

# PRELIMINARY REPORT OF 061219

last update on Tue Dec 19 16:37:11 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 2006-12-18 00:00:00 to 2006-12-19 16:37:11

PDHS-K
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AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	42	54	33	12	69
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	42	54	33	12	69
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	54	33	12	69
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	54	33	12	69

## 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	20061216 204905
H	20061211 050036

### 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"/>

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## 4 - Internal calibration Results

No anomalies observed.

### 4.1 - Daily statistics

#### 4.1.1 - Evolution for WVS

##### Evolution of cal pulses for WVS

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#### 4.1.2 - Evolution for GM1

##### Evolution of cal pulses for GM1

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### 4.2 - Cyclic statistics

#### 4.2.1 - Evolution for WVS

##### Evolution of cal pulses for WVS

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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	-3.964044	0.008204	0.012453
7	P1	-3.149537	0.024421	0.017421
11	P1	-4.124945	0.026255	0.028064
15	P1	-6.317917	0.016038	-0.044546
19	P1	-3.640239	0.006130	-0.060228
22	P1	-4.653618	0.013683	-0.004811
26	P1	-3.954072	0.010018	-0.024939
30	P1	-5.885672	0.009604	-0.026115
3	P1	-16.546677	0.248411	0.004951
7	P1	-17.293295	0.183805	-0.046166
11	P1	-17.192686	0.473075	0.066164
15	P1	-13.061165	0.140104	0.027350
19	P1	-14.969214	0.092721	-0.096534
22	P1	-15.818666	0.557898	-0.022799
26	P1	-15.062268	0.194287	-0.123829
30	P1	-17.501680	0.480651	-0.101811

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.814945	0.095569	0.067925
7	P2	-21.730768	0.097234	0.022762
11	P2	-15.610167	0.106695	0.151763
15	P2	-7.117688	0.111122	0.022092
19	P2	-9.189362	0.109124	-0.013535
22	P2	-18.234591	0.101609	0.013733
26	P2	-16.575151	0.116901	-0.062392
30	P2	-19.464268	0.092116	0.036781

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.244199	0.009146	0.020566
7	P3	-8.244199	0.009146	0.020566
11	P3	-8.244199	0.009146	0.020566

15	P3	-8.244199	0.009146	0.020566
19	P3	-8.244199	0.009146	0.020566
22	P3	-8.244199	0.009146	0.020566
26	P3	-8.244240	0.009149	0.020807
30	P3	-8.244240	0.009149	0.020807

#### 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	-3.916317	0.017908	-0.027434
7	P1	-2.485543	0.036204	0.038849
11	P1	-2.854022	0.019312	-0.013513
15	P1	-3.686470	0.033339	-0.021269
19	P1	-3.538715	0.018051	-0.040253
22	P1	-5.027740	0.023520	-0.023048
26	P1	-6.021170	0.028558	-0.036590
30	P1	-5.338775	0.040184	-0.026879
3	P1	-11.742006	0.088330	-0.032417
7	P1	-10.060122	0.112309	-0.050277
11	P1	-10.335452	0.141153	-0.060696
15	P1	-10.715345	0.125975	0.012600
19	P1	-15.719208	0.120074	-0.036580
22	P1	-21.572960	1.435163	0.019128
26	P1	-16.064743	0.339041	0.038228
30	P1	-17.885178	0.372105	-0.051364

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.464886	0.127169	-0.014516
7	P2	-22.229706	0.276900	0.008102
11	P2	-10.906779	0.150565	0.135472
15	P2	-4.984823	0.267569	-0.002935
19	P2	-6.960157	0.253338	-0.025244
22	P2	-8.254929	0.147052	0.018796
26	P2	-24.319592	0.201945	0.022099
30	P2	-21.948366	0.171755	-0.016481

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.092060	0.004612	0.022213
7	P3	-8.092137	0.004598	0.022270
11	P3	-8.092119	0.004608	0.022346
15	P3	-8.091935	0.004605	0.022588
19	P3	-8.092080	0.004609	0.022497
22	P3	-8.092050	0.004597	0.022432
26	P3	-8.092053	0.004610	0.022093
30	P3	-8.091927	0.004593	0.021695

## 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	0.000556400
	stdev	1.71237e-07
MEAN Q	mean	0.000513538
	stdev	2.16341e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138490
	stdev	0.00116996
STDEV Q	mean	0.138874
	stdev	0.00118927



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006121[789]

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_WSM_1PNPDE20061218_165907_000000852053_00499_25102_3527.N1	0	2
ASA_WSM_1PNPDE20061219_020903_000001152054_00003_25107_4095.N1	0	18



## 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"/>	

### 7.4 - Unbiased Doppler Error for GM1

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



### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

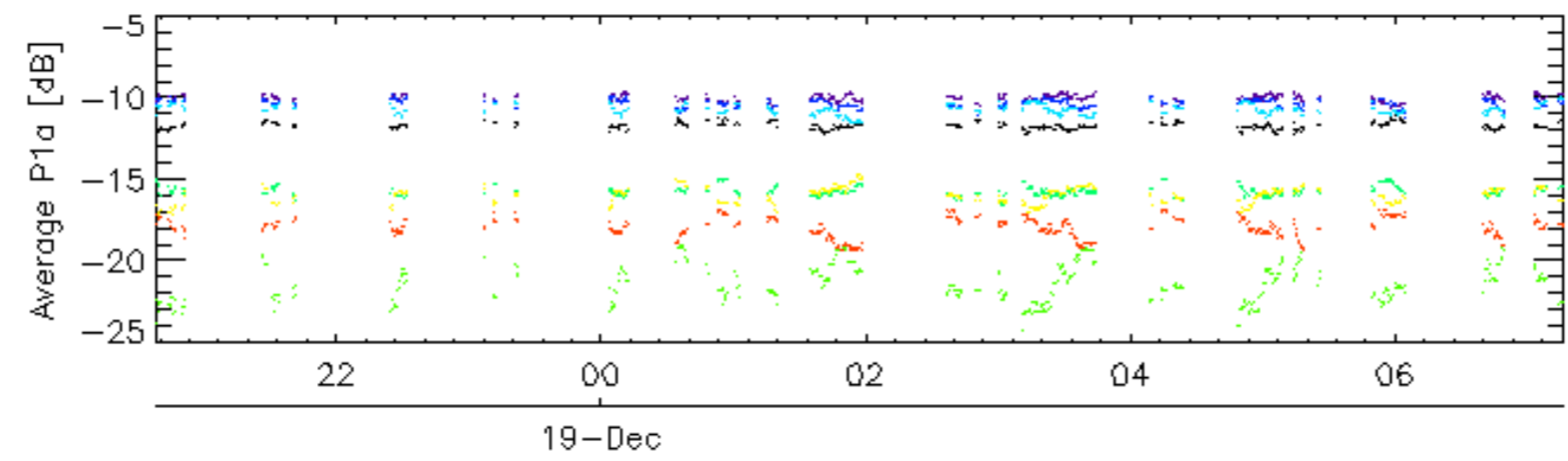
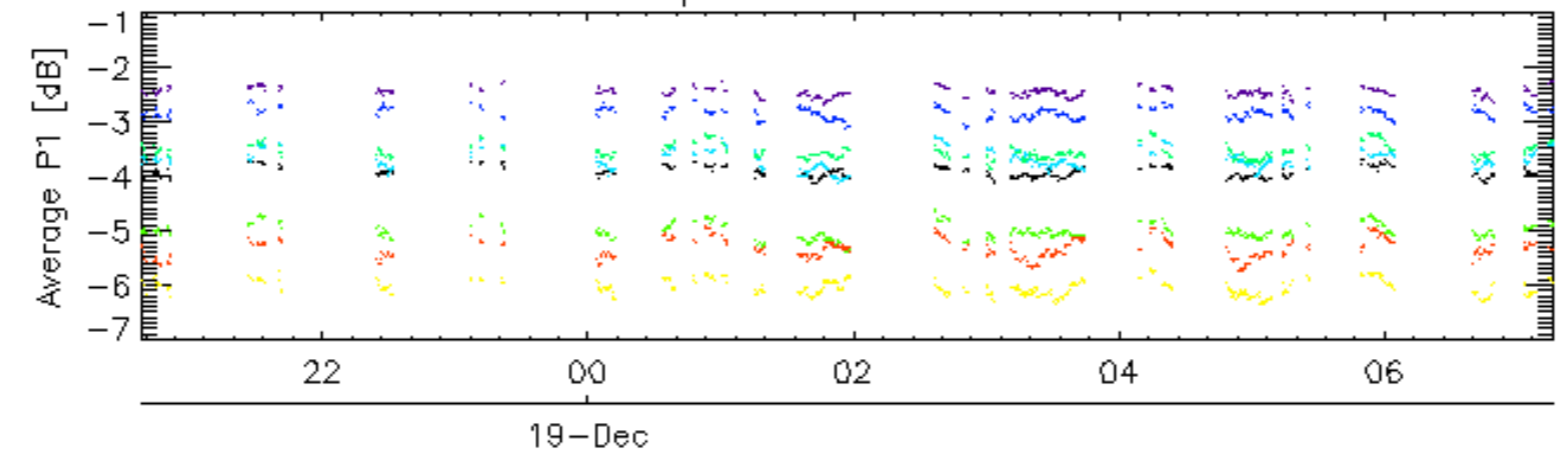
Ascending

Descending

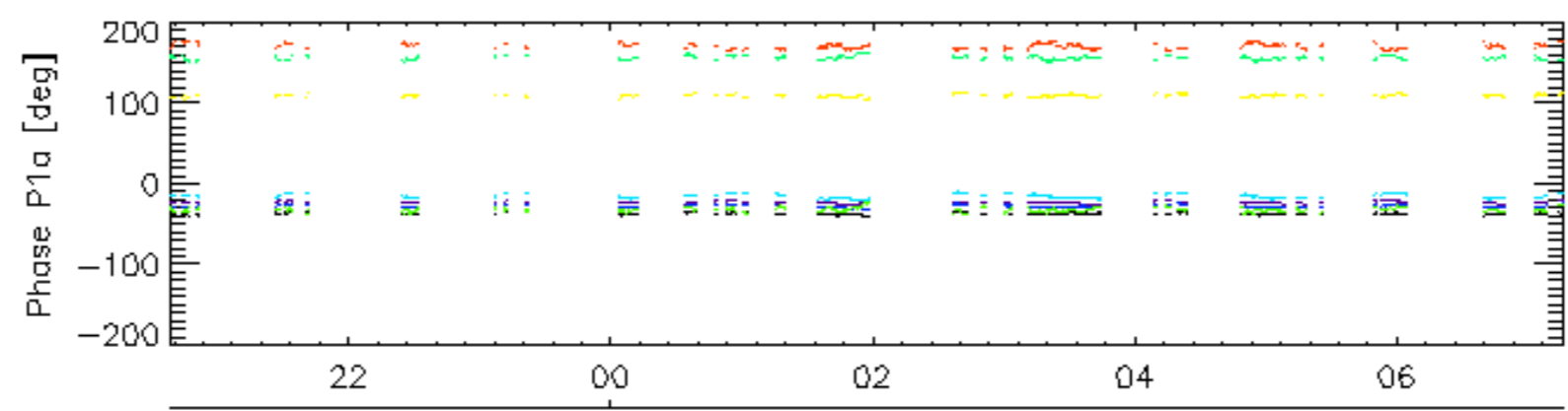
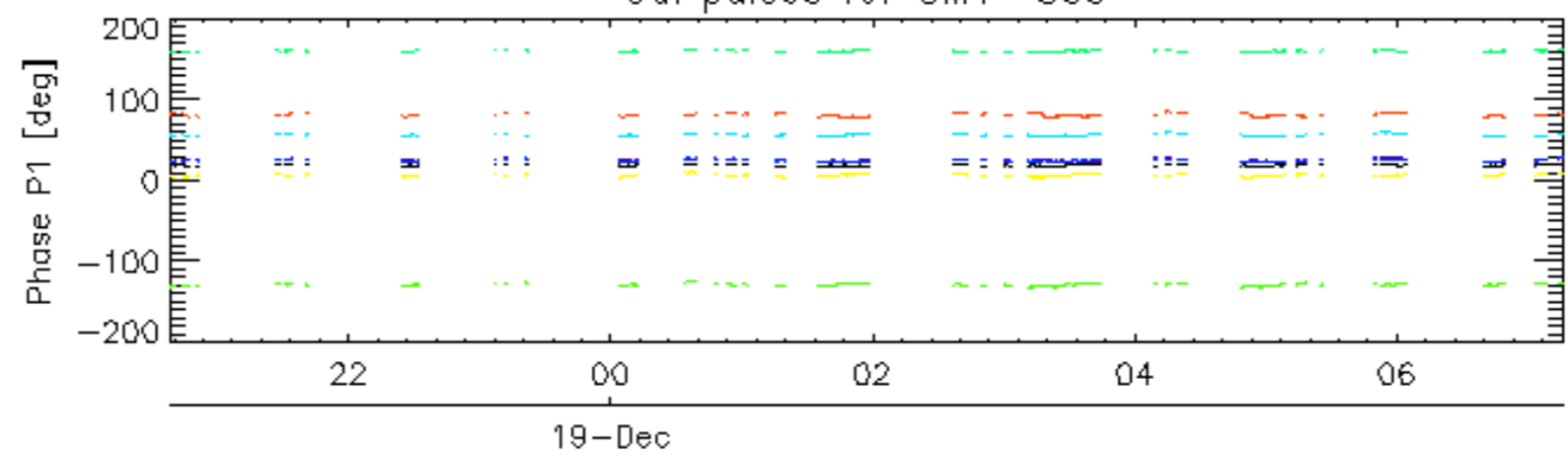
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

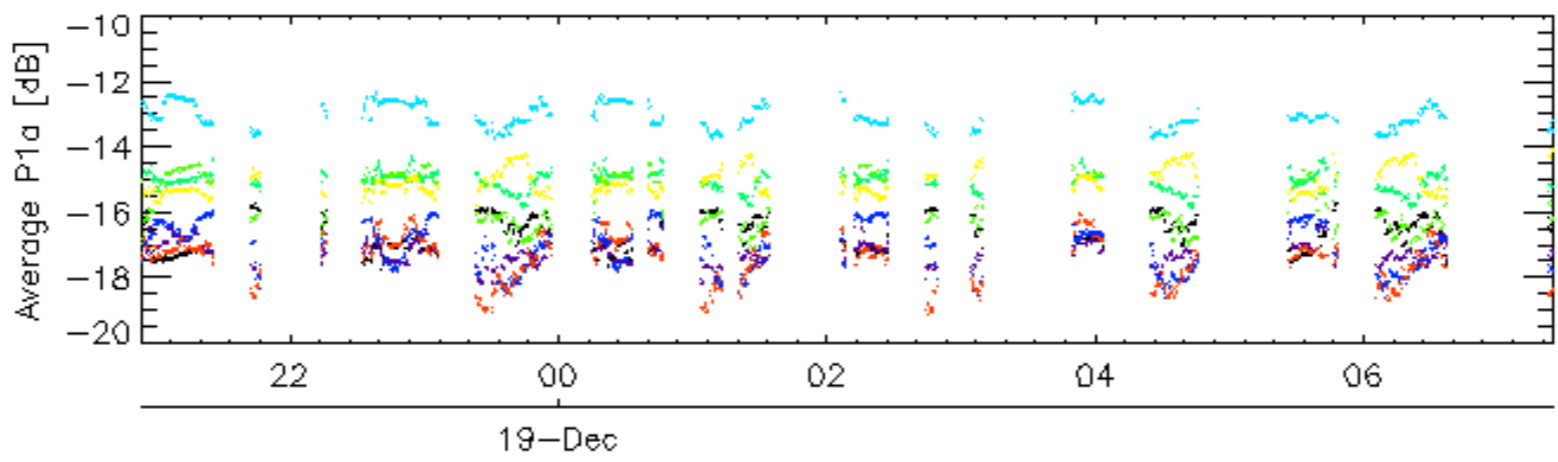
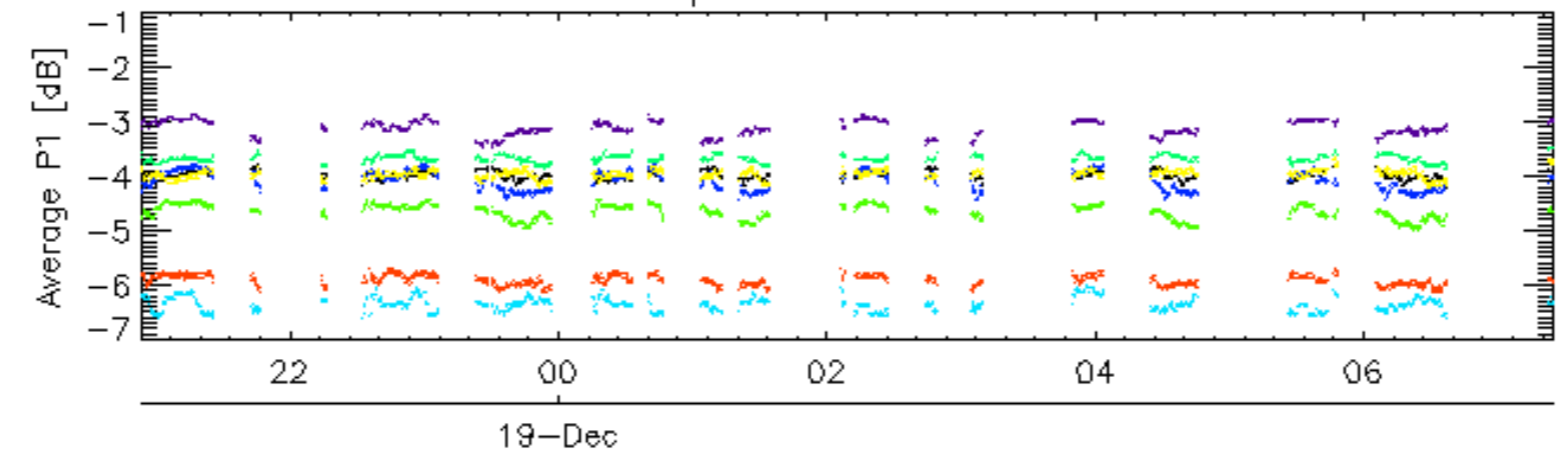


