

# PRELIMINARY REPORT OF 051025

last update on Tue Oct 25 17:04:25 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 2005-10-24 00:00:00 to 2005-10-25 17:04:25

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	44	77	11	1	4
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	44	77	11	1	4
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	77	11	1	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	44	77	11	1	4

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	39	52	21	24	51
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	39	52	21	24	51
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	52	21	24	51
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	39	52	21	24	51

### 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	20051024 180520
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
<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	-3.530768	0.008911	0.033757
7	P1	-2.898433	0.010516	-0.070883
11	P1	-4.071304	0.016327	-0.091294
15	P1	-6.030426	0.015170	-0.044761
19	P1	-3.158948	0.005561	-0.042387
22	P1	-4.450018	0.013283	-0.066505
26	P1	-4.272624	0.014997	0.042185
30	P1	-5.709020	0.008729	-0.050108
3	P1	-15.390381	0.182728	0.247386
7	P1	-16.272865	0.110789	-0.141130
11	P1	-16.223324	0.285997	-0.299193
15	P1	-13.345275	0.105095	-0.060591
19	P1	-13.621260	0.040686	-0.148202
22	P1	-16.134529	0.479634	-0.296063
26	P1	-16.152431	0.245418	0.346768
30	P1	-16.404310	0.178802	-0.149674

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.864326	0.098624	0.004488
7	P2	-22.697060	0.104770	0.076262
11	P2	-16.744488	0.114025	0.144588
15	P2	-7.221735	0.101340	-0.055411
19	P2	-9.174865	0.093077	-0.055914
22	P2	-17.727533	0.099332	-0.126894
26	P2	-16.102192	0.094689	-0.120567
30	P2	-19.624205	0.090482	-0.021598

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.191237	0.005752	-0.043967
7	P3	-8.191237	0.005752	-0.043967
11	P3	-8.191237	0.005752	-0.043967
15	P3	-8.191237	0.005752	-0.043967
19	P3	-8.191237	0.005752	-0.043967
22	P3	-8.191237	0.005752	-0.043967
26	P3	-8.191237	0.005752	-0.043967
30	P3	-8.191237	0.005752	-0.043967

**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	-3.661648	0.007111	-0.018551
7	P1	-2.826123	0.011807	0.068906
11	P1	-2.851058	0.012788	-0.002291
15	P1	-3.385786	0.017883	0.013949
19	P1	-3.350675	0.010715	-0.023573
22	P1	-5.141679	0.019432	0.041985
26	P1	-5.781863	0.017497	-0.053699
30	P1	-5.213746	0.026292	-0.026324
3	P1	-11.403693	0.032051	-0.024666
7	P1	-9.919707	0.040393	-0.003829
11	P1	-10.013350	0.057485	-0.034294
15	P1	-10.574908	0.093056	0.045963
19	P1	-15.464512	0.068122	-0.058556
22	P1	-20.482553	1.190947	-0.291551

26	P1	-17.103352	0.387938	-0.204687
30	P1	-18.755735	0.386107	0.562062

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.703051	0.038196	0.019607
7	P2	-23.053564	0.090692	-0.080879
11	P2	-11.746519	0.027142	0.020262
15	P2	-4.895093	0.037256	-0.084439
19	P2	-6.900642	0.026229	-0.048315
22	P2	-8.109946	0.024829	-0.073833
26	P2	-23.867603	0.038737	-0.125870
30	P2	-22.059870	0.027014	-0.044693

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.035142	0.002835	-0.044626
7	P3	-8.035265	0.002848	-0.044683
11	P3	-8.035154	0.002843	-0.044912
15	P3	-8.035267	0.002846	-0.045049
19	P3	-8.035284	0.002855	-0.044830
22	P3	-8.035193	0.002859	-0.045007
26	P3	-8.035371	0.002859	-0.044770
30	P3	-8.035235	0.002852	-0.044973

## 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	0.000559593
	stdev	1.71297e-07
MEAN Q	mean	0.000541421
	stdev	2.16075e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137584
	stdev	0.00111908
STDEV Q	mean	0.137929
	stdev	0.00113536



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005102[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_1PNPDK20051023_123959_000001452041_00482_19073_6051.N1	1	0
ASA_GM1_1PNPDK20051023_151422_000011362041_00483_19074_9321.N1	0	7
ASA_WSM_1PNPDE20051024_015714_000001592041_00490_19081_5772.N1	0	11
ASA_WSM_1PNPDE20051024_033513_000000672041_00491_19082_5794.N1	0	50
ASA_WSM_1PNPDE20051024_184203_000003062041_00500_19091_5927.N1	0	67



## 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

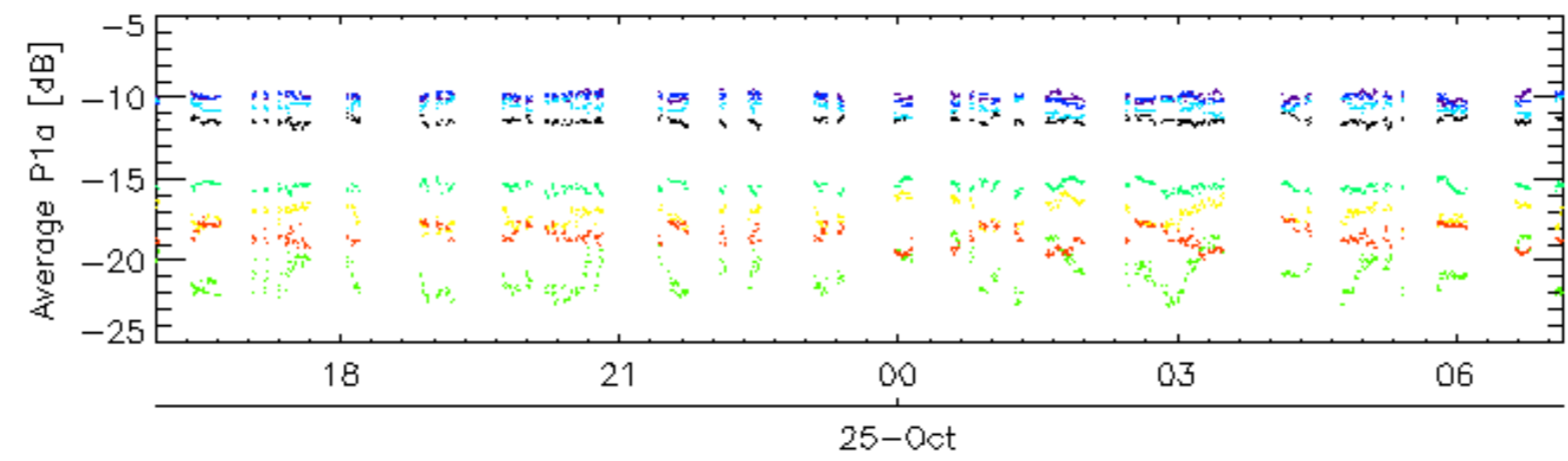
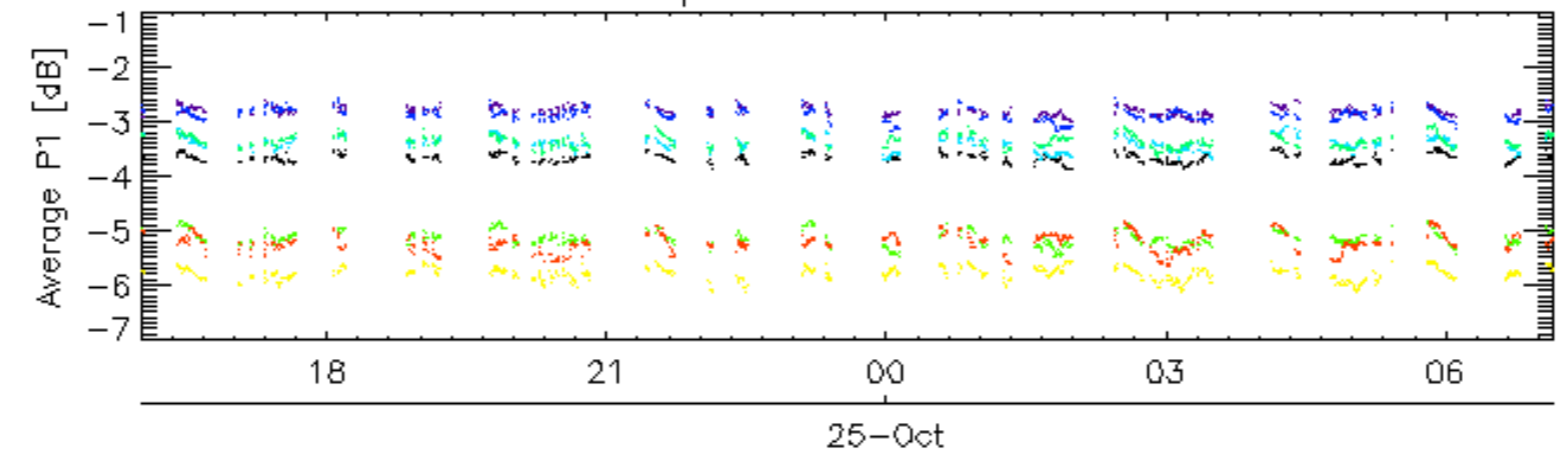
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Acsending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

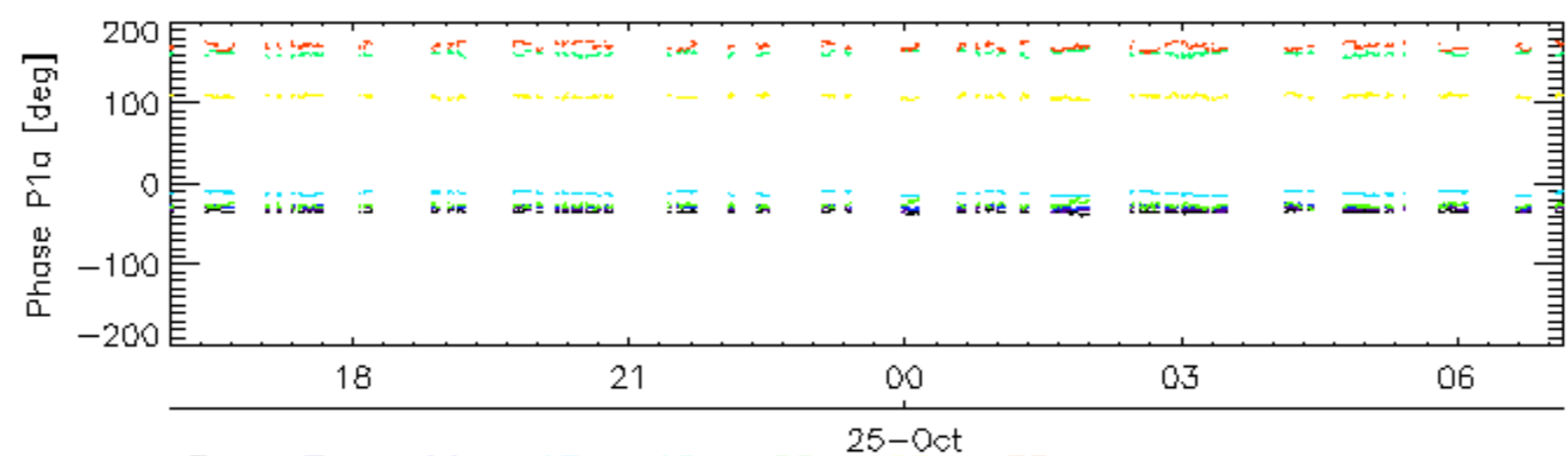
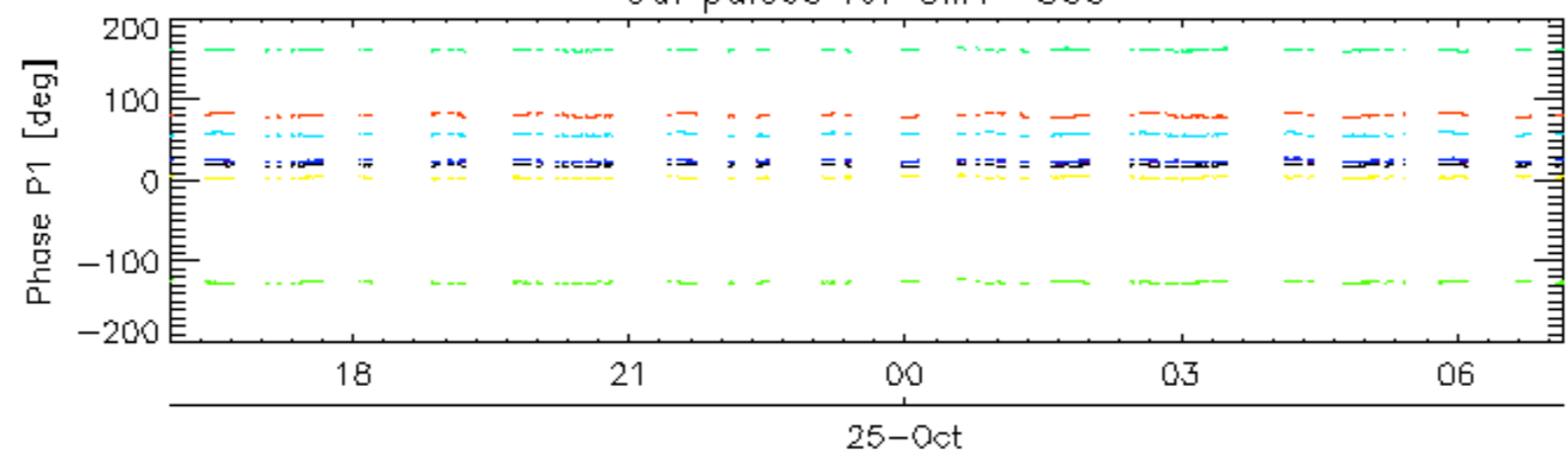
Evolution Doppler error versus ANX

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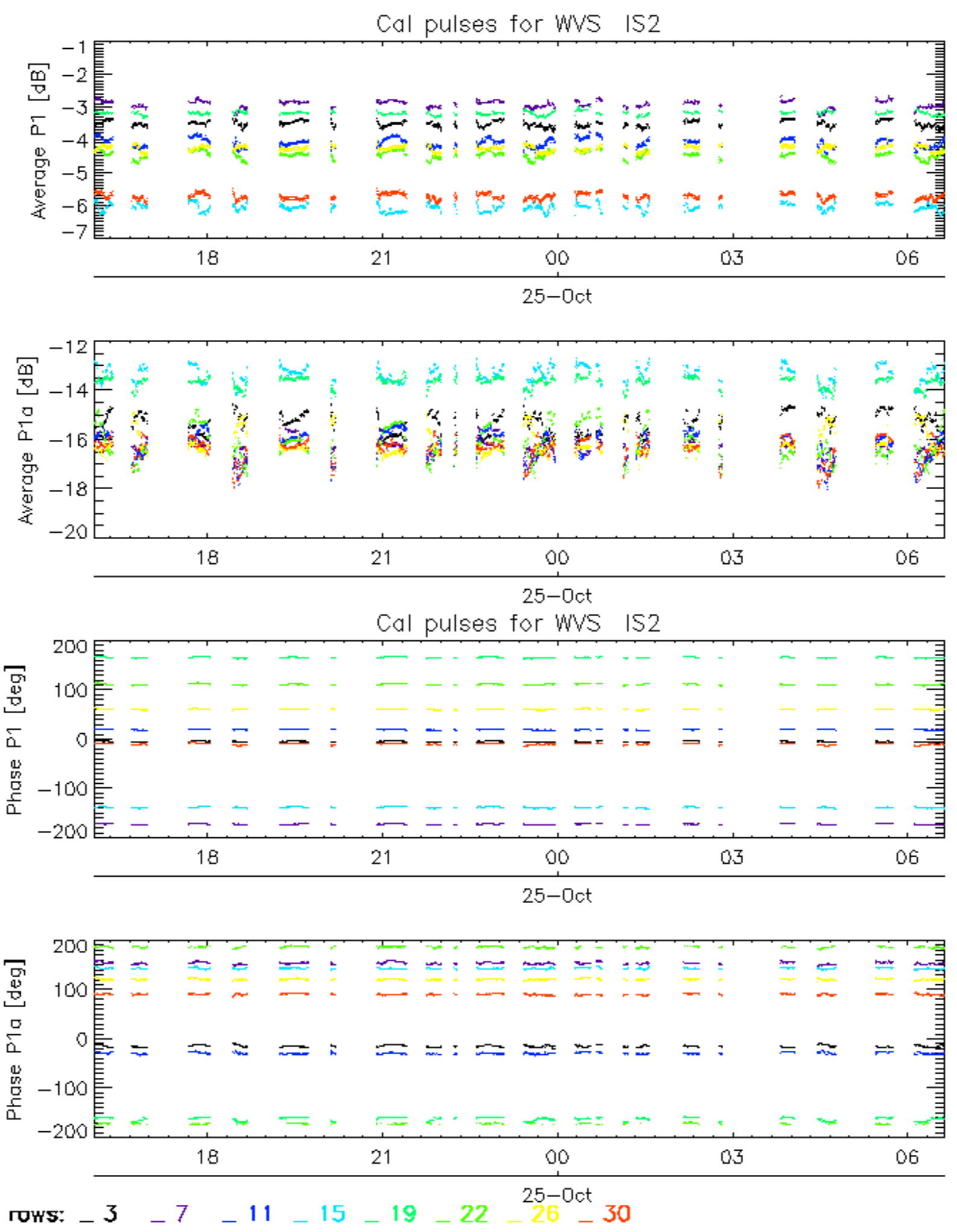
Cal pulses for GM1 SS3



