

# PRELIMINARY REPORT OF 060727

last update on Thu Jul 27 16:31:41 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 2006-07-26 00:00:00 to 2006-07-27 16:31:41

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	35	63	14	8	7
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	35	63	14	8	7
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	35	63	14	8	7
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	35	63	14	8	7

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	63	26	21	57
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	38	63	26	21	57
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	63	26	21	57
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	63	26	21	57

### 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	20060727 100811
H	20060726 071837

### 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	-3.934737	0.011782	-0.029490
7	P1	-3.100192	0.010207	0.012244
11	P1	-4.085393	0.013548	0.005468
15	P1	-6.173584	0.011486	-0.008708
19	P1	-3.401202	0.009928	-0.049755
22	P1	-4.549229	0.010198	-0.030180
26	P1	-3.928133	0.020108	0.034857
30	P1	-5.762672	0.009495	-0.003312
3	P1	-16.519093	0.312221	-0.082946
7	P1	-17.190962	0.101804	-0.013459
11	P1	-16.985441	0.276979	-0.032032
15	P1	-13.108084	0.149183	0.043330
19	P1	-14.458149	0.053969	-0.136670
22	P1	-16.012642	0.424657	0.052163
26	P1	-15.119918	0.240026	0.106682
30	P1	-17.104340	0.347906	-0.067419

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.973654	0.087957	0.148693
7	P2	-21.914890	0.105253	0.080726
11	P2	-15.792772	0.122011	0.063692
15	P2	-7.128643	0.100618	0.030065
19	P2	-9.132902	0.091614	0.015115
22	P2	-18.148746	0.086515	0.007838
26	P2	-16.399179	0.093558	-0.013453
30	P2	-19.521965	0.093084	0.039149

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.174816	0.002995	0.002884
7	P3	-8.174816	0.002995	0.002884
11	P3	-8.174816	0.002995	0.002884
15	P3	-8.174816	0.002995	0.002884
19	P3	-8.174816	0.002995	0.002884
22	P3	-8.174816	0.002995	0.002884
26	P3	-8.174816	0.002995	0.002884
30	P3	-8.174816	0.002995	0.002884

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1

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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	-3.808913	0.024272	-0.087822
7	P1	-2.559818	0.007962	0.018492
11	P1	-2.857802	0.014349	0.014920
15	P1	-3.570586	0.029150	-0.042791
19	P1	-3.422300	0.026283	-0.037103
22	P1	-5.089508	0.019965	0.018093
26	P1	-5.859711	0.015737	-0.012597
30	P1	-5.195275	0.034045	-0.021999
3	P1	-11.594564	0.082330	-0.109777
7	P1	-9.967974	0.034344	0.035016
11	P1	-10.248303	0.056355	0.000462
15	P1	-10.755990	0.144379	-0.011135
19	P1	-15.554953	0.562525	-0.171214
22	P1	-20.908602	1.242073	0.033174

26	P1	-16.292164	0.382419	0.226765
30	P1	-17.919834	0.414658	-0.184170

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.616140	0.071383	0.203447
7	P2	-22.394011	0.125953	0.145064
11	P2	-11.047915	0.041778	0.081774
15	P2	-4.910121	0.045635	0.041166
19	P2	-6.873595	0.041379	0.028249
22	P2	-8.195717	0.036608	0.021261
26	P2	-24.182926	0.062187	0.023855
30	P2	-22.012135	0.049478	0.053498

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.013850	0.003748	0.010150
7	P3	-8.013837	0.003747	0.010465
11	P3	-8.013672	0.003759	0.010216
15	P3	-8.013771	0.003754	0.010289
19	P3	-8.013824	0.003749	0.010260
22	P3	-8.013862	0.003738	0.010045
26	P3	-8.013817	0.003747	0.010069
30	P3	-8.013810	0.003744	0.010239

## 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	0.000564286
	stdev	1.68035e-07
MEAN Q	mean	0.000539537
	stdev	2.13929e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137835
	stdev	0.00109656
STDEV Q	mean	0.138194
	stdev	0.00111447



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006072[567]

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_1PNPDE20060725_115630_000000512049_00410_23009_2003.N1	1	0
ASA_IMM_1PNPDE20060726_012209_000000622049_00418_23017_2072.N1	1	0
ASA_IMM_1PNPDE20060726_144003_000000822049_00426_23025_2069.N1	1	0
ASA_IMM_1PNPDE20060727_003438_000001152049_00431_23030_2088.N1	1	0
ASA_WSM_1PNPDE20060725_183111_000002692049_00414_23013_4403.N1	0	18





## 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"/>
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Ascending

<input type="checkbox"/>
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Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

<input type="checkbox"/>
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Ascending

<input type="checkbox"/>
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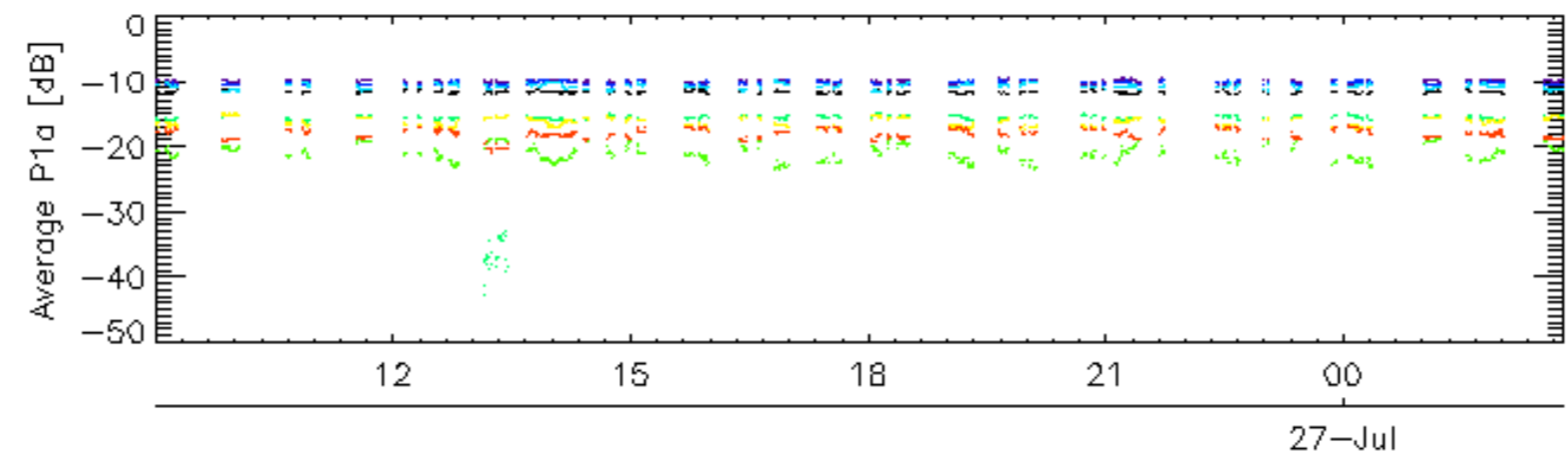
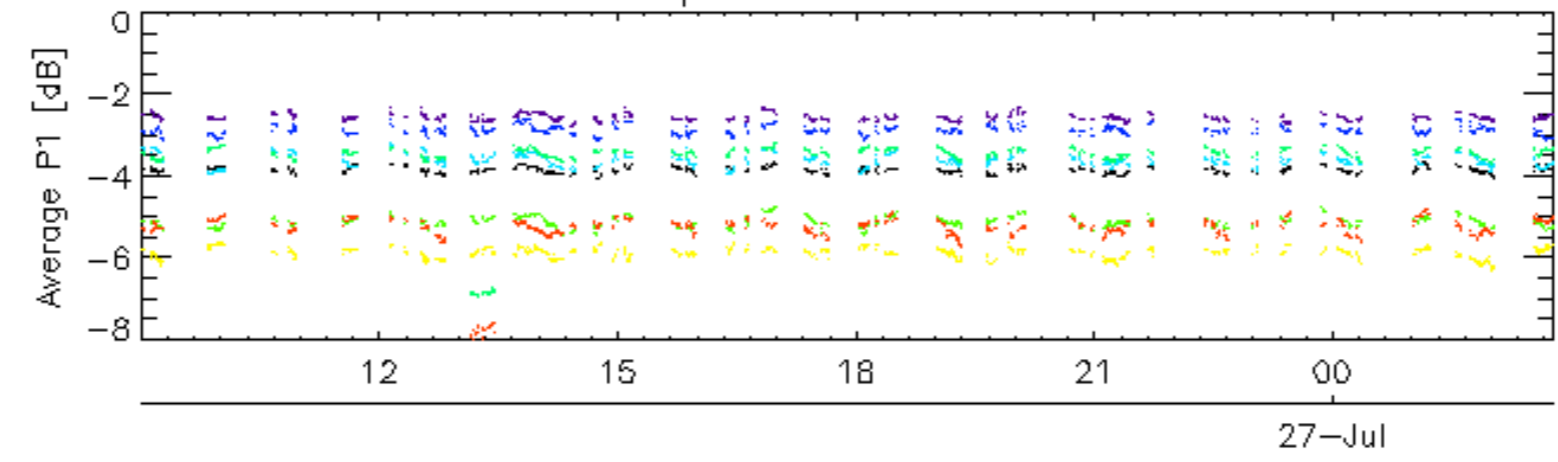
Descending

### 7.6 - Doppler evolution versus ANX for GM1

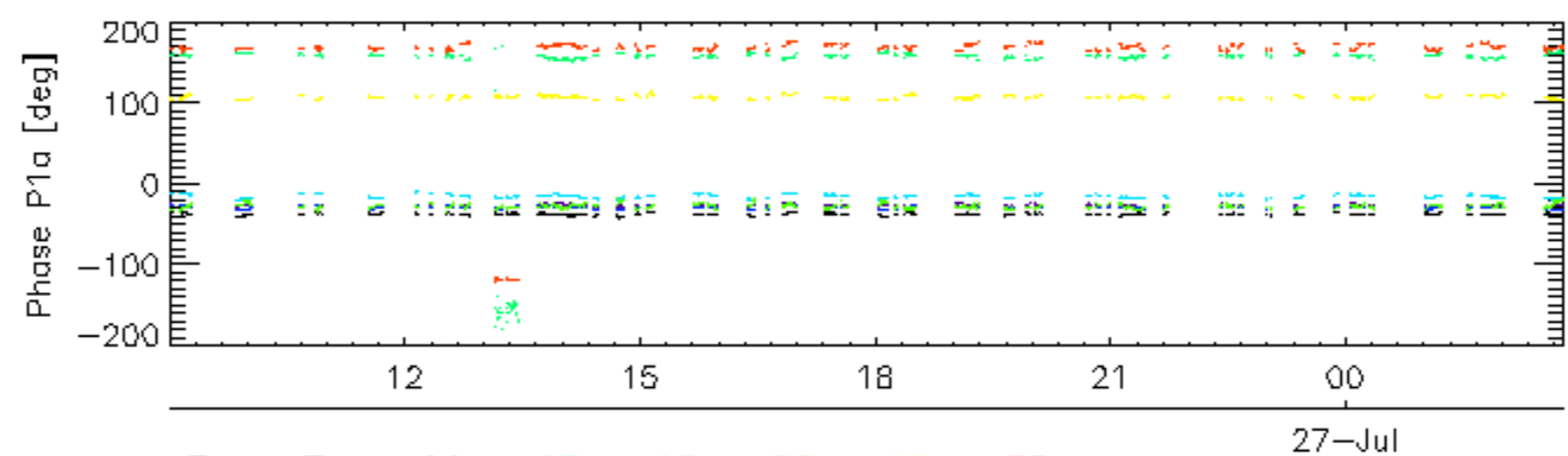
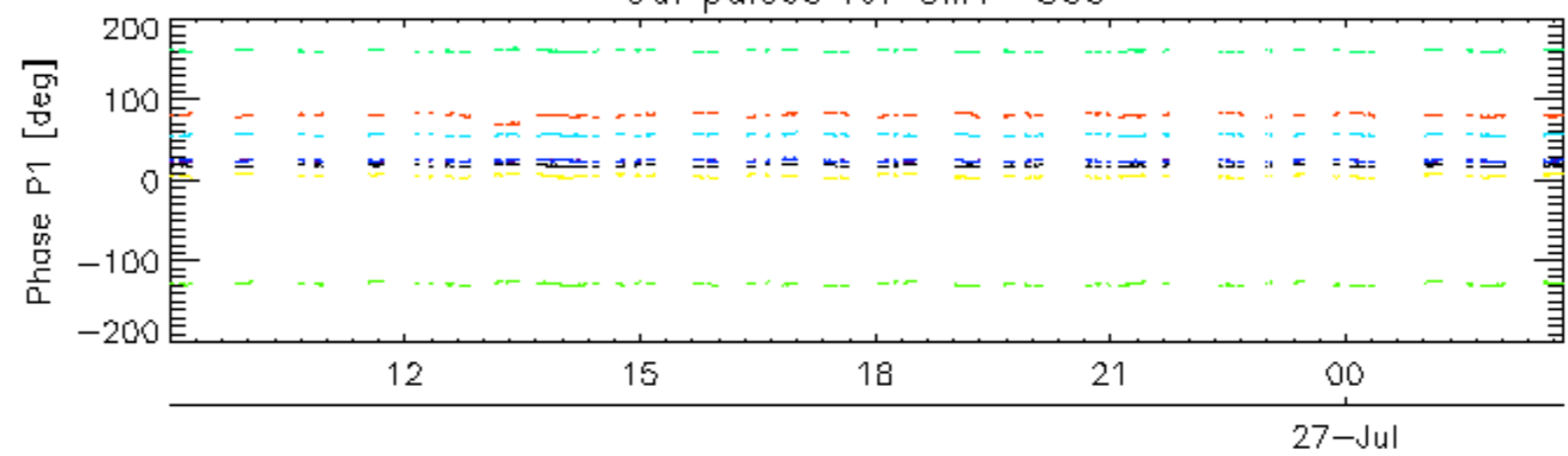
Evolution Doppler error versus ANX

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

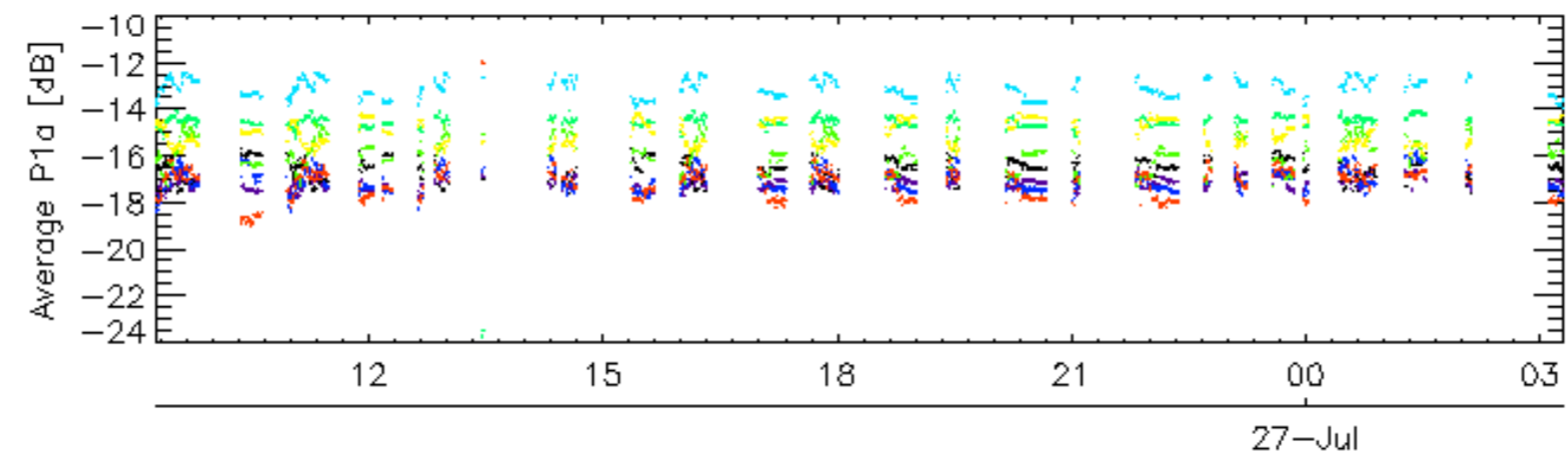
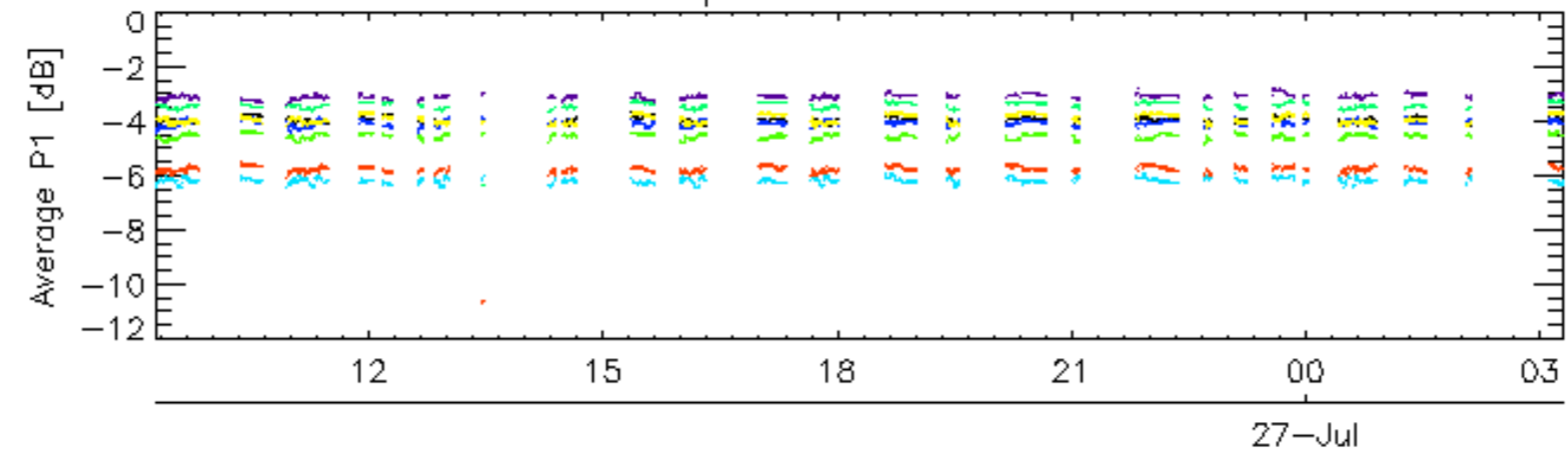


