

# PRELIMINARY REPORT OF 061201

last update on Fri Dec 1 16:48:02 GMT 2006

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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 2006-11-30 00:00:00 to 2006-12-01 16:48:02

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	26	39	0	2	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	26	39	0	2	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	26	39	0	2	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	26	39	0	2	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	28	39	23	8	62
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	28	39	23	8	62
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	28	39	23	8	62
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	28	39	23	8	62

### 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	20061201 033423
H	20061128 050914

### 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
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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	-3.959021	0.008401	-0.016217
7	P1	-3.152209	0.023597	0.008395
11	P1	-4.129730	0.024989	0.015655
15	P1	-6.298915	0.014605	-0.034094
19	P1	-3.612268	0.006328	-0.051332
22	P1	-4.646542	0.012824	-0.017553
26	P1	-3.948991	0.010643	0.008772
30	P1	-5.865986	0.009522	-0.042586
3	P1	-16.515617	0.234646	-0.084424
7	P1	-17.283066	0.175839	-0.004657
11	P1	-17.179201	0.458509	-0.144435
15	P1	-13.067383	0.135357	0.011899
19	P1	-14.913886	0.090226	-0.162194
22	P1	-15.851723	0.515469	0.163084
26	P1	-15.051674	0.197737	0.070922
30	P1	-17.478148	0.475104	-0.027374

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.839113	0.091294	0.051839
7	P2	-21.730686	0.093781	0.003382
11	P2	-15.646675	0.102387	0.055835
15	P2	-7.122008	0.106343	0.014378
19	P2	-9.190078	0.104558	0.019866
22	P2	-18.233616	0.096675	-0.008209
26	P2	-16.553040	0.111232	-0.031430
30	P2	-19.473055	0.088034	0.017423

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.240470	0.008564	-0.015185
7	P3	-8.240470	0.008564	-0.015185
11	P3	-8.240470	0.008564	-0.015185
15	P3	-8.240470	0.008564	-0.015185
19	P3	-8.240470	0.008564	-0.015185
22	P3	-8.240470	0.008564	-0.015185
26	P3	-8.240433	0.008580	-0.015417
30	P3	-8.240433	0.008580	-0.015417

**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	-3.908546	0.027524	0.000055
7	P1	-2.503815	0.129746	0.059403
11	P1	-2.855976	0.027497	0.037308
15	P1	-3.682506	0.041338	0.009046
19	P1	-3.524119	0.017195	-0.023866
22	P1	-5.037073	0.021952	0.050545
26	P1	-6.000120	0.026170	-0.039552
30	P1	-5.319427	0.036881	-0.035131
3	P1	-11.721624	0.087284	-0.032676
7	P1	-10.047700	0.207415	0.014992
11	P1	-10.321078	0.122855	0.008774
15	P1	-10.741065	0.164942	0.111873
19	P1	-15.693541	0.108208	-0.077341
22	P1	-21.462662	1.451422	-0.360752

26	P1	-16.062145	0.321858	0.011892
30	P1	-17.893908	0.390939	0.092262

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.461365	0.103330	0.005581
7	P2	-22.227842	0.286191	-0.008085
11	P2	-10.937800	0.117693	0.033785
15	P2	-4.969469	0.189839	-0.029518
19	P2	-6.952387	0.224150	0.001782
22	P2	-8.256595	0.168842	0.015576
26	P2	-24.327959	0.181184	0.014014
30	P2	-21.951344	0.139919	0.039352

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.087568	0.003408	-0.015392
7	P3	-8.087633	0.003392	-0.015318
11	P3	-8.087651	0.003404	-0.015407
15	P3	-8.087543	0.003401	-0.015470
19	P3	-8.087587	0.003408	-0.015428
22	P3	-8.087575	0.003403	-0.015410
26	P3	-8.087592	0.003407	-0.015705
30	P3	-8.087620	0.003409	-0.015009

## 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	0.000545512
	stdev	1.78672e-07
MEAN Q	mean	0.000524077
	stdev	2.20337e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136082
	stdev	0.00111296
STDEV Q	mean	0.136440
	stdev	0.00113001



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006113[901]

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_1PNPDK20061130_181455_000003322053_00242_24845_9480.N1	0	24
ASA_WSM_1PNPDE20061130_230852_000000982053_00245_24848_3084.N1	0	53
ASA_WSM_1PNPDE20061130_235456_000000672053_00245_24848_3034.N1	0	36
ASA_WSM_1PNPDE20061130_235456_000001282053_00245_24848_3251.N1	0	36
ASA_WSM_1PNPDE20061130_235456_000003672053_00245_24848_3599.N1	0	36



## 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)

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

### 7.3 - Doppler evolution versus ANX for WVS

#### Evolution Doppler error versus ANX

<input type="checkbox"/>
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#### 7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

#### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

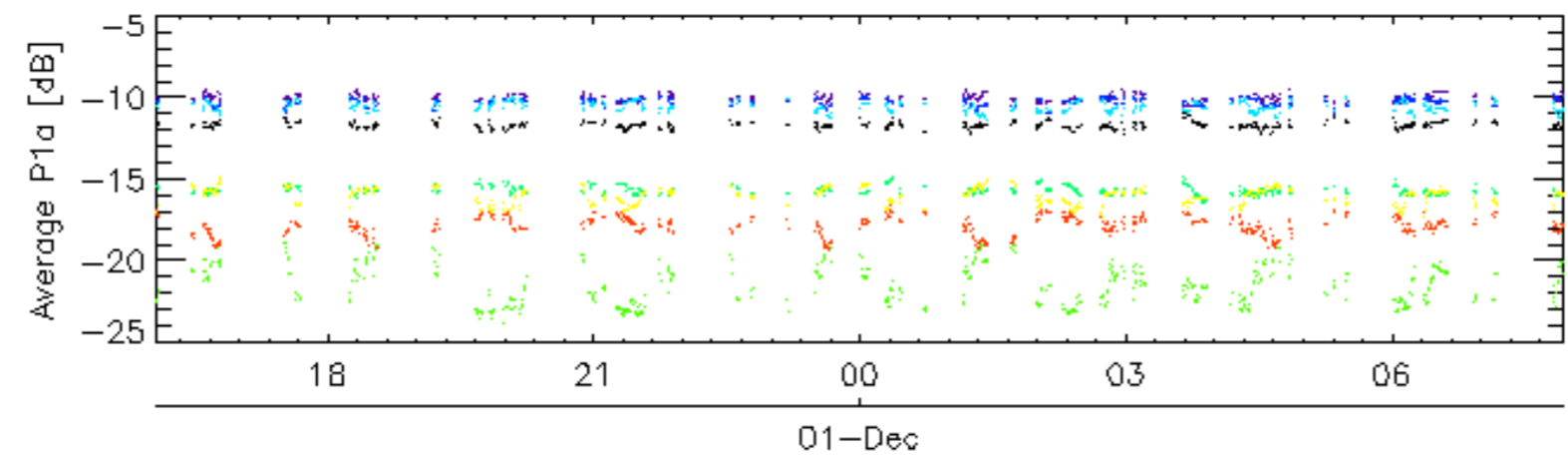
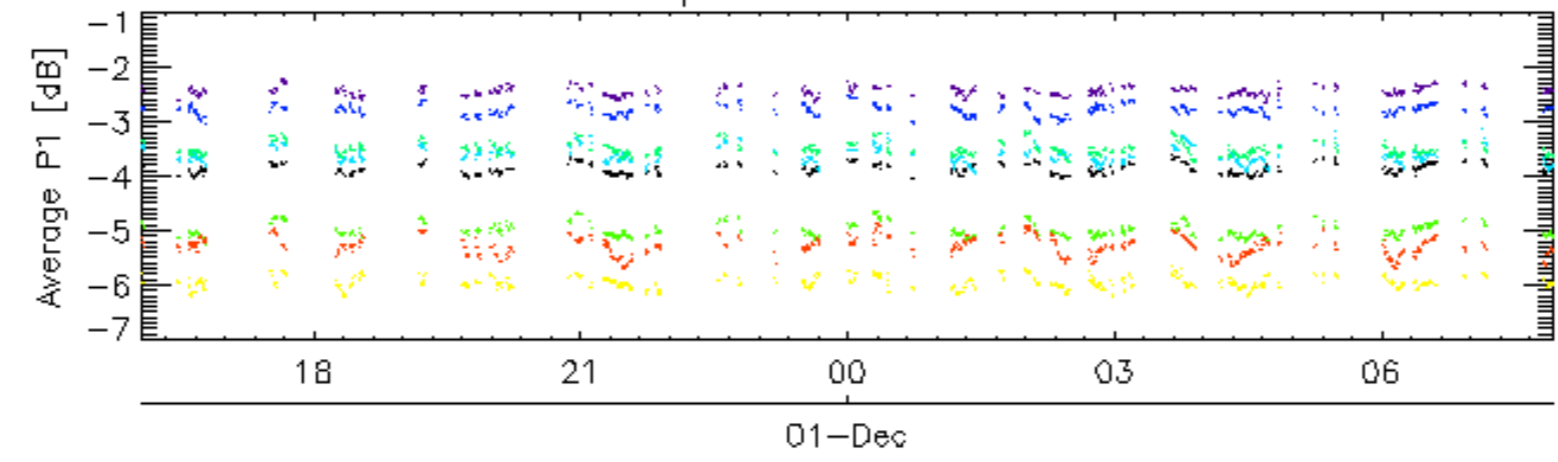
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	Ascending
<input type="checkbox"/>	
	Descending

#### 7.6 - Doppler evolution versus ANX for GM1

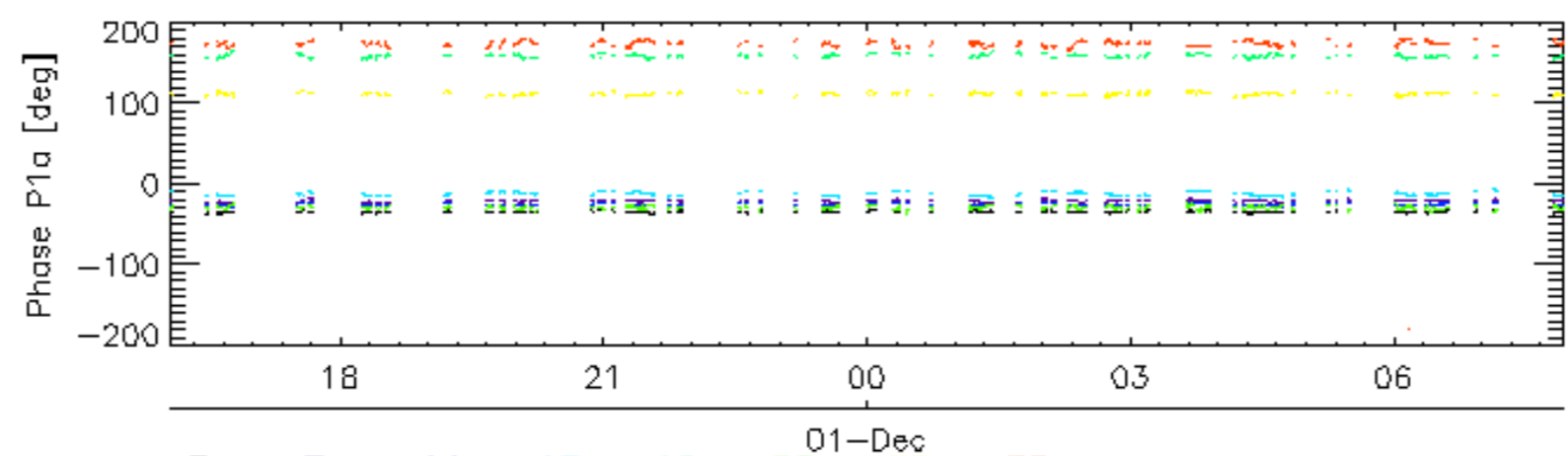
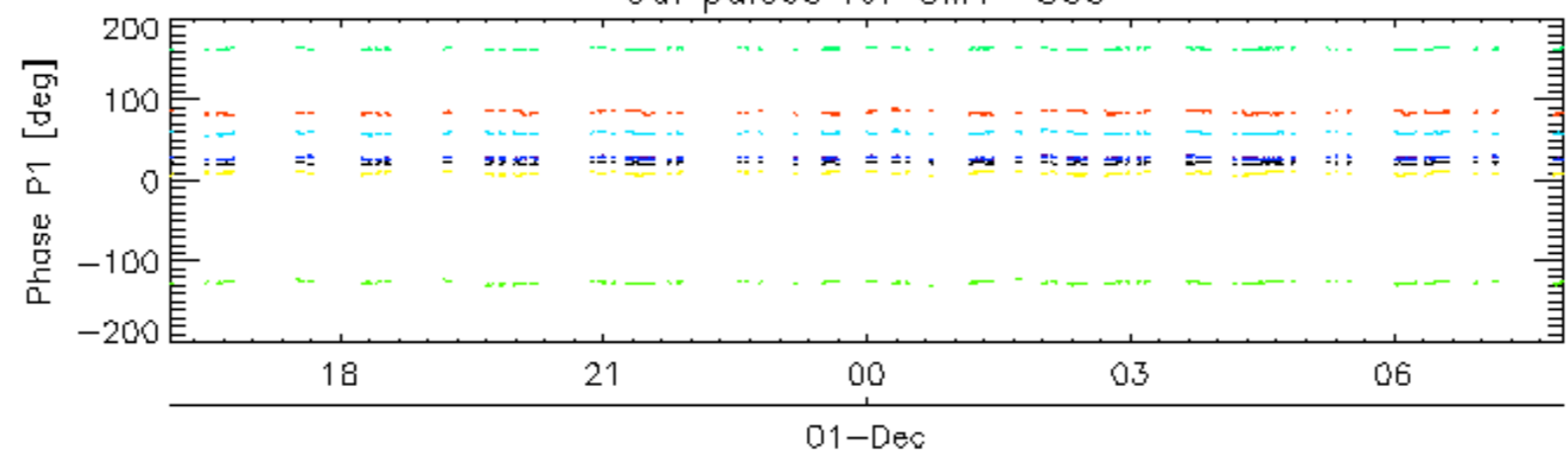
Evolution Doppler error versus ANX

<input type="checkbox"/>	
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Cal pulses for GM1 SS3

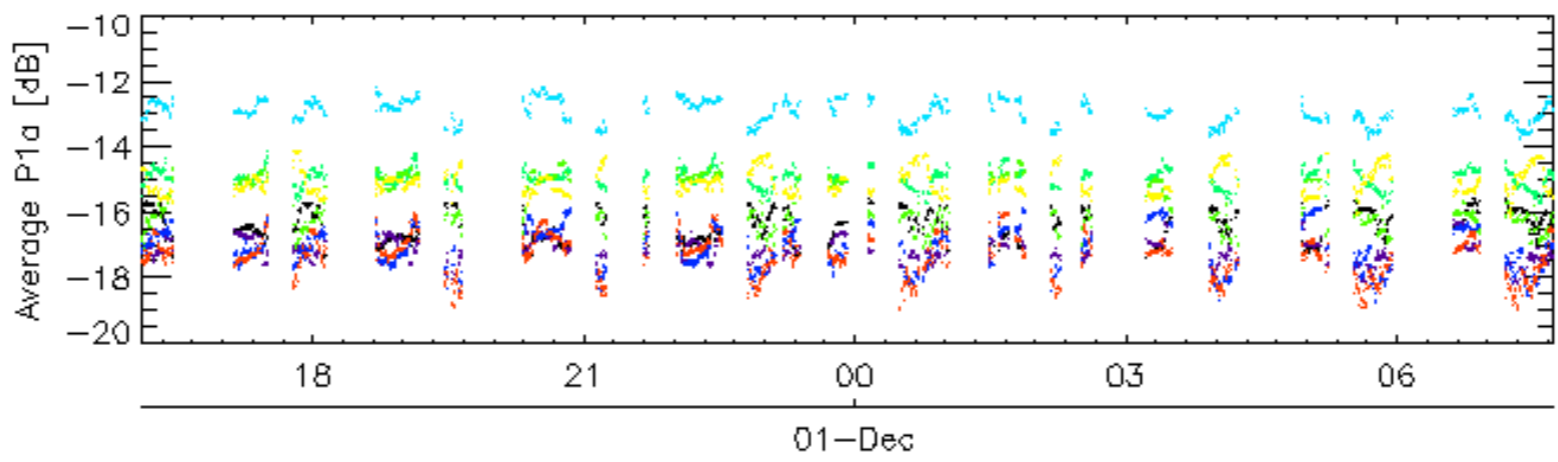
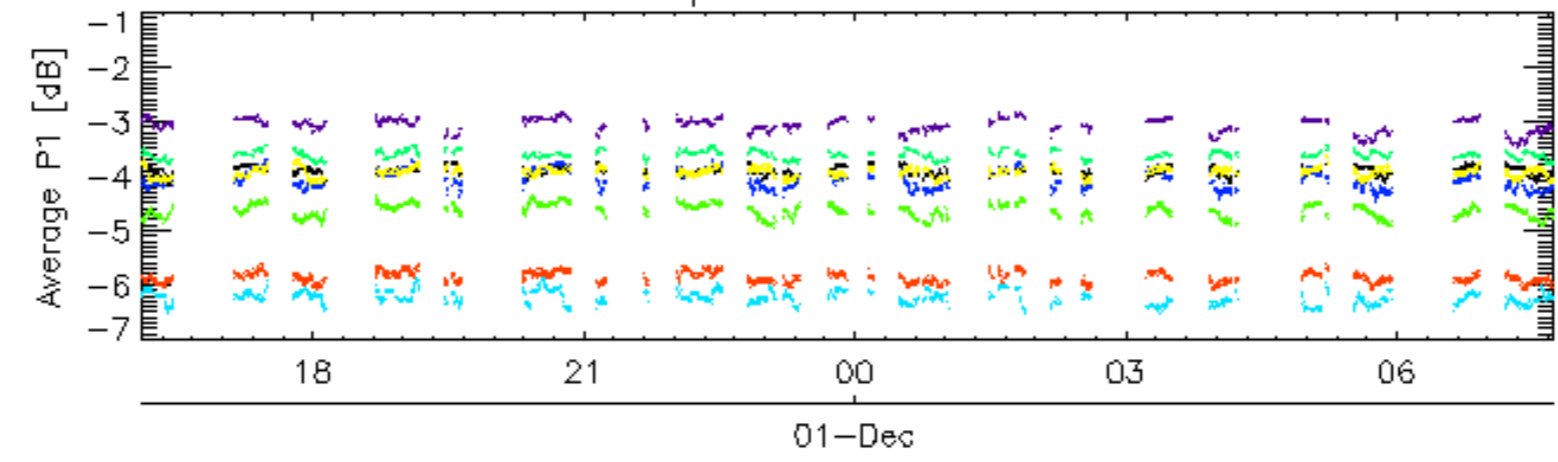


