

# PRELIMINARY REPORT OF 060629

last update on Thu Jun 29 16:50:42 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 2006-06-28 00:00:00 to 2006-06-29 16:50:42

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	68	12	0	24
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	68	12	0	24
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	68	12	0	24
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	68	12	0	24

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	20	35	36	23	79
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	20	35	36	23	79
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	20	35	36	23	79
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	20	35	36	23	79

## 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	20060628 170204
H	20060629 062651

### 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	-3.939611	0.046967	-0.059820
7	P1	-3.135075	0.012764	-0.005437
11	P1	-4.101067	0.016495	-0.007424
15	P1	-6.157966	0.011359	-0.038937
19	P1	-3.361234	0.008587	-0.057765
22	P1	-4.521879	0.011556	-0.054449
26	P1	-3.962636	0.017139	0.027735
30	P1	-5.752920	0.008888	-0.034502
3	P1	-16.542690	0.577993	-0.180576
7	P1	-17.241251	0.112815	-0.003028
11	P1	-16.969395	0.282100	-0.083750
15	P1	-13.179031	0.156826	0.018929
19	P1	-14.361031	0.051393	-0.145311
22	P1	-16.148161	0.375677	0.070435
26	P1	-15.193337	0.227221	0.108850
30	P1	-17.147024	0.408676	-0.023239

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.105698	0.082400	0.135834
7	P2	-21.996914	0.098982	0.094988
11	P2	-15.841683	0.112385	0.092072
15	P2	-7.152829	0.095972	-0.007803
19	P2	-9.165127	0.087624	0.013033
22	P2	-18.167347	0.084286	-0.027982
26	P2	-16.406767	0.090055	-0.041333
30	P2	-19.551237	0.088530	-0.005235

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.182914	0.003906	-0.021709
7	P3	-8.182914	0.003906	-0.021709
11	P3	-8.182914	0.003906	-0.021709
15	P3	-8.182914	0.003906	-0.021709
19	P3	-8.182914	0.003906	-0.021709
22	P3	-8.182914	0.003906	-0.021709
26	P3	-8.182914	0.003906	-0.021709
30	P3	-8.182914	0.003906	-0.021709

**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	-3.812109	0.052453	-0.091132
7	P1	-2.576661	0.008776	0.029979
11	P1	-2.854998	0.013448	-0.000300
15	P1	-3.521855	0.027866	-0.057447
19	P1	-3.412523	0.014368	-0.027229
22	P1	-5.082779	0.019586	-0.010158
26	P1	-5.857047	0.016034	-0.025207
30	P1	-5.189925	0.026599	-0.014928
3	P1	-11.641479	0.142147	-0.084709
7	P1	-9.978199	0.032983	0.000062
11	P1	-10.234495	0.059290	-0.011826
15	P1	-10.688984	0.129687	-0.067434
19	P1	-15.541143	0.077068	-0.034033
22	P1	-20.941116	1.177121	-0.018016

26	P1	-16.440792	0.334114	0.092417
30	P1	-17.877382	0.372351	0.069467

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.781088	0.075122	0.193515
7	P2	-22.468563	0.131643	0.078931
11	P2	-11.123353	0.048643	0.087814
15	P2	-4.919442	0.049223	-0.020460
19	P2	-6.879935	0.054076	-0.010691
22	P2	-8.206901	0.043079	-0.005369
26	P2	-24.158510	0.069613	-0.078126
30	P2	-22.050856	0.056589	0.038271

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.017836	0.004794	-0.018358
7	P3	-8.017920	0.004778	-0.018250
11	P3	-8.017857	0.004790	-0.018378
15	P3	-8.017798	0.004792	-0.018344
19	P3	-8.017821	0.004790	-0.017865
22	P3	-8.017970	0.004778	-0.018319
26	P3	-8.018005	0.004788	-0.018185
30	P3	-8.017850	0.004770	-0.018113

## 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	0.000564639
	stdev	1.68106e-07
MEAN Q	mean	0.000528147
	stdev	2.18917e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137374
	stdev	0.00116223
STDEV Q	mean	0.137733
	stdev	0.00118007



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006062[789]

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_1PNPDE20060628_004521_000001932049_00016_22615_0034.N1	1	0
ASA_IMM_1PNPDE20060628_010203_000000692049_00017_22616_0025.N1	1	0
ASA_IMM_1PNPDE20060628_155408_000000412049_00025_22624_0069.N1	1	0
ASA_GM1_1PNPDK20060628_092952_000005862049_00022_22621_0014.N1	0	7
ASA_GM1_1PNPDK20060628_174527_000005672049_00027_22626_0046.N1	0	6

ASA_WSM_1PNPDE20060627_181149_000000852049_00013_22612_0030.N1	0	6
ASA_WSM_1PNPDE20060627_231143_000000672049_00016_22615_0072.N1	0	53
ASA_WSM_1PNPDE20060627_231145_000000972049_00016_22615_0189.N1	0	53
ASA_WSM_1PNPDE20060628_113740_000000862049_00023_22622_0179.N1	0	47
ASA_WSM_1PNPDE20060628_223813_000002452049_00030_22629_0252.N1	0	17





## 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



#### 7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Ascending

Descending

#### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

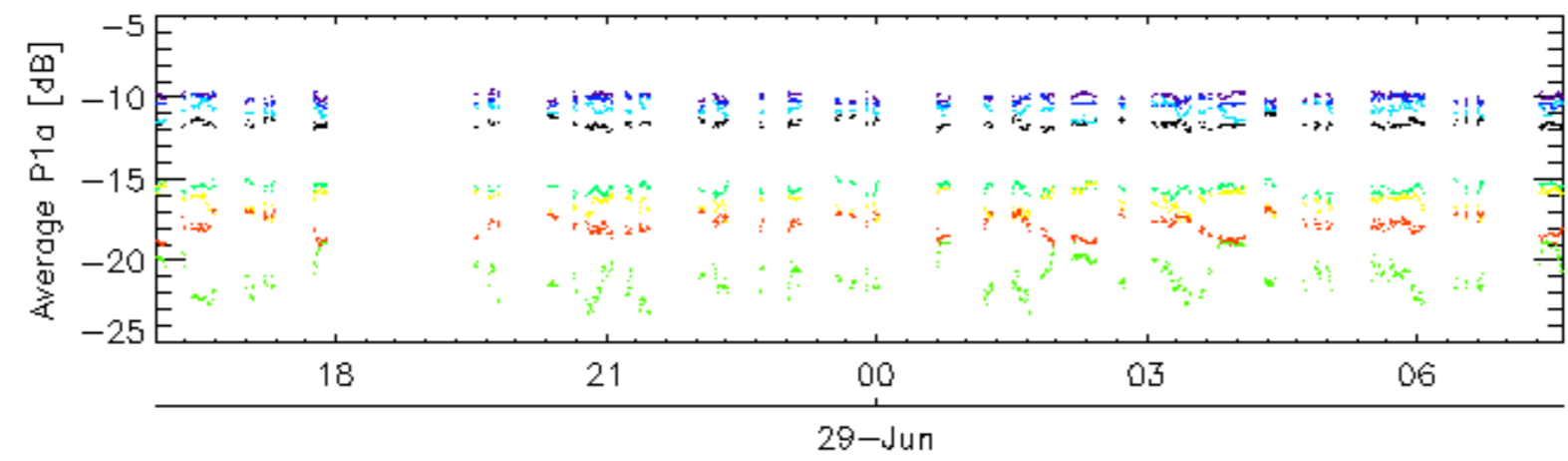
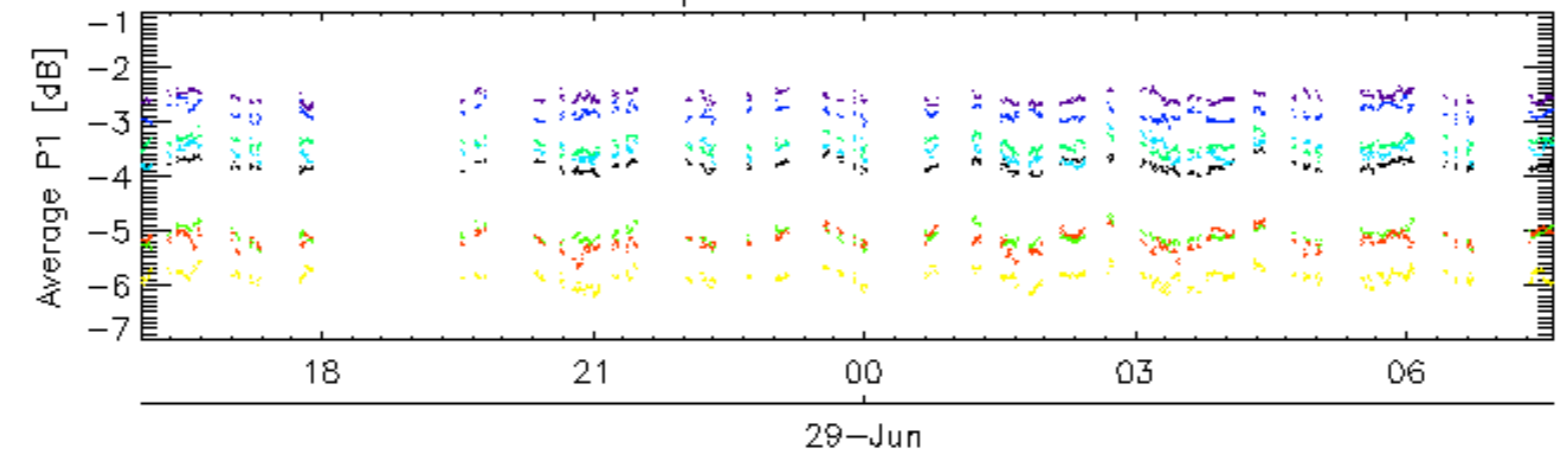
Ascending

Descending

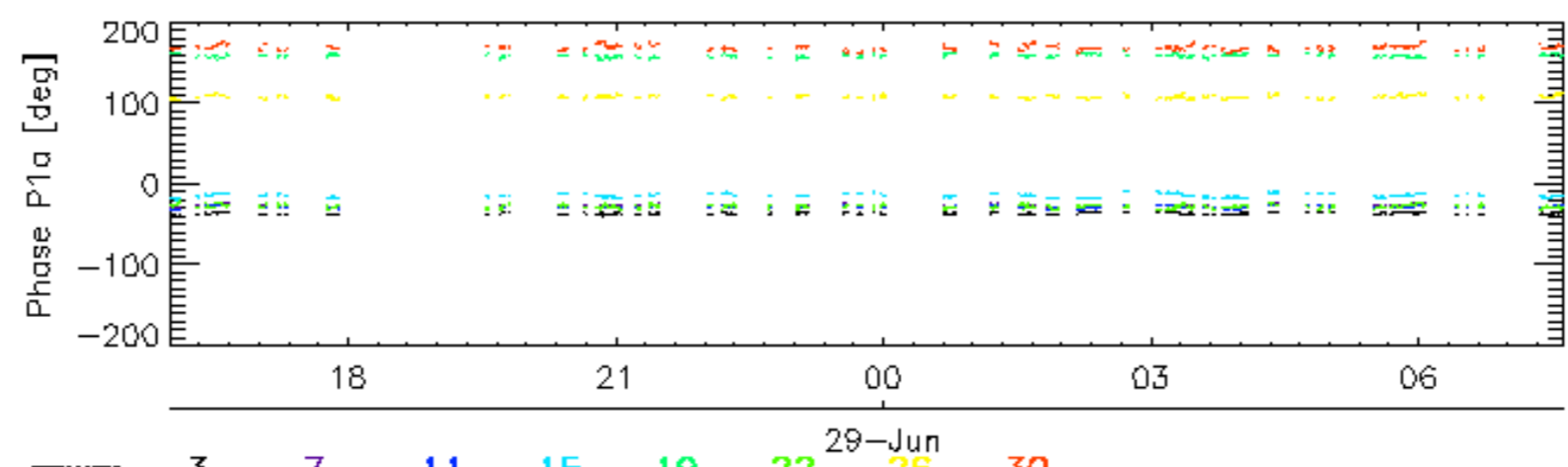
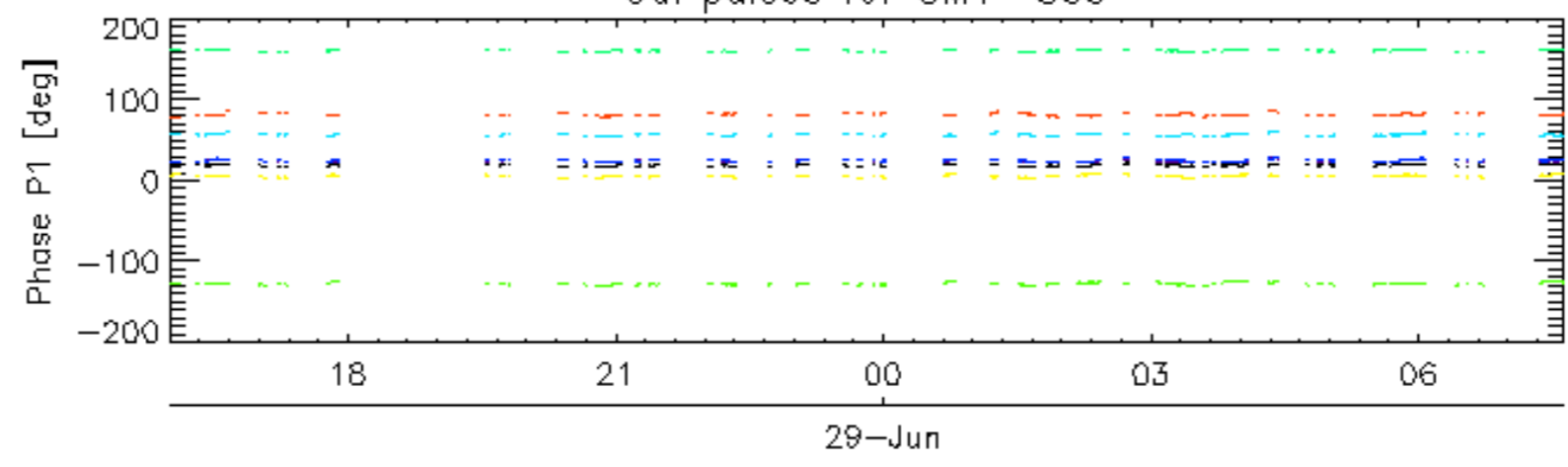
#### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

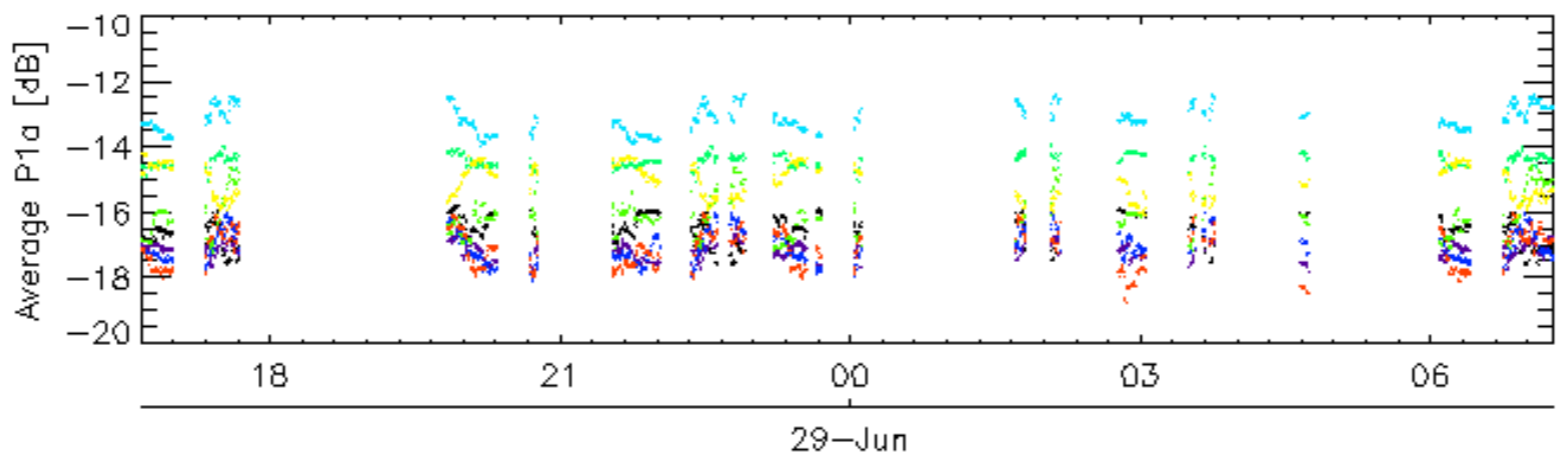
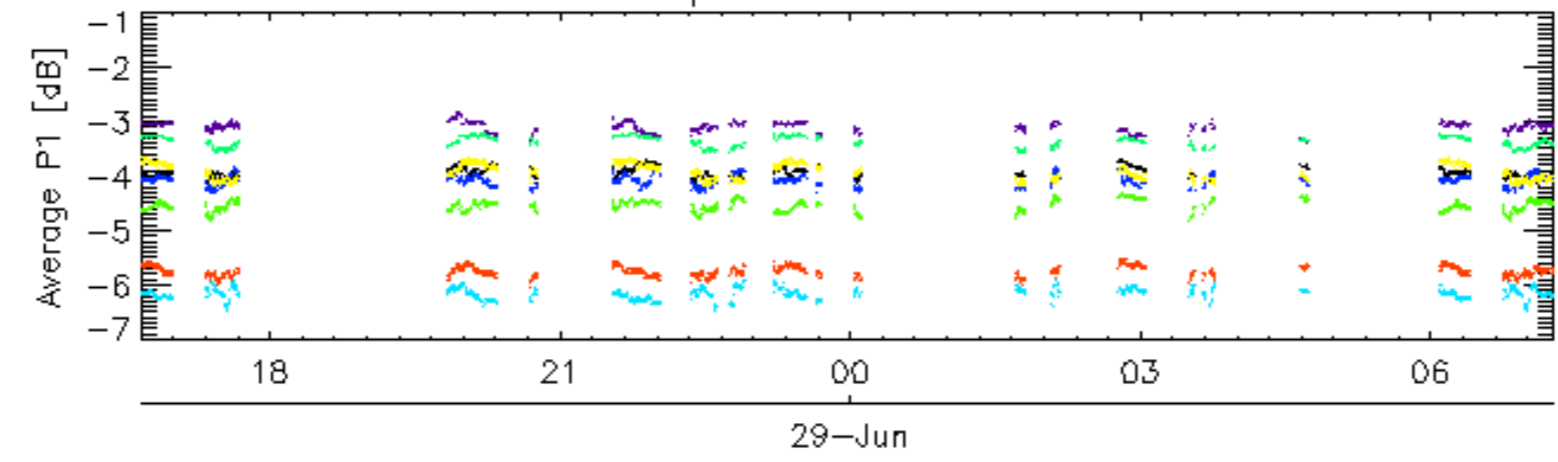


