

# PRELIMINARY REPORT OF 061111

last update on Sat Nov 11 16:37:51 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 2006-11-10 00:00:00 to 2006-11-11 16:37:51

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	49	86	37	7	20
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	49	86	37	7	20
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	49	86	37	7	20
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	49	86	37	7	20

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	21	32	53	3	24
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	21	32	53	3	24
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	21	32	53	3	24
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	21	32	53	3	24

## 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	20061109 100809
H	20061110 143819

### 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
<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	-3.955140	0.009078	0.004812
7	P1	-3.121434	0.020312	-0.110035
11	P1	-4.117614	0.024621	-0.058969
15	P1	-6.256382	0.015078	-0.103695
19	P1	-3.601732	0.064982	-0.041391
22	P1	-4.654587	0.130171	-0.049905
26	P1	-3.982038	0.088631	0.046215
30	P1	-5.875828	0.170548	-0.027920
3	P1	-16.542532	0.226202	0.252577
7	P1	-17.197628	0.190256	-0.305359
11	P1	-17.100662	0.431213	-0.202644
15	P1	-12.980567	0.121059	-0.312693
19	P1	-14.841647	0.371453	-0.264584
22	P1	-15.759423	0.503063	-0.513671
26	P1	-15.086573	0.217295	0.069059
30	P1	-17.250860	0.560982	-0.684548

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.841980	0.088408	-0.038395
7	P2	-21.741261	0.093101	0.039206
11	P2	-15.682018	0.105371	0.096376
15	P2	-7.101332	0.106947	-0.091482
19	P2	-9.166086	0.101359	-0.111821
22	P2	-18.194691	0.094769	-0.128223
26	P2	-16.494551	0.107200	-0.182439
30	P2	-19.472202	0.089212	-0.013626

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.221230	0.007716	-0.046457
7	P3	-8.221230	0.007716	-0.046457
11	P3	-8.221230	0.007716	-0.046457
15	P3	-8.221230	0.007716	-0.046457
19	P3	-8.221230	0.007716	-0.046457
22	P3	-8.221230	0.007716	-0.046457
26	P3	-8.221283	0.007737	-0.046400
30	P3	-8.221283	0.007737	-0.046400

#### 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	-3.923075	0.167689	0.068481
7	P1	-2.607133	1.077824	0.354540
11	P1	-2.897158	0.134399	0.141483
15	P1	-3.698494	0.124346	0.090056
19	P1	-3.523316	0.132296	-0.058196
22	P1	-5.066493	0.099283	0.015423
26	P1	-5.999003	0.249866	-0.072826
30	P1	-5.301089	0.167593	-0.091874
3	P1	-11.749846	0.410617	0.176227
7	P1	-10.146644	1.369191	0.393450
11	P1	-10.409762	0.374507	0.342320
15	P1	-10.871964	0.510444	0.462683
19	P1	-15.745719	2.322964	-0.132454
22	P1	-21.170774	1.634244	-0.673975
26	P1	-15.950864	0.439602	-0.394420
30	P1	-17.976723	0.528322	0.273620

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.393772	0.256690	-0.268095
7	P2	-22.064957	1.416540	-0.649261
11	P2	-10.884292	0.228935	-0.236459
15	P2	-4.924268	0.077200	-0.138500
19	P2	-6.909437	0.153454	-0.156991
22	P2	-8.265762	0.469842	0.045595
26	P2	-24.188326	1.067385	-0.541521
30	P2	-21.887878	0.544462	-0.276152

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.070500	0.003271	-0.044109
7	P3	-8.070423	0.003251	-0.044216
11	P3	-8.070425	0.003257	-0.044643
15	P3	-8.070317	0.003252	-0.043947
19	P3	-8.070412	0.003256	-0.044207
22	P3	-8.070271	0.003260	-0.044414
26	P3	-8.070271	0.003248	-0.044982
30	P3	-8.070344	0.003258	-0.045027

## 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	0.000549662
	stdev	1.75144e-07
MEAN Q	mean	0.000518413
	stdev	2.19559e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136932
	stdev	0.00112351
STDEV Q	mean	0.137296
	stdev	0.00114080



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006111[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_IMM_1PNPDK20061110_062233_00000592052_00449_24551_3724.N1	0	1
ASA_GM1_1PNPDK20061110_150123_000001872052_00454_24556_8390.N1	0	30
ASA_GM1_1PNPDK20061110_152402_000006522052_00455_24557_8387.N1	0	28
ASA_WSM_1PNPDE20061110_005418_000002632052_00446_24548_0001.N1	0	29
ASA_WSM_1PNPDK20061110_141658_000003302052_00454_24556_9834.N1	0	60
ASA_WSM_1PNPDK20061110_142505_000000672052_00454_24556_9836.N1	0	18
ASA_WSM_1PNPDK20061110_165310_000000852052_00456_24558_9847.N1	0	59





## 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)


Acsending

Descending

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler


Acsending

Descending

### 7.3 - Doppler evolution versus ANX for WVS

#### Evolution Doppler error versus ANX


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### 7.4 - Unbiased Doppler Error for GM1



**Evolution of unbiased Doppler error (Real - Expected)**

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

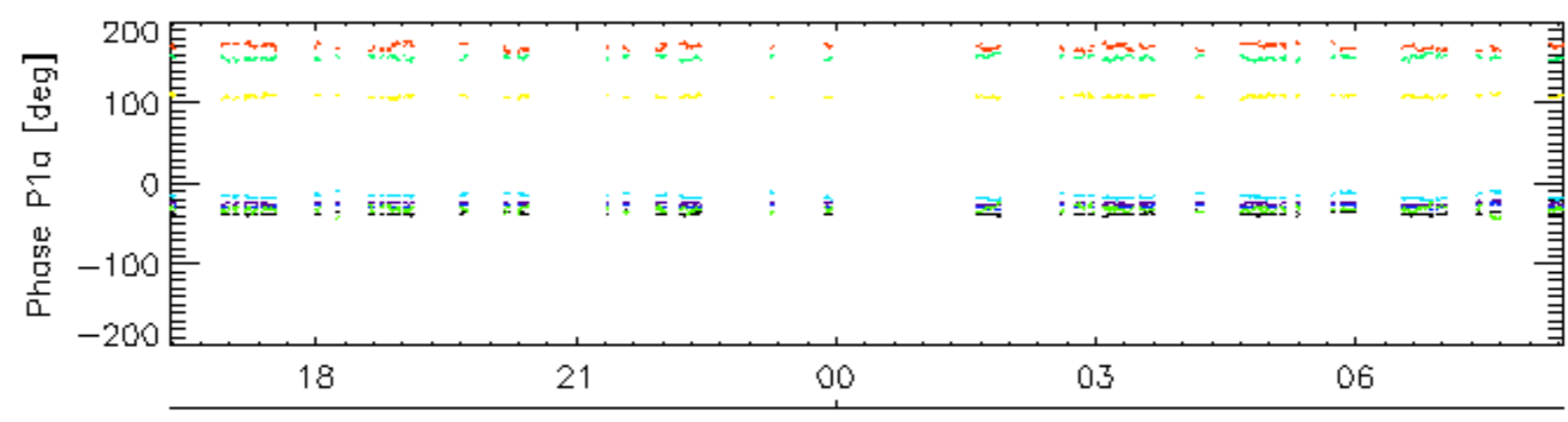
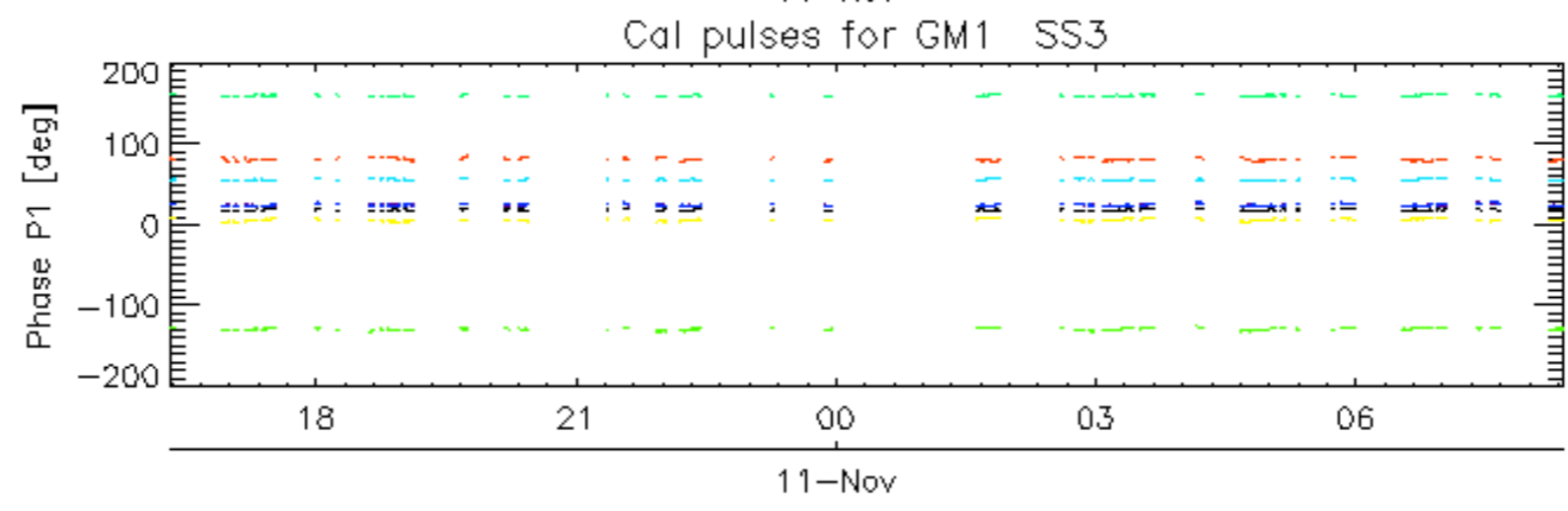
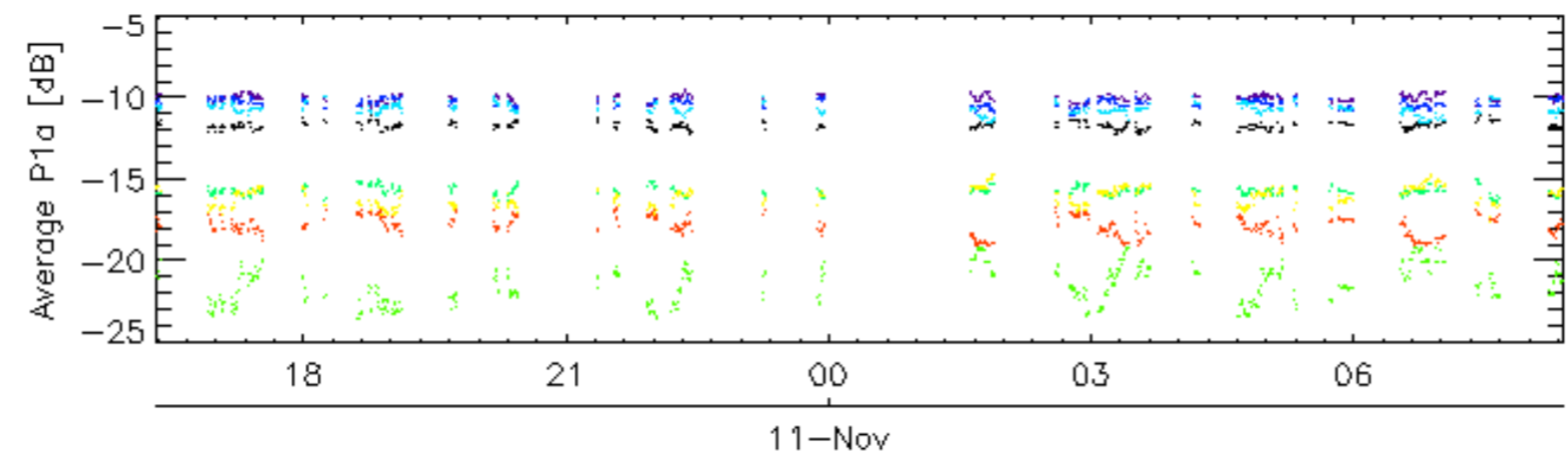
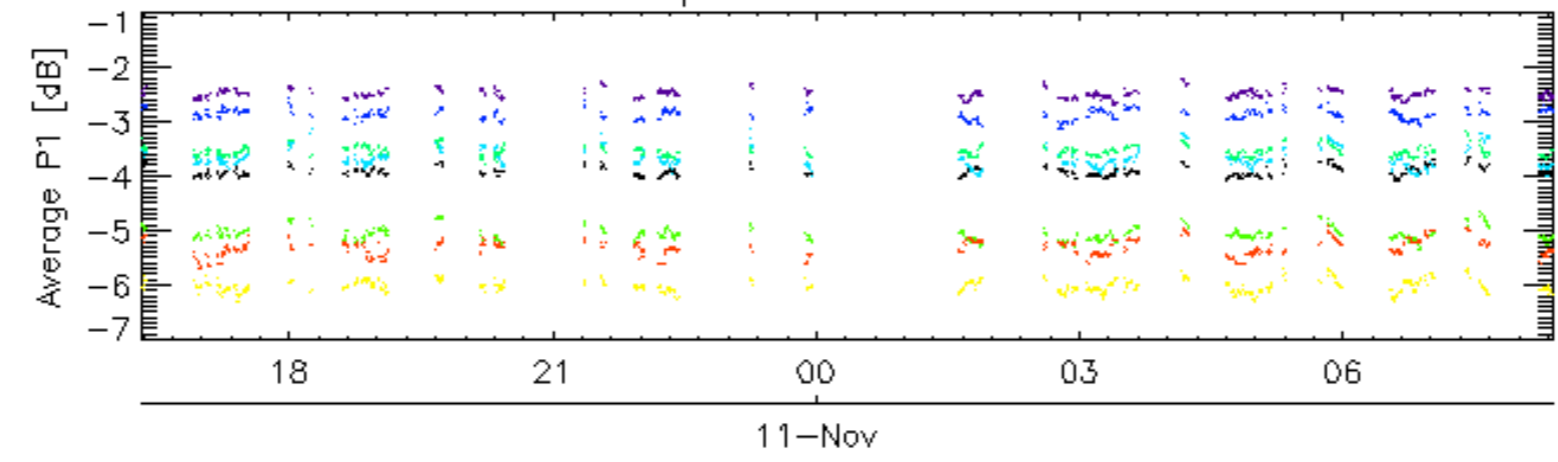
**7.5 - Absolute Doppler for GM1****Evolution of Absolute Doppler**

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

**7.6 - Doppler evolution versus ANX for GM1****Evolution Doppler error versus ANX**

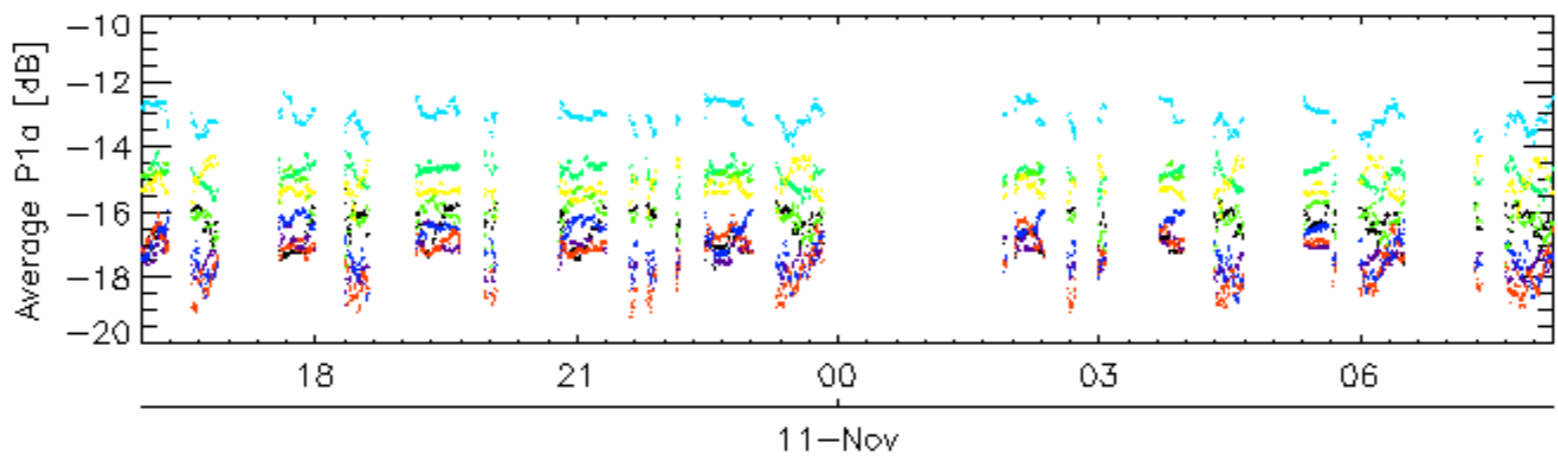
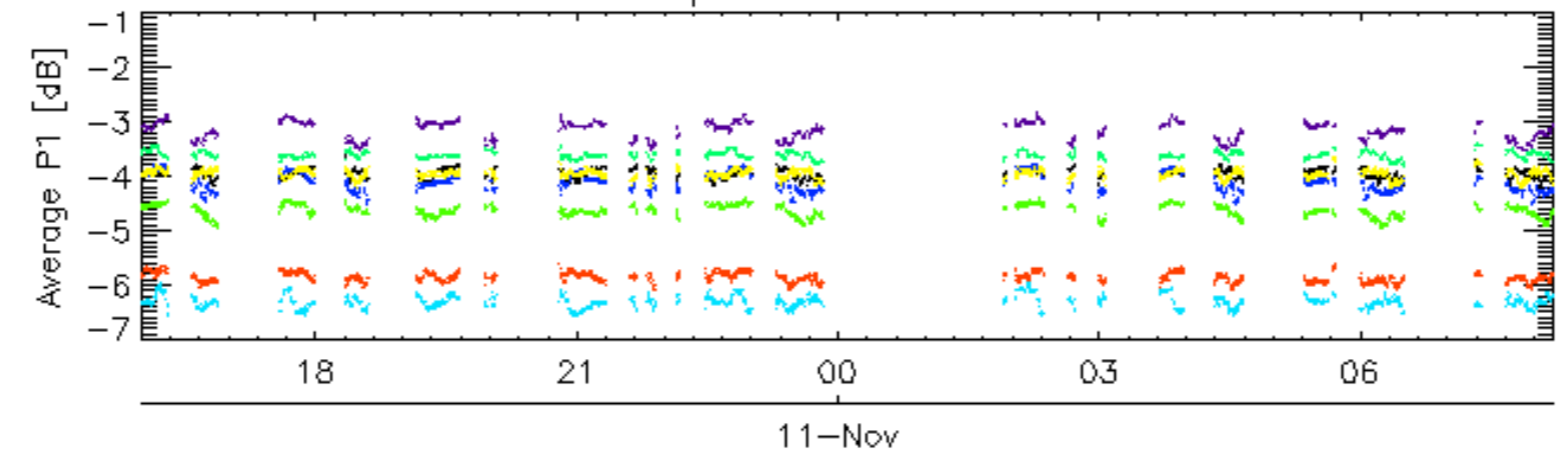
<input type="checkbox"/>
--------------------------

