

# PRELIMINARY REPORT OF 061124

last update on Fri Nov 24 16:45:47 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 2006-11-23 00:00:00 to 2006-11-24 16:45:47

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	43	58	5	2	20
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	58	5	2	20
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	58	5	2	20
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	58	5	2	20

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	44	55	31	9	72
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	44	55	31	9	72
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	55	31	9	72
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	55	31	9	72

## 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	20061123 074719
H	20061124 071542

### 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	-3.959698	0.008575	-0.020379
7	P1	-3.151640	0.023045	-0.029919
11	P1	-4.132189	0.024625	-0.002053
15	P1	-6.291800	0.014310	-0.061266
19	P1	-3.622253	0.062964	0.030540
22	P1	-4.671348	0.128287	0.111465
26	P1	-3.972084	0.085663	0.111447
30	P1	-5.893088	0.164819	0.109266
3	P1	-16.505854	0.236218	-0.113424
7	P1	-17.277164	0.172049	-0.062958
11	P1	-17.158138	0.454012	-0.118006
15	P1	-13.064636	0.130780	-0.050571
19	P1	-14.927482	0.369891	0.030860
22	P1	-15.863077	0.516500	0.046239
26	P1	-15.060793	0.198758	0.068585
30	P1	-17.424721	0.608753	-0.332653

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.846489	0.090618	0.020922
7	P2	-21.732946	0.093897	-0.005628
11	P2	-15.658194	0.102277	0.012338
15	P2	-7.124268	0.105962	-0.013631
19	P2	-9.191324	0.103411	-0.012601
22	P2	-18.231068	0.095670	-0.039215
26	P2	-16.546848	0.109708	-0.067948
30	P2	-19.477171	0.088185	-0.004259

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.239828	0.008250	-0.032340
7	P3	-8.239828	0.008250	-0.032340
11	P3	-8.239828	0.008250	-0.032340
15	P3	-8.239828	0.008250	-0.032340
19	P3	-8.239828	0.008250	-0.032340
22	P3	-8.239828	0.008250	-0.032340
26	P3	-8.239861	0.008261	-0.032404
30	P3	-8.239861	0.008261	-0.032404

#### 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	-3.910577	0.056101	-0.008767
7	P1	-2.525310	0.330991	0.083046
11	P1	-2.863477	0.050815	0.028107
15	P1	-3.680446	0.058086	-0.026885
19	P1	-3.543350	0.113269	0.078362
22	P1	-5.058451	0.088923	0.107806
26	P1	-6.028170	0.185474	0.103552
30	P1	-5.334551	0.112520	0.048562
3	P1	-11.720010	0.136752	-0.046199
7	P1	-10.062029	0.433467	0.030872
11	P1	-10.332287	0.154811	0.033861
15	P1	-10.759136	0.217189	0.084535
19	P1	-15.797165	2.151313	0.476725
22	P1	-21.392040	1.569169	-0.407572
26	P1	-16.047108	0.397023	-0.061014
30	P1	-17.905064	0.412847	0.025573

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.457153	0.128216	-0.032333
7	P2	-22.211309	0.467313	-0.080903
11	P2	-10.939458	0.131119	-0.045134
15	P2	-4.966532	0.161519	-0.054651
19	P2	-6.948329	0.196393	-0.043022
22	P2	-8.261294	0.202230	-0.009300
26	P2	-24.307970	0.343858	-0.096016
30	P2	-21.945663	0.213276	-0.024060

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.085877	0.003266	-0.028456
7	P3	-8.085854	0.003253	-0.028693
11	P3	-8.085927	0.003254	-0.028682
15	P3	-8.085865	0.003253	-0.028480
19	P3	-8.085892	0.003261	-0.028597
22	P3	-8.085830	0.003261	-0.028767
26	P3	-8.085920	0.003254	-0.028416
30	P3	-8.086008	0.003263	-0.028451

## 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	0.000543002
	stdev	1.79846e-07
MEAN Q	mean	0.000519785
	stdev	2.20984e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135955
	stdev	0.00110983
STDEV Q	mean	0.136313
	stdev	0.00112656



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006112[234]

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_1PNPDE20061124_042634_000000782053_00147_24750_6576.N1	1	0
ASA_GM1_1PNPDK20061122_104752_000007672053_00123_24726_9116.N1	0	19
ASA_WSM_1PNPDE20061123_182823_000000862053_00142_24745_5906.N1	0	70
ASA_WSM_1PNPDK20061122_135848_000000852053_00125_24728_0656.N1	0	29







## 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)


Acsending



<input type="checkbox"/>
Descending

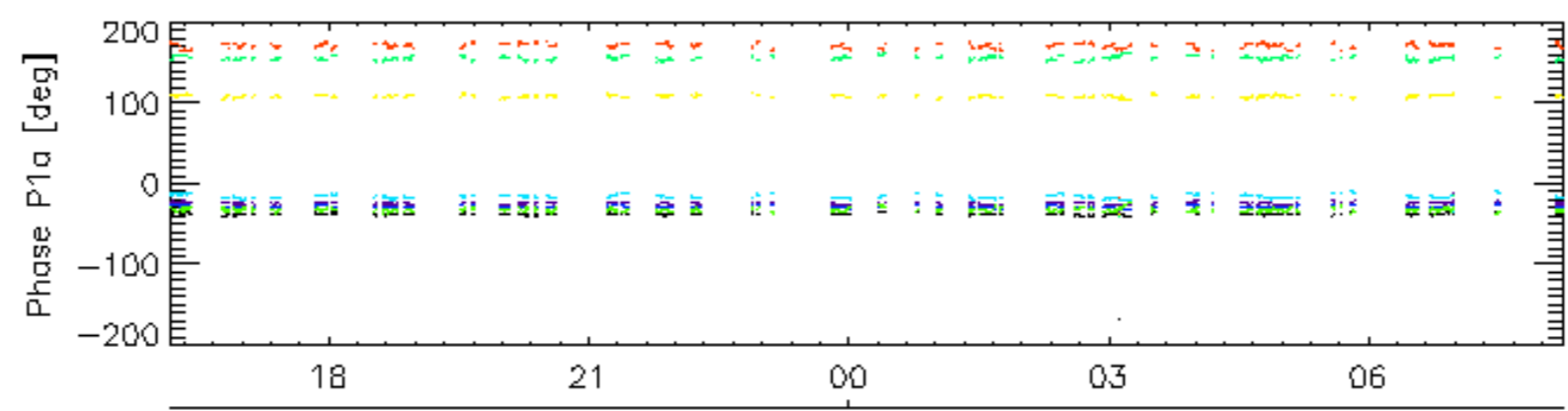
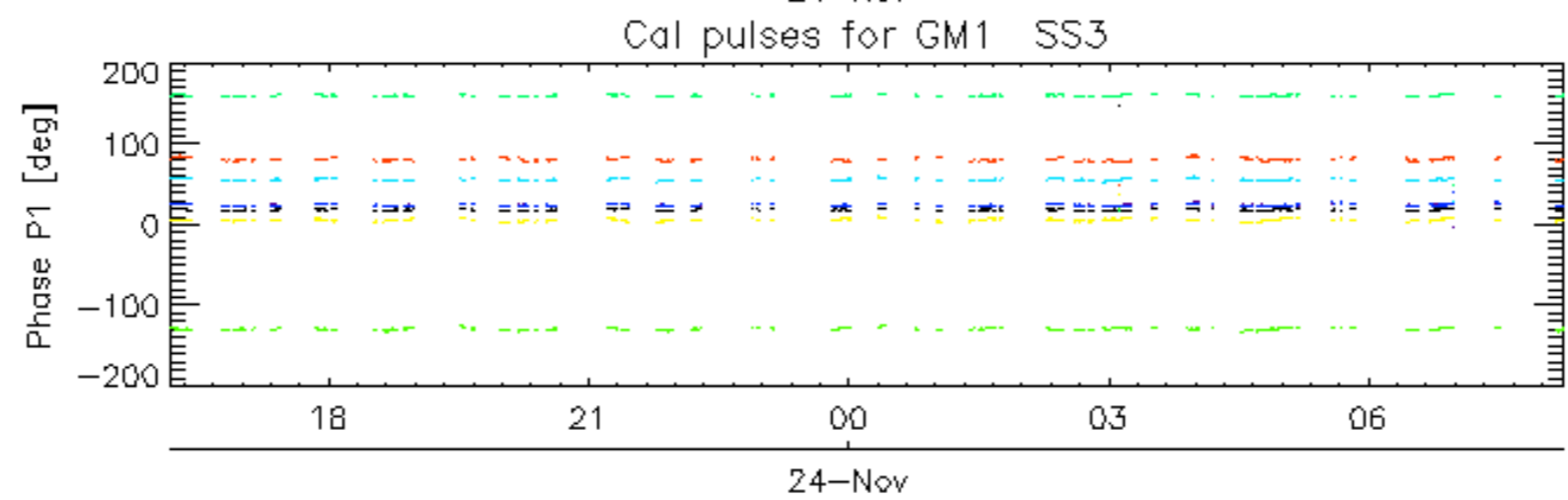
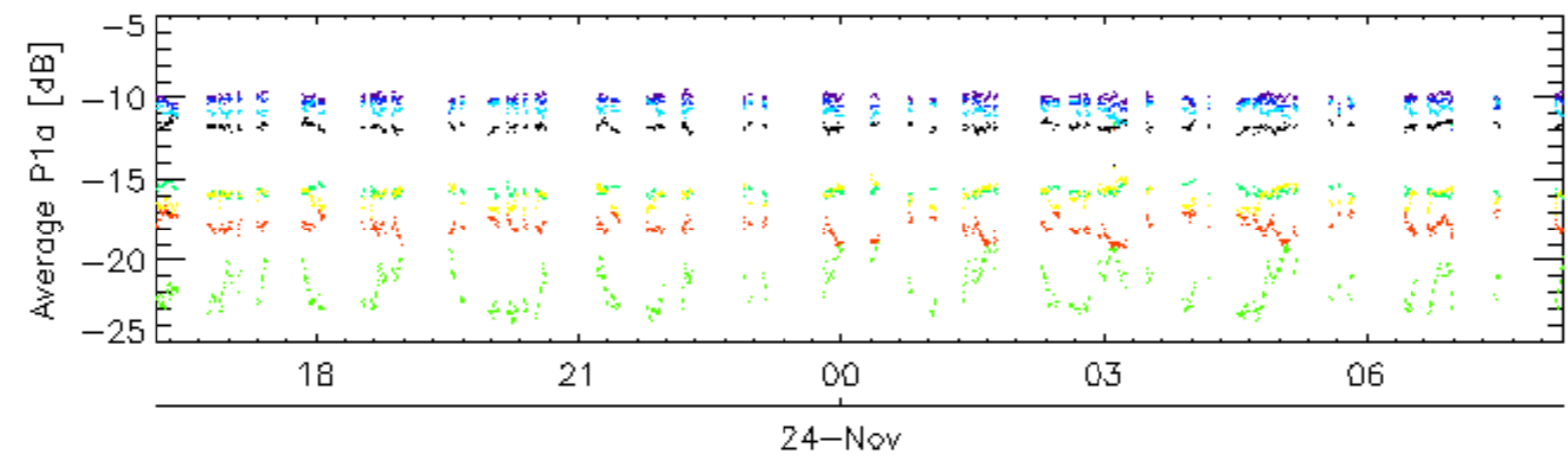
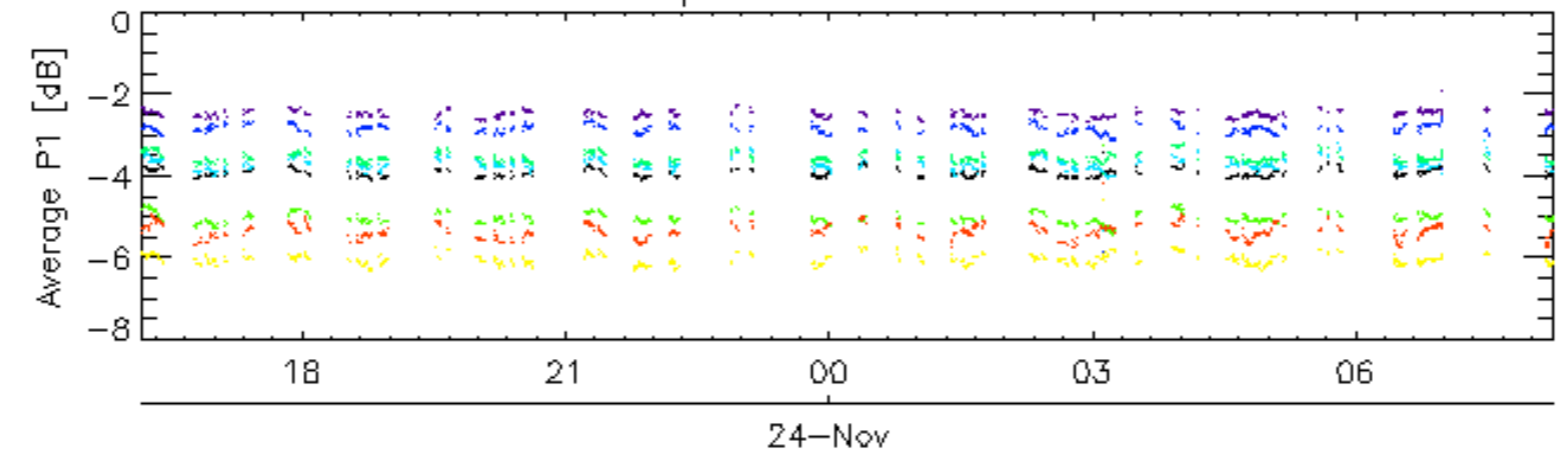
### 7.5 - Absolute Doppler for GM1

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

### 7.6 - Doppler evolution versus ANX for GM1

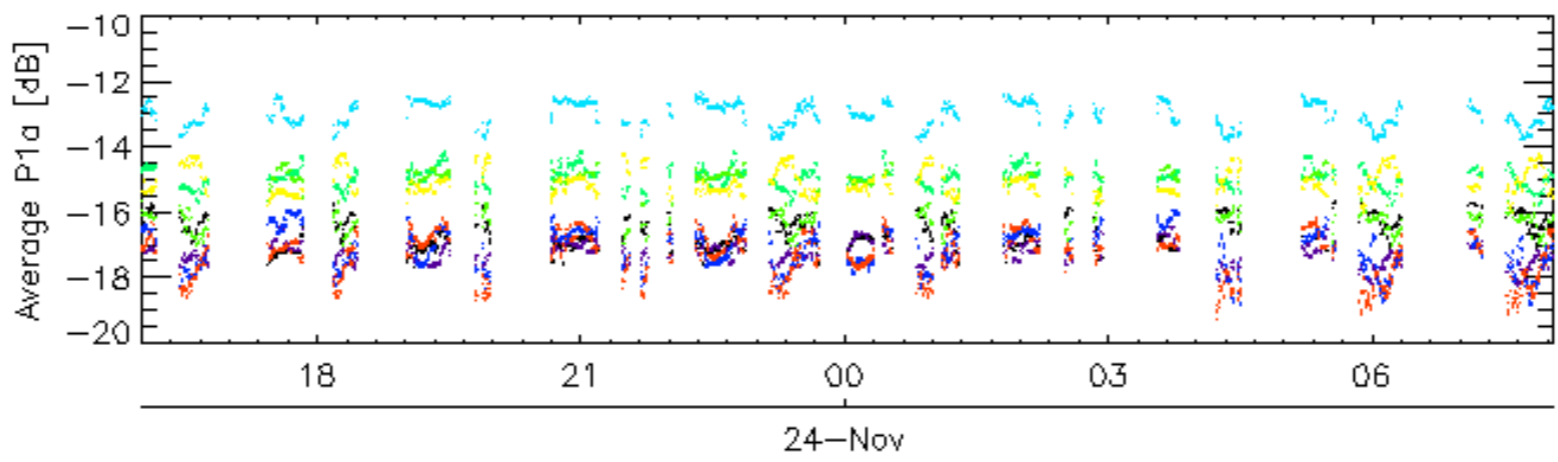
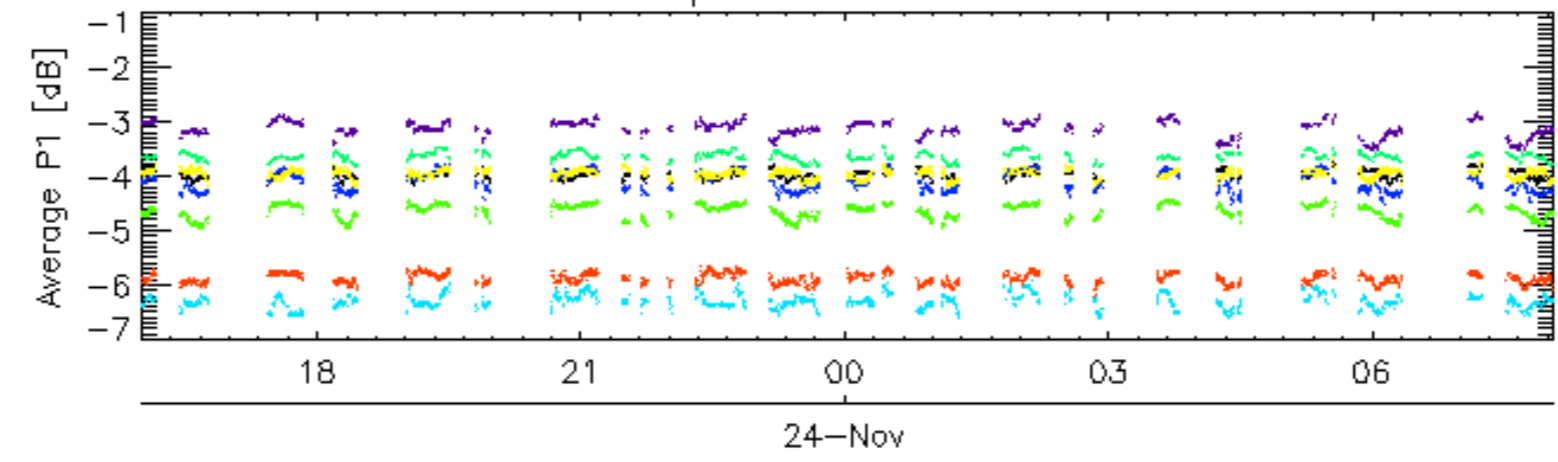
<b>Evolution Doppler error versus ANX</b>
<input type="checkbox"/>

