

# PRELIMINARY REPORT OF 051024

last update on Mon Oct 24 16:44:51 GMT 2005

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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 2005-10-23 00:00:00 to 2005-10-24 16:44:51

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	45	71	17	1	13
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	45	71	17	1	13
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	71	17	1	13
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	45	71	17	1	13

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	51	25	15	54
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	37	51	25	15	54
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	51	25	15	54
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	51	25	15	54

## 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	20051022 204910
H	20051023 183657

### 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
☒	☒
☒	☒
☒	☒
☒	☒

## 4 - Internal calibration Results

No anomalies observed.

### 4.1 - Daily statistics

#### 4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒
☒

#### 4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

### 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	-3.532197	0.008942	0.034790
7	P1	-2.896277	0.010412	-0.071218
11	P1	-4.068263	0.016408	-0.096241
15	P1	-6.028849	0.015256	-0.041812
19	P1	-3.157427	0.005590	-0.040961
22	P1	-4.447435	0.013262	-0.071119
26	P1	-4.273849	0.015093	0.043568
30	P1	-5.707291	0.008732	-0.050877
3	P1	-15.399448	0.183714	0.259184
7	P1	-16.268492	0.109739	-0.143050
11	P1	-16.215870	0.284800	-0.315242
15	P1	-13.344150	0.104975	-0.053555
19	P1	-13.617470	0.039990	-0.146843
22	P1	-16.123678	0.482591	-0.321914
26	P1	-16.160603	0.244198	0.355014
30	P1	-16.400789	0.176868	-0.156876

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.864901	0.098594	0.000772
7	P2	-22.698811	0.104971	0.077933
11	P2	-16.748928	0.114624	0.146747
15	P2	-7.219544	0.101155	-0.057787
19	P2	-9.172866	0.093209	-0.055541
22	P2	-17.723690	0.099399	-0.127029
26	P2	-16.099272	0.094472	-0.119356
30	P2	-19.624153	0.090378	-0.018457

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.190016	0.005685	-0.044010
7	P3	-8.190016	0.005685	-0.044010
11	P3	-8.190016	0.005685	-0.044010
15	P3	-8.190016	0.005685	-0.044010
19	P3	-8.190016	0.005685	-0.044010
22	P3	-8.190016	0.005685	-0.044010
26	P3	-8.190016	0.005685	-0.044010
30	P3	-8.190016	0.005685	-0.044010

**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	-3.660899	0.007138	-0.020802
7	P1	-2.827582	0.011901	0.069923
11	P1	-2.850944	0.012882	0.000434
15	P1	-3.385598	0.017956	0.012726
19	P1	-3.350743	0.010586	-0.022718
22	P1	-5.142996	0.019497	0.041889
26	P1	-5.780741	0.017621	-0.054483
30	P1	-5.213613	0.026309	-0.028640
3	P1	-11.402049	0.031954	-0.030878
7	P1	-9.918736	0.040388	0.003964
11	P1	-10.013136	0.057430	-0.019882
15	P1	-10.575656	0.093456	0.051102
19	P1	-15.464954	0.067986	-0.056831
22	P1	-20.470772	1.193714	-0.287540

26	P1	-17.099119	0.390385	-0.200024
30	P1	-18.772493	0.385804	0.561287

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.705059	0.038682	0.021887
7	P2	-23.052799	0.090736	-0.070409
11	P2	-11.748728	0.027572	0.021158
15	P2	-4.893421	0.037257	-0.080408
19	P2	-6.899477	0.026509	-0.047063
22	P2	-8.109020	0.024757	-0.069980
26	P2	-23.864841	0.038908	-0.121059
30	P2	-22.059431	0.026938	-0.041687

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.034060	0.002826	-0.043258
7	P3	-8.034148	0.002831	-0.043064
11	P3	-8.034091	0.002829	-0.043414
15	P3	-8.034162	0.002834	-0.043636
19	P3	-8.034203	0.002839	-0.043367
22	P3	-8.034049	0.002847	-0.043552
26	P3	-8.034327	0.002845	-0.043242
30	P3	-8.034160	0.002841	-0.043444

## 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	0.000558204
	stdev	1.72093e-07
MEAN Q	mean	0.000538567
	stdev	2.16913e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137542
	stdev	0.00112818
STDEV Q	mean	0.137887
	stdev	0.00114460



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005102[234]

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_1PNPDK20051023_123959_000001452041_00482_19073_6051.N1	1	0
ASA_GM1_1PNPDK20051023_151422_000011362041_00483_19074_9321.N1	0	7
ASA_WSM_1PNPDE20051022_010806_000002192041_00460_19051_5377.N1	0	123
ASA_WSM_1PNPDE20051022_022829_000000422041_00461_19052_5382.N1	0	120
ASA_WSM_1PNPDE20051022_162409_000000922041_00470_19061_5477.N1	0	44

ASA_WSM_1PNPDE20051022_180625_000001292041_00471_19062_5521.N1	0	70
ASA_WSM_1PNPDE20051022_230541_000000672041_00474_19065_5561.N1	0	3
ASA_WSM_1PNPDE20051024_015714_000001592041_00490_19081_5772.N1	0	11
ASA_WSM_1PNPDE20051024_033513_000000672041_00491_19082_5794.N1	0	50



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

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

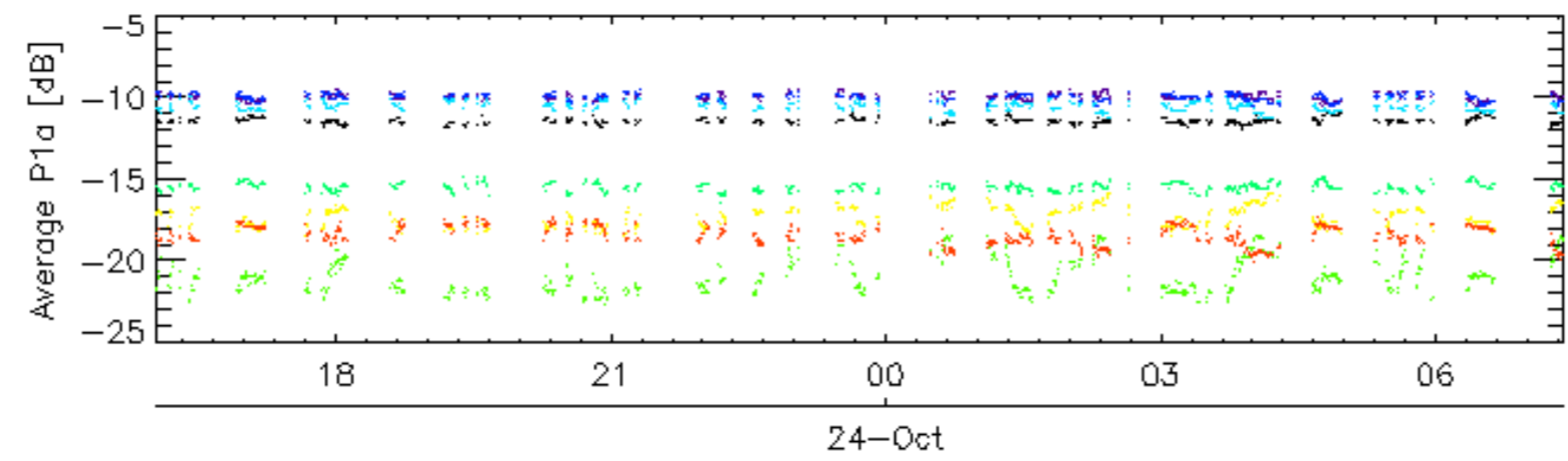
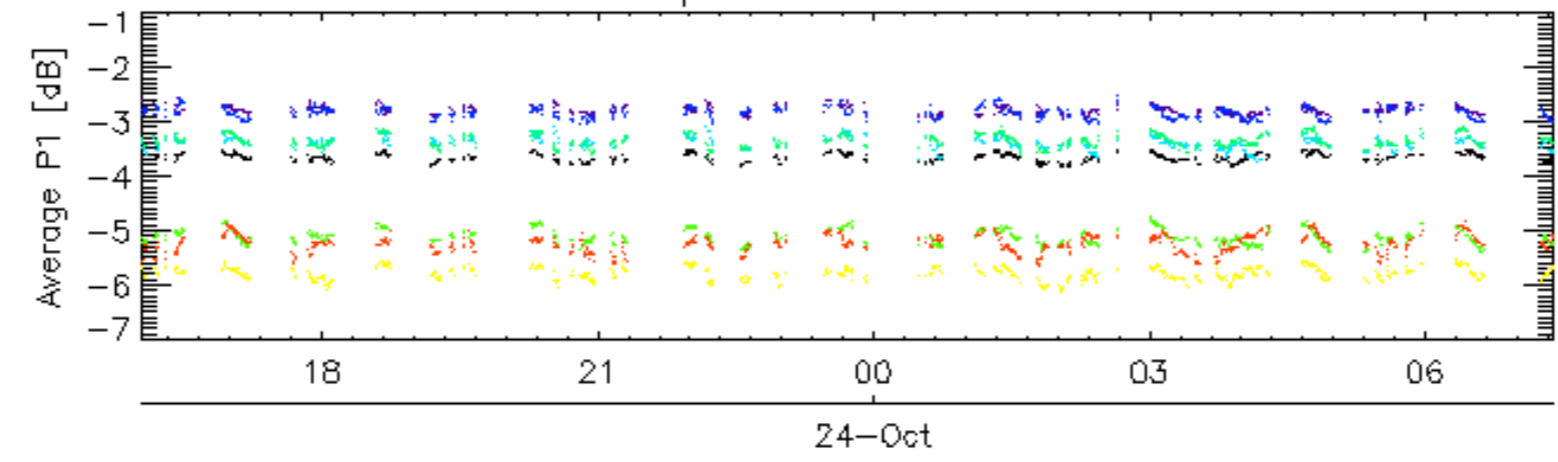
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

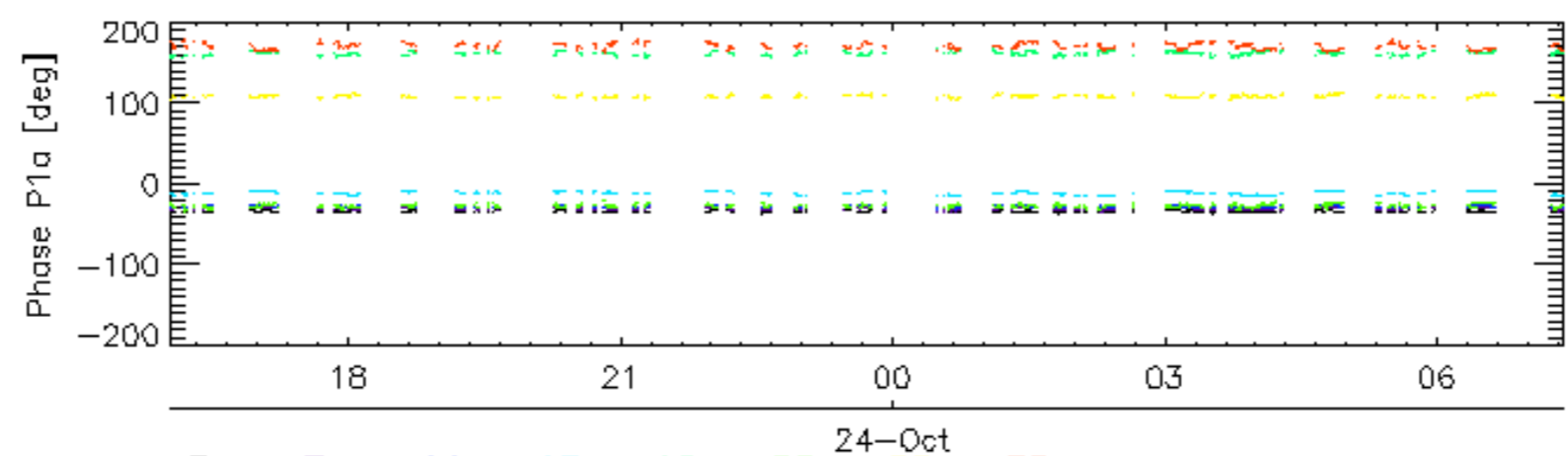
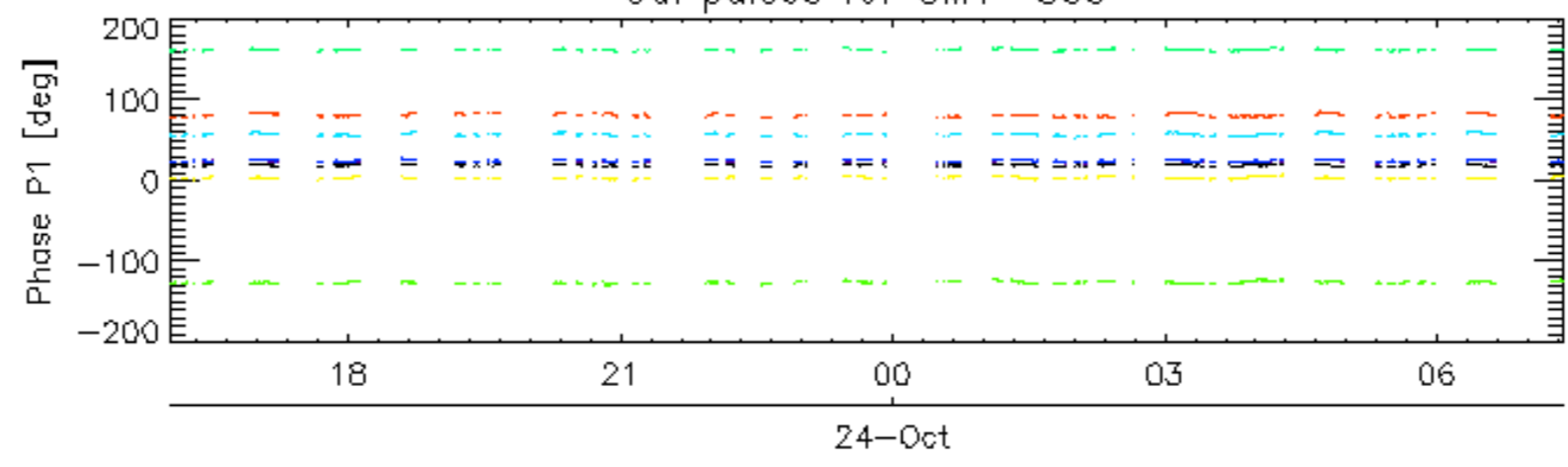
Evolution Doppler error versus ANX

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

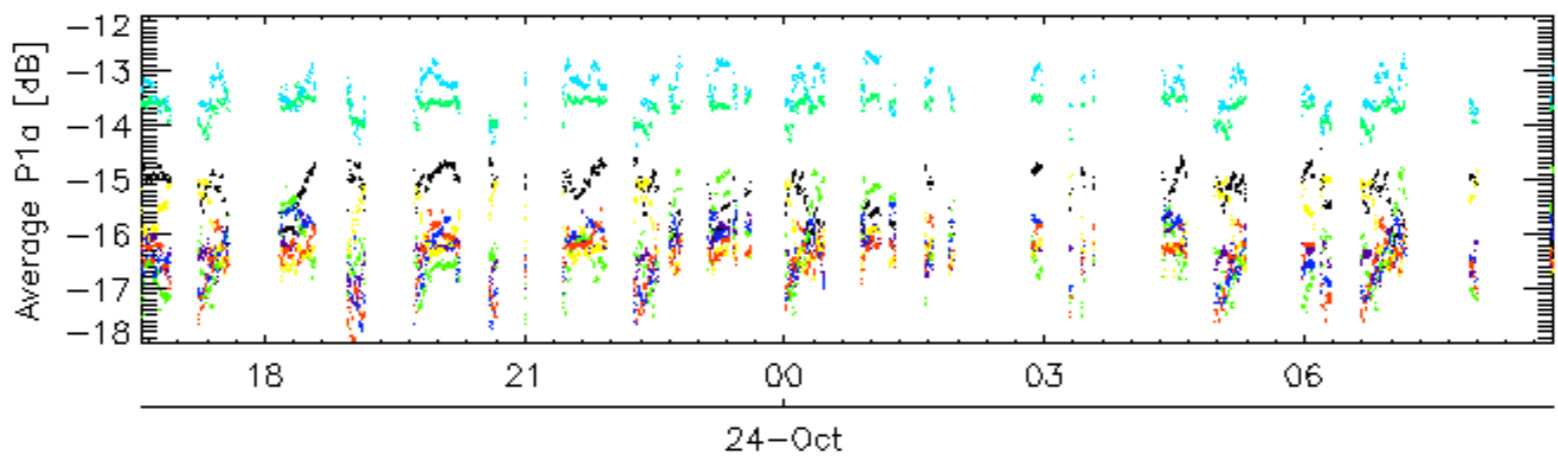
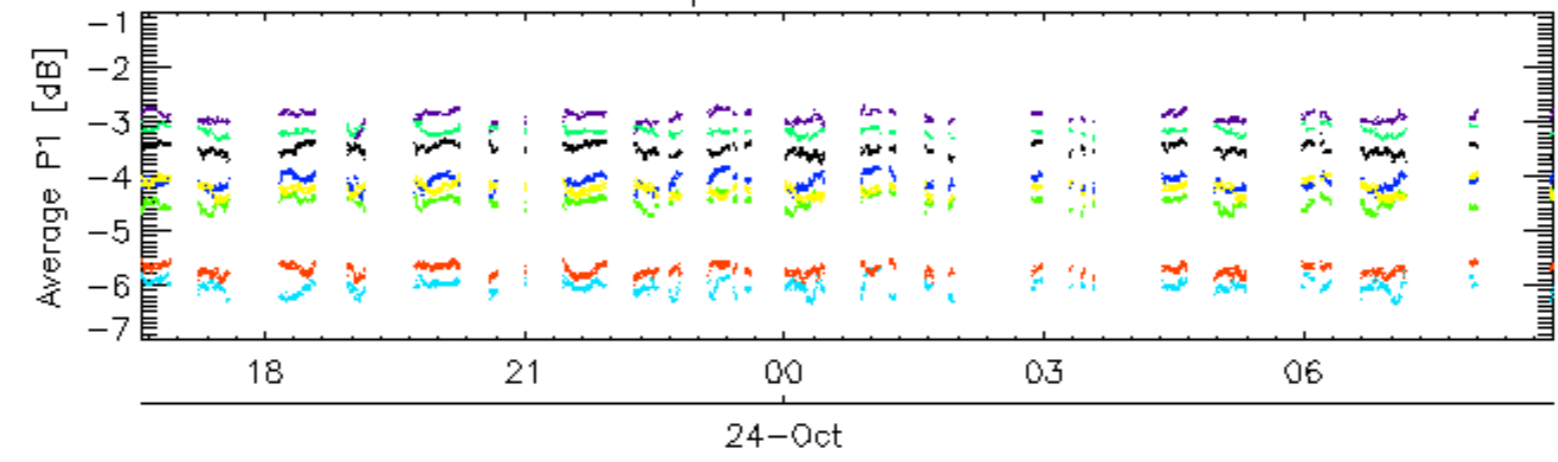


