

# PRELIMINARY REPORT OF 060804

last update on Fri Aug 4 16:35:53 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 2006-08-03 00:00:00 to 2006-08-04 16:35:53

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	79	5	6	9
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	79	5	6	9
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	79	5	6	9
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	79	5	6	9

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	52	29	23	69
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	38	52	29	23	69
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	52	29	23	69
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	52	29	23	69

## 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	20060804 055515
H	20060803 062652

### 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
☒	☒
☒	☒
☒	☒
☒	☒

**4 - Internal calibration Results**

No anomalies observed.

**4.1 - Daily statistics**

**4.1.1 - Evolution for WVS**

Evolution of cal pulses for WVS
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☒

**4.1.2 - Evolution for GM1**

Evolution of cal pulses for GM1
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☒

**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	-3.935738	0.011518	-0.032973
7	P1	-3.100383	0.015838	0.003472
11	P1	-4.083266	0.013769	0.007367
15	P1	-6.174043	0.011452	0.002643
19	P1	-3.410543	0.009910	-0.058471
22	P1	-4.552191	0.010114	-0.024944
26	P1	-3.925086	0.020016	0.019322
30	P1	-5.763009	0.009455	0.002867
3	P1	-16.515547	0.304603	-0.121188
7	P1	-17.188074	0.106982	0.041219
11	P1	-16.970692	0.283034	0.086271
15	P1	-13.092942	0.145598	0.106790
19	P1	-14.469904	0.053577	-0.074280
22	P1	-15.997280	0.429491	0.095739
26	P1	-15.116696	0.235200	0.024563
30	P1	-17.096394	0.341392	0.012530

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.953079	0.086912	0.132232
7	P2	-21.899845	0.103610	0.084981
11	P2	-15.784683	0.119542	0.047487
15	P2	-7.124189	0.098843	0.026858
19	P2	-9.130379	0.090136	0.017707
22	P2	-18.149132	0.085807	0.002284
26	P2	-16.399630	0.092375	-0.002823
30	P2	-19.514364	0.092150	0.048147

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173450	0.003074	0.005177
7	P3	-8.173450	0.003074	0.005177
11	P3	-8.173450	0.003074	0.005177
15	P3	-8.173450	0.003074	0.005177
19	P3	-8.173450	0.003074	0.005177
22	P3	-8.173450	0.003074	0.005177
26	P3	-8.173450	0.003074	0.005177
30	P3	-8.173450	0.003074	0.005177

**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	-3.812011	0.022397	-0.070228
7	P1	-2.556167	0.007987	0.030959
11	P1	-2.855557	0.014116	0.017480
15	P1	-3.576748	0.029190	-0.024906
19	P1	-3.423510	0.024444	-0.025153
22	P1	-5.087153	0.019895	0.017778
26	P1	-5.860545	0.015969	-0.006156
30	P1	-5.197294	0.033226	-0.007104
3	P1	-11.599625	0.077087	-0.111301
7	P1	-9.966327	0.034909	0.038810
11	P1	-10.248049	0.055841	-0.005328
15	P1	-10.756486	0.144829	0.019506
19	P1	-15.555874	0.503951	-0.100652
22	P1	-20.916050	1.264868	0.049503

26	P1	-16.266611	0.384504	0.211084
30	P1	-17.936106	0.410962	-0.142834

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.586071	0.070258	0.187540
7	P2	-22.372295	0.122062	0.143935
11	P2	-11.035494	0.041448	0.073201
15	P2	-4.905001	0.045101	0.037640
19	P2	-6.870164	0.040503	0.024171
22	P2	-8.192812	0.035836	0.013566
26	P2	-24.181652	0.059993	0.014681
30	P2	-22.004318	0.048591	0.048190

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.012188	0.003753	0.010617
7	P3	-8.012173	0.003762	0.010615
11	P3	-8.012109	0.003769	0.010163
15	P3	-8.012211	0.003762	0.010245
19	P3	-8.012149	0.003766	0.010393
22	P3	-8.012278	0.003753	0.010343
26	P3	-8.012198	0.003752	0.010360
30	P3	-8.012130	0.003760	0.010272

## 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	0.000560362
	stdev	1.72279e-07
MEAN Q	mean	0.000535236
	stdev	2.15714e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137492
	stdev	0.00109766
STDEV Q	mean	0.137849
	stdev	0.00111545



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006080[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_1PNPDE20060802_004523_000001932050_00016_23116_2770.N1	1	0
ASA_IMM_1PNPDE20060802_010204_000000692050_00017_23117_2773.N1	1	0
ASA_IMM_1PNPDE20060802_155516_000000502050_00026_23126_2816.N1	1	0
ASA_IMM_1PNPDE20060804_054400_000000352050_00048_23148_2915.N1	1	0
ASA_WSM_1PNPDE20060802_113753_000000852050_00023_23123_5463.N1	0	70



## 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"/>	



### 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

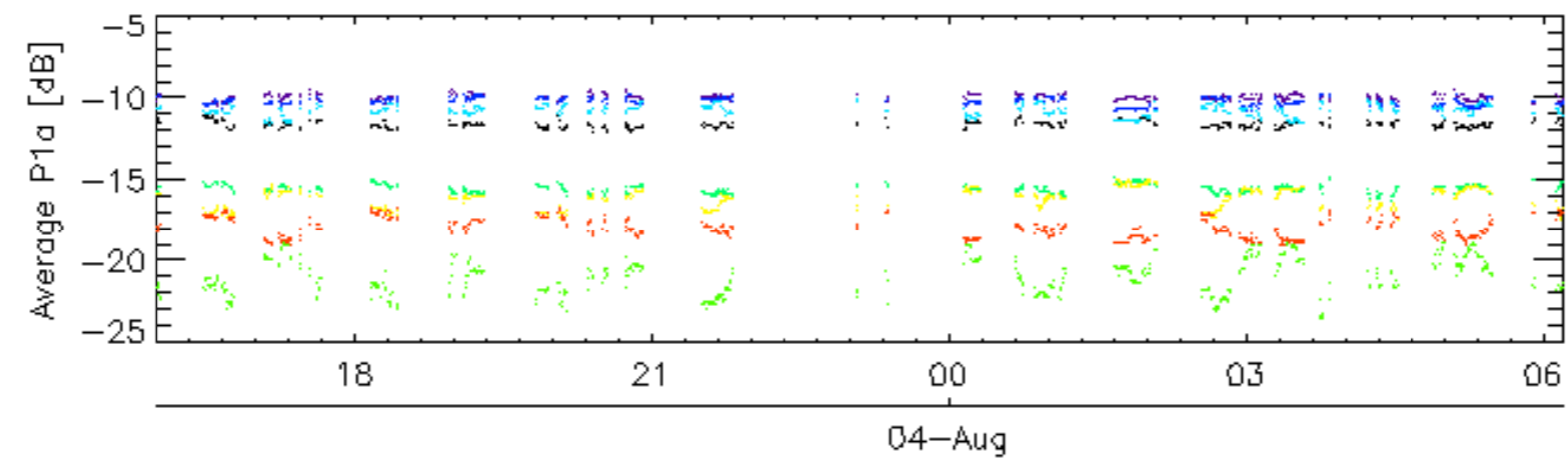
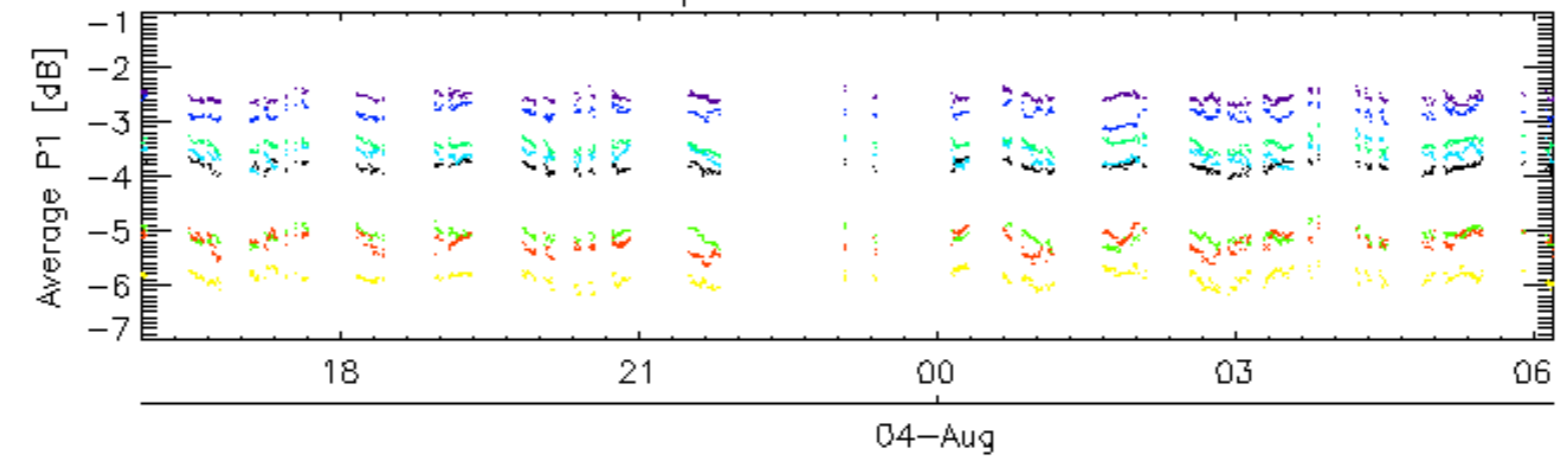
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

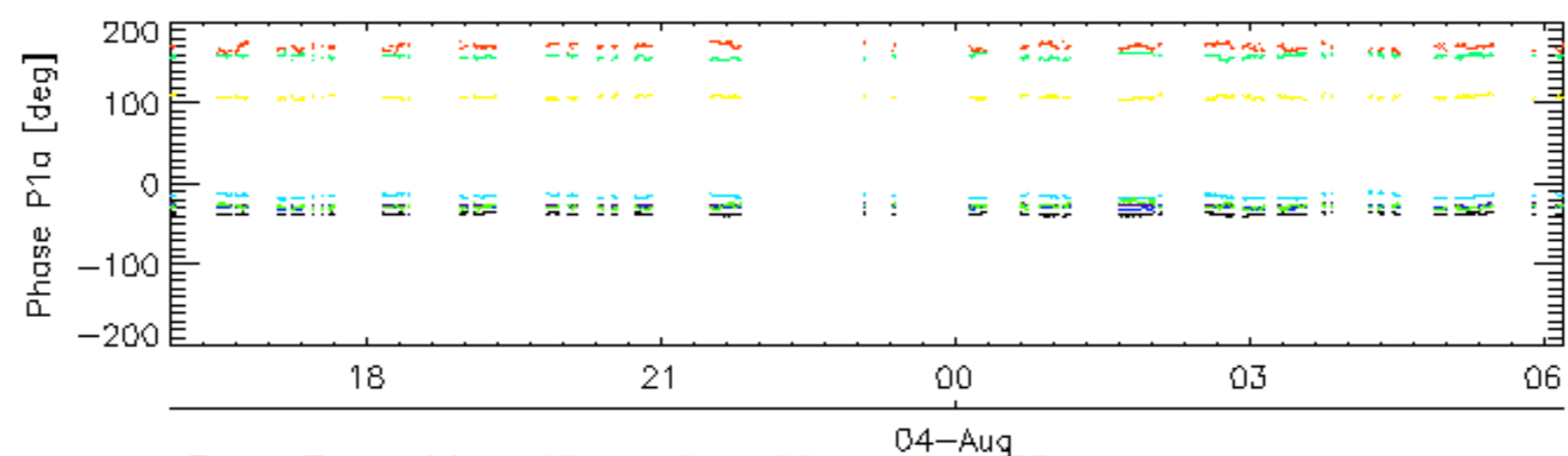
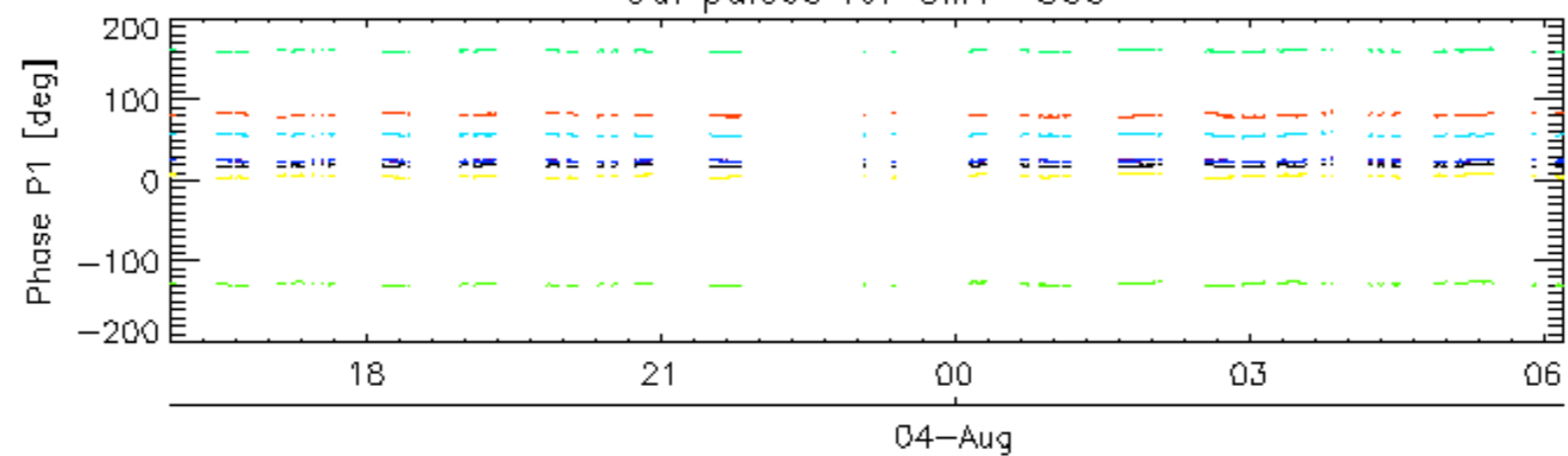
Evolution Doppler error versus ANX

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

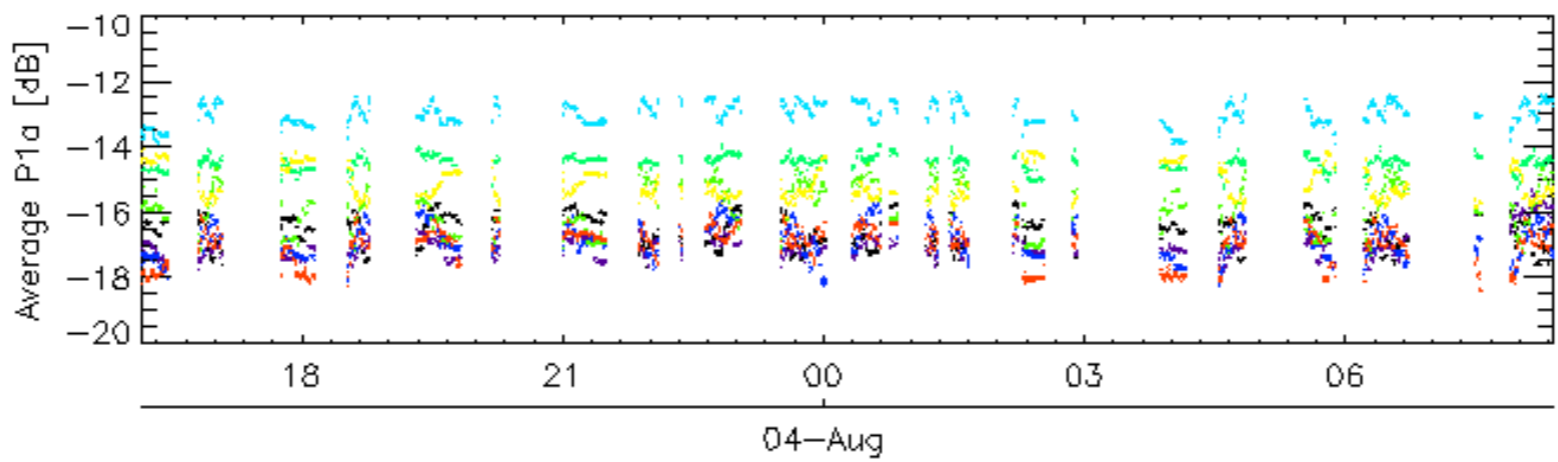
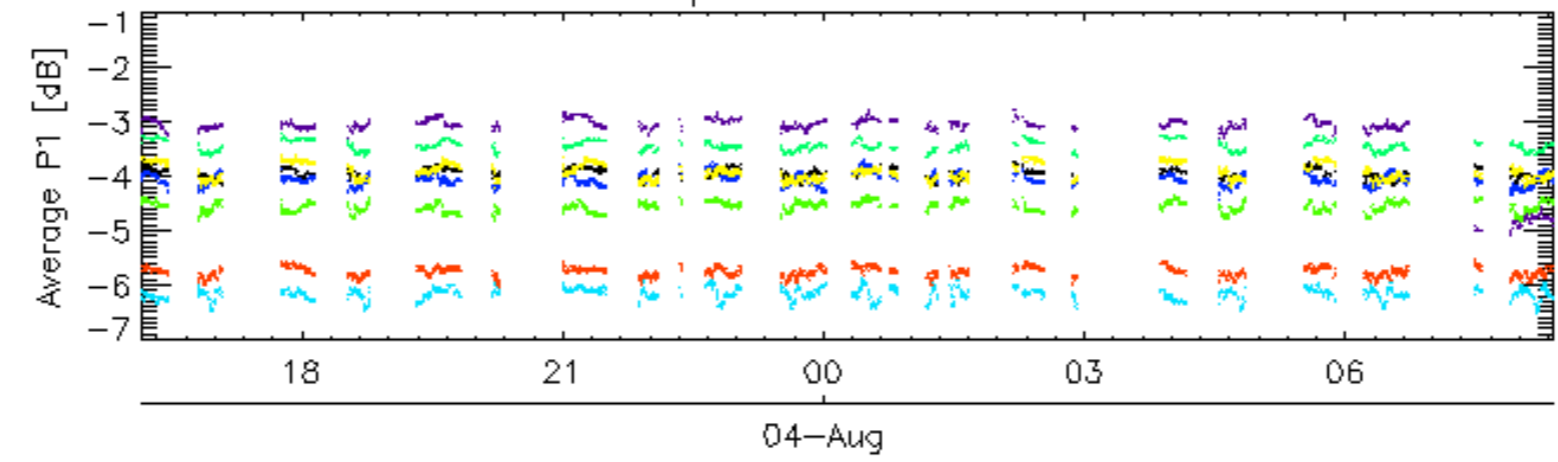


