

# PRELIMINARY REPORT OF 061104

last update on Sat Nov 4 16:35:30 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 2006-11-03 00:00:00 to 2006-11-04 16:35:30

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	71	22	9	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	71	22	9	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	71	22	9	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	71	22	9	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	73	99	13	7	27
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	73	99	13	7	27
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	73	99	13	7	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	73	99	13	7	27

## 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	20061103 063528
H	20061104 060351

### 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
<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	-3.950874	0.009681	-0.014292
7	P1	-3.103912	0.017393	-0.110115
11	P1	-4.107696	0.025217	-0.065715
15	P1	-6.235610	0.016023	-0.120559
19	P1	-3.591907	0.067992	-0.096385
22	P1	-4.643652	0.134939	-0.135187
26	P1	-4.001221	0.129807	0.039223
30	P1	-5.886266	0.247306	-0.043155
3	P1	-16.584278	0.215440	0.331304
7	P1	-17.159016	0.172609	-0.240570
11	P1	-17.075760	0.429249	-0.100649
15	P1	-12.919745	0.118786	-0.405484
19	P1	-14.795236	0.378268	-0.372697
22	P1	-15.665023	0.492406	-0.650303
26	P1	-15.073216	0.254569	-0.061456
30	P1	-17.098112	0.697590	-0.793634

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.835318	0.088729	-0.055391
7	P2	-21.750257	0.095552	0.072850
11	P2	-15.698624	0.107818	0.118362
15	P2	-7.083133	0.109059	-0.117845
19	P2	-9.144930	0.102042	-0.129727
22	P2	-18.167681	0.097212	-0.166942
26	P2	-16.461237	0.107892	-0.200732
30	P2	-19.466423	0.092083	-0.031104

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210584	0.007631	-0.059058
7	P3	-8.210584	0.007631	-0.059058
11	P3	-8.210584	0.007631	-0.059058
15	P3	-8.210584	0.007631	-0.059058
19	P3	-8.210584	0.007631	-0.059058
22	P3	-8.210584	0.007631	-0.059058
26	P3	-8.210473	0.007651	-0.059346
30	P3	-8.210473	0.007651	-0.059346

#### 4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.925714	0.201670	0.116921
7	P1	-2.628578	1.277554	0.522145
11	P1	-2.906060	0.155960	0.203683
15	P1	-3.700928	0.141655	0.164274
19	P1	-3.523558	0.163747	-0.127226
22	P1	-5.071217	0.120780	-0.018042
26	P1	-6.001329	0.309958	-0.179596
30	P1	-5.300263	0.202788	-0.189458
3	P1	-11.758434	0.490448	0.283606
7	P1	-10.164147	1.619771	0.644414
11	P1	-10.430574	0.437257	0.511980
15	P1	-10.898618	0.577332	0.697363
19	P1	-15.764187	2.945243	-0.478143
22	P1	-21.114962	1.670518	-0.865754
26	P1	-15.925881	0.464861	-0.599758
30	P1	-17.996559	0.550081	0.394580

## P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.374975	0.297267	-0.371567
7	P2	-22.022345	1.689993	-0.932369
11	P2	-10.866231	0.258018	-0.312847
15	P2	-4.912608	0.056473	-0.178395
19	P2	-6.892816	0.083190	-0.169780
22	P2	-8.266296	0.513684	0.085417
26	P2	-24.148890	1.289549	-0.739459
30	P2	-21.867693	0.651507	-0.376808

## P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.066175	0.003179	-0.050987
7	P3	-8.066214	0.003158	-0.051681
11	P3	-8.066113	0.003163	-0.051891
15	P3	-8.066112	0.003158	-0.050955
19	P3	-8.066136	0.003155	-0.051164
22	P3	-8.066036	0.003169	-0.051825
26	P3	-8.065903	0.003148	-0.052583
30	P3	-8.065928	0.003147	-0.052219

## 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	0.000556955
	stdev	1.70026e-07
MEAN Q	mean	0.000523295
	stdev	2.16447e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137412
	stdev	0.00110493
STDEV Q	mean	0.137778
	stdev	0.00112197



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006110[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_GM1_1PNPDK20061102_203159_000007372052_00343_24445_7869.N1	0	9
ASA_WSM_1PNPDE20061102_000626_000002022052_00331_24433_0001.N1	0	35
ASA_WSM_1PNPDE20061102_042319_000000852052_00334_24436_0001.N1	0	8
ASA_WSM_1PNPDE20061103_011004_000002262052_00346_24448_0001.N1	0	63







## 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

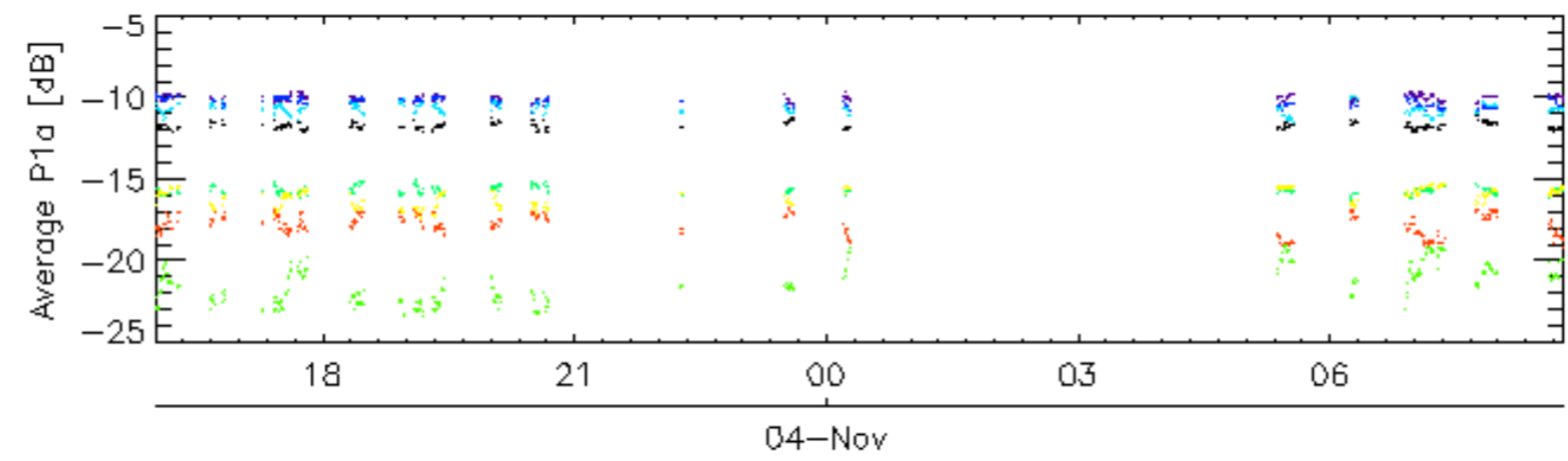
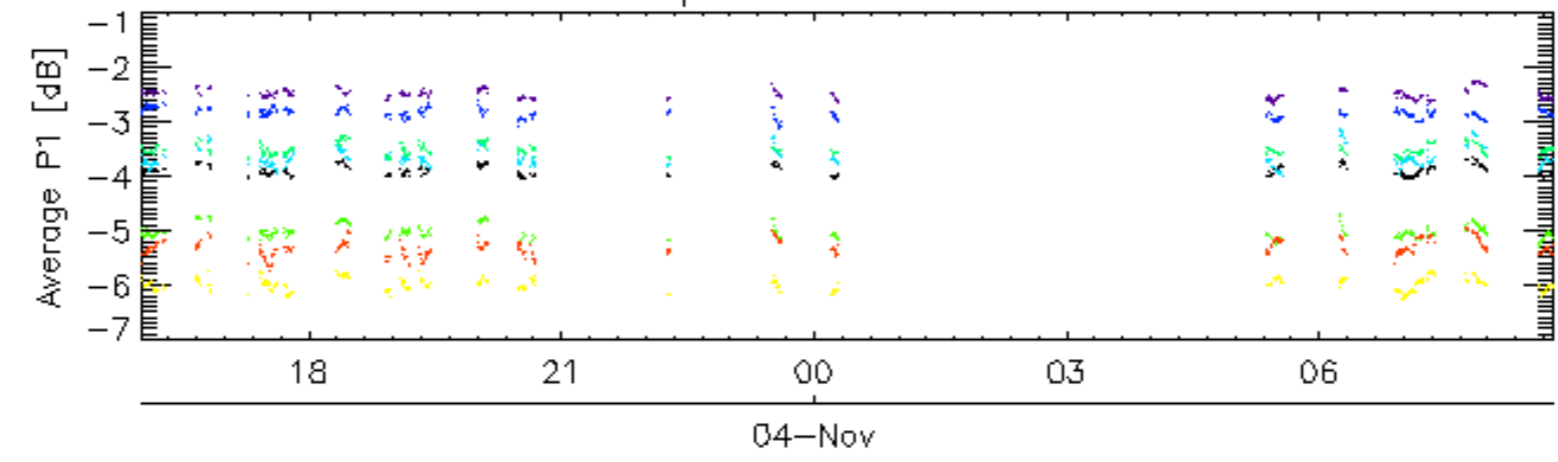
### 7.5 - Absolute Doppler for GM1

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

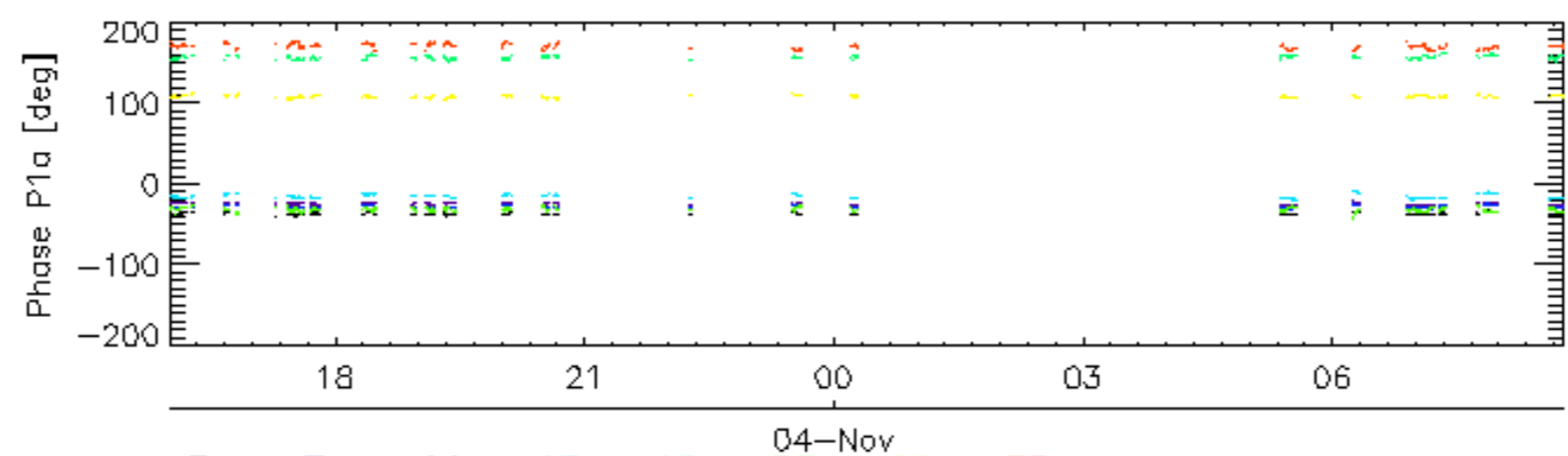
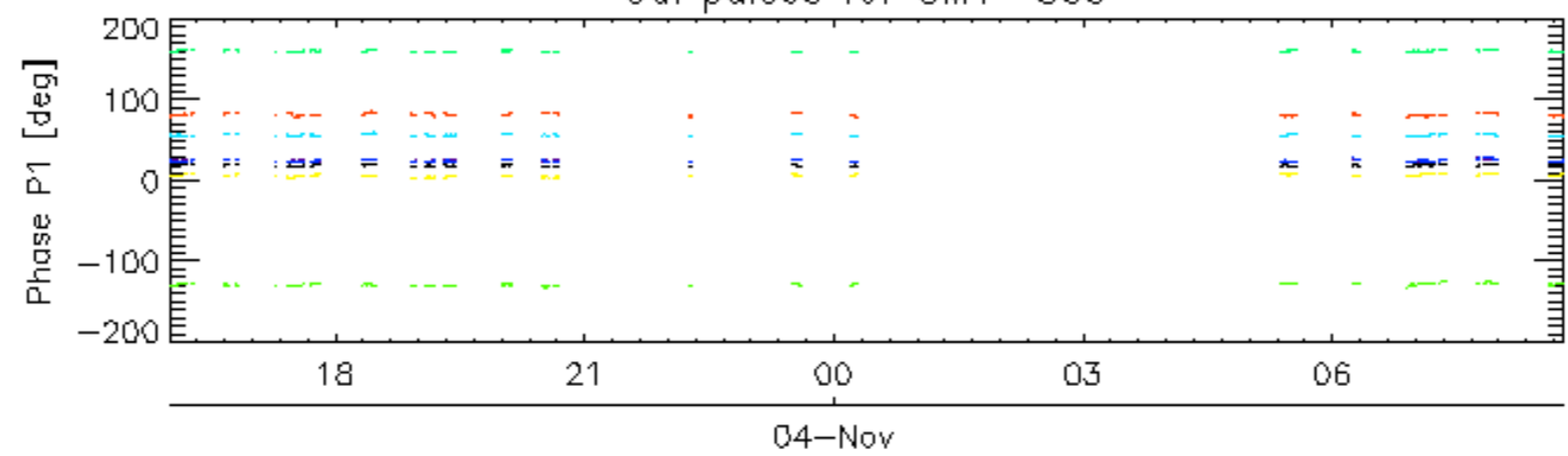
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