Cal pulses for GM1 SS3

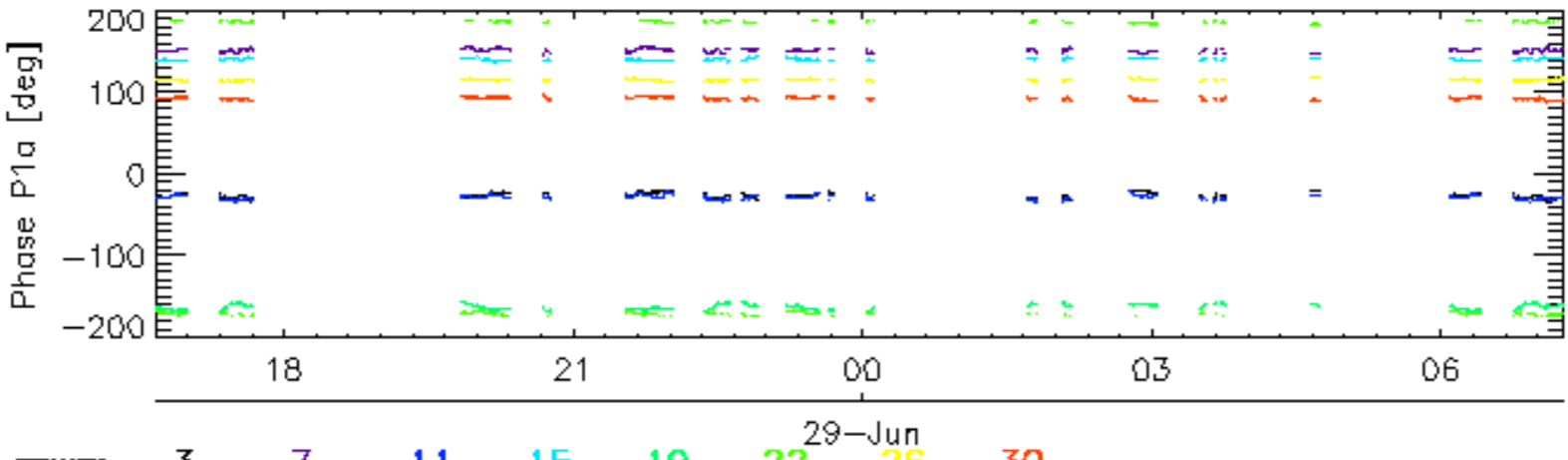
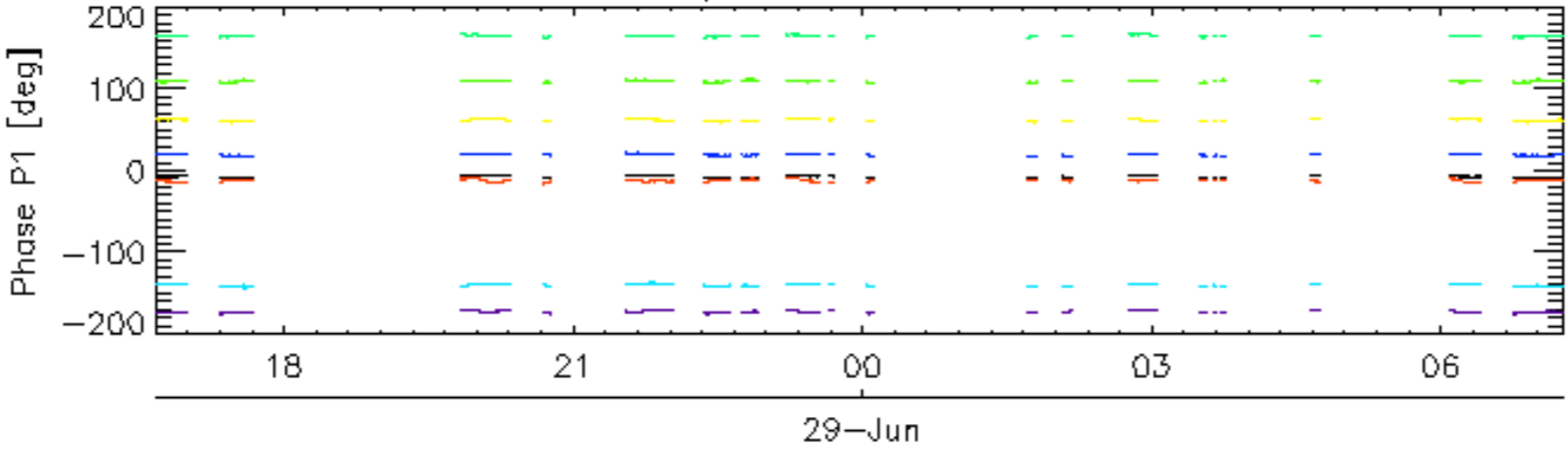


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

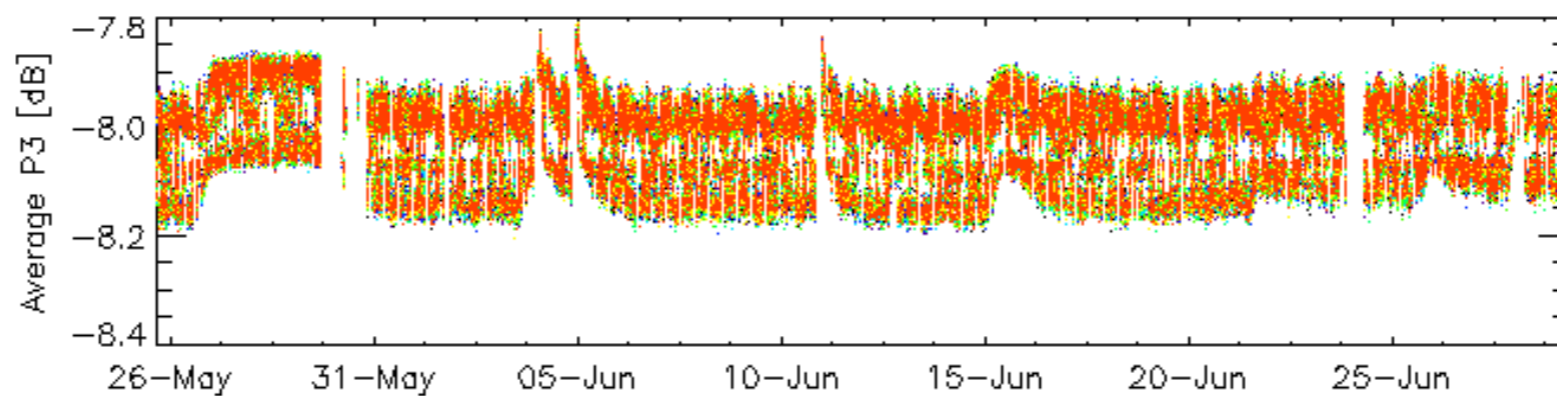
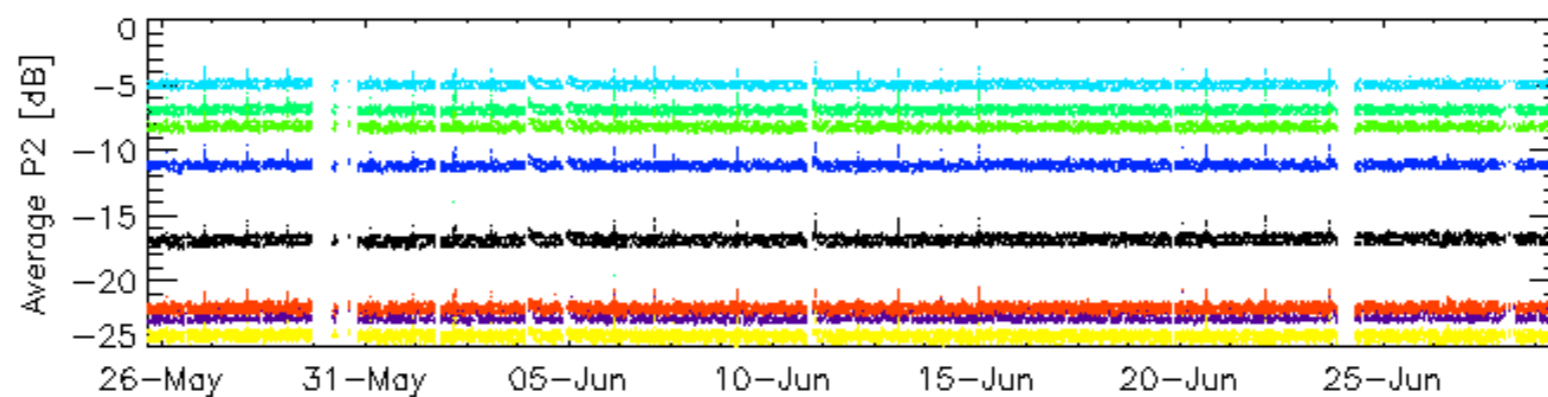
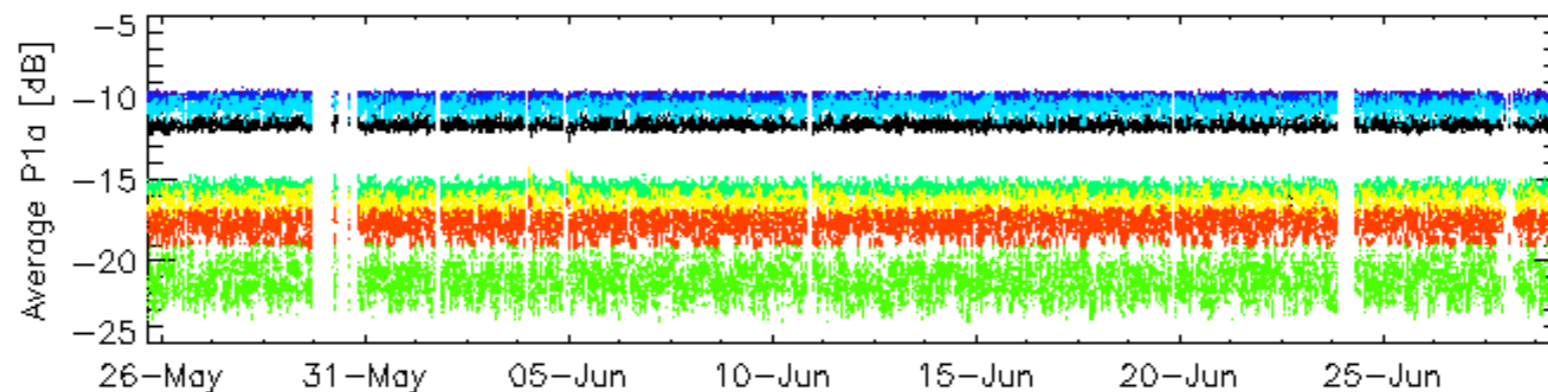
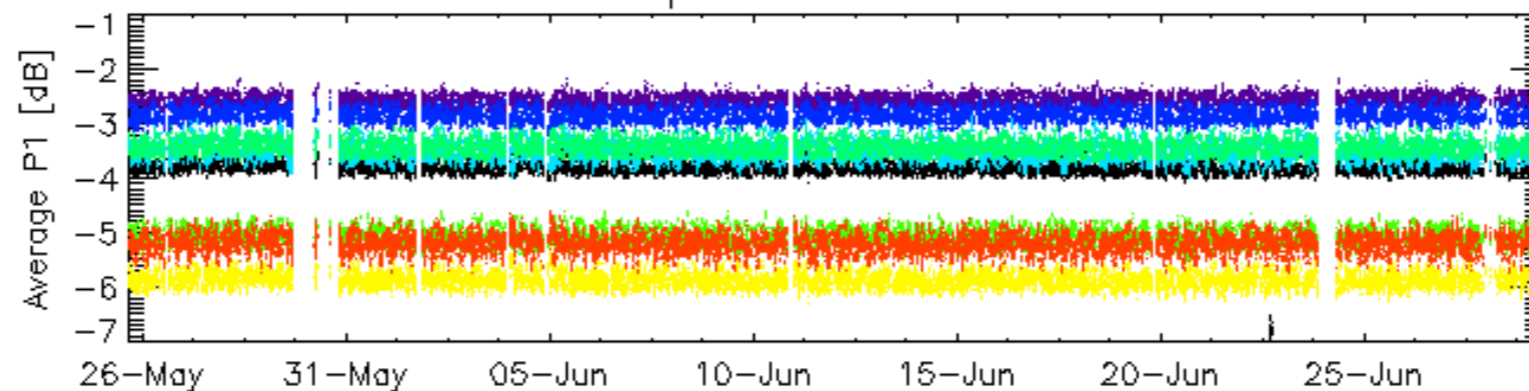


Cal pulses for WVS IS2



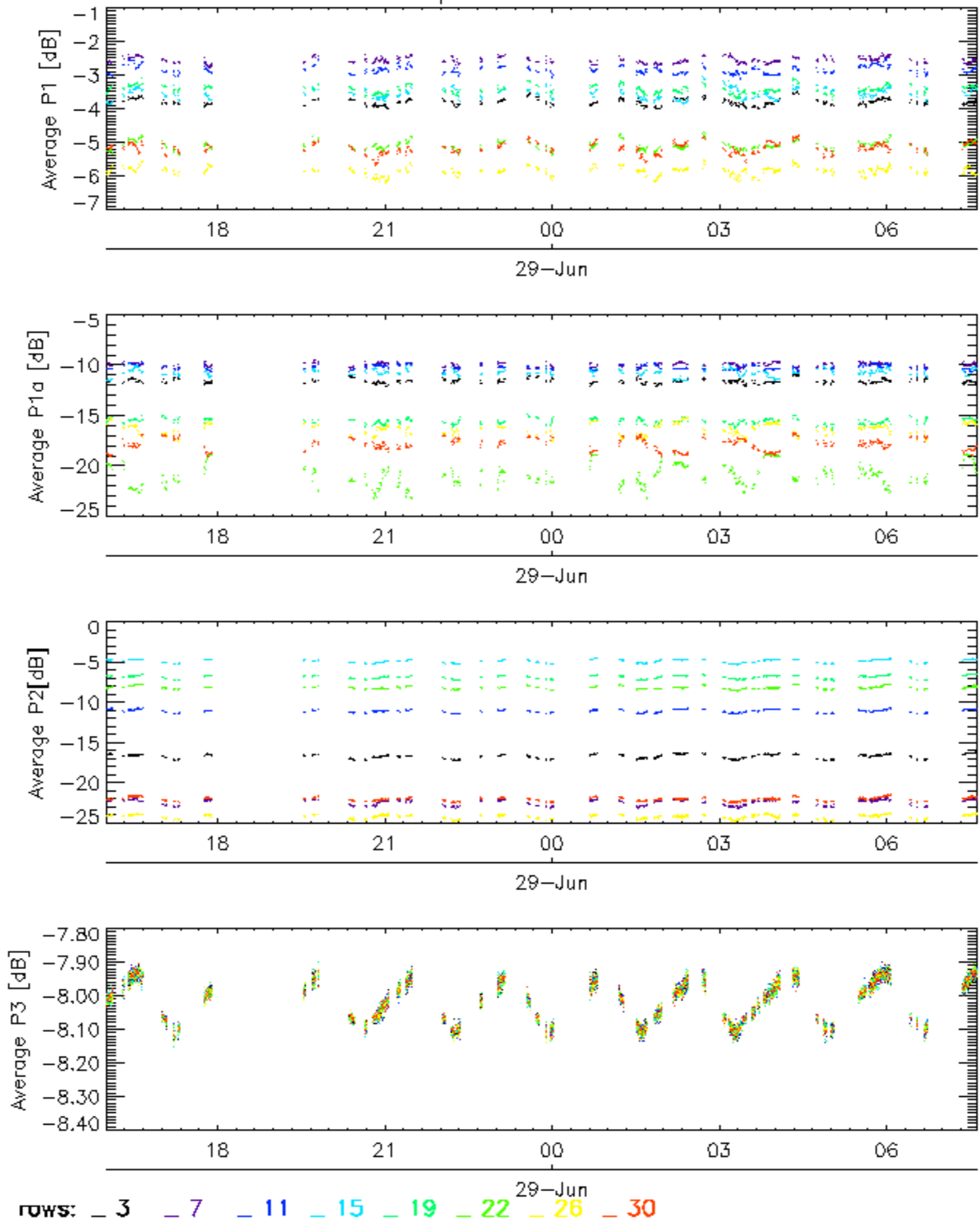
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

