

# PRELIMINARY REPORT OF 061125

last update on Sat Nov 25 16:43:16 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 2006-11-24 00:00:00 to 2006-11-25 16:43:16

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	38	61	8	4	29
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	38	61	8	4	29
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	61	8	4	29
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	61	8	4	29

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	46	66	29	14	68
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	46	66	29	14	68
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	66	29	14	68
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	66	29	14	68

## 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	20061125 064405
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	-3.959982	0.008523	-0.023682
7	P1	-3.151833	0.023141	-0.023921
11	P1	-4.131938	0.024719	0.000490
15	P1	-6.293126	0.014386	-0.054638
19	P1	-3.623935	0.062921	0.037295
22	P1	-4.671688	0.128361	0.118947
26	P1	-3.972034	0.085652	0.117027
30	P1	-5.893883	0.164866	0.121297
3	P1	-16.509064	0.235920	-0.120157
7	P1	-17.277945	0.172785	-0.054930
11	P1	-17.160261	0.455968	-0.132122
15	P1	-13.064502	0.131777	-0.030861
19	P1	-14.931257	0.370283	0.046646
22	P1	-15.857648	0.517697	0.055184
26	P1	-15.059069	0.199635	0.069631
30	P1	-17.426495	0.611892	-0.304510

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.845272	0.090779	0.020603
7	P2	-21.732811	0.094135	-0.011731
11	P2	-15.657012	0.102216	0.010186
15	P2	-7.124385	0.106095	-0.011653
19	P2	-9.191519	0.103586	-0.005965
22	P2	-18.231373	0.095913	-0.034745
26	P2	-16.548634	0.109909	-0.059067
30	P2	-19.476913	0.088270	-0.002549

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.240238	0.008299	-0.033445
7	P3	-8.240238	0.008299	-0.033445
11	P3	-8.240238	0.008299	-0.033445
15	P3	-8.240238	0.008299	-0.033445
19	P3	-8.240238	0.008299	-0.033445
22	P3	-8.240238	0.008299	-0.033445
26	P3	-8.240259	0.008311	-0.033554
30	P3	-8.240259	0.008311	-0.033554

#### 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	-3.911408	0.056305	-0.002814
7	P1	-2.525055	0.332703	0.096399
11	P1	-2.863153	0.050973	0.031636
15	P1	-3.681637	0.057969	-0.020898
19	P1	-3.544161	0.113997	0.085444
22	P1	-5.057899	0.089371	0.115490
26	P1	-6.029531	0.186267	0.118634
30	P1	-5.336164	0.113302	0.058009
3	P1	-11.721544	0.137160	-0.039958
7	P1	-10.063604	0.435182	0.053392
11	P1	-10.331649	0.155264	0.036251
15	P1	-10.758430	0.217528	0.092188
19	P1	-15.798939	2.162411	0.507865
22	P1	-21.403585	1.573464	-0.404195
26	P1	-16.046976	0.398042	-0.063327
30	P1	-17.903074	0.415749	0.016098

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.457462	0.129103	-0.035645
7	P2	-22.211752	0.469396	-0.089117
11	P2	-10.938519	0.131813	-0.040928
15	P2	-4.967356	0.162404	-0.049008
19	P2	-6.949630	0.197129	-0.034125
22	P2	-8.261319	0.203269	-0.001402
26	P2	-24.309370	0.345286	-0.102215
30	P2	-21.944460	0.215484	-0.026629

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.086602	0.003283	-0.029506
7	P3	-8.086585	0.003272	-0.029725
11	P3	-8.086635	0.003275	-0.029729
15	P3	-8.086589	0.003275	-0.029541
19	P3	-8.086629	0.003282	-0.029706
22	P3	-8.086551	0.003281	-0.029864
26	P3	-8.086630	0.003274	-0.029668
30	P3	-8.086730	0.003282	-0.029517

## 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	0.000542877
	stdev	1.80049e-07
MEAN Q	mean	0.000519571
	stdev	2.20655e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135979
	stdev	0.00111237
STDEV Q	mean	0.136337
	stdev	0.00112922



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006112[345]

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_IMM_1PNPDE20061124_042634_000000782053_00147_24750_6576.N1	1	0
ASA_IMM_1PNPDE20061124_201746_000000362053_00157_24760_7594.N1	1	0
ASA_GM1_1PNPDK20061124_153848_000006402053_00154_24757_9246.N1	0	32
ASA_WSM_1PNPDE20061123_182823_000000862053_00142_24745_5906.N1	0	70
ASA_APM_1PNPDE20061124_143627_000000872053_00154_24757_7416.N1	0	10







## 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)


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Ascending
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Descending
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### 7.5 - Absolute Doppler for GM1

<b>Evolution of Absolute Doppler</b>
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Ascending
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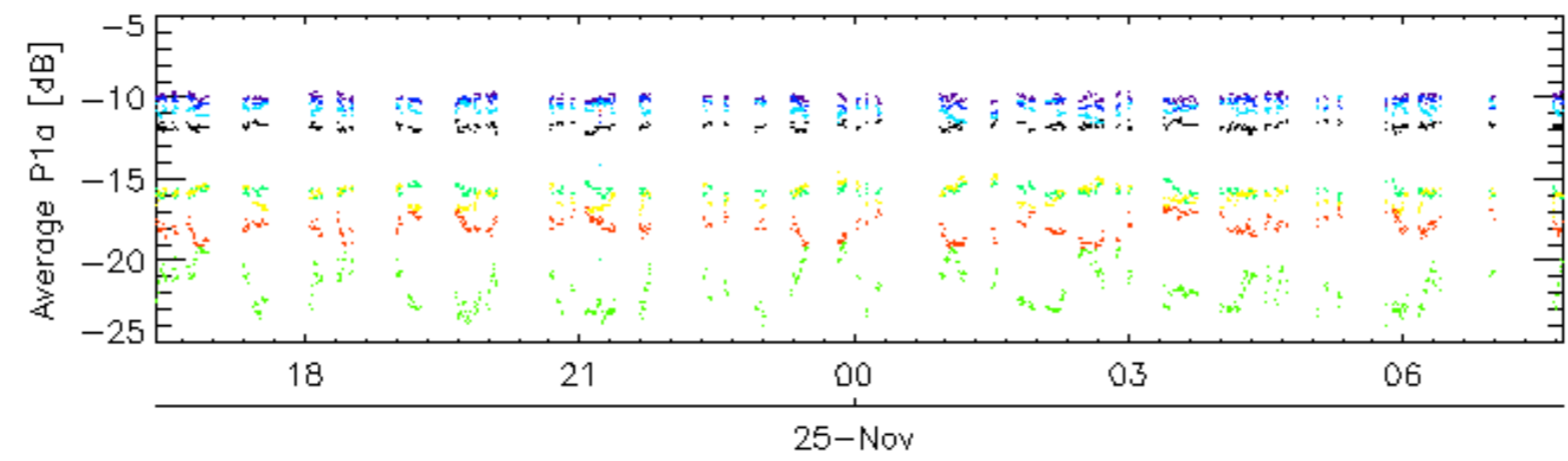
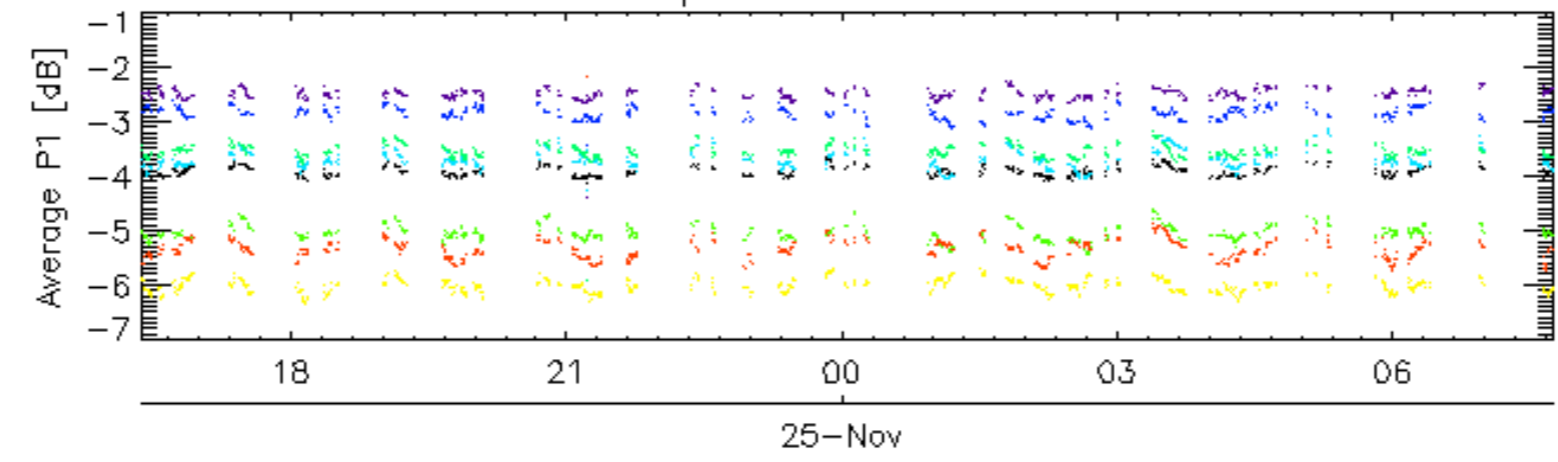
Descending
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### 7.6 - Doppler evolution versus ANX for GM1

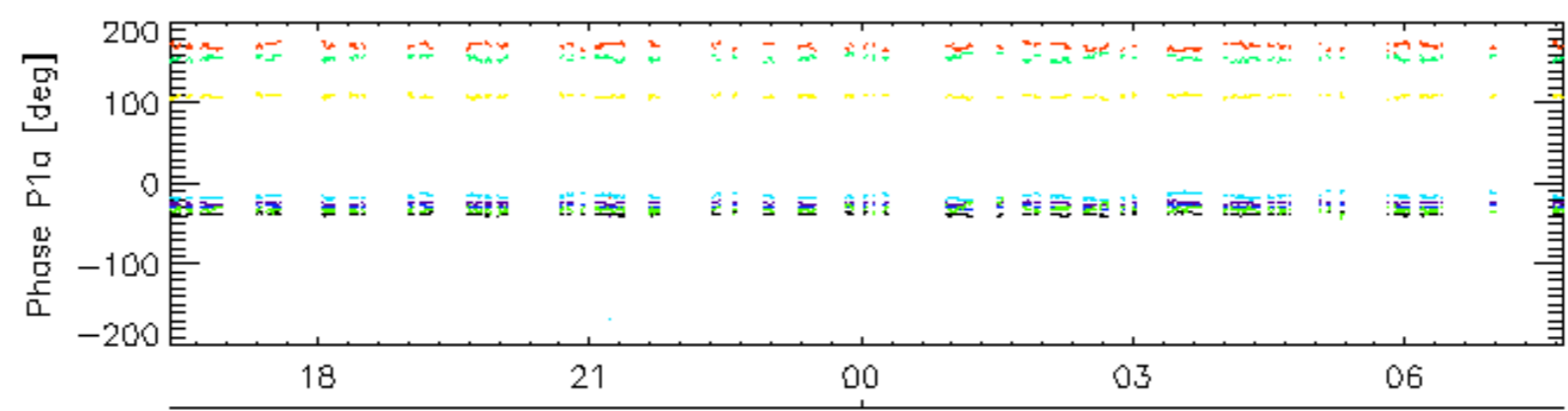
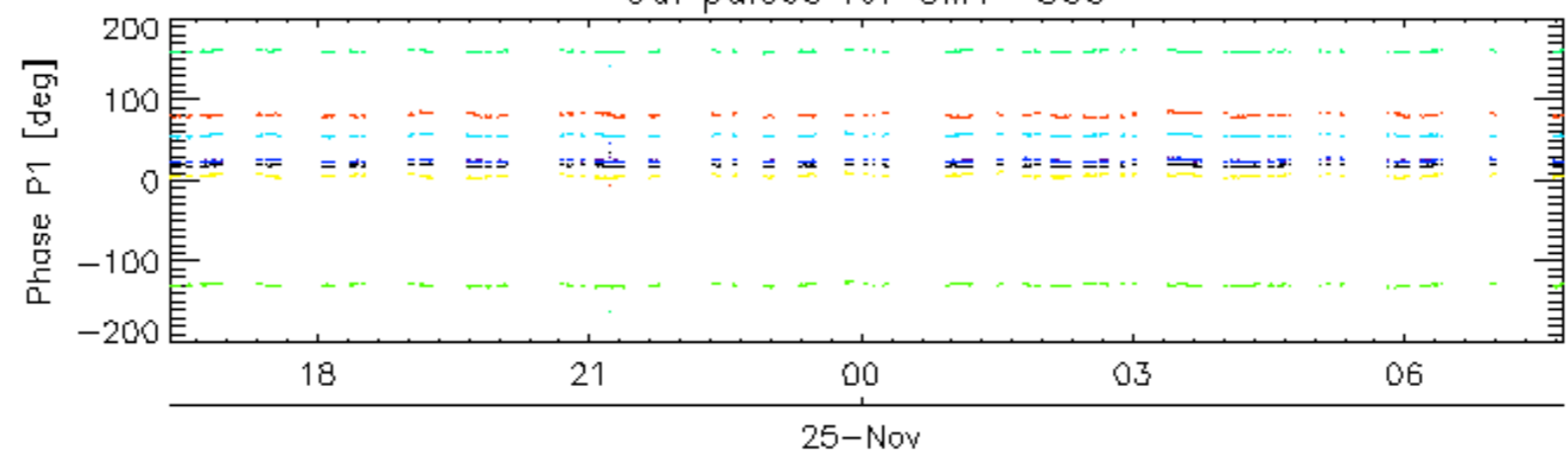
<b>Evolution Doppler error versus ANX</b>
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Cal pulses for GM1 SS3

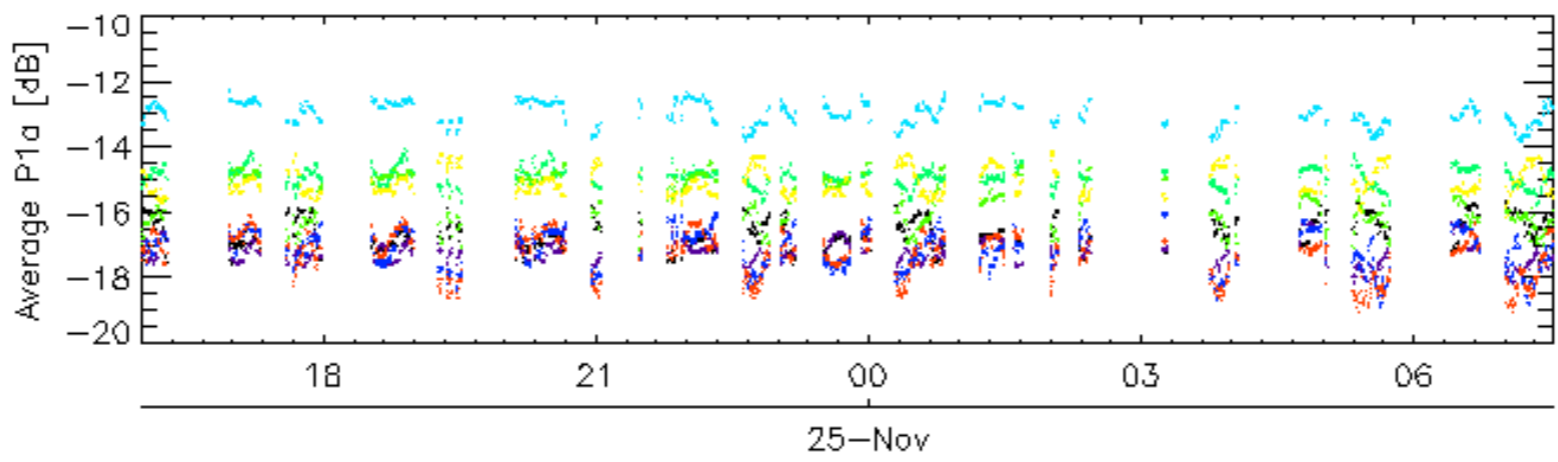
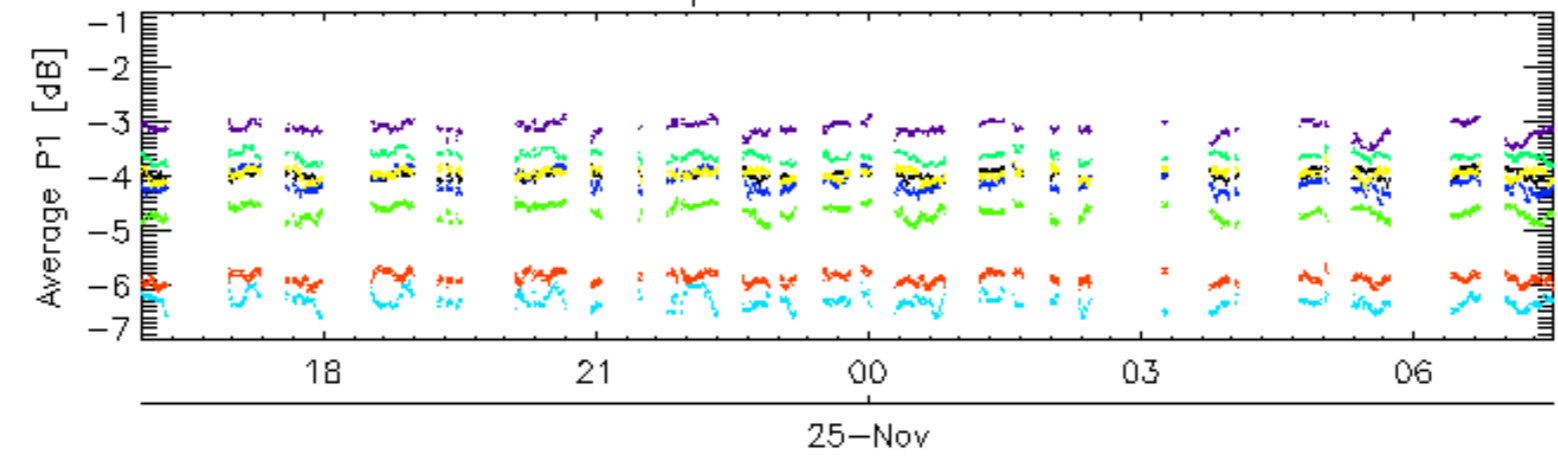


