

# PRELIMINARY REPORT OF 061101

last update on Wed Nov 1 16:33:37 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 2006-10-31 00:00:00 to 2006-11-01 16:33:37

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	36	72	24	11	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	36	72	24	11	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	36	72	24	11	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	72	24	11	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	30	48	28	5	14
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	30	48	28	5	14
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	30	48	28	5	14
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	30	48	28	5	14

### 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	20061030 084156
H	20061031 081019

### MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

### 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	-3.952107	0.009690	-0.023381
7	P1	-3.100872	0.016496	-0.111943
11	P1	-4.106239	0.024696	-0.066915
15	P1	-6.233291	0.015909	-0.127659
19	P1	-3.589745	0.070782	-0.119900
22	P1	-4.643768	0.139977	-0.163863
26	P1	-4.003690	0.135148	-0.004749
30	P1	-5.887265	0.257662	-0.095040
3	P1	-16.588770	0.217971	0.269359
7	P1	-17.151560	0.170097	-0.216693
11	P1	-17.059278	0.423900	-0.130086
15	P1	-12.914913	0.114997	-0.393114
19	P1	-14.783410	0.390134	-0.399209
22	P1	-15.661918	0.487722	-0.528285
26	P1	-15.082138	0.254326	-0.056605
30	P1	-17.073240	0.689428	-0.696549

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.834038	0.088759	-0.056720
7	P2	-21.753040	0.096342	0.065359
11	P2	-15.703339	0.108807	0.108796
15	P2	-7.082256	0.108748	-0.106689
19	P2	-9.143233	0.101945	-0.121872
22	P2	-18.165098	0.096600	-0.159263
26	P2	-16.456871	0.107195	-0.184628
30	P2	-19.467035	0.092375	-0.038177

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.209541	0.007299	-0.064205
7	P3	-8.209541	0.007299	-0.064205
11	P3	-8.209541	0.007299	-0.064205
15	P3	-8.209541	0.007299	-0.064205
19	P3	-8.209541	0.007299	-0.064205
22	P3	-8.209541	0.007299	-0.064205
26	P3	-8.209426	0.007312	-0.064650
30	P3	-8.209426	0.007312	-0.064650

**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	-3.929748	0.223501	0.121872
7	P1	-2.643563	1.420732	0.580577
11	P1	-2.911123	0.172368	0.235552
15	P1	-3.703993	0.154414	0.200031
19	P1	-3.525926	0.180883	-0.209501
22	P1	-5.073468	0.132295	-0.051418
26	P1	-6.004161	0.344463	-0.294306
30	P1	-5.301294	0.223616	-0.287549
3	P1	-11.766075	0.540752	0.321197
7	P1	-10.181590	1.797795	0.728843
11	P1	-10.441124	0.479495	0.616321
15	P1	-10.913836	0.629162	0.827632
19	P1	-15.776890	3.272697	-0.827350
22	P1	-21.104496	1.697507	-1.126351

26	P1	-15.918737	0.482181	-0.792322
30	P1	-17.999857	0.566281	0.538446

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.368553	0.325816	-0.463135
7	P2	-22.001030	1.871670	-1.100582
11	P2	-10.861021	0.283591	-0.392620
15	P2	-4.911863	0.058787	-0.249200
19	P2	-6.891958	0.086997	-0.235904
22	P2	-8.270891	0.569187	0.069502
26	P2	-24.129332	1.435137	-0.856573
30	P2	-21.858887	0.724182	-0.449196

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.066010	0.003137	-0.071996
7	P3	-8.065989	0.003114	-0.072660
11	P3	-8.065863	0.003113	-0.072559
15	P3	-8.065928	0.003113	-0.071848
19	P3	-8.065942	0.003108	-0.072078
22	P3	-8.065793	0.003121	-0.072805
26	P3	-8.065644	0.003096	-0.074684
30	P3	-8.065652	0.003094	-0.073669

## 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	0.000559544
	stdev	1.67220e-07
MEAN Q	mean	0.000522469
	stdev	2.15555e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137878
	stdev	0.00111011
STDEV Q	mean	0.138249
	stdev	0.00112759



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006103[011]

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_1PNPDE20061030_010452_000000932052_00289_24391_0001.N1	1	0
ASA_IMM_1PNPDE20061030_064719_000000342052_00292_24394_7664.N1	1	0
ASA_GM1_1PNPDK20061030_140740_000002832052_00296_24398_7654.N1	0	7
ASA_WSM_1PNPDE20061030_160313_000000852052_00298_24400_0001.N1	0	24
ASA_WSM_1PNPDE20061031_010559_000000852052_00303_24405_0001.N1	0	15



## 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"/>
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Ascending

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

Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

<input type="checkbox"/>
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Ascending

<input type="checkbox"/>
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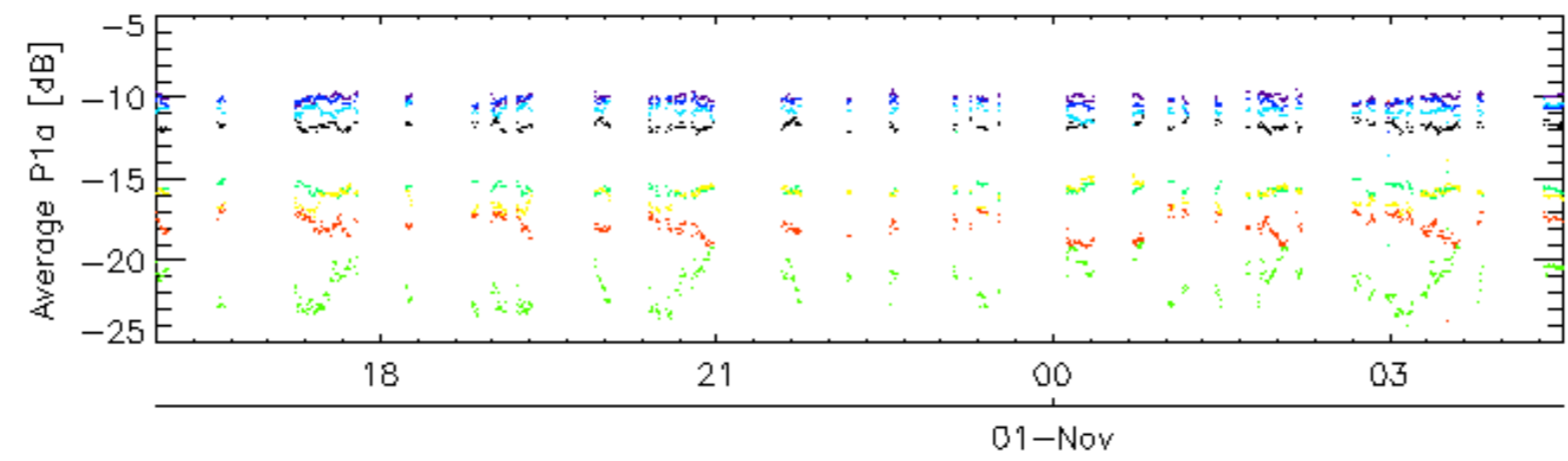
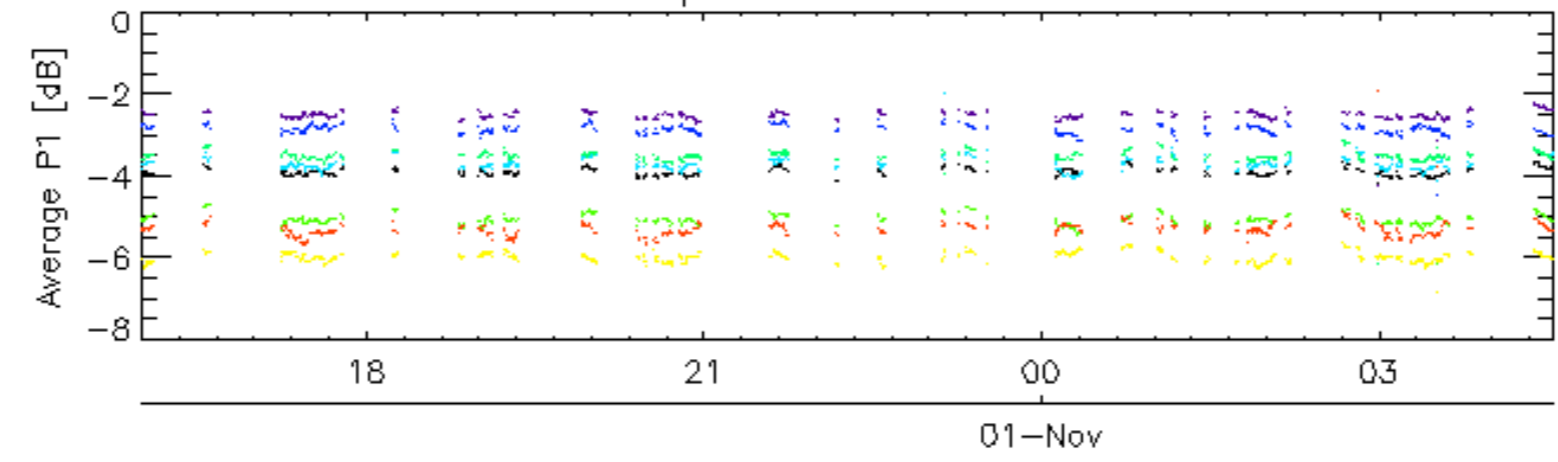
Descending

### 7.6 - Doppler evolution versus ANX for GM1

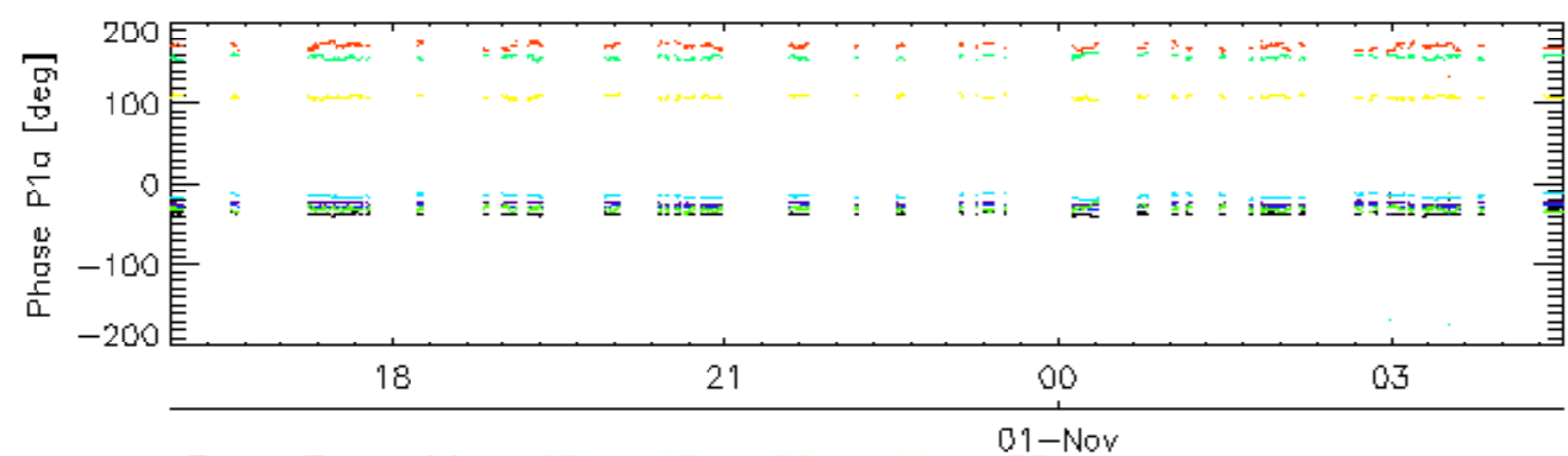
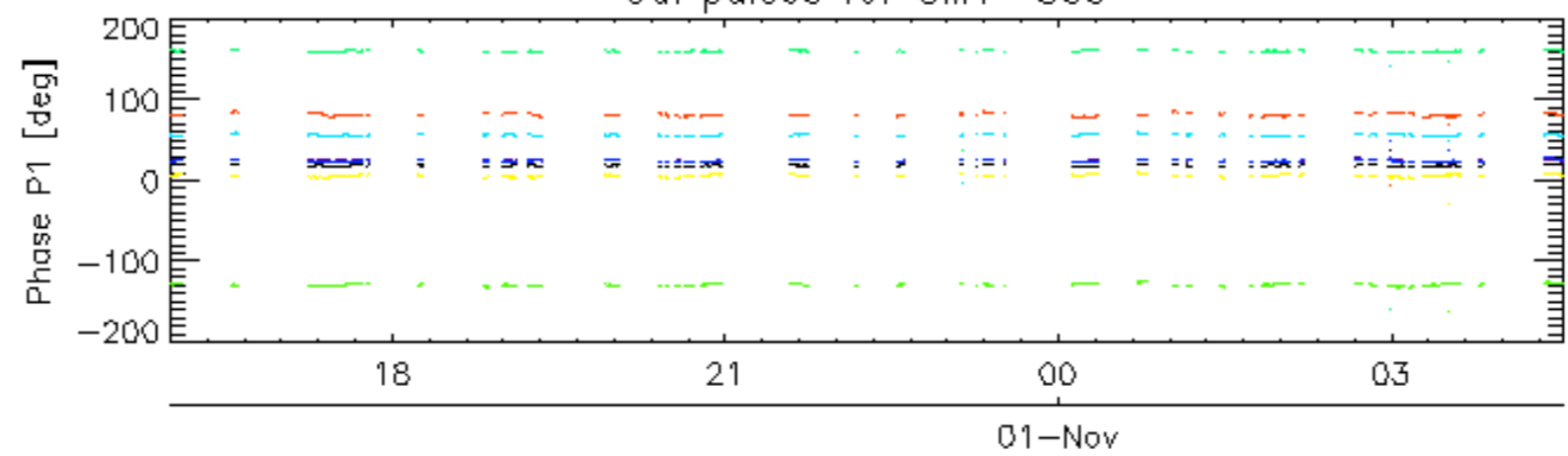
Evolution Doppler error versus ANX

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

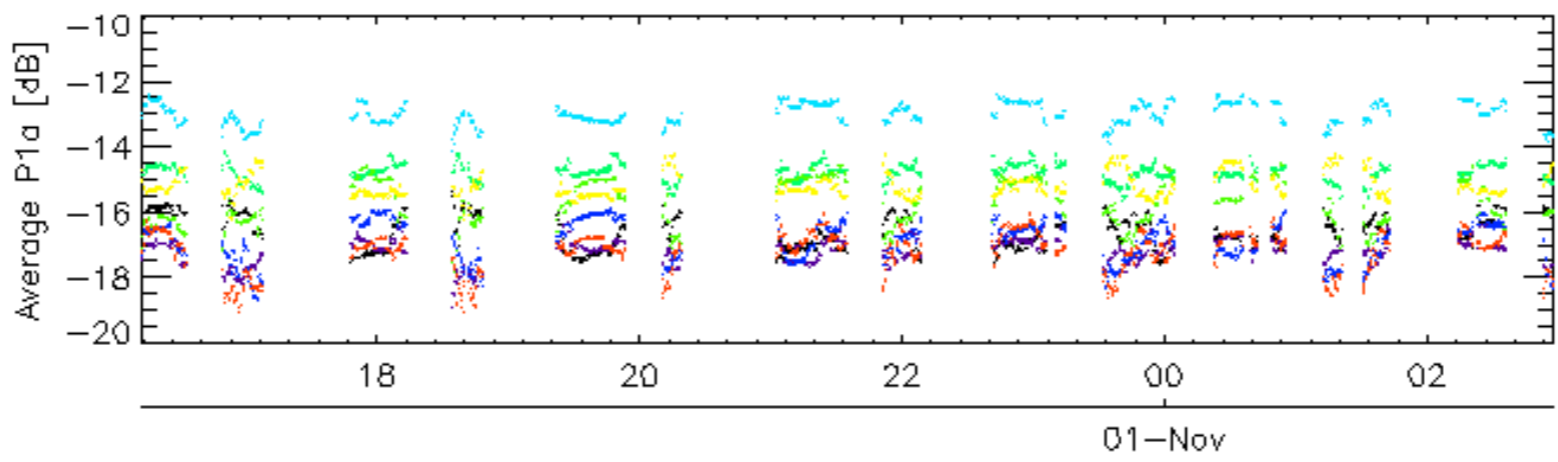
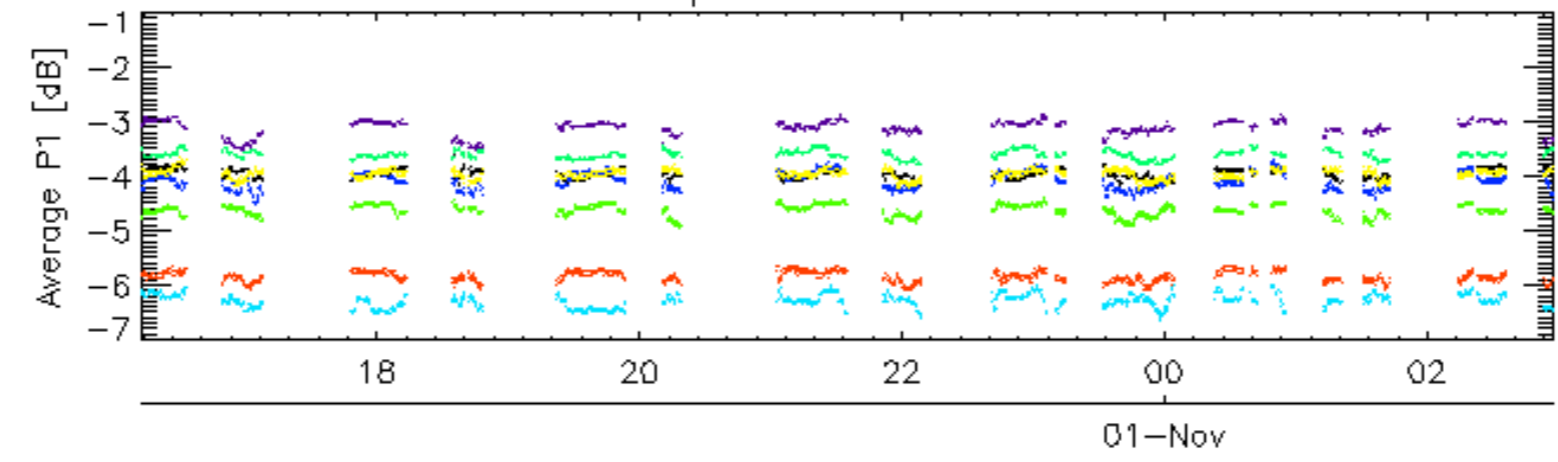


Cal pulses for GM1 SS3

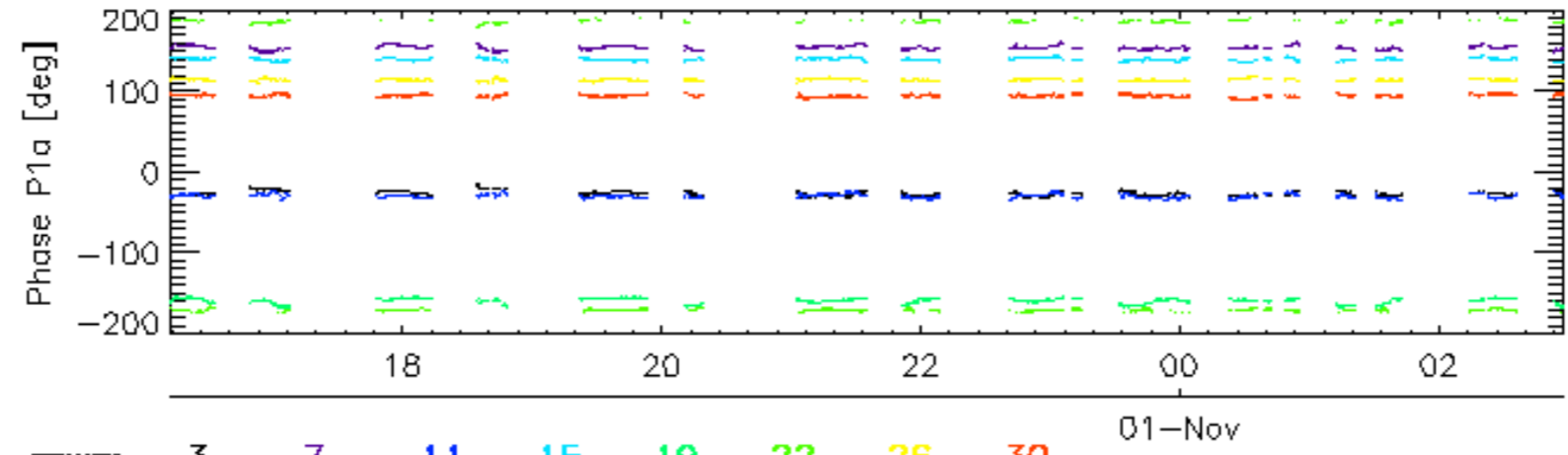
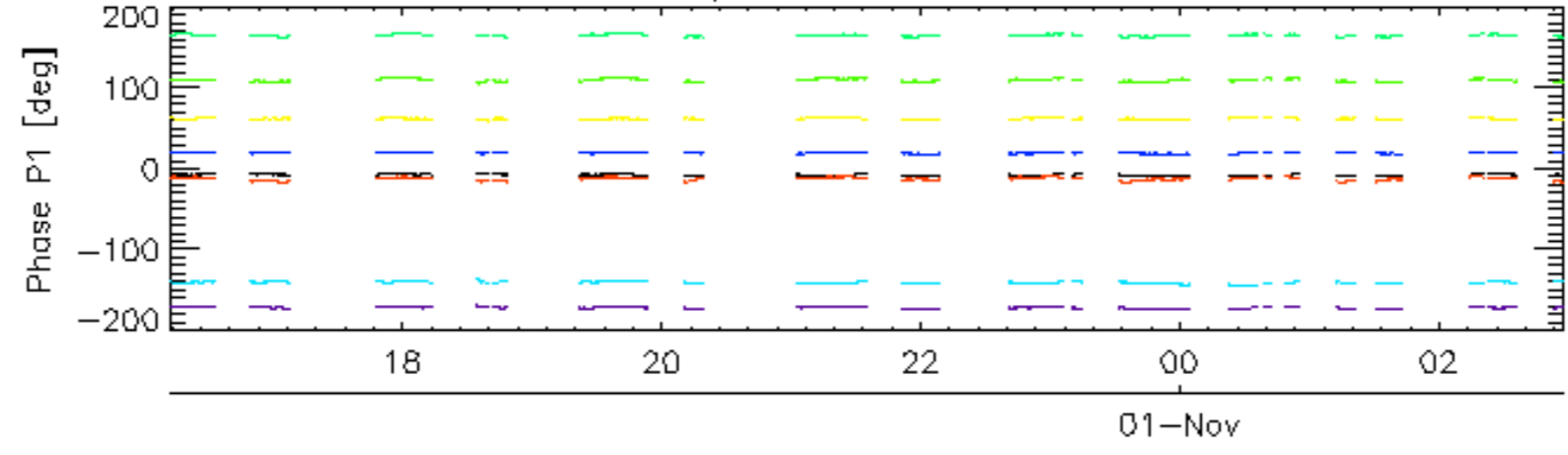


