

# PRELIMINARY REPORT OF 060510

last update on Wed May 10 16:33:13 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 2006-05-09 00:00:00 to 2006-05-10 16:33:13

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	57	9	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	57	9	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	57	9	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	57	9	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	17	1	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	17	1	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	17	1	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	17	1	0	0

### 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	20060510 073838
H	20060509 081015

### 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	-3.972166	0.011728	-0.000205
7	P1	-3.058434	0.012065	-0.093725
11	P1	-4.090745	0.015947	-0.059720
15	P1	-6.103572	0.012448	-0.097851
19	P1	-3.308049	0.007757	-0.002901
22	P1	-4.520774	0.011088	-0.040668
26	P1	-4.034359	0.020331	0.110712
30	P1	-5.736642	0.021849	-0.037789
3	P1	-16.679573	0.300255	0.119152
7	P1	-16.981882	0.150728	-0.282452
11	P1	-16.758471	0.326111	-0.499117
15	P1	-13.112506	0.138386	-0.322166
19	P1	-14.155607	0.048866	-0.277066
22	P1	-16.061277	0.469675	-0.344943
26	P1	-15.424208	0.272683	0.483401
30	P1	-16.803102	0.318896	-0.598796

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.284435	0.085878	0.089541
7	P2	-22.184996	0.100420	0.107636
11	P2	-16.025482	0.112080	0.164501
15	P2	-7.162296	0.096663	-0.040063
19	P2	-9.151981	0.089965	-0.049639
22	P2	-18.058987	0.088772	-0.149961
26	P2	-16.312805	0.093922	-0.132250
30	P2	-19.603678	0.087925	-0.018648

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.189004	0.004417	-0.021358
7	P3	-8.189004	0.004417	-0.021358
11	P3	-8.189004	0.004417	-0.021358
15	P3	-8.189004	0.004417	-0.021358
19	P3	-8.189004	0.004417	-0.021358
22	P3	-8.189004	0.004417	-0.021358
26	P3	-8.189026	0.004418	-0.021341
30	P3	-8.189026	0.004418	-0.021341

**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	-3.749410	0.029266	0.004654
7	P1	-2.662987	0.119898	0.110648
11	P1	-2.883600	0.035117	0.066559
15	P1	-3.514815	0.032079	0.055860
19	P1	-3.383123	0.013779	-0.017462
22	P1	-5.120083	0.022980	0.069710
26	P1	-5.815281	0.024521	-0.049139
30	P1	-5.179636	0.048705	0.011830
3	P1	-11.597770	0.115156	-0.022496
7	P1	-9.977316	0.178481	0.044608
11	P1	-10.227863	0.088954	0.088150
15	P1	-10.688261	0.137017	0.144768
19	P1	-15.452080	0.091428	-0.087854
22	P1	-20.691742	1.282876	-0.515891

26	P1	-16.388042	0.417340	-0.254407
30	P1	-18.242851	0.501889	0.460590

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.954092	0.071195	0.068532
7	P2	-22.510220	0.191295	-0.119966
11	P2	-11.191910	0.052373	-0.011100
15	P2	-4.869766	0.042948	-0.080838
19	P2	-6.861027	0.042085	-0.053966
22	P2	-8.156072	0.057180	-0.089279
26	P2	-24.051947	0.138766	-0.116102
30	P2	-22.051434	0.093984	-0.024102

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024549	0.003795	-0.009442
7	P3	-8.024457	0.003815	-0.009534
11	P3	-8.024622	0.003789	-0.008862
15	P3	-8.024414	0.003804	-0.009146
19	P3	-8.024661	0.003799	-0.009692
22	P3	-8.024533	0.003804	-0.009285
26	P3	-8.024407	0.003792	-0.008973
30	P3	-8.024487	0.003799	-0.009227

## 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	0.000547373
	stdev	1.83626e-07
MEAN Q	mean	0.000516433
	stdev	2.24718e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136335
	stdev	0.00117959
STDEV Q	mean	0.136693
	stdev	0.00119714



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006050[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
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## 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)


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Ascending


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Descending

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler


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Ascending


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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)


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Ascending


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Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

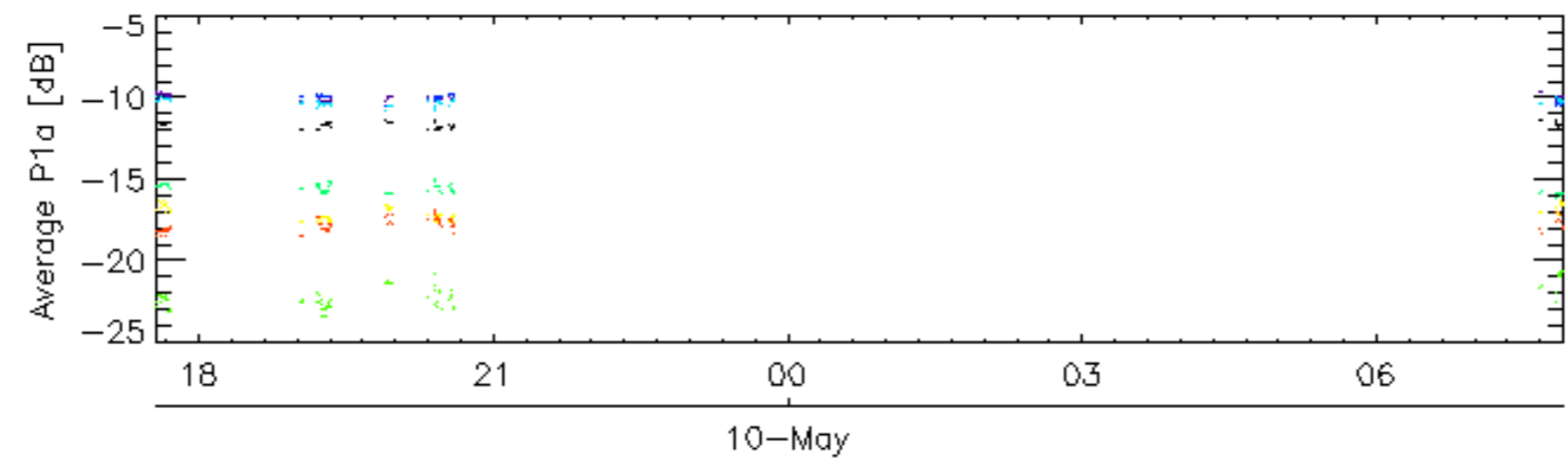
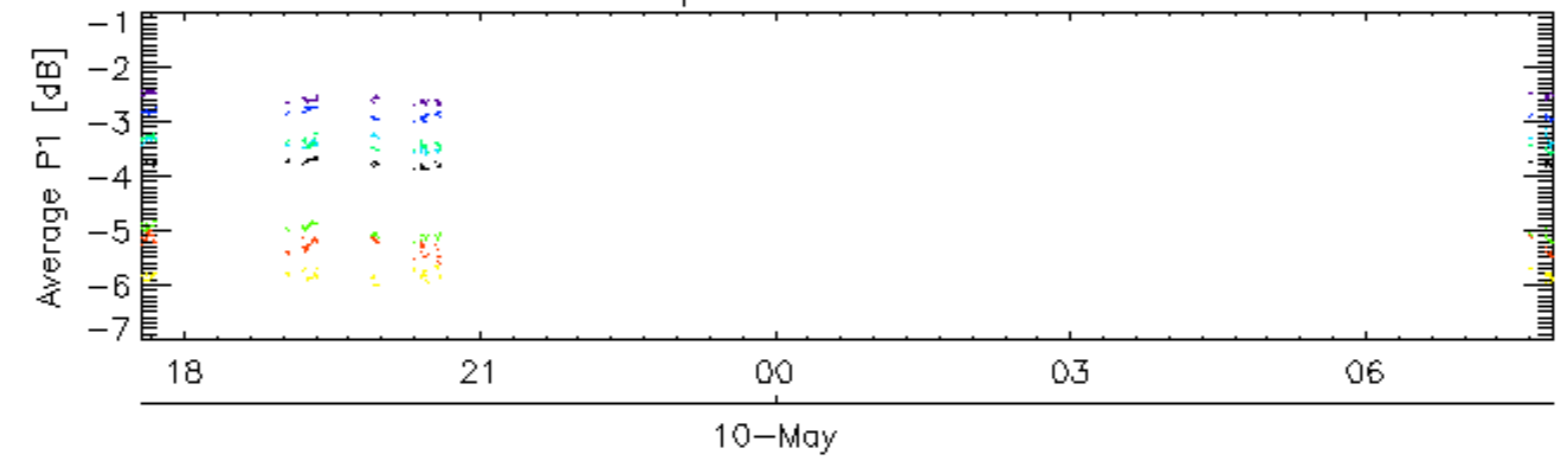
Ascending

Descending

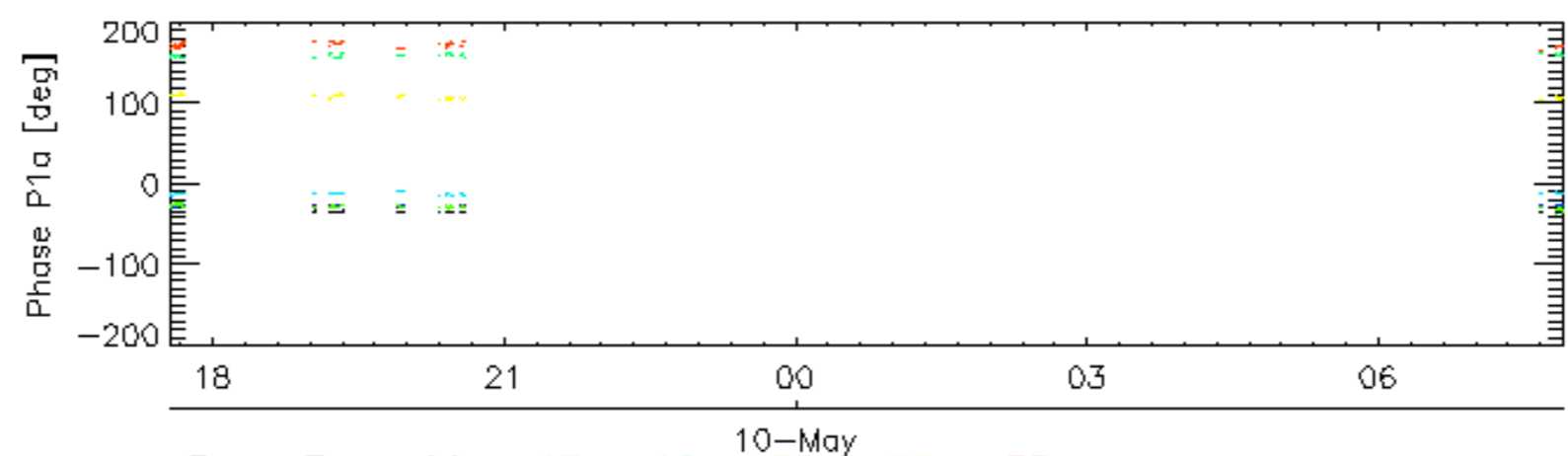
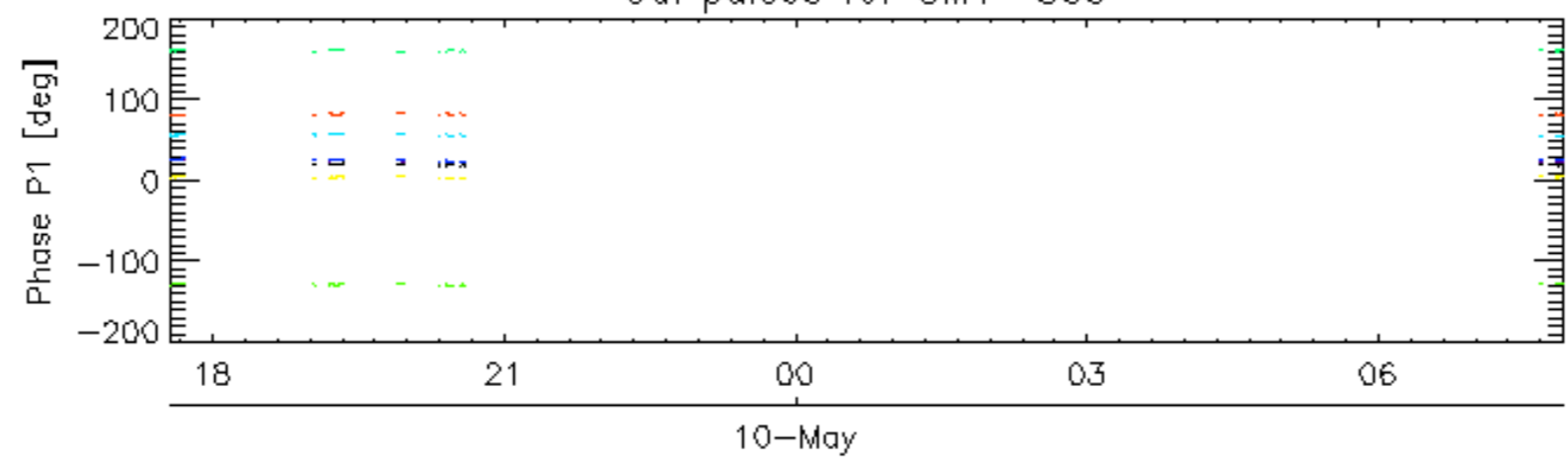
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

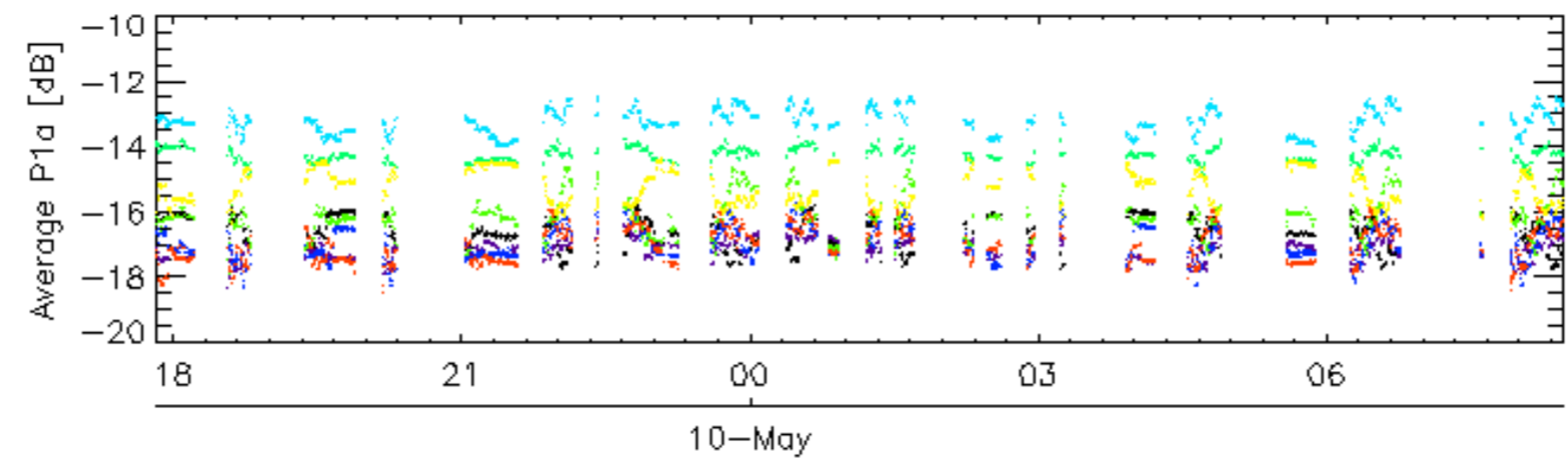
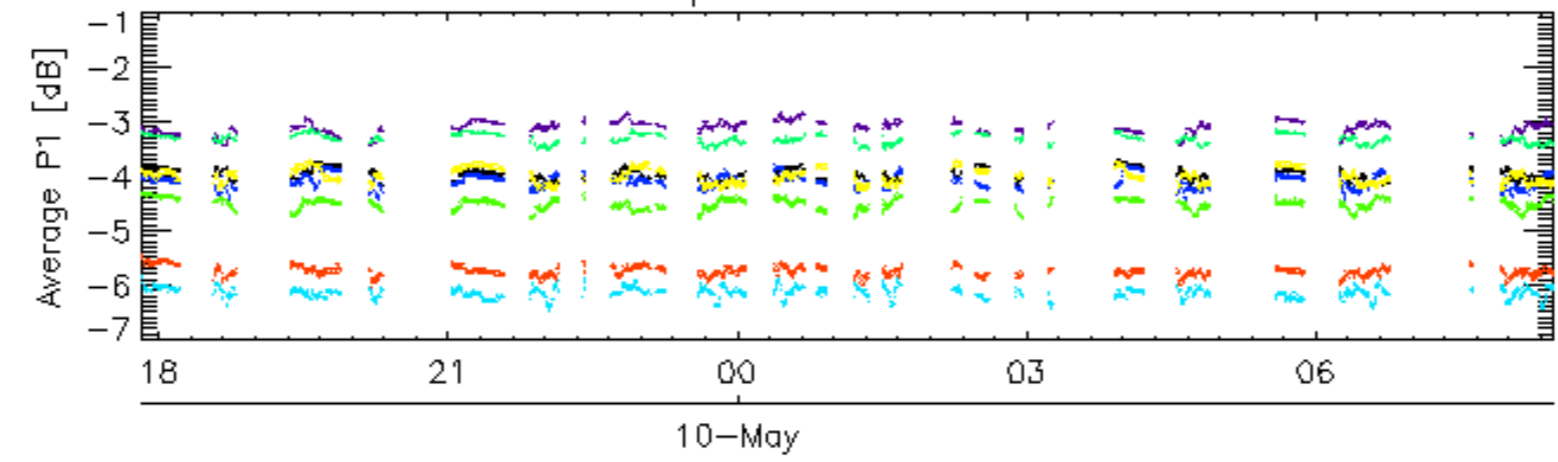