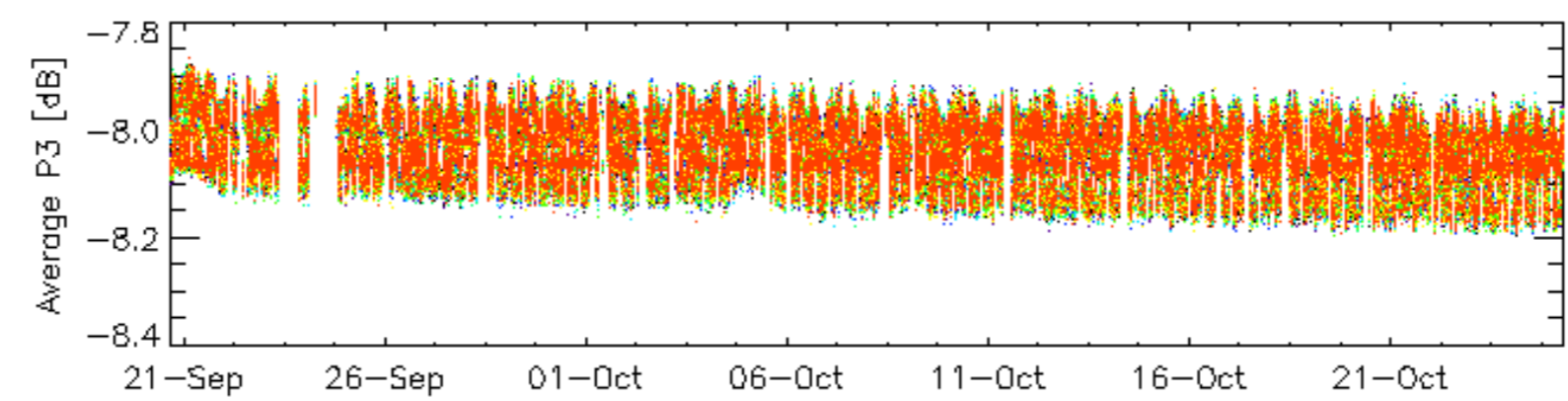
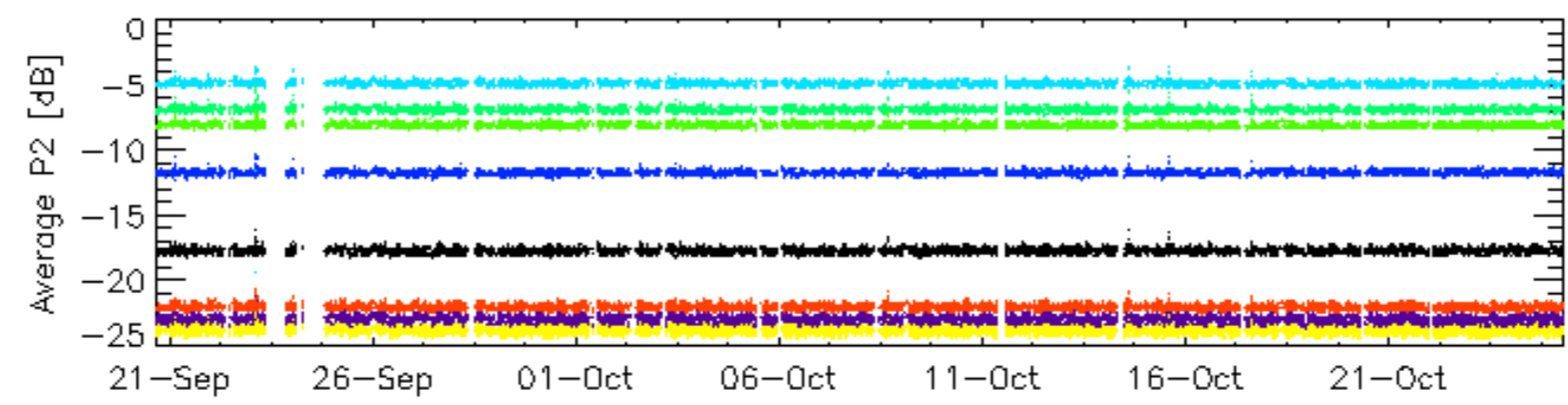
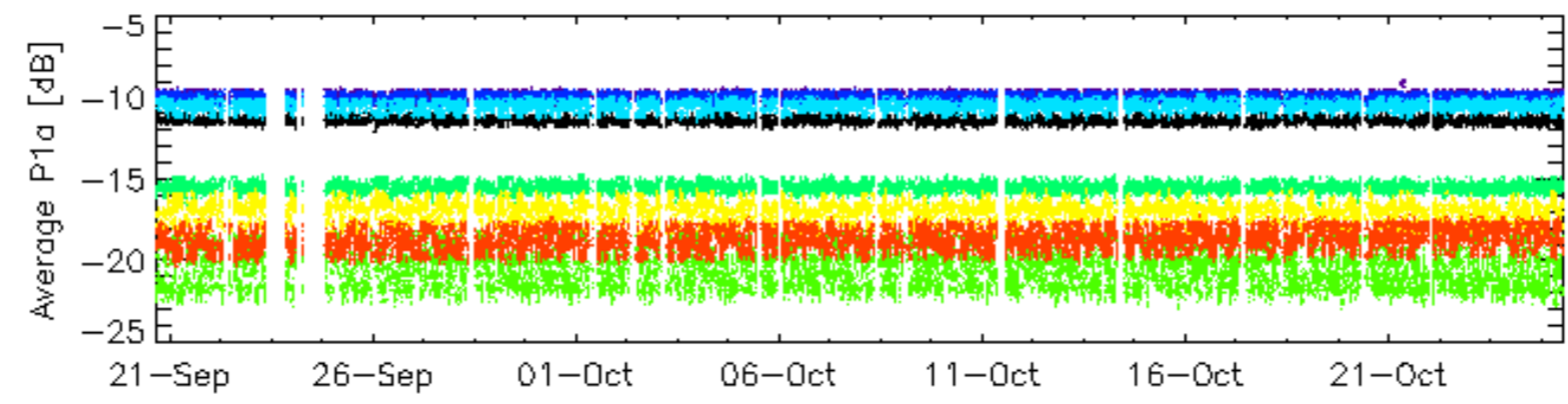
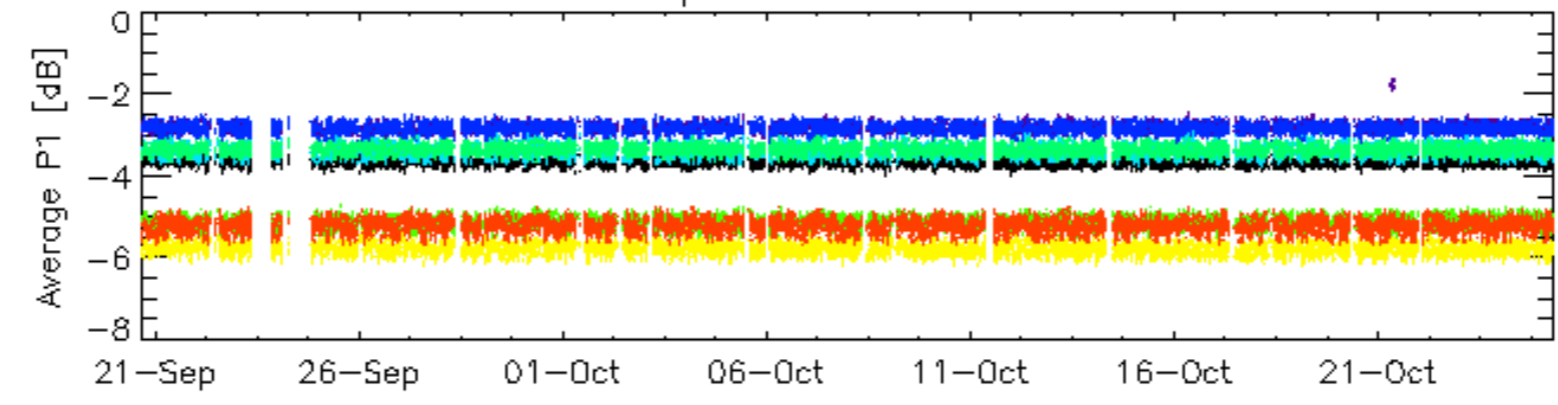
Cal pulses for GM1 SS3



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

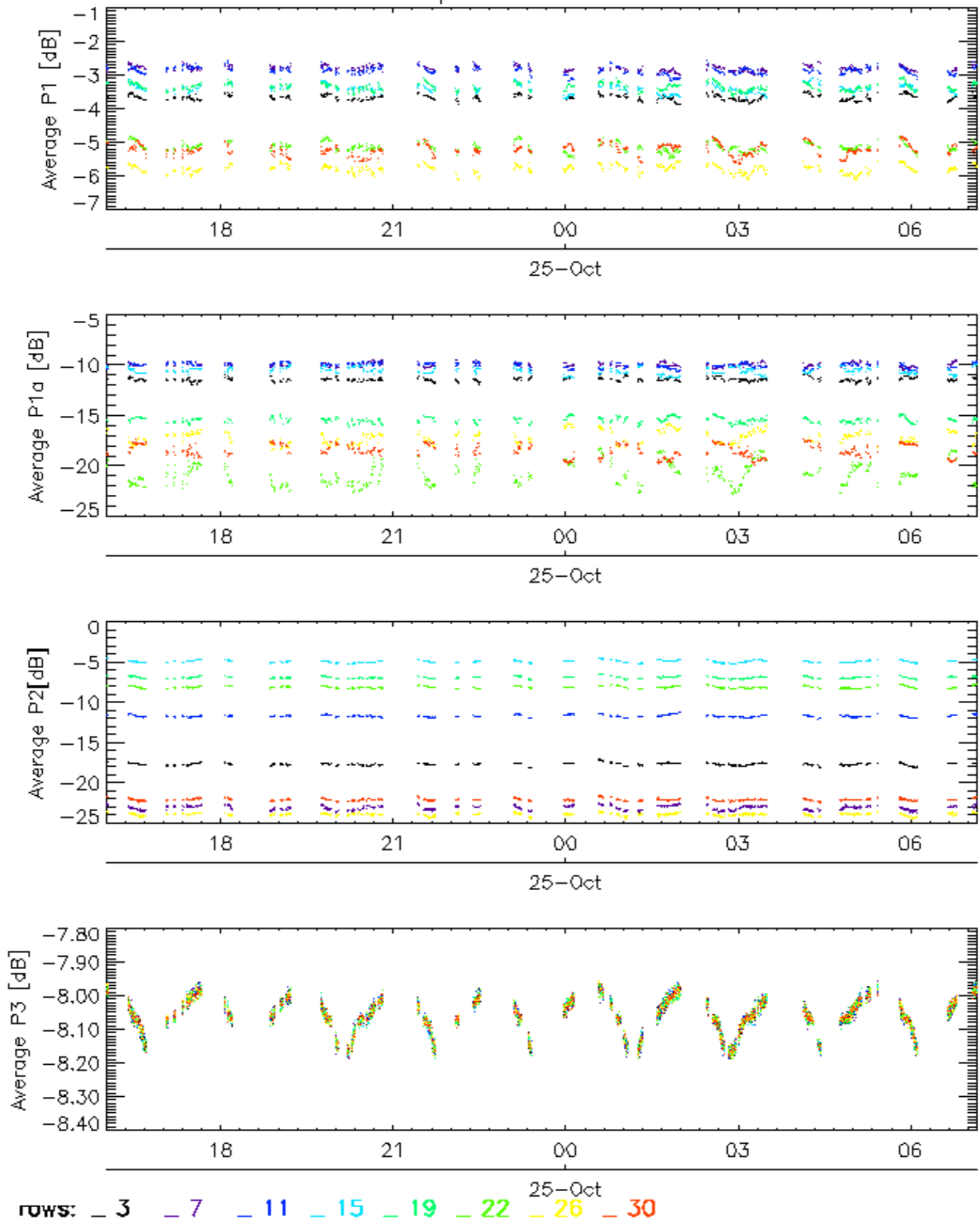


Cal pulses for GM1 SS3

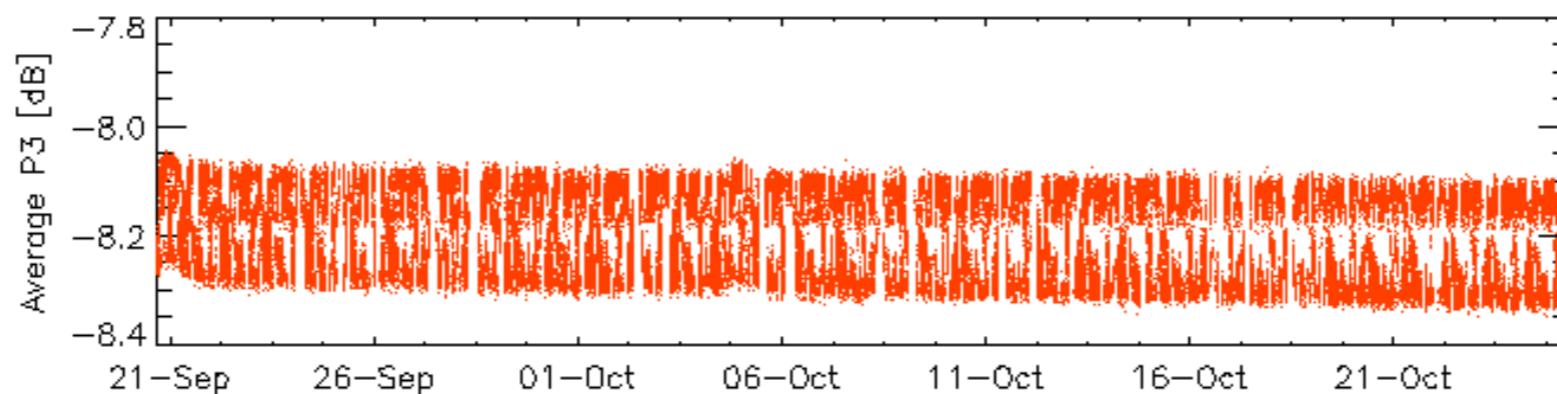
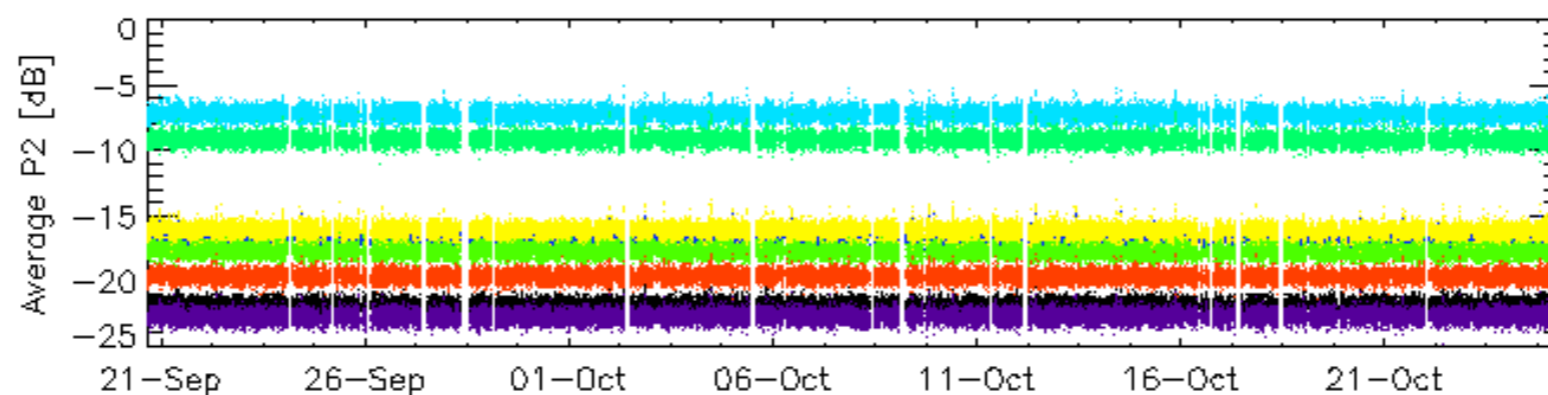
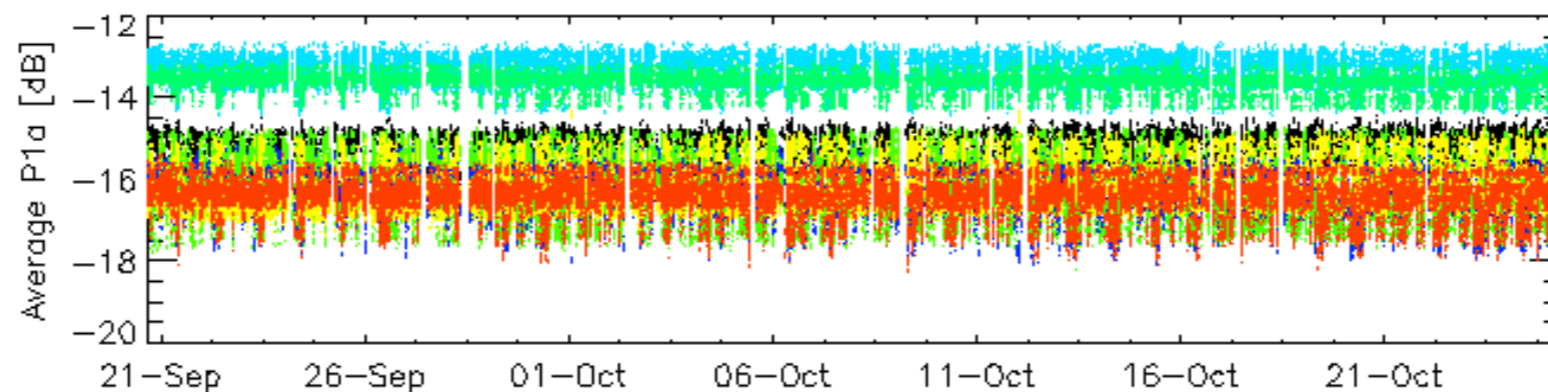
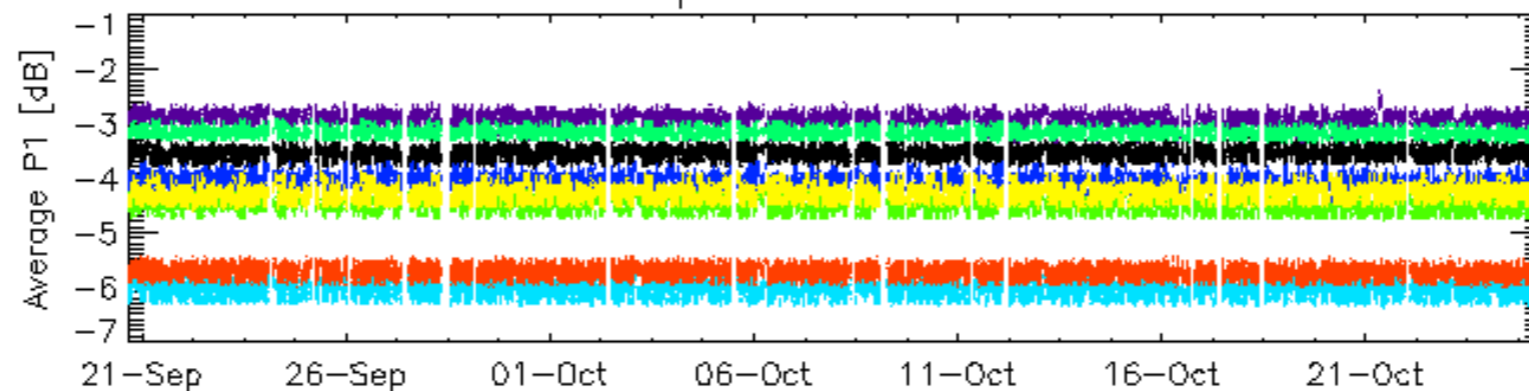