Cal pulses for GM1 SS3

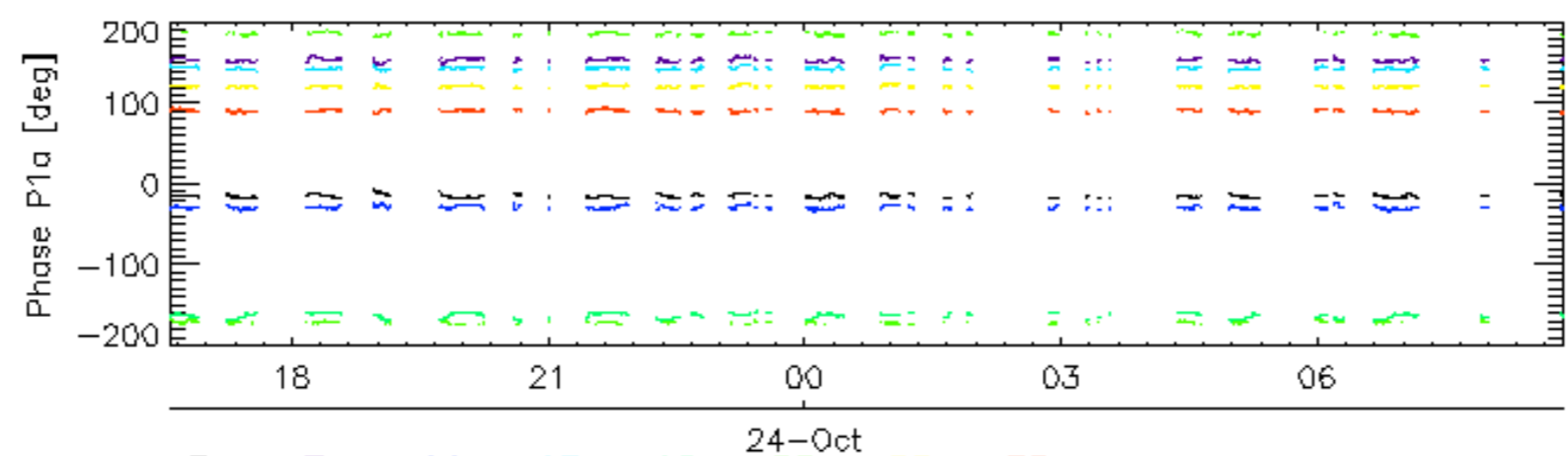
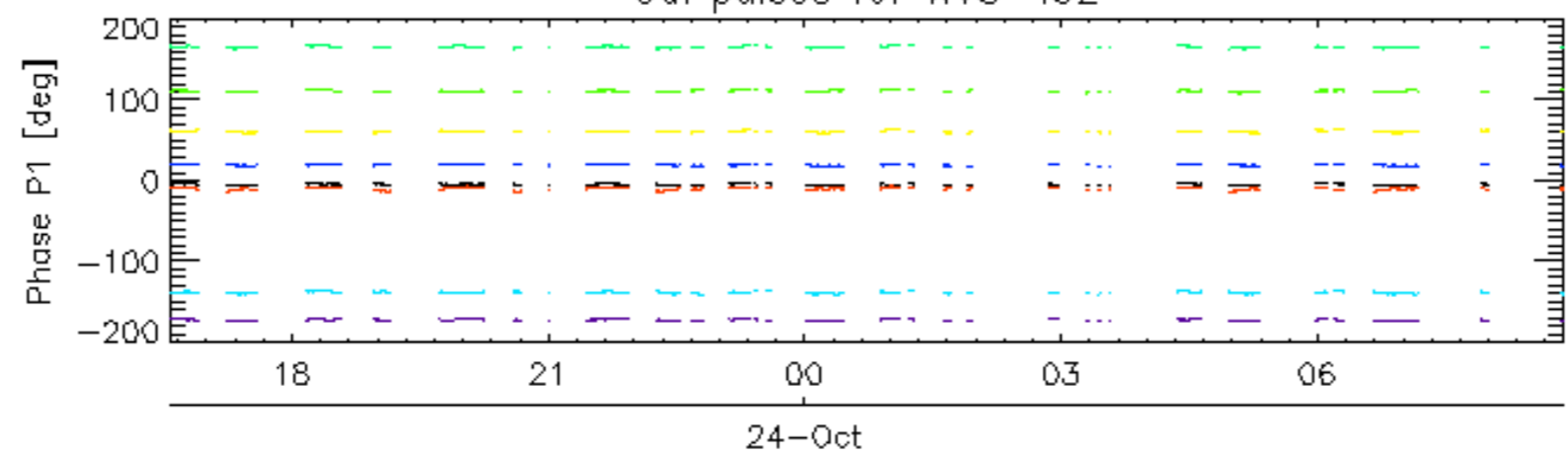


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

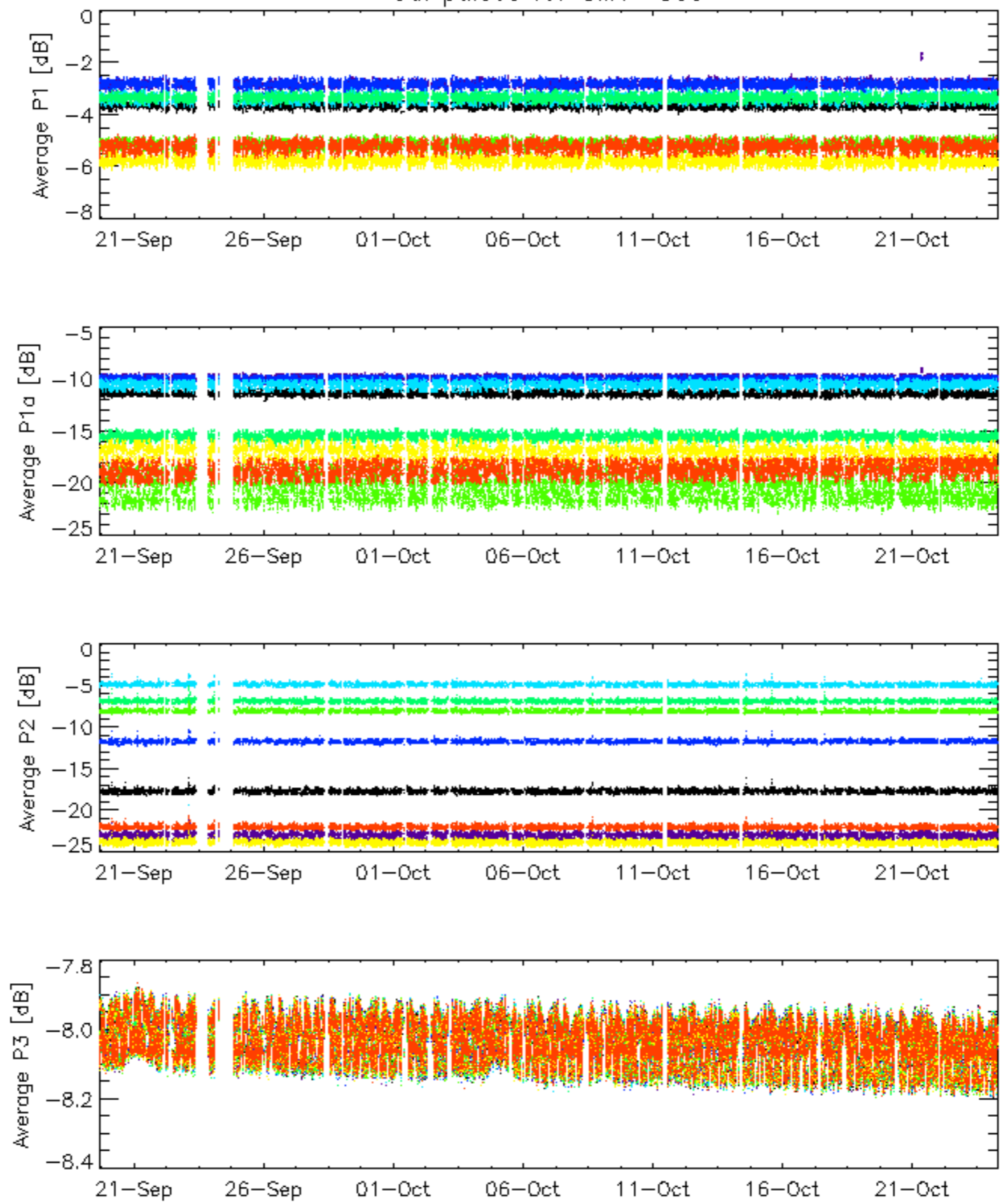


Cal pulses for WVS IS2



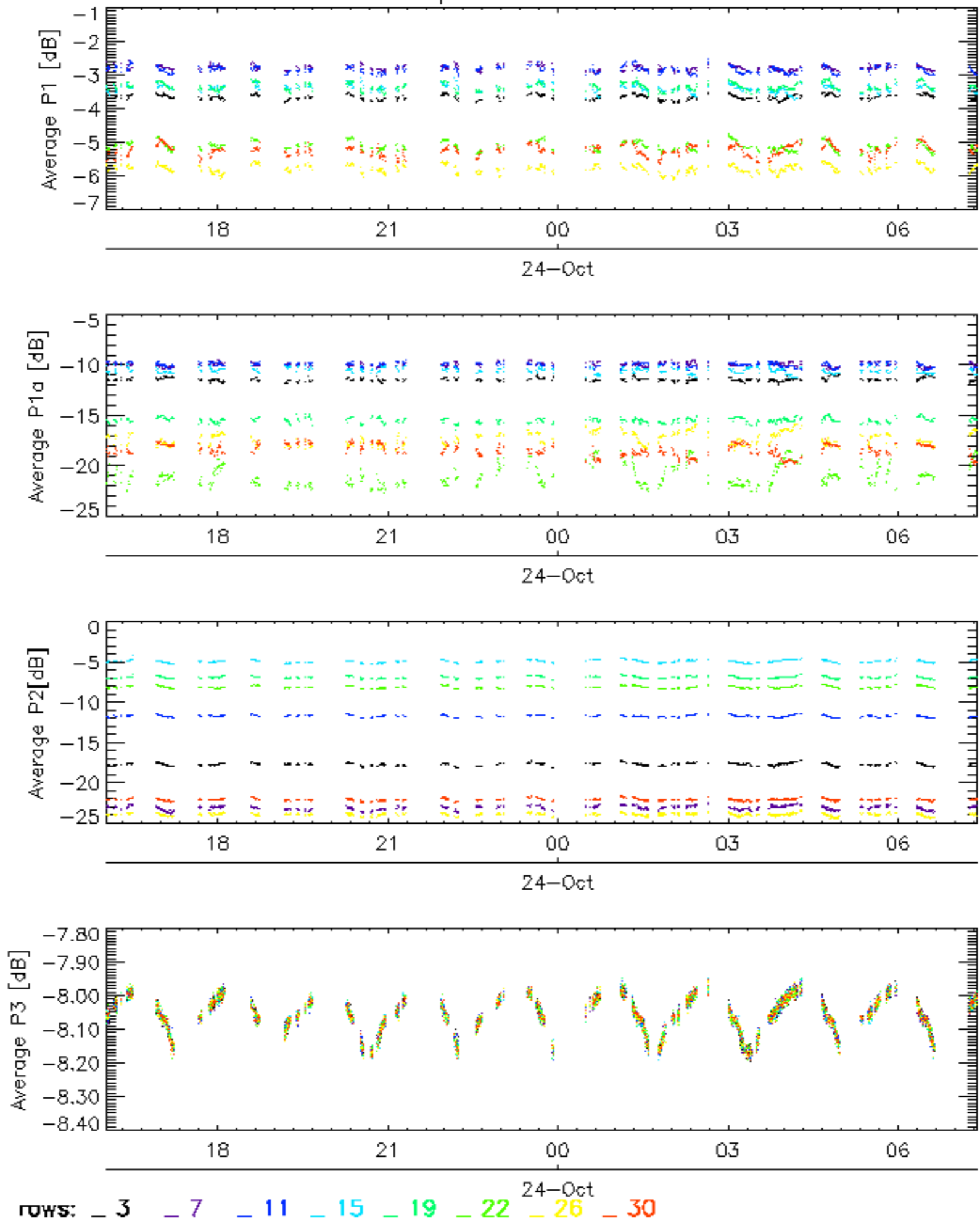
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

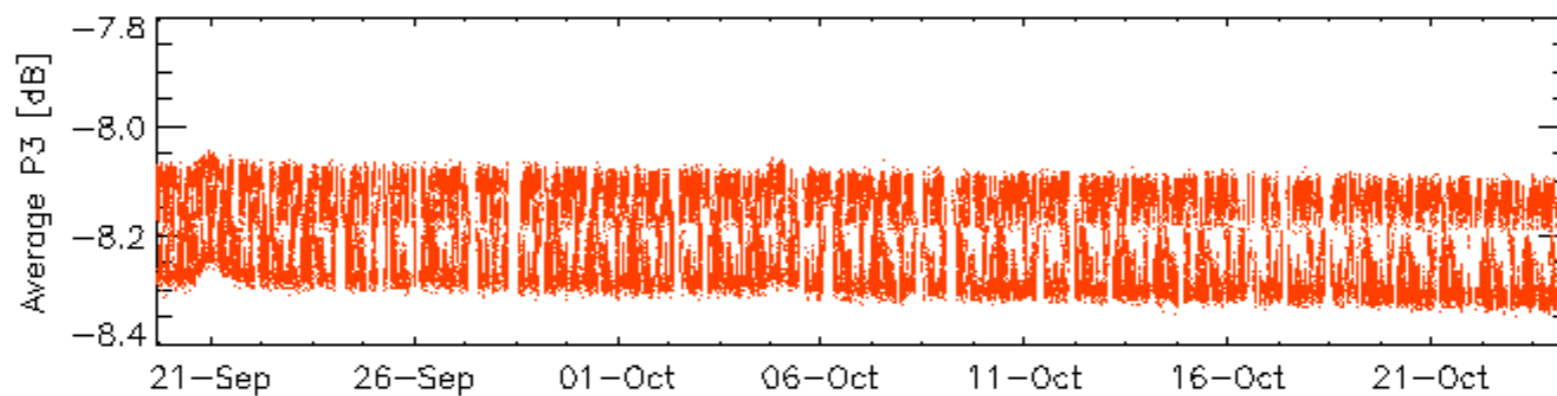
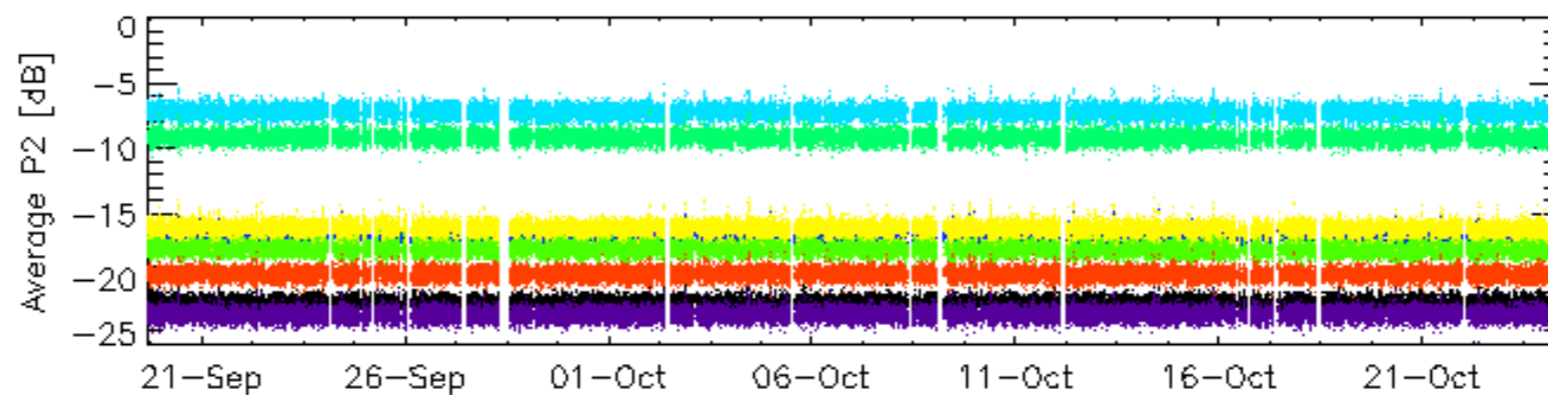
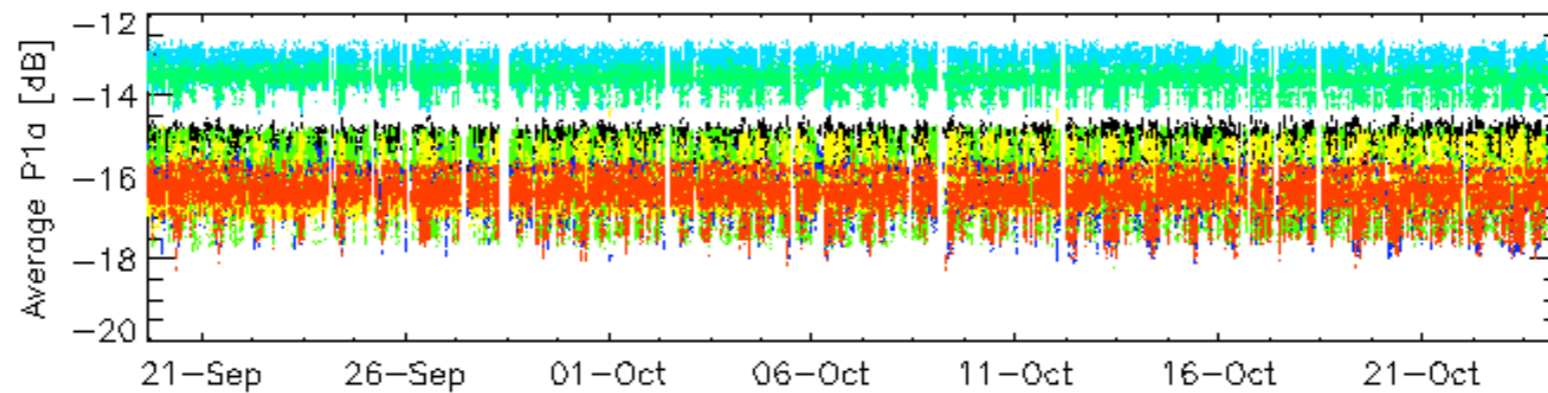
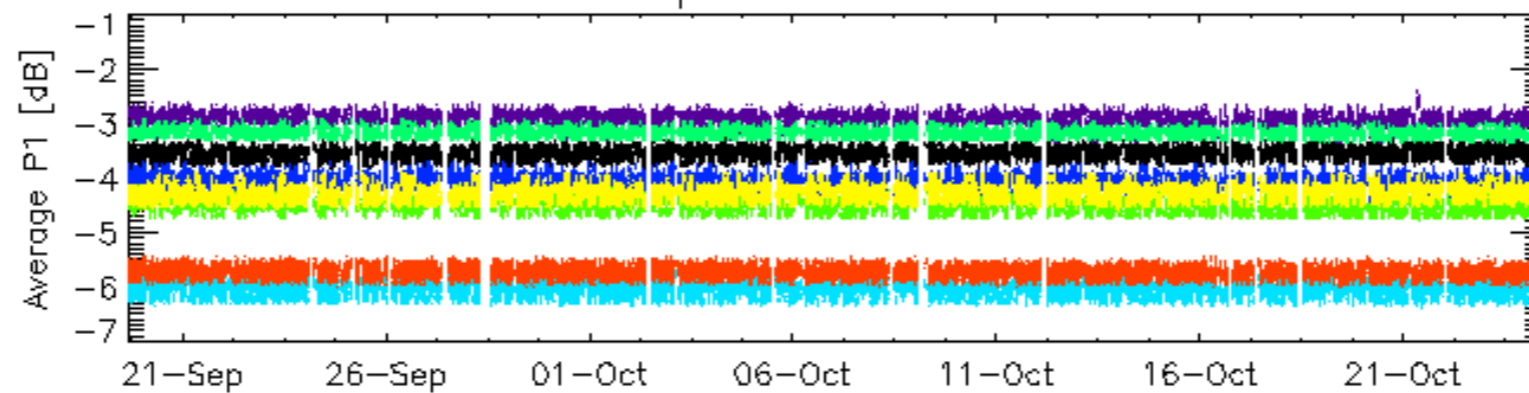


