

# PRELIMINARY REPORT OF 060316

last update on Thu Mar 16 17:24:28 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 2006-03-15 00:00:00 to 2006-03-16 17:24:28

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	60	10	0	22
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	60	10	0	22
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	60	10	0	22
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	60	10	0	22

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	44	32	18	62
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	44	32	18	62
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	44	32	18	62
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	44	32	18	62

### 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	20060315 170153
H	20060316 062640

### 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	-4.002798	0.009403	0.001845
7	P1	-3.005432	0.008672	-0.027892
11	P1	-4.063622	0.020560	0.035245
15	P1	-6.081174	0.021572	-0.049011
19	P1	-3.289123	0.006594	-0.034196
22	P1	-4.458546	0.014898	-0.008133
26	P1	-4.195654	0.103697	0.109956
30	P1	-5.801650	0.144996	-0.003453
3	P1	-16.981045	0.248904	0.007934
7	P1	-16.712294	0.101419	-0.125386
11	P1	-16.498264	0.324569	0.084981
15	P1	-13.057100	0.095066	0.006308
19	P1	-13.932277	0.054404	-0.096546
22	P1	-15.582446	0.467245	0.010478
26	P1	-15.767494	0.304224	-0.049362
30	P1	-16.496714	0.305607	-0.108300

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.405851	0.087272	0.106293
7	P2	-22.378437	0.095307	0.102590
11	P2	-16.228180	0.100494	0.046112
15	P2	-7.165401	0.098784	0.011429
19	P2	-9.132959	0.091031	0.010269
22	P2	-17.939140	0.089223	-0.039004
26	P2	-16.210461	0.094416	-0.017237
30	P2	-19.646687	0.084183	-0.025347

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.193946	0.005952	0.002203
7	P3	-8.193946	0.005952	0.002203
11	P3	-8.193946	0.005952	0.002203
15	P3	-8.193946	0.005952	0.002203
19	P3	-8.193946	0.005952	0.002203
22	P3	-8.193946	0.005952	0.002203
26	P3	-8.193946	0.005952	0.002203
30	P3	-8.193946	0.005952	0.002203

**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	-3.840489	3.123280	0.224628
7	P1	-2.831794	3.278313	0.292248
11	P1	-3.020689	3.300746	0.257067
15	P1	-3.665356	3.272315	0.275822
19	P1	-3.467314	3.170762	0.219092
22	P1	-5.262230	2.914030	0.207917
26	P1	-5.948542	3.097346	0.414433
30	P1	-5.287634	2.948105	0.275040
3	P1	-11.640100	2.052220	0.198266
7	P1	-10.038489	2.273247	0.184990
11	P1	-10.335855	2.265243	0.121917
15	P1	-10.880764	2.273786	0.145830
19	P1	-15.467933	1.674229	0.122764
22	P1	-20.310942	2.300745	0.121098

26	P1	-16.316759	2.181796	0.130702
30	P1	-18.357971	1.569467	0.137740

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.103477	2.158725	0.132465
7	P2	-22.547956	2.523701	-0.036545
11	P2	-11.276808	2.343995	0.159921
15	P2	-4.913976	3.045750	0.223516
19	P2	-6.923433	2.741397	0.216140
22	P2	-8.211985	2.571559	0.166949
26	P2	-23.894228	2.586226	-0.208842
30	P2	-22.035593	2.441926	-0.114672

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.023178	0.002478	0.010932
7	P3	-8.023193	0.002472	0.010830
11	P3	-8.023172	0.002482	0.010954
15	P3	-8.023324	0.002476	0.010478
19	P3	-8.023199	0.002485	0.010742
22	P3	-8.023293	0.002473	0.010645
26	P3	-8.023298	0.002473	0.011068
30	P3	-8.023153	0.002478	0.010977

## 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	0.000555021
	stdev	1.76195e-07
MEAN Q	mean	0.000514072
	stdev	2.21723e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138089
	stdev	0.00119183
STDEV Q	mean	0.138450
	stdev	0.00120981



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006031[456]

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_1PNPDE20060314_134140_000000372046_00010_21106_0829.N1	1	0
ASA_IMM_1PNPDE20060314_153600_000000352046_00011_21107_0830.N1	1	0
ASA_IMM_1PNPDE20060315_004510_000001932046_00016_21112_0858.N1	1	0
ASA_IMM_1PNPDE20060315_155429_000000372046_00026_21122_0885.N1	1	0
ASA_IMM_1PNPDK20060315_124554_000000702046_00024_21120_0330.N1	1	0

ASA_WVS_1PNPDE20060315_003528_000000002046_00016_21112_0236.N1	1	0
ASA_GM1_1PNPDK20060314_155431_000003742046_00011_21107_0319.N1	0	17
ASA_WSM_1PNPDE20060314_135201_000000852046_00010_21106_0704.N1	0	29
ASA_WSM_1PNPDE20060315_030808_000001832046_00018_21114_0795.N1	0	1
ASA_WSM_1PNPDE20060315_160013_000001282046_00026_21122_0852.N1	0	70





## 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

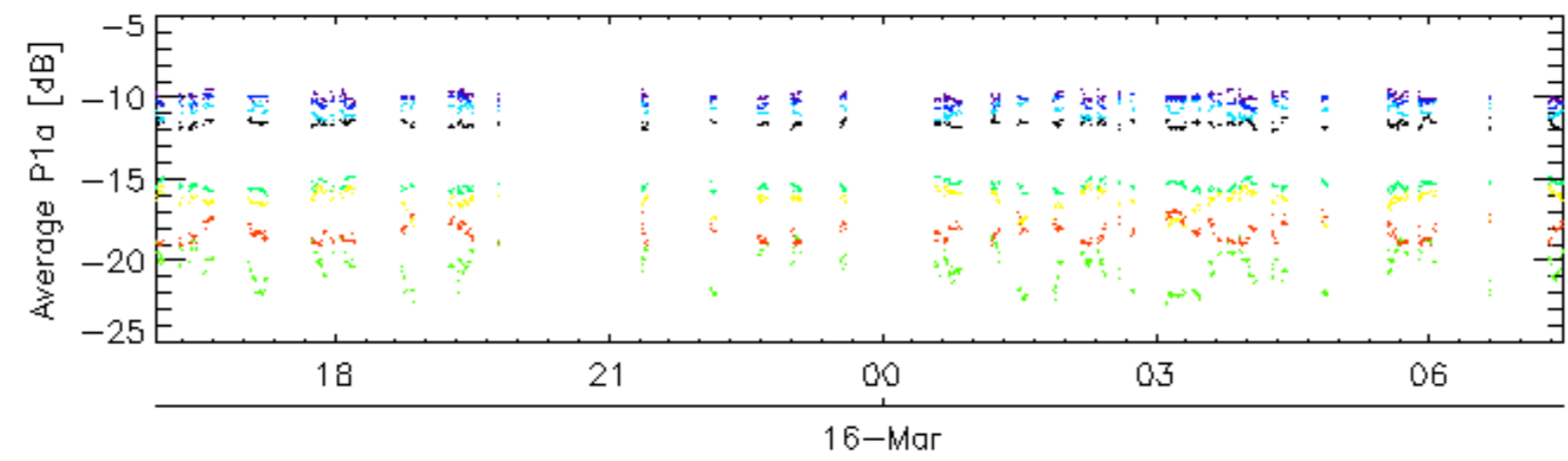
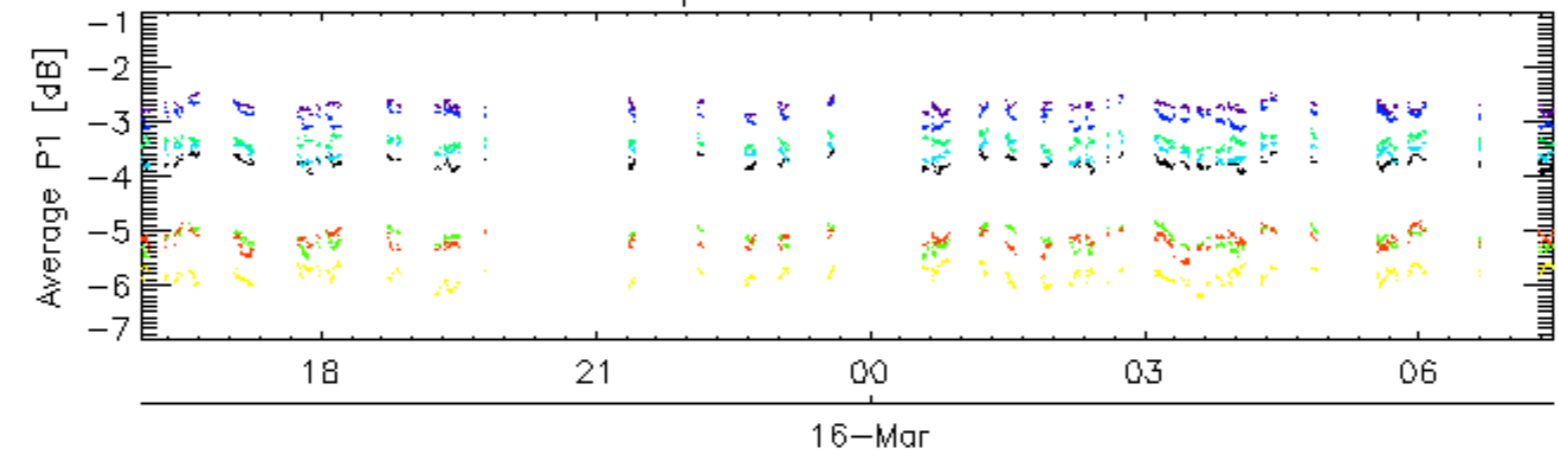
Ascending

Descending

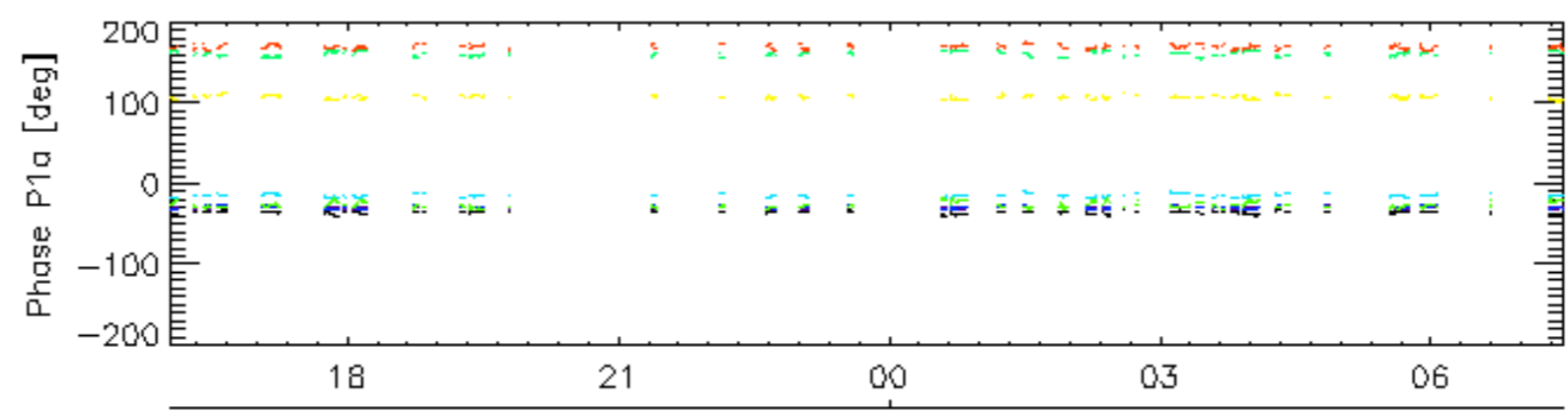
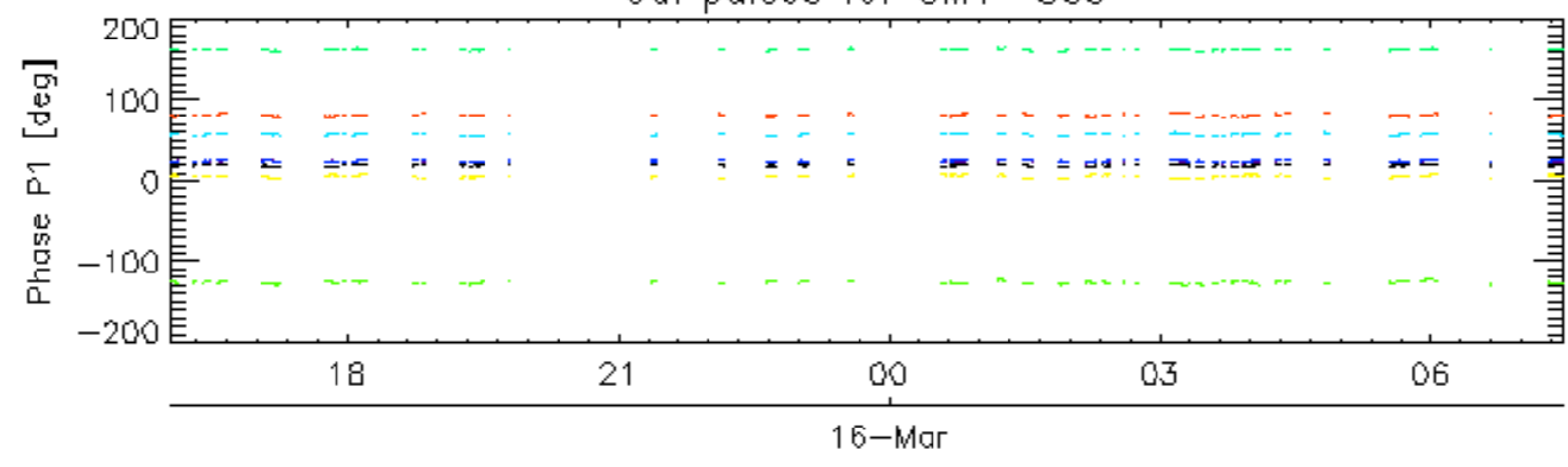
#### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

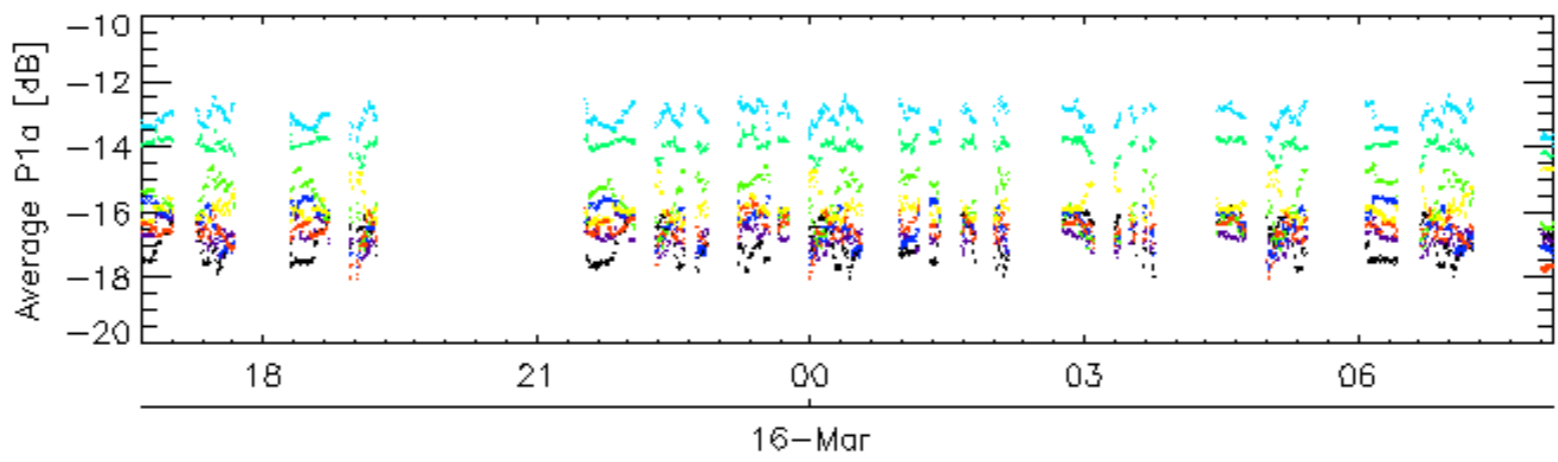
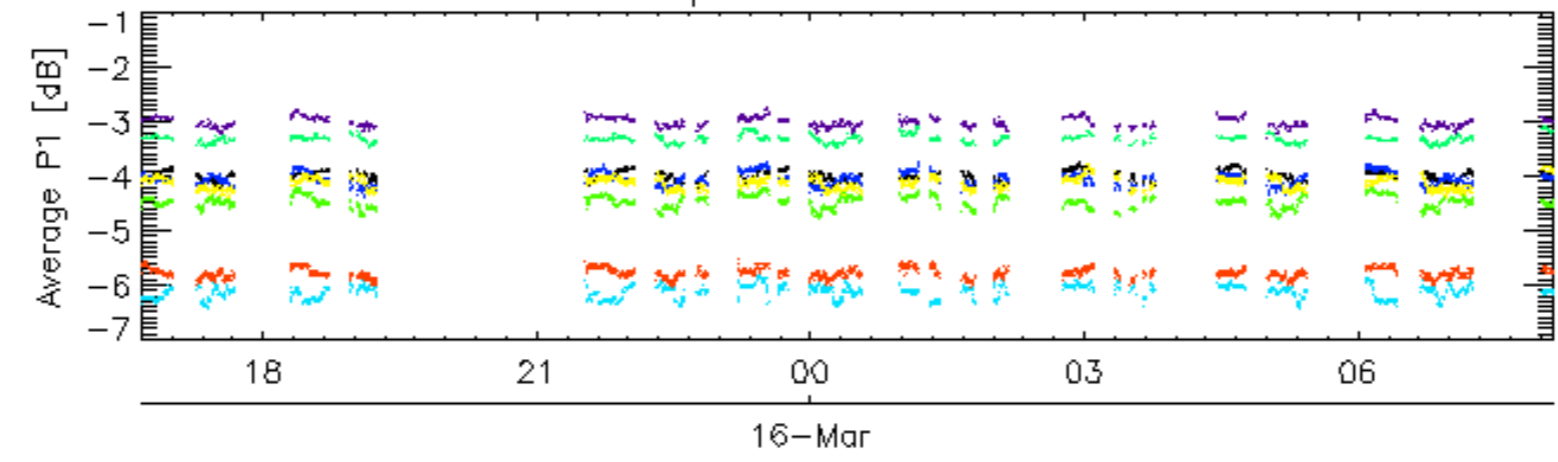


