

# PRELIMINARY REPORT OF 060608

last update on Thu Jun 8 16:42:54 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 2006-06-07 00:00:00 to 2006-06-08 16:42:54

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	63	10	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	63	10	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	63	10	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	63	10	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	48	27	31	56
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	48	27	31	56
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	48	27	31	56
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	48	27	31	56

### 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	20060607 043734
H	20060606 050911

### 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	-3.949418	0.017662	0.057228
7	P1	-3.117164	0.016706	-0.048705
11	P1	-4.108690	0.018408	0.010035
15	P1	-6.137857	0.019913	-0.007331
19	P1	-3.329376	0.008384	-0.043723
22	P1	-4.515793	0.011428	0.023525
26	P1	-3.980800	0.017932	0.041410
30	P1	-5.747849	0.008504	0.012402
3	P1	-16.547758	0.261780	0.133218
7	P1	-17.176933	0.149389	-0.150316
11	P1	-16.934763	0.310726	-0.055791
15	P1	-13.210230	0.215105	0.022003
19	P1	-14.282209	0.048981	-0.112141
22	P1	-16.164087	0.377818	-0.018369
26	P1	-15.254638	0.241528	0.111209
30	P1	-17.052698	0.384003	-0.237534

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.188509	0.080370	0.137681
7	P2	-22.069082	0.096075	0.139507
11	P2	-15.917932	0.109751	0.140142
15	P2	-7.161719	0.091470	0.025393
19	P2	-9.167042	0.084269	-0.008118
22	P2	-18.134682	0.082238	-0.072265
26	P2	-16.378668	0.086990	-0.051902
30	P2	-19.571066	0.085125	0.068296

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.185303	0.003969	0.018039
7	P3	-8.185303	0.003969	0.018039
11	P3	-8.185303	0.003969	0.018039
15	P3	-8.185303	0.003969	0.018039
19	P3	-8.185303	0.003969	0.018039
22	P3	-8.185303	0.003969	0.018039
26	P3	-8.185303	0.003969	0.018039
30	P3	-8.185303	0.003969	0.018039

**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	-3.782314	0.064381	-0.067163
7	P1	-2.600578	0.031726	0.029912
11	P1	-2.864770	0.023501	0.001454
15	P1	-3.500321	0.049619	-0.028751
19	P1	-3.399339	0.014192	-0.019044
22	P1	-5.084673	0.019867	0.007416
26	P1	-5.841907	0.015596	-0.015960
30	P1	-5.187383	0.026613	0.013808
3	P1	-11.614507	0.081732	-0.024976
7	P1	-9.966575	0.053731	-0.007732
11	P1	-10.207161	0.085987	-0.059453
15	P1	-10.632393	0.150538	-0.121202
19	P1	-15.515748	0.076009	-0.047743
22	P1	-20.895887	1.217579	-0.057012

26	P1	-16.480211	0.348226	0.030519
30	P1	-17.981520	0.386747	0.258777

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.876900	0.067324	0.111867
7	P2	-22.506756	0.125441	0.045656
11	P2	-11.173807	0.045233	0.057337
15	P2	-4.907821	0.046422	-0.018608
19	P2	-6.877242	0.050422	-0.008909
22	P2	-8.198042	0.041268	-0.029942
26	P2	-24.113668	0.064855	-0.067111
30	P2	-22.063906	0.053046	-0.006703

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018374	0.004649	0.011911
7	P3	-8.018498	0.004651	0.011977
11	P3	-8.018376	0.004644	0.012519
15	P3	-8.018286	0.004651	0.011688
19	P3	-8.018461	0.004649	0.011916
22	P3	-8.018462	0.004642	0.011745
26	P3	-8.018433	0.004634	0.011495
30	P3	-8.018396	0.004640	0.011724

## 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	0.000529395
	stdev	1.91992e-07
MEAN Q	mean	0.000508299
	stdev	2.30439e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.133937
	stdev	0.00119606
STDEV Q	mean	0.134277
	stdev	0.00121281



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006060[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_1PNPDE20060606_003645_000001642048_00202_22300_6709.N1	1	0
ASA_GM1_1PNPDK20060606_092117_000007552048_00208_22306_4644.N1	0	24
ASA_GM1_1PNPDK20060607_102902_000006702048_00223_22321_4703.N1	0	6
ASA_WSM_1PNPDE20060606_040457_000002692048_00205_22303_2880.N1	0	13
ASA_WSM_1PNPDE20060606_112905_000001292048_00209_22307_2917.N1	0	14

ASA_WSM_1PNPDE20060606_141126_000001522048_00211_22309_2967.N1	0	49
ASA_WSM_1PNPDE20060606_204401_000000862048_00214_22312_3005.N1	0	1
ASA_WSM_1PNPDE20060607_015506_000000852048_00218_22316_3054.N1	0	54
ASA_WSM_1PNPDE20060607_141813_000000972048_00225_22323_3144.N1	0	2
ASA_WSM_1PNPDE20060607_183929_000002072048_00228_22326_3160.N1	0	13



## 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



#### 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

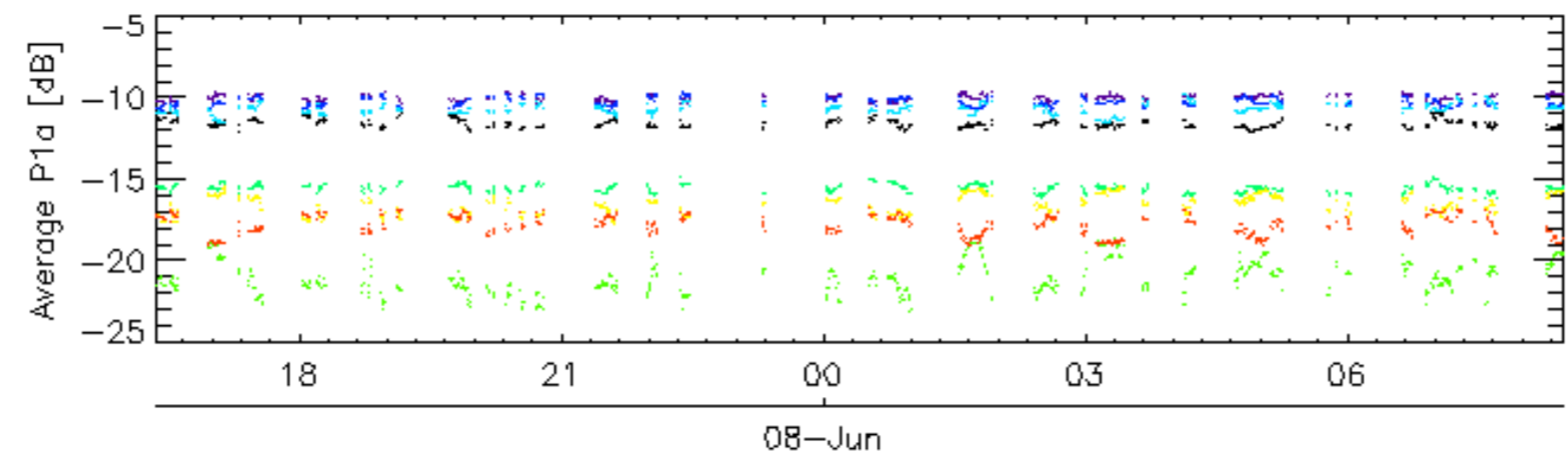
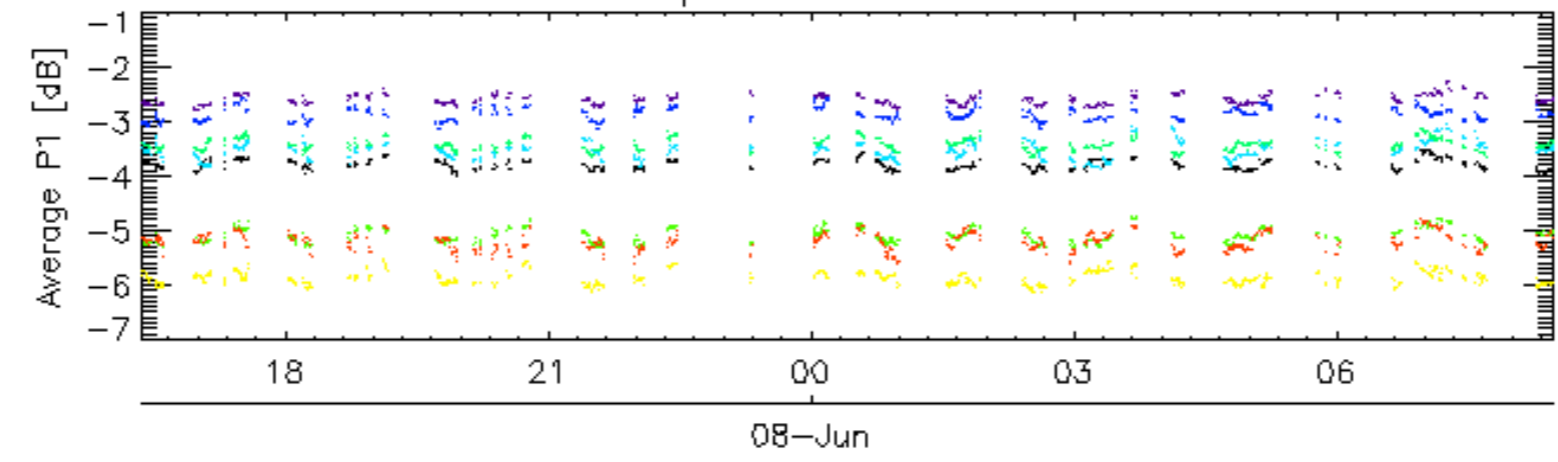
Ascending

Descending

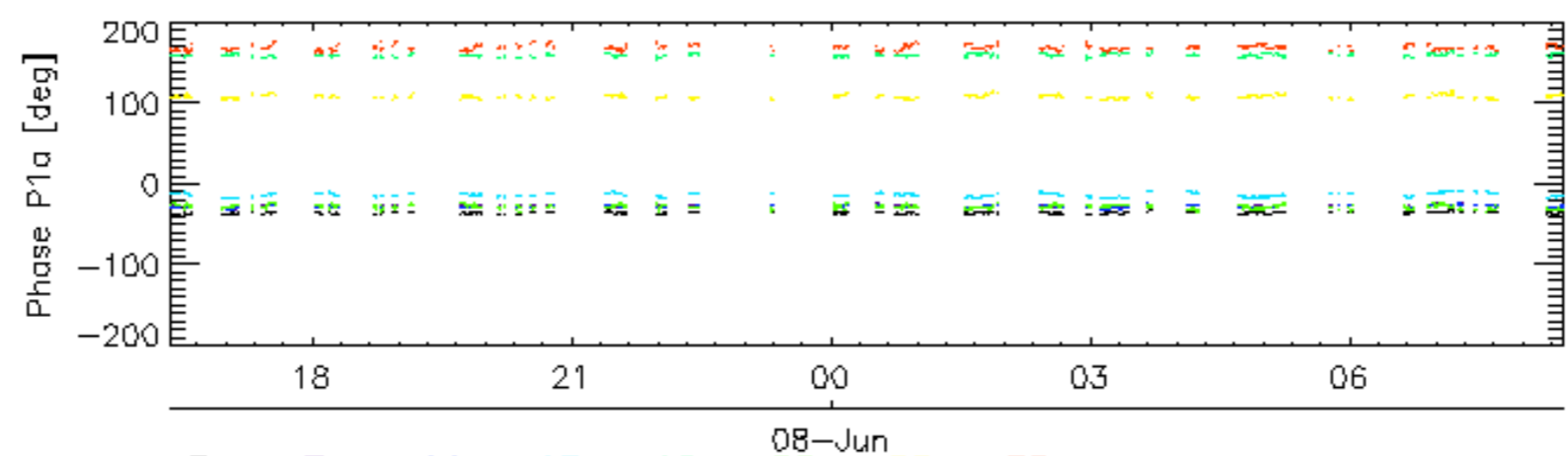
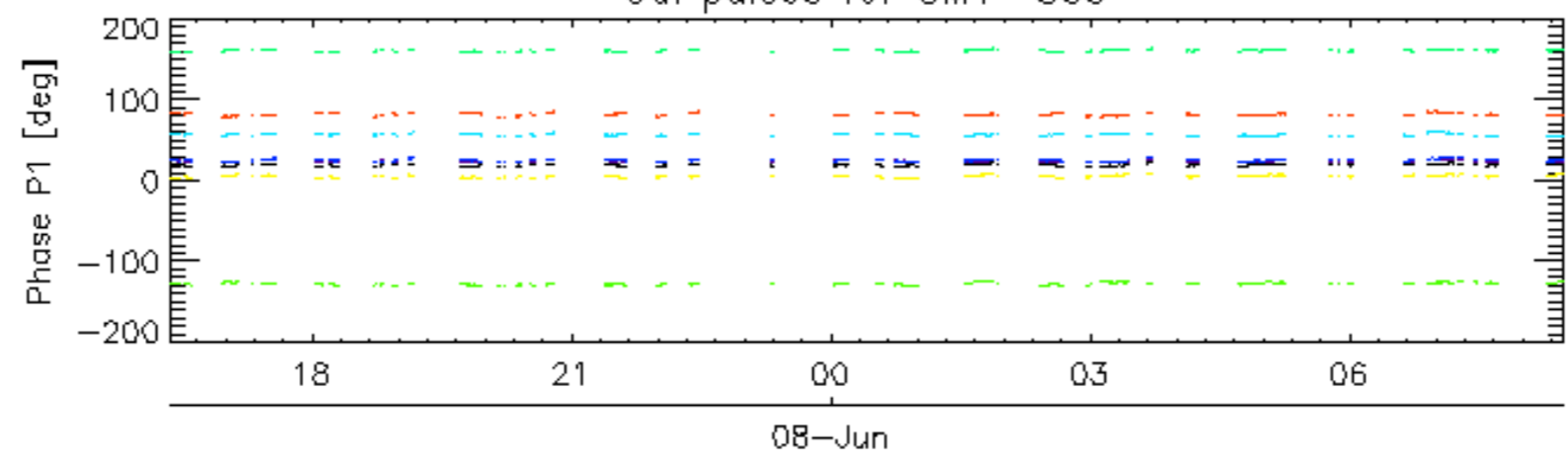
#### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

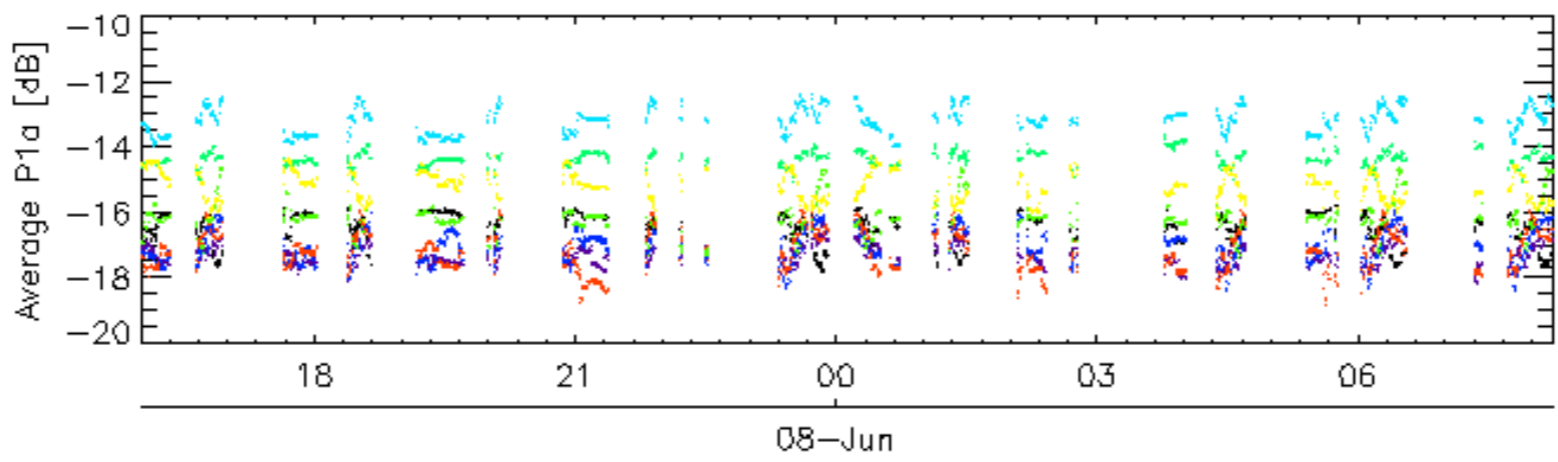
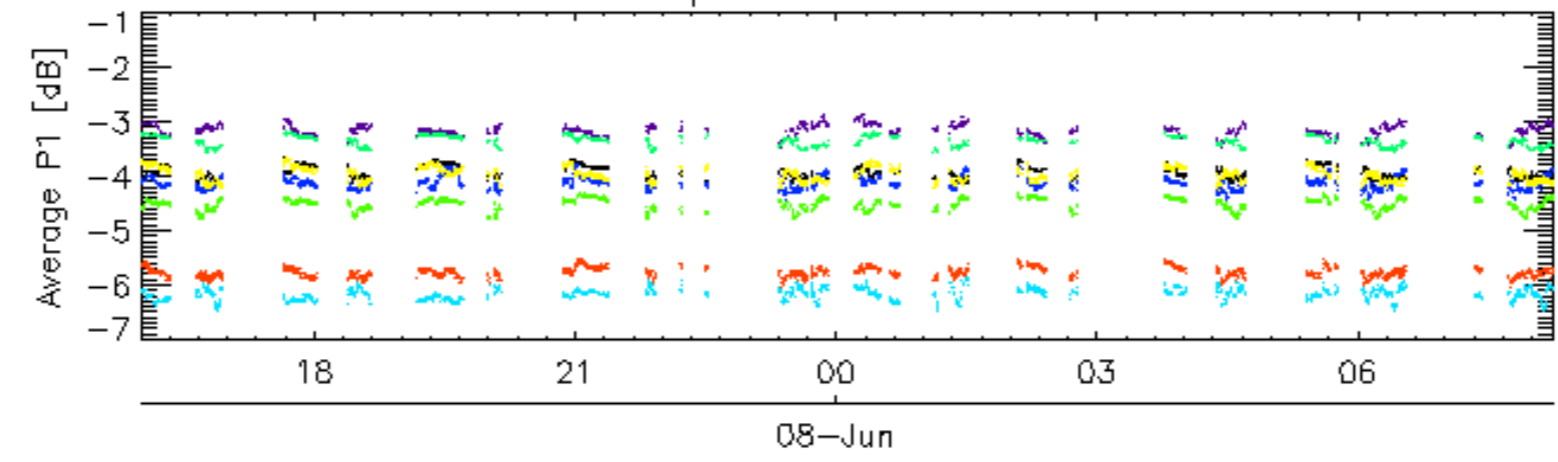


