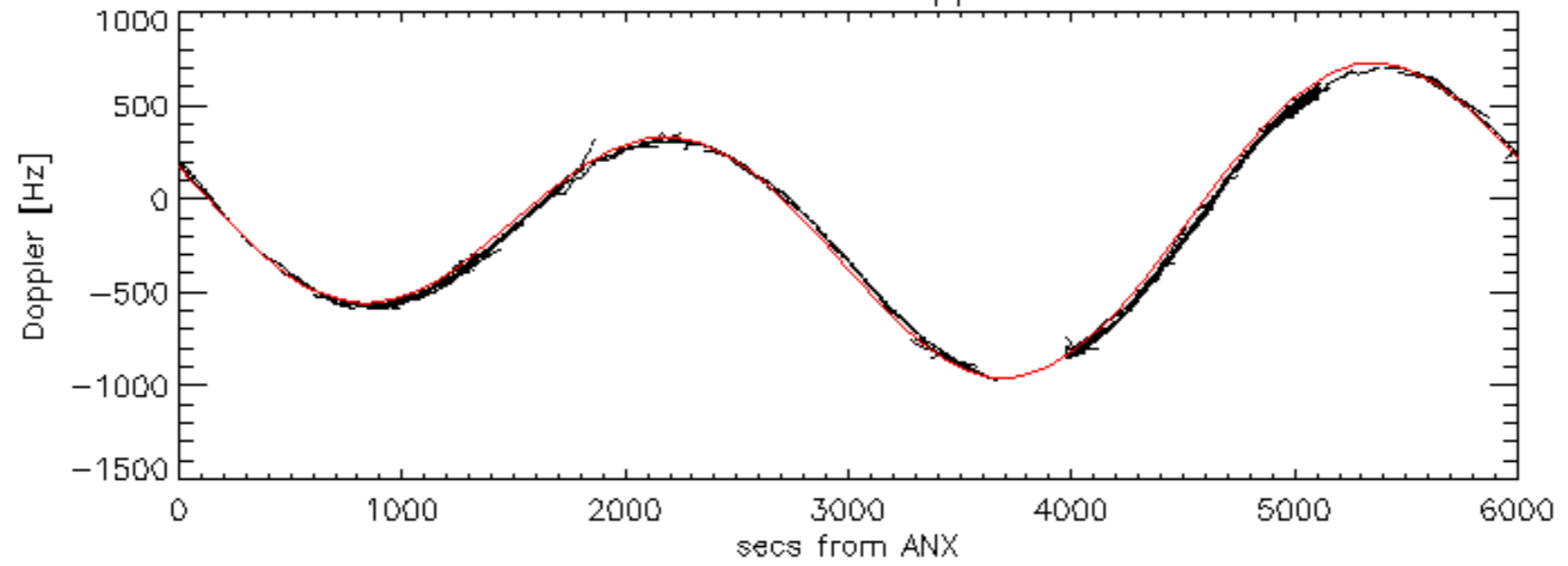


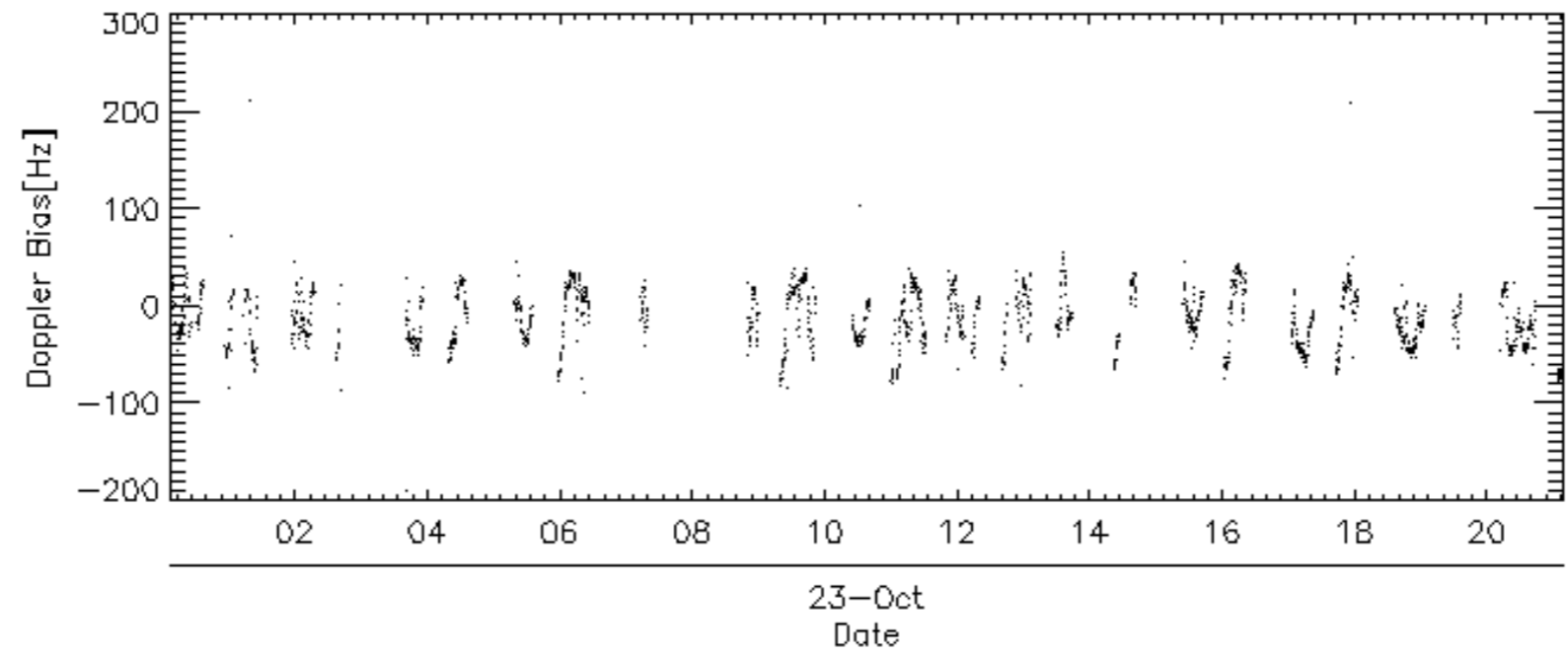
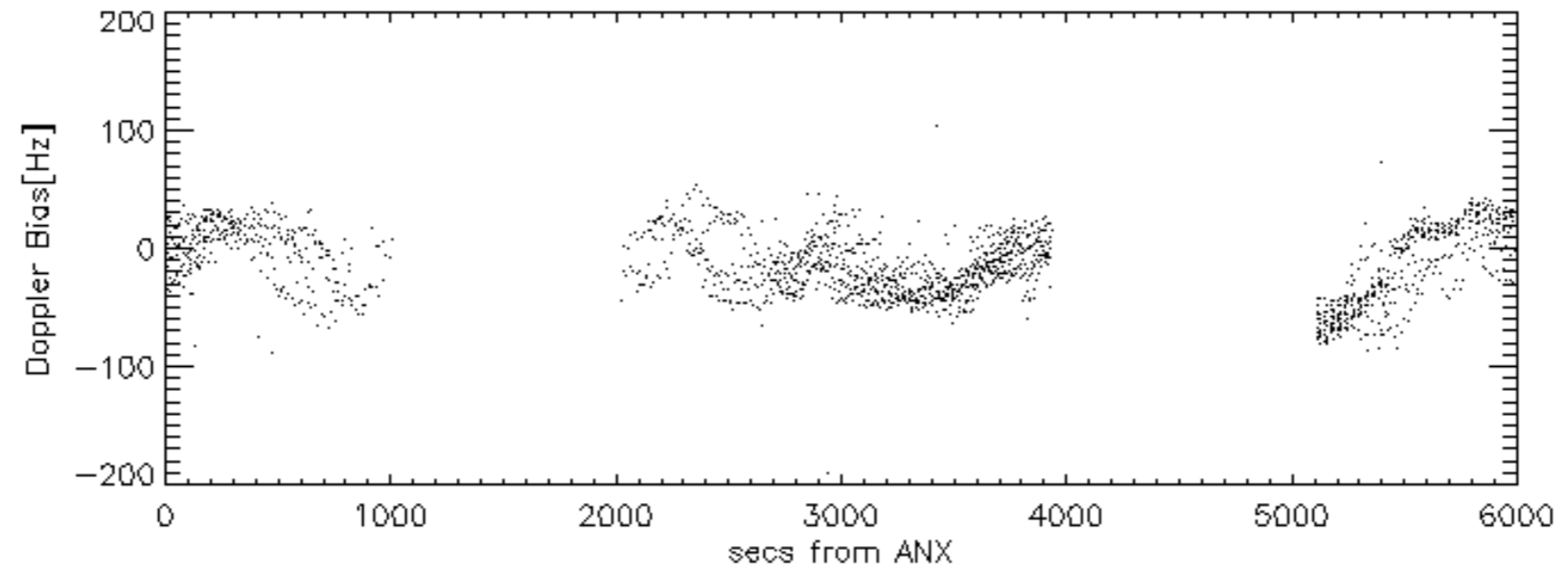
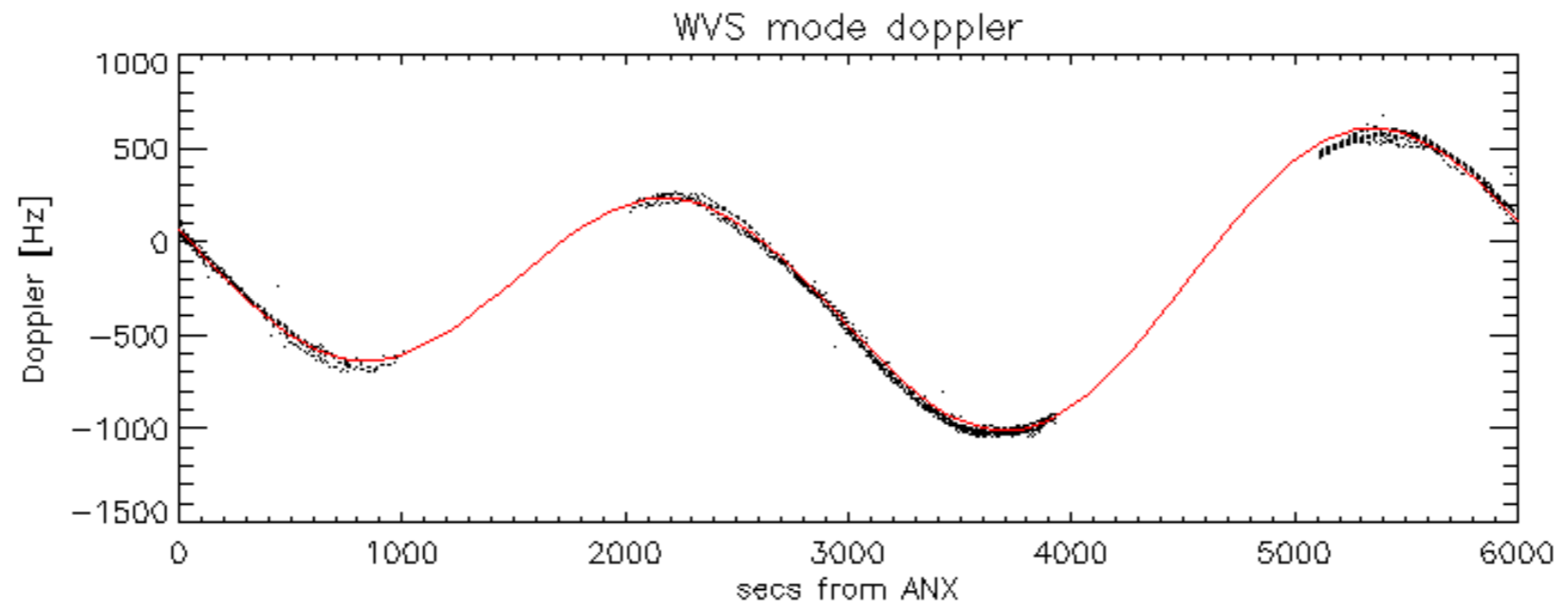