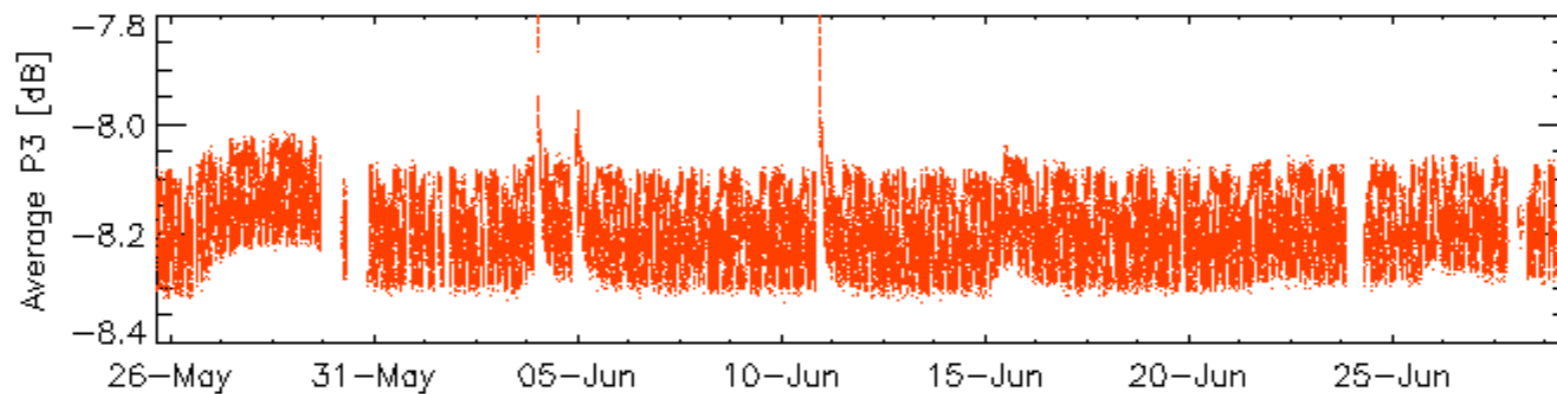
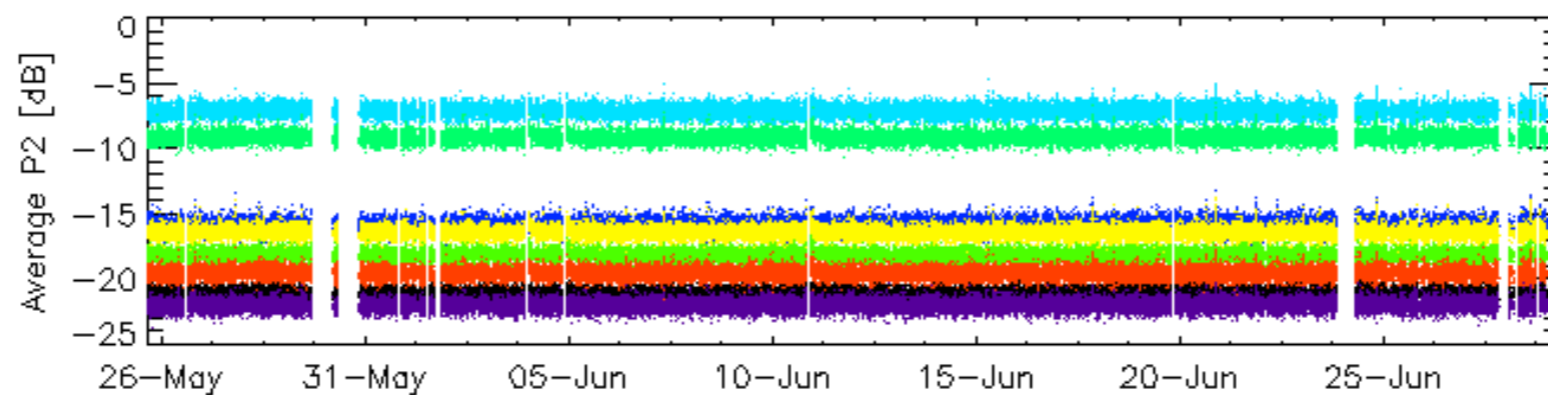
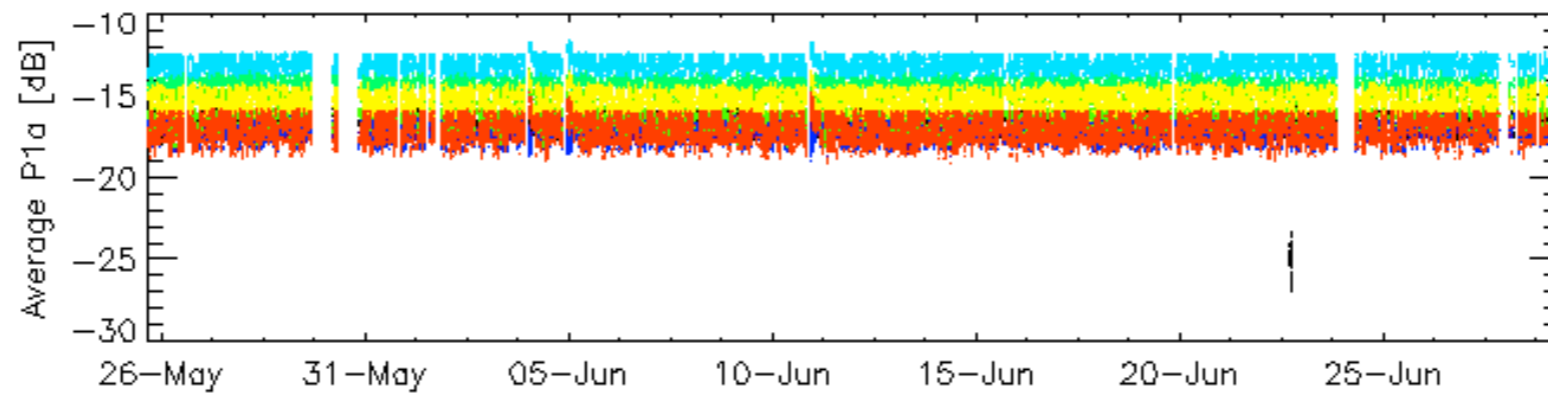
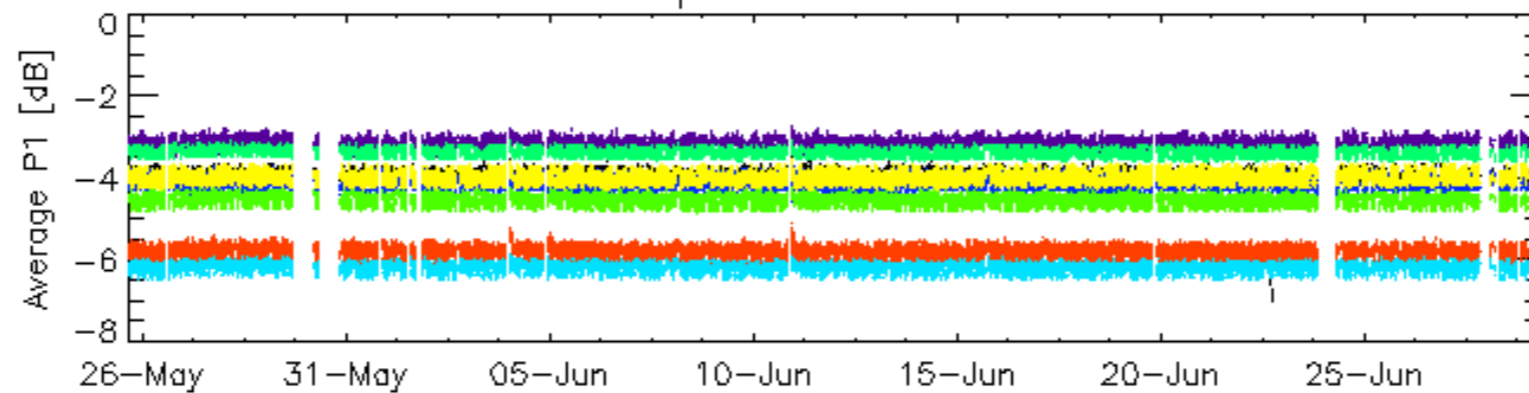


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



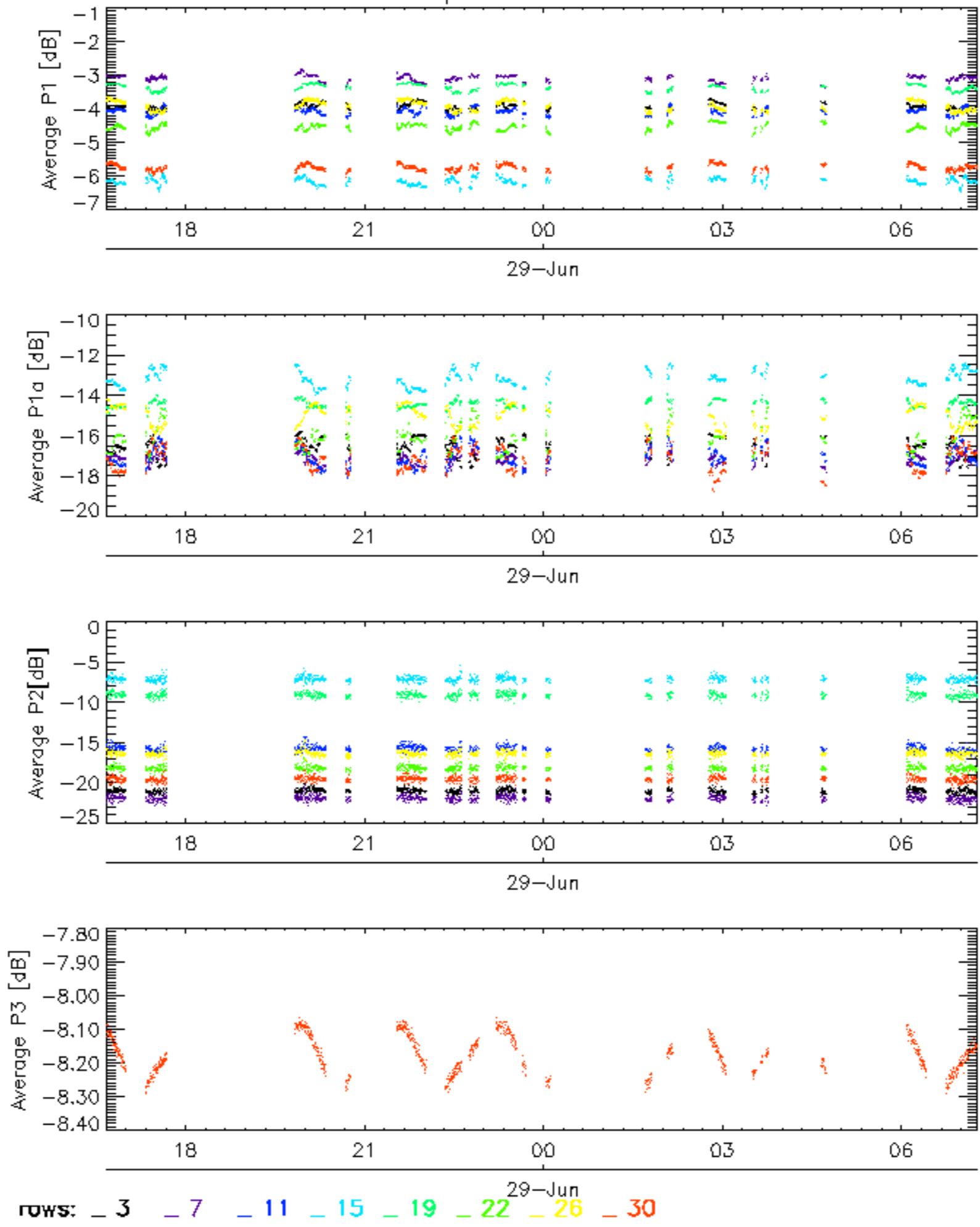
Cal pulses for WVS IS2



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



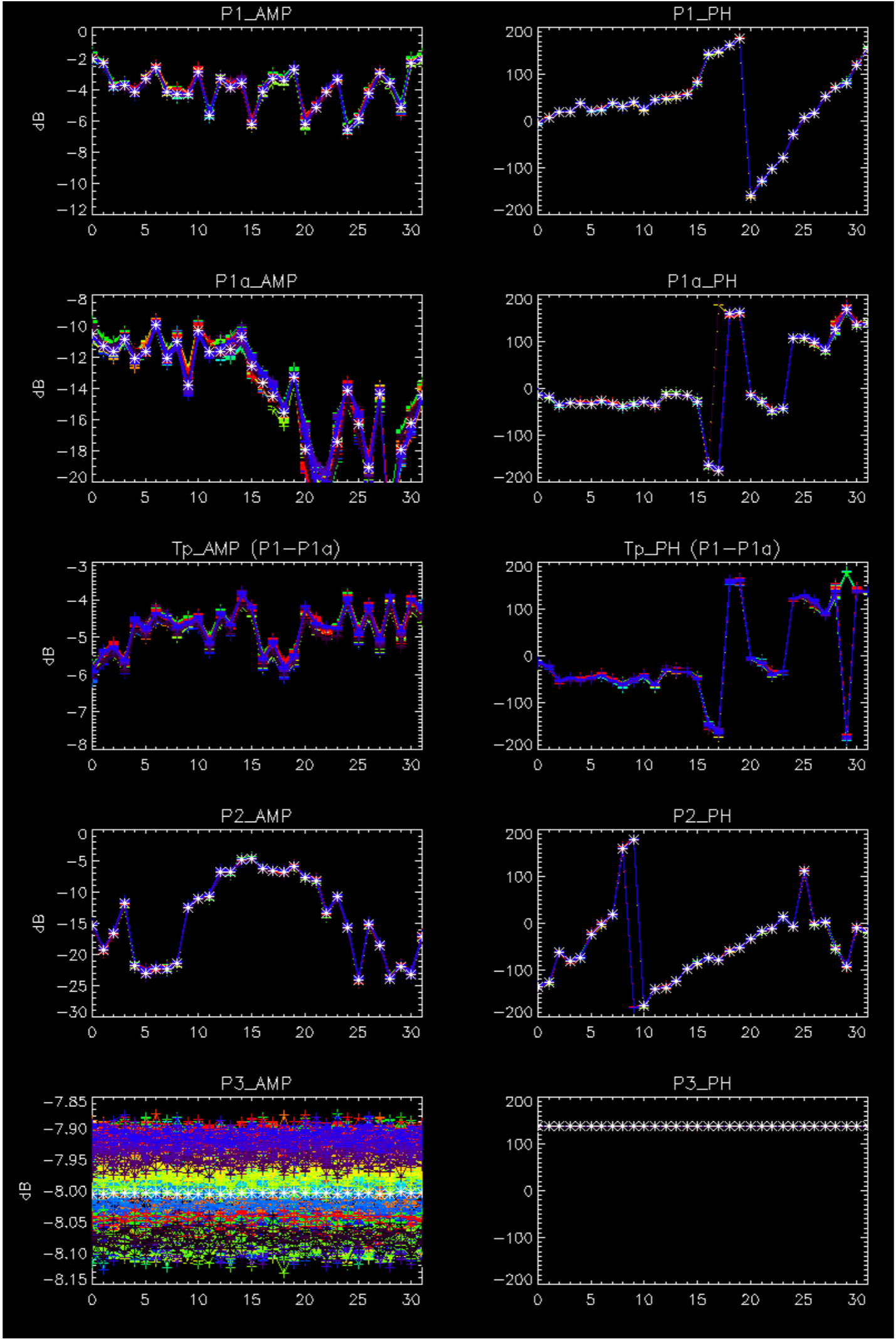
Cal pulses for WVS IS2

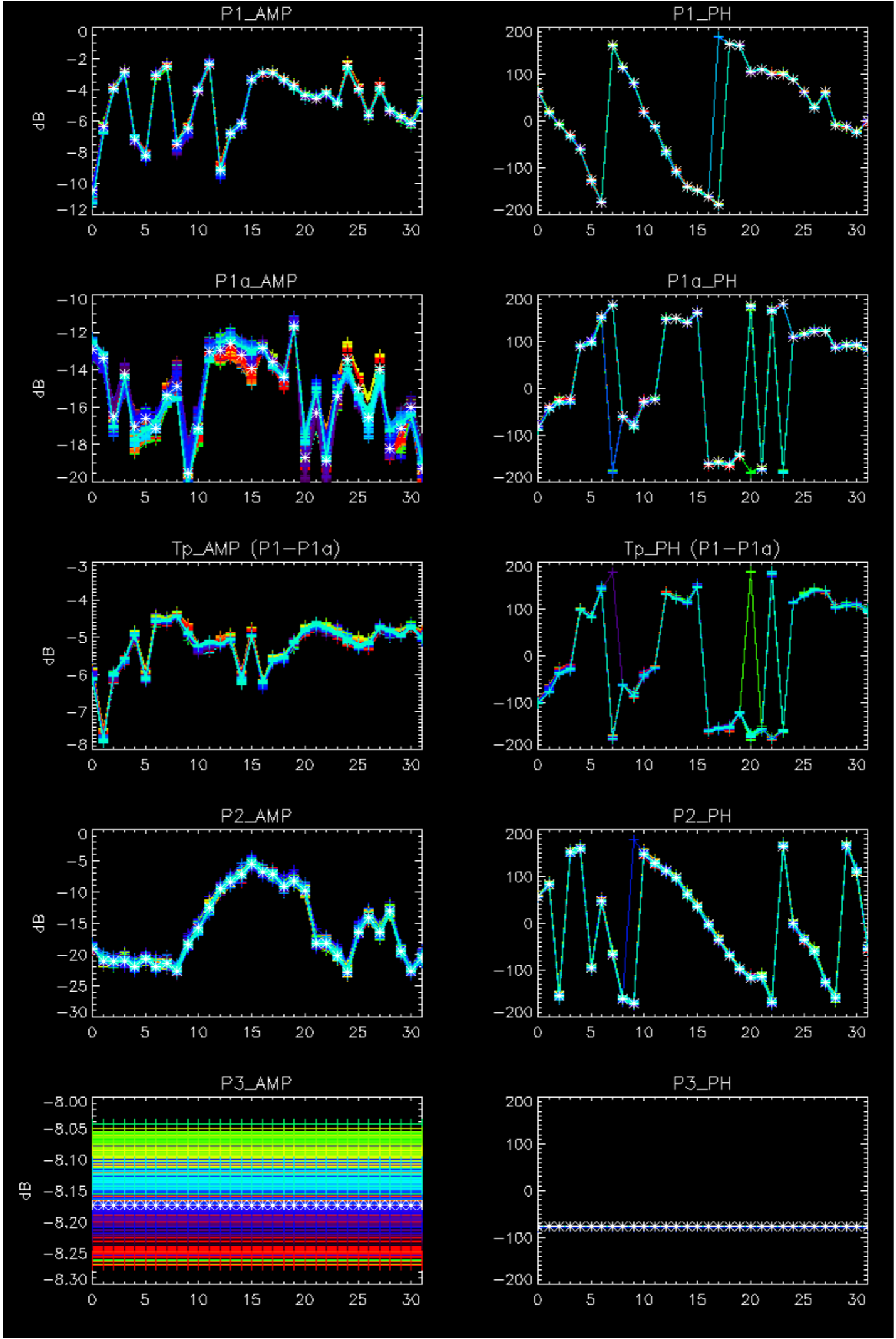


No anomalies observed on available browse products



No anomalies observed.