Cal pulses for GM1 SS3

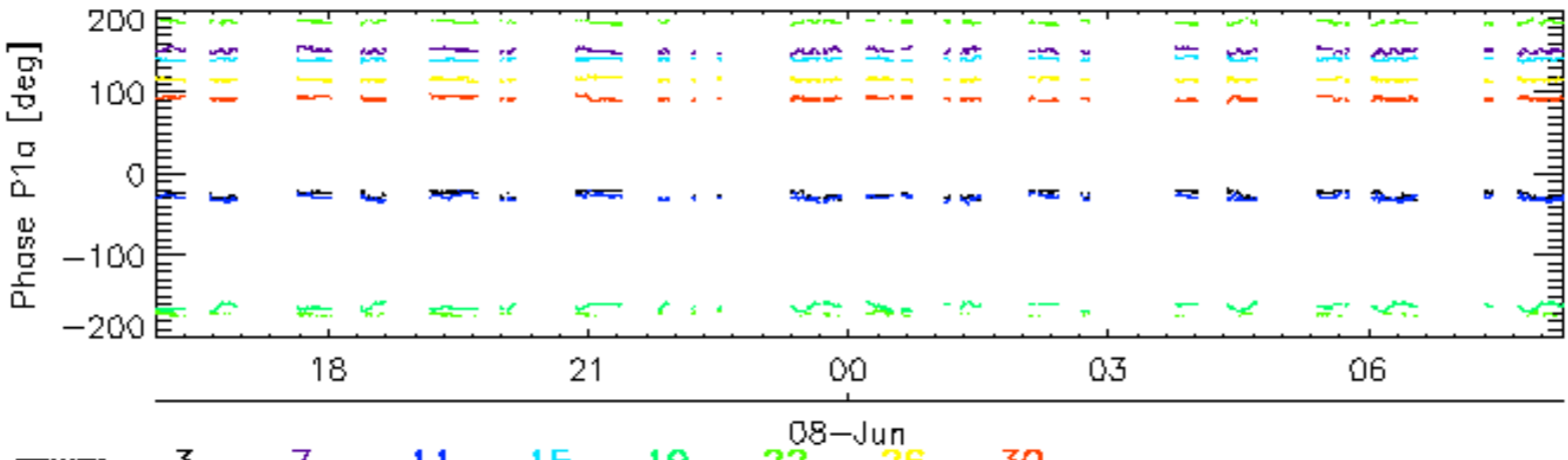
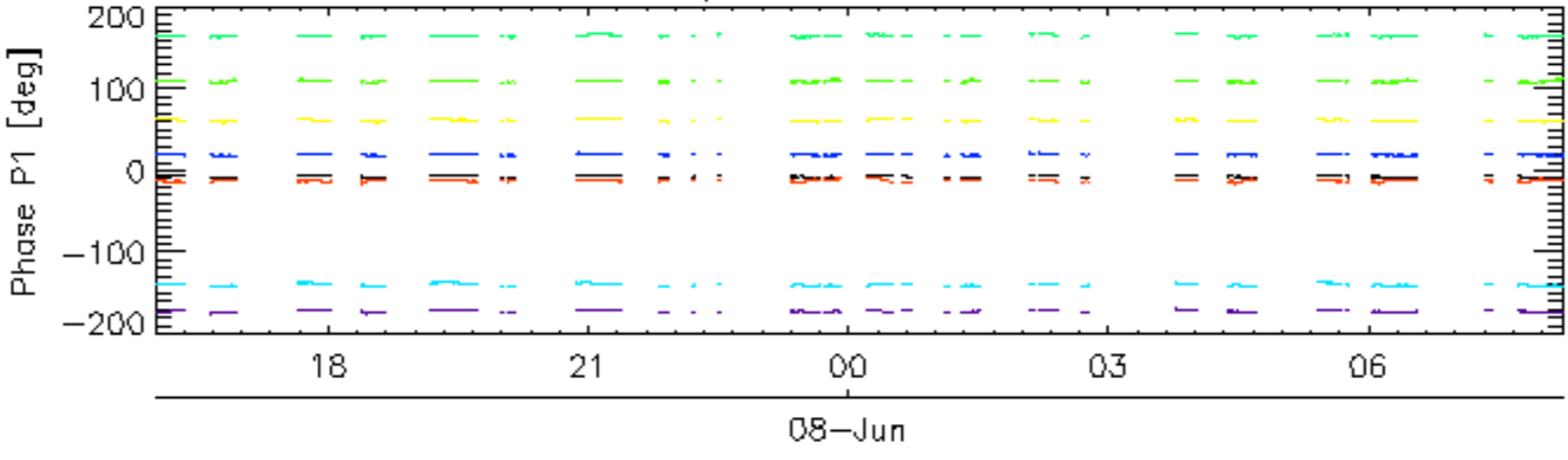


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

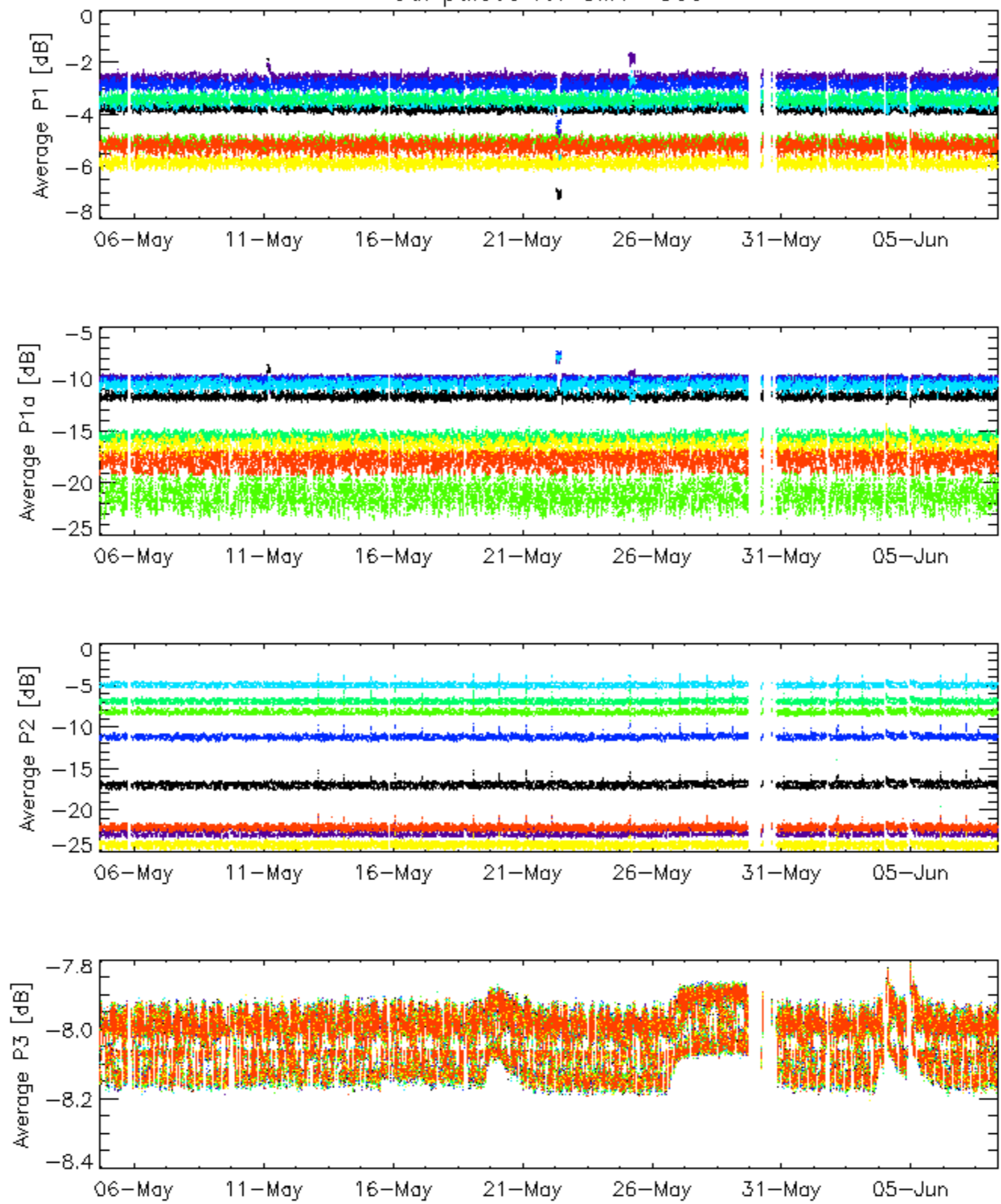


Cal pulses for WVS IS2



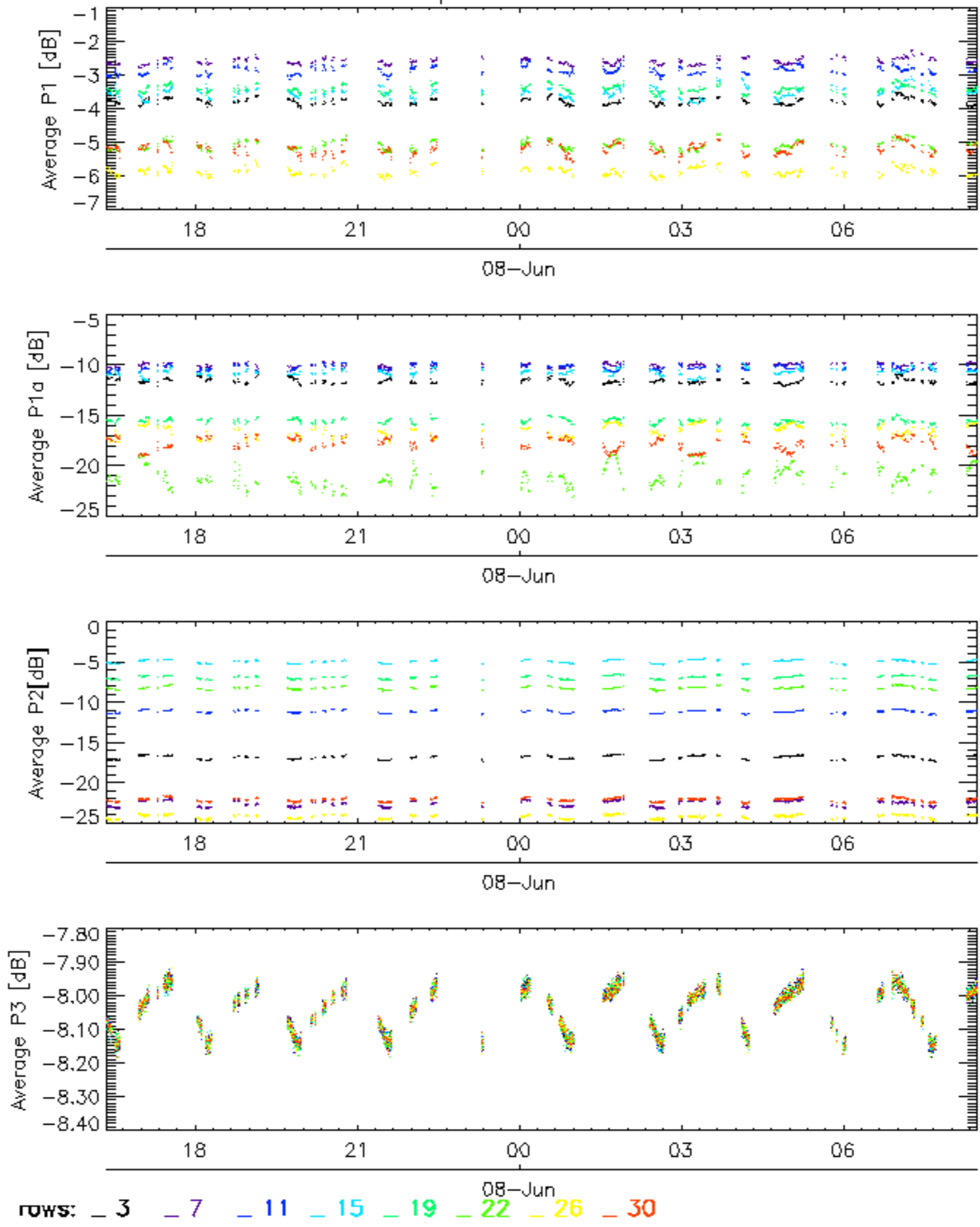
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

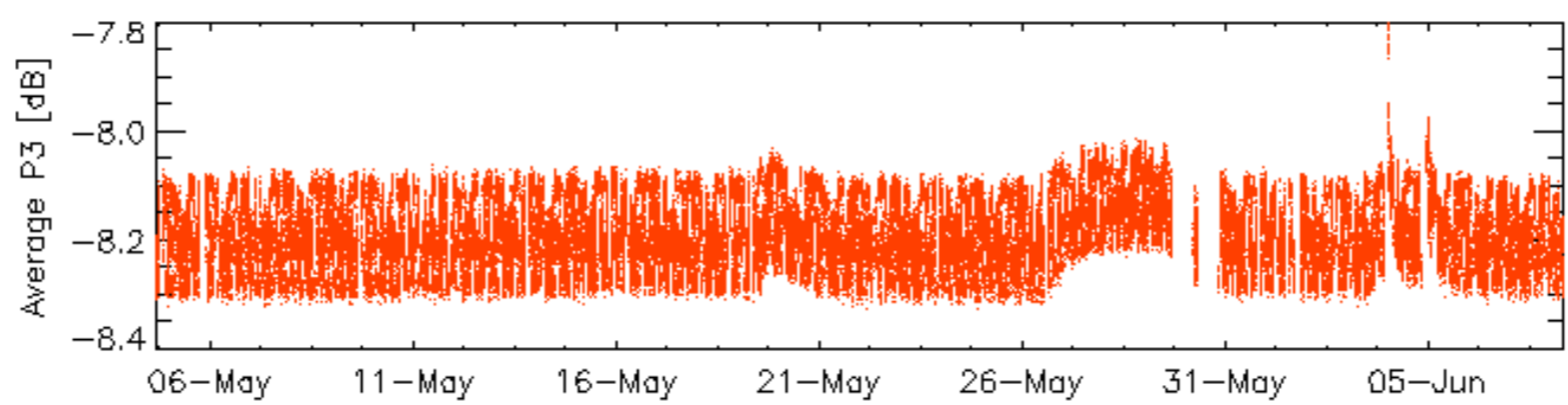
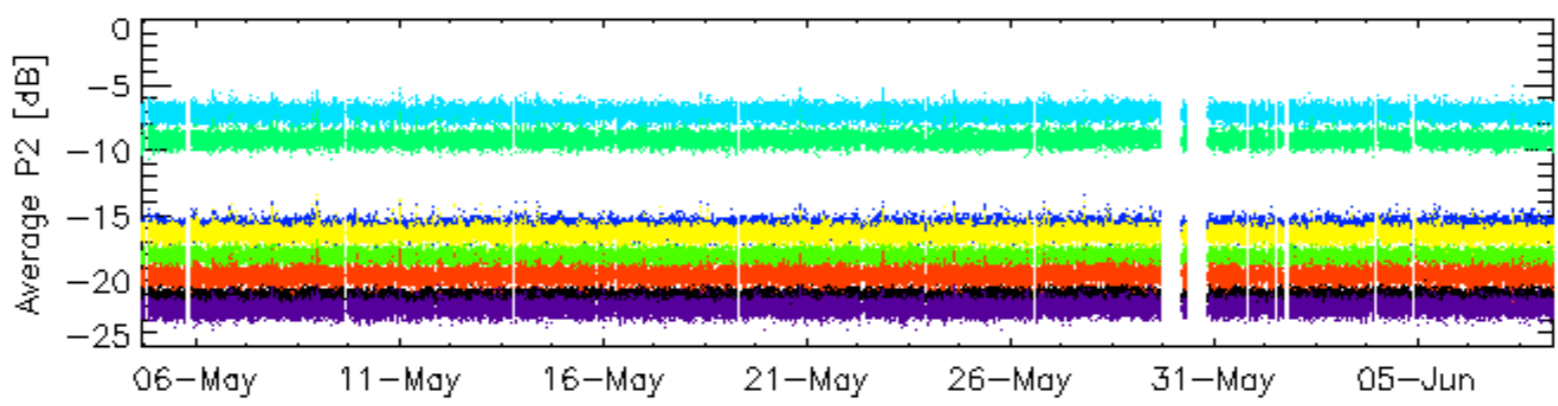
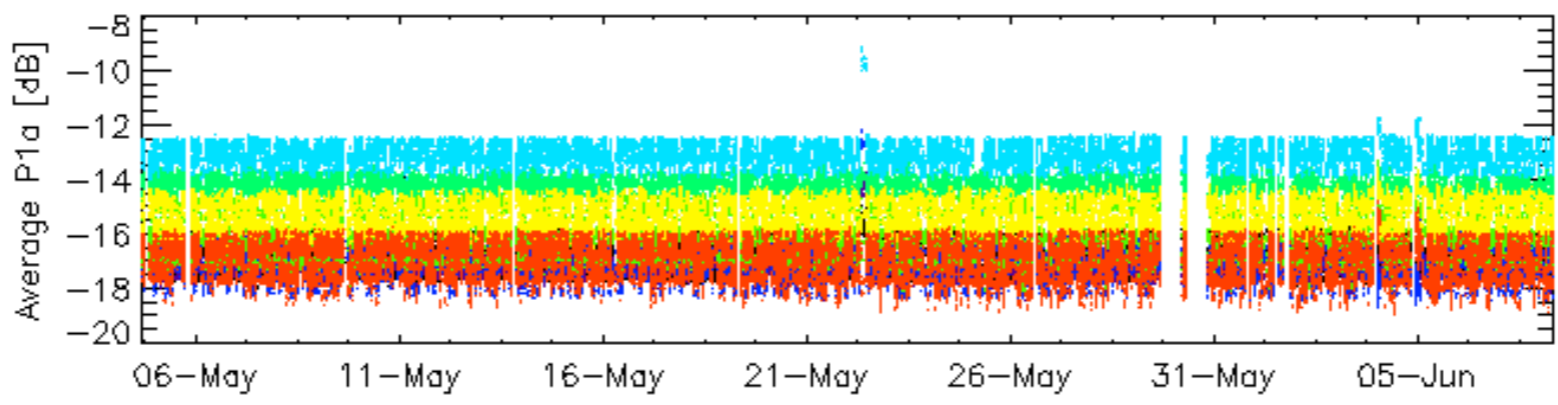
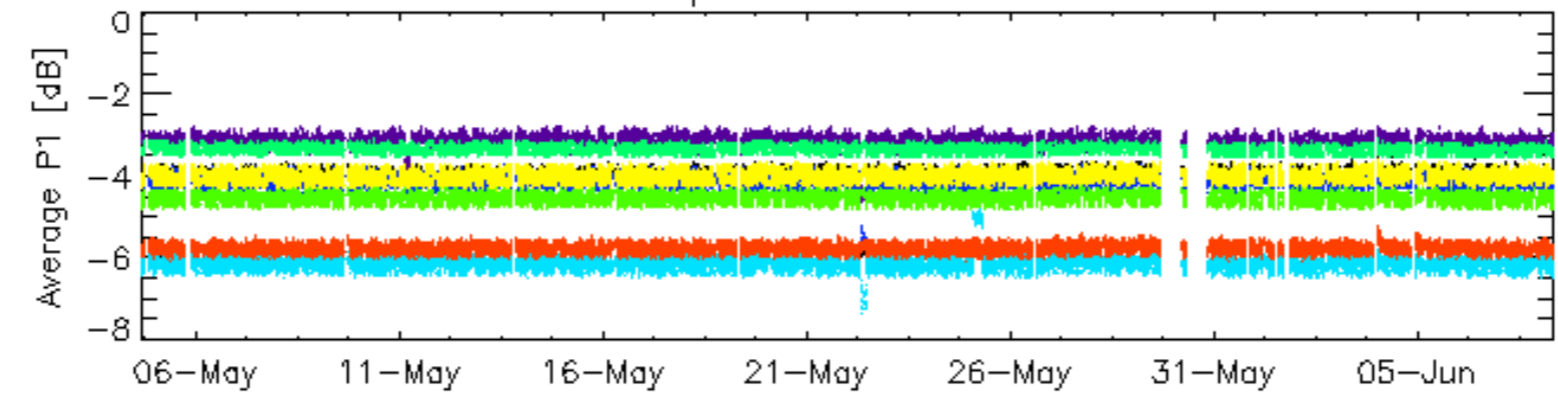