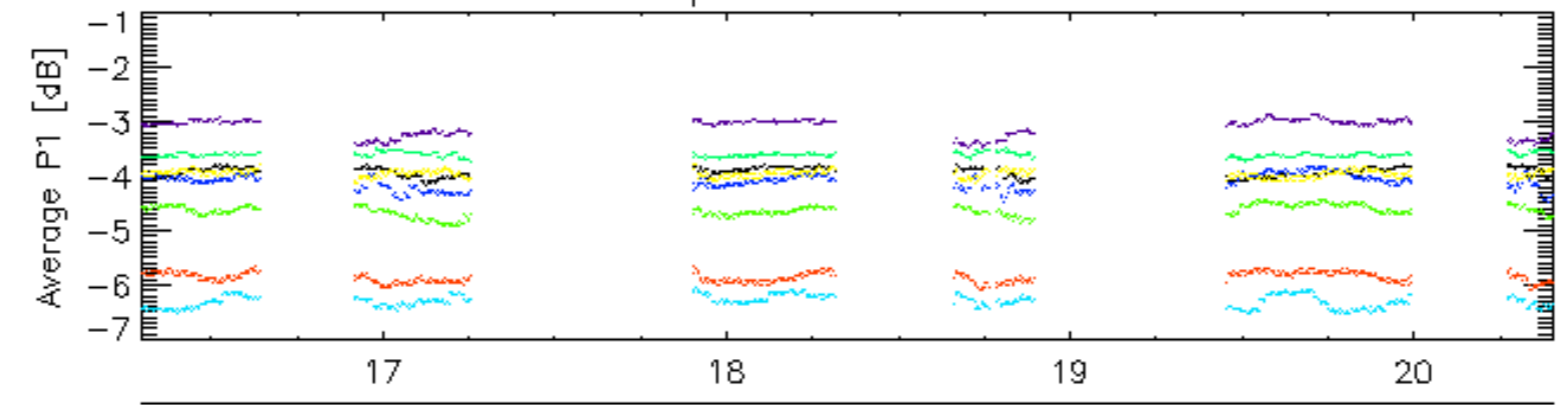


Cal pulses for GM1 SS3

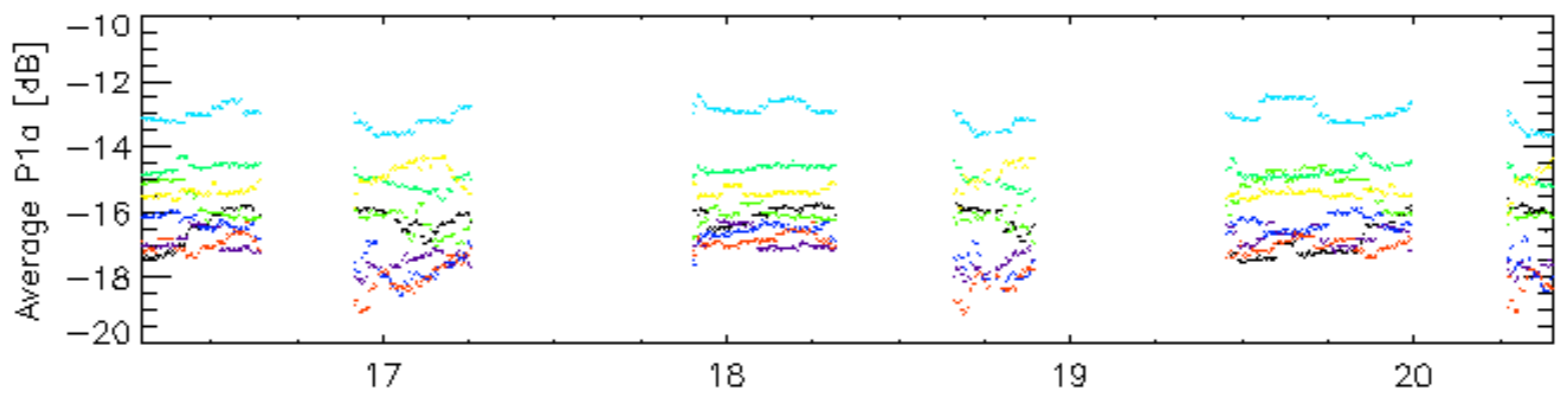


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

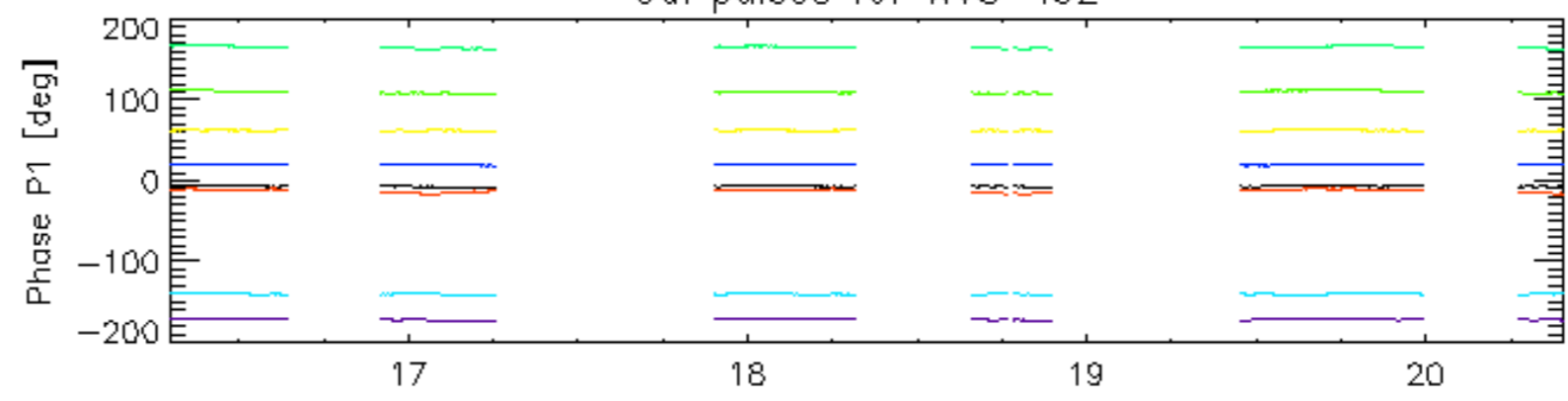


03-Nov

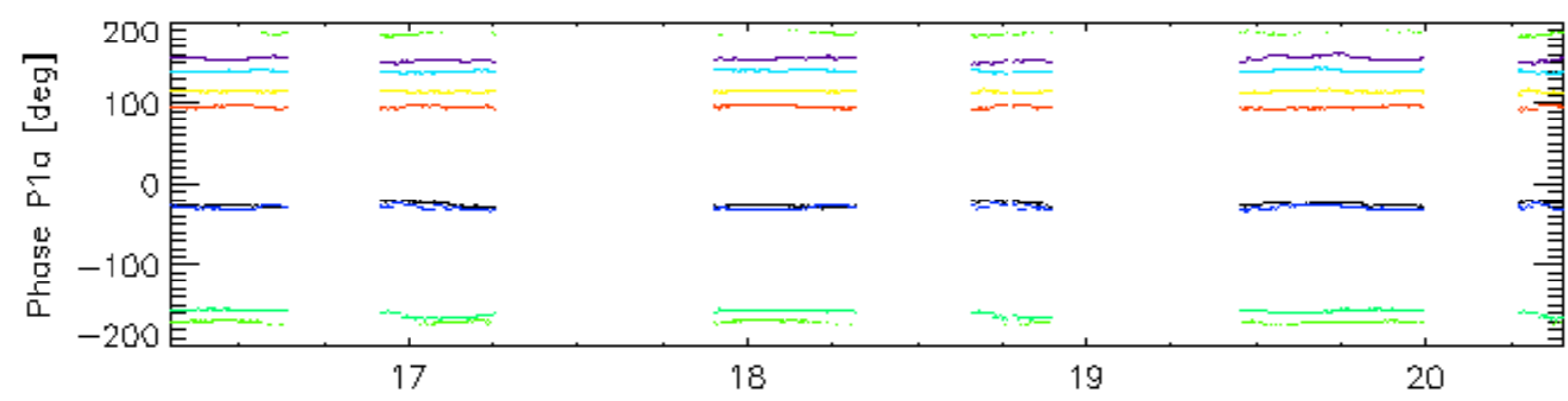


03-Nov

Cal pulses for WVS IS2

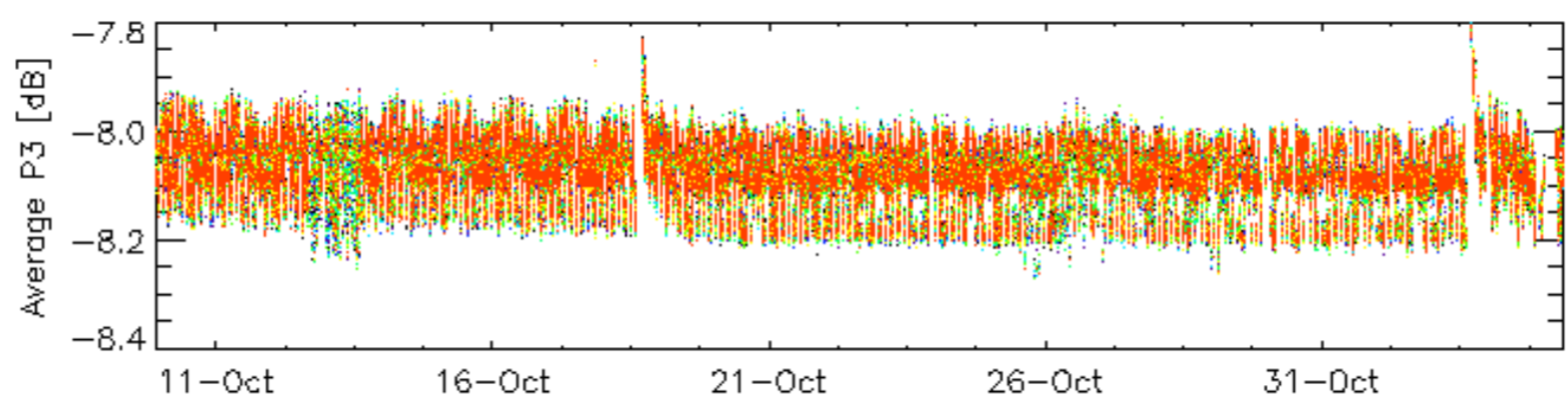
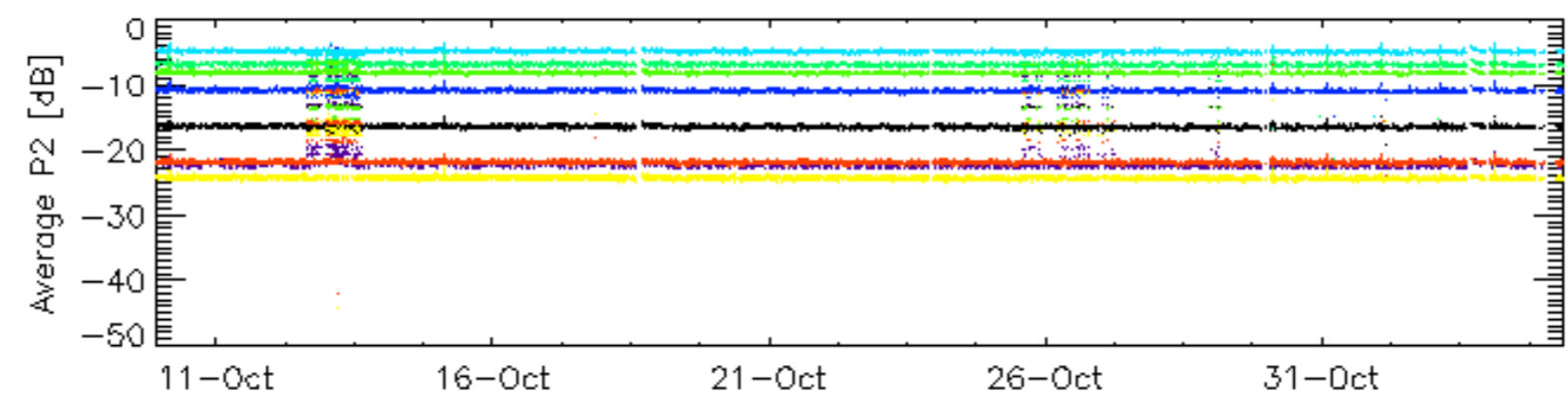
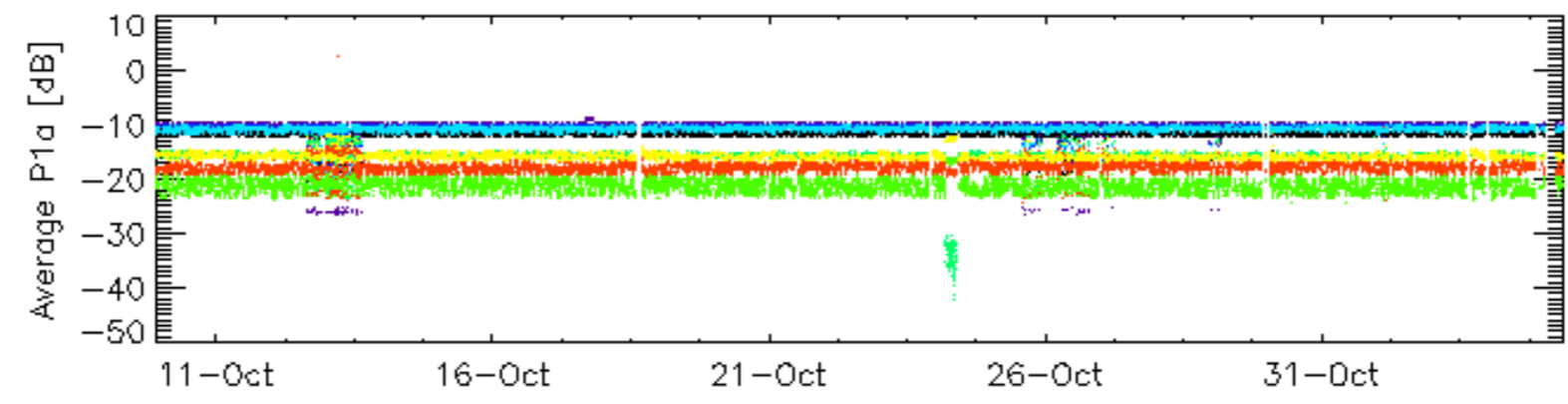
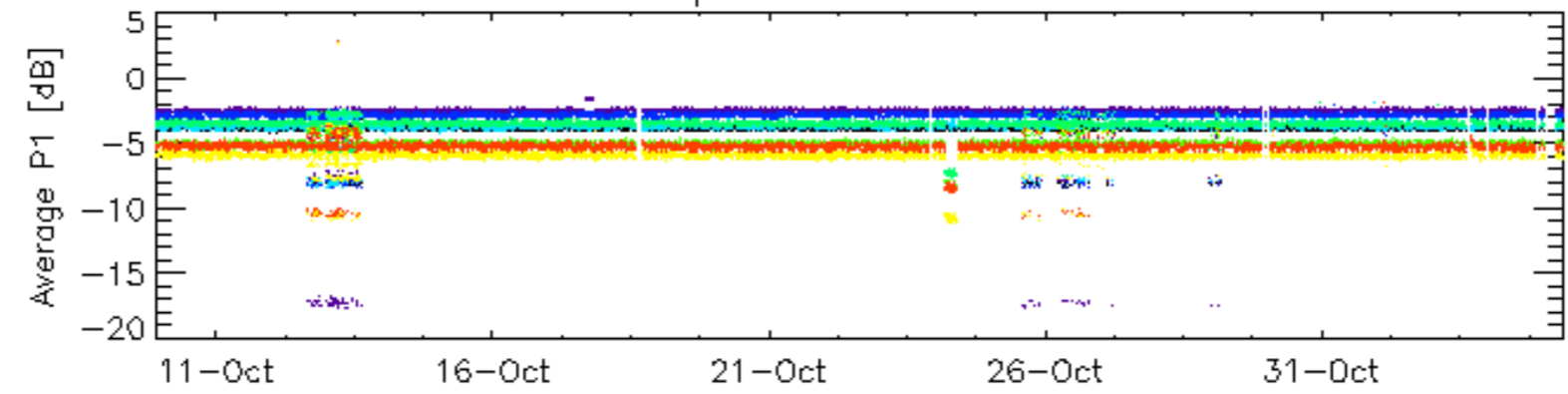


03-Nov



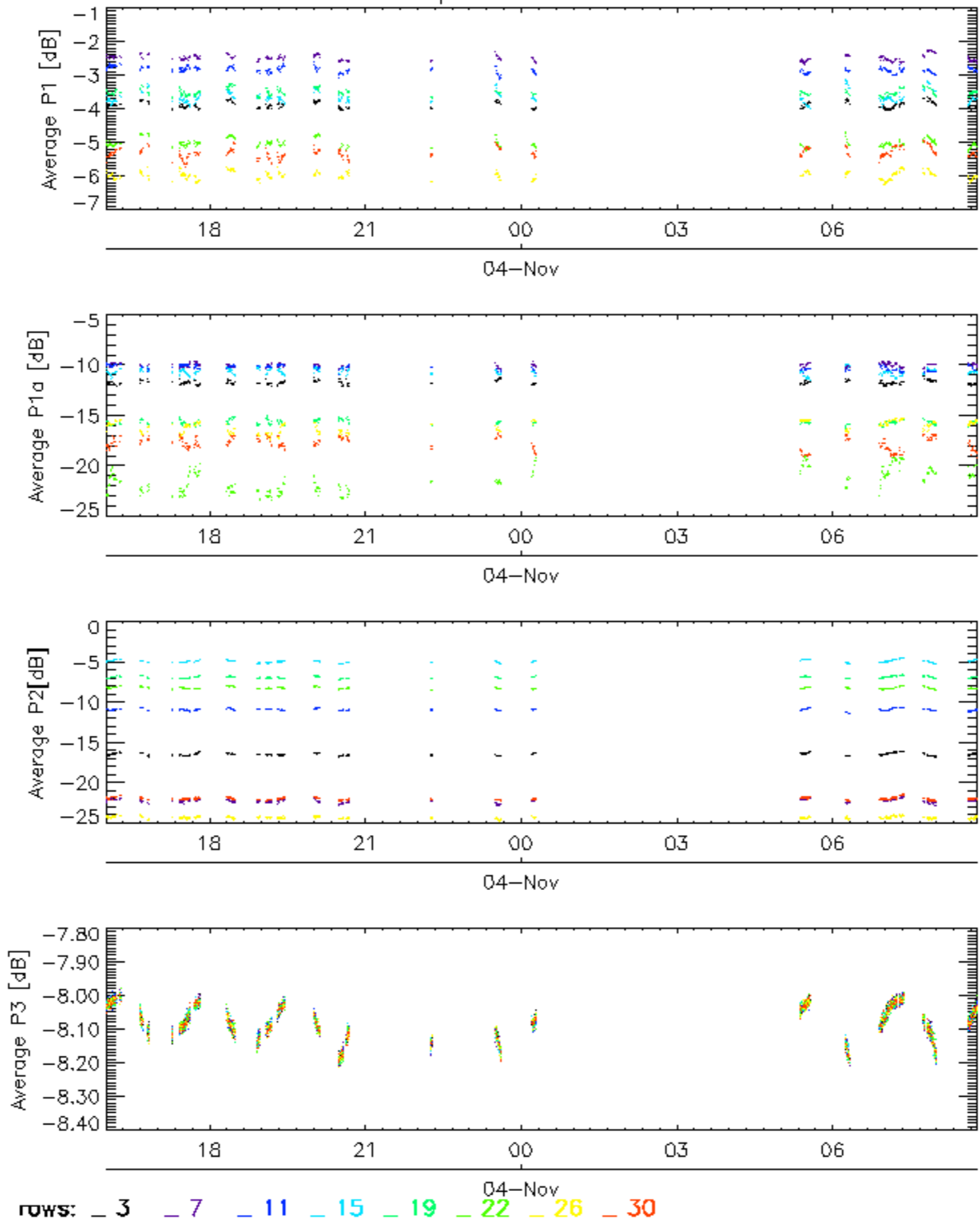
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30 03-Nov

### Cal pulses for GM1 SS3

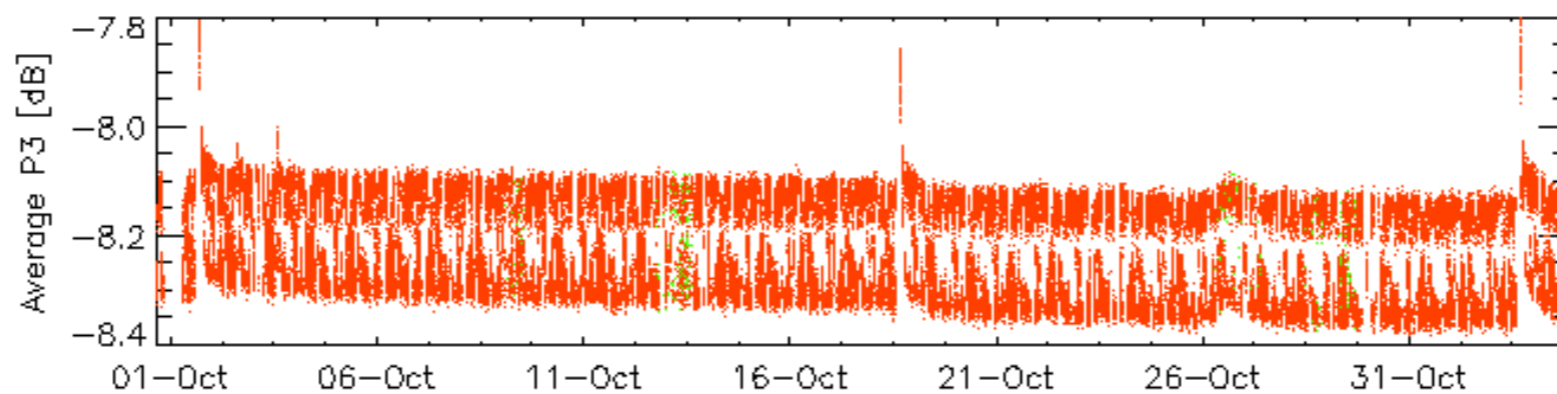
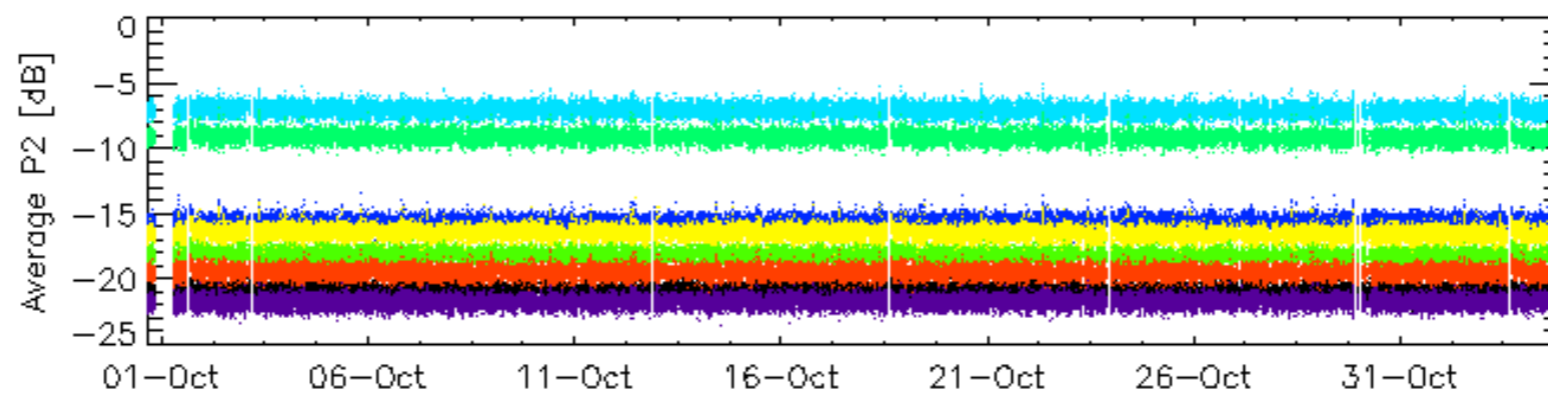
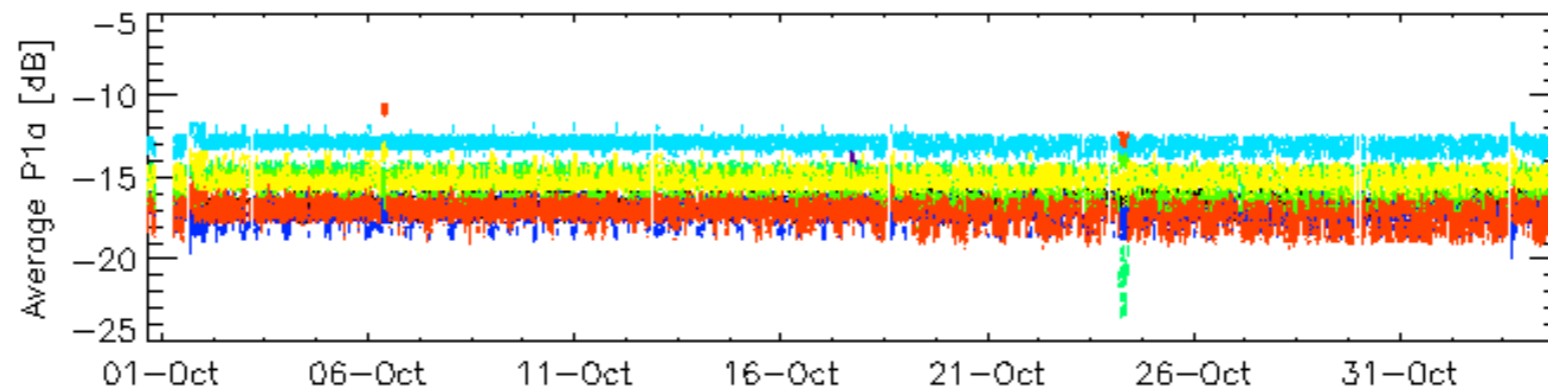
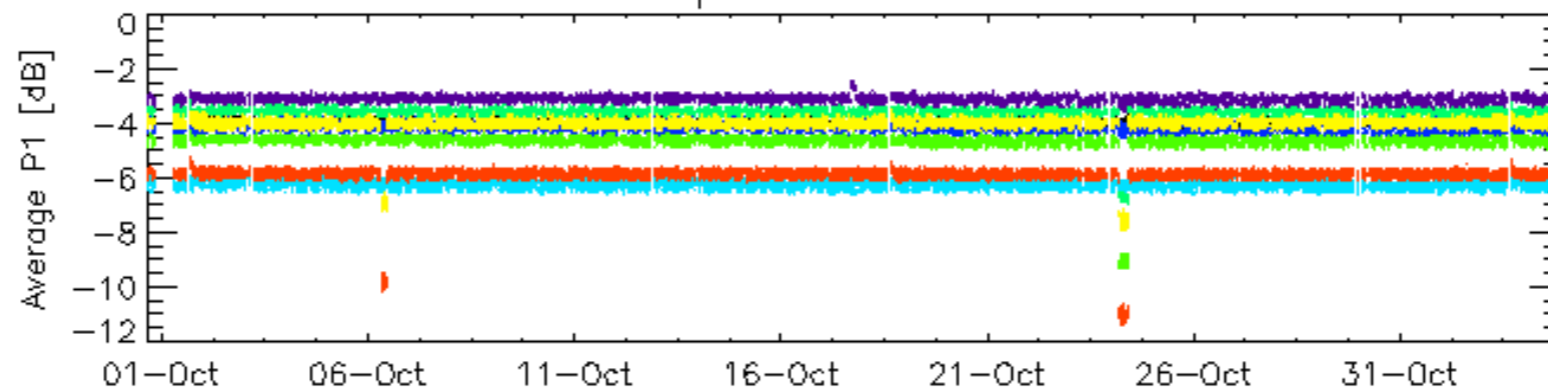


