

# PRELIMINARY REPORT OF 040827

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

**last update on Fri Aug 27 13:07:36 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	20040826 100811
H	20040825 071836

### 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	-3.470011	0.050442	0.081659
7	P1	-3.310235	0.055985	0.083696
11	P1	-4.650500	0.111110	0.015021
15	P1	-5.754122	0.119614	0.001298
19	P1	-3.461775	0.005746	-0.011420
22	P1	-4.548680	0.011309	0.050498
24	P1	-4.964255	0.020385	0.007227
30	P1	-6.932137	0.023476	-0.070721

3	P1	-15.920807	1.547948	0.864941
7	P1	-14.029626	0.166911	-0.125835
11	P1	-20.131001	0.418004	-0.284245
15	P1	-11.791666	0.163796	-0.010574
19	P1	-13.884565	0.035960	-0.048998
22	P1	-16.225073	0.342277	0.246428
24	P1	-14.558531	0.296992	0.162730
30	P1	-17.768248	0.446938	-0.255092

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.303242	0.081895	0.030882
7	P2	-22.633167	0.135546	0.103343
11	P2	-15.351847	0.175494	0.138390
15	P2	-7.070838	0.096622	0.077125
19	P2	-9.560754	0.195332	0.084806
22	P2	-17.360306	0.117025	0.124774
24	P2	-20.747250	0.087894	-0.001537
30	P2	-19.276814	0.080995	0.122190

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.140661	0.002586	0.006374
7	P3	-8.140651	0.002586	0.006327
11	P3	-8.140652	0.002586	0.006299
15	P3	-8.140639	0.002587	0.006209
19	P3	-8.140634	0.002587	0.006193
22	P3	-8.140651	0.002587	0.006292
24	P3	-8.140676	0.002587	0.006429
30	P3	-8.140835	0.002583	0.006007

**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	-2.697263	0.265929	0.322266
7	P1	-2.956817	0.217580	0.252049
11	P1	-3.880348	0.165985	0.002001
15	P1	-3.534455	0.134967	0.014078
19	P1	-3.481104	0.014208	0.000336
22	P1	-5.680987	0.041421	-0.084934
24	P1	-3.889886	0.015609	-0.105408
30	P1	-6.176086	0.064899	0.017715
3	P1	-10.351300	1.043199	0.567035
7	P1	-10.067572	0.164795	0.137250
11	P1	-12.115471	0.116868	-0.186360
15	P1	-11.640263	0.107609	-0.122757
19	P1	-15.624428	0.050213	0.015133
22	P1	-23.376921	1.179883	-0.106350
24	P1	-17.844519	0.227950	-0.327514
30	P1	-20.390791	1.207338	-0.221653

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.979185	0.059670	0.004263
7	P2	-22.767645	0.051349	0.093838
11	P2	-11.008121	0.072196	0.135513
15	P2	-4.950775	0.038968	0.007185
19	P2	-6.762929	0.057395	0.034243
22	P2	-7.449564	0.048014	0.036933
24	P2	-11.039642	0.053583	-0.010597
30	P2	-22.216911	0.042399	0.099208

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P3	-7.988681	0.003772	-0.008641
7	P3	-7.988614	0.003780	-0.008435
11	P3	-7.988747	0.003768	-0.008726
15	P3	-7.988627	0.003771	-0.008656
19	P3	-7.988674	0.003779	-0.008460
22	P3	-7.988635	0.003770	-0.008285
24	P3	-7.988647	0.003786	-0.008620
30	P3	-7.988648	0.003769	-0.008505

### 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	0.000491431
	stdev	2.13152e-07
MEAN Q	mean	0.000544929
	stdev	2.38751e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129266
	stdev	0.000990121

STDEV Q	mean	0.129500
	stdev	0.00100167





### 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

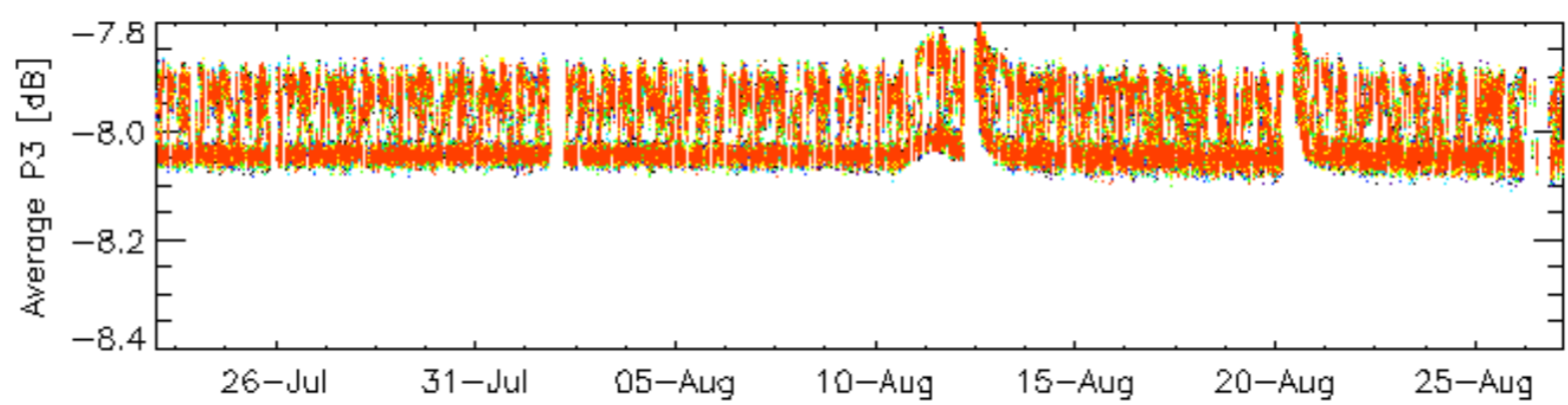
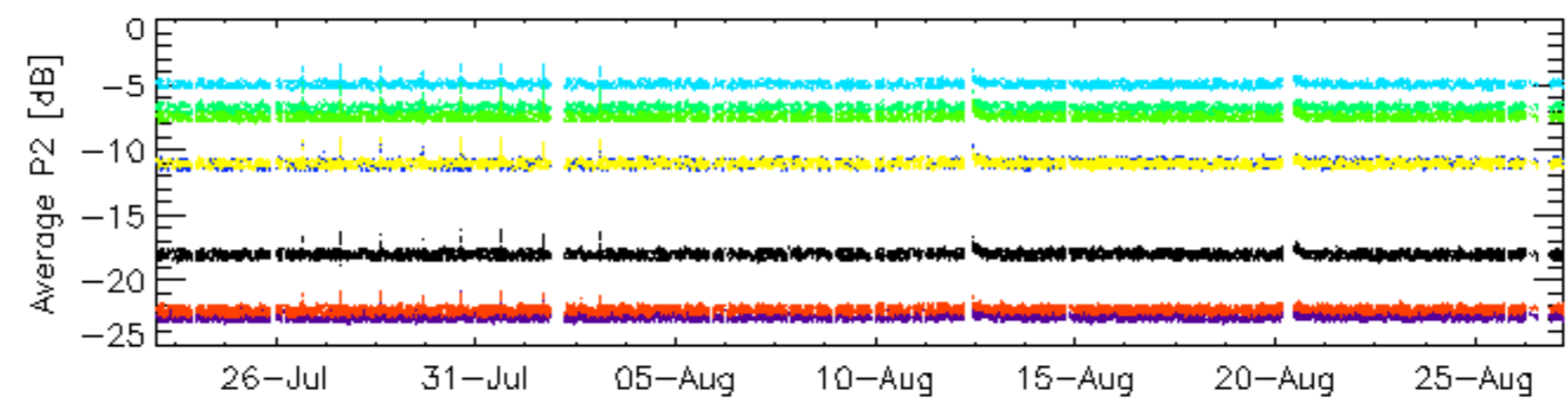
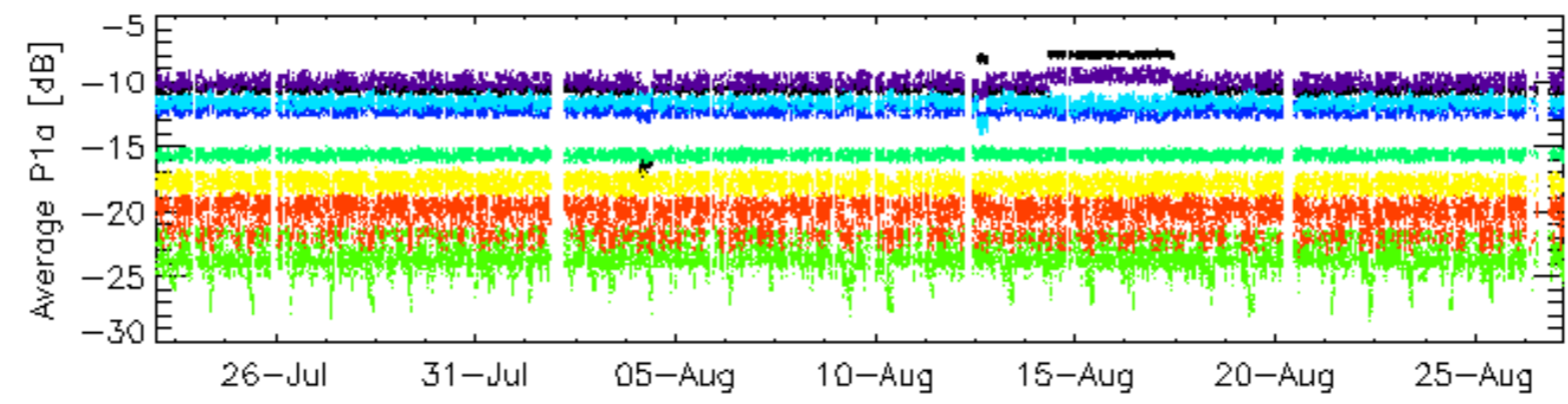
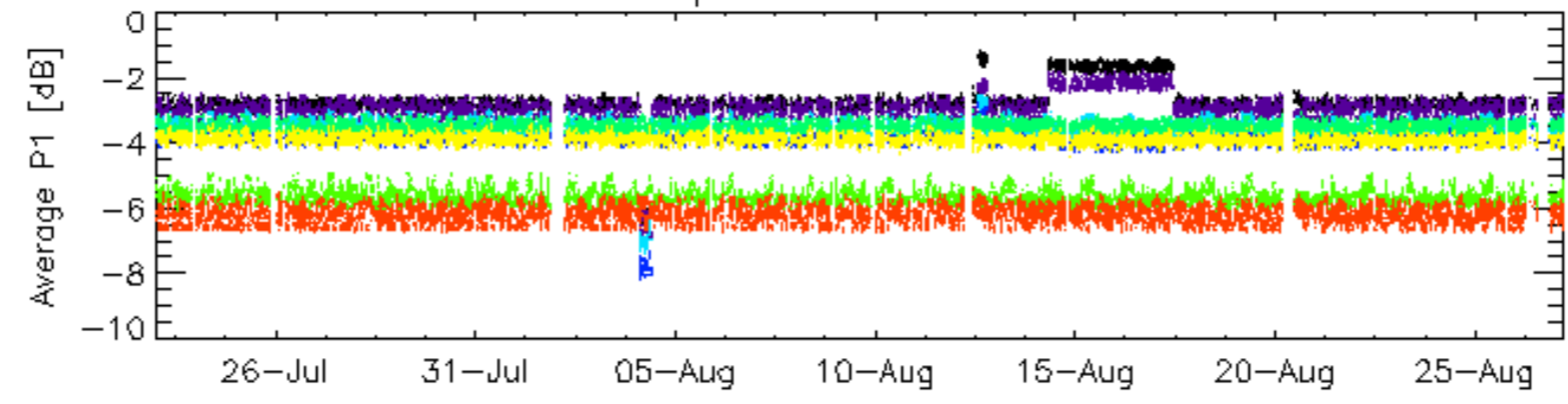
Evolution of Absolute Doppler	
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	Ascending
<input type="checkbox"/>	
	Descending

### 6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX	
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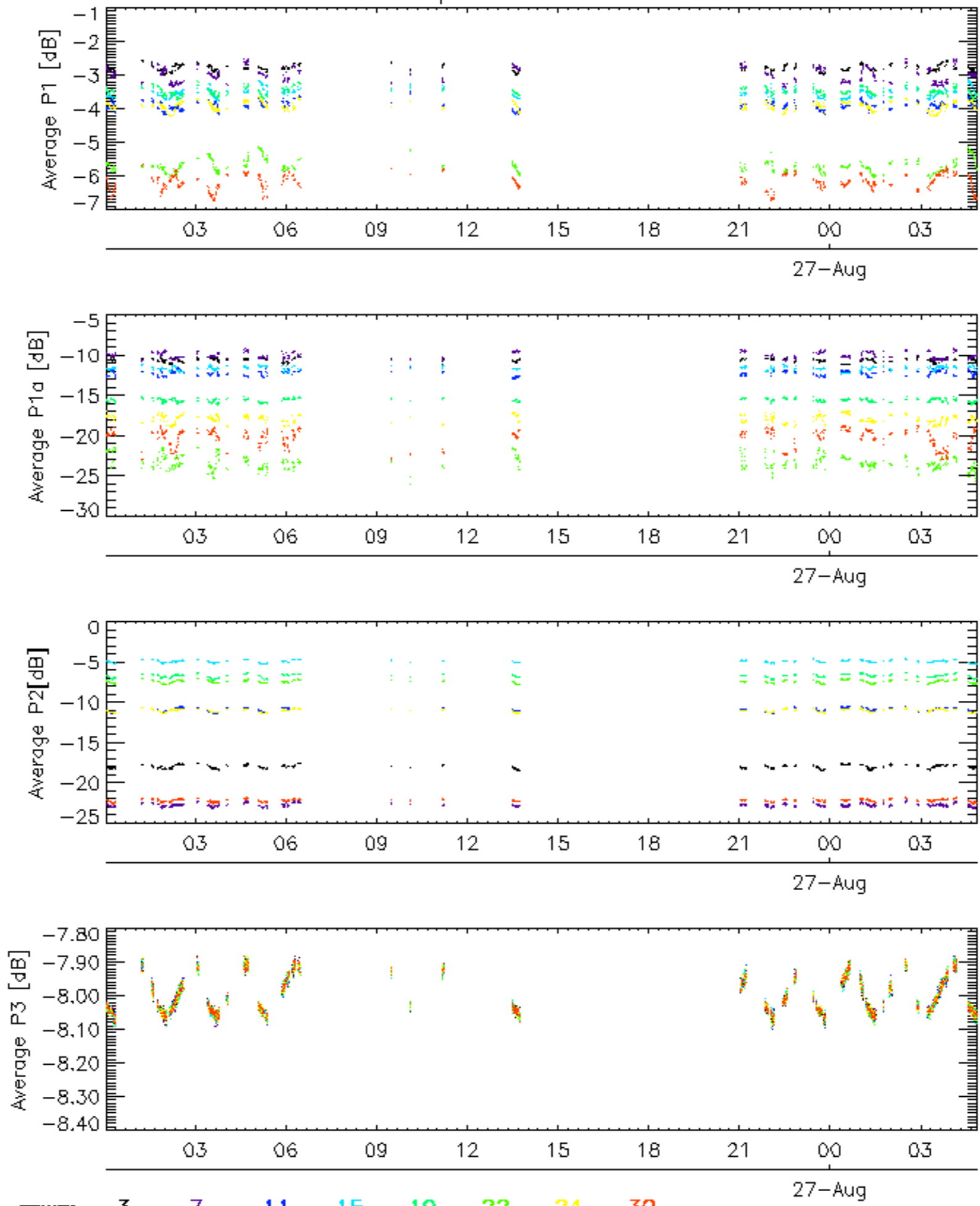