Cal pulses for GM1 SS3

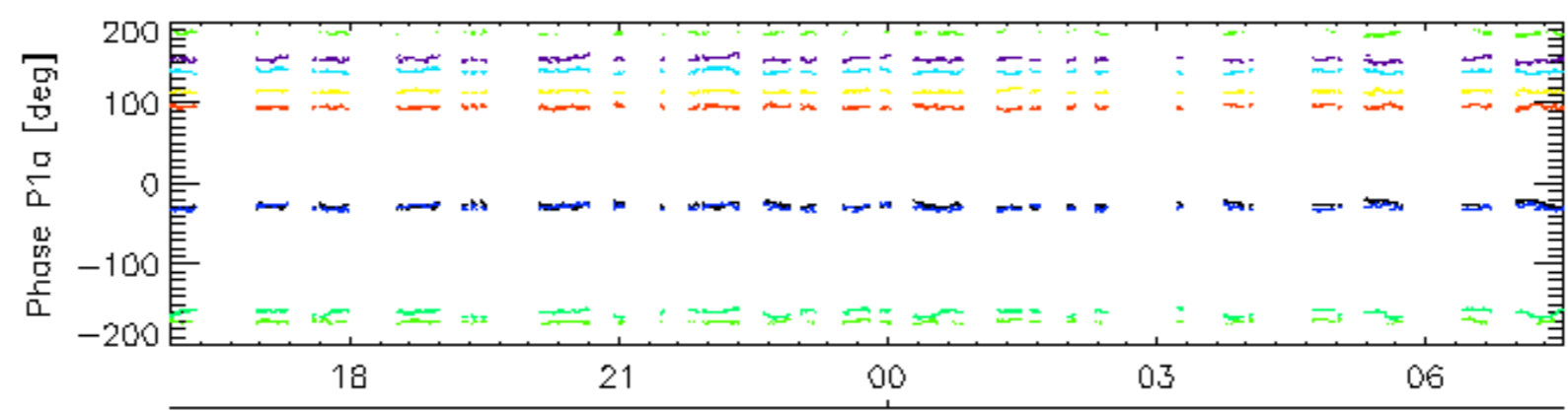
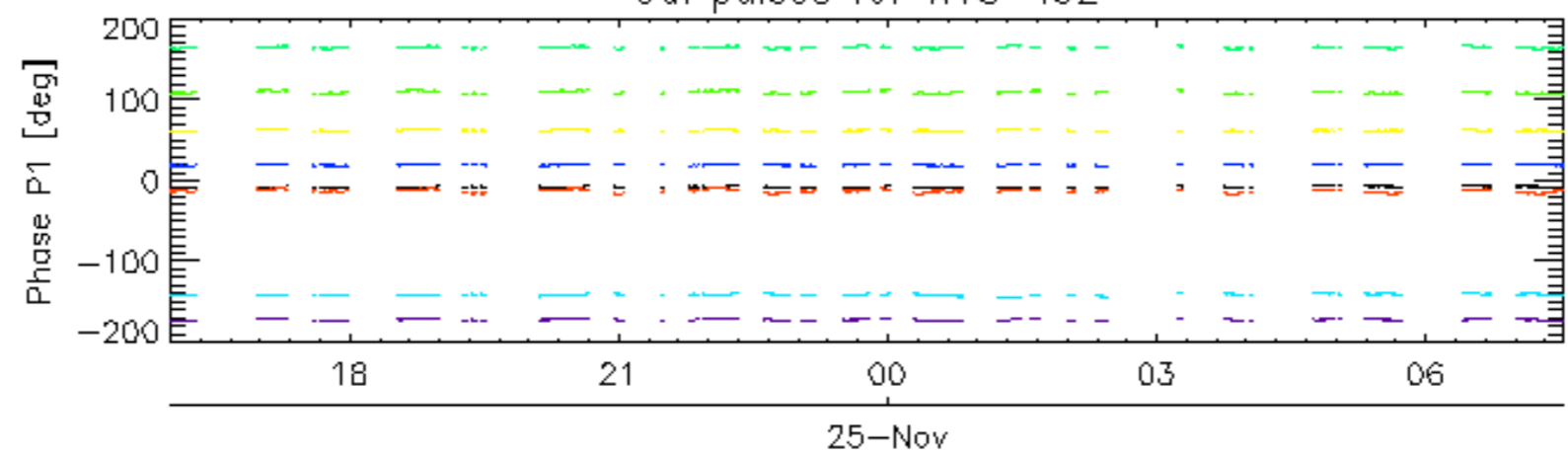


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

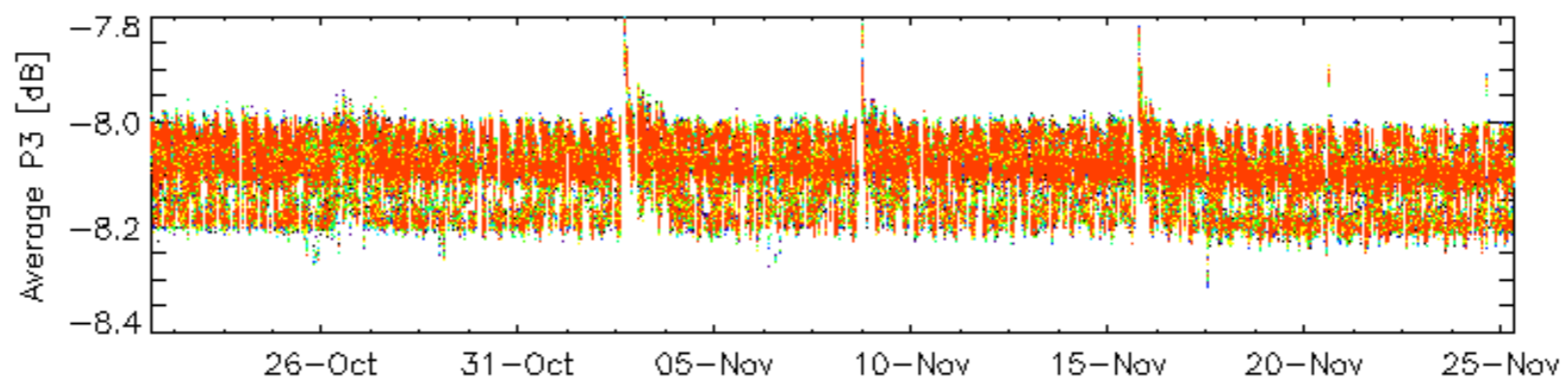
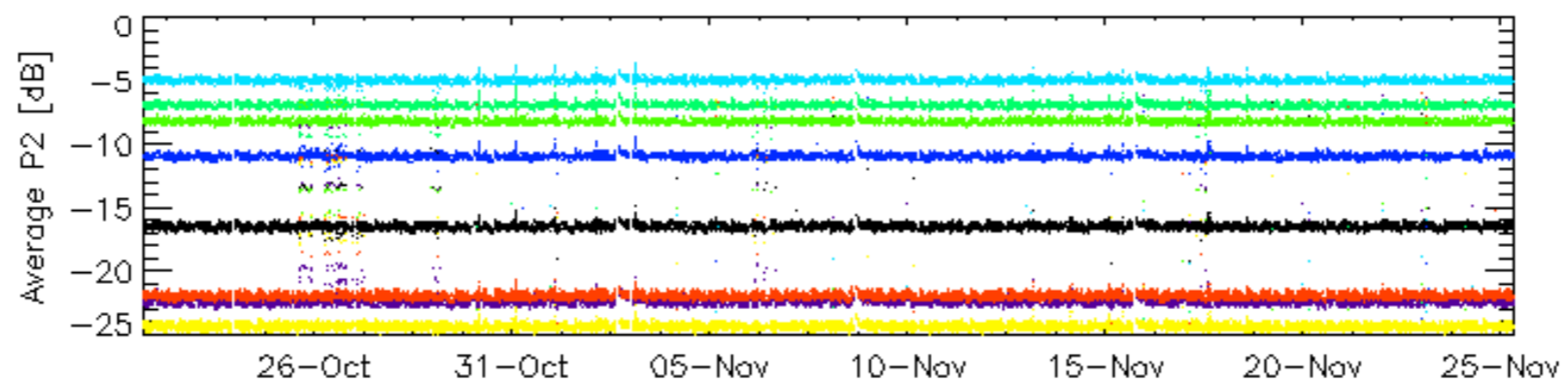
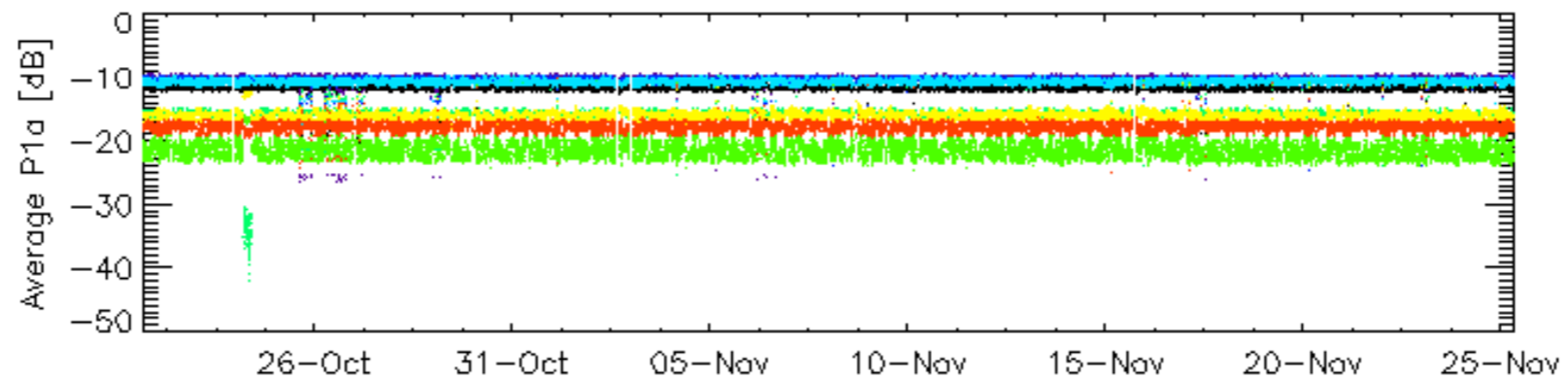
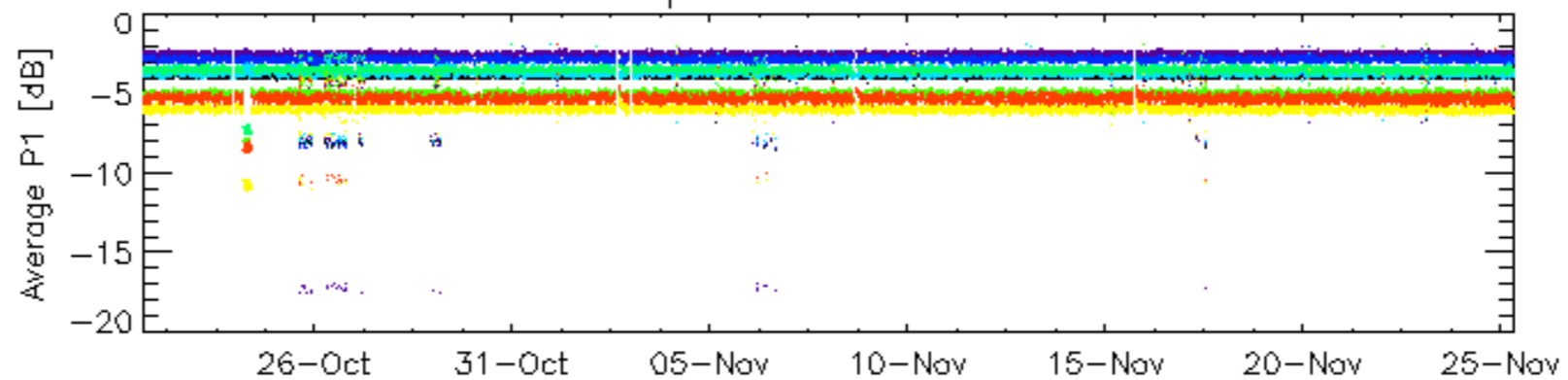


Cal pulses for WVS IS2



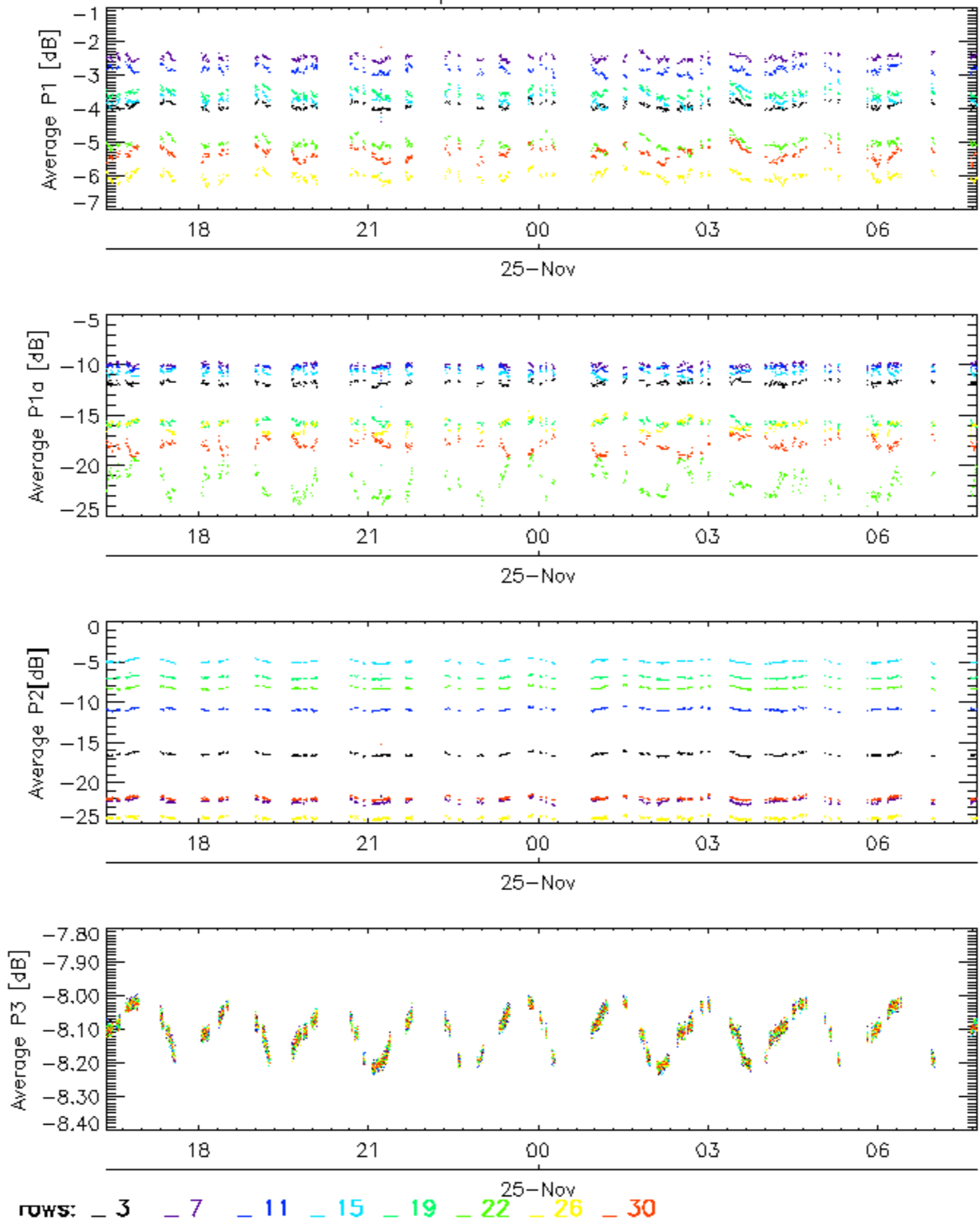
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

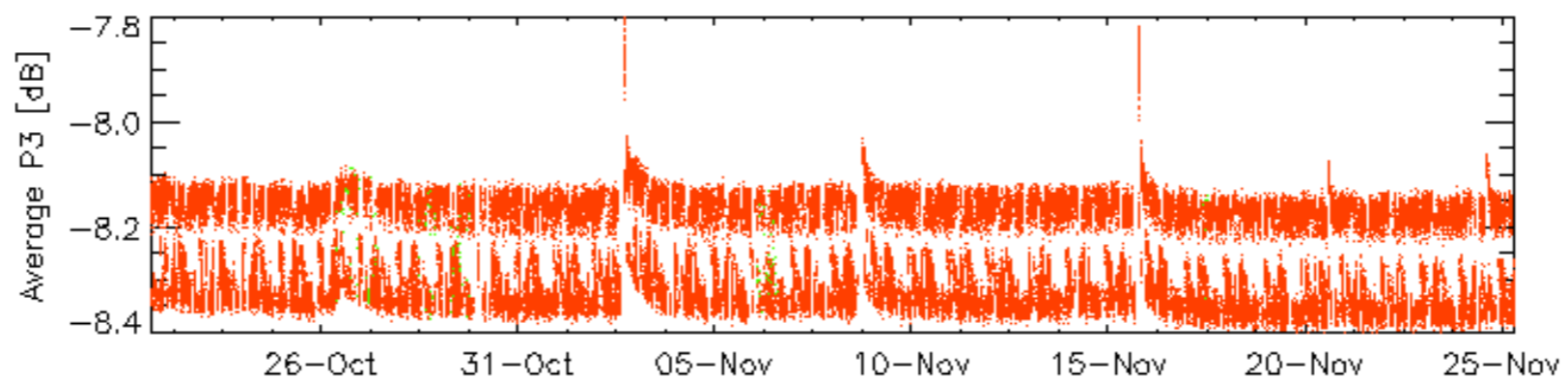
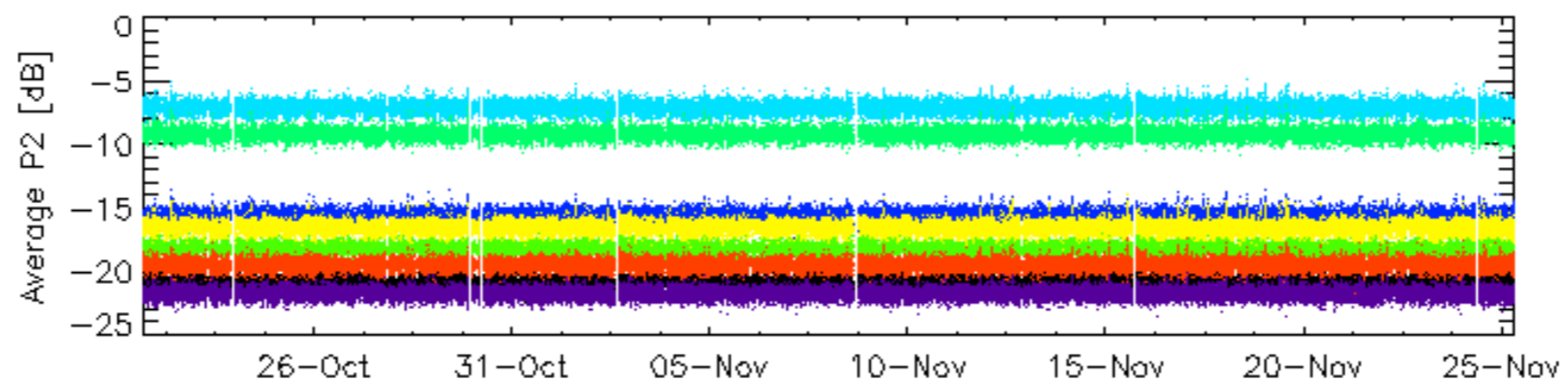
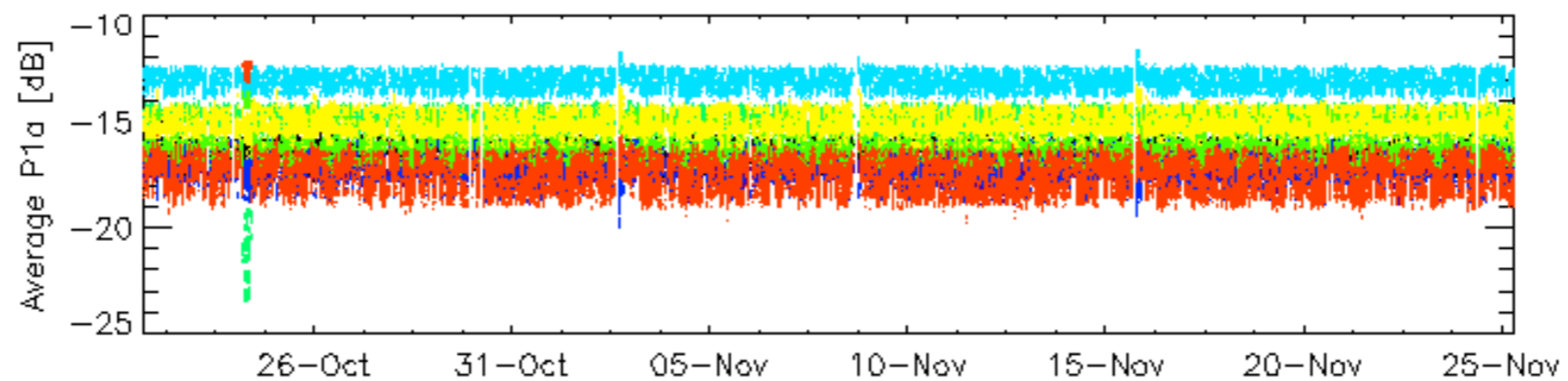
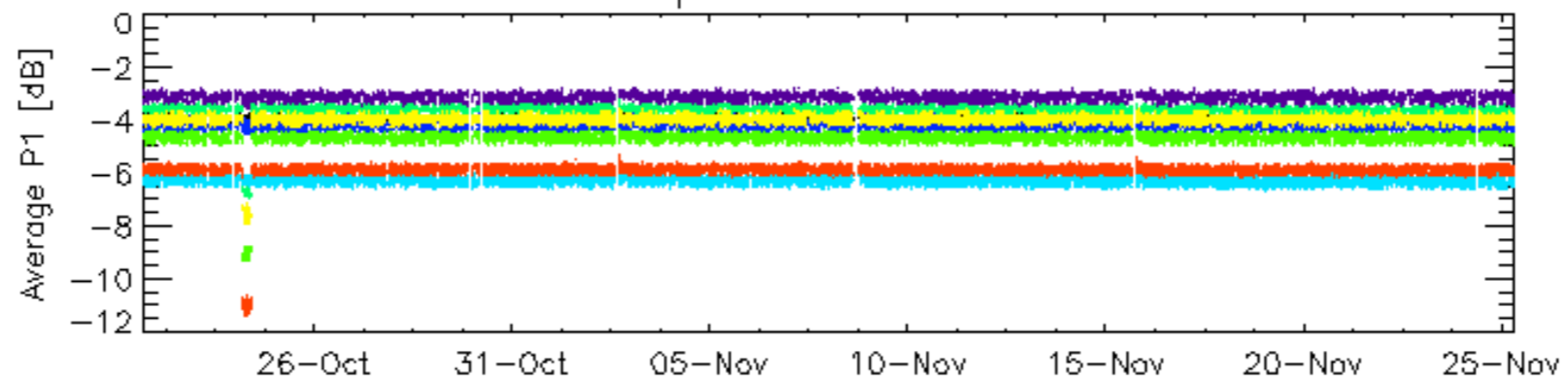


rows: [\\_ 3](#) [\\_ 7](#) [\\_ 11](#) [\\_ 15](#) [\\_ 19](#) [\\_ 22](#) [\\_ 26](#) [\\_ 30](#)