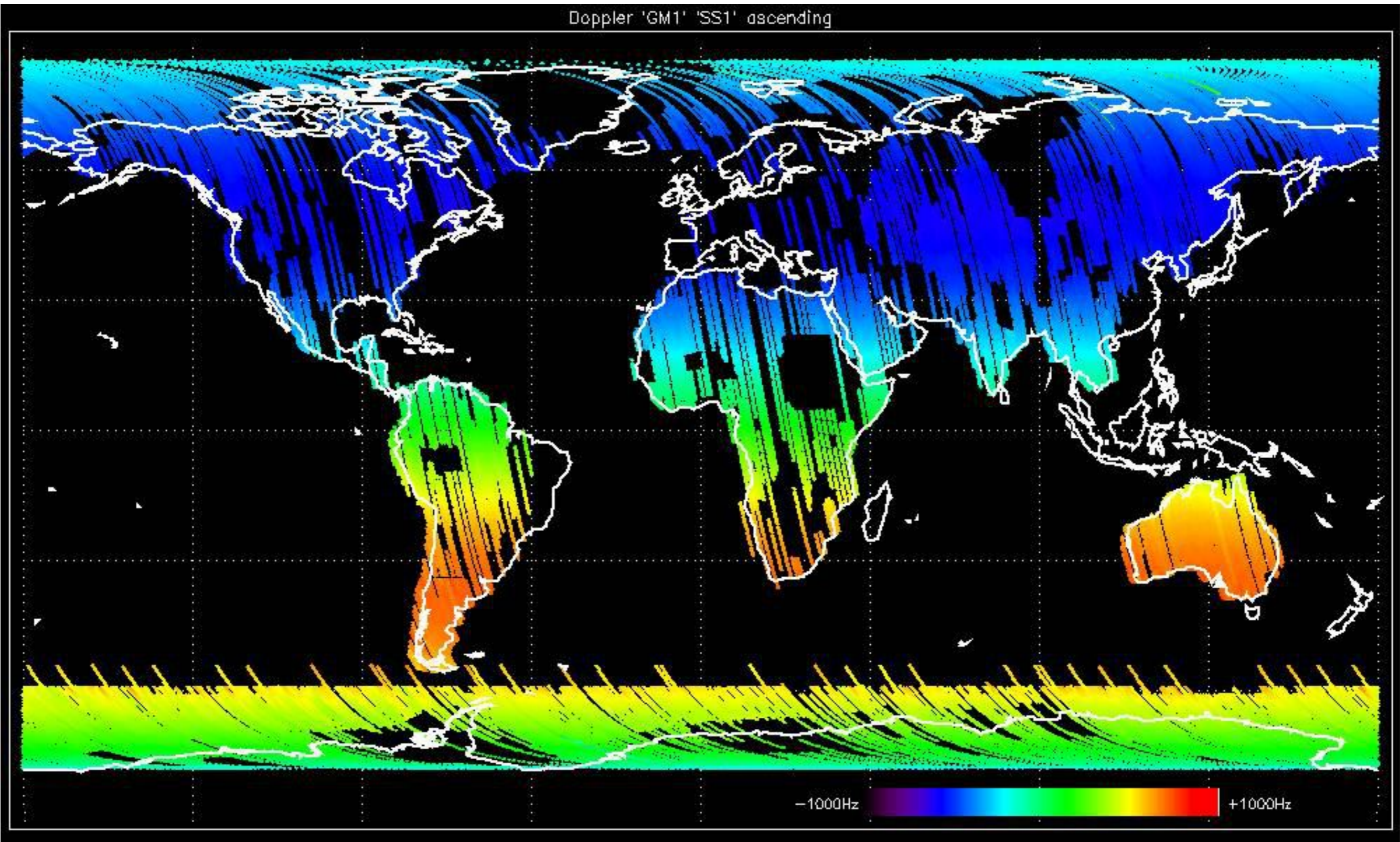


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



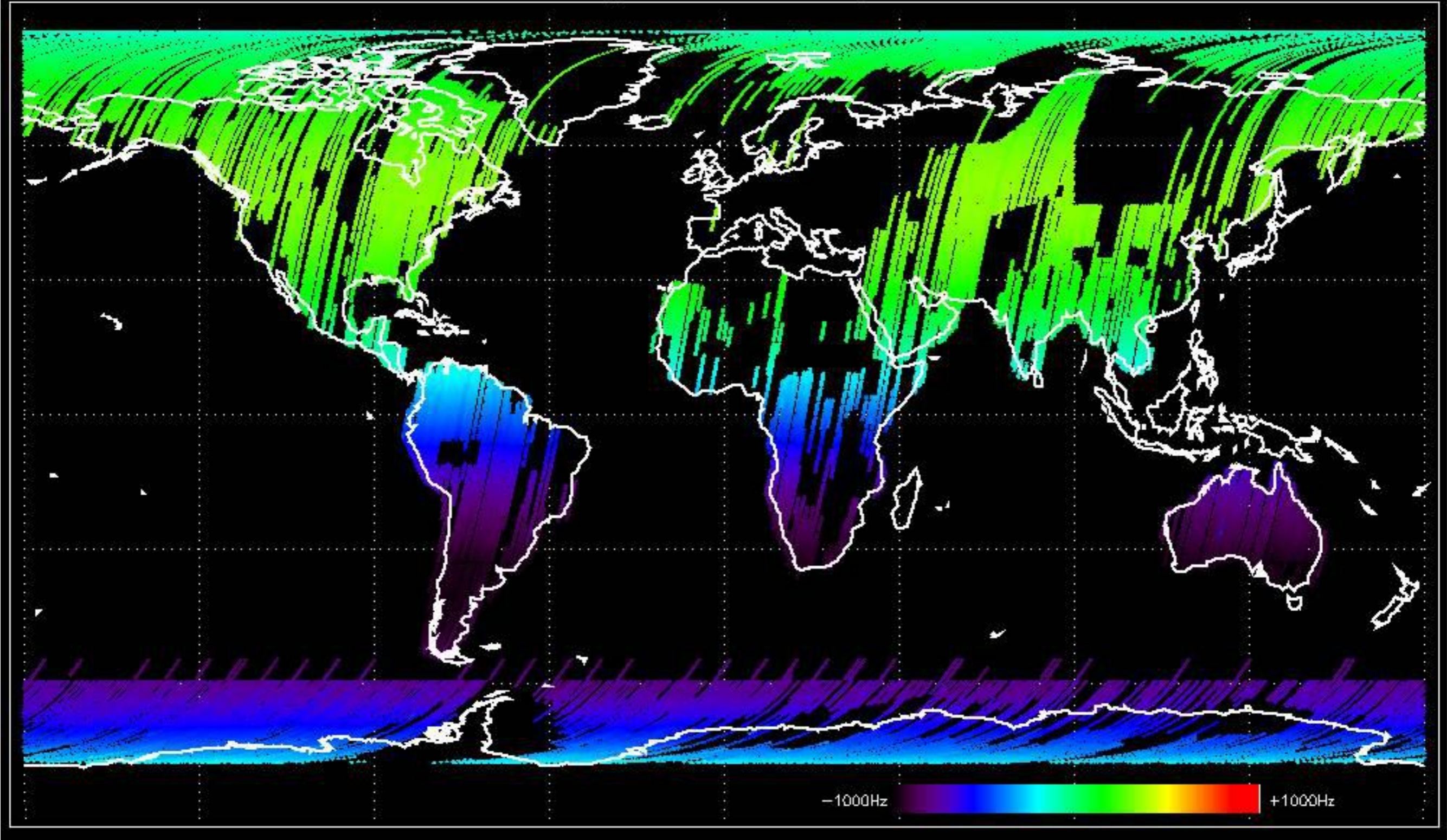


Doppler 'GM1' 'SS1' ascending



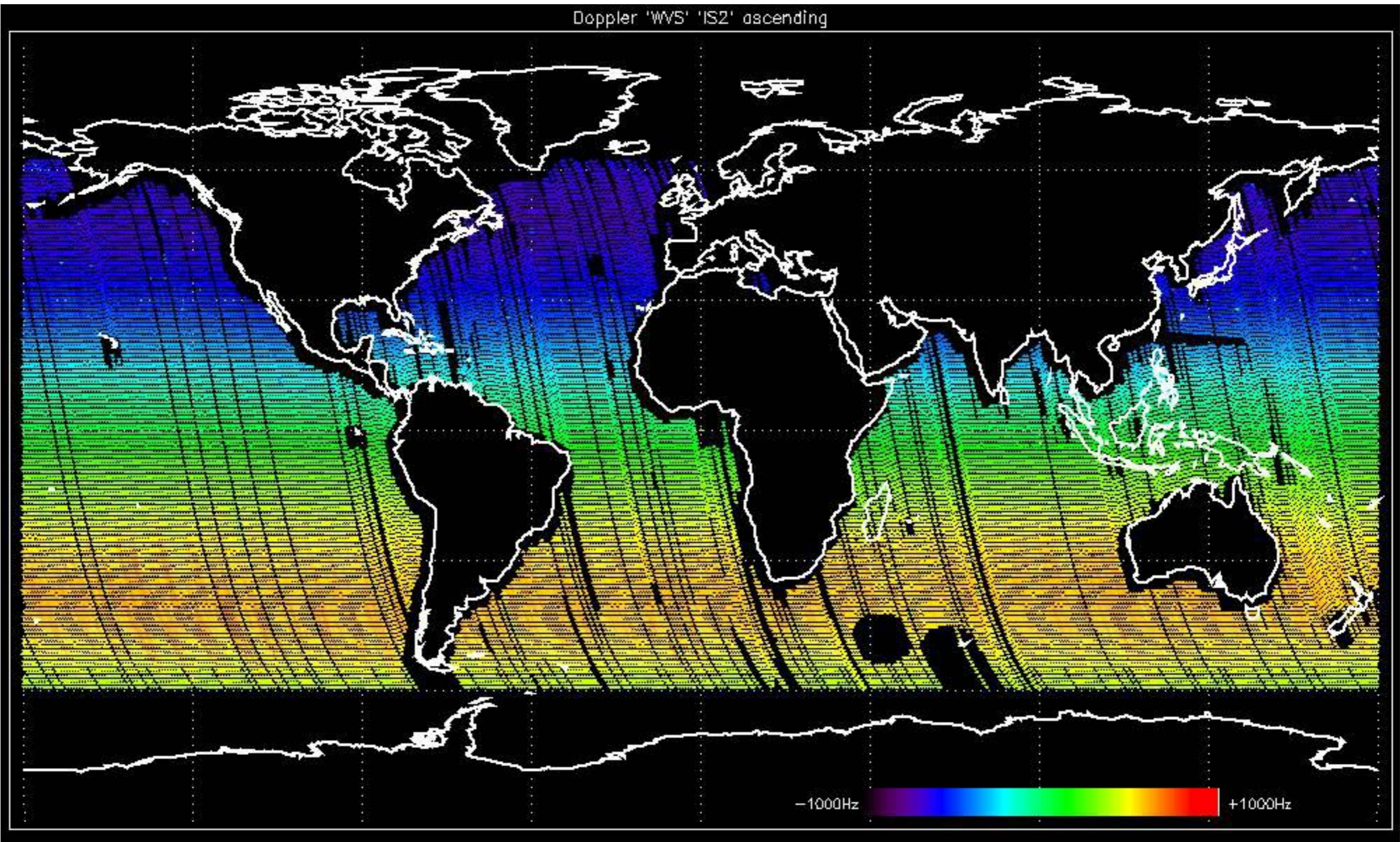


Doppler 'GM1' 'SS1' descending



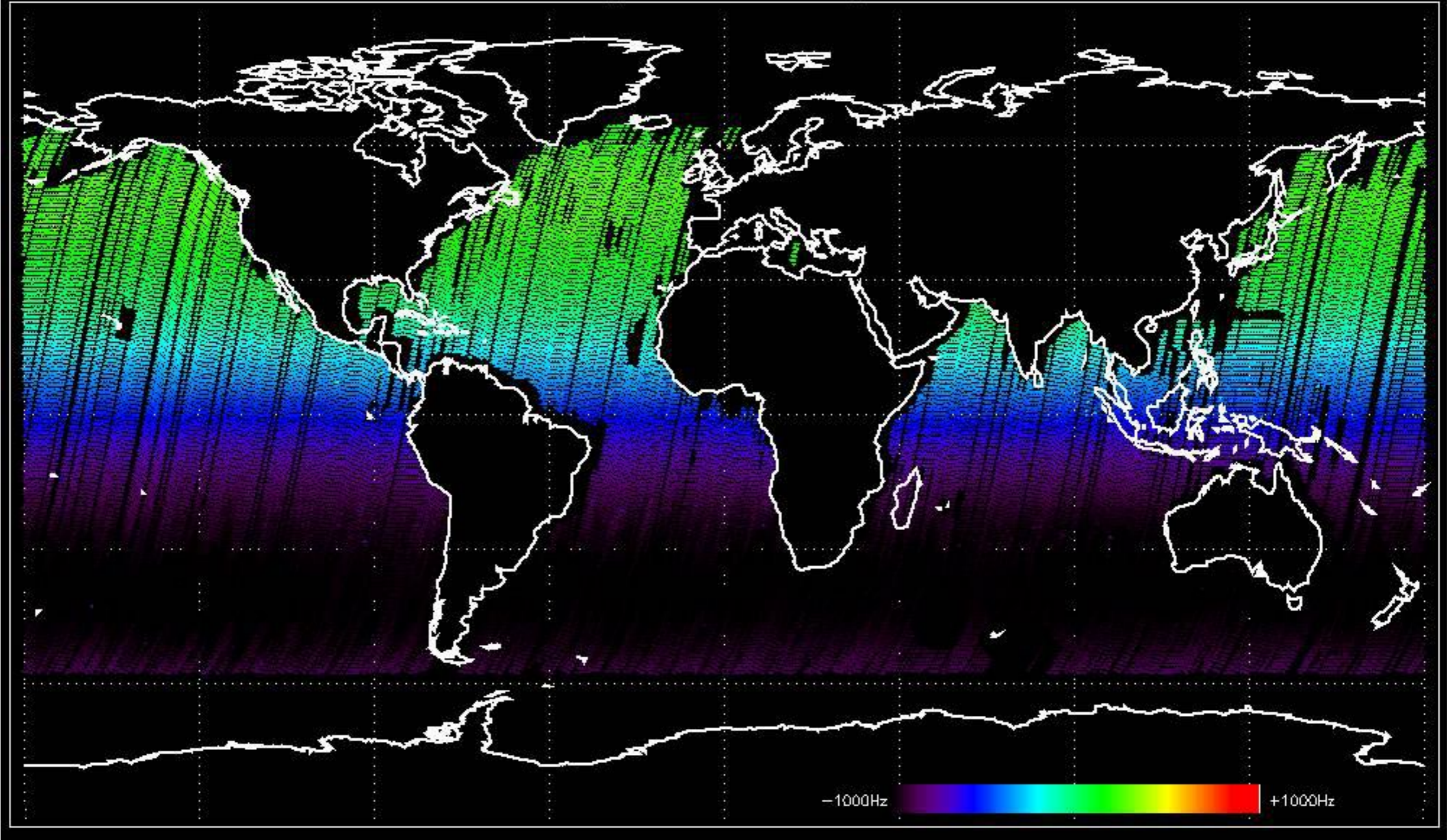


Doppler 'WVS' 'IS2' ascending

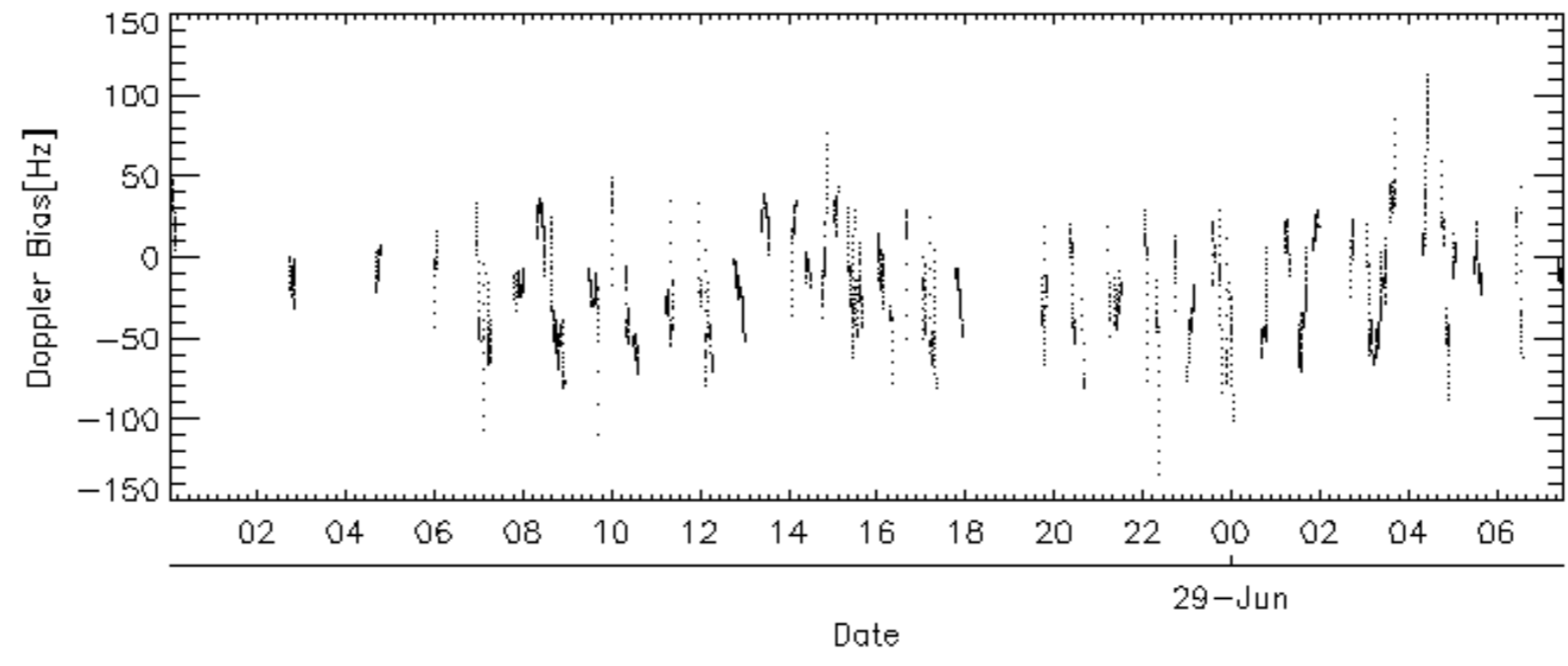
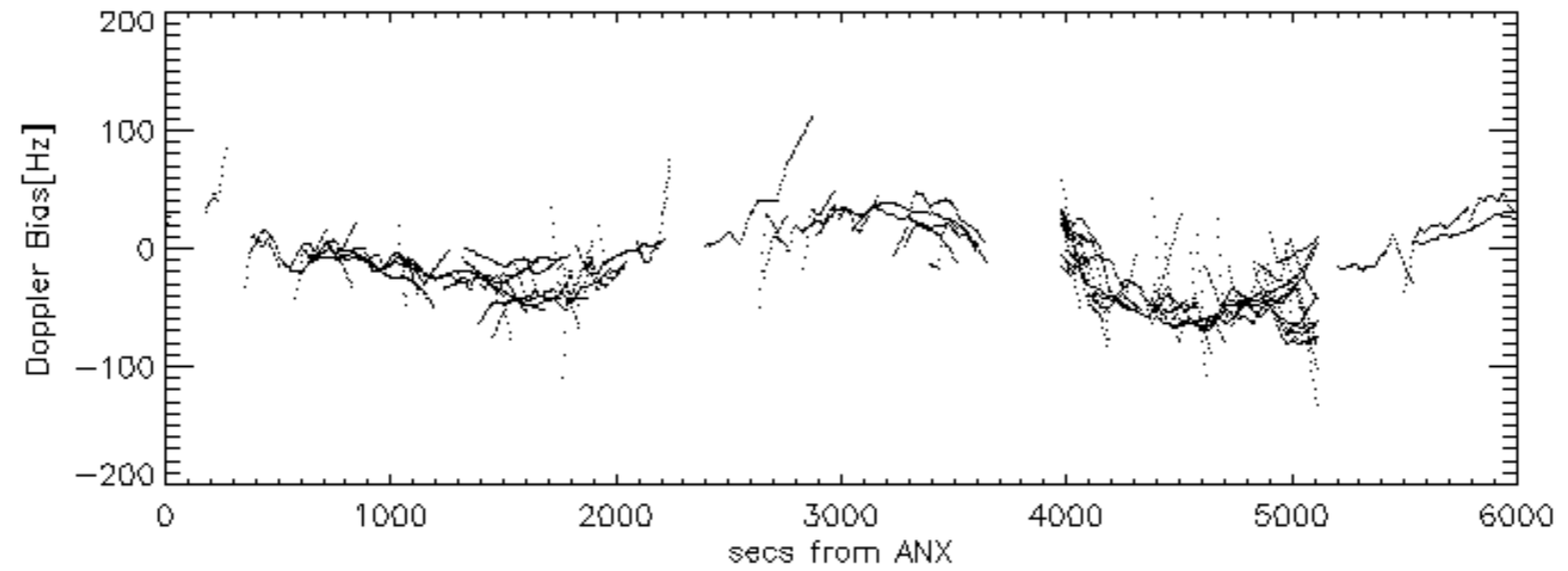
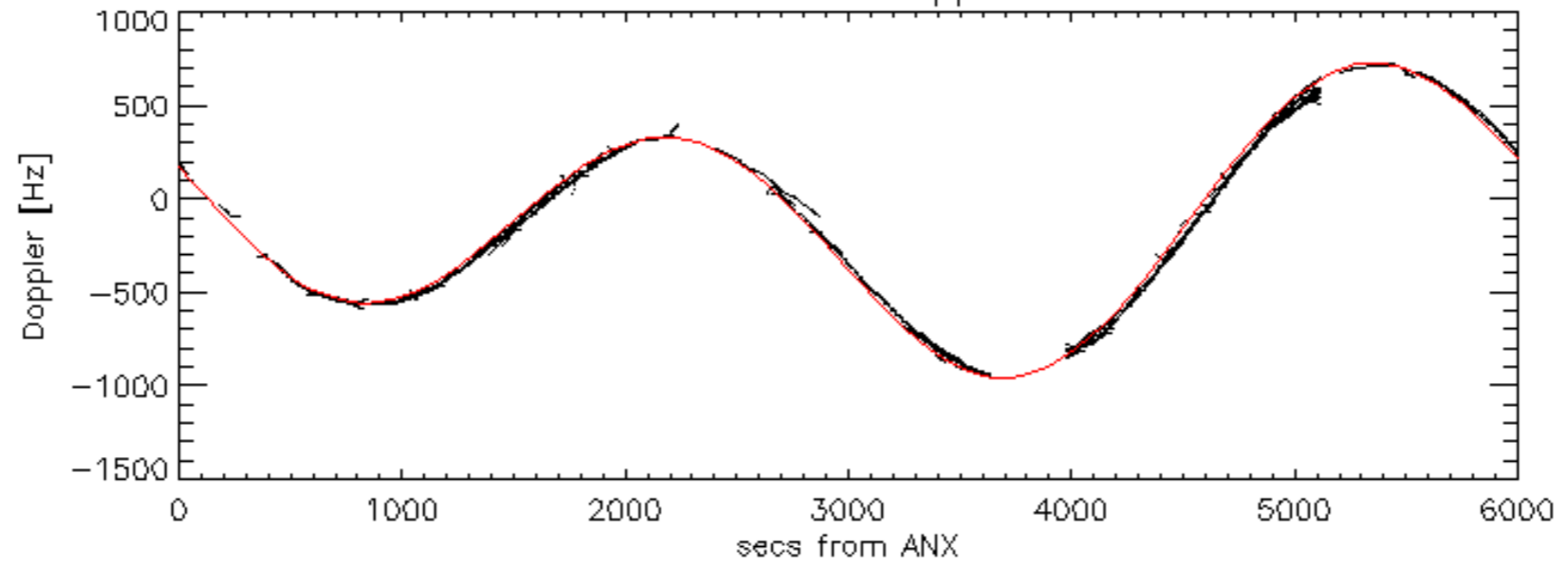




