

# PRELIMINARY REPORT OF 060311

last update on Sat Mar 11 16:26:48 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 2006-03-10 00:00:00 to 2006-03-11 16:26:48

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	63	13	0	15
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	63	13	0	15
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	63	13	0	15
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	63	13	0	15

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	46	68	17	26
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	38	46	68	17	26
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	46	68	17	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	46	68	17	26

## 2.3 - Browse Visual Inspection

## 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	20060309 100800
H	20060310 143810

### 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
☒
☒

**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	-4.002542	0.009644	-0.009992
7	P1	-3.003489	0.008798	-0.031756
11	P1	-4.068887	0.020951	0.050844
15	P1	-6.076140	0.021899	-0.047917
19	P1	-3.285372	0.006712	-0.041398
22	P1	-4.459429	0.015084	0.003539
26	P1	-4.203722	0.109527	0.054816
30	P1	-5.804777	0.155128	-0.058891
3	P1	-16.977037	0.249822	-0.056769
7	P1	-16.702070	0.103585	-0.121153
11	P1	-16.507183	0.329781	0.129919
15	P1	-13.058370	0.095604	0.024233
19	P1	-13.922564	0.055988	-0.092870
22	P1	-15.593401	0.476743	0.093647
26	P1	-15.765053	0.317831	-0.074957
30	P1	-16.485456	0.317918	-0.016182

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.419287	0.088029	0.121665
7	P2	-22.388676	0.094618	0.068100
11	P2	-16.231459	0.100311	0.041307
15	P2	-7.166997	0.099053	0.010644
19	P2	-9.134442	0.091578	0.010484
22	P2	-17.935043	0.090913	-0.033991
26	P2	-16.207754	0.095199	-0.014321
30	P2	-19.642292	0.084763	-0.035996

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.194228	0.006251	-0.007802
7	P3	-8.194228	0.006251	-0.007802
11	P3	-8.194228	0.006251	-0.007802
15	P3	-8.194228	0.006251	-0.007802
19	P3	-8.194228	0.006251	-0.007802
22	P3	-8.194228	0.006251	-0.007802
26	P3	-8.194228	0.006251	-0.007802
30	P3	-8.194228	0.006251	-0.007802

#### 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	-3.856161	3.728042	0.119168
7	P1	-2.852956	3.912201	0.175102
11	P1	-3.038118	3.938039	0.139373
15	P1	-3.682413	3.903658	0.144396
19	P1	-3.482789	3.785008	0.103927
22	P1	-5.274120	3.475807	0.098257
26	P1	-5.978692	3.691190	0.255470
30	P1	-5.311604	3.515068	0.125426
3	P1	-11.655730	2.444613	0.116782
7	P1	-10.050052	2.706236	0.095252
11	P1	-10.340643	2.696127	0.032511
15	P1	-10.882991	2.697071	0.052527
19	P1	-15.479527	1.984442	0.027515
22	P1	-20.323168	2.571798	0.053699
26	P1	-16.341227	2.543850	0.130312
30	P1	-18.362175	1.814685	0.029692

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.119926	2.571673	0.126671
7	P2	-22.553654	3.000456	-0.006080
11	P2	-11.291012	2.794430	0.120038
15	P2	-4.931581	3.631879	0.119680
19	P2	-6.938673	3.269681	0.114235
22	P2	-8.225026	3.067264	0.075238
26	P2	-23.877771	3.081338	-0.147604
30	P2	-22.027960	2.911862	-0.080103

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024414	0.002614	-0.003612
7	P3	-8.024396	0.002608	-0.003738
11	P3	-8.024415	0.002626	-0.003510
15	P3	-8.024513	0.002614	-0.003920
19	P3	-8.024420	0.002635	-0.003355
22	P3	-8.024506	0.002609	-0.003616
26	P3	-8.024516	0.002611	-0.003541
30	P3	-8.024362	0.002613	-0.003418

## 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	0.000553653
	stdev	1.77094e-07
MEAN Q	mean	0.000512932
	stdev	2.21599e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138048
	stdev	0.00119506
STDEV Q	mean	0.138408
	stdev	0.00121309



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006031[901]

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
ASA_IMM_1PNPDE20060310_124102_00000362045_00453_21048_0326.N1	1	0
ASA_IMM_1PNPDE20060311_015053_000001992045_00461_21056_0412.N1	0	1



## 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"/>
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### 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

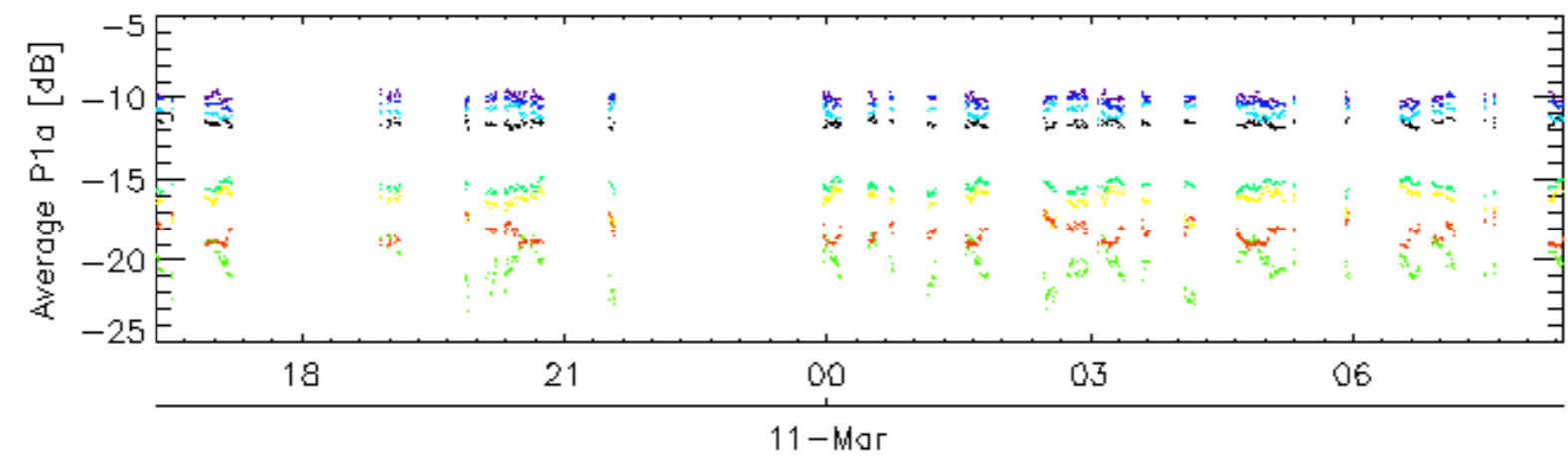
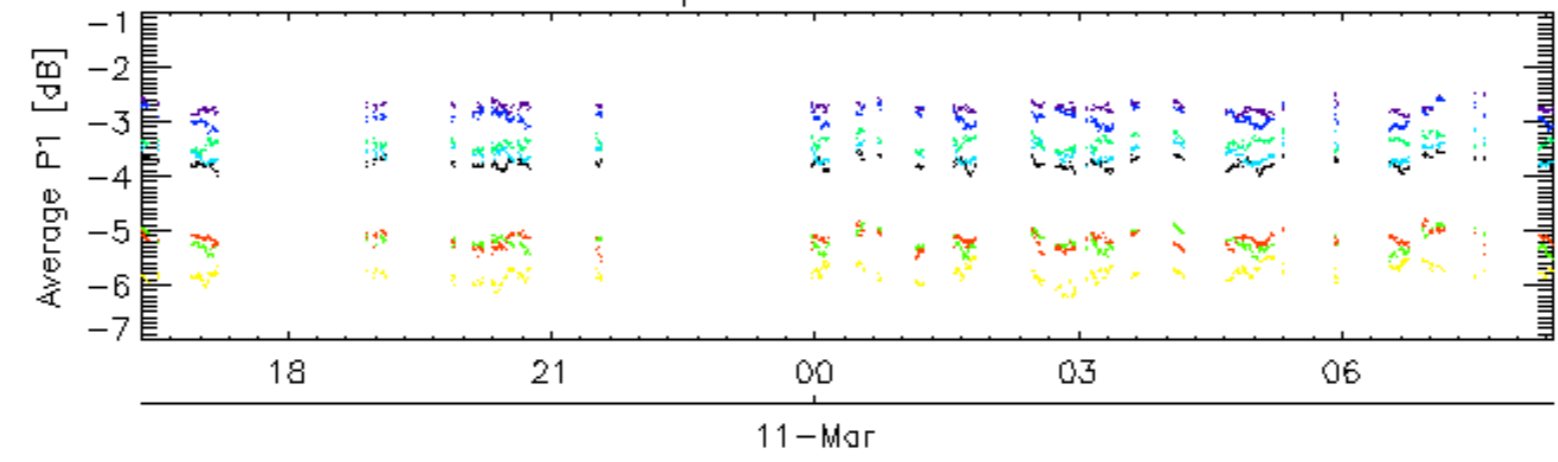
Ascending

Descending

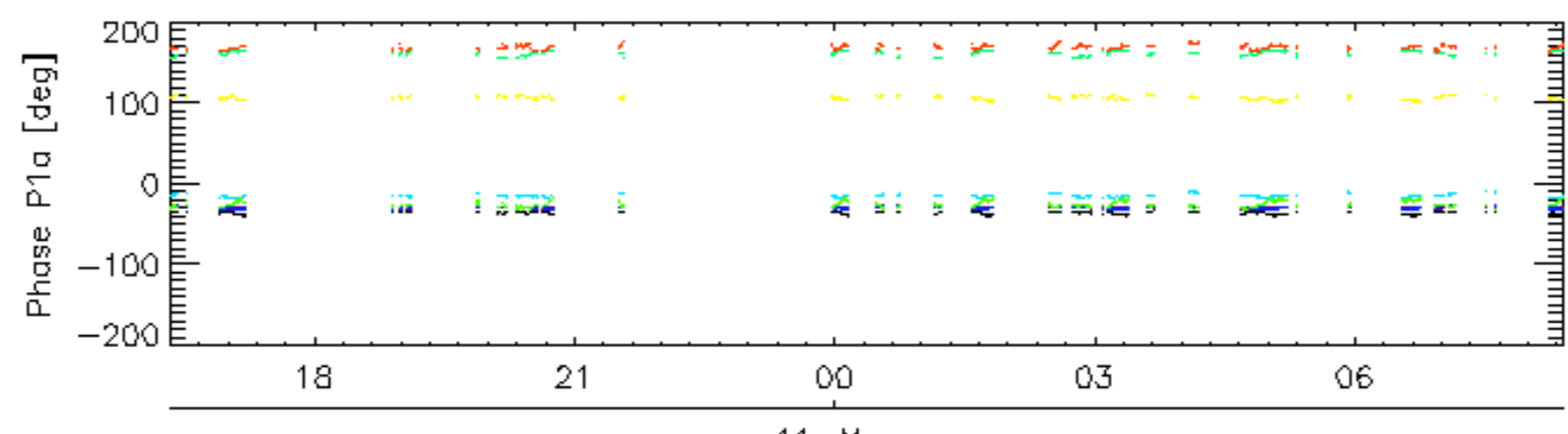
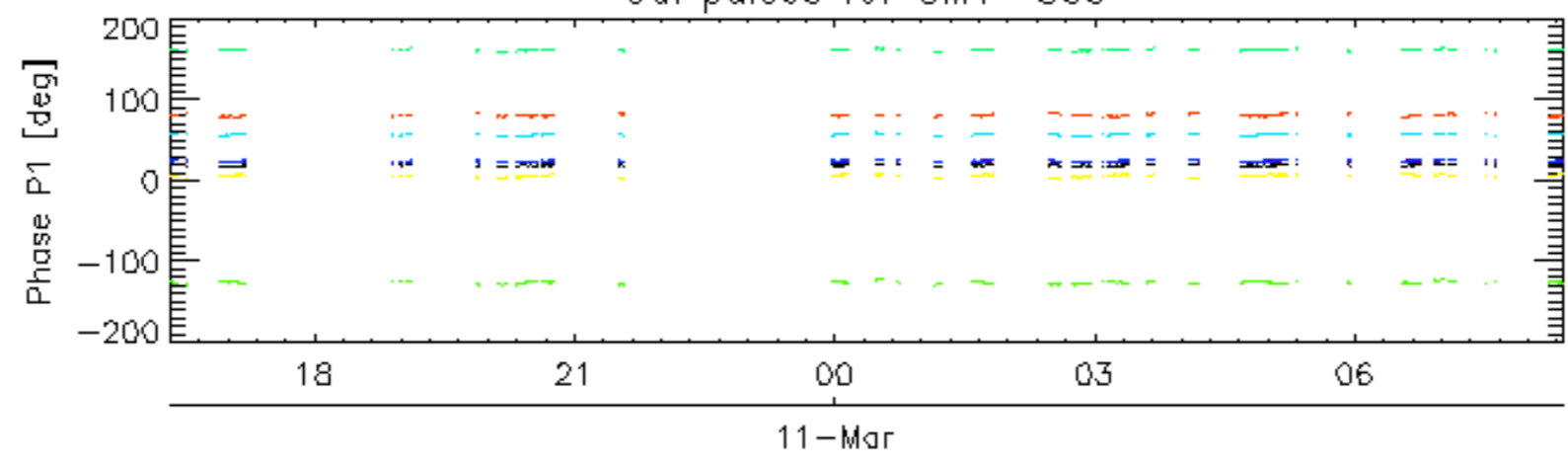
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

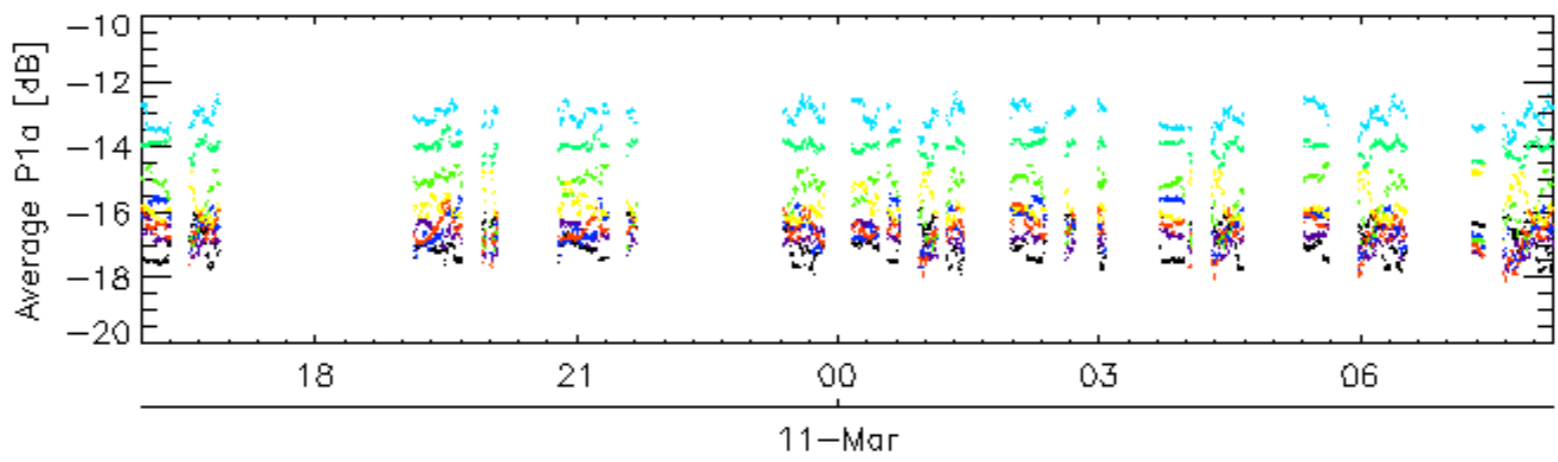
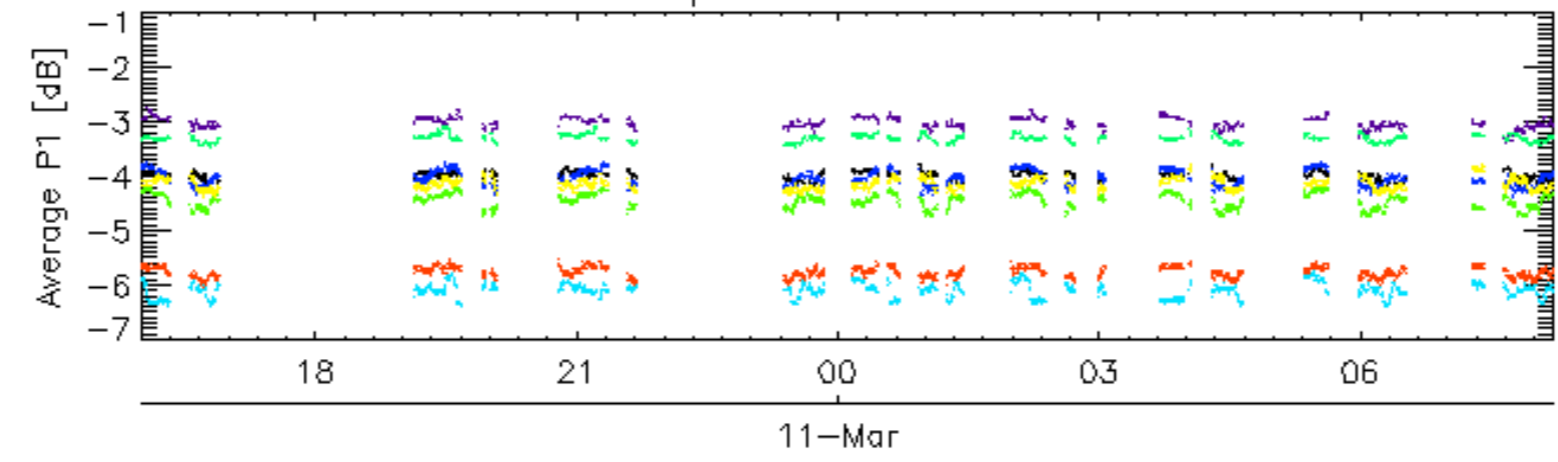