Cal pulses for GM1 SS3

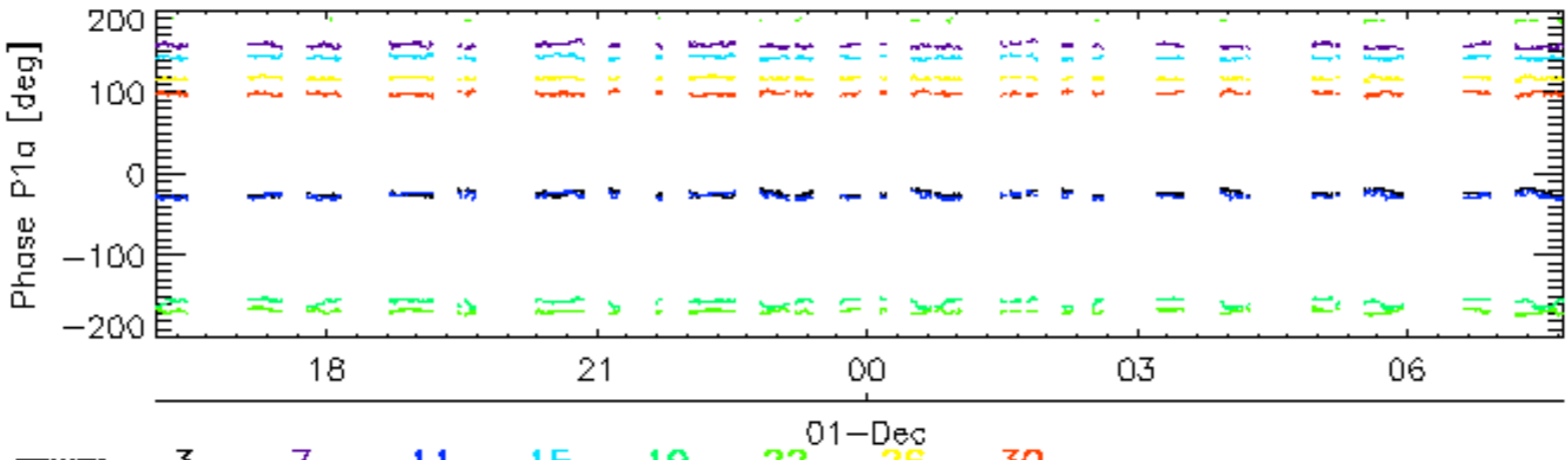
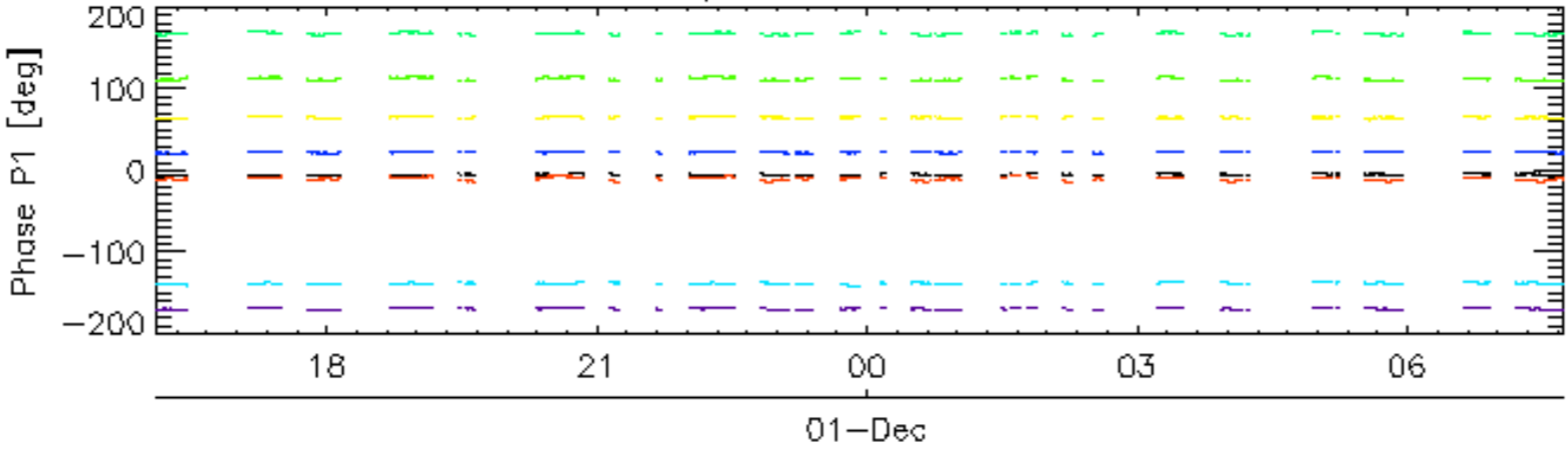


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

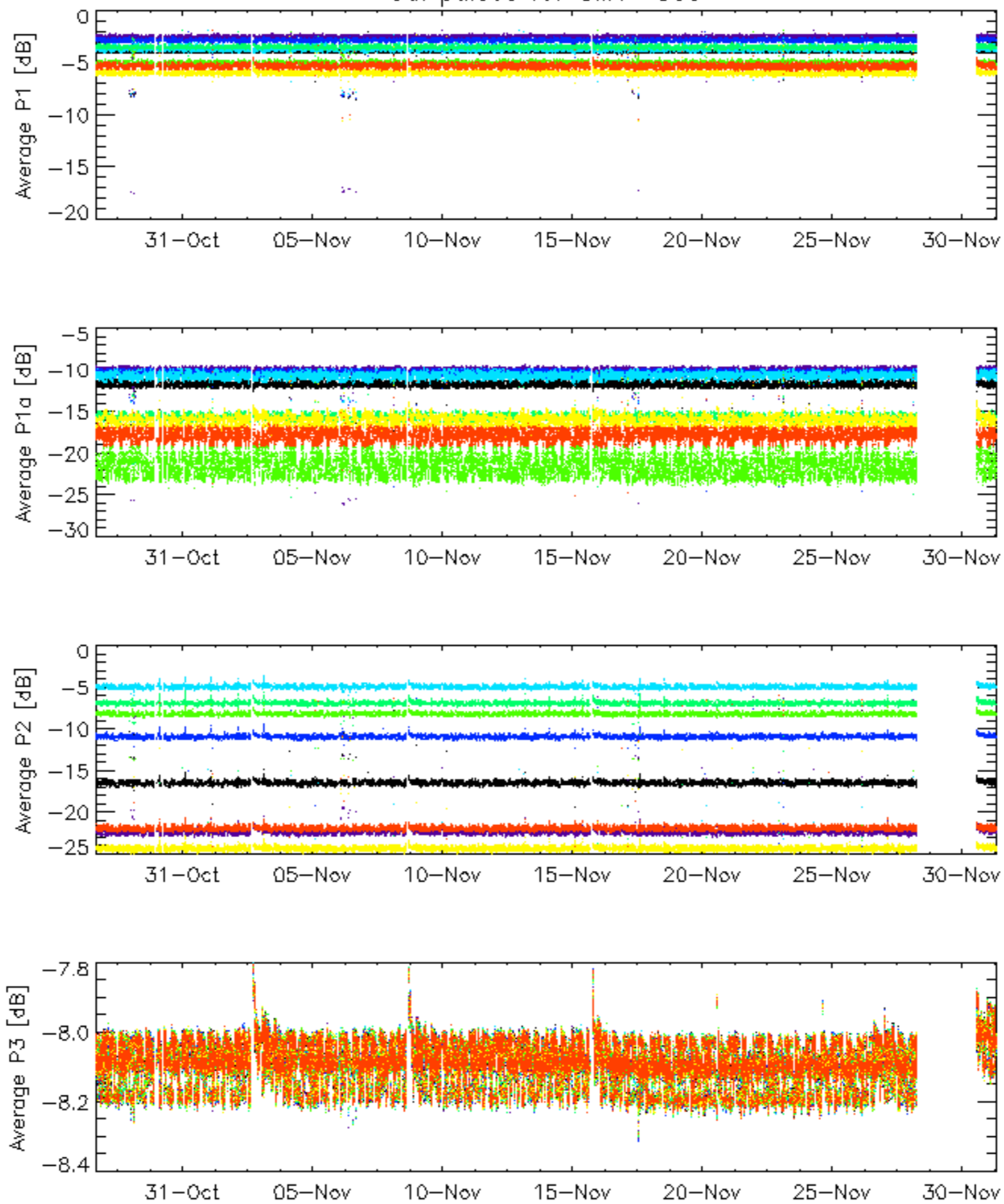


Cal pulses for WVS IS2



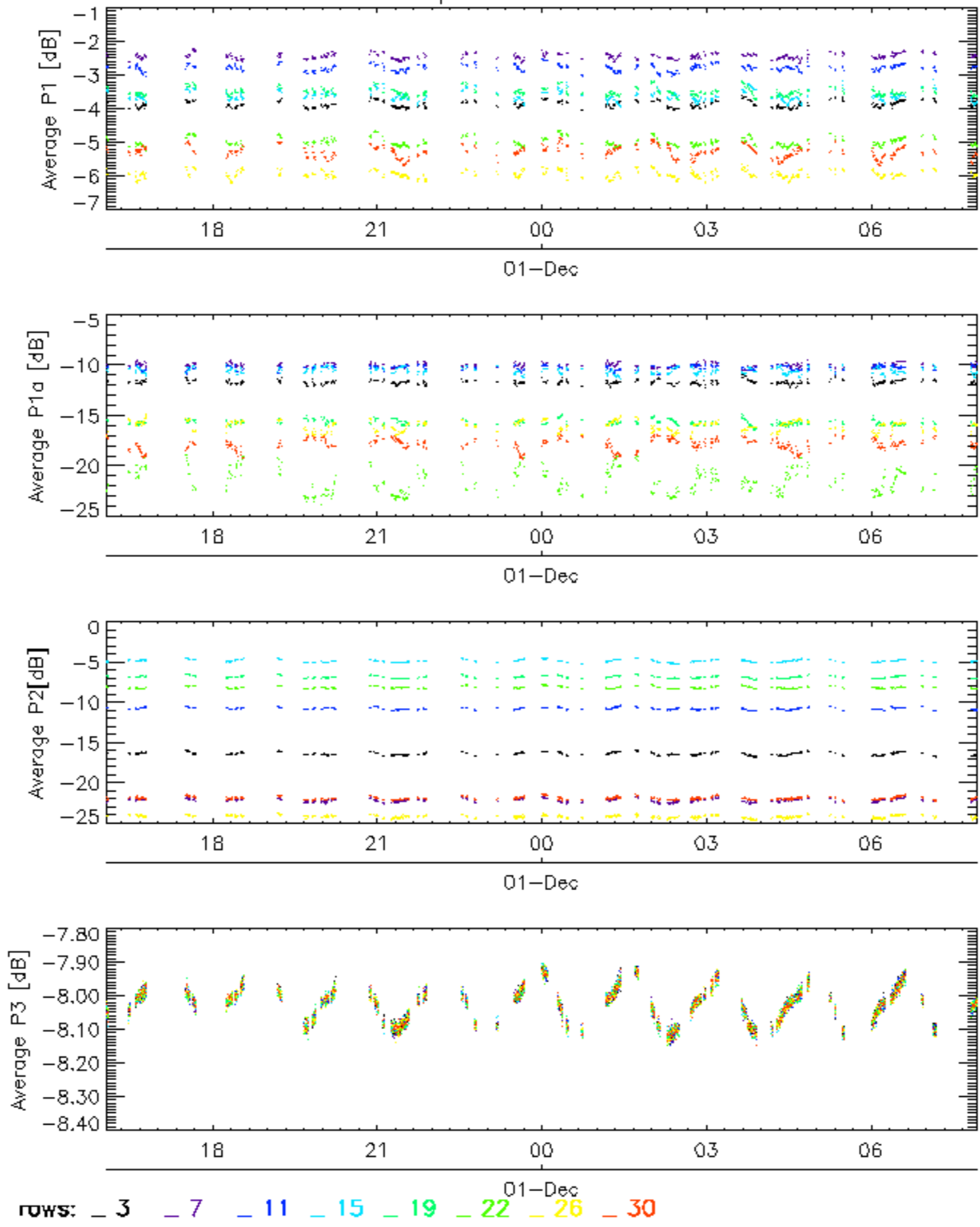
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

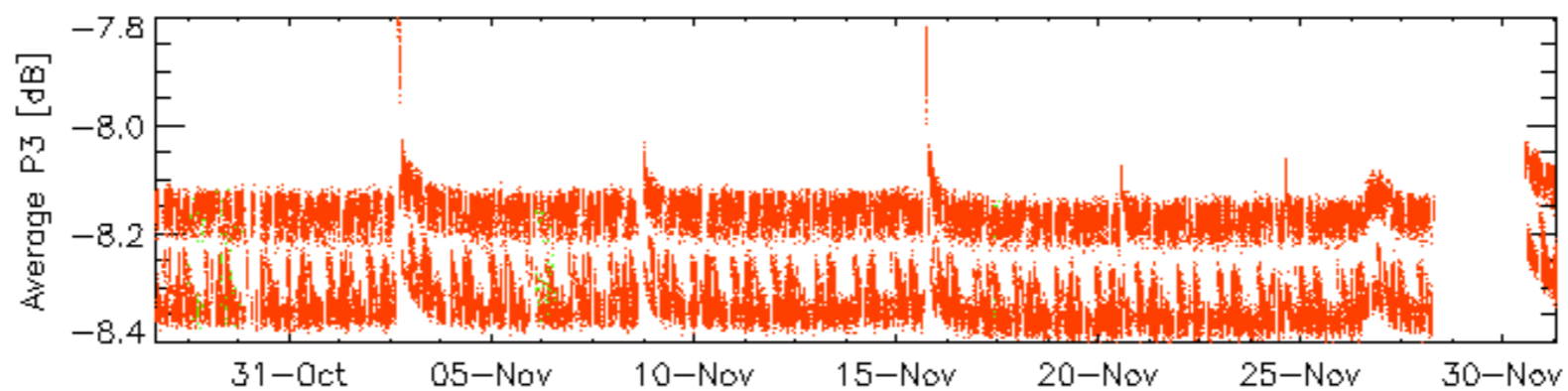
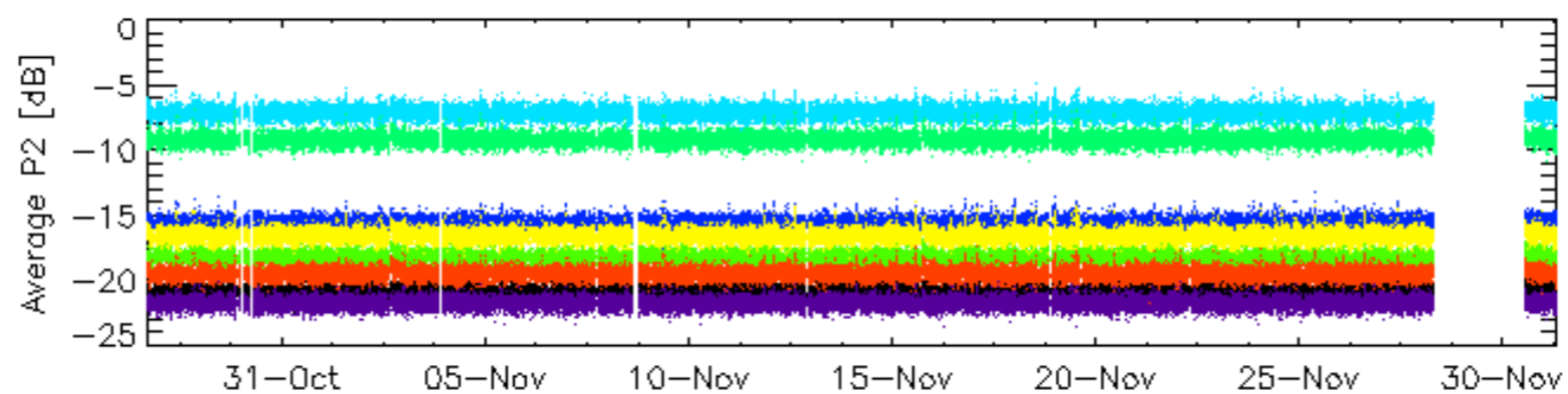
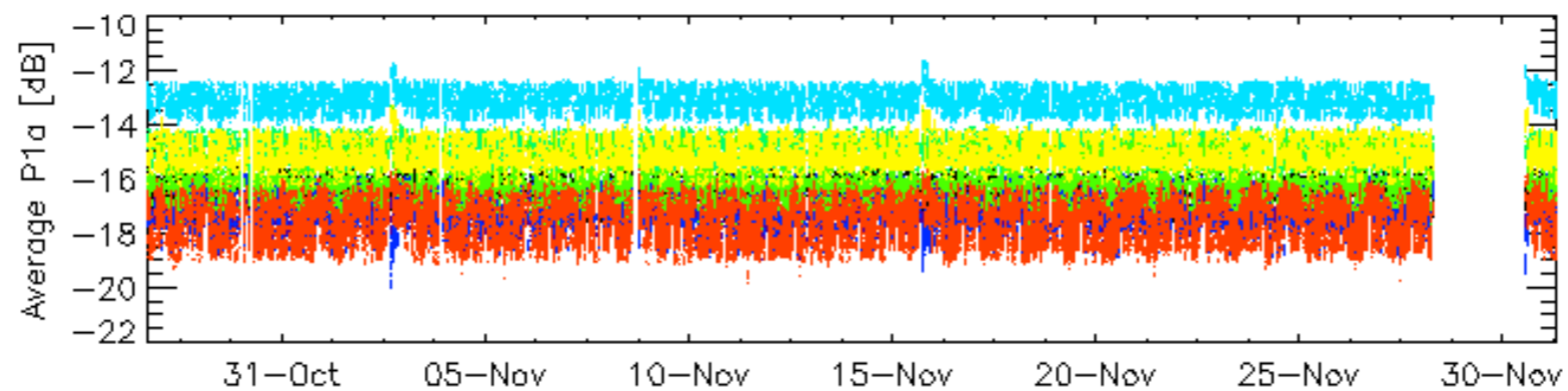
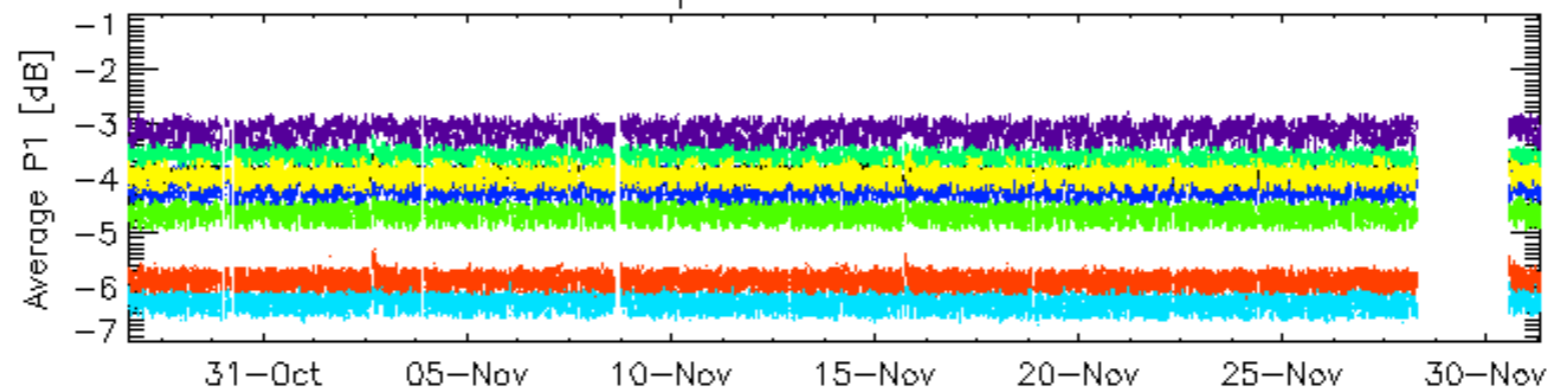


rows: [\\_ 3](#) [\\_ 7](#) [\\_ 11](#) [\\_ 15](#) [\\_ 19](#) [\\_ 22](#) [\\_ 26](#) [\\_ 30](#)

