

# PRELIMINARY REPORT OF 041214

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

**last update on Tue Dec 14 11:13:45 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 - Auxiliary files

**Summary of the auxiliary files used from 2004-12-13 00:00:00 to 2004-12-14 11:13:46**

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	33	45	0	0	0
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	33	45	0	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	33	45	0	0	0
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	33	45	0	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	42	48	6	3	0
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	42	48	6	3	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	42	48	6	3	0
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	42	48	6	3	0

## 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

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	20041213 180515
H	20041212 183653

### 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
⊗	
⊗	
⊗	
⊗	

## 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	-3.468596	0.029695	-0.017374
7	P1	-3.161035	0.038117	0.269252
11	P1	-4.628137	0.046163	-0.075451
15	P1	-5.659400	0.033822	-0.047158
19	P1	-3.635319	0.005172	-0.043374
22	P1	-4.580493	0.016201	0.020451
26	P1	-4.923171	0.016697	-0.038830
30	P1	-7.096056	0.014298	-0.041677
3	P1	-15.962158	0.118251	0.034108
7	P1	-15.195671	0.511214	-1.527240
11	P1	-20.698542	0.487954	-0.006638
15	P1	-11.620463	0.090160	0.074426
19	P1	-14.125778	0.030593	-0.088160
22	P1	-16.159903	0.447620	0.200849
26	P1	-17.798777	0.267146	0.014052
30	P1	-17.913832	0.299524	0.015470

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.370687	0.085427	0.016975
7	P2	-22.612867	0.141455	0.042531
11	P2	-14.981231	0.134599	0.152244
15	P2	-7.174479	0.109475	0.015881
19	P2	-9.723403	0.137574	0.043689
22	P2	-17.209509	0.099444	0.054888

26	P2	-16.524319	0.106522	0.002704
30	P2	-19.006174	0.083089	0.110693

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210205	0.006908	-0.008657
7	P3	-8.210222	0.006909	-0.008566
11	P3	-8.210221	0.006909	-0.008561
15	P3	-8.210220	0.006909	-0.008560
19	P3	-8.210220	0.006909	-0.008563
22	P3	-8.210223	0.006909	-0.008568
26	P3	-8.210225	0.006909	-0.008575
30	P3	-8.210056	0.006909	-0.008545

**4.2.2 - Evolution for GM1**

<b>Evolution of cal pulses for GM1</b>
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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	-2.840530	0.110778	-0.105571
7	P1	-2.978977	0.064485	-0.073594
11	P1	-3.930339	0.049528	-0.086528
15	P1	-3.509746	0.078738	-0.099596
19	P1	-3.600938	0.012663	-0.027403
22	P1	-5.599954	0.068493	-0.044179
26	P1	-6.493967	0.023073	-0.050385
30	P1	-6.292865	0.041599	-0.059700
3	P1	-10.626342	0.058552	-0.106926
7	P1	-10.105664	0.153080	0.017230

11	P1	-12.388694	0.201526	-0.005275
15	P1	-11.721109	0.103795	0.029379
19	P1	-15.633686	0.049960	-0.028733
22	P1	-24.149782	2.251618	-0.067768
26	P1	-15.143477	0.409577	0.165990
30	P1	-20.202959	0.984147	0.180789

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.056904	0.036237	0.018742
7	P2	-22.660648	0.027498	0.067610
11	P2	-10.777698	0.033236	0.183414
15	P2	-5.069941	0.024351	-0.009655
19	P2	-6.976339	0.032142	-0.002593
22	P2	-7.335683	0.026192	0.034876
26	P2	-23.962227	0.018421	-0.019558
30	P2	-22.068985	0.017641	0.082358

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.045863	0.002766	0.000412
7	P3	-8.045868	0.002773	0.000307
11	P3	-8.045948	0.002762	0.000694
15	P3	-8.045751	0.002773	0.000353
19	P3	-8.045956	0.002775	0.000402
22	P3	-8.045927	0.002769	0.000620
26	P3	-8.045931	0.002766	0.000242
30	P3	-8.045825	0.002761	0.000515

## 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	0.000440388
	stdev	2.41954e-07
MEAN Q	mean	0.000497537
	stdev	2.55391e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125492
	stdev	0.00100796
STDEV Q	mean	0.125731
	stdev	0.00101720



### 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
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Descending
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## 6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
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Acsending
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Descending
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## 6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX
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## 6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)
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Acsending
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Descending
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## 6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
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Acsending
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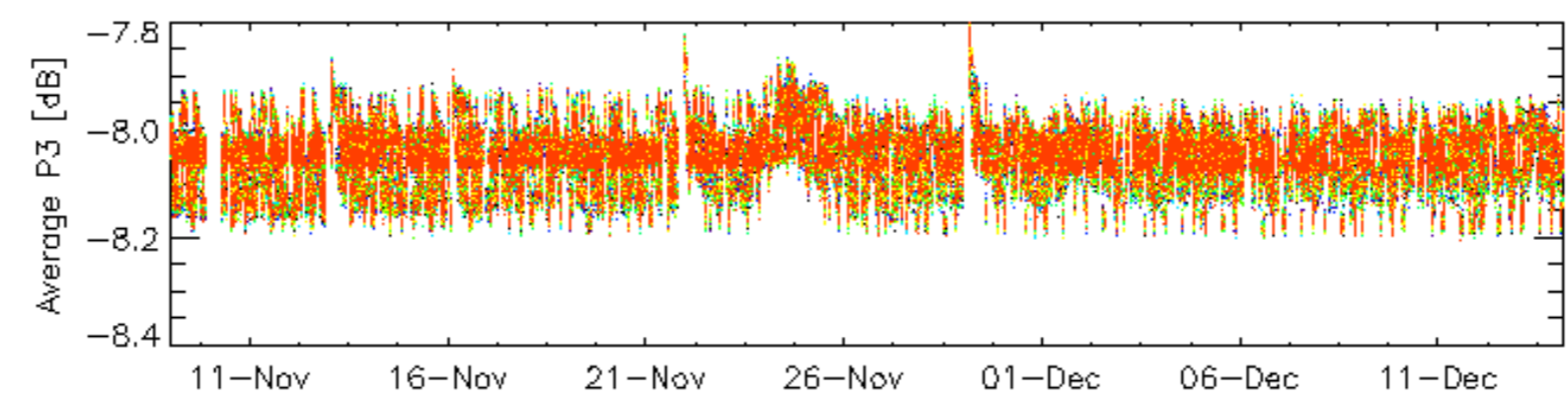
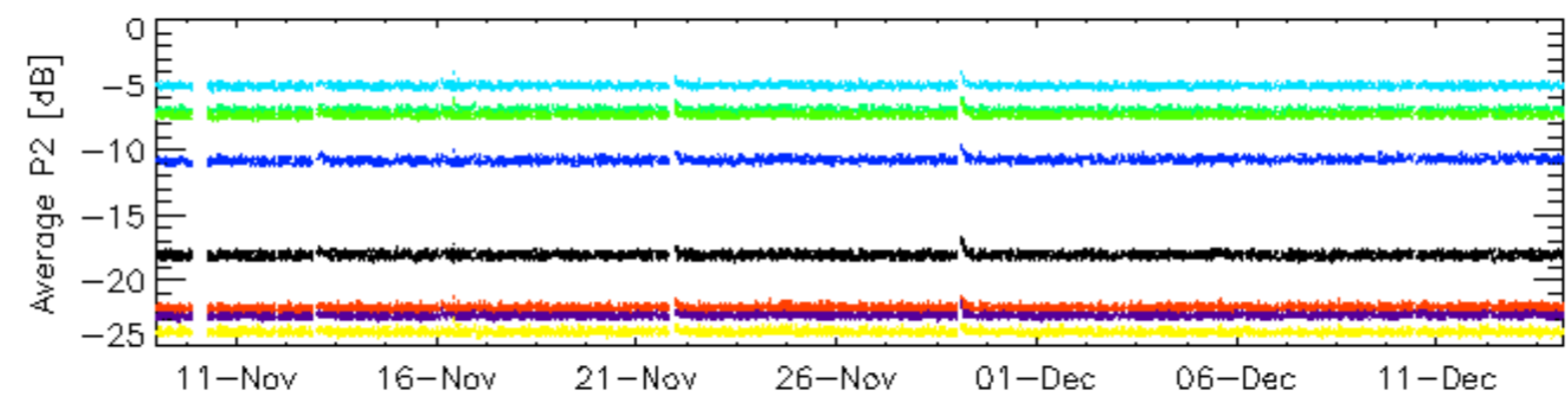
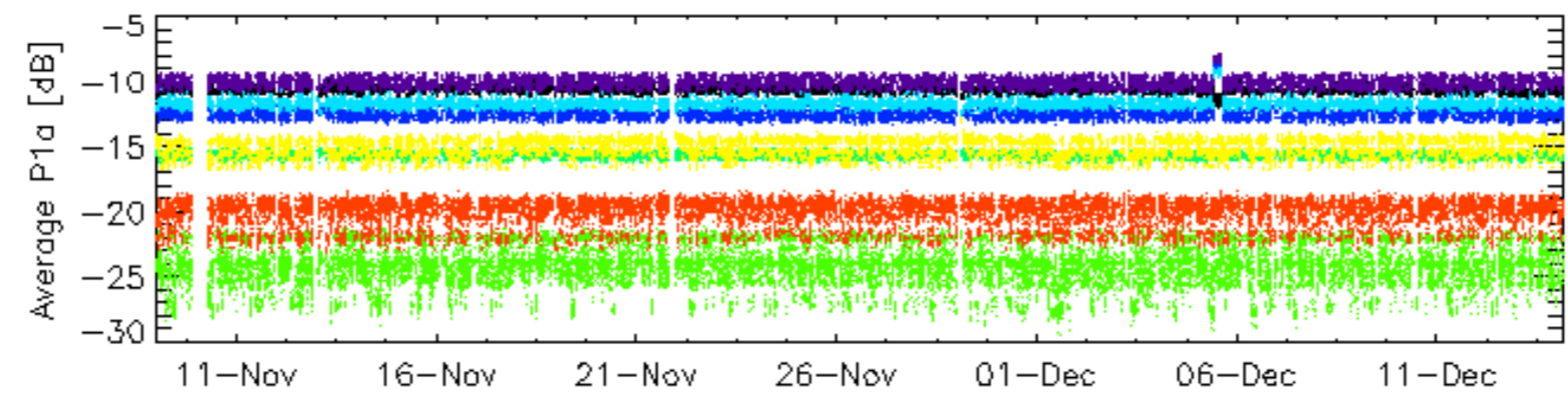
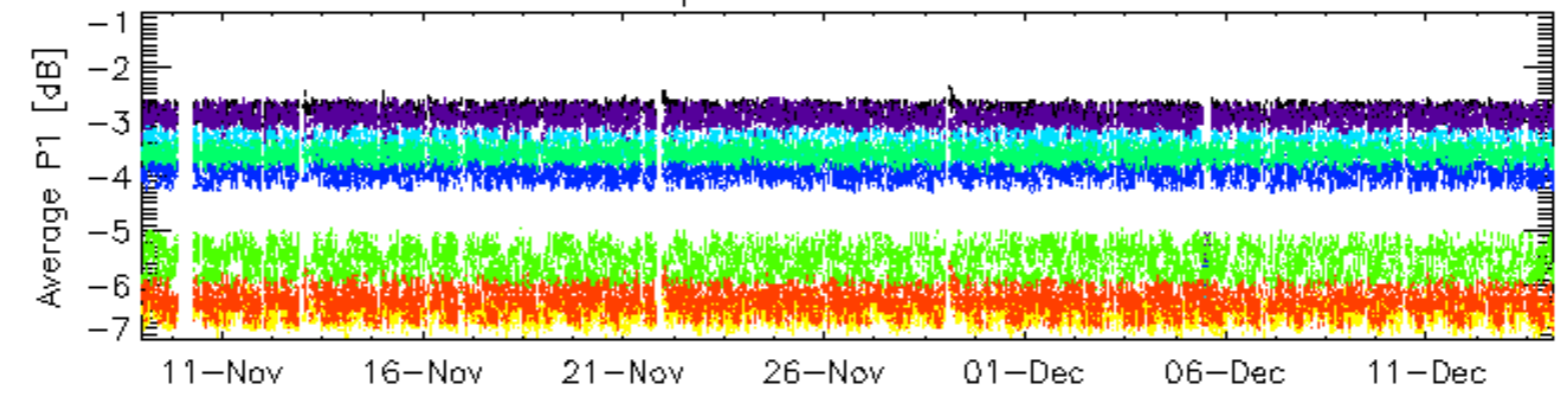
Descending

