

# PRELIMINARY REPORT OF 060313

last update on Mon Mar 13 16:29:18 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 2006-03-12 00:00:00 to 2006-03-13 16:29:18

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	60	12	0	13
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	60	12	0	13
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	60	12	0	13
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	60	12	0	13

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	36	41	45	19	36
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	36	41	45	19	36
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	36	41	45	19	36
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	41	45	19	36

### 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	20060311 204857
H	20060312 183644

### 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	-4.002464	0.009620	-0.008023
7	P1	-3.004586	0.008846	-0.032835
11	P1	-4.068268	0.020719	0.046344
15	P1	-6.077446	0.021639	-0.047758
19	P1	-3.286216	0.006733	-0.039638
22	P1	-4.459924	0.014962	0.000240
26	P1	-4.200608	0.104194	0.063762
30	P1	-5.803102	0.146792	-0.039762
3	P1	-16.974886	0.250695	-0.035710
7	P1	-16.705772	0.103983	-0.122411
11	P1	-16.507906	0.326980	0.106008
15	P1	-13.058742	0.095528	0.018922
19	P1	-13.925200	0.055686	-0.092047
22	P1	-15.593866	0.475177	0.076801
26	P1	-15.765985	0.310154	-0.069363
30	P1	-16.491537	0.312272	-0.047918

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.417416	0.087736	0.112898
7	P2	-22.385750	0.094967	0.073999
11	P2	-16.230833	0.100581	0.038096
15	P2	-7.167101	0.099011	0.008277
19	P2	-9.134732	0.091554	0.007038
22	P2	-17.936773	0.090703	-0.038798
26	P2	-16.208797	0.095191	-0.017802
30	P2	-19.643721	0.084855	-0.038161

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.194599	0.006209	-0.007596
7	P3	-8.194599	0.006209	-0.007596
11	P3	-8.194599	0.006209	-0.007596
15	P3	-8.194599	0.006209	-0.007596
19	P3	-8.194599	0.006209	-0.007596
22	P3	-8.194599	0.006209	-0.007596
26	P3	-8.194599	0.006209	-0.007596
30	P3	-8.194599	0.006209	-0.007596

**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	-3.847520	3.374920	0.138571
7	P1	-2.841218	3.541899	0.199365
11	P1	-3.028122	3.565956	0.162142
15	P1	-3.671576	3.535406	0.170326
19	P1	-3.474130	3.426367	0.126503
22	P1	-5.266335	3.147905	0.118217
26	P1	-5.962103	3.344446	0.287194
30	P1	-5.298295	3.184208	0.166470
3	P1	-11.648021	2.216061	0.131940
7	P1	-10.042024	2.453795	0.117303
11	P1	-10.337888	2.444980	0.040421
15	P1	-10.878602	2.450716	0.065489
19	P1	-15.474041	1.802323	0.048917
22	P1	-20.309673	2.418799	0.108878

26	P1	-16.330393	2.333233	0.156534
30	P1	-18.360949	1.668742	0.030127

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.112673	2.331183	0.137630
7	P2	-22.552910	2.721936	-0.002226
11	P2	-11.283499	2.531949	0.133491
15	P2	-4.921925	3.289689	0.143759
19	P2	-6.928751	2.962043	0.140978
22	P2	-8.218047	2.778292	0.094465
26	P2	-23.885588	2.791915	-0.157253
30	P2	-22.032156	2.637460	-0.085481

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024092	0.002570	-0.001228
7	P3	-8.024036	0.002571	-0.001015
11	P3	-8.024096	0.002582	-0.001134
15	P3	-8.024151	0.002571	-0.001235
19	P3	-8.024044	0.002589	-0.000807
22	P3	-8.024135	0.002566	-0.001079
26	P3	-8.024149	0.002573	-0.000916
30	P3	-8.023973	0.002572	-0.000760

## 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	0.000554989
	stdev	1.76722e-07
MEAN Q	mean	0.000513589
	stdev	2.21886e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138075
	stdev	0.00119845
STDEV Q	mean	0.138436
	stdev	0.00121661



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006031[123]

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_1PNPDE20060311_015053_000001992045_00461_21056_0412.N1	0	1
ASA_IMM_1PNPDE20060312_003948_000001552045_00474_21069_0566.N1	1	0
ASA_IMM_1PNPDE20060312_005604_000000362045_00475_21070_0559.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0586.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0595.N1	1	0

ASA_IMM_1PNPDK20060312_124030_000000362045_00482_21077_0195.N1	1	0
ASA_WSM_1PNPDE20060312_113127_000001842045_00481_21076_0468.N1	0	62
ASA_APM_1PNPDE20060312_141416_000000412045_00483_21078_0171.N1	0	11



## 7 - Doppler Analysis

Preliminary report. The data is not yet controlled

### 7.1 - Unbiased Doppler Error for WVS

<b>Evolution of unbiased Doppler error (Real - Expected)</b>	
<input type="checkbox"/>	
	Acsending
<input type="checkbox"/>	
	Descending

### 7.2 - Absolute Doppler for WVS

<b>Evolution of Absolute Doppler</b>	
<input type="checkbox"/>	
	Acsending
<input type="checkbox"/>	
	Descending

### 7.3 - Doppler evolution versus ANX for WVS

<b>Evolution Doppler error versus ANX</b>	
<input type="checkbox"/>	



### 7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)	
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

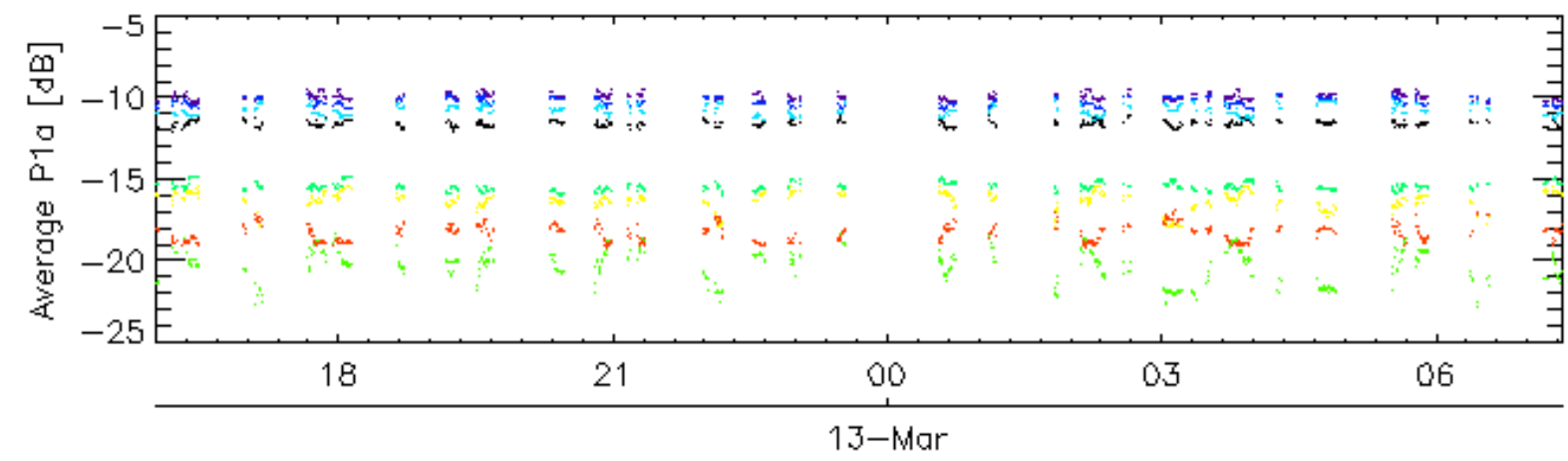
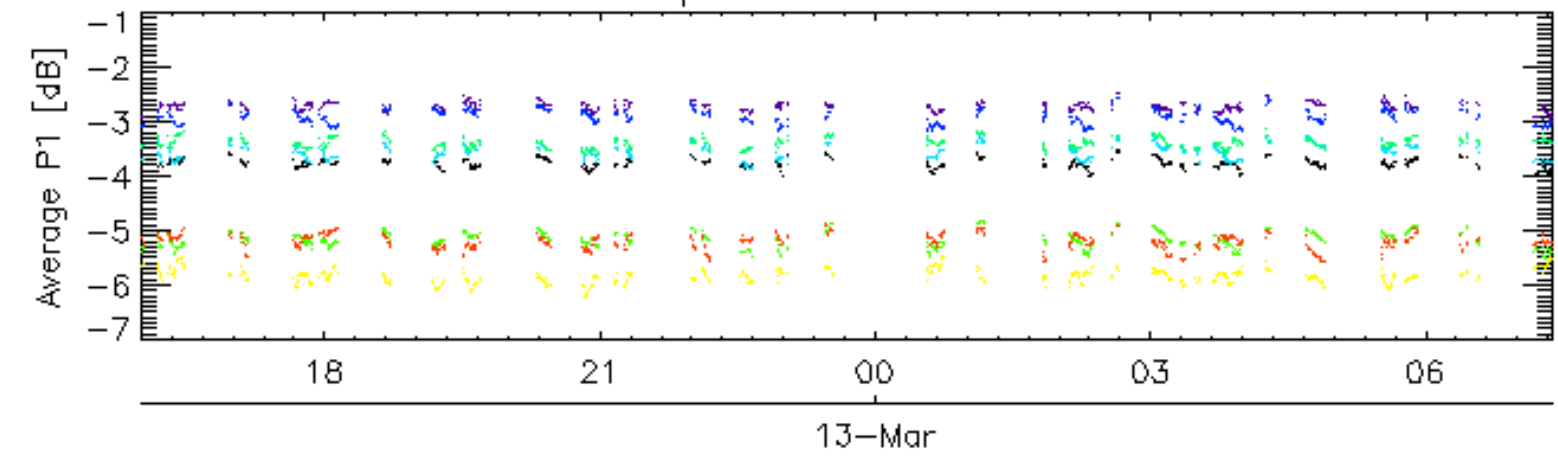
### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler	
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

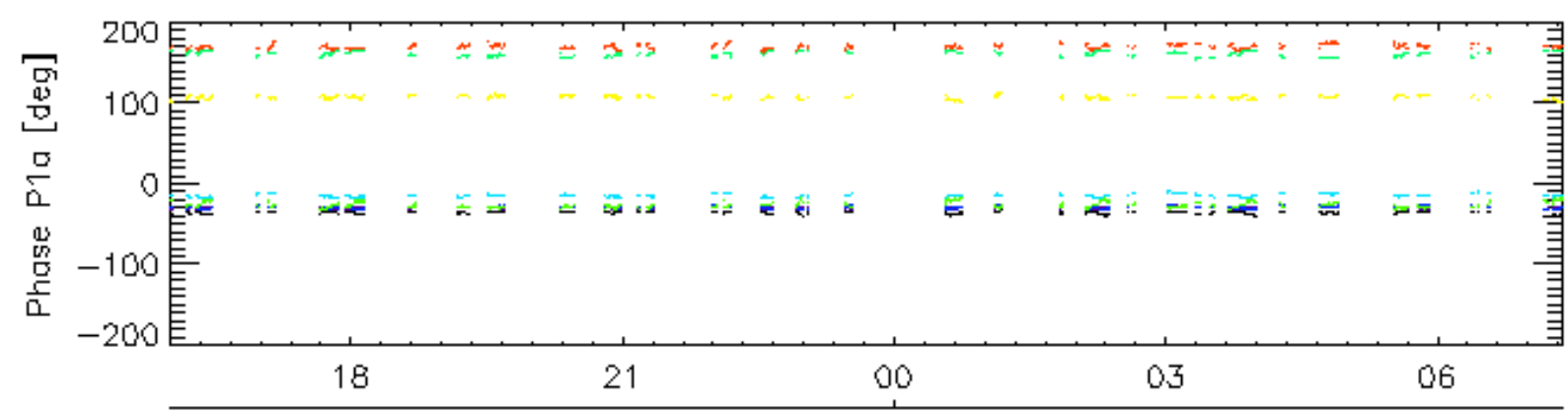
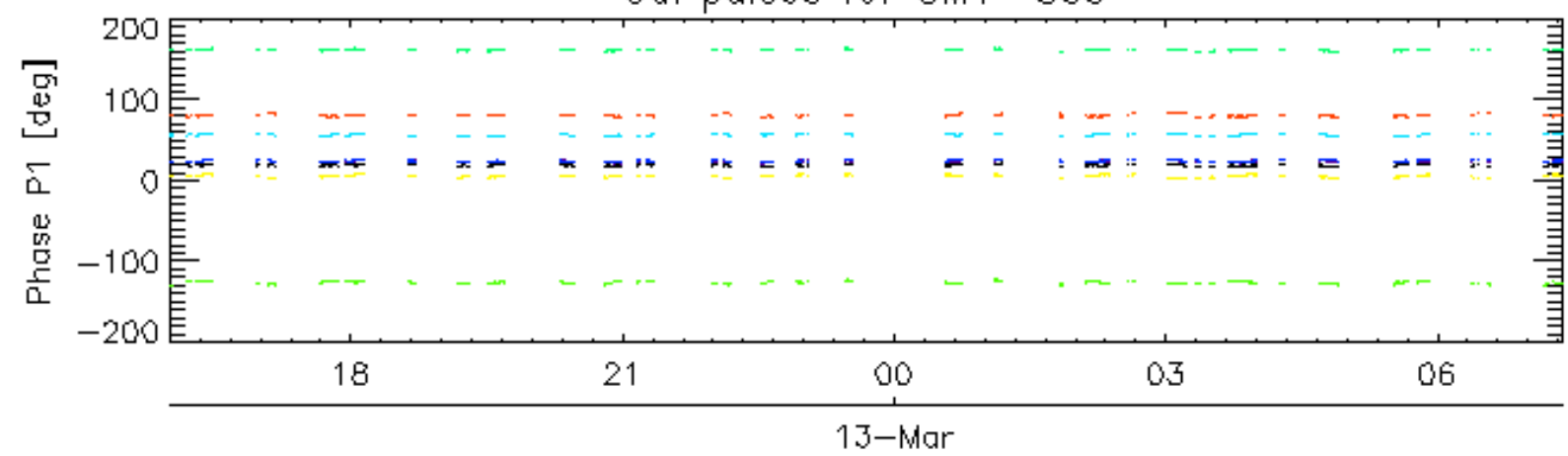
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX	
<input type="checkbox"/>	

Cal pulses for GM1 SS3

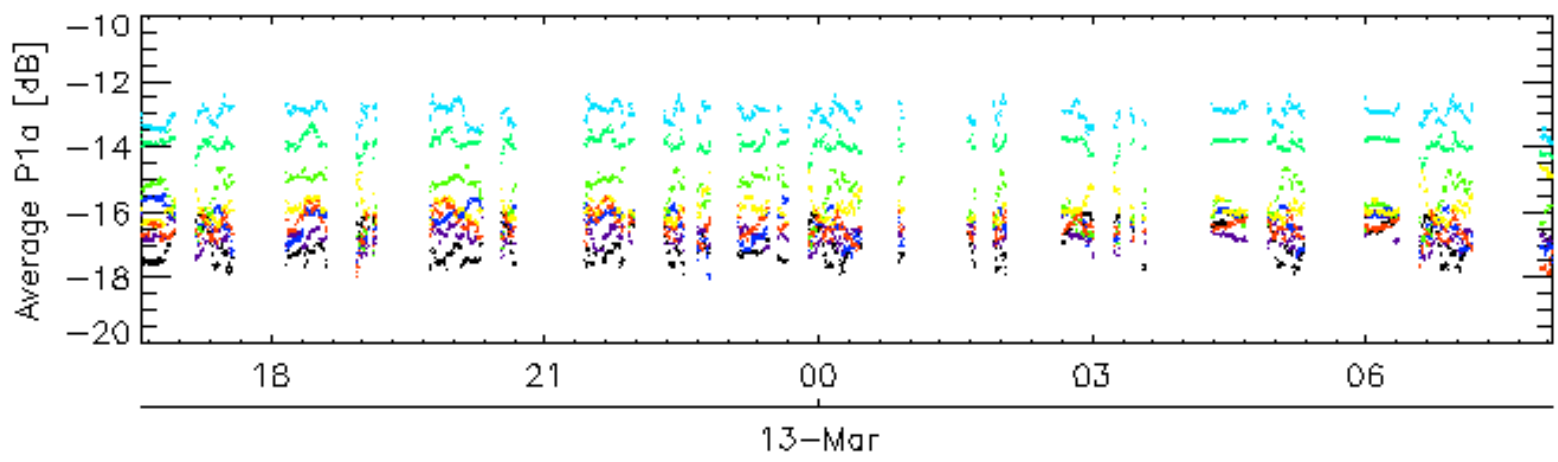
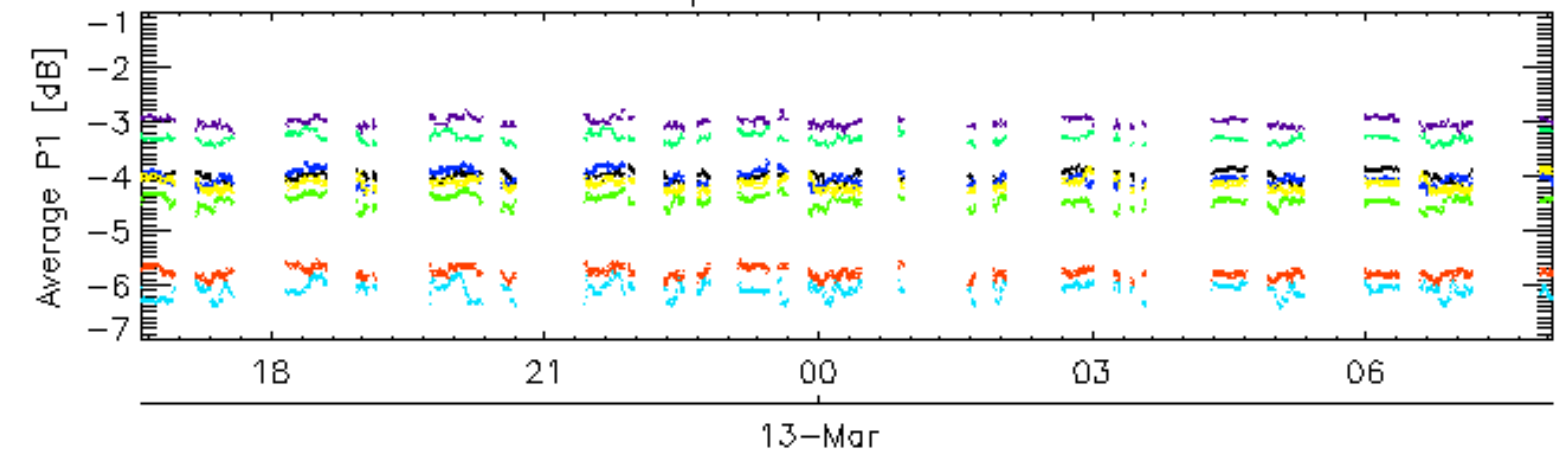