Cal pulses for GM1 SS3

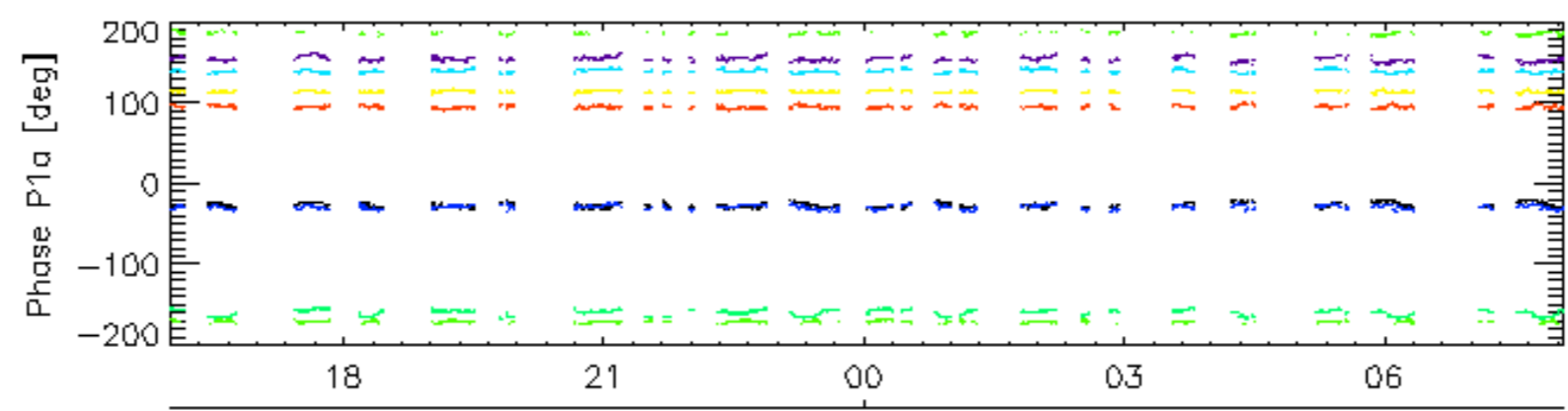
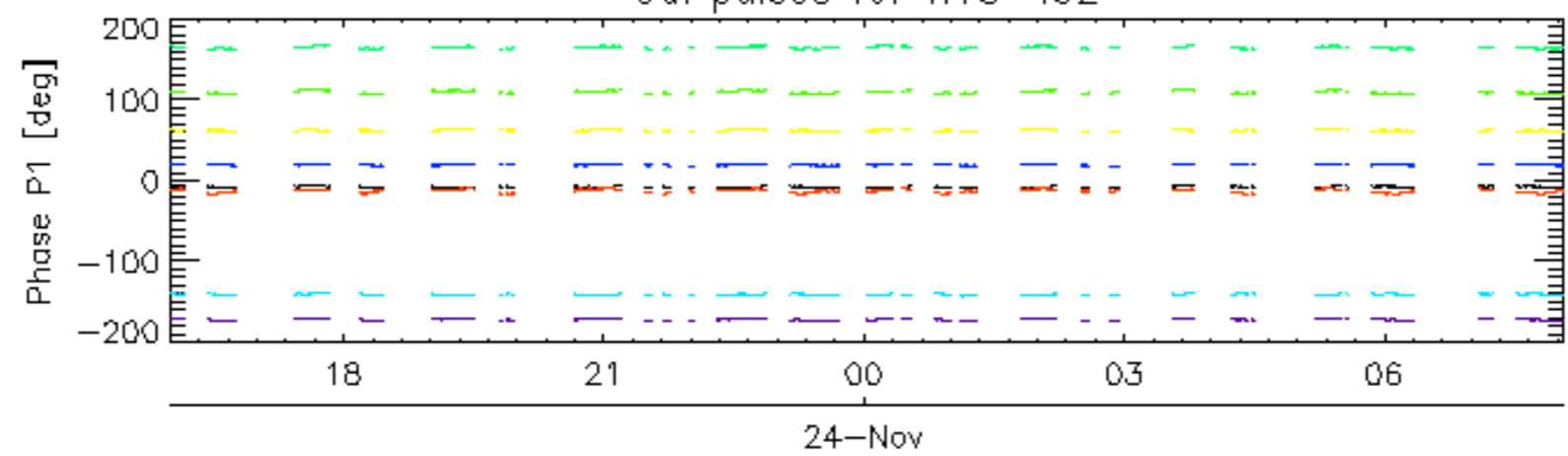


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

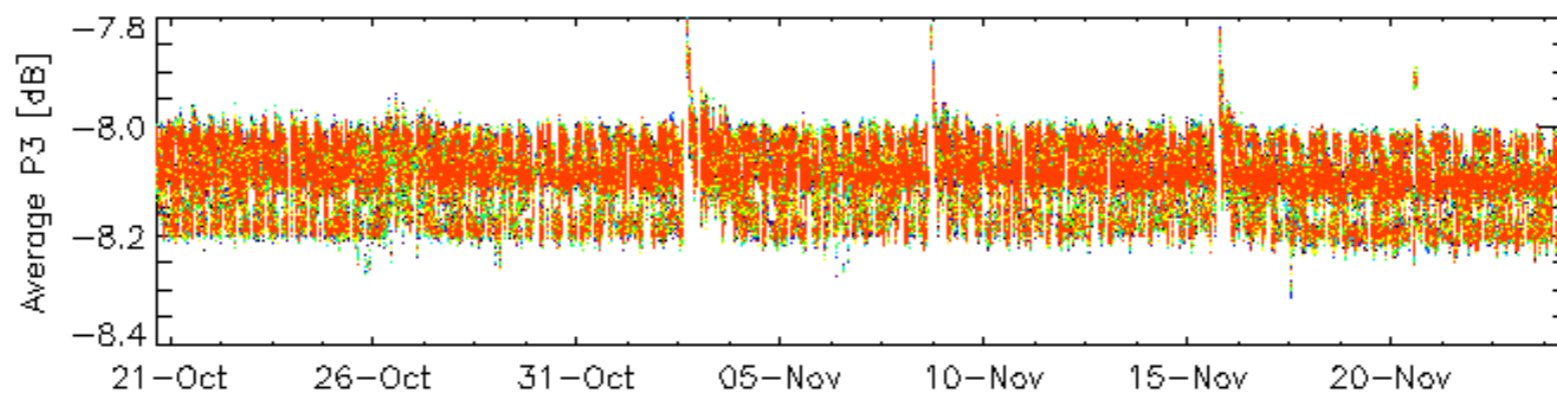
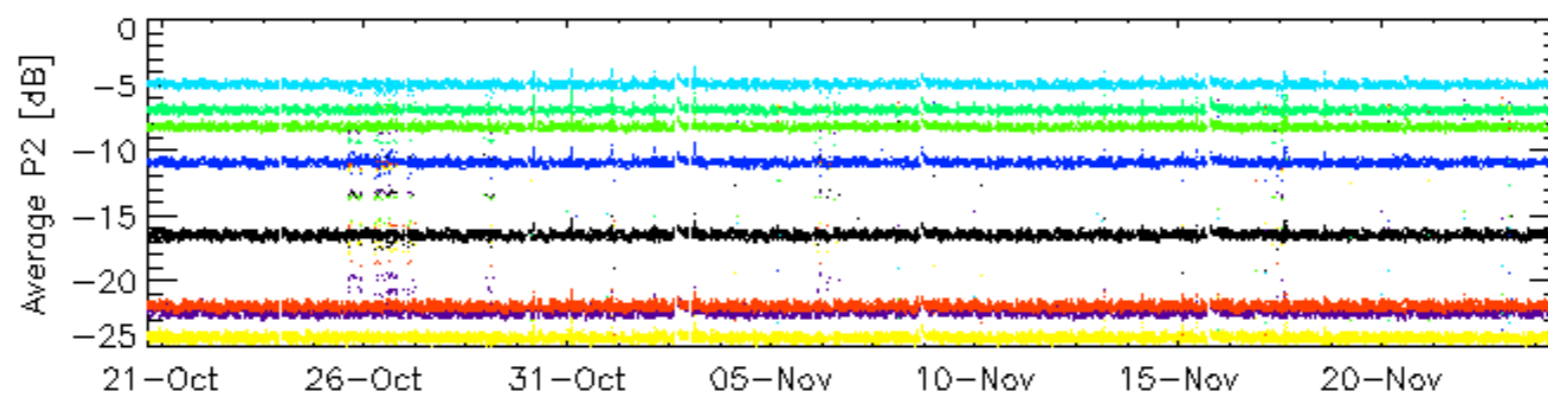
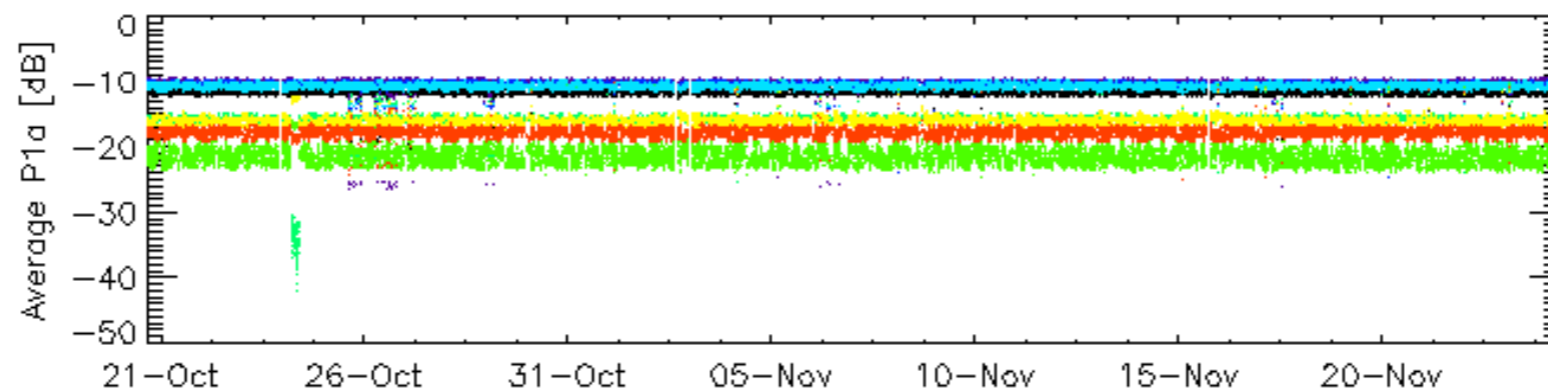
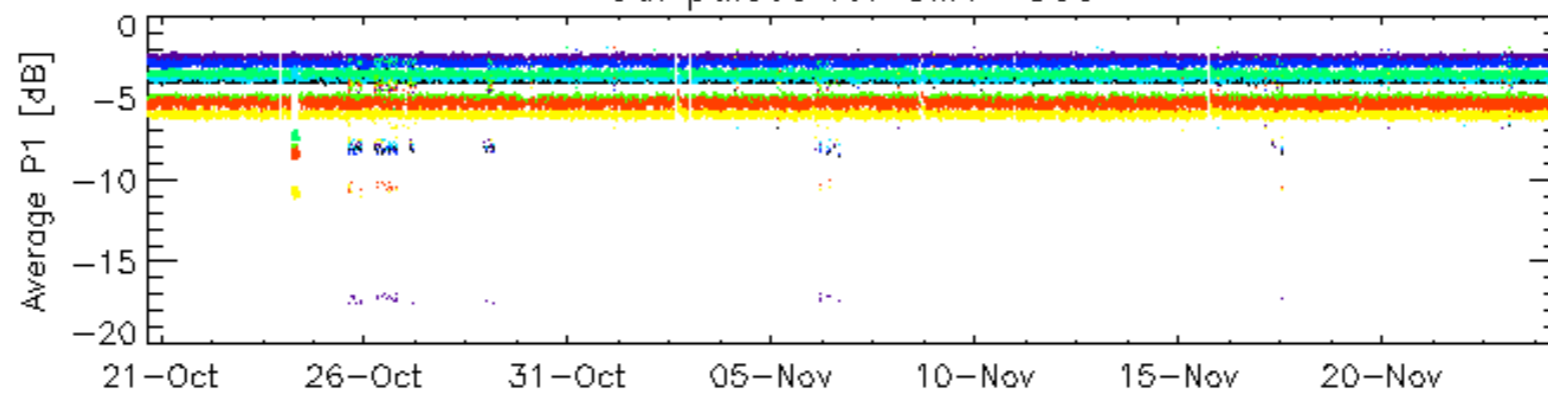


Cal pulses for WVS IS2



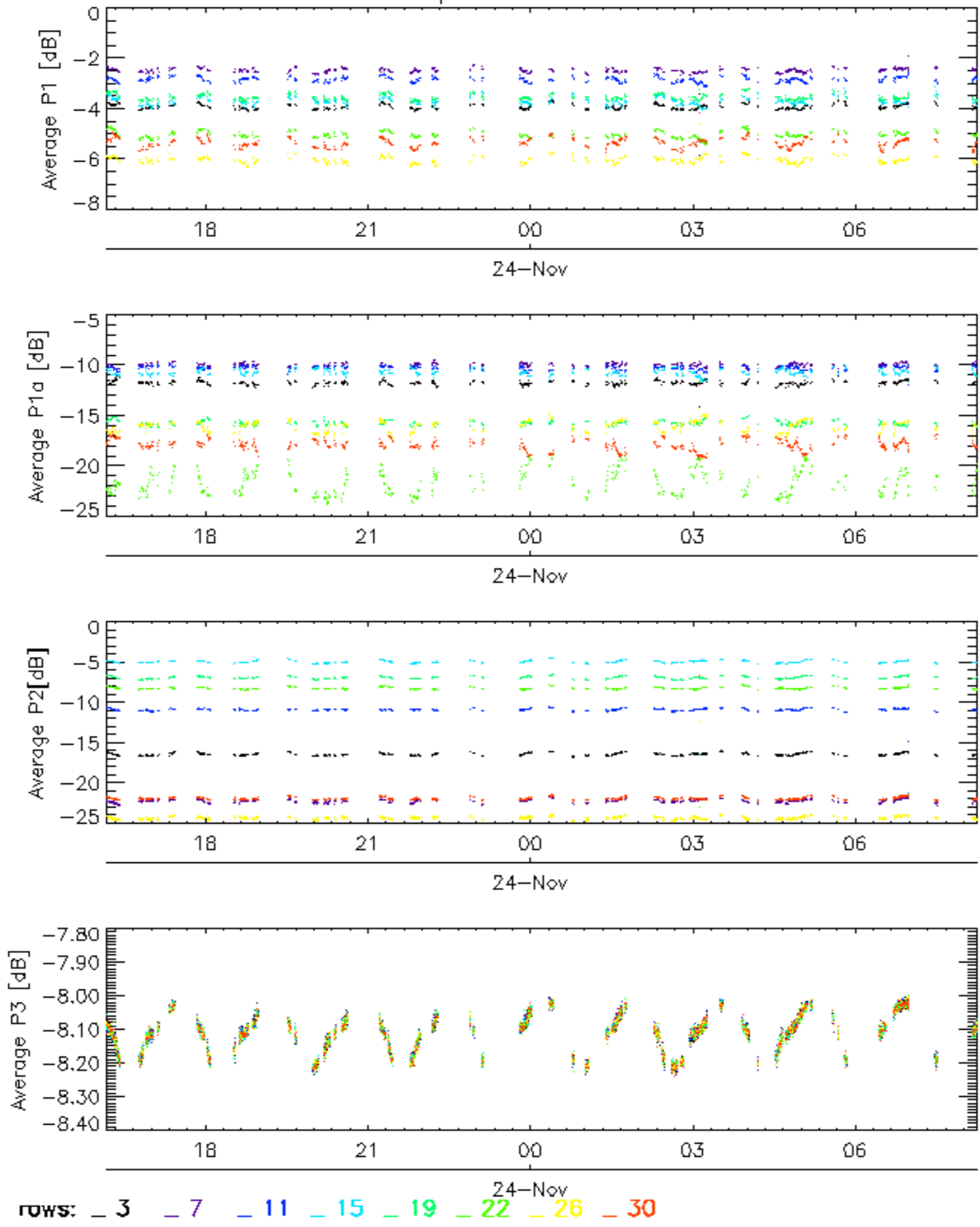
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

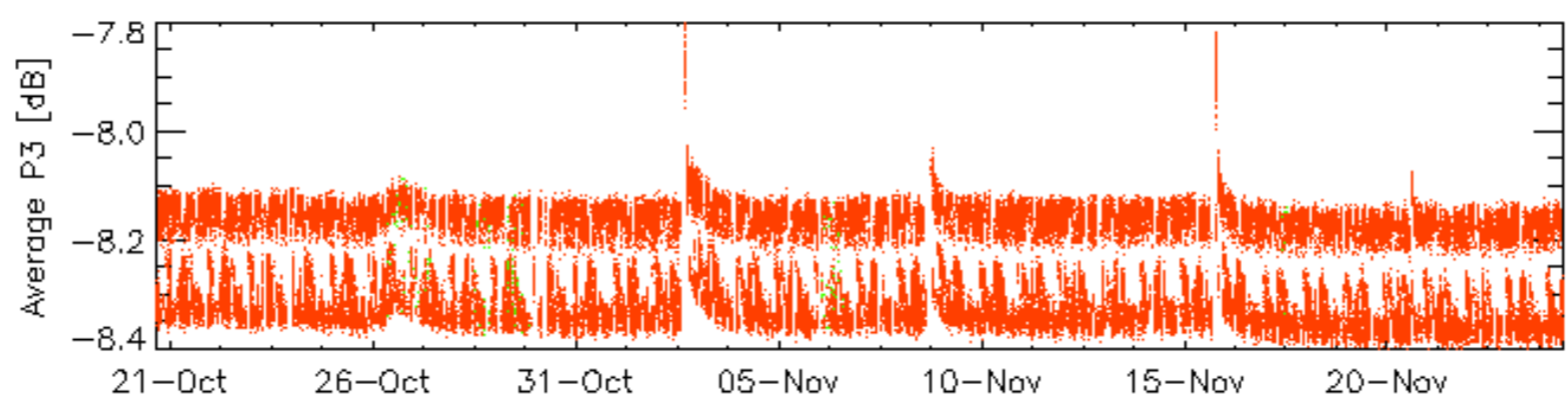
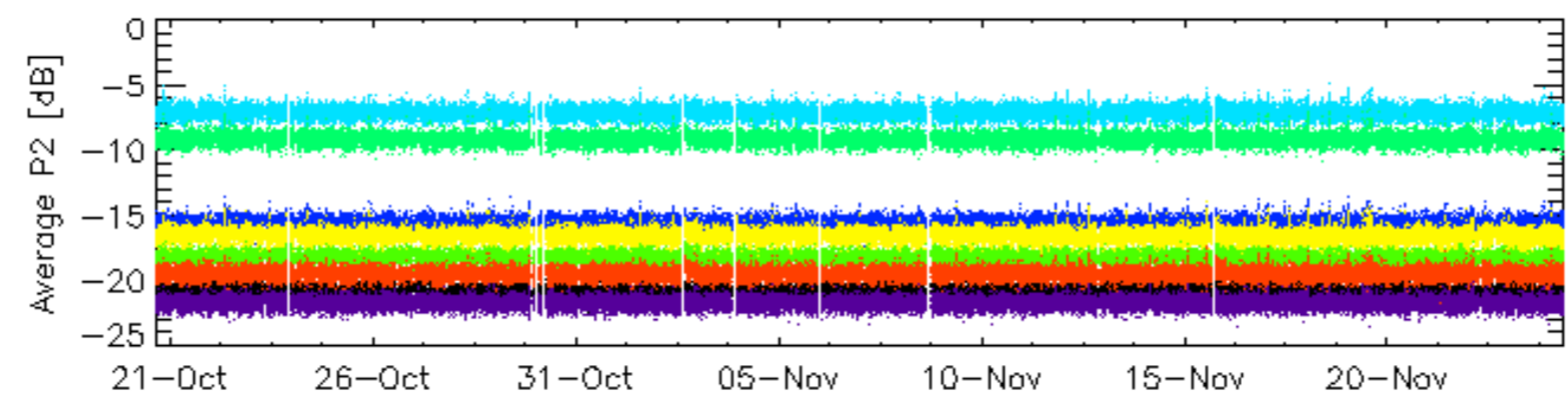
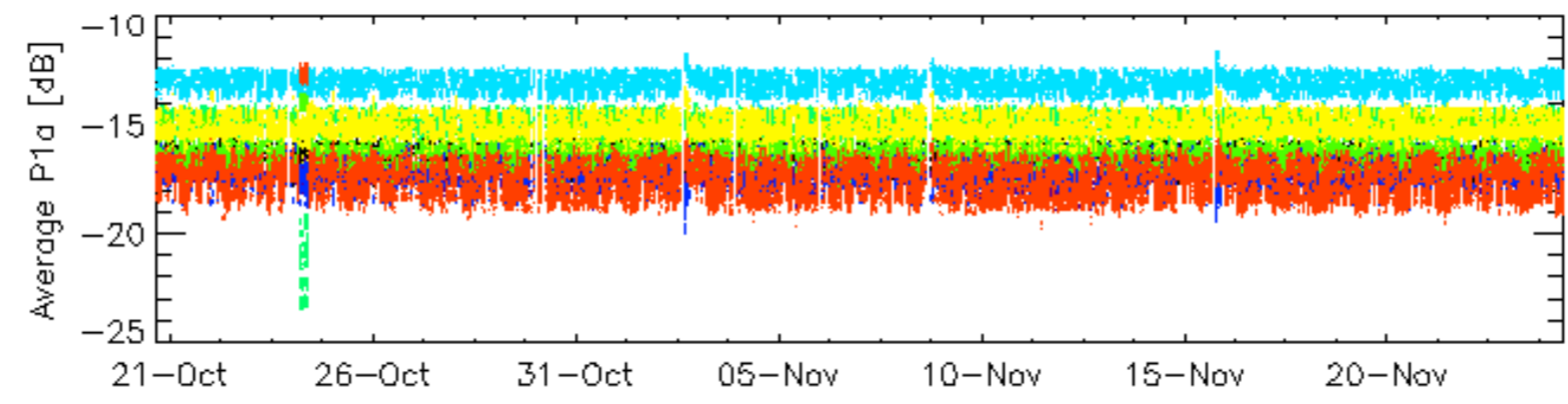
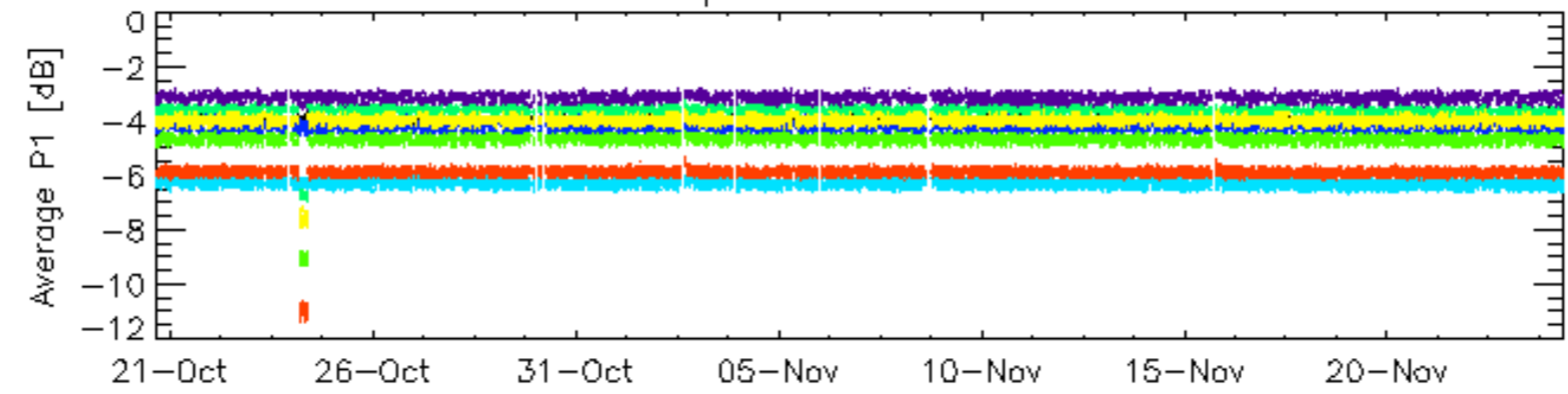


rows: [3](#) [7](#) [11](#) [15](#) [19](#) [22](#) [26](#) [30](#)