Cal pulses for GM1 SS3



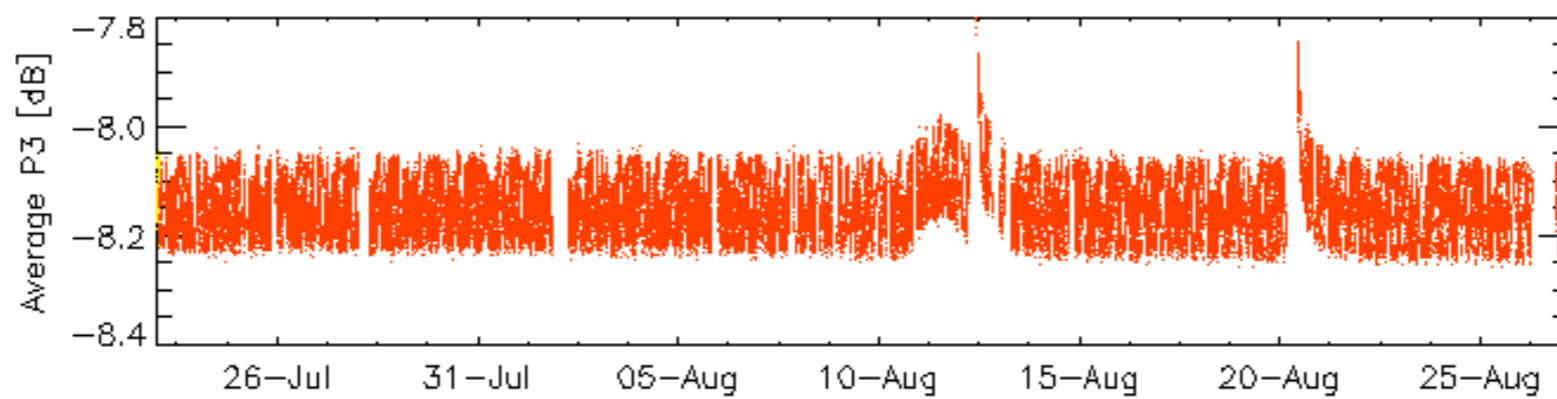
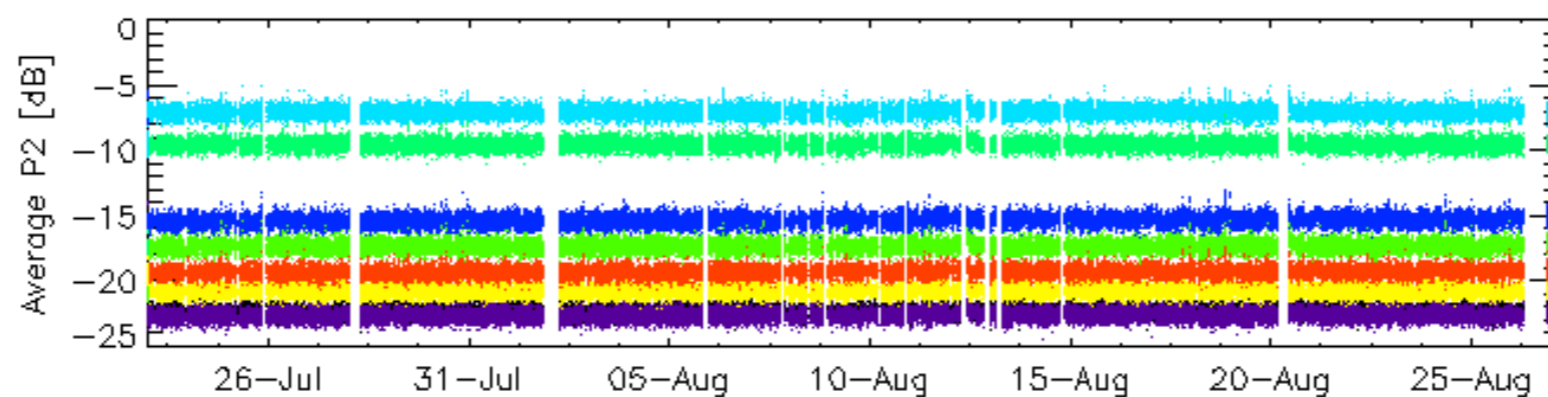
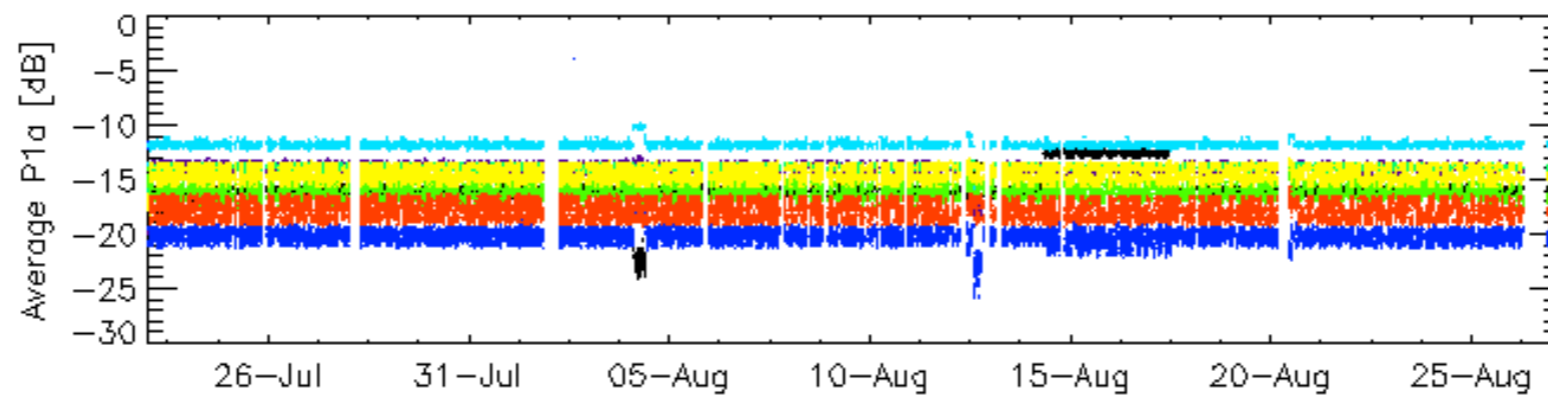
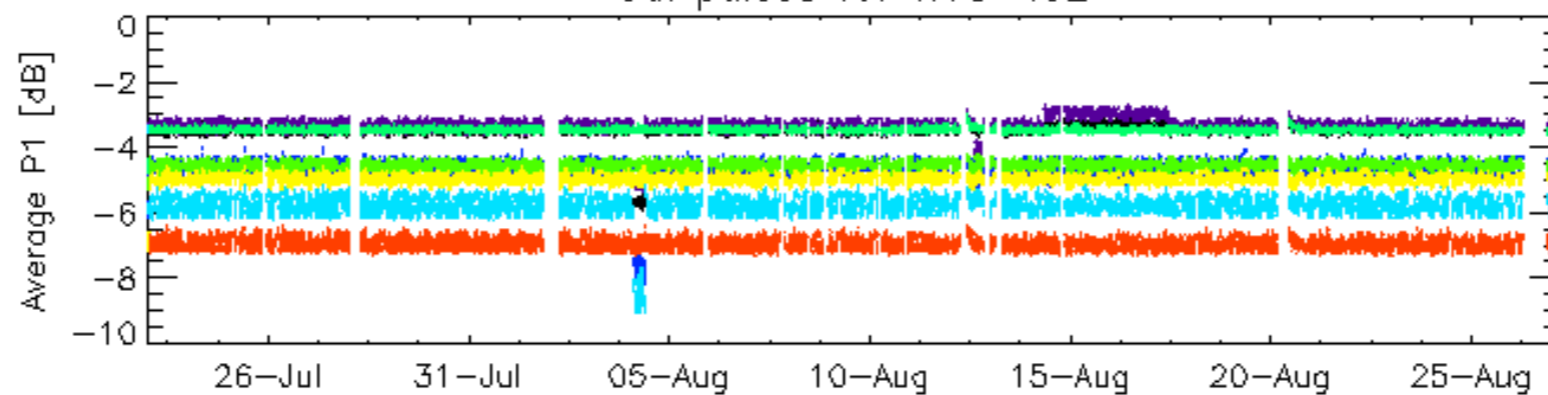
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

Cal pulses for GM1 SS3



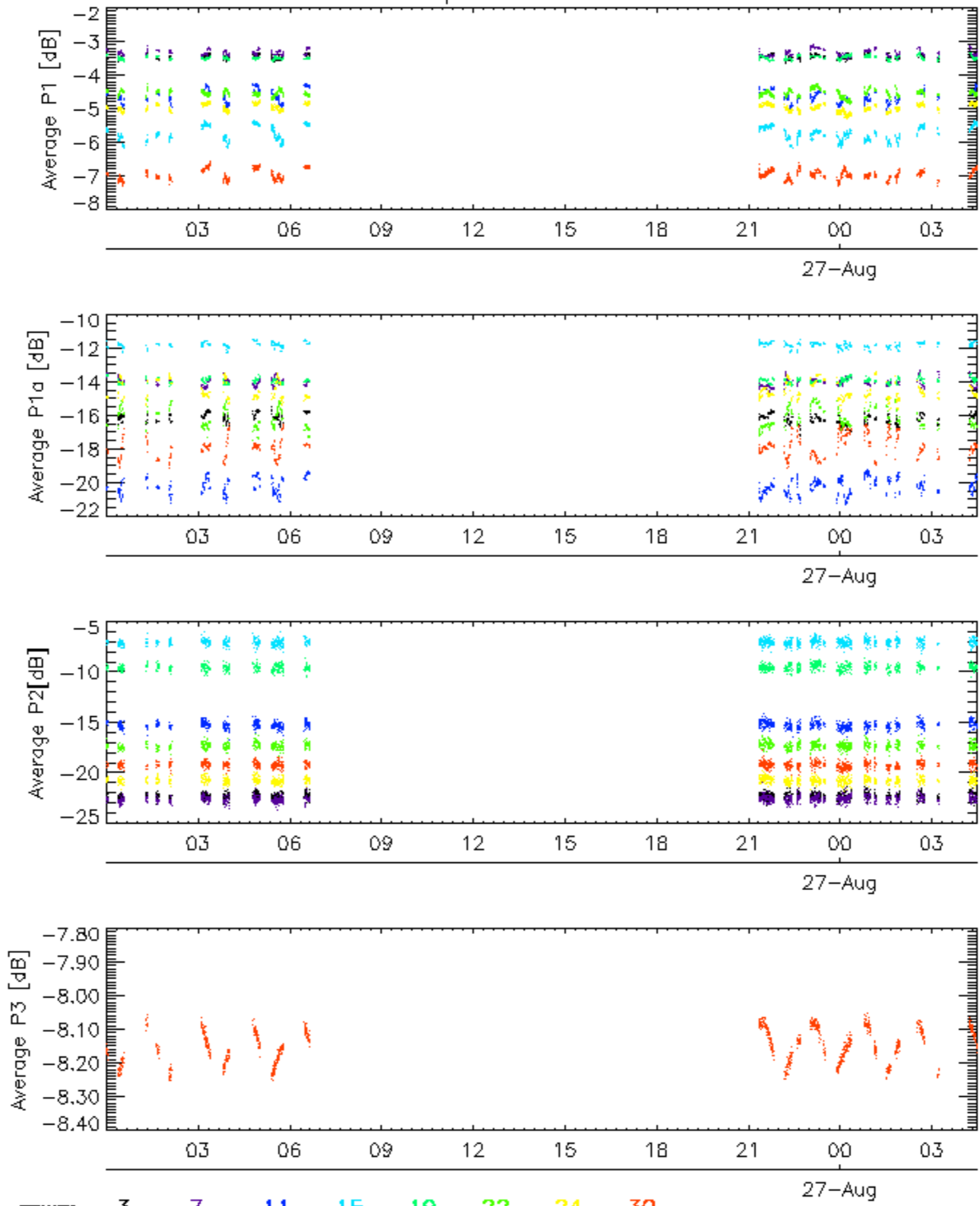
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Cal pulses for WVS IS2