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

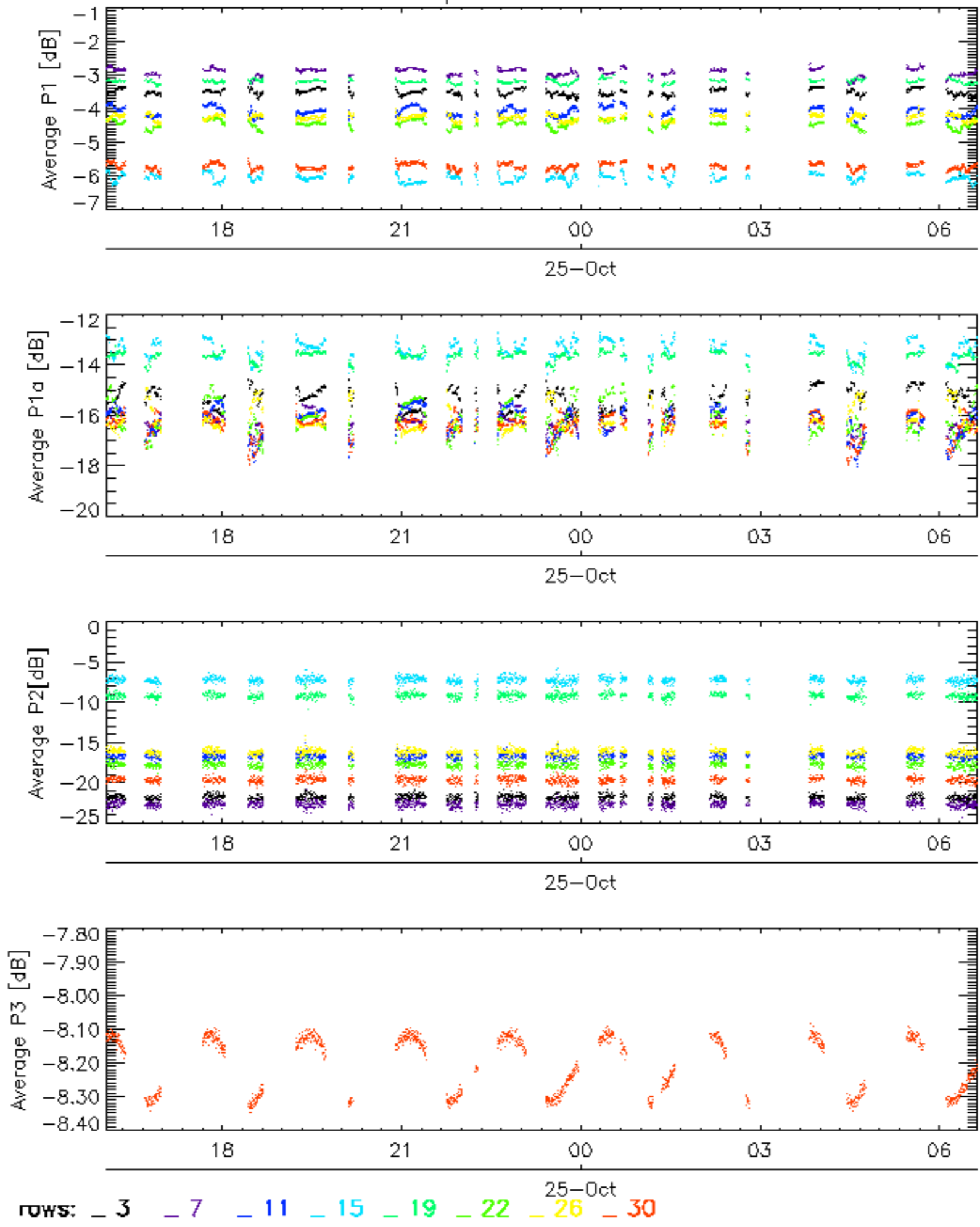


Cal pulses for WVS IS2



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

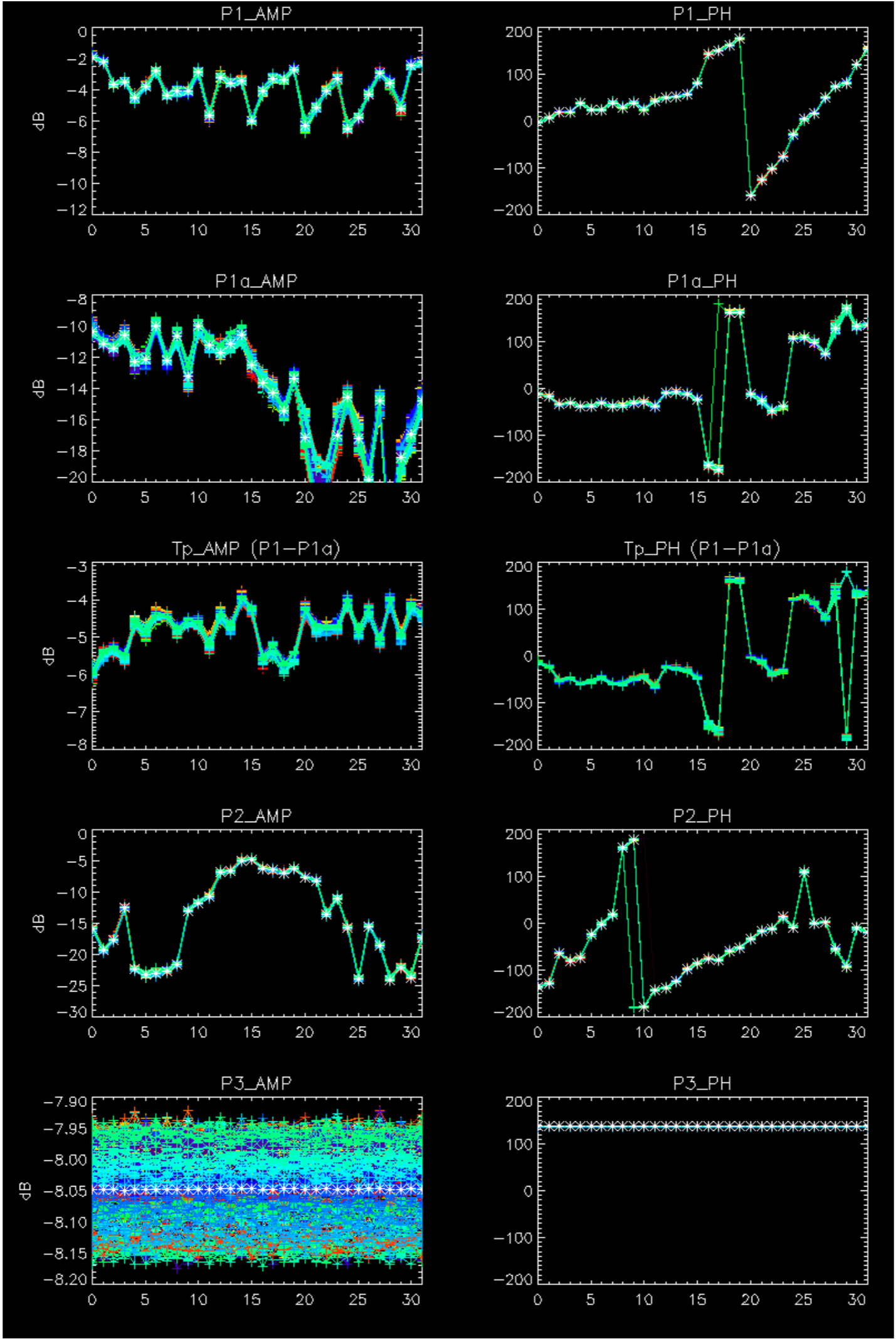
Cal pulses for WVS IS2

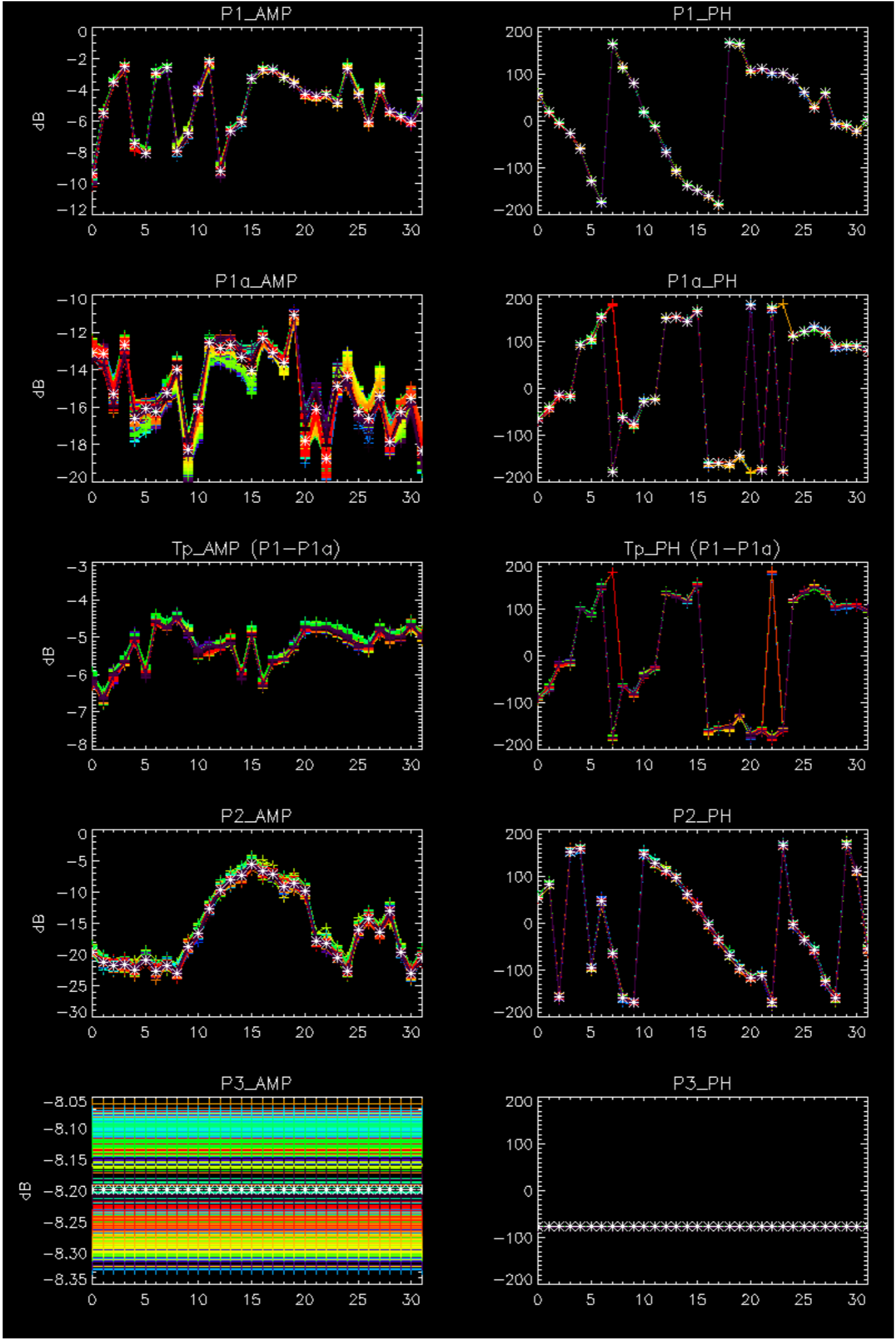


No anomalies observed on available browse products



No anomalies observed.

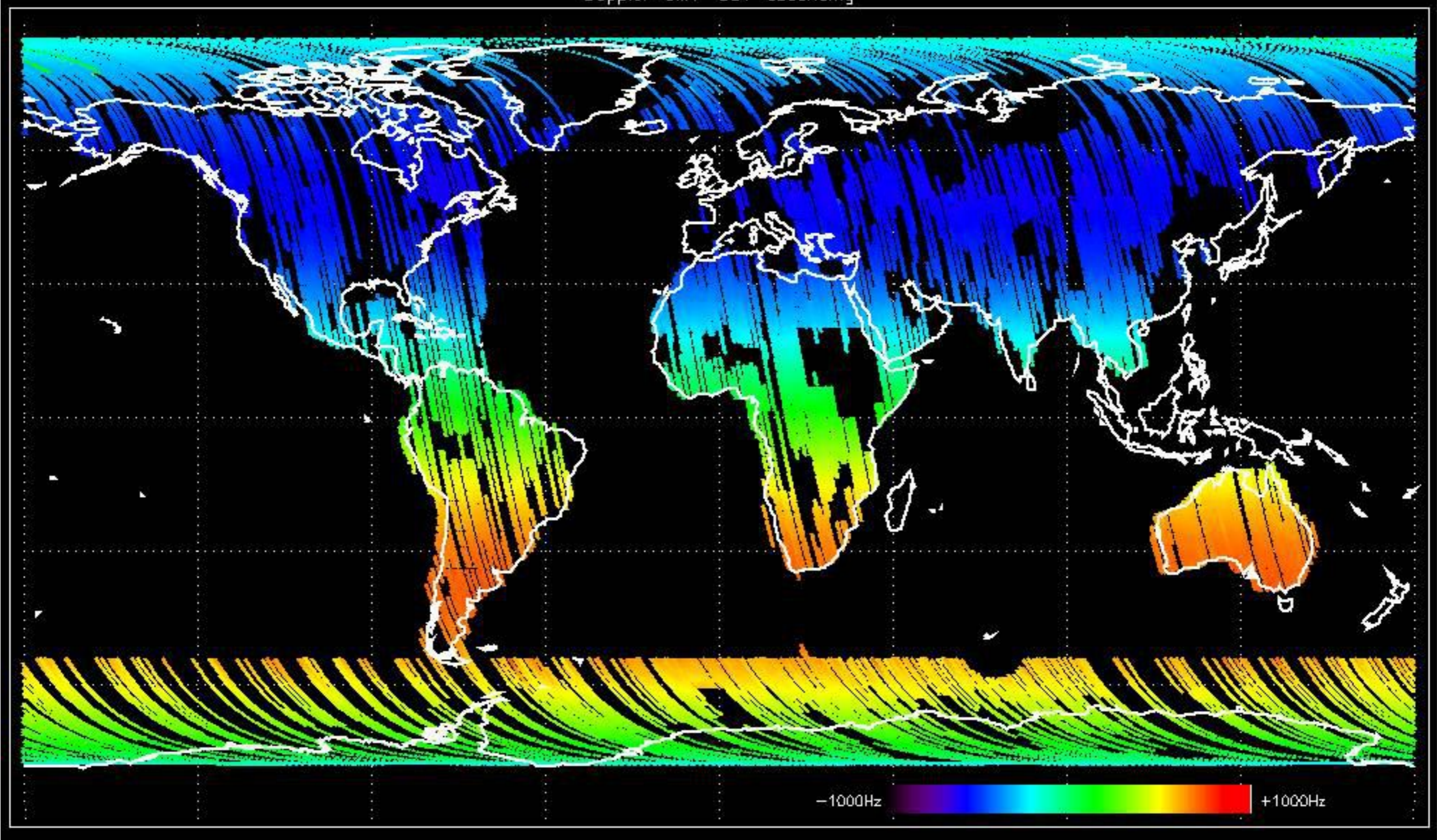




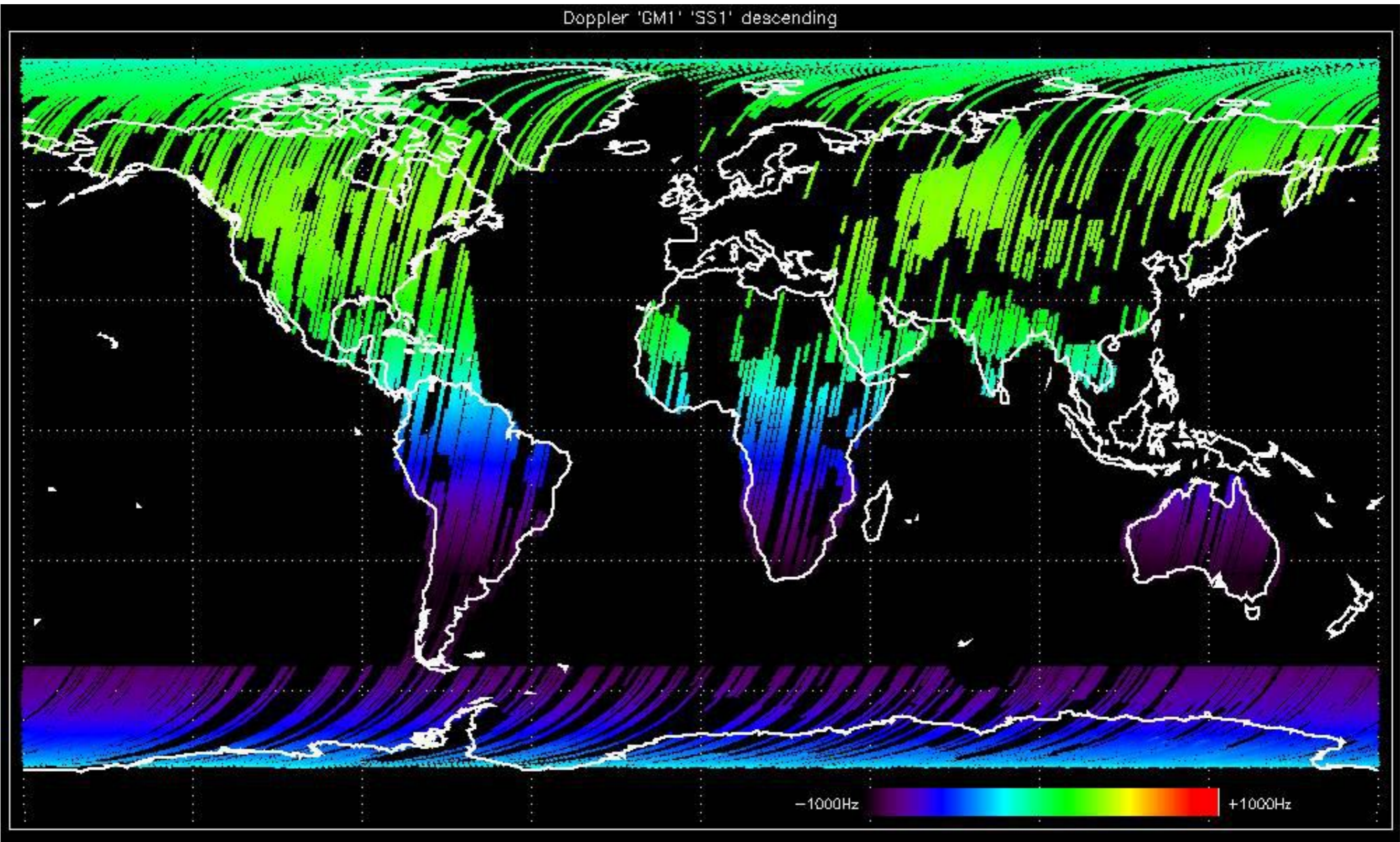
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