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

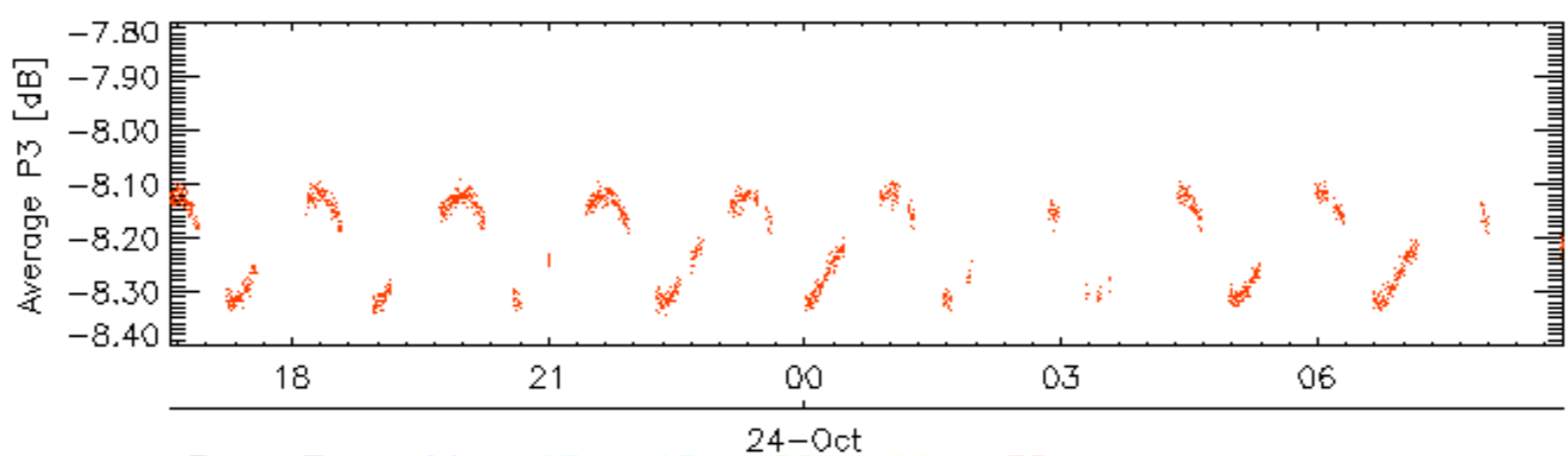
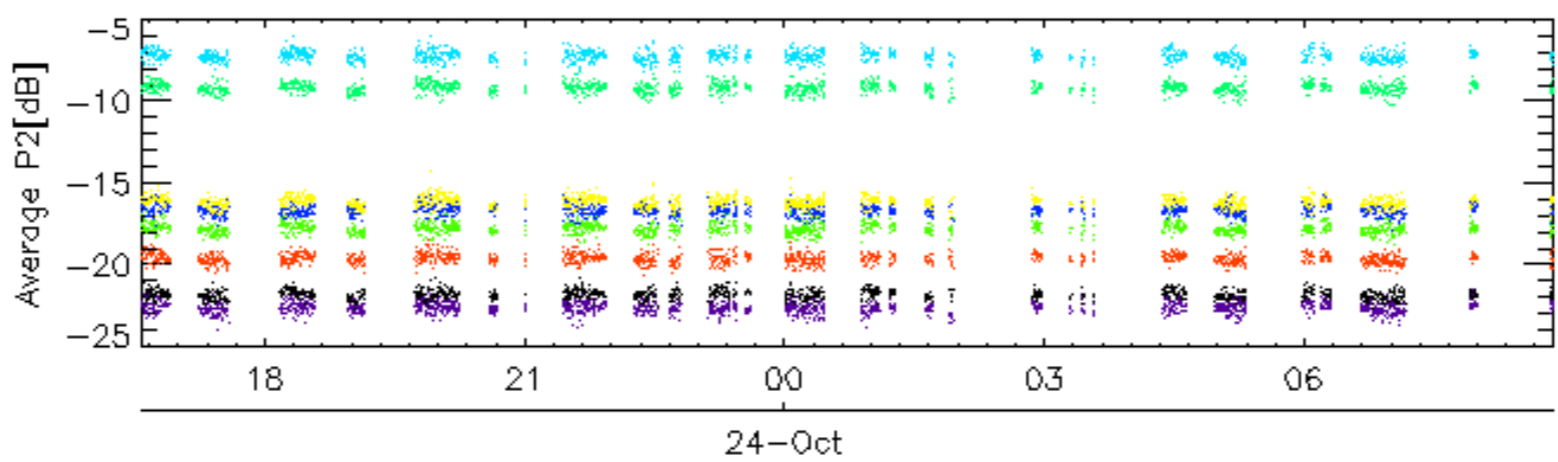
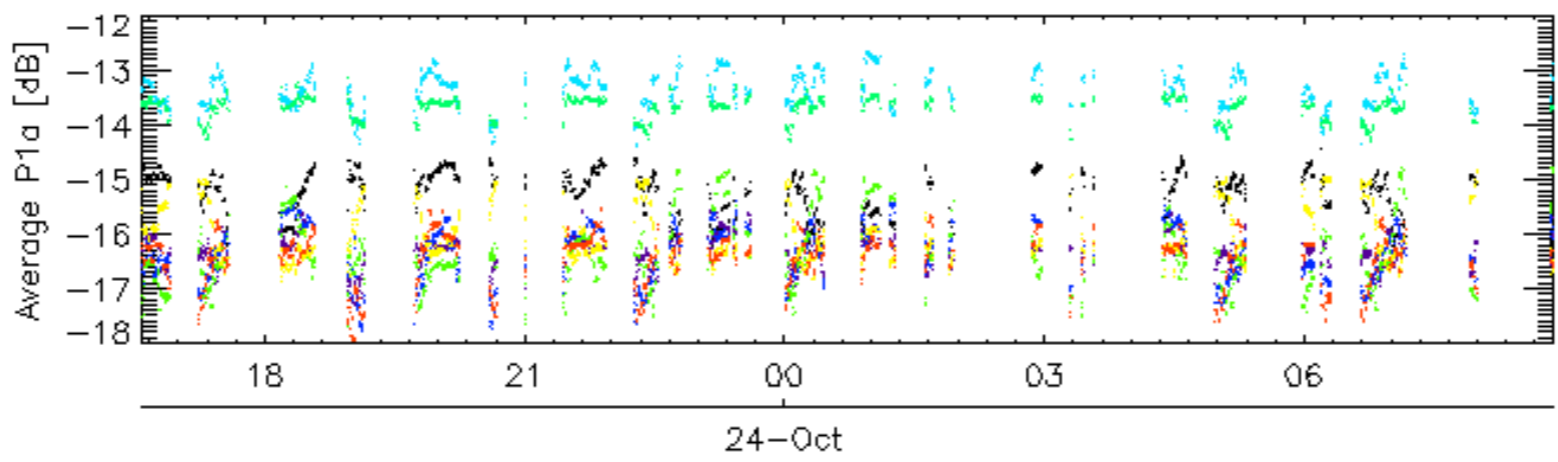
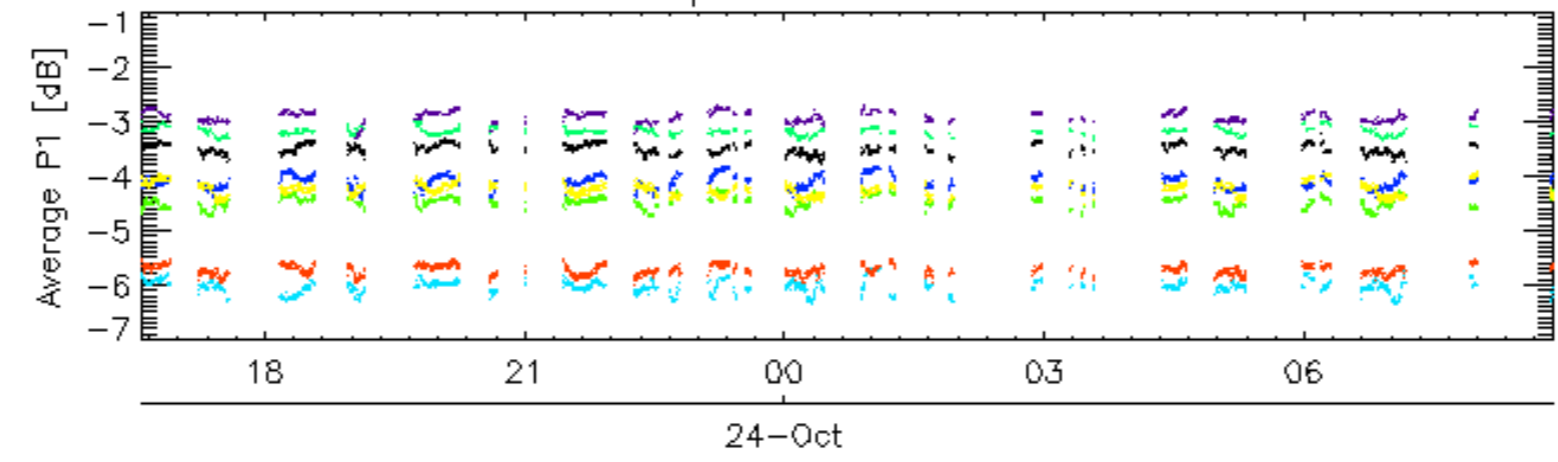


Cal pulses for WVS IS2



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

Cal pulses for WVS IS2

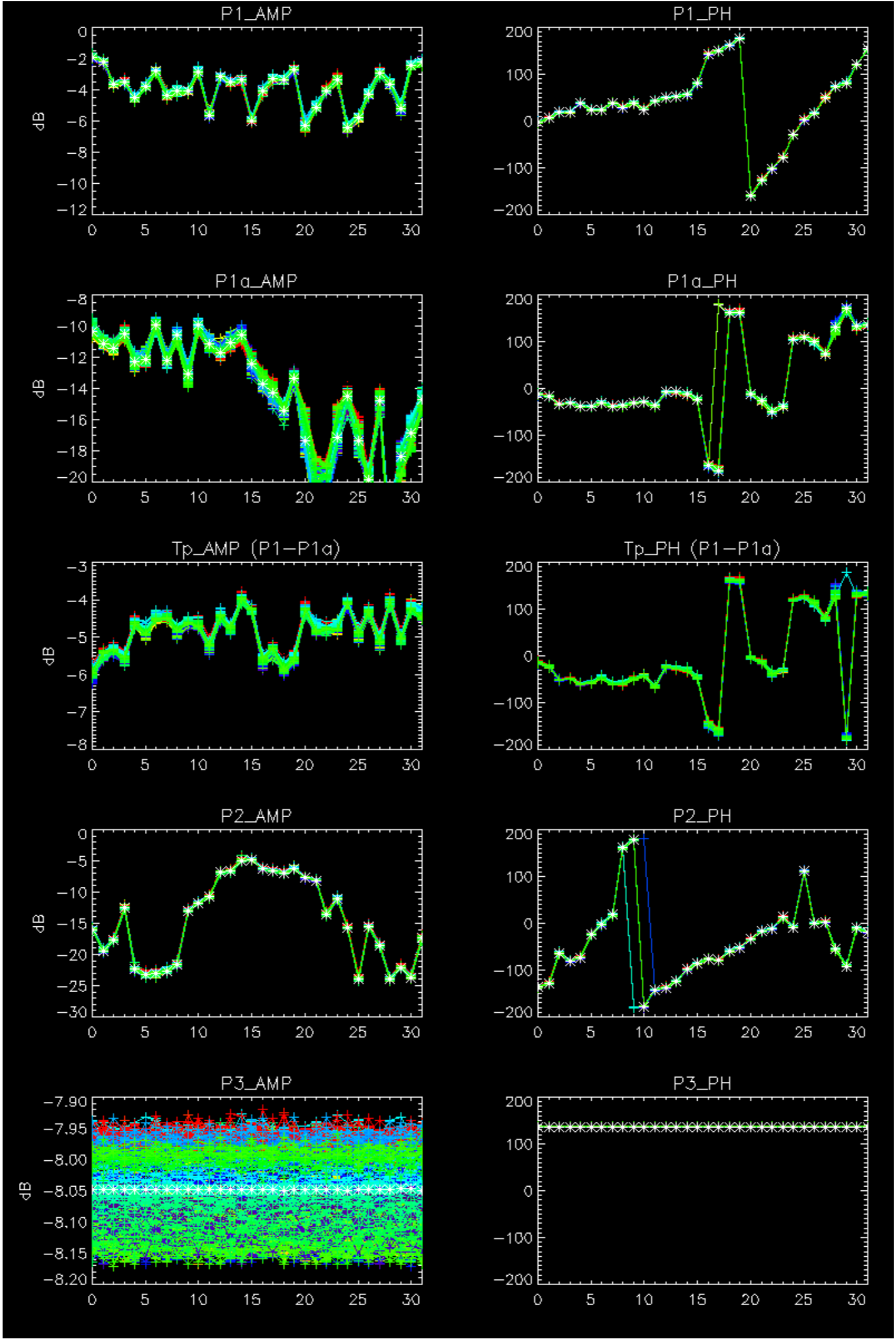


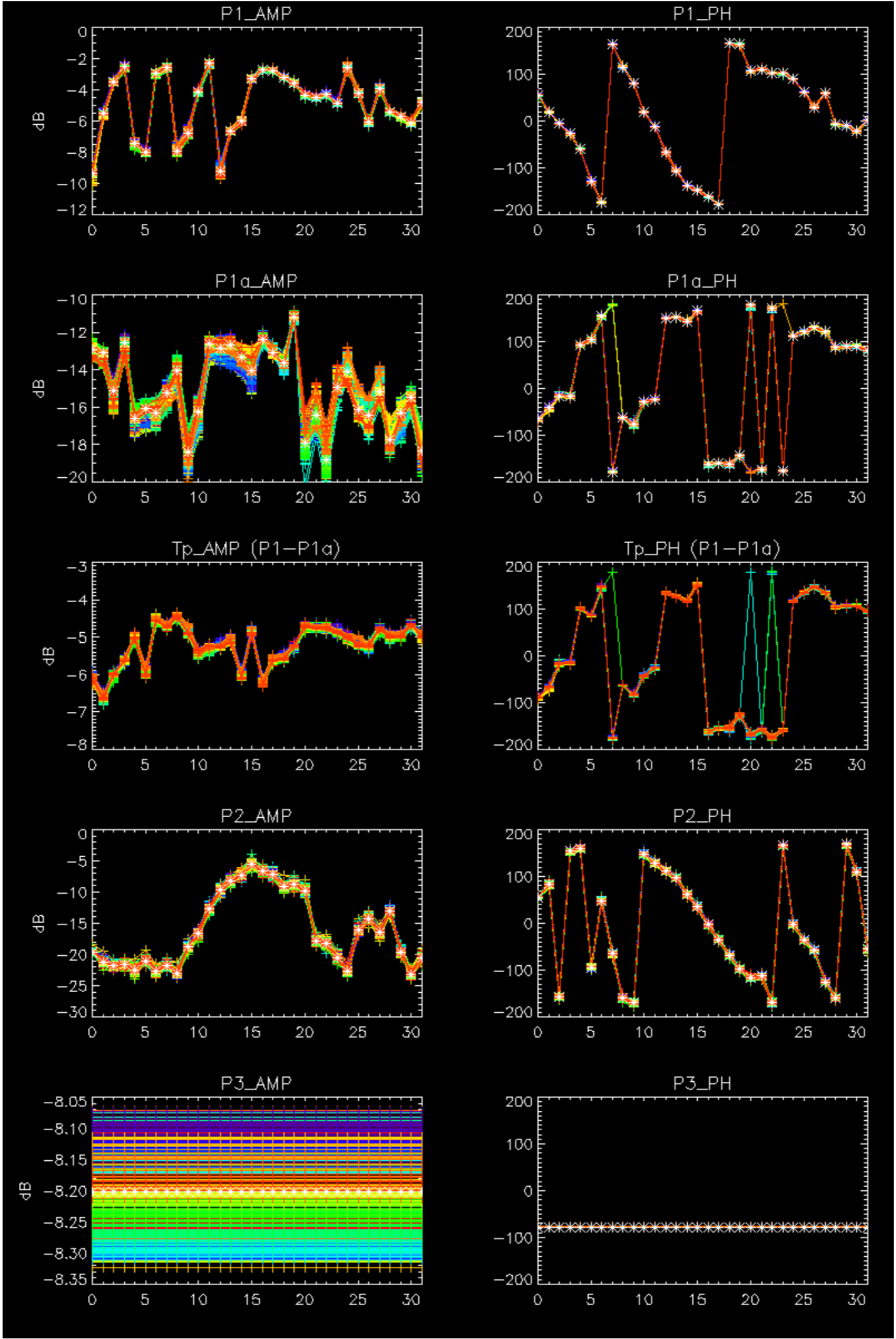
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No anomalies observed on available browse products



No anomalies observed.