## 6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

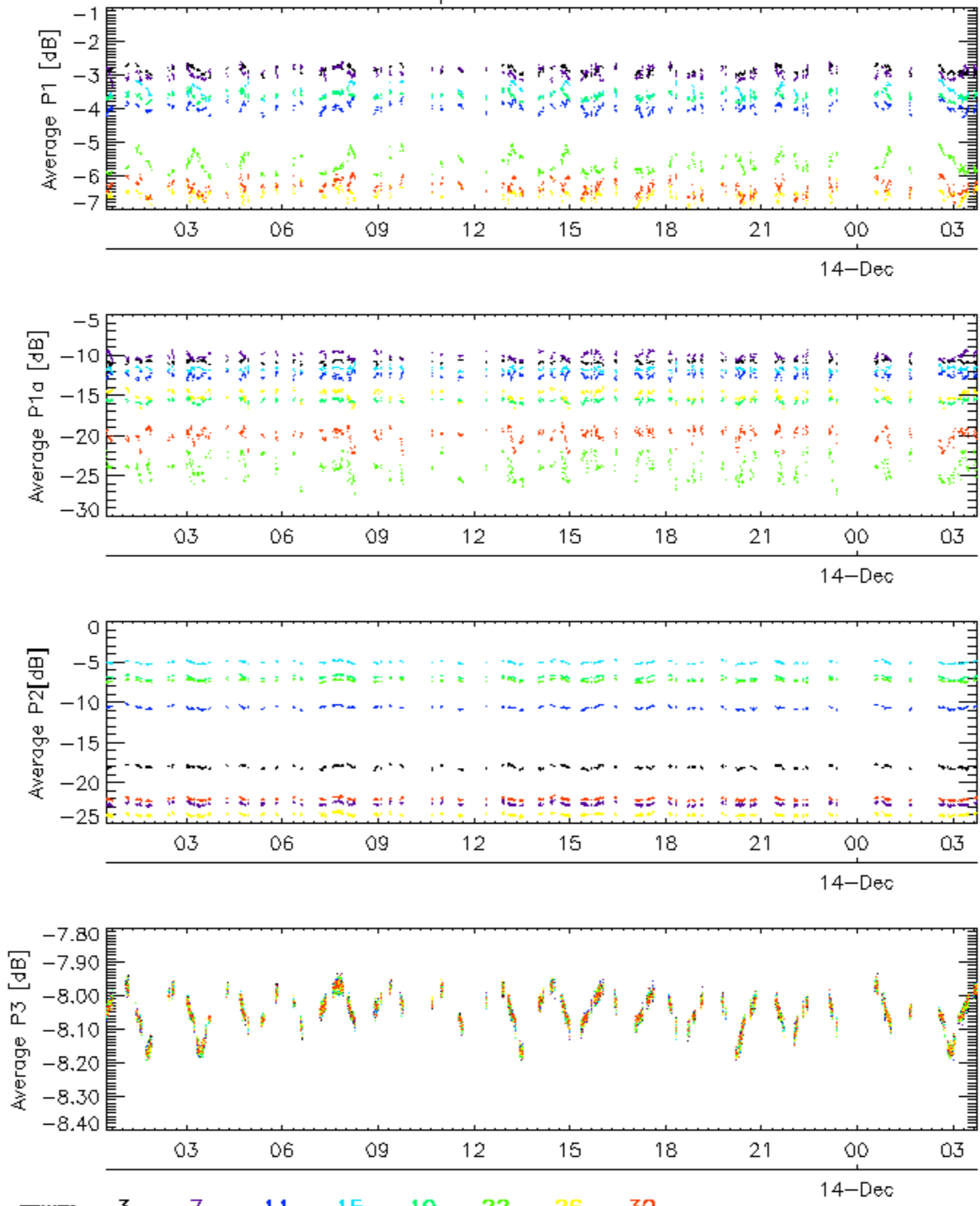


Cal pulses for GM1 SS3



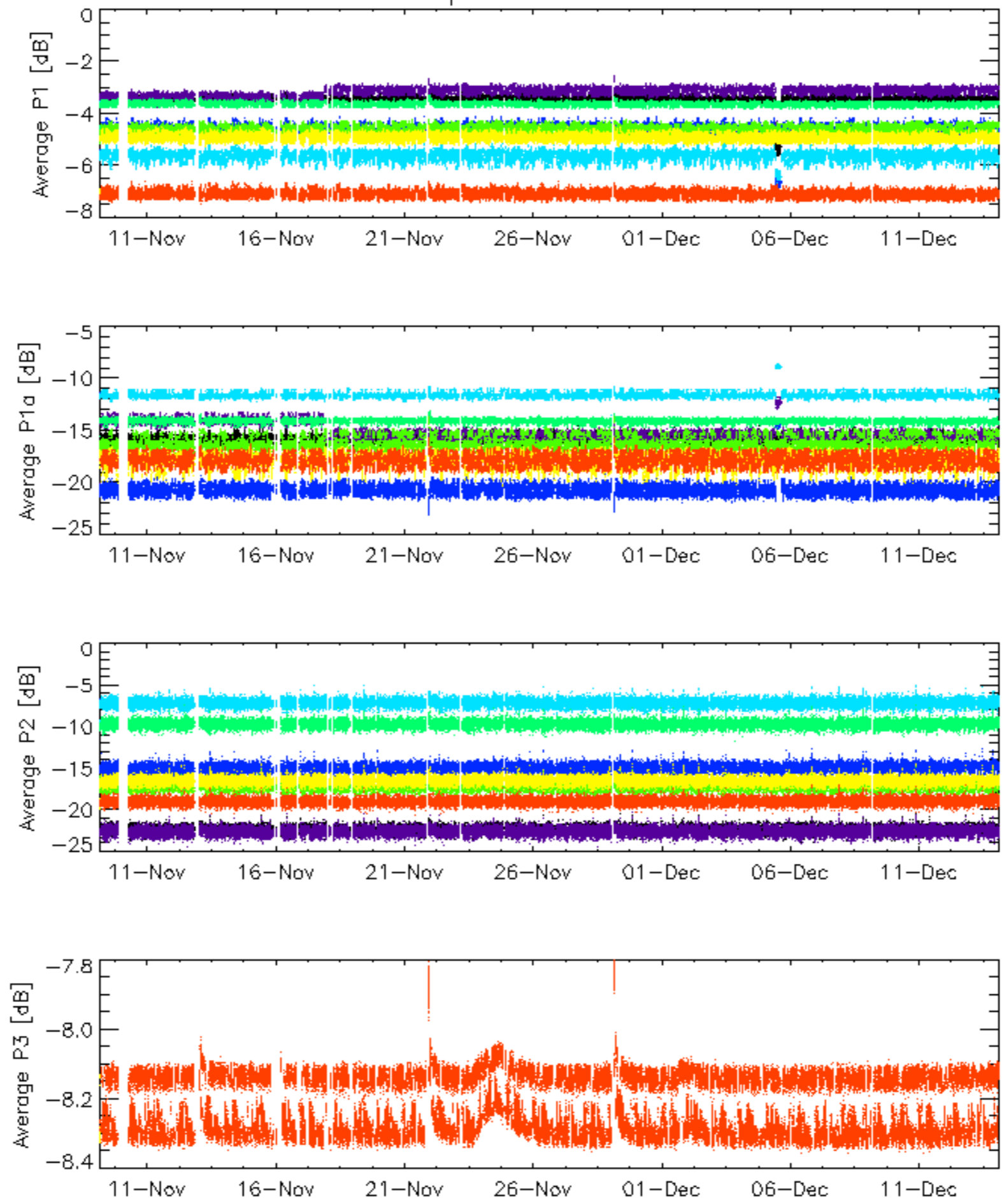
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Cal pulses for GM1 SS3



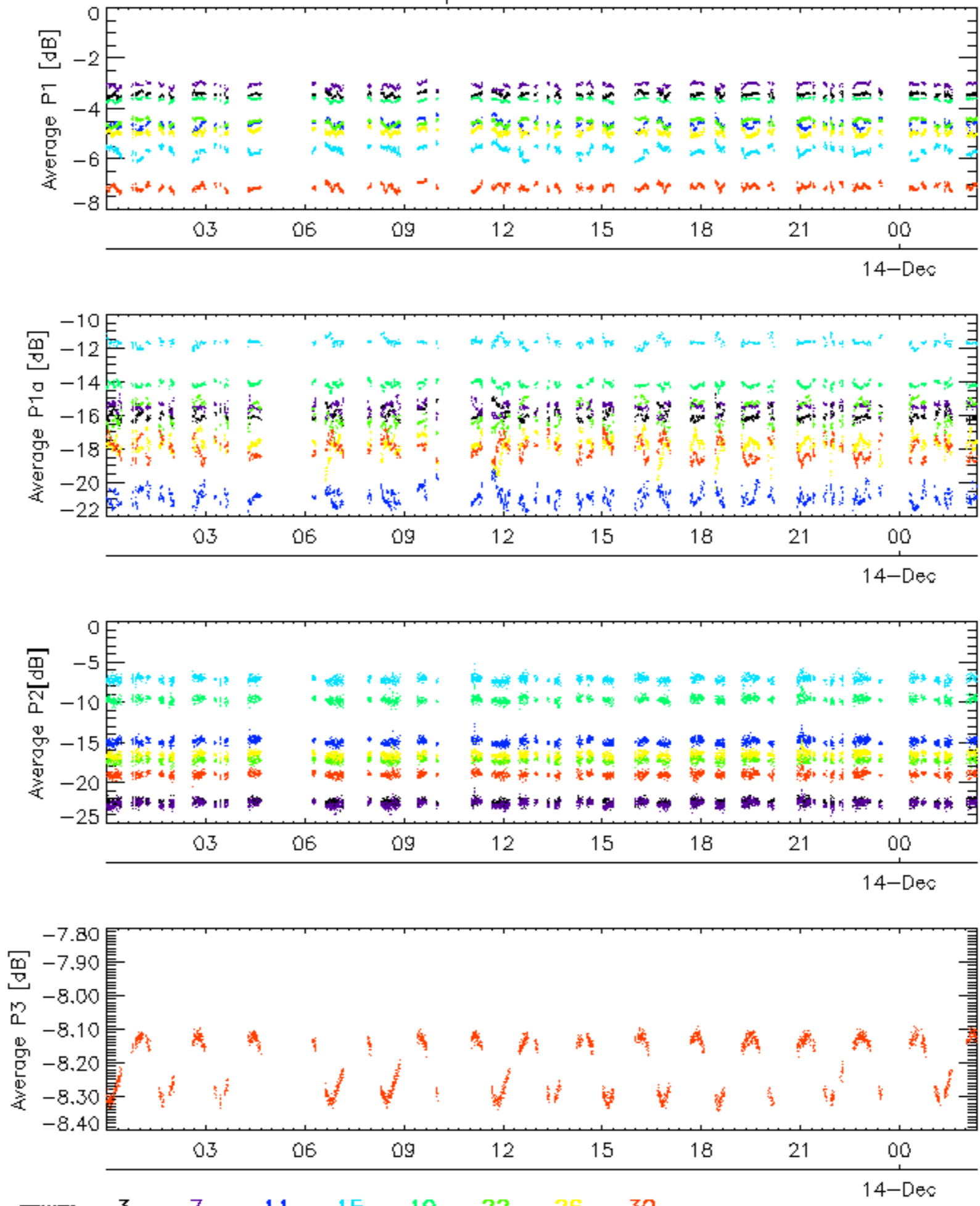
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Cal pulses for WVS IS2



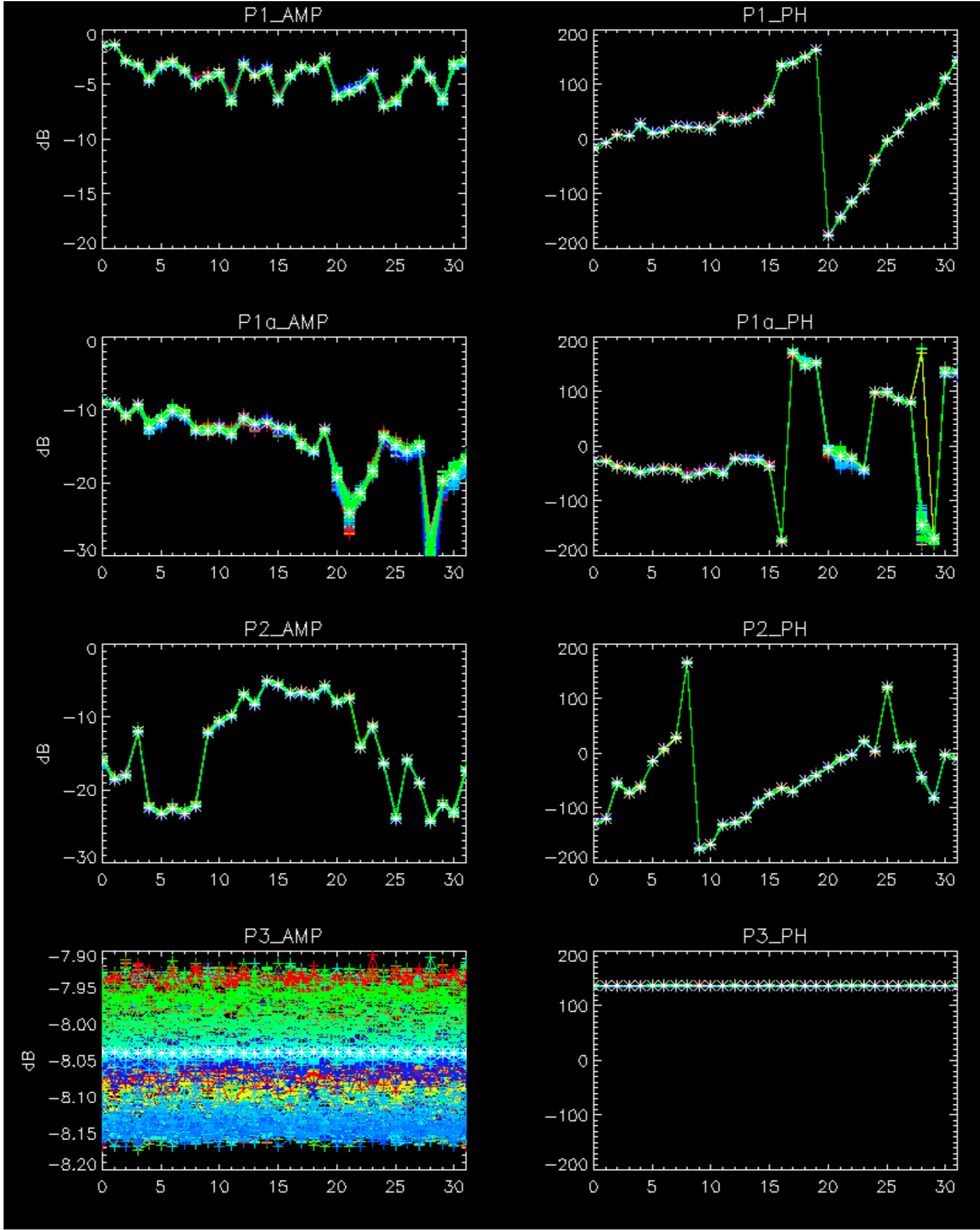
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Cal pulses for WVS IS2

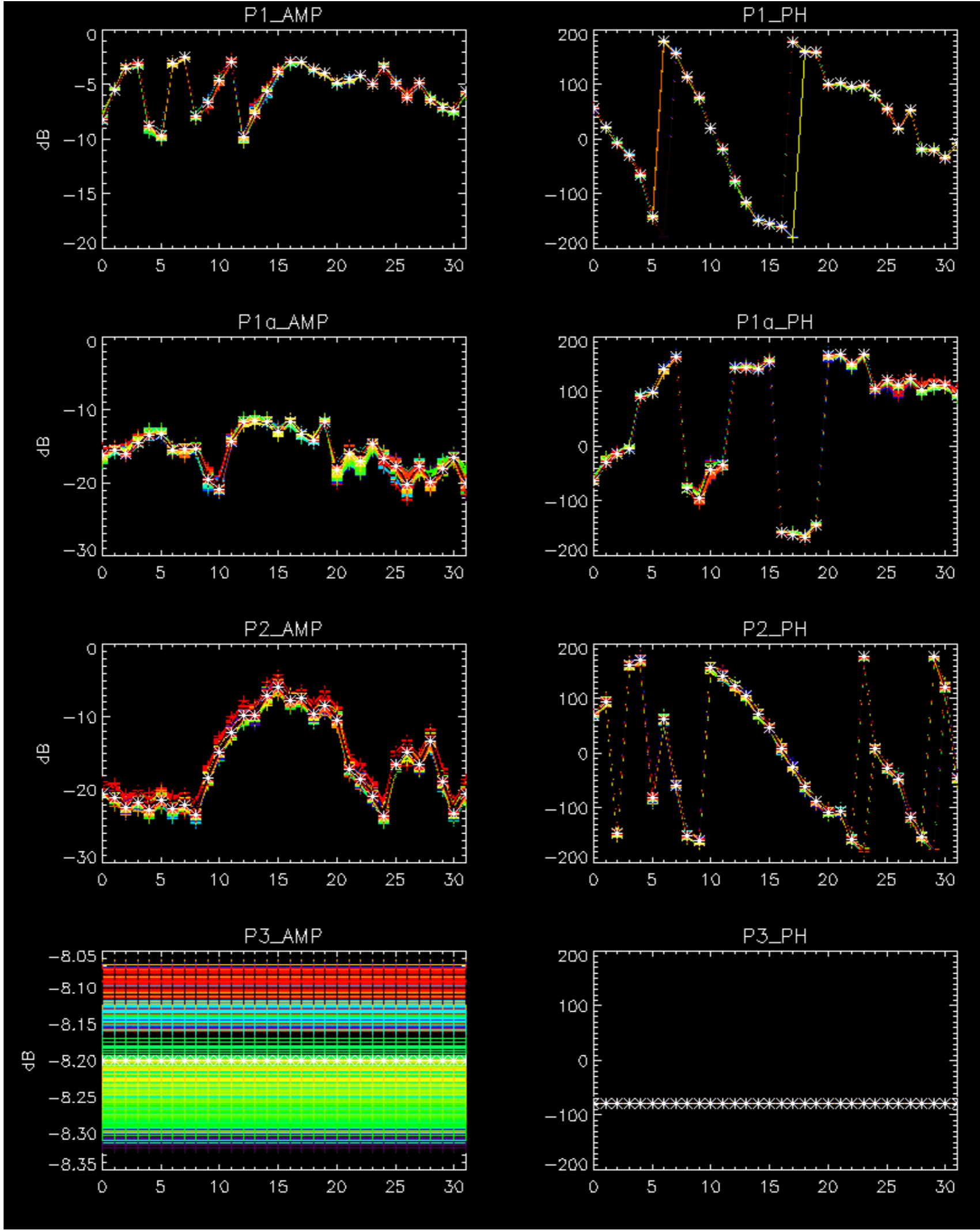


No anomalies observed on available browse products

No anomalies observed.