Cal pulses for GM1 SS3

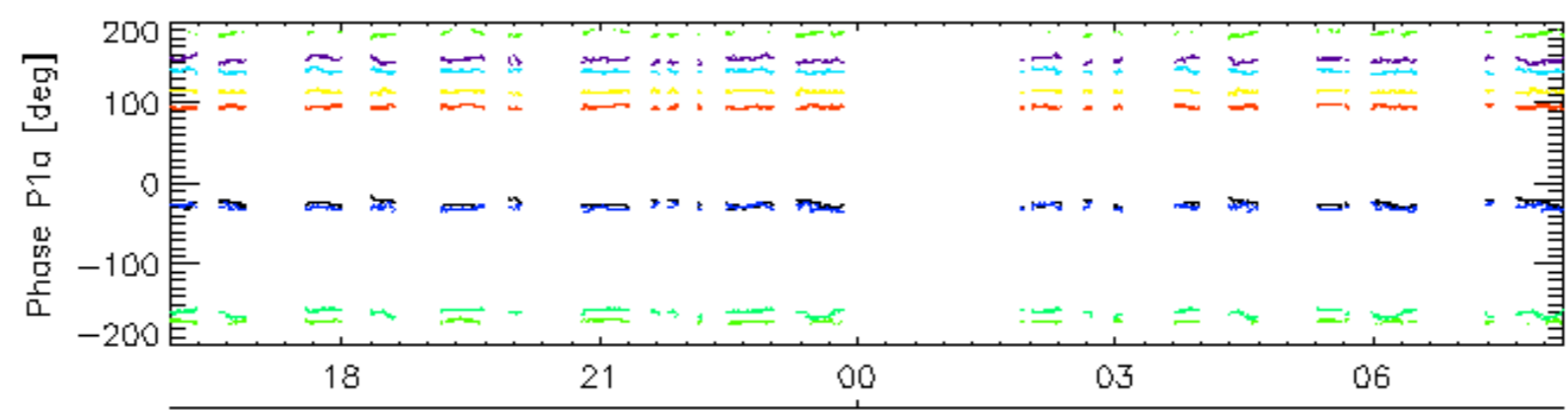
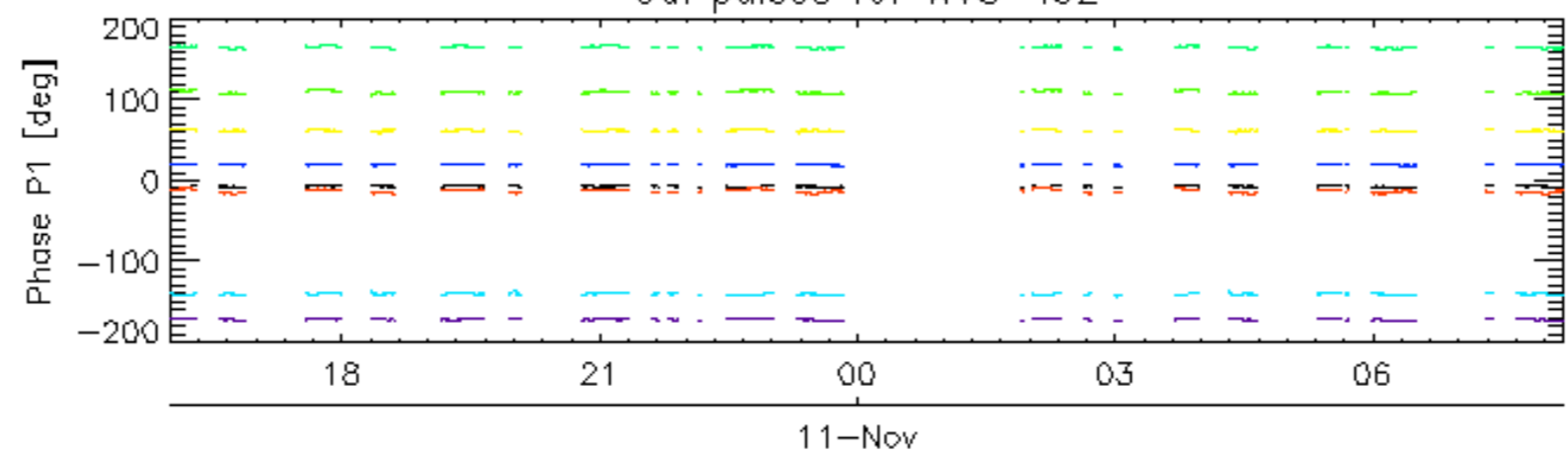


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

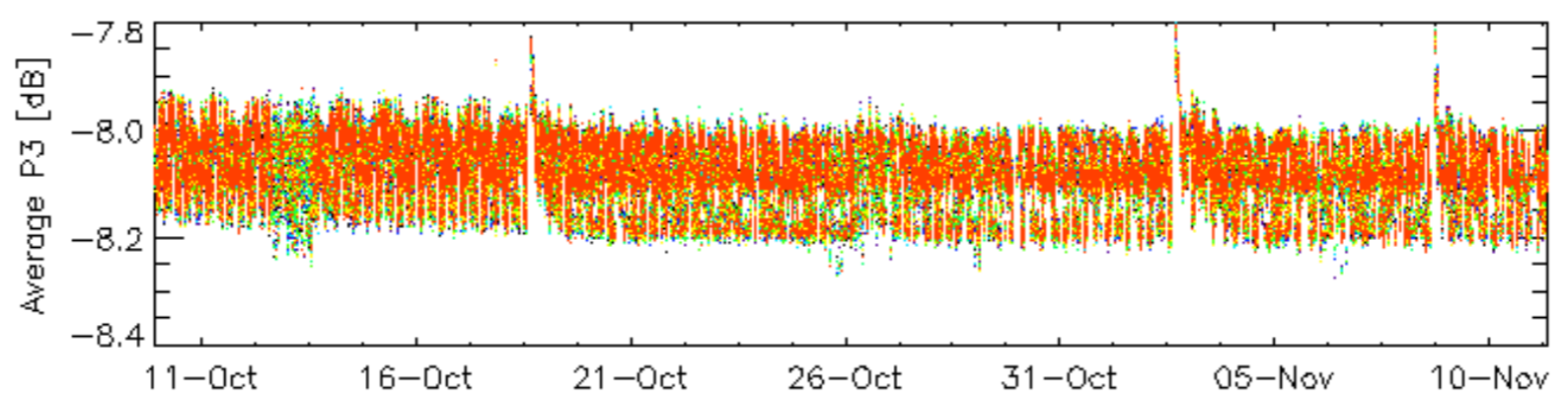
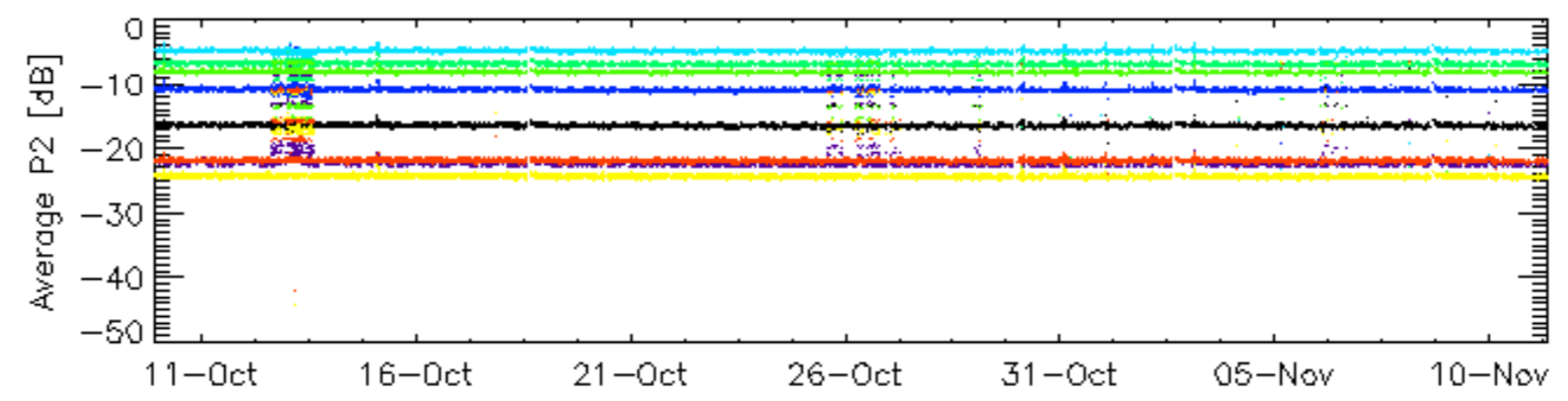
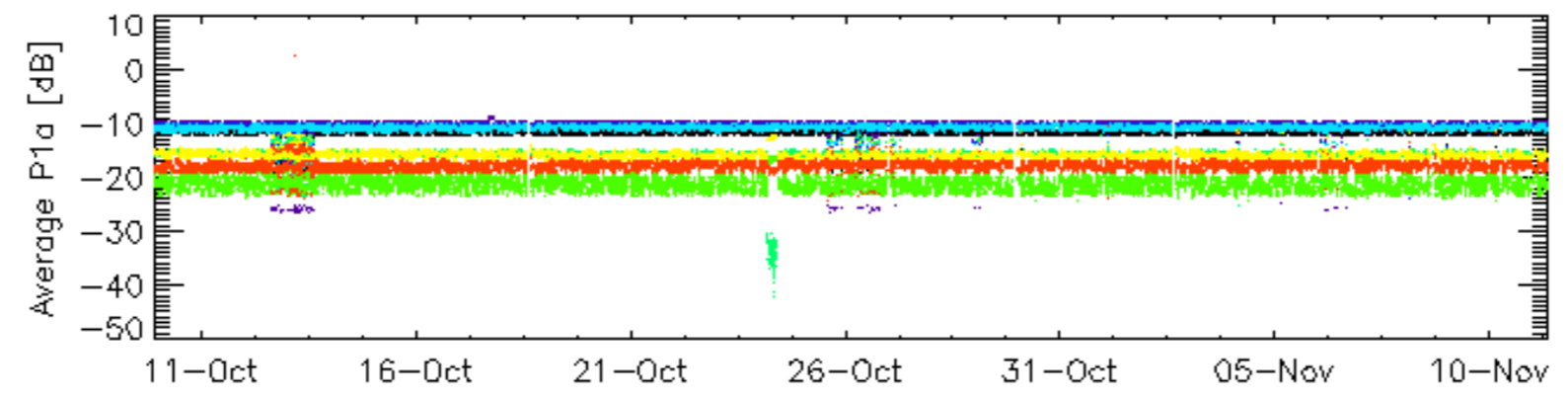
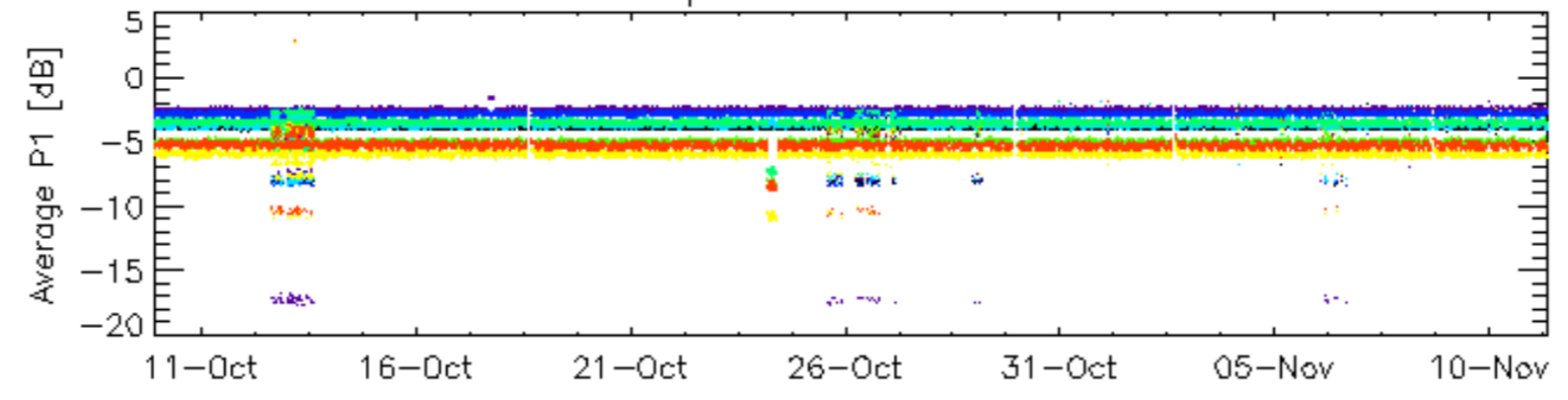


Cal pulses for WVS IS2



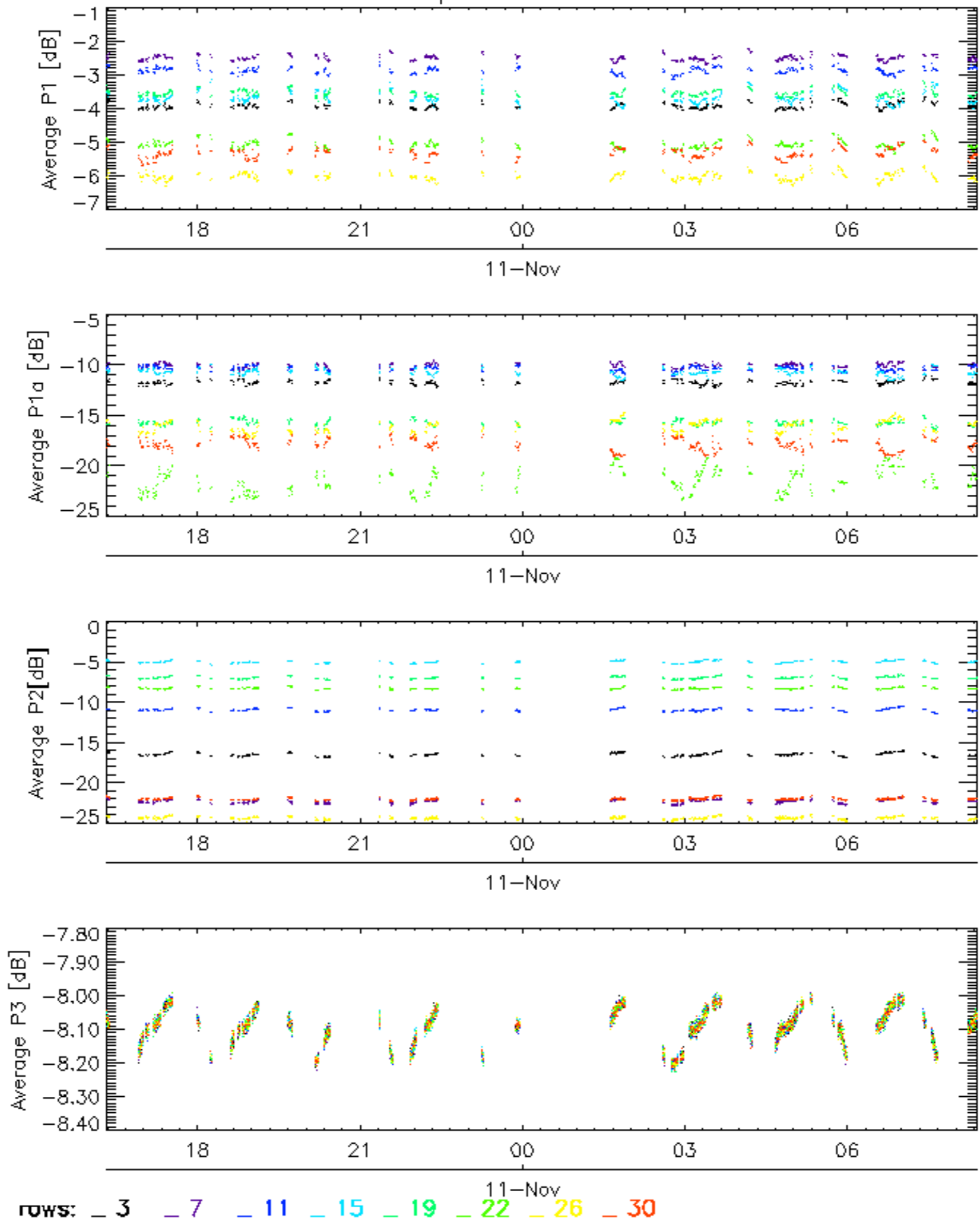
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

