

# PRELIMINARY REPORT OF 060917

last update on Sun Sep 17 16:39:16 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 2006-09-16 00:00:00 to 2006-09-17 16:39:16

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	69	10	0	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	38	69	10	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	69	10	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	69	10	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	20	32	24	22	93
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	20	32	24	22	93
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	20	32	24	22	93
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	20	32	24	22	93

## 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	20060916 064400
H	20060917 061223

### MSM in V/V 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"/>

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

**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	-3.939237	0.009792	0.009219
7	P1	-3.047415	0.011525	-0.062152
11	P1	-4.055791	0.017517	-0.004004
15	P1	-6.179731	0.015209	0.005661
19	P1	-3.512663	0.049927	-0.091331
22	P1	-4.567433	0.027038	-0.021110
26	P1	-3.943211	0.019683	-0.056206
30	P1	-5.790693	0.150425	-0.095973
3	P1	-16.584850	0.256073	-0.174500
7	P1	-16.780836	0.668585	-1.127053
11	P1	-16.803337	0.340614	-0.032866
15	P1	-12.916019	0.106856	0.217567
19	P1	-14.612894	0.451604	-0.207476
22	P1	-15.716519	0.562105	0.305676
26	P1	-15.205419	0.208686	-0.054926
30	P1	-16.938873	0.400798	0.113029

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.827997	0.082918	0.074042
7	P2	-21.861023	0.096612	0.010183
11	P2	-15.744529	0.107344	-0.019053
15	P2	-7.089922	0.098443	0.019388
19	P2	-9.112489	0.091312	-0.007904
22	P2	-18.119219	0.086190	0.034939
26	P2	-16.400745	0.093416	-0.017817
30	P2	-19.468084	0.089948	0.011252

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.174871	0.004611	-0.003457
7	P3	-8.174871	0.004611	-0.003457
11	P3	-8.174871	0.004611	-0.003457
15	P3	-8.174871	0.004611	-0.003457
19	P3	-8.174871	0.004611	-0.003457
22	P3	-8.174871	0.004611	-0.003457
26	P3	-8.174928	0.004611	-0.003127
30	P3	-8.174928	0.004611	-0.003127

#### 4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



#### 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	-3.844693	0.023931	-0.019553
7	P1	-2.444408	0.177312	-0.375244
11	P1	-2.879225	0.034528	-0.034753
15	P1	-3.650566	0.036719	-0.038234
19	P1	-3.459348	0.082806	-0.060613
22	P1	-5.095571	0.037802	-0.072054
26	P1	-5.866607	0.031100	0.046842
30	P1	-5.197798	0.086898	-0.029525
3	P1	-11.633155	0.074576	-0.001023
7	P1	-9.916247	0.200756	-0.322030
11	P1	-10.336618	0.085337	-0.112204
15	P1	-10.861389	0.180111	0.007761
19	P1	-15.681603	3.708880	-0.291886
22	P1	-20.812368	1.732180	0.181580
26	P1	-15.963701	0.406334	0.350459
30	P1	-18.036327	0.840505	-0.308496

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.415537	0.076373	0.098601
7	P2	-22.192347	0.200794	0.065381
11	P2	-10.897777	0.059566	0.055874
15	P2	-4.860228	0.039419	0.064187
19	P2	-6.847080	0.041757	0.044601
22	P2	-8.159003	0.066502	0.081586
26	P2	-24.157804	0.135241	-0.009765
30	P2	-21.956263	0.080853	-0.006121

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.019750	0.003740	-0.005834
7	P3	-8.019666	0.003745	-0.005479
11	P3	-8.019625	0.003747	-0.005685
15	P3	-8.019620	0.003766	-0.005324
19	P3	-8.019704	0.003771	-0.005116
22	P3	-8.019805	0.003733	-0.005411
26	P3	-8.019723	0.003748	-0.005865
30	P3	-8.019593	0.003745	-0.006018

## 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	0.000547419
	stdev	1.79021e-07
MEAN Q	mean	0.000525394
	stdev	2.17443e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135851
	stdev	0.00111045
STDEV Q	mean	0.136196
	stdev	0.00112716



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006091[567]

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_IMM_1PNPDE20060915_201740_000000362051_00157_23758_5807.N1	1	0
ASA_IMM_1PNPDK20060916_140527_000000392051_00168_23769_1904.N1	1	0
ASA_WSM_1PNPDE20060915_015531_000001282051_00146_23747_2075.N1	0	39
ASA_WSM_1PNPDE20060915_021350_000000672051_00146_23747_2061.N1	4	196
ASA_WSM_1PNPDE20060915_021500_000000362051_00146_23747_2169.N1	27	2559
ASA_WSM_1PNPDE20060915_033458_000000852051_00147_23748_2087.N1	0	7
ASA_WSM_1PNPDE20060915_234319_000003242051_00159_23760_2251.N1	0	34
ASA_WSM_1PNPDE20060917_005119_000001462051_00174_23775_2423.N1	0	34
ASA_APM_1PNPDE20060915_143623_000000892051_00154_23755_2658.N1	0	9





## 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


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### 7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Ascending

Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

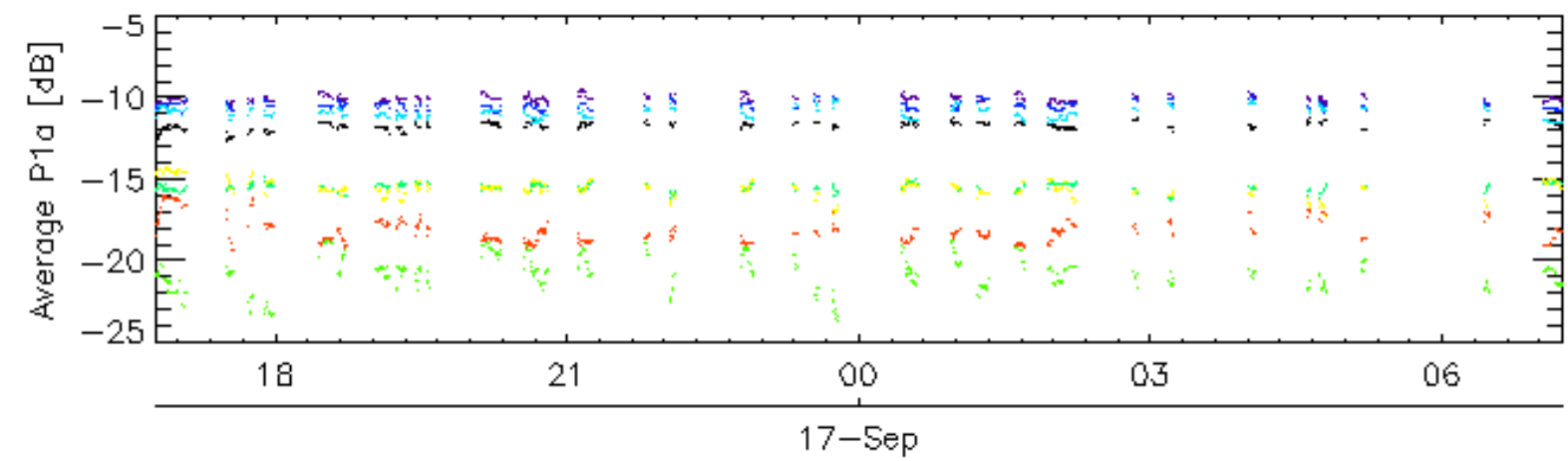
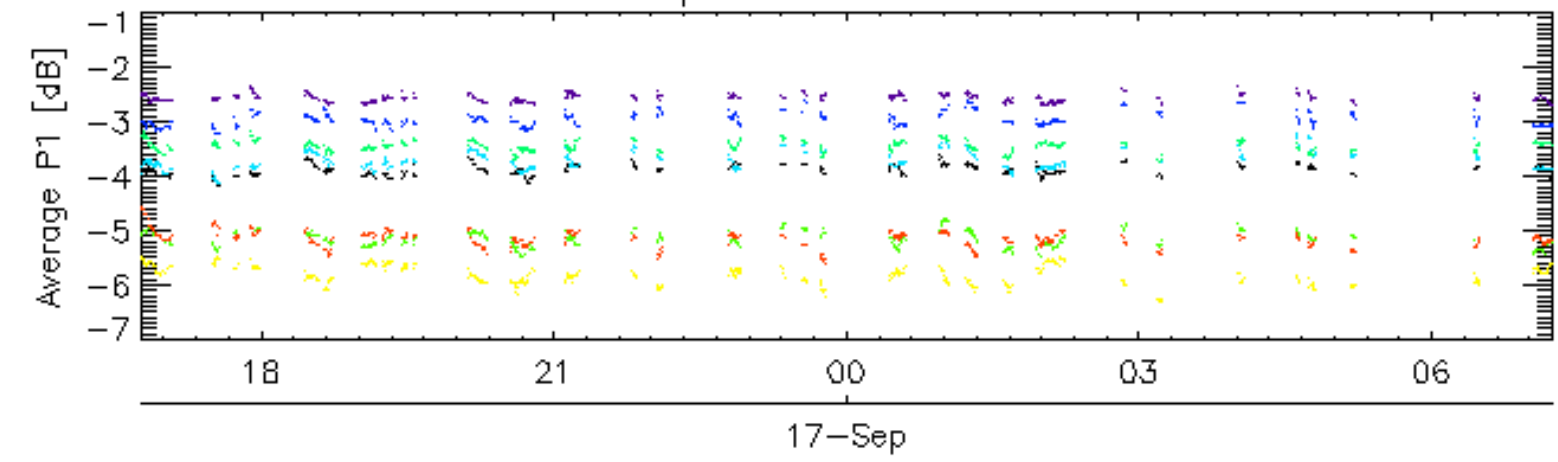
Ascending

Descending

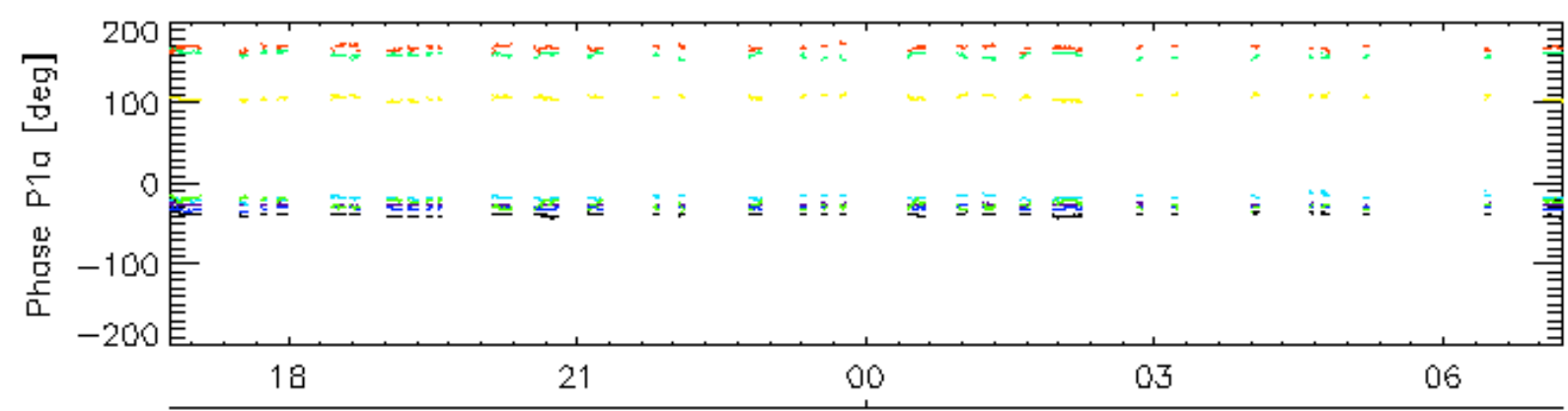
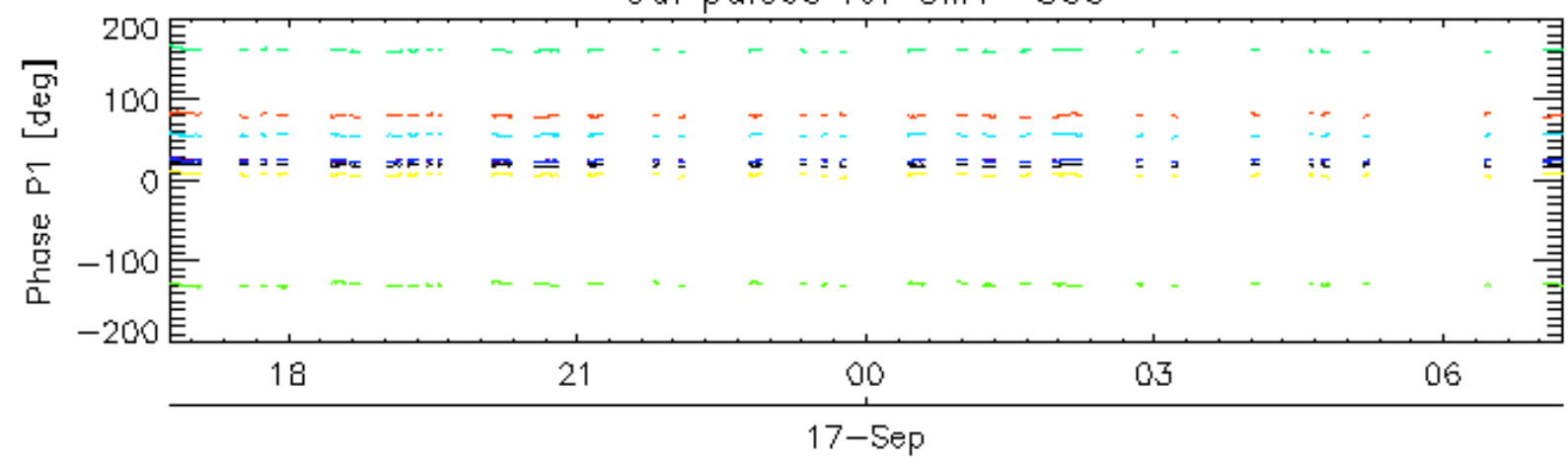
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

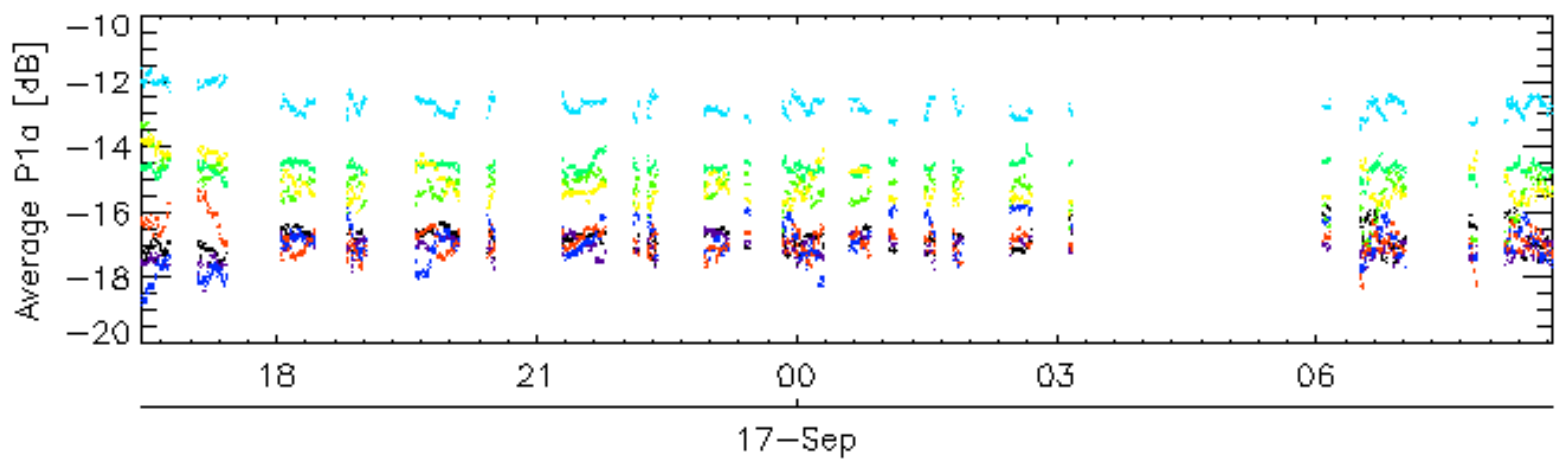
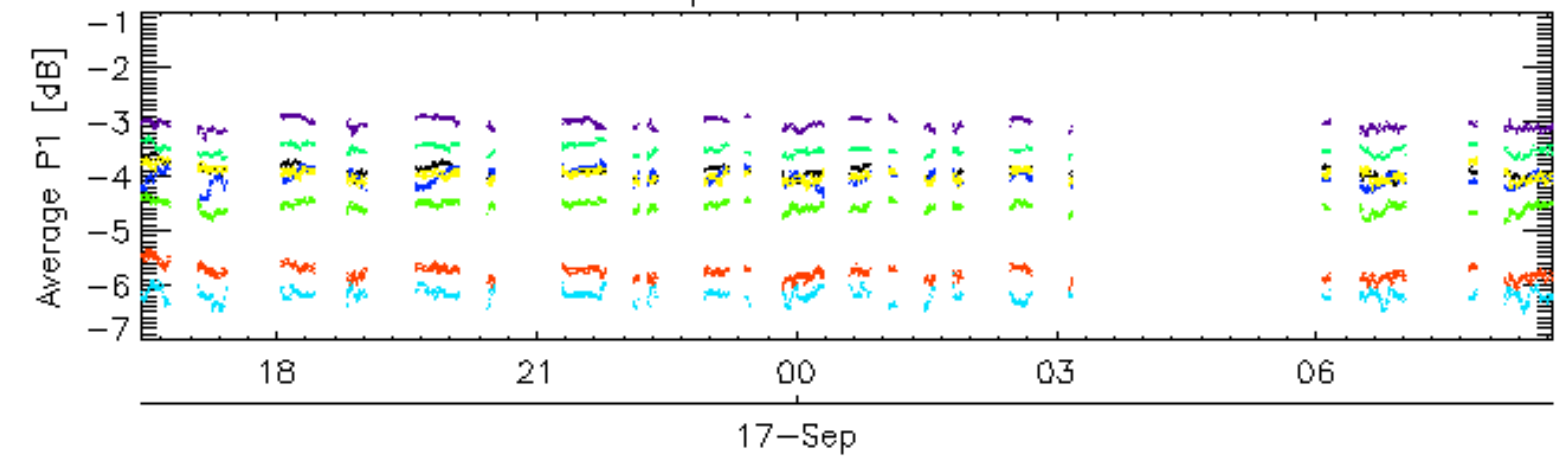