Cal pulses for GM1 SS3

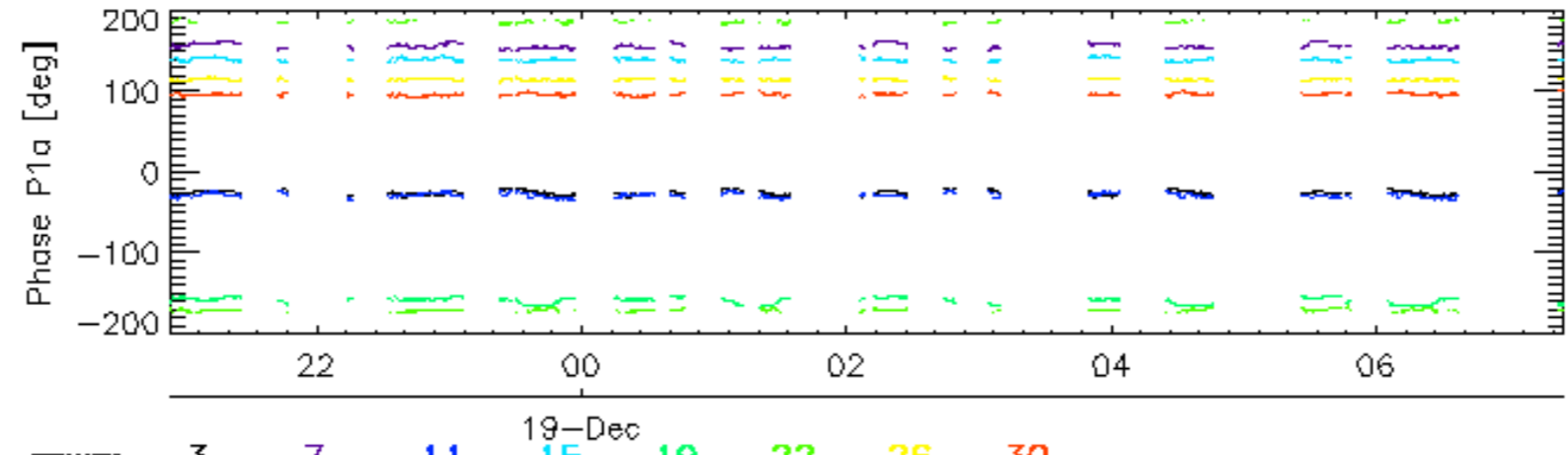
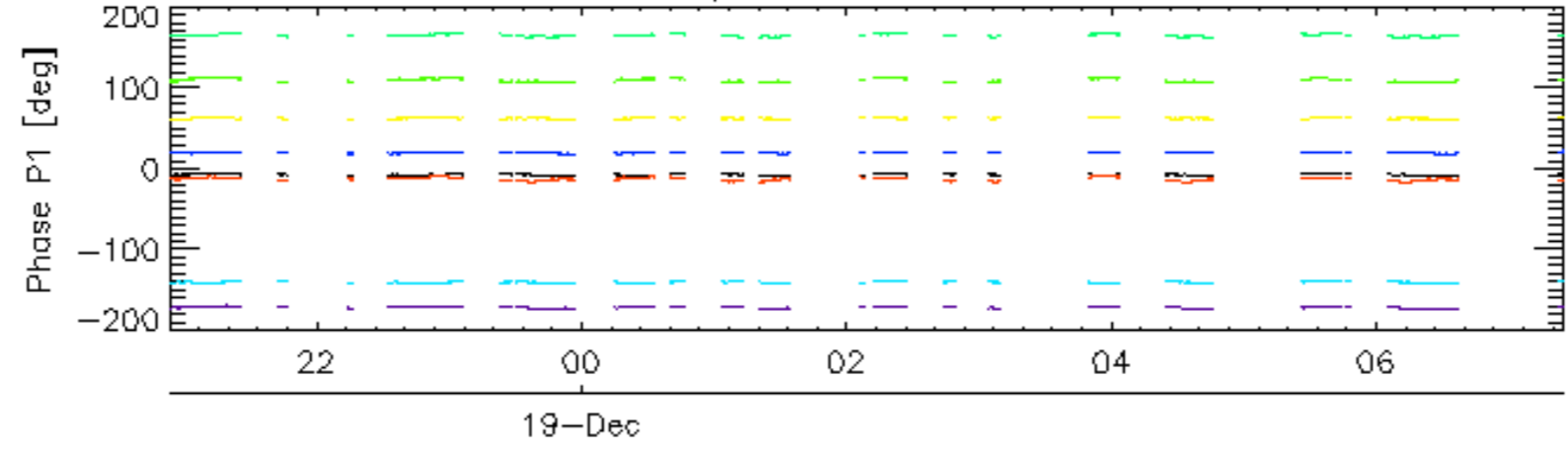


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

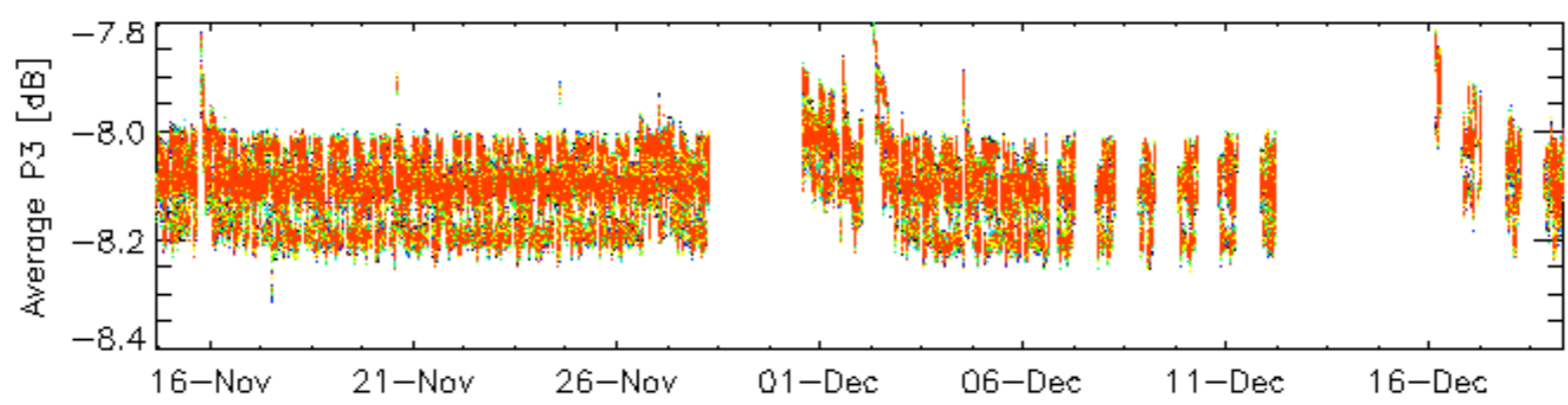
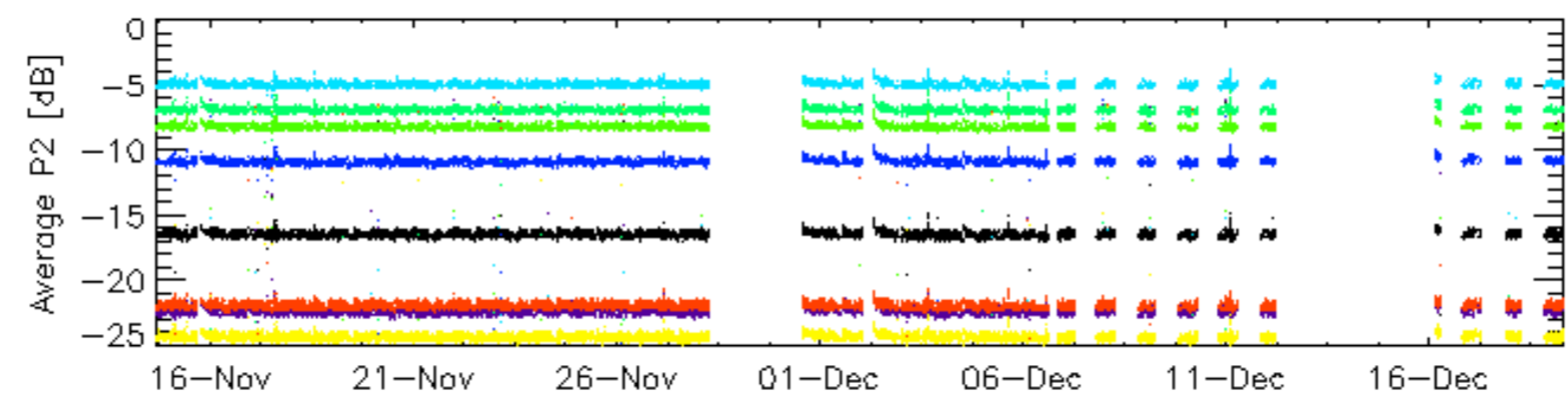
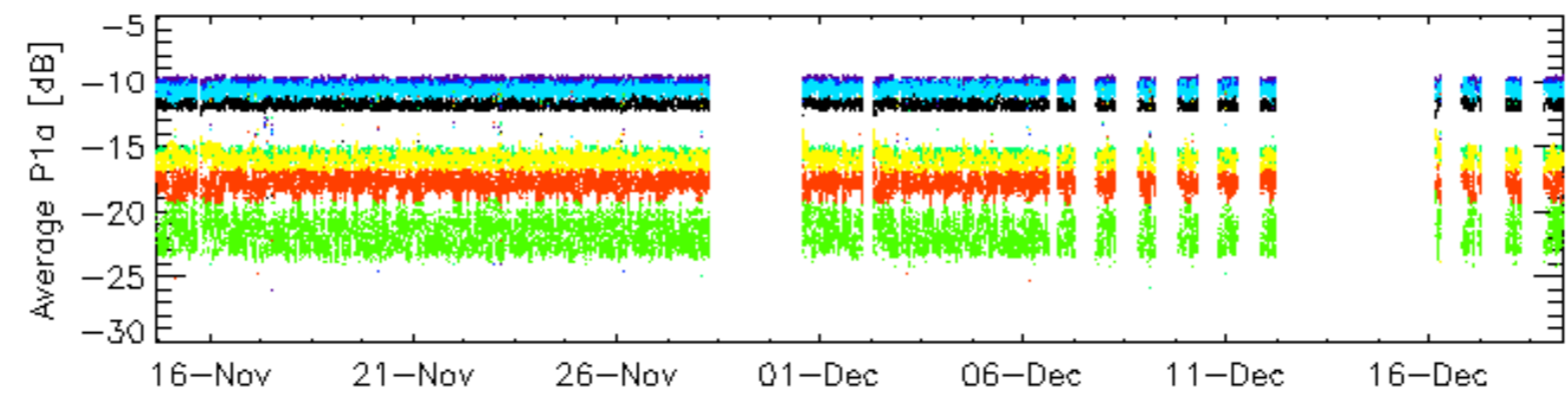
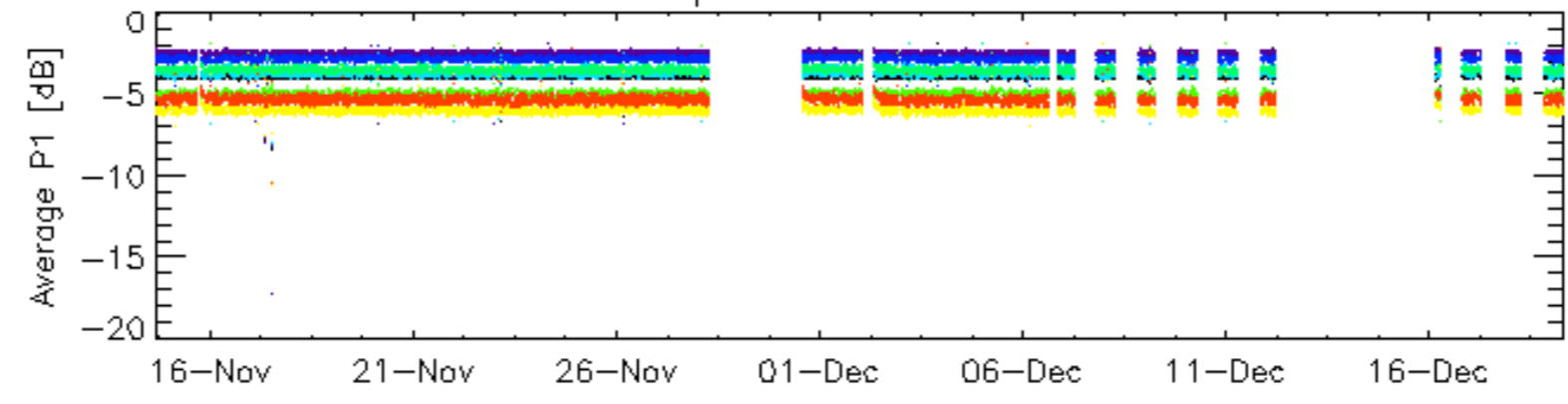


Cal pulses for WVS IS2



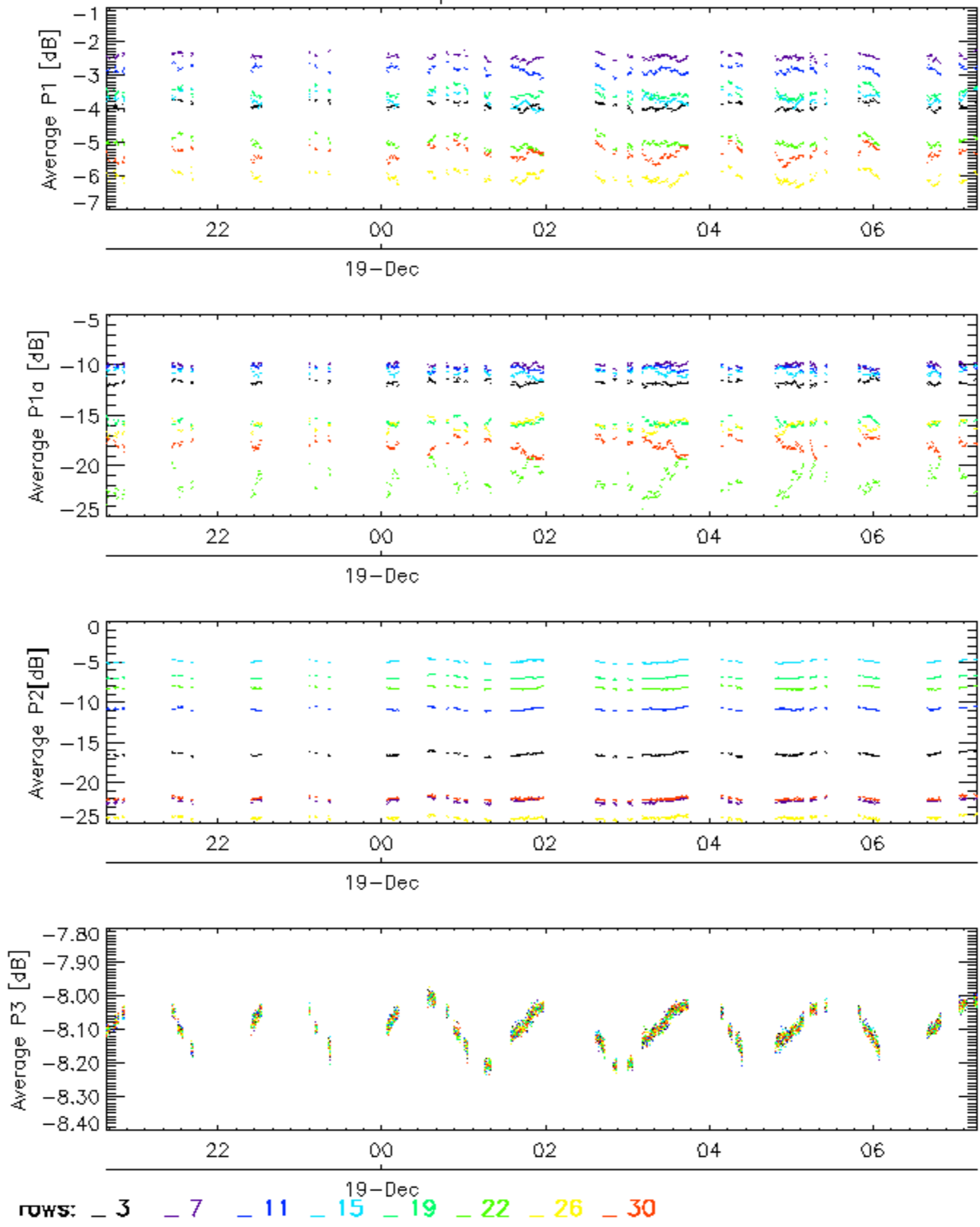
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

