

# PRELIMINARY REPORT OF 040921

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

**last update on Tue Sep 21 12:41:06 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), 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 - 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 any malfunctioning modules and to identify modules for which calibration offsets are to be applied. No anomalies observed on available MS products:

Polarisation	Start Time
V	20040920 084154
H	20040918 030245

### 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

#### 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



#### 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	-3.466468	0.022651	-0.057493
7	P1	-3.334384	0.024271	-0.053531
11	P1	-4.645237	0.041312	-0.045145
15	P1	-5.760711	0.088031	-0.087500
19	P1	-3.510011	0.078720	-0.096681
22	P1	-4.558313	0.107135	-0.065949
24	P1	-4.999434	0.126182	-0.072740
30	P1	-7.024556	0.148699	-0.188261

3	P1	-16.182892	0.564470	-0.361706
7	P1	-14.015887	0.079897	0.021141
11	P1	-20.238098	0.277225	-0.144466
15	P1	-11.776760	0.042303	0.019378
19	P1	-14.025250	1.096268	-0.315675
22	P1	-16.069281	0.354109	0.208545
24	P1	-14.481713	0.323875	0.150510
30	P1	-17.927618	0.625611	-0.163848

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.309160	0.084994	-0.023350
7	P2	-22.605639	0.130478	-0.026889
11	P2	-15.233229	0.159928	0.108419
15	P2	-7.062571	0.098694	-0.006939
19	P2	-9.570505	0.173330	0.034221
22	P2	-17.322083	0.115861	0.056127
24	P2	-20.755716	0.092548	-0.050299
30	P2	-19.189857	0.083172	0.113946

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.152340	0.002829	-0.025919
7	P3	-8.152308	0.002828	-0.026088
11	P3	-8.152293	0.002828	-0.026124
15	P3	-8.152297	0.002828	-0.026111
19	P3	-8.152314	0.002827	-0.026033
22	P3	-8.152329	0.002828	-0.025941
24	P3	-8.152328	0.002828	-0.025948
30	P3	-8.152528	0.002836	-0.027077

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1	
<input type="checkbox"/>	
<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	-2.809280	0.070200	-0.228322
7	P1	-3.015089	0.092788	-0.146507
11	P1	-3.889587	0.063865	-0.069378
15	P1	-3.538529	0.079638	-0.072702
19	P1	-3.518486	0.098983	-0.109698
22	P1	-5.728966	0.123151	-0.080338
24	P1	-3.951822	0.054244	-0.093983
30	P1	-6.214447	0.098080	-0.079095
3	P1	-10.740274	0.291128	-0.708564
7	P1	-10.101574	0.144513	-0.061602
11	P1	-12.165623	0.110333	-0.016495
15	P1	-11.678842	0.074323	-0.069134
19	P1	-15.747480	2.073947	-0.402125
22	P1	-23.337618	1.566170	0.276636
24	P1	-17.937674	0.349656	-0.001577
30	P1	-20.391495	1.260267	0.135566

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.990004	0.049380	0.003541
7	P2	-22.745104	0.039411	0.023445
11	P2	-10.940621	0.060393	0.095392
15	P2	-4.961745	0.030389	-0.013981
19	P2	-6.773984	0.045598	-0.025028
22	P2	-7.430907	0.037775	0.042215
24	P2	-11.060837	0.043602	-0.024547
30	P2	-22.158236	0.029167	0.088497

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P3	-8.003781	0.003058	-0.023354
7	P3	-8.003793	0.003054	-0.023475
11	P3	-8.003833	0.003057	-0.023289
15	P3	-8.003812	0.003045	-0.023522
19	P3	-8.003785	0.003063	-0.023392
22	P3	-8.003805	0.003056	-0.023524
24	P3	-8.003861	0.003074	-0.023624
30	P3	-8.003784	0.003058	-0.023403

### 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	0.000469653
	stdev	2.18297e-07
MEAN Q	mean	0.000537588
	stdev	2.35828e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127484
	stdev	0.000960809

STDEV Q	mean	0.127707
	stdev	0.000970427





### 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)	
	
	Acsending
	
	Descending

### 6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler	
	
	Acsending
	
	Descending

### 6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX	
	

### 6.4 - Unbiased Doppler Error for GM1

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

### 6.5 - Absolute Doppler for GM1

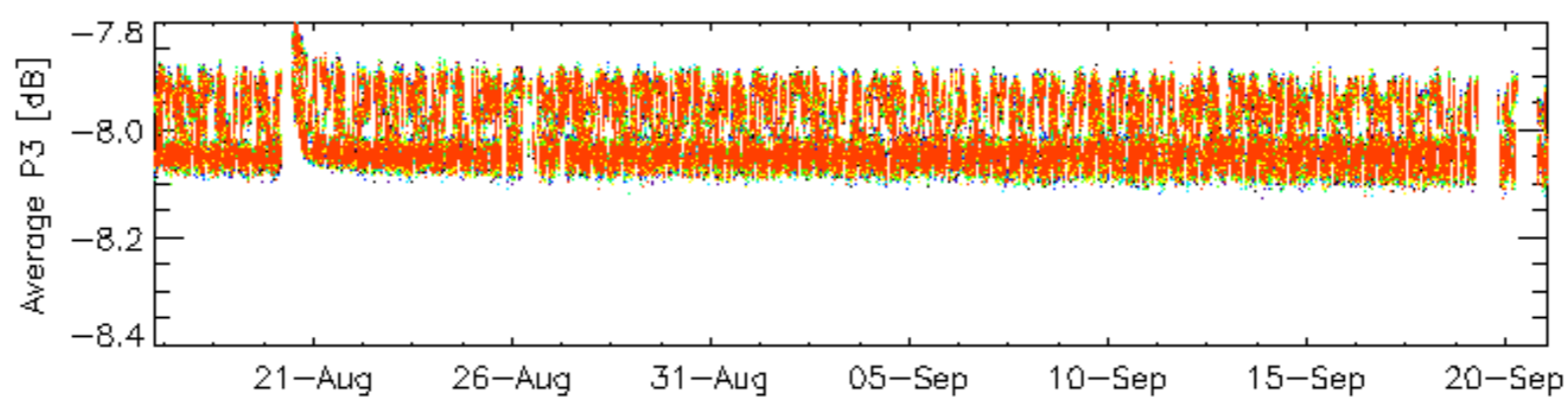
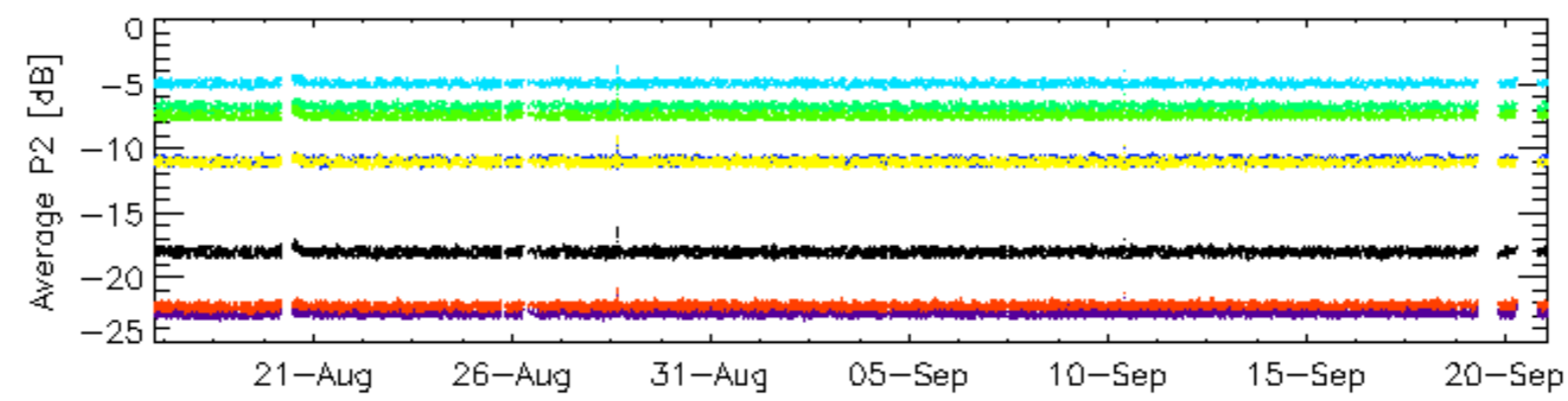
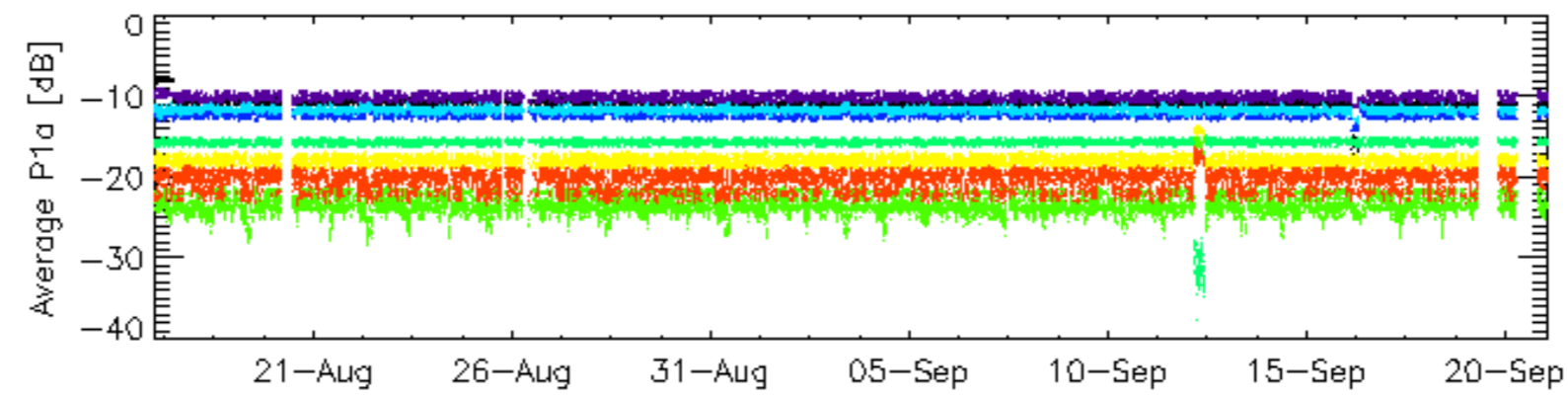
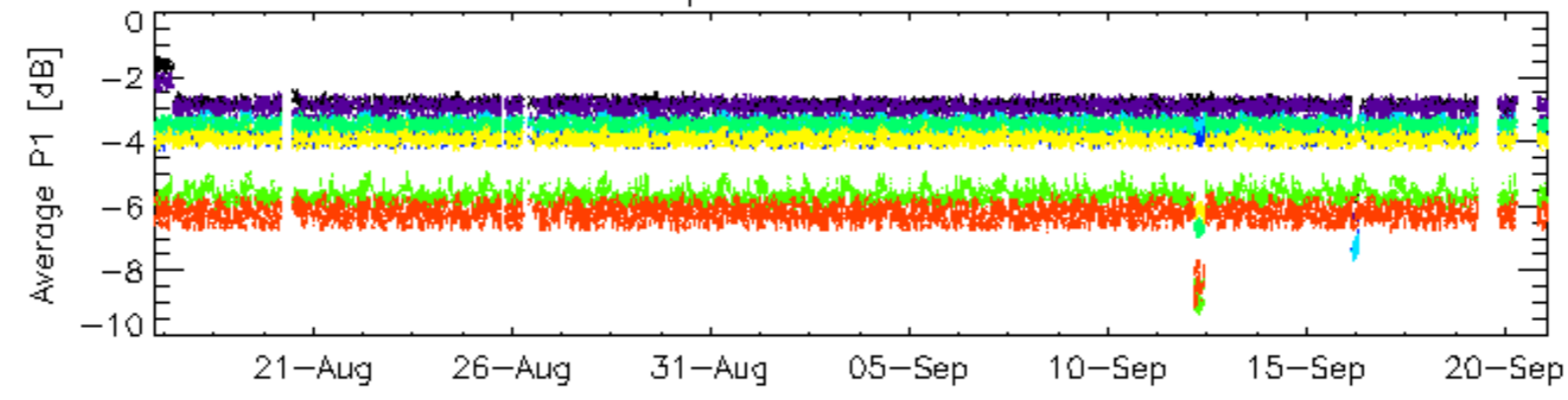
Evolution of Absolute Doppler	
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	Ascending
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	Descending

### 6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX	
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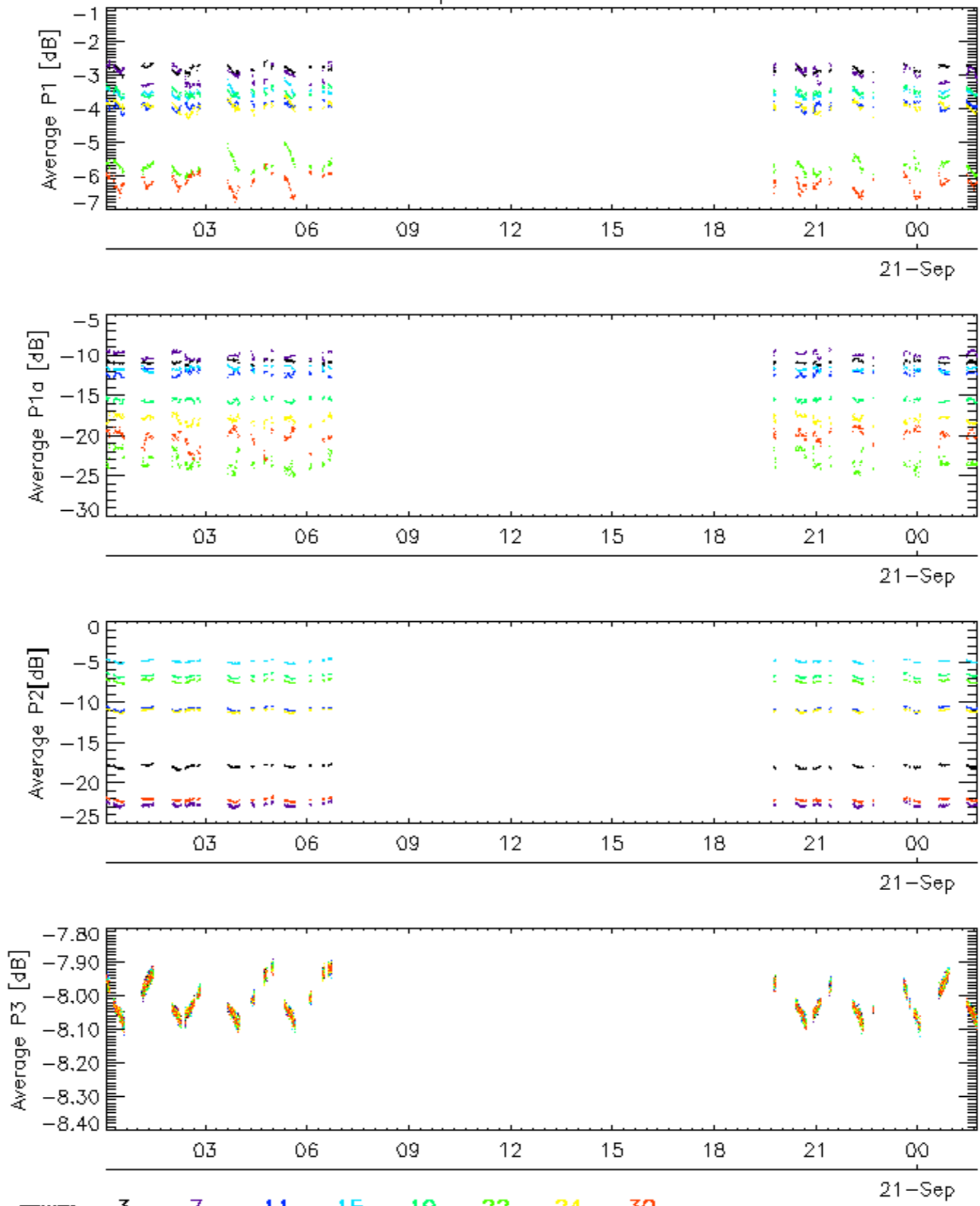