Cal pulses for GM1 SS3

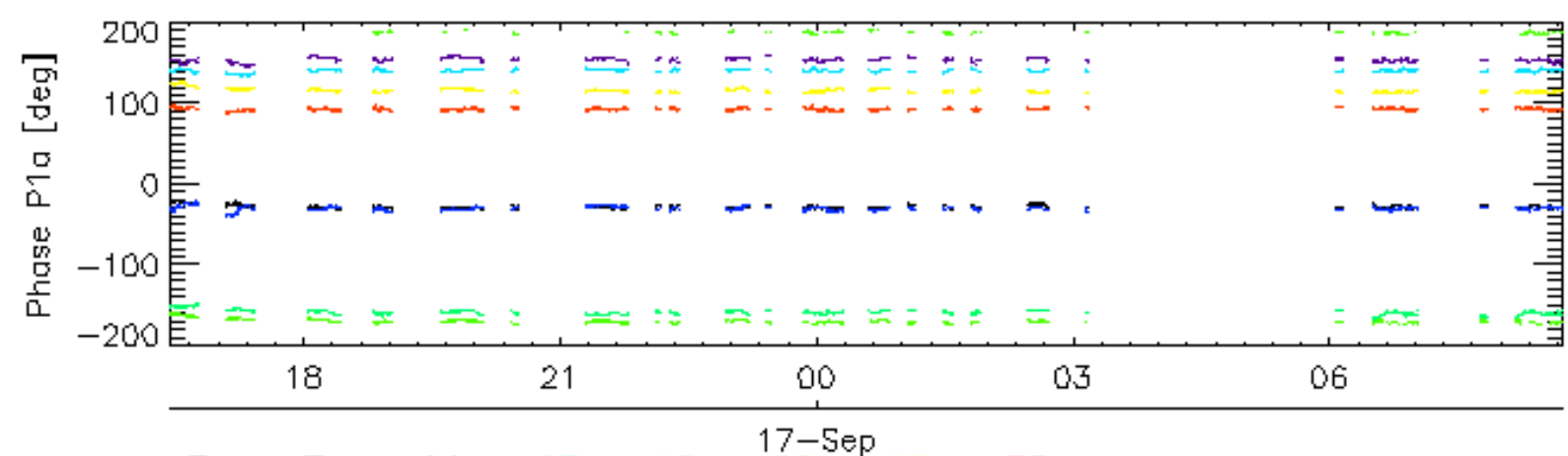
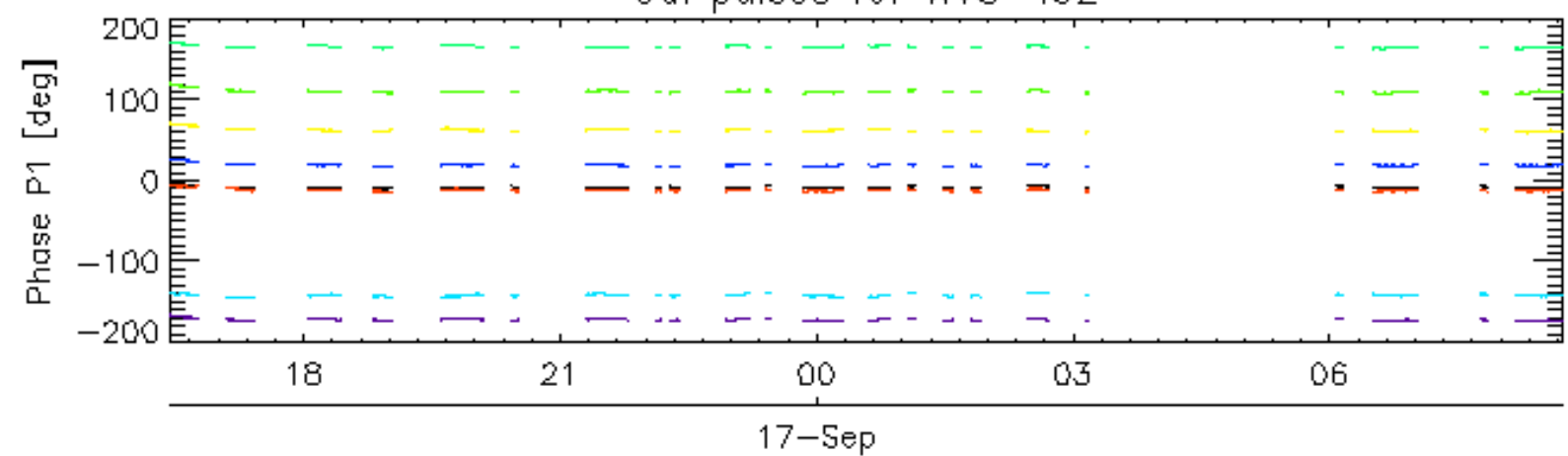


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

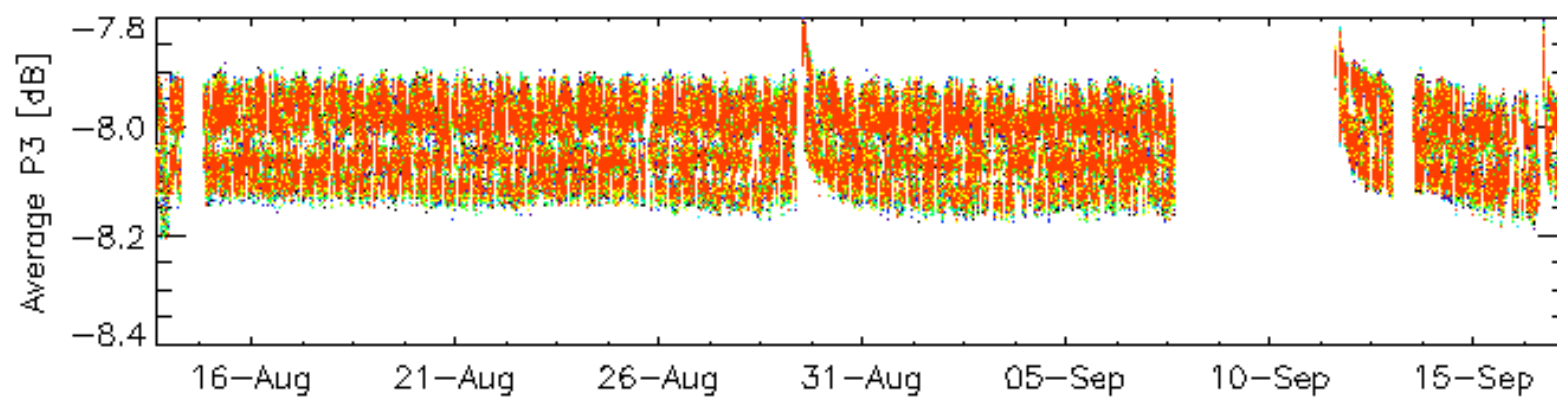
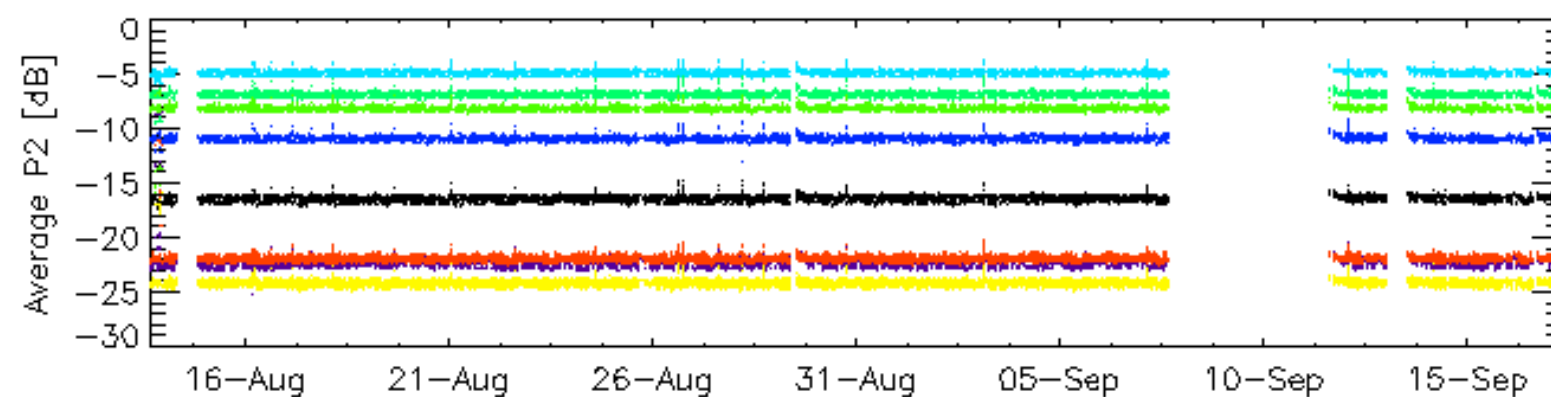
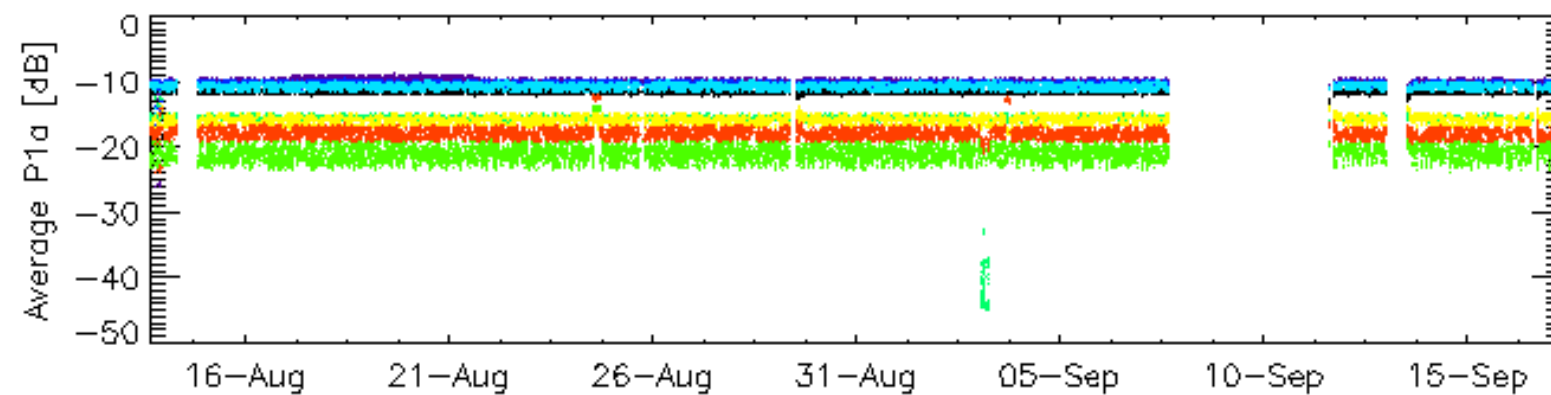
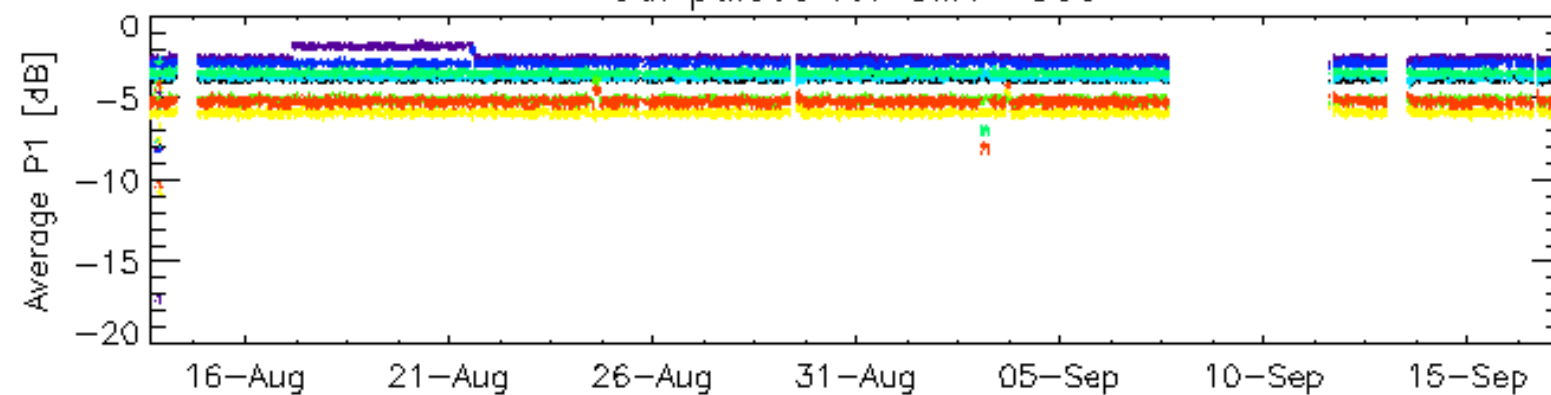


Cal pulses for WVS IS2



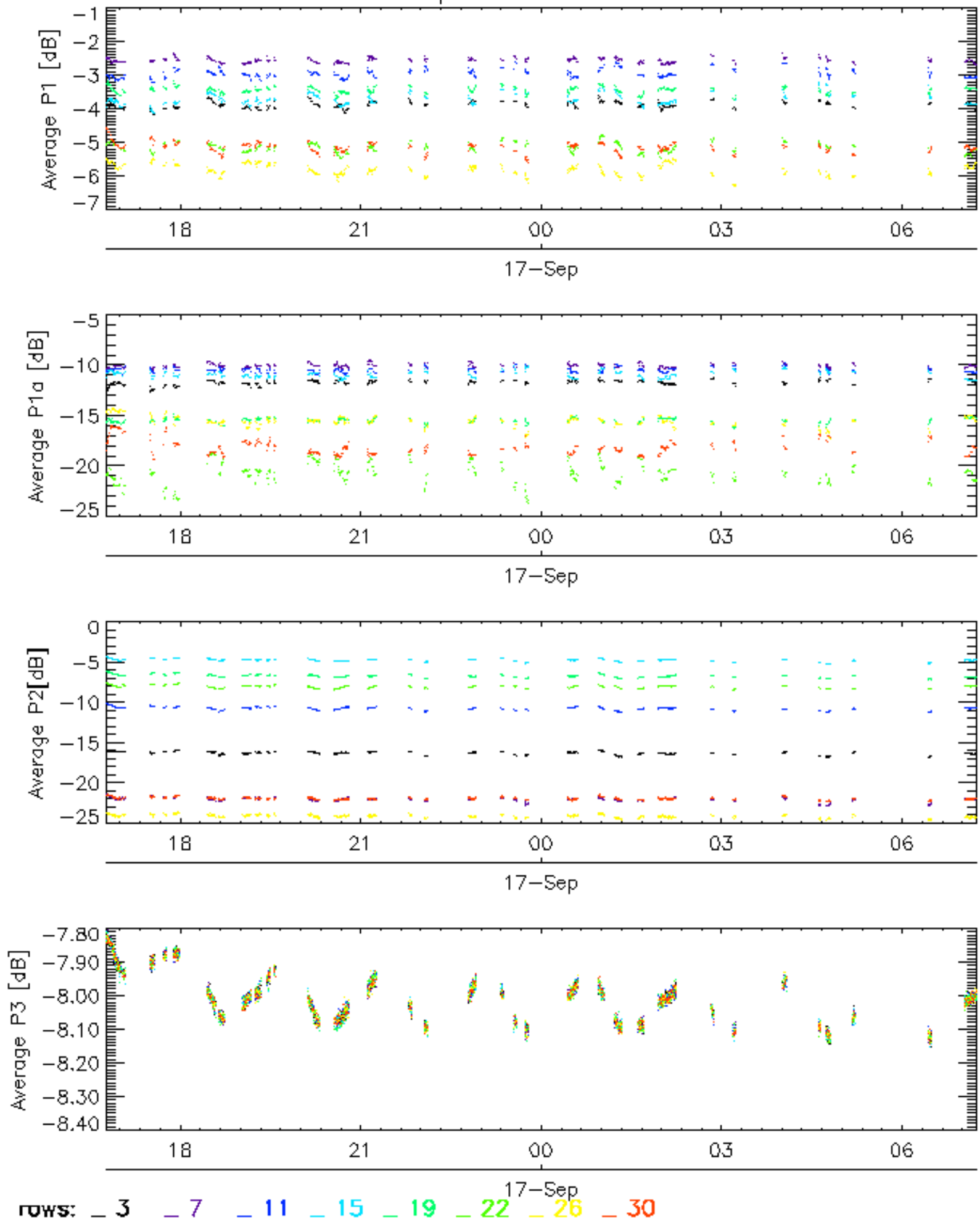
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

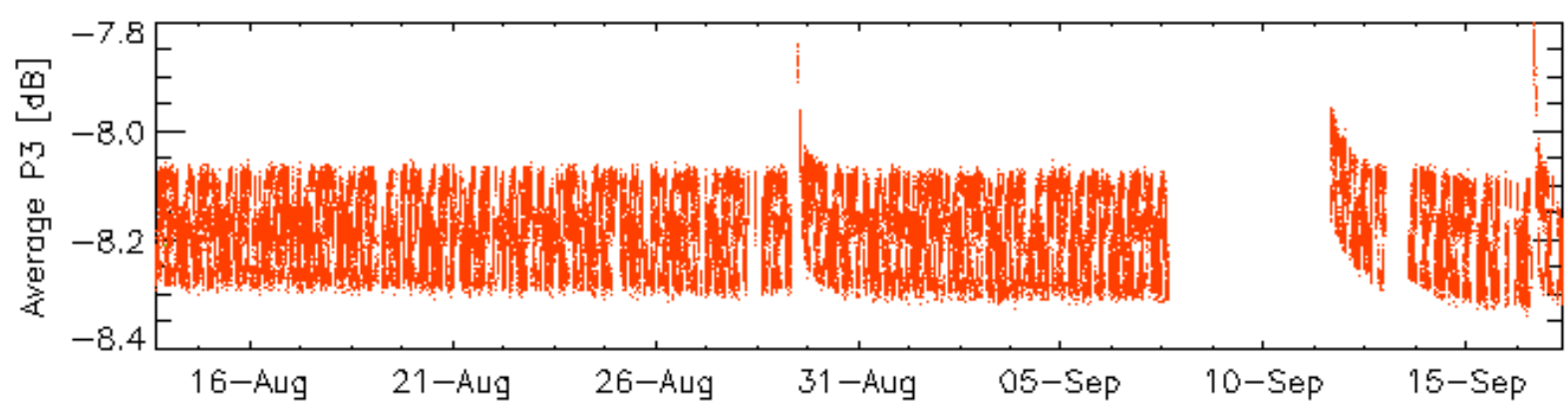
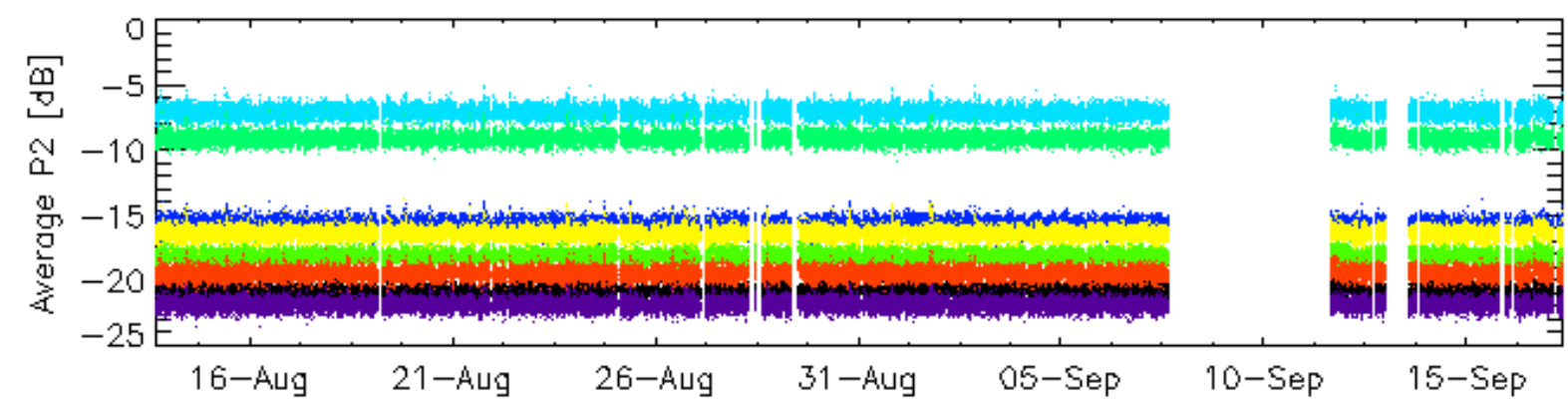
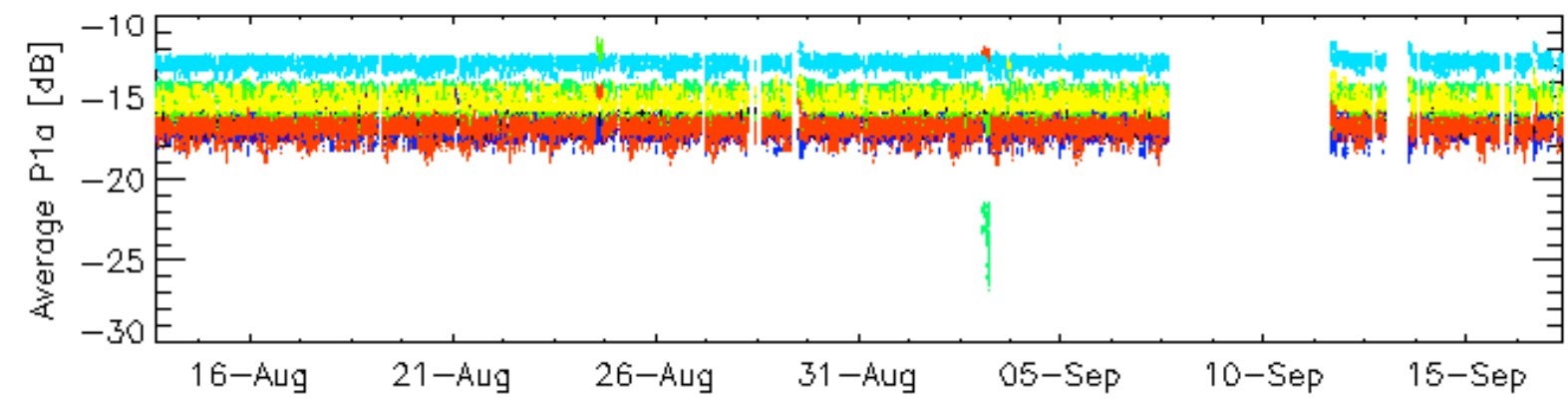
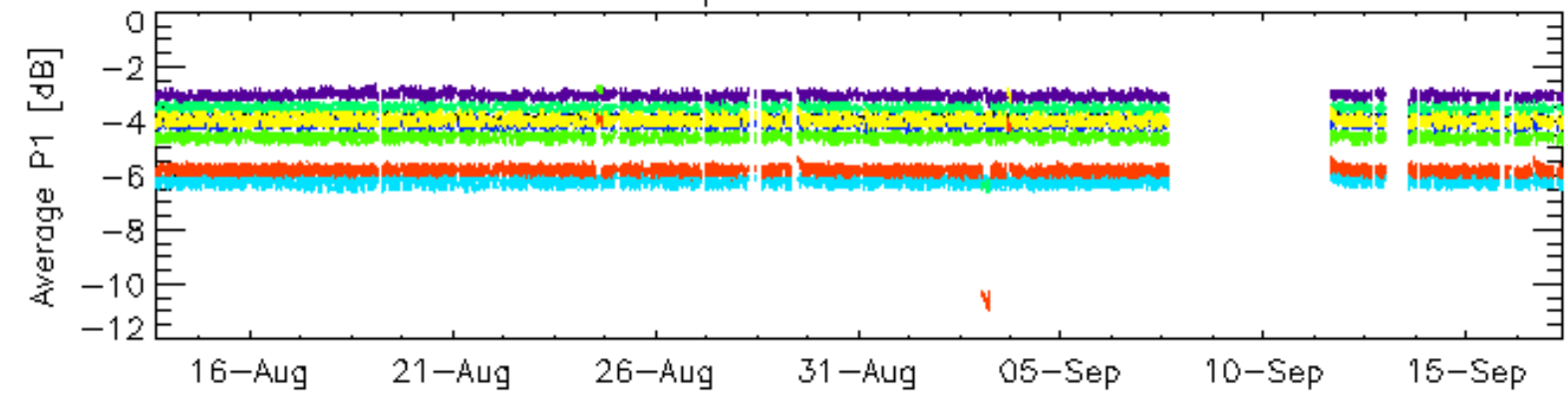