Cal pulses for GM1 SS3

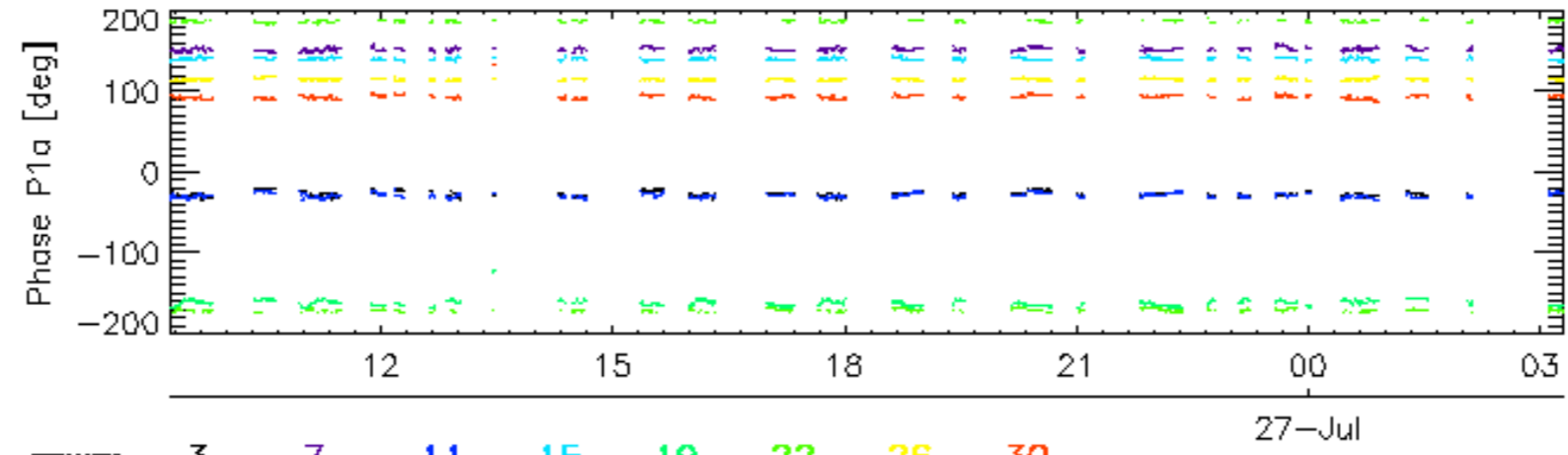
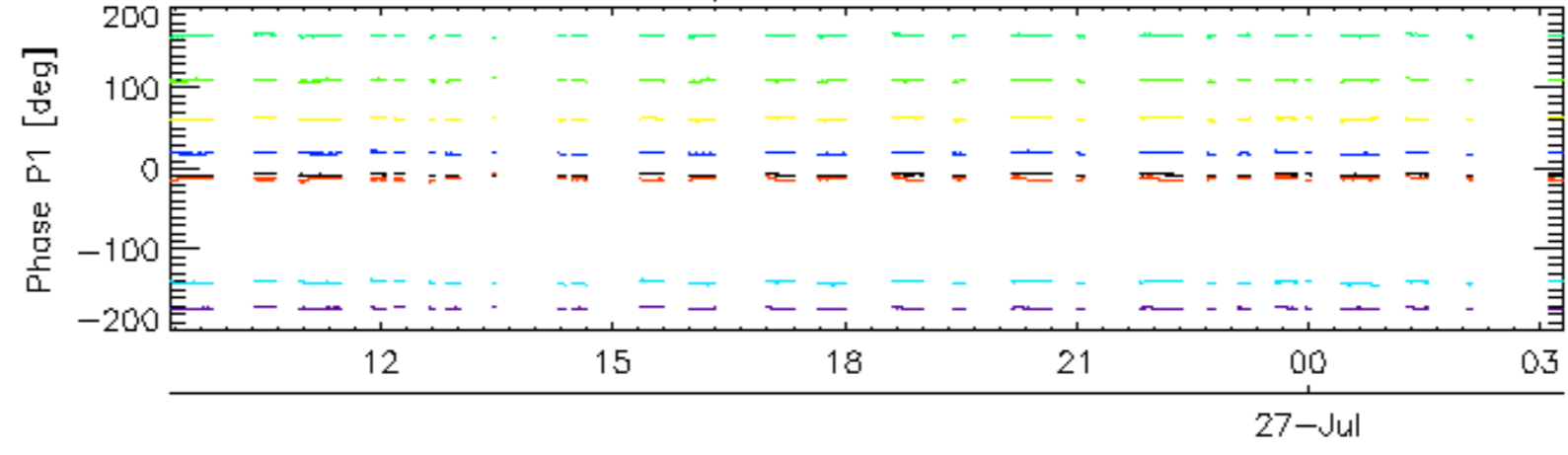


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

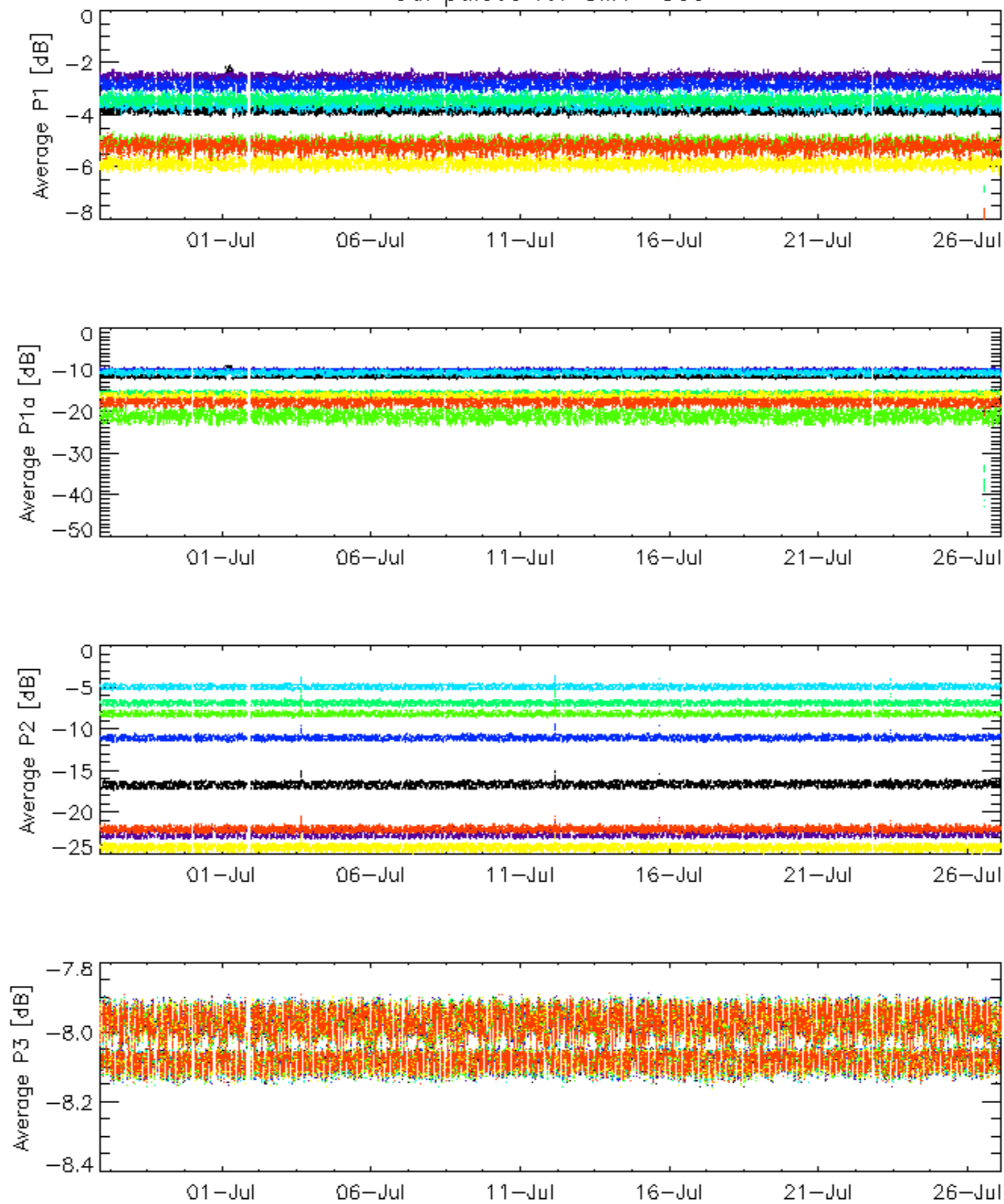


Cal pulses for WVS IS2



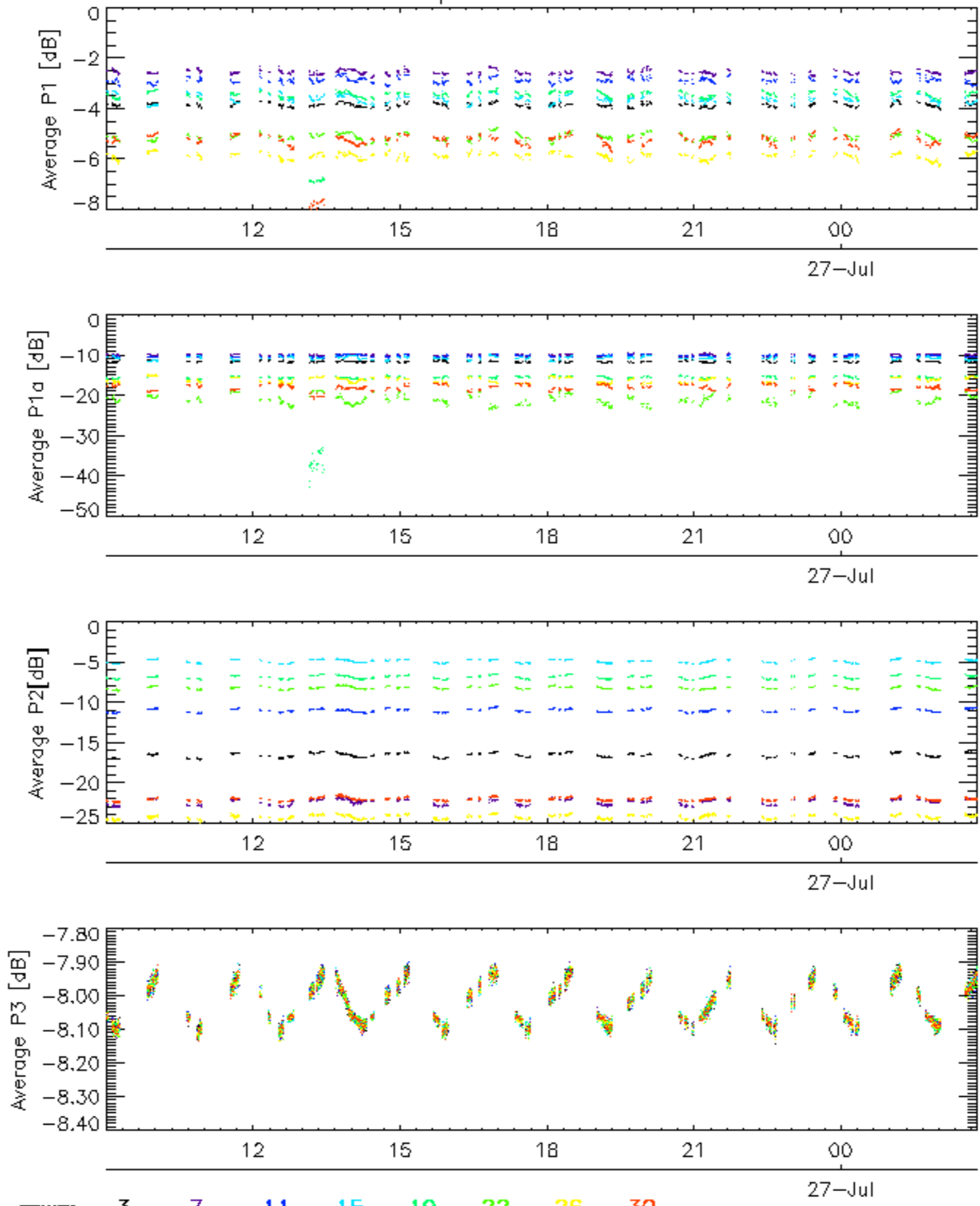
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

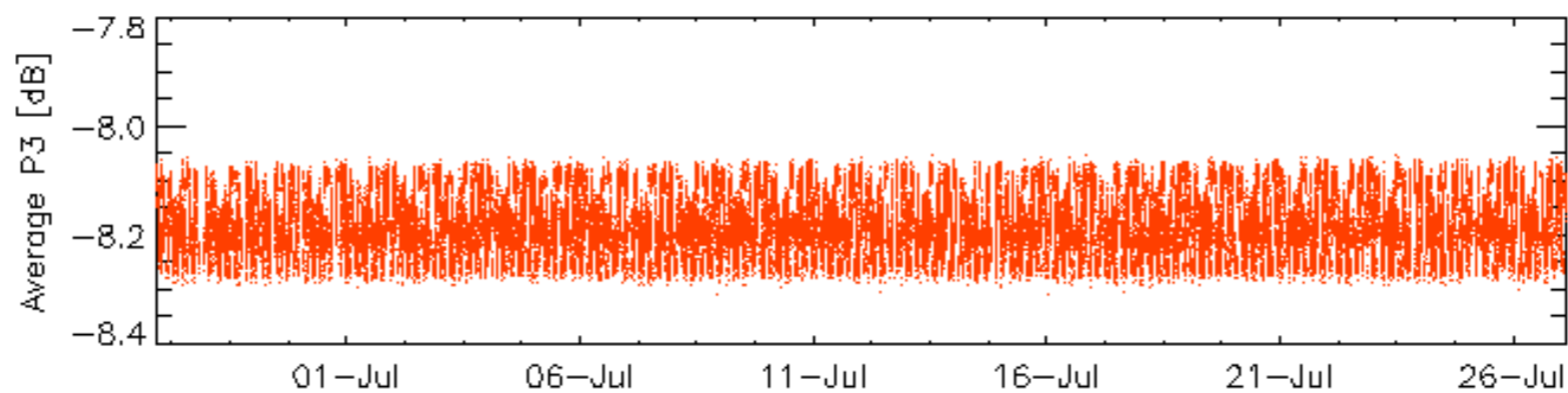
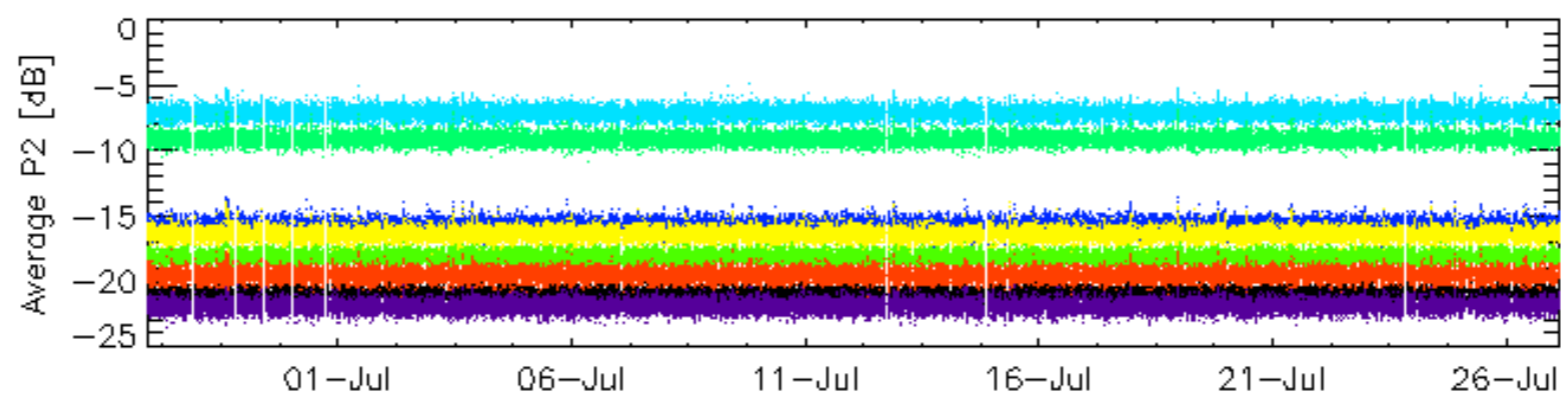
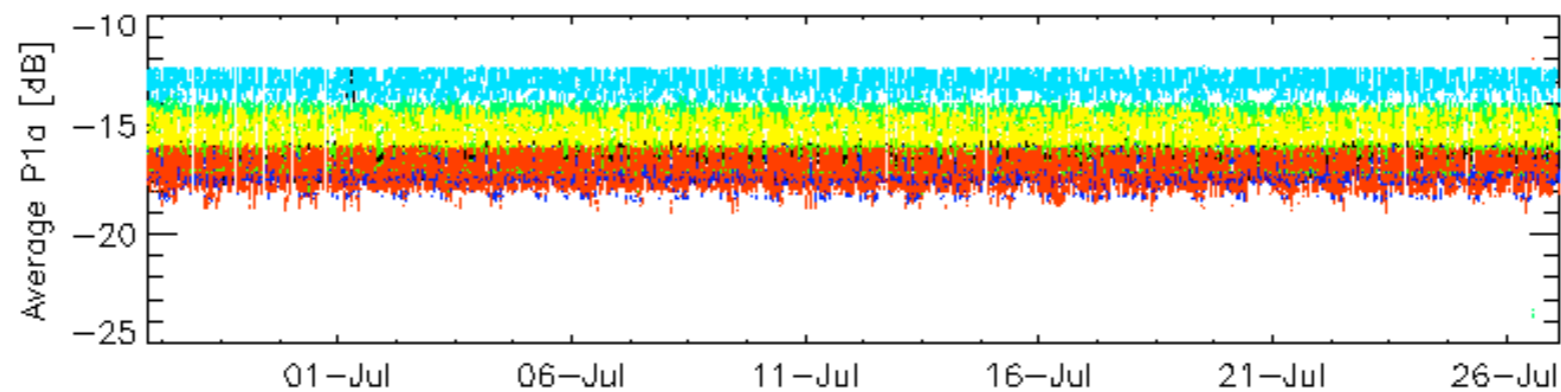
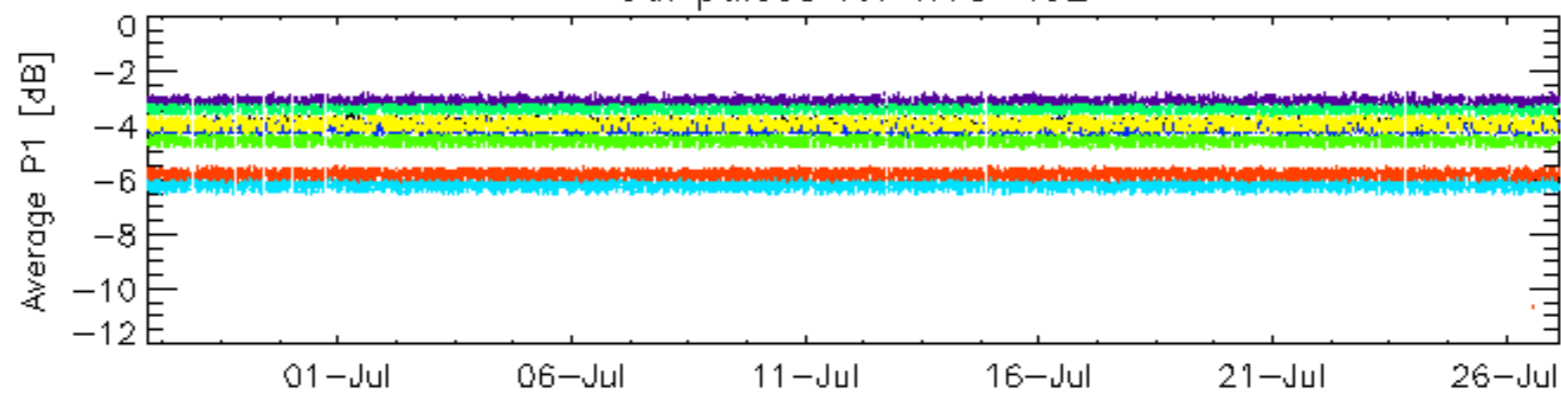