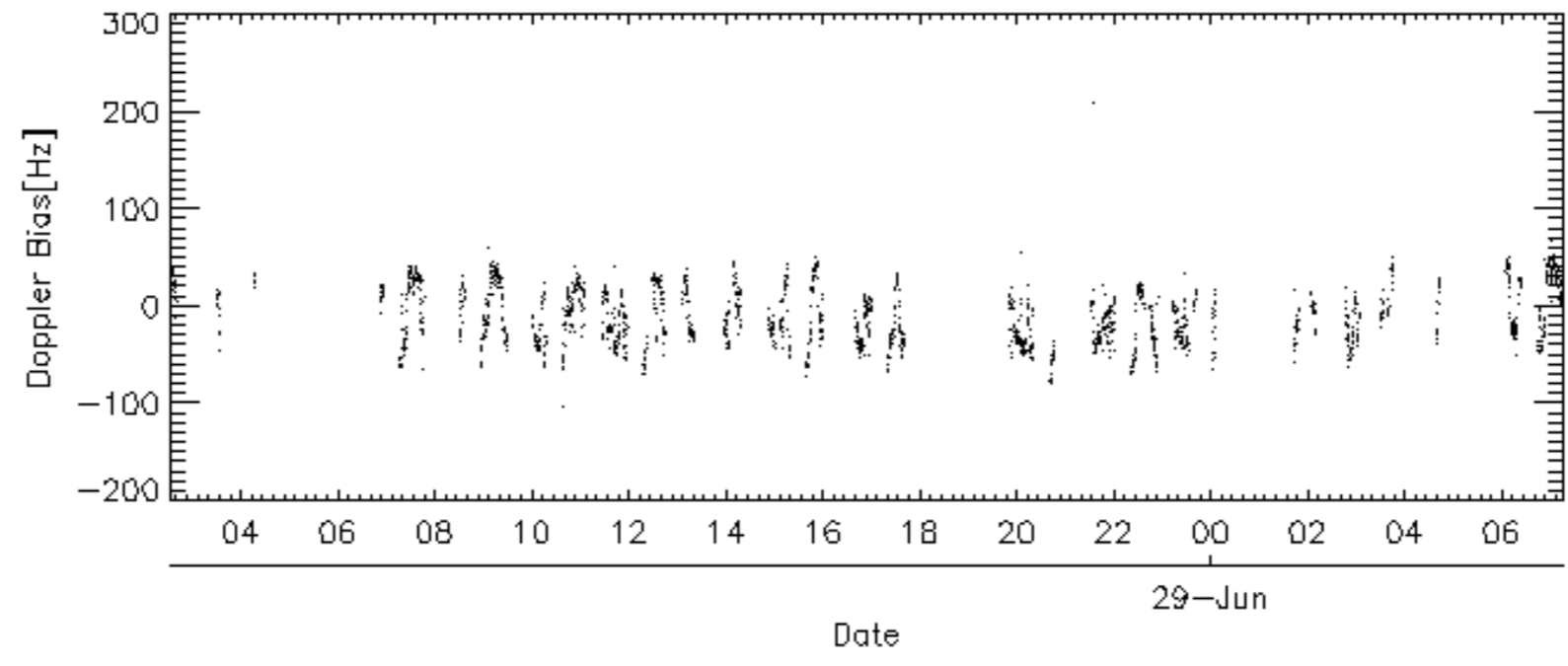
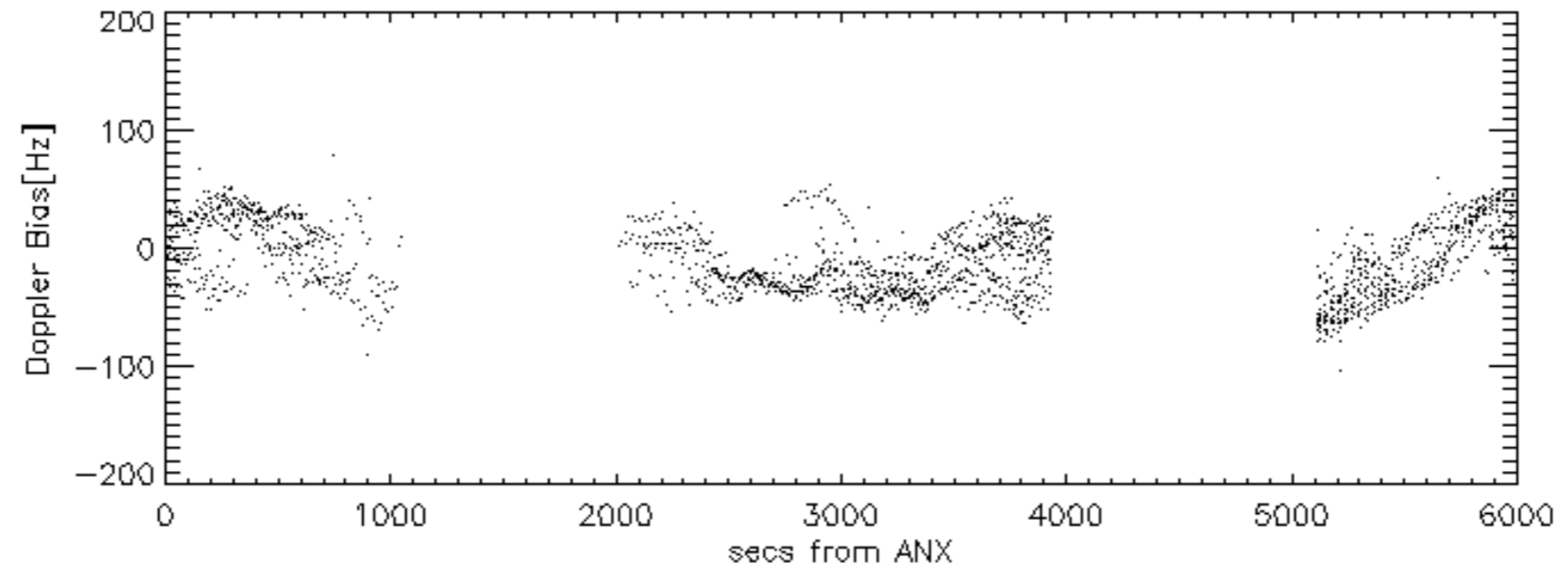
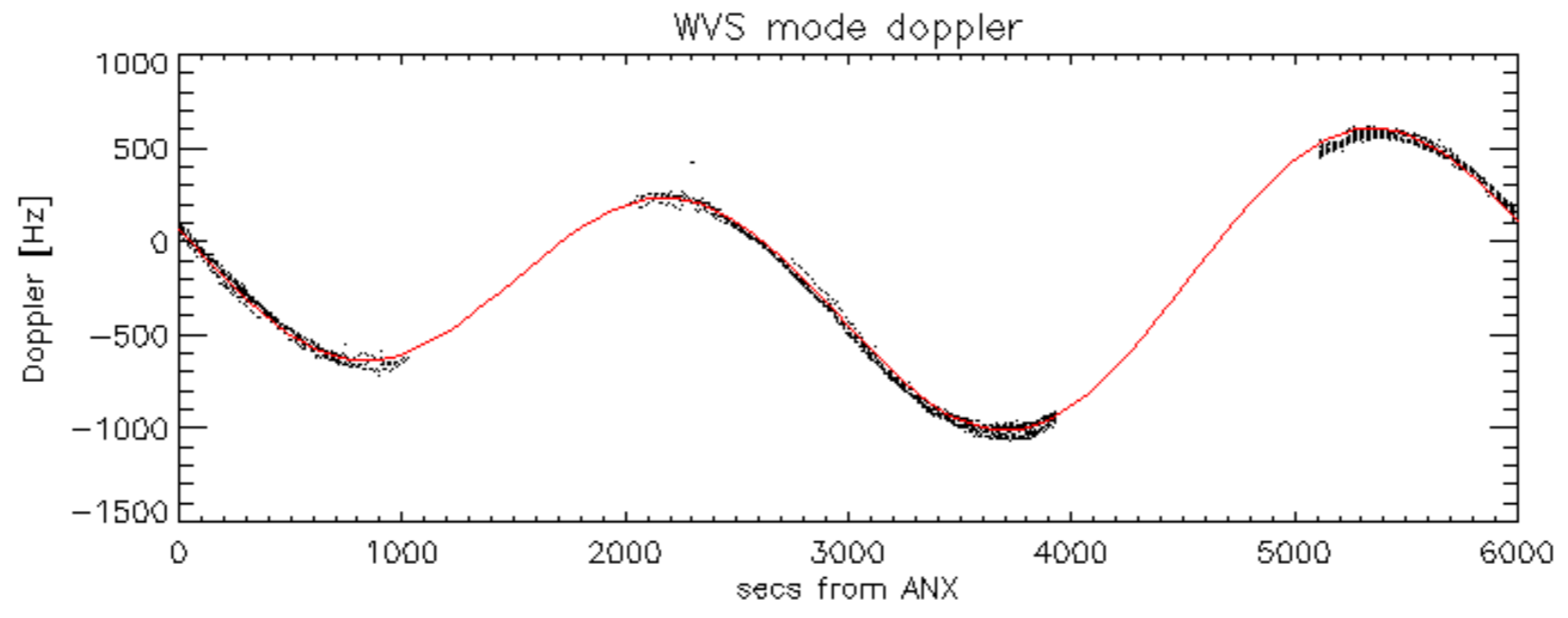
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

