

# PRELIMINARY REPORT OF 060810

last update on Thu Aug 10 16:39:26 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 2006-08-09 00:00:00 to 2006-08-10 16:39:26

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	77	7	2	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	41	77	7	2	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	77	7	2	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	77	7	2	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	32	59	24	20	70
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	32	59	24	20	70
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	32	59	24	20	70
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	32	59	24	20	70

### 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	20060810 074720
H	20060809 081857

### 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	-3.940279	0.010395	-0.013979
7	P1	-3.113144	0.048372	-0.058061
11	P1	-4.100274	0.061662	-0.077649
15	P1	-6.197895	0.091341	-0.115083
19	P1	-3.421719	0.009944	-0.066535
22	P1	-4.555843	0.010098	-0.025121
26	P1	-3.922941	0.019957	0.008461
30	P1	-5.764328	0.009585	-0.000507
3	P1	-16.533516	0.248718	-0.023061
7	P1	-17.186678	0.129372	0.059139
11	P1	-16.950075	0.286489	0.180636
15	P1	-13.056768	0.180087	0.247596
19	P1	-14.482090	0.053988	-0.046613
22	P1	-15.977421	0.432024	0.135705
26	P1	-15.117862	0.231912	-0.032319
30	P1	-17.090462	0.338101	0.091729

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.933205	0.086423	0.118852
7	P2	-21.885777	0.102618	0.083909
11	P2	-15.778369	0.119131	0.038352
15	P2	-7.121035	0.098612	0.032111
19	P2	-9.129020	0.089911	0.027087
22	P2	-18.149010	0.085697	0.008576
26	P2	-16.401806	0.091663	0.013329
30	P2	-19.506794	0.091511	0.049945

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173001	0.003158	0.005640
7	P3	-8.173001	0.003158	0.005640
11	P3	-8.173001	0.003158	0.005640
15	P3	-8.173001	0.003158	0.005640
19	P3	-8.173001	0.003158	0.005640
22	P3	-8.173001	0.003158	0.005640
26	P3	-8.173001	0.003158	0.005640
30	P3	-8.173001	0.003158	0.005640

**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	-3.823657	0.008851	-0.012093
7	P1	-2.590642	0.124847	-0.171209
11	P1	-2.886179	0.123817	-0.166672
15	P1	-3.613539	0.140560	-0.209090
19	P1	-3.424950	0.023952	-0.007063
22	P1	-5.084133	0.019519	0.006920
26	P1	-5.861878	0.015947	-0.007288
30	P1	-5.197600	0.033425	0.008626
3	P1	-11.619529	0.043280	-0.020454
7	P1	-9.973861	0.046944	-0.038170
11	P1	-10.258924	0.061616	-0.068275
15	P1	-10.755601	0.143469	-0.012082
19	P1	-15.557378	0.498116	-0.011732
22	P1	-20.923685	1.311651	0.035254

26	P1	-16.240957	0.387280	0.222547
30	P1	-17.950909	0.409460	-0.147957

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.557980	0.073310	0.185801
7	P2	-22.352392	0.117965	0.156755
11	P2	-11.020411	0.041235	0.093881
15	P2	-4.899307	0.044581	0.047979
19	P2	-6.866285	0.039922	0.031626
22	P2	-8.190618	0.034930	0.014215
26	P2	-24.180069	0.060066	0.020610
30	P2	-21.996672	0.047735	0.056012

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.011571	0.003730	0.007153
7	P3	-8.011539	0.003732	0.006973
11	P3	-8.011581	0.003730	0.006566
15	P3	-8.011590	0.003731	0.006698
19	P3	-8.011514	0.003741	0.007106
22	P3	-8.011639	0.003723	0.006777
26	P3	-8.011545	0.003722	0.006747
30	P3	-8.011573	0.003735	0.006839

## 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	0.000562744
	stdev	1.71024e-07
MEAN Q	mean	0.000538077
	stdev	2.13944e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137601
	stdev	0.00107674
STDEV Q	mean	0.137957
	stdev	0.00109404



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006080[890]

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_WSM_1PNPDE20060808_000918_000000852050_00102_23202_6545.N1	0	35
ASA_WSM_1PNPDE20060808_014653_000001462050_00103_23203_6563.N1	0	40
ASA_WSM_1PNPDE20060808_233741_000003292050_00116_23216_6720.N1	0	35
ASA_WSM_1PNPDE20060809_171625_000002252050_00127_23227_6841.N1	0	66





## 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)**

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

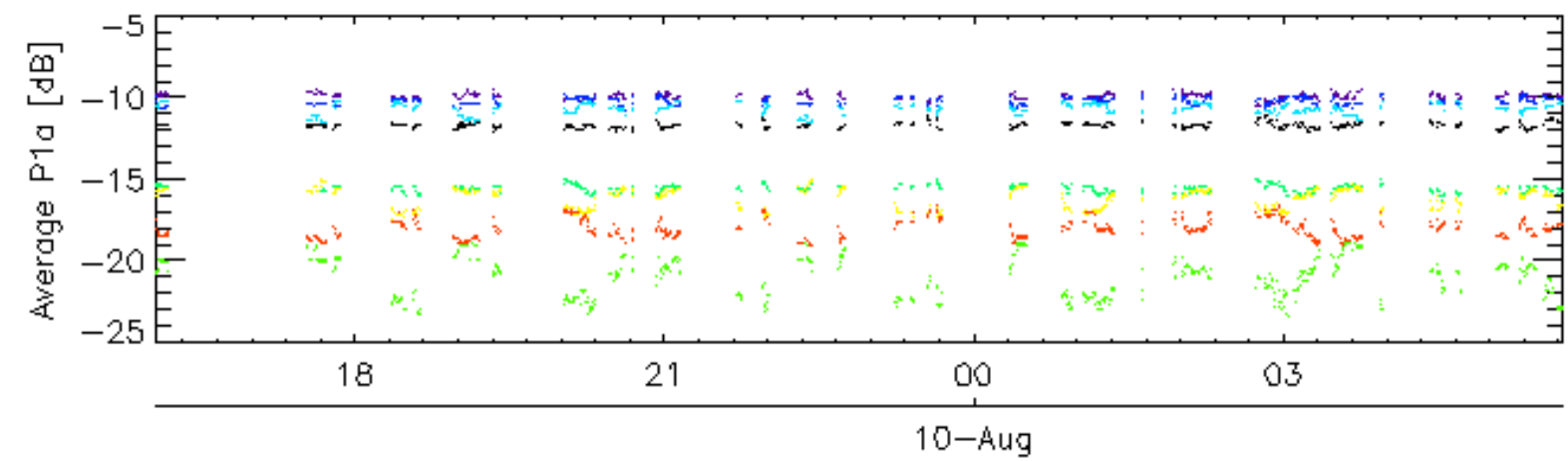
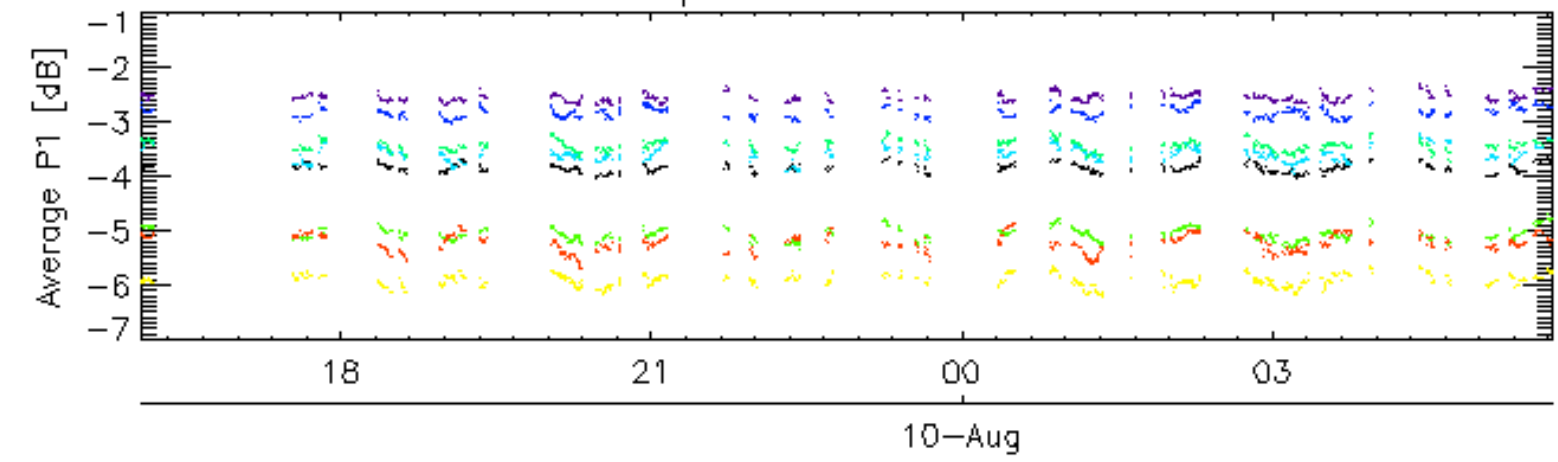
**7.5 - Absolute Doppler for GM1****Evolution of Absolute Doppler**

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

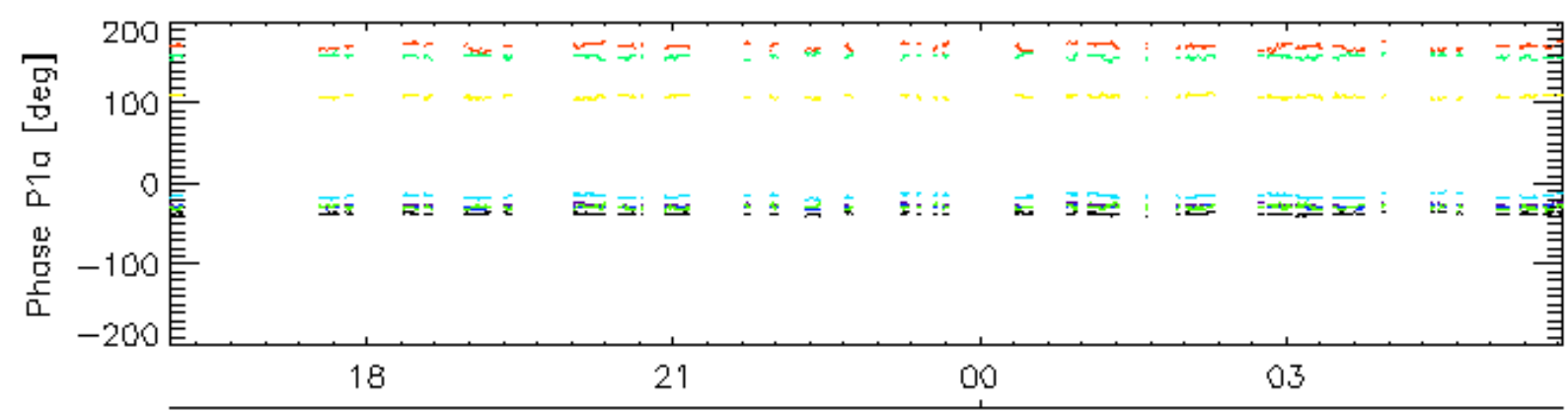
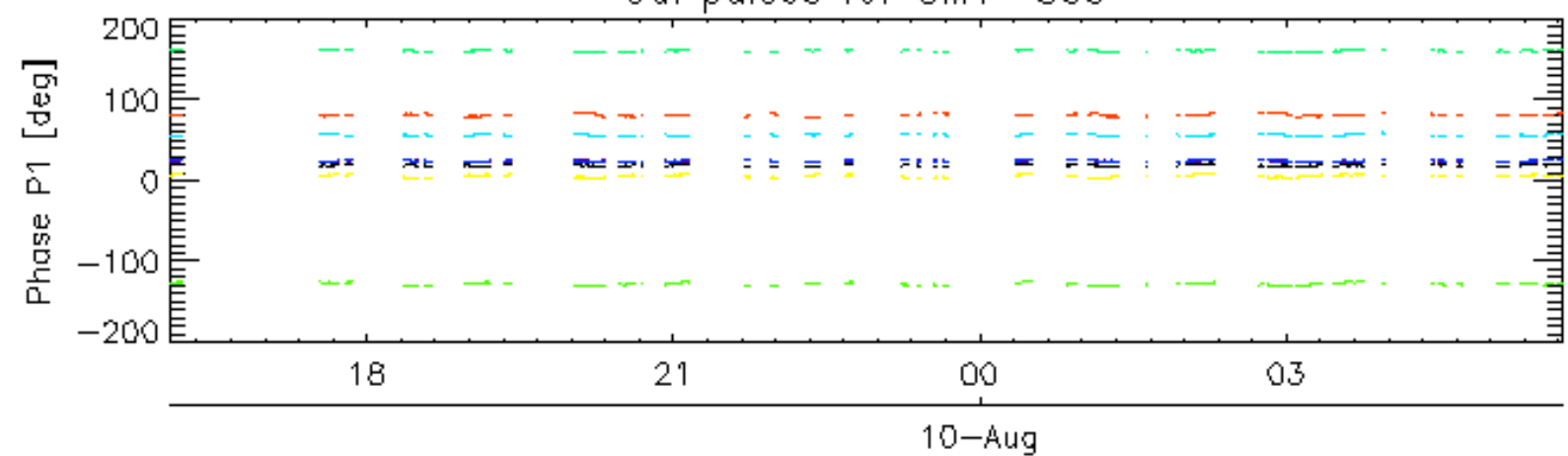
**7.6 - Doppler evolution versus ANX for GM1****Evolution Doppler error versus ANX**

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

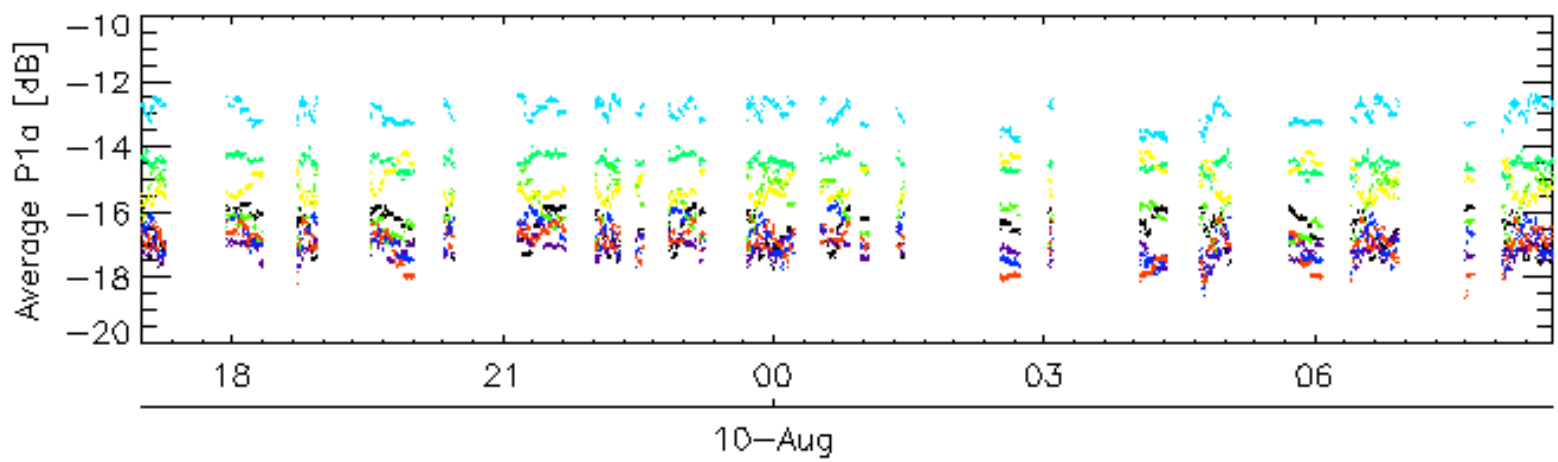
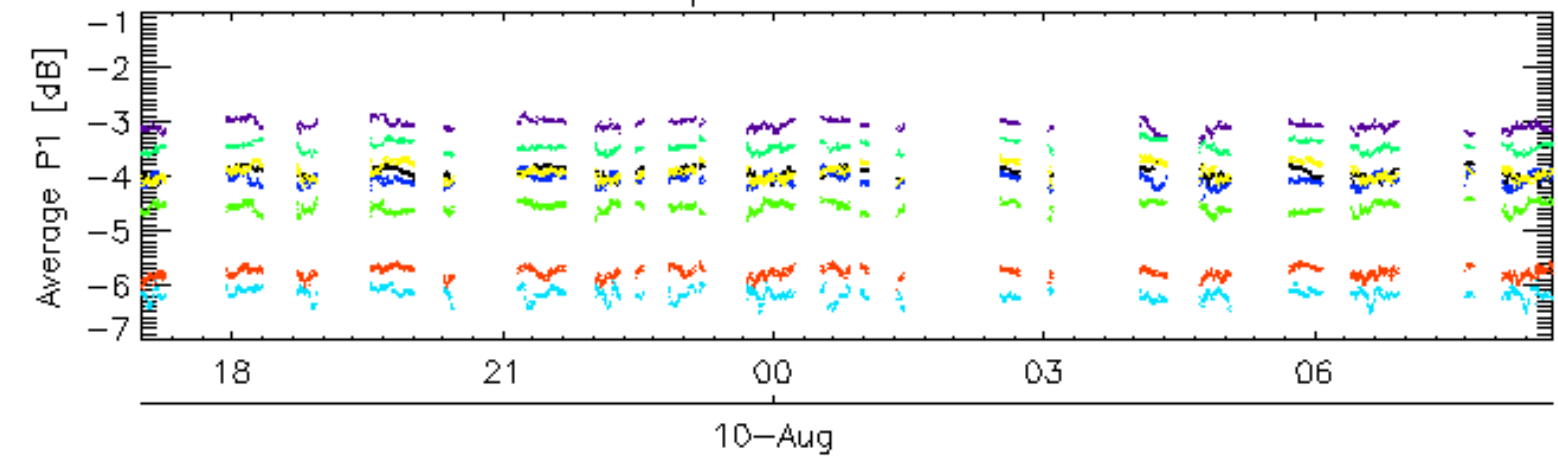