Cal pulses for GM1 SS3

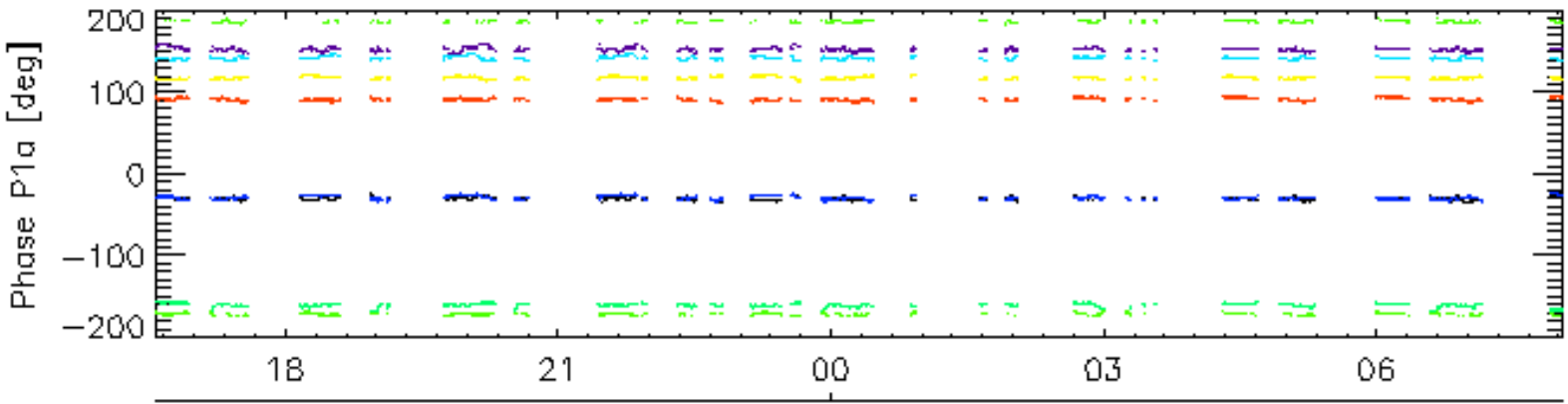
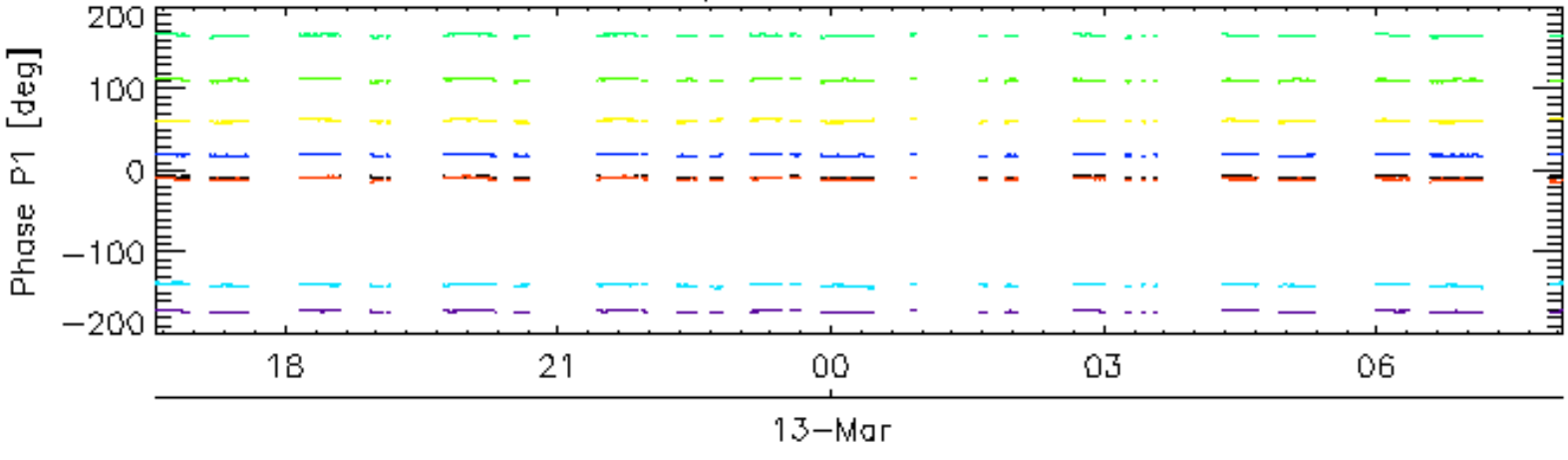


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30 13-Mar

Cal pulses for WVS IS2

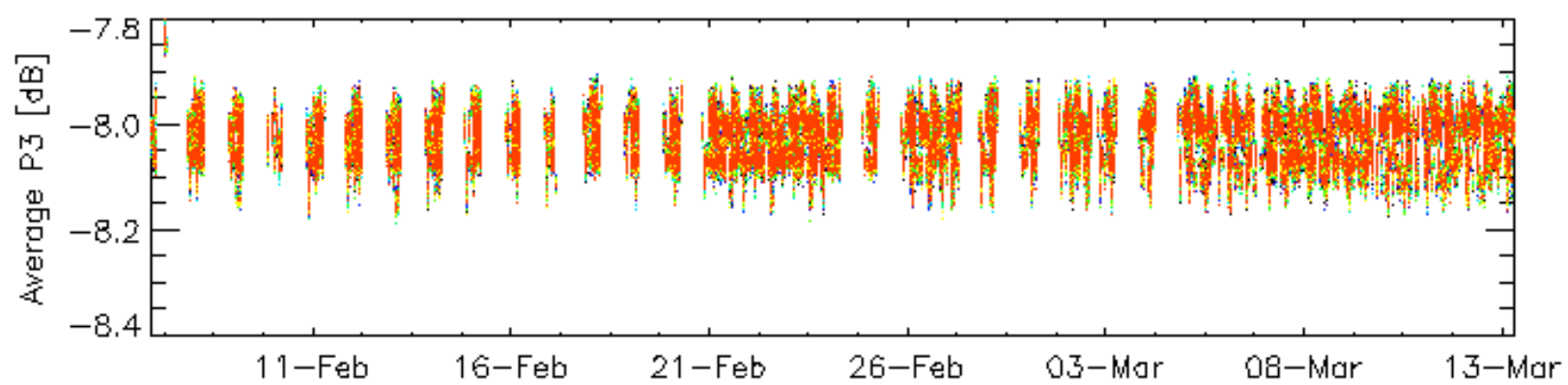
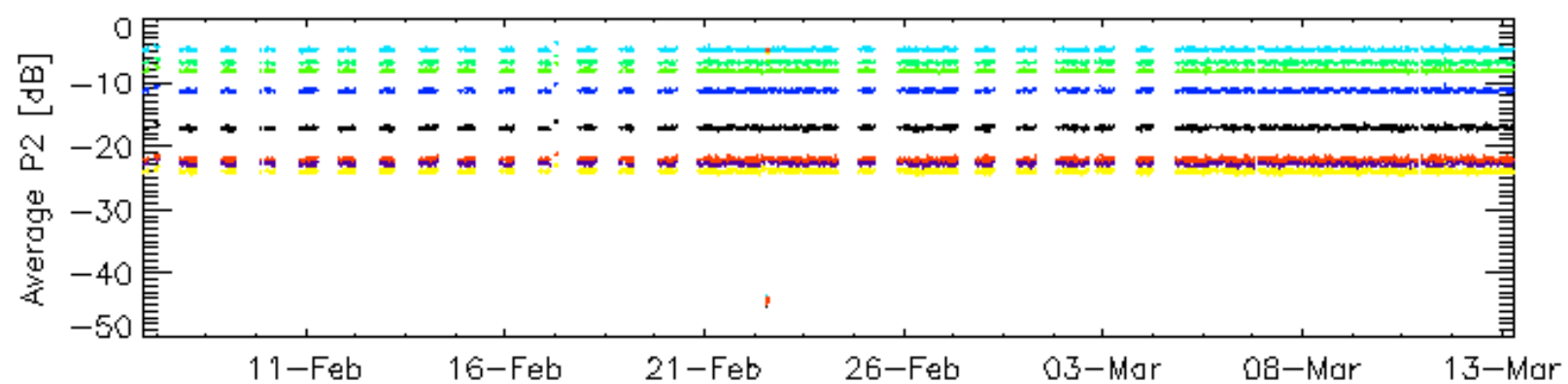
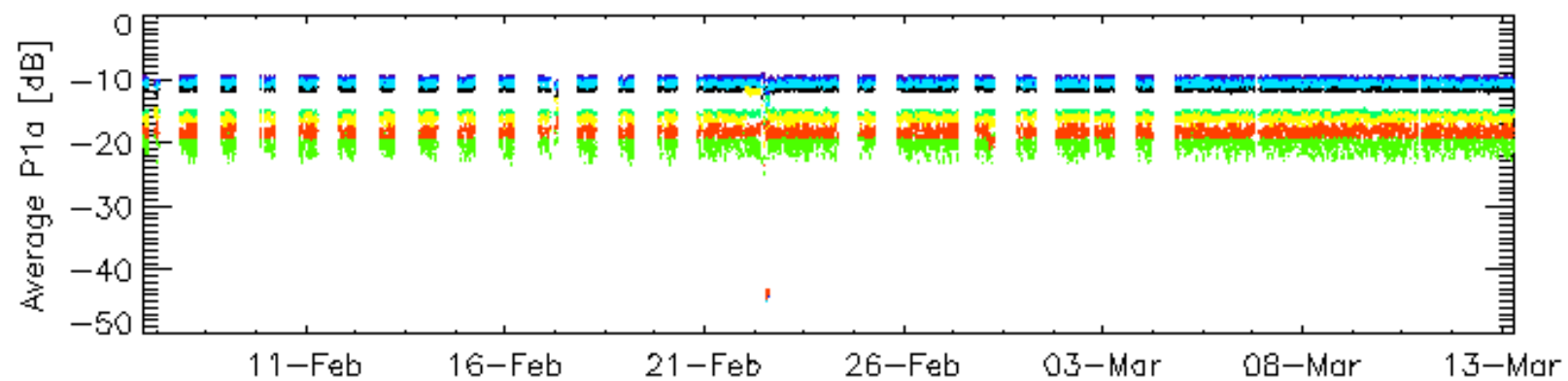
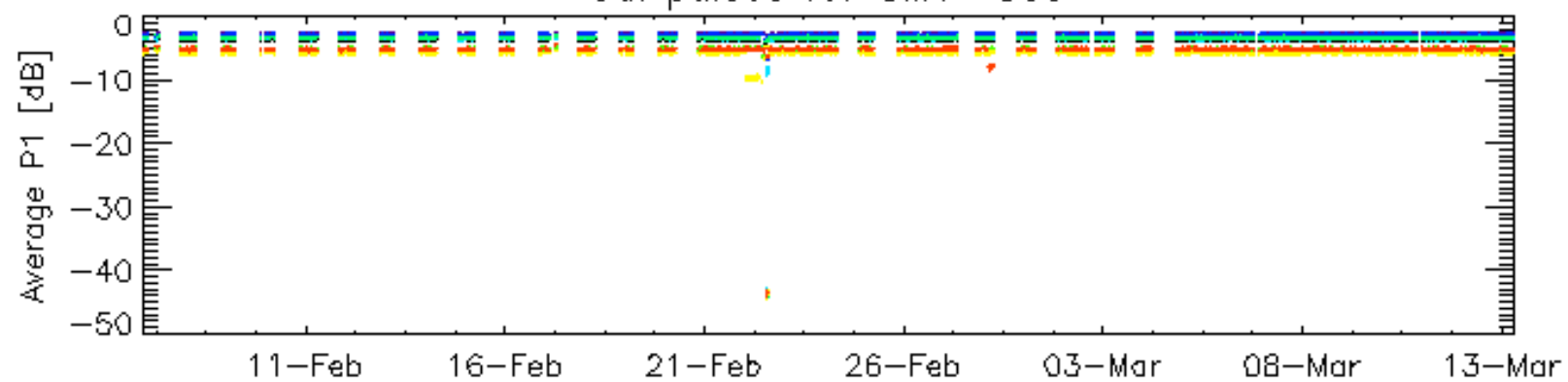


Cal pulses for WVS IS2



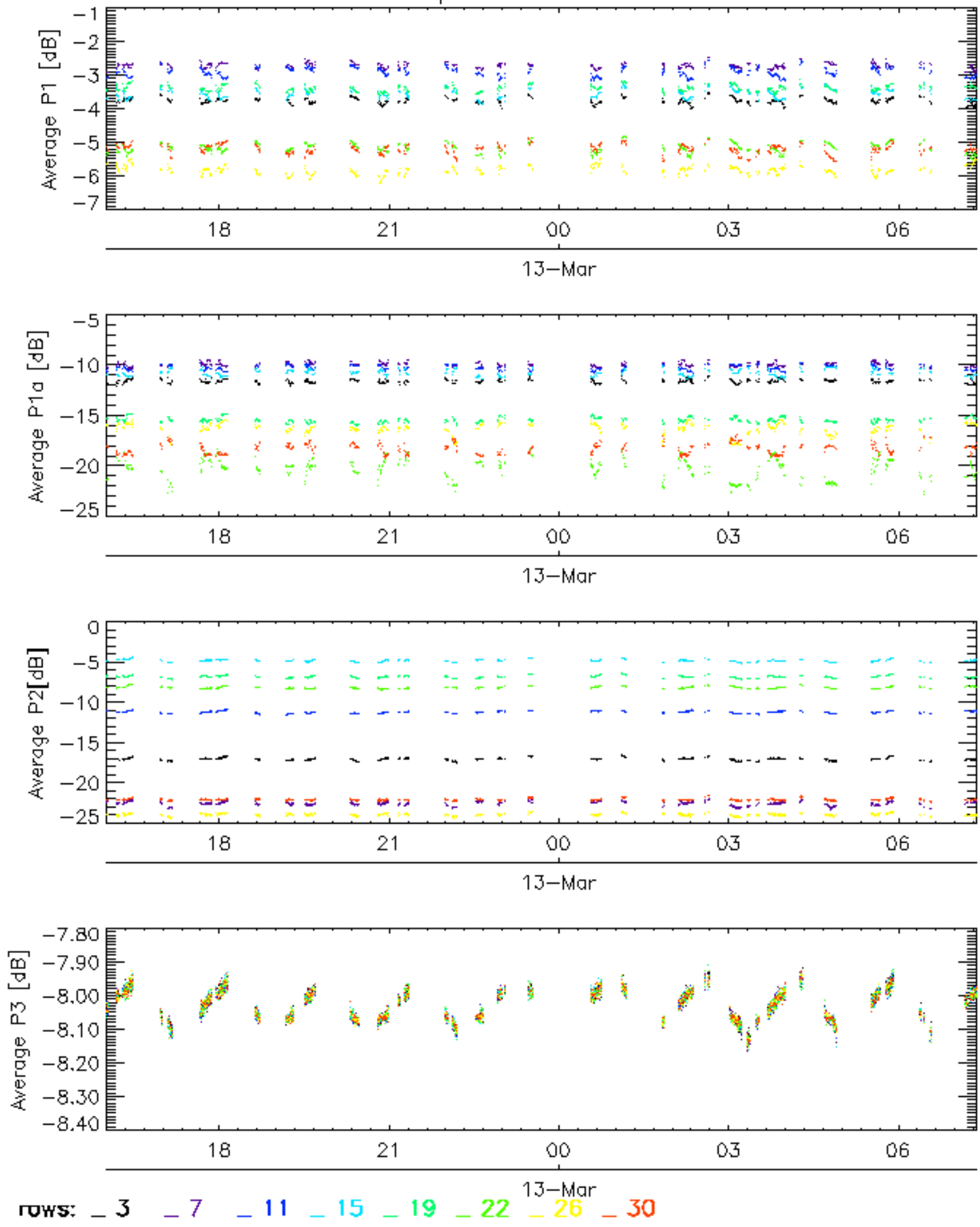
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