### Cal pulses for GM1 SS3

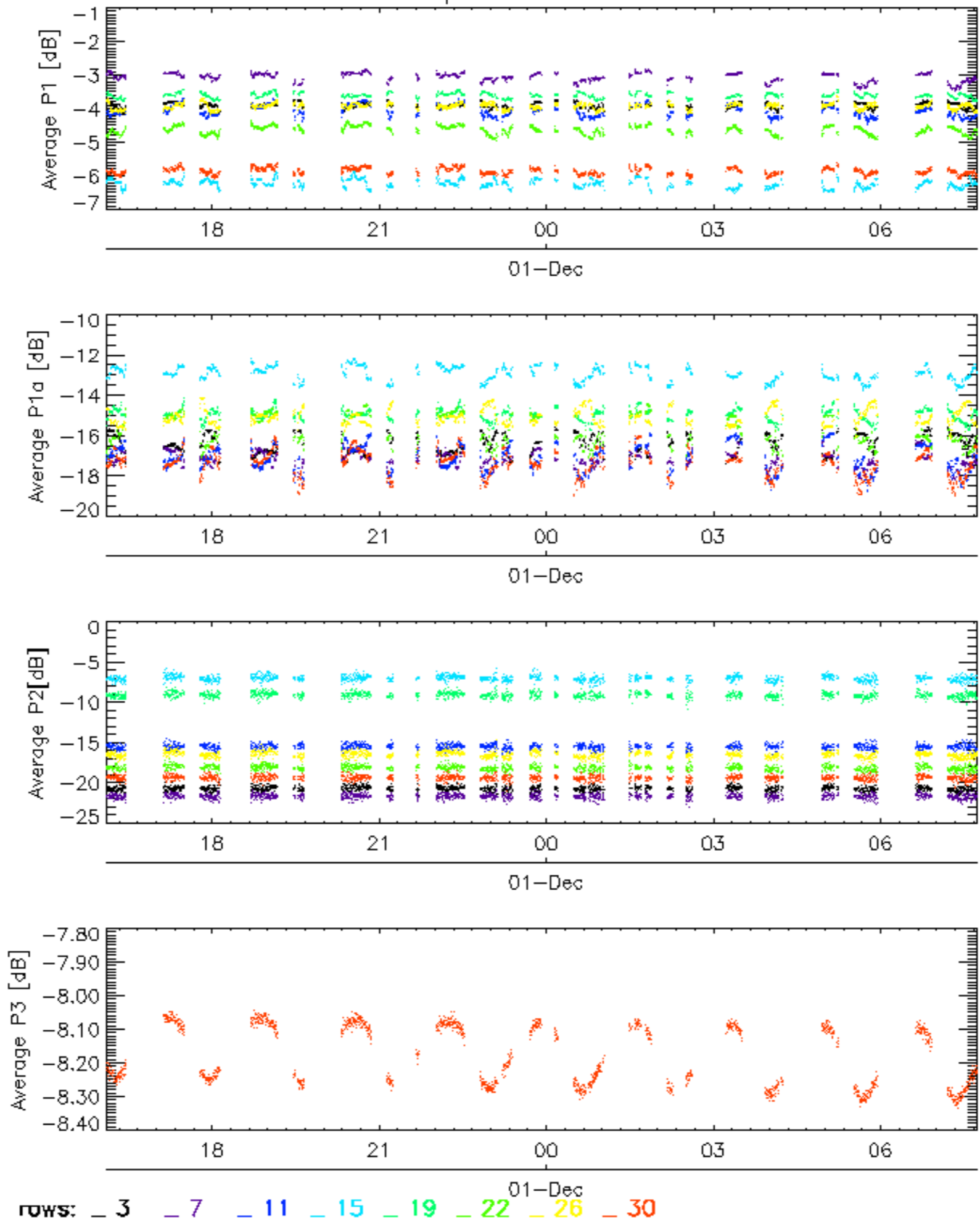


Cal pulses for WVS IS2



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

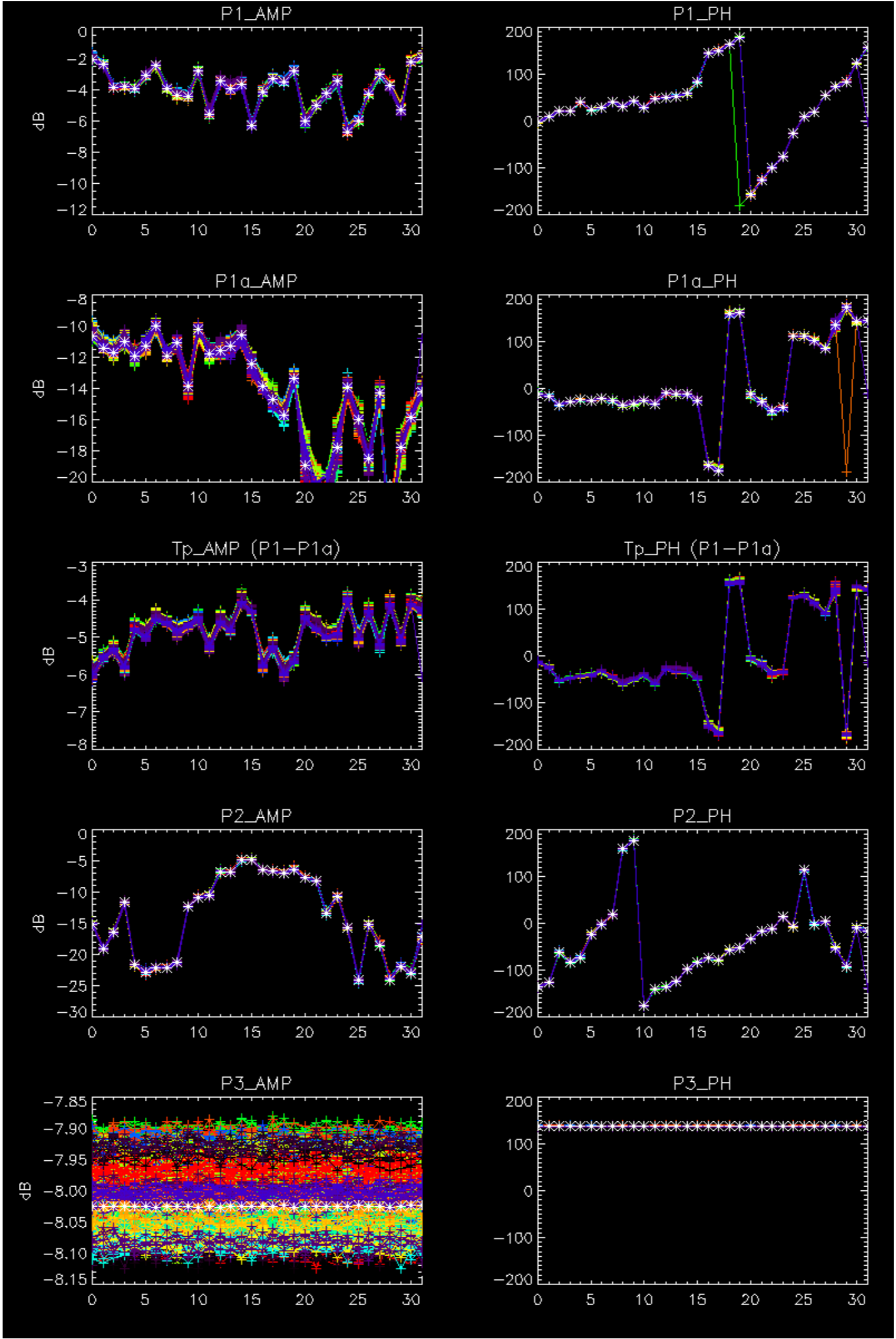
Cal pulses for WVS IS2

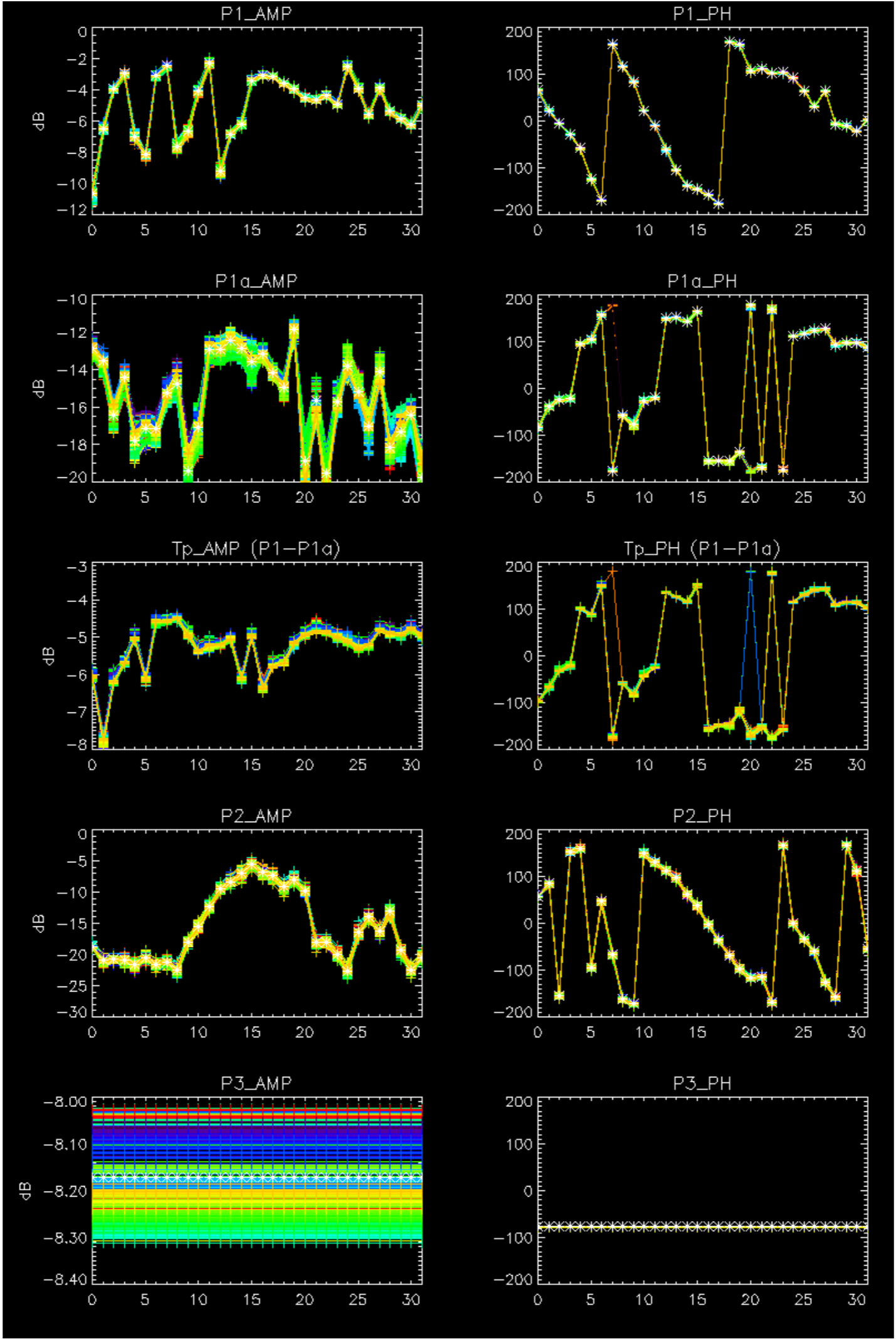


No anomalies observed on available browse products



No anomalies observed.

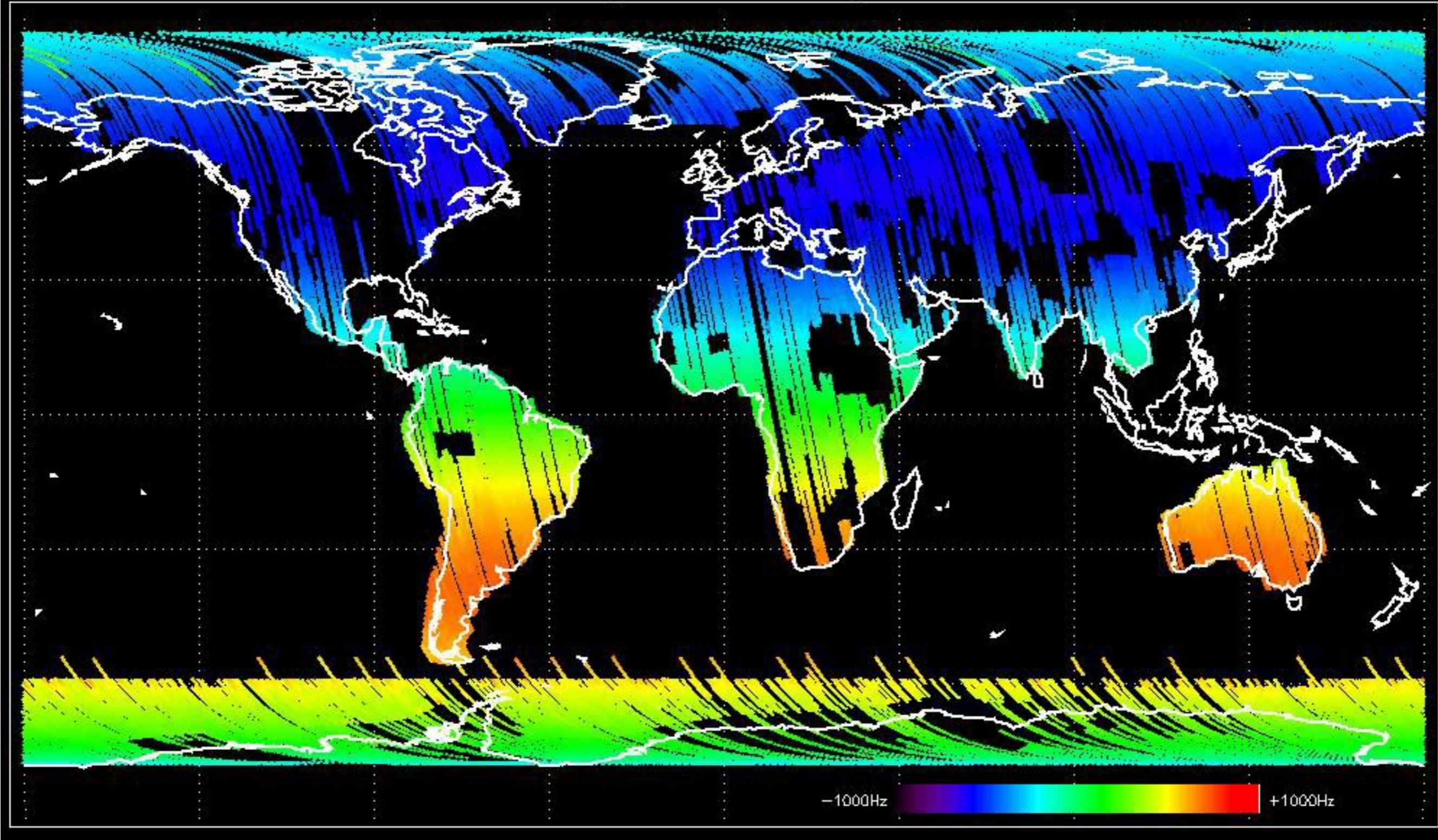




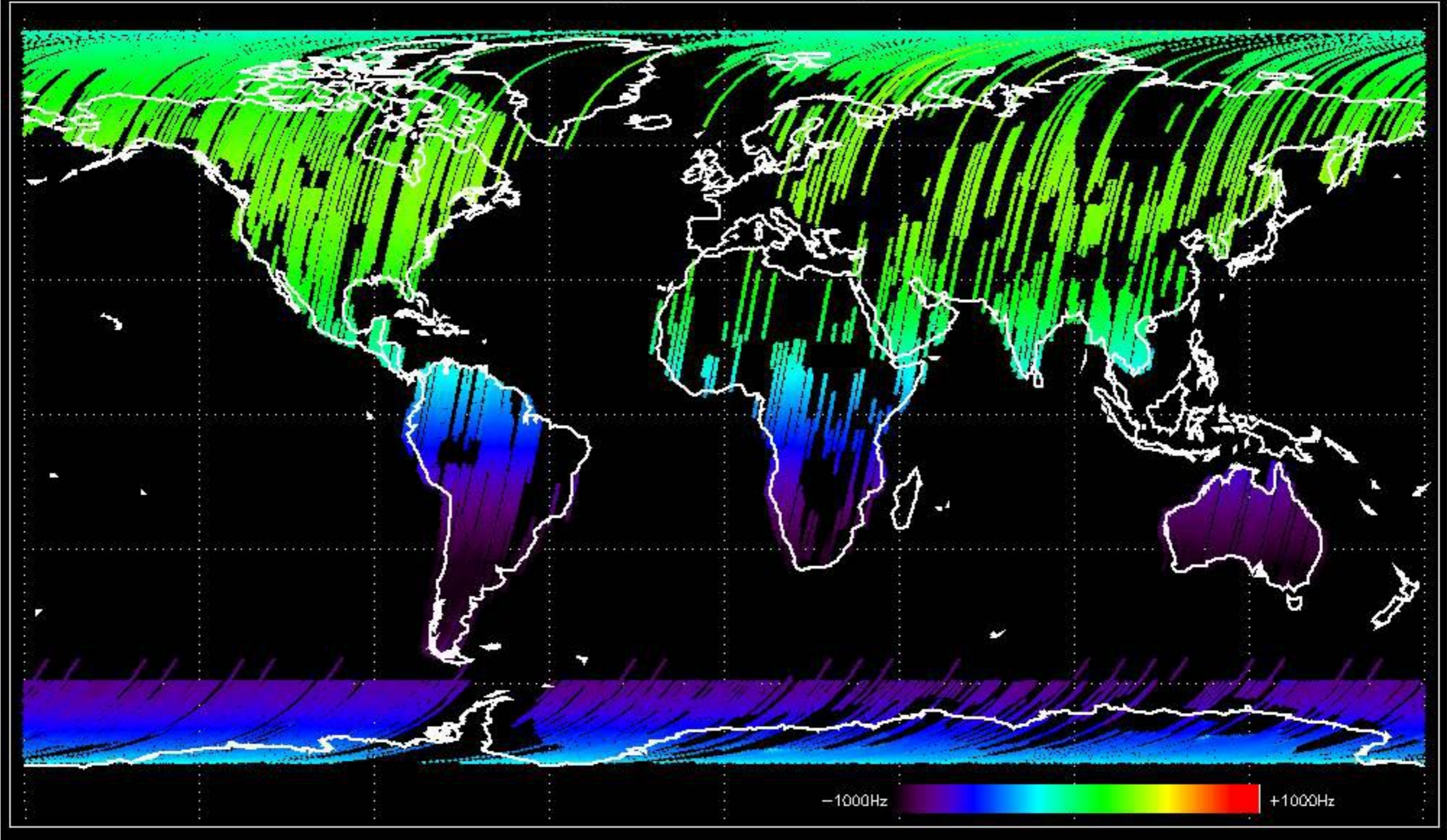
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