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

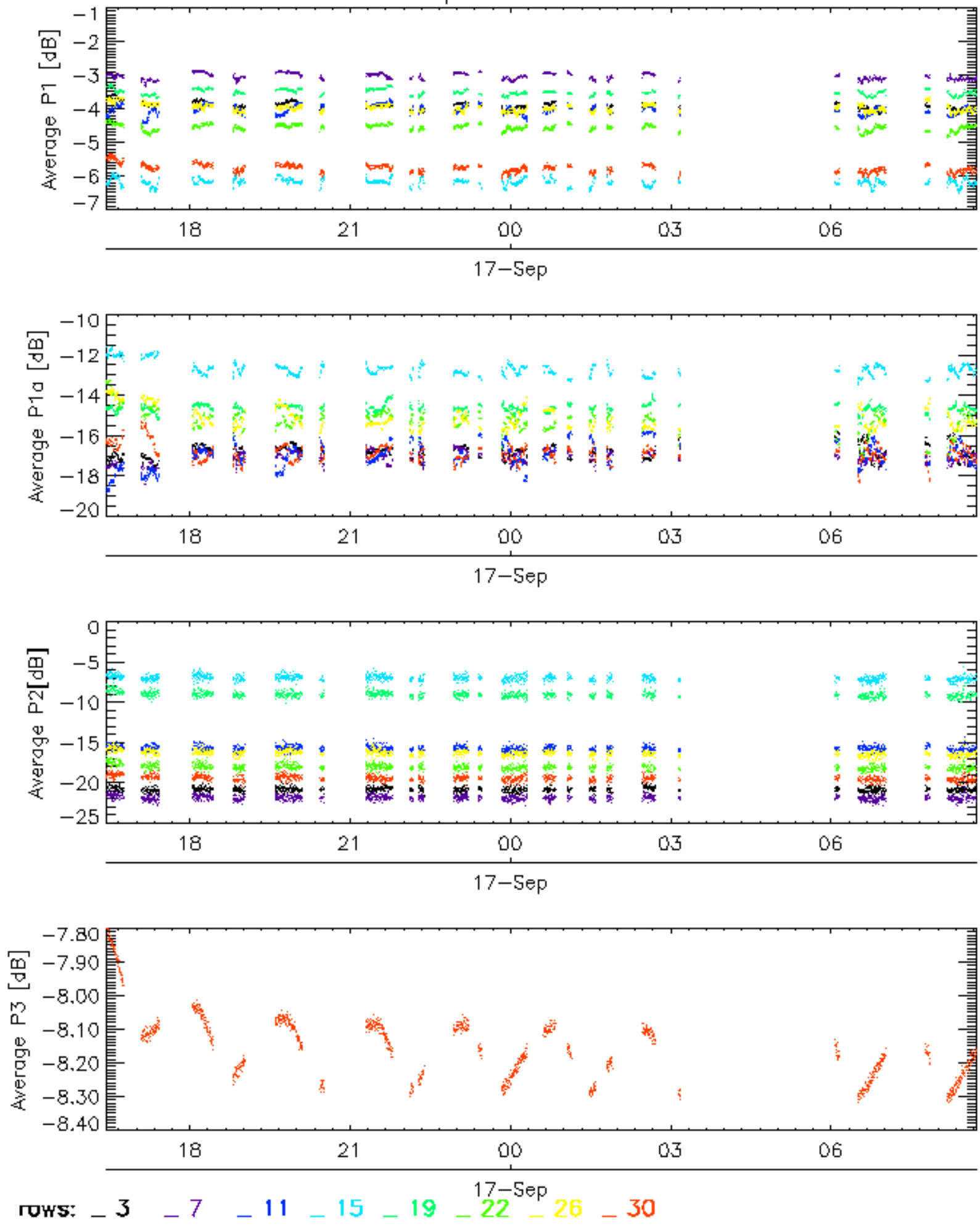


Cal pulses for WVS IS2



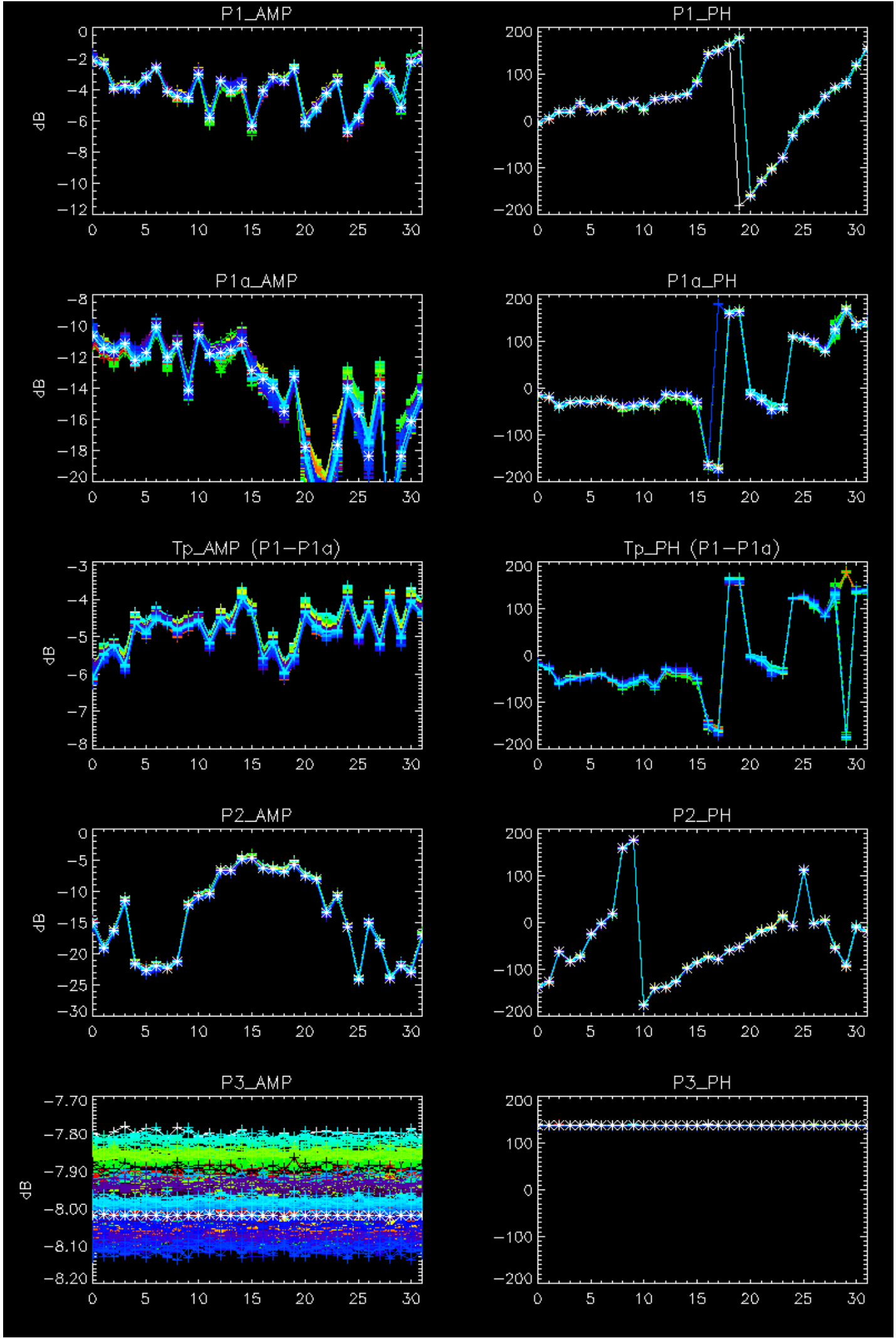
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

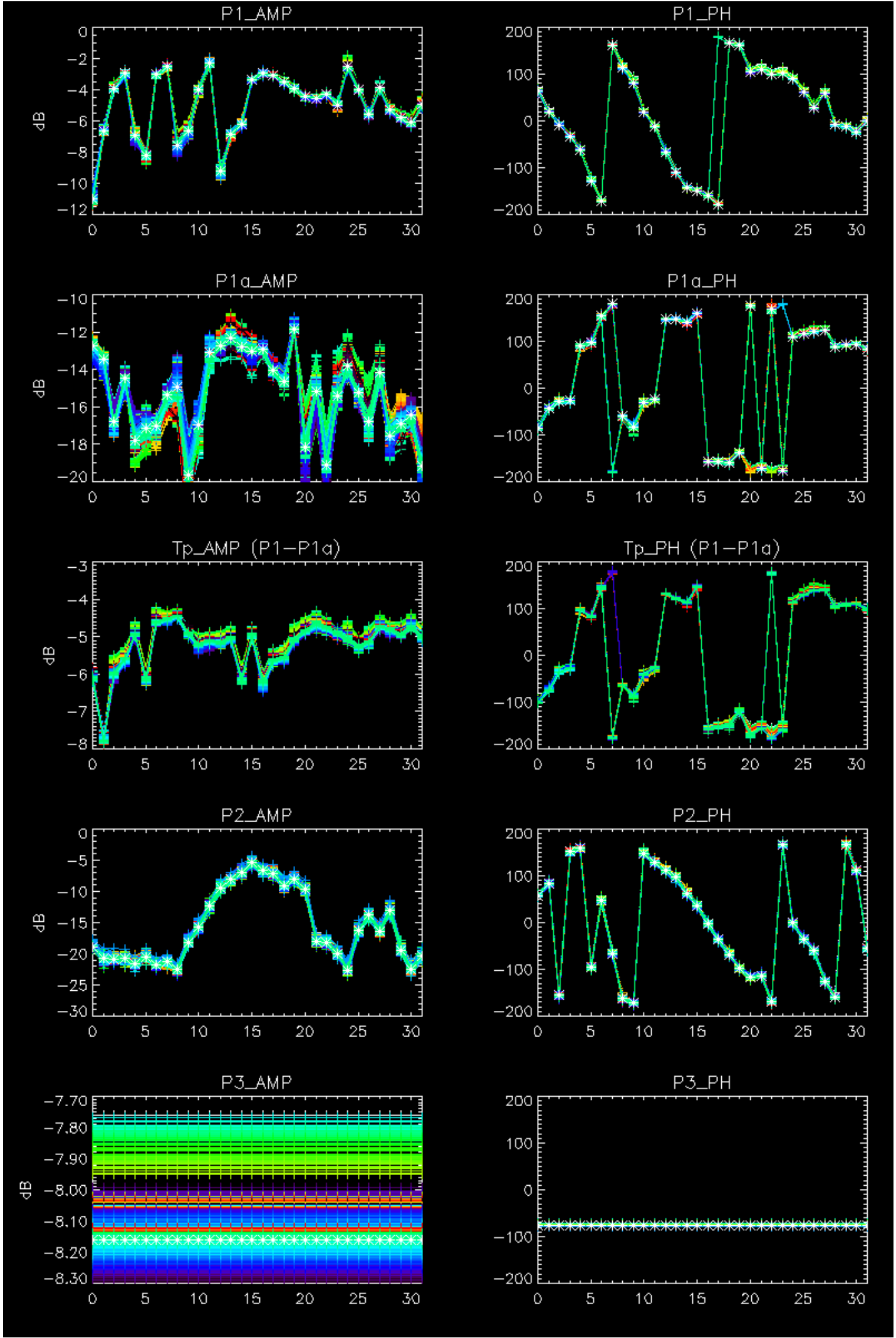
Cal pulses for WVS IS2



No anomalies observed.