Cal pulses for GM1 SS3

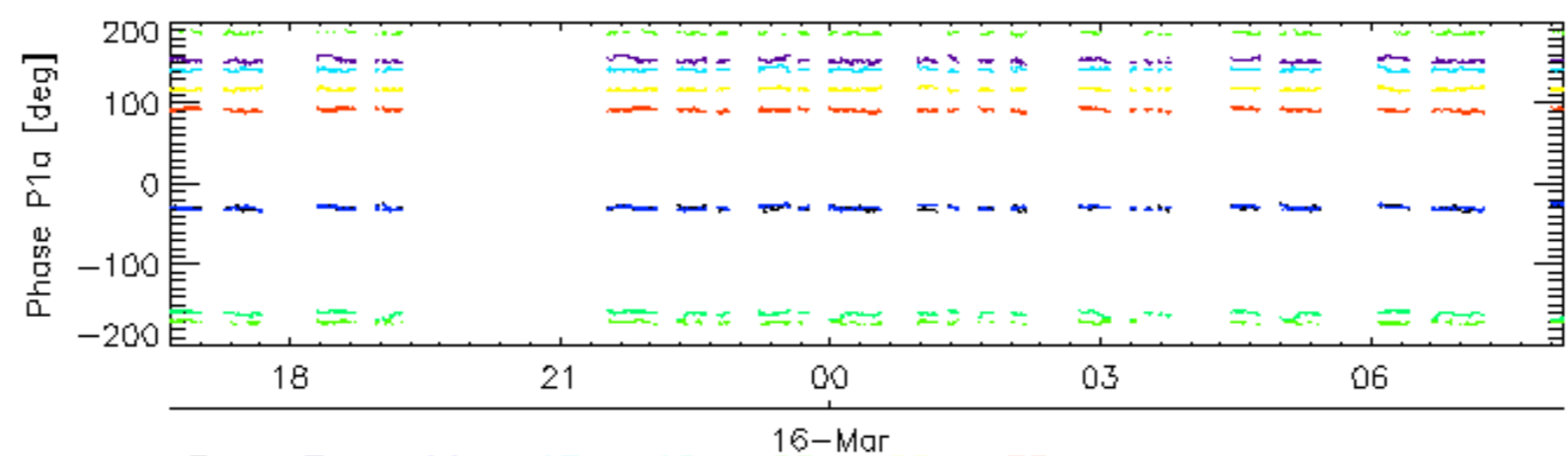
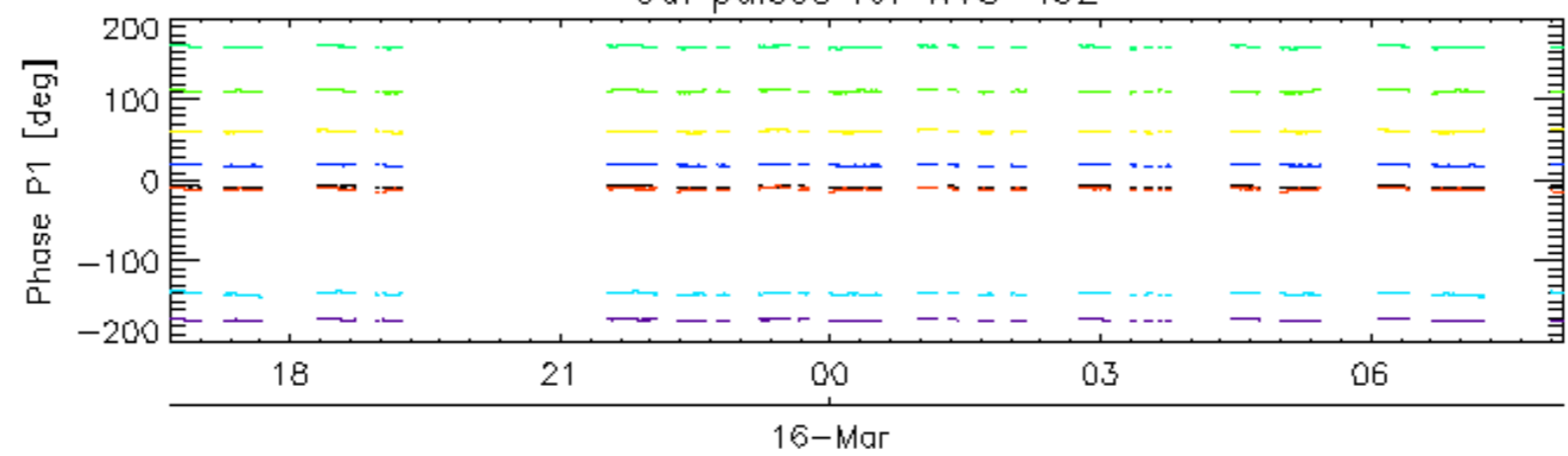


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

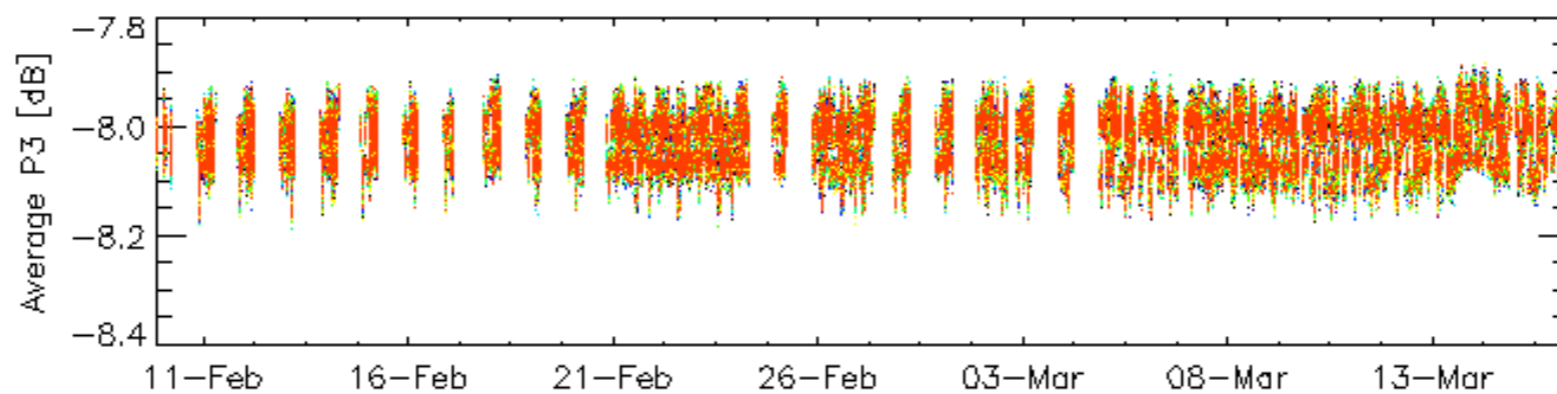
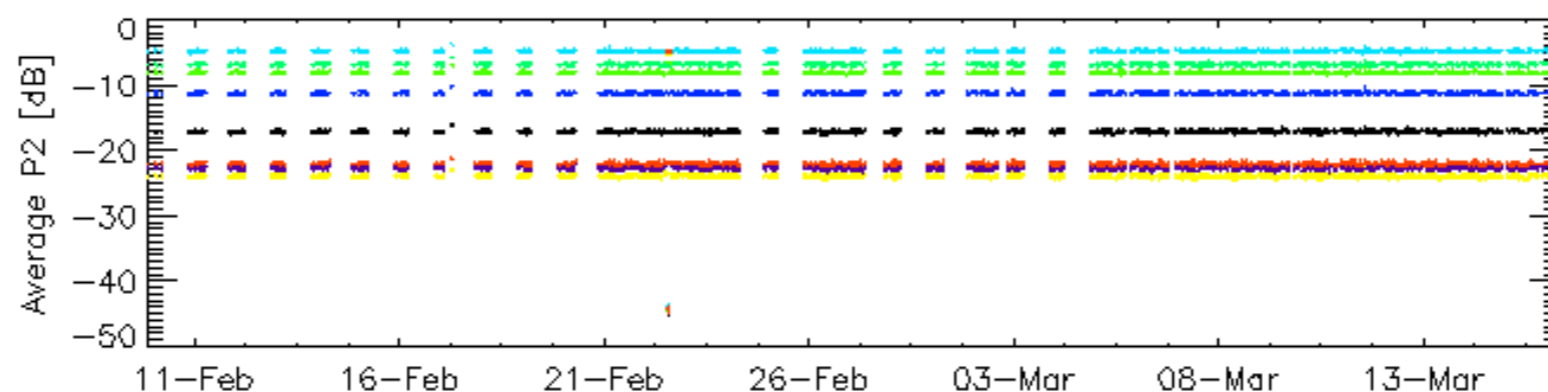
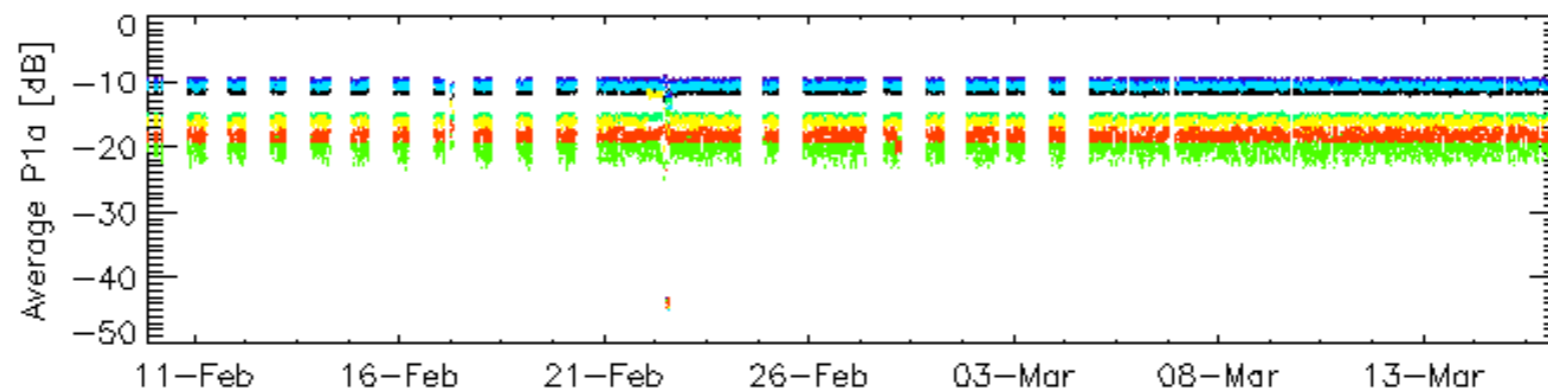
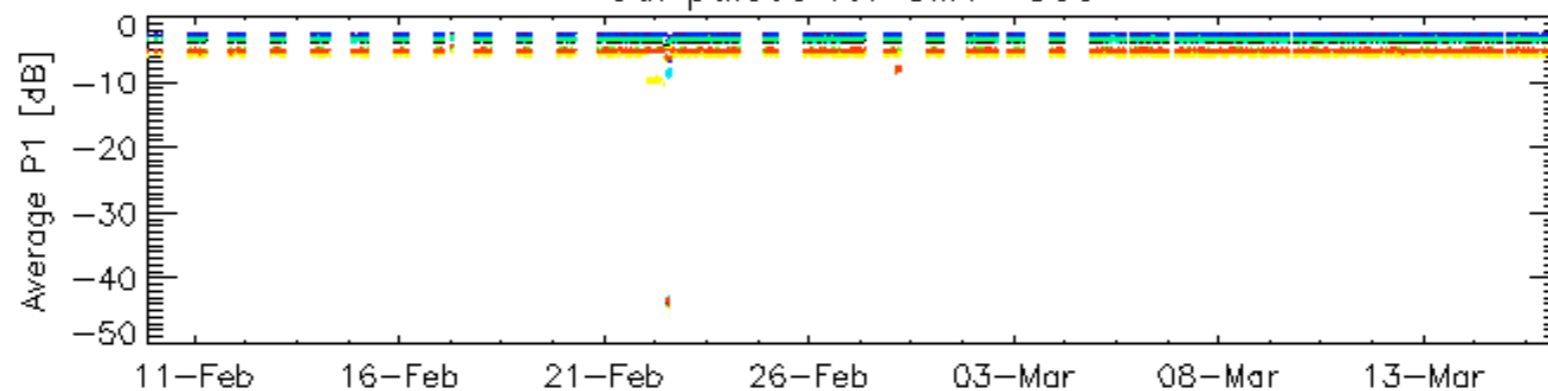


Cal pulses for WVS IS2



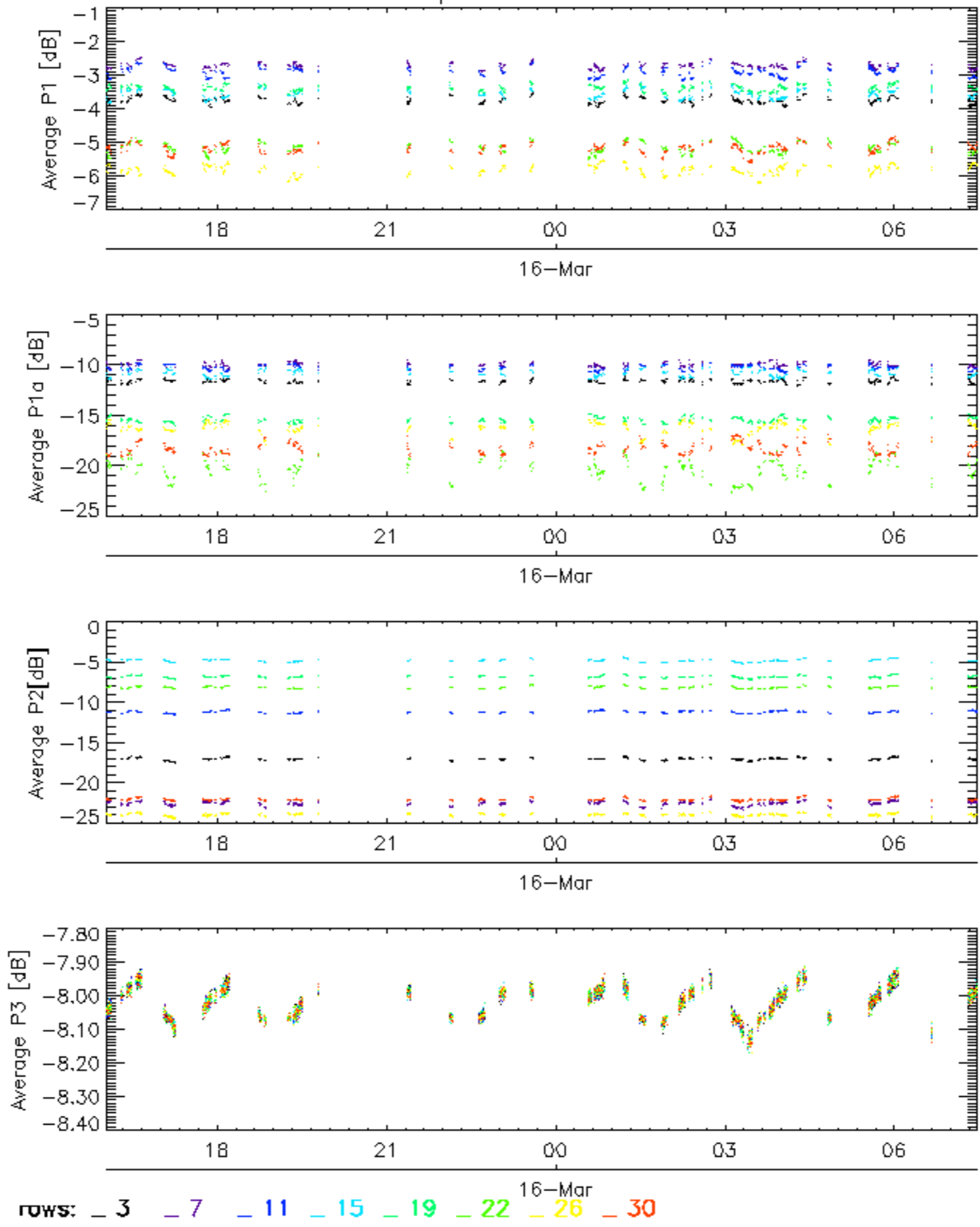
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