Doppler 'WVS' 'IS2' descending

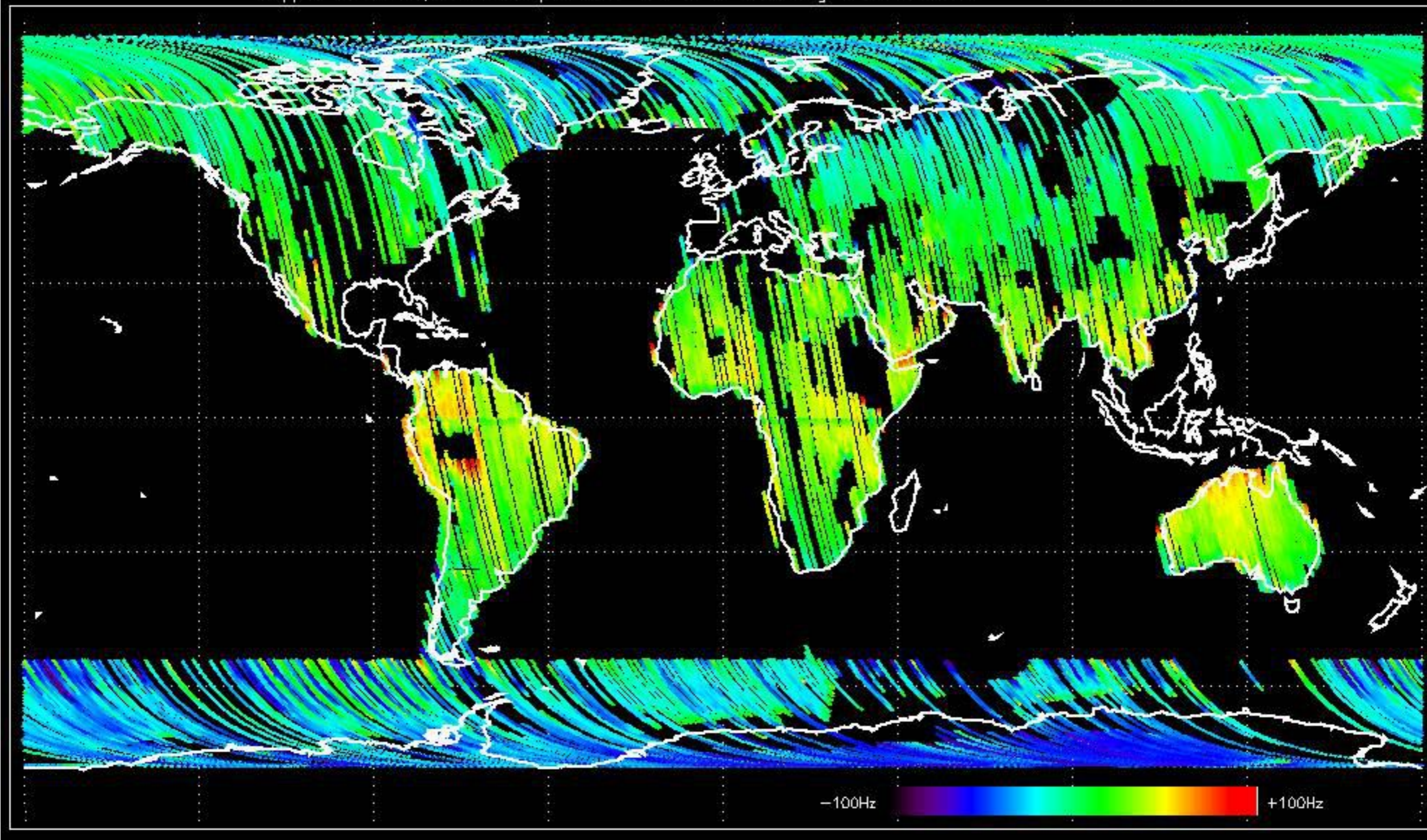


GM1 mode doppler

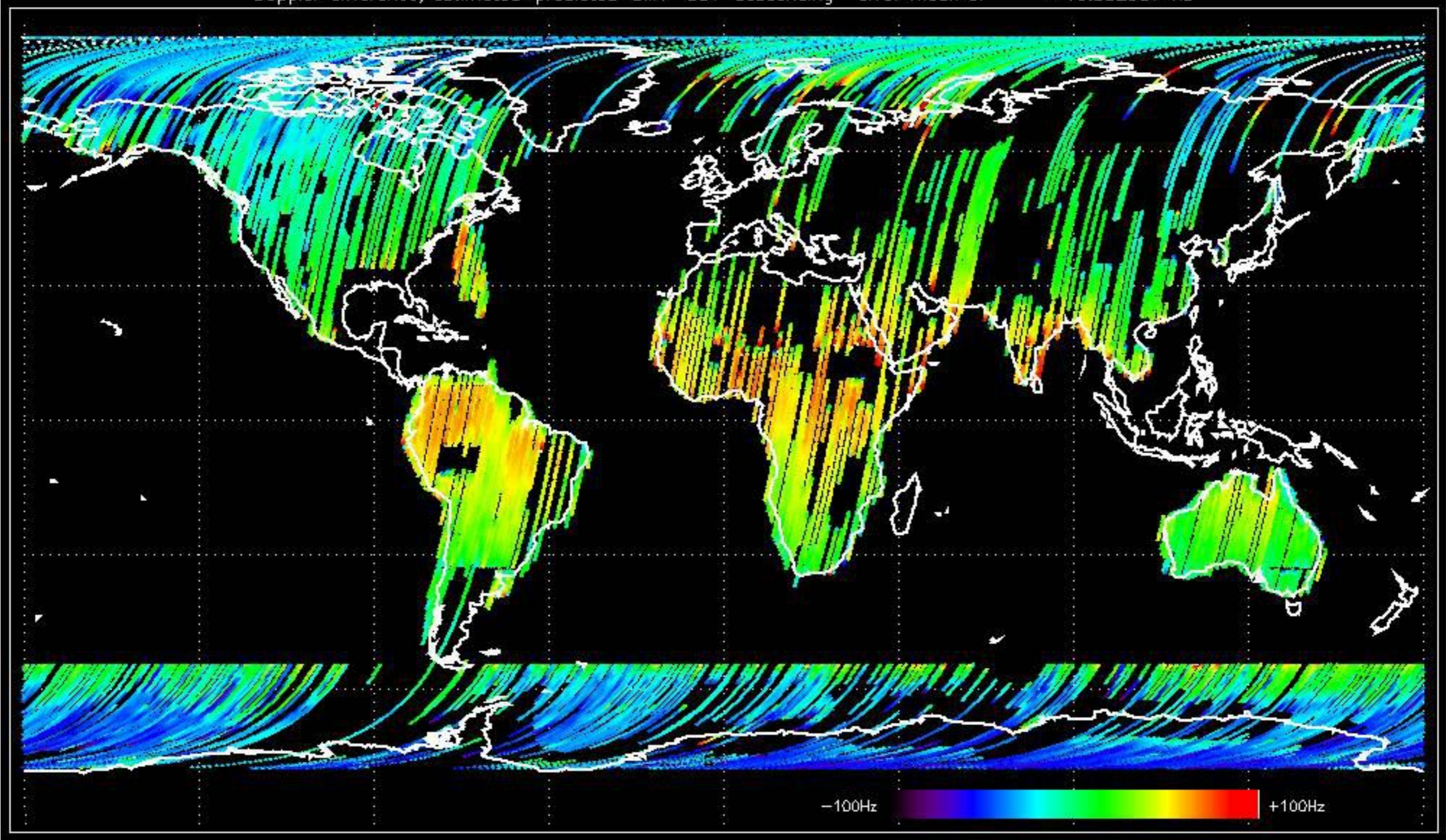




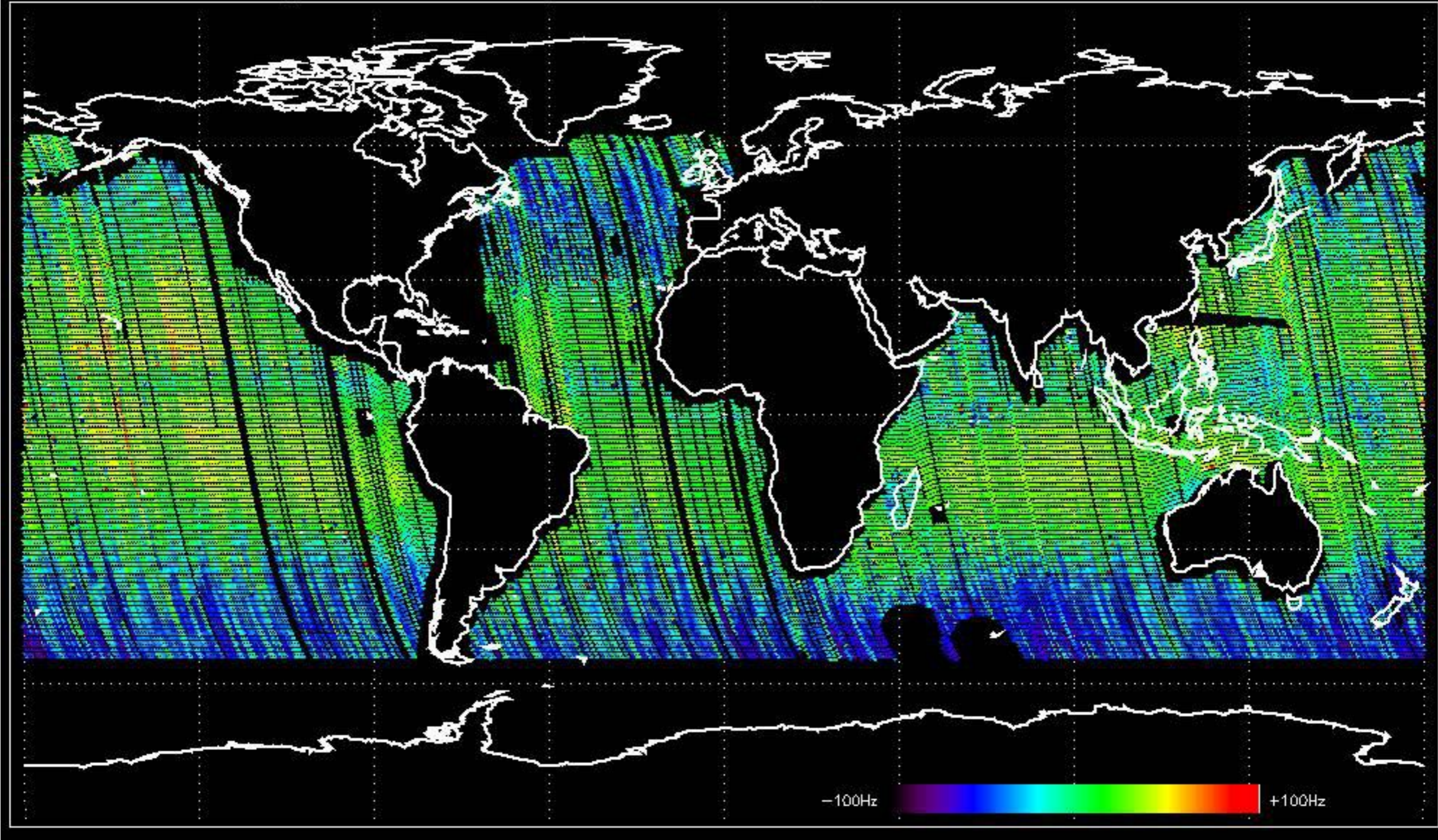
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.056884 Hz