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

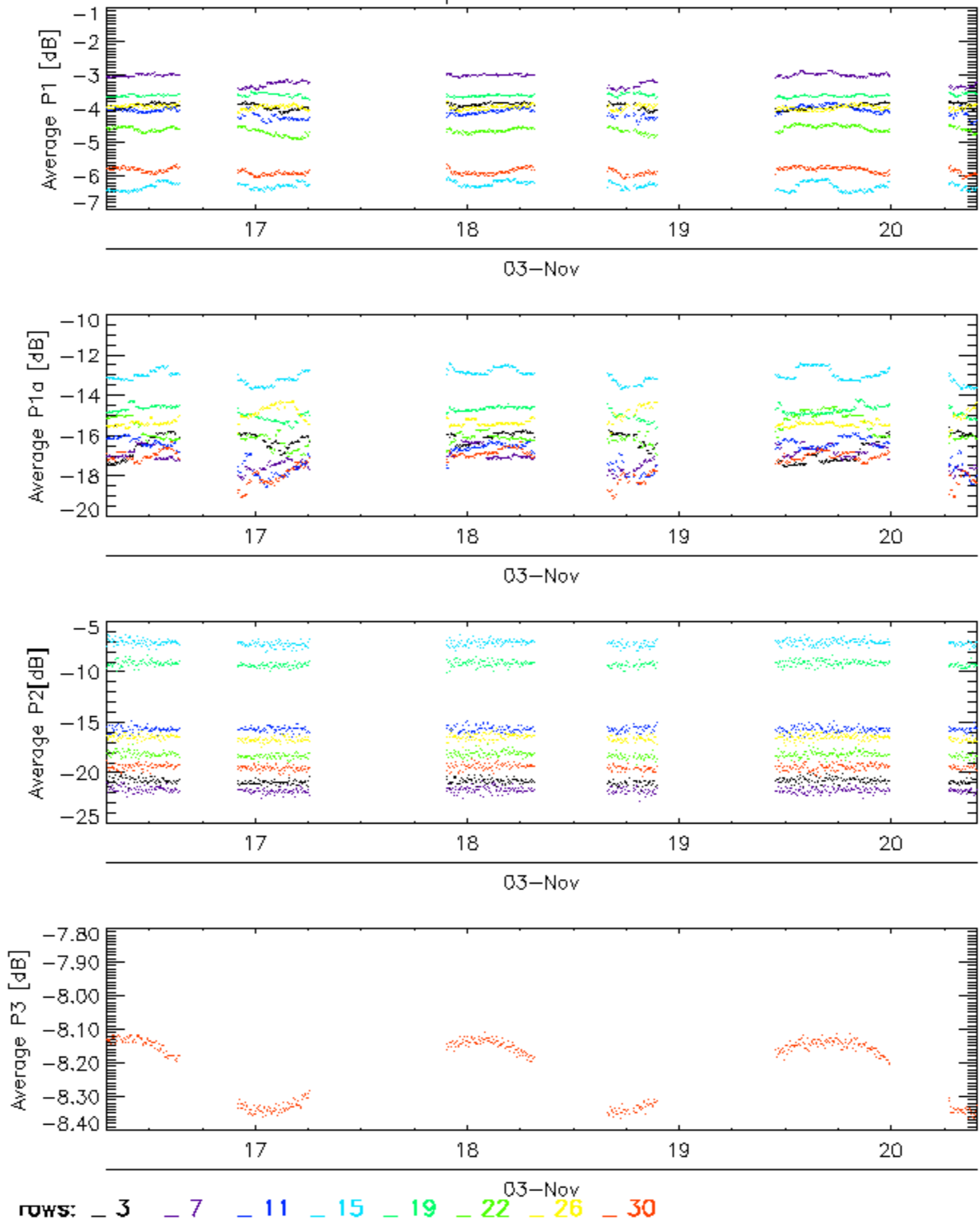


Cal pulses for WVS IS2



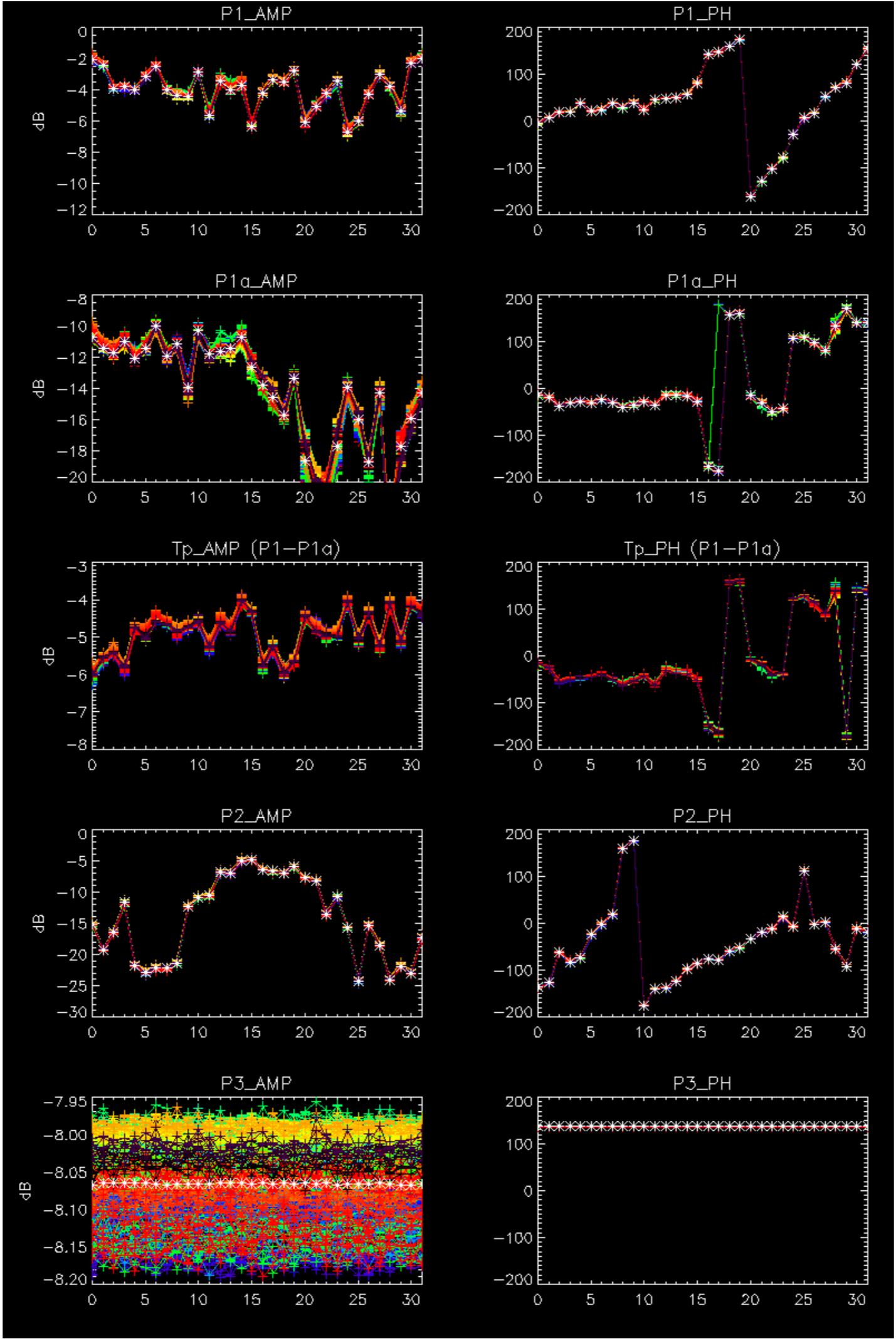
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

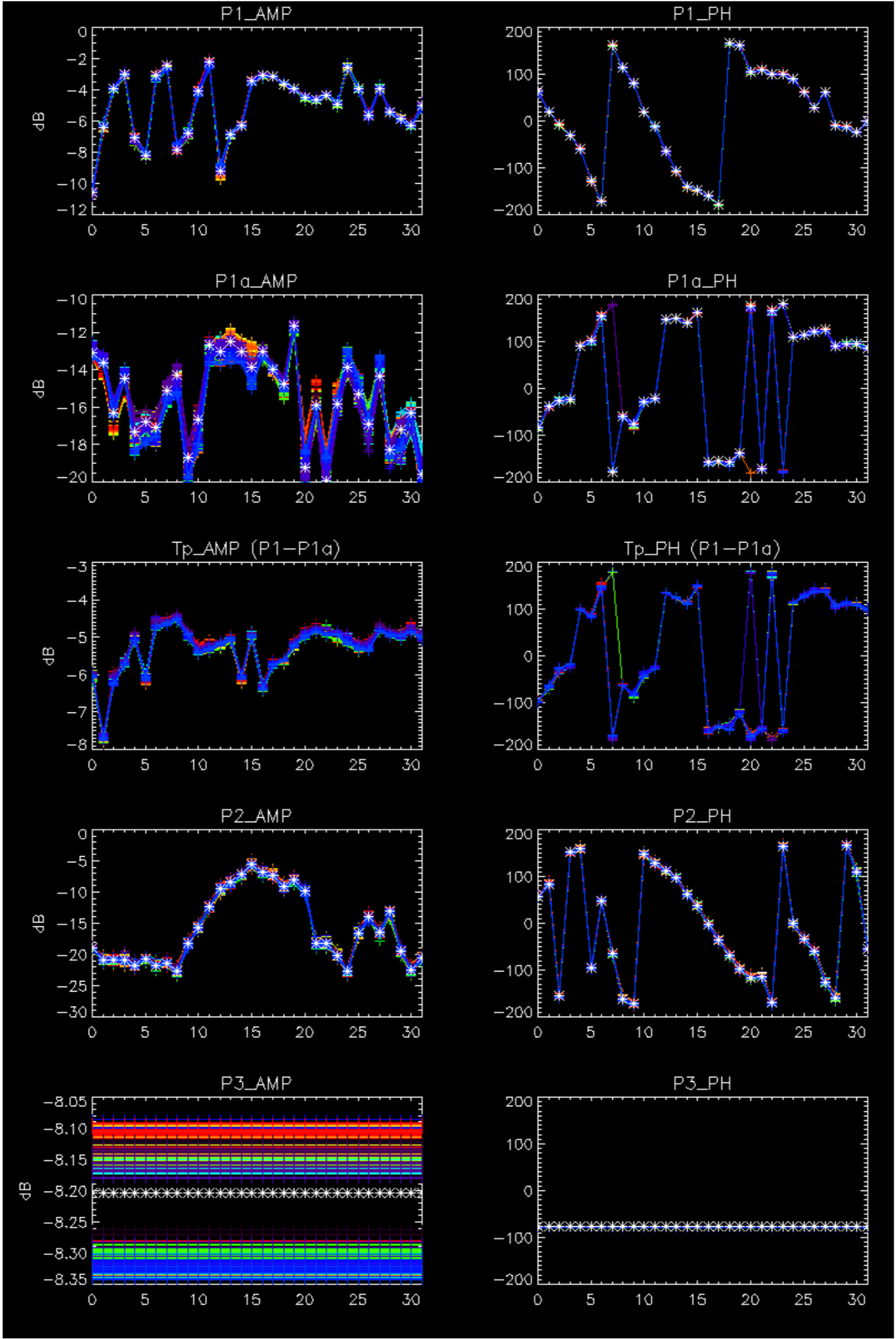
Cal pulses for WVS IS2



No anomalies observed.



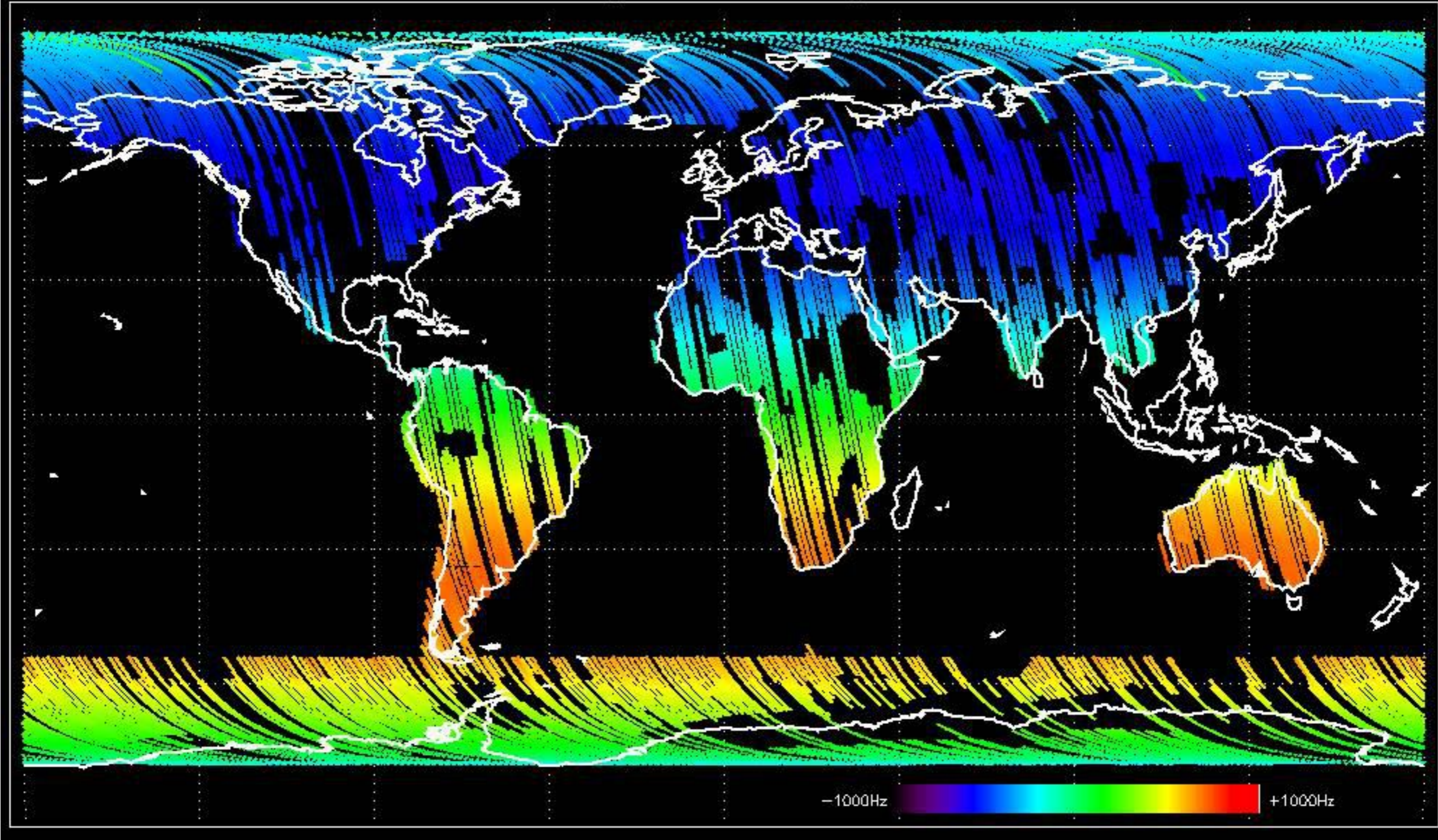




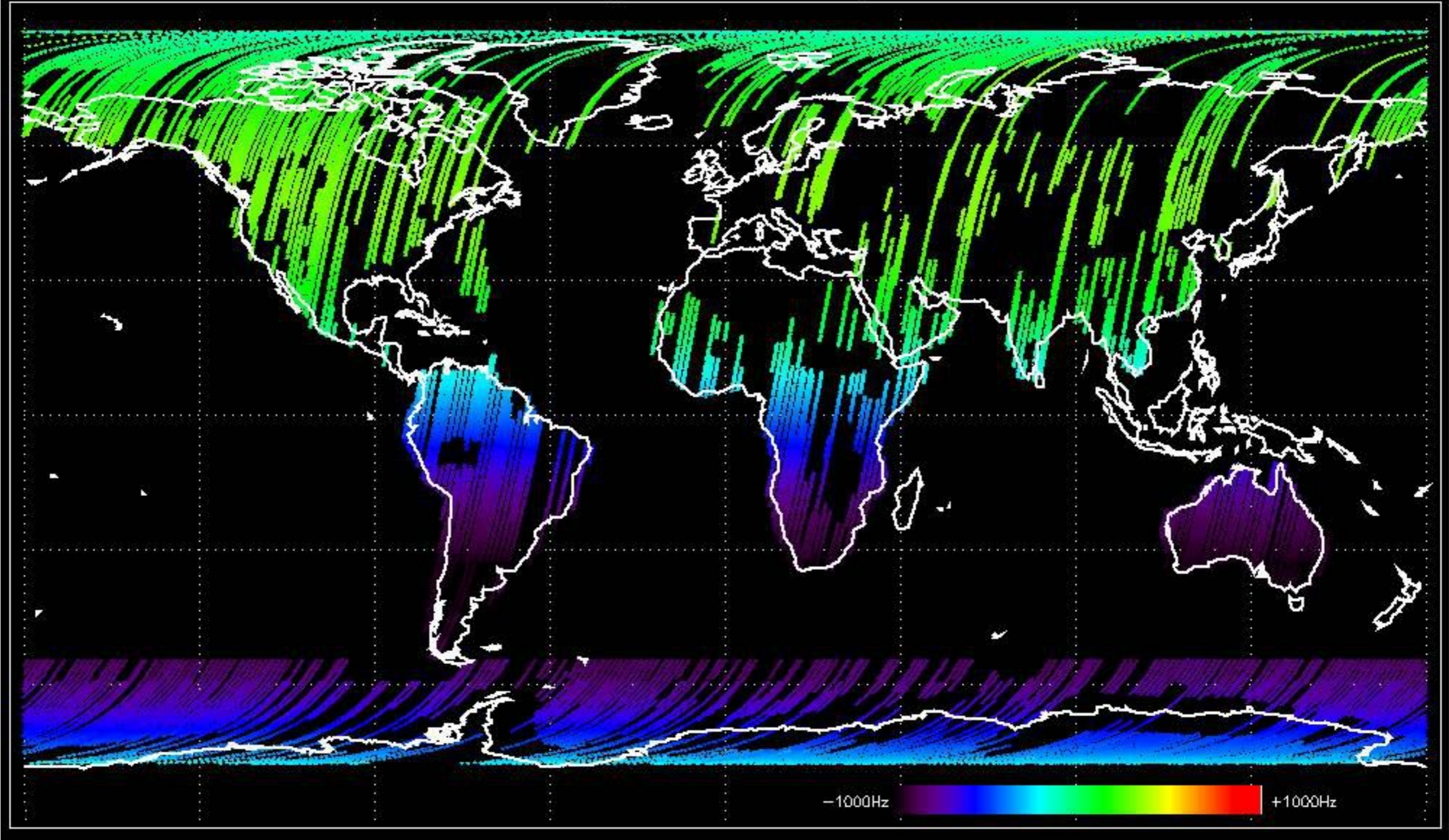
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