Cal pulses for GM1 SS3

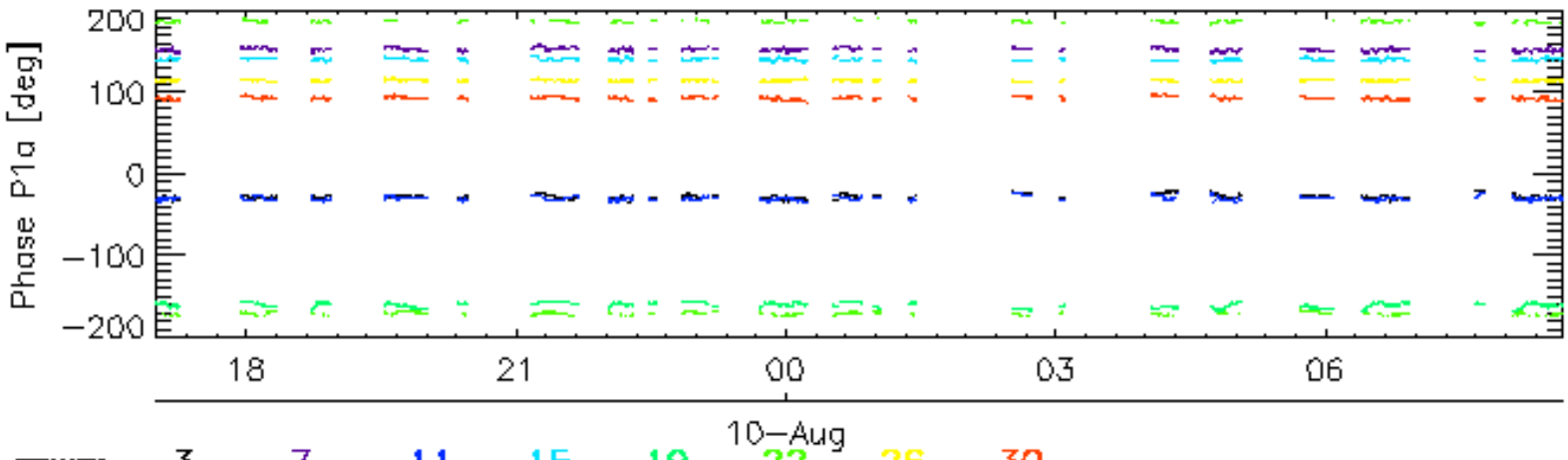
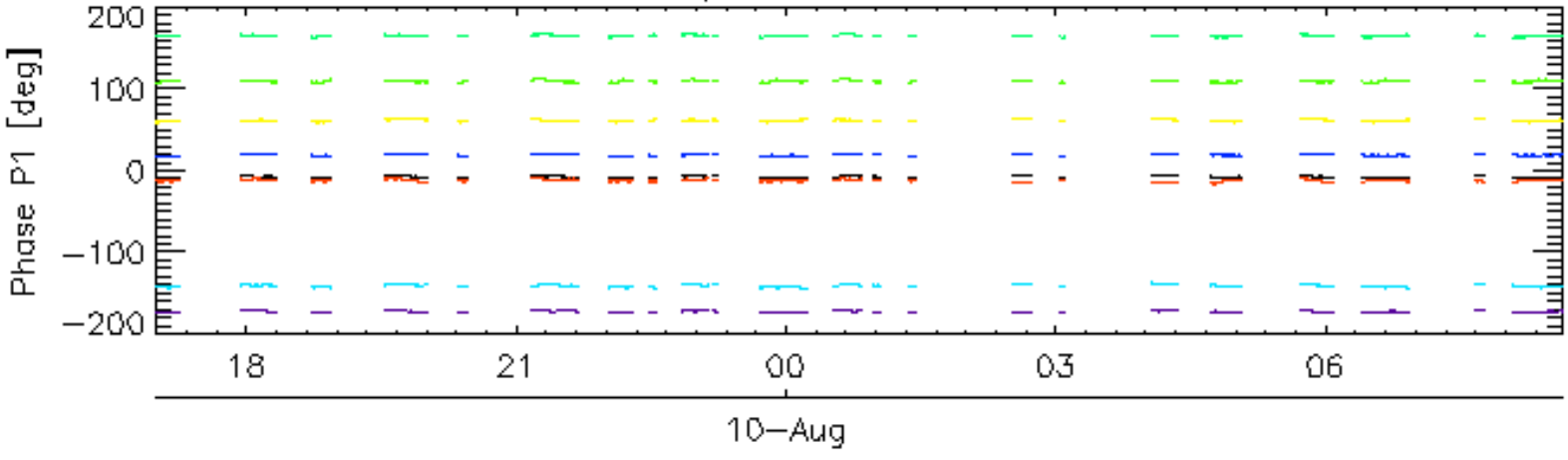


rows: **3** **7** **11** **15** **19** **22** **26** **30** 10-Aug

Cal pulses for WVS IS2

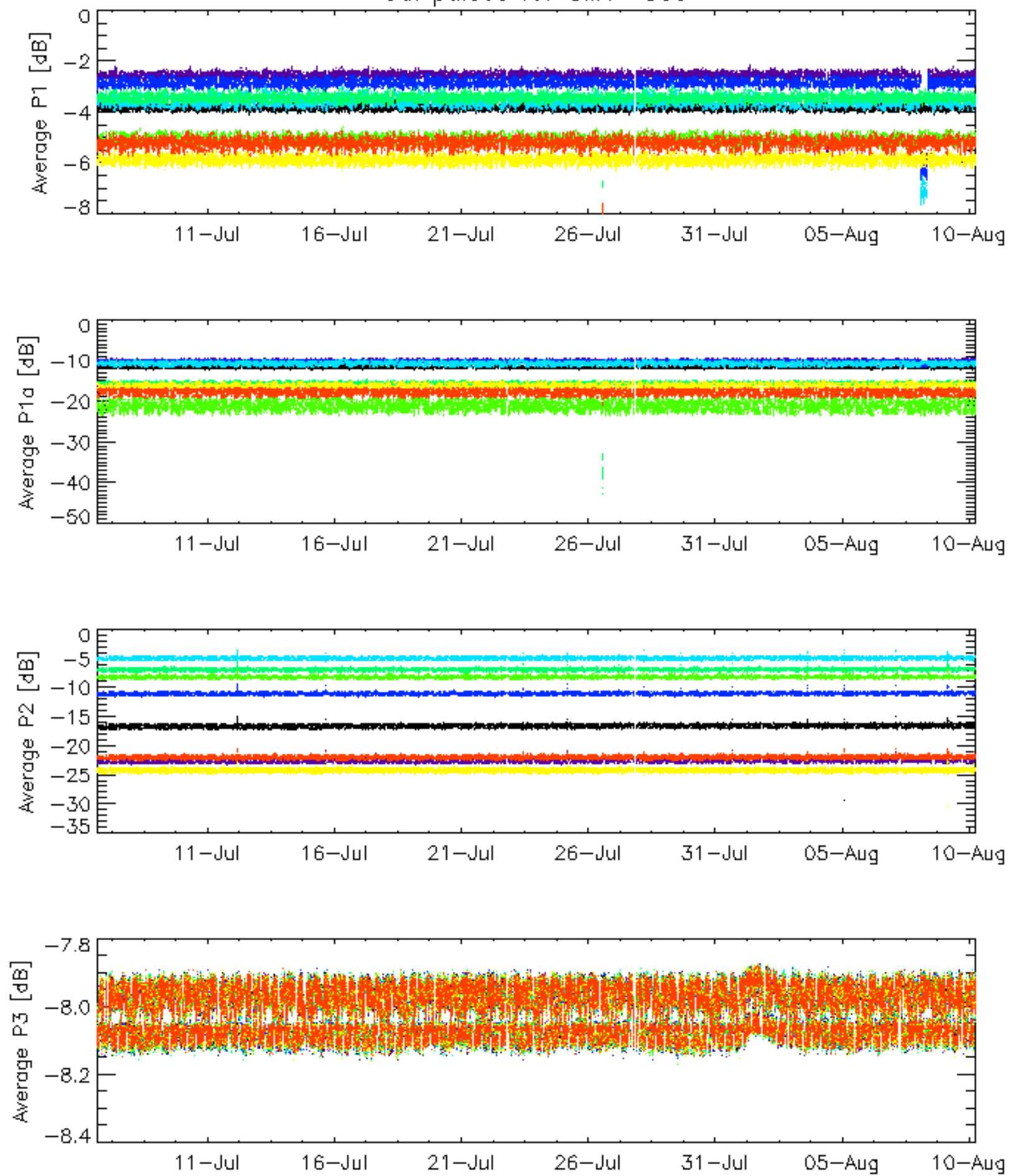


Cal pulses for WVS IS2

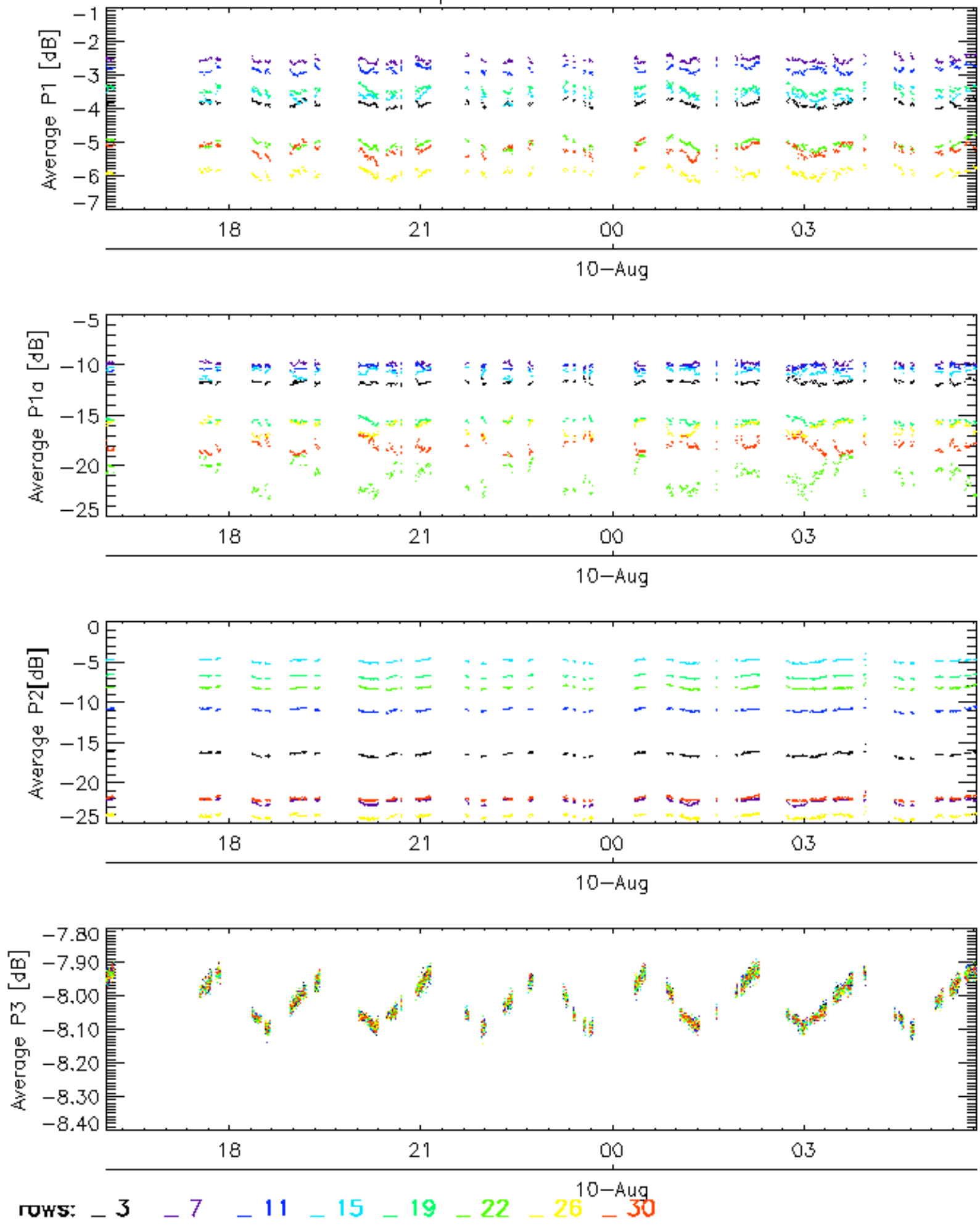


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

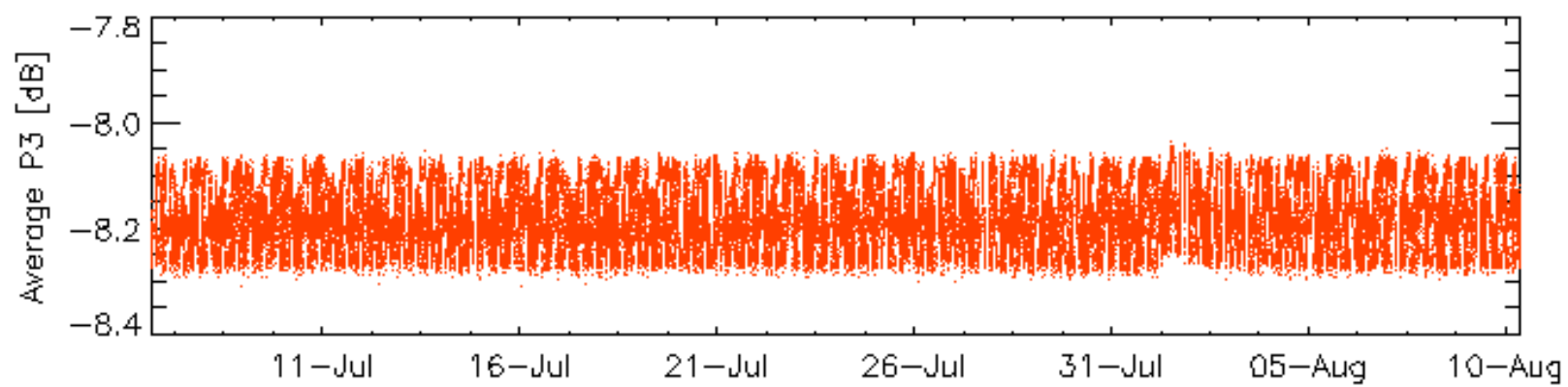
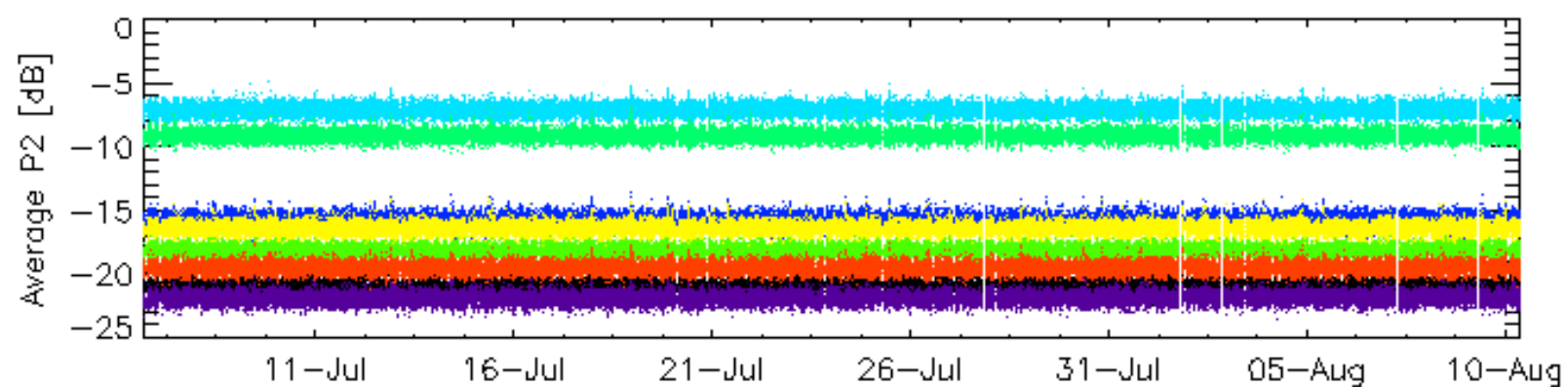
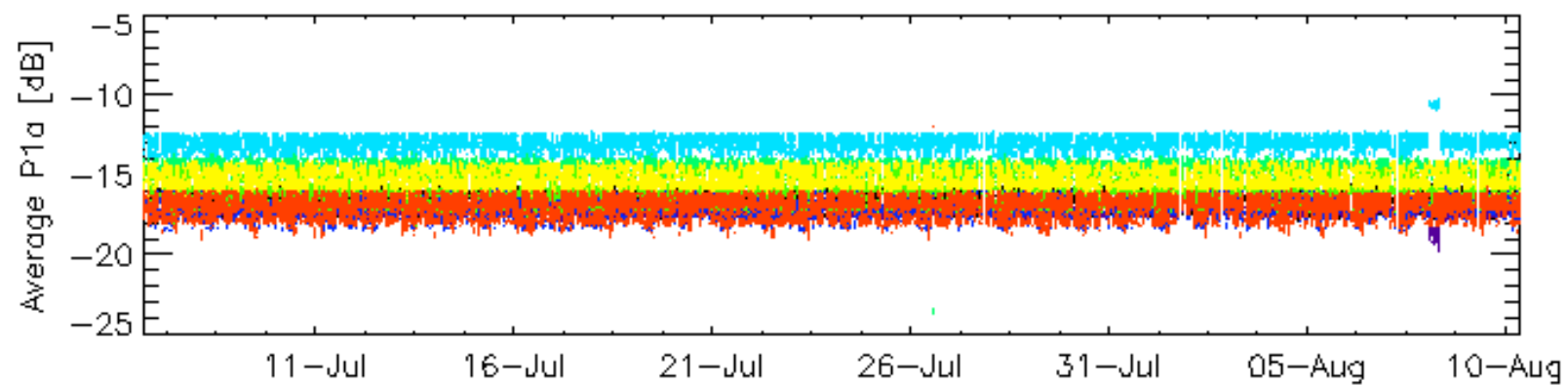
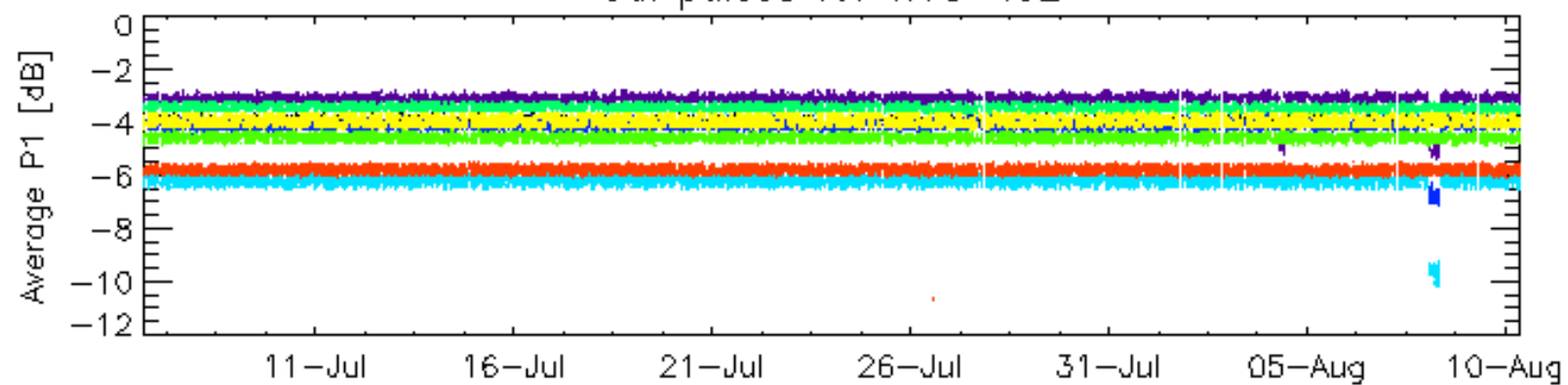
Cal pulses for GM1 SS3