Cal pulses for GM1 SS3

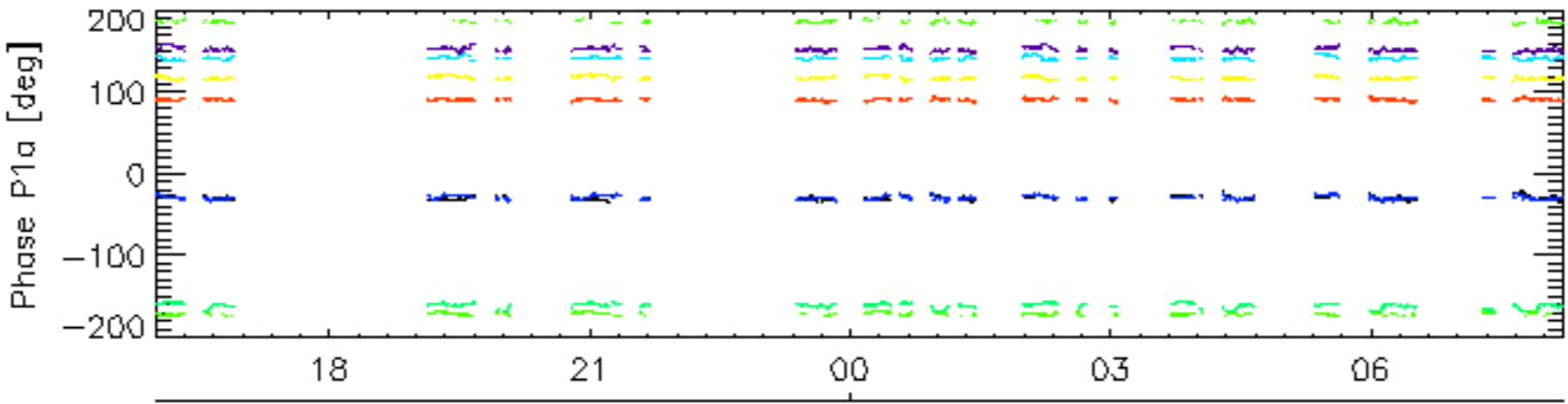
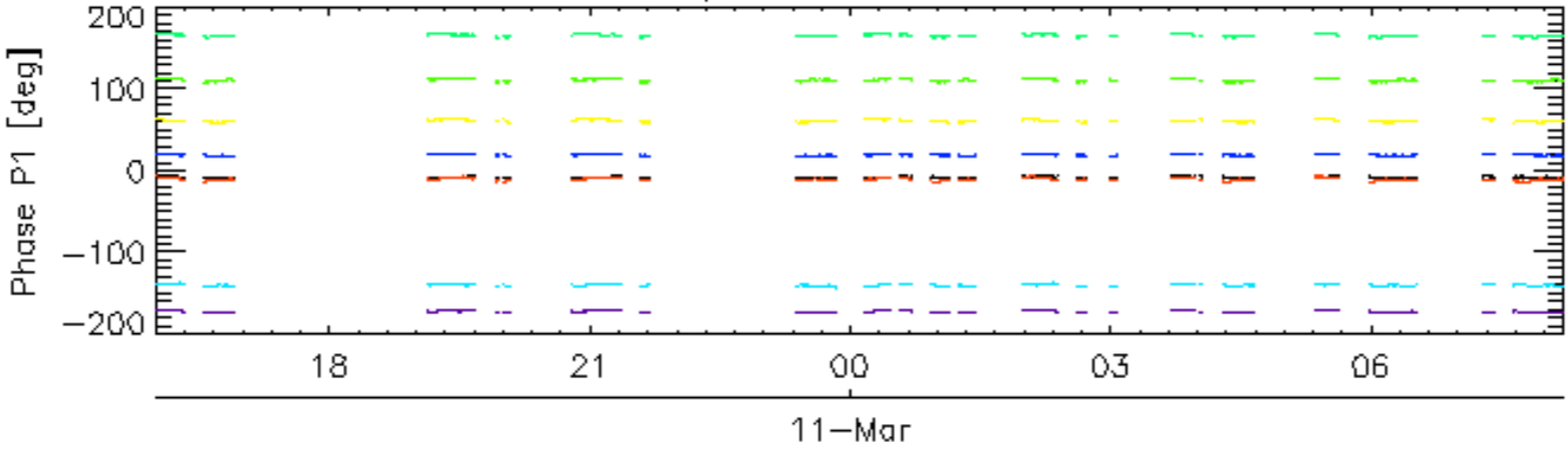


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

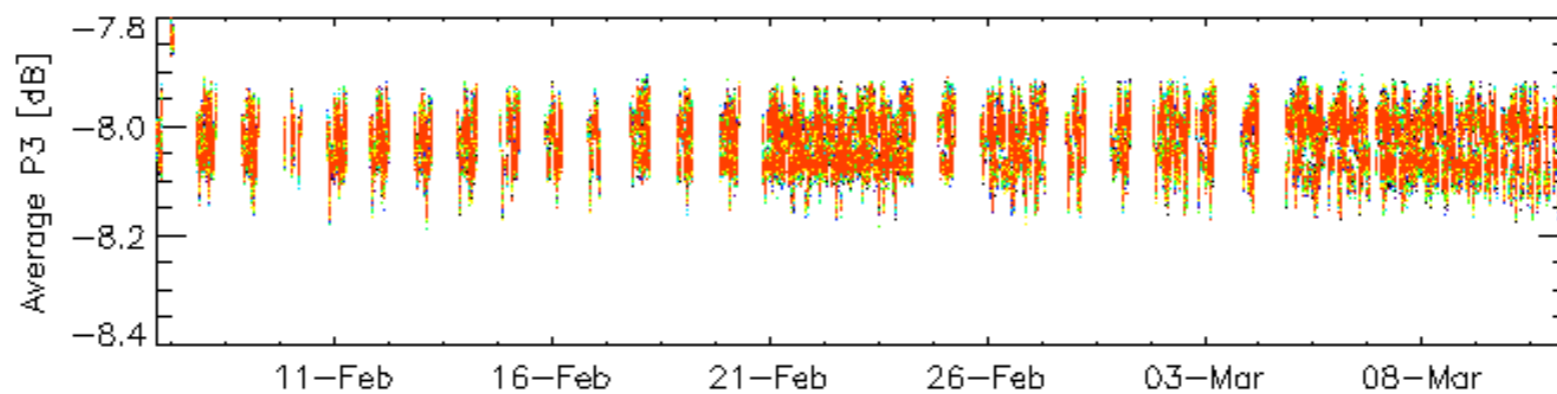
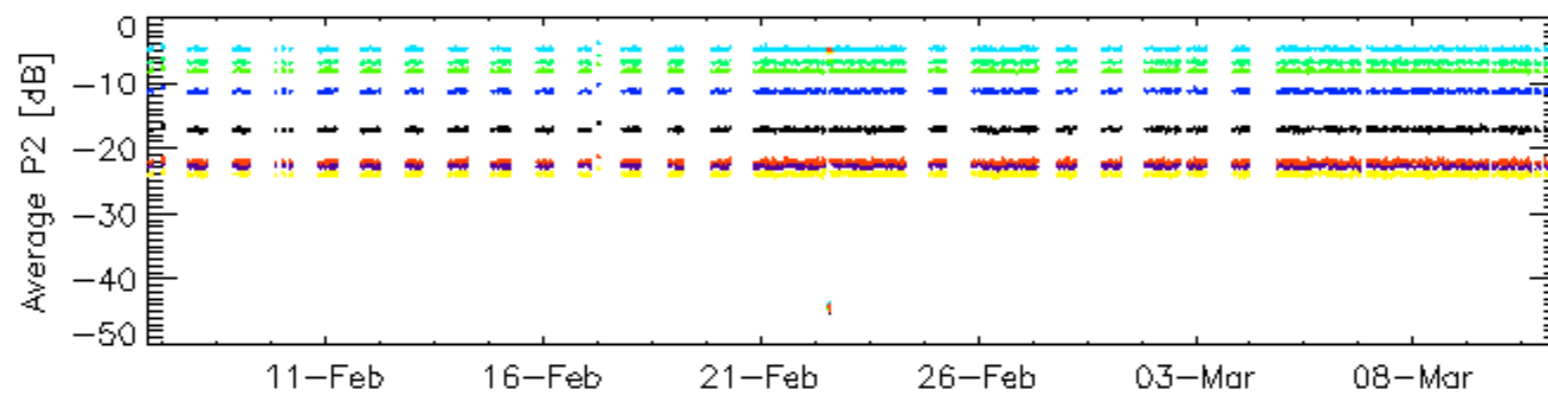
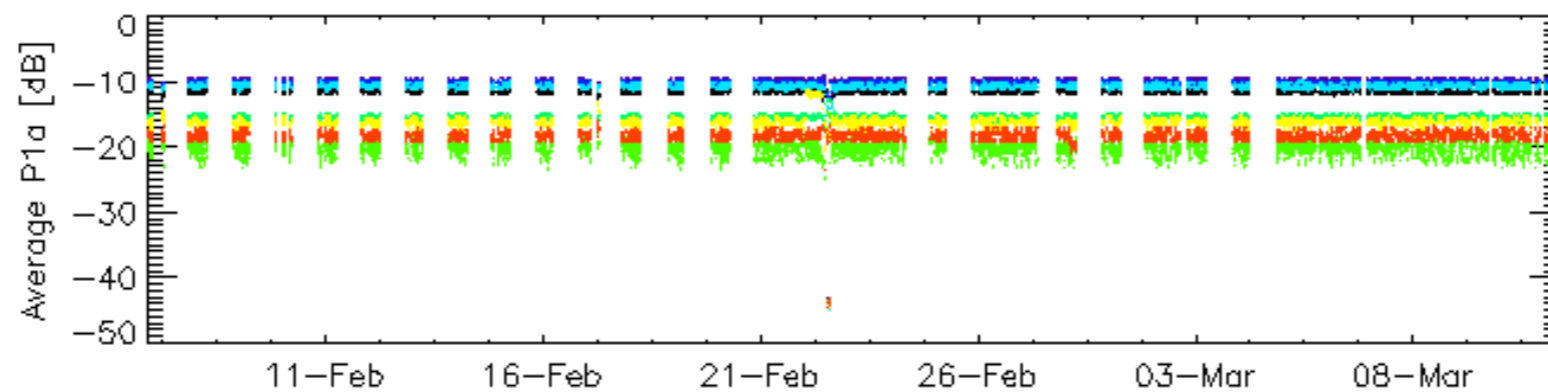
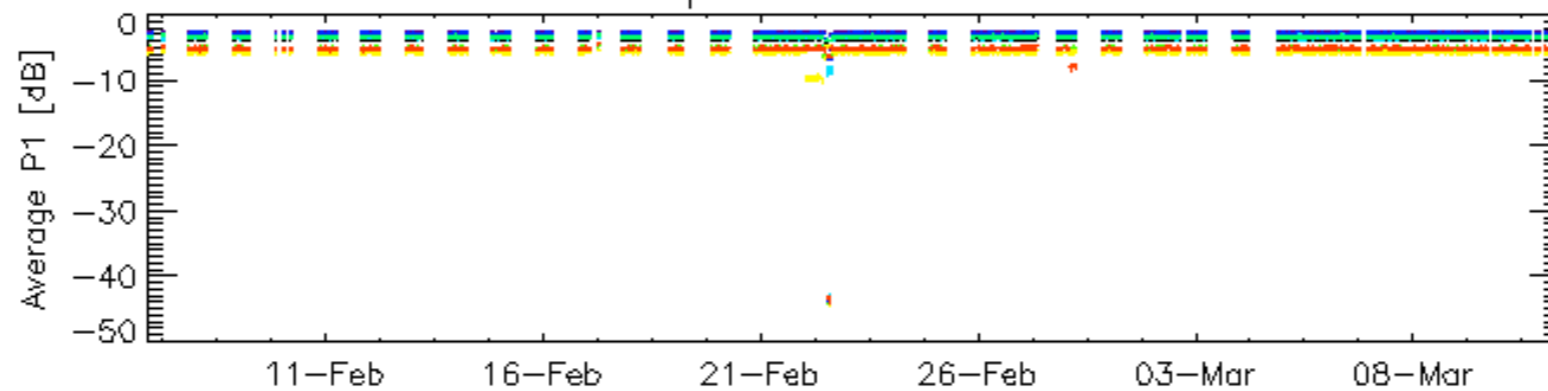


Cal pulses for WVS IS2



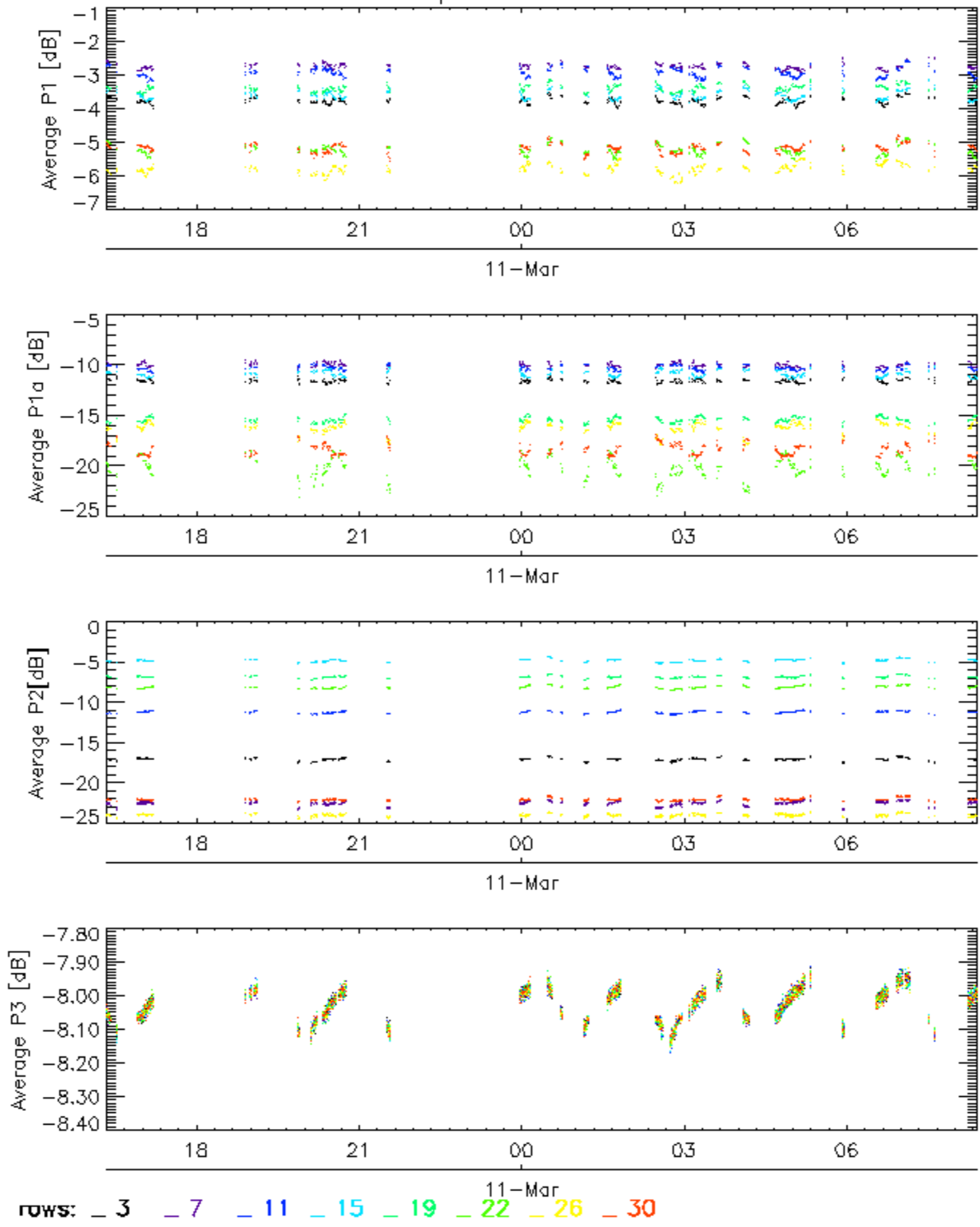
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

