

# PRELIMINARY REPORT OF 060808

last update on Tue Aug 8 16:37:56 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 2006-08-07 00:00:00 to 2006-08-08 16:37:56

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	70	7	4	10
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	44	70	7	4	10
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	70	7	4	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	70	7	4	10

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	59	32	19	68
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	39	59	32	19	68
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	59	32	19	68
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	59	32	19	68

### 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	20060808 085034
H	20060807 092212

### 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
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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	-3.939363	0.010464	-0.013851
7	P1	-3.114065	0.047367	-0.077962
11	P1	-4.100250	0.059892	-0.091632
15	P1	-6.196985	0.088226	-0.131579
19	P1	-3.418266	0.009919	-0.064358
22	P1	-4.554236	0.010092	-0.022840
26	P1	-3.924185	0.019896	0.011203
30	P1	-5.764560	0.009500	-0.000655
3	P1	-16.532541	0.247187	-0.017925
7	P1	-17.189323	0.128099	0.025488
11	P1	-16.955502	0.287371	0.149112
15	P1	-13.064091	0.180651	0.229006
19	P1	-14.476831	0.053960	-0.056728
22	P1	-15.982554	0.429086	0.124444
26	P1	-15.119967	0.232793	-0.013758
30	P1	-17.089954	0.339028	0.045448

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.940228	0.086344	0.124941
7	P2	-21.890789	0.102783	0.085435
11	P2	-15.781315	0.119325	0.042307
15	P2	-7.122235	0.098495	0.030998
19	P2	-9.130093	0.089745	0.020089
22	P2	-18.149755	0.085534	0.006962
26	P2	-16.401493	0.091345	0.002424
30	P2	-19.509850	0.091503	0.049603

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173154	0.003123	0.004847
7	P3	-8.173154	0.003123	0.004847
11	P3	-8.173154	0.003123	0.004847
15	P3	-8.173154	0.003123	0.004847
19	P3	-8.173154	0.003123	0.004847
22	P3	-8.173154	0.003123	0.004847
26	P3	-8.173154	0.003123	0.004847
30	P3	-8.173154	0.003123	0.004847

**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	-3.822428	0.008884	-0.011397
7	P1	-2.588921	0.115770	-0.176285
11	P1	-2.883536	0.113476	-0.164683
15	P1	-3.609115	0.130734	-0.208822
19	P1	-3.424369	0.024077	-0.014571
22	P1	-5.085204	0.019776	0.010882
26	P1	-5.860772	0.015879	-0.005261
30	P1	-5.197512	0.033314	0.000297
3	P1	-11.616632	0.043351	-0.023052
7	P1	-9.974147	0.045754	-0.038513
11	P1	-10.256573	0.060812	-0.054476
15	P1	-10.755569	0.145173	0.006341
19	P1	-15.557148	0.498237	-0.048623
22	P1	-20.922386	1.303809	0.005396

26	P1	-16.248678	0.385612	0.199624
30	P1	-17.947750	0.410509	-0.138555

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.567642	0.073187	0.175808
7	P2	-22.358353	0.119089	0.142259
11	P2	-11.025878	0.040933	0.083590
15	P2	-4.900642	0.044589	0.040597
19	P2	-6.867851	0.039784	0.021863
22	P2	-8.190766	0.035047	0.014004
26	P2	-24.180777	0.059092	0.015254
30	P2	-21.998703	0.047769	0.048424

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.011635	0.003740	0.007044
7	P3	-8.011597	0.003742	0.006856
11	P3	-8.011622	0.003743	0.006342
15	P3	-8.011665	0.003741	0.006507
19	P3	-8.011588	0.003752	0.006971
22	P3	-8.011664	0.003734	0.006618
26	P3	-8.011642	0.003734	0.006656
30	P3	-8.011605	0.003744	0.006628

## 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	0.000561997
	stdev	1.71198e-07
MEAN Q	mean	0.000537501
	stdev	2.14085e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137510
	stdev	0.00108210
STDEV Q	mean	0.137864
	stdev	0.00109960



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006080[678]

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_1PNPDE20060807_002903_000000512050_00088_23188_3070.N1	1	0
ASA_WSM_1PNPDE20060808_000918_000000852050_00102_23202_6545.N1	0	35
ASA_WSM_1PNPDE20060808_014653_000001462050_00103_23203_6563.N1	0	40





## 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)


Ascending

Descending

### 7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Ascending

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)



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

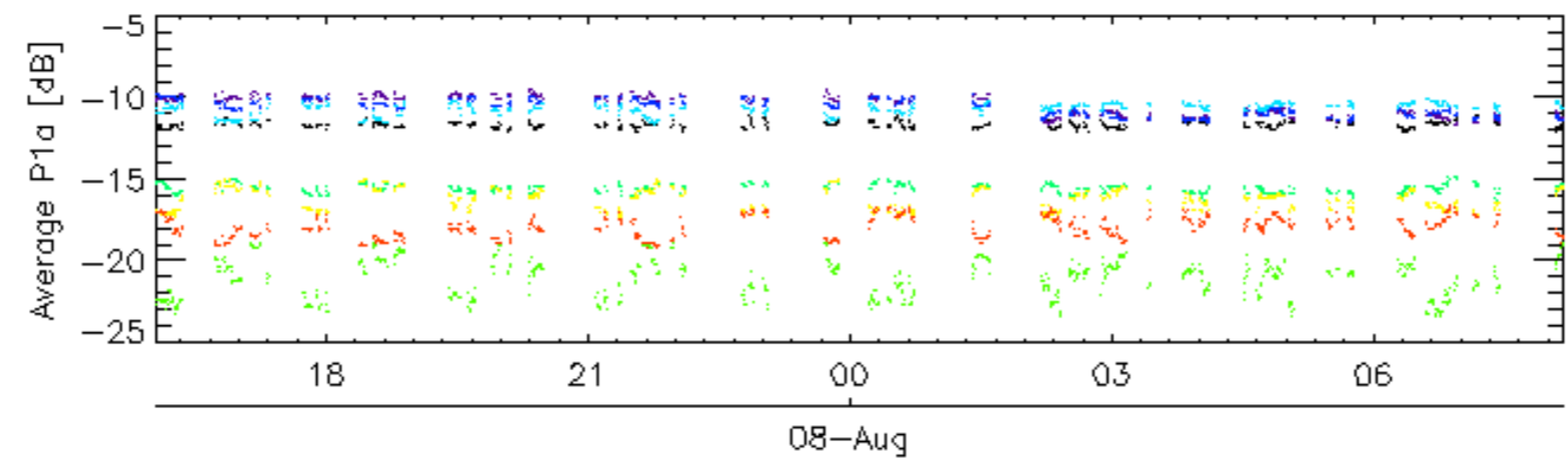
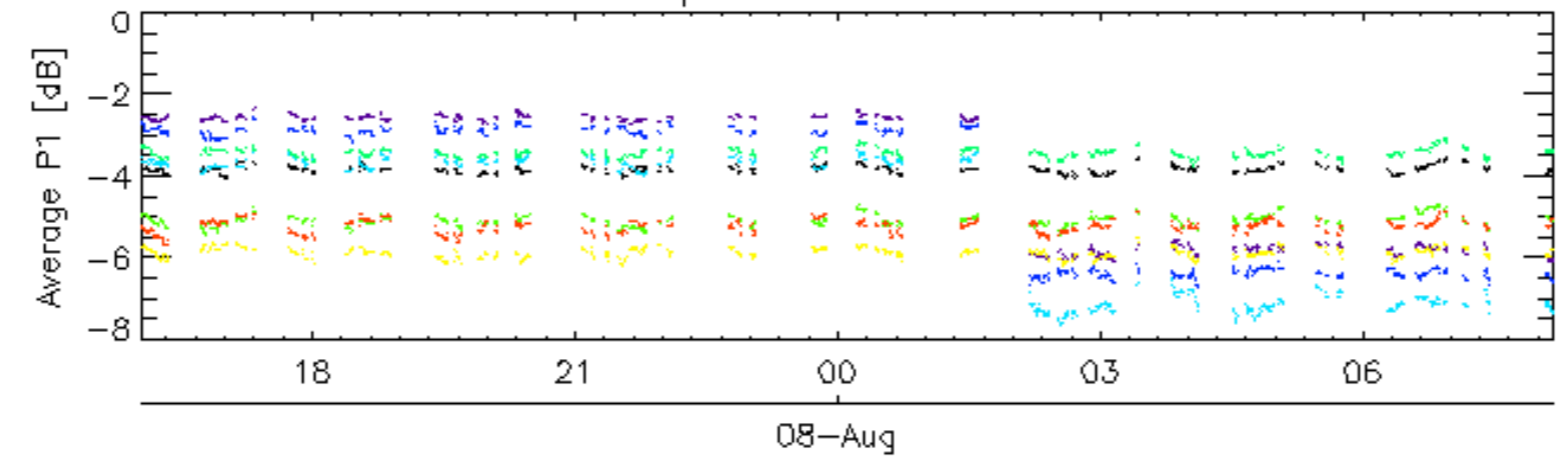
### 7.5 - Absolute Doppler for GM1

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

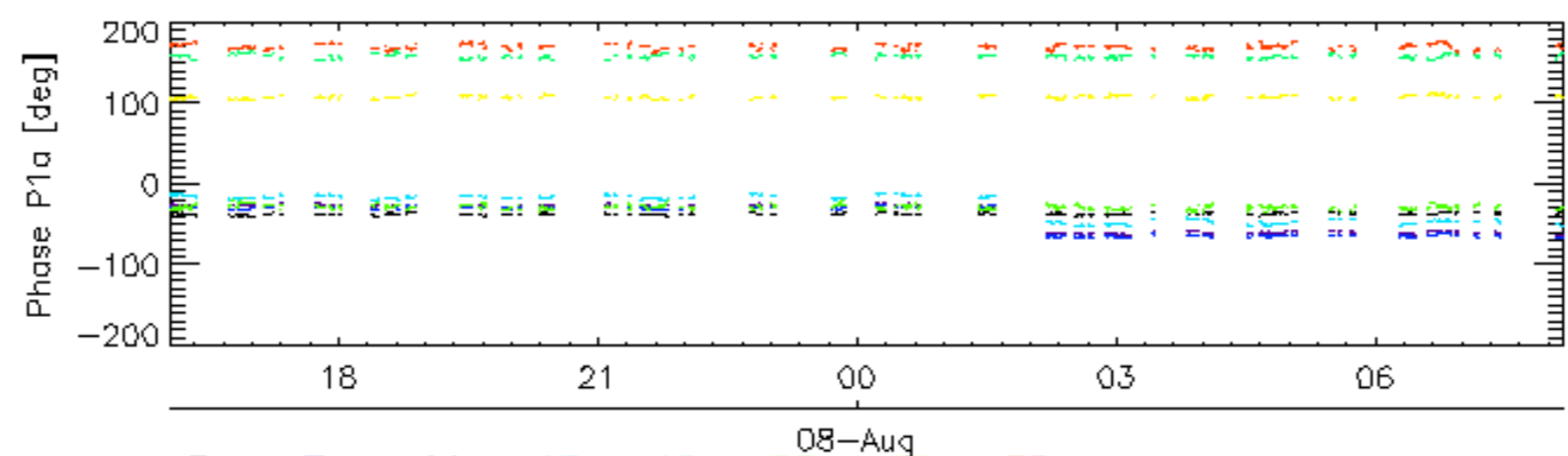
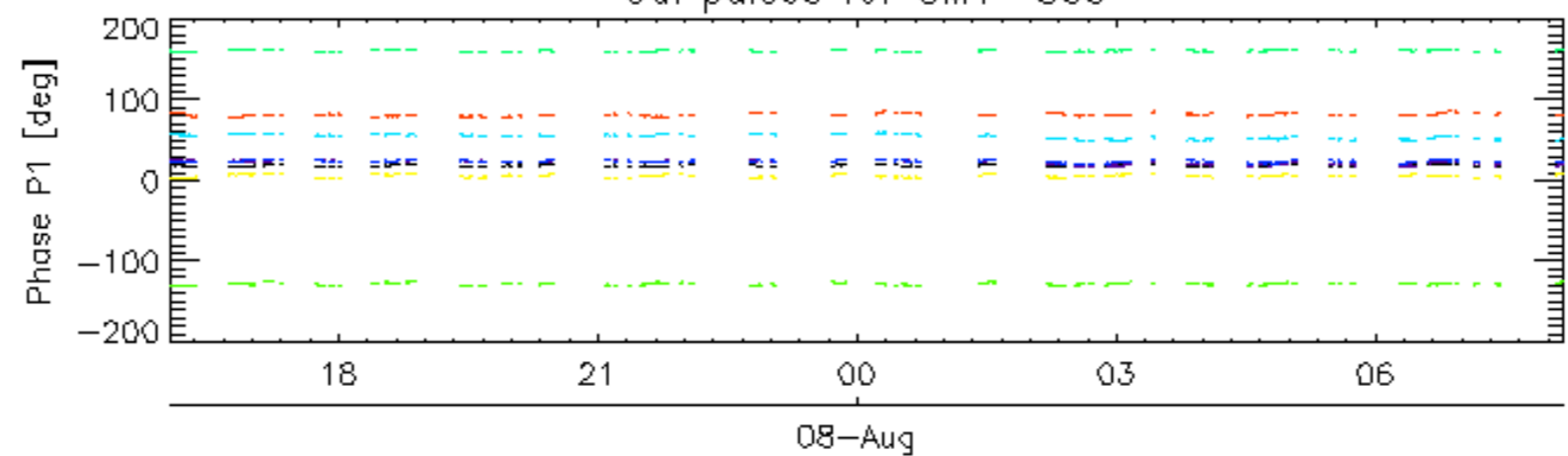
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

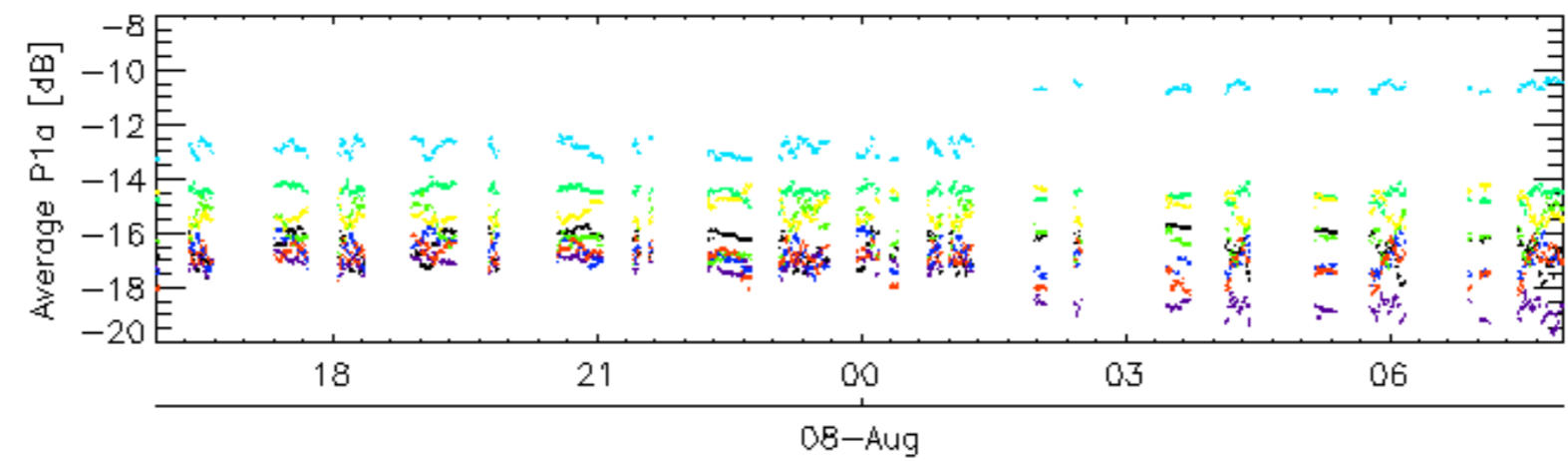
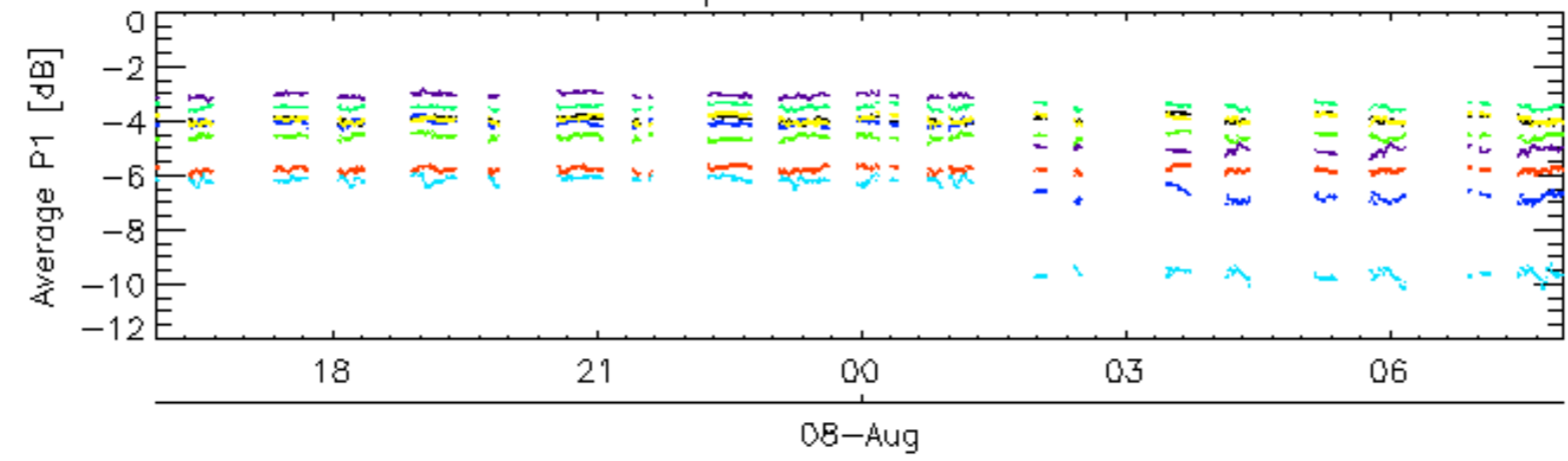