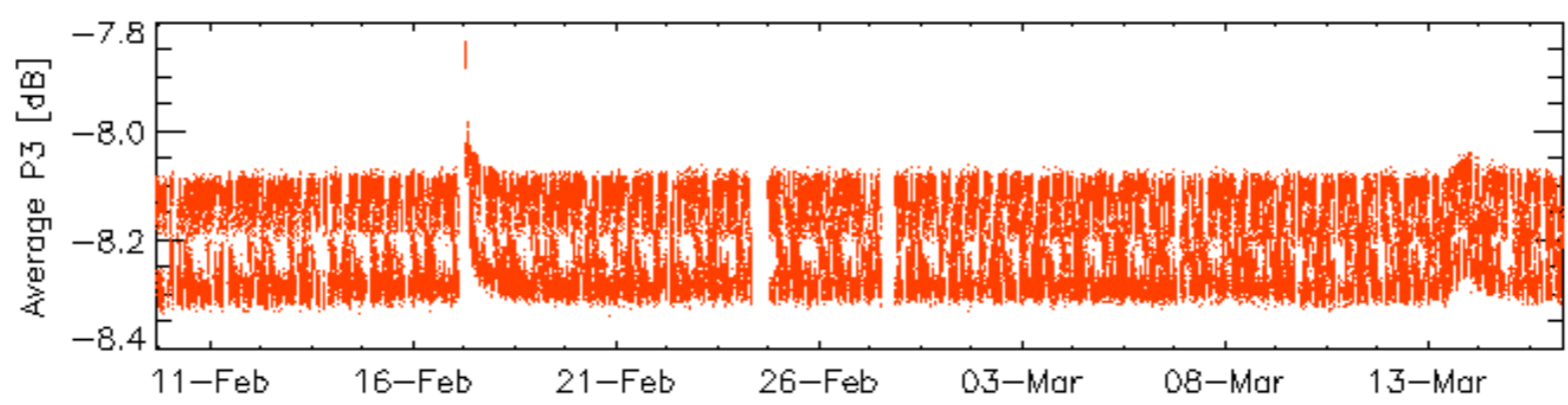
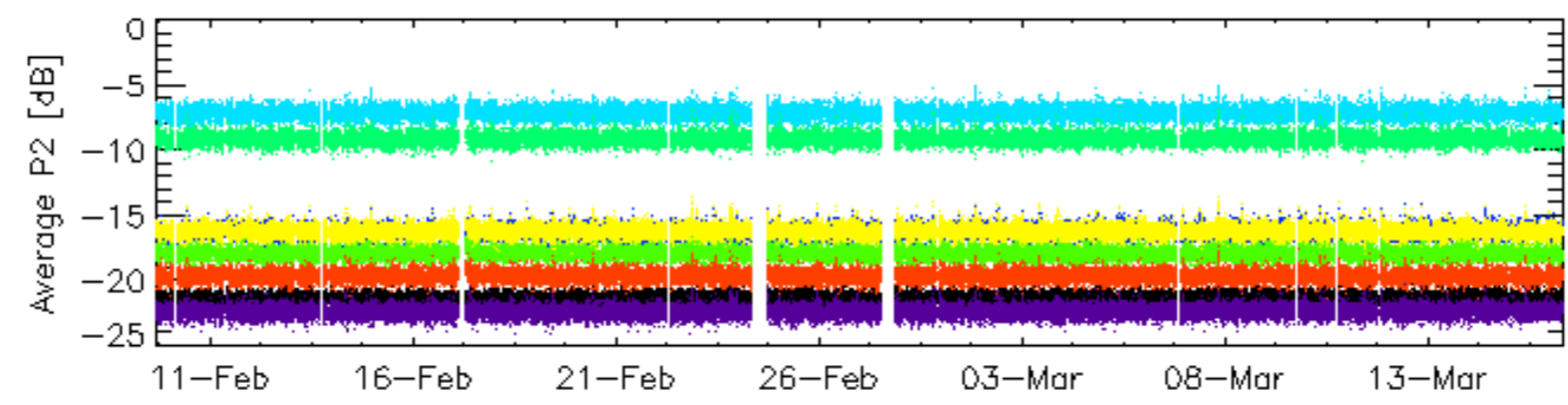
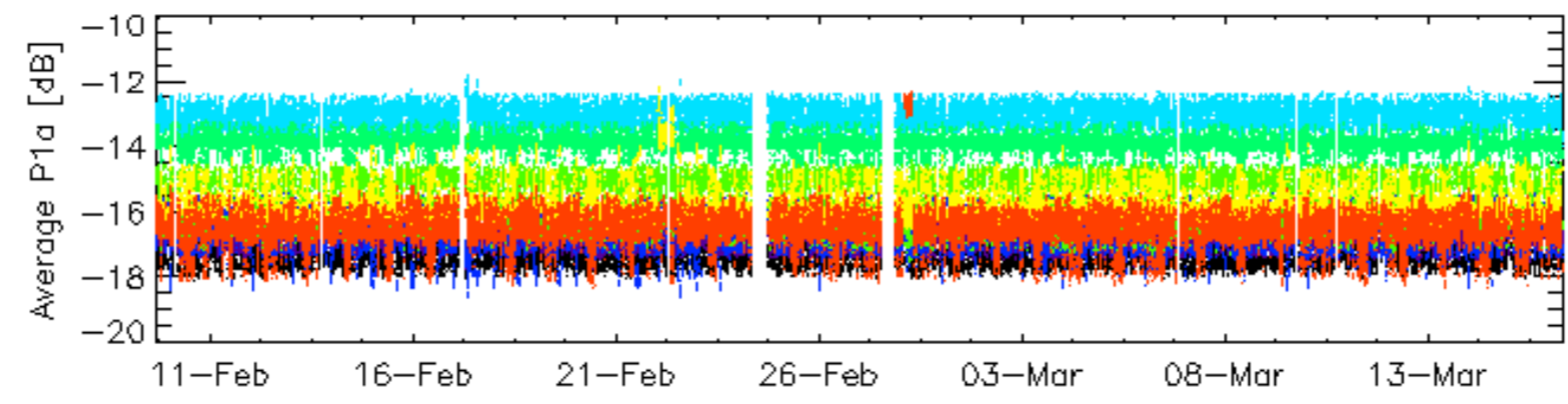
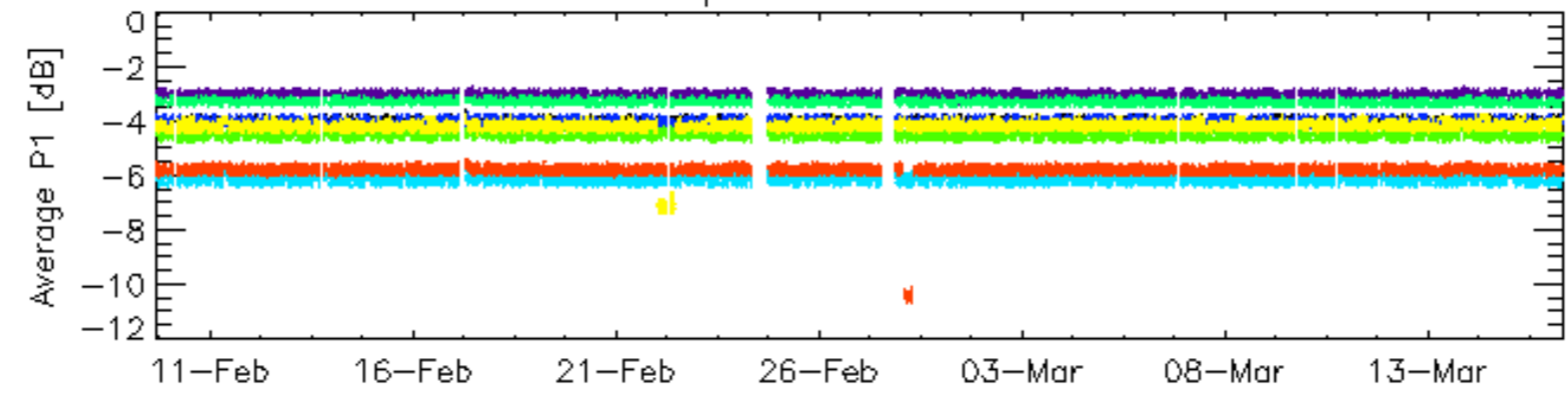