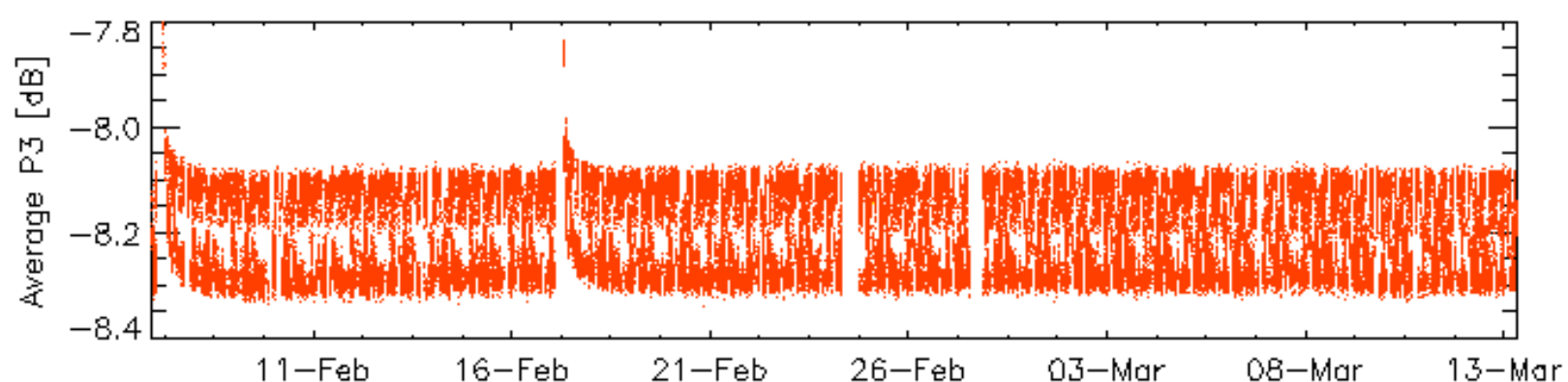
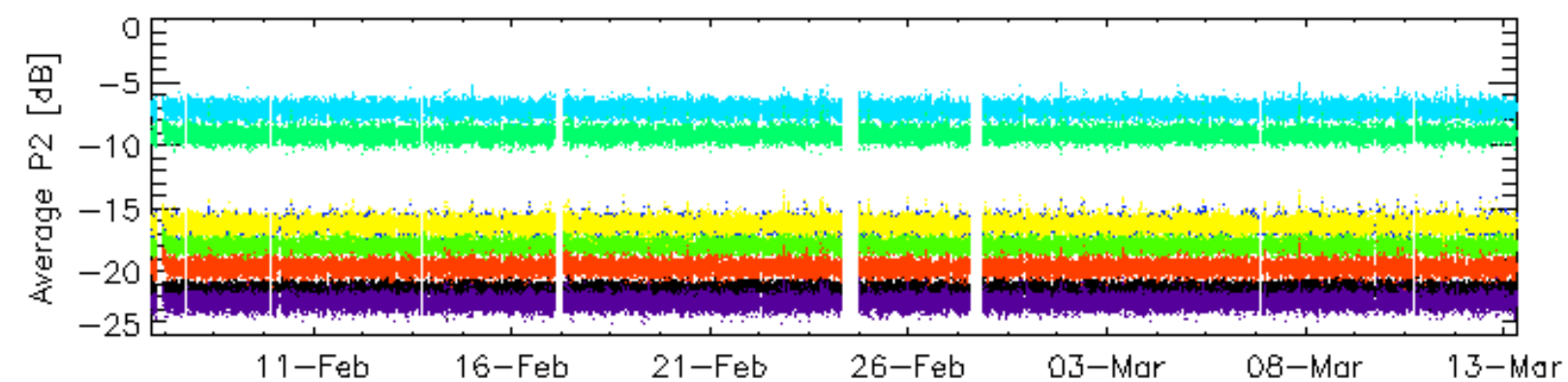
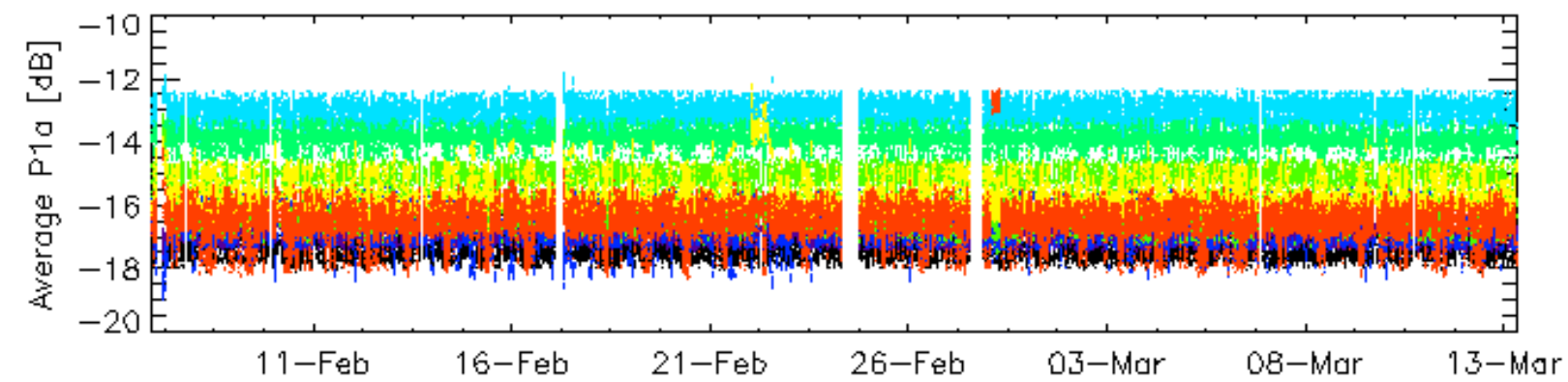
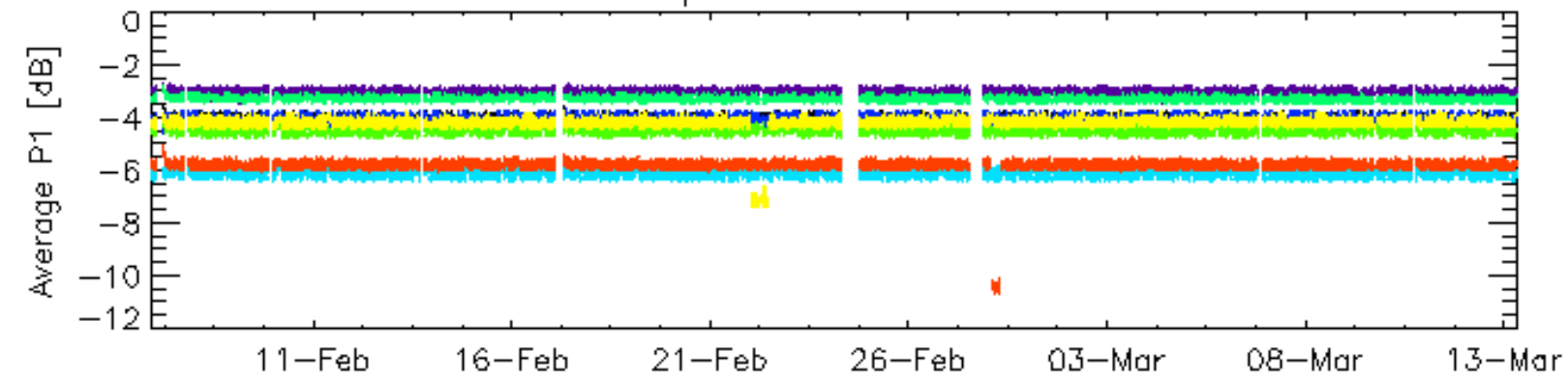


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

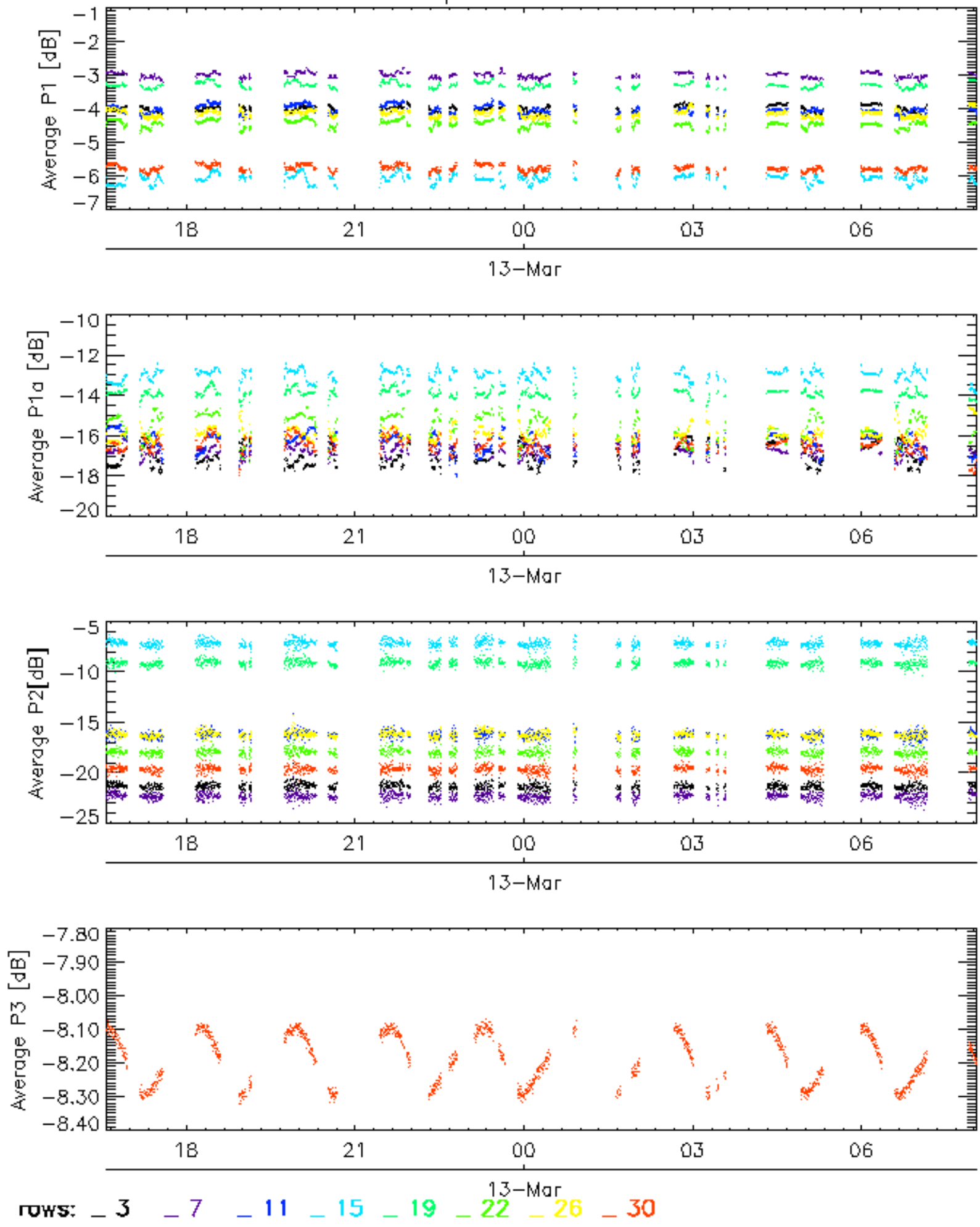


Cal pulses for WVS IS2



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

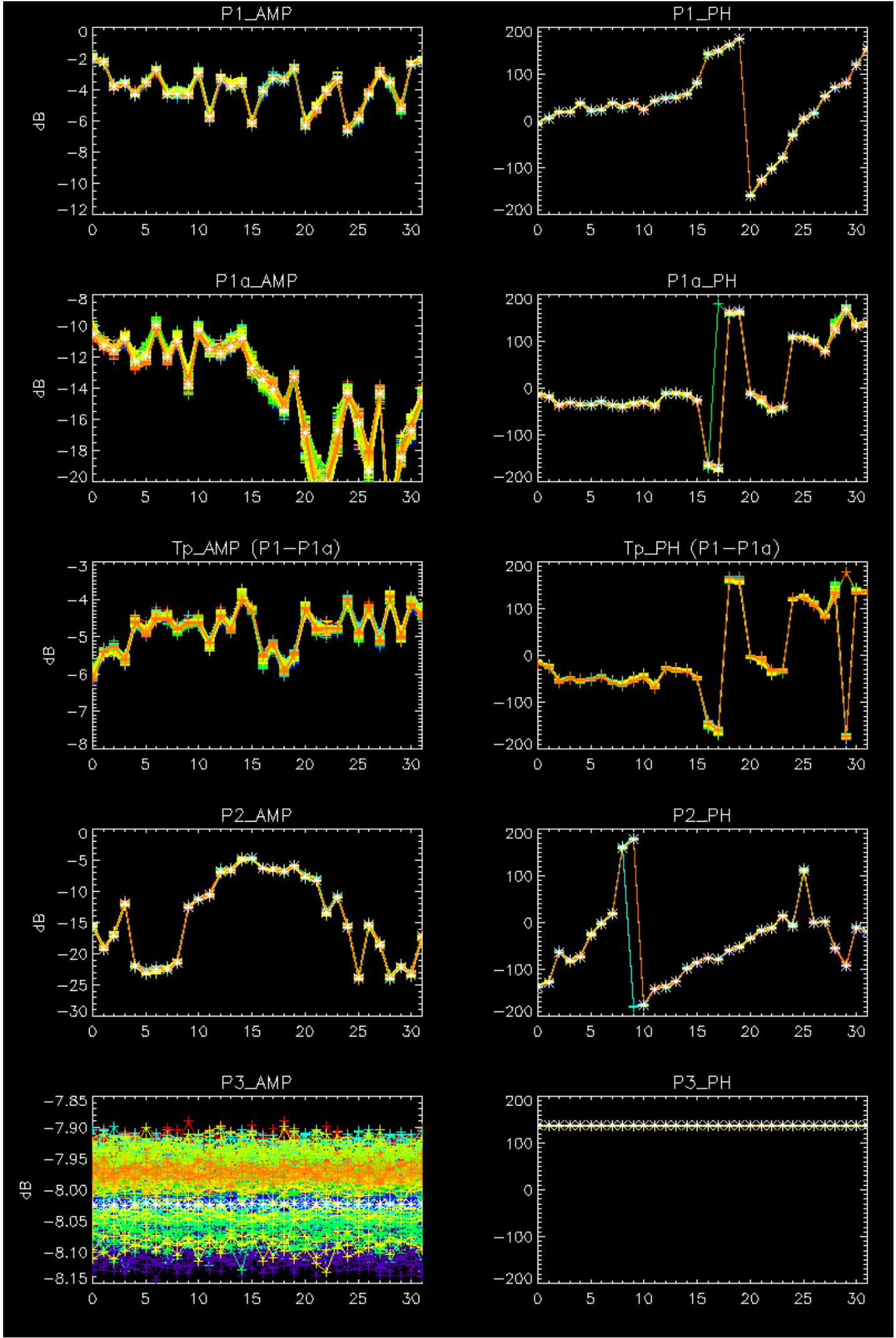
Cal pulses for WVS IS2

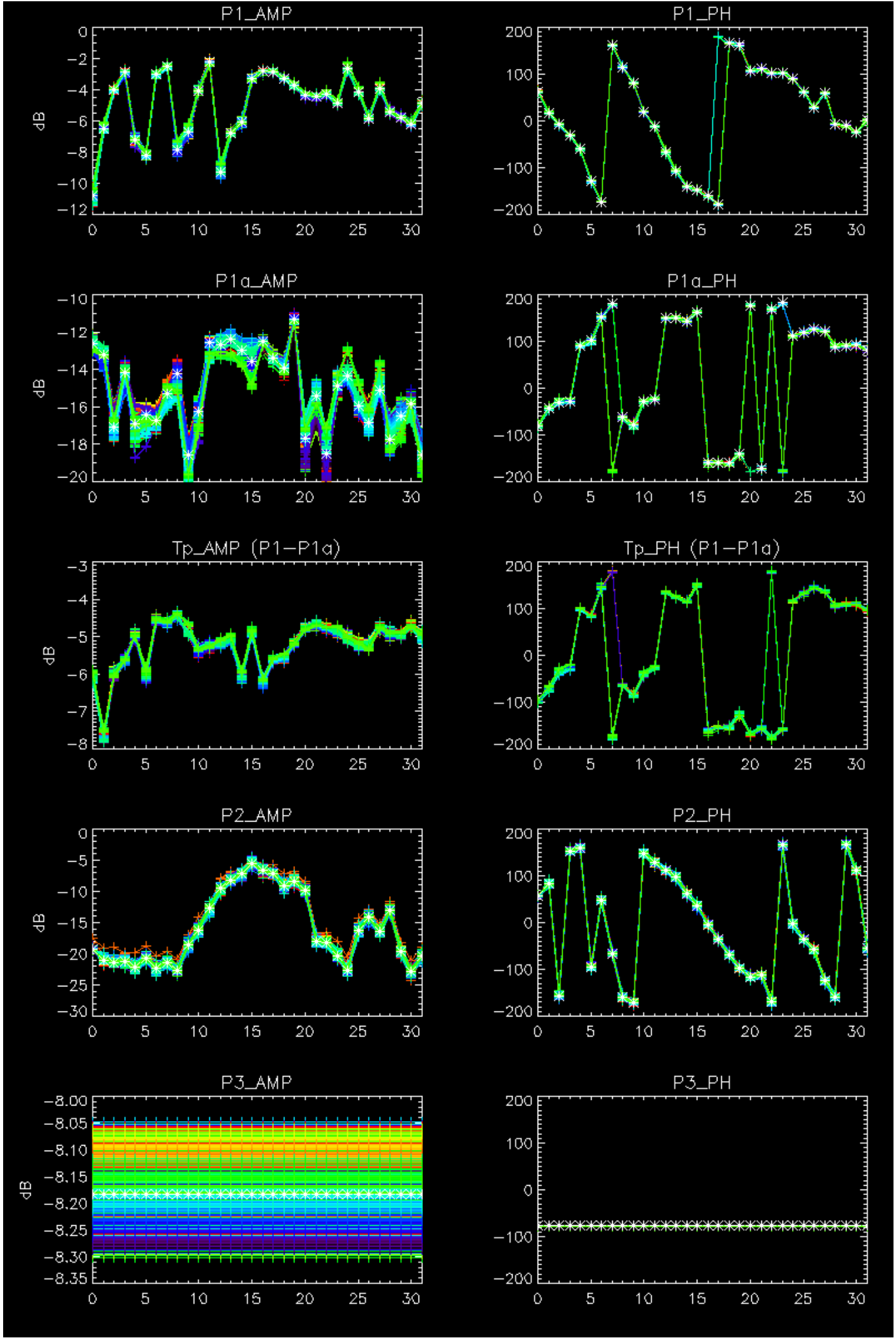


No anomalies observed on available browse products



No anomalies observed.