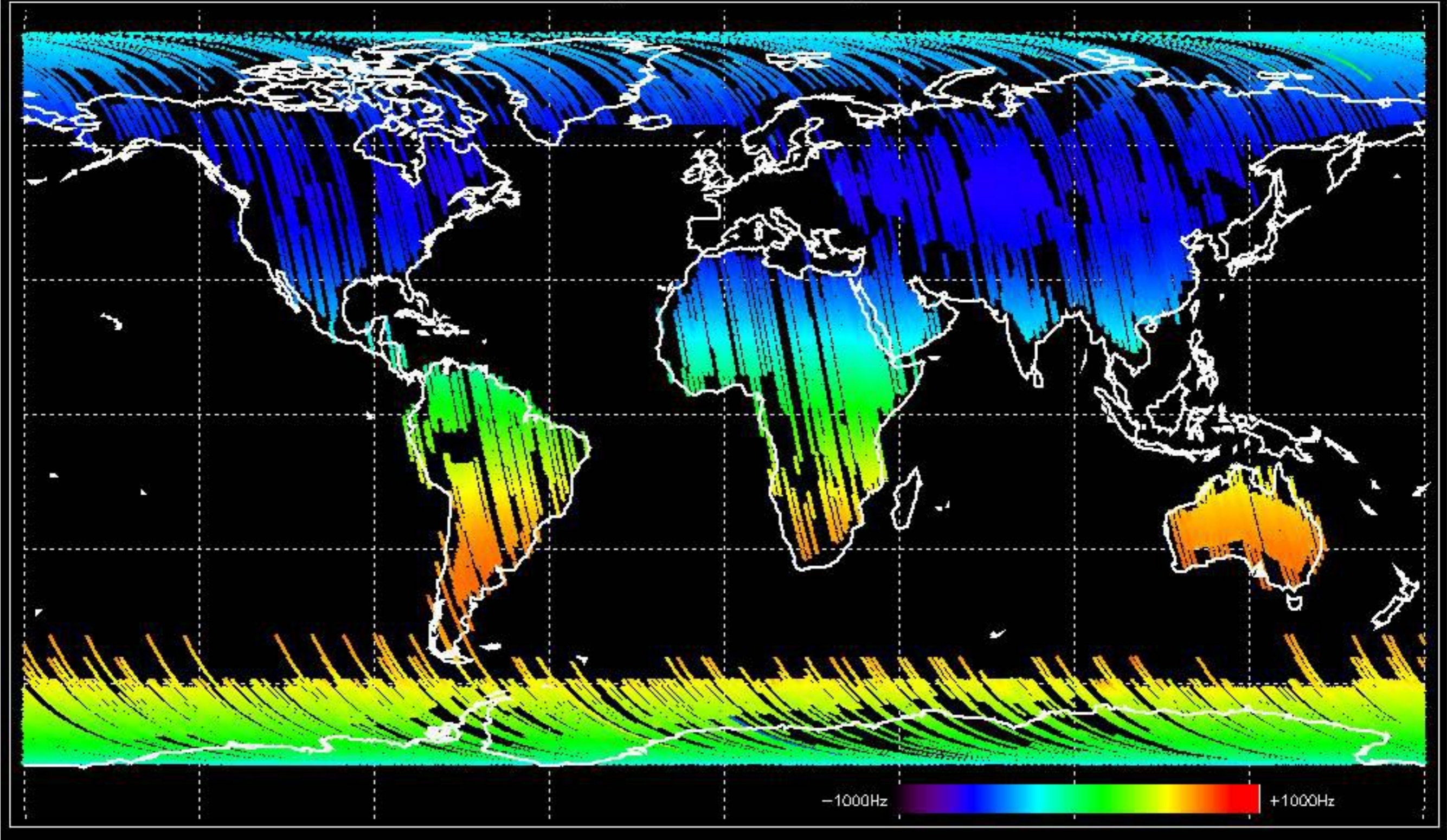




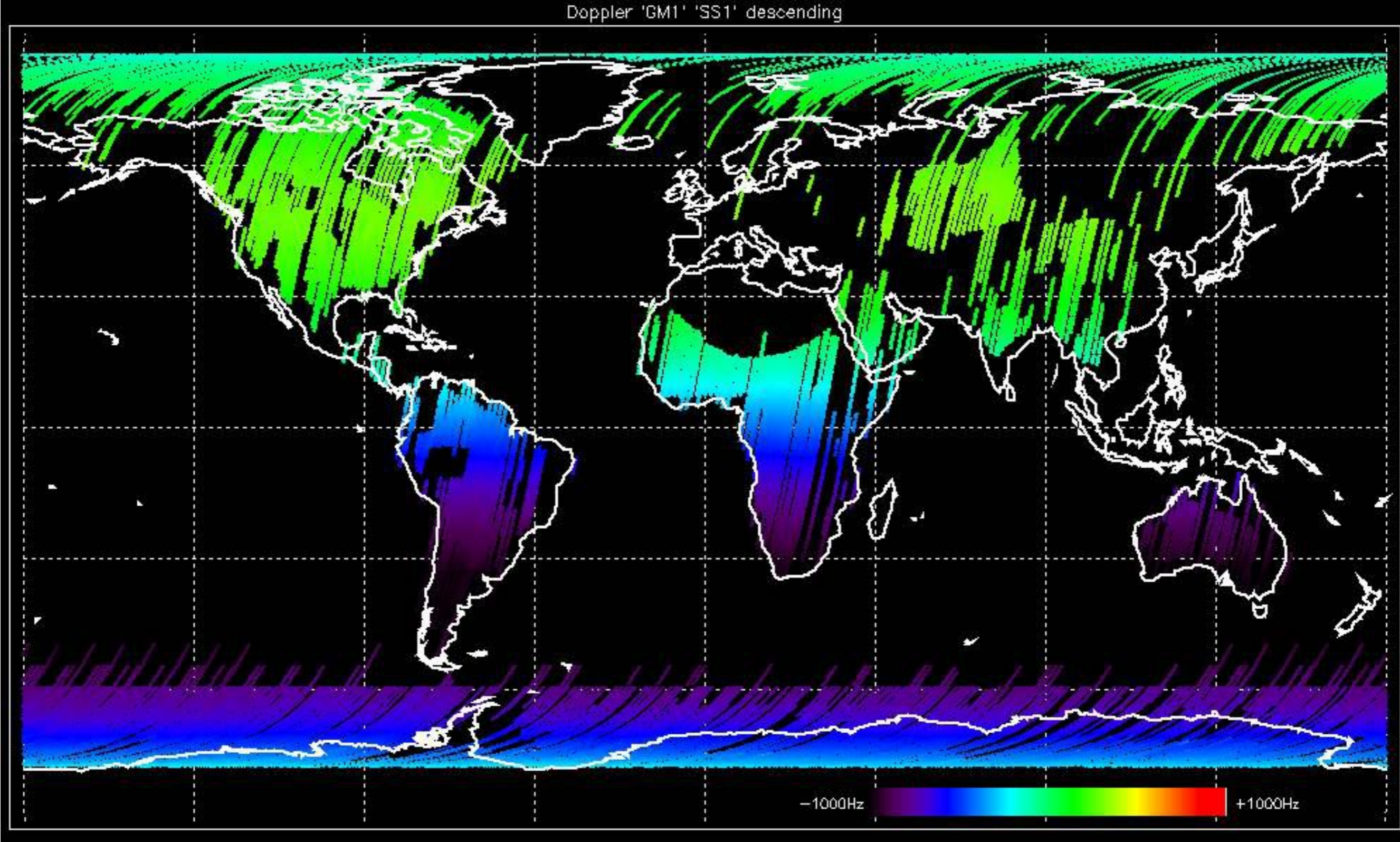
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