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

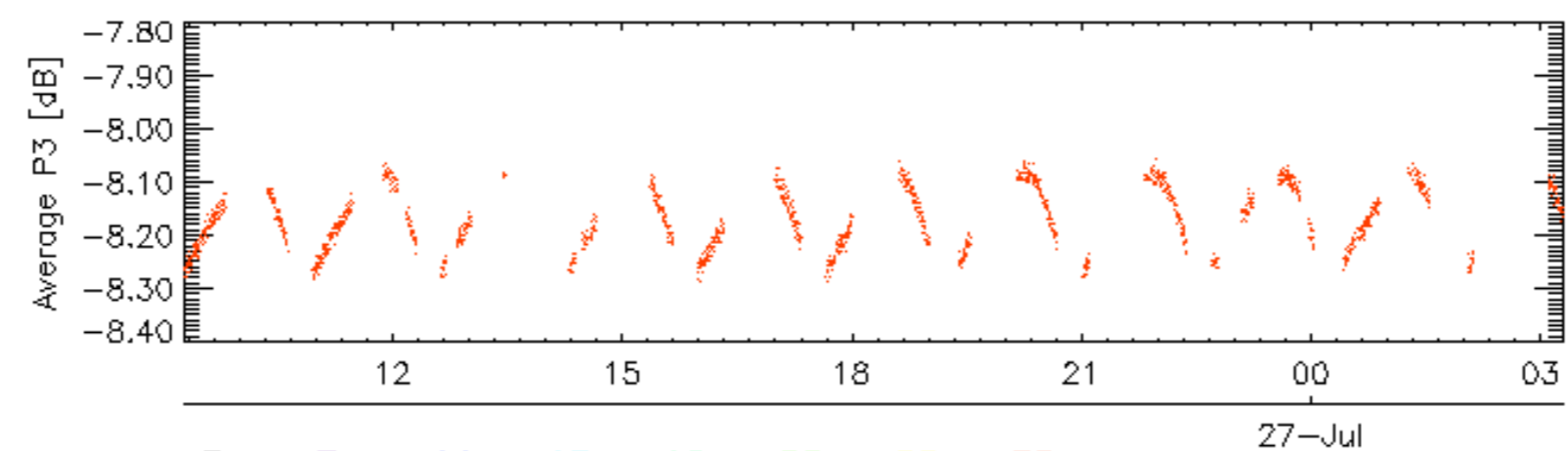
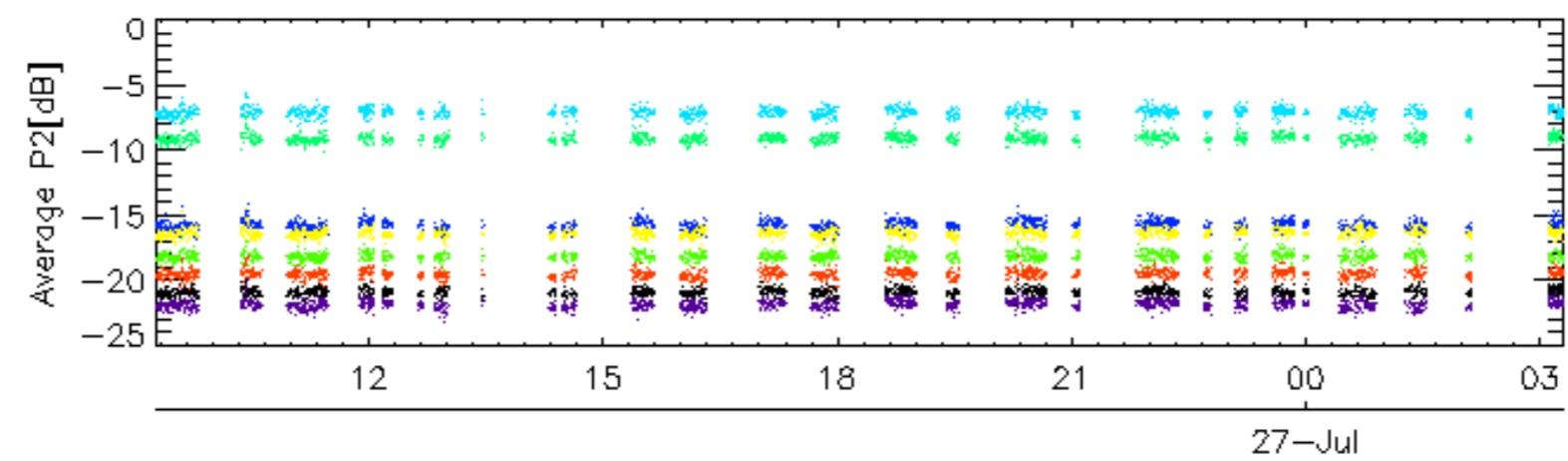
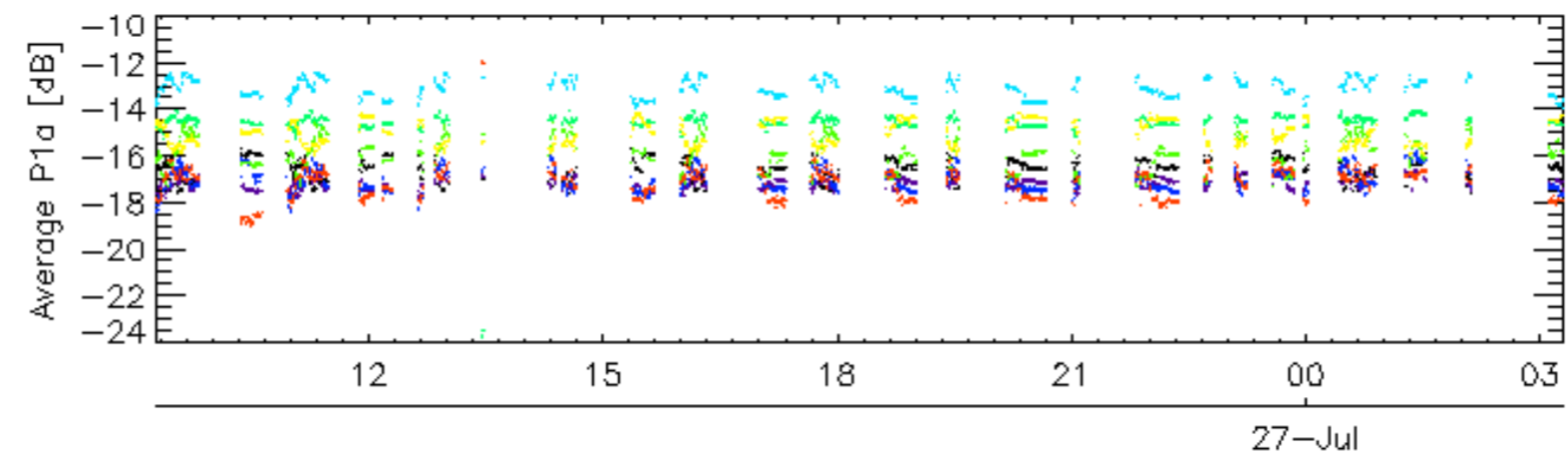
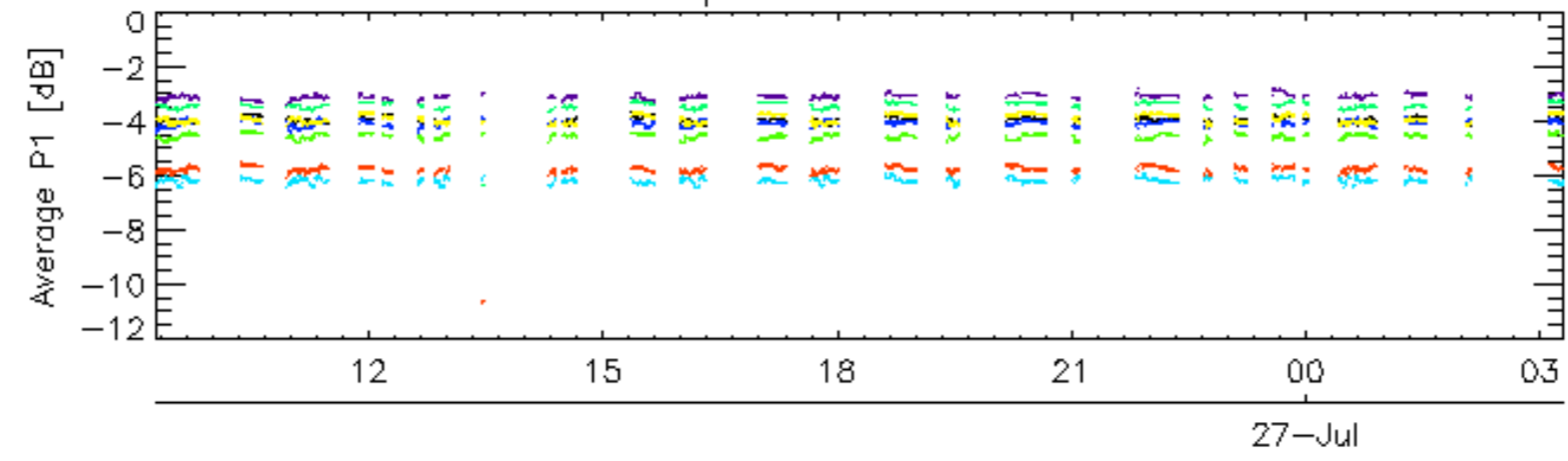


Cal pulses for WVS IS2



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

Cal pulses for WVS IS2

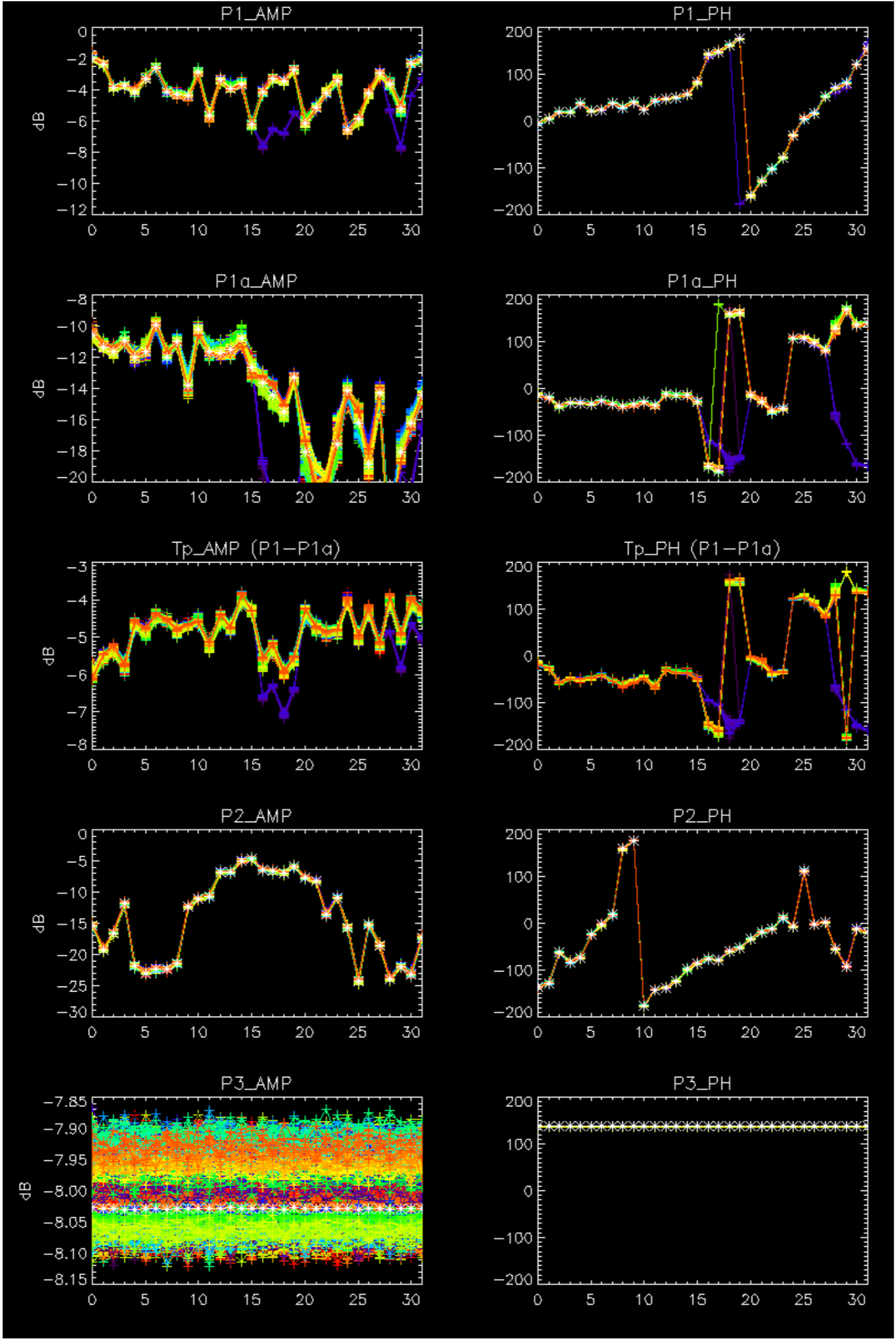


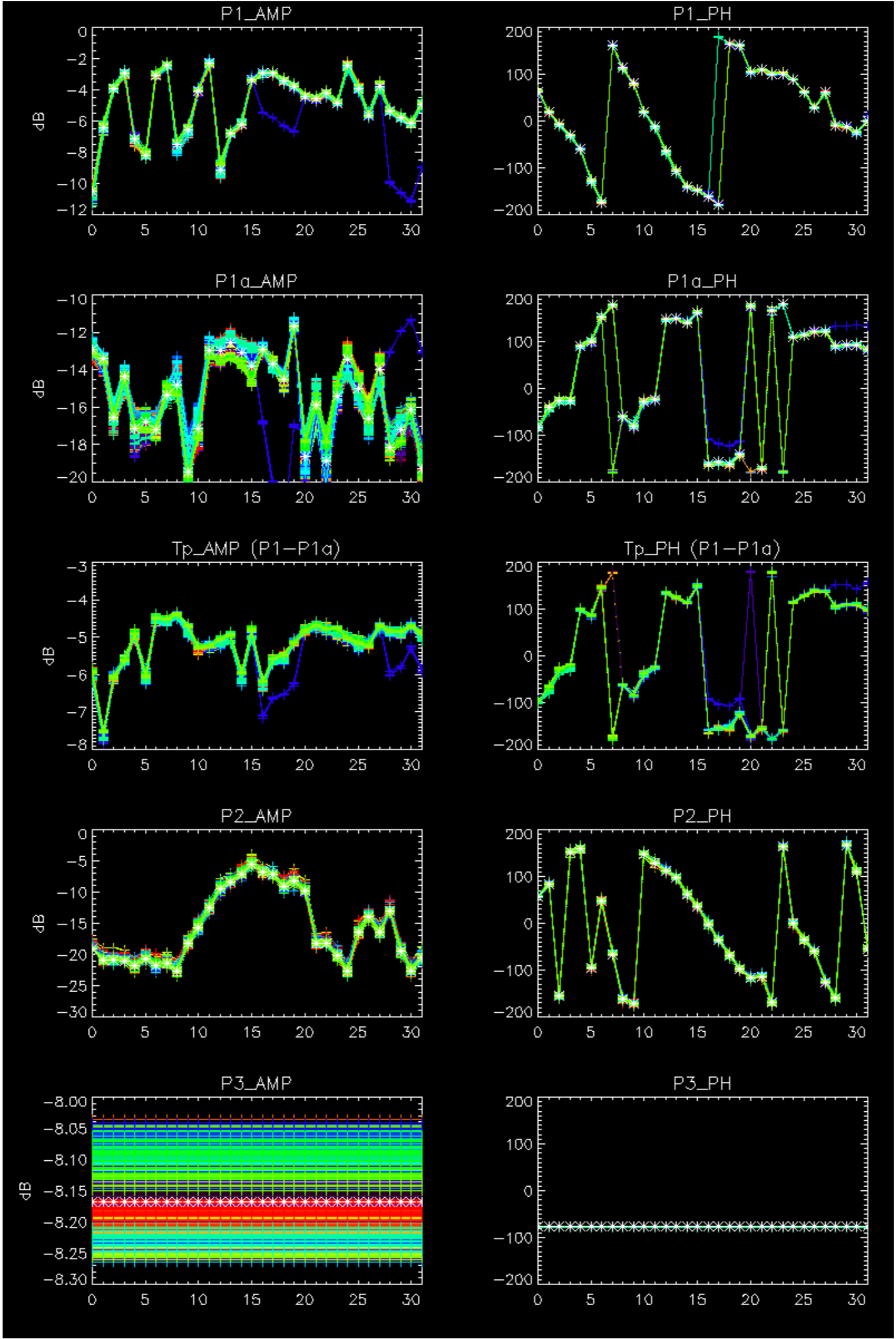
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No anomalies observed on available browse products



No anomalies observed.

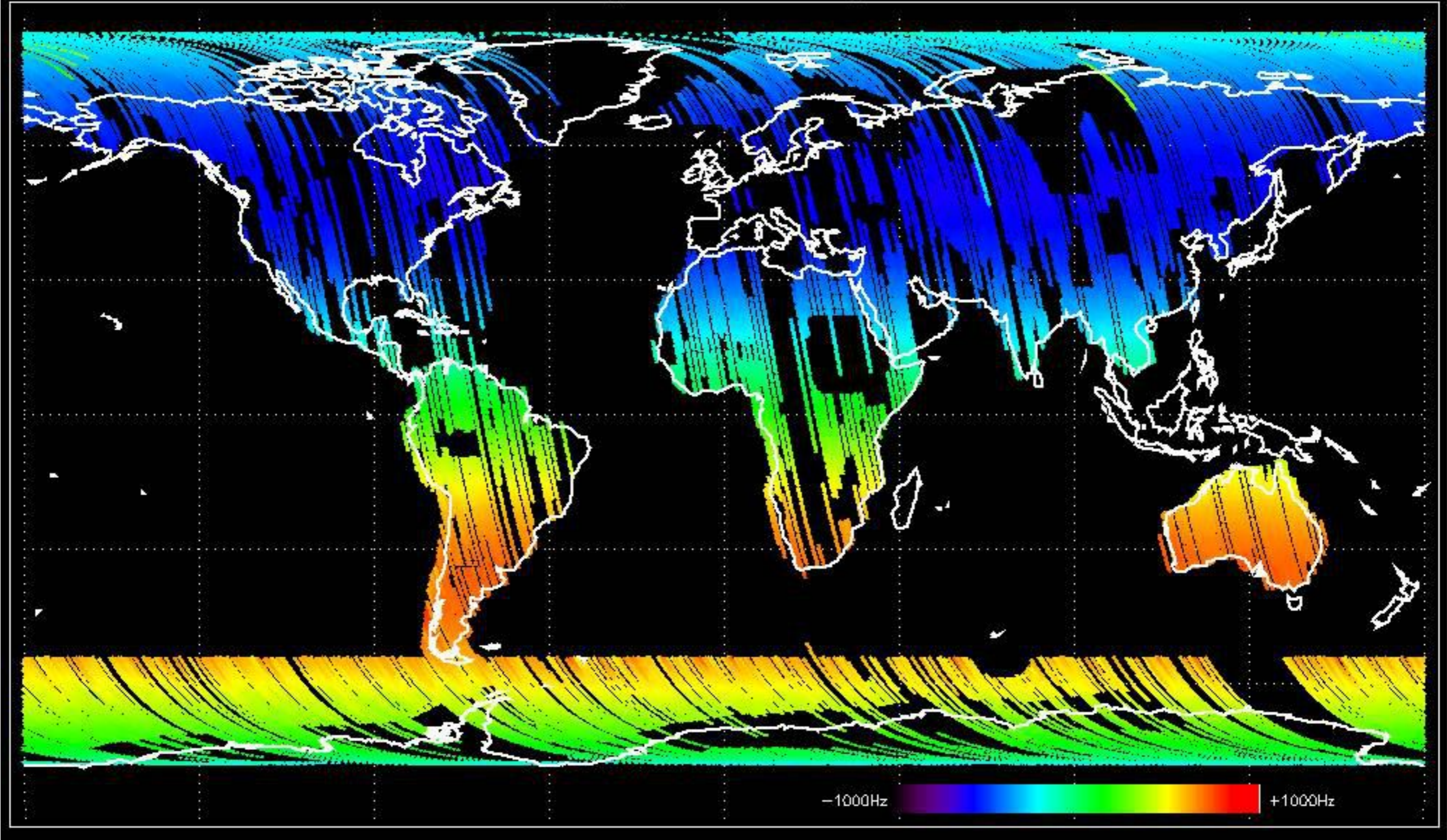




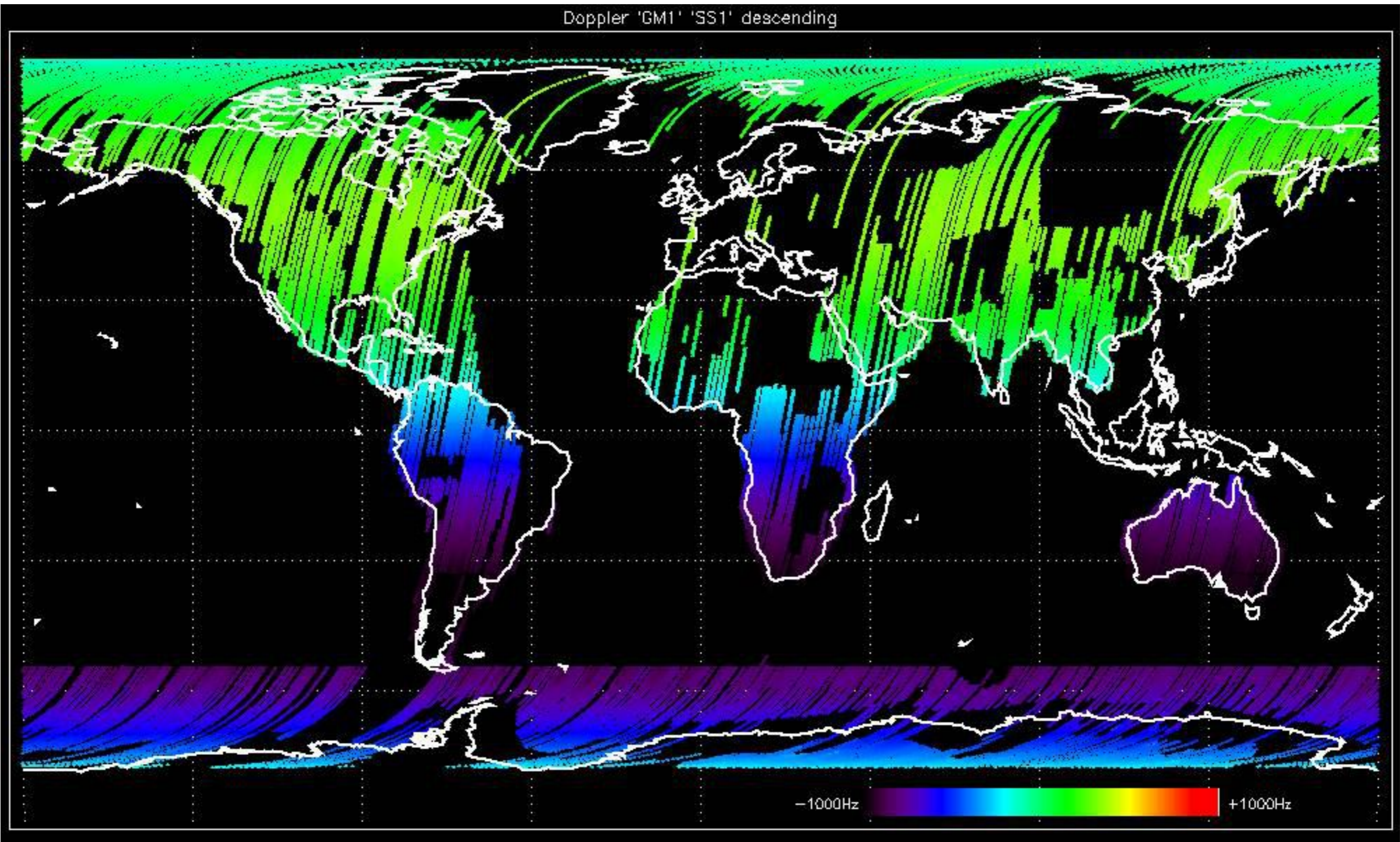
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