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

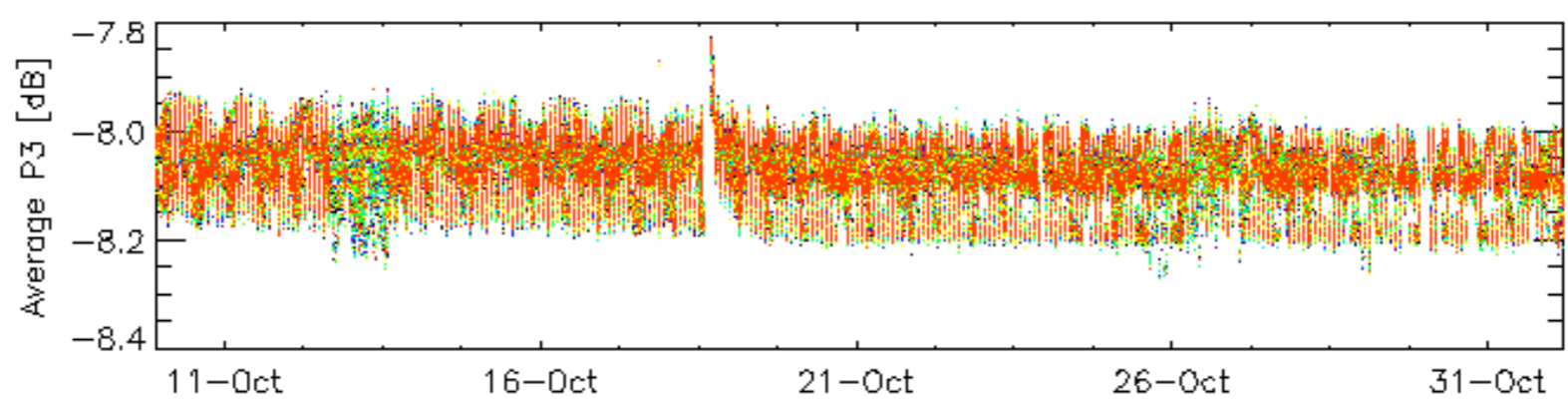
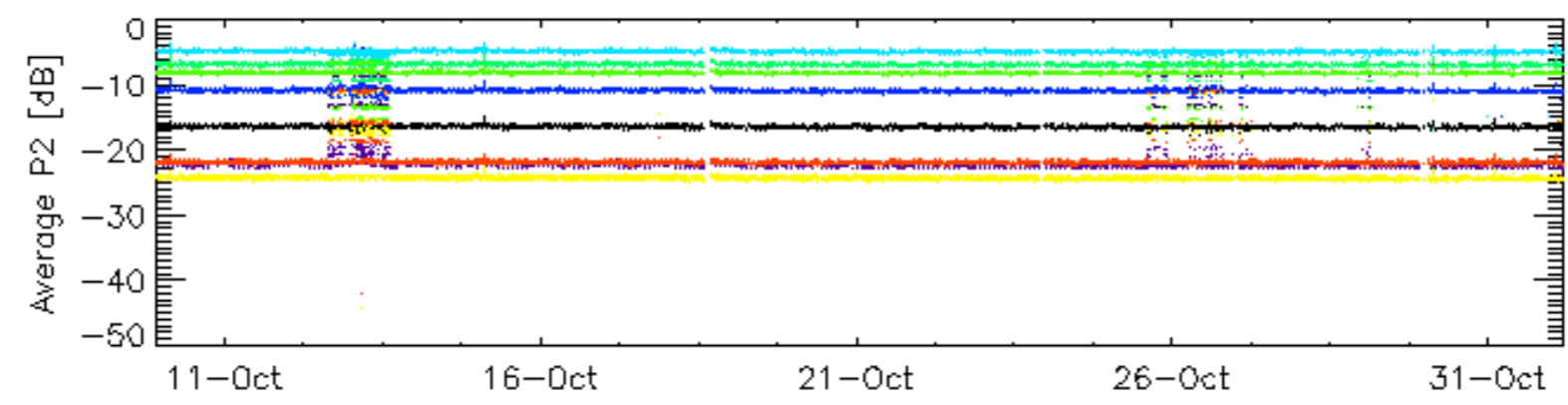
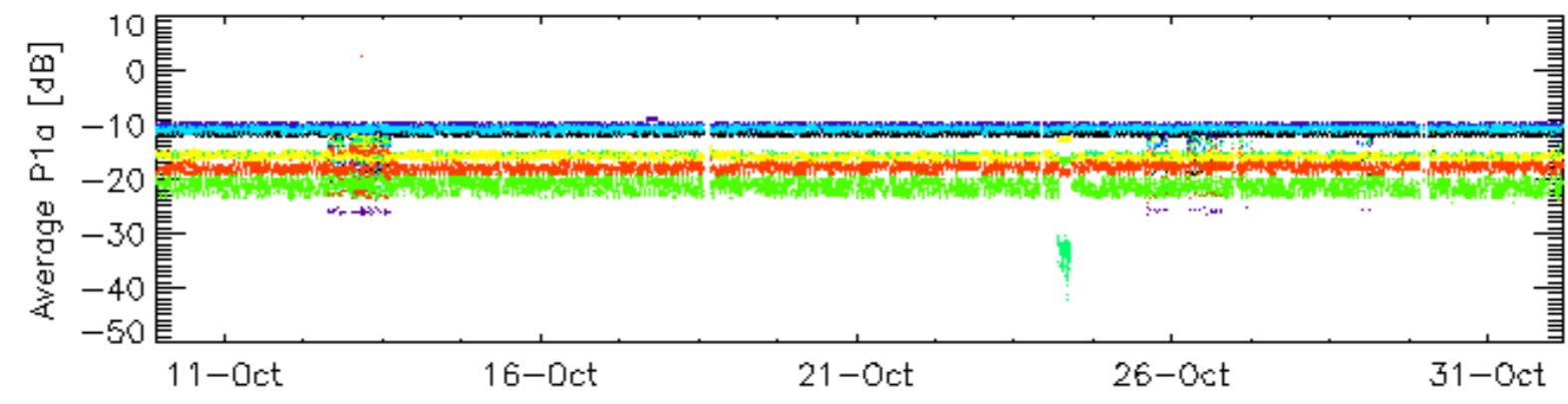
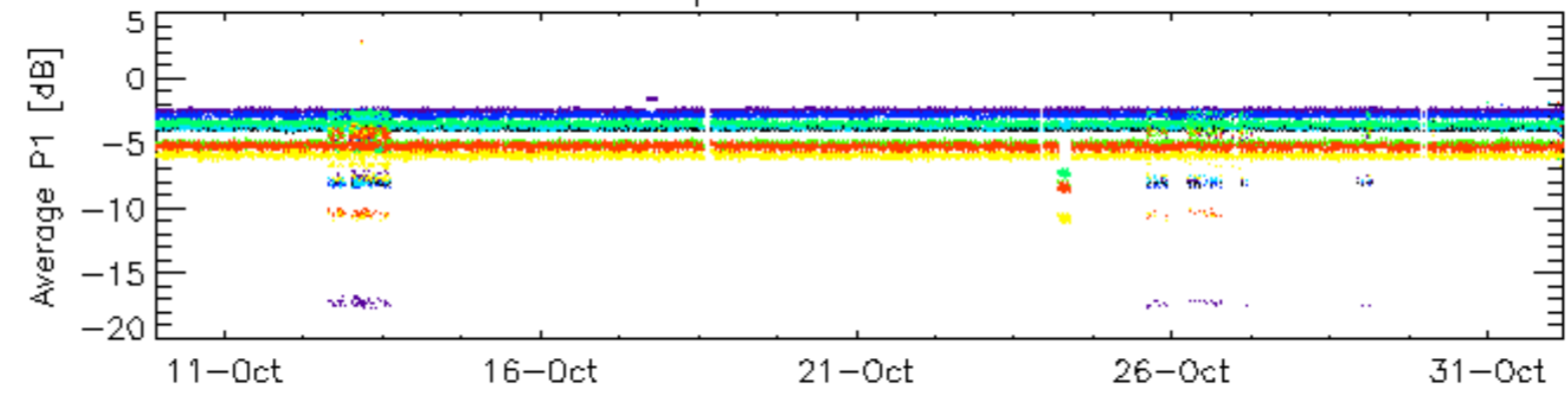


Cal pulses for WVS IS2



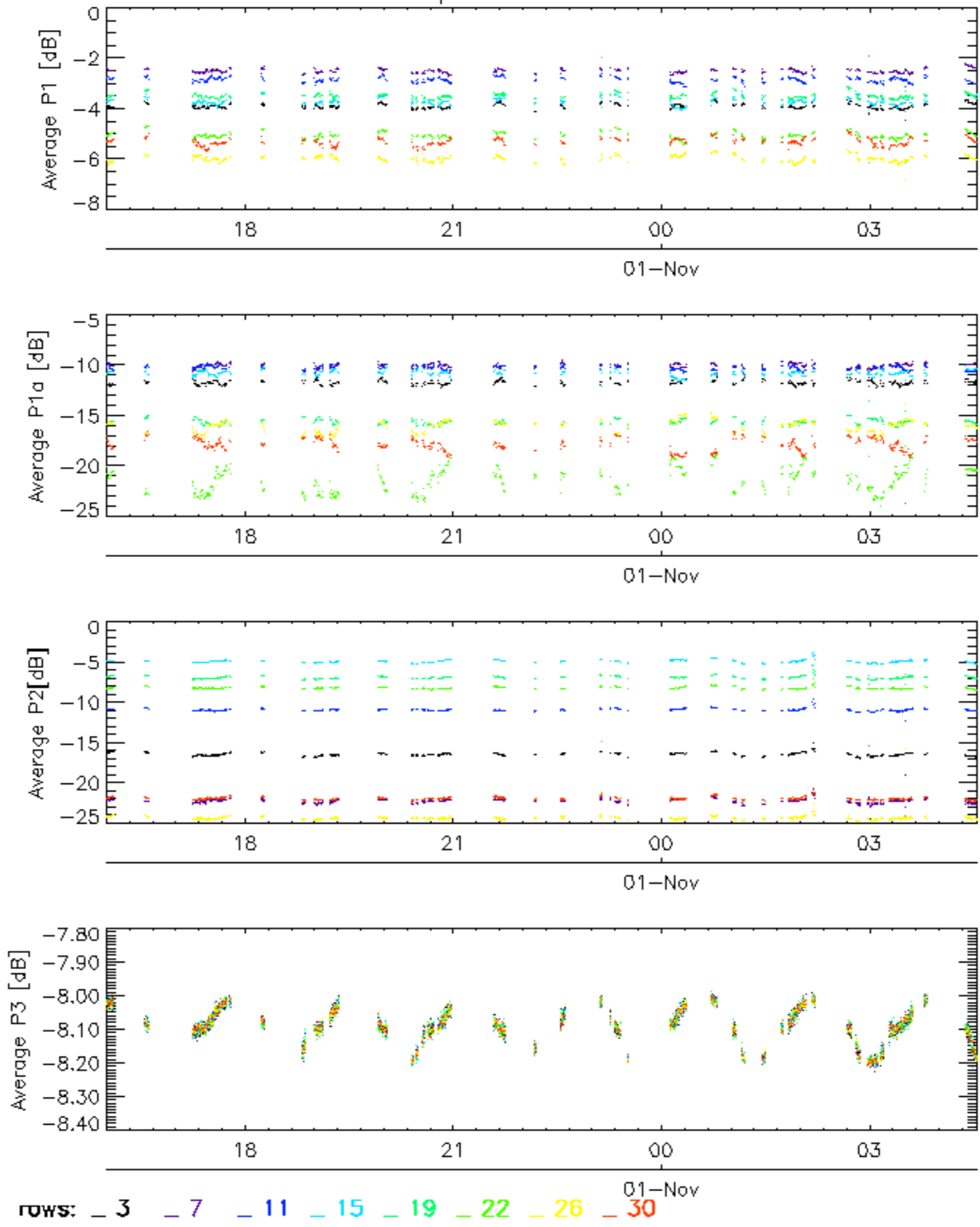
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

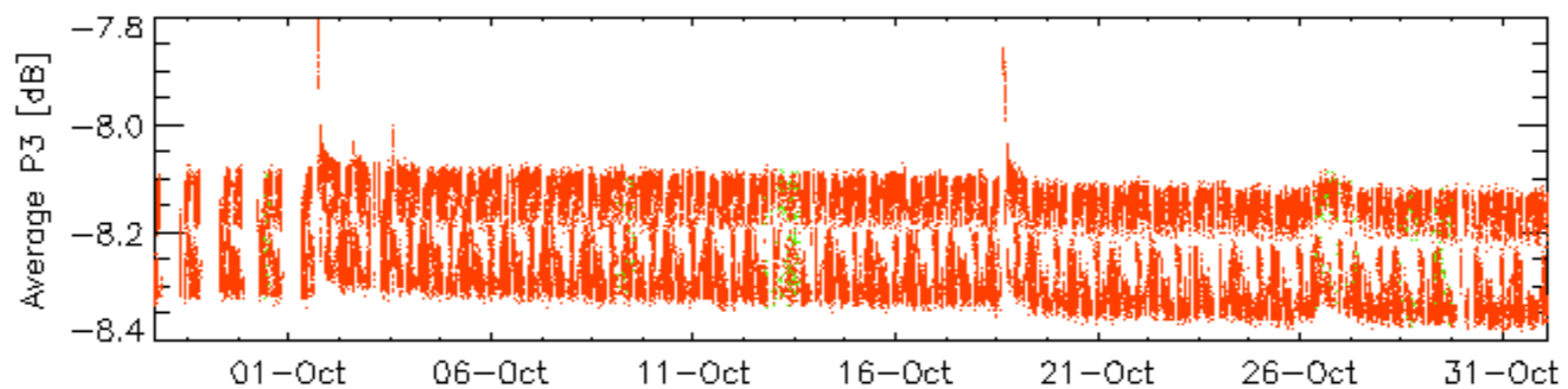
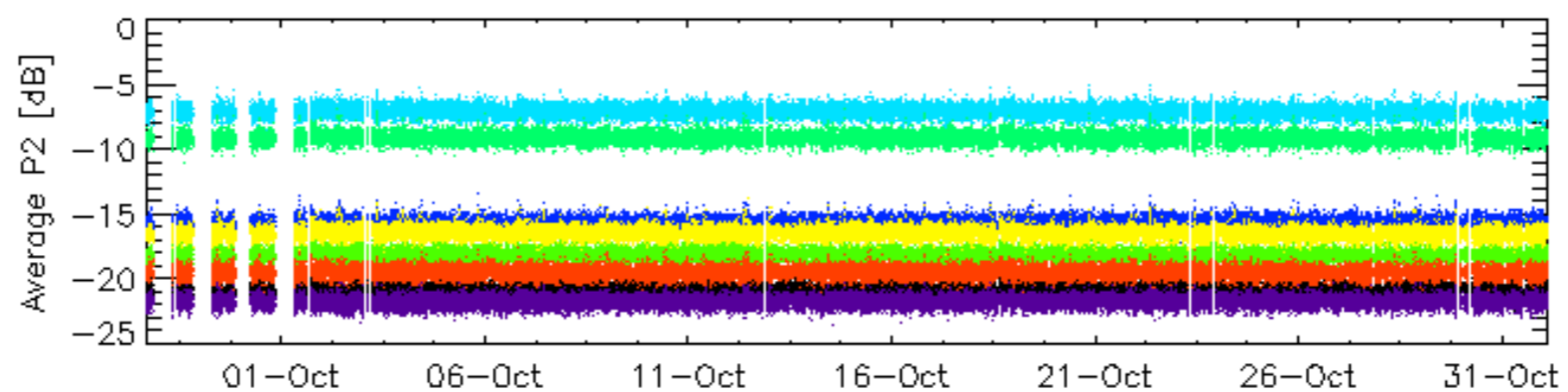
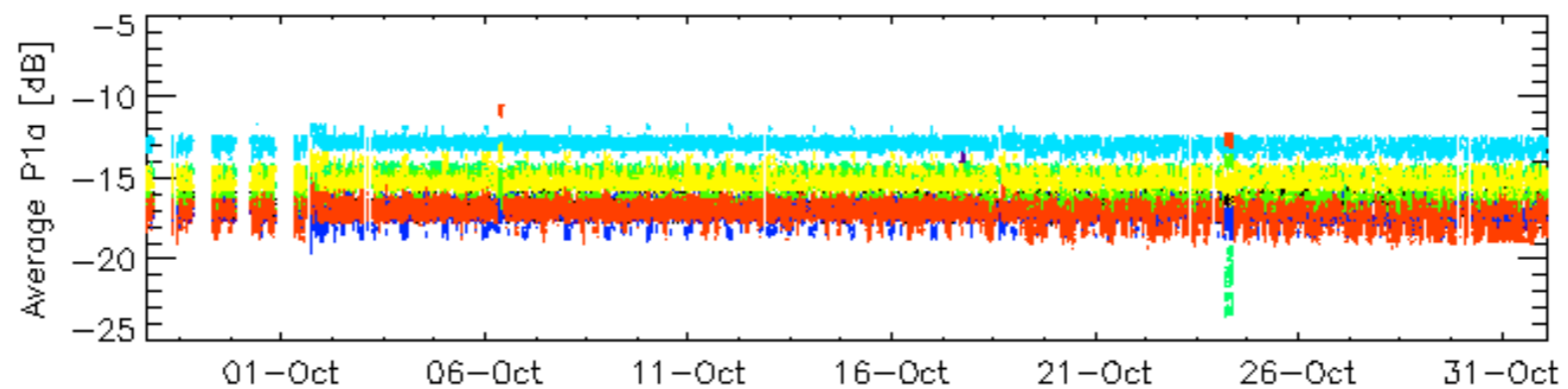
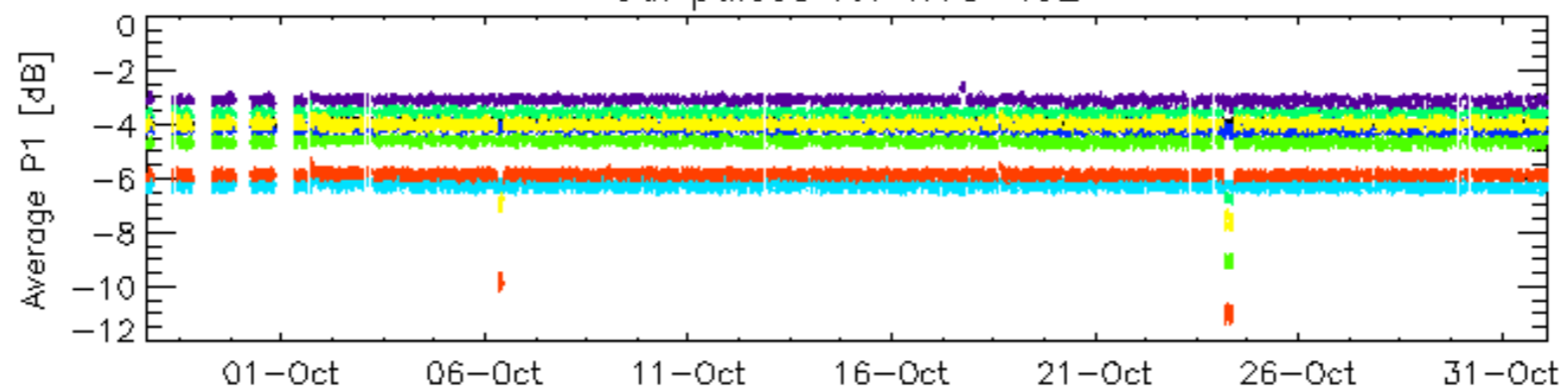


rows: [\\_ 3](#) [\\_ 7](#) [\\_ 11](#) [\\_ 15](#) [\\_ 19](#) [\\_ 22](#) [\\_ 26](#) [\\_ 30](#)