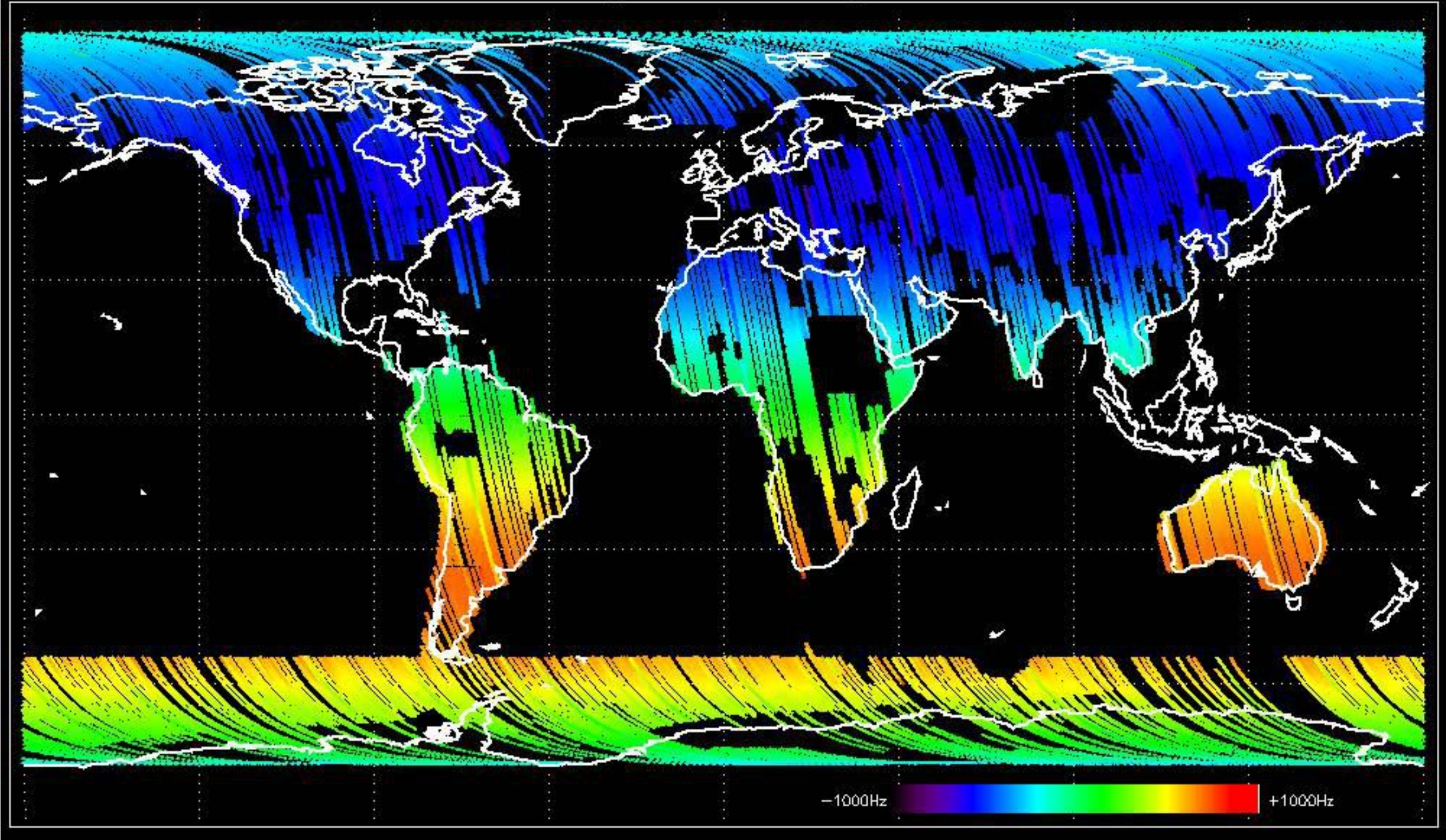


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



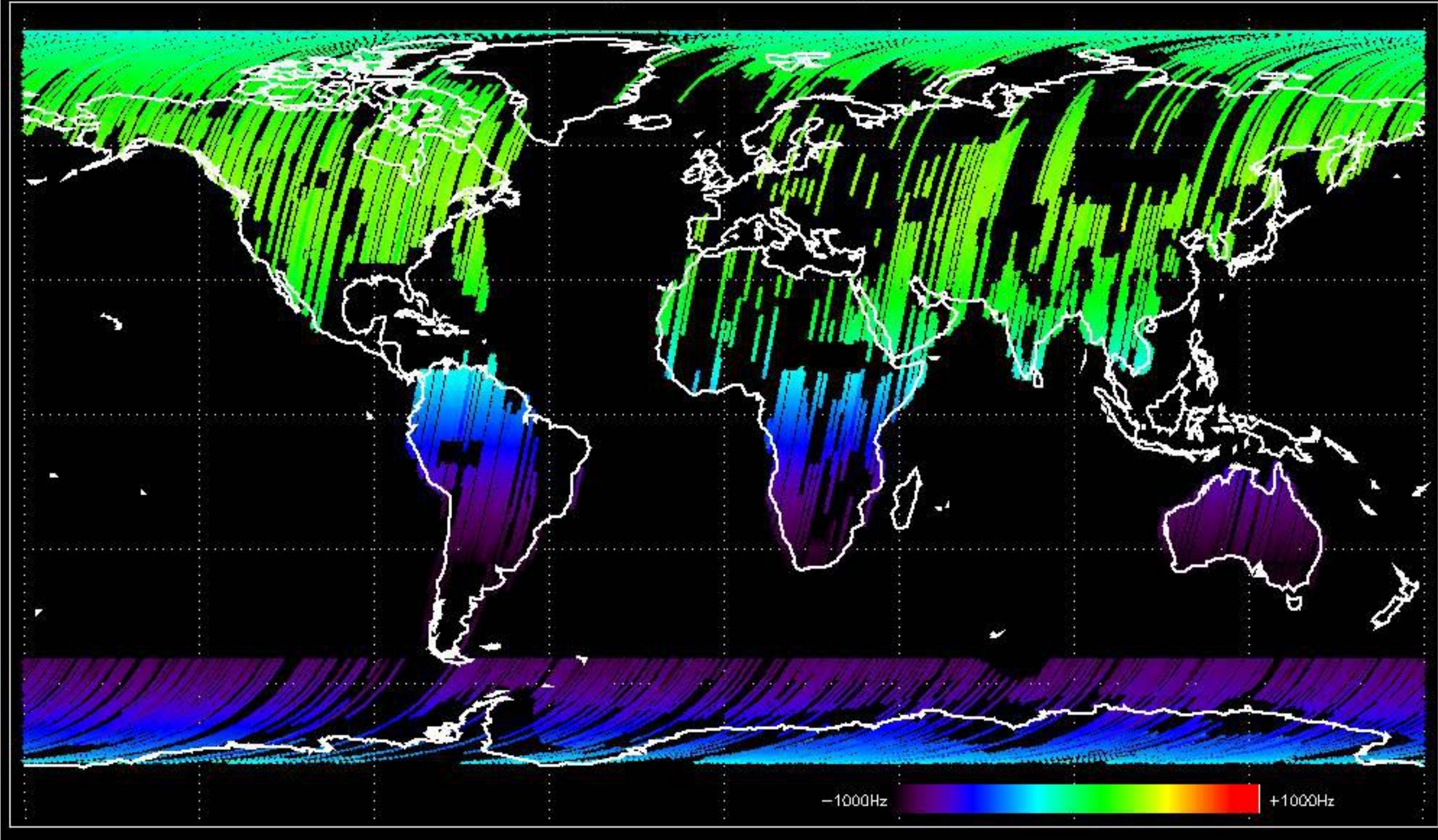


Doppler 'GM1' 'SS1' ascending



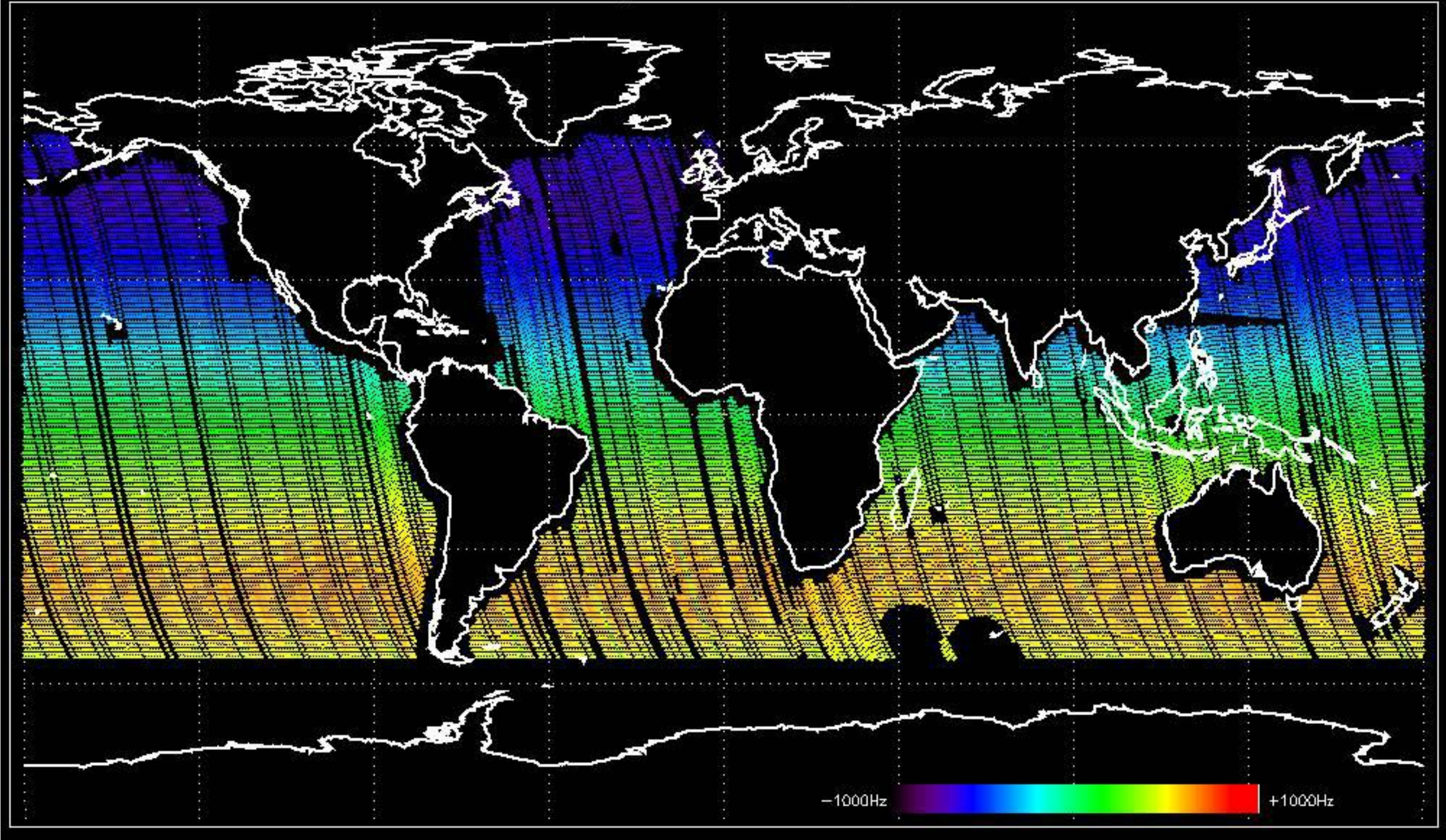


Doppler 'GM1' 'SS1' descending



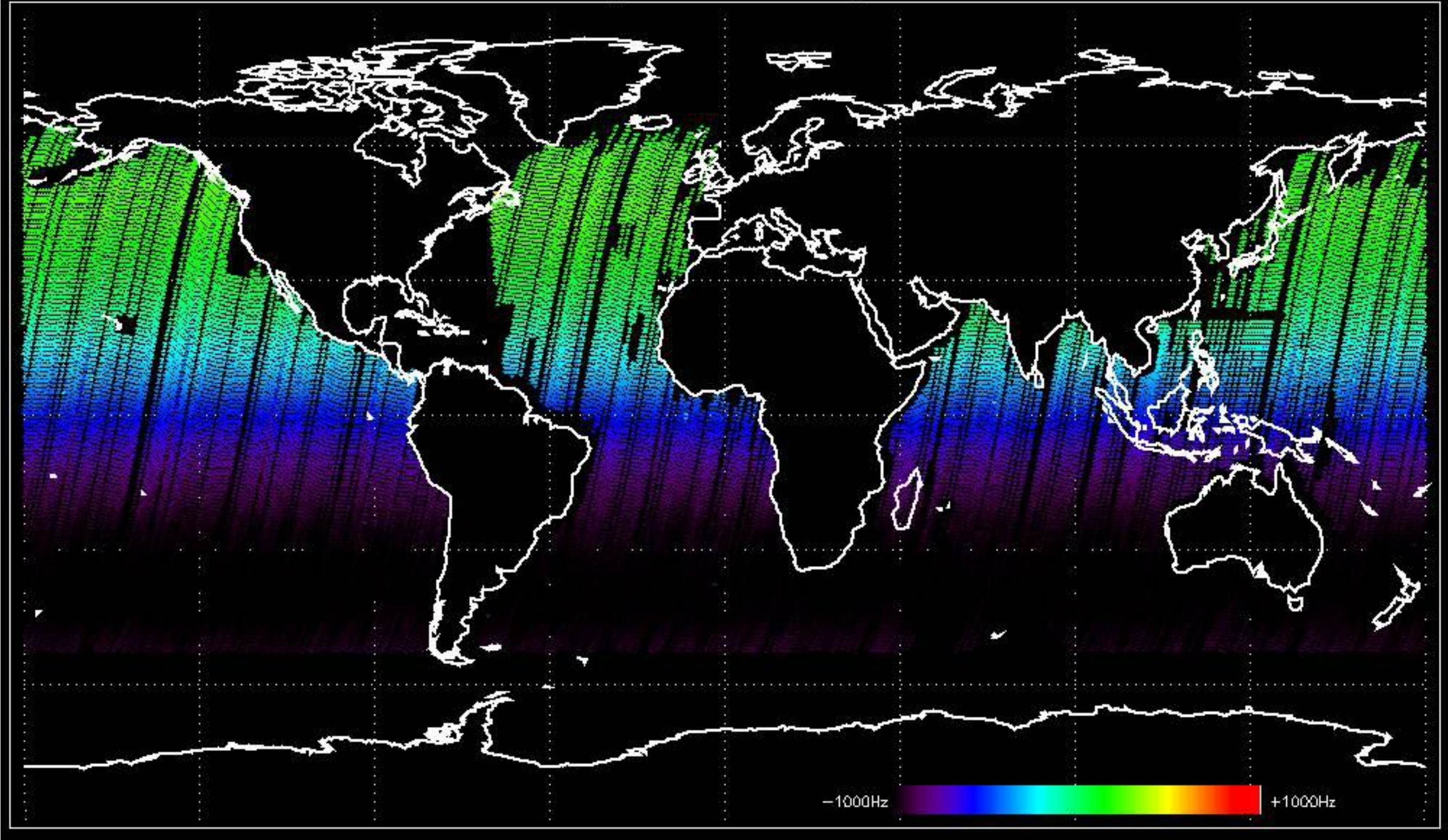


Doppler 'WVS' 'IS2' ascending

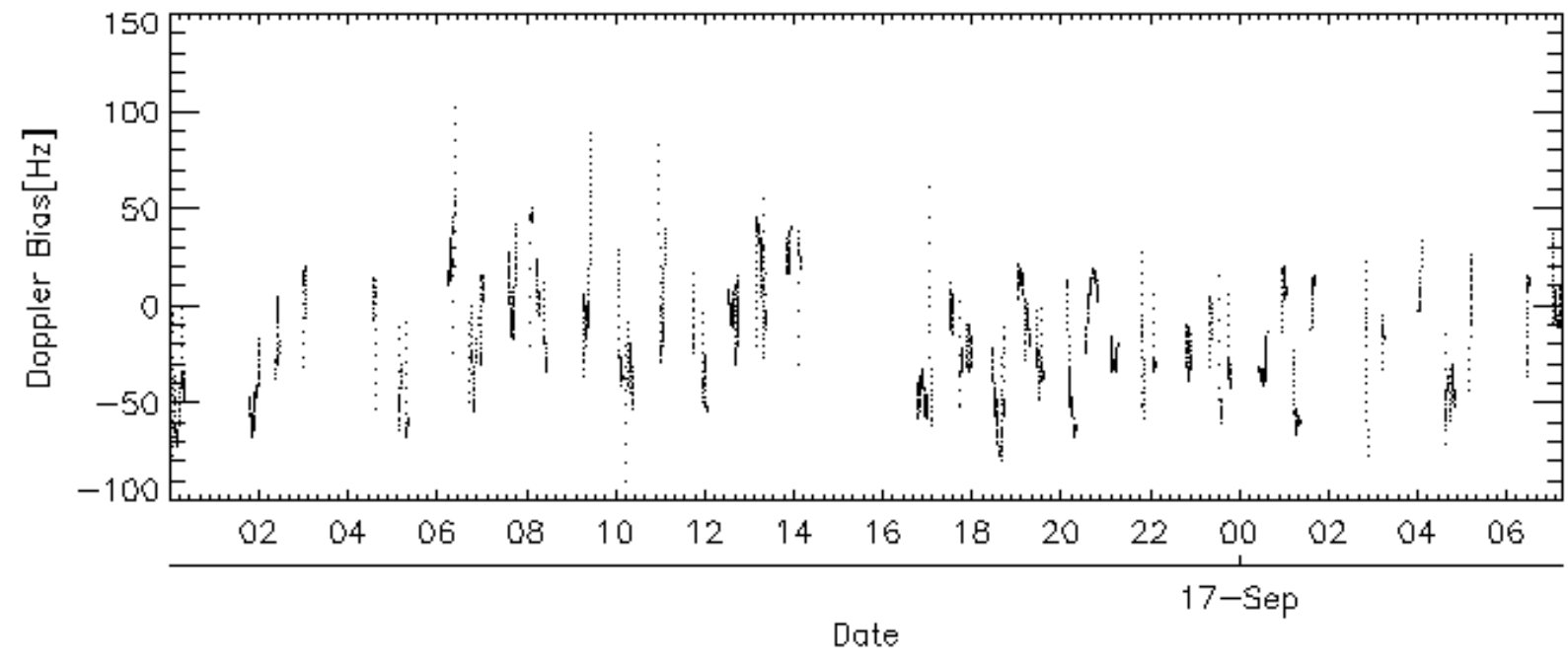
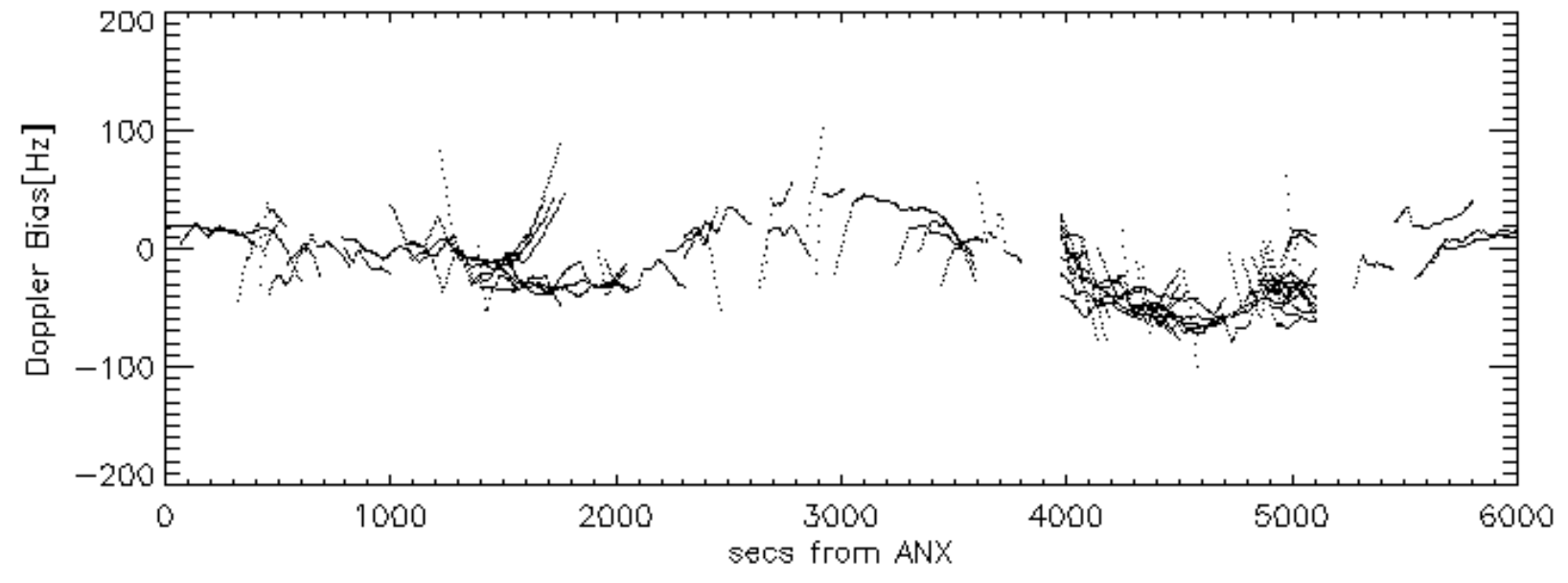
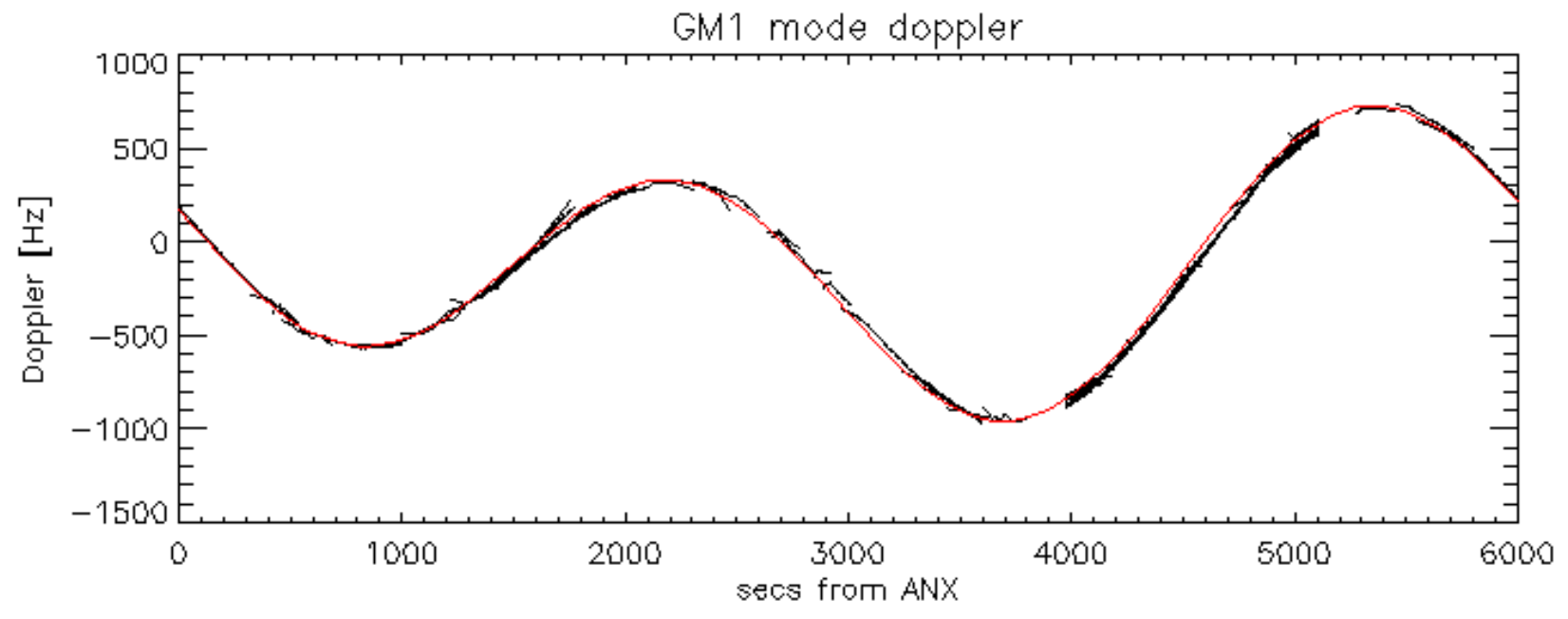