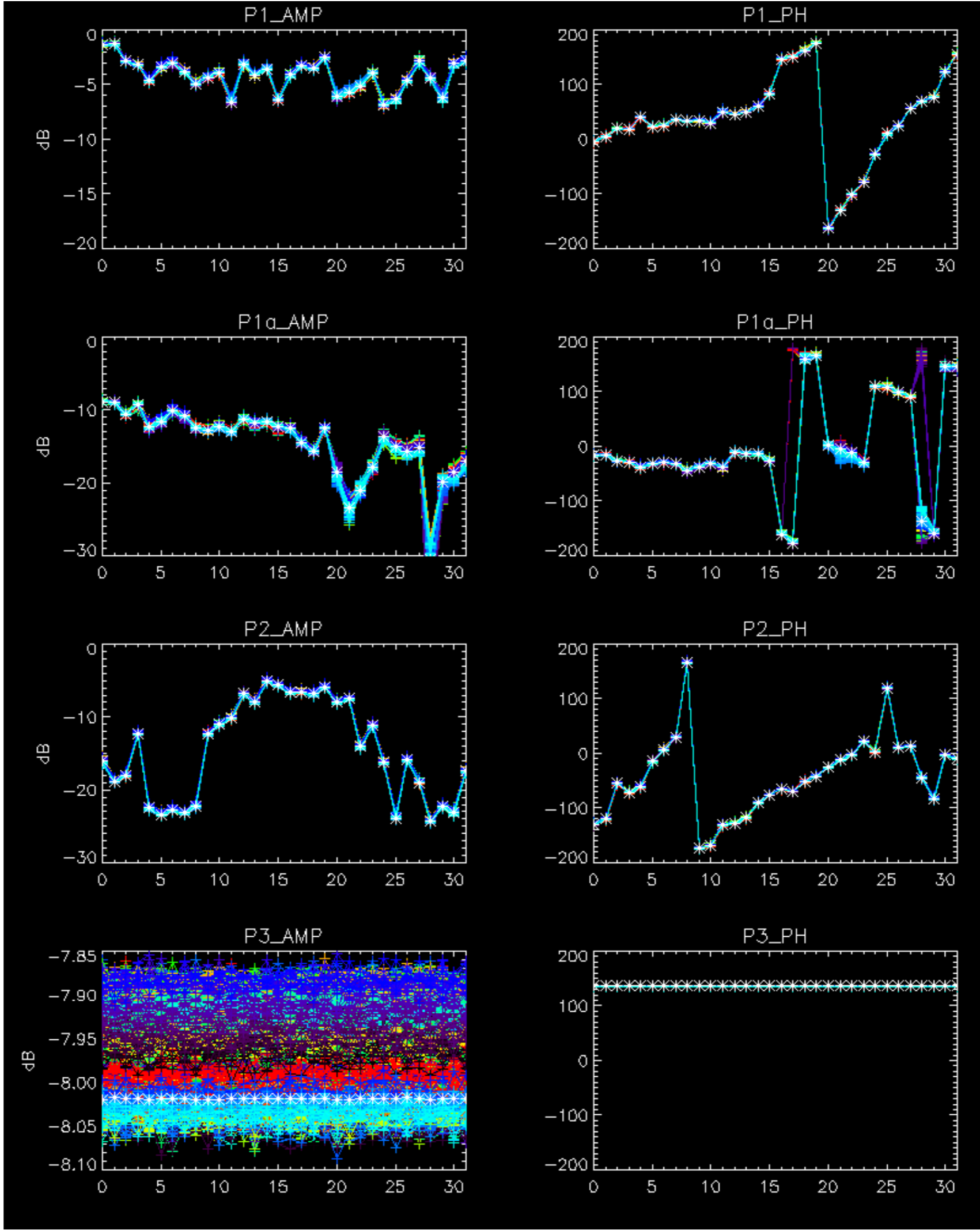


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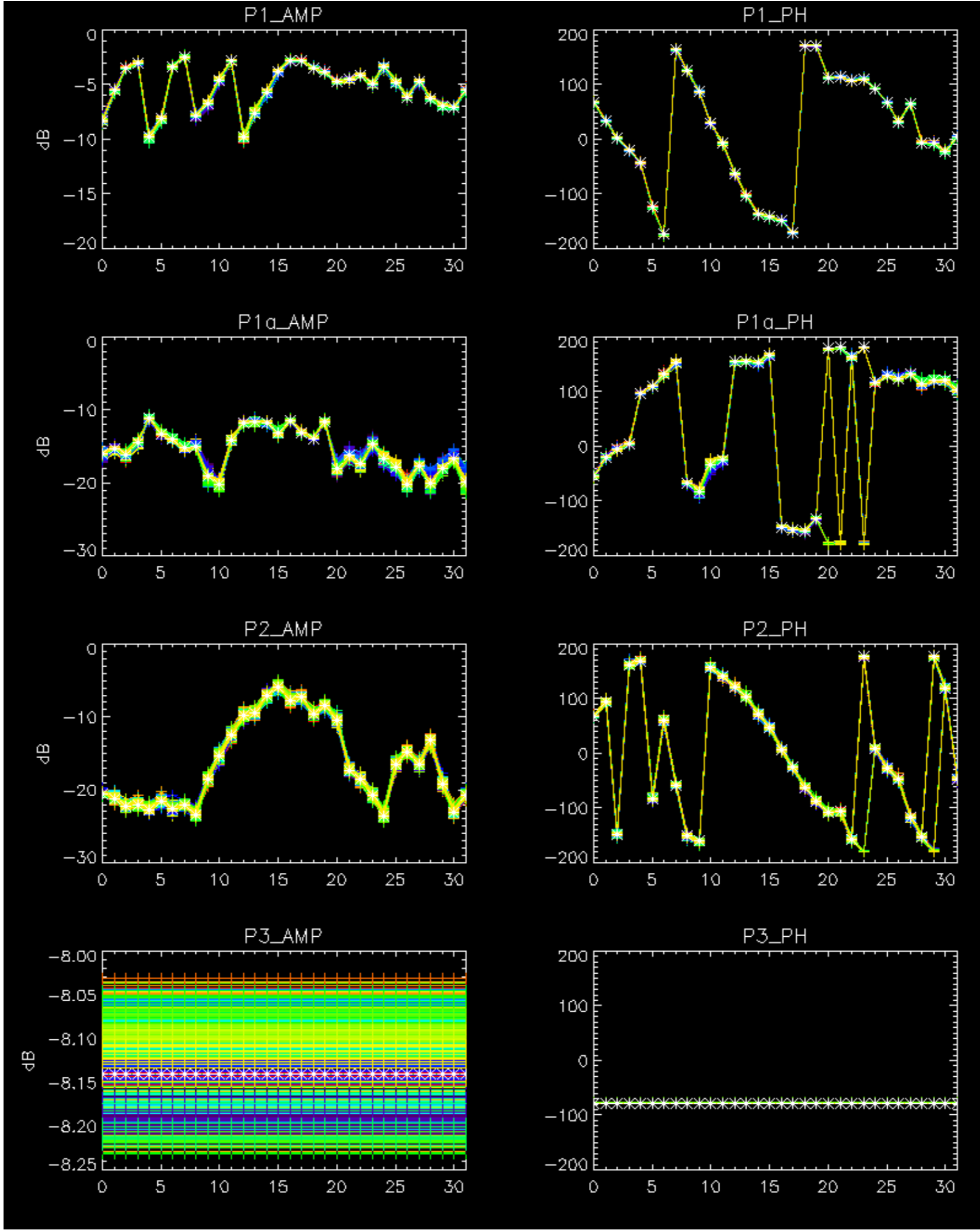
Cal pulses for WVS IS2



No anomalies observed.