Cal pulses for GM1 SS3

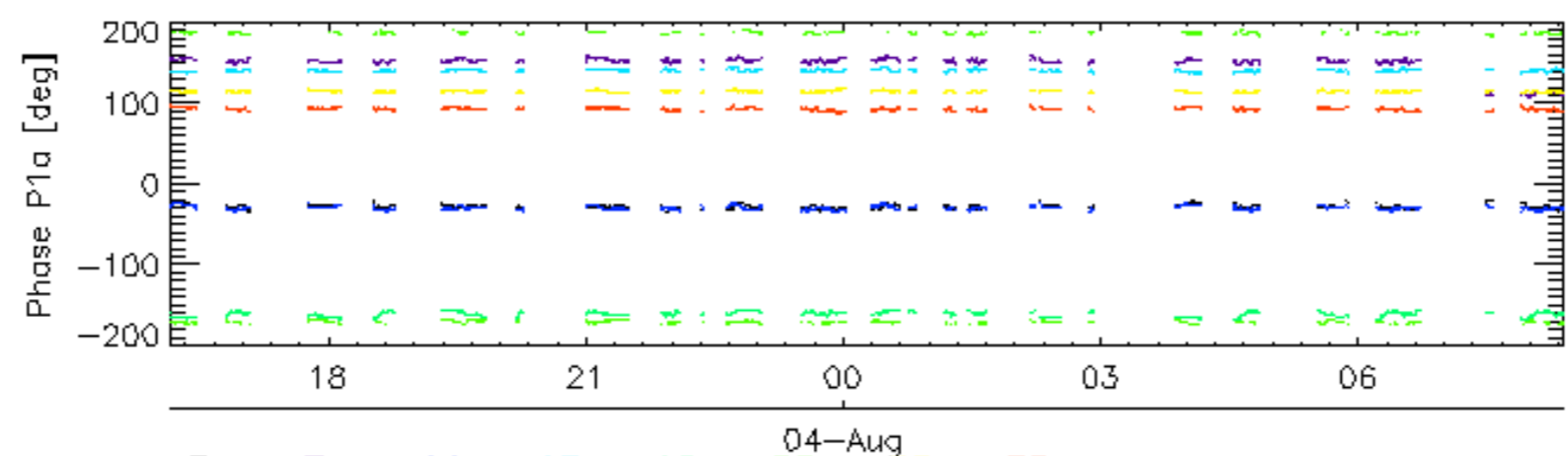
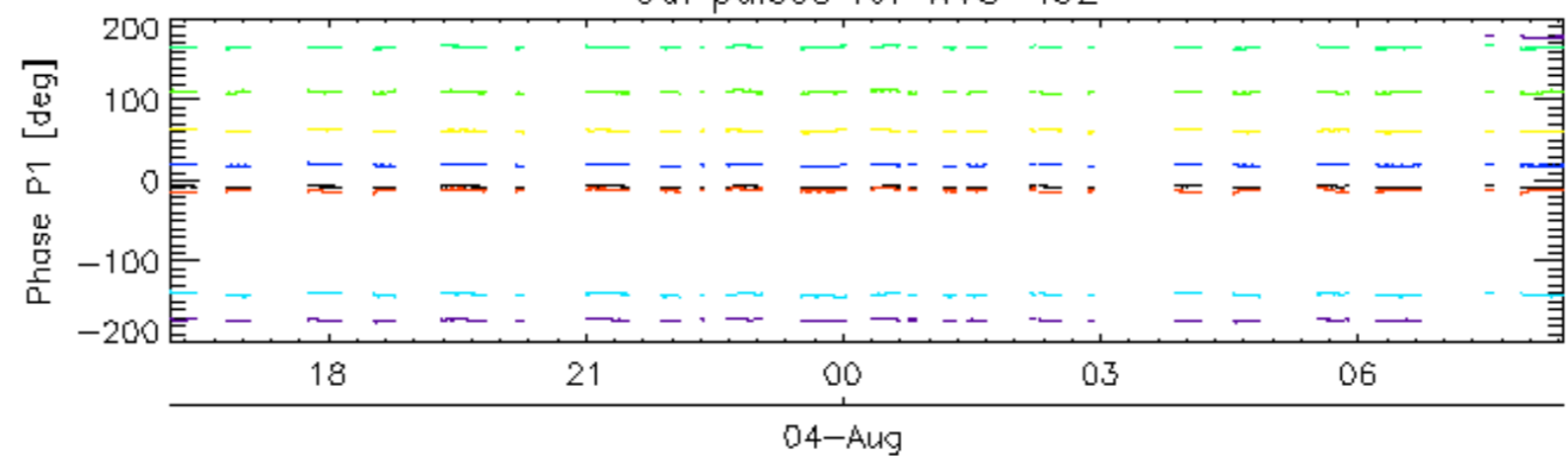


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

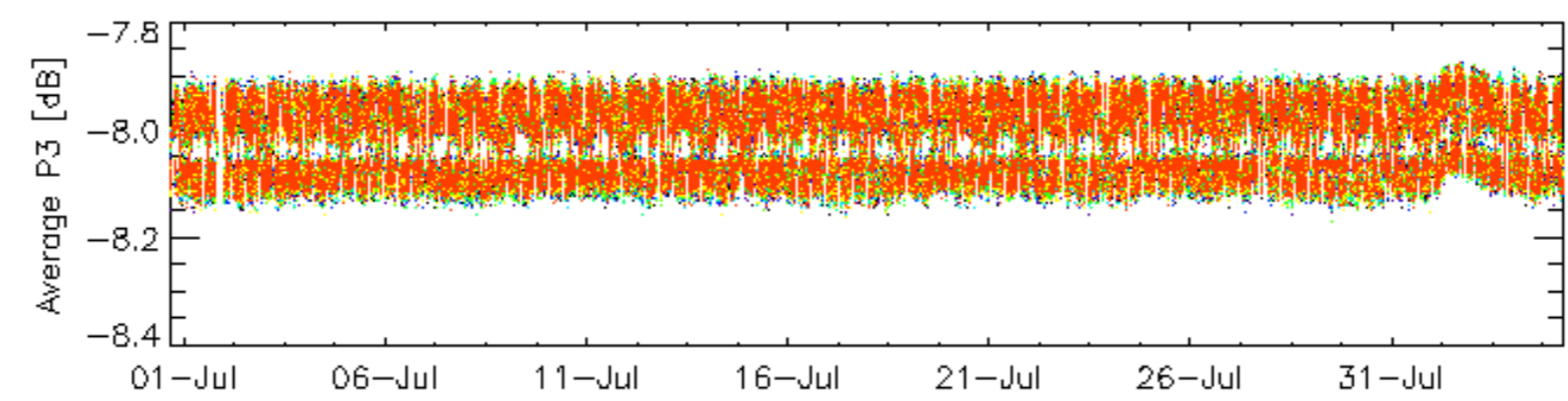
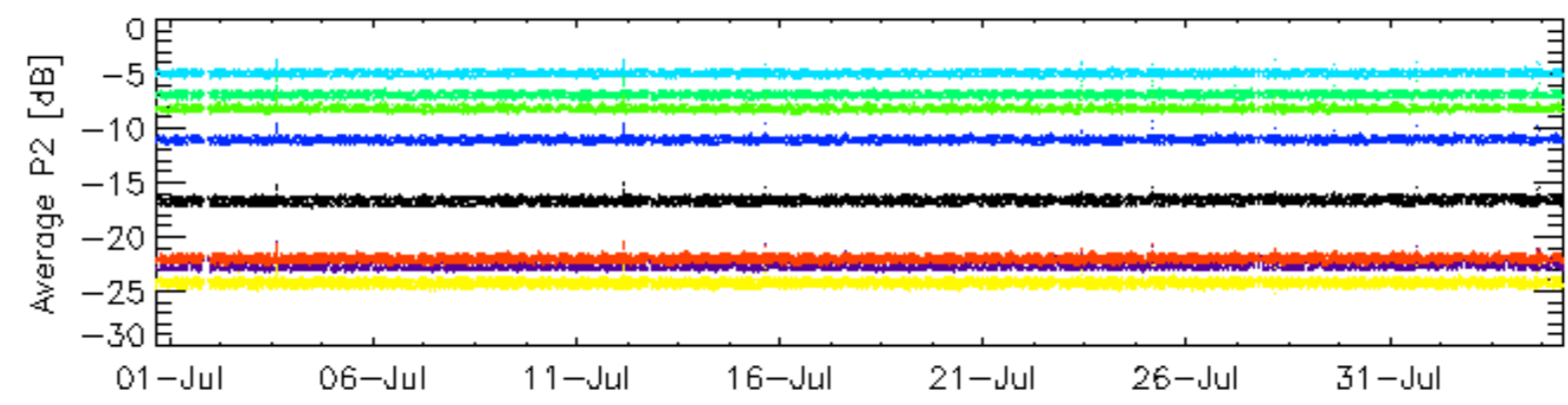
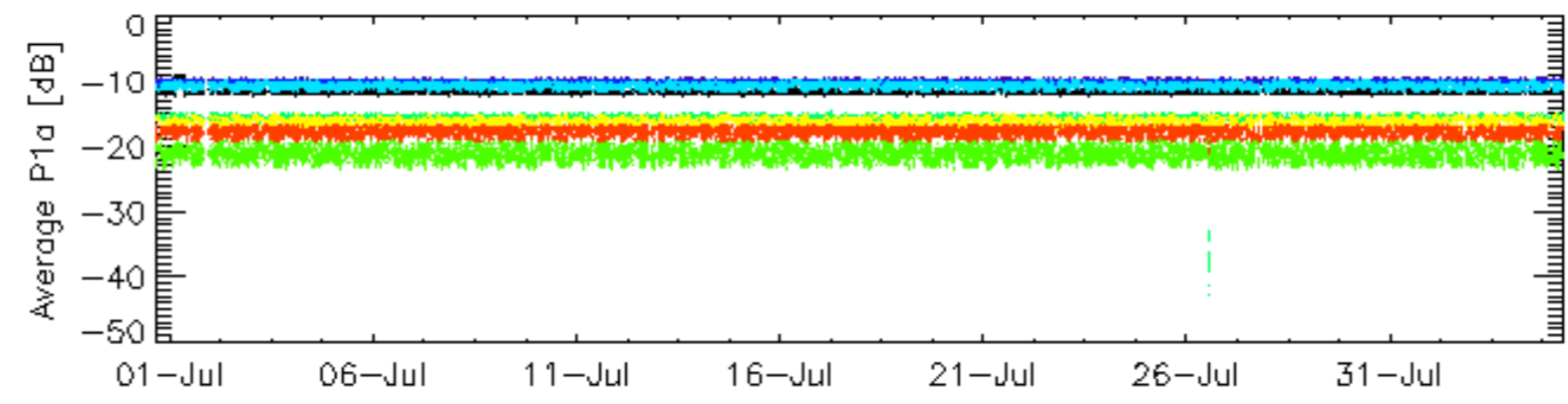
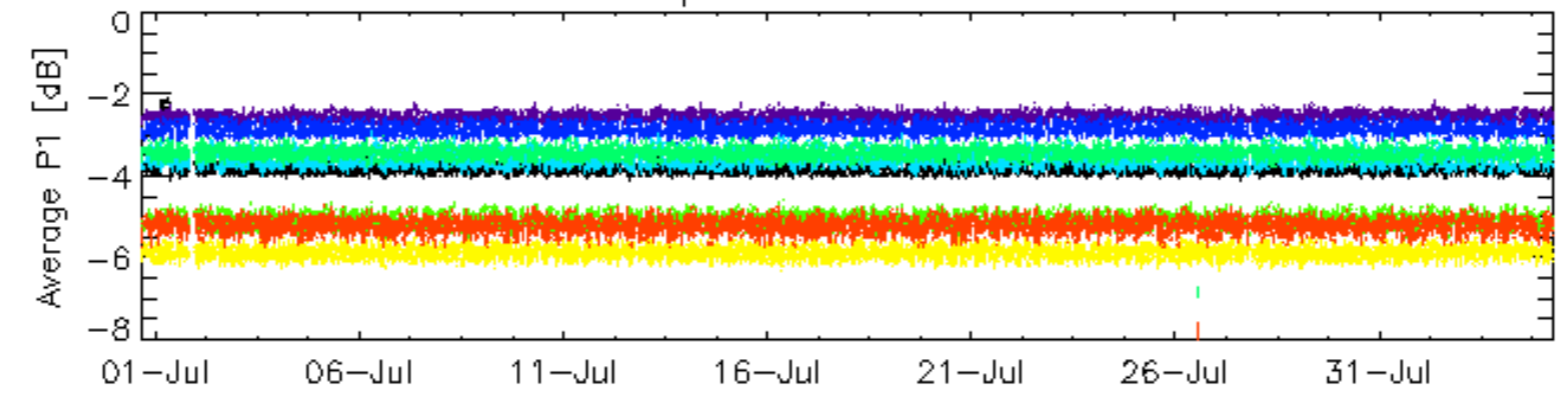


Cal pulses for WVS IS2



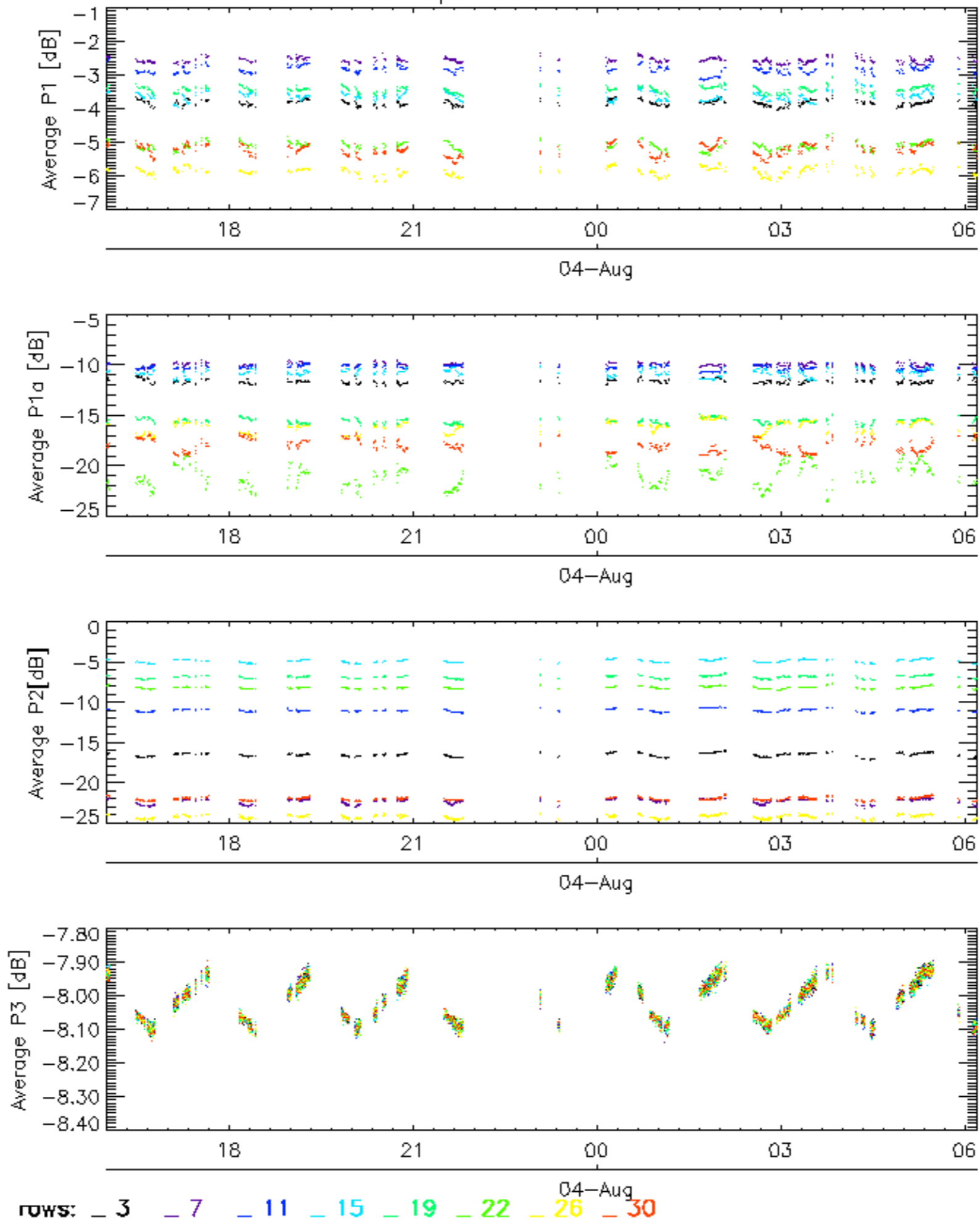
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