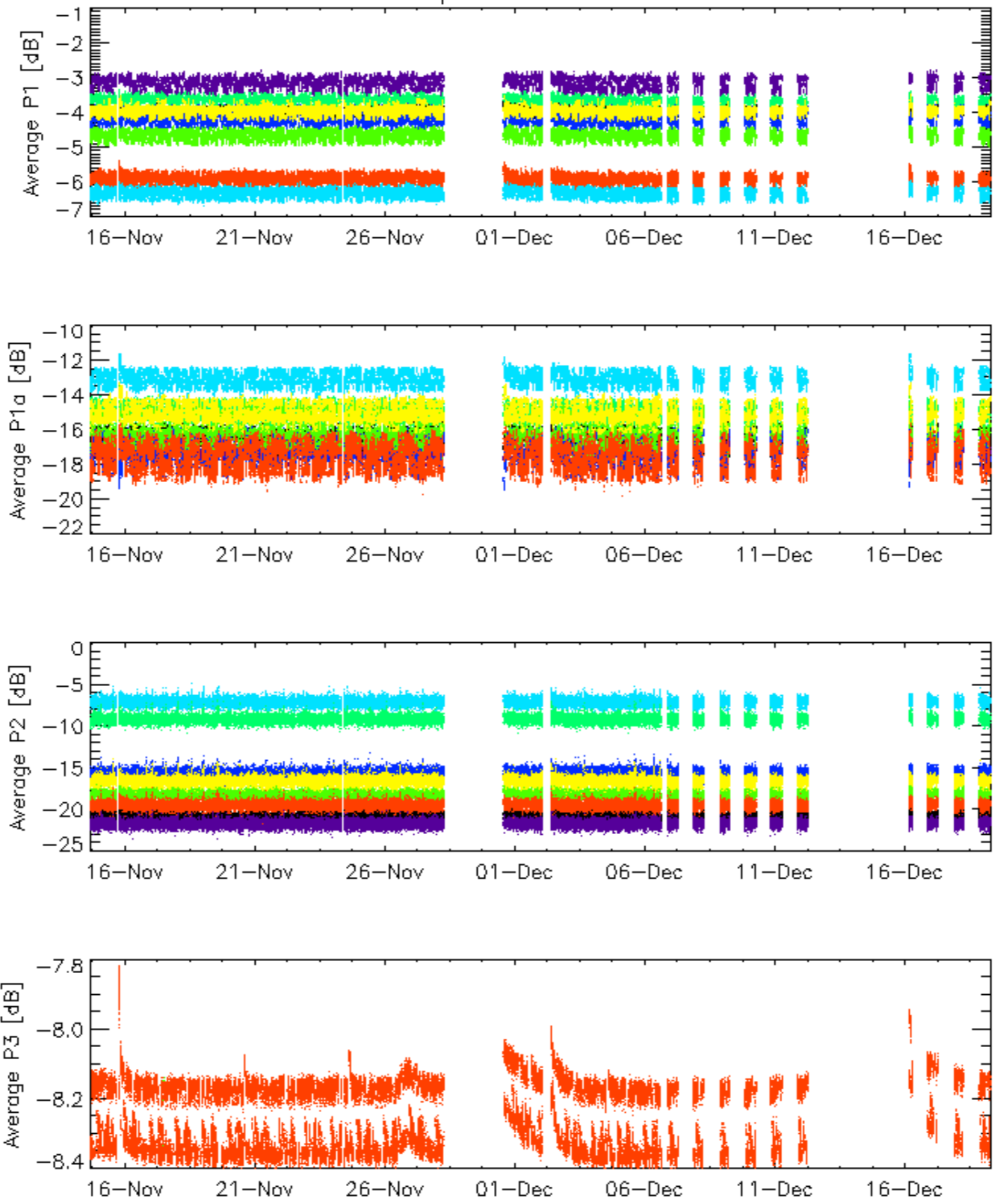


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

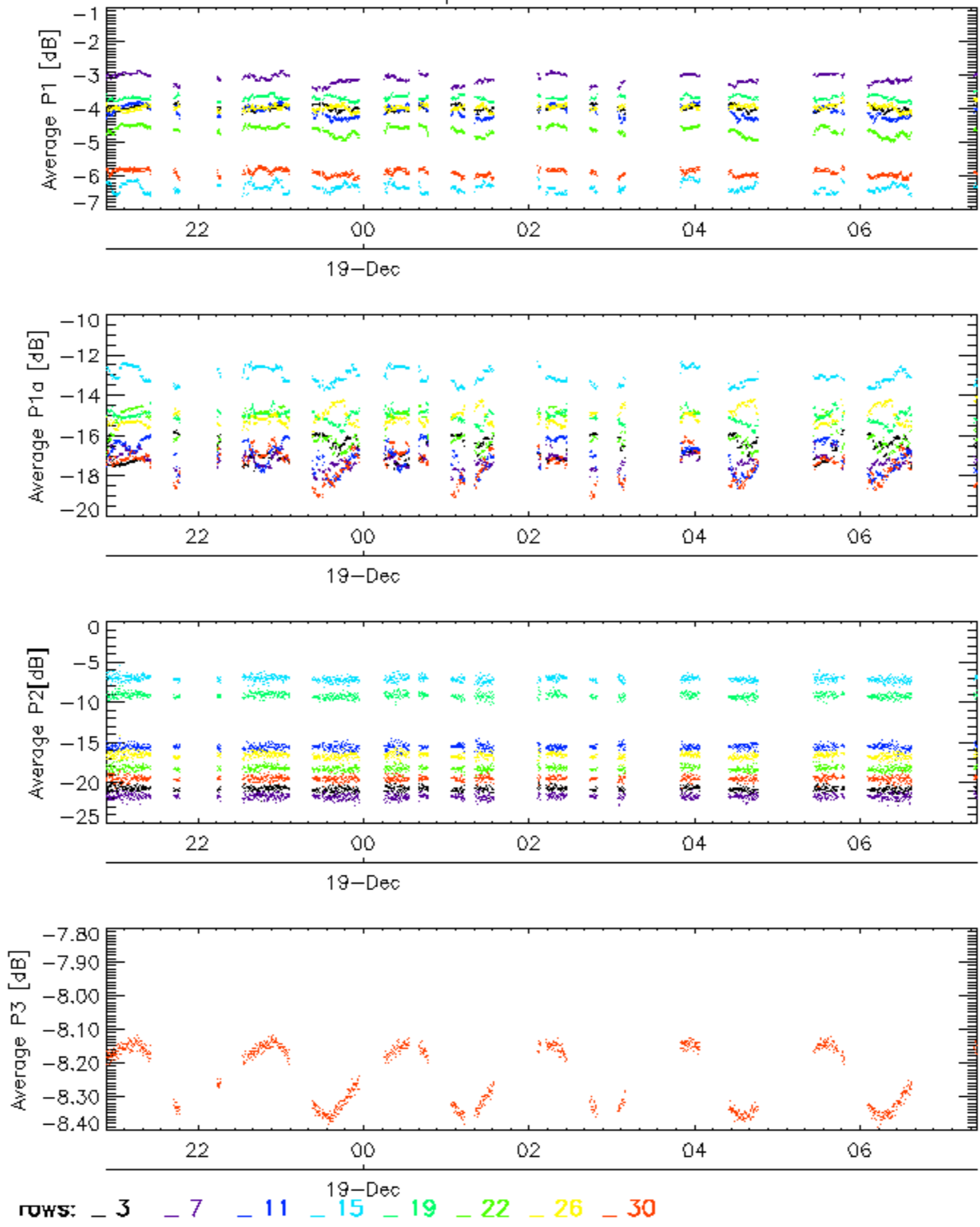


Cal pulses for WVS IS2



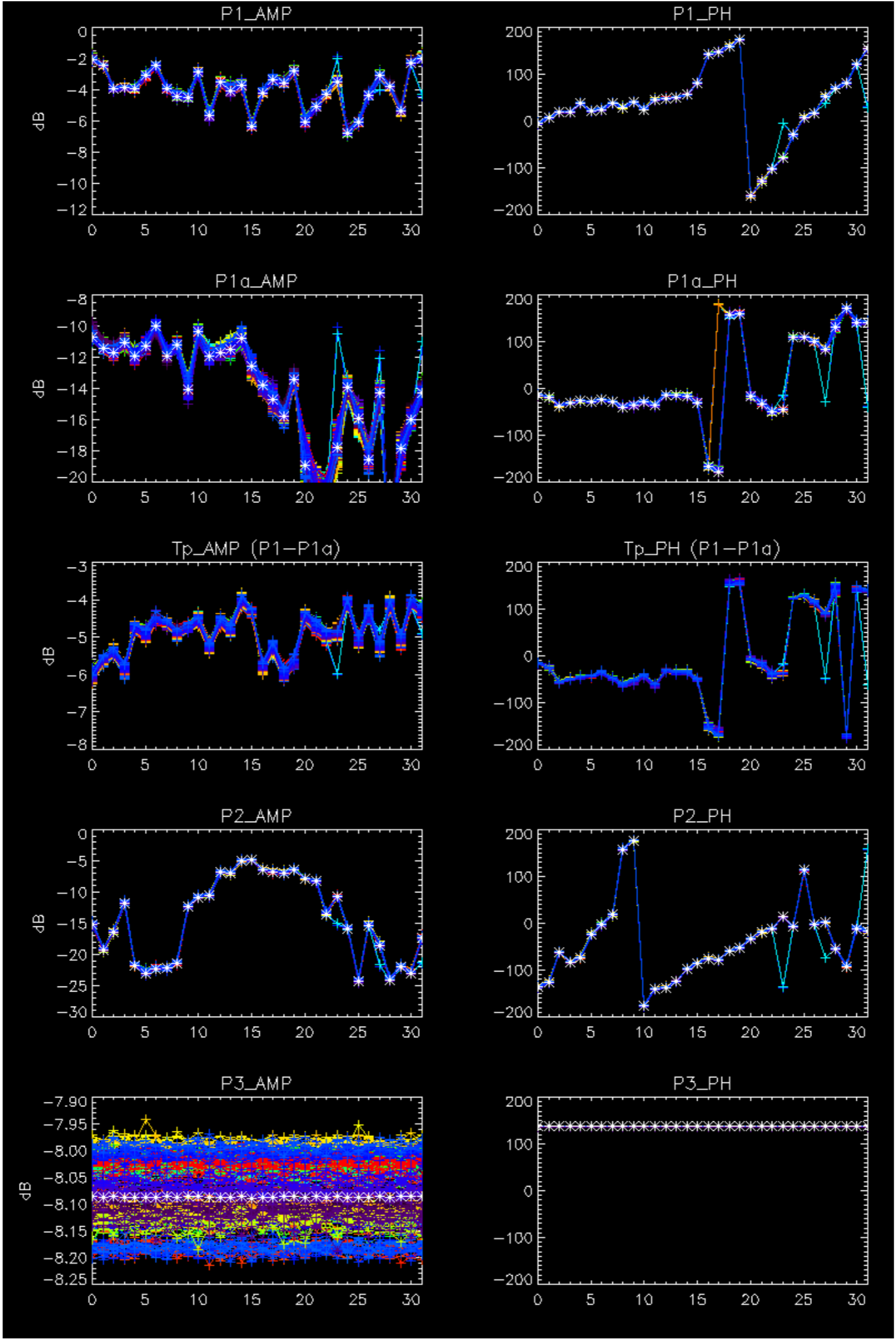
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

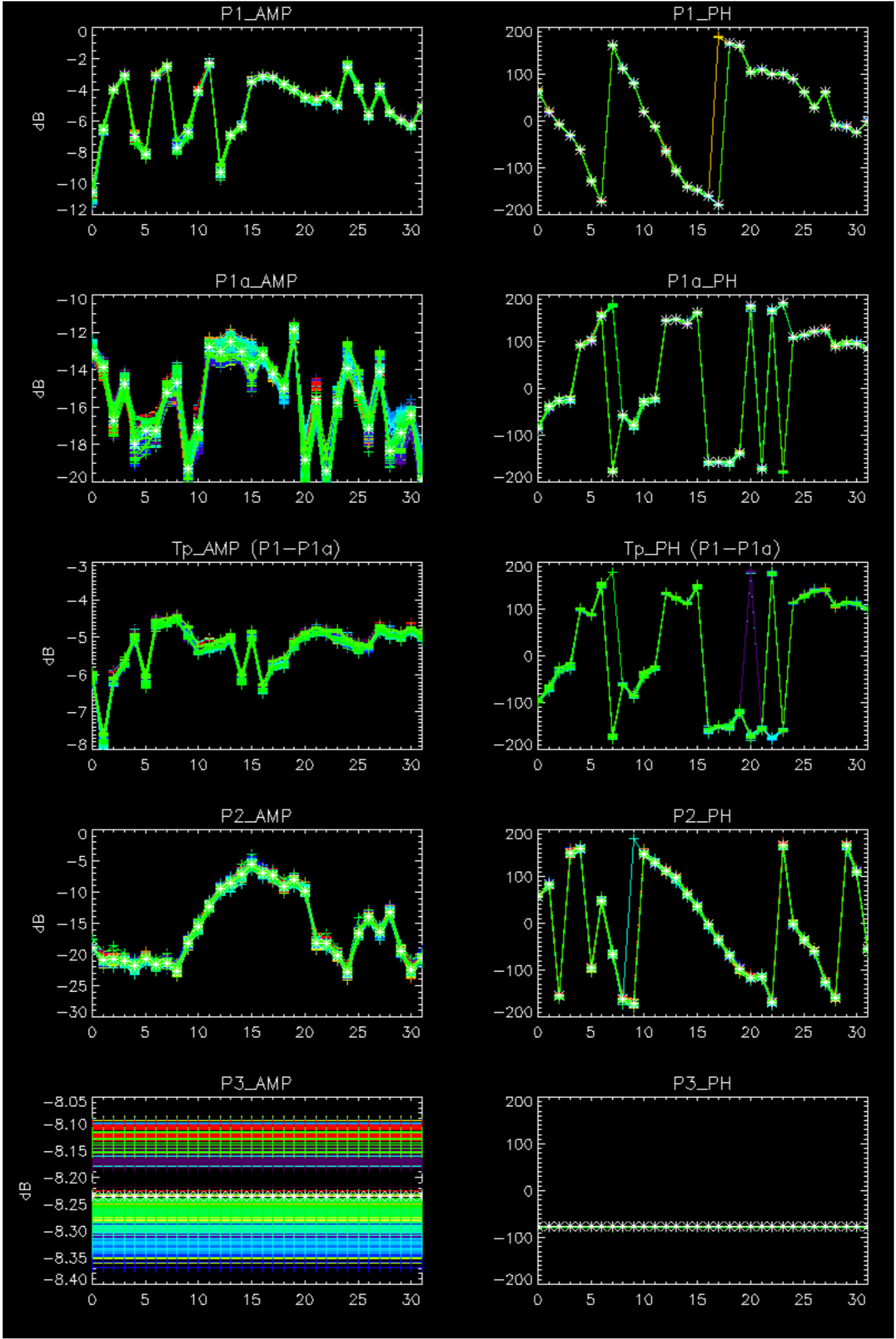
Cal pulses for WVS IS2



No anomalies observed.



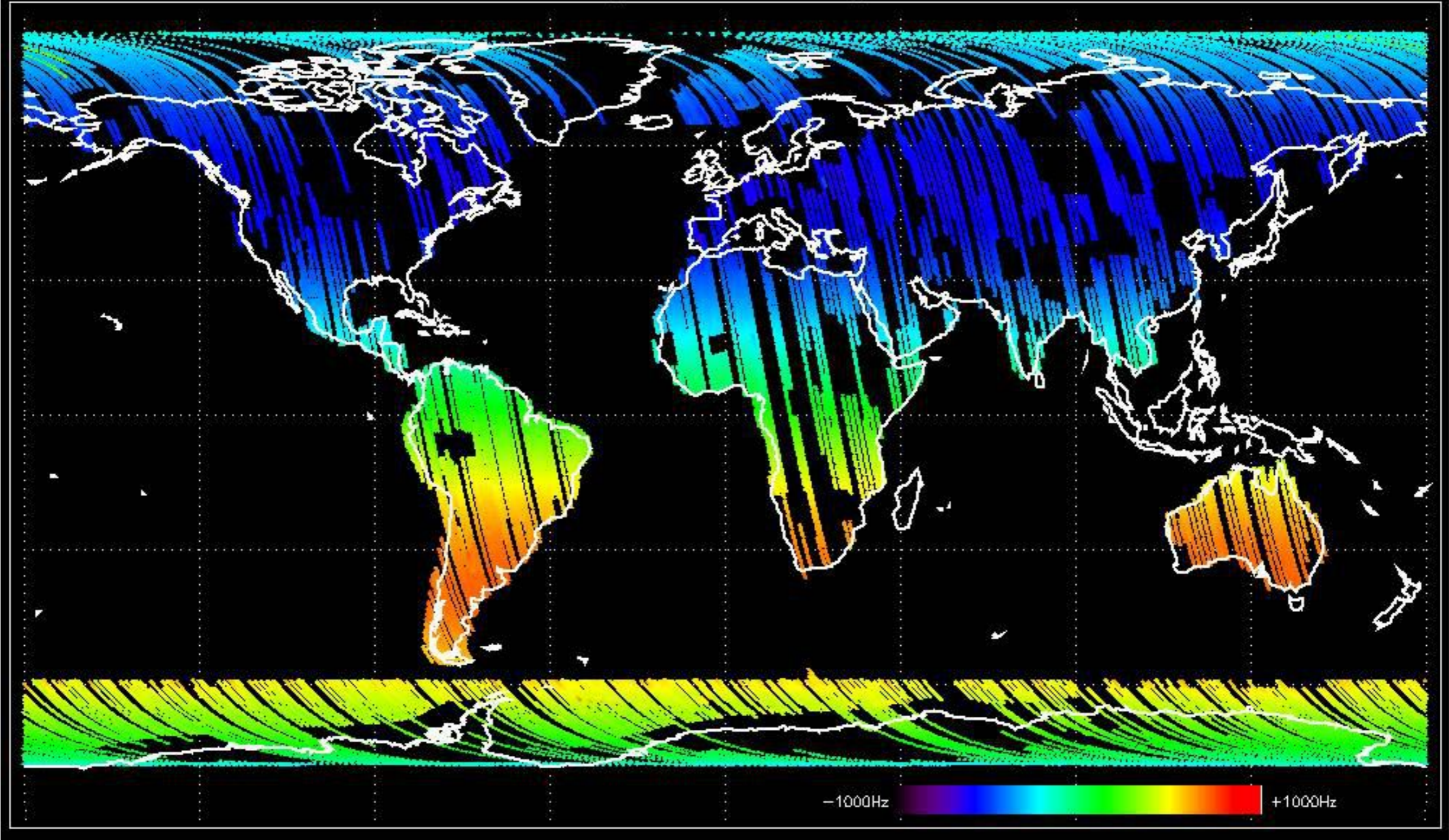




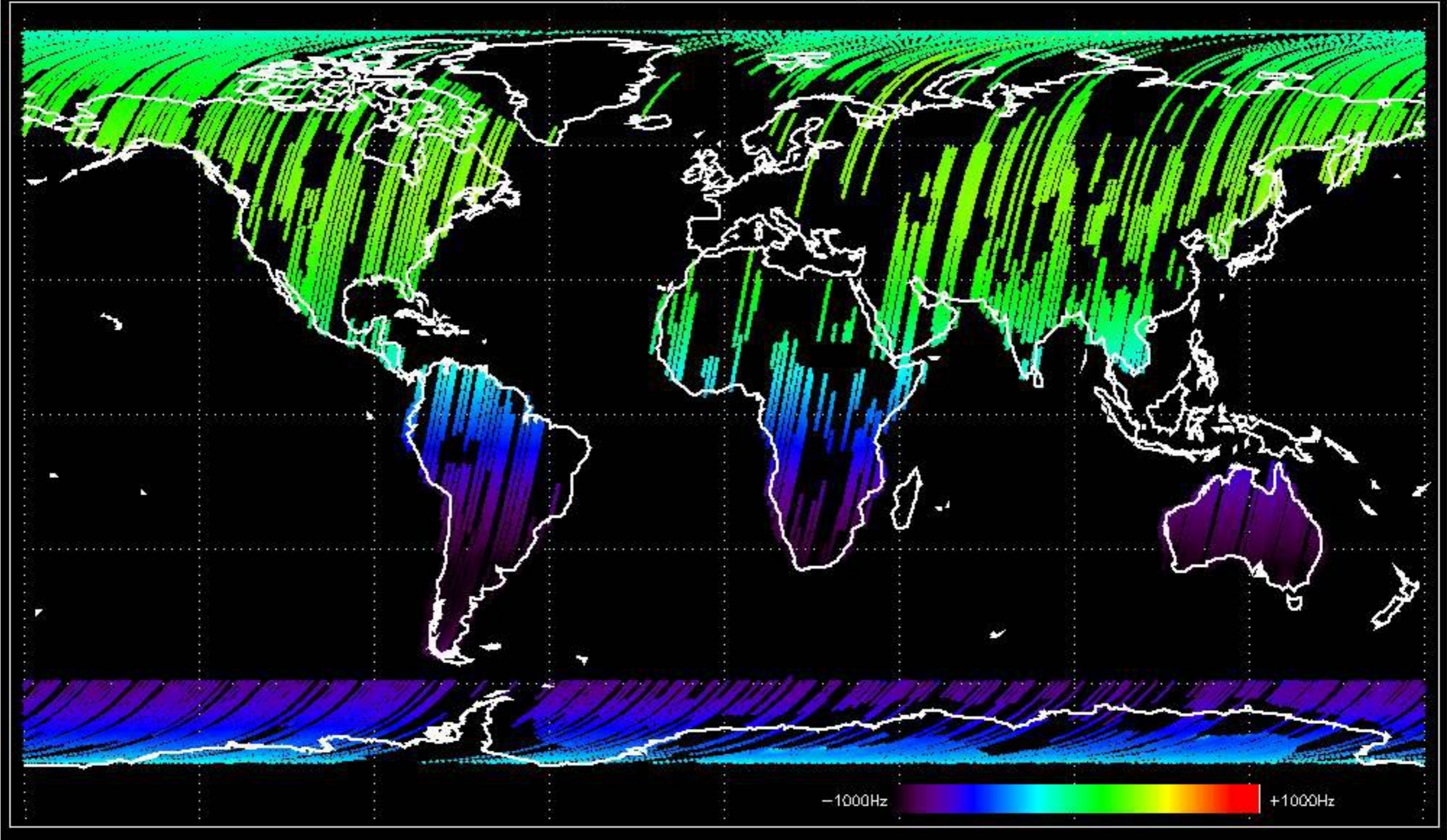
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