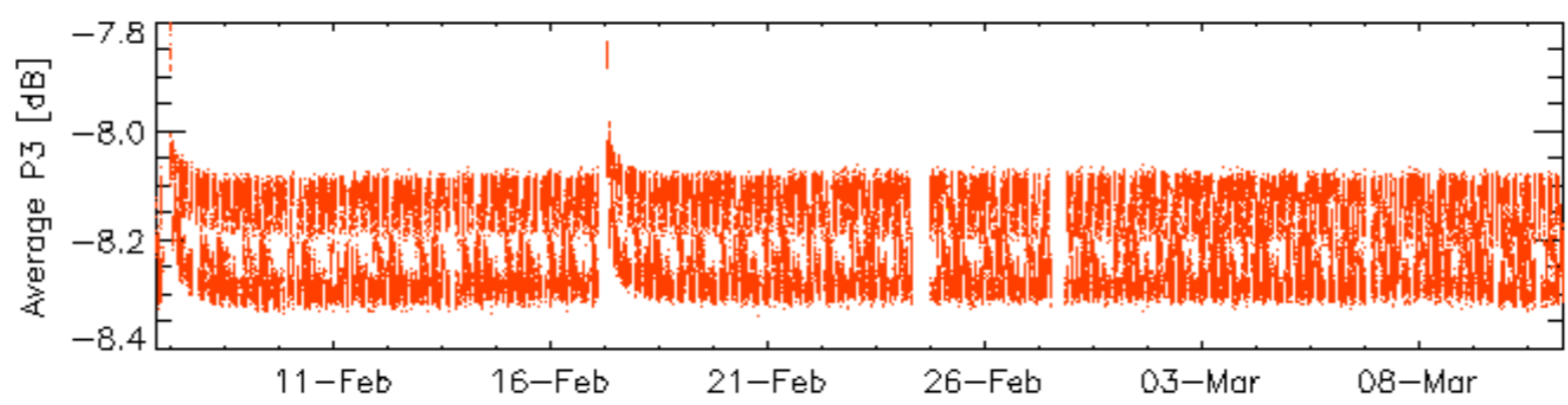
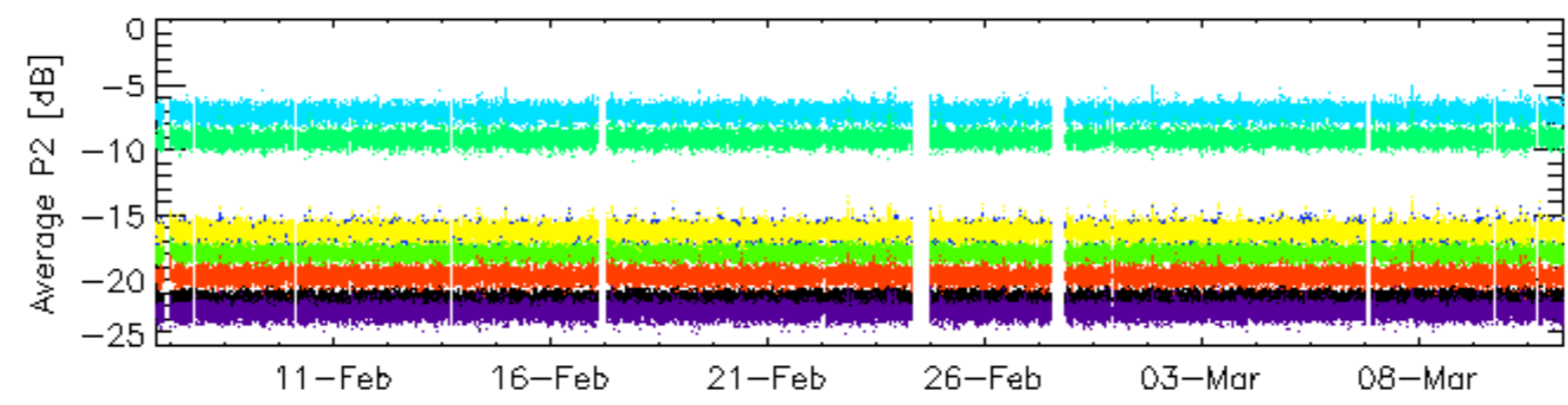
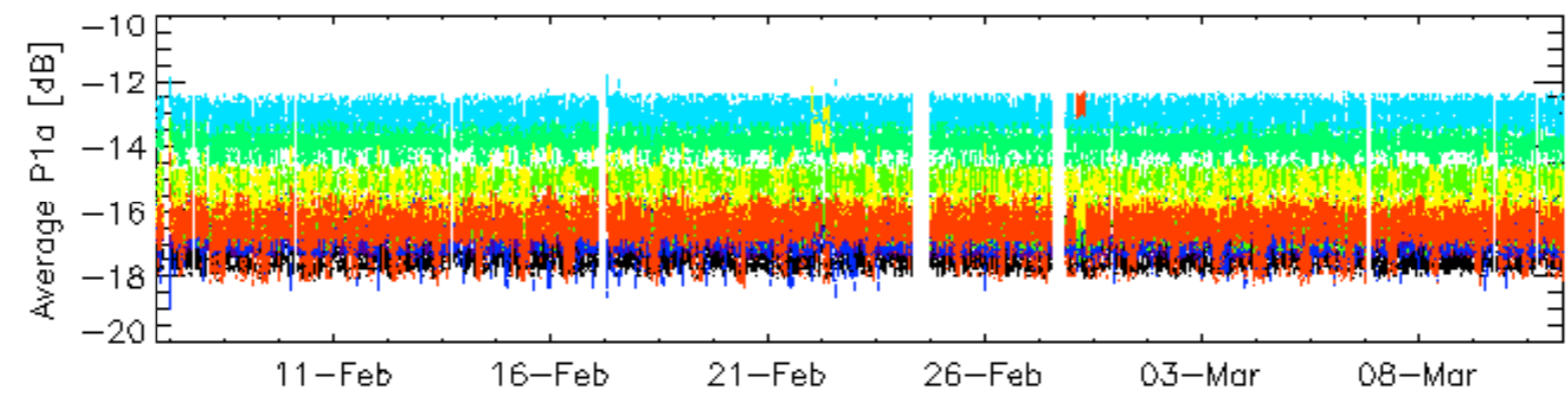
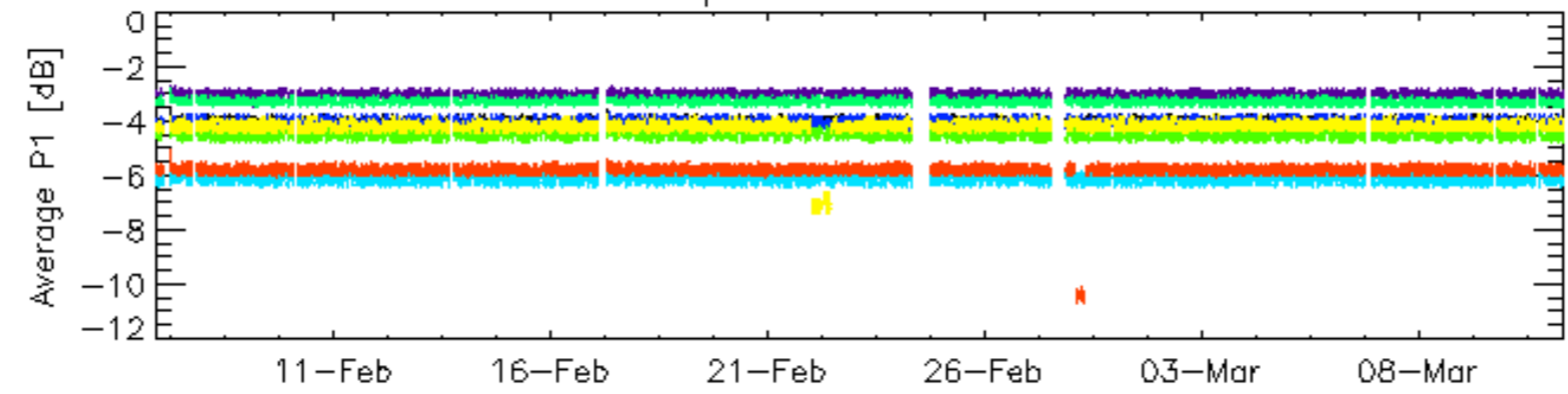


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

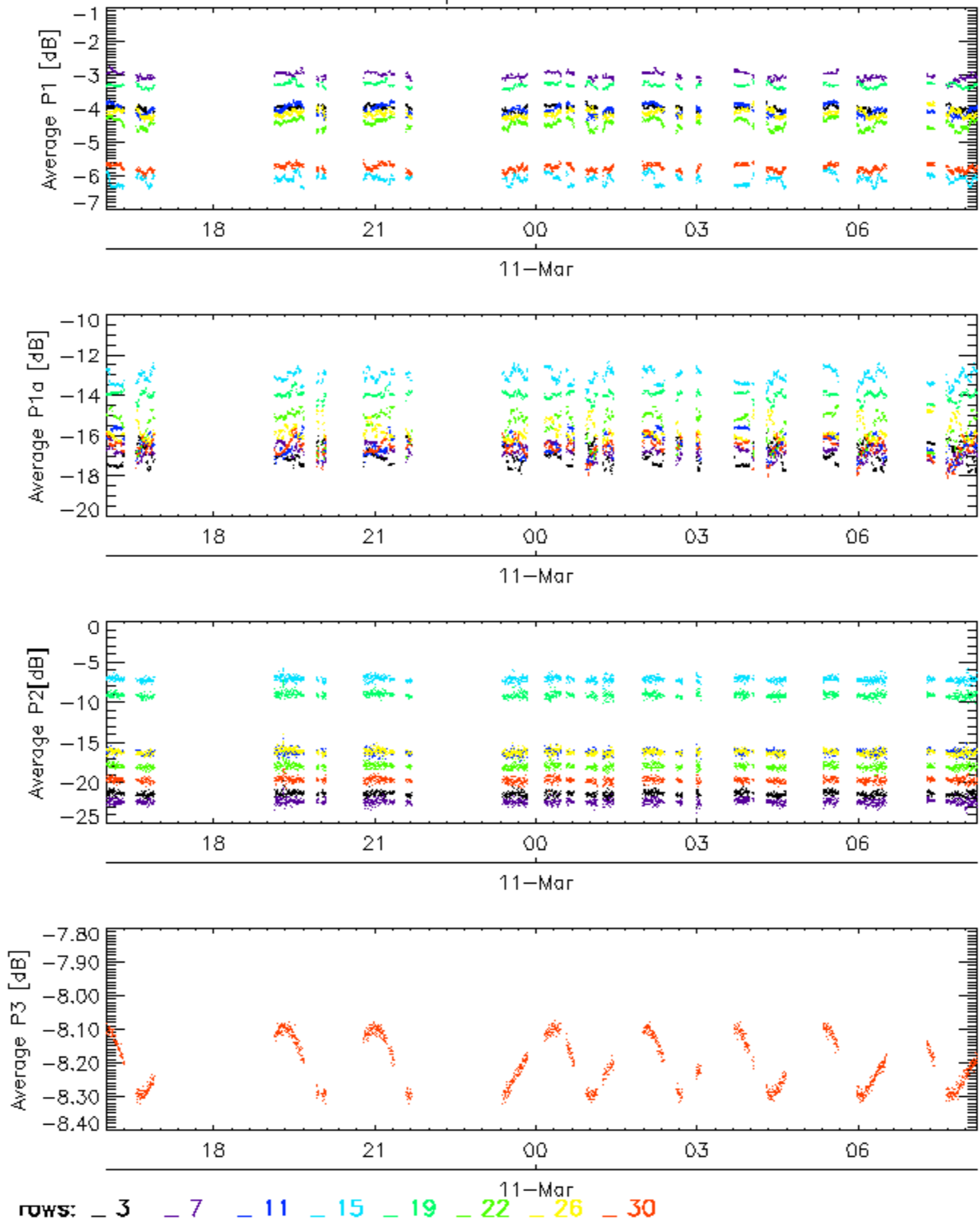


Cal pulses for WVS IS2



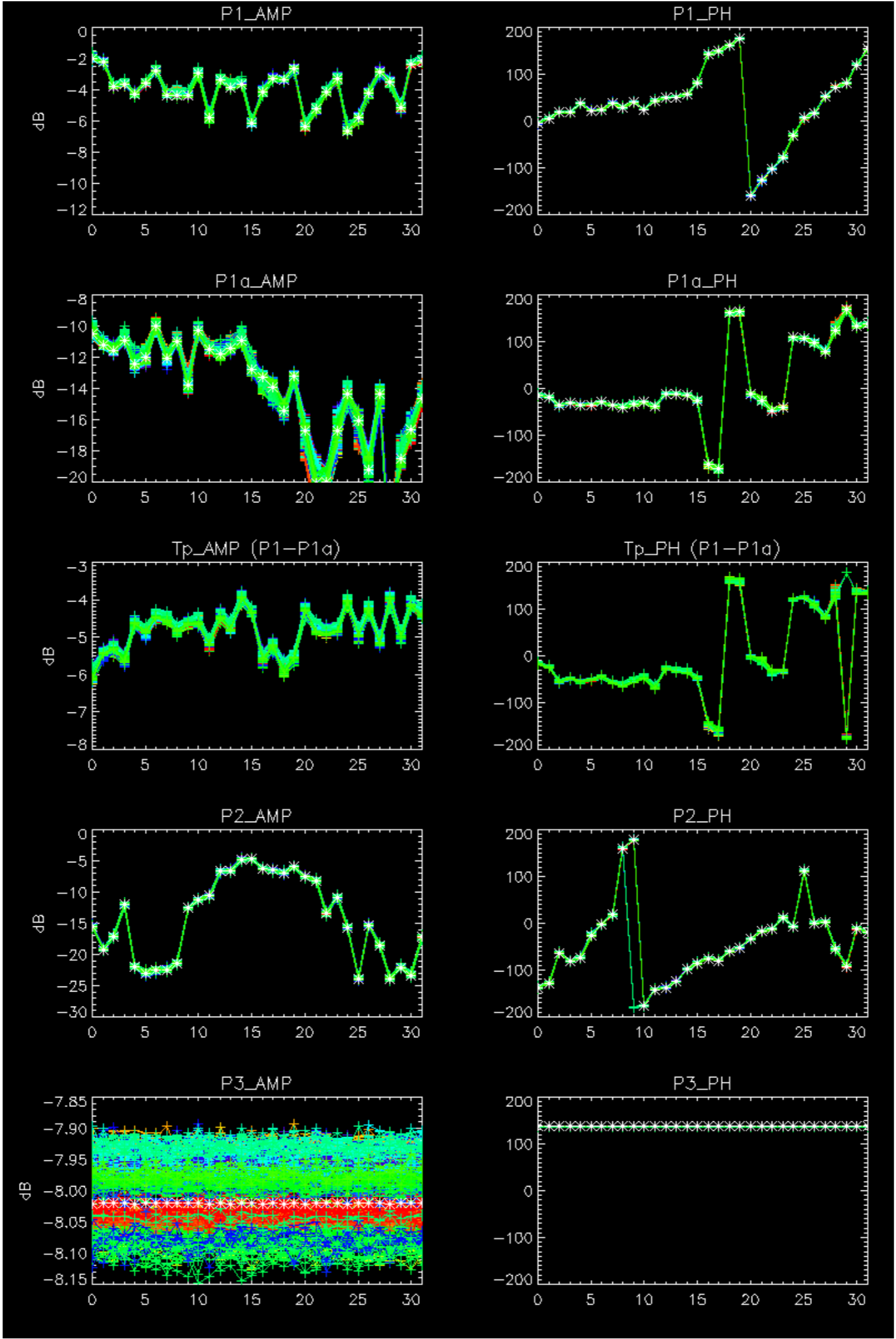
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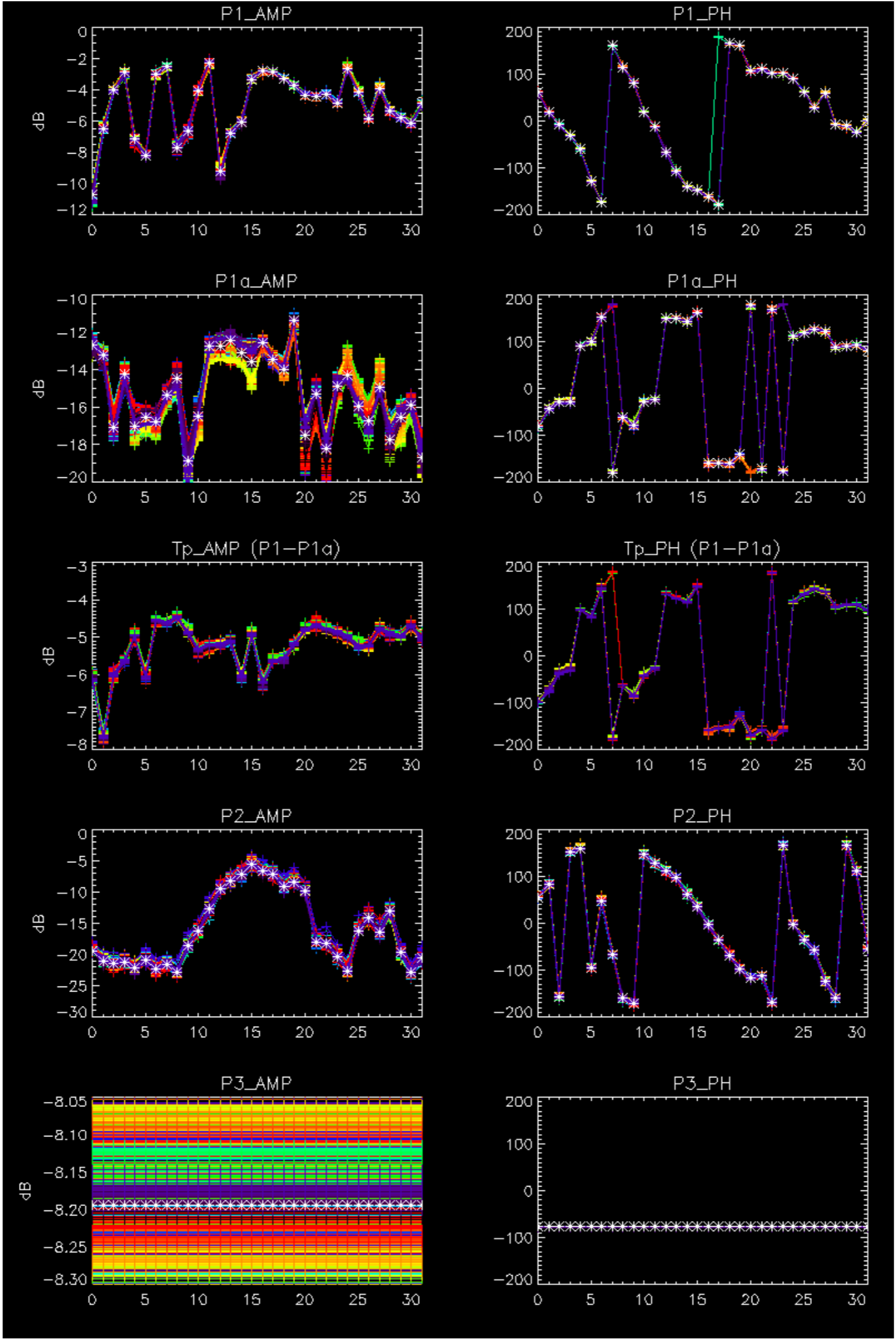
Cal pulses for WVS IS2



No anomalies observed.