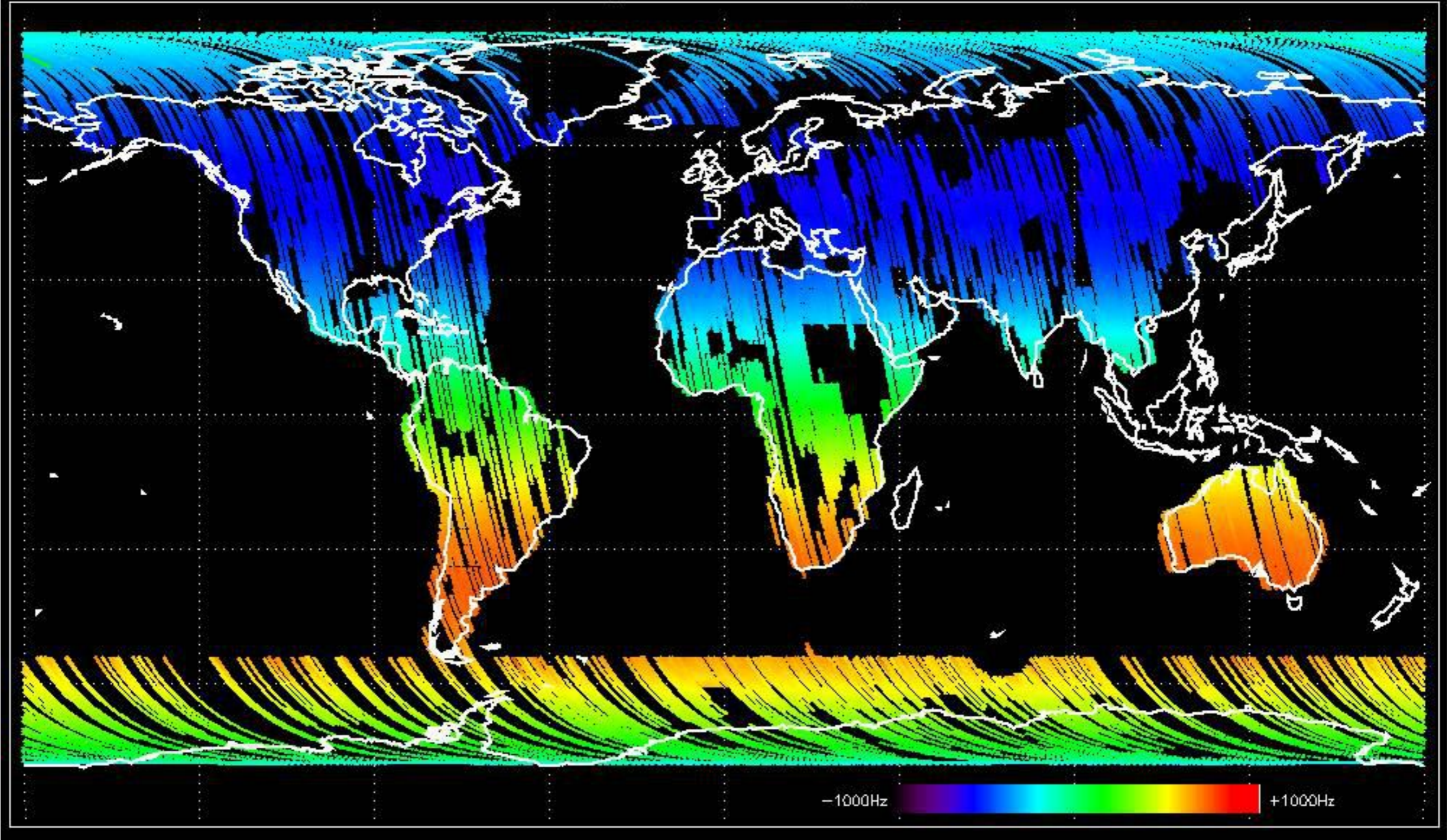




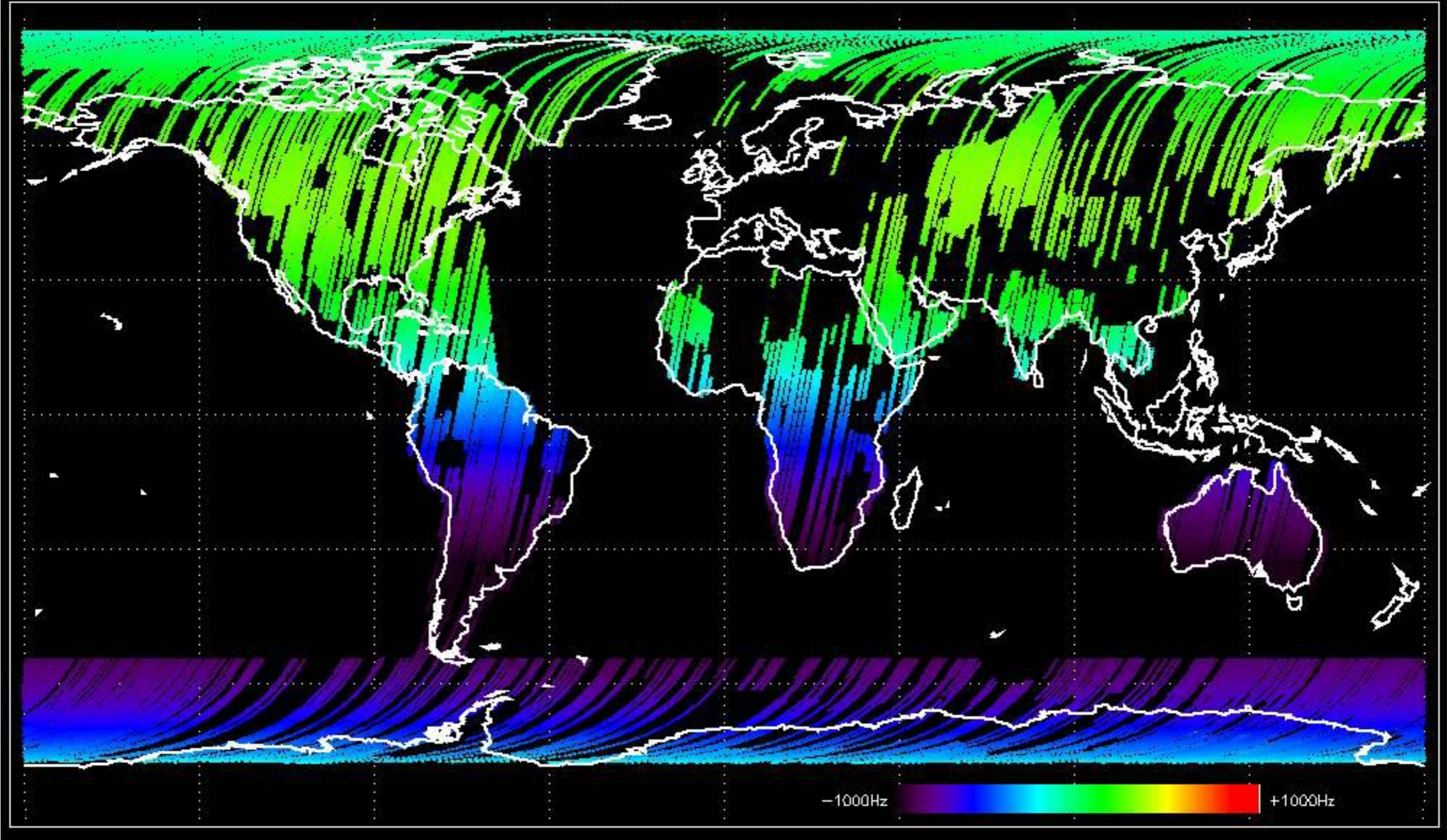
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



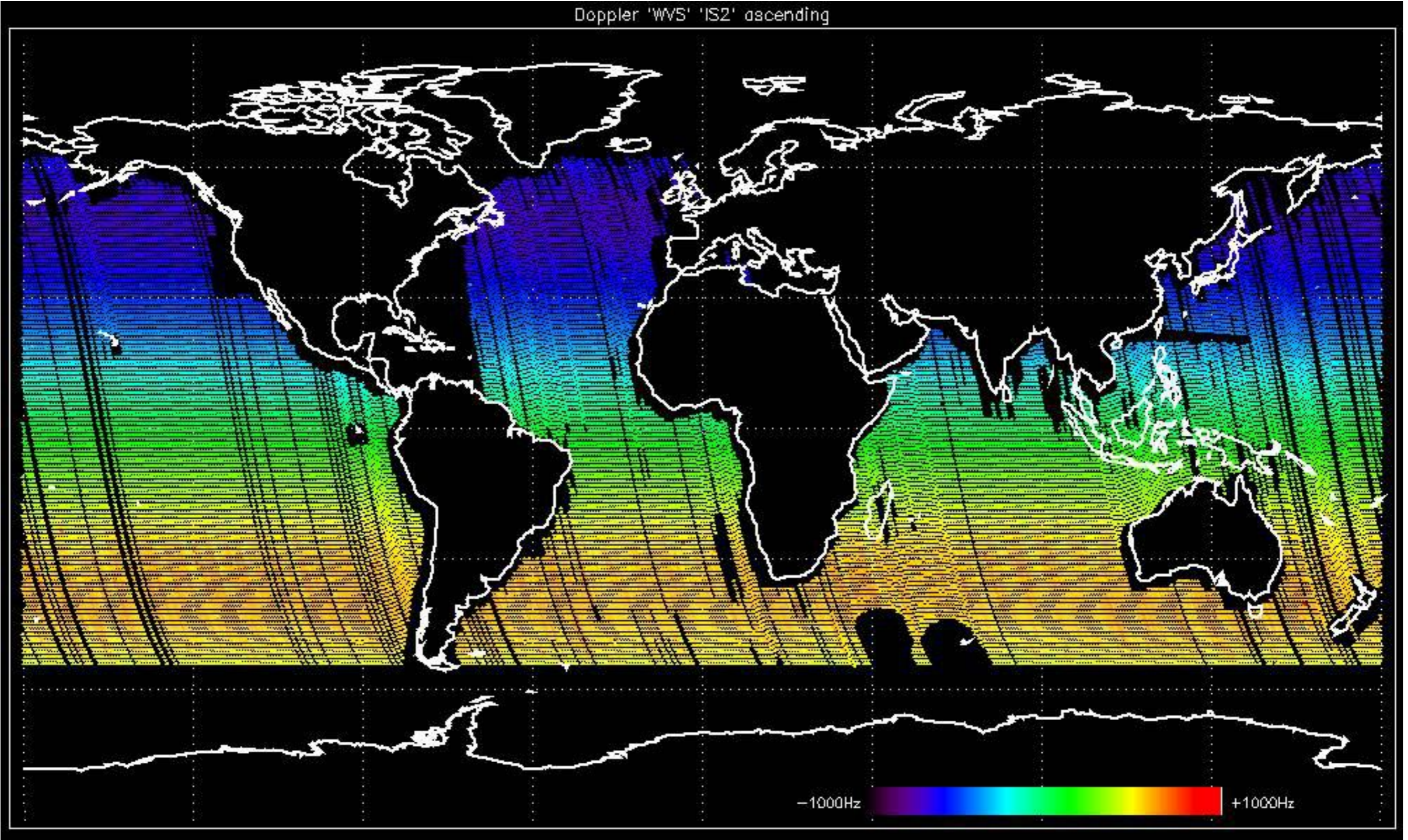
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

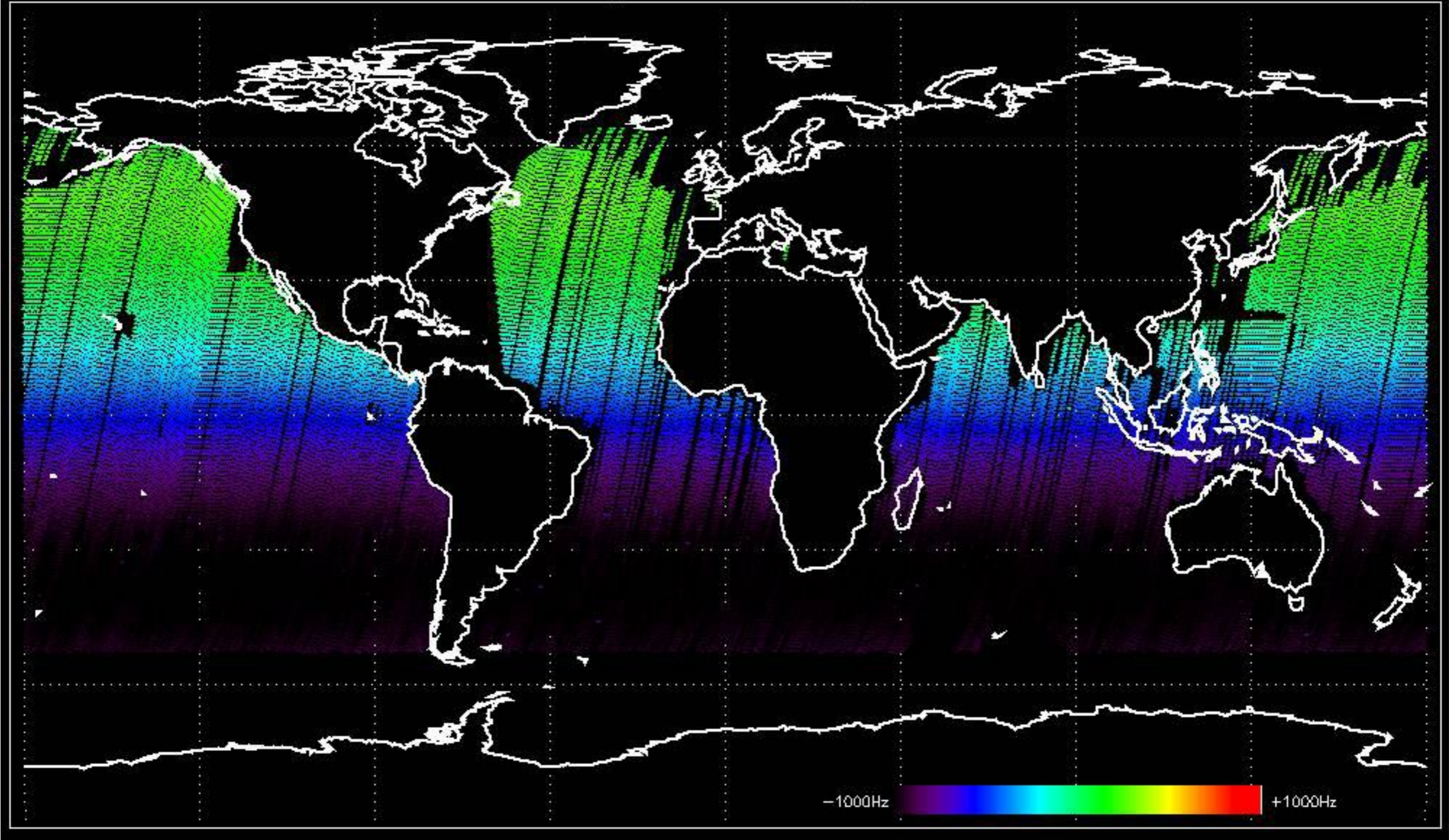


Doppler 'WVS' 'IS2' ascending

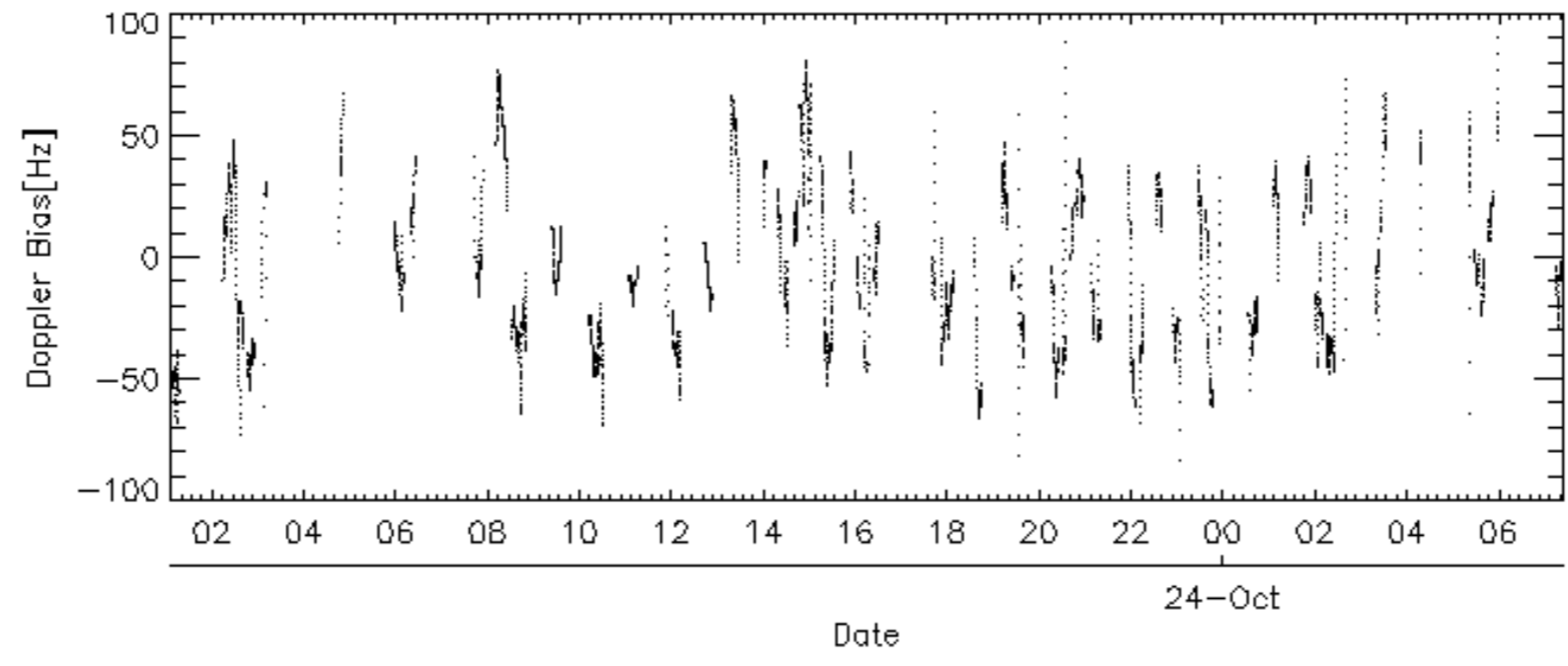
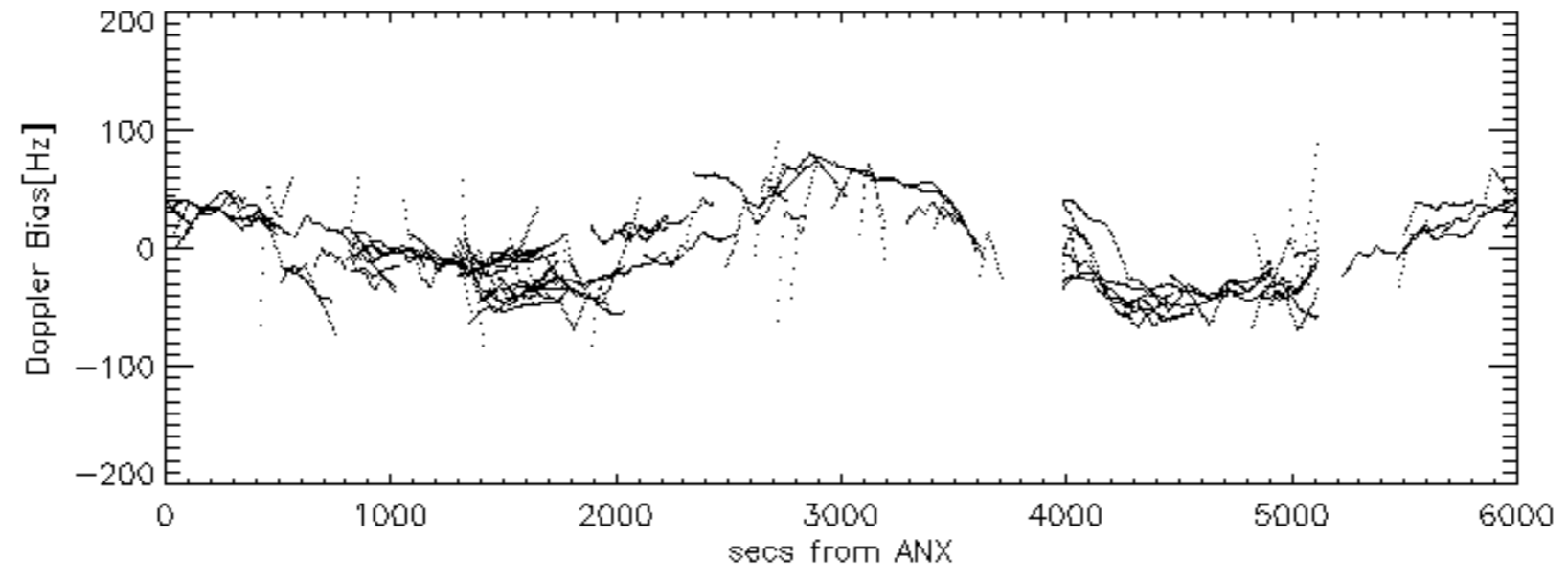
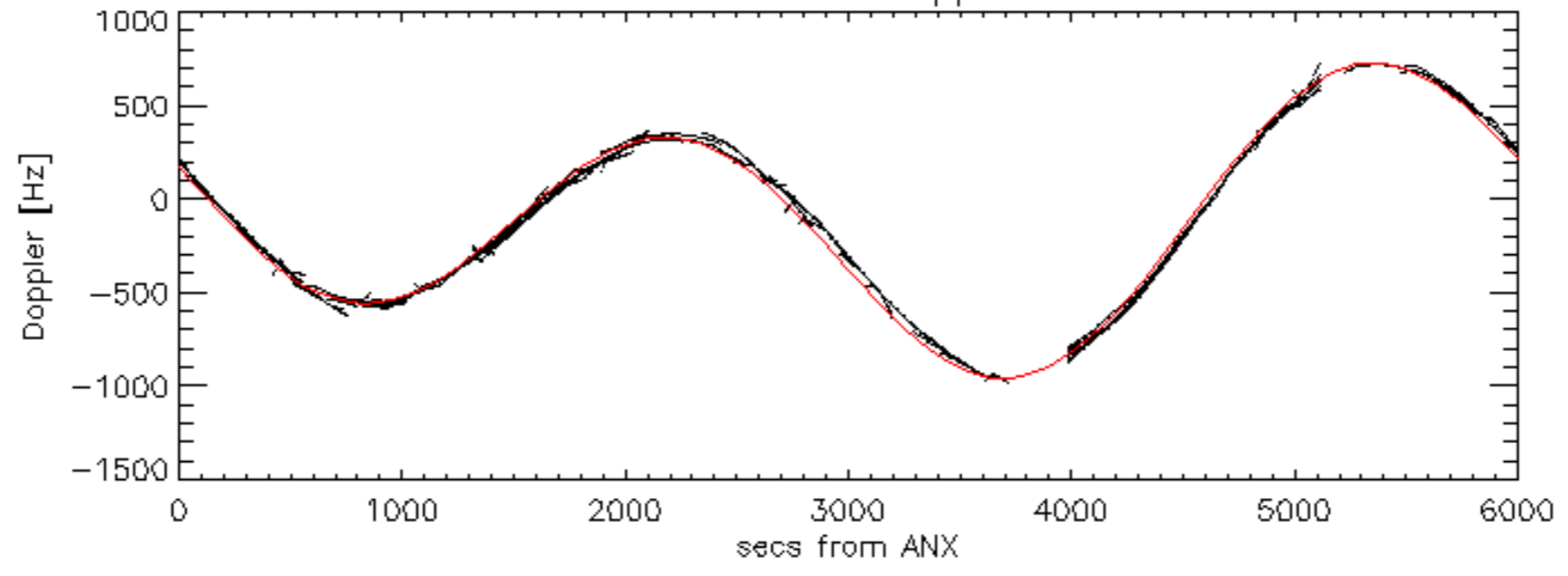