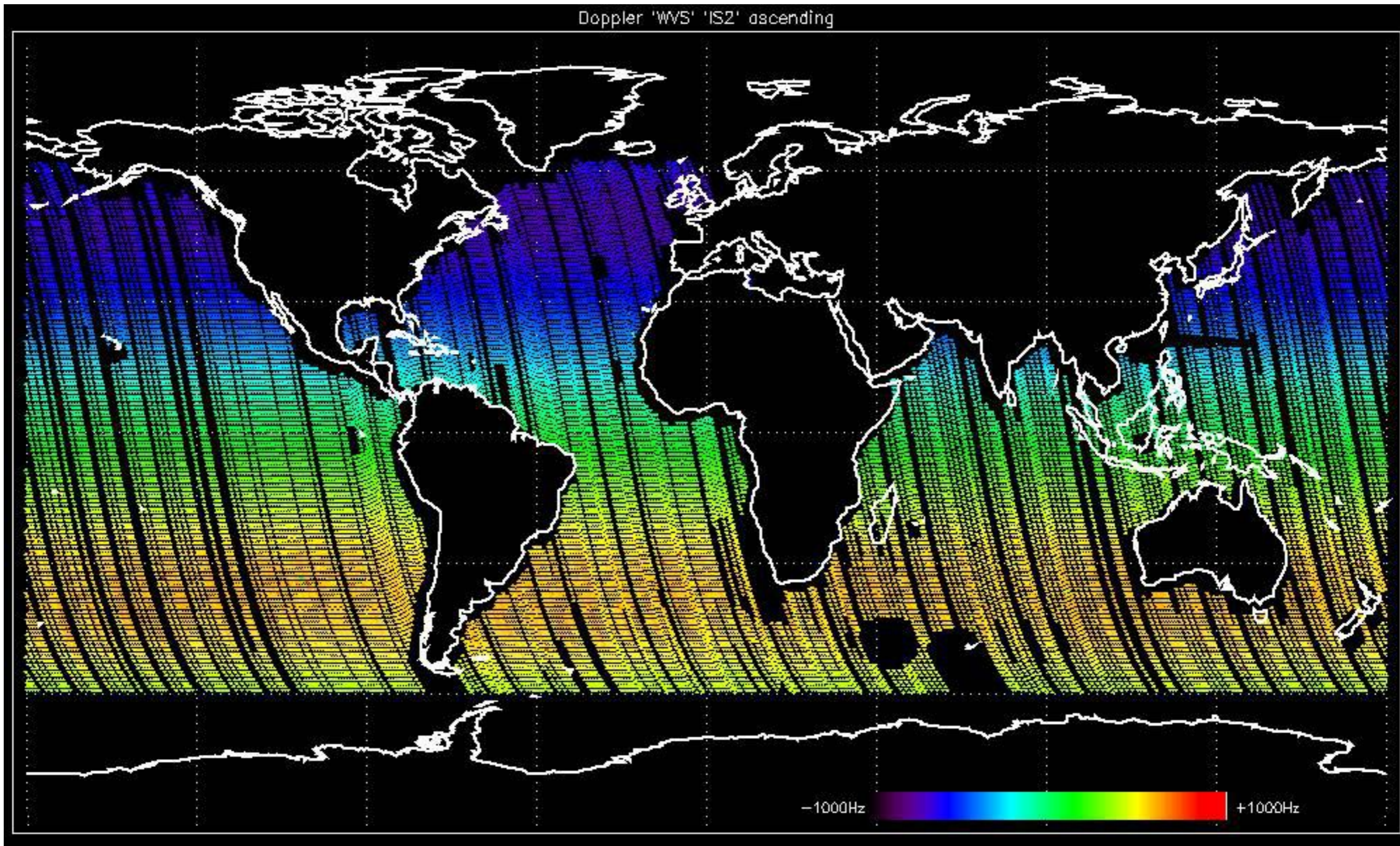
Doppler 'GM1' 'SS1' ascending



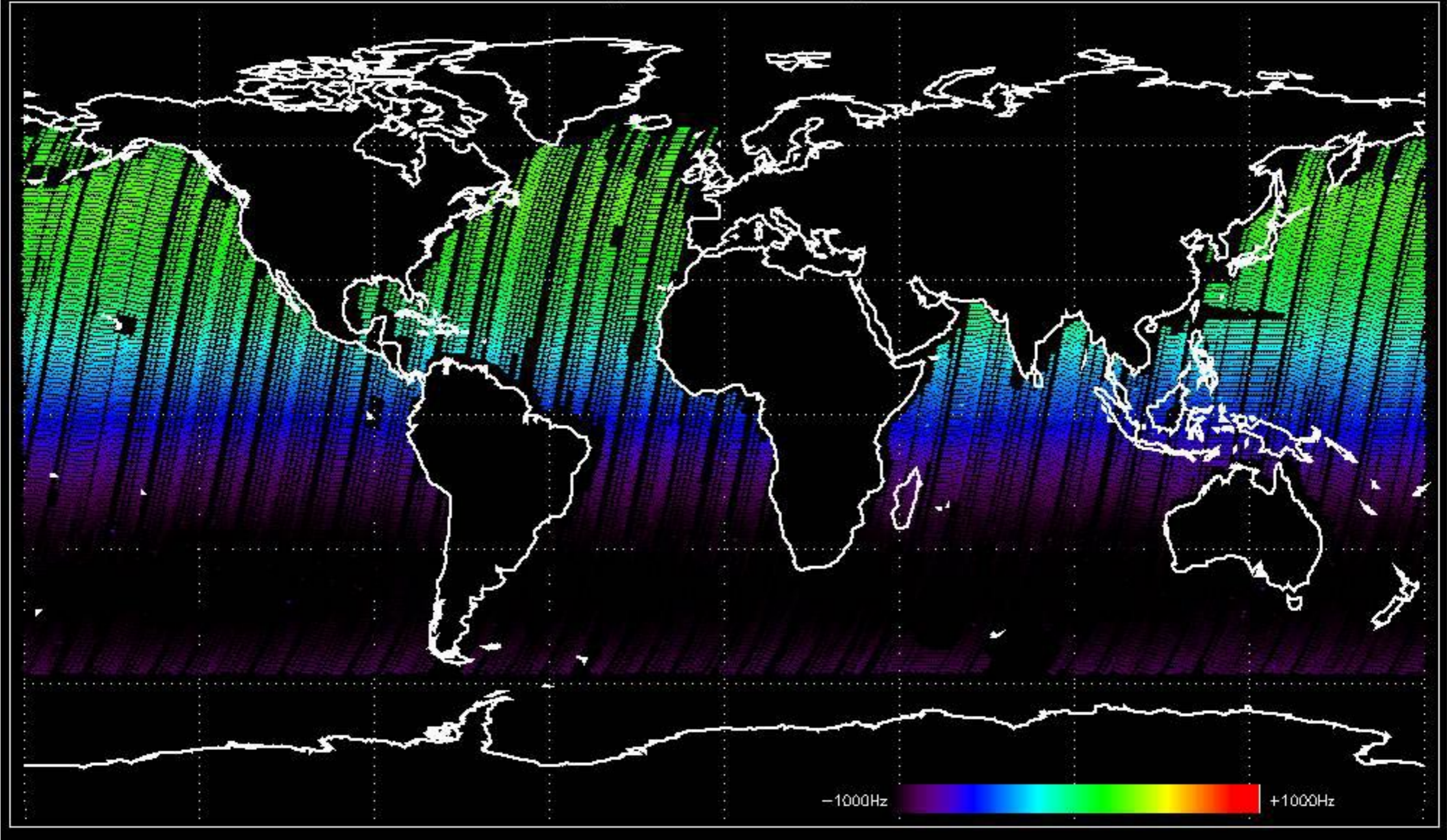
Doppler 'GM1' 'SS1' descending



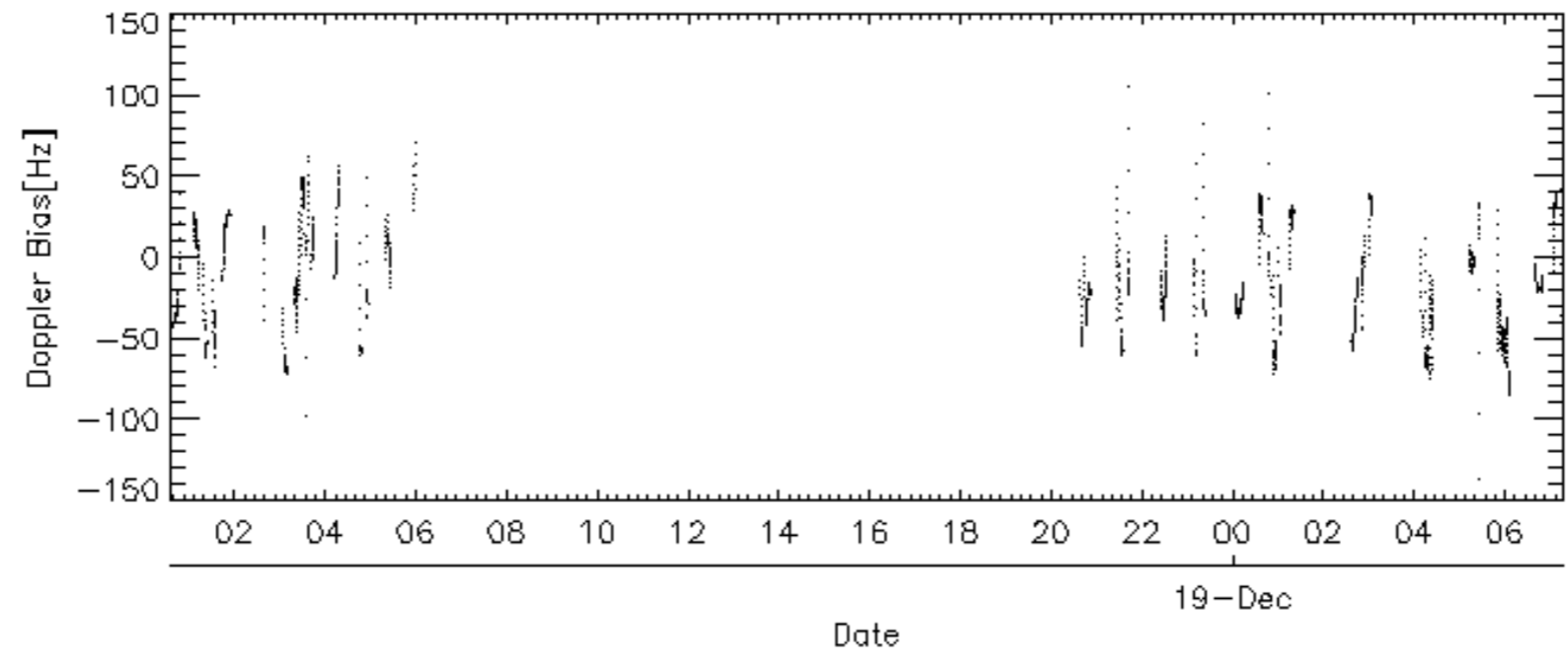
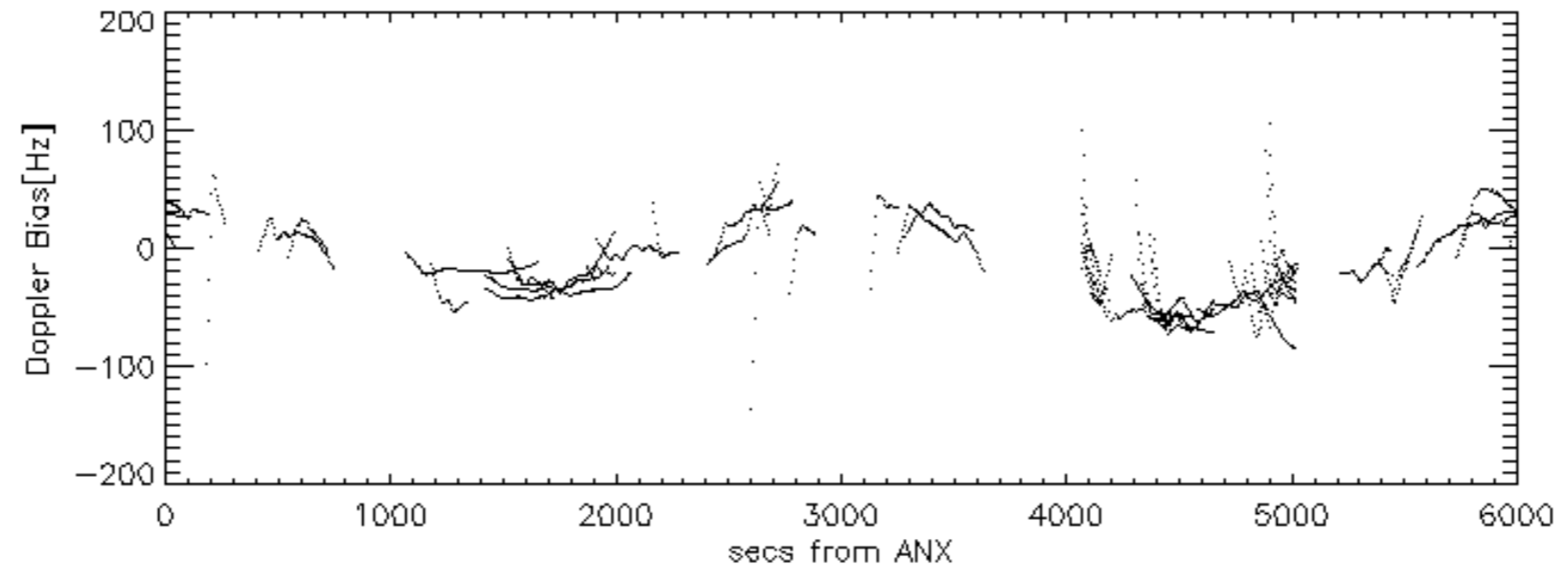
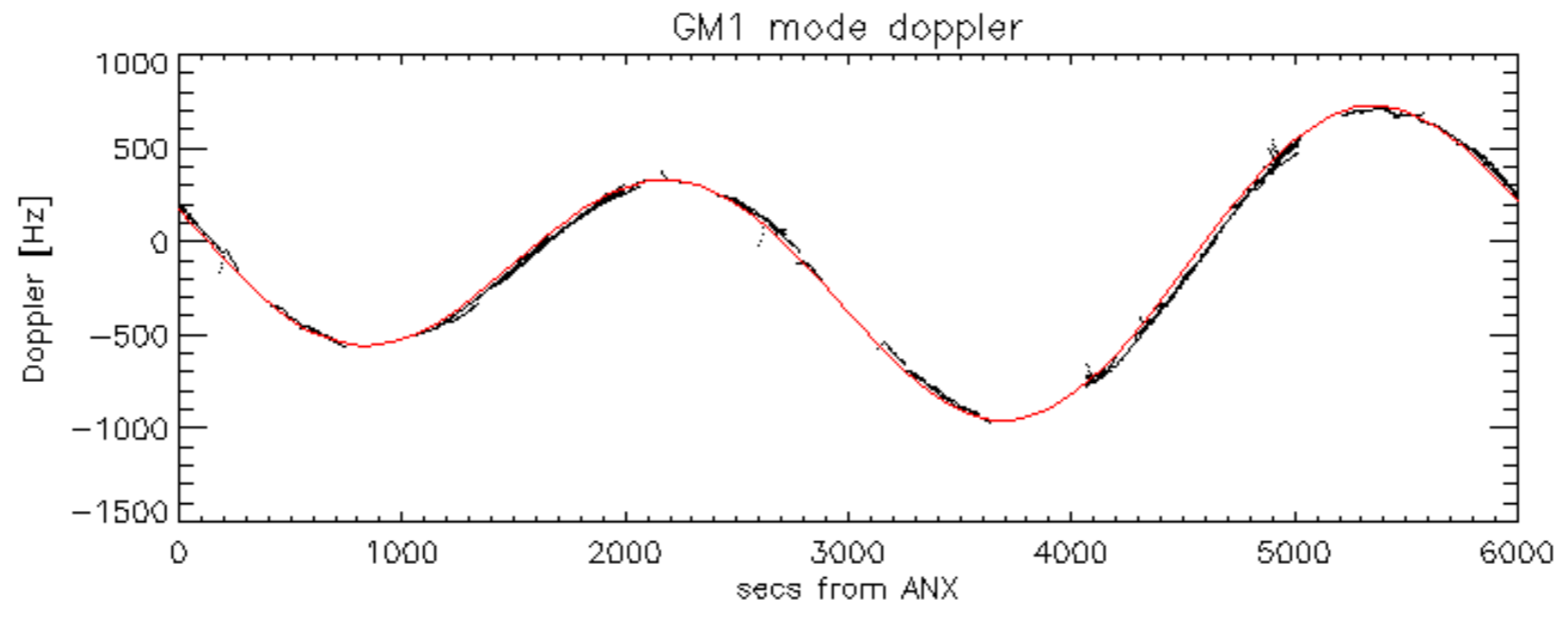
Doppler 'WVS' 'IS2' ascending