Cal pulses for GM1 SS3



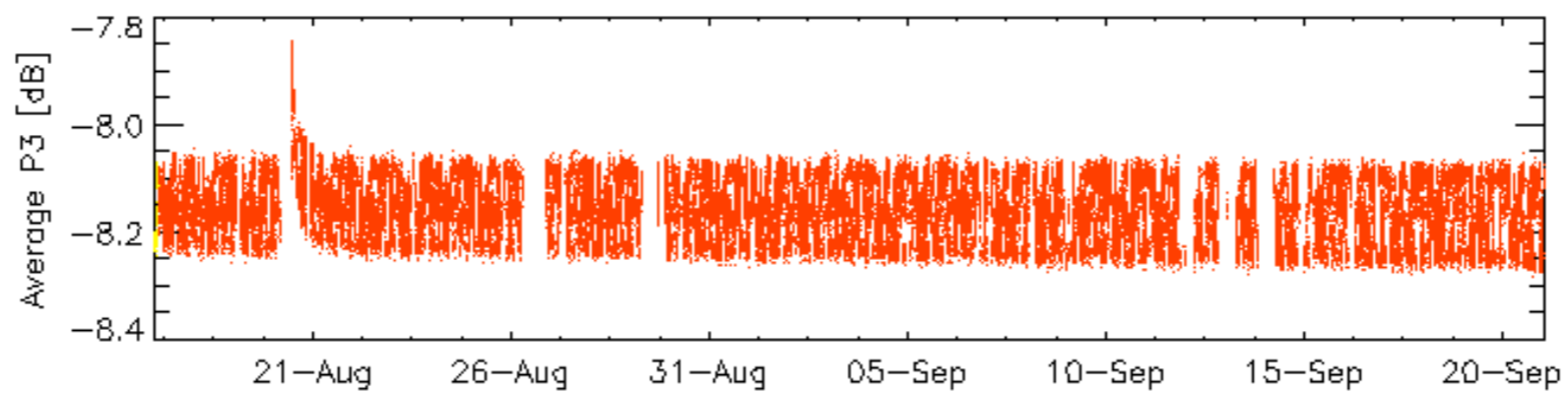
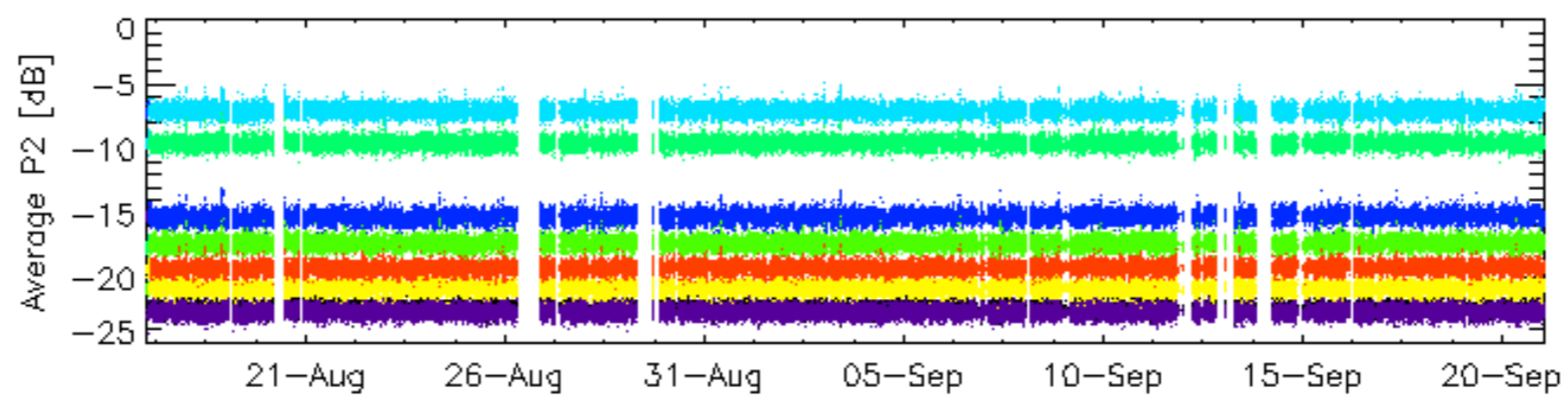
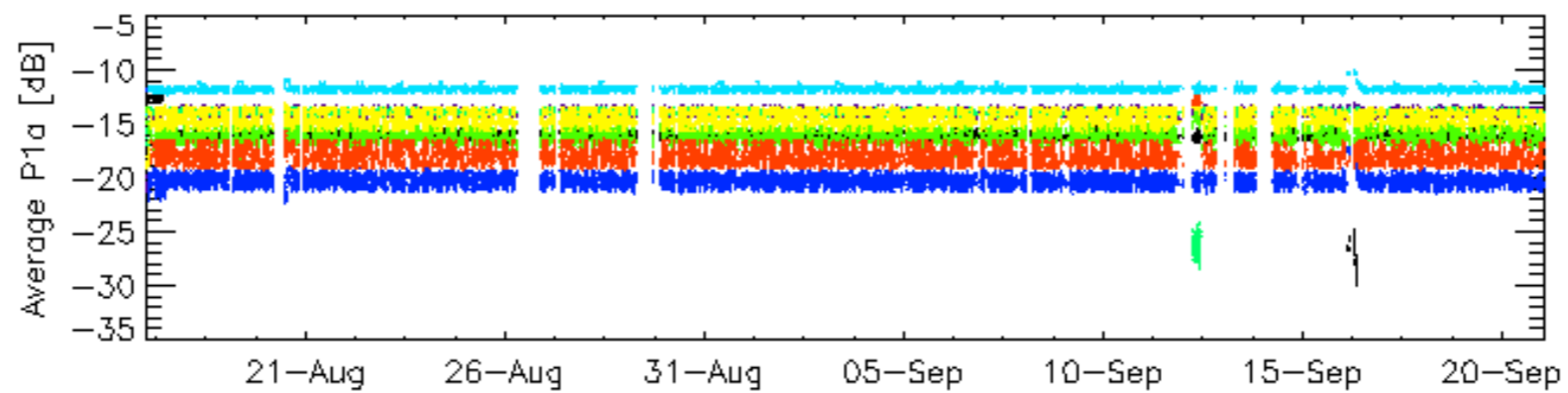
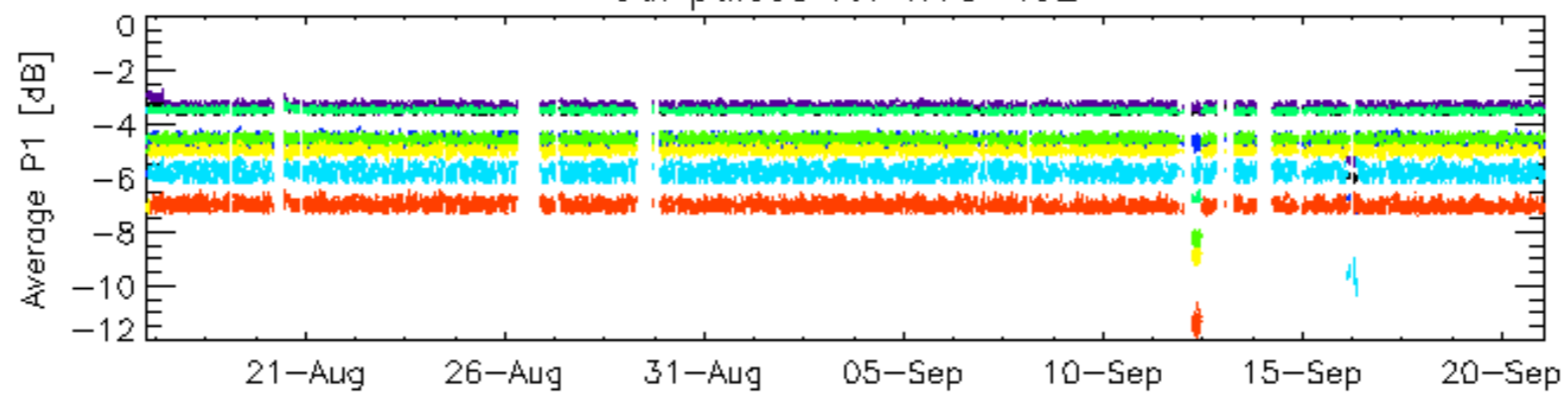
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

Cal pulses for GM1 SS3



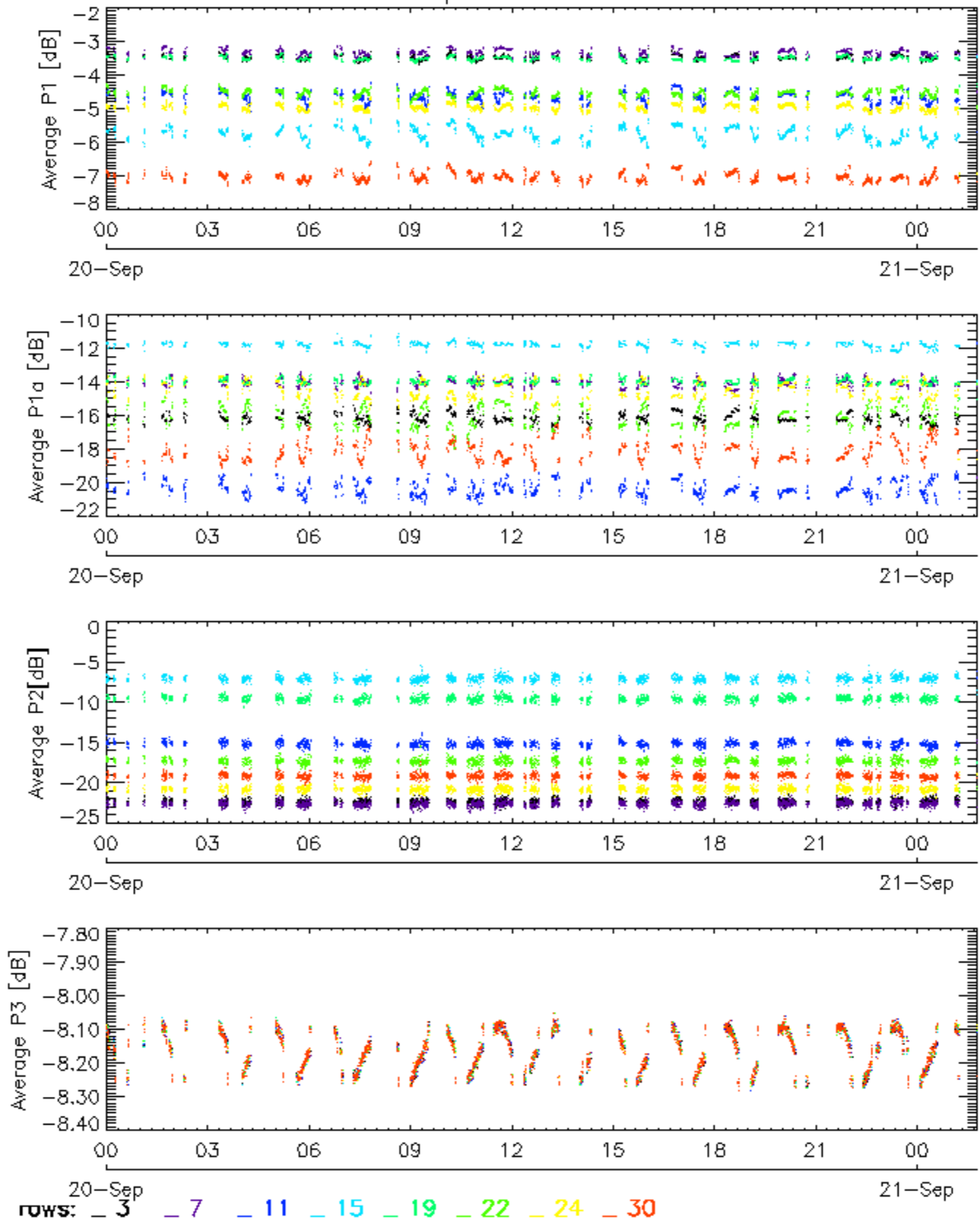
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