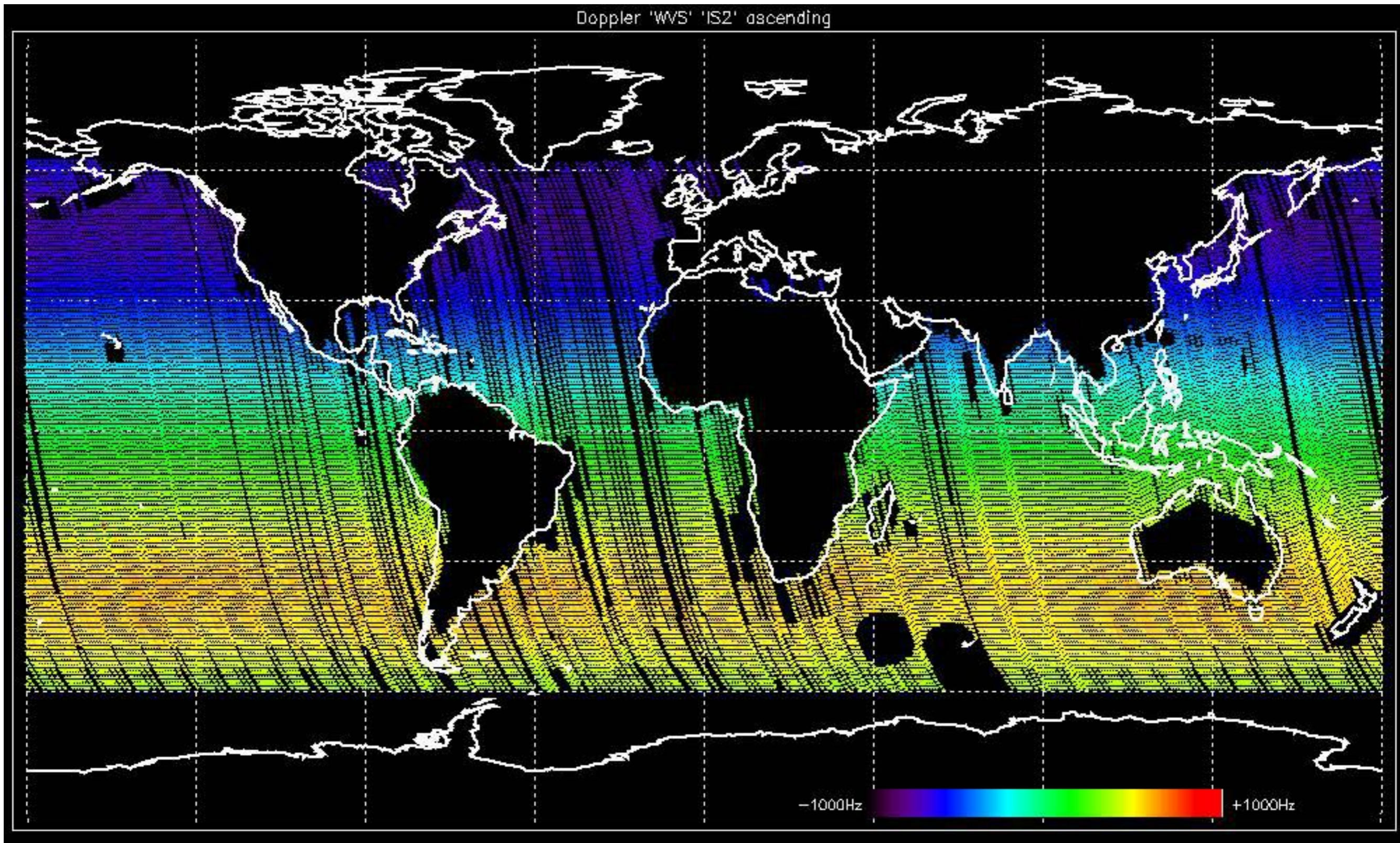
Doppler 'GM1' 'SS1' ascending



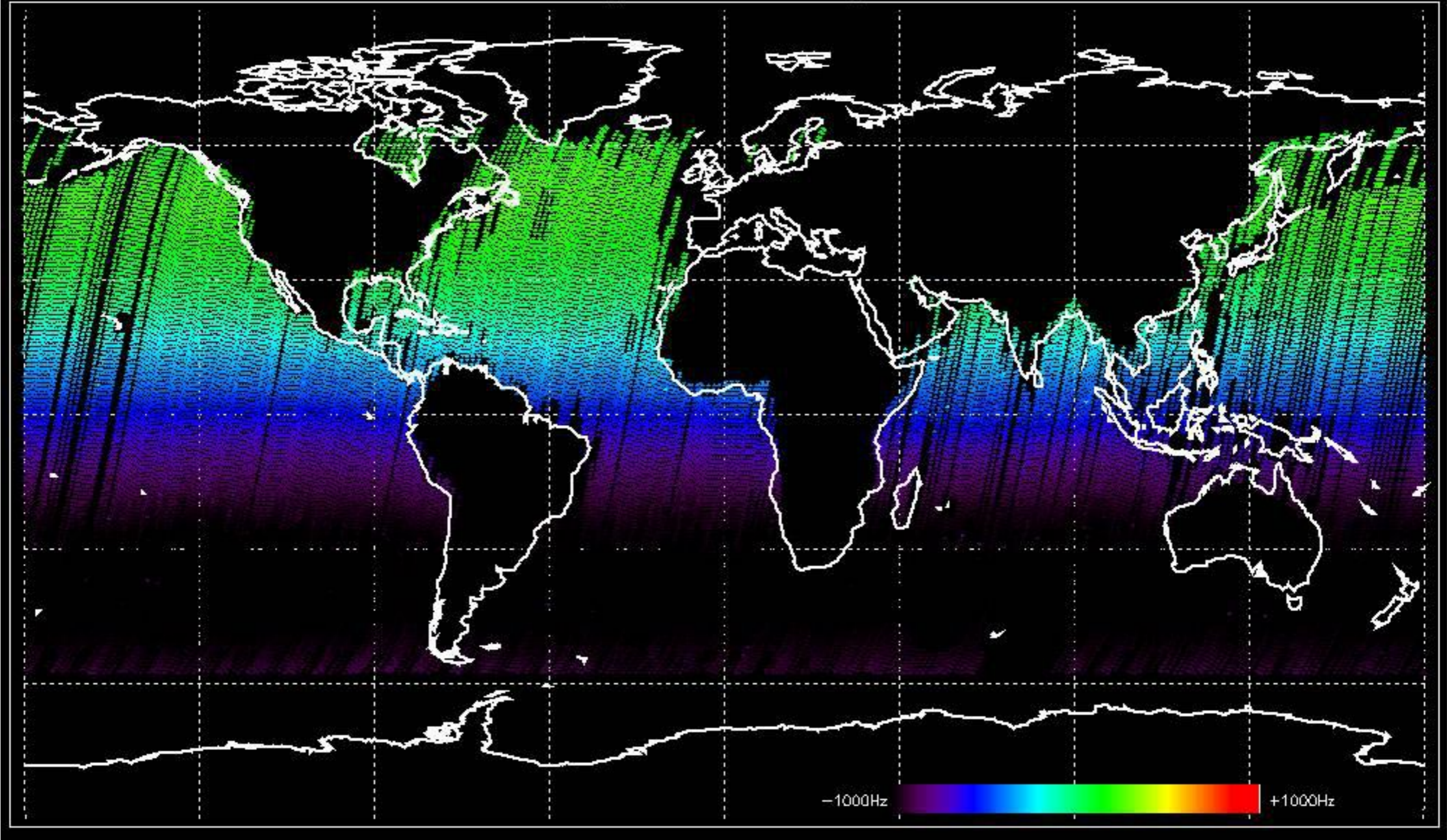
Doppler 'GM1' 'SS1' descending



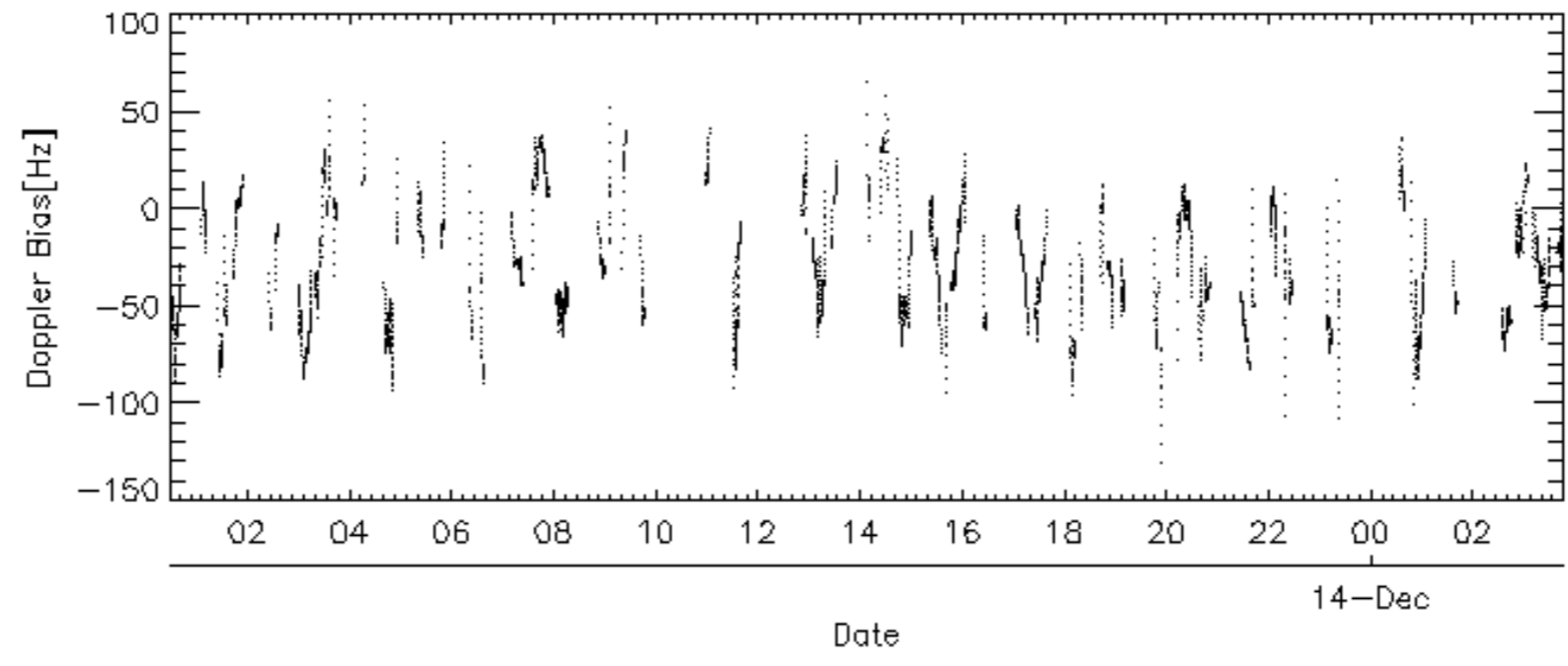
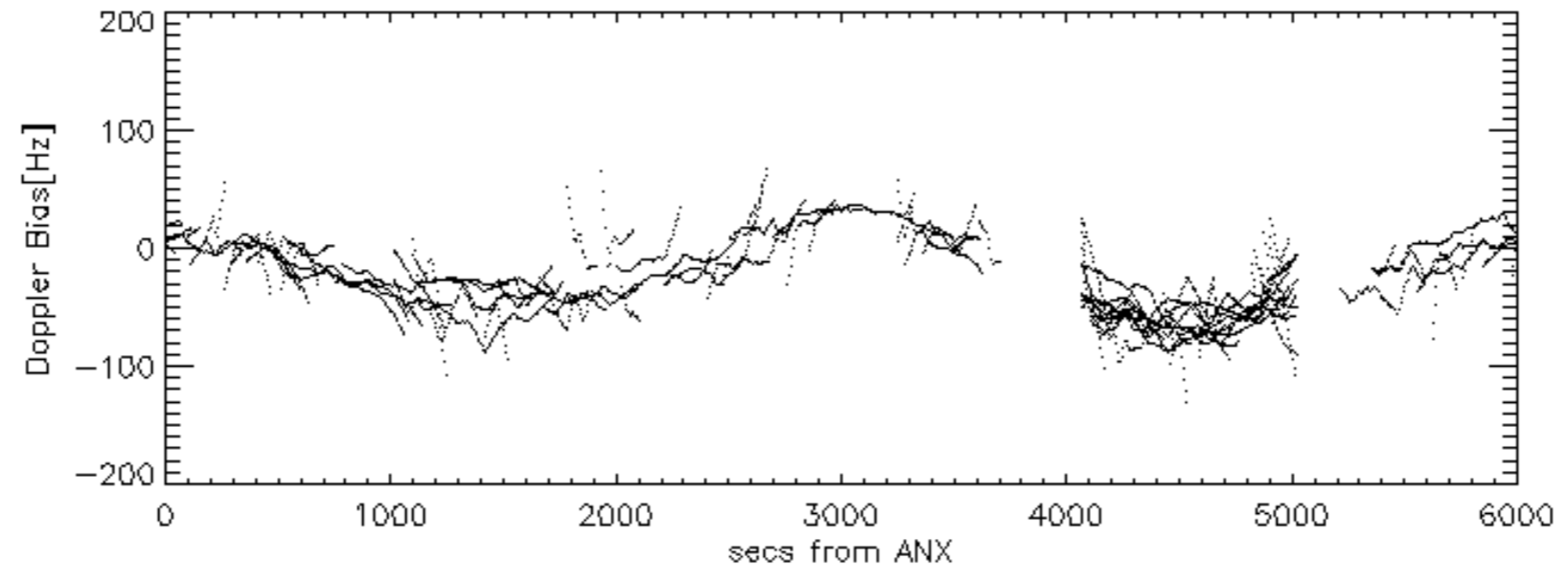
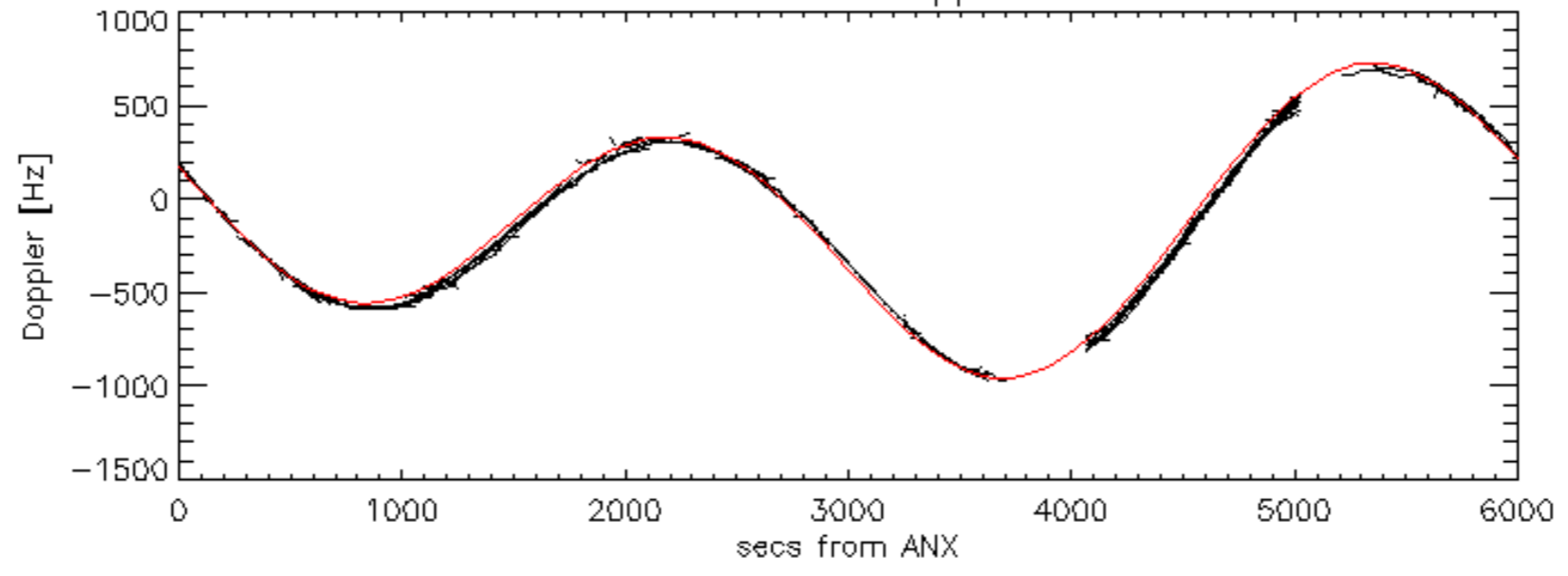
Doppler 'WVS' 'IS2' ascending