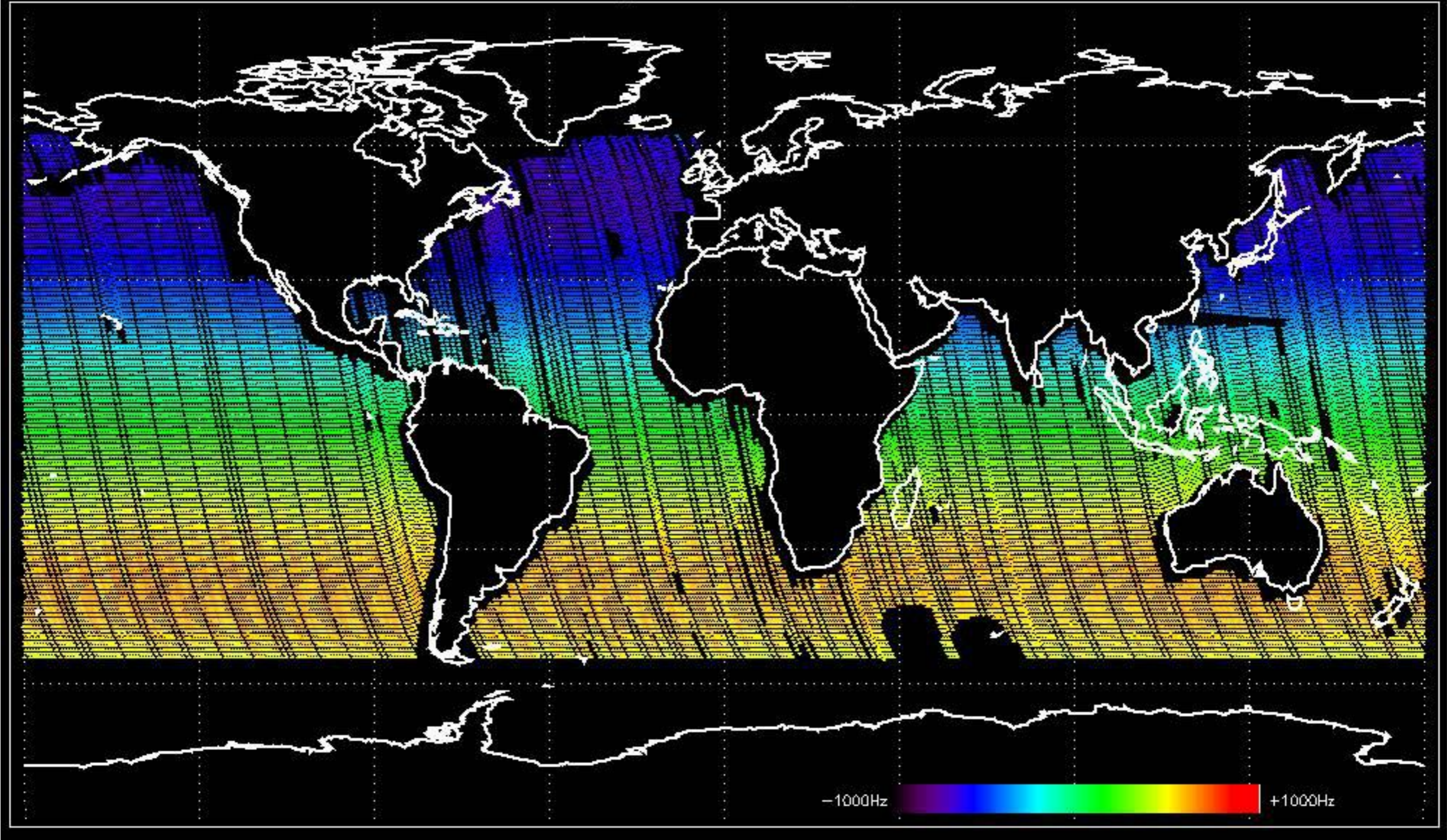
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

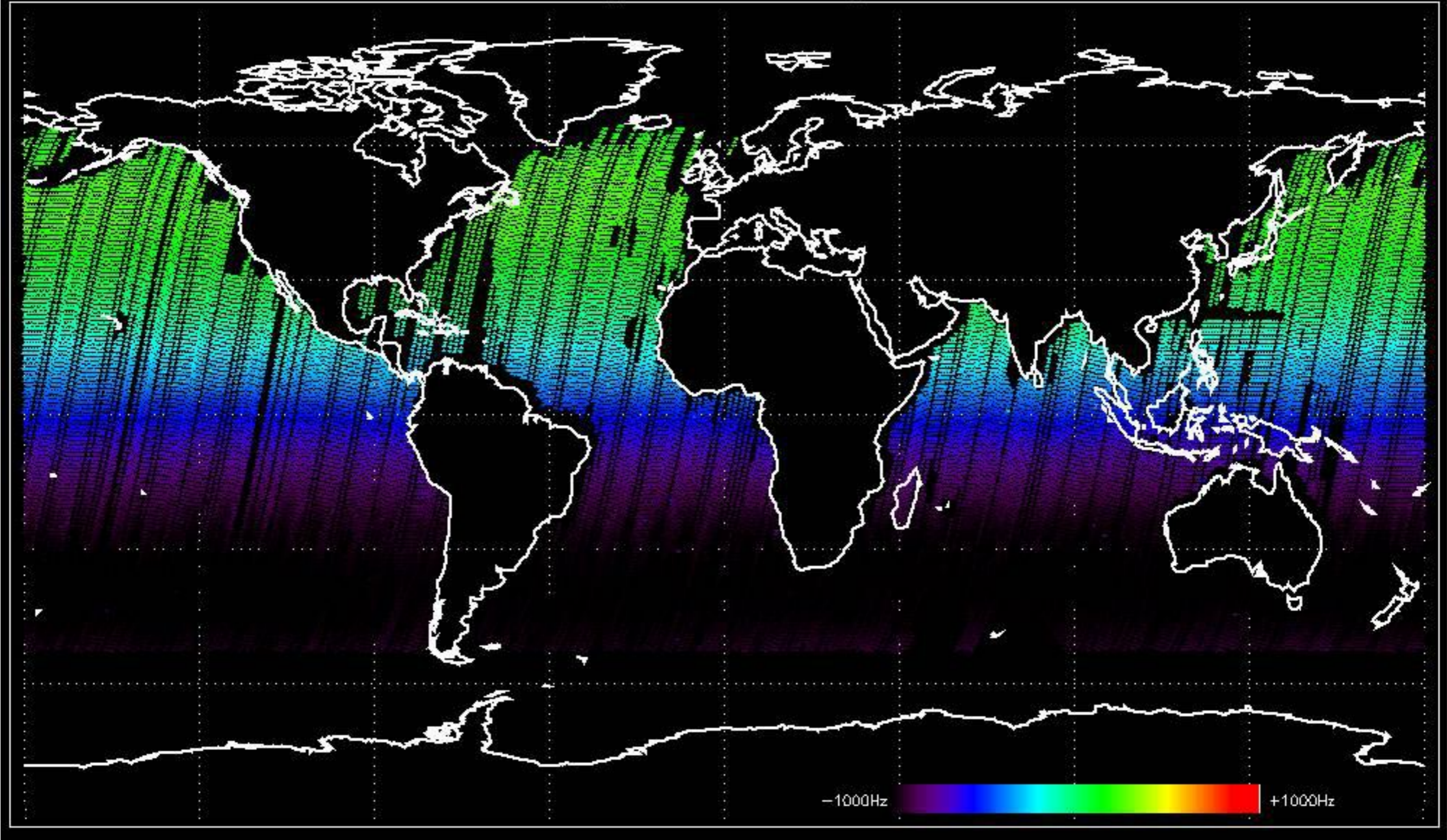


Doppler 'WVS' 'IS2' ascending

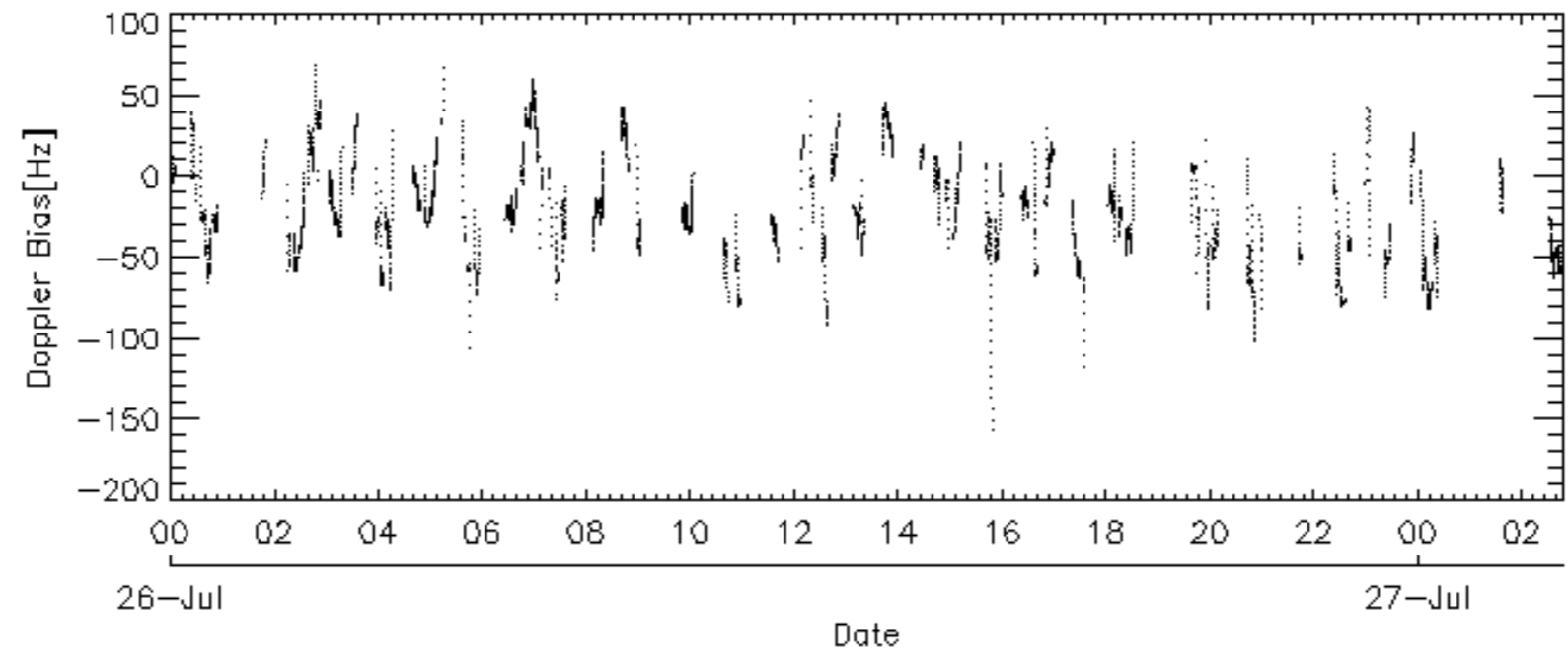
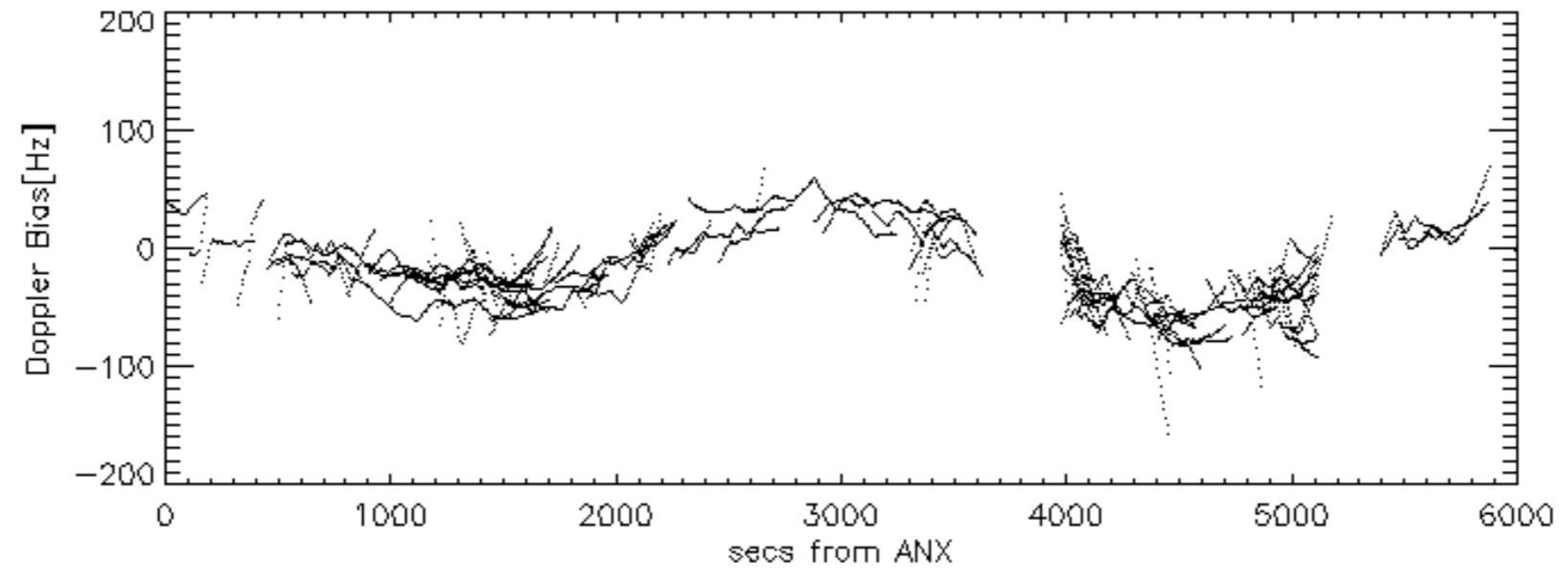
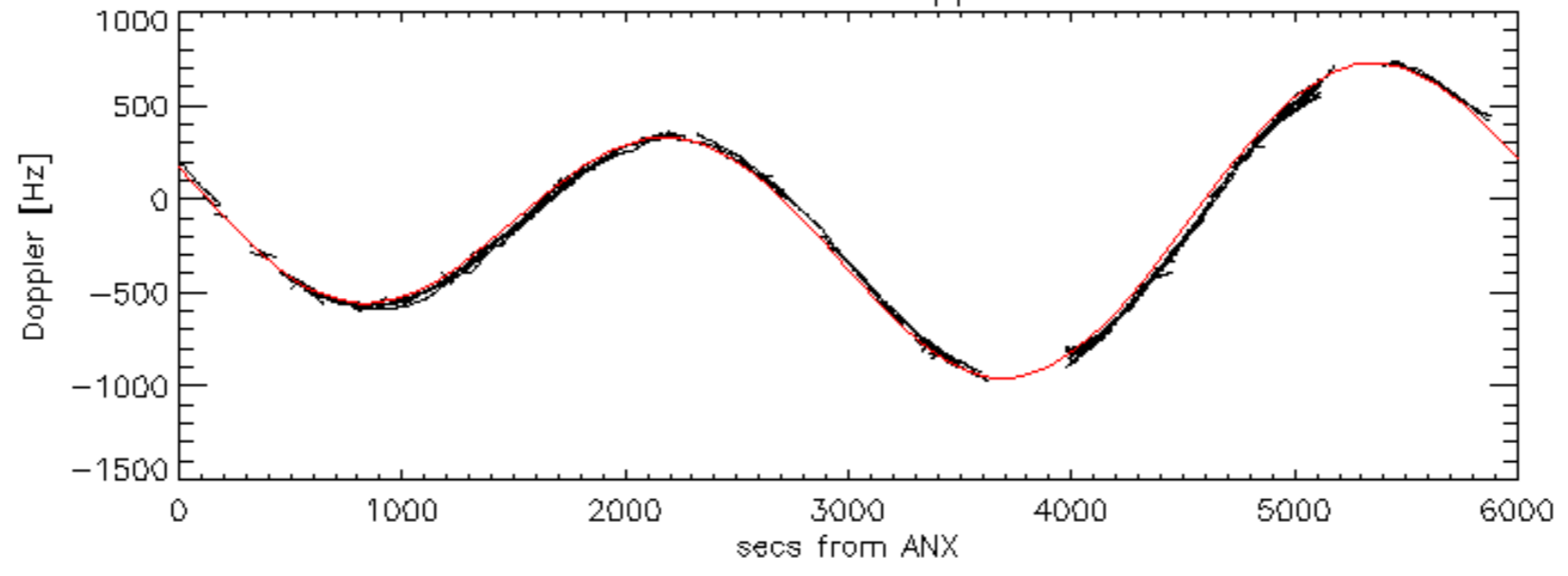