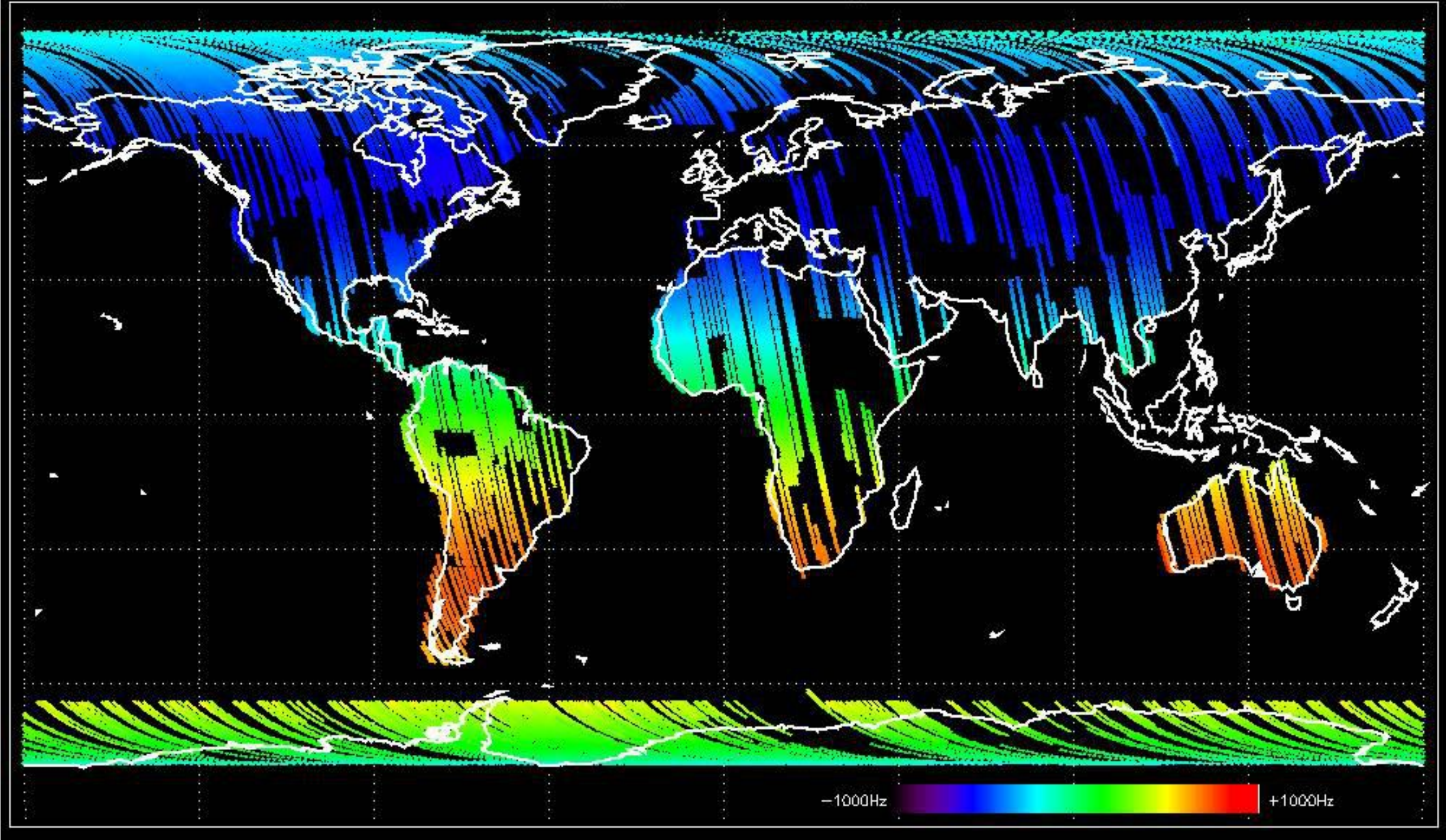


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



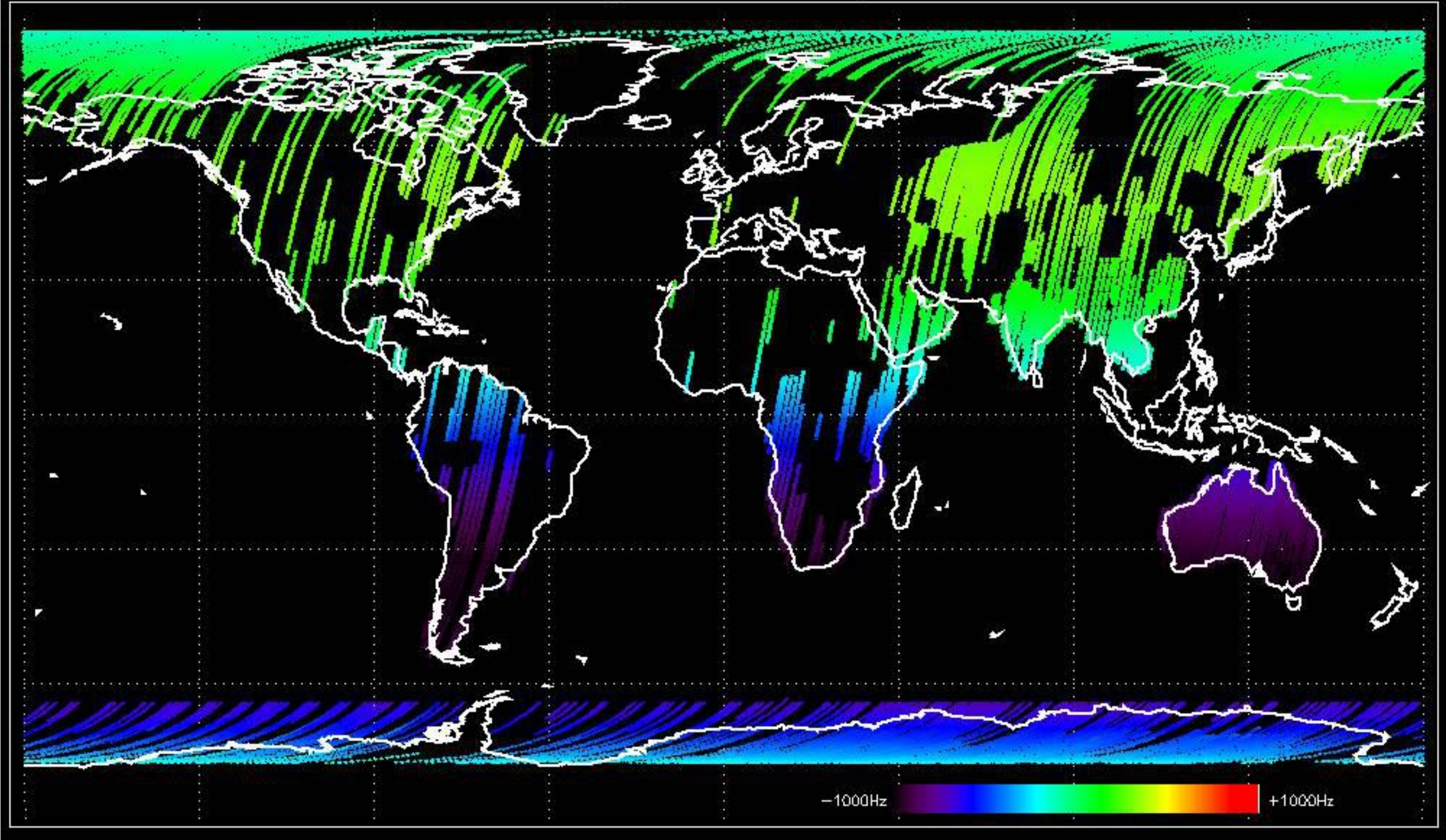


Doppler 'GM1' 'SS1' ascending



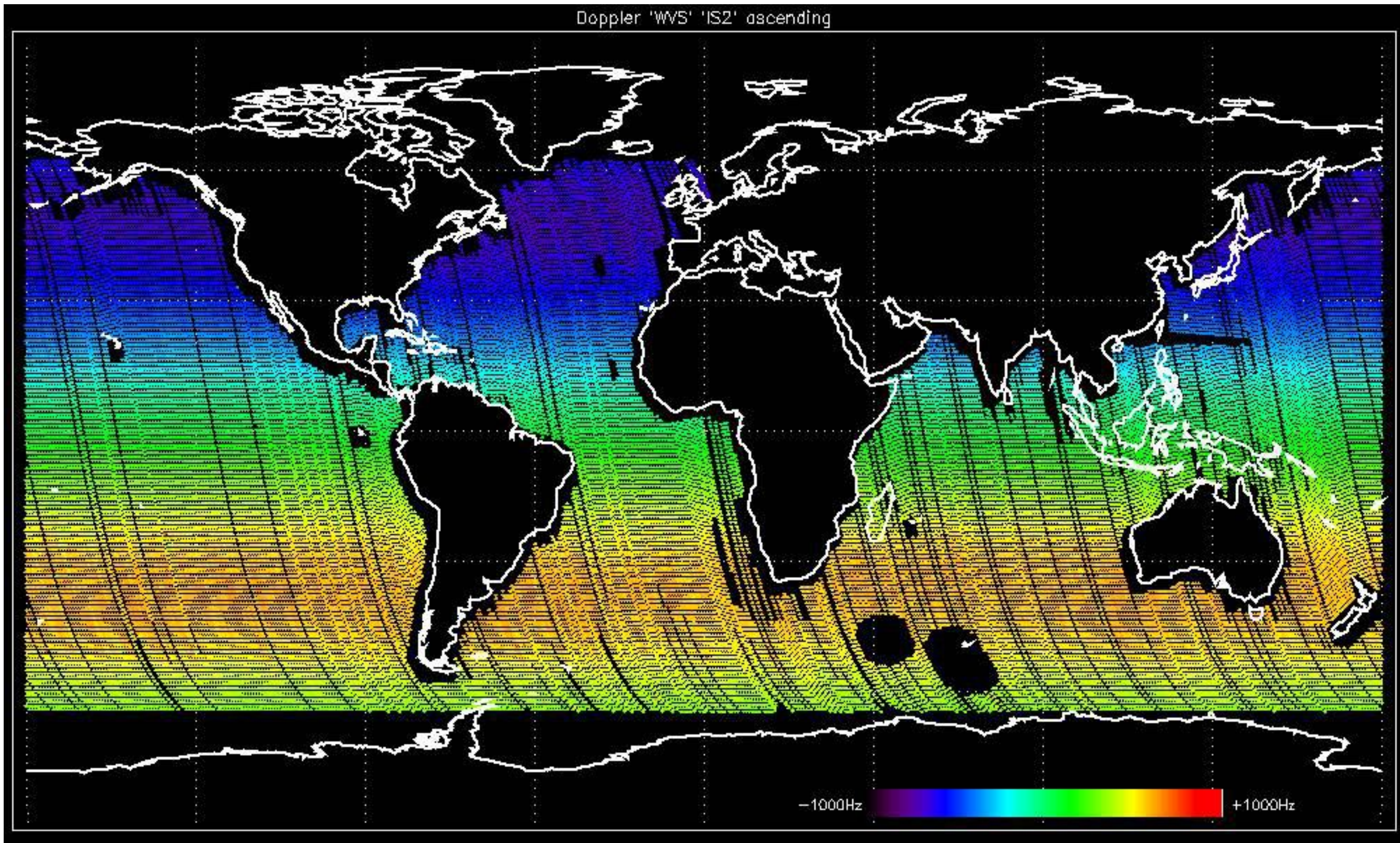


Doppler 'GM1' 'SS1' descending



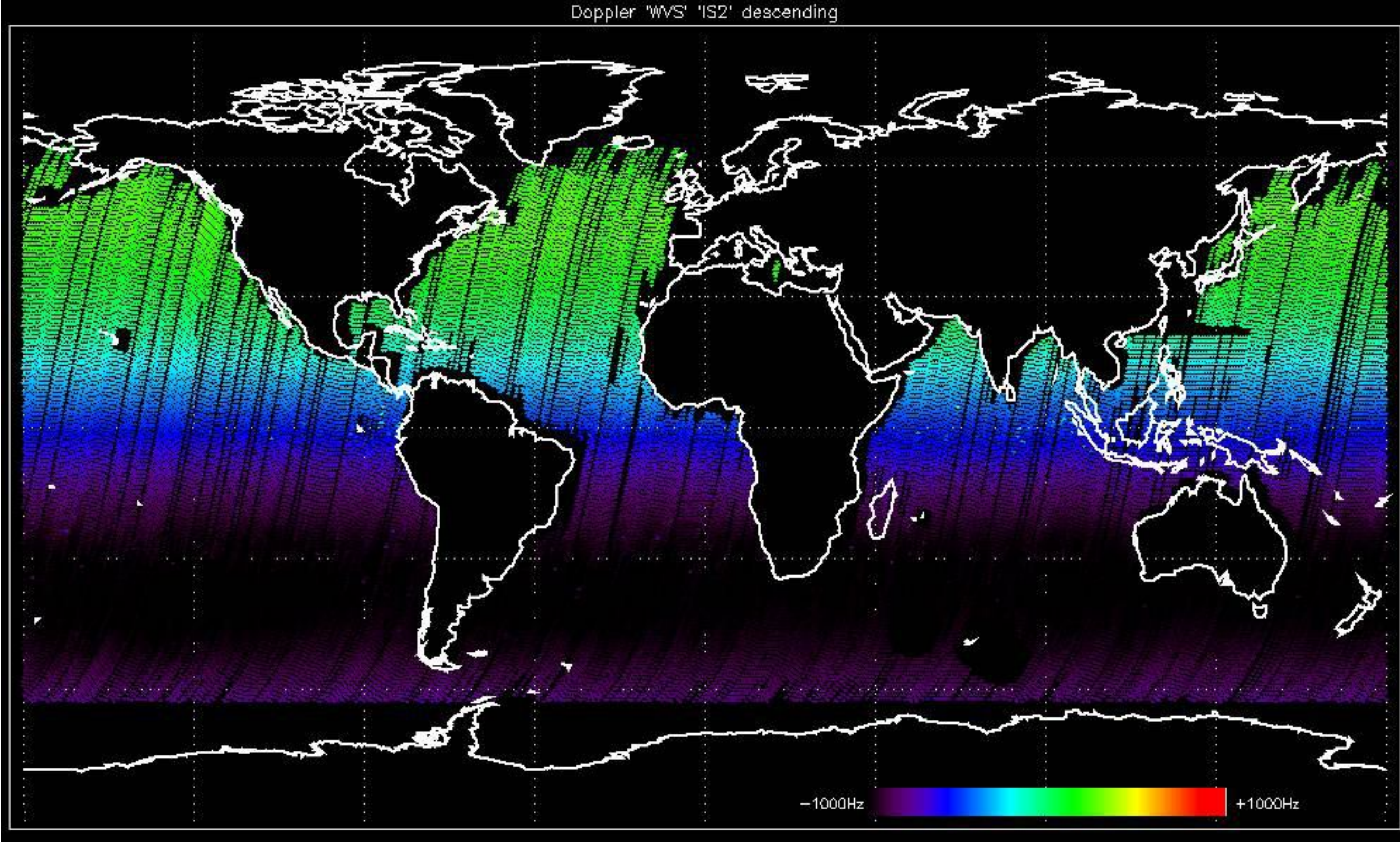


Doppler 'WVS' 'IS2' ascending

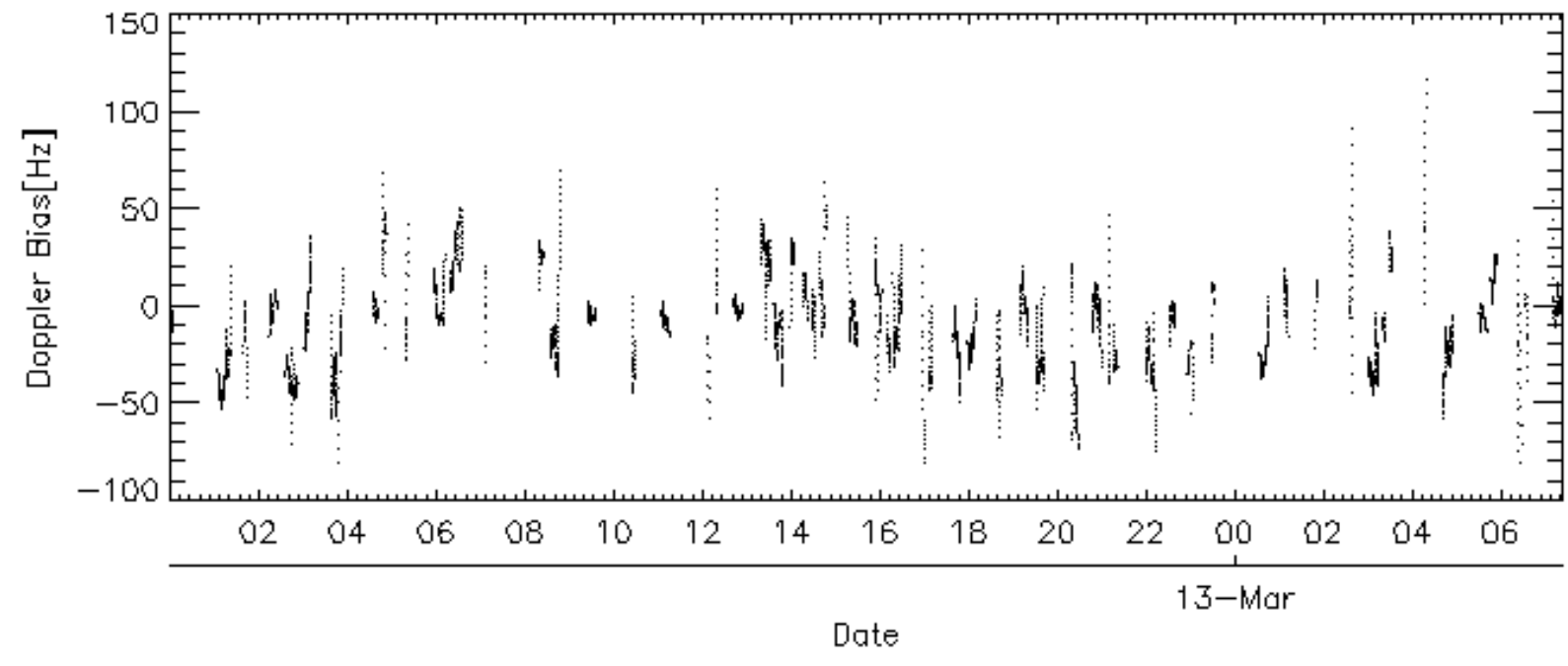
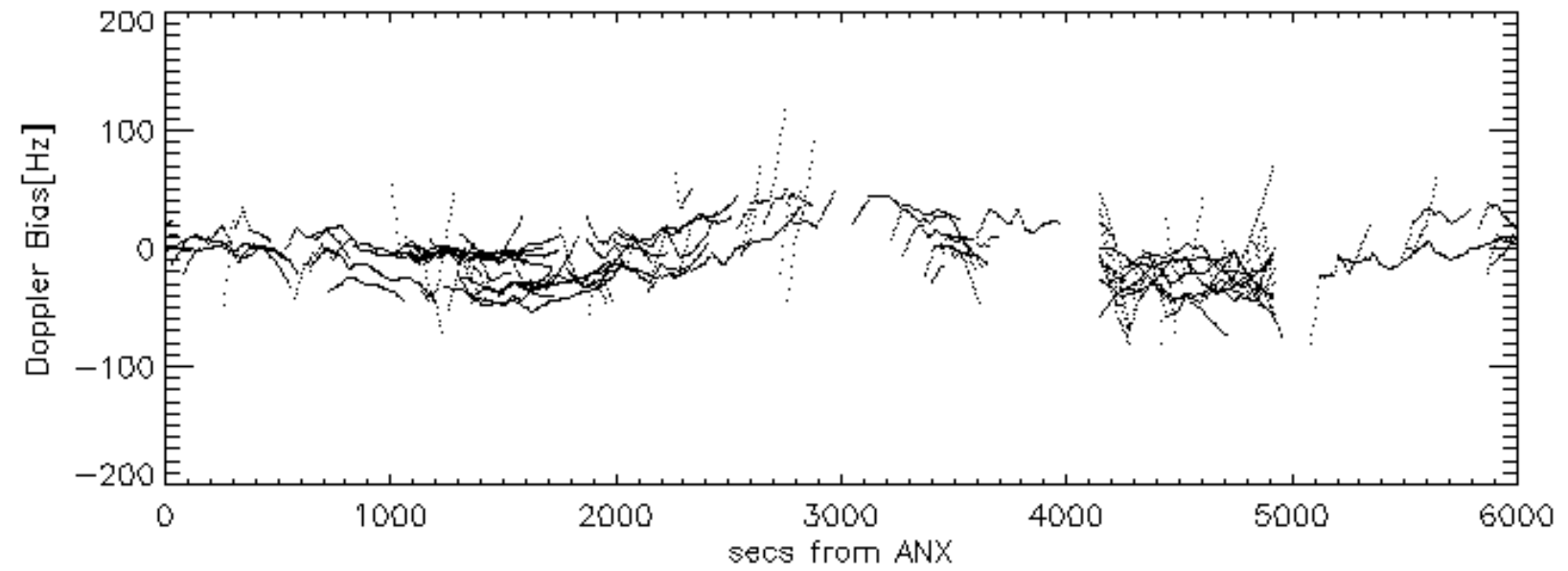
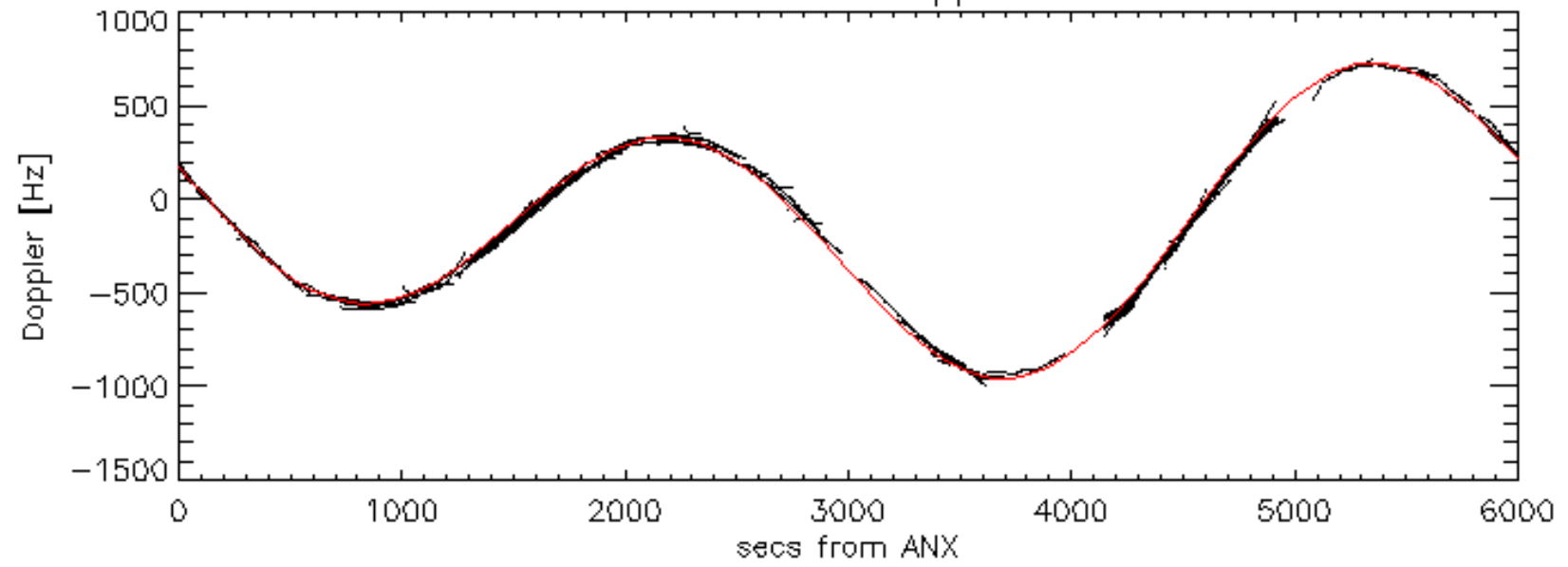