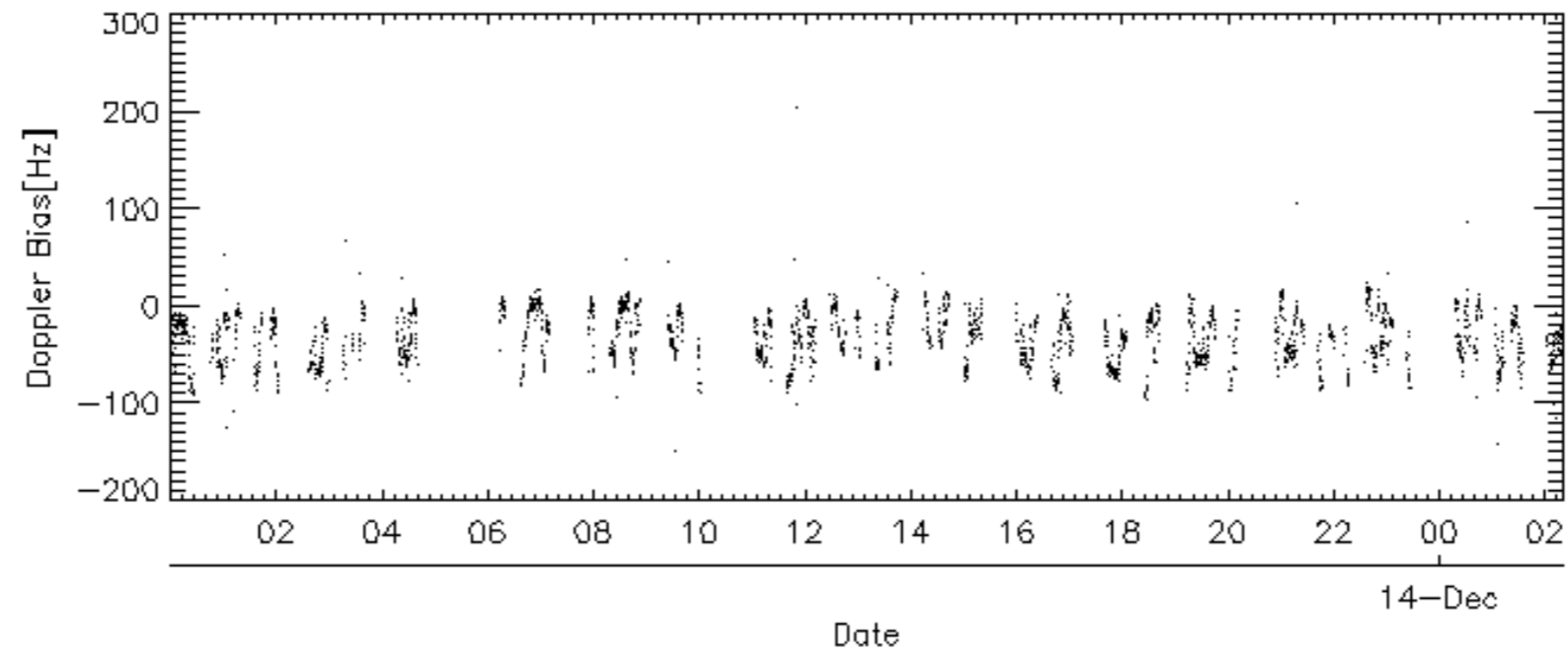
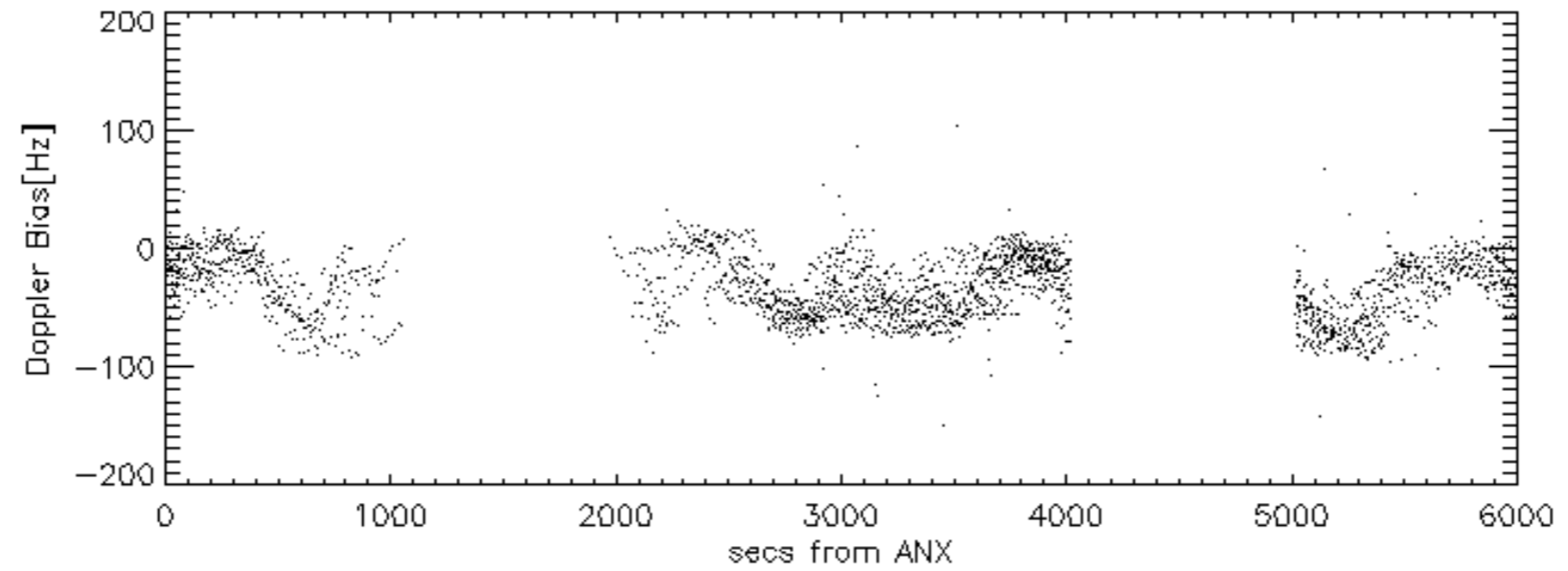
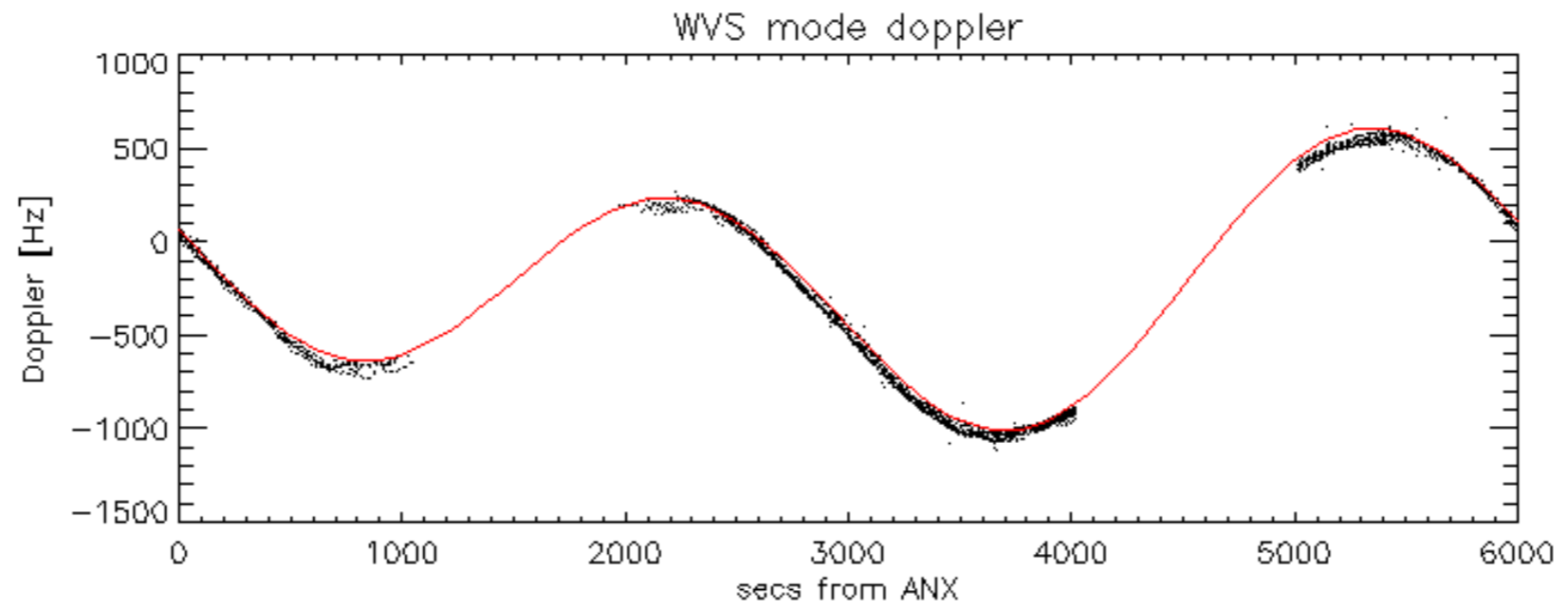
Doppler 'WVS' 'IS2' descending



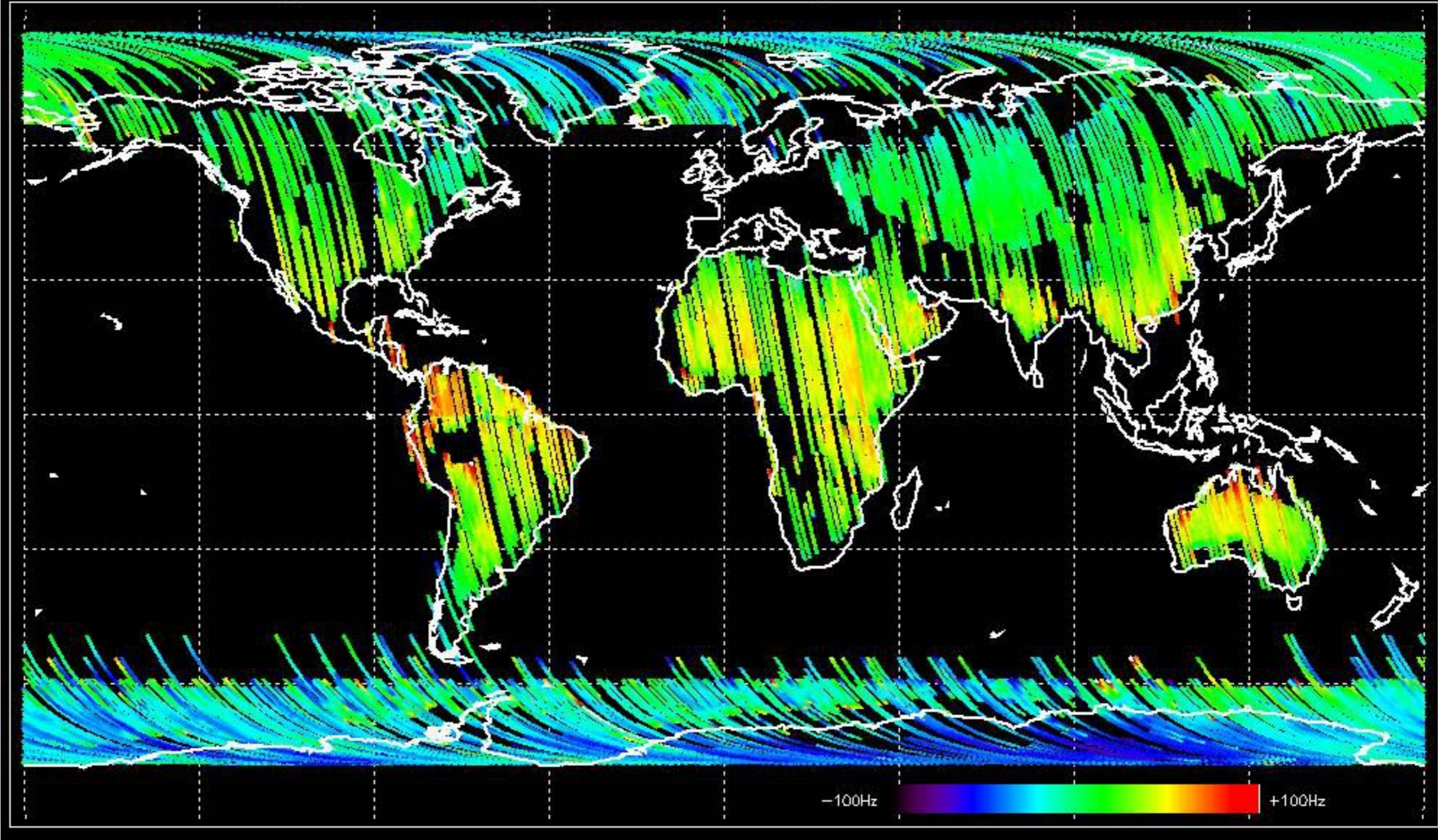
GM1 mode doppler



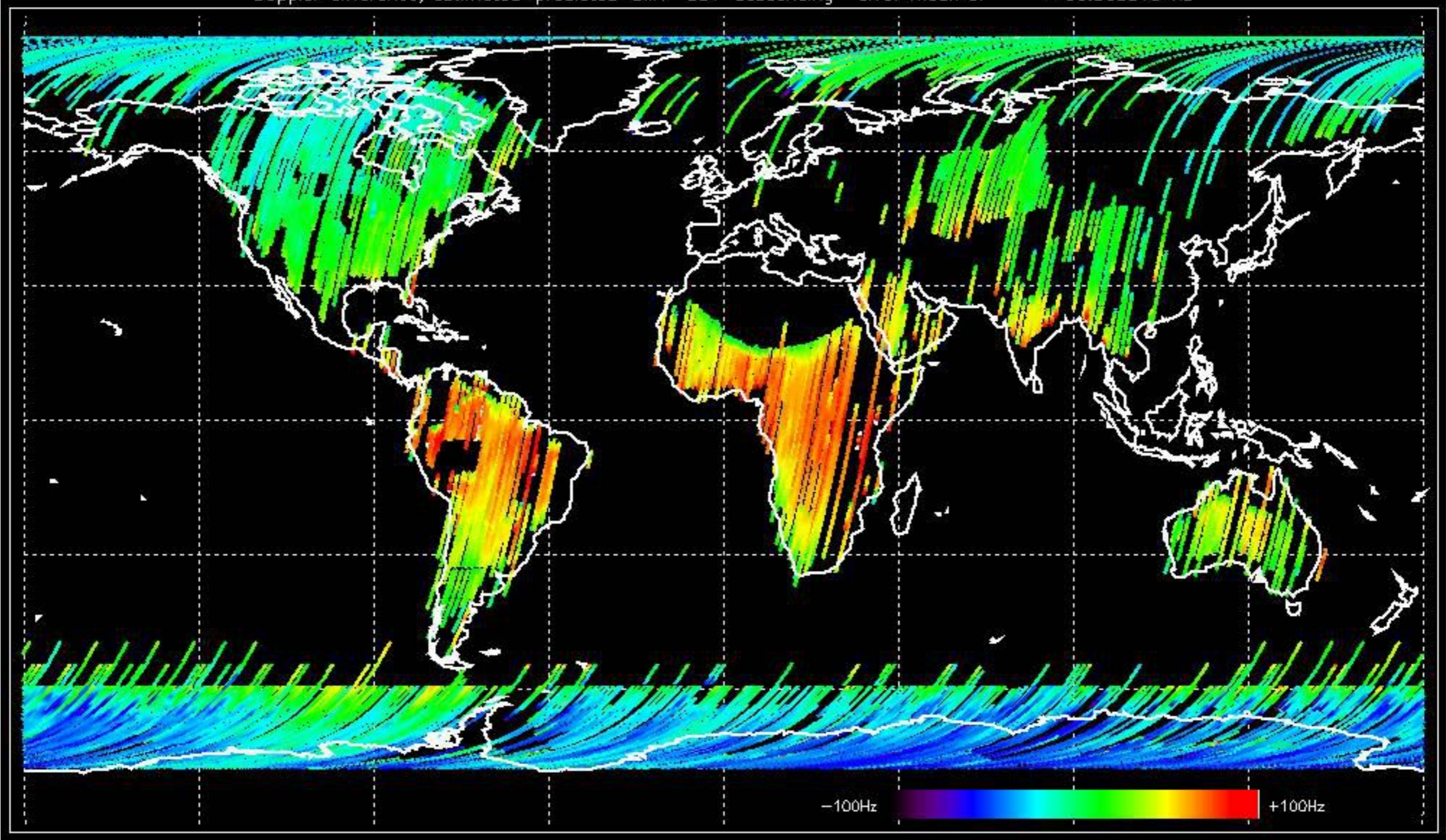




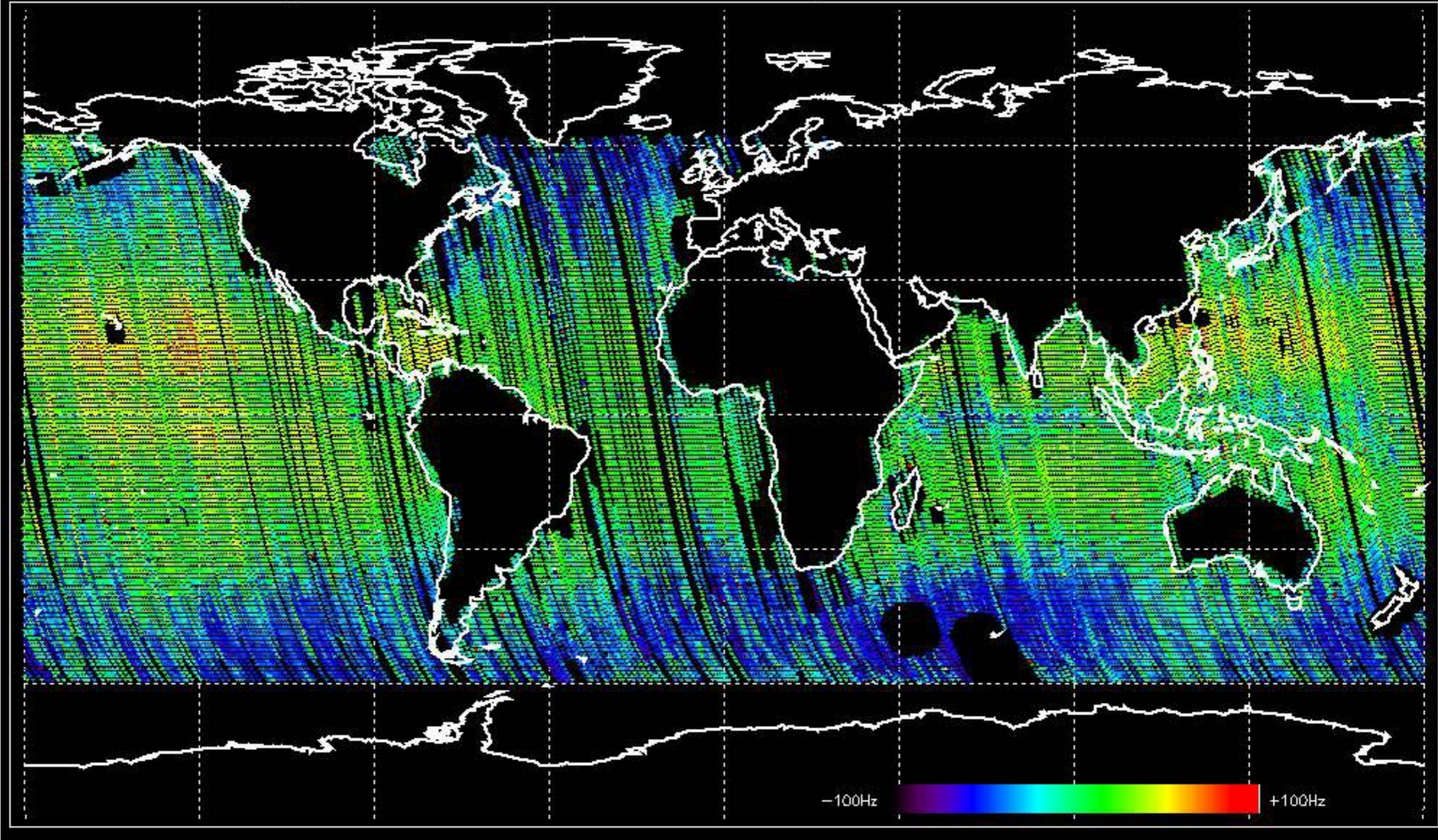
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -37.821823 Hz