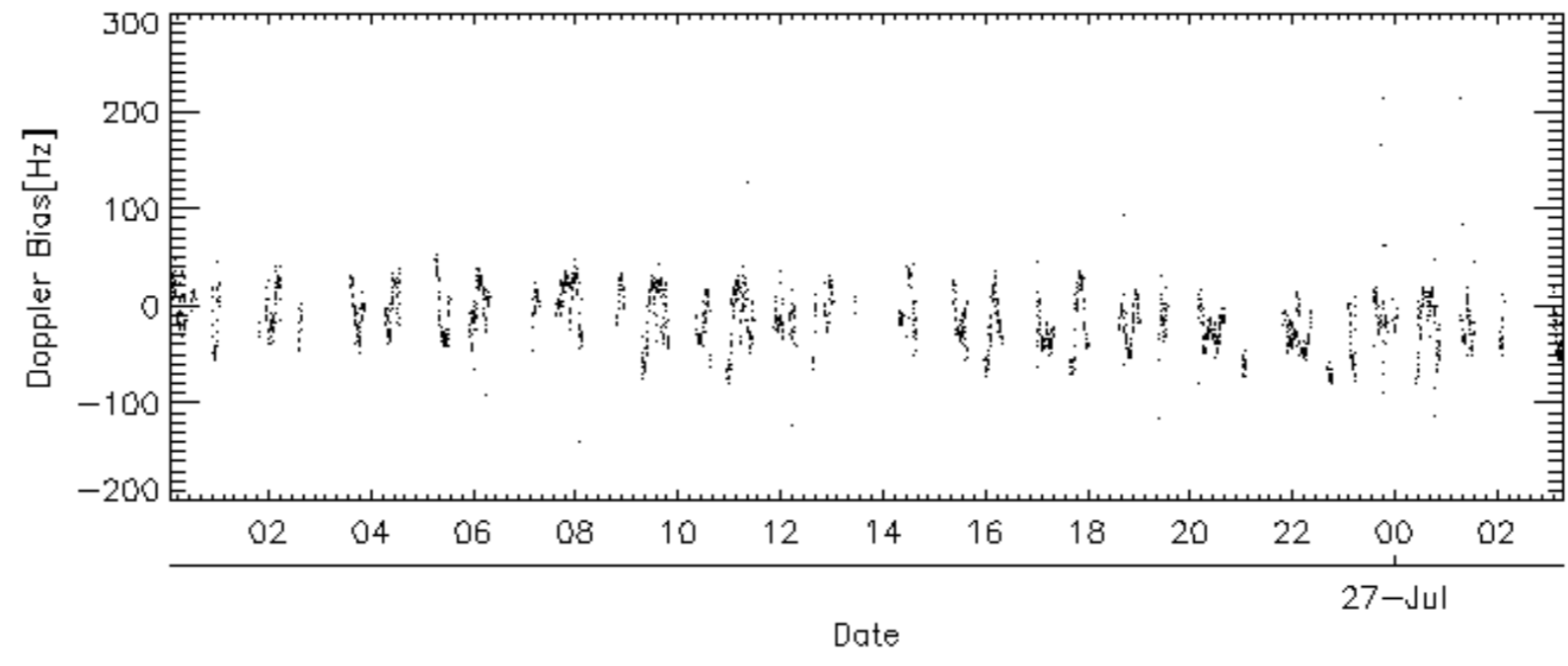
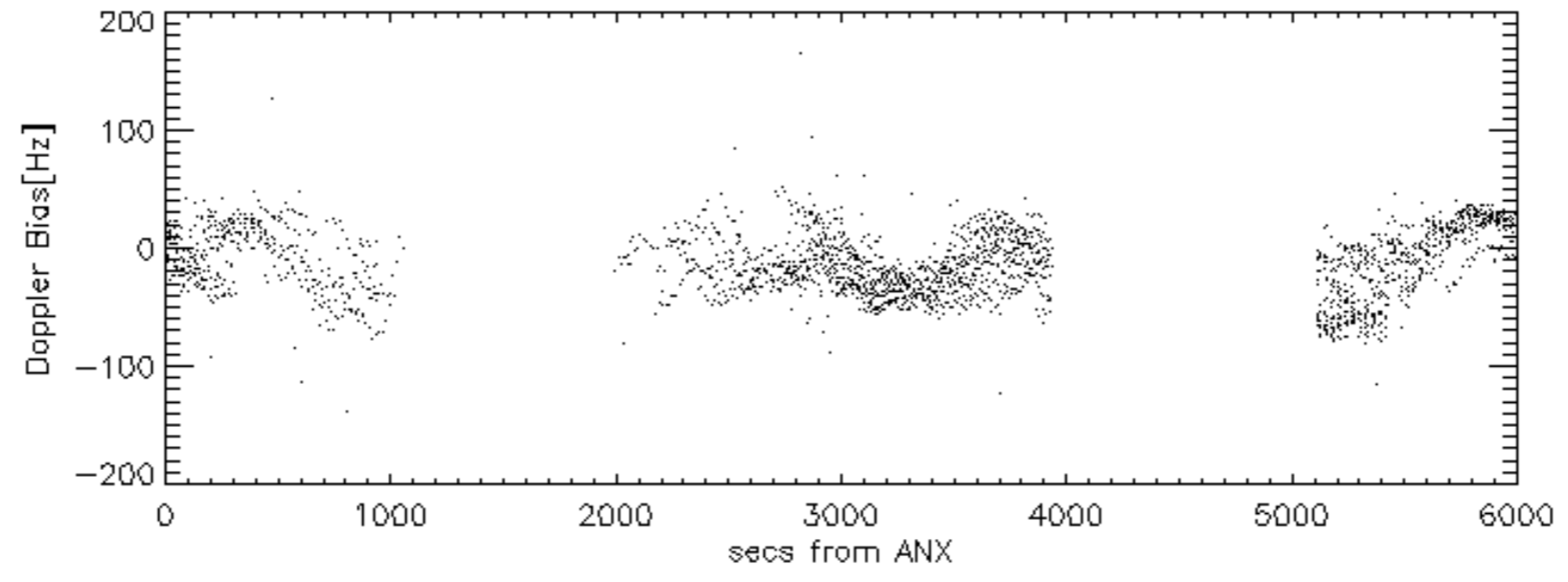
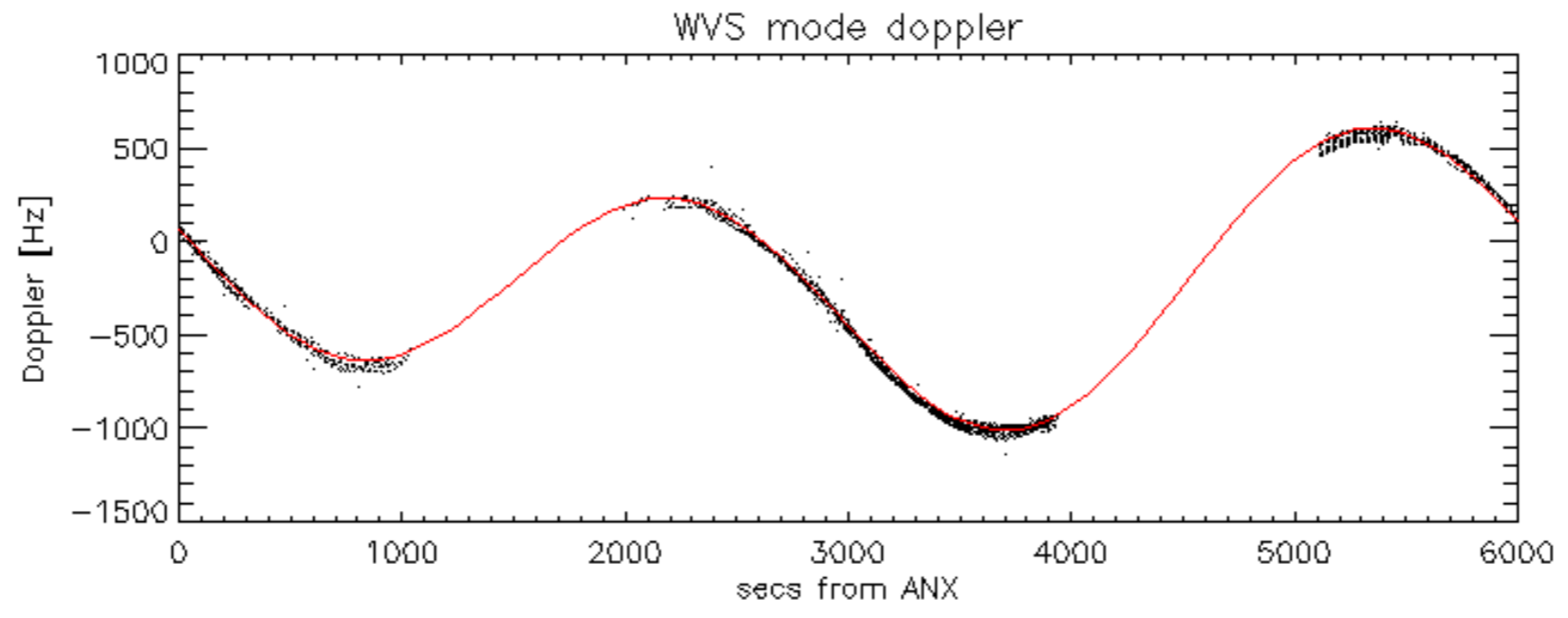


Doppler 'WVS' 'IS2' descending

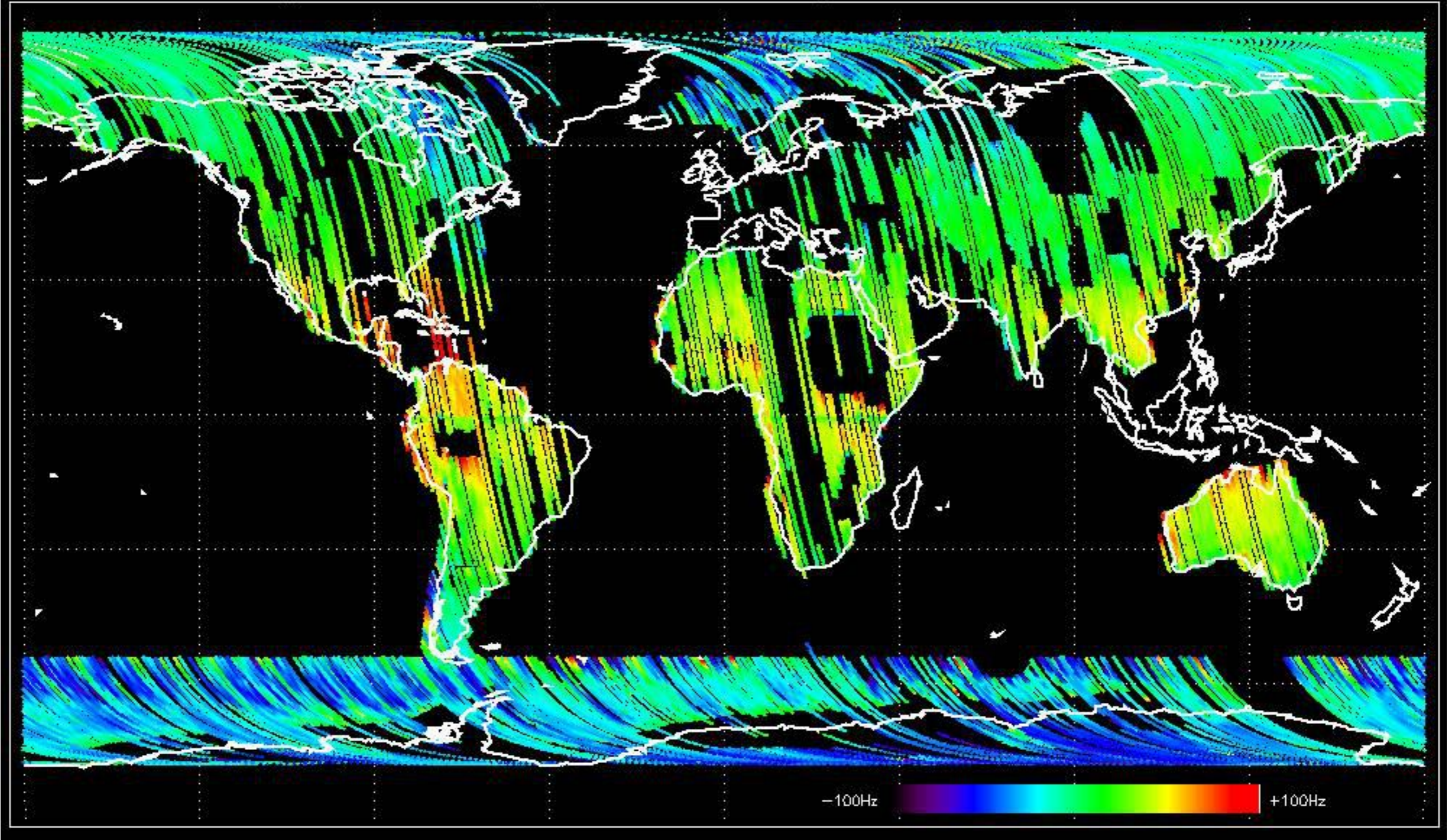


GM1 mode doppler

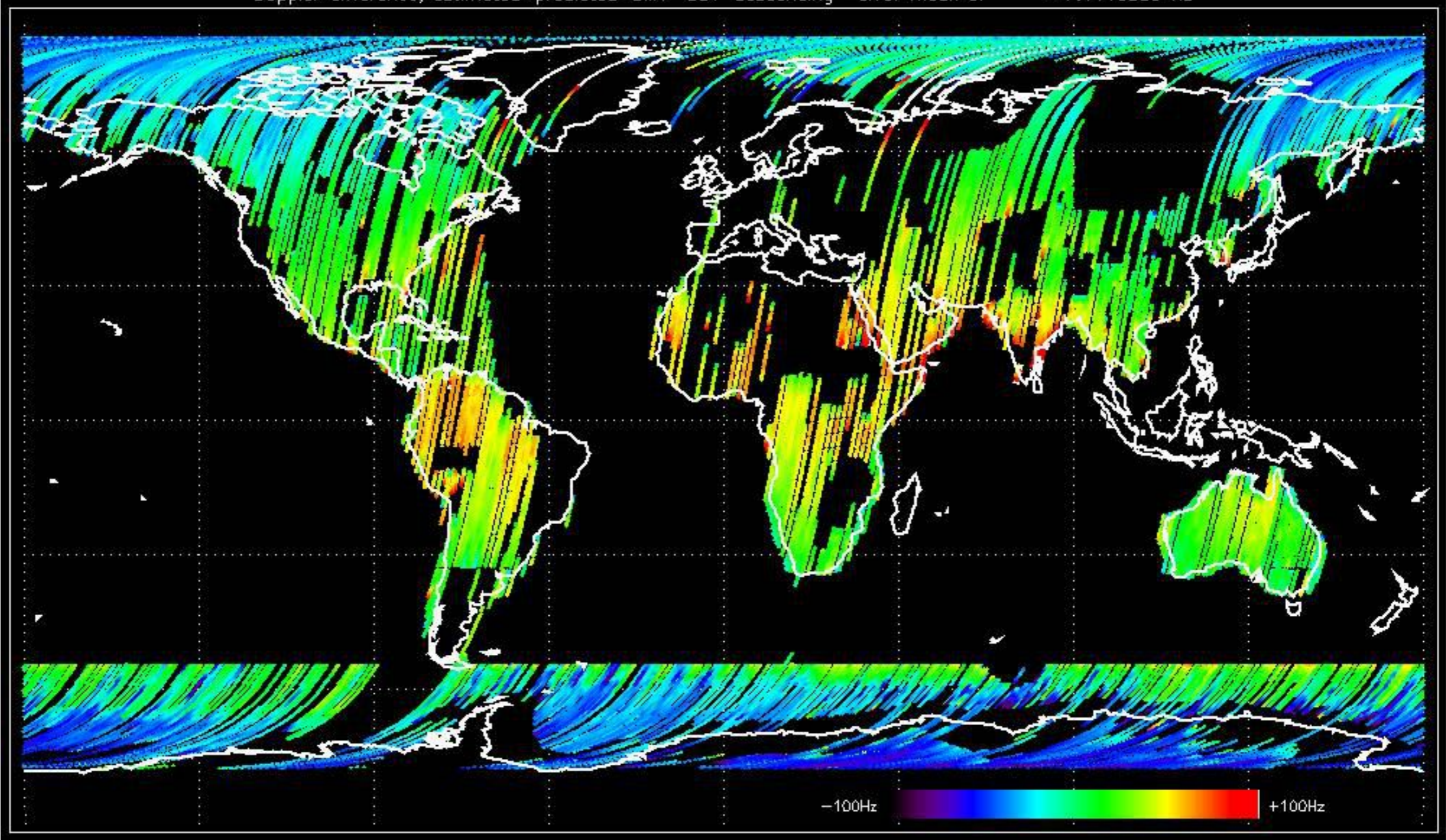




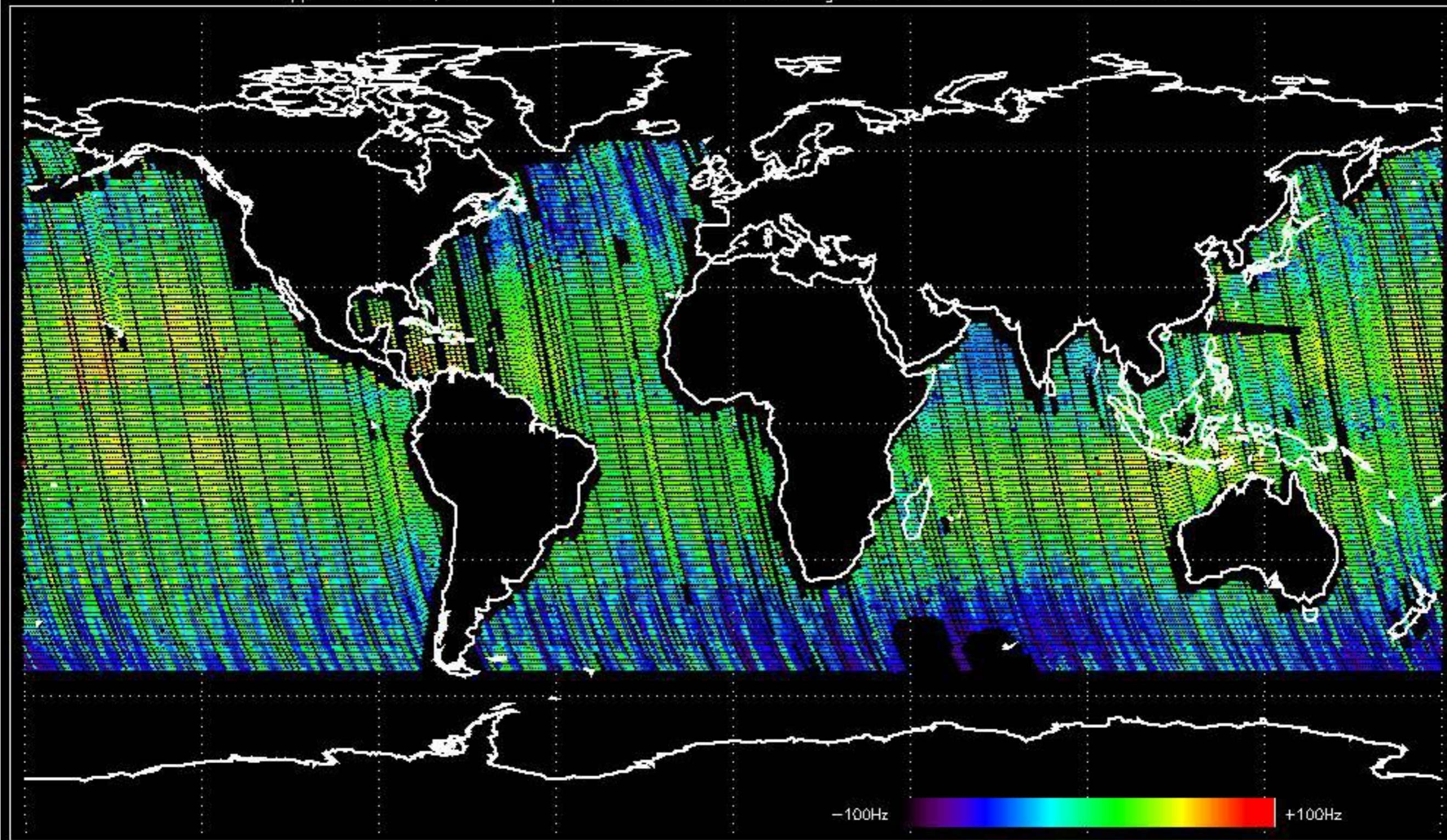
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.020893 Hz