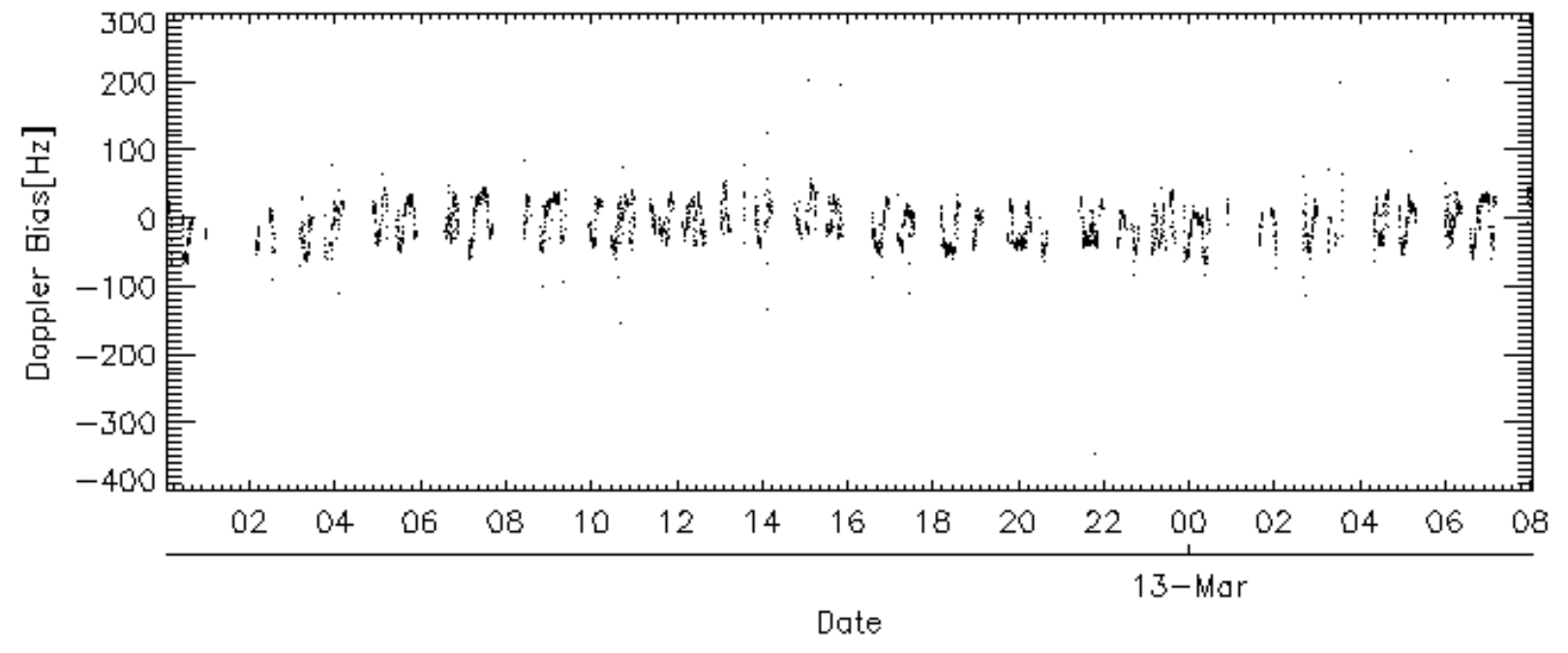
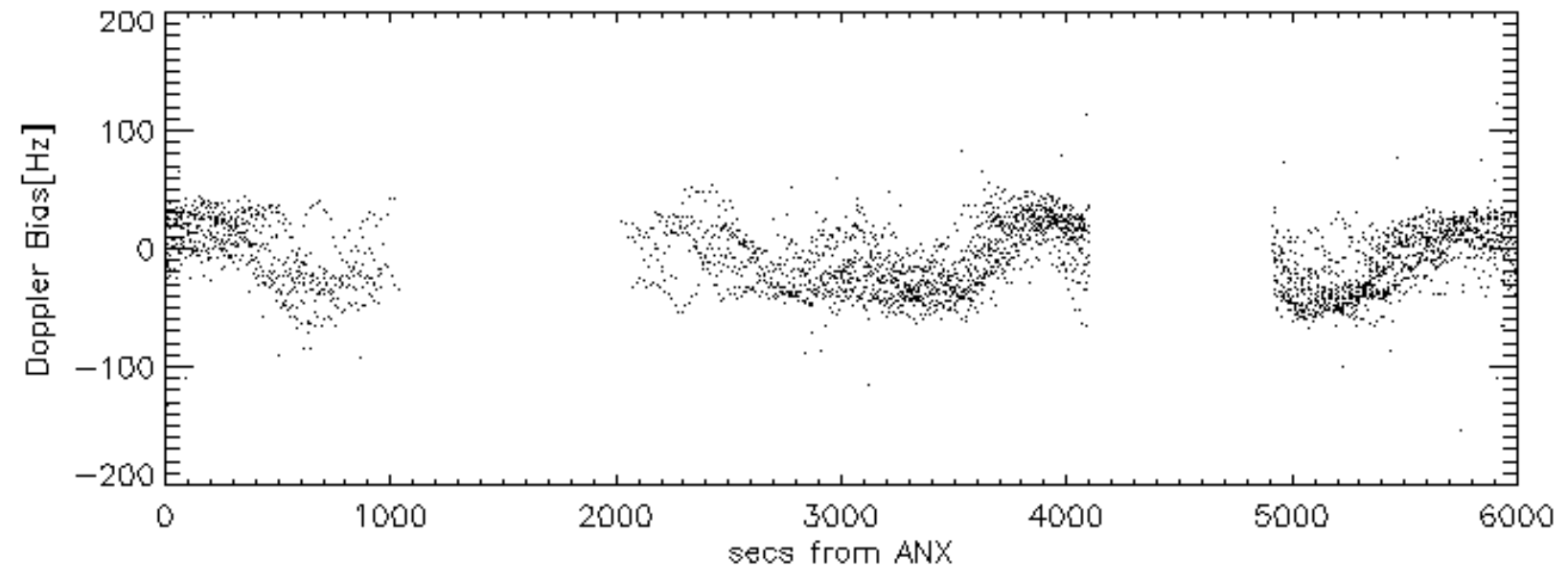
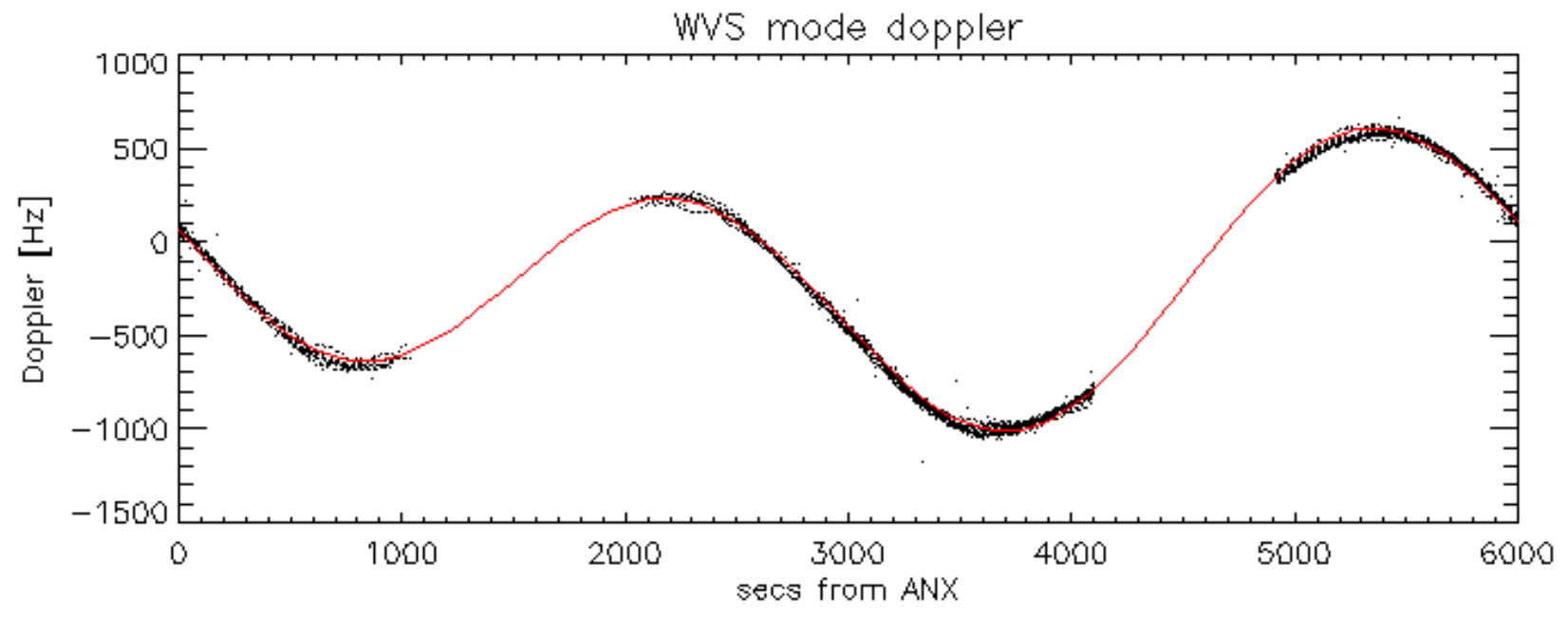
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