Cal pulses for GM1 SS3

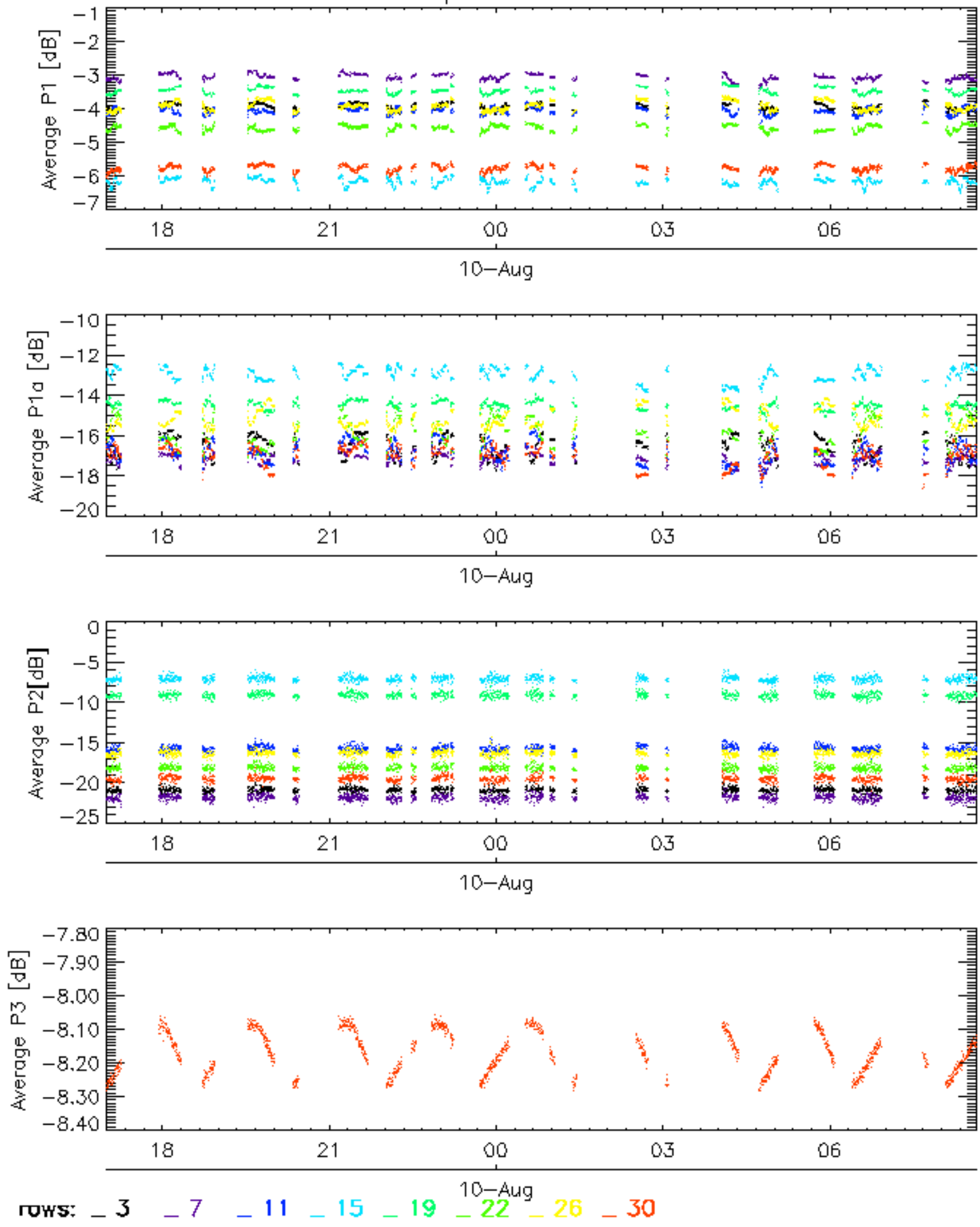


Cal pulses for WVS IS2



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

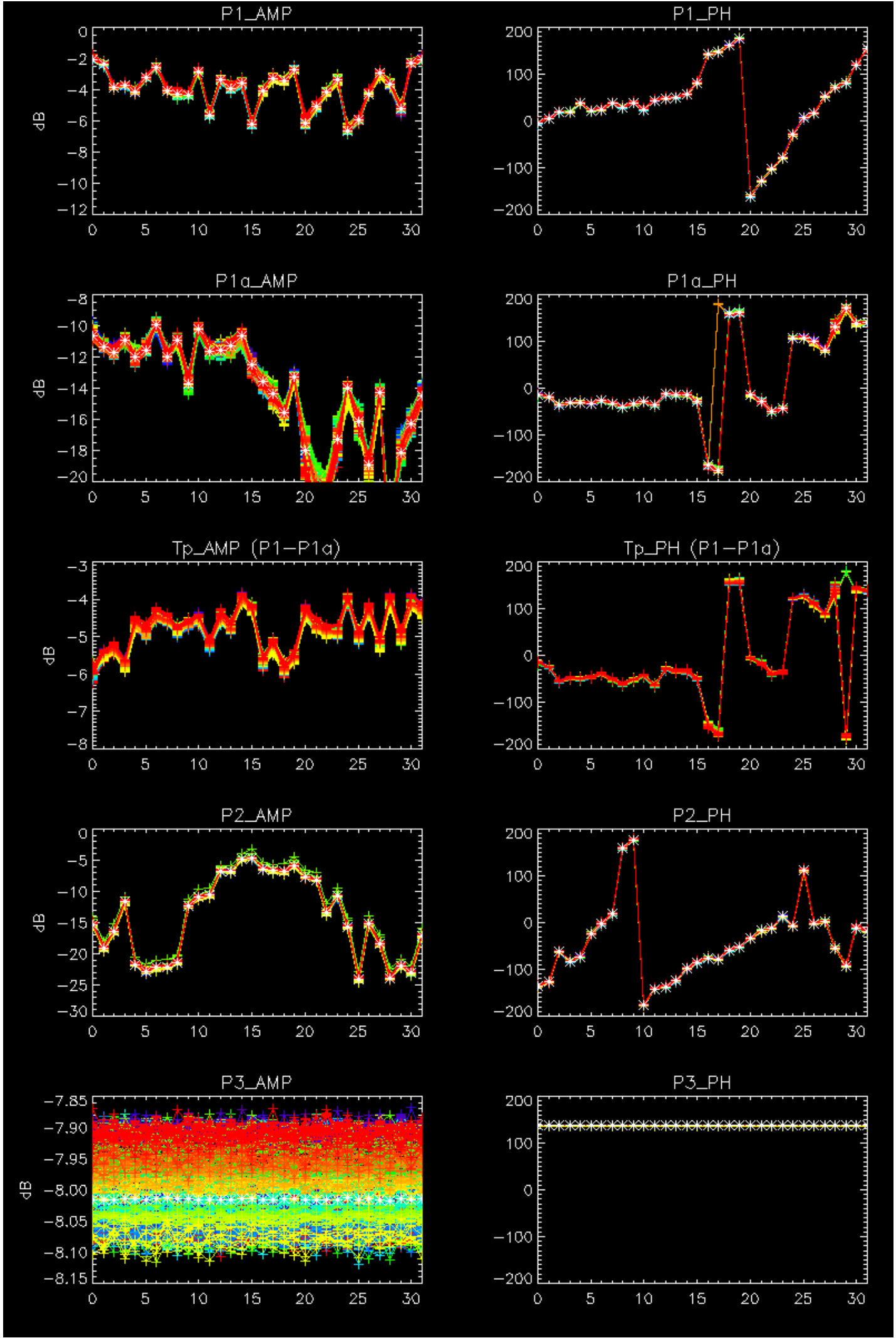
Cal pulses for WVS IS2

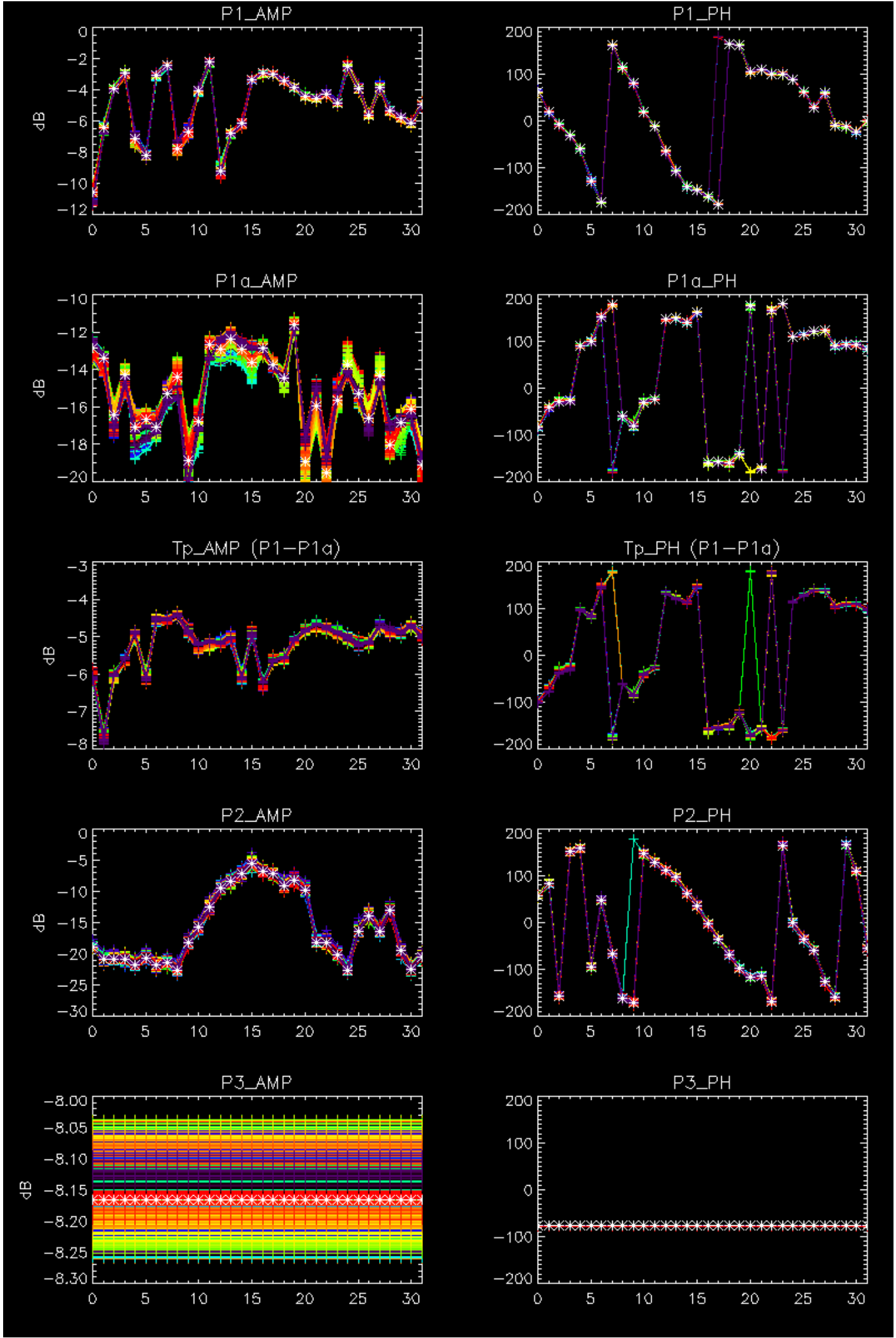


No anomalies observed on available browse products



No anomalies observed.