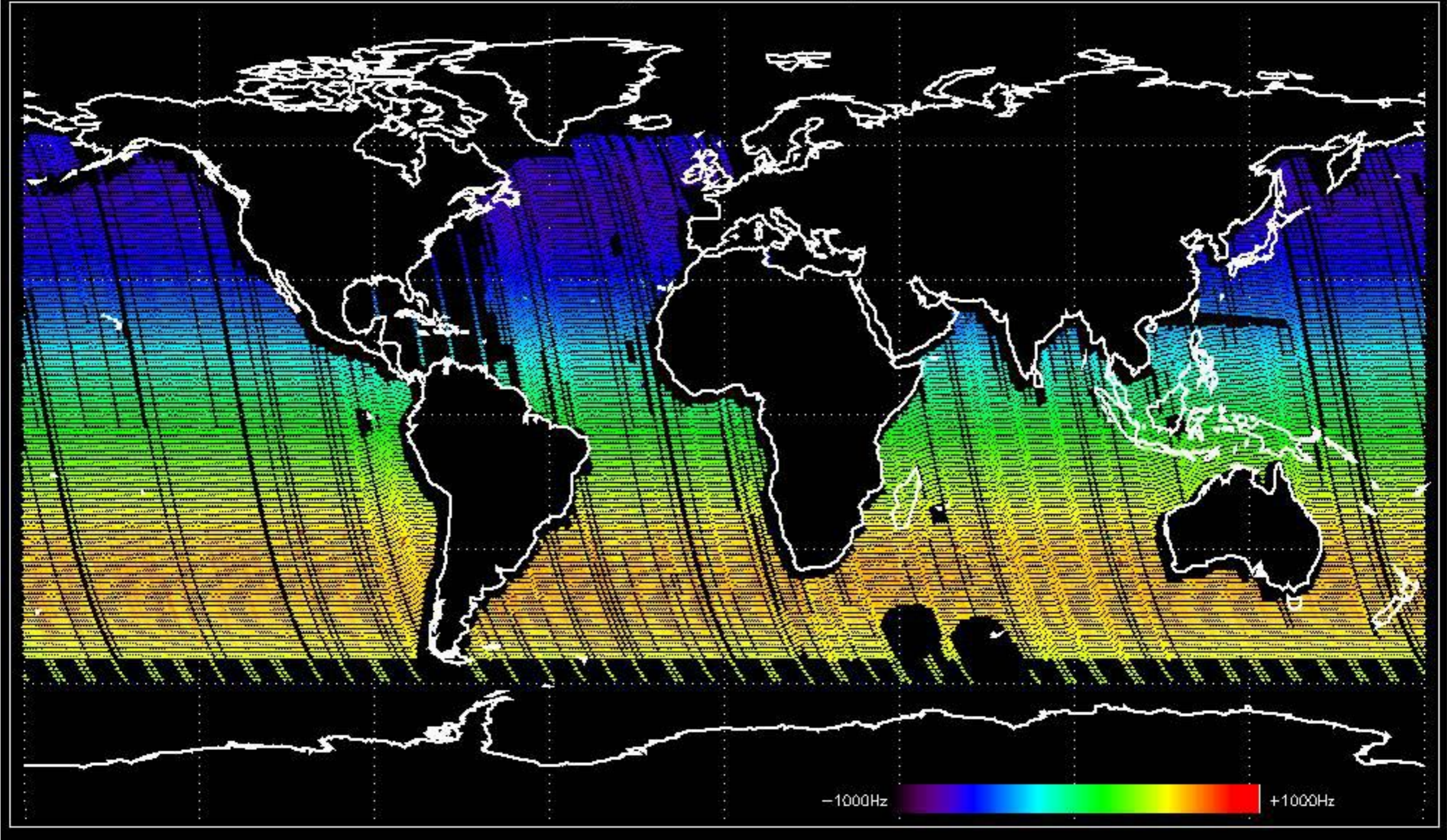
Doppler 'GM1' 'SS1' ascending



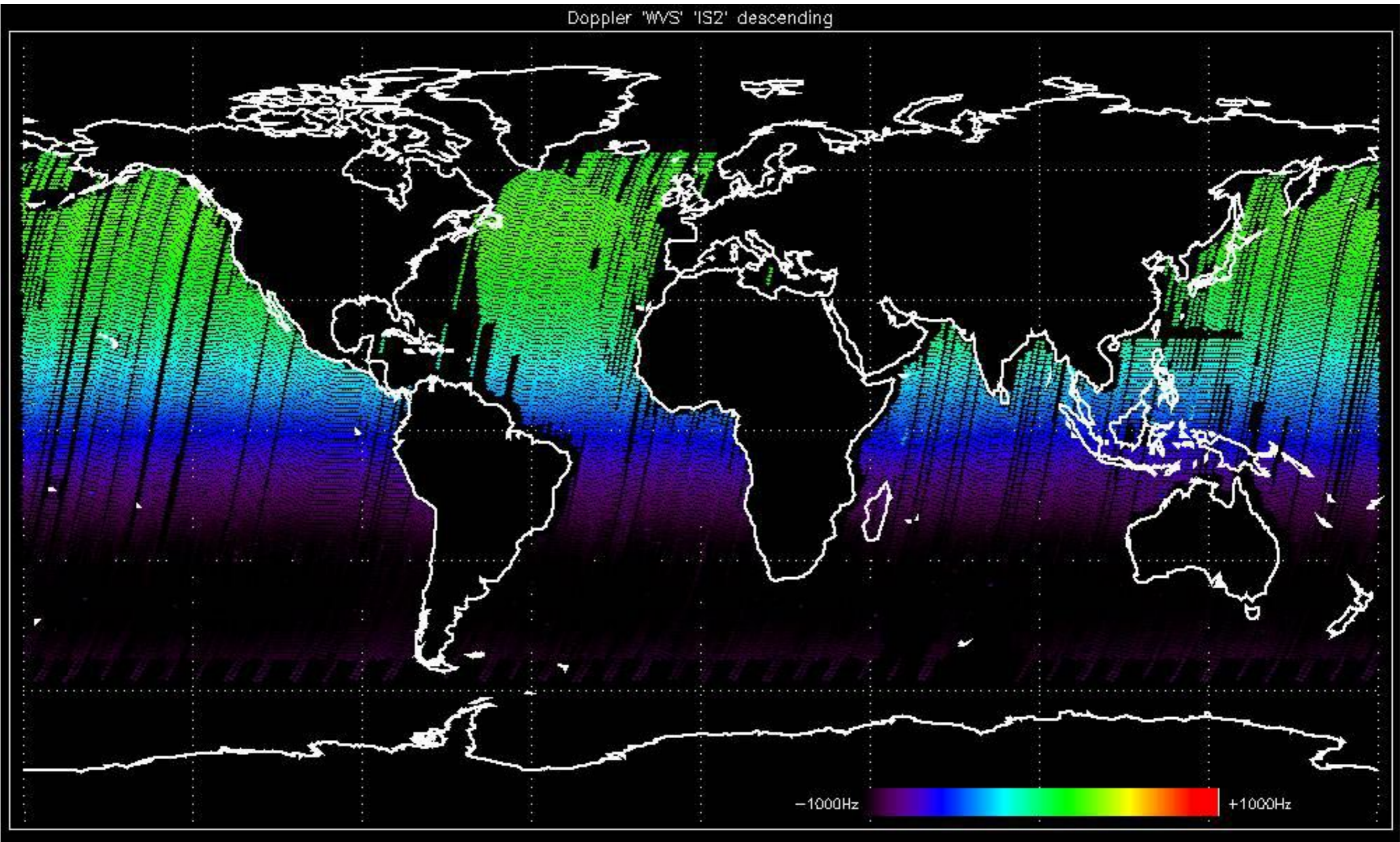
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

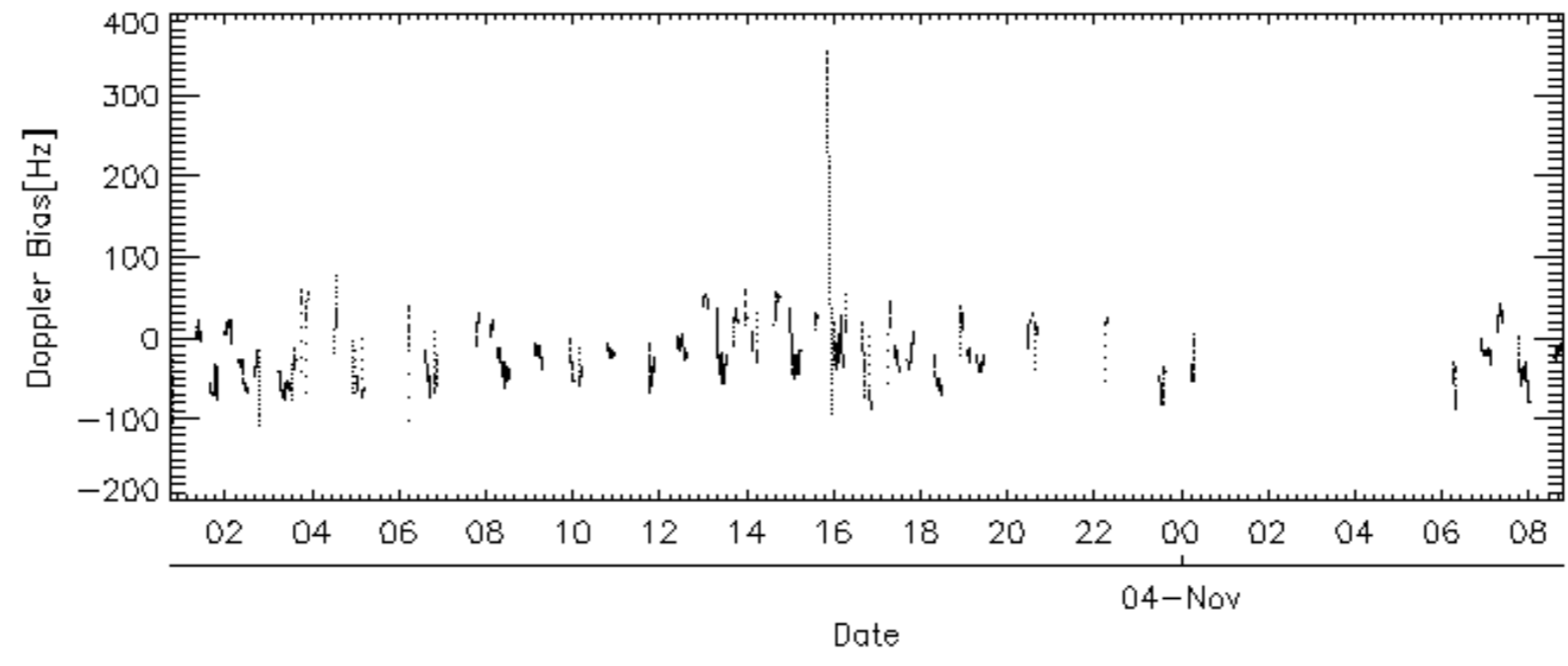
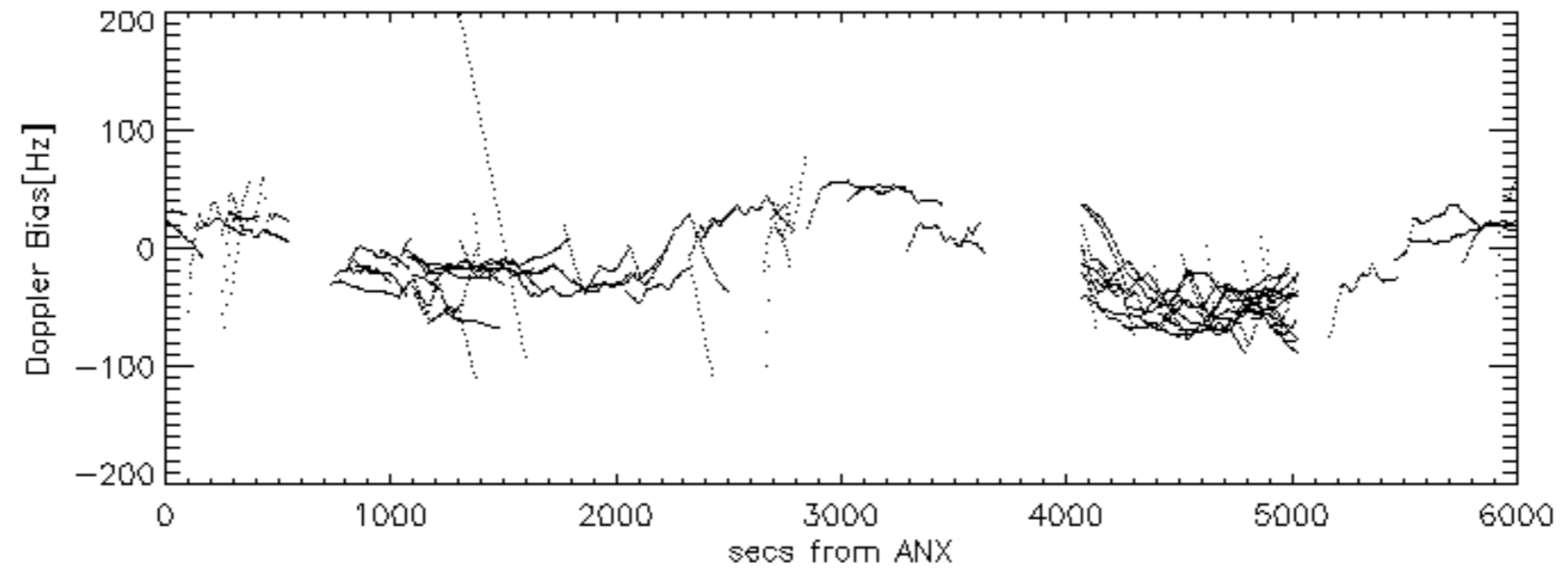
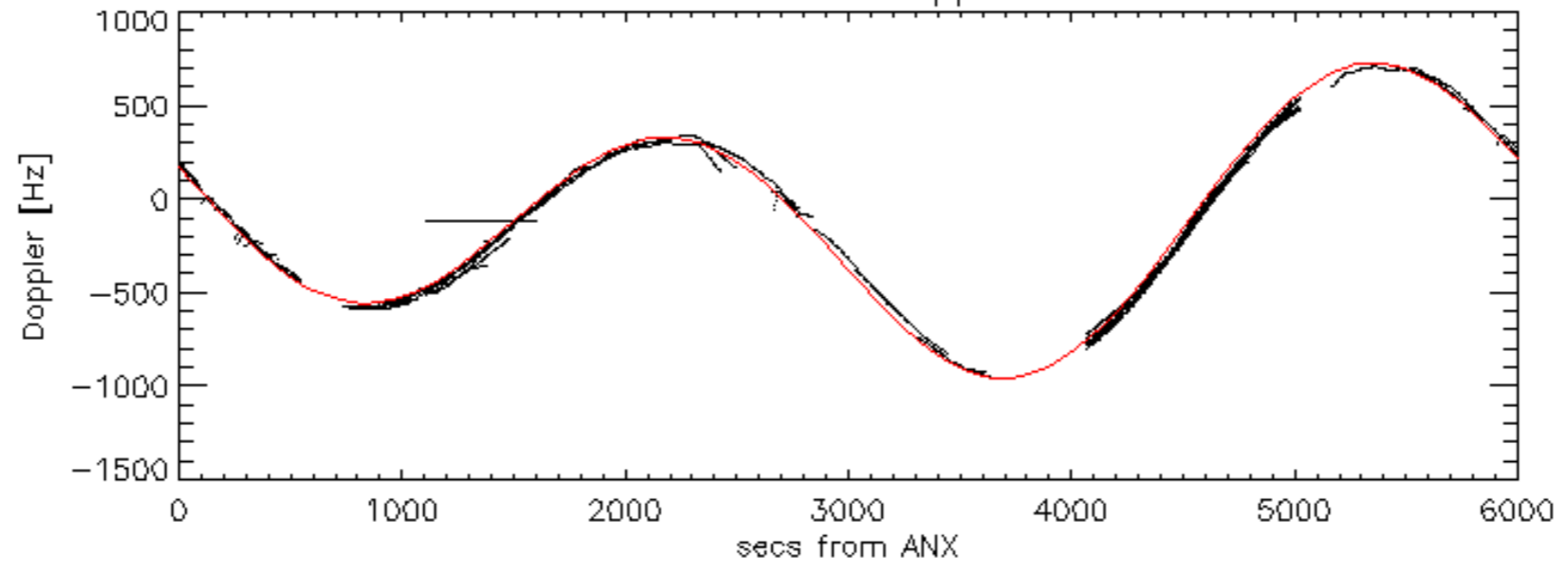