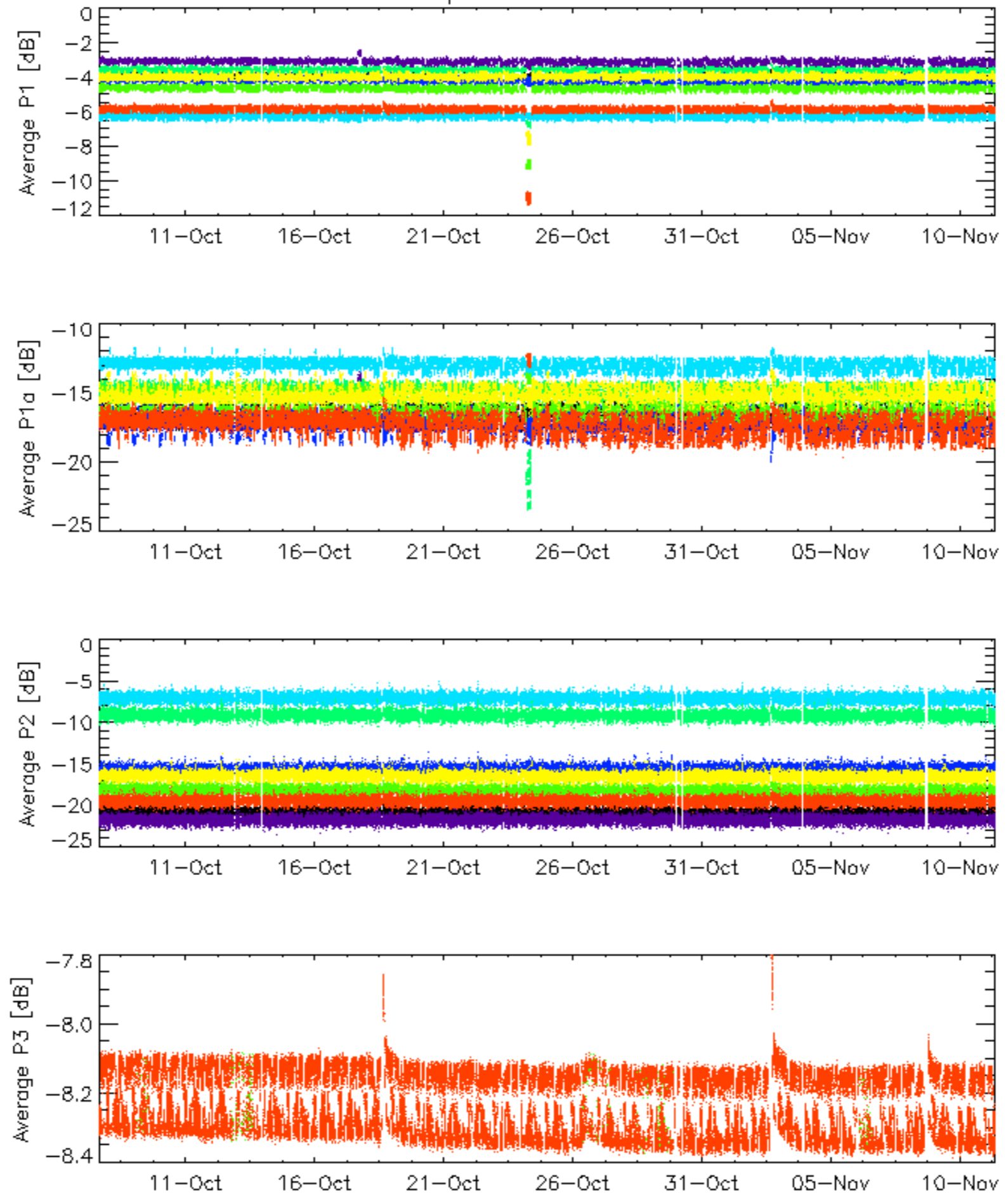


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

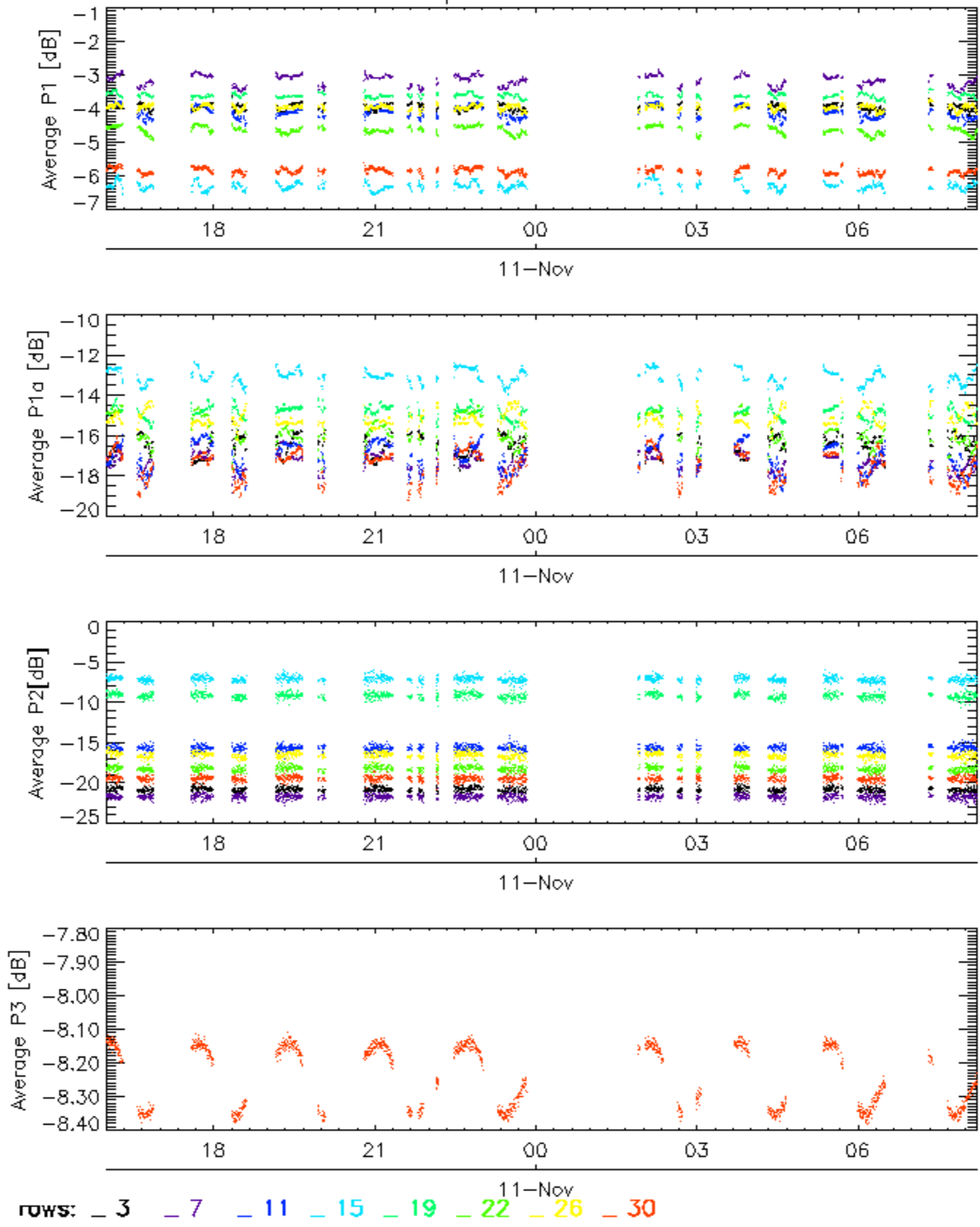


Cal pulses for WVS IS2



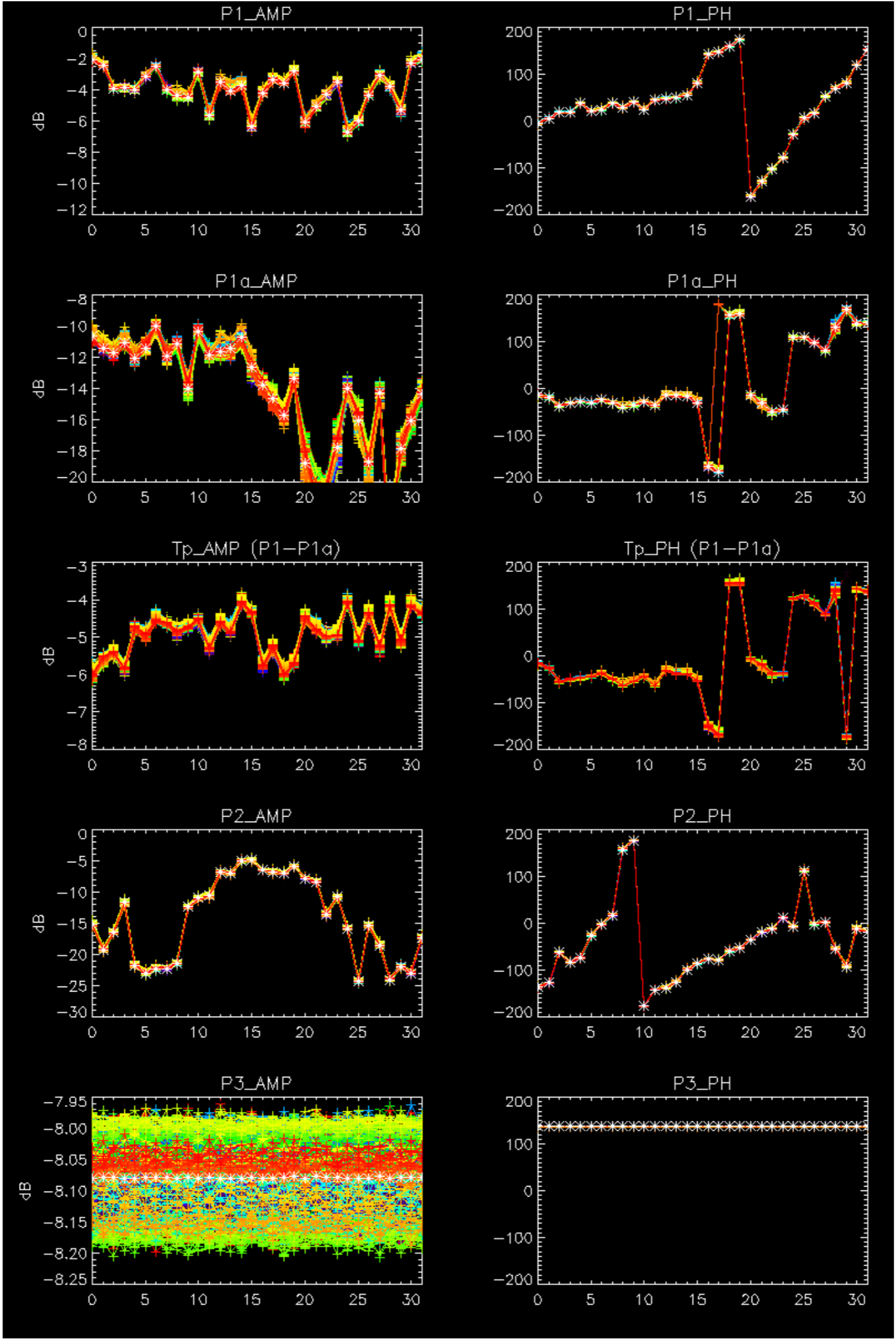
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

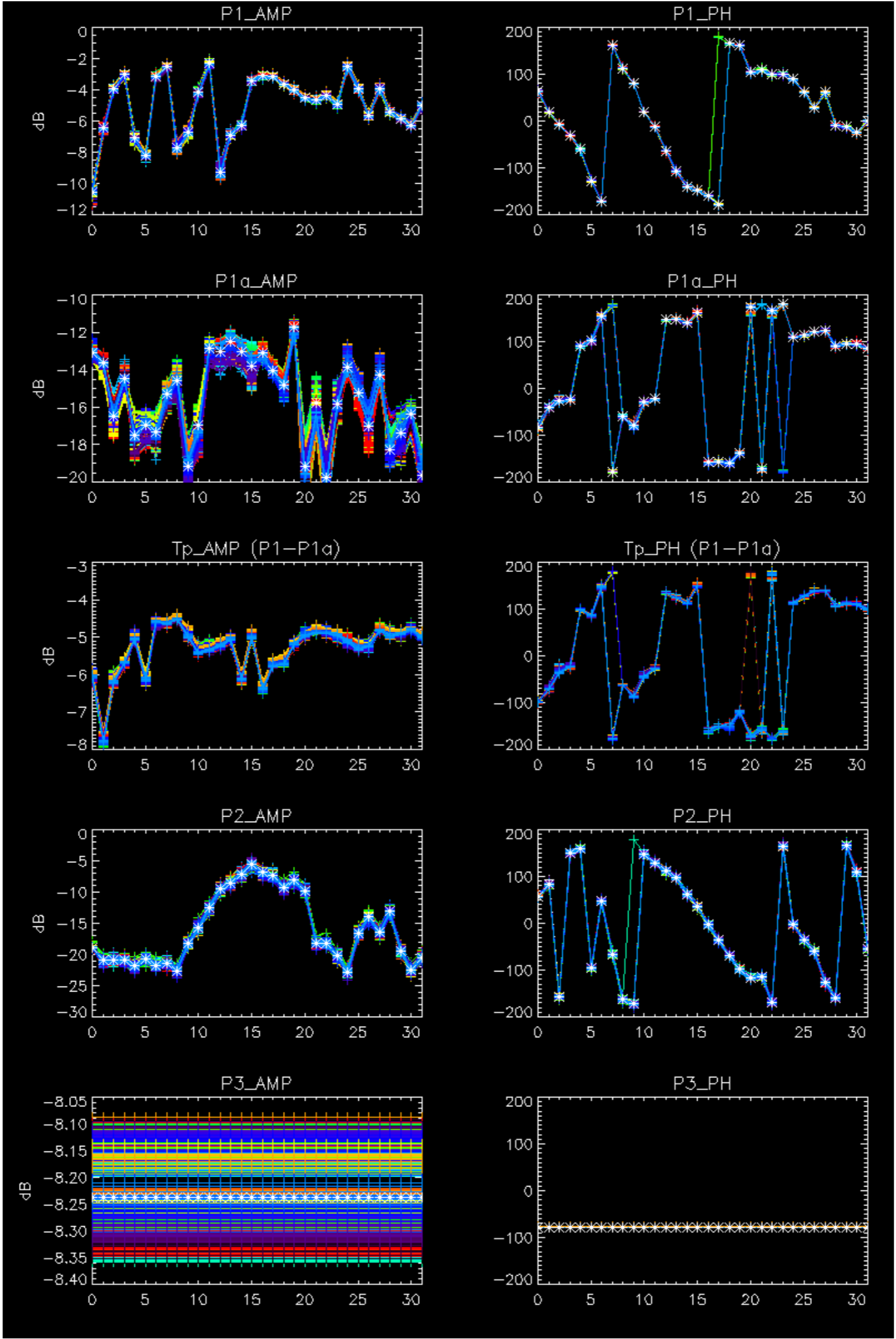
Cal pulses for WVS IS2



No anomalies observed.



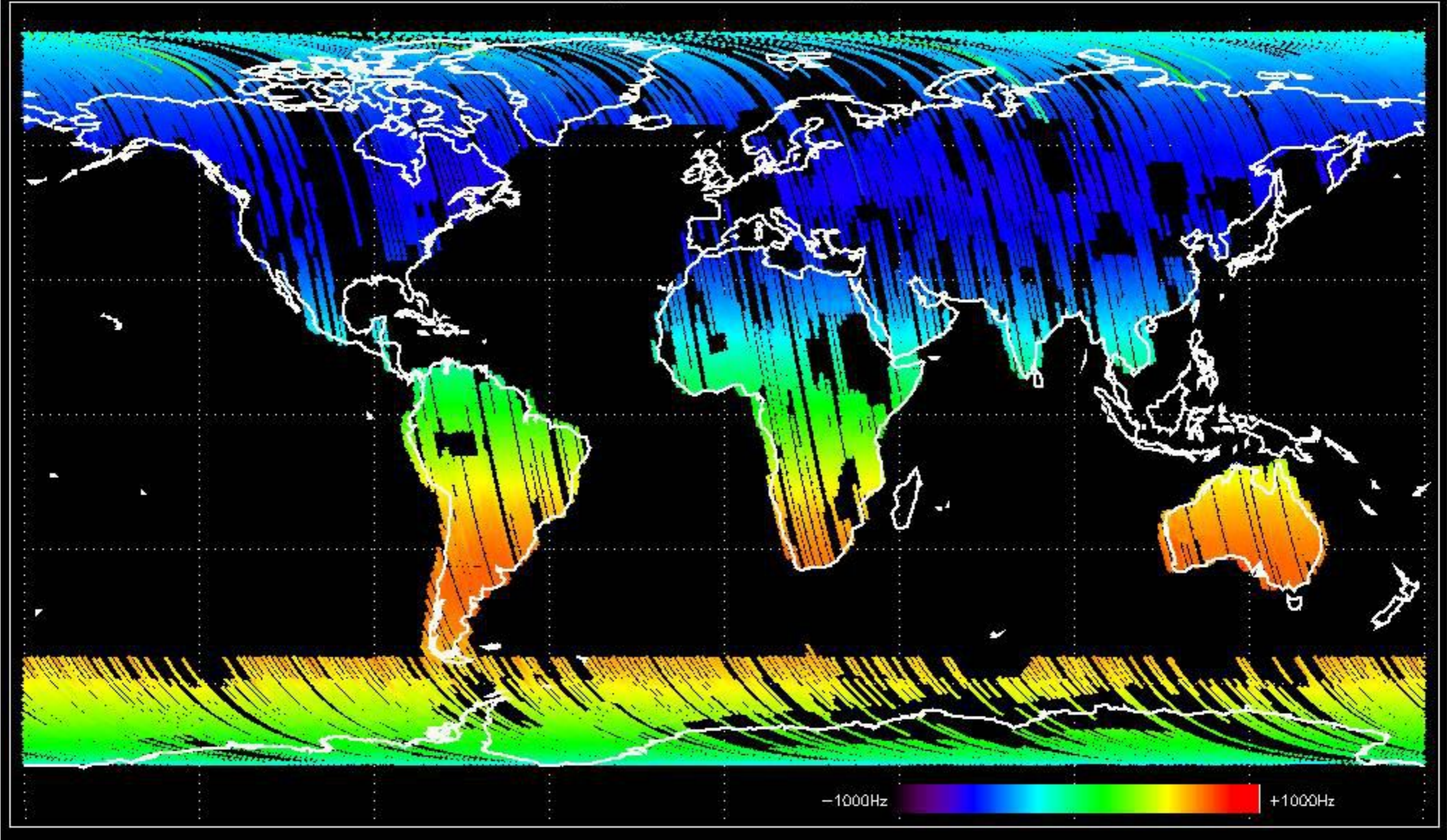




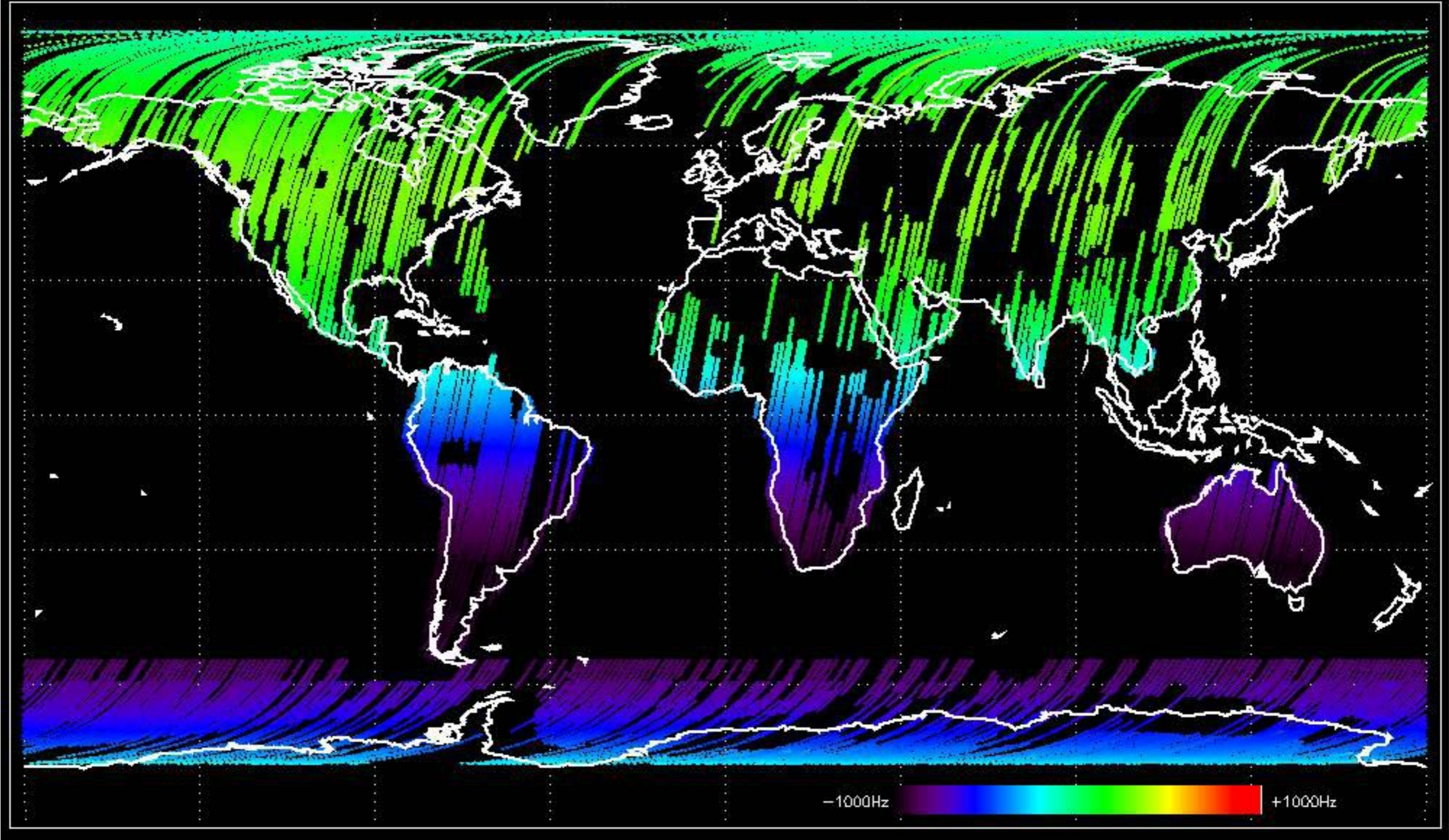
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