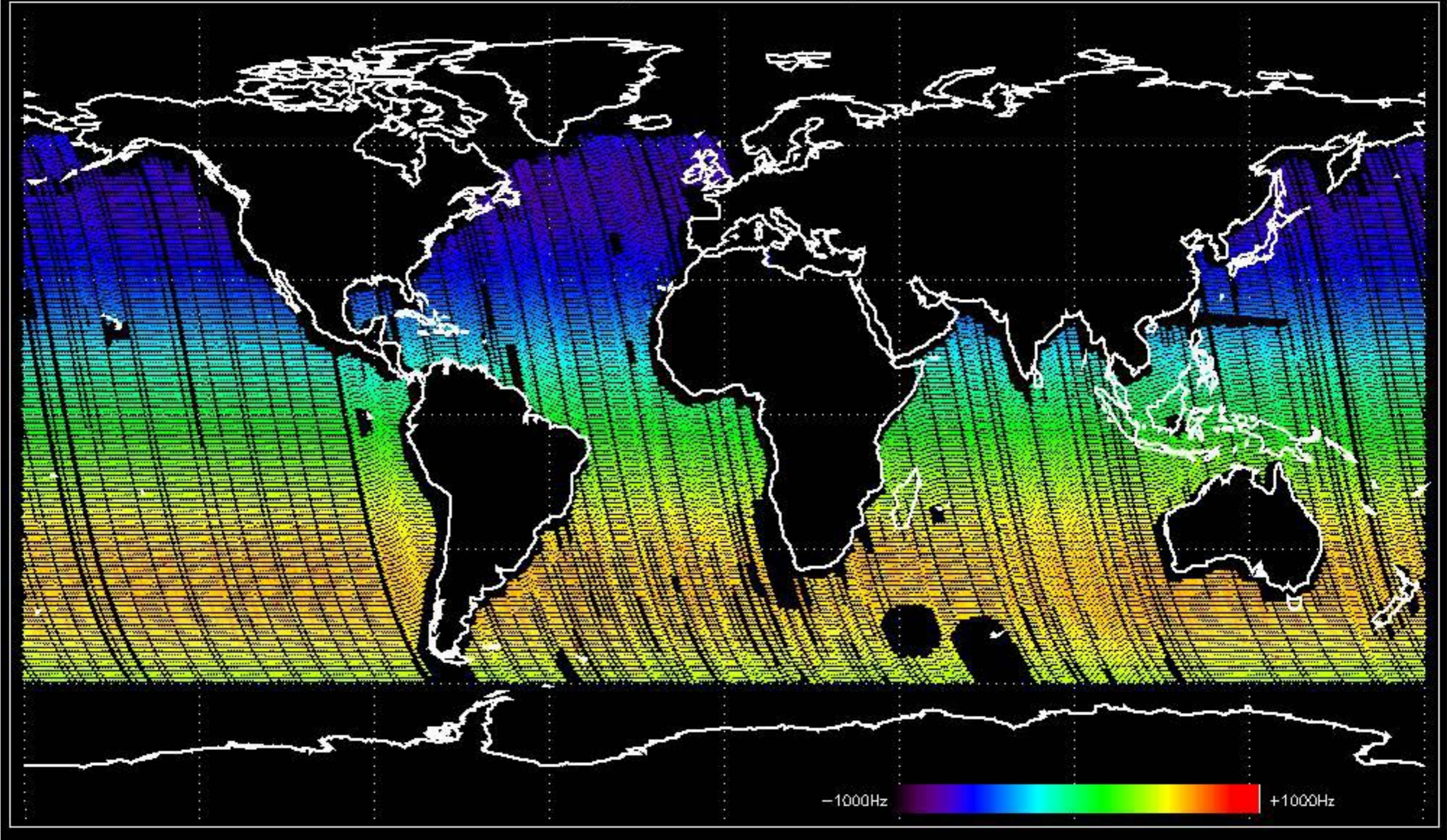
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

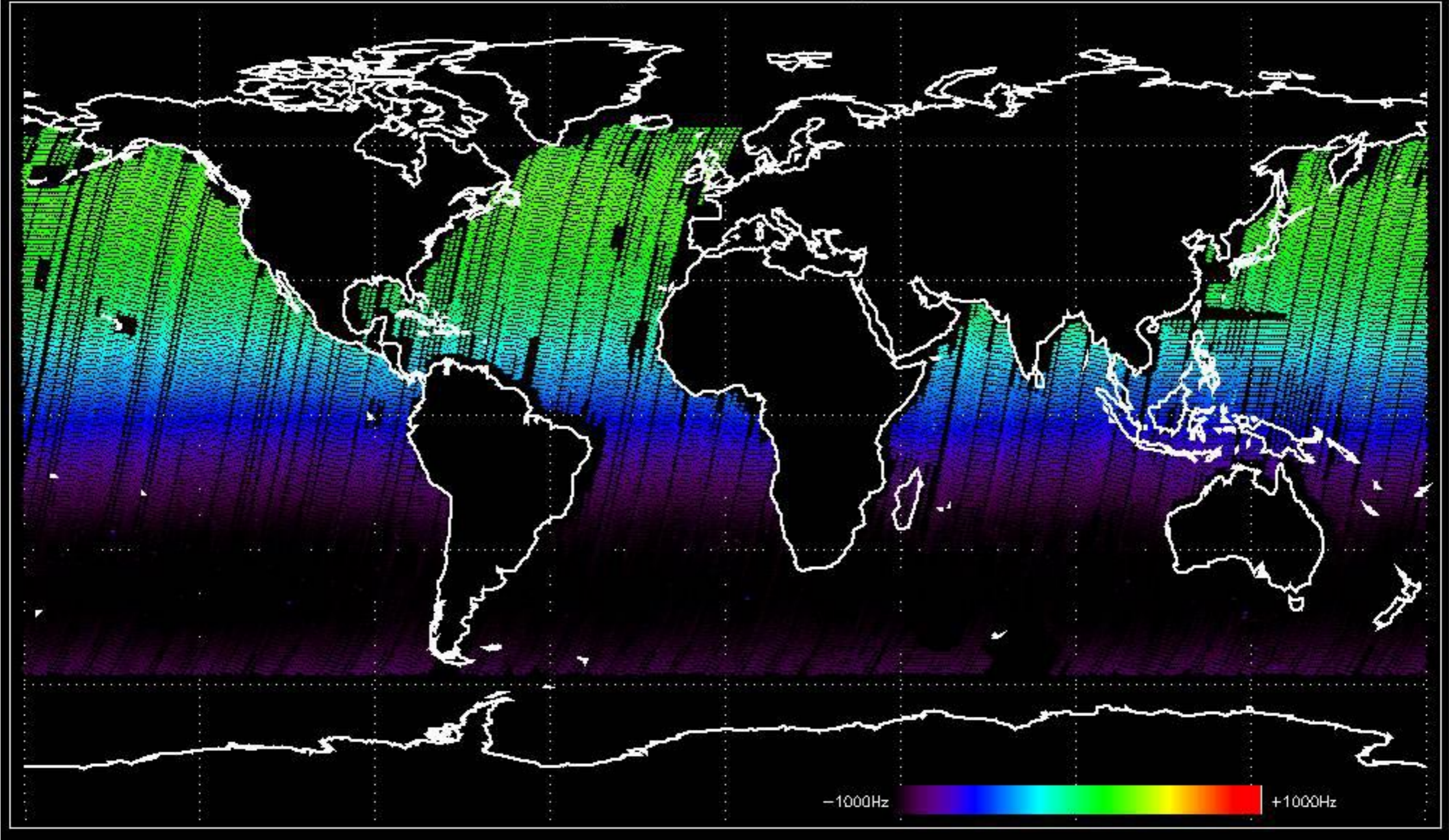


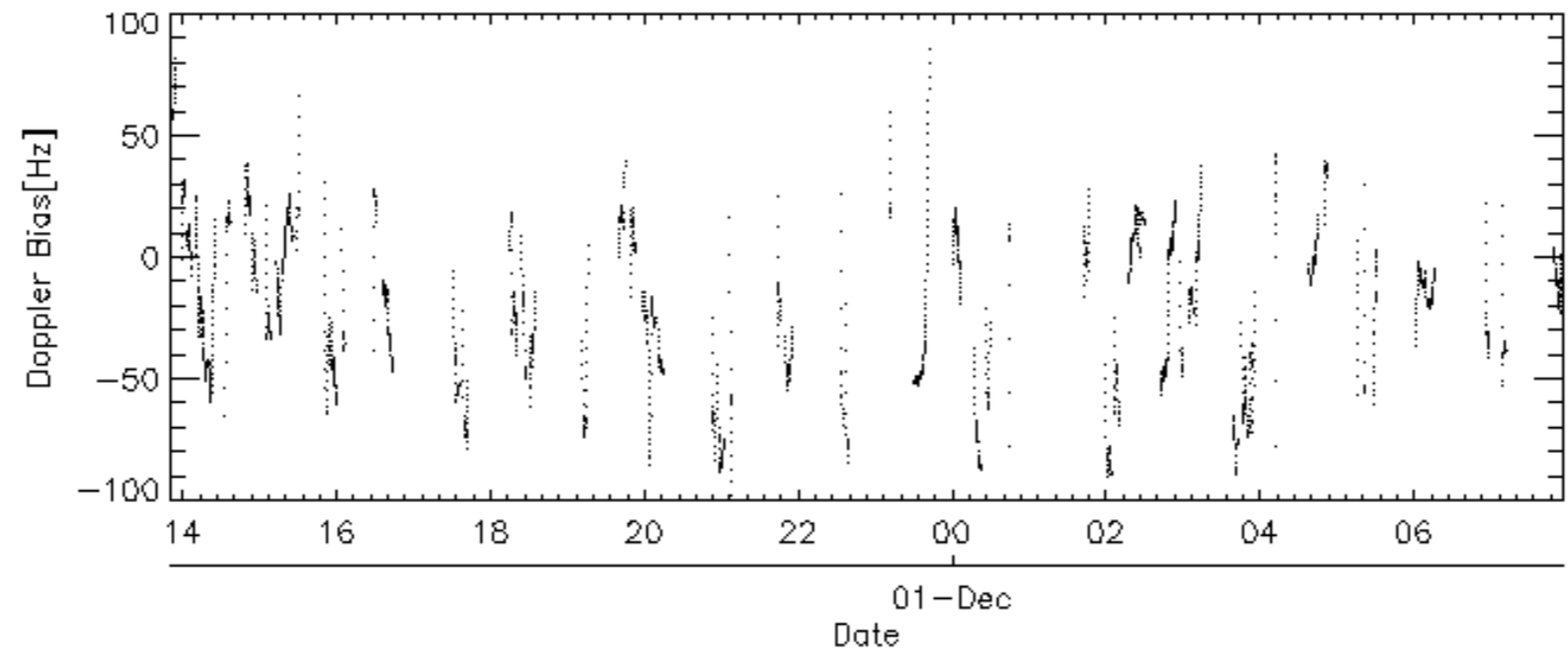
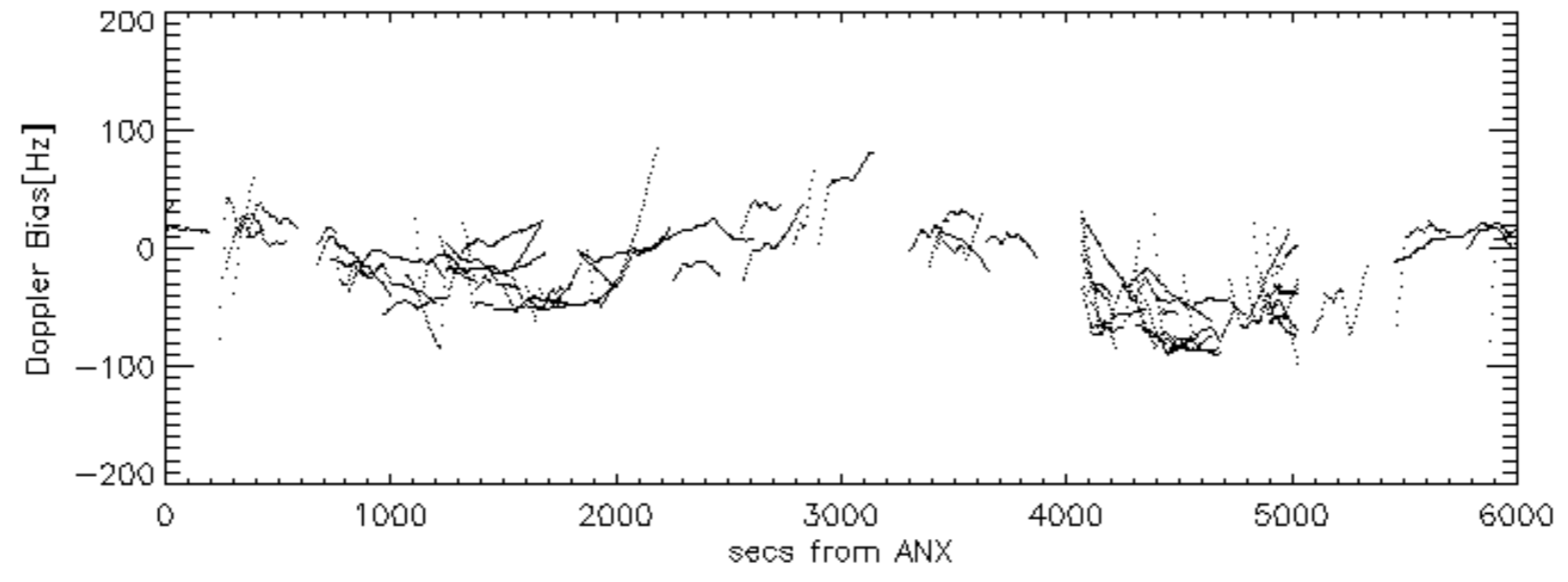
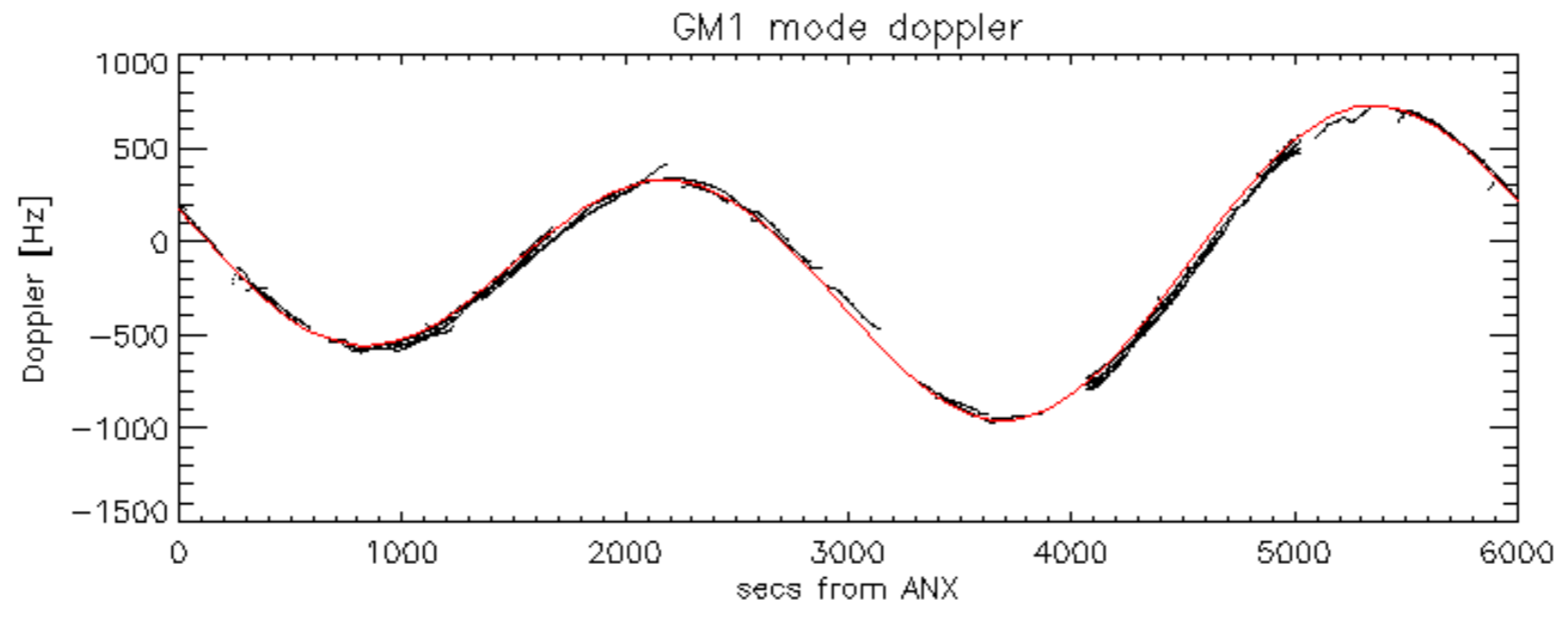
Doppler 'WVS' 'IS2' ascending