Cal pulses for GM1 SS3

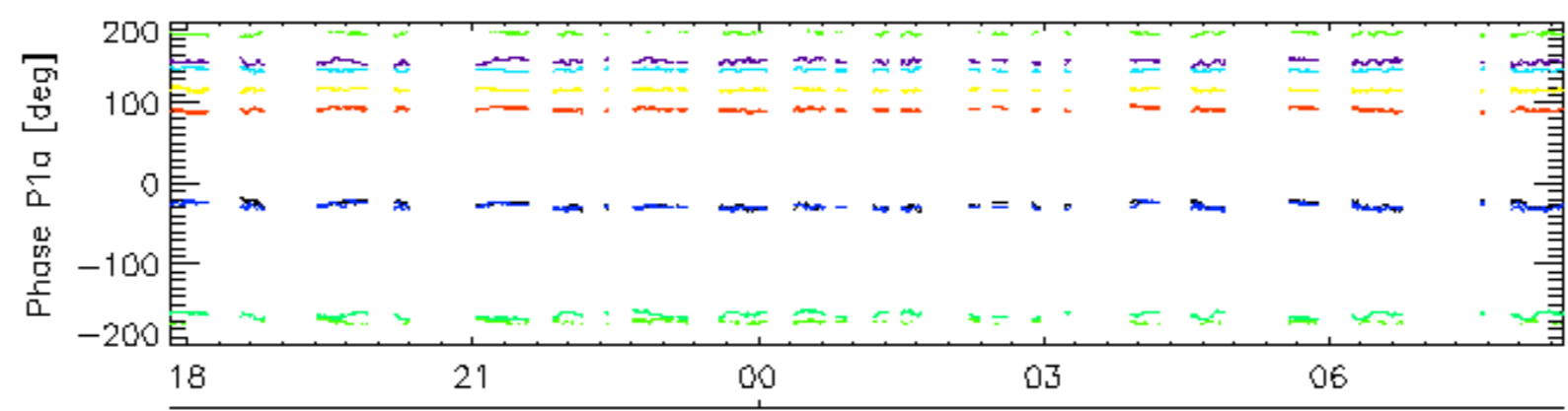
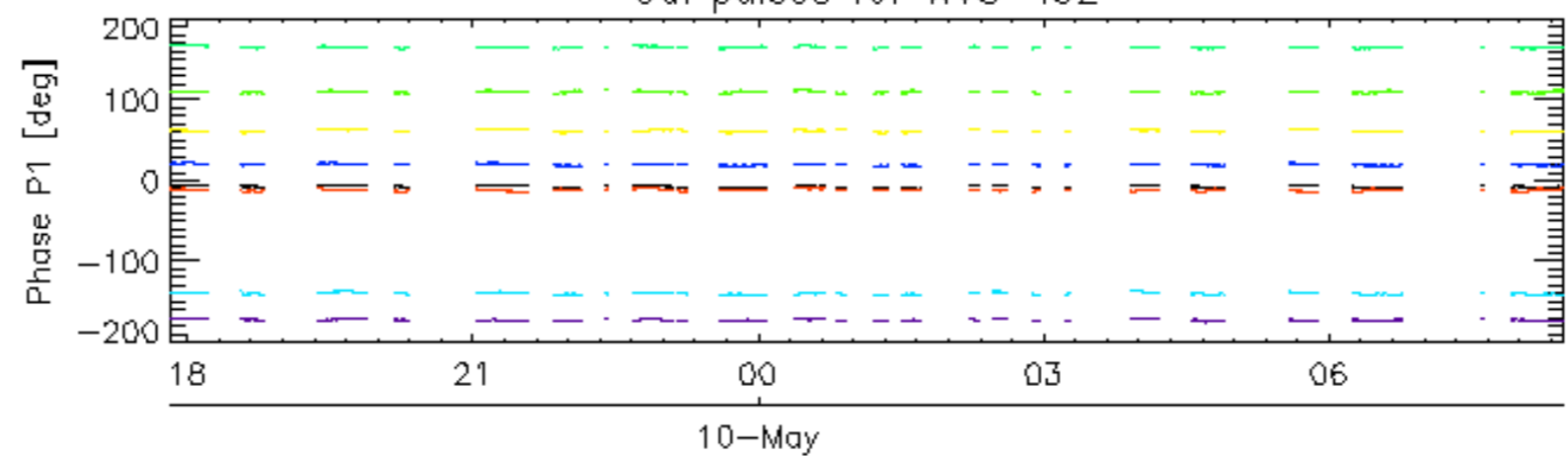


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

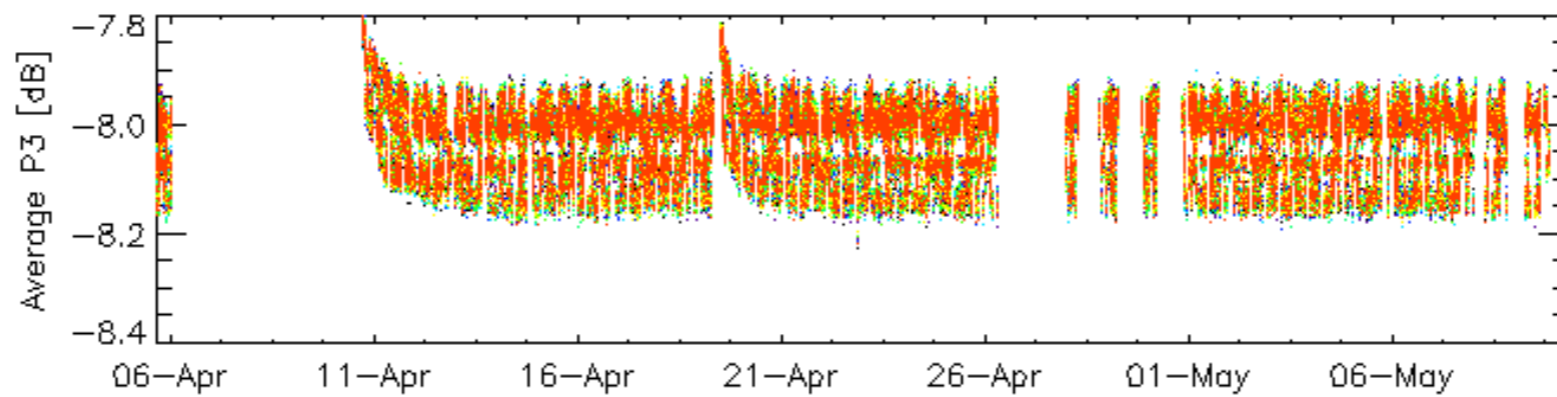
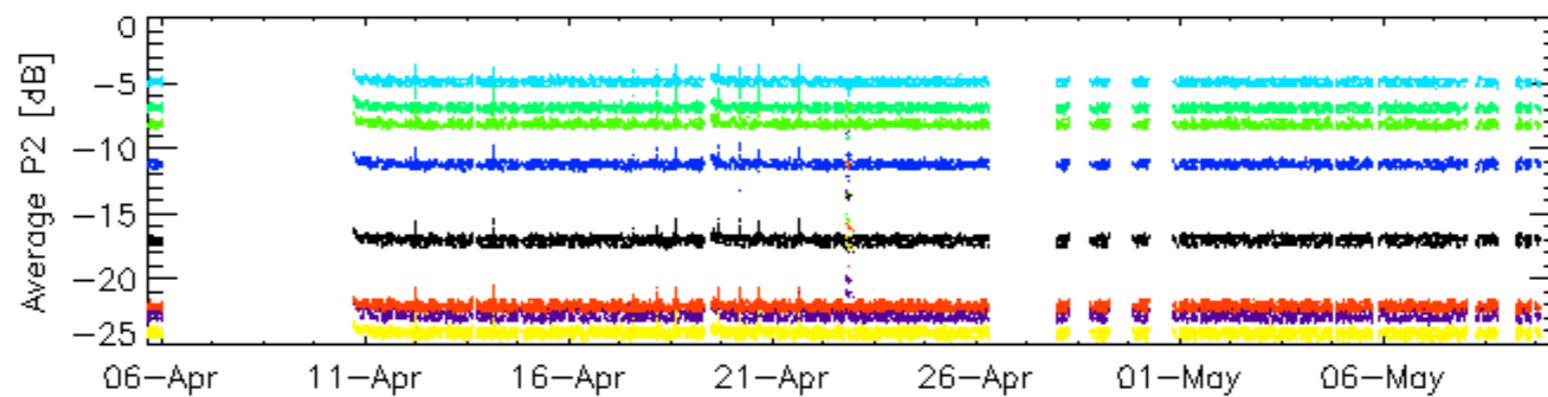
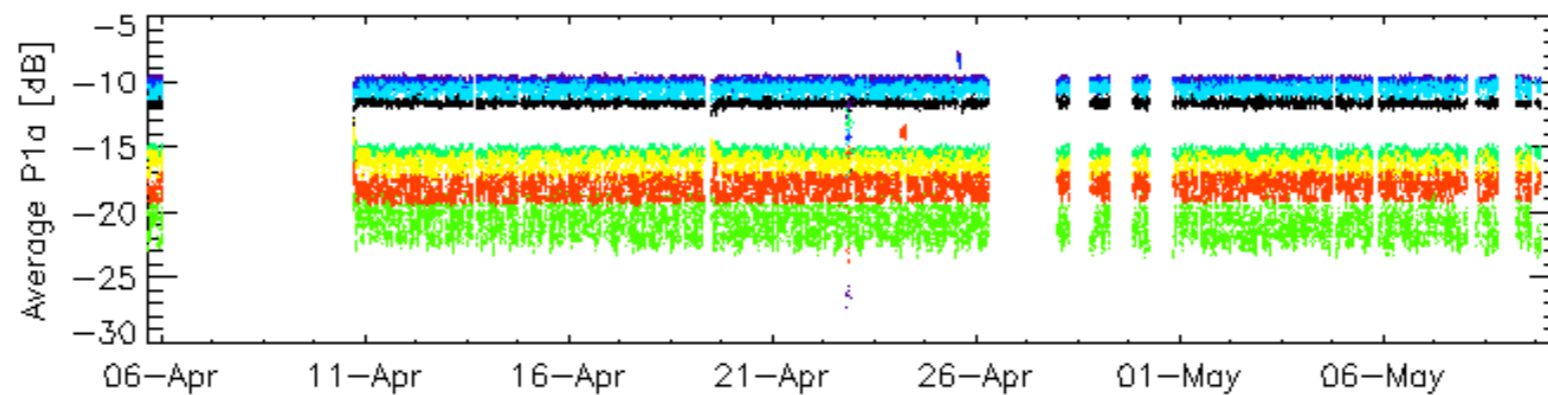
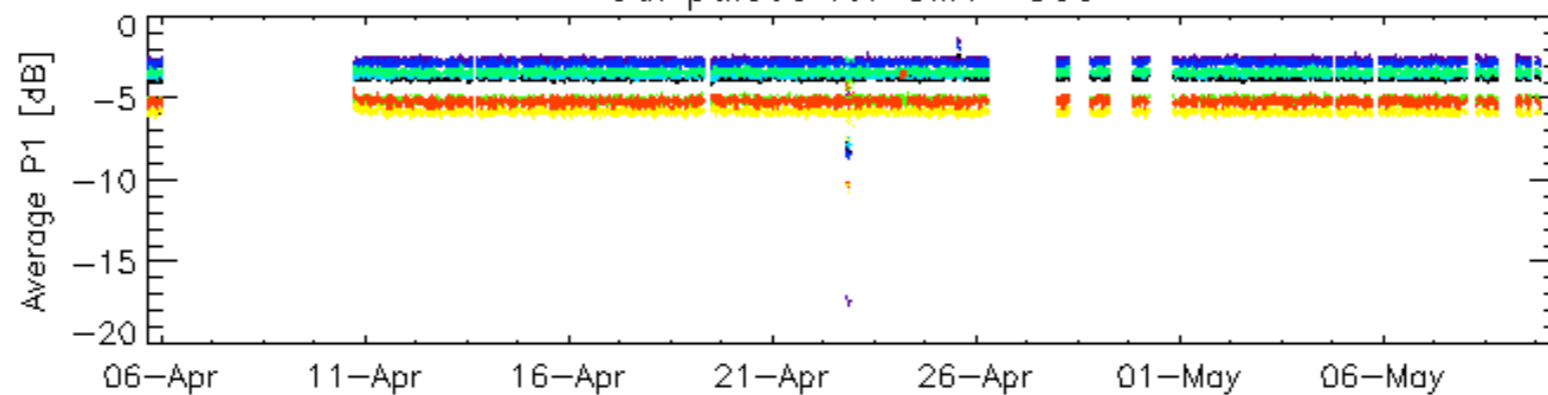


Cal pulses for WVS IS2



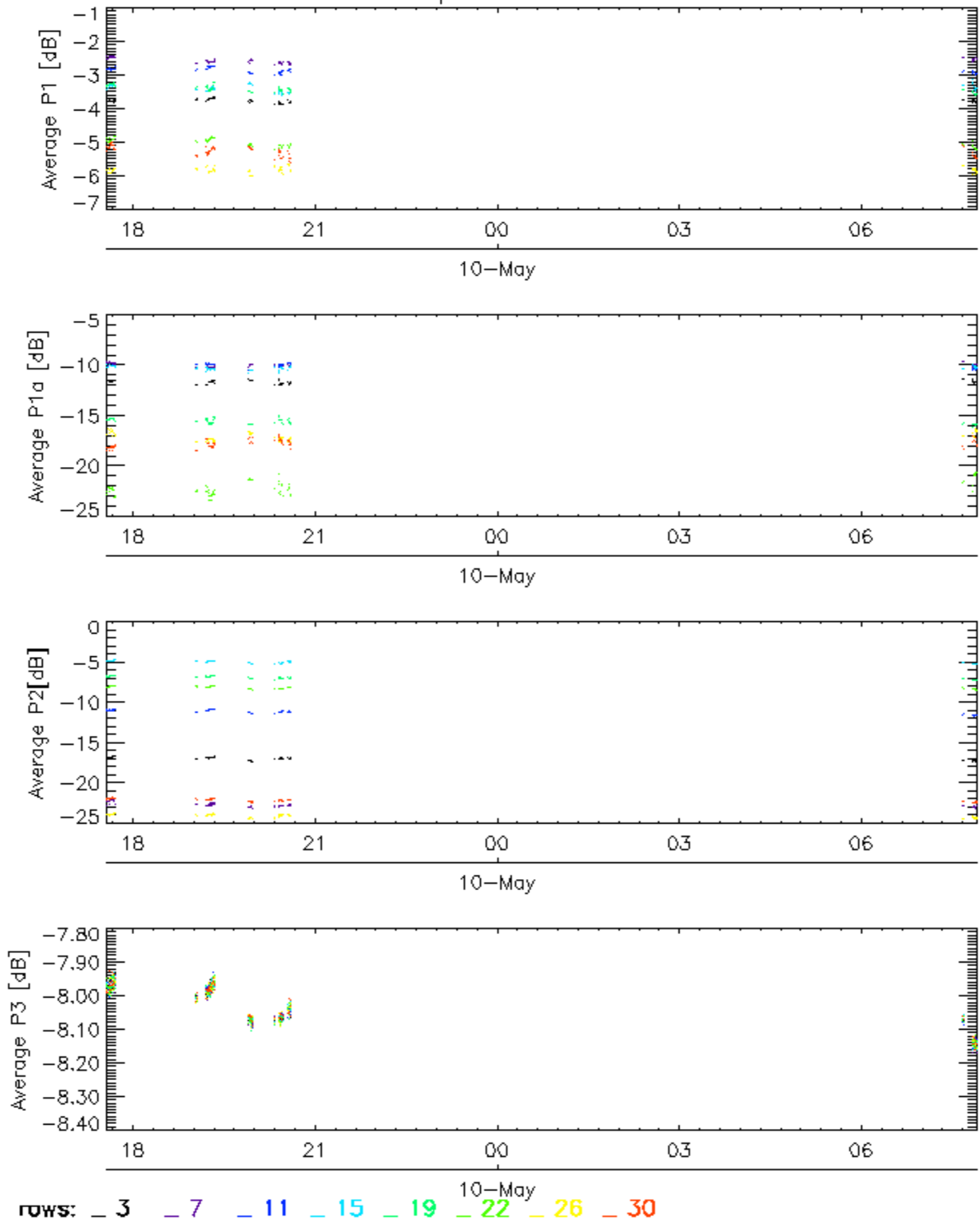
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

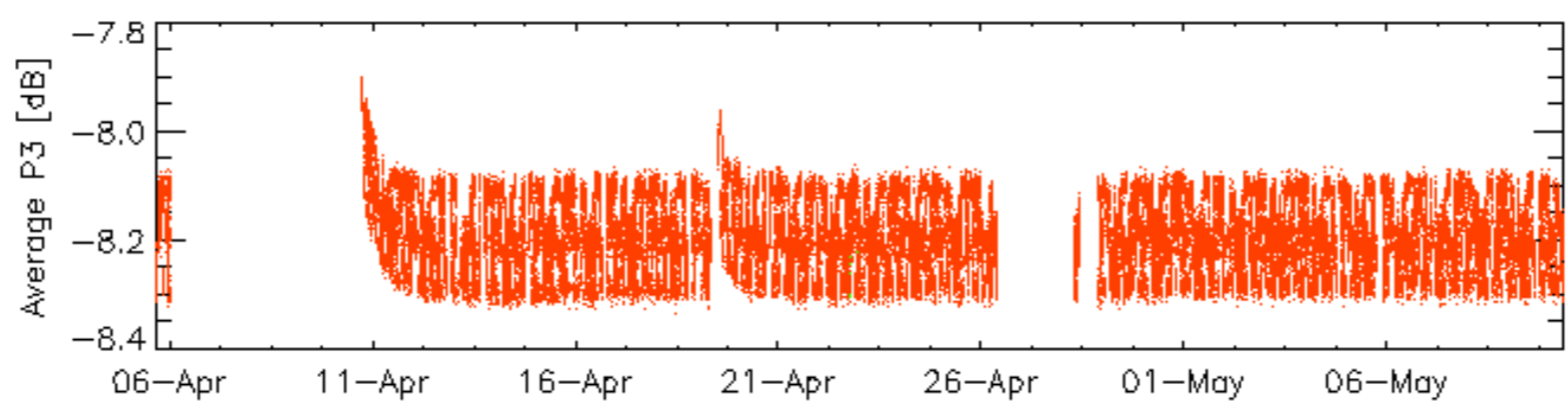
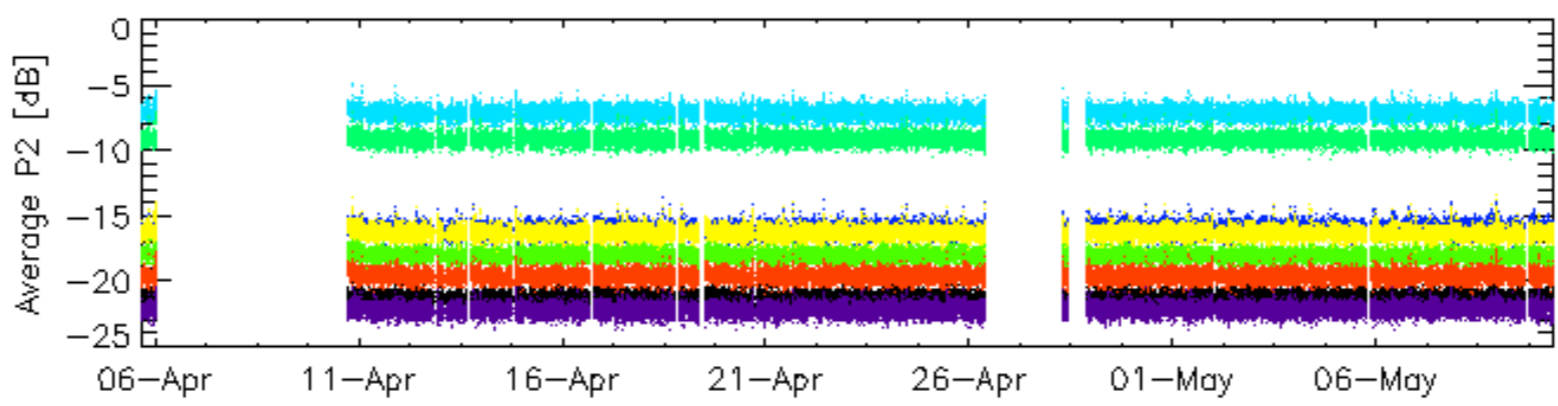
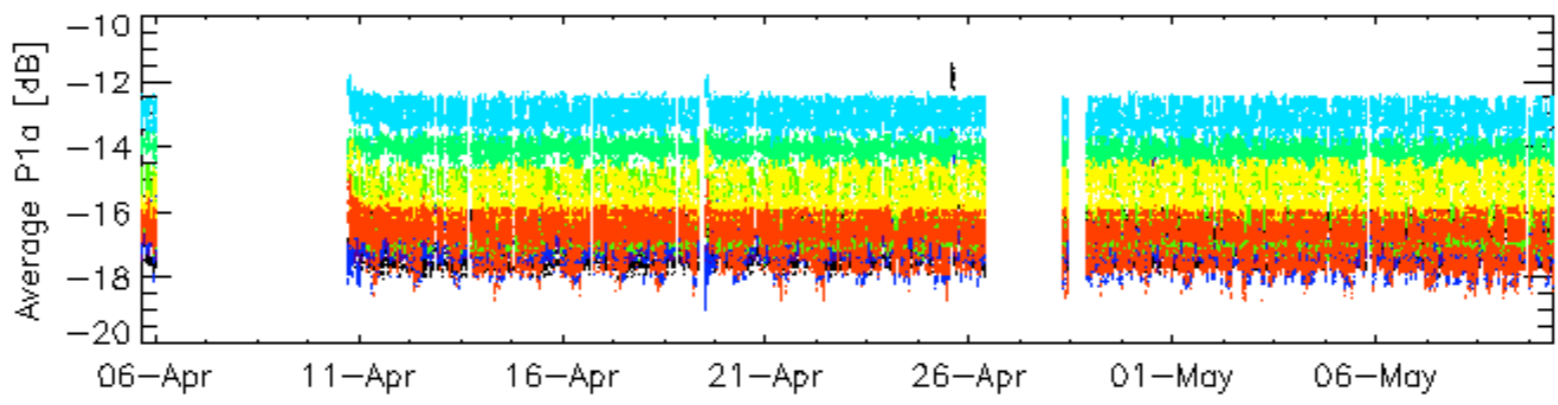
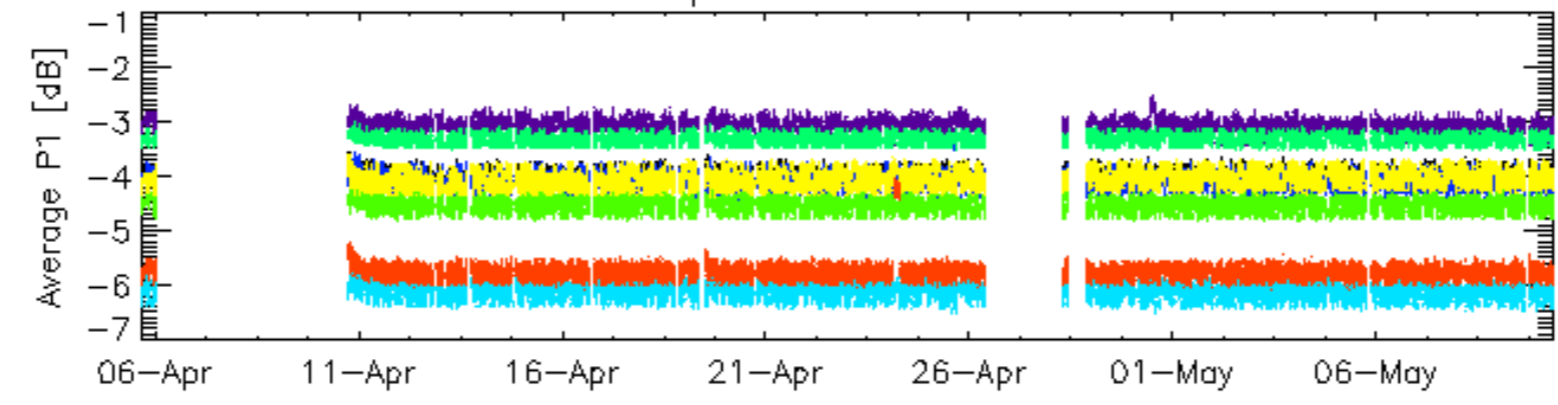