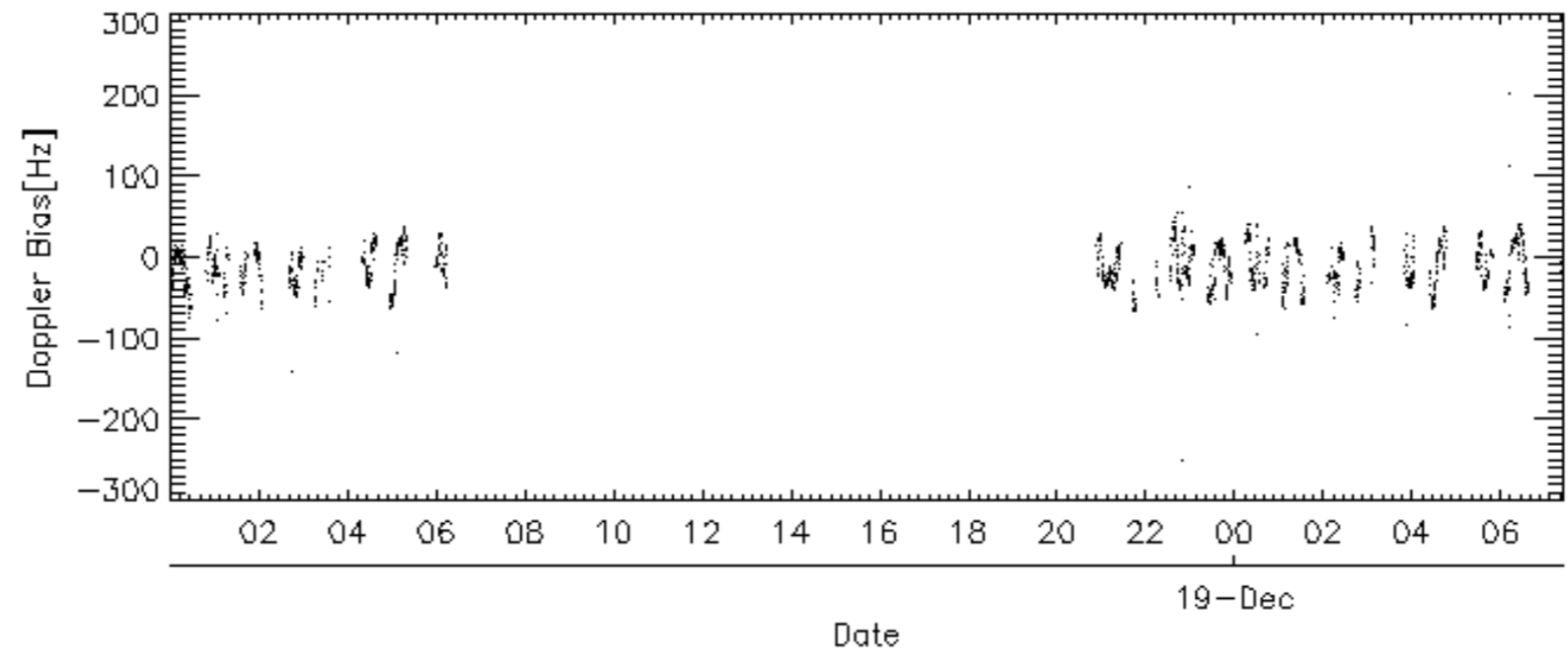
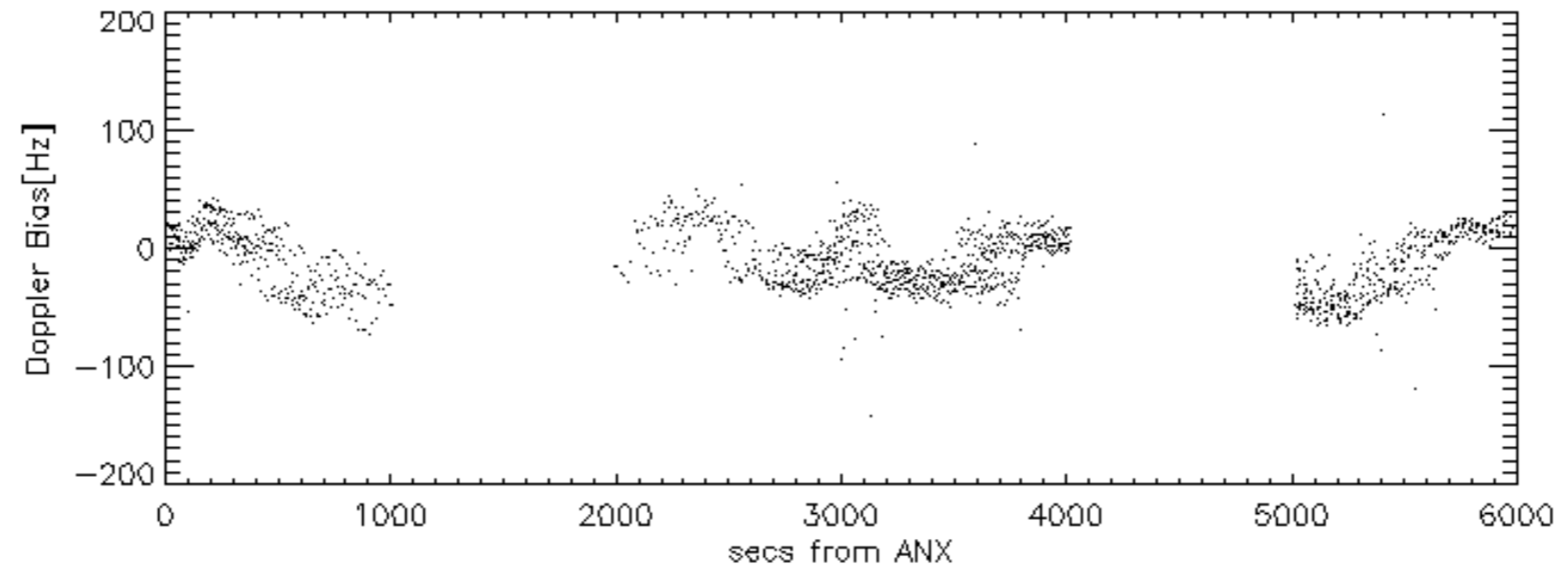
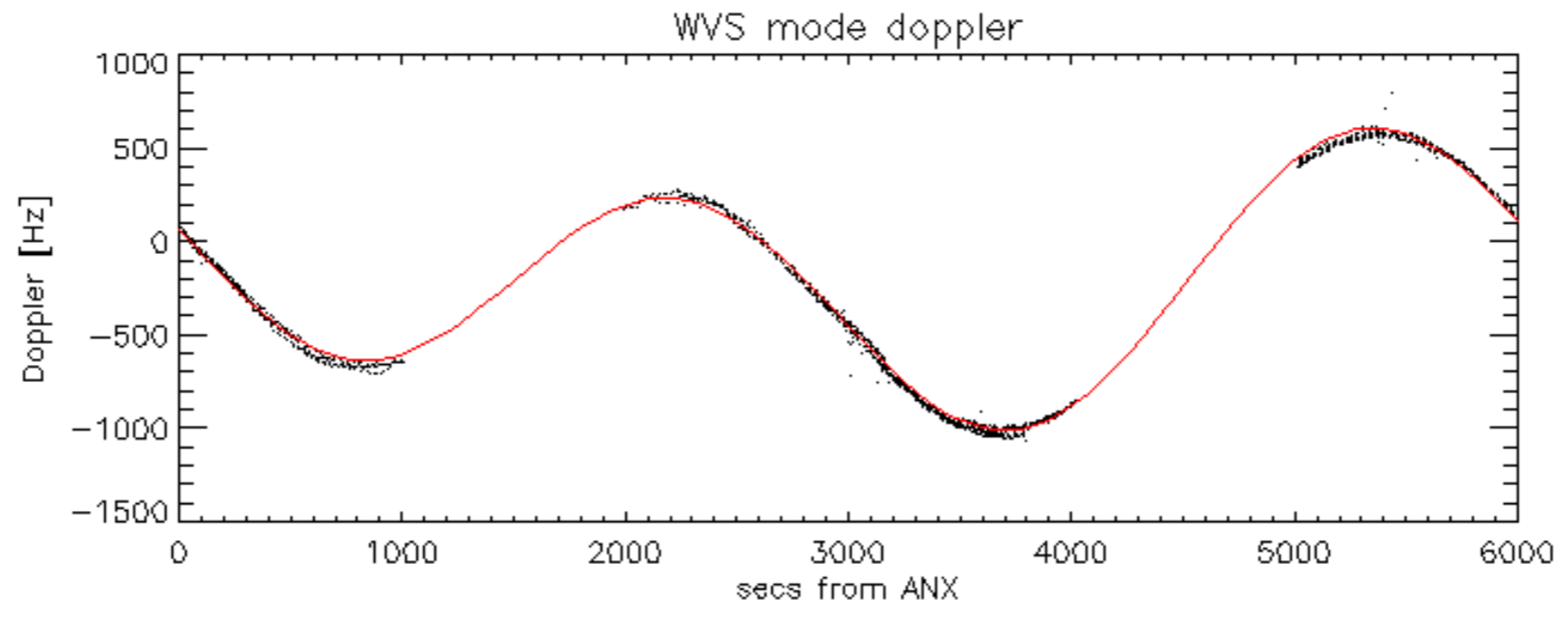


Doppler 'WVS' 'IS2' descending

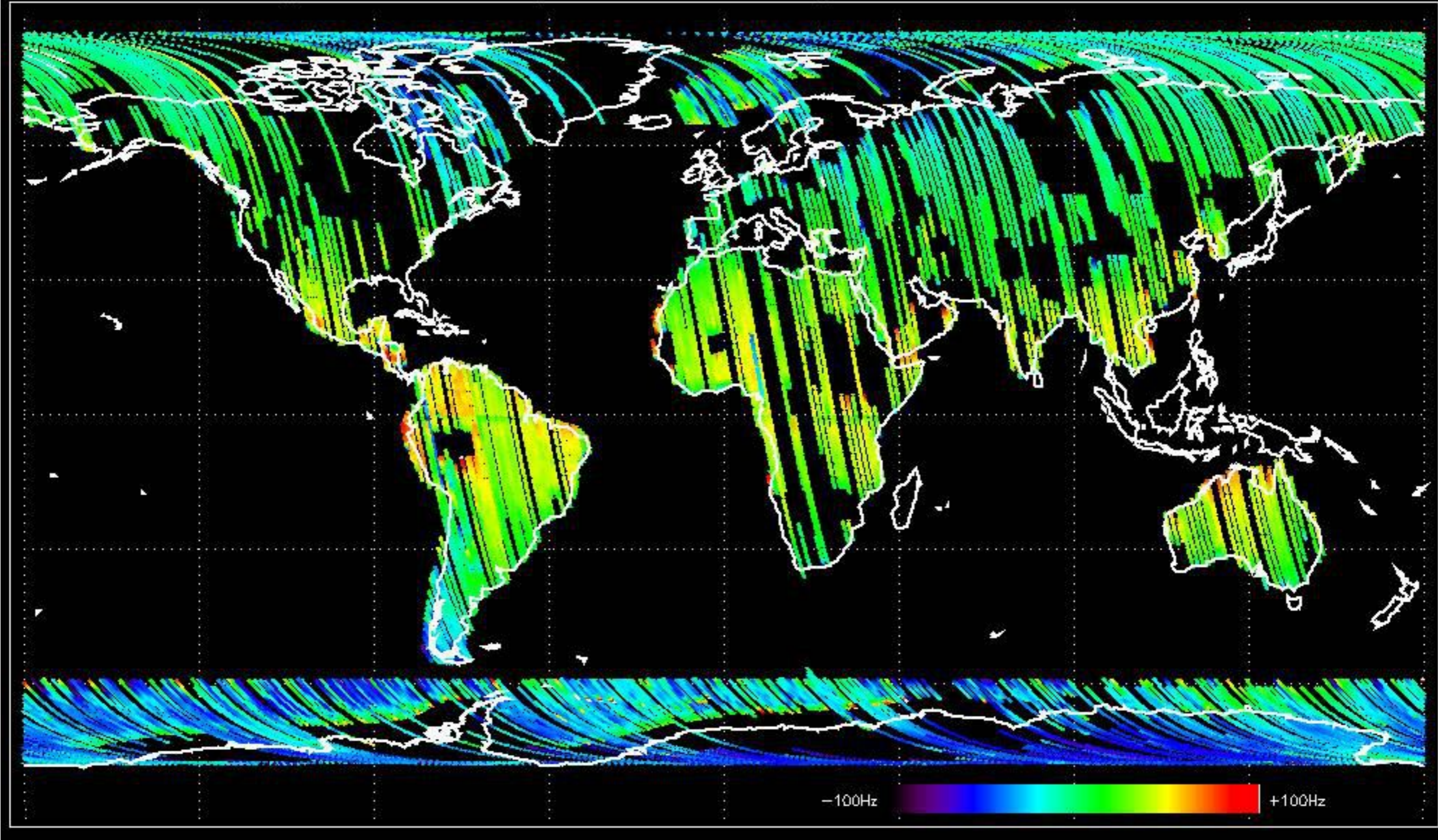




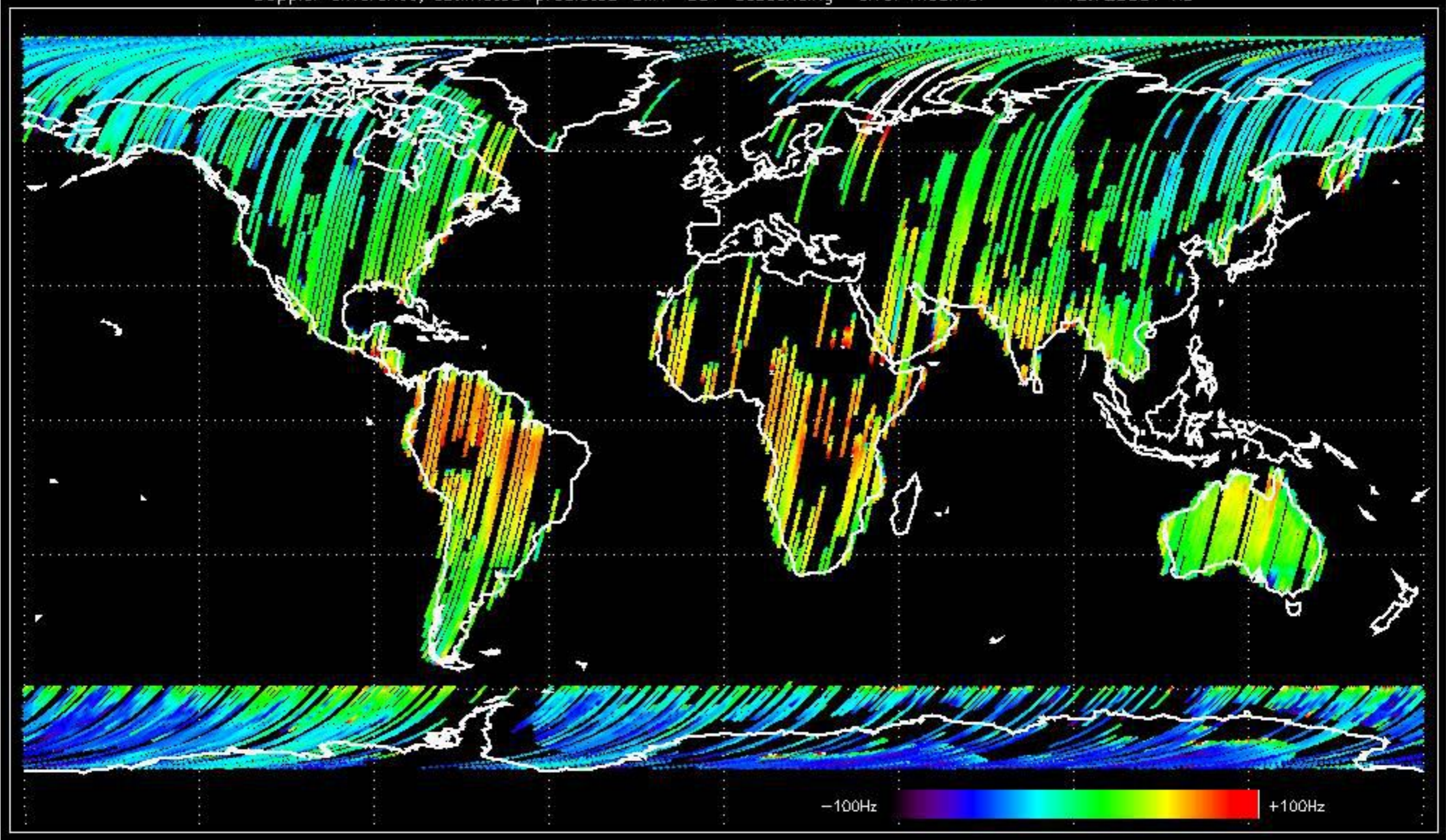




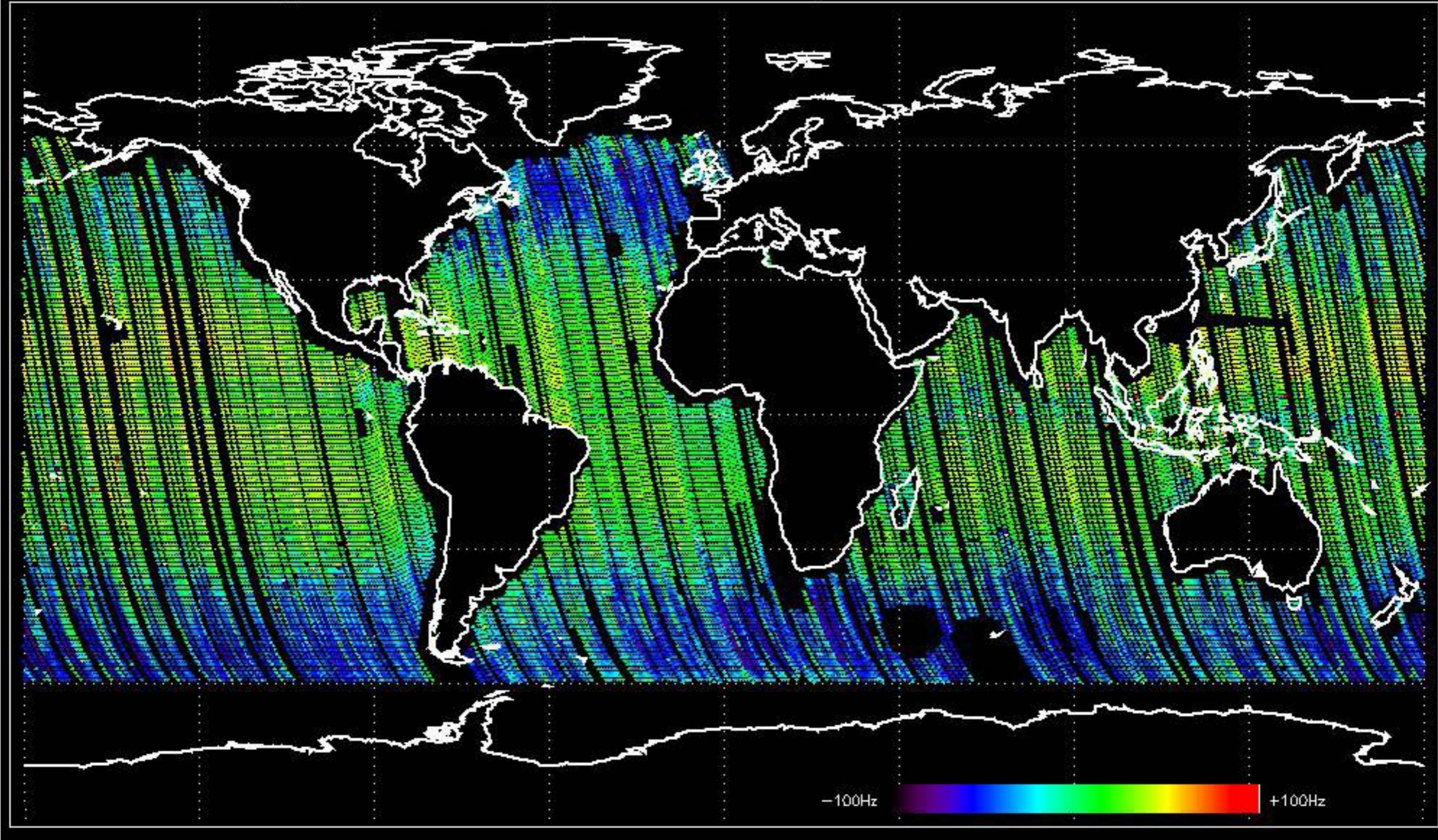
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.599129 Hz



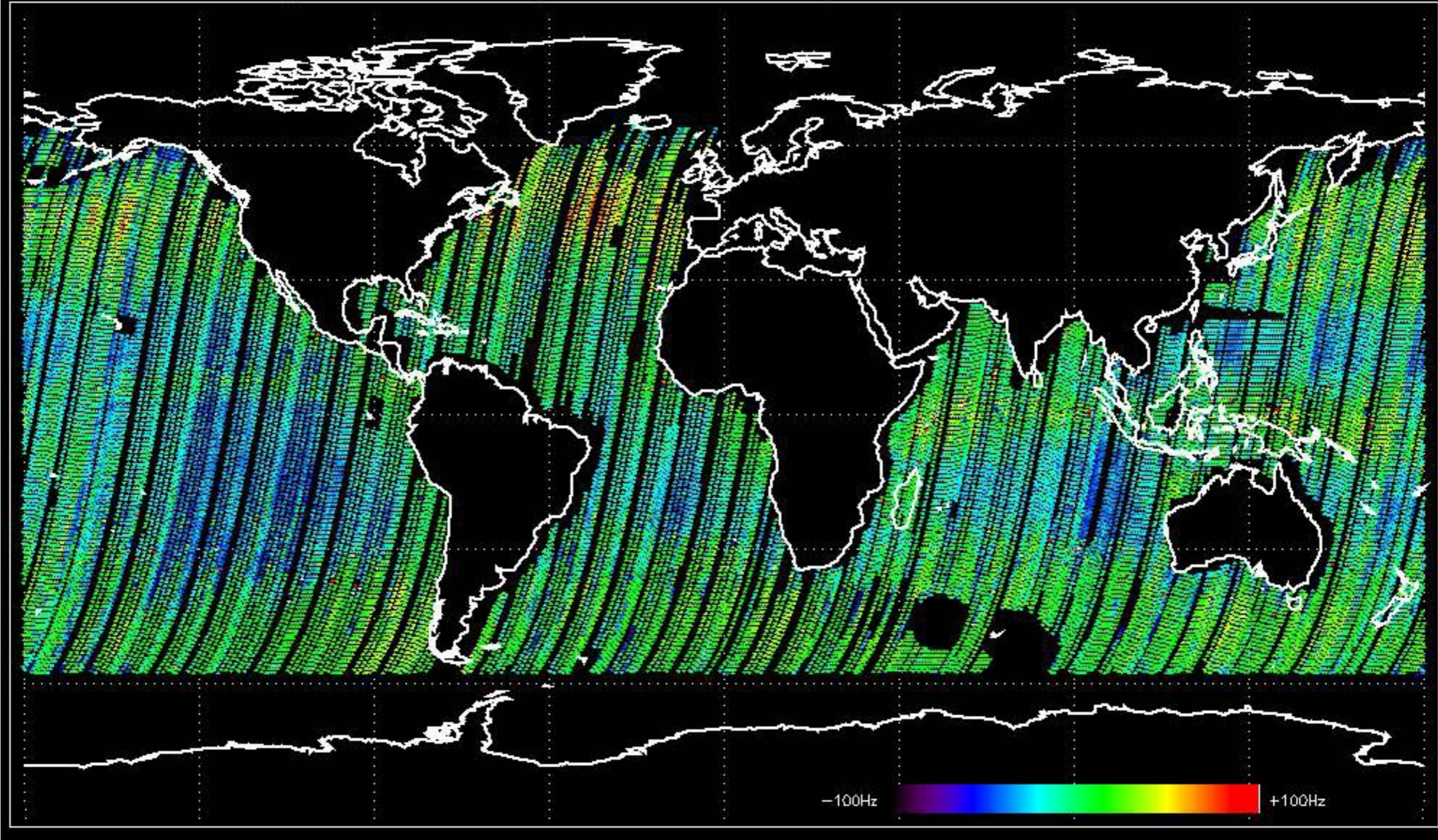
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -12.725581 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.146458 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.3622029 Hz



No anomalies observed on available MS products:

No anomalies observed.