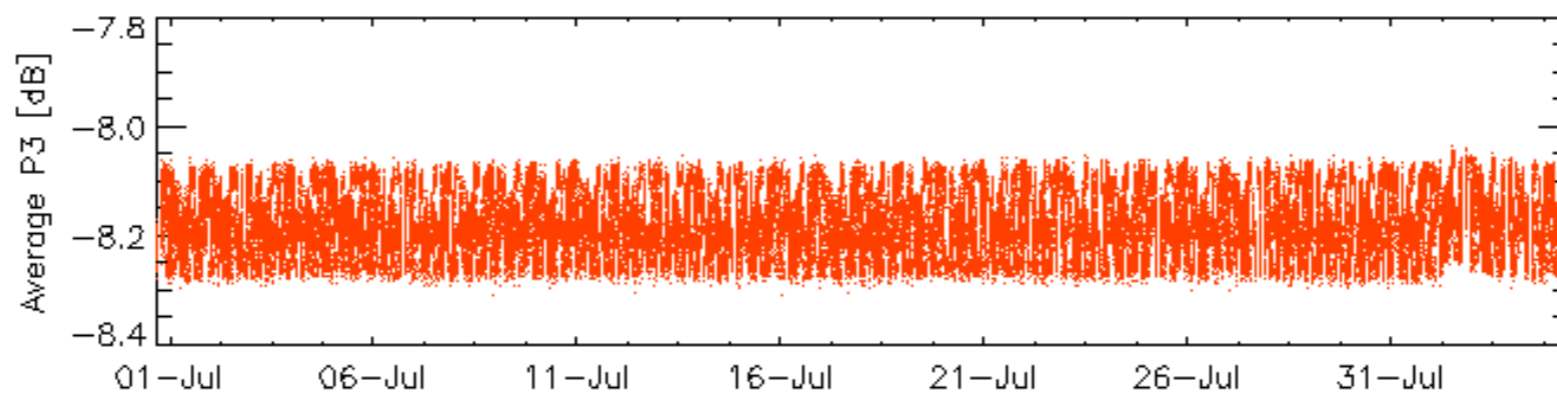
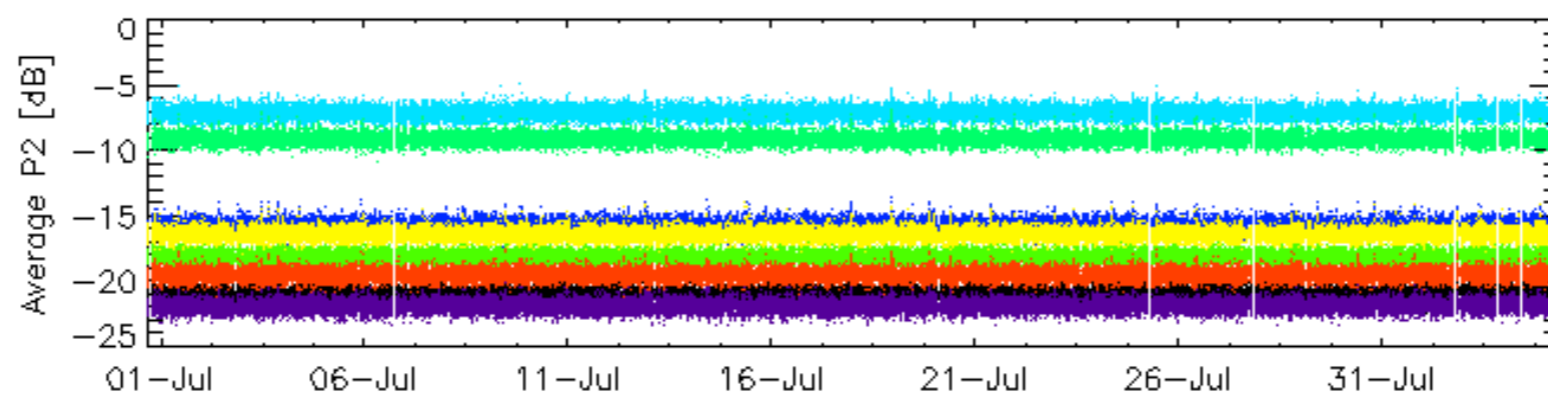
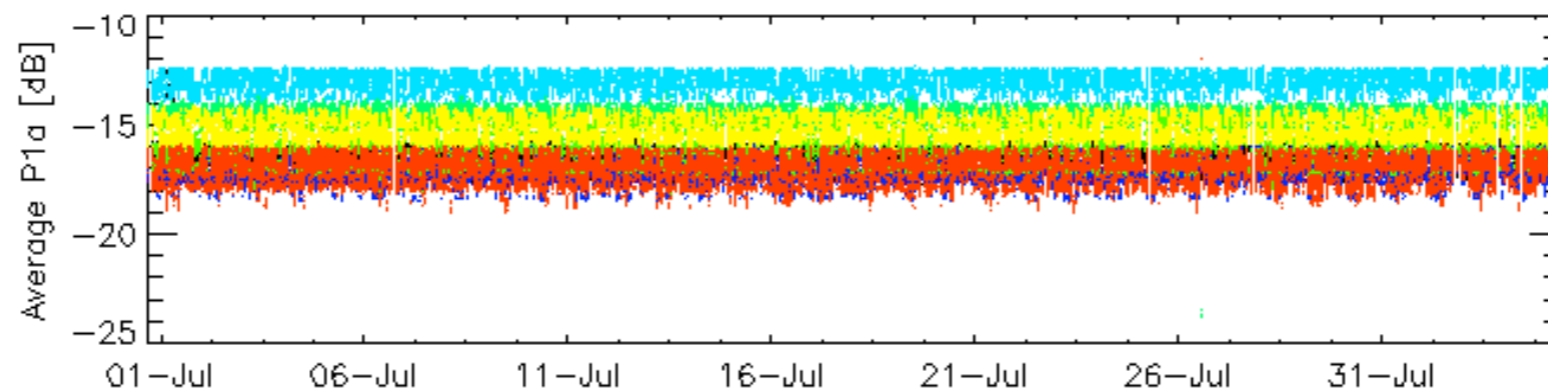
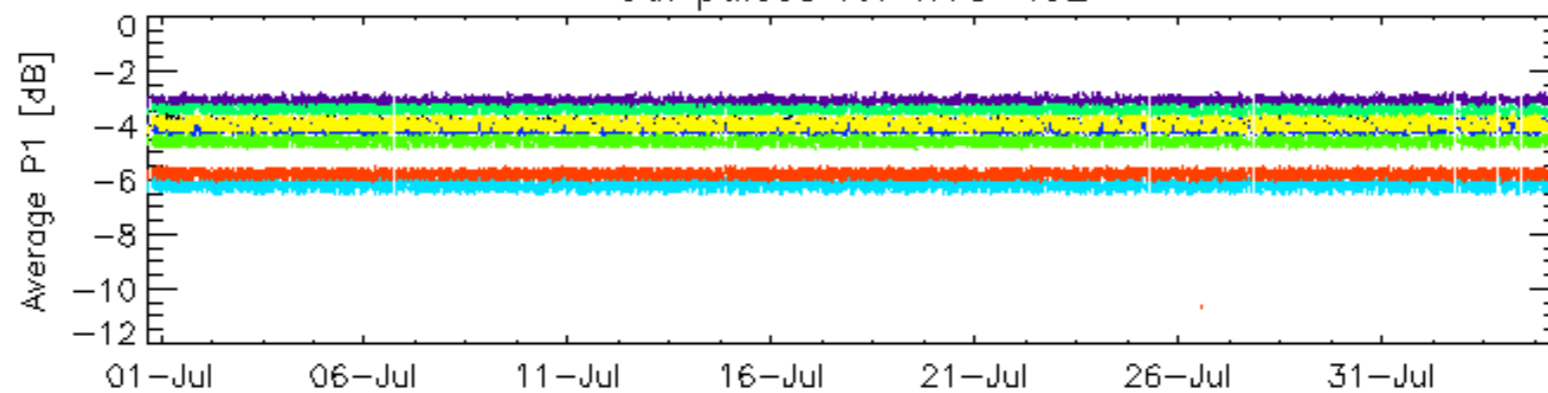


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

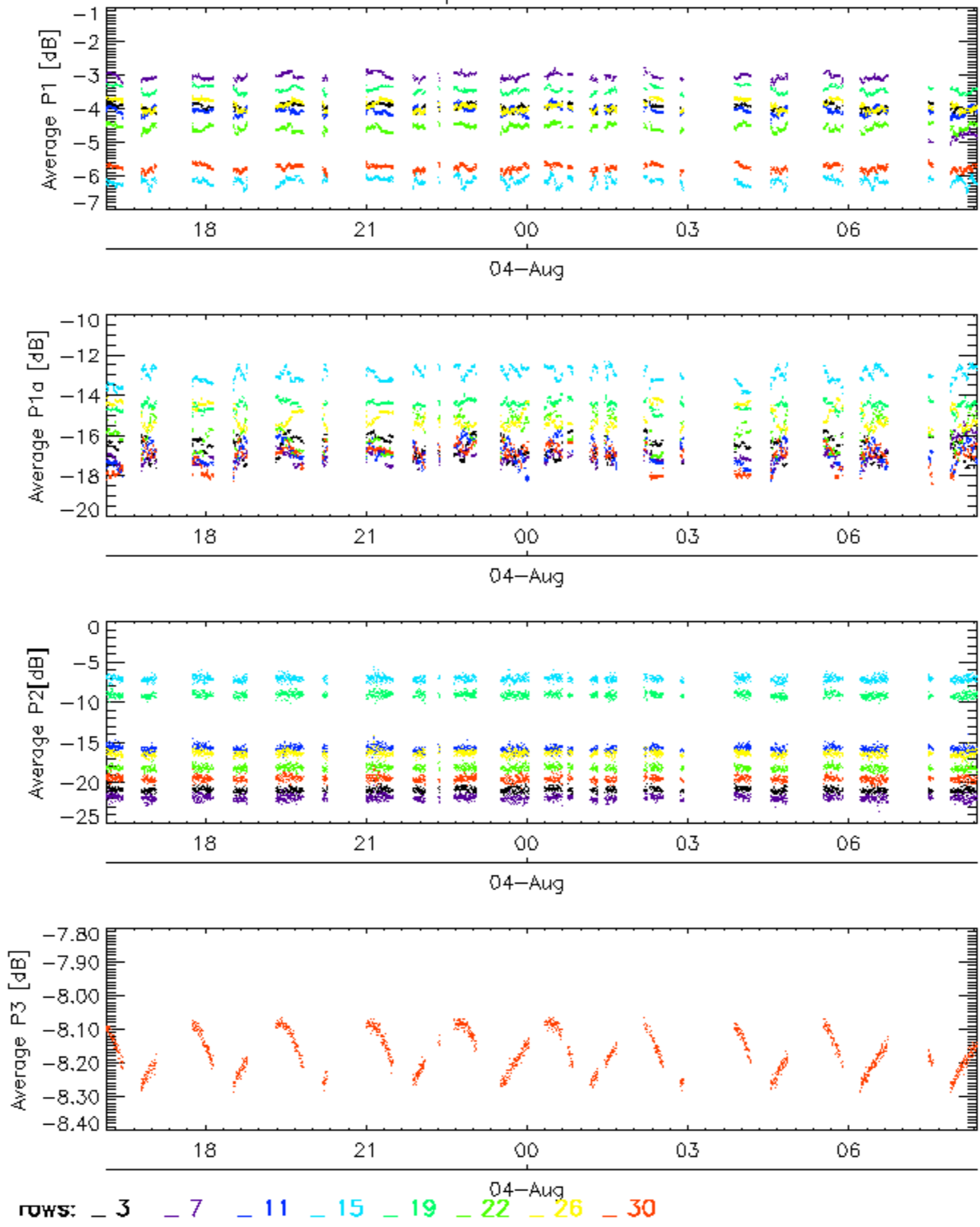


Cal pulses for WVS IS2



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

Cal pulses for WVS IS2

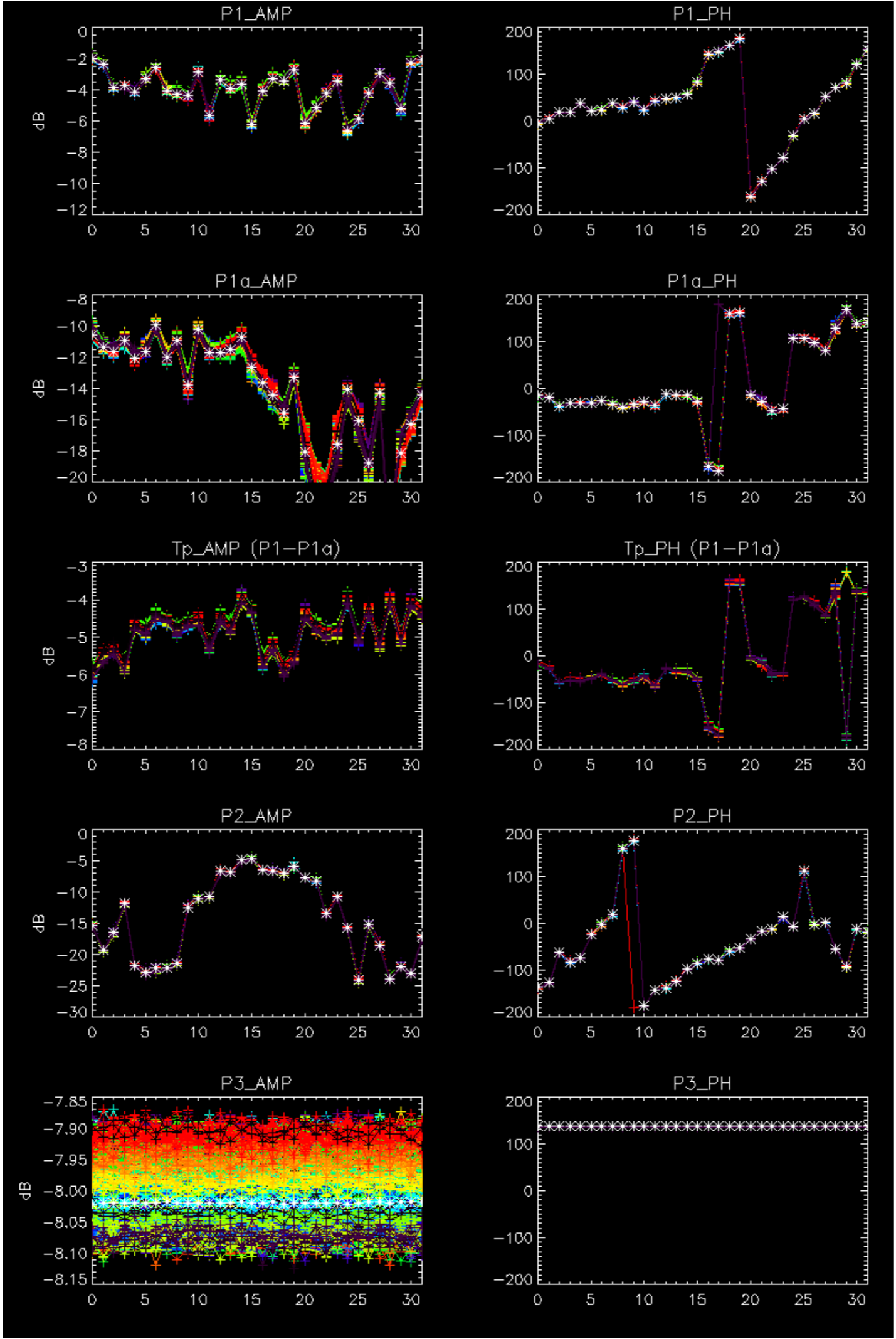


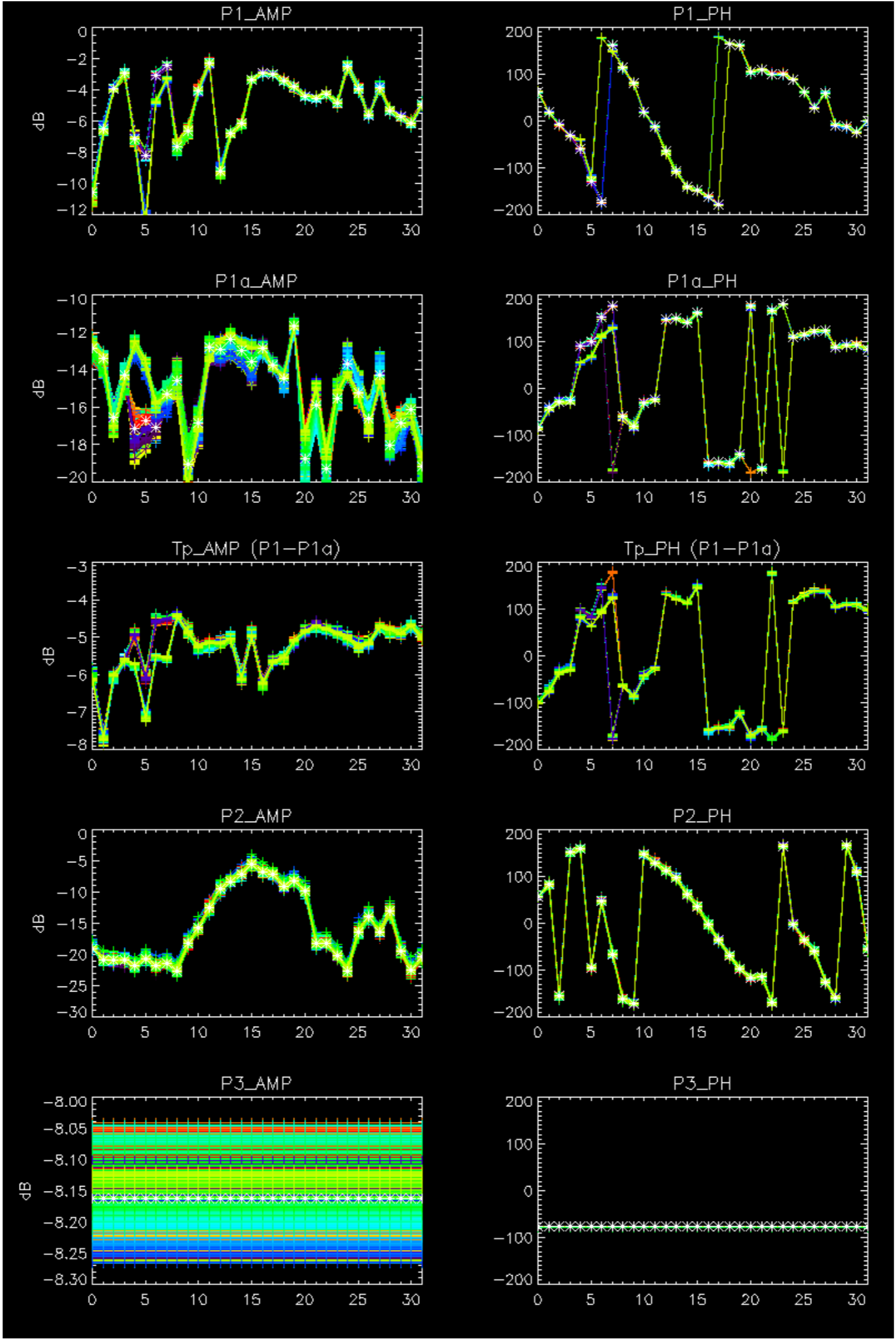


No anomalies observed on available browse products



No anomalies observed.