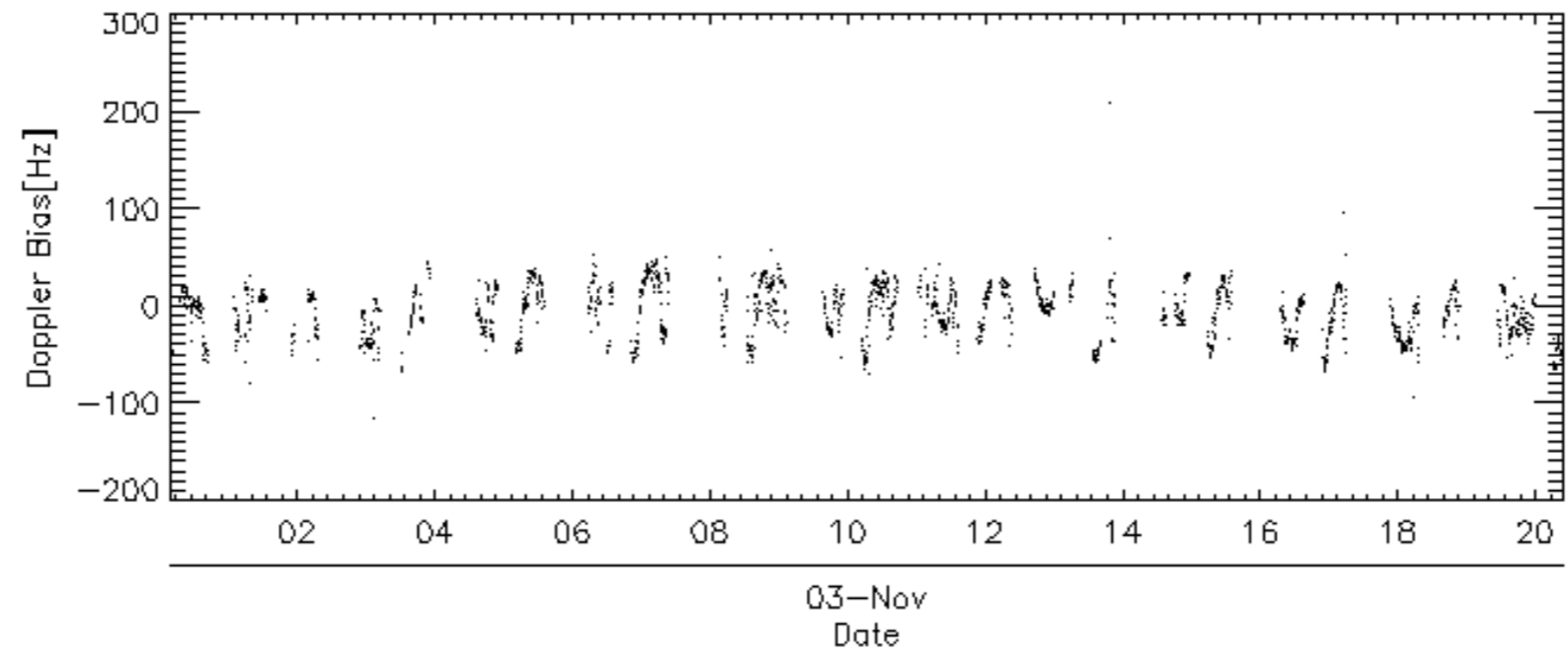
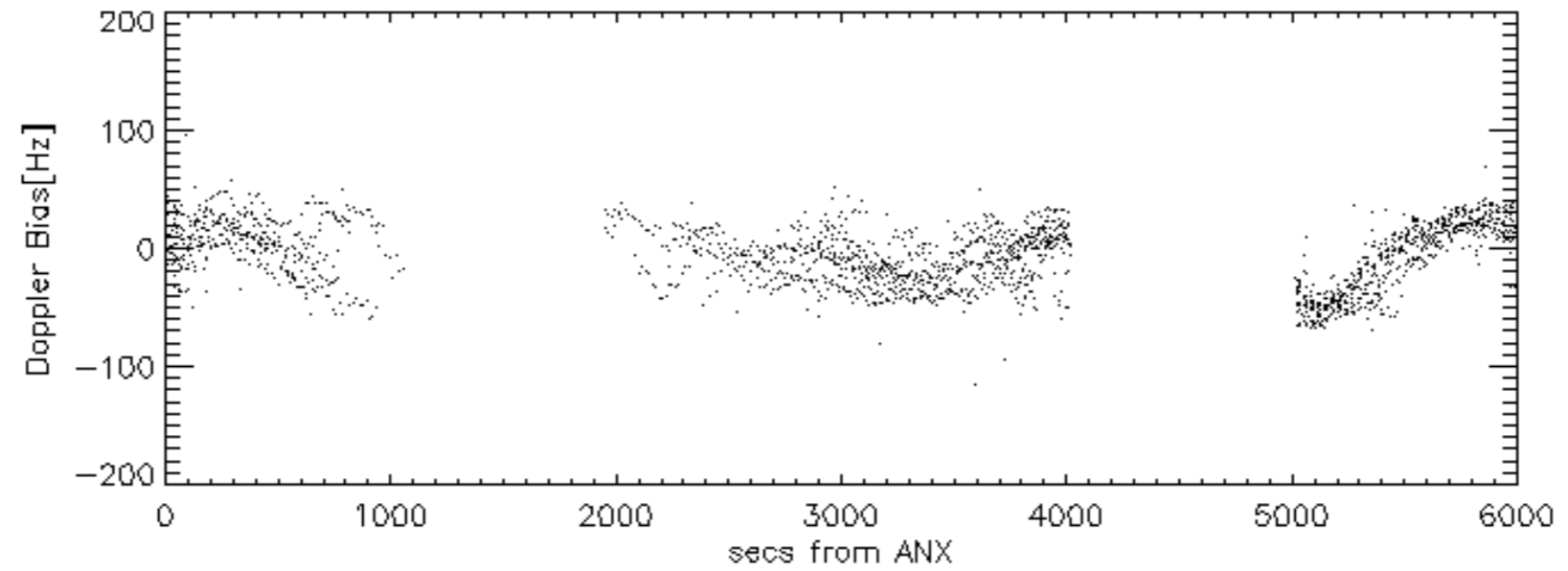
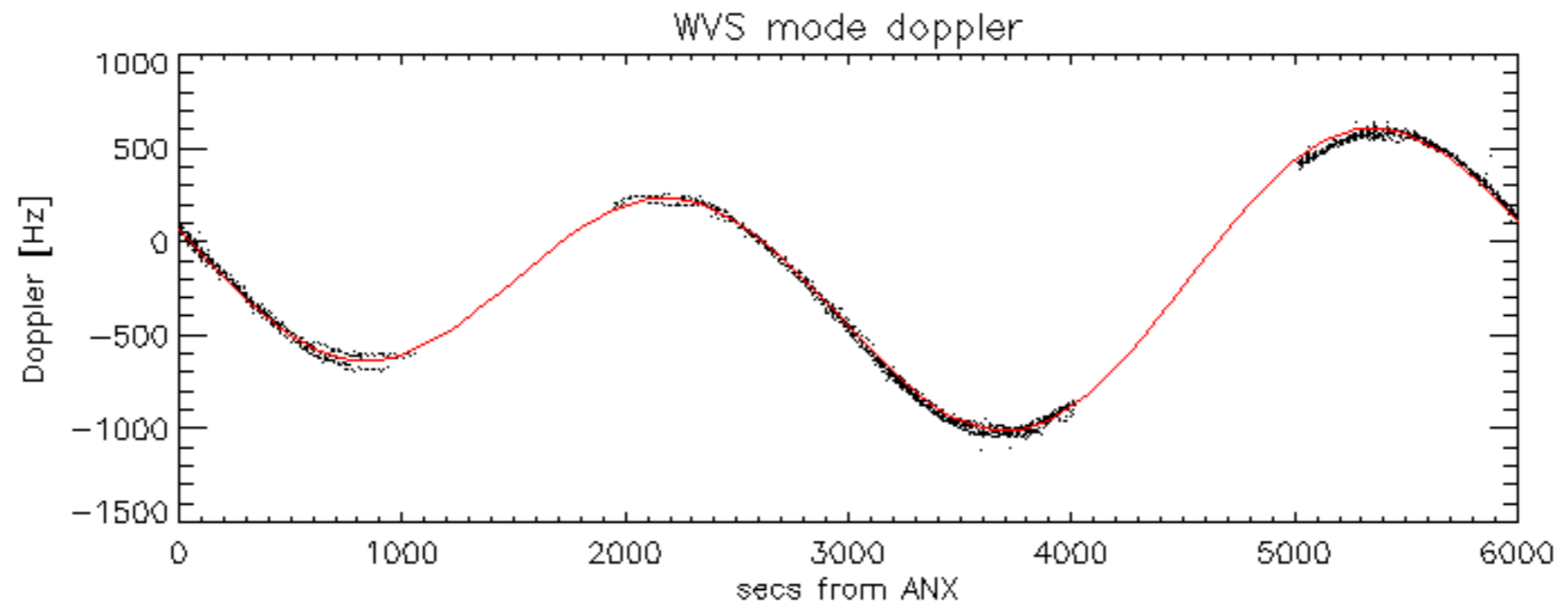
Doppler 'WVS' 'IS2' descending



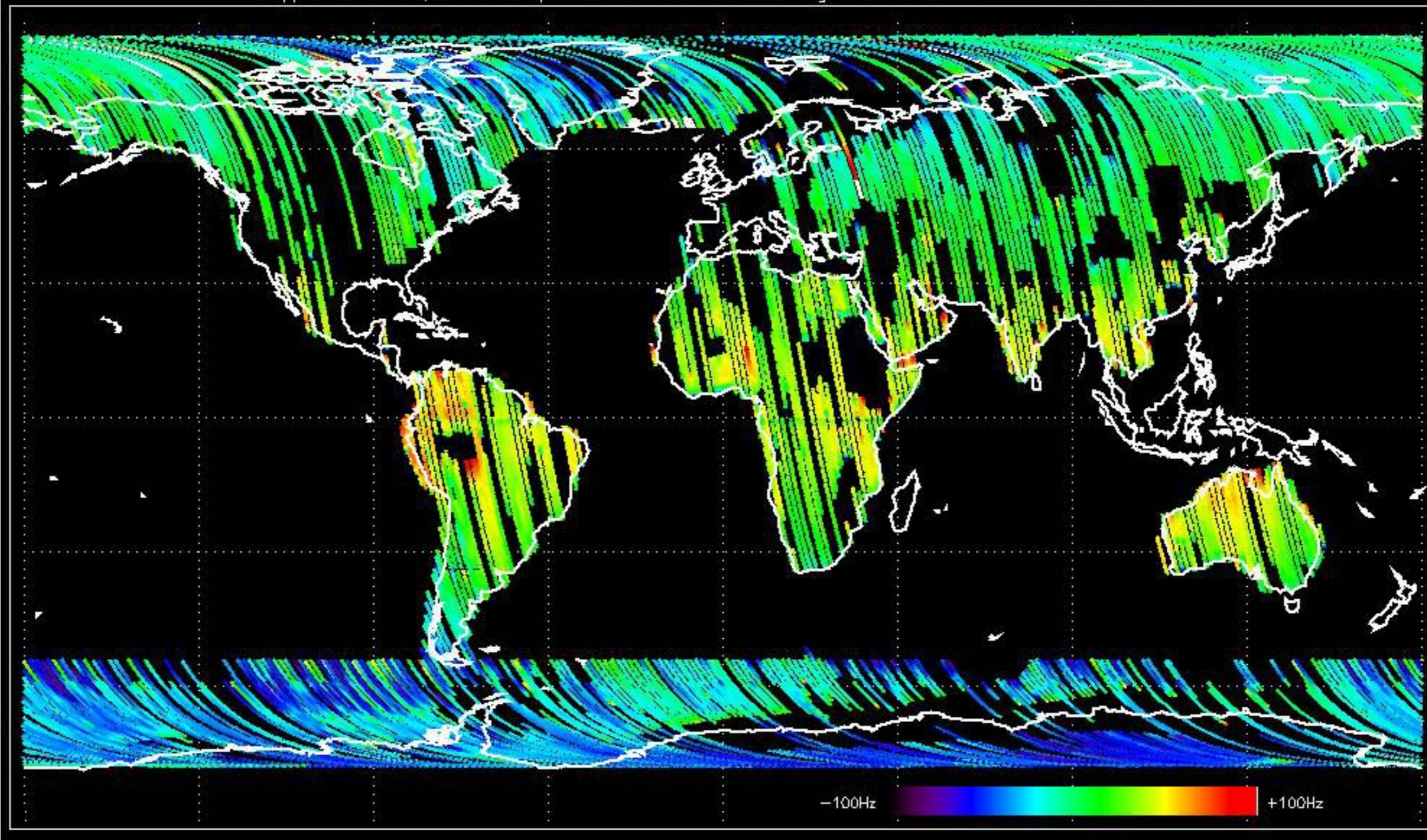


GM1 mode doppler

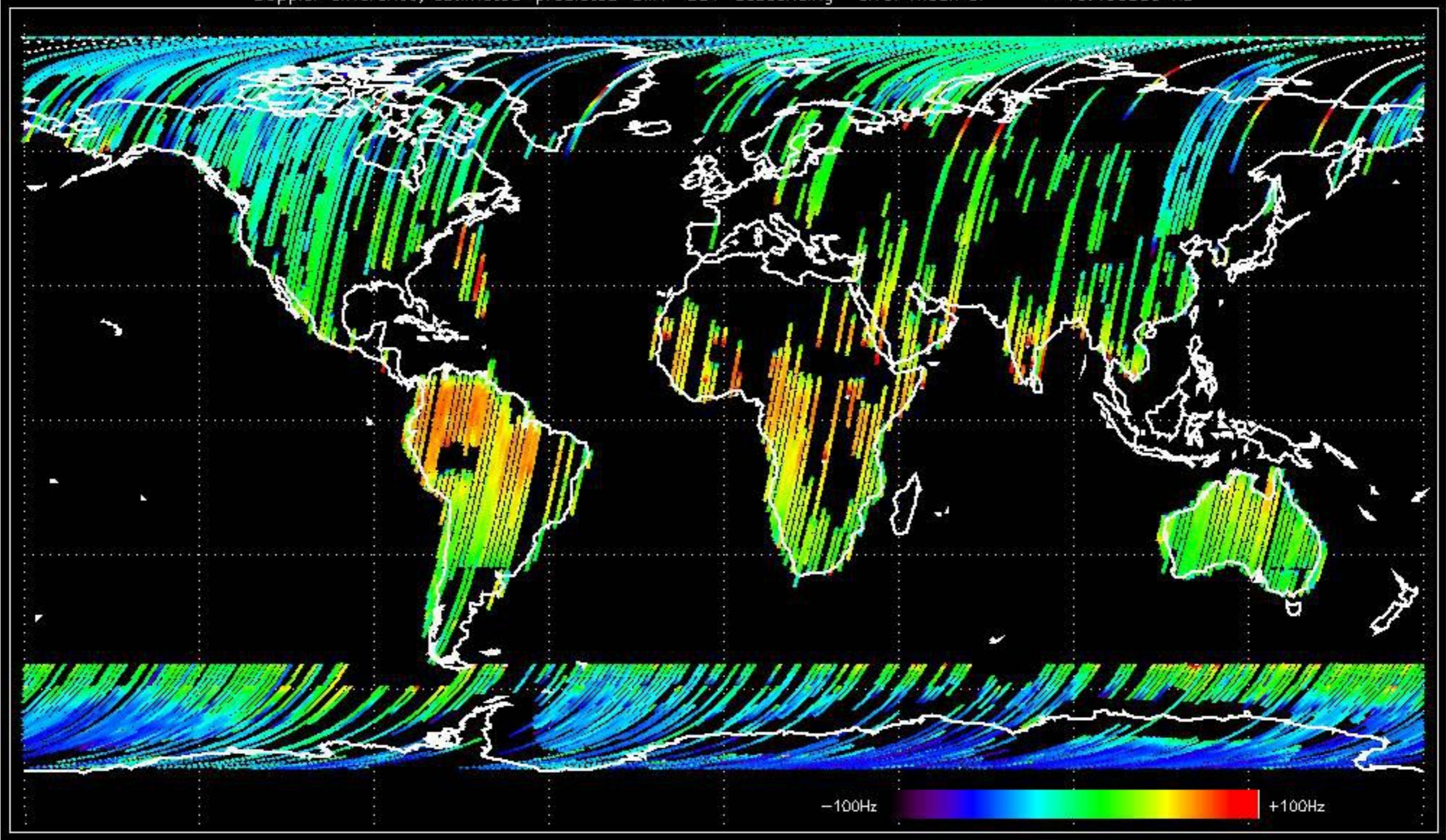




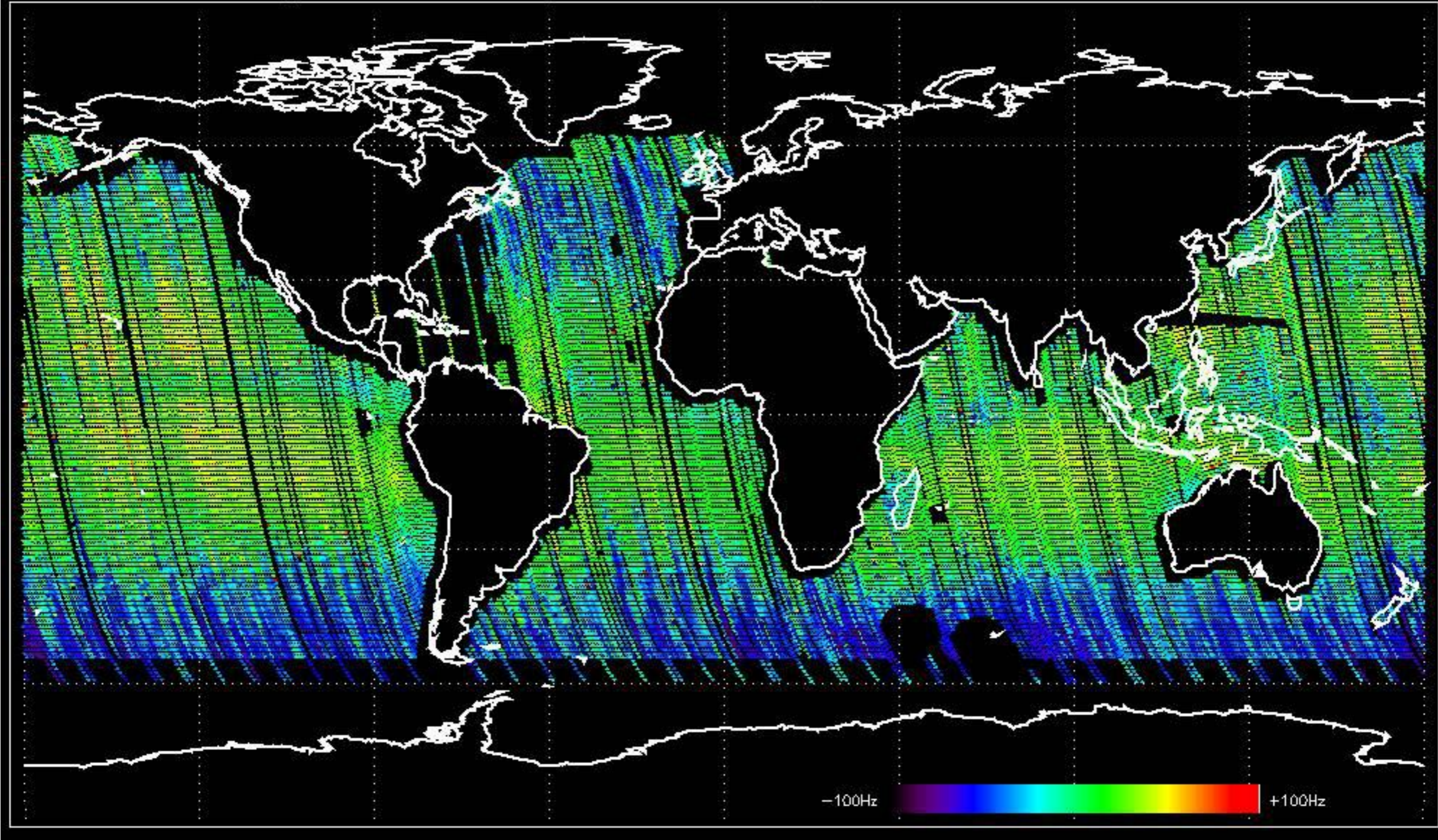
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.533972 Hz



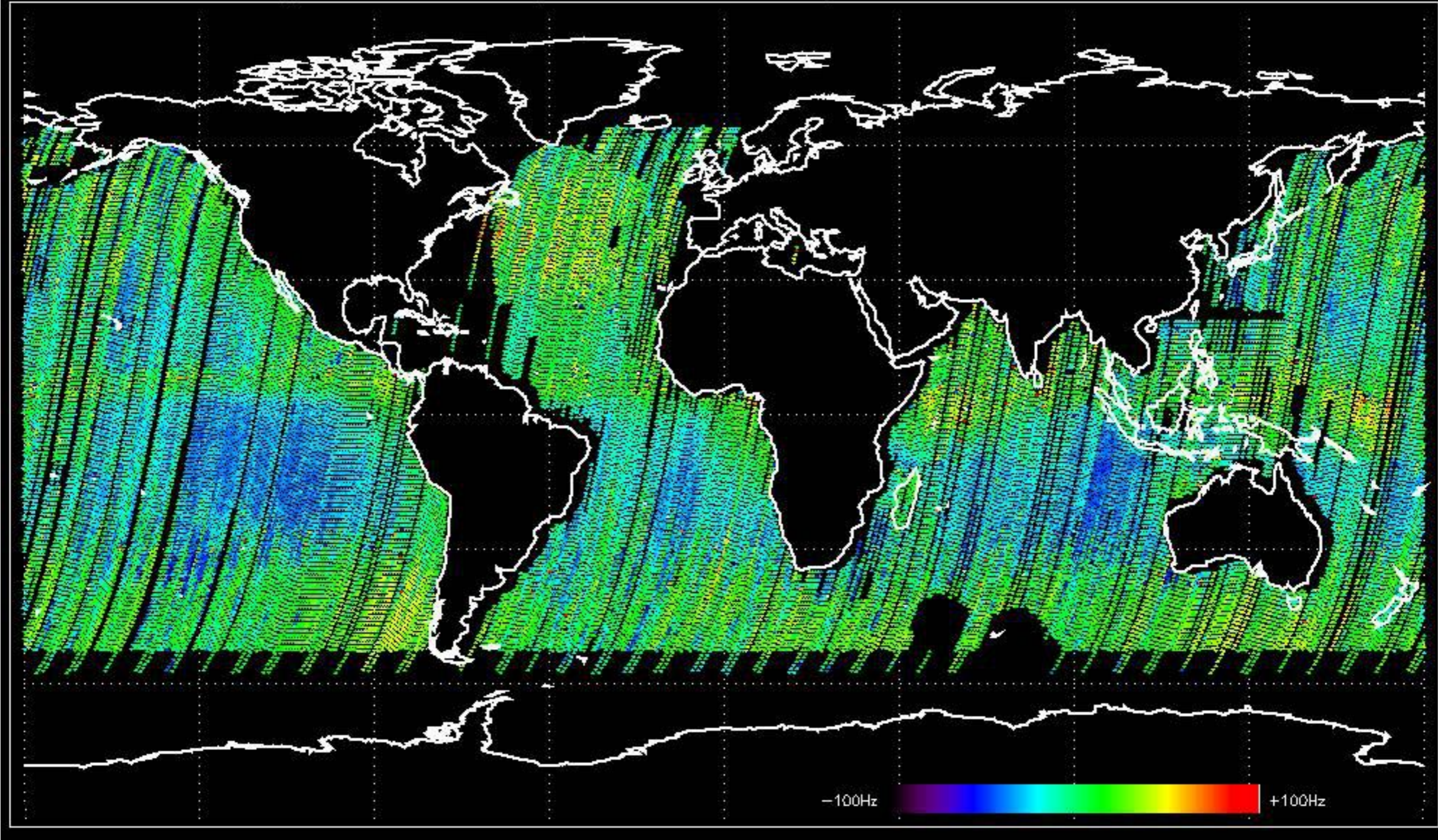
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.466033 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.9704962 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.349814 Hz



No anomalies observed on available MS products:

No anomalies observed.