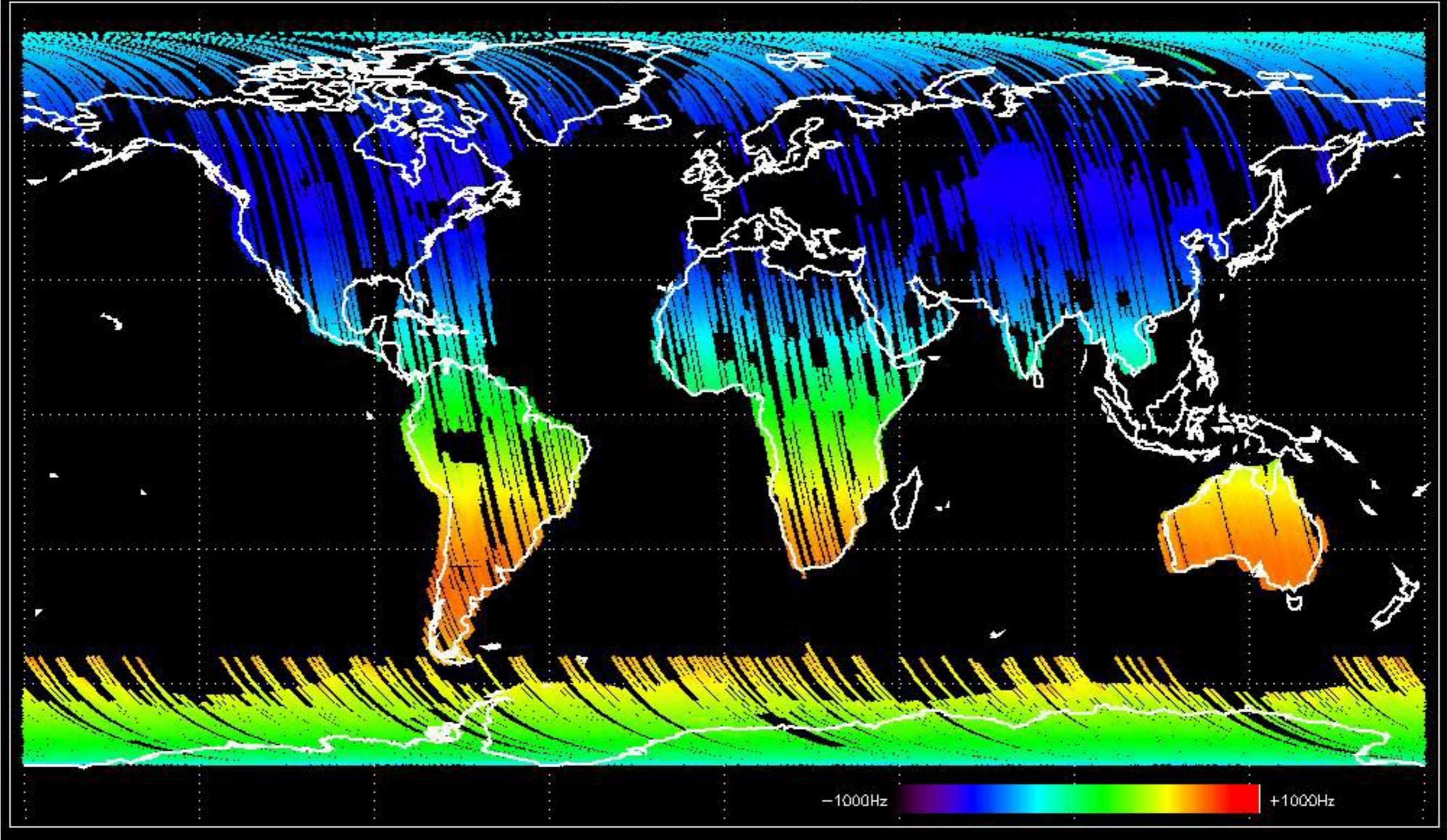


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



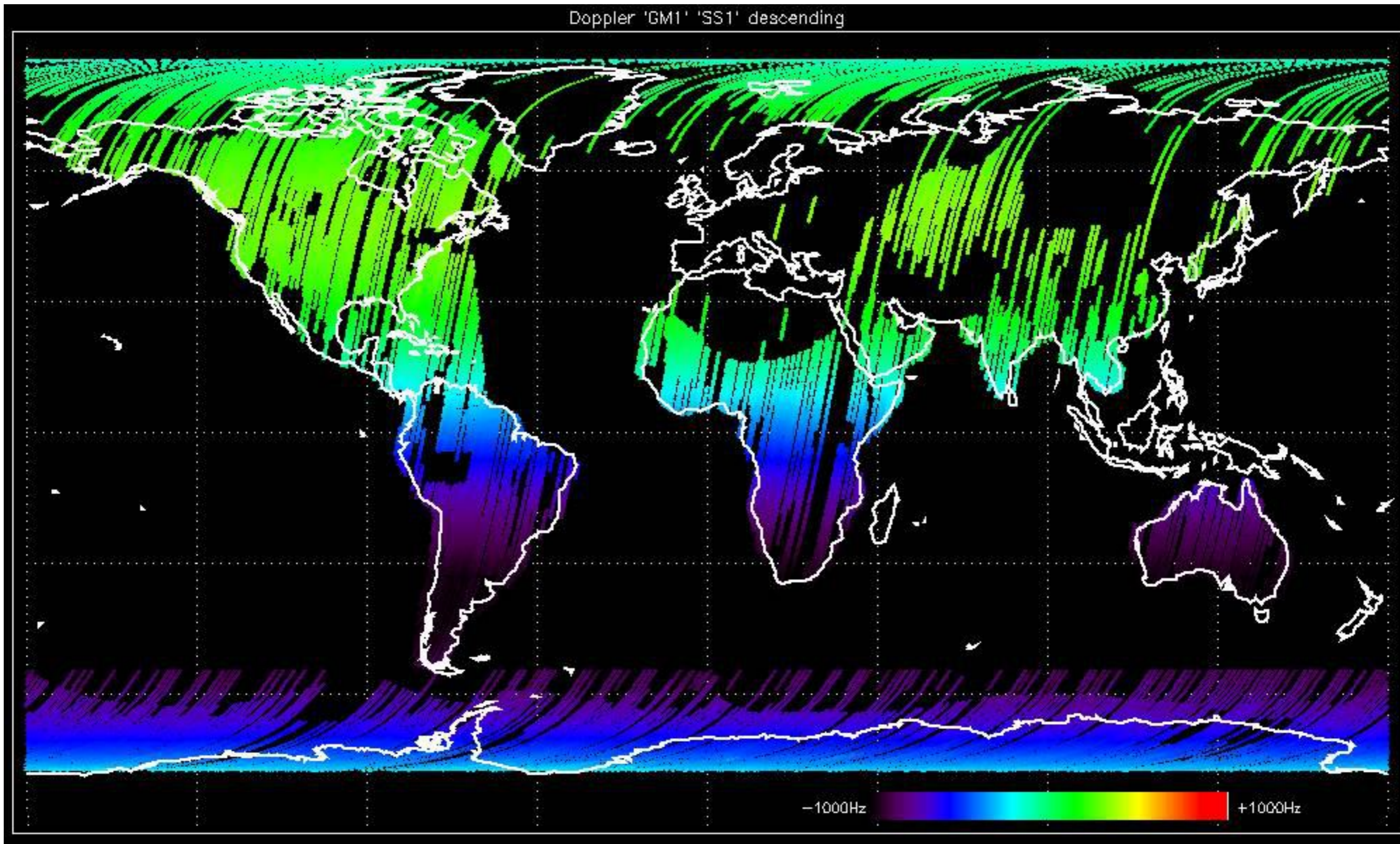


Doppler 'GM1' 'SS1' ascending



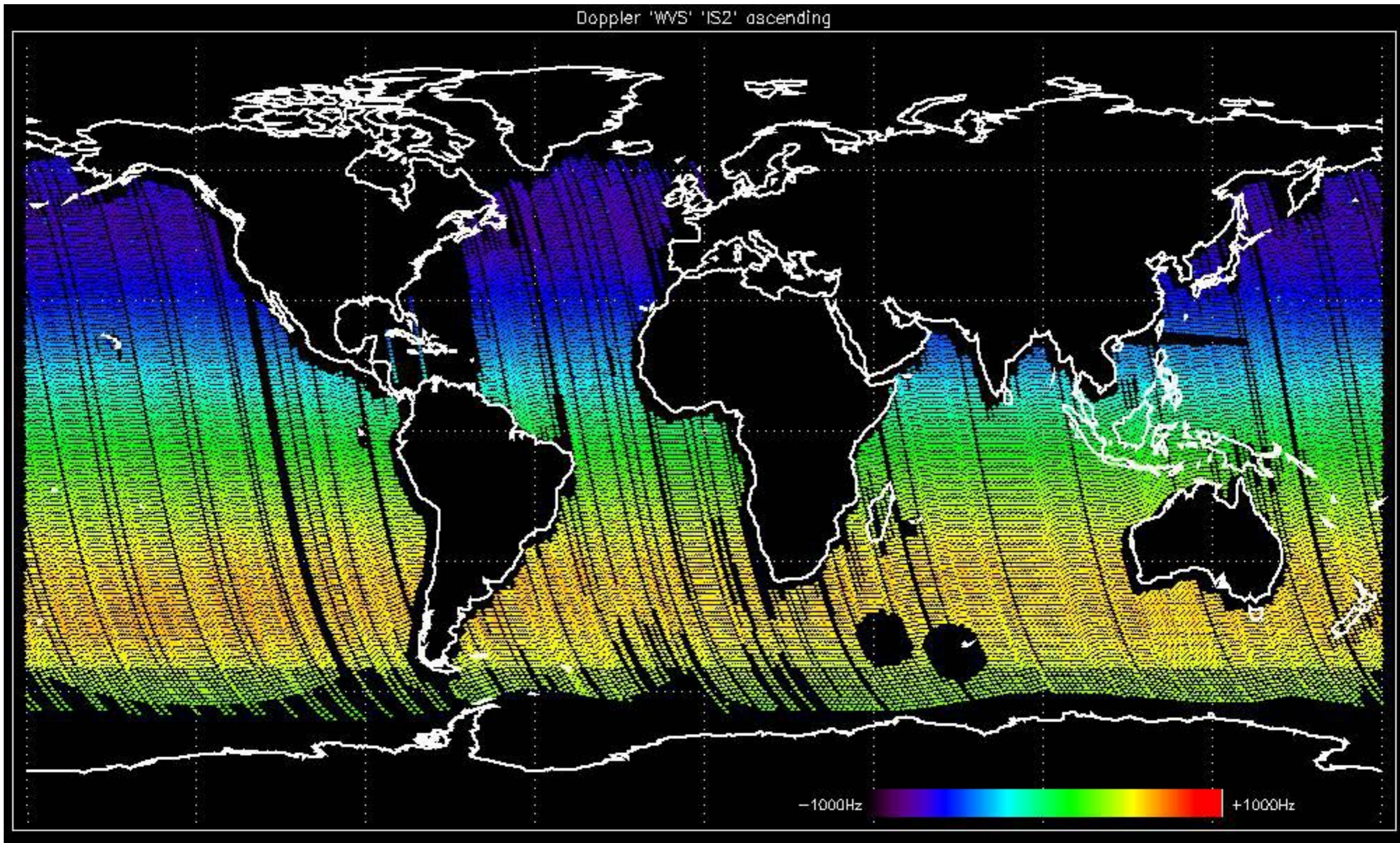


Doppler 'GM1' 'SS1' descending



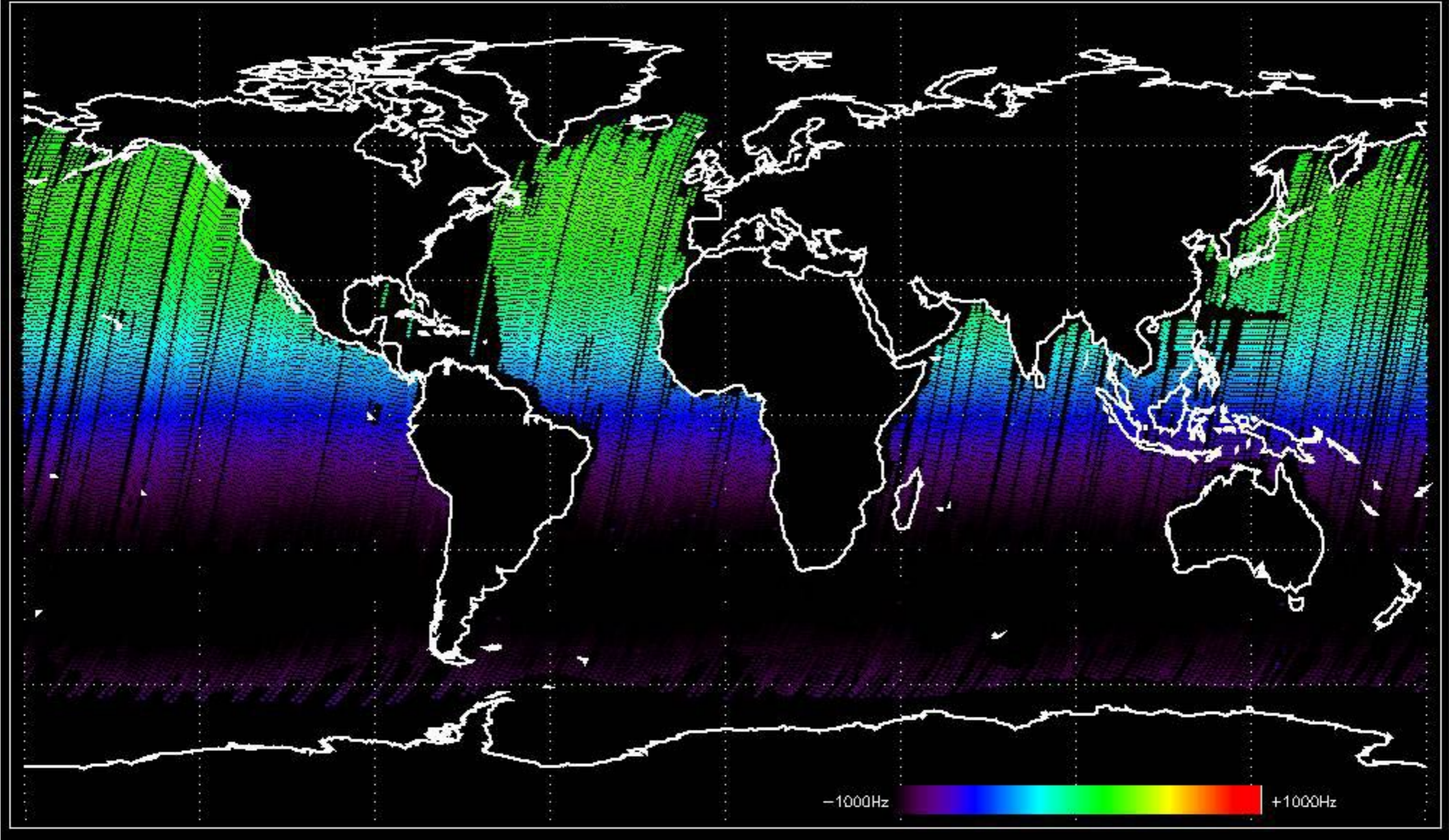


Doppler 'WVS' 'IS2' ascending

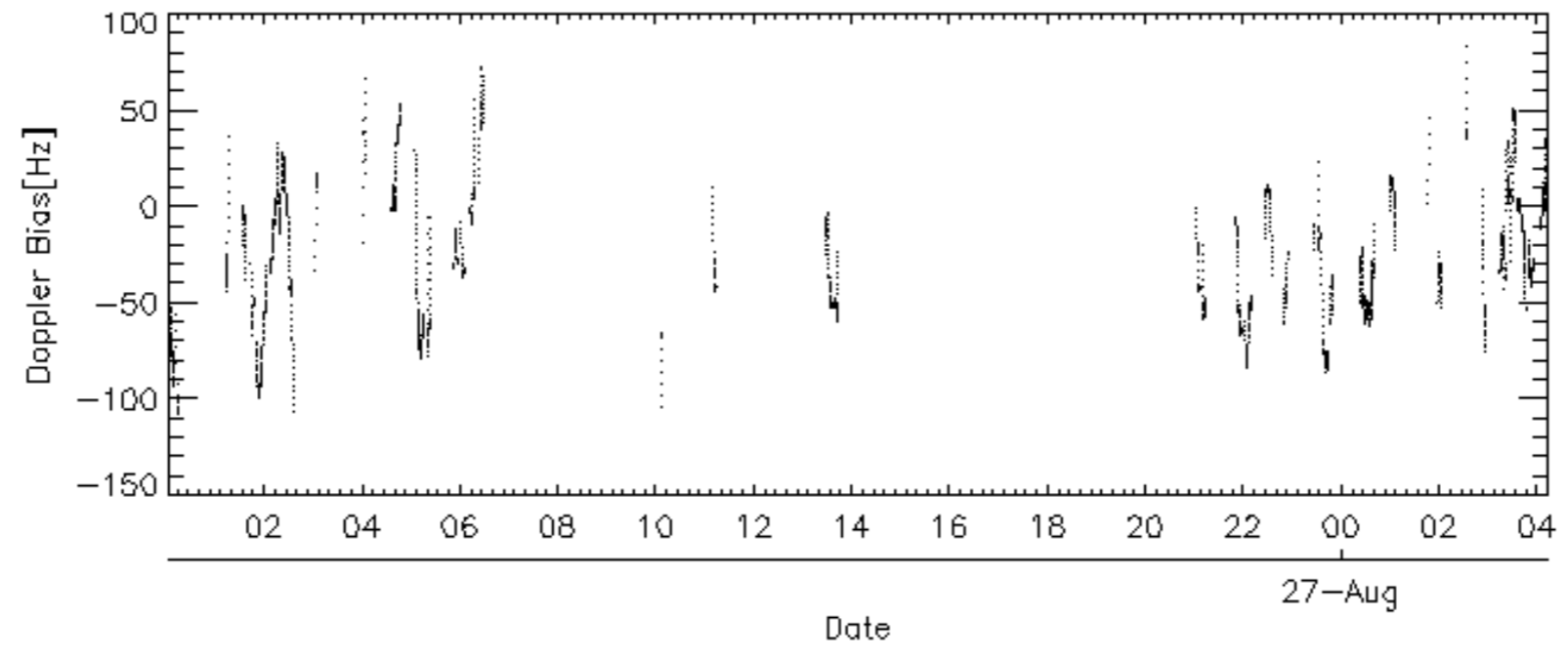
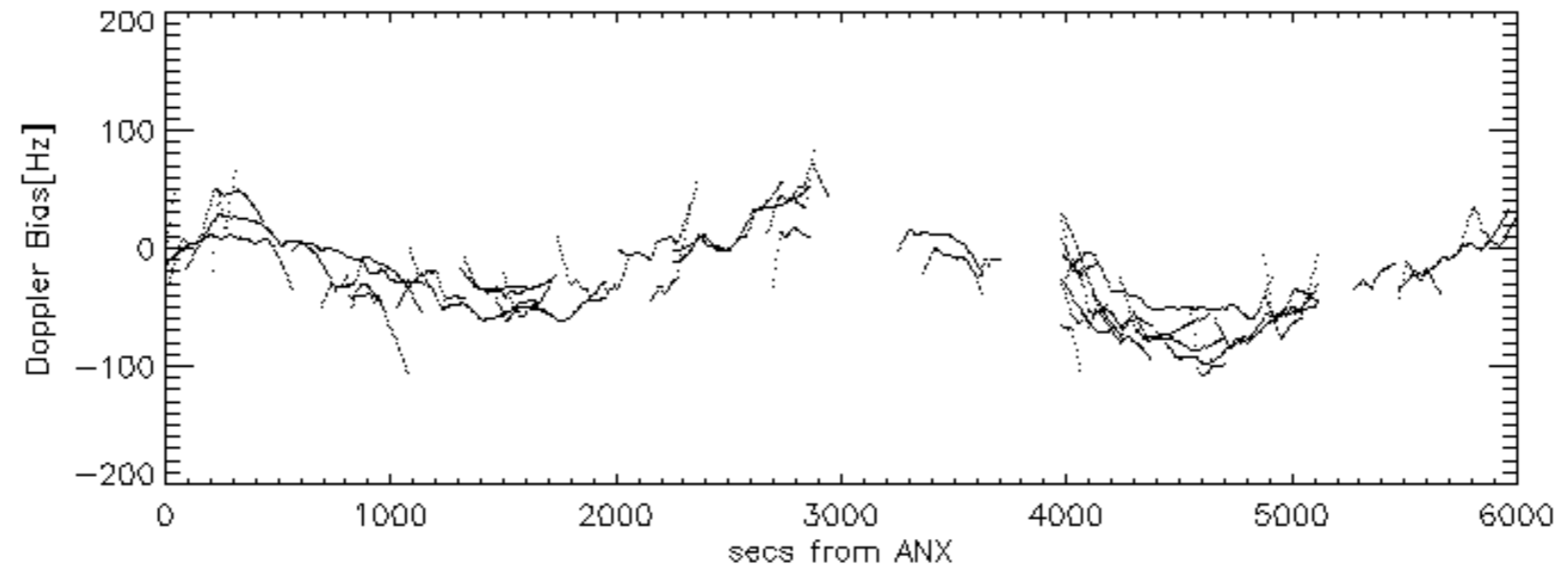
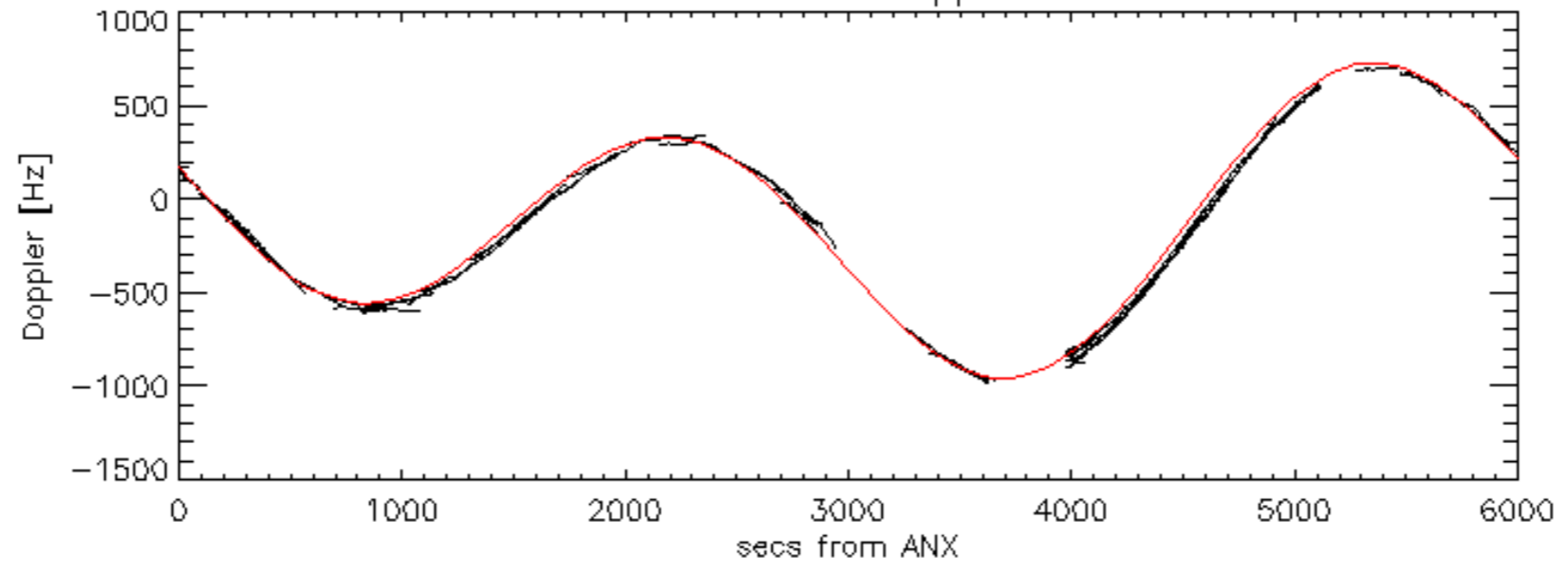