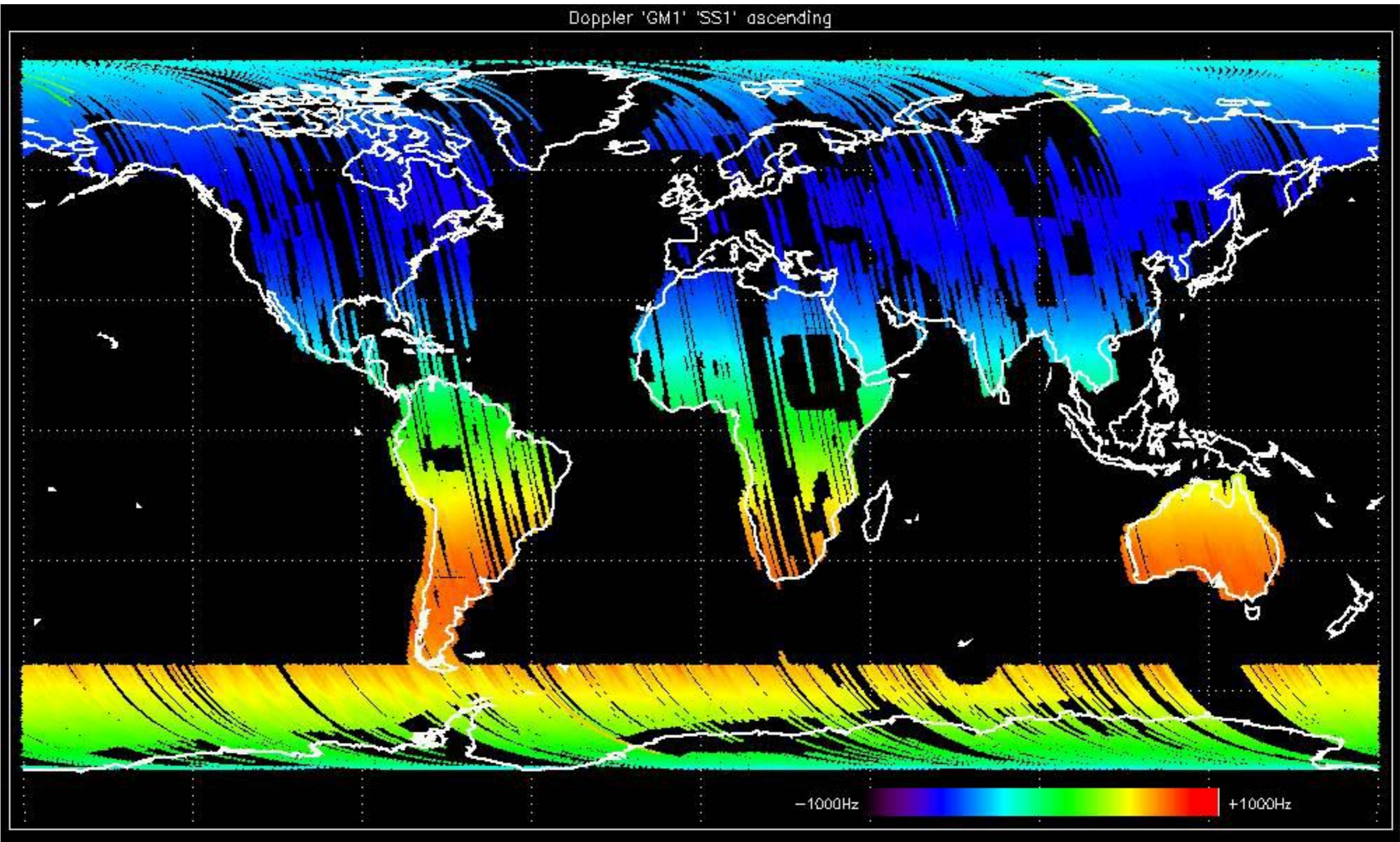


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



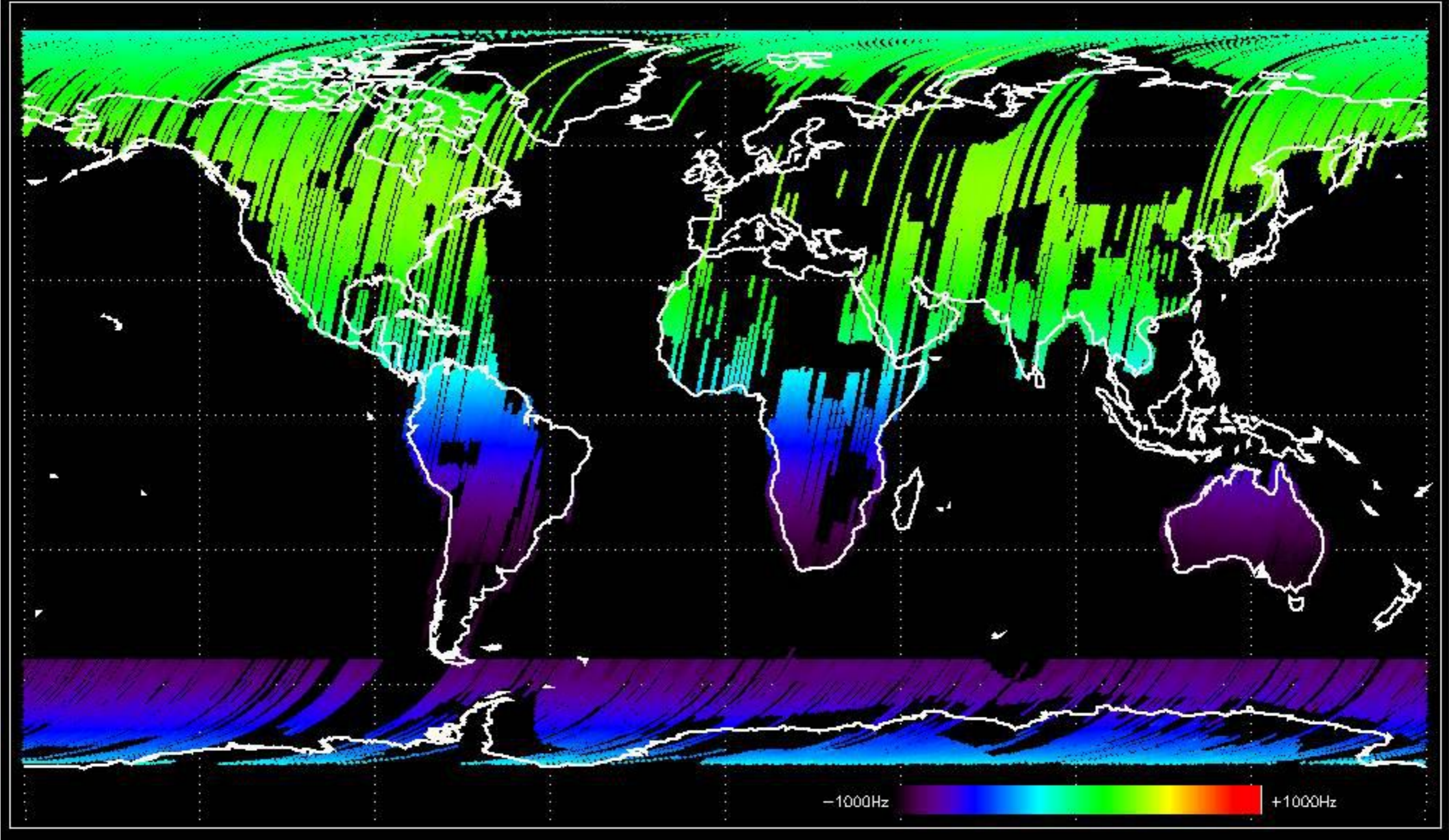


Doppler 'GM1' 'SS1' ascending



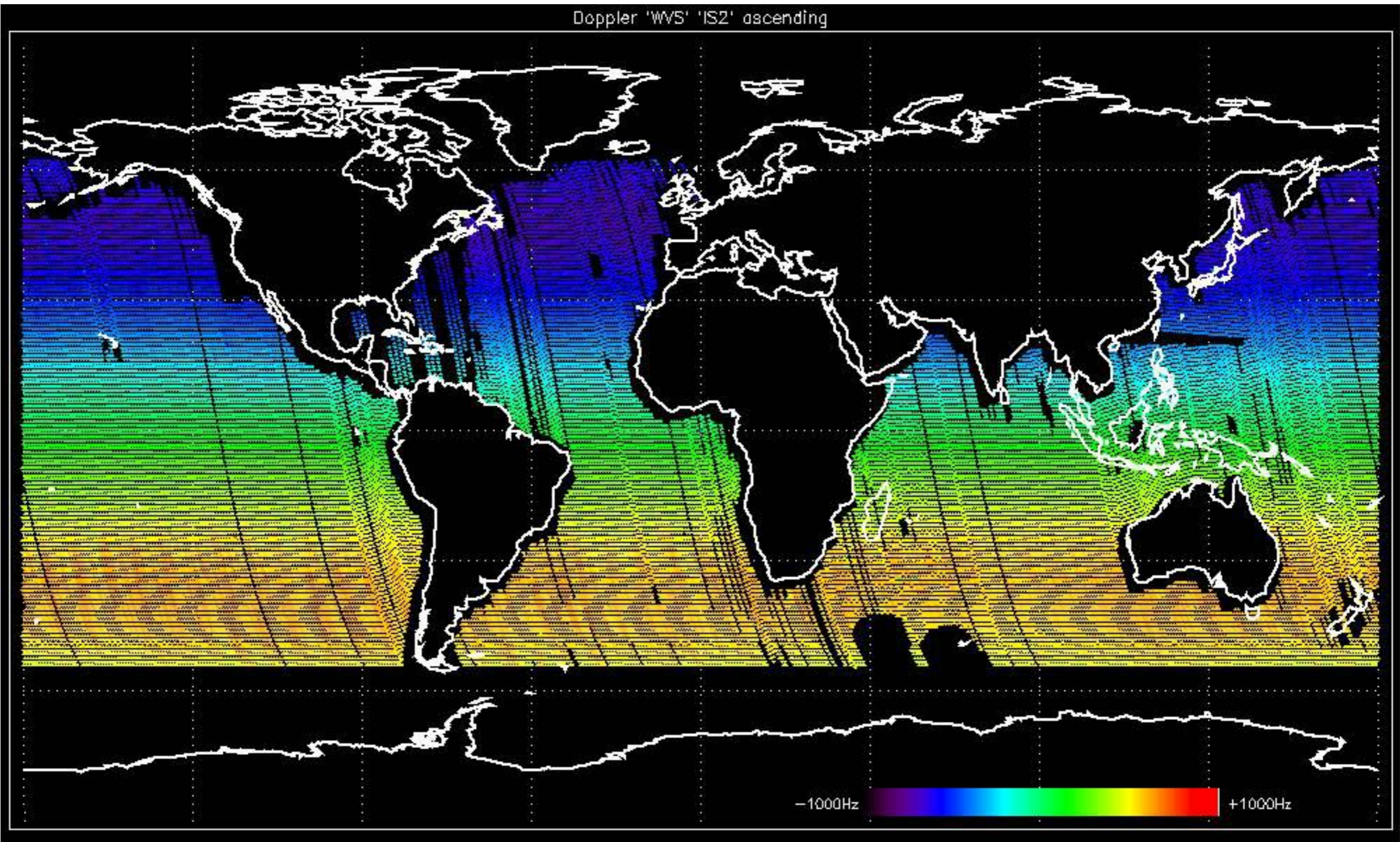


Doppler 'GM1' 'SS1' descending



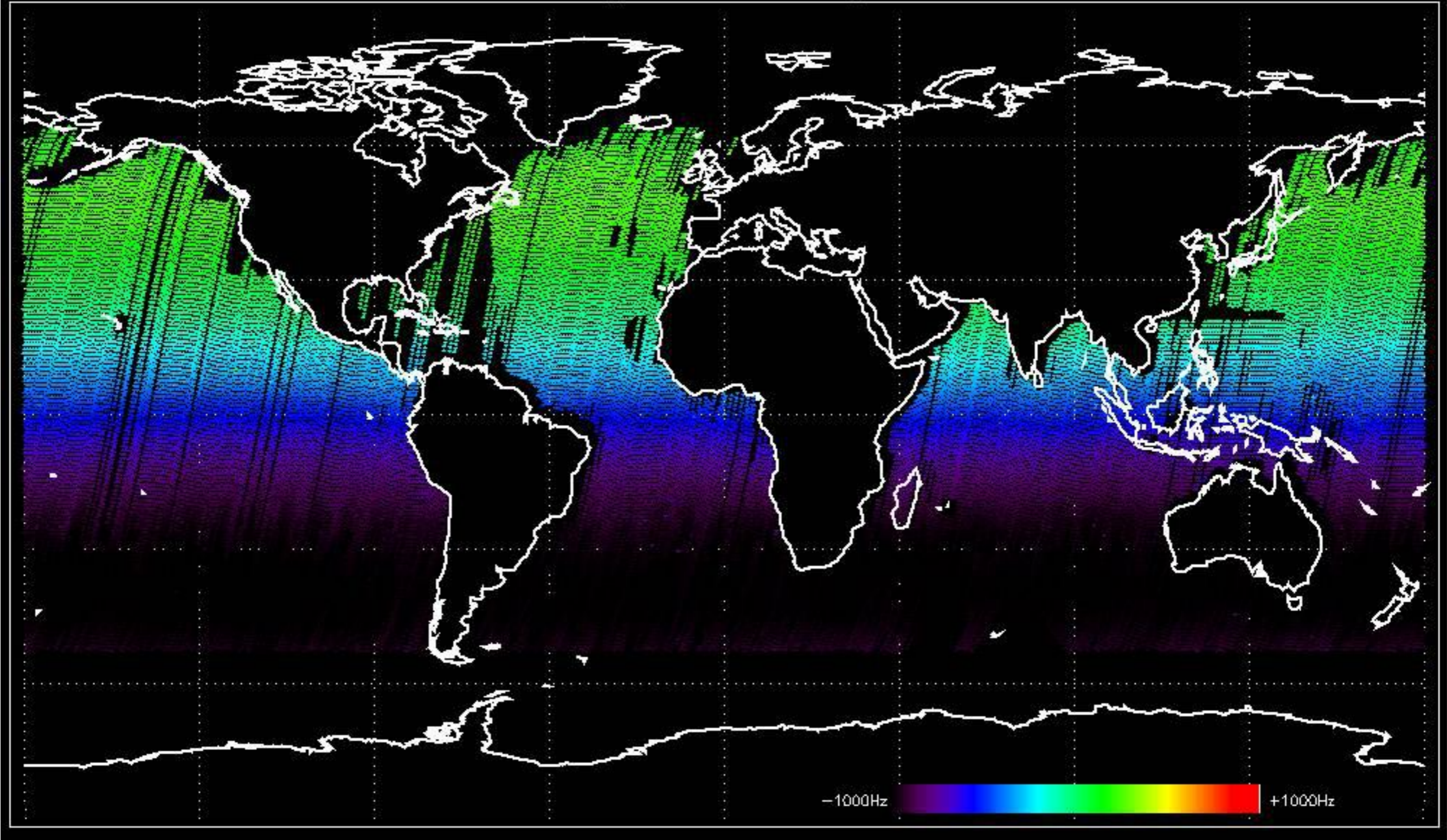


Doppler 'WVS' 'IS2' ascending

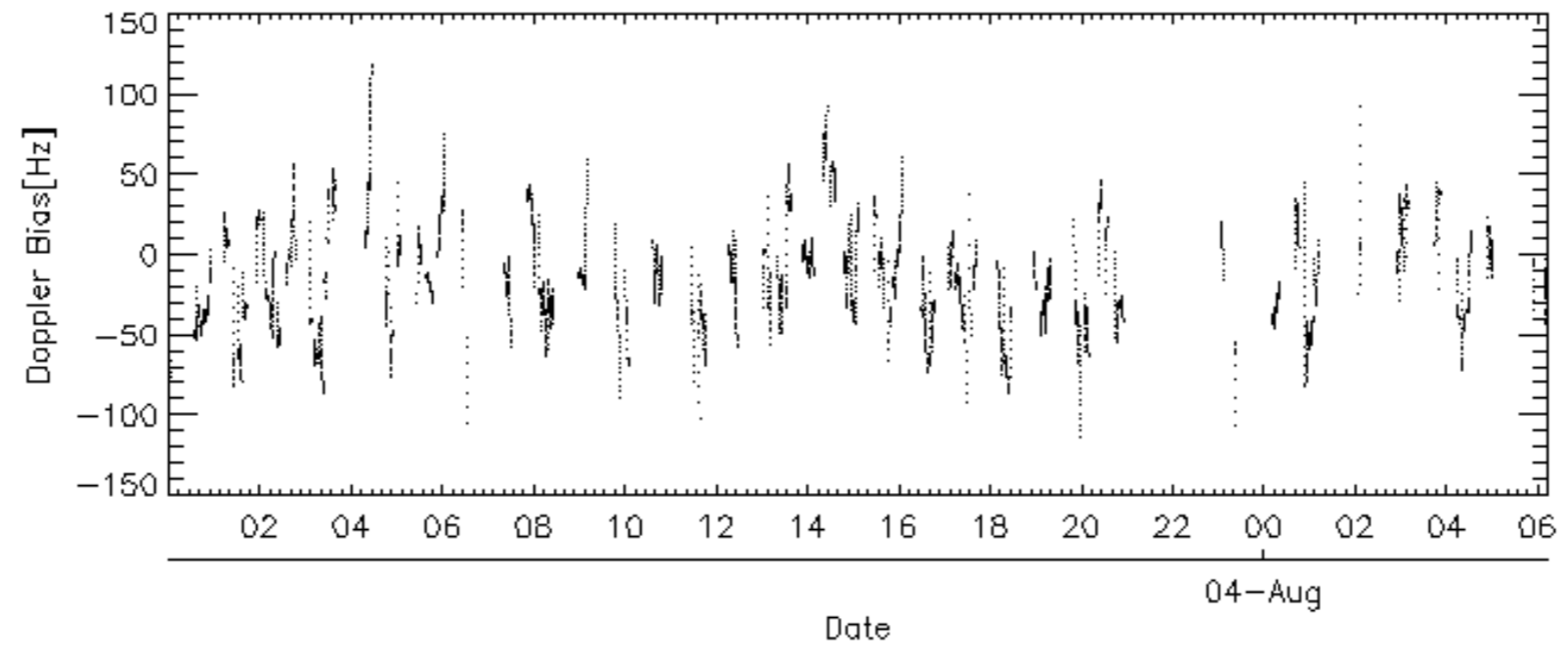
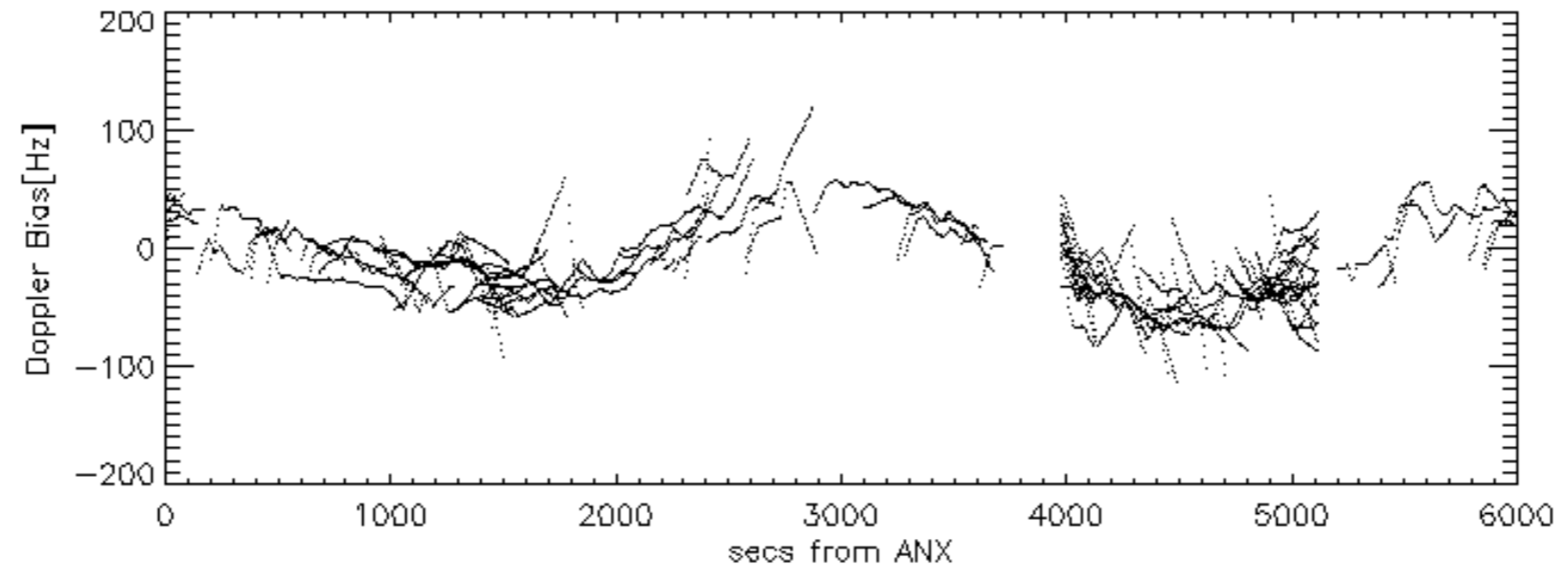
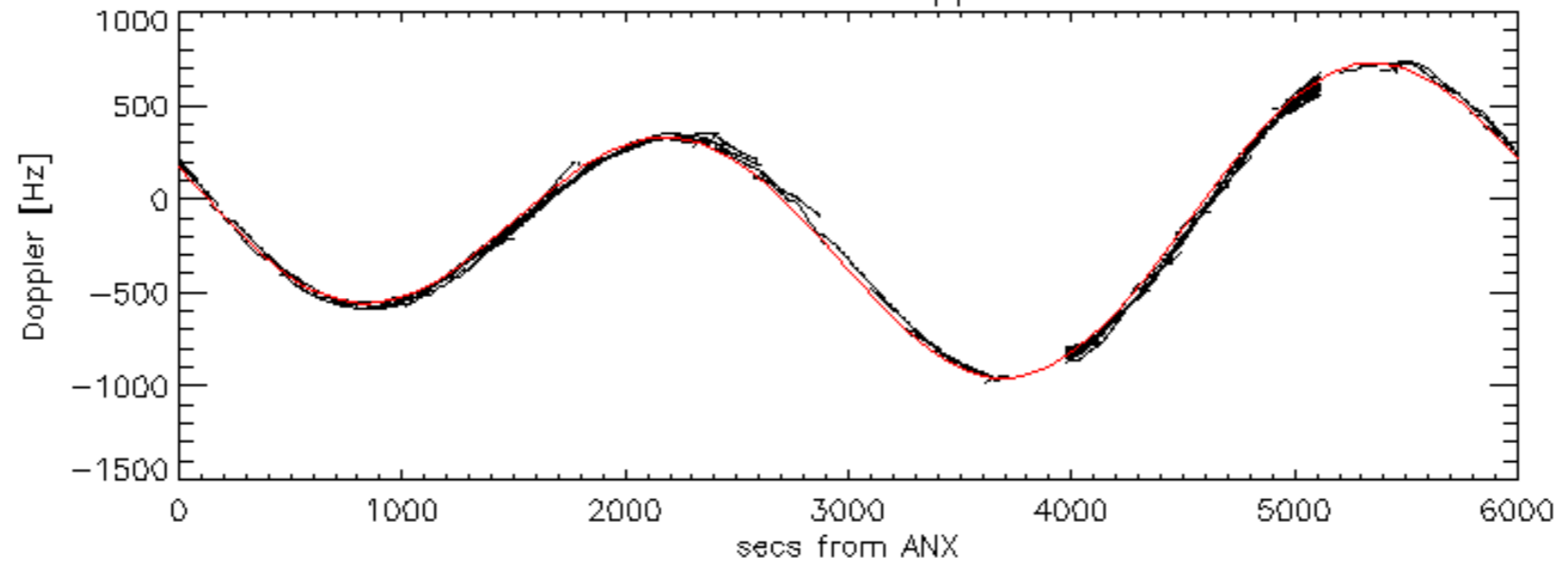