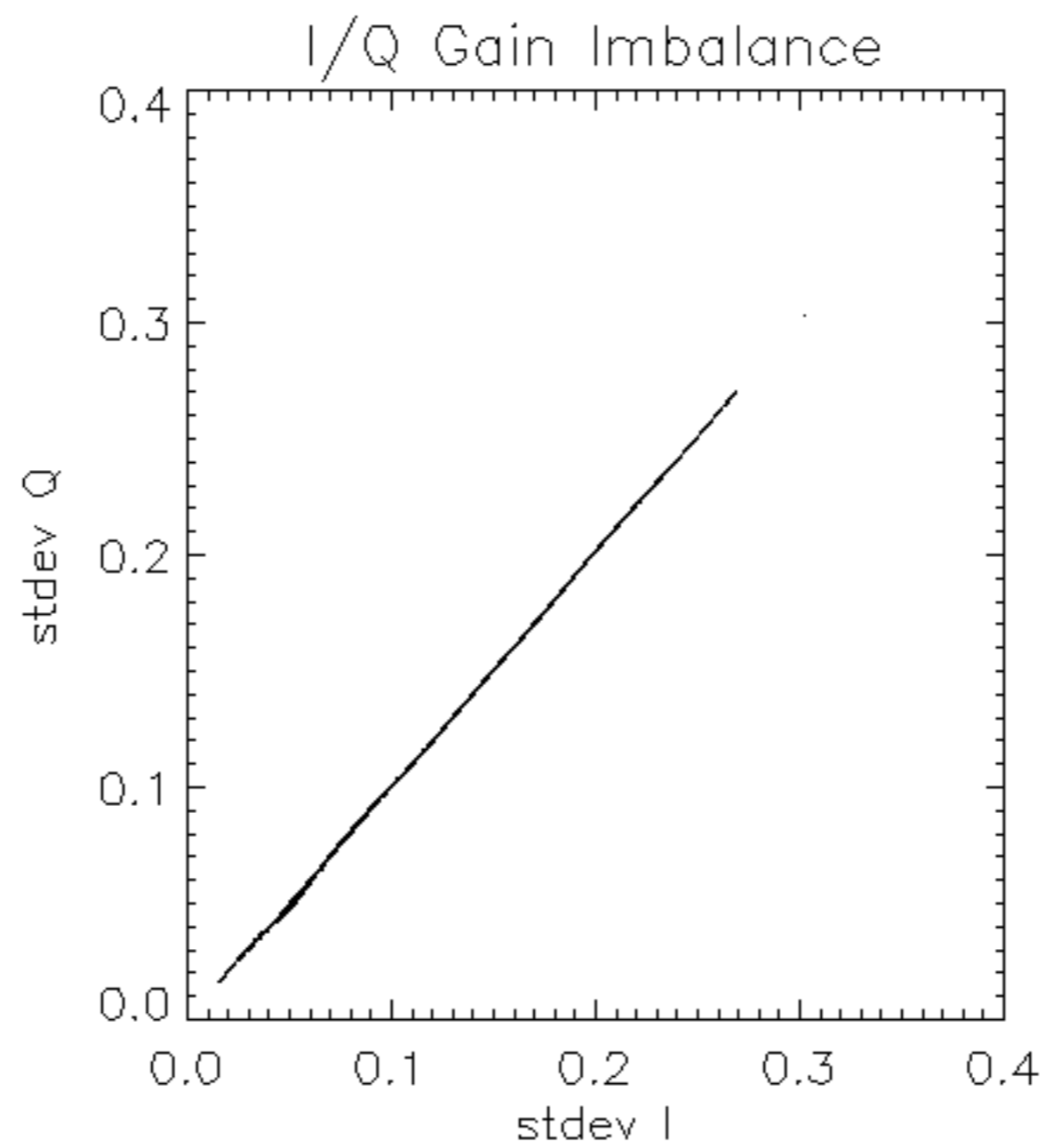


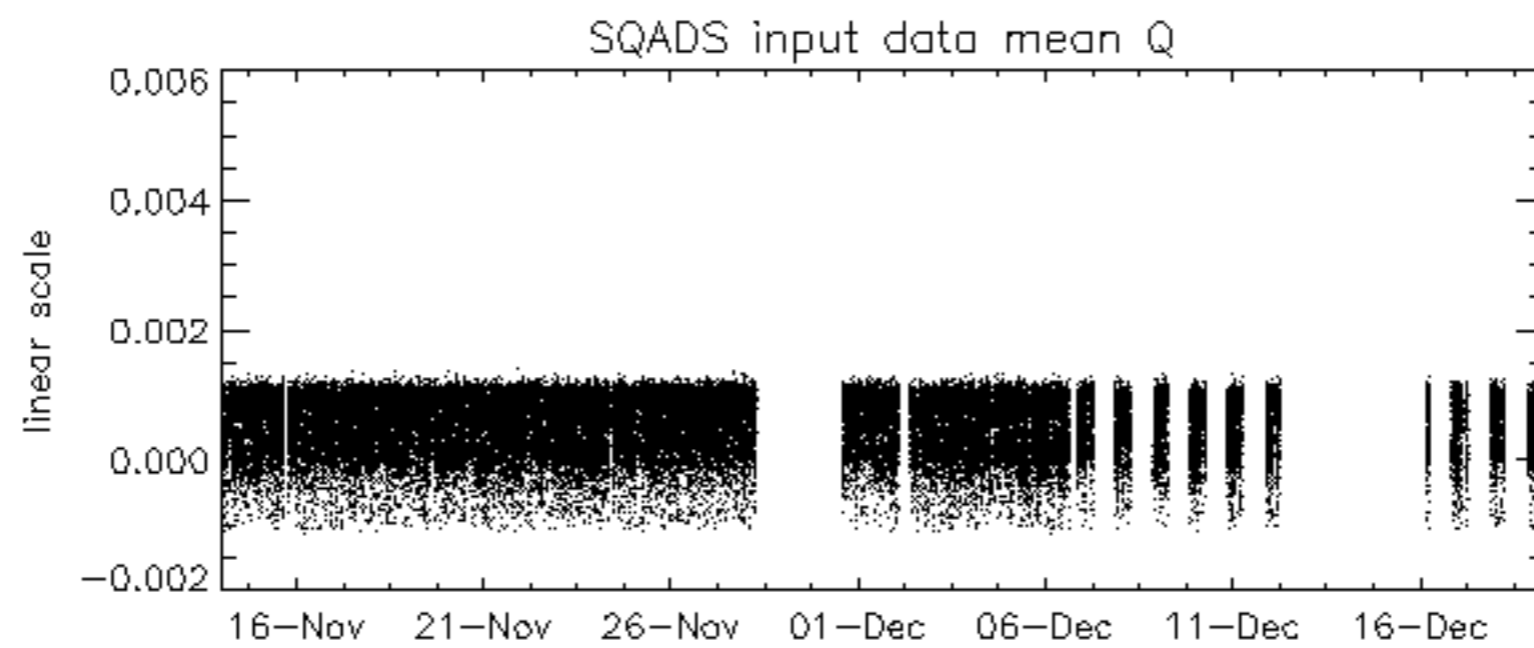
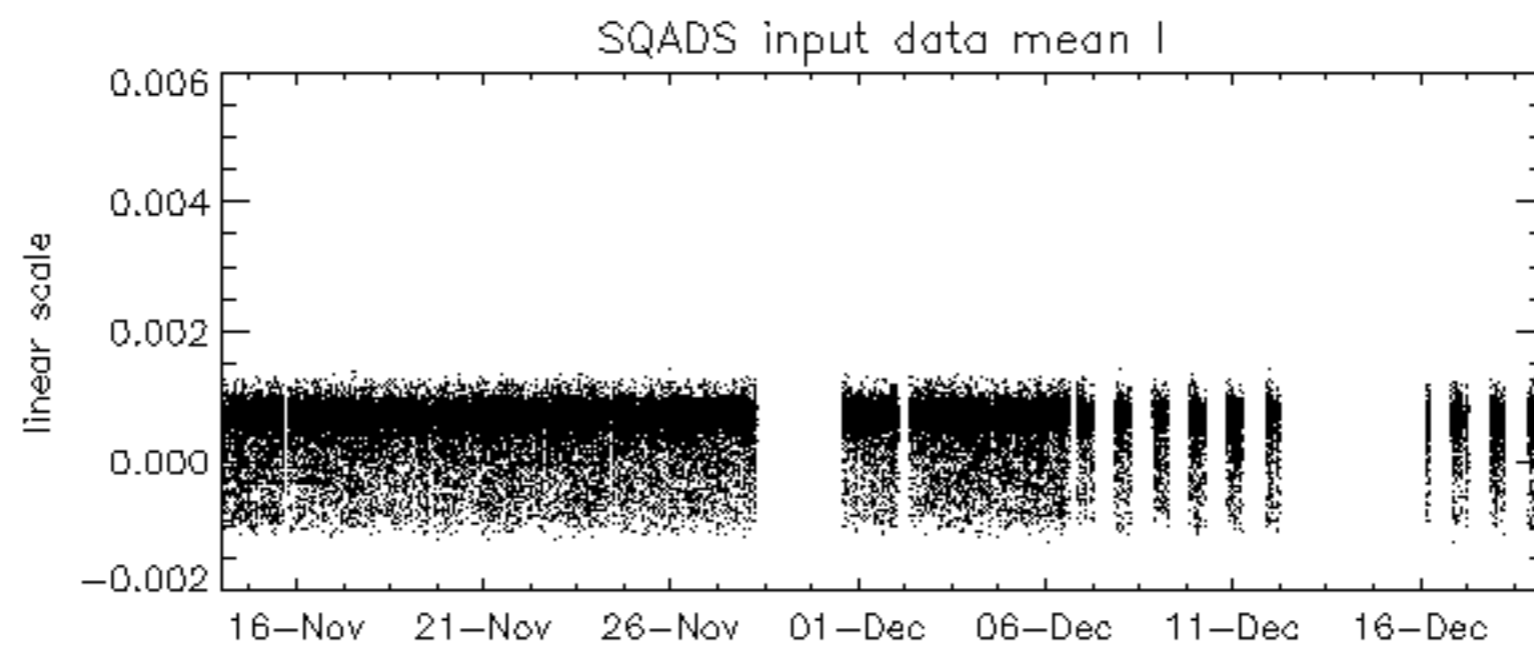
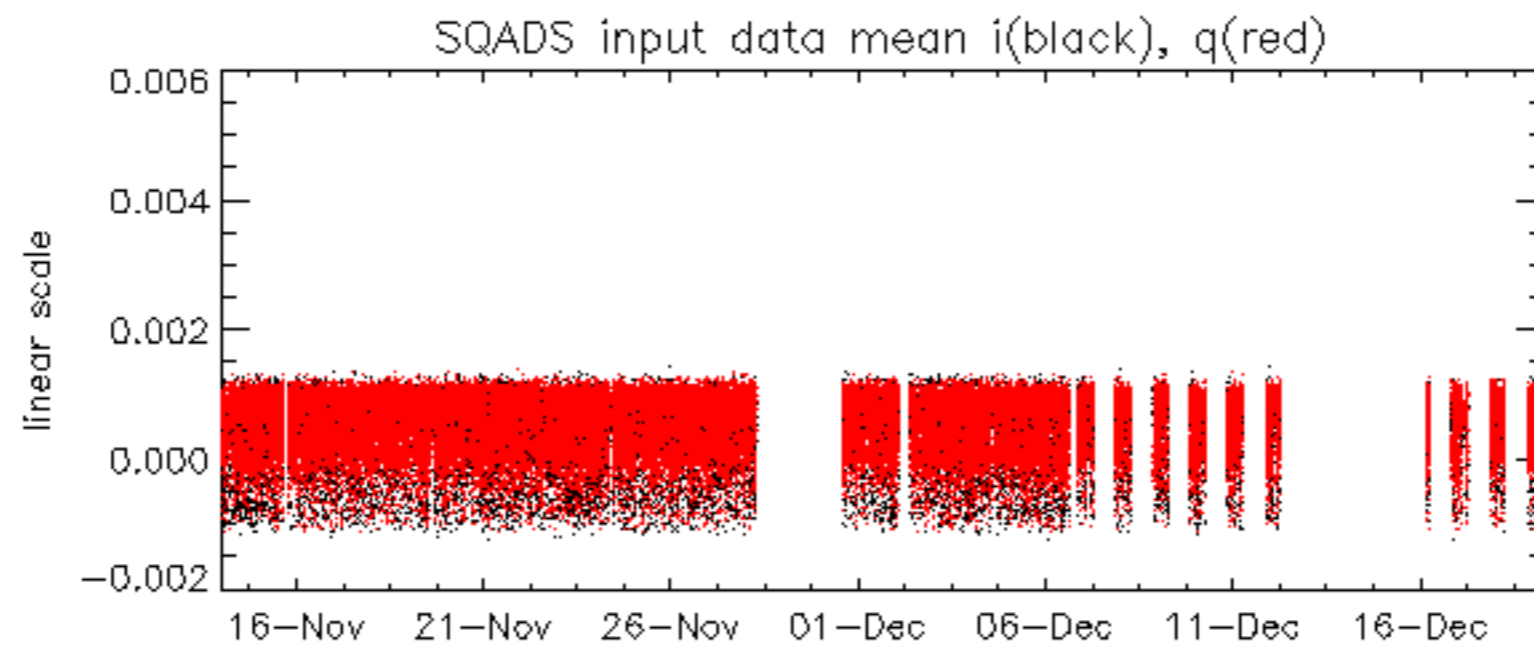