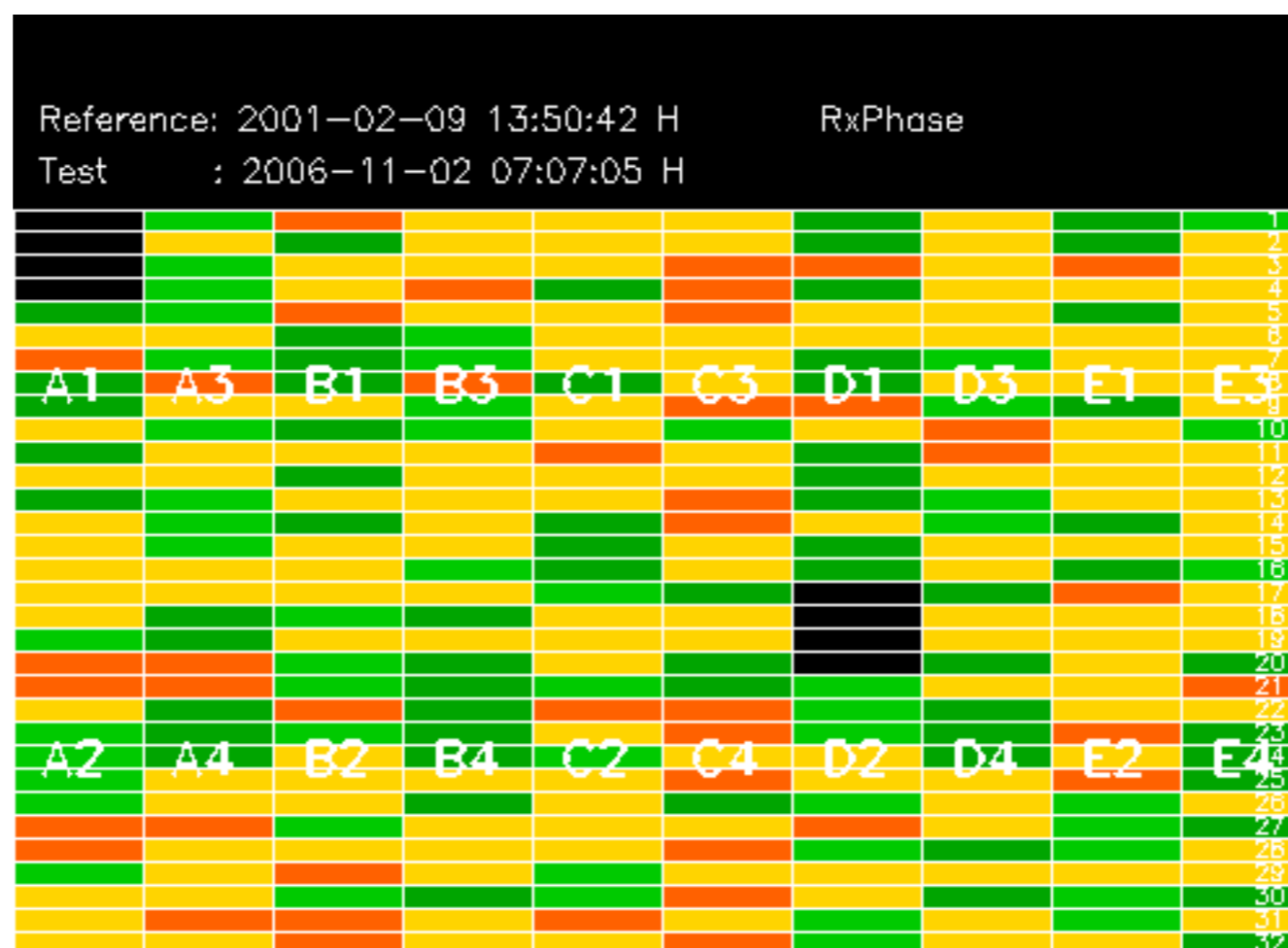










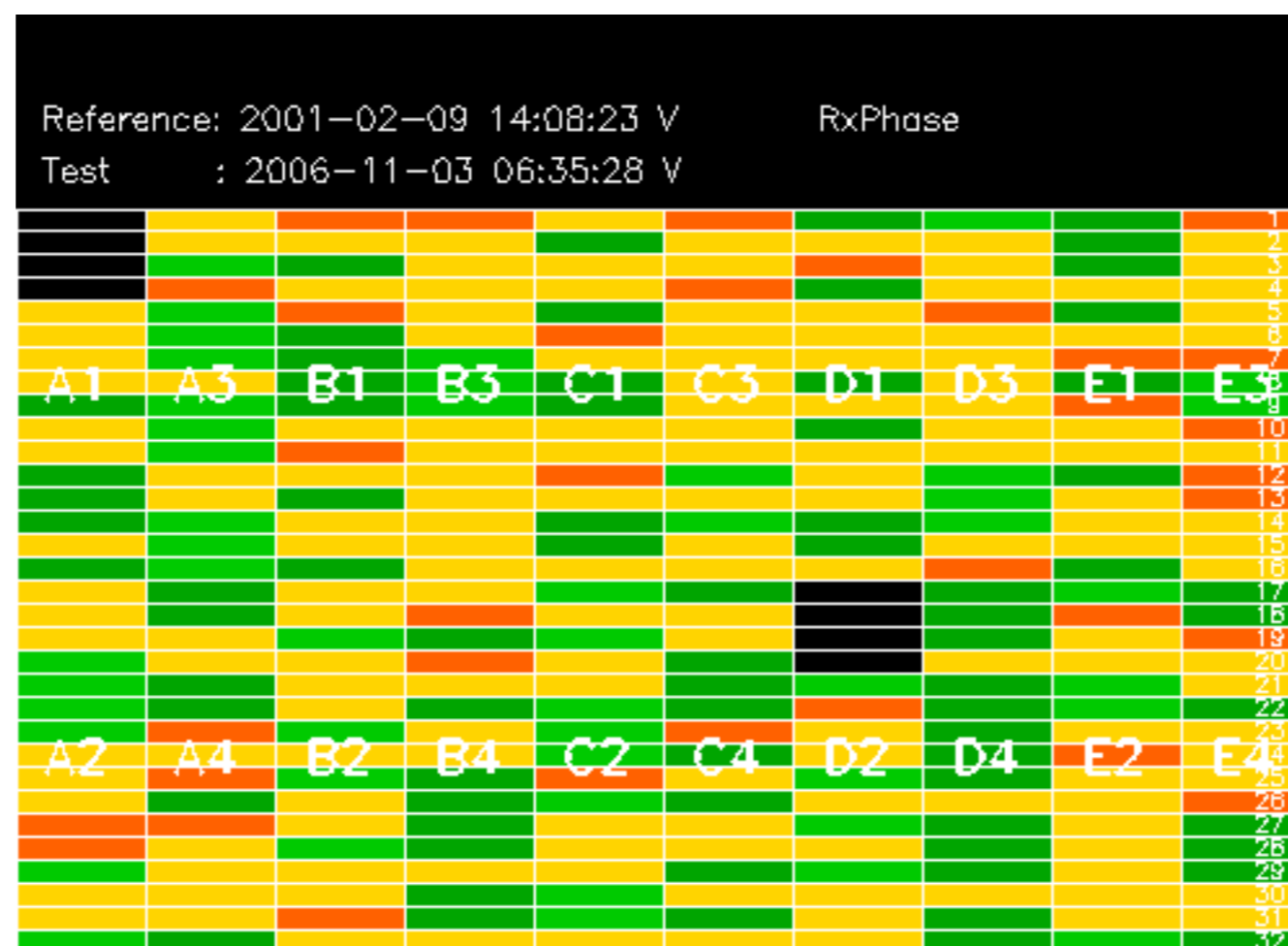




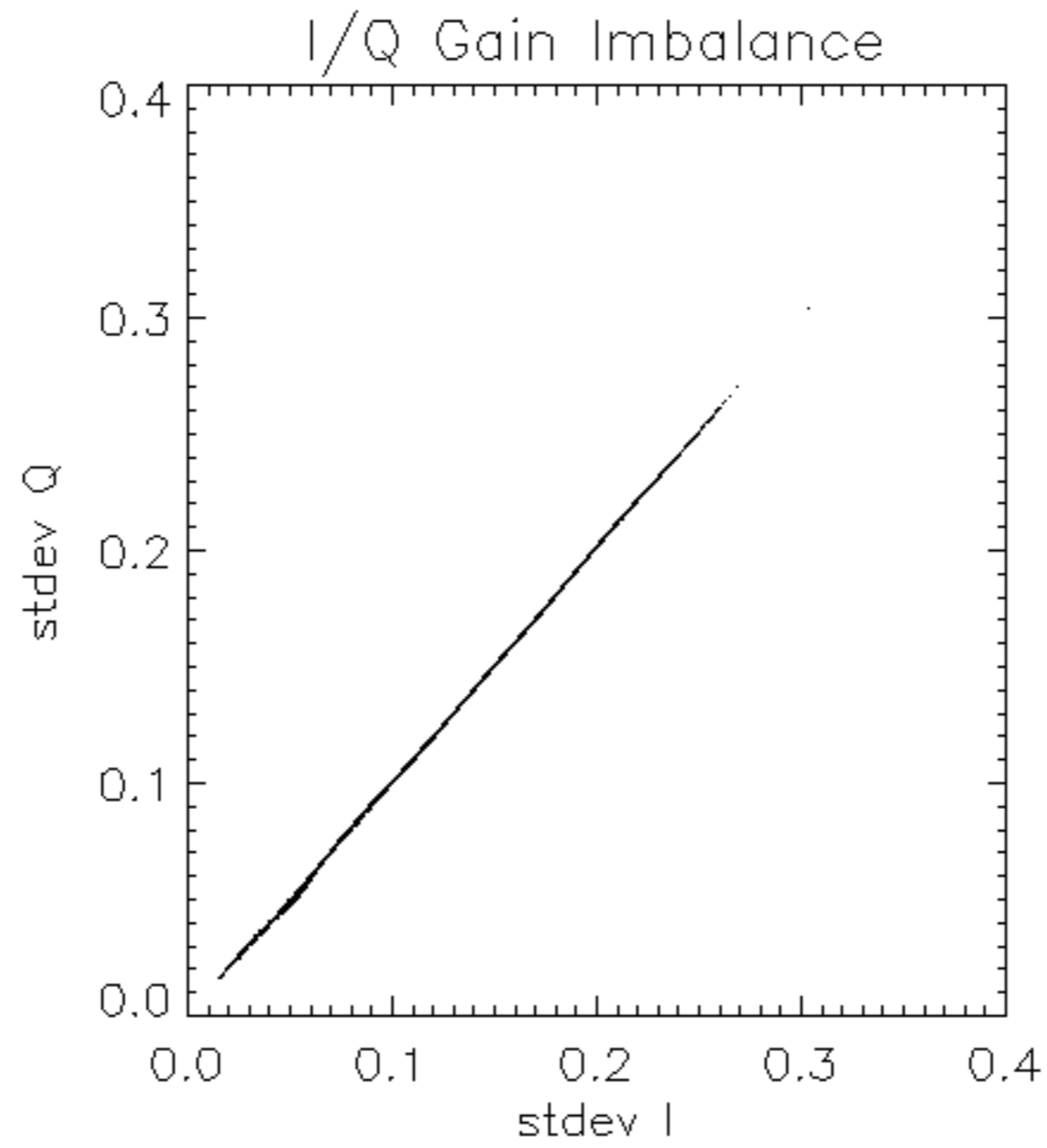


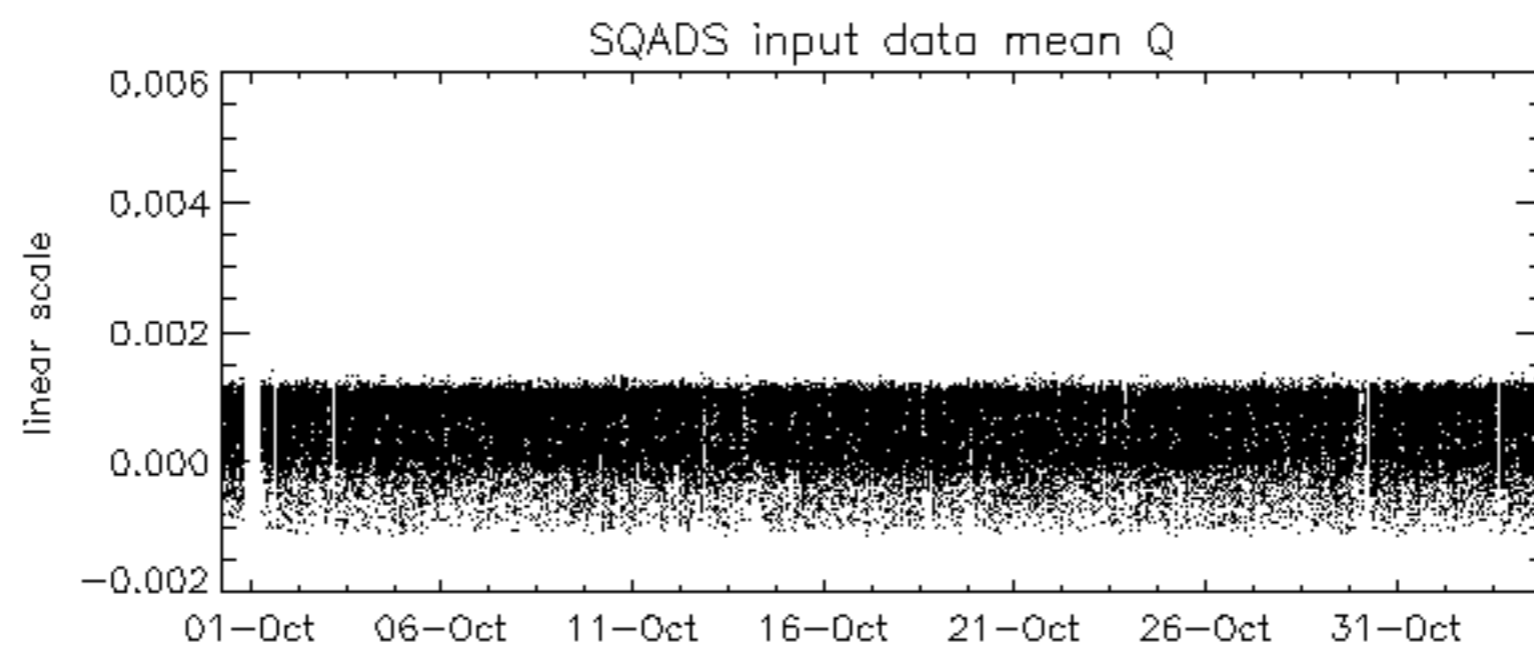
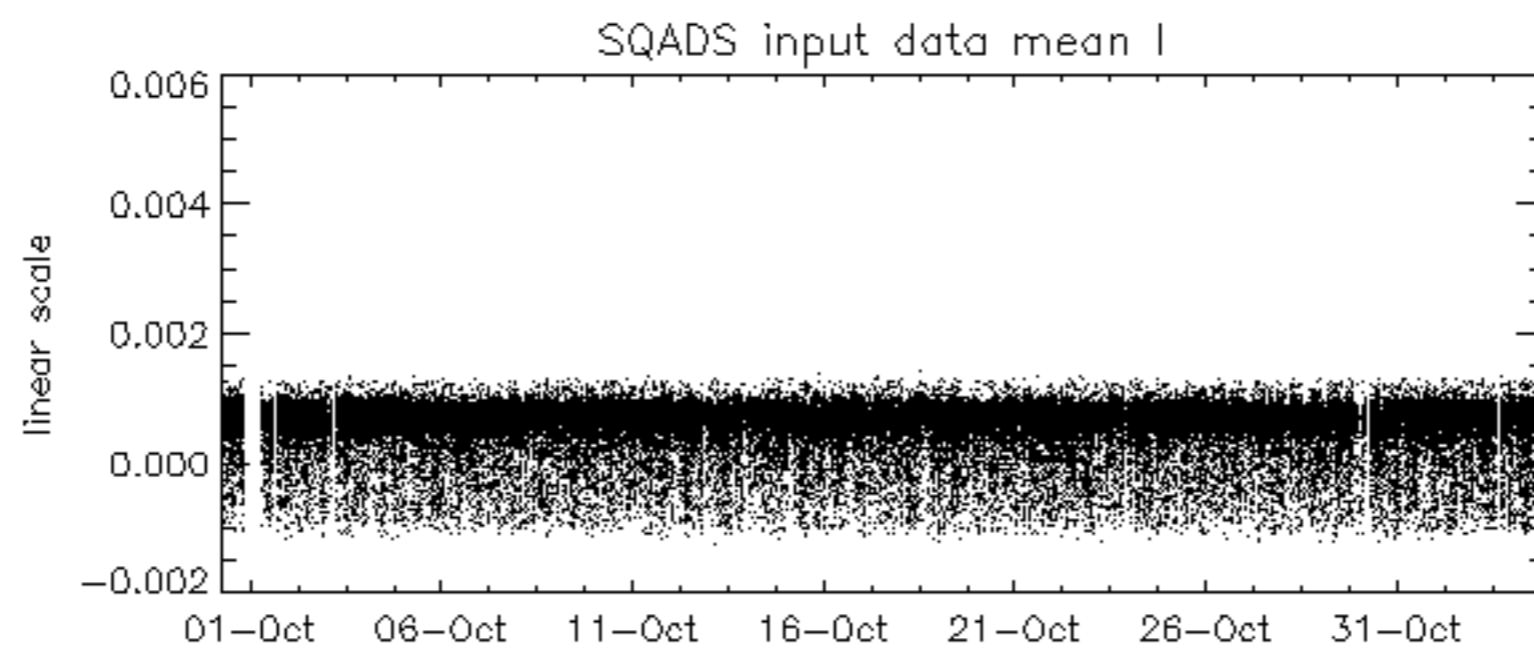
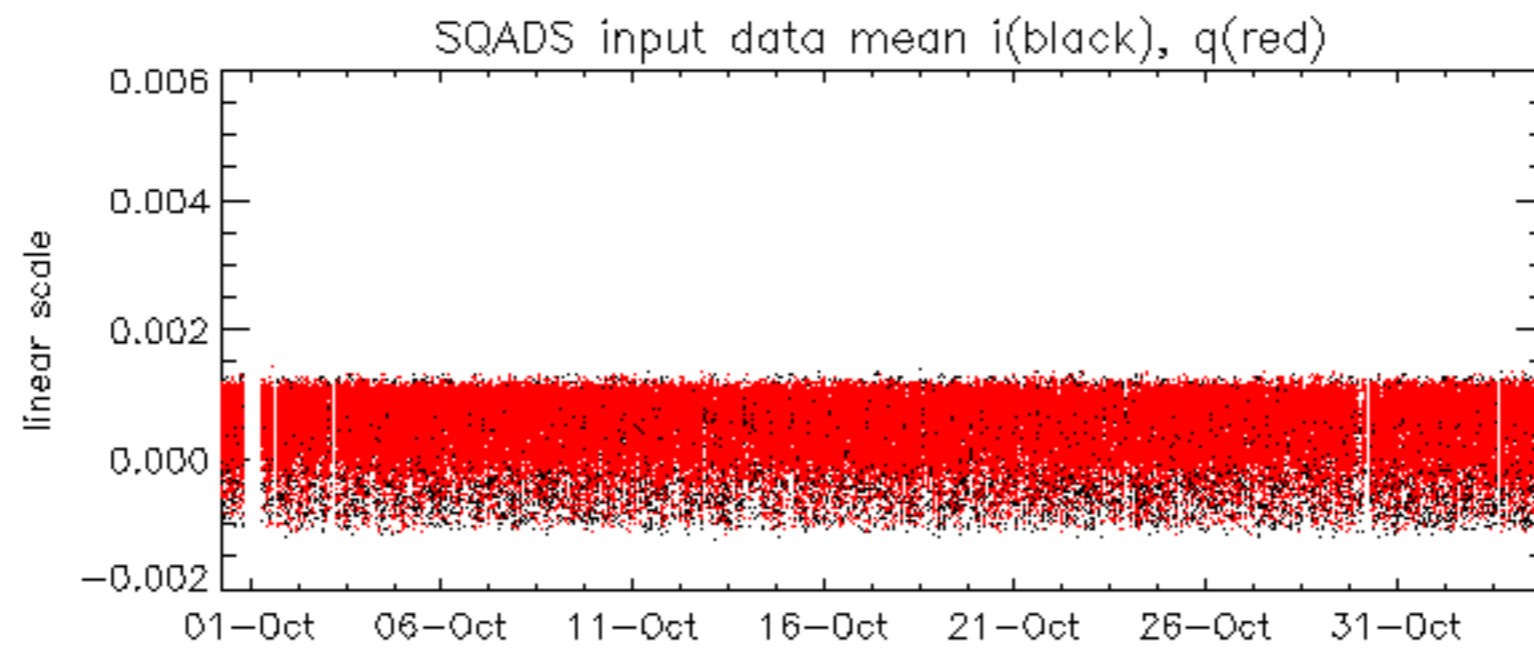