### Cal pulses for GM1 SS3

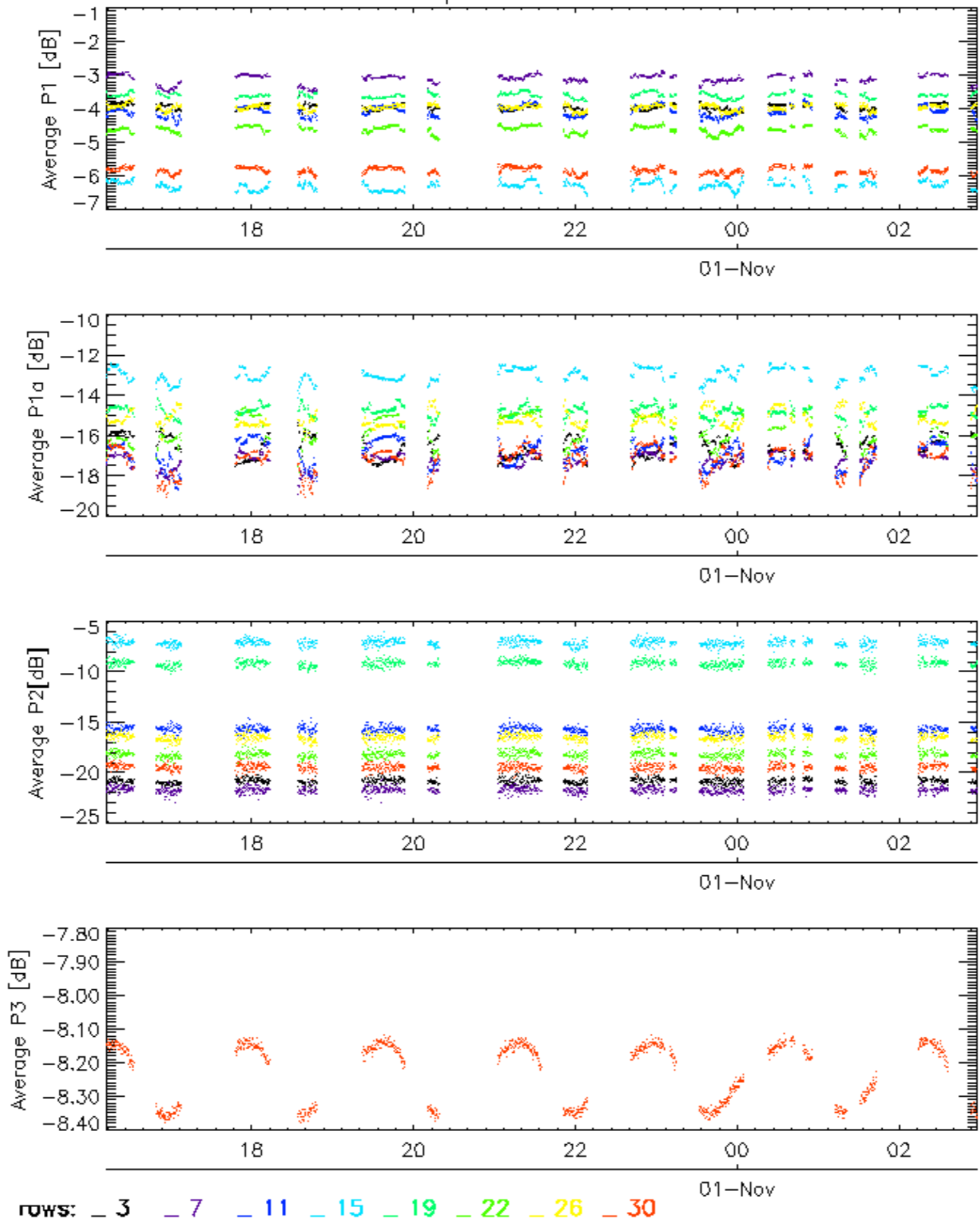


Cal pulses for WVS IS2



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

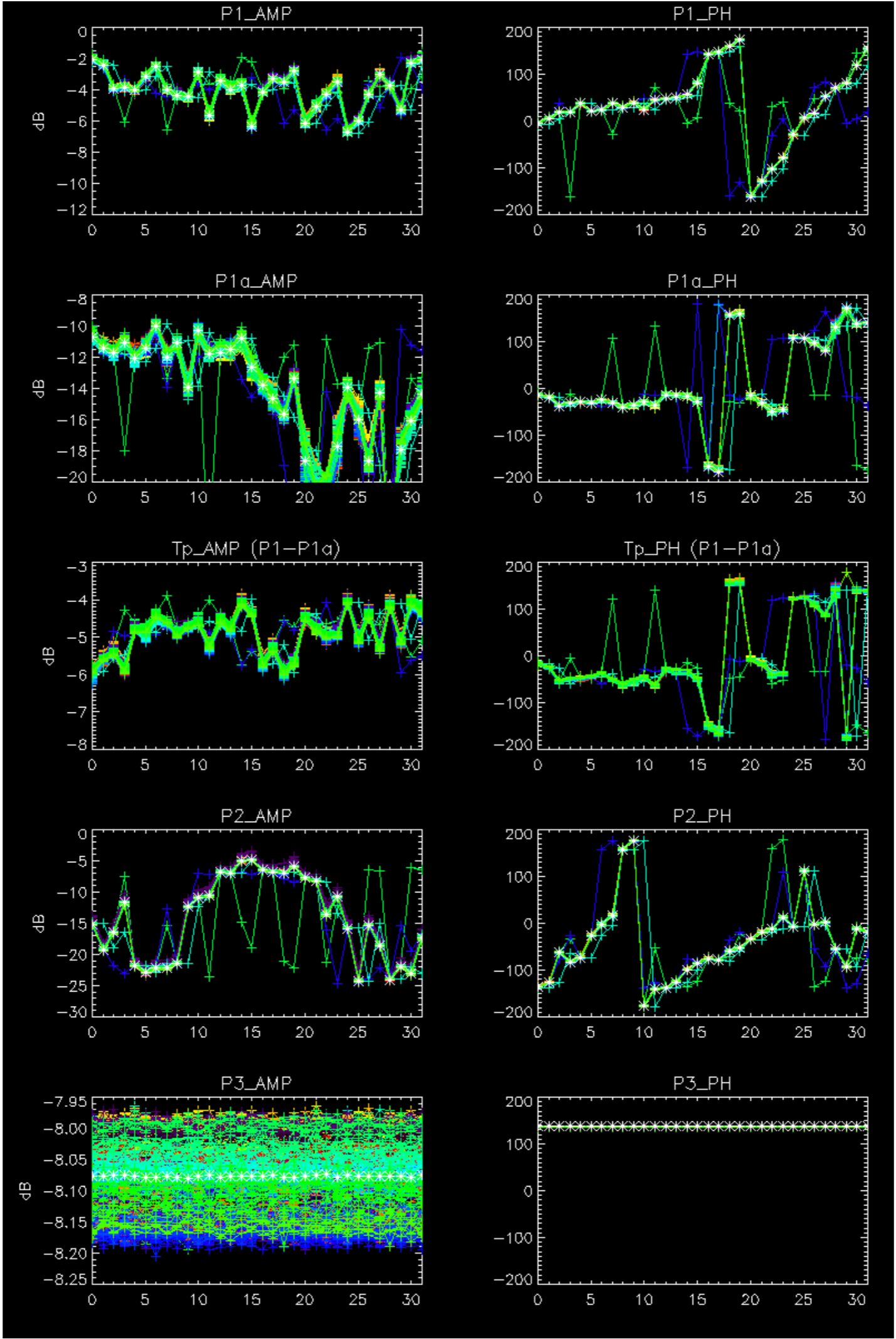
Cal pulses for WVS IS2

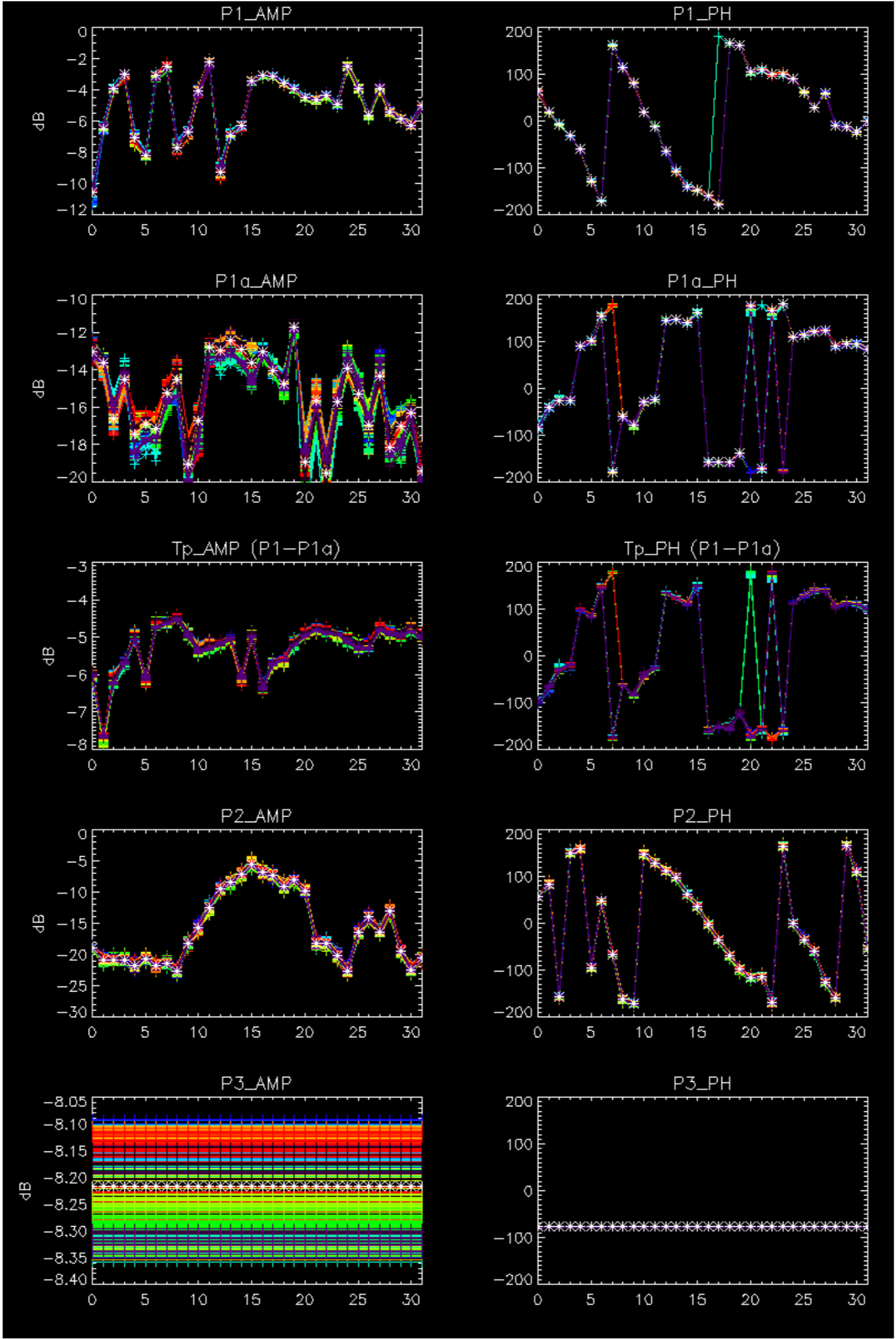


No anomalies observed on available browse products



No anomalies observed.

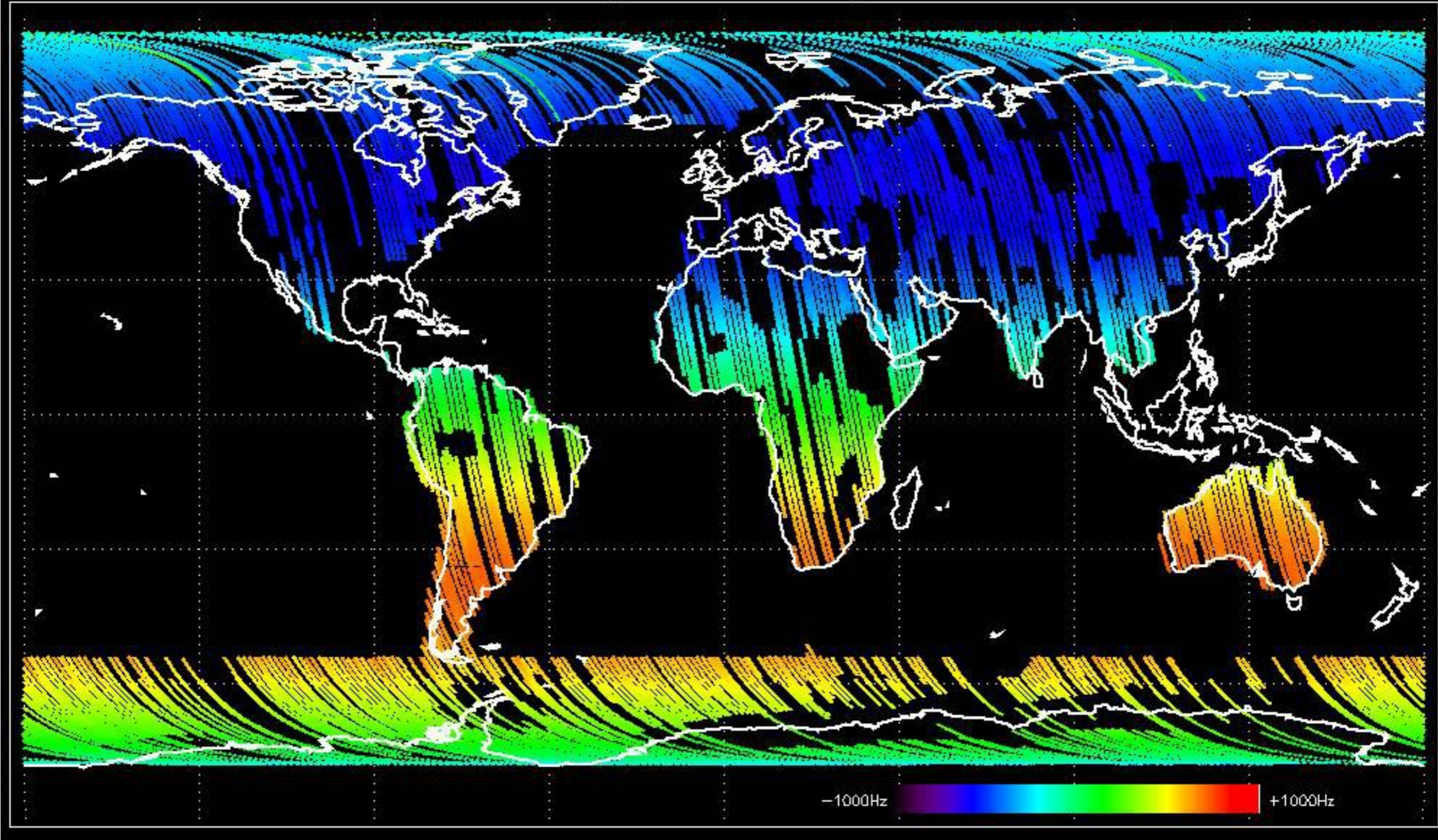




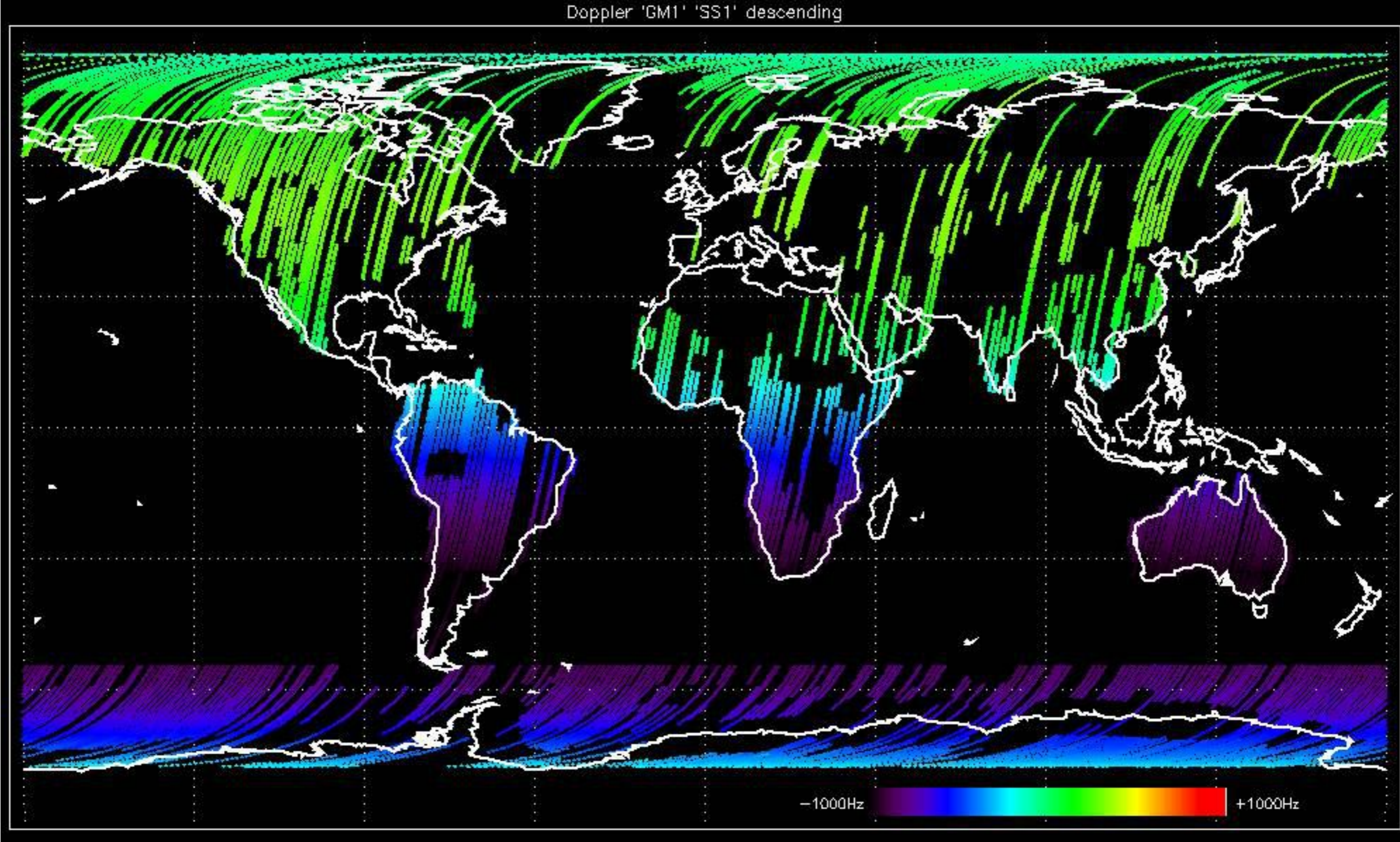
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