### Cal pulses for GM1 SS3

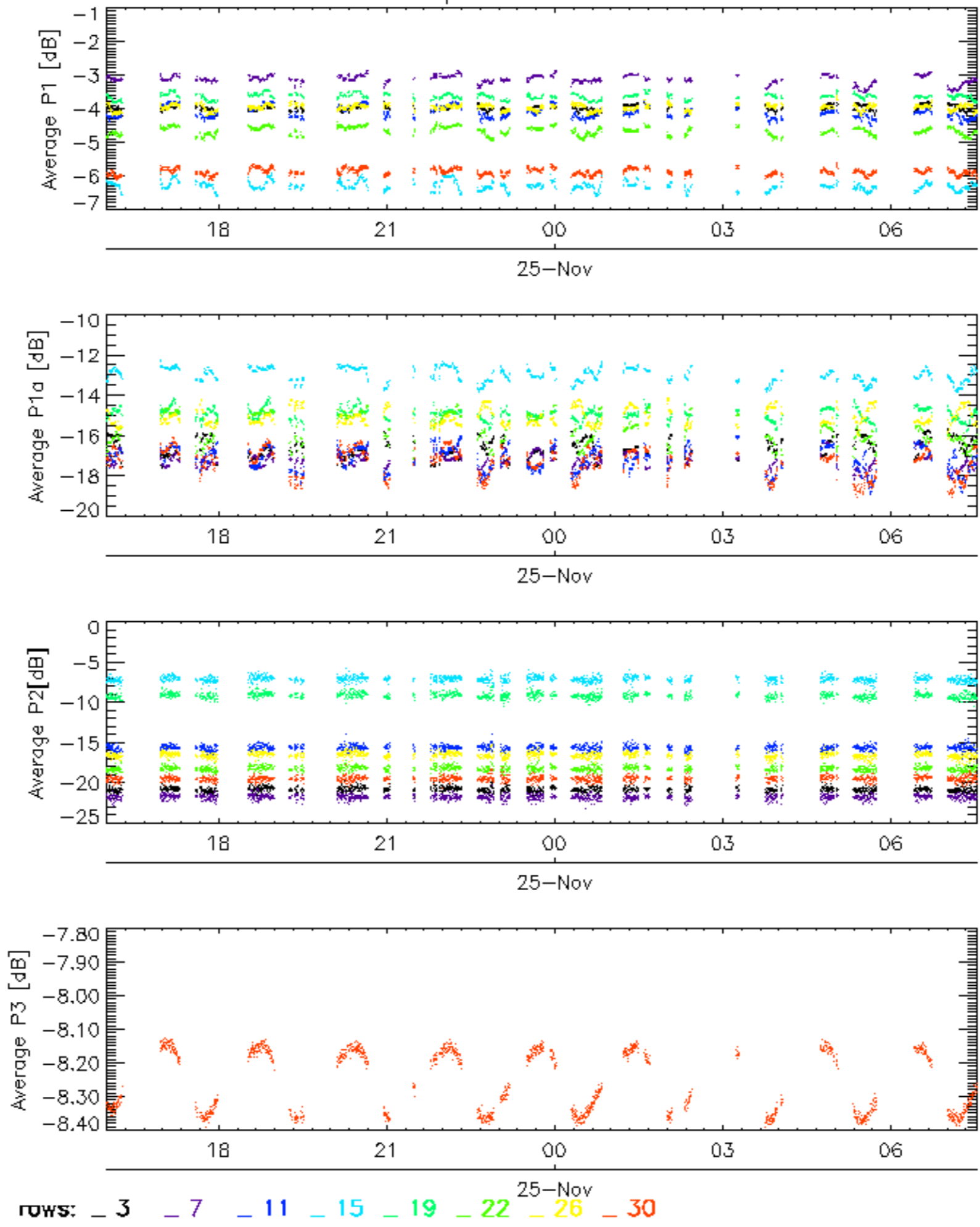


Cal pulses for WVS IS2



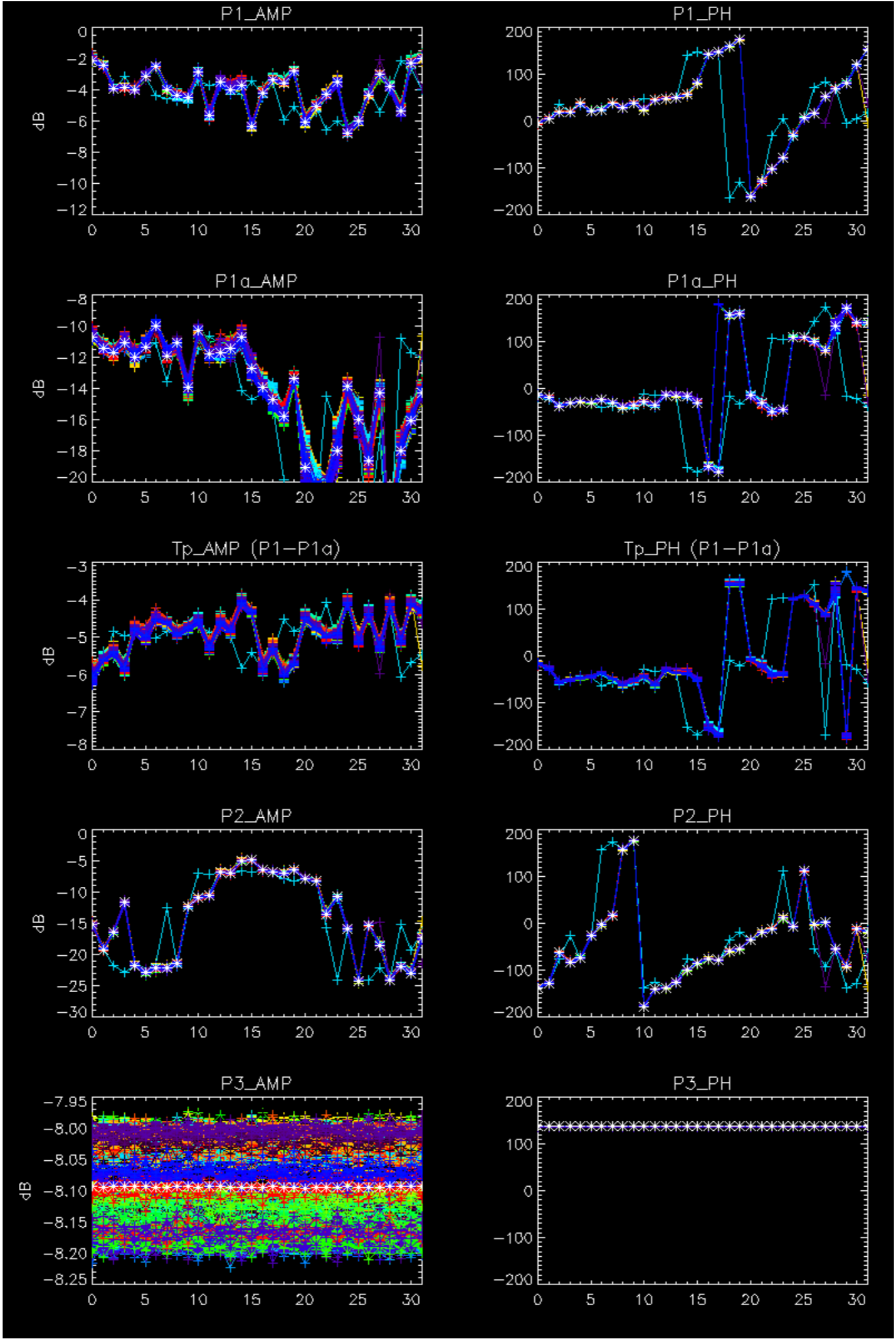
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

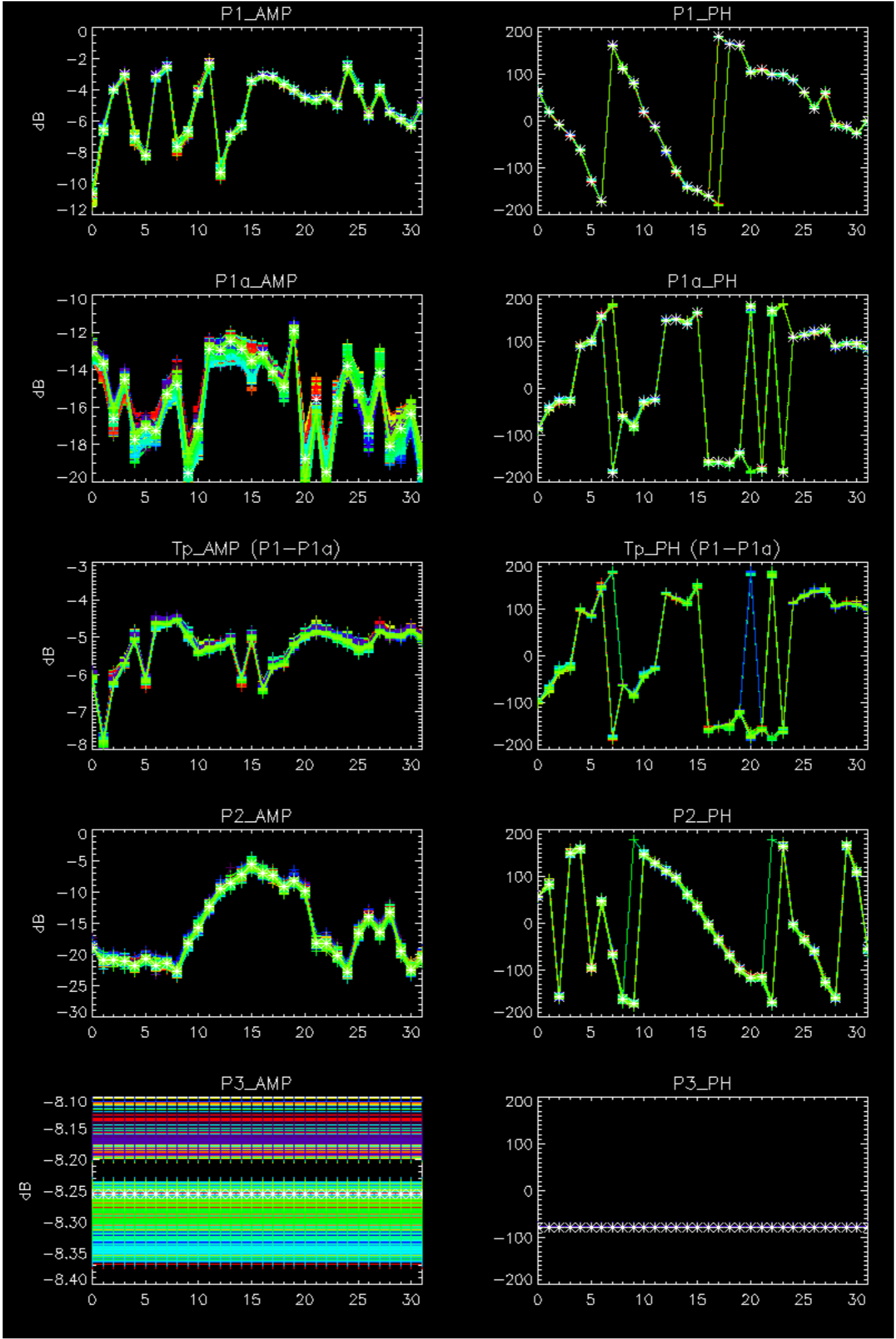
Cal pulses for WVS IS2



No anomalies observed.



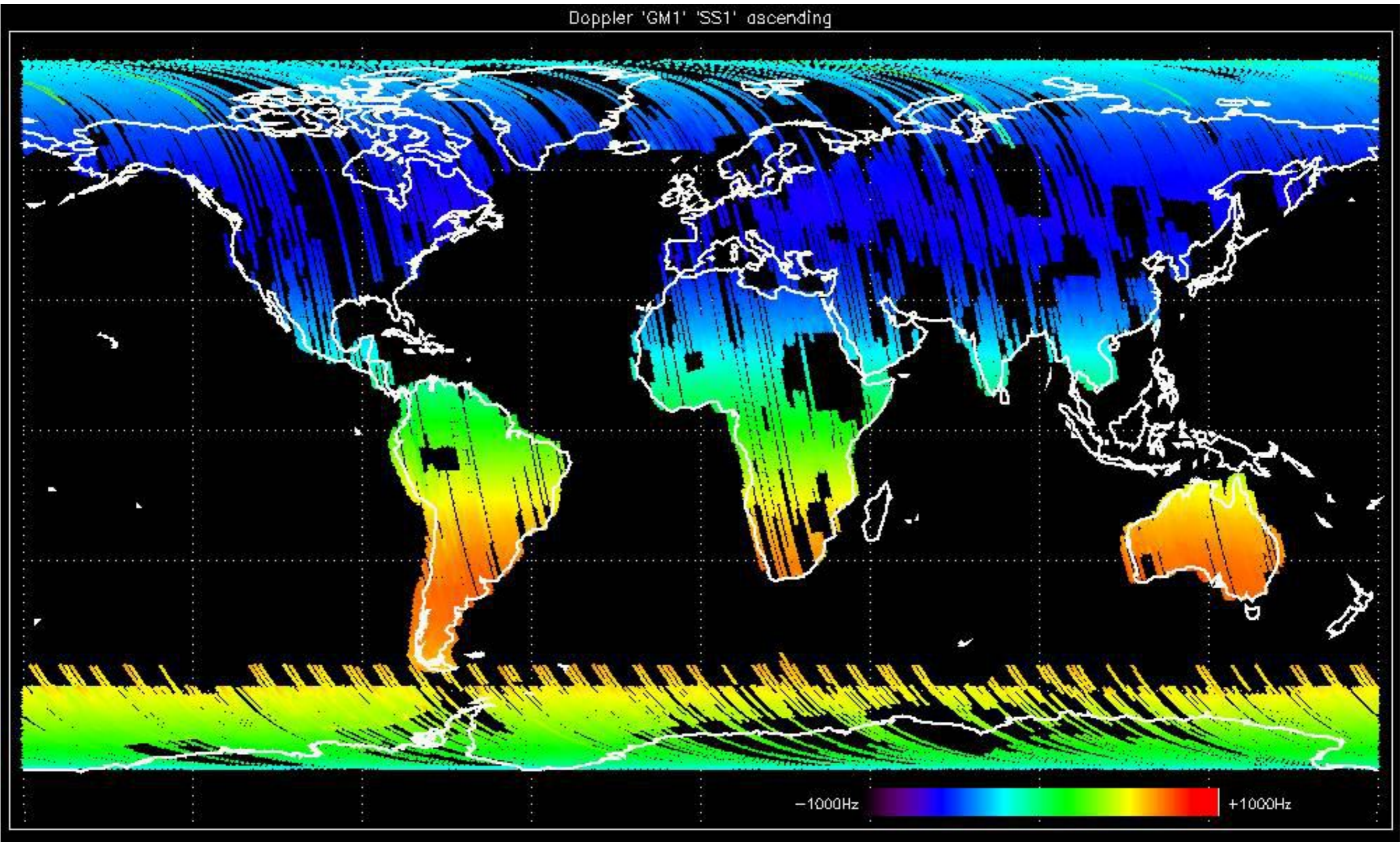




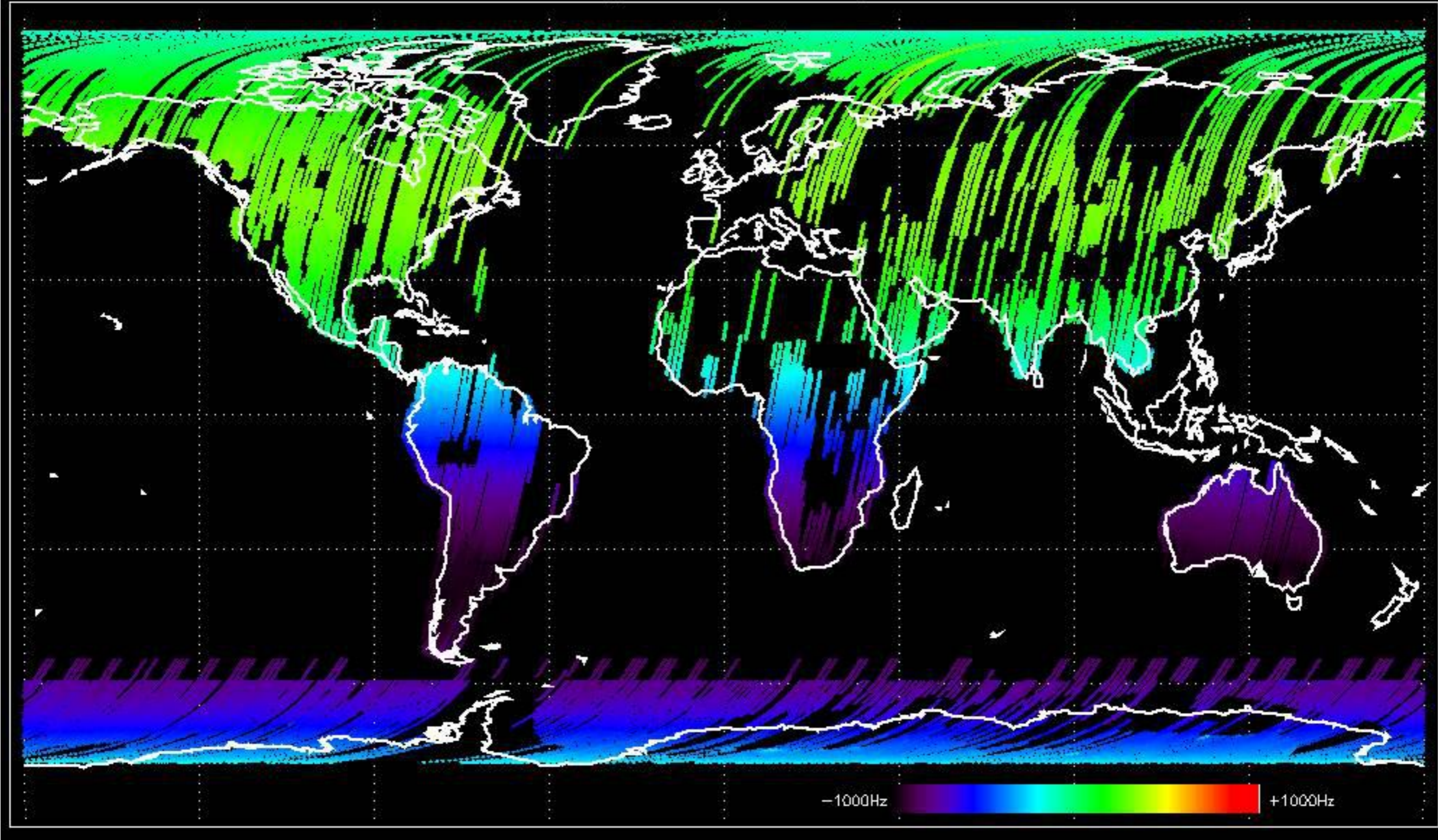
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