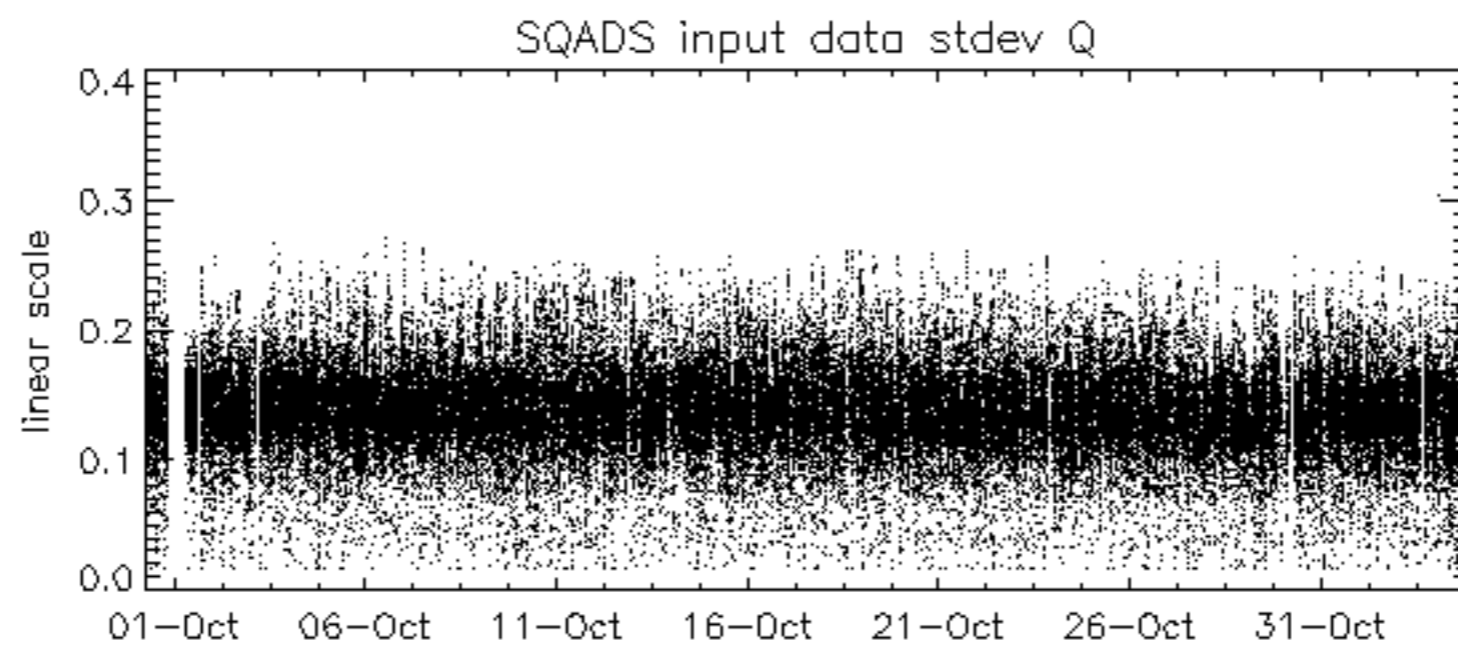
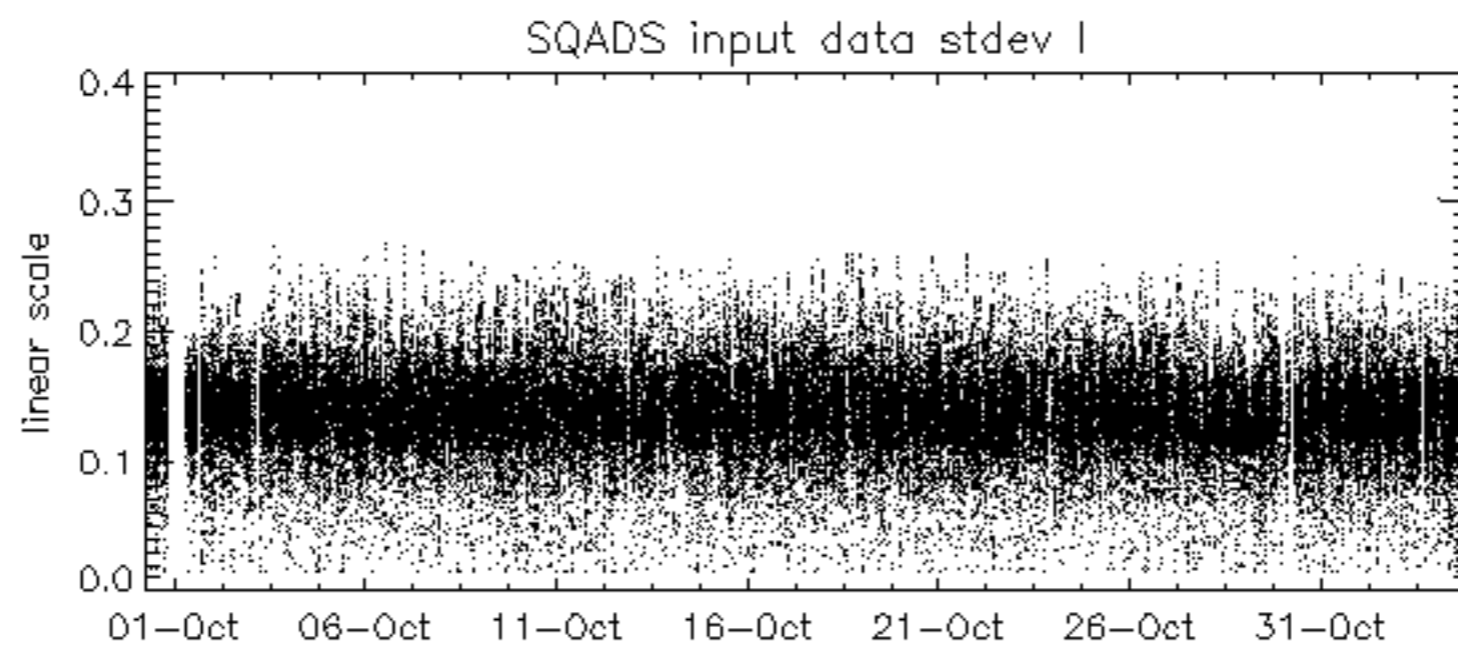
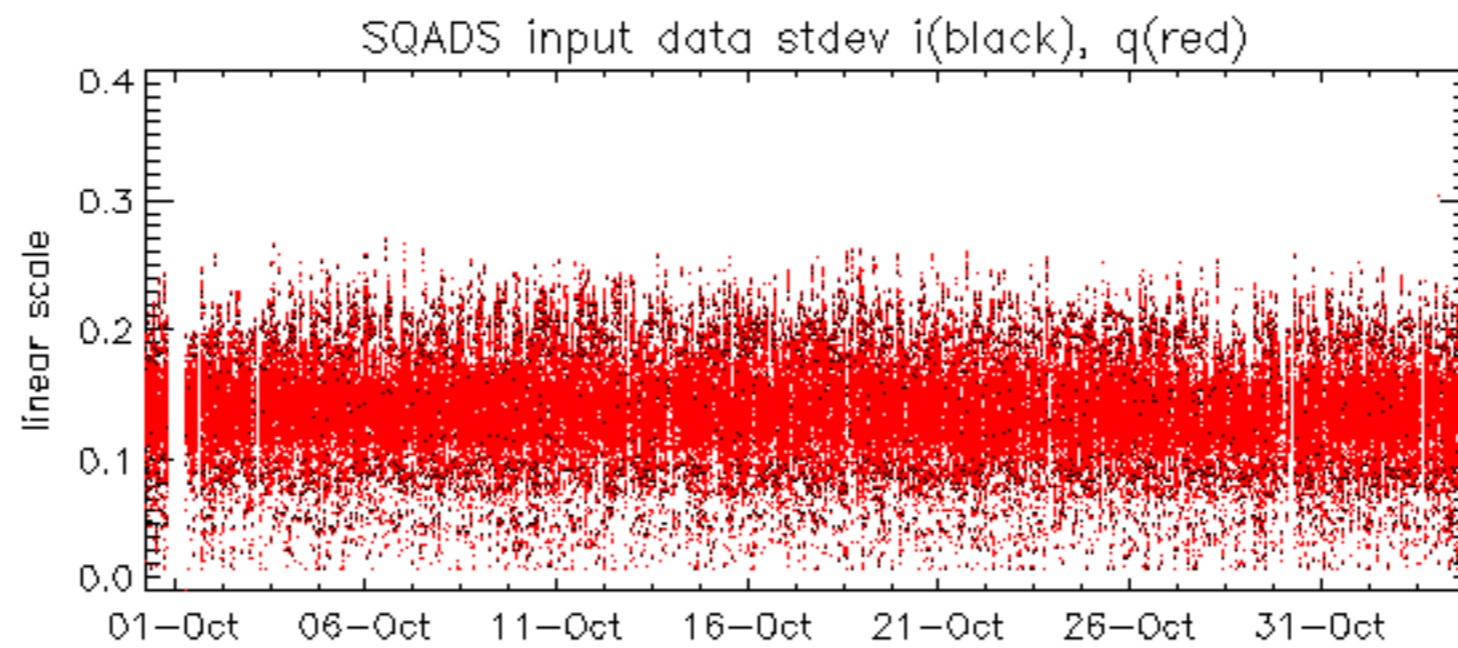






















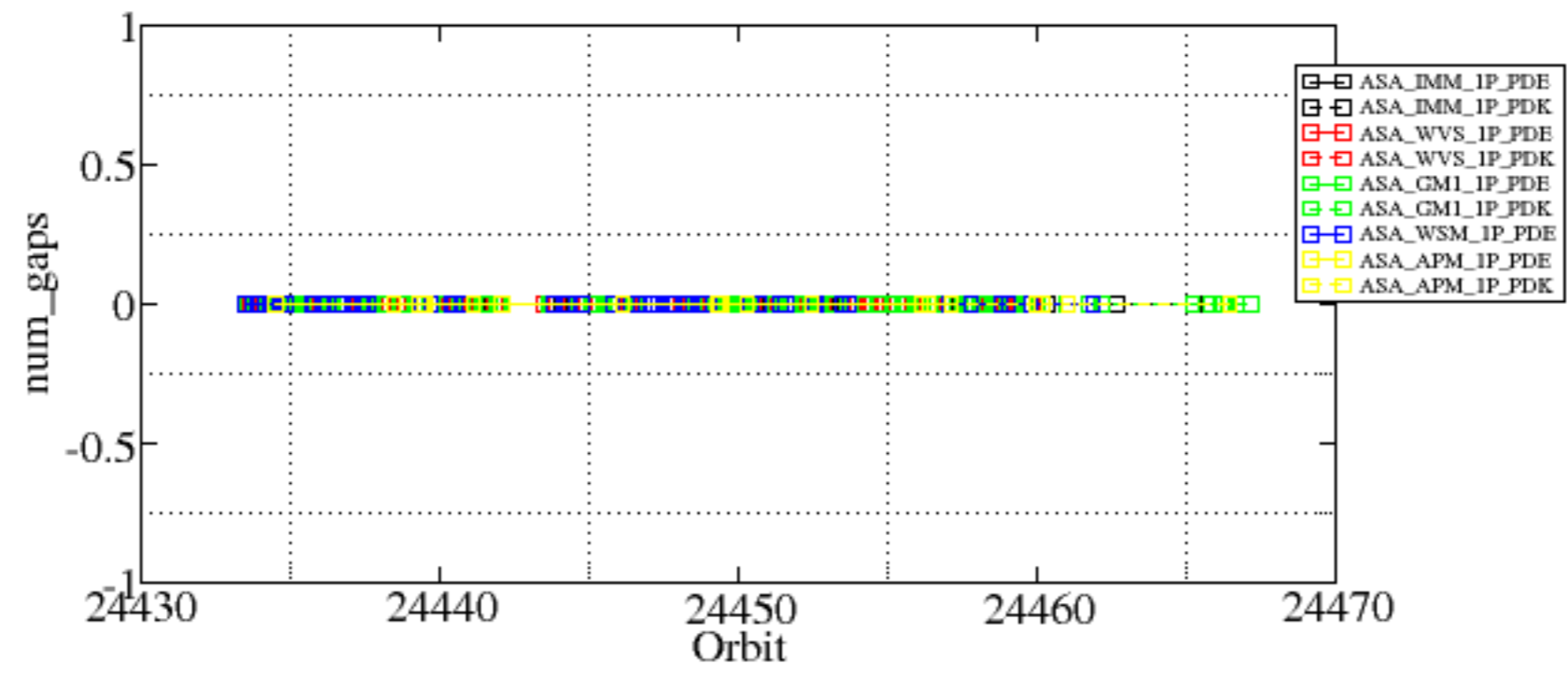




Summary of analysis for the last 3 days 2006110[234]

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_GM1_1PNPDK20061102_203159_000007372052_00343_24445_7869.N1	0	9
ASA_WSM_1PNPDE20061102_000626_000002022052_00331_24433_0001.N1	0	35
ASA_WSM_1PNPDE20061102_042319_000000852052_00334_24436_0001.N1	0	8
ASA_WSM_1PNPDE20061103_011004_000002262052_00346_24448_0001.N1	0	63