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

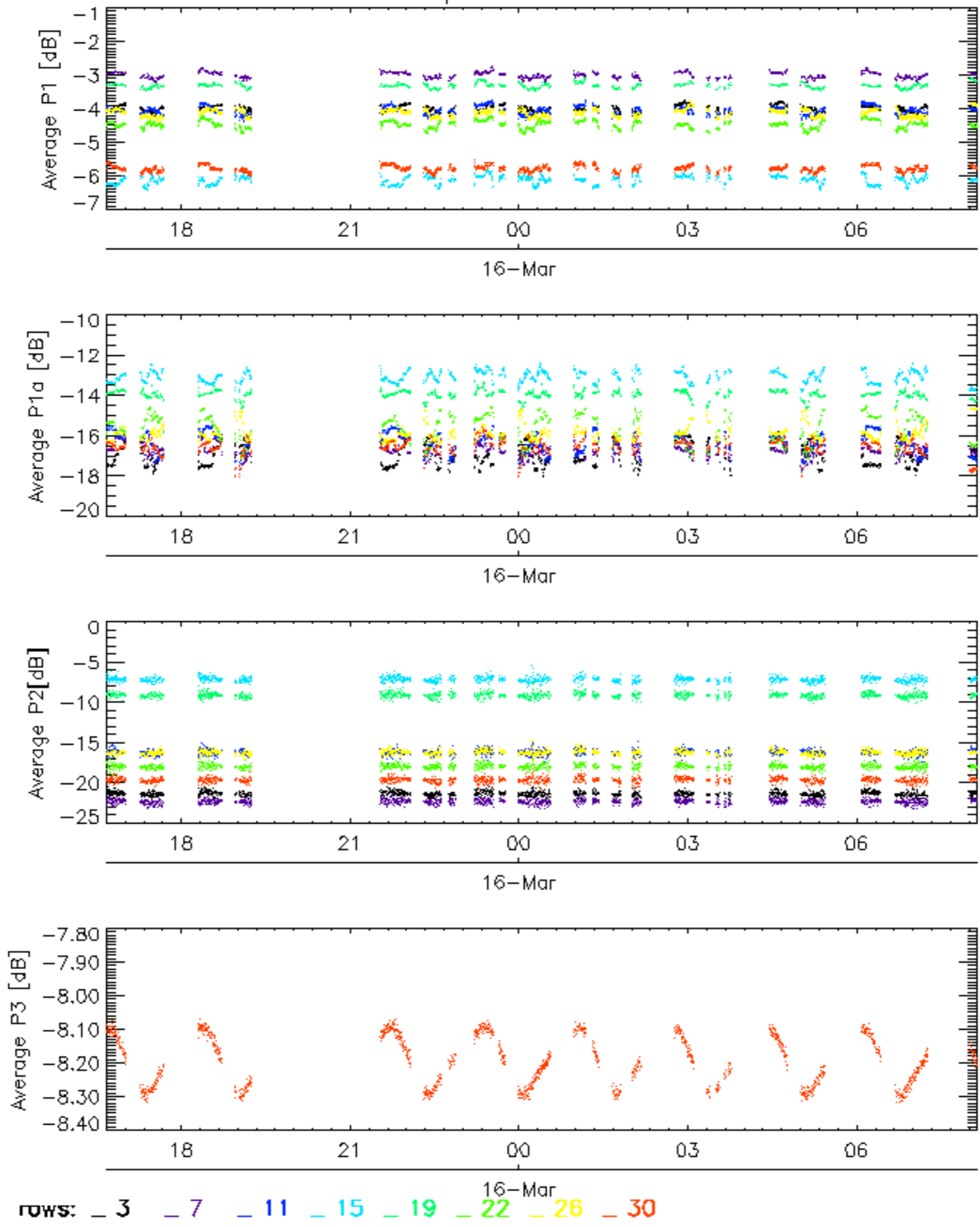


Cal pulses for WVS IS2



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

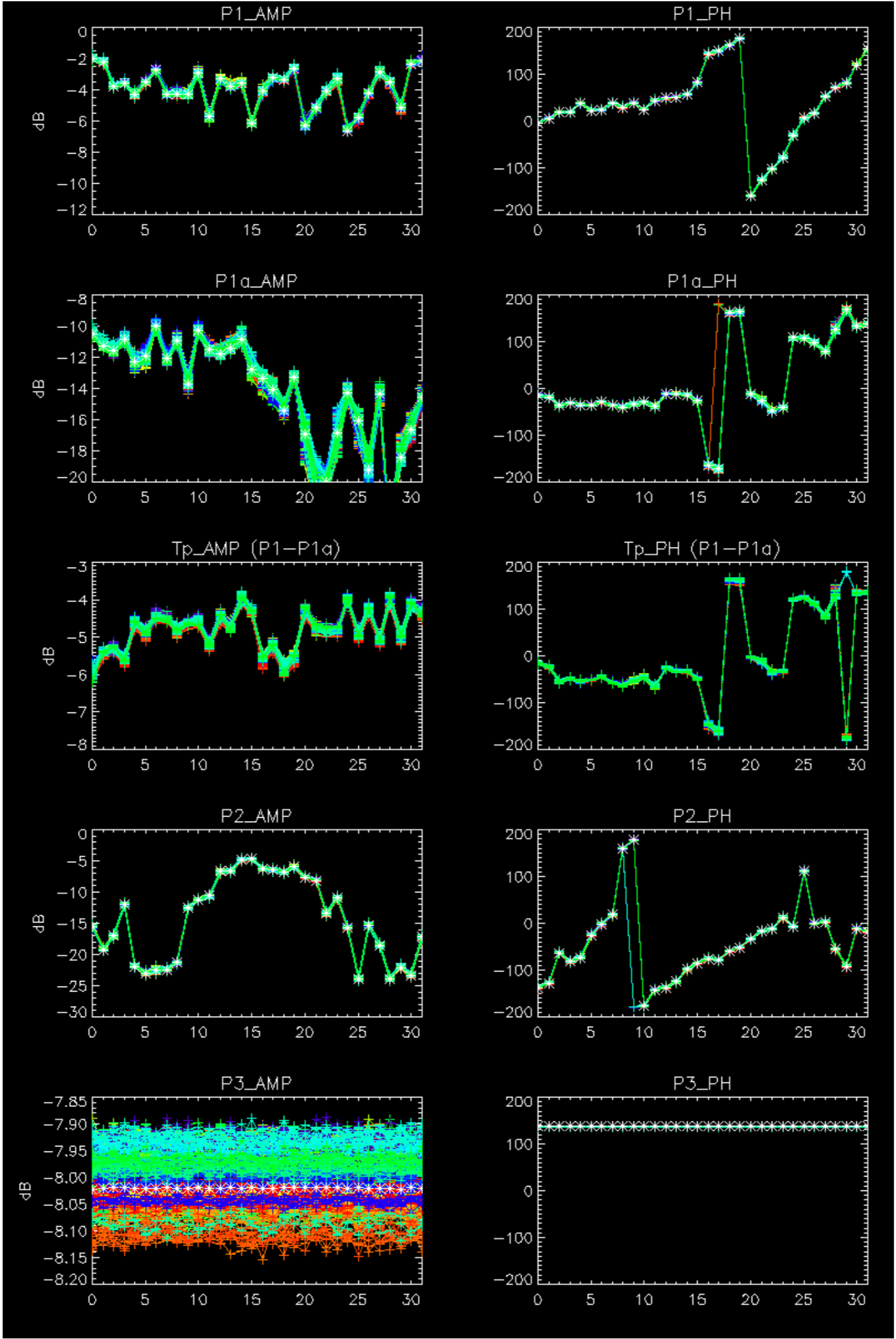
Cal pulses for WVS IS2

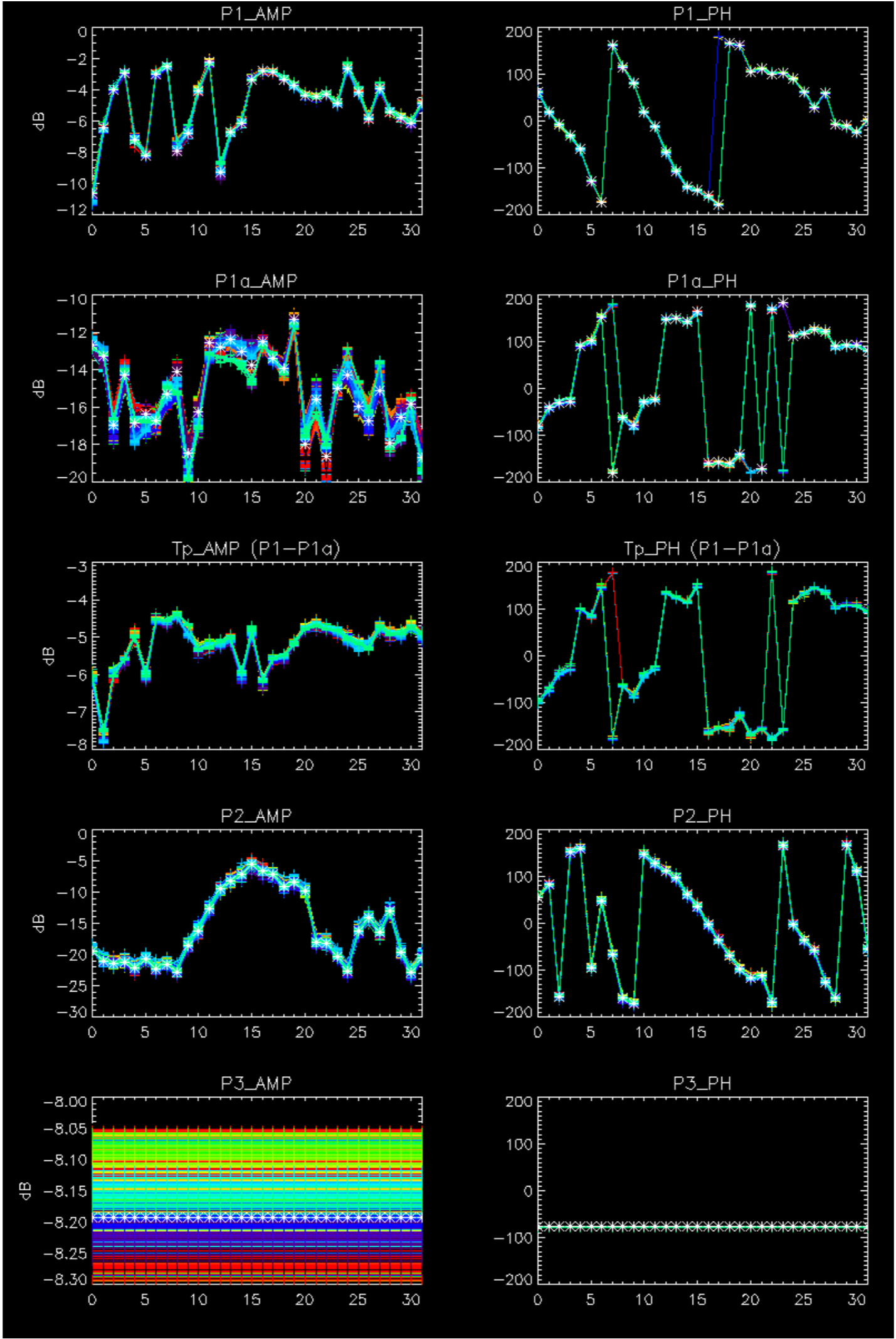


No anomalies observed on available browse products



No anomalies observed.