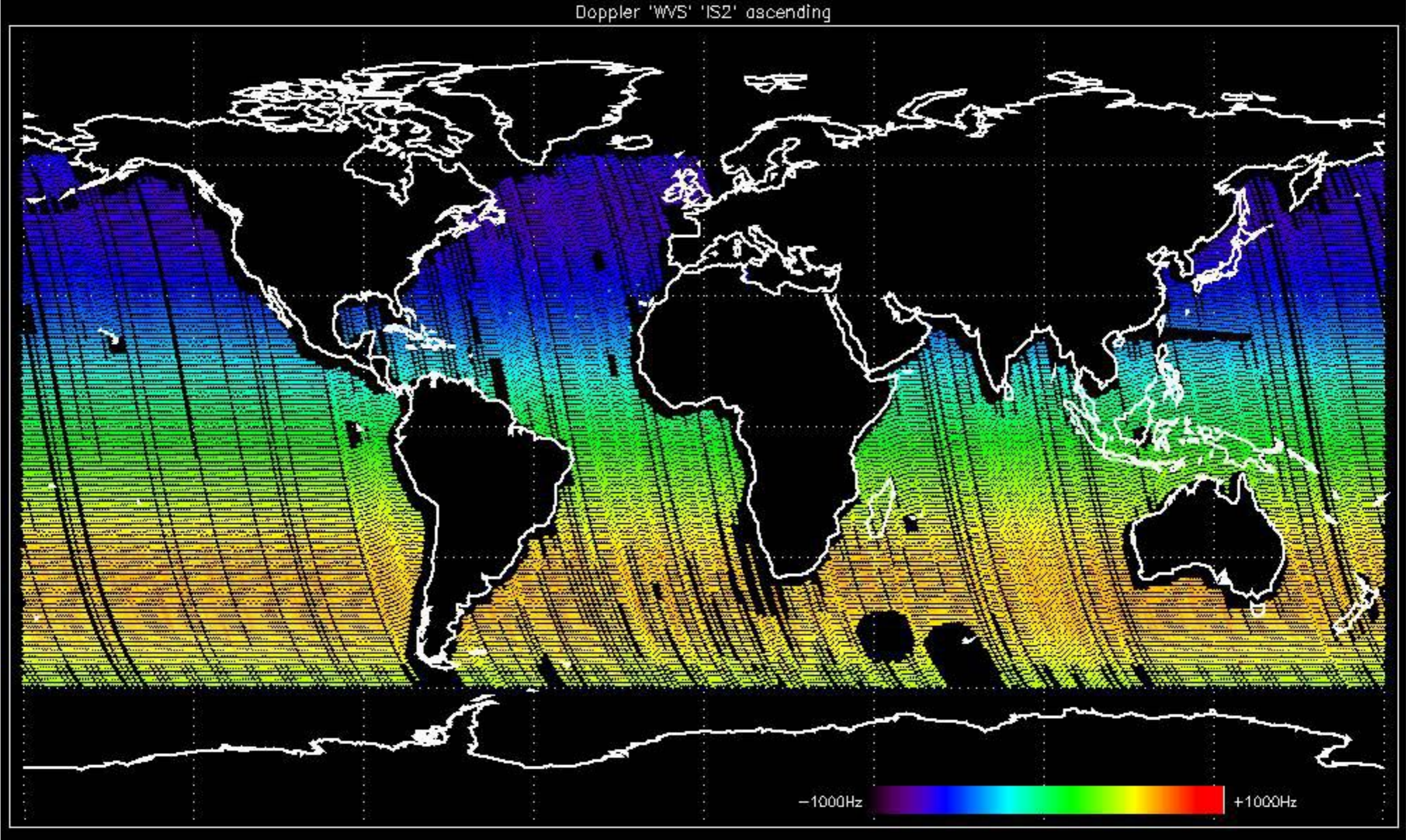
Doppler 'GM1' 'SS1' ascending



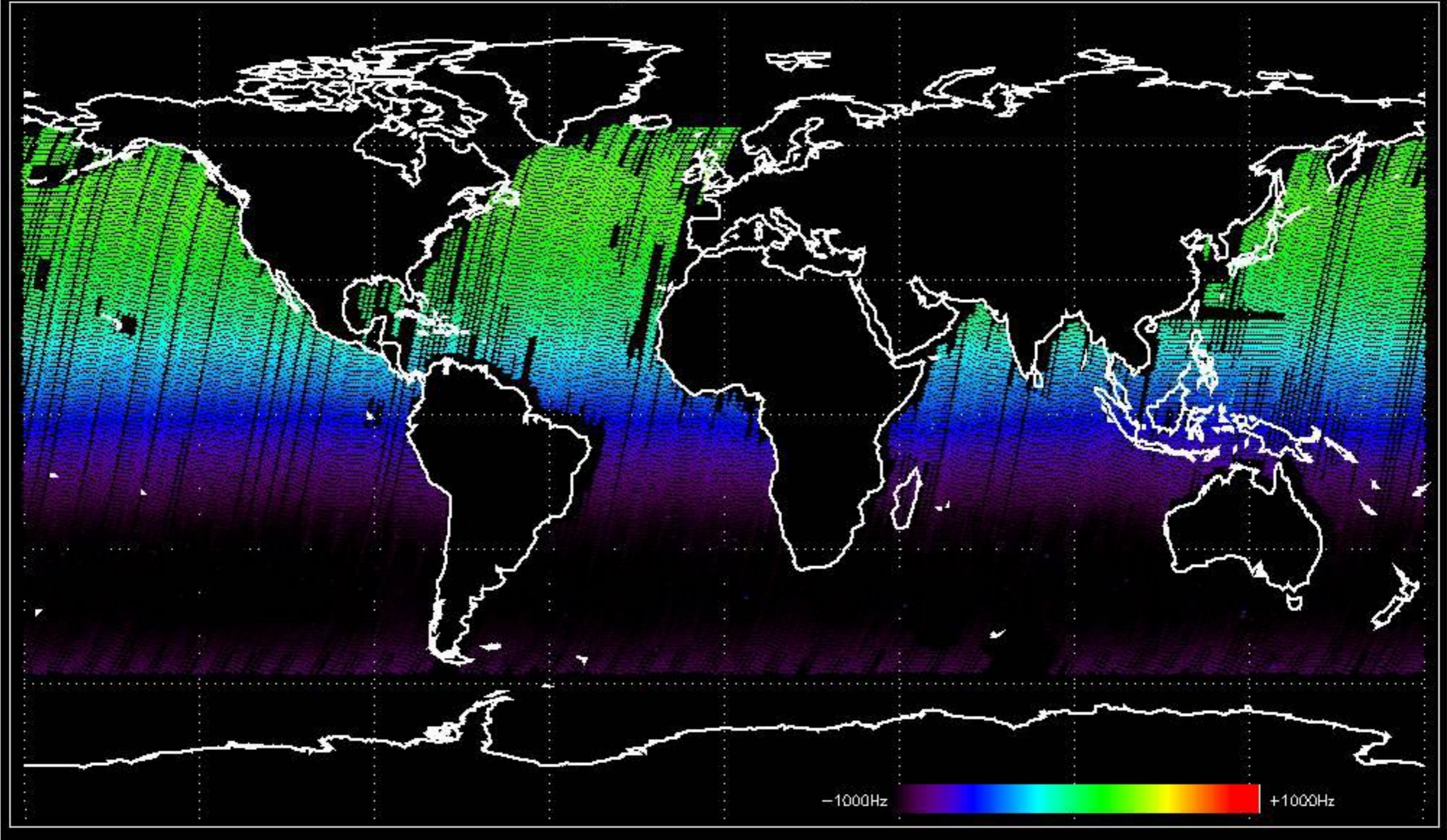
Doppler 'GM1' 'SS1' descending



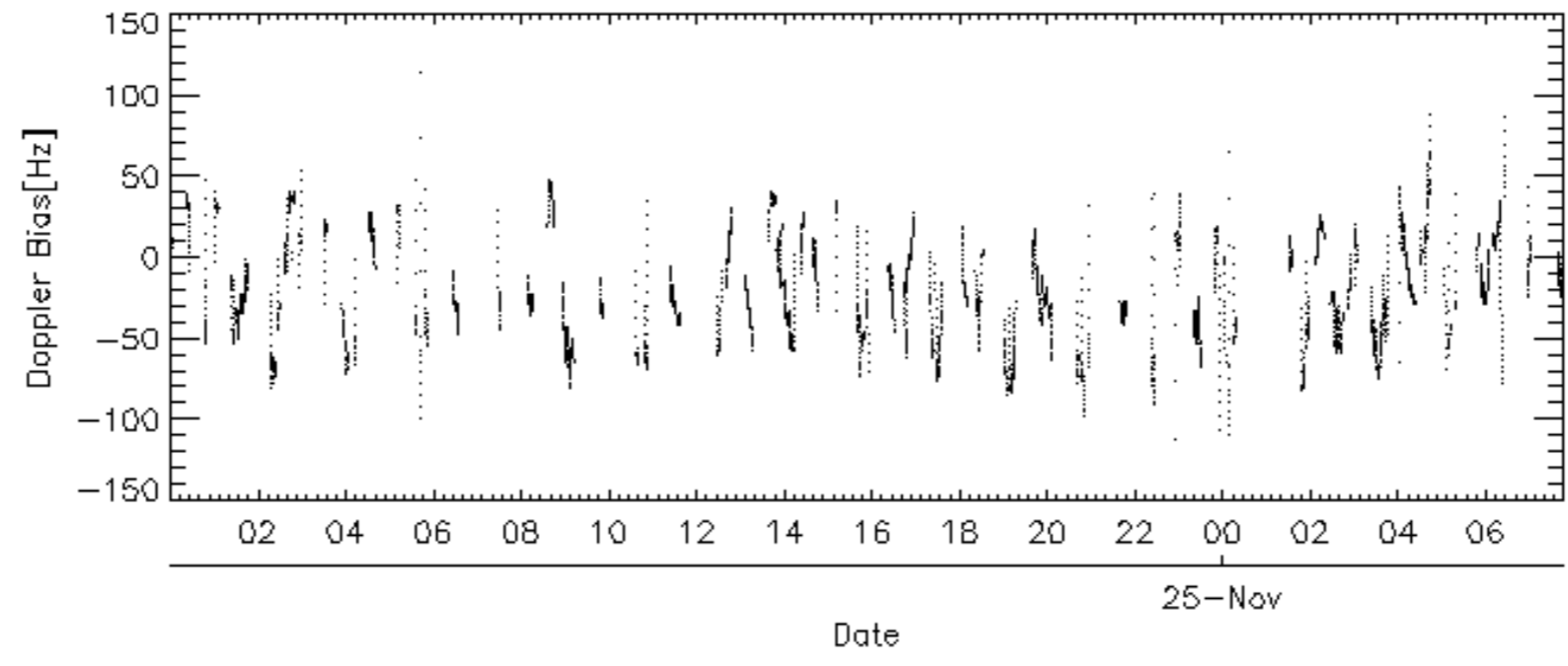
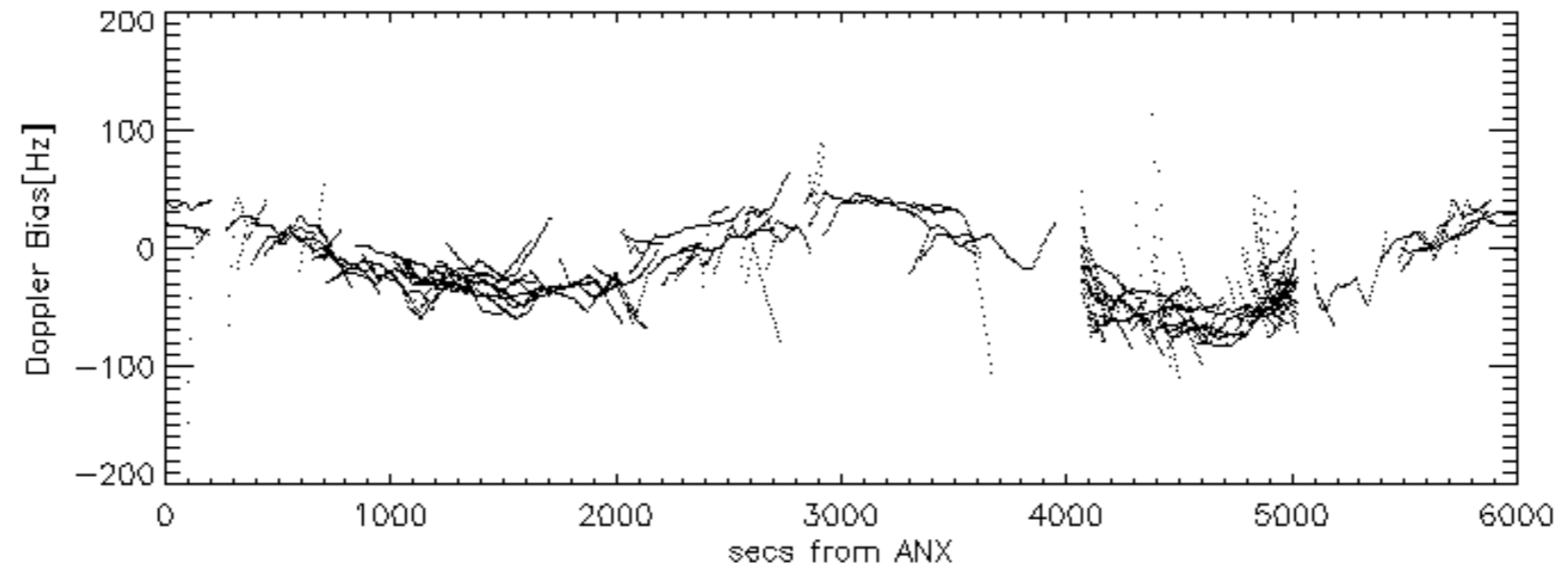
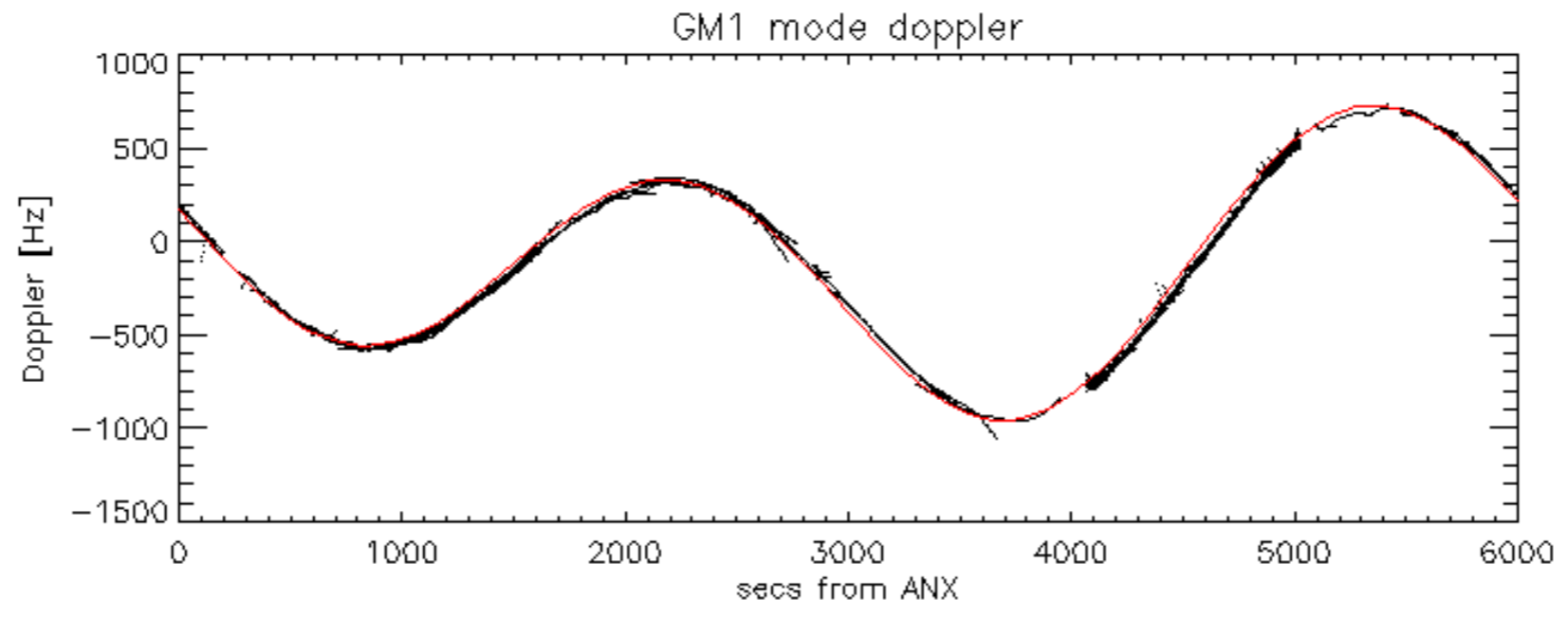
Doppler 'WVS' 'IS2' ascending