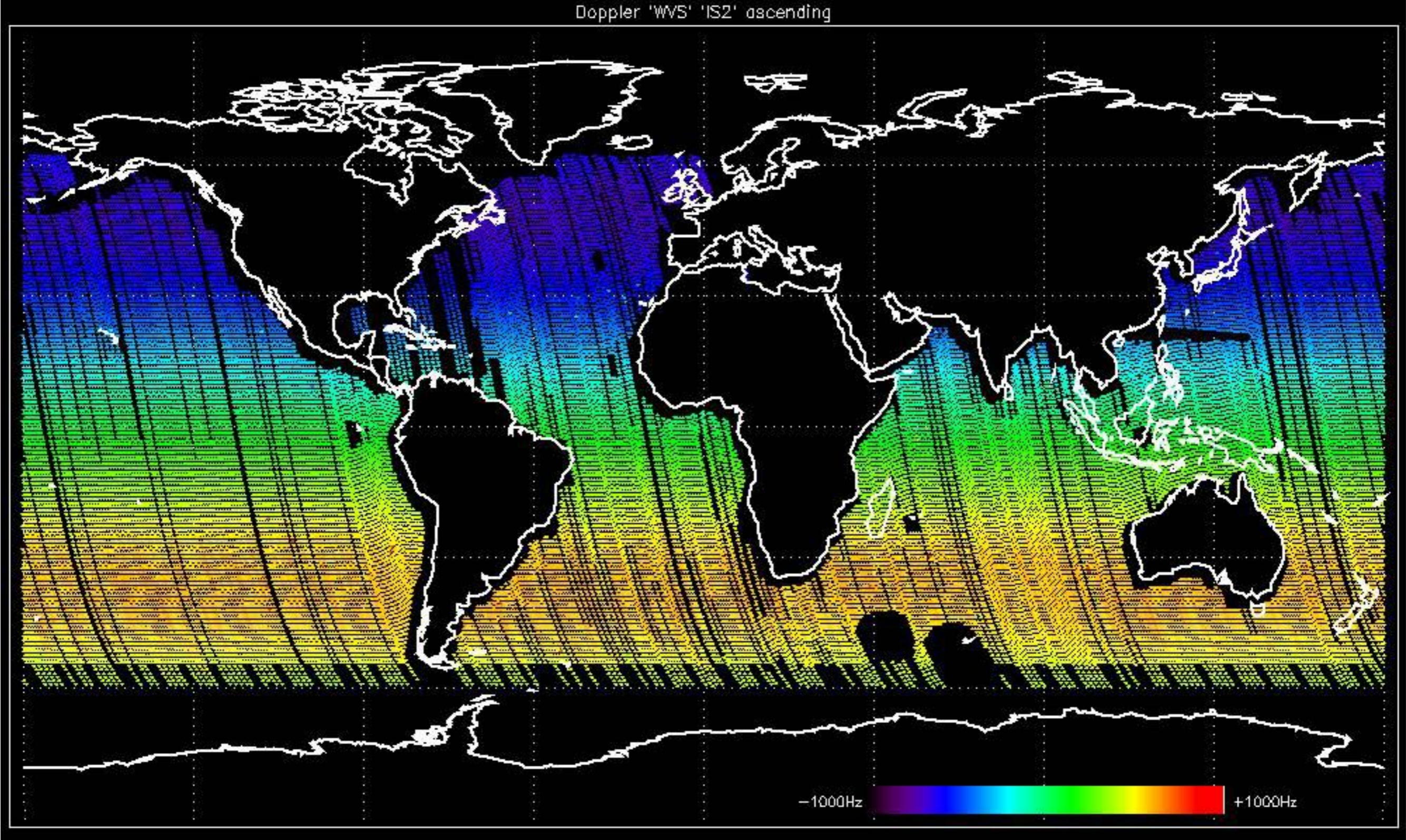
Doppler 'GM1' 'SS1' ascending



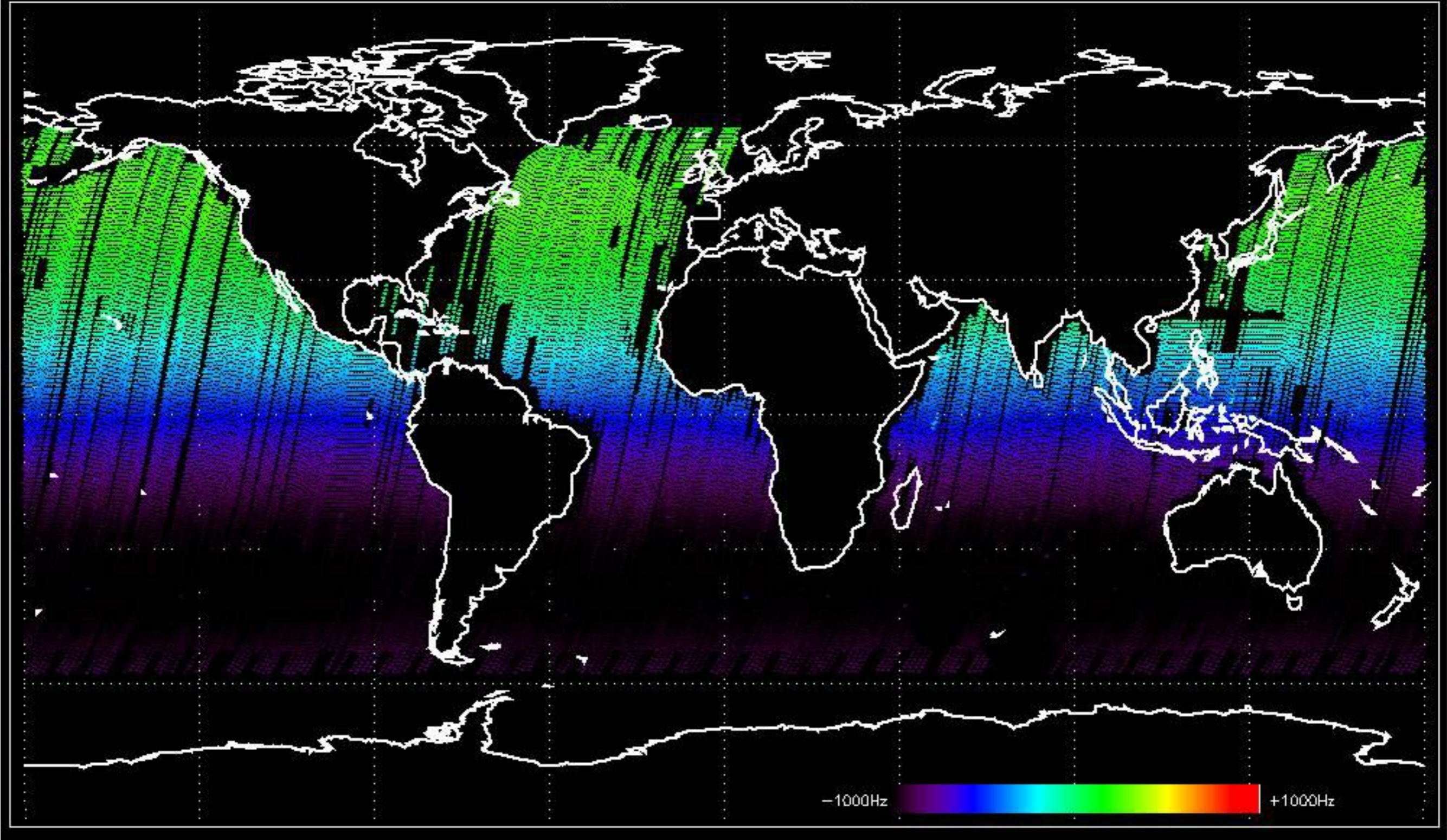
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

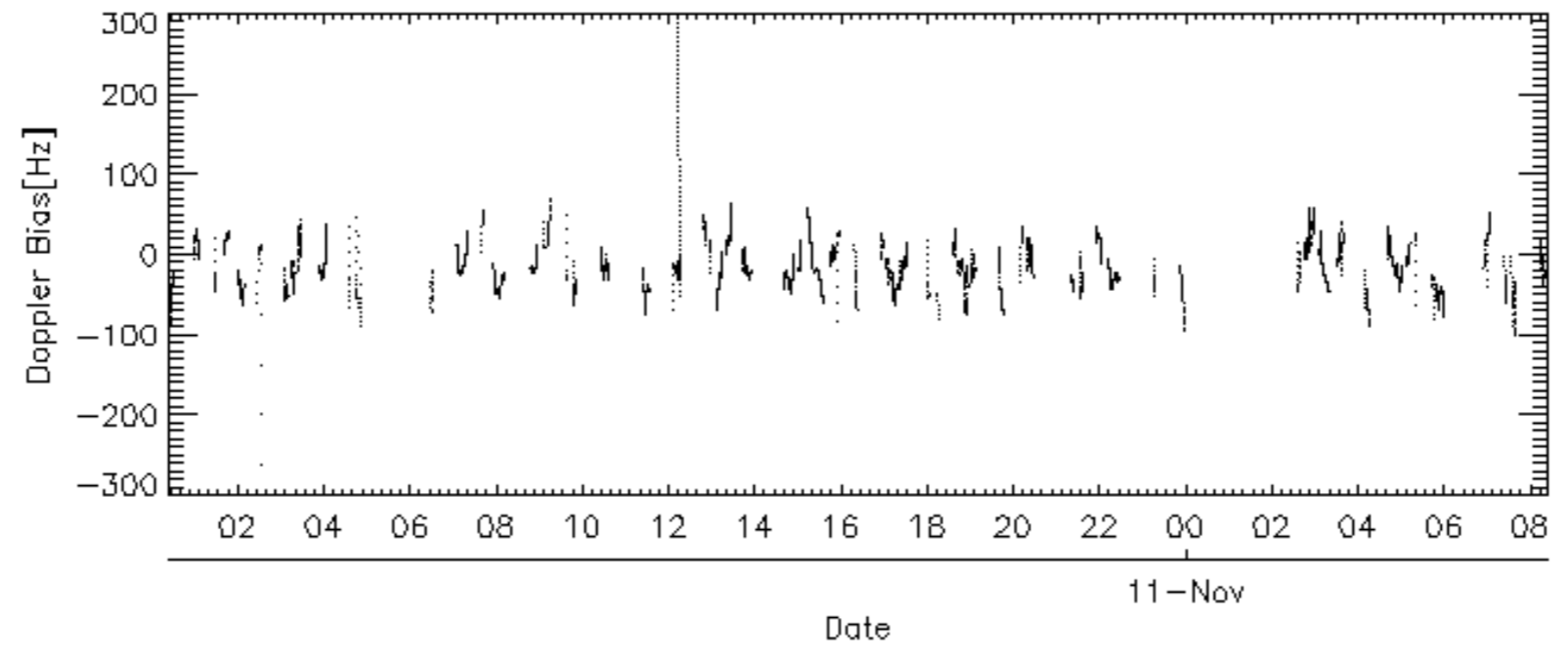
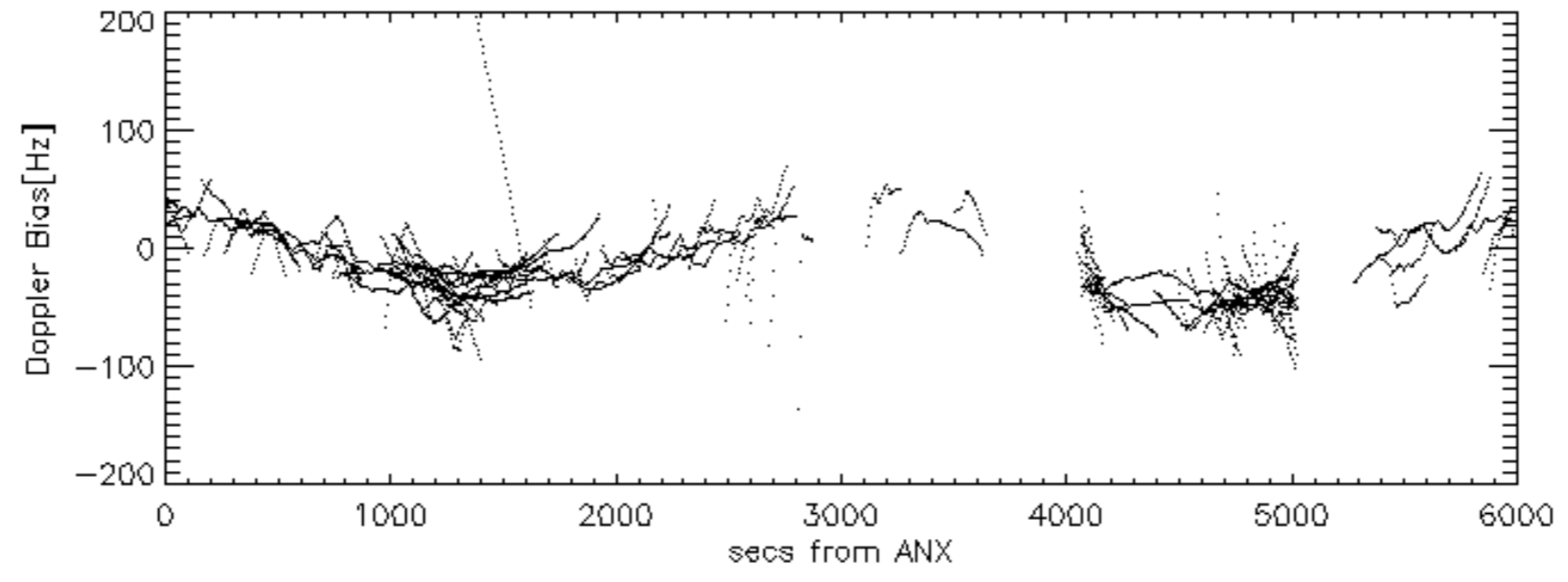
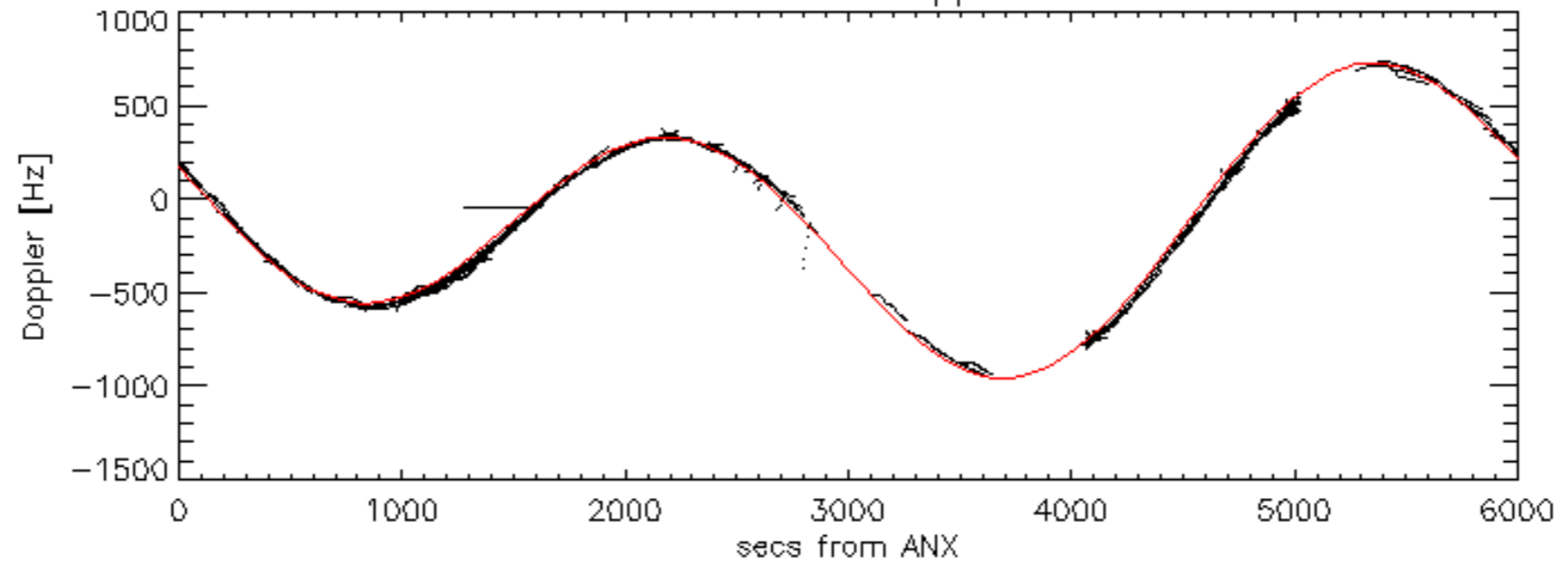