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

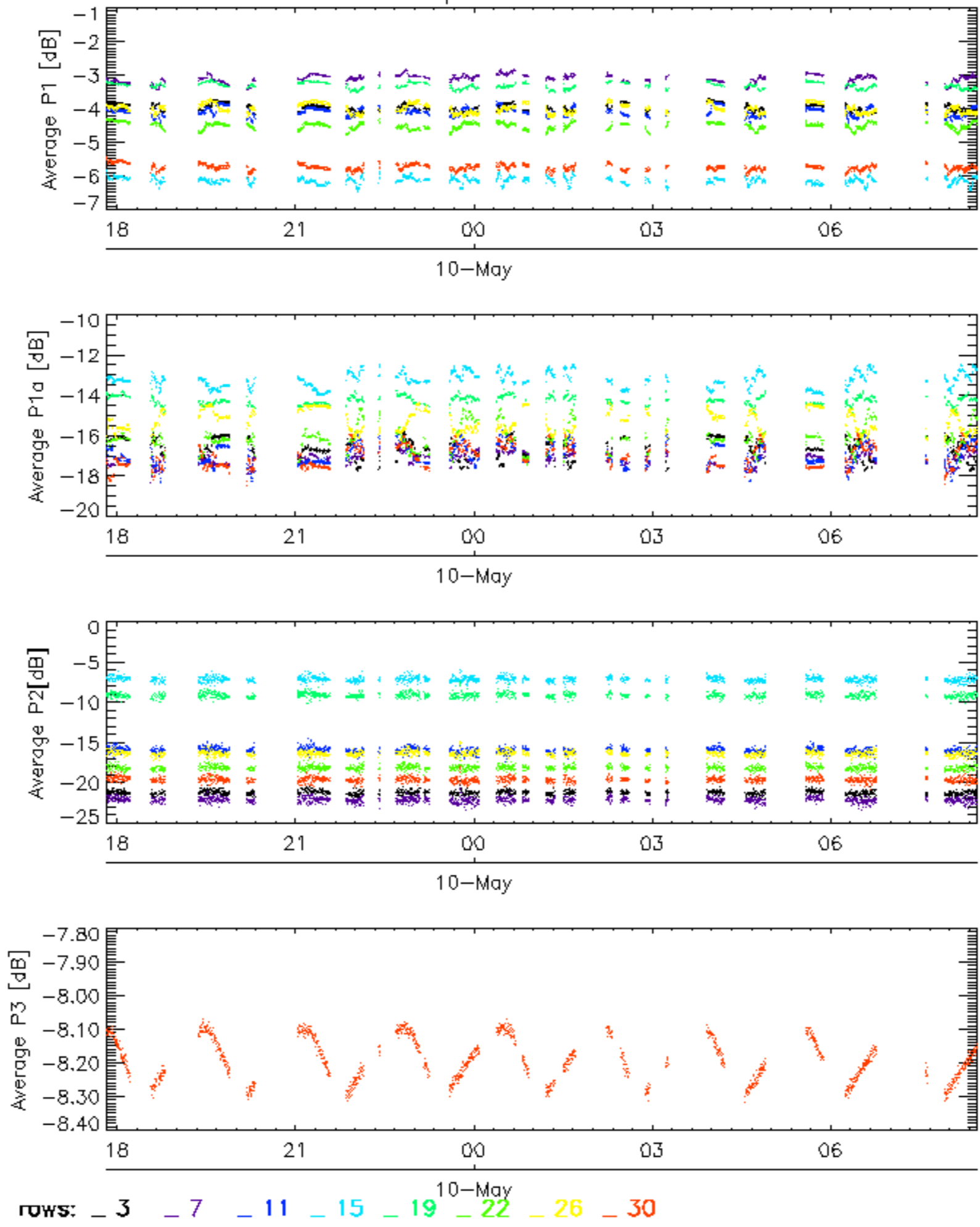


Cal pulses for WVS IS2



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

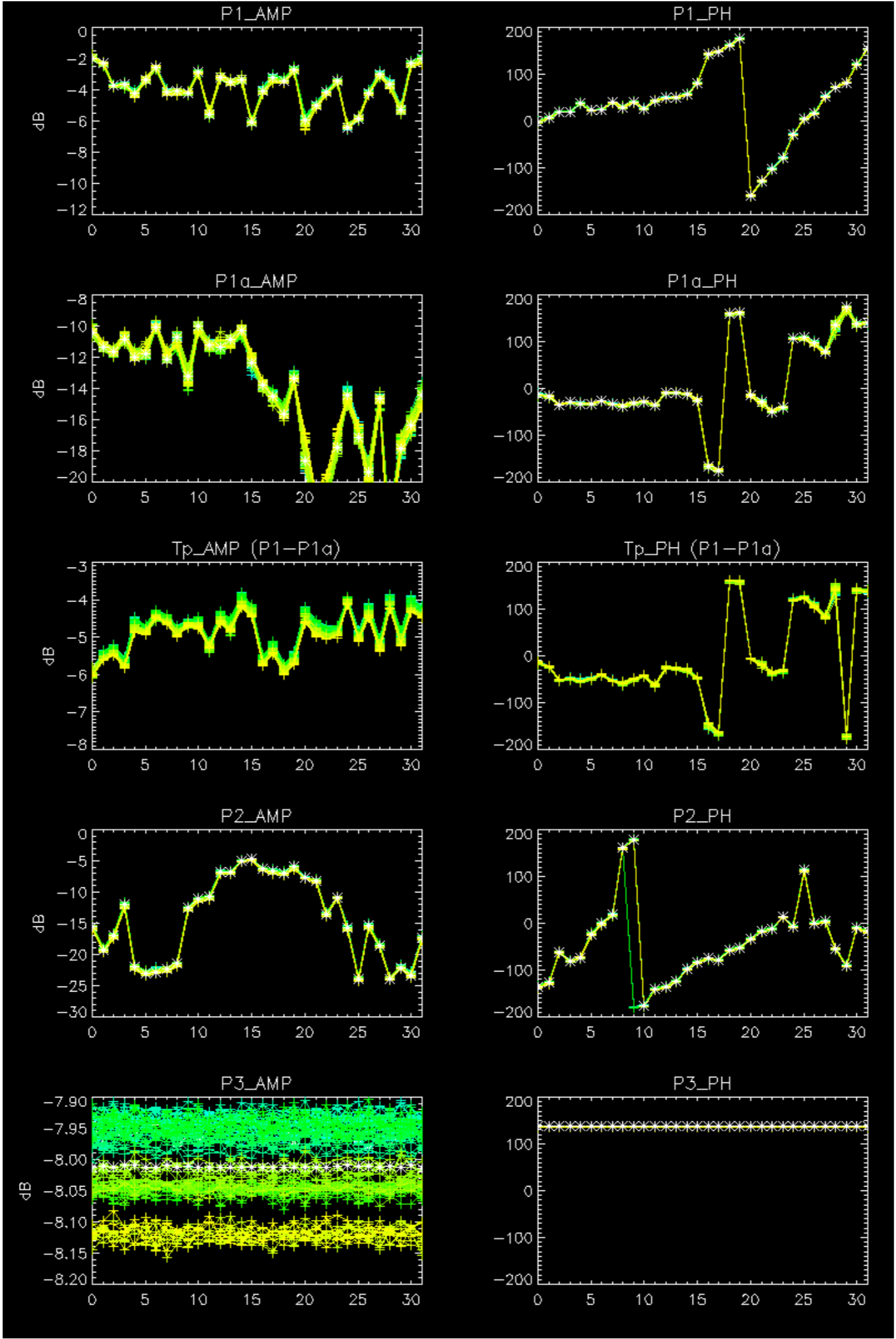
Cal pulses for WVS IS2

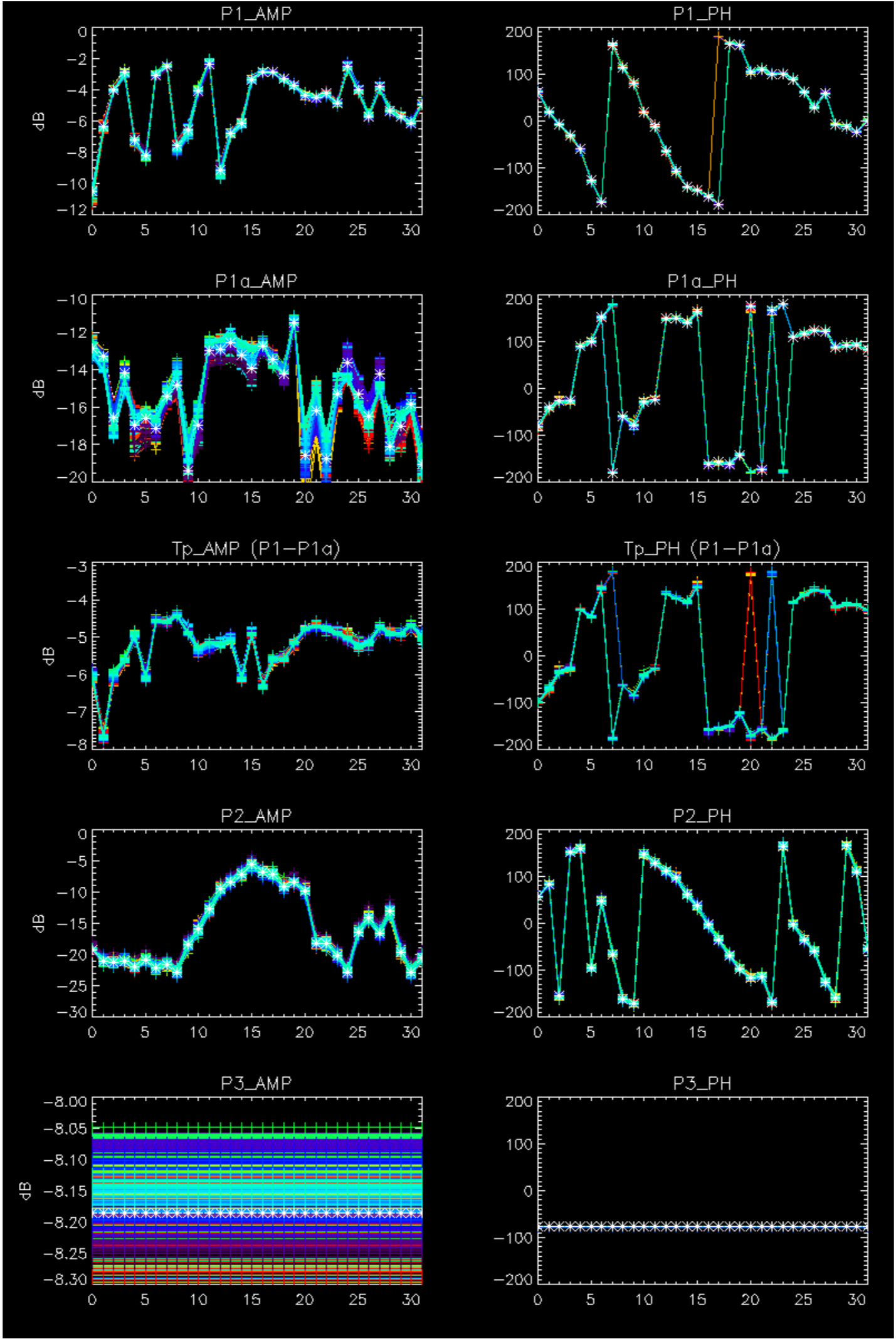


No anomalies observed on available browse products



No anomalies observed.