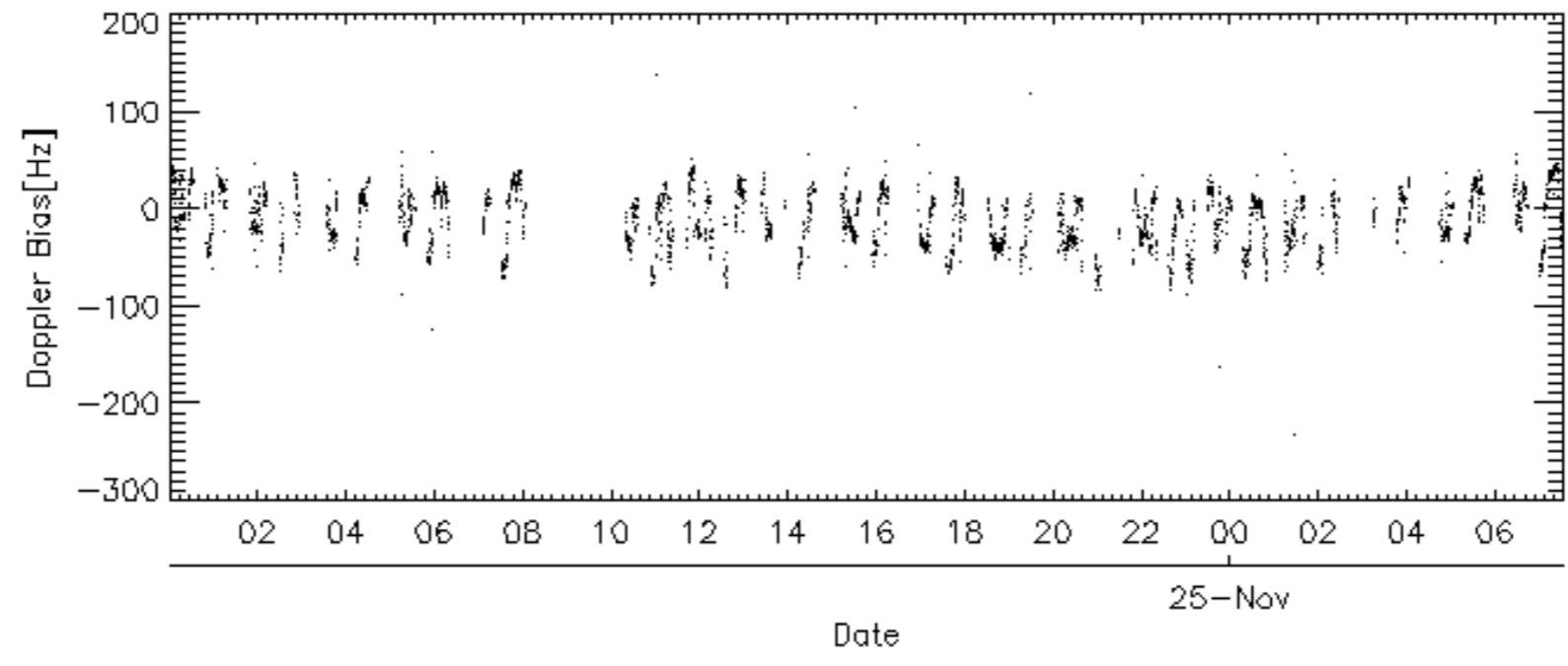
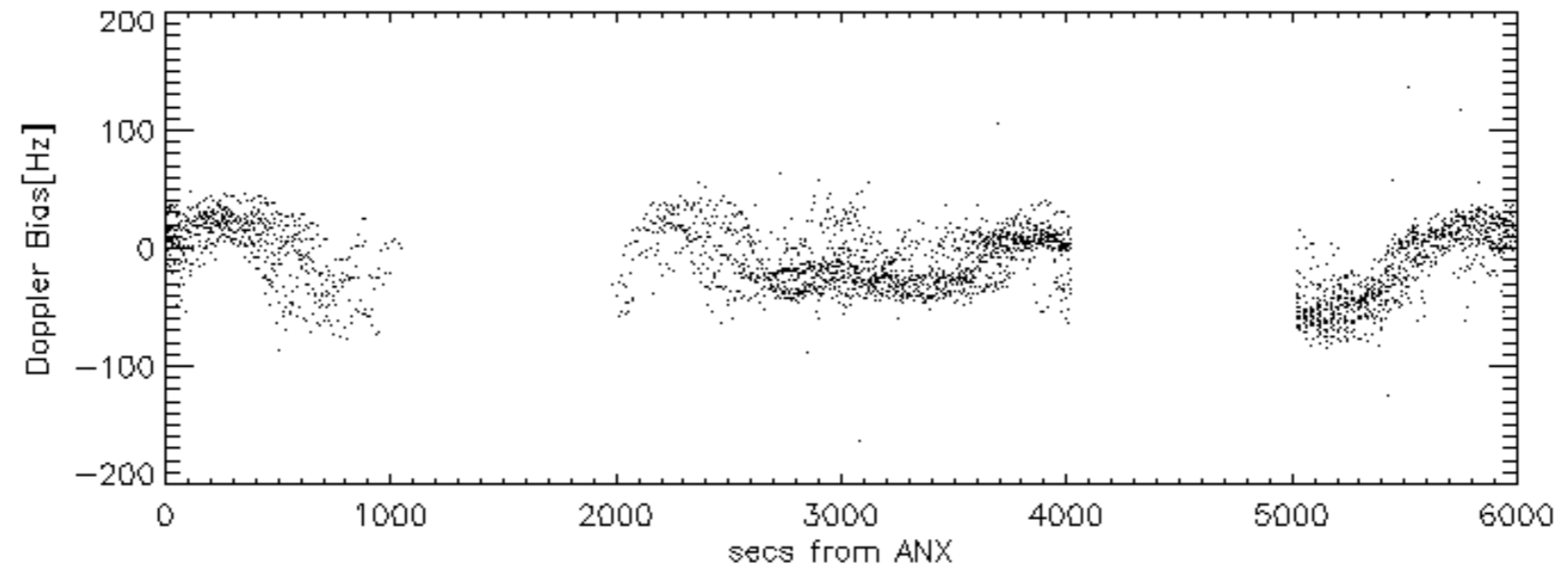
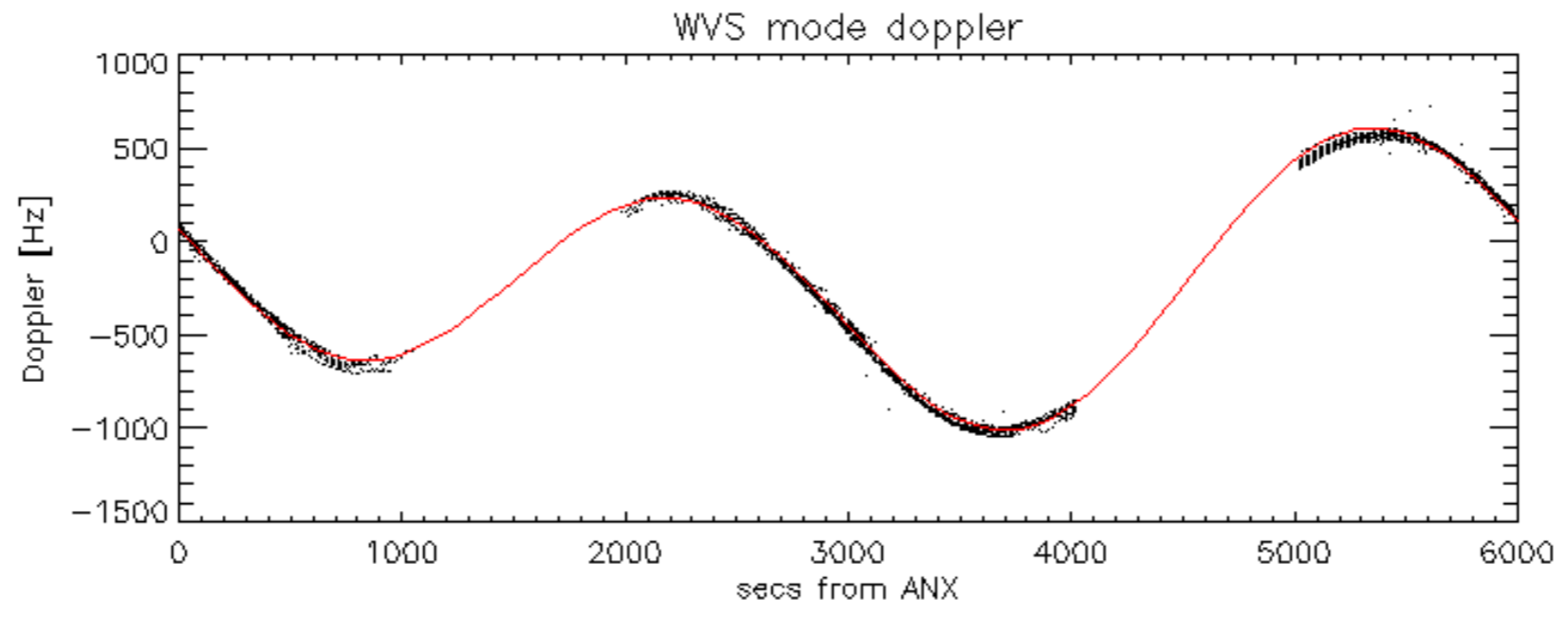


Doppler 'WVS' 'IS2' descending

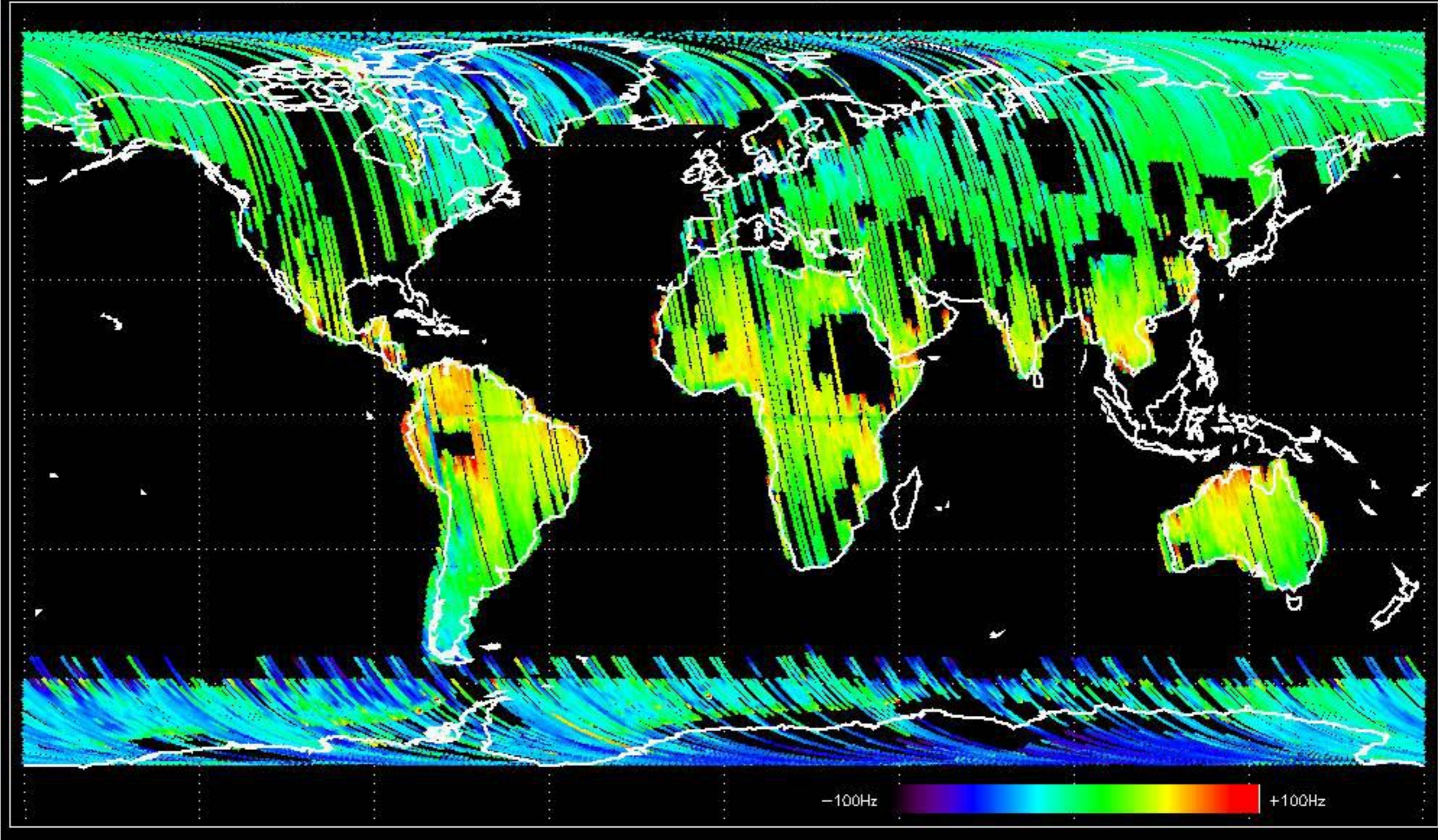




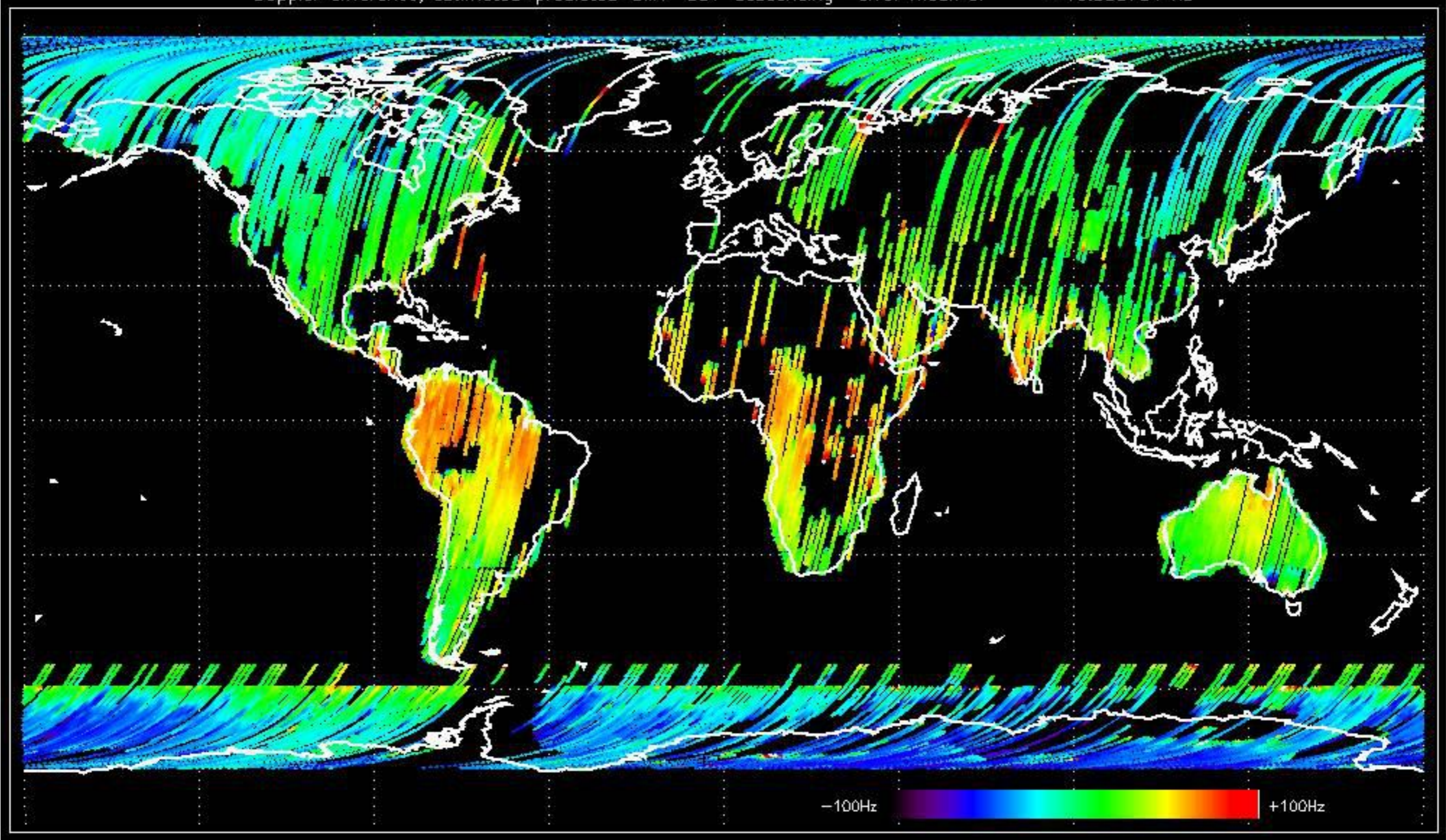




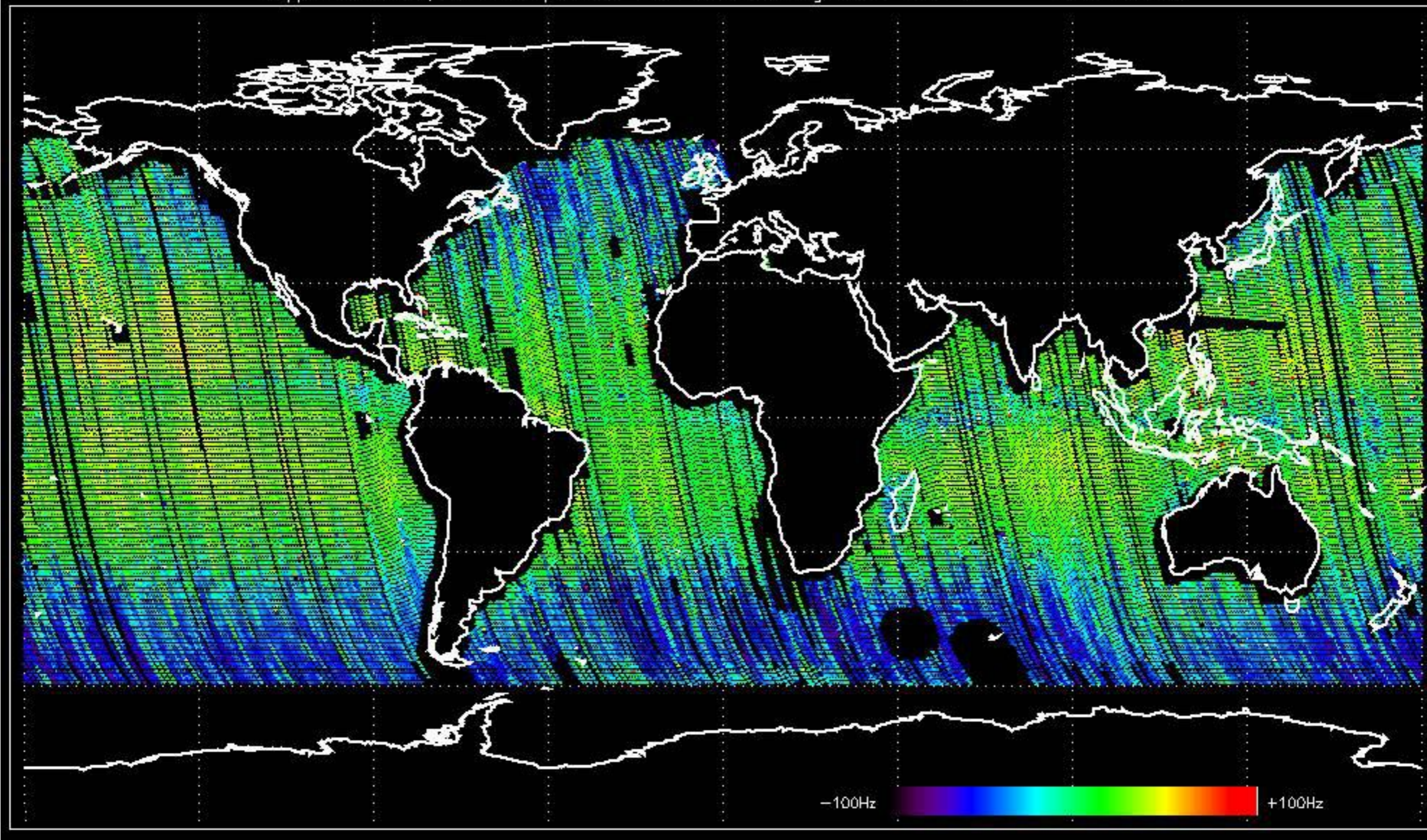
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.669031 Hz



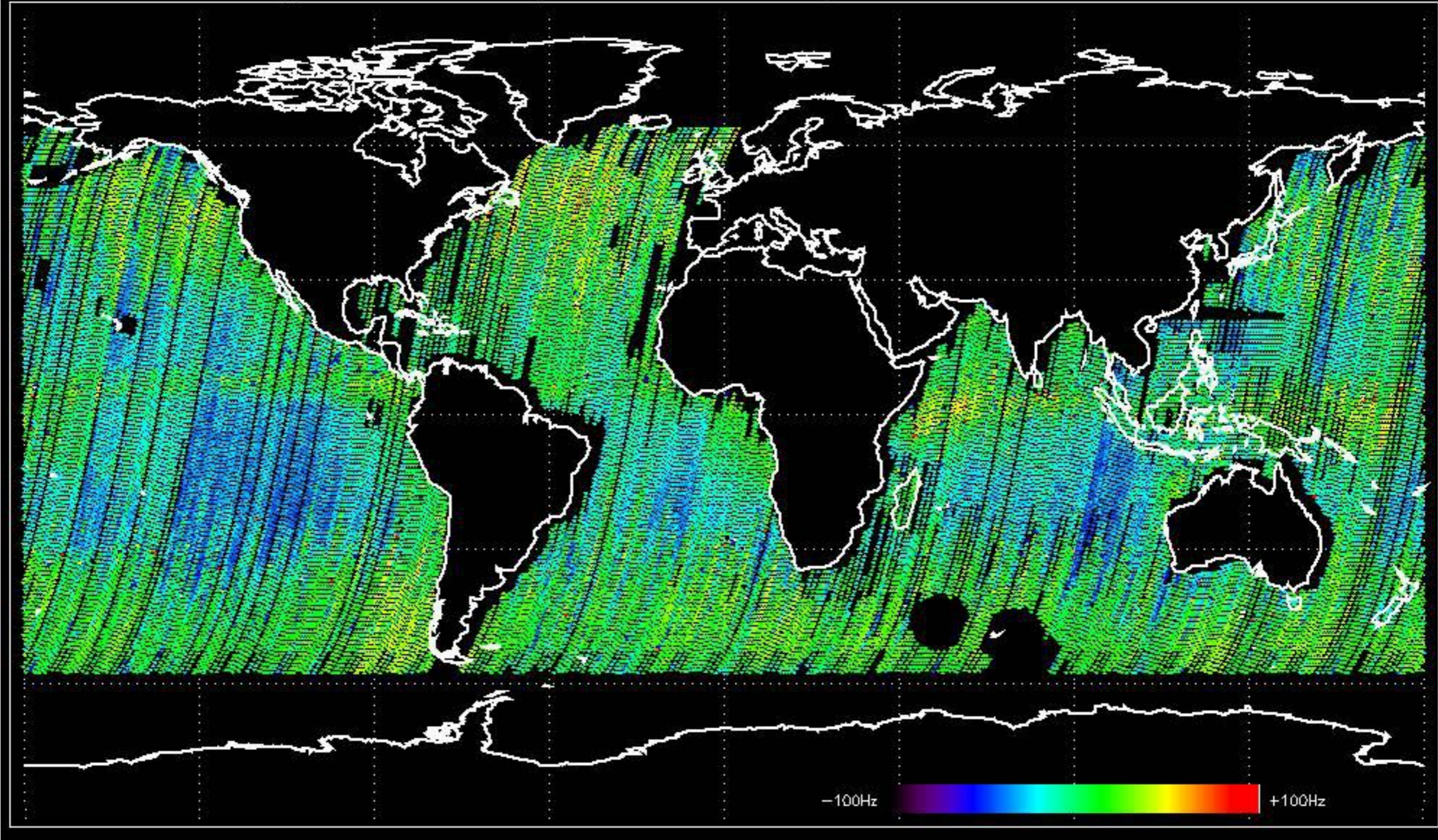
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.838754 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.5562811 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.8394116 Hz



No anomalies observed on available MS products:

No anomalies observed.