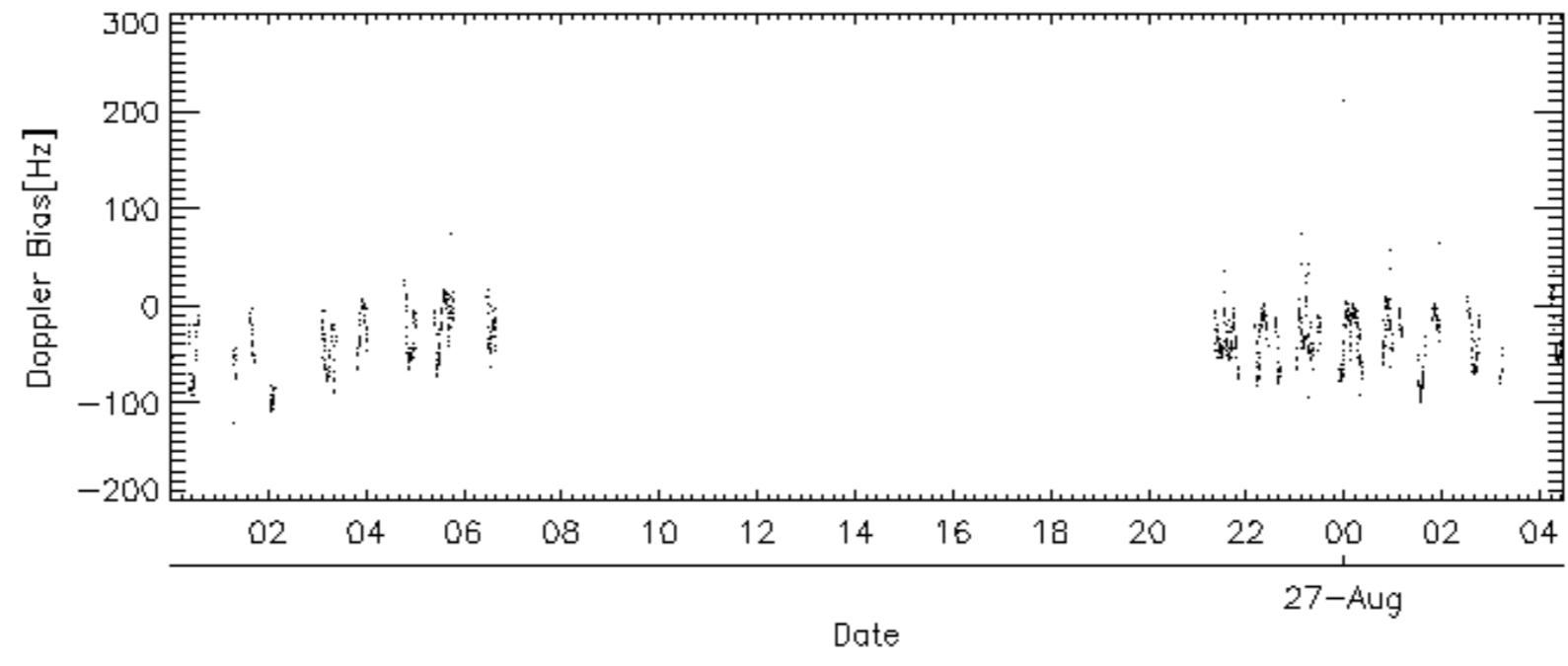
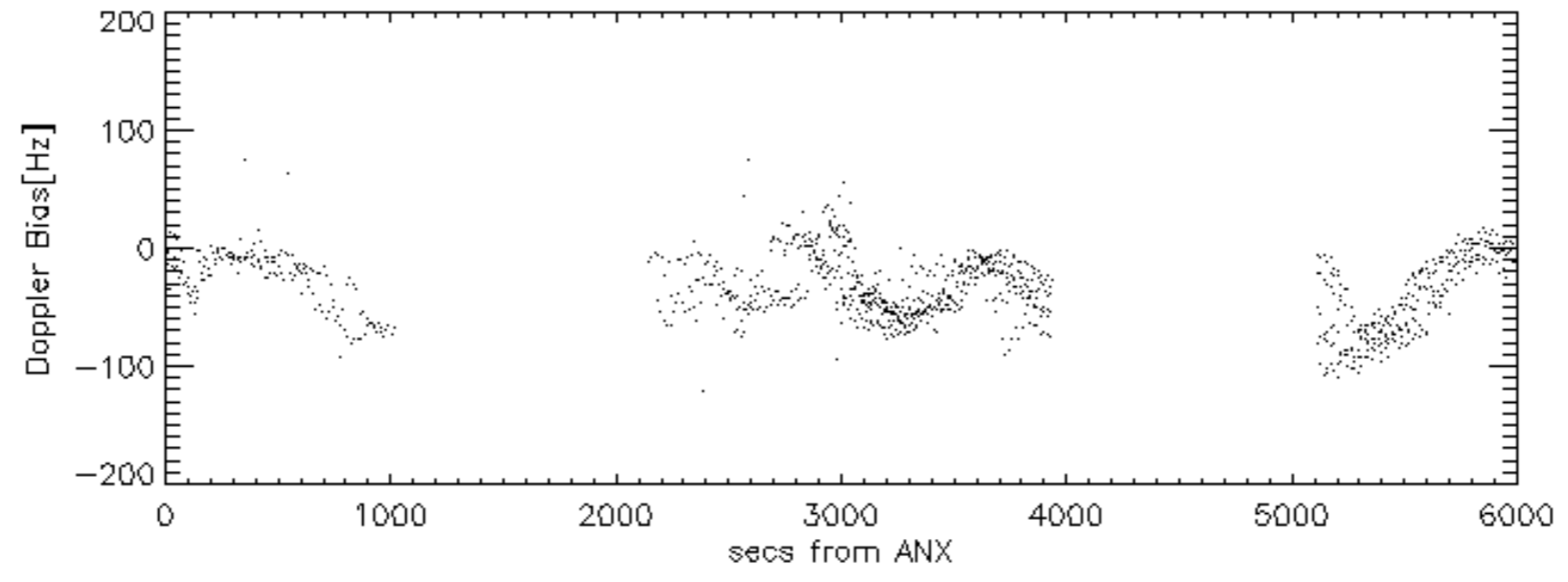
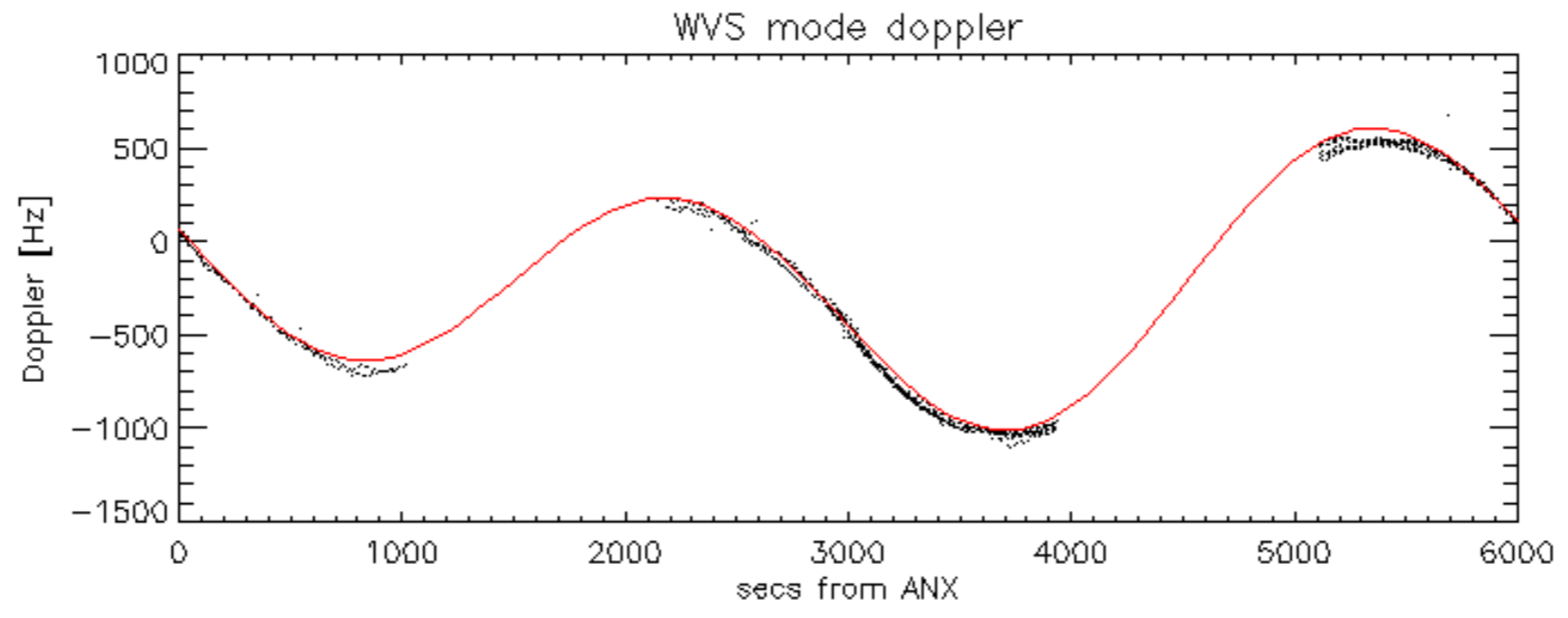
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