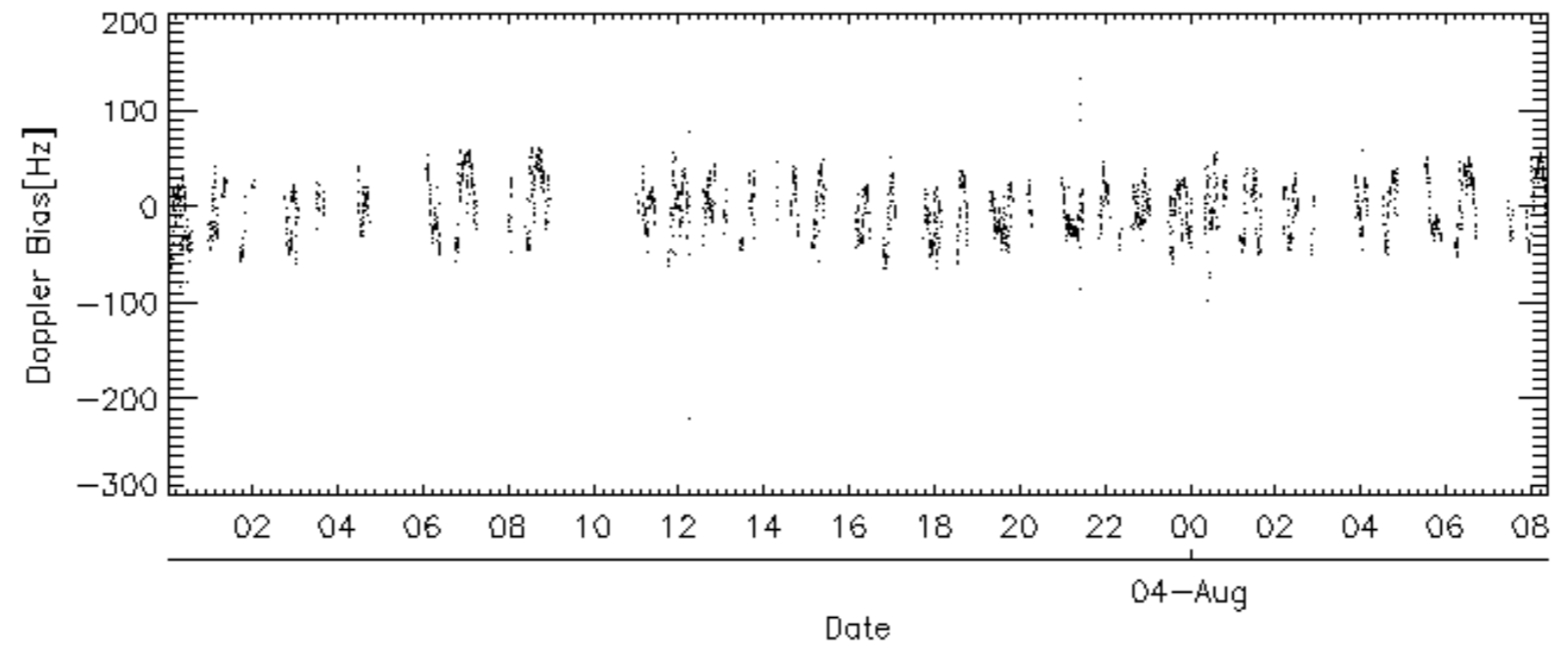
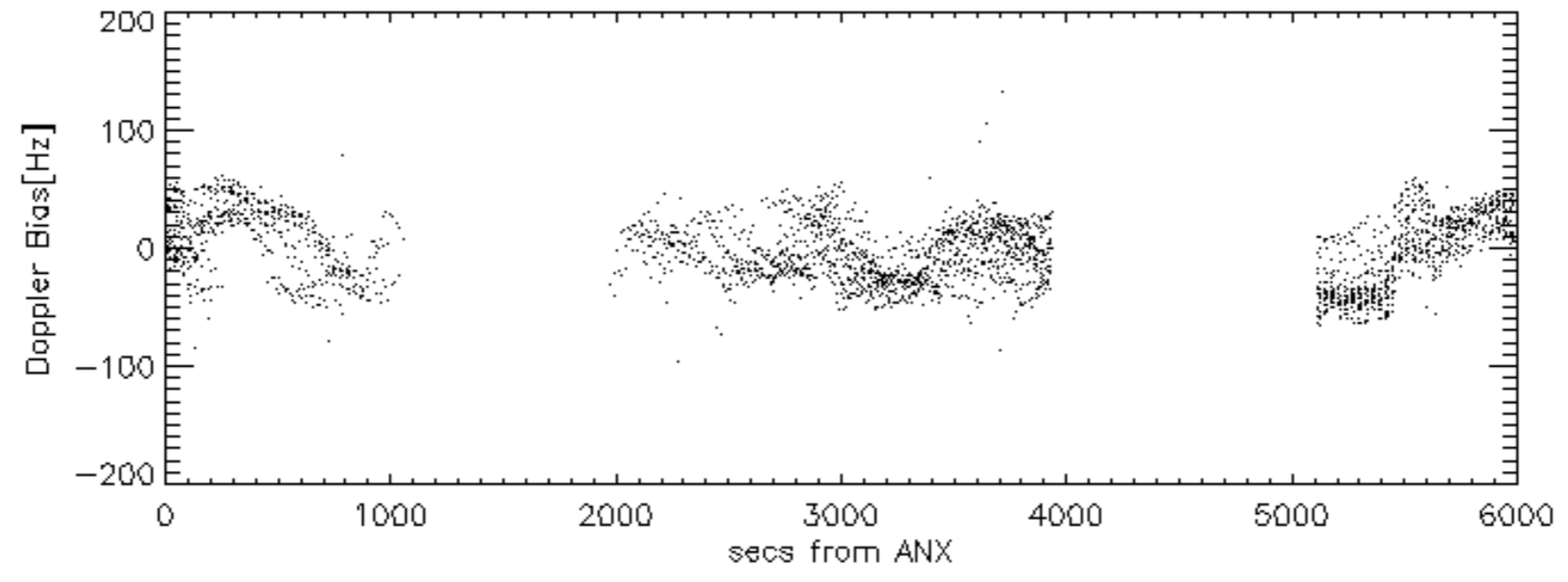
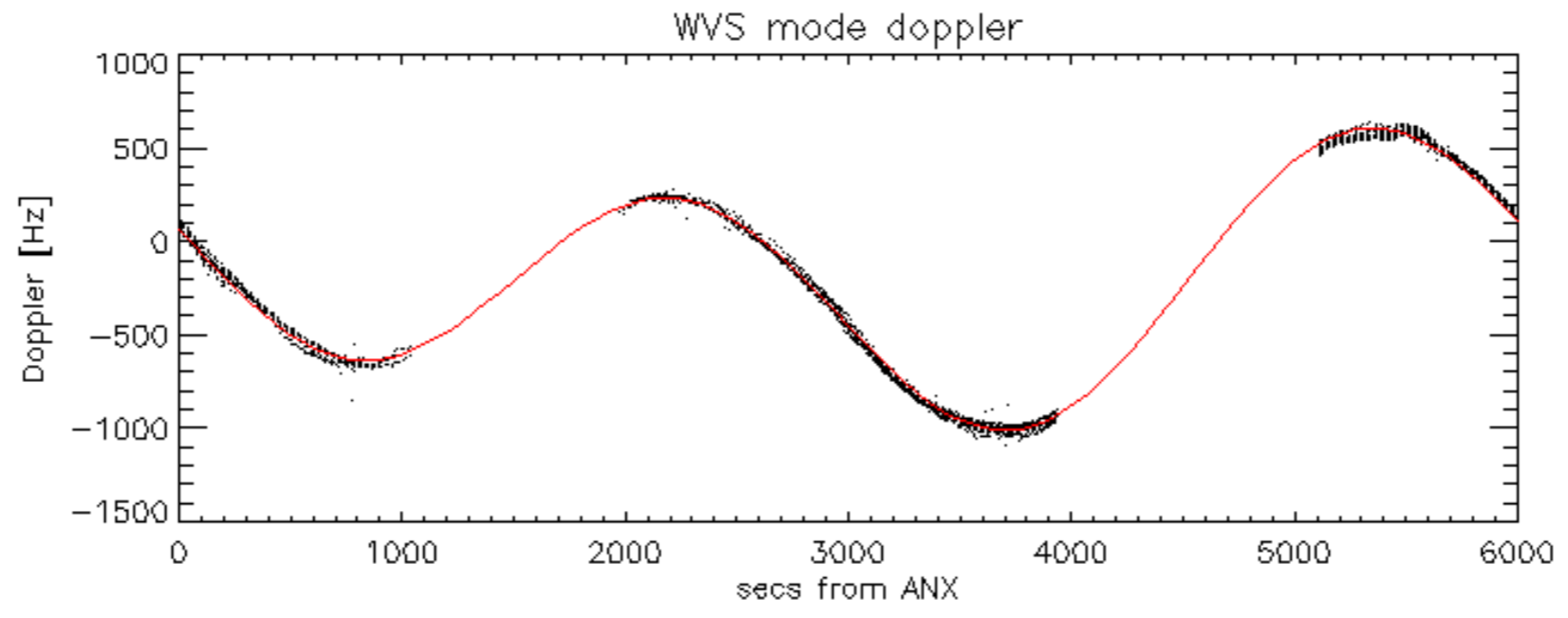
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