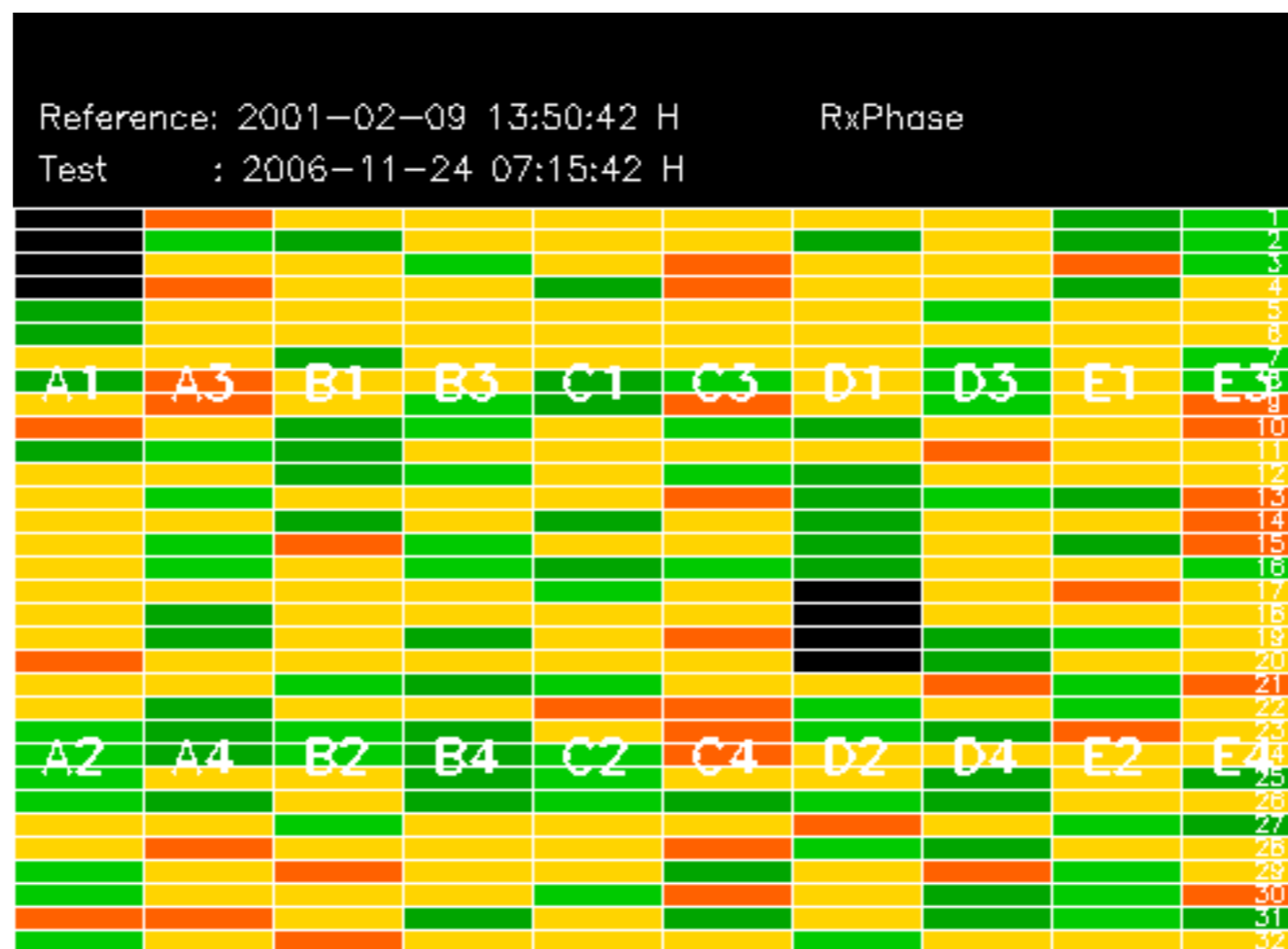






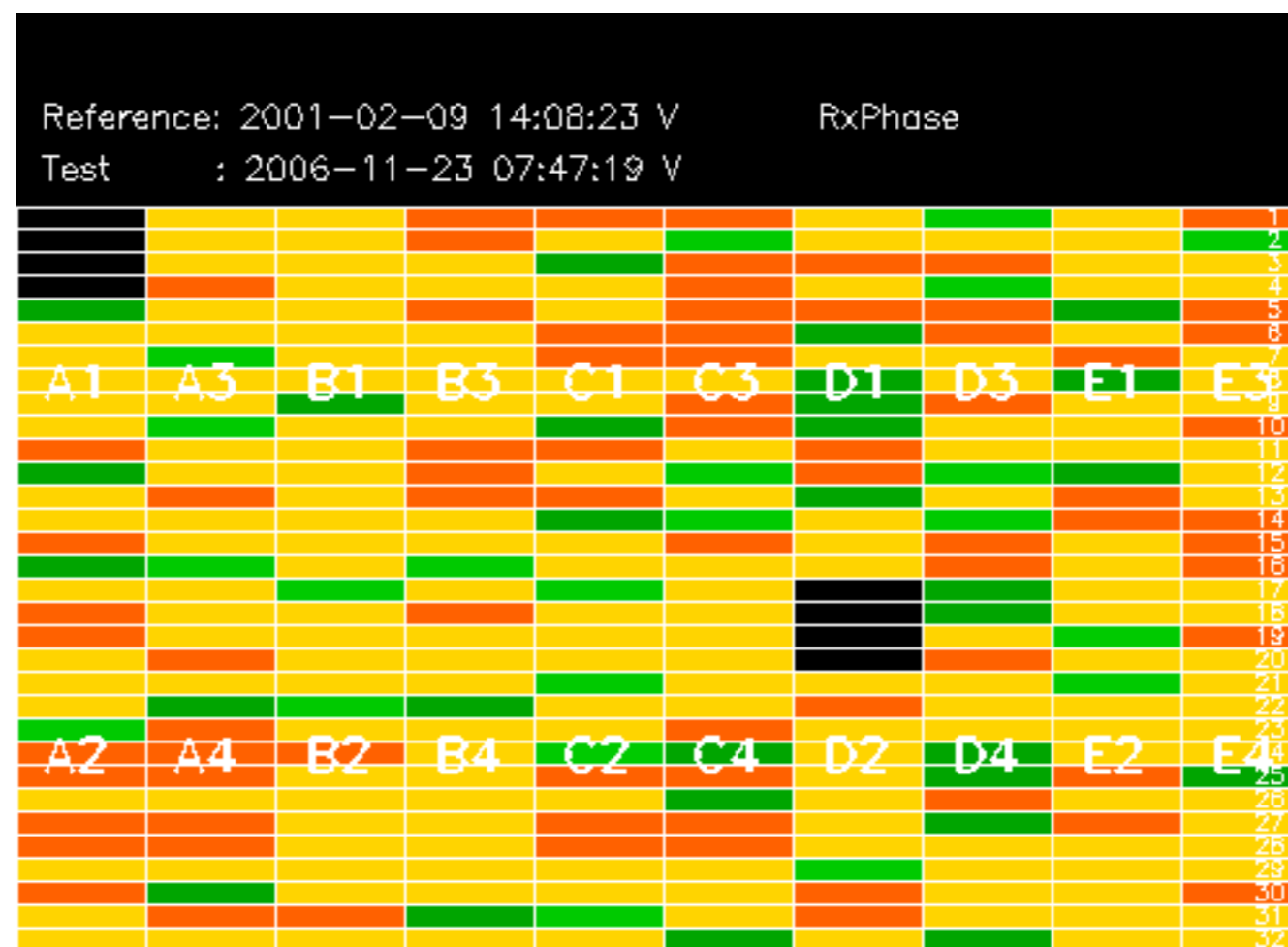








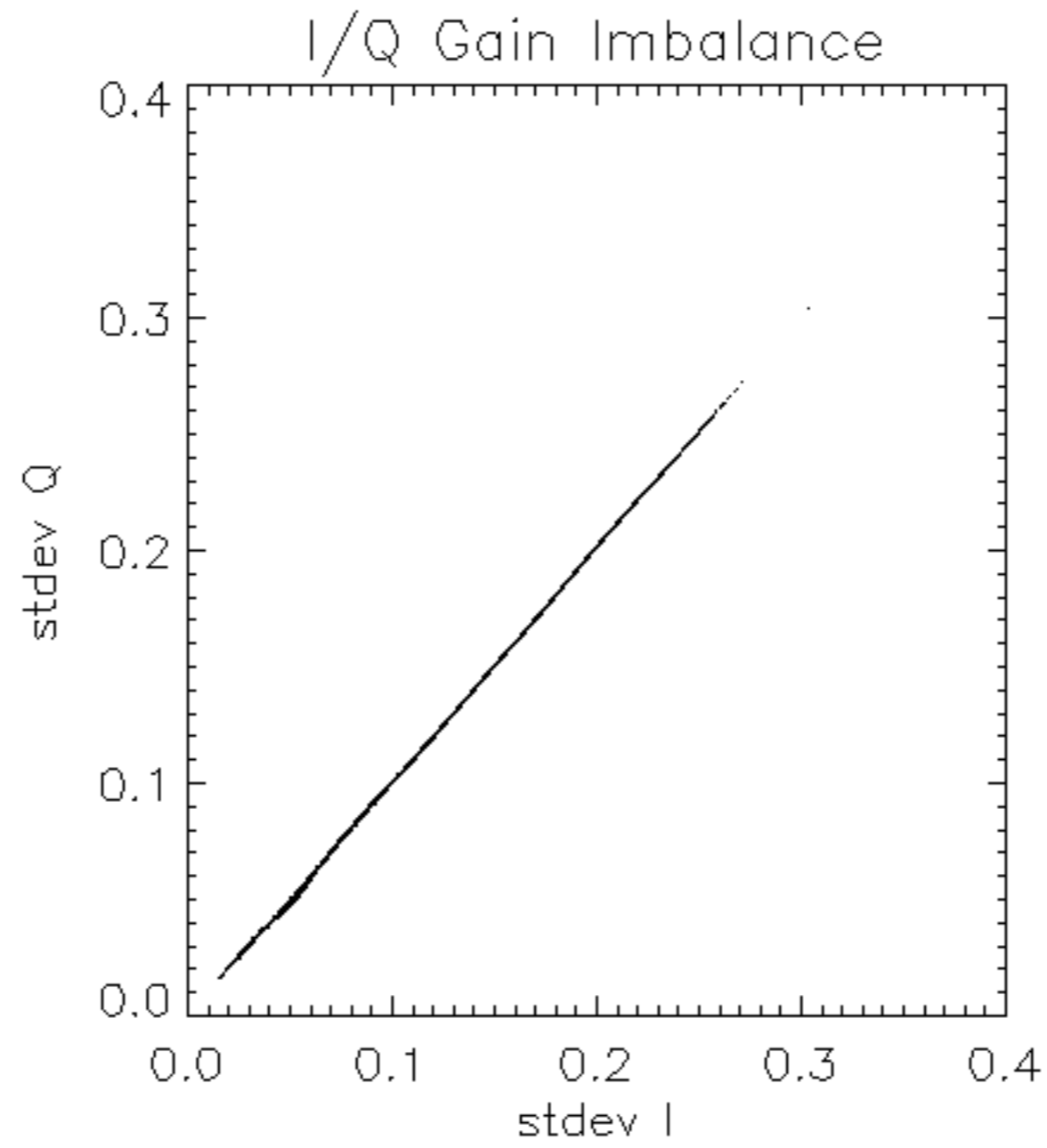


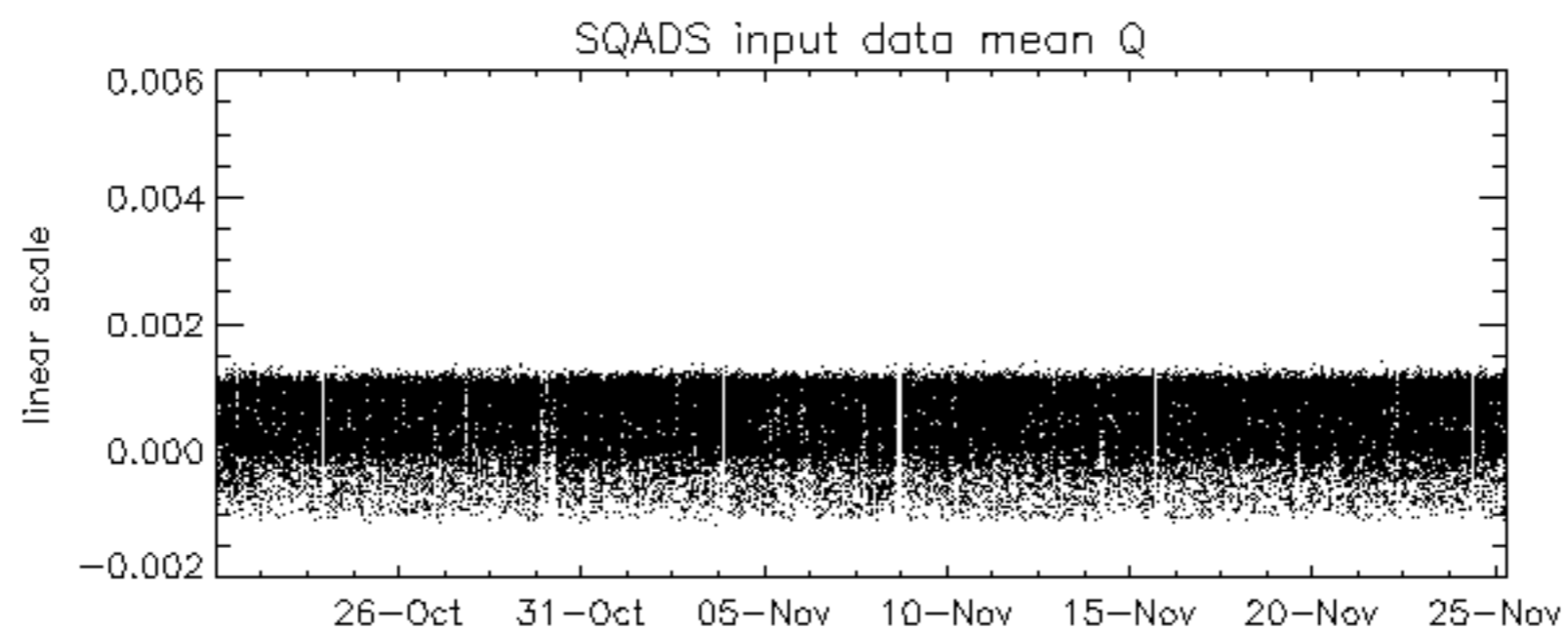
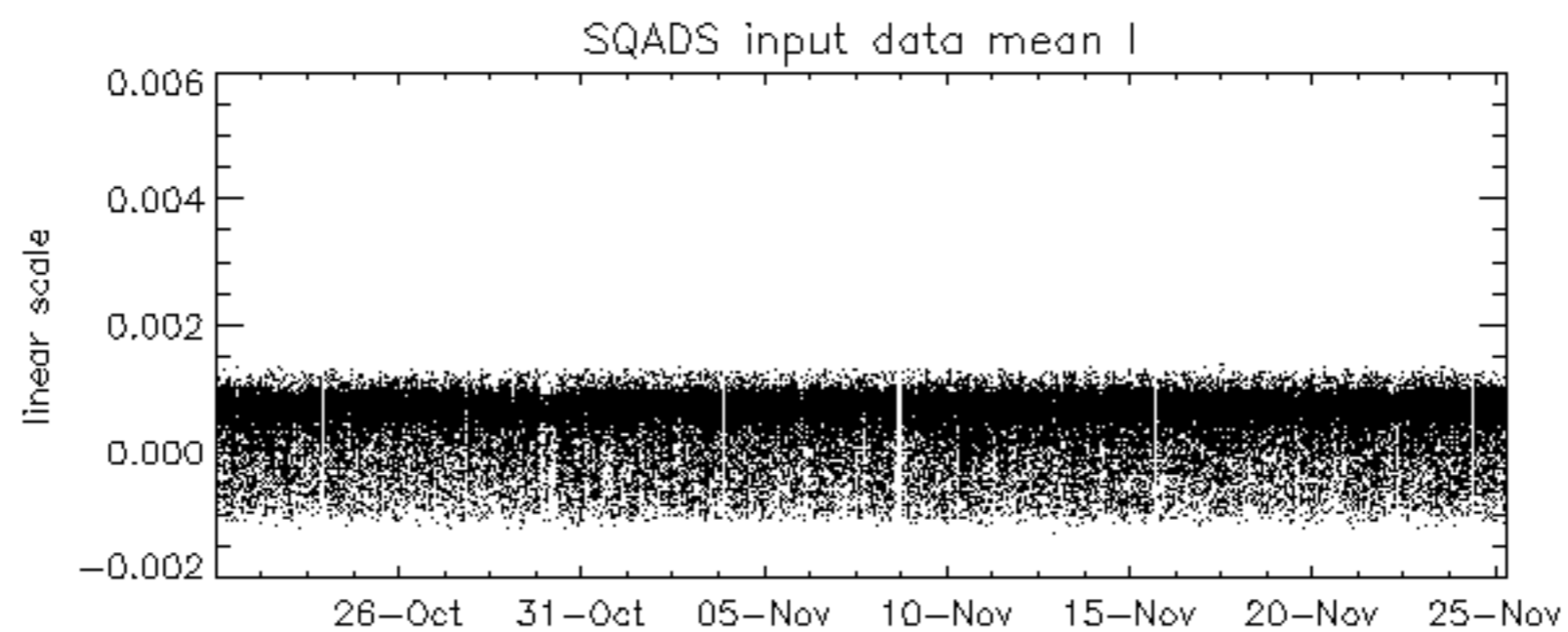
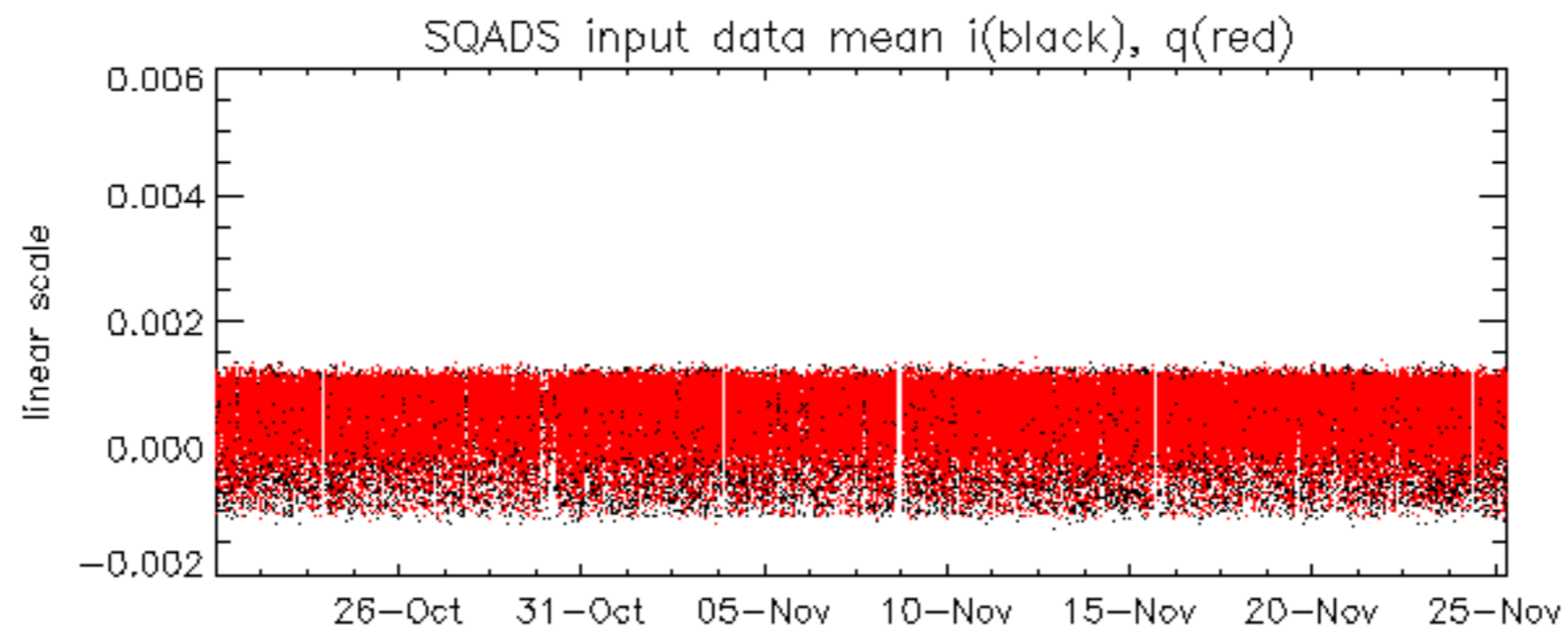