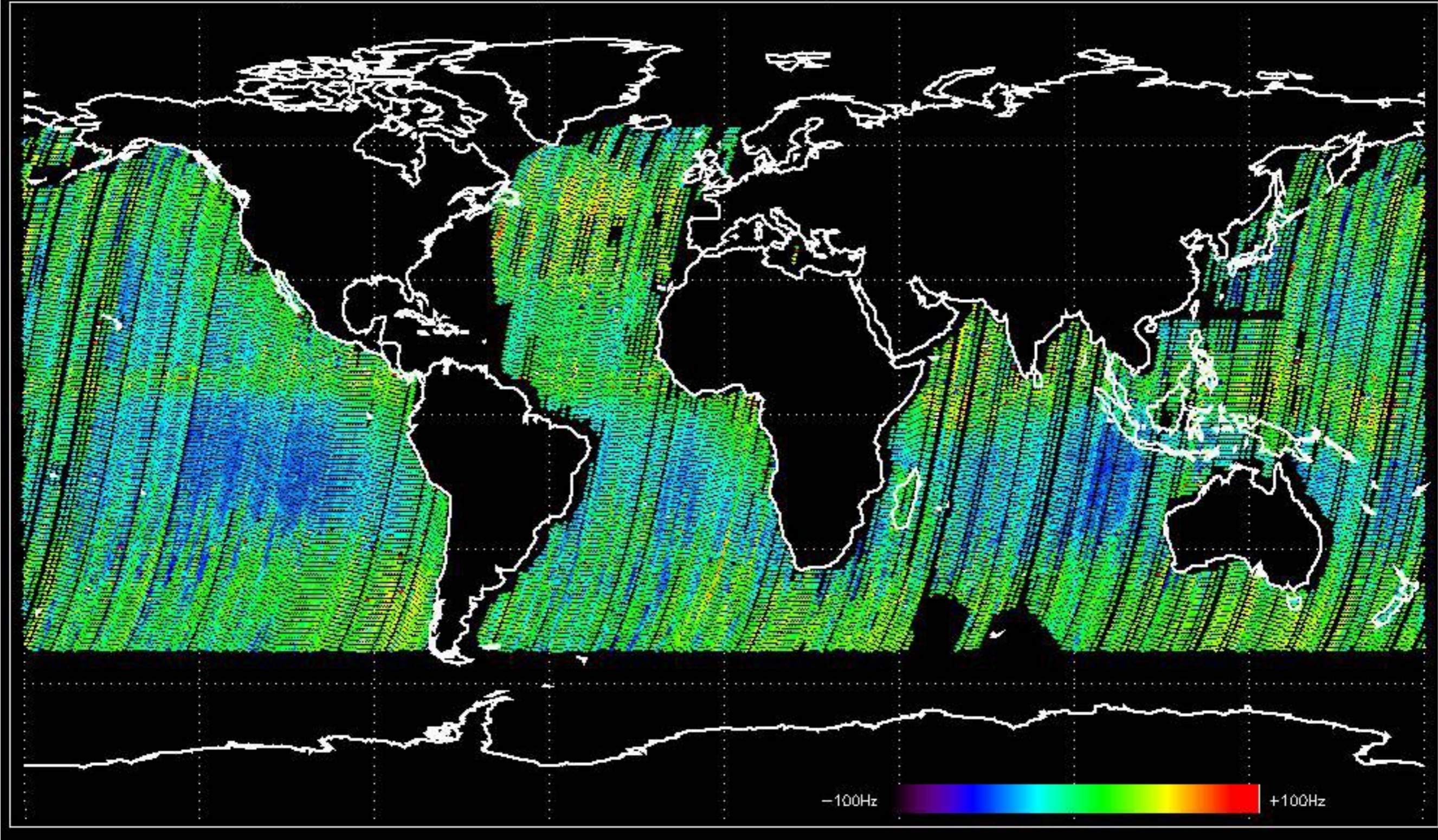
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -10.832907 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.5367836 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.534764 Hz



No anomalies observed on available MS products:



No anomalies observed.