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

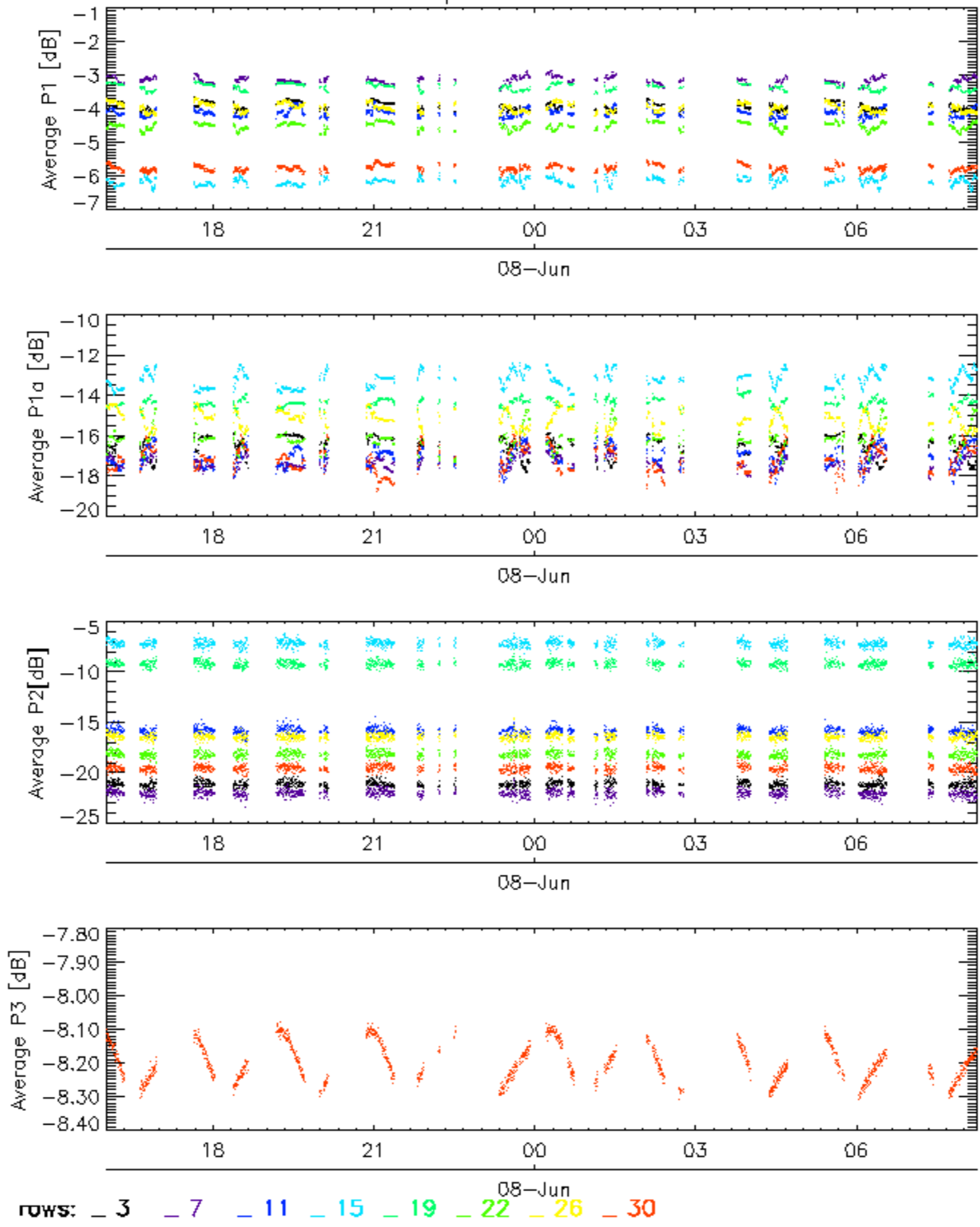


Cal pulses for WVS IS2



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

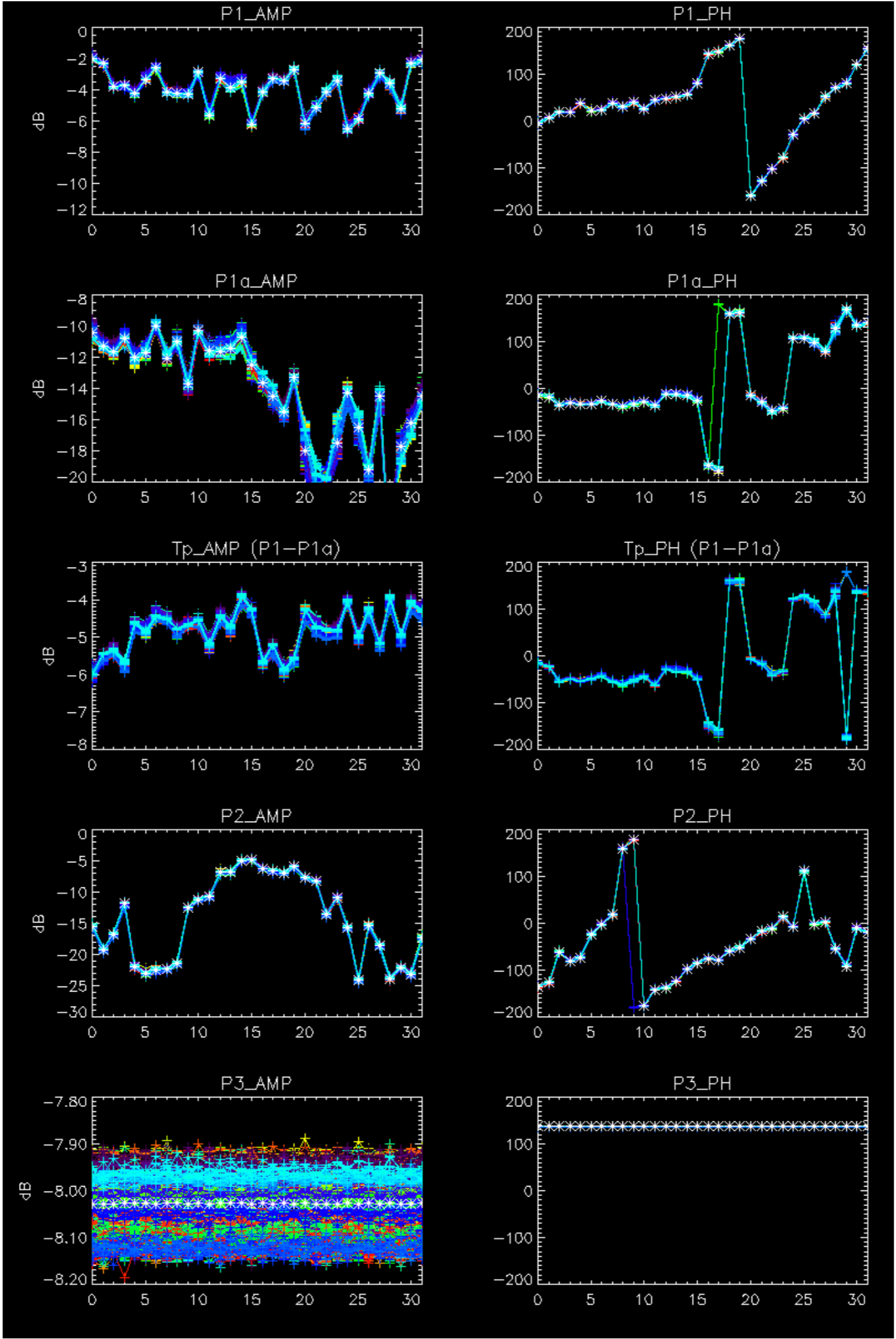
Cal pulses for WVS IS2

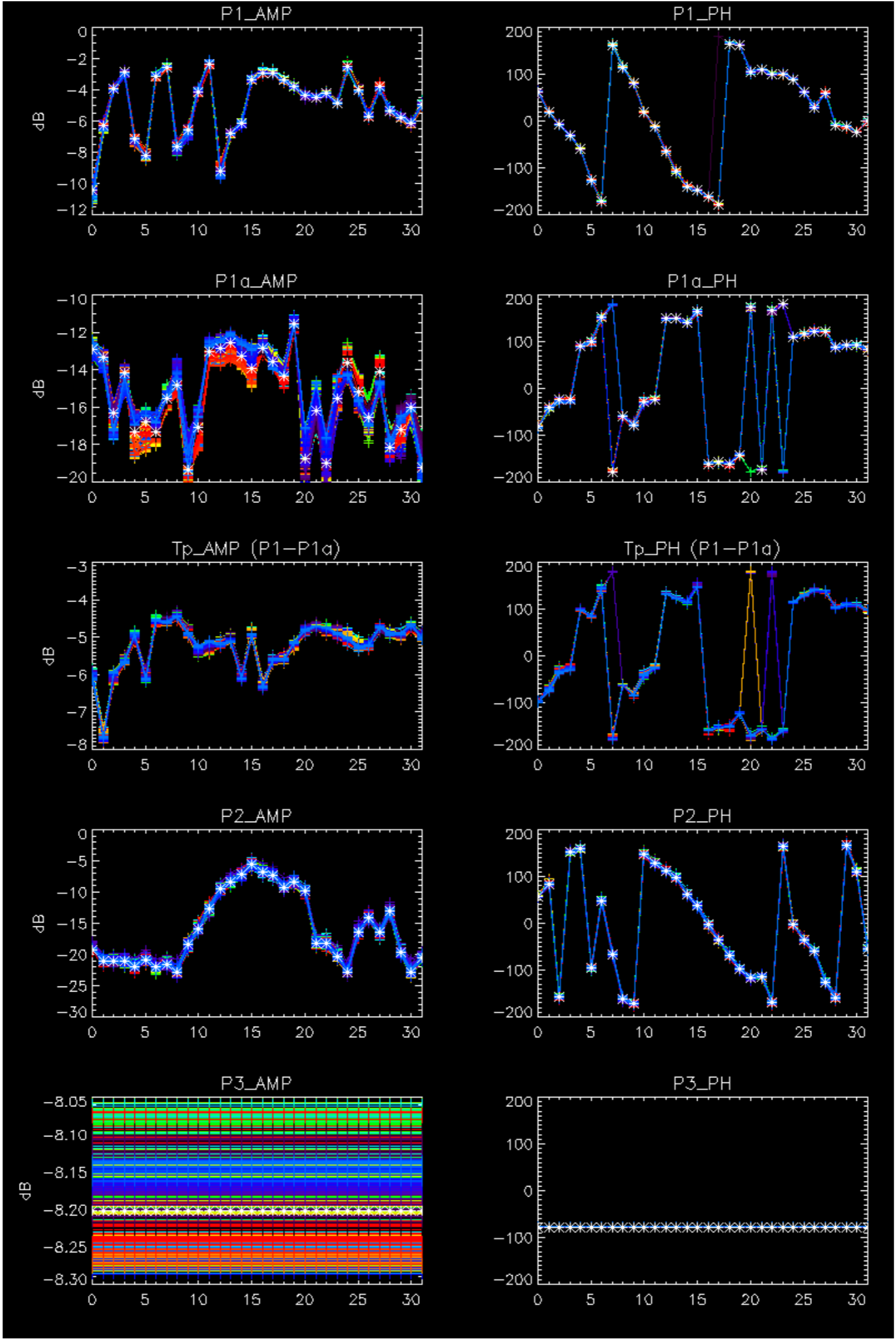


No anomalies observed on available browse products



No anomalies observed.

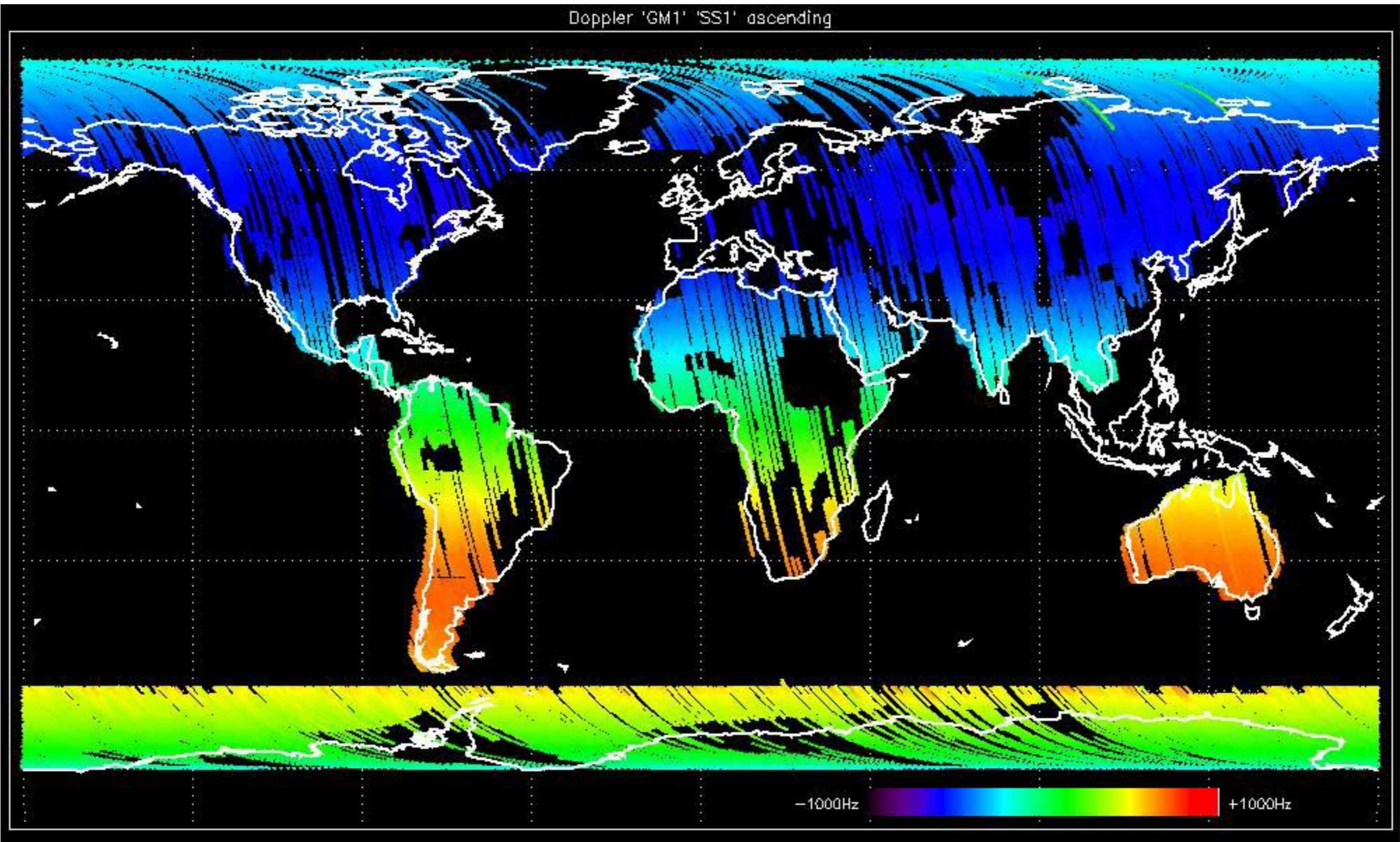




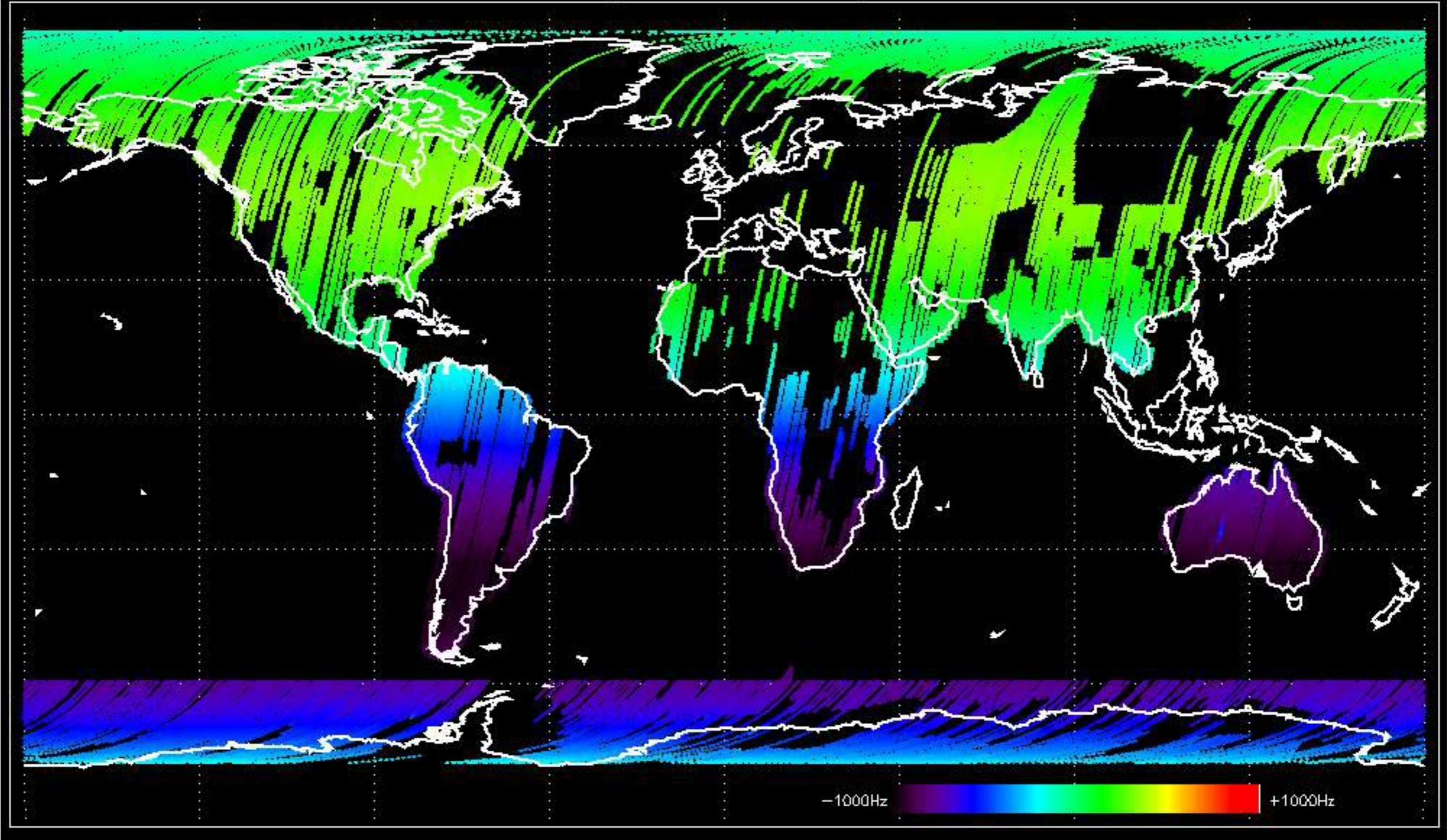
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