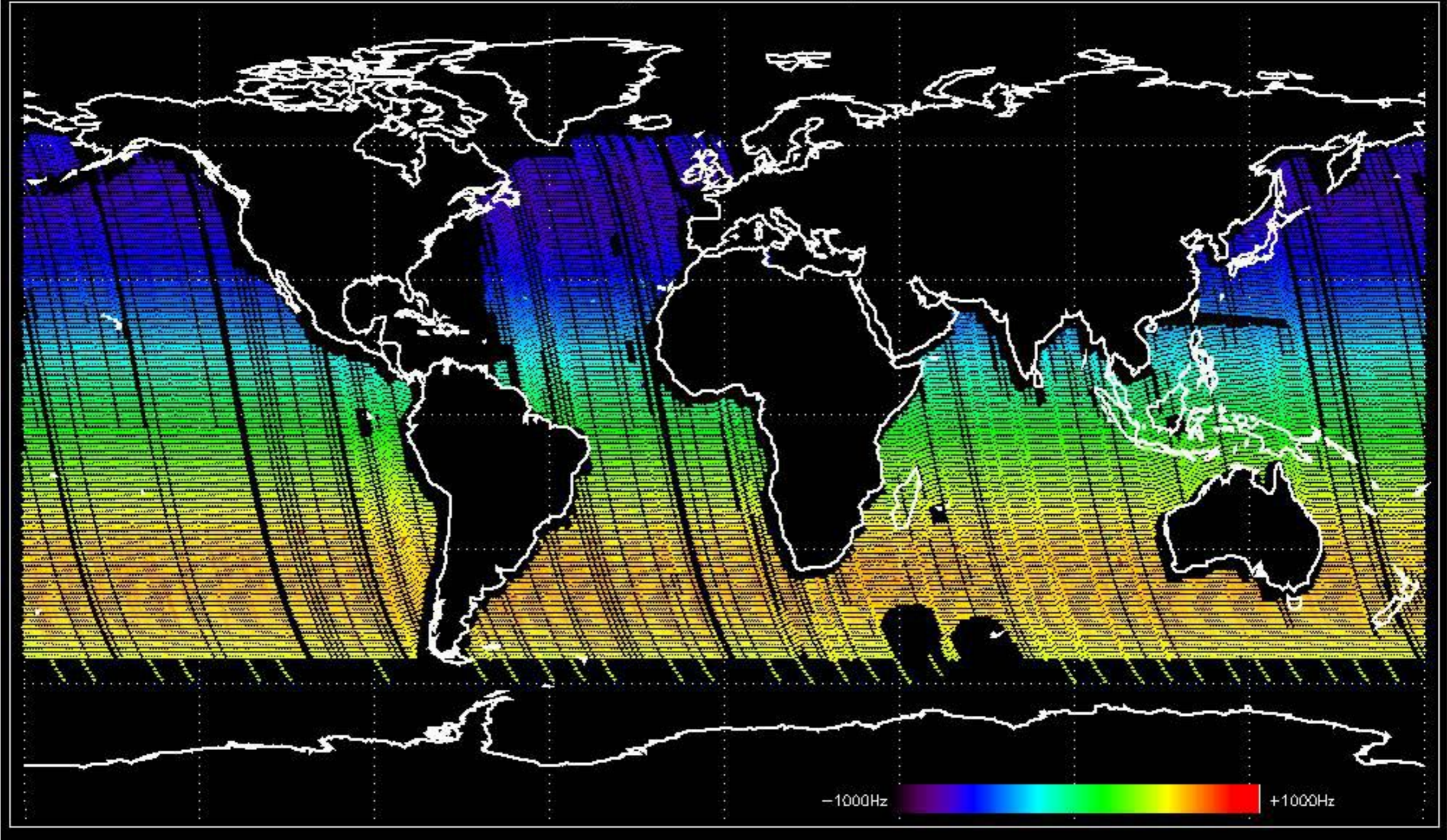
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

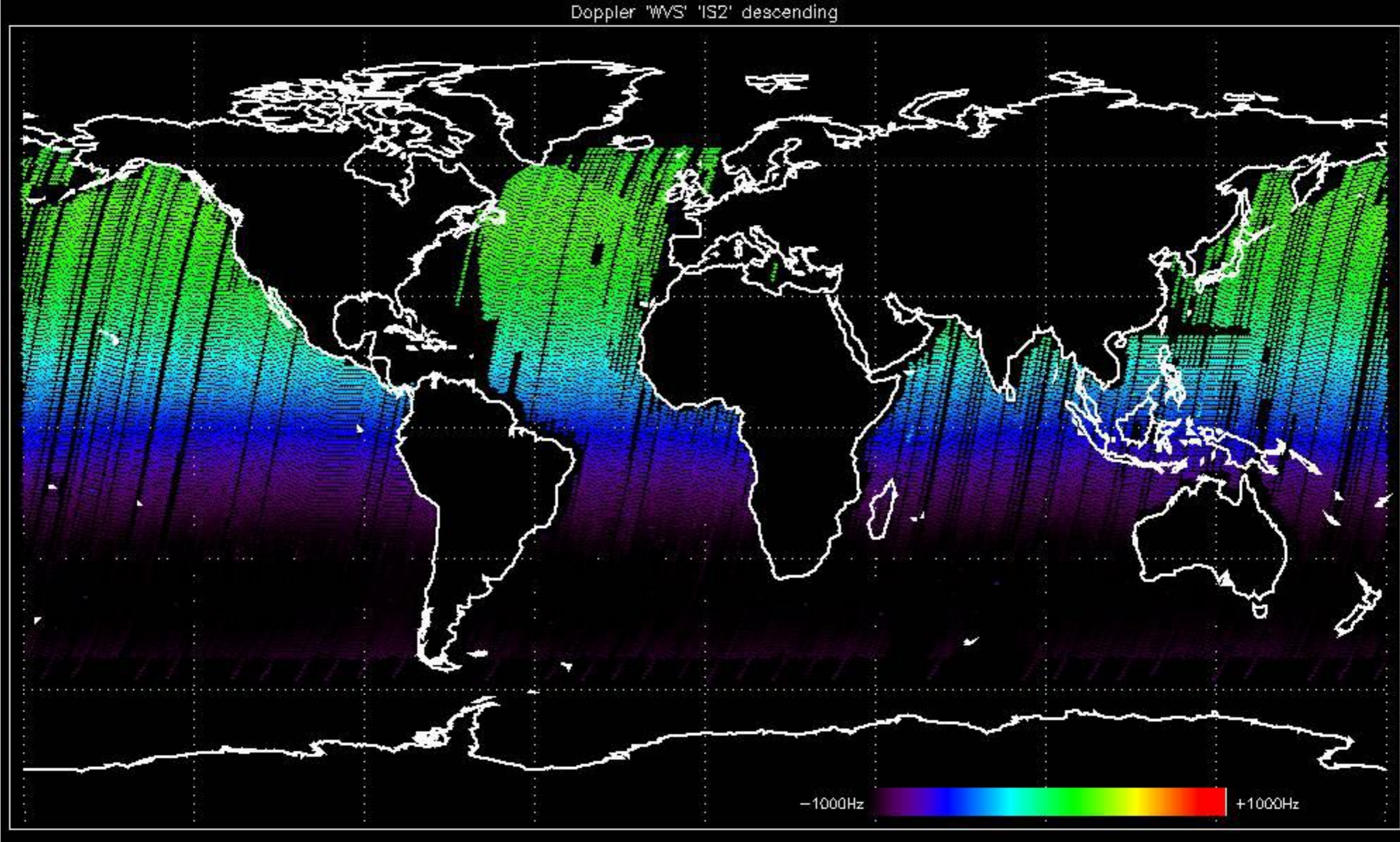


Doppler 'WVS' 'IS2' ascending

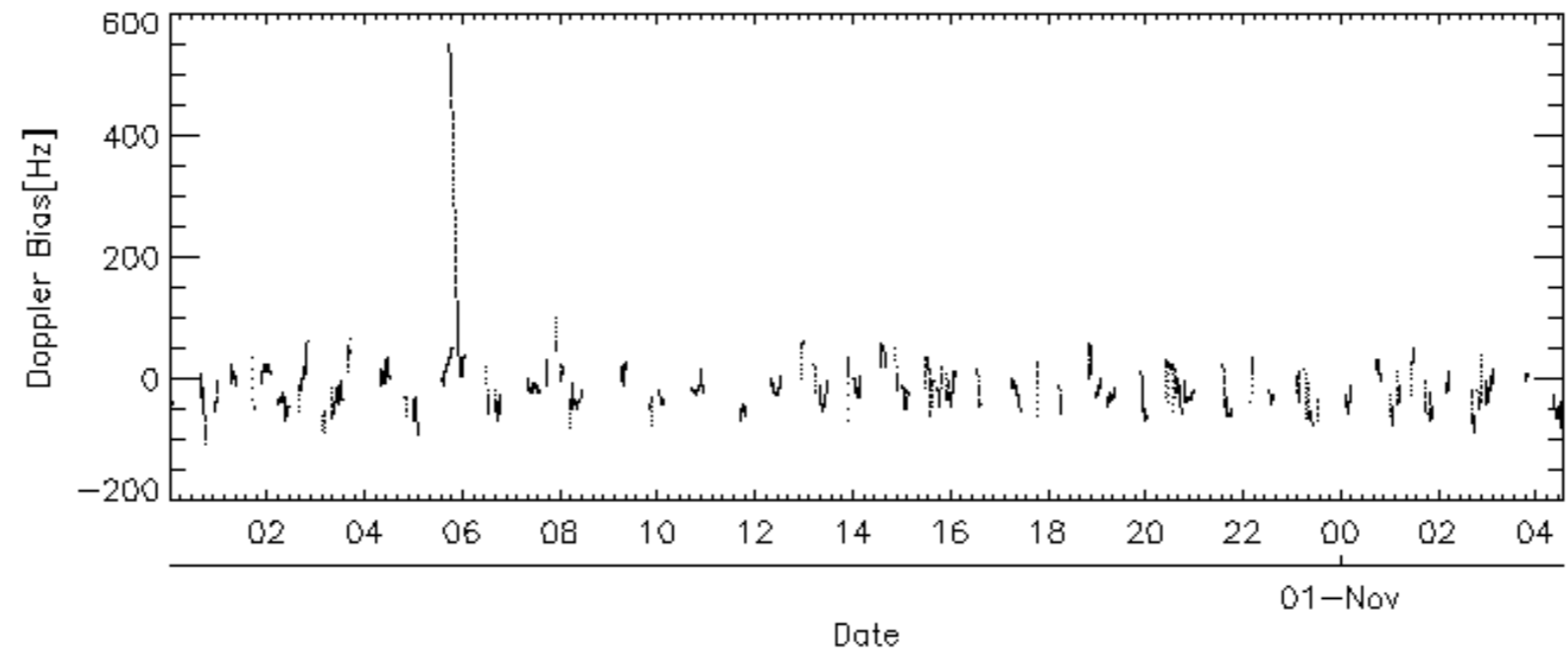
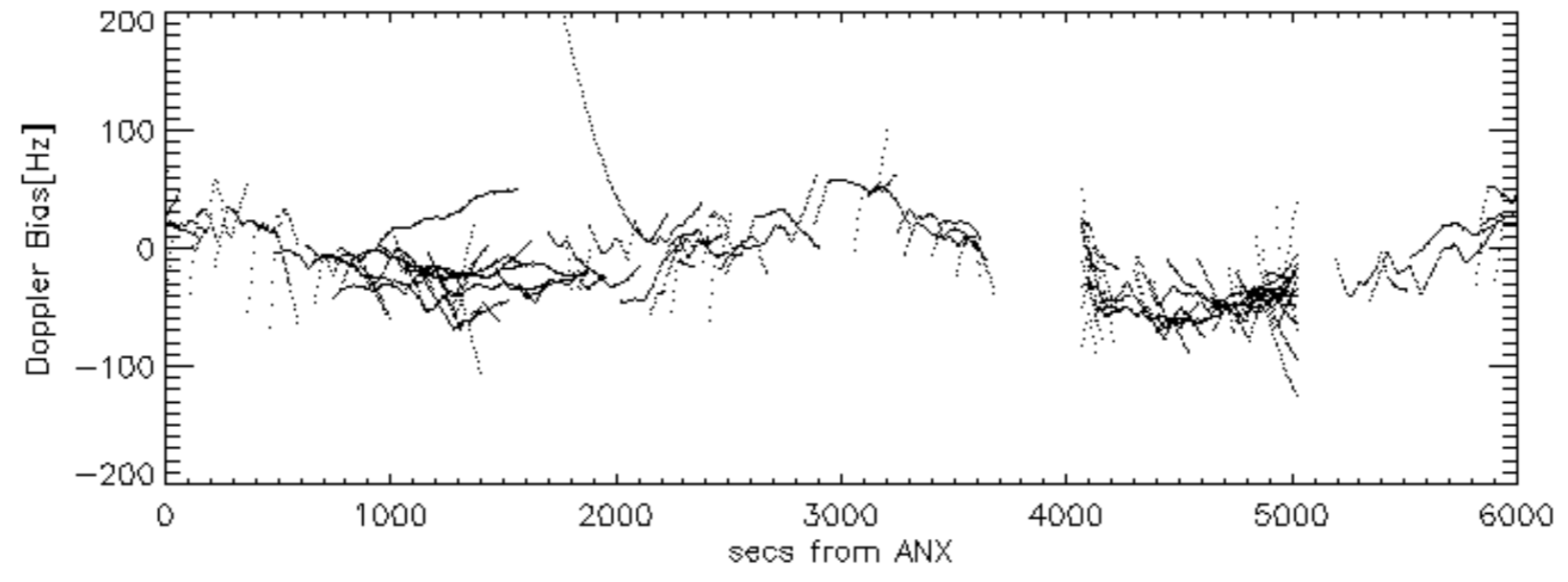
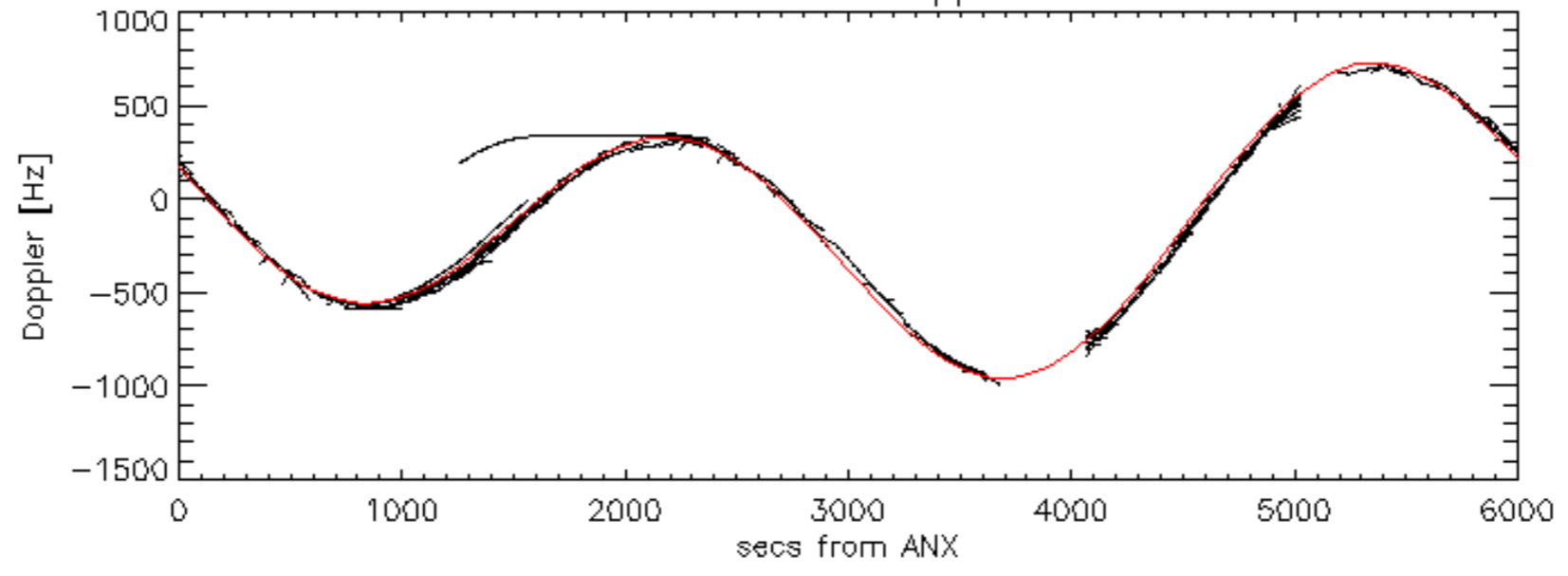


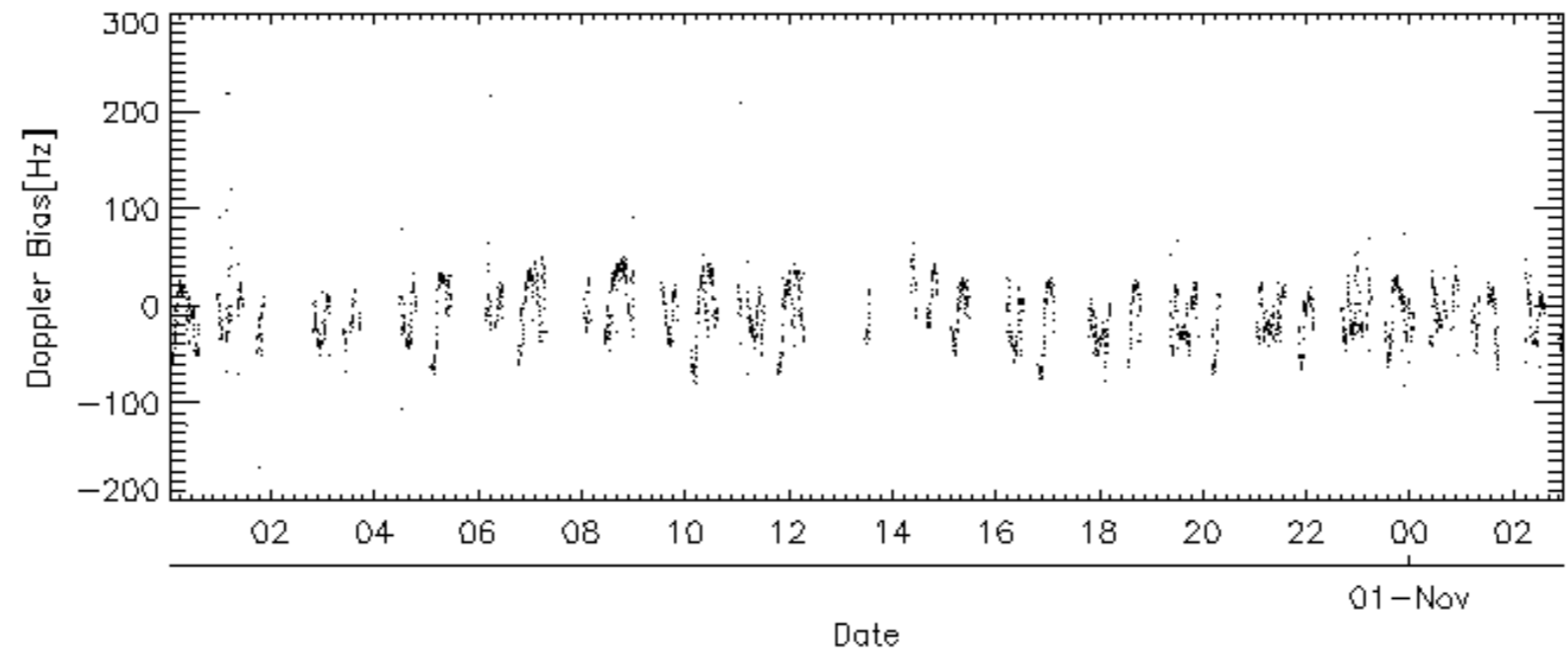
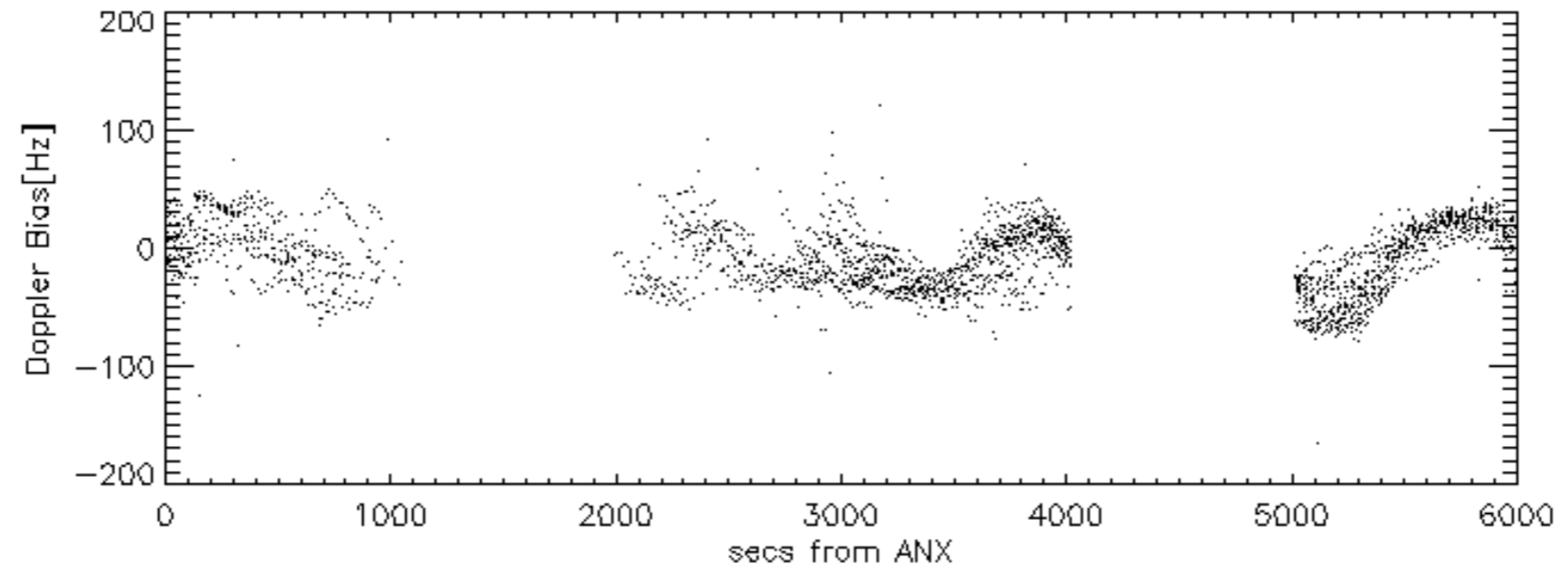
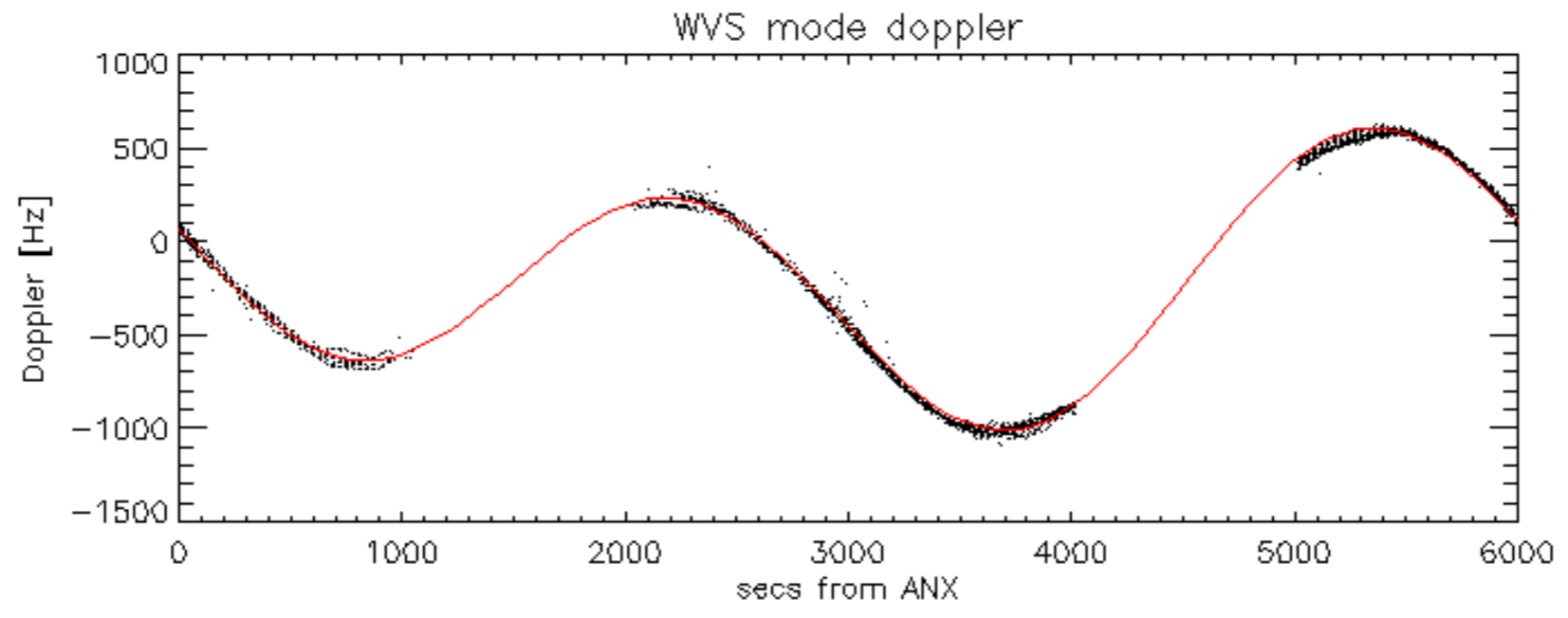