Cal pulses for GM1 SS3

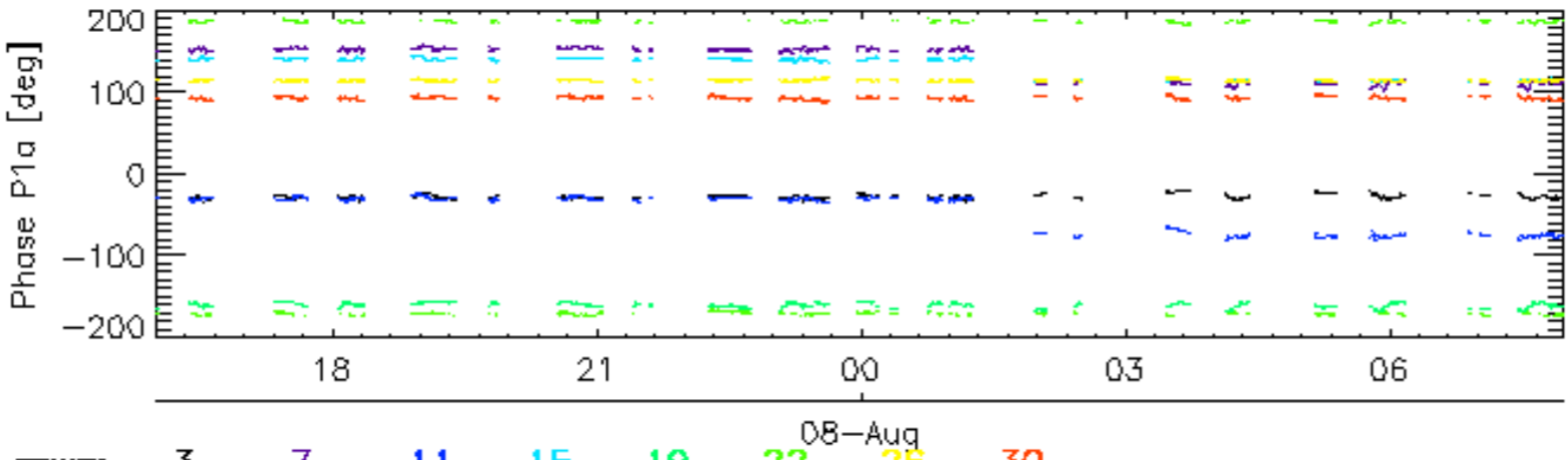
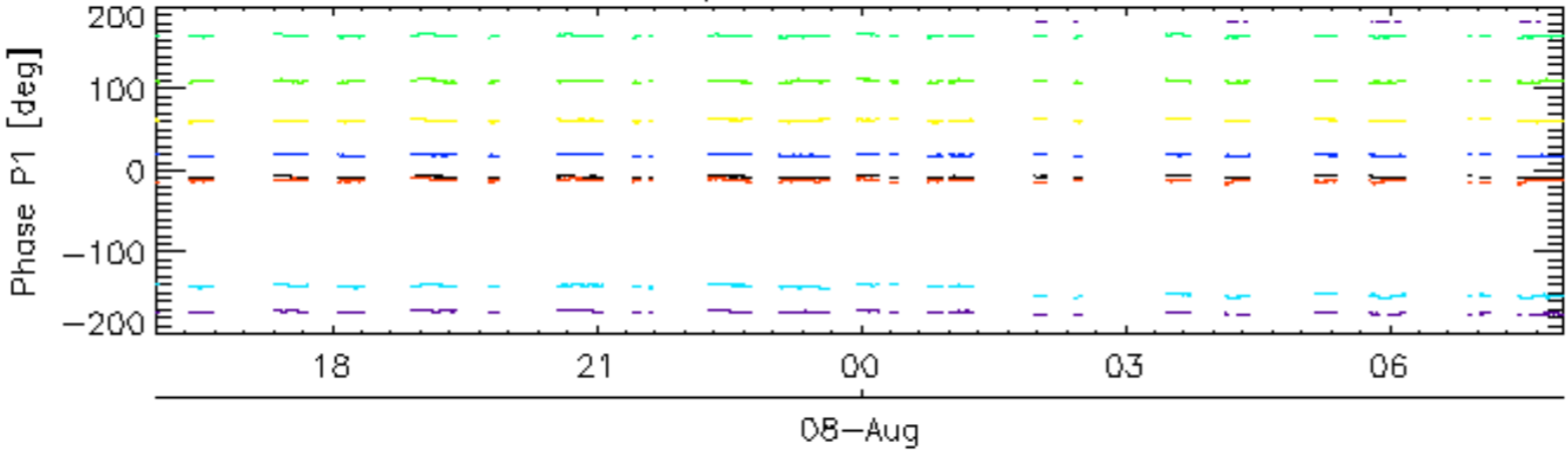


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

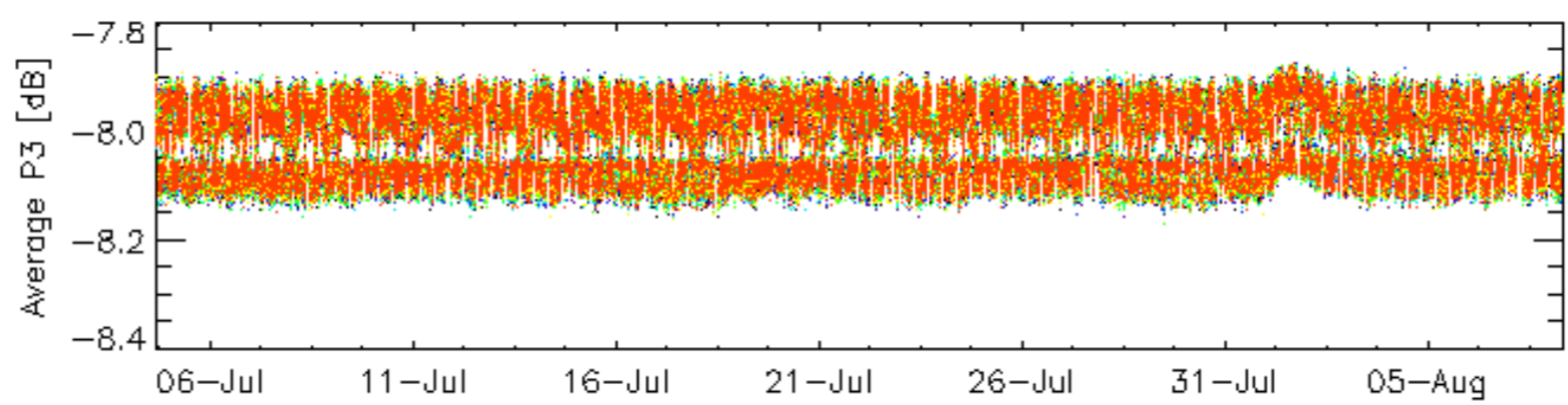
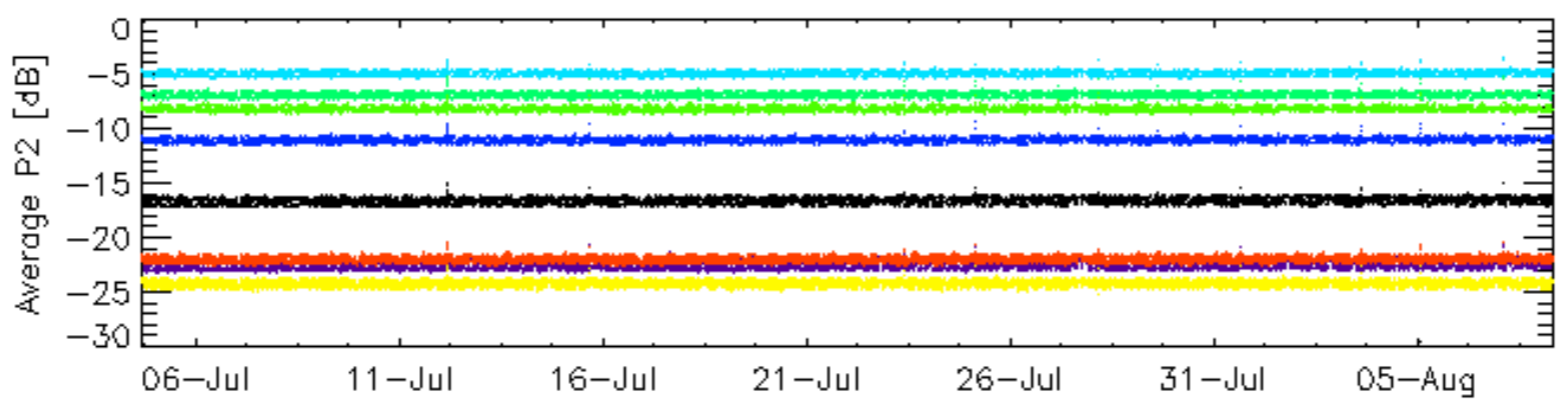
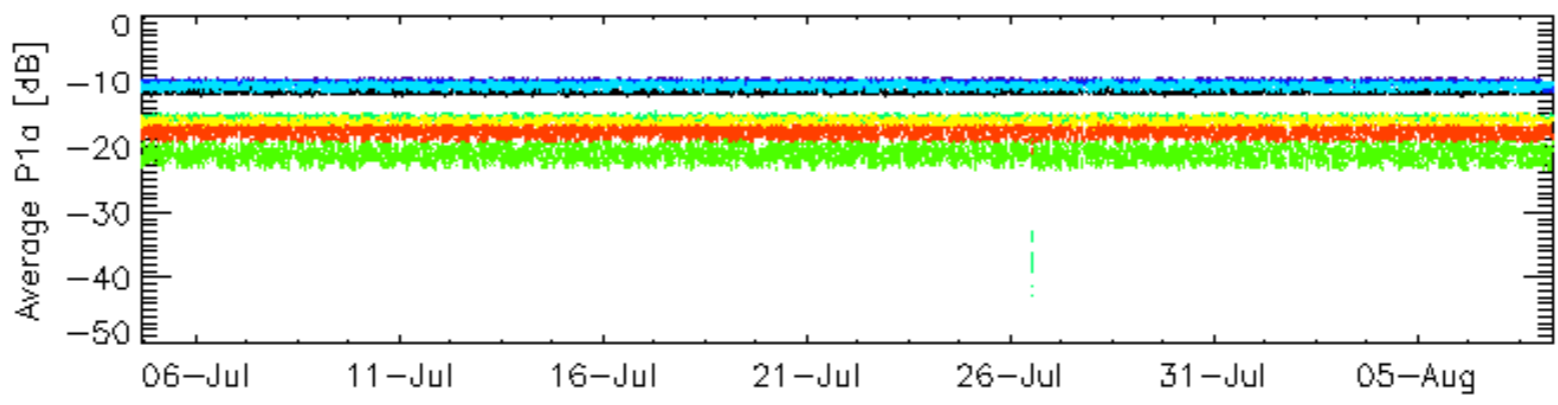
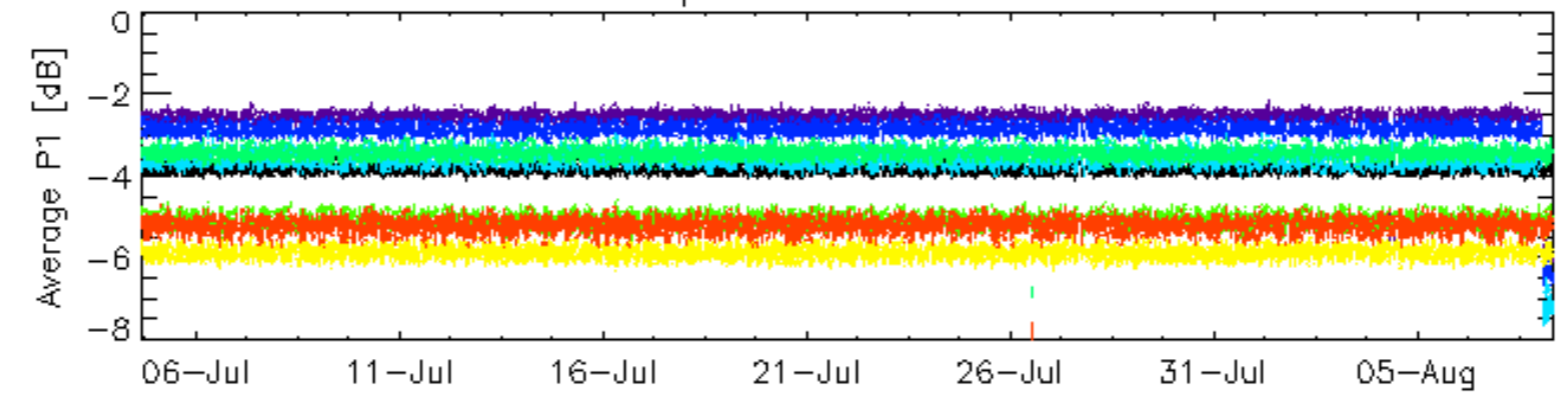


Cal pulses for WVS IS2



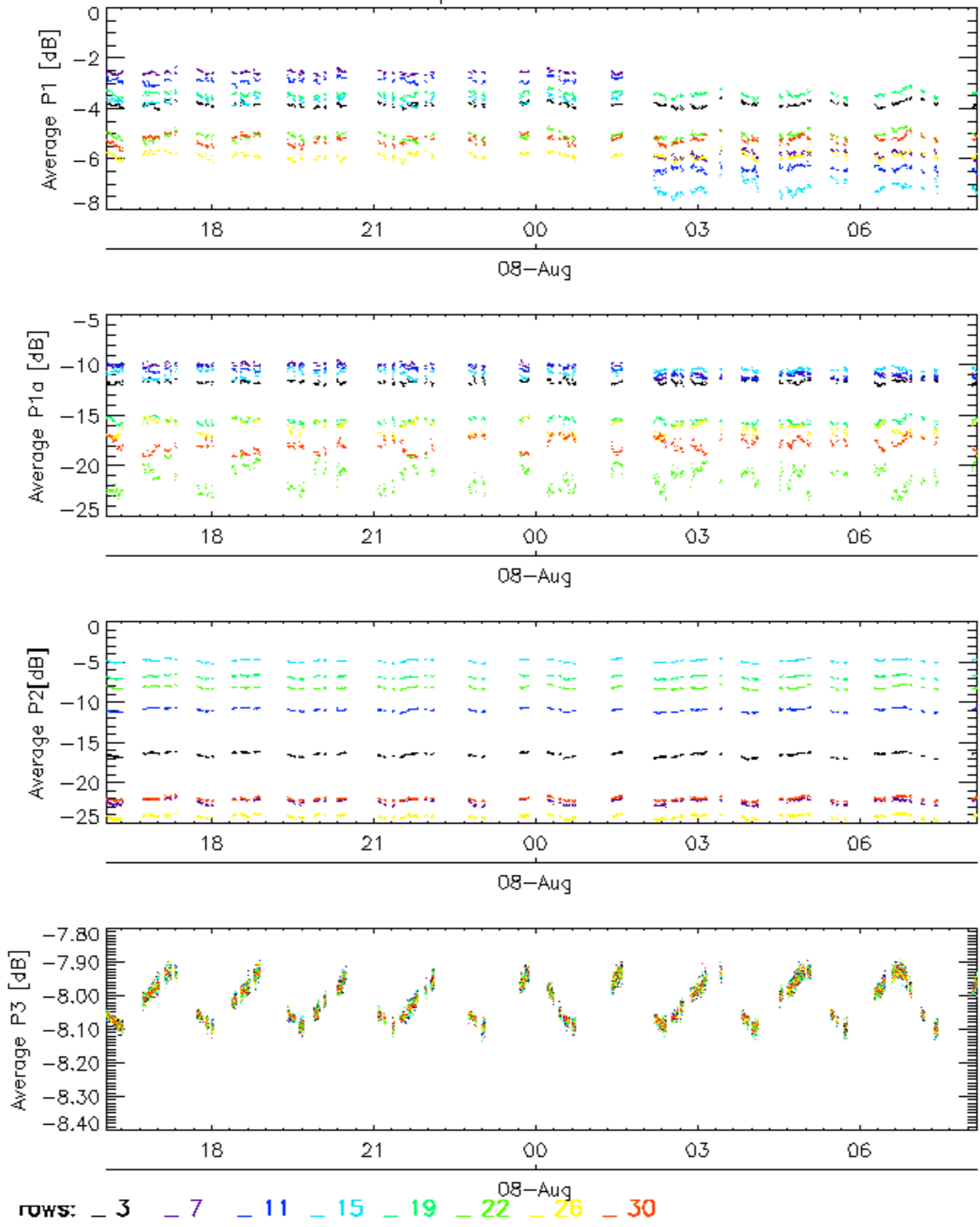
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

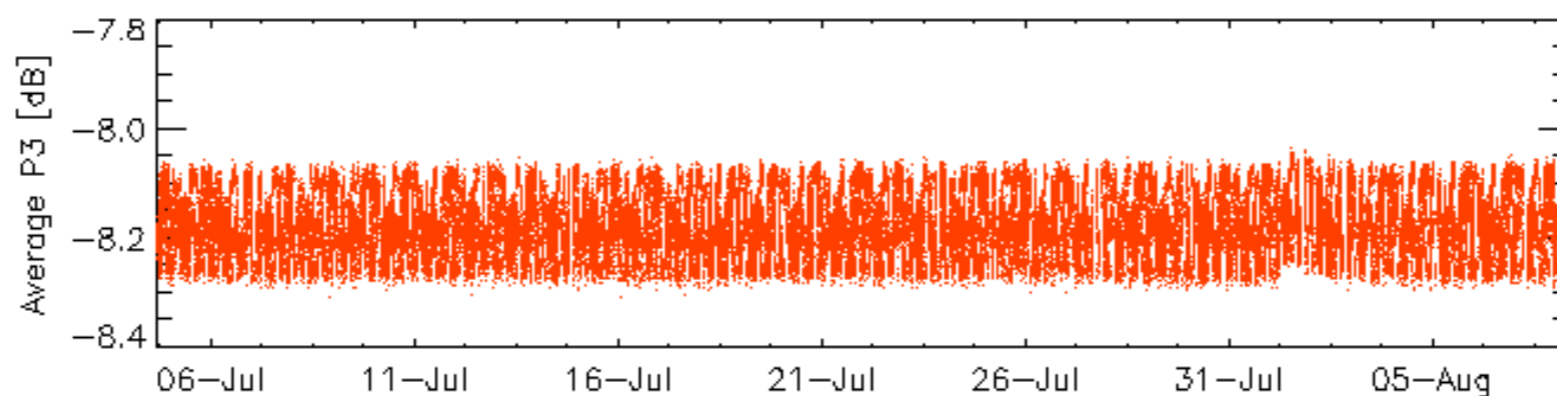
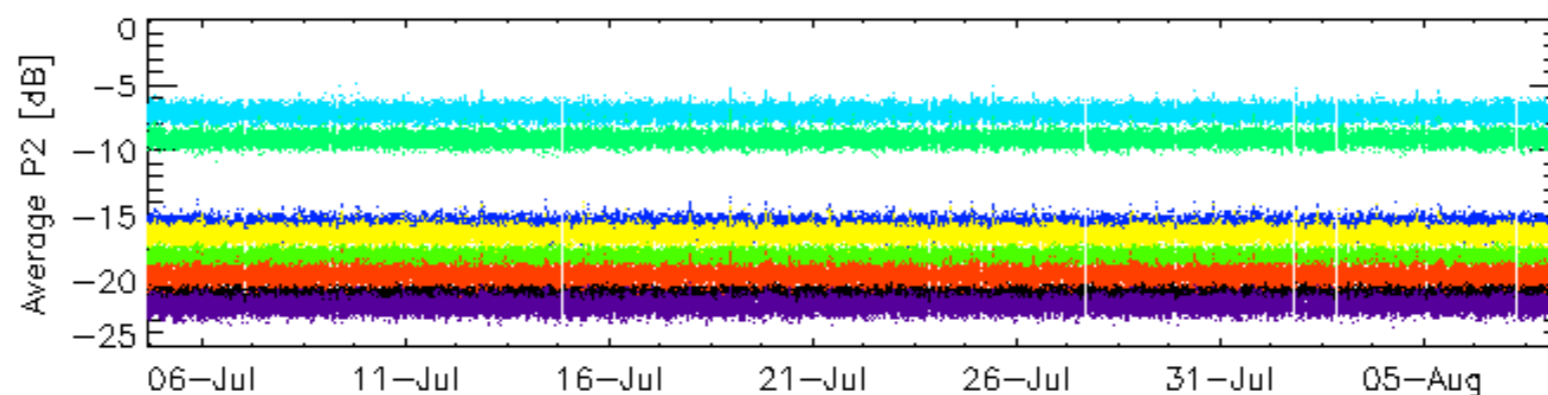
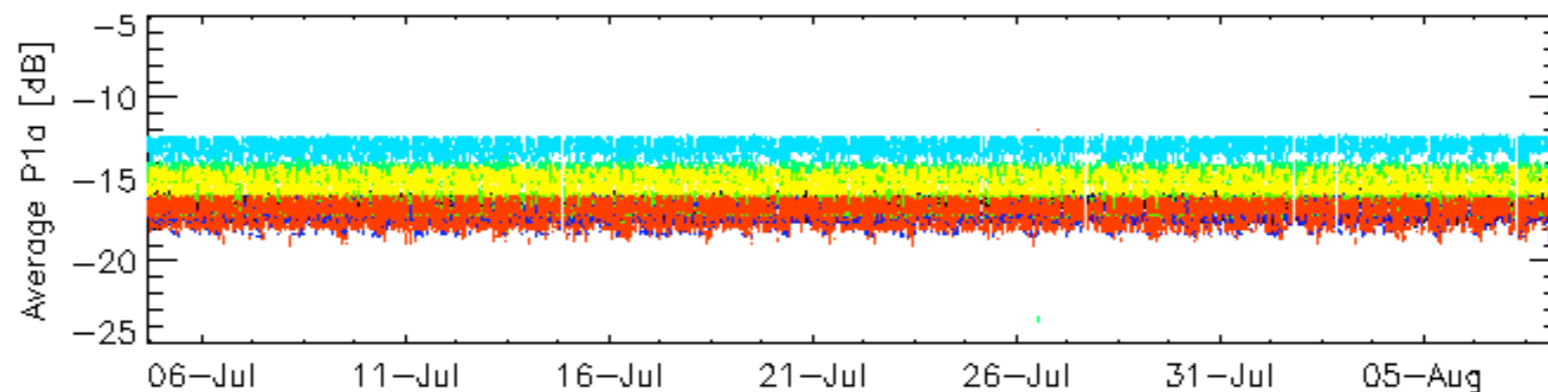
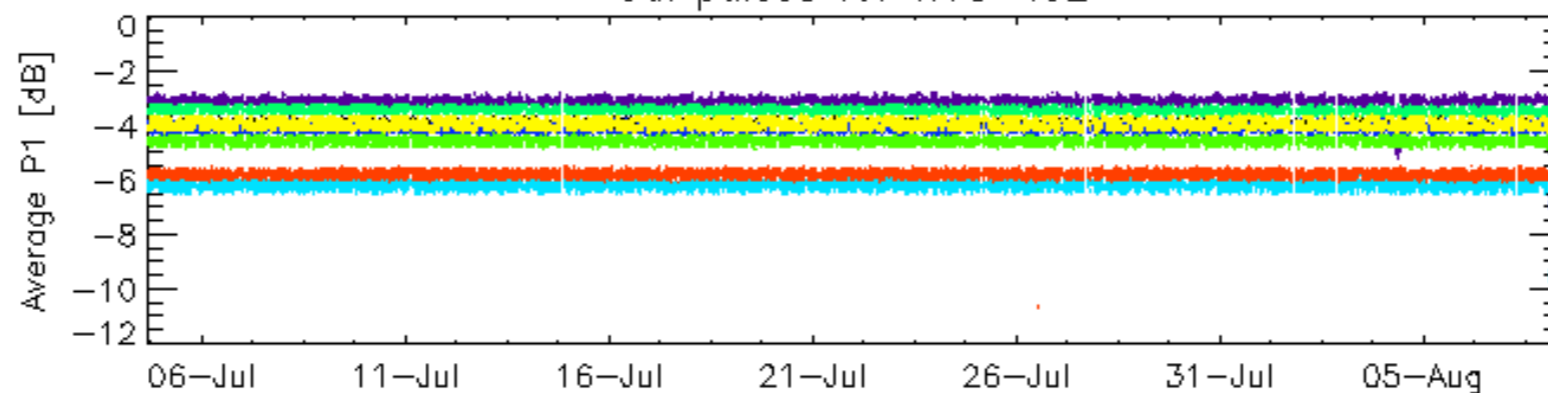