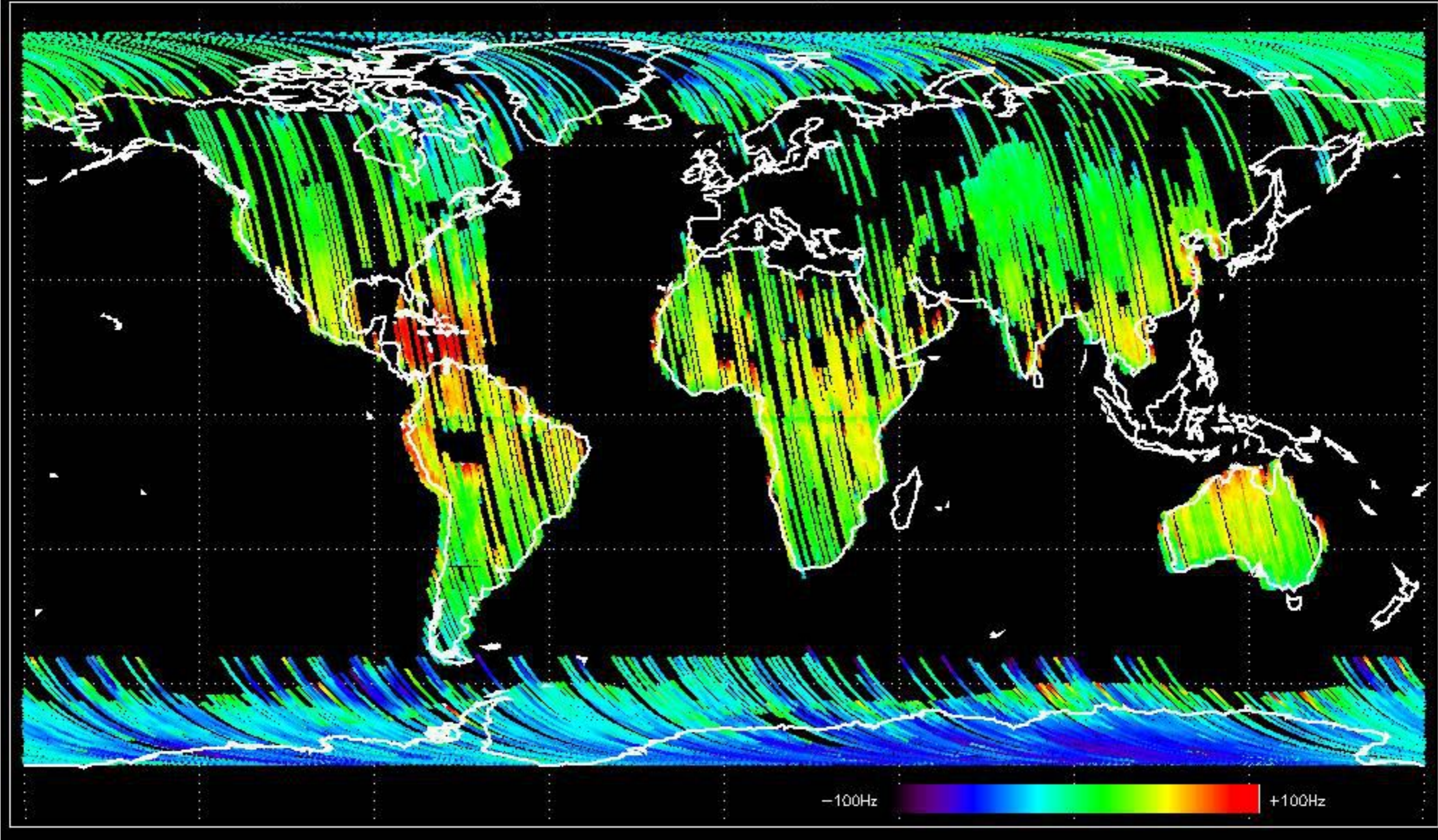






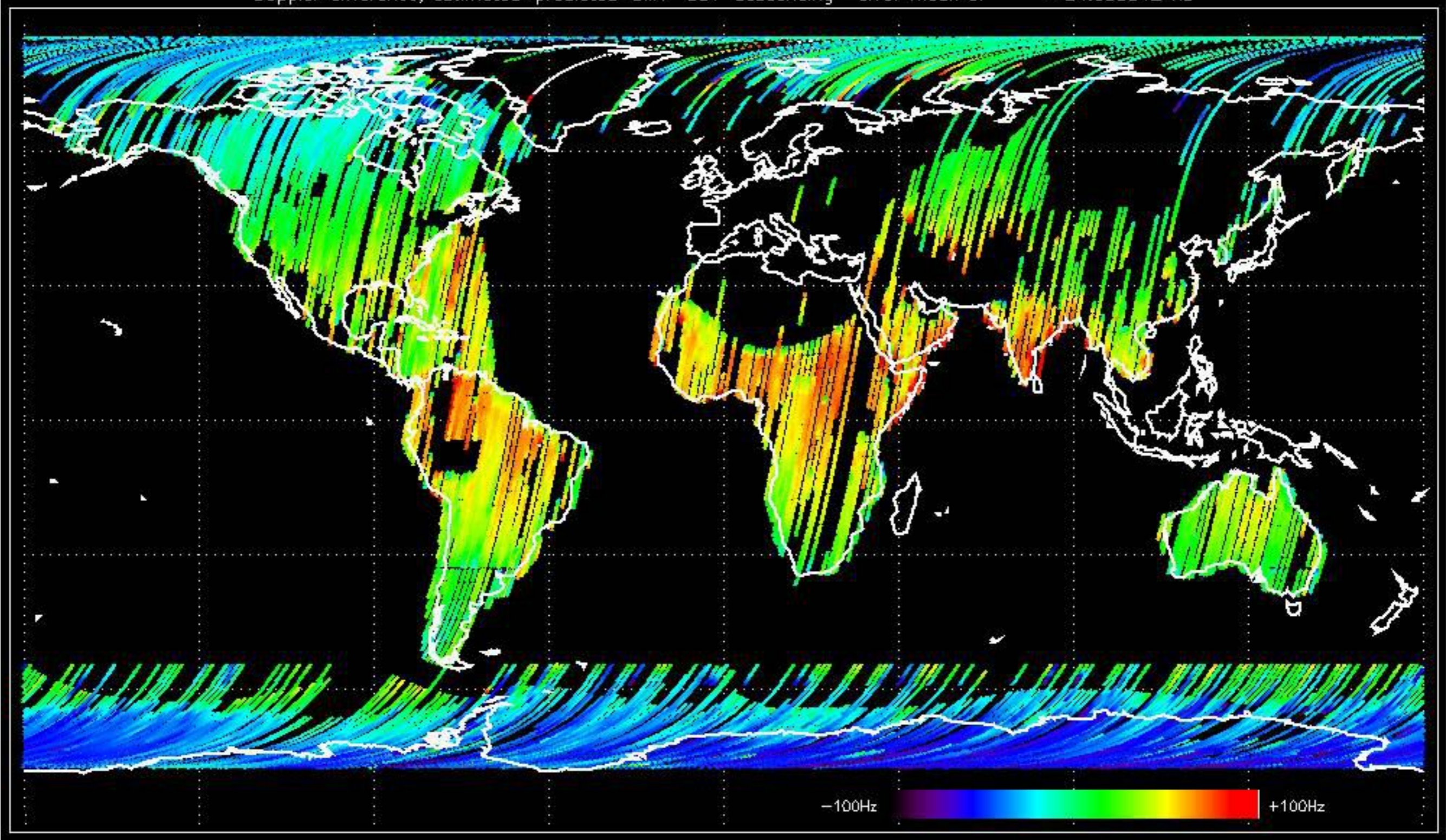


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -35.789769 Hz



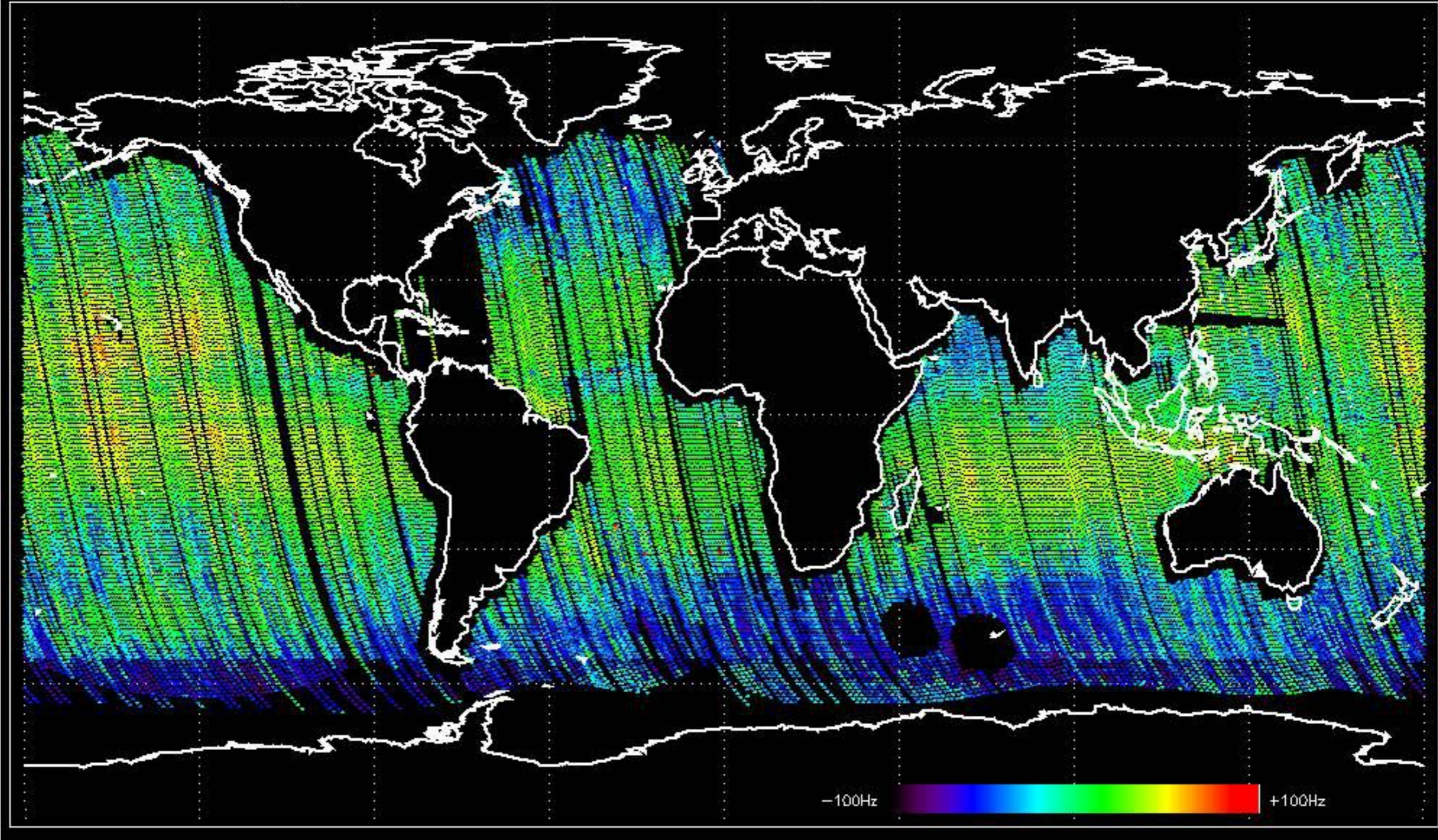


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.638542 Hz



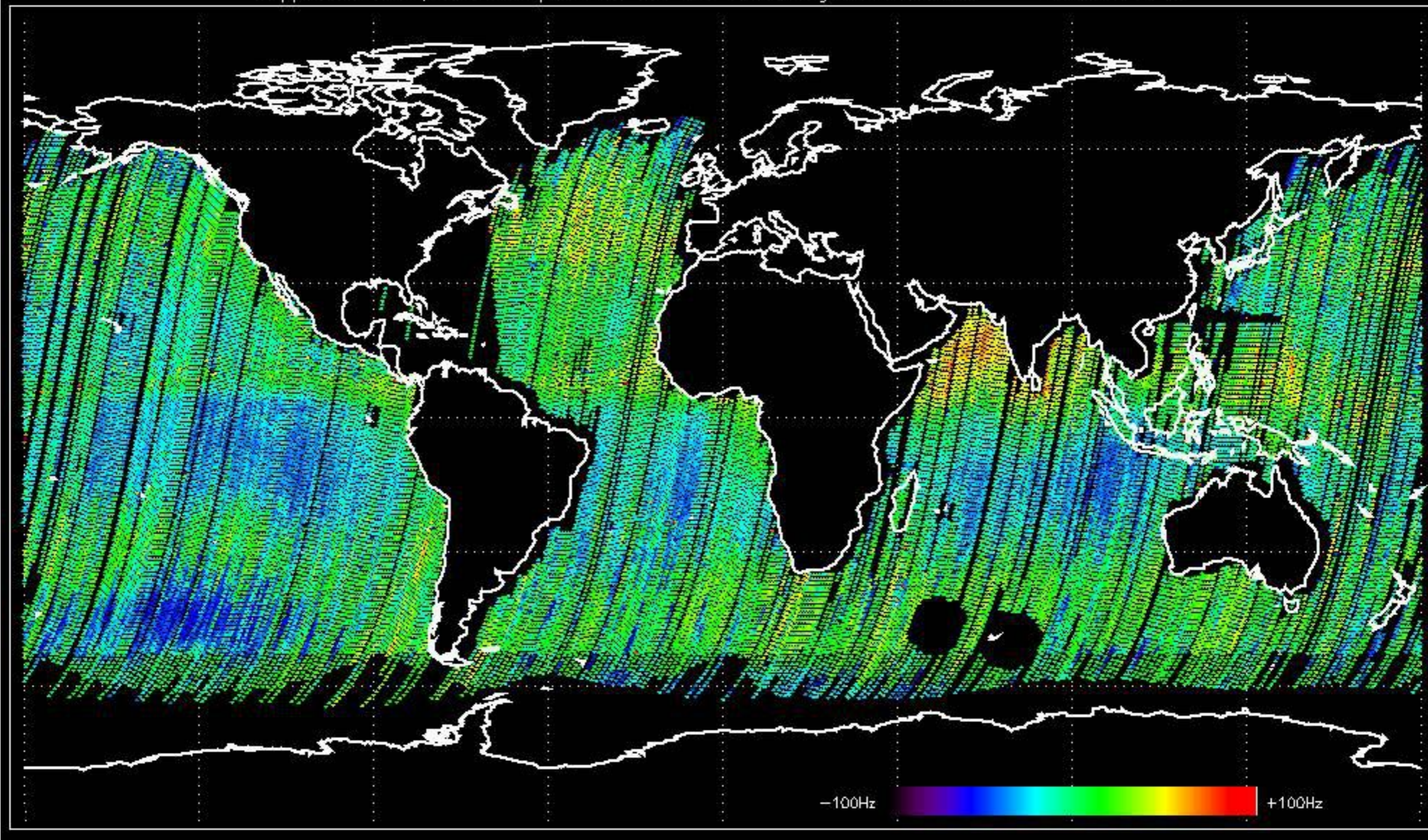


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -28.680433 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -28.709609 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.