Doppler 'WVS' 'IS2' descending

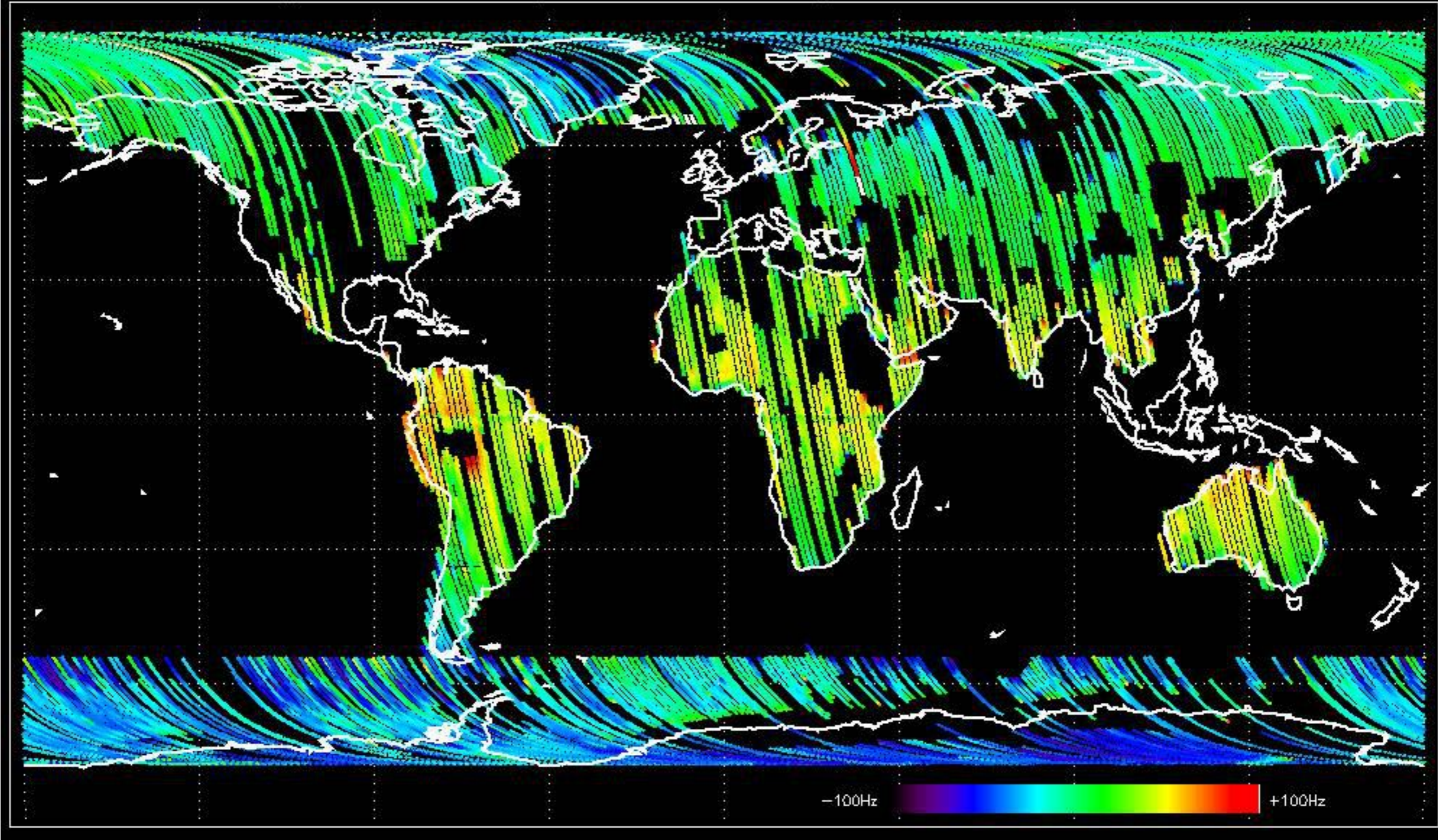


GM1 mode doppler

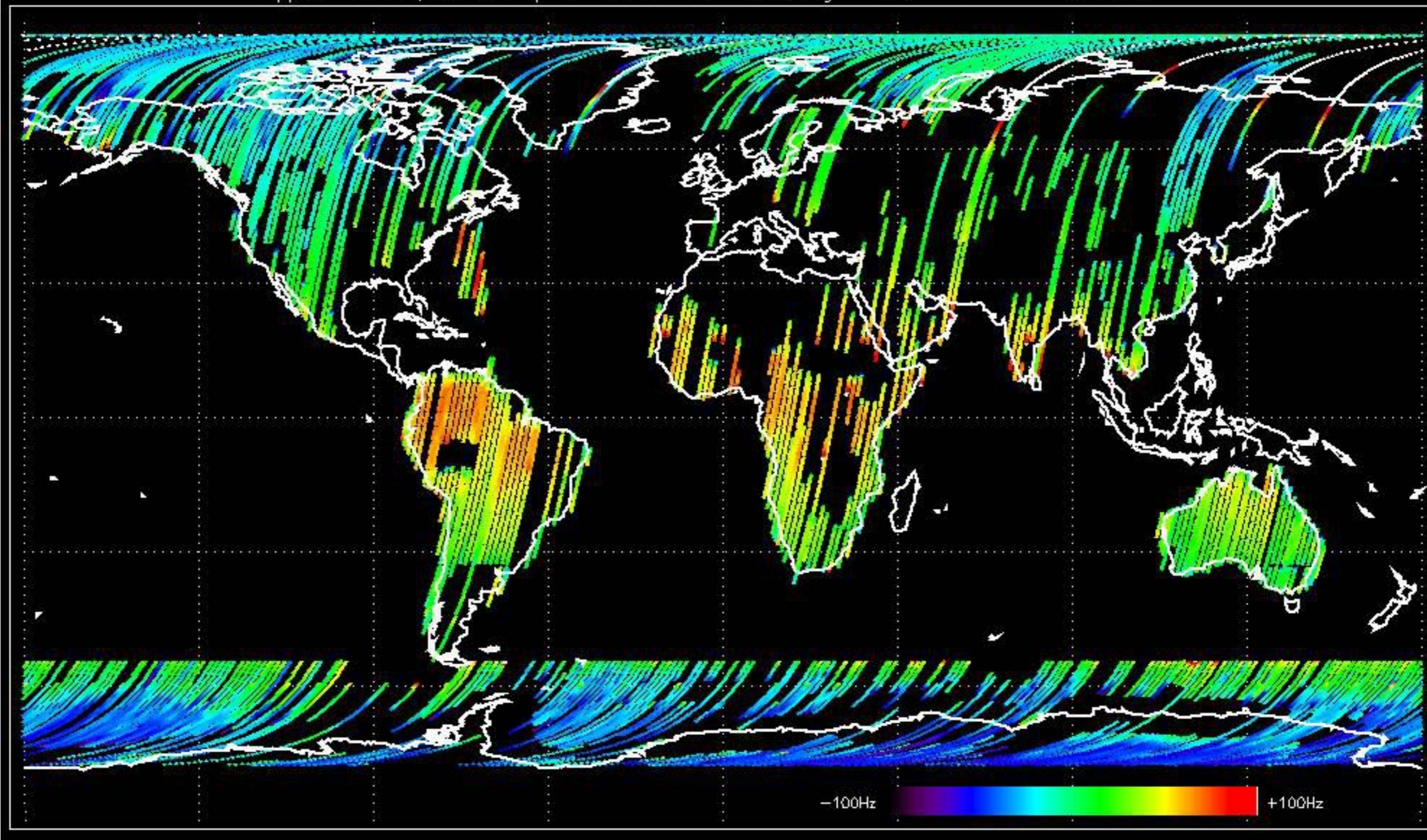




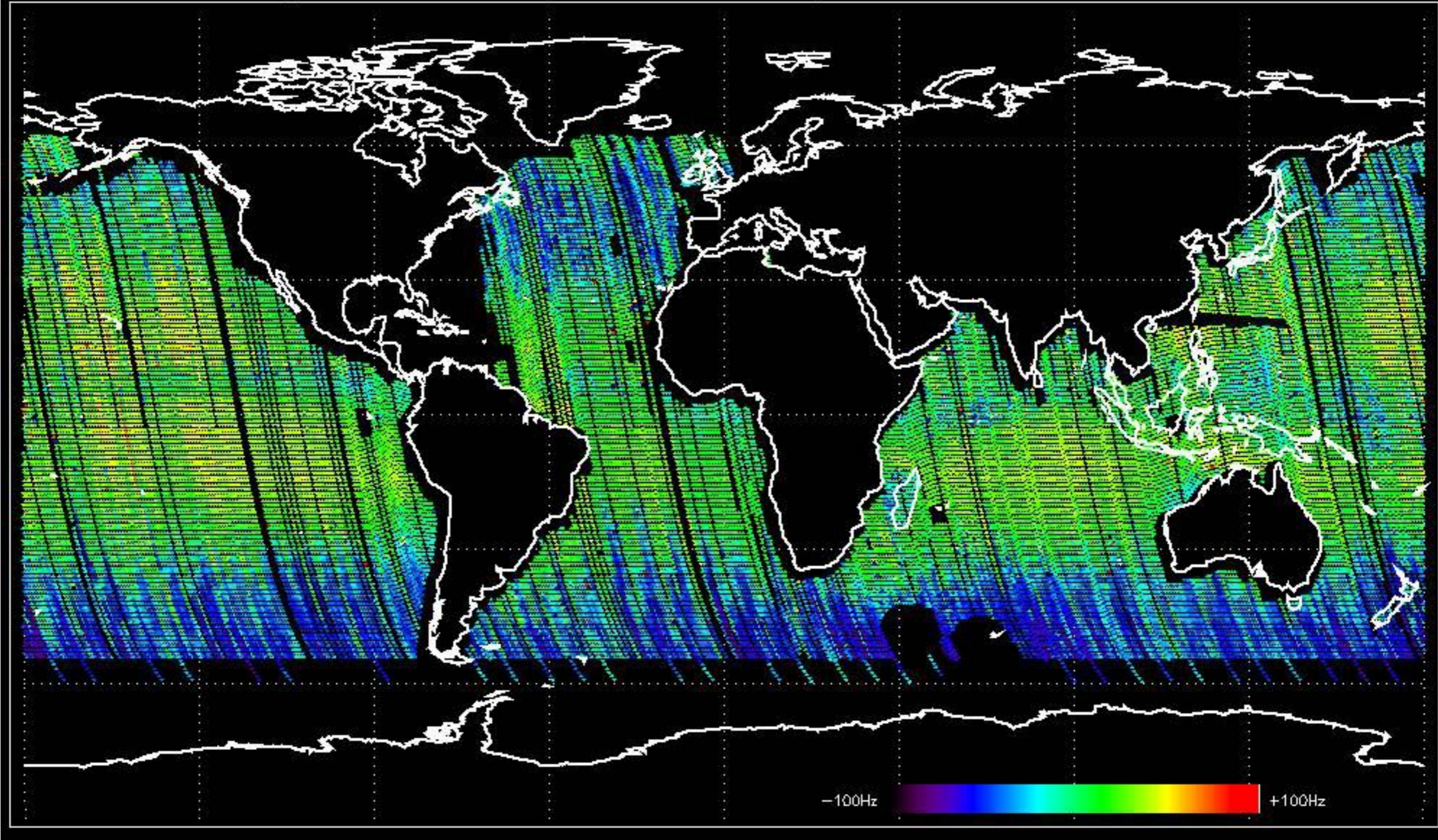
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.636447 Hz



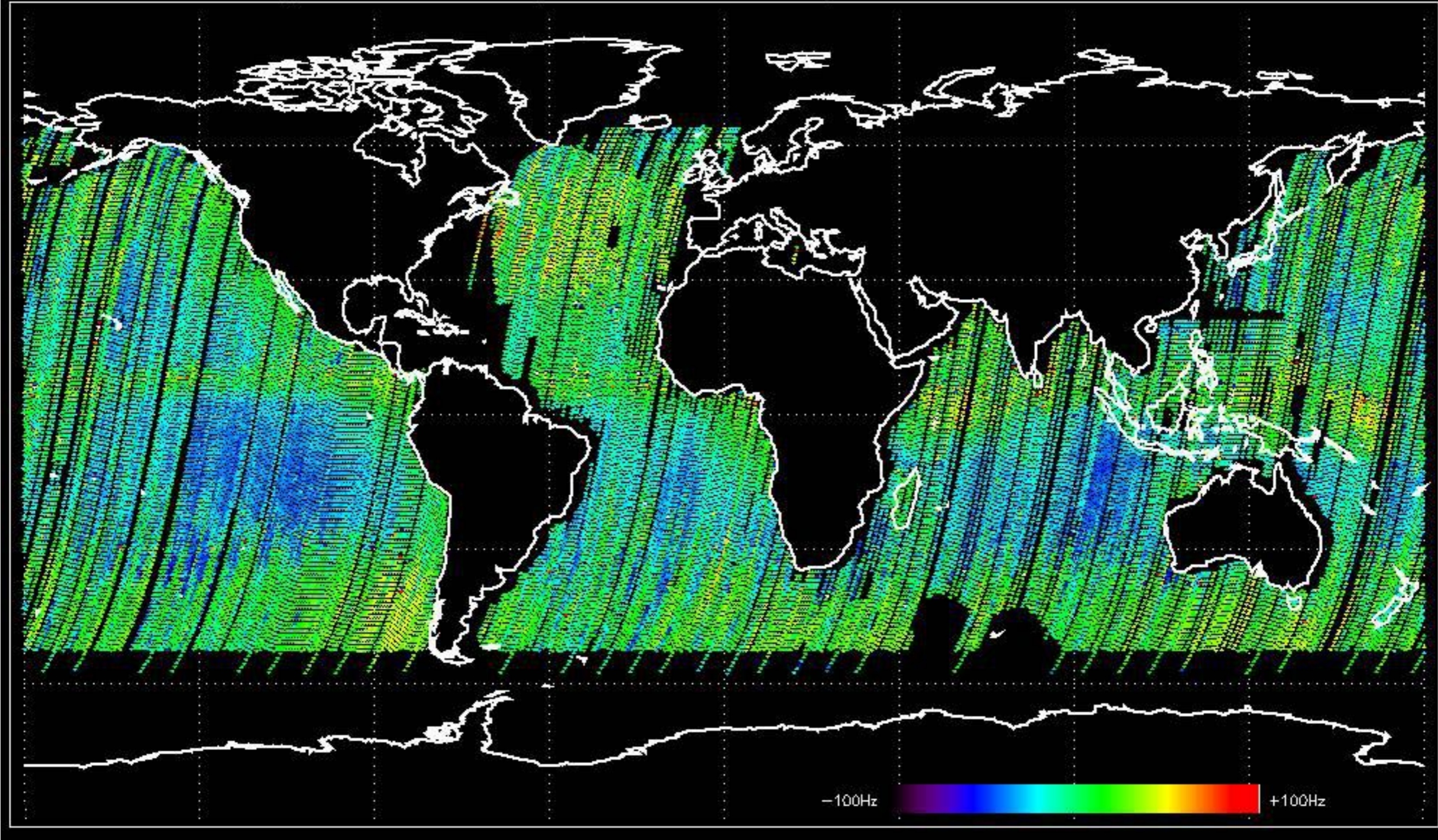
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.473894 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.9387854 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.495435 Hz



No anomalies observed on available MS products:



No anomalies observed.