Cal pulses for WVS IS2

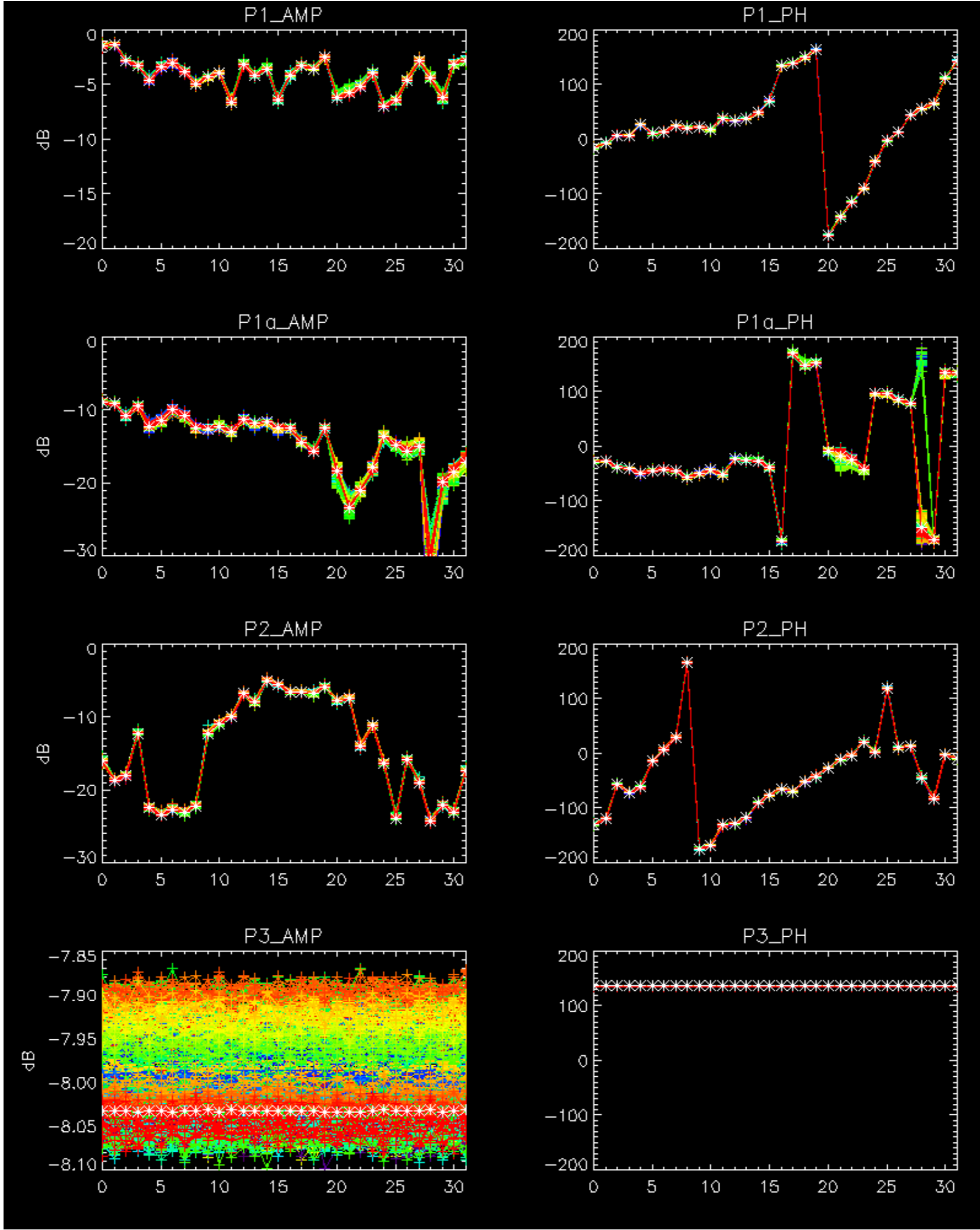


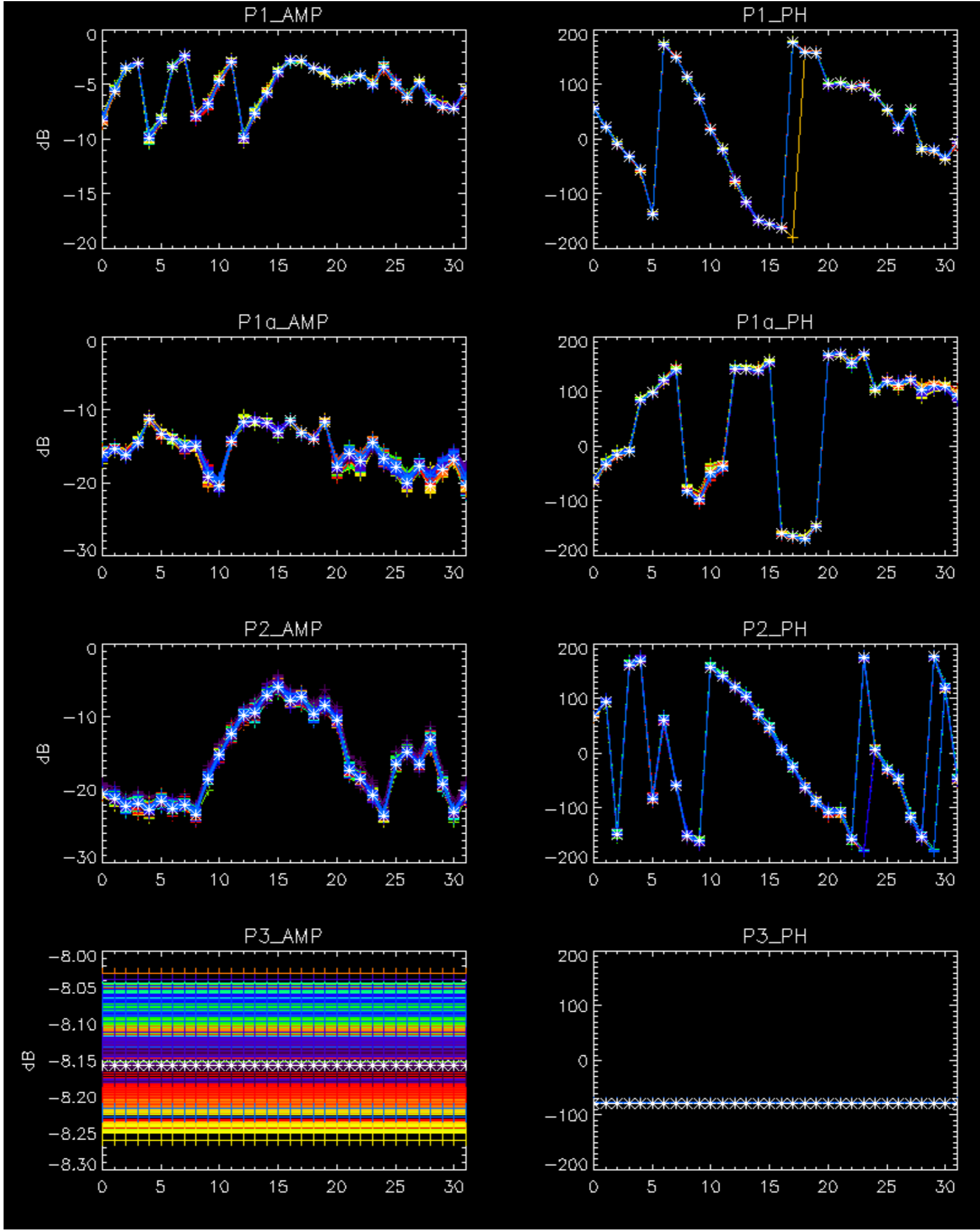
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### Cal pulses for WVS IS2



No anomalies observed.