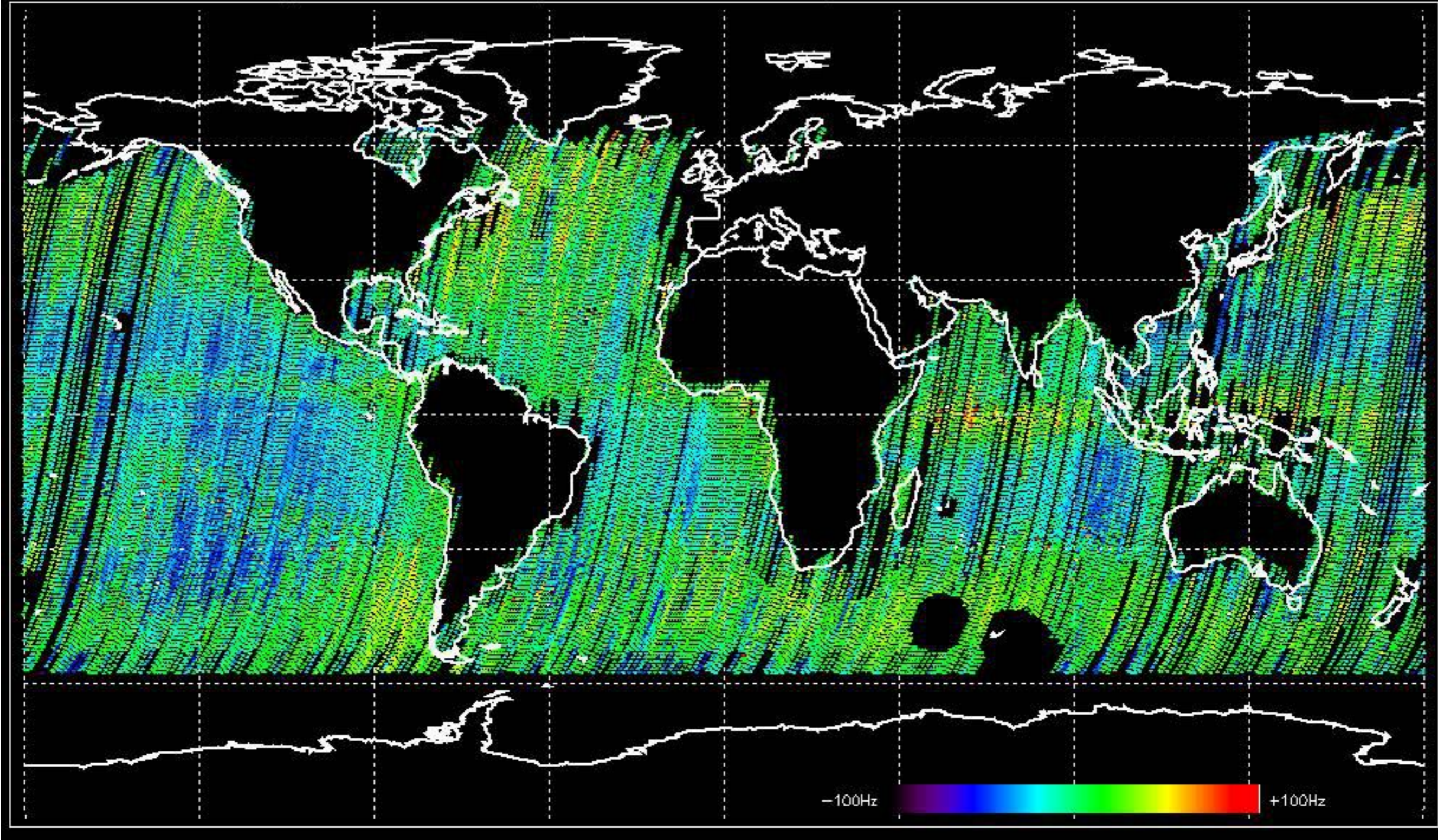
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -33.363815 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -31.240440 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -34.268867 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.









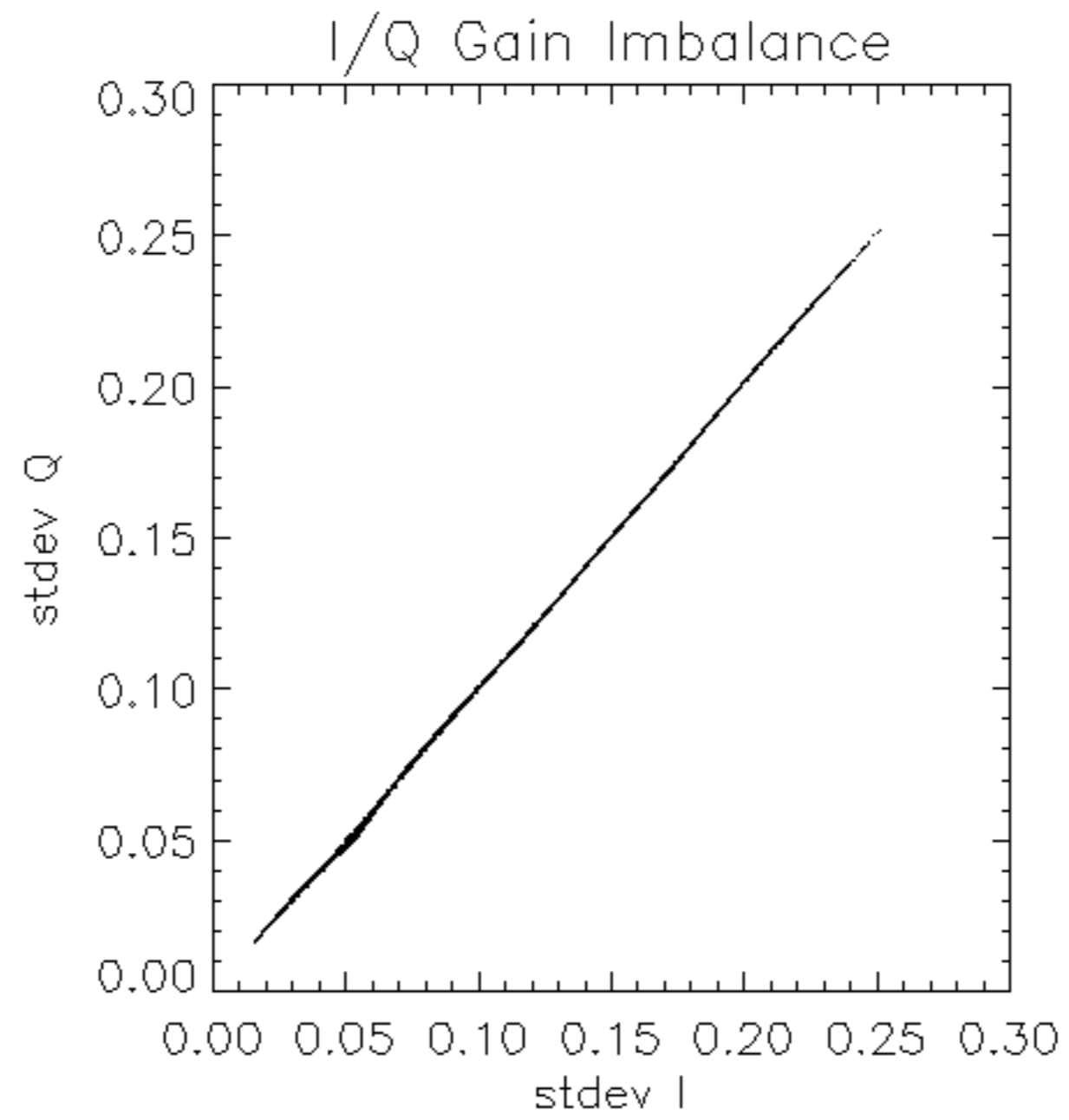




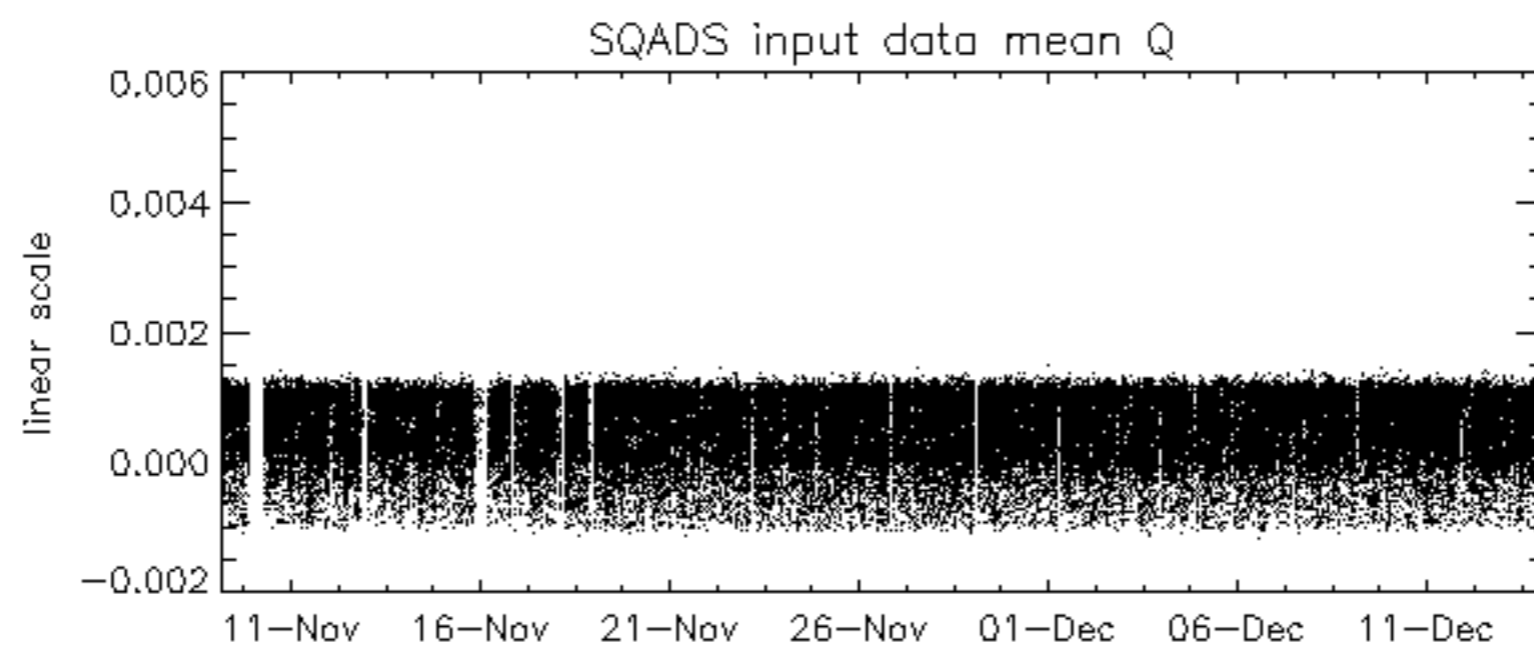
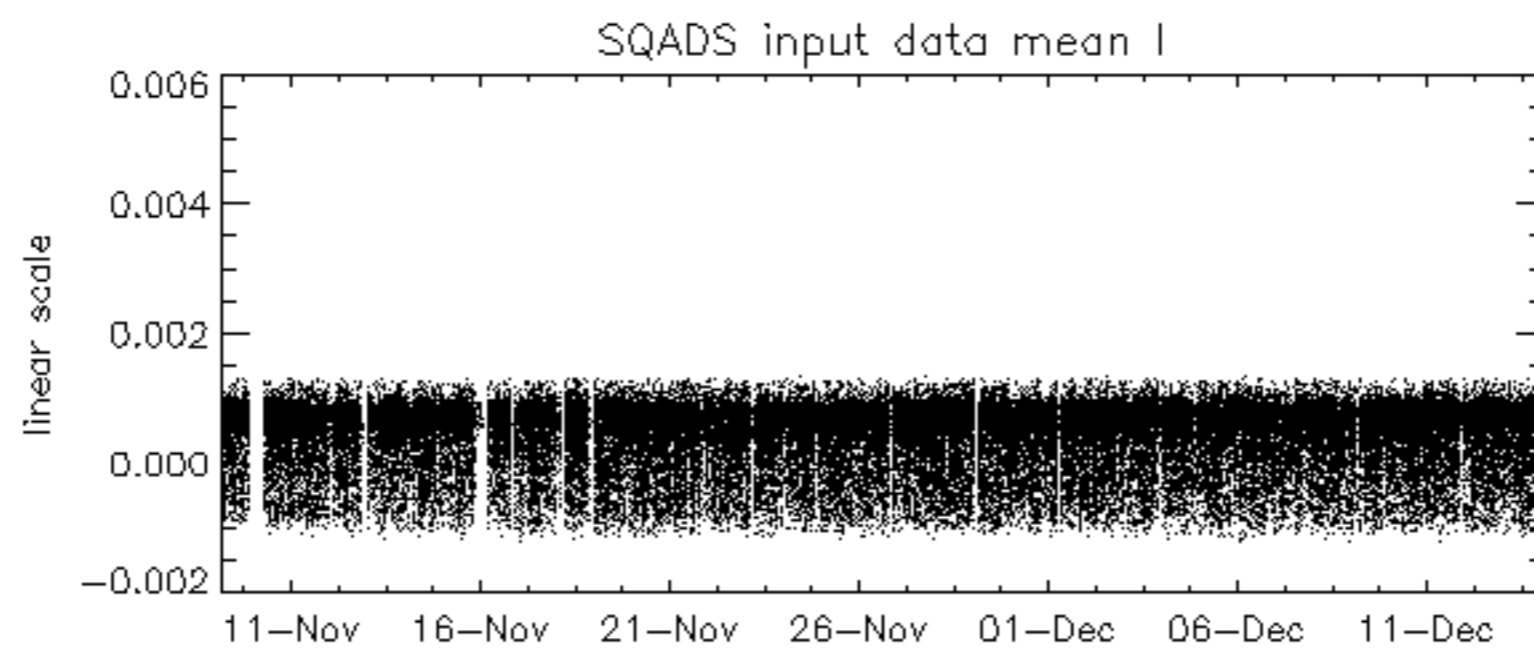
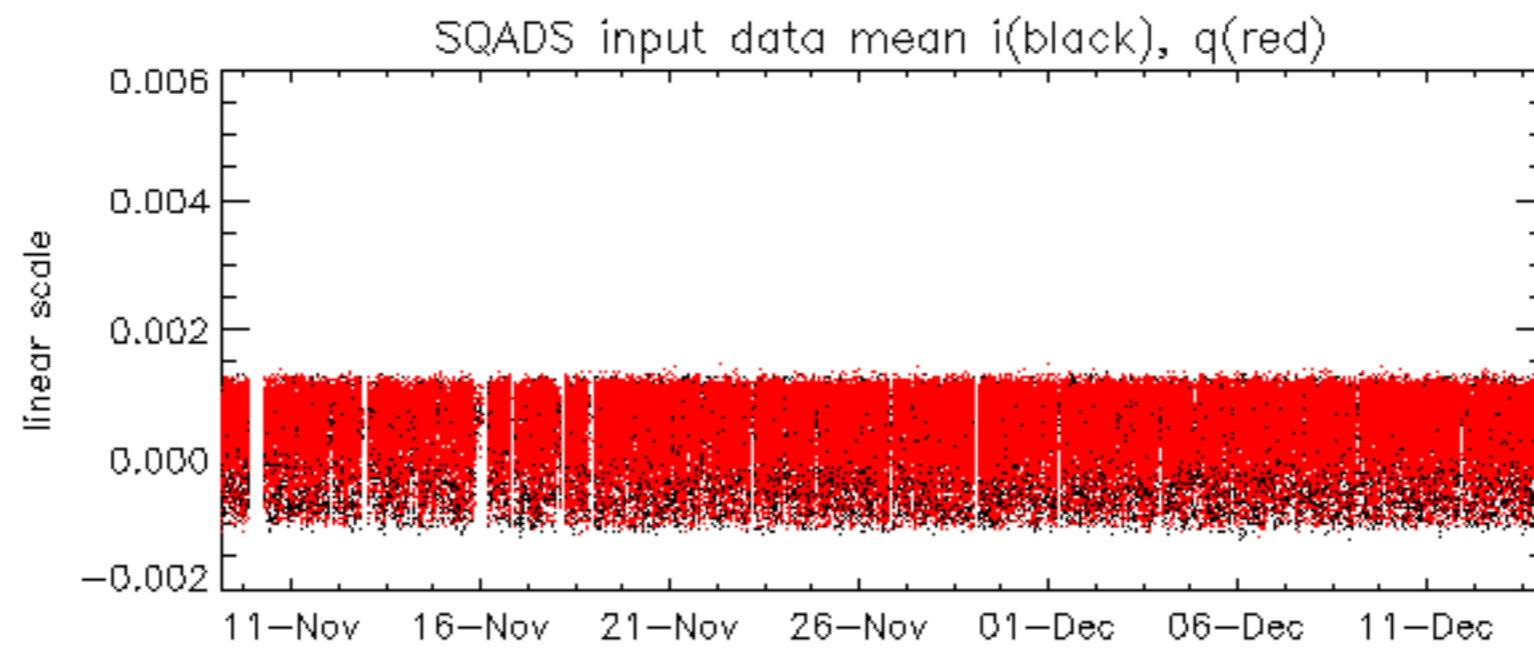