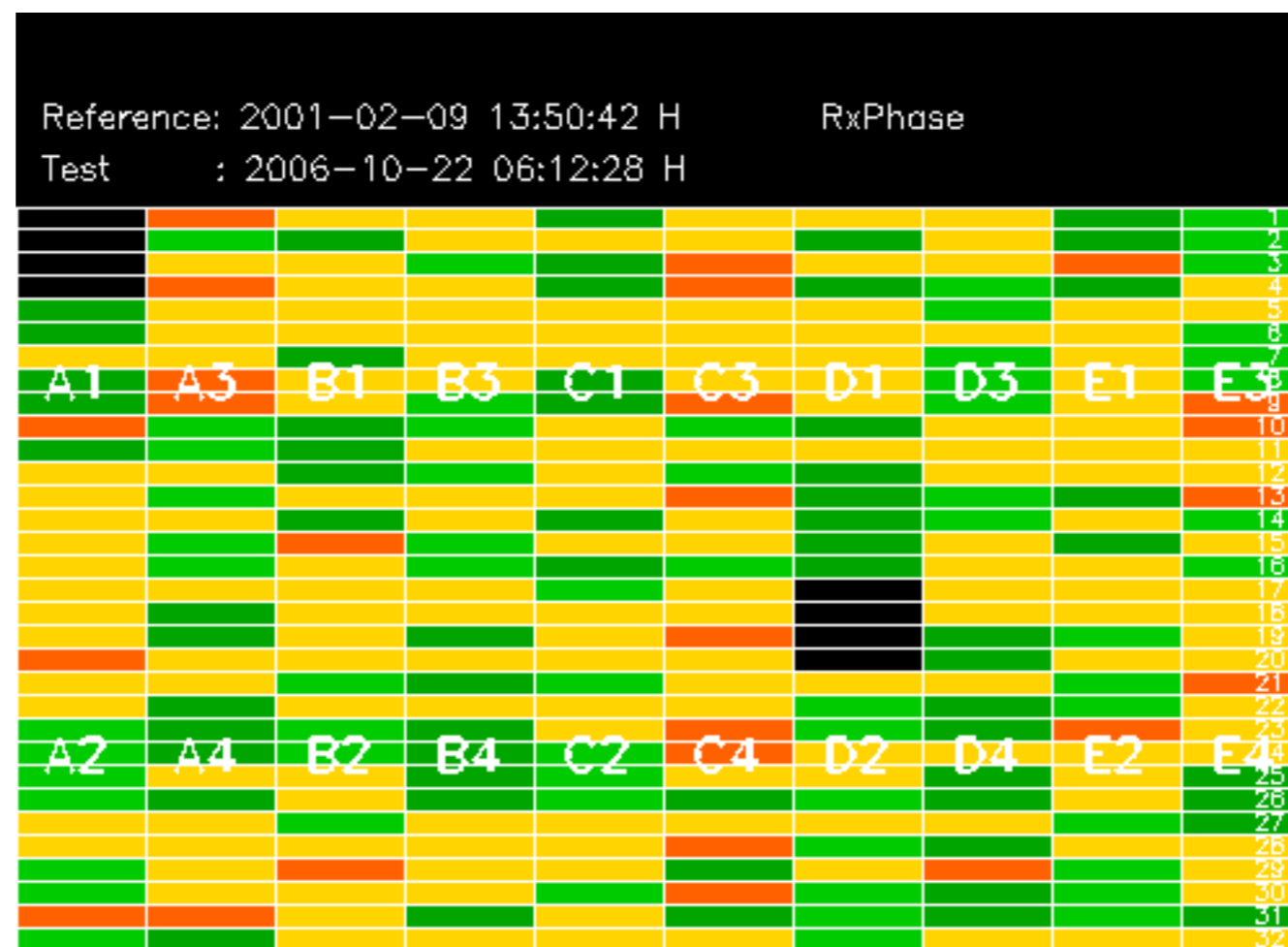






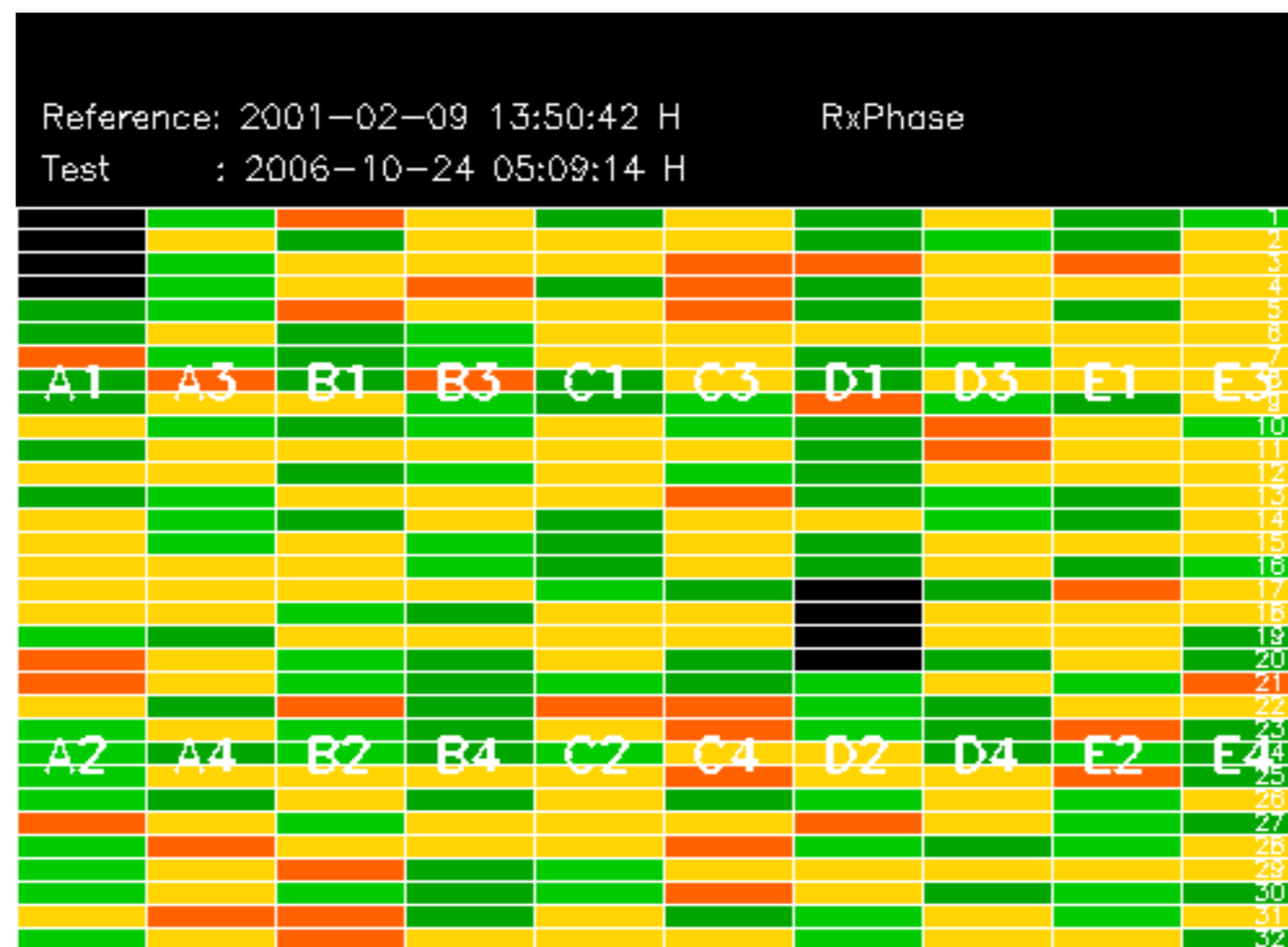








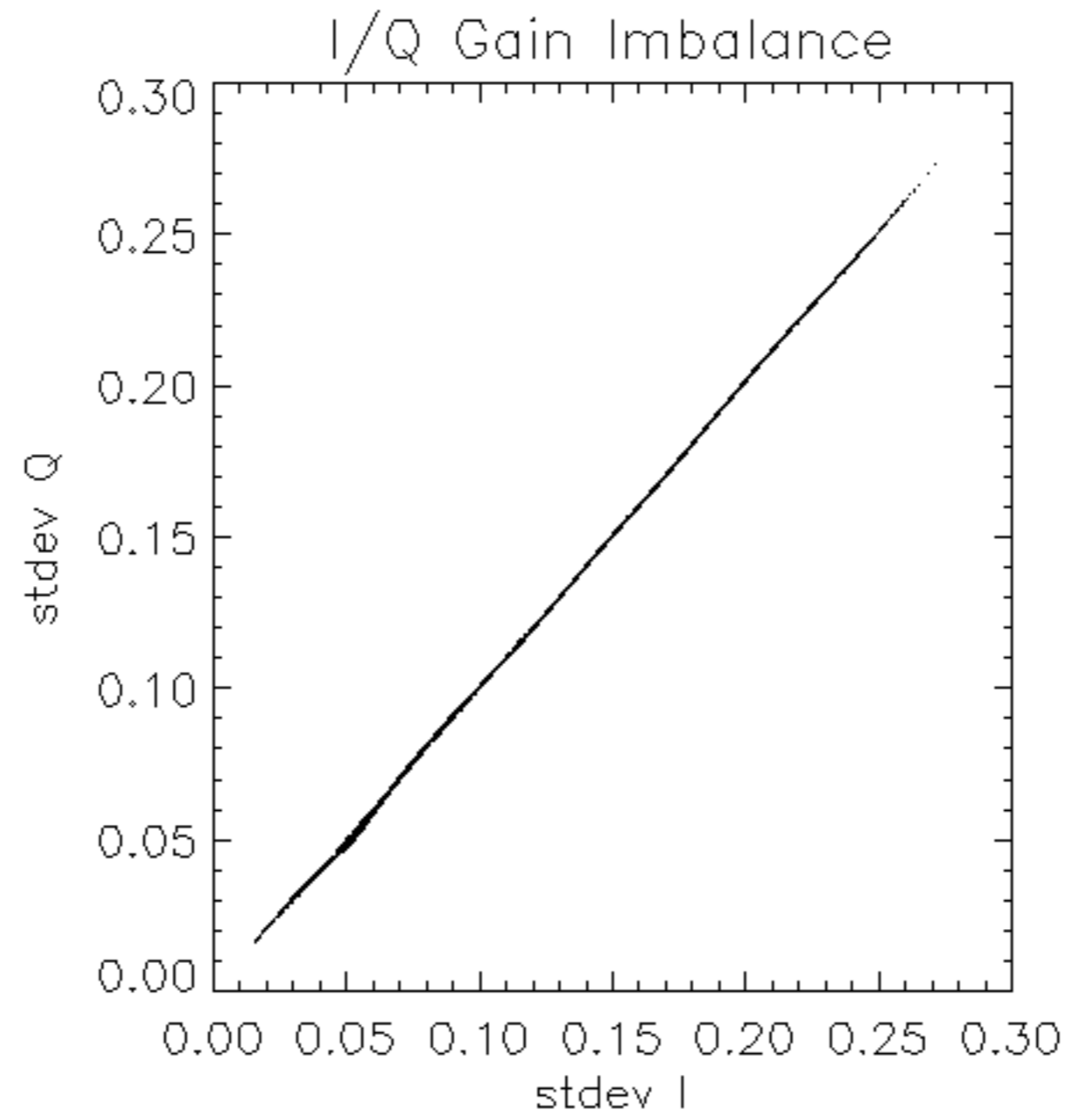


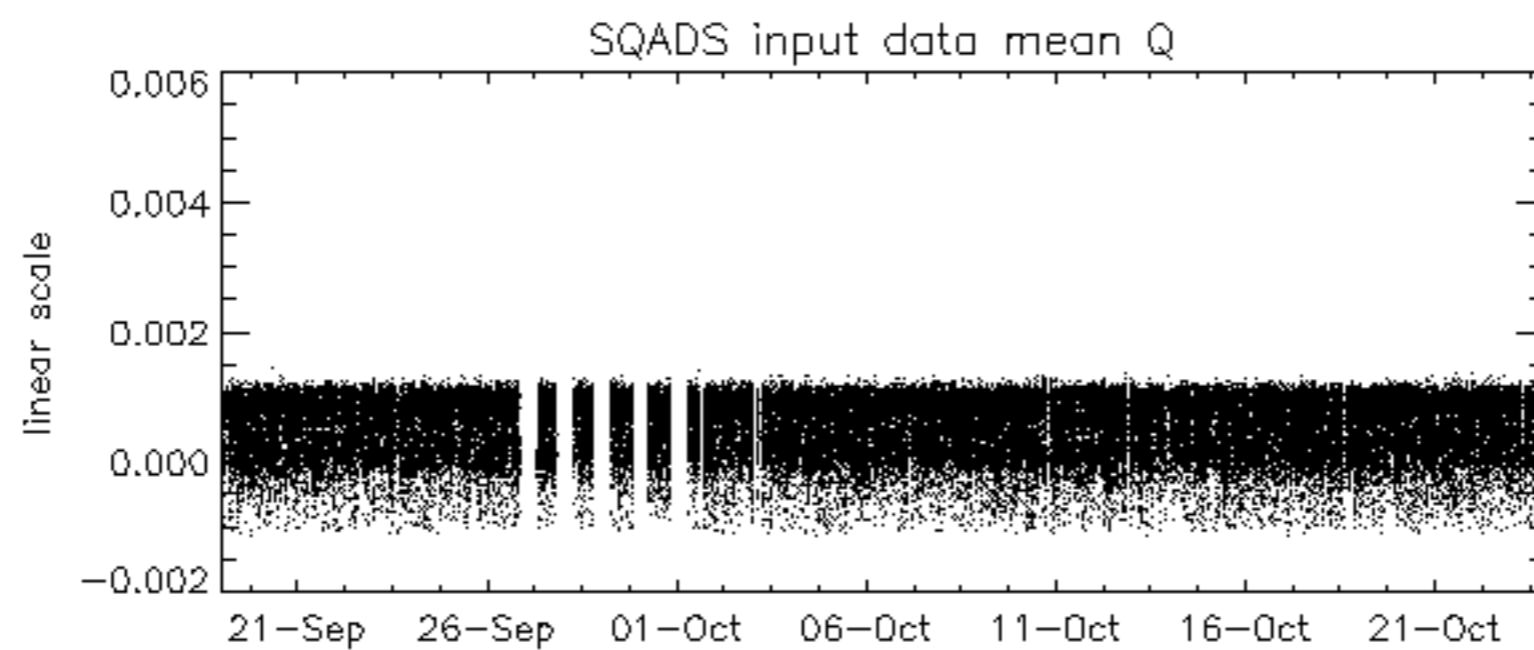
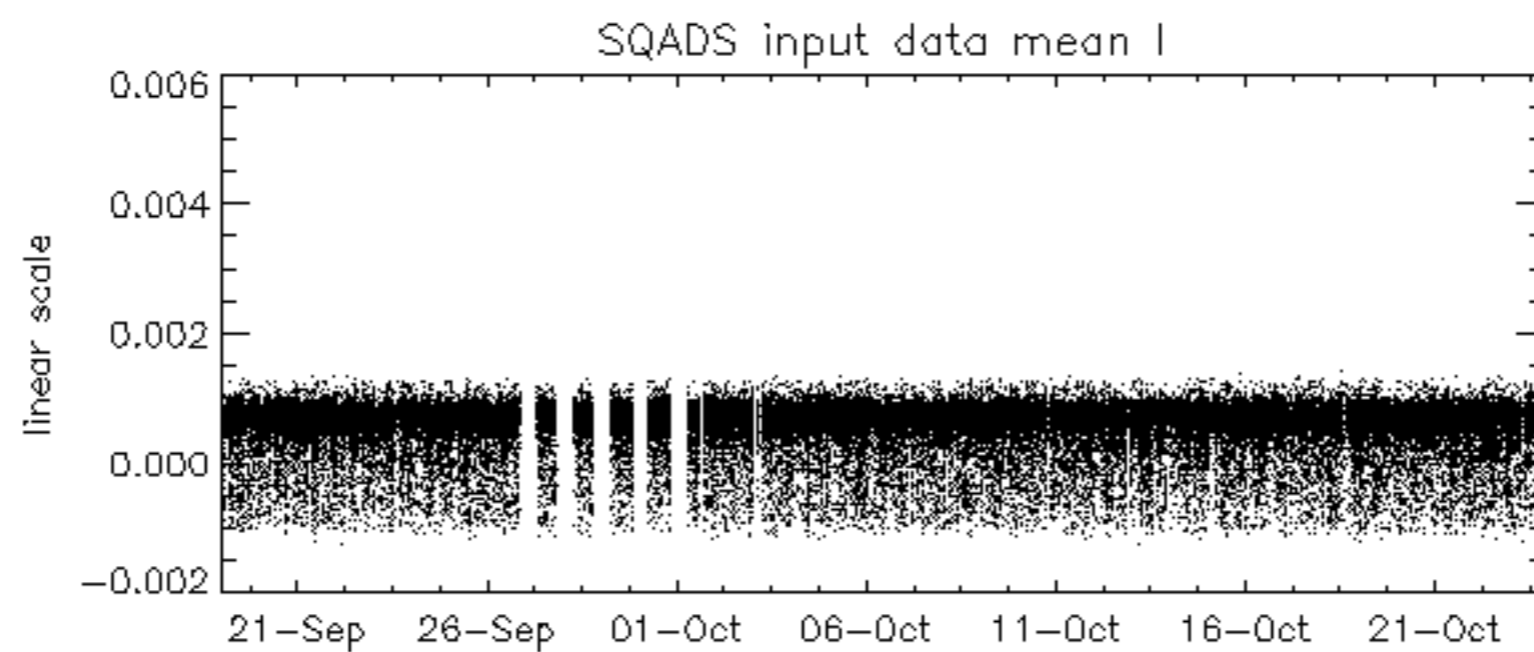
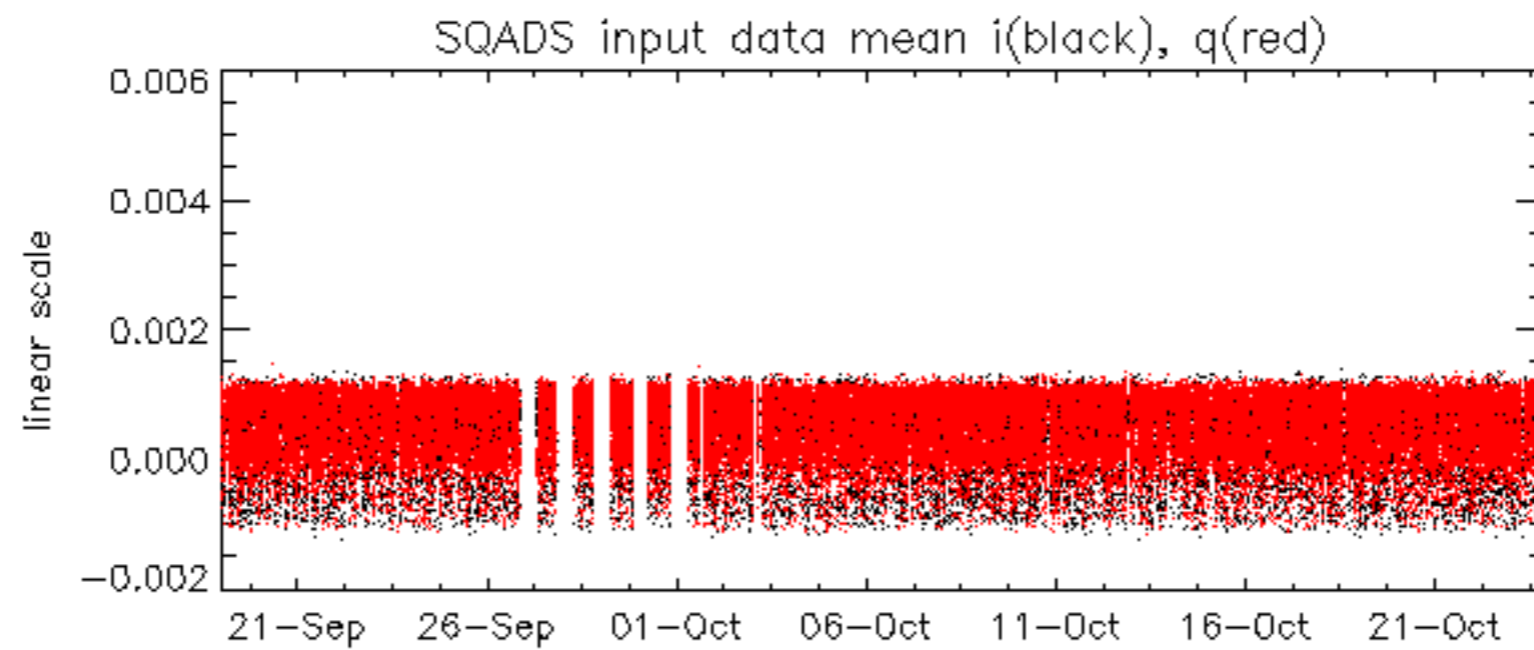