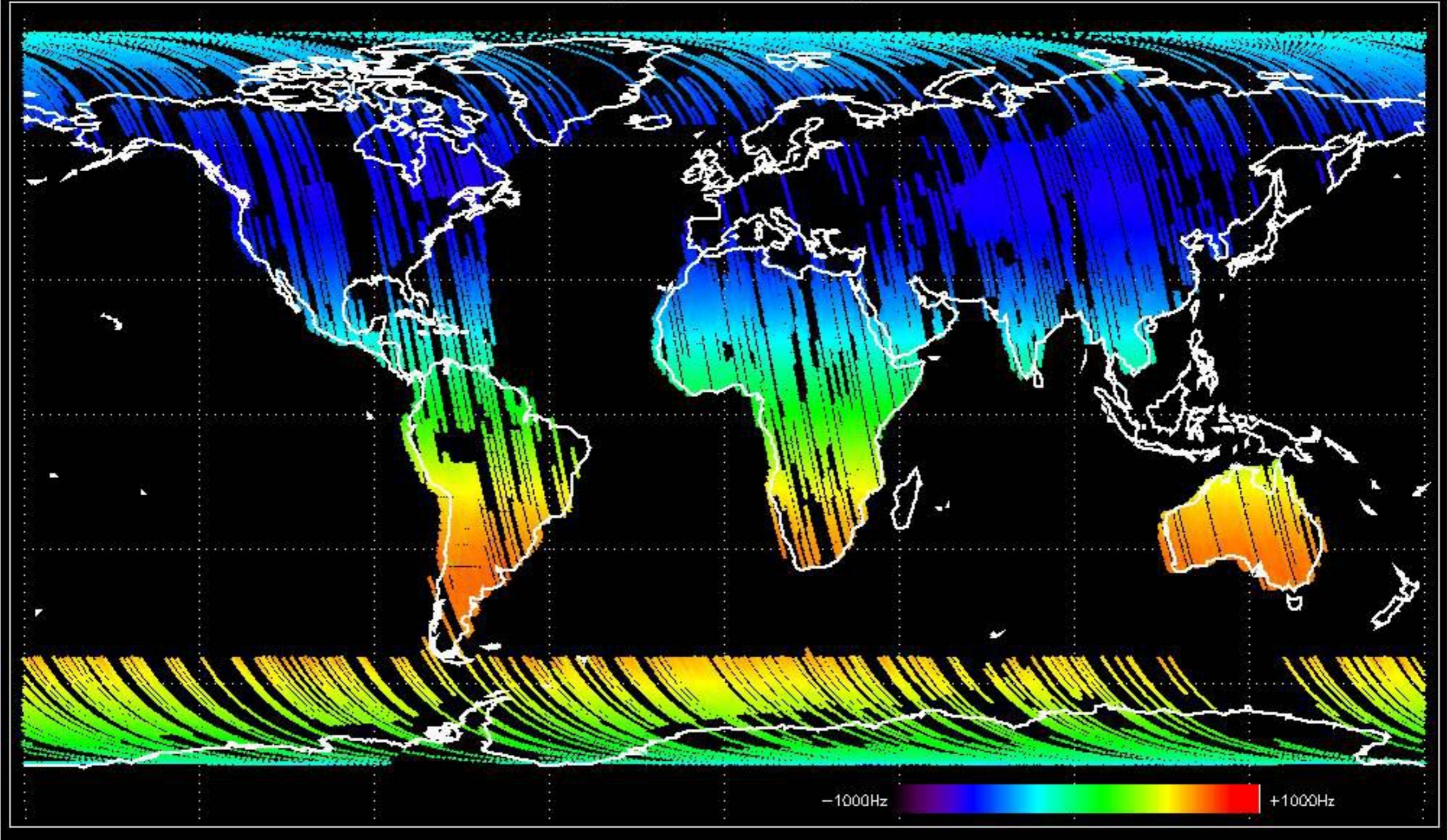


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

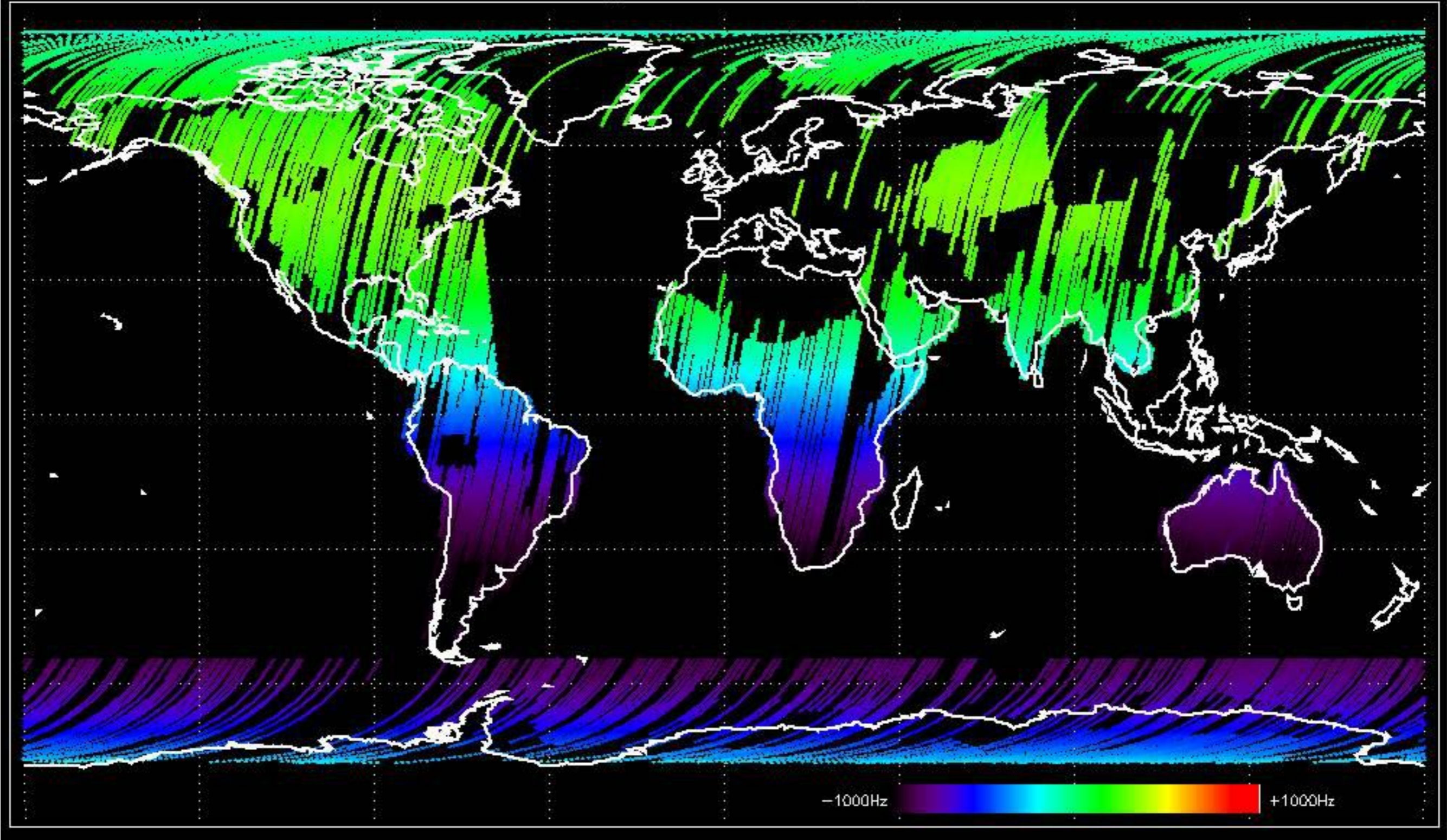




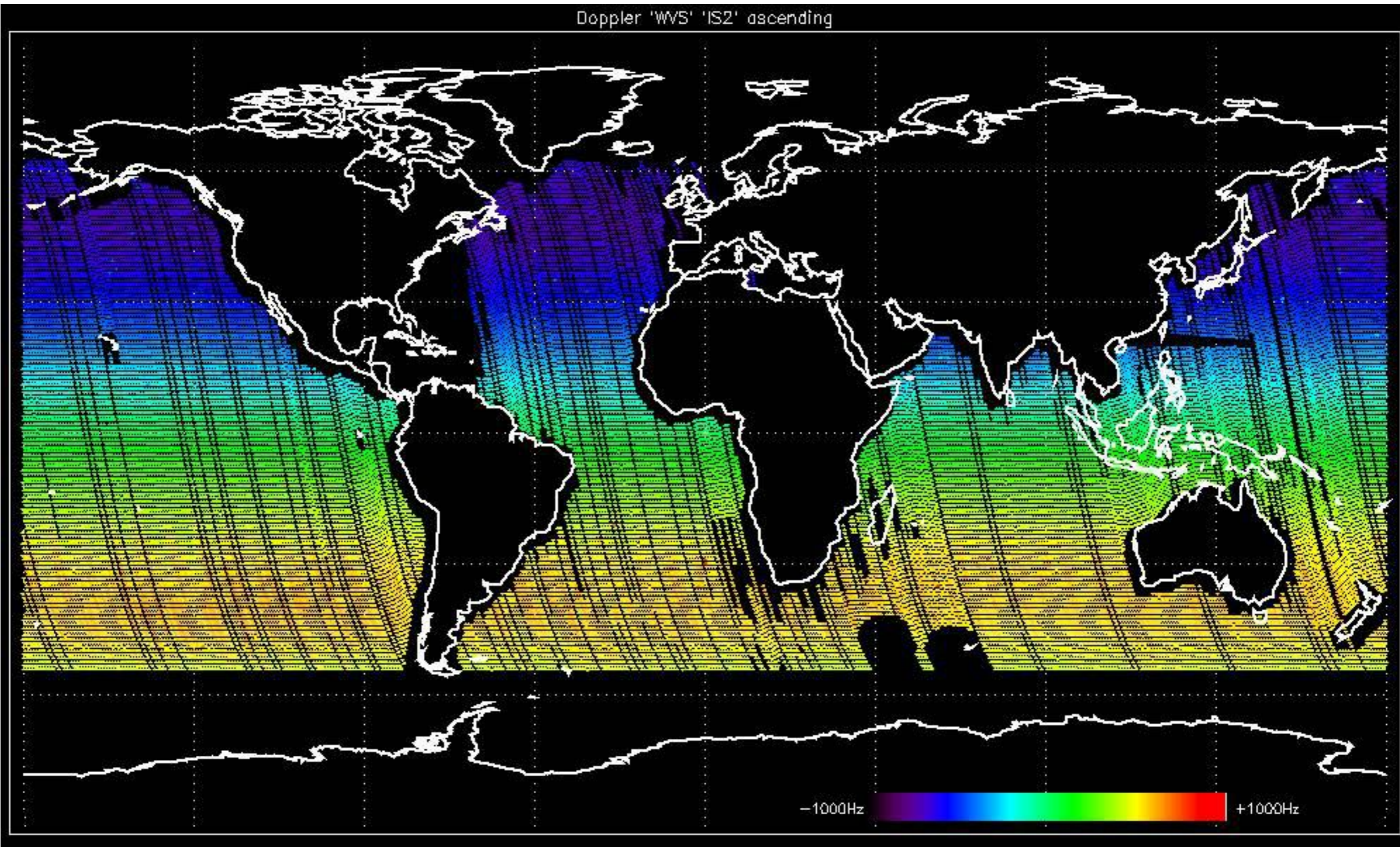
Doppler 'GM1' 'SS1' ascending



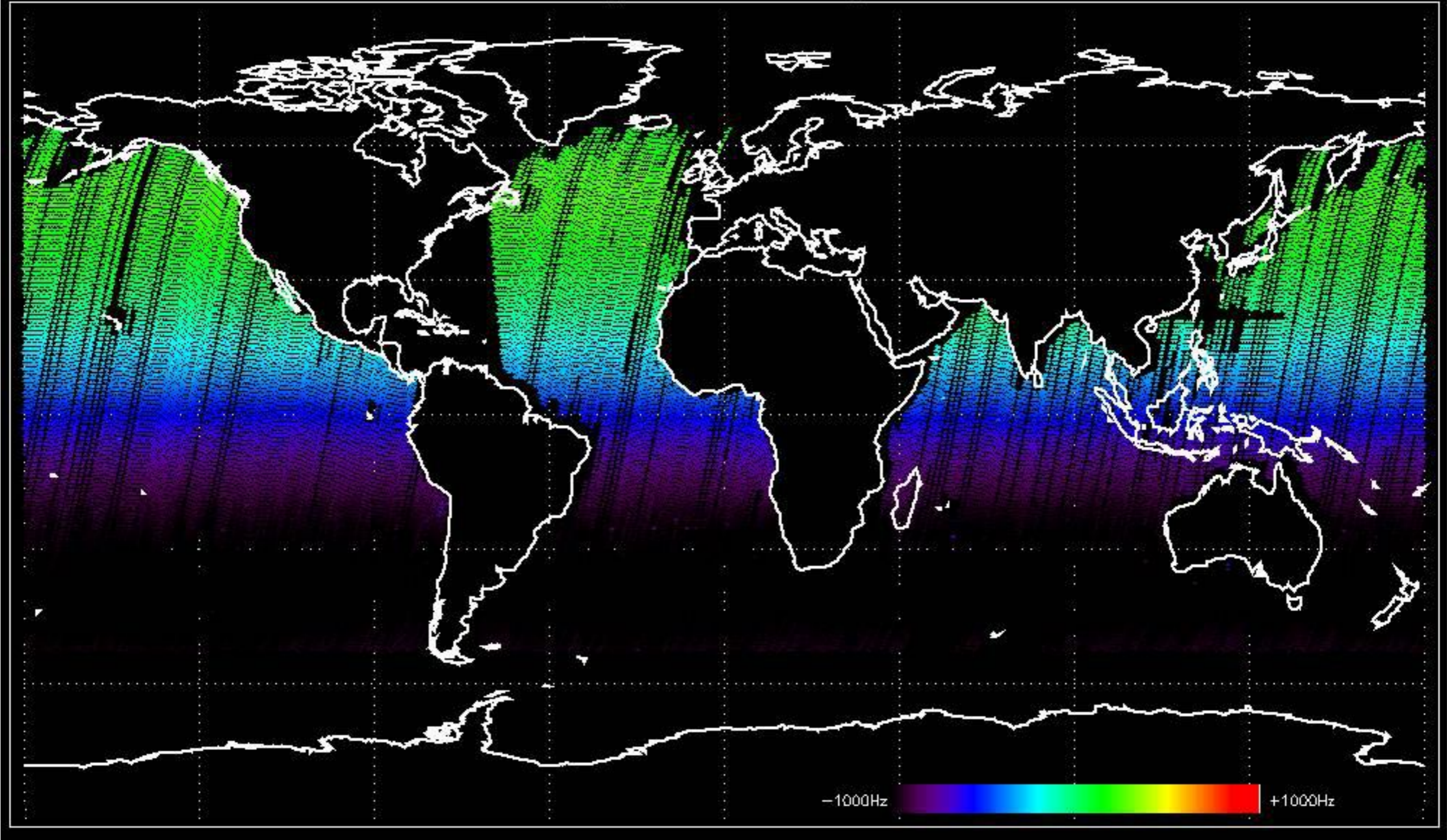
Doppler 'GM1' 'SS1' descending

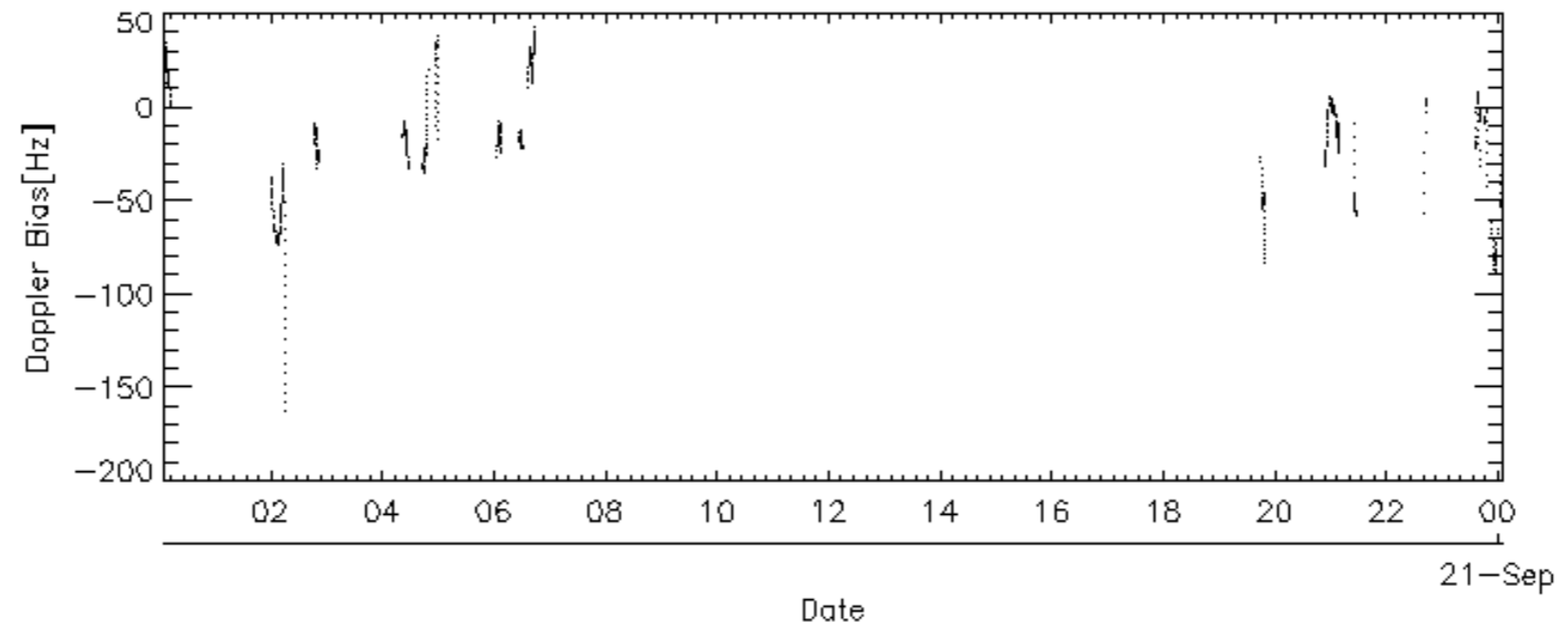
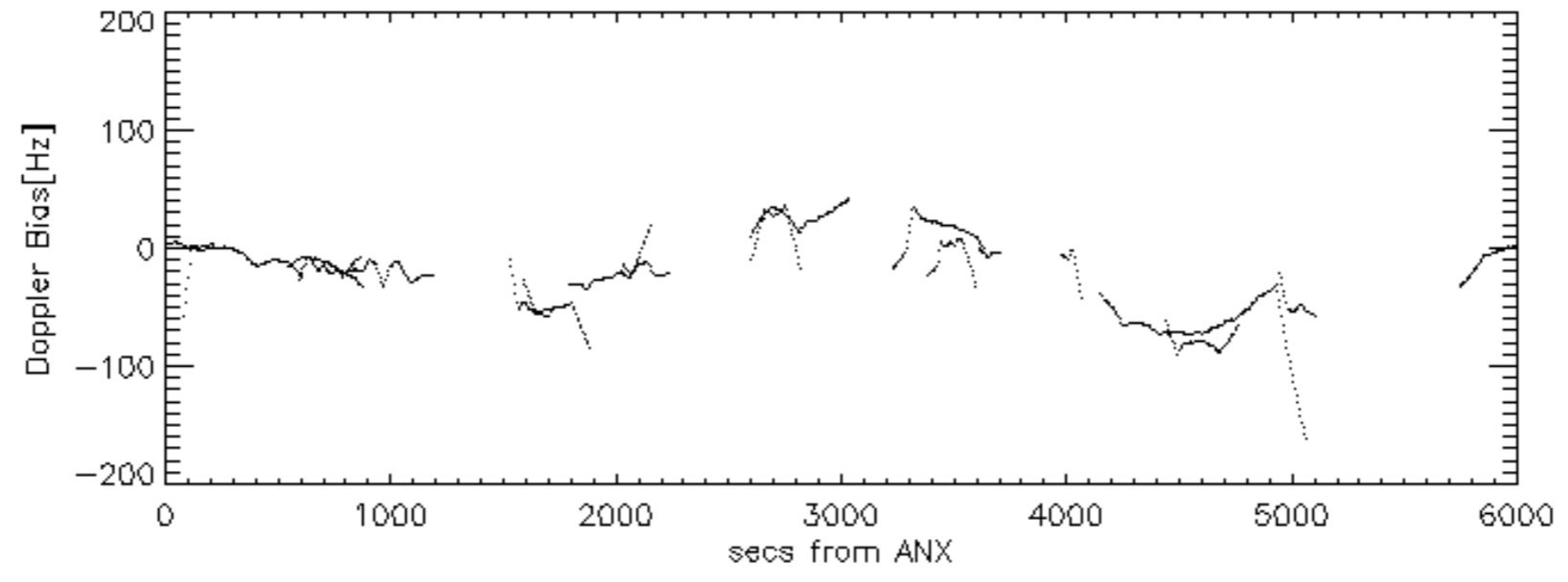
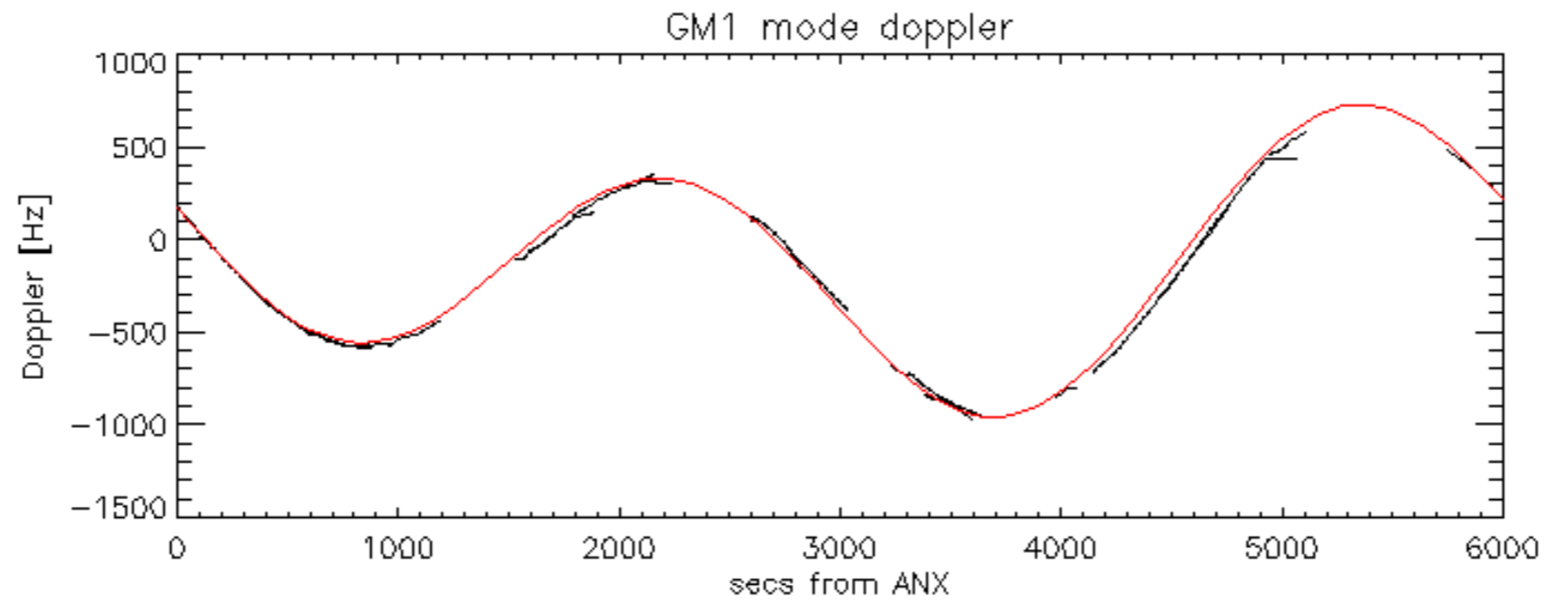