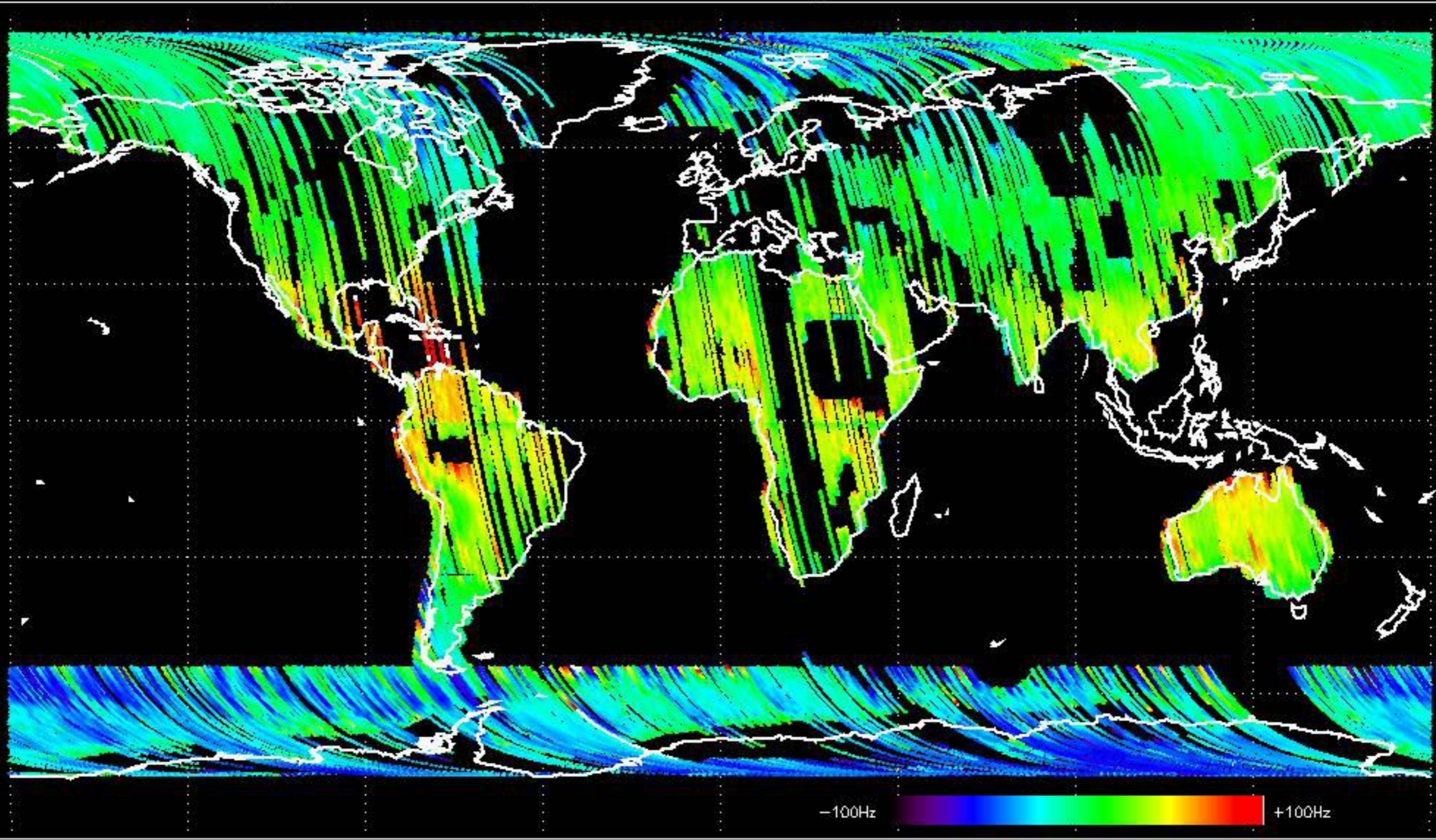






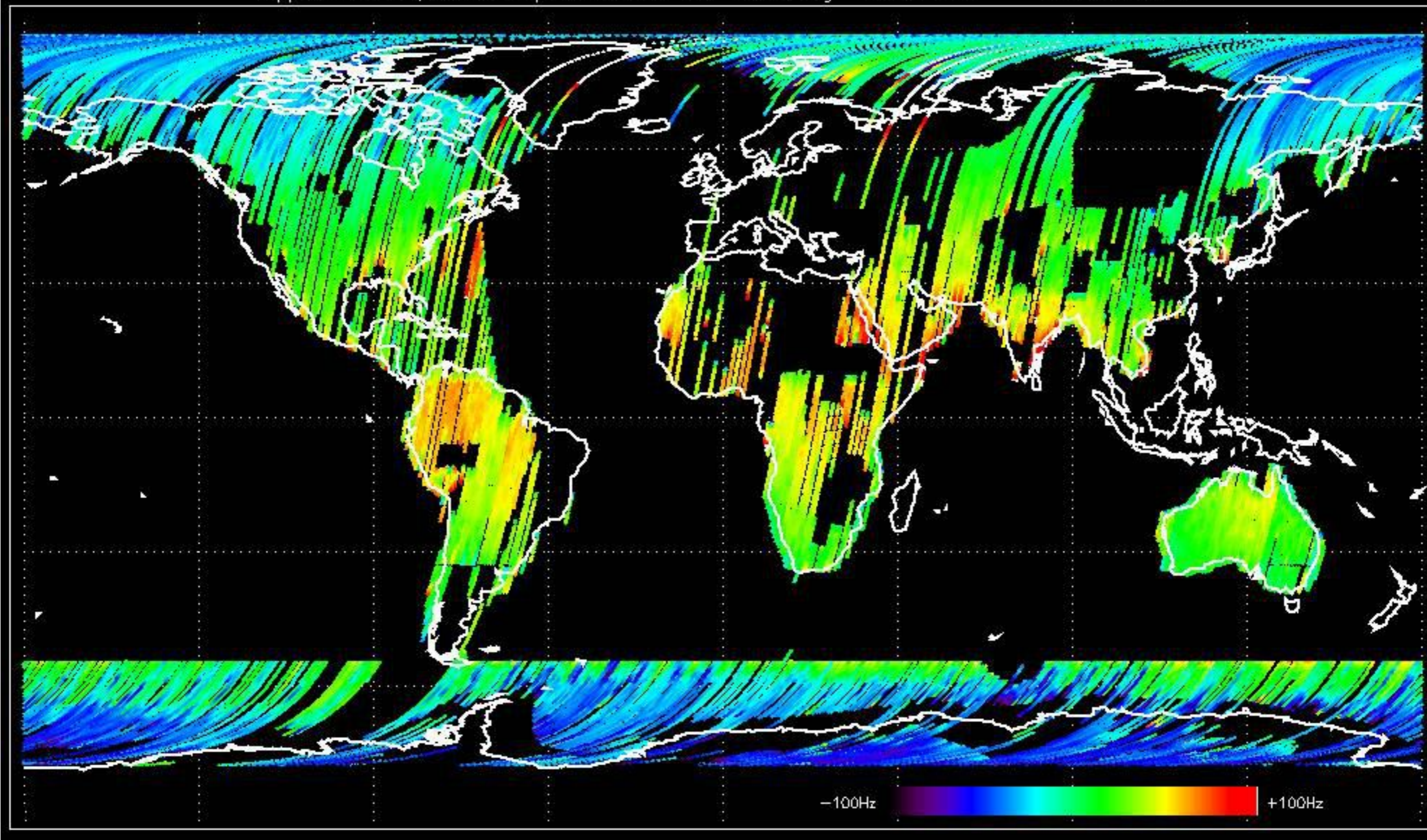


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.993616 Hz



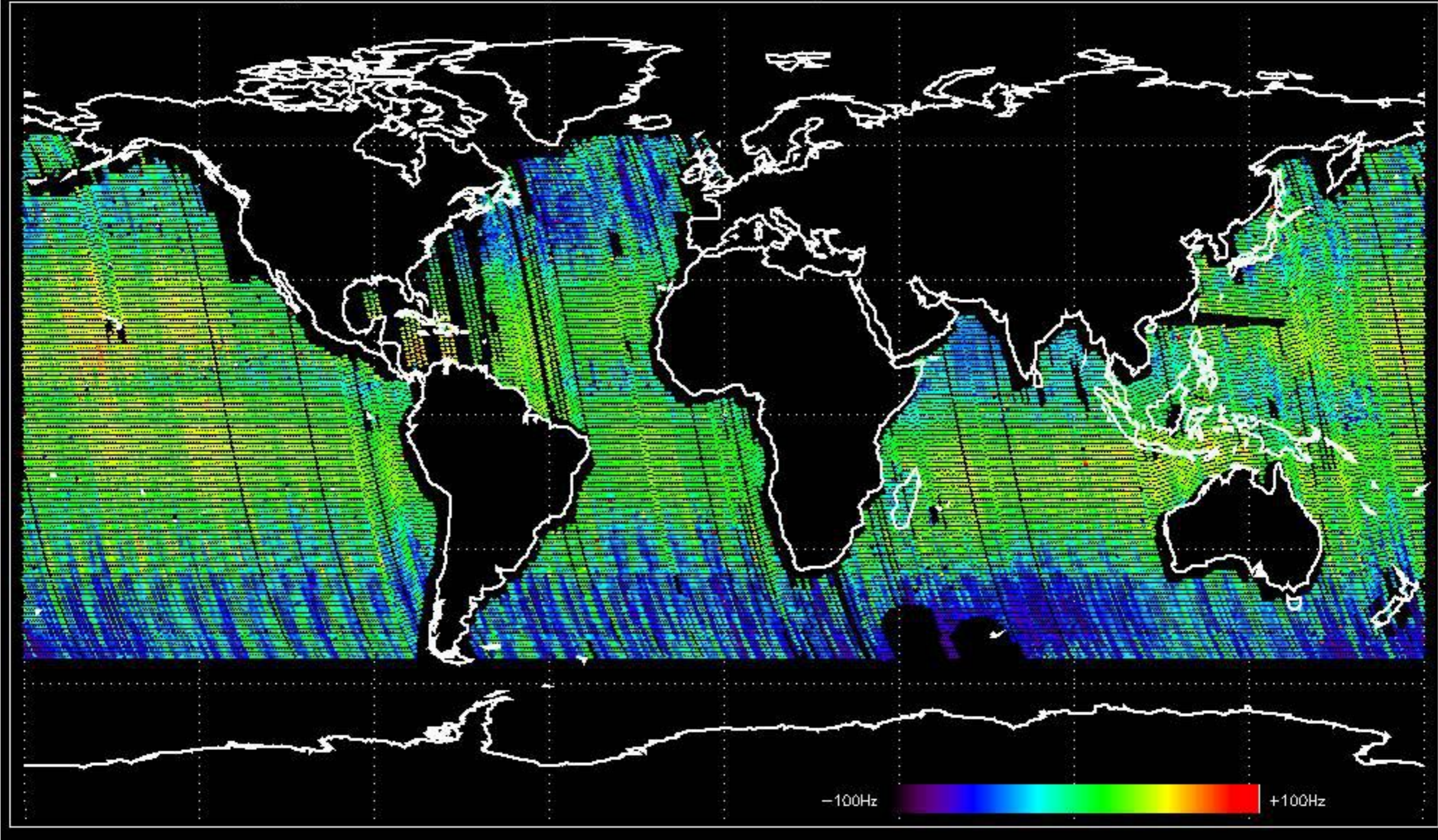


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -7.7563673 Hz



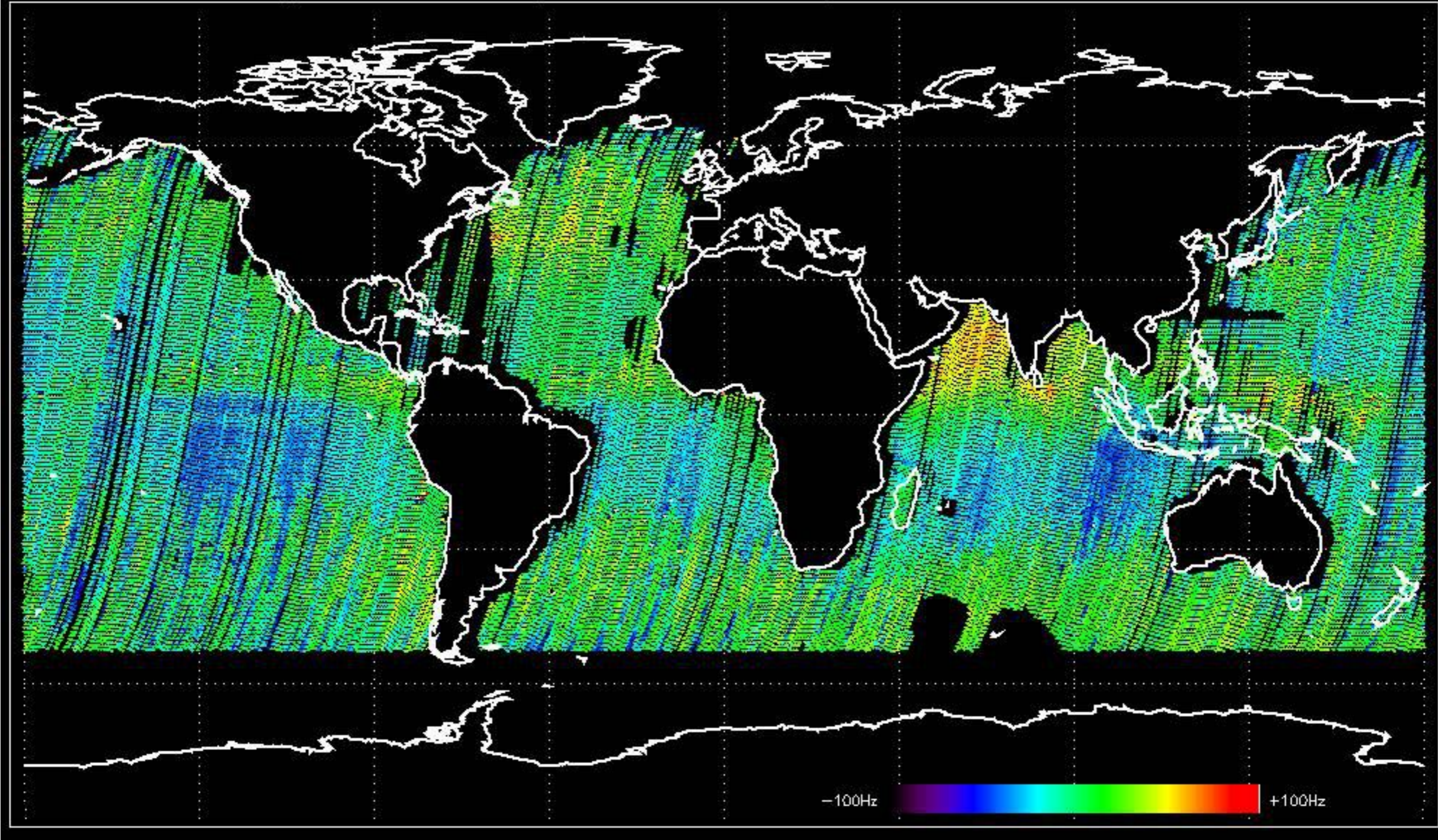


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -2.3686334 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.5211354 Hz





No anomalies observed on available MS products:



No anomalies observed.



















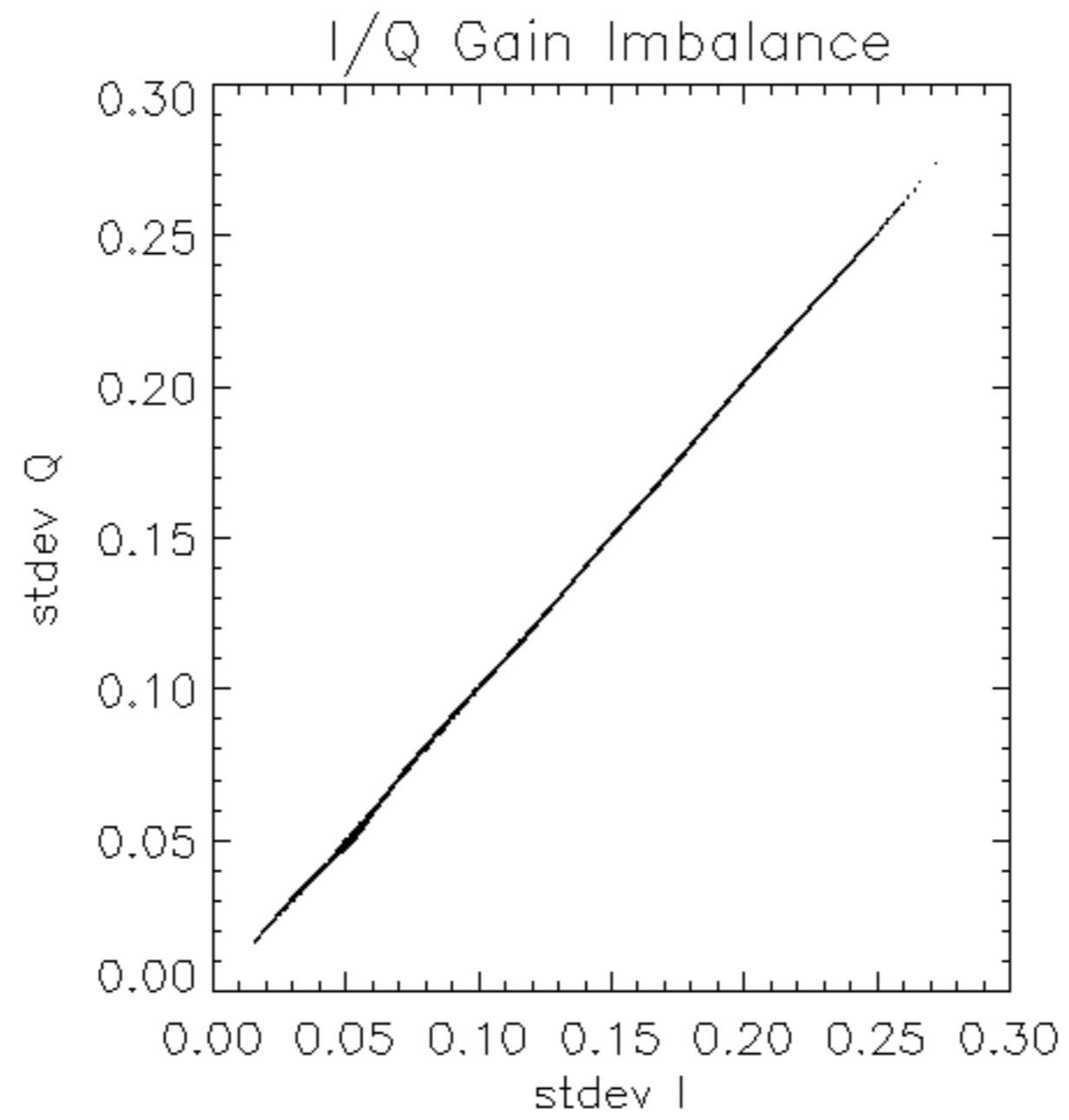


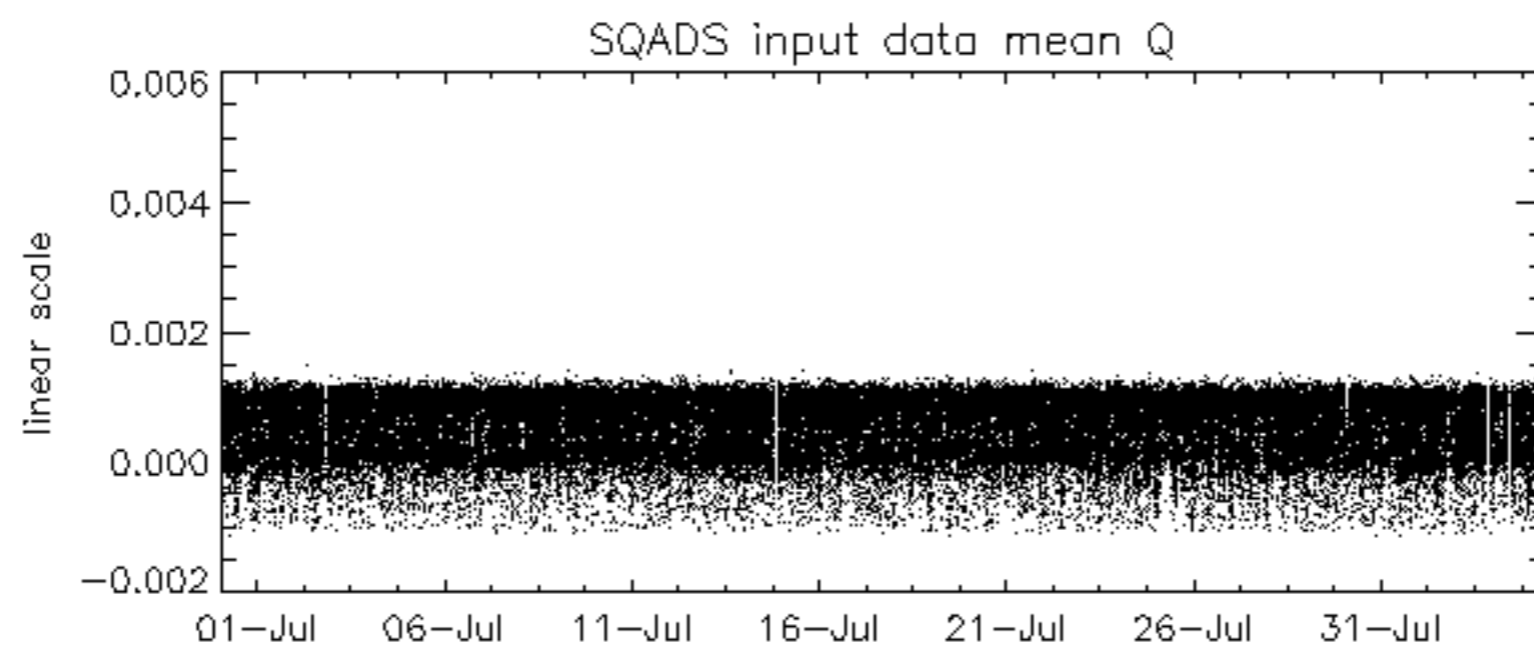
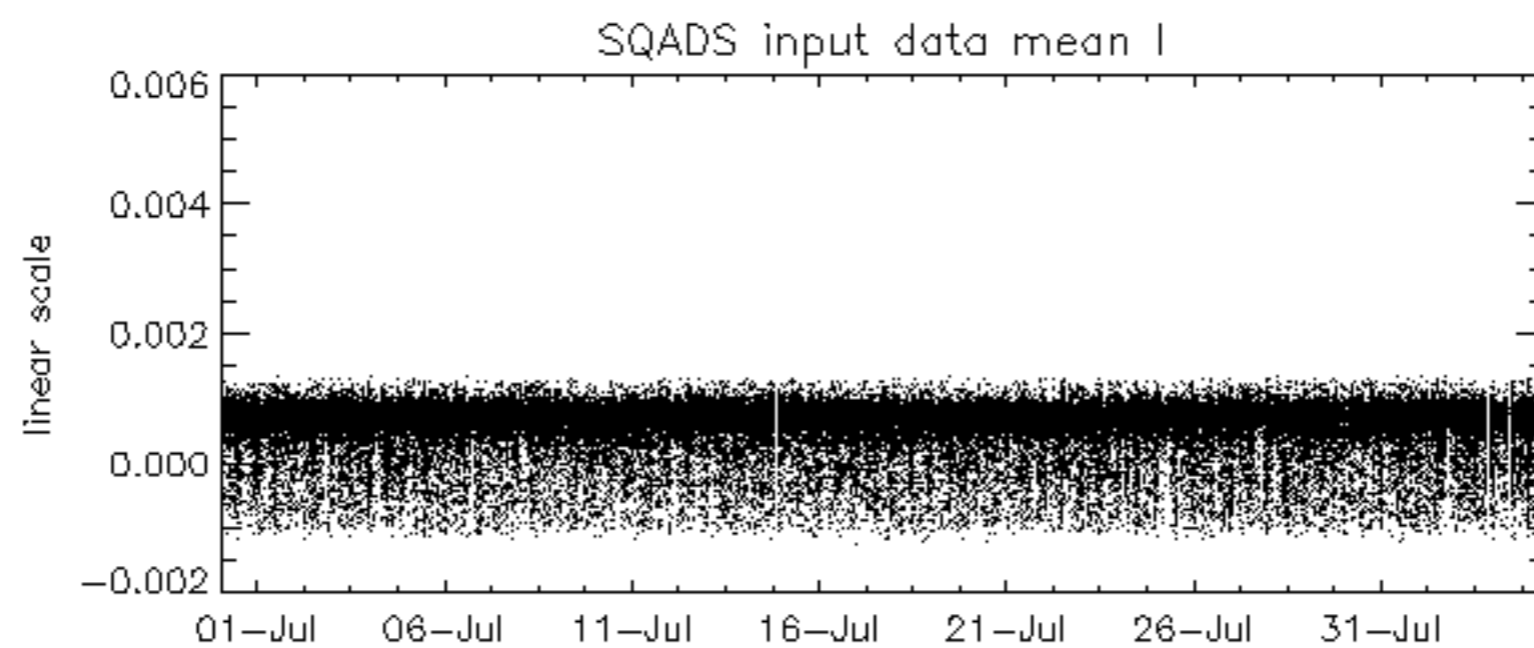
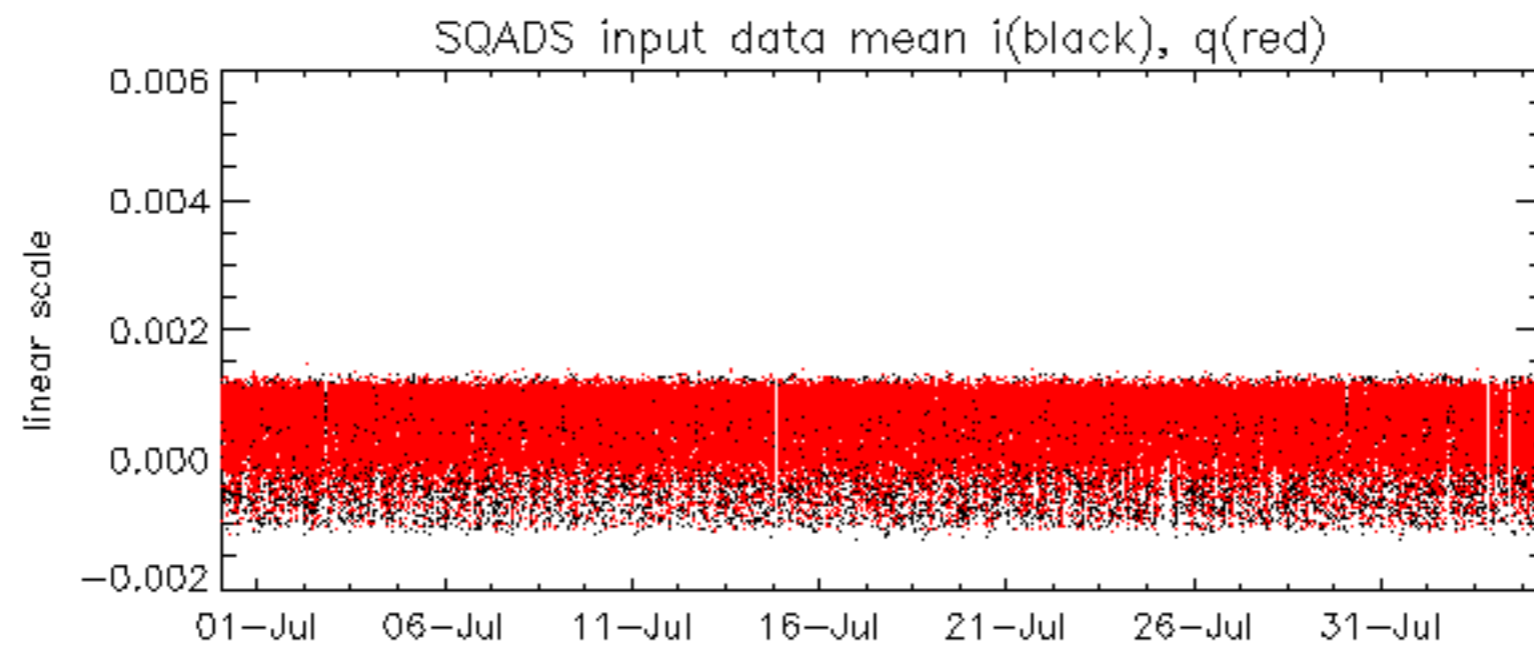