### Cal pulses for GM1 SS3

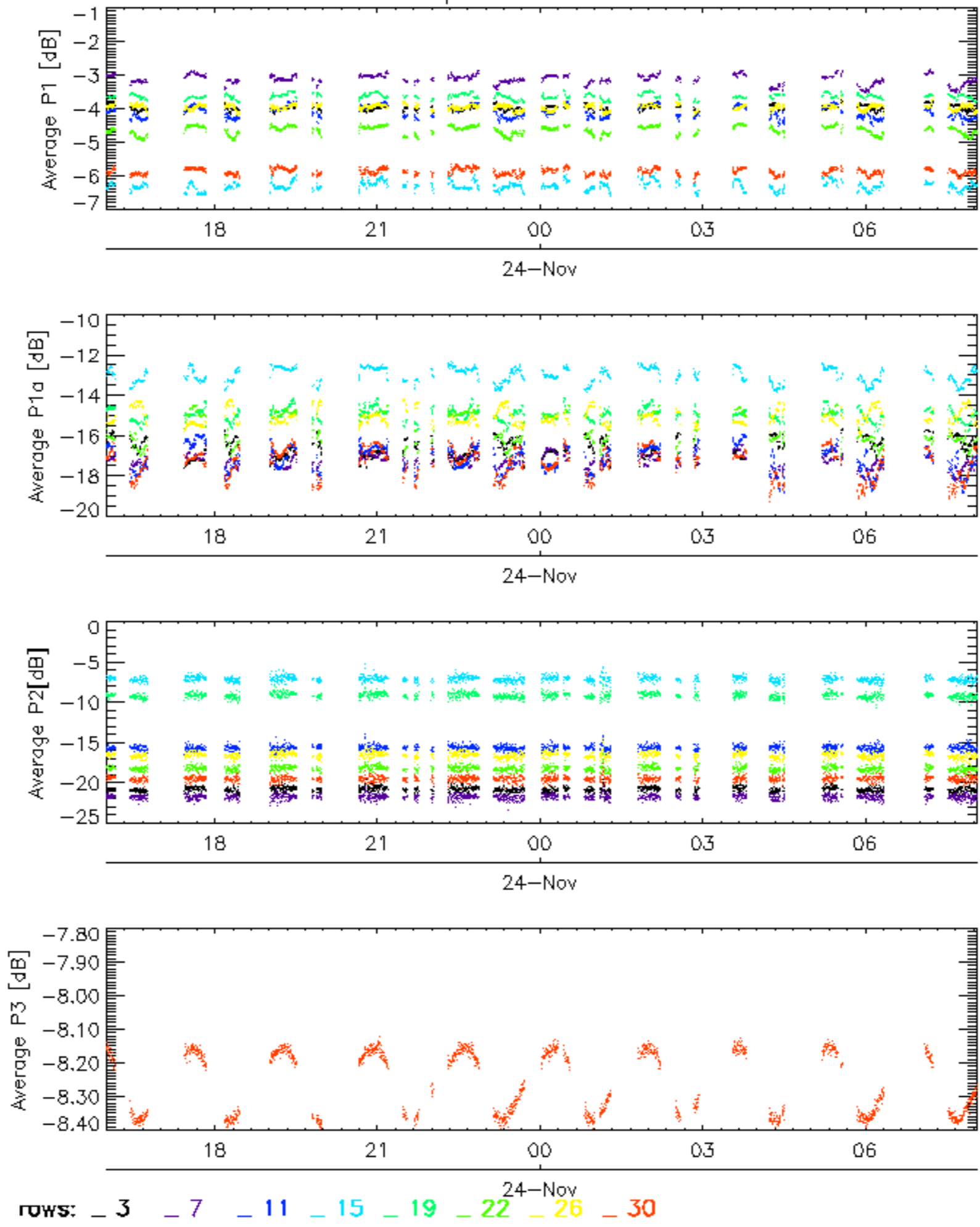


Cal pulses for WVS IS2



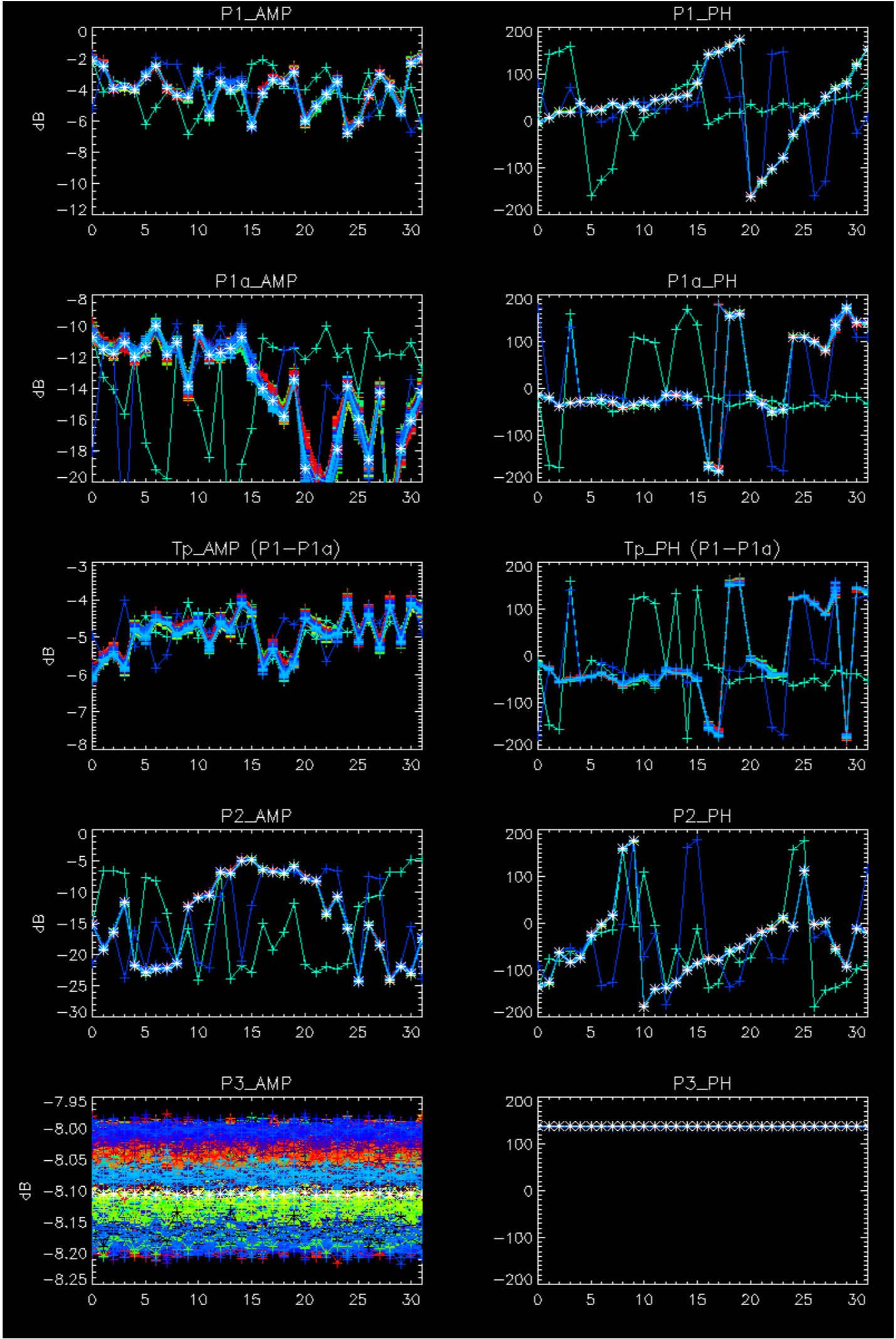
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

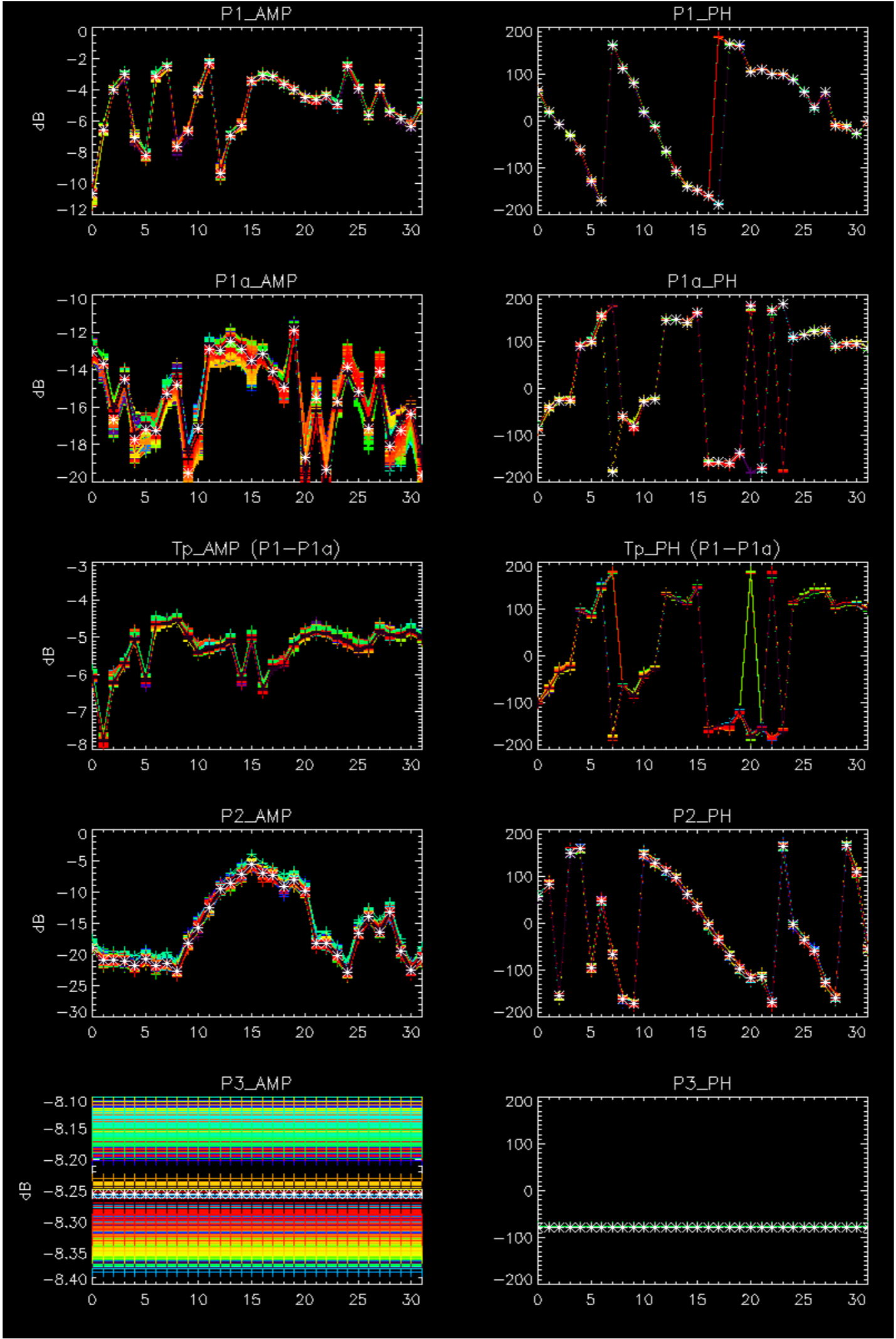
### Cal pulses for WVS IS2



No anomalies observed.



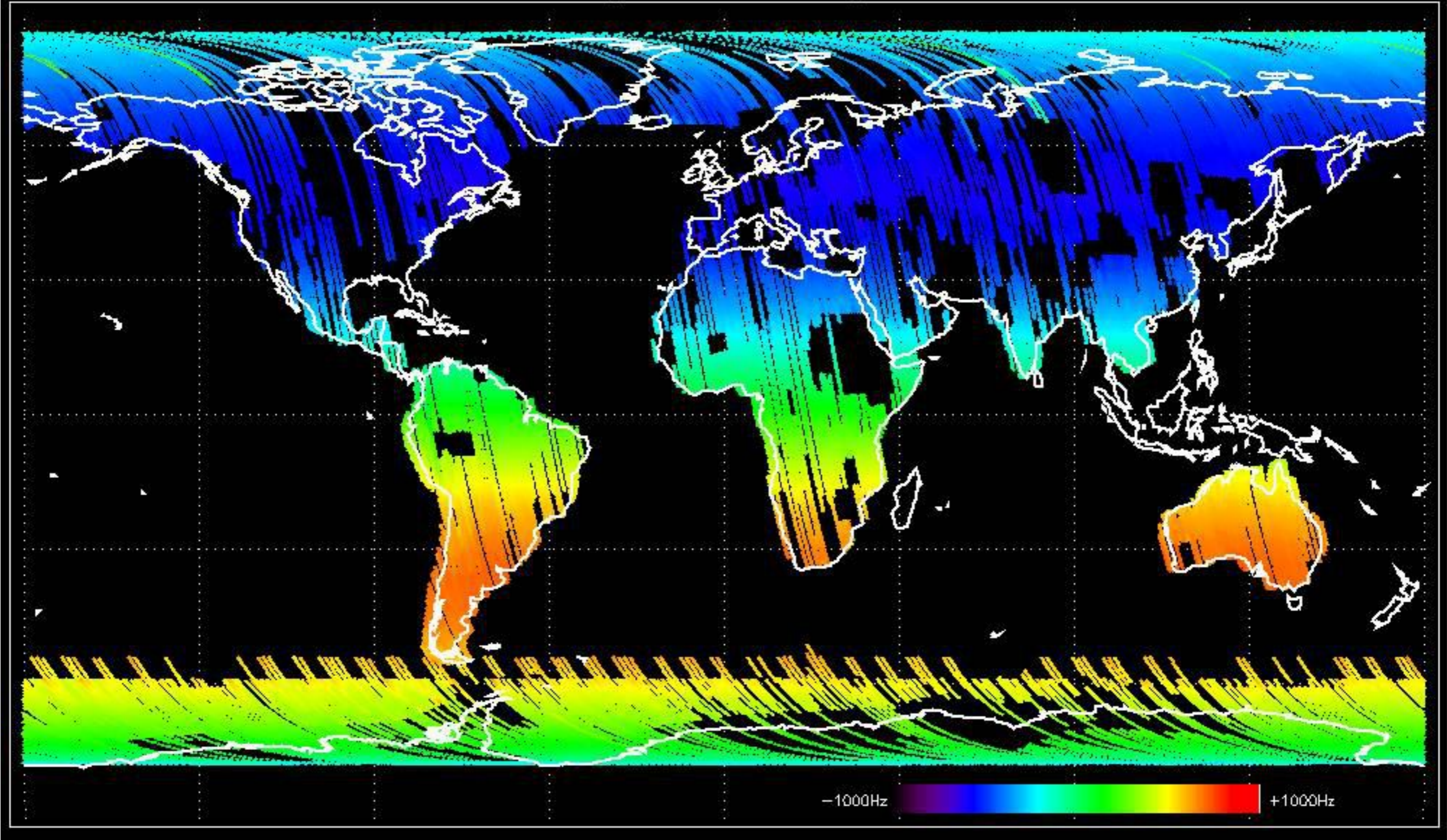




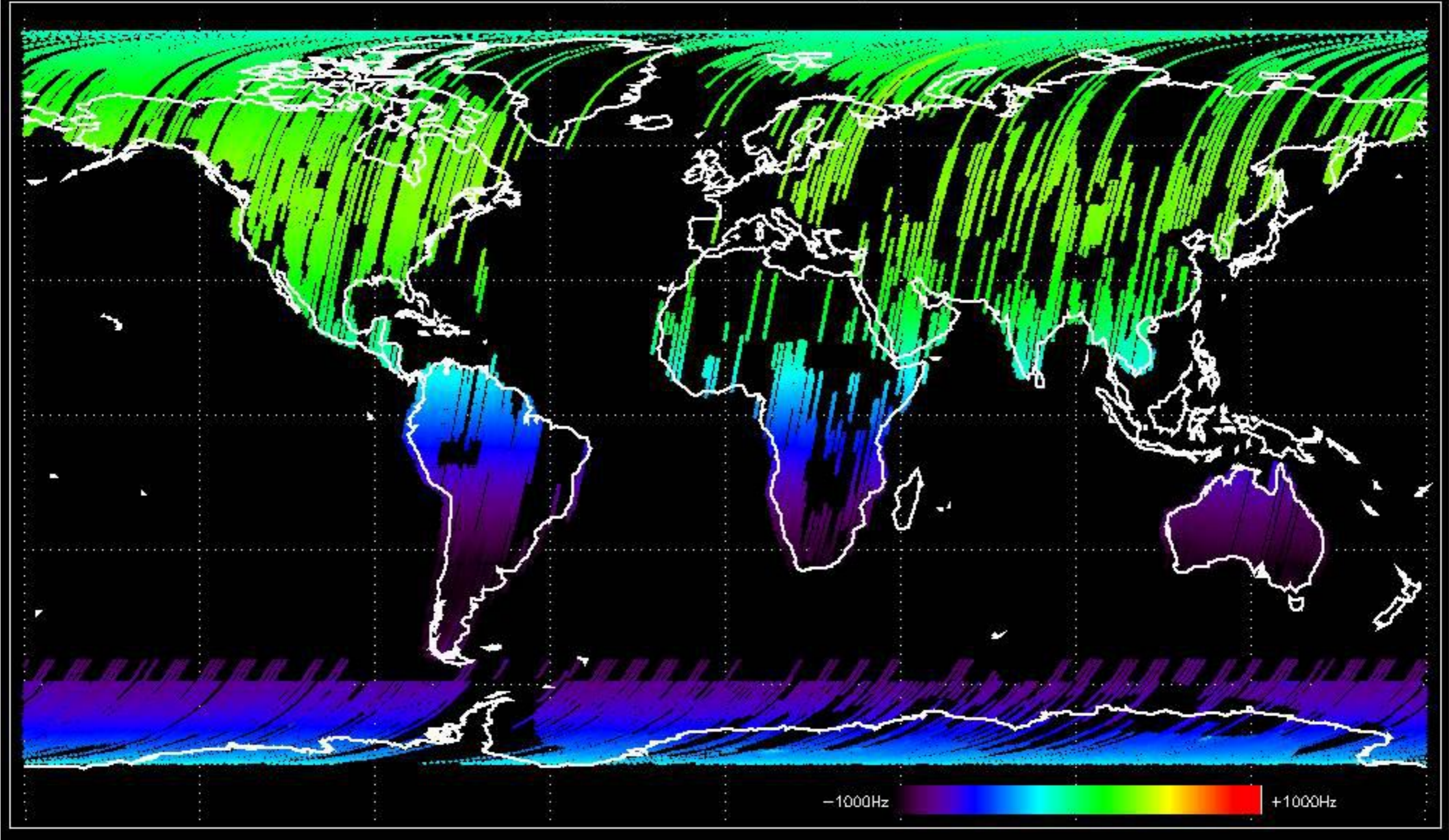
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