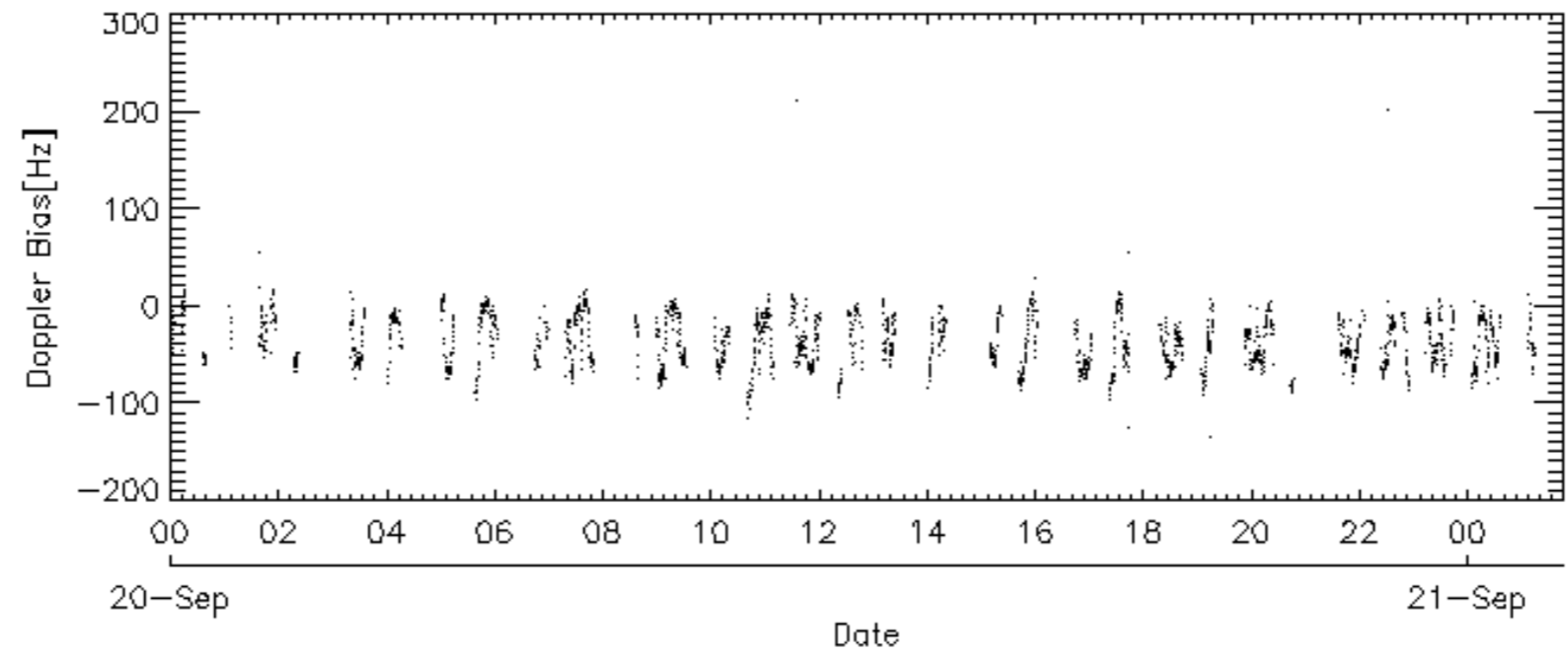
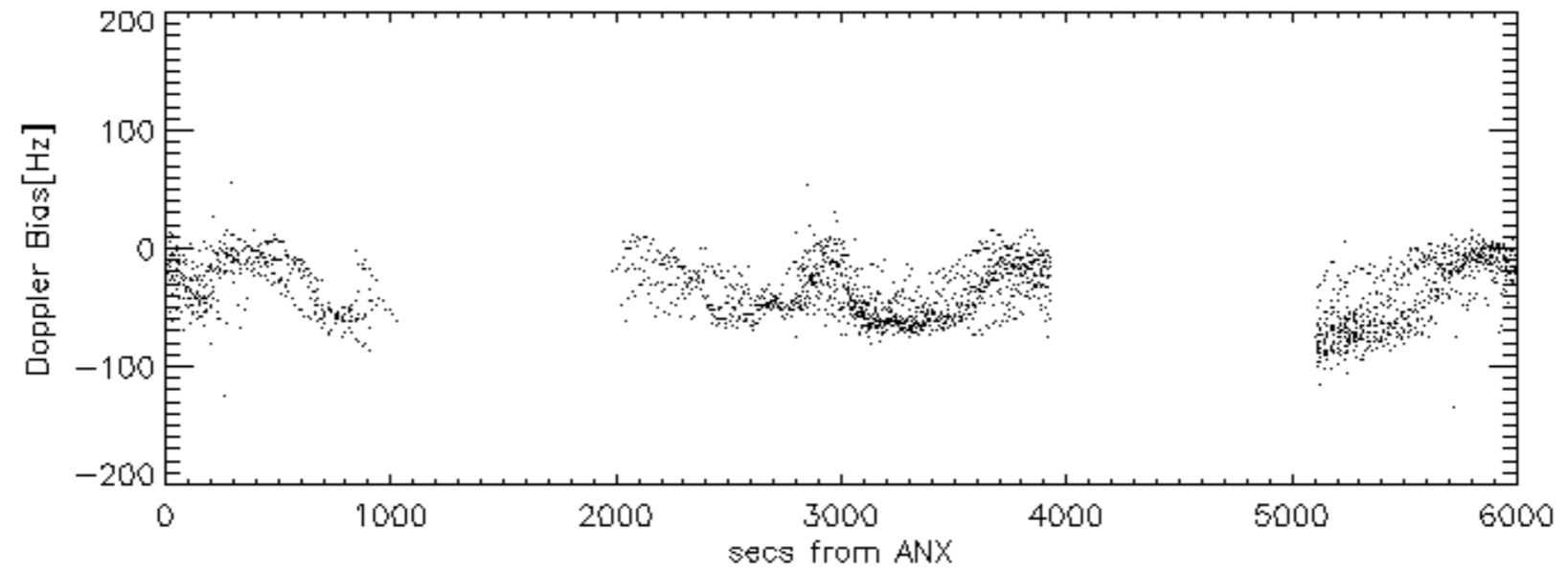
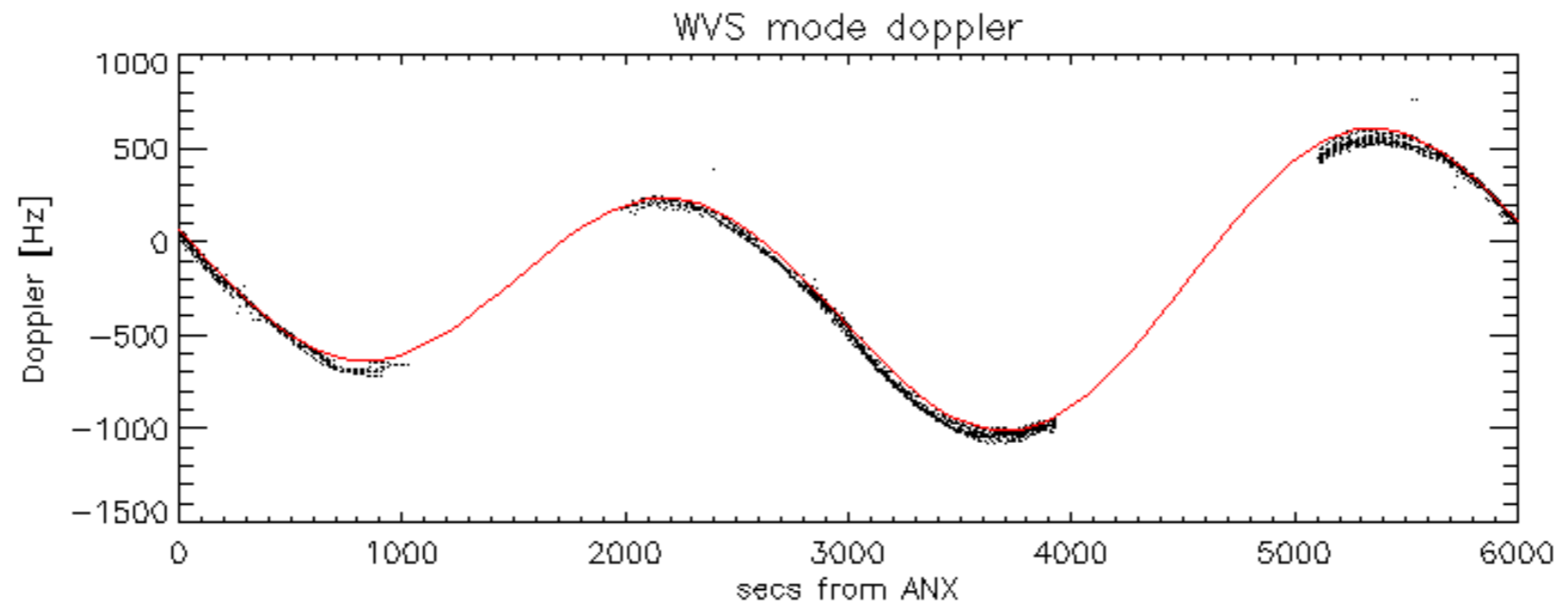
Doppler 'WVS' 'IS2' ascending