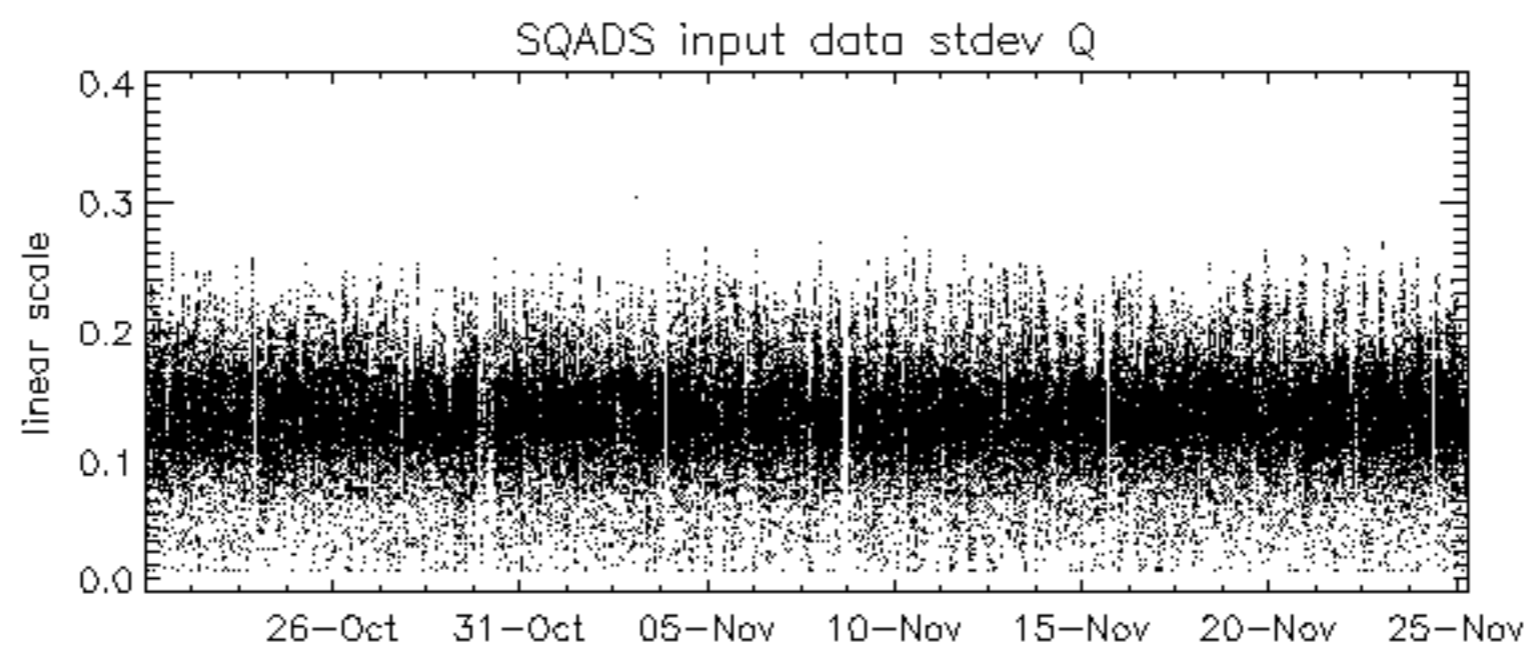
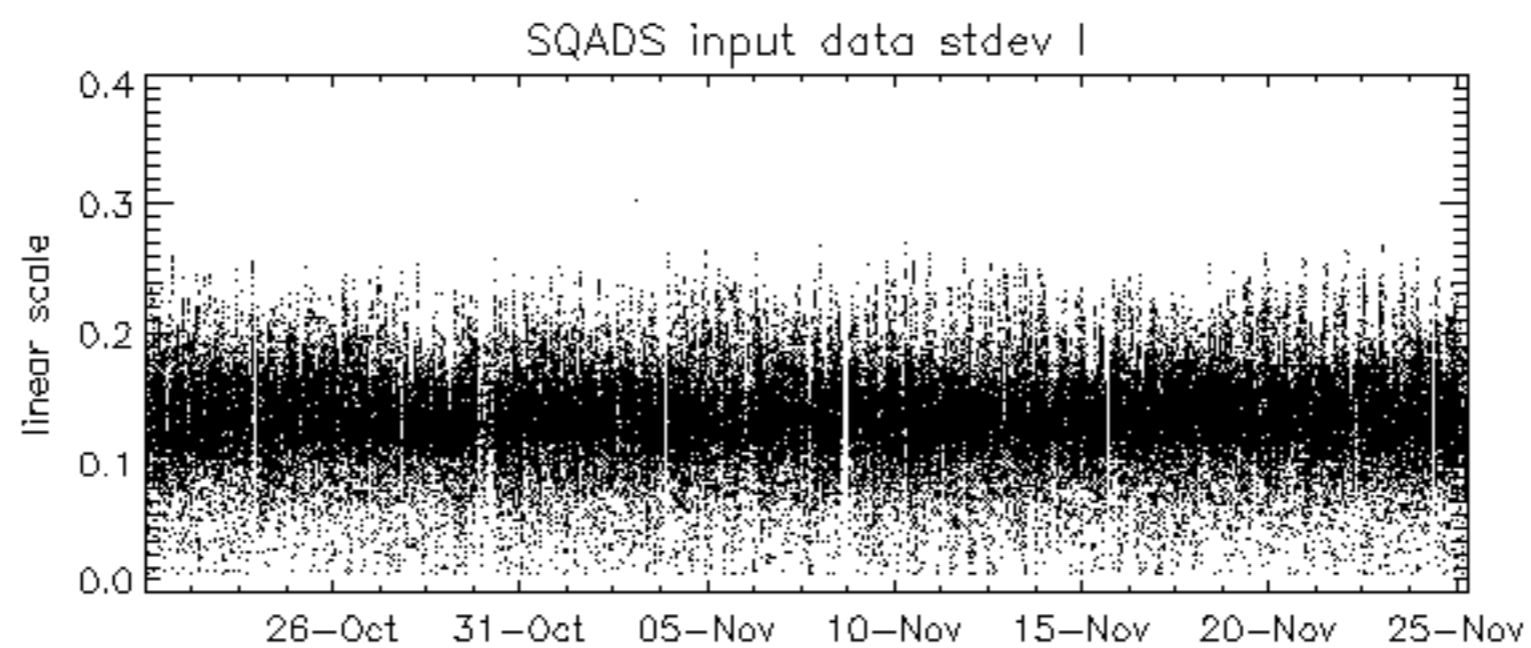
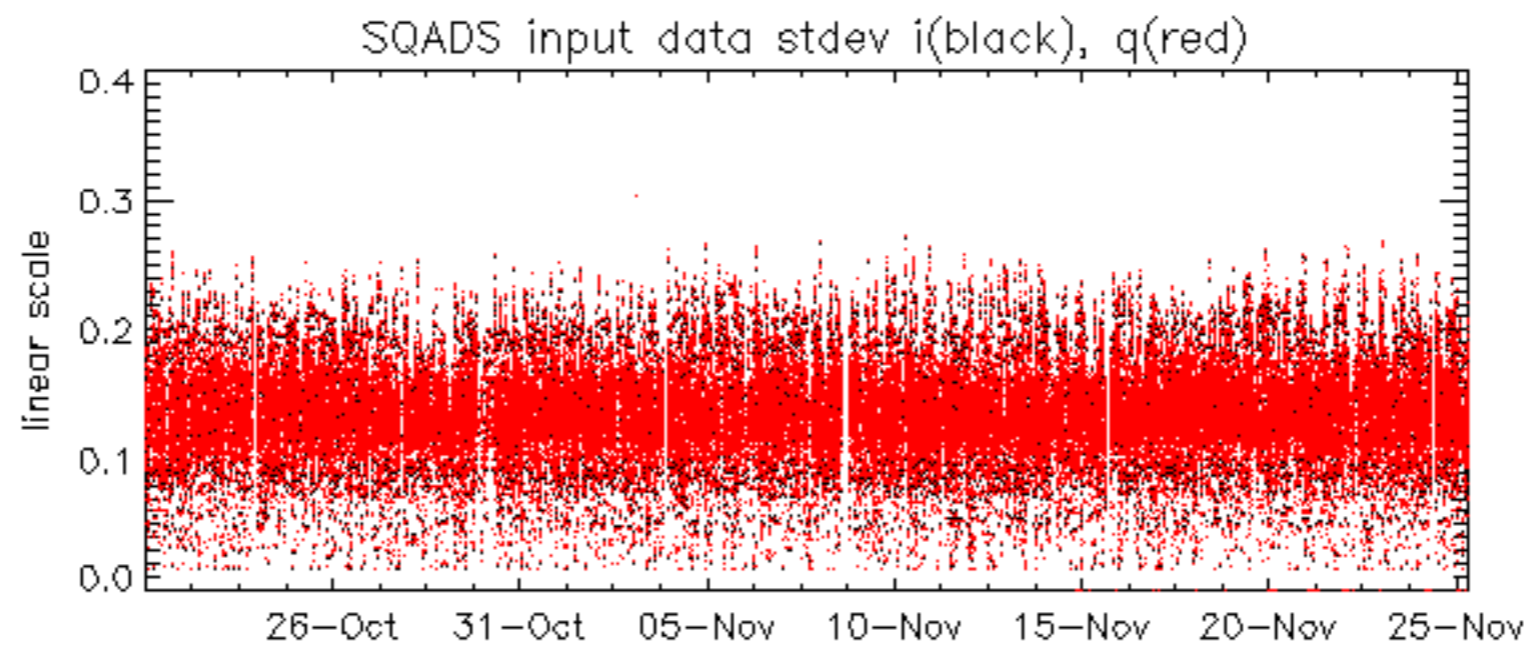






















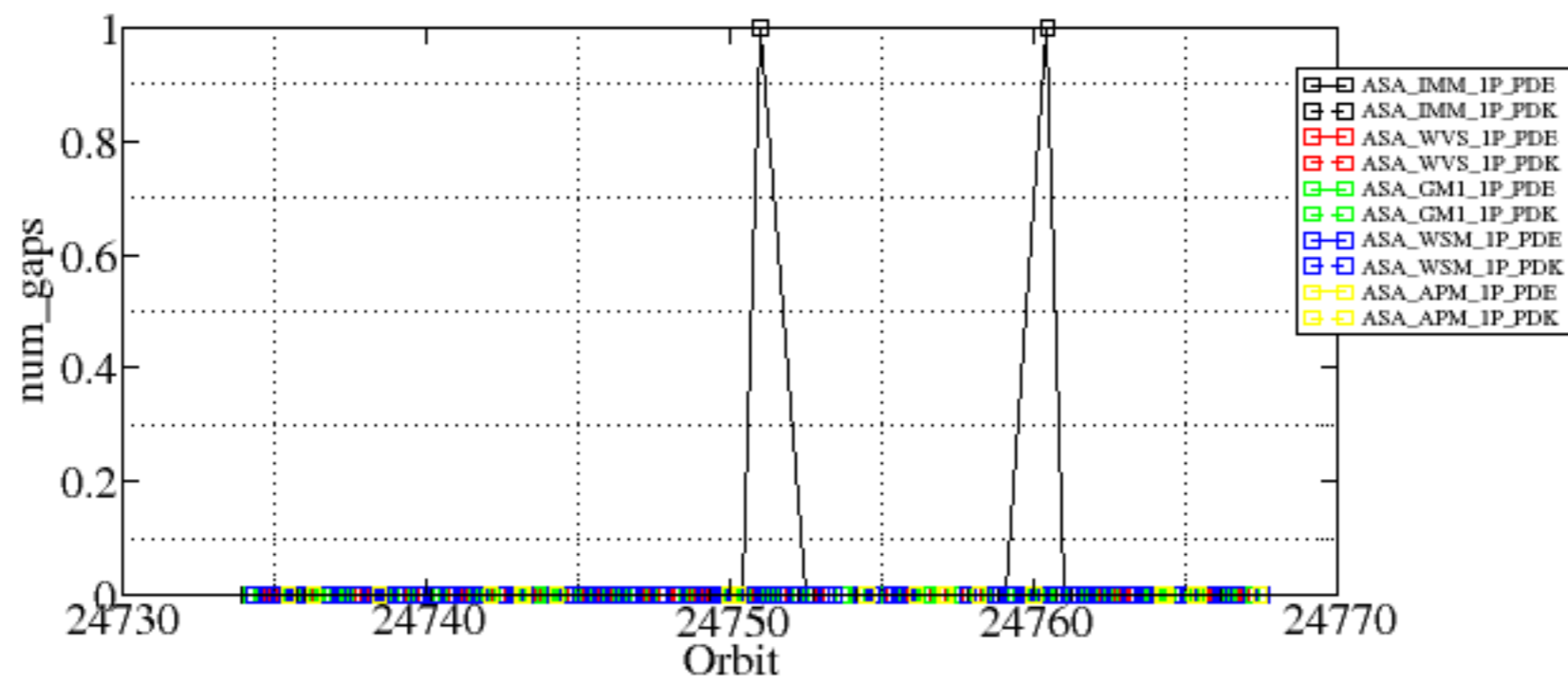




Summary of analysis for the last 3 days 2006112[345]

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_IMM_1PNPDE20061124_201746_000000362053_00157_24760_7594.N1	1	0
ASA_GM1_1PNPDK20061124_153848_000006402053_00154_24757_9246.N1	0	32
ASA_WSM_1PNPDE20061123_182823_000000862053_00142_24745_5906.N1	0	70
ASA_APM_1PNPDE20061124_143627_000000872053_00154_24757_7416.N1	0	10