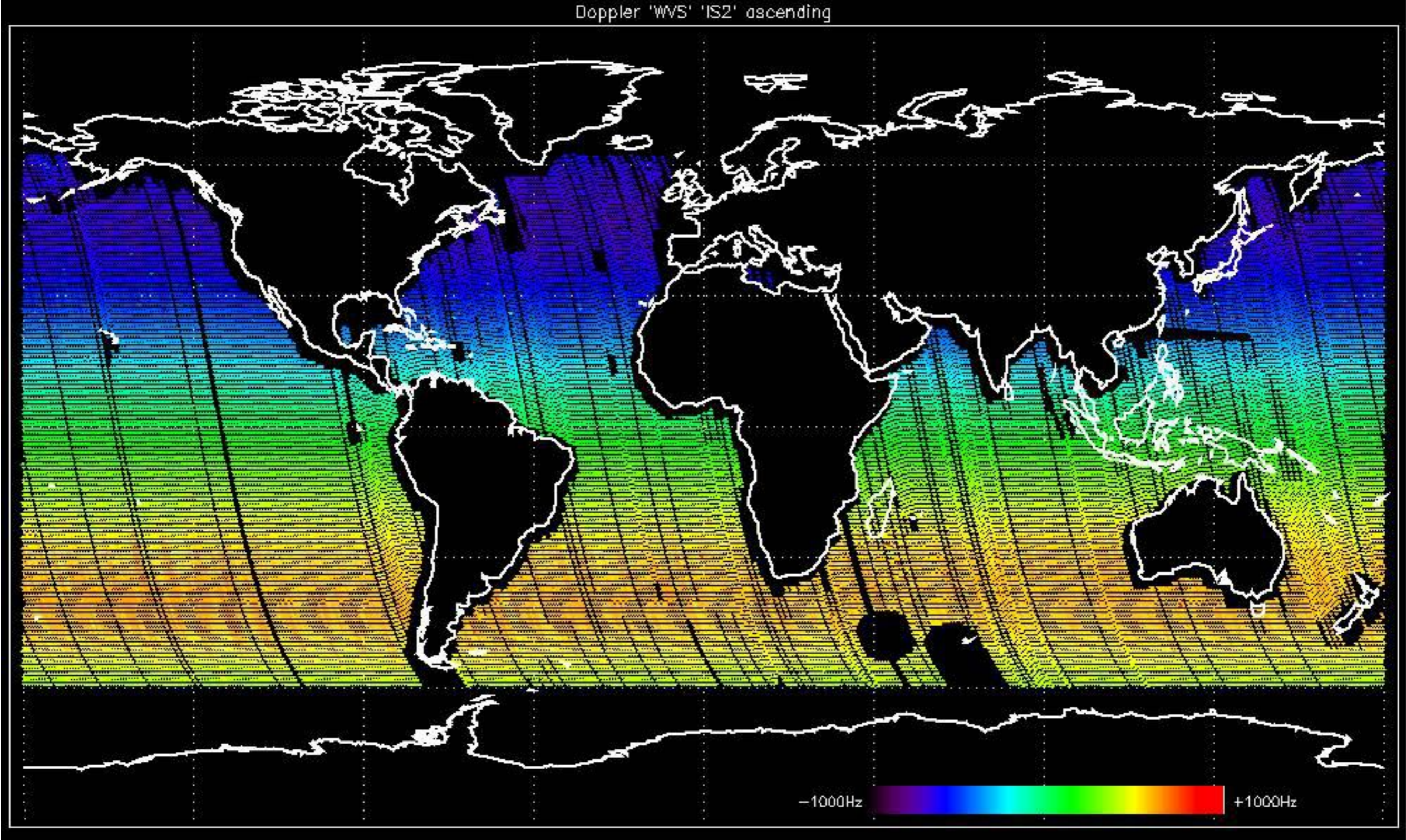
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

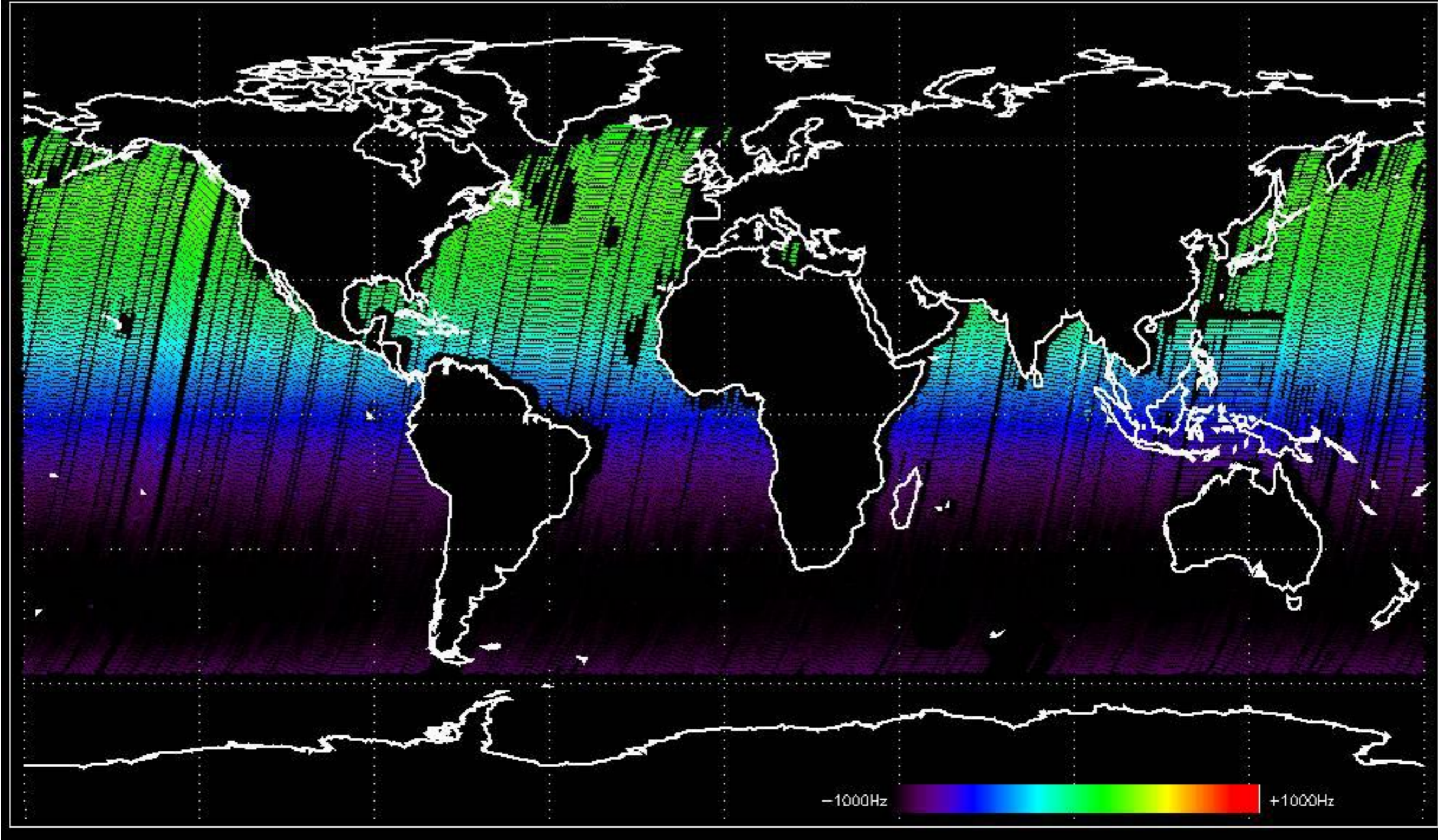


Doppler 'WVS' 'IS2' ascending

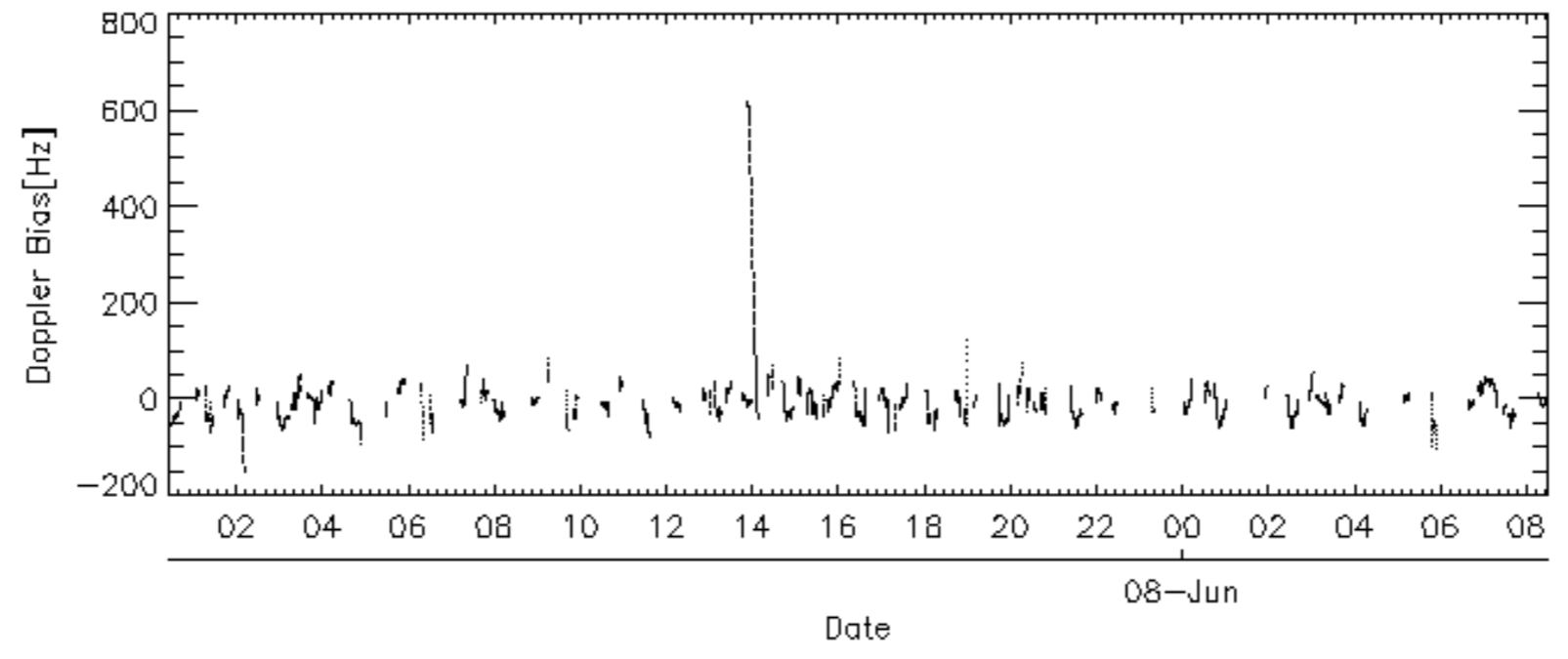
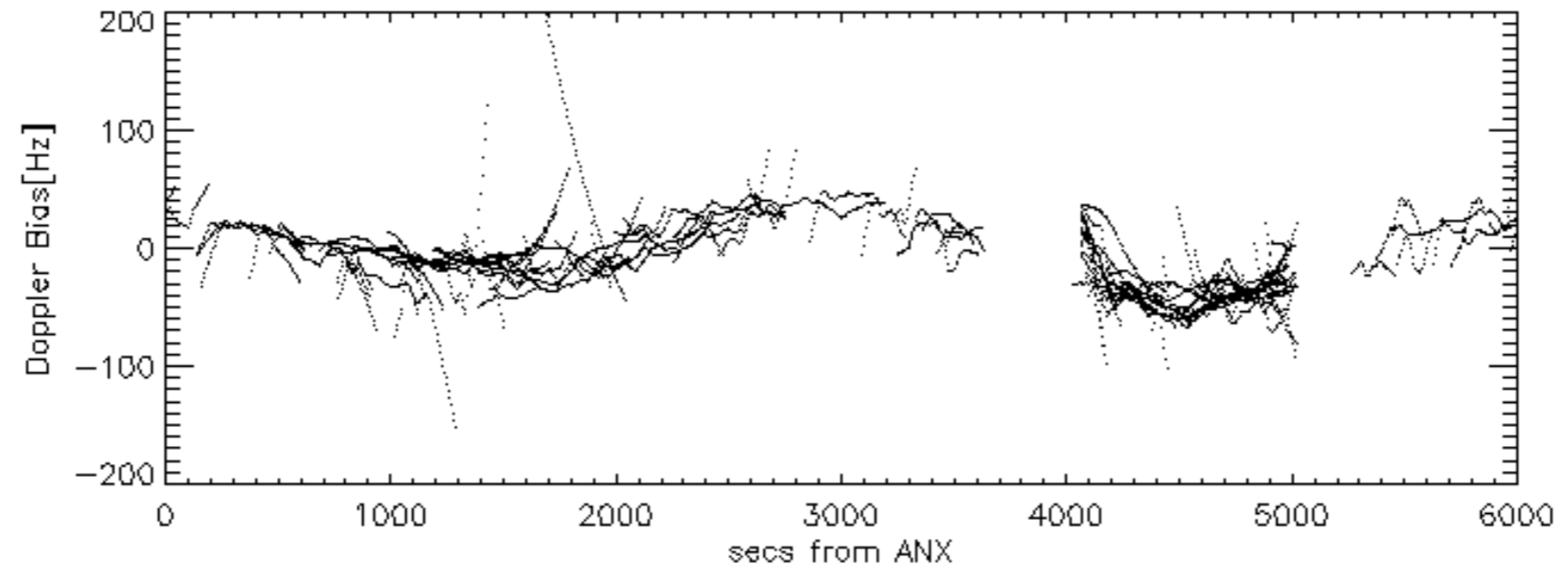
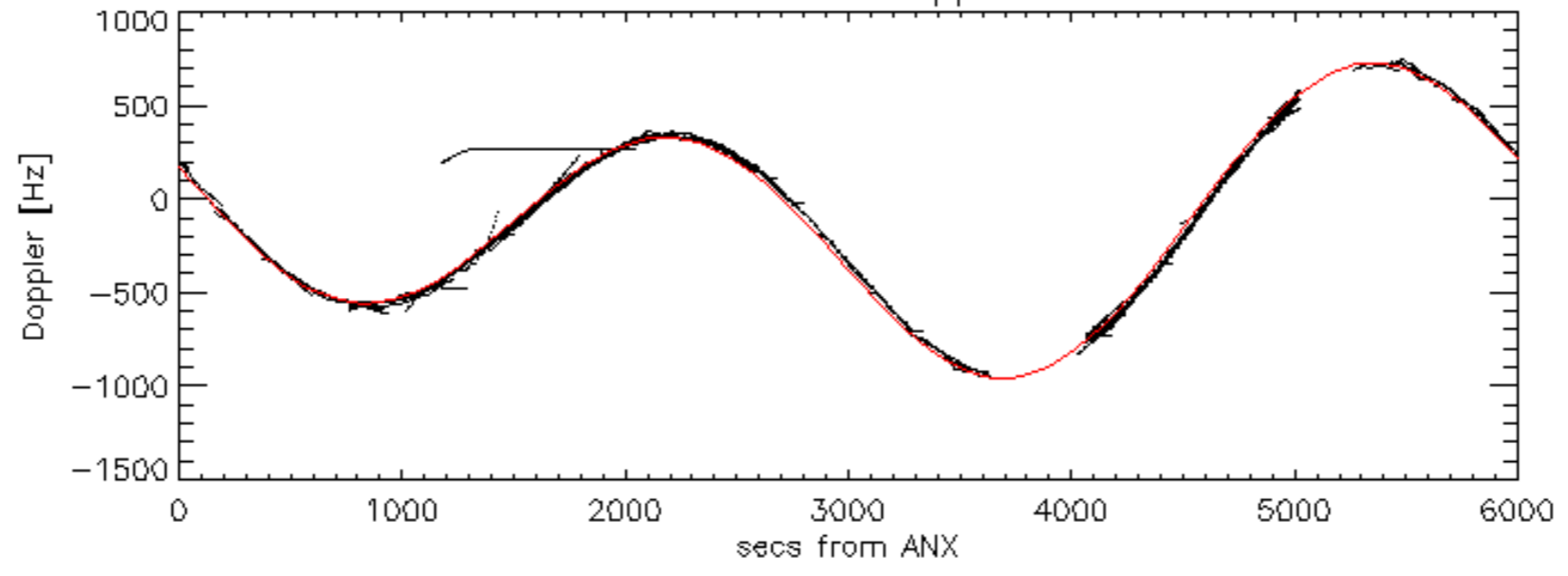