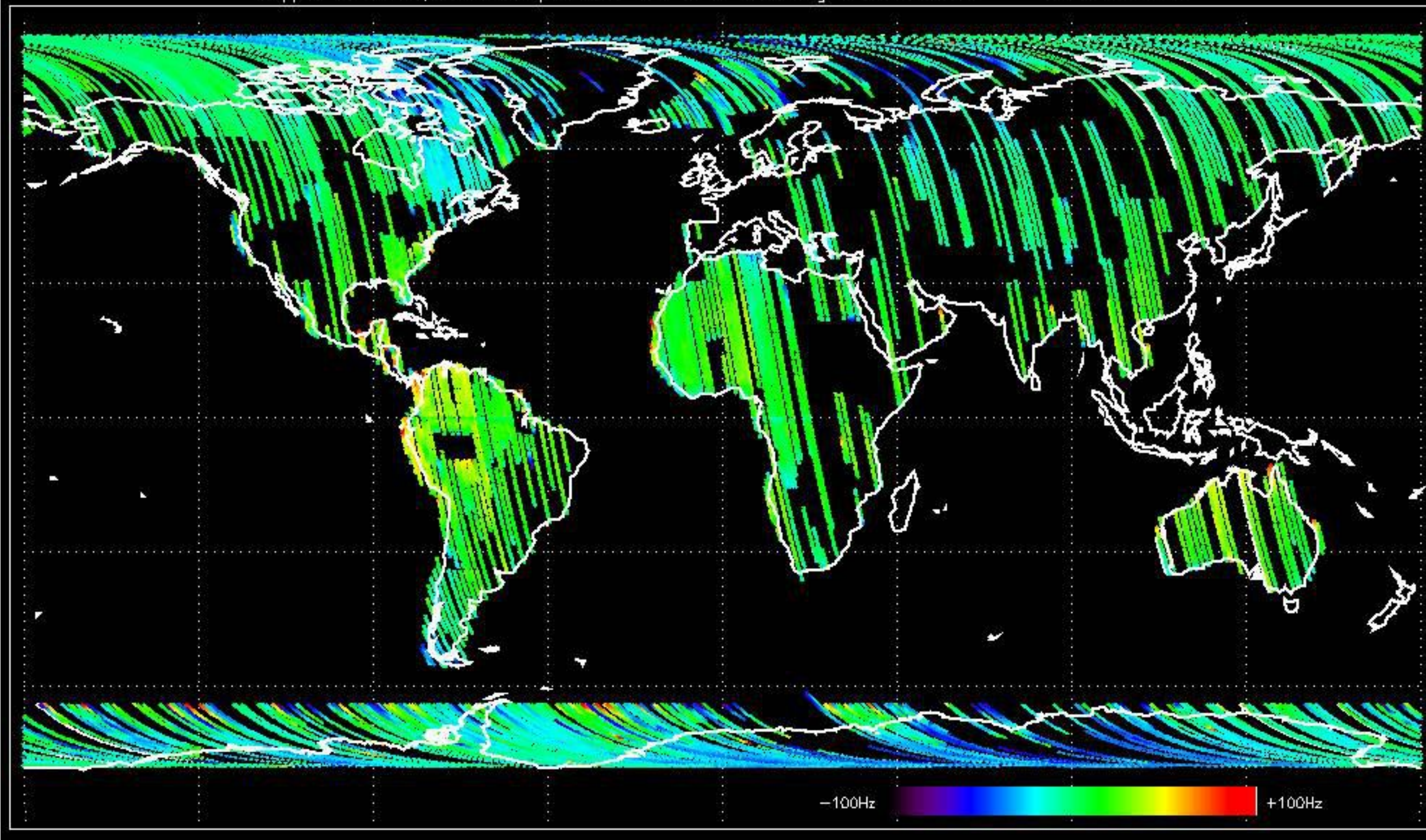






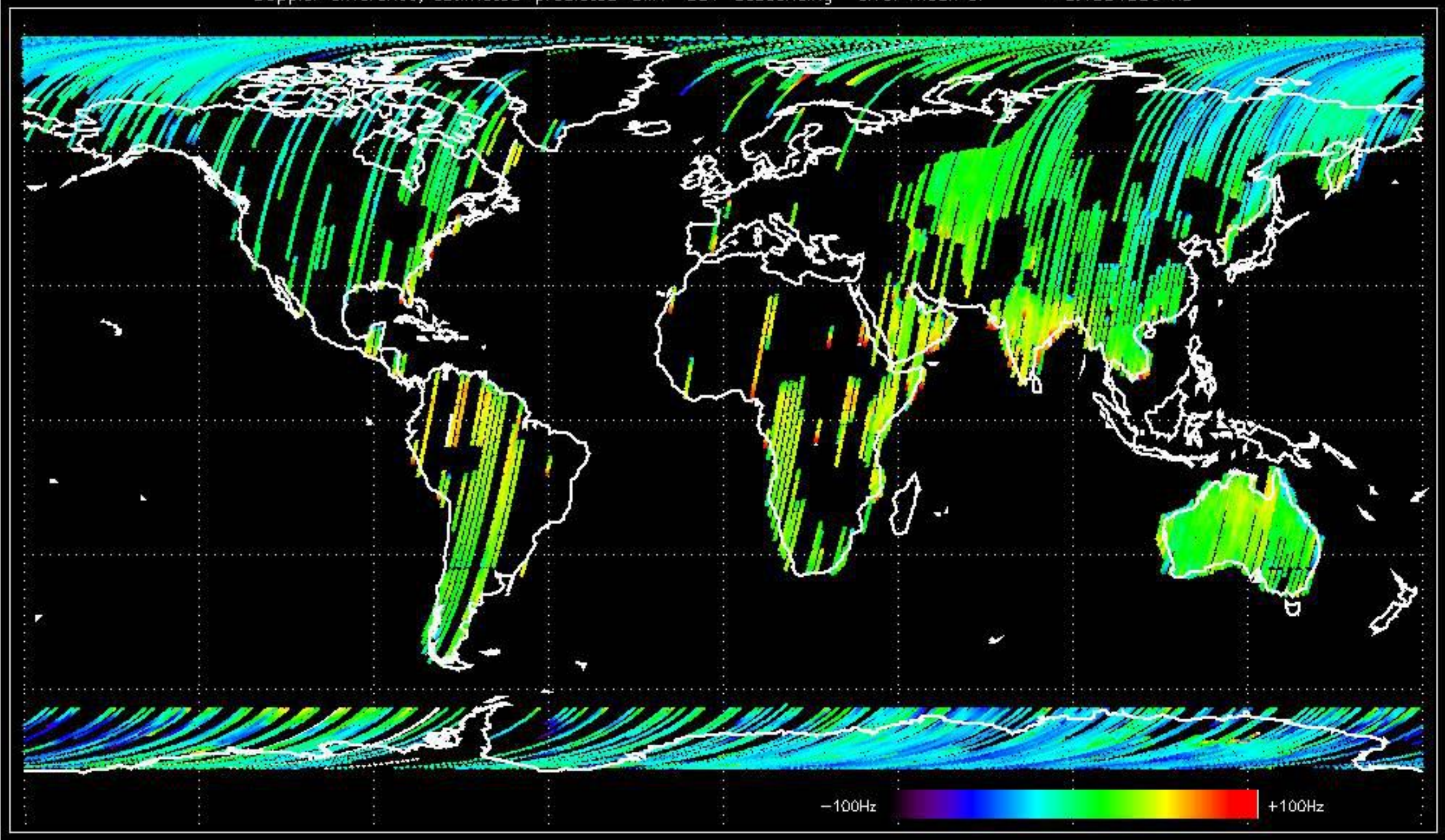


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -9.5787787 Hz



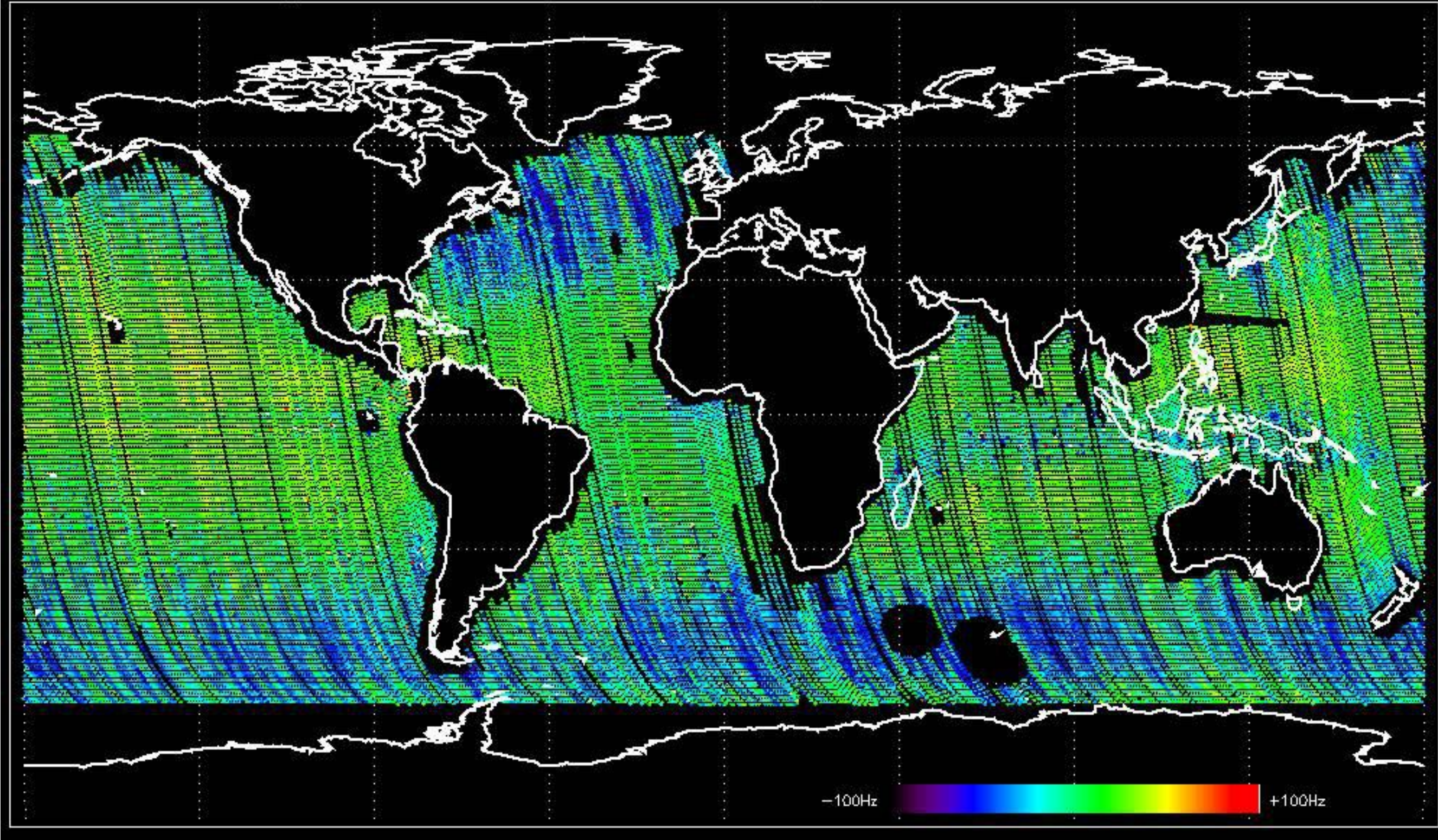


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.1884306 Hz



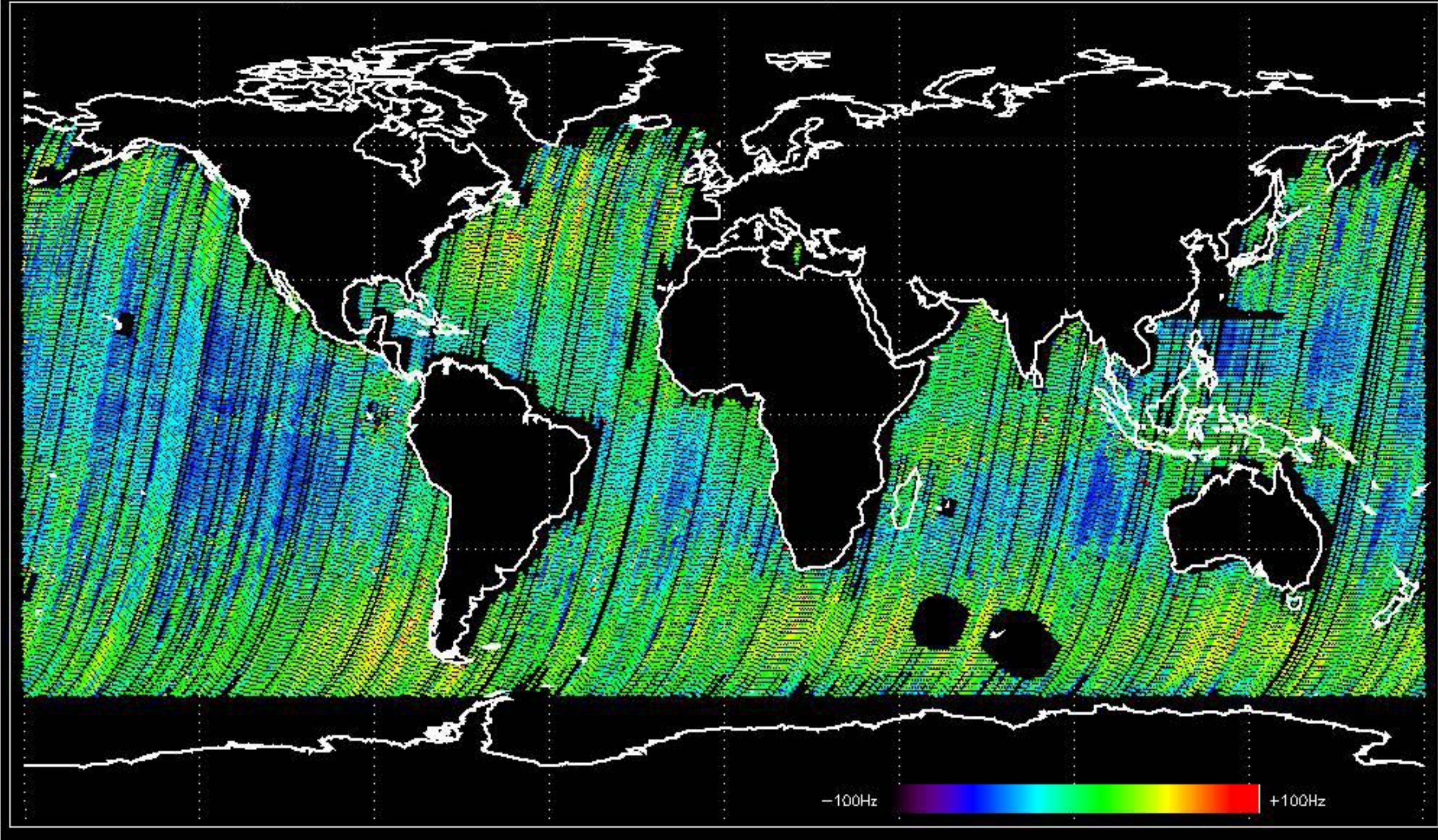


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.1750653 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.5483745 Hz





No anomalies observed on available MS products:



No anomalies observed.









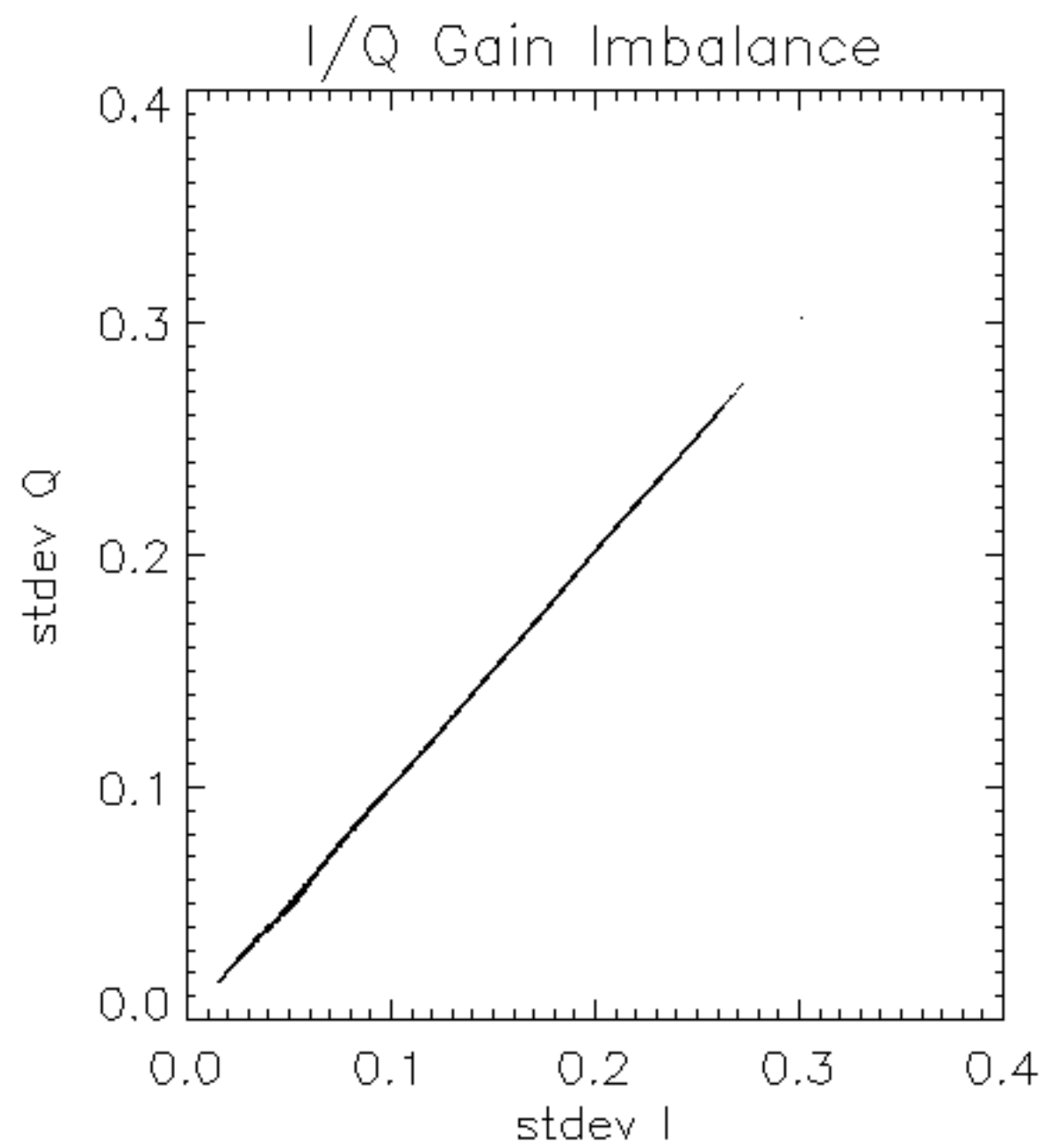


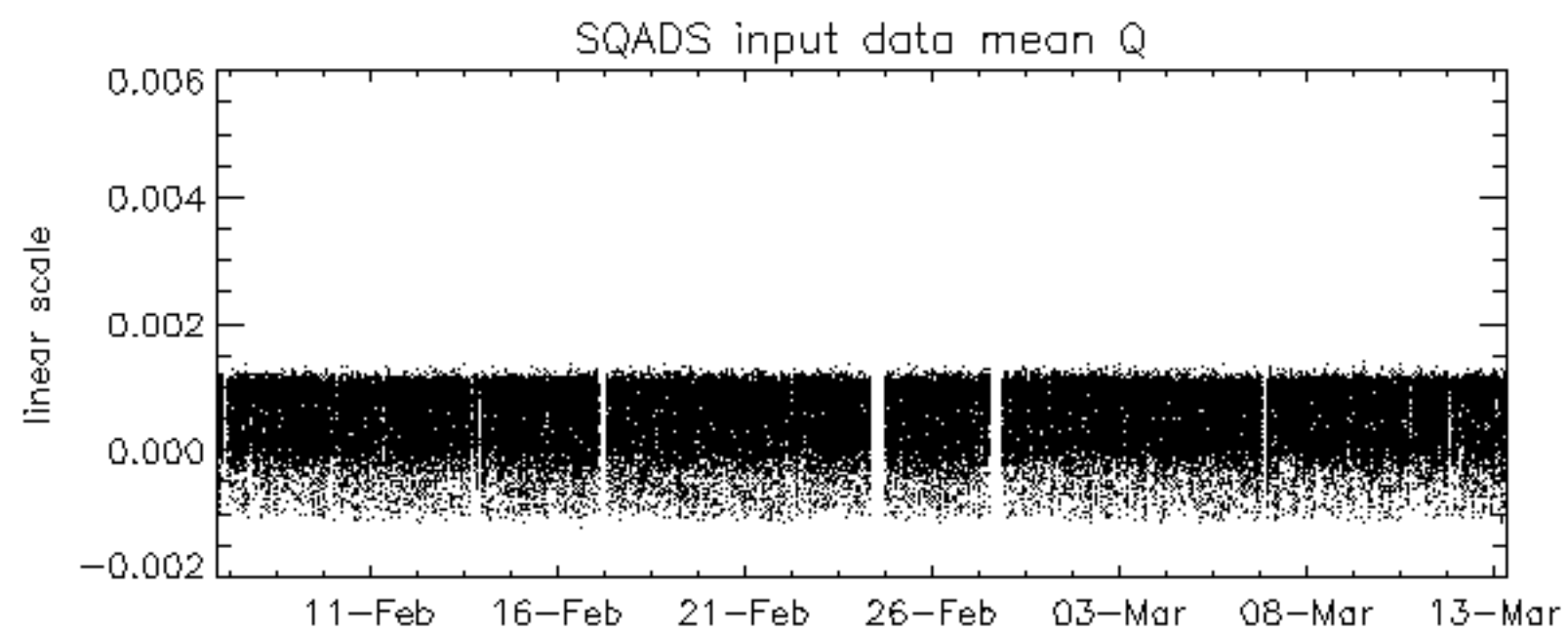
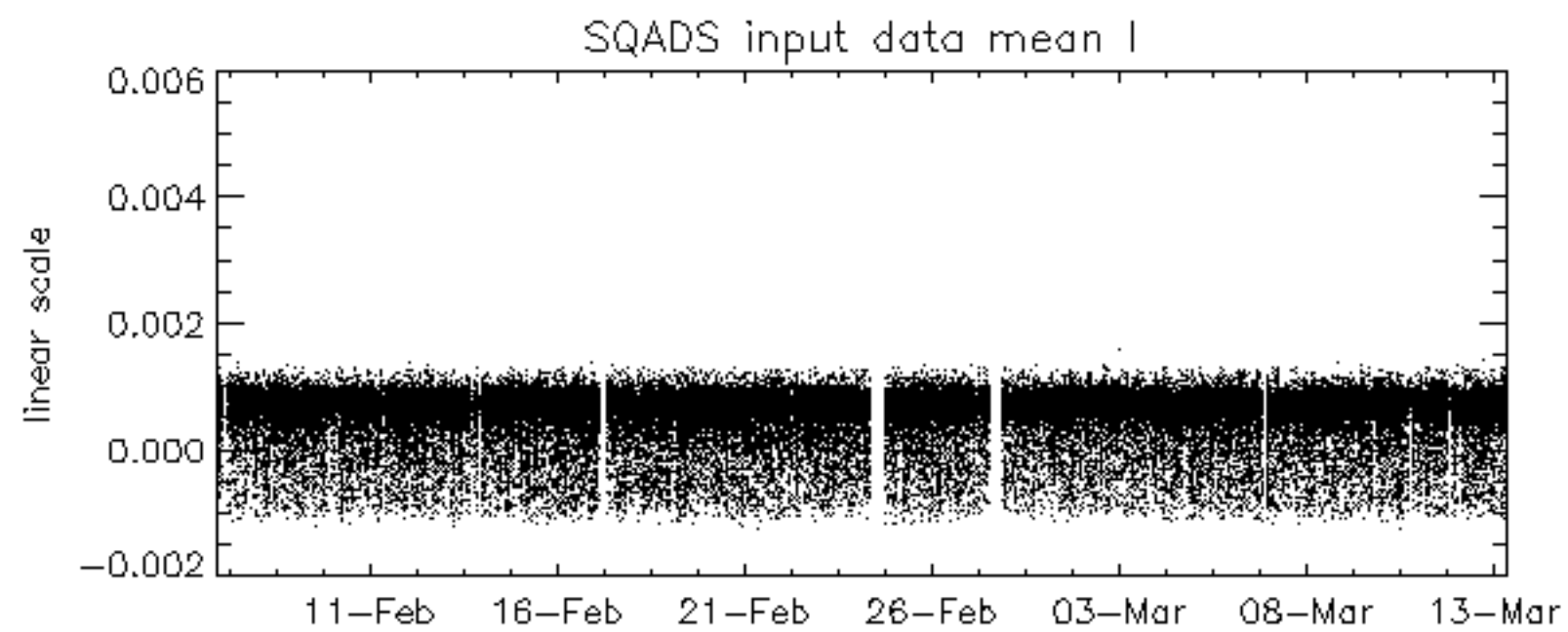
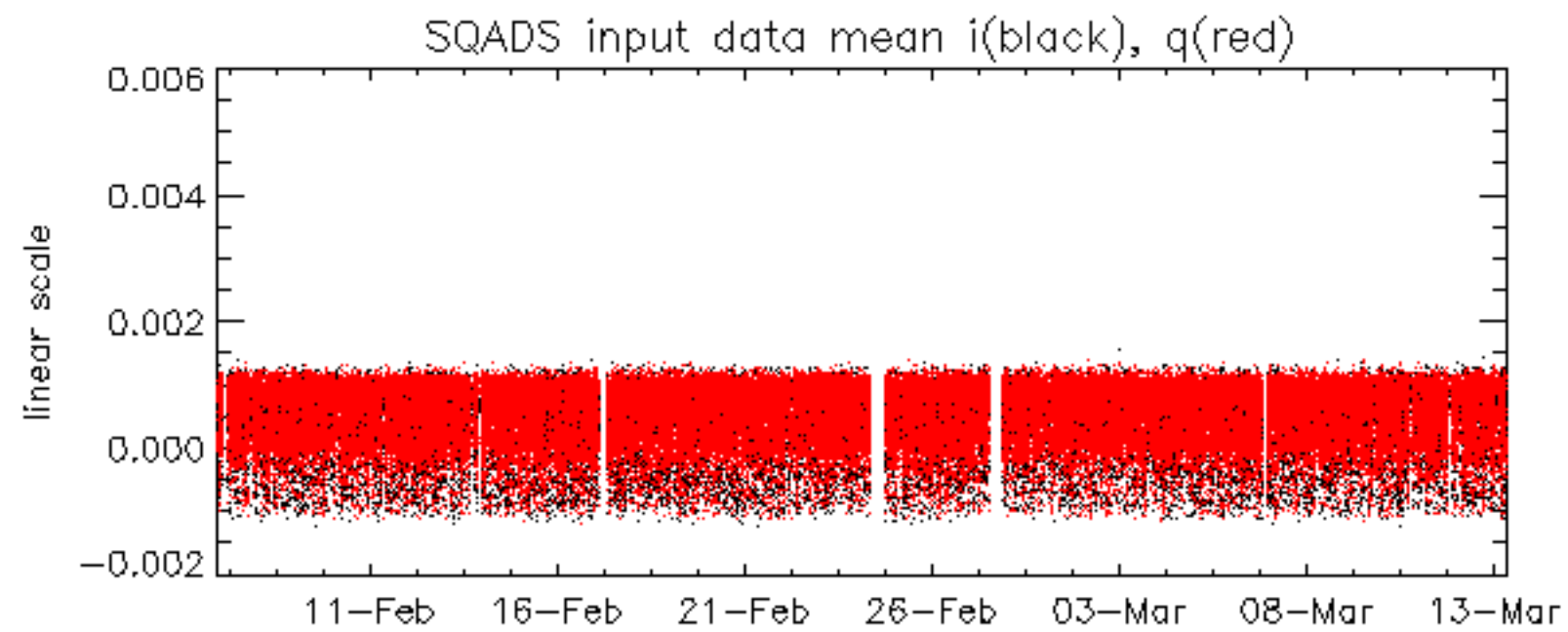