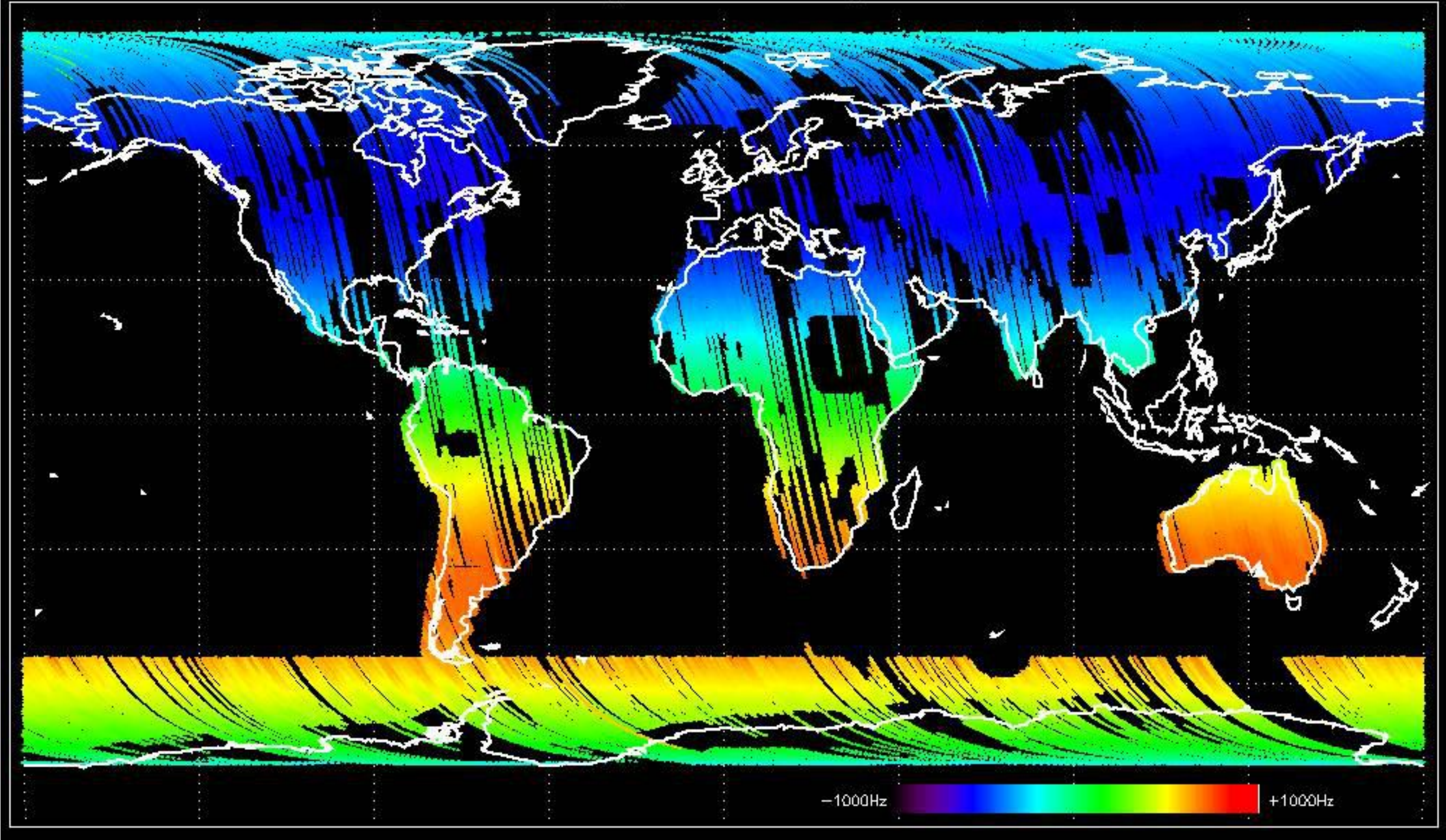


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



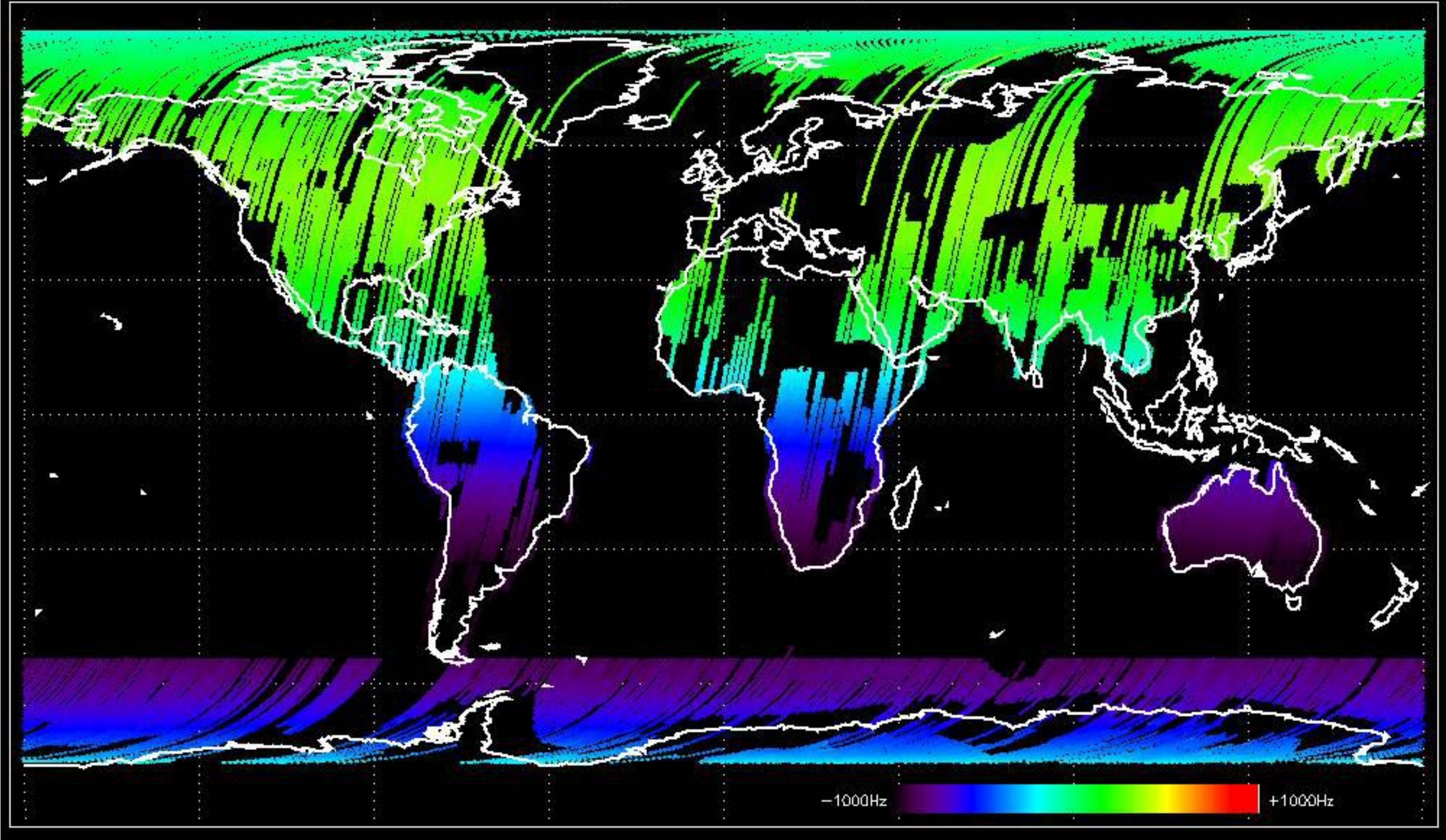


Doppler 'GM1' 'SS1' ascending



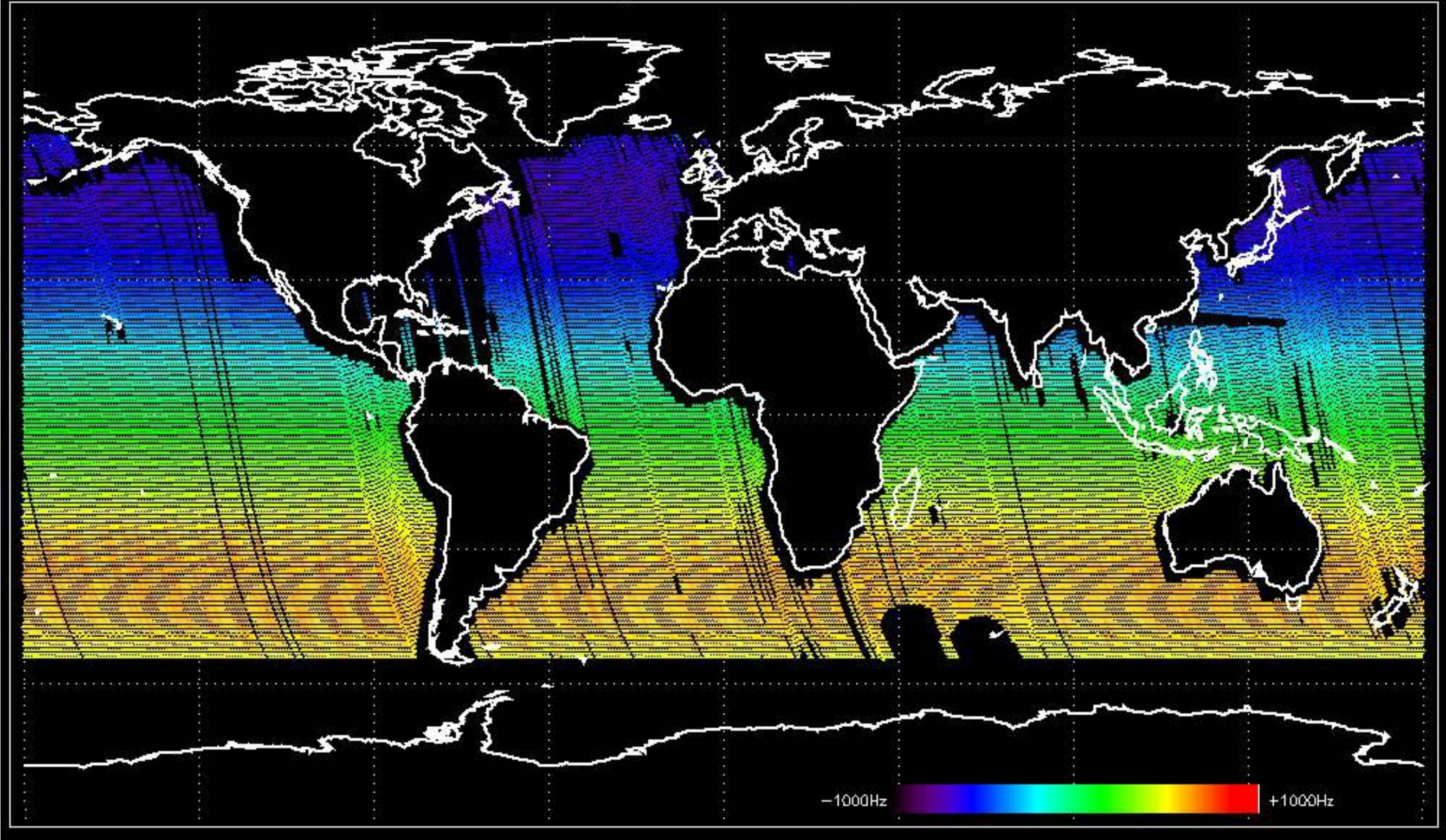


Doppler 'GM1' 'SS1' descending



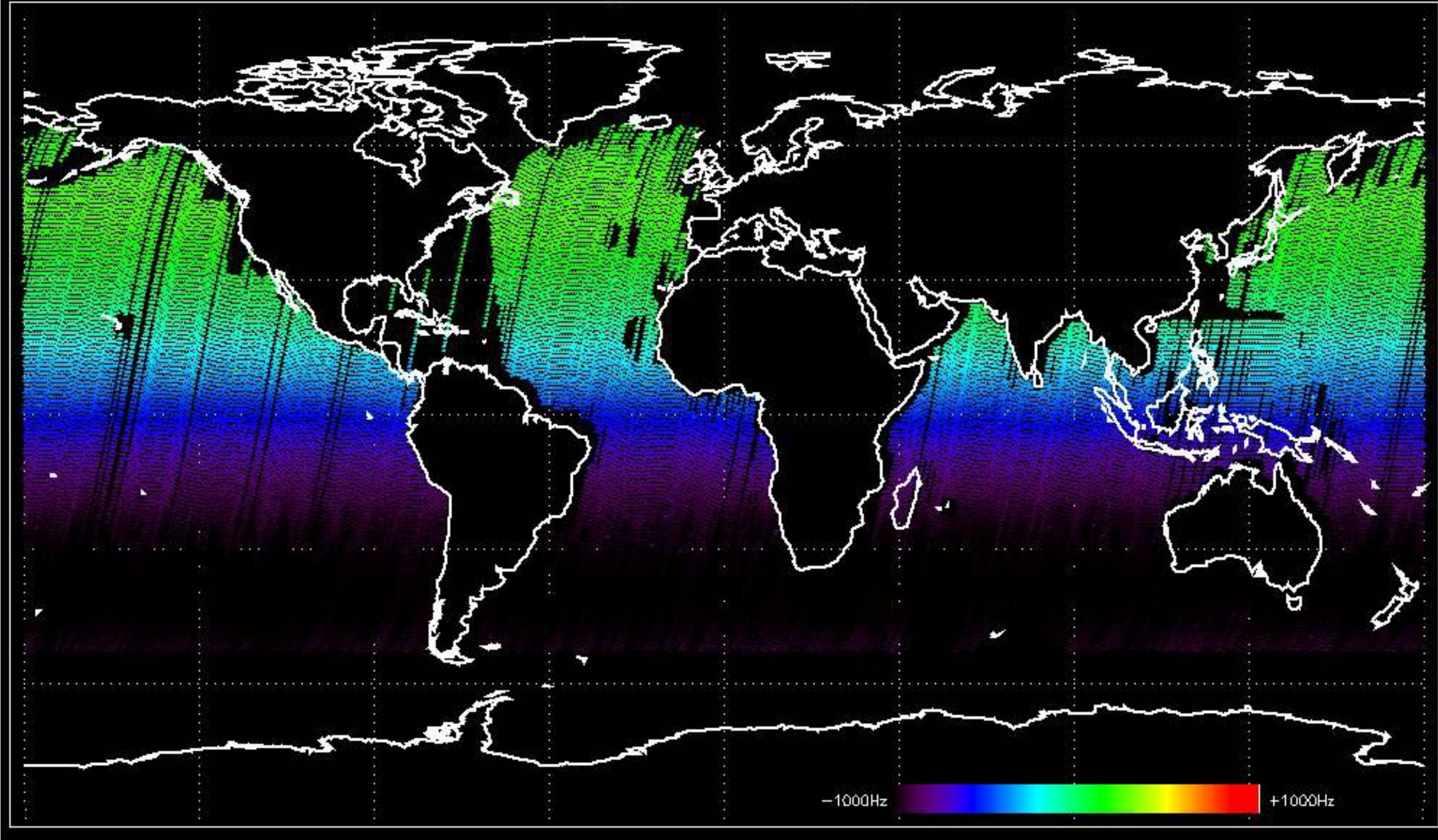


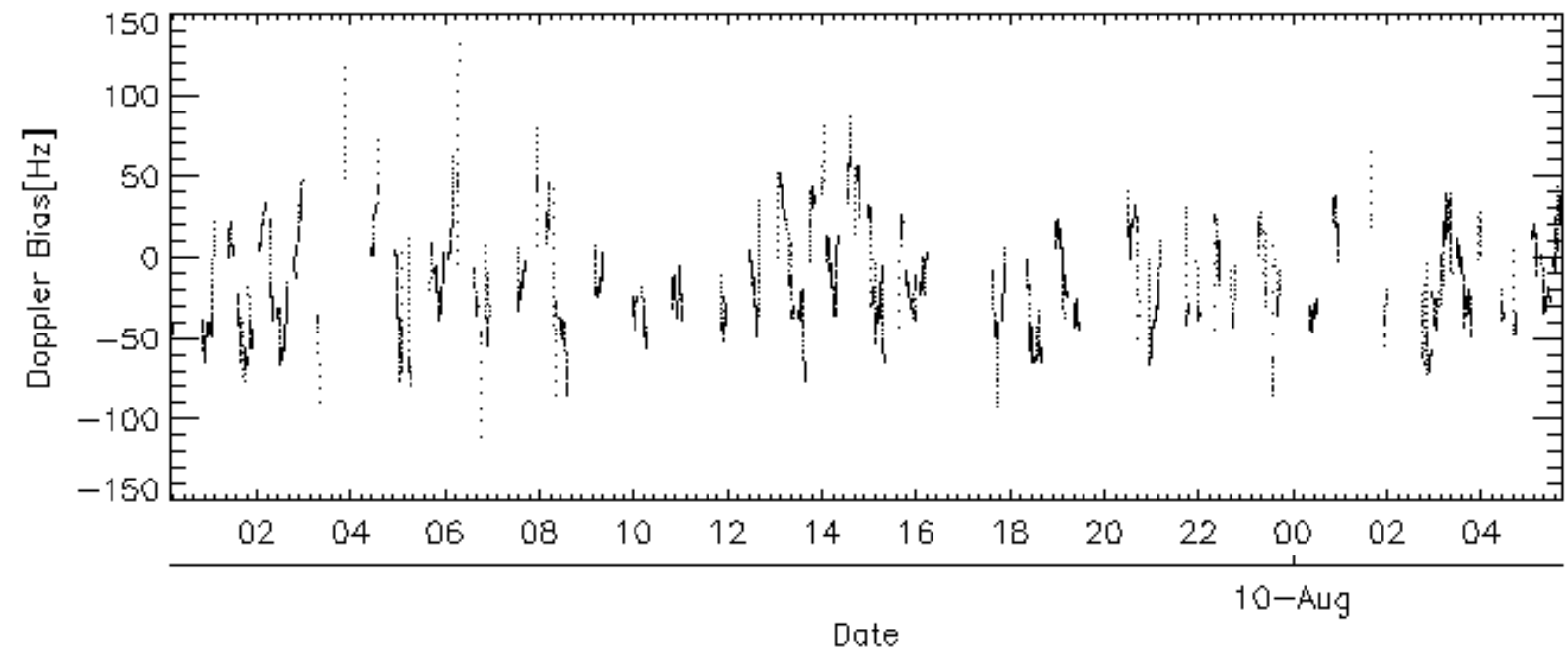
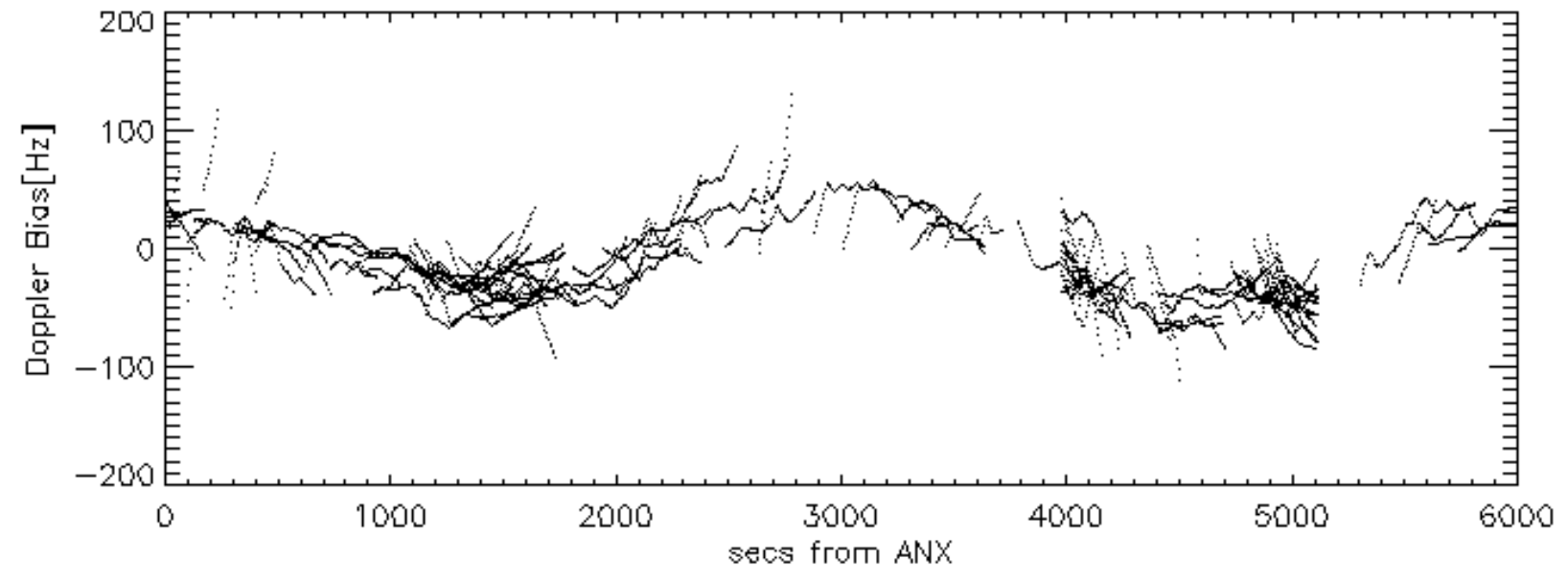
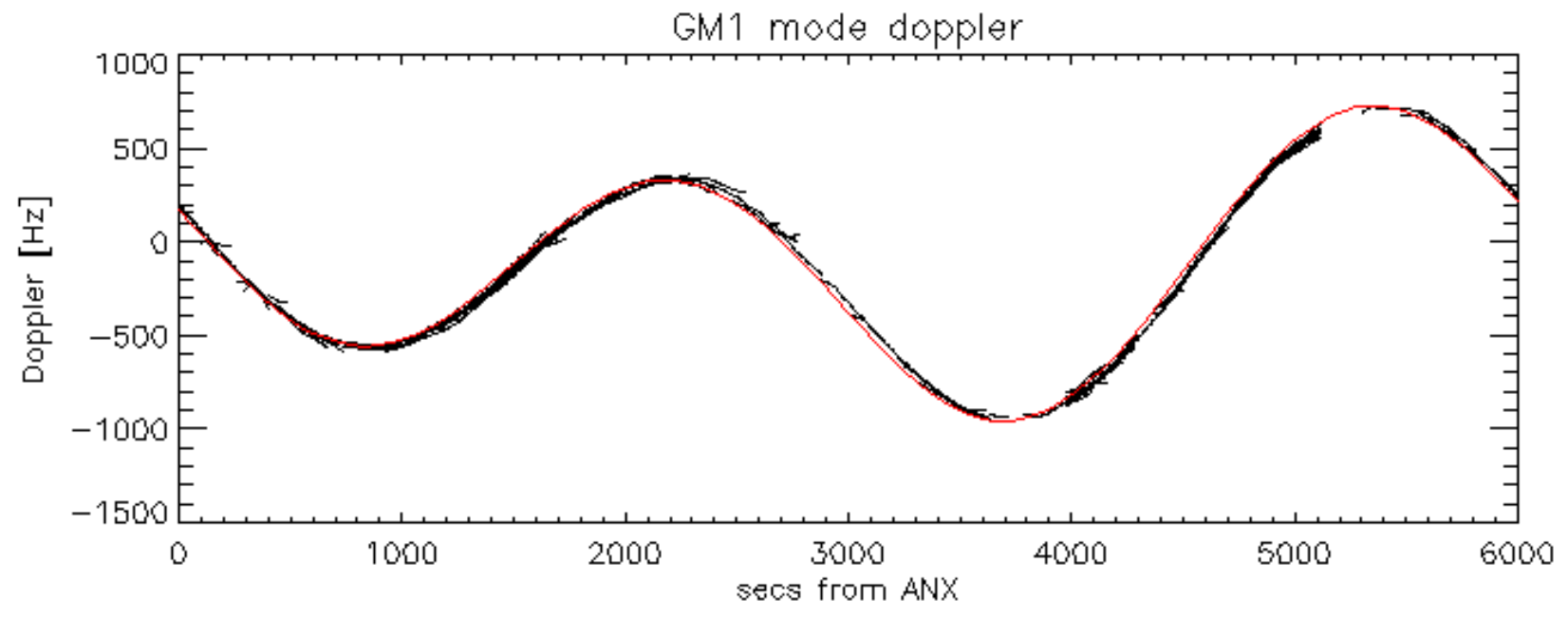
Doppler 'WVS' 'IS2' ascending