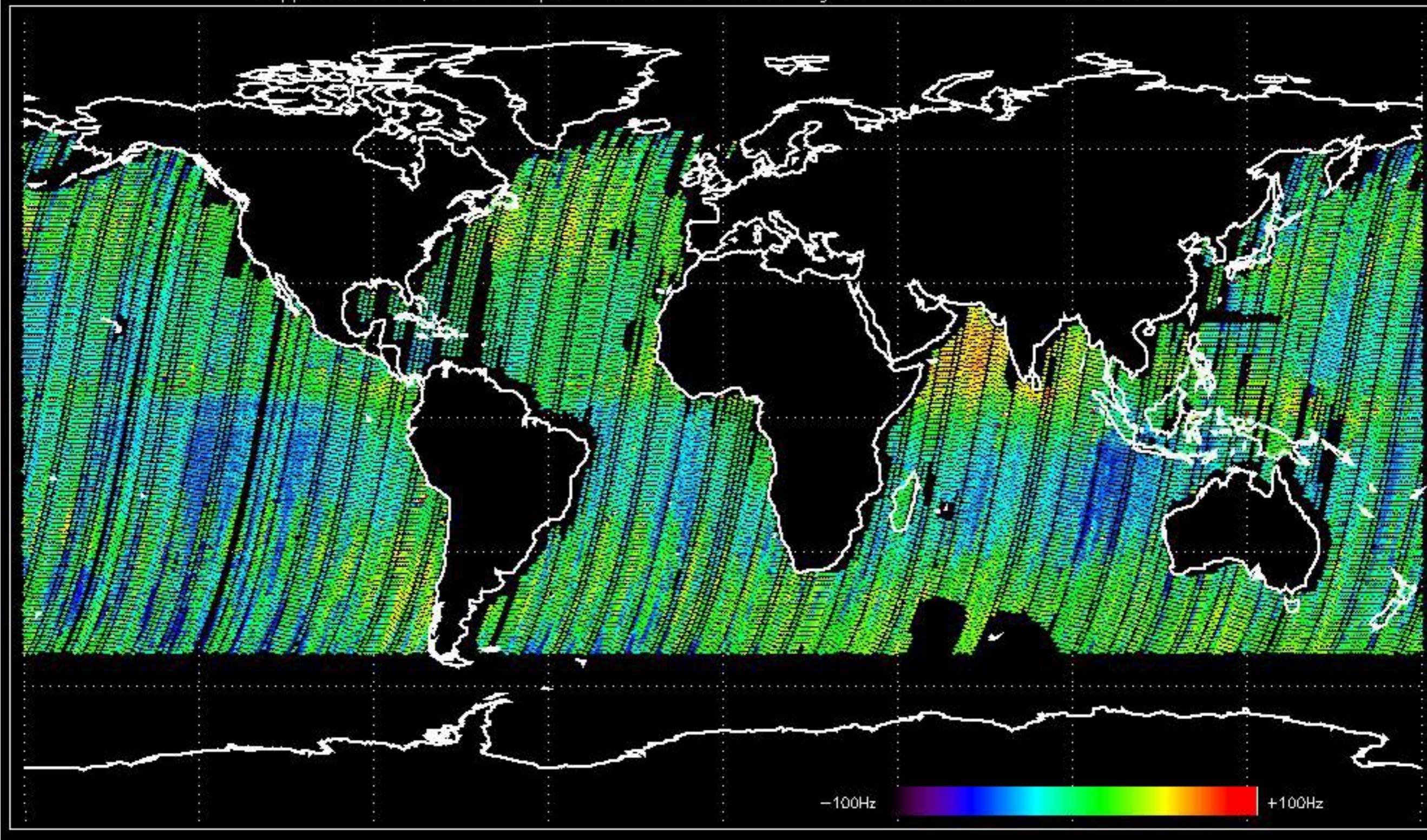
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -7.1116803 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -2.7764217 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.058932 Hz



No anomalies observed on available MS products:



No anomalies observed.

















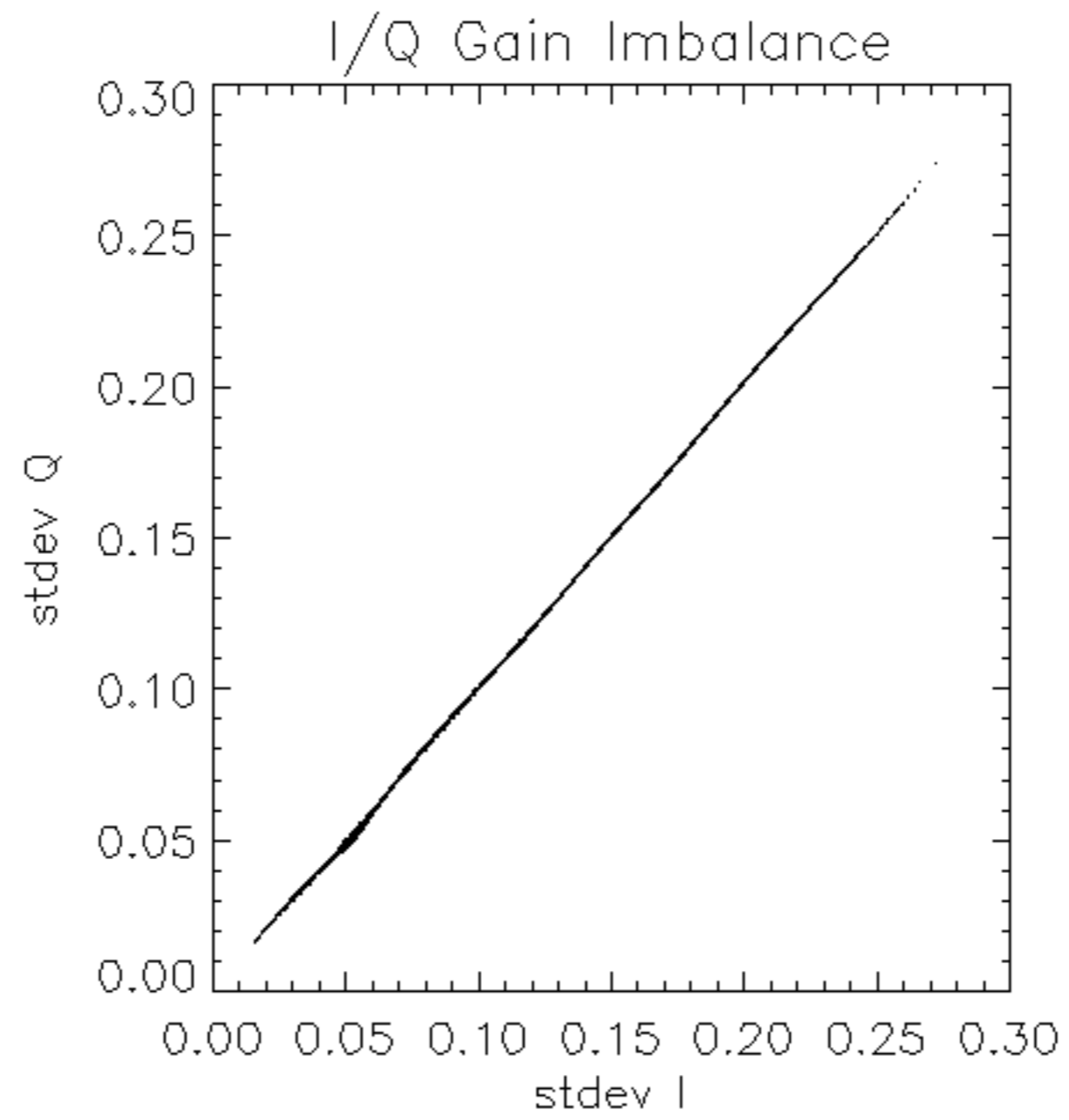


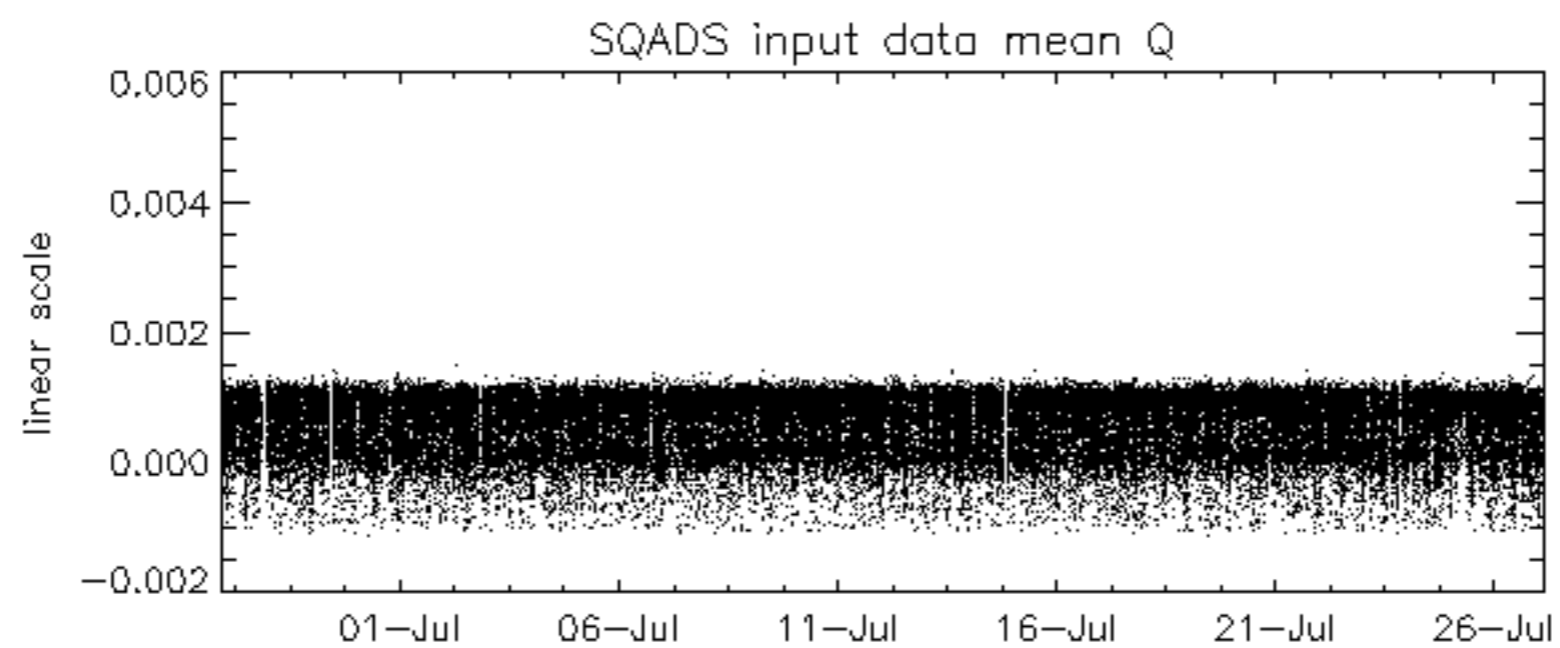
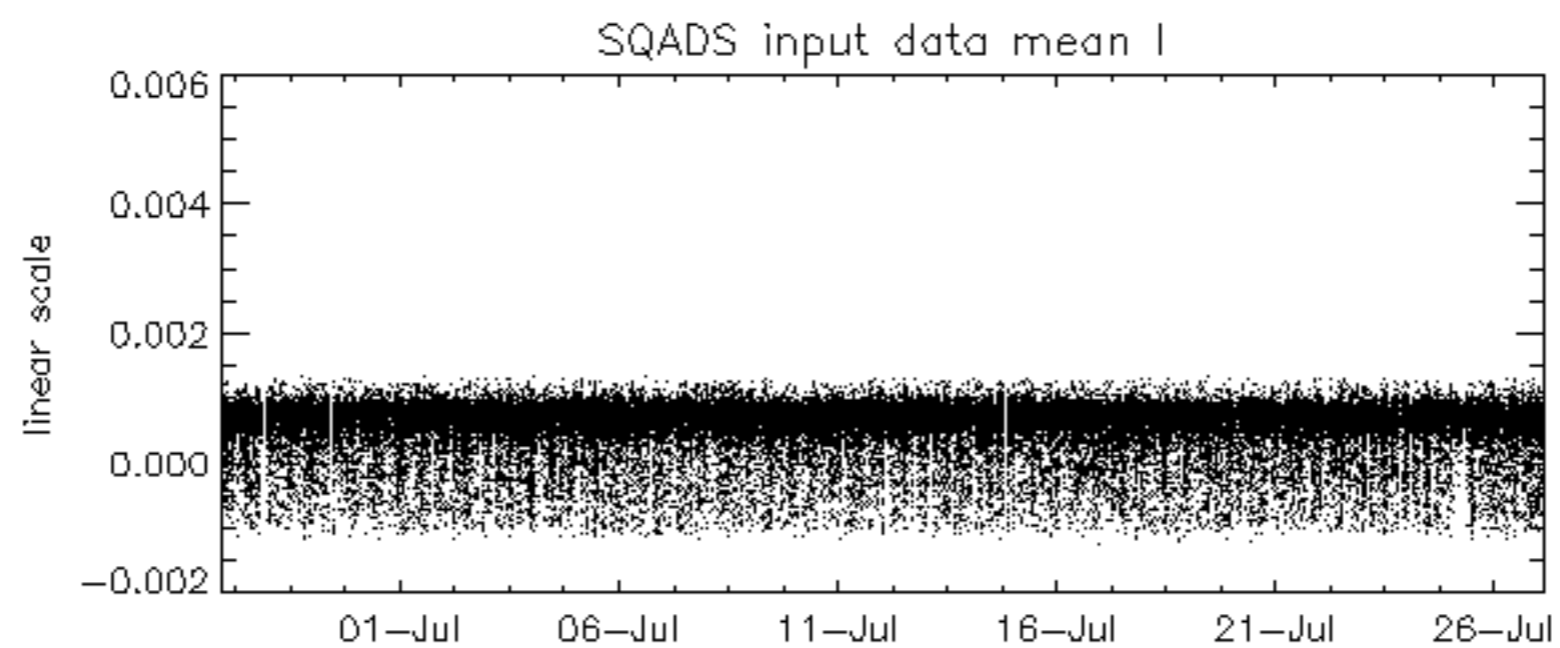
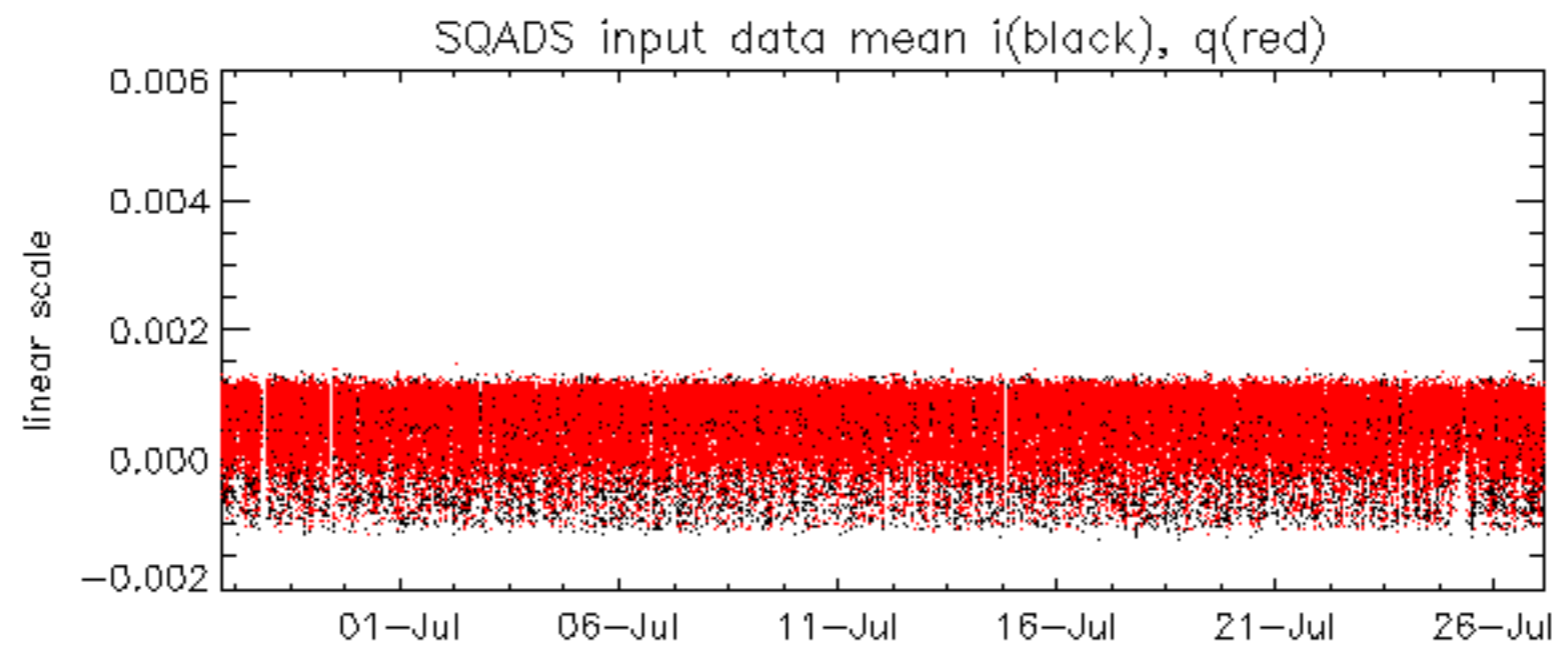