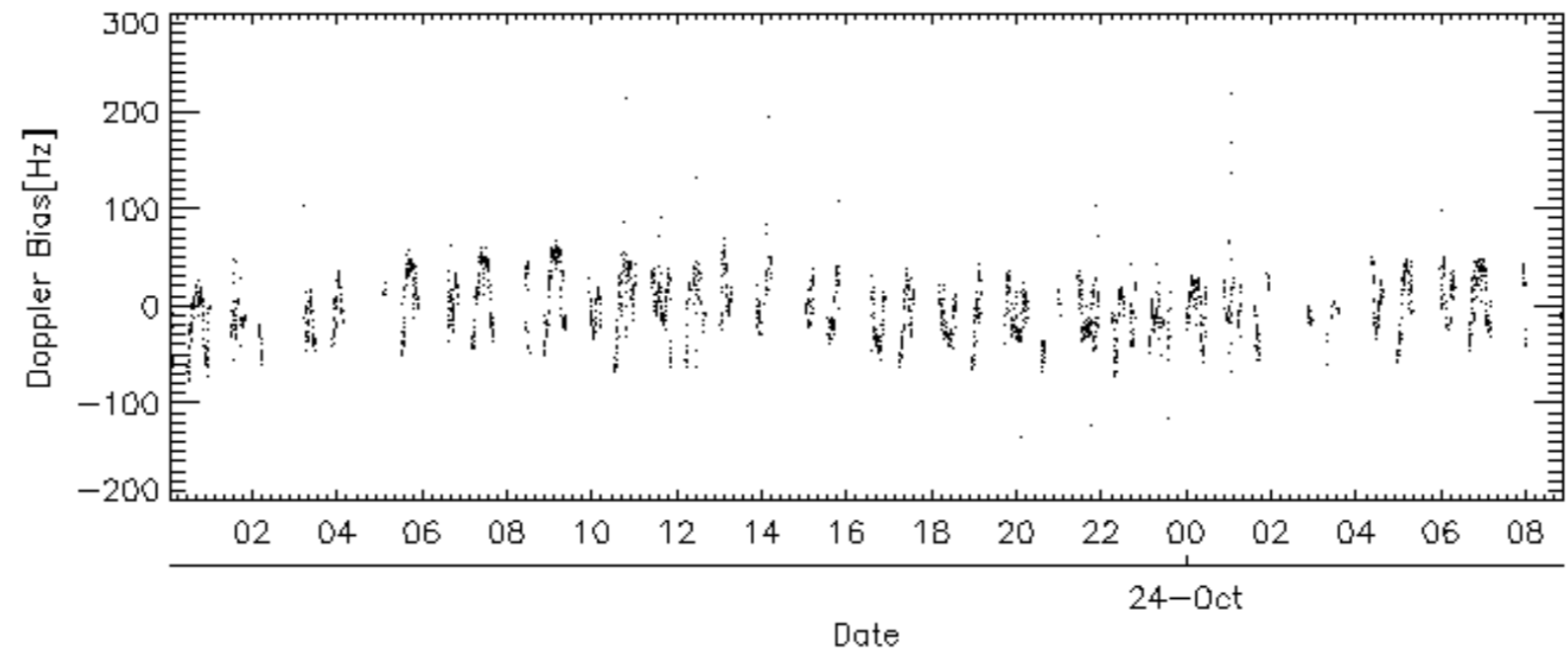
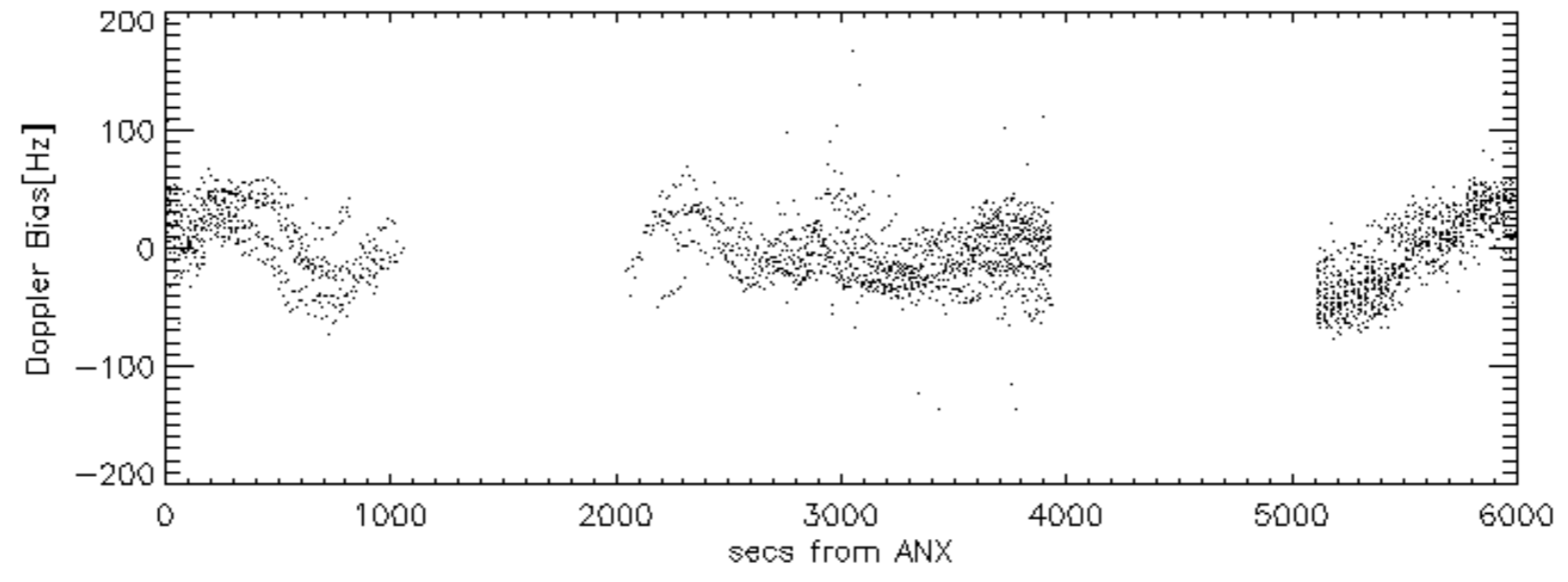
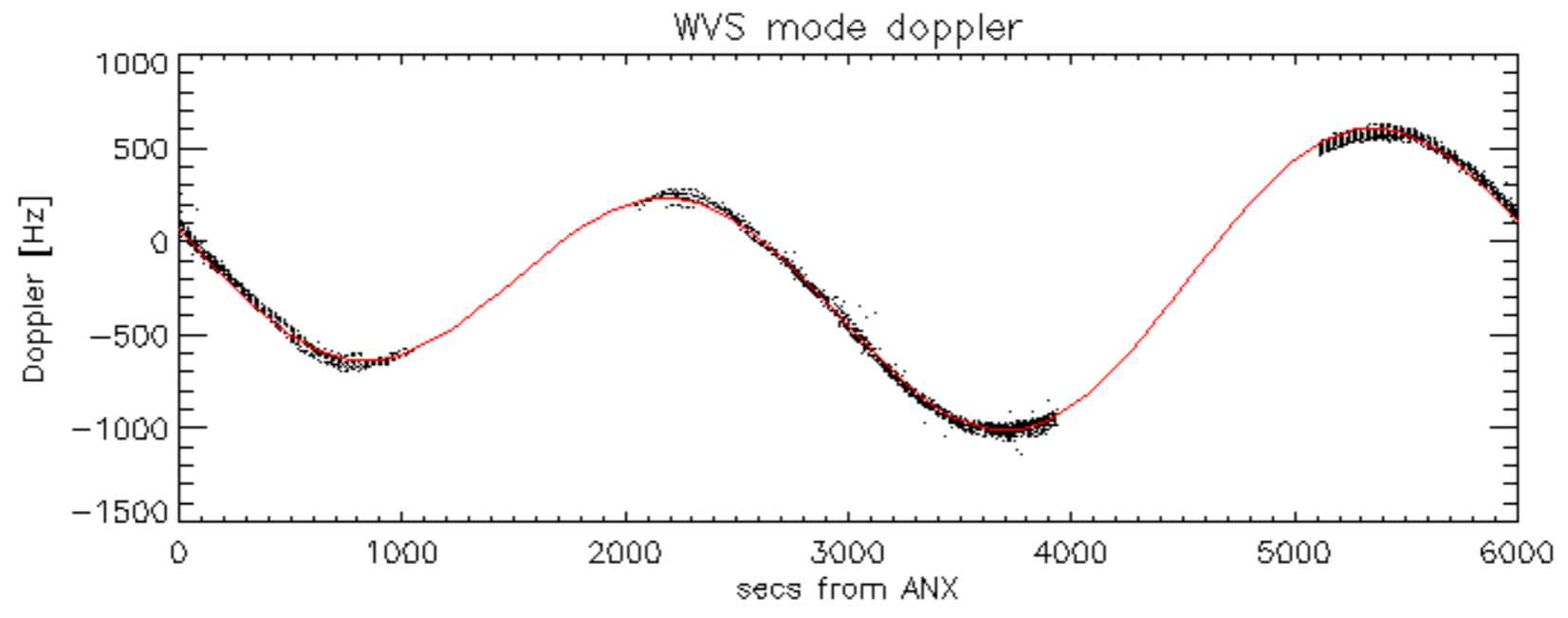