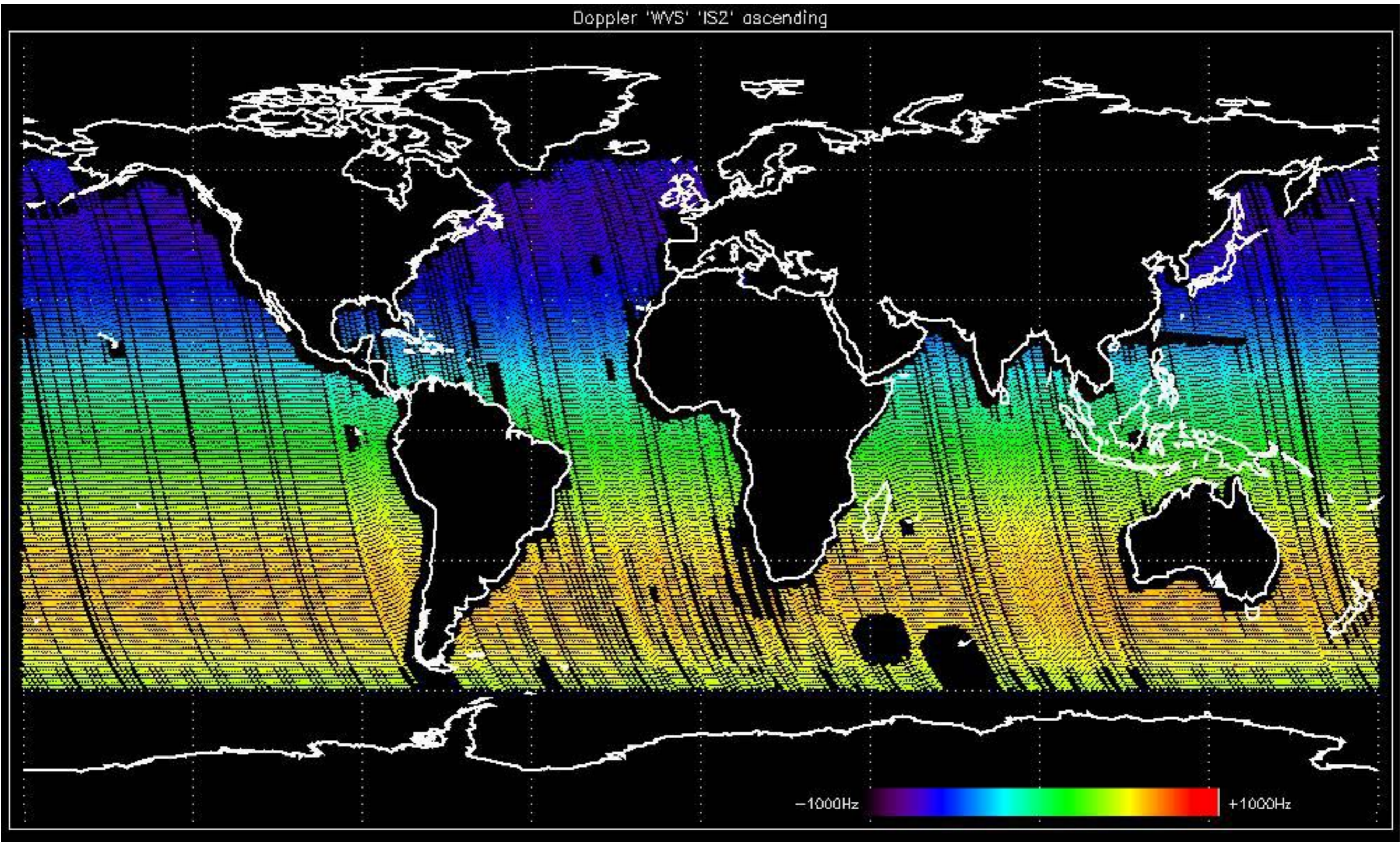
Doppler 'GM1' 'SS1' ascending



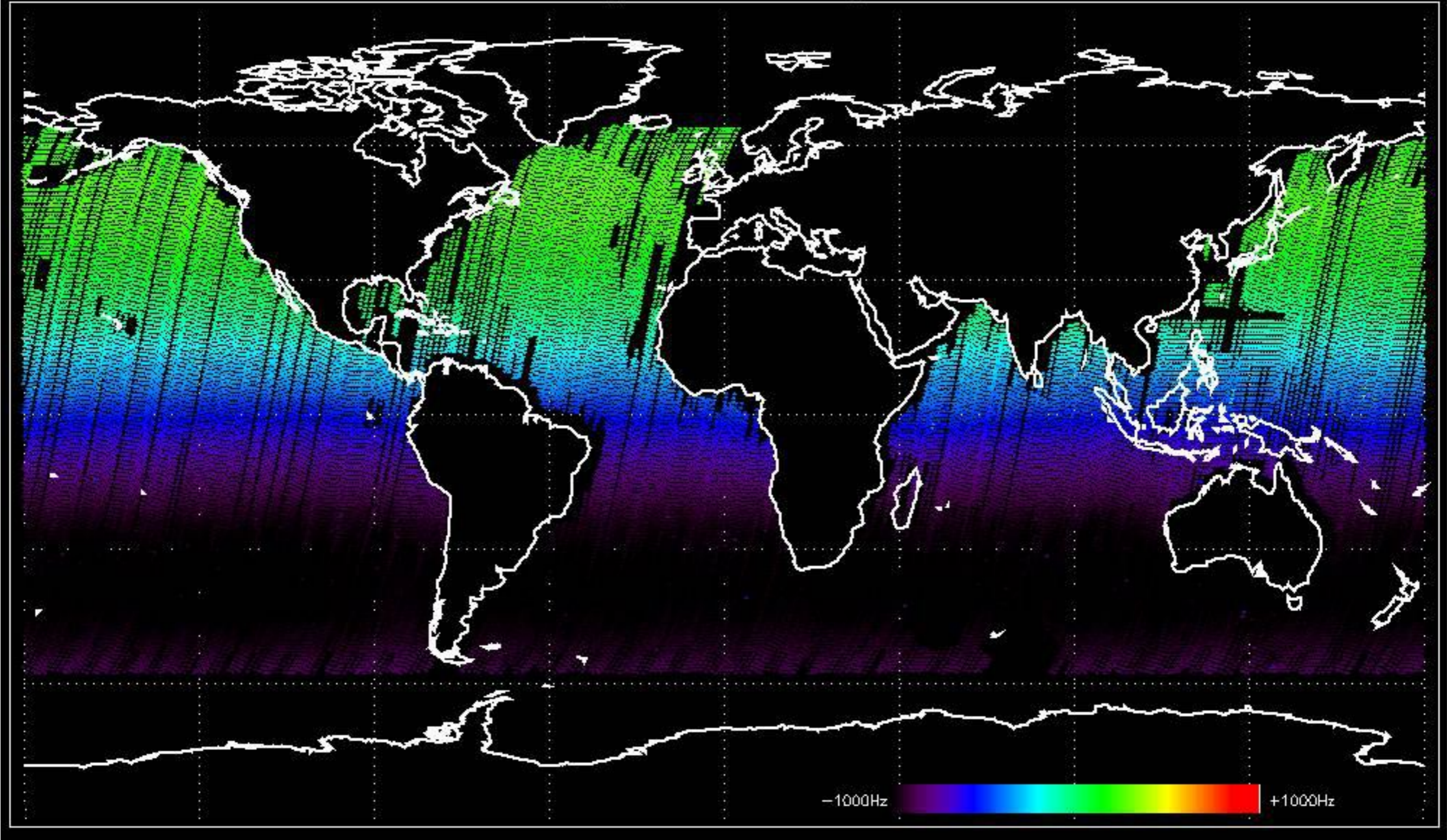
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

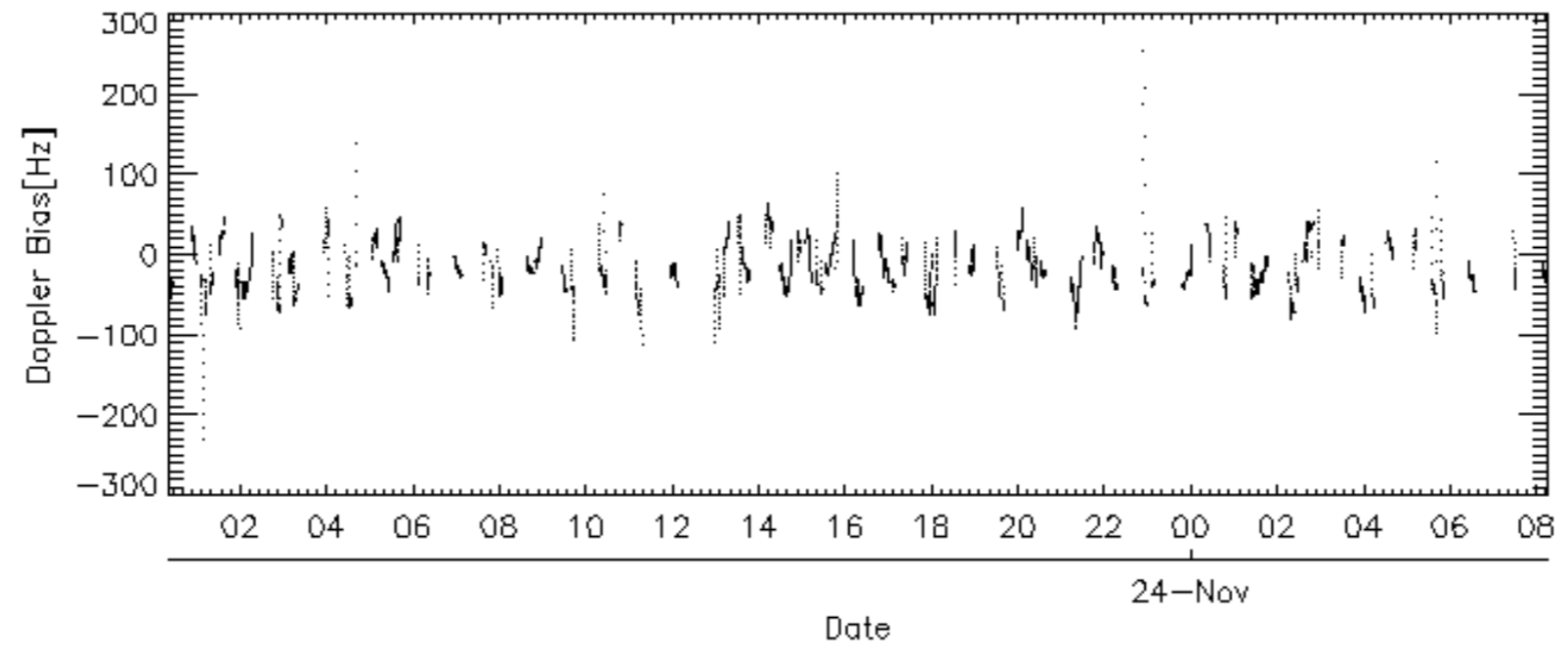
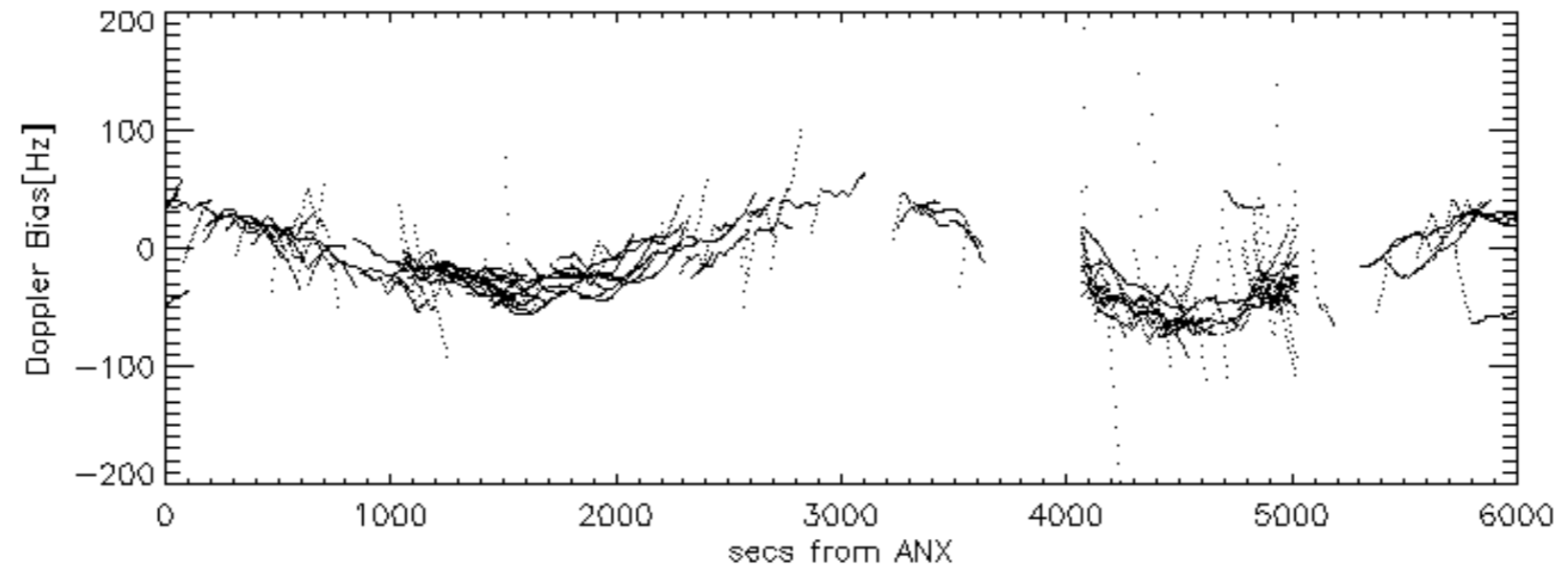
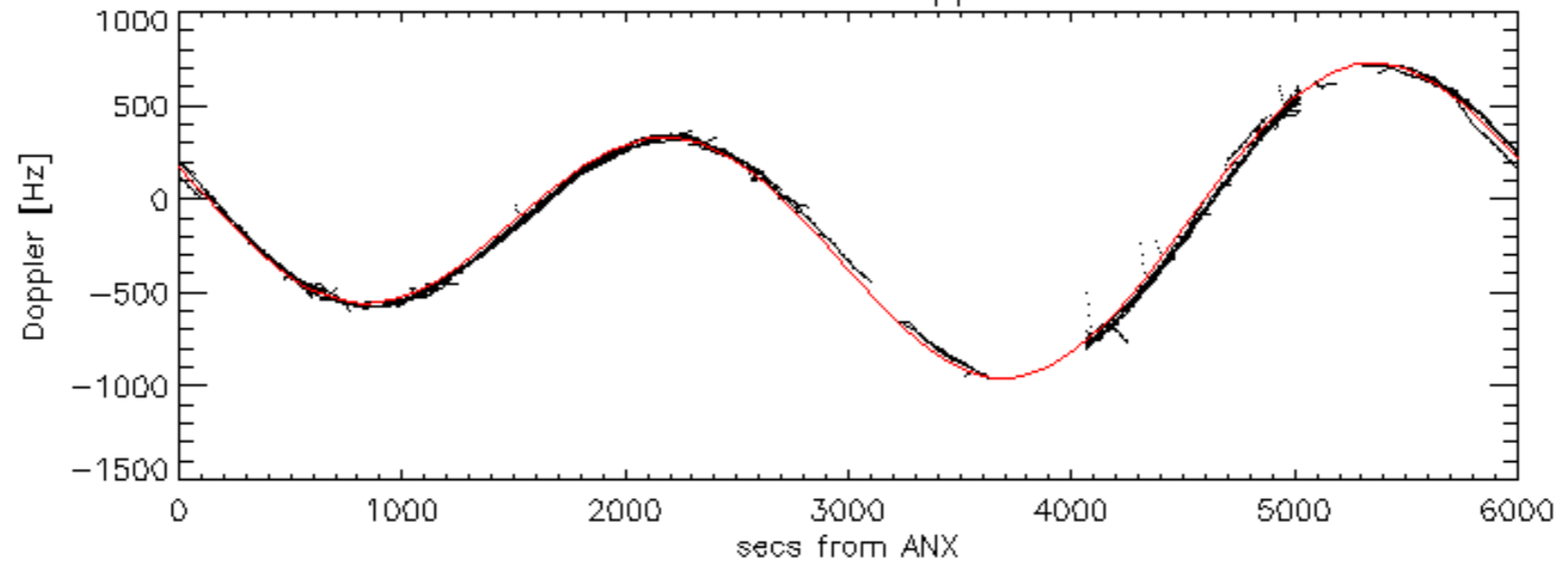