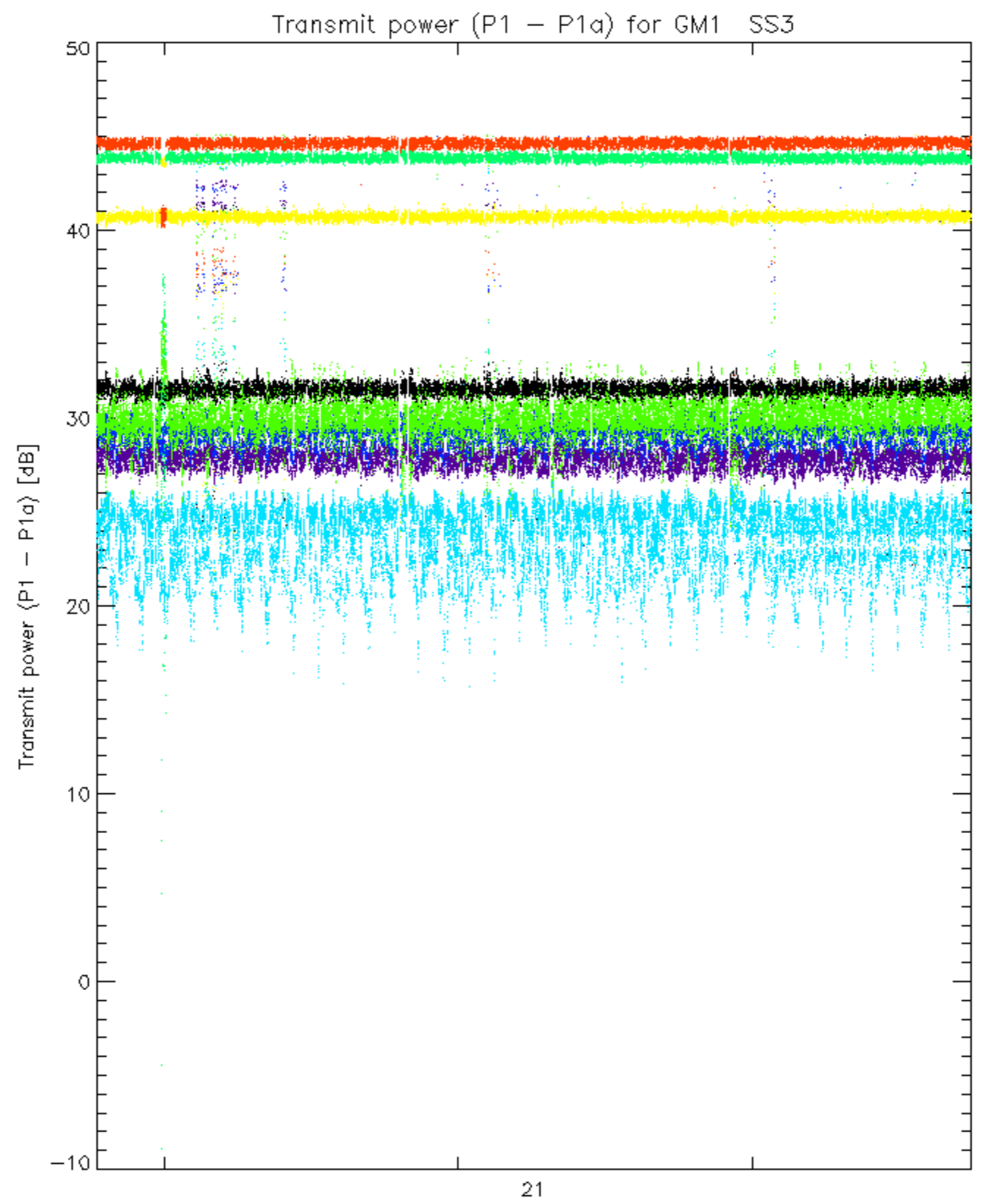




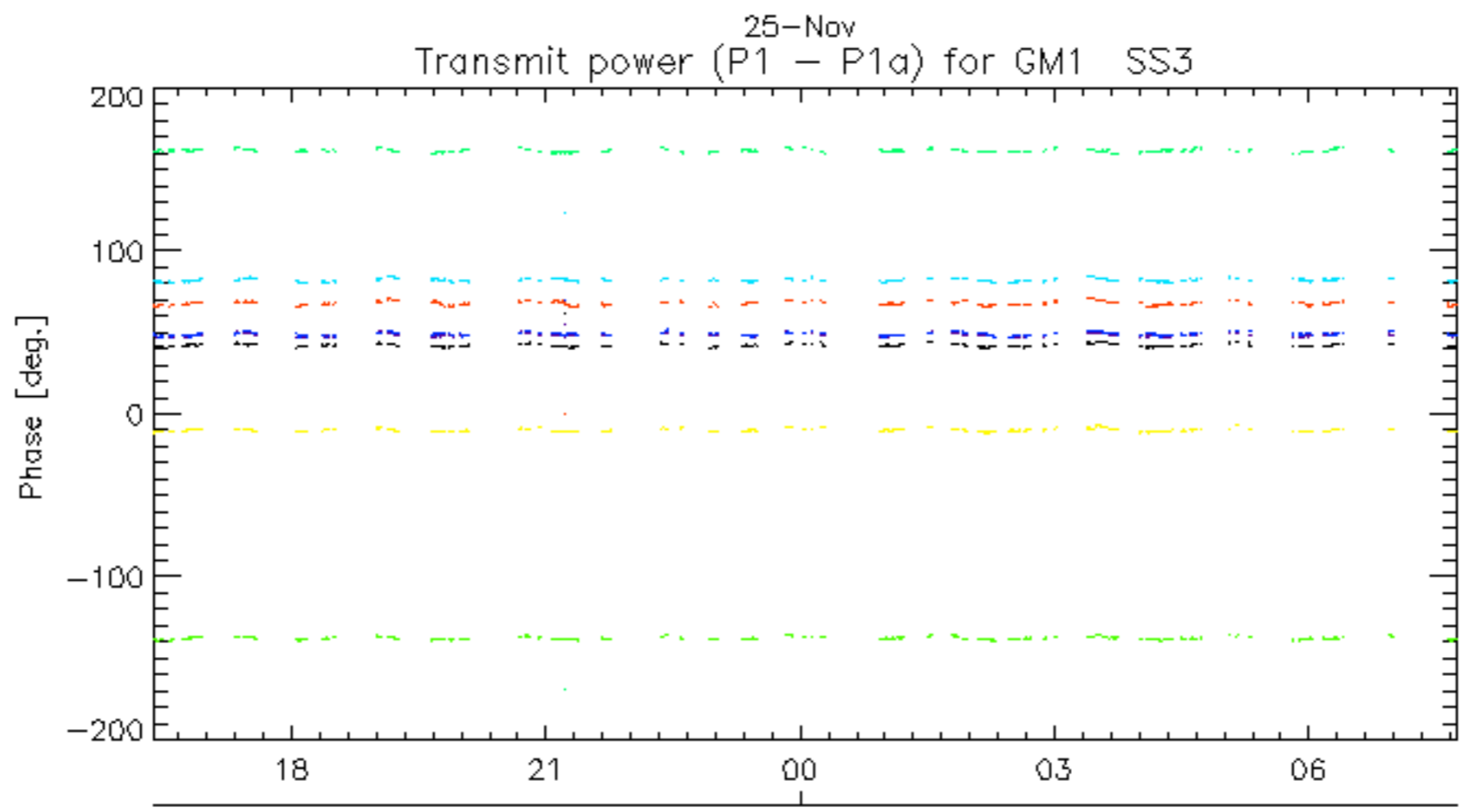
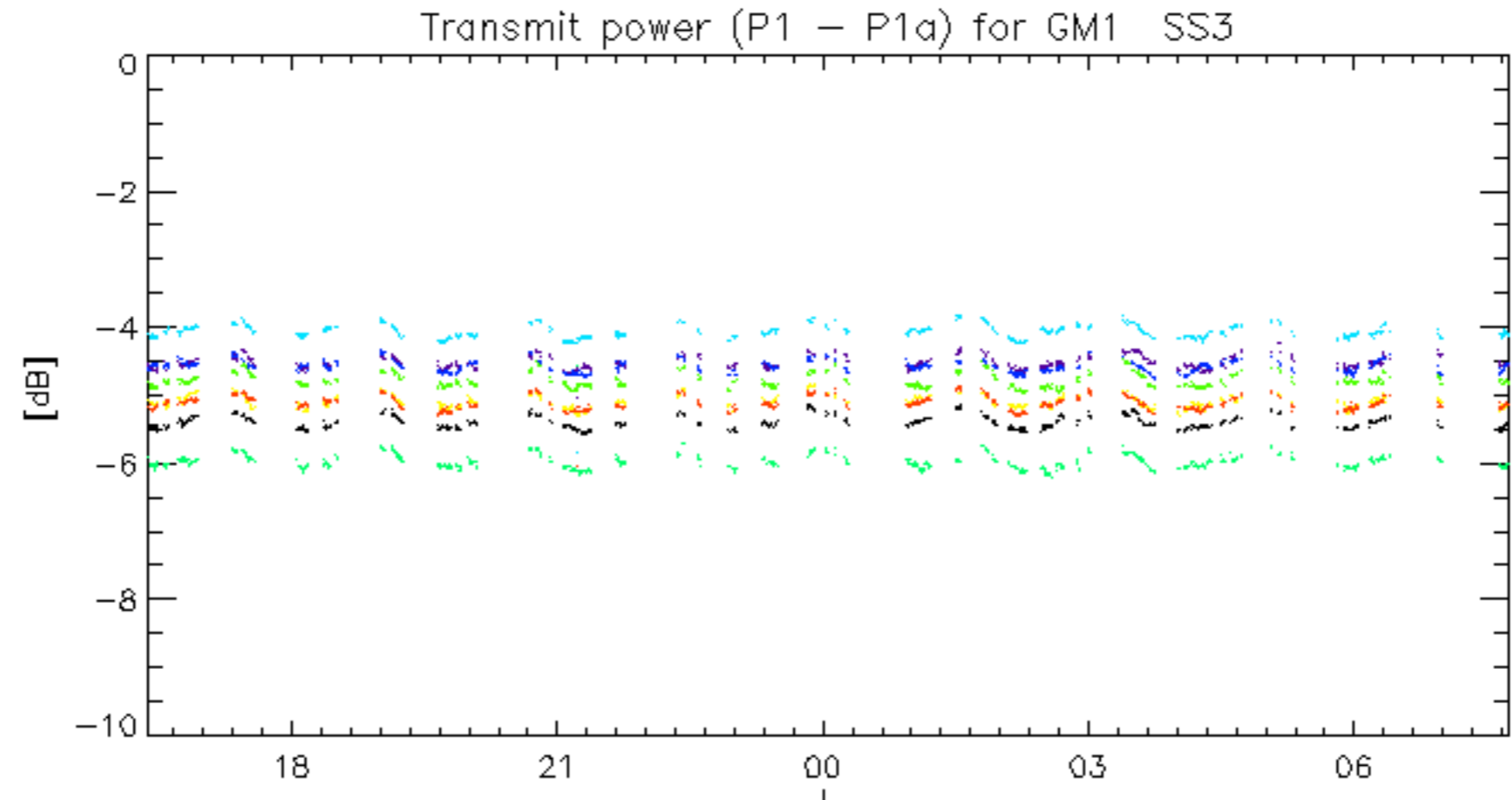






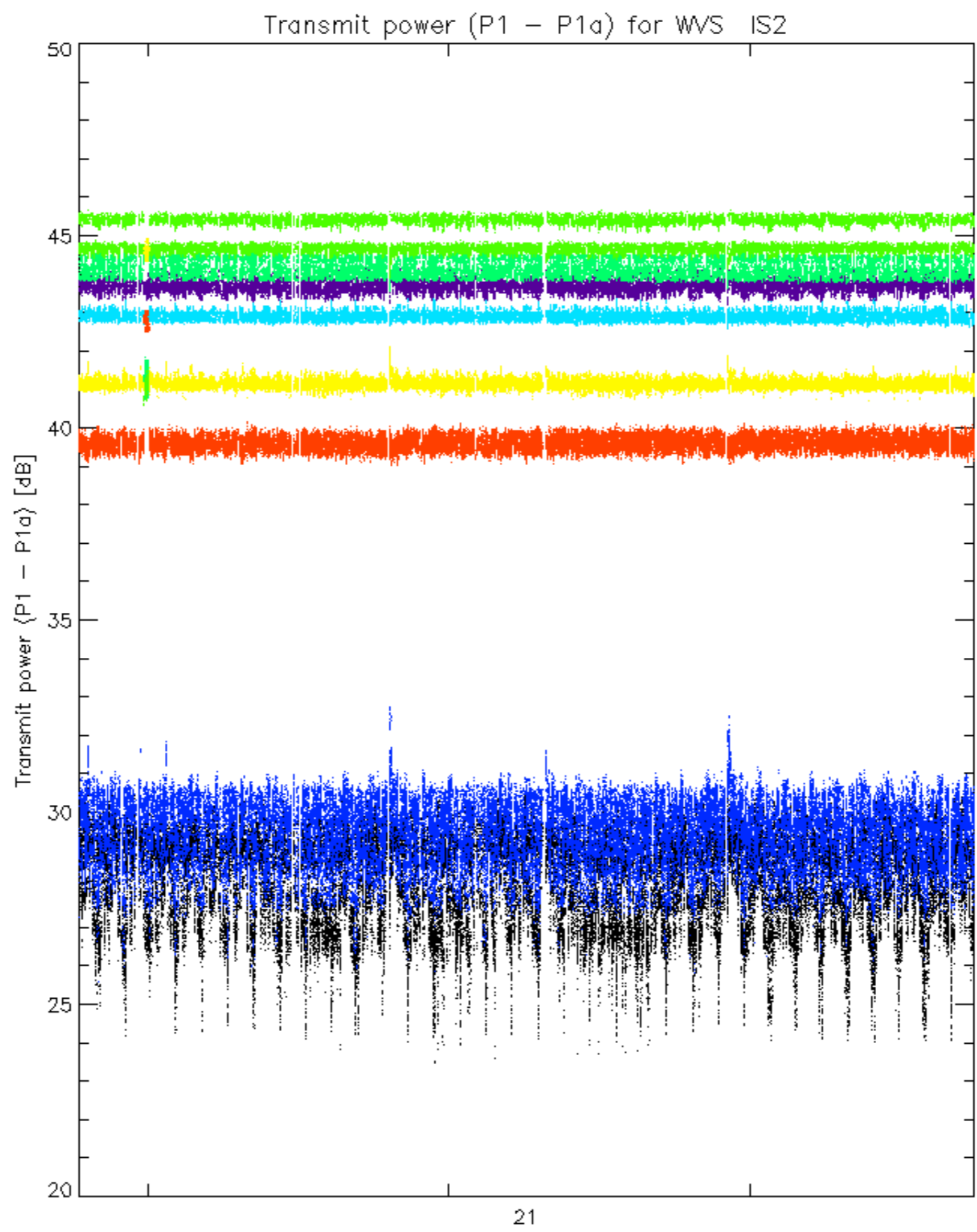


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

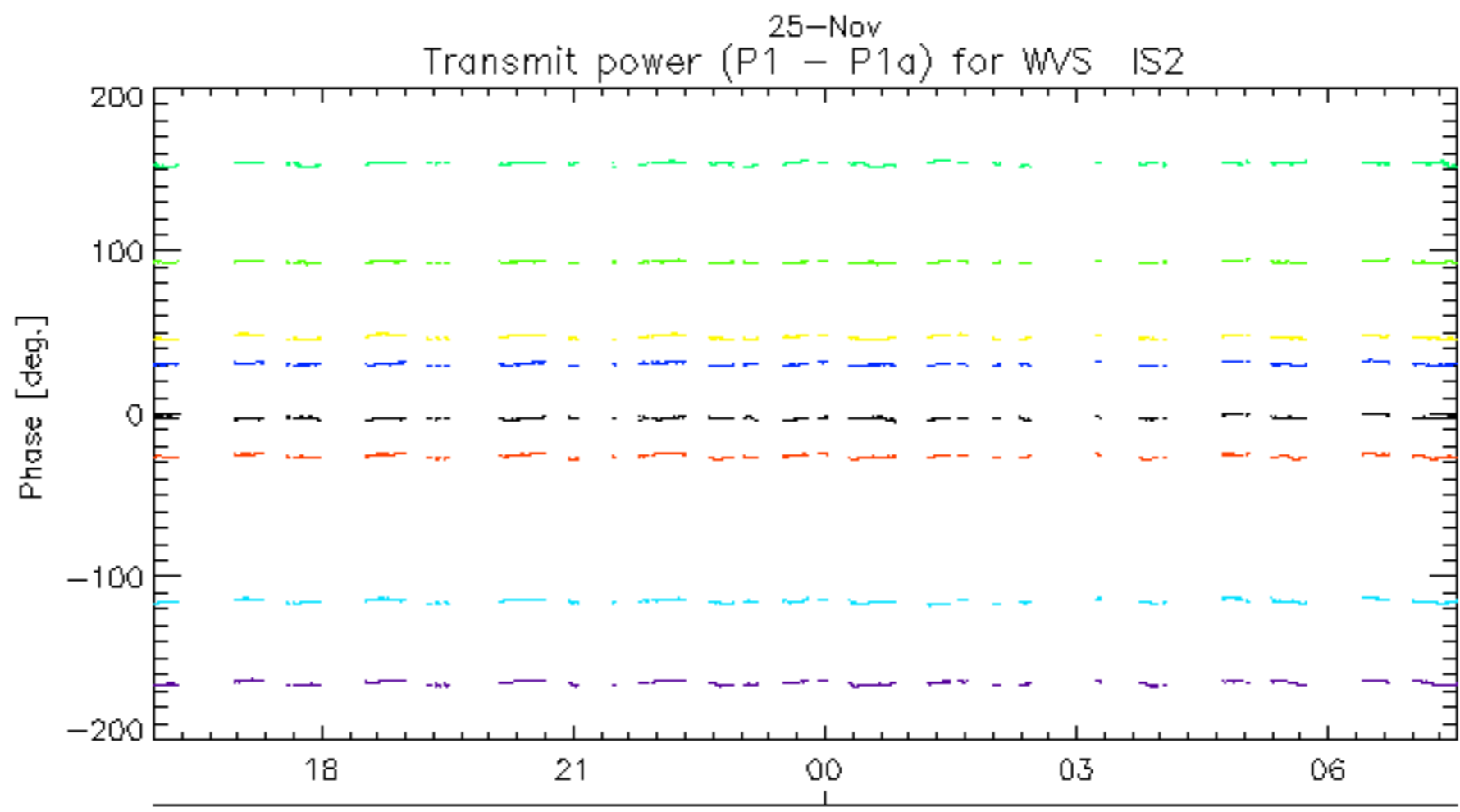
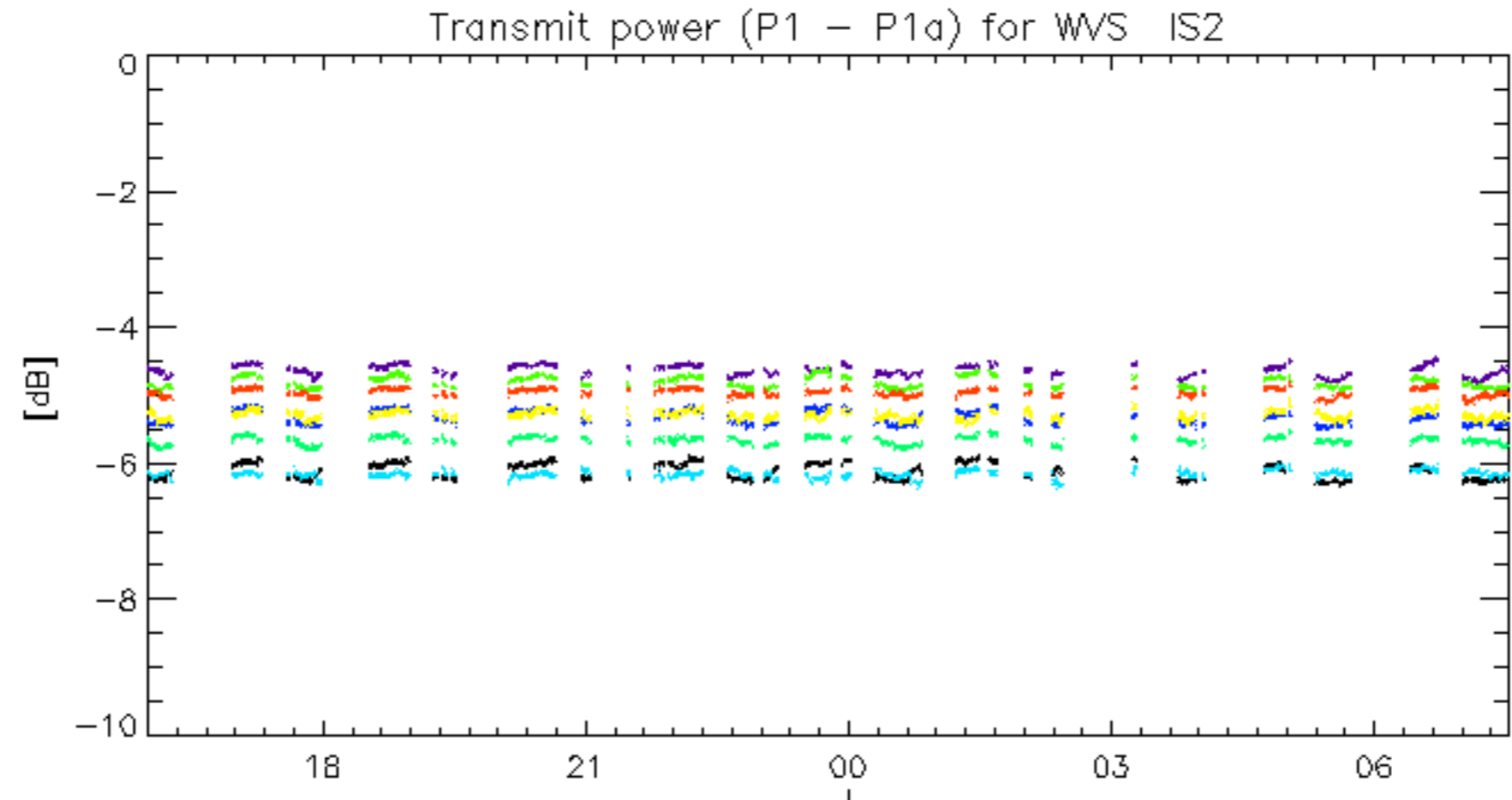


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No unavailabilities during the reported period.