Doppler 'WVS' 'IS2' descending

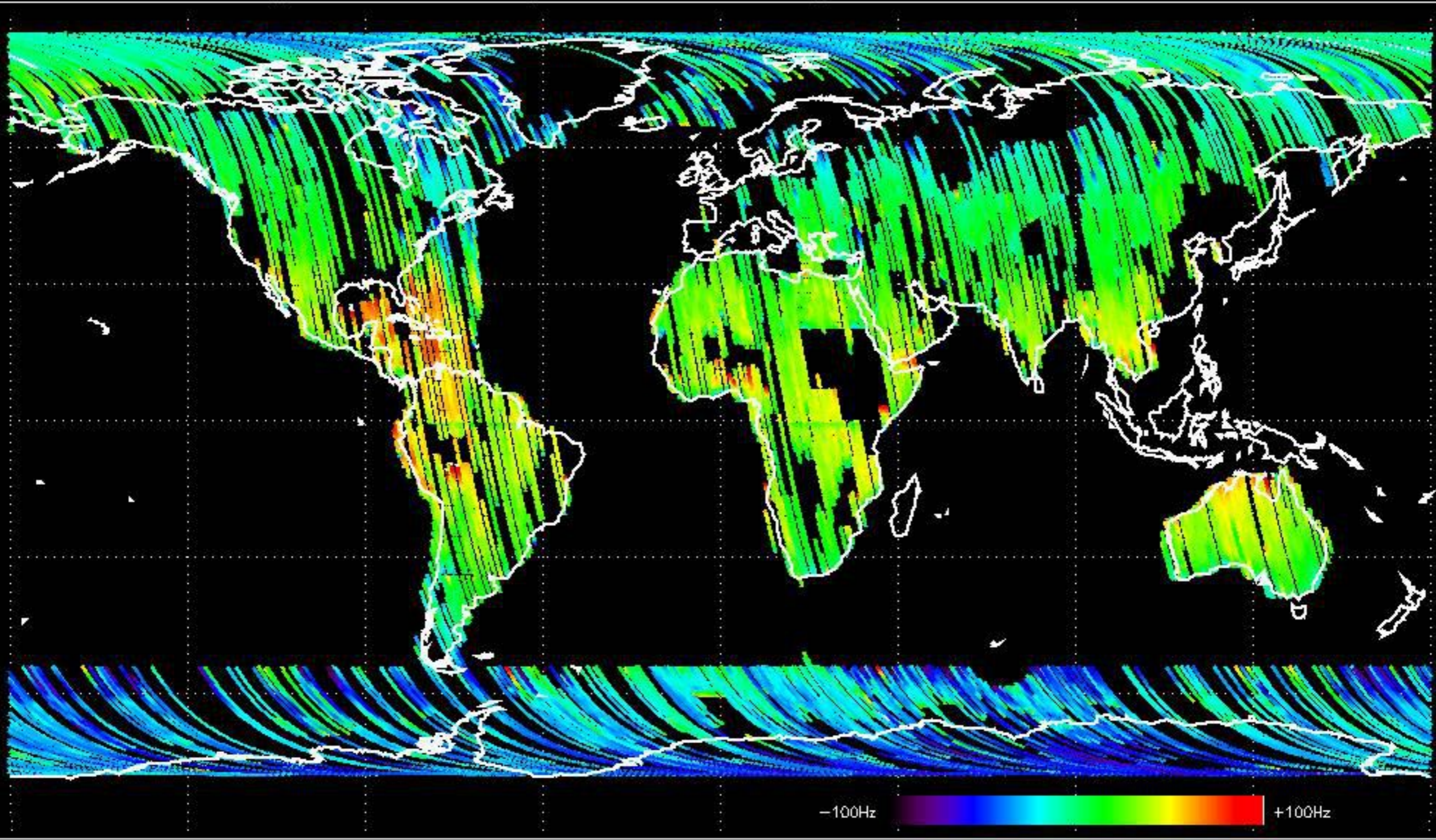


GM1 mode doppler



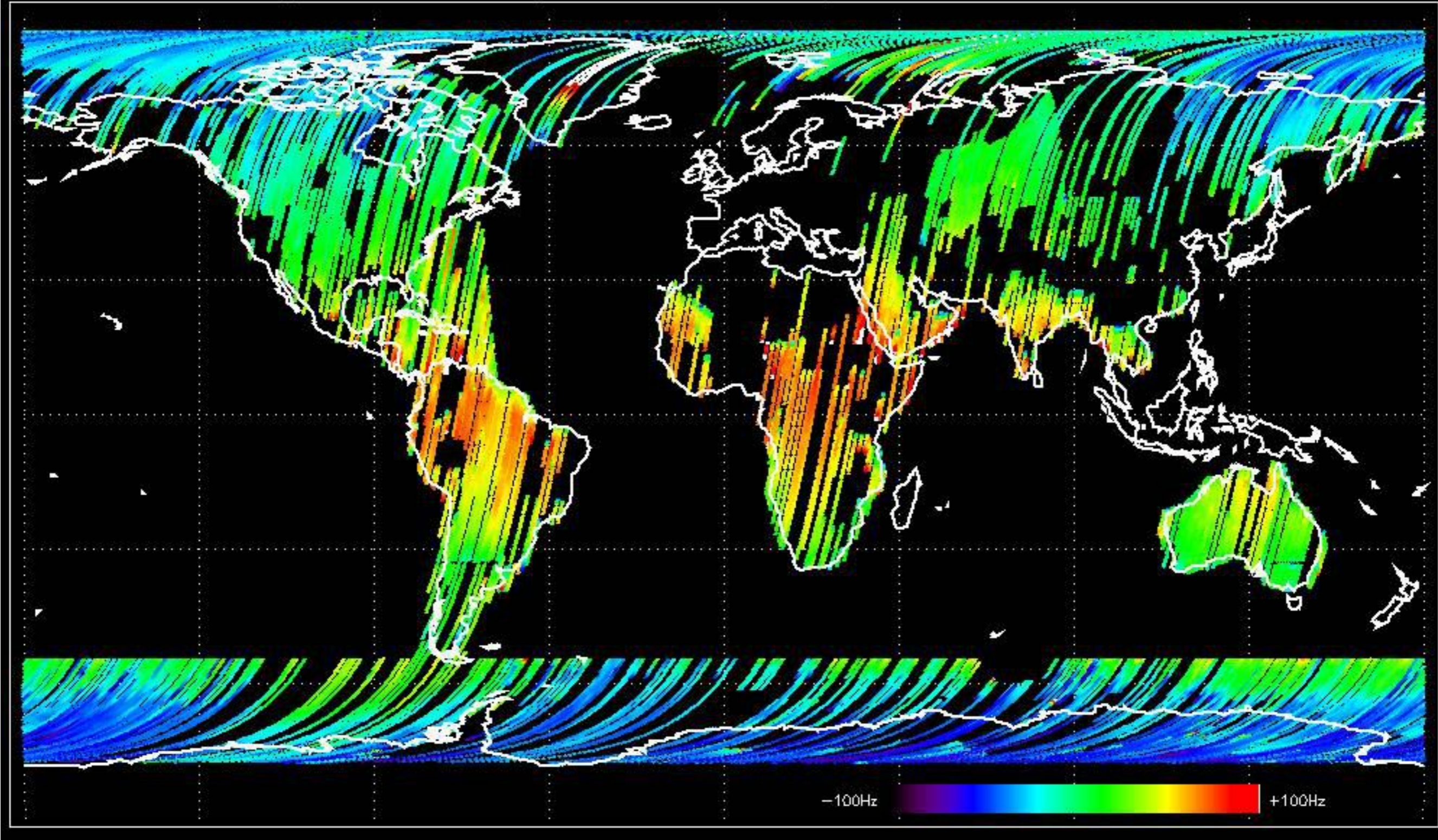


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -7.8754018 Hz

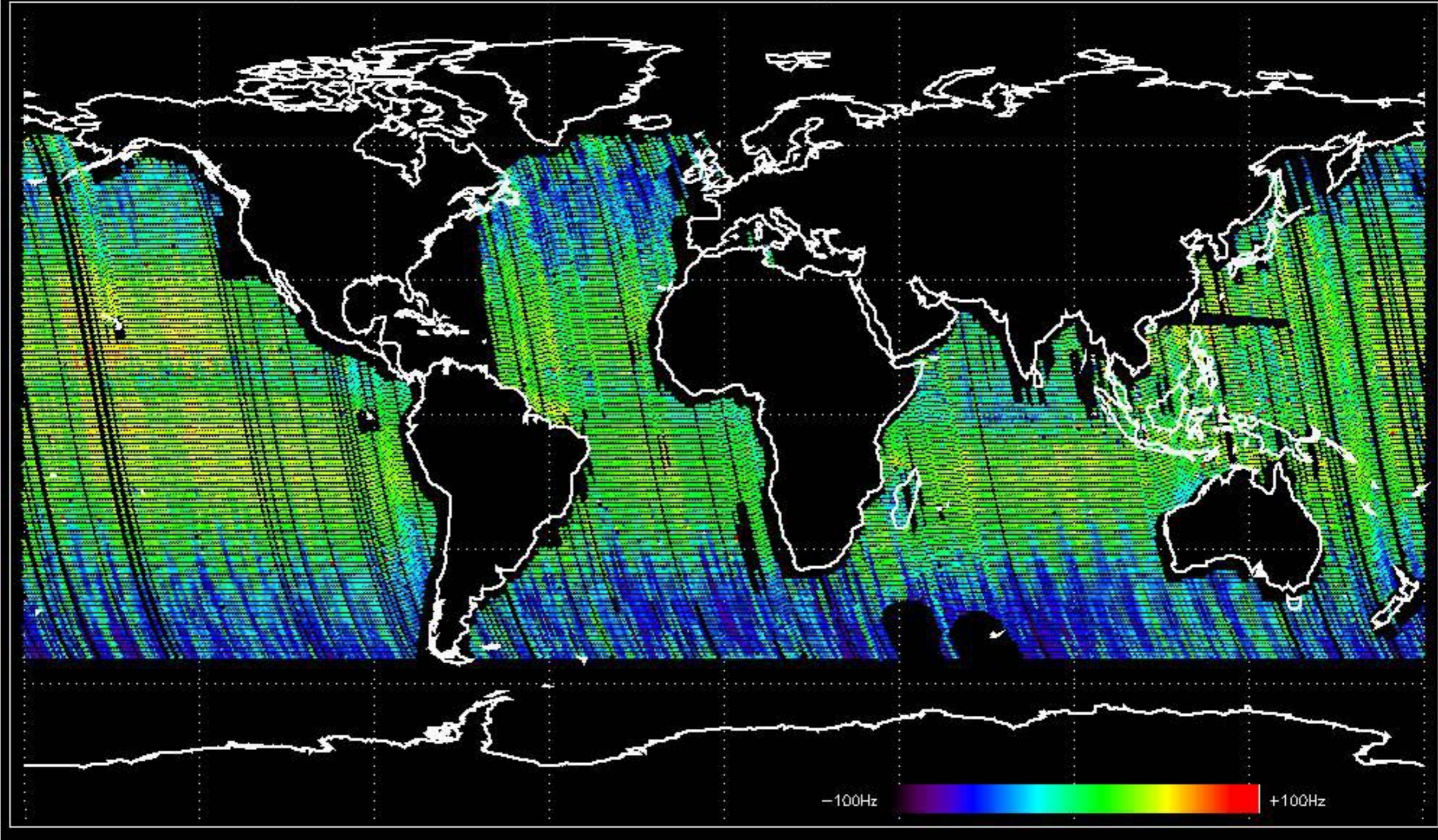


-100Hz +100Hz

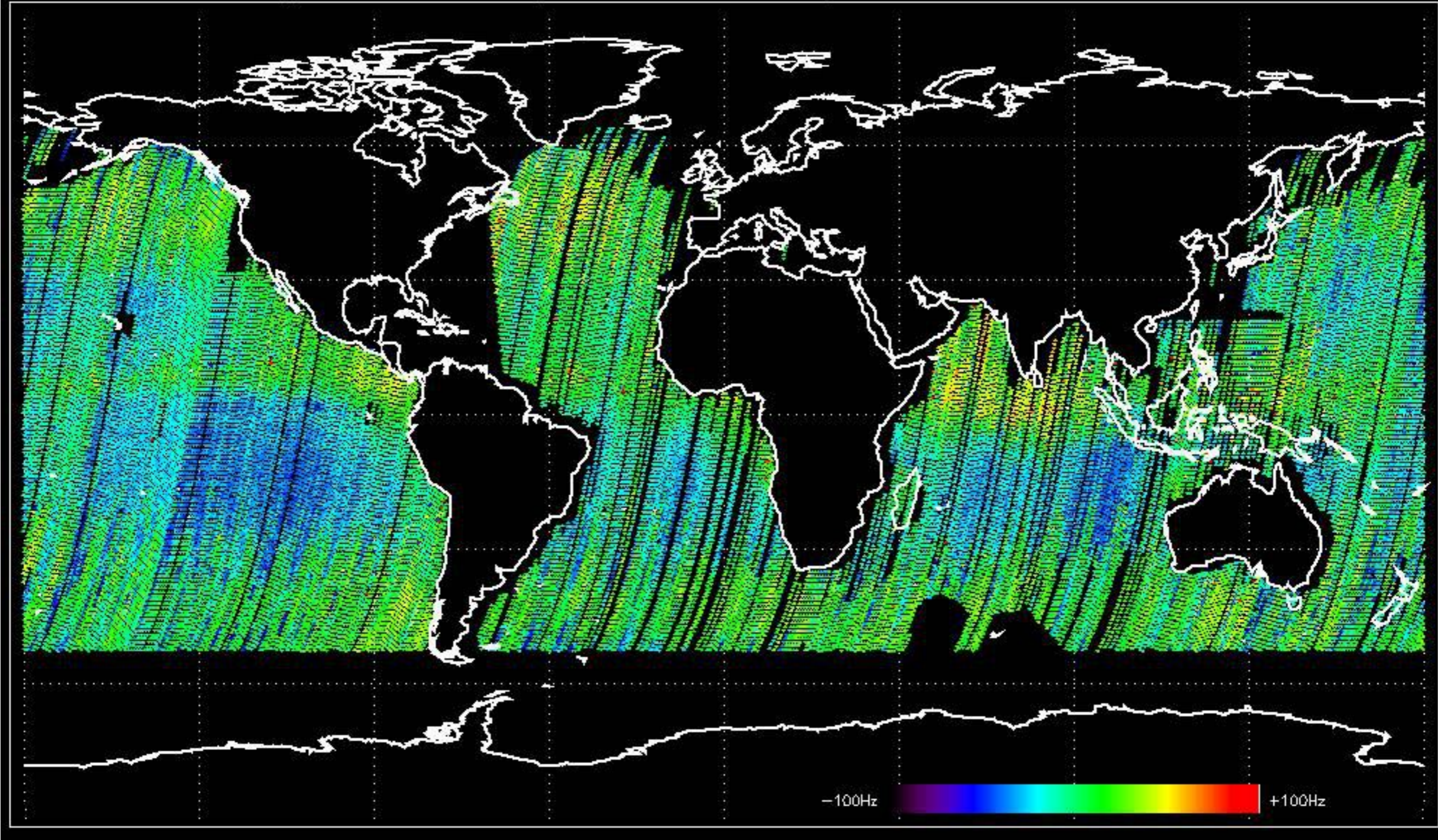
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -5.1610703 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of 0.14825845 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -3.7064196 Hz



No anomalies observed on available MS products:



No anomalies observed.









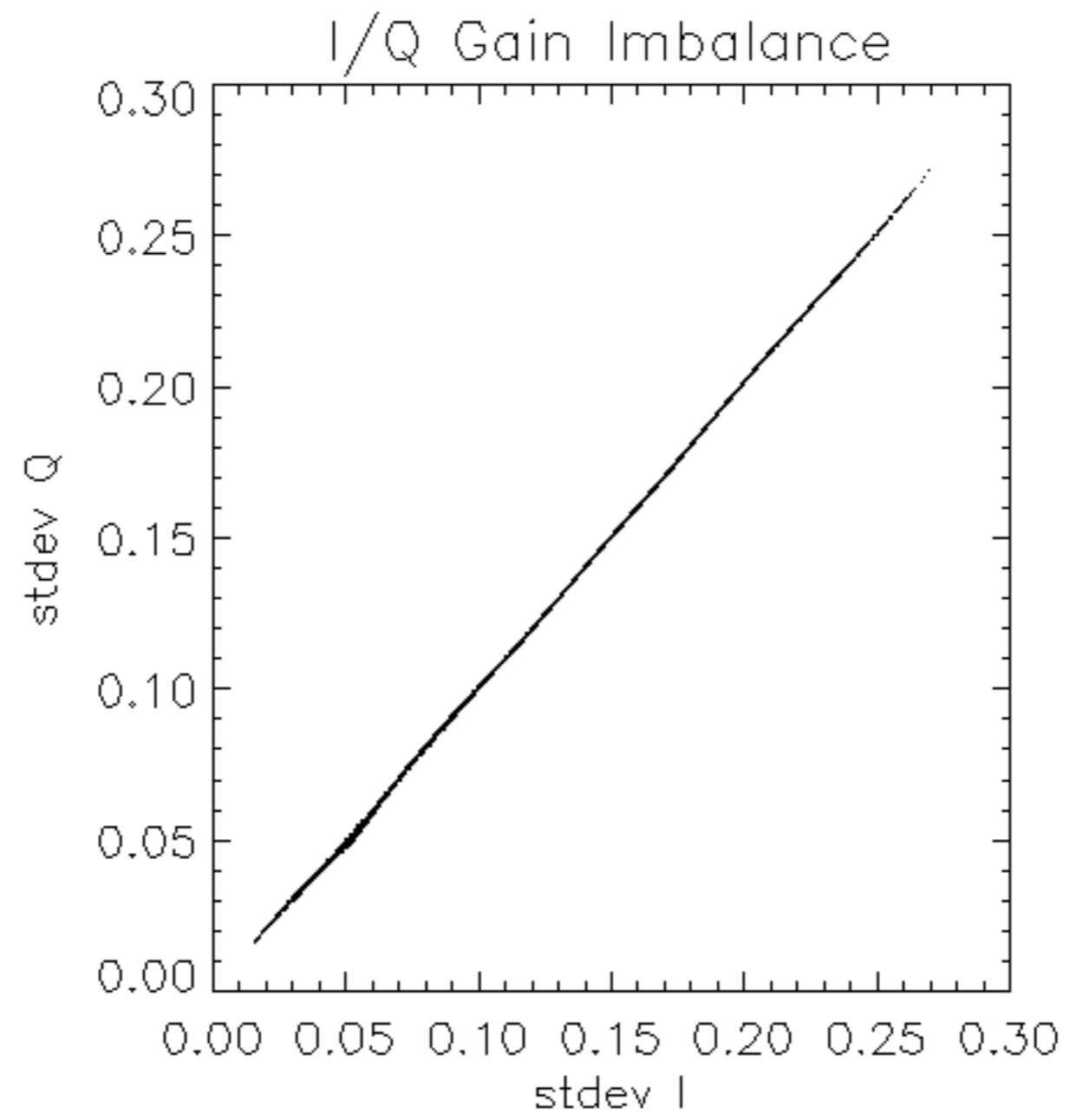


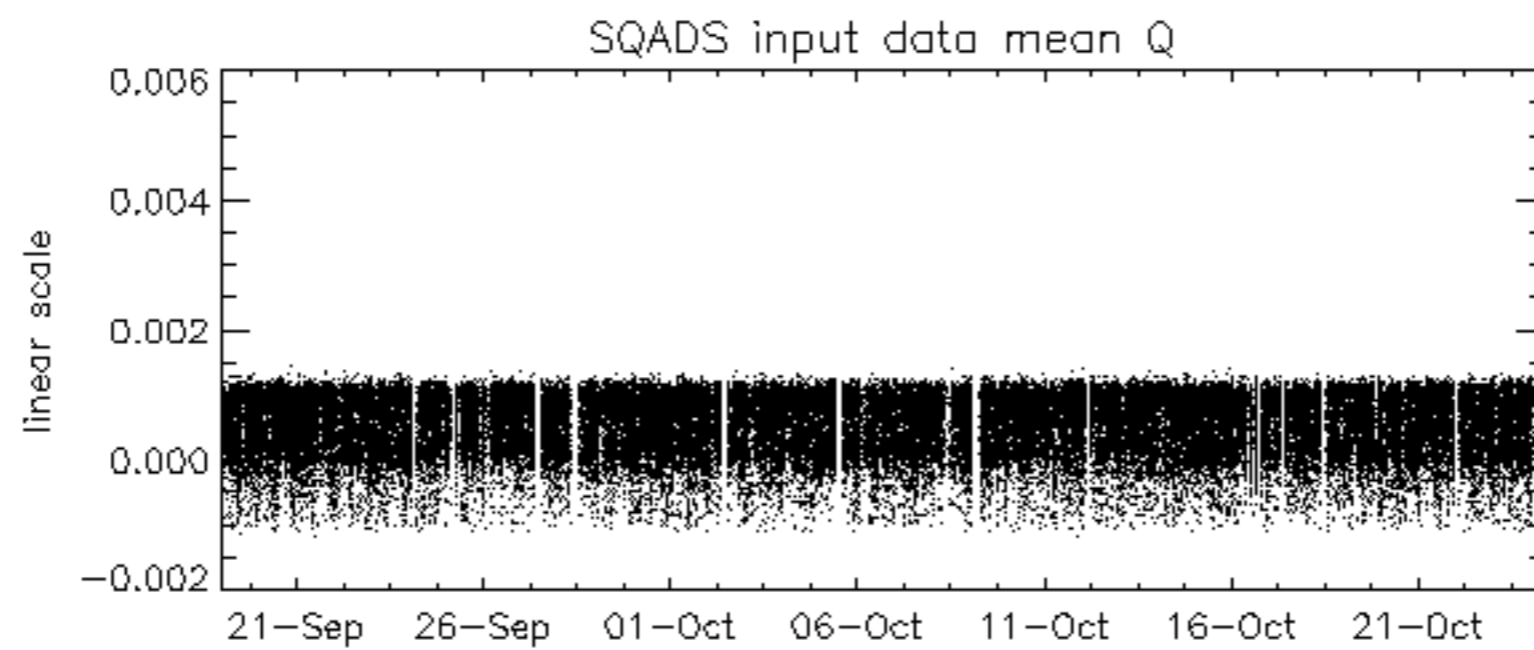
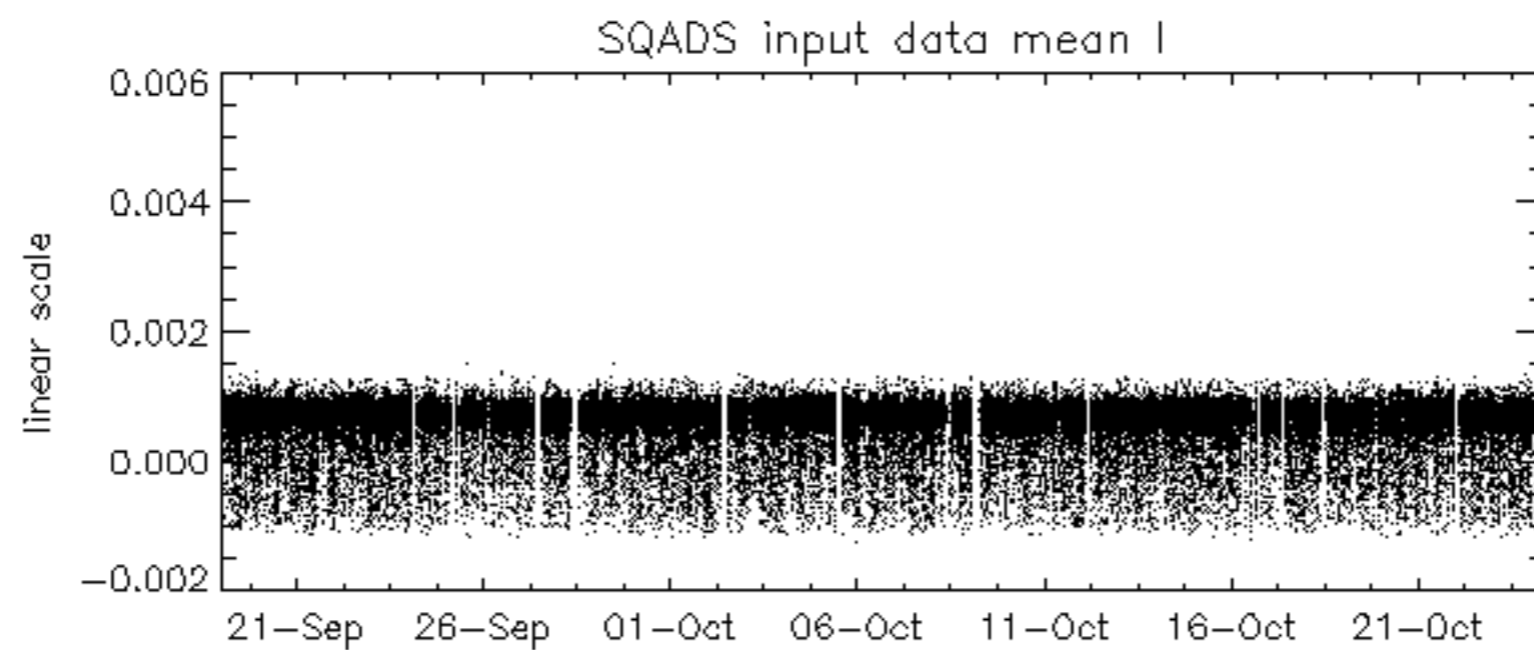
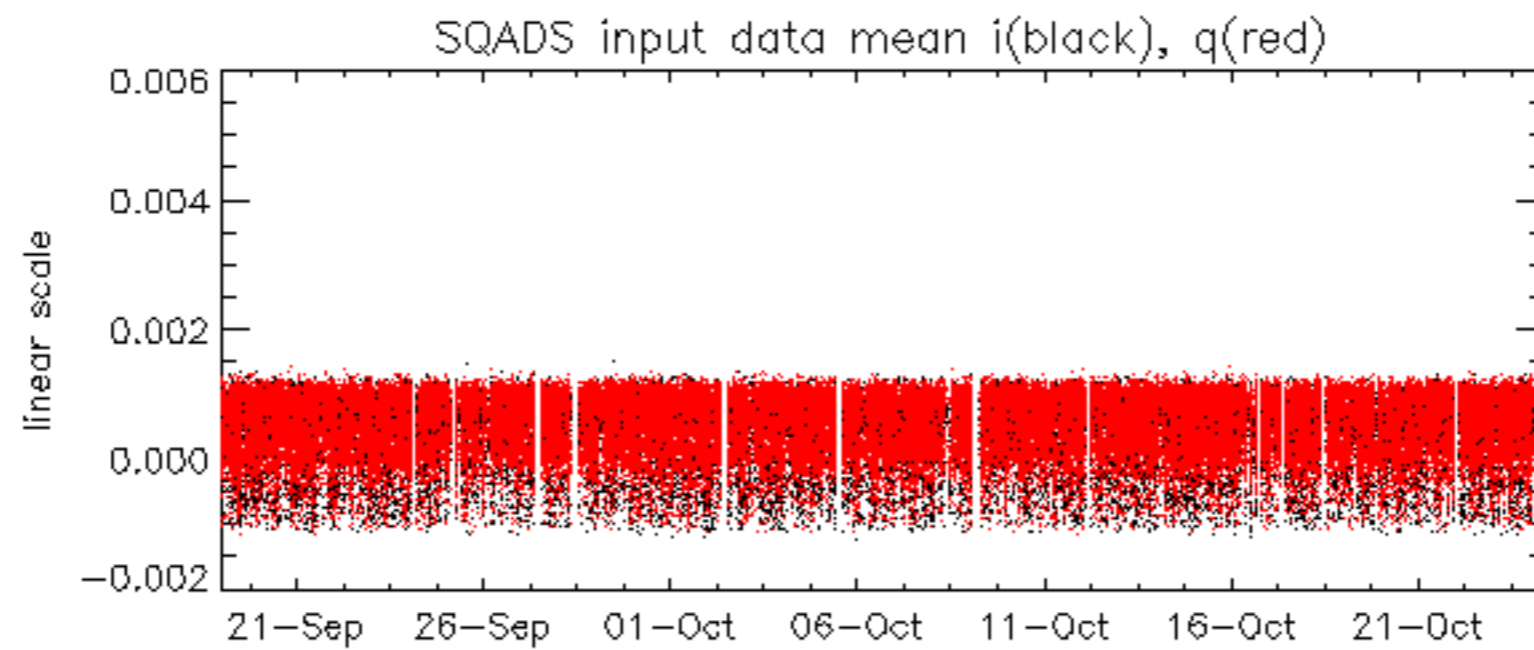