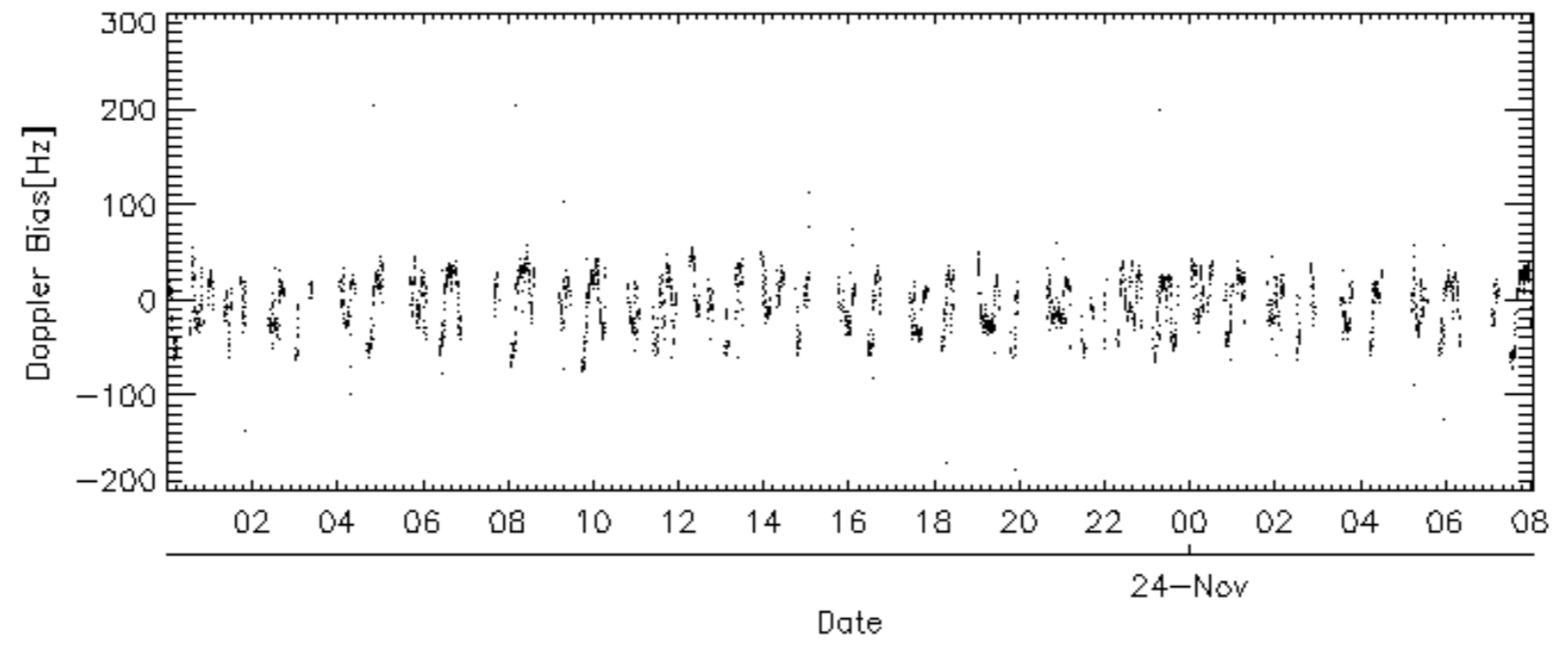
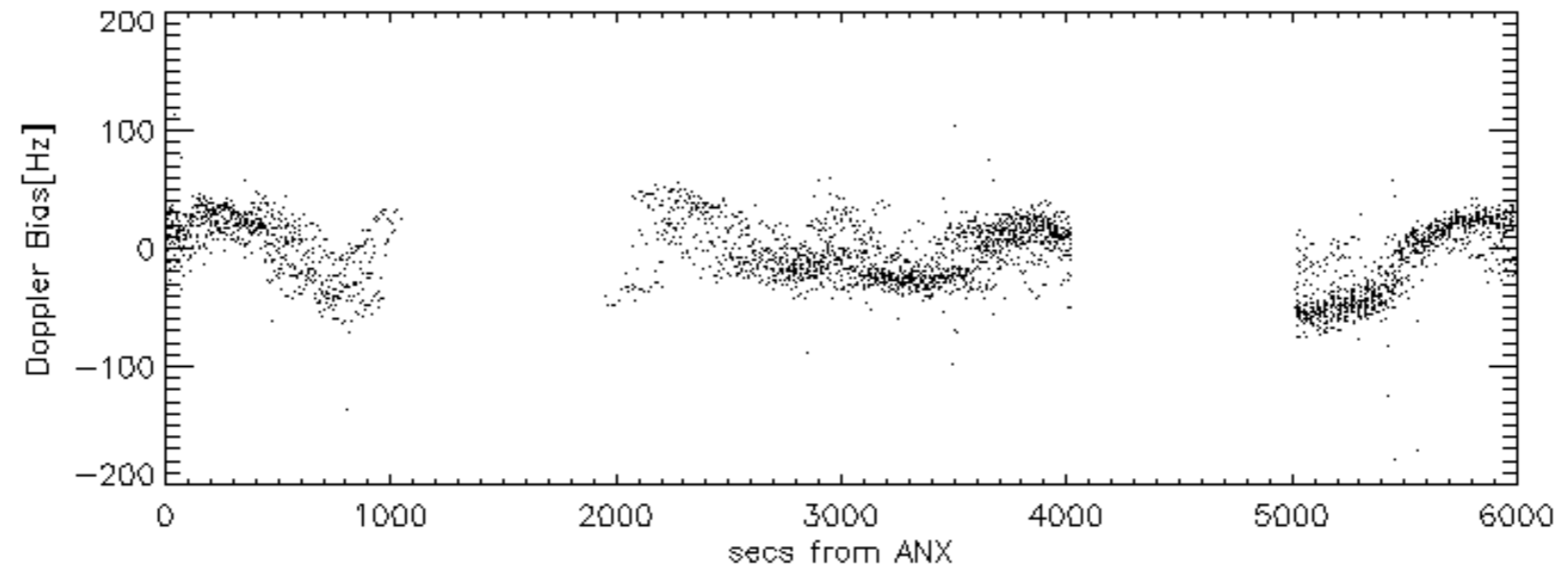
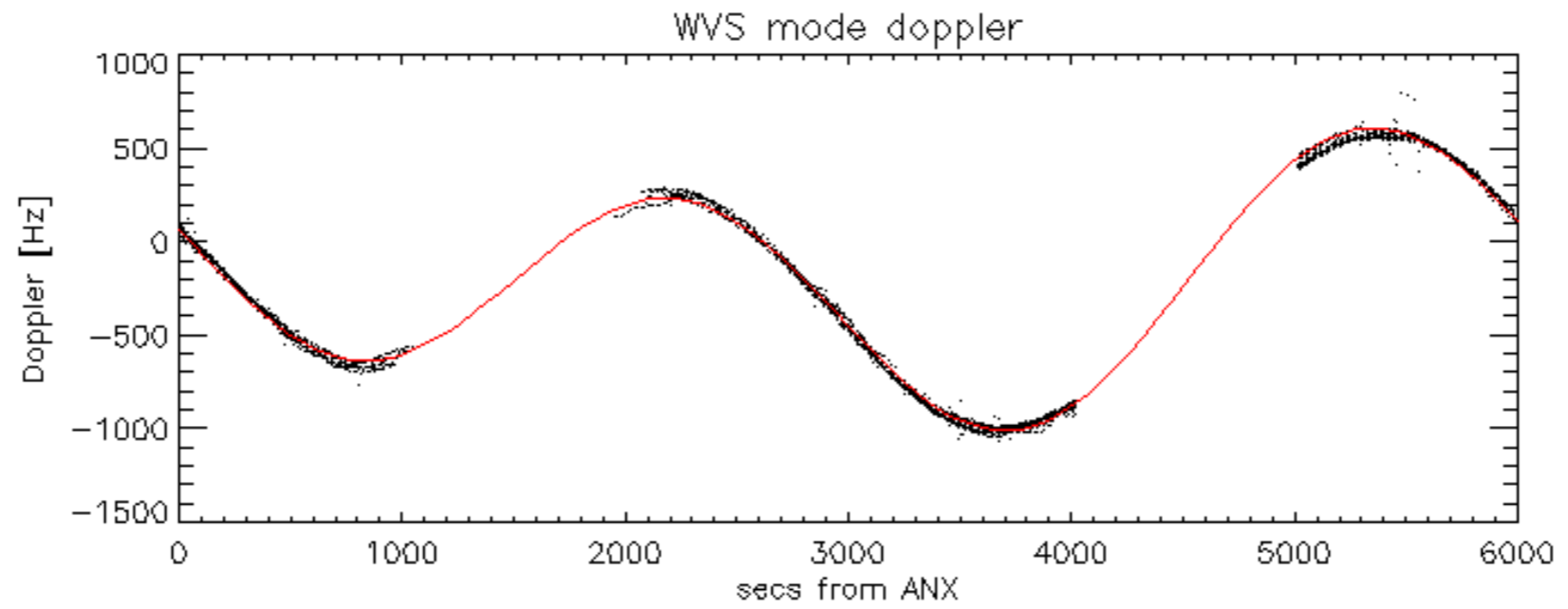
Doppler 'WVS' 'IS2' descending



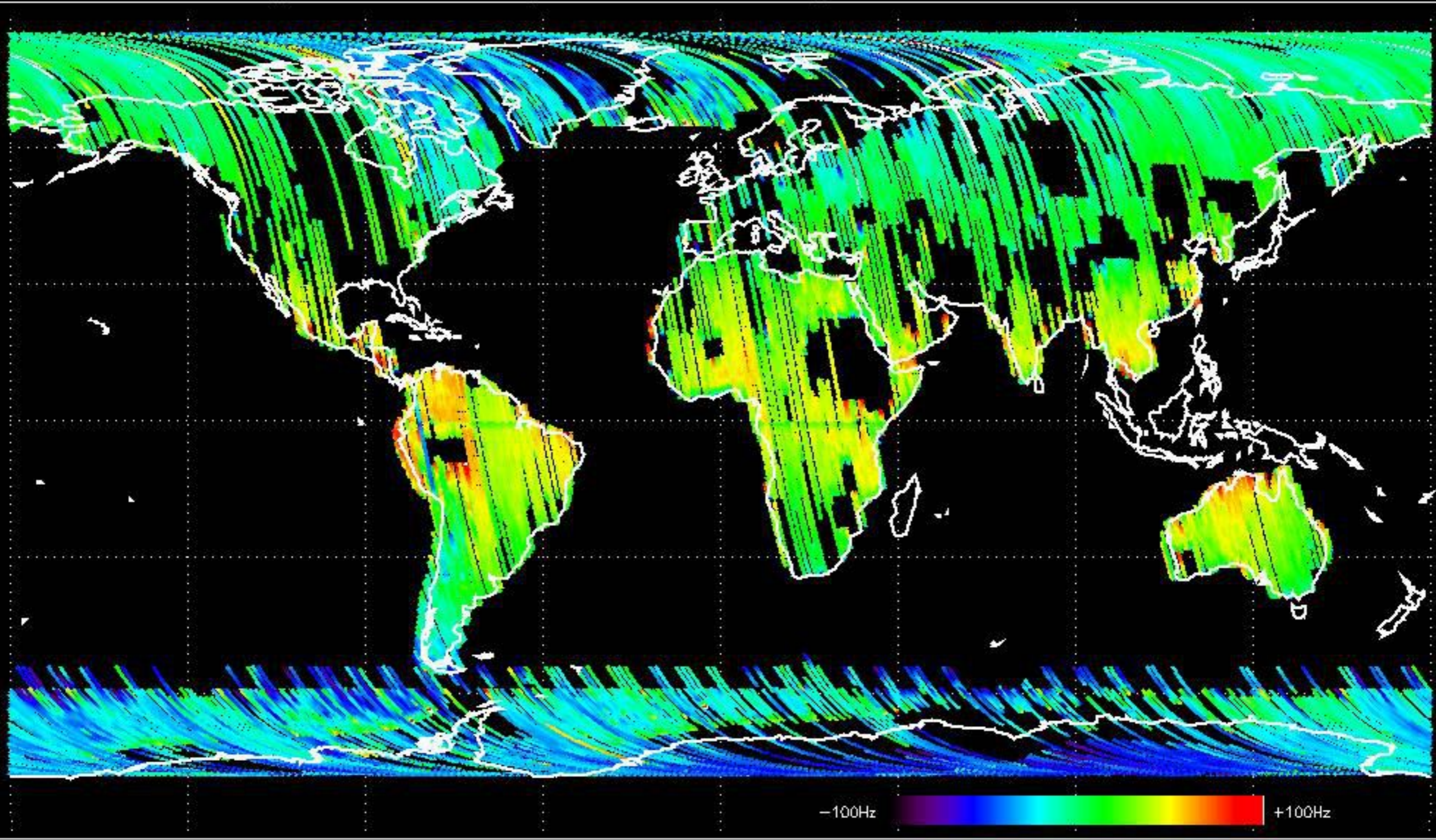


GM1 mode doppler



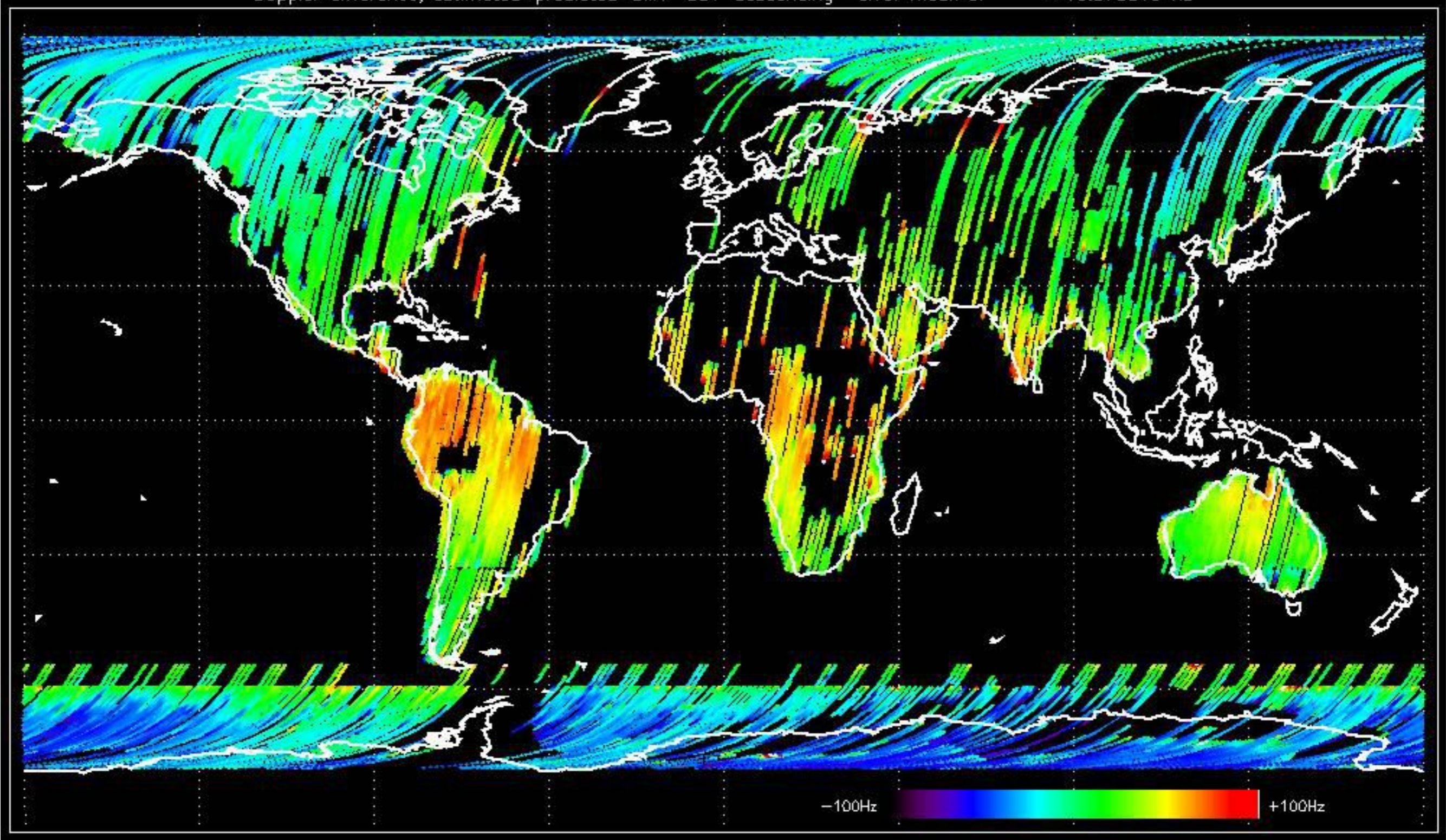


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.621878 Hz

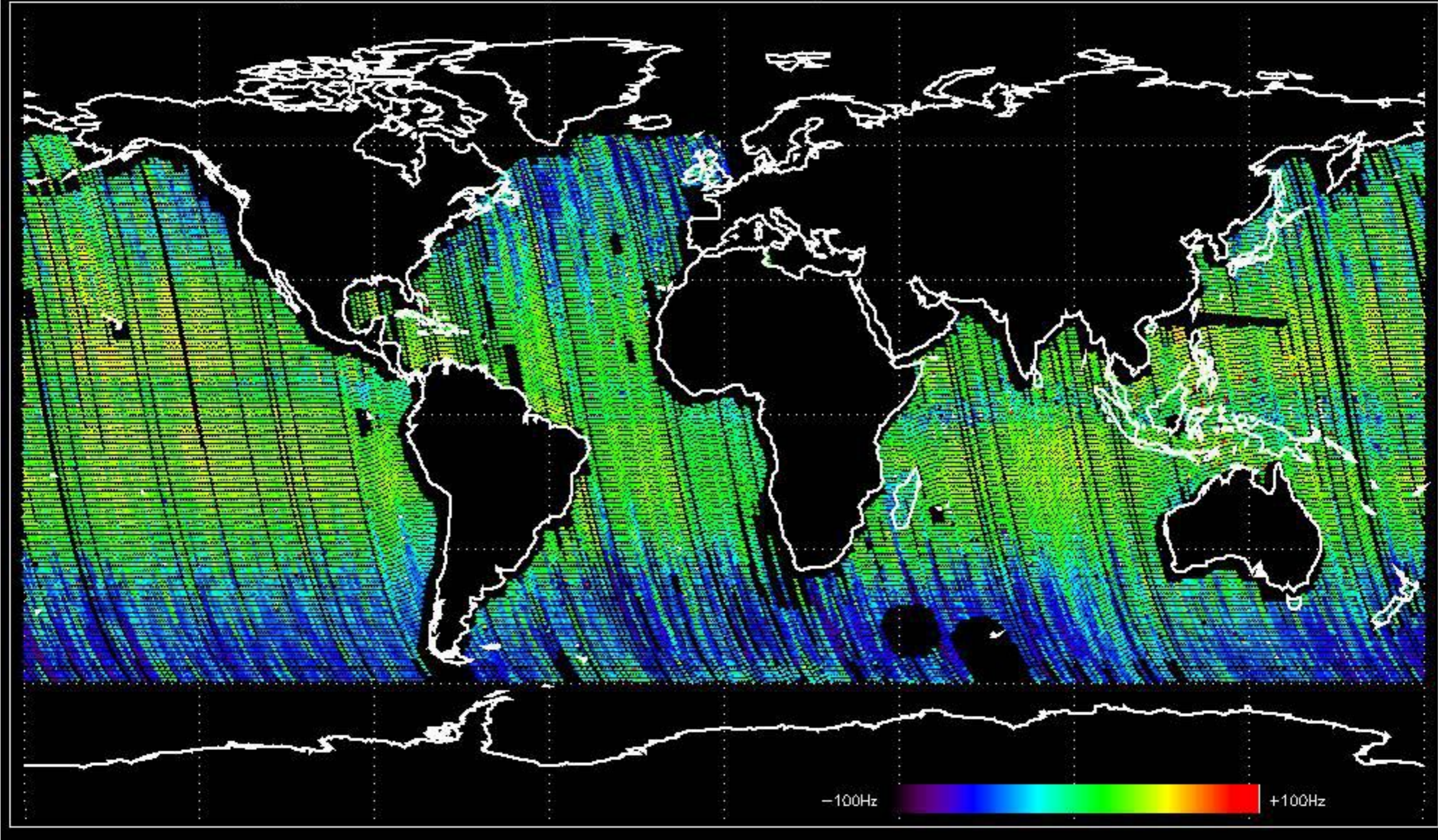


-100Hz +100Hz

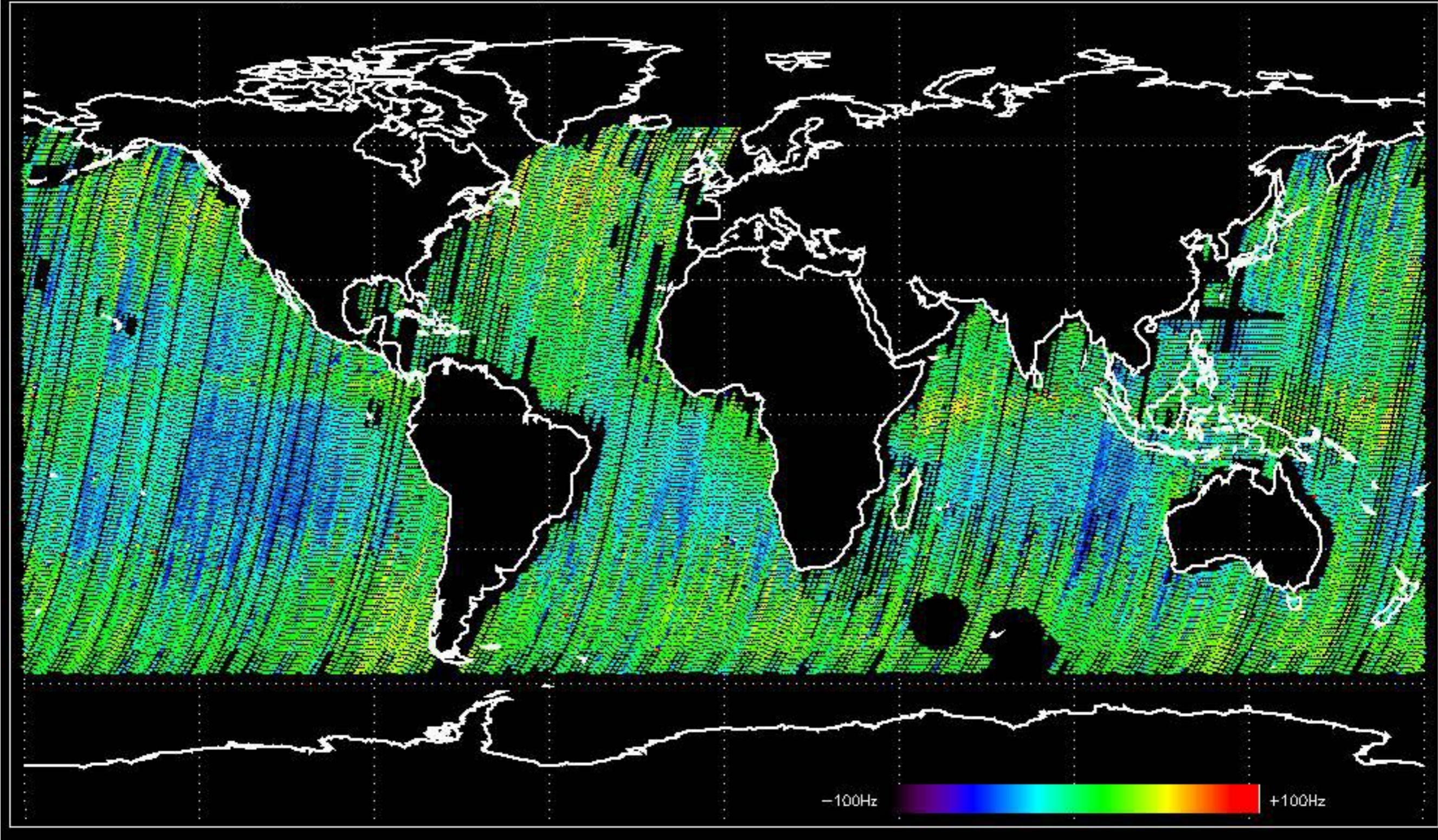
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.875513 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.5064644 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.9684317 Hz



No anomalies observed on available MS products:

No anomalies observed.