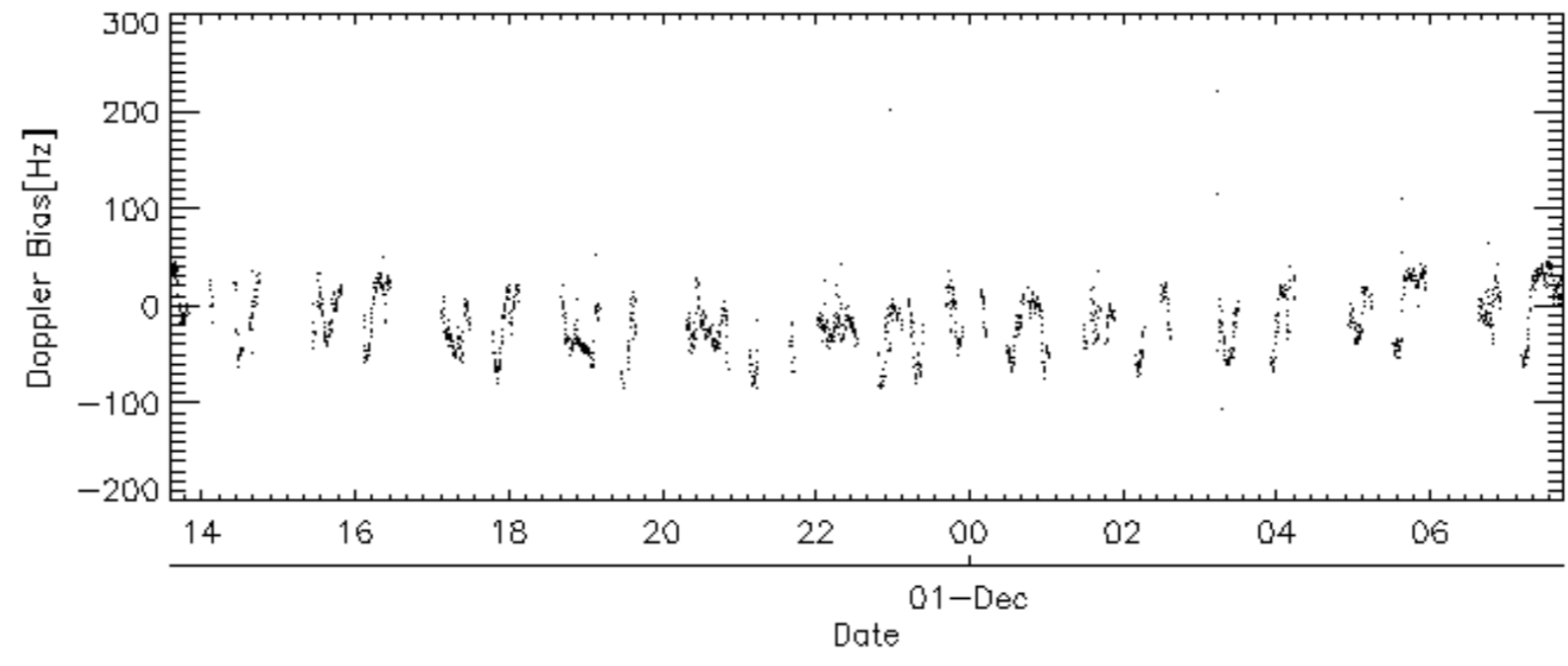
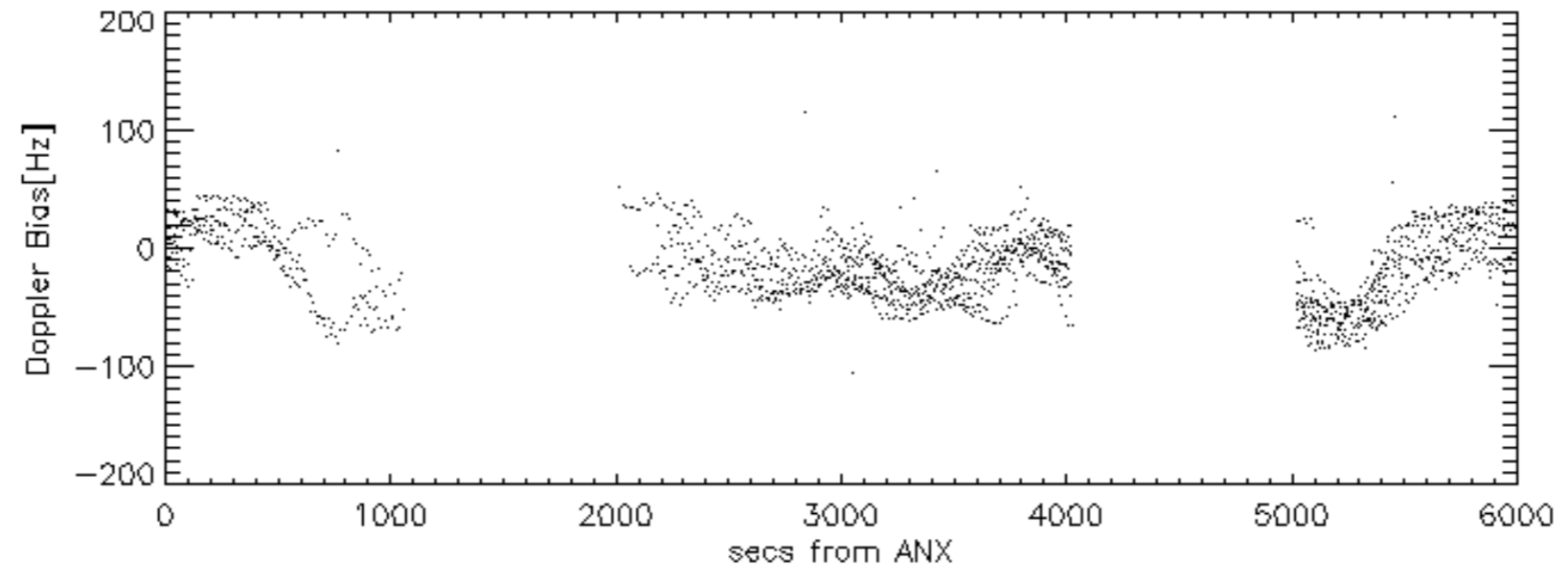
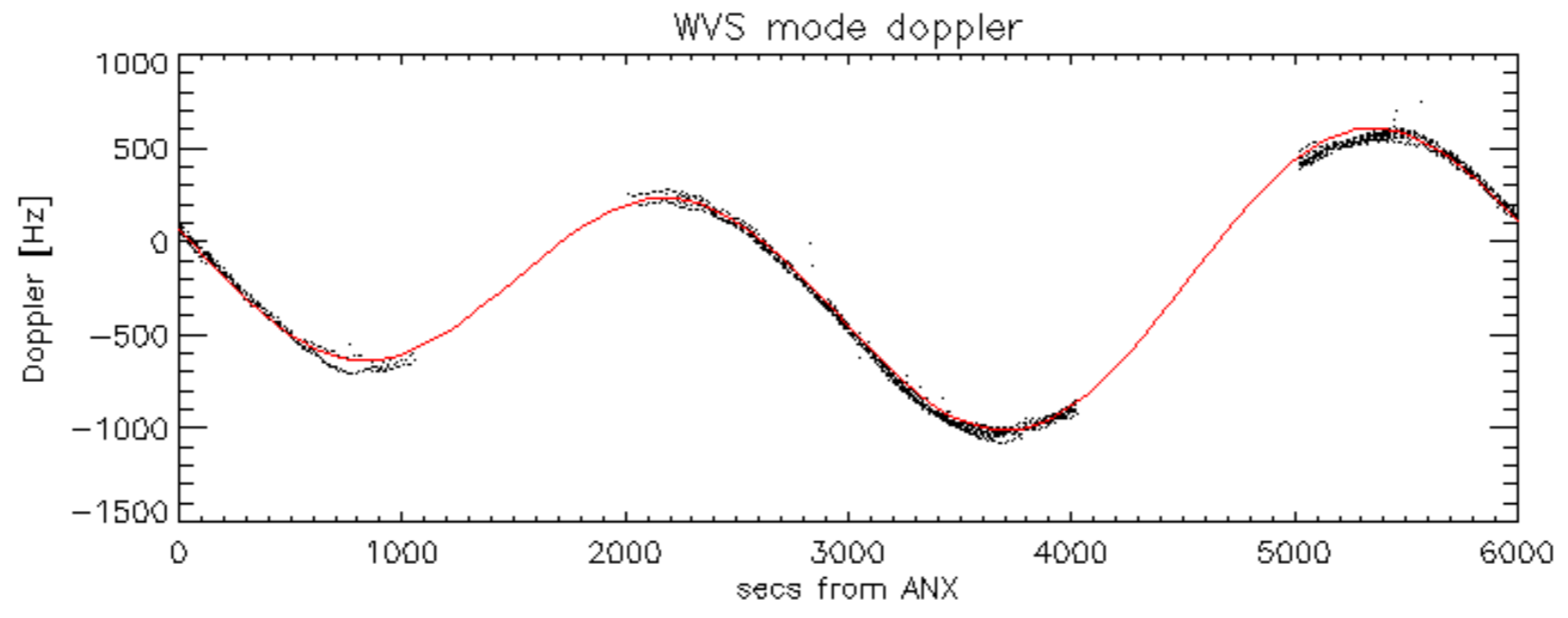




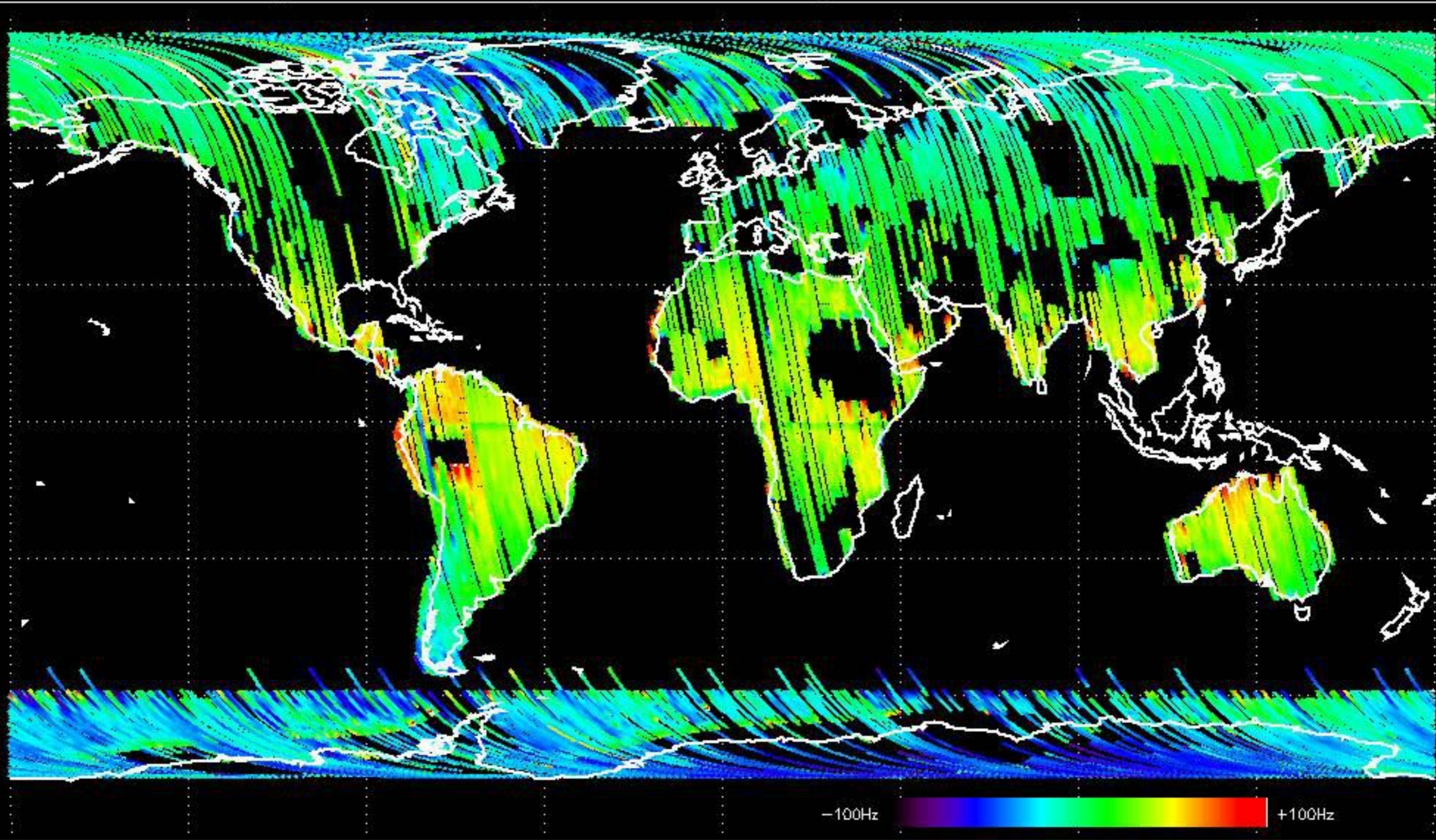
Doppler 'WVS' 'IS2' descending



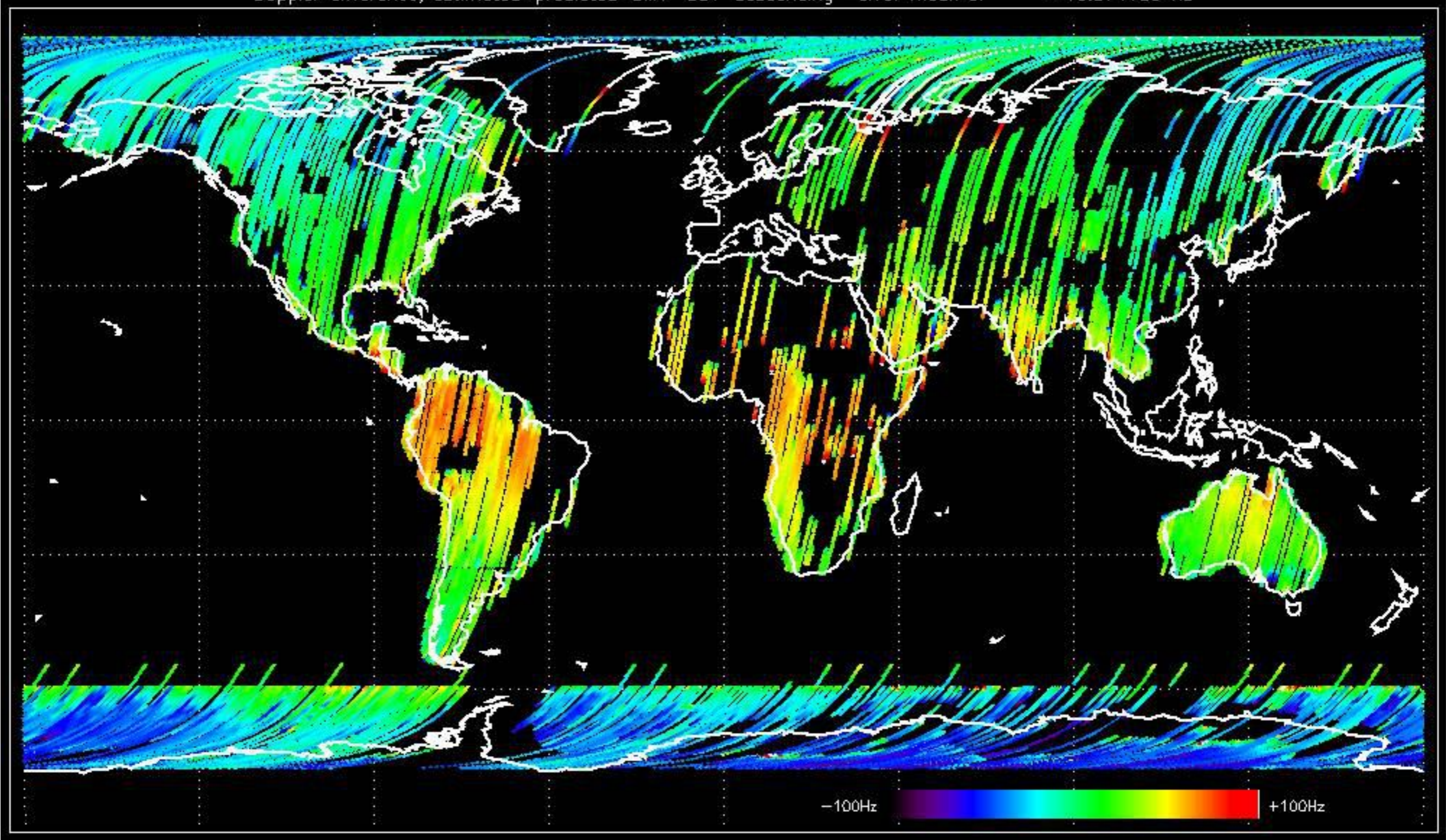




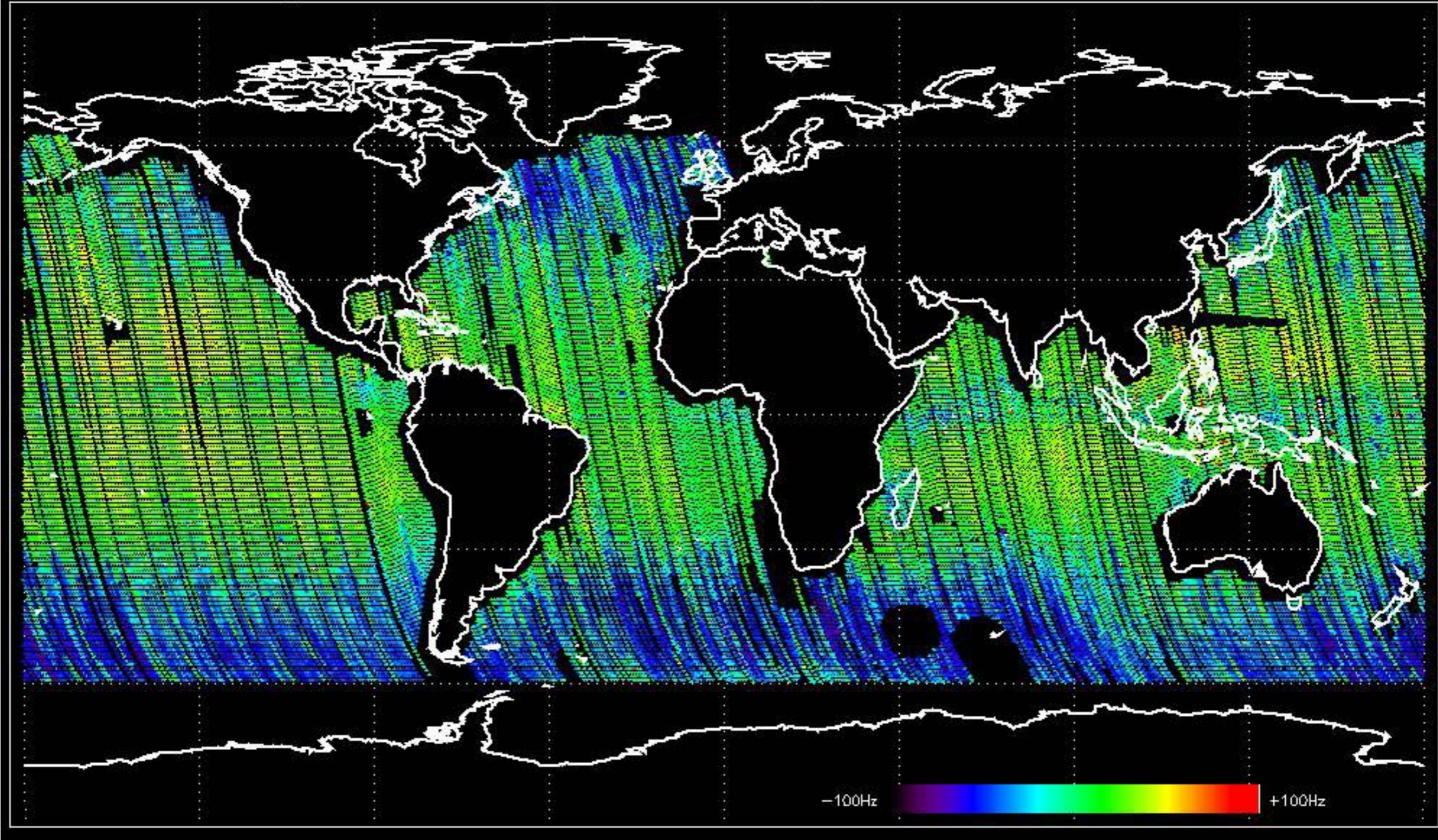
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.811476 Hz



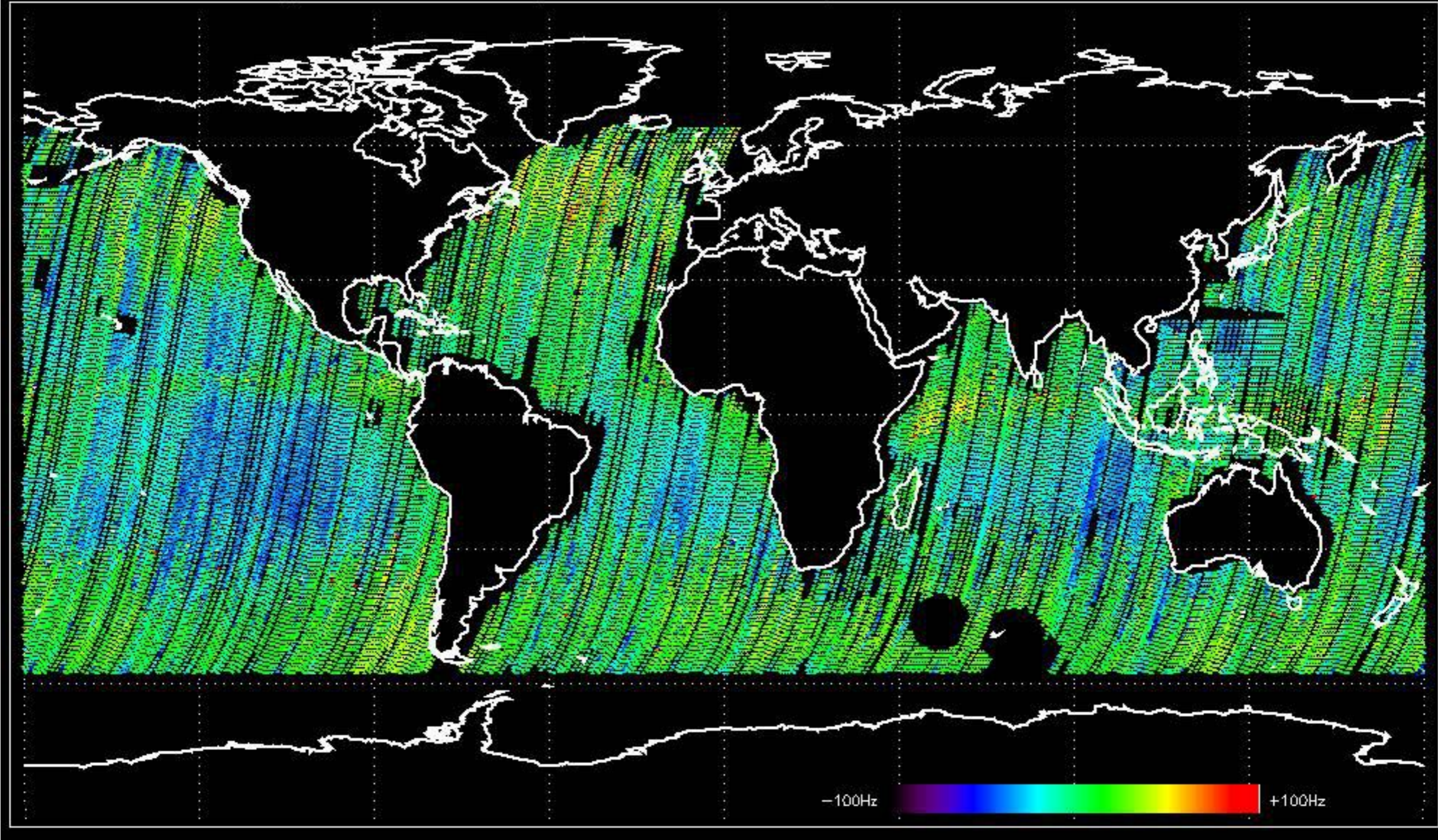
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.371135 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.1503071 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.6157597 Hz



No anomalies observed on available MS products:



No anomalies observed.