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

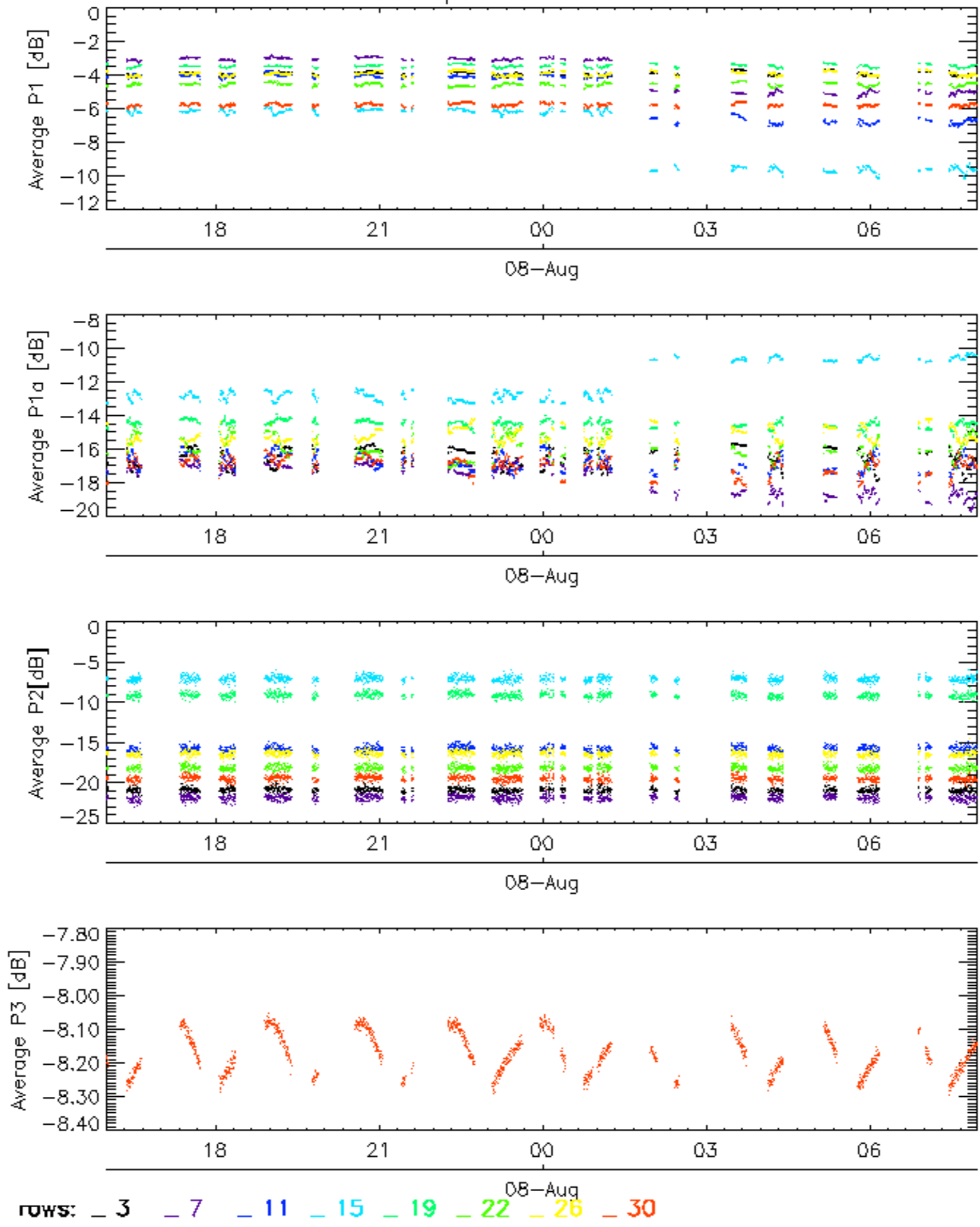


Cal pulses for WVS IS2



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

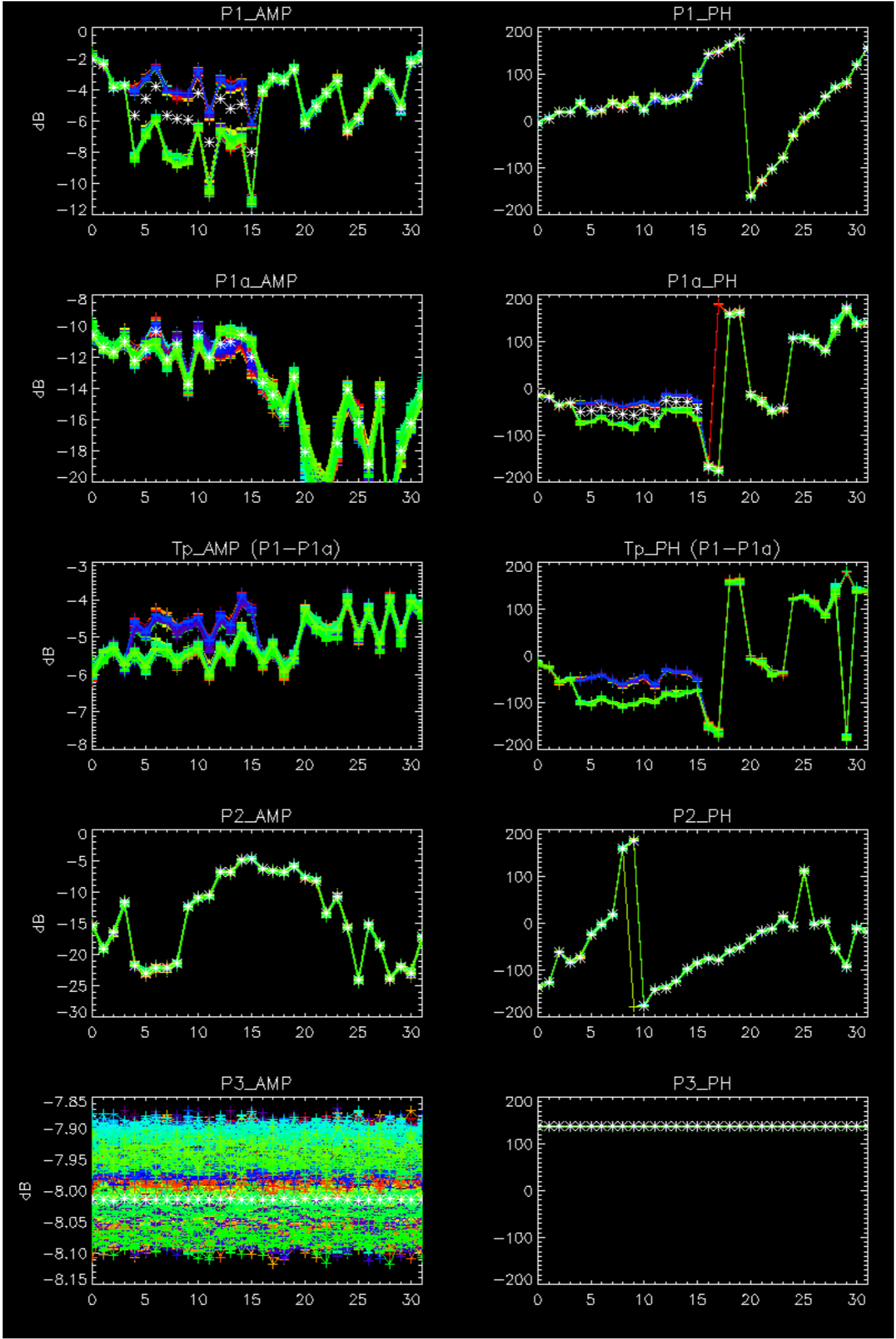
Cal pulses for WVS IS2

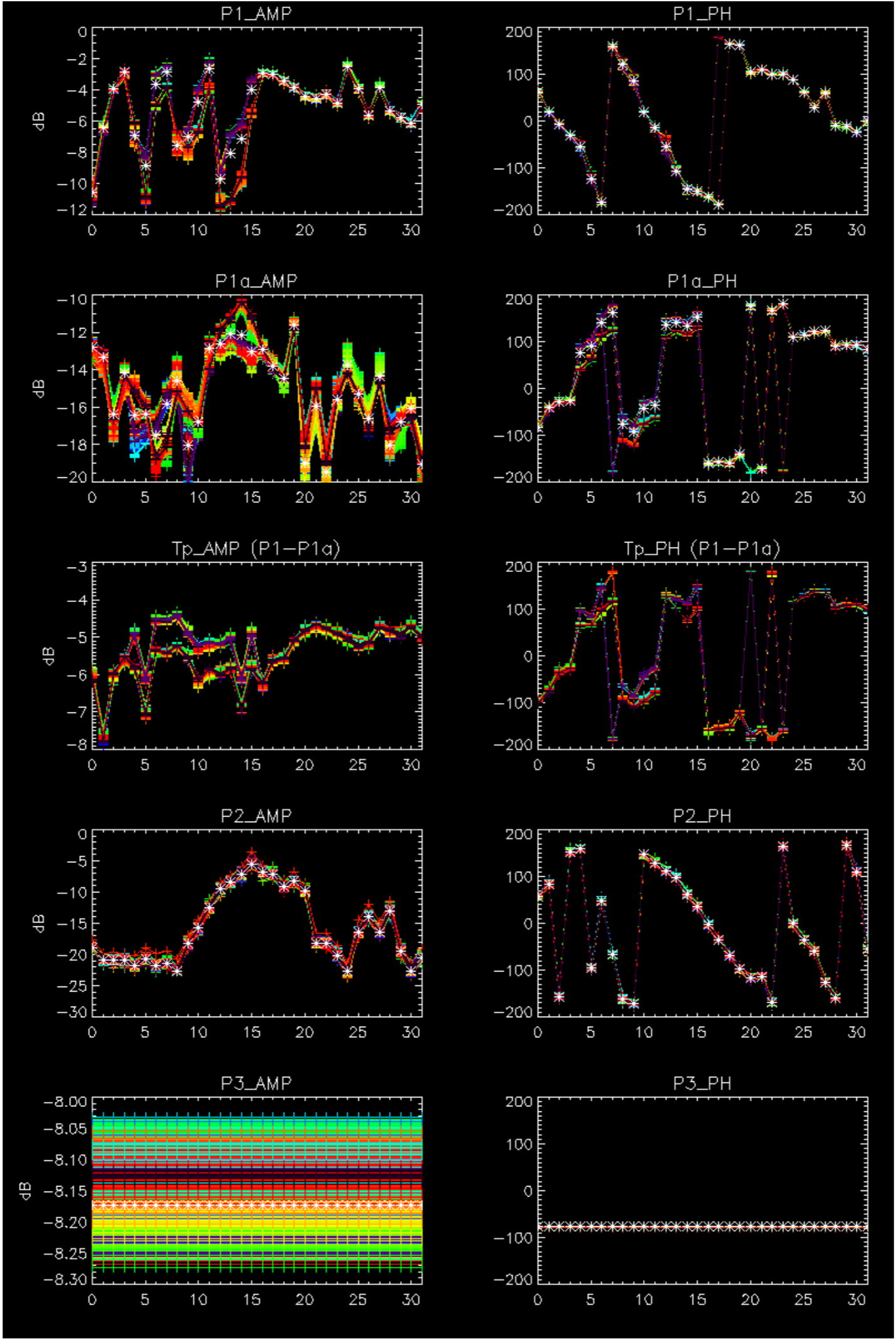


No anomalies observed on available browse products



No anomalies observed.