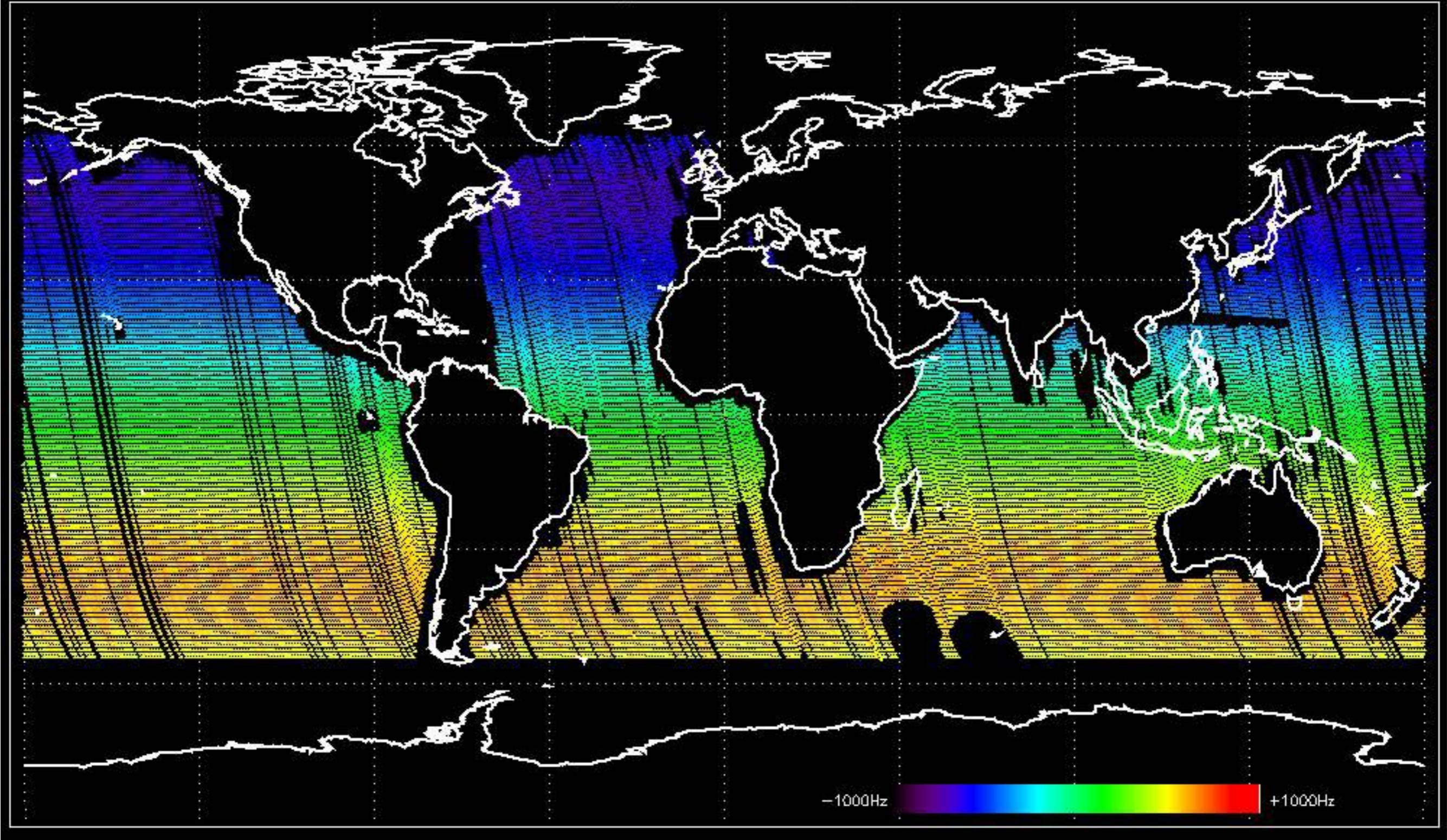
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

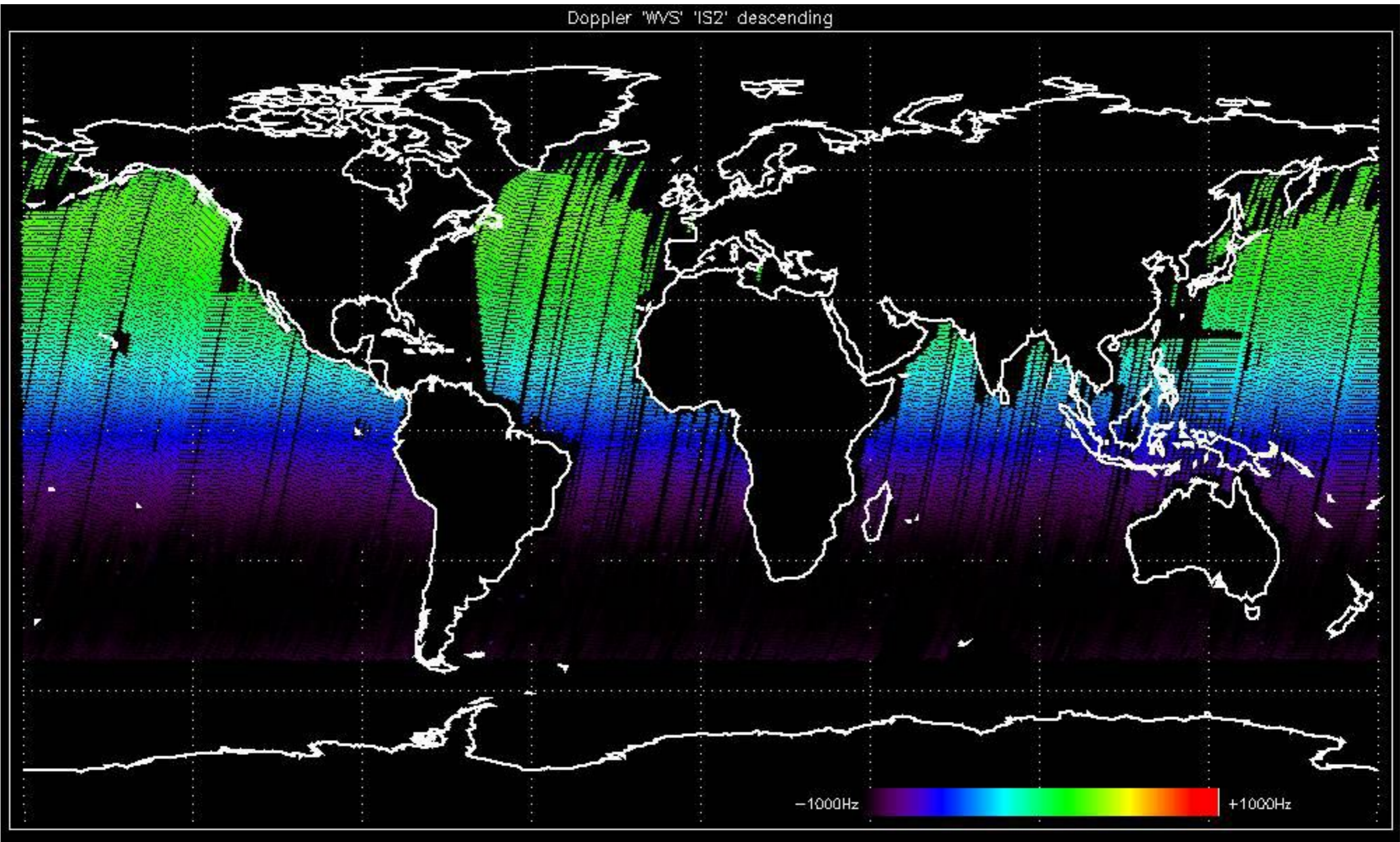


Doppler 'WVS' 'IS2' ascending

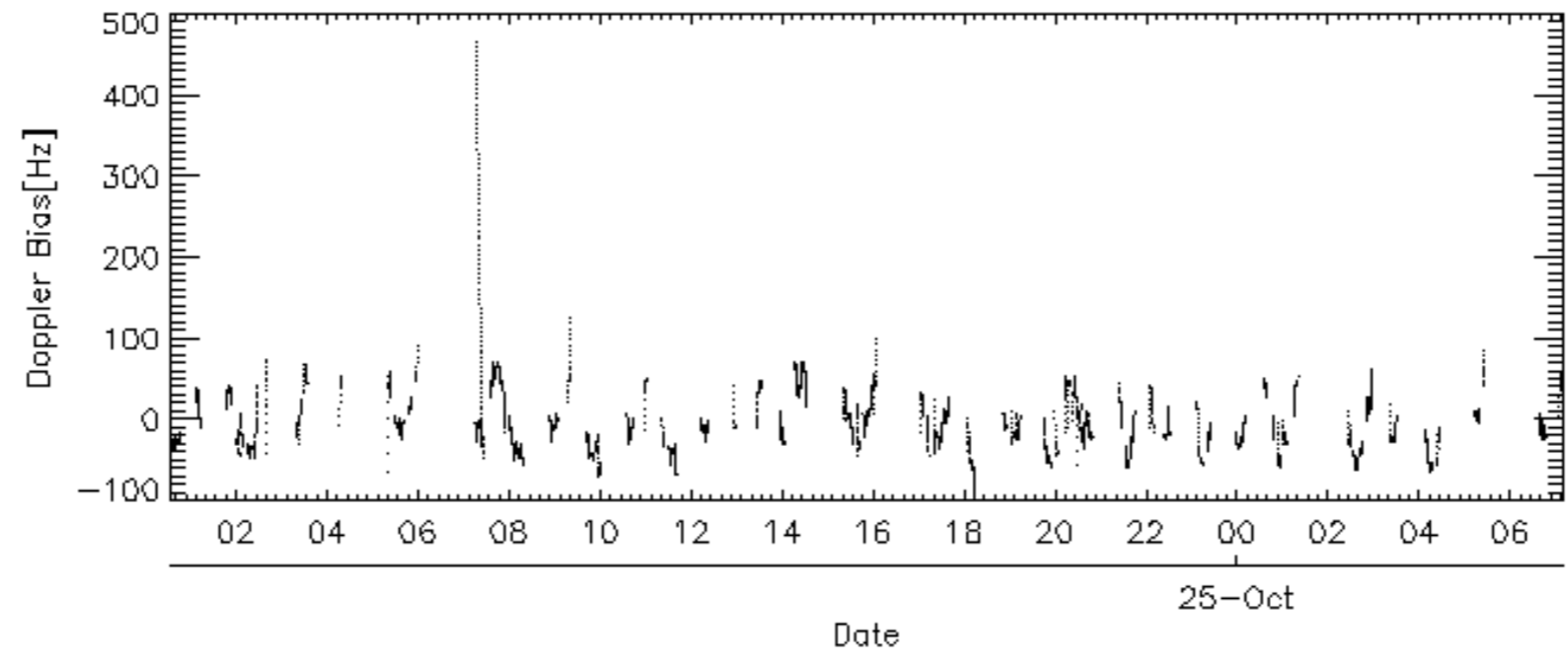
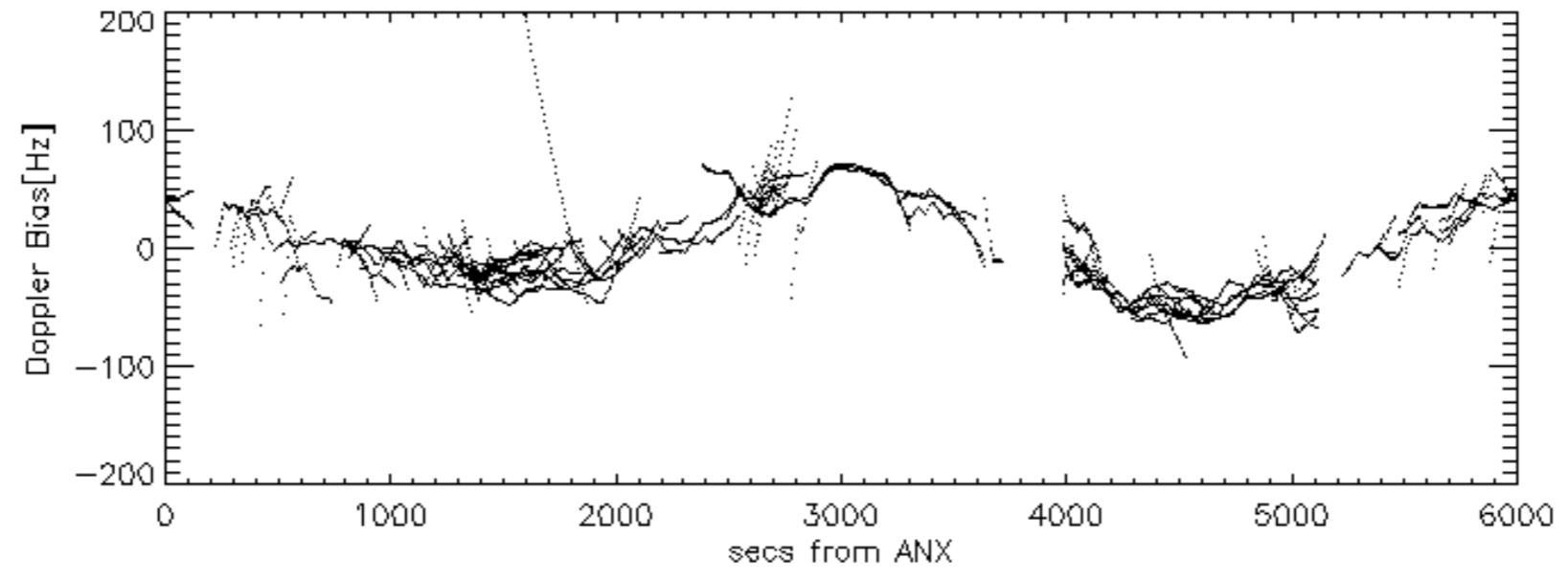
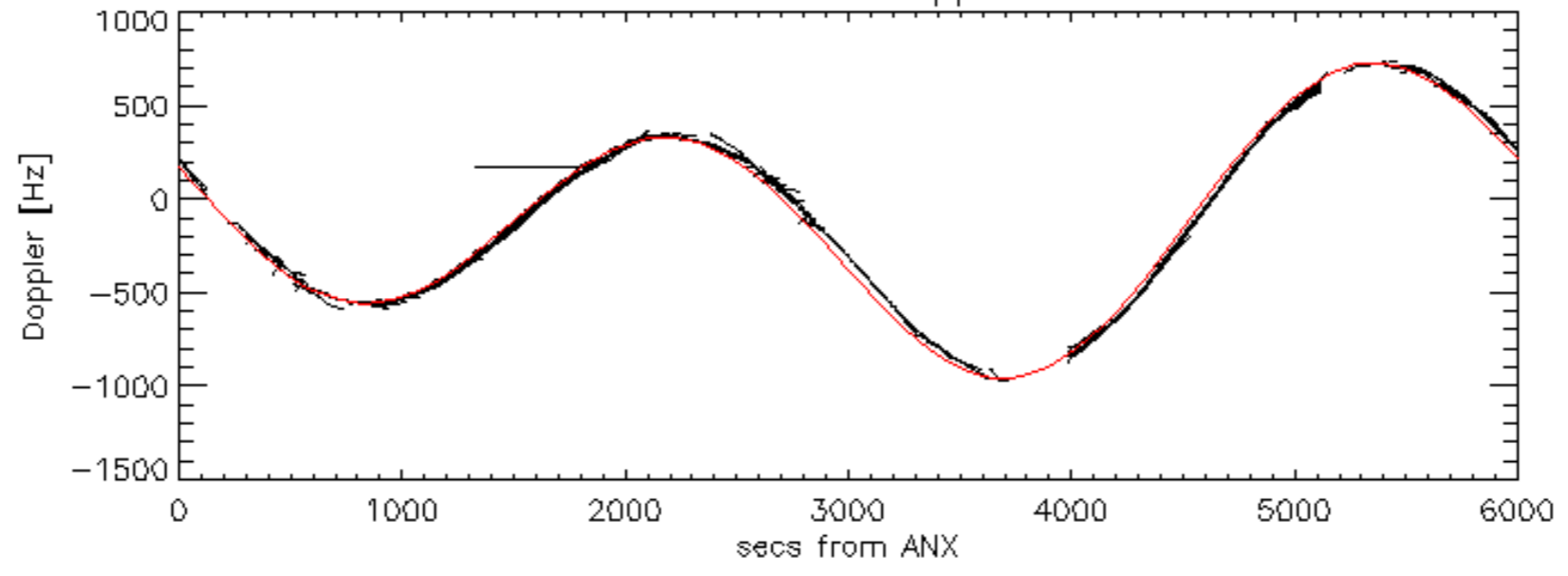