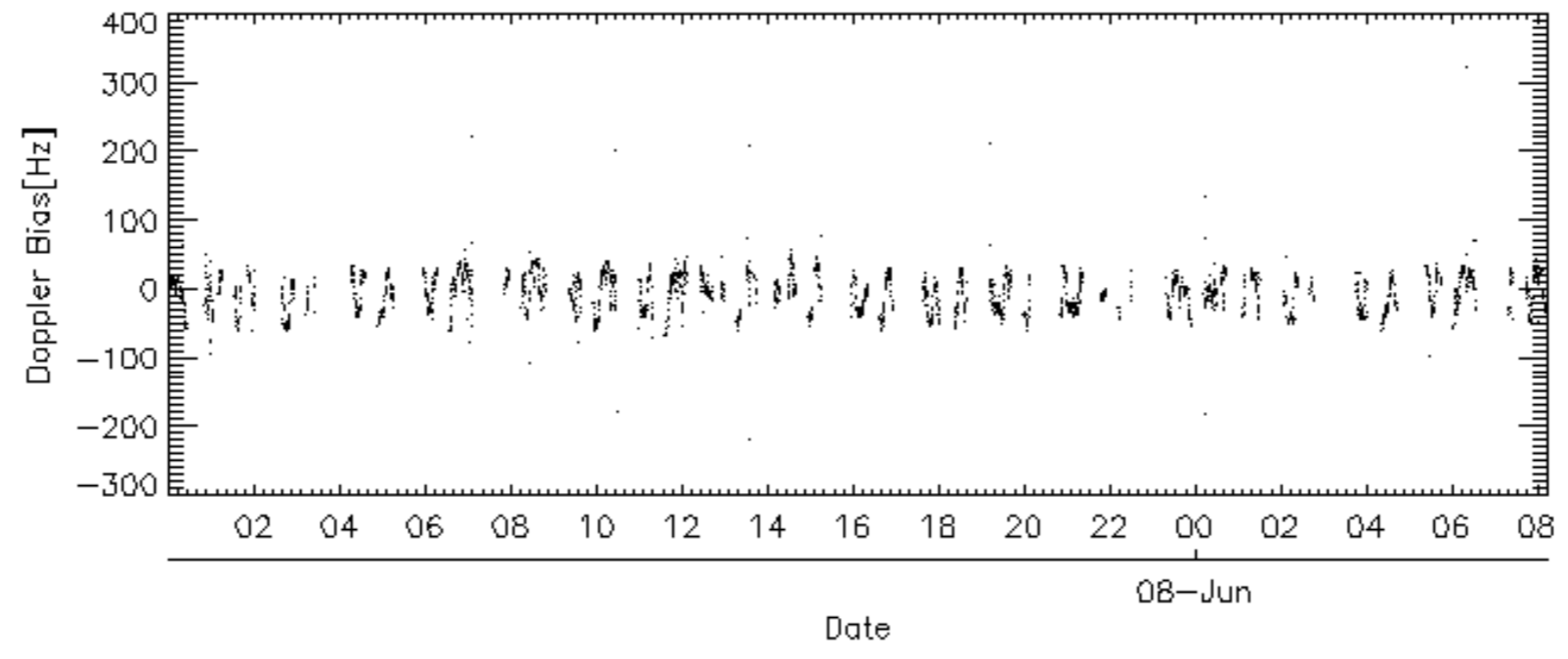
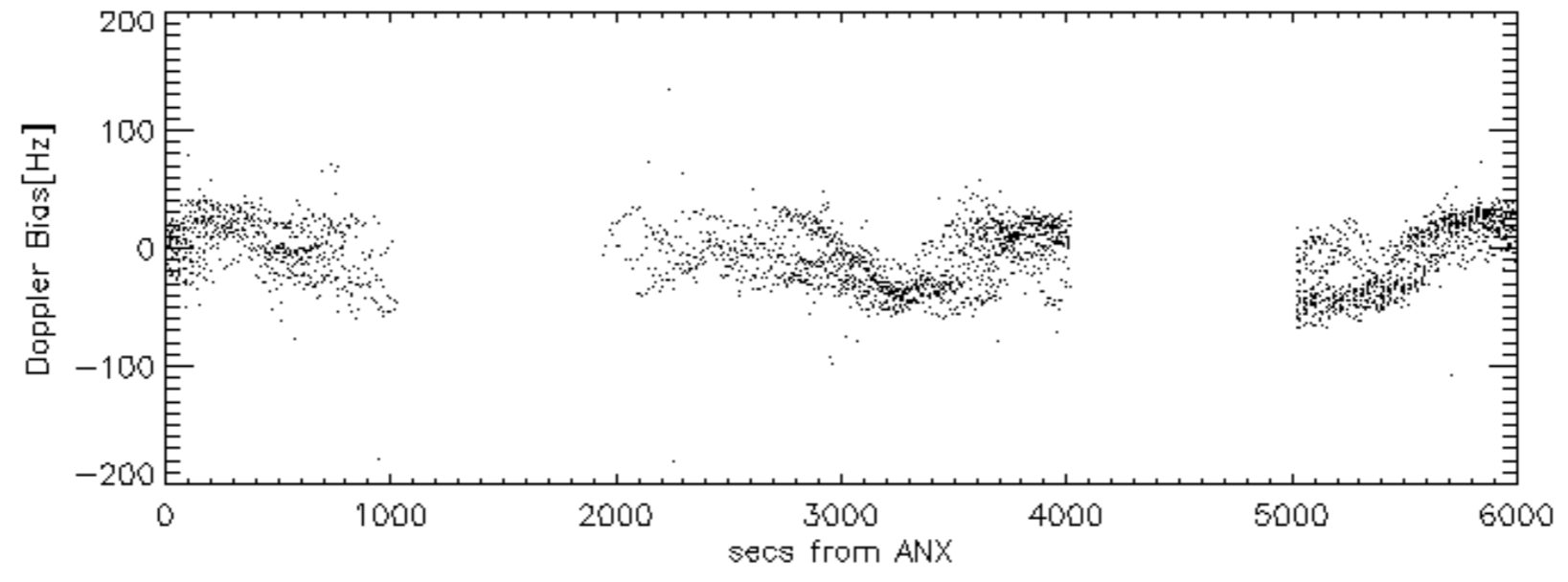
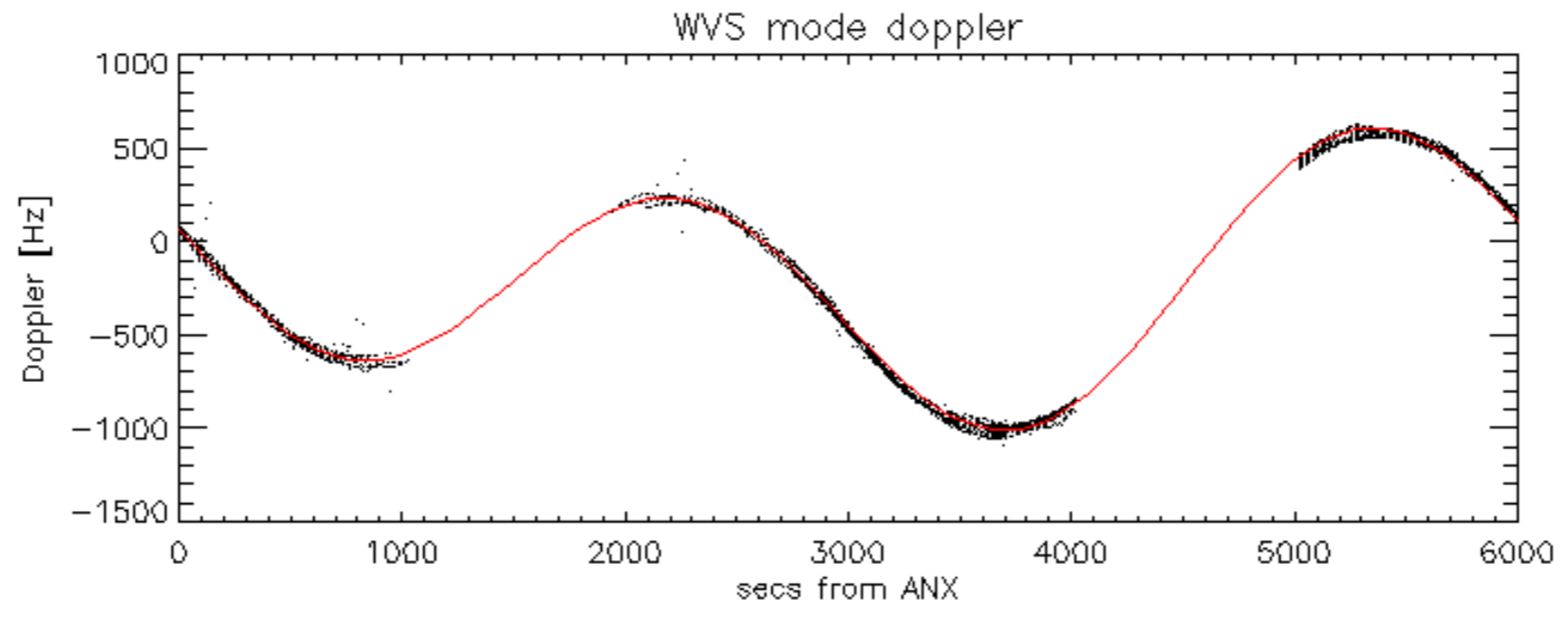


Doppler 'WVS' 'IS2' descending

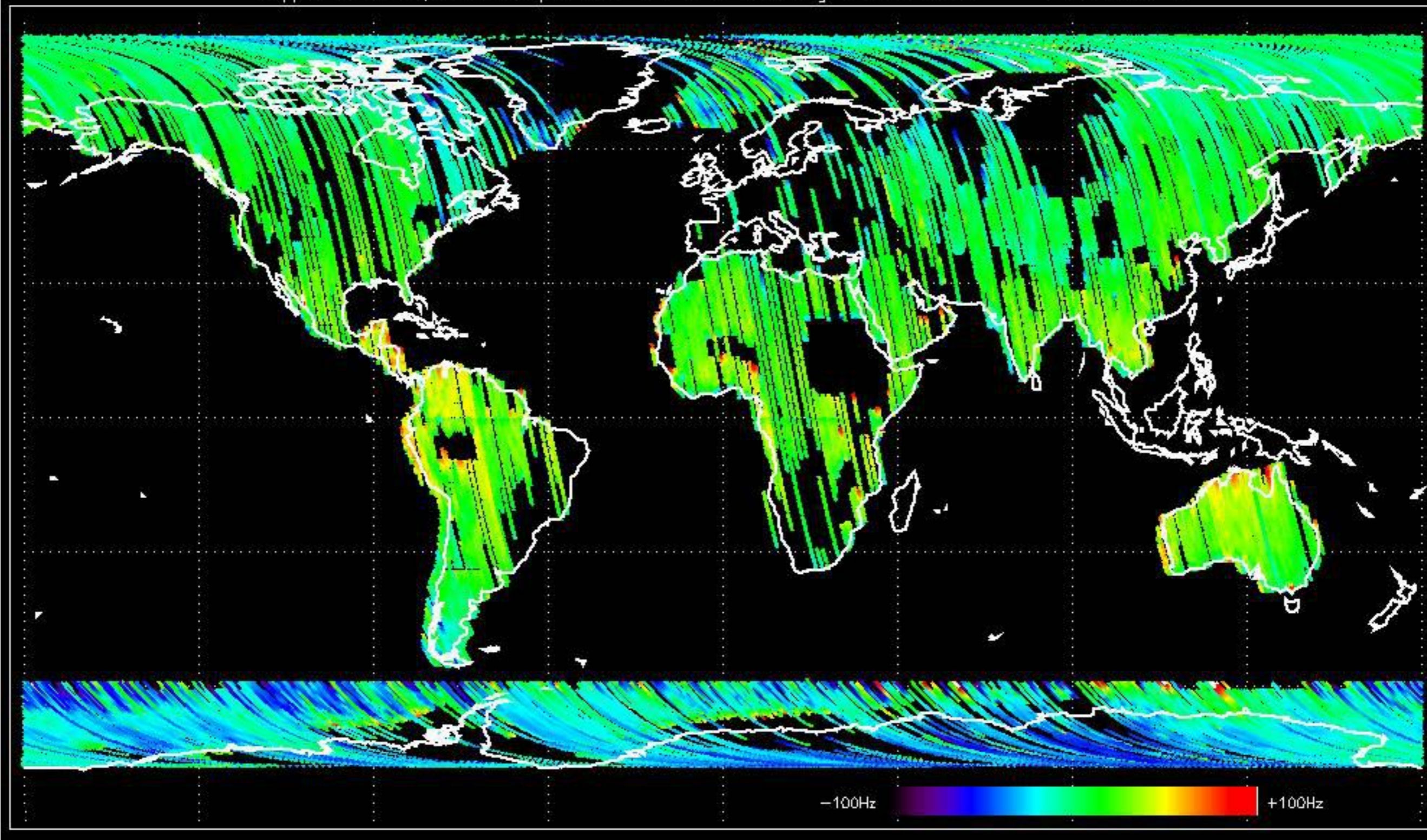


GM1 mode doppler

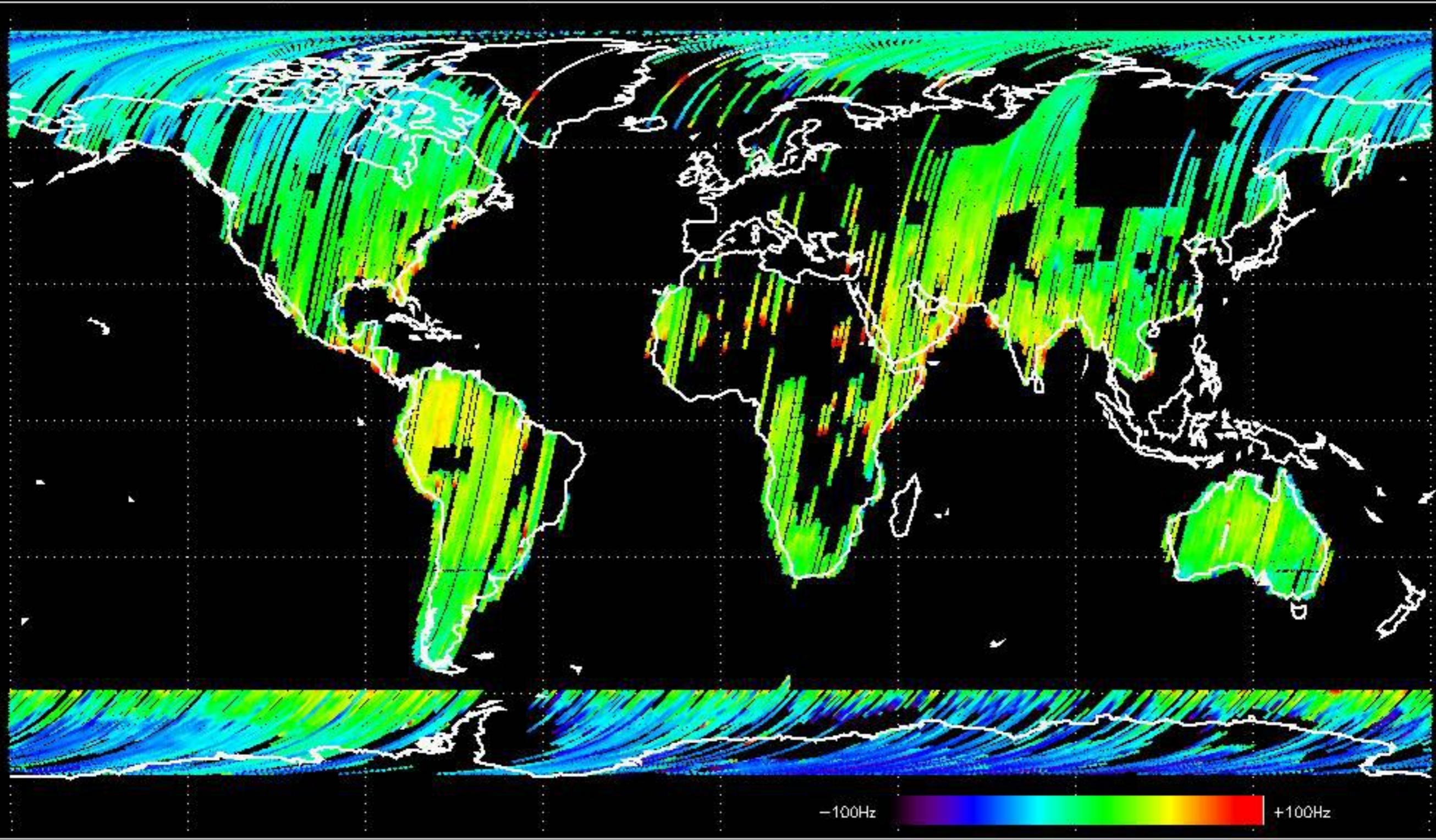




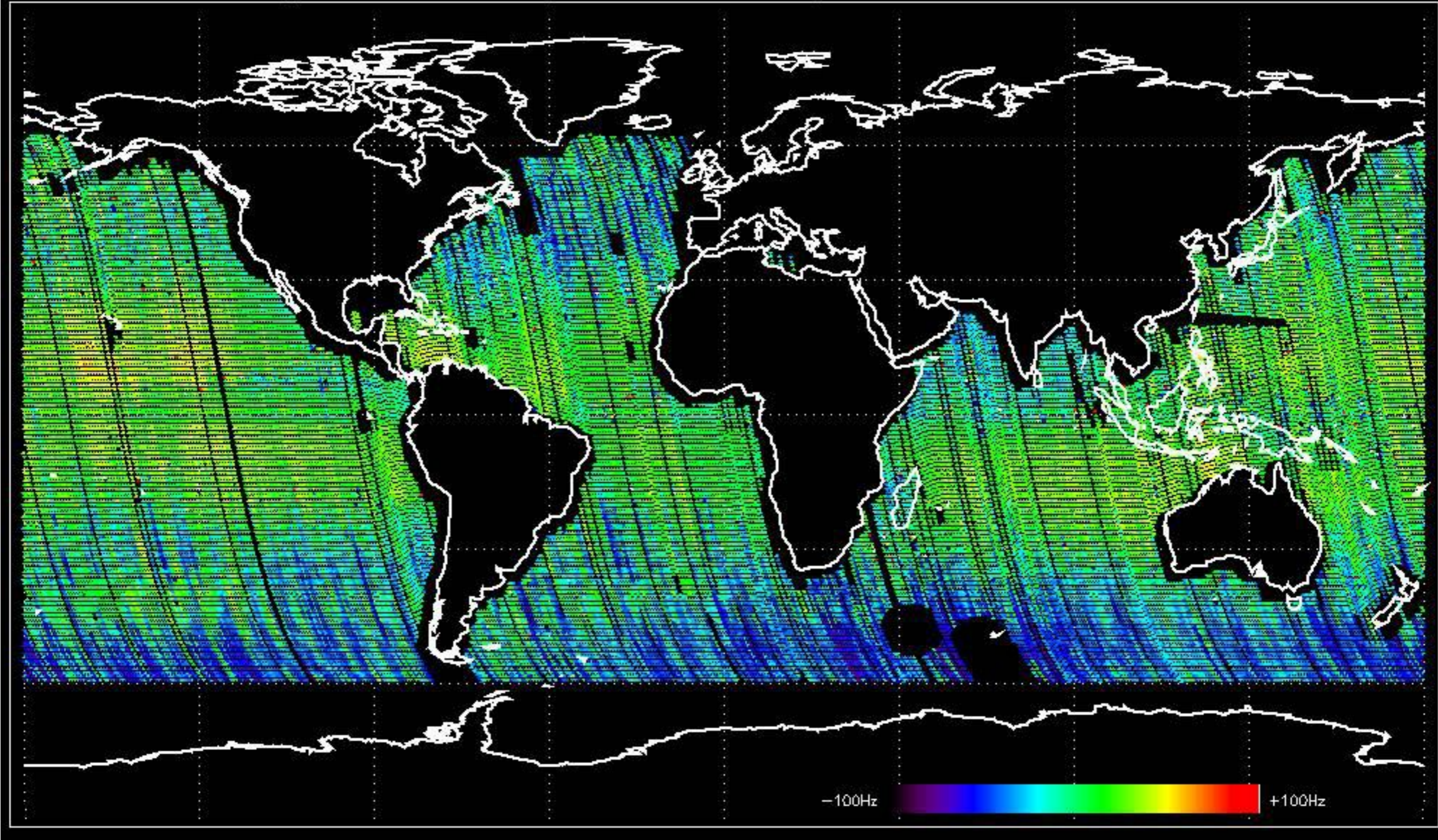
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.380509 Hz