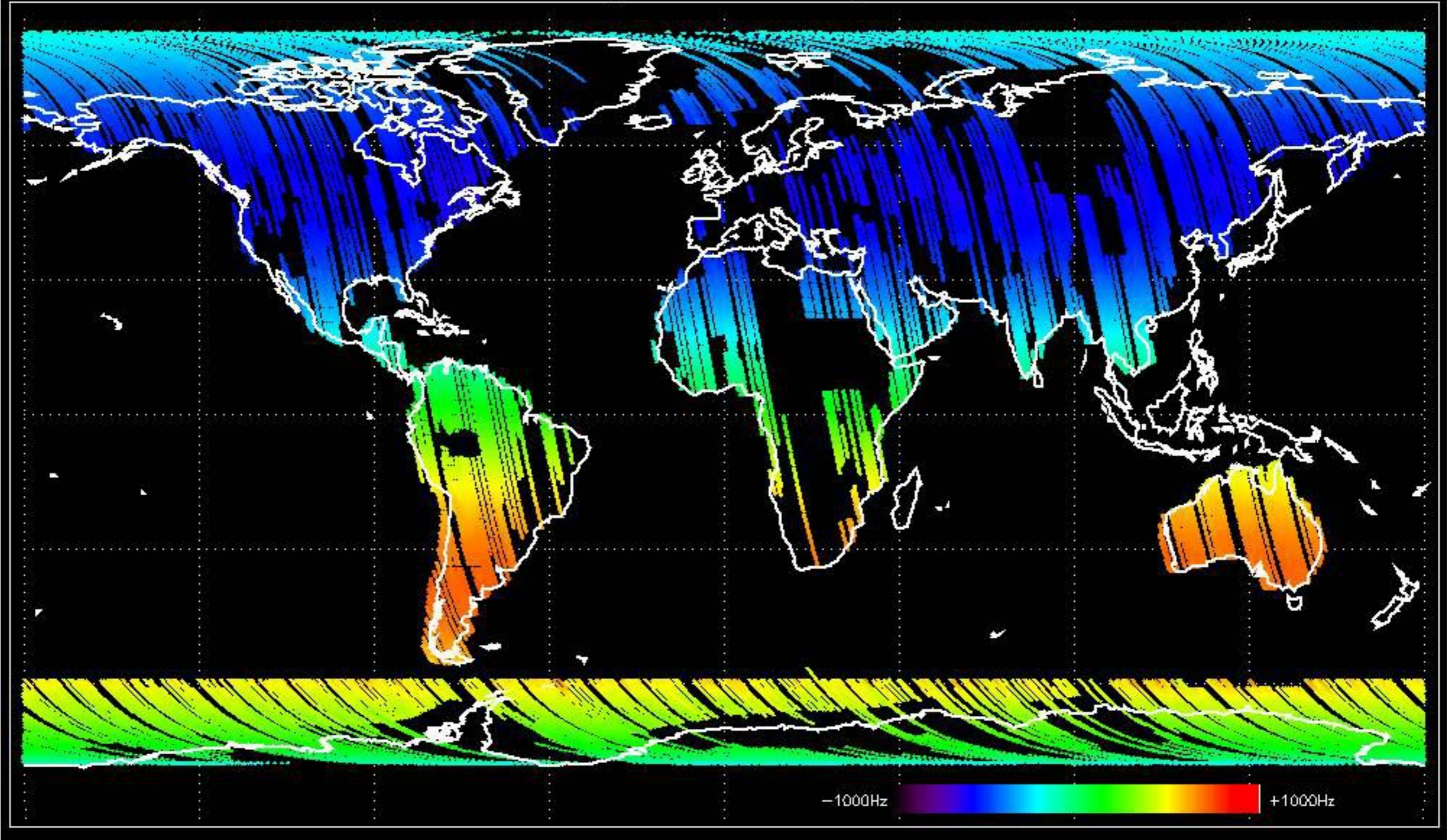




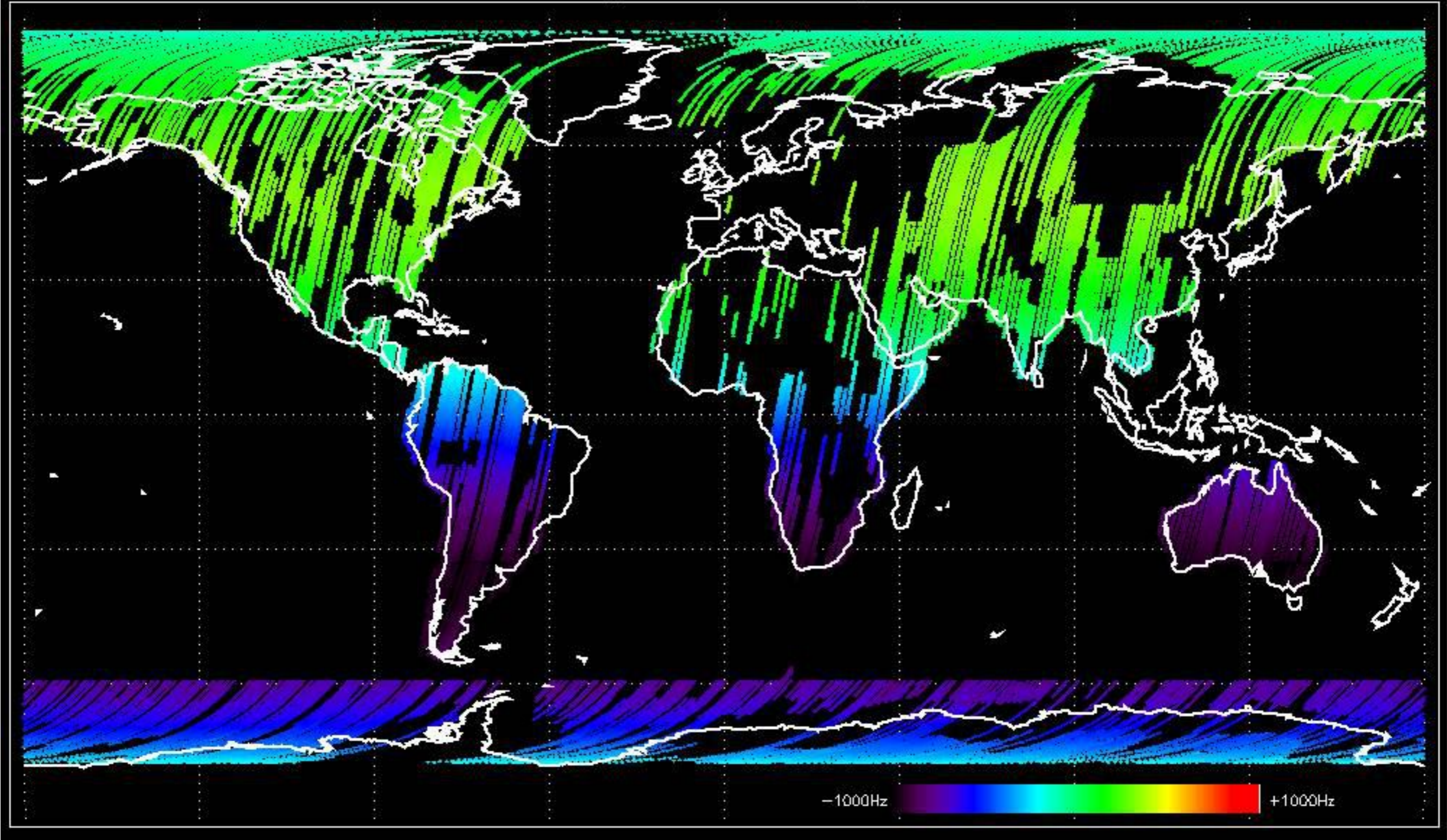
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



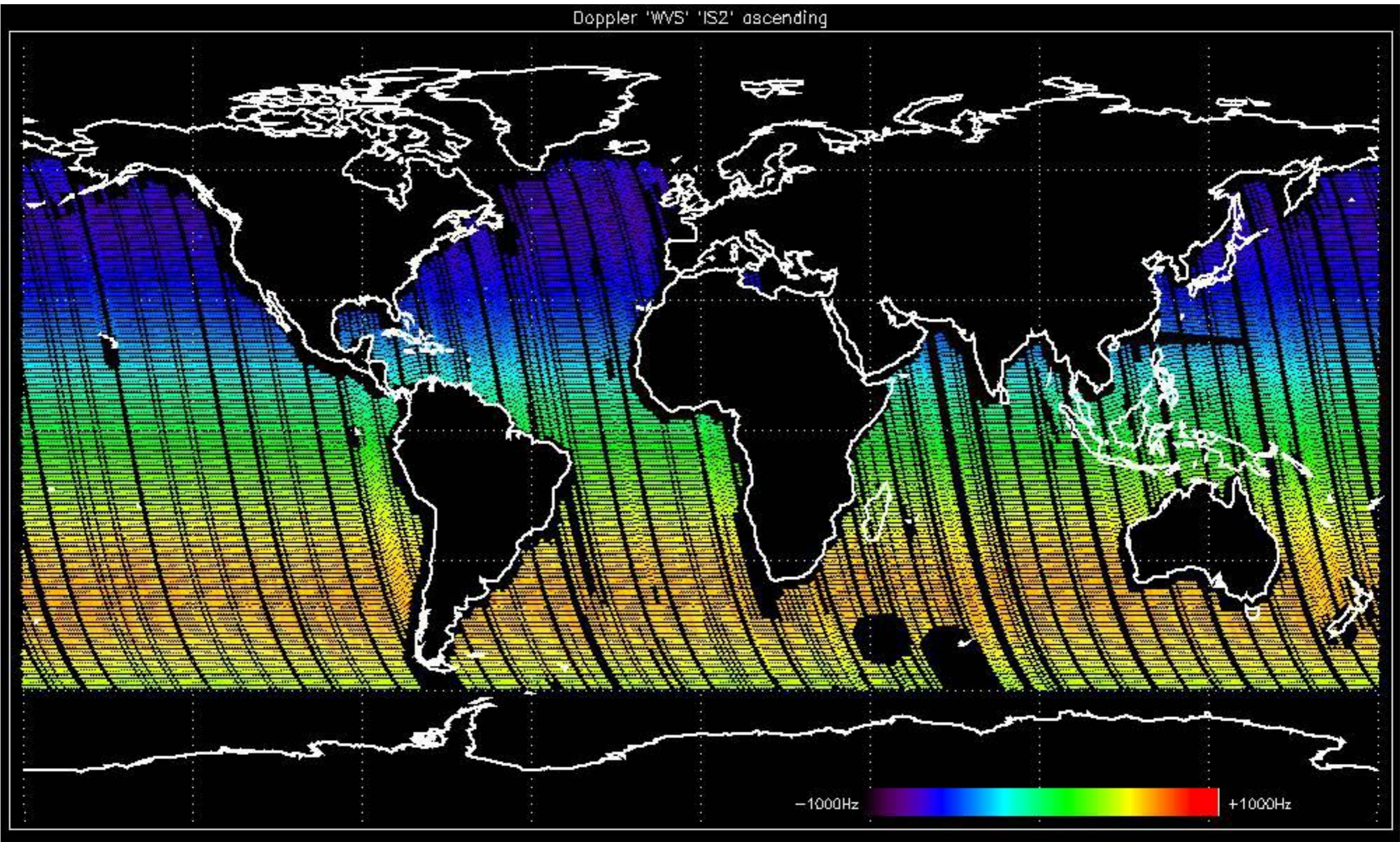
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

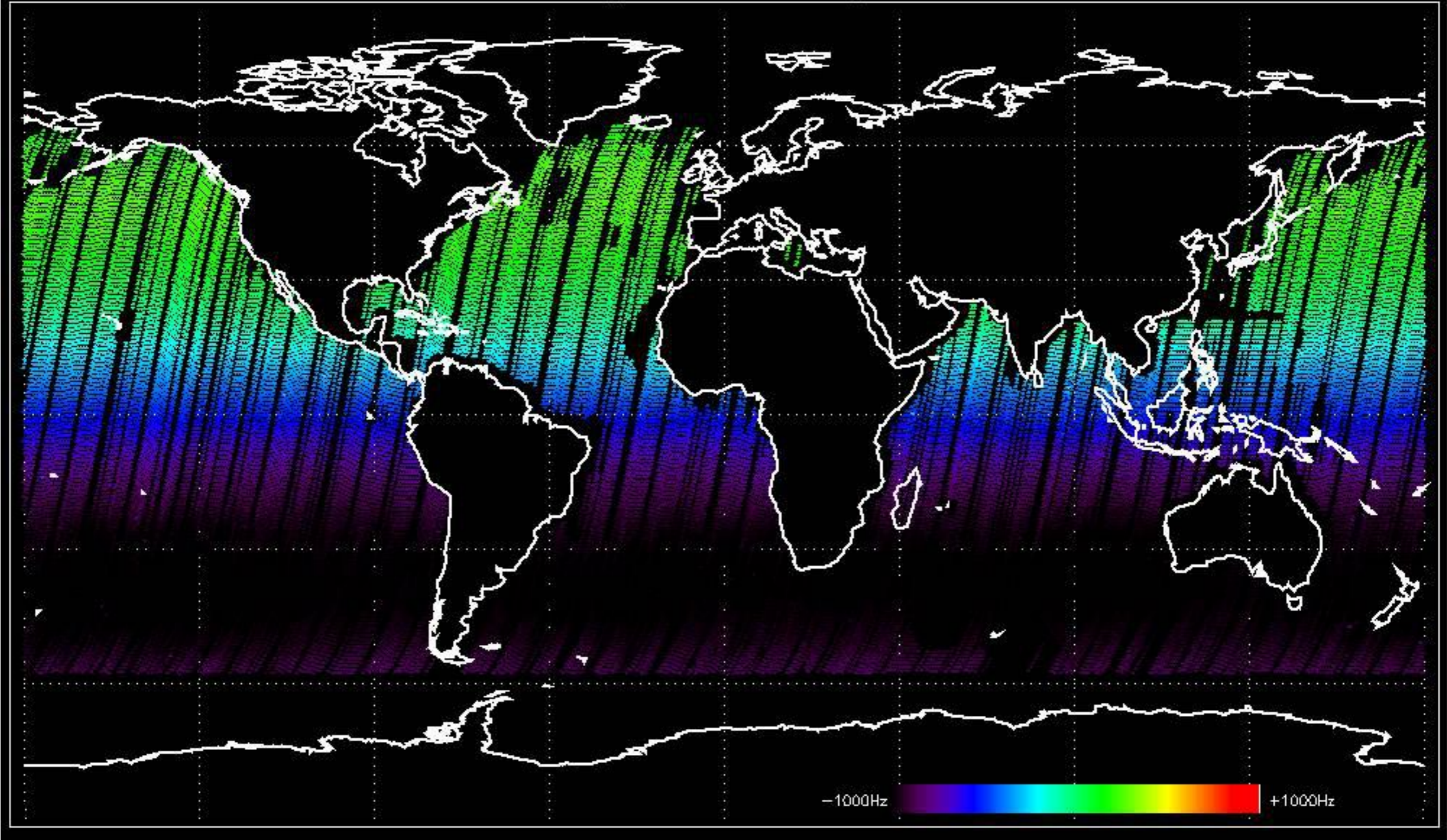


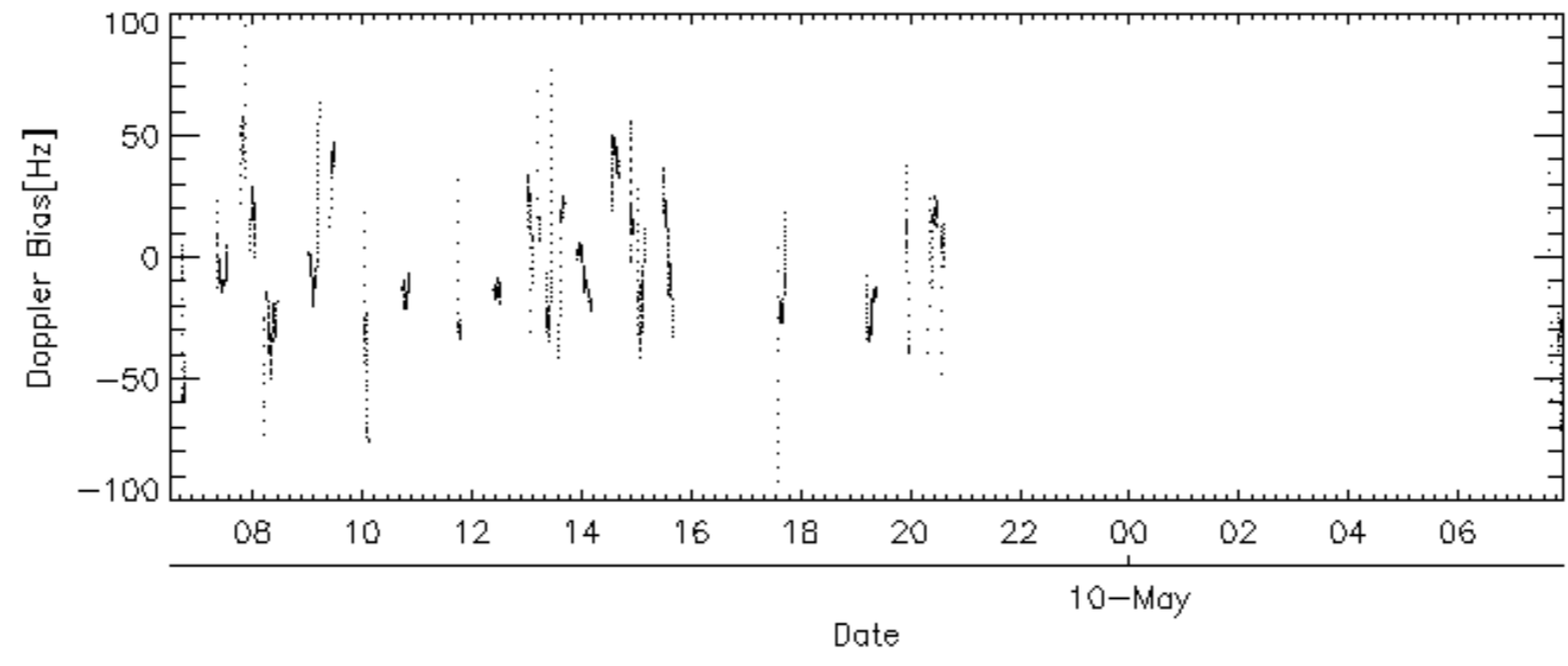
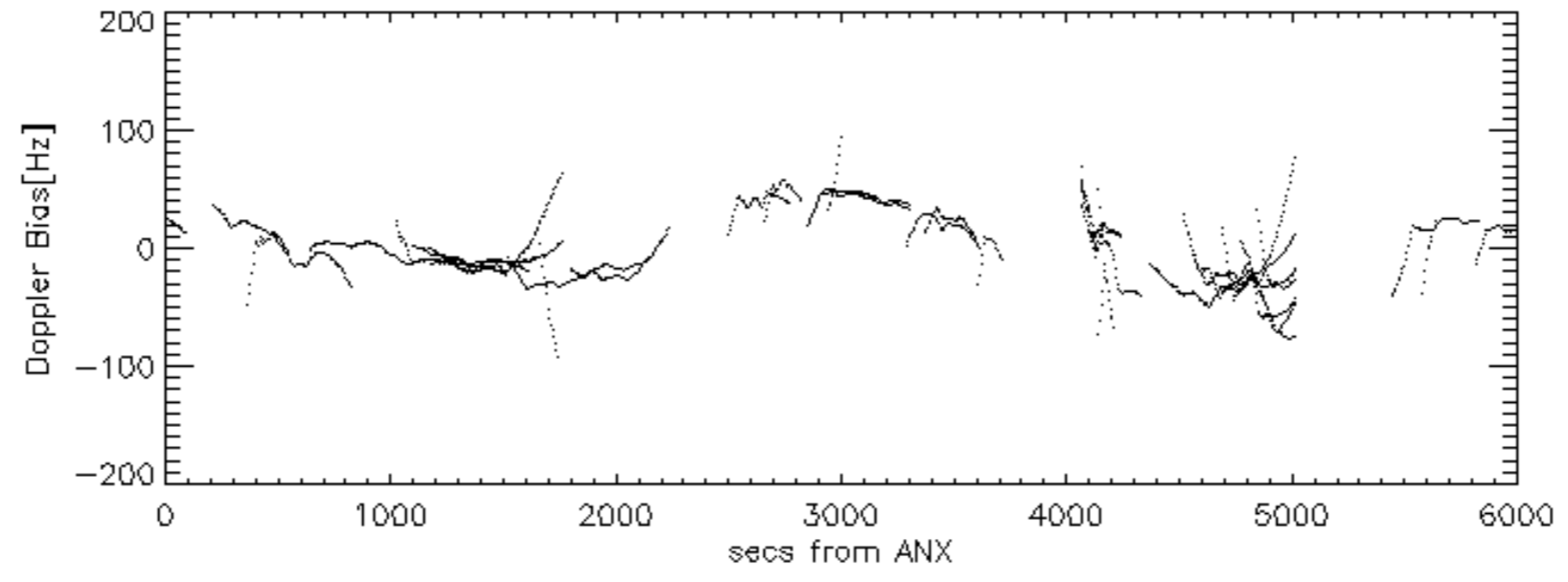
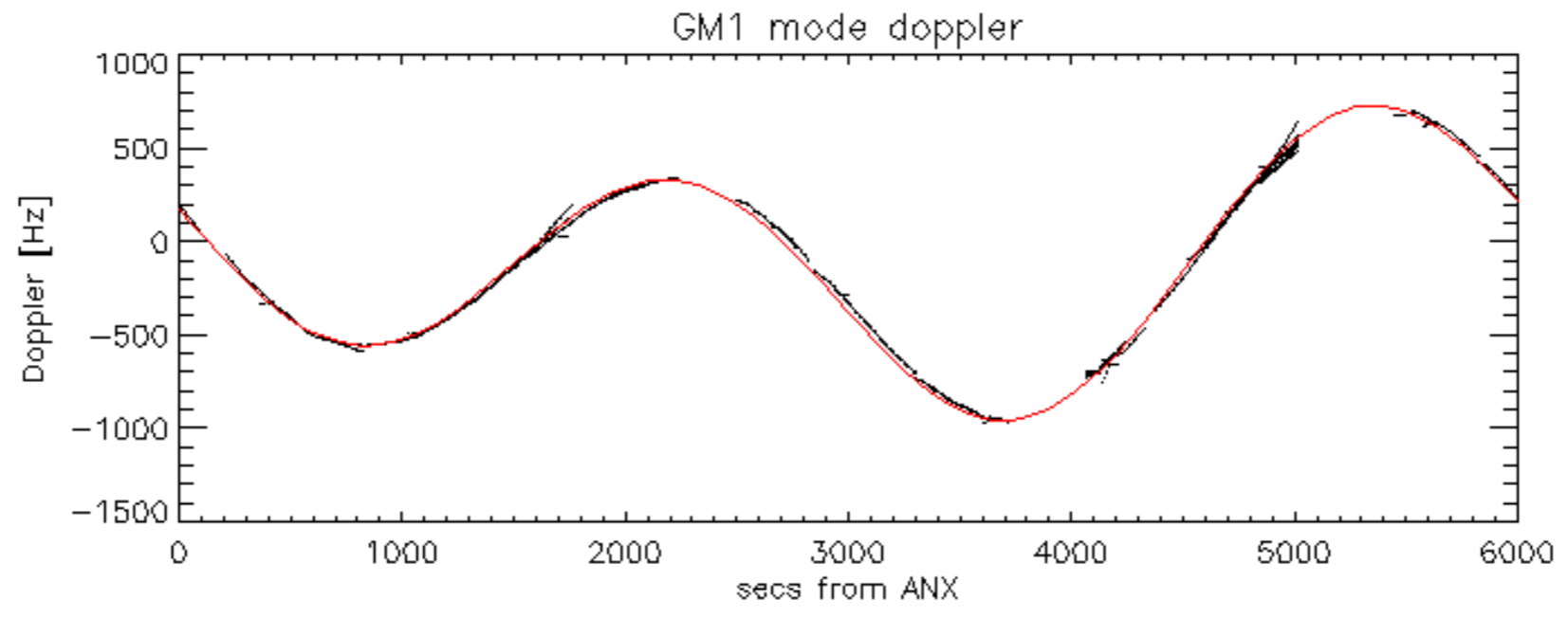
Doppler 'WVS' 'IS2' ascending