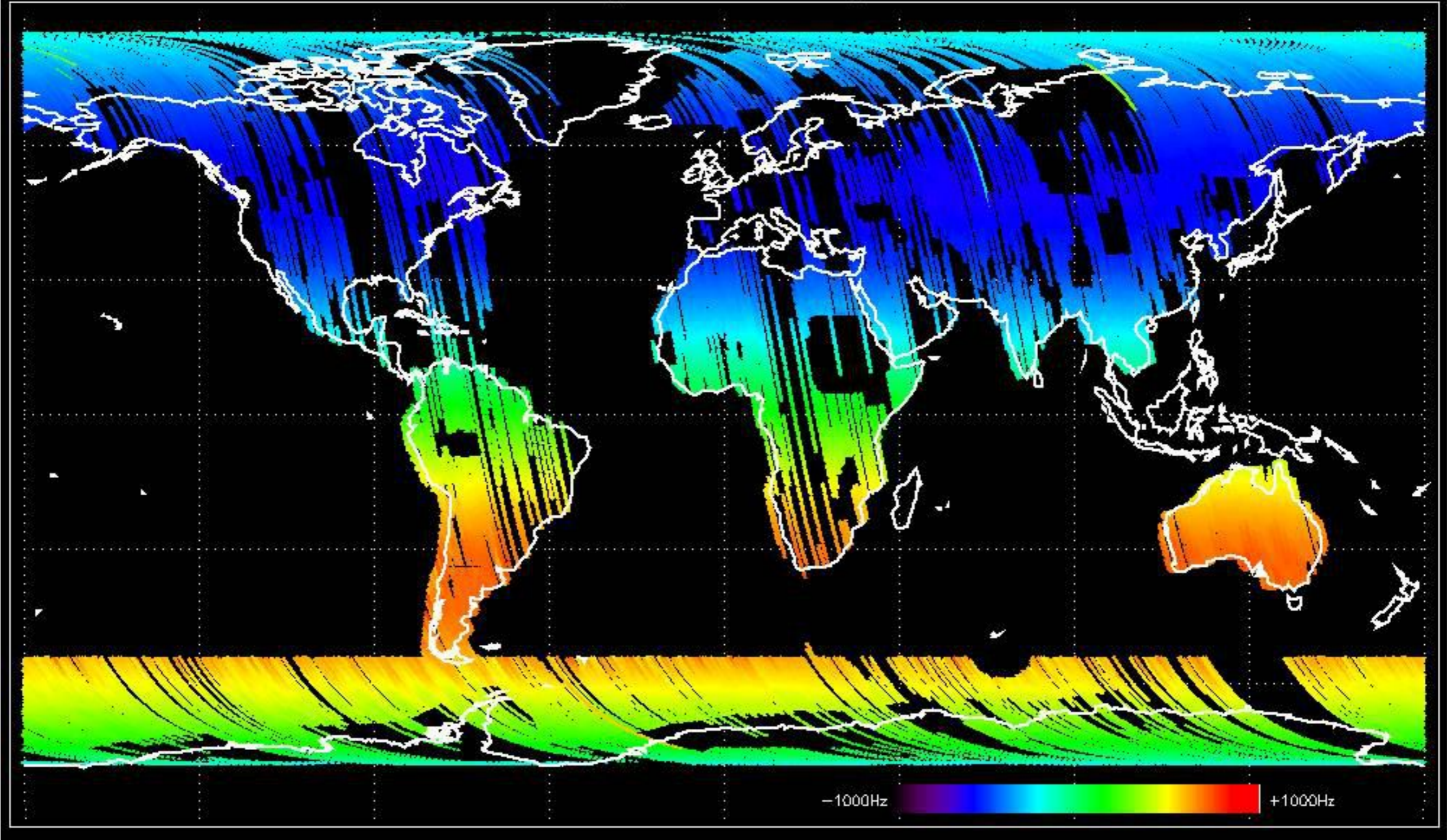


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



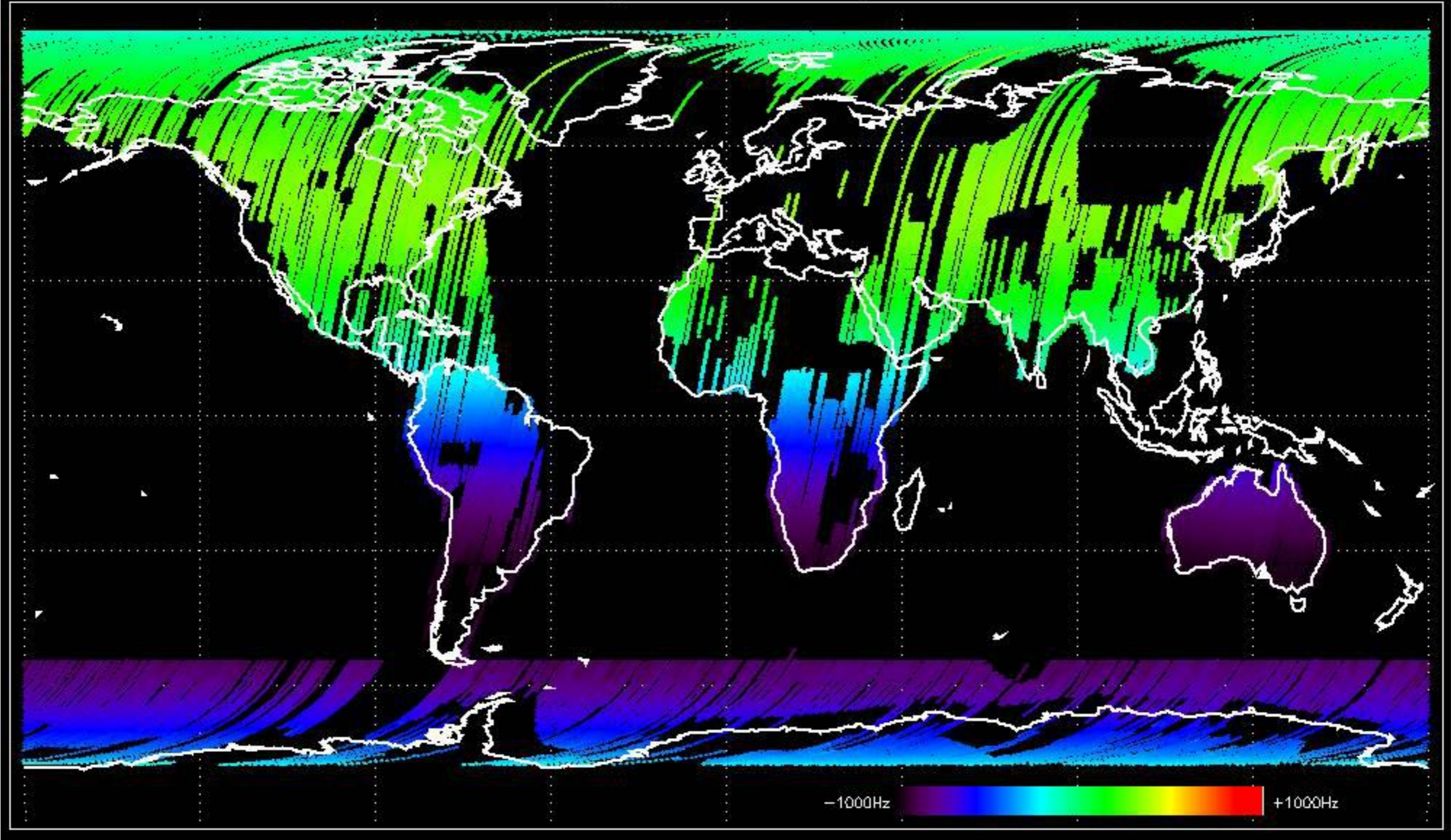


Doppler 'GM1' 'SS1' ascending



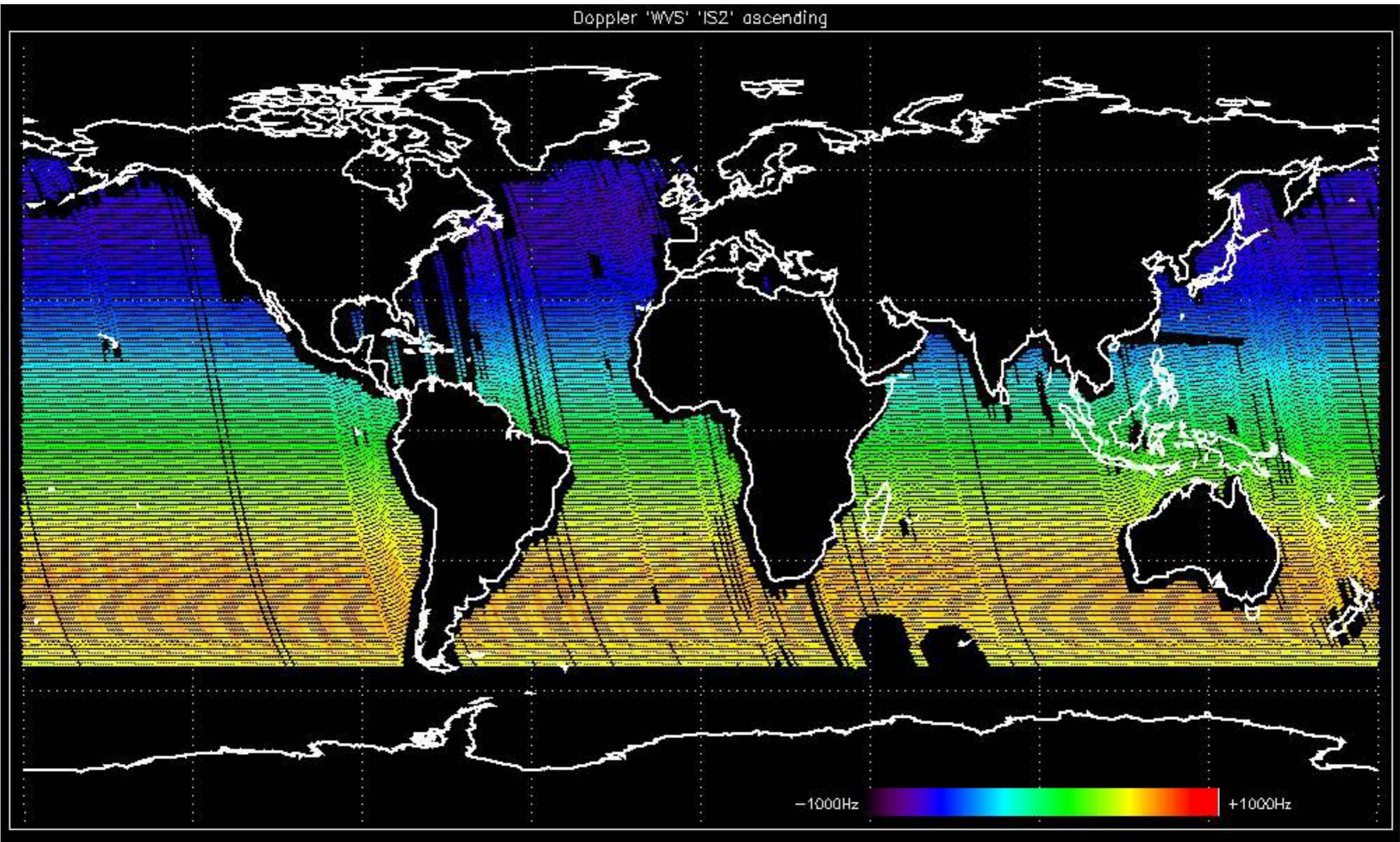


Doppler 'GM1' 'SS1' descending



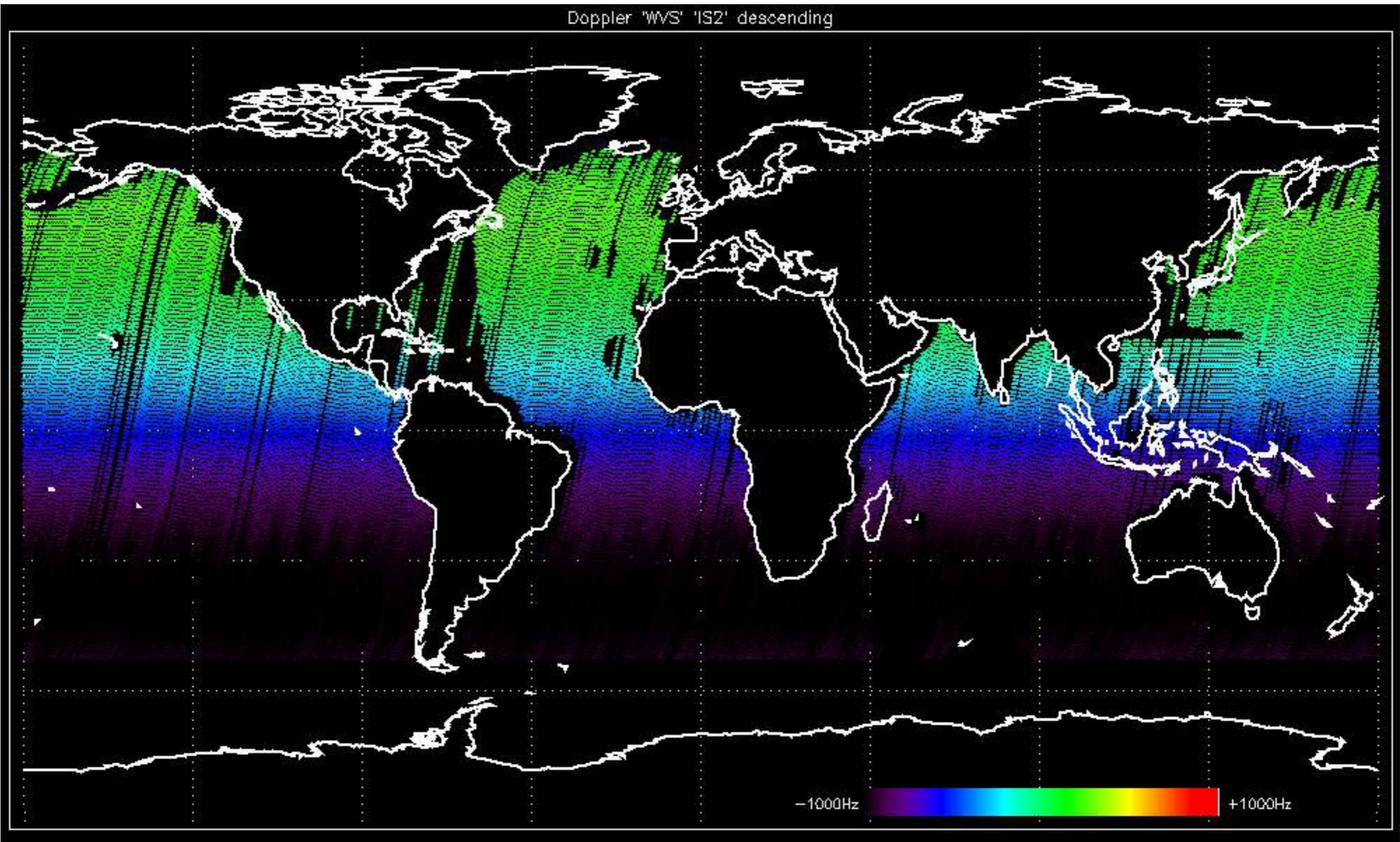


Doppler 'WVS' 'IS2' ascending

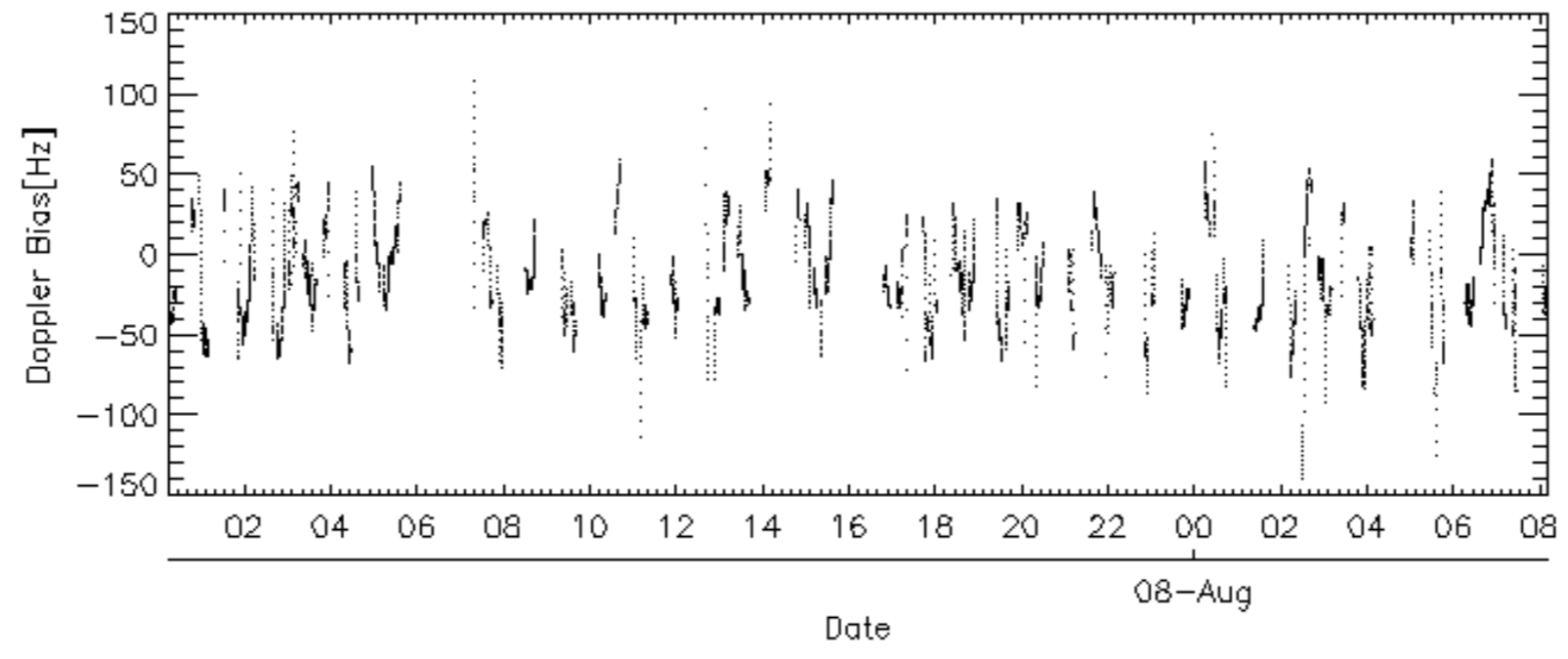
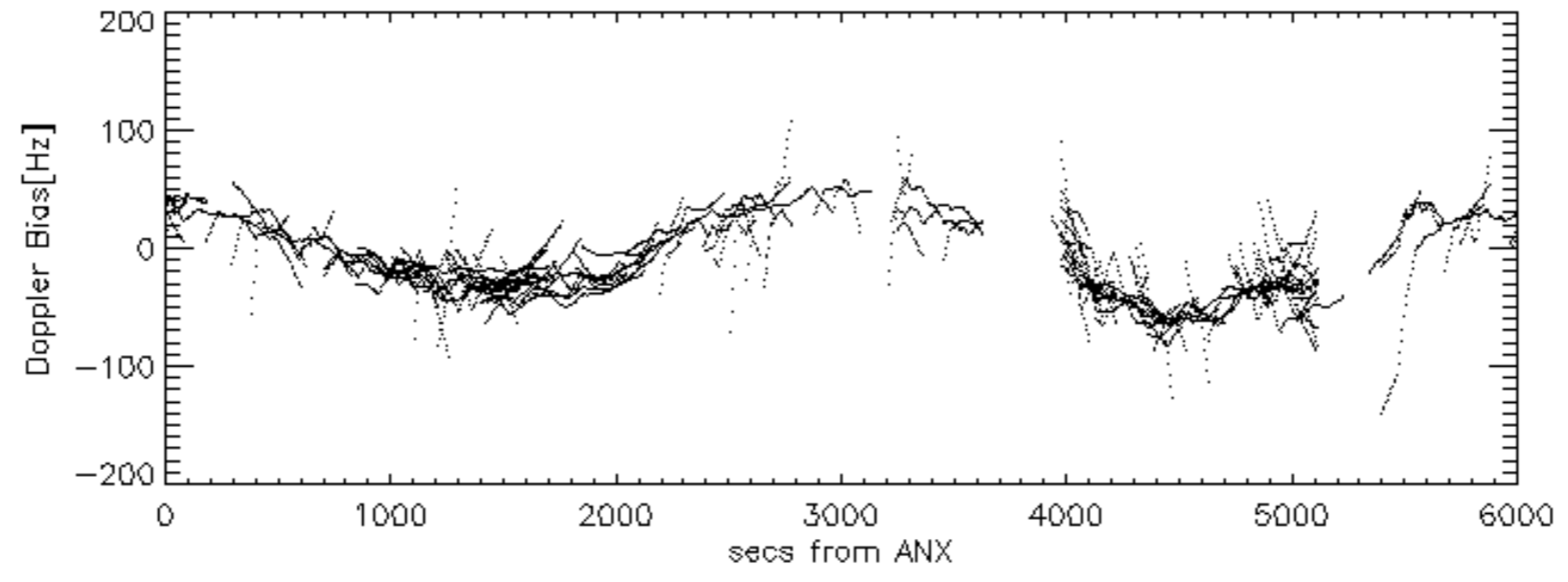
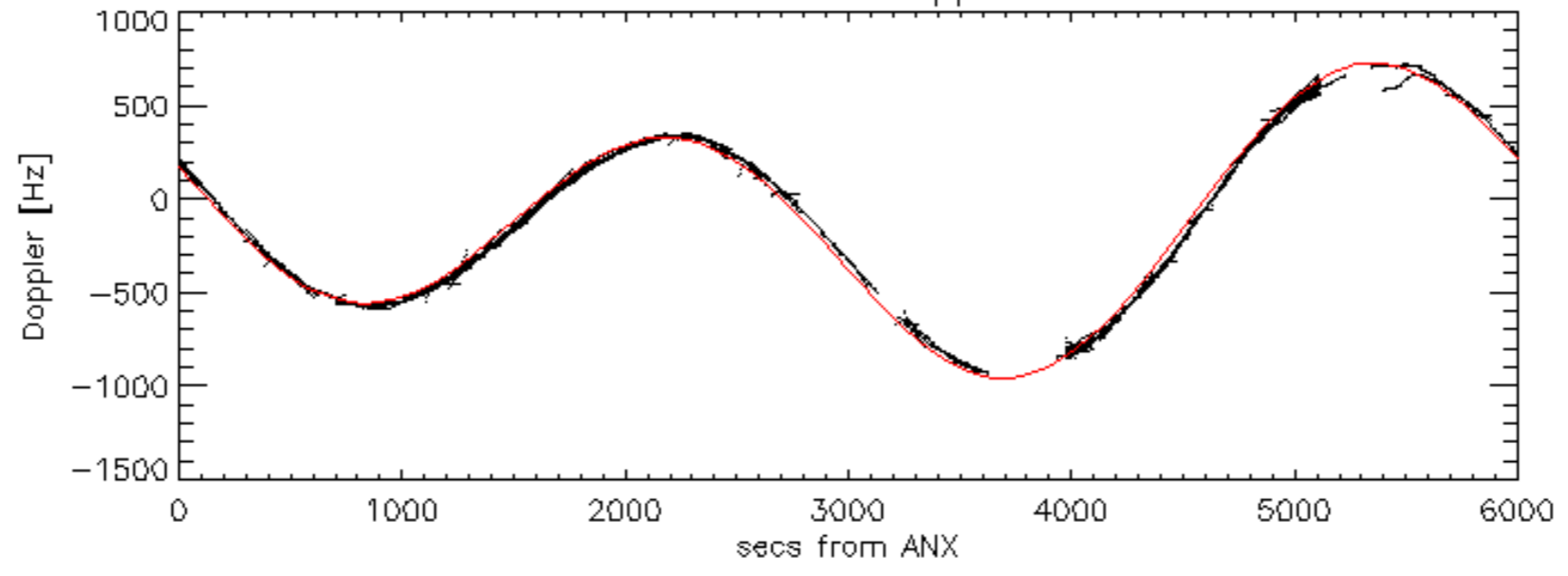