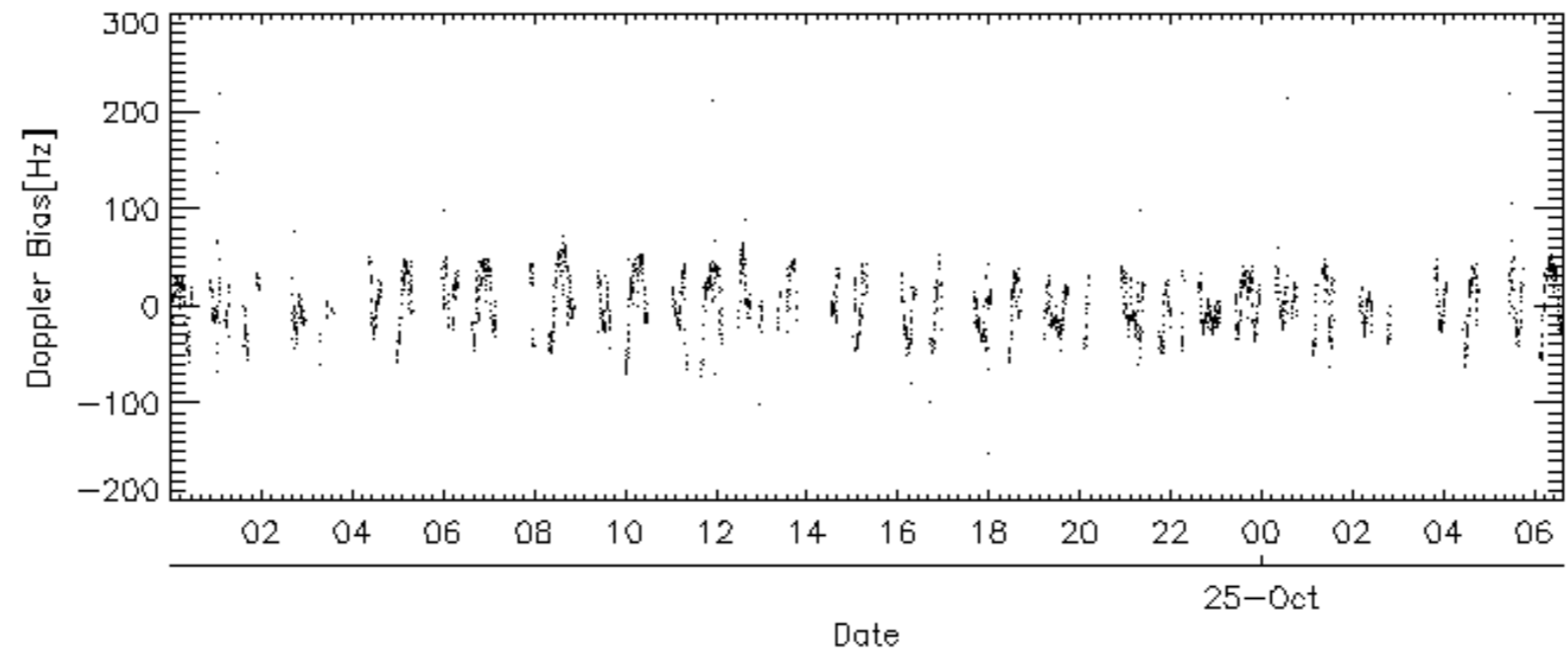
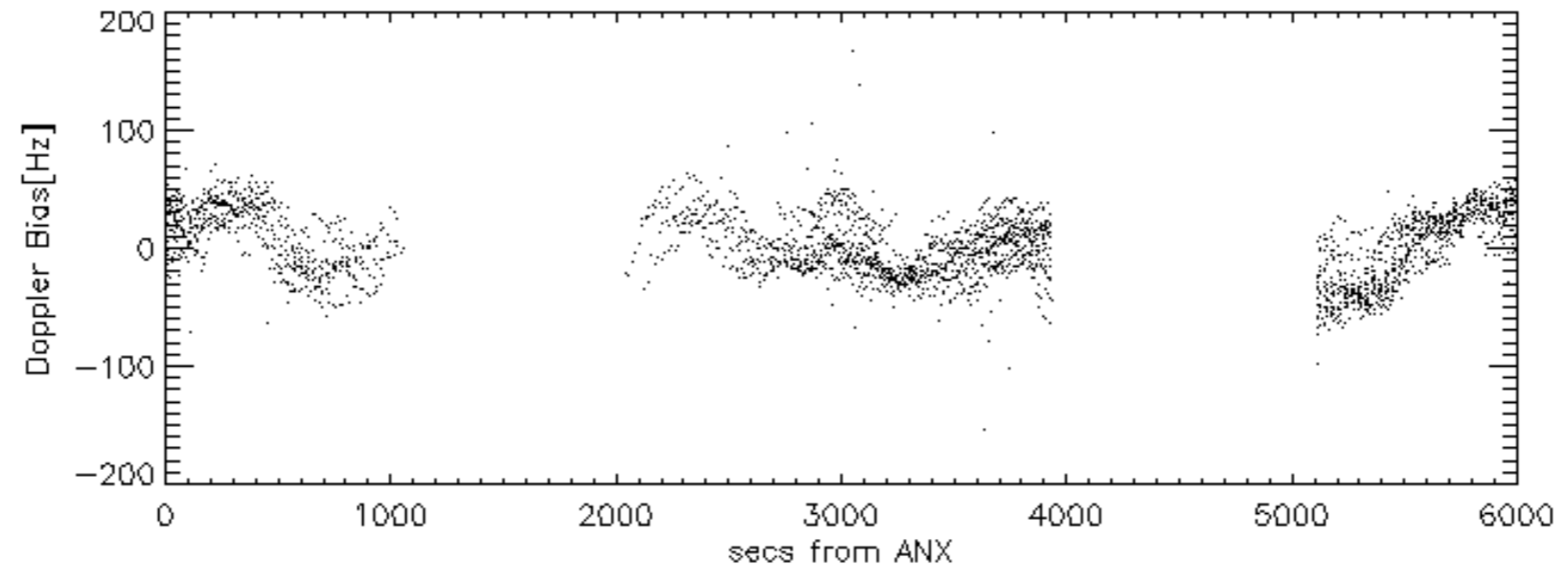
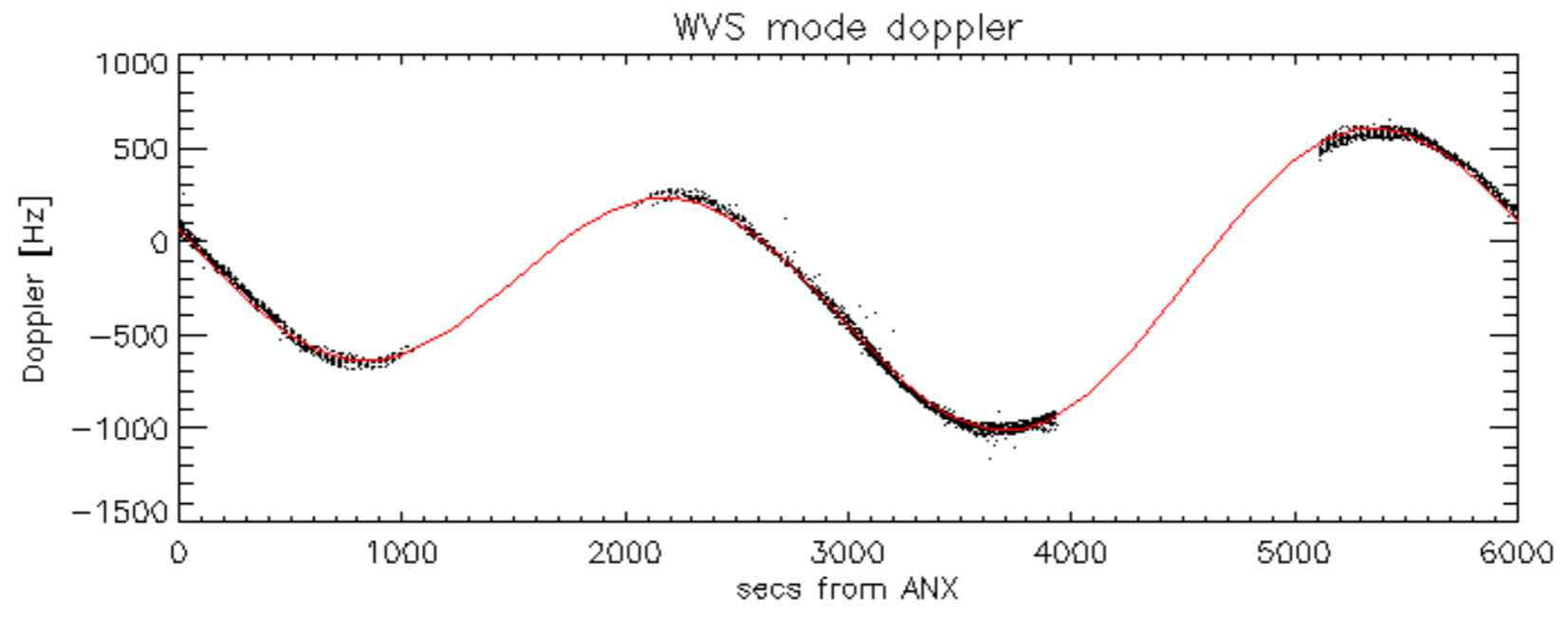


Doppler 'WVS' 'IS2' descending

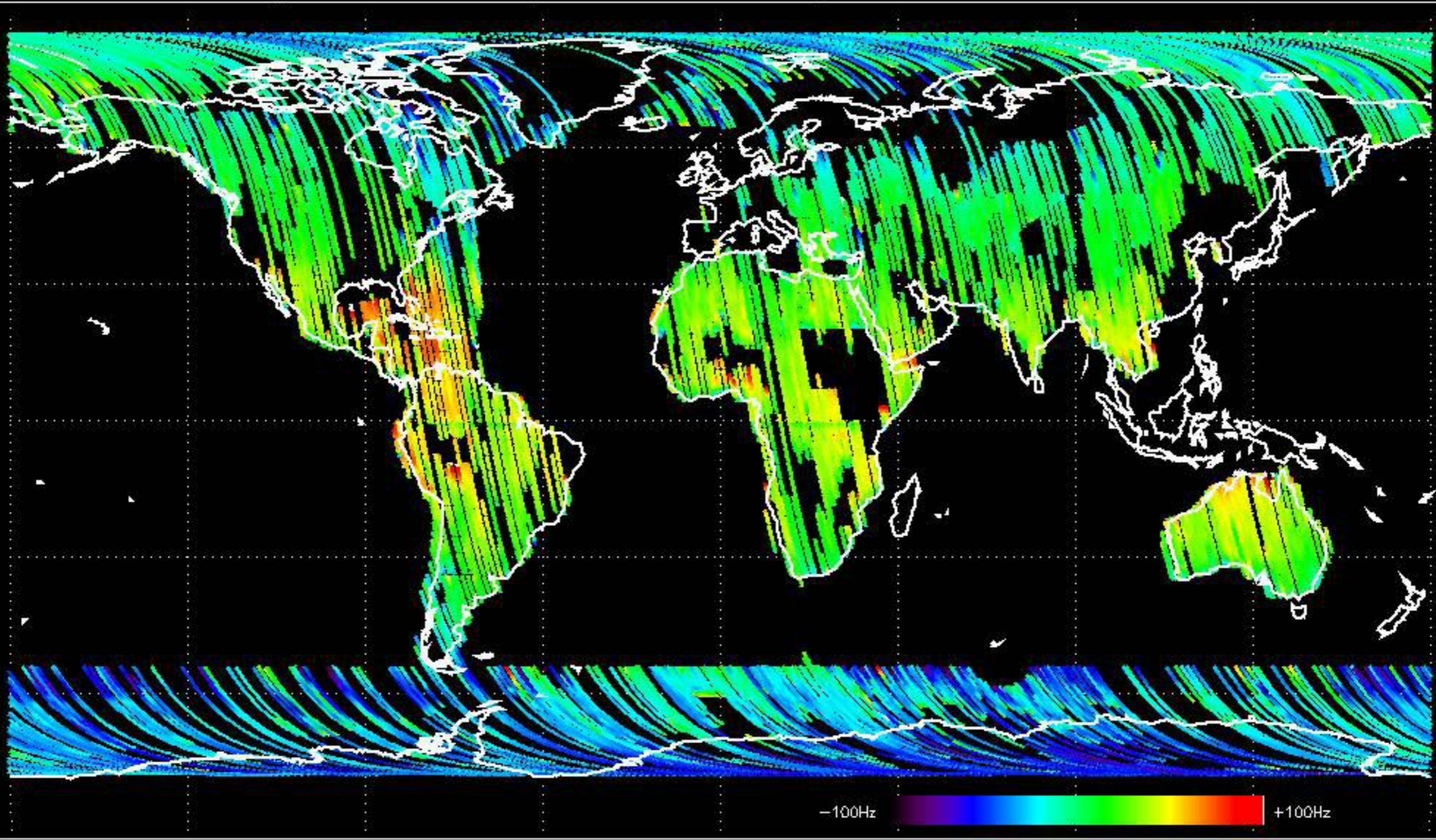


GM1 mode doppler

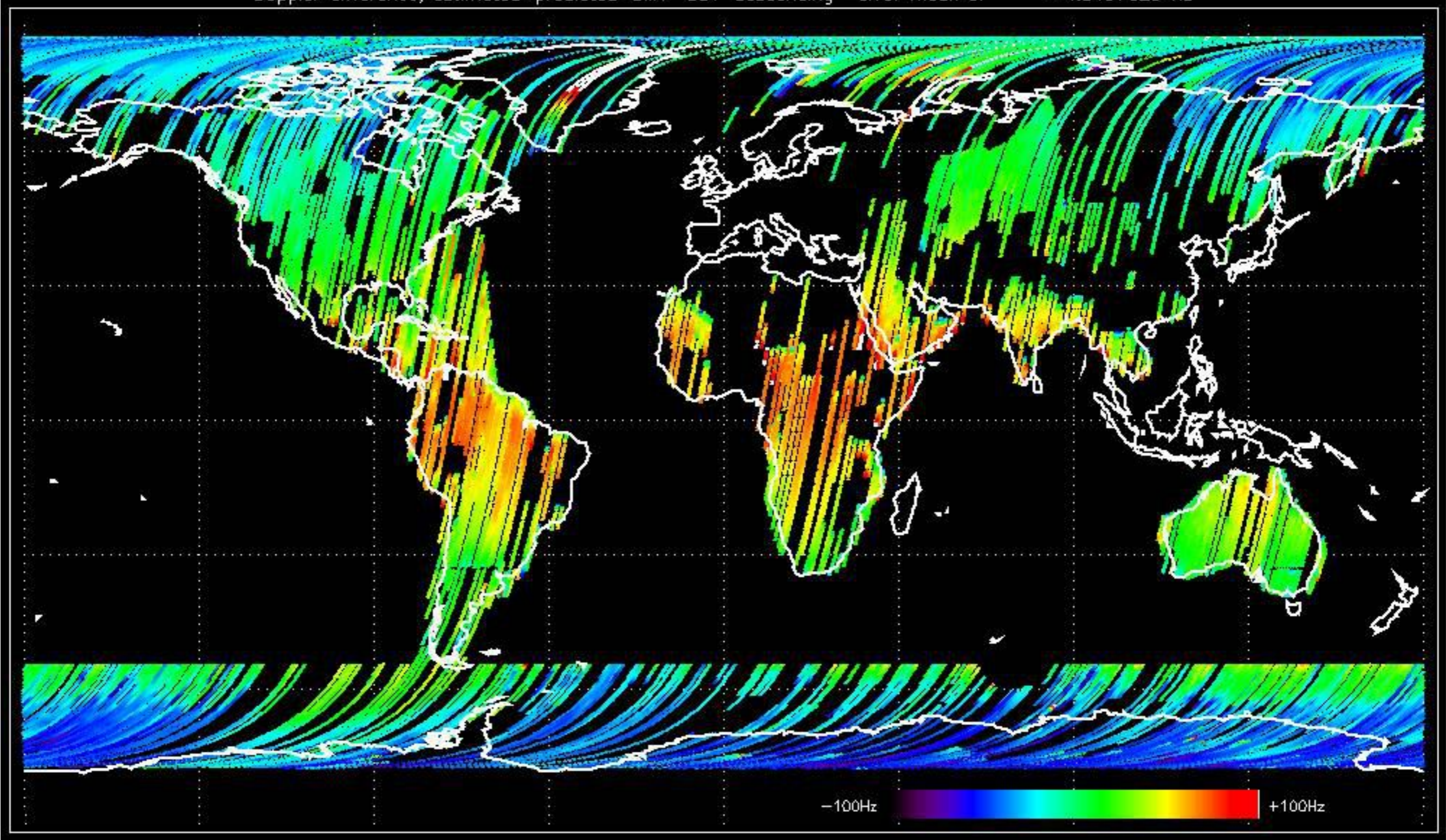




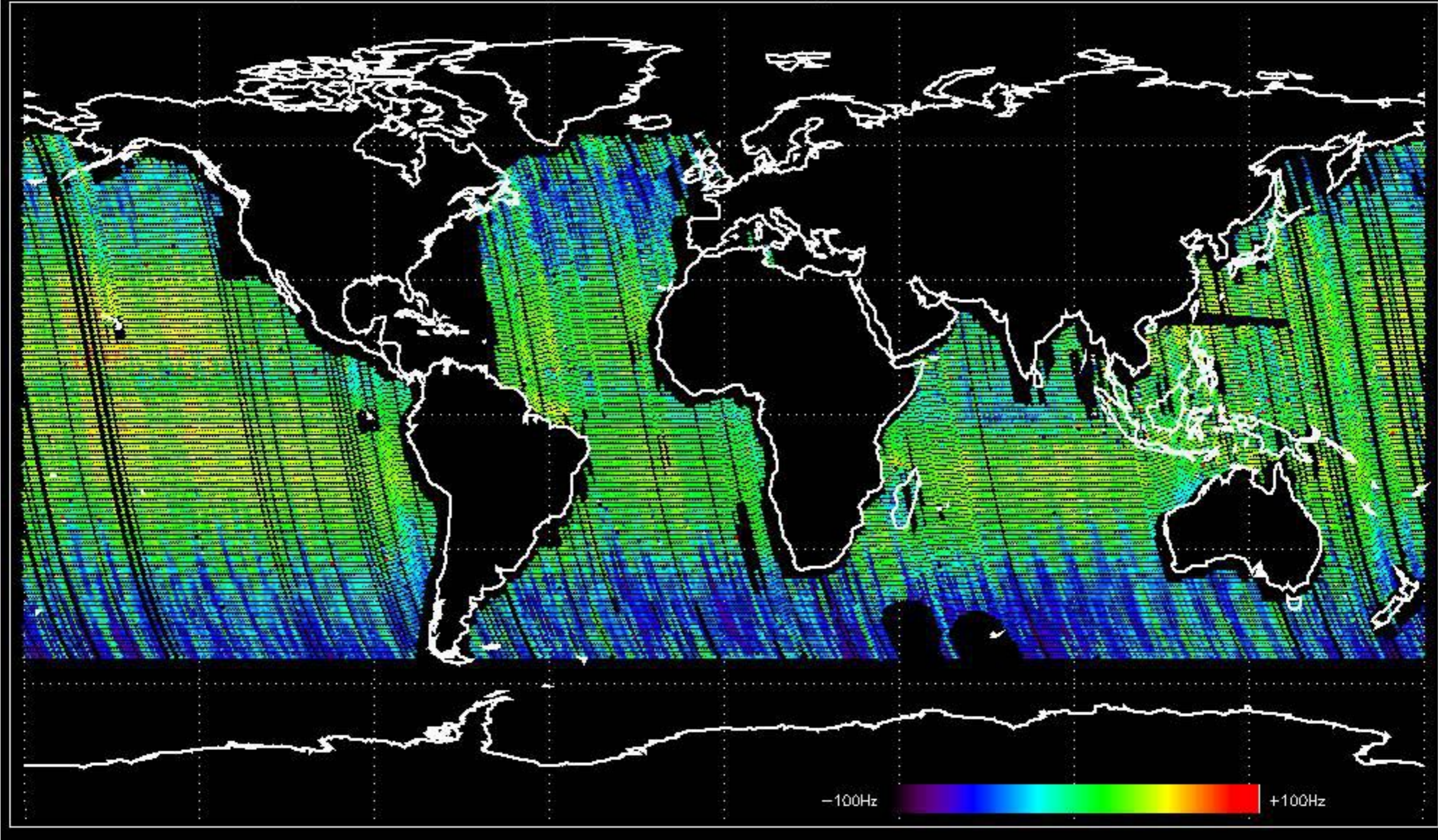
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -8.0125516 Hz



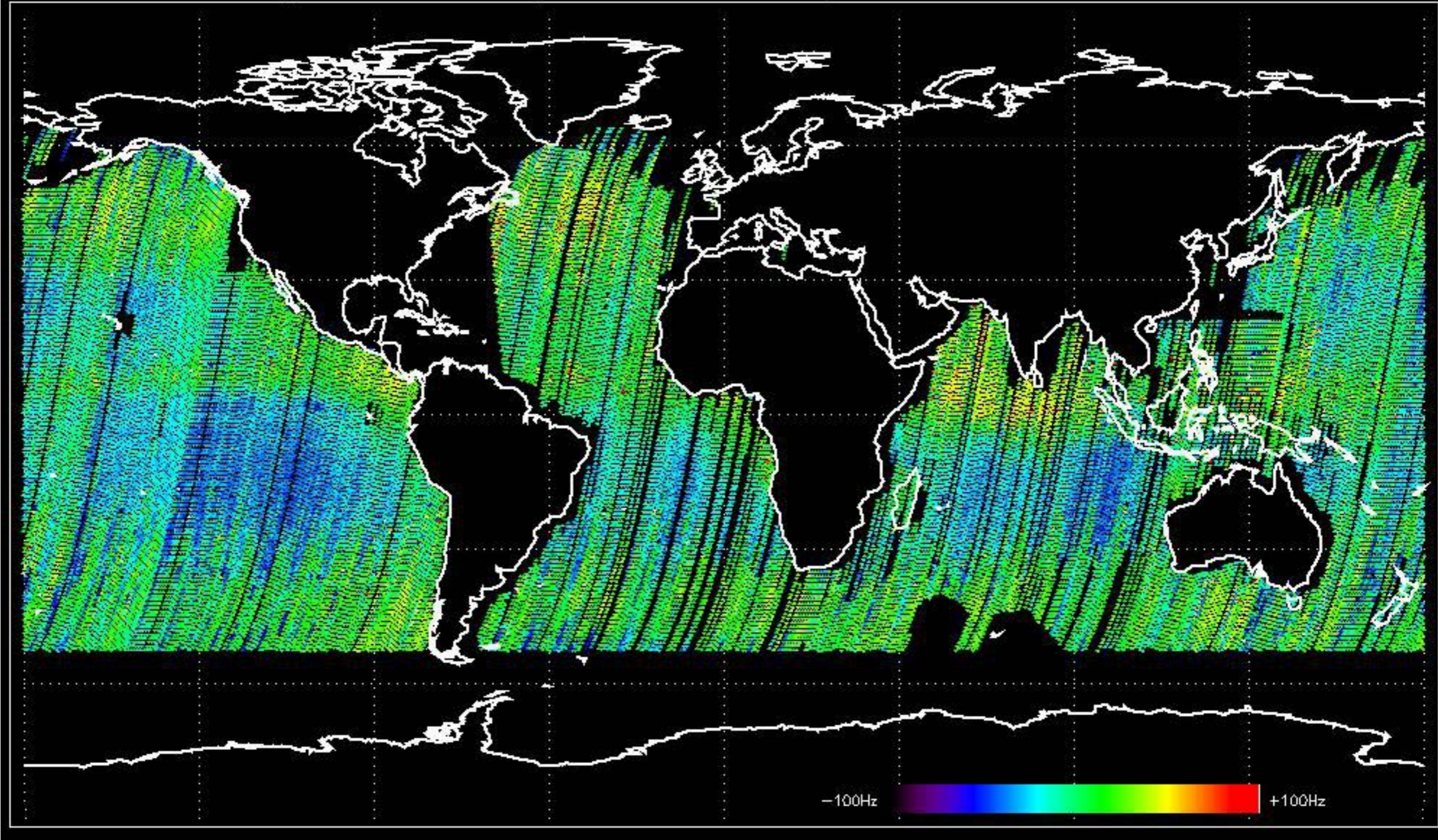
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.8197625 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of 0.28126351 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -3.7825544 Hz



No anomalies observed on available MS products:



No anomalies observed.