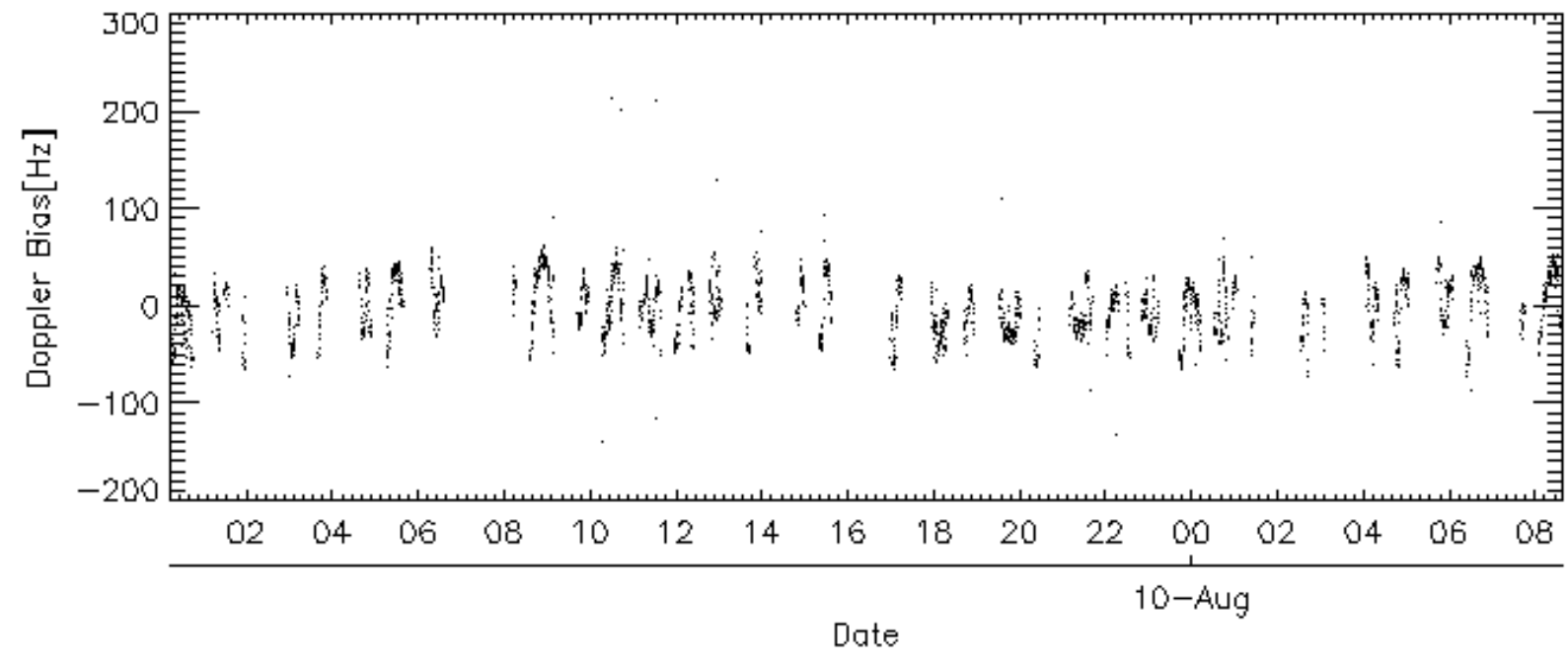
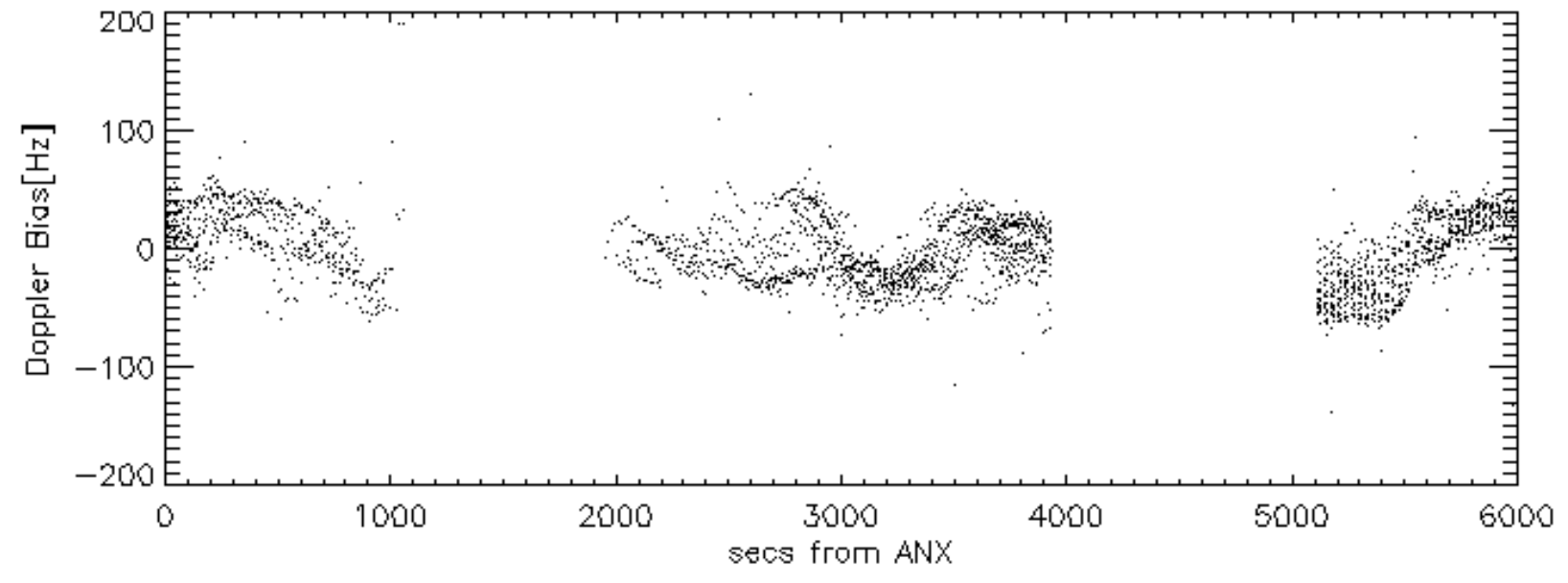
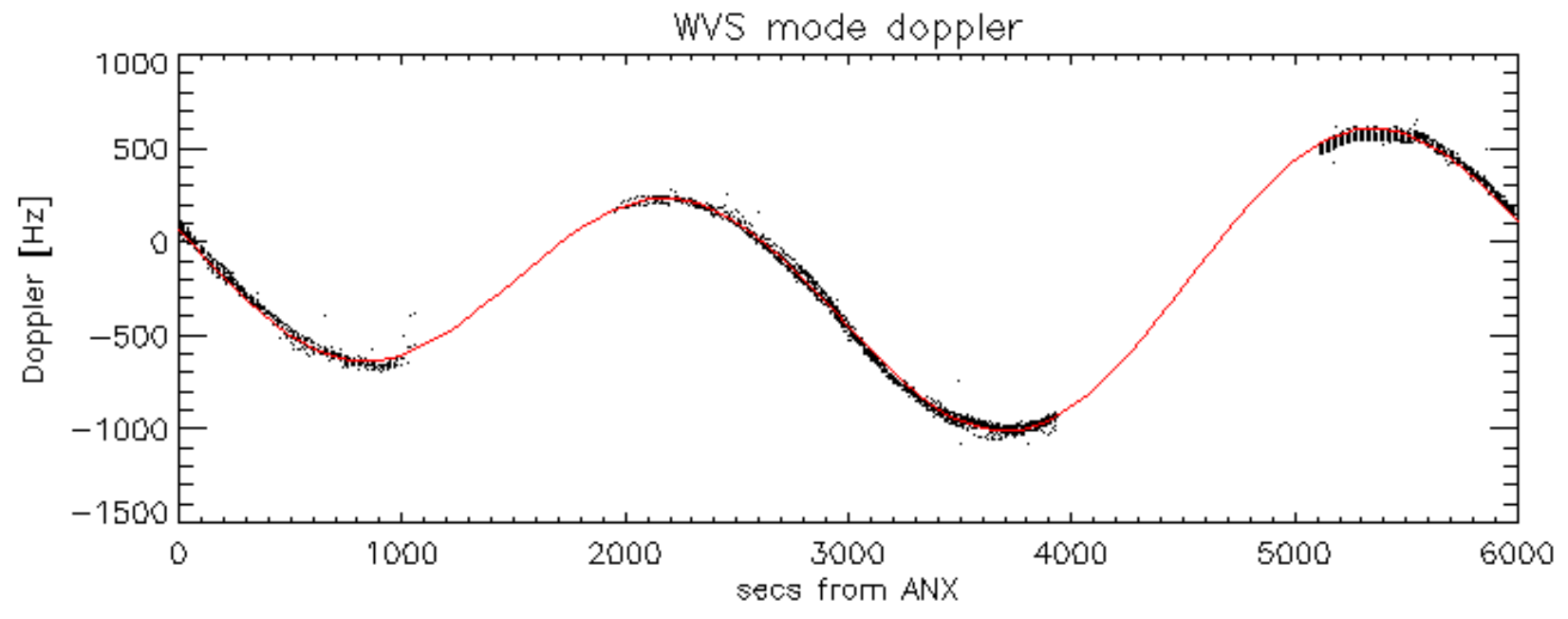