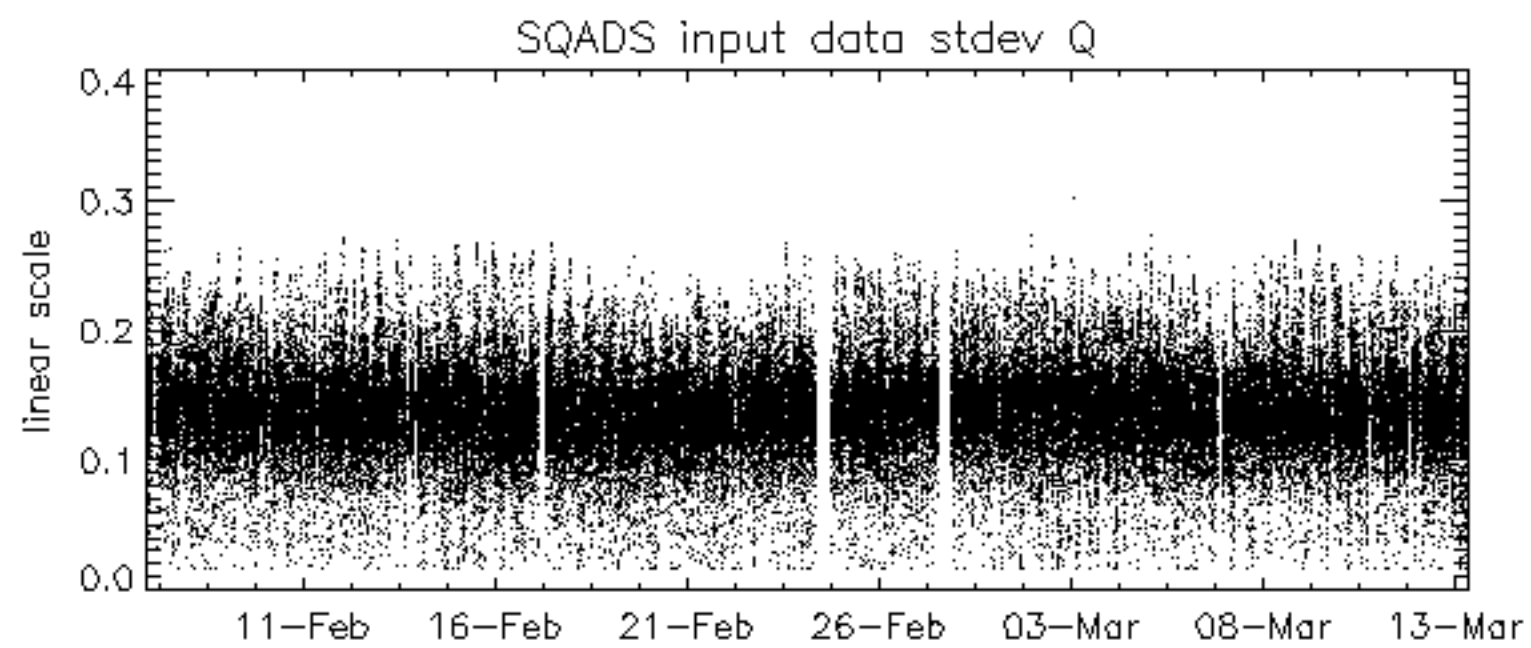
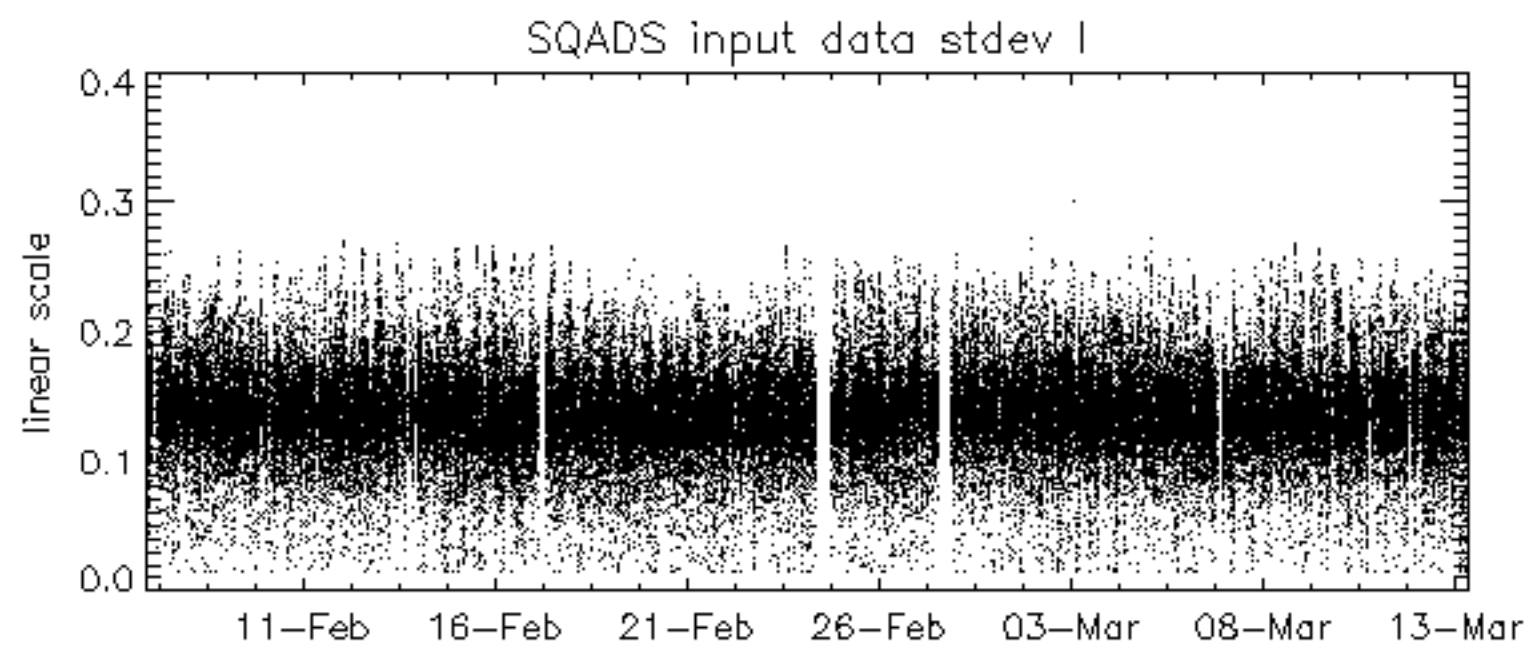
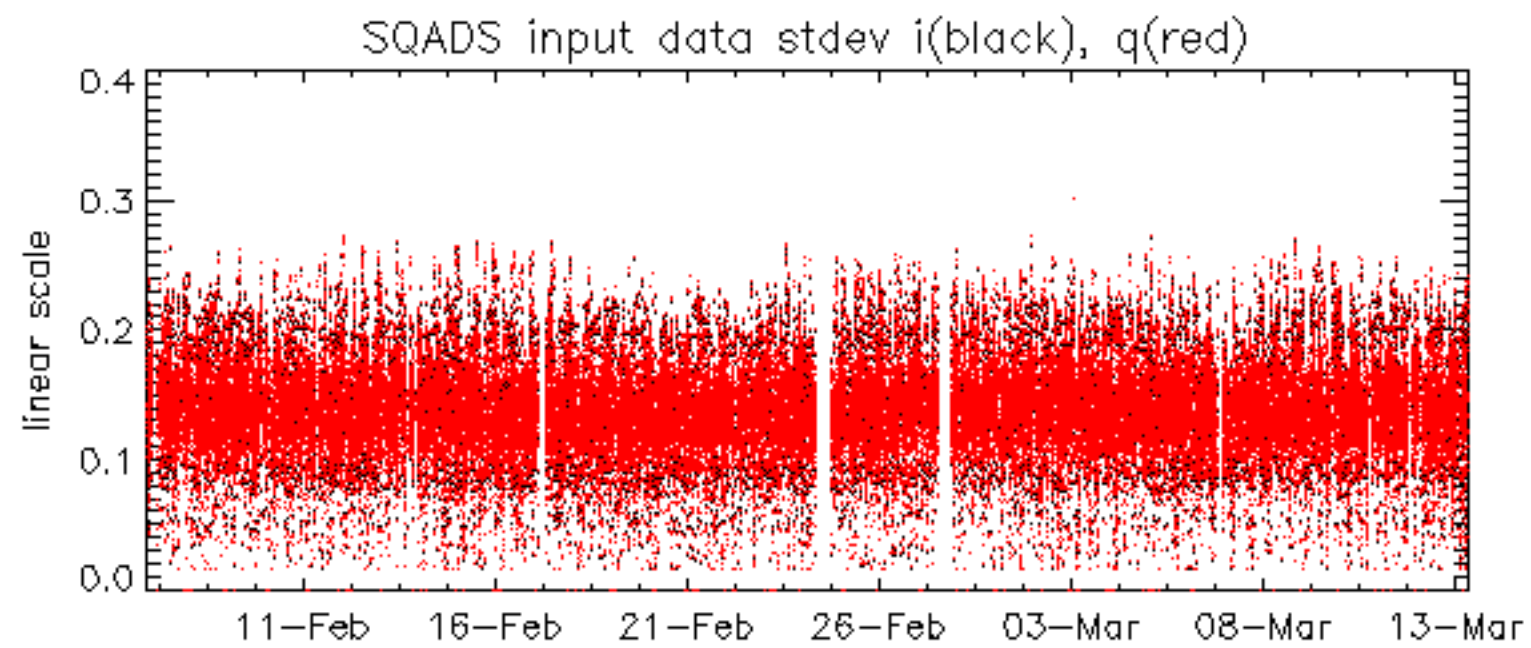


















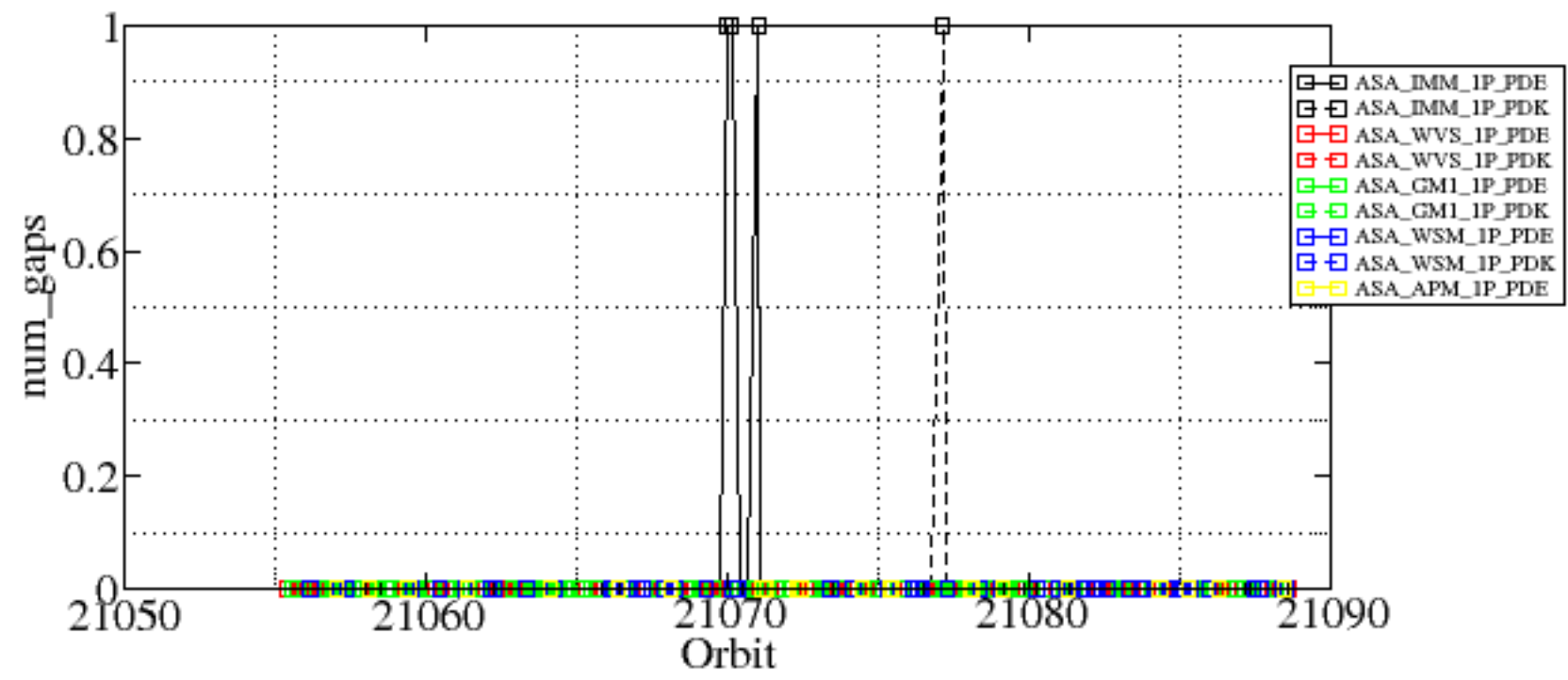




Summary of analysis for the last 3 days 2006031[123]

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_1PNPDE20060311_015053_000001992045_00461_21056_0412.N1	0	1
ASA_IMM_1PNPDE20060312_003948_000001552045_00474_21069_0566.N1	1	0
ASA_IMM_1PNPDE20060312_005604_000000362045_00475_21070_0559.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0586.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0595.N1	1	0
ASA_IMM_1PNPDK20060312_124030_000000362045_00482_21077_0195.N1	1	0
ASA_WSM_1PNPDE20060312_113127_000001842045_00481_21076_0468.N1	0	62
ASA_APM_1PNPDE20060312_141416_000000412045_00483_21078_0171.N1	0	11