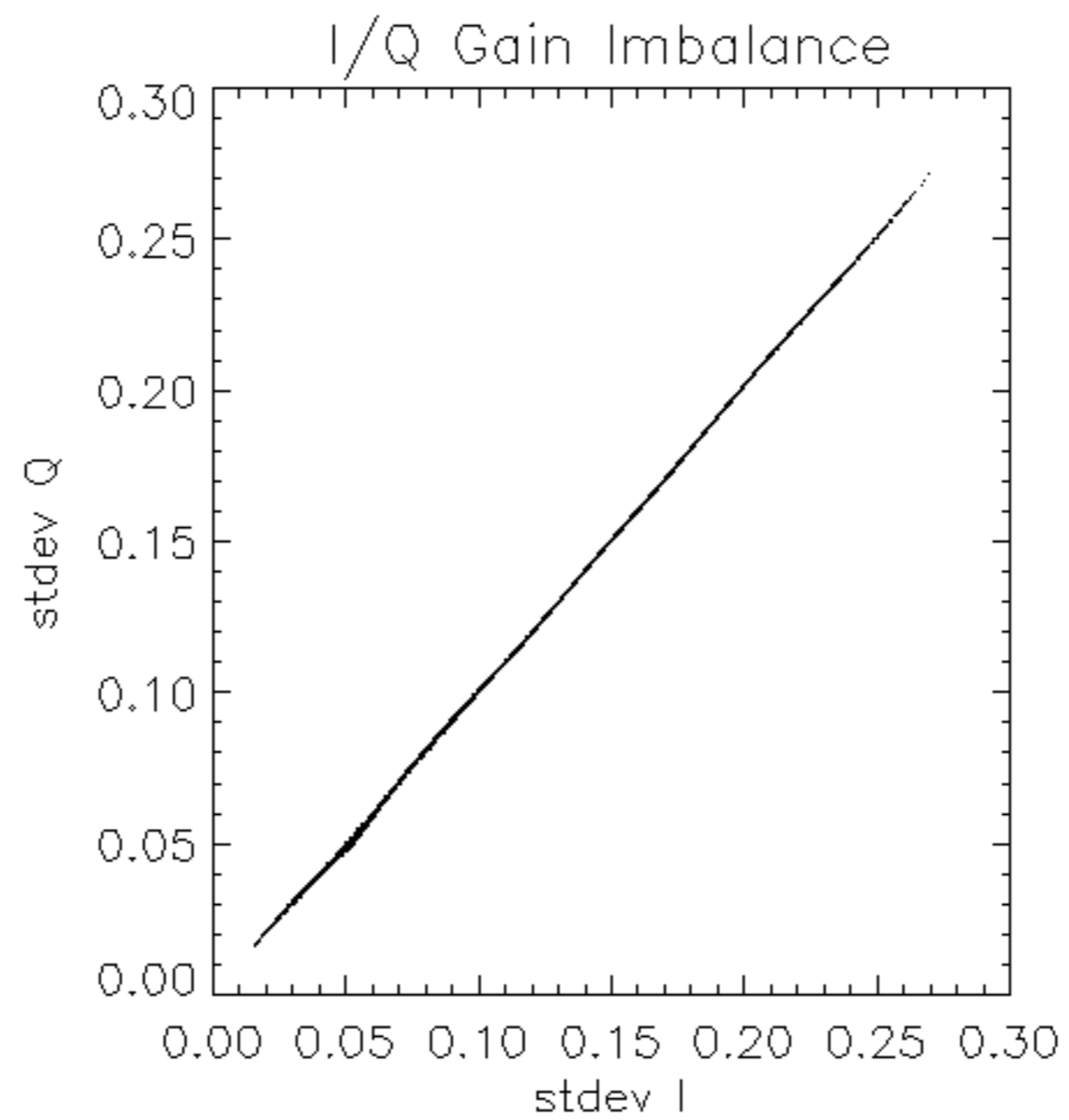


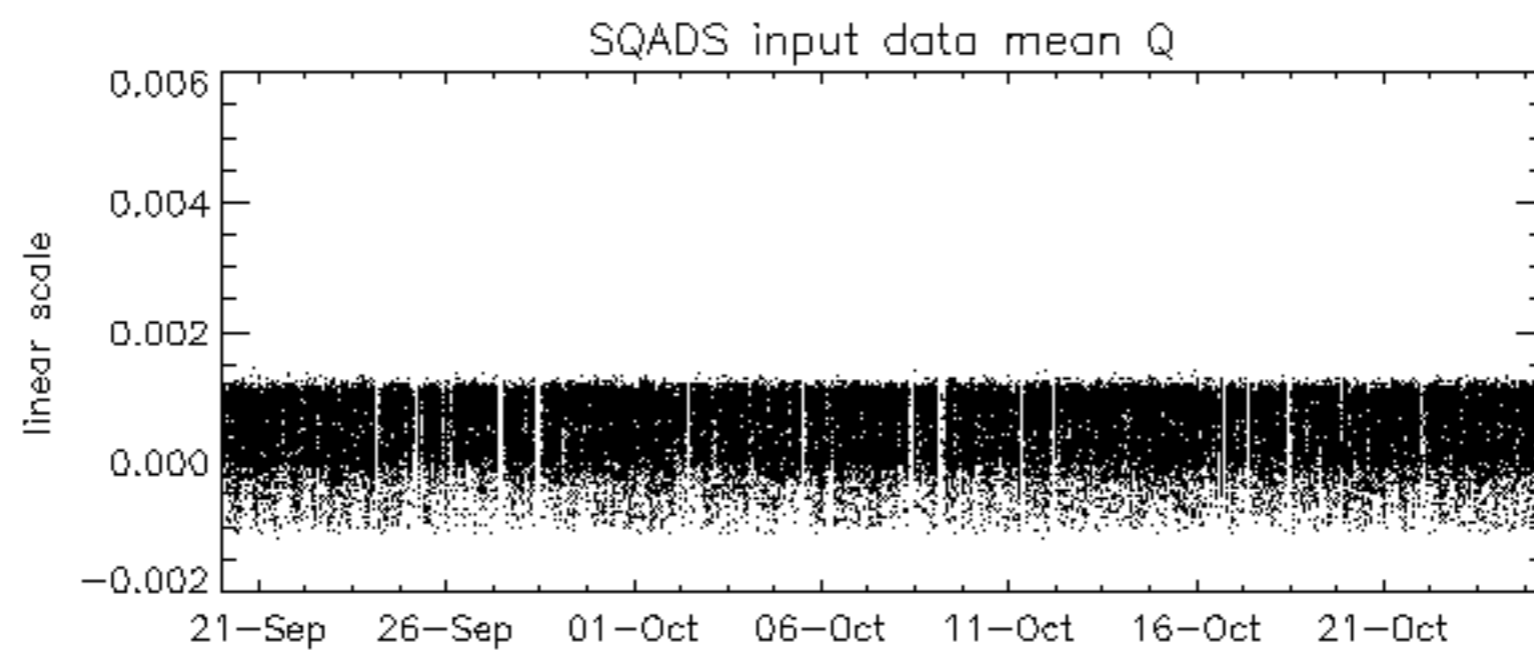
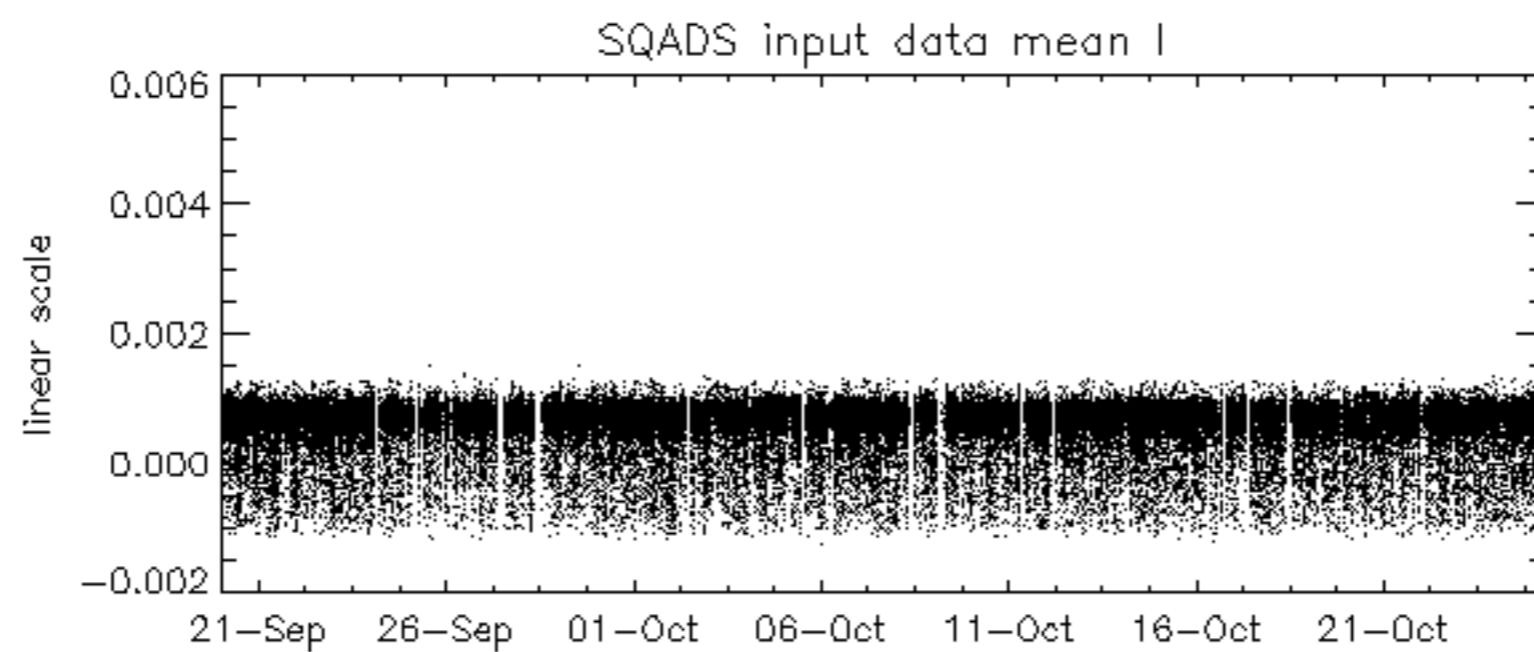
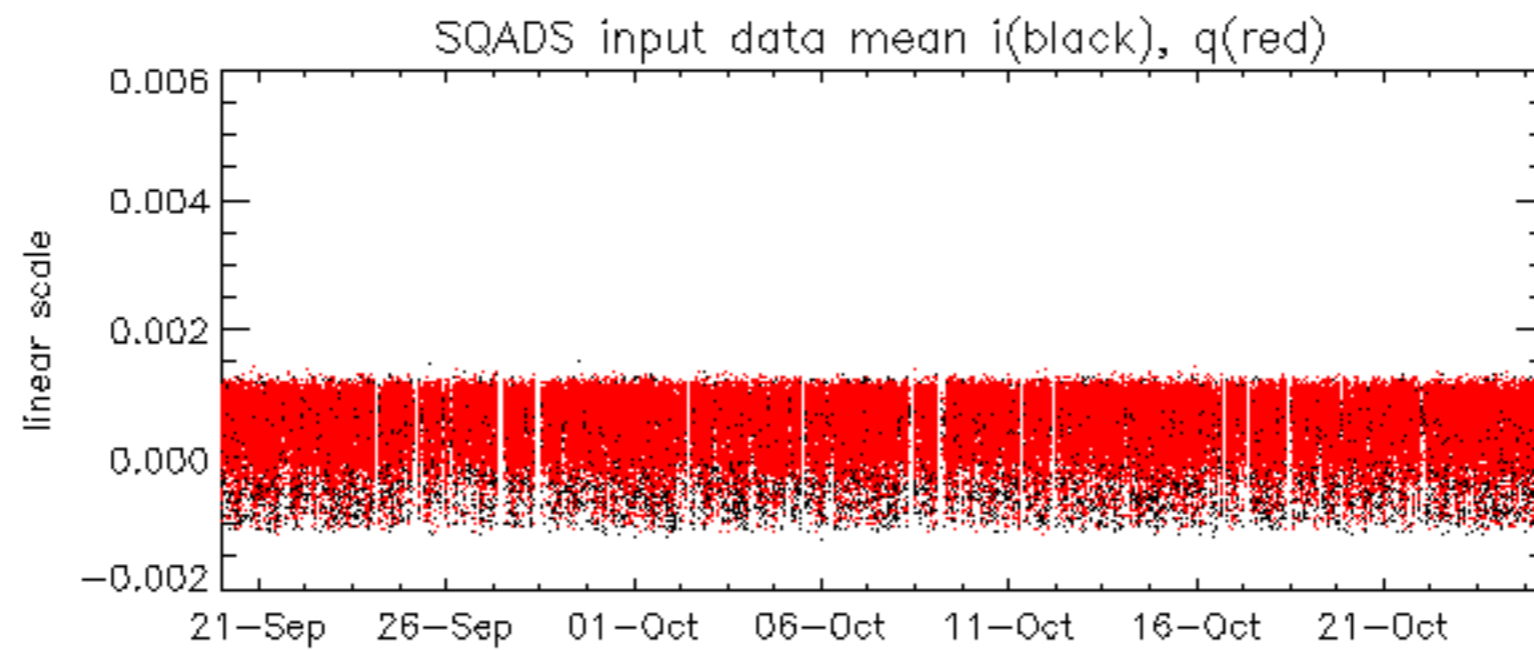