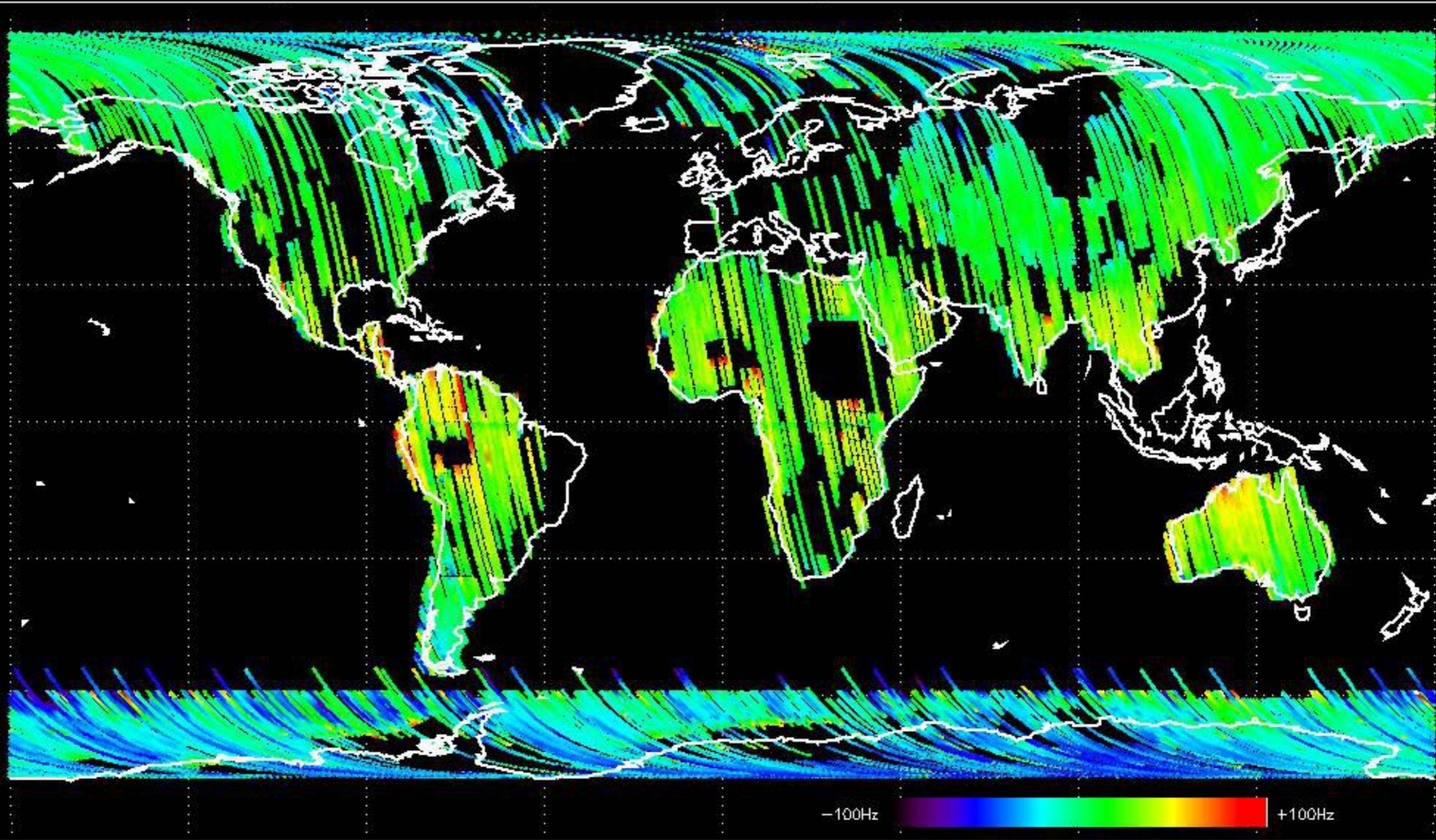






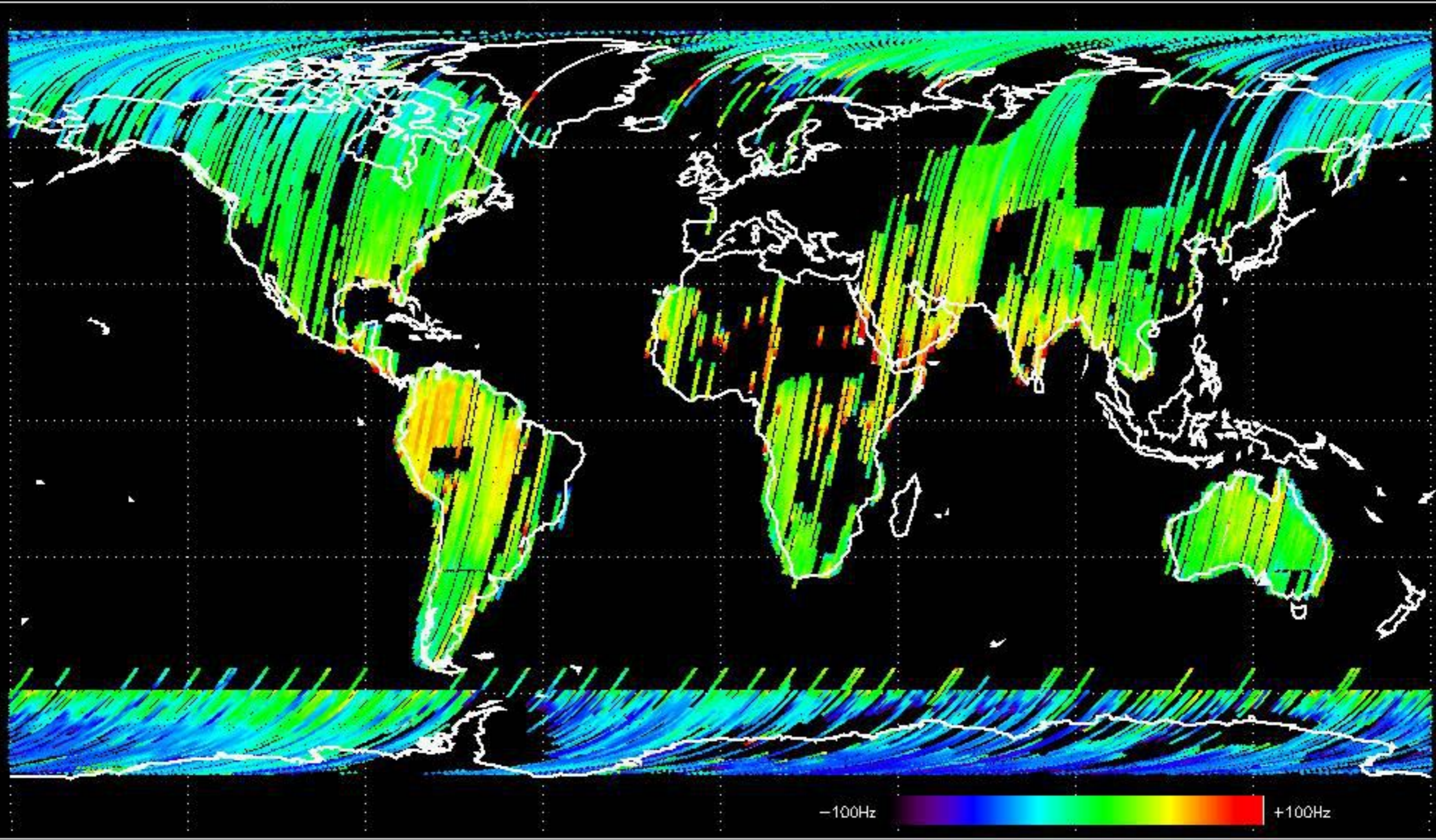


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.909095 Hz



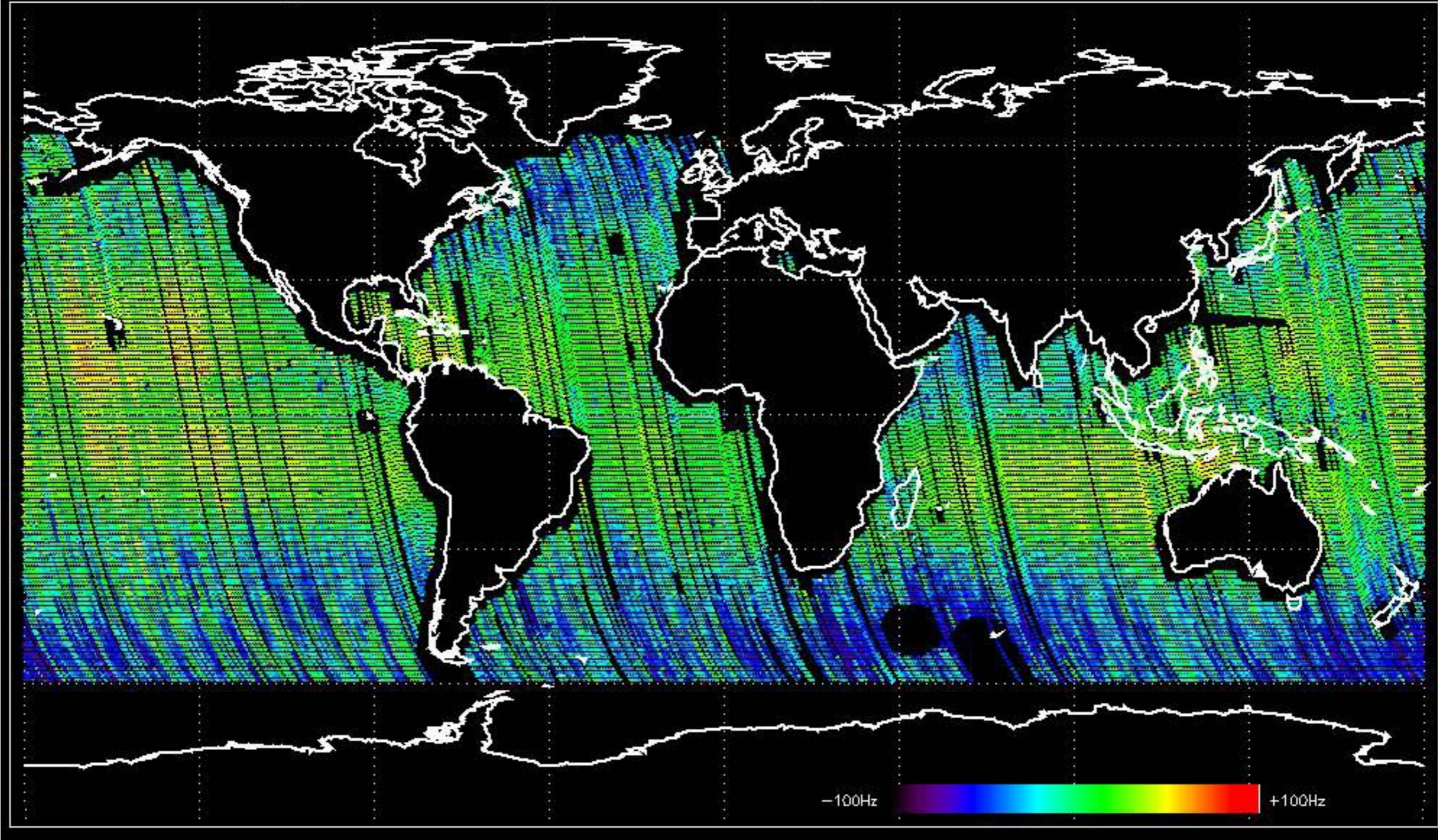


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.2679989 Hz



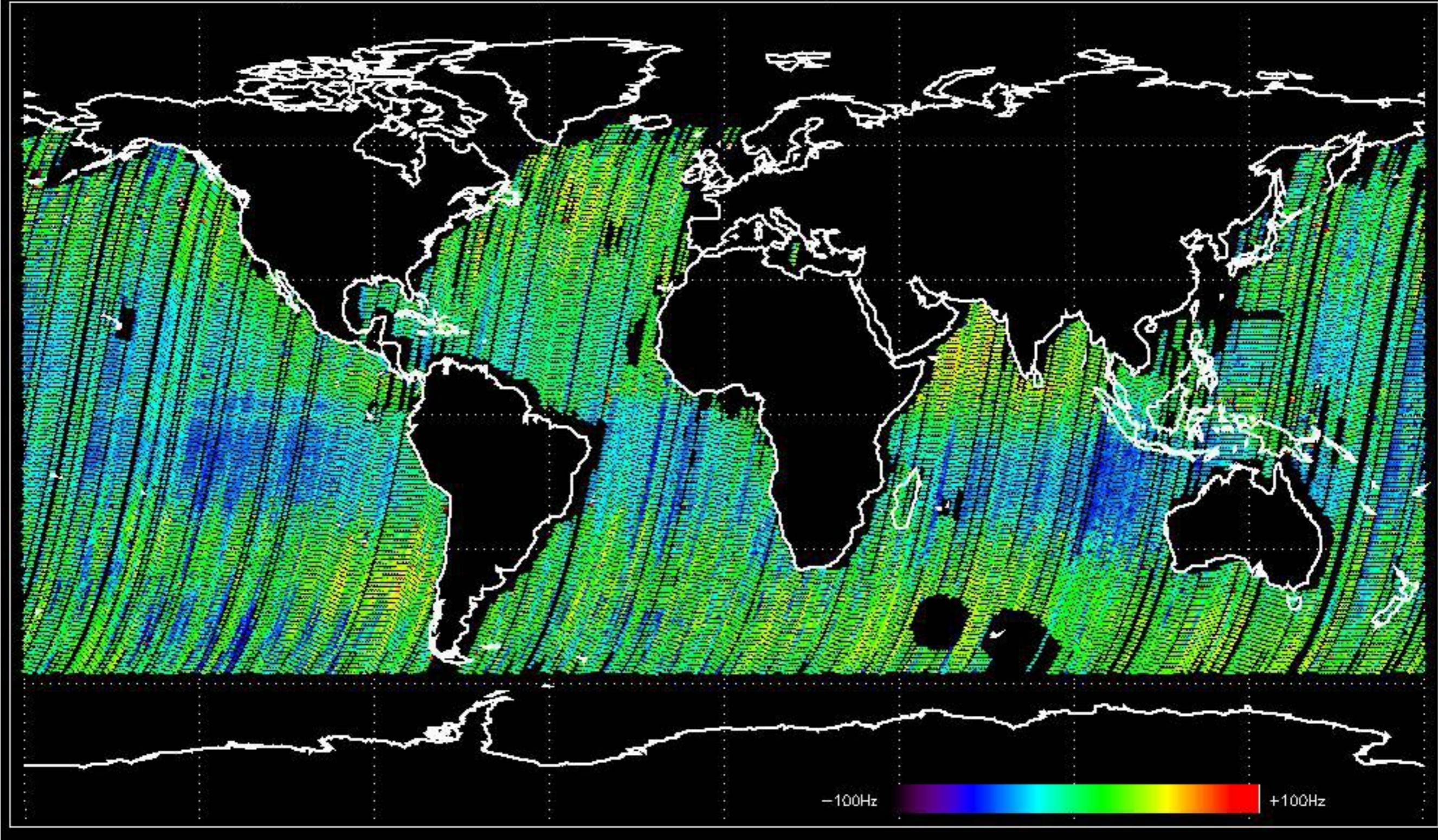


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.6553651 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -12.001793 Hz





No anomalies observed on available MS products:



No anomalies observed.



















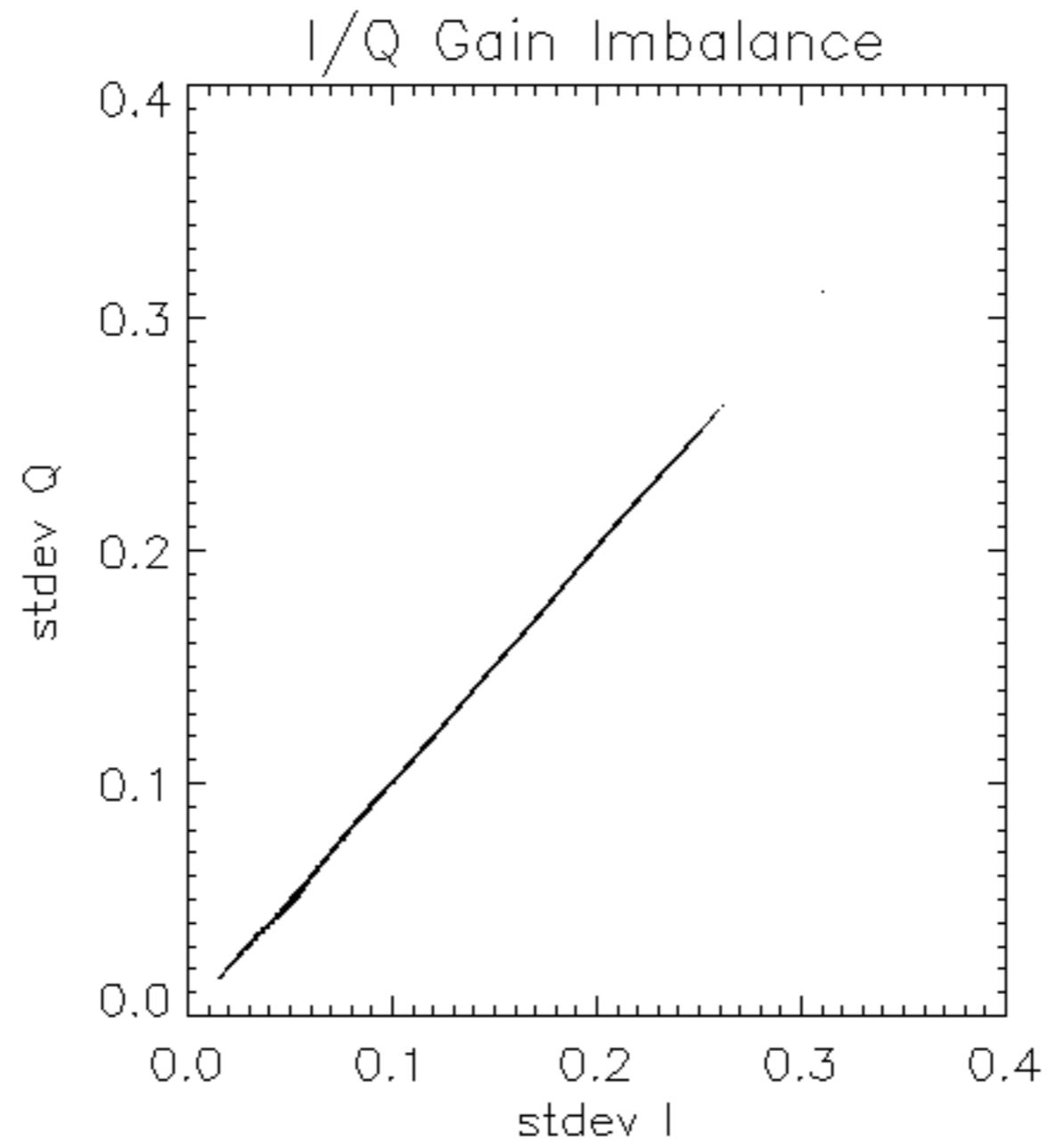


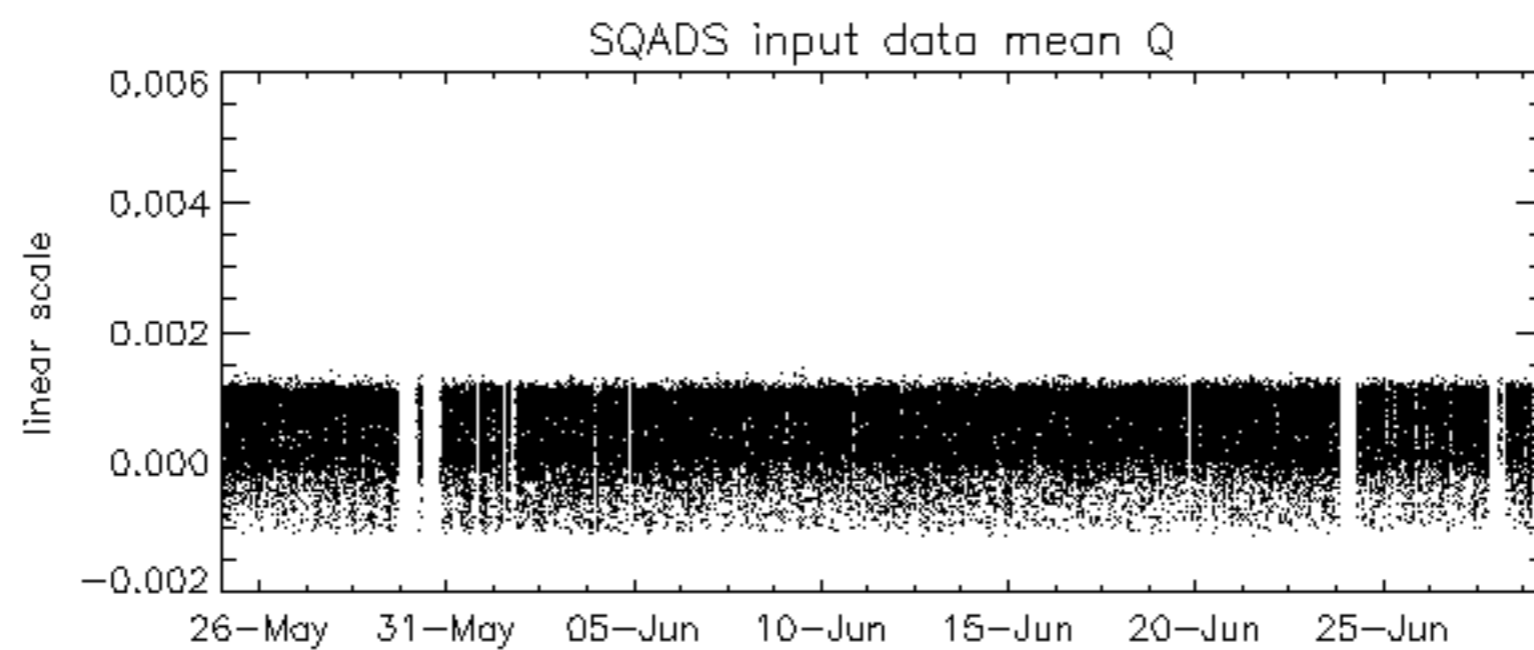
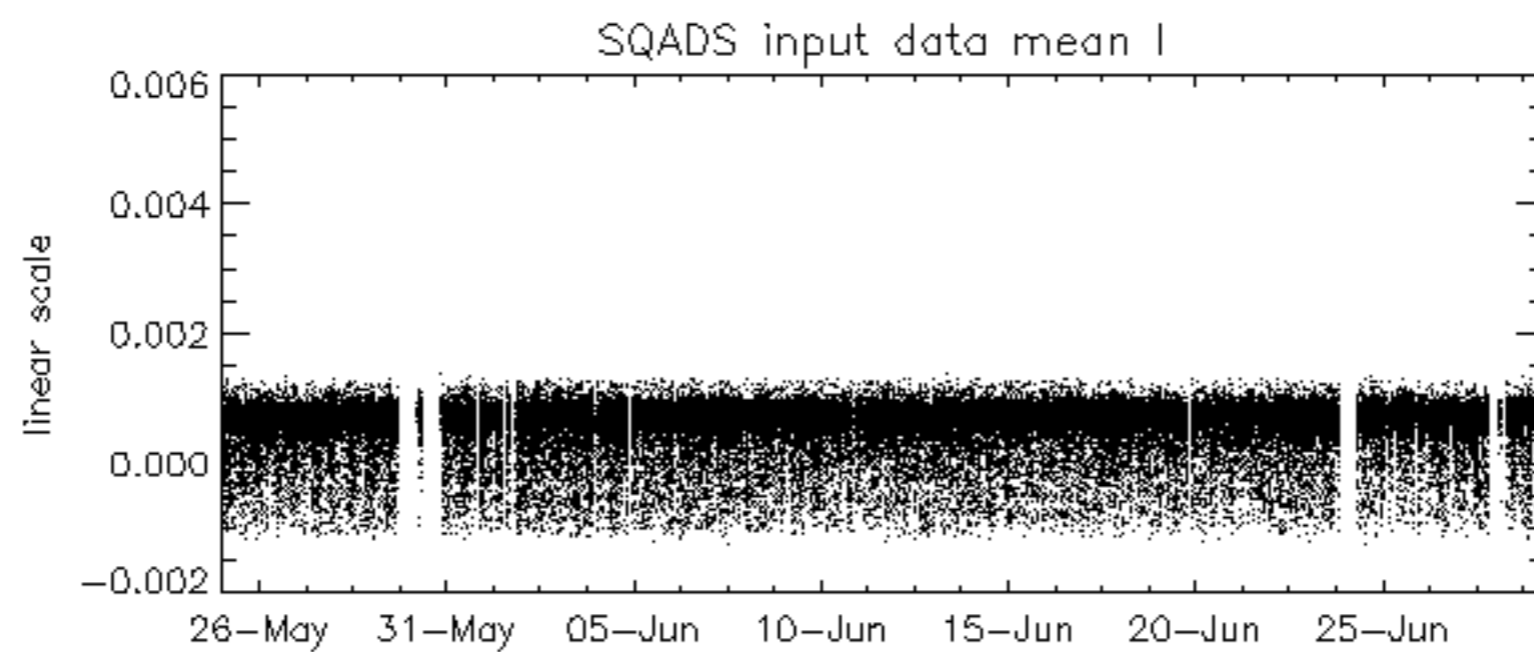
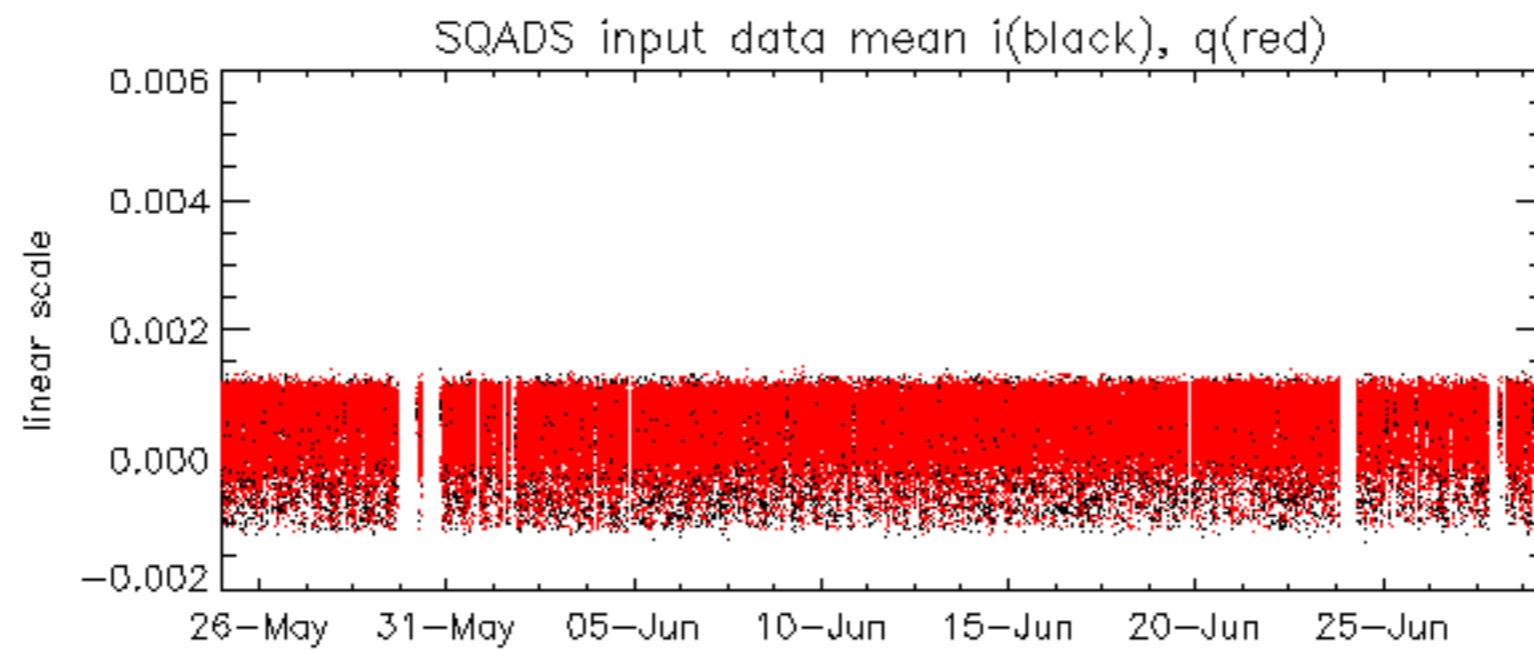