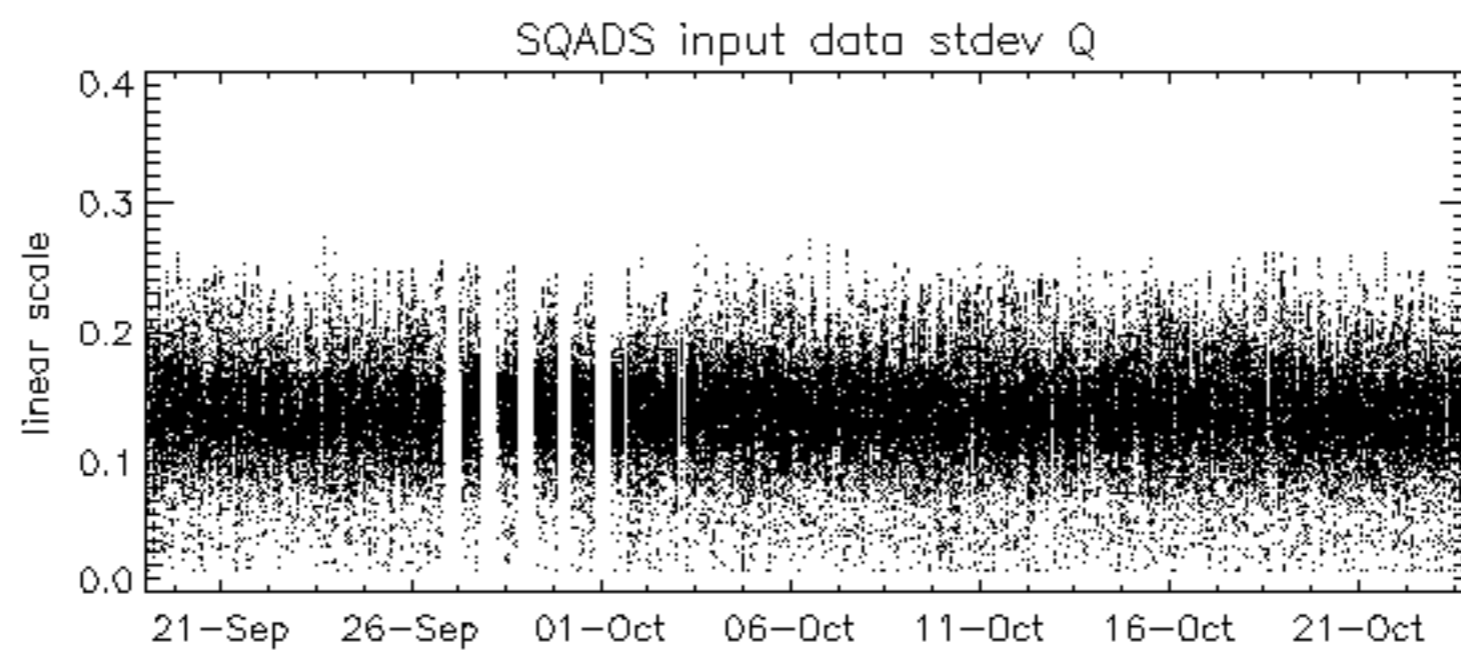
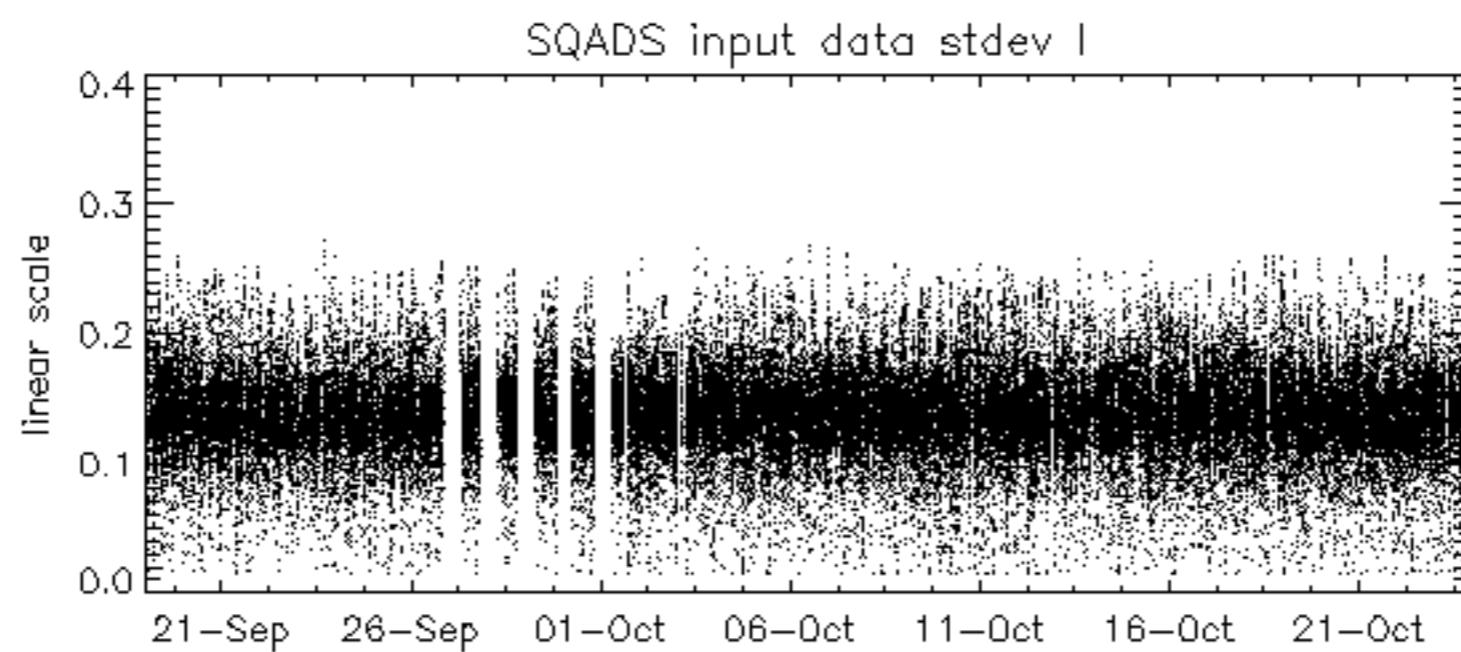
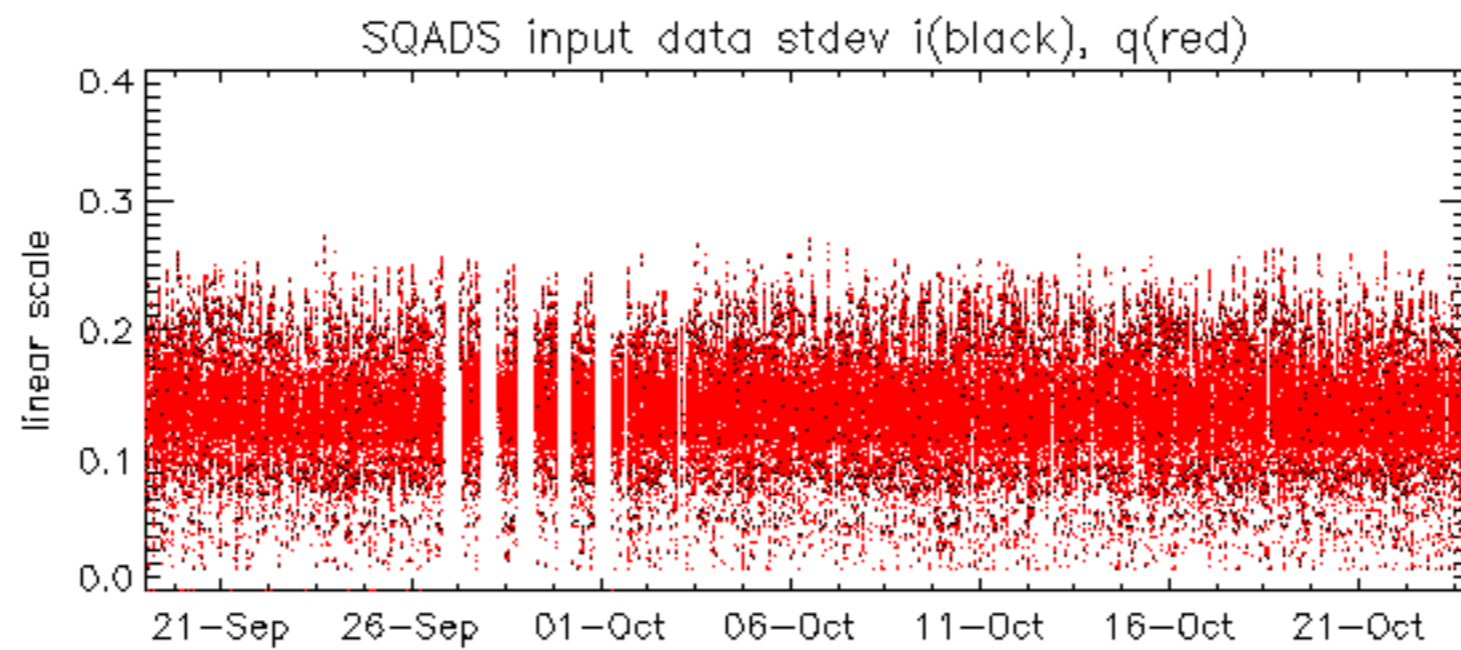