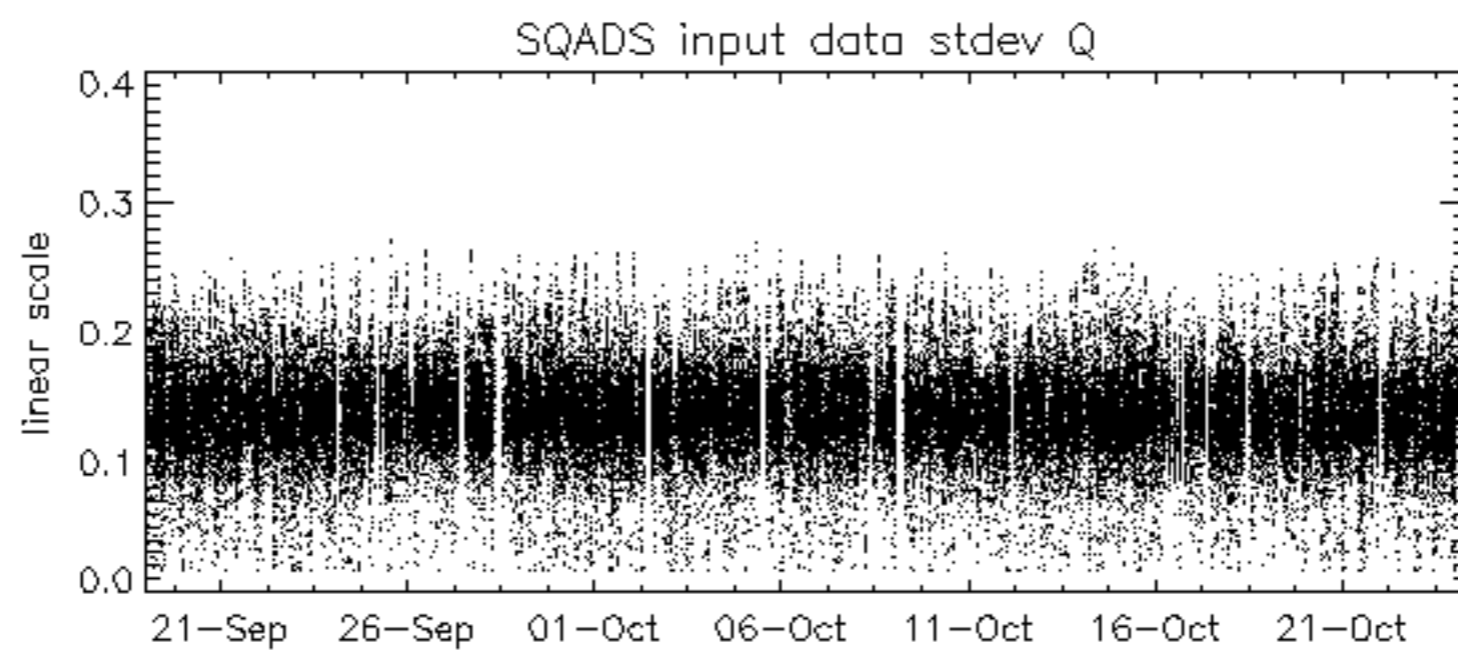
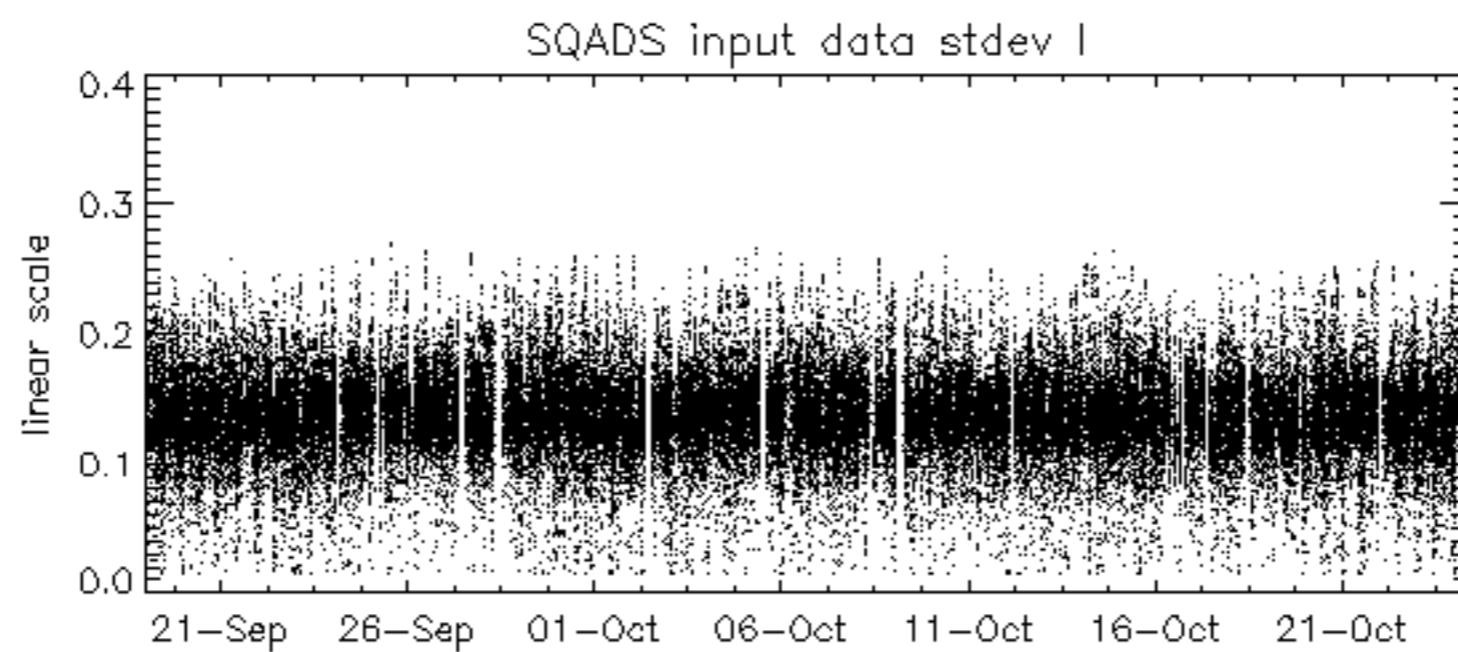
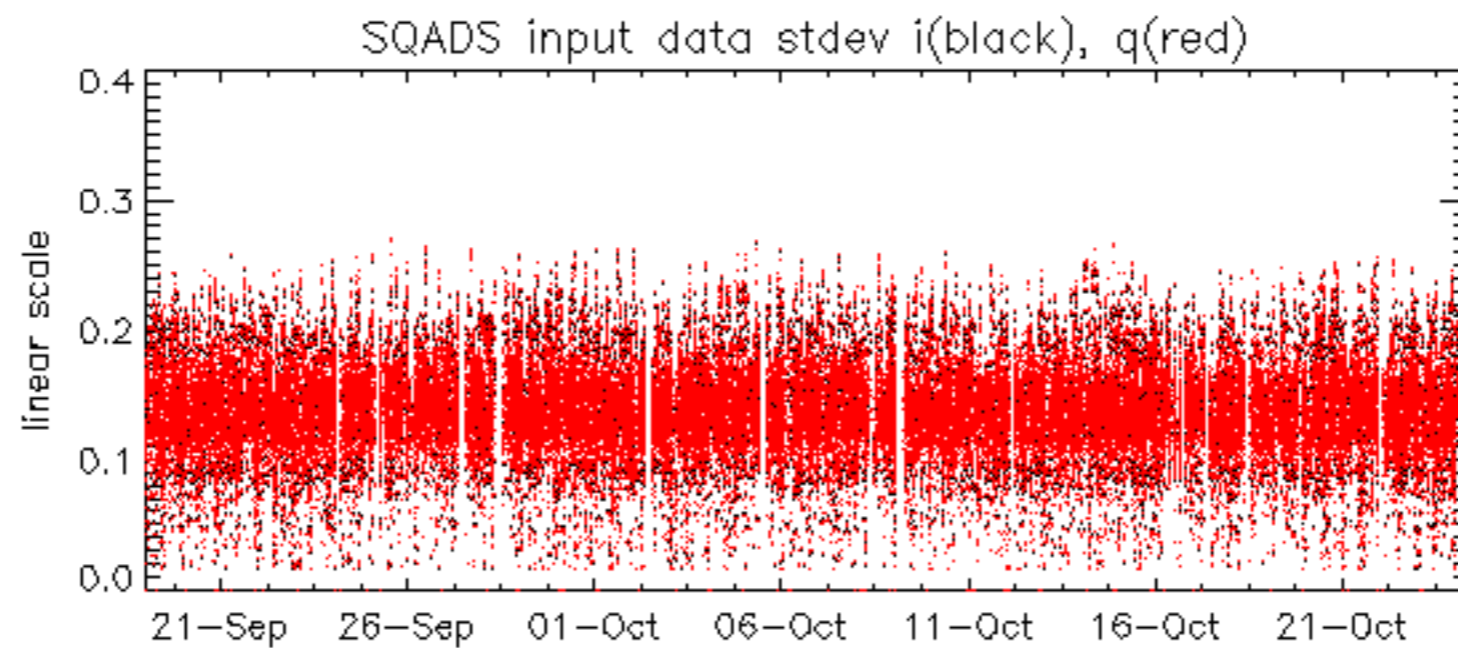






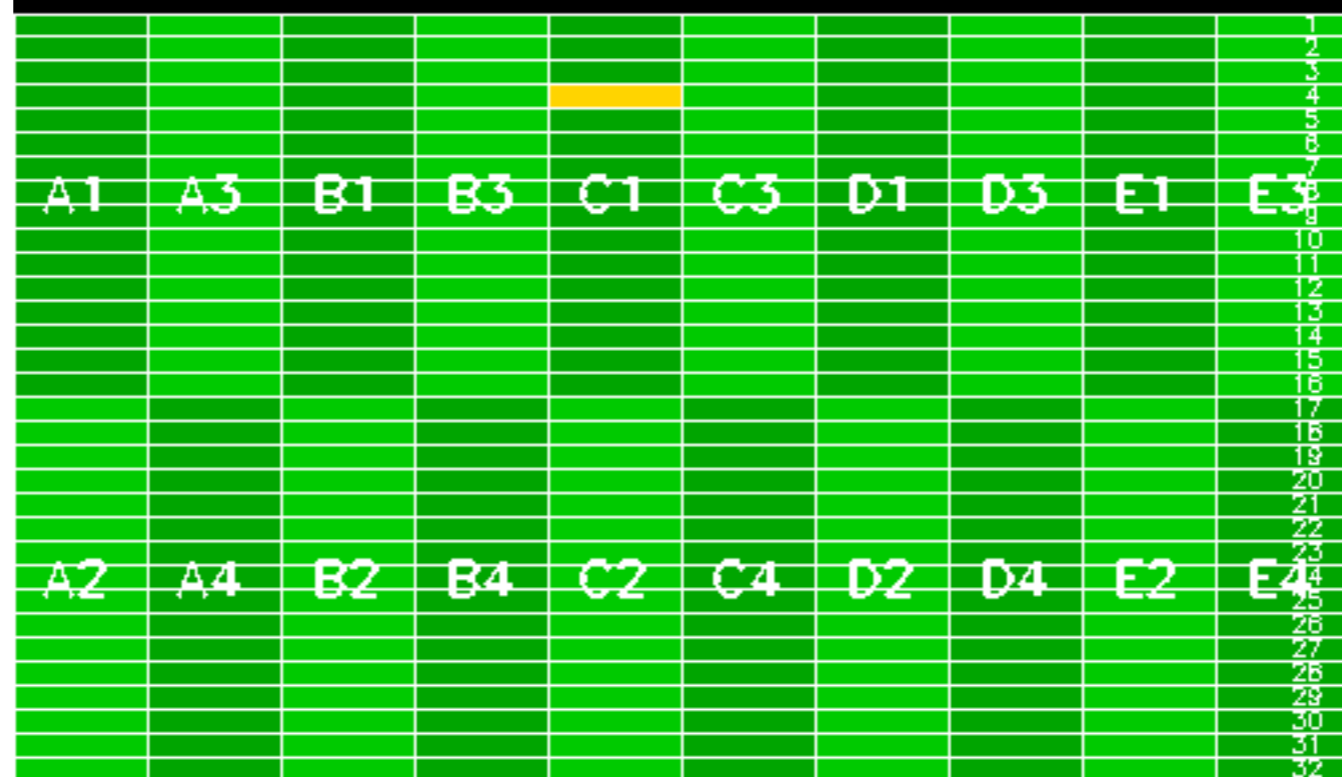








Reference: 2005-10-08 03:02:47 H TxGain  
 Test : 2005-10-23 18:36:57 H









Summary of analysis for the last 3 days 2005102[234]

The assumptions 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_1PNPDK20051023_123959_000001452041_00482_19073_6051.N1	1	0
ASA_GM1_1PNPDK20051023_151422_000011362041_00483_19074_9321.N1	0	7
ASA_WSM_1PNPDE20051022_010806_000002192041_00460_19051_5377.N1	0	123
ASA_WSM_1PNPDE20051022_022829_00000422041_00461_19052_5382.N1	0	120
ASA_WSM_1PNPDE20051022_162409_000000922041_00470_19061_5477.N1	0	44
ASA_WSM_1PNPDE20051022_180625_000001292041_00471_19062_5521.N1	0	70
ASA_WSM_1PNPDE20051022_230541_000000672041_00474_19065_5561.N1	0	3
ASA_WSM_1PNPDE20051024_015714_000001592041_00490_19081_5772.N1	0	11
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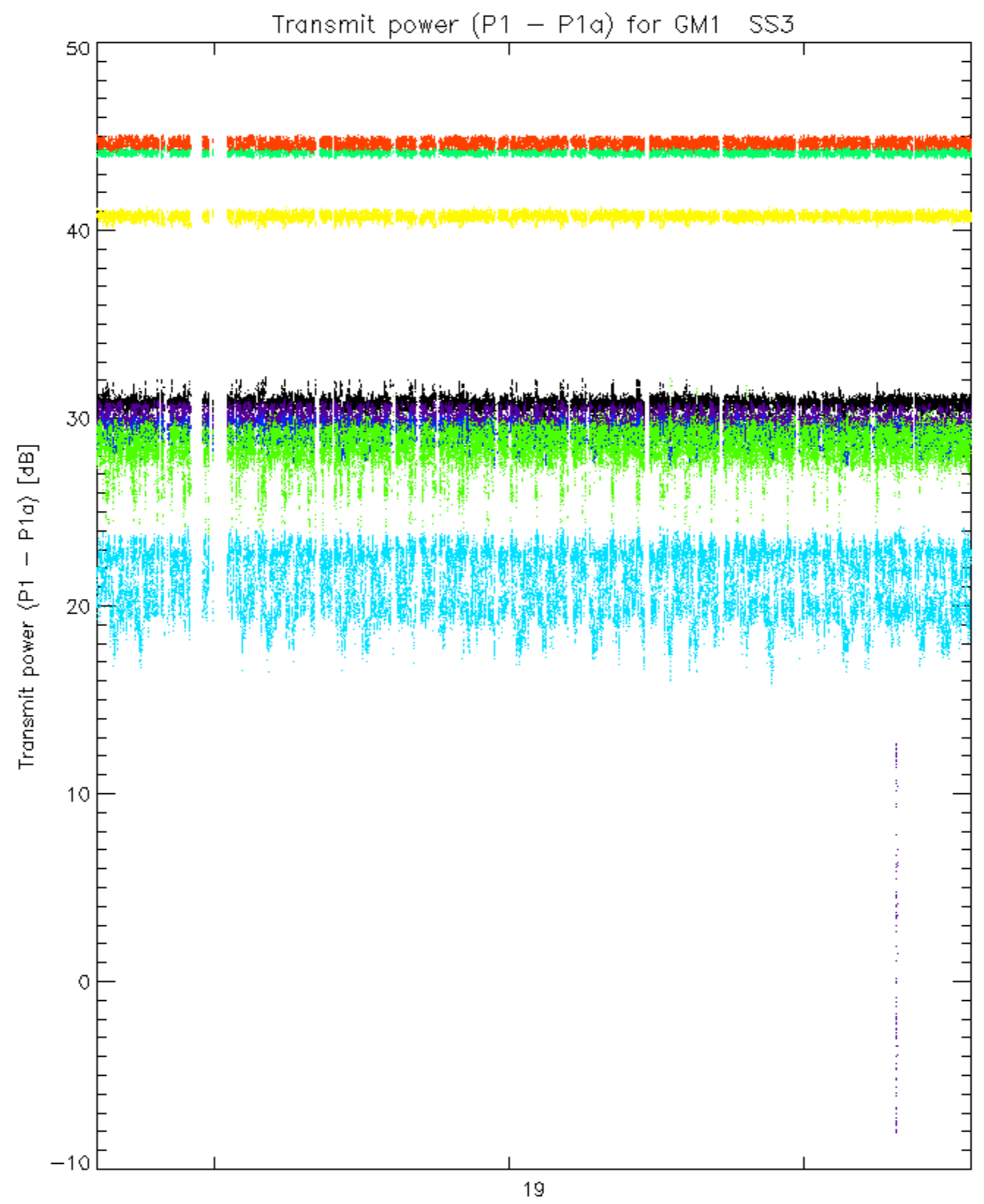