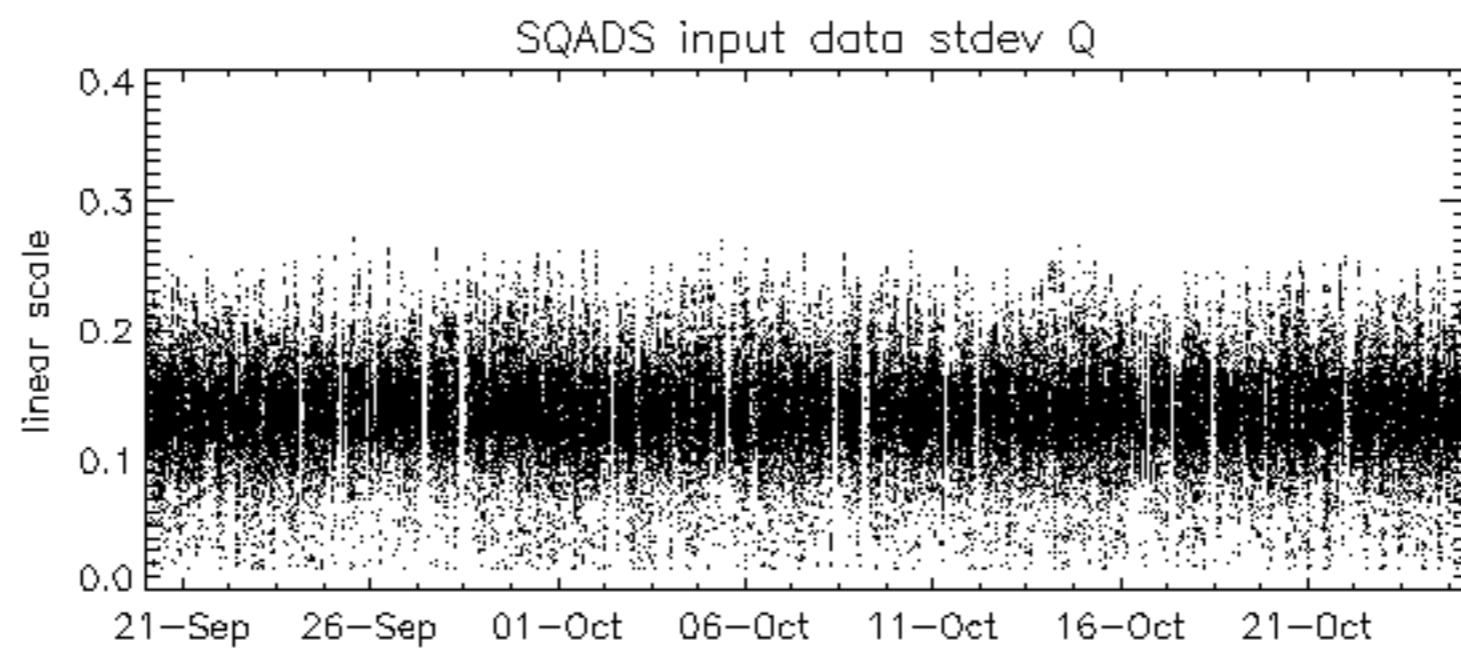
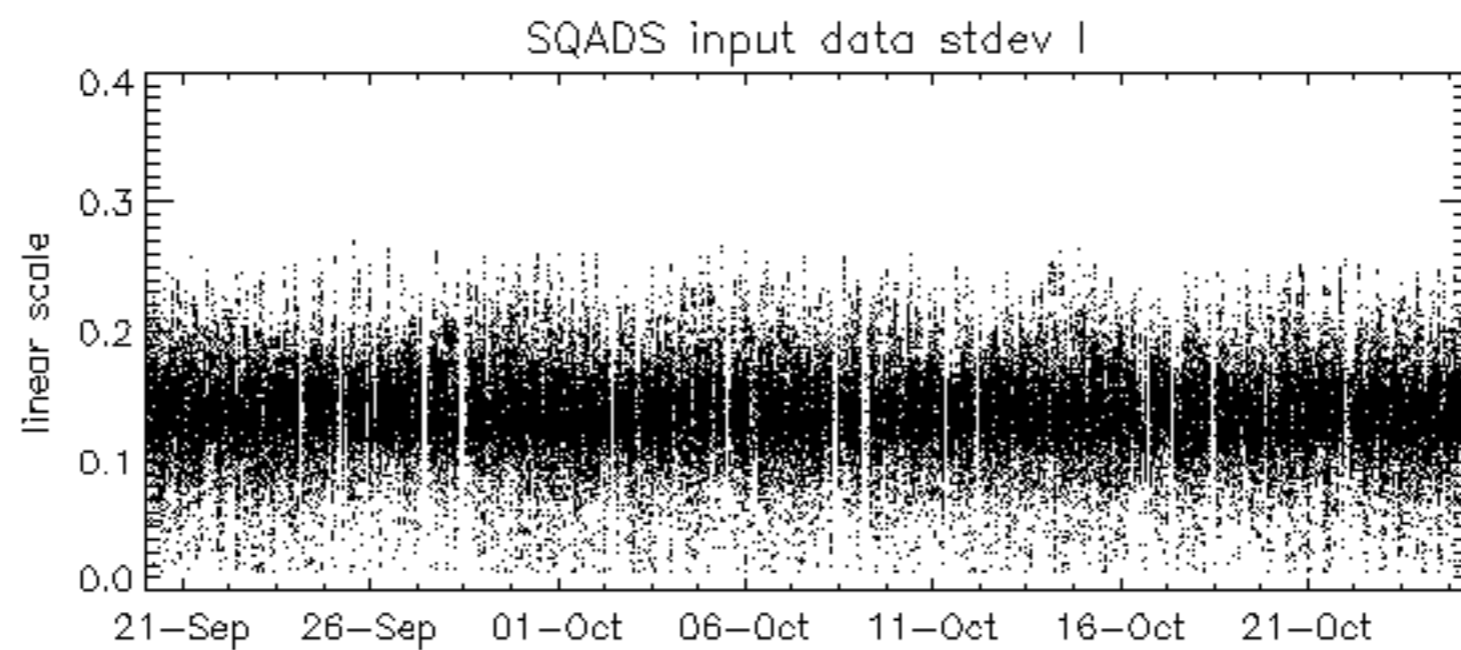
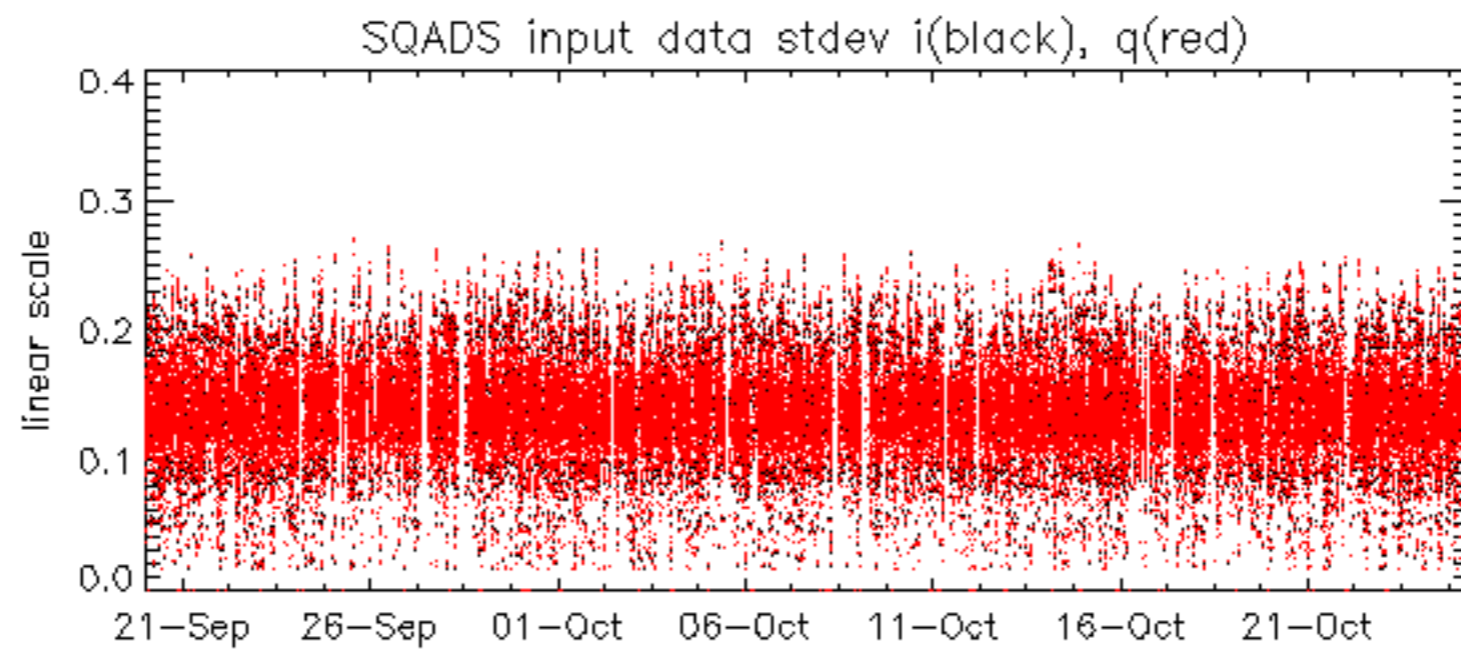






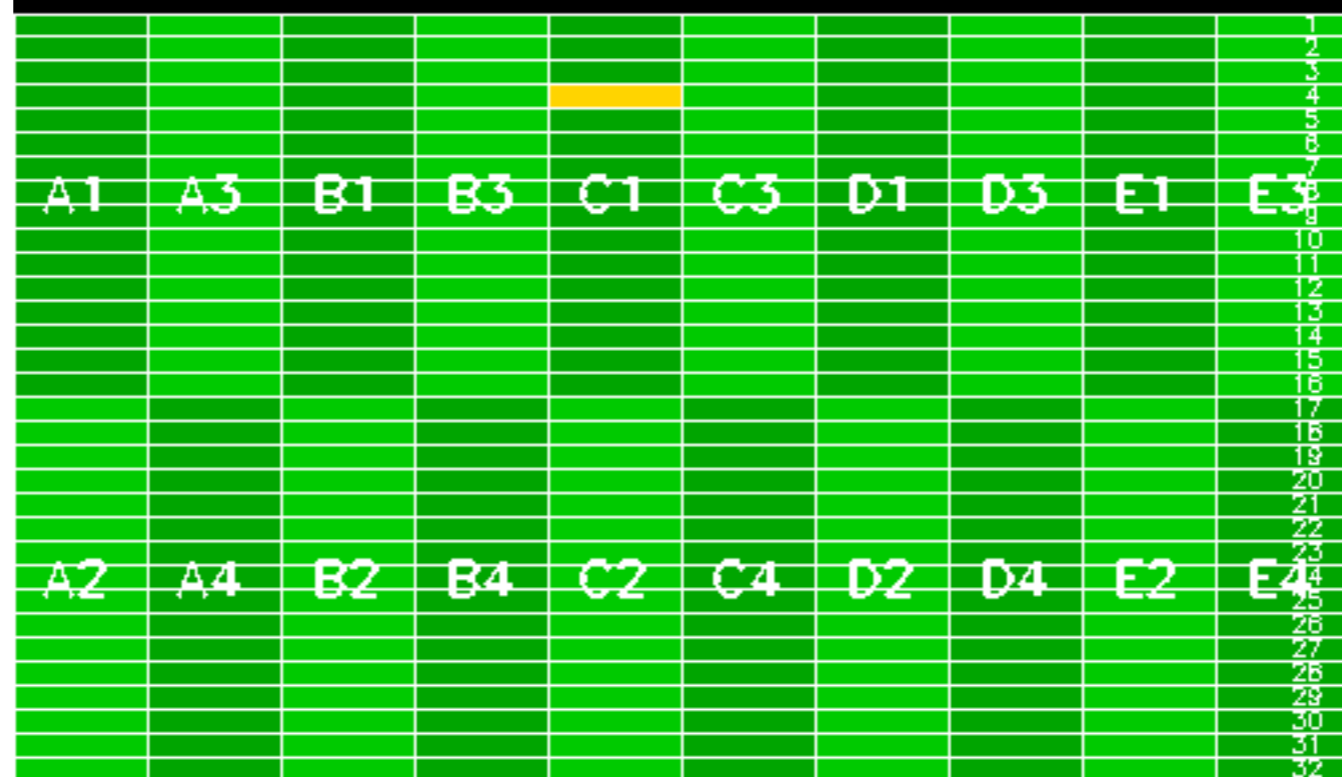








Reference: 2005-10-08 03:02:47 H TxGain  
 Test : 2005-10-23 18:36:57 H





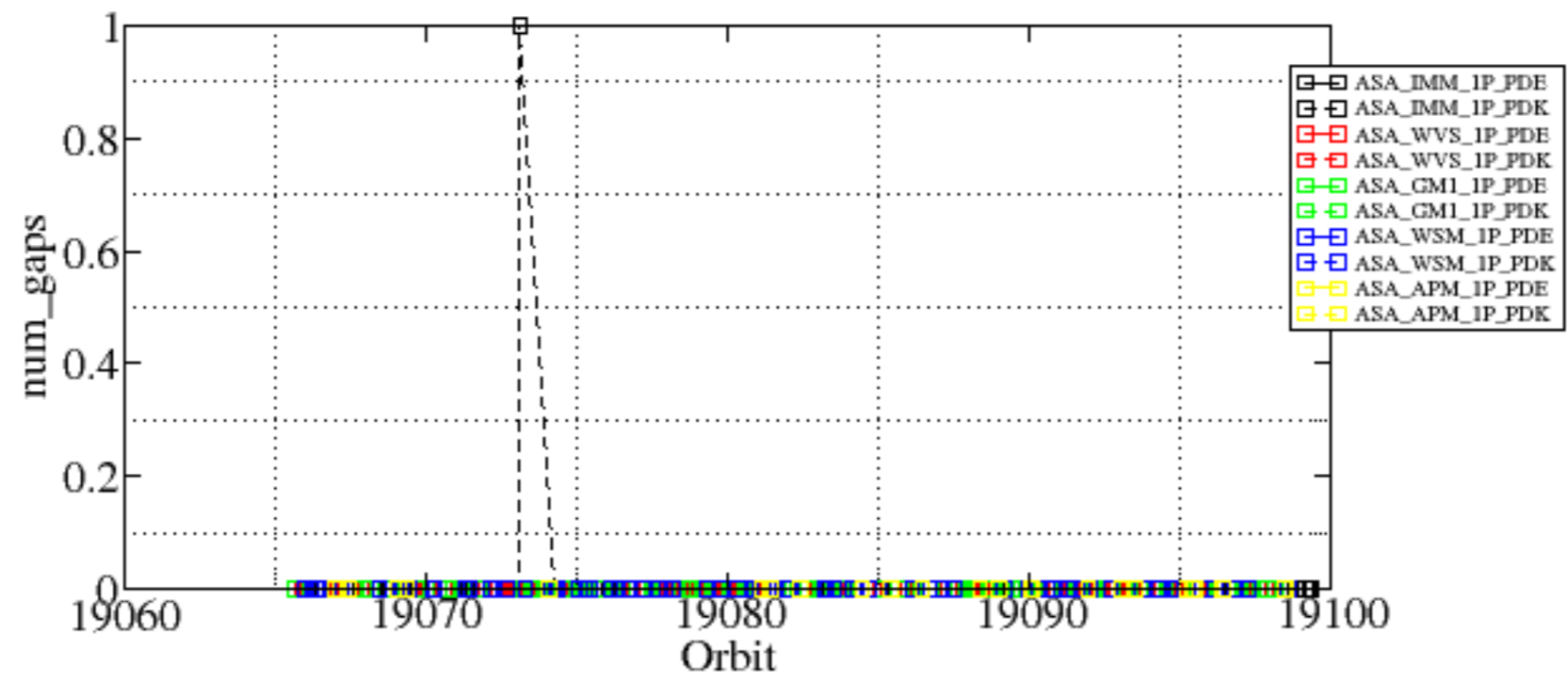


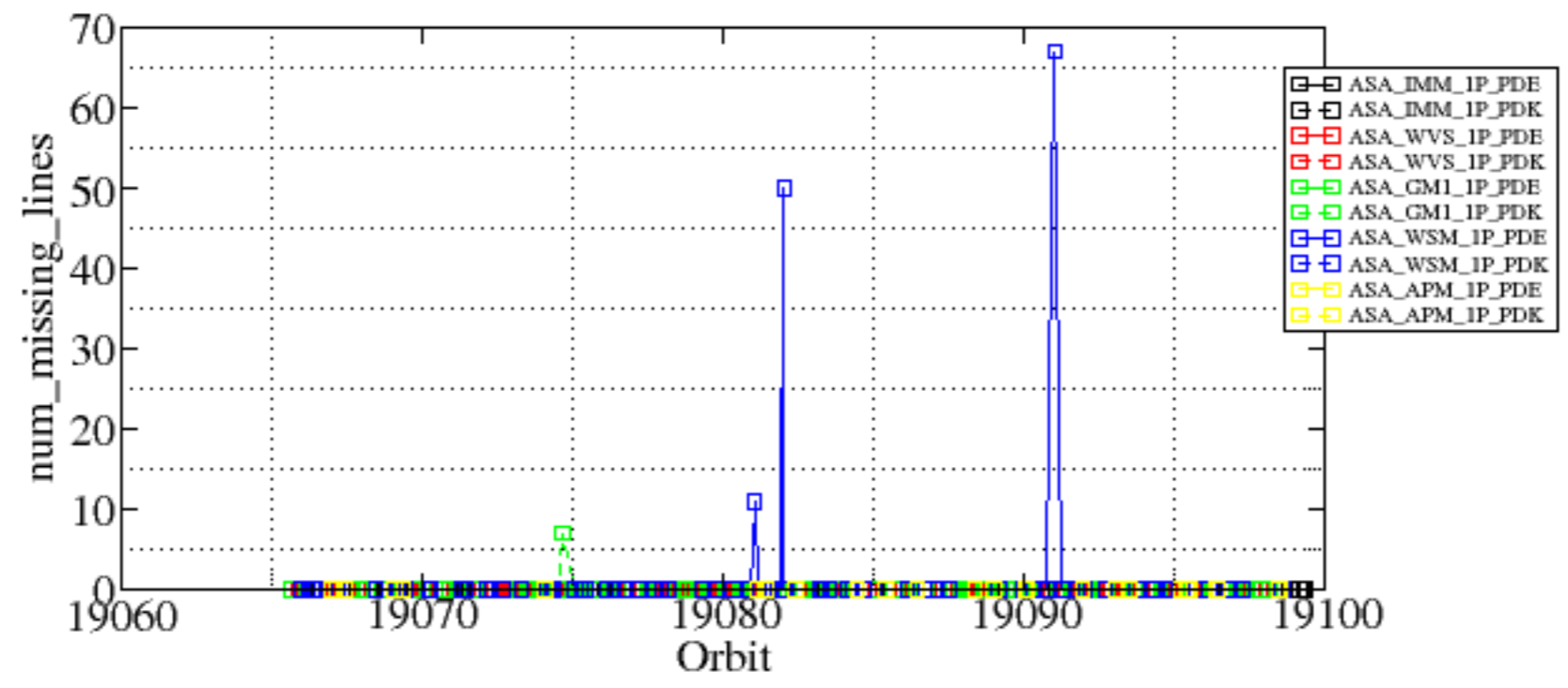


Summary of analysis for the last 3 days 2005102[345]

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_1PNPDK20051023_123959_000001452041_00482_19073_6051.N1	1	0
ASA_GM1_1PNPDK20051023_151422_000011362041_00483_19074_9321.N1	0	7
ASA_WSM_1PNPDE20051024_015714_000001592041_00490_19081_5772.N1	0	11
ASA_WSM_1PNPDE20051024_033513_000000672041_00491_19082_5794.N1	0	50
ASA_WSM_1PNPDE20051024_184203_000003062041_00500_19091_5927.N1	0	67