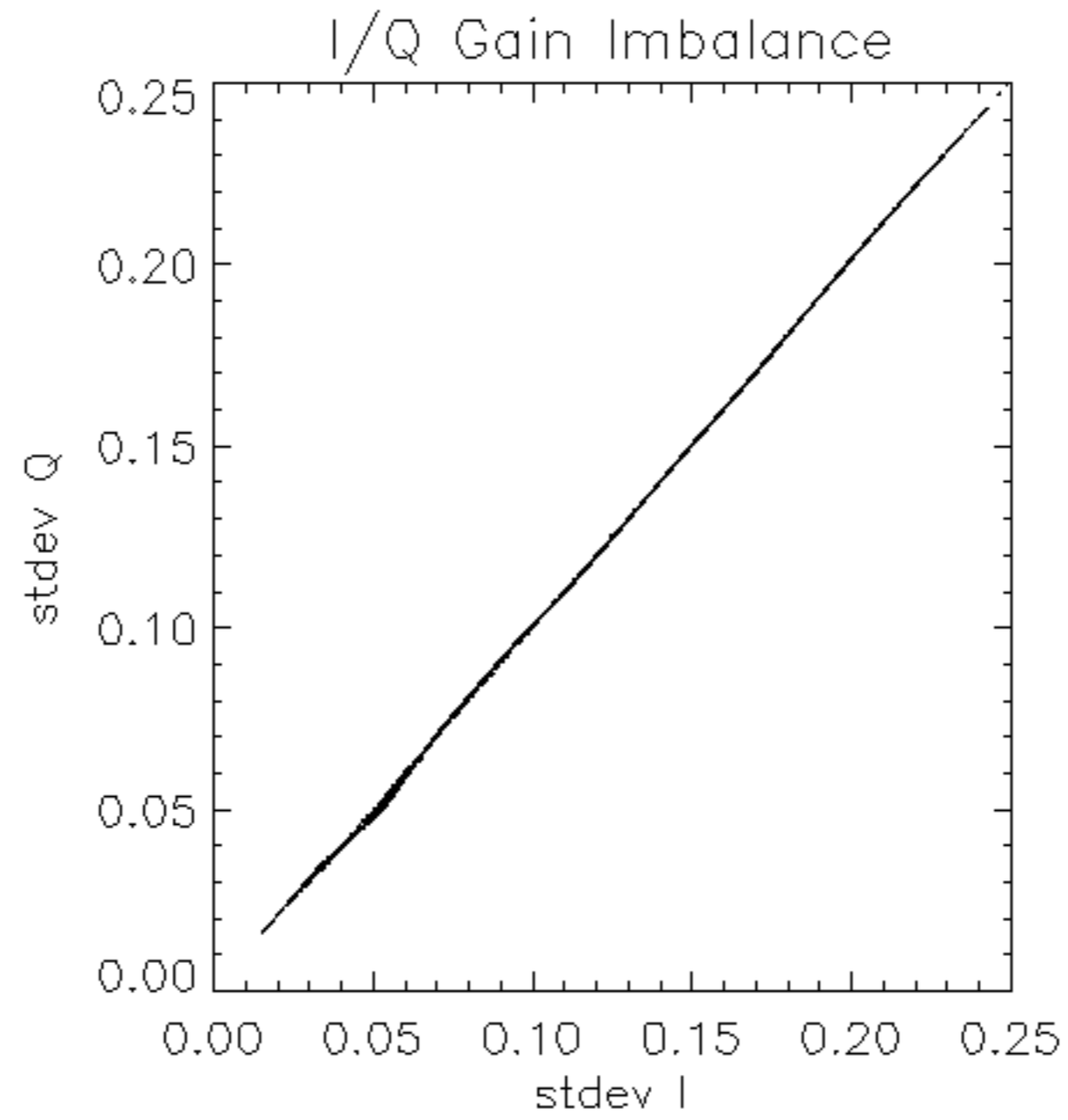




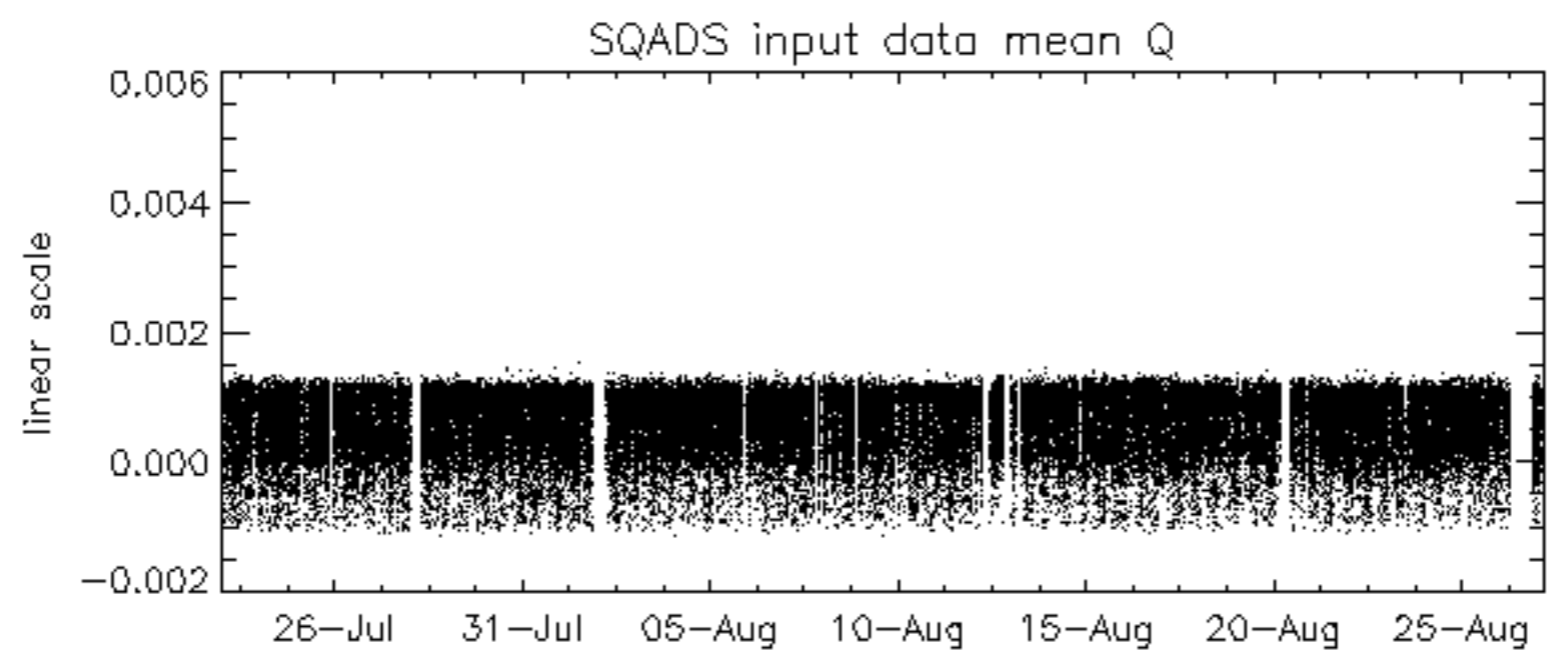
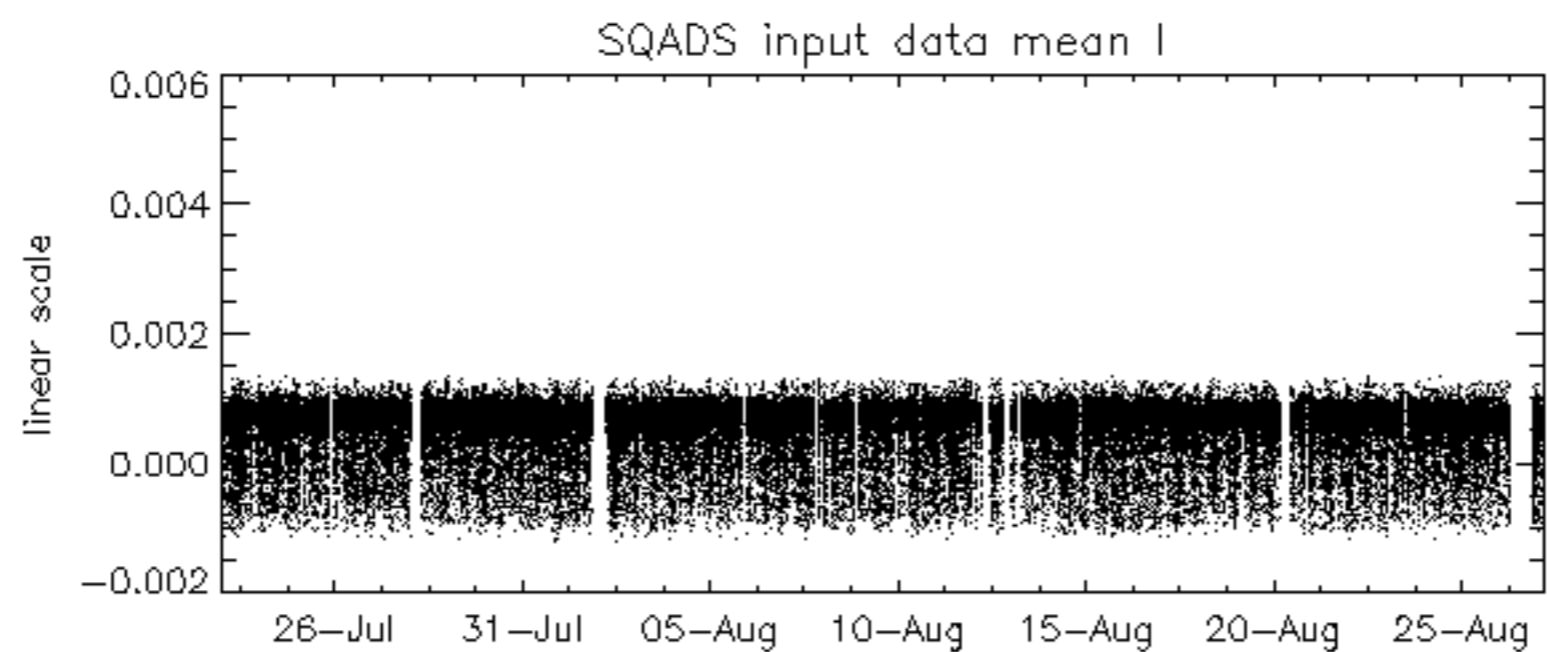
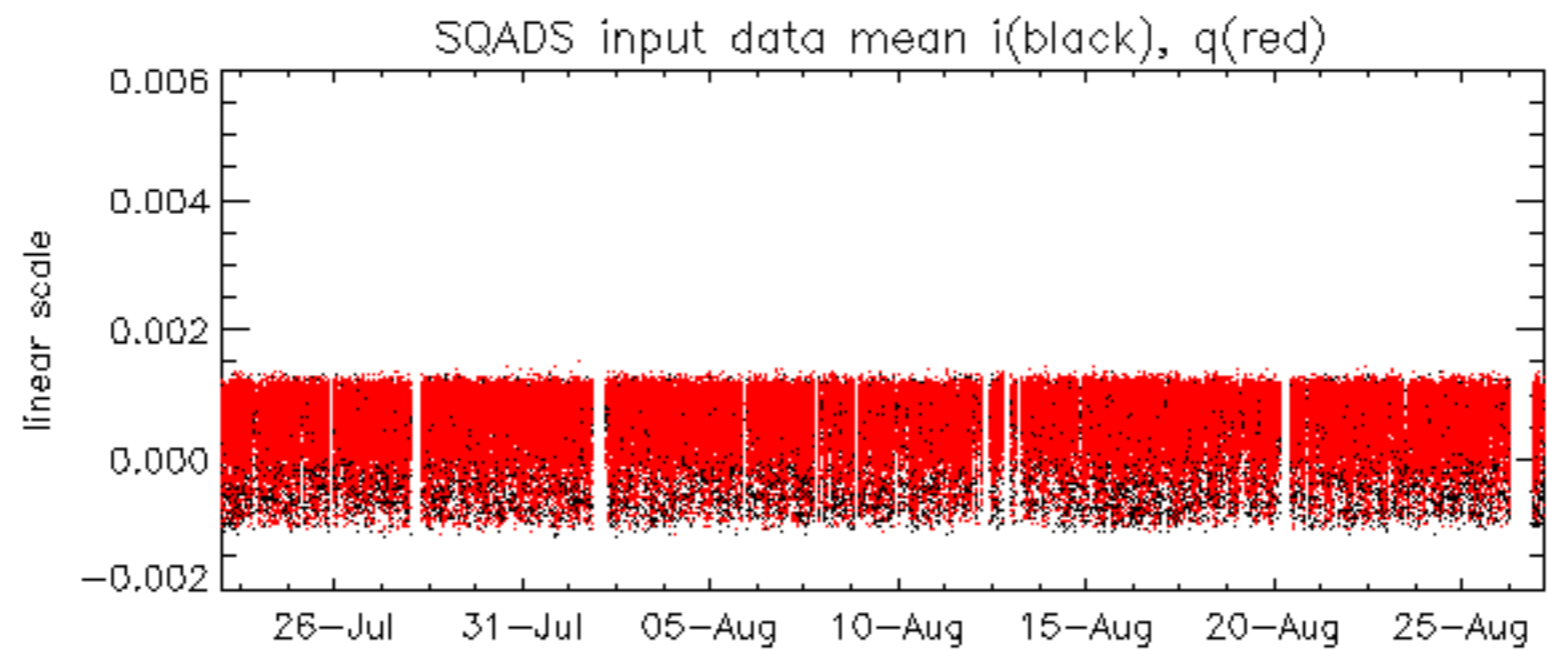


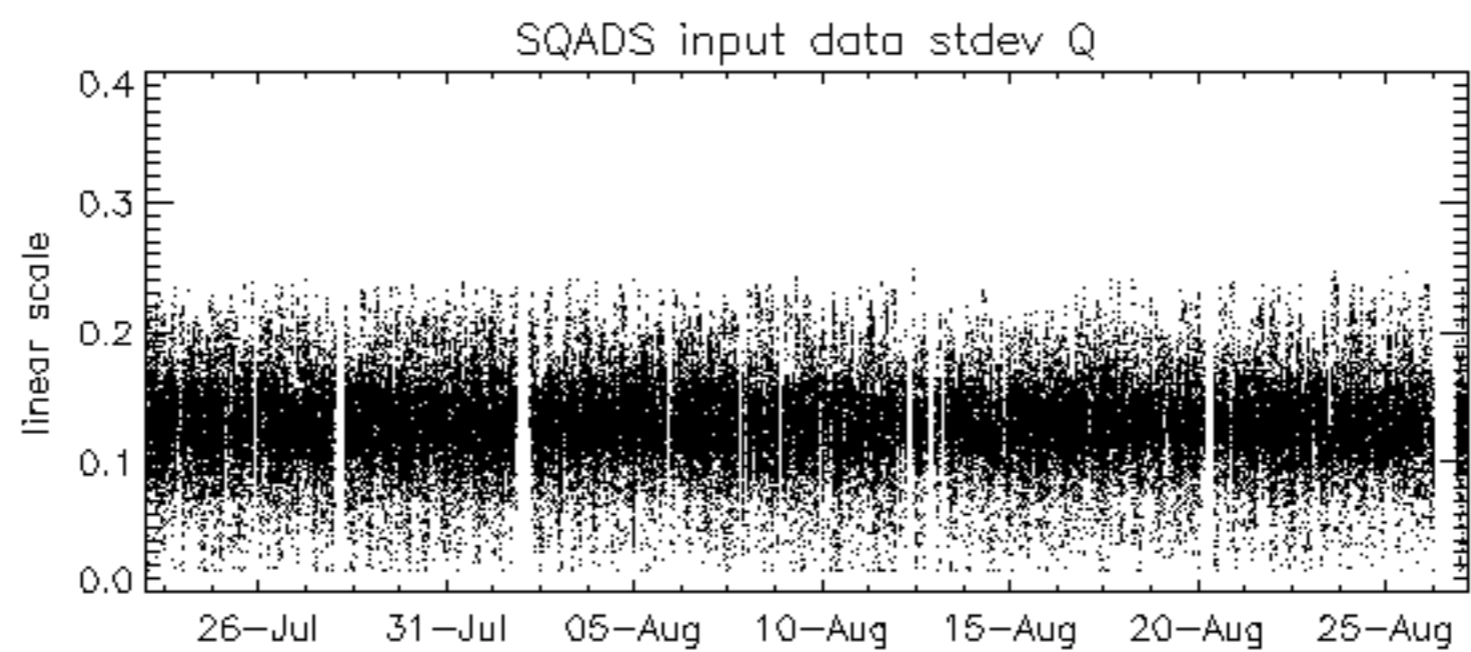
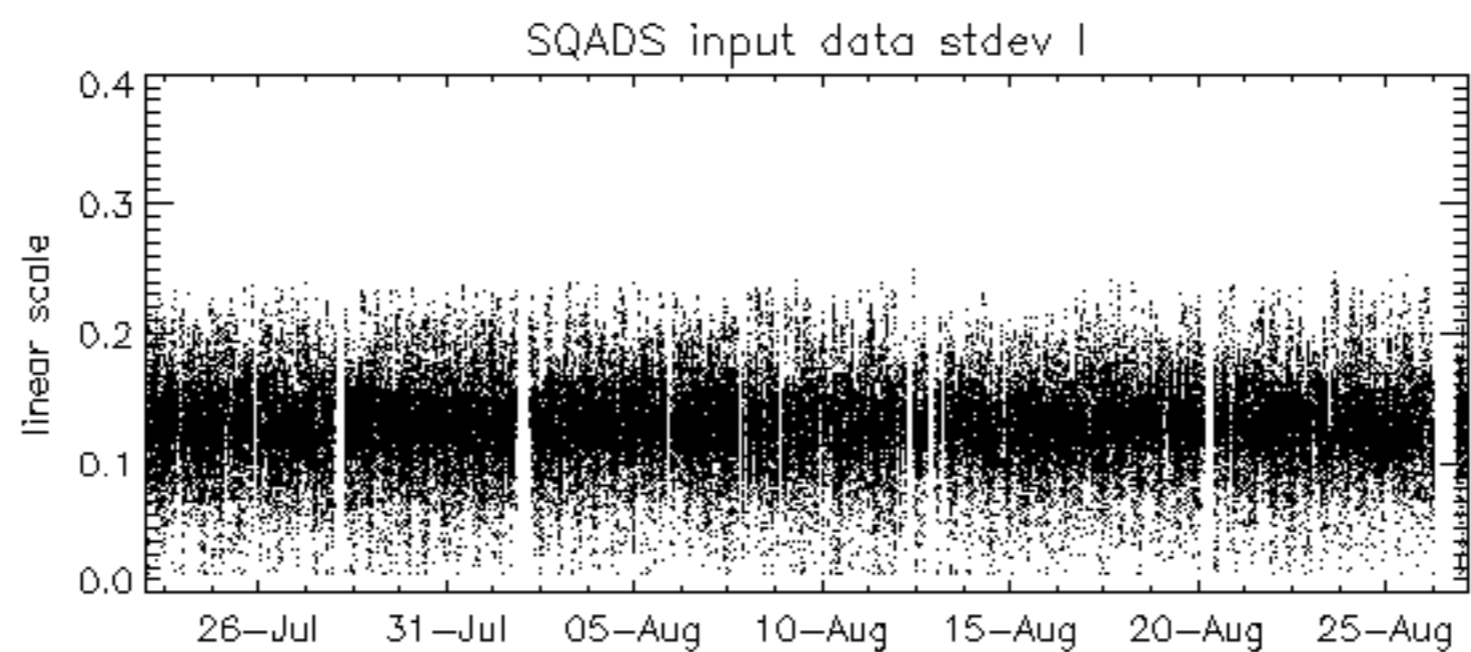
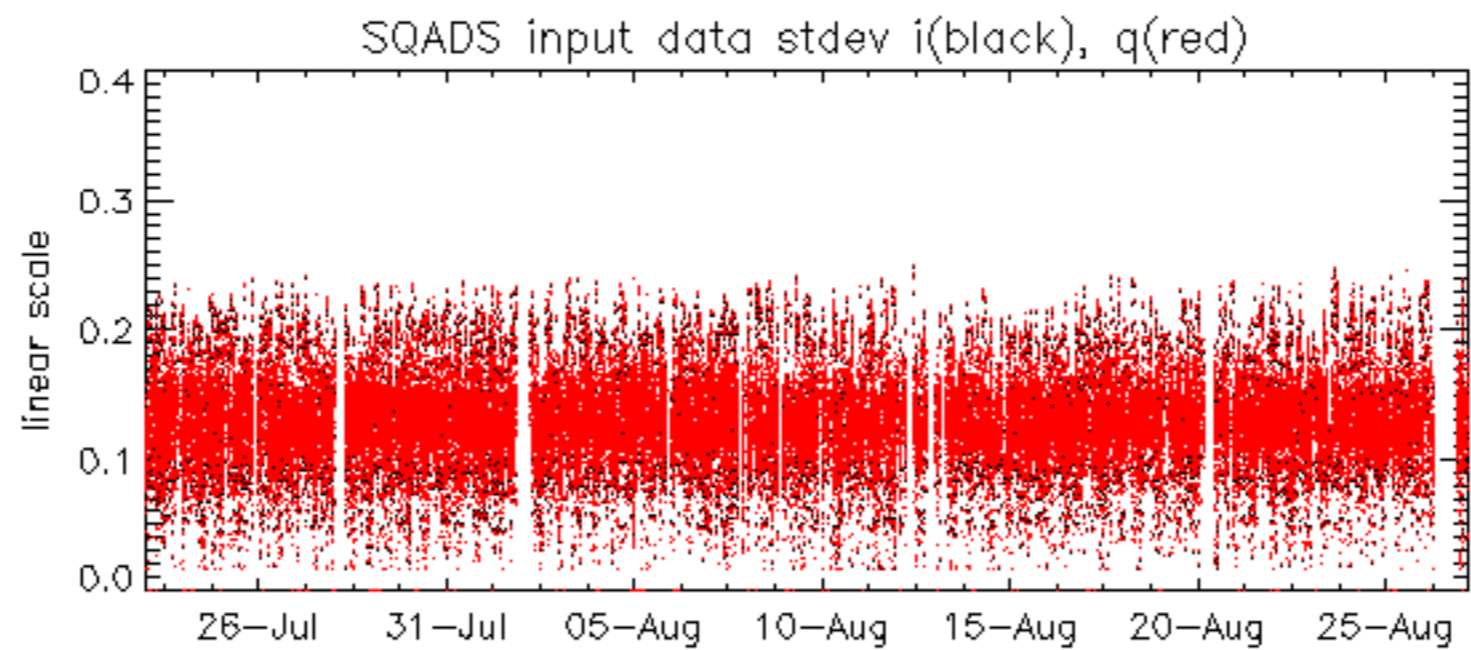
