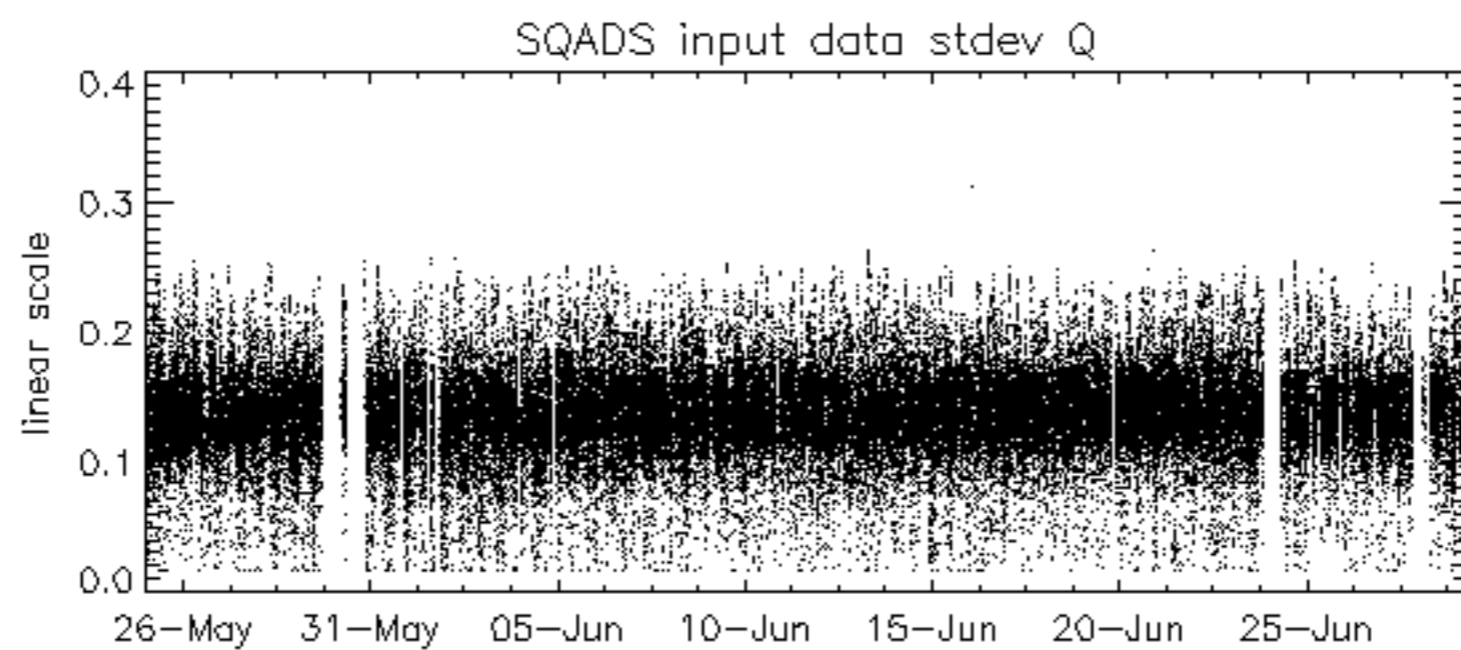
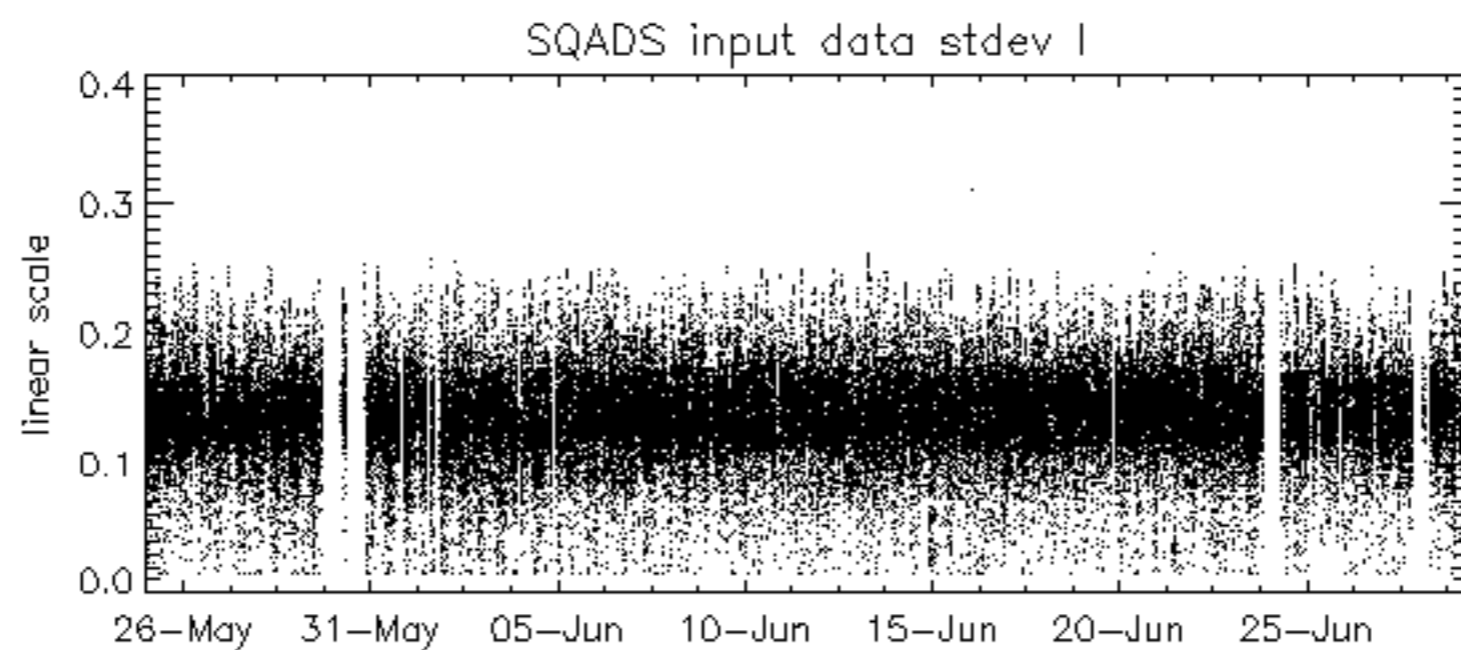
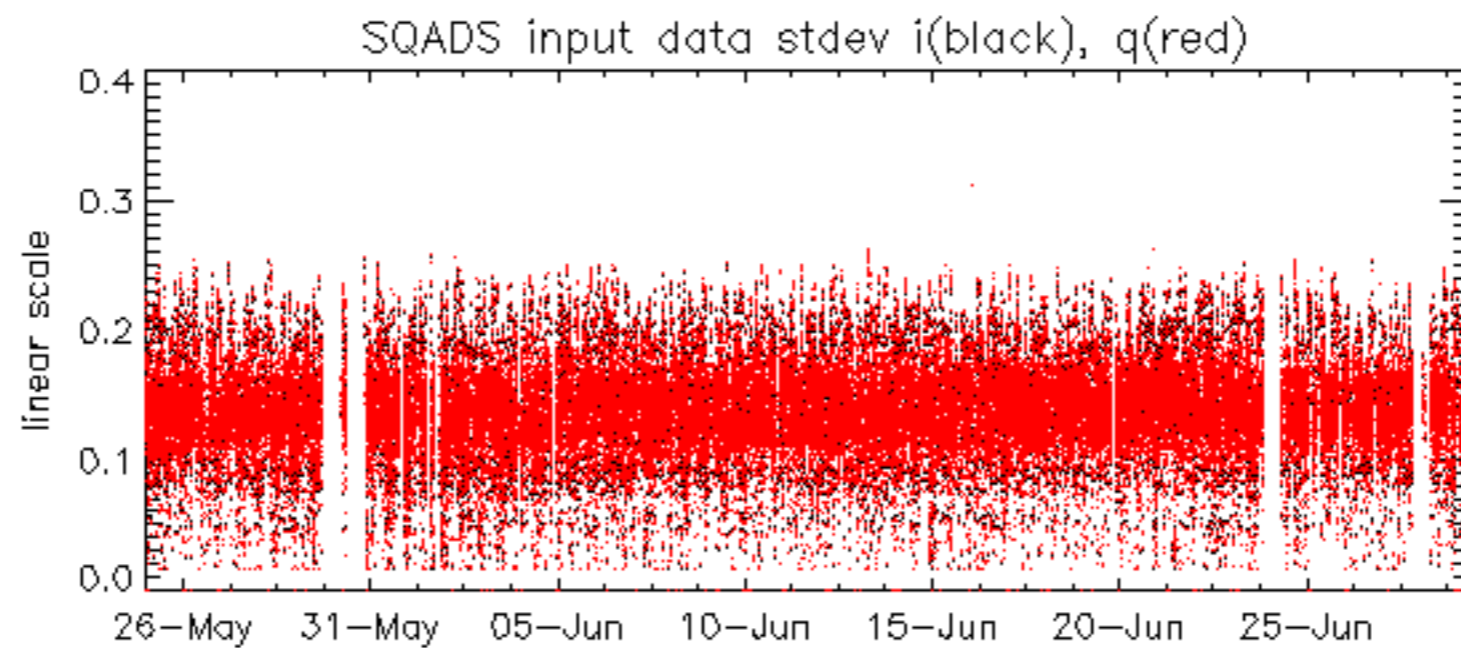
























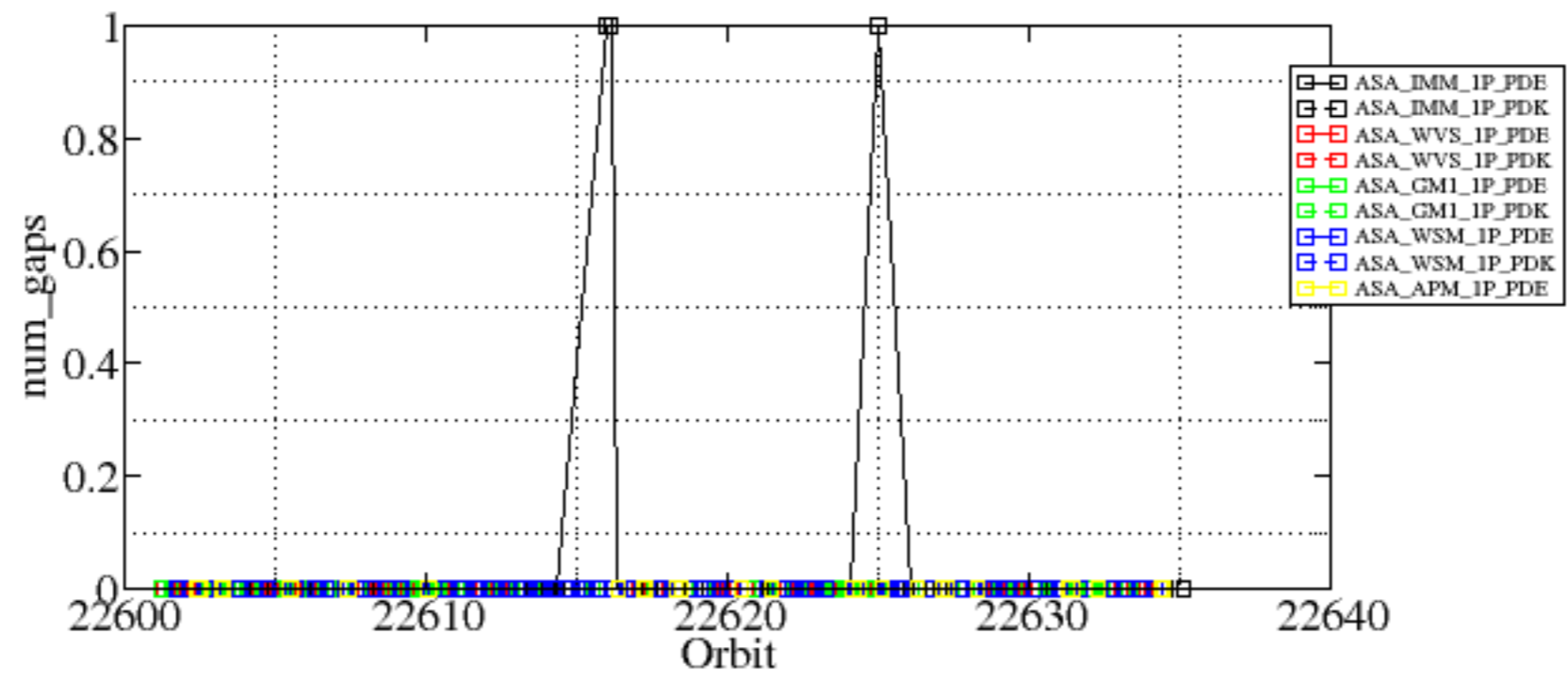


Summary of analysis for the last 3 days 2006062[789]

The assumptions 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_1PNPDE20060628_004521_000001932049_00016_22615_0034.N1	1	0
ASA_IMM_1PNPDE20060628_010203_000000692049_00017_22616_0025.N1	1	0
ASA_IMM_1PNPDE20060628_155408_000000412049_00025_22624_0069.N1	1	0
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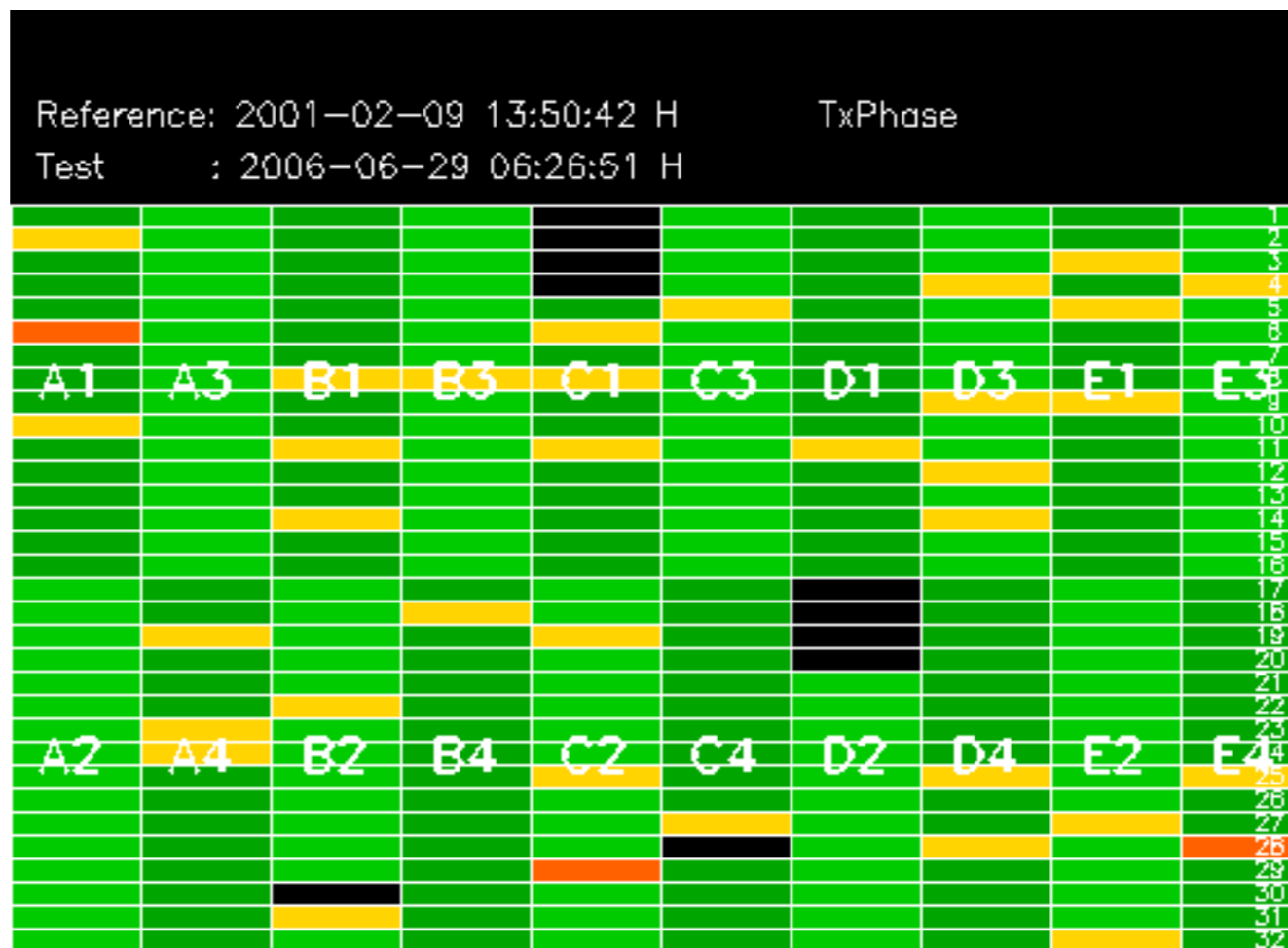