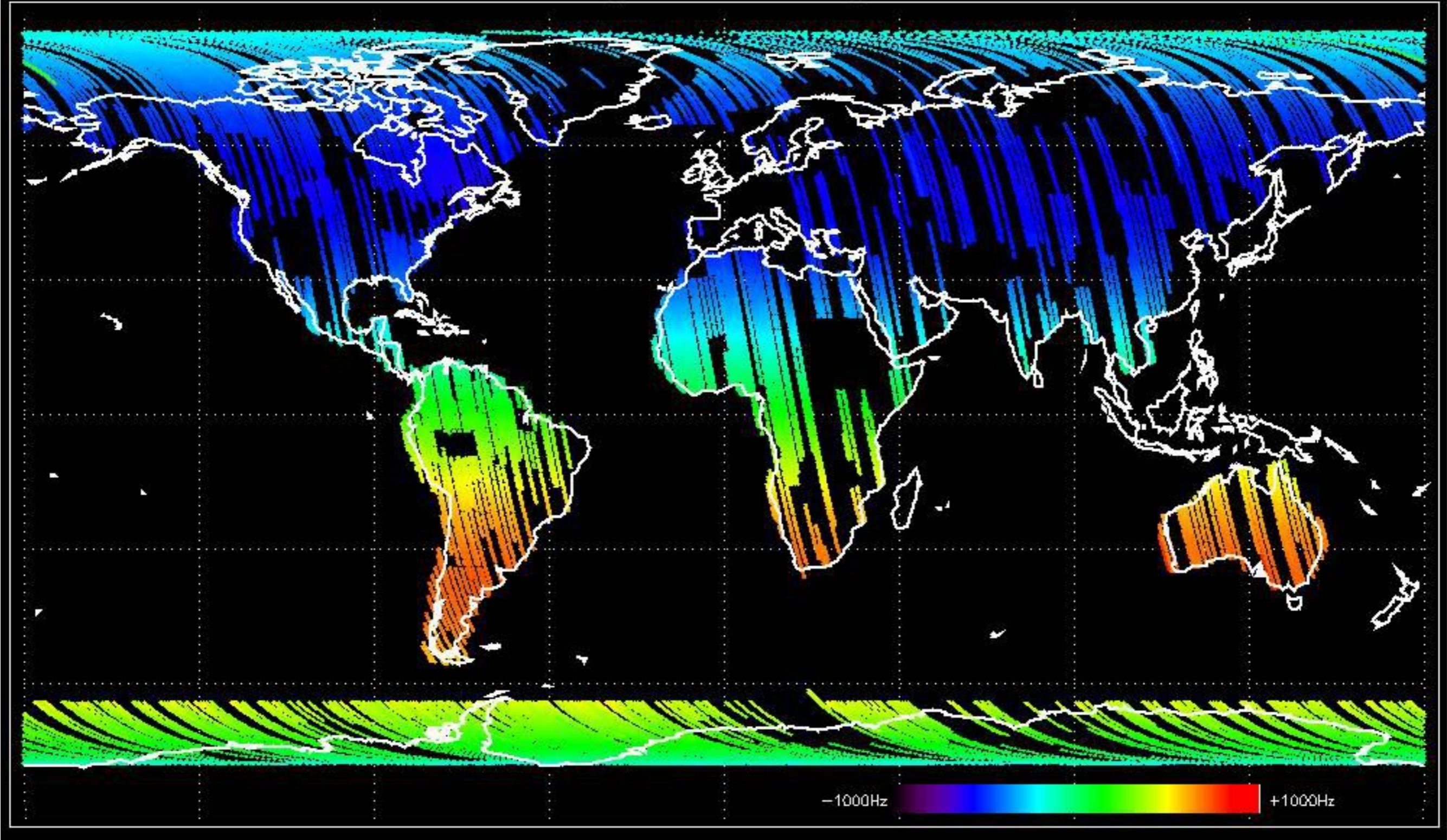


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



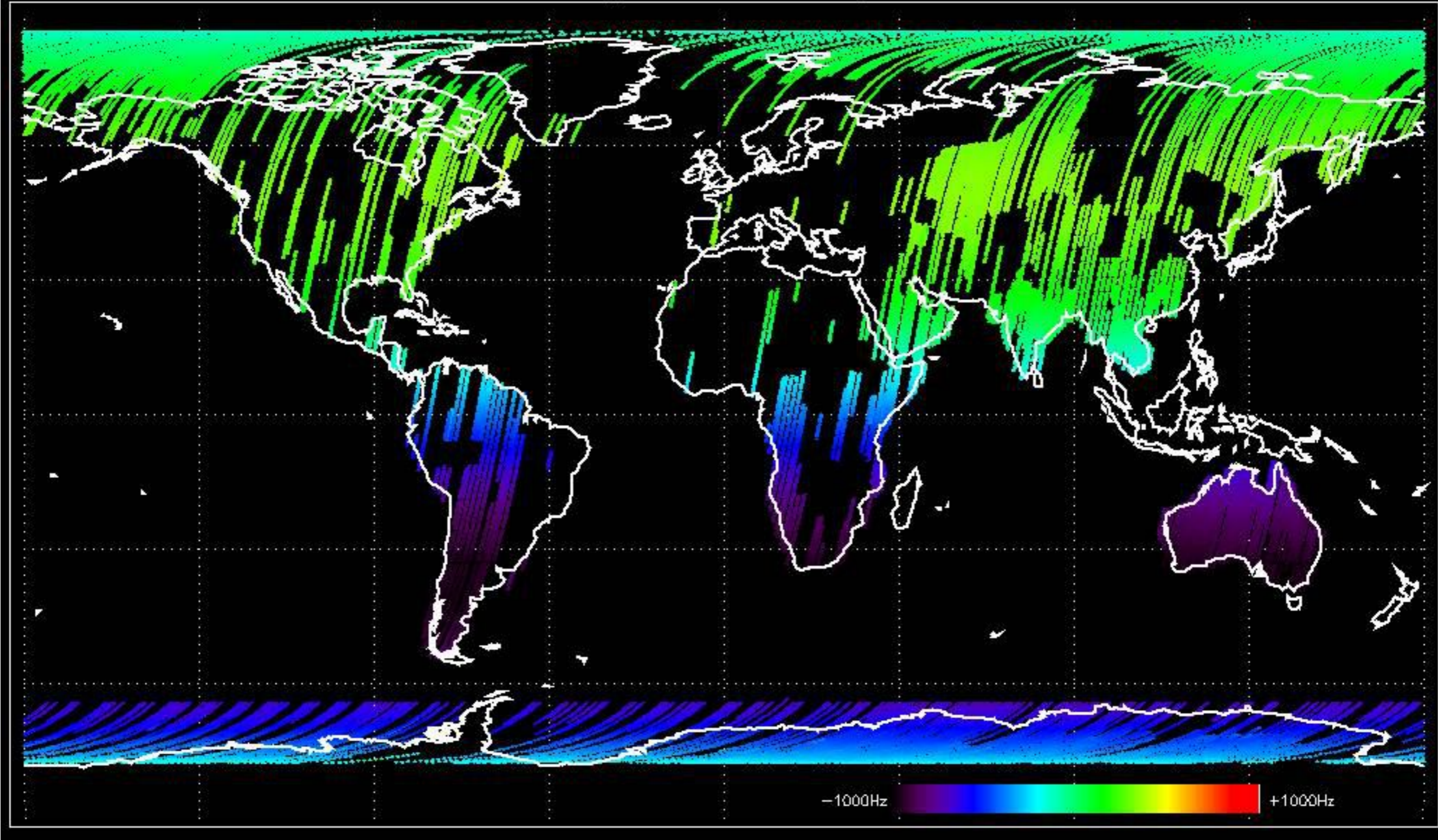


Doppler 'GM1' 'SS1' ascending



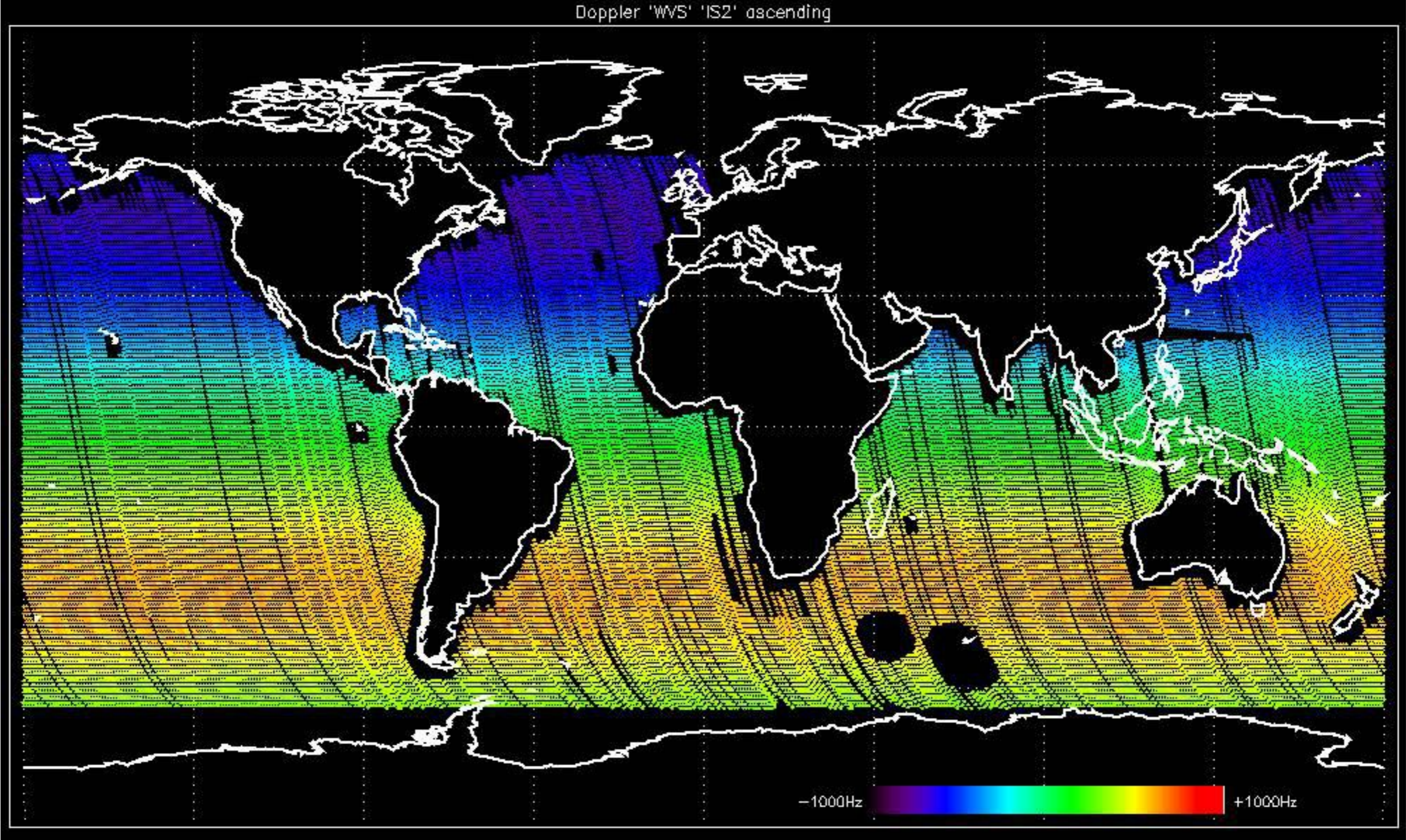


Doppler 'GM1' 'SS1' descending



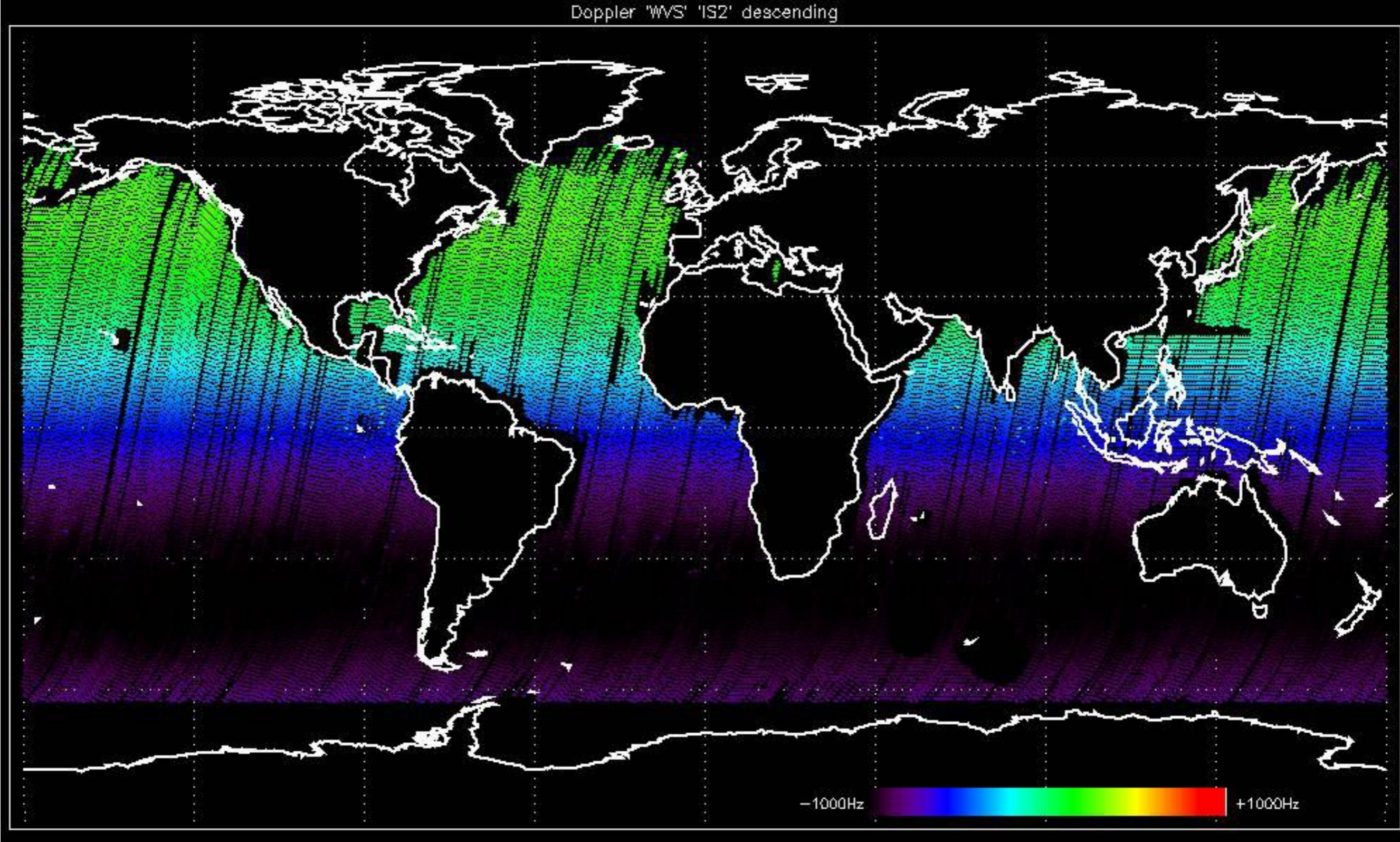


Doppler 'WVS' 'IS2' ascending

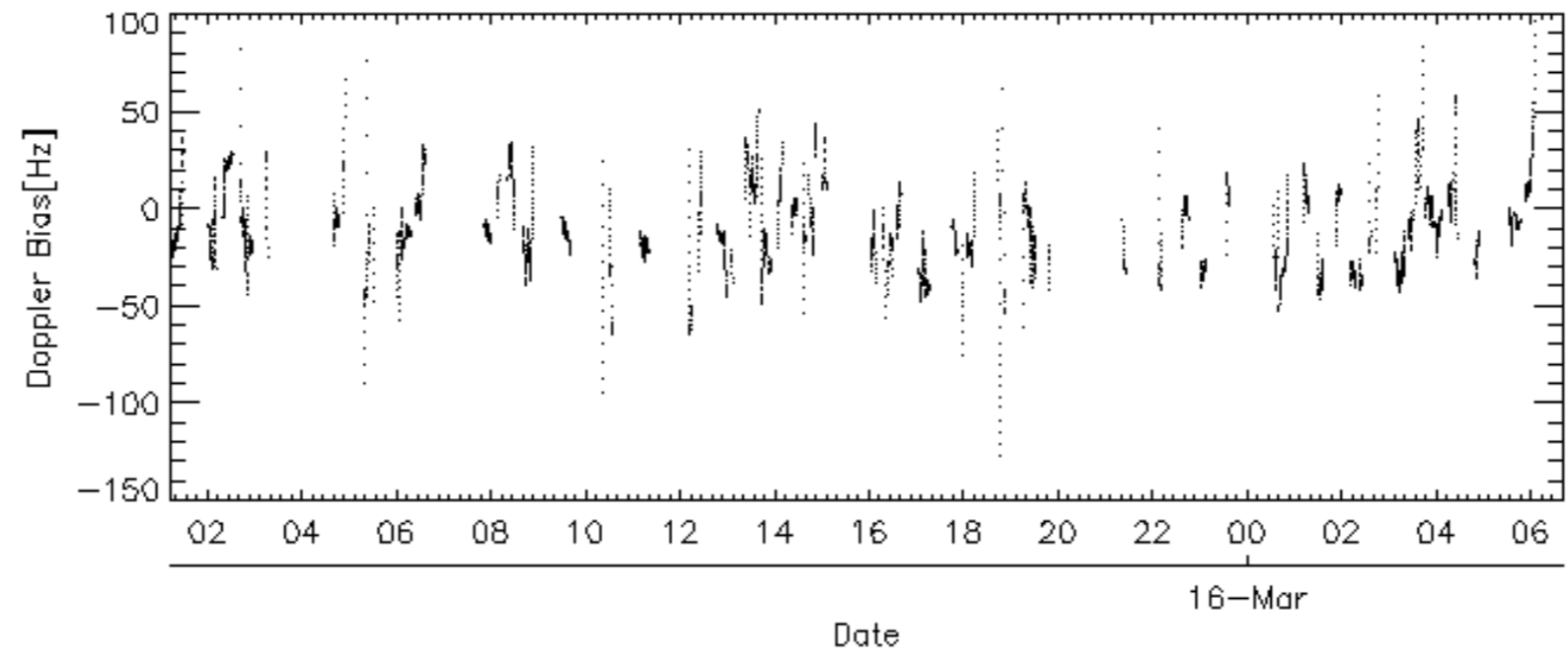
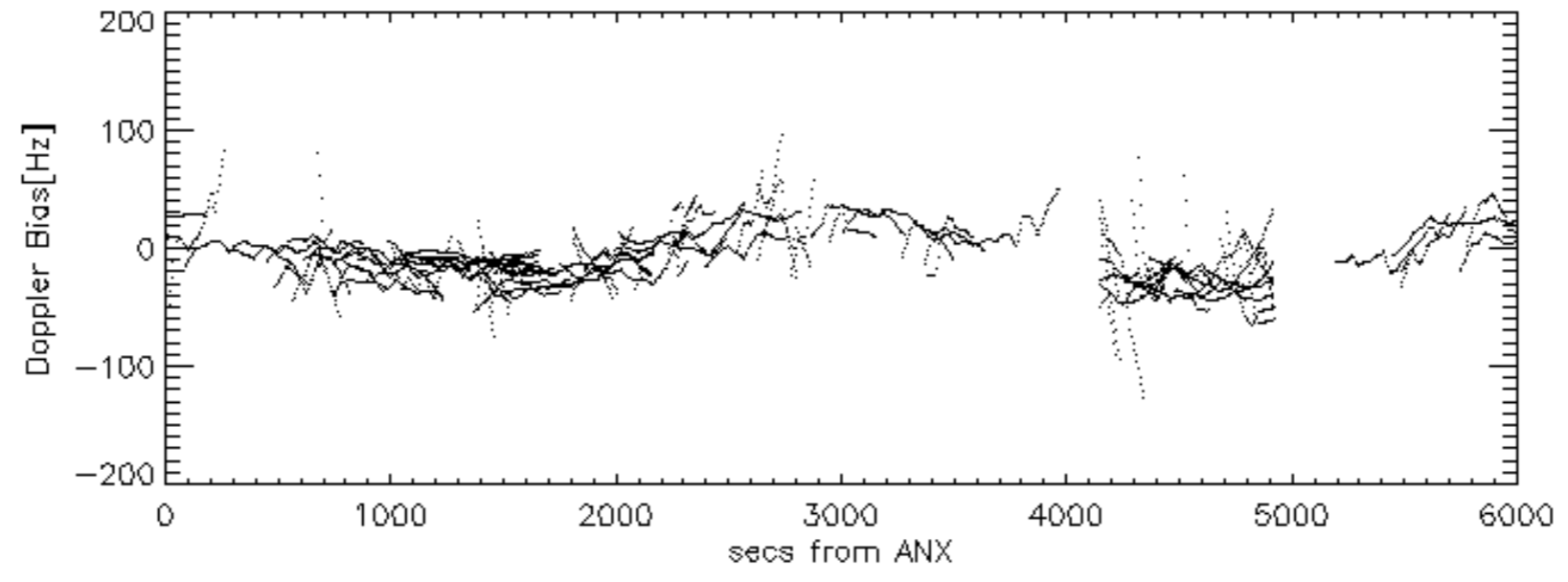
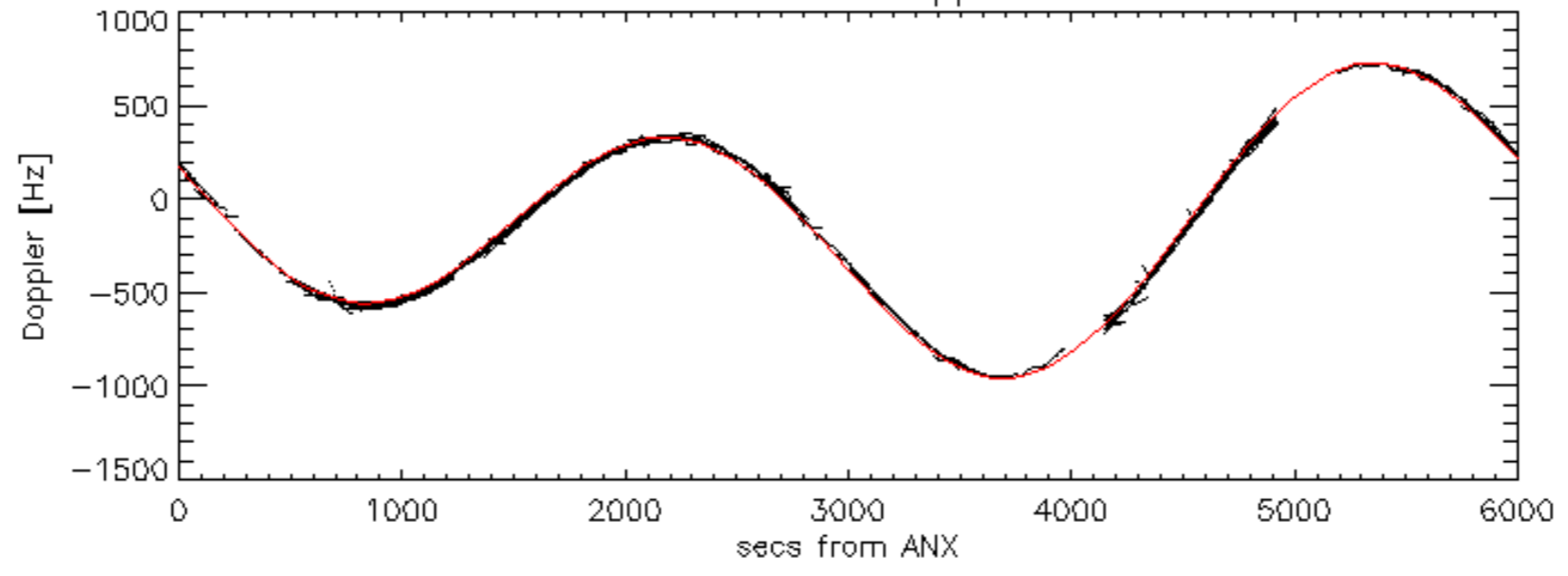




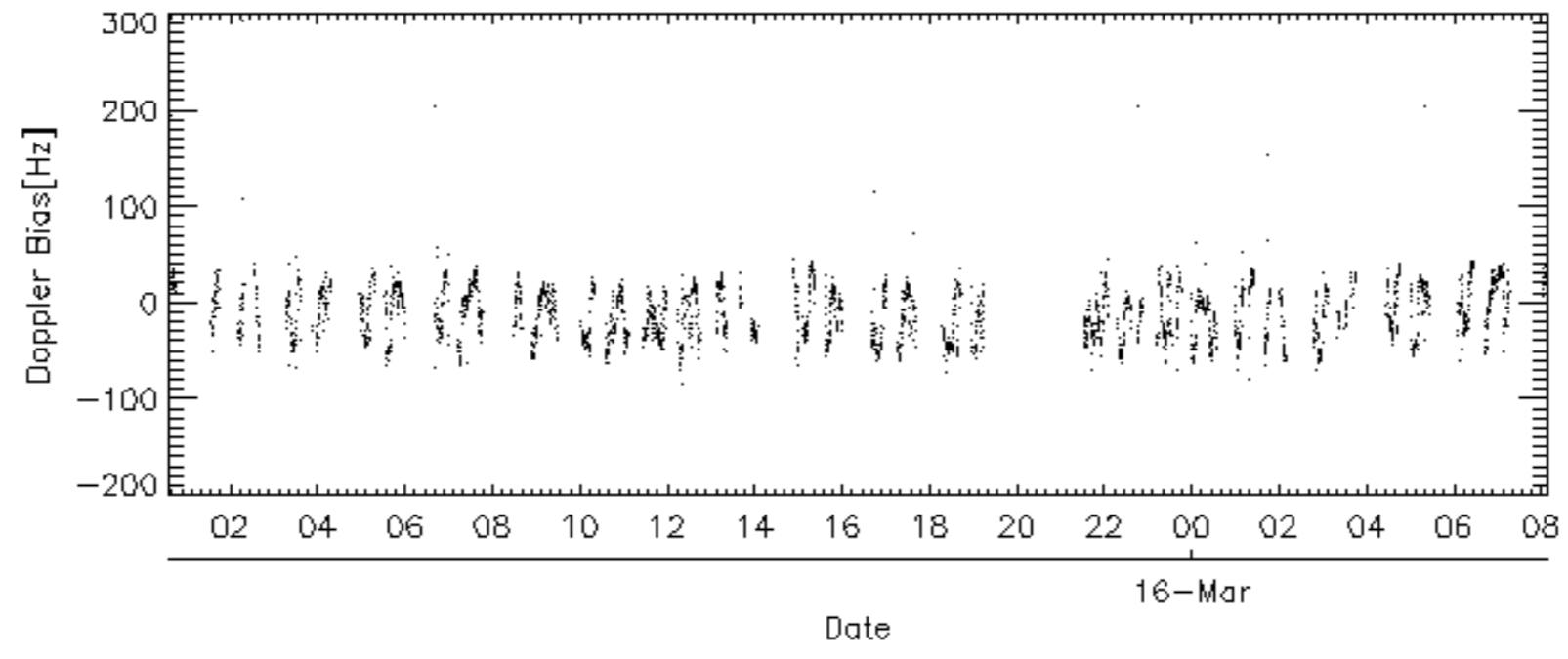
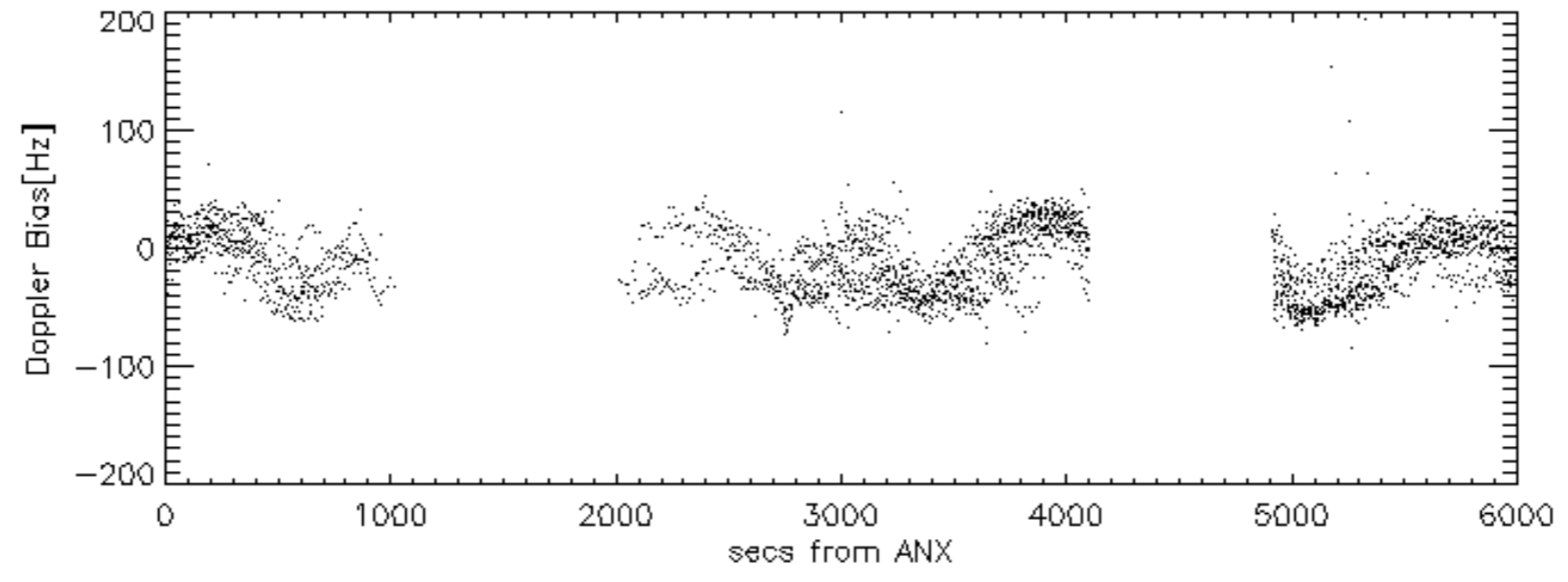
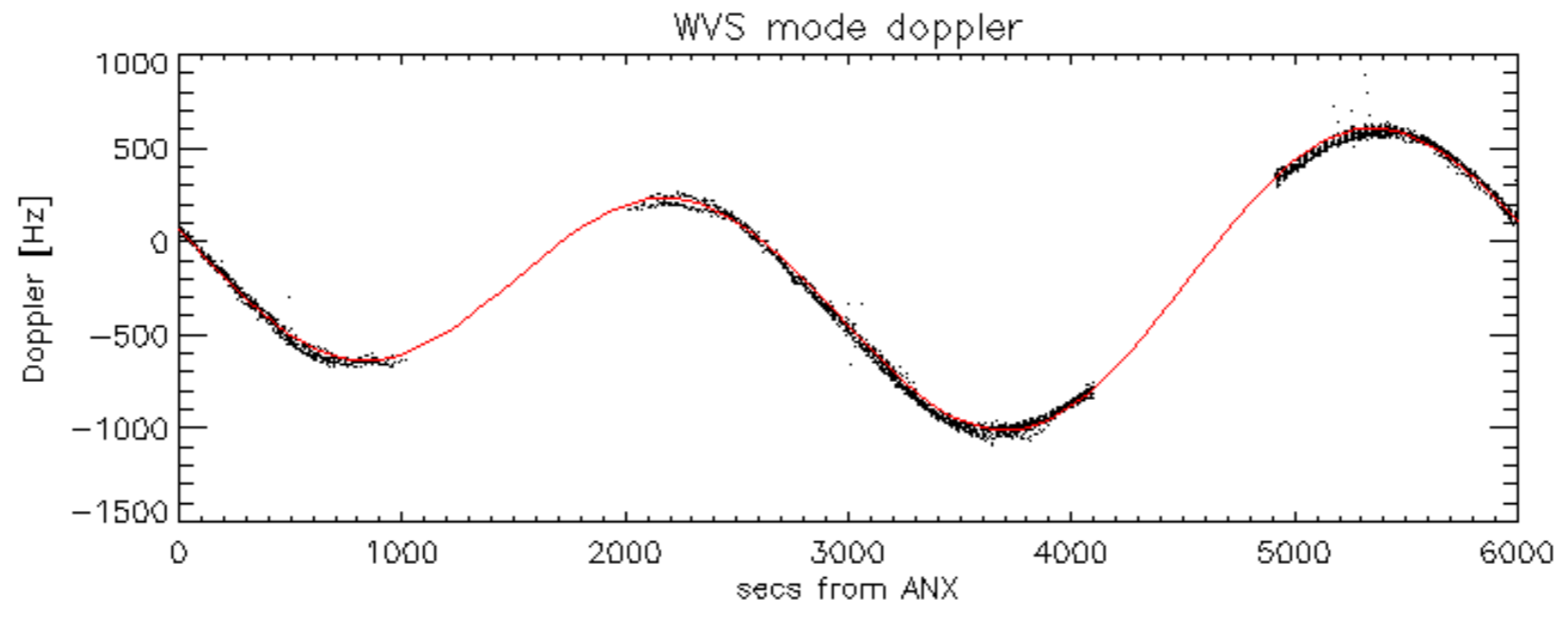
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