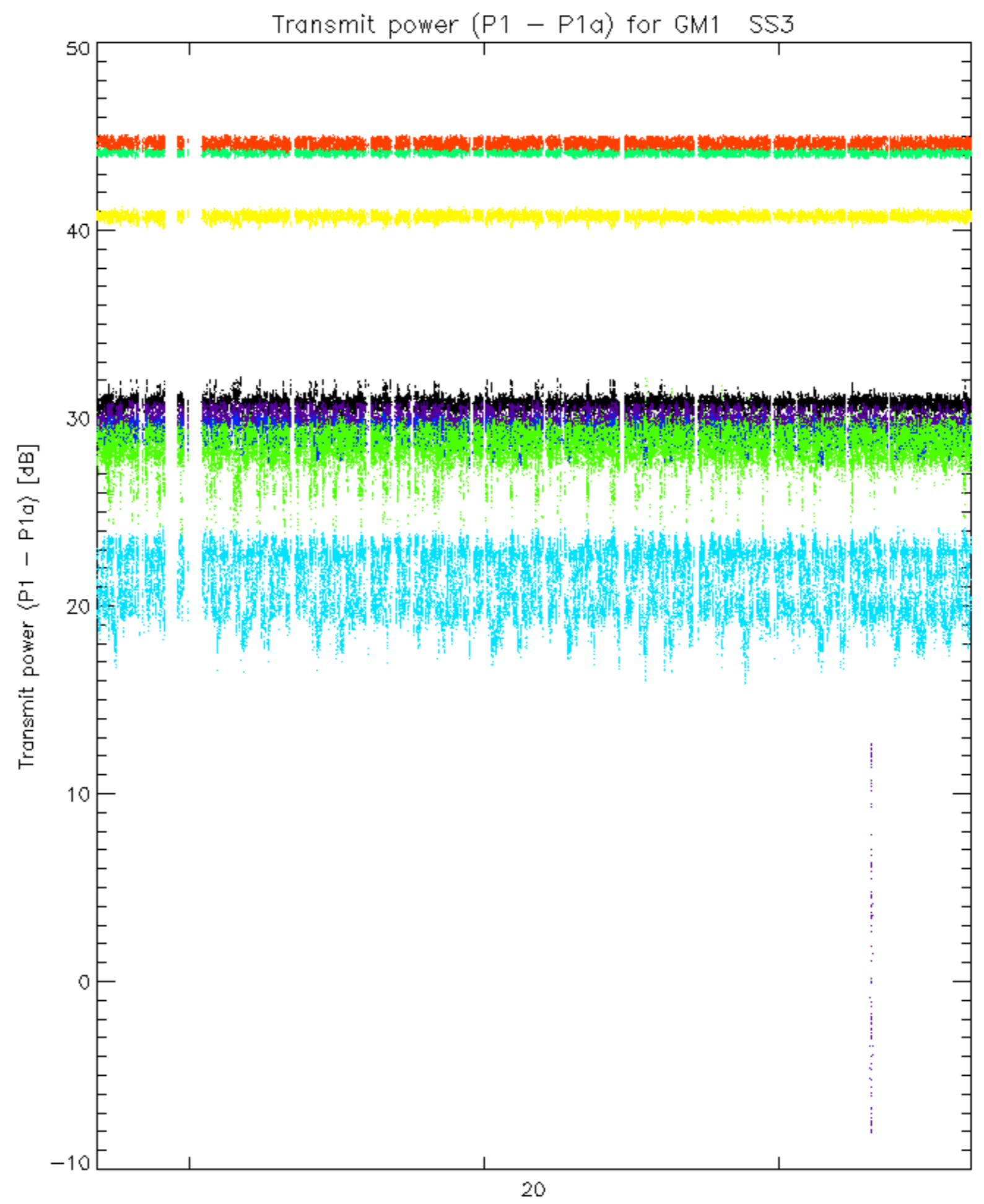






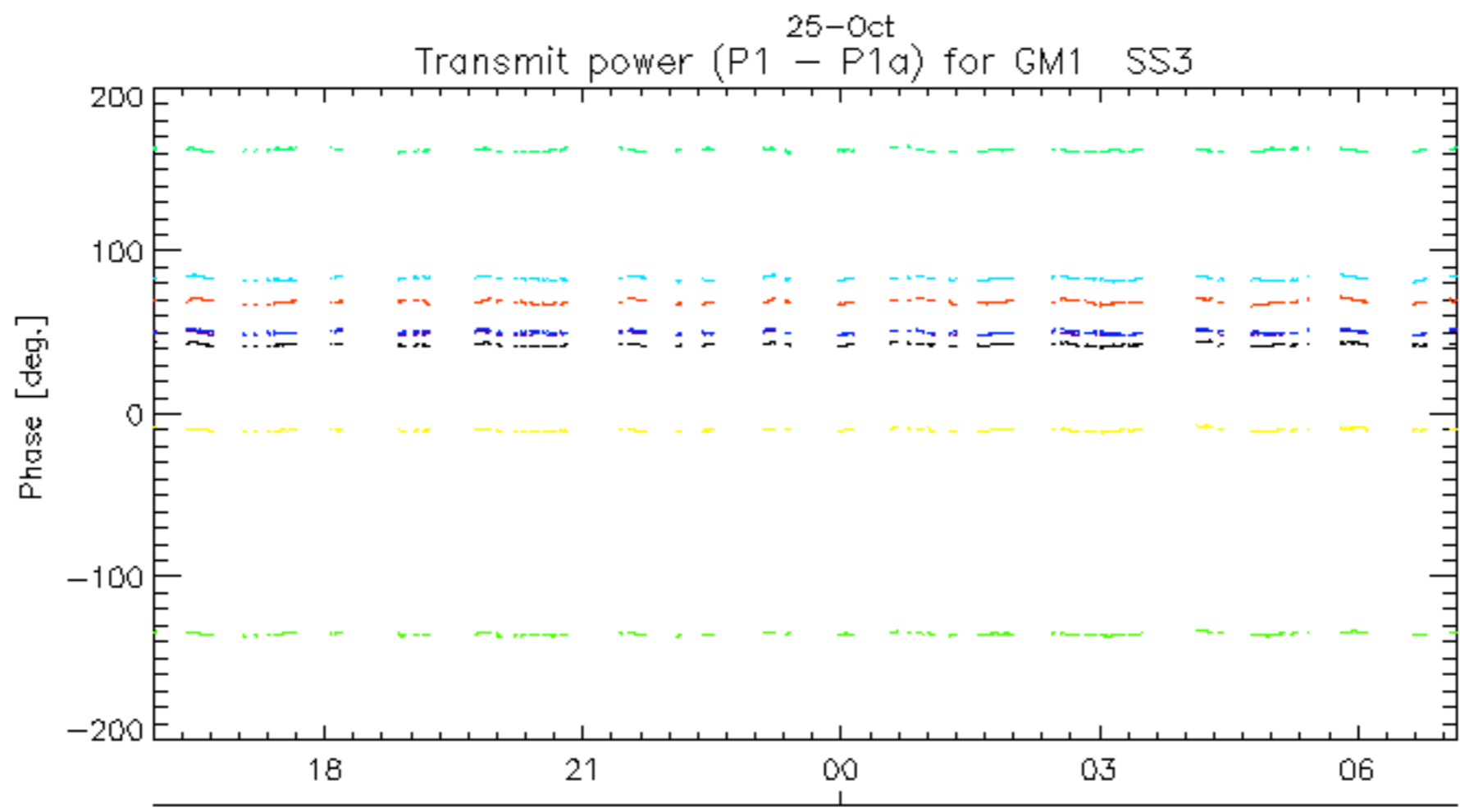
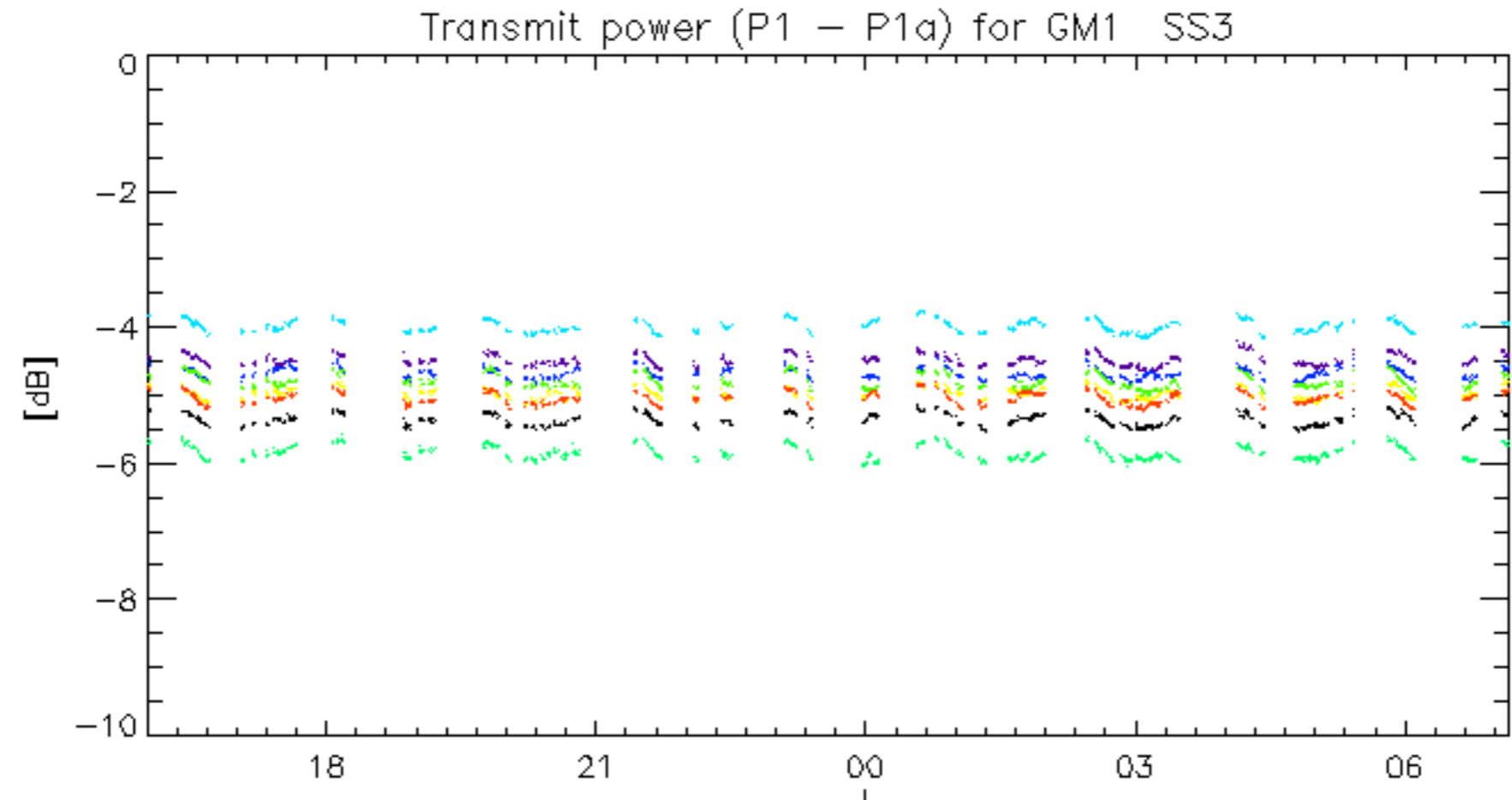




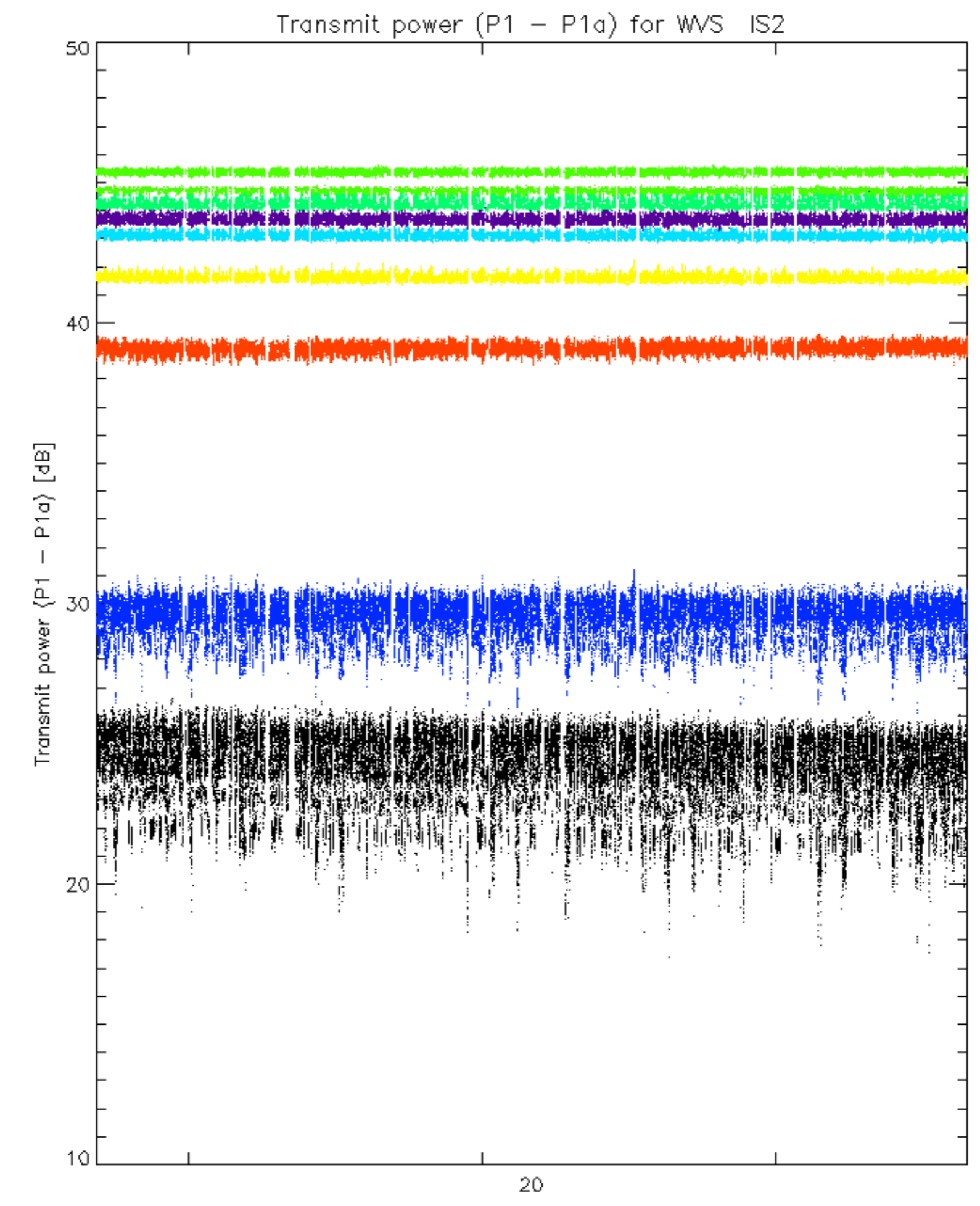


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

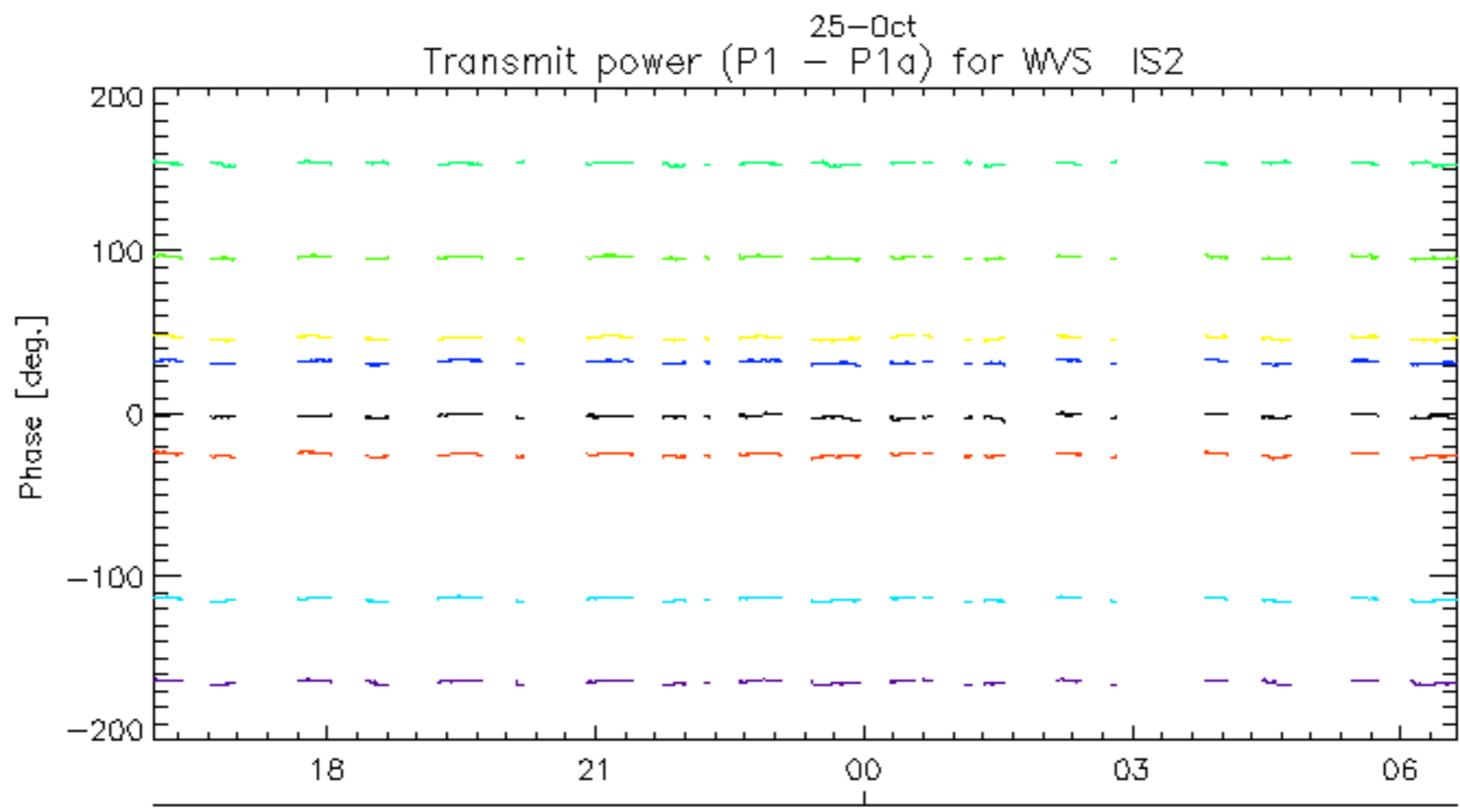
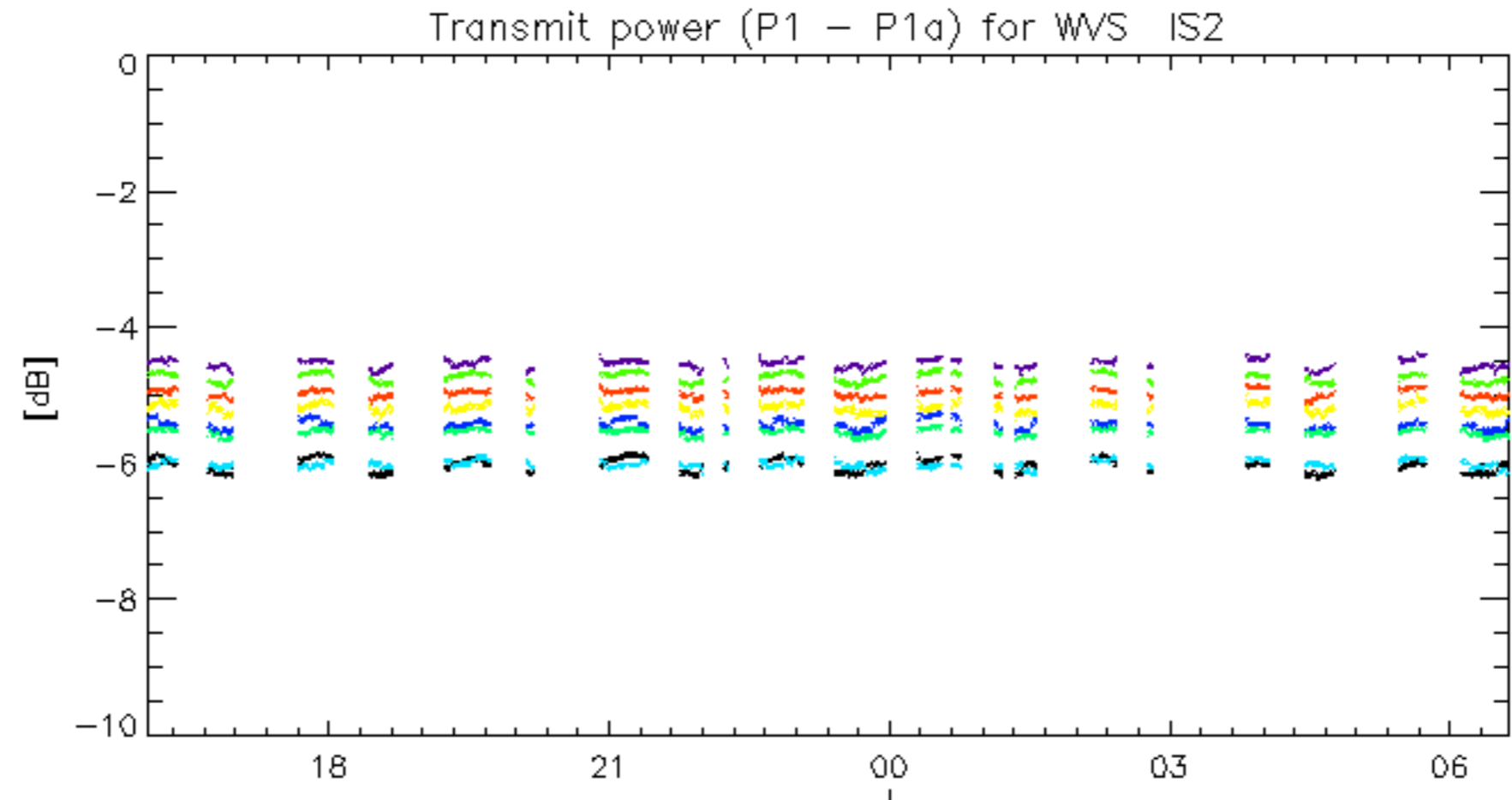




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rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No unavailabilities during the reported period.