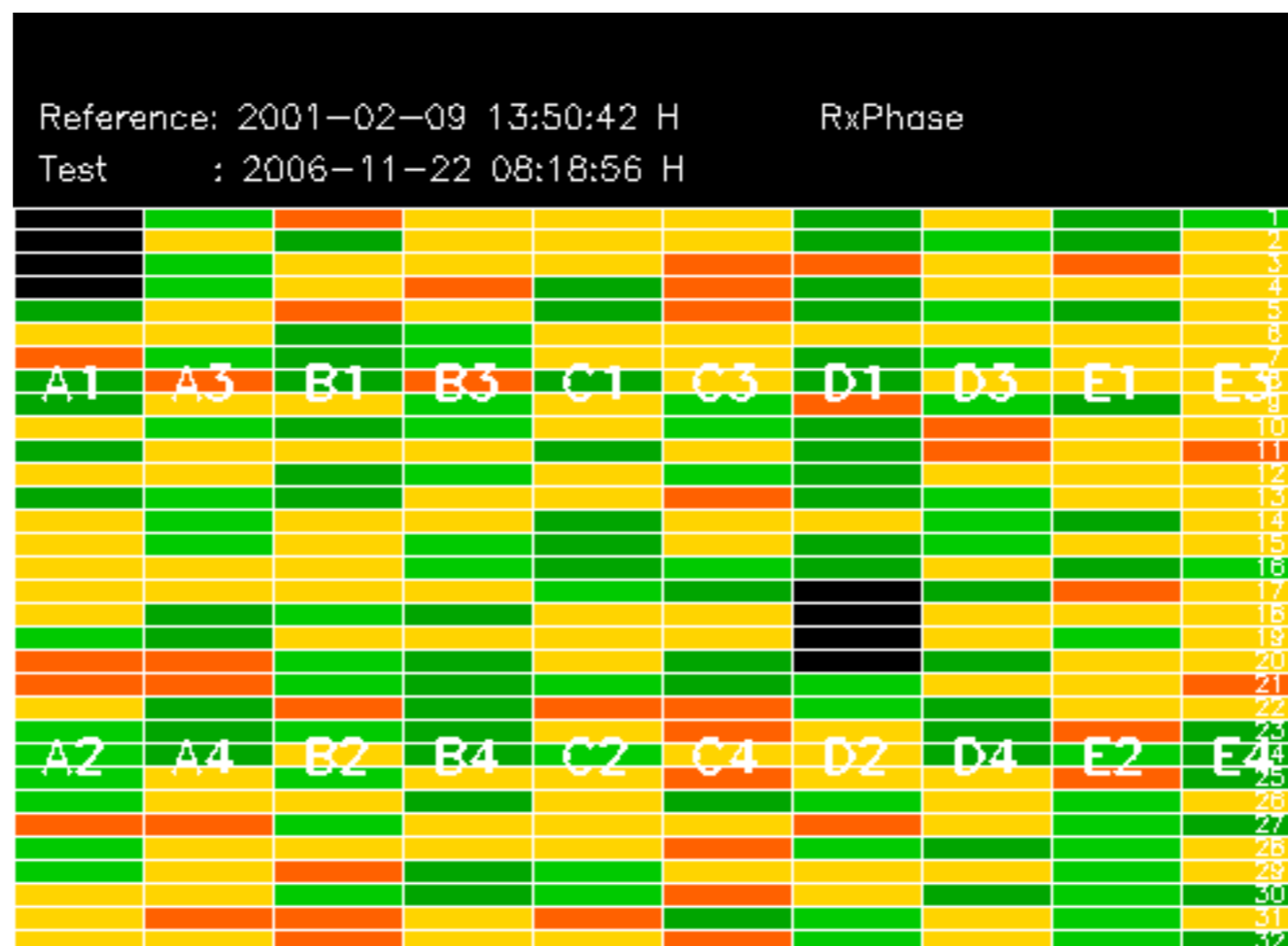






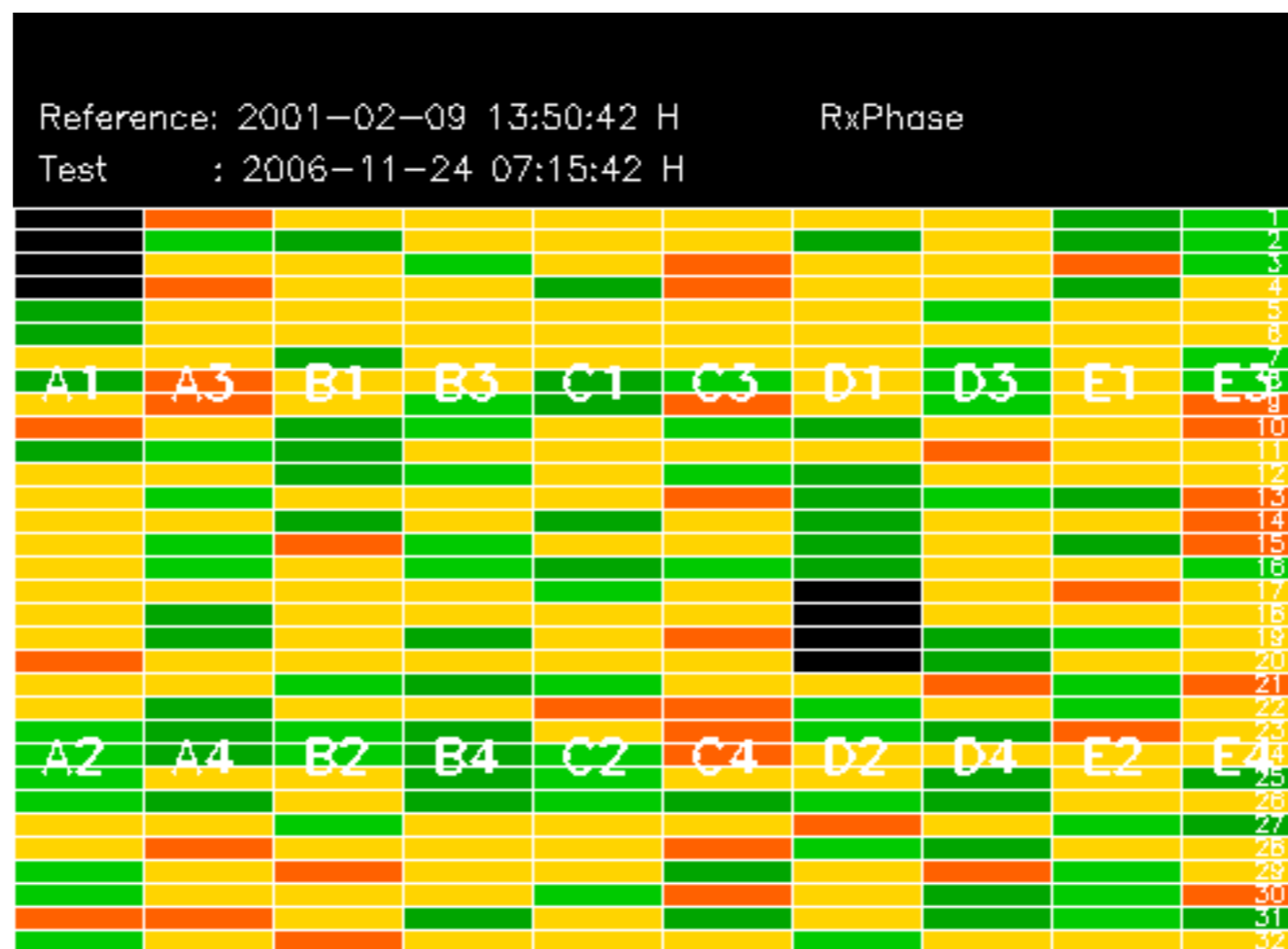




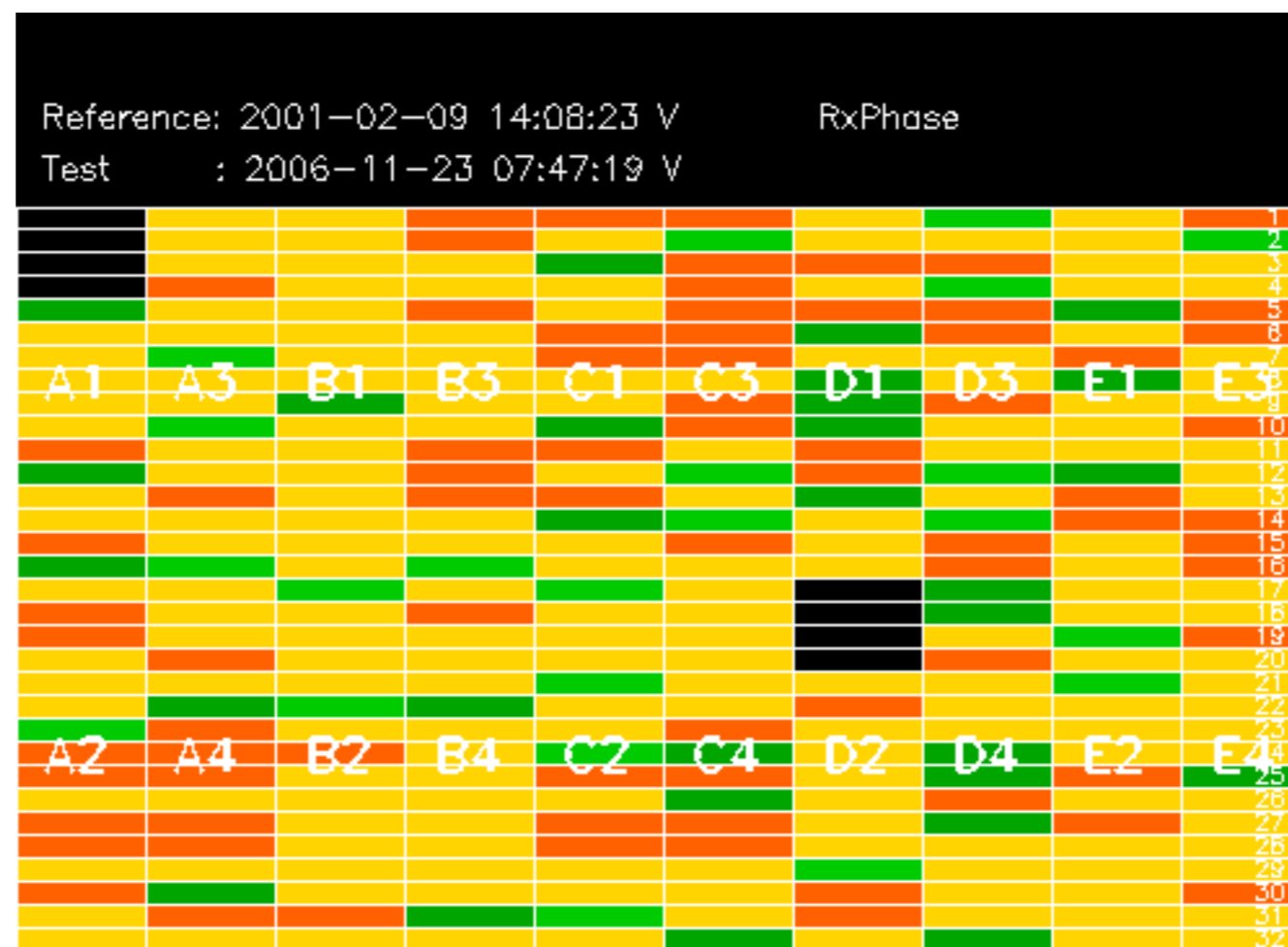




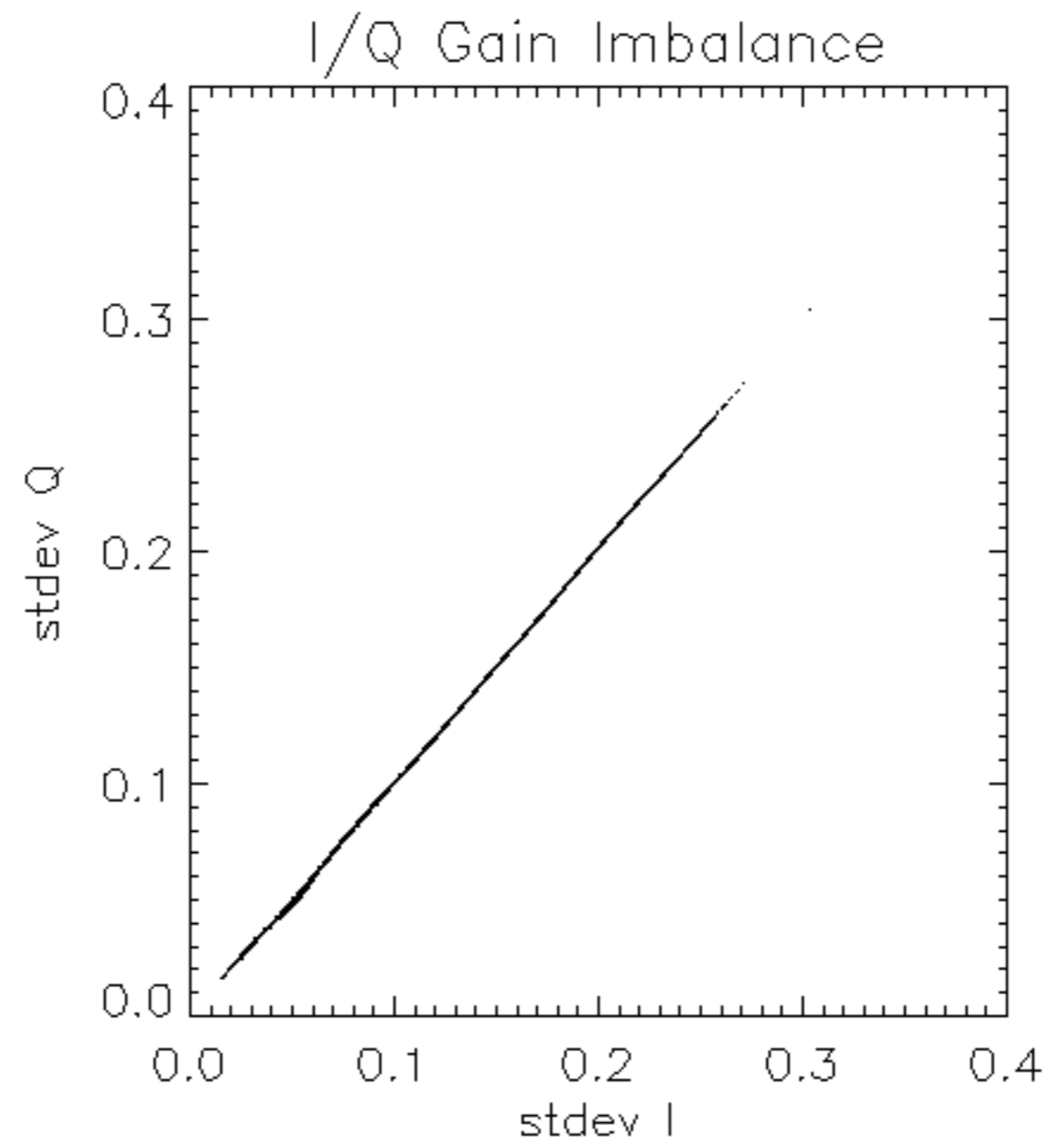


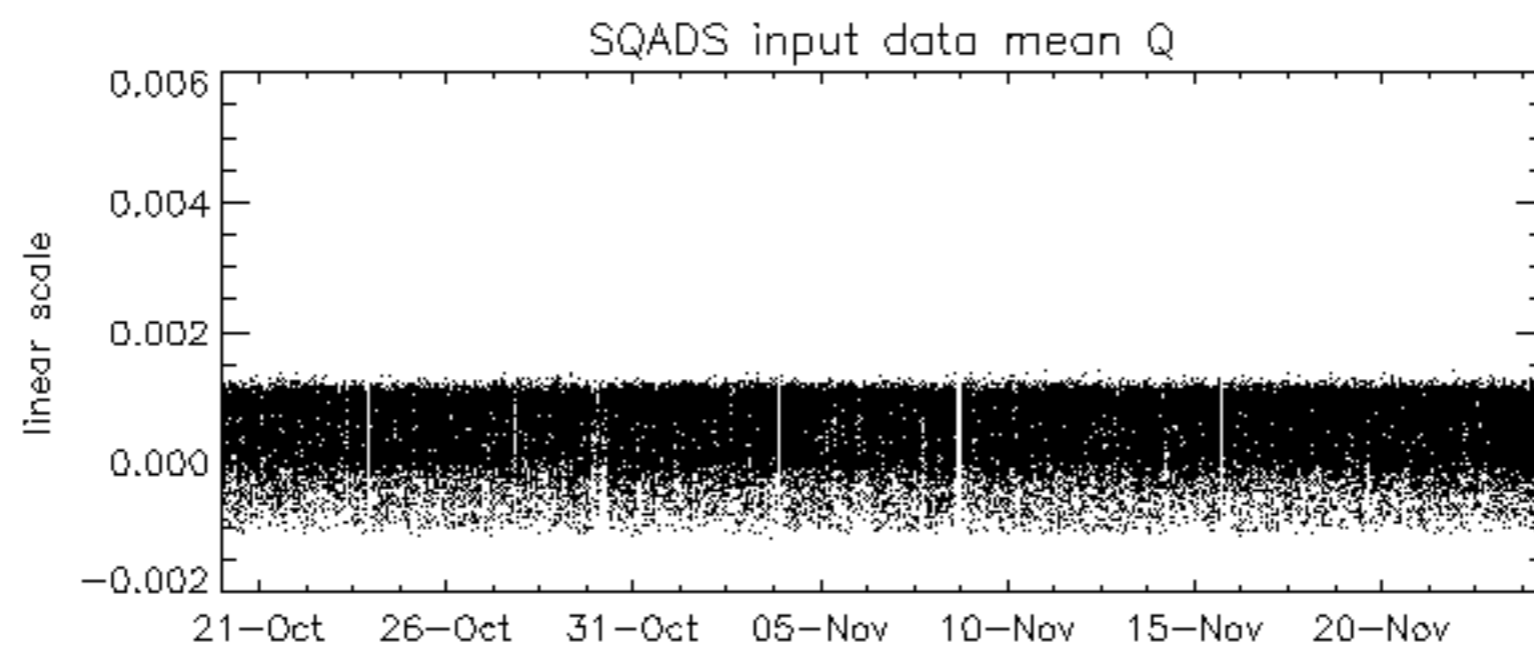
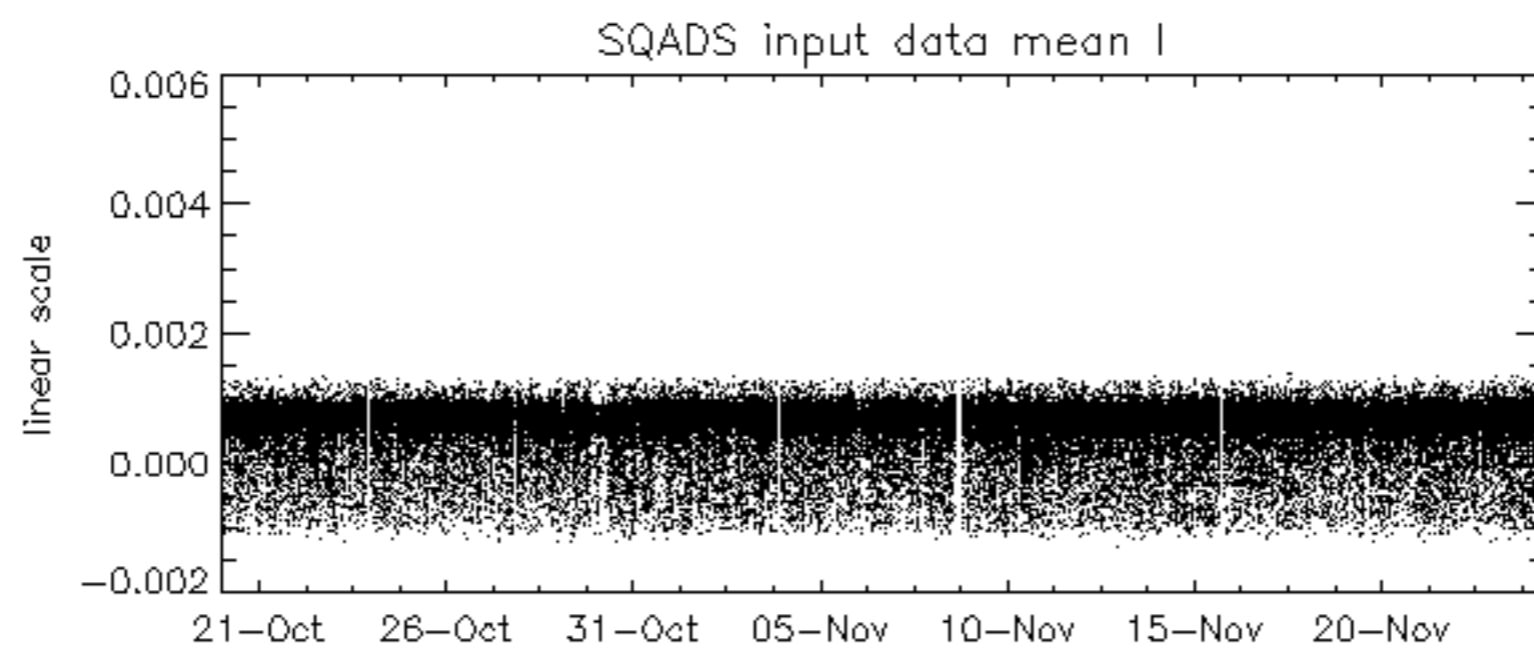
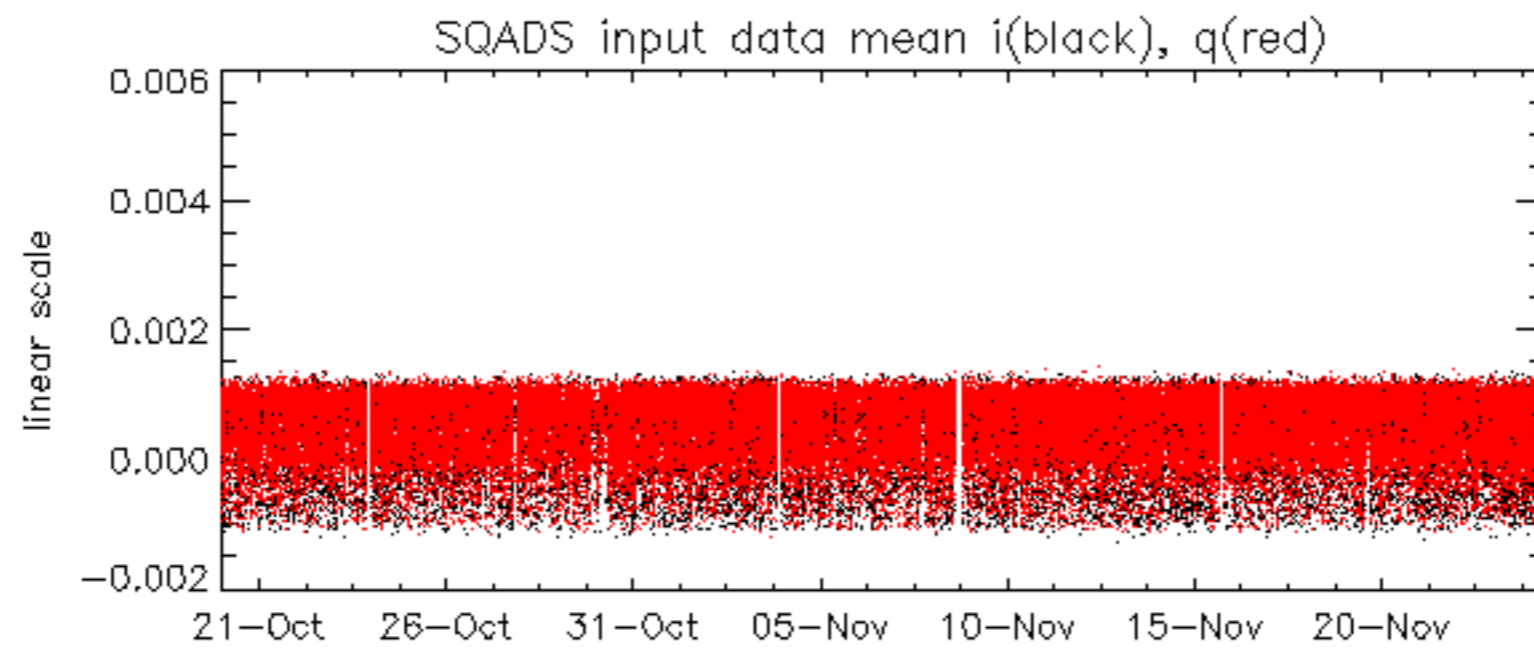


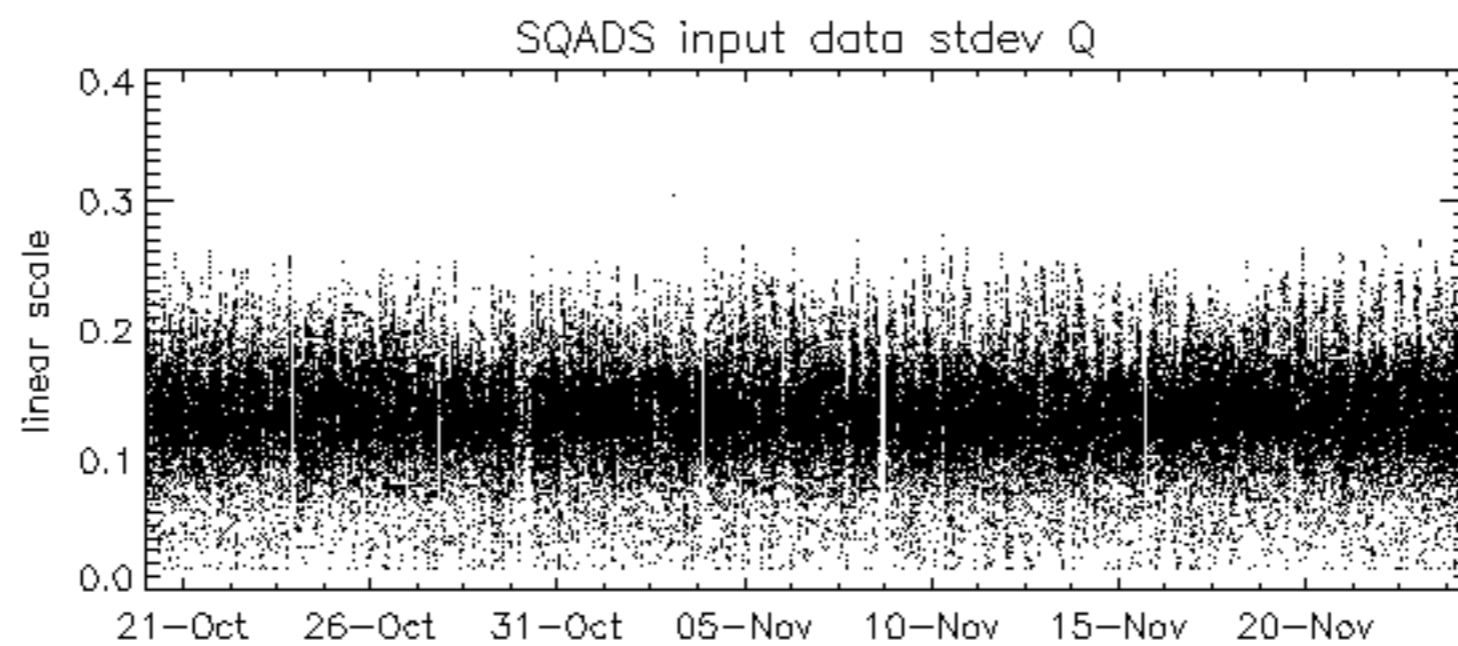
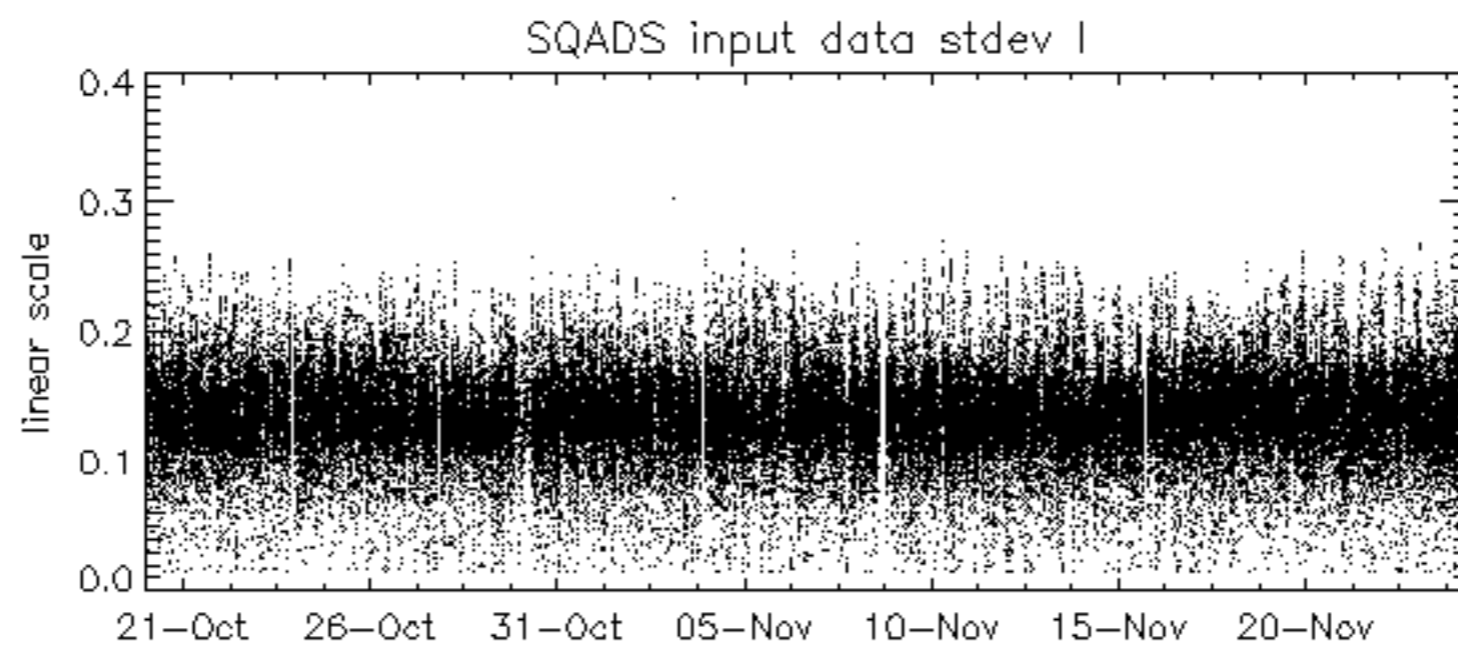