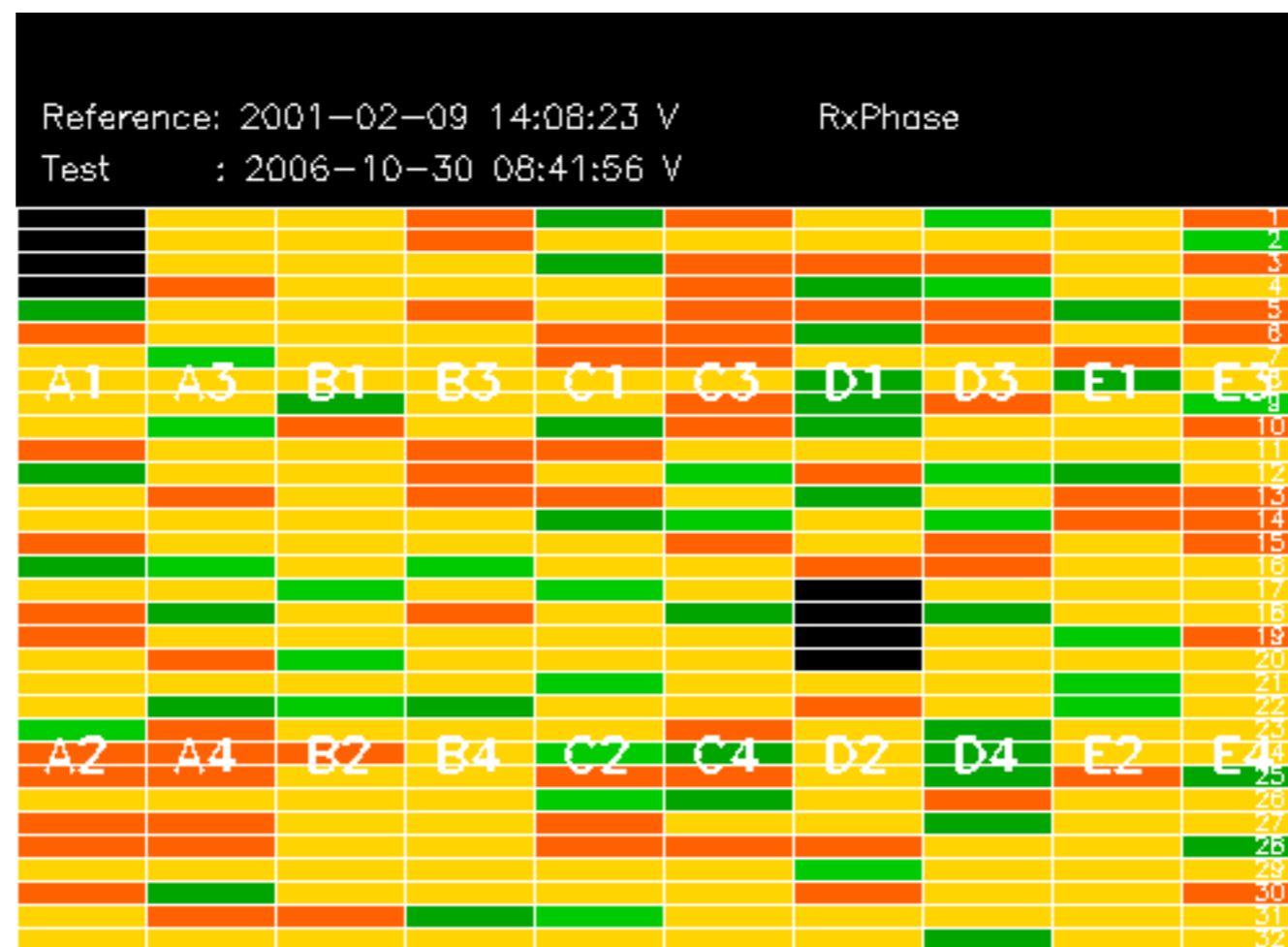






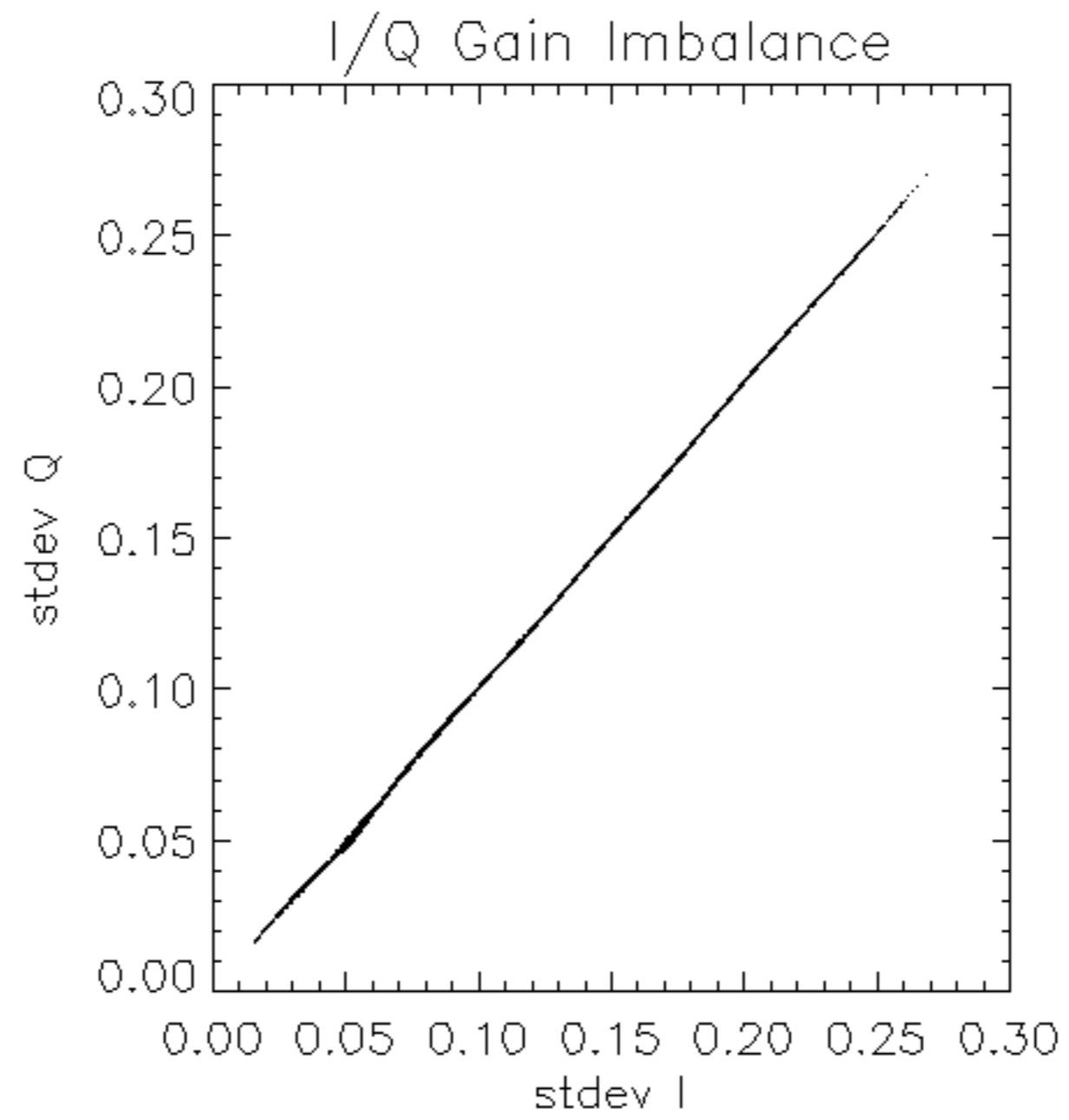


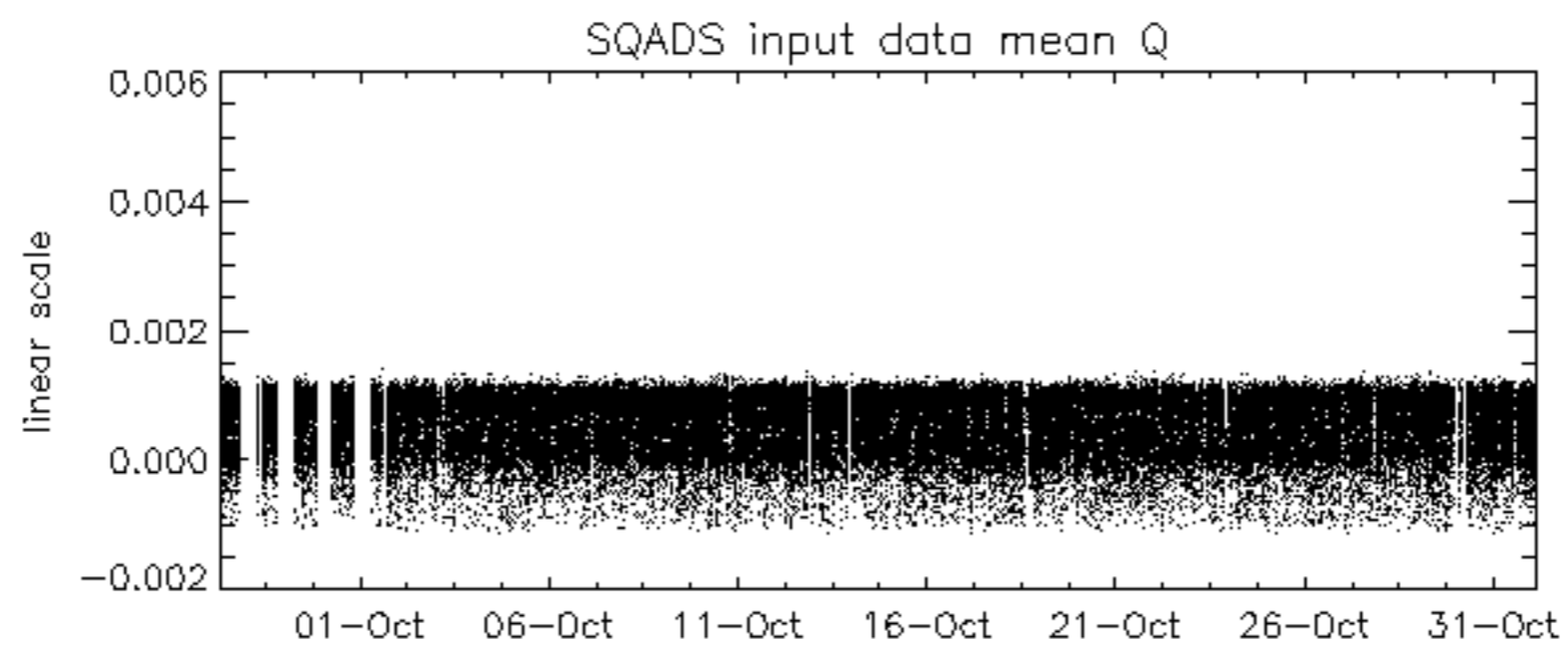
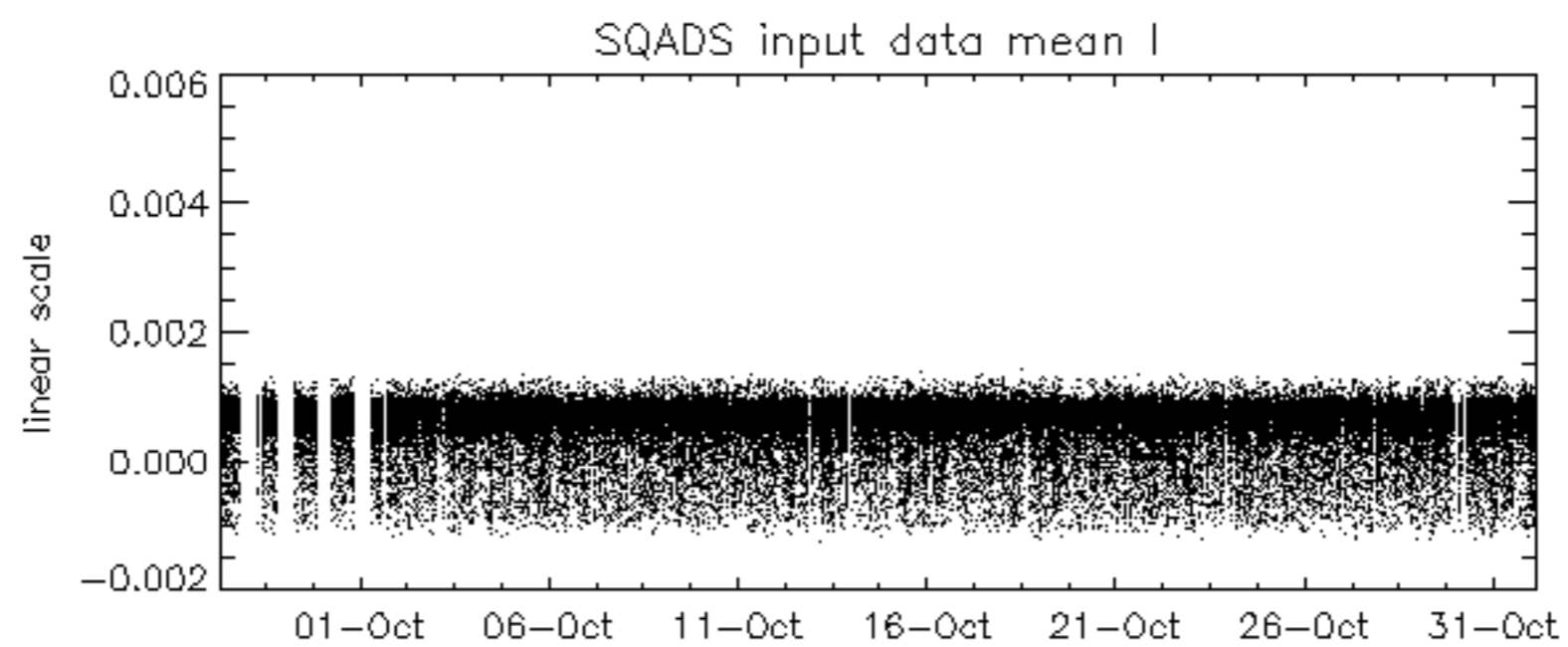
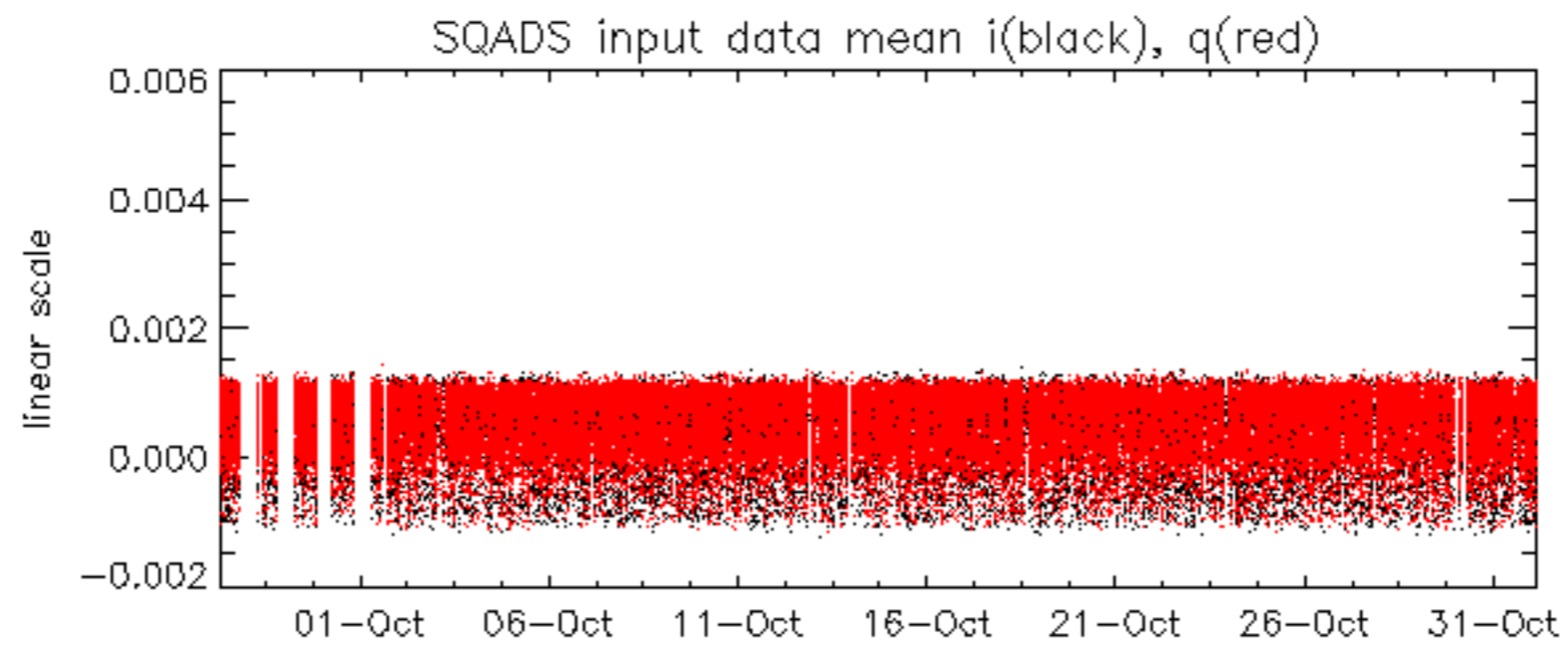


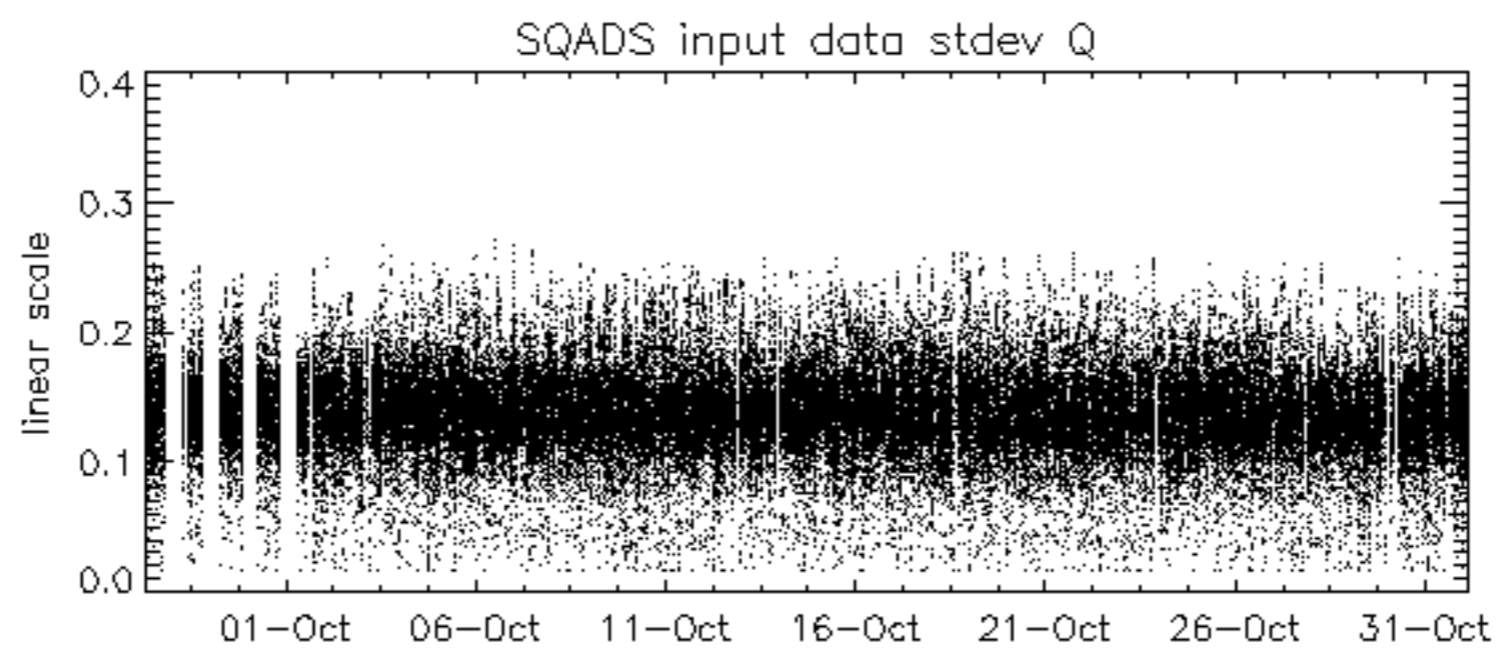
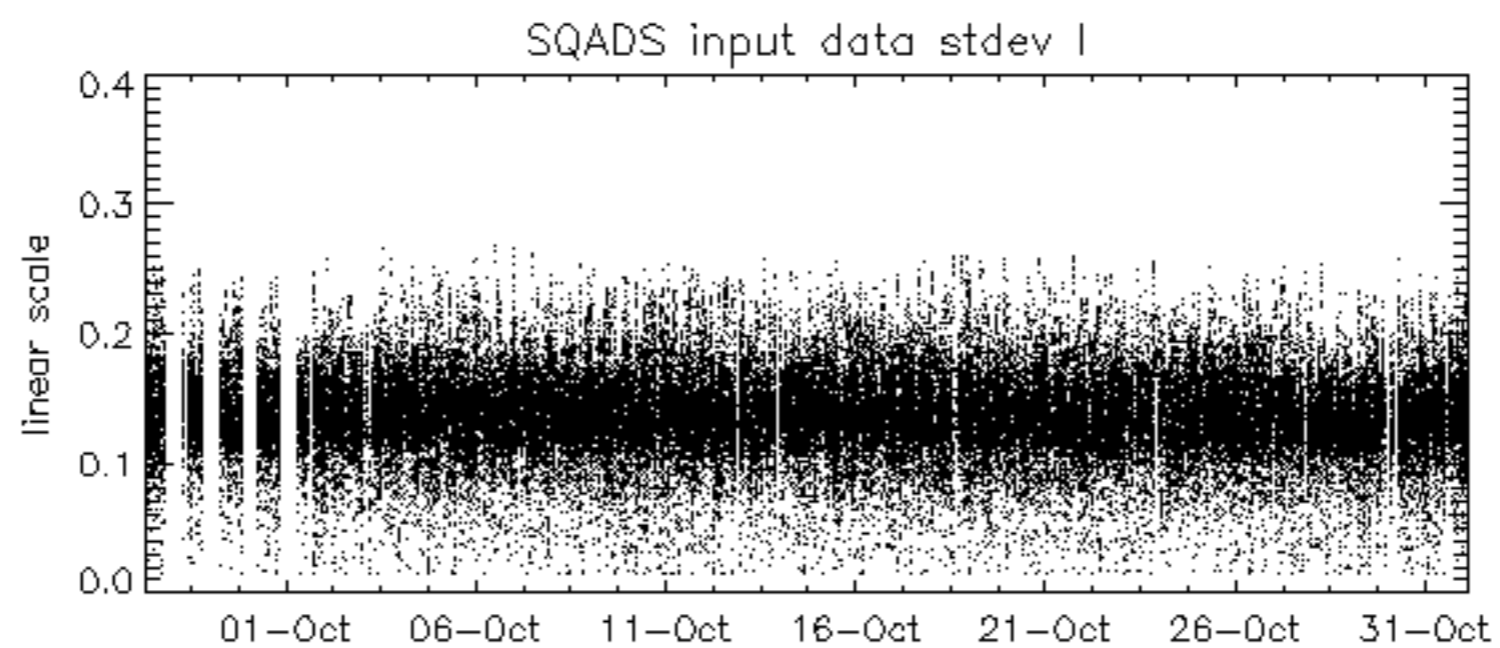
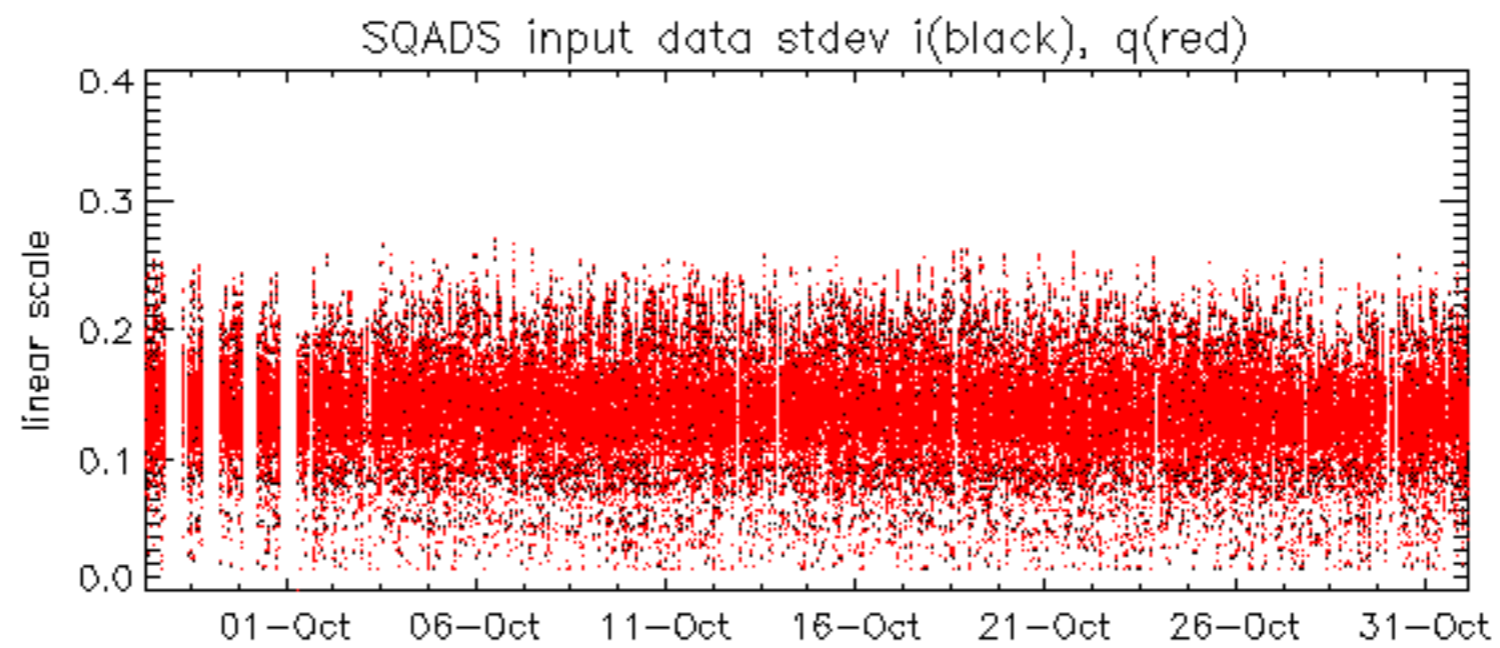