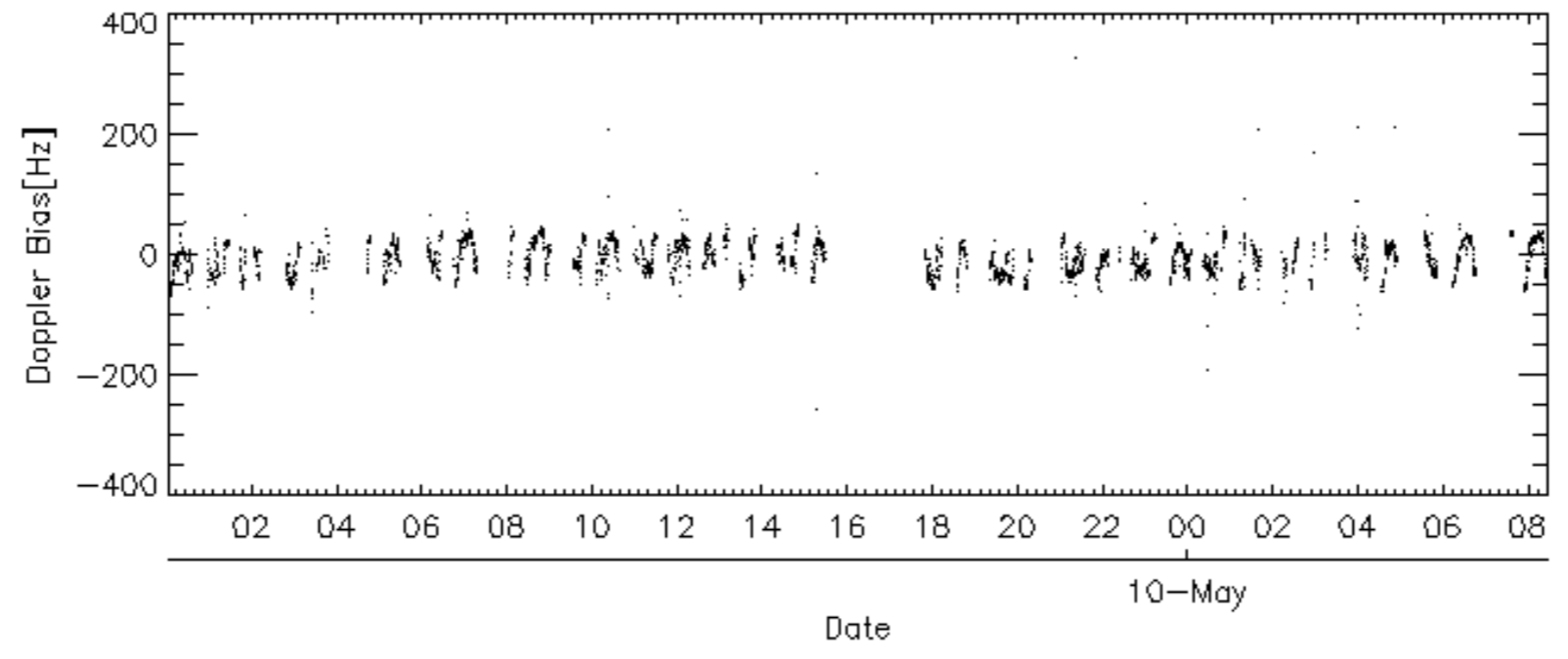
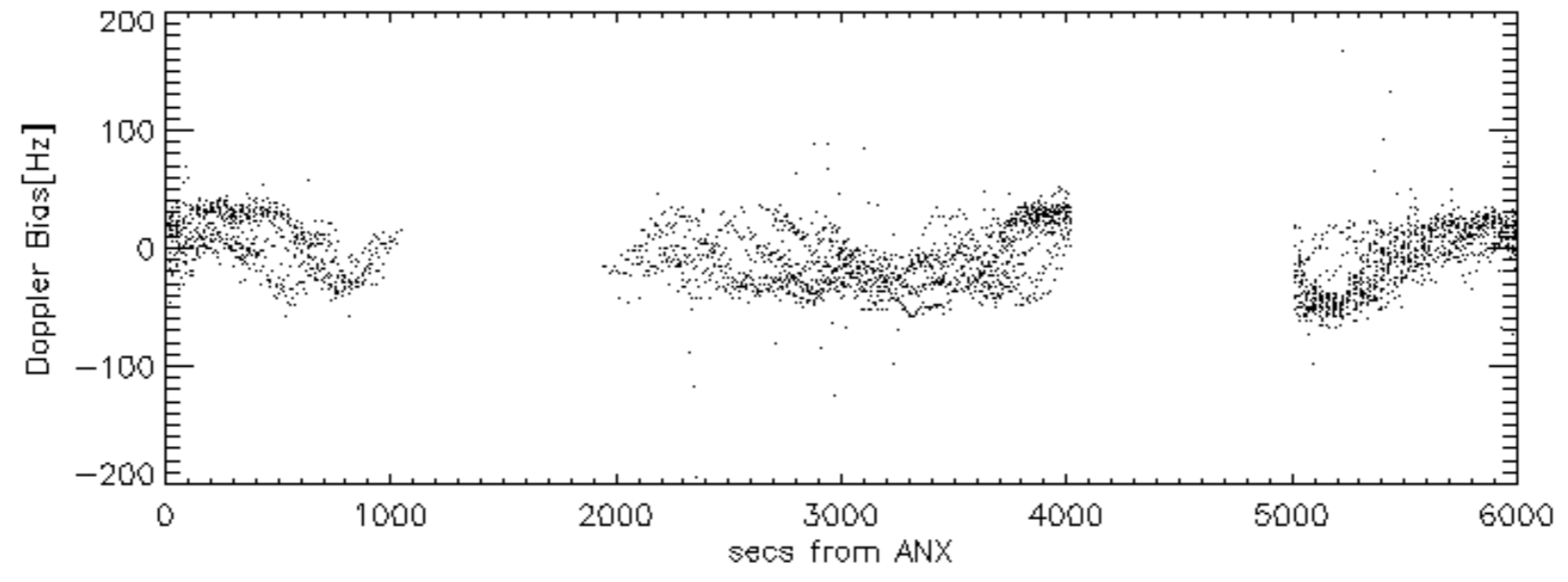
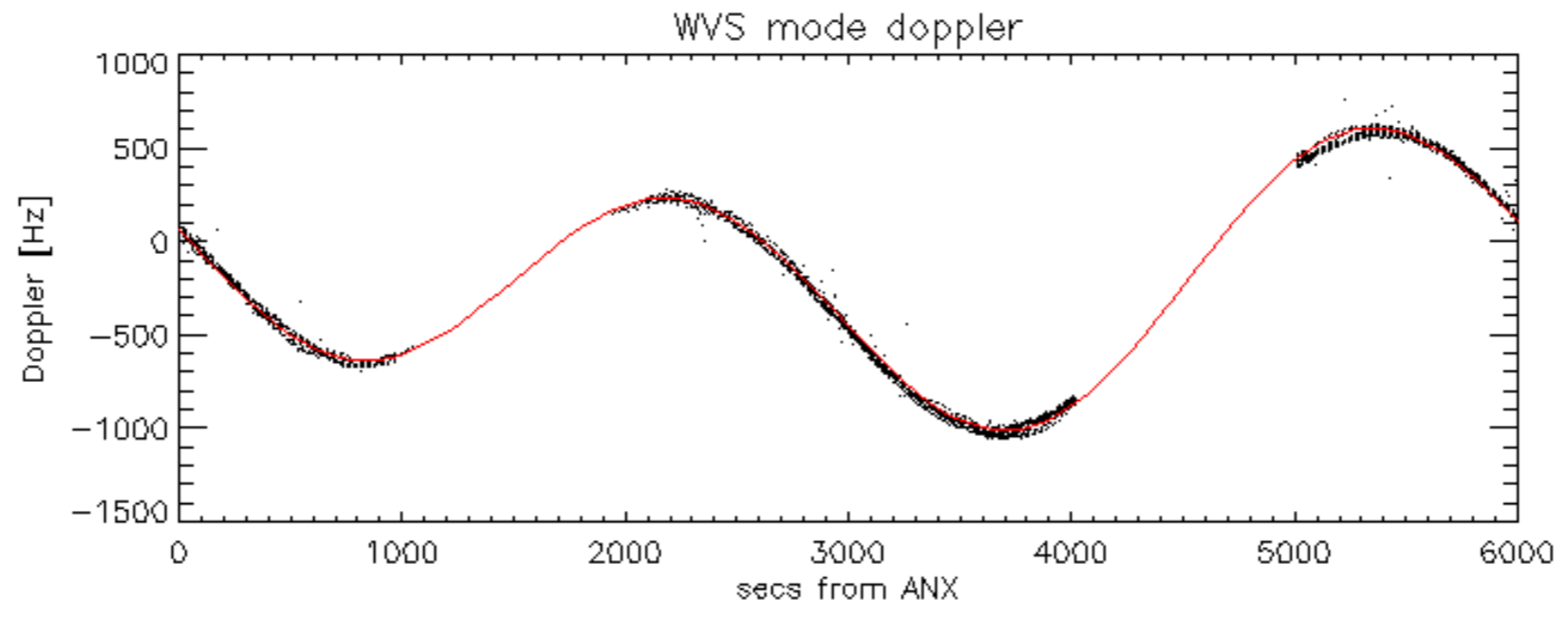