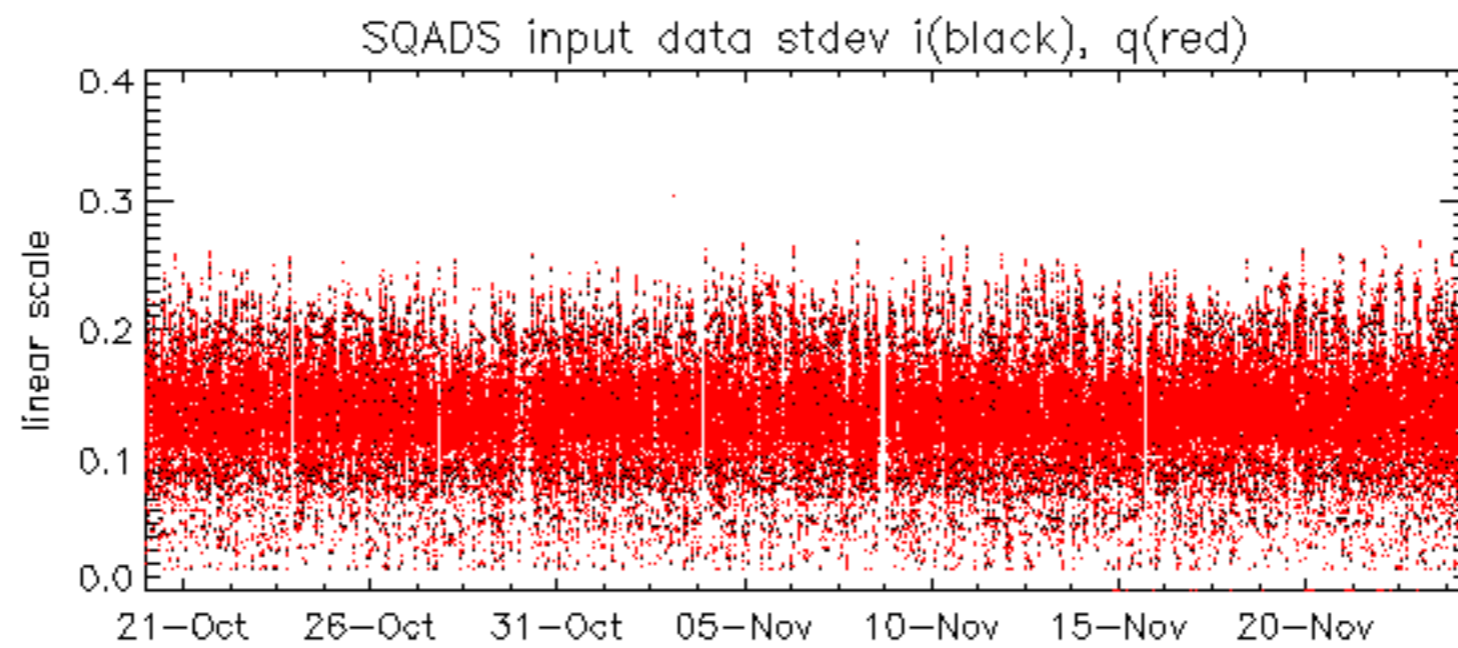


























Summary of analysis for the last 3 days 2006112[234]

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_1PNPDE20061124_042634_000000782053_00147_24750_6576.N1	1	0
ASA_GM1_1PNPDK20061122_104752_000007672053_00123_24726_9116.N1	0	19
ASA_WSM_1PNPDE20061123_182823_000000862053_00142_24745_5906.N1	0	70
ASA_WSM_1PNPDK20061122_135848_000000852053_00125_24728_0656.N1	0	29