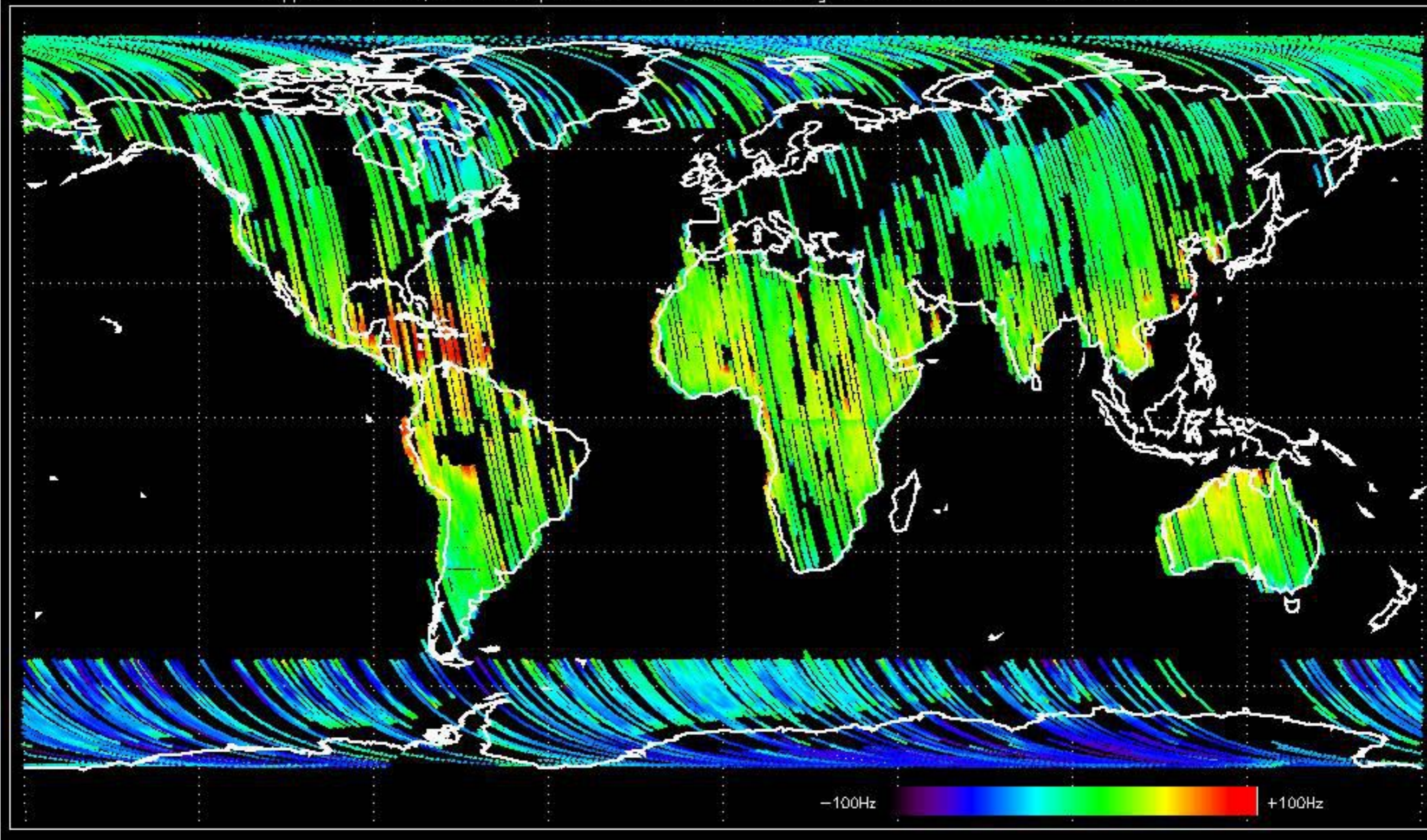
Doppler 'WVS' 'IS2' descending





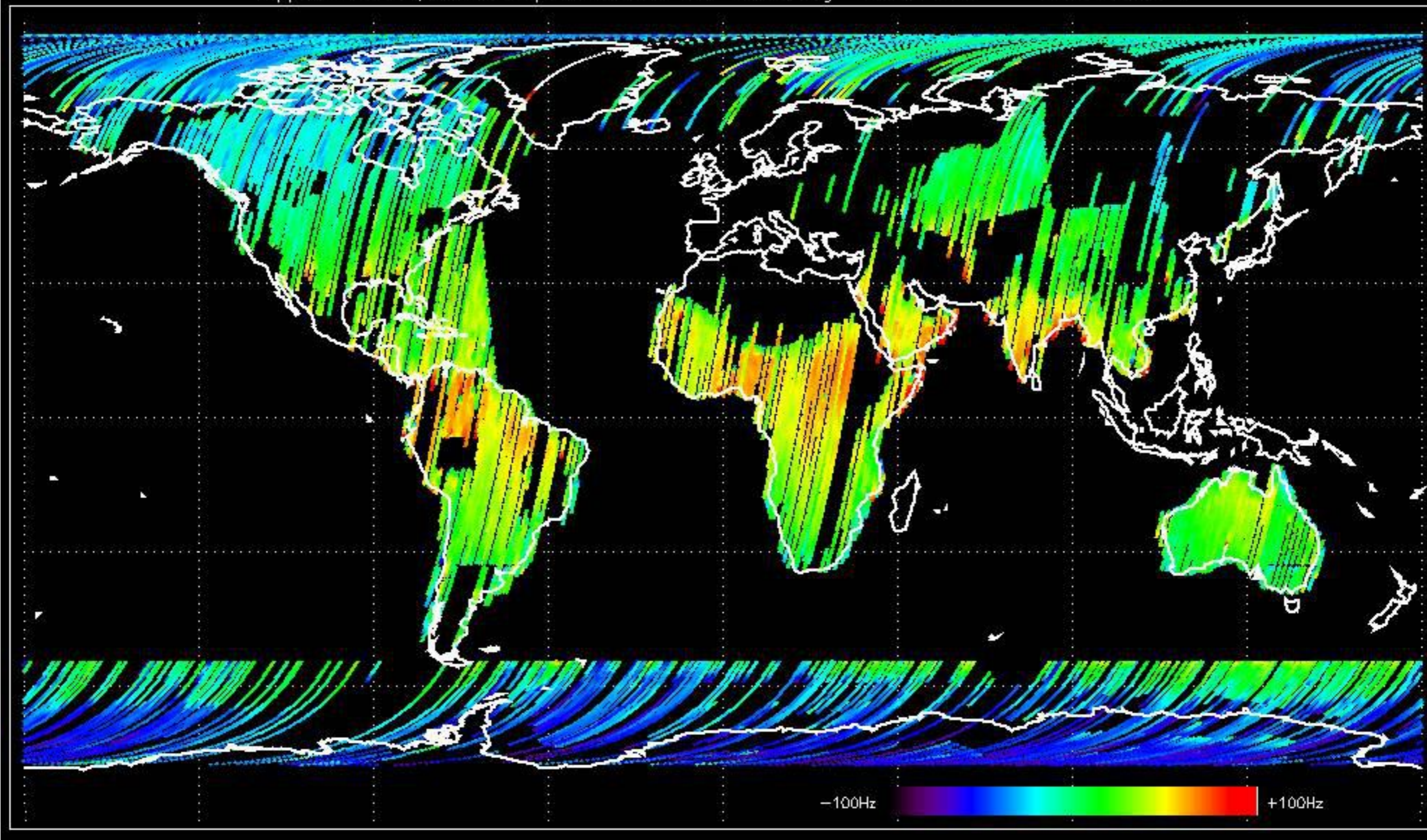


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -29.221222 Hz

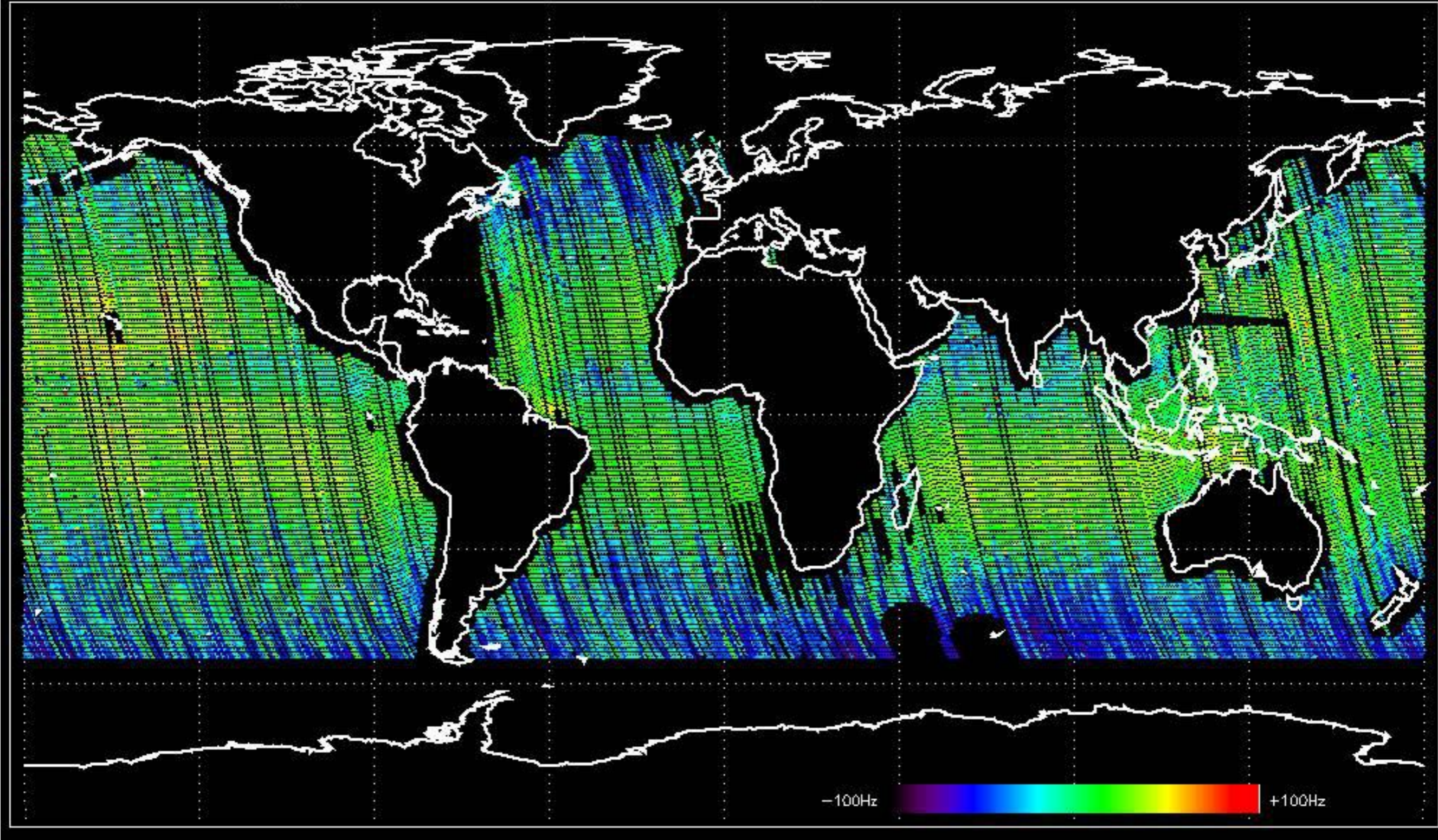




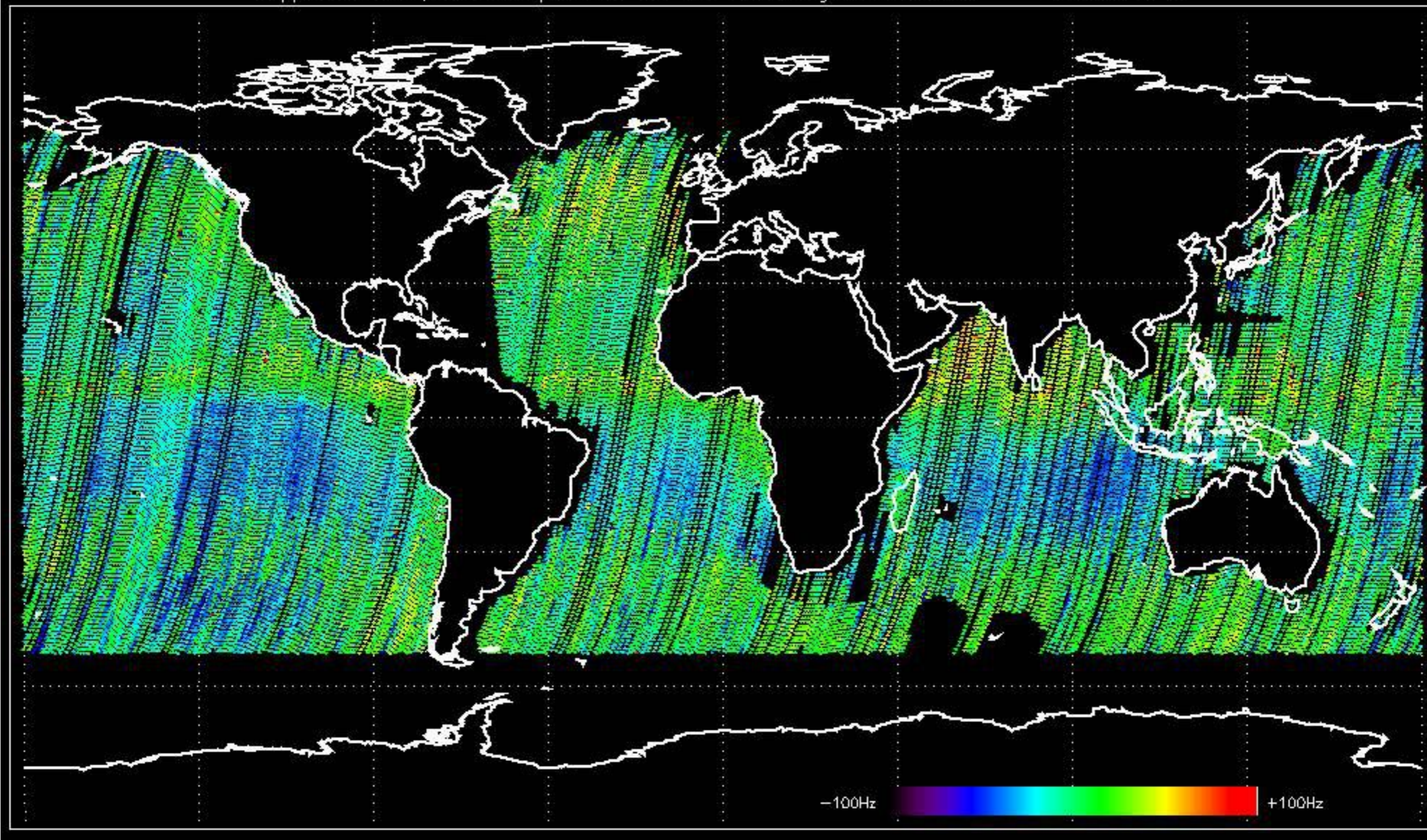
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.873585 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -29.575652 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -30.787601 Hz



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

No anomalies observed.