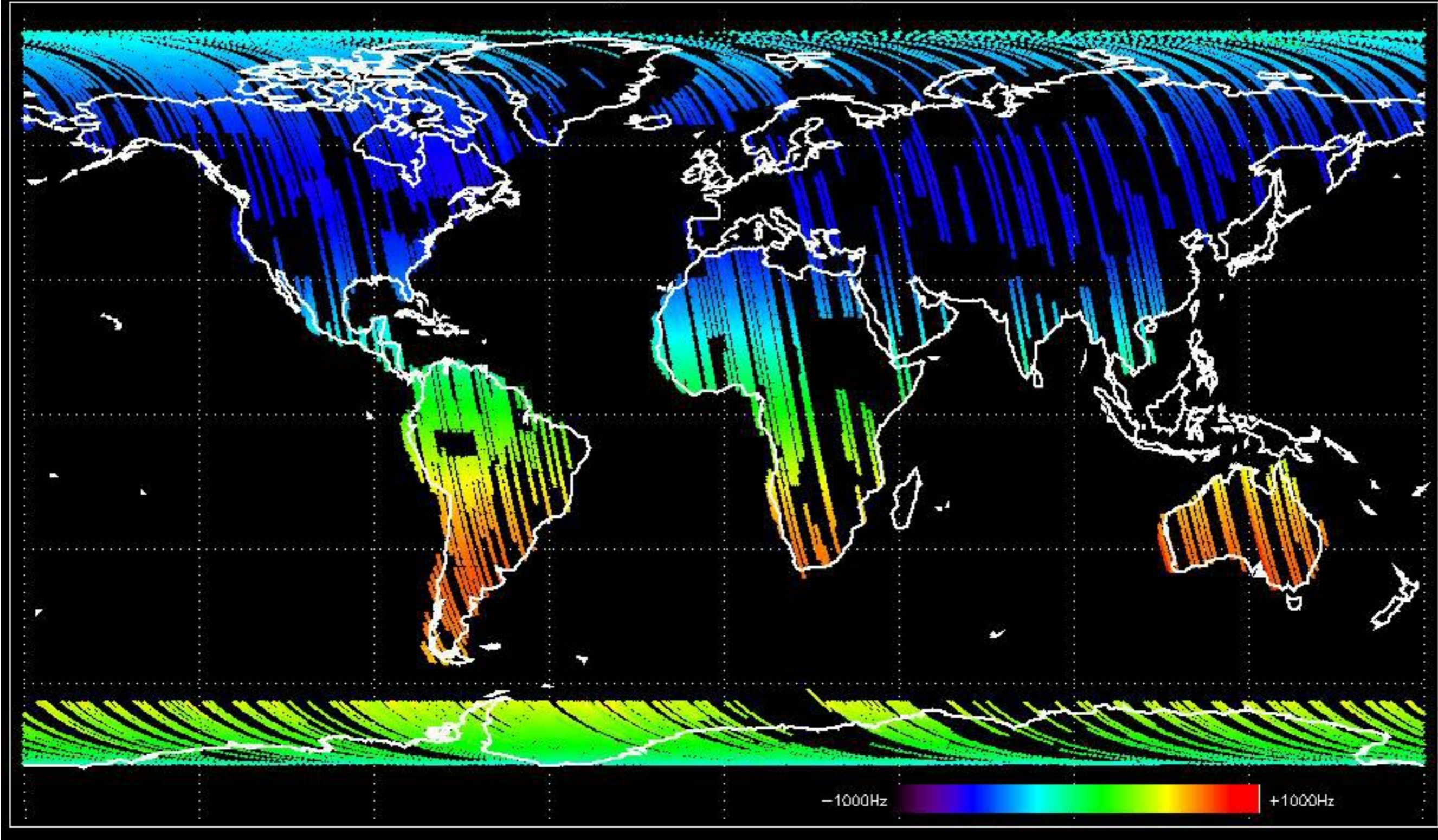




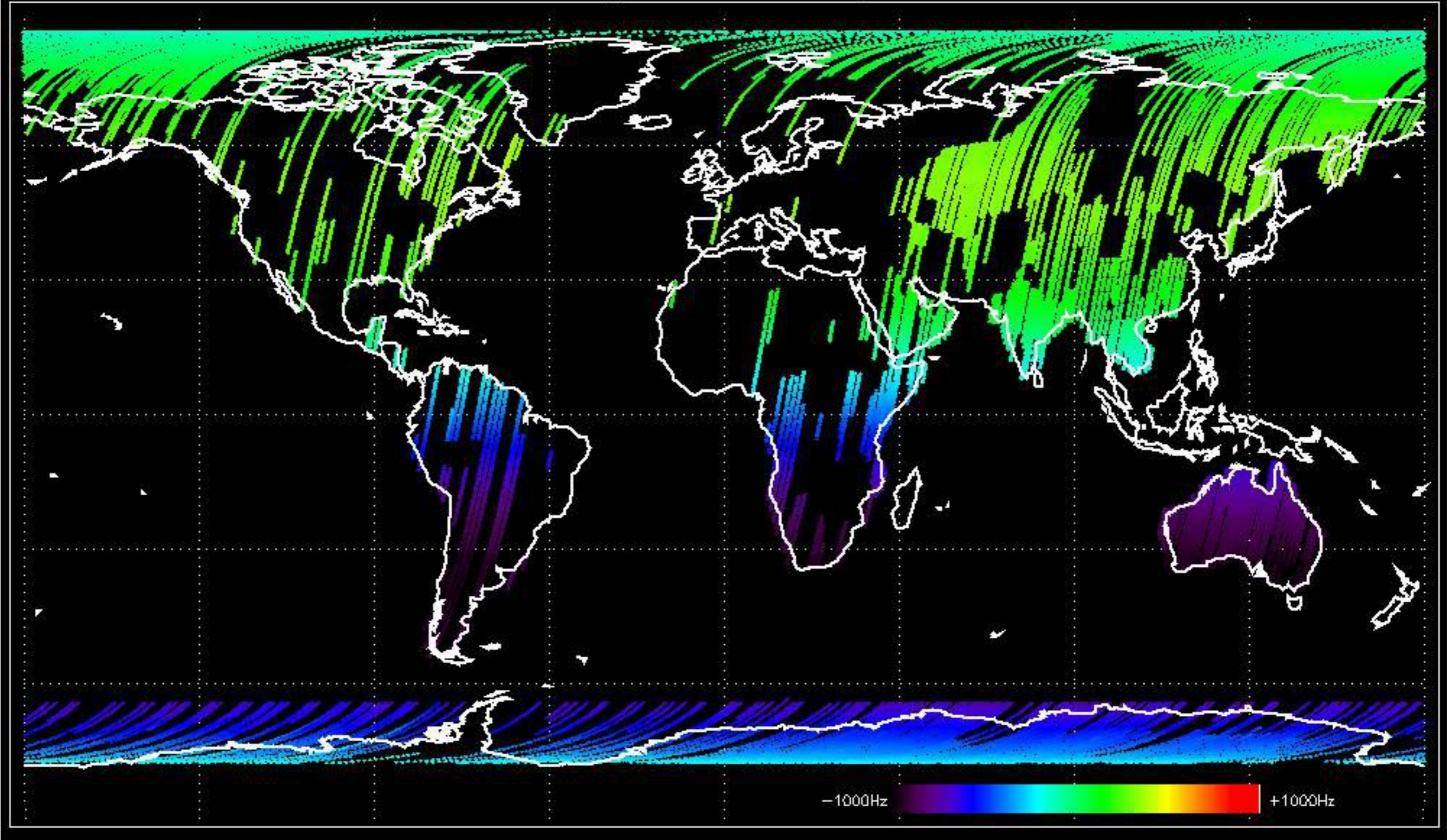
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



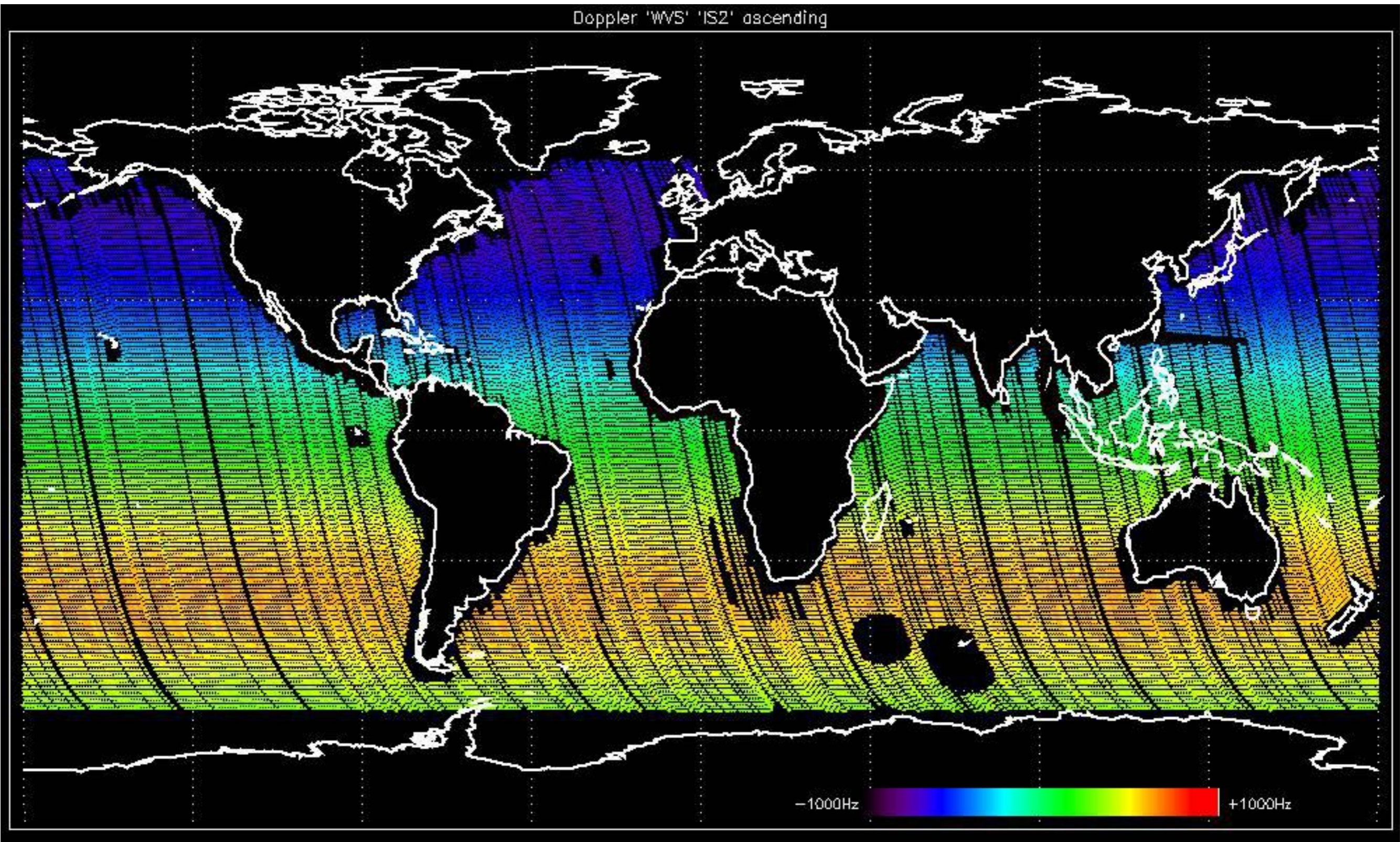
Doppler 'GM1' 'SS1' ascending



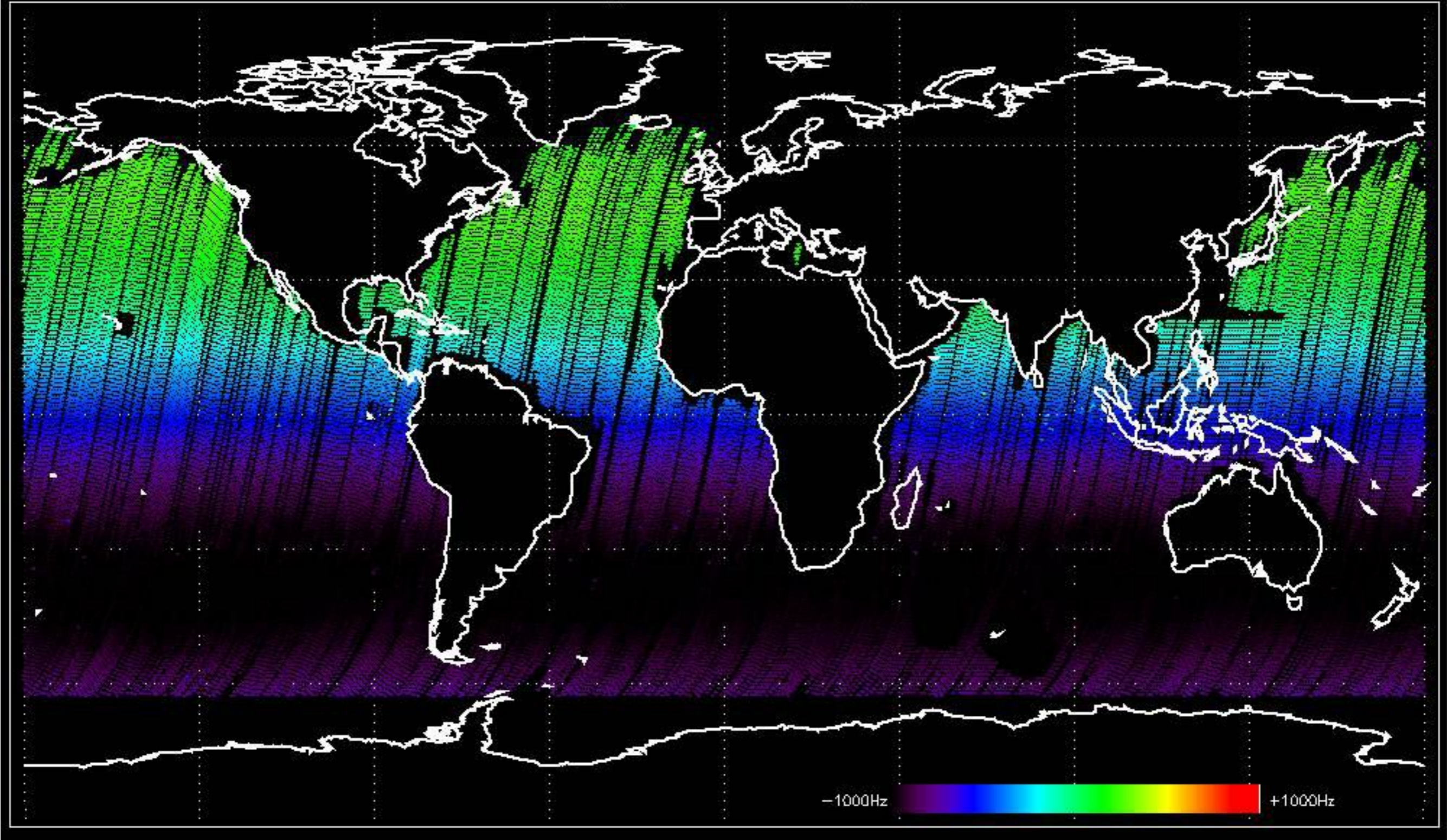
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

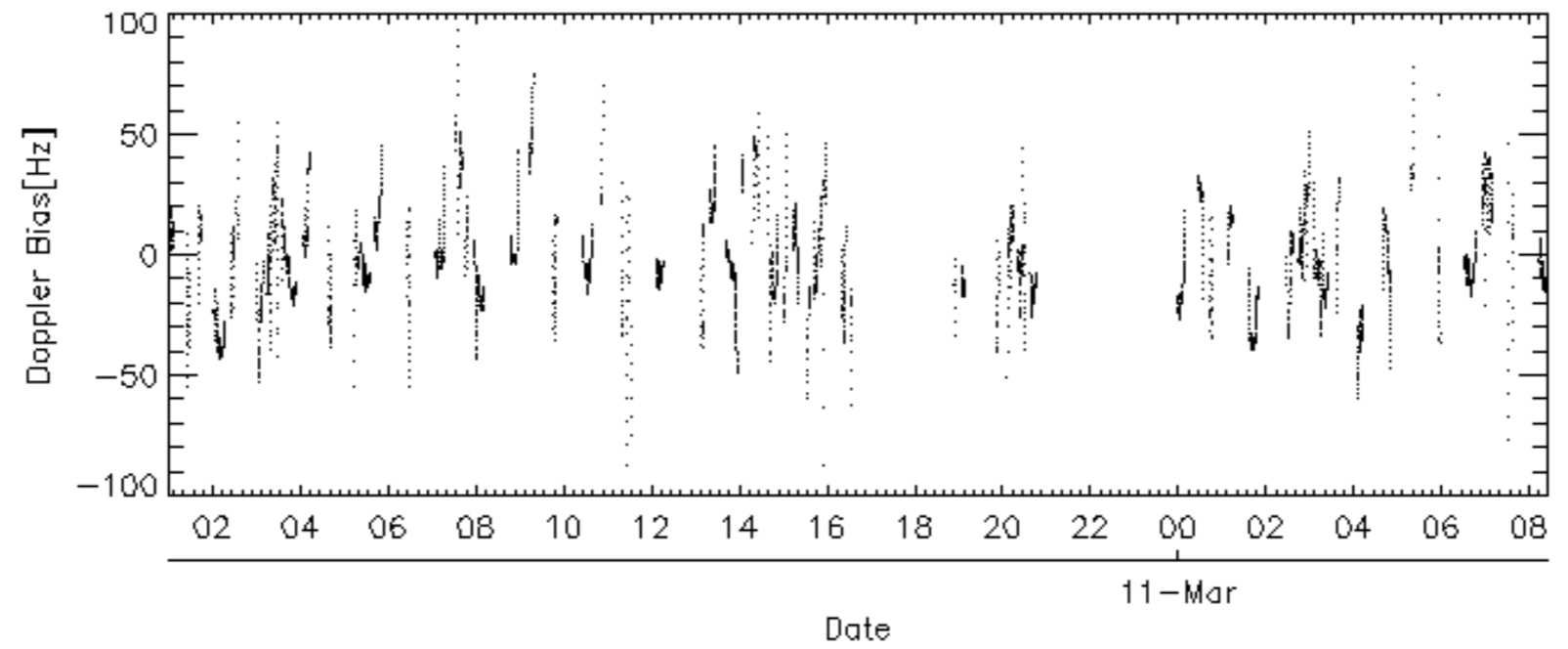
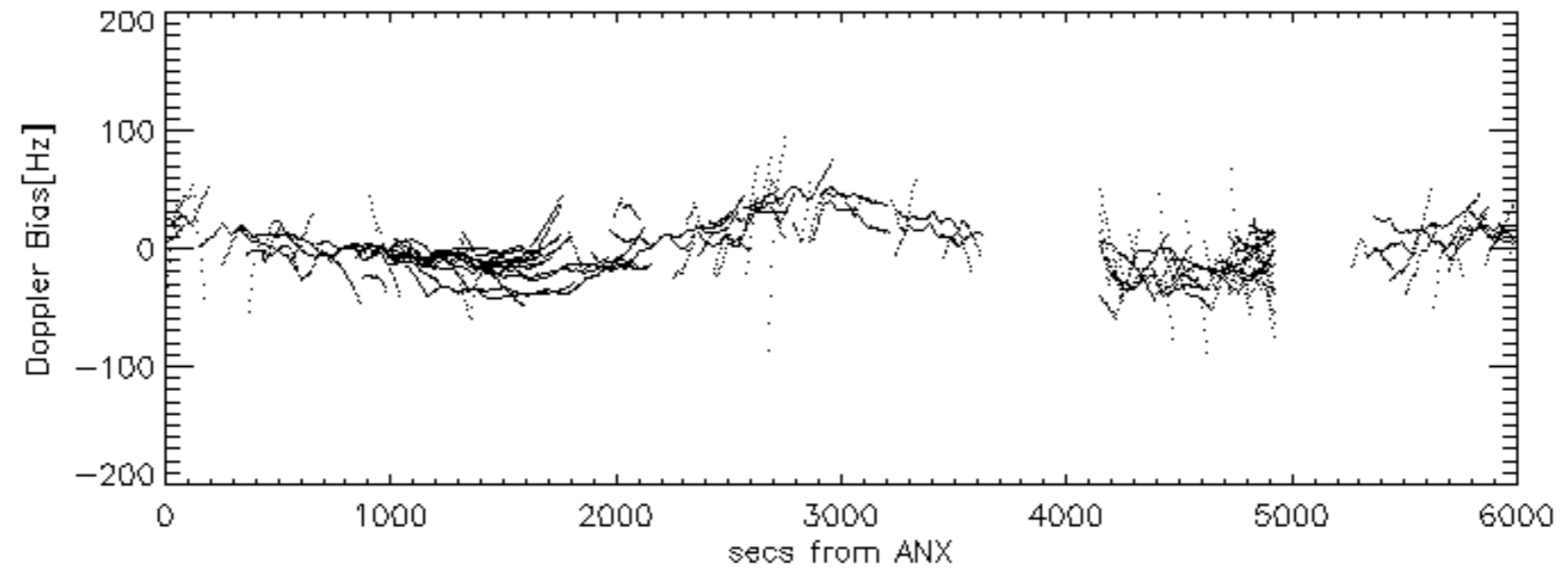
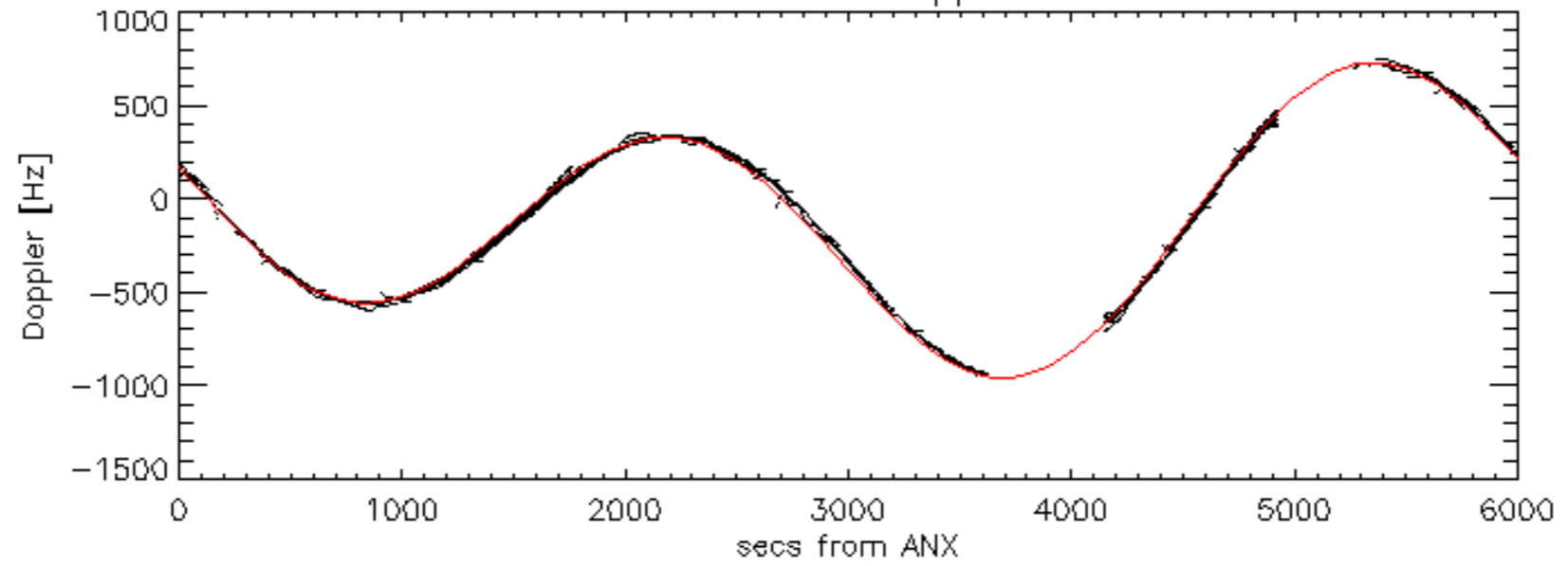