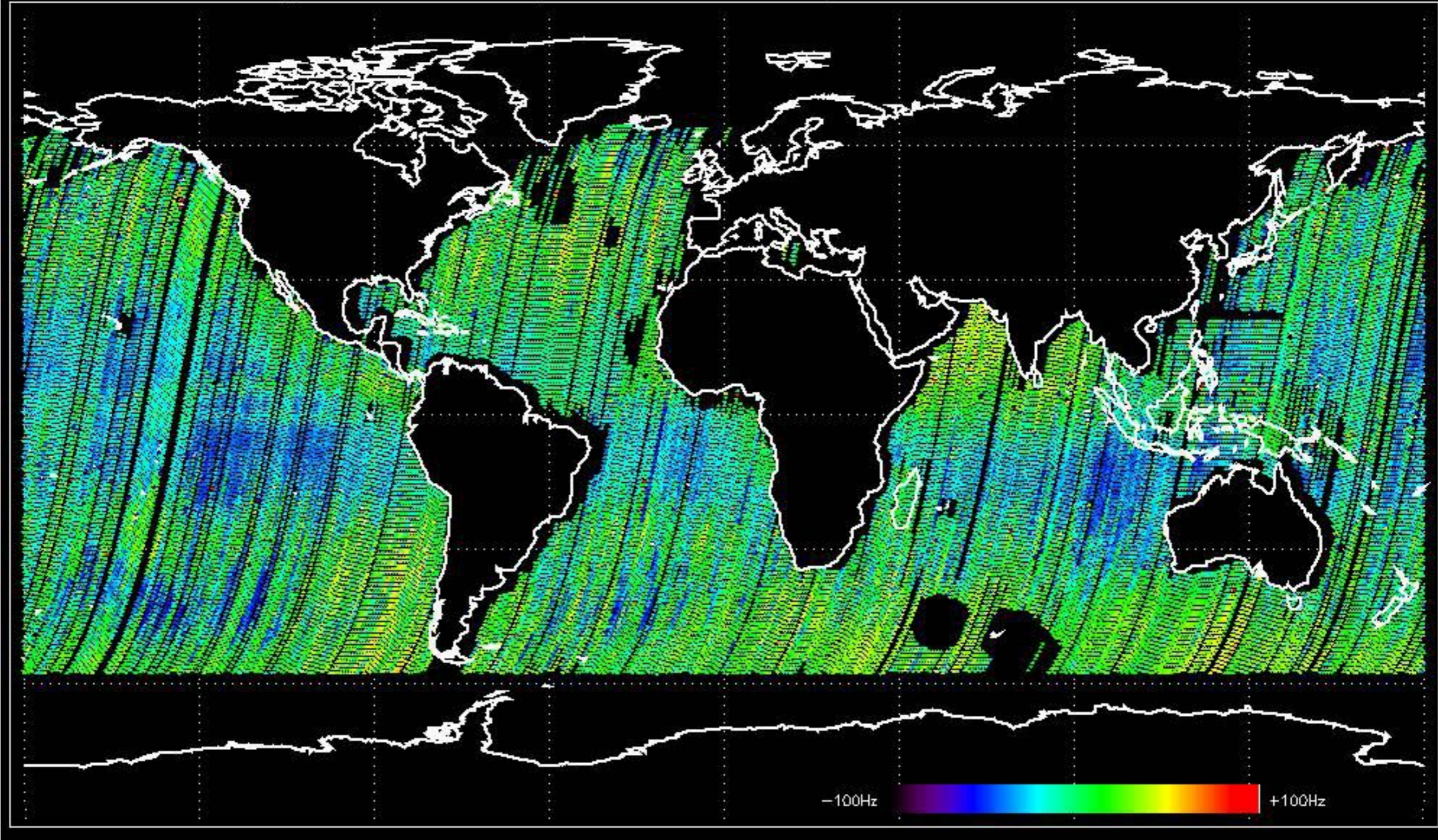
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -5.1071456 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.3553239 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.602701 Hz



No anomalies observed on available MS products:



No anomalies observed.



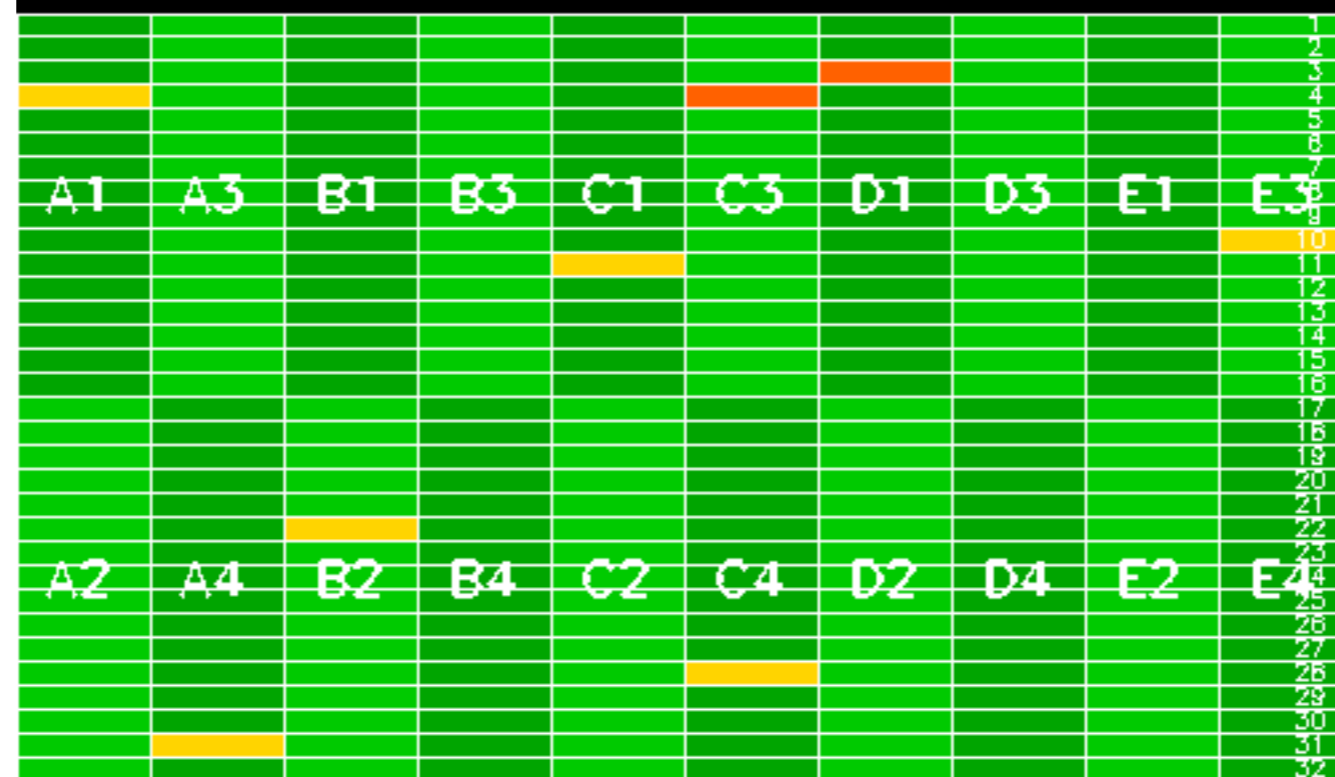




Reference: 2005-09-29 07:47:20 V

RxGain

Test : 2006-06-07 04:37:34 V



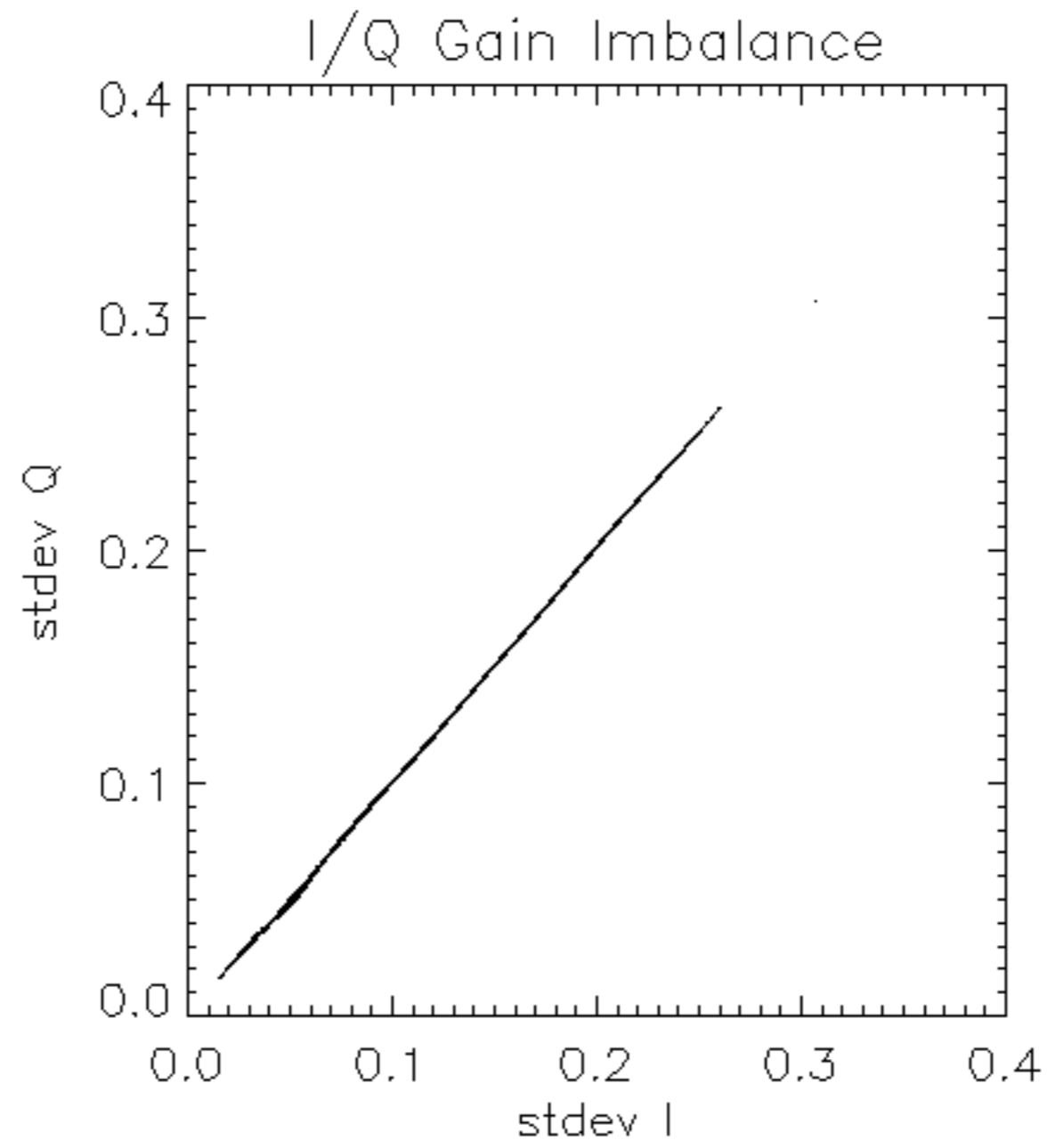


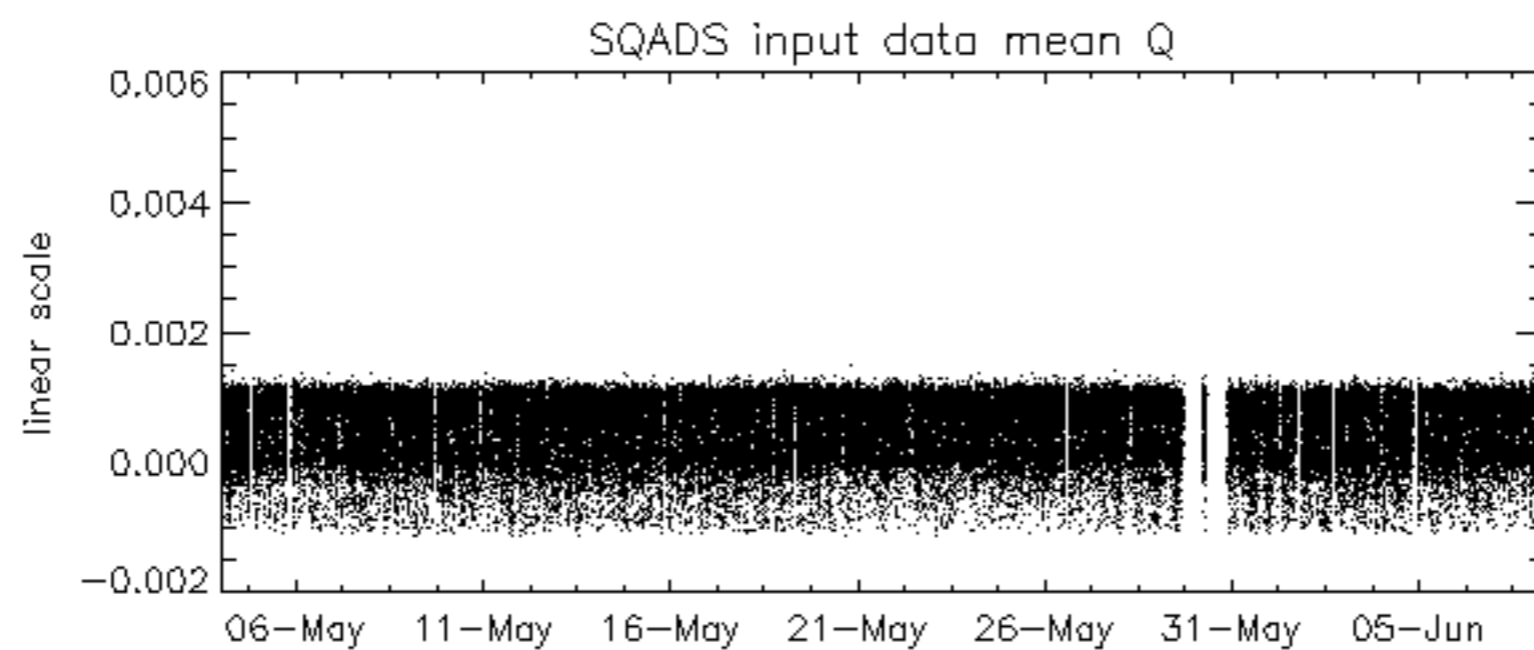
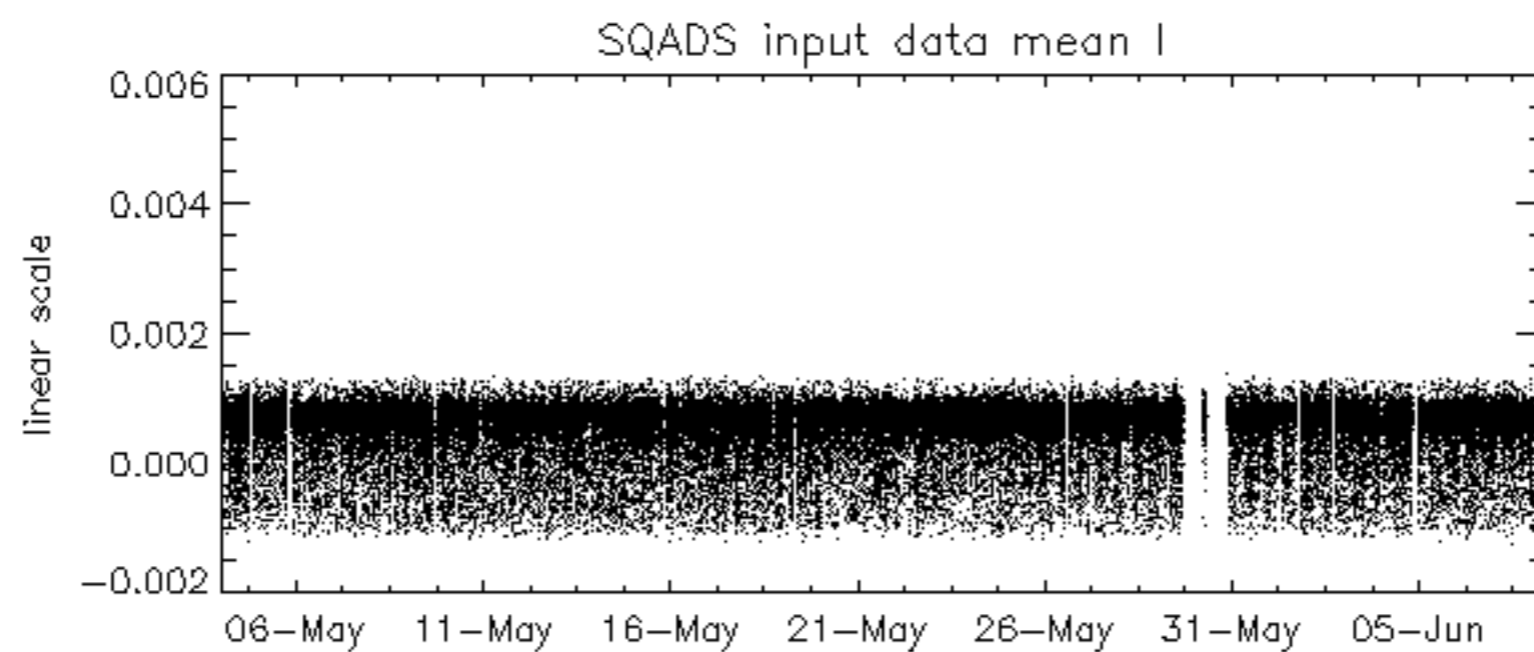
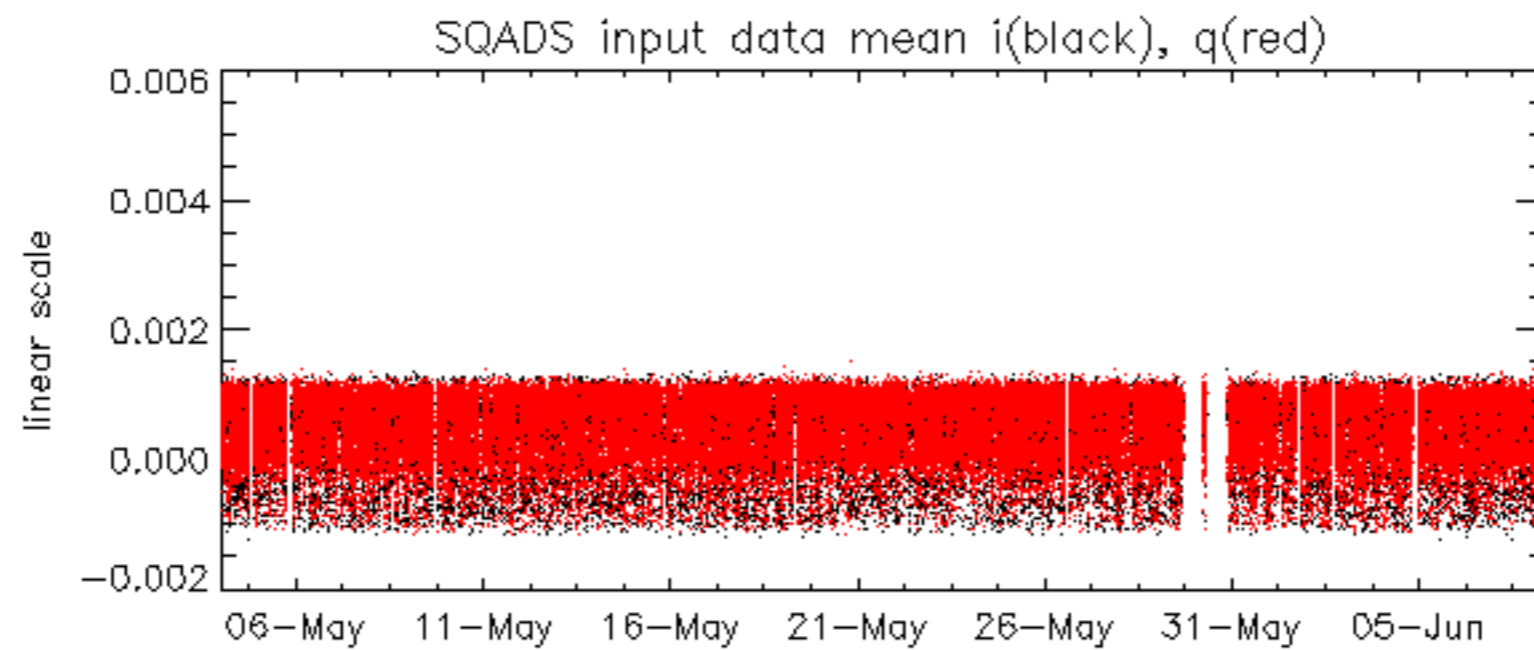