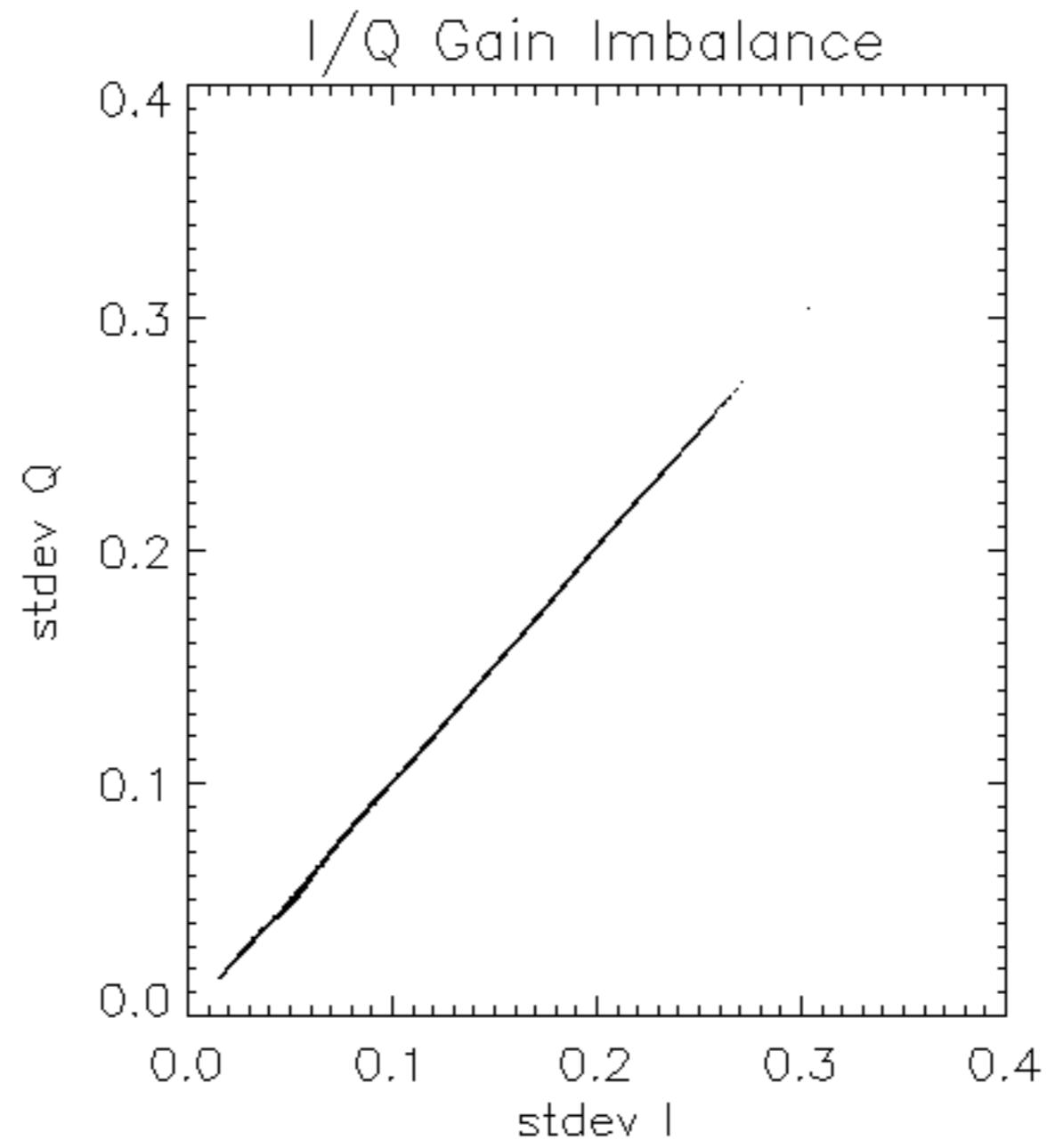


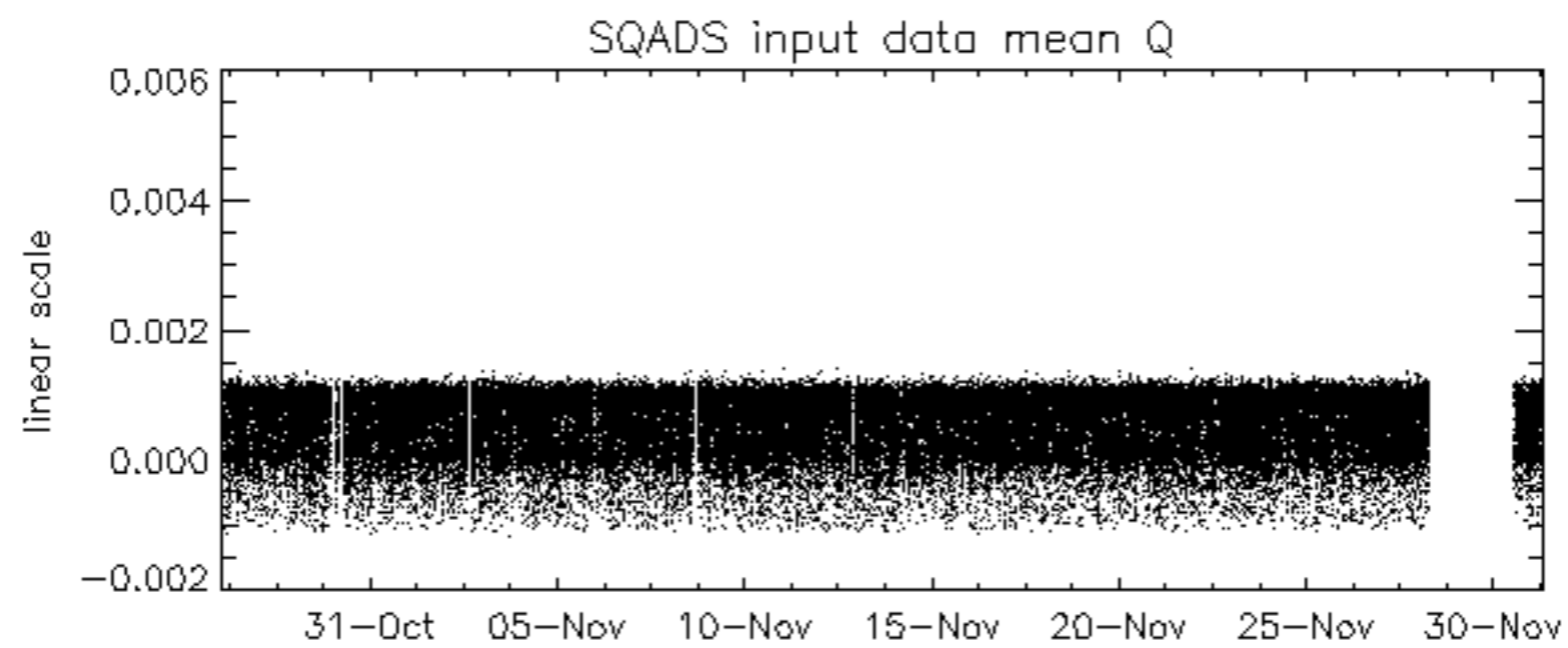
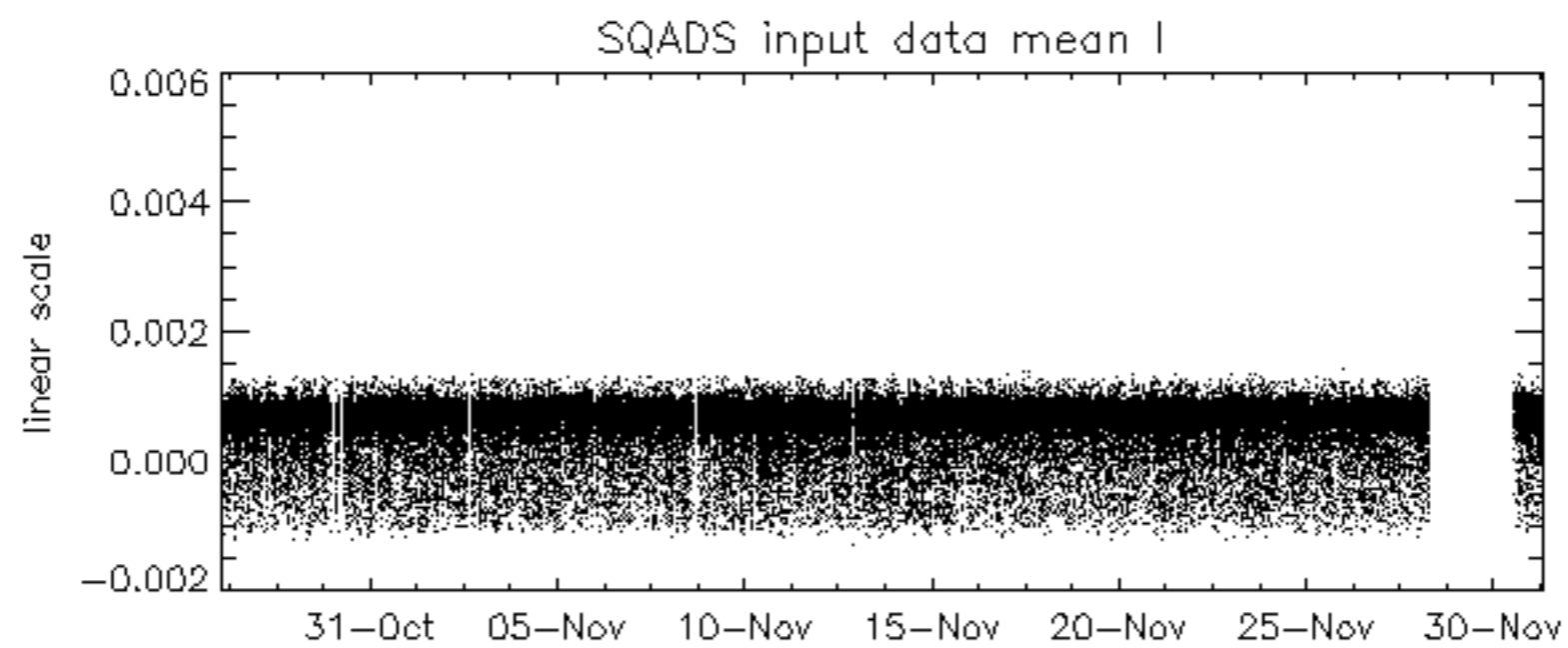
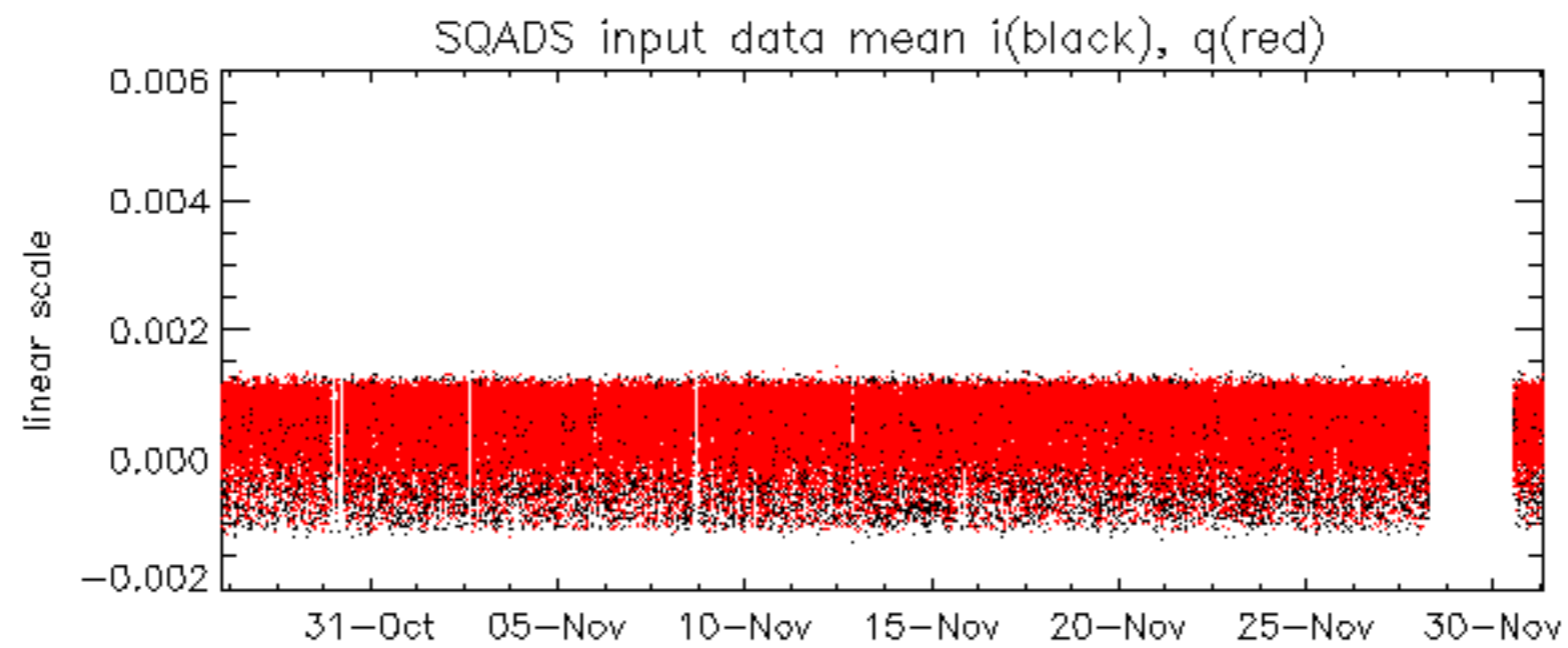