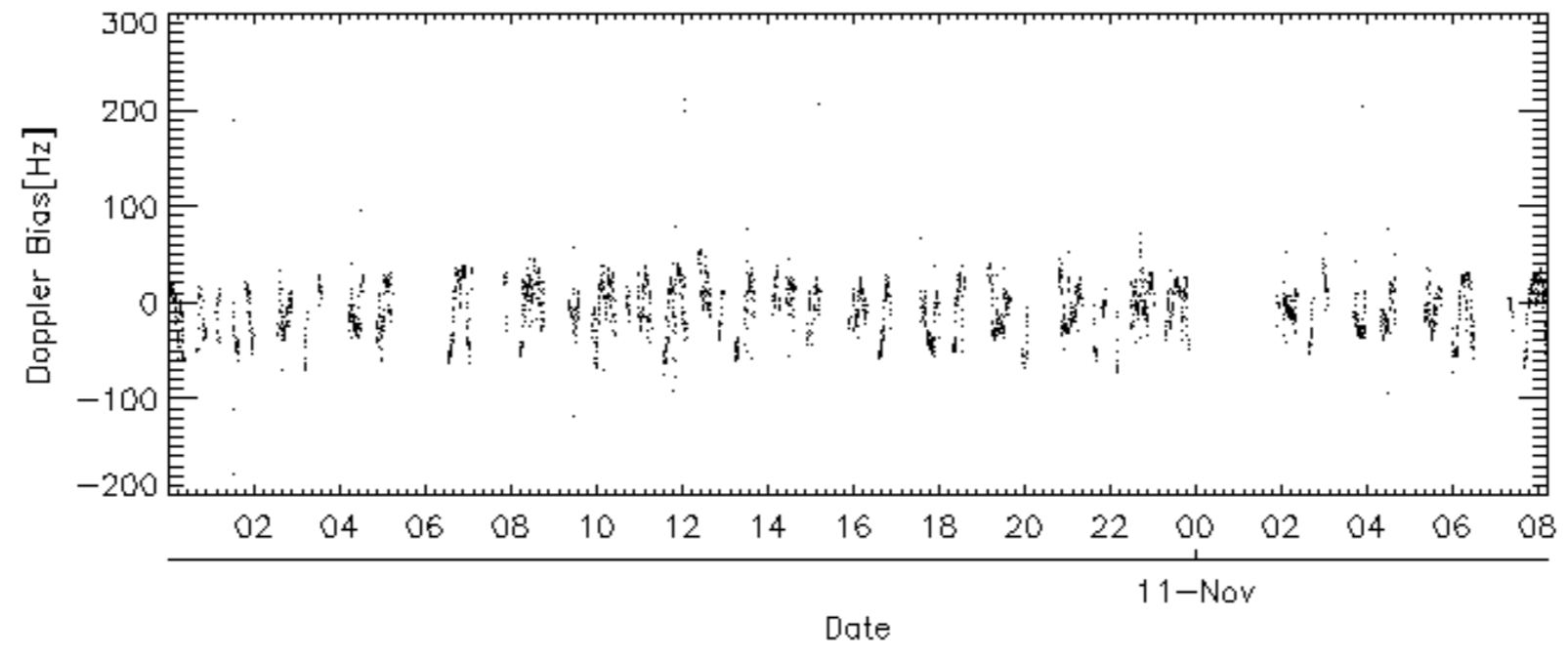
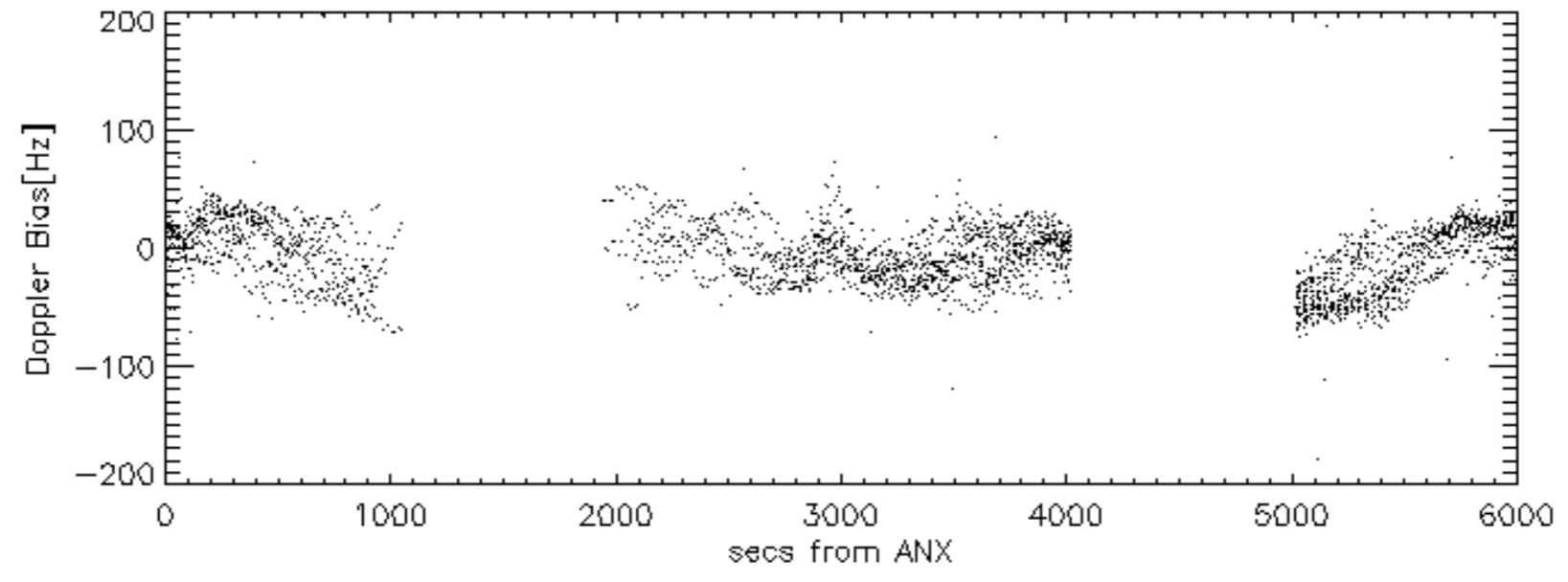
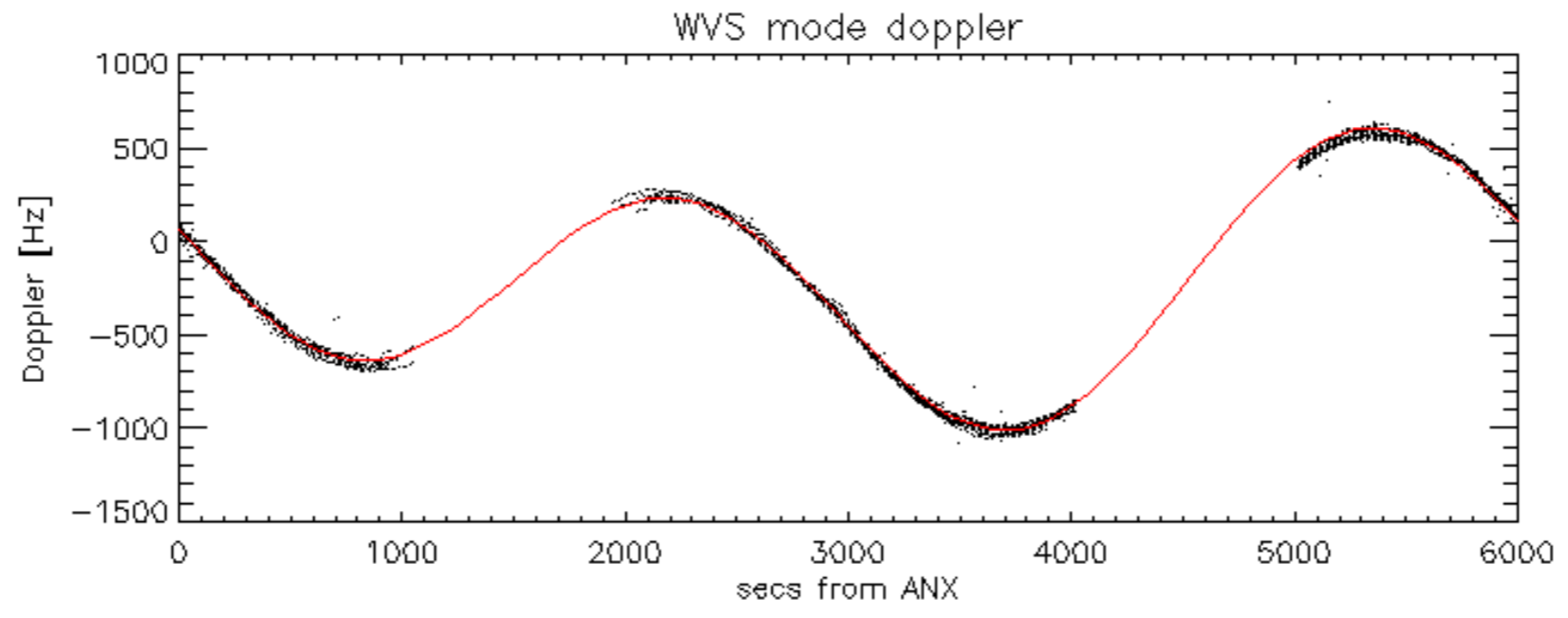
Doppler 'WVS' 'IS2' descending



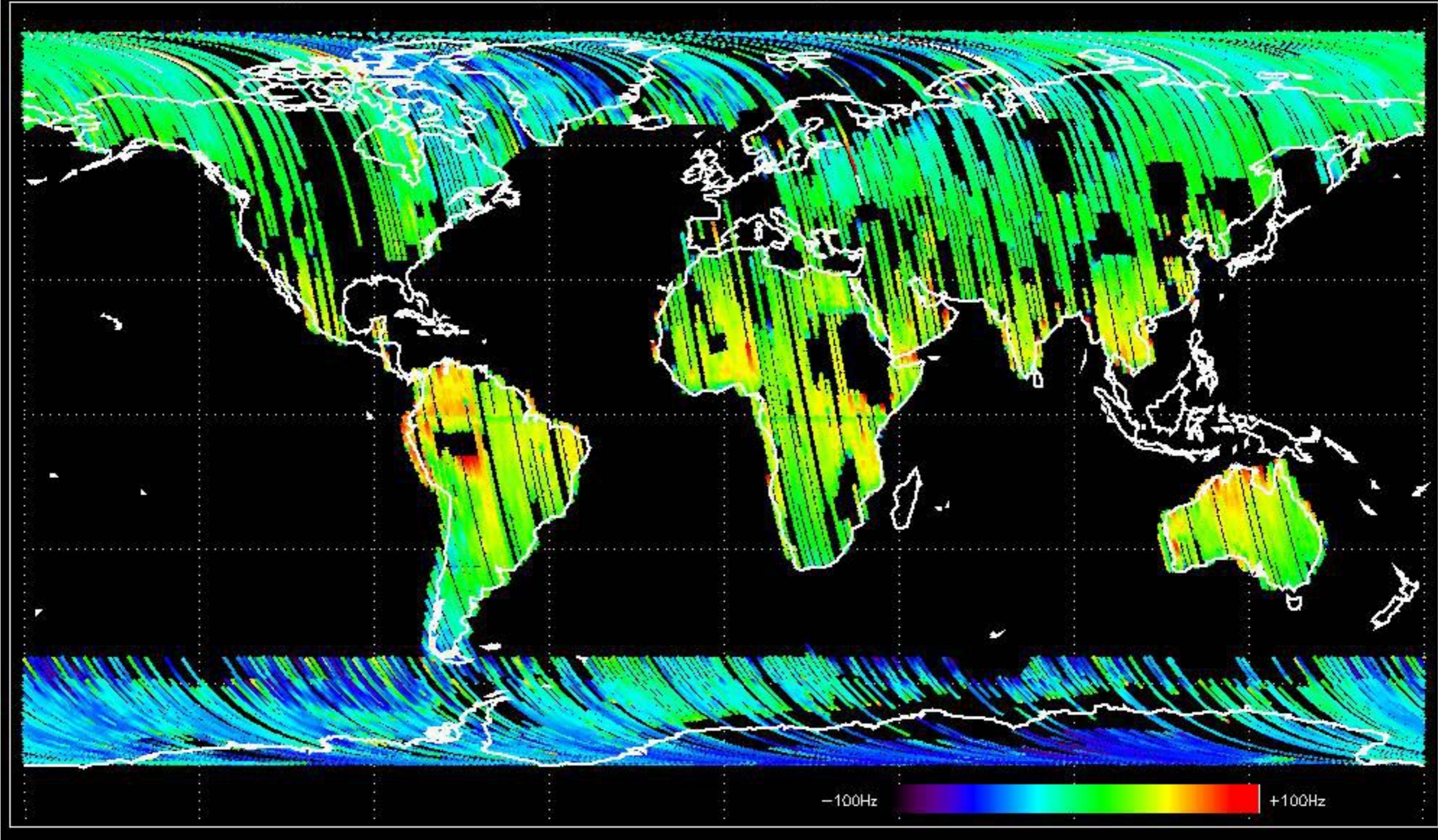


GM1 mode doppler

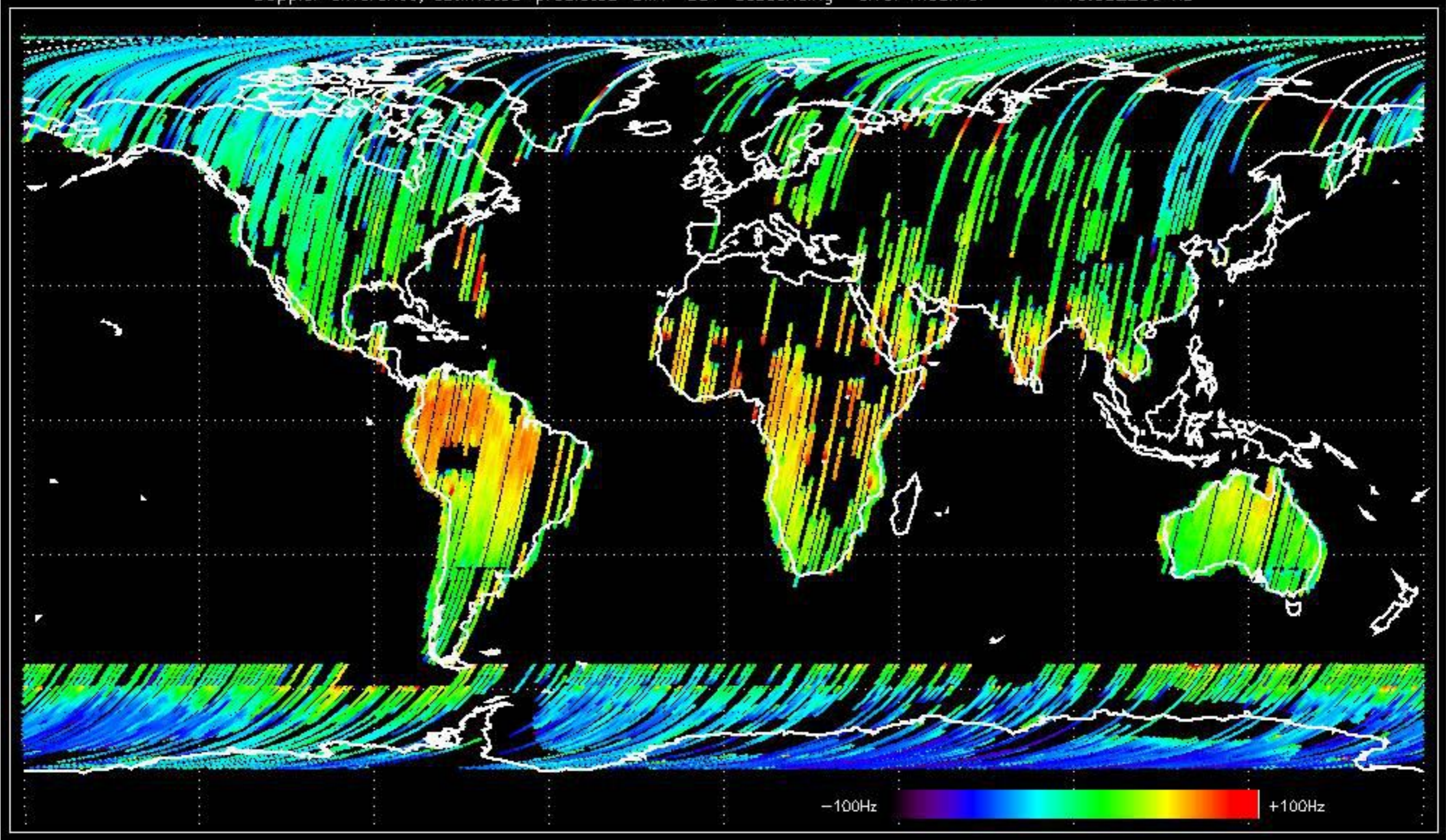




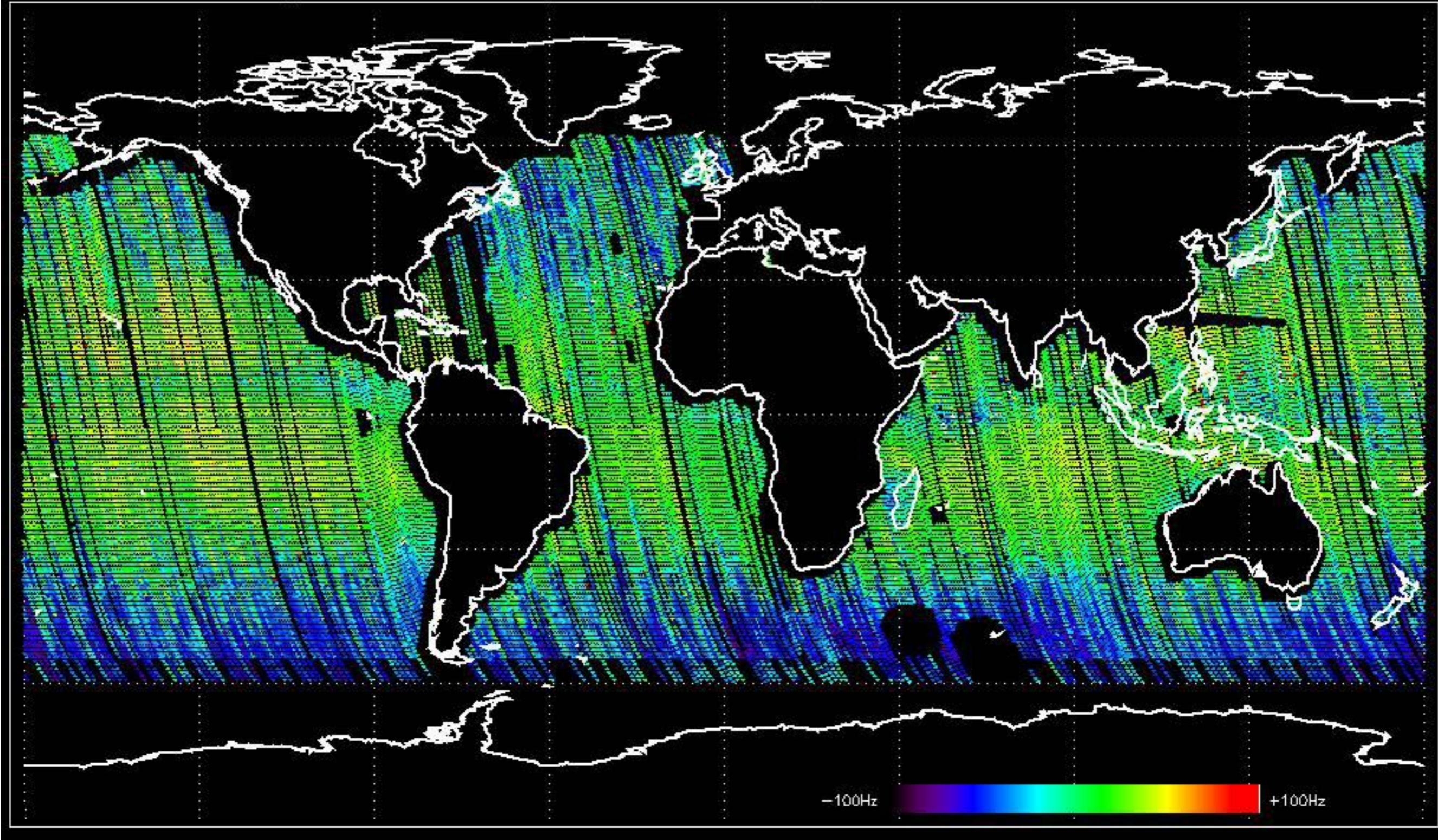
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.274171 Hz