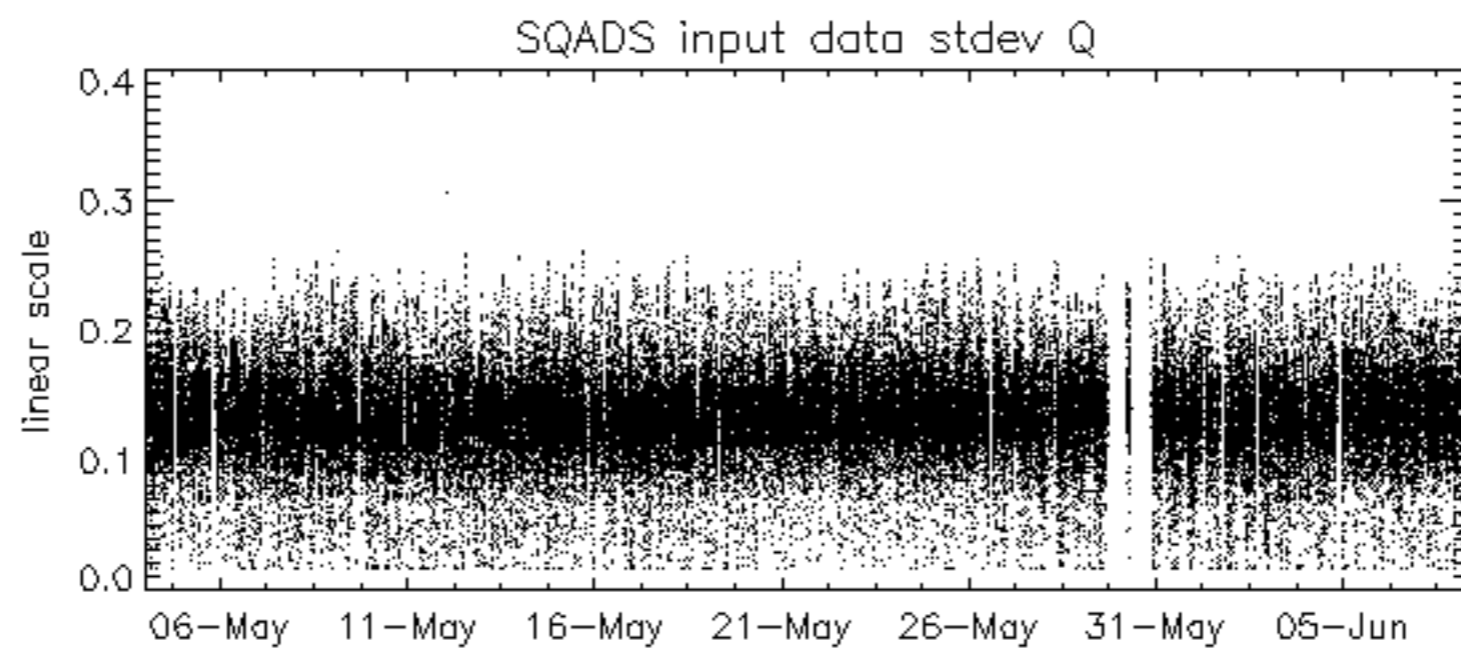
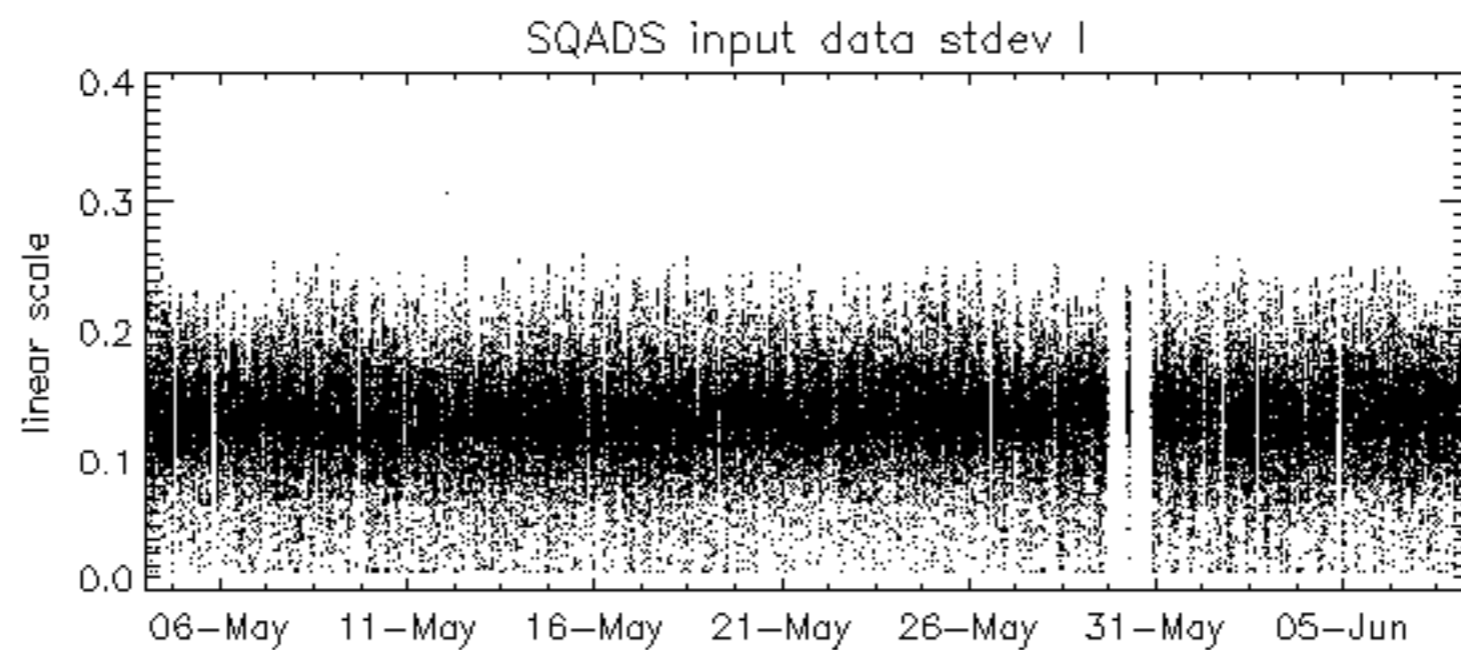
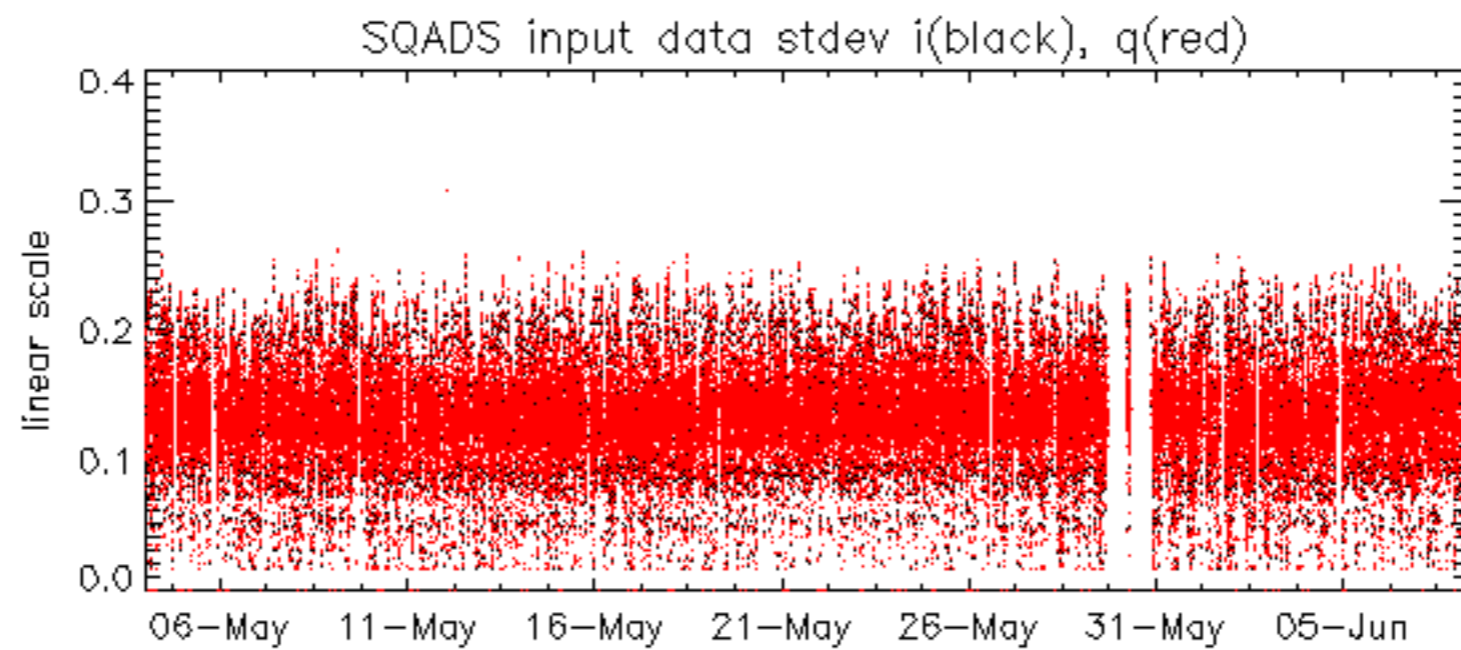


















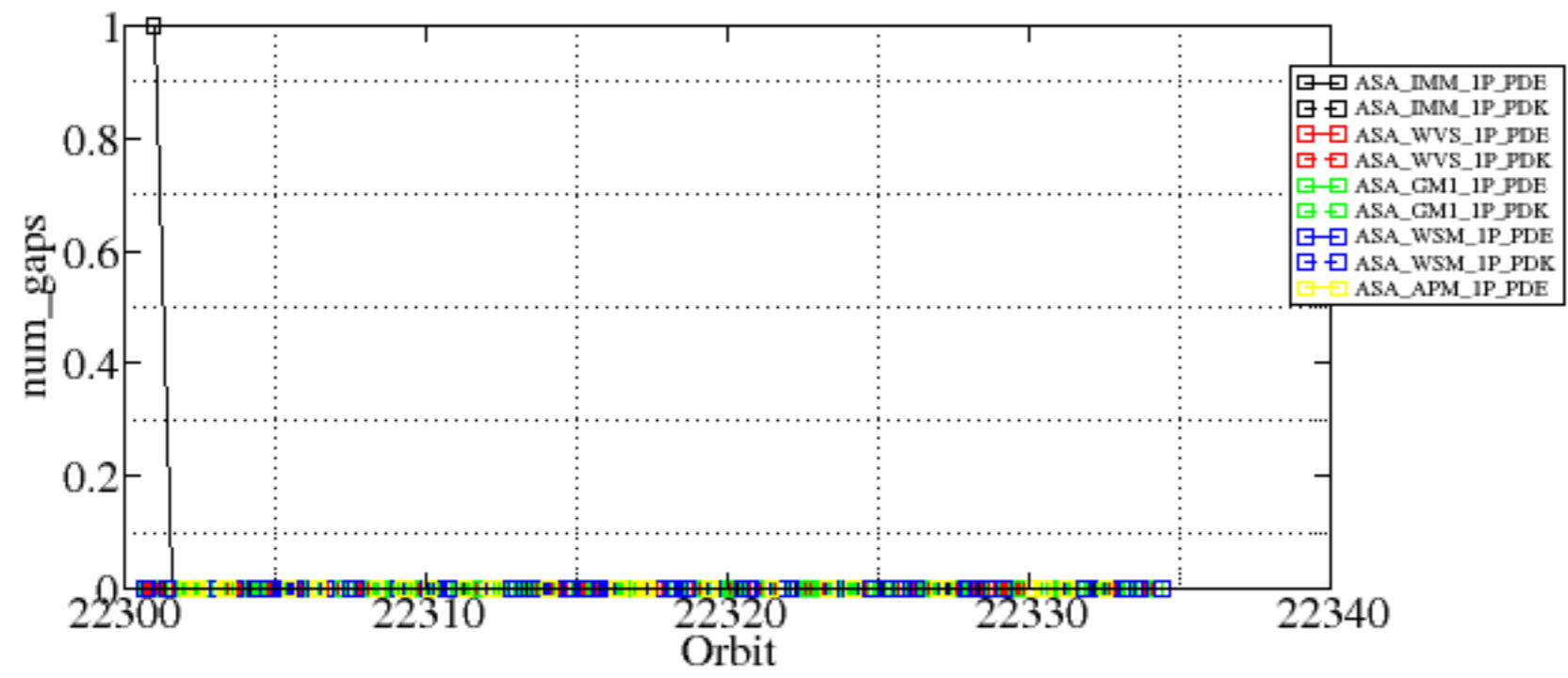




Summary of analysis for the last 3 days 2006060[678]

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_1PNPDE20060606_003645_000001642048_00202_22300_6709.N1	1	0
ASA_GM1_1PNPDK20060606_092117_000007552048_00208_22306_4644.N1	0	24
ASA_GM1_1PNPDK20060607_102902_000006702048_00223_22321_4703.N1	0	6
ASA_WSM_1PNPDE20060606_040457_000002692048_00205_22303_2880.N1	0	13
ASA_WSM_1PNPDE20060606_112905_000001292048_00209_22307_2917.N1	0	14
ASA_WSM_1PNPDE20060606_141126_000001522048_00211_22309_2967.N1	0	49
ASA_WSM_1PNPDE20060606_204401_000000862048_00214_22312_3005.N1	0	1
ASA_WSM_1PNPDE20060607_015506_000000852048_00218_22316_3054.N1	0	54
ASA_WSM_1PNPDE20060607_141813_000000972048_00225_22323_3144.N1	0	2
ASA_WSM_1PNPDE20060607_183929_000002072048_00228_22326_3160.N1	0	13