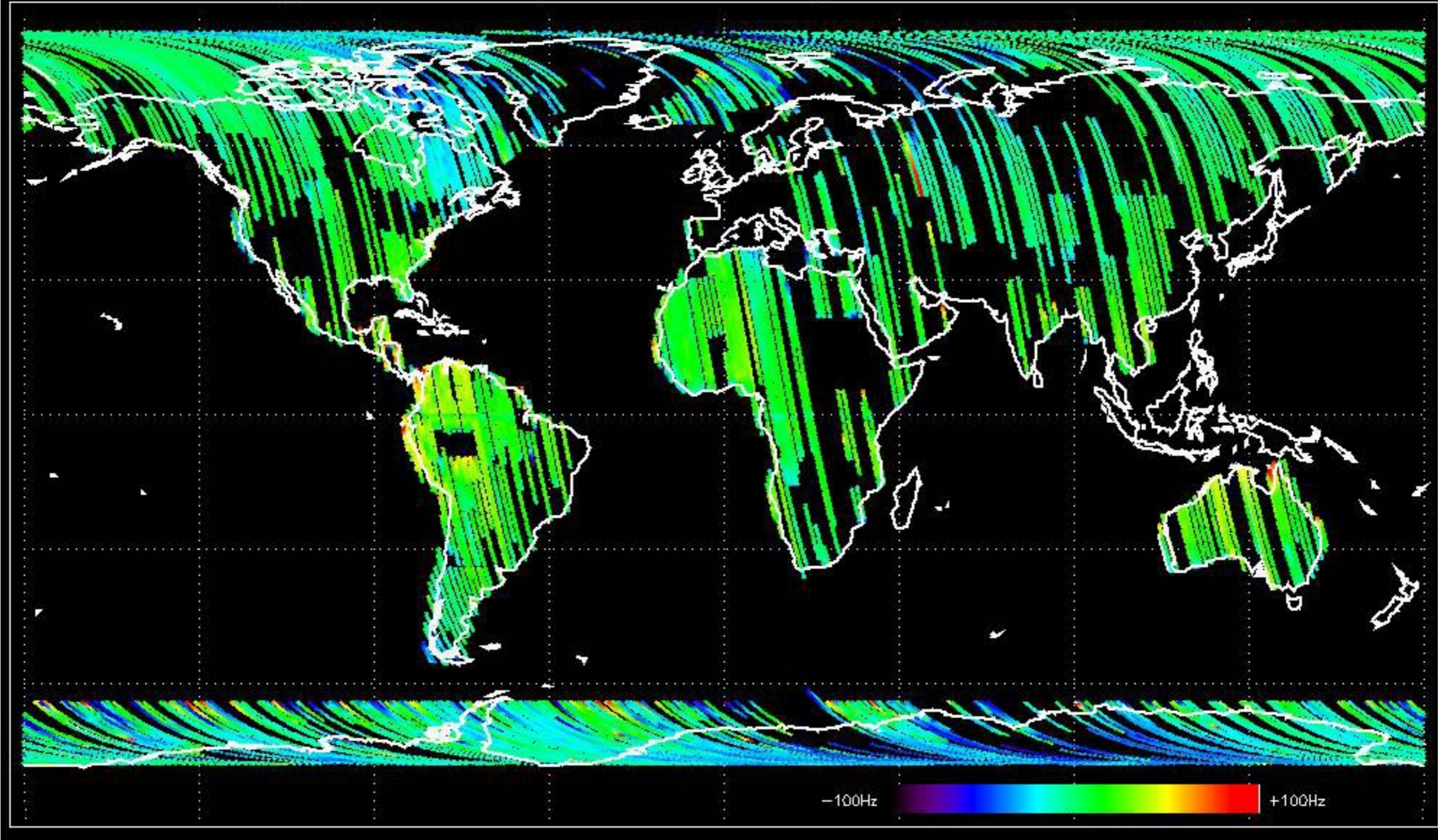






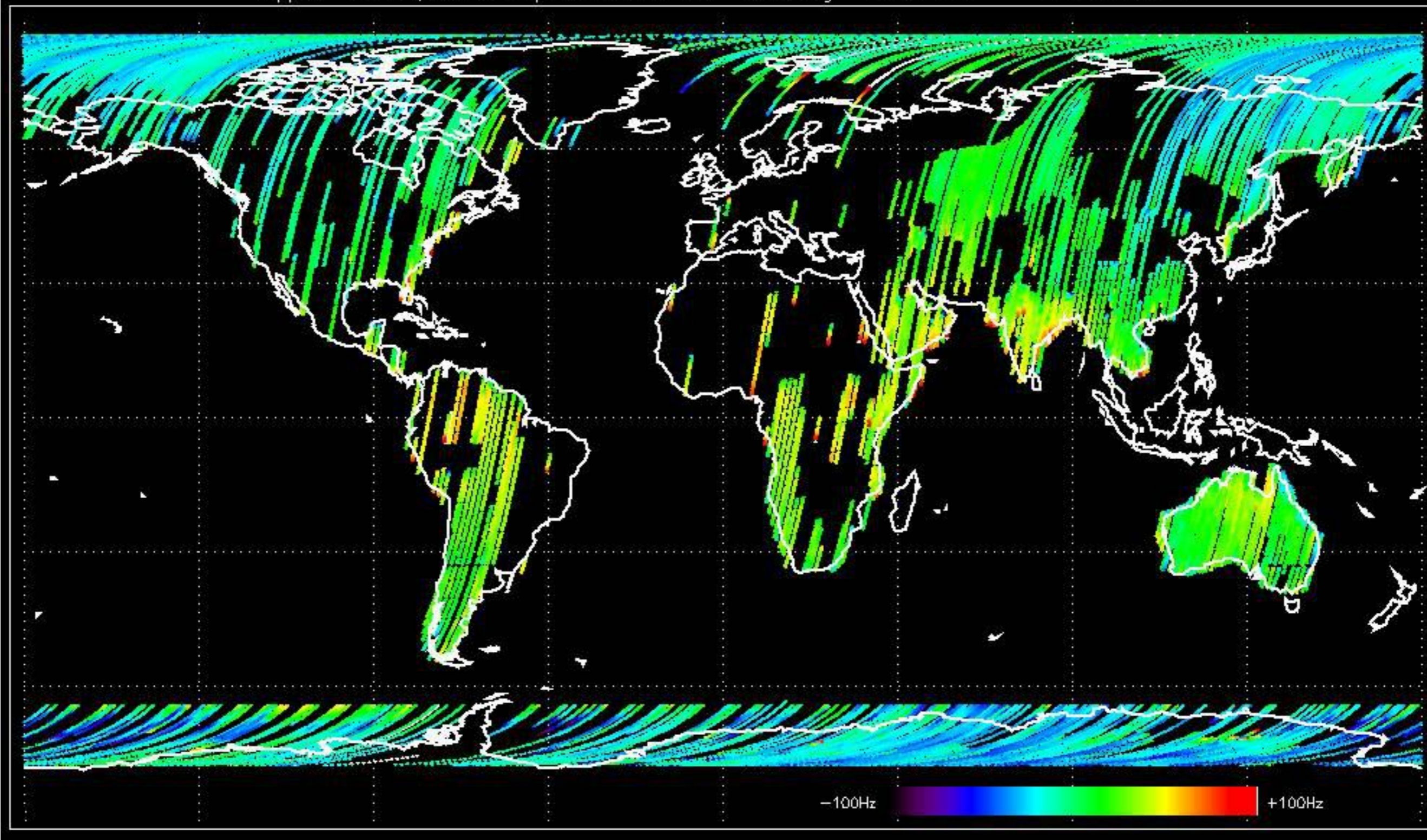


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -9.3328226 Hz



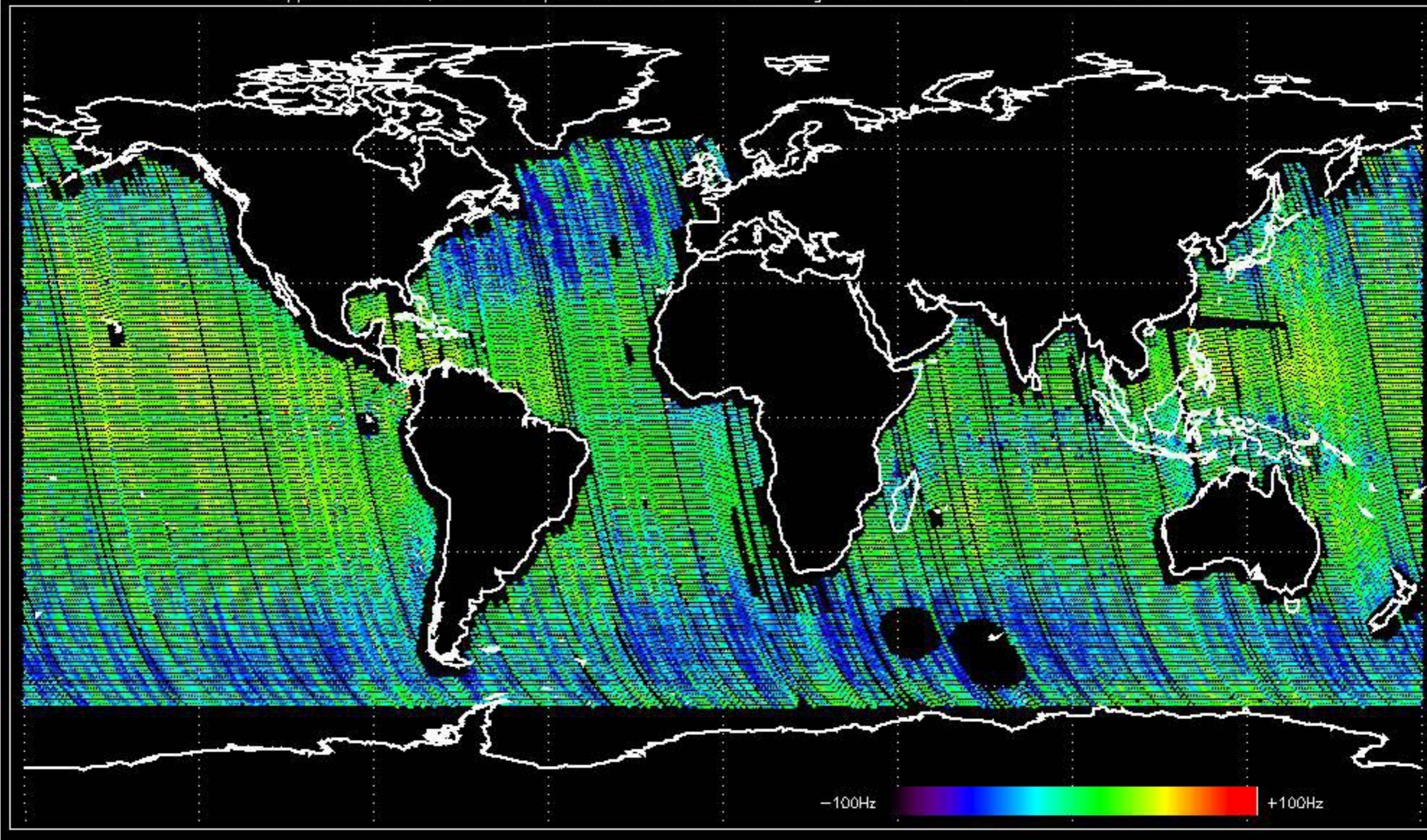


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -7.7366636 Hz



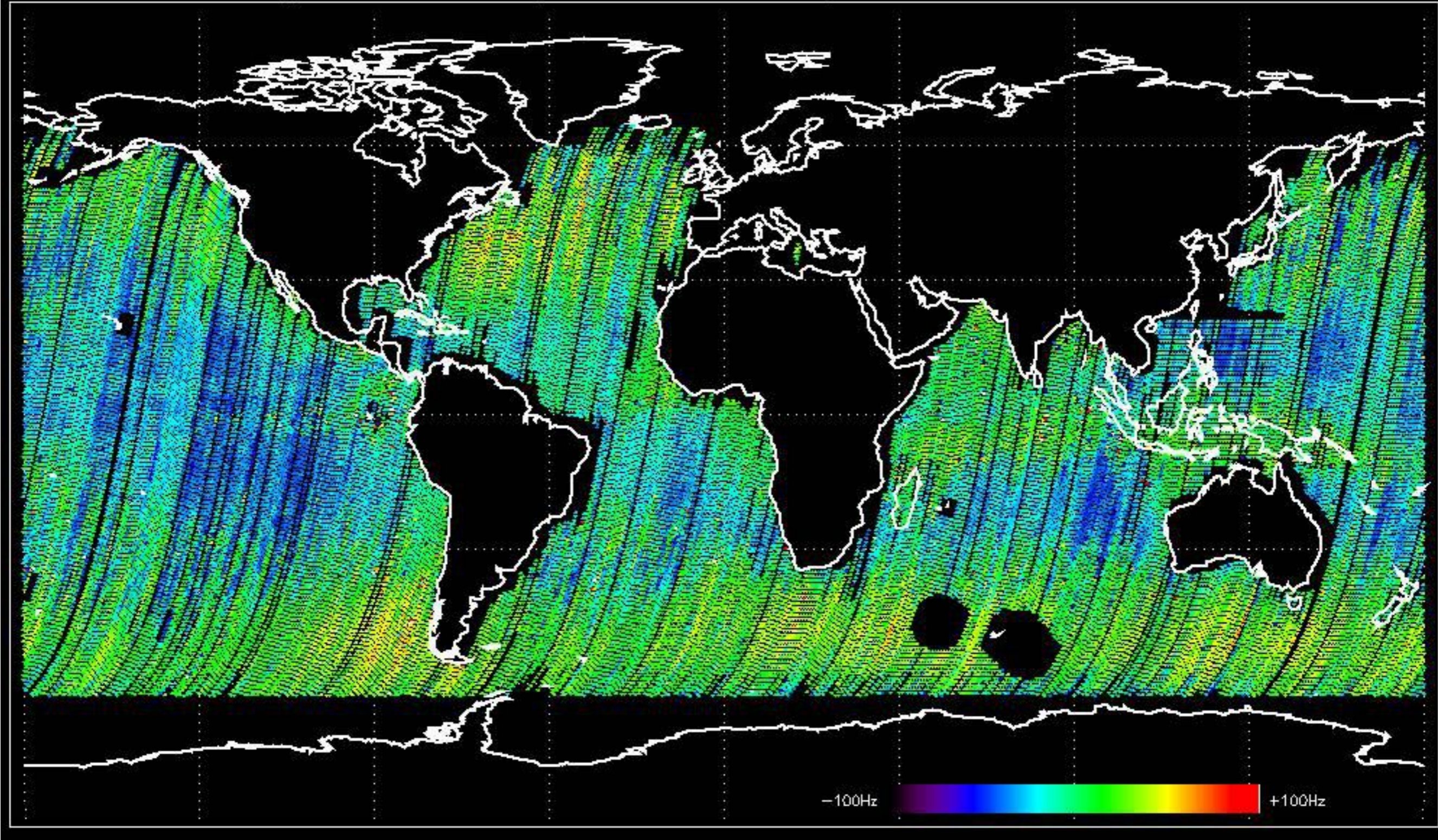


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.4605436 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.5869038 Hz