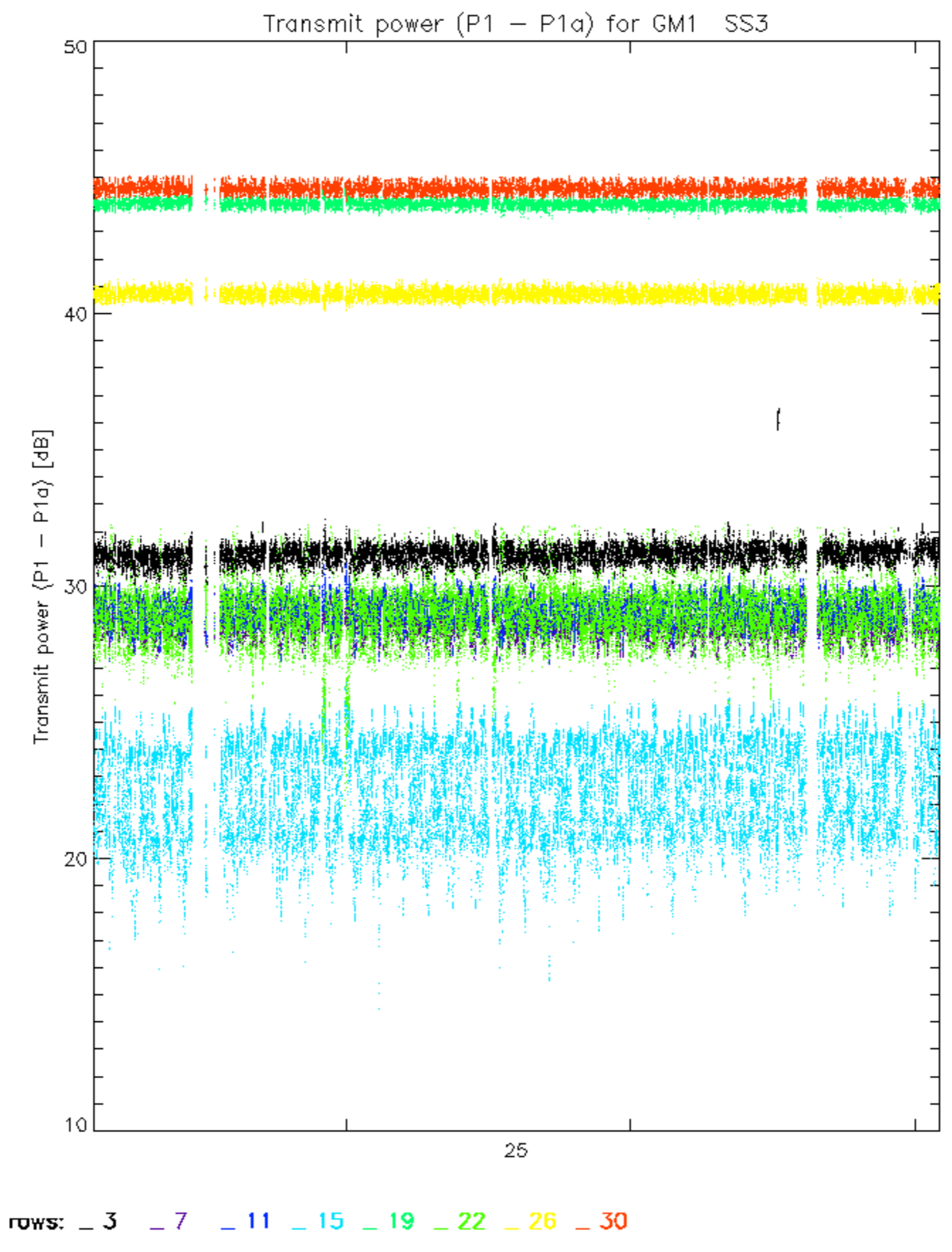


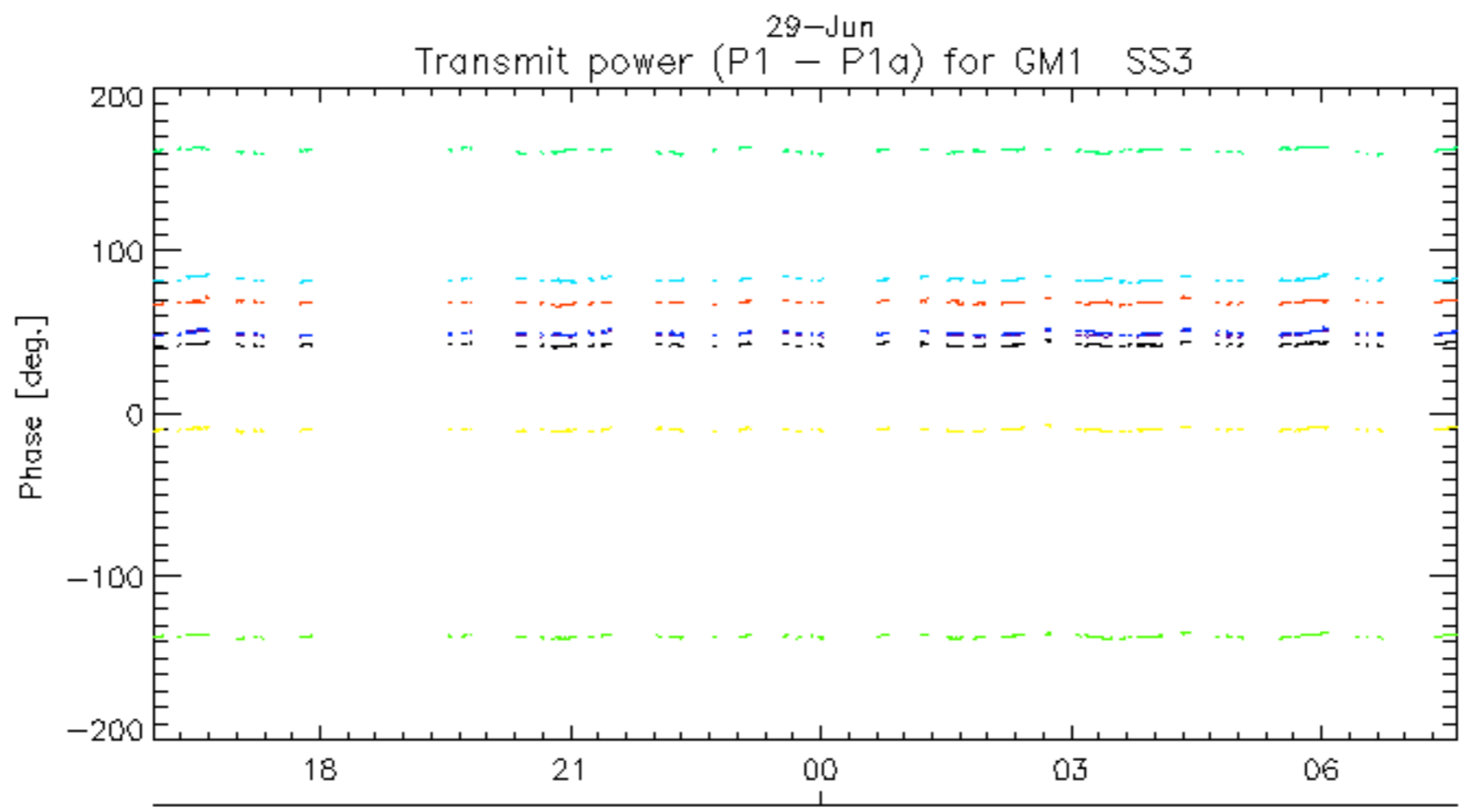
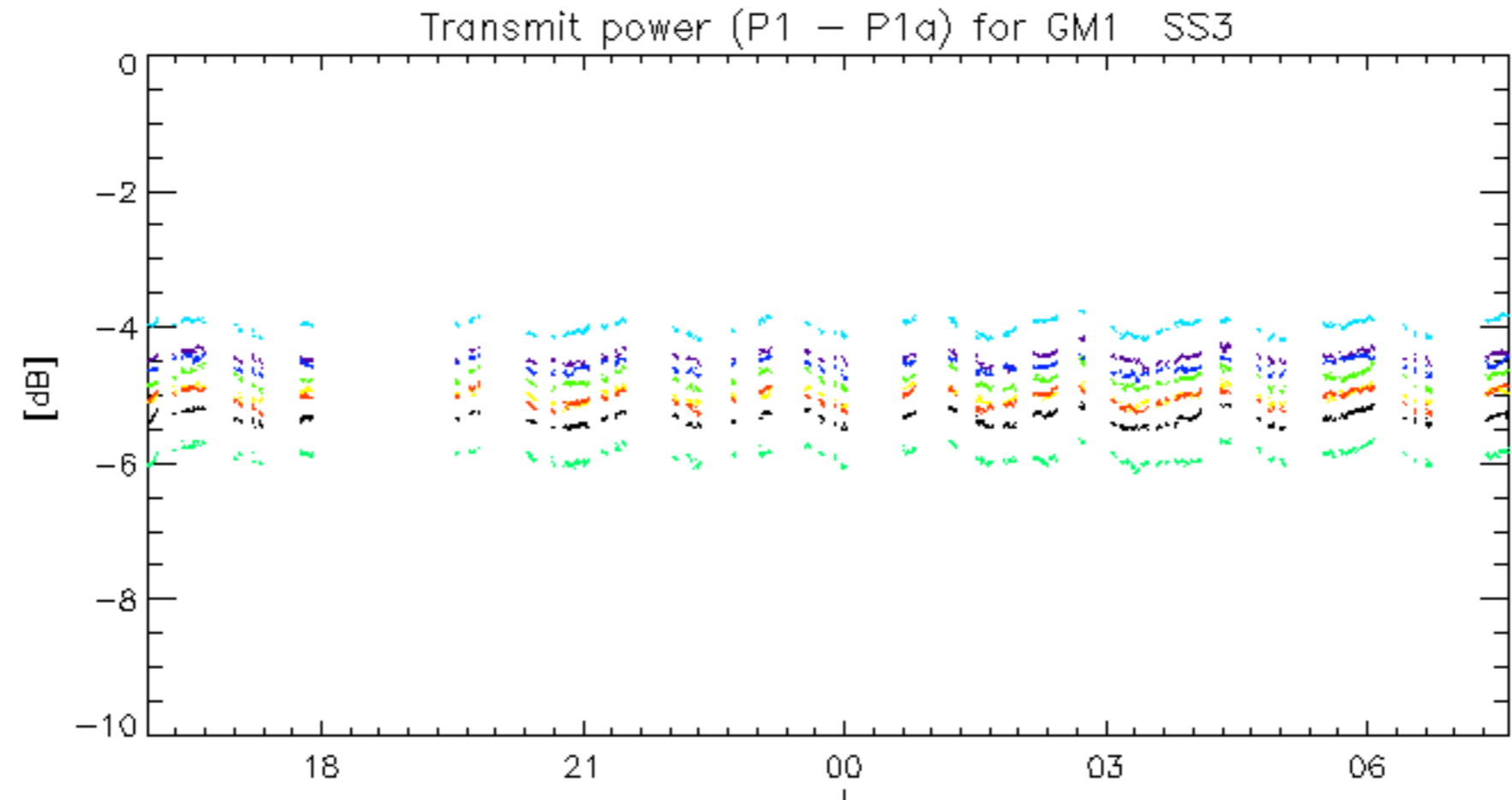




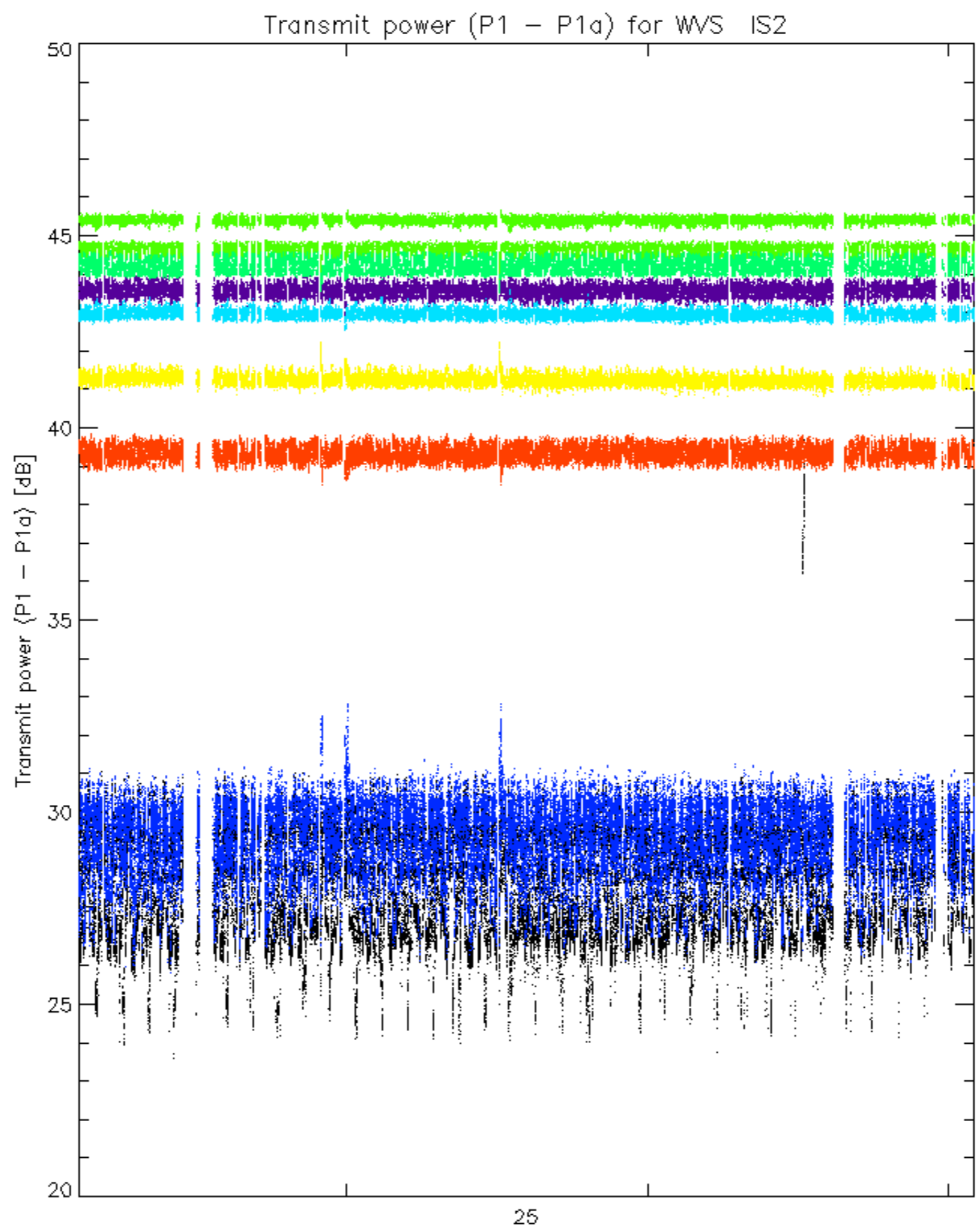




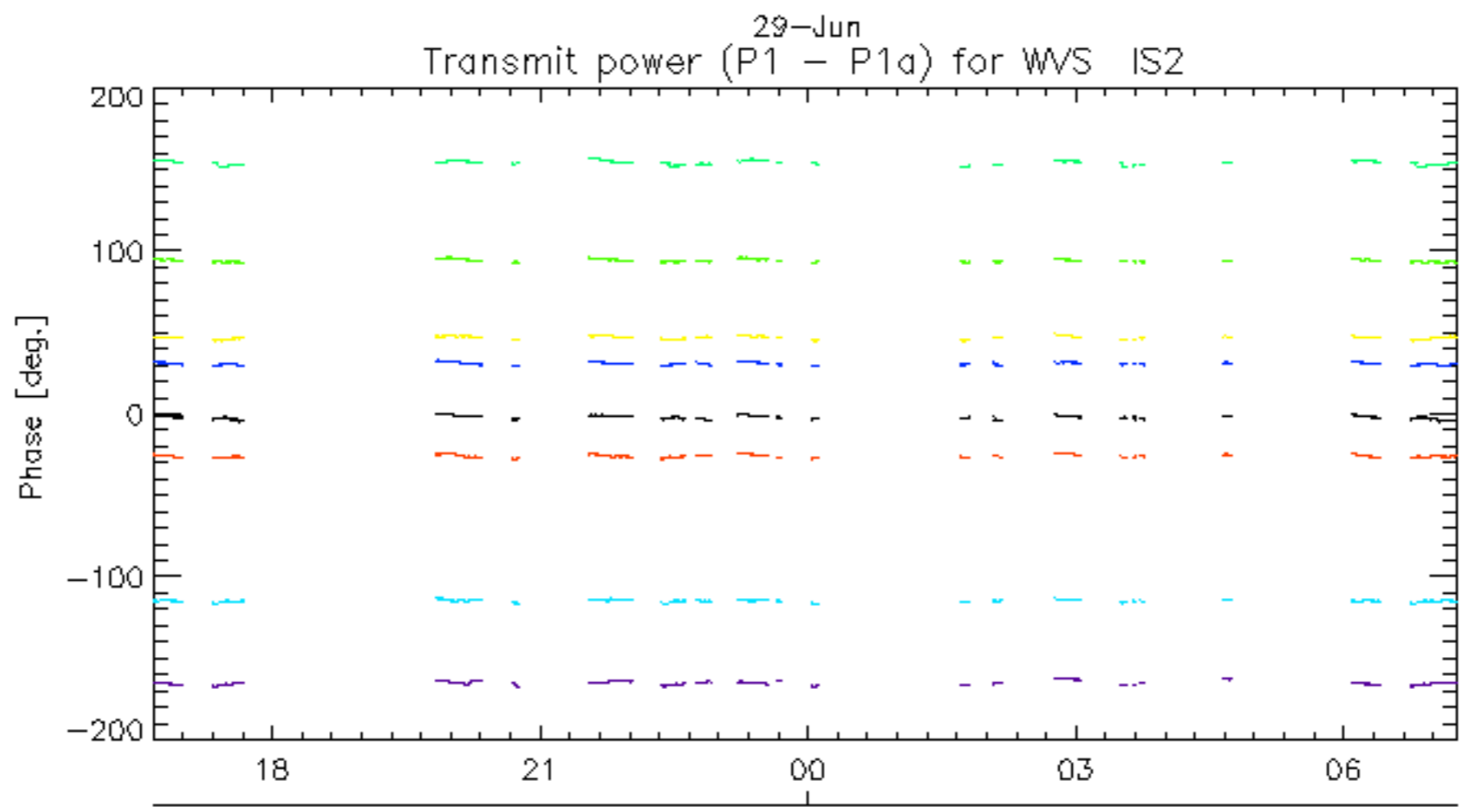
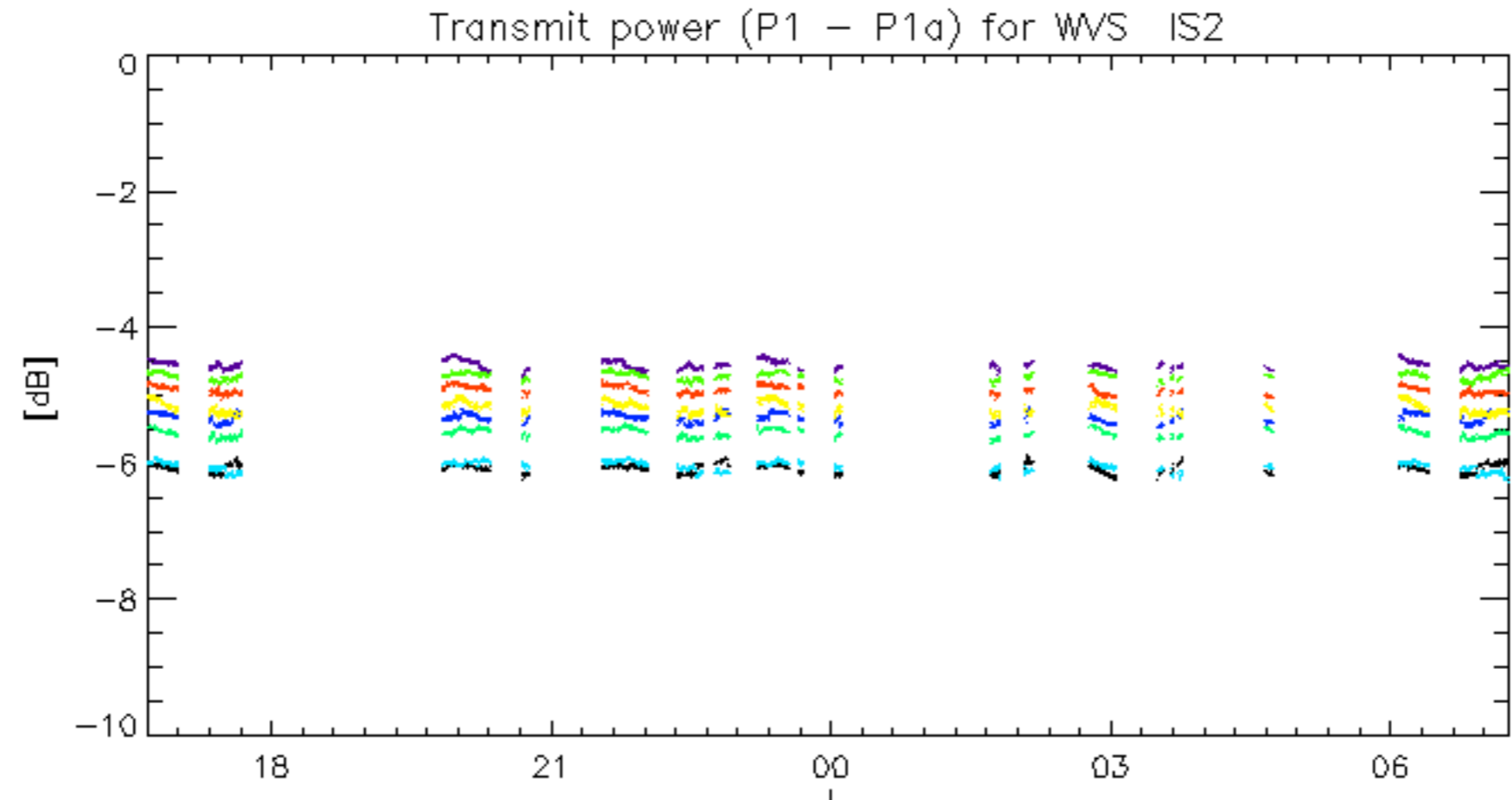




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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



No unavailabilities during the reported period.