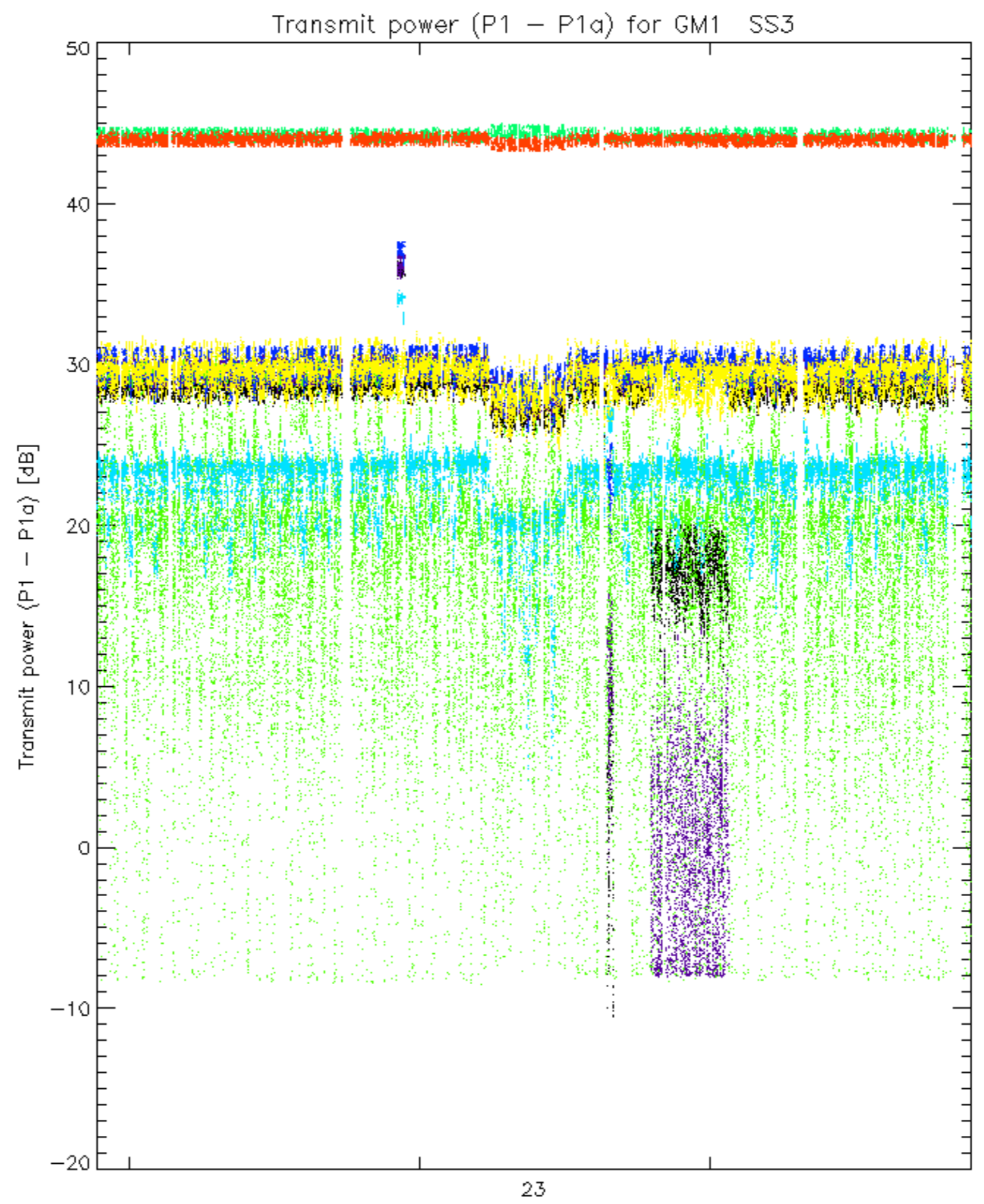




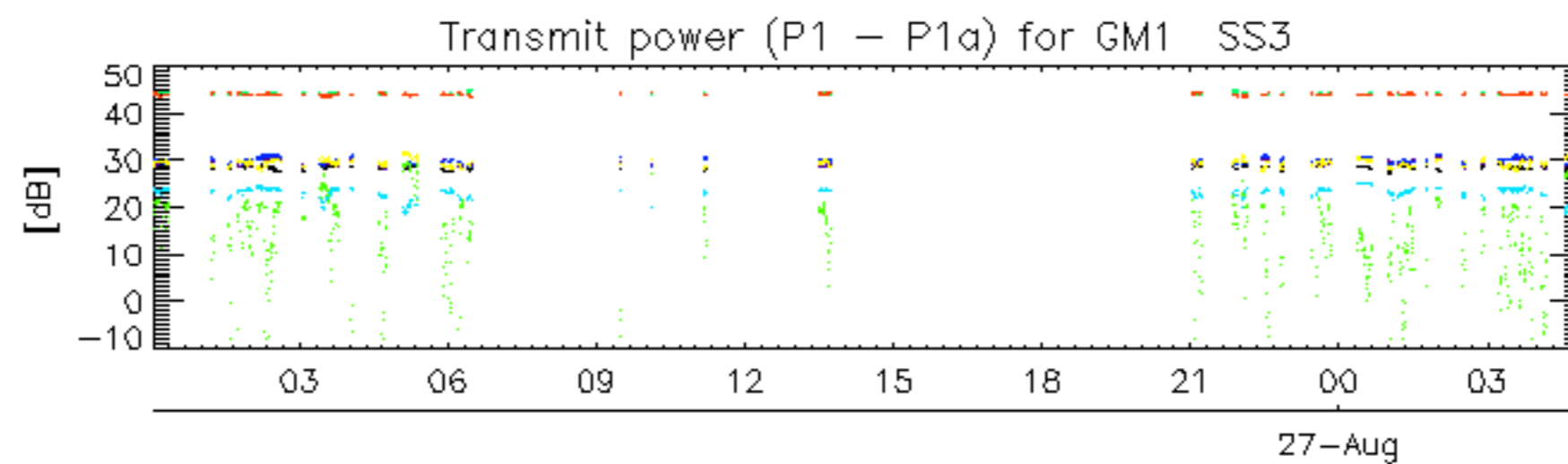






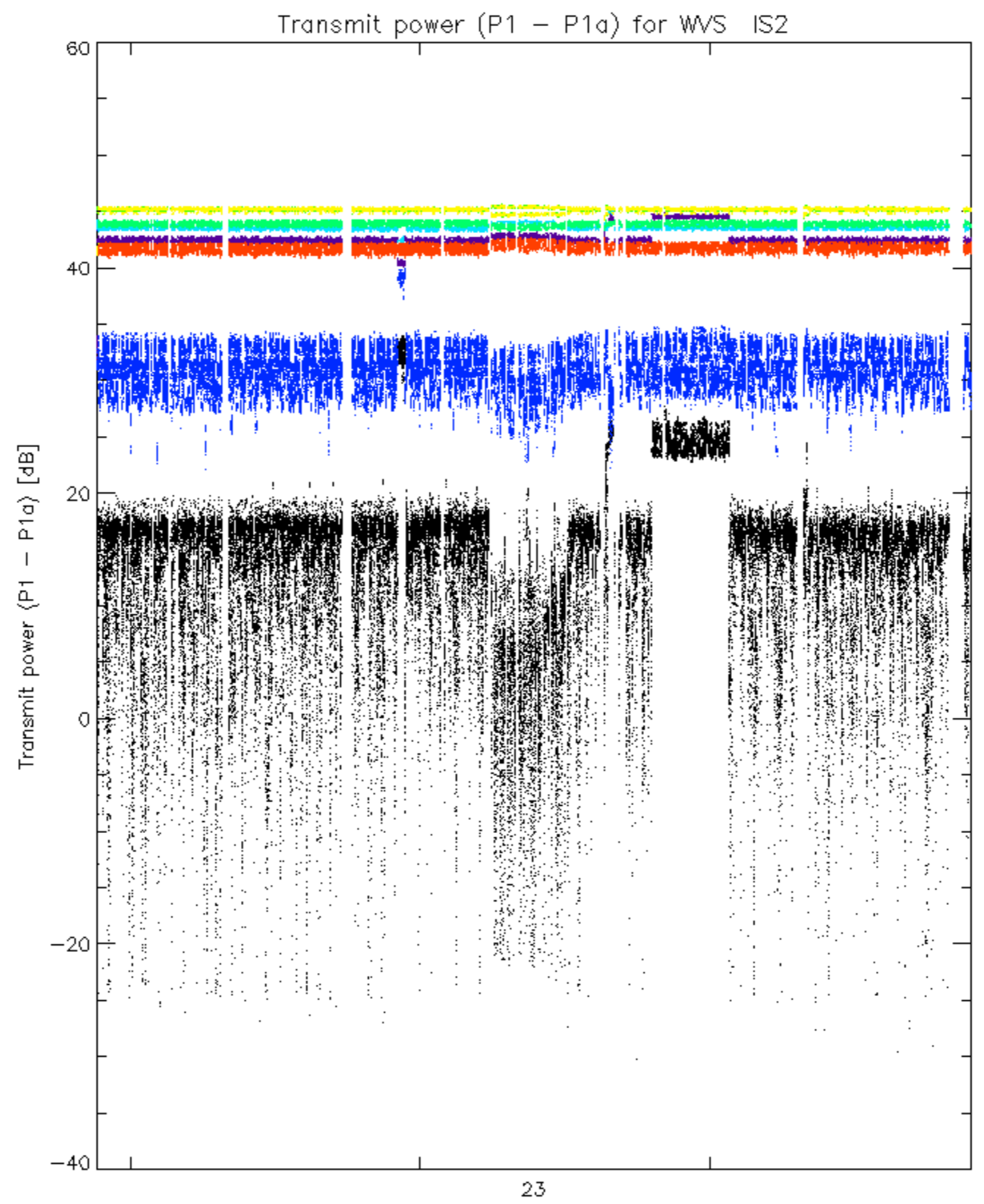


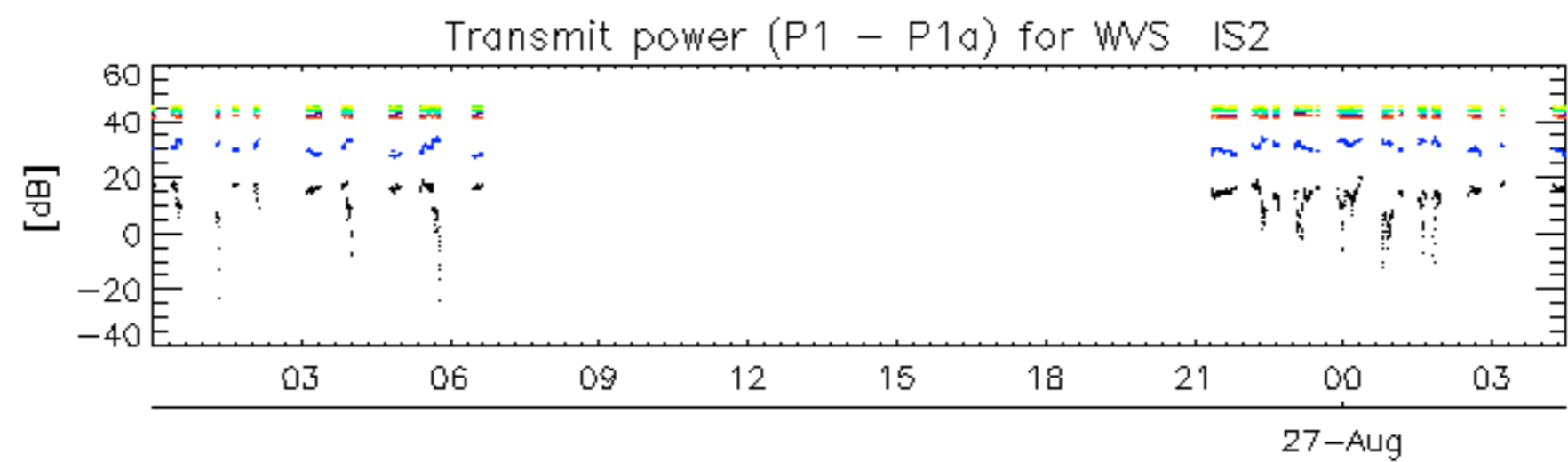
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rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30







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

No unavailabilities during the reported period.