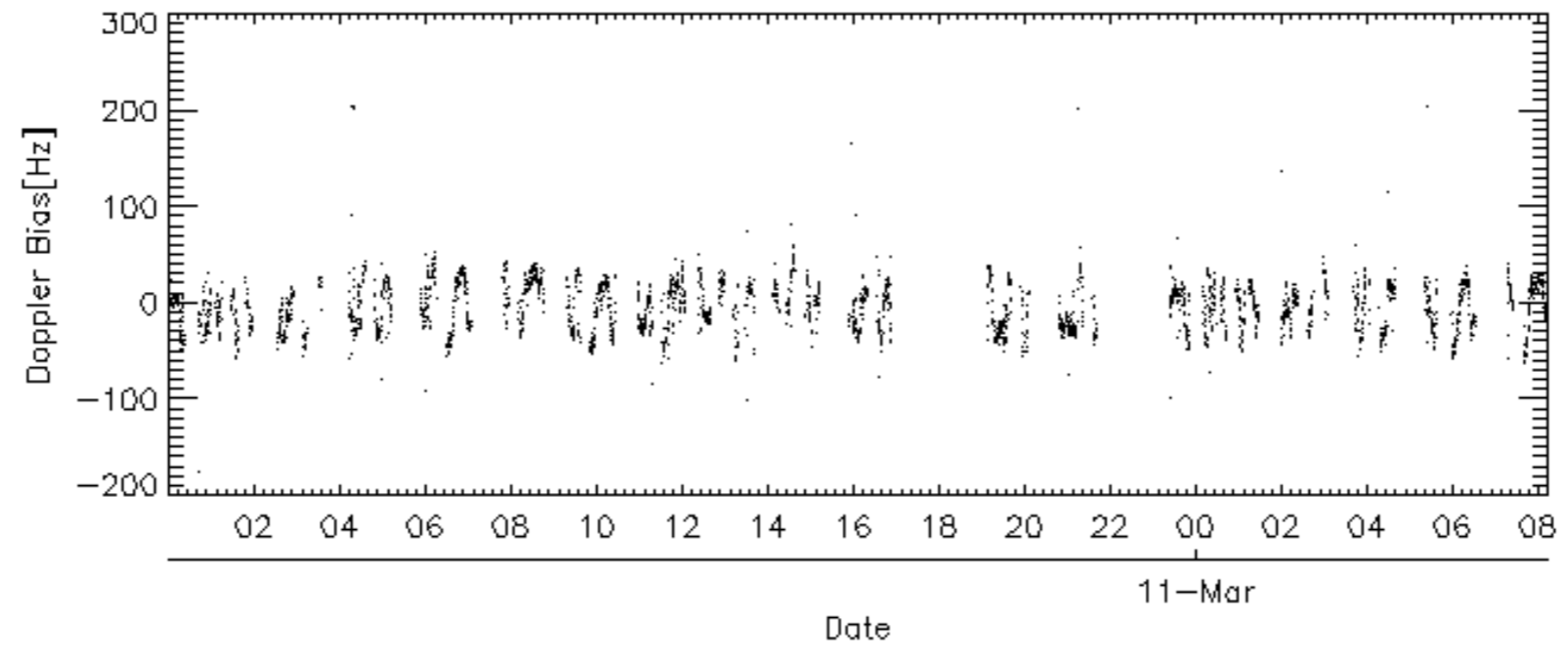
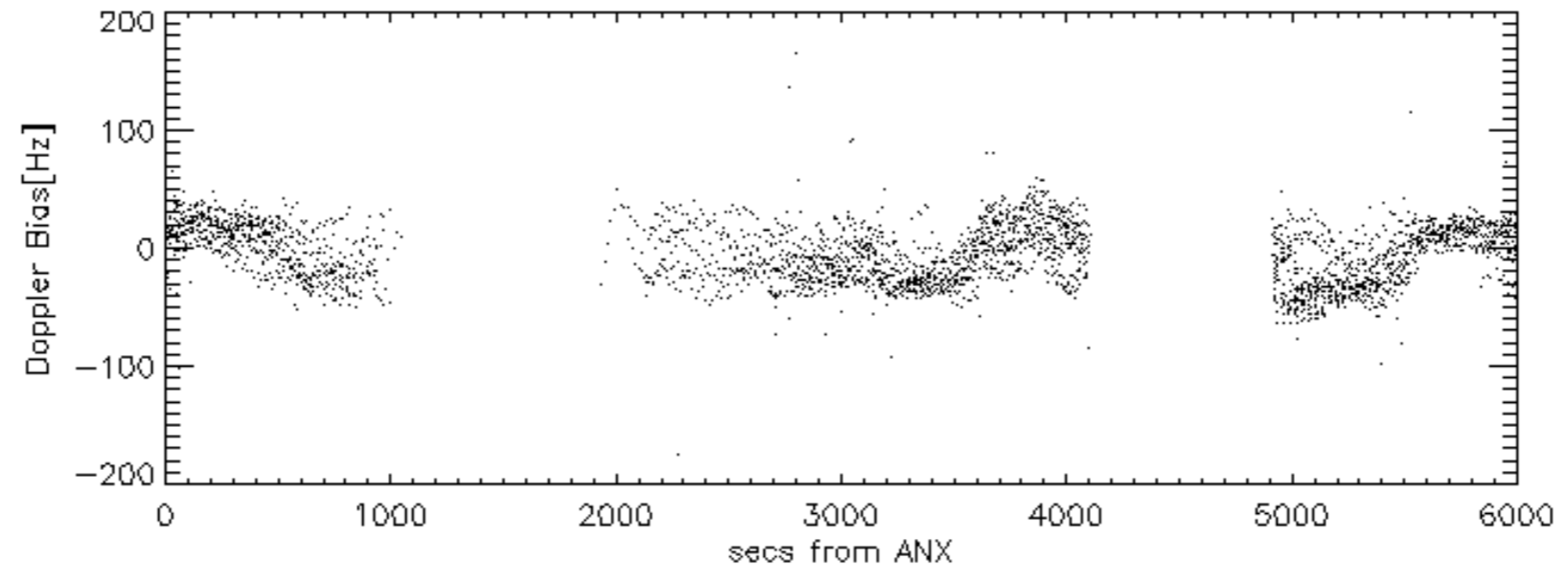
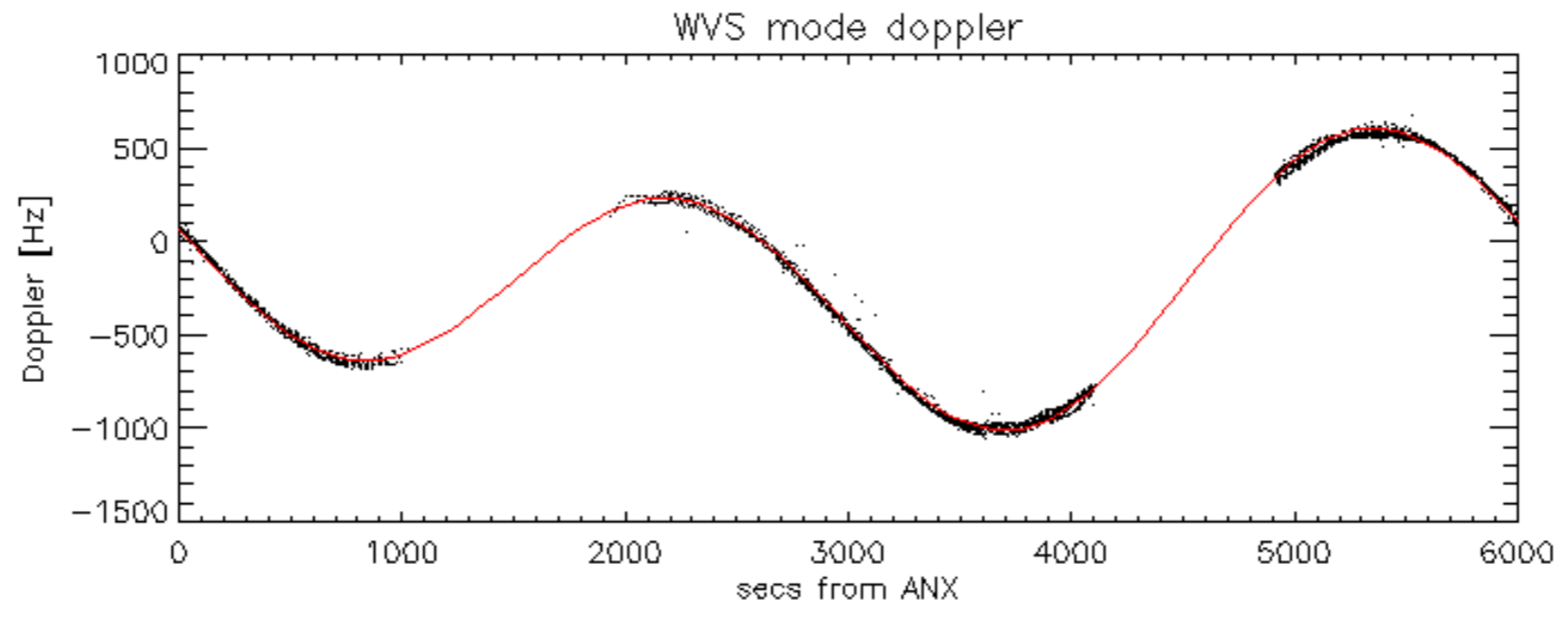
Doppler 'WVS' 'IS2' descending