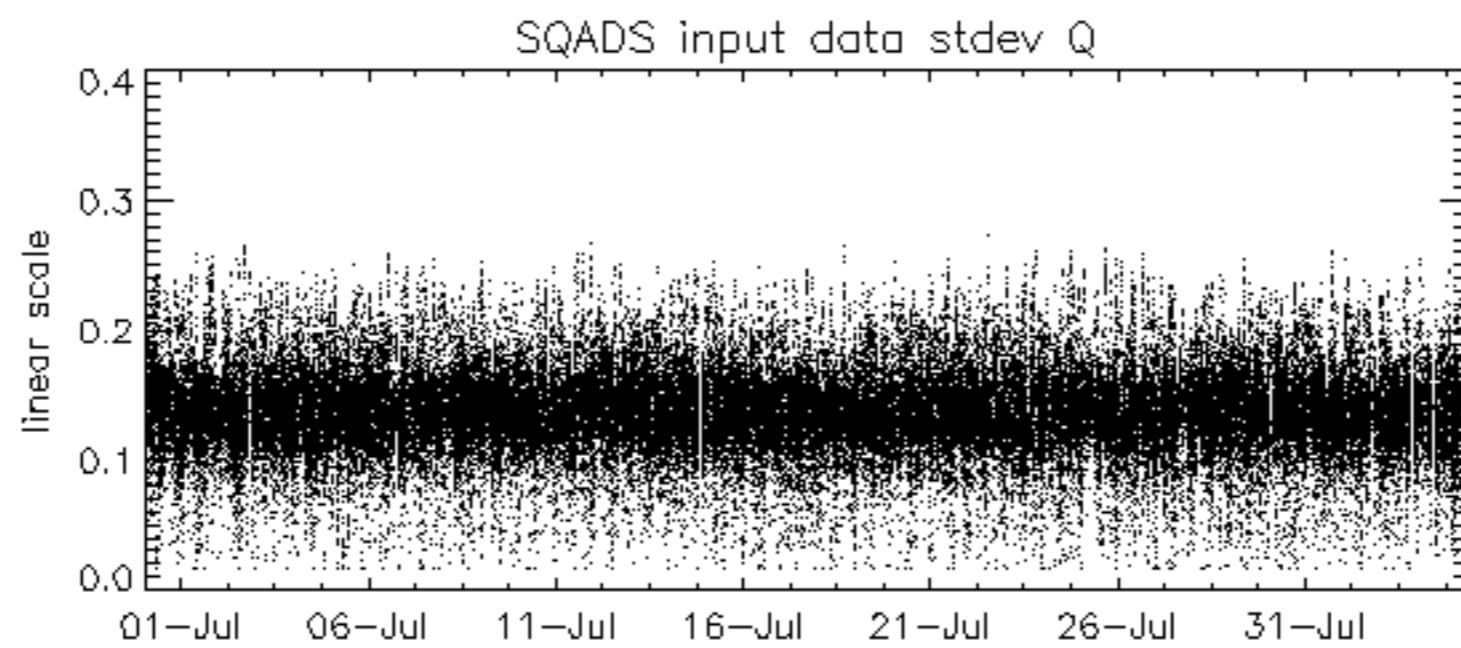
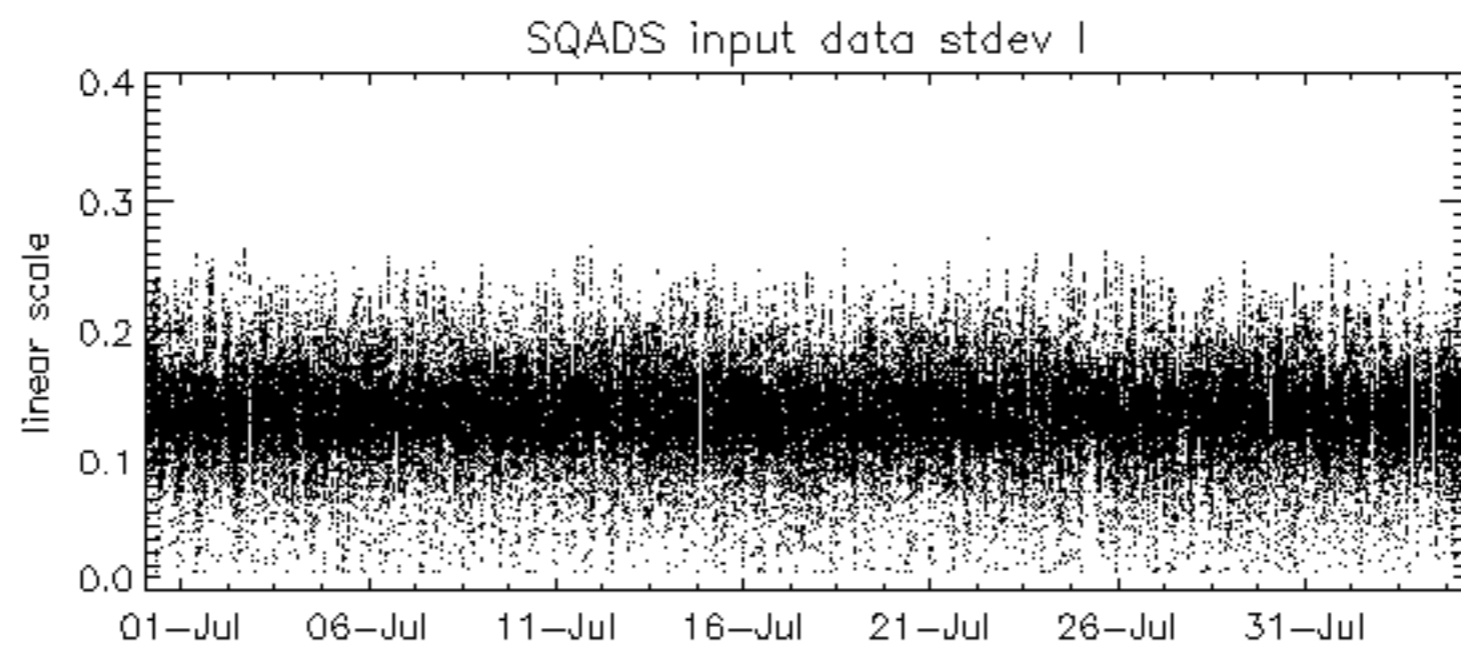
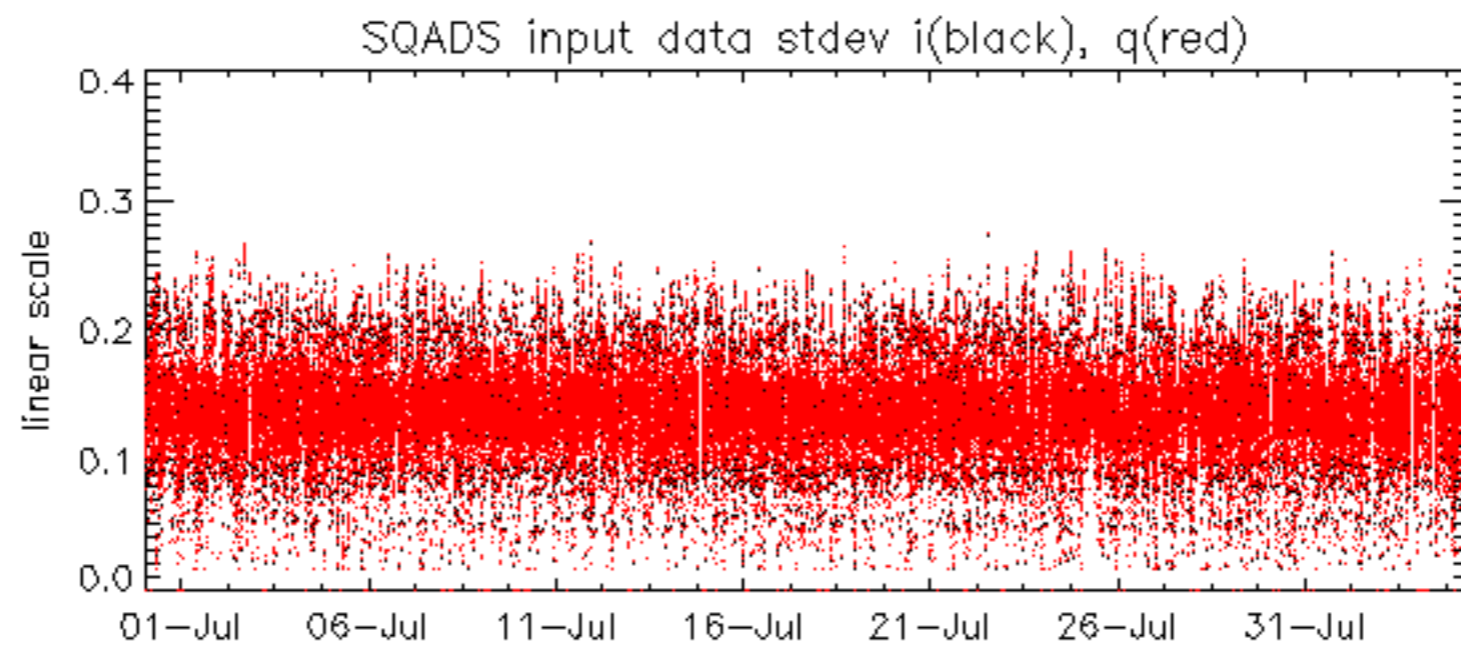
























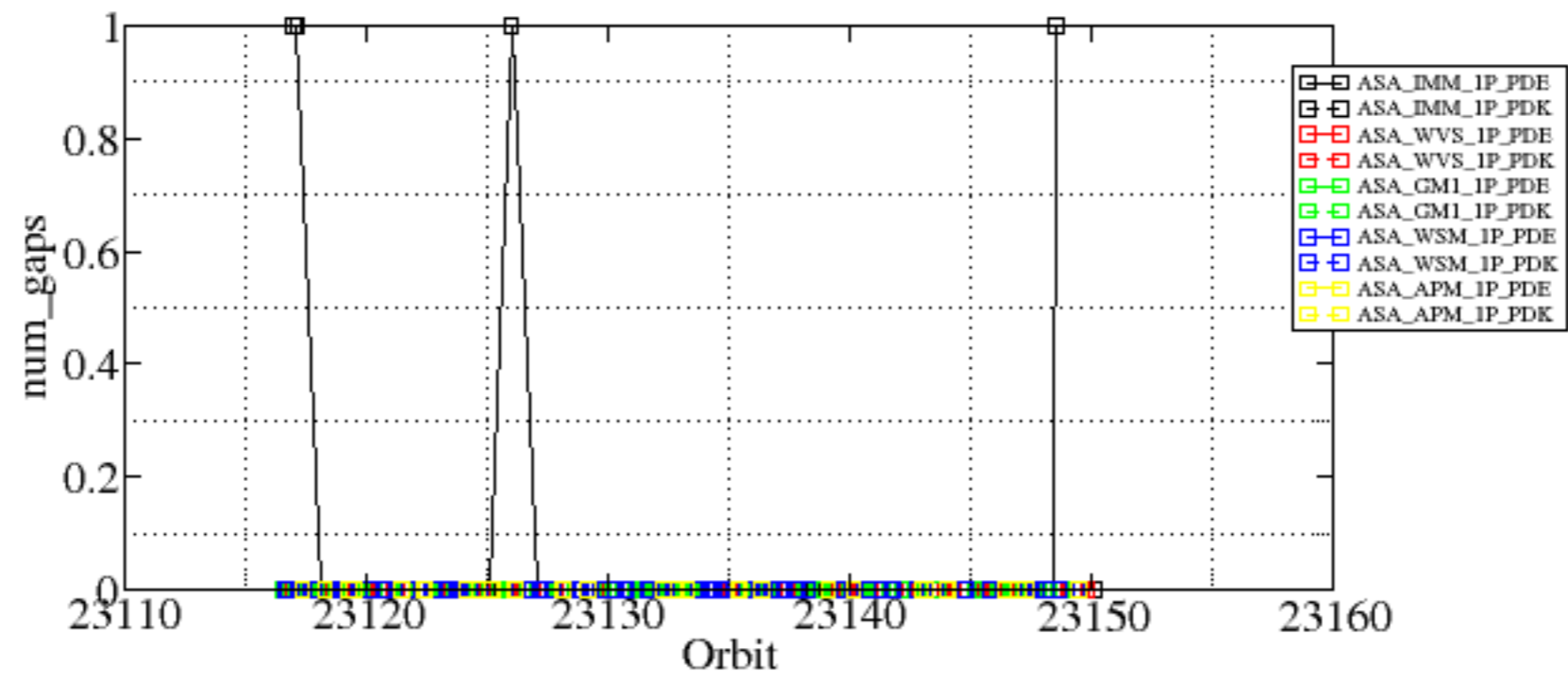


Summary of analysis for the last 3 days 2006080[234]

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_1PNPDE20060802_004523_000001932050_00016_23116_2770.N1	1	0
ASA_IMM_1PNPDE20060802_010204_000000692050_00017_23117_2773.N1	1	0
ASA_IMM_1PNPDE20060802_155516_000000502050_00026_23126_2816.N1	1	0
ASA_IMM_1PNPDE20060804_054400_000000352050_00048_23148_2915.N1	1	0
ASA_WSM_1PNPDE20060802_113753_000000852050_00023_23123_5463.N1	0	70