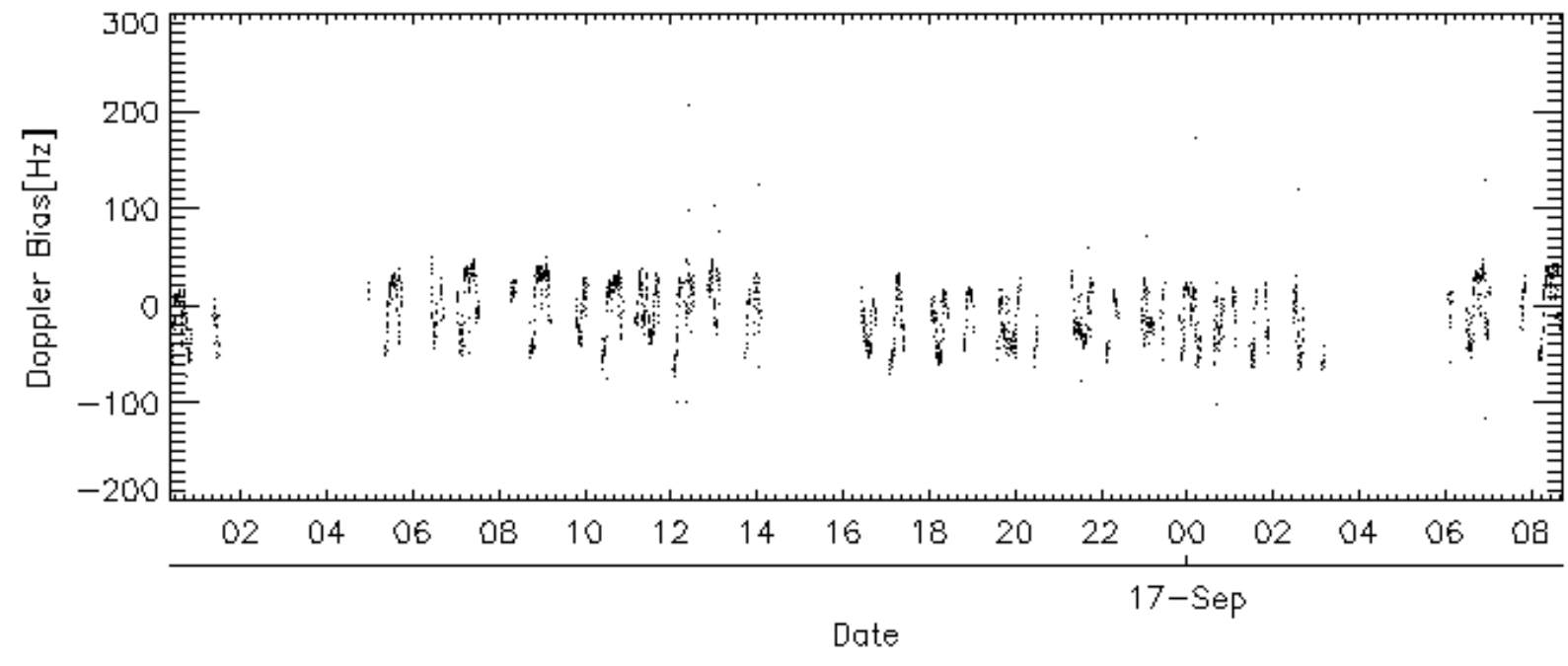
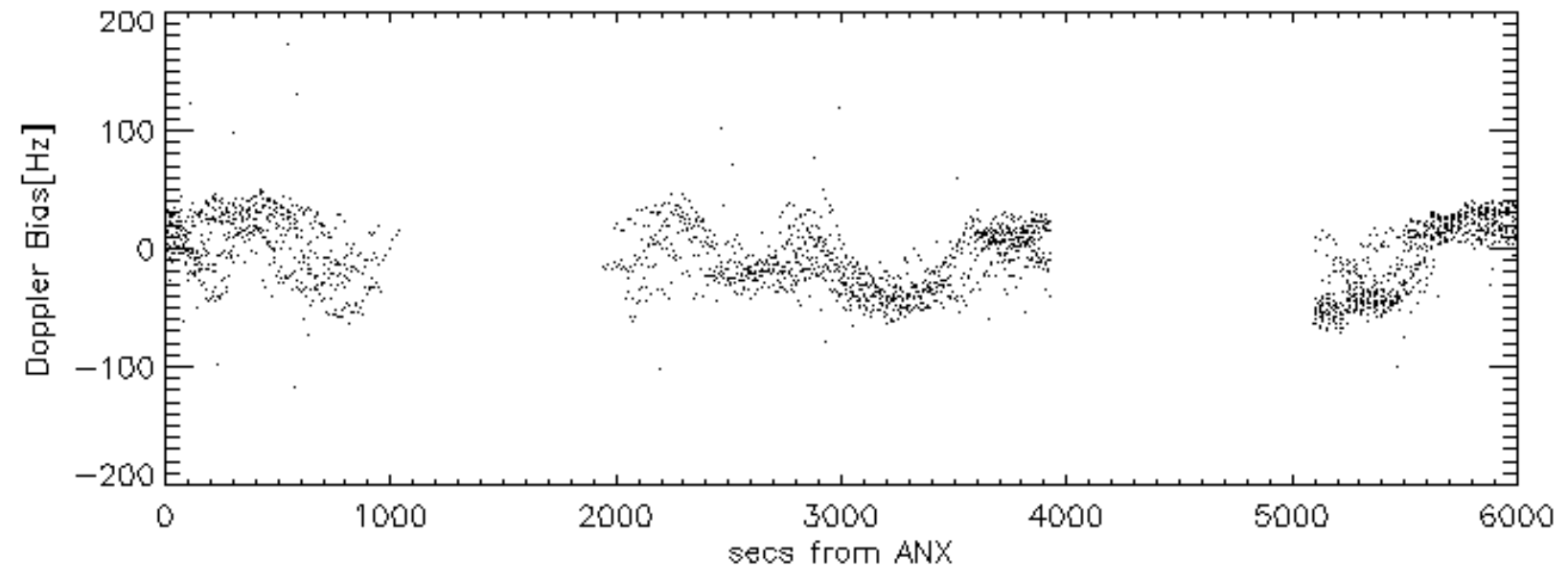
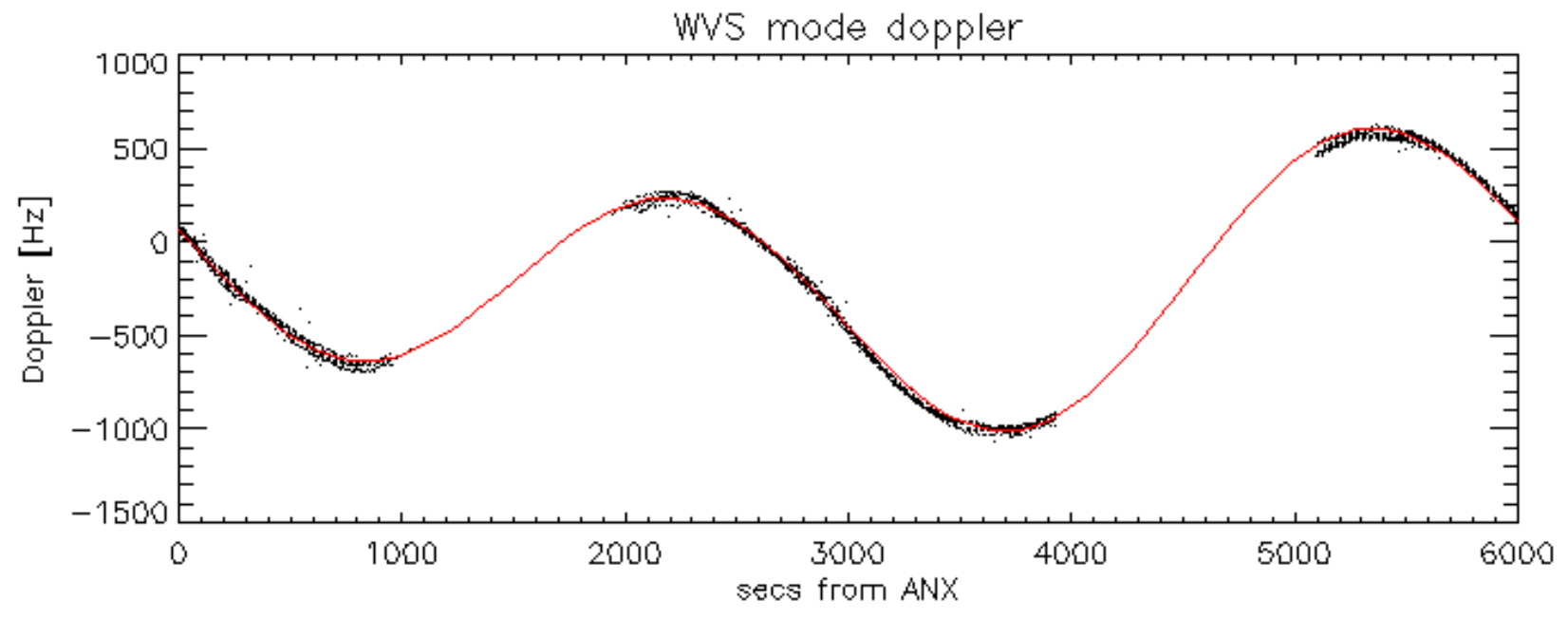