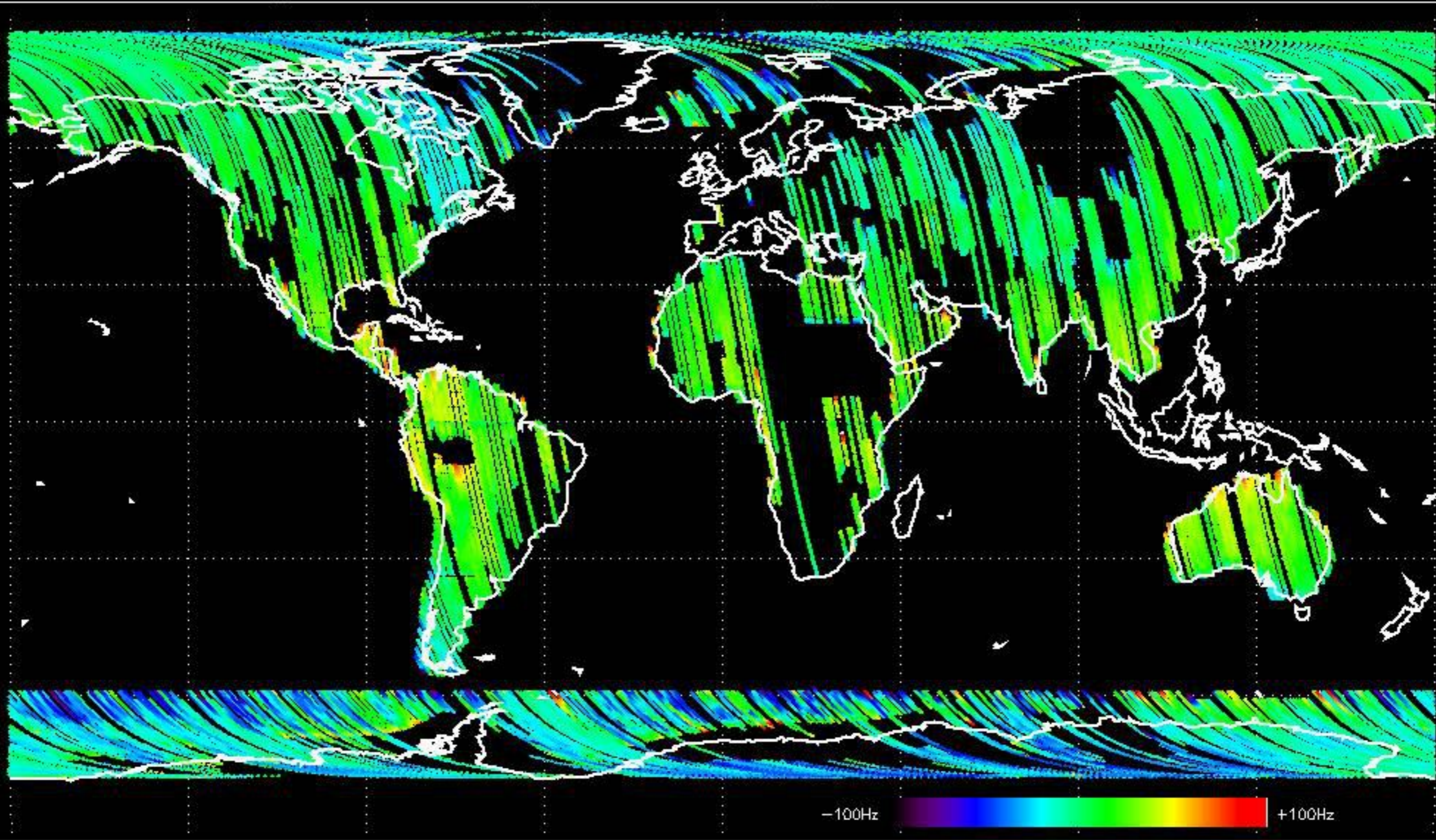
Doppler 'WVS' 'IS2' descending





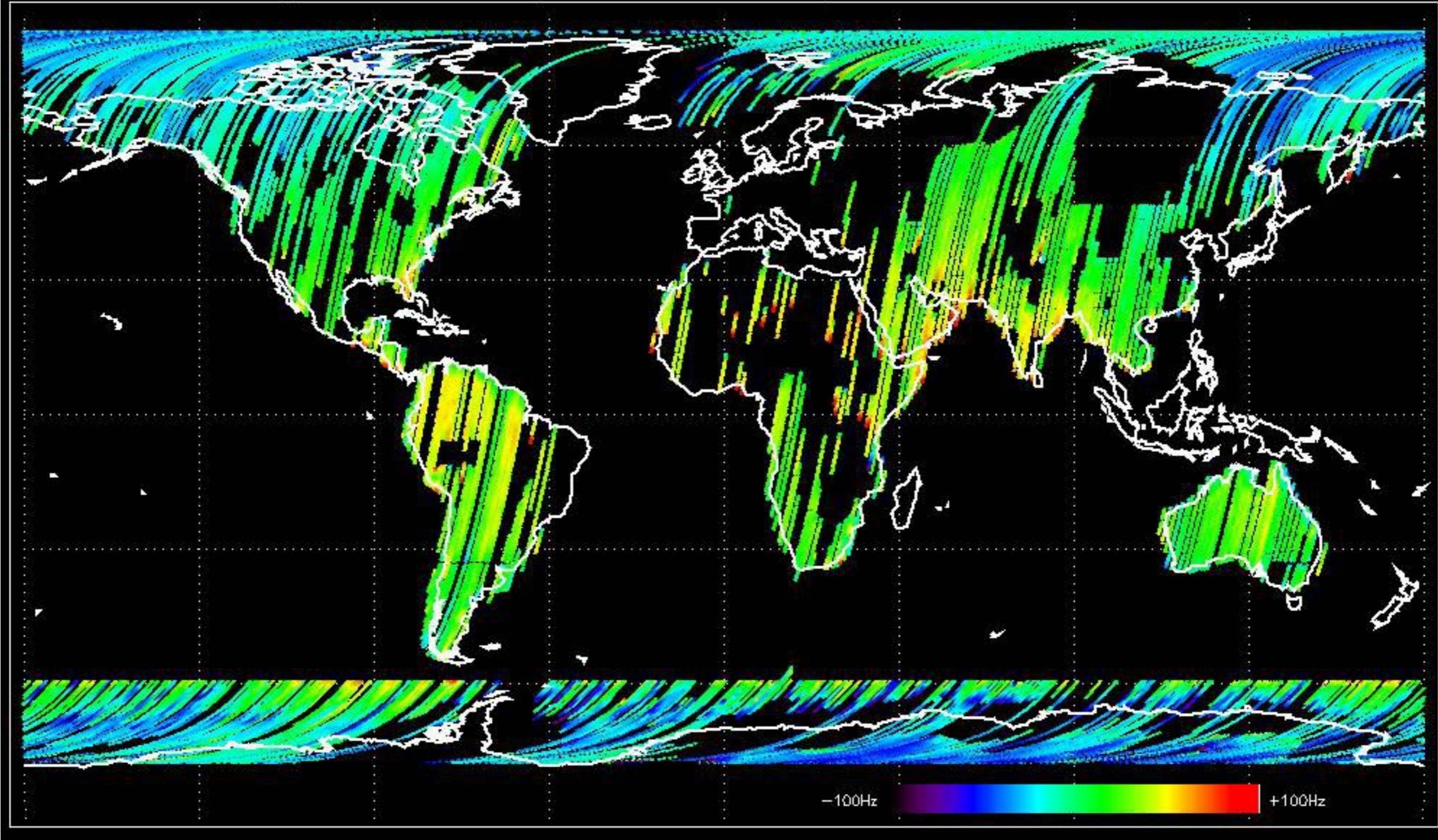


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -13.182851 Hz

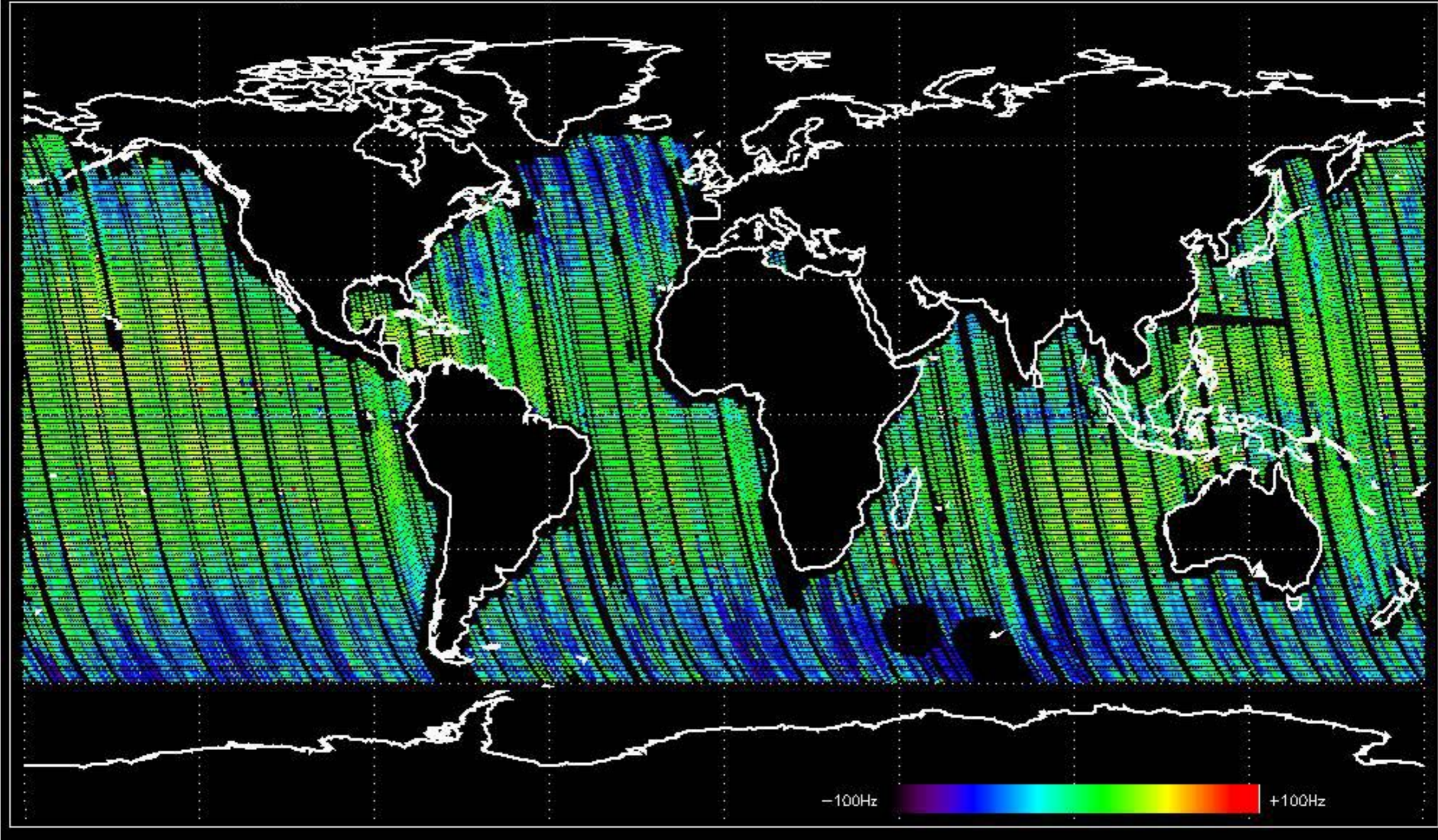


-100Hz +100Hz

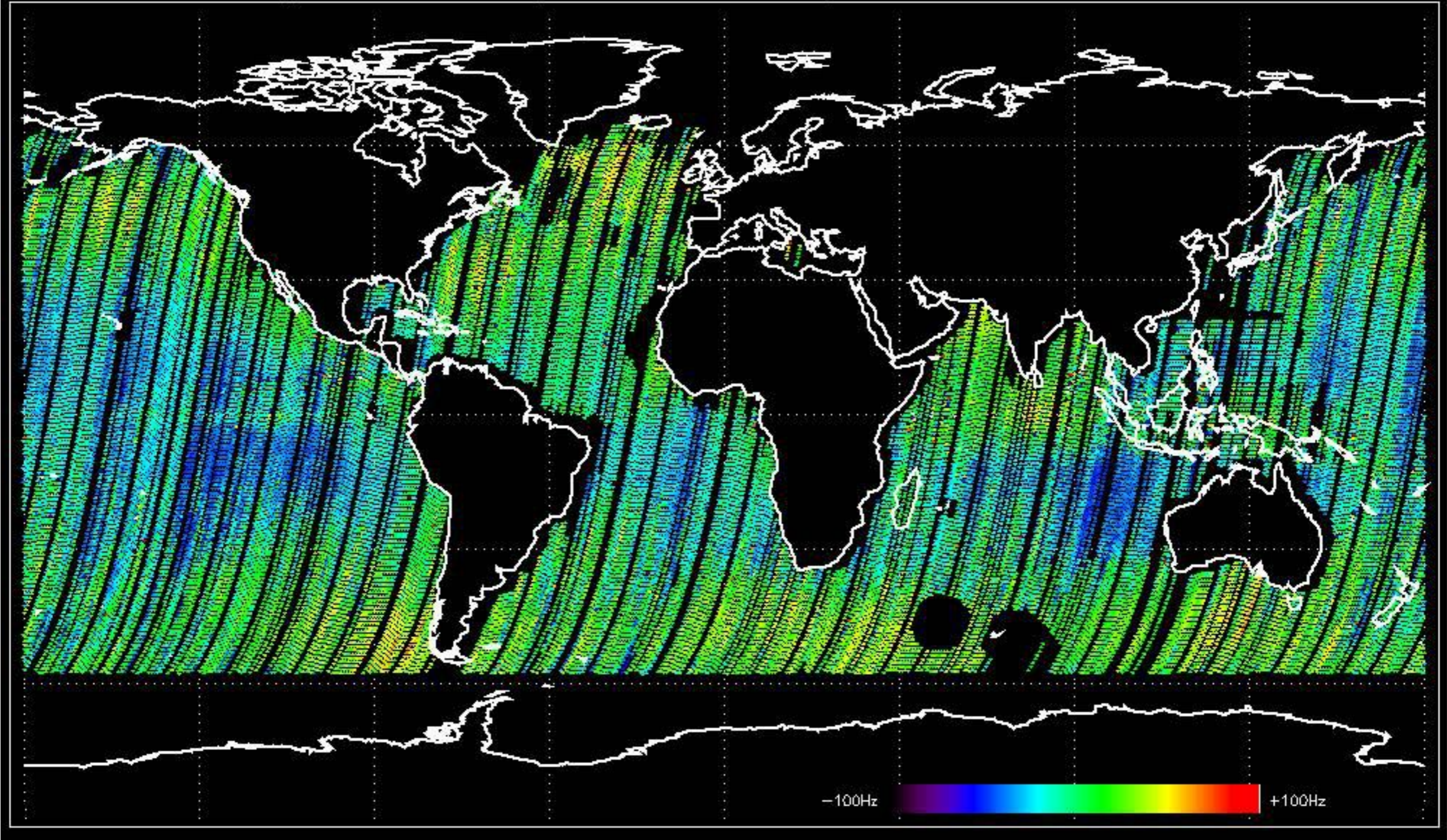
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.0339051 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.0839301 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.408434 Hz



No anomalies observed on available MS products:



No anomalies observed.

















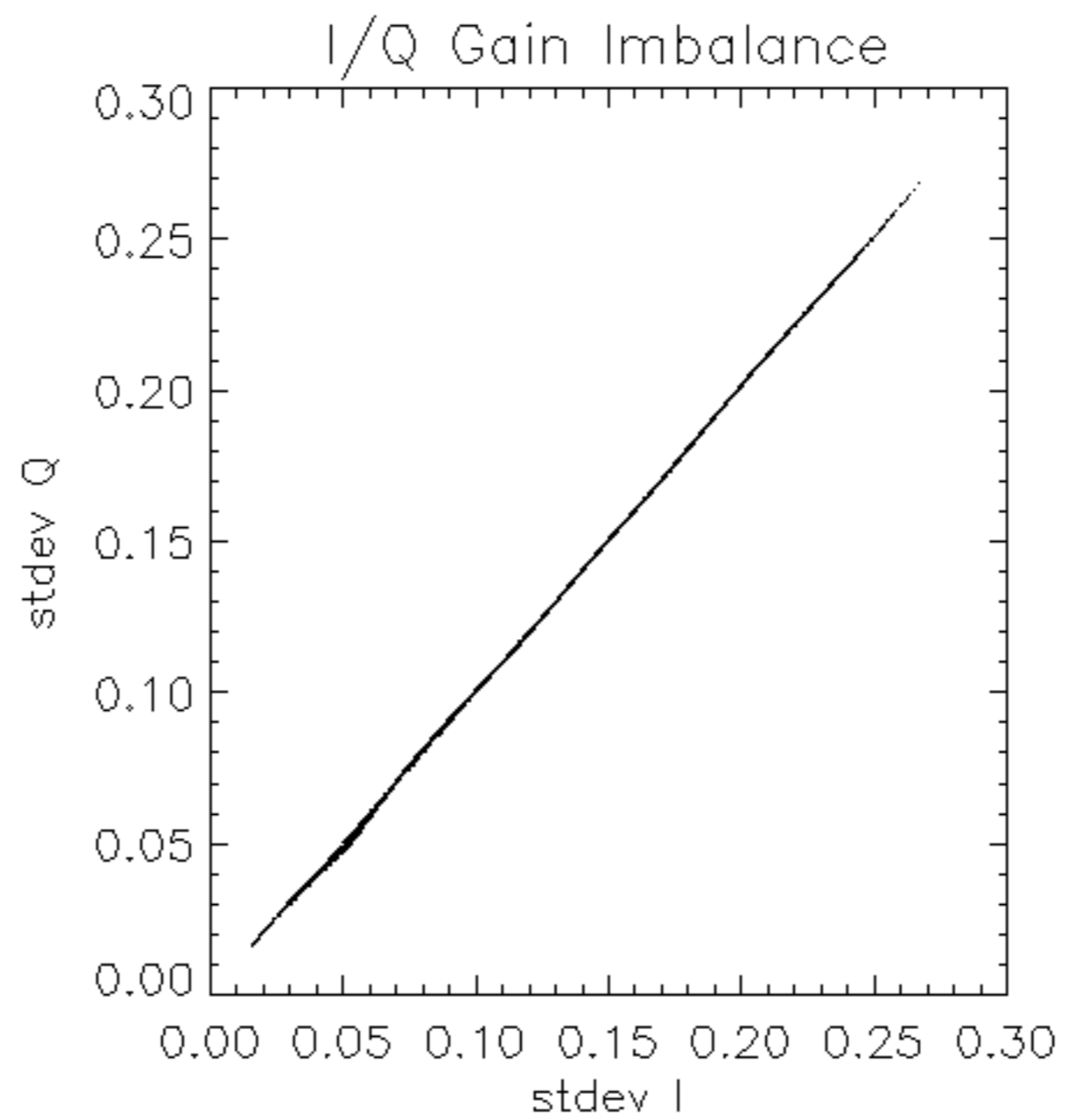


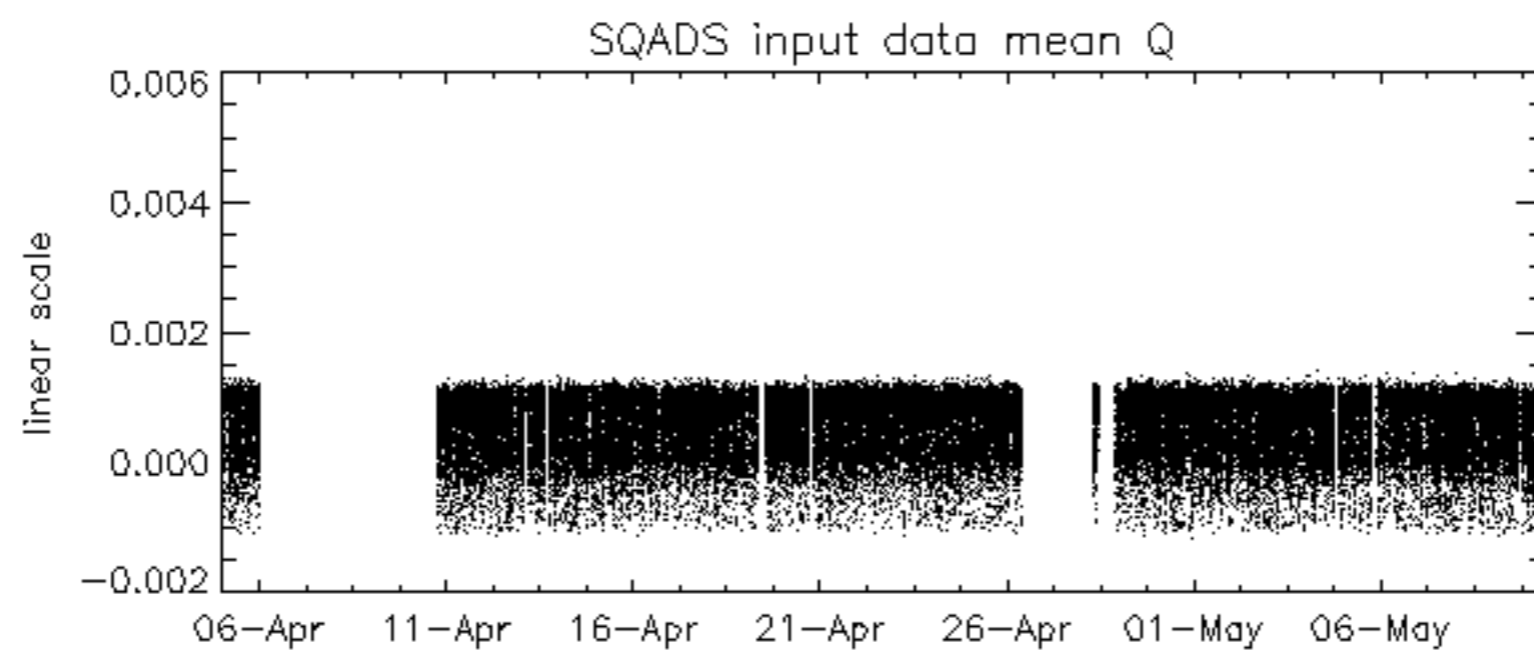
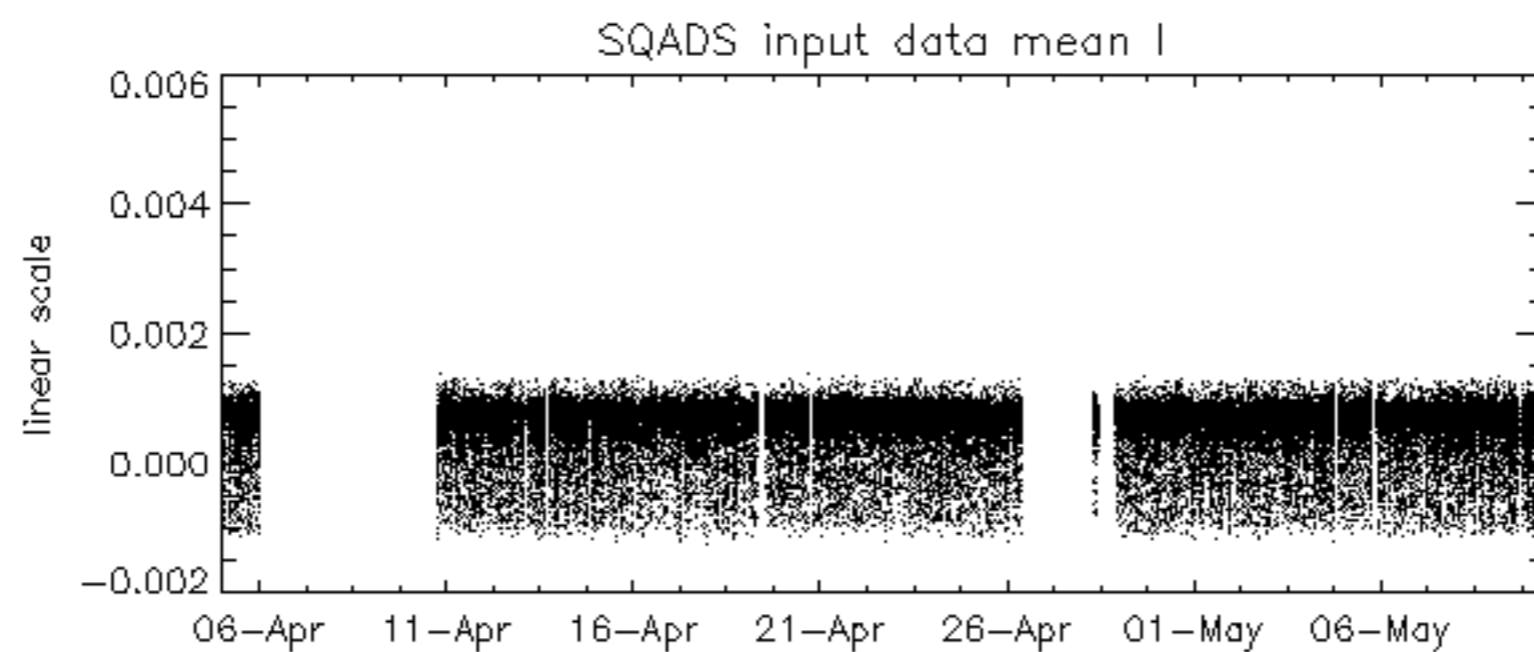
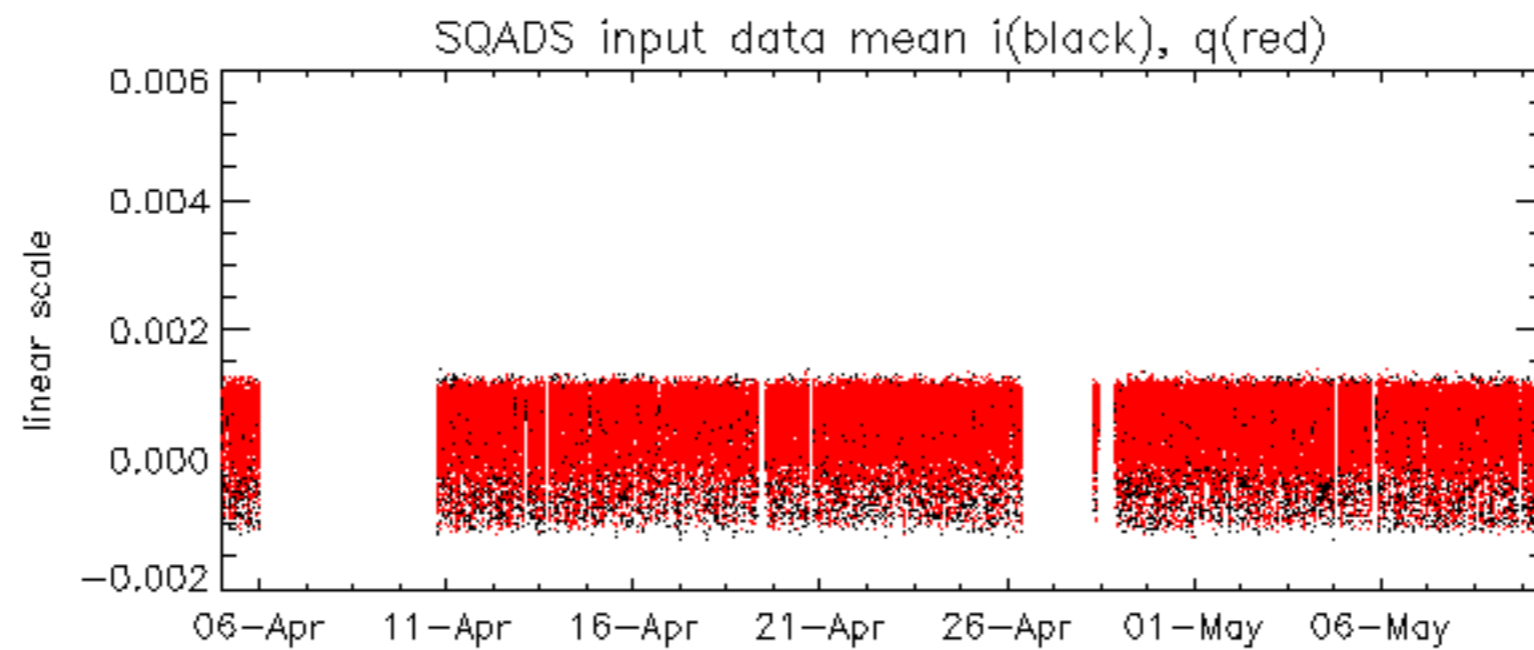