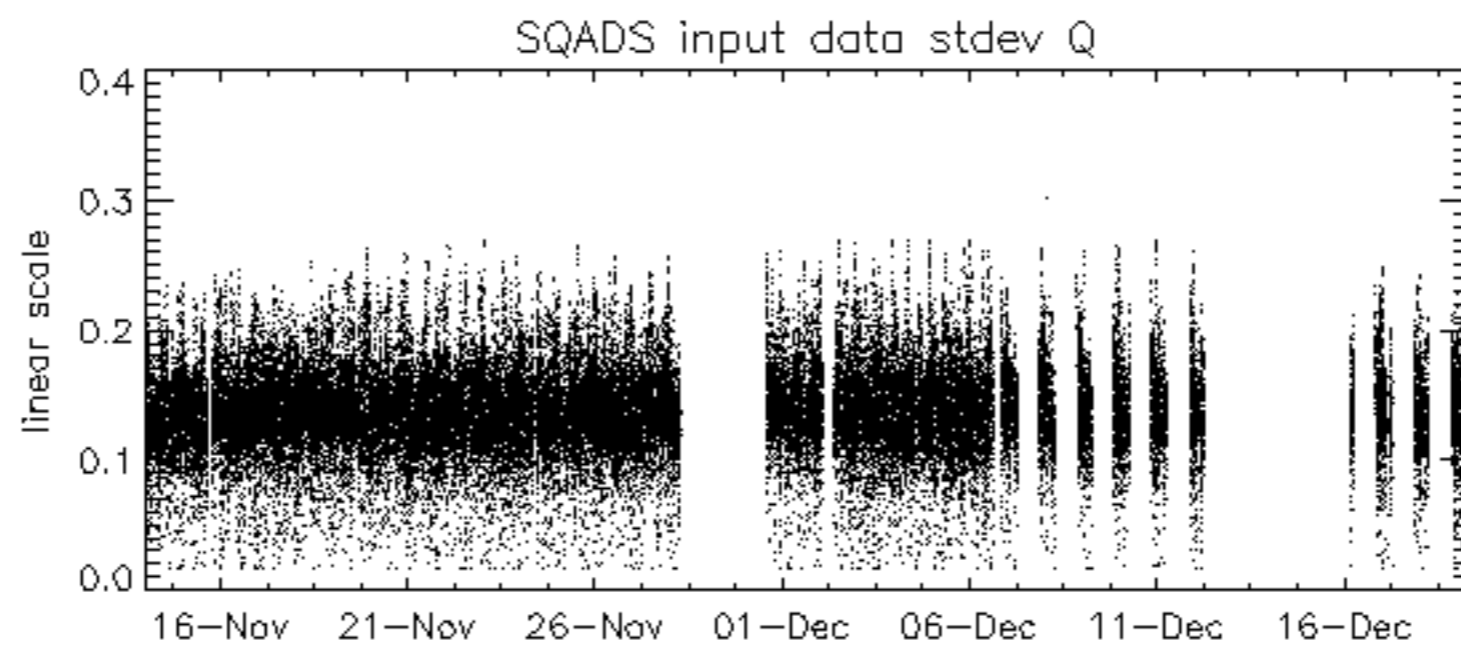
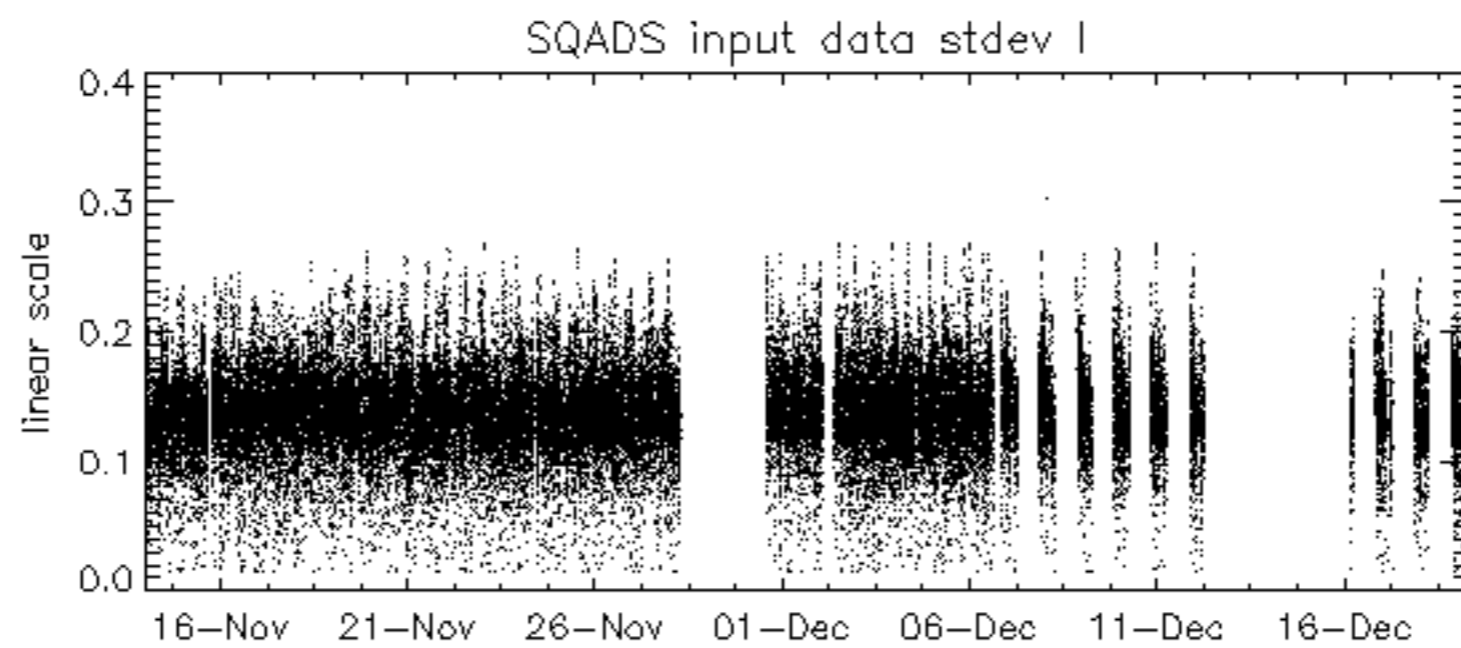
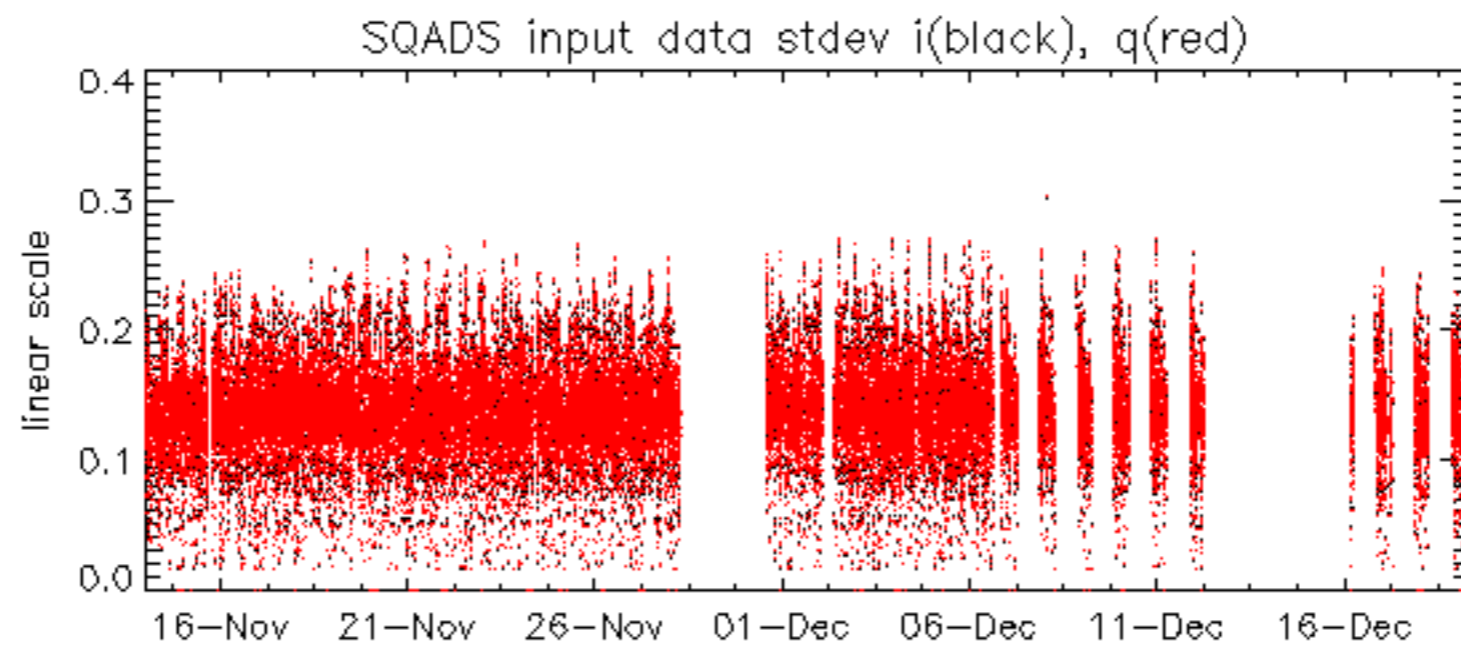


















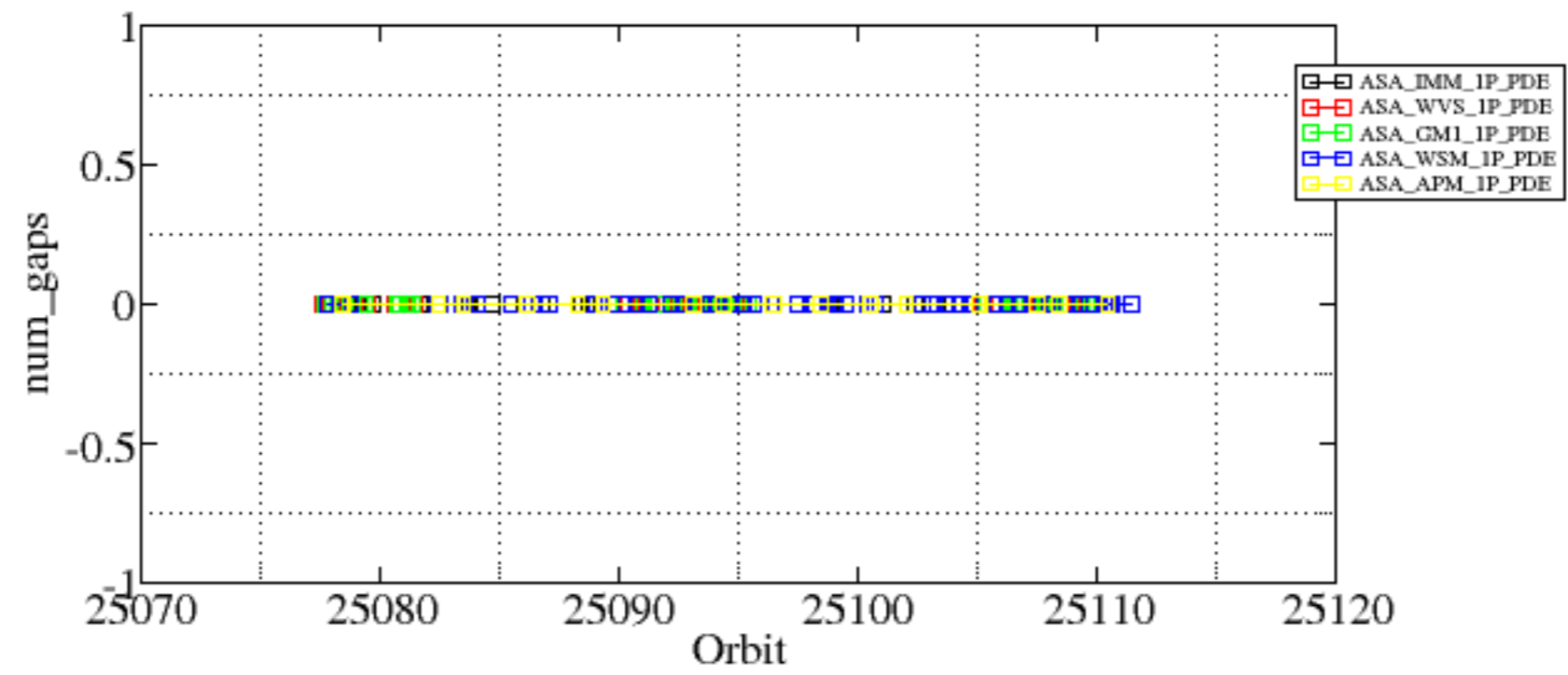


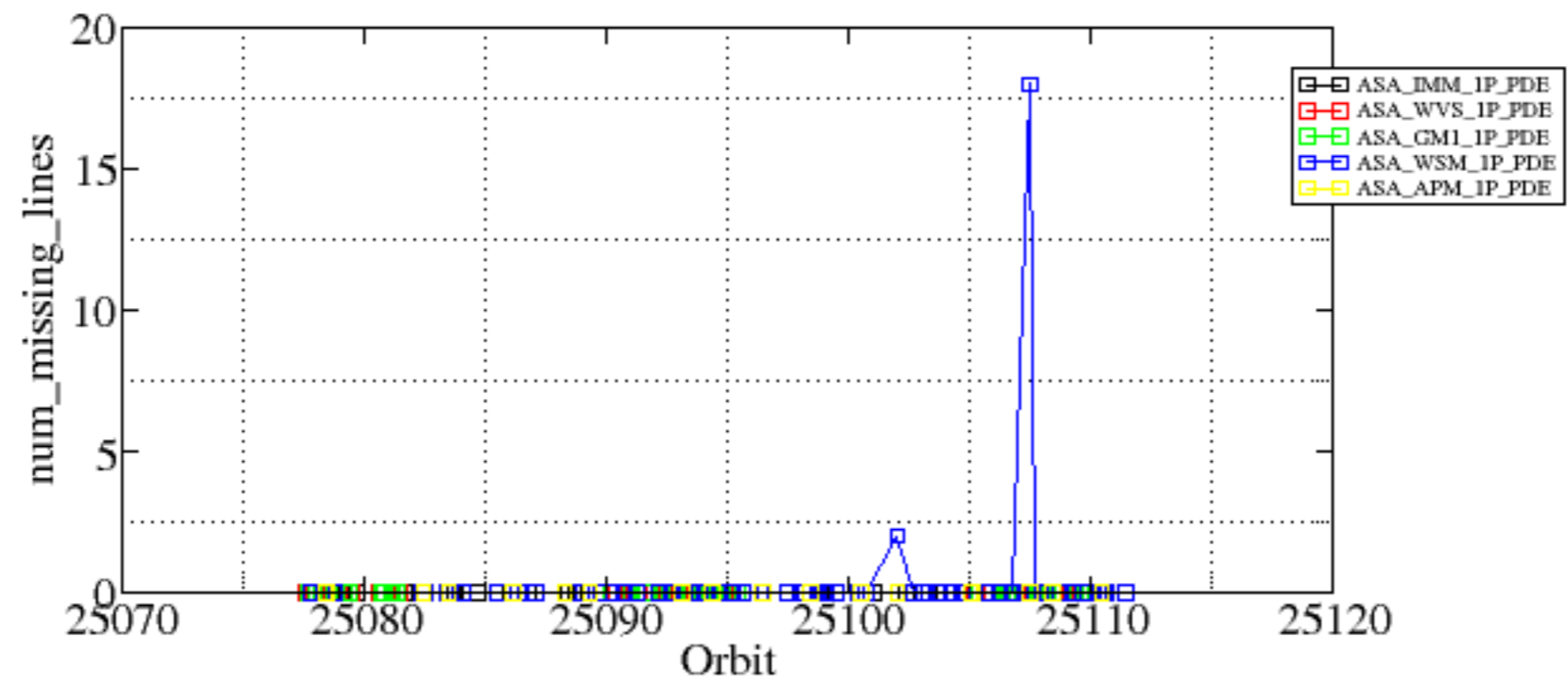
Summary of analysis for the last 3 days 2006121[789]

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_WSM_1PNPDE20061218_165907_00000852053_00499_25102_3527.N1	0	2
ASA_WSM_1PNPDE20061219_020903_000001152054_00003_25107_4095.N1	0	18