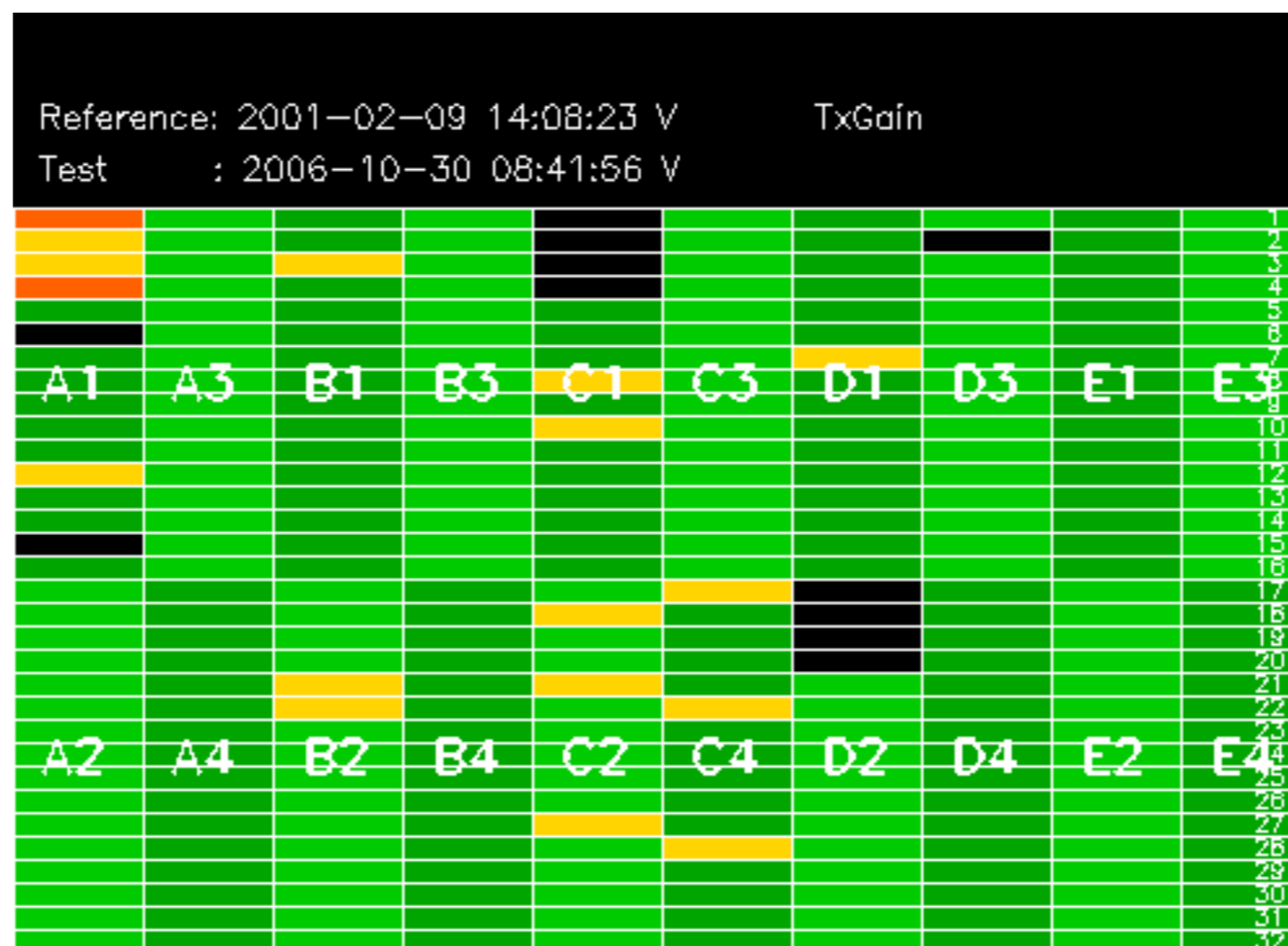


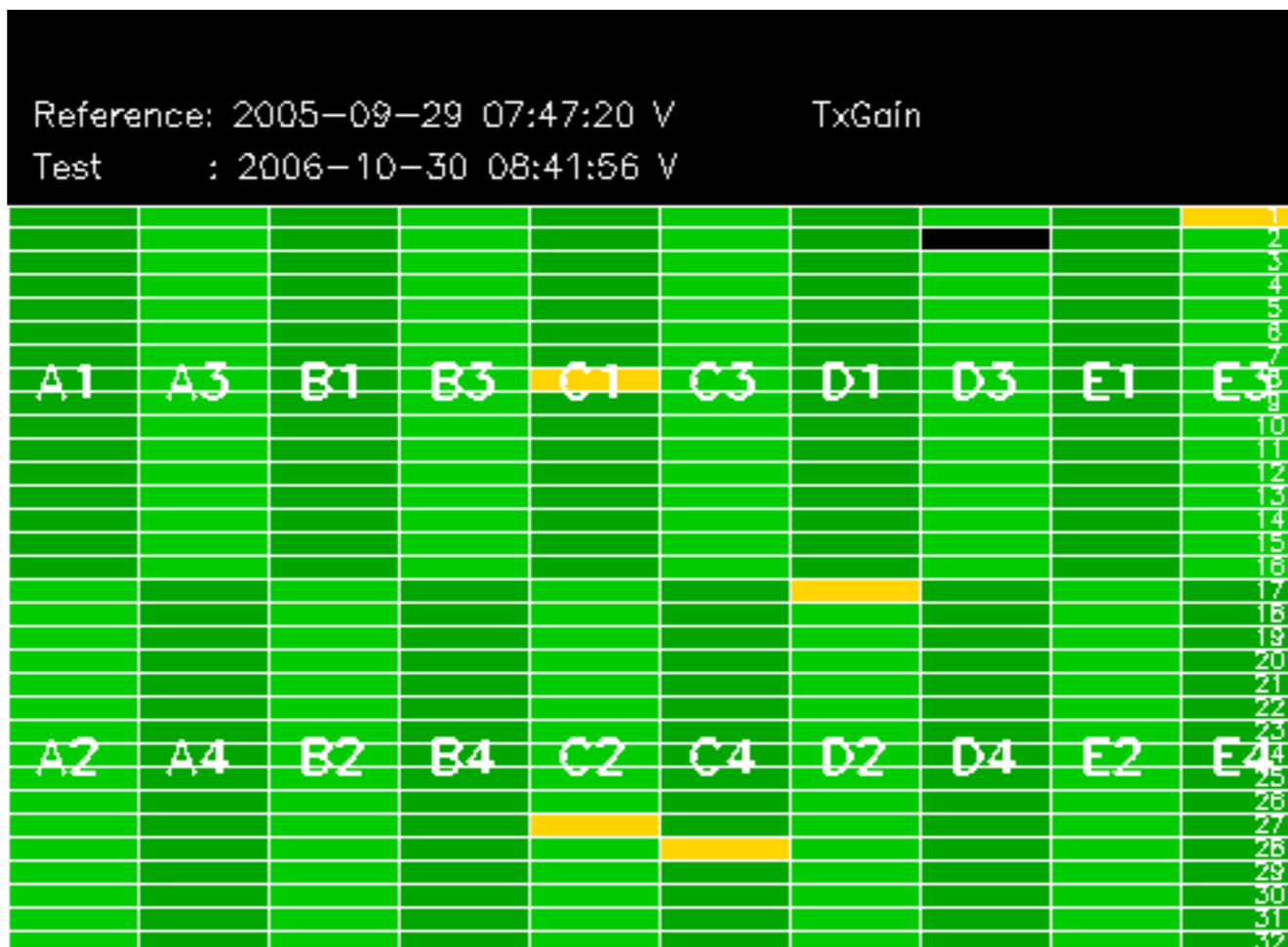










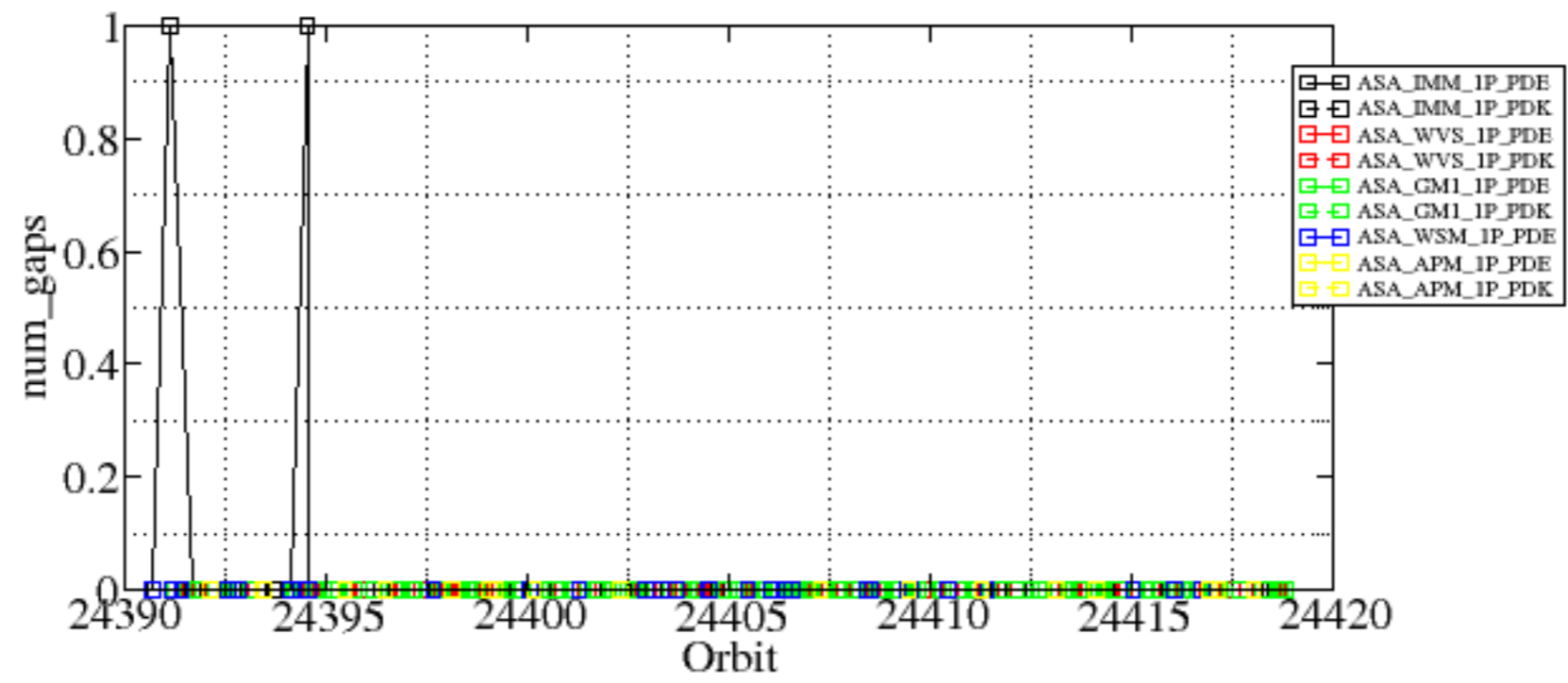




Summary of analysis for the last 3 days 2006103[011]

The assumption is taken that the SQUADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

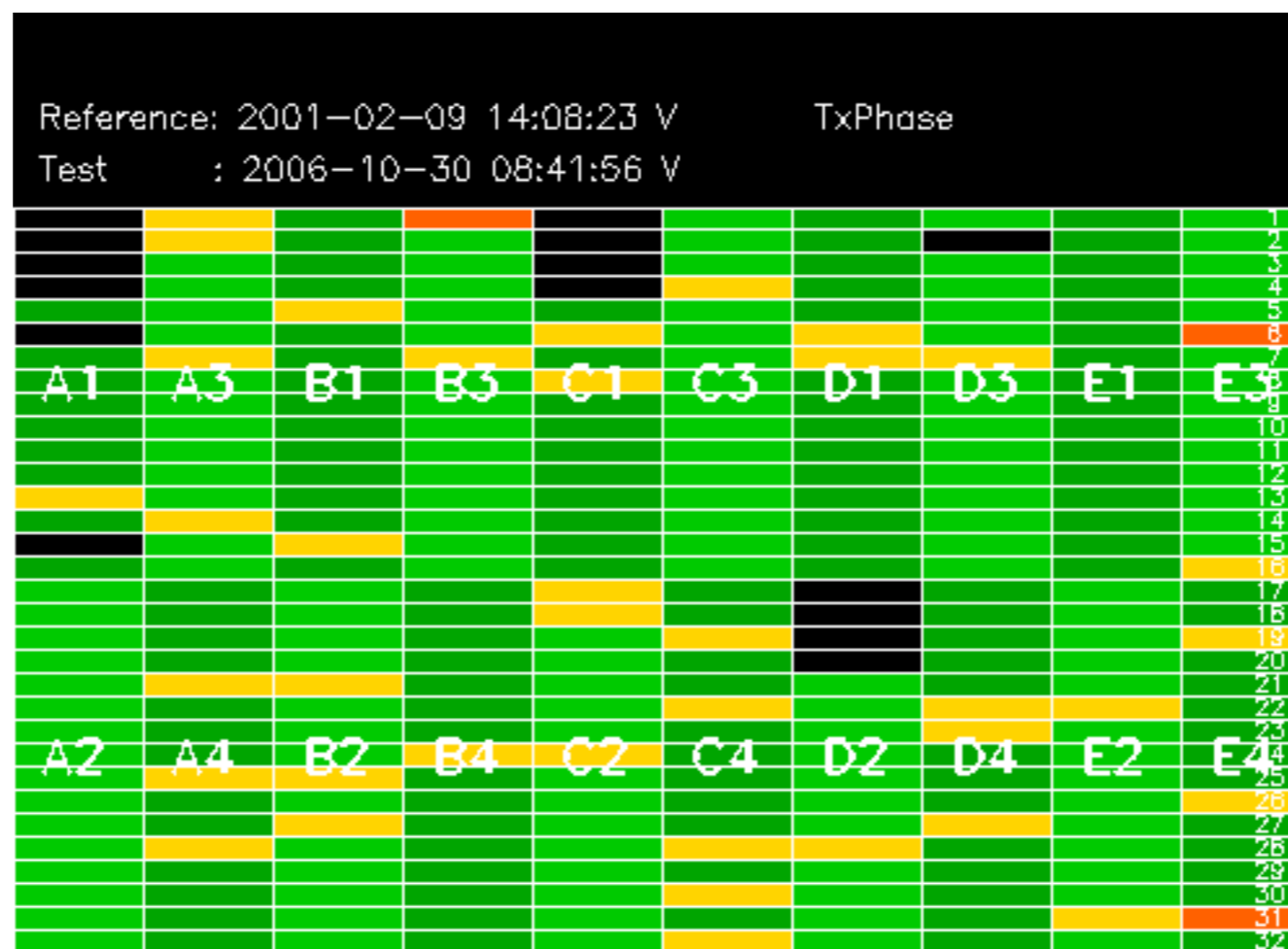
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20061030_010452_000000932052_00289_24391_0001.N1	1	0
ASA_IMM_1PNPDE20061030_064719_000000342052_00292_24394_7664.N1	1	0
ASA_GM1_1PNPDK20061030_140740_000002832052_00296_24398_7654.N1	0	7
ASA_WSM_1PNPDE20061030_160313_000000852052_00298_24400_0001.N1	0	24
ASA_WSM_1PNPDE20061031_010559_000000852052_00303_24405_0001.N1	0	15
ASA_WSM_1PNPDE20061031_170842_000003302052_00313_24415_0001.N1	0	20