Doppler 'WVS' 'IS2' descending



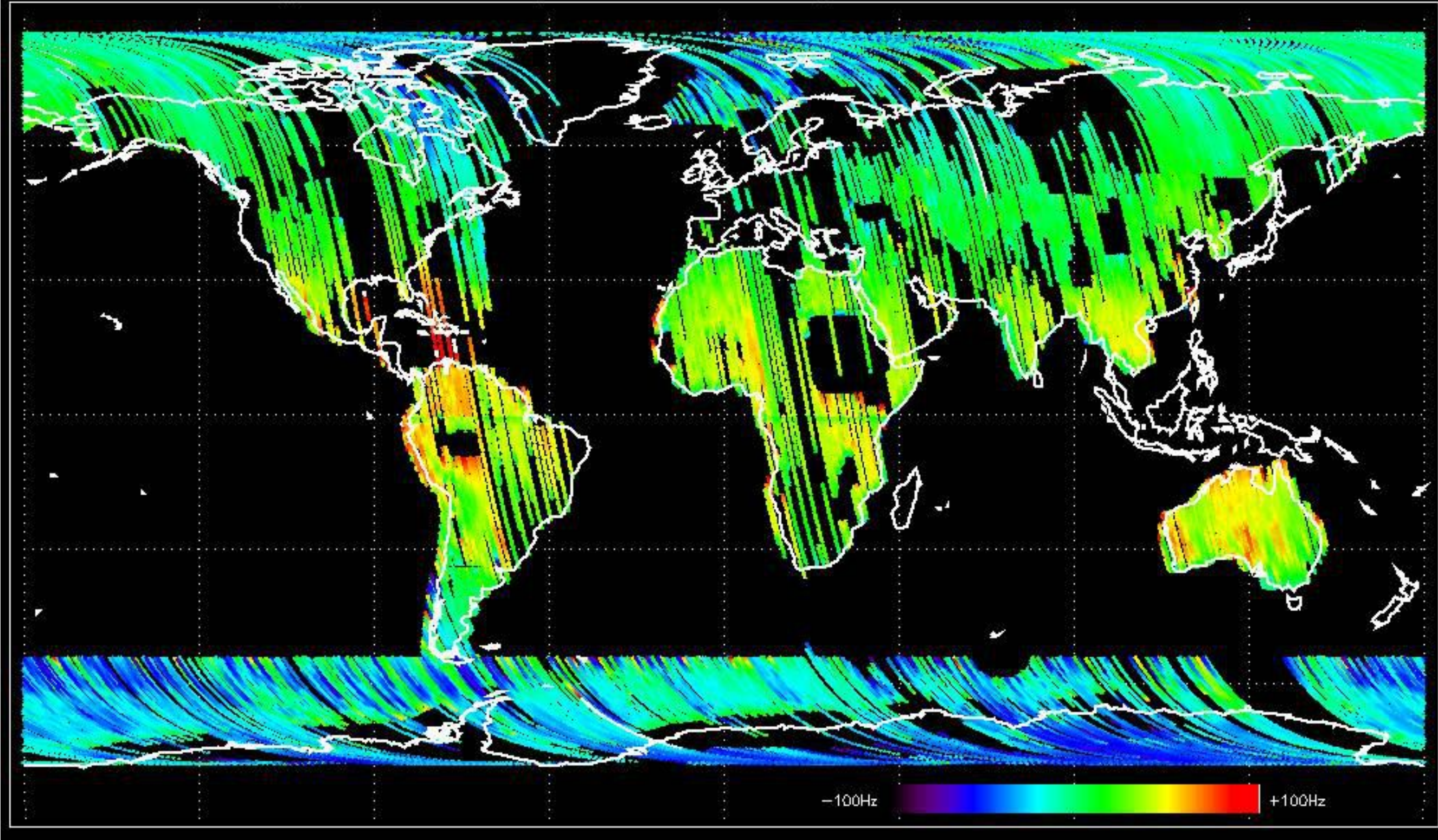






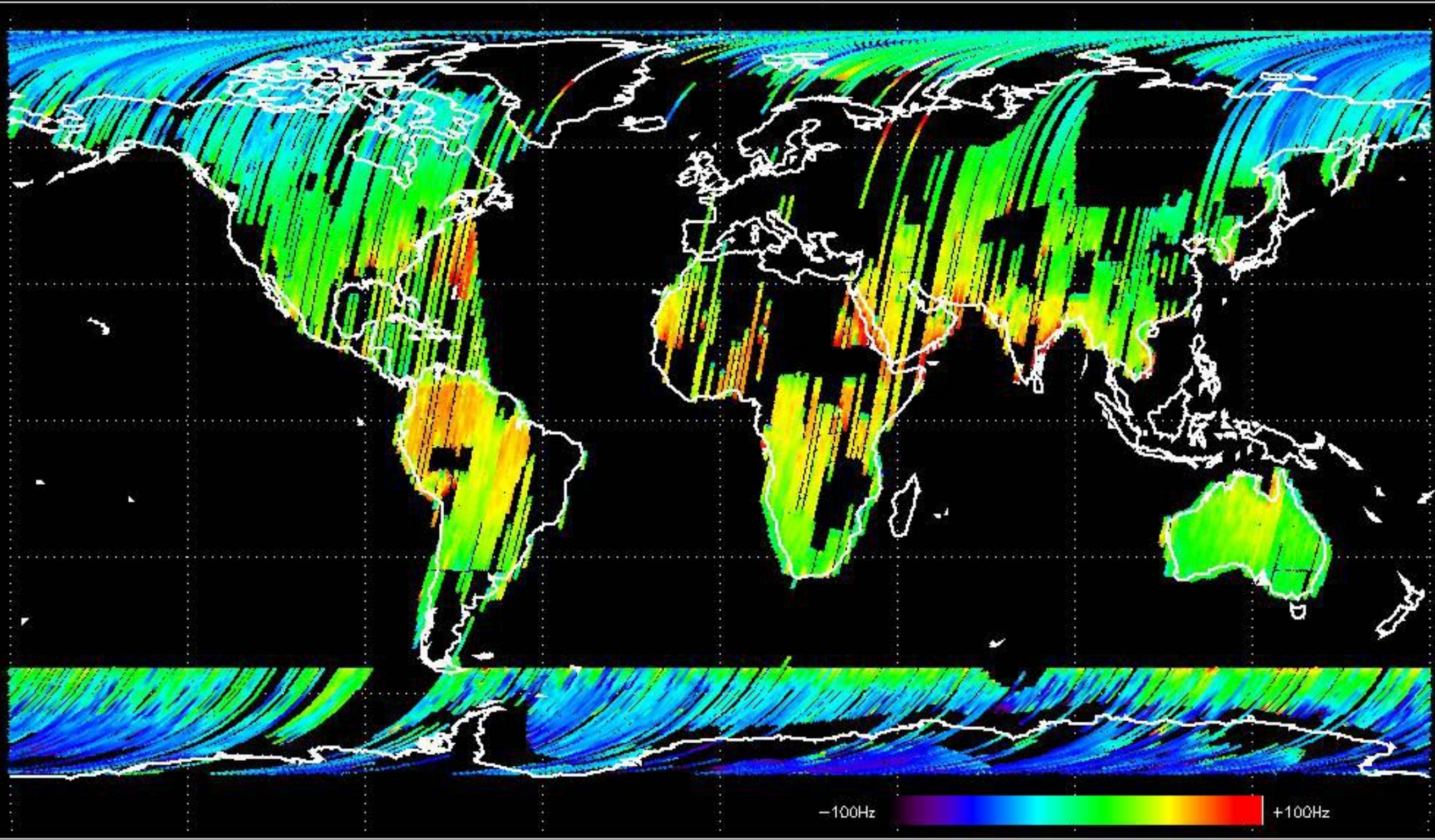


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.603825 Hz



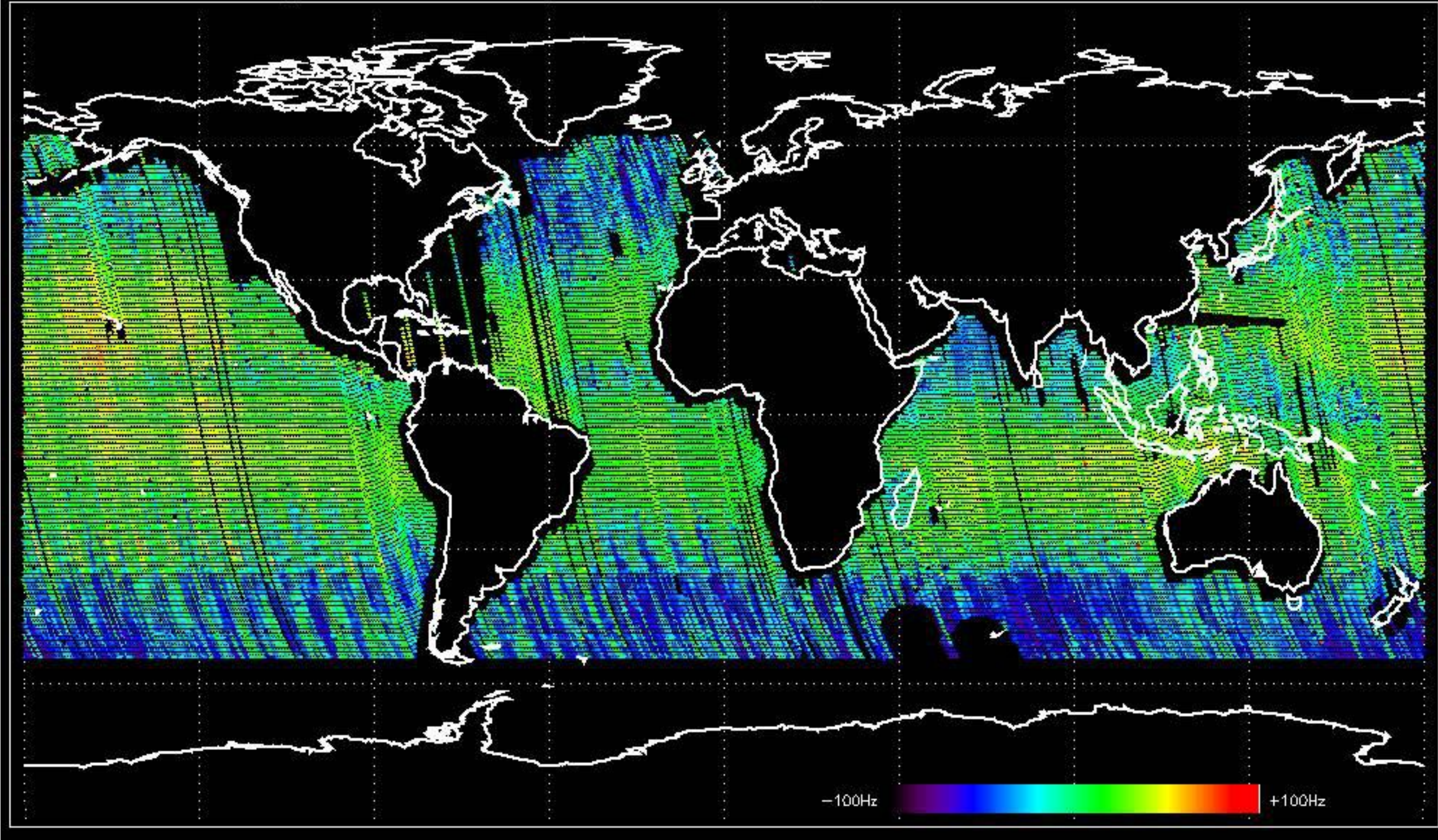


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.6851744 Hz



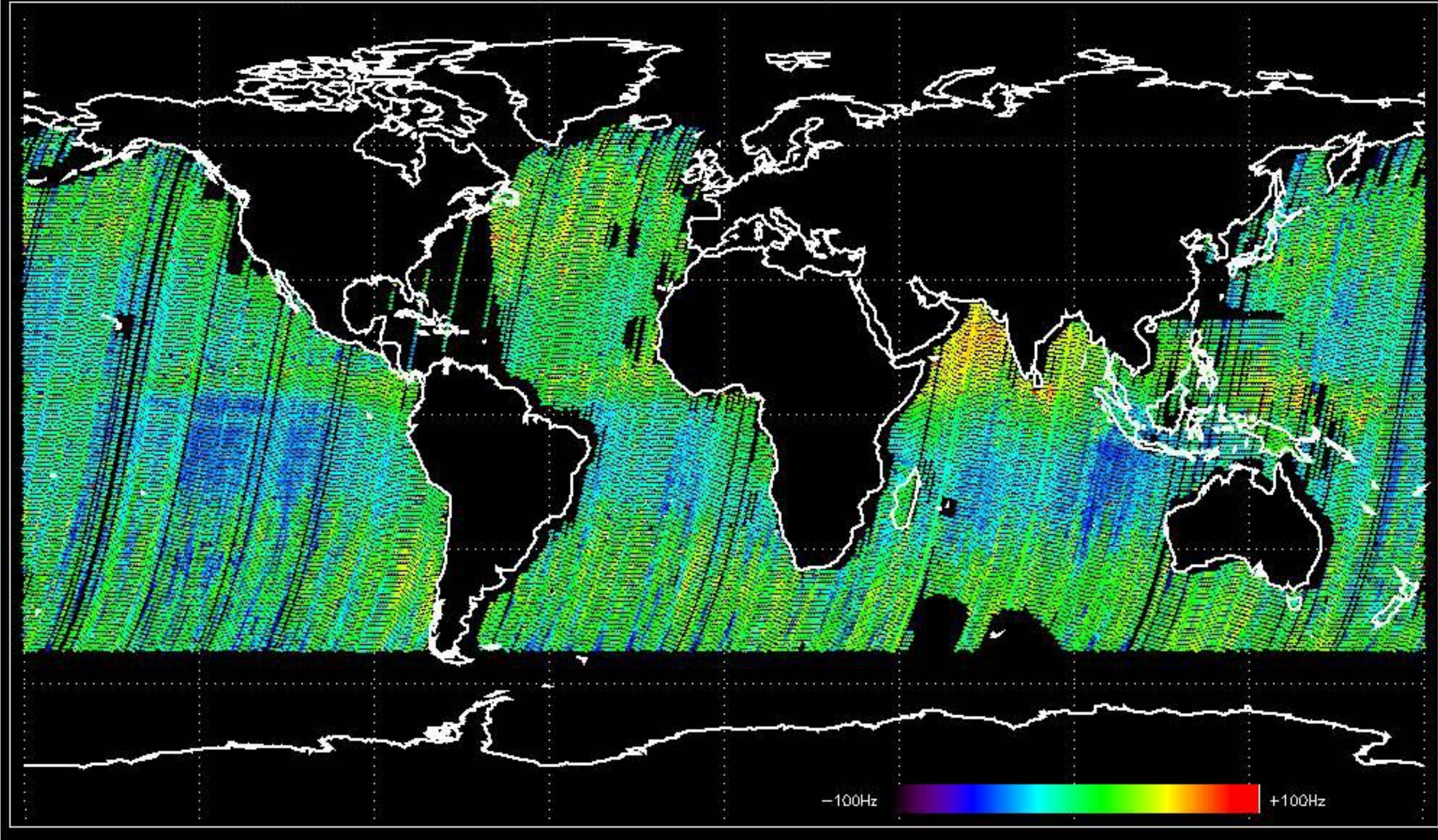


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -2.2720870 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.1345230 Hz





No anomalies observed on available MS products:



No anomalies observed.

















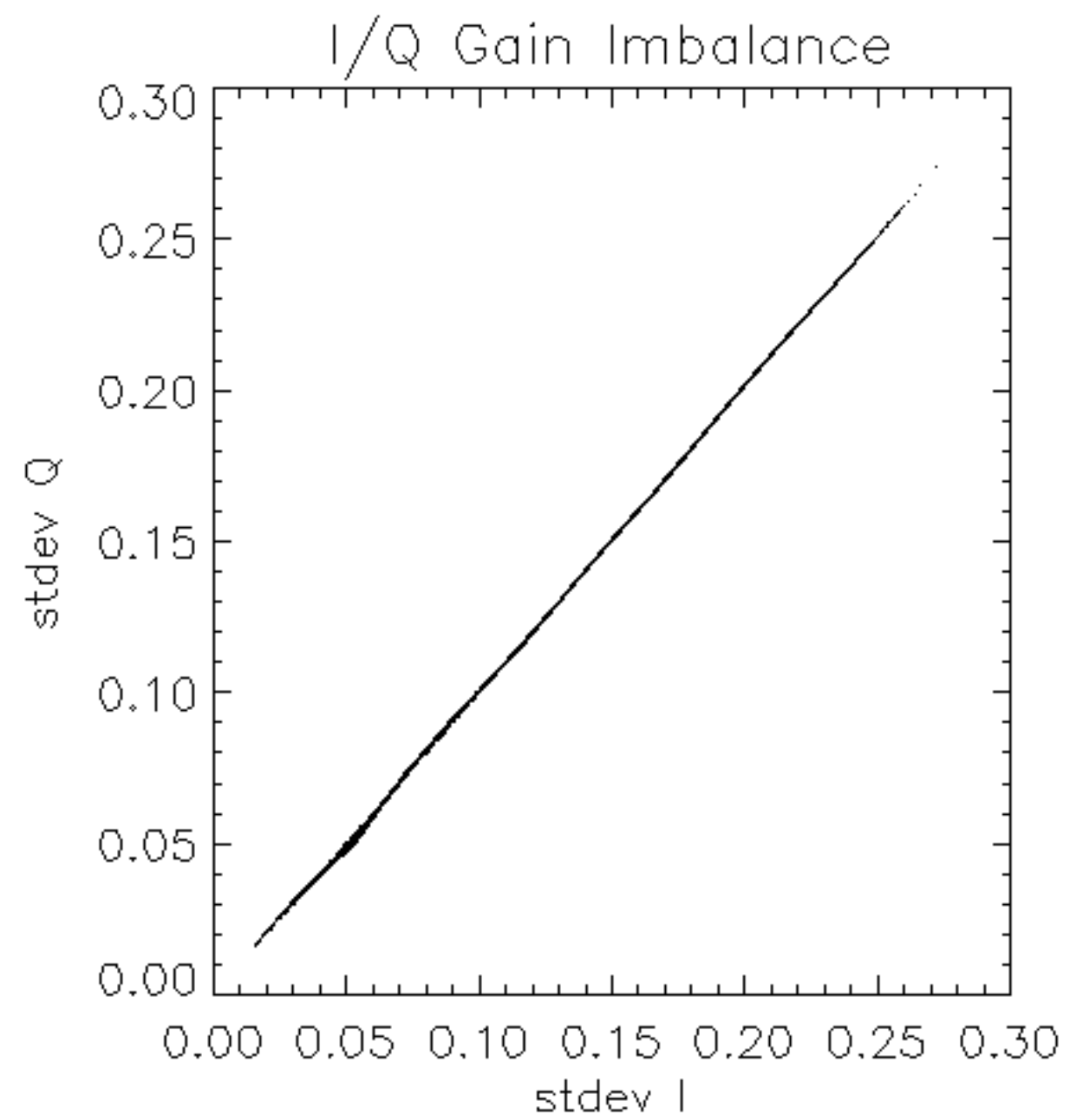


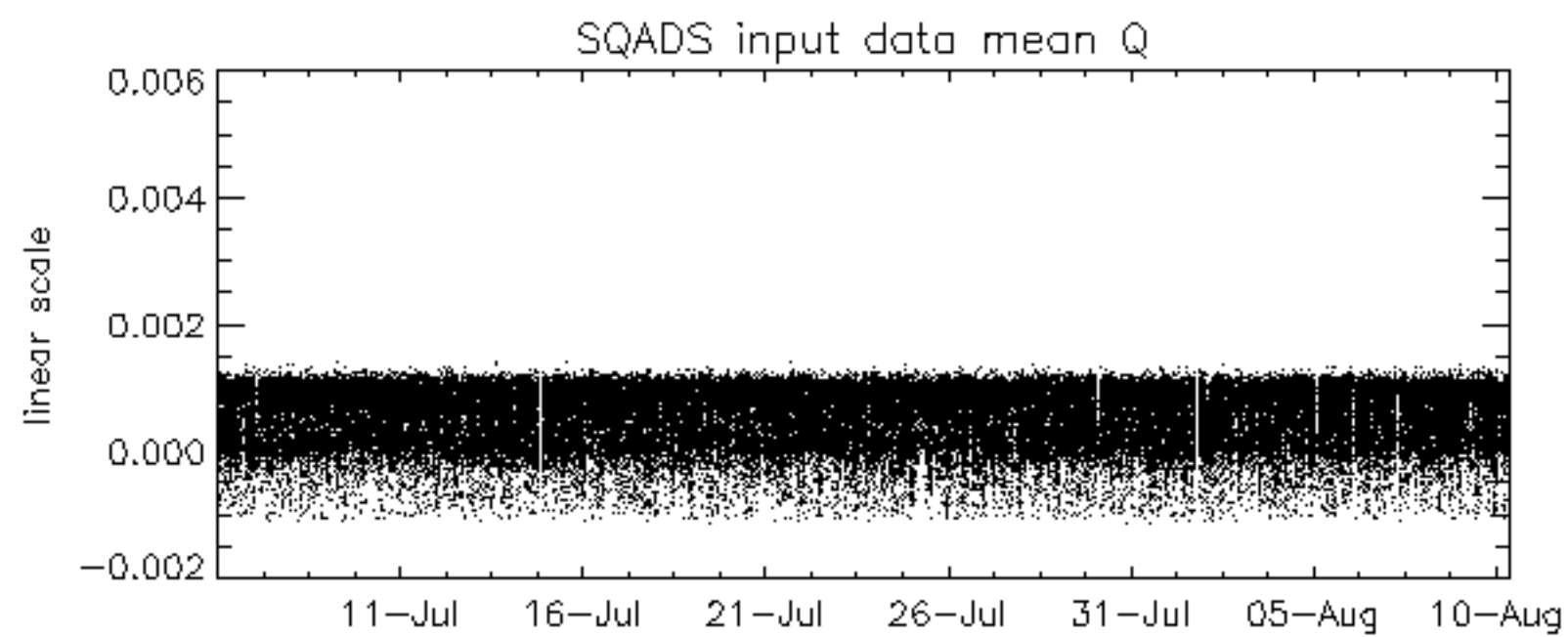
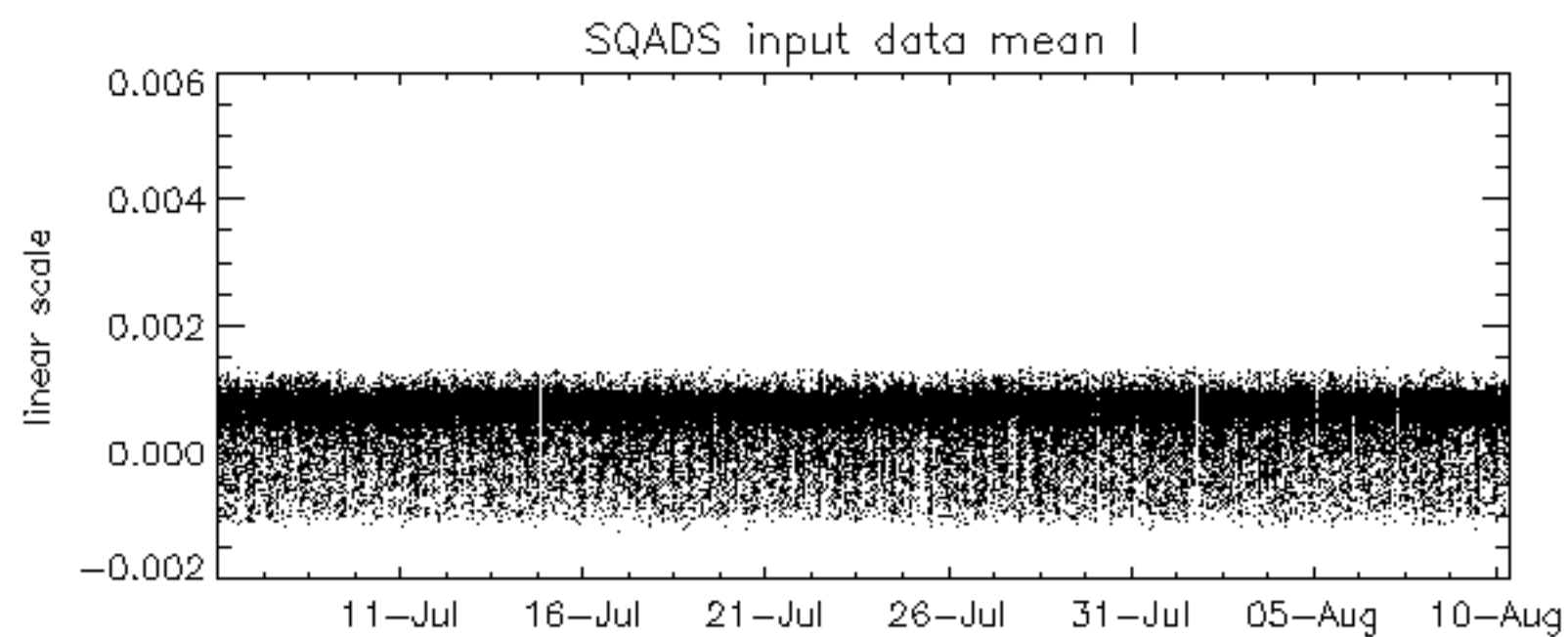
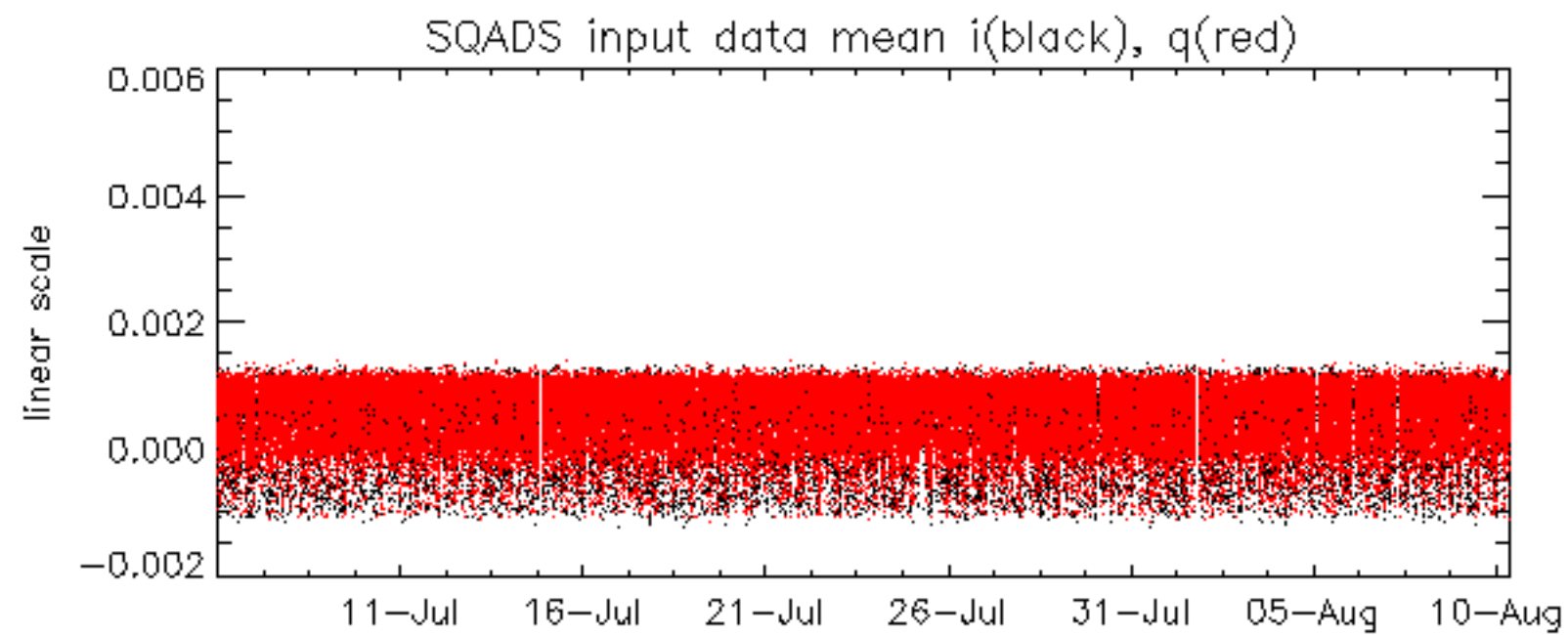