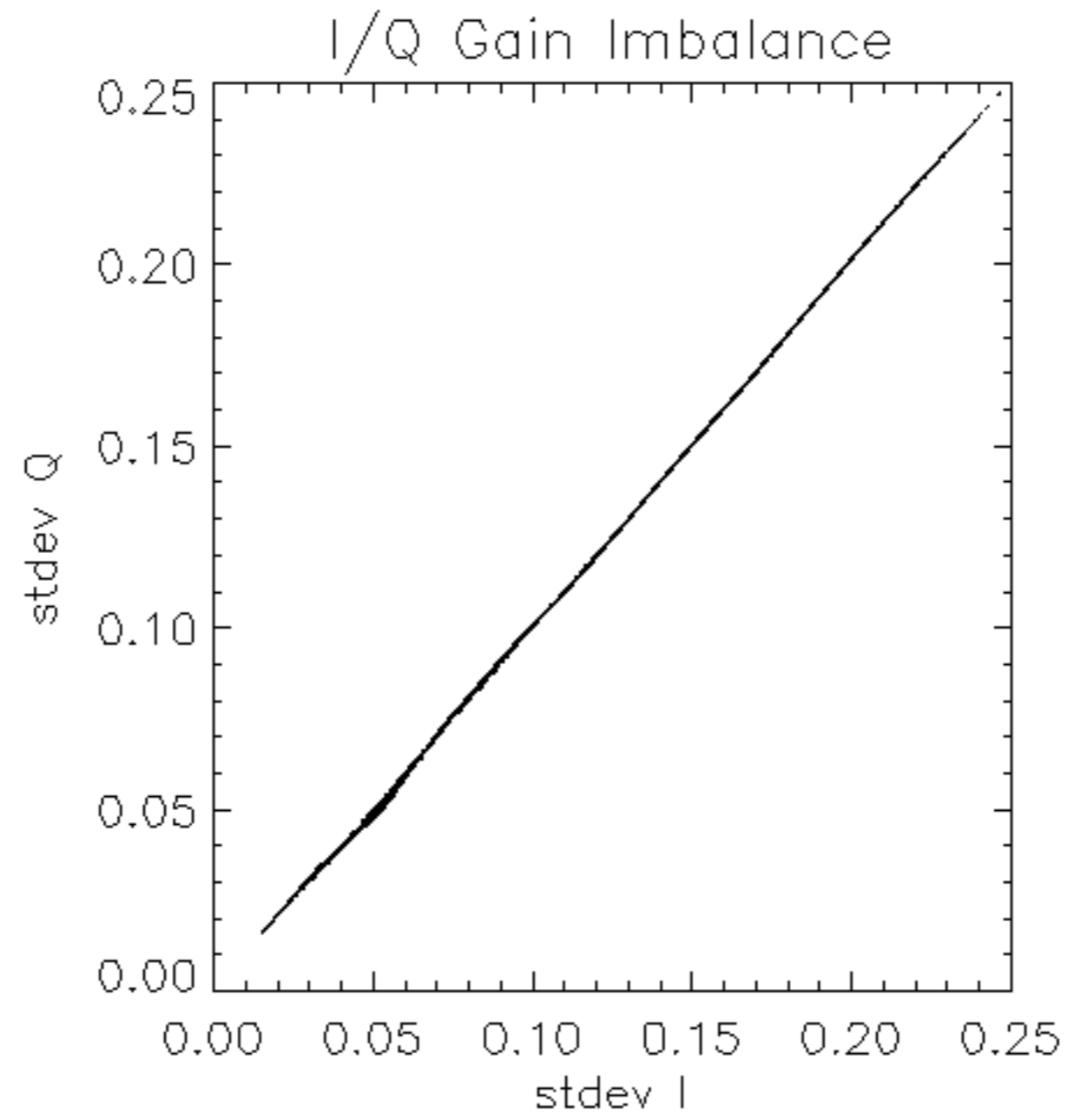


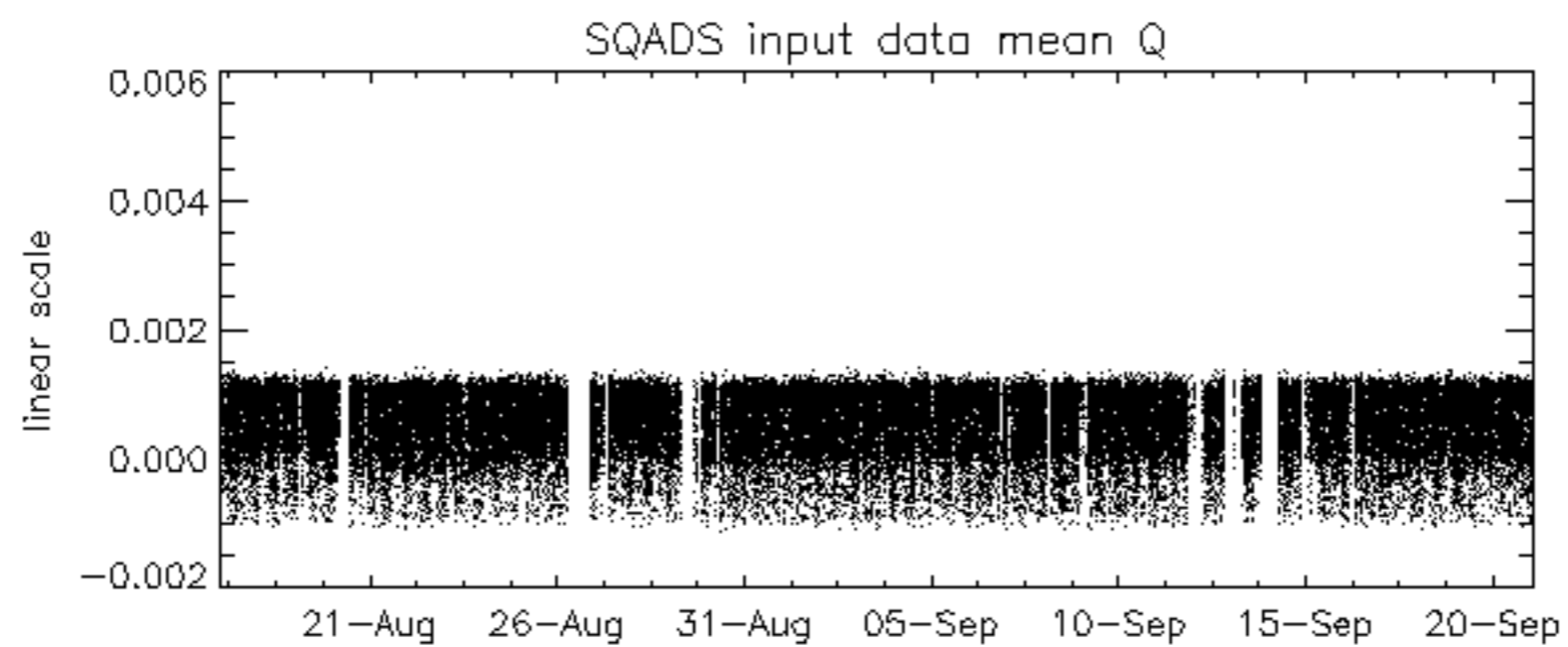
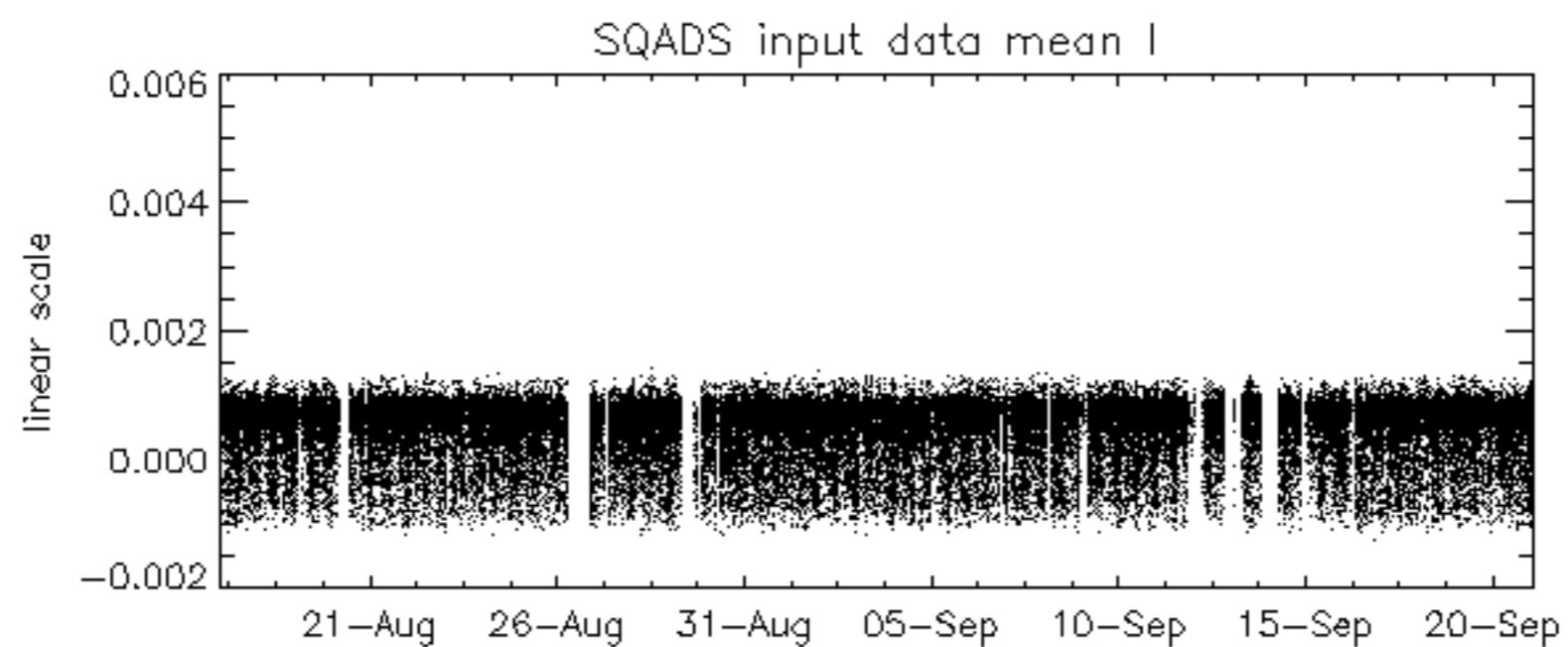
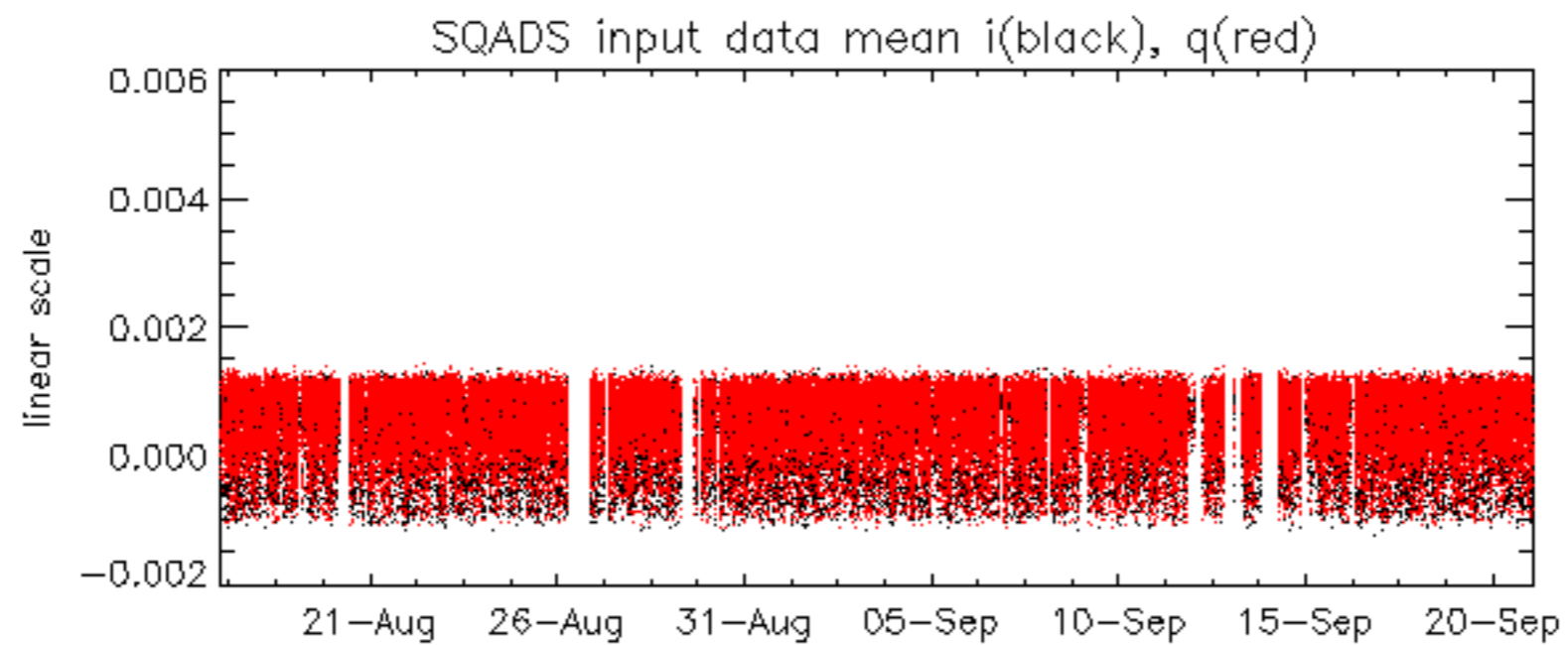


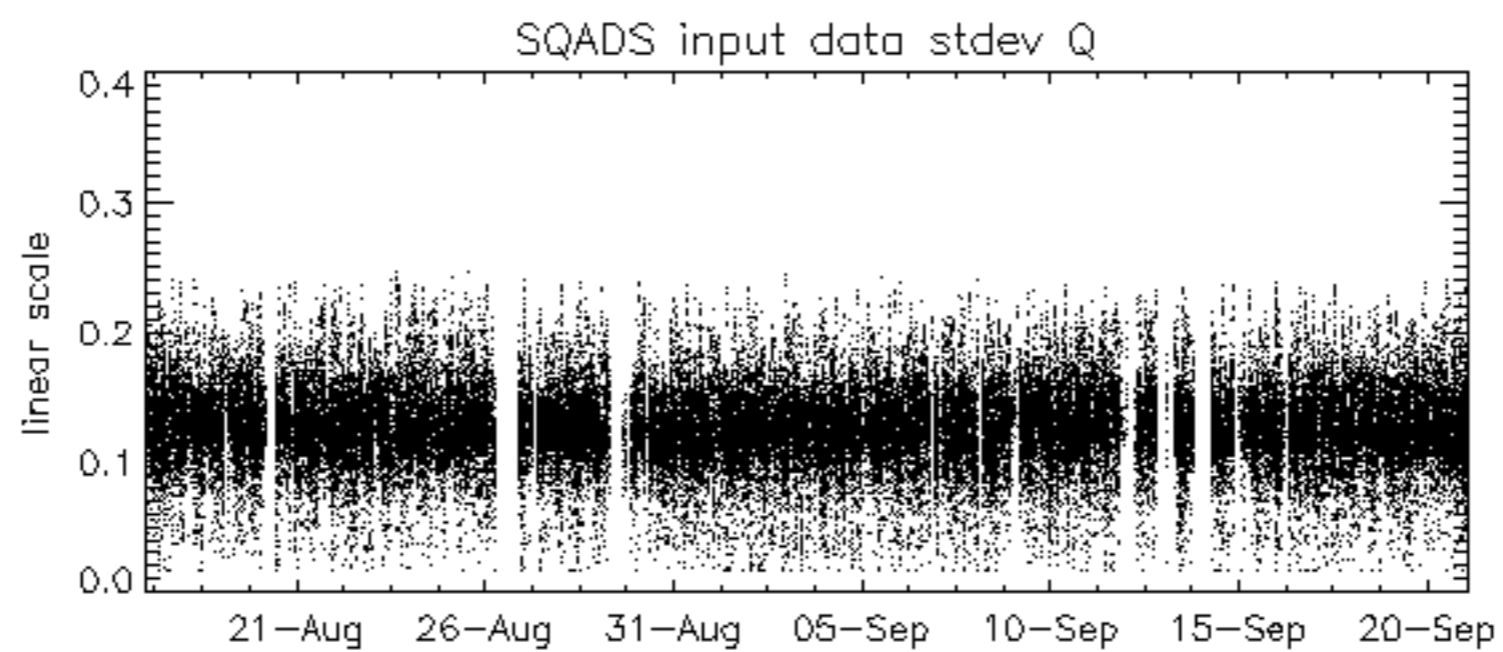
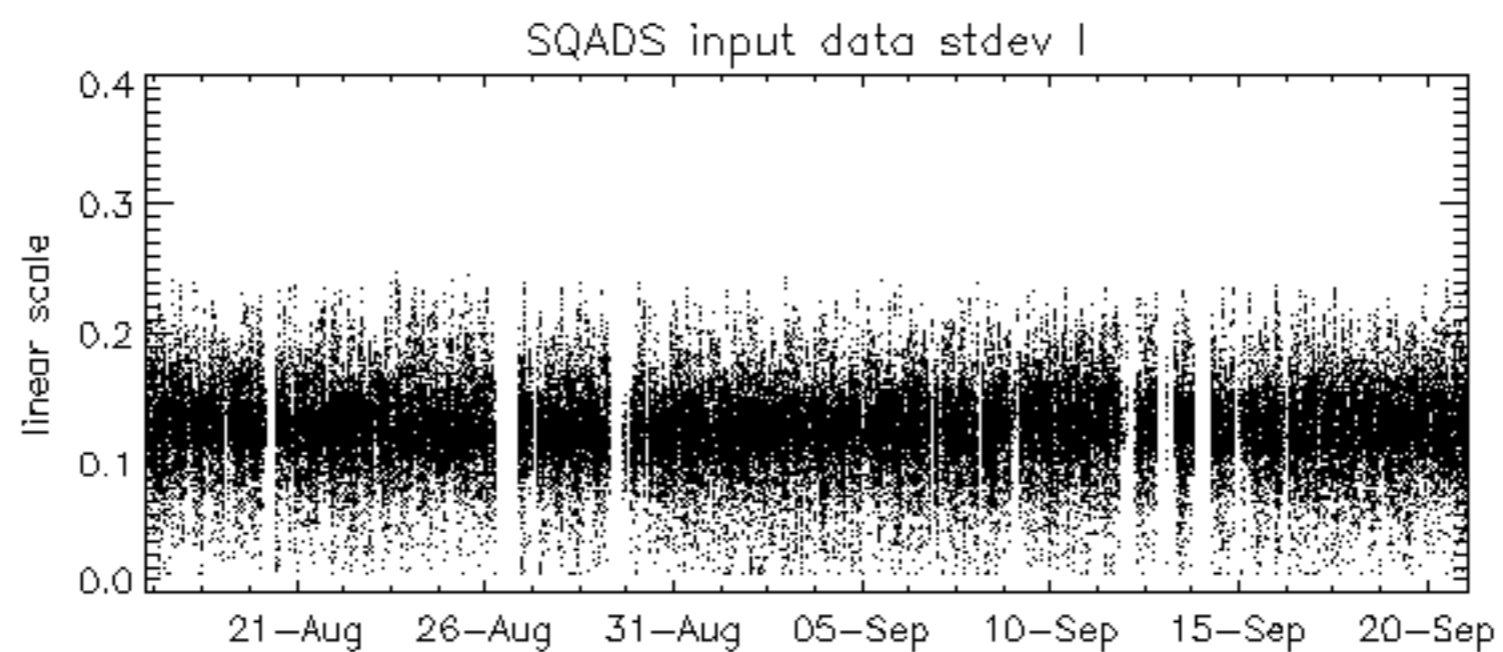
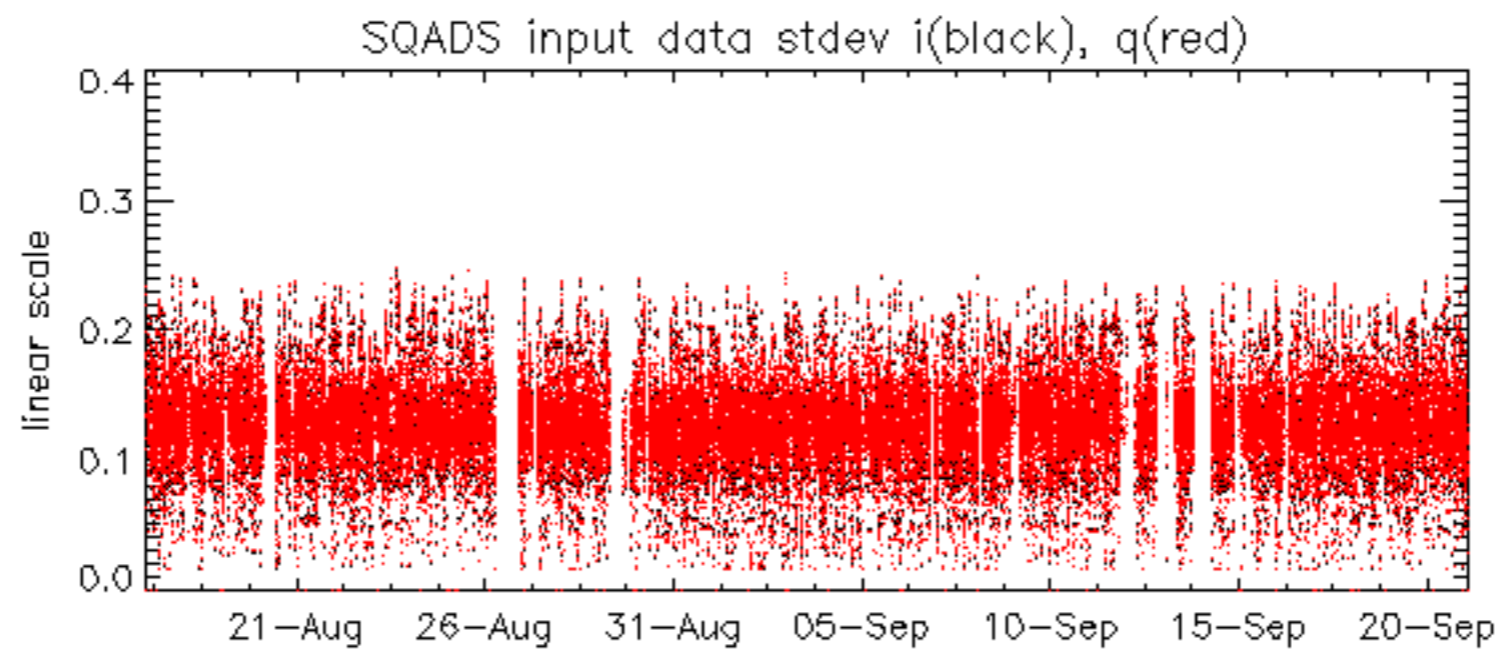