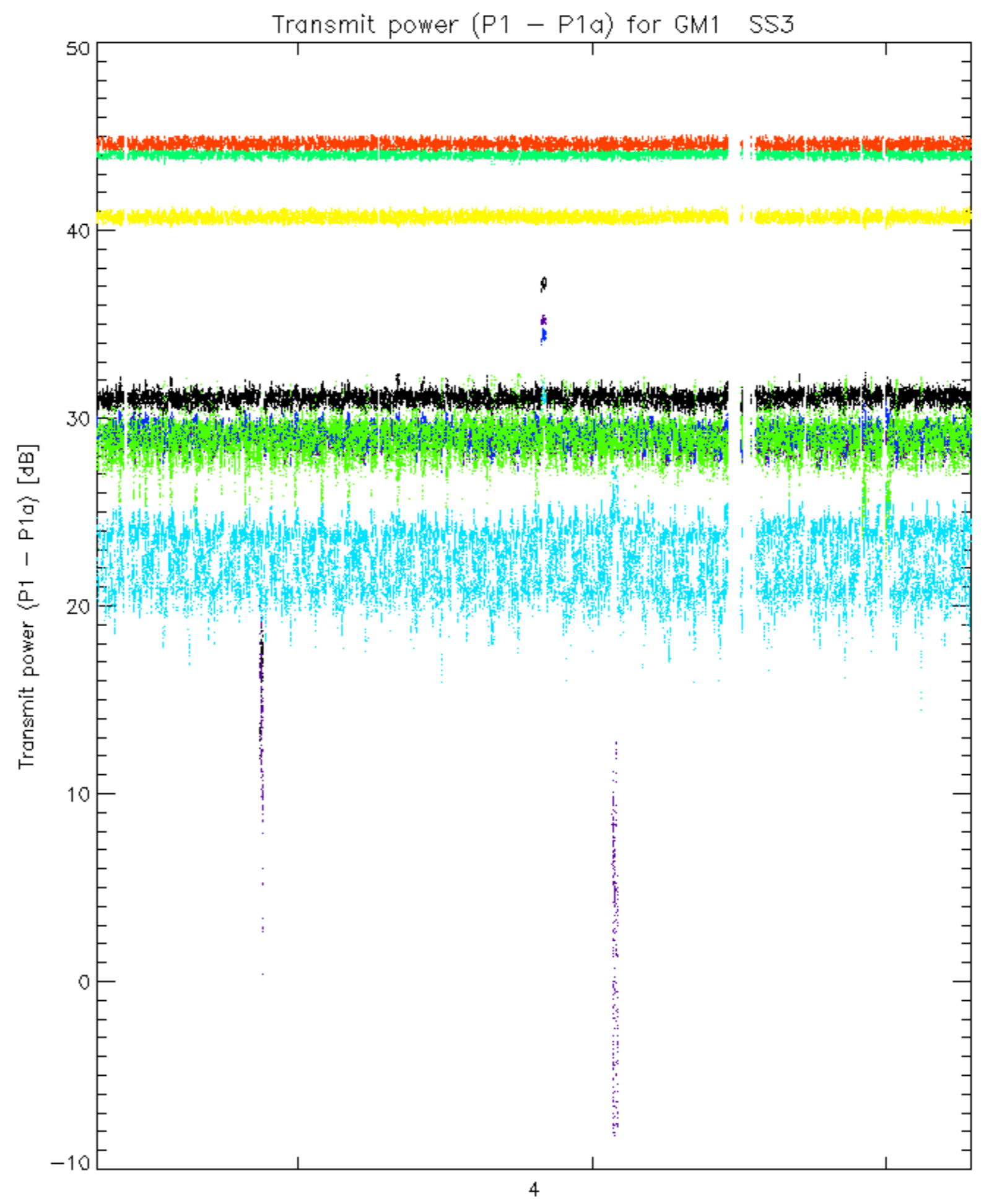






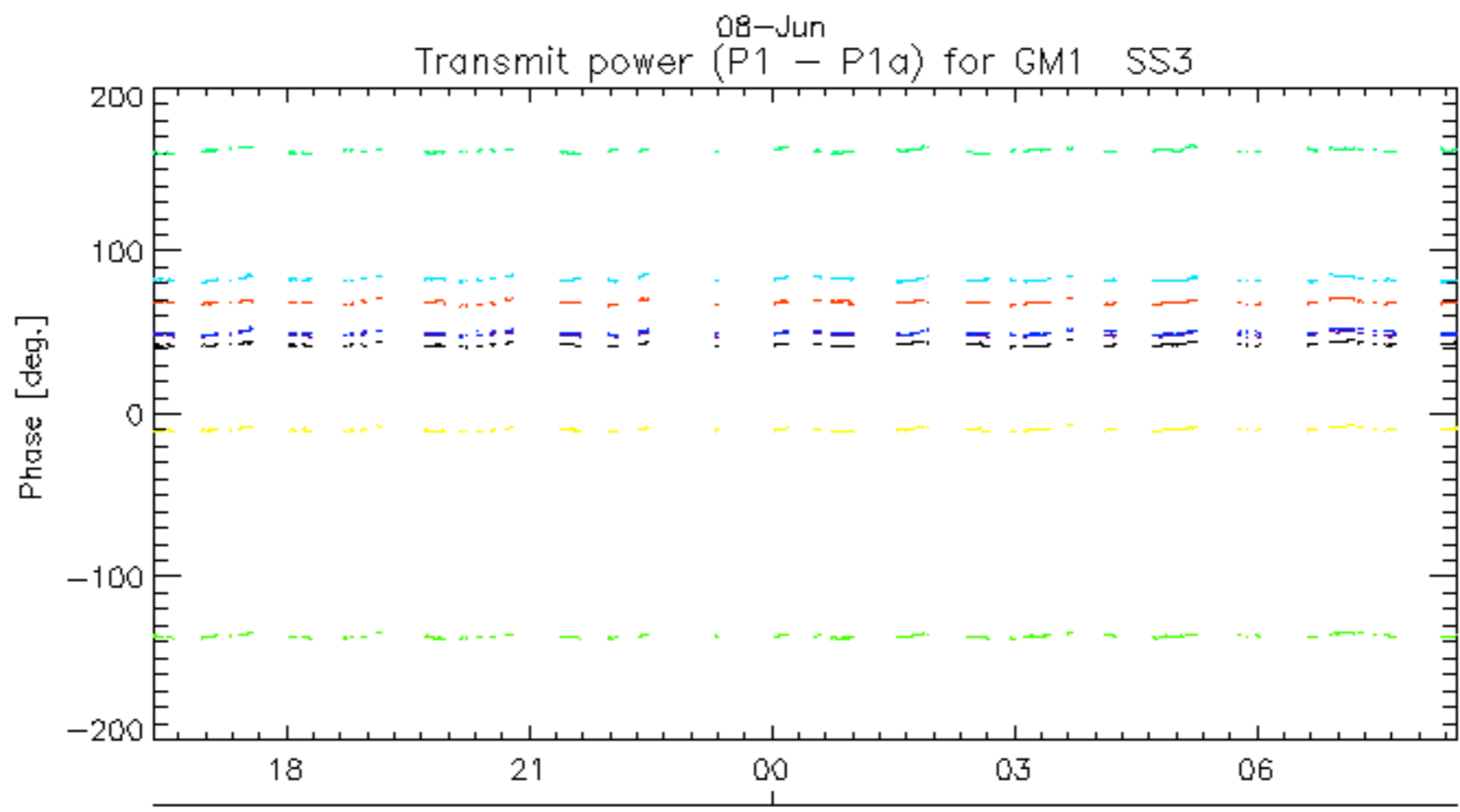
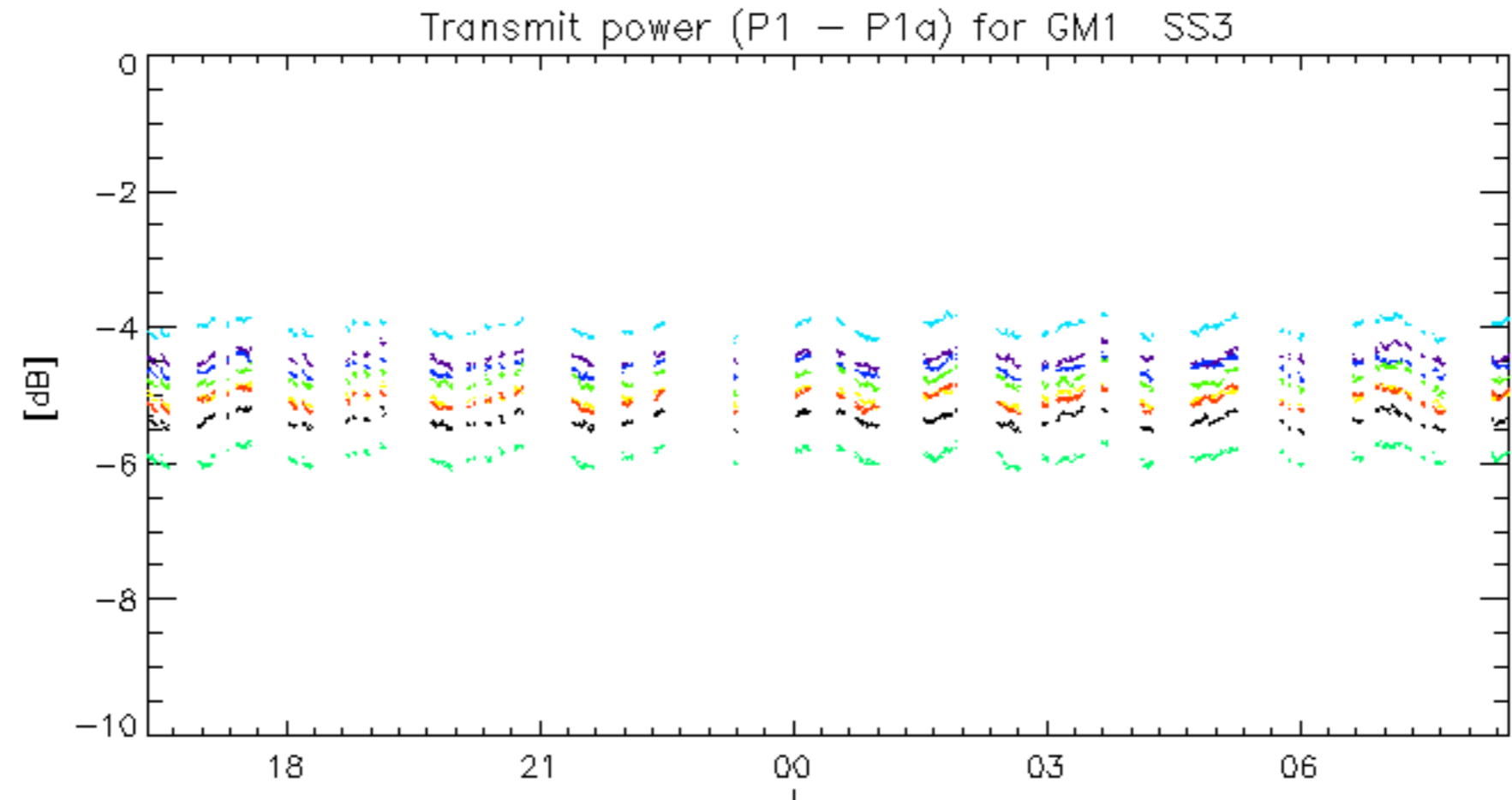




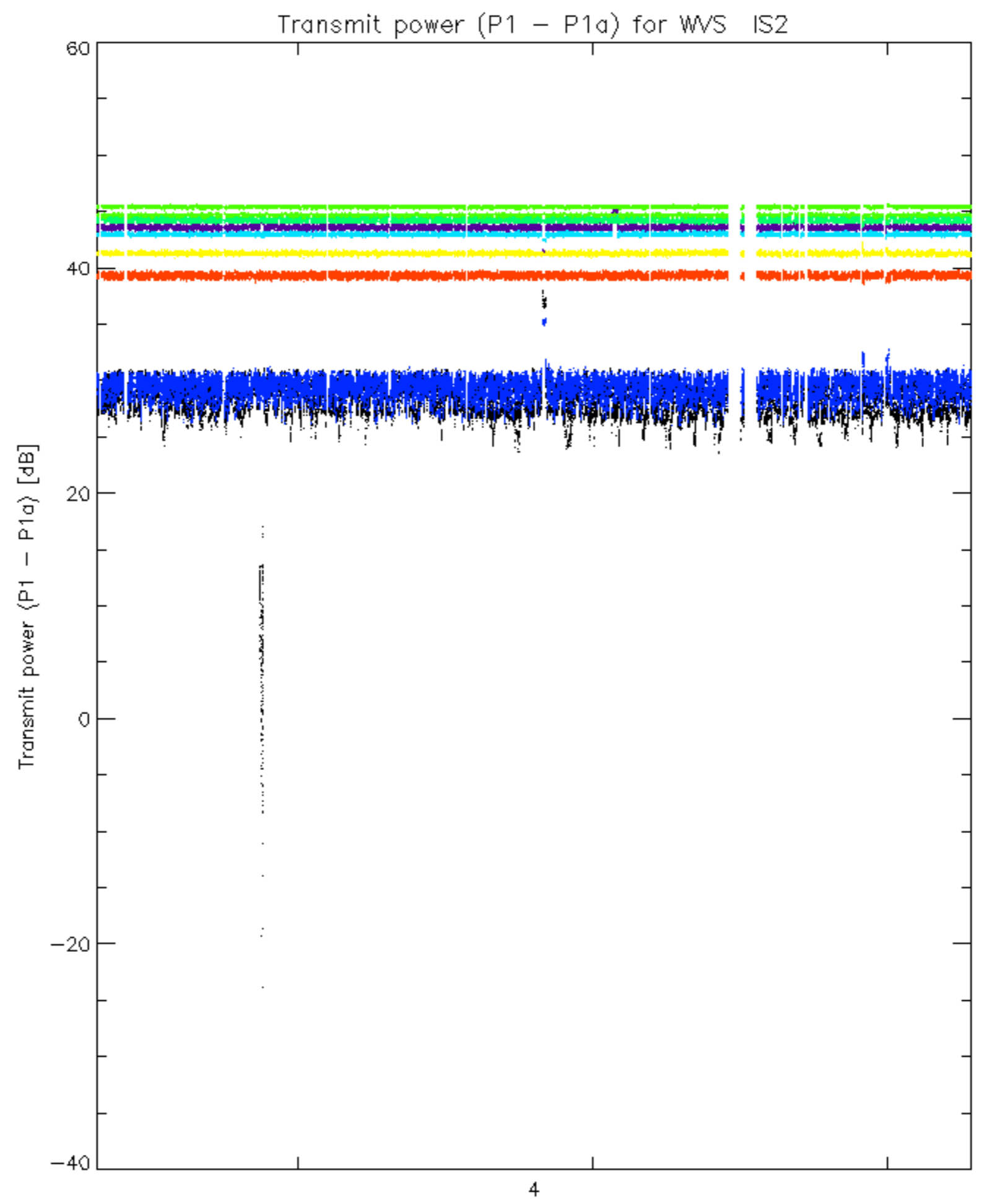


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

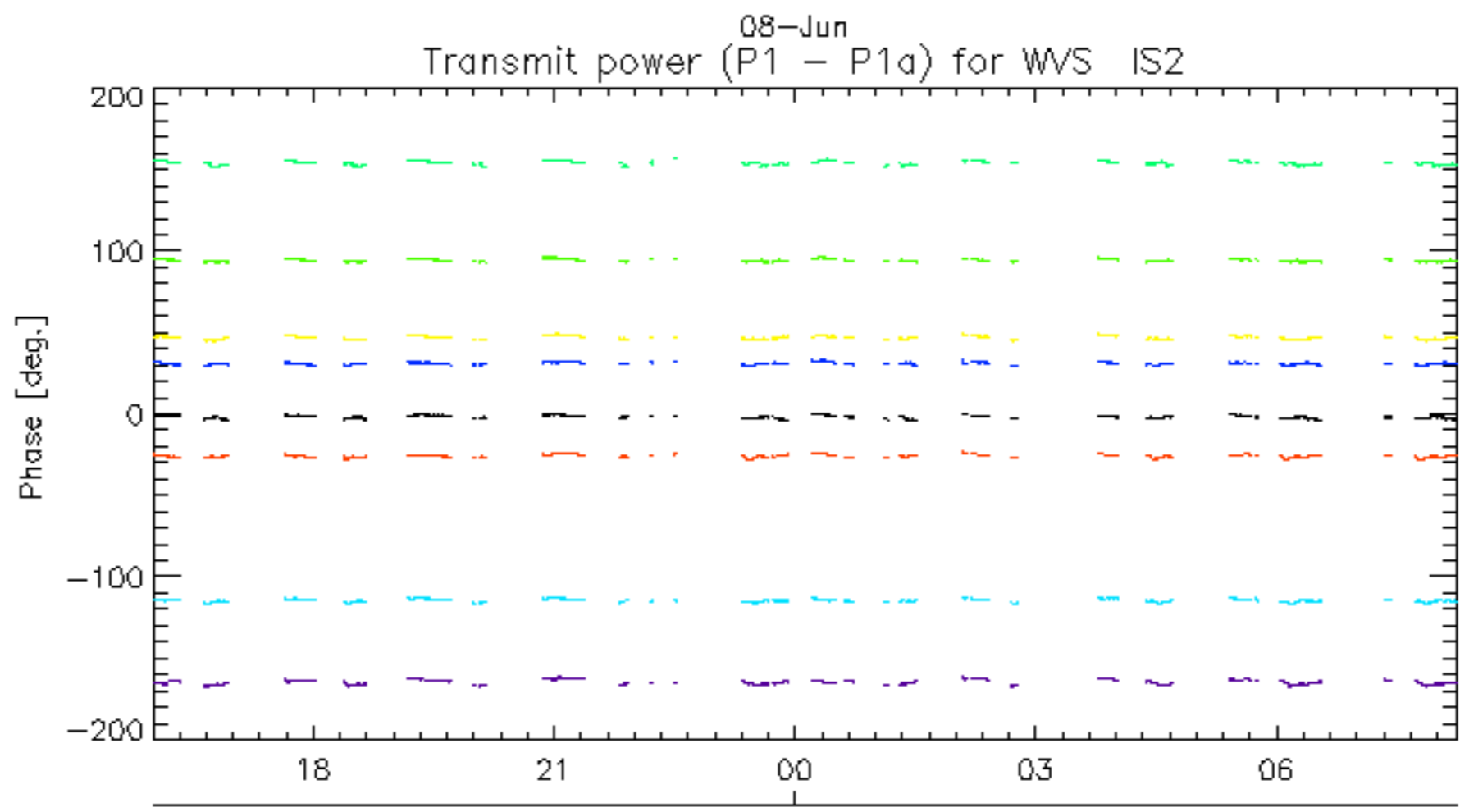
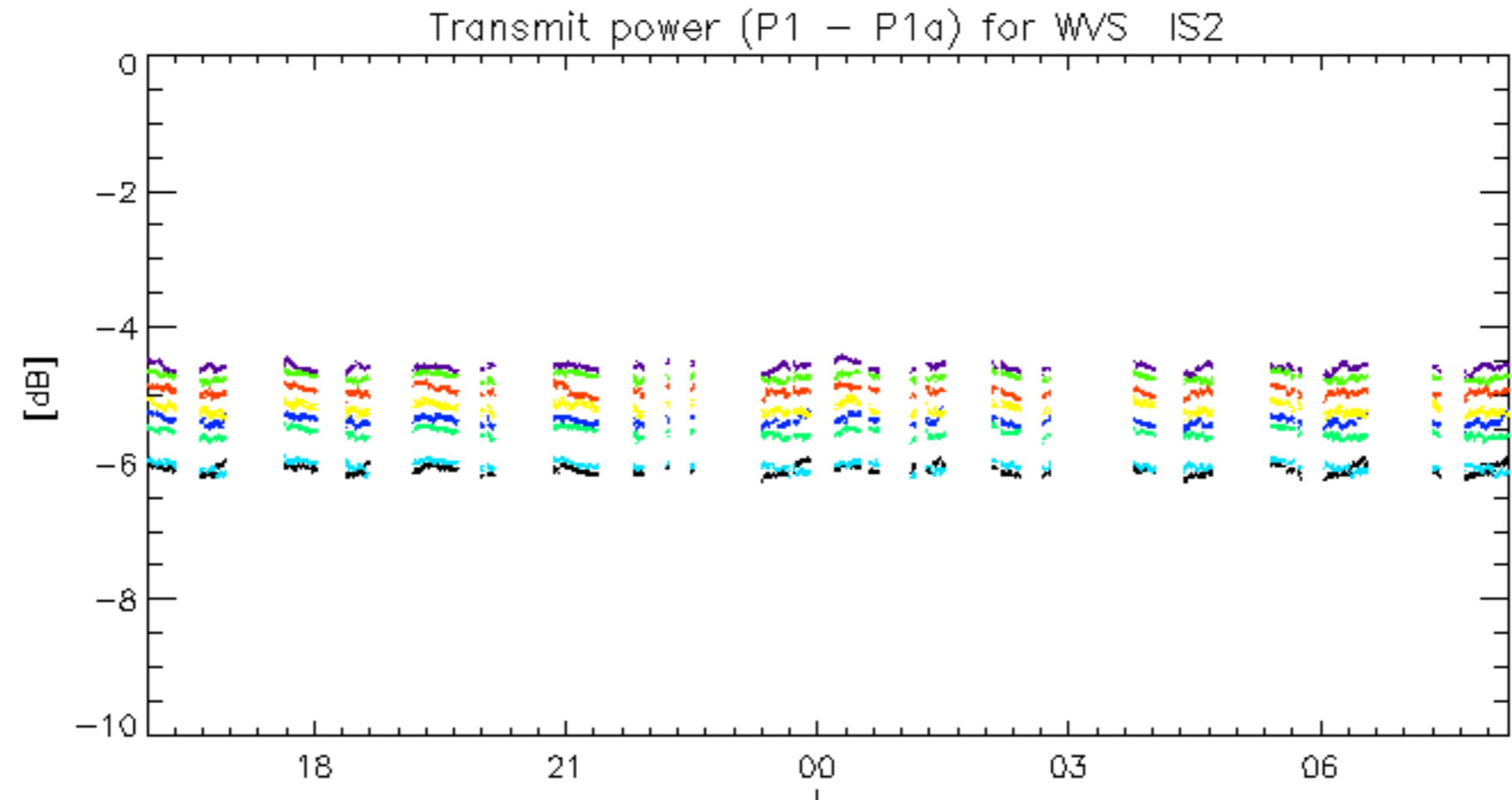




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rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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No unavailabilities during the reported period.