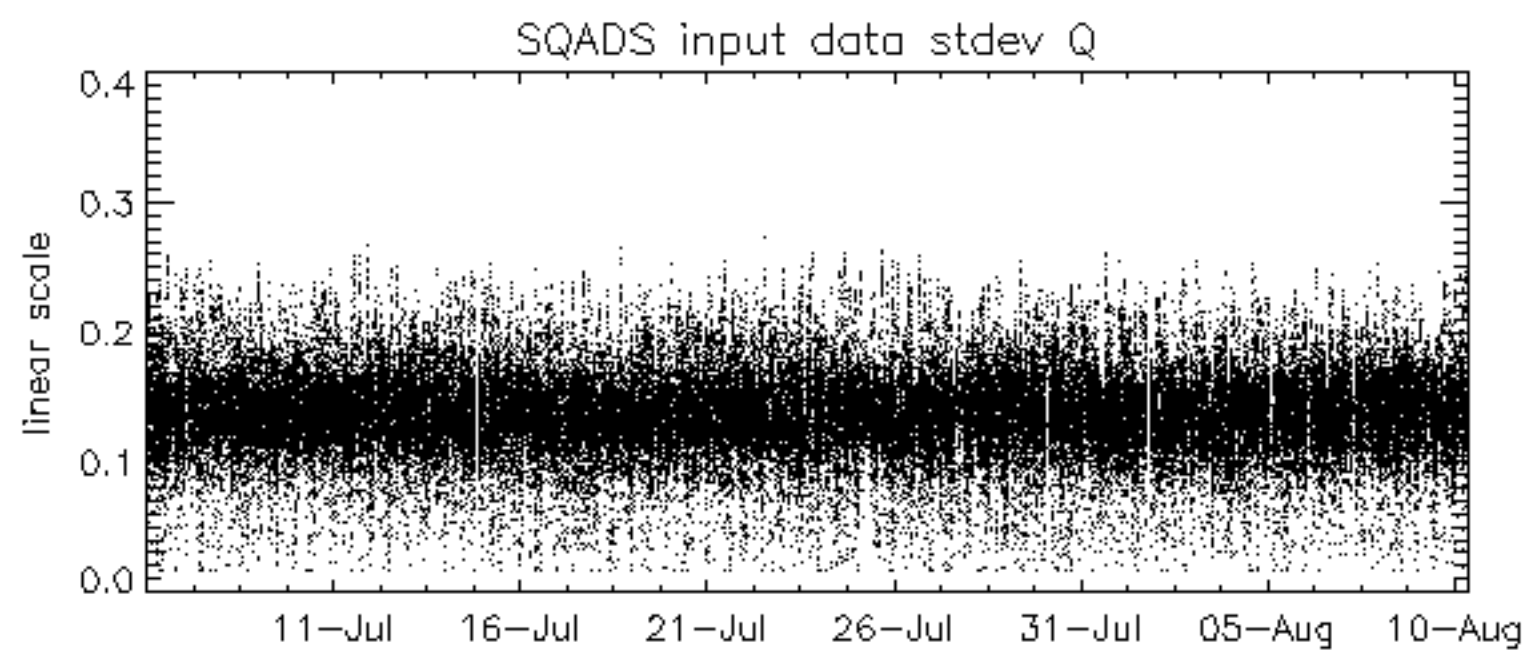
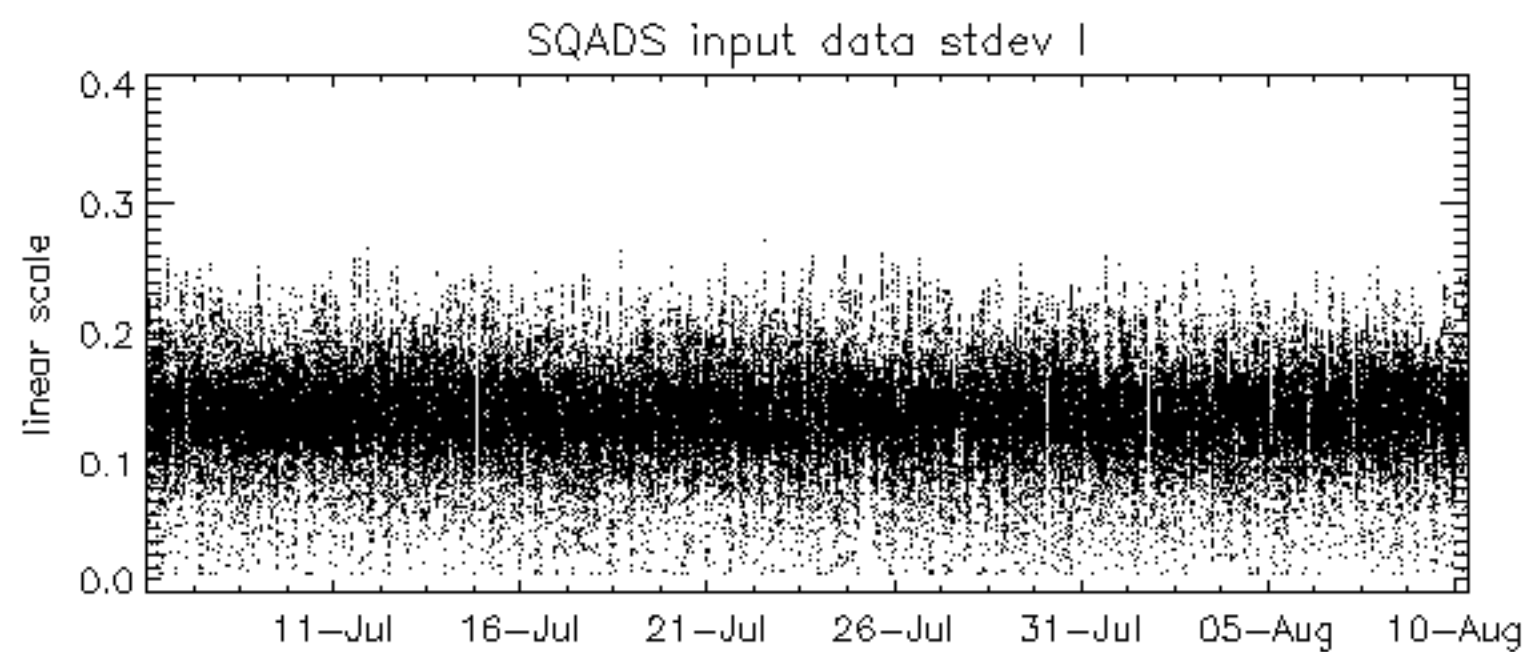
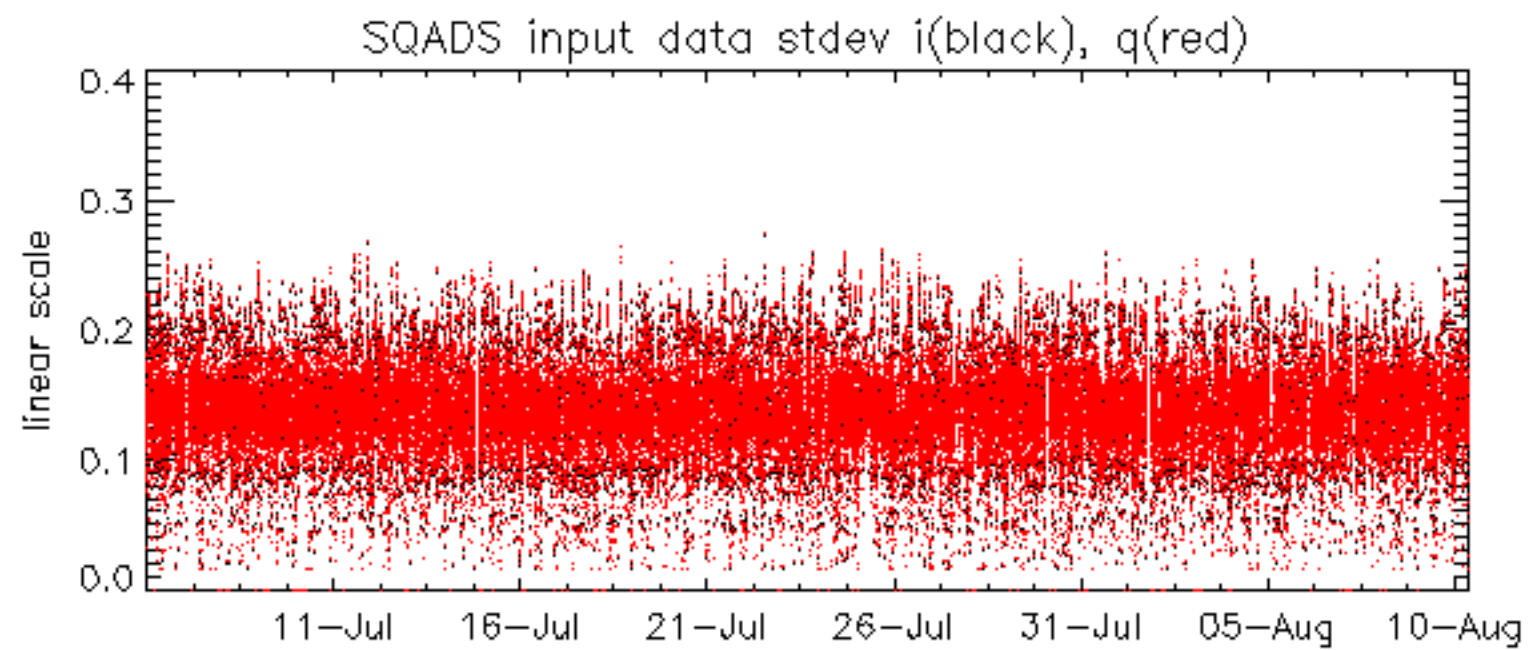






















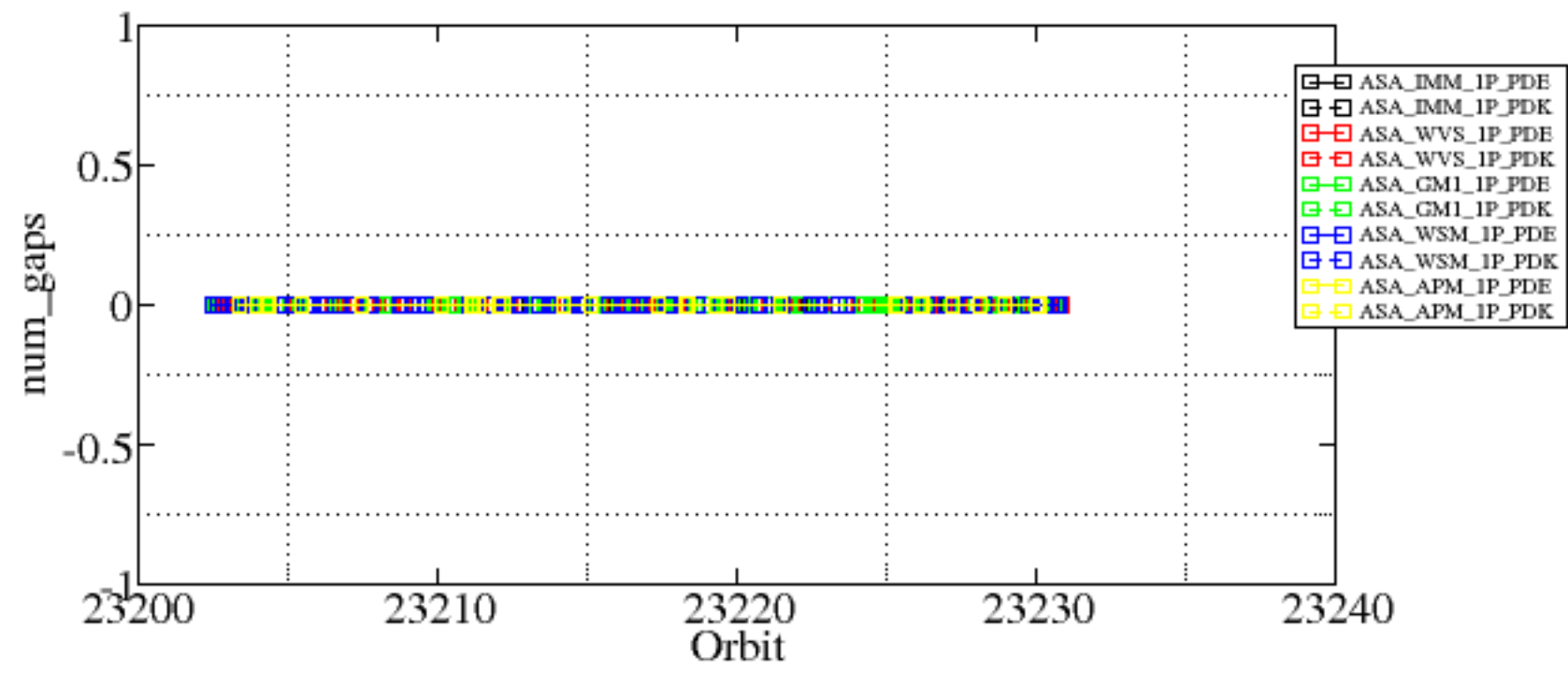




Summary of analysis for the last 3 days 2006080[890]

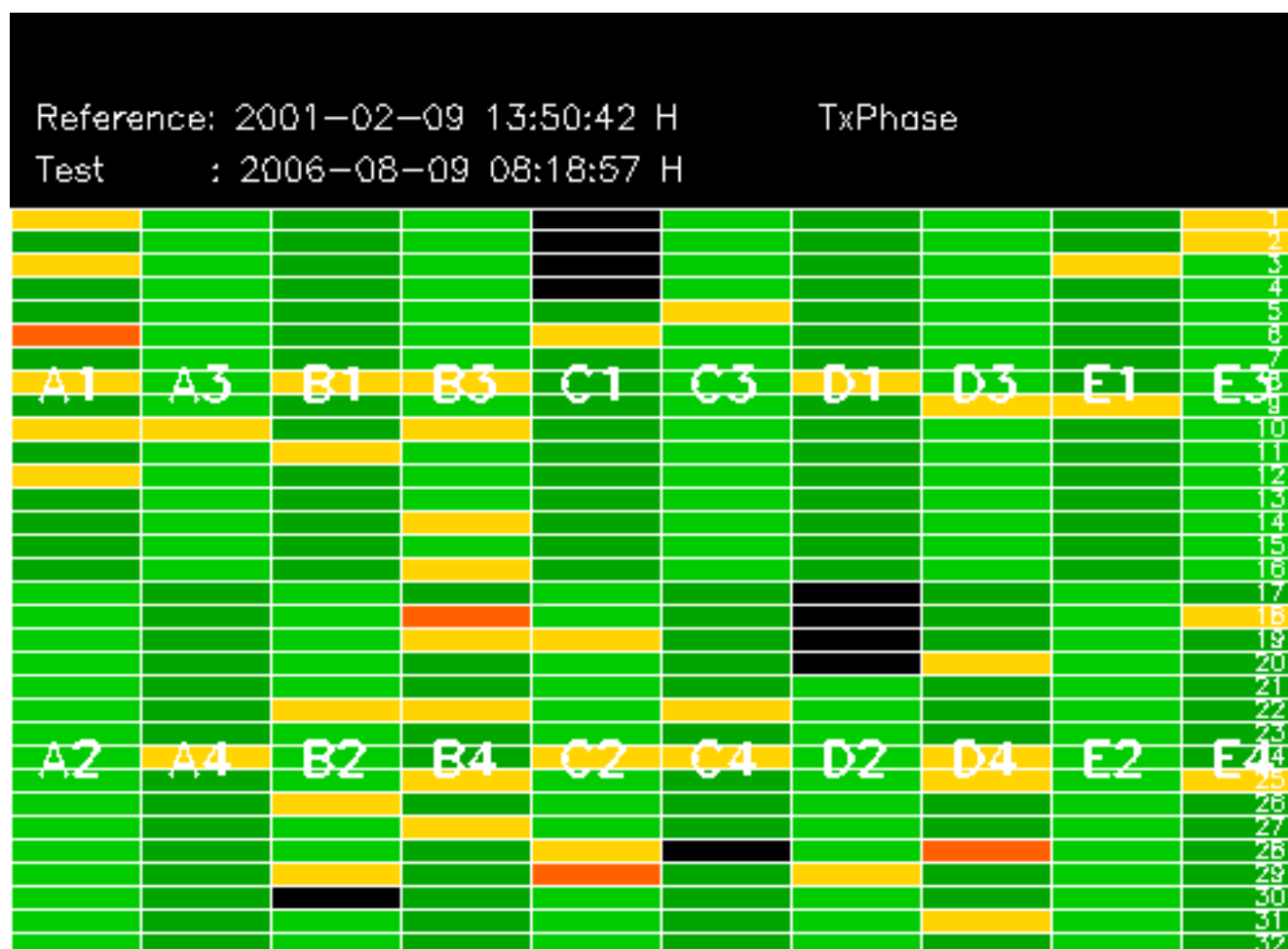
The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20060808_000918_00000852050_00102_23202_6545.N1	0	35
ASA_WSM_1PNPDE20060808_014653_000001462050_00103_23203_6563.N1	0	40
ASA_WSM_1PNPDE20060808_233741_000003292050_00116_23216_6720.N1	0	35
ASA_WSM_1PNPDE20060809_171625_000002252050_00127_23227_6841.N1	0	66