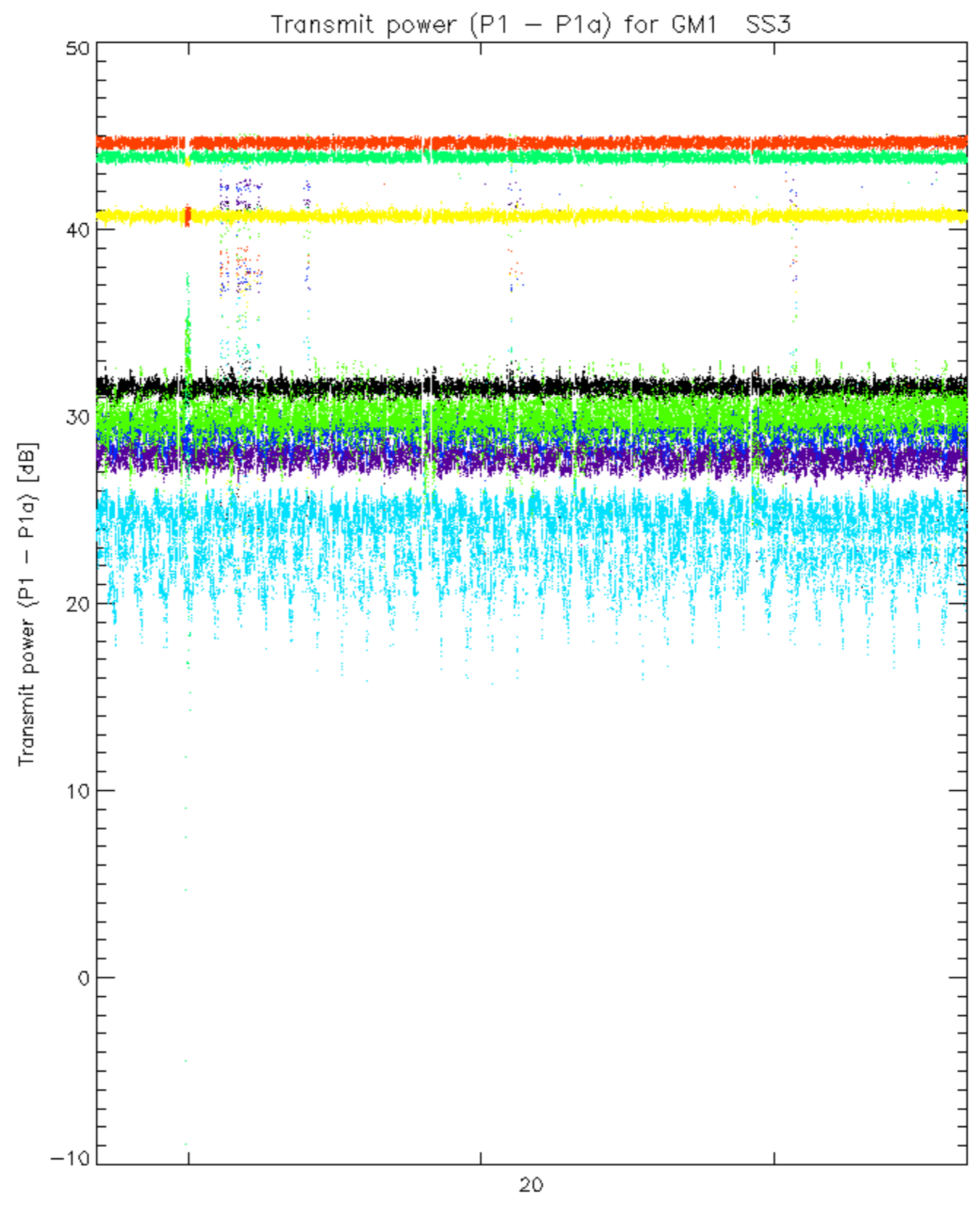




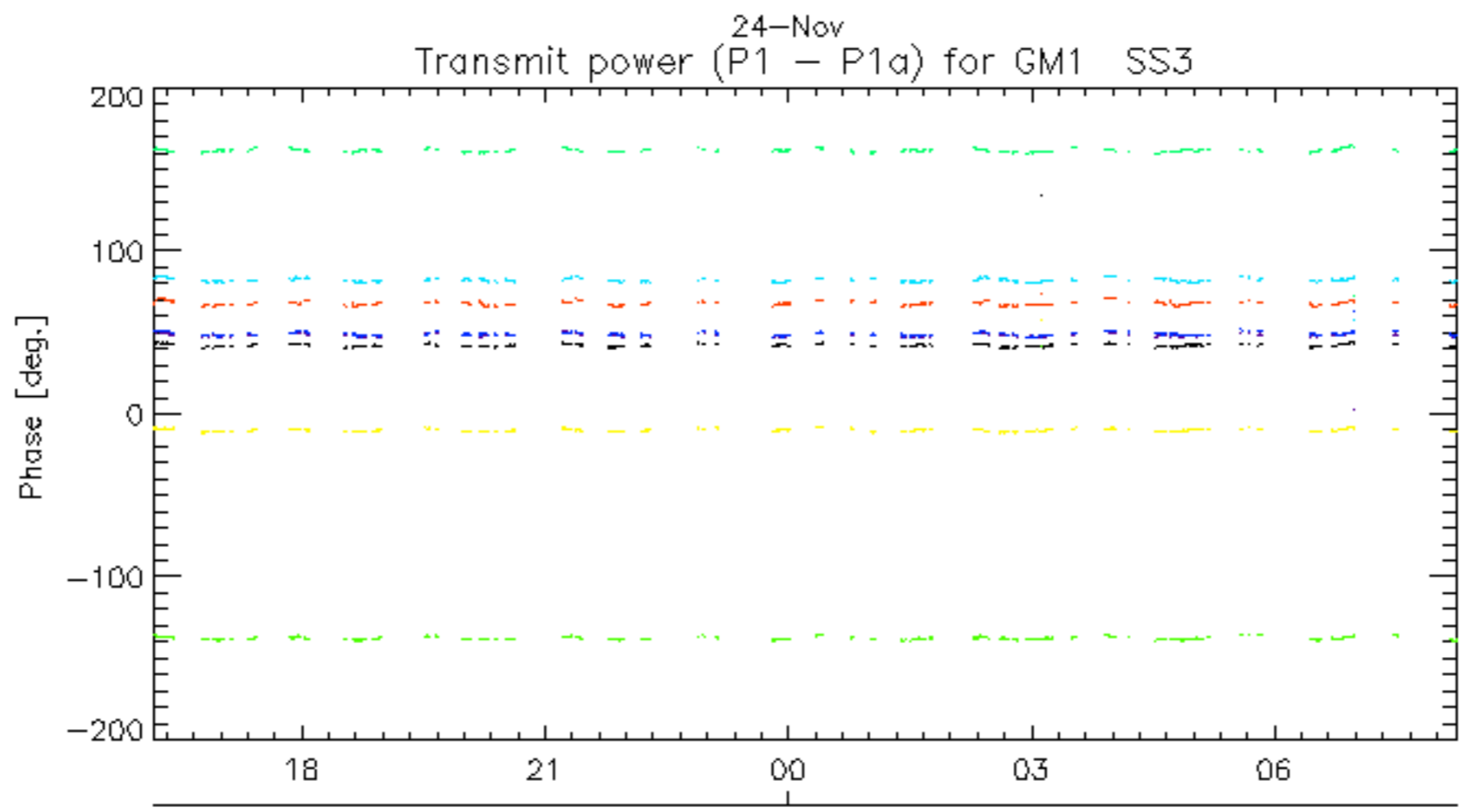
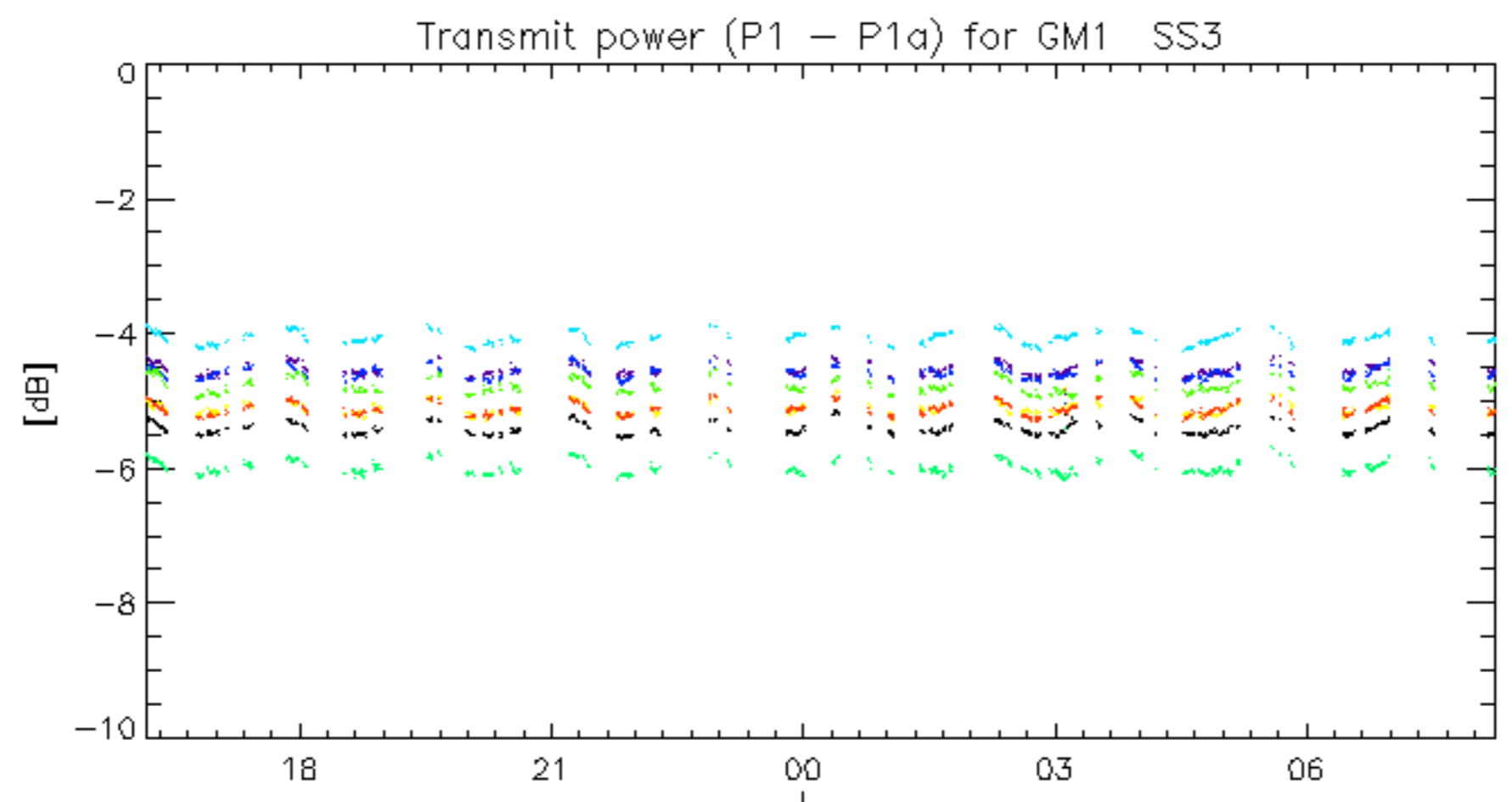






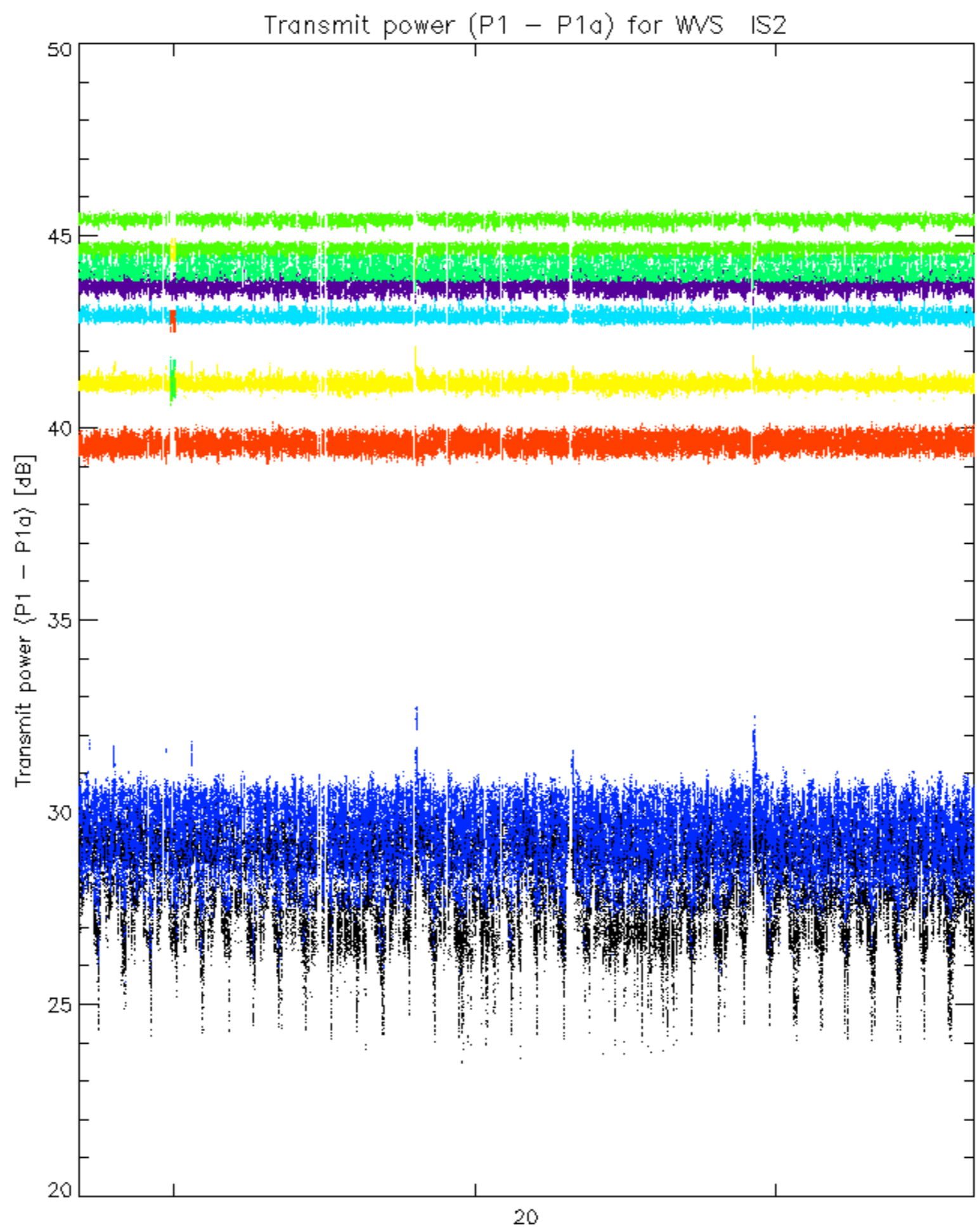


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

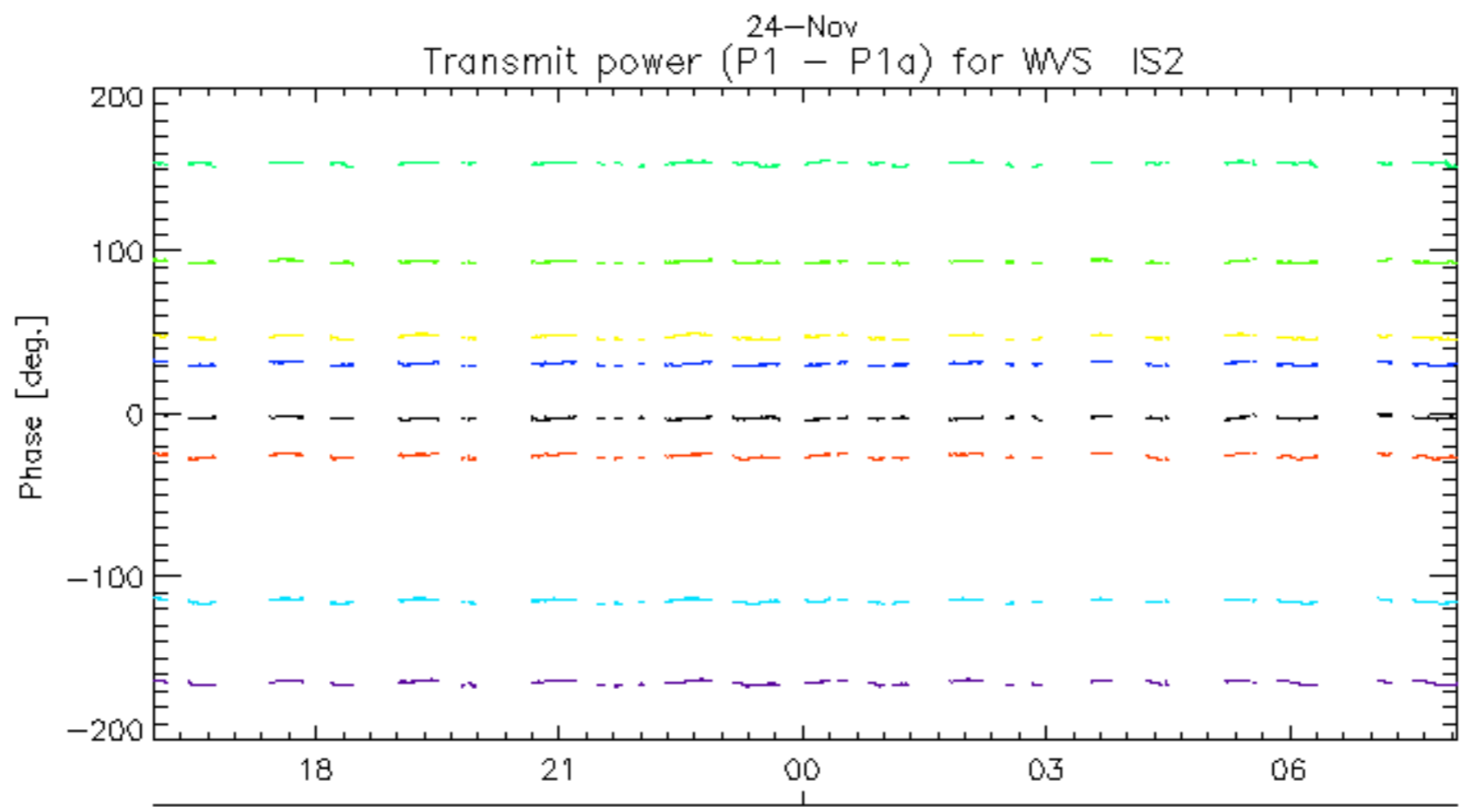
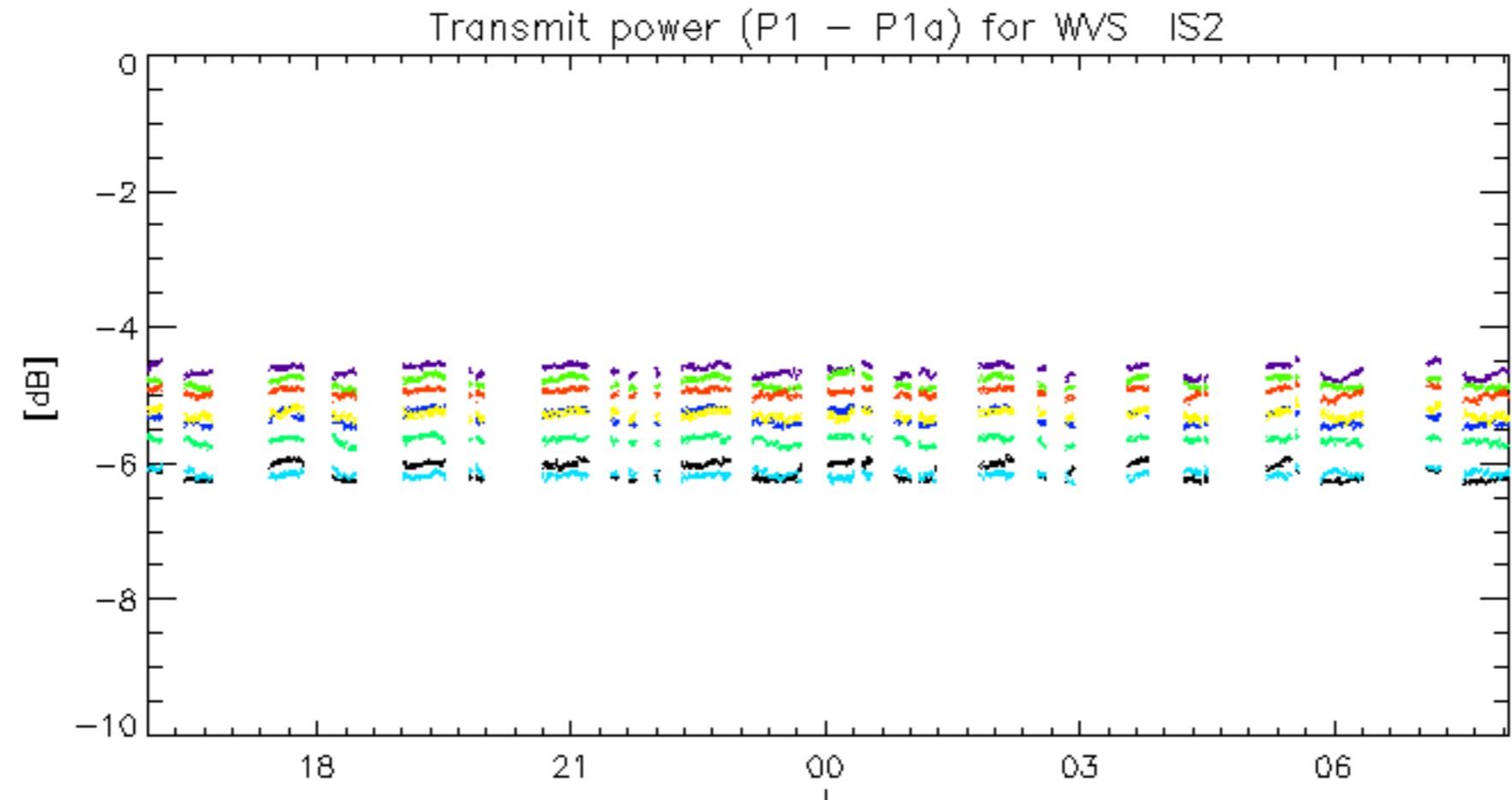


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No unavailabilities during the reported period.