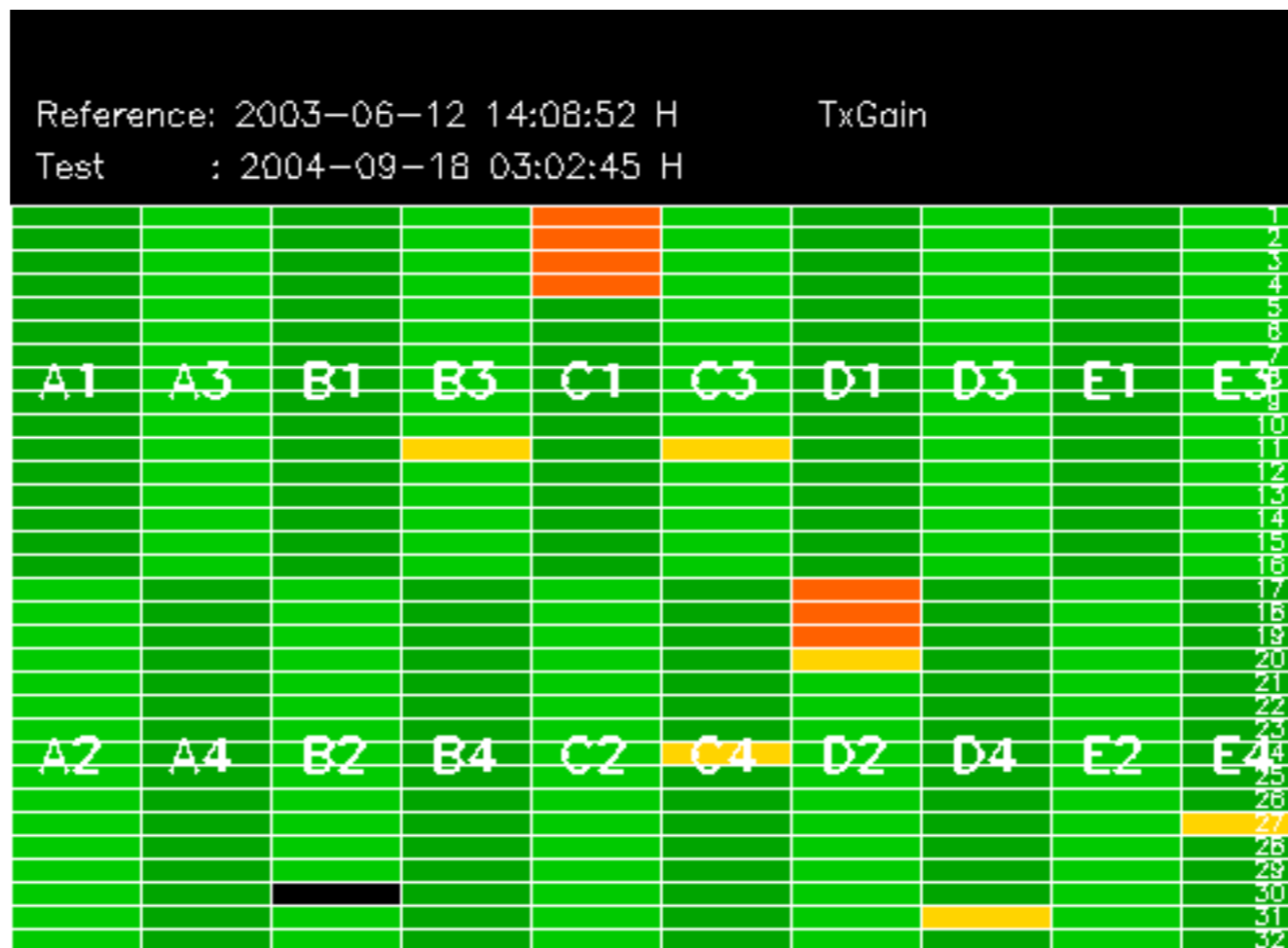
















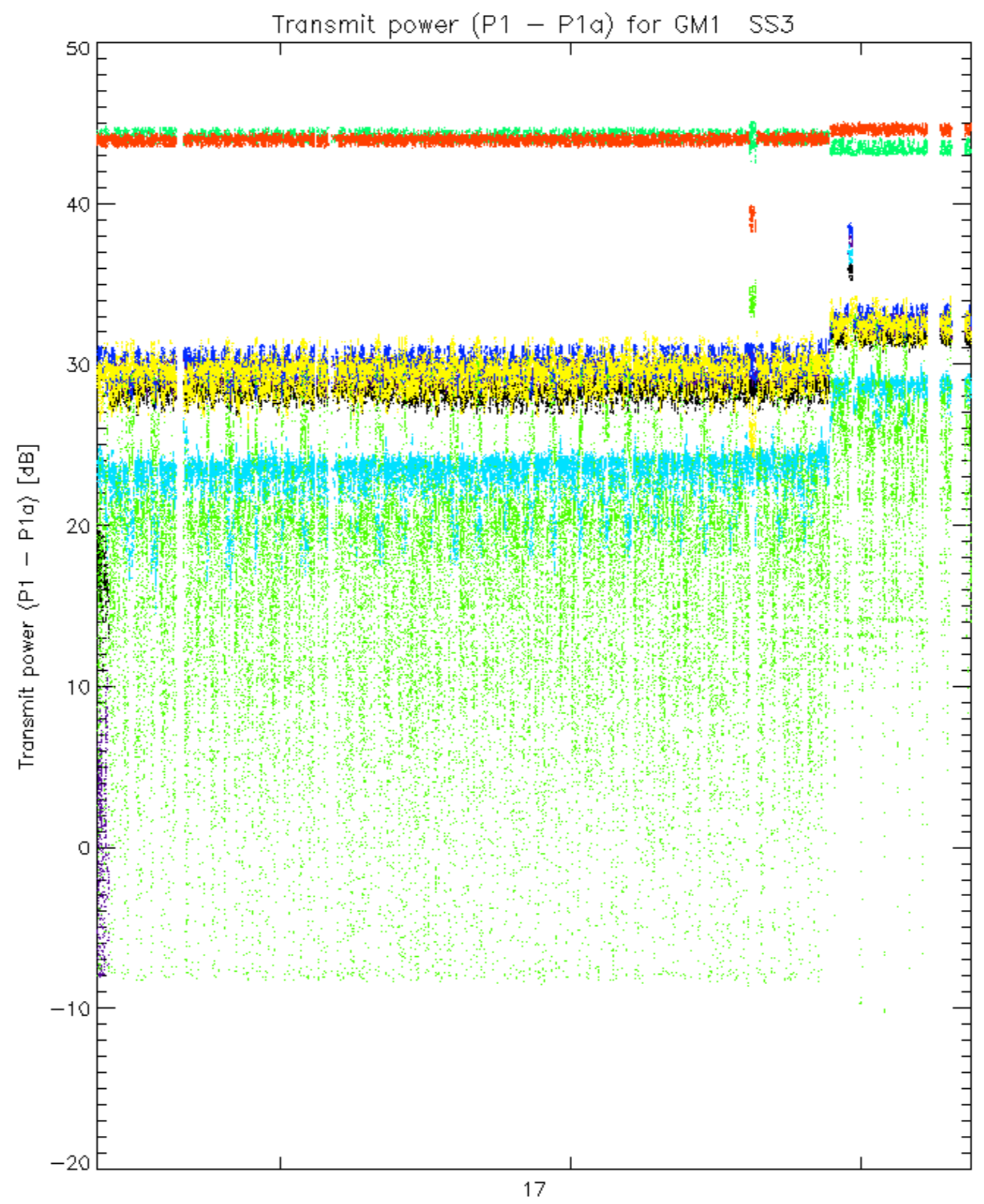


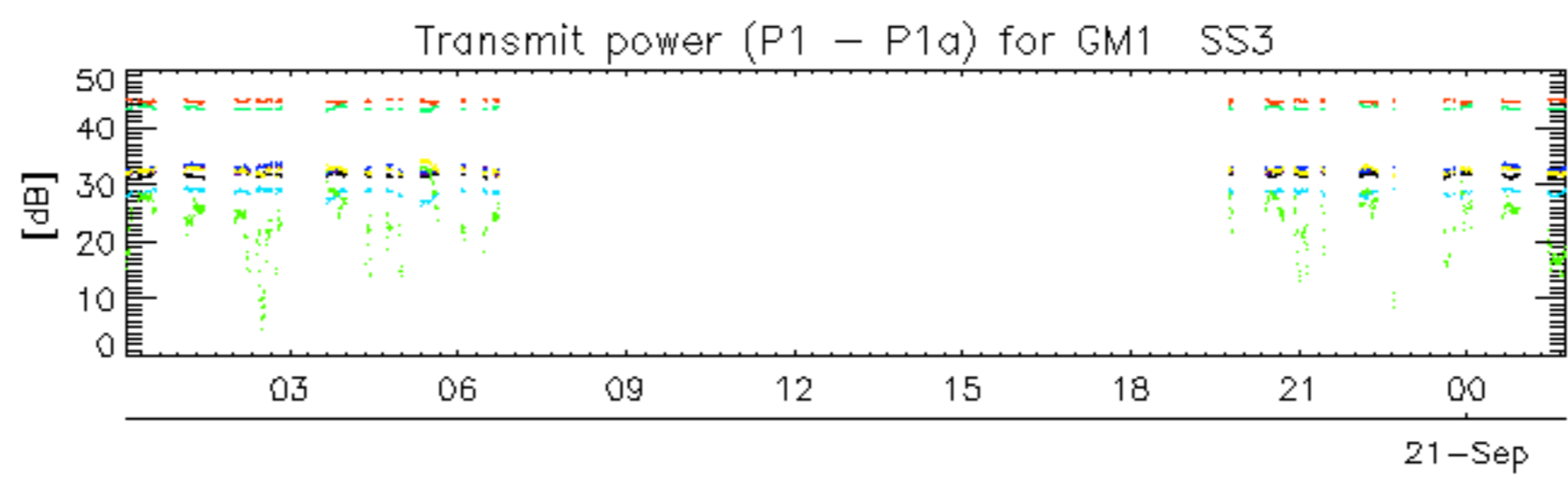




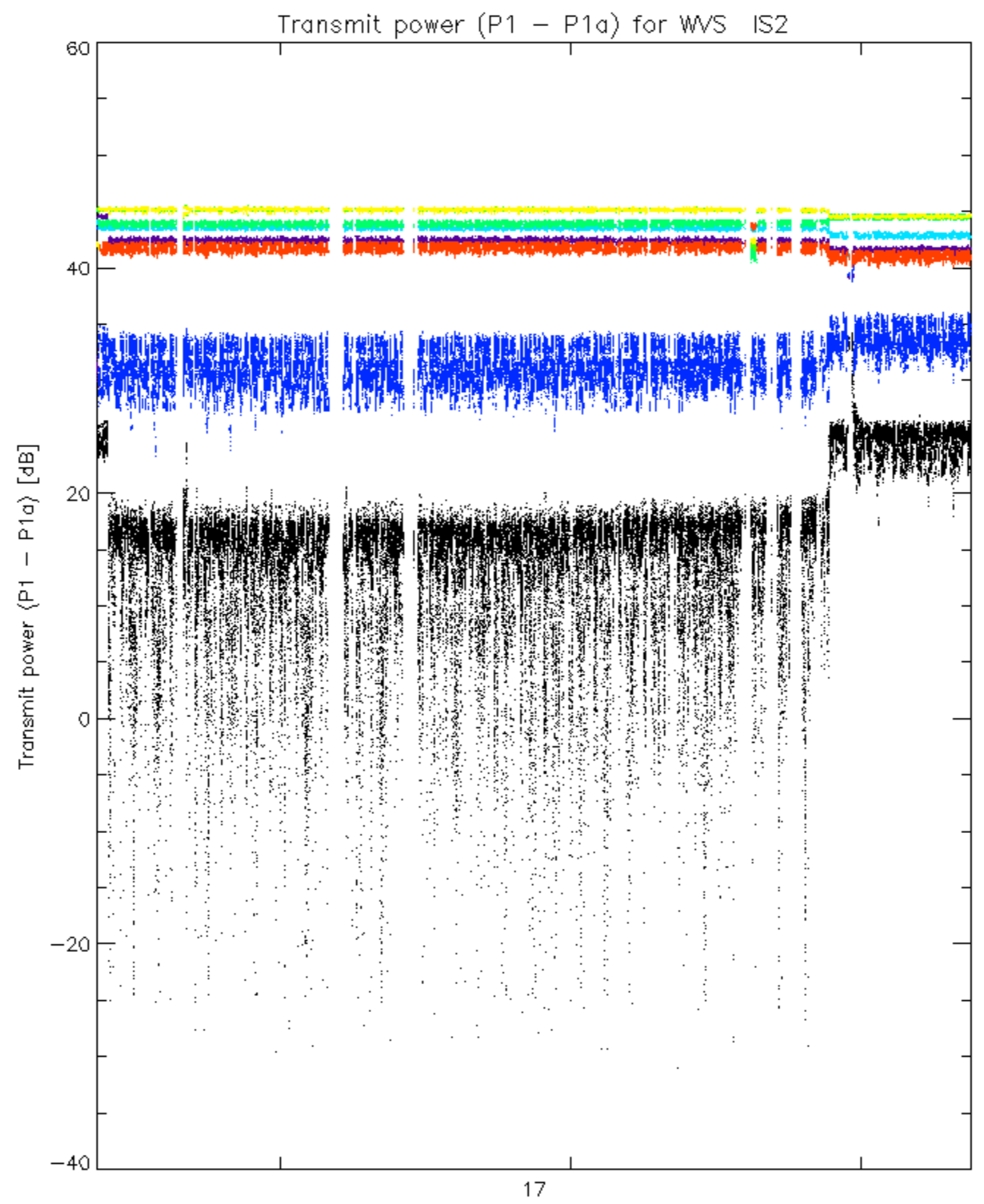




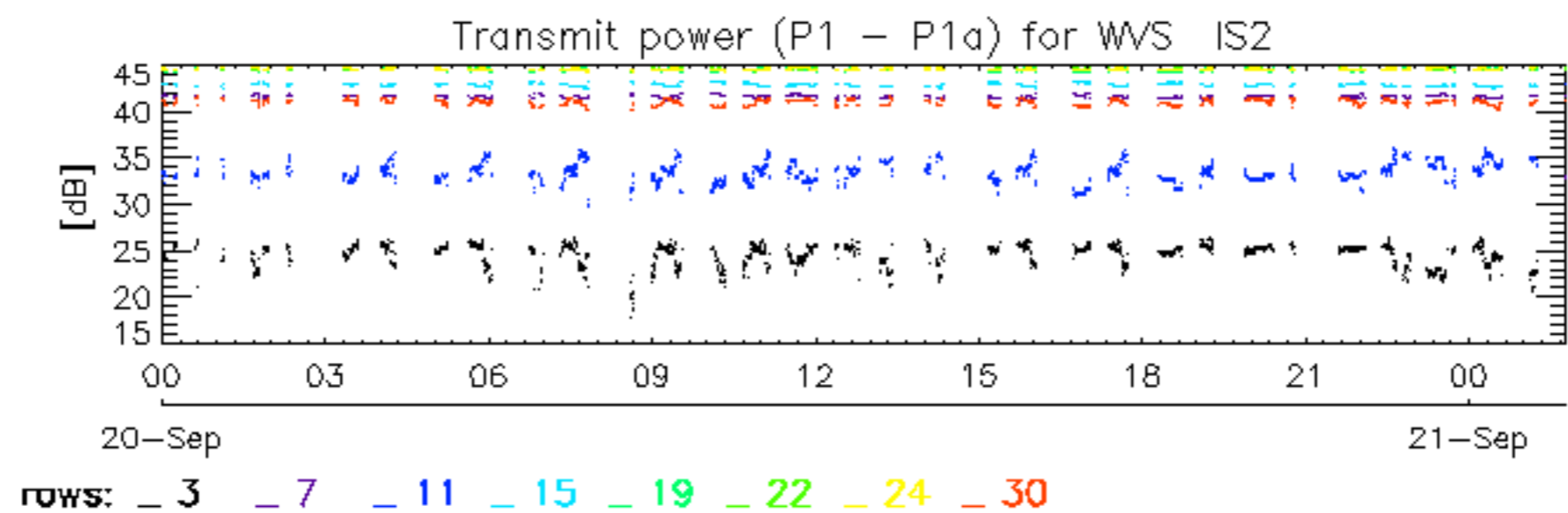




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30



rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30



No unavailabilities during the reported period.