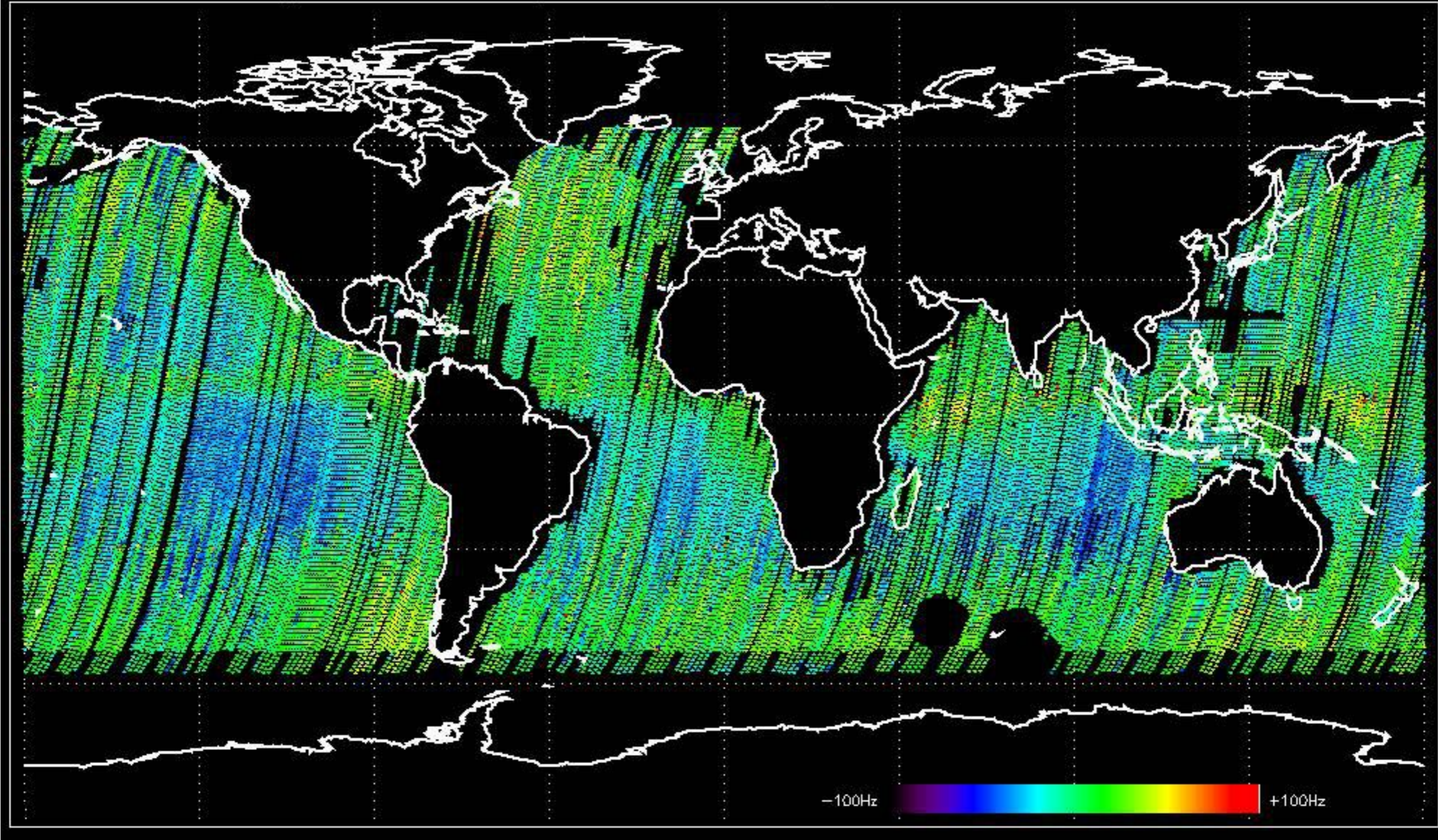
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.632296 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.4454003 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.6999345 Hz



No anomalies observed on available MS products:

No anomalies observed.





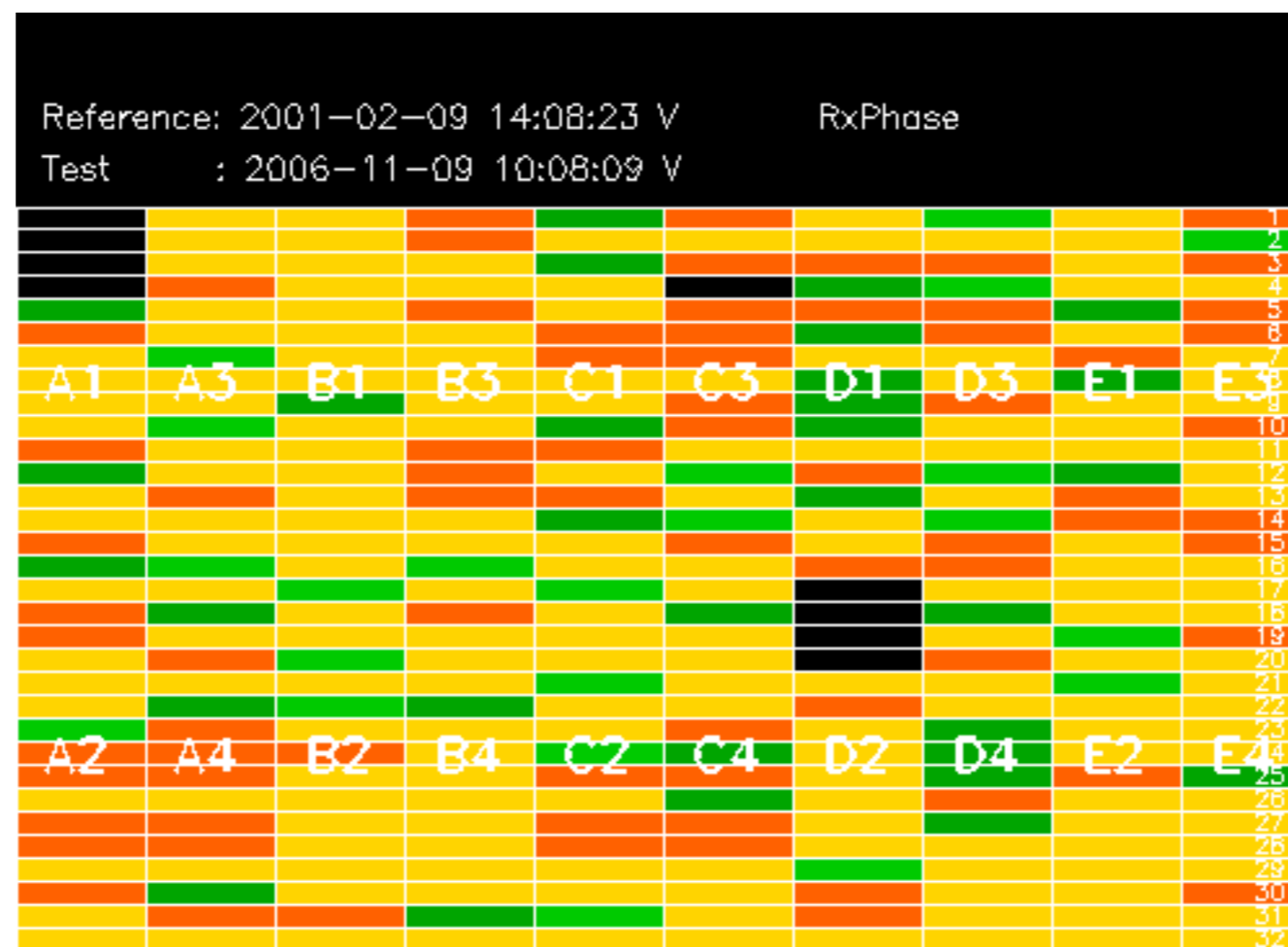






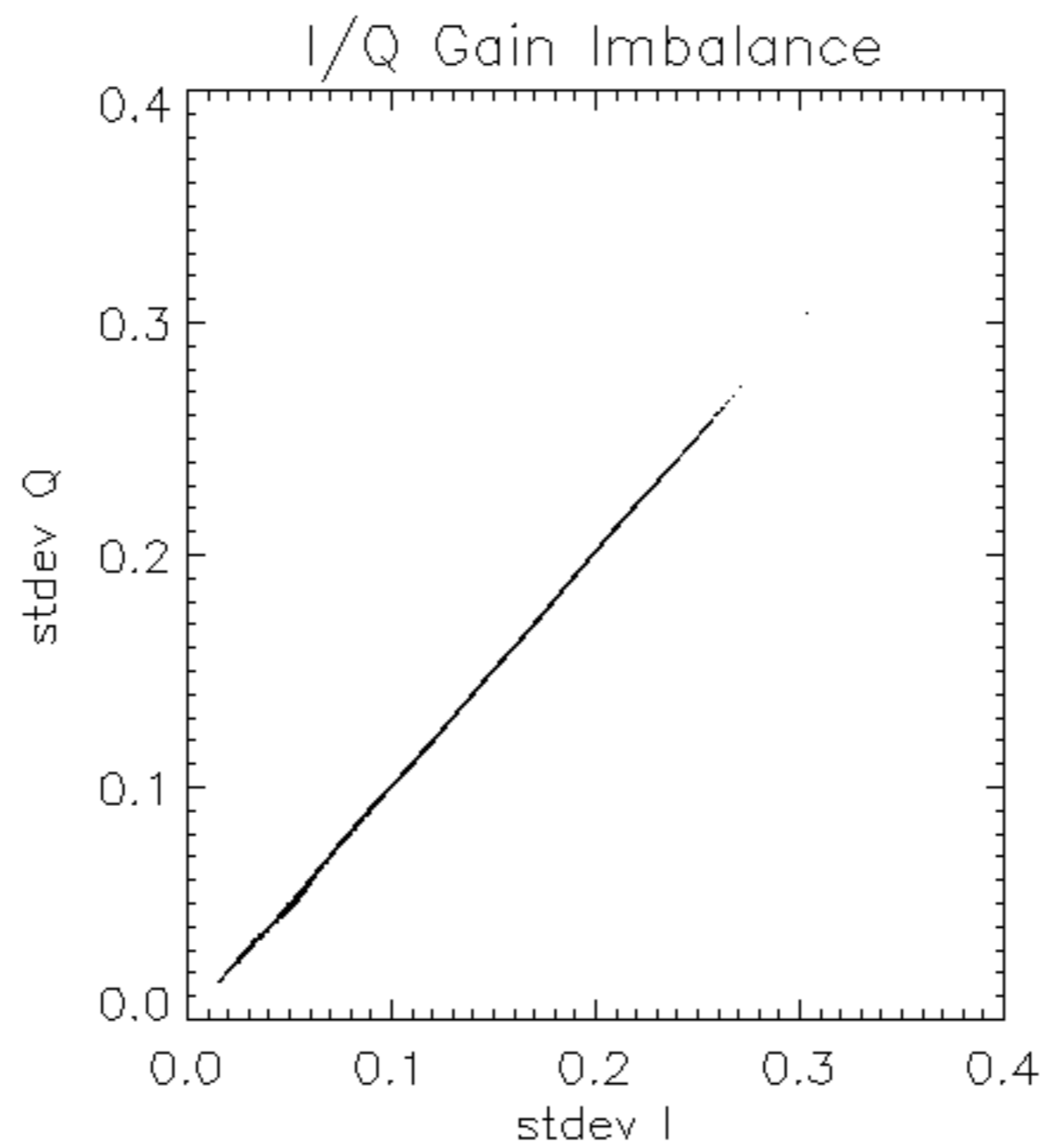


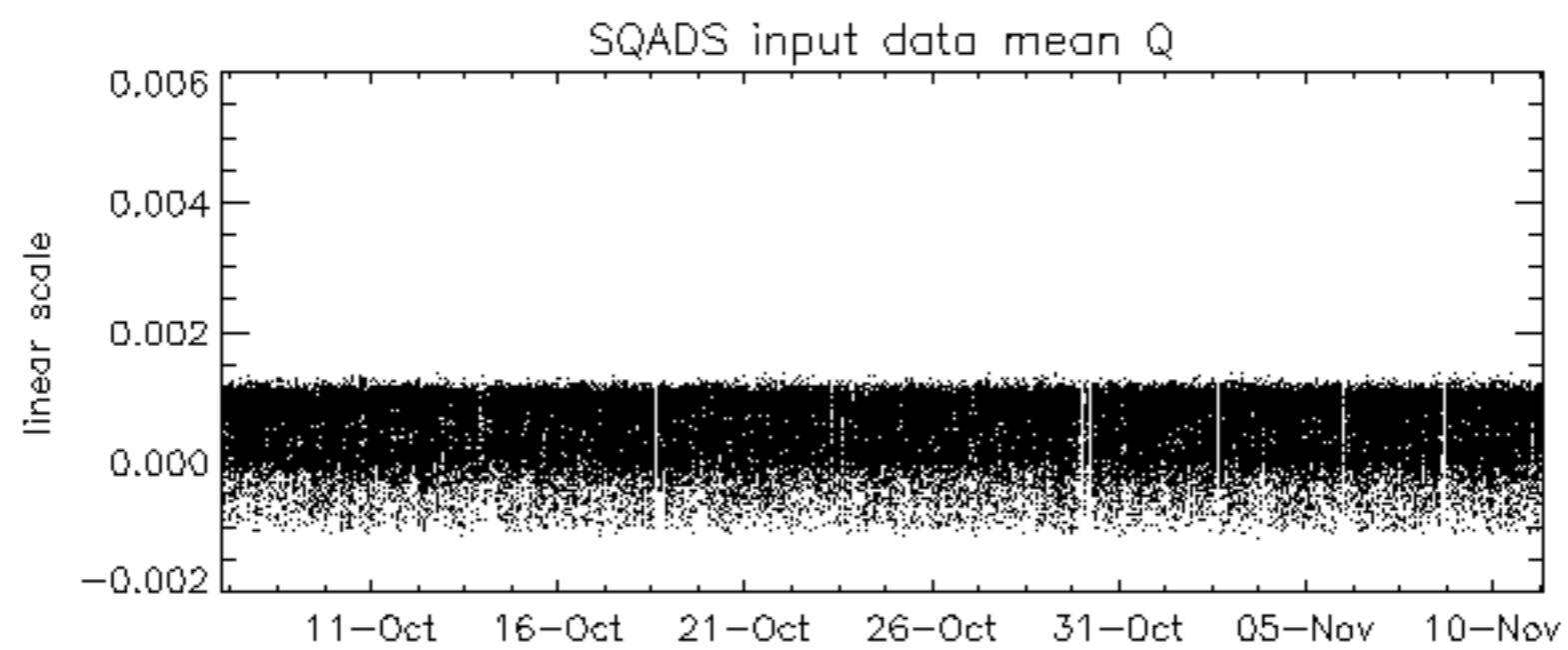
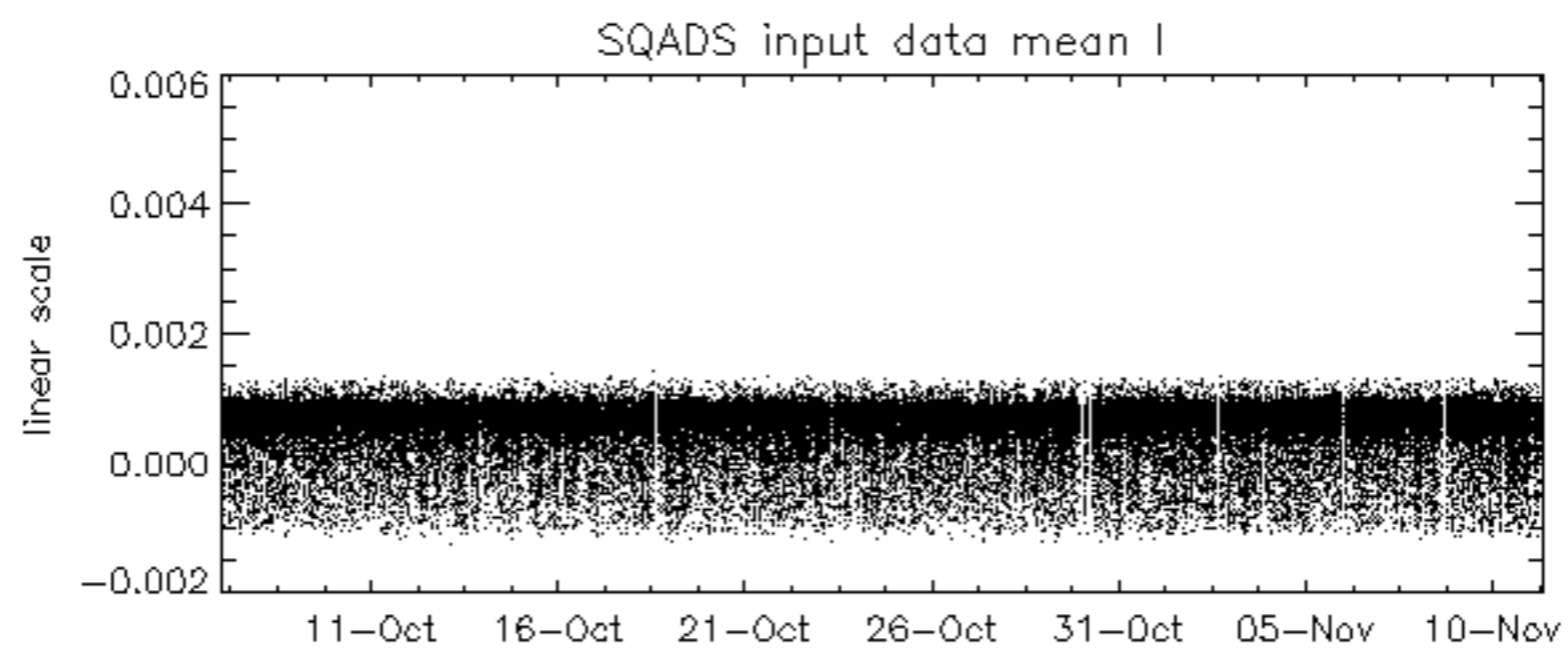
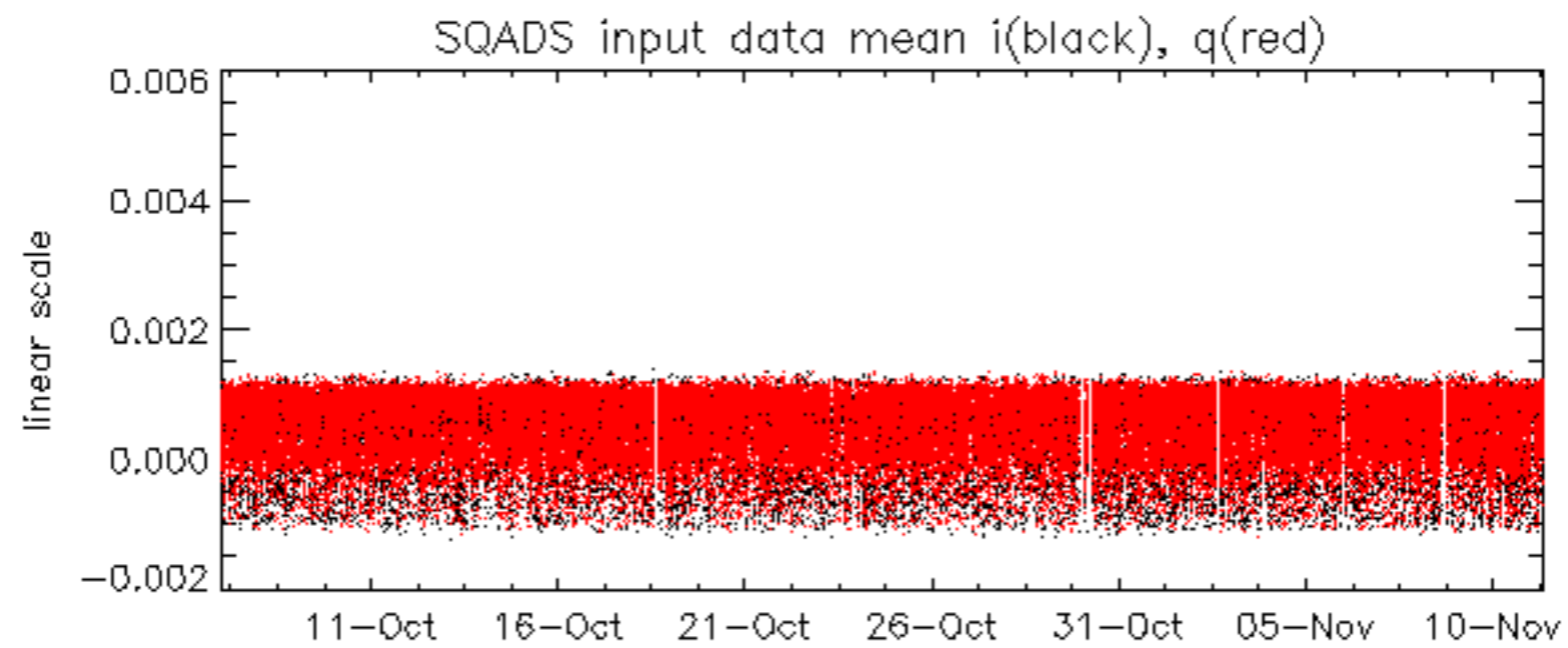