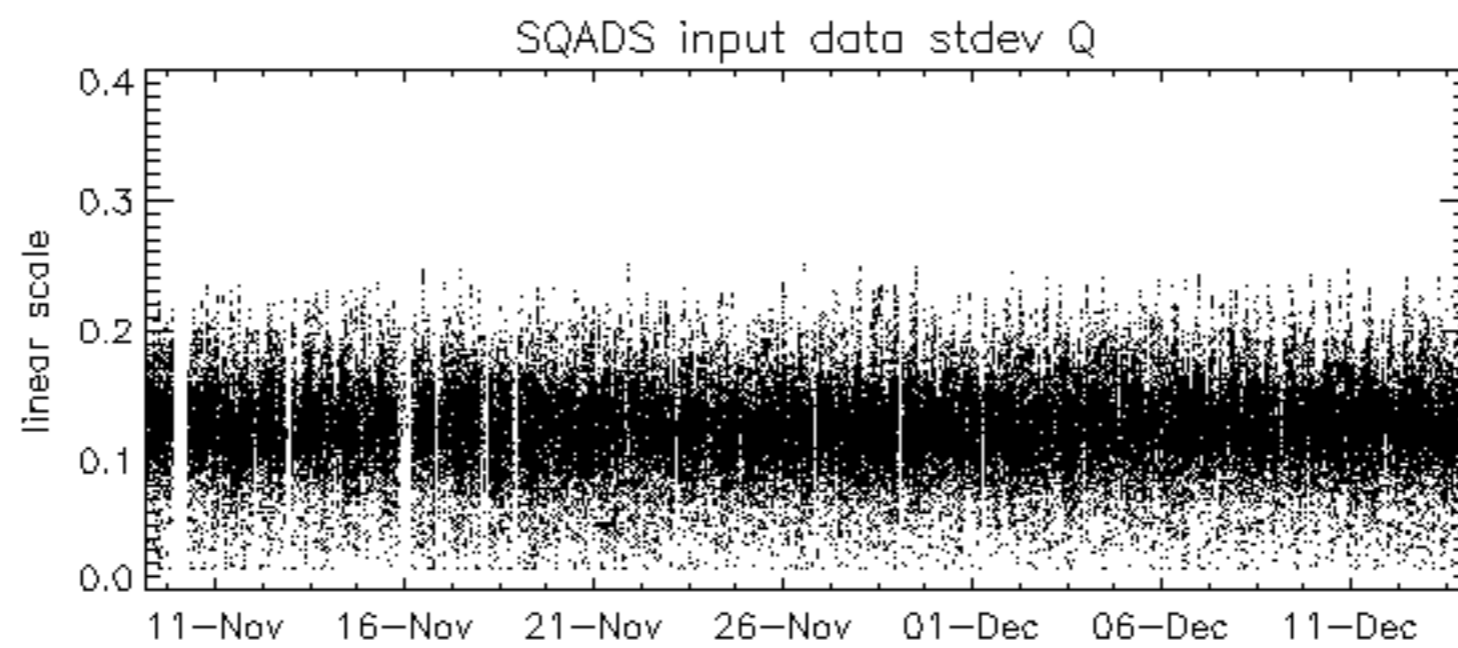
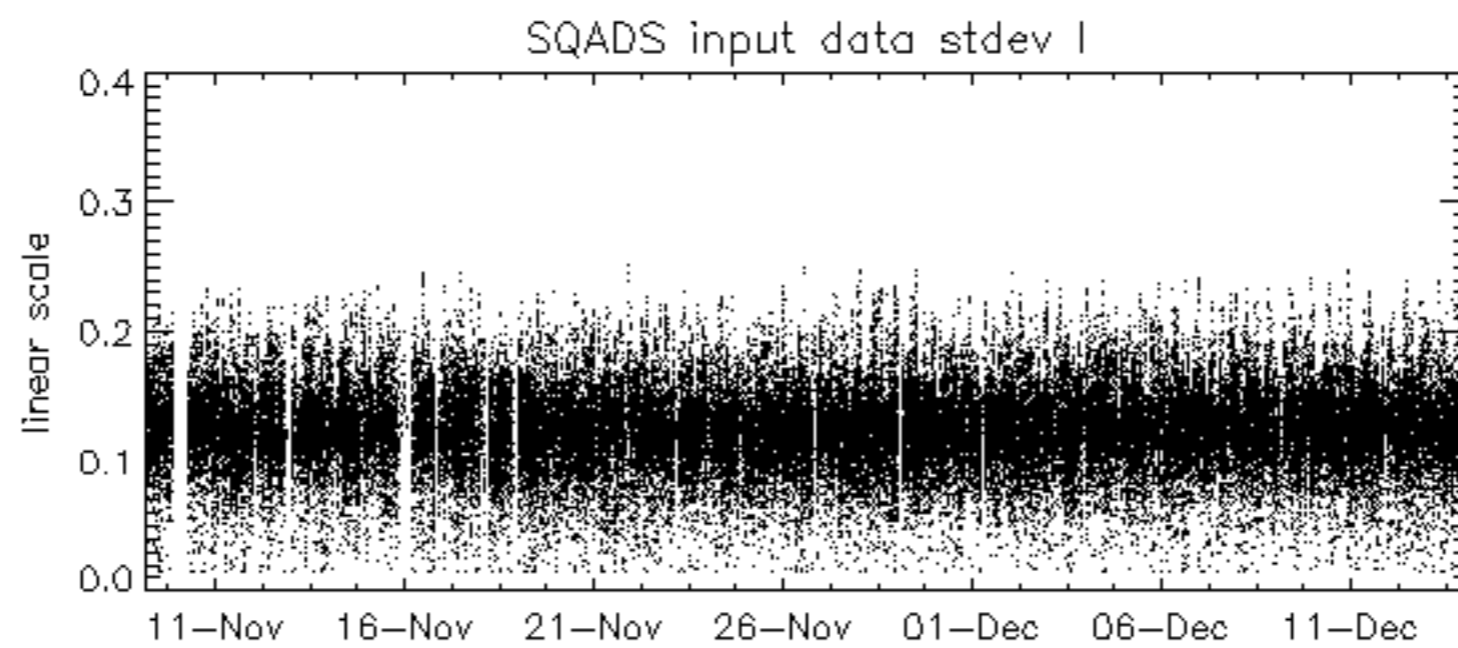
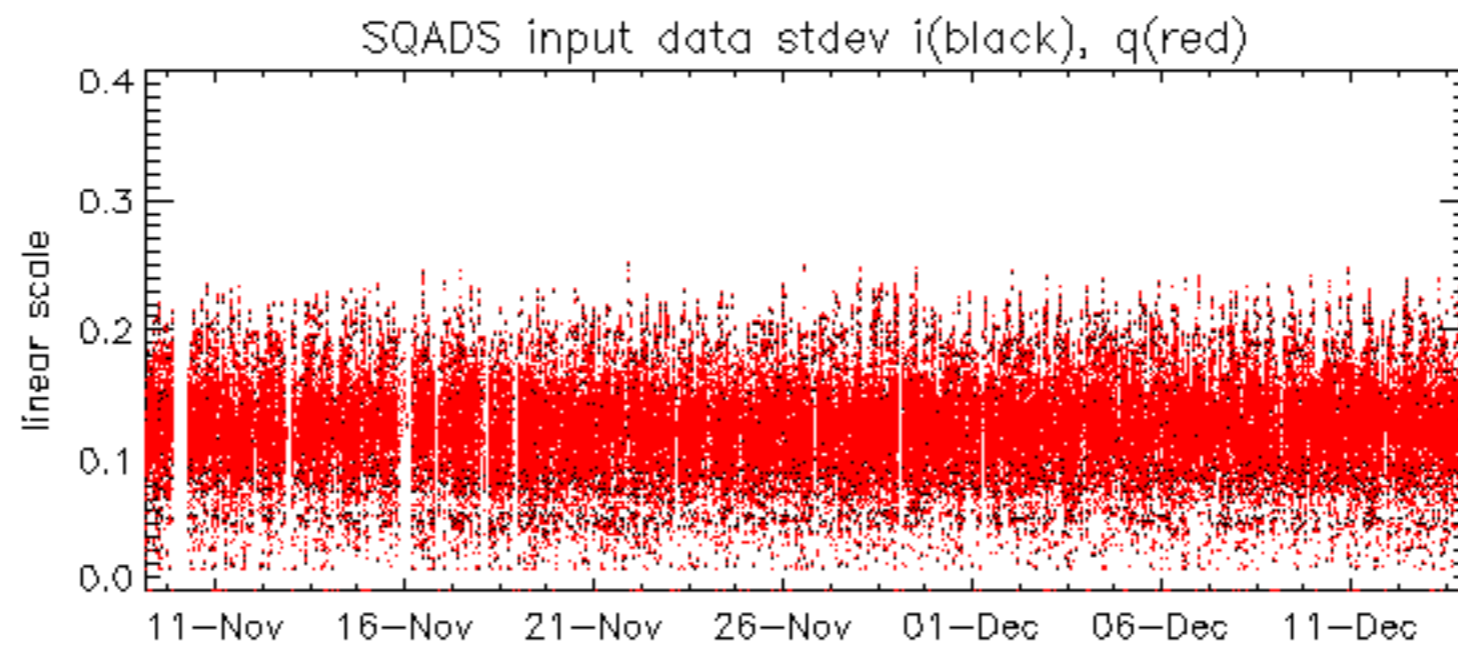
