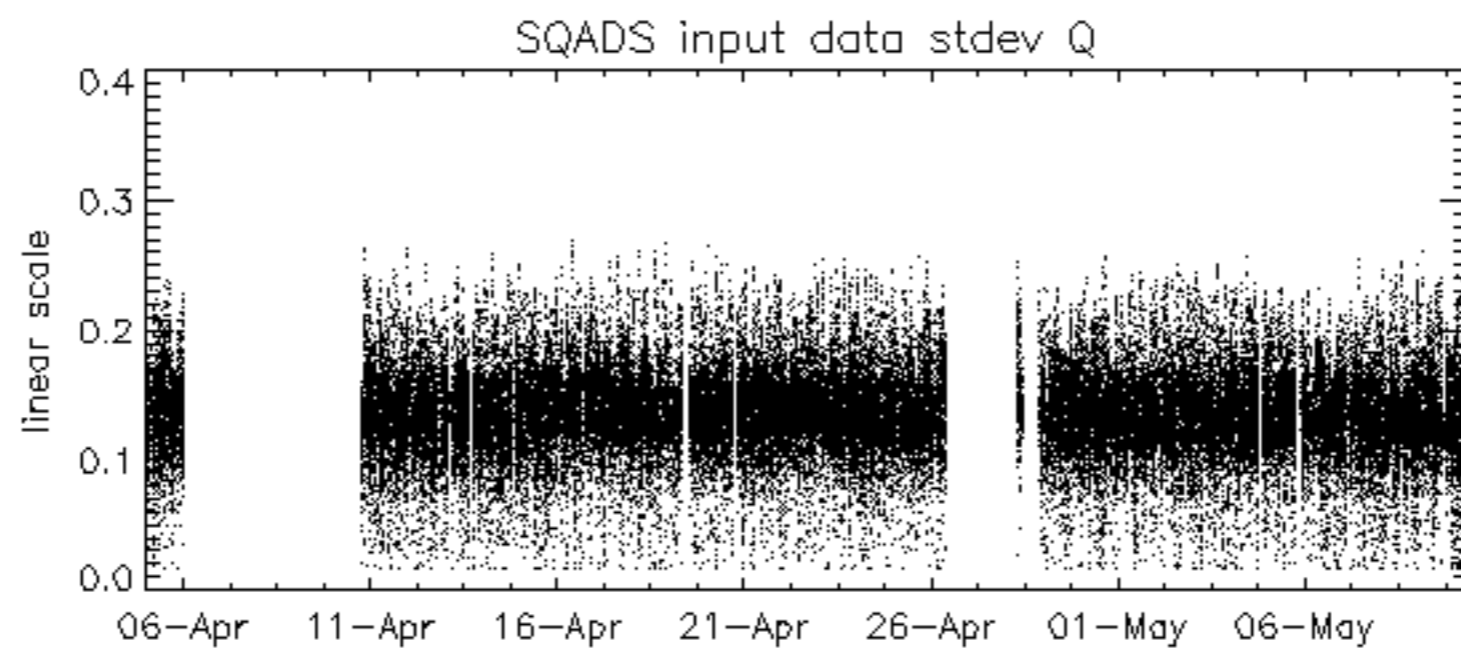
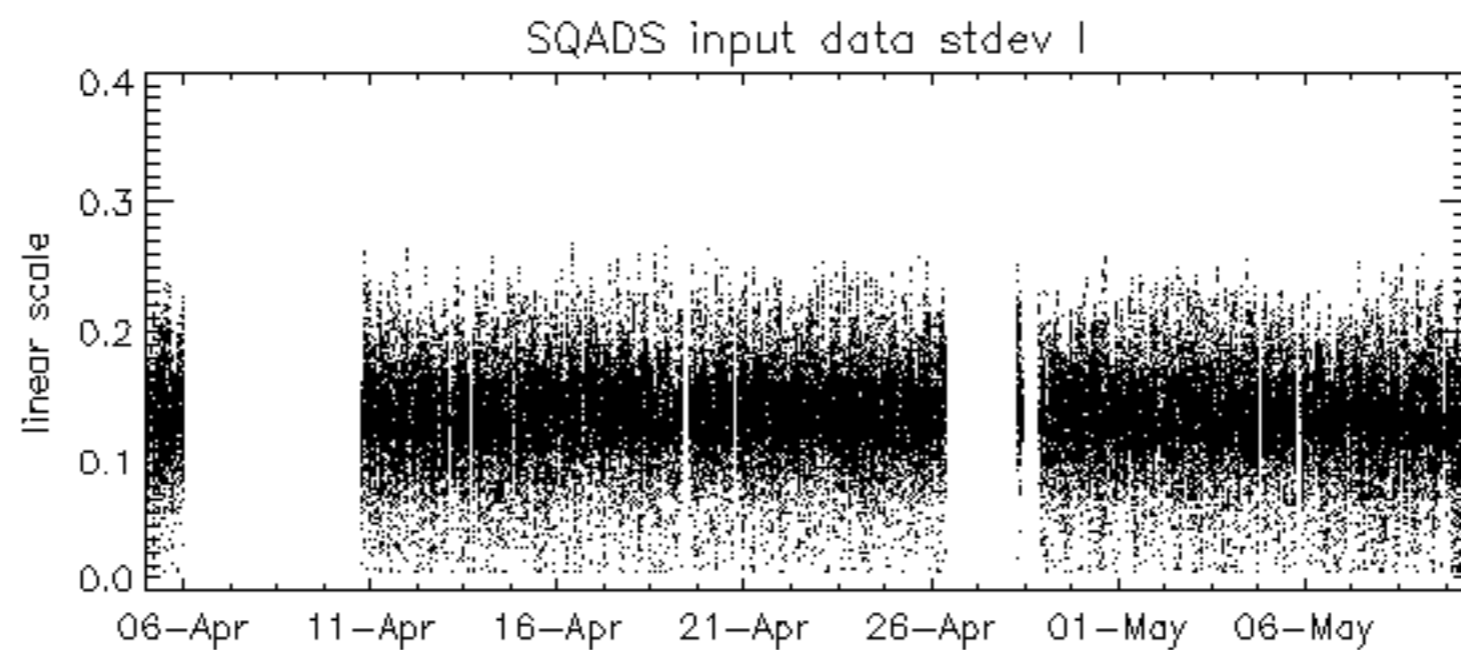
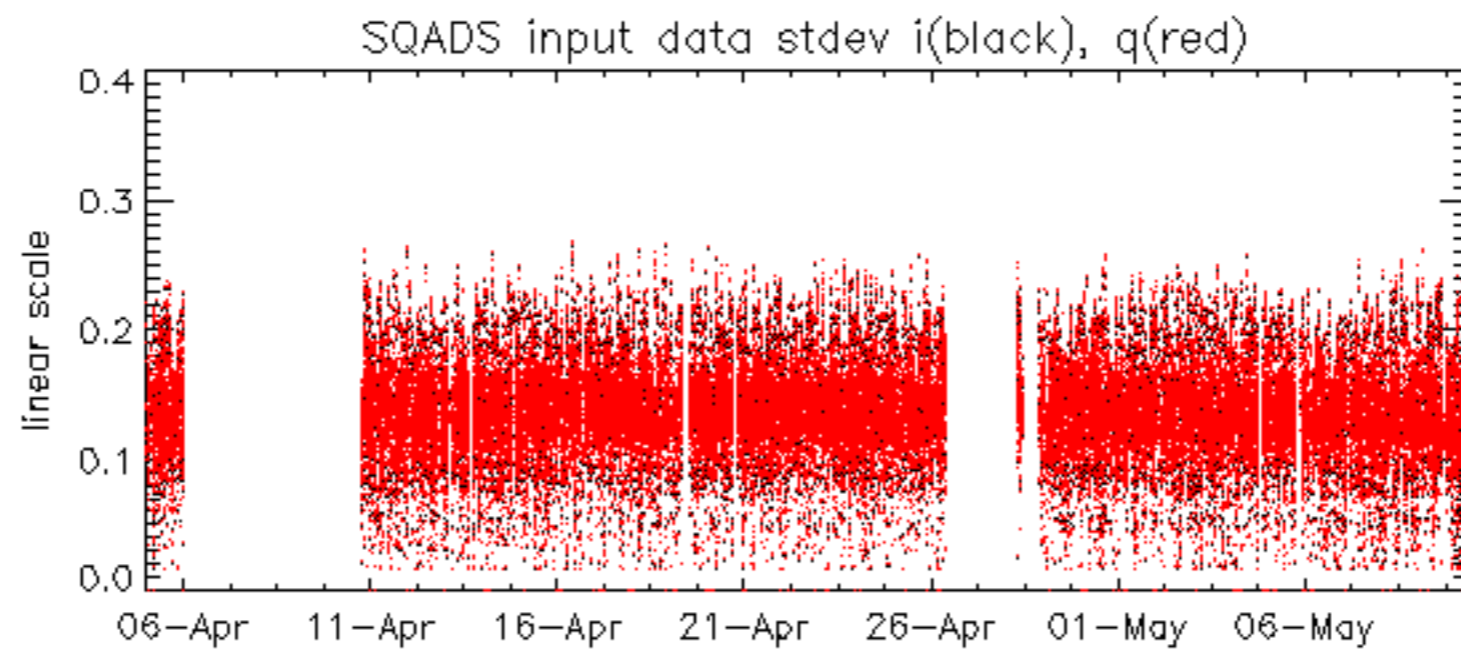






















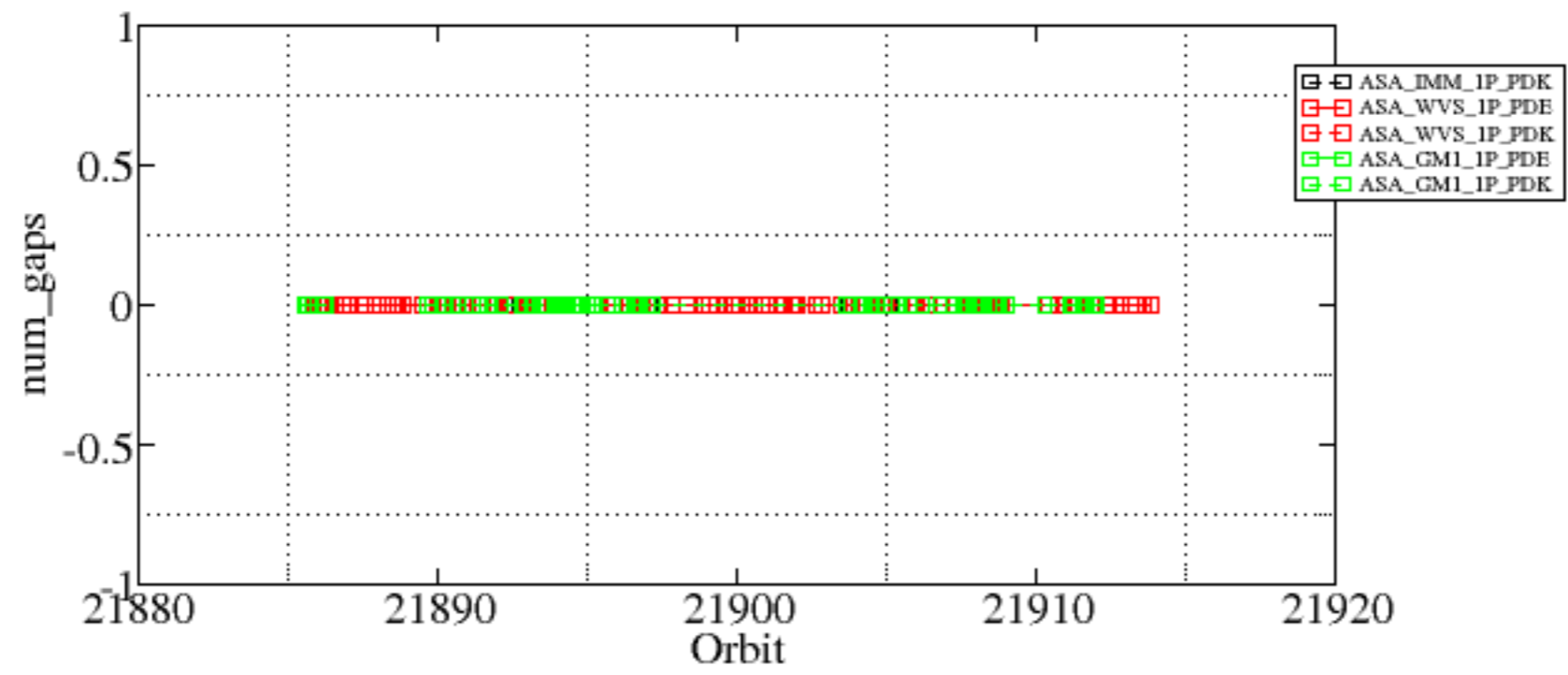




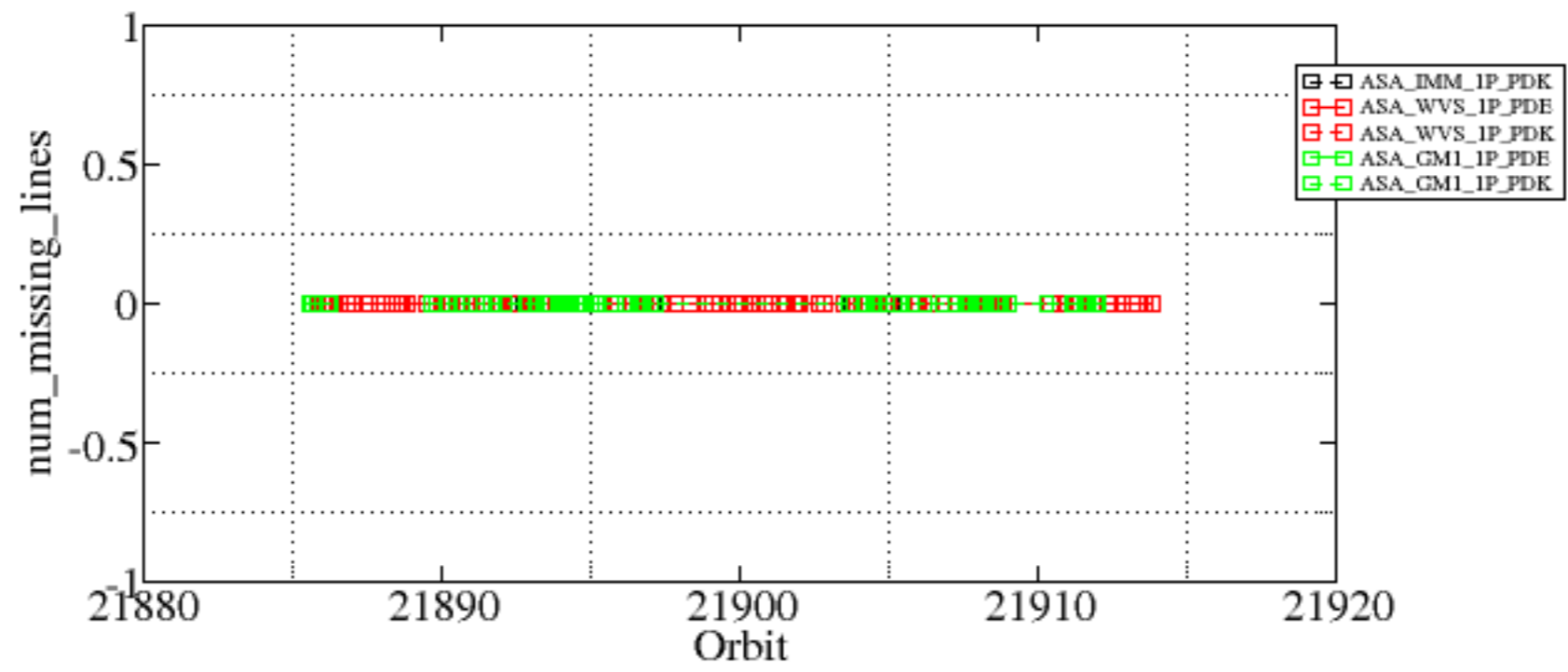
Summary of analysis for the last 3 days 2006050[890]

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
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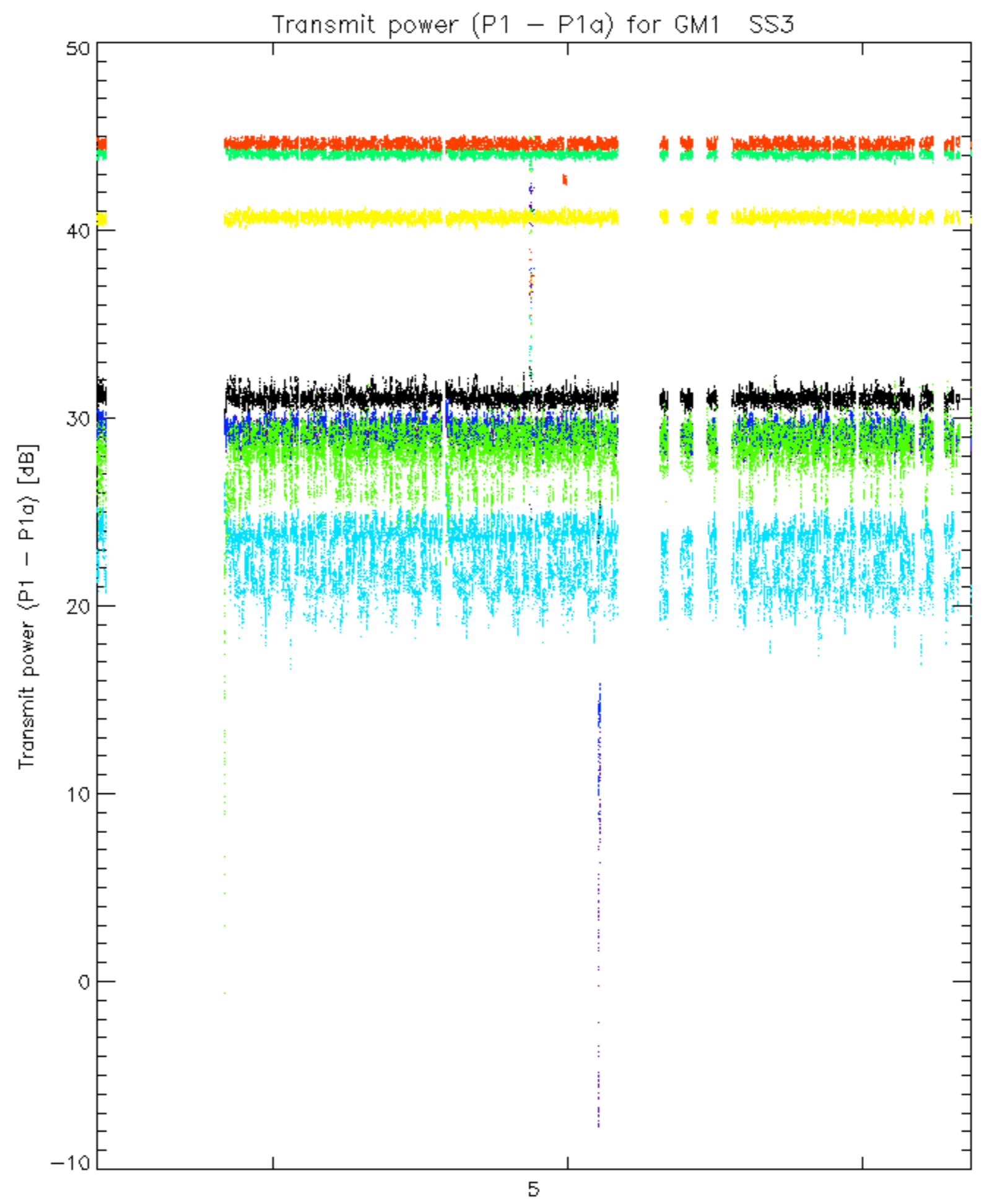