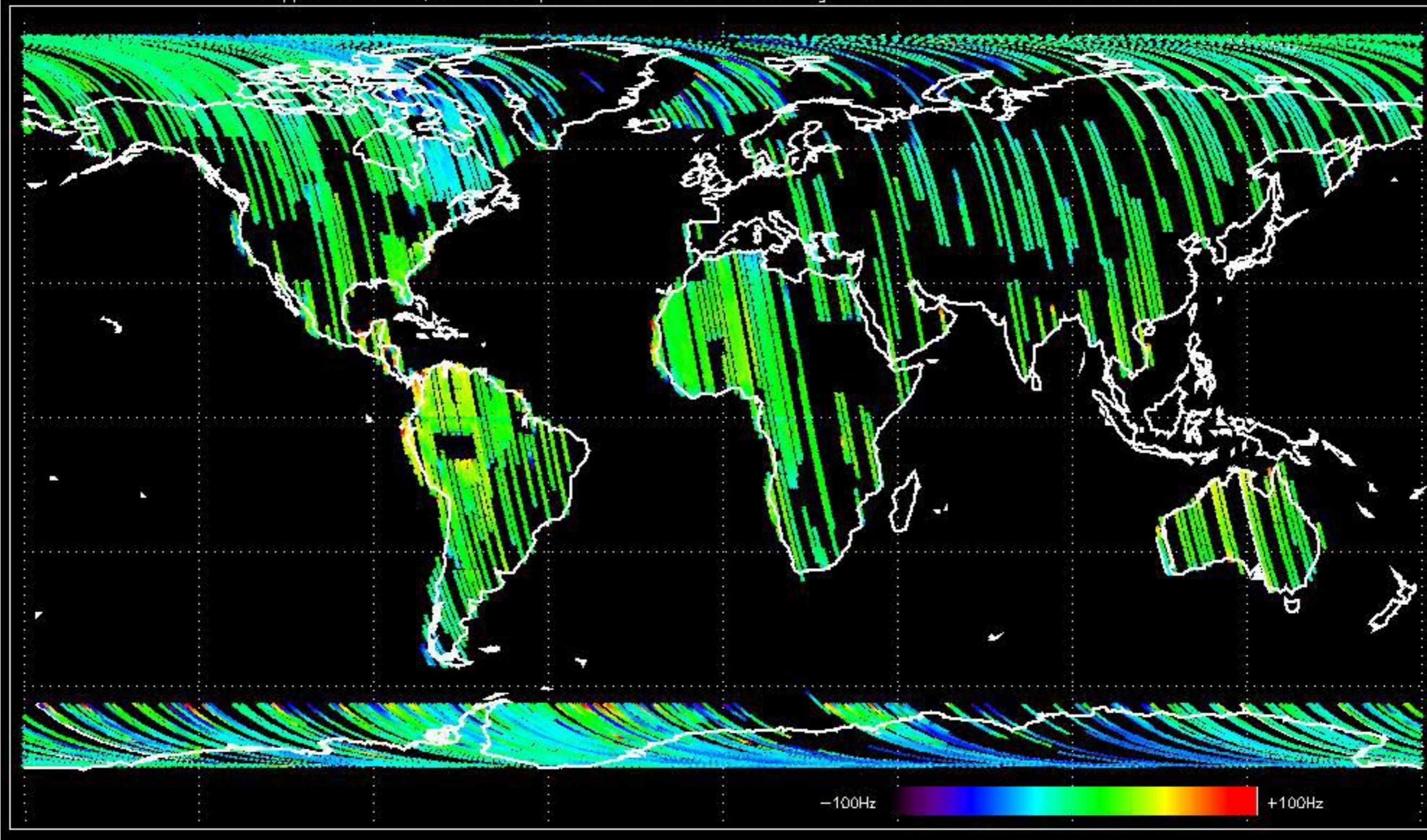


GM1 mode doppler

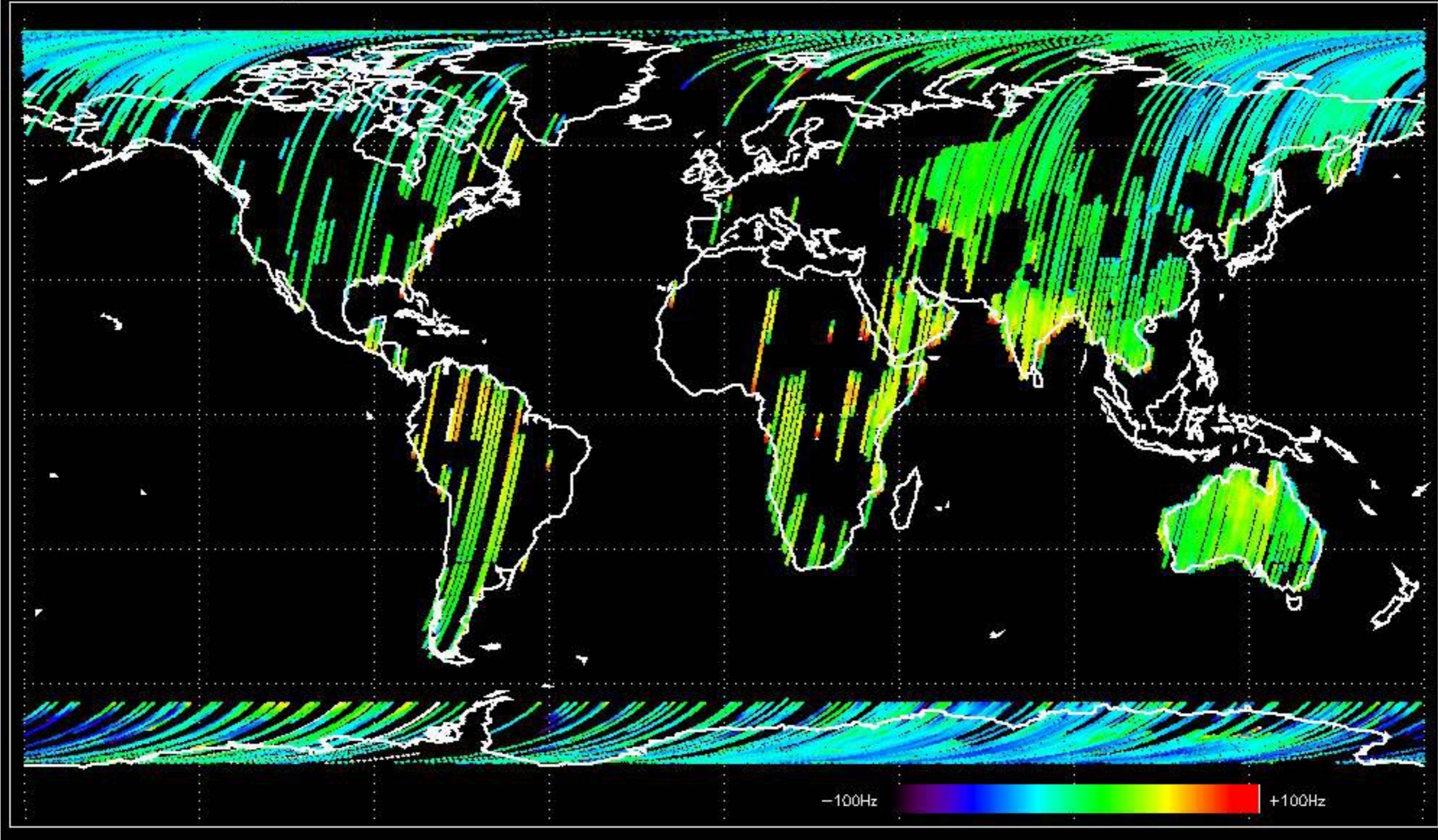




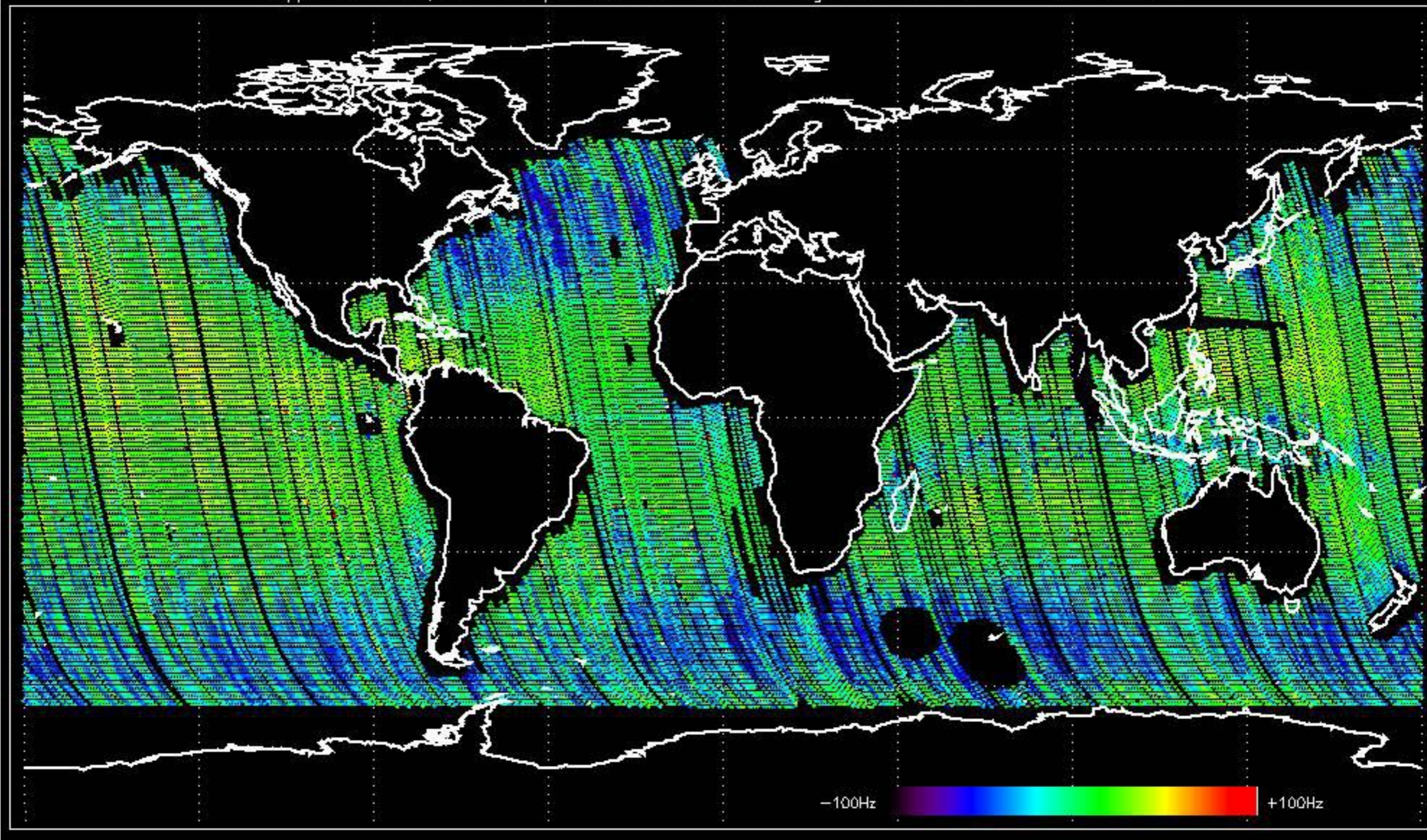
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -9.2874620 Hz



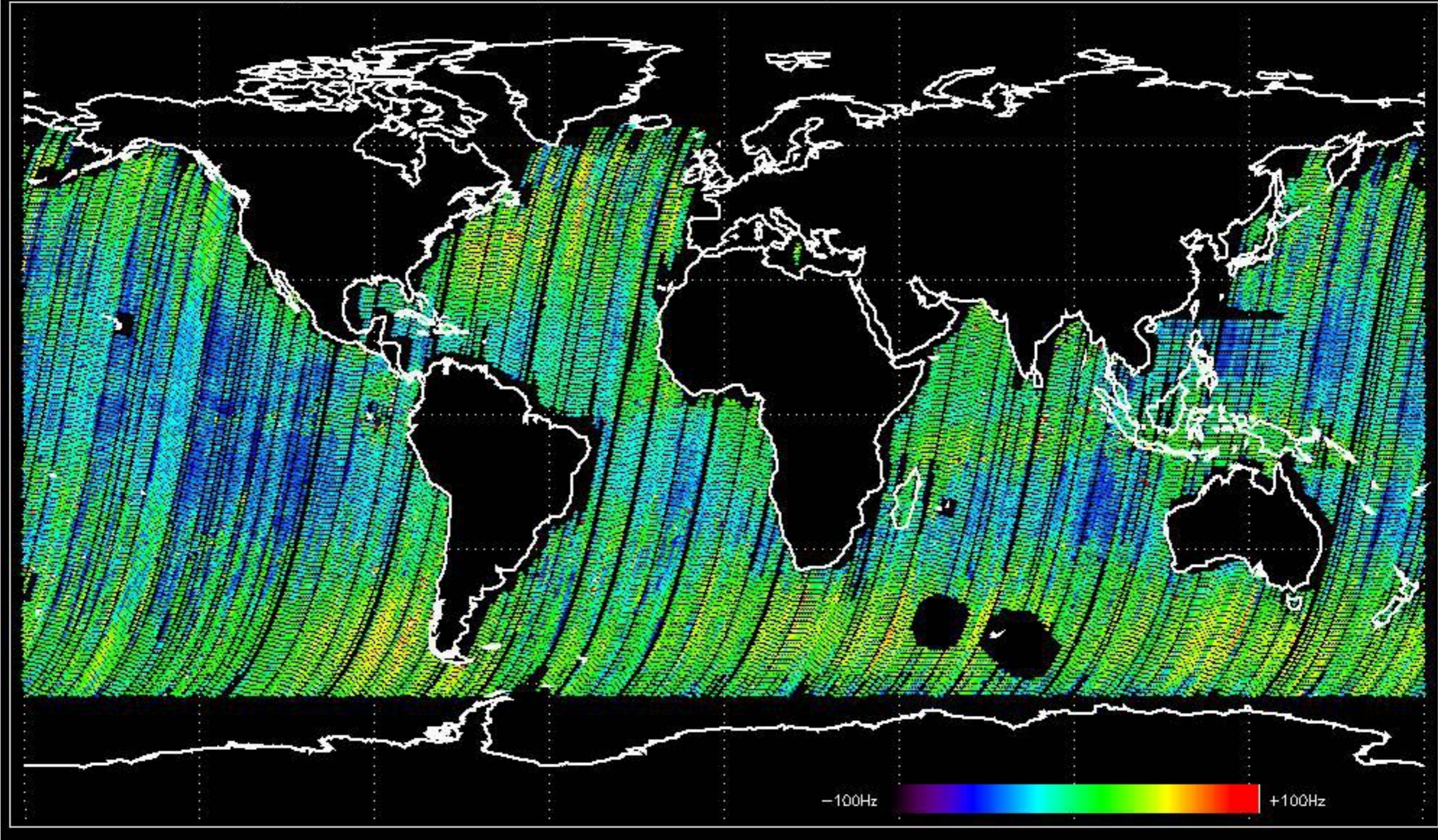
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.3468660 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -5.8989054 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.4055513 Hz



No anomalies observed on available MS products:

No anomalies observed.











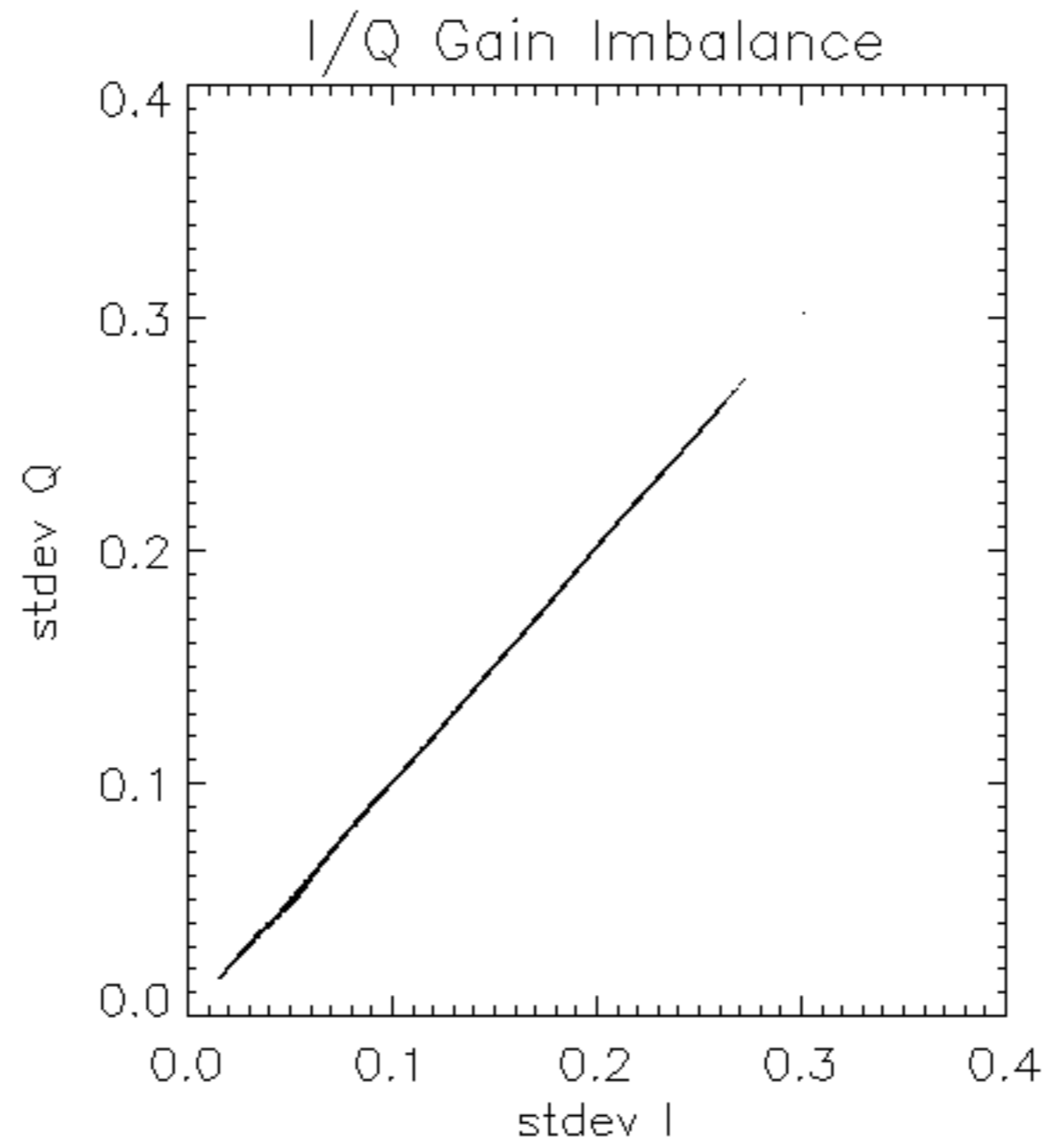


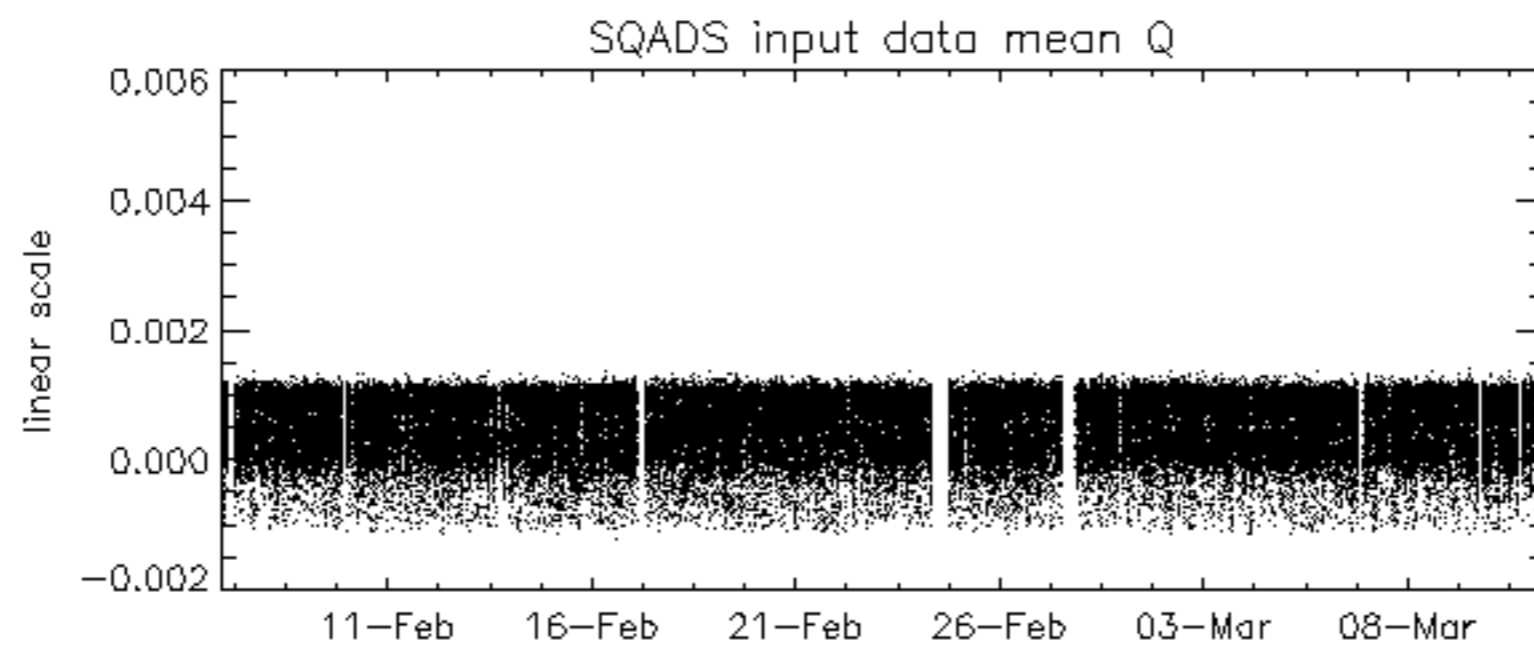
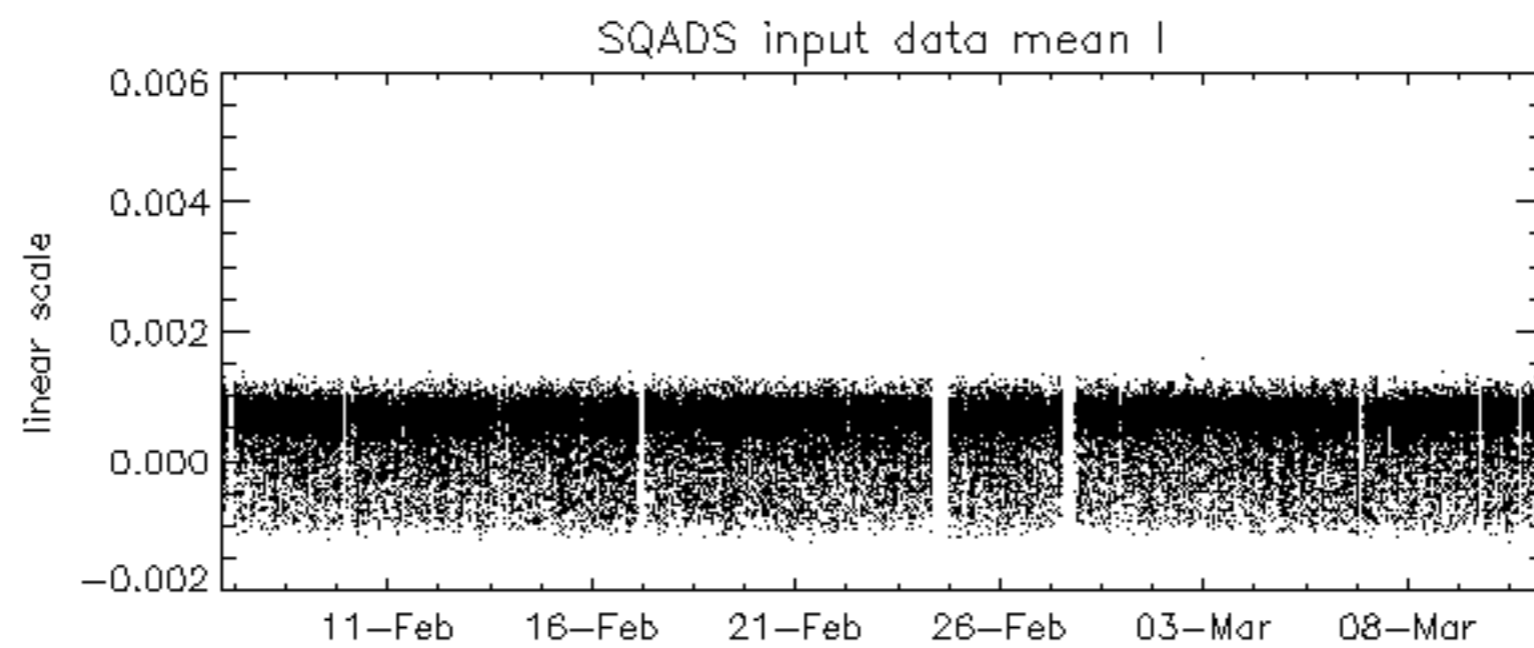
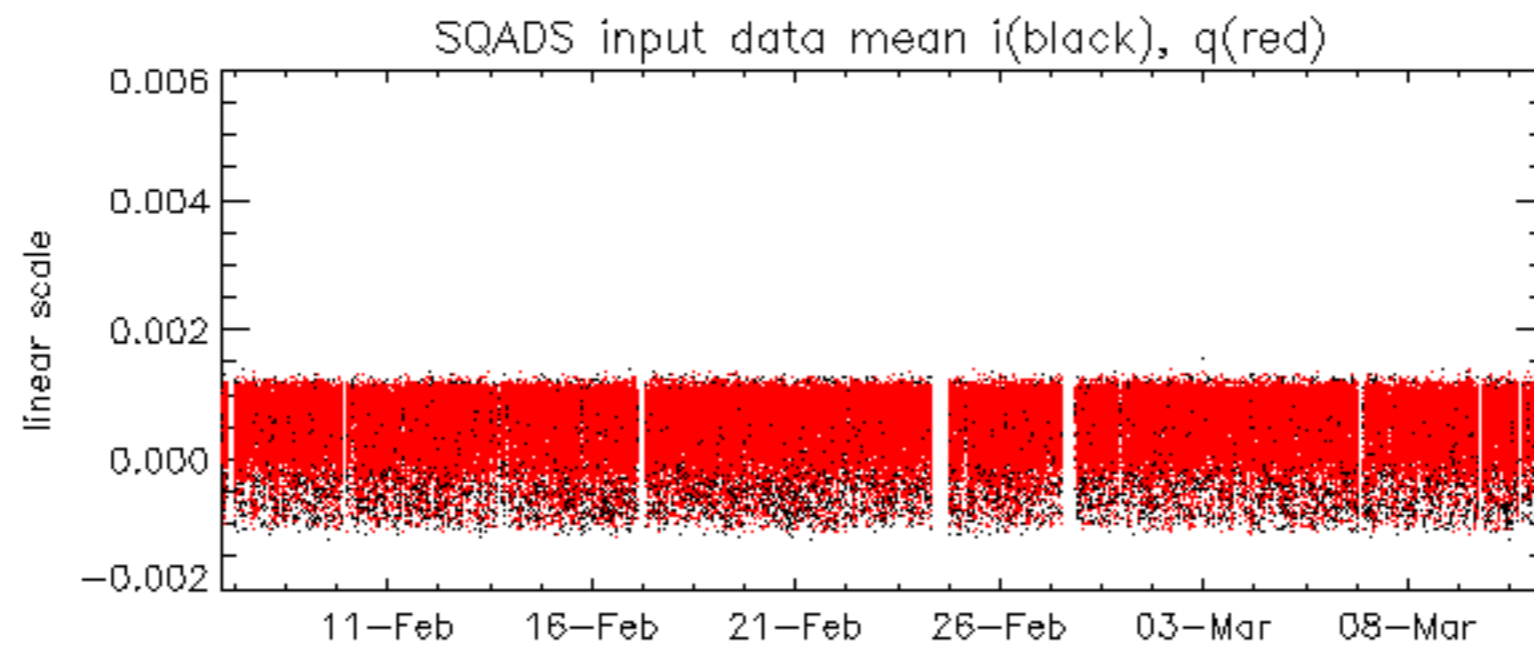