Doppler 'WVS' 'IS2' descending



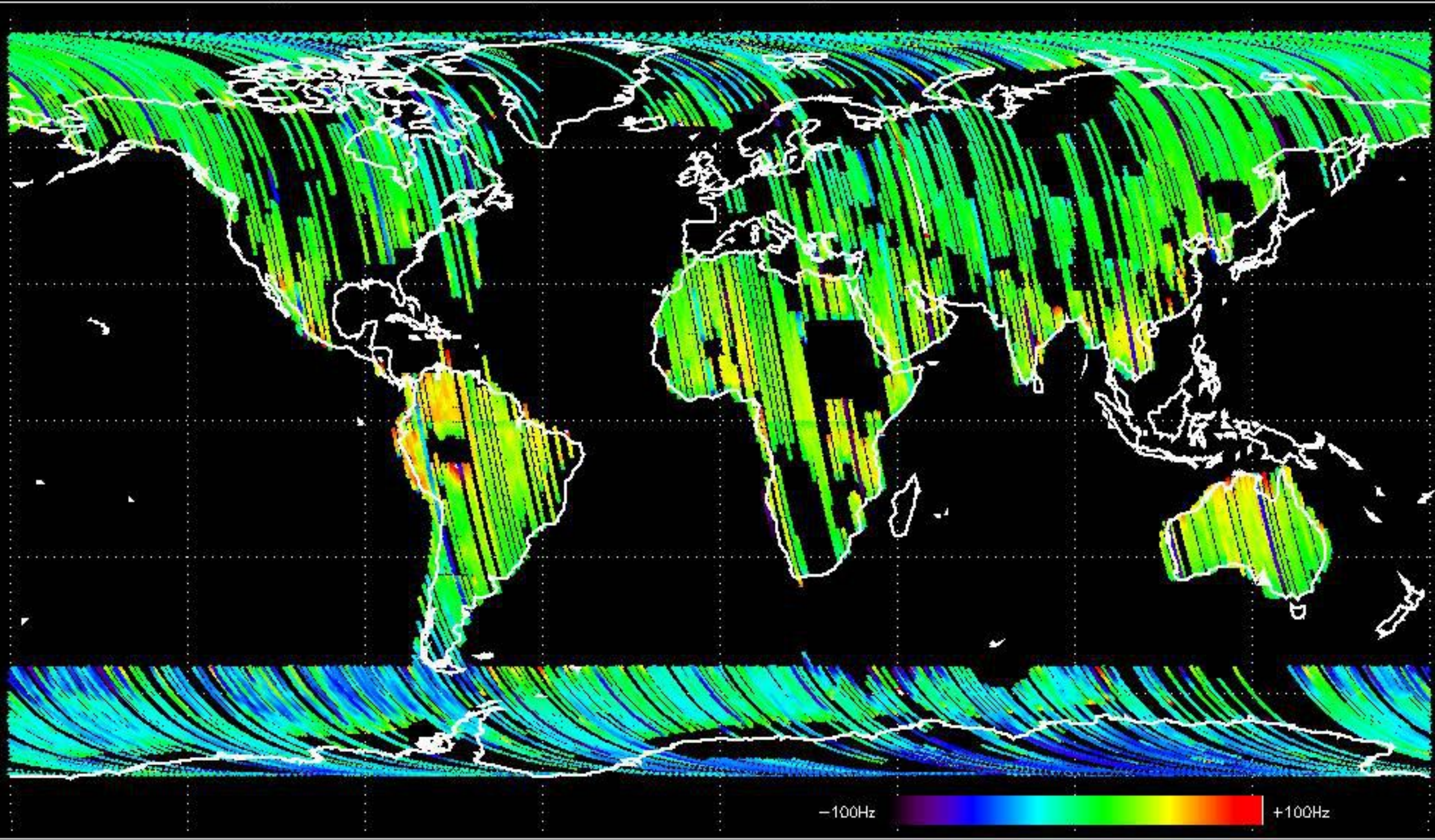






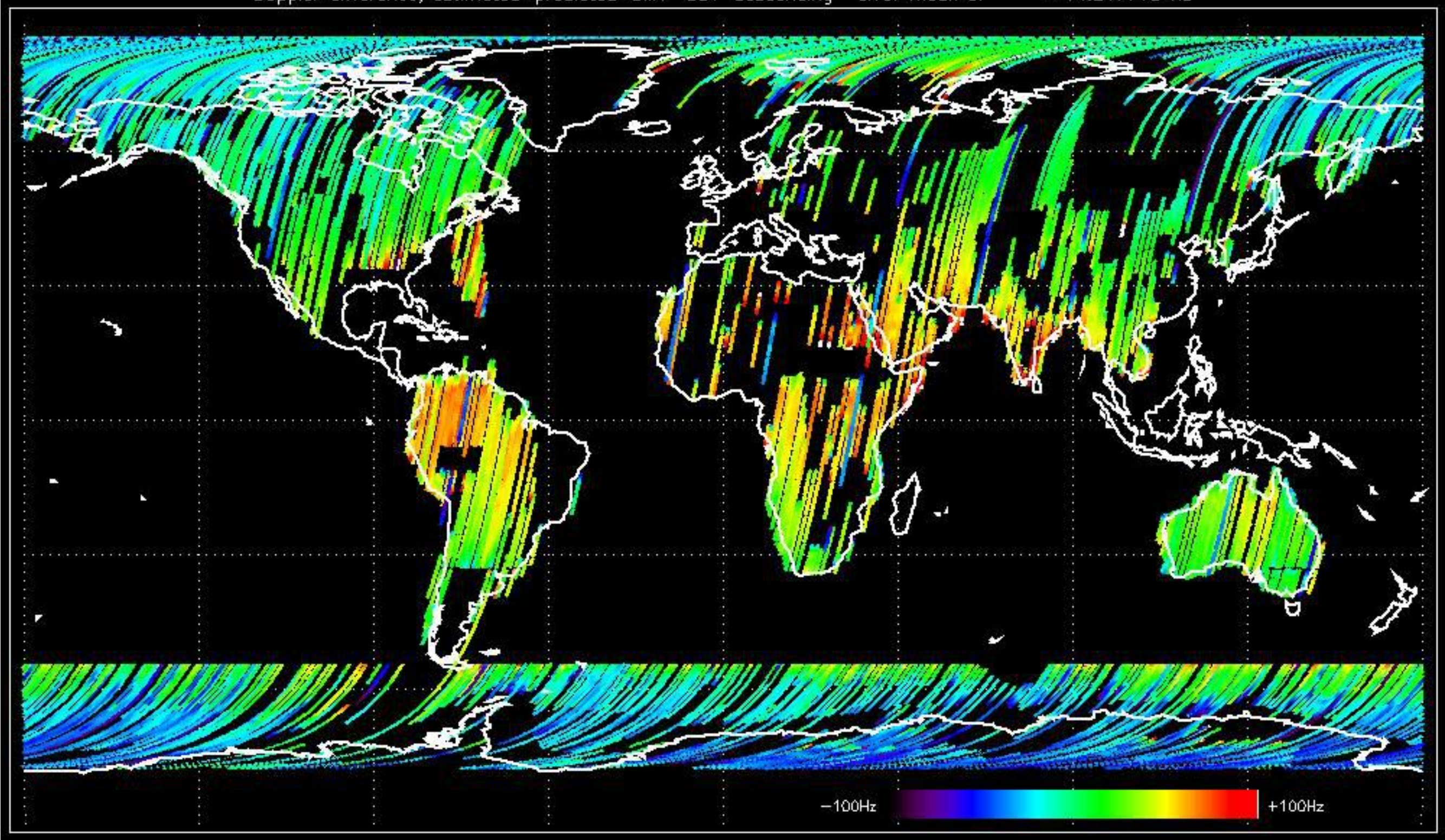


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -23.054432 Hz



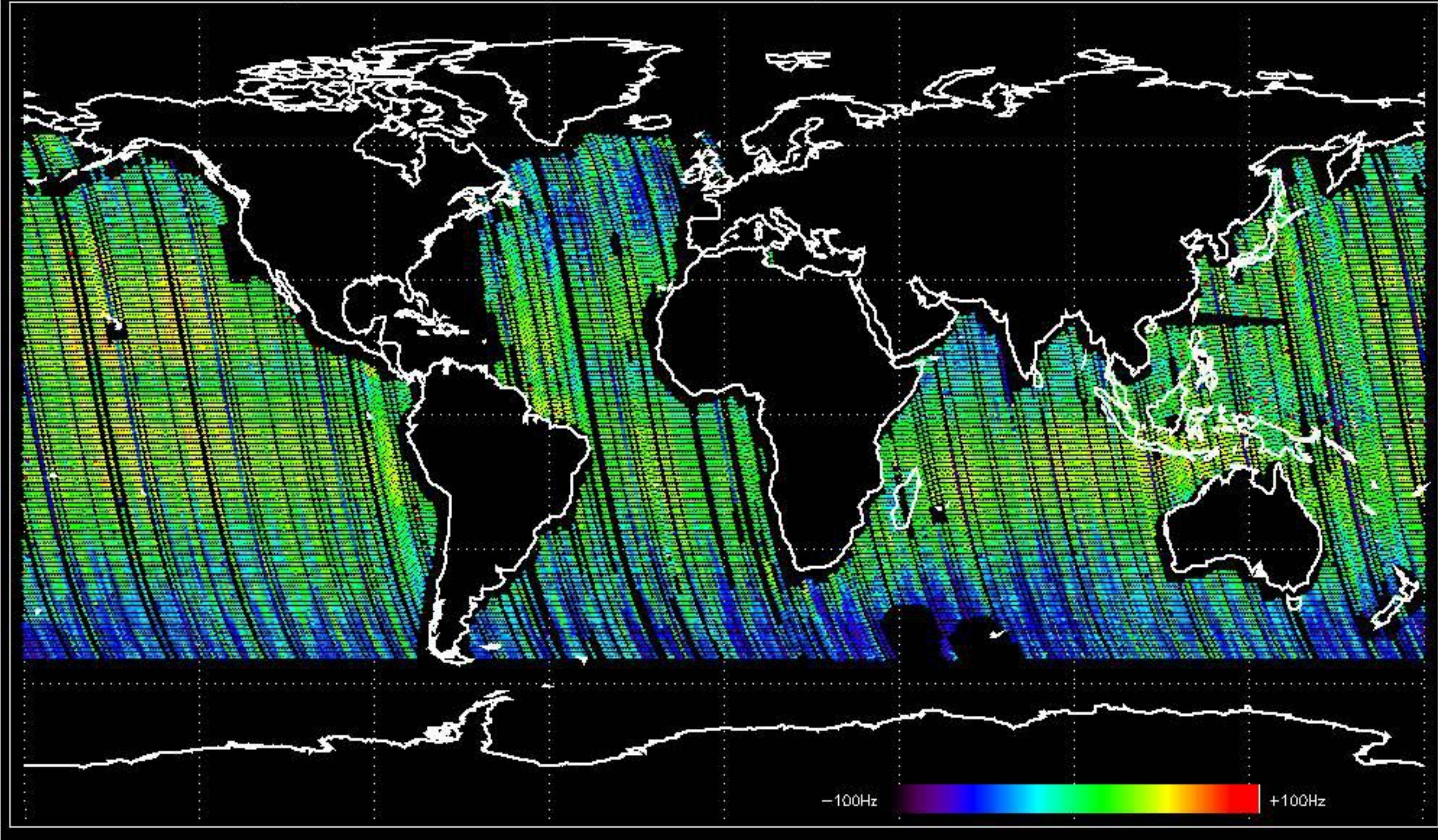


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.247718 Hz



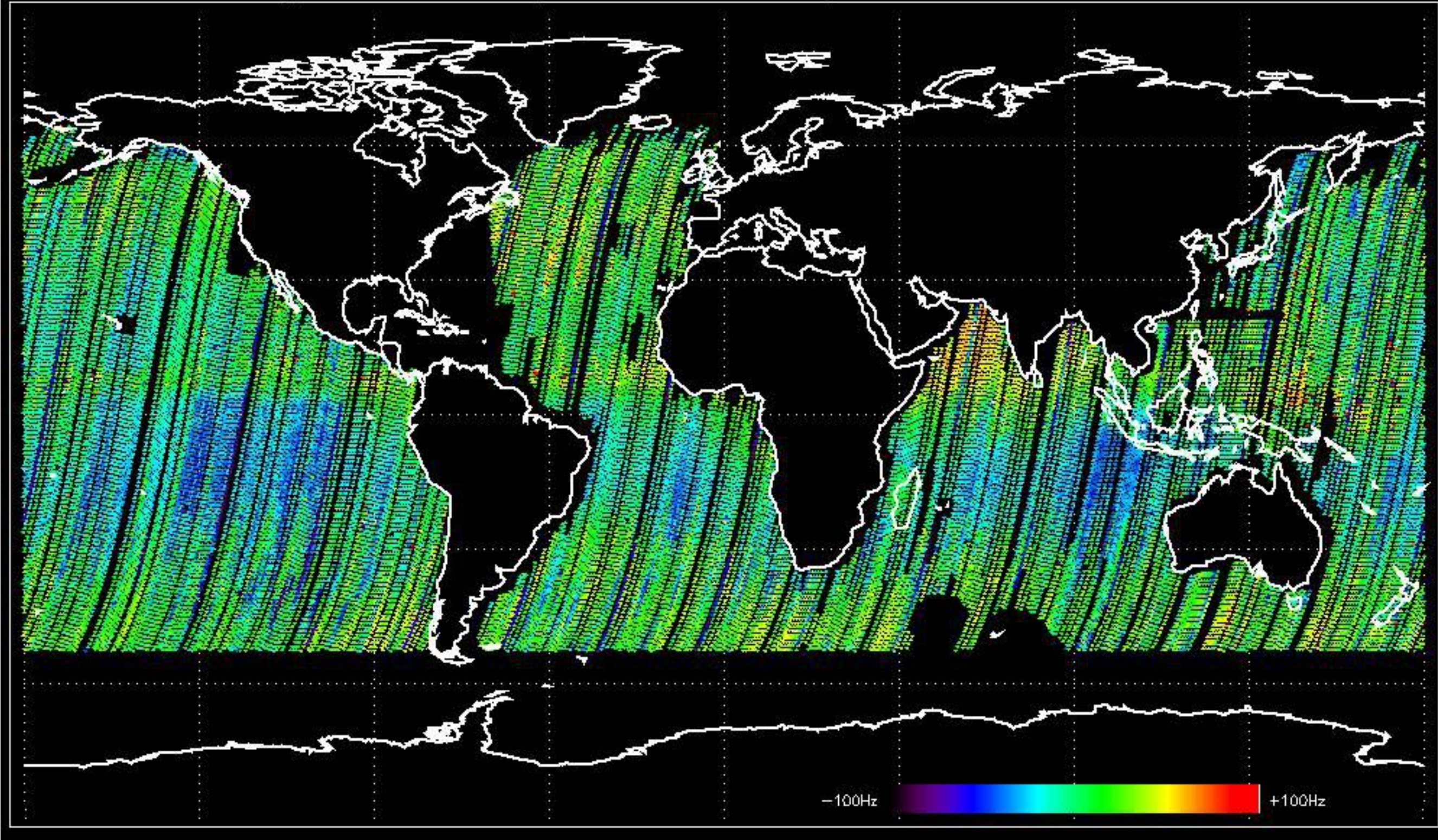


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.804452 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -12.902477 Hz





No anomalies observed on available MS products:

No anomalies observed.















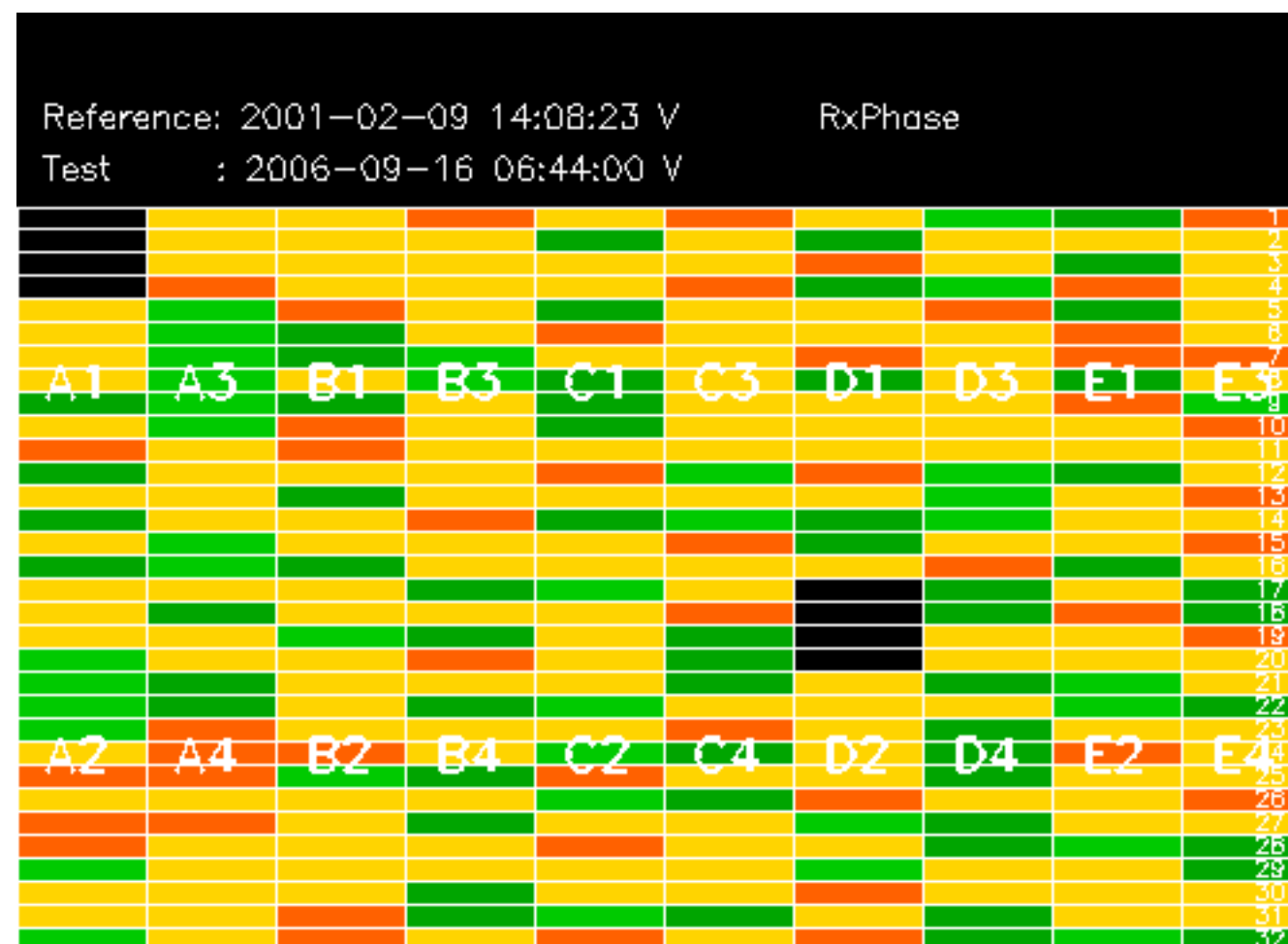




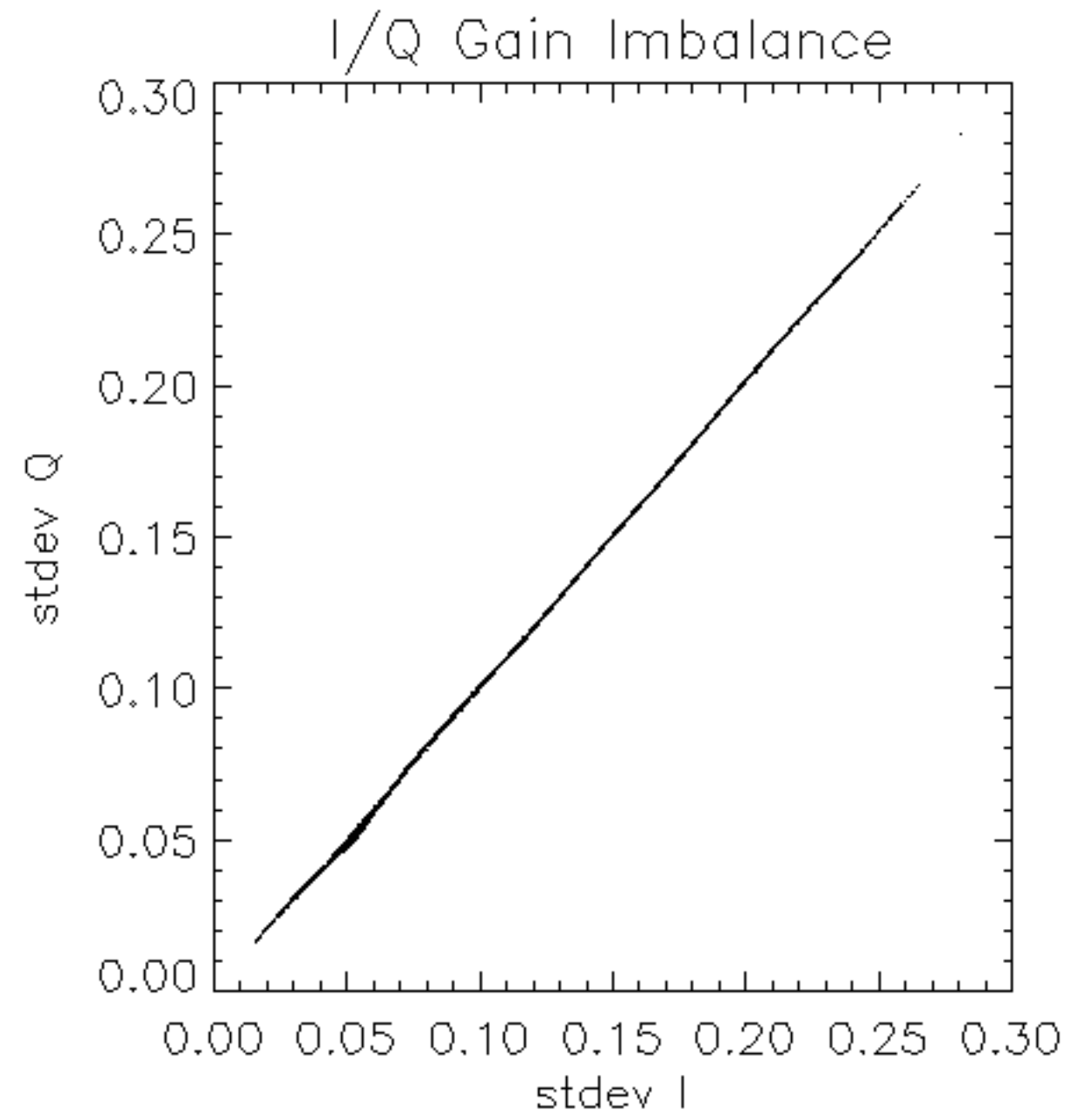


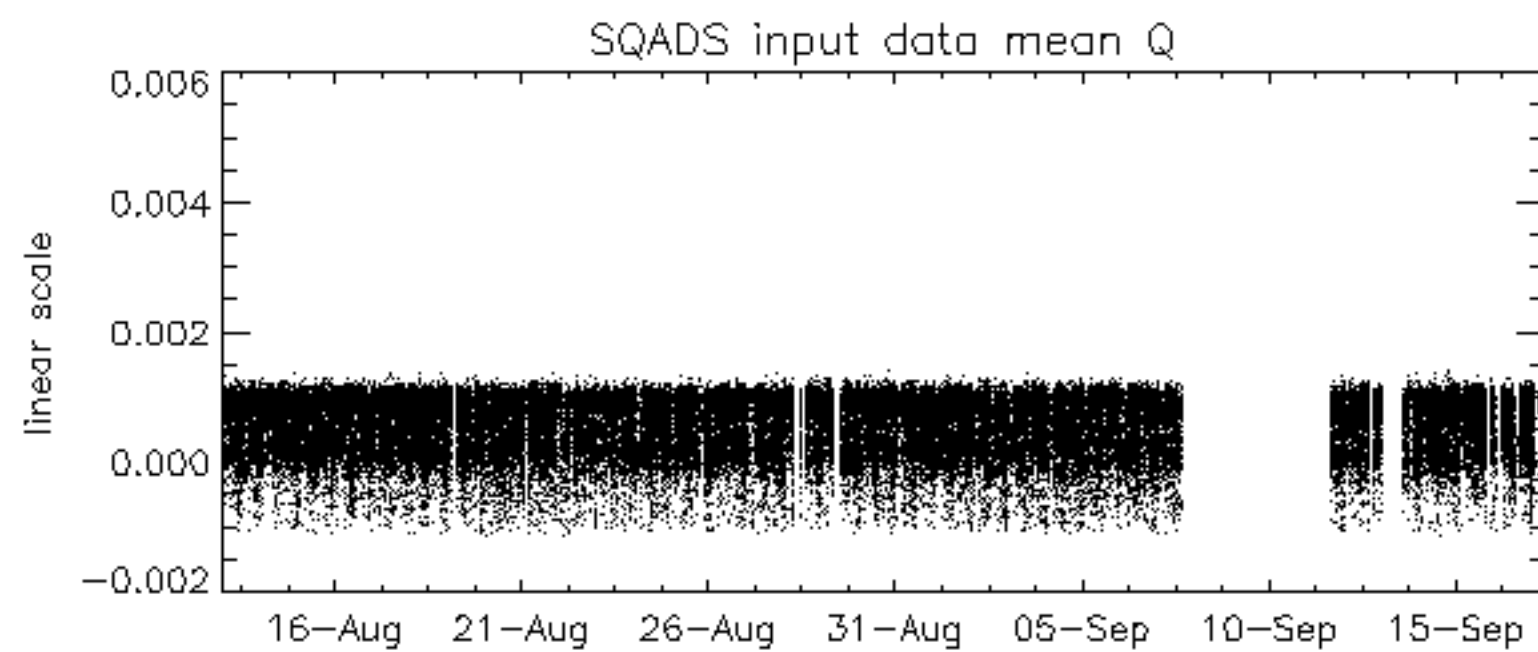
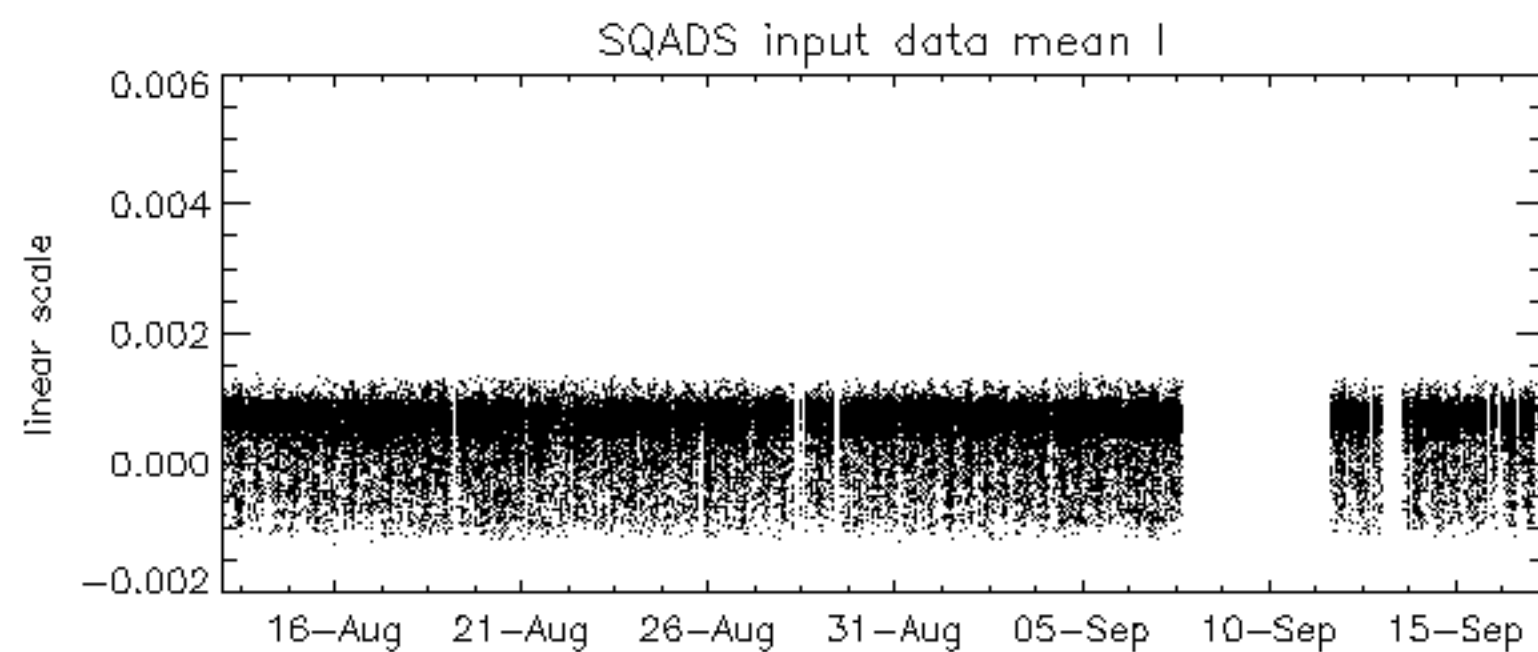
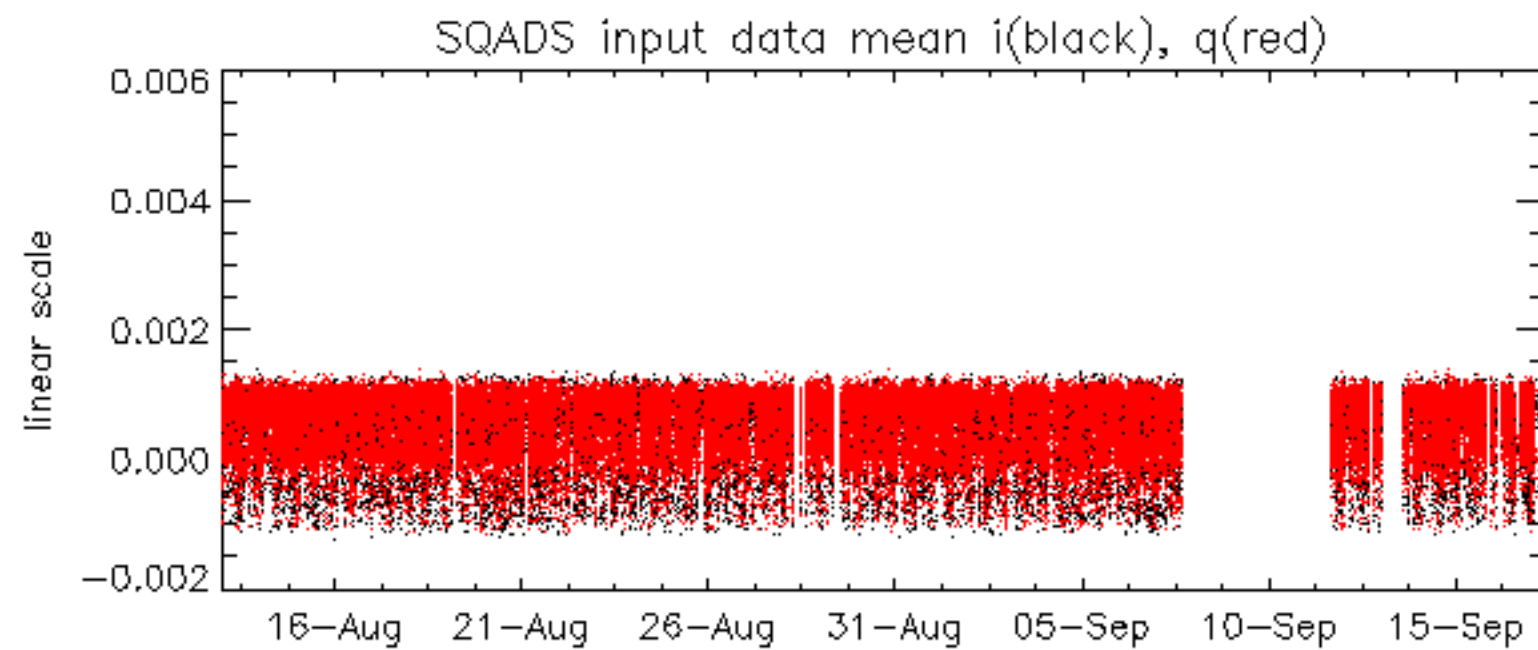