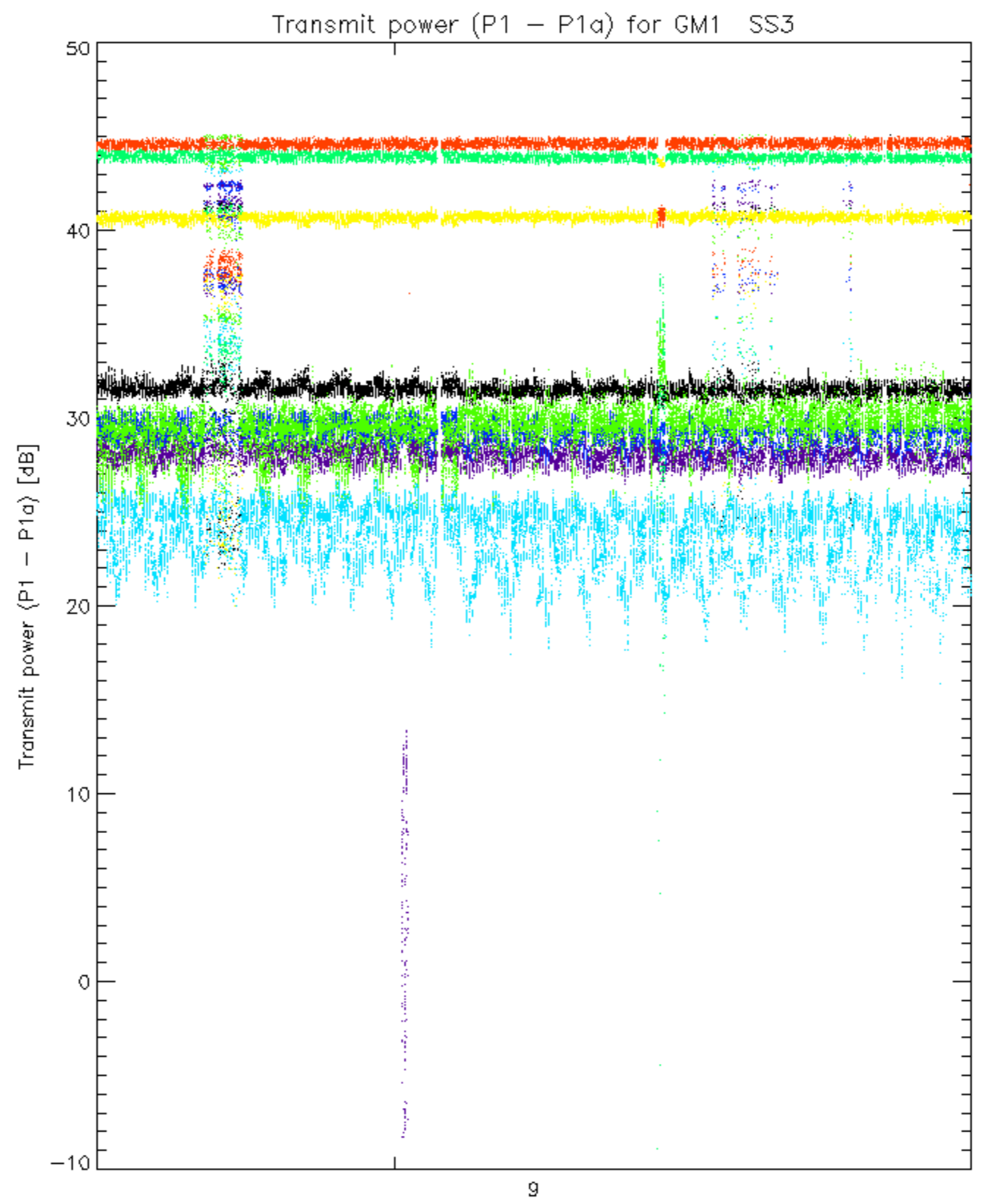






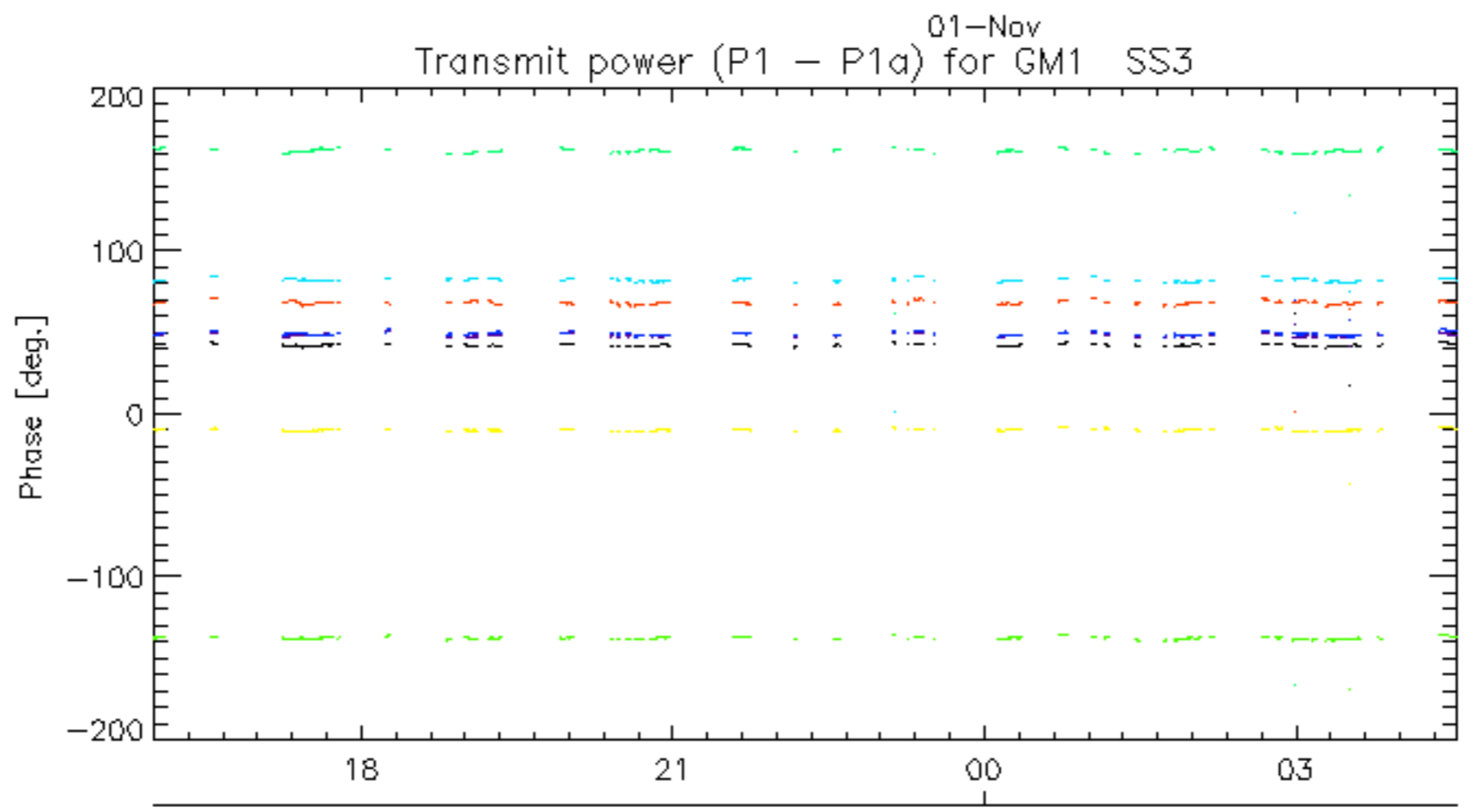
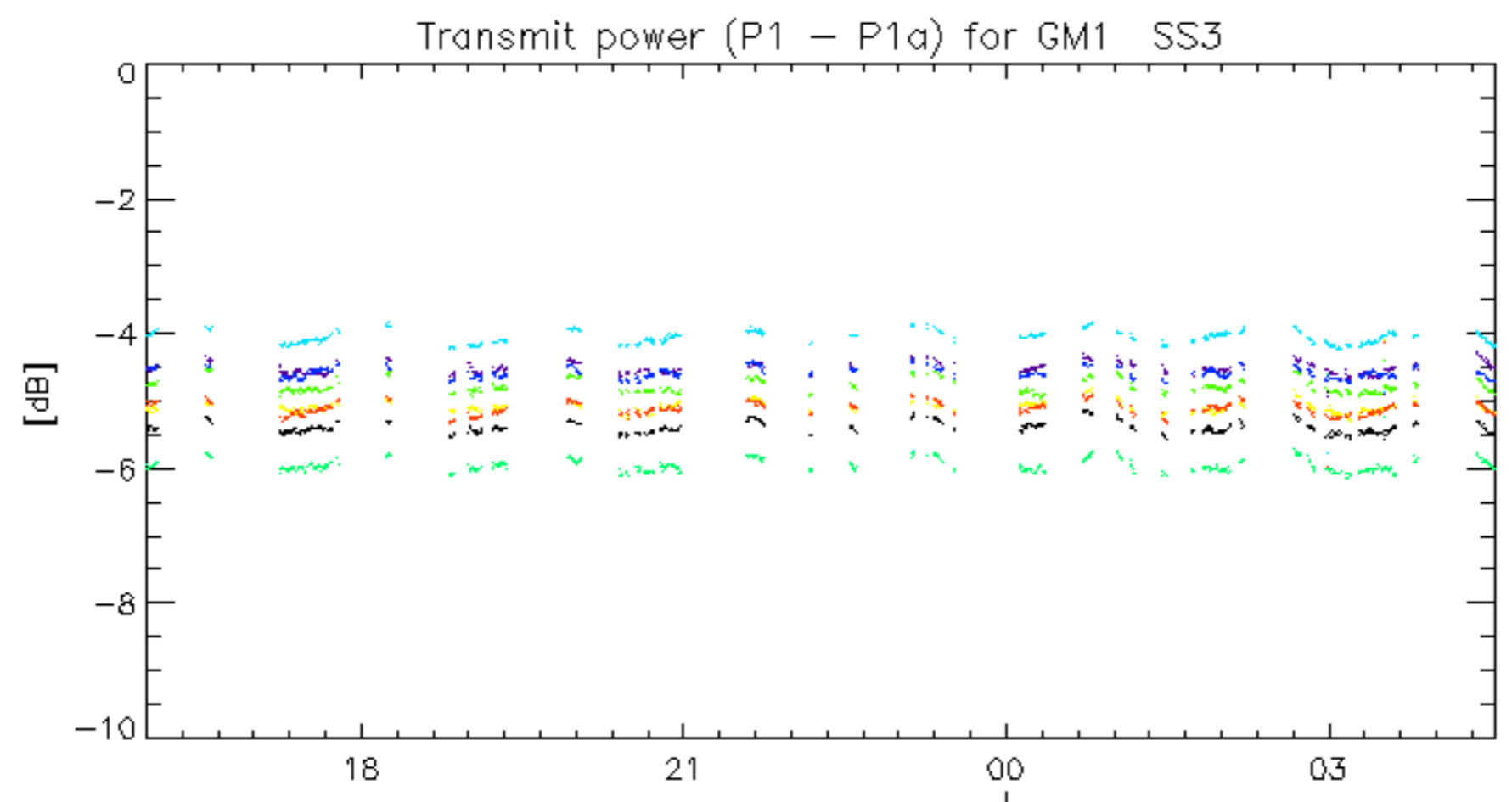




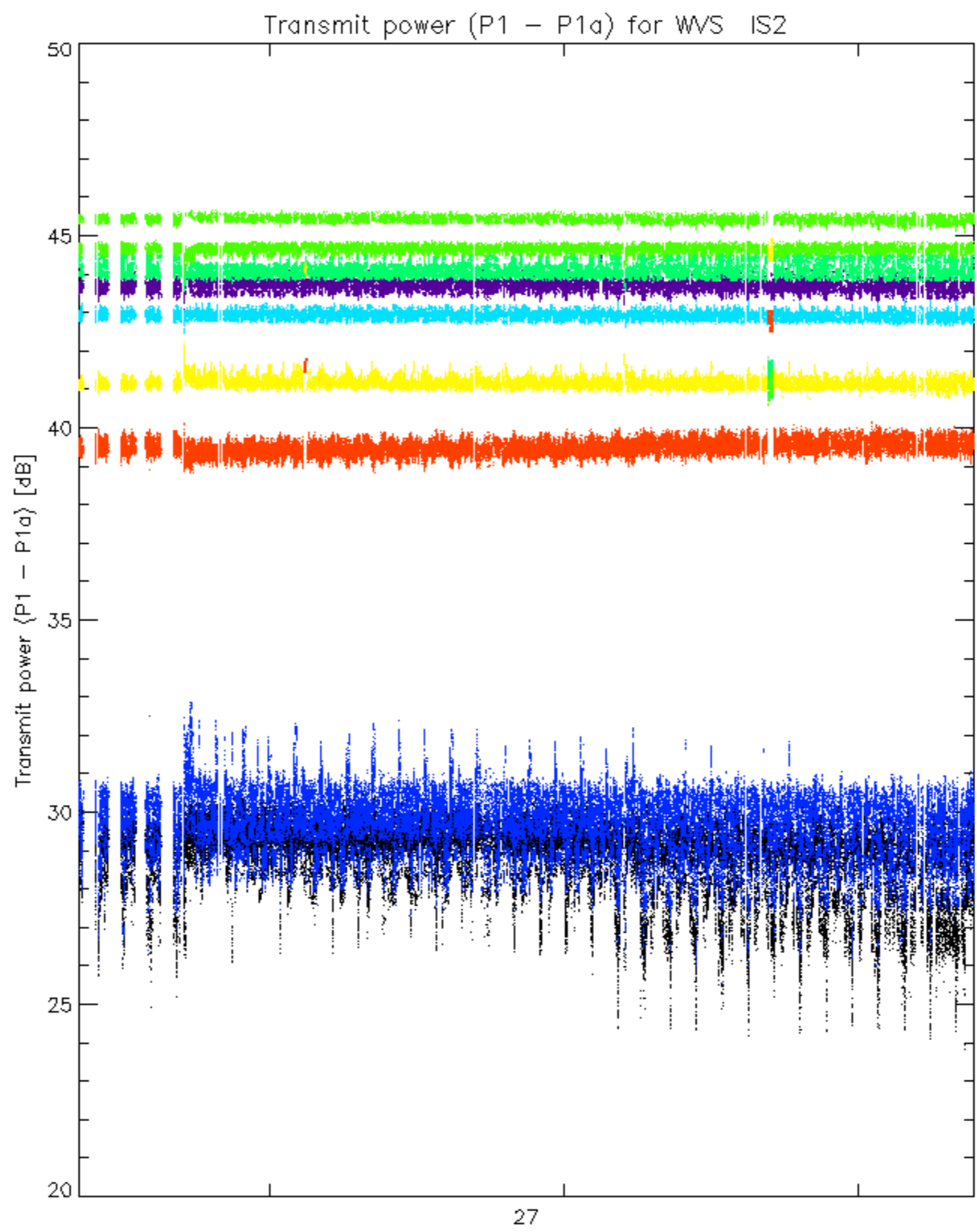


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

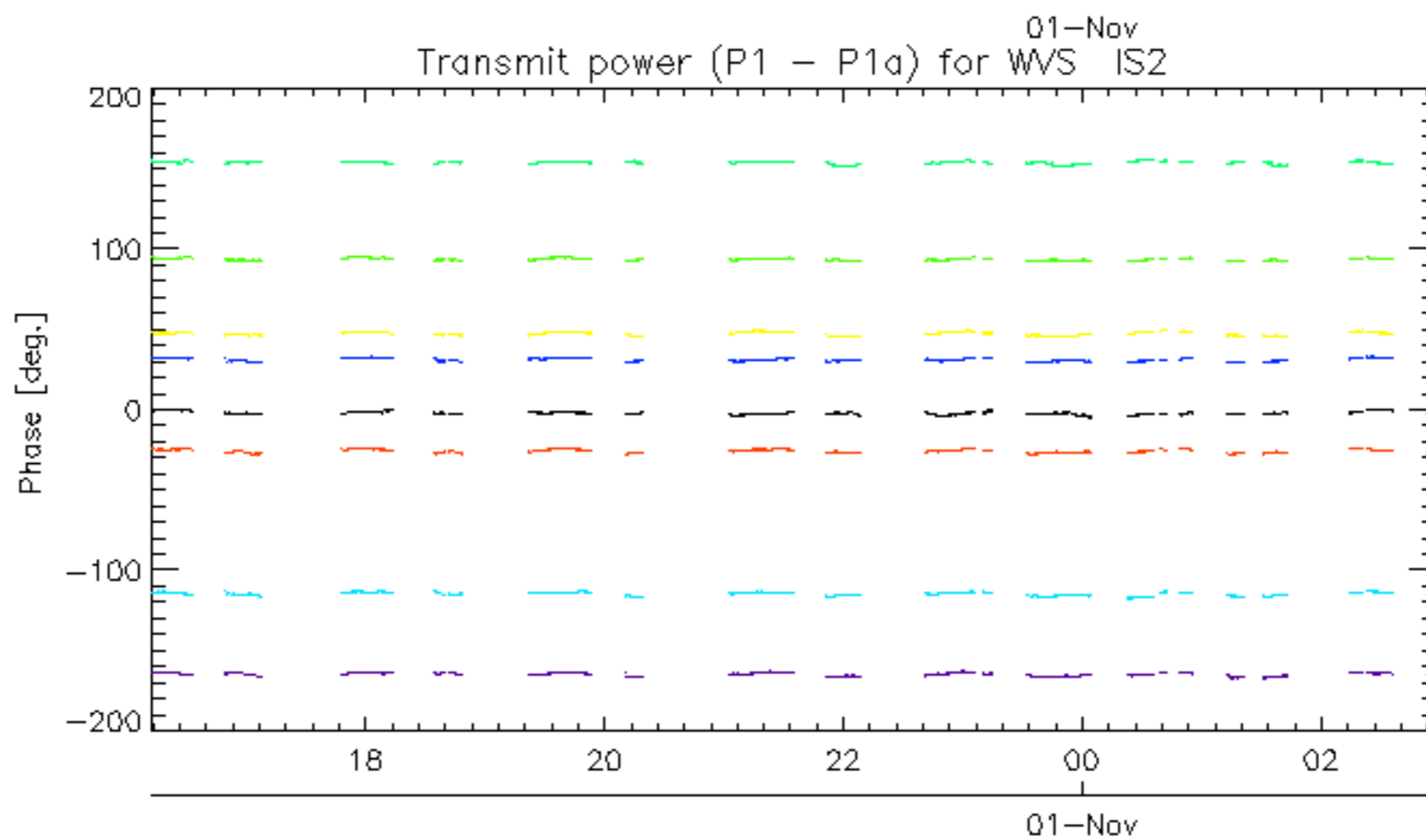
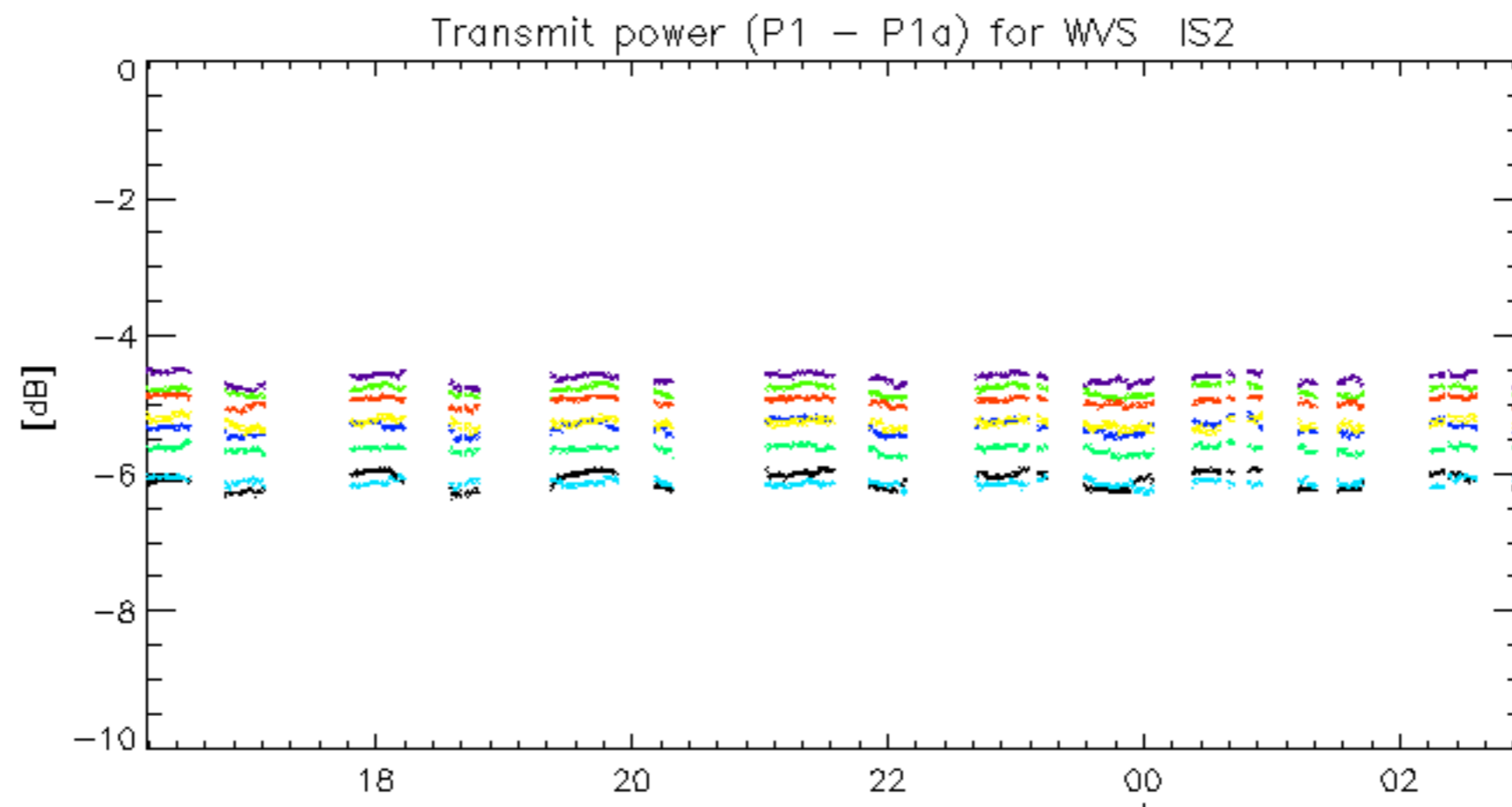




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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

No unavailabilities during the reported period.