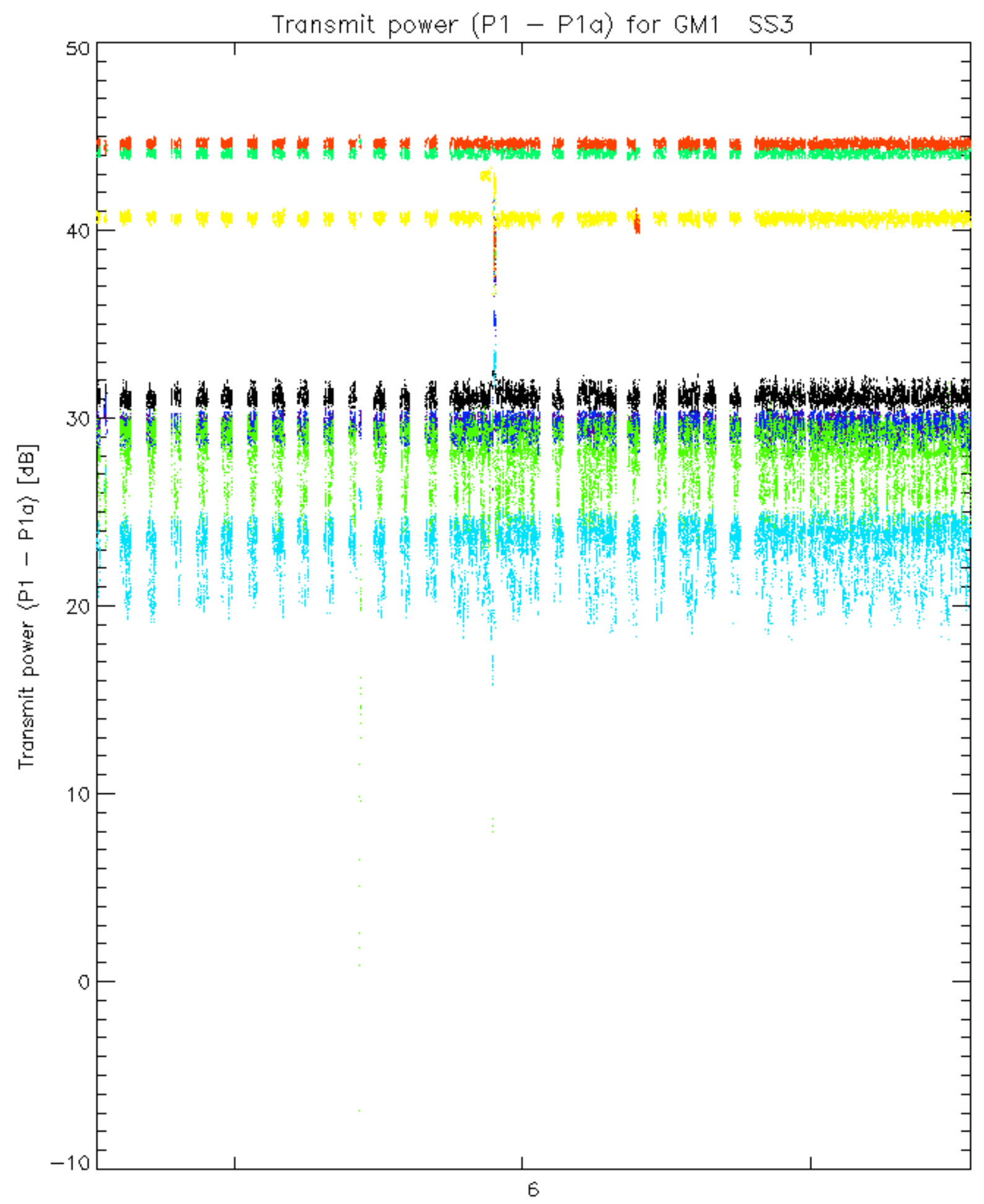




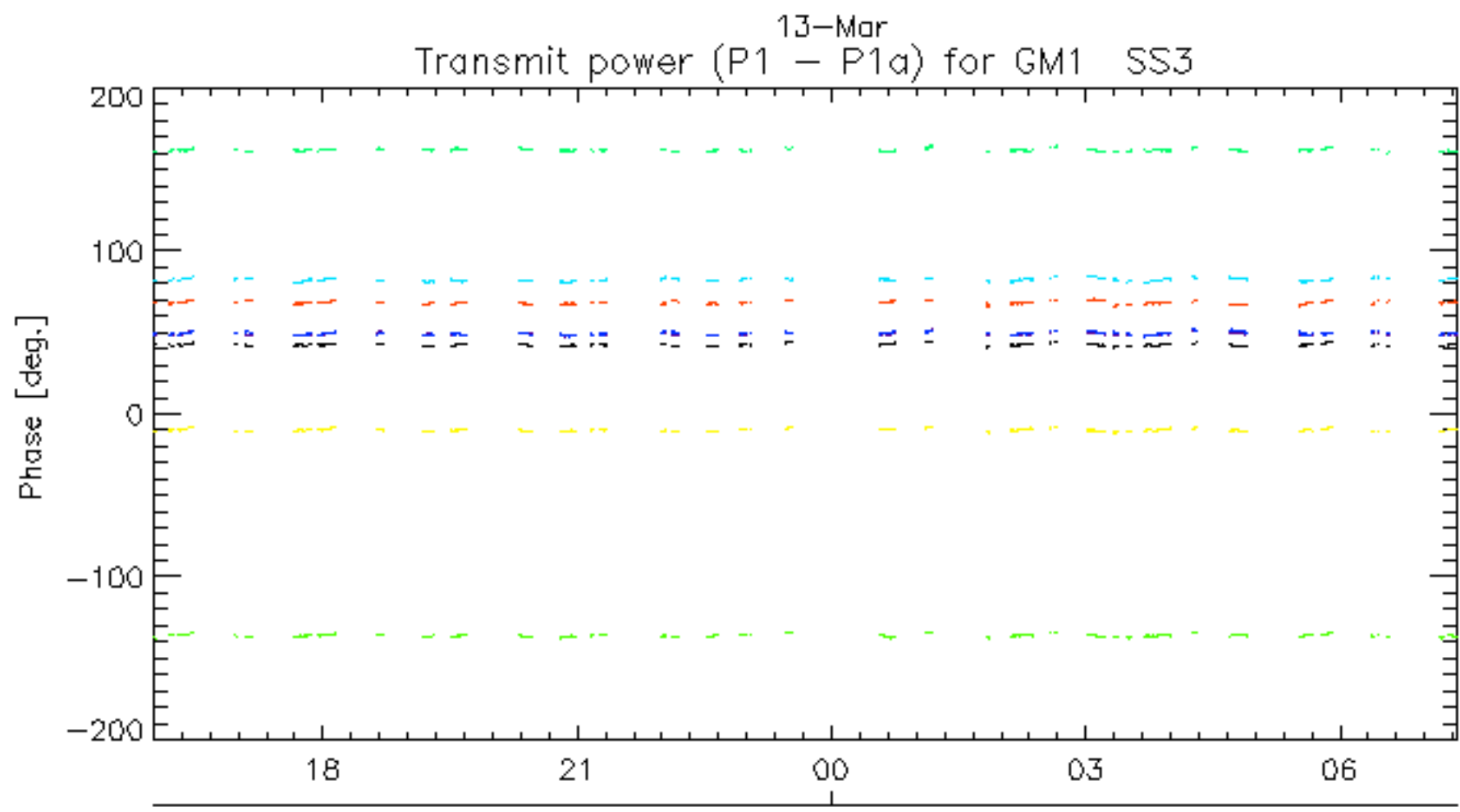
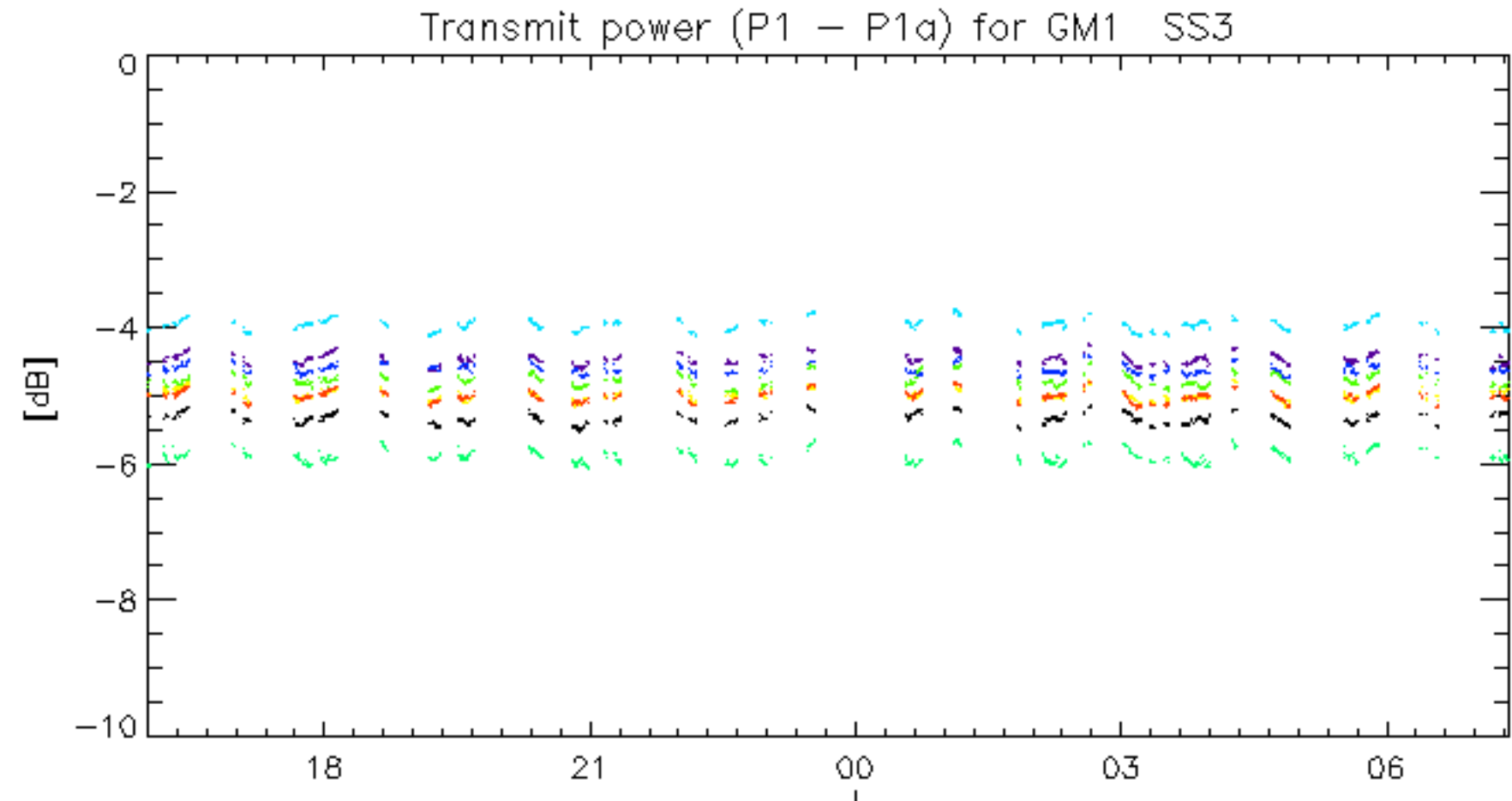




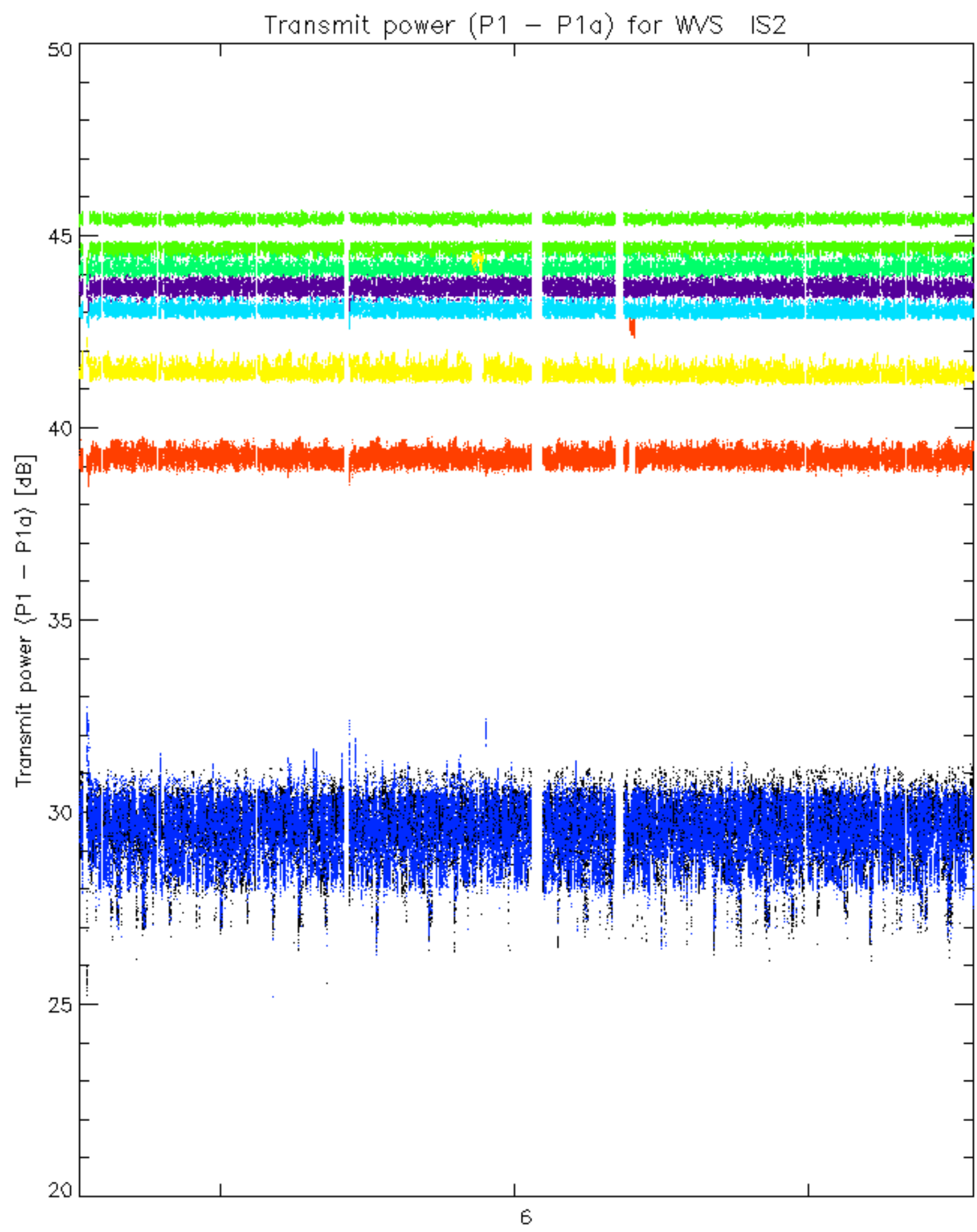




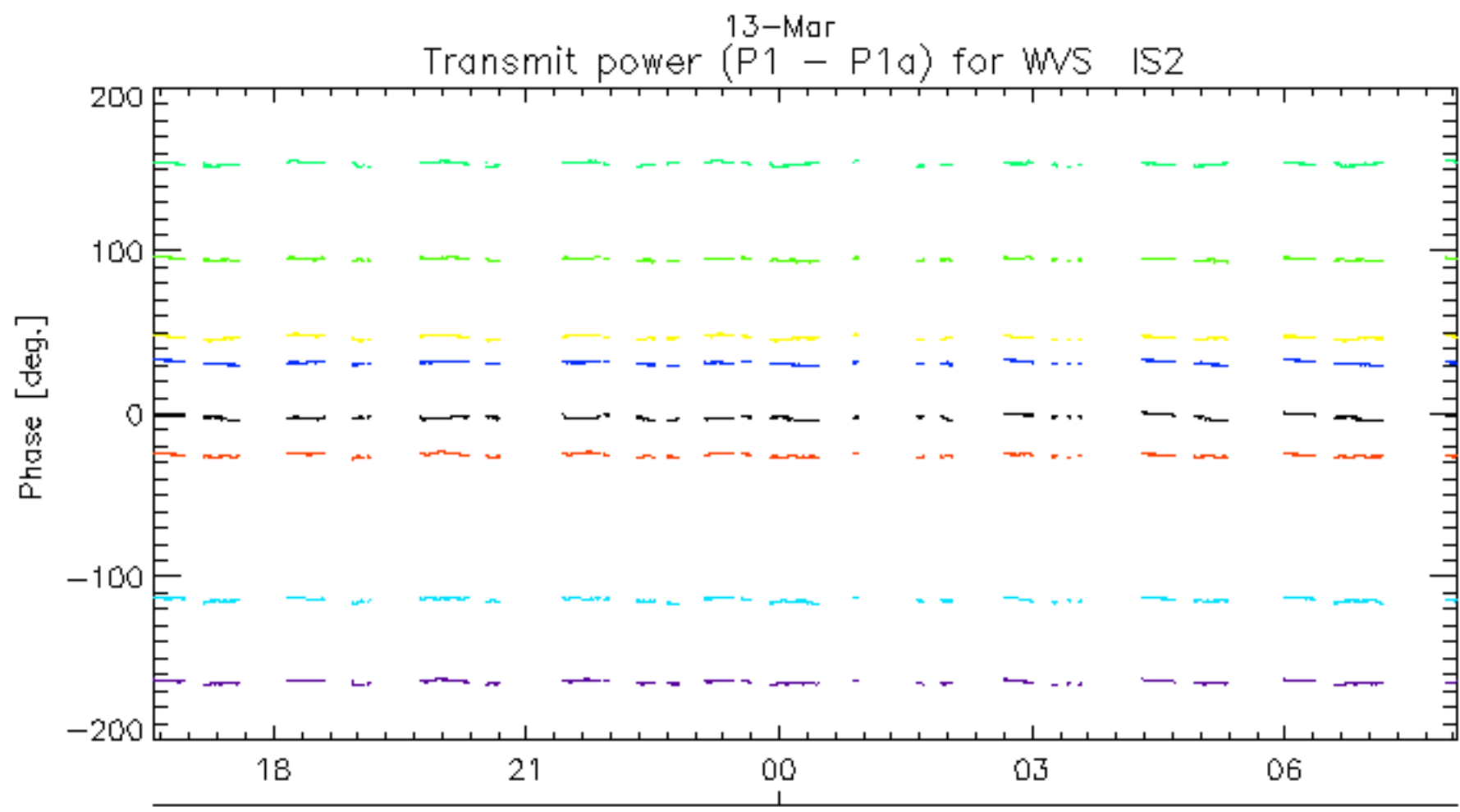
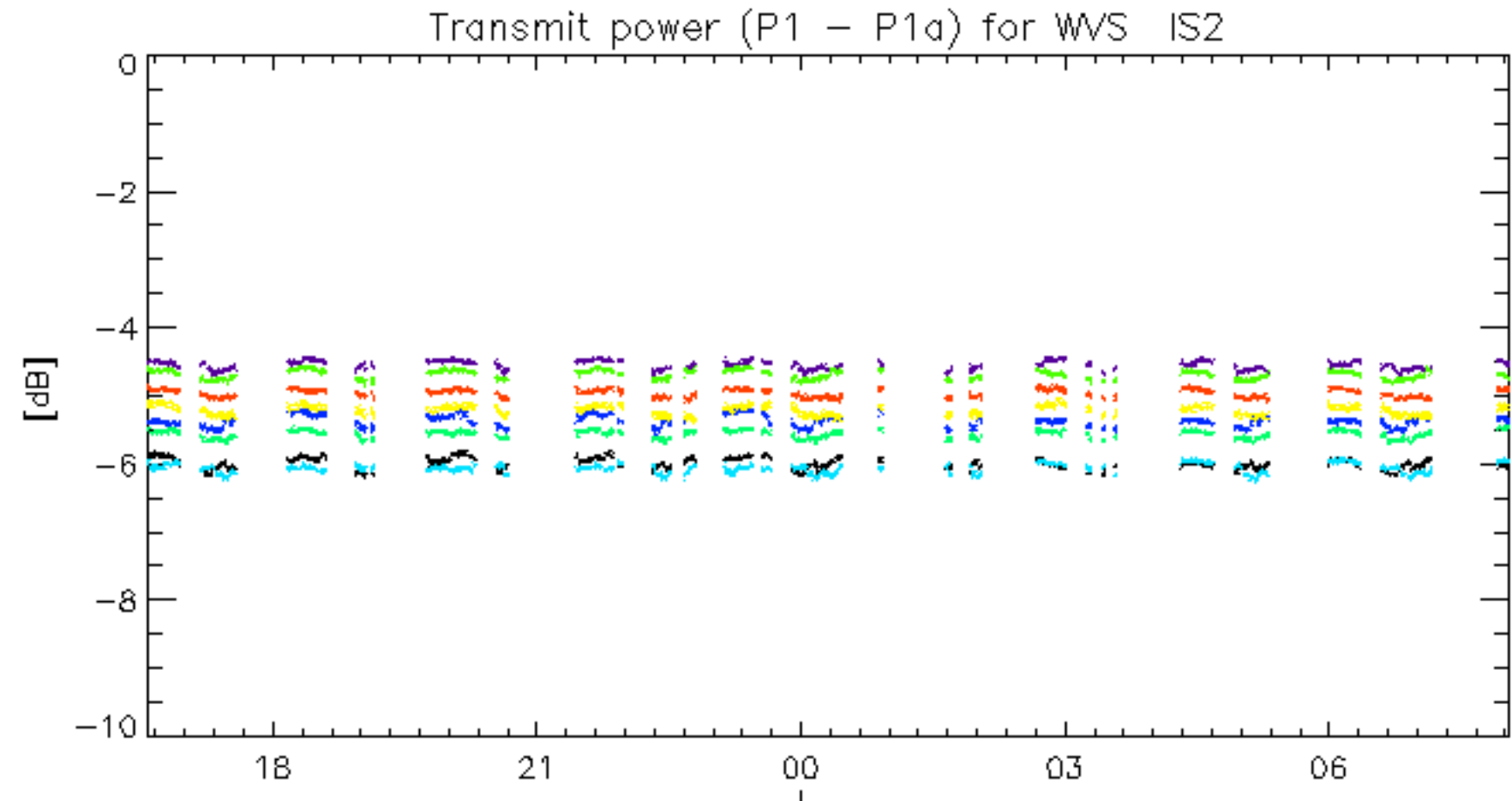




13-Mar  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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No unavailabilities during the reported period.