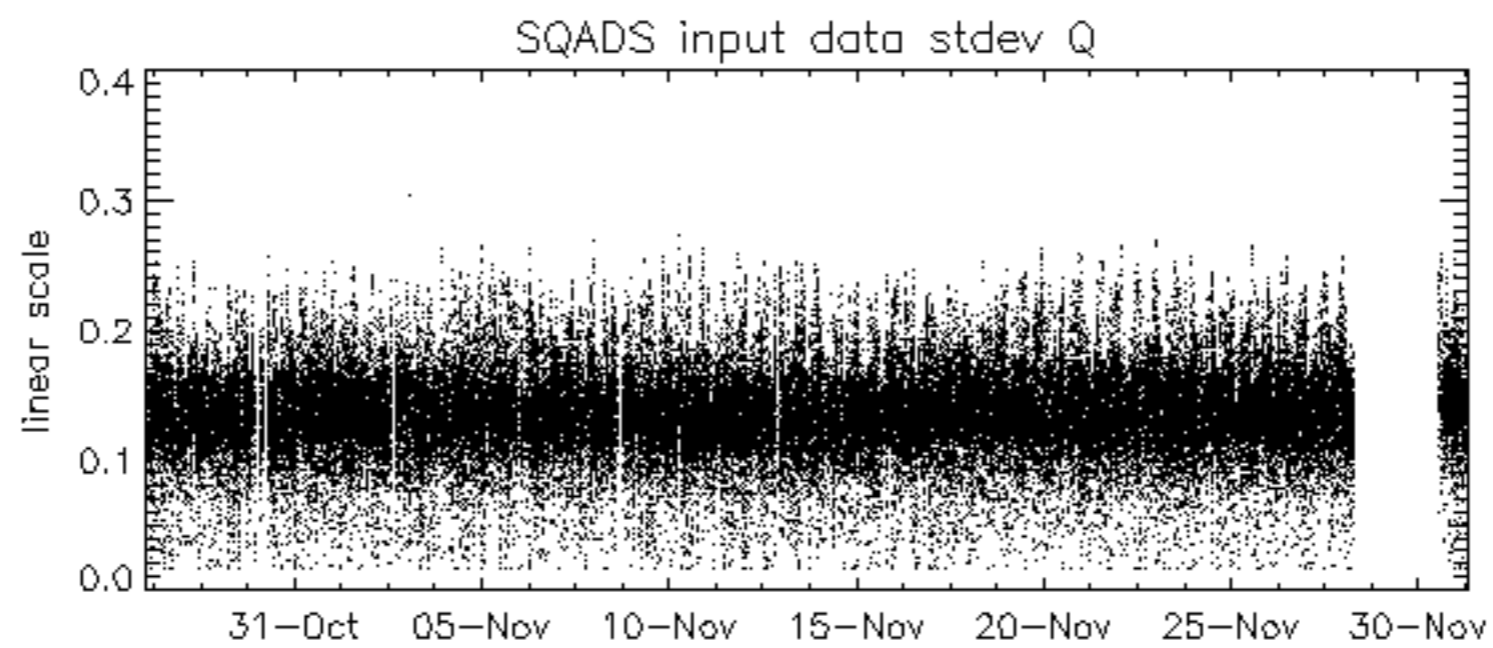
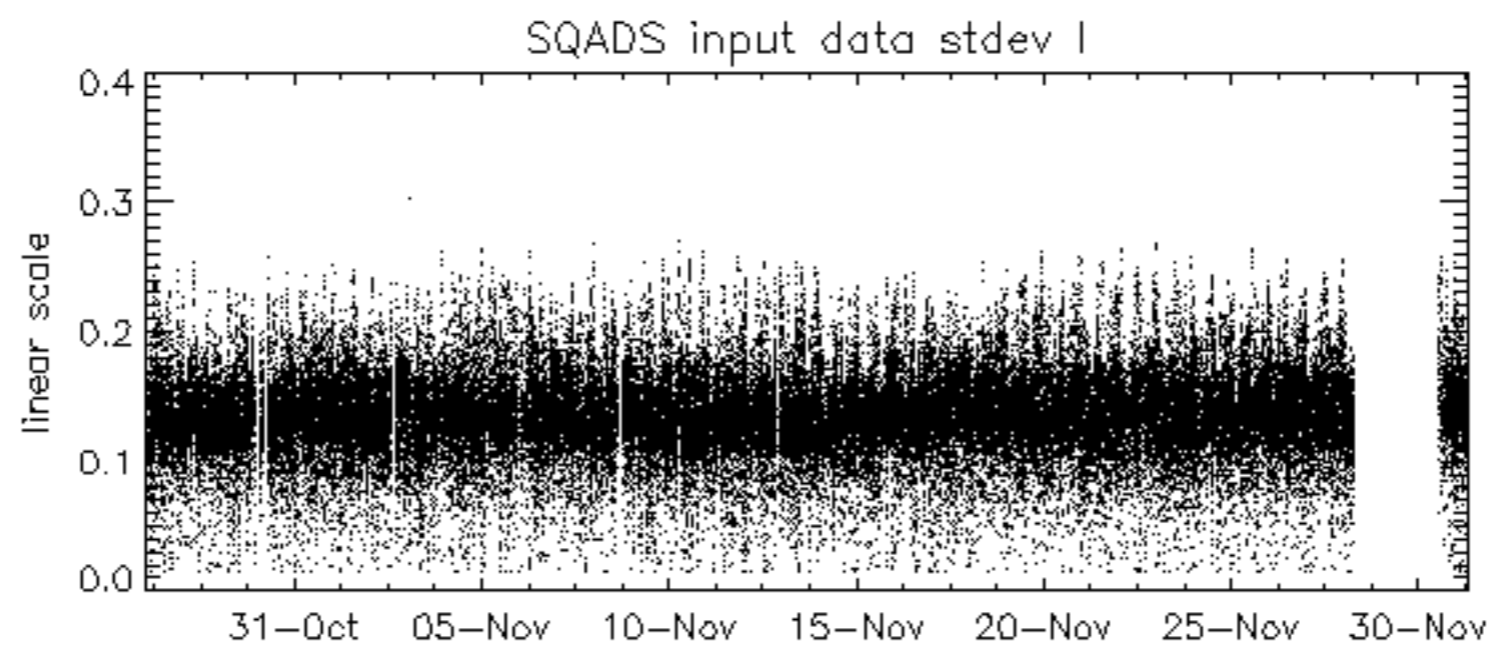
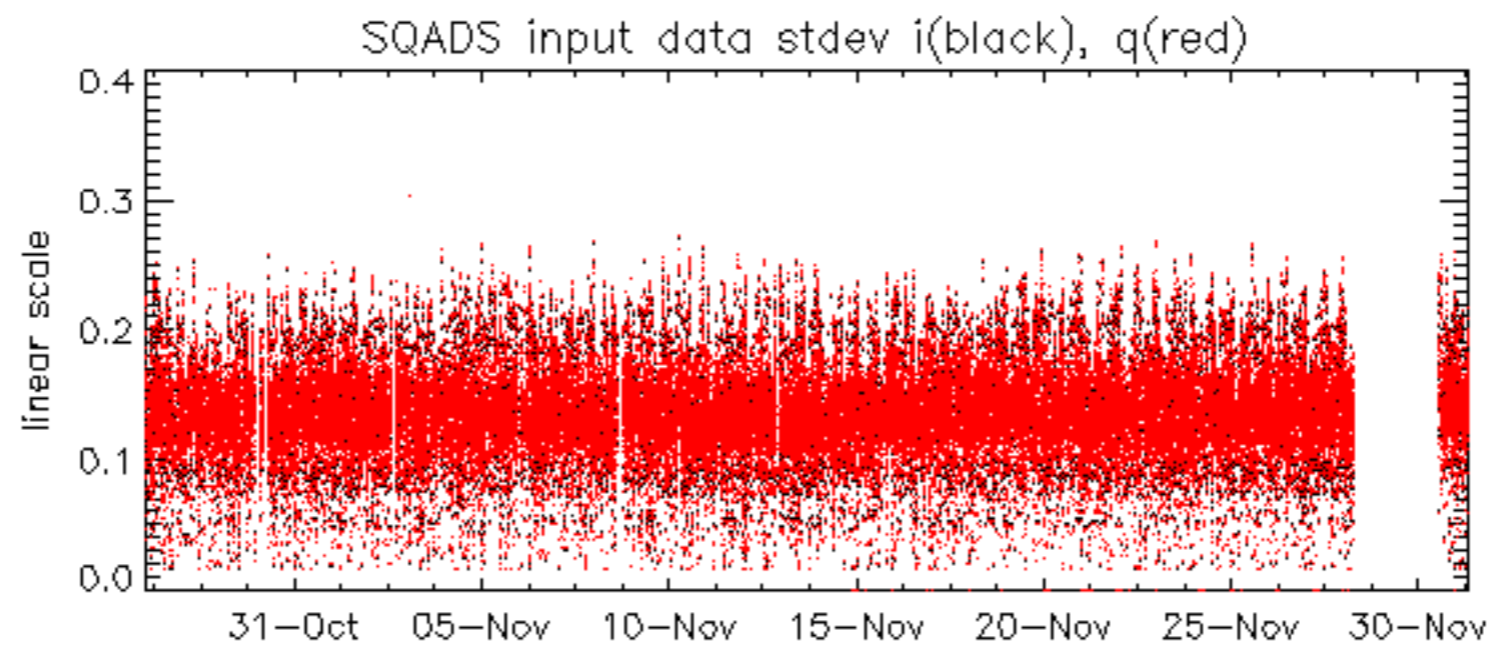


















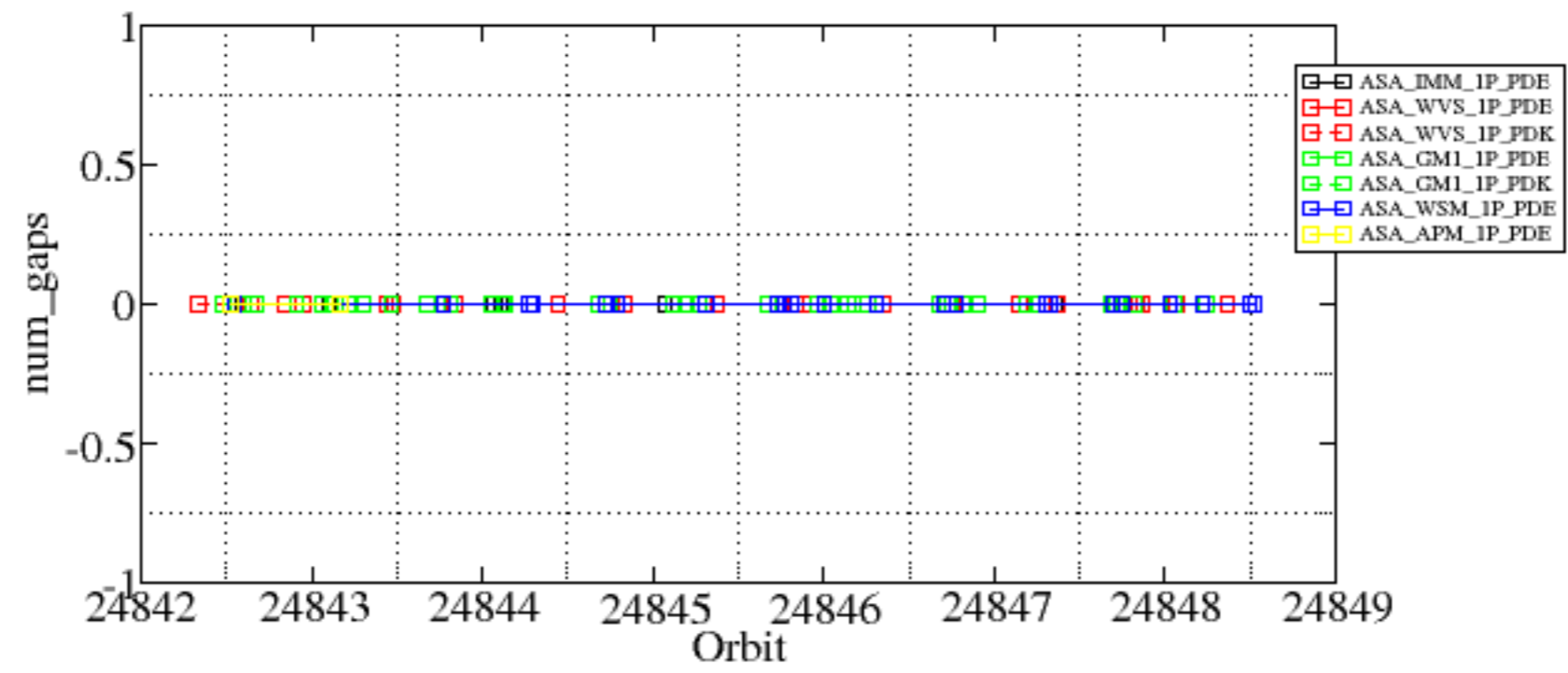


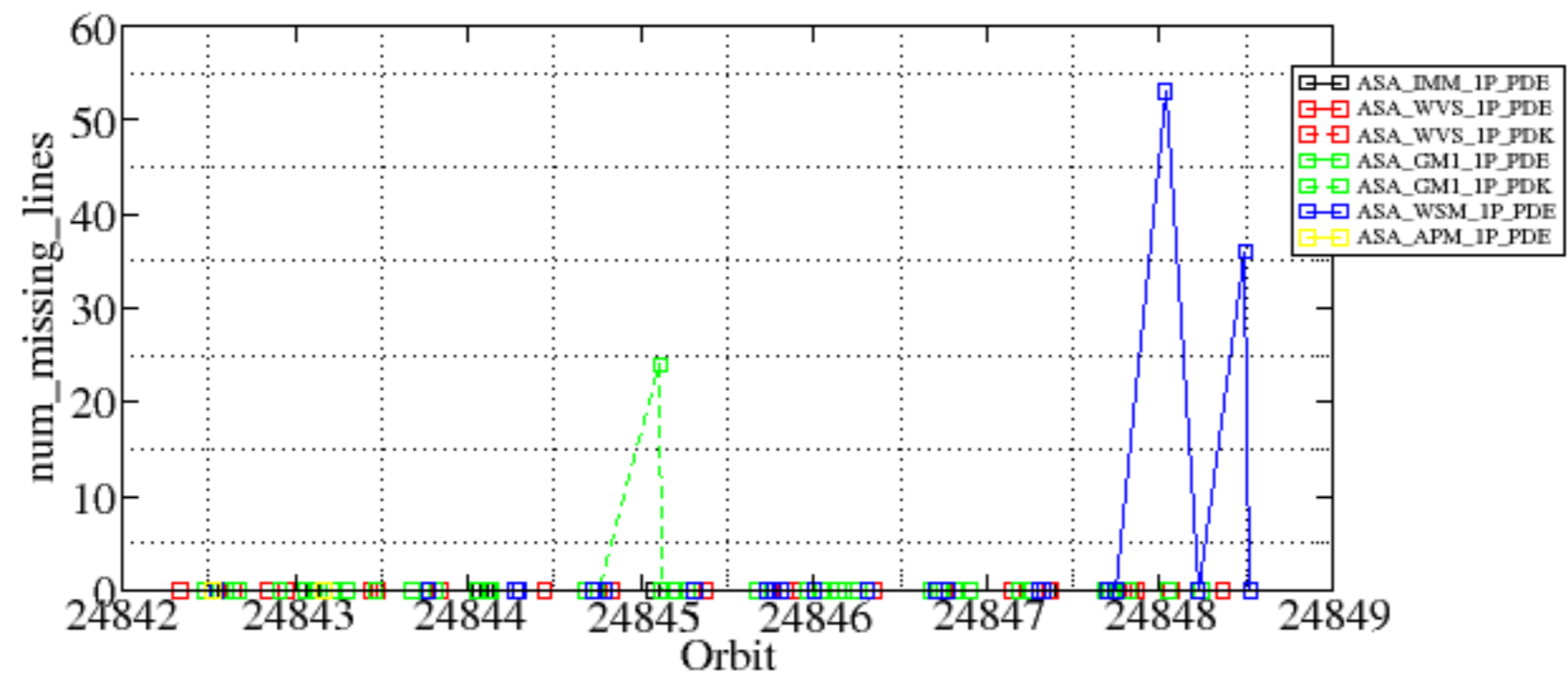


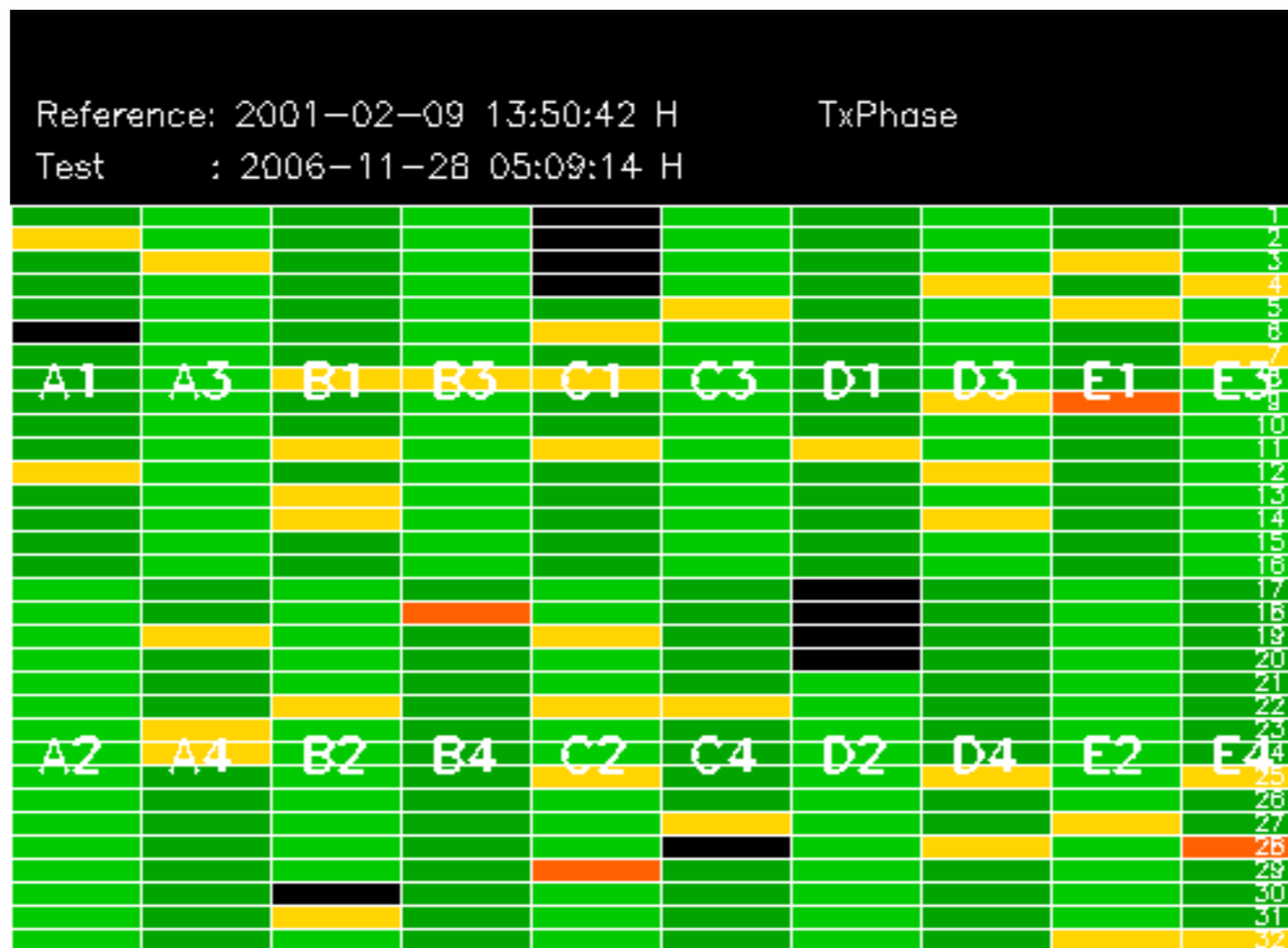
Summary of analysis for the last 3 days 2006113[901]

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_1PNPDK20061130_181455_000003322053_00242_24845_9480.N1	0	24
ASA_WSM_1PNPDE20061130_230852_000000982053_00245_24848_3084.N1	0	53
ASA_WSM_1PNPDE20061130_235456_000000672053_00245_24848_3034.N1	0	36
ASA_WSM_1PNPDE20061130_235456_000001282053_00245_24848_3251.N1	0	36
ASA_WSM_1PNPDE20061130_235456_000003672053_00245_24848_3599.N1	0	36
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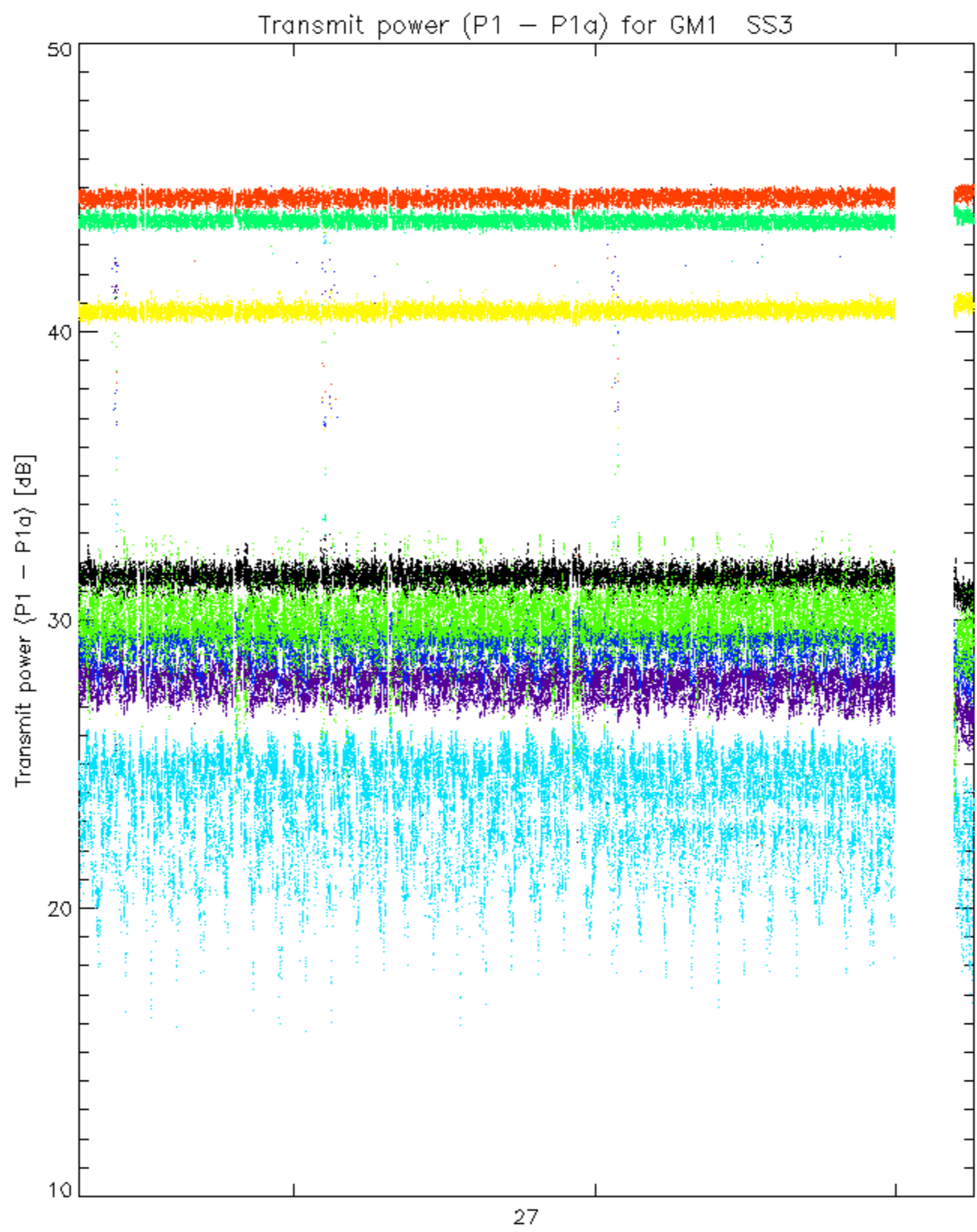