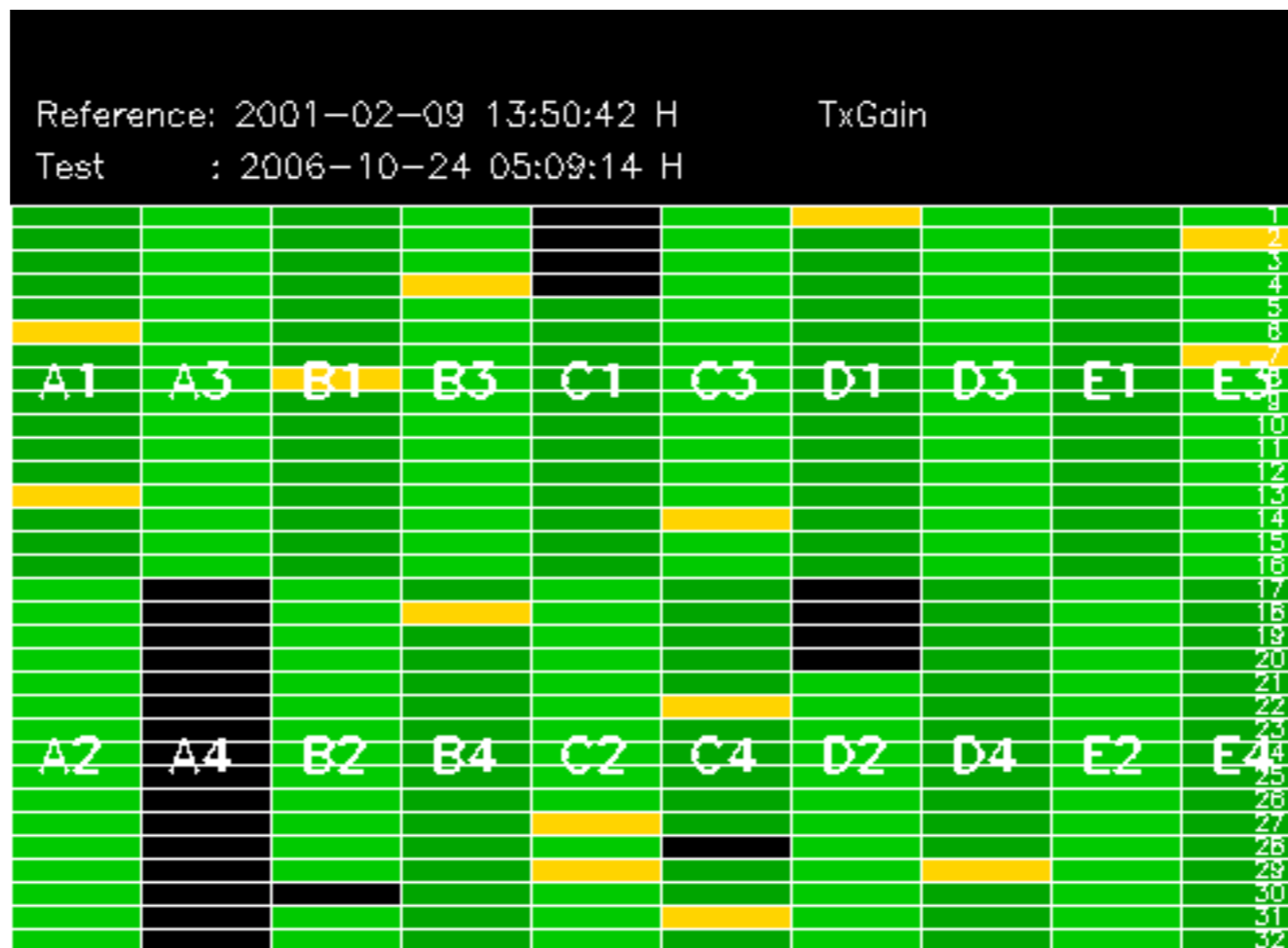














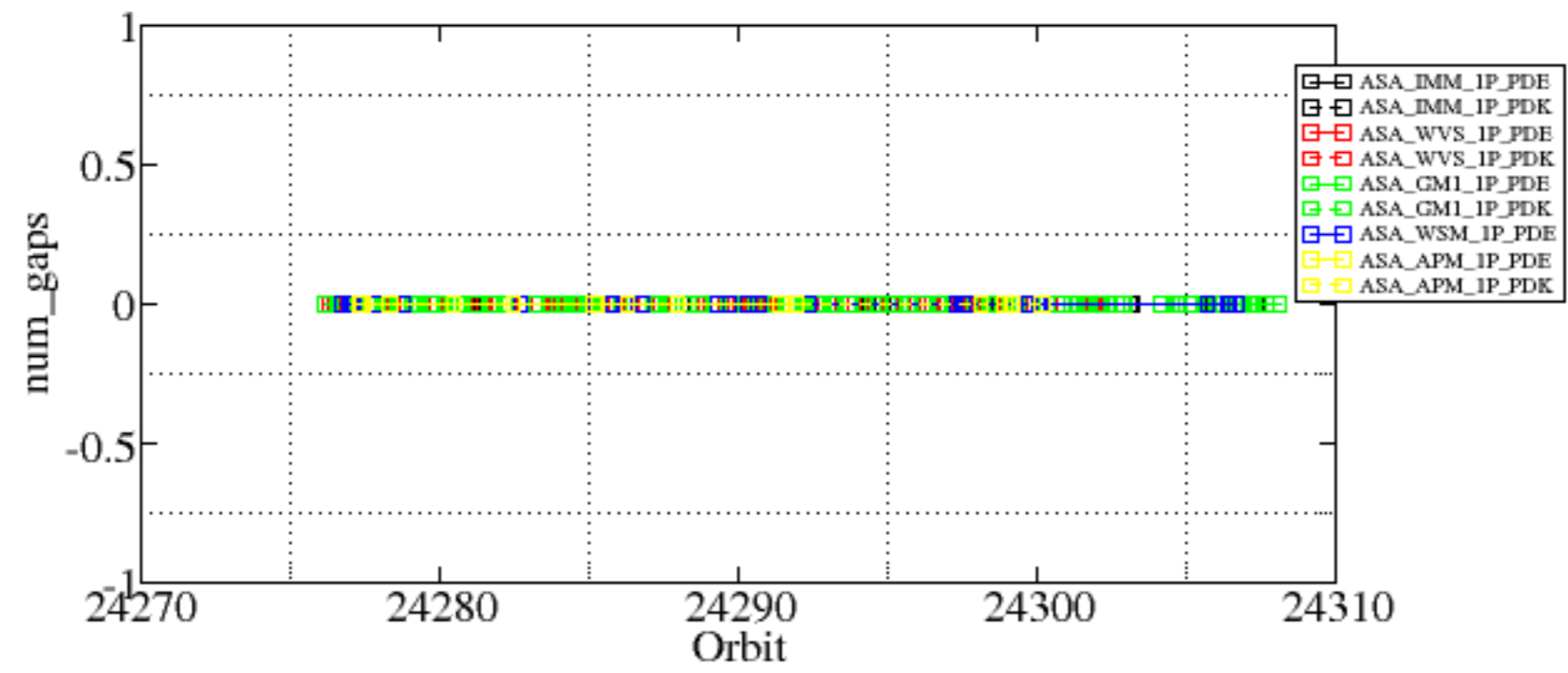




Summary of analysis for the last 3 days 2006102[234]

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
ASA_GM1_1PNPDK20061023_154305_000005372052_00197_24299_7155.N1	0	7
ASA_WSM_1PNPDE20061023_162157_000001282052_00198_24300_4755.N1	0	52