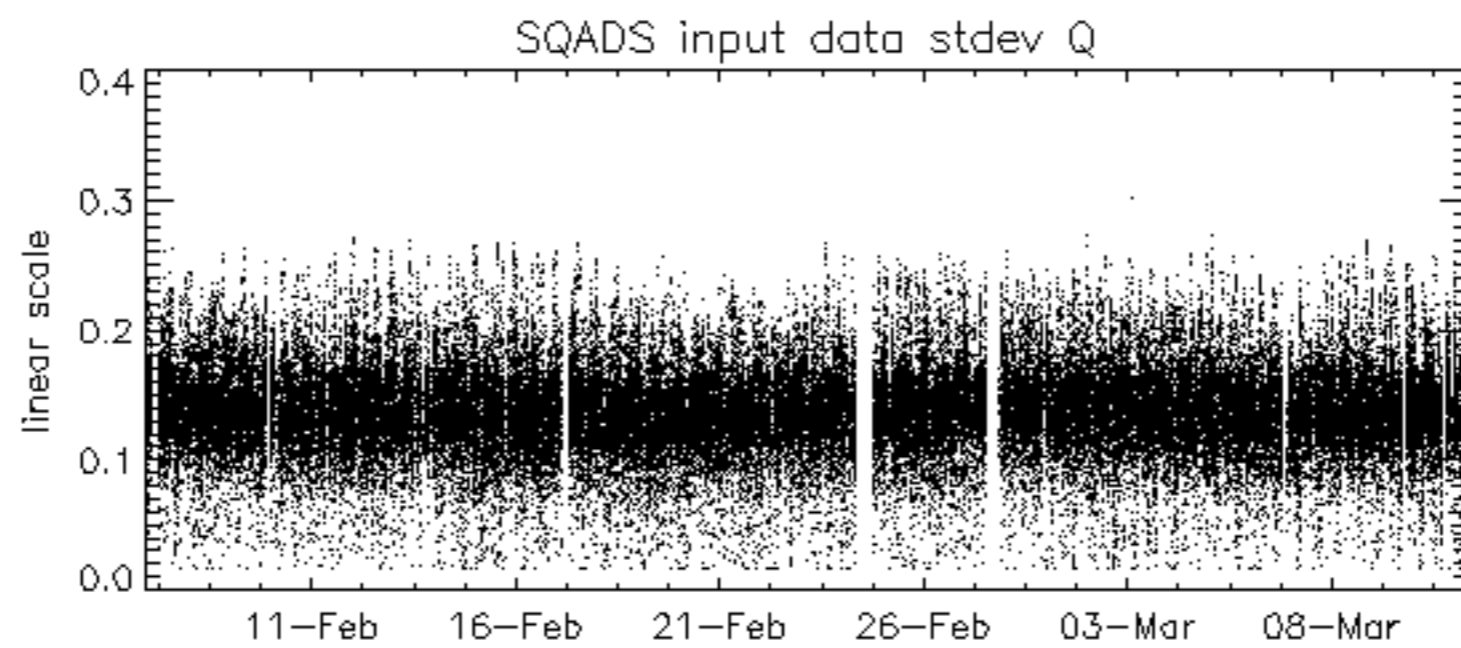
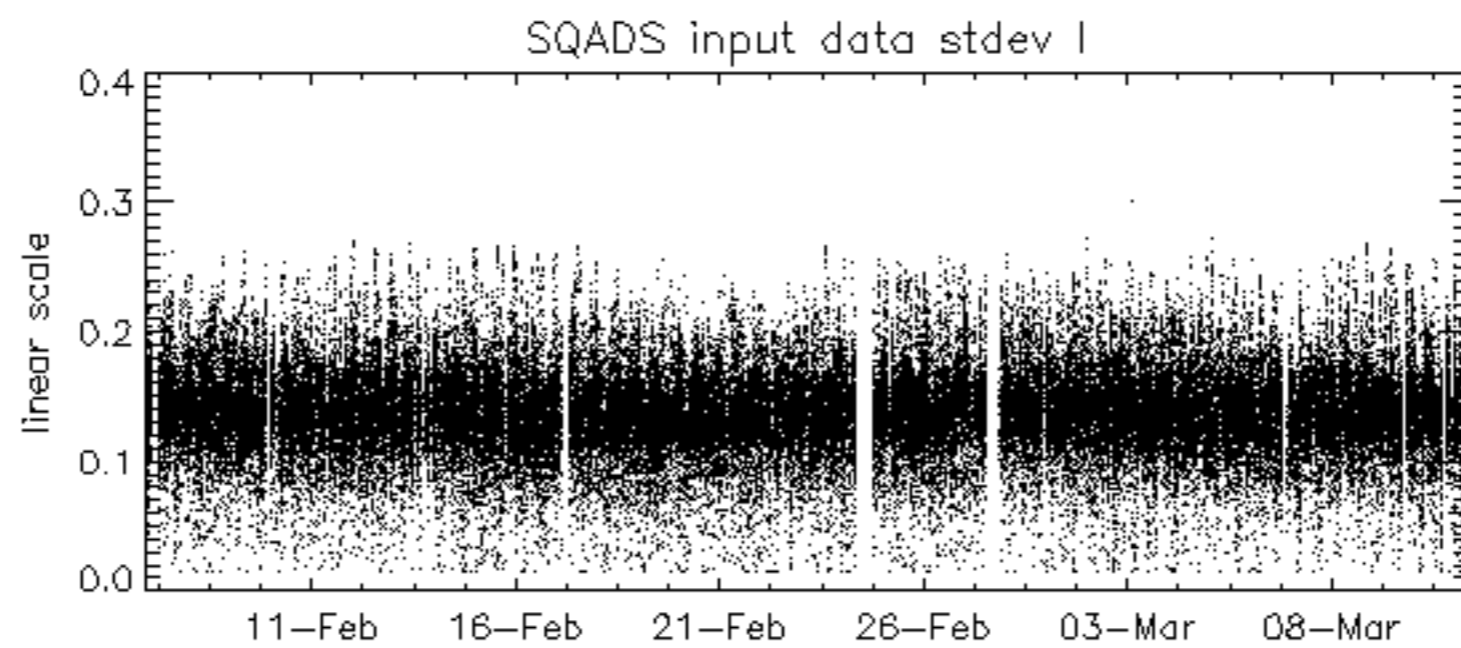
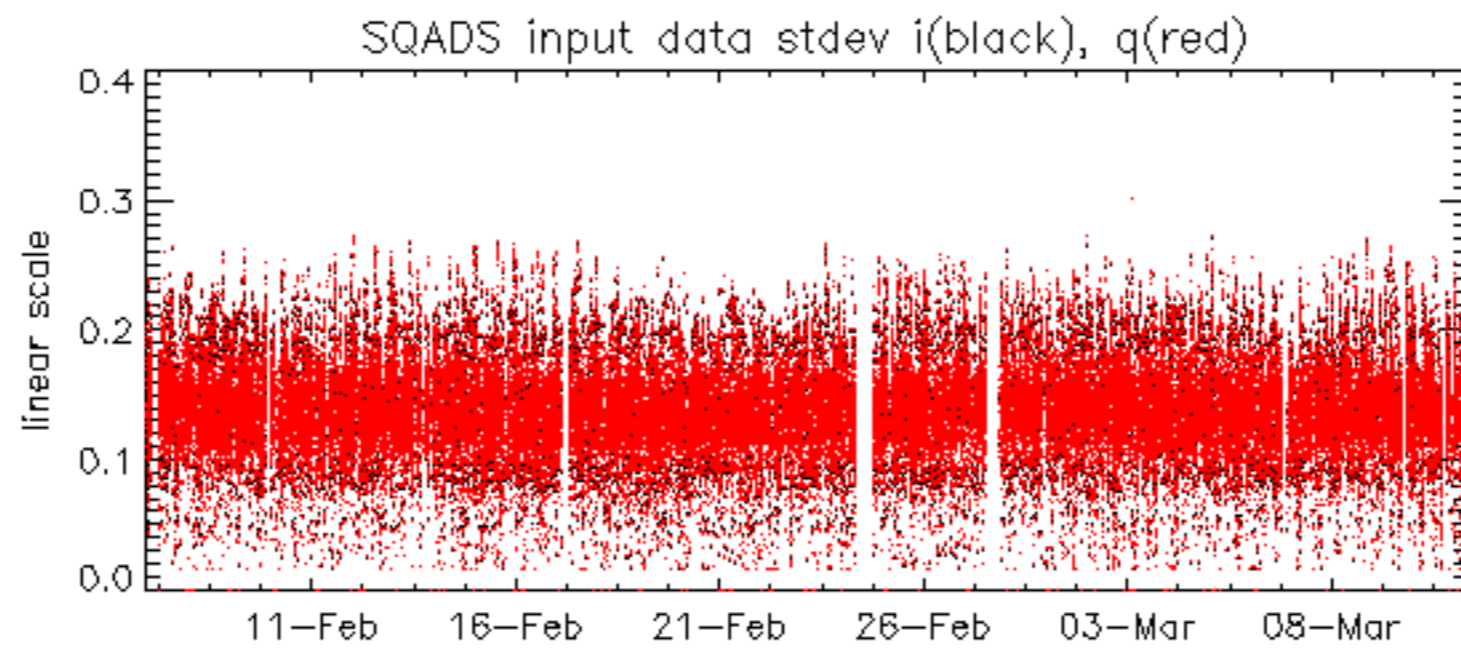




















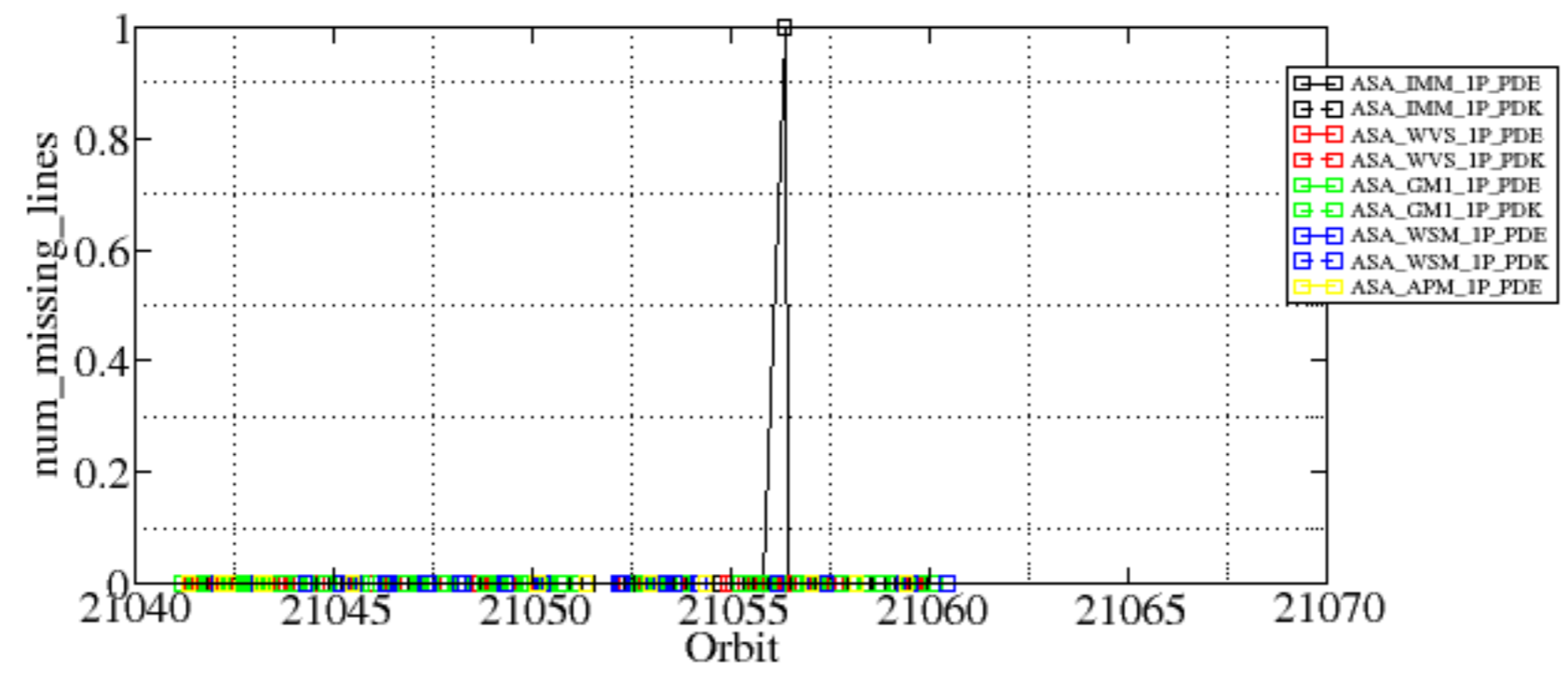
Summary of analysis for the last 3 days 2006031[901]

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
ASA_IMM_1PNPDE20060310_124102_000000362045_00453_21048_0326.N1	1	0
ASA_IMM_1PNPDE20060311_015053_000001992045_00461_21056_0412.N1	0	1