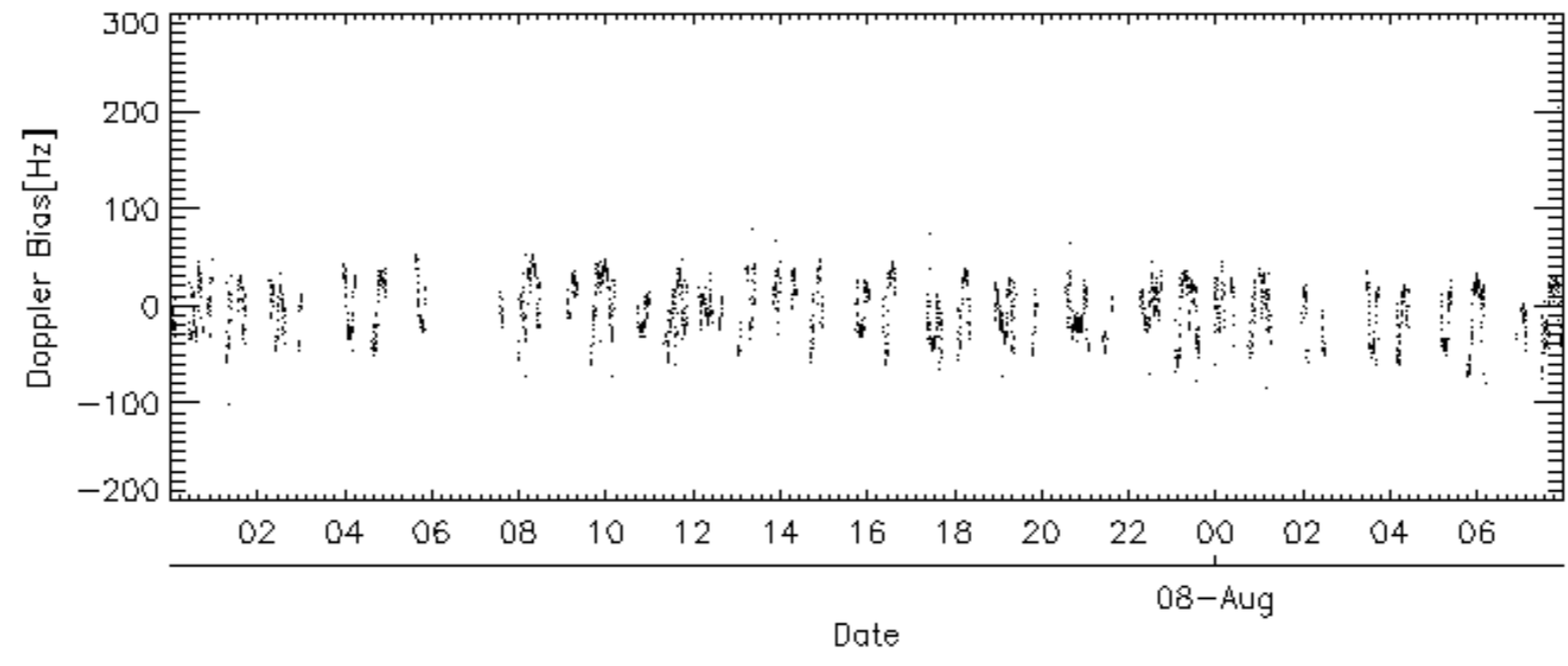
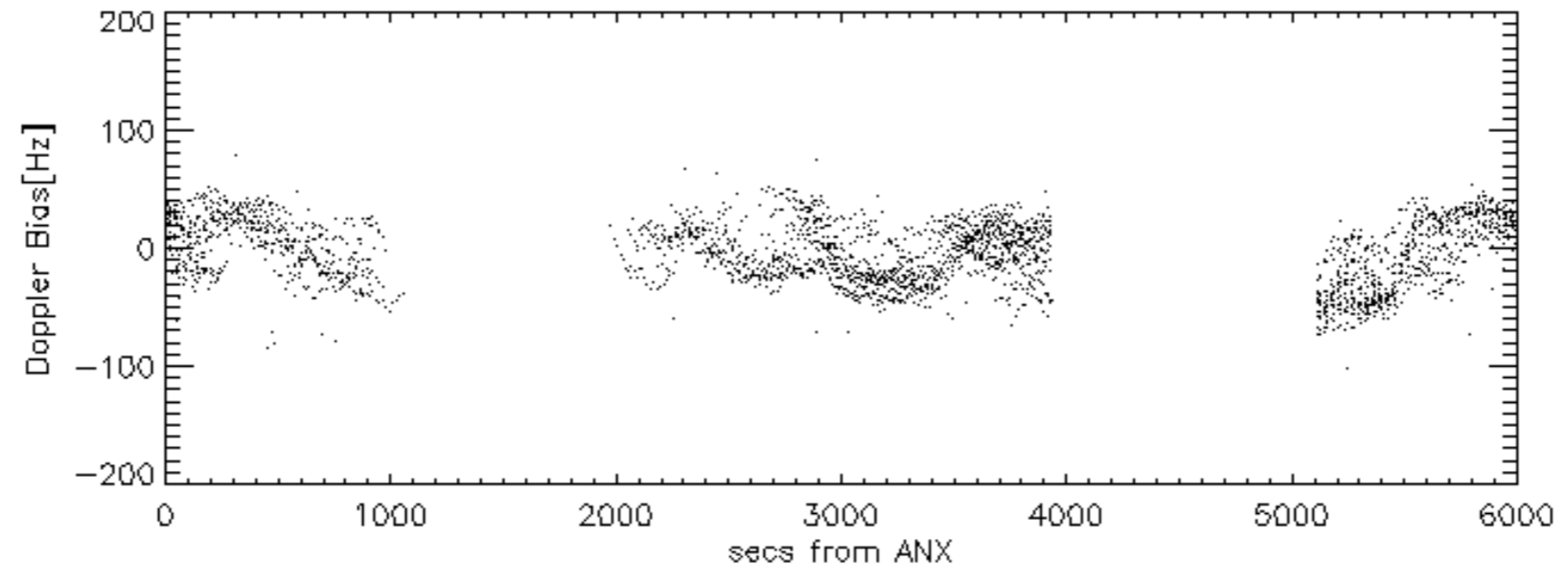
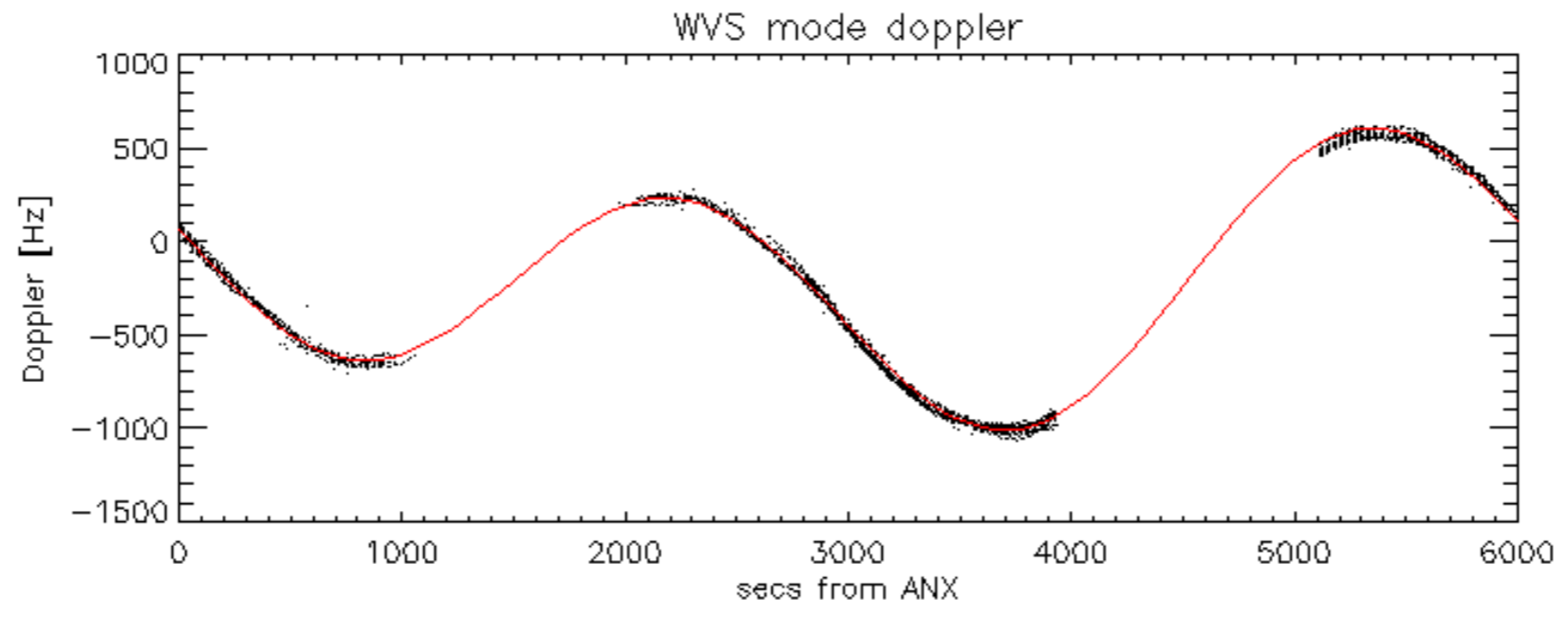
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

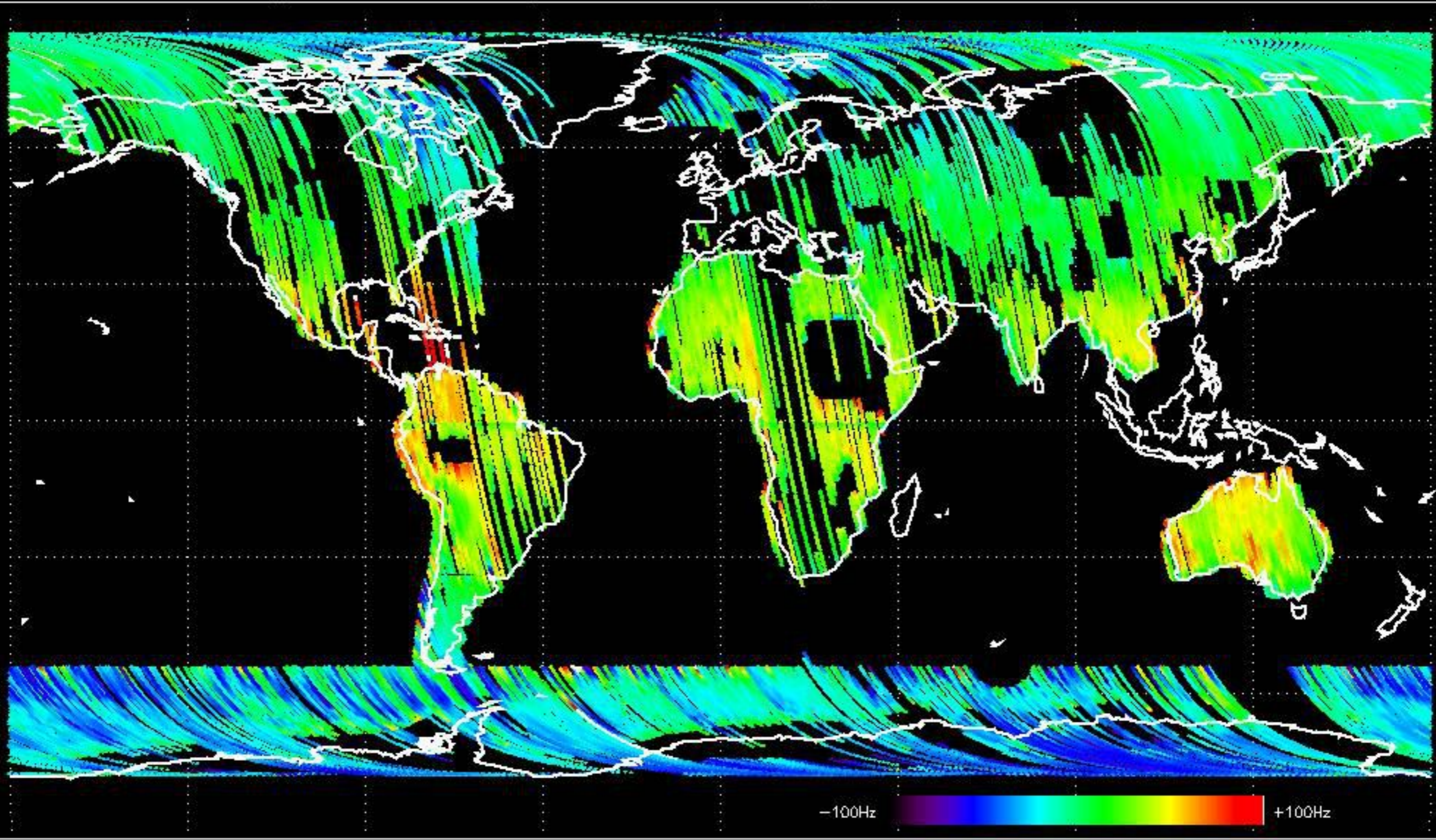






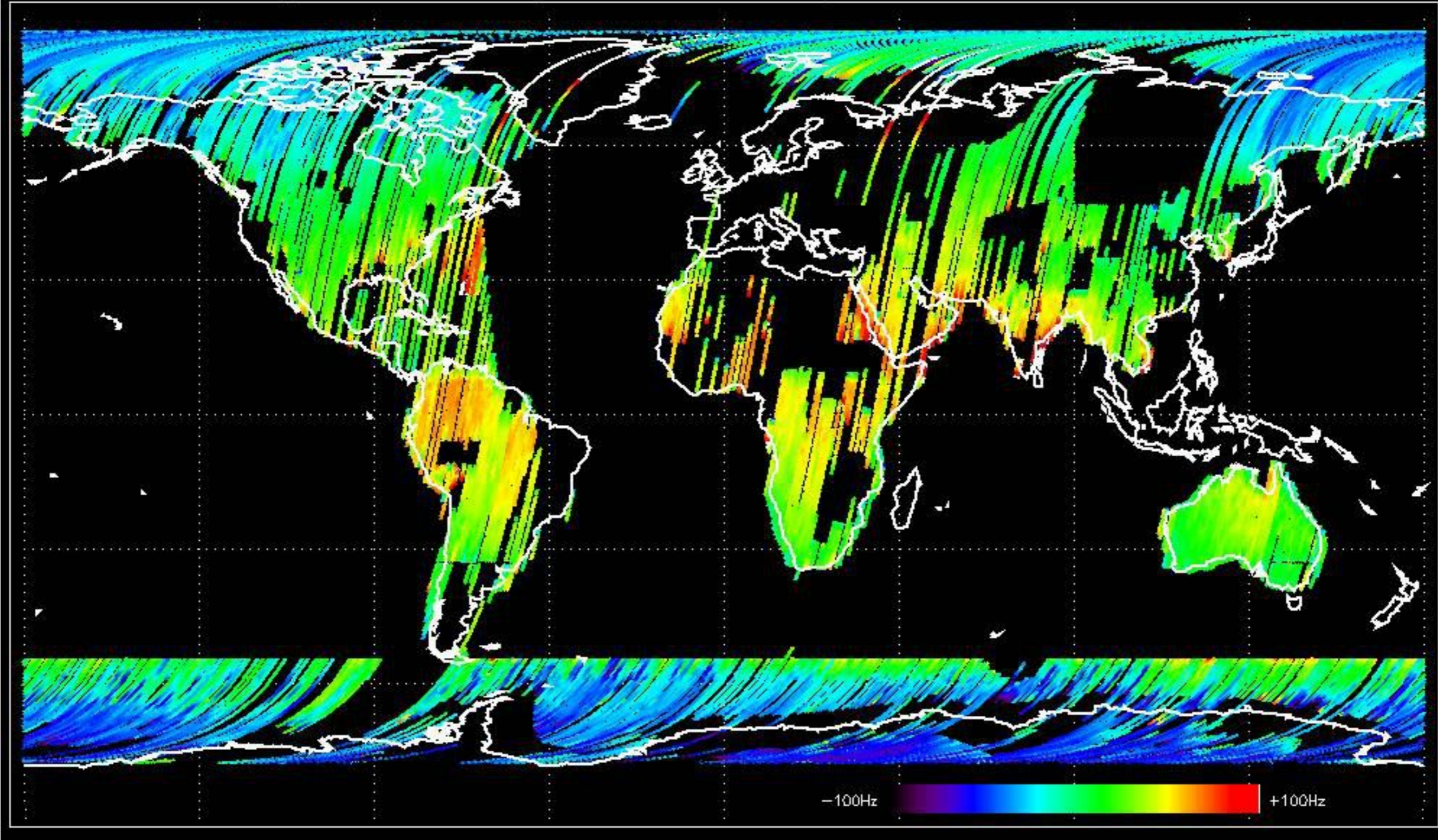


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.884413 Hz



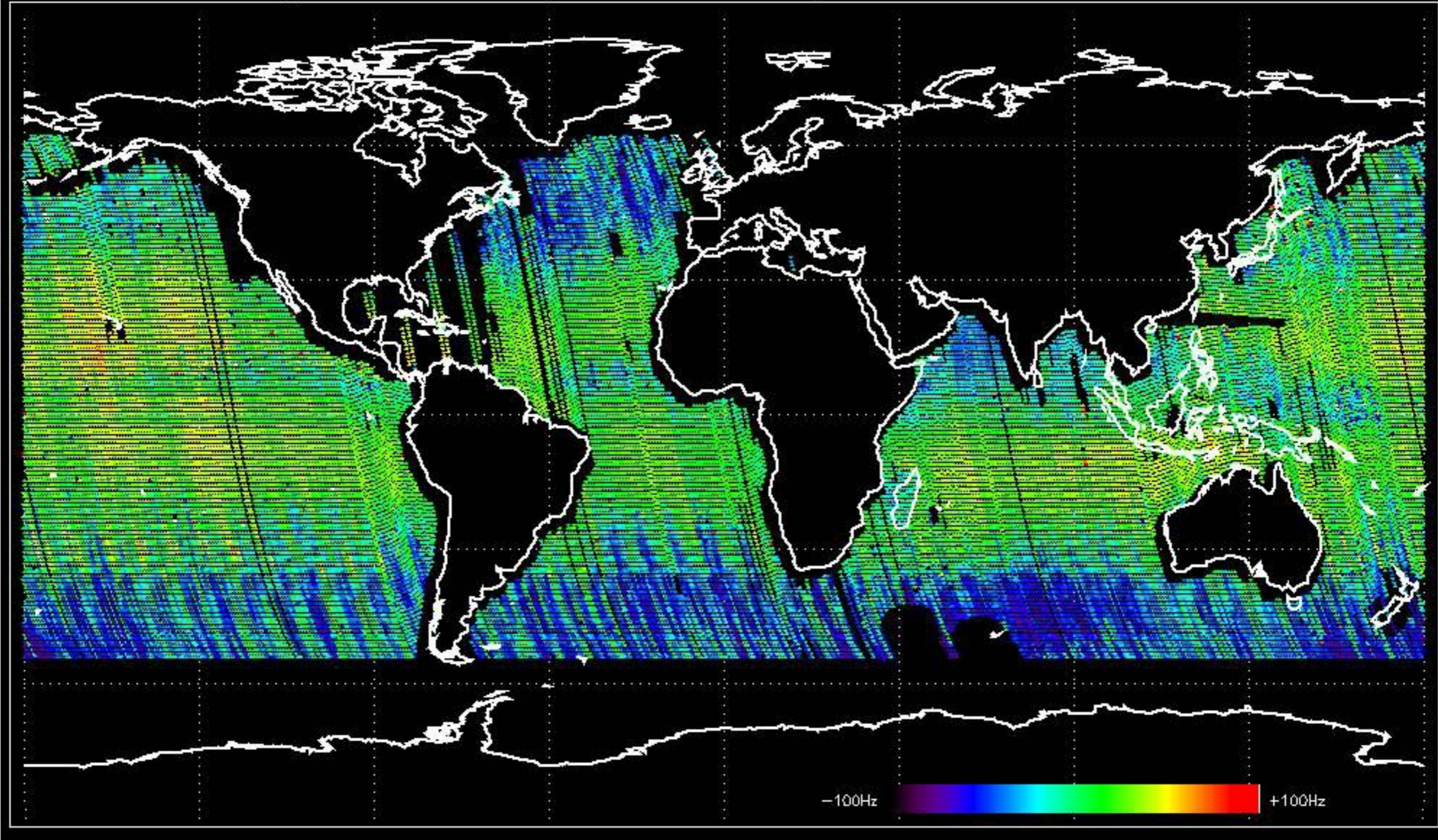


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.2934525 Hz



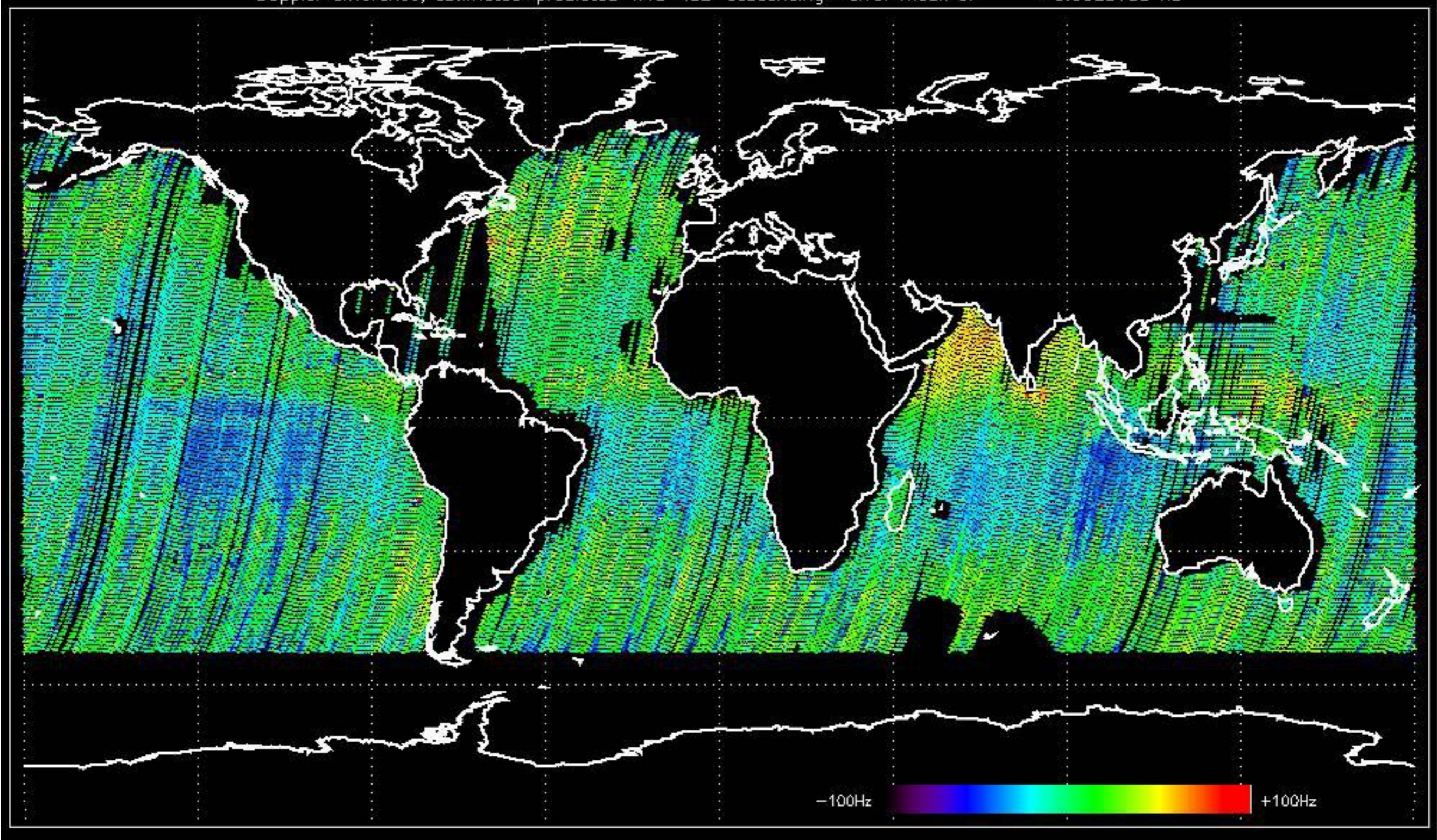


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -2.3489915 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.3028138 Hz





No anomalies observed on available MS products:



No anomalies observed.