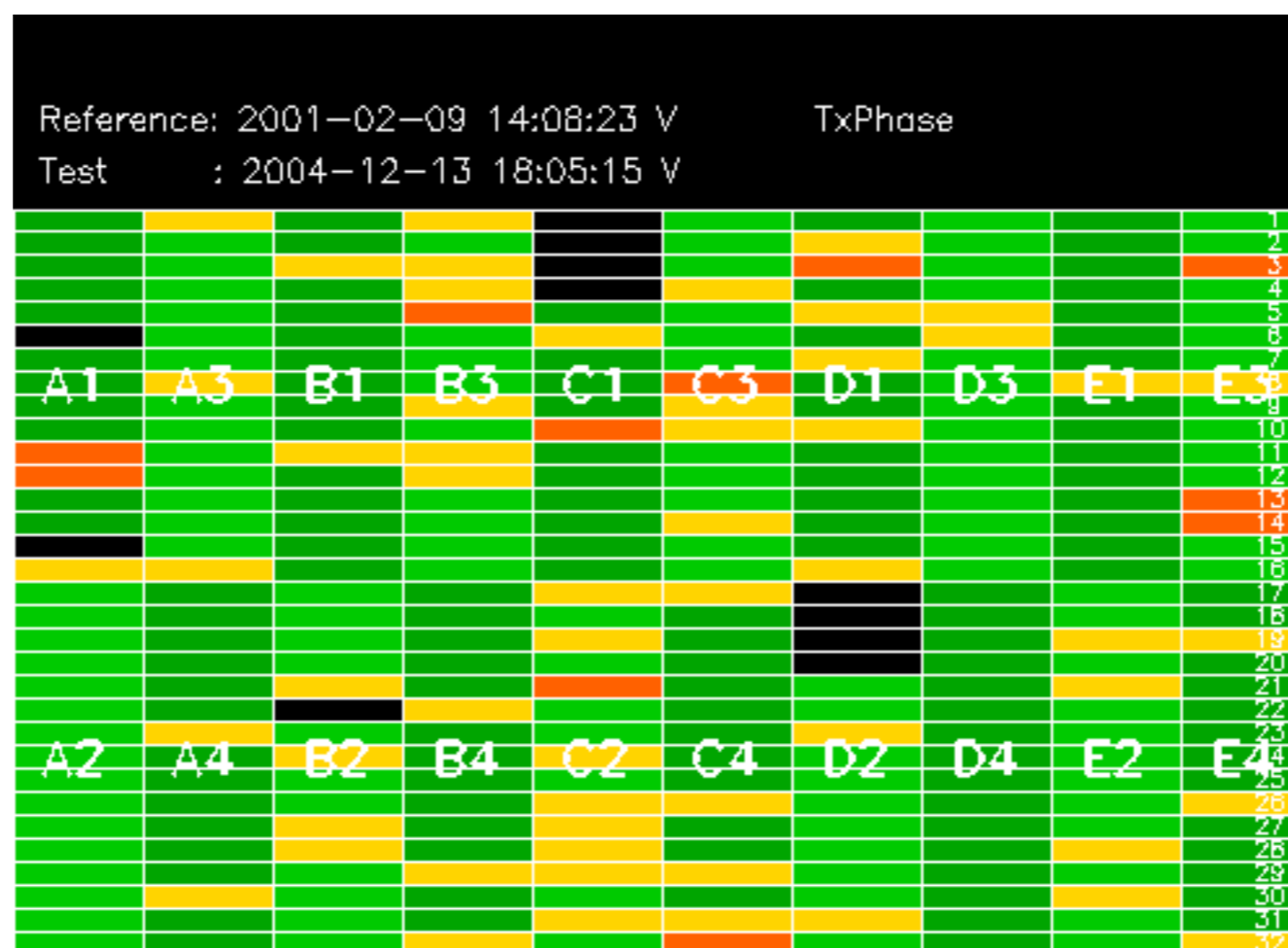




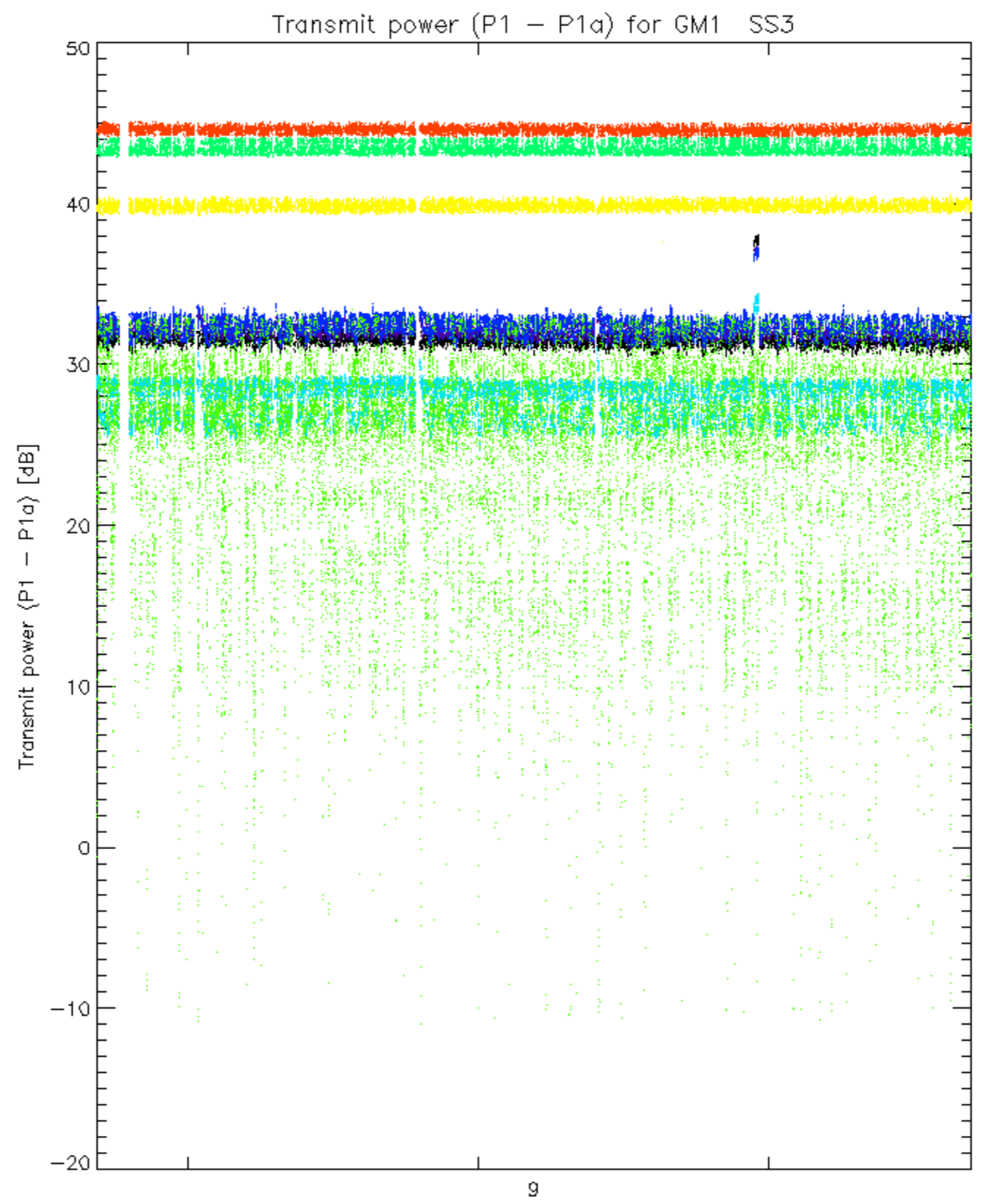




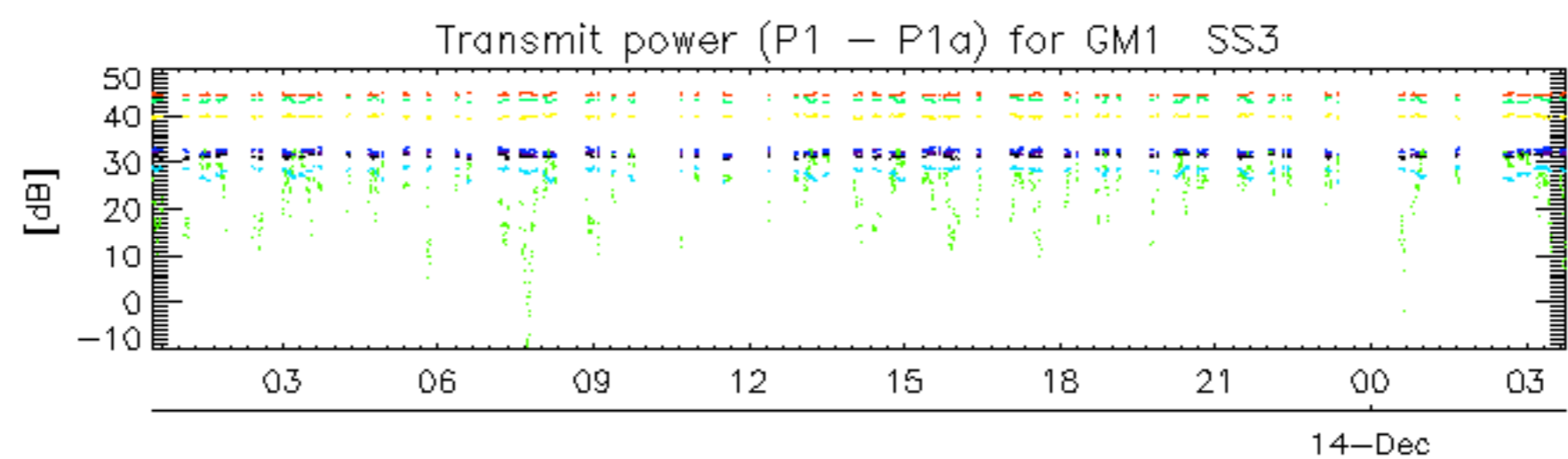




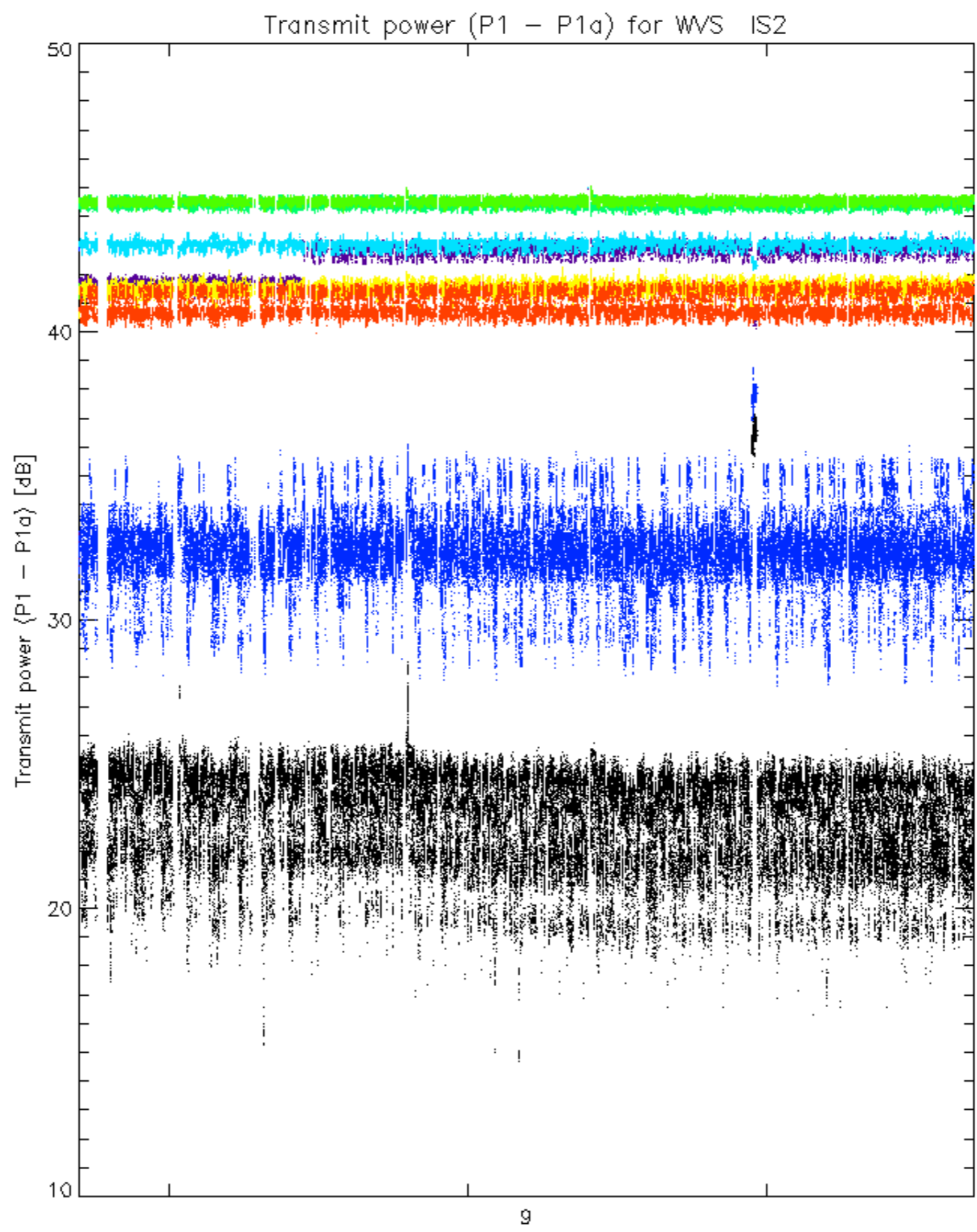




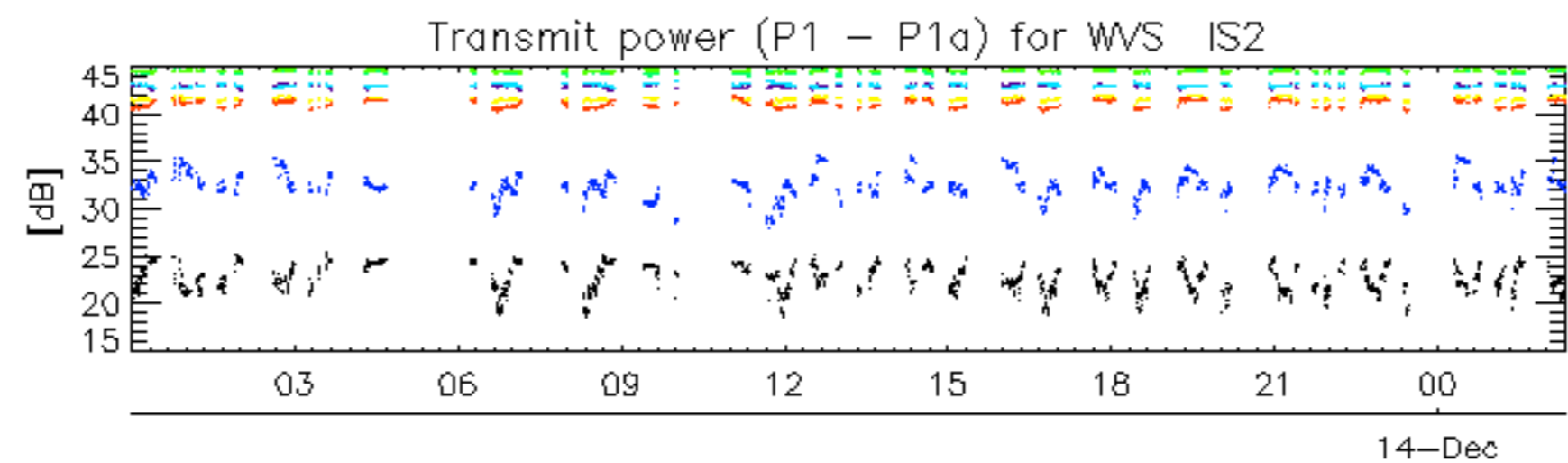
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No unavailabilities during the reported period.