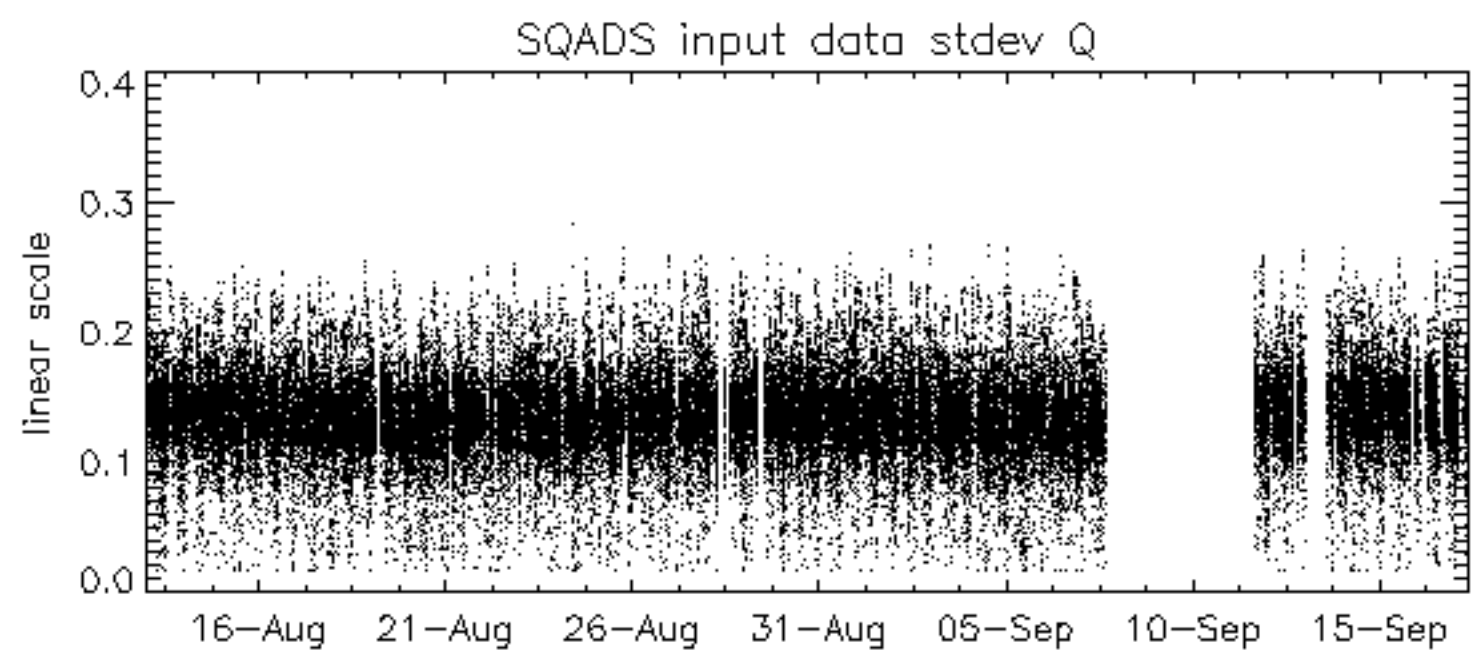
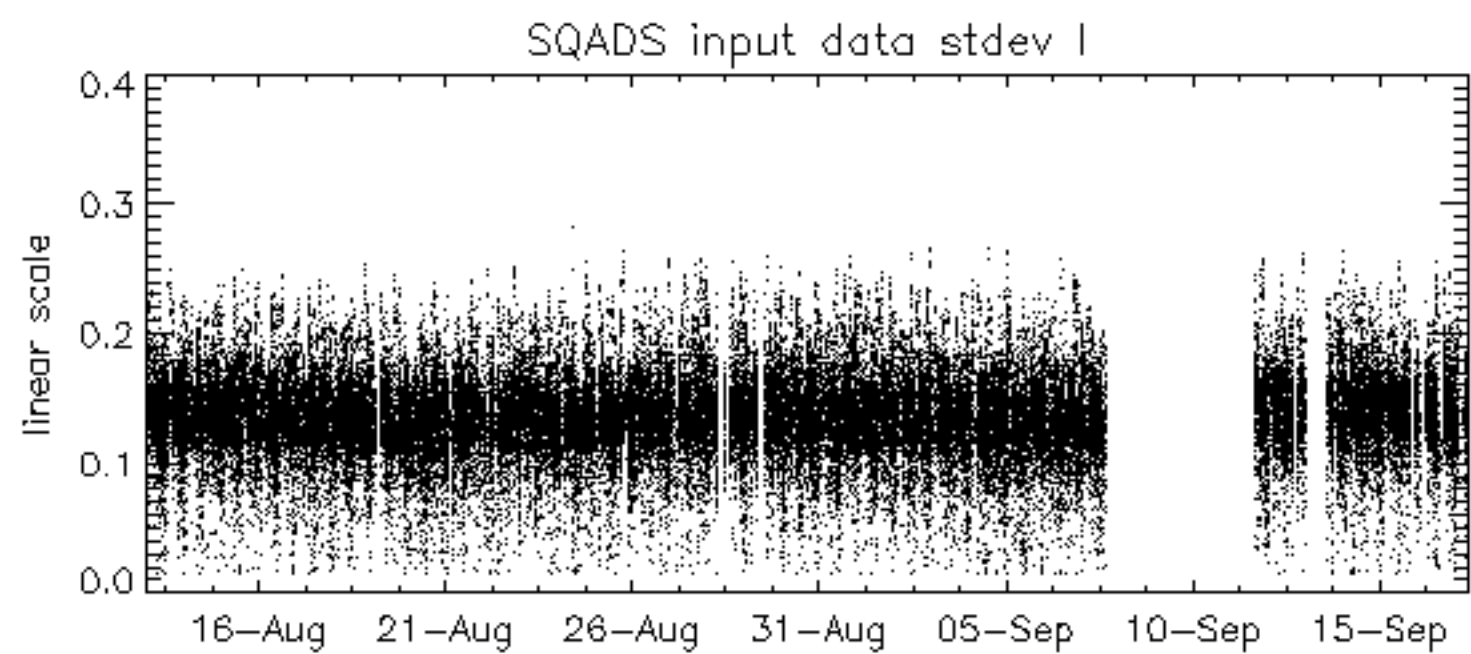
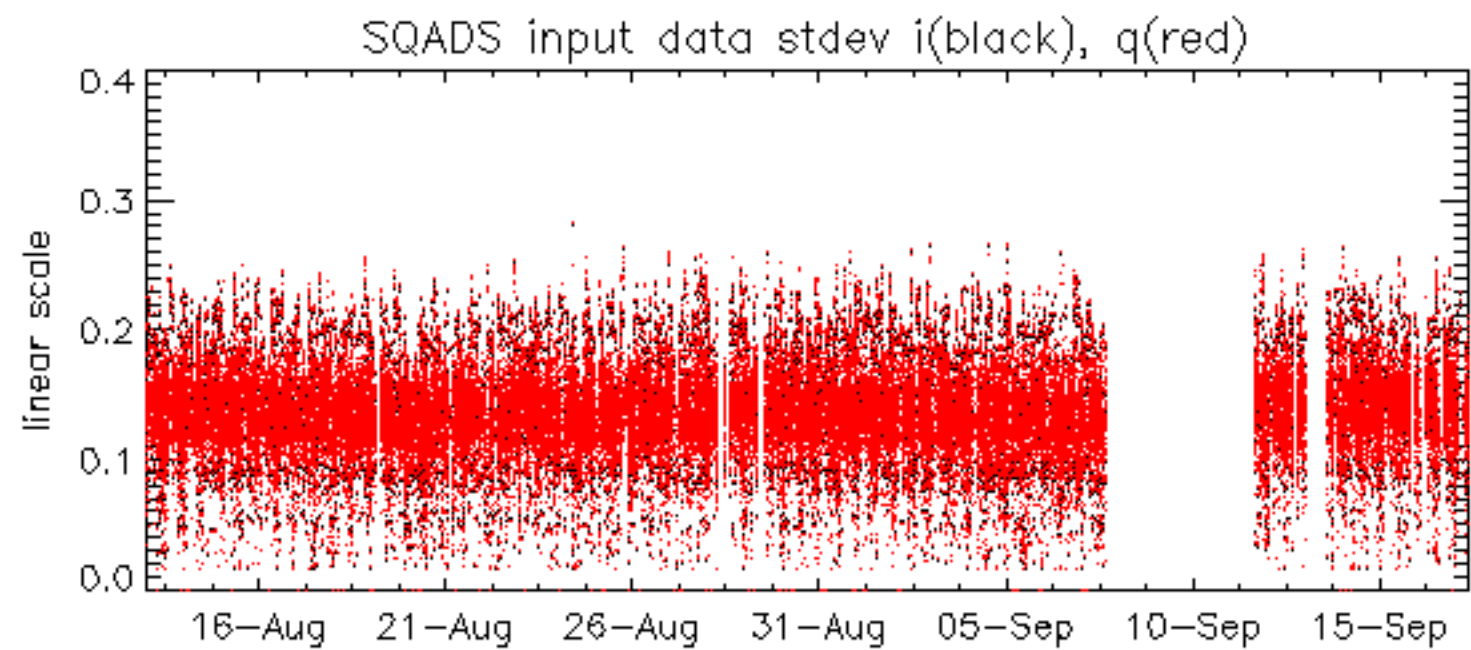


























Summary of analysis for the last 3 days 2006091[567]

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

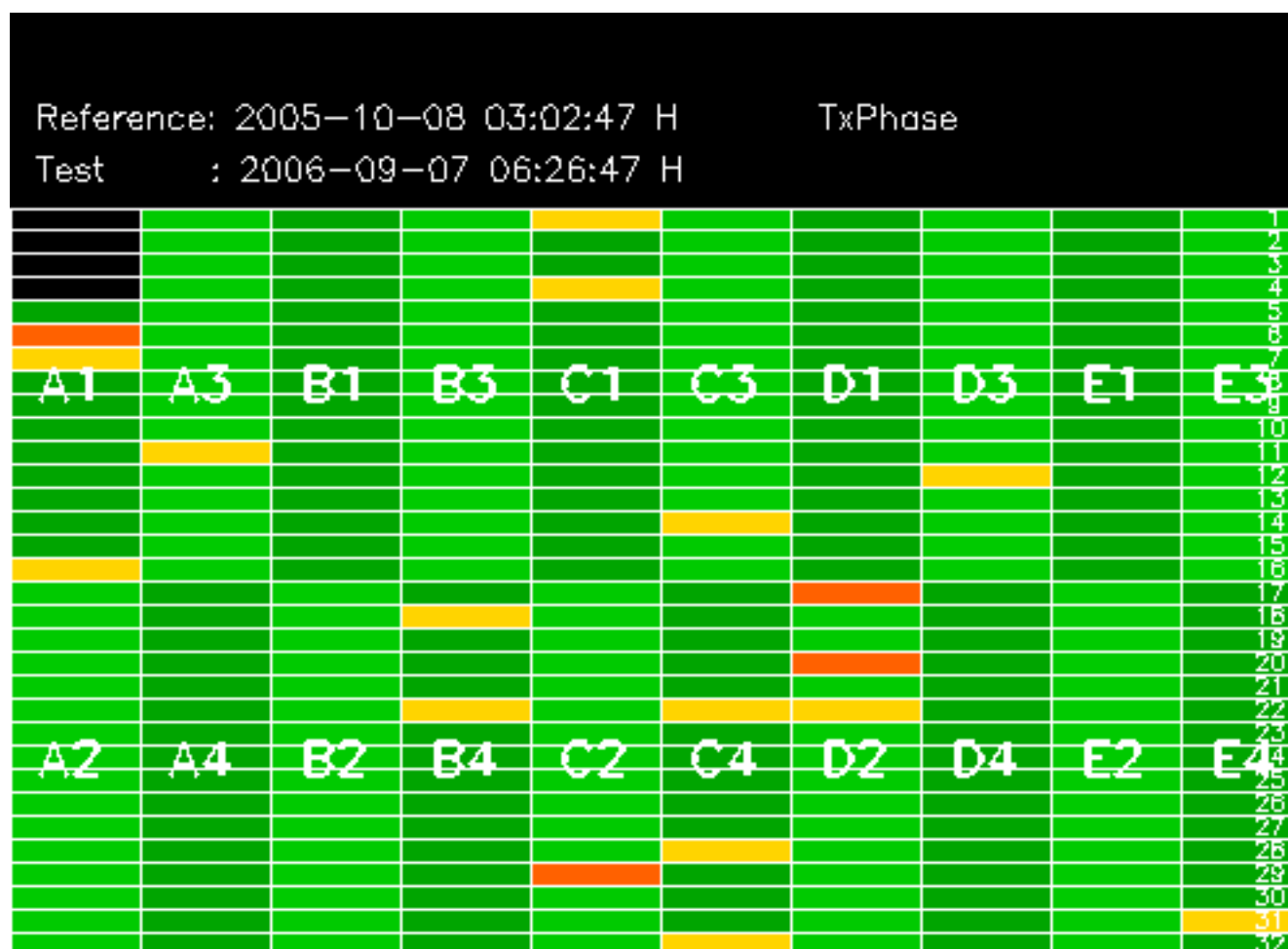
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060915_201740_000000362051_00157_23758_5807.N1	1	0
ASA_IMM_1PNPDK20060916_140527_000000392051_00168_23769_1904.N1	1	0
ASA_WSM_1PNPDE20060915_015531_000001282051_00146_23747_2075.N1	0	39
ASA_WSM_1PNPDE20060915_021350_000000672051_00146_23747_2061.N1	4	196
ASA_WSM_1PNPDE20060915_021500_000000362051_00146_23747_2169.N1	27	2559
ASA_WSM_1PNPDE20060915_033458_000000852051_00147_23748_2087.N1	0	7
ASA_WSM_1PNPDE20060915_234319_000003242051_00159_23760_2251.N1	0	34
ASA_WSM_1PNPDE20060917_005119_000001462051_00174_23775_2423.N1	0	34
ASA_APM_1PNPDE20060915_143623_000000892051_00154_23755_2658.N1	0	9