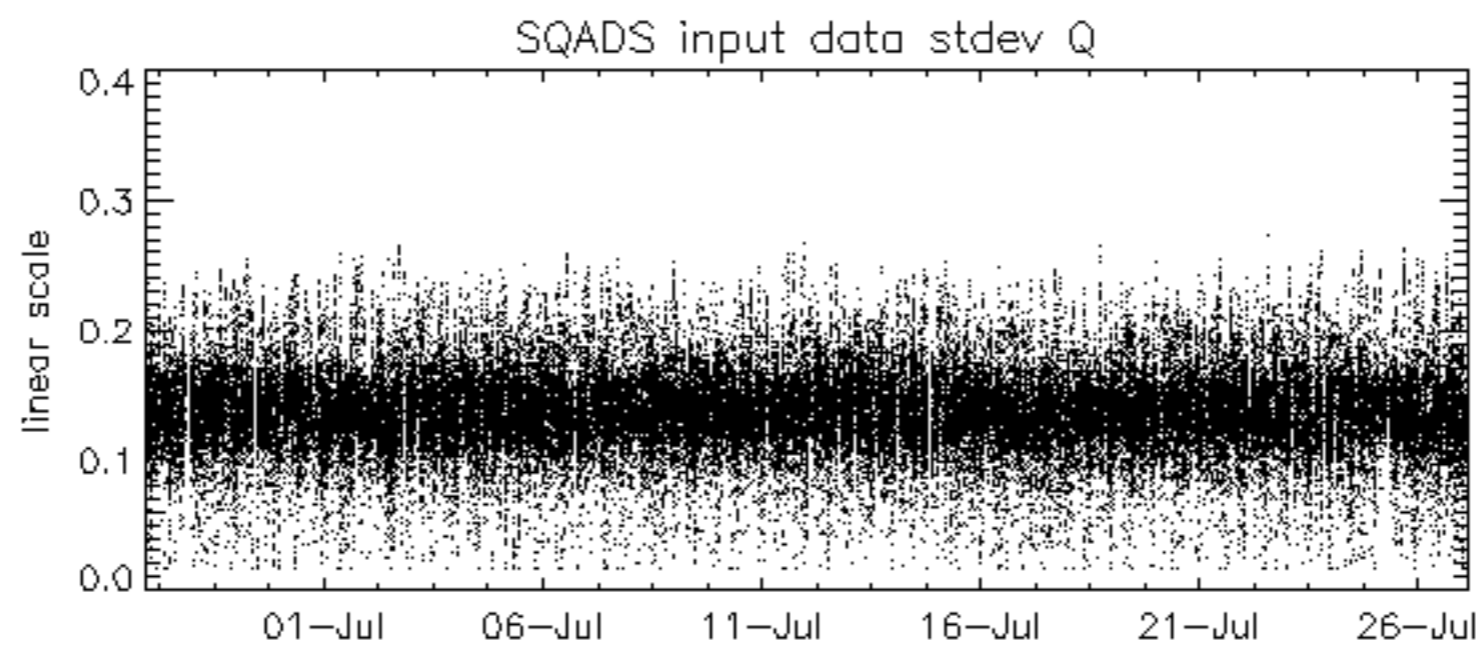
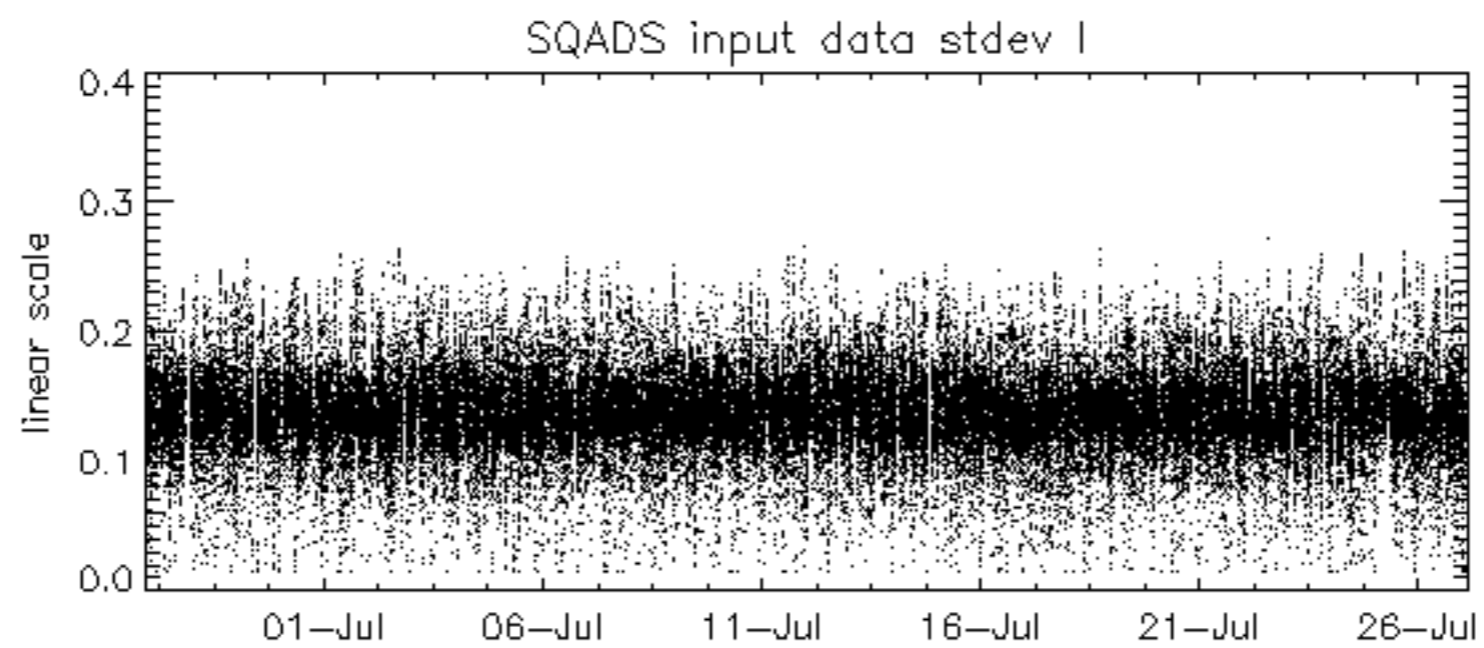
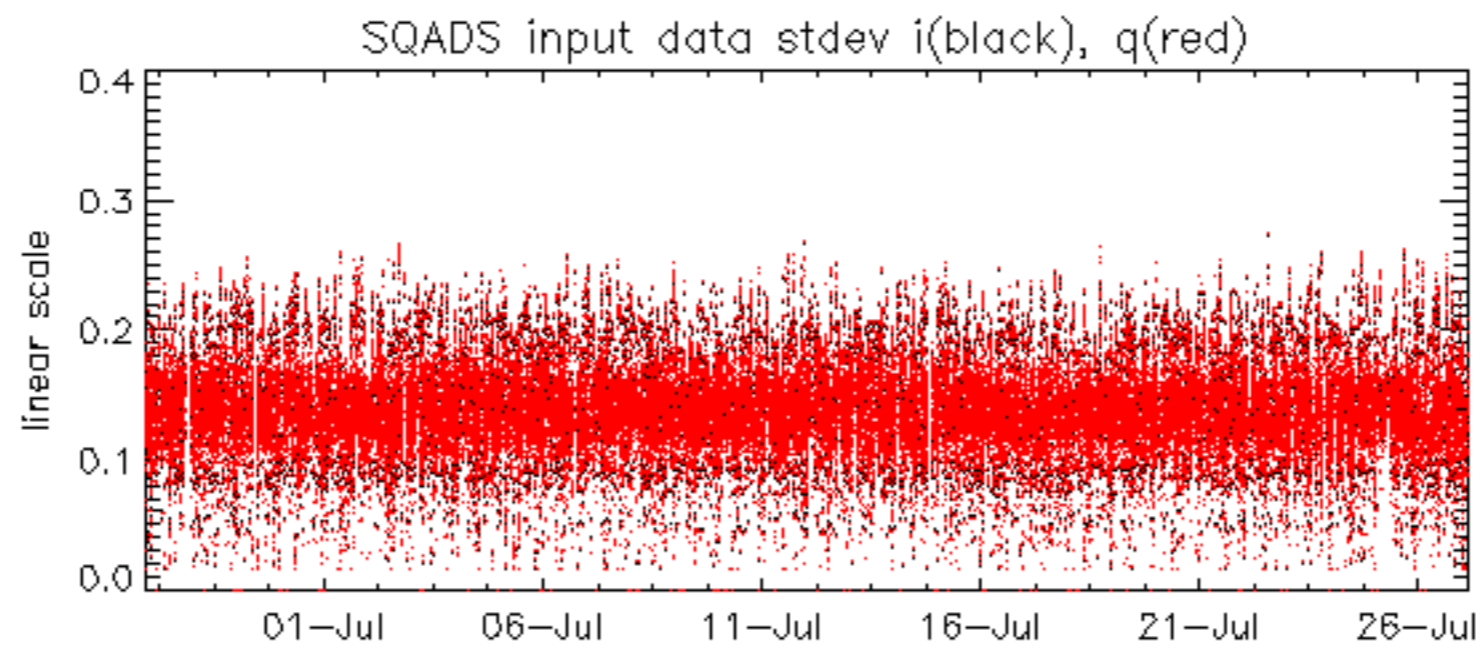






















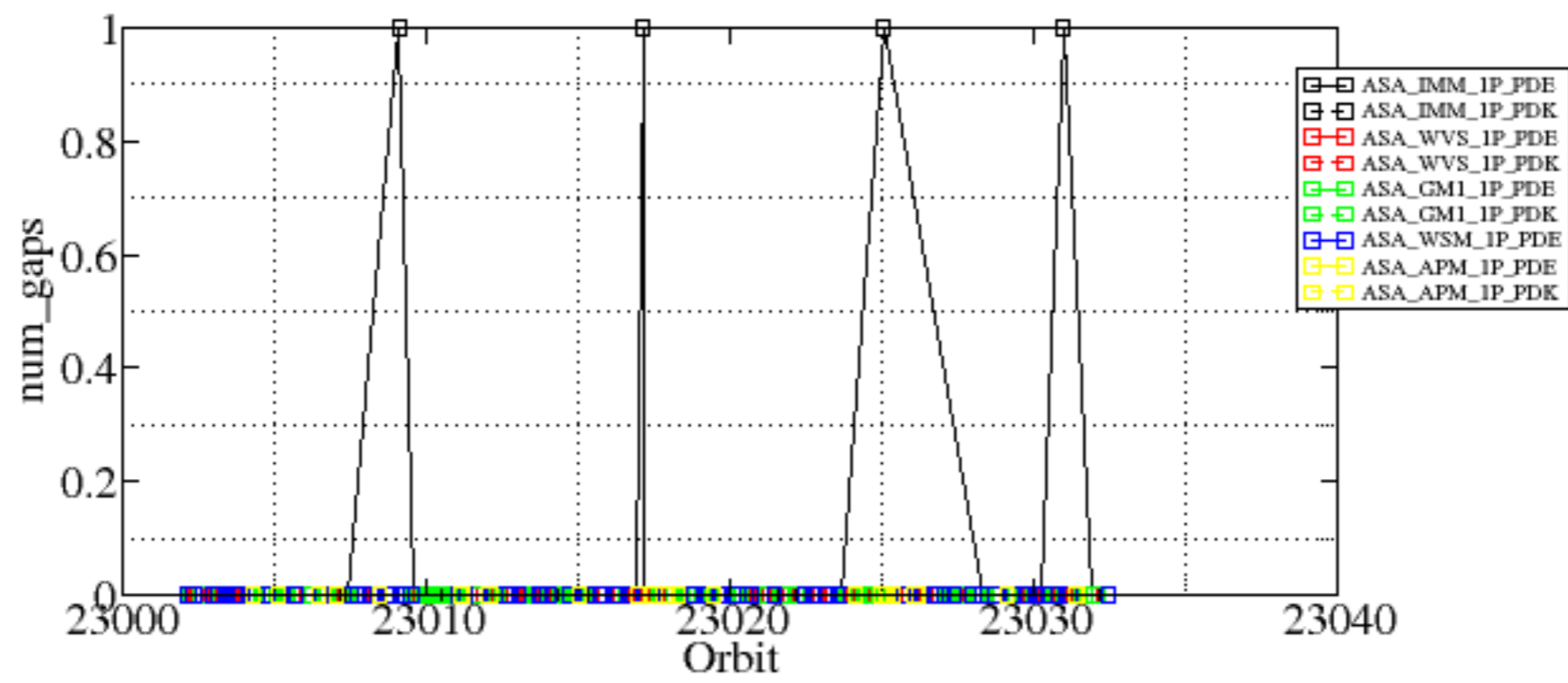




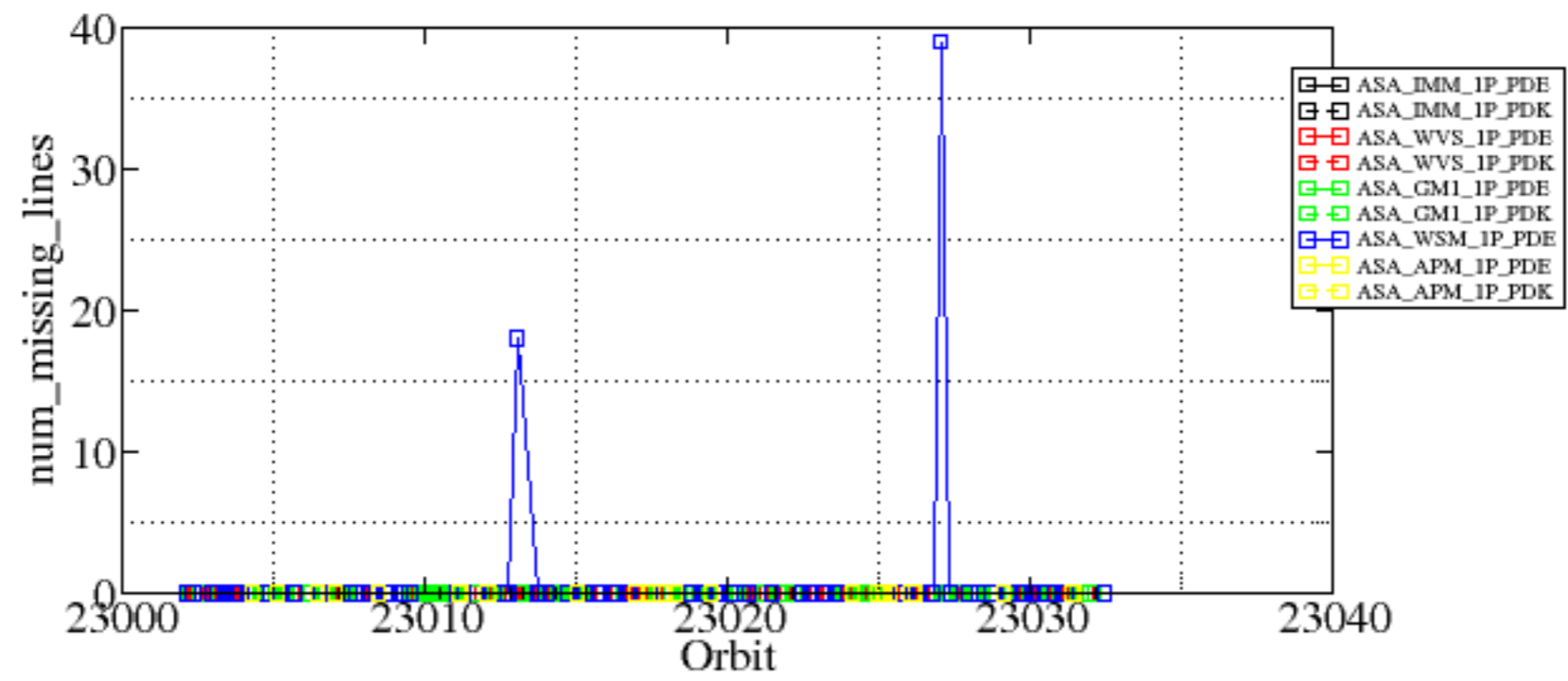
Summary of analysis for the last 3 days 2006072[567]

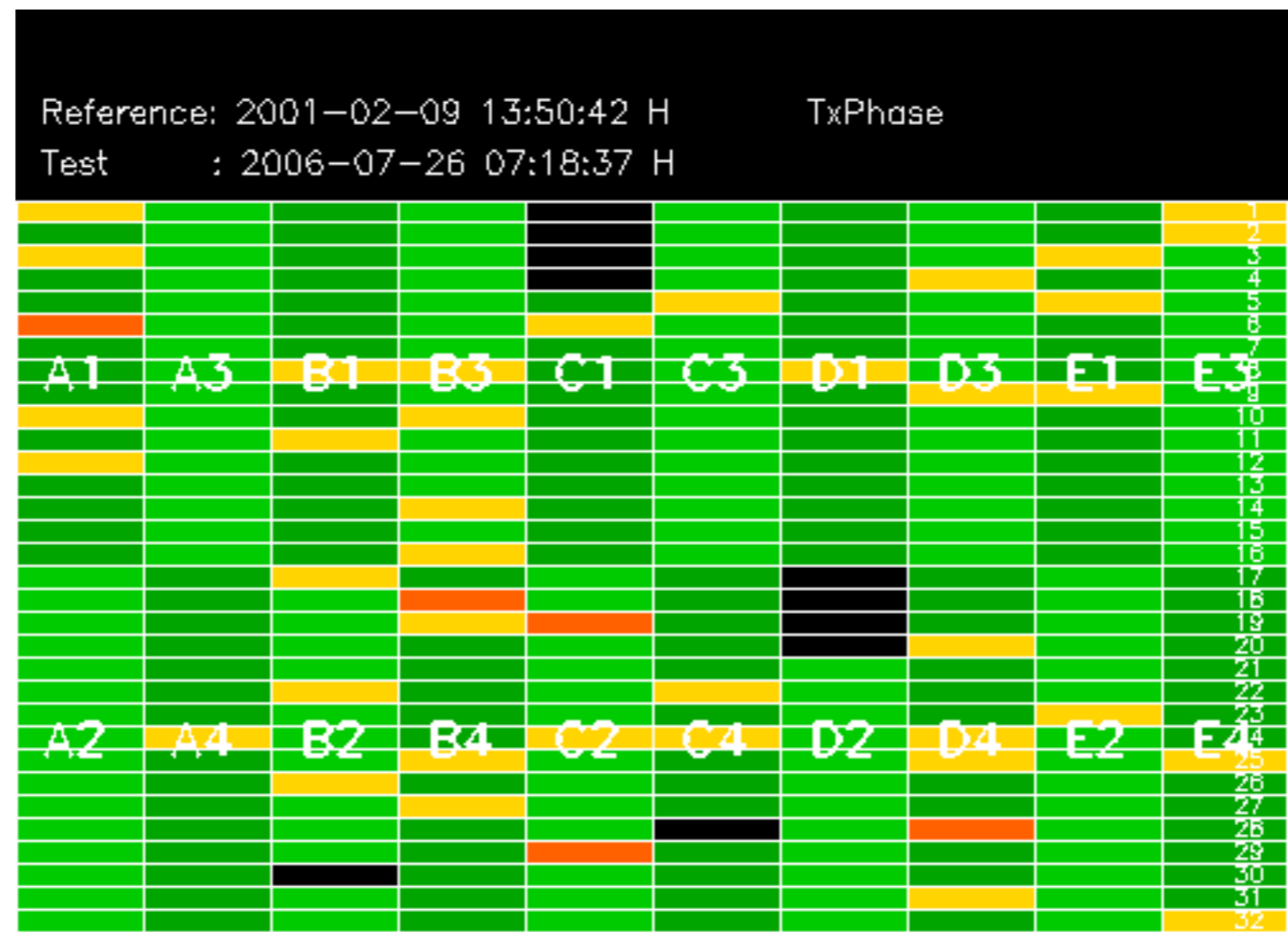
The assumption is taken that the SQUADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060725_115630_000000512049_00410_23009_2003.N1	1	0
ASA_IMM_1PNPDE20060726_012209_000000622049_00418_23017_2072.N1	1	0
ASA_IMM_1PNPDE20060726_144003_000000822049_00426_23025_2069.N1	1	0
ASA_IMM_1PNPDE20060727_003438_000001152049_00431_23030_2088.N1	1	0
ASA_WSM_1PNPDE20060725_183111_000002692049_00414_23013_4403.N1	0	18
ASA_WSM_1PNPDE20060726_180100_000000852049_00428_23027_4568.N1	0	39