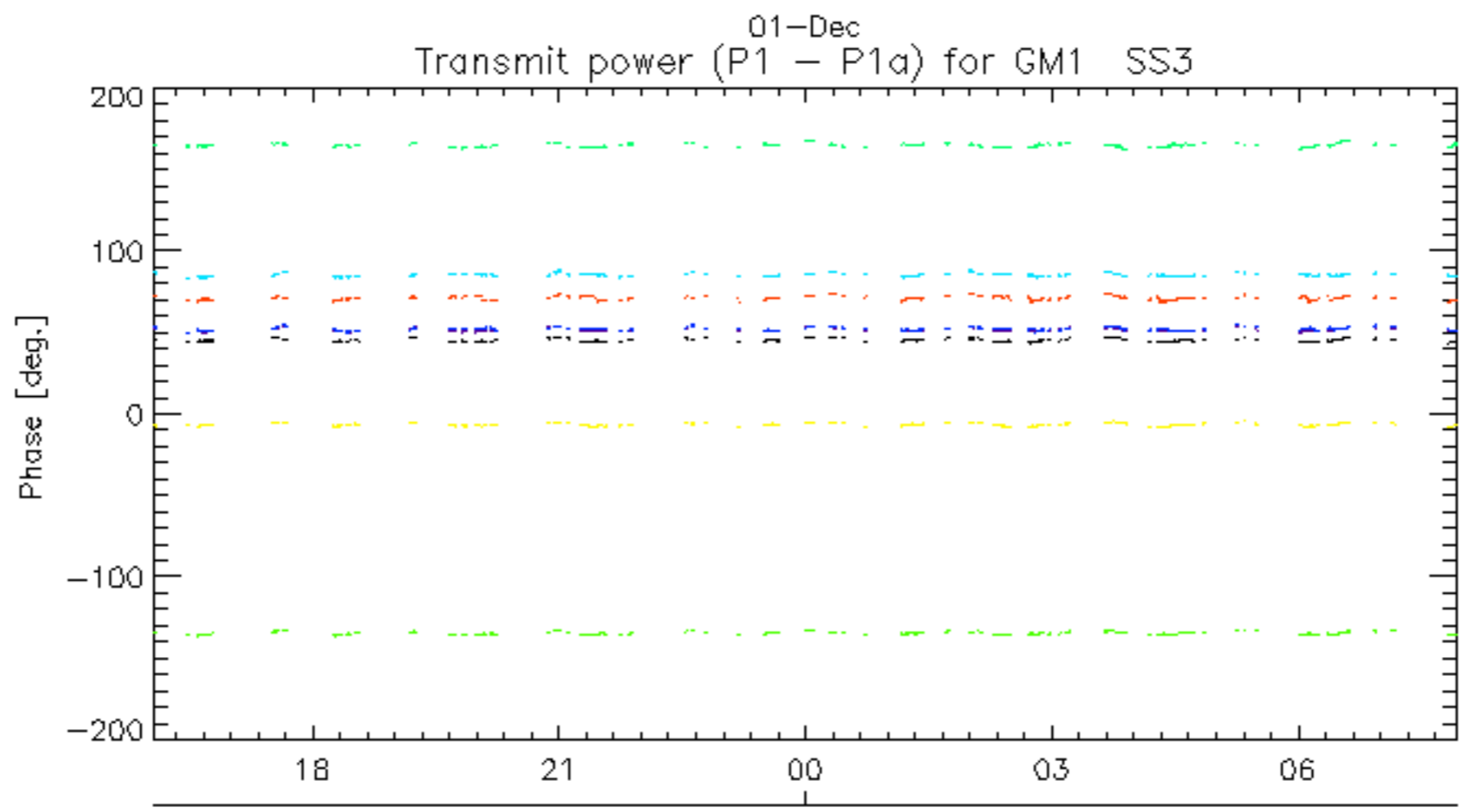
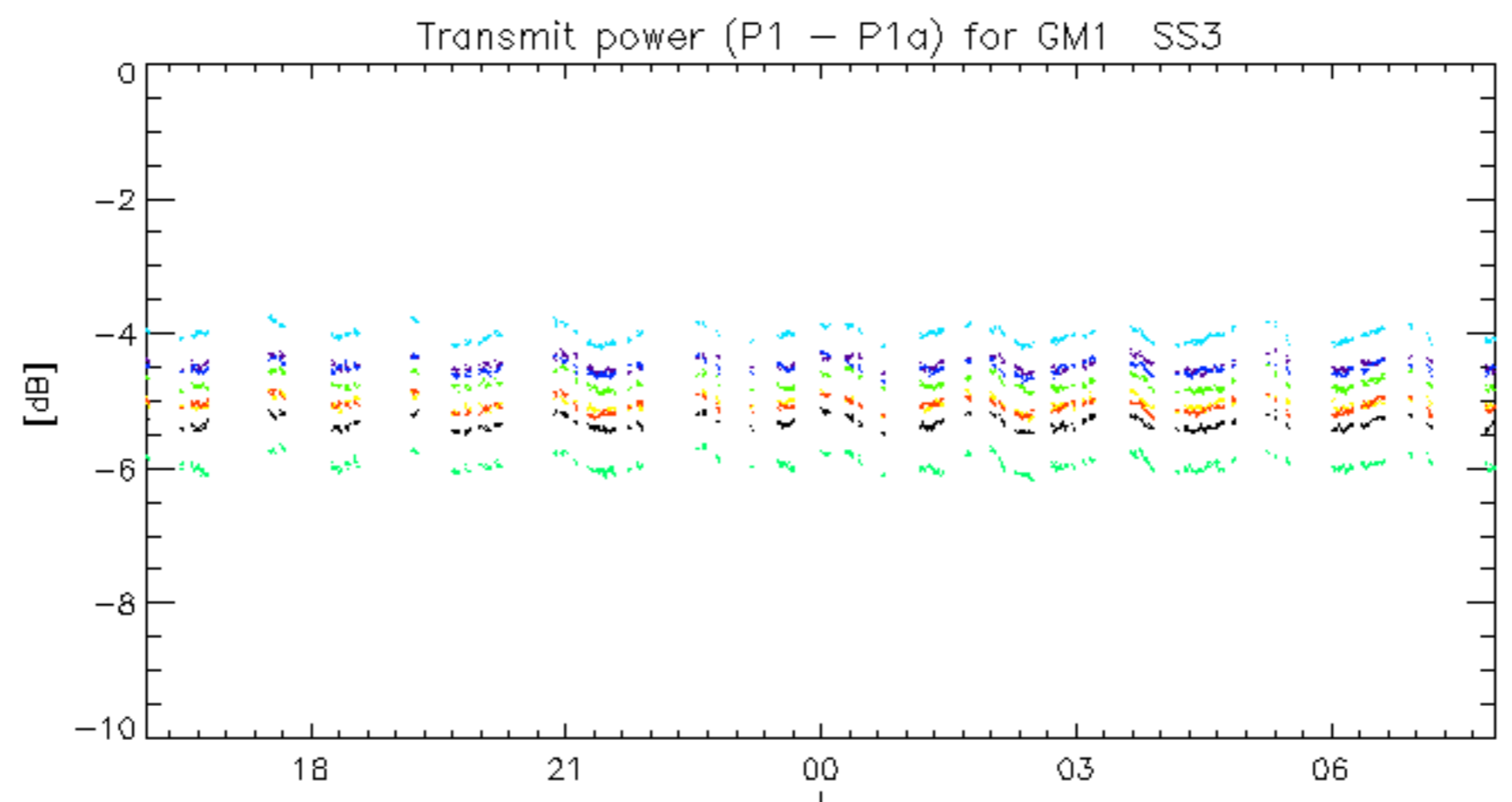




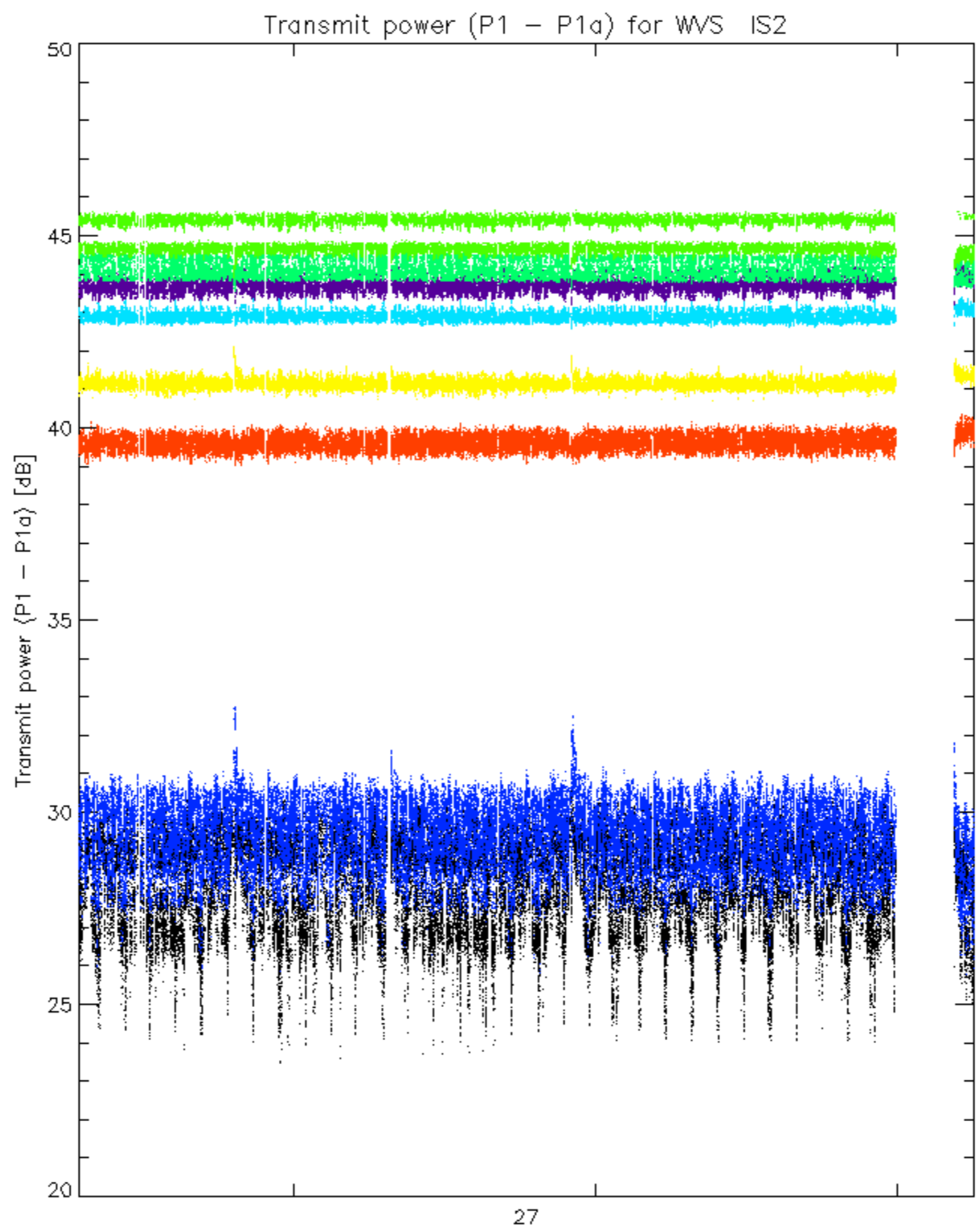


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

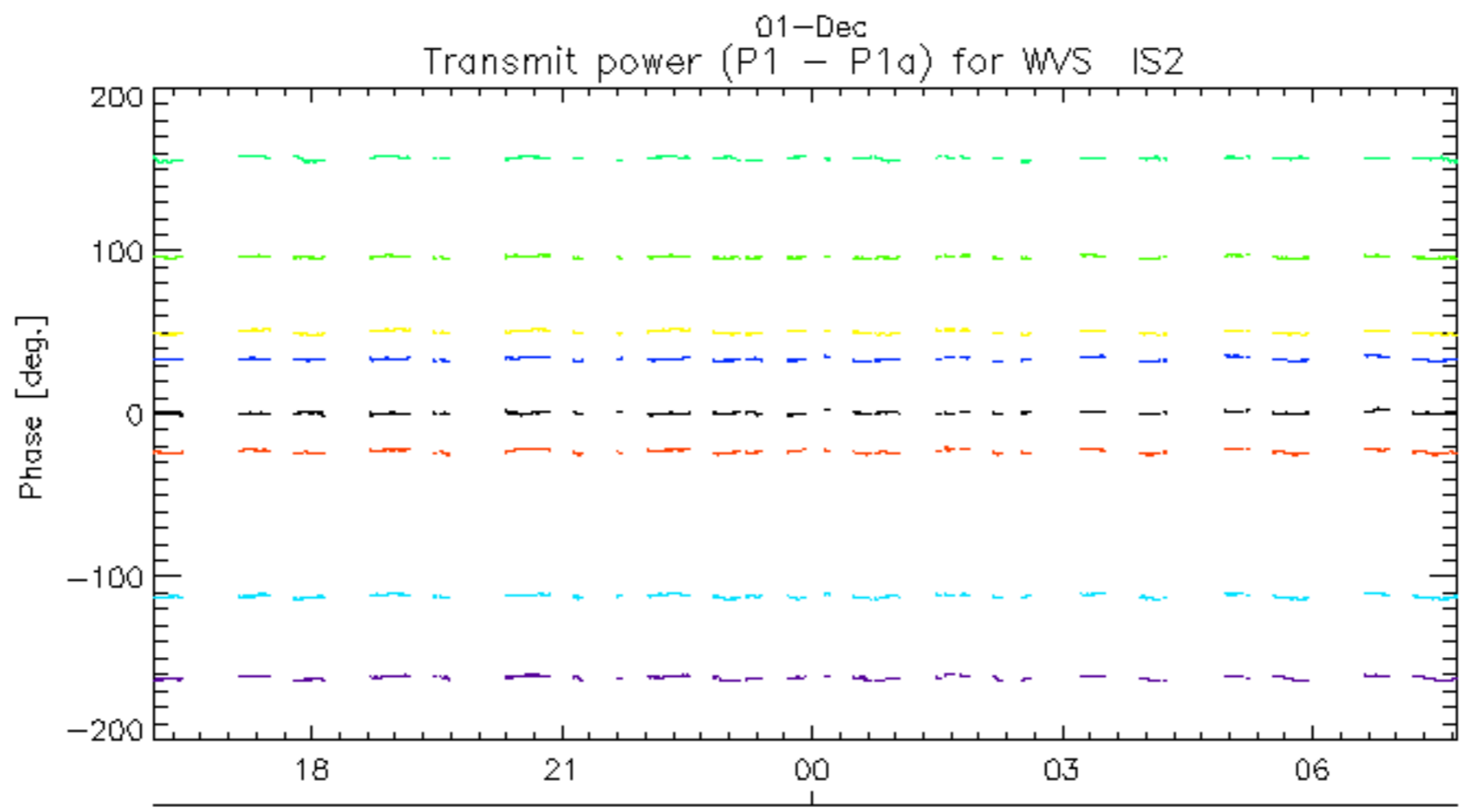
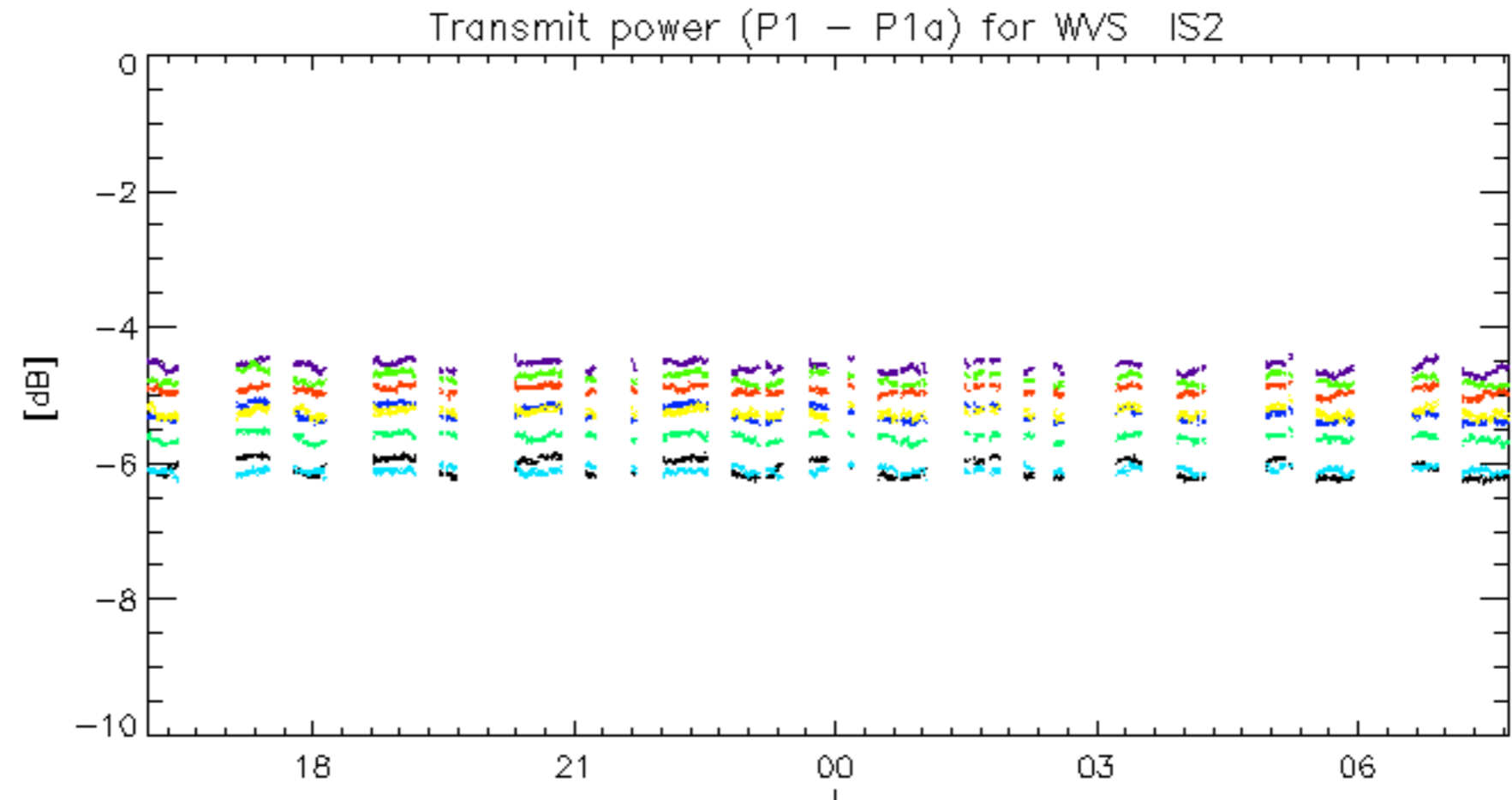




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No unavailabilities during the reported period.