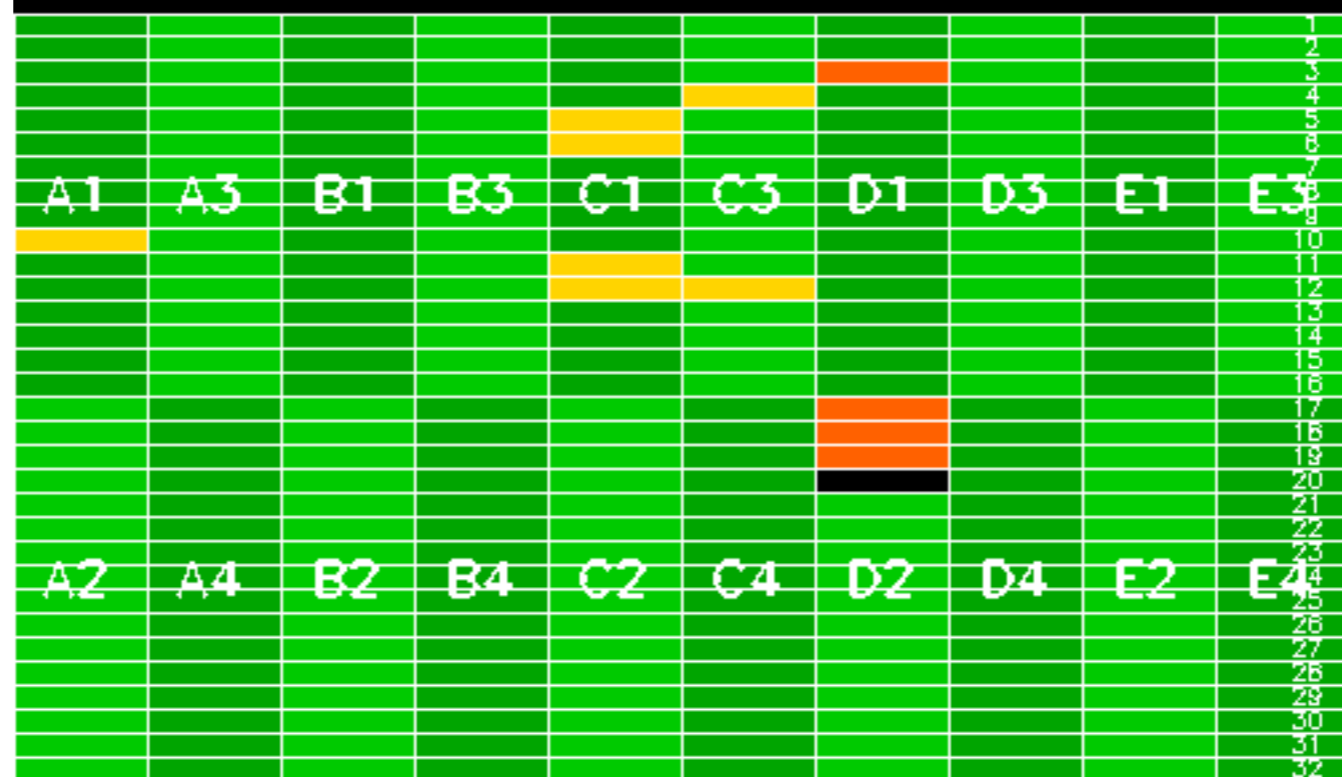


No anomalies observed on available MS products:



No anomalies observed.

Reference: 2001-02-09 13:50:42 H      RxGain  
 Test : 2006-03-14 17:33:30 H









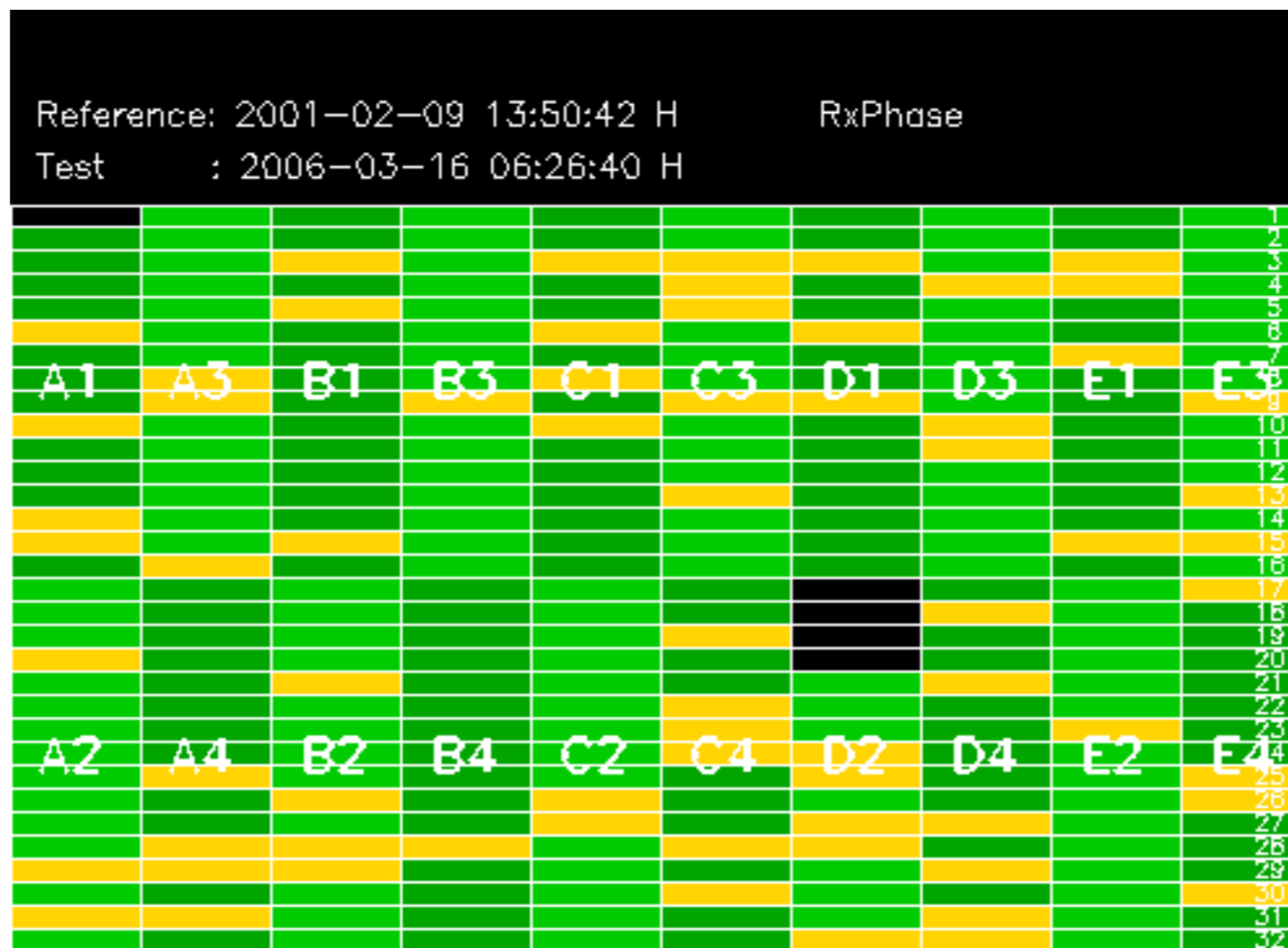










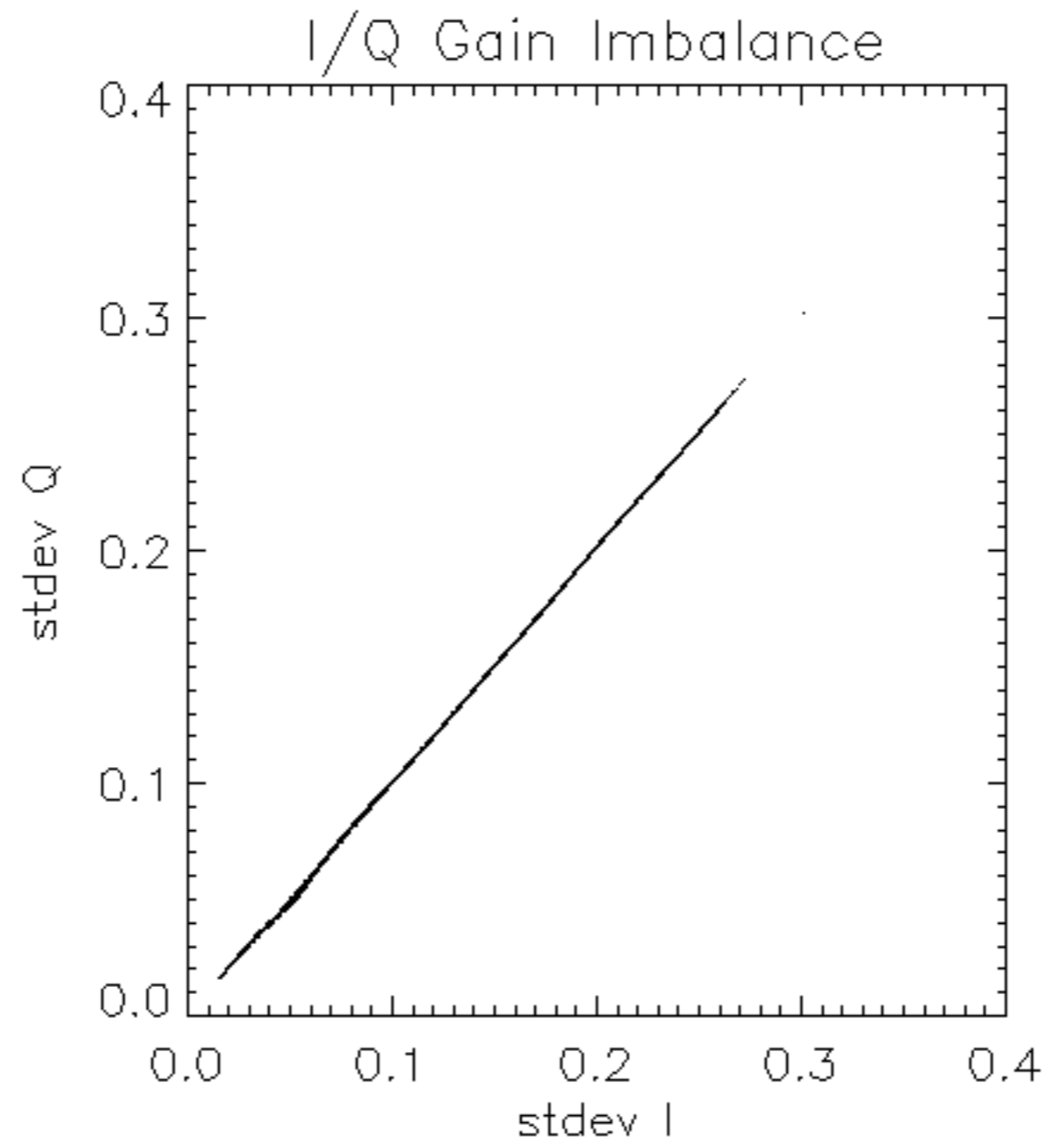


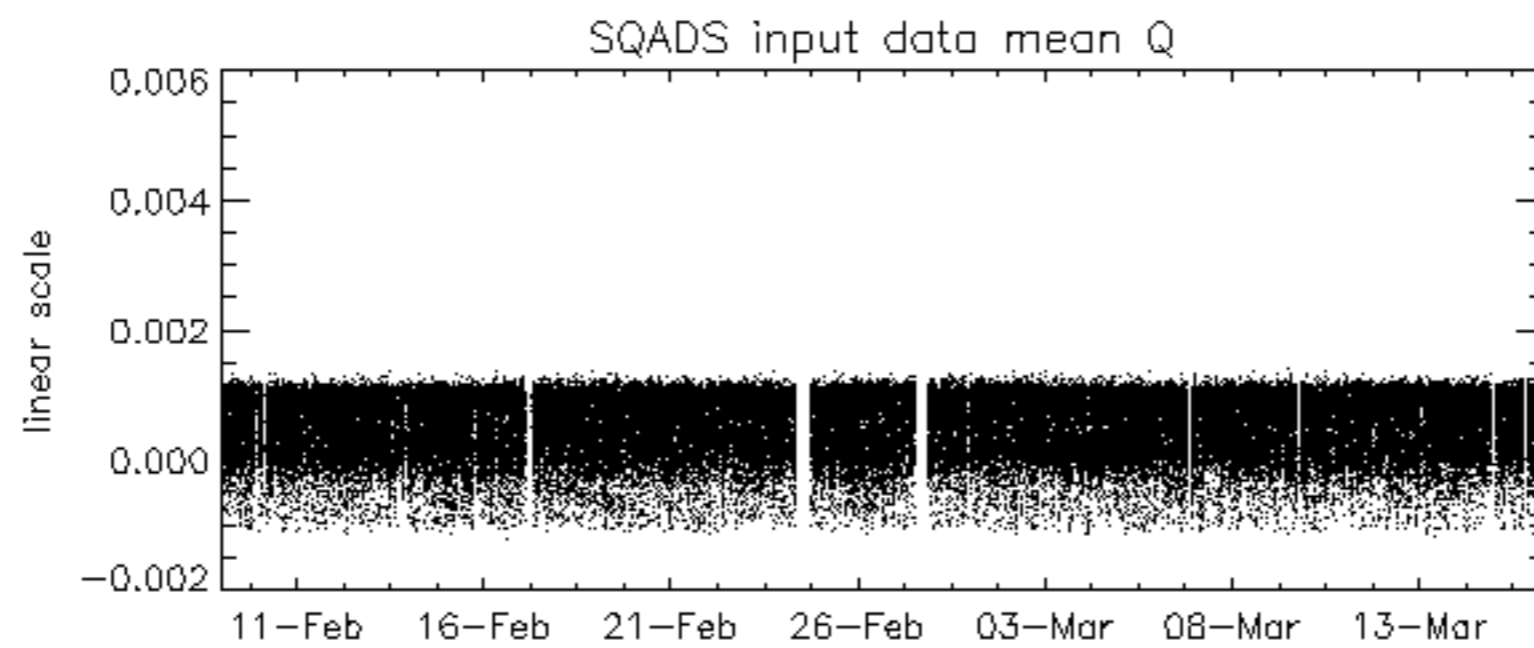
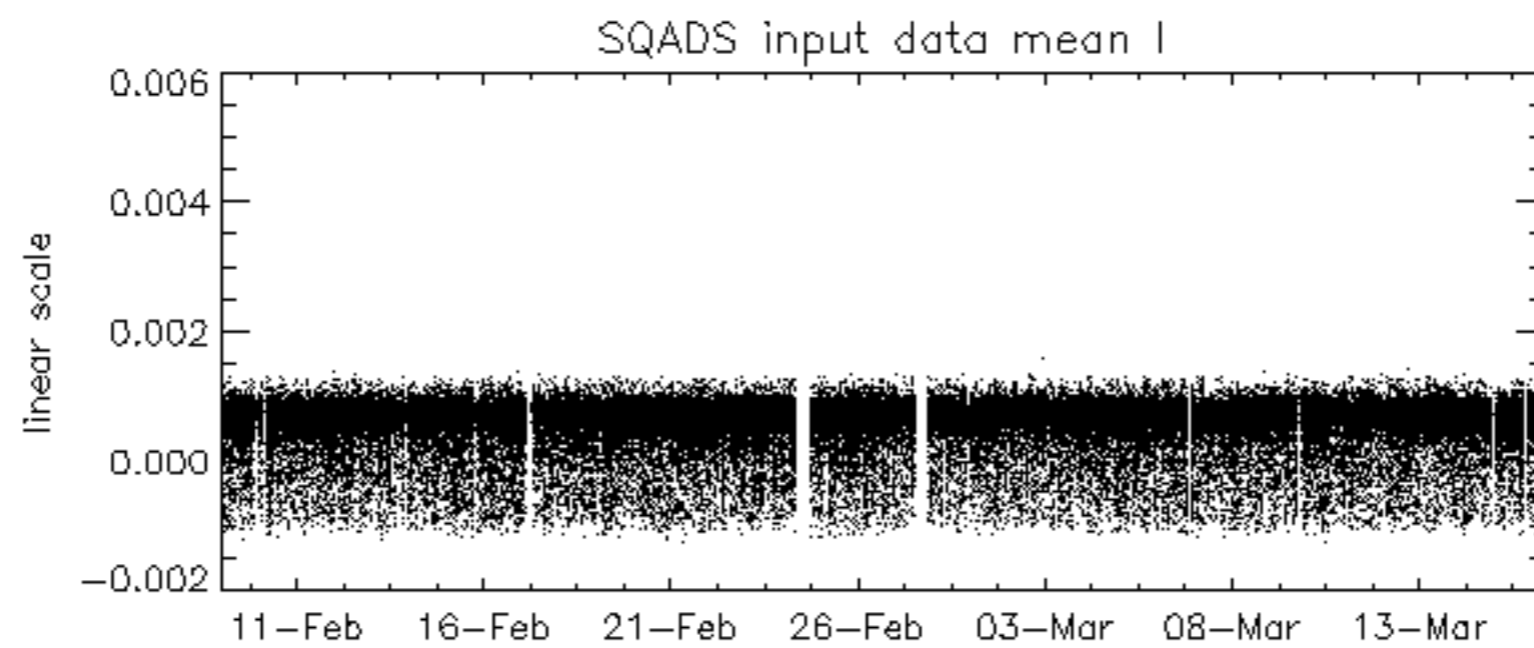
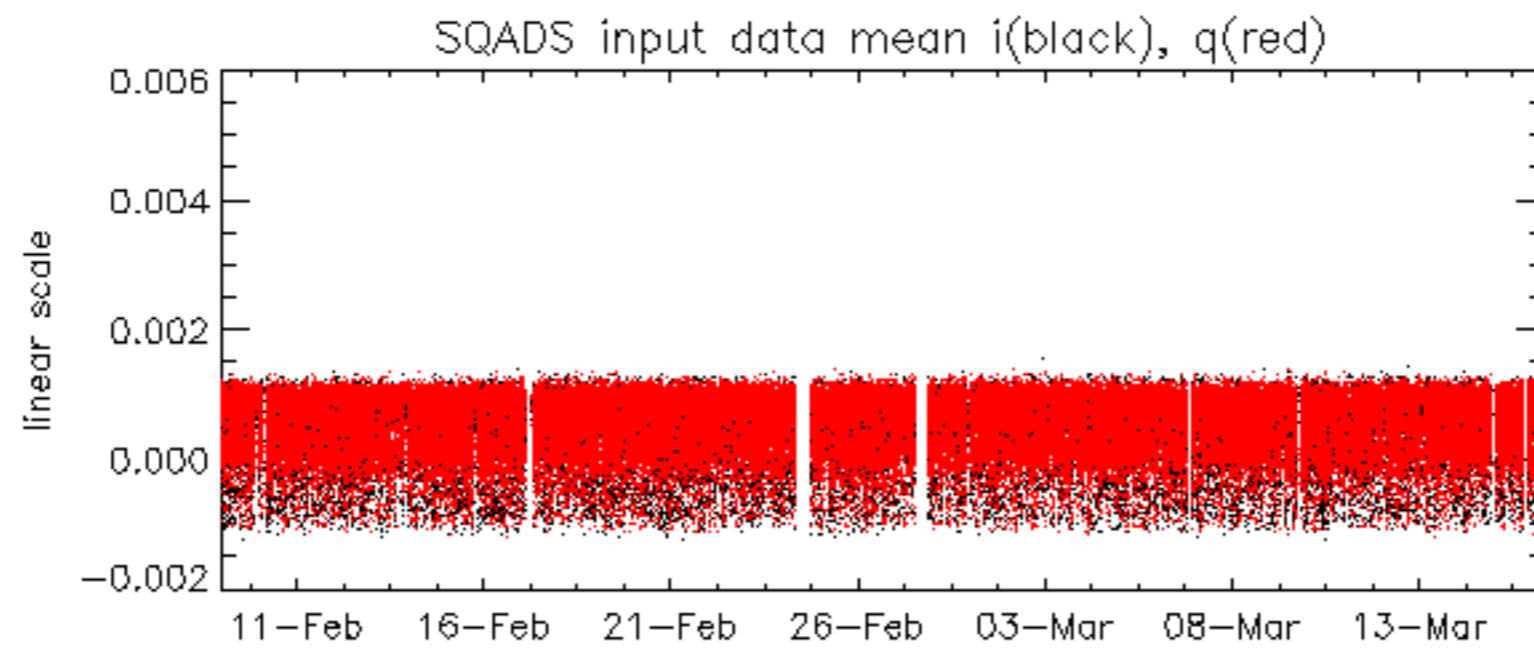