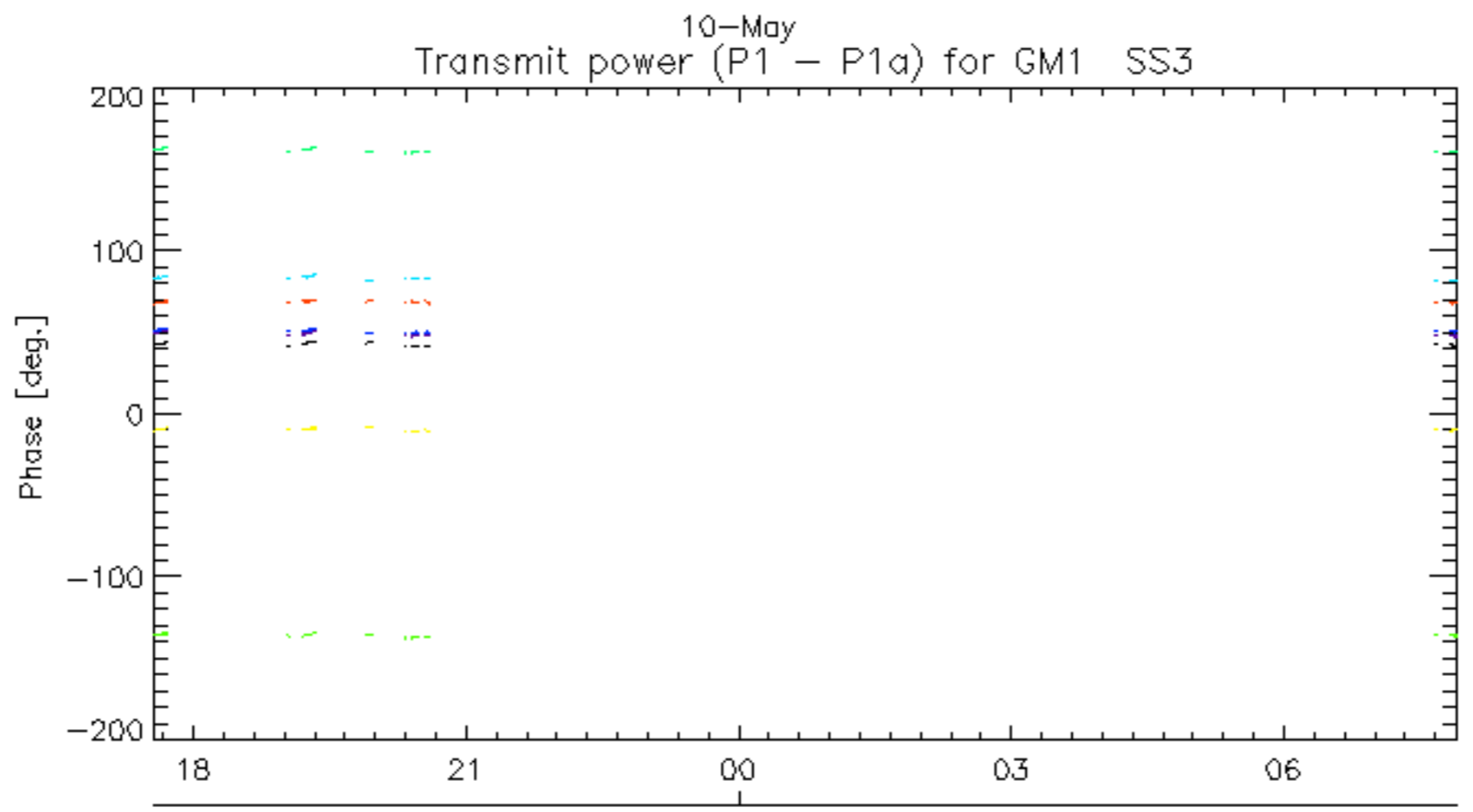
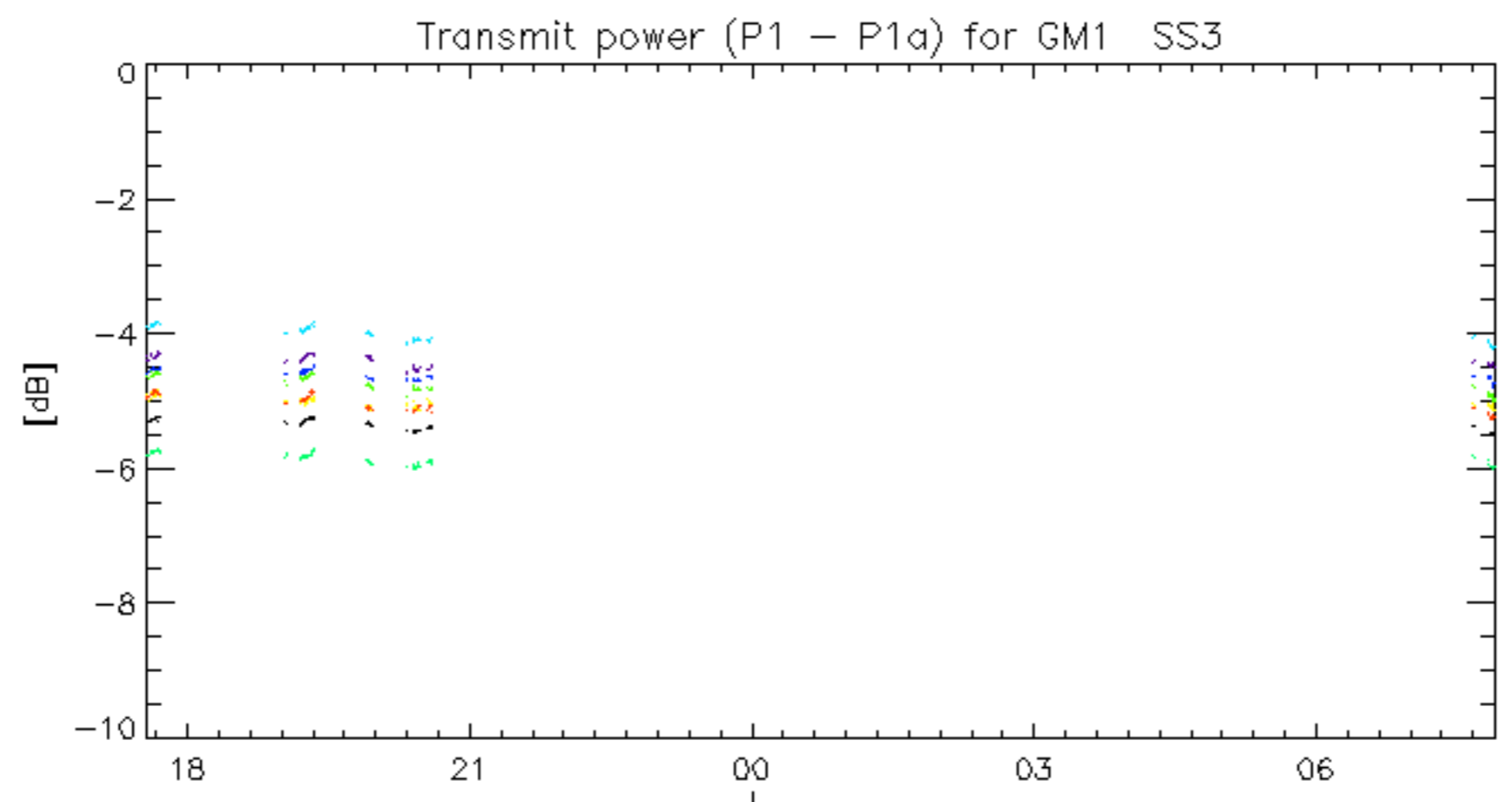




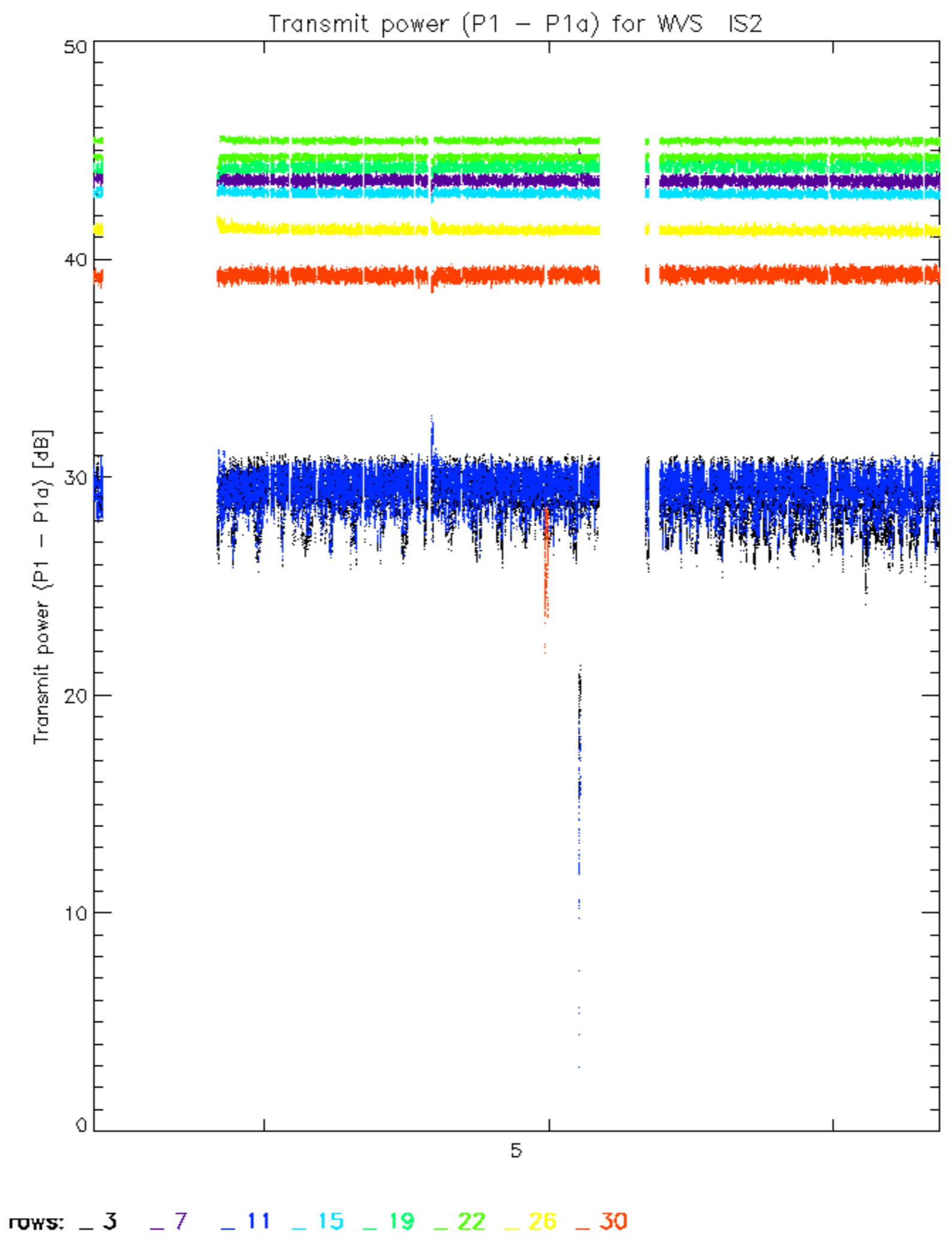


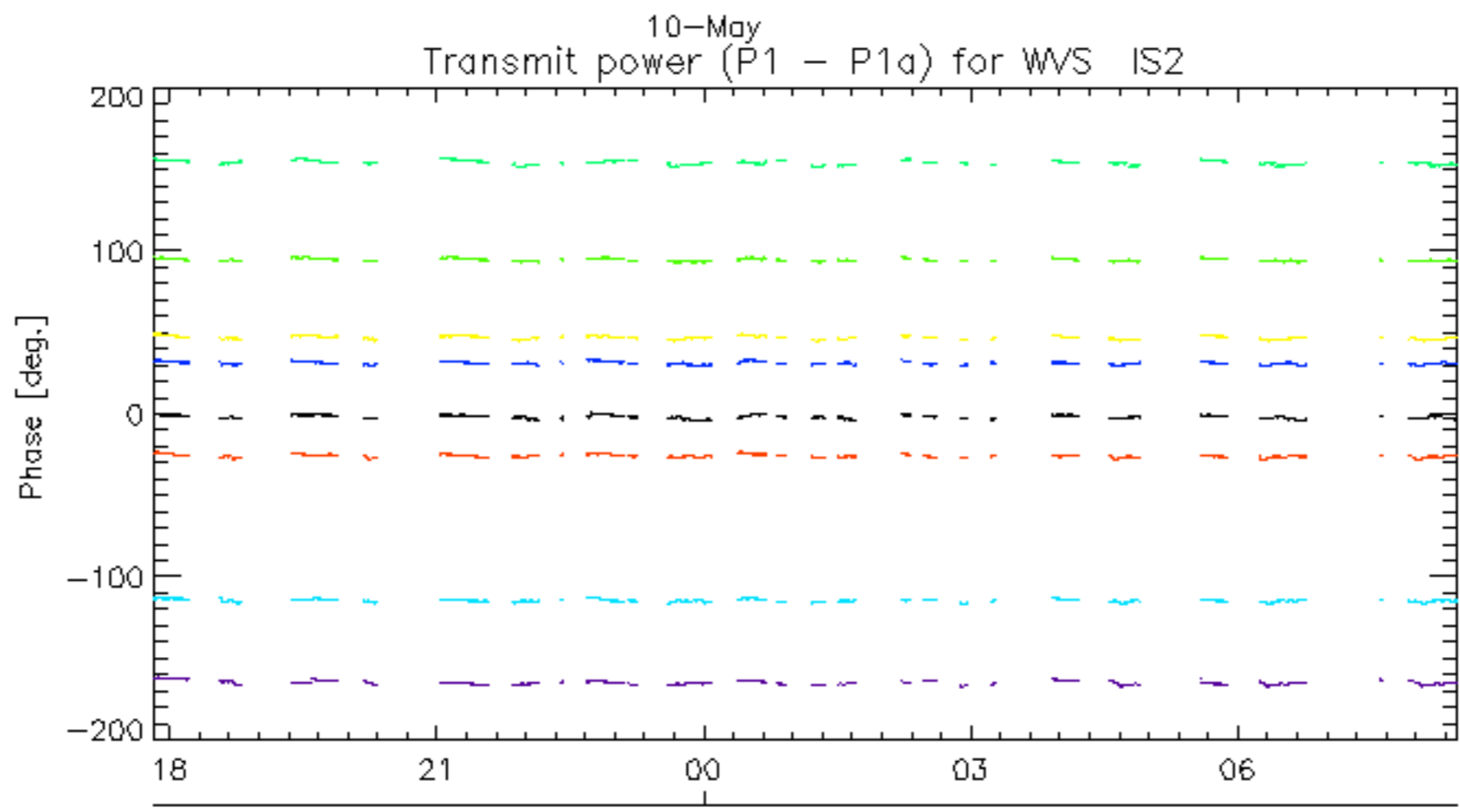
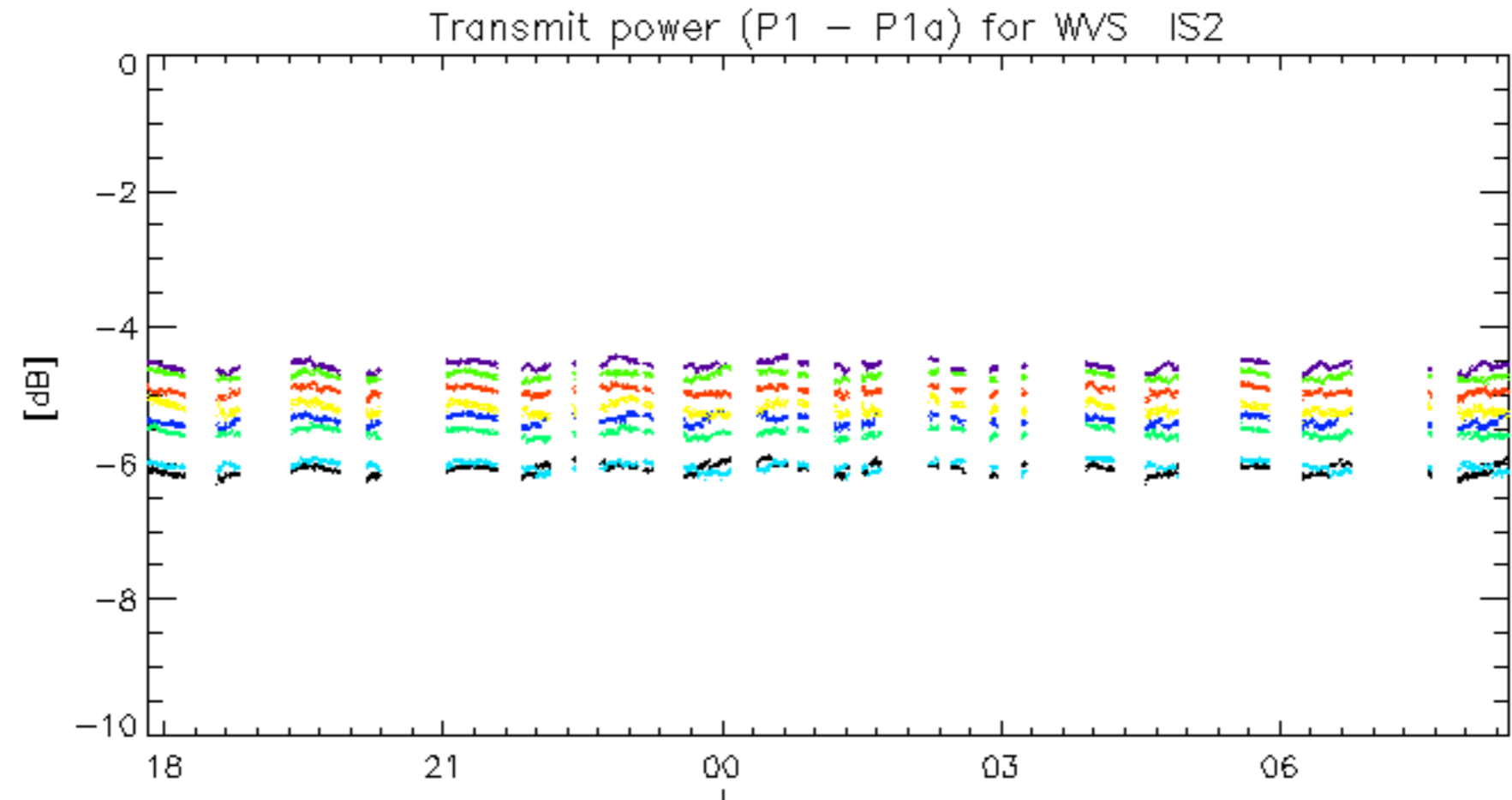
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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





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

No unavailabilities during the reported period.