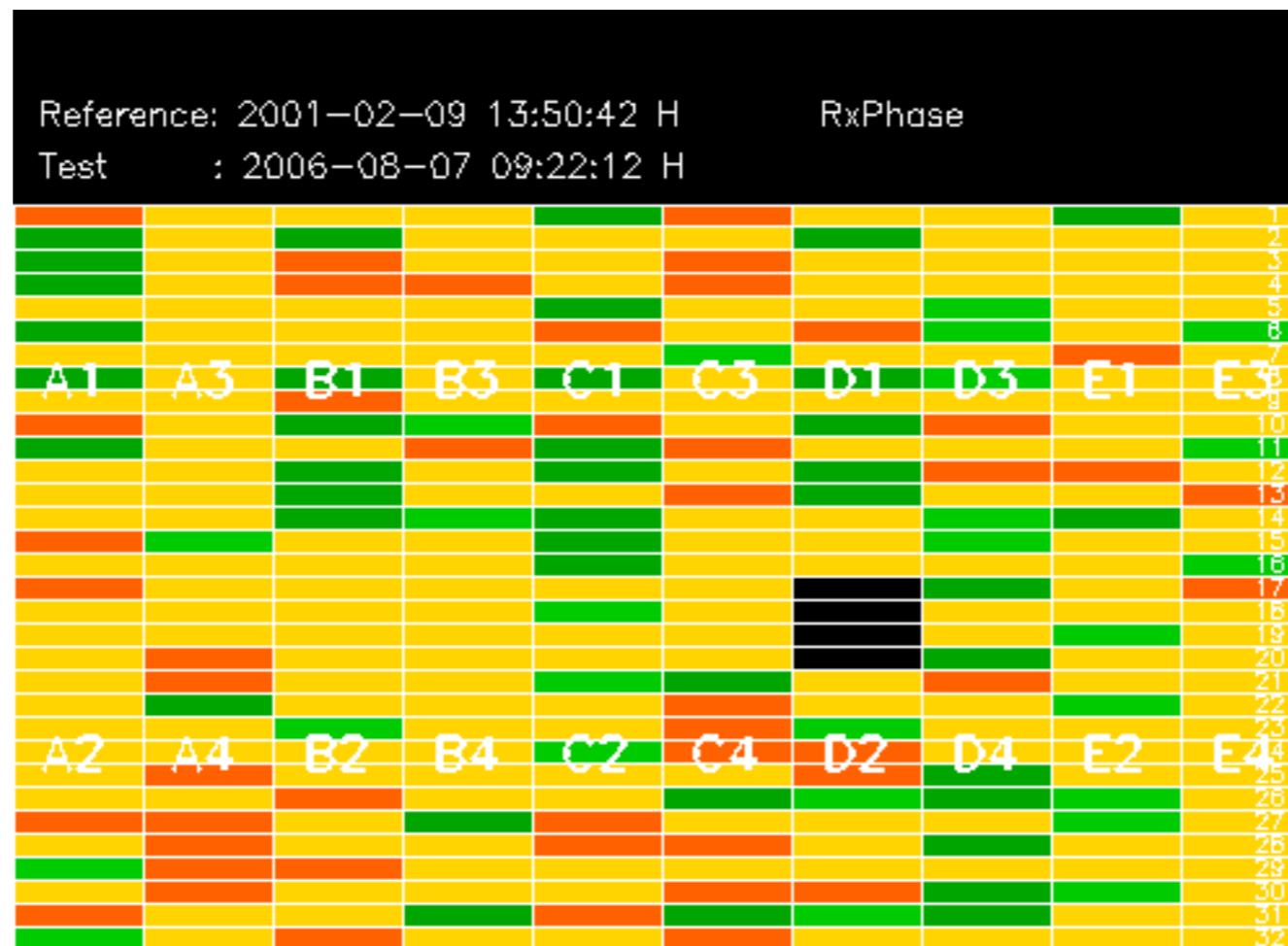






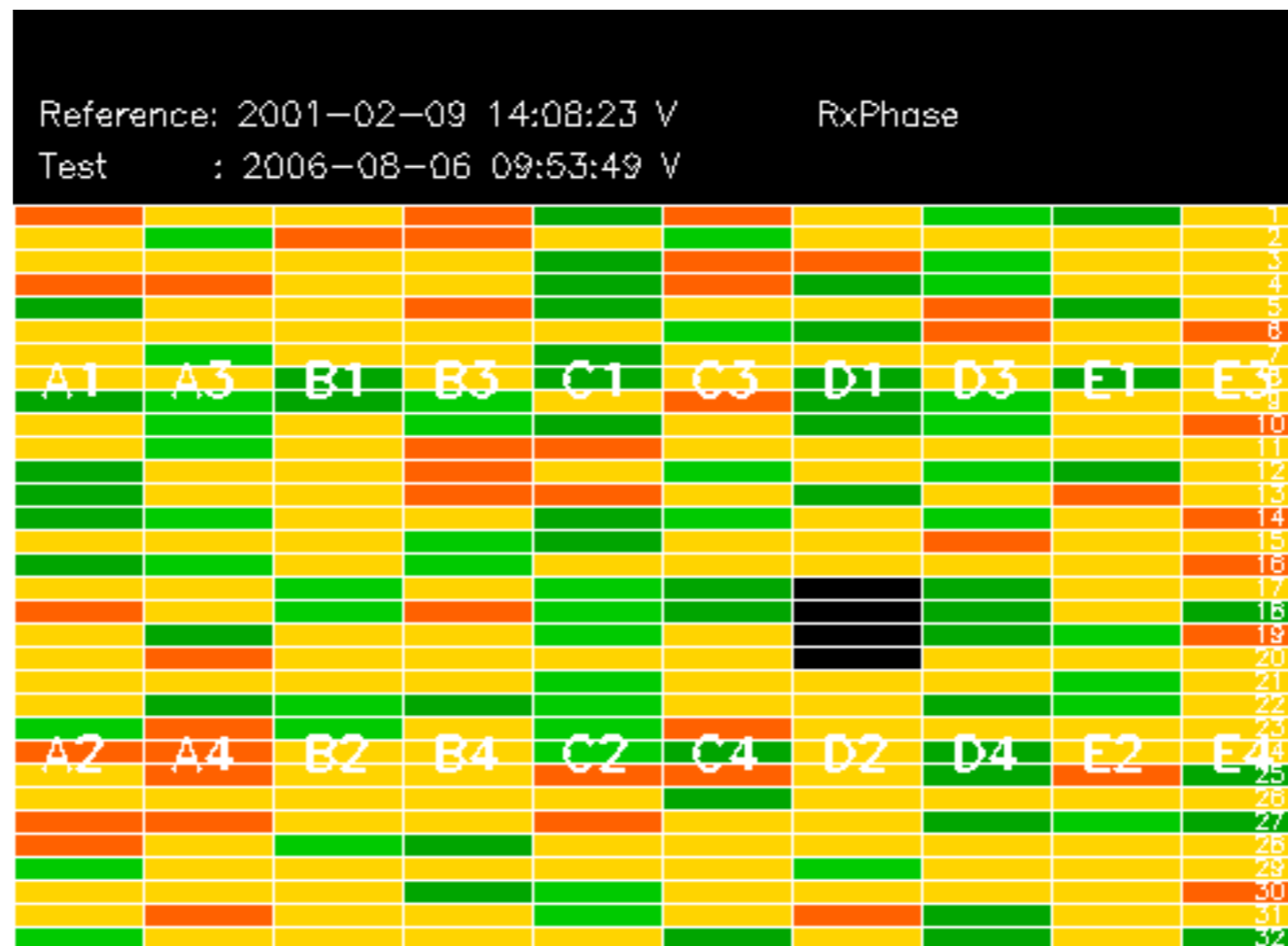










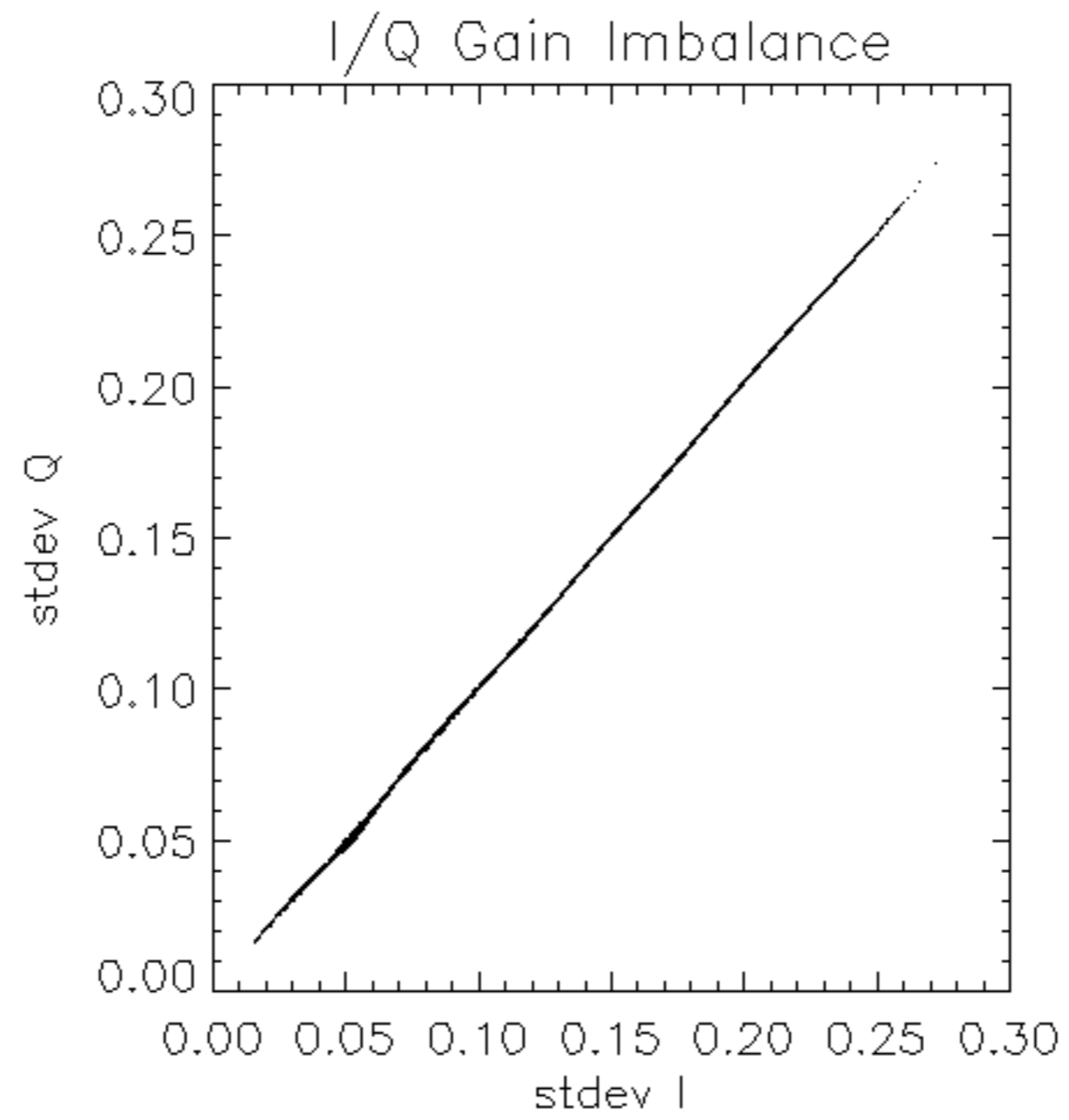


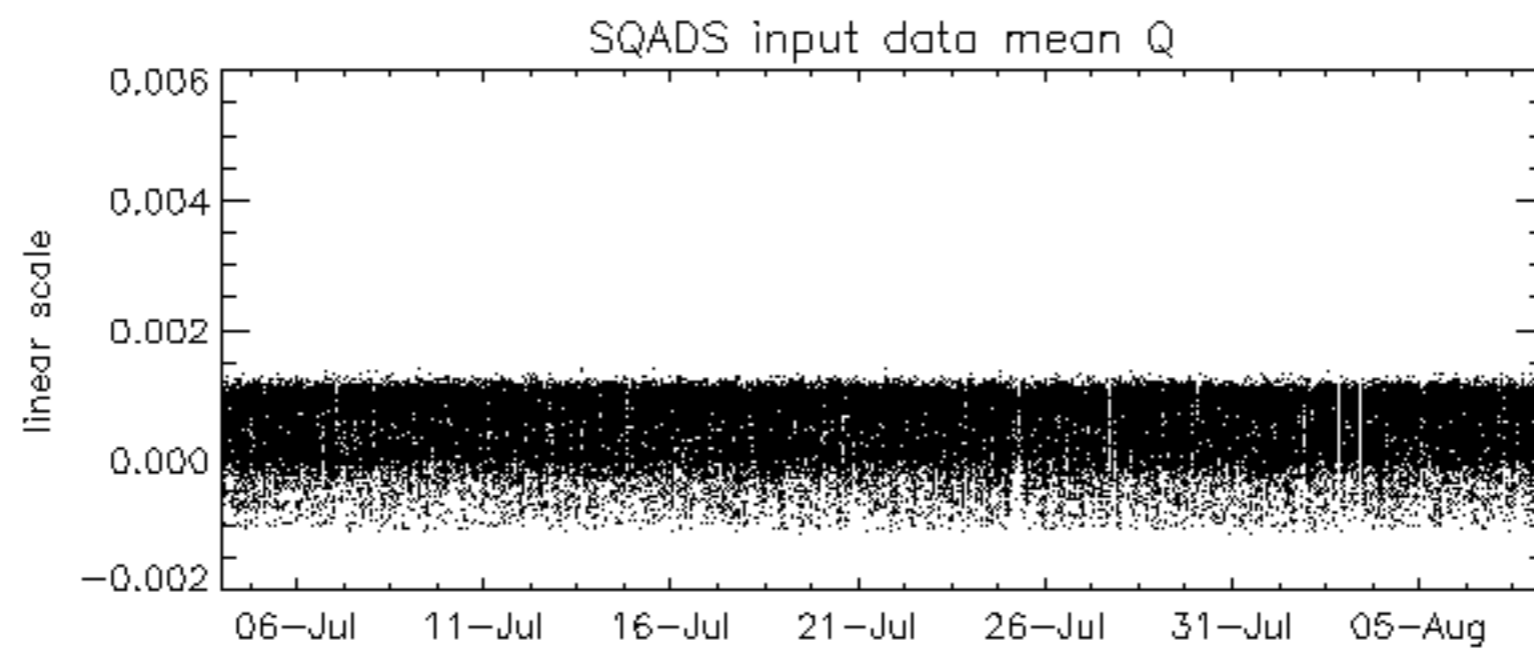
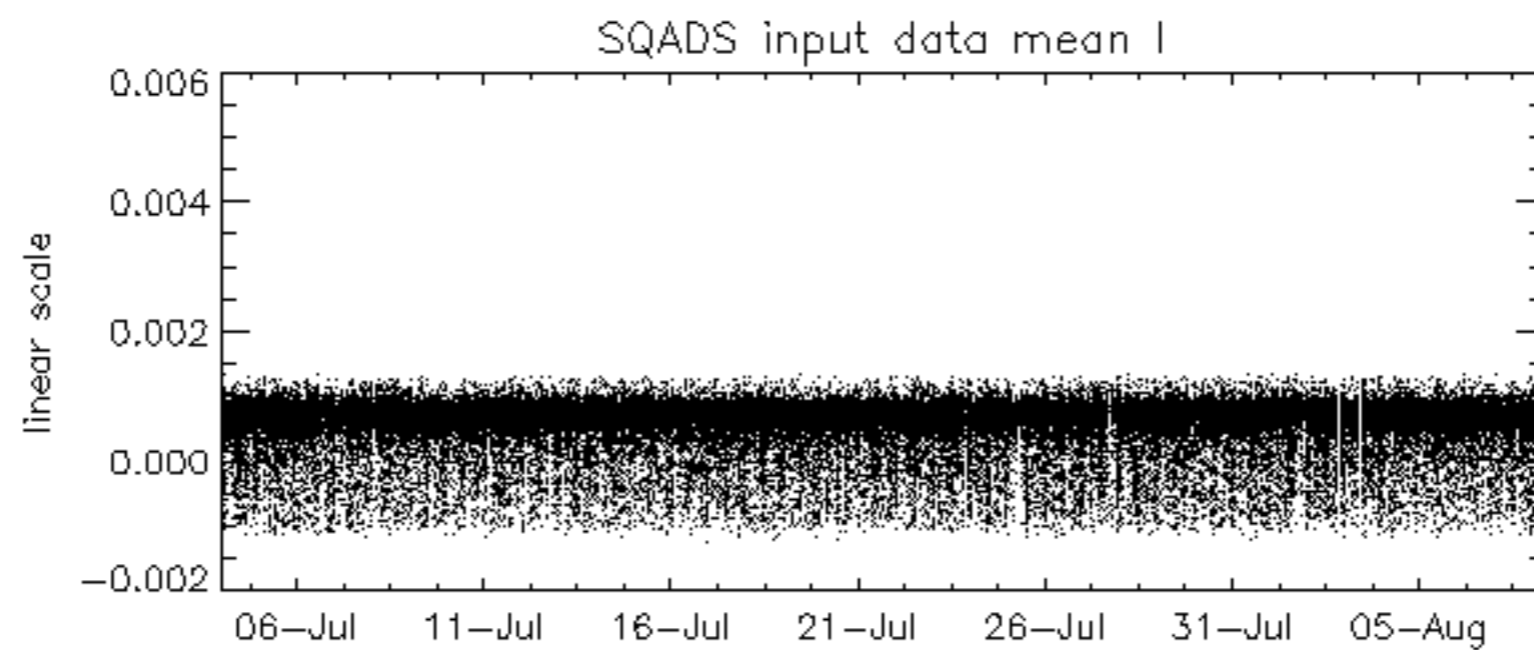
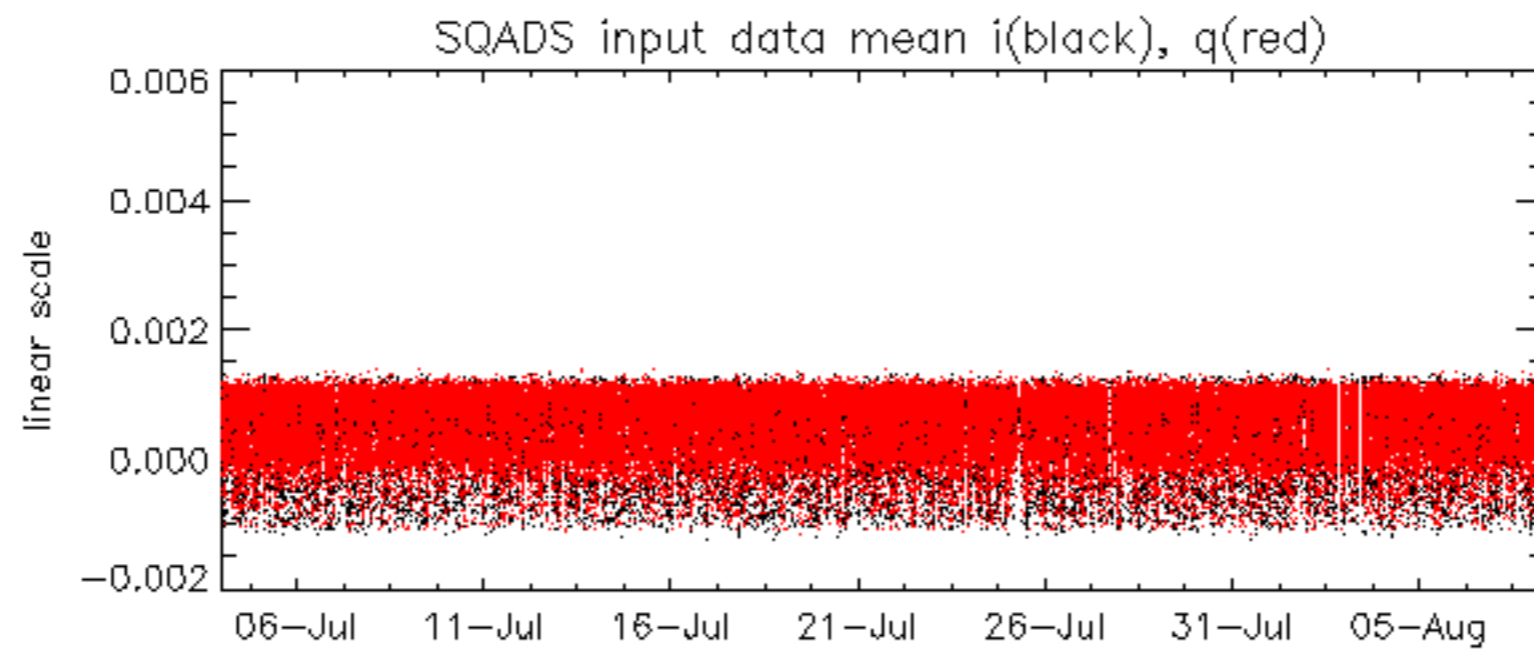