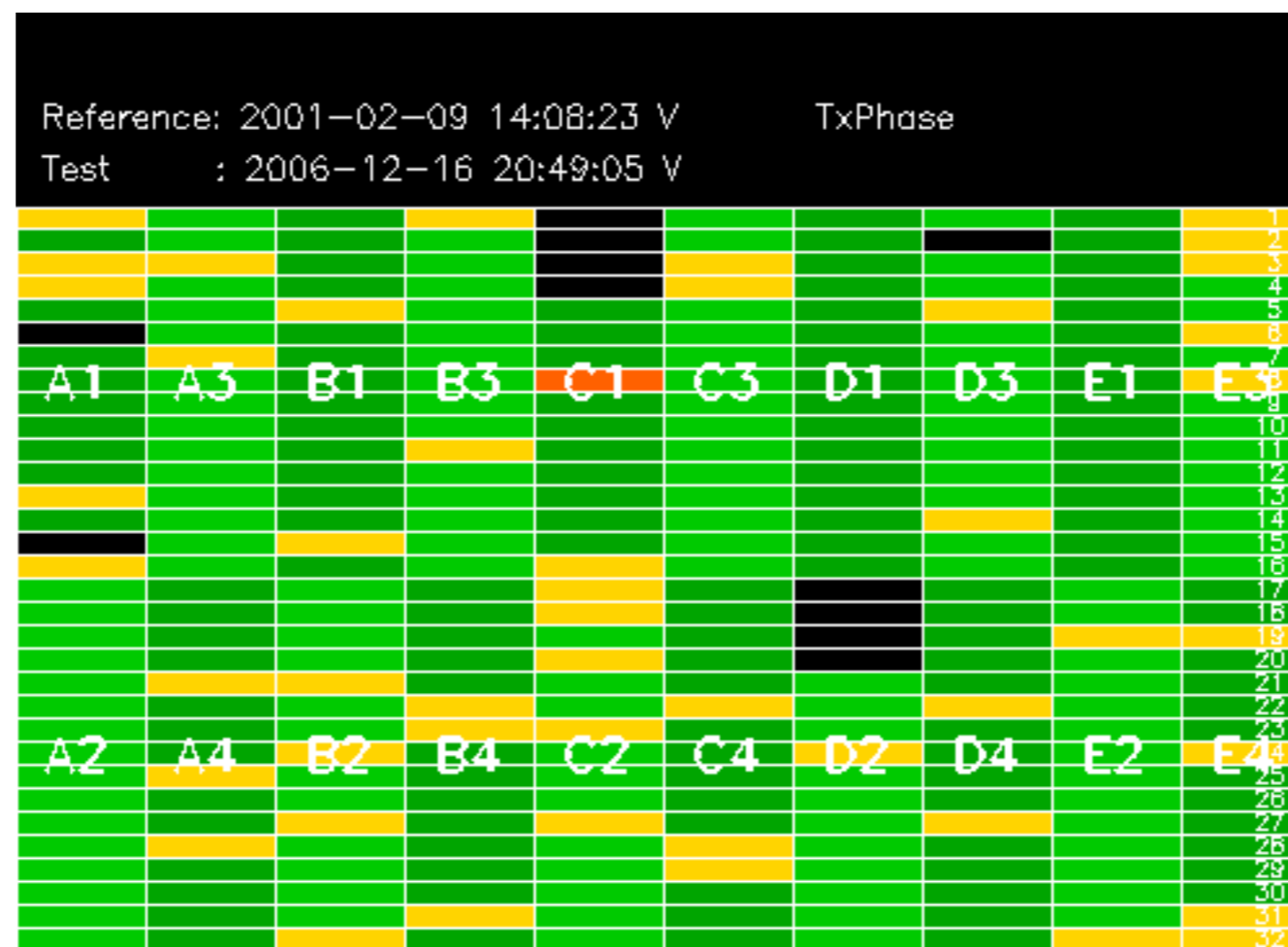




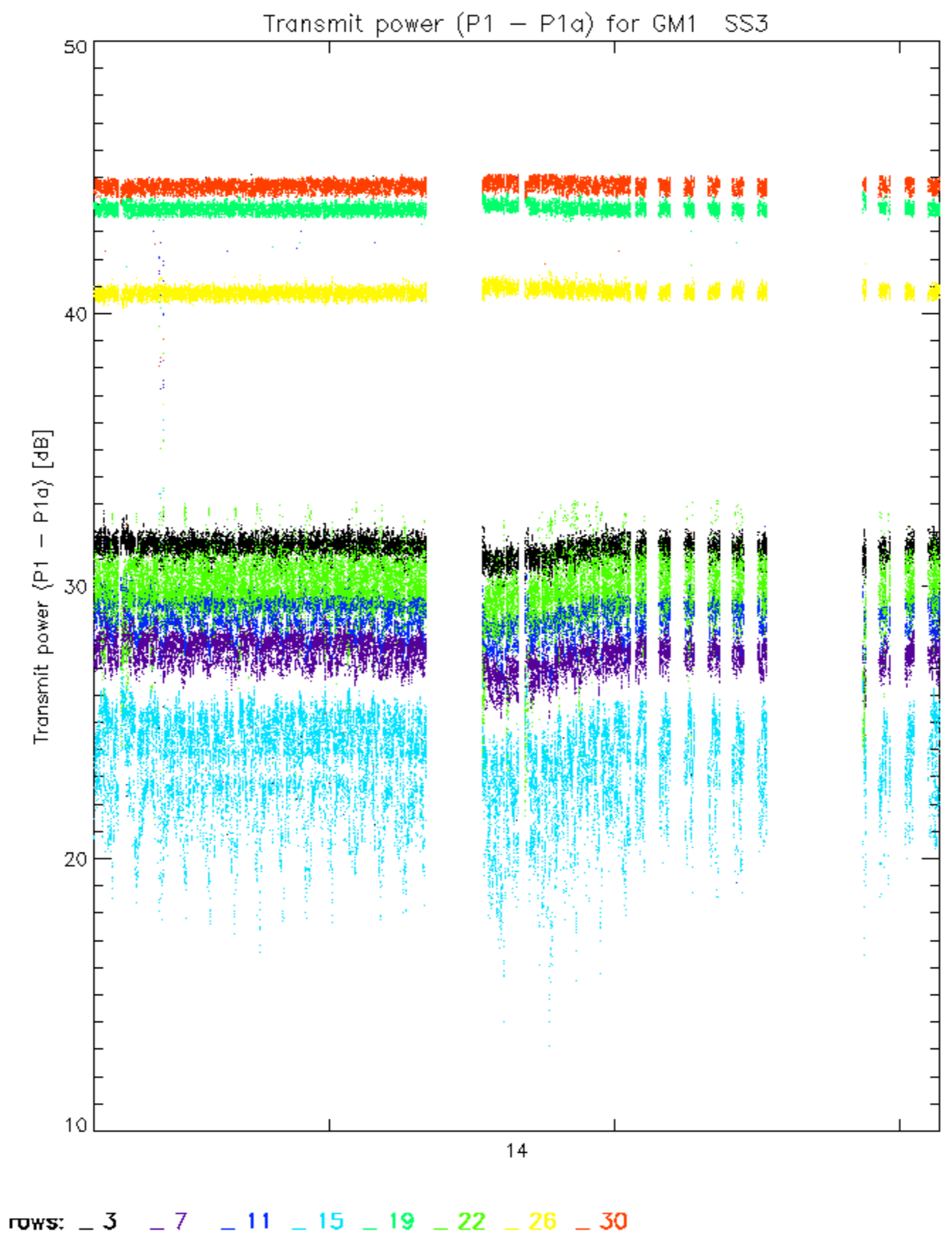


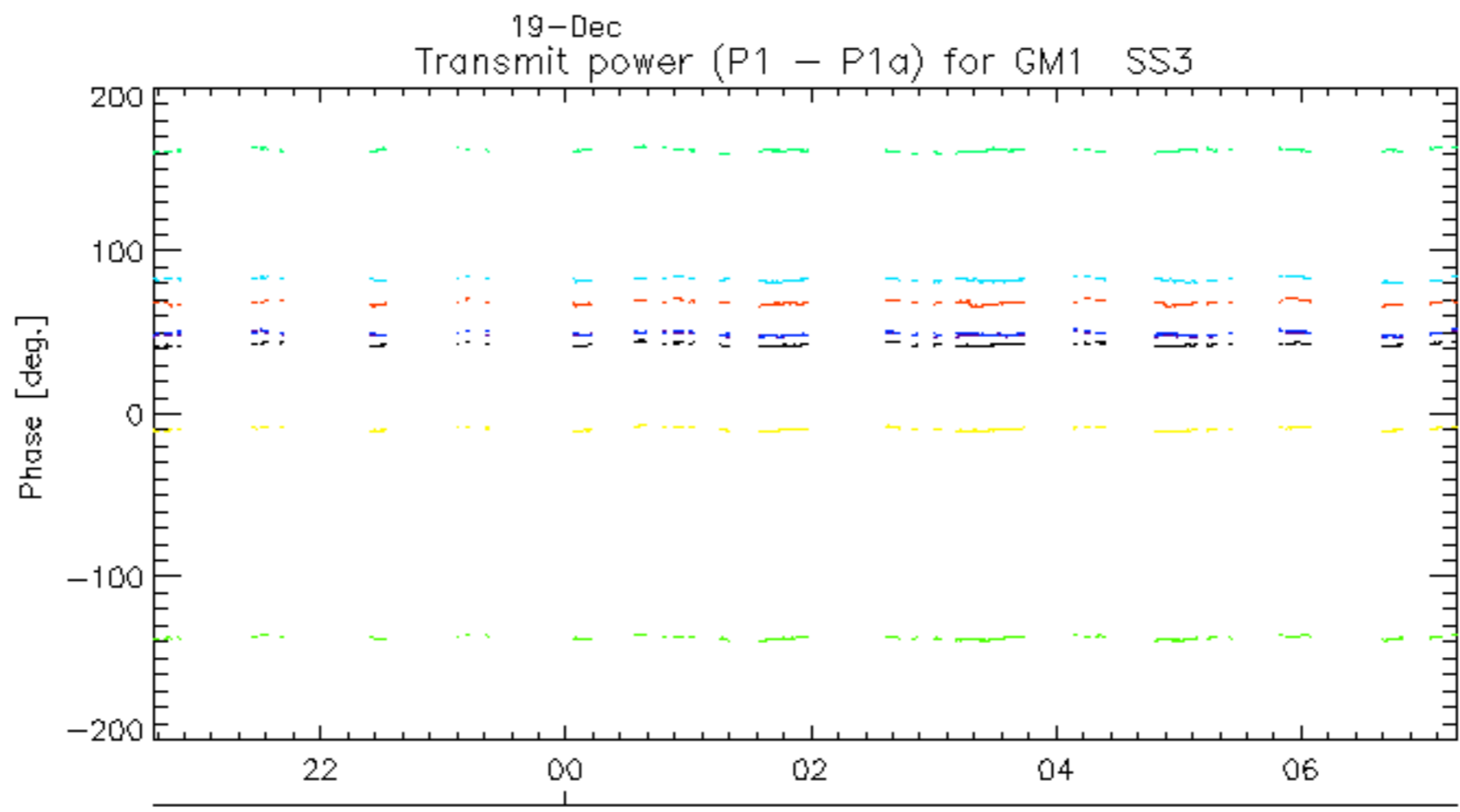
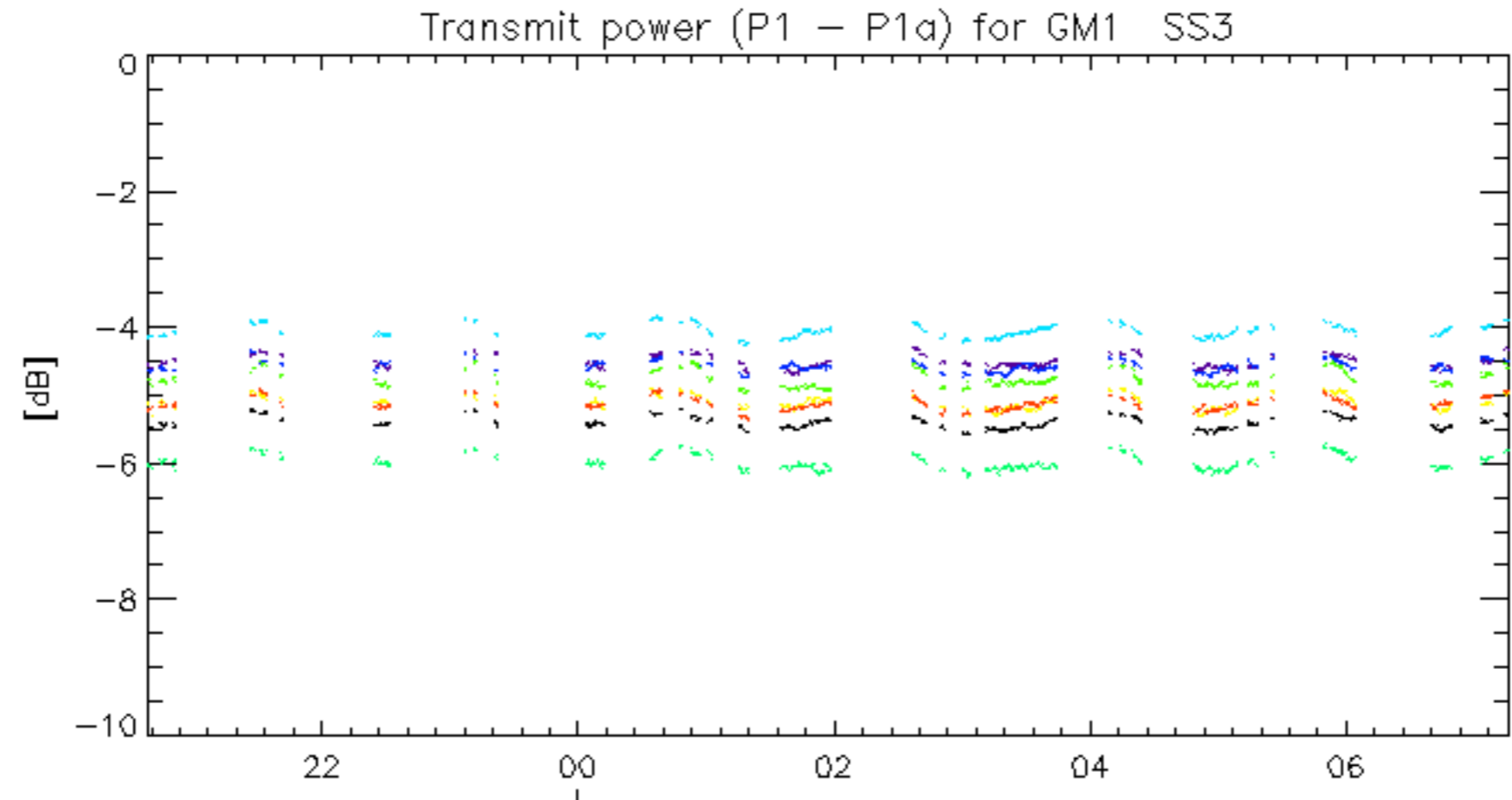






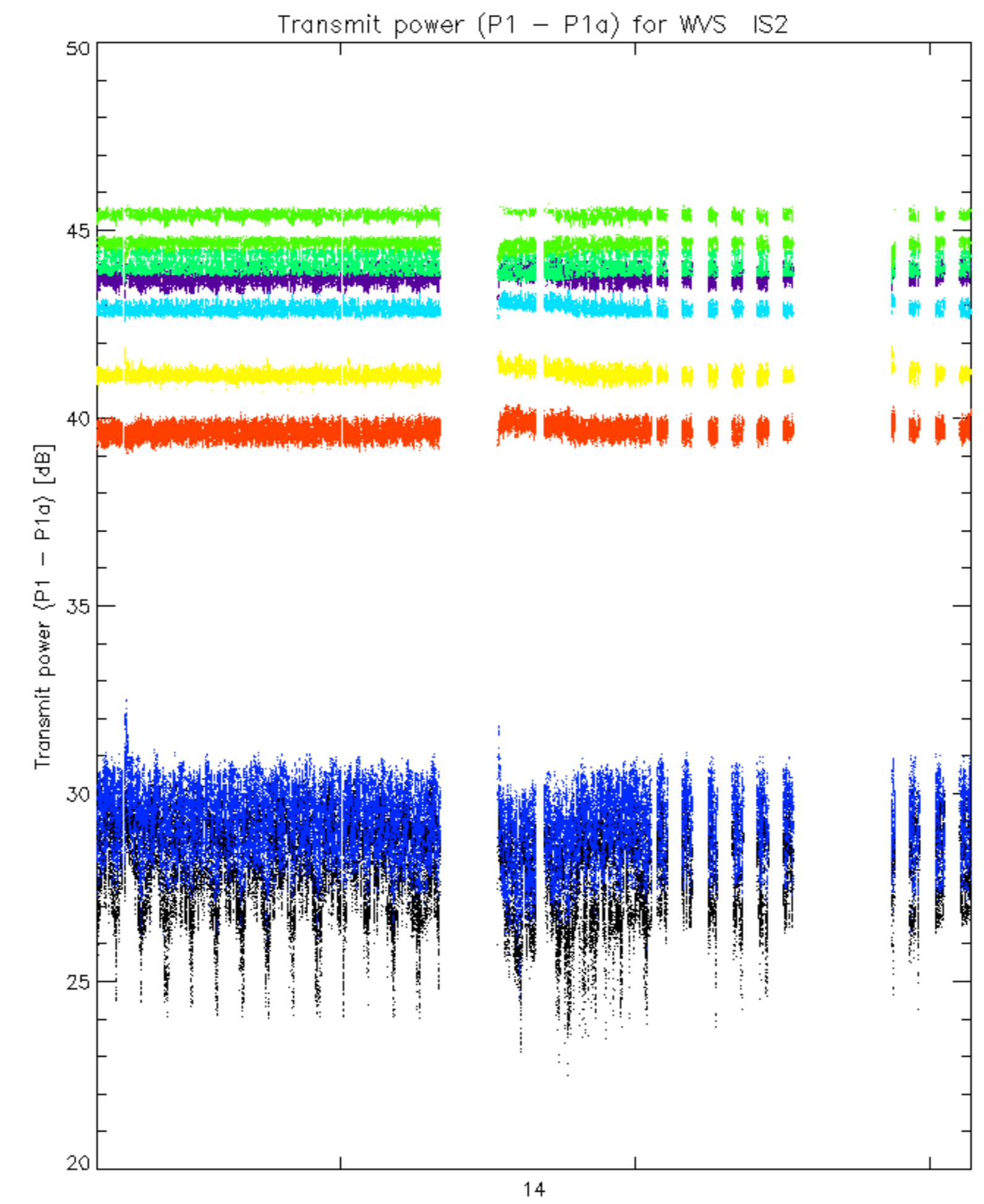




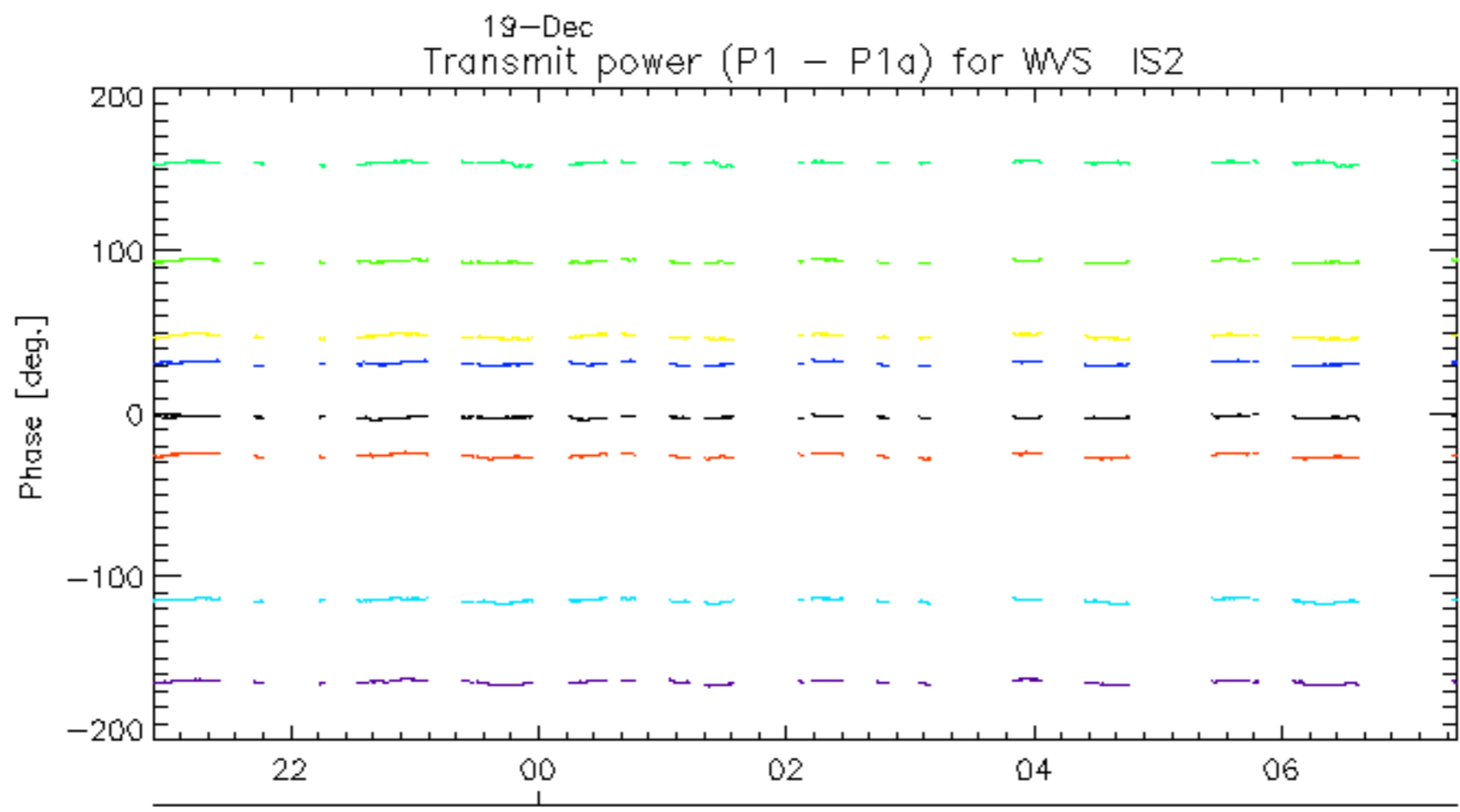
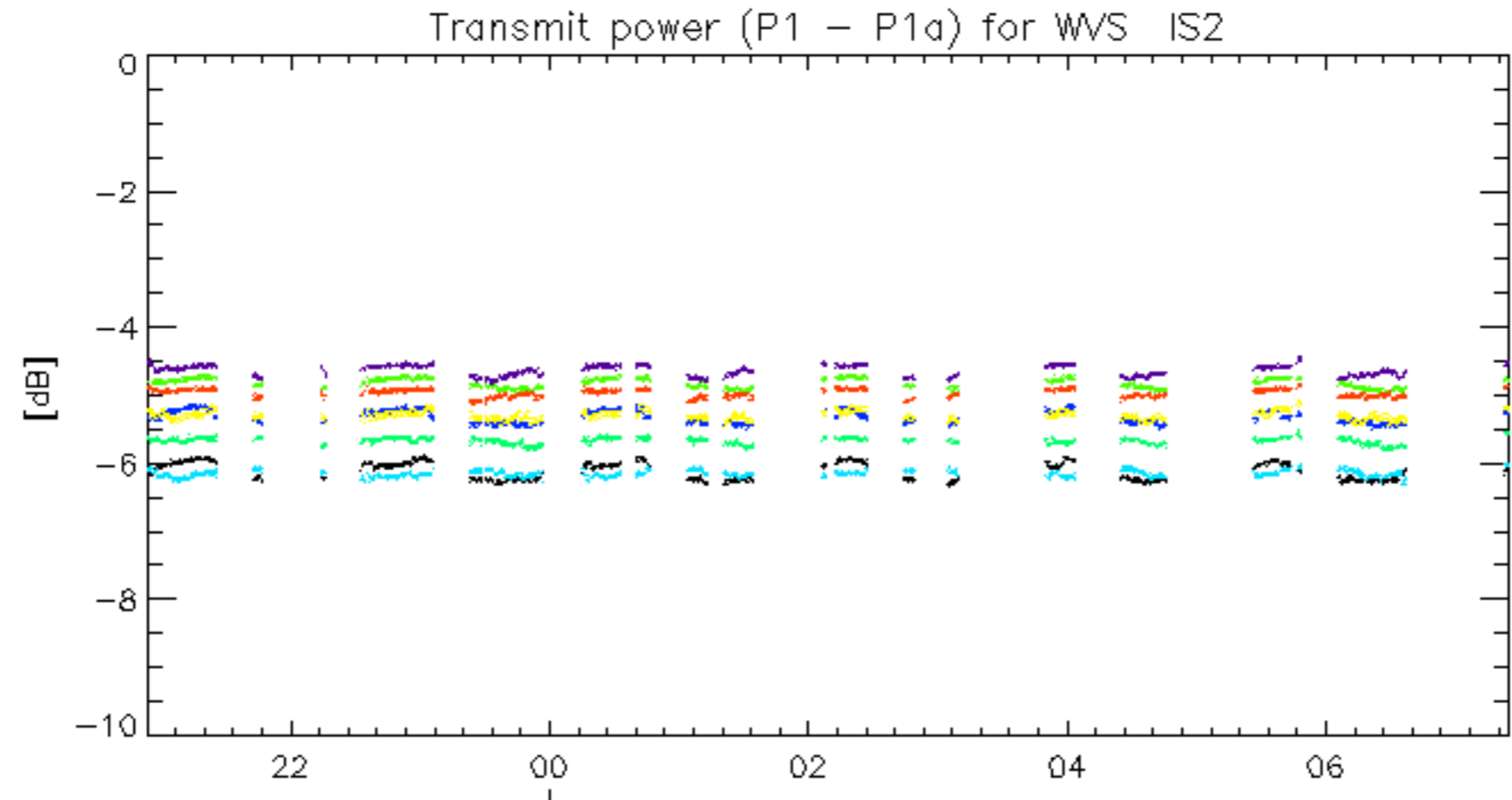


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.