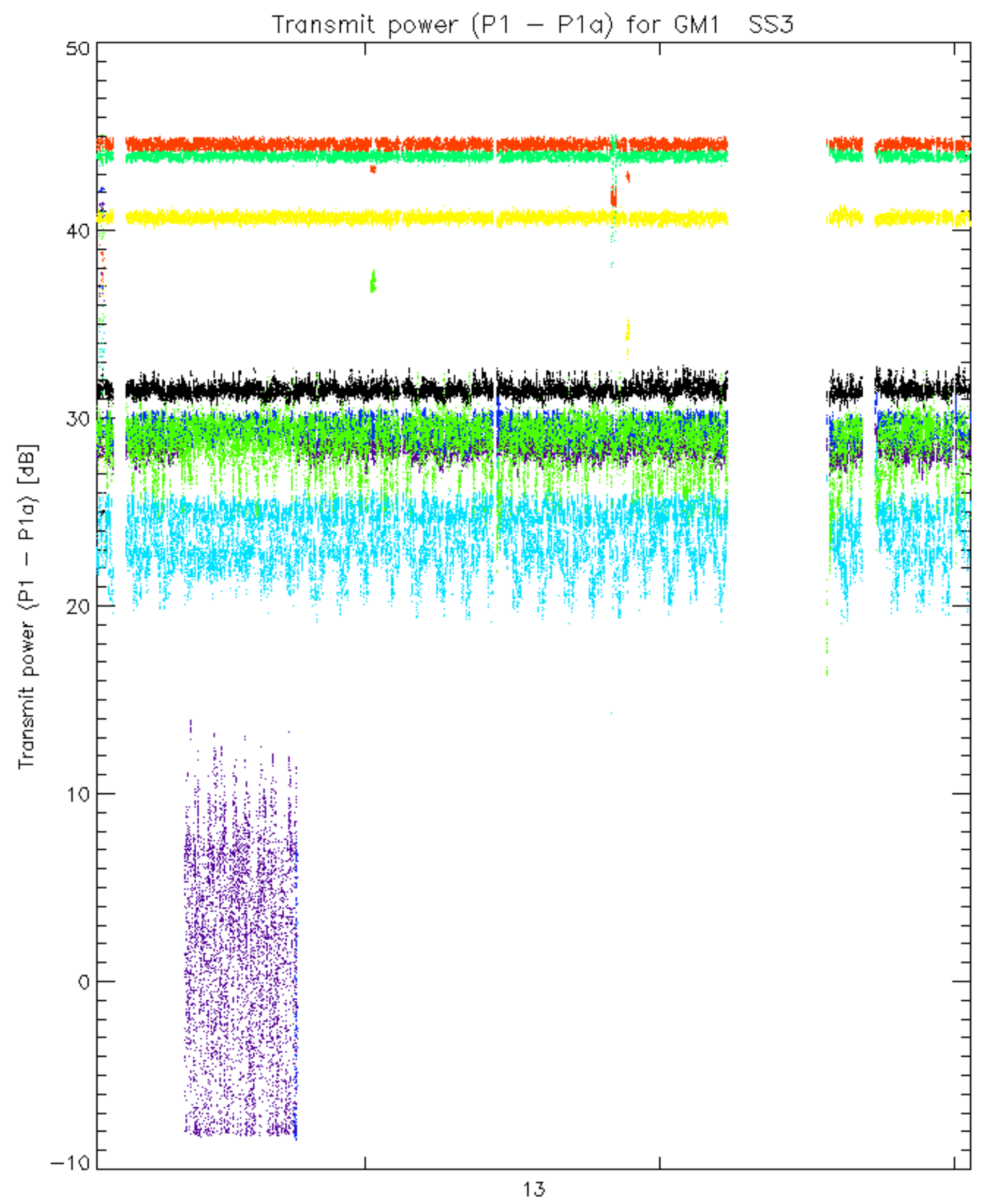


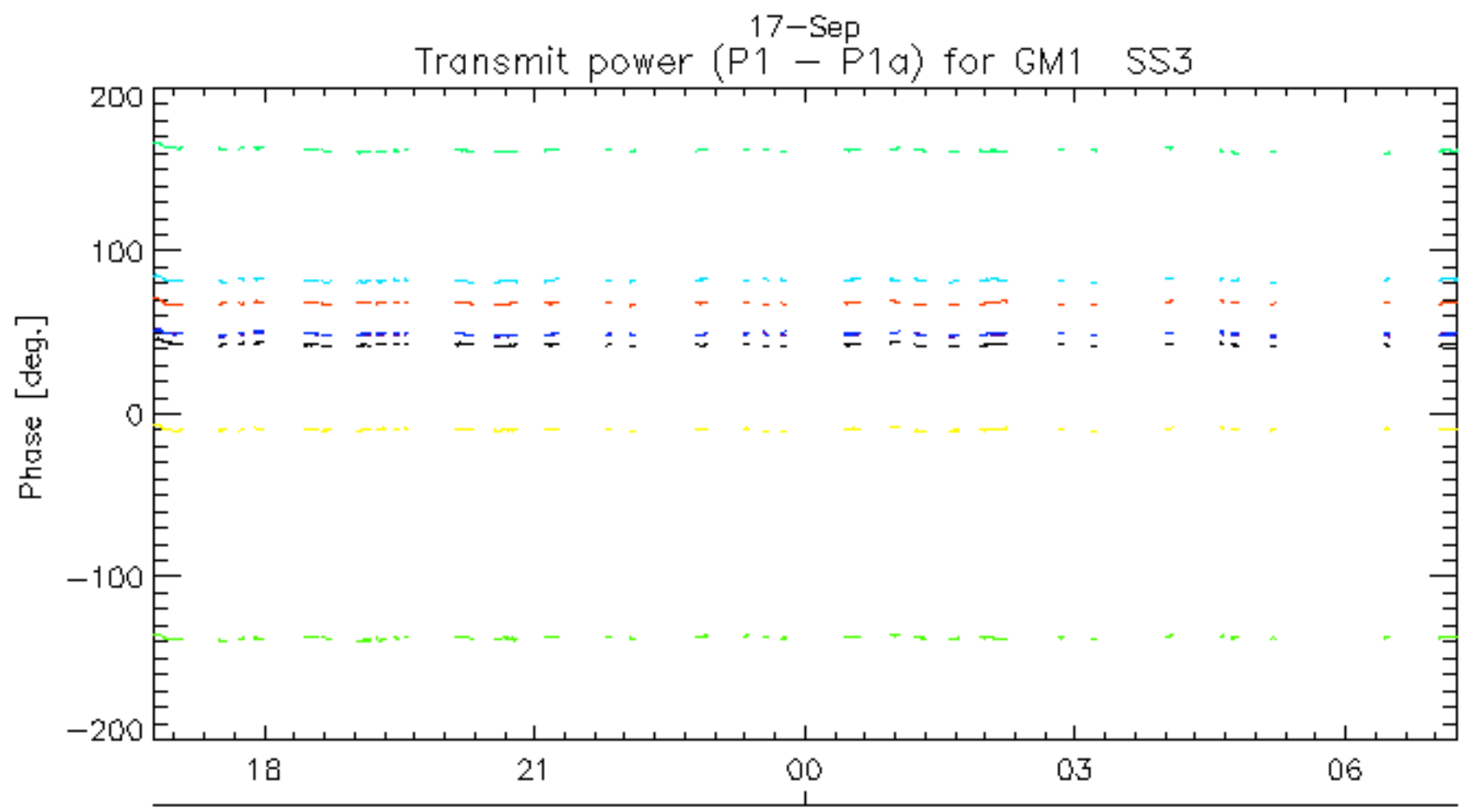
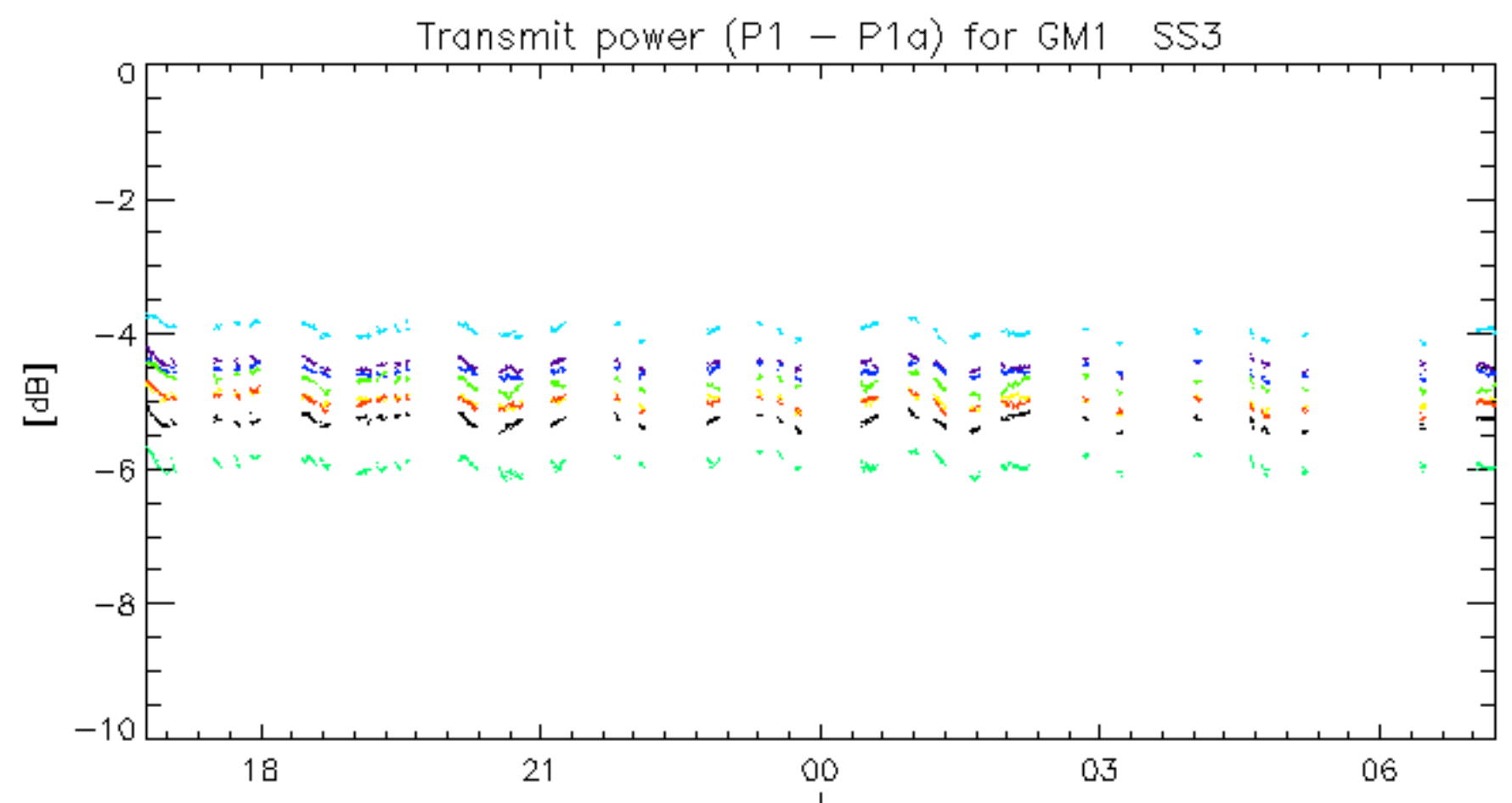




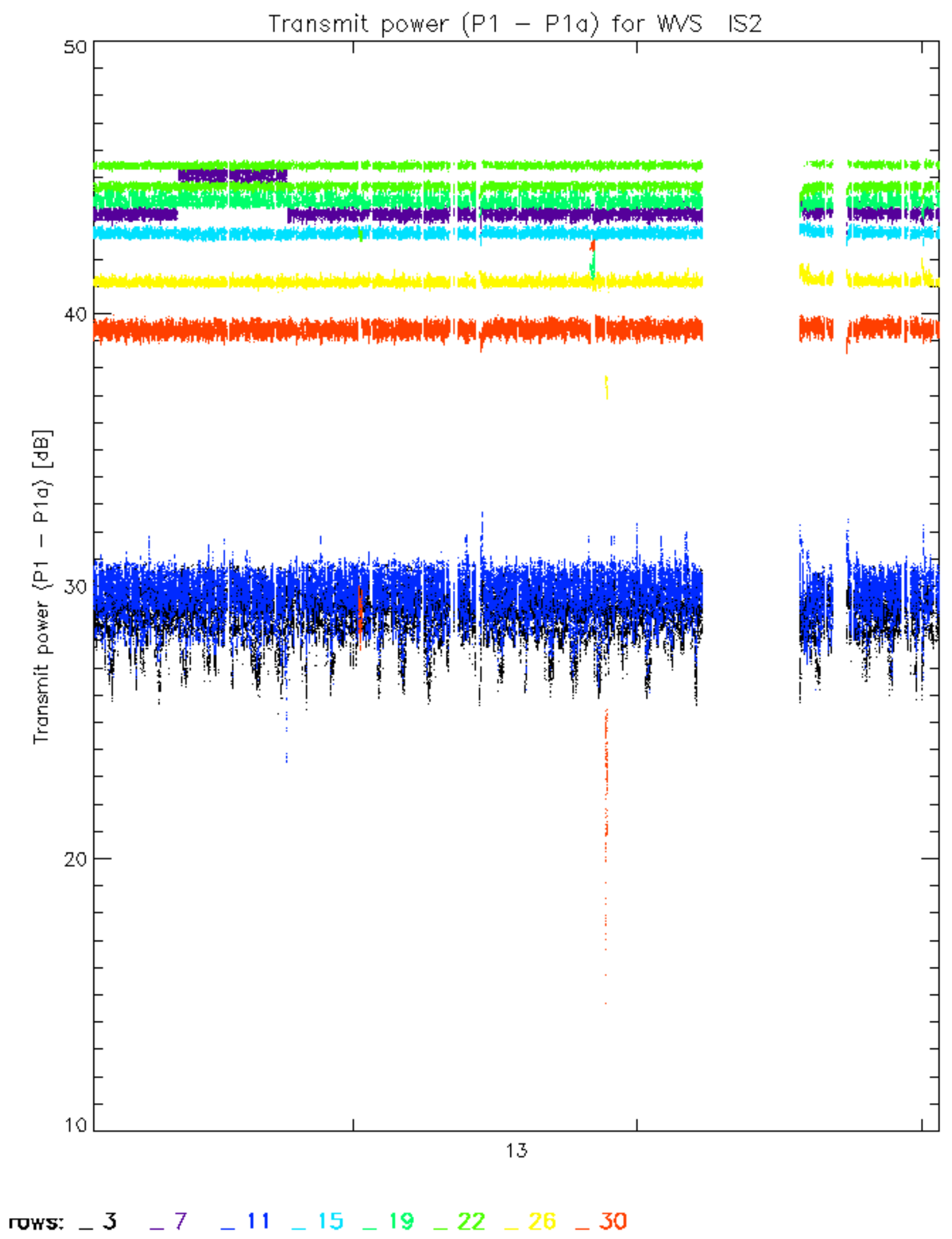


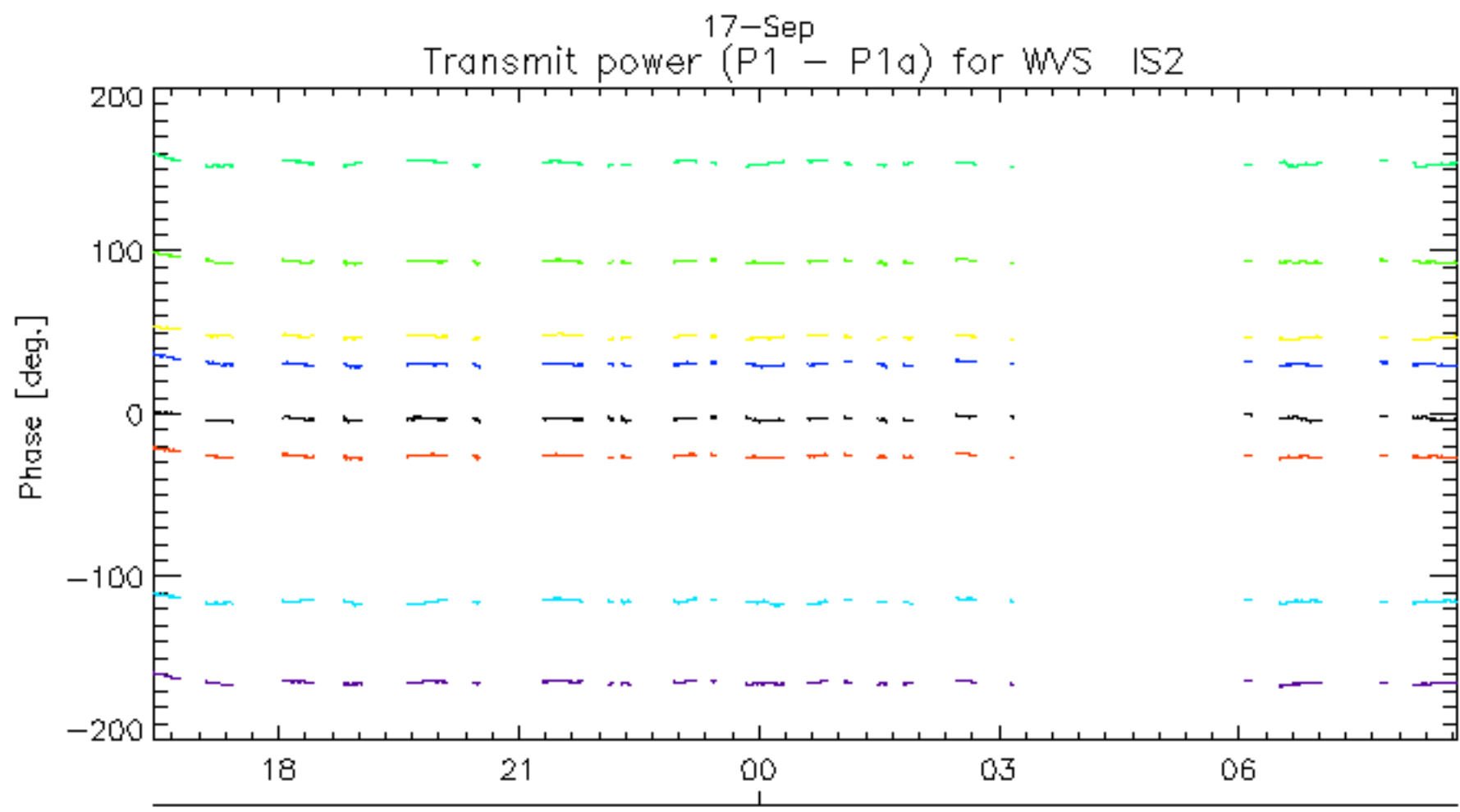
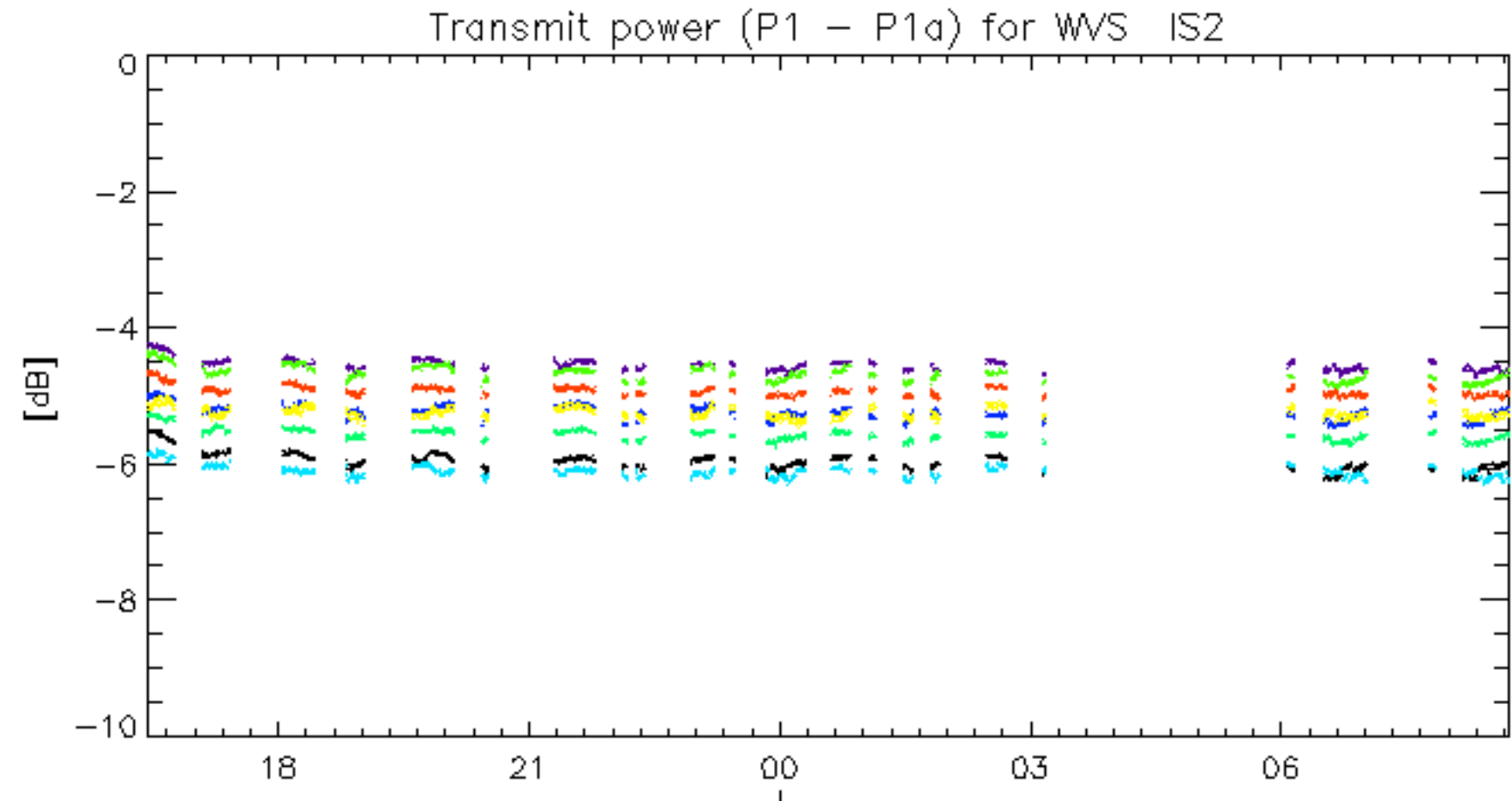






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No unavailabilities during the reported period.