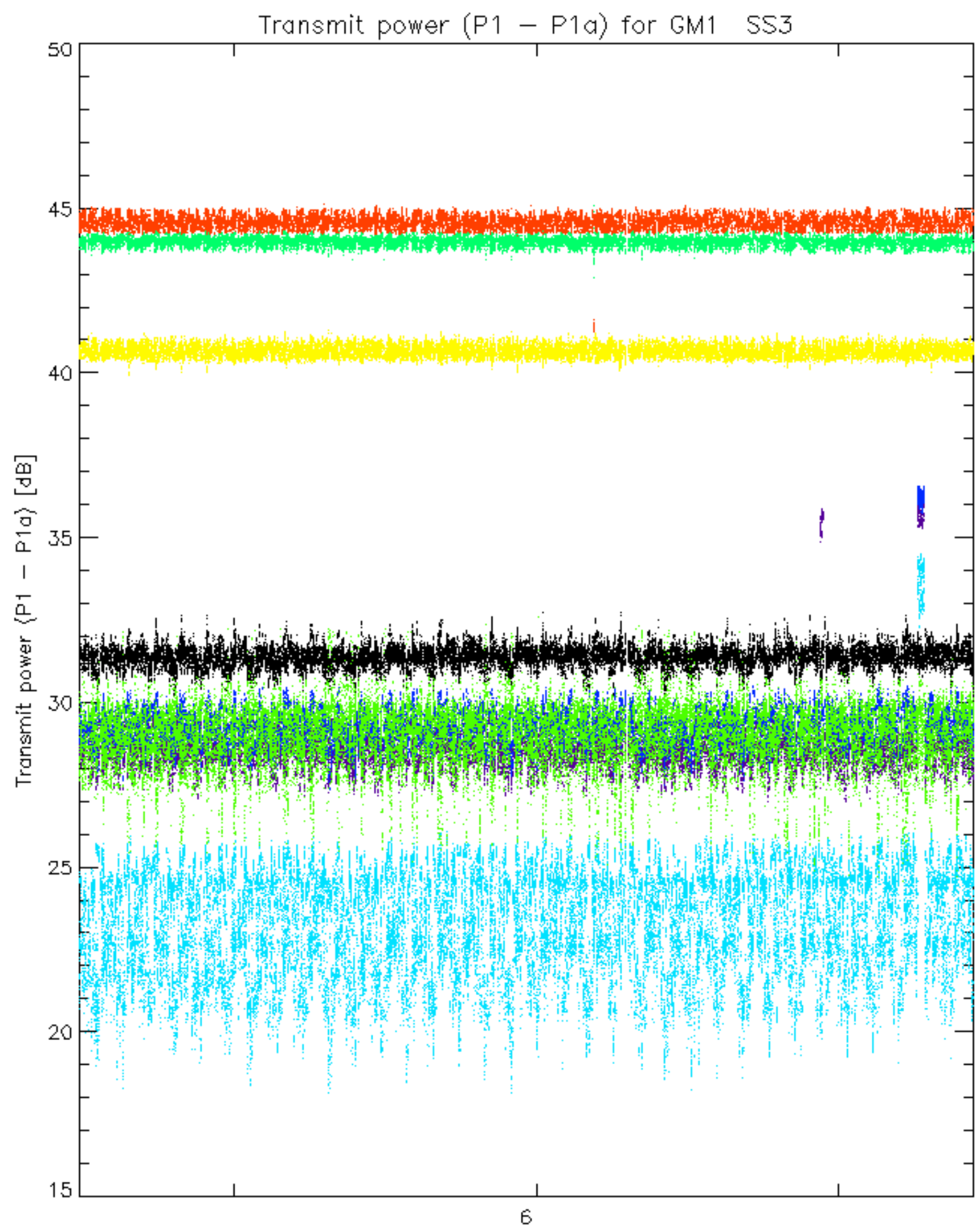




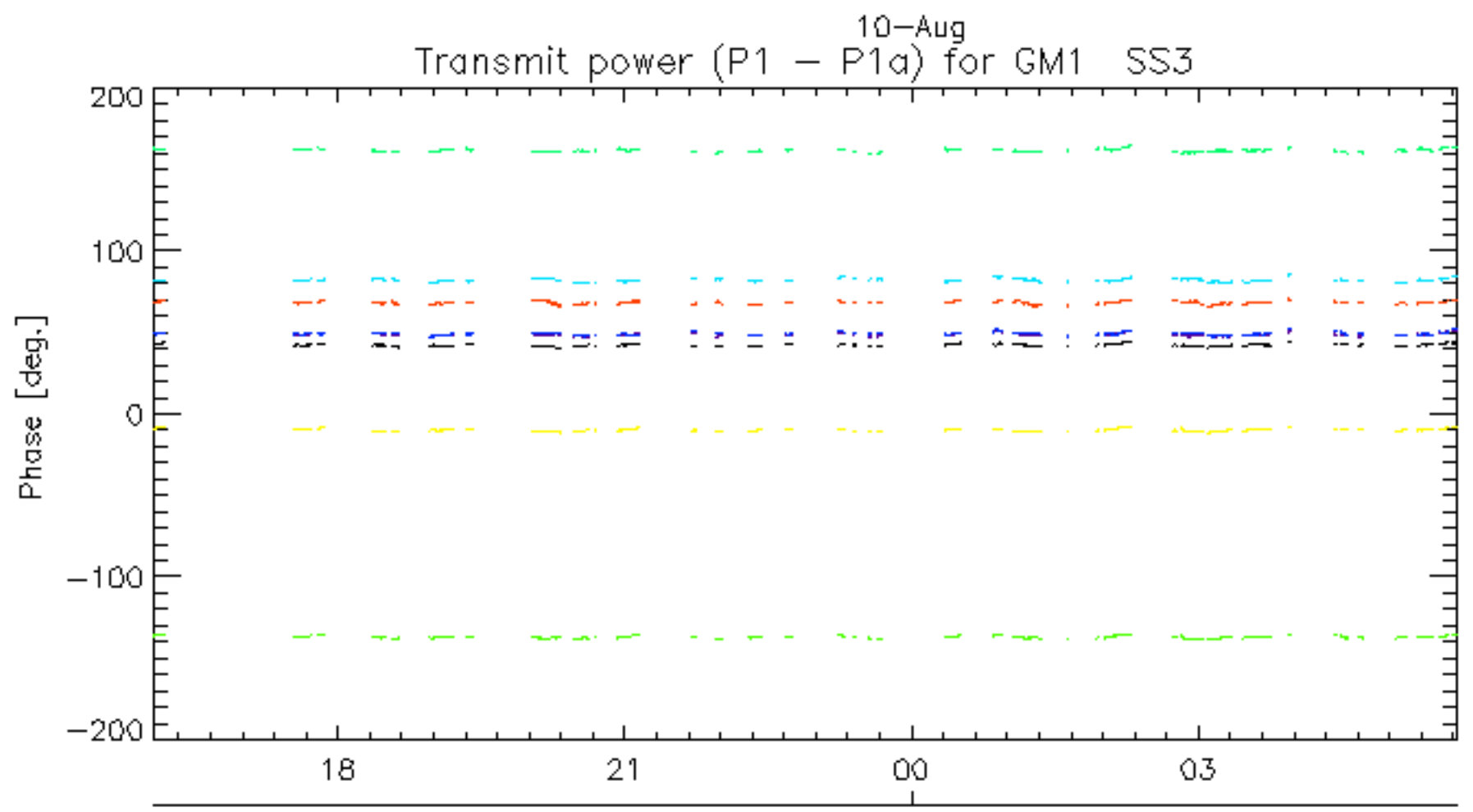
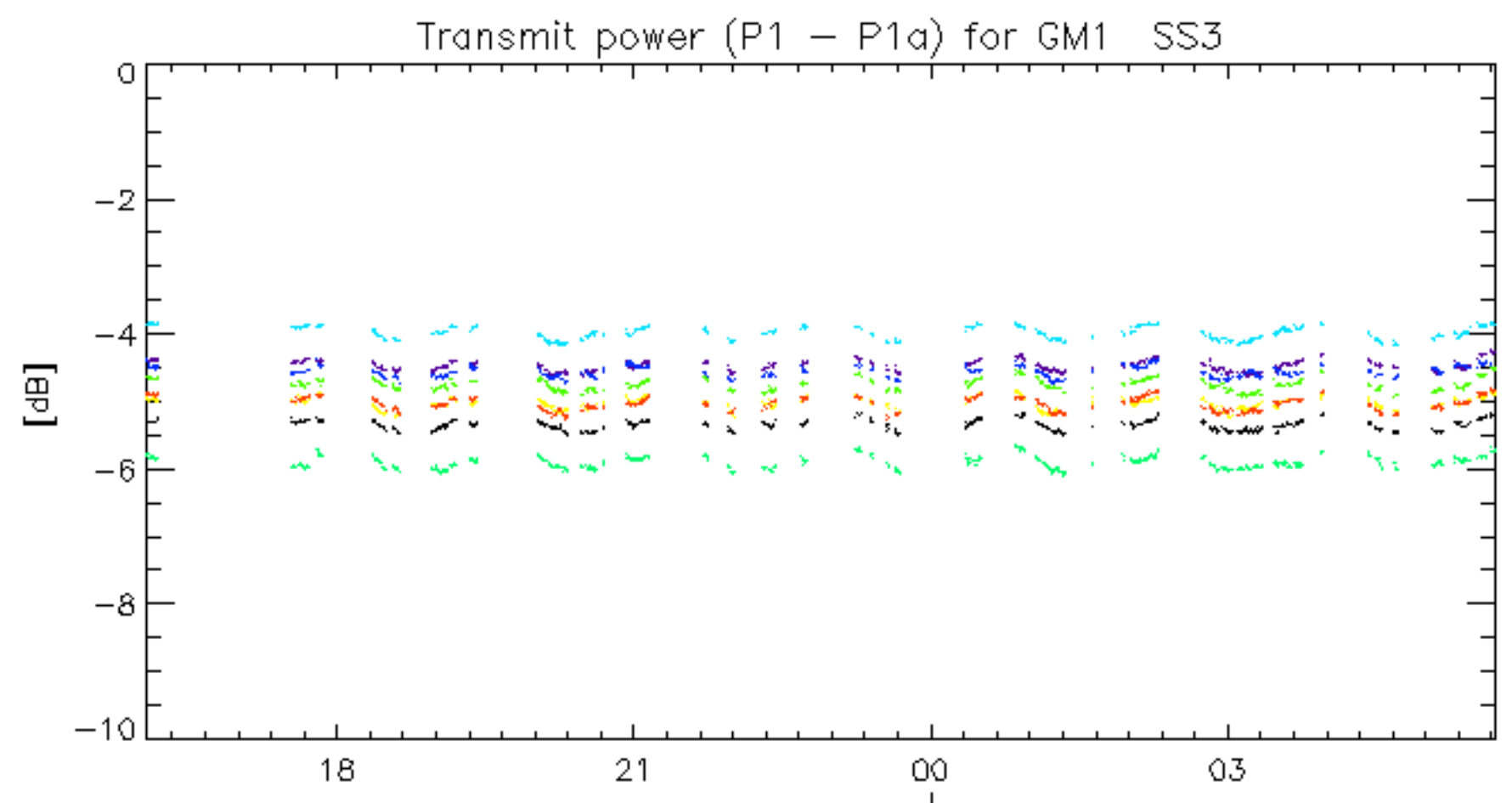






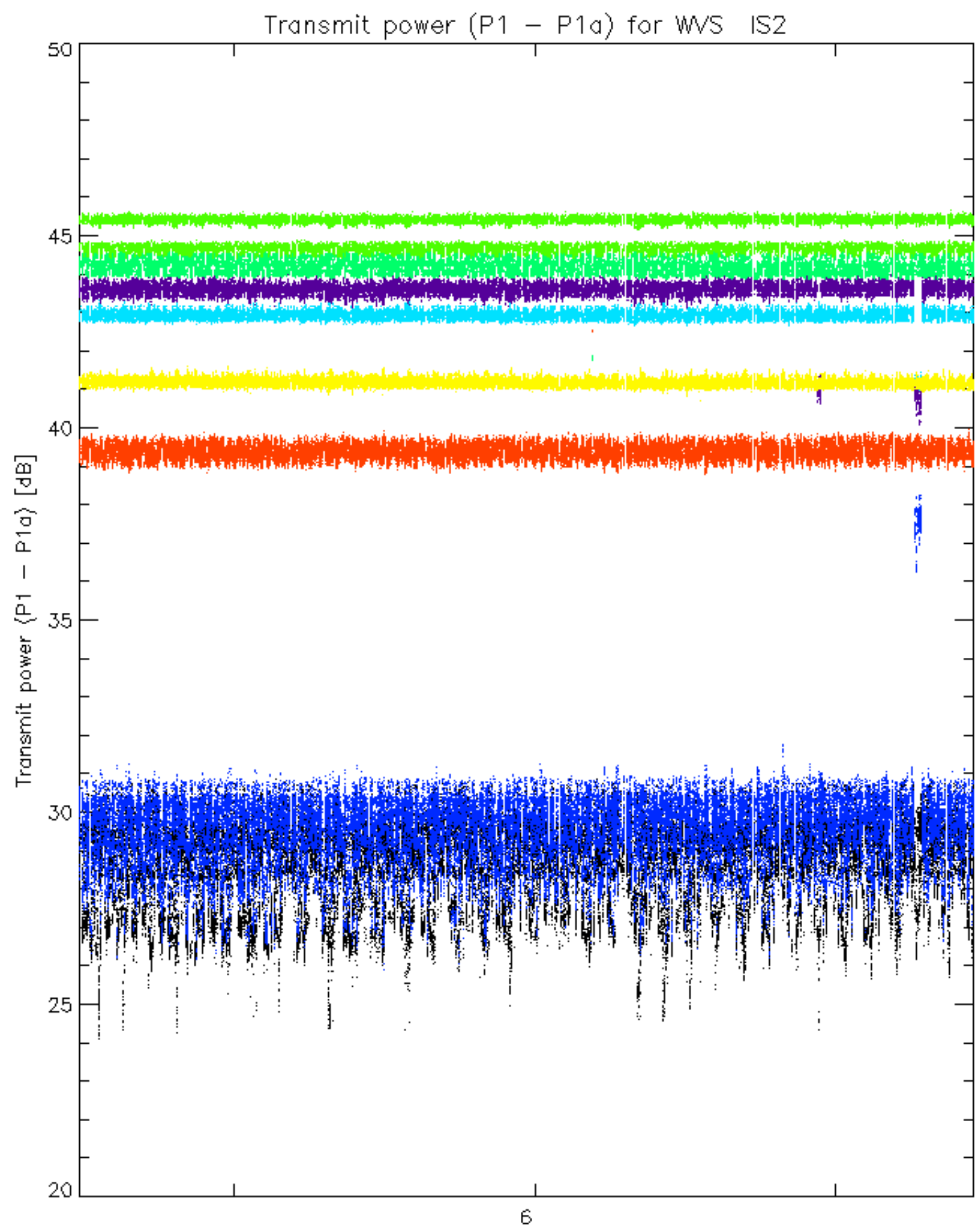


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

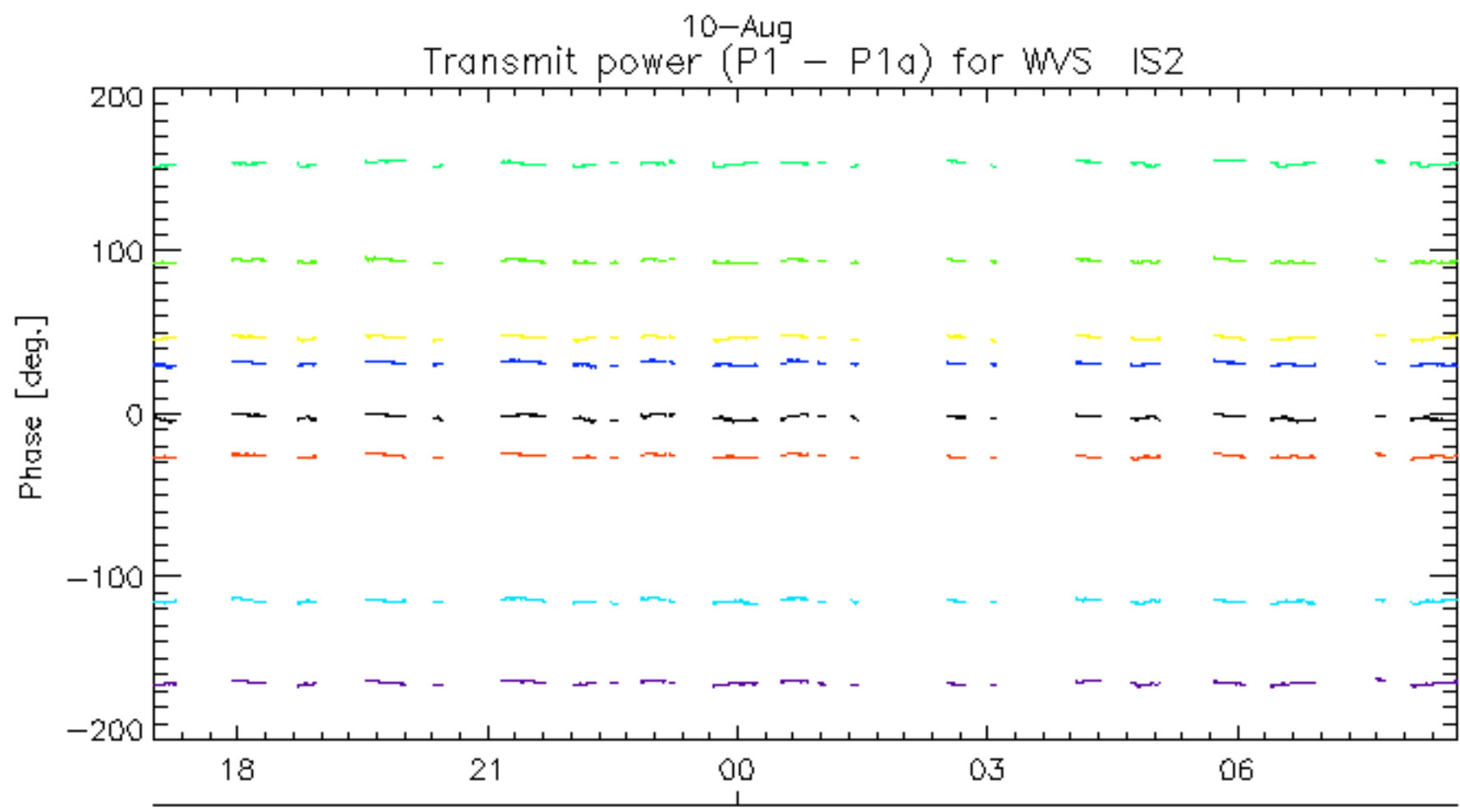
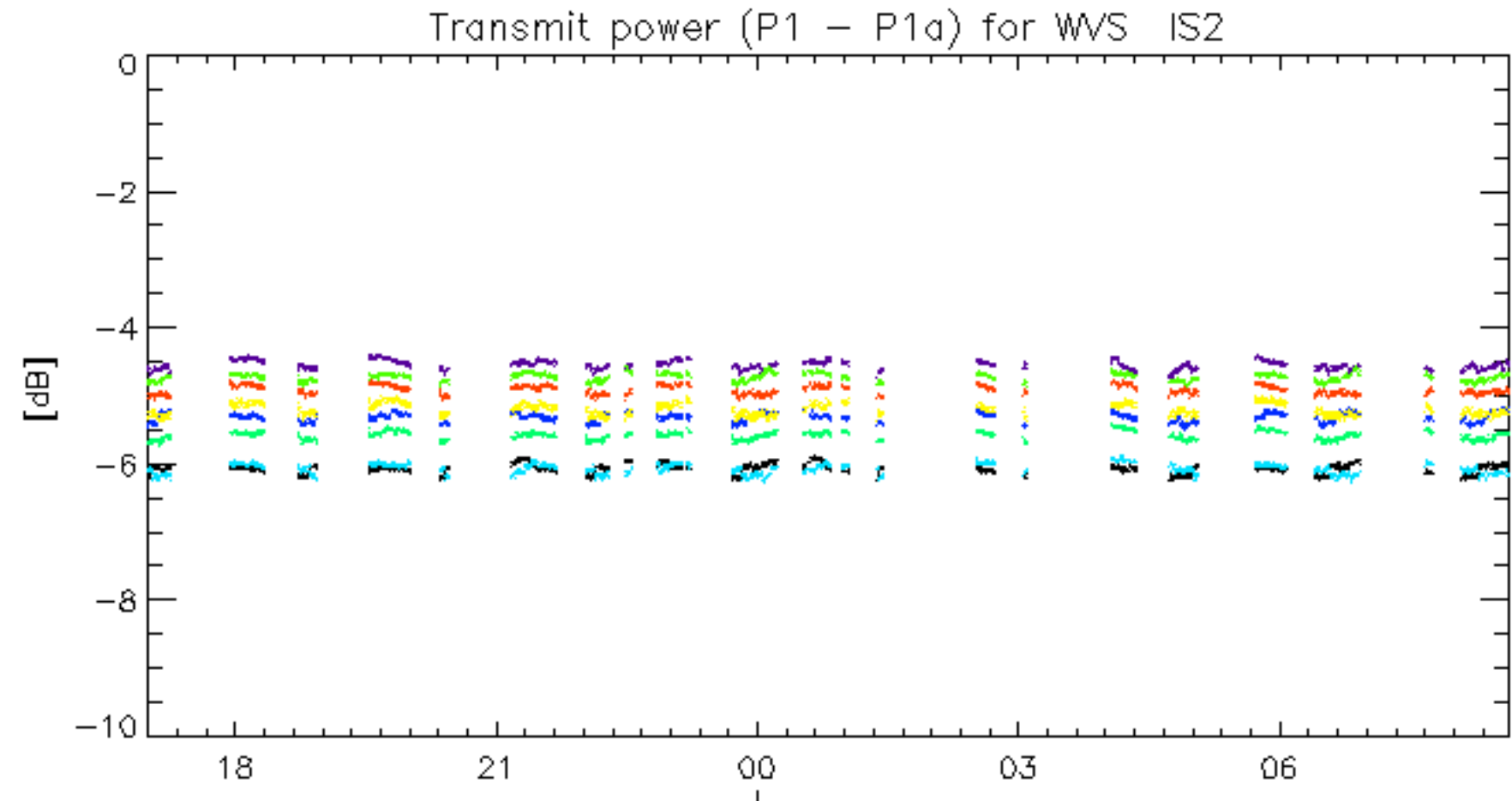


10-Aug  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



rows: **3** **7** **11** **15** **19** **22** **26** **30**

No unavailabilities during the reported period.