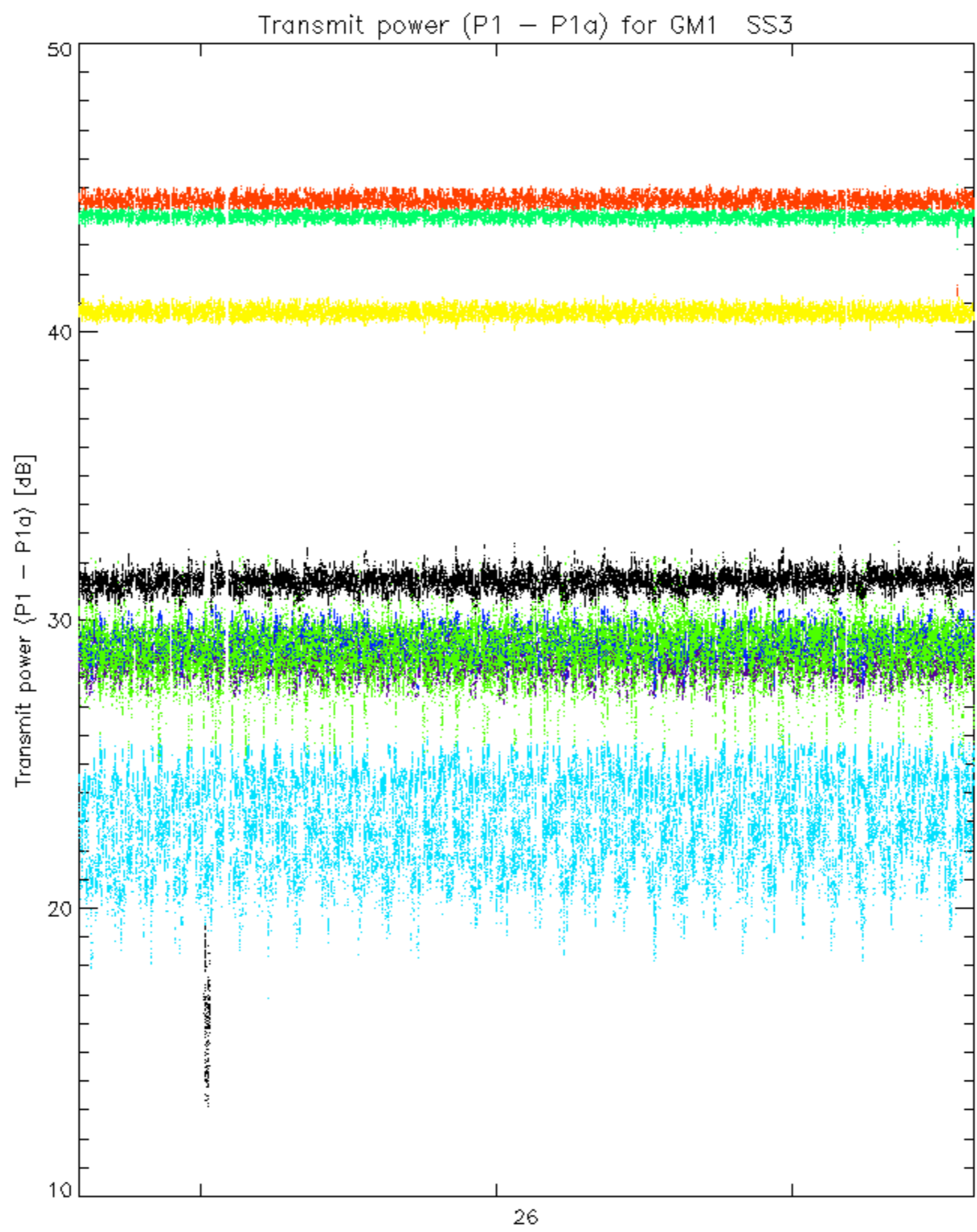




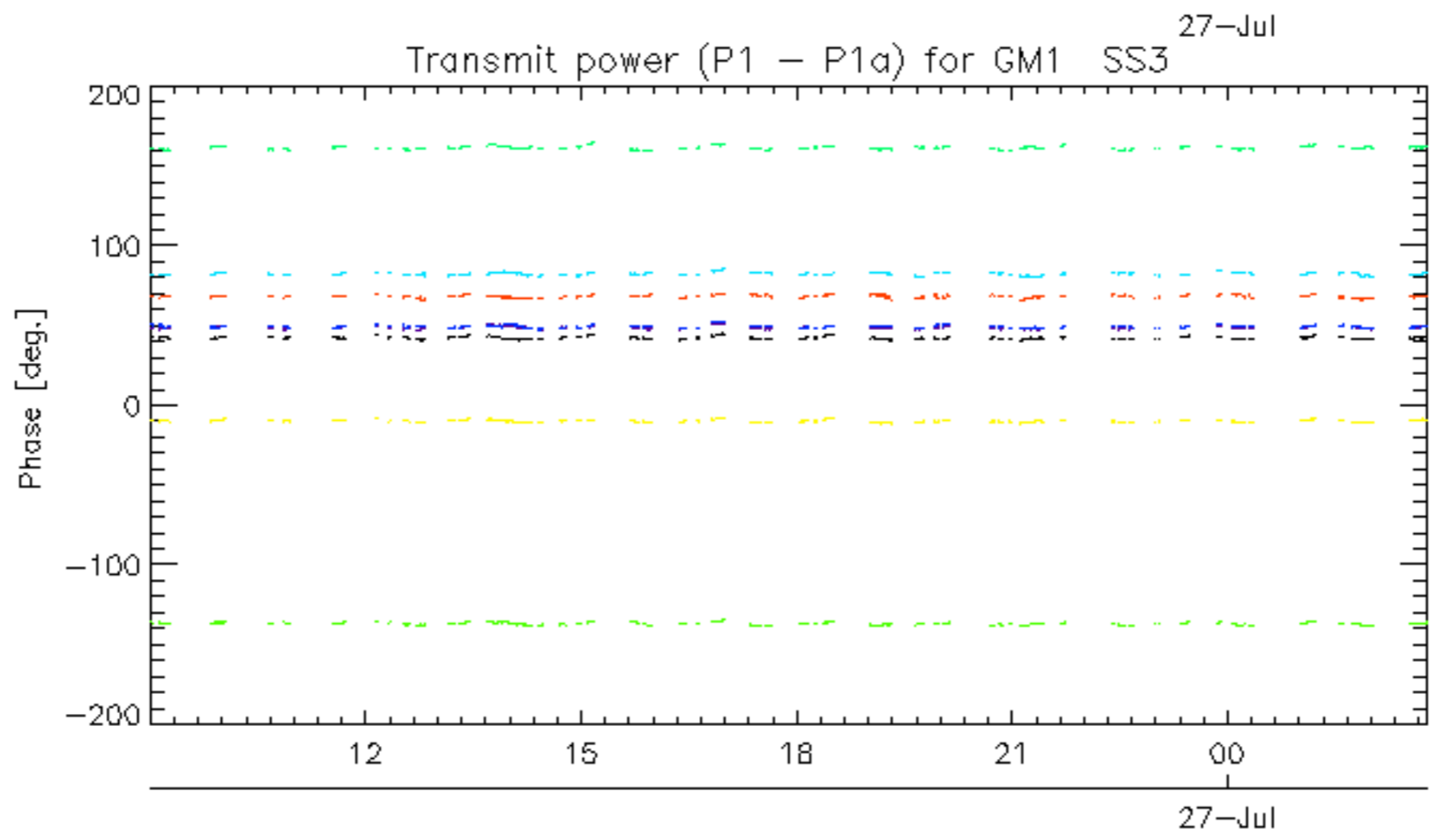
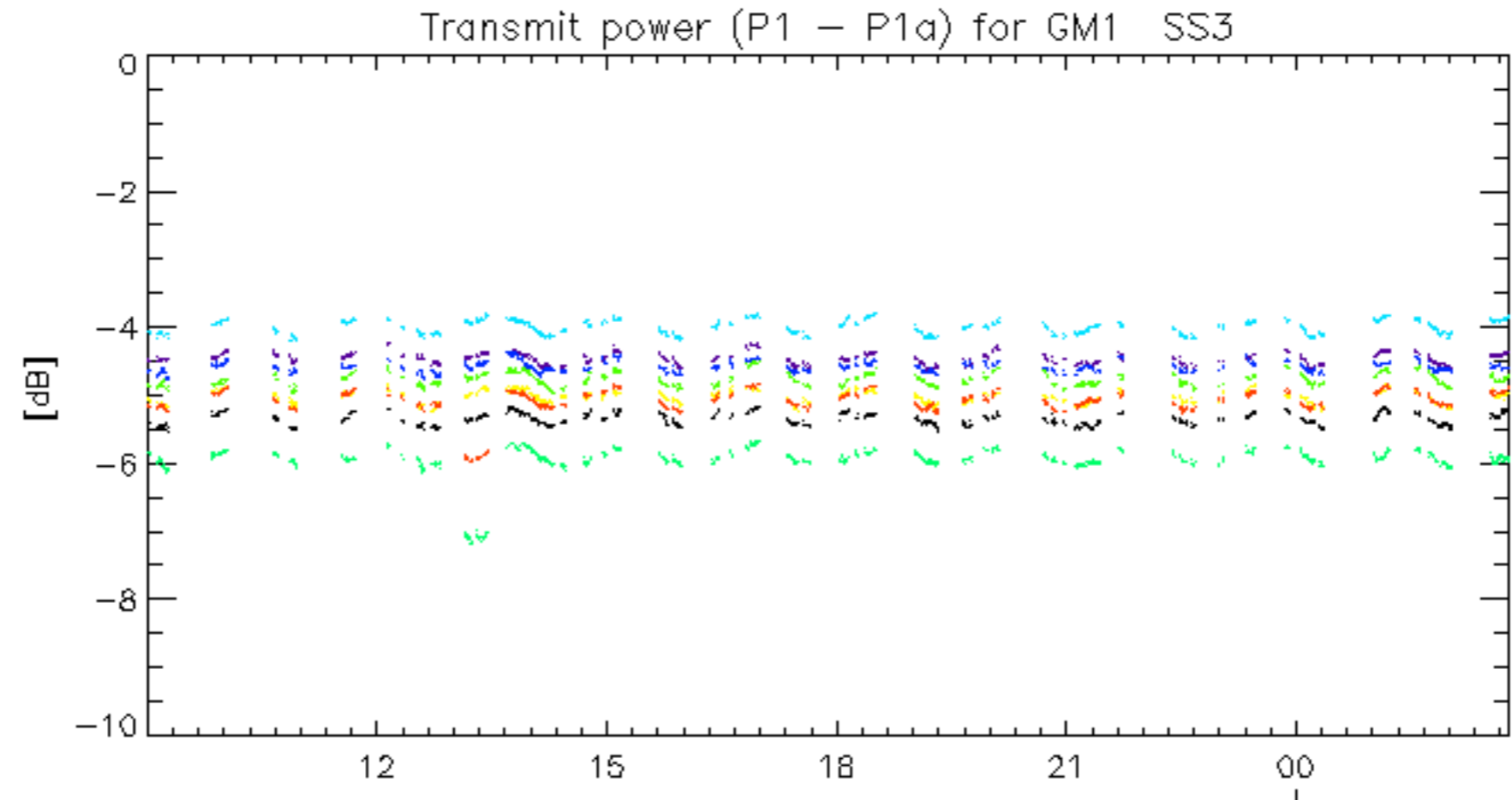






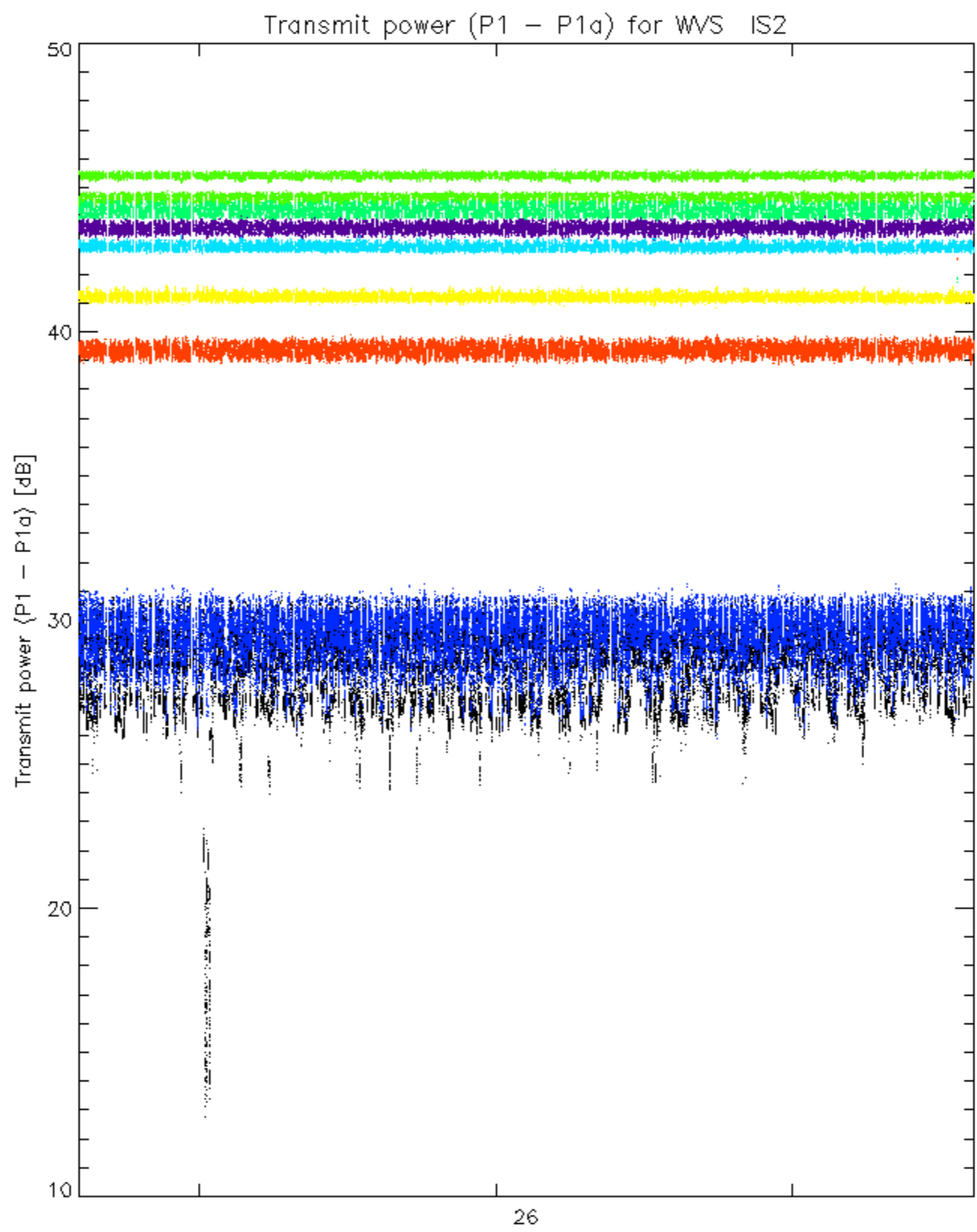


rows: 3 7 11 15 19 22 26 30

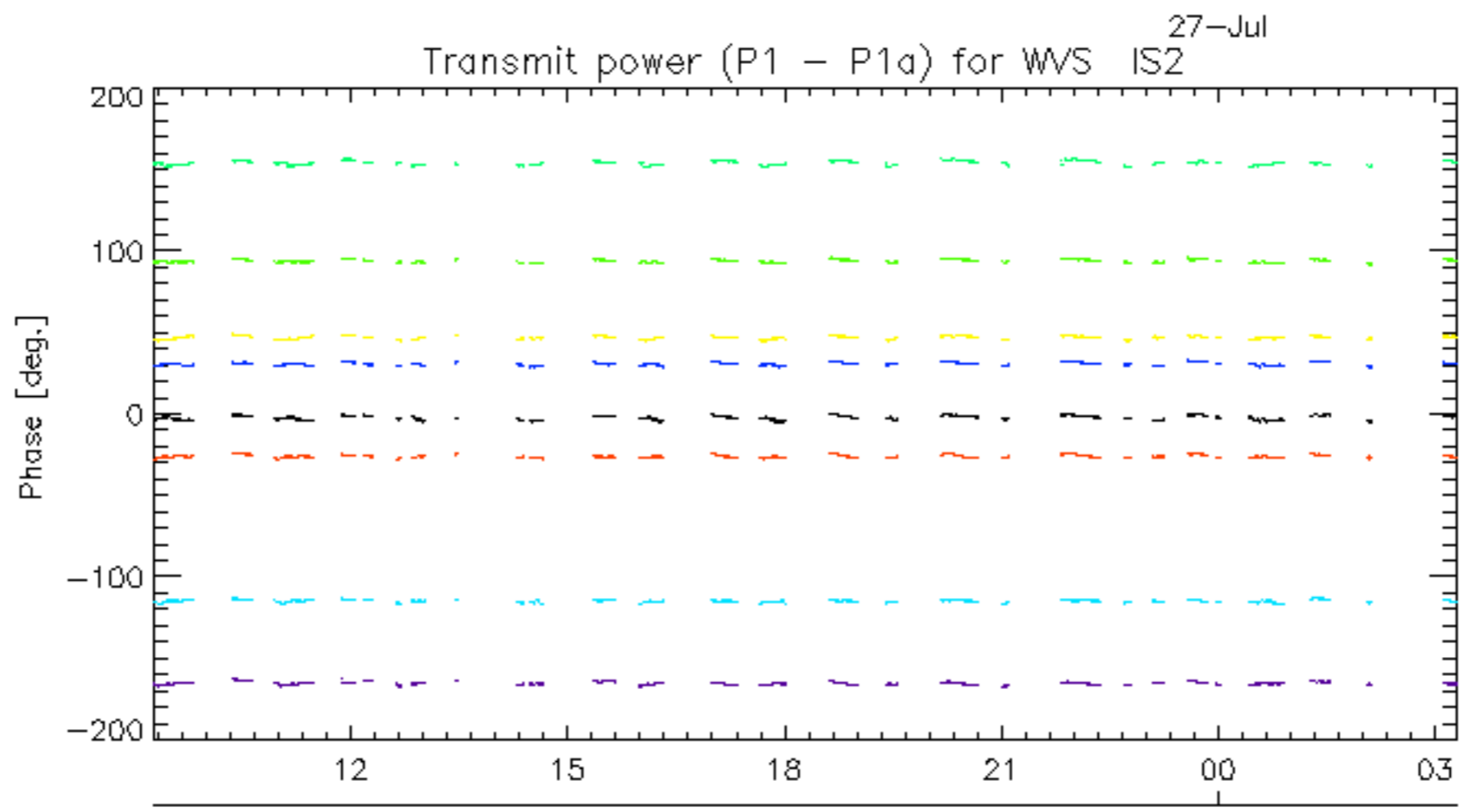
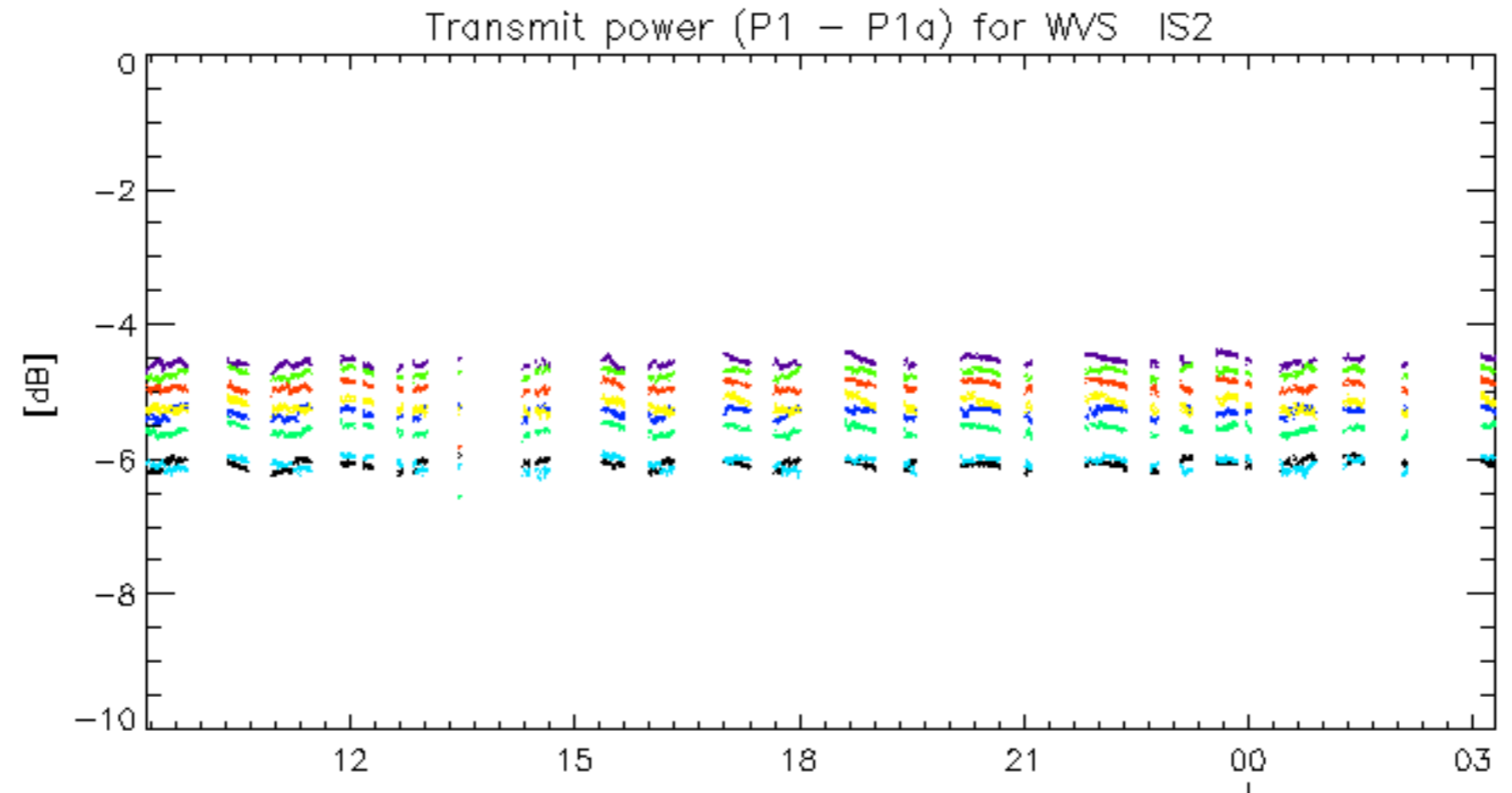


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

27-Jul

No unavailabilities during the reported period.