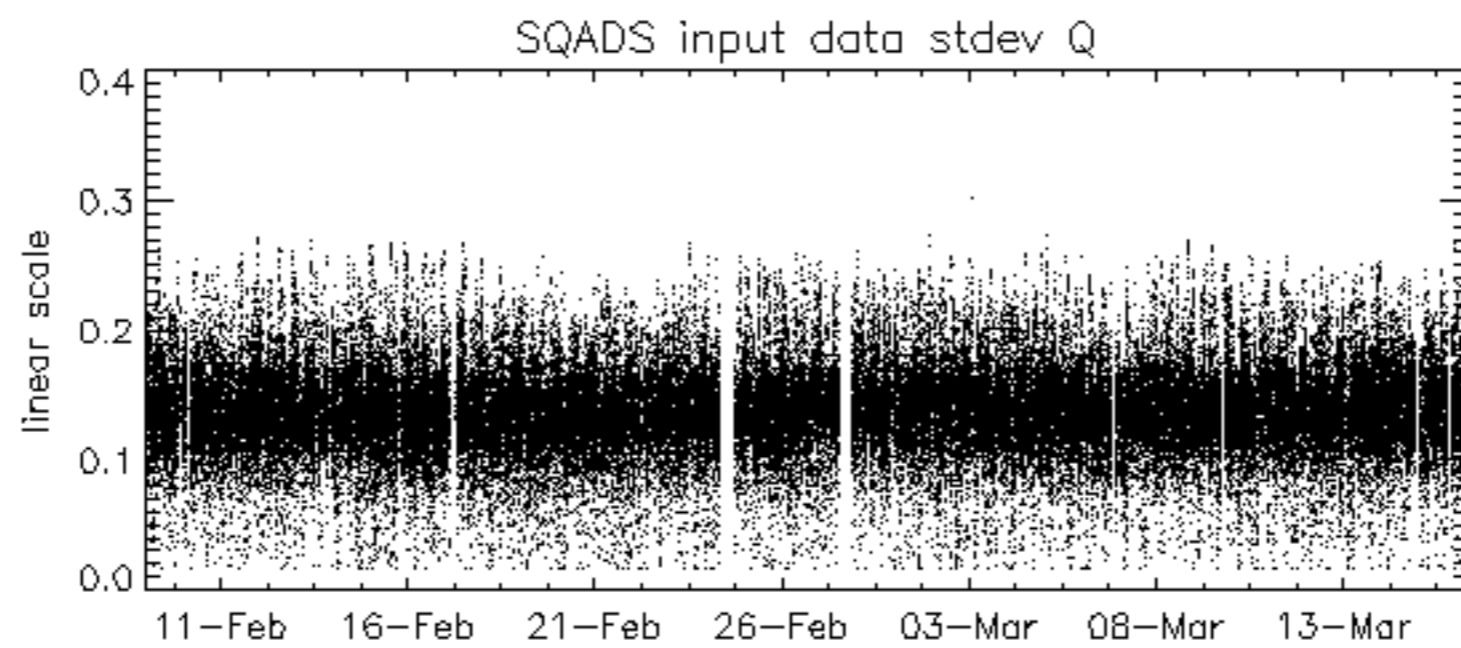
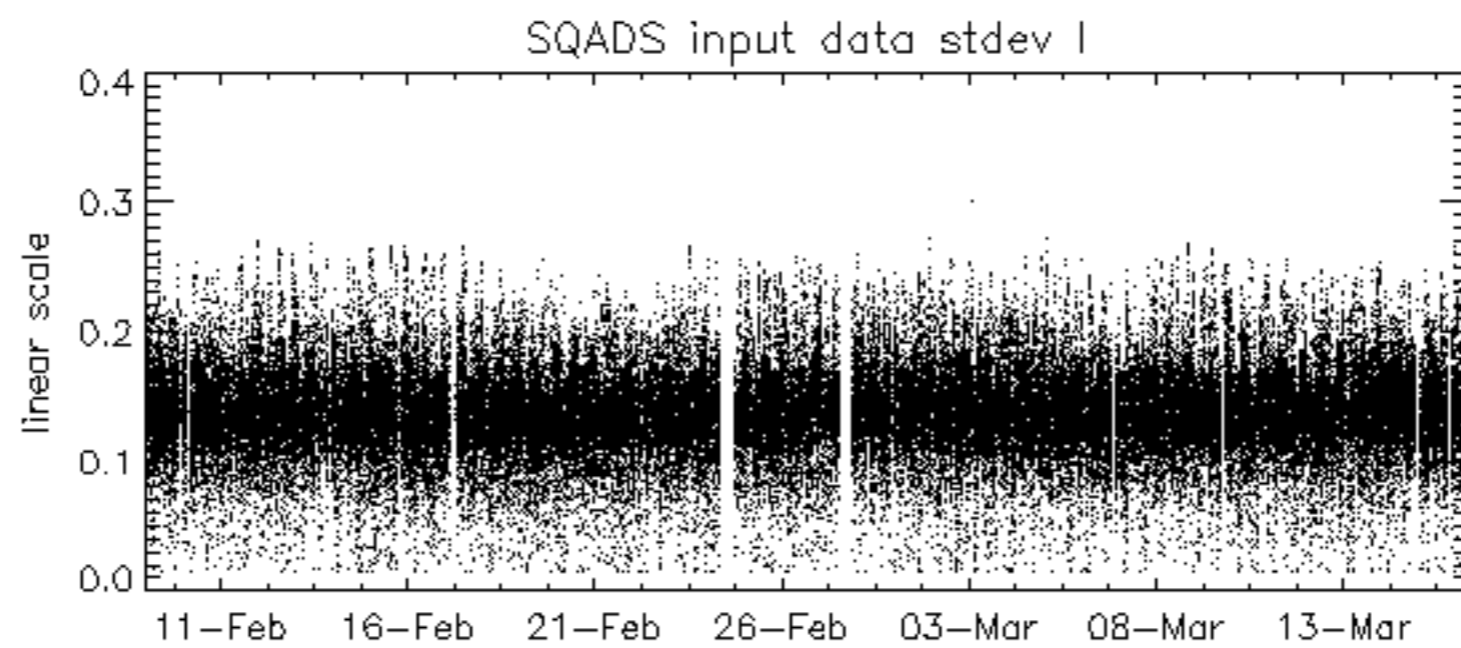
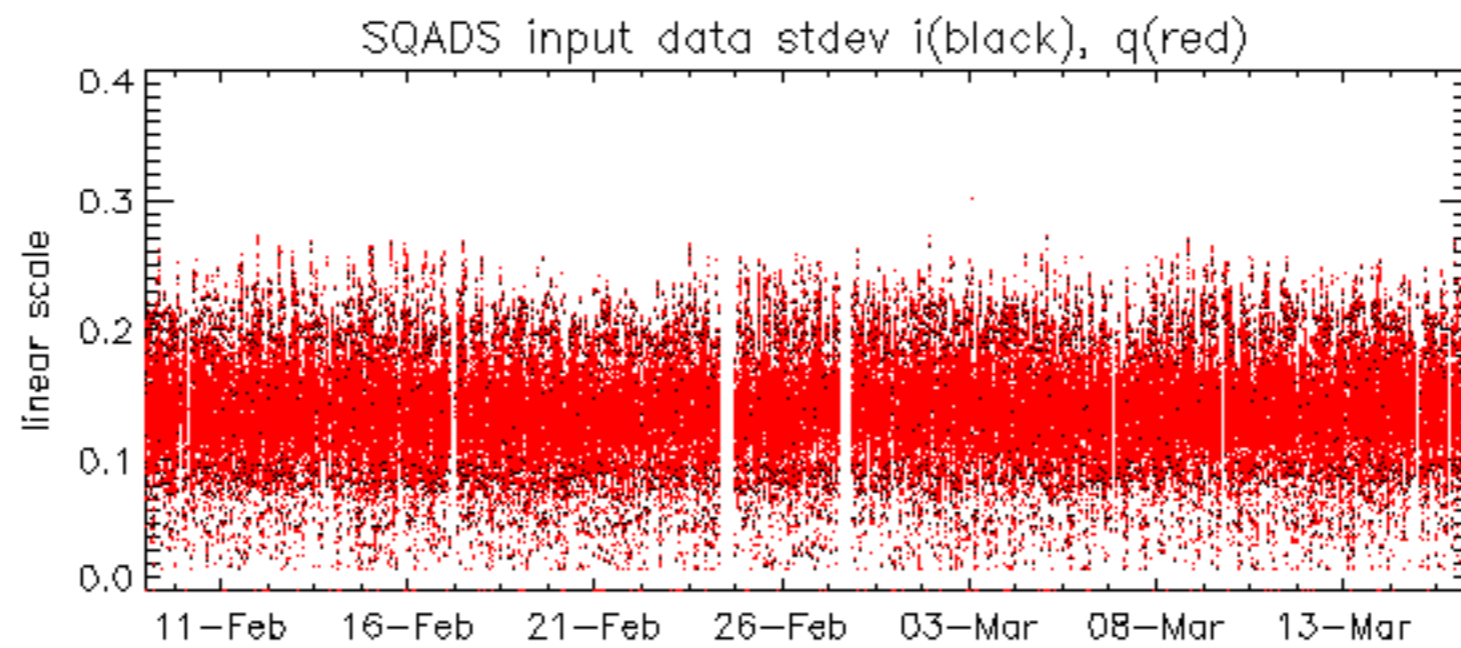


























Summary of analysis for the last 3 days 2006031[456]

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_1PNPDE20060314_134140_000000372046_00010_21106_0829.N1	1	0
ASA_IMM_1PNPDE20060314_153600_000000352046_00011_21107_0830.N1	1	0
ASA_IMM_1PNPDE20060315_004510_000001932046_00016_21112_0858.N1	1	0
ASA_IMM_1PNPDE20060315_155429_000000372046_00026_21122_0885.N1	1	0
ASA_IMM_1PNPDK20060315_124554_000000702046_00024_21120_0330.N1	1	0
ASA_WVS_1PNPDE20060315_003528_000000002046_00016_21112_0236.N1	1	0
ASA_GM1_1PNPDK20060314_155431_000003742046_00011_21107_0319.N1	0	17
ASA_WSM_1PNPDE20060314_135201_000000852046_00010_21106_0704.N1	0	29
ASA_WSM_1PNPDE20060315_030808_000001832046_00018_21114_0795.N1	0	1
ASA_WSM_1PNPDE20060315_160013_000001282046_00026_21122_0852.N1	0	70













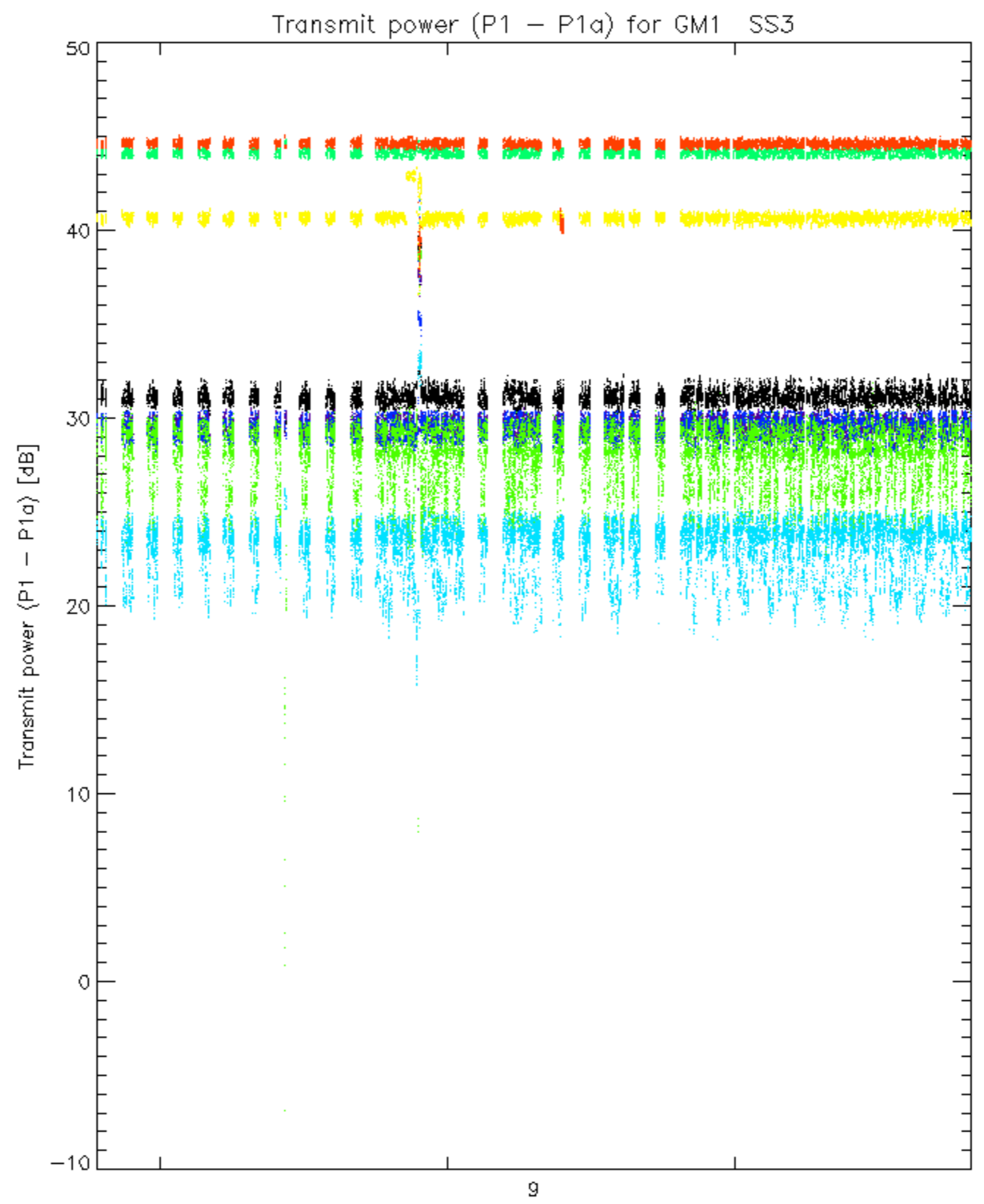