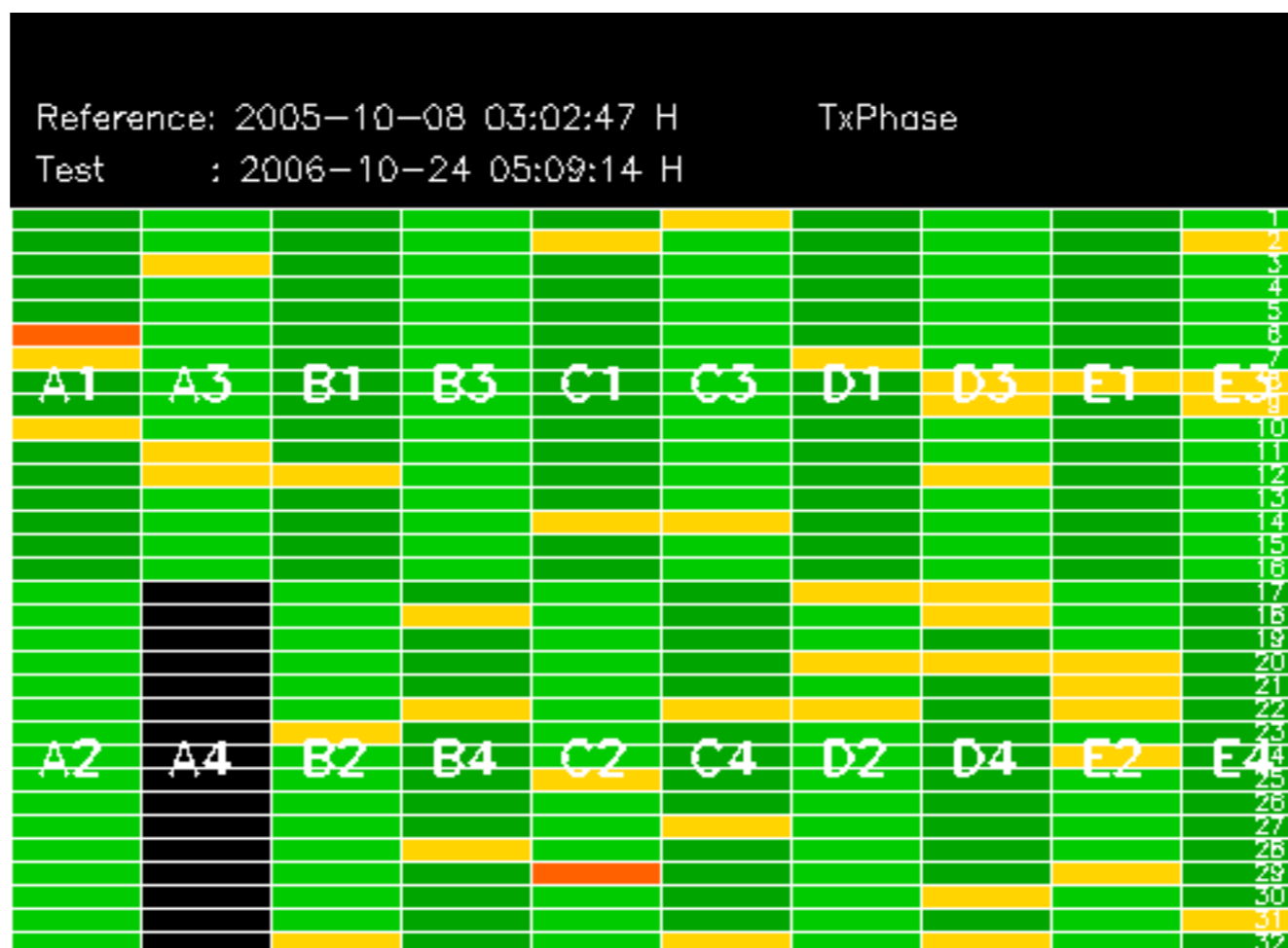


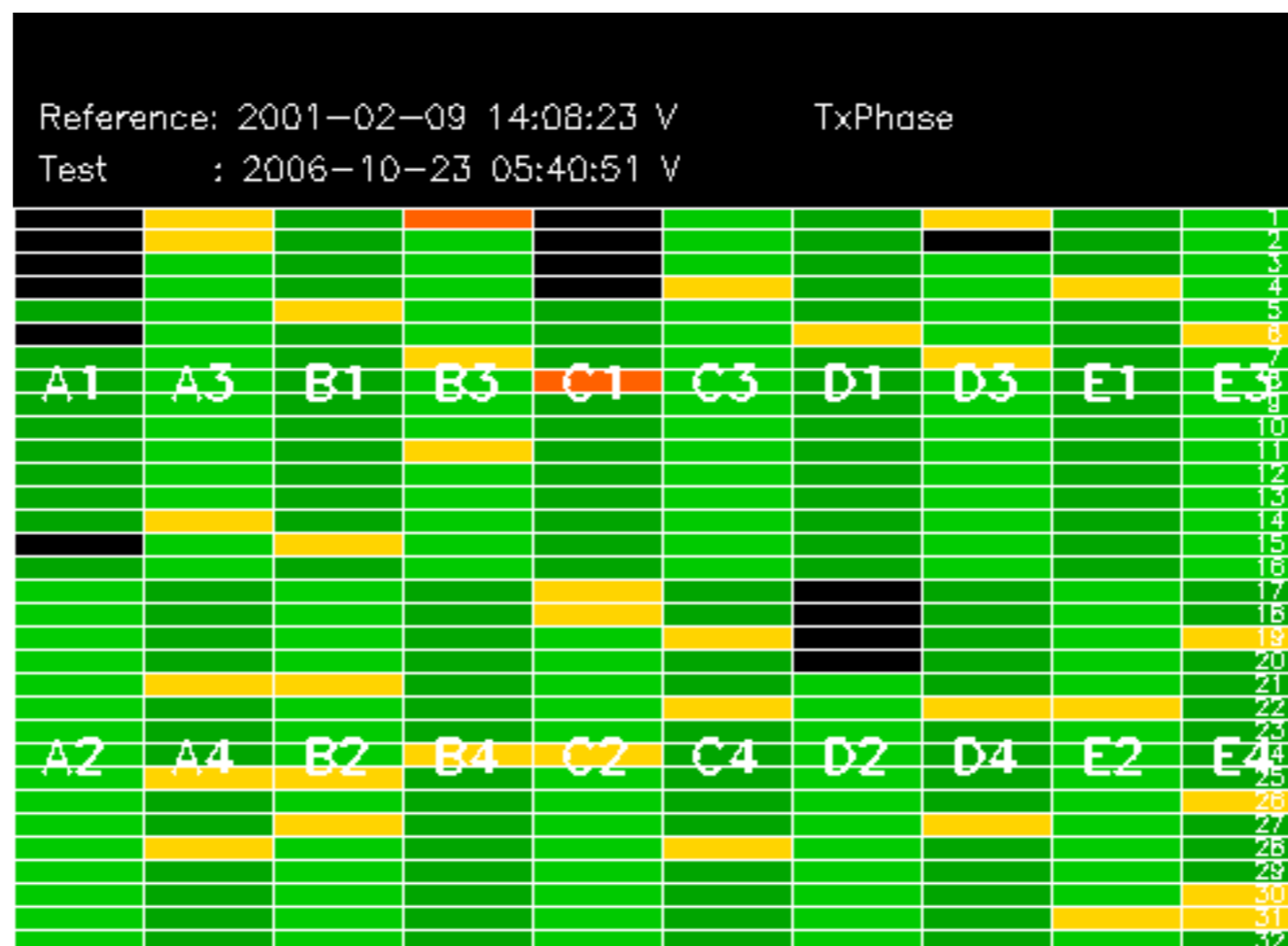




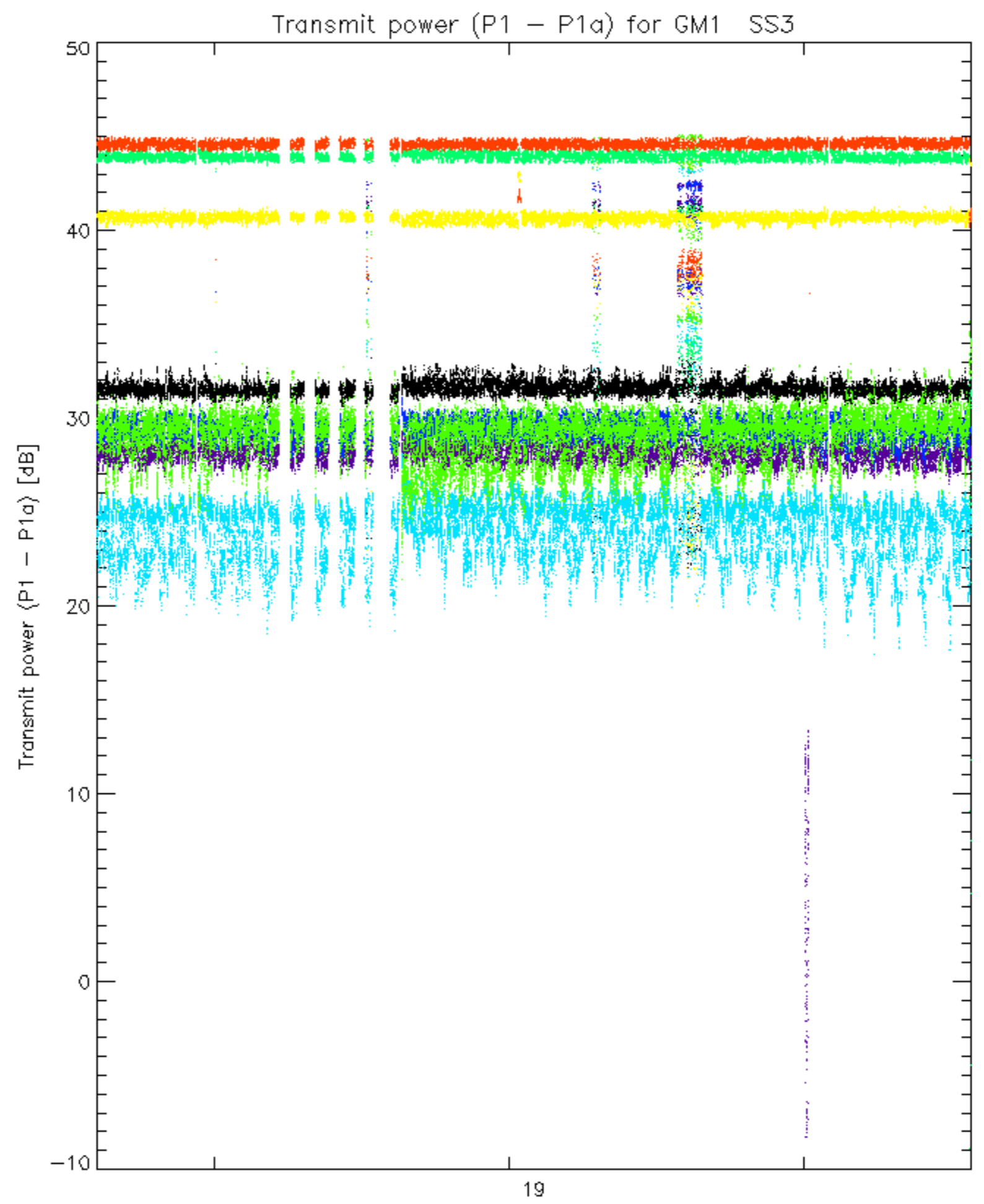






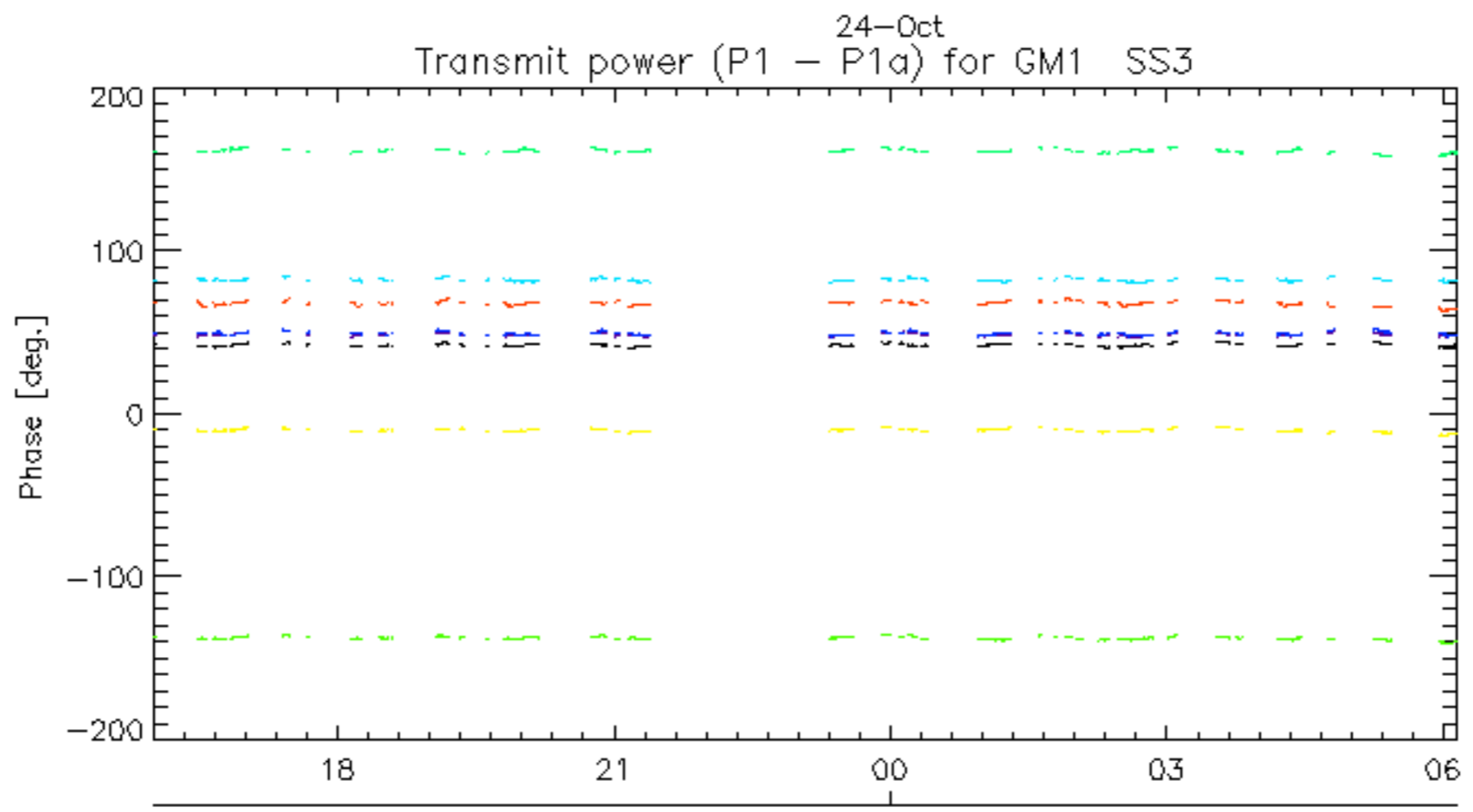
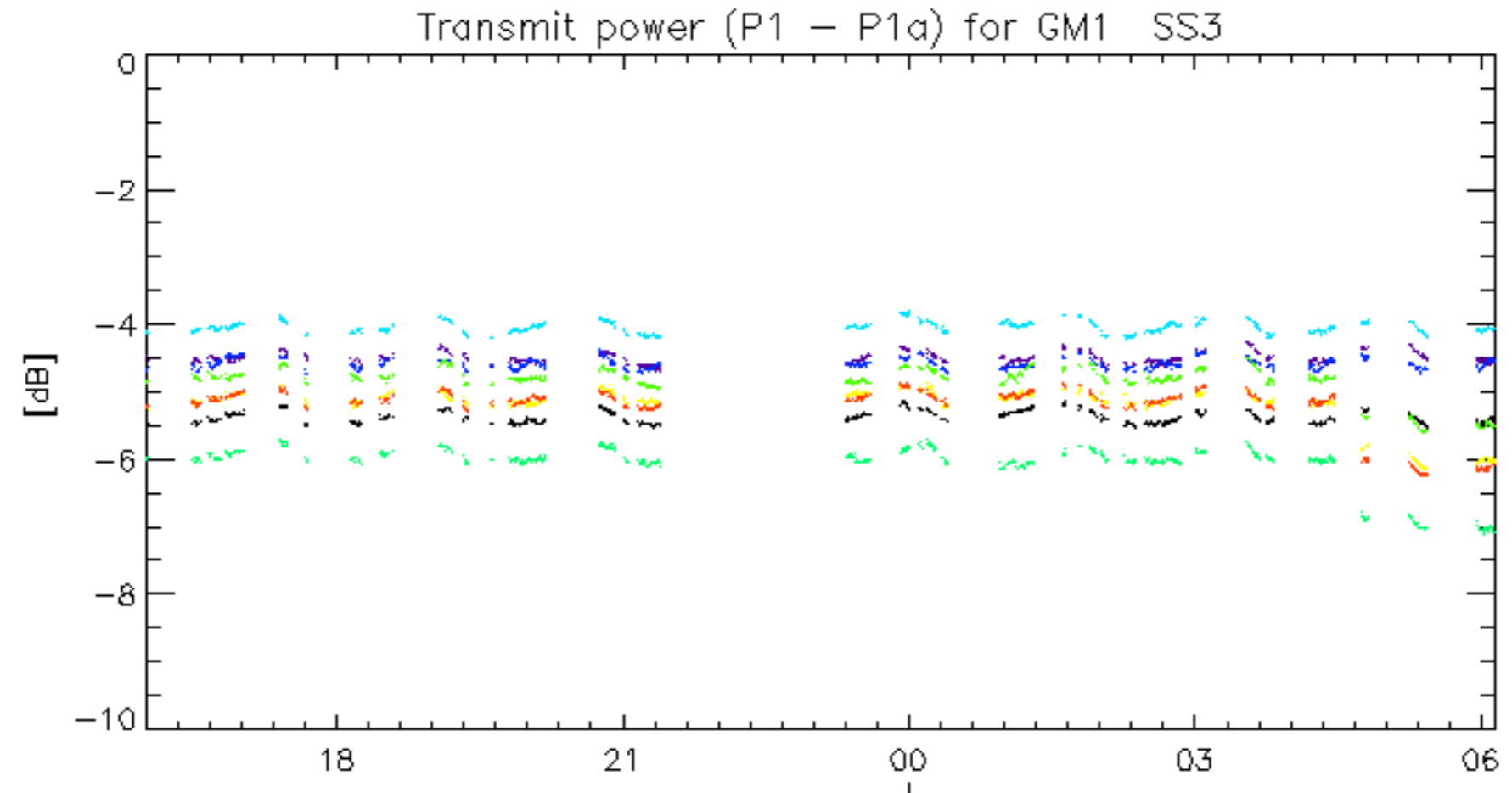