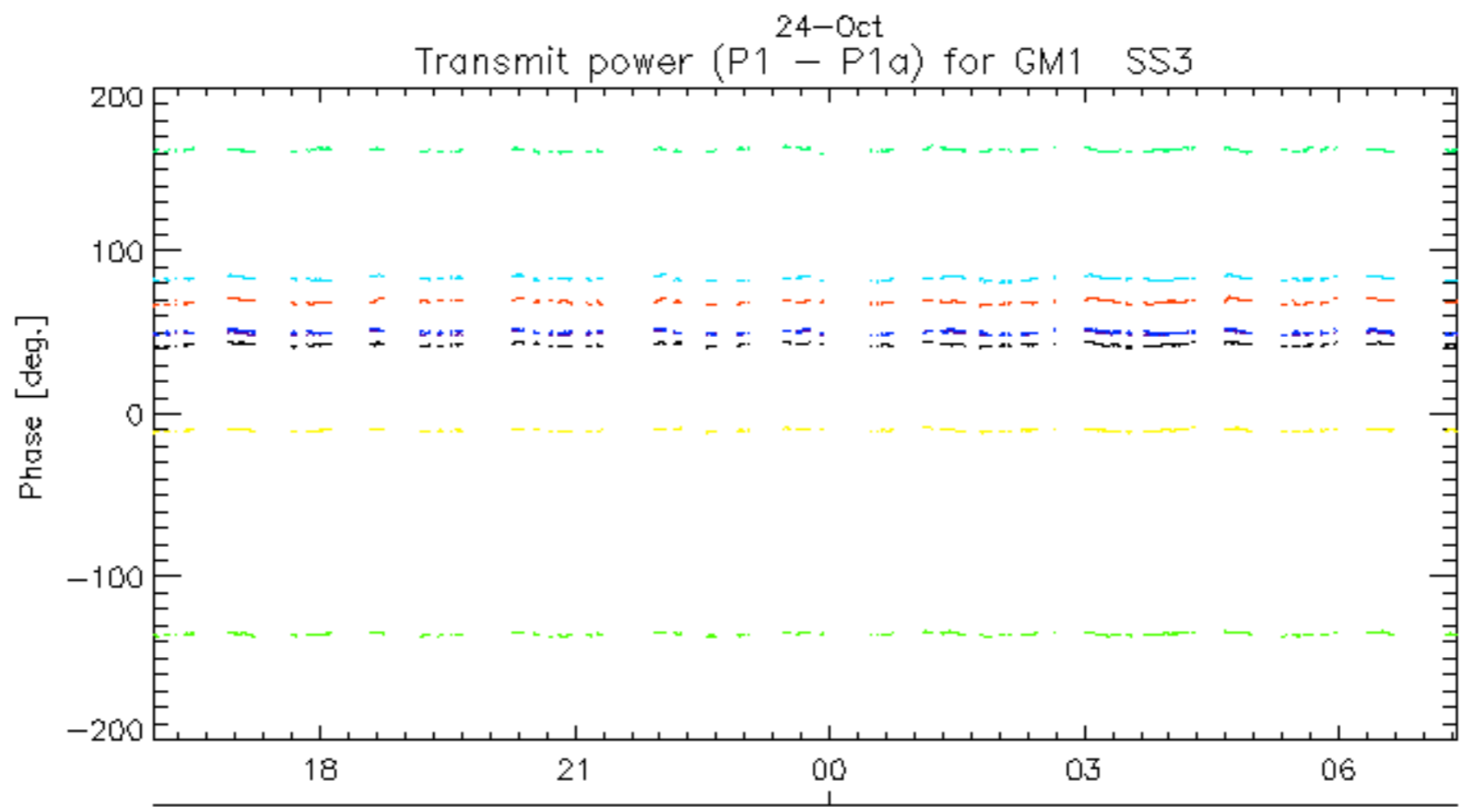
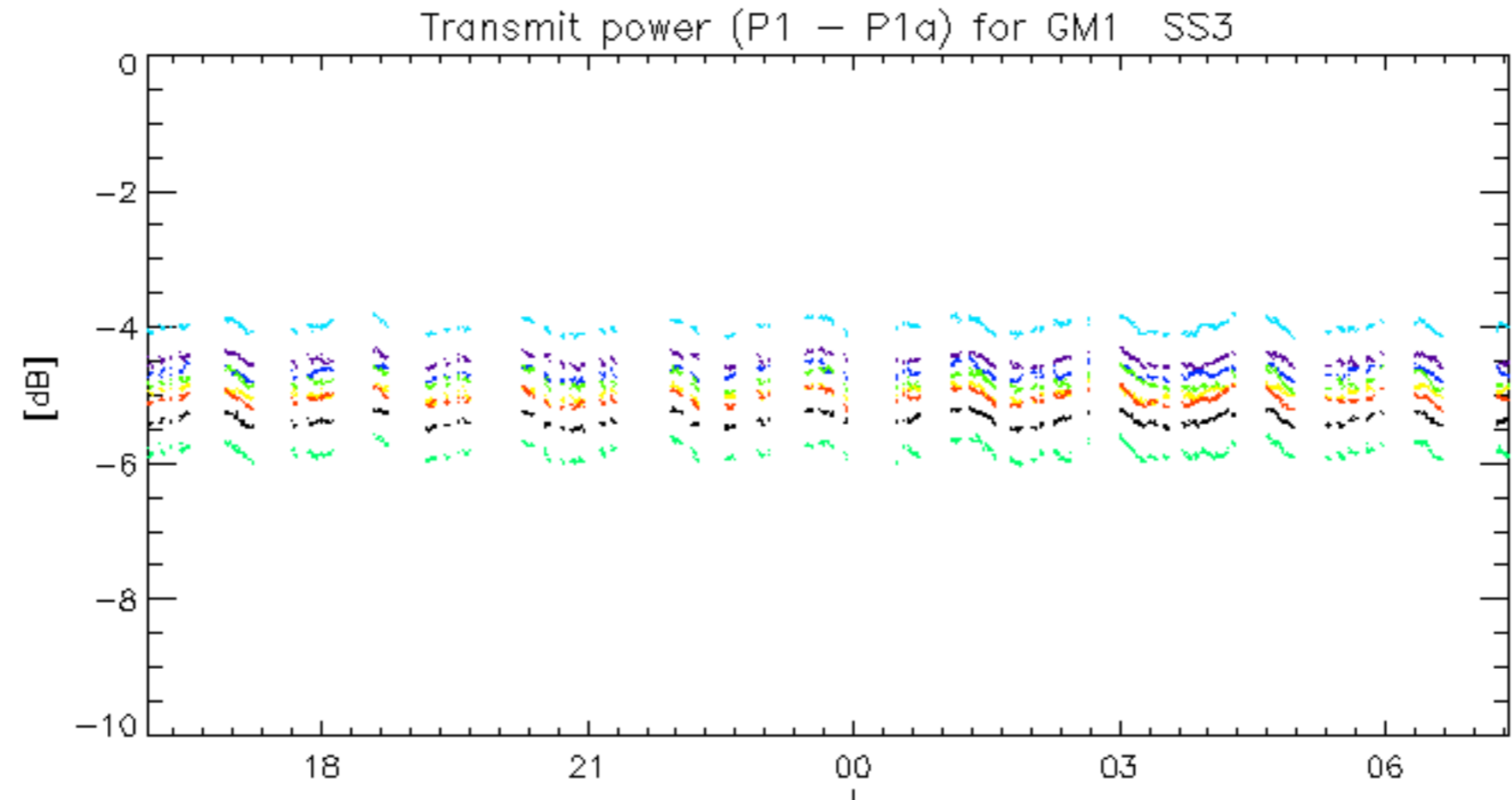




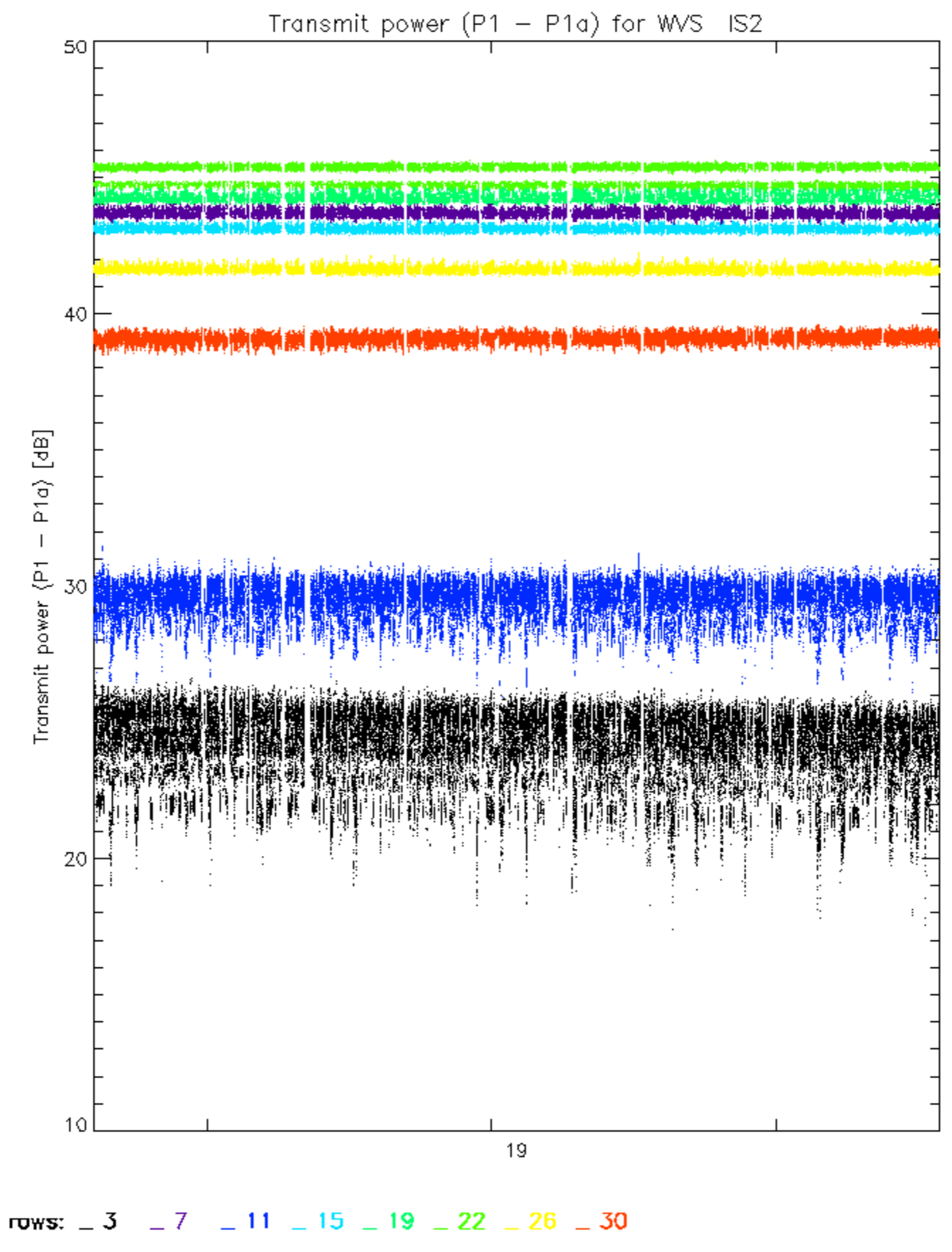


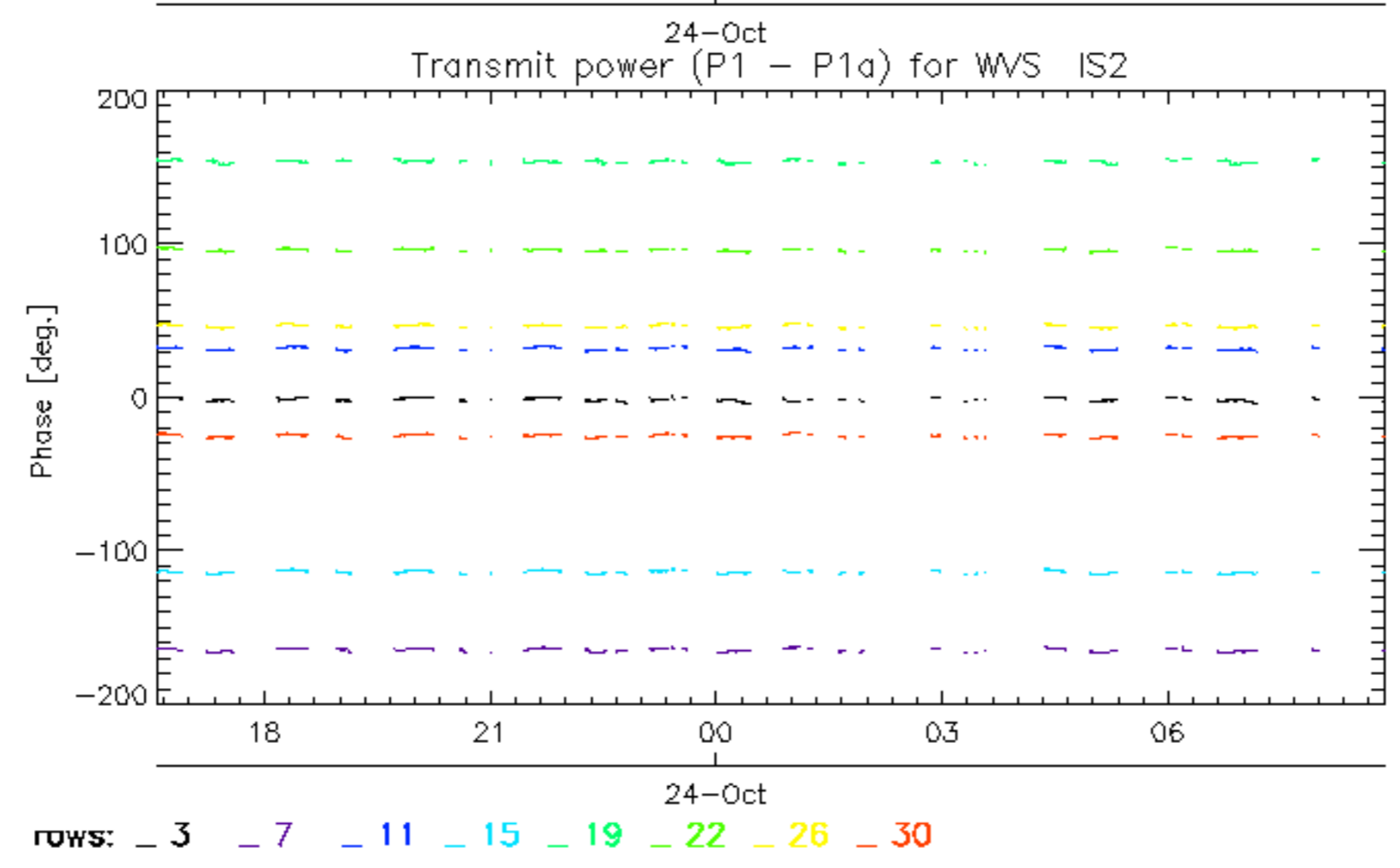
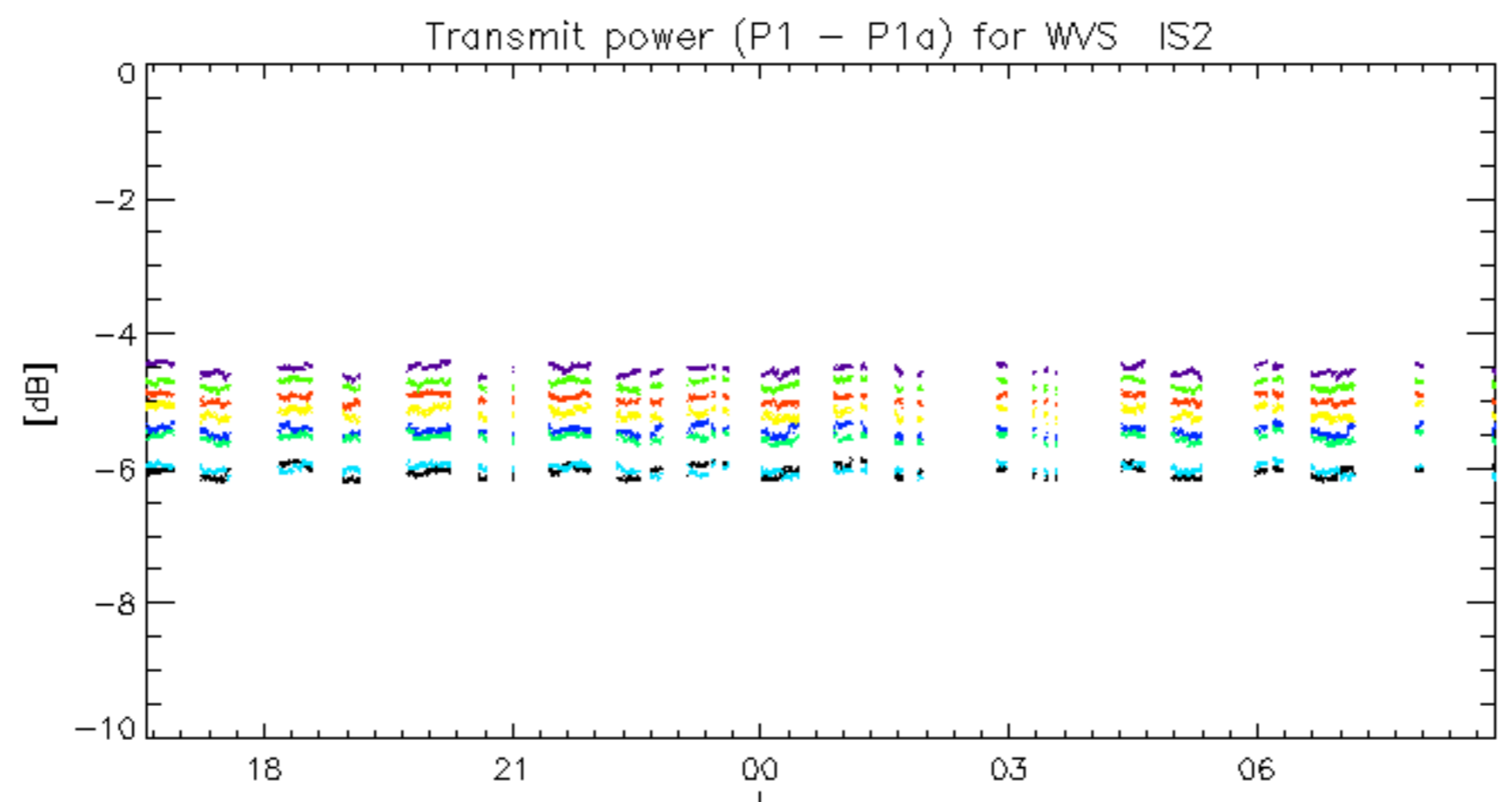
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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





No unavailabilities during the reported period.