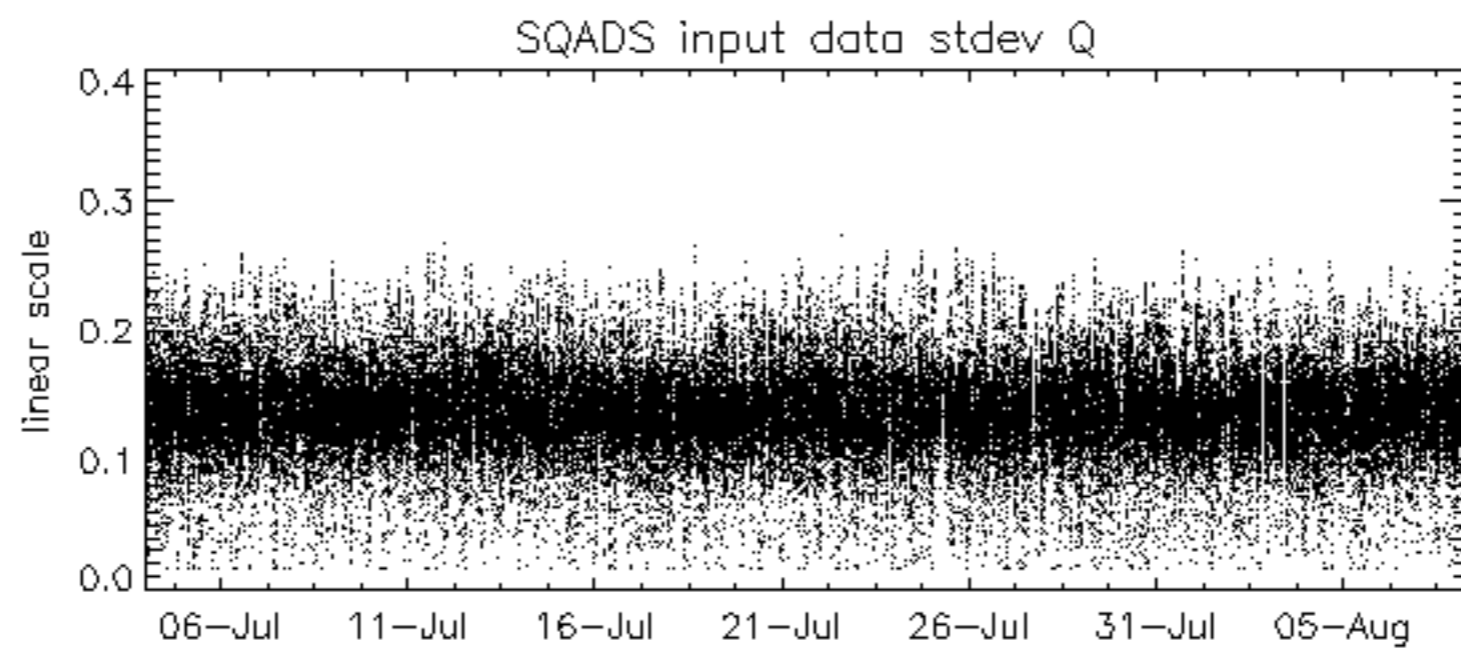
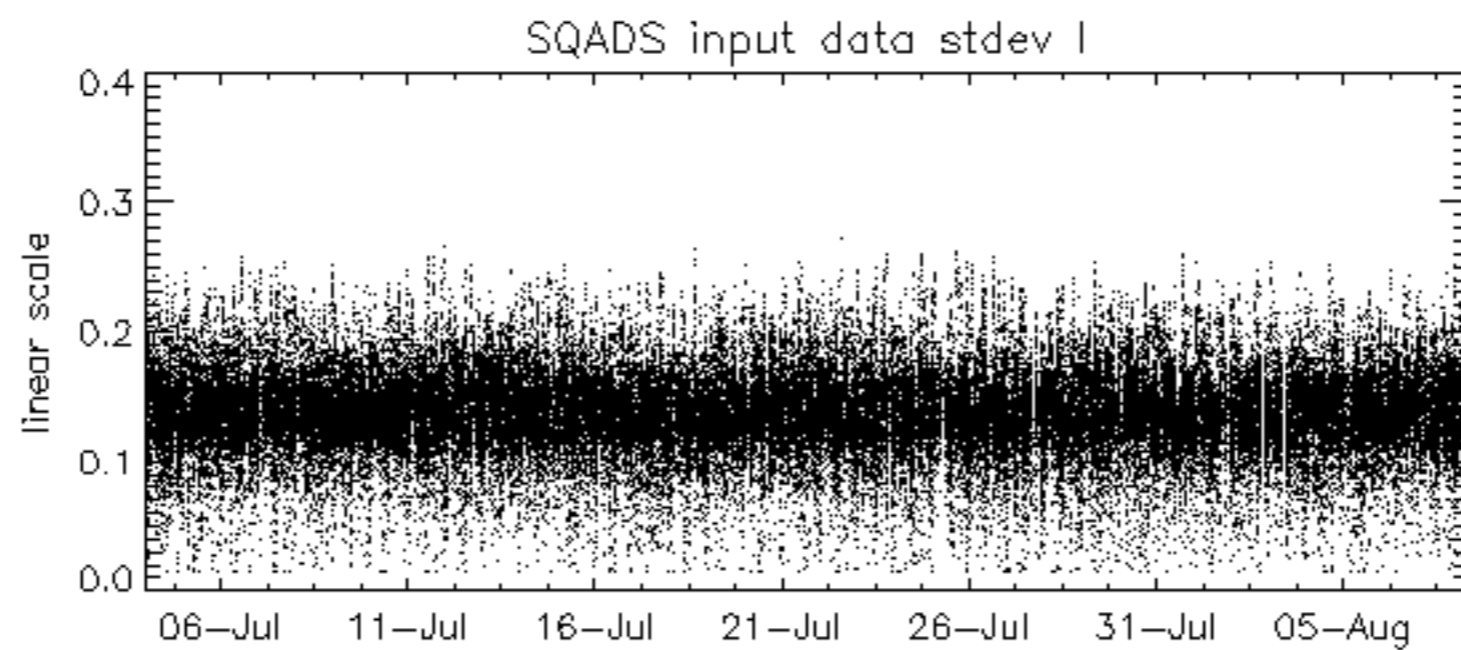
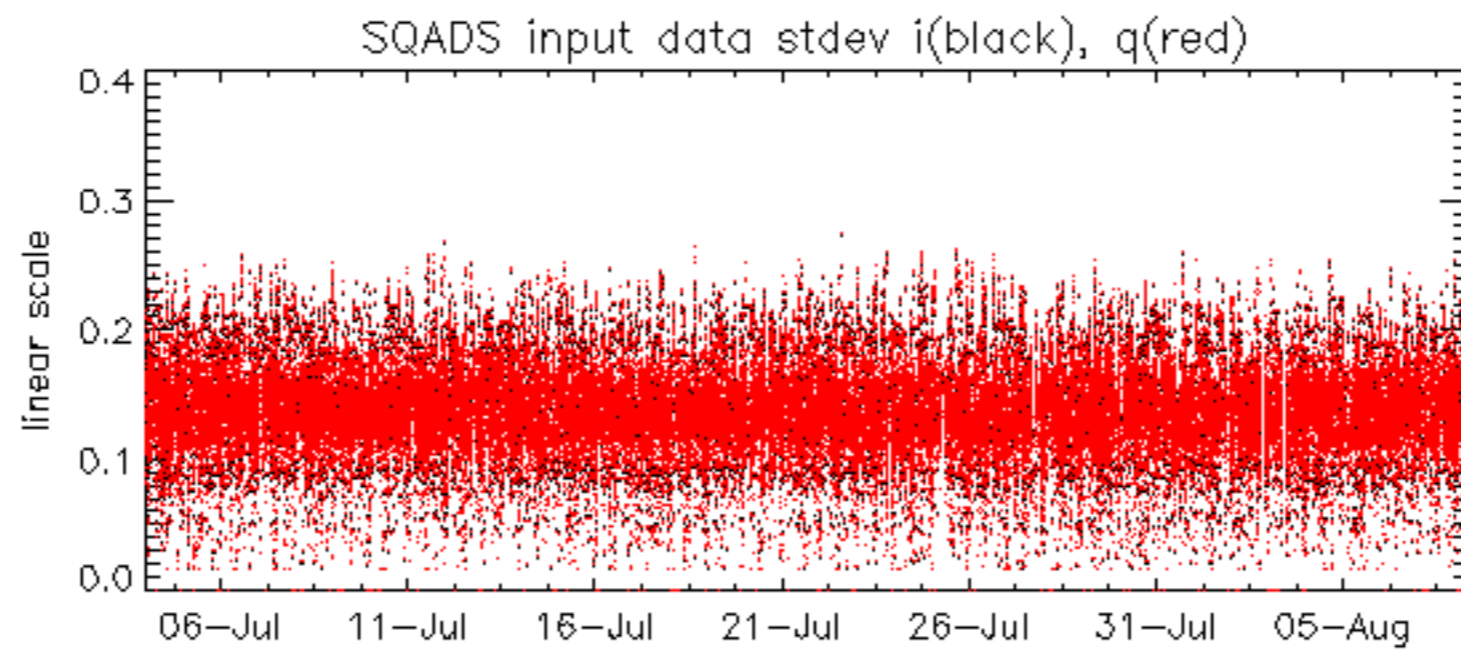


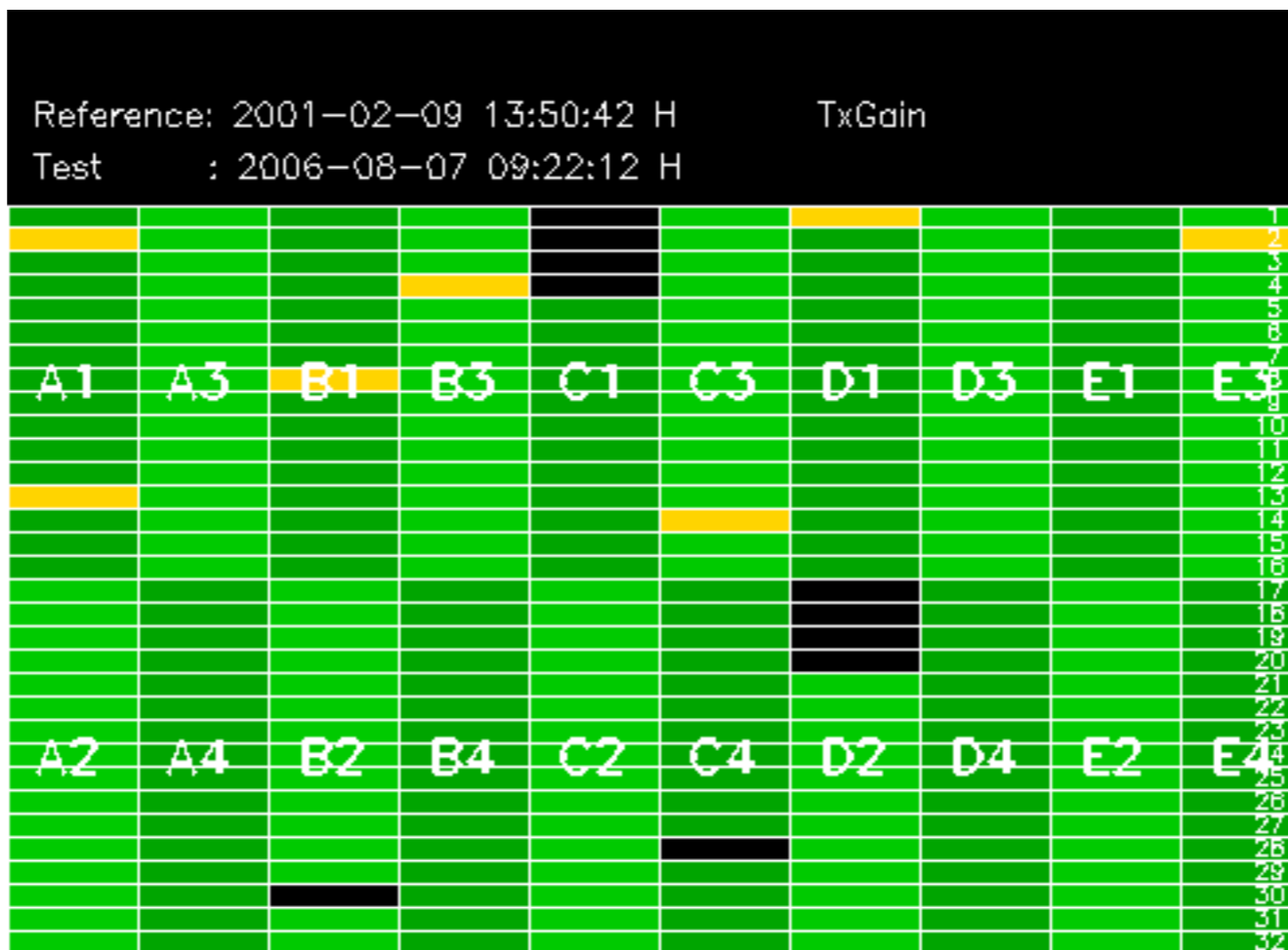
























Summary of analysis for the last 3 days 2006080[678]

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_1PNPDE20060807_002903_000000512050_00088_23188_3070.N1	1	0
ASA_WSM_1PNPDE20060808_000918_000000852050_00102_23202_6545.N1	0	35
ASA_WSM_1PNPDE20060808_014653_000001462050_00103_23203_6563.N1	0	40