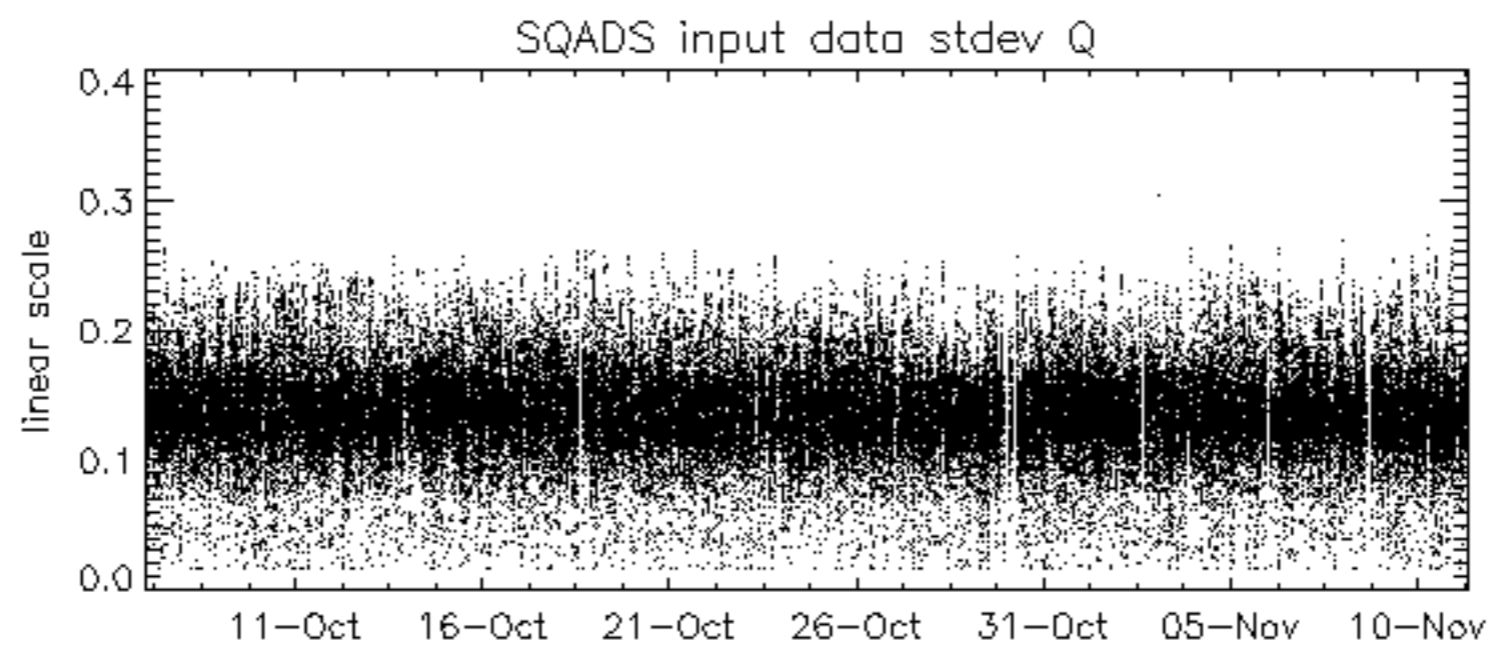
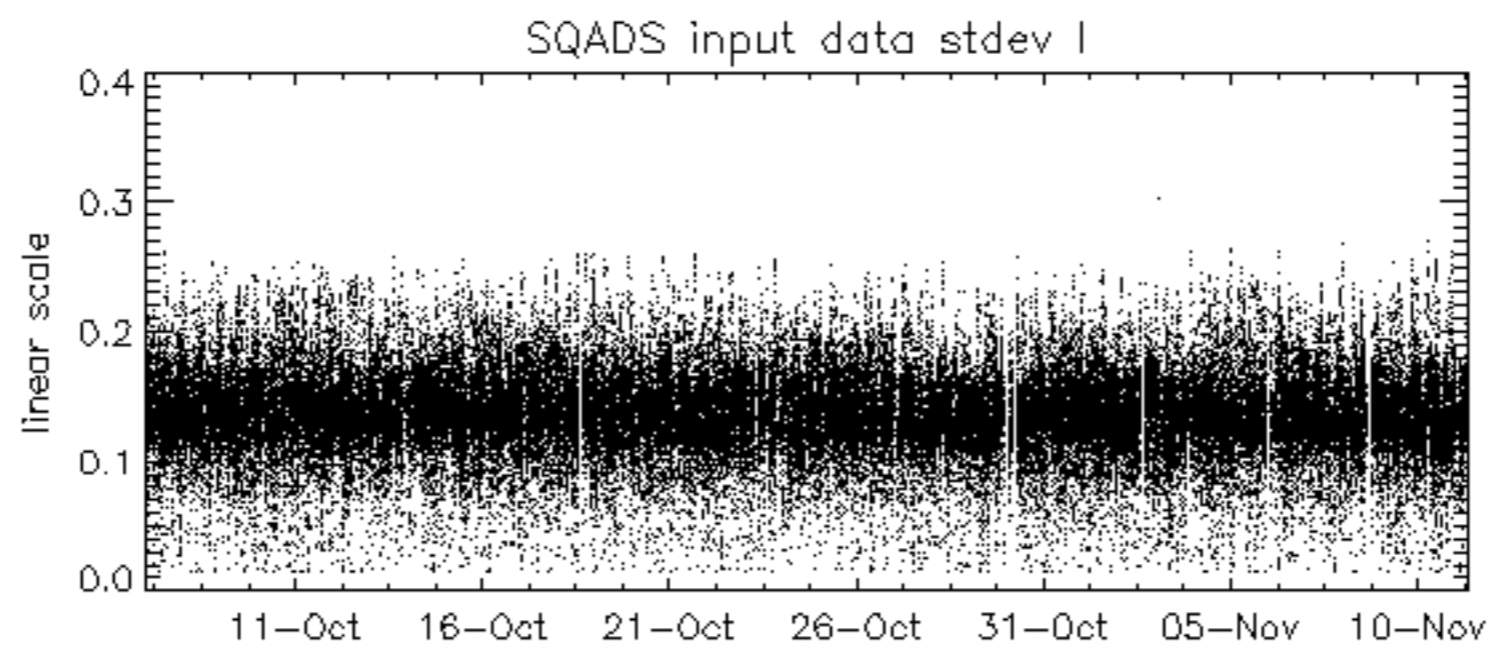
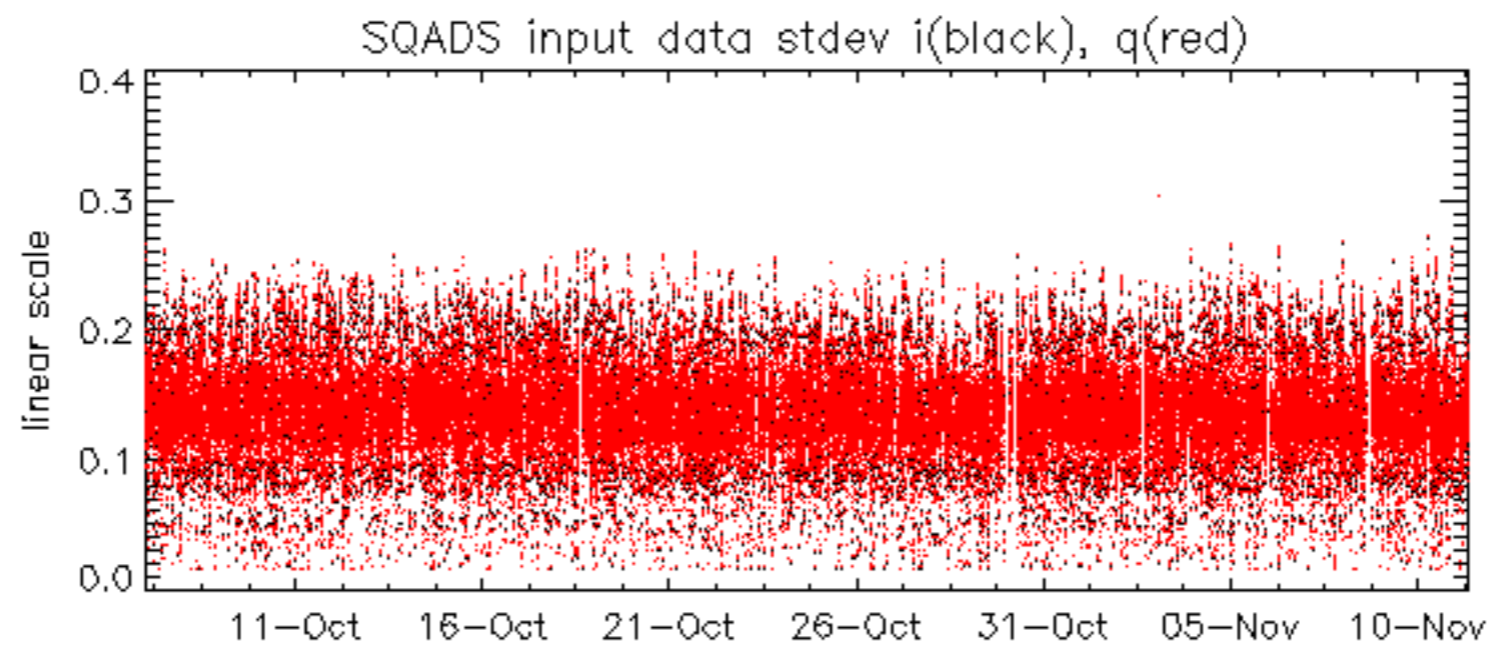


















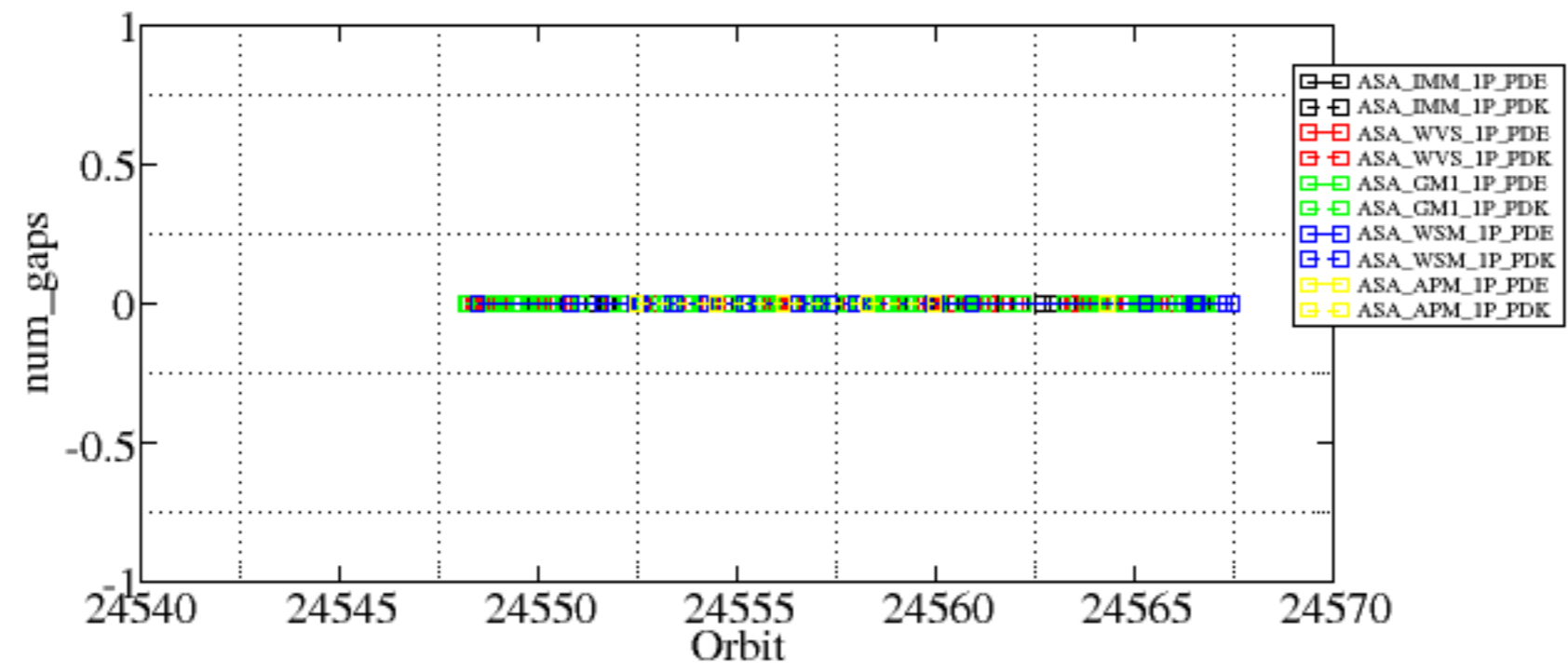


Summary of analysis for the last 3 days 2006111[901]

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_IMM_1PNPDK20061110_062233_00000592052_00449_24551_3724.N1	0	1
ASA_GM1_1PNPDK20061110_150123_000001872052_00454_24556_8390.N1	0	30
ASA_GM1_1PNPDK20061110_152402_000006522052_00455_24557_8387.N1	0	28
ASA_WSM_1PNPDE20061110_005418_000002632052_00446_24548_0001.N1	0	29
ASA_WSM_1PNPDK20061110_141658_000003302052_00454_24556_9834.N1	0	60
ASA_WSM_1PNPDK20061110_142505_000000672052_00454_24556_9836.N1	0	18
ASA_WSM_1PNPDK20061110_165310_000000852052_00456_24558_9847.N1	0	59