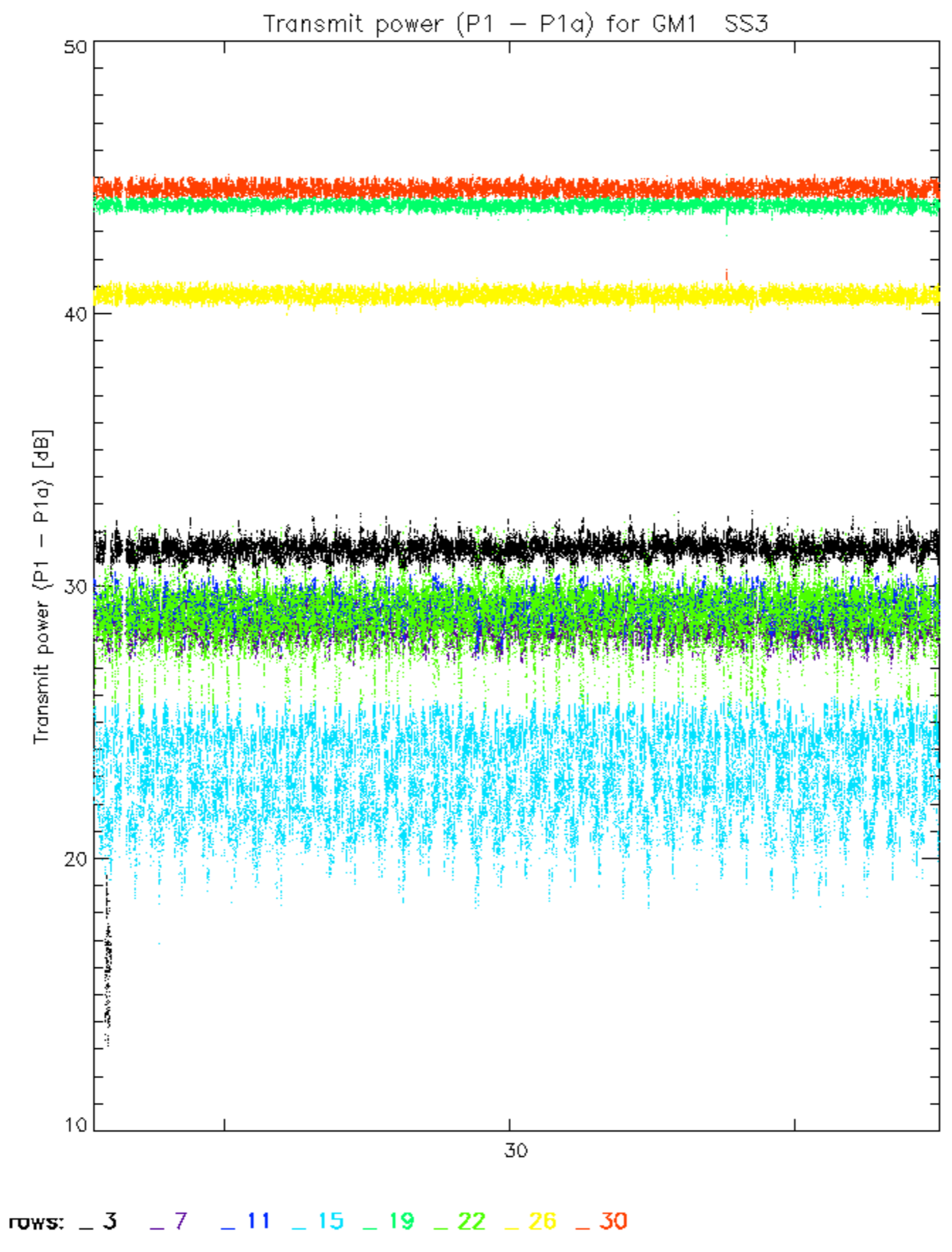


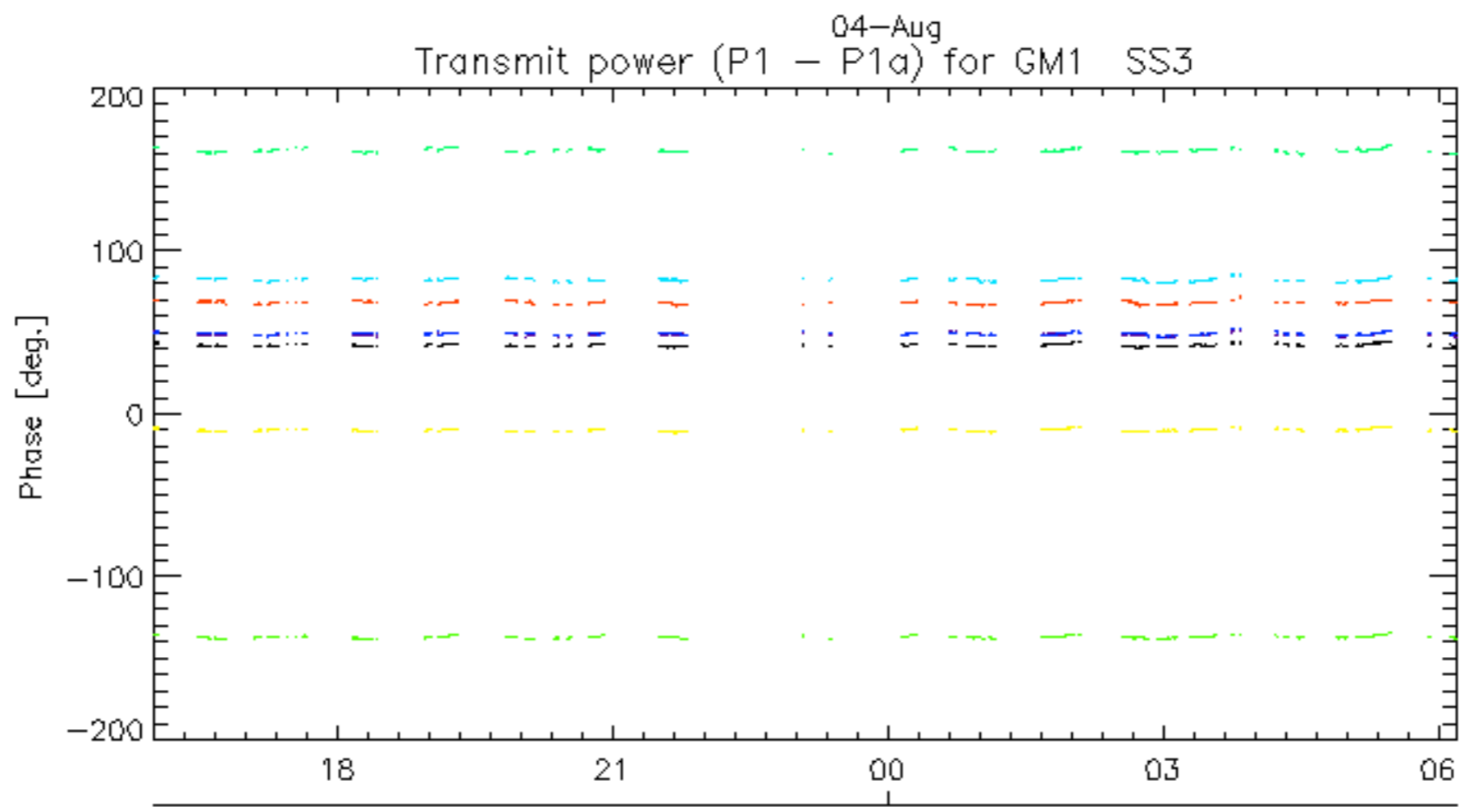
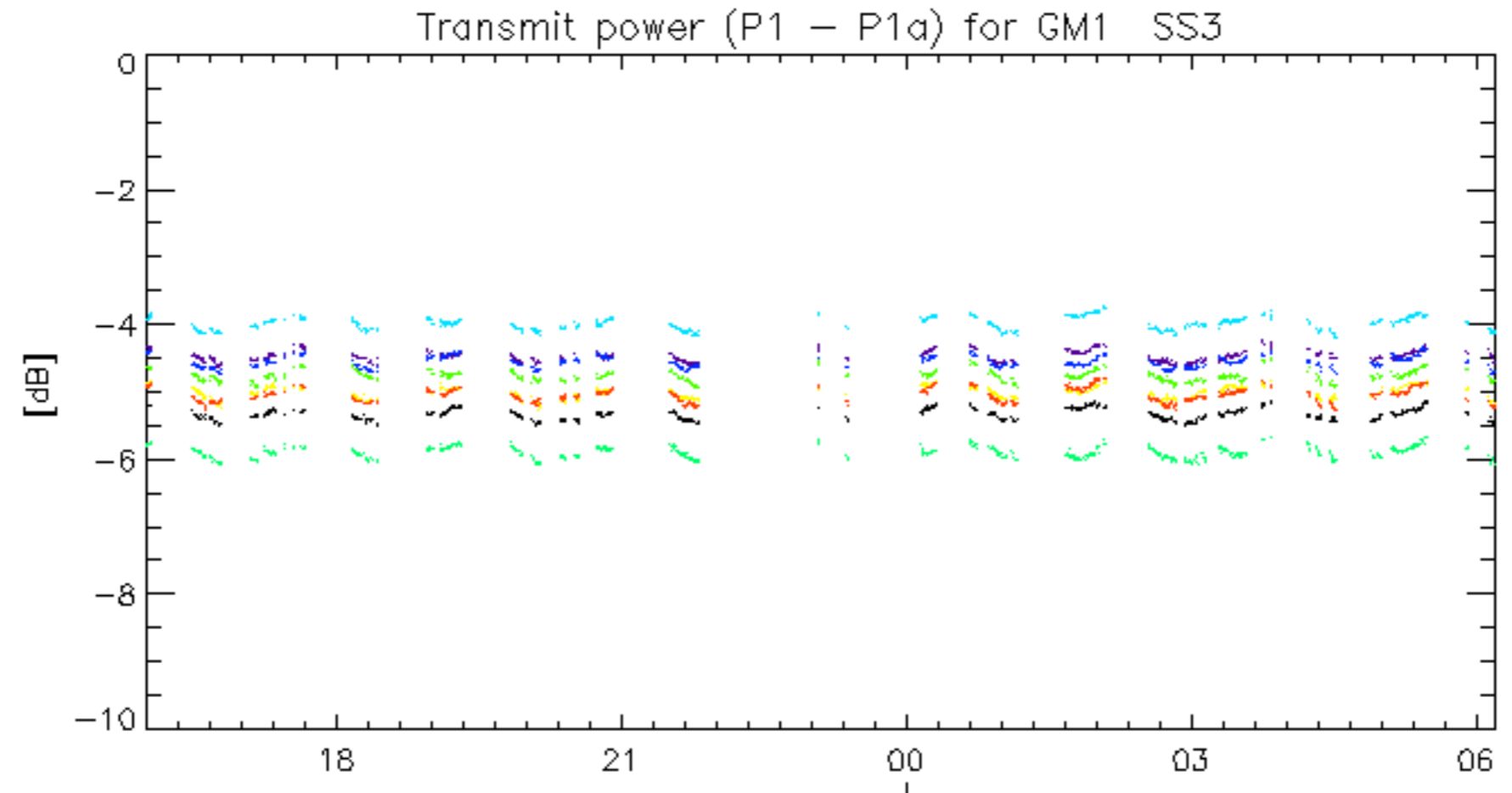




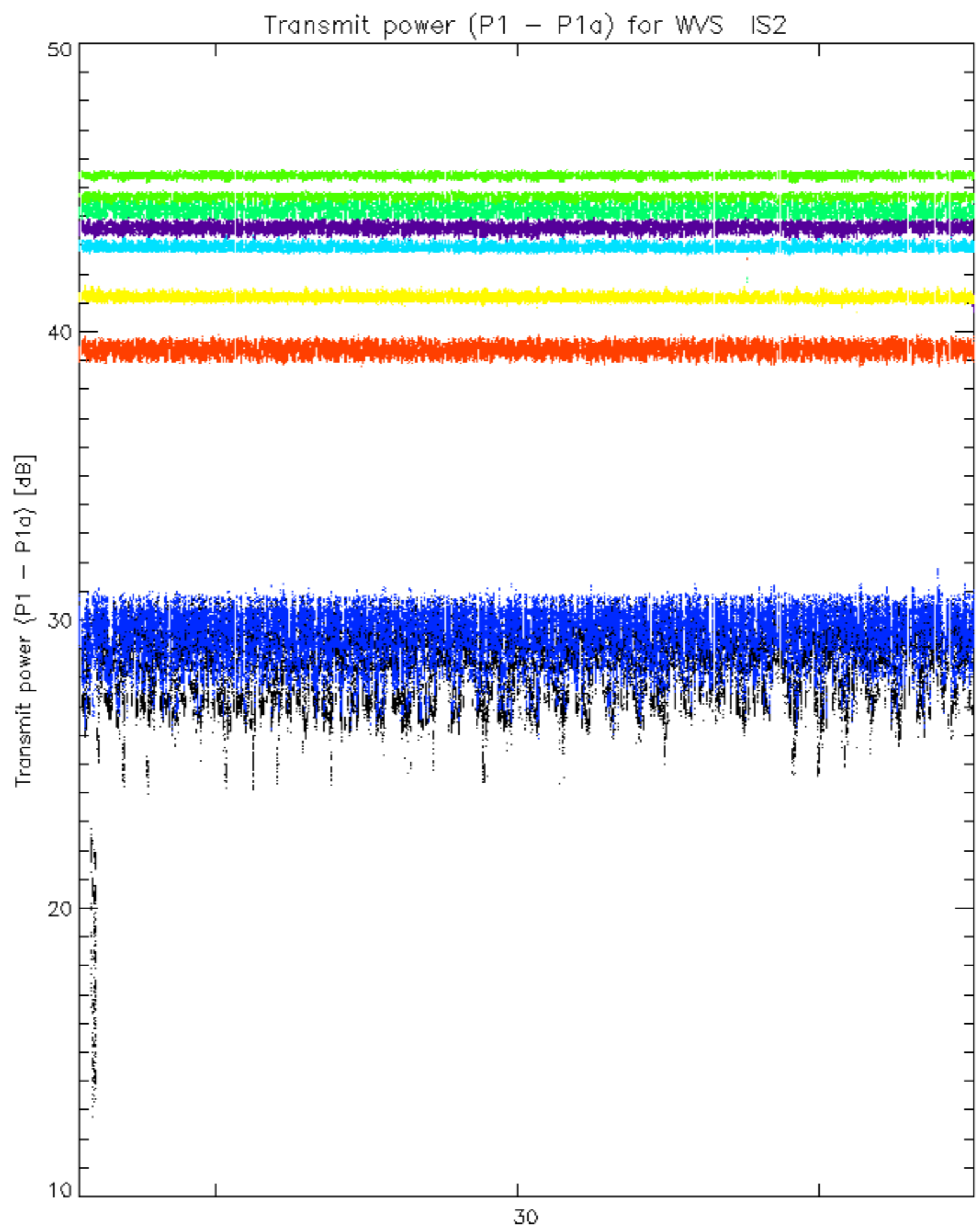




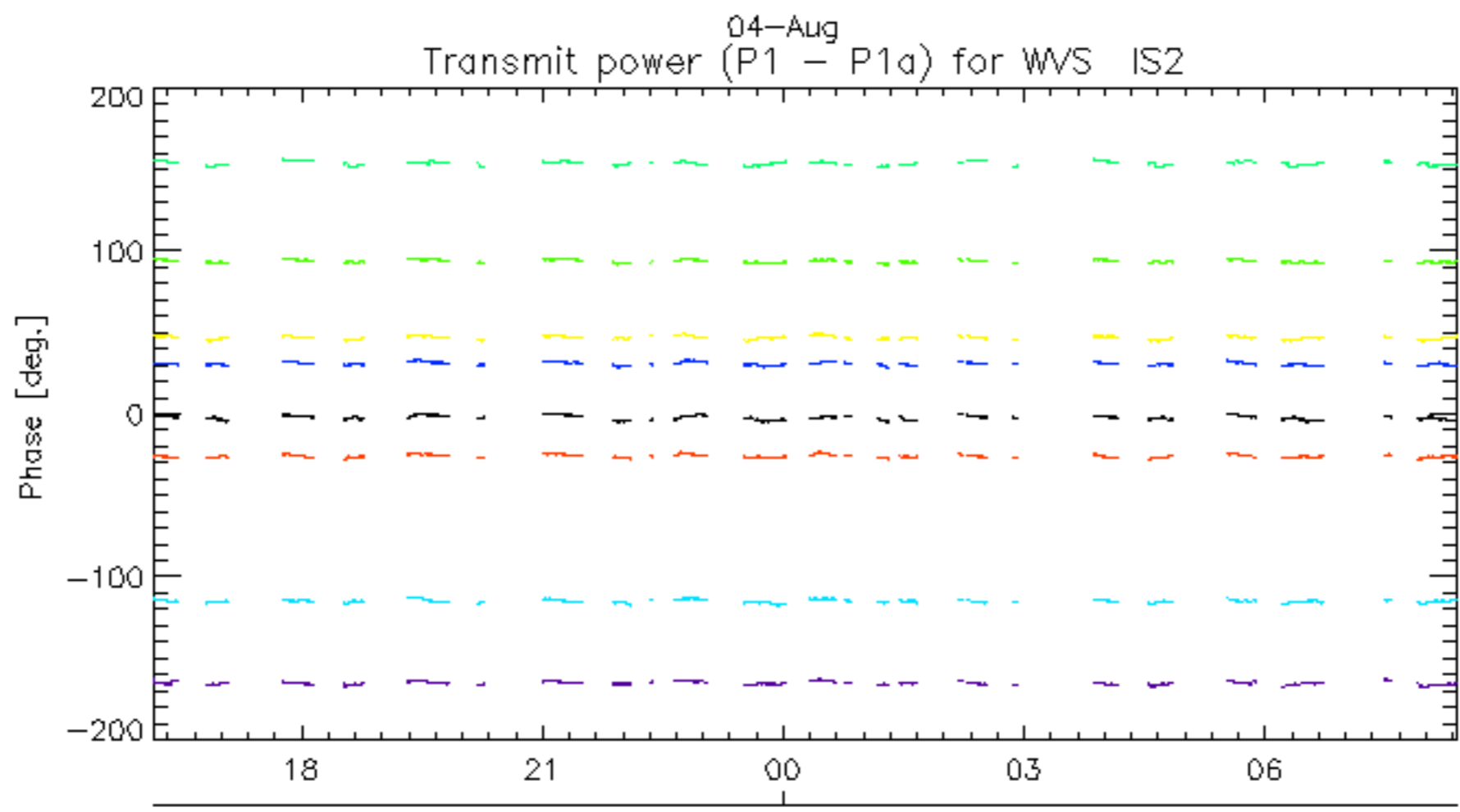
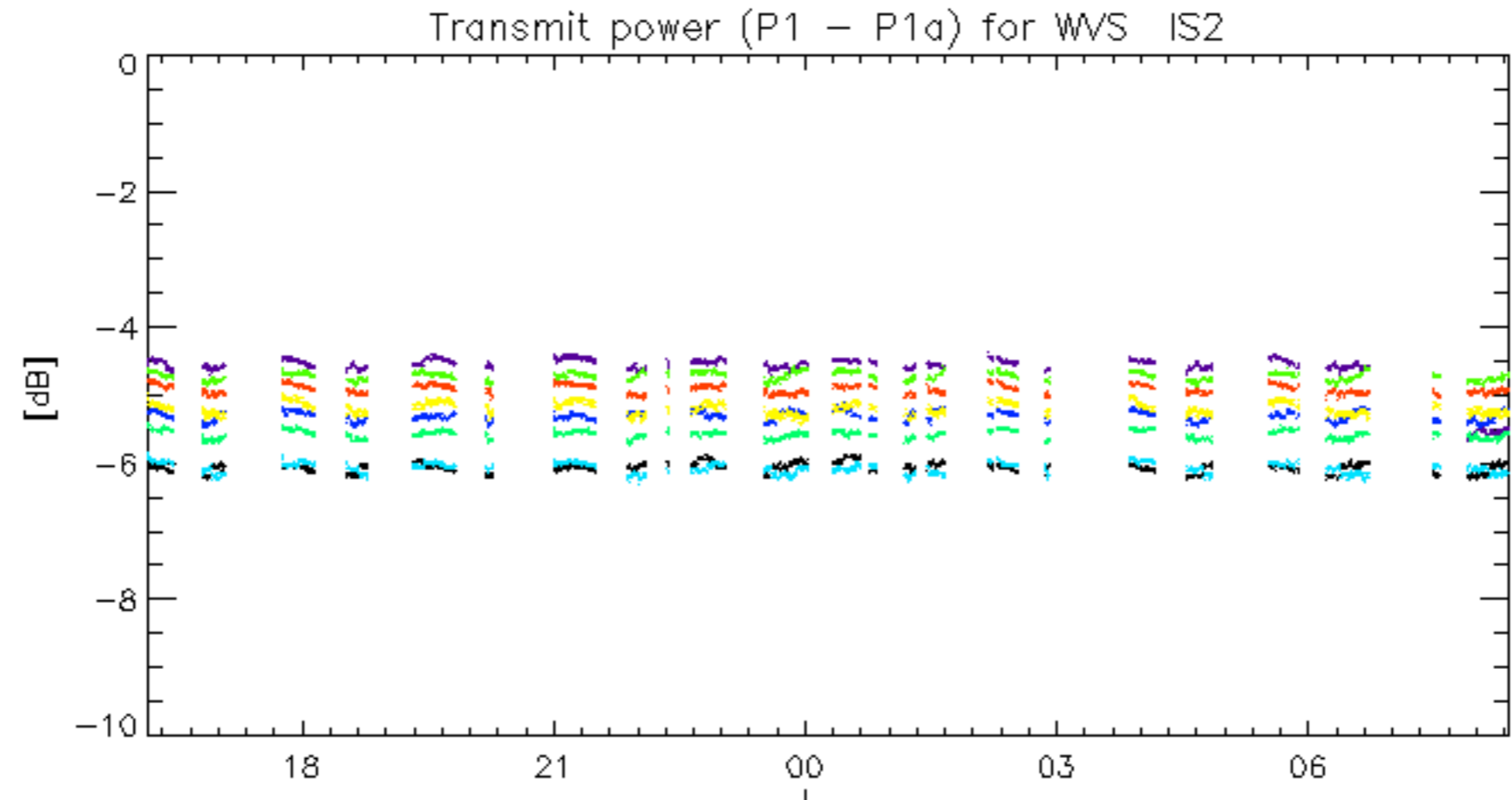




04-Aug  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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No unavailabilities during the reported period.