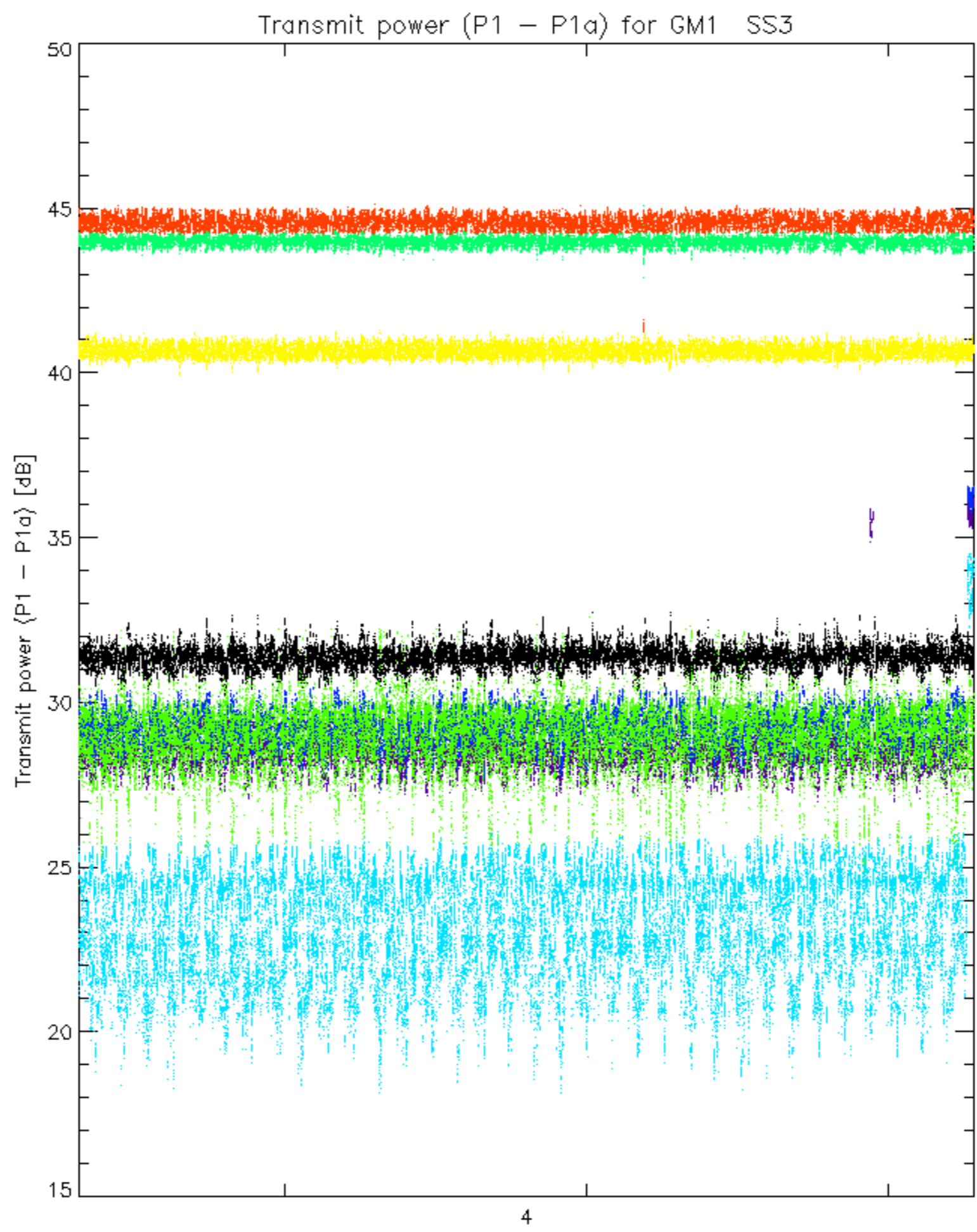


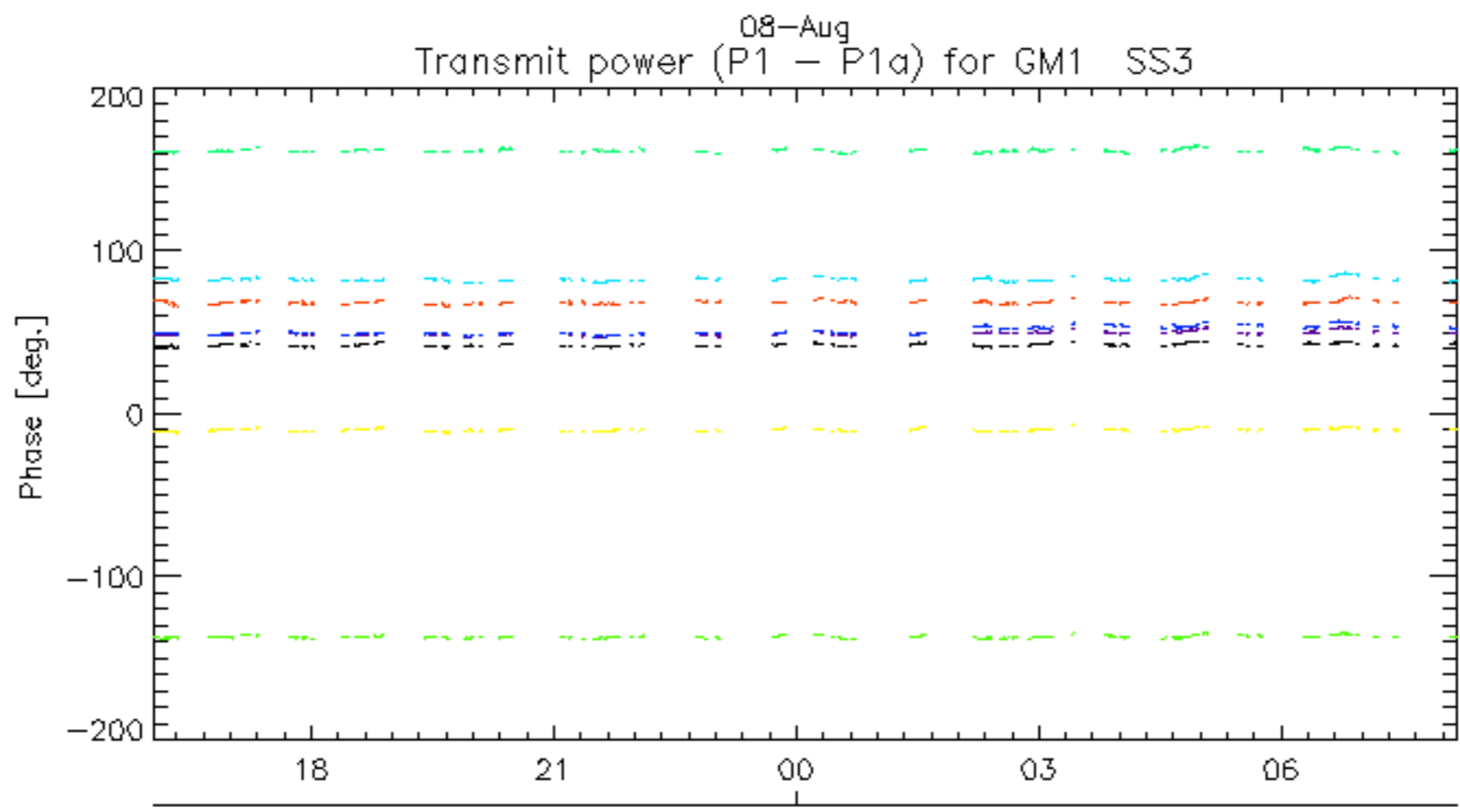
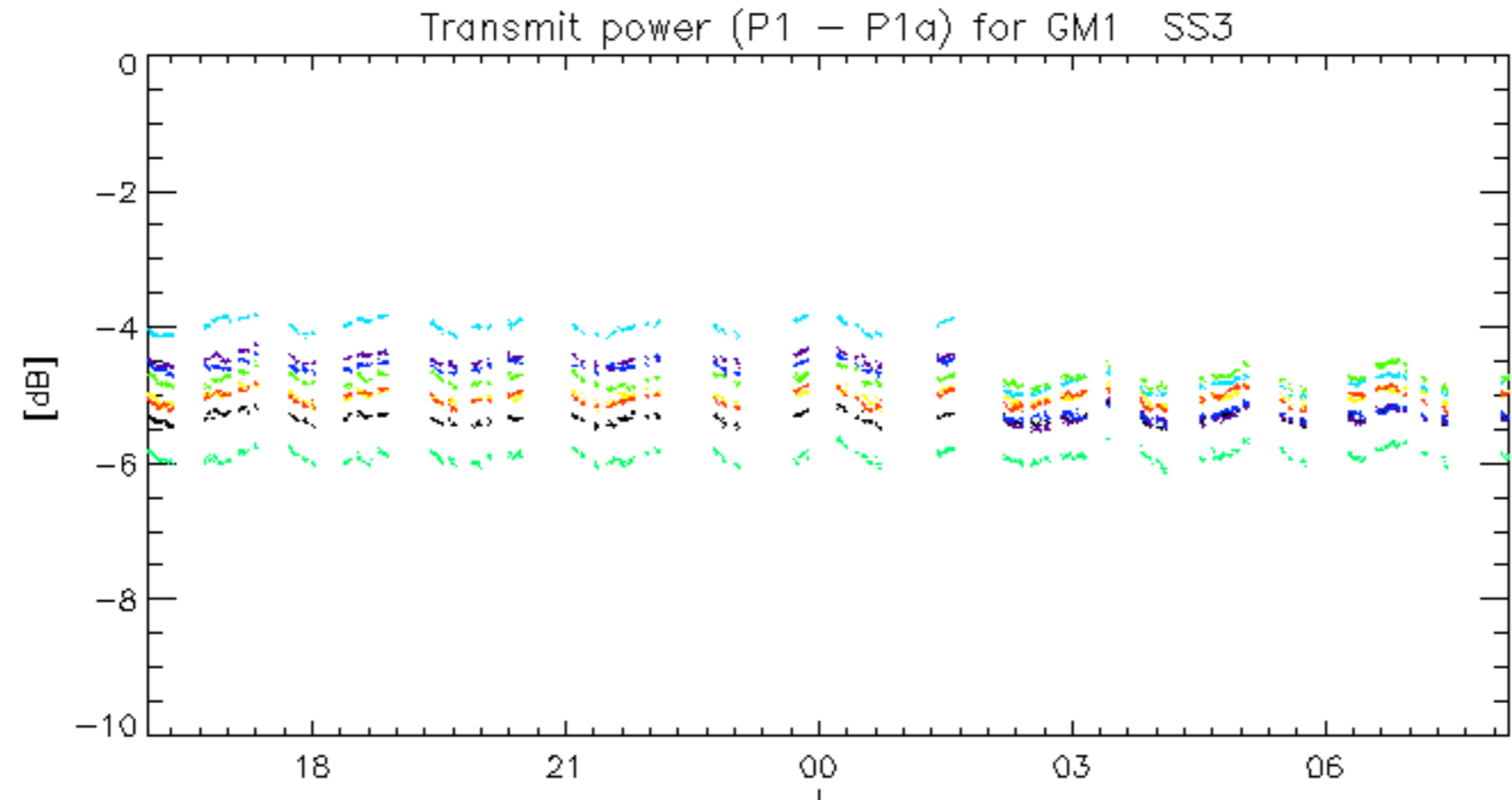




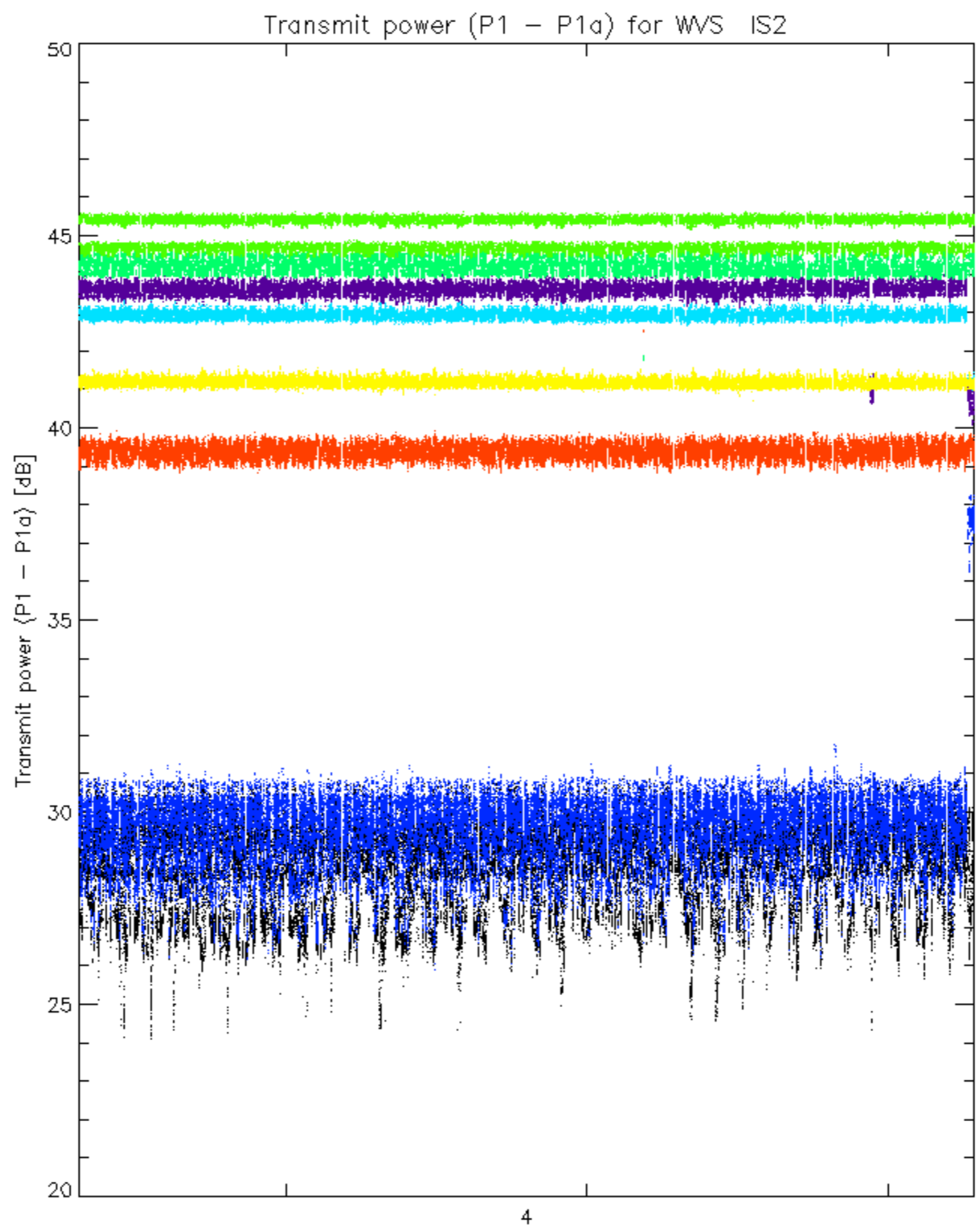




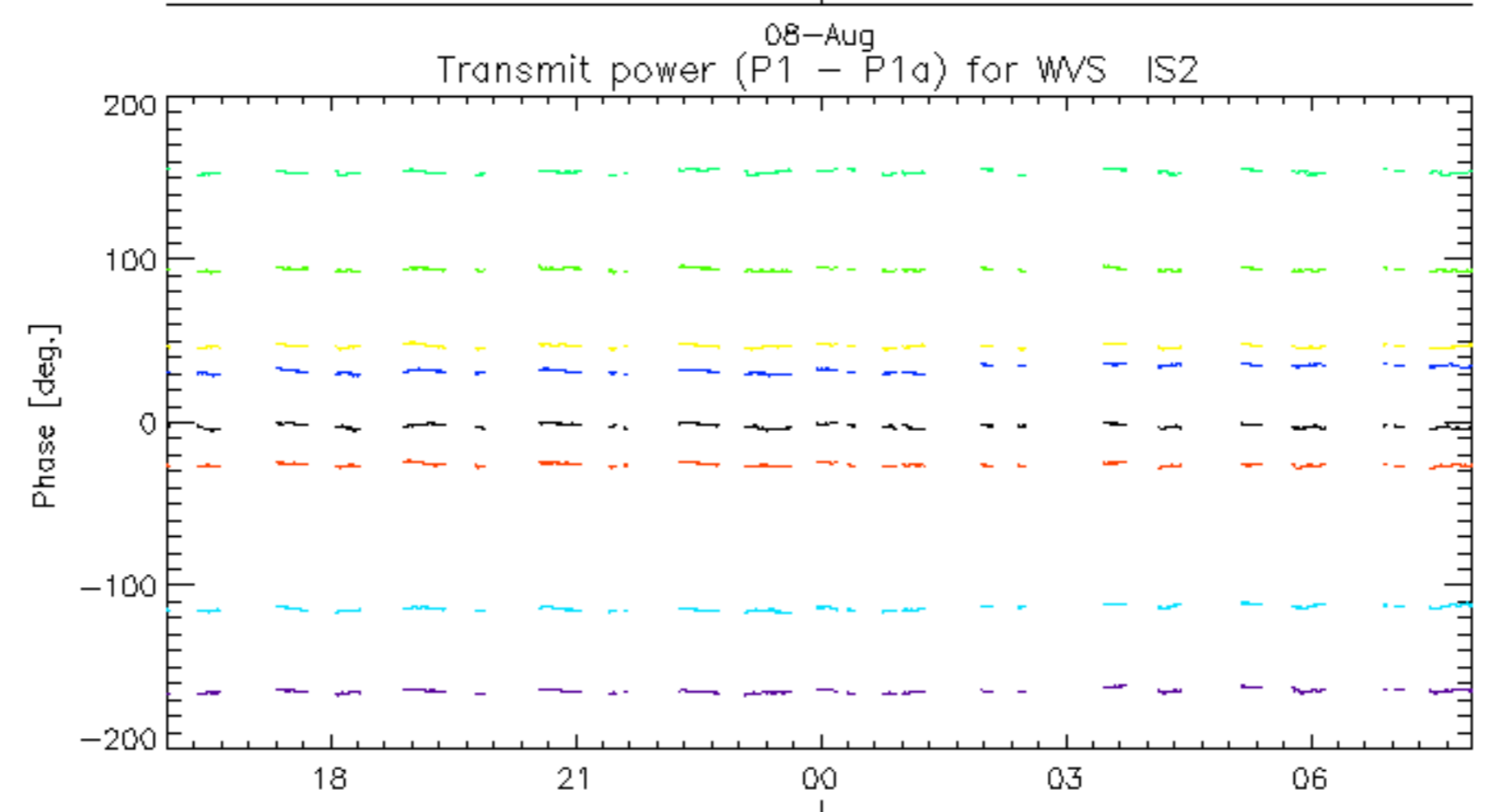
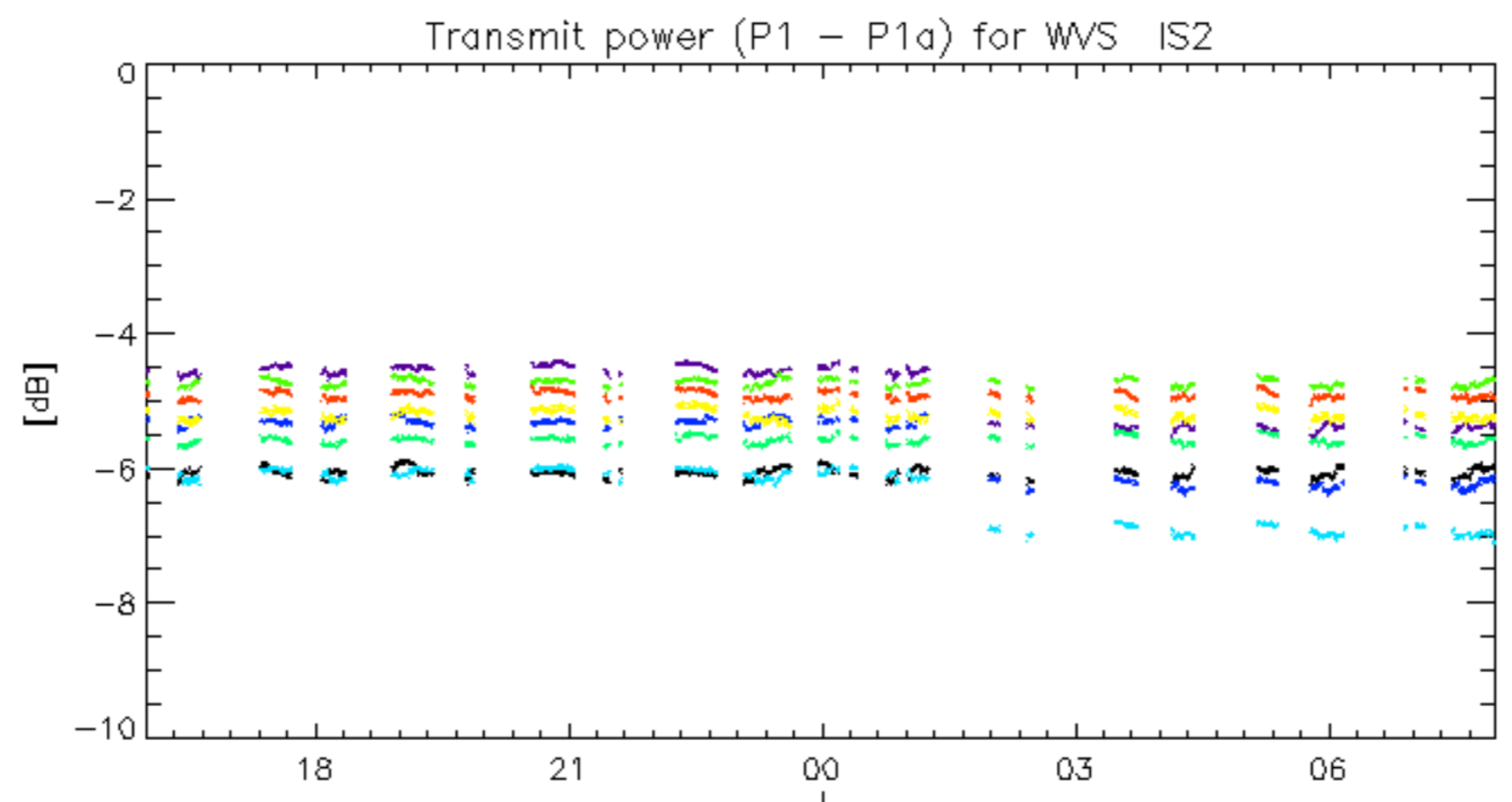




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No unavailabilities during the reported period.