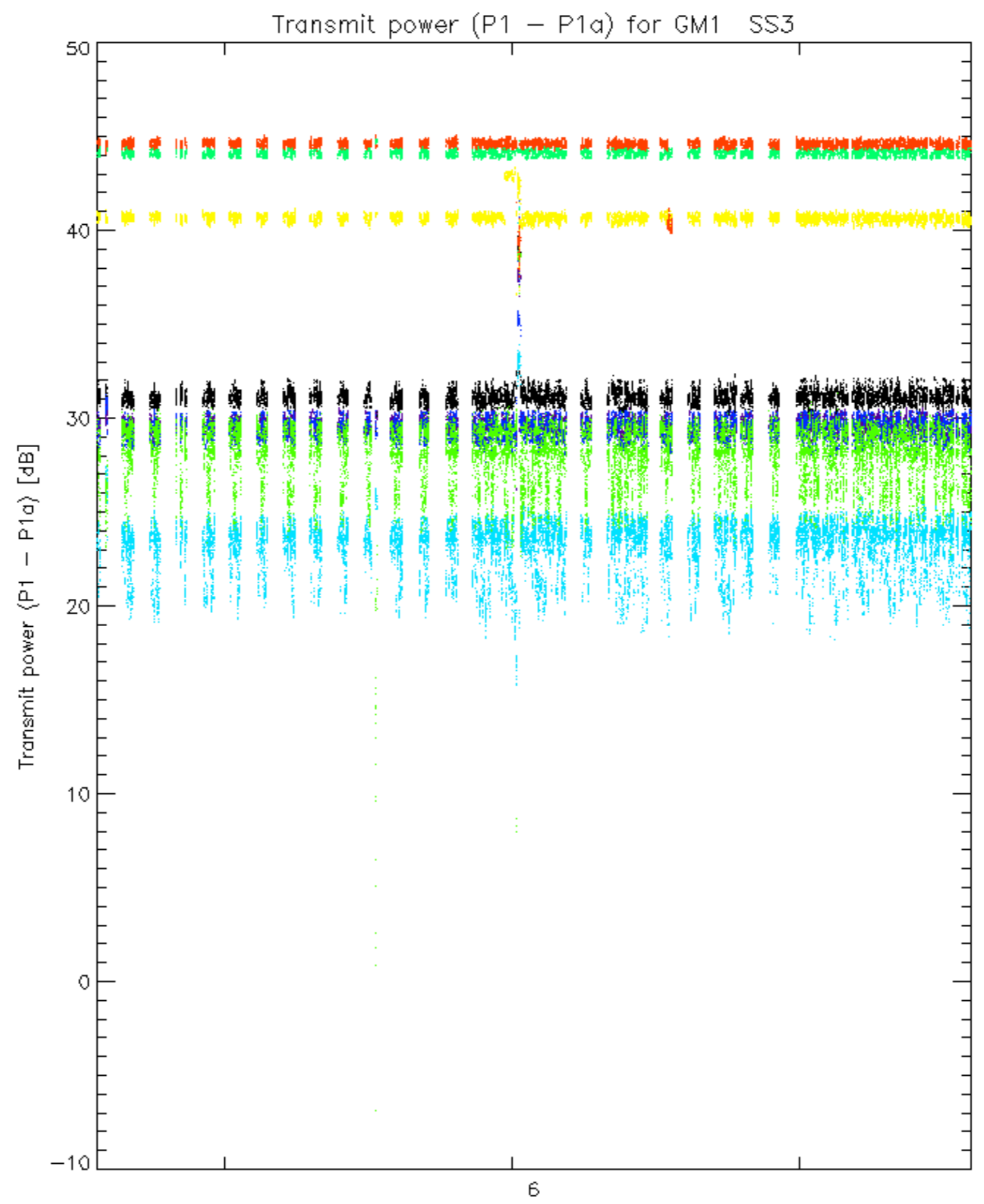




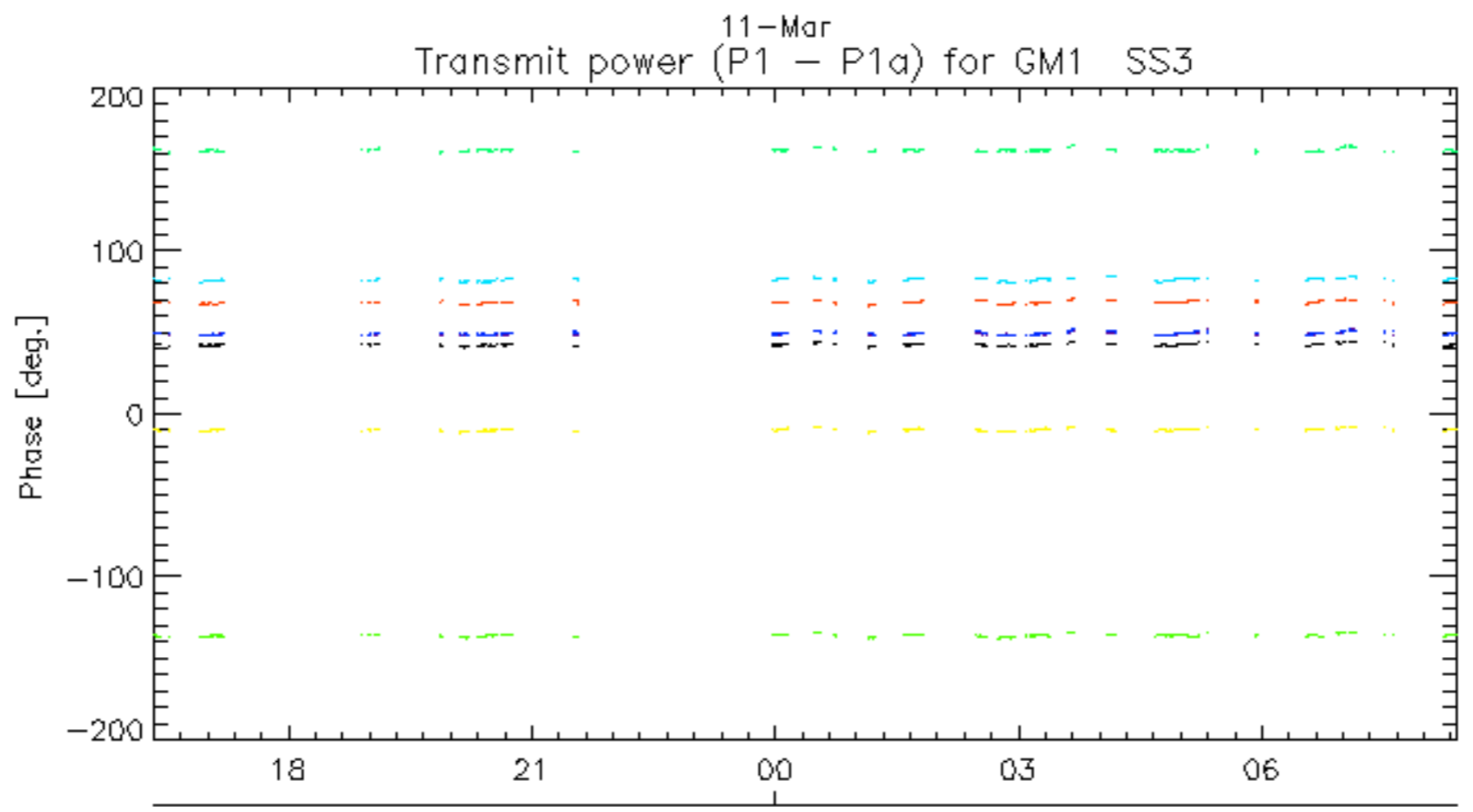
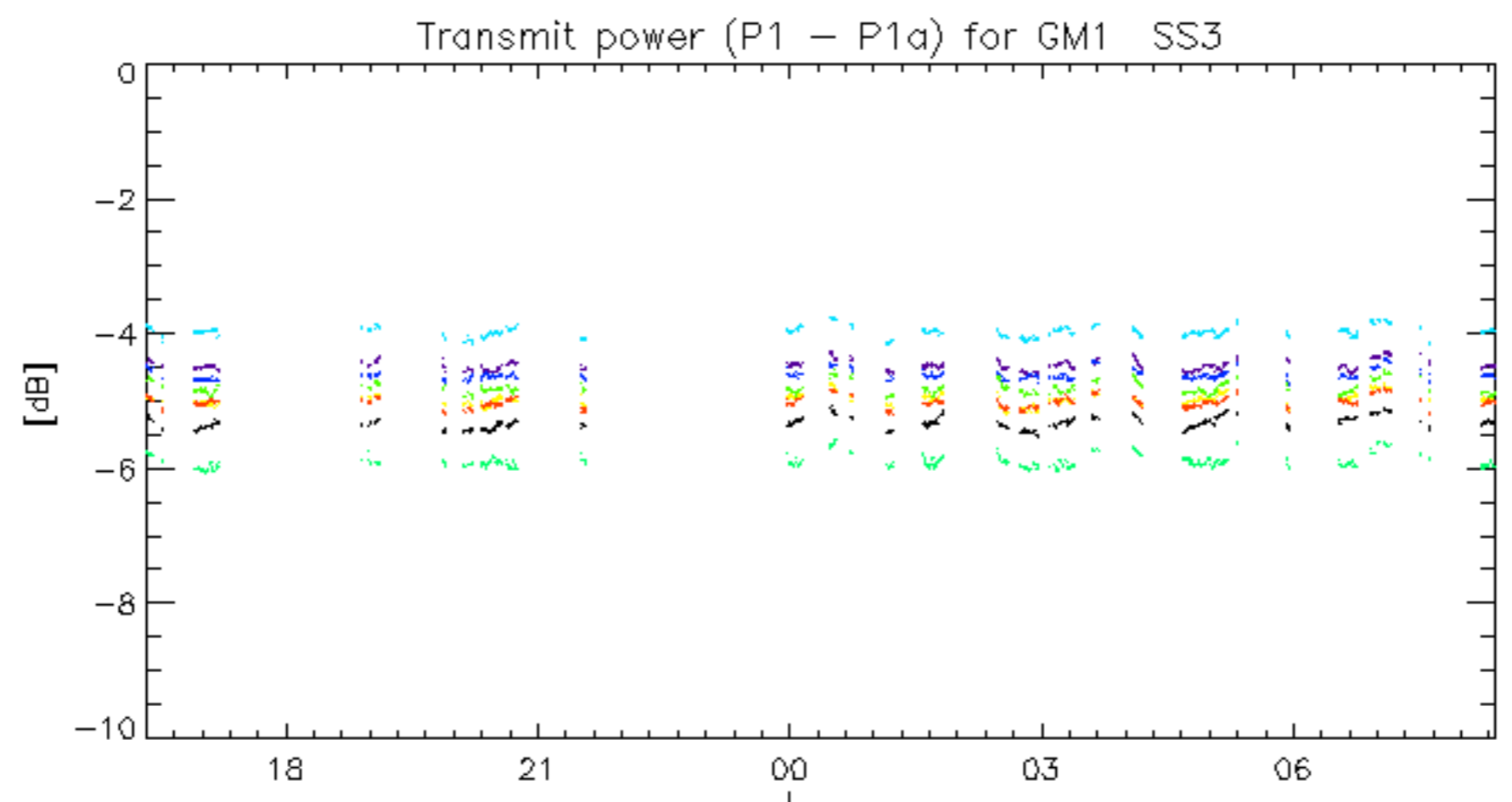






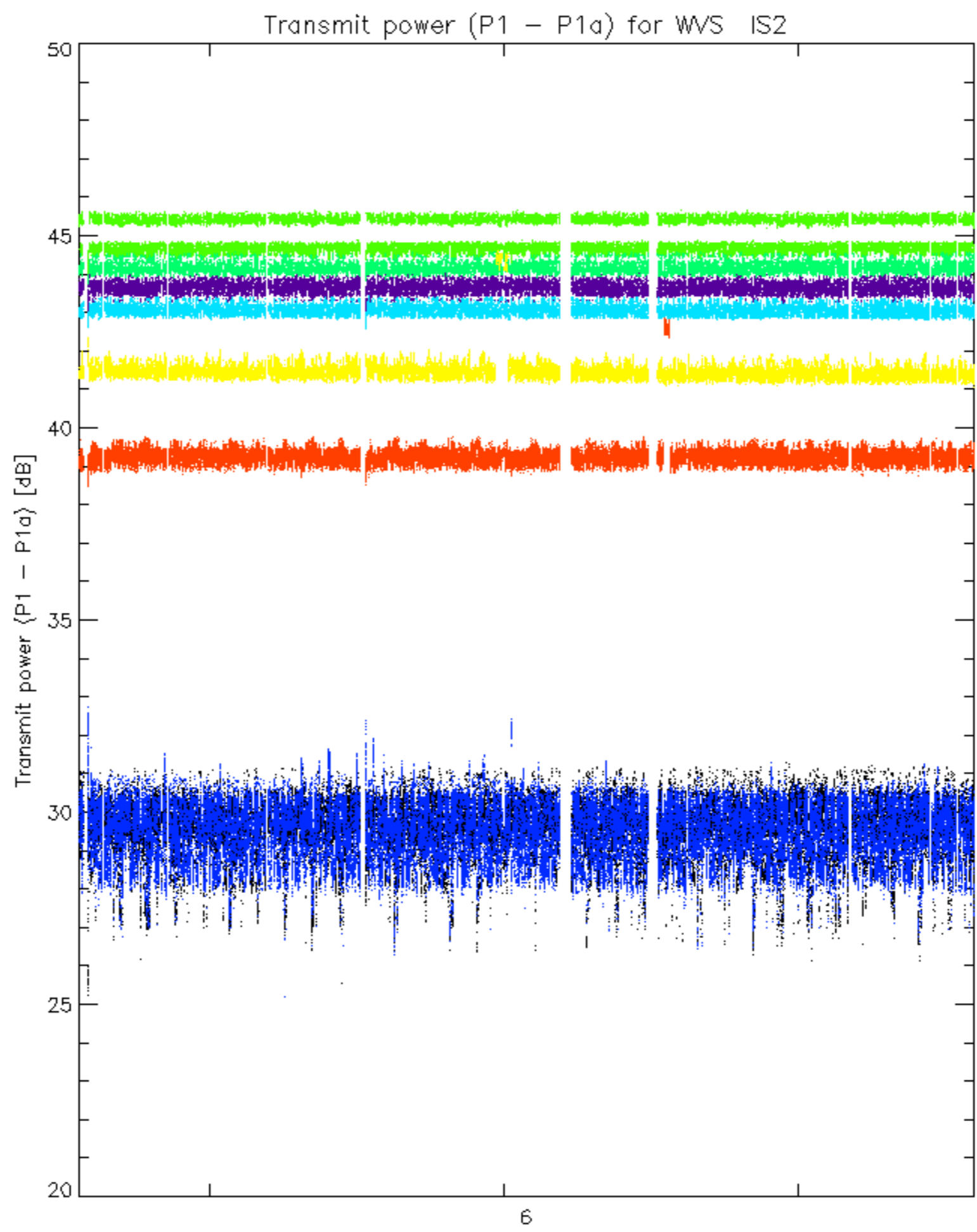


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

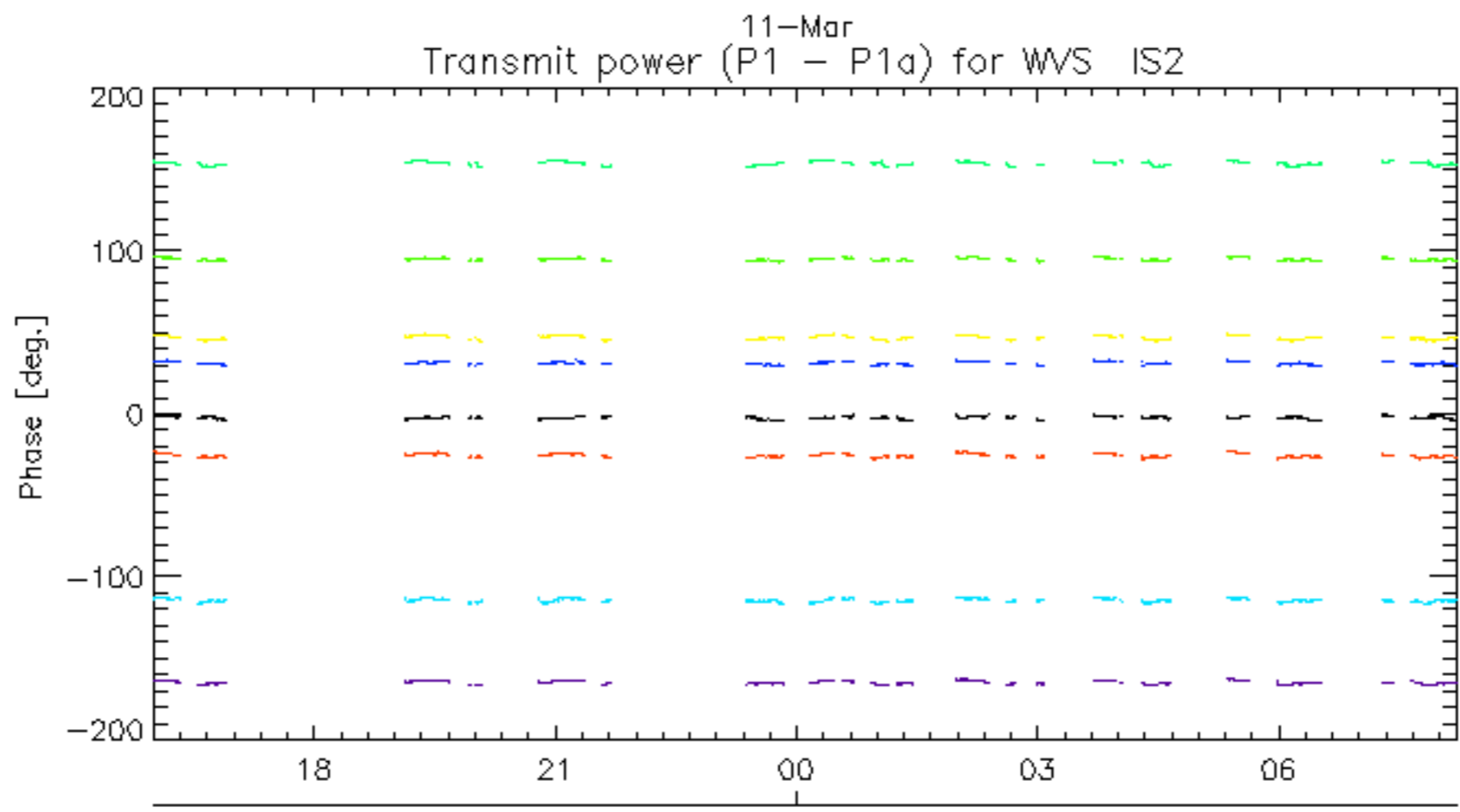
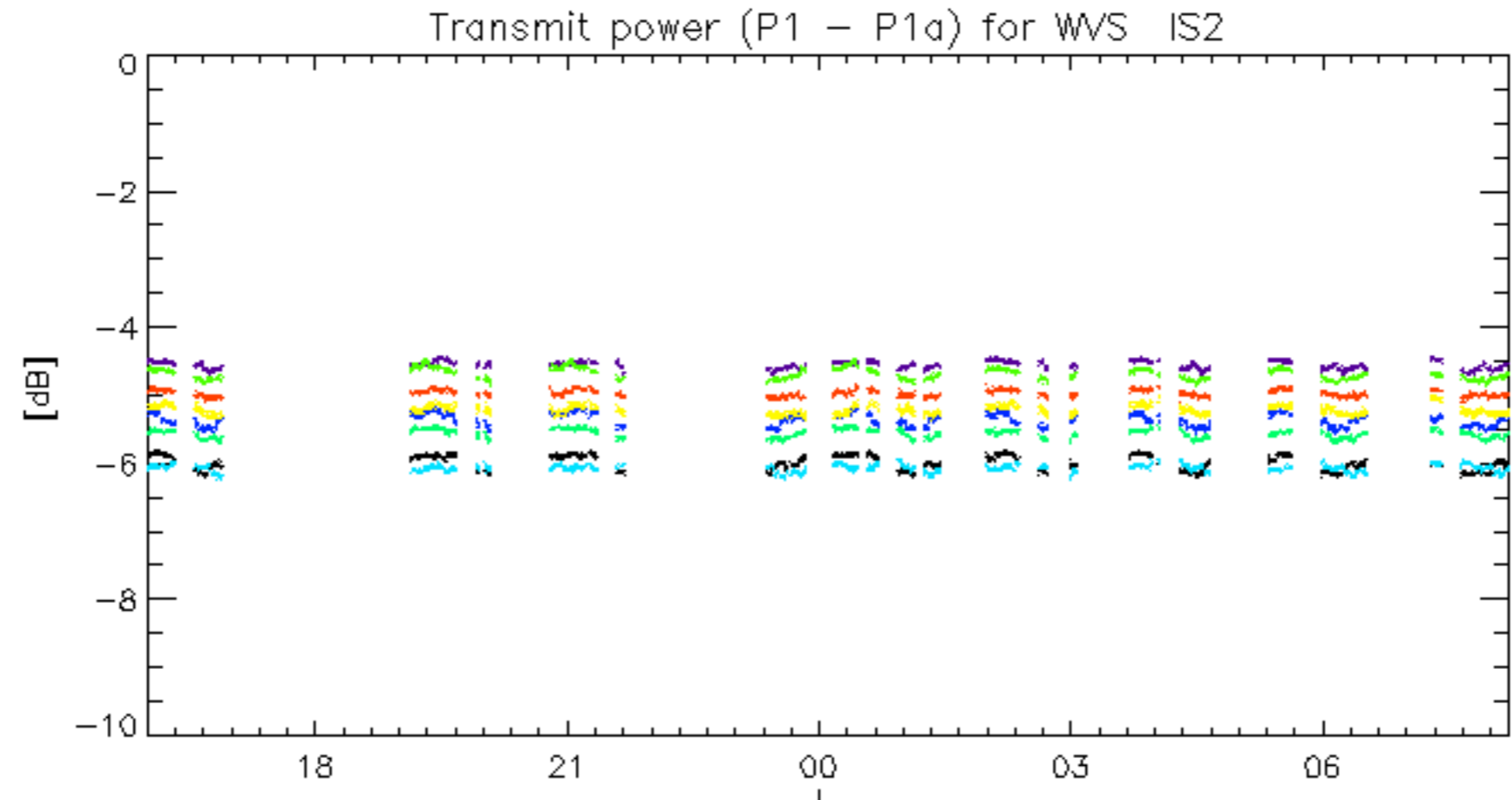


11-Mar  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.