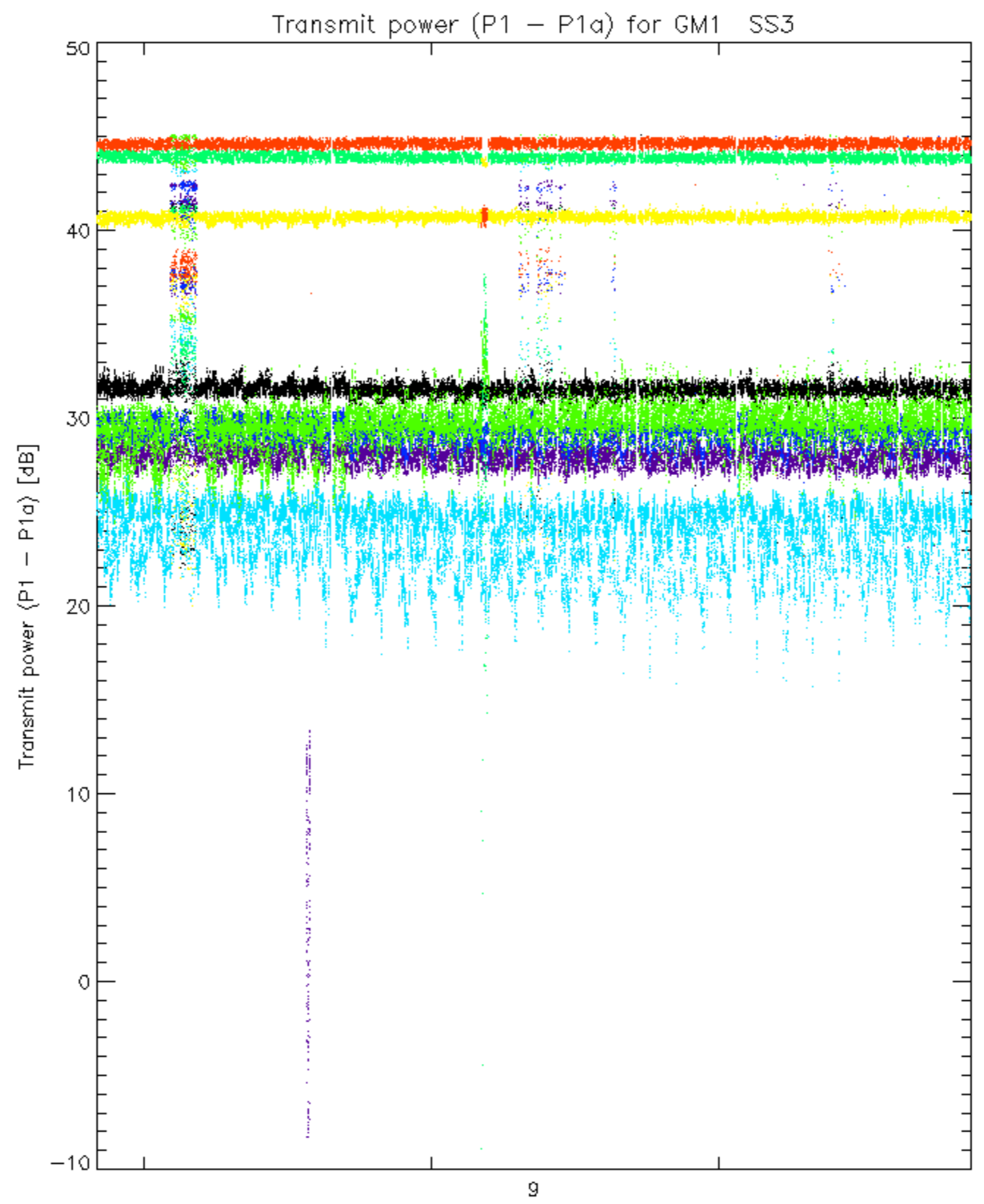




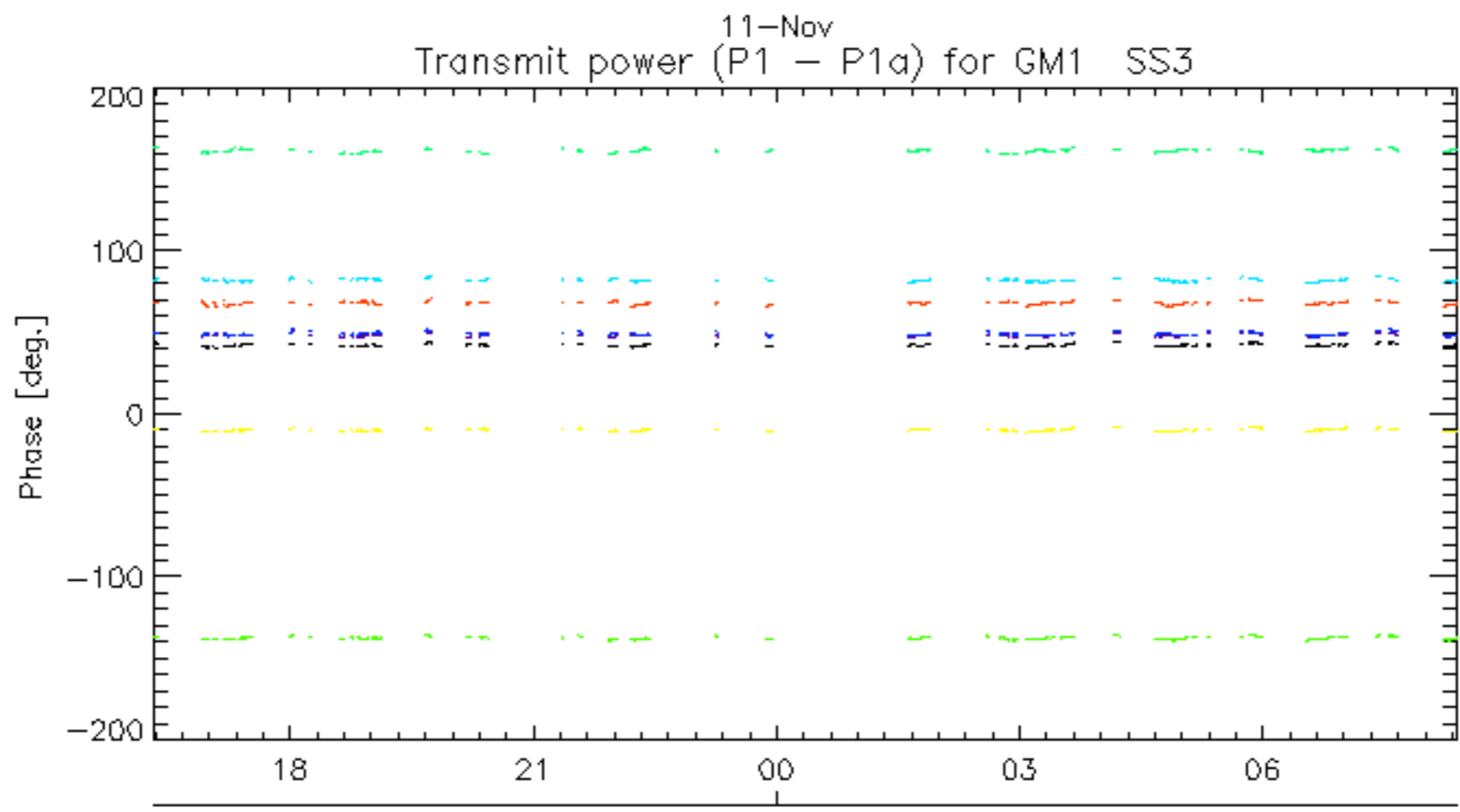
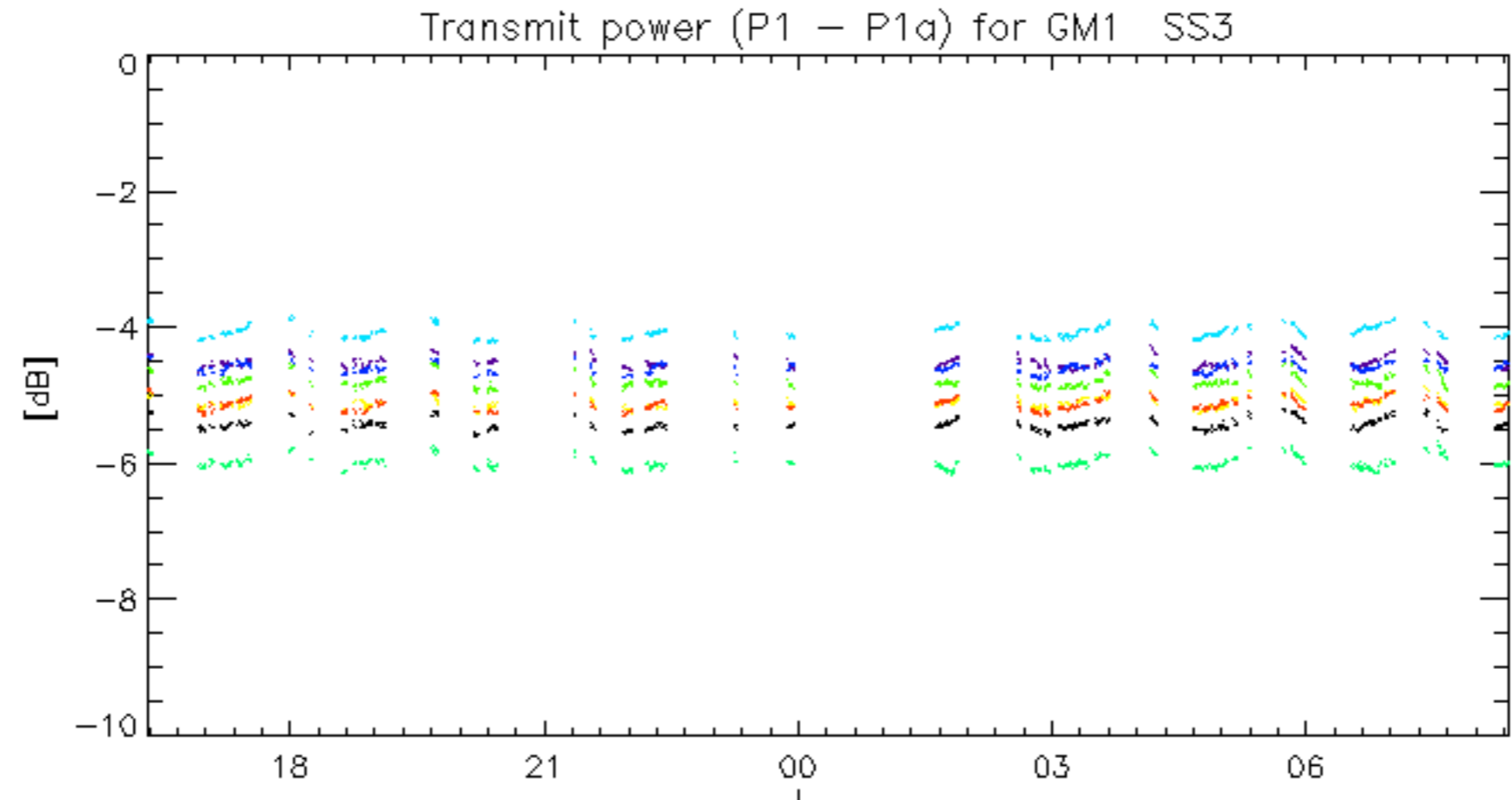






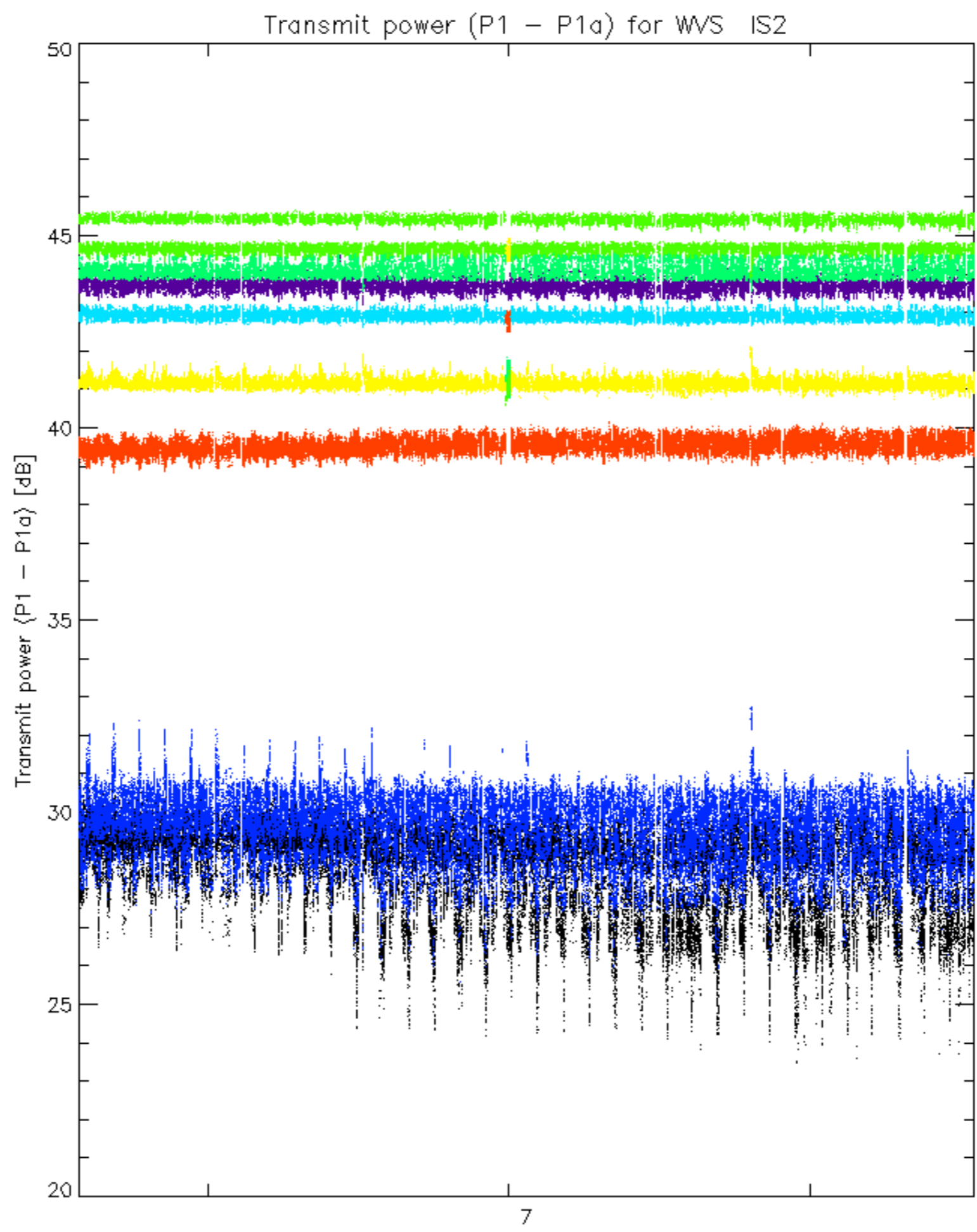


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

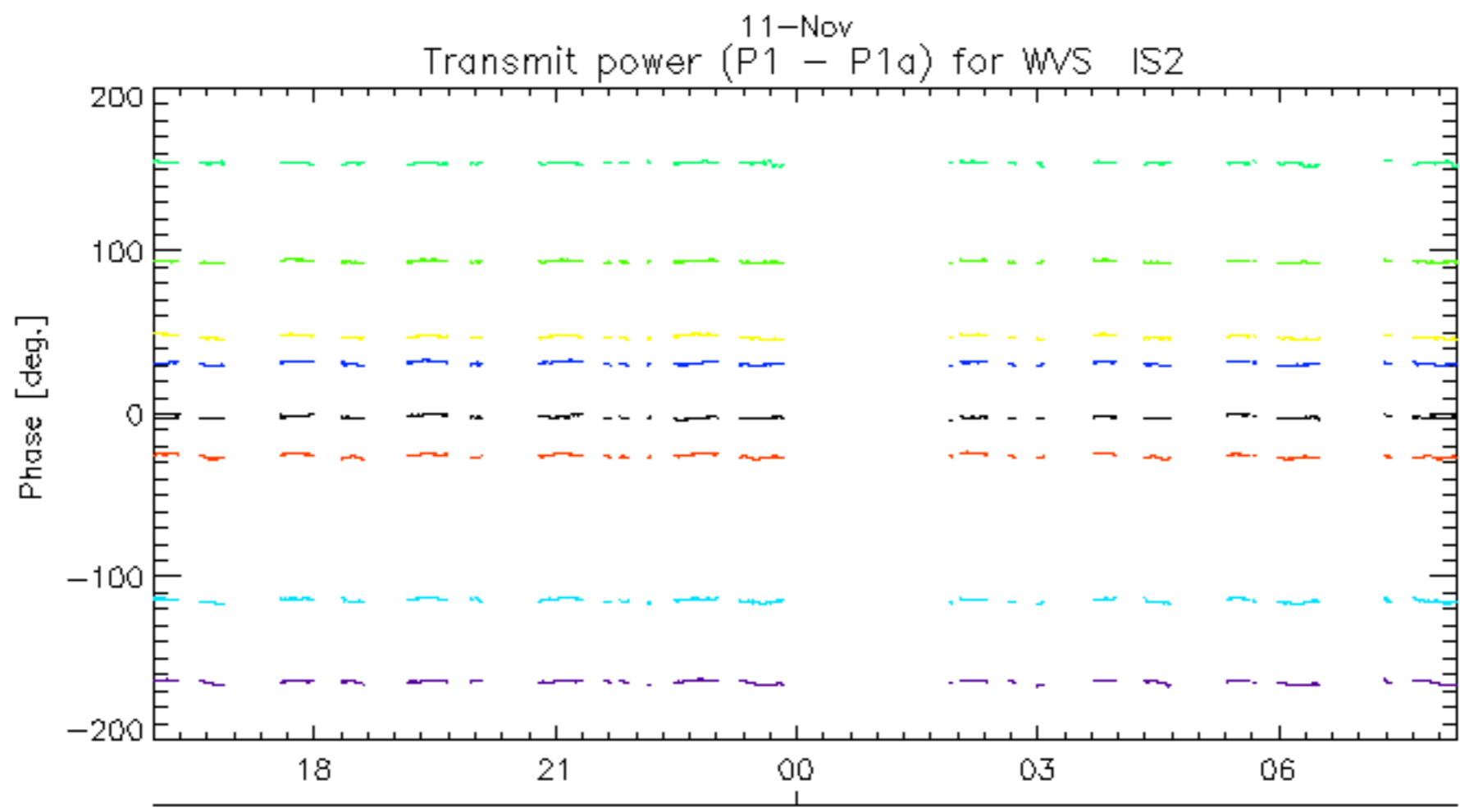
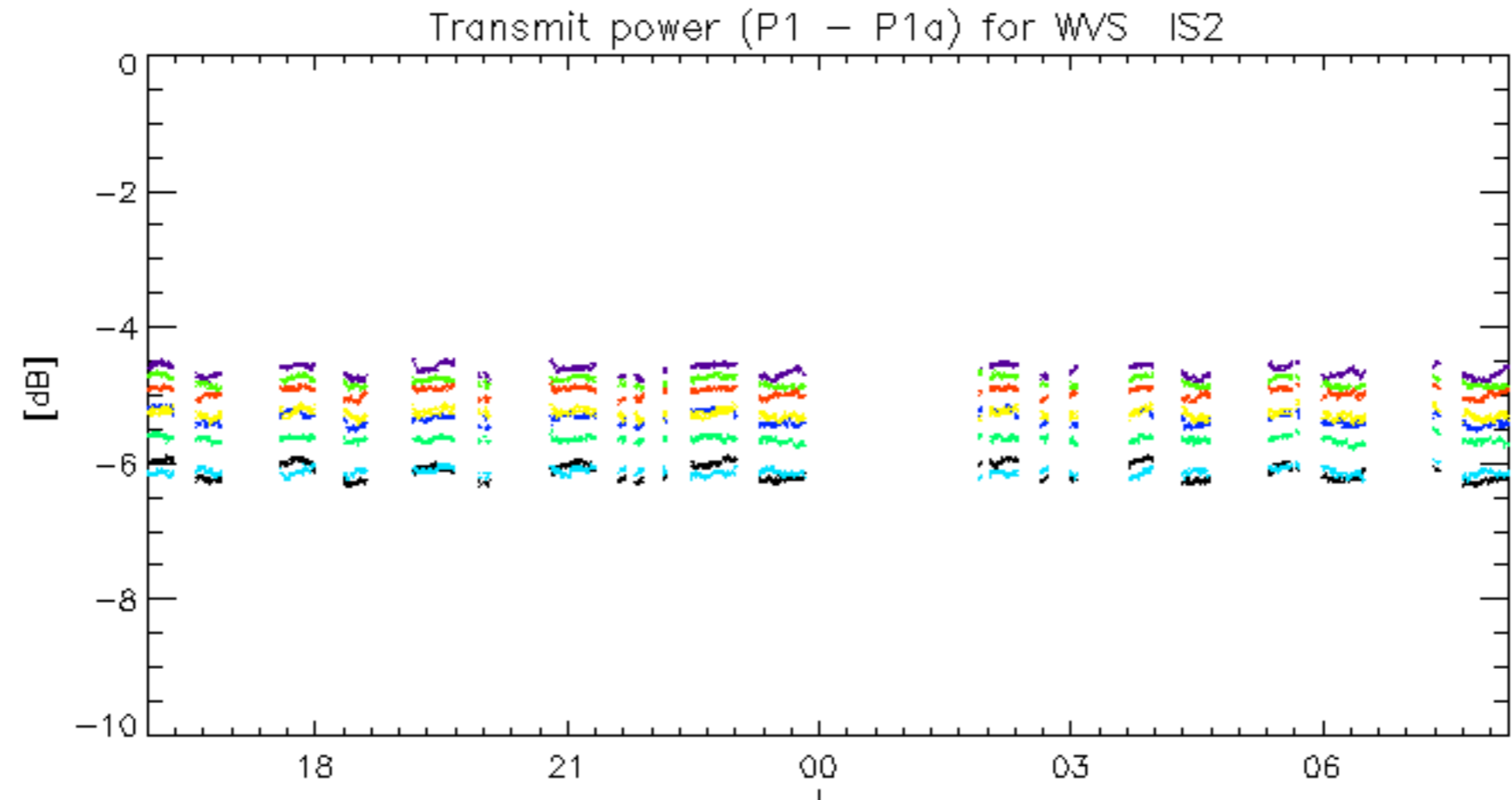


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No unavailabilities during the reported period.