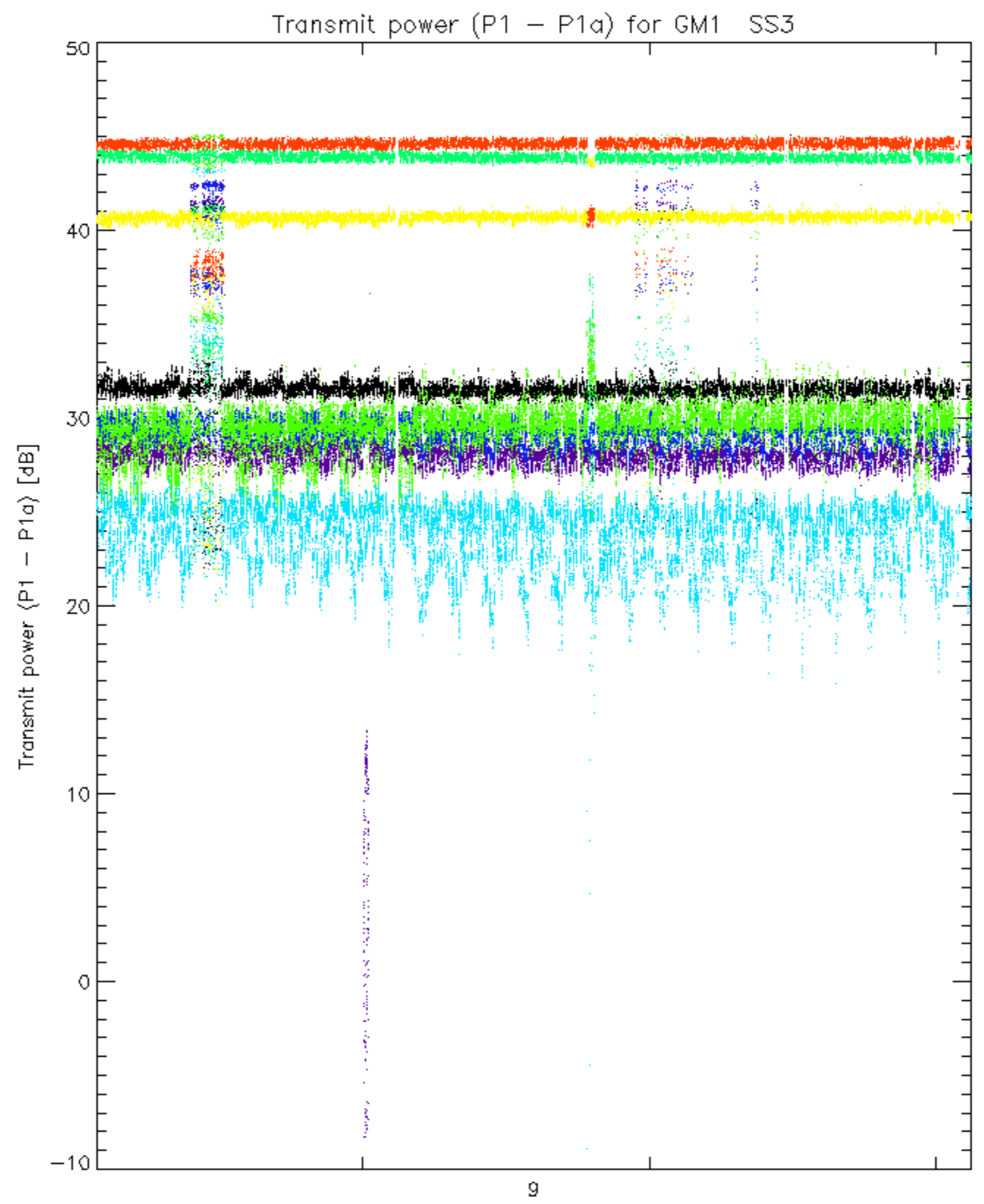




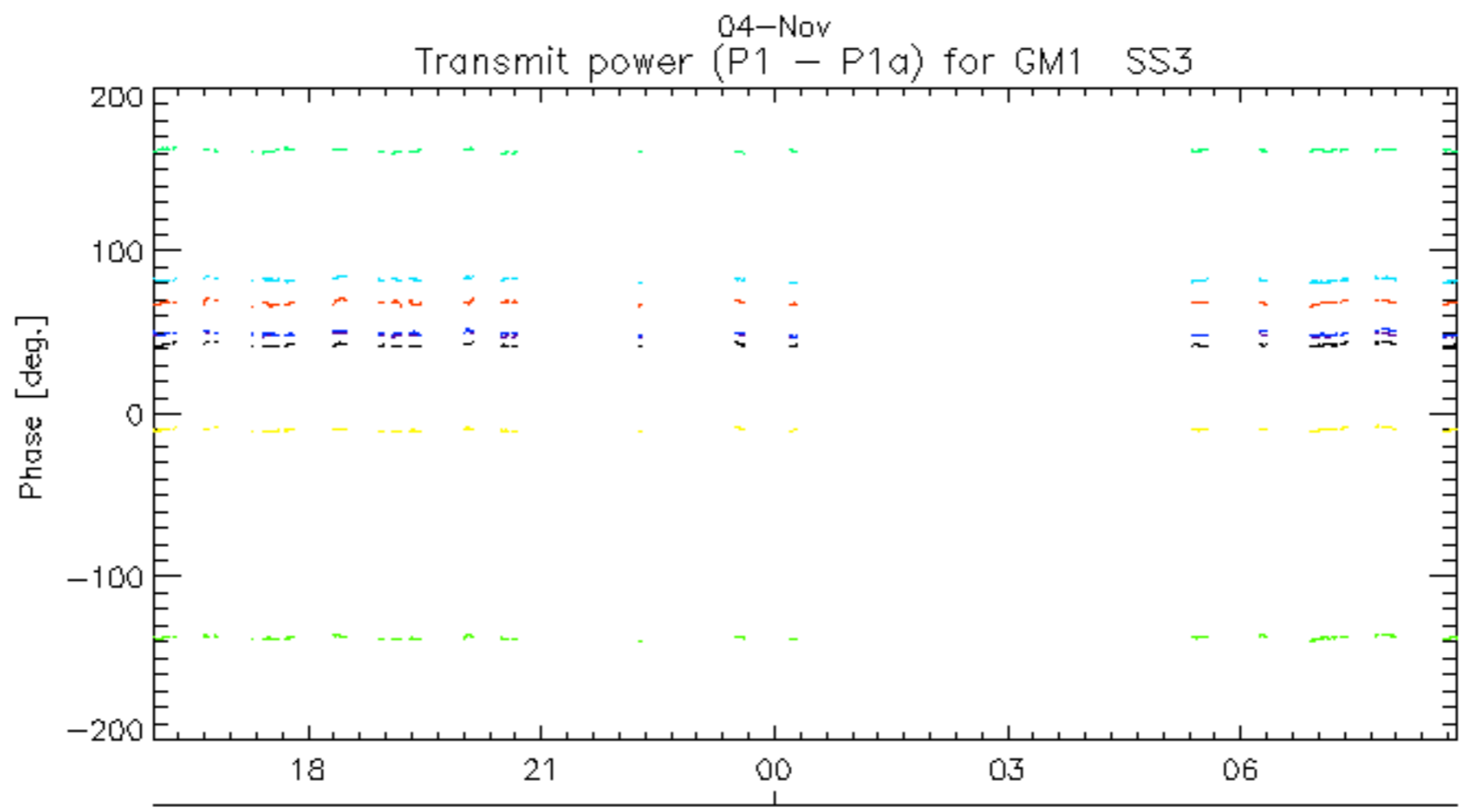
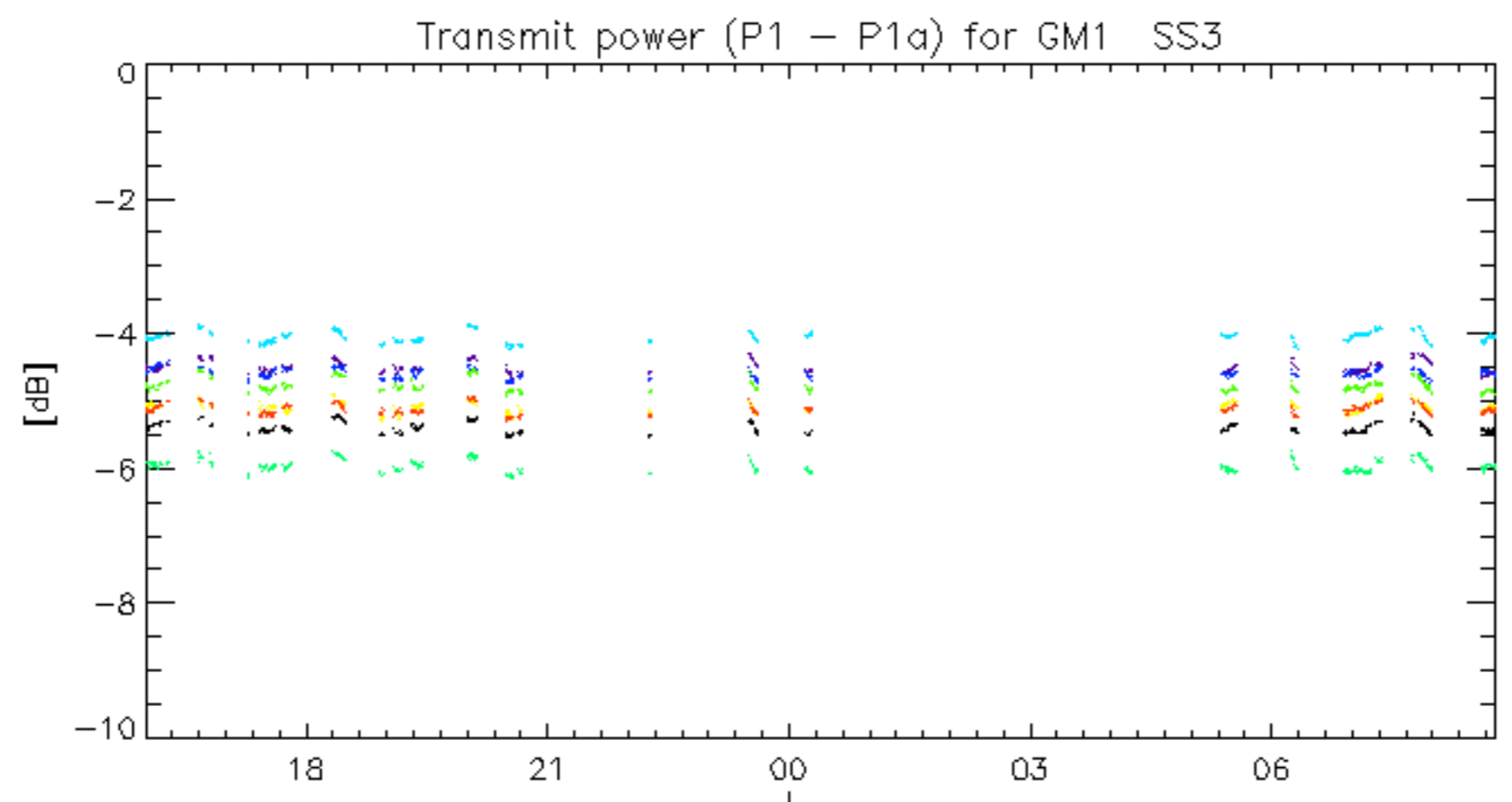






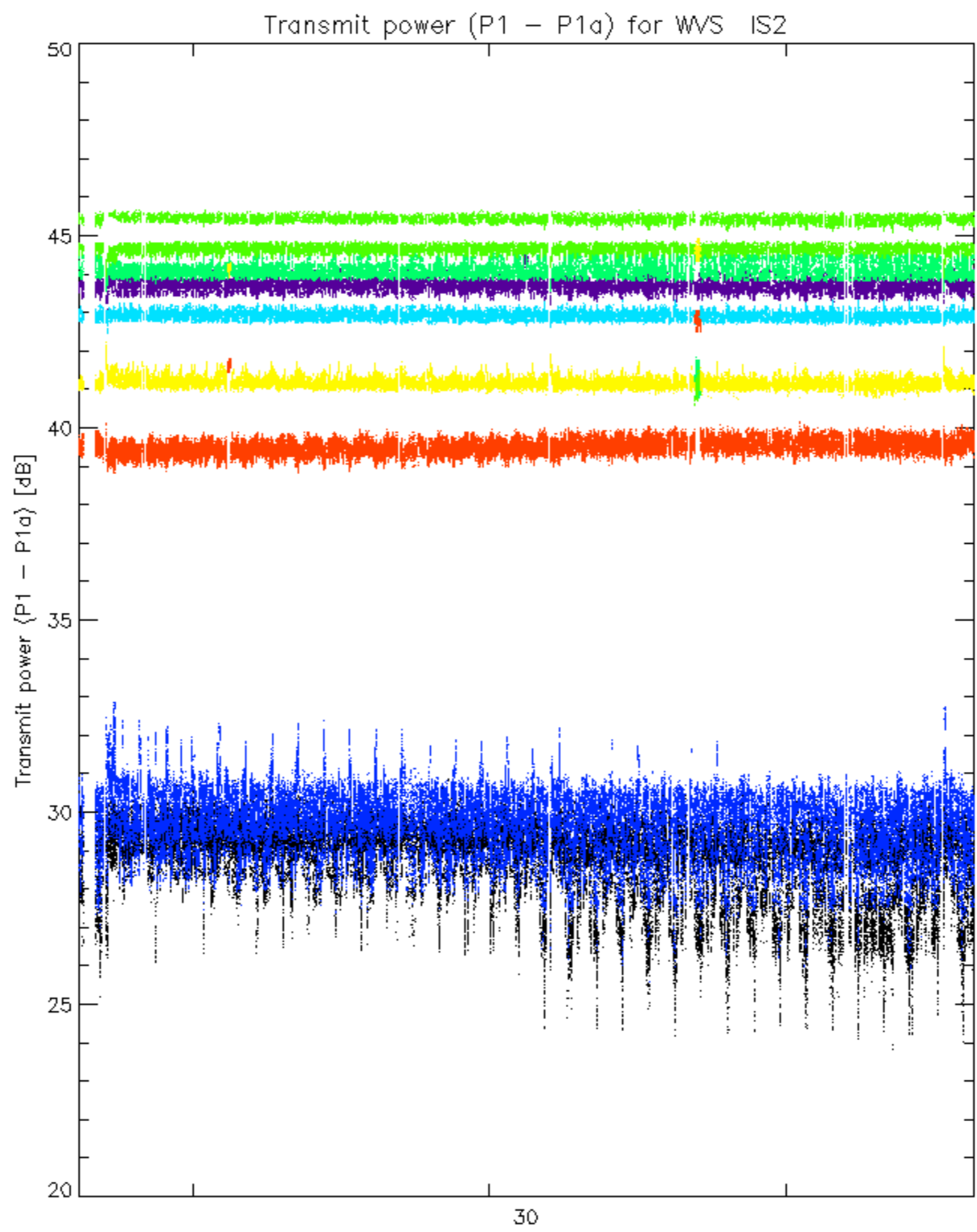


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

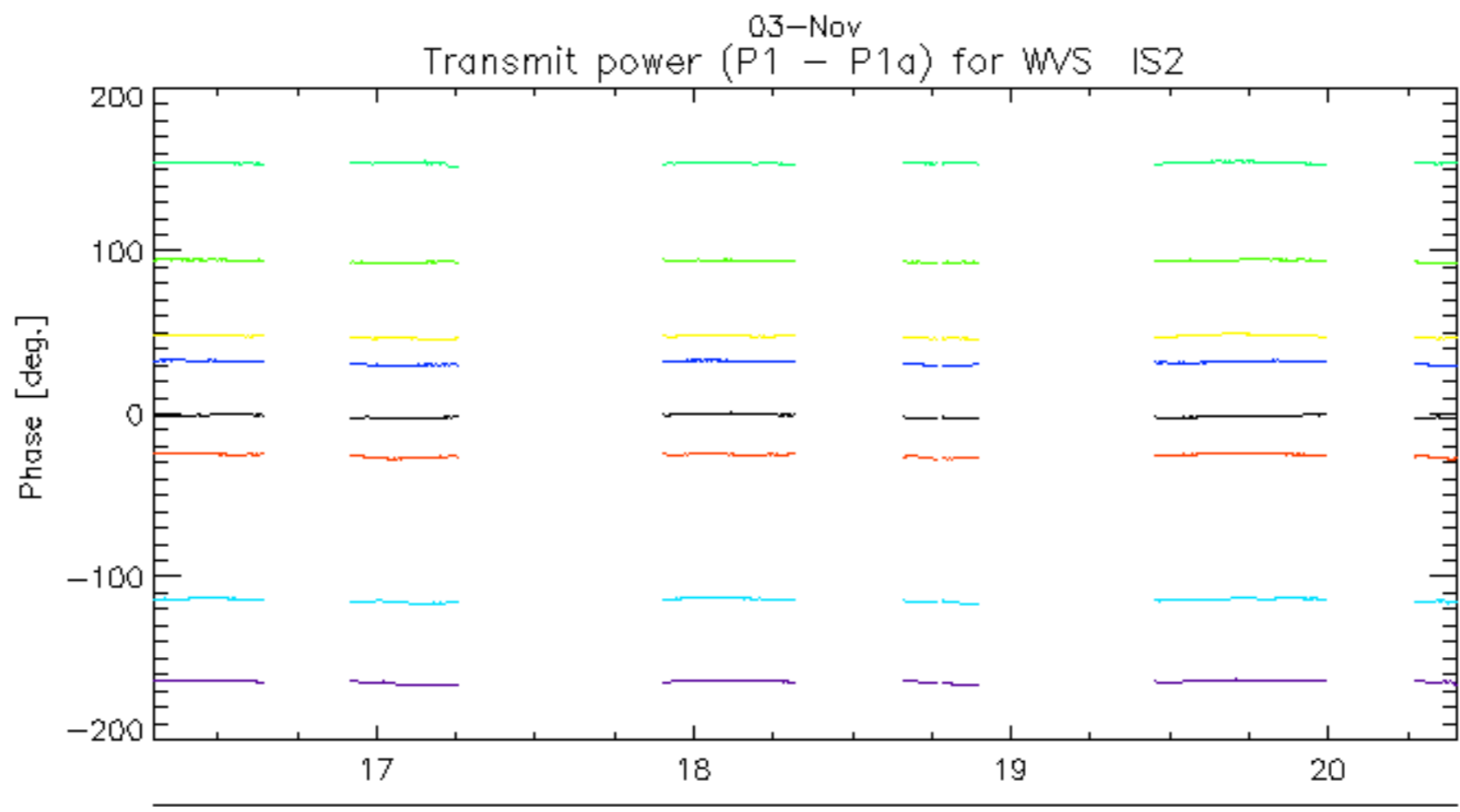
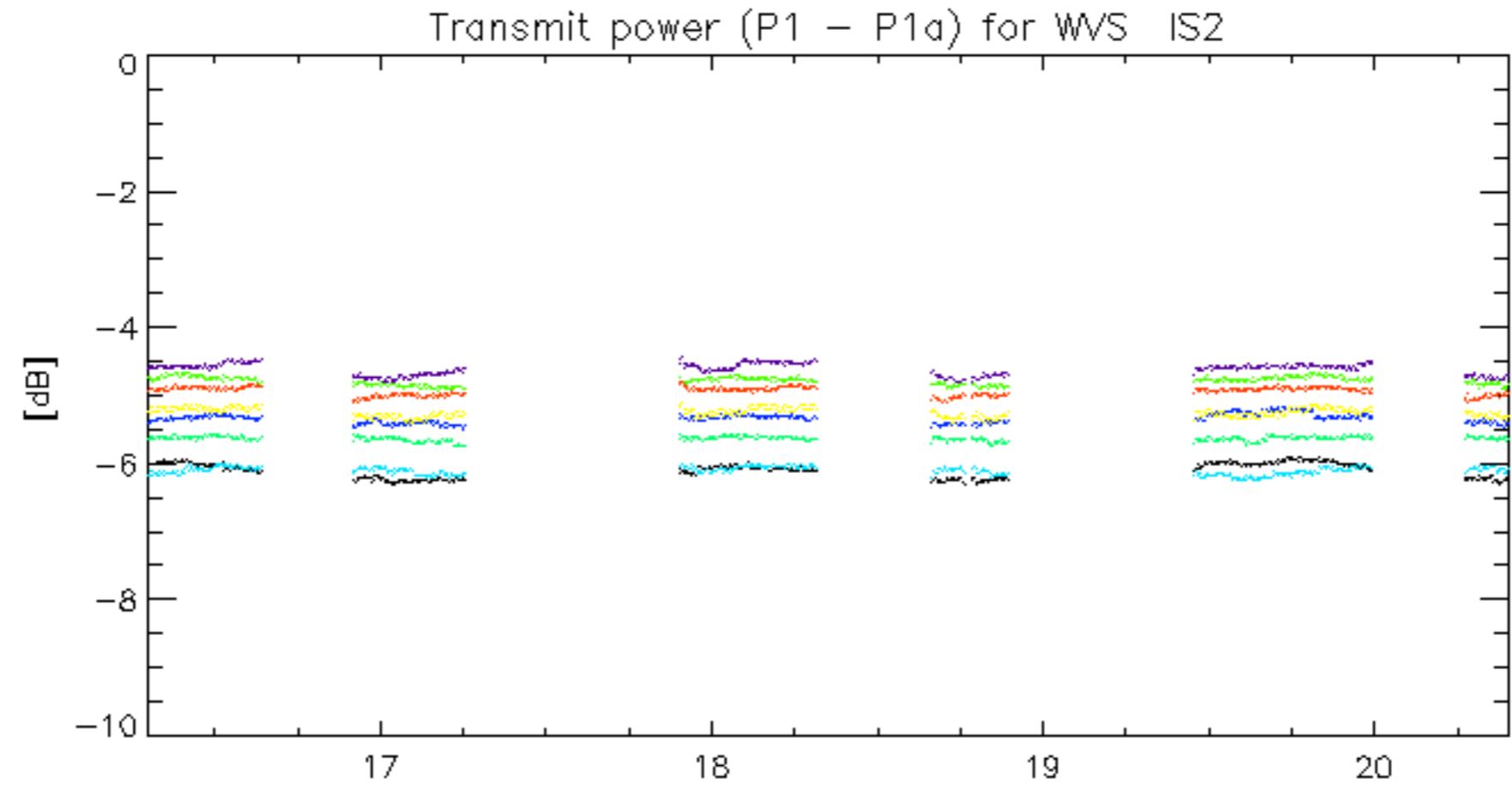


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03-Nov  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No unavailabilities during the reported period.