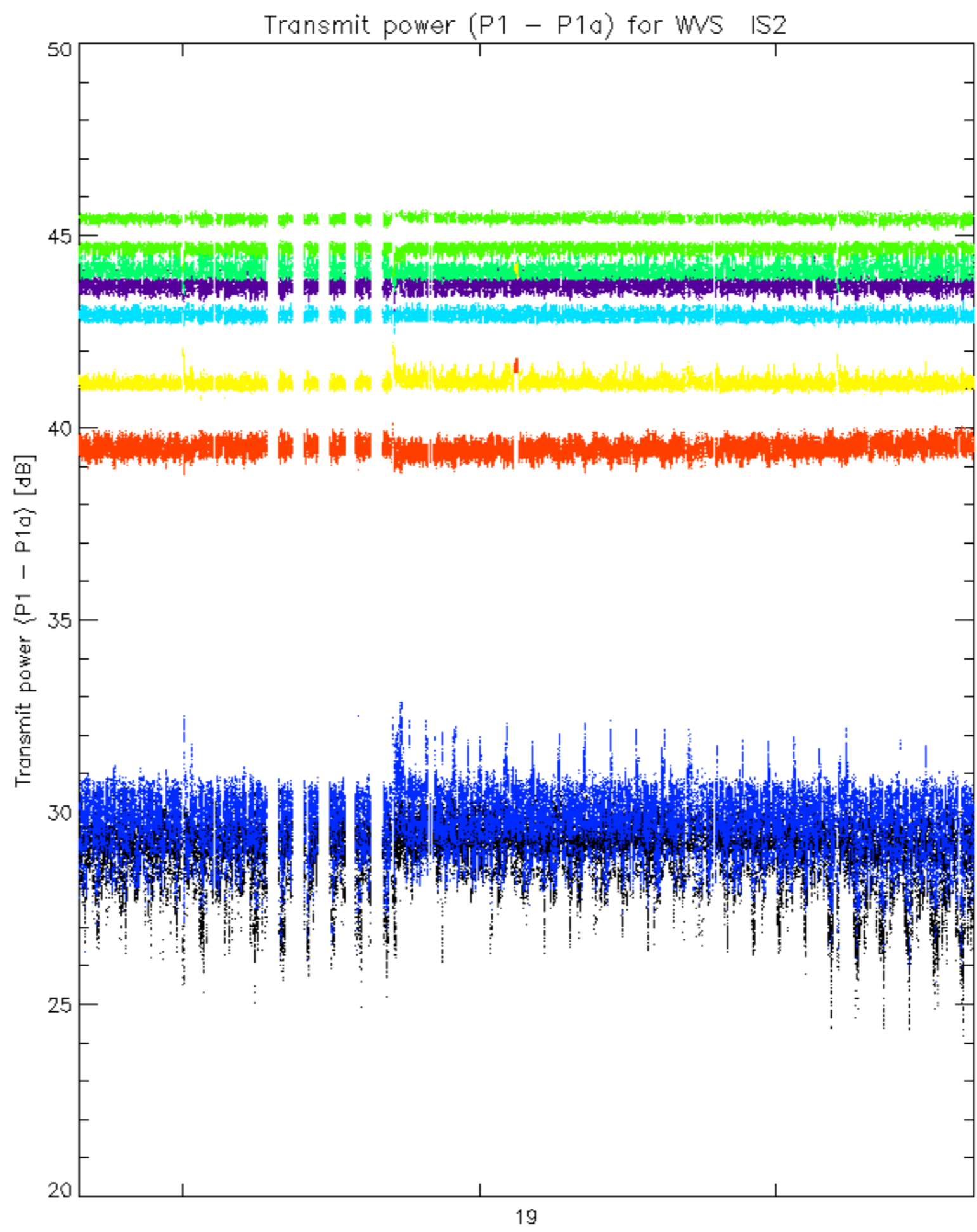


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

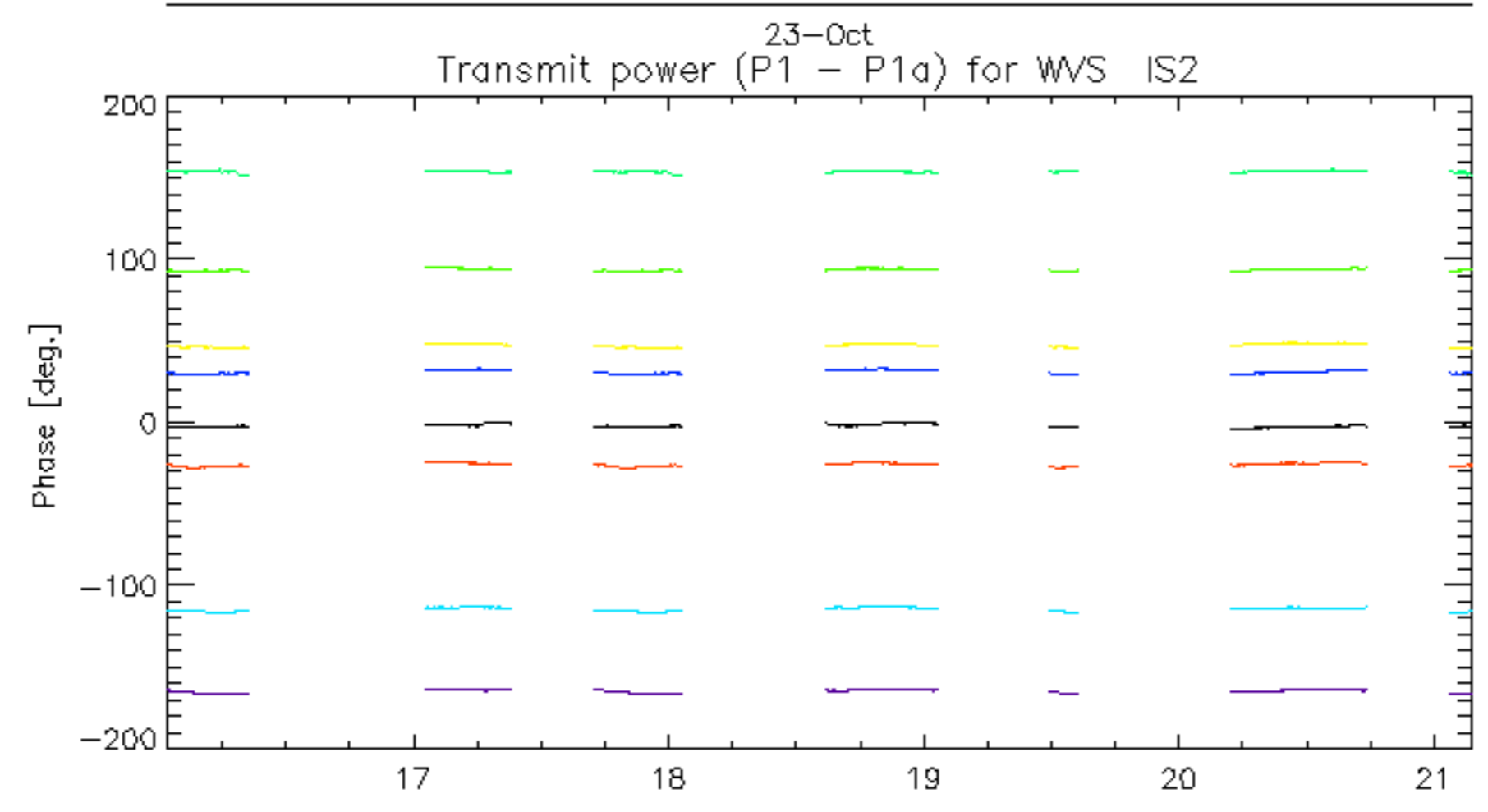
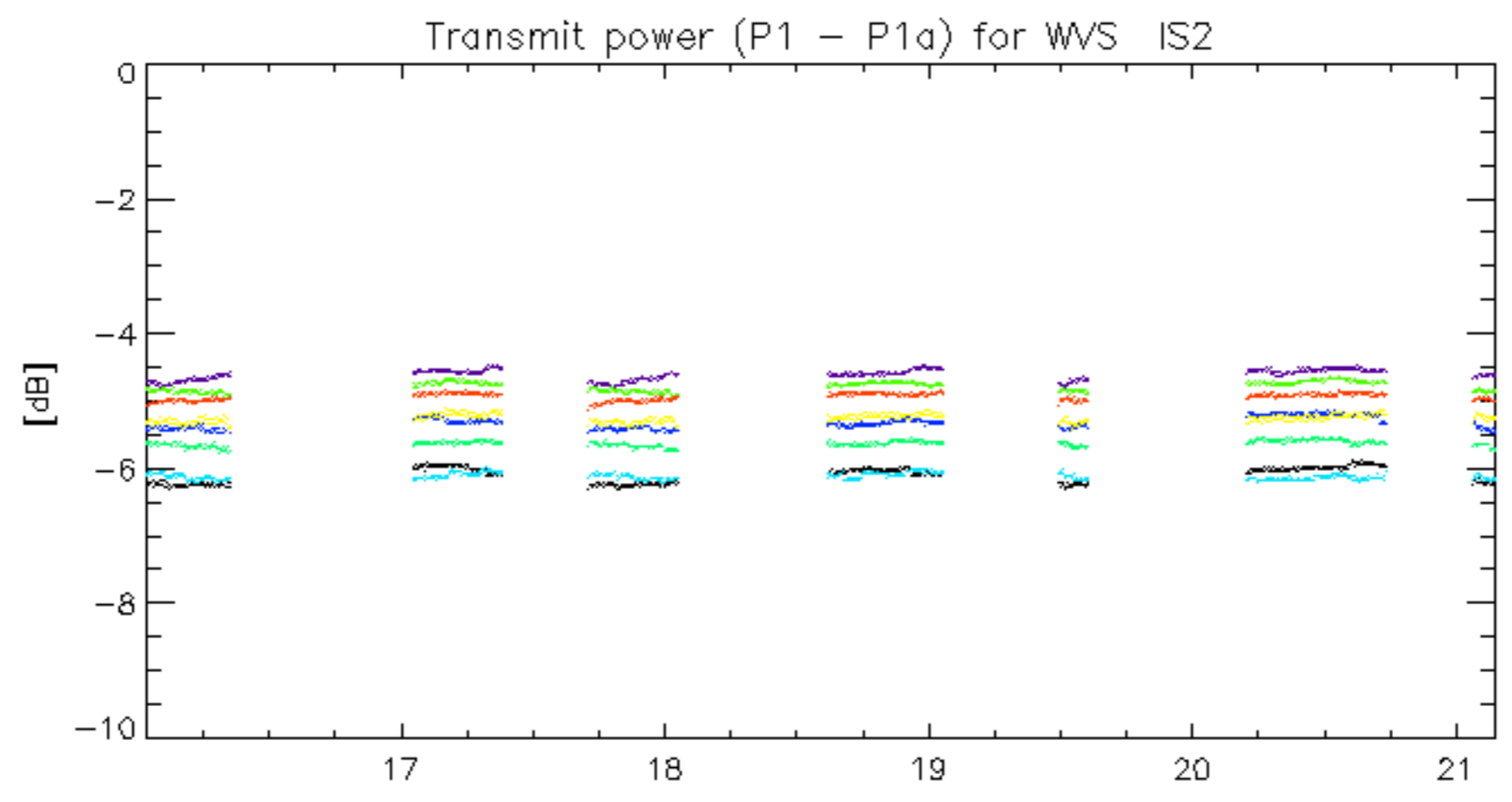




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



rows: **3** **7** **11** **15** **19** **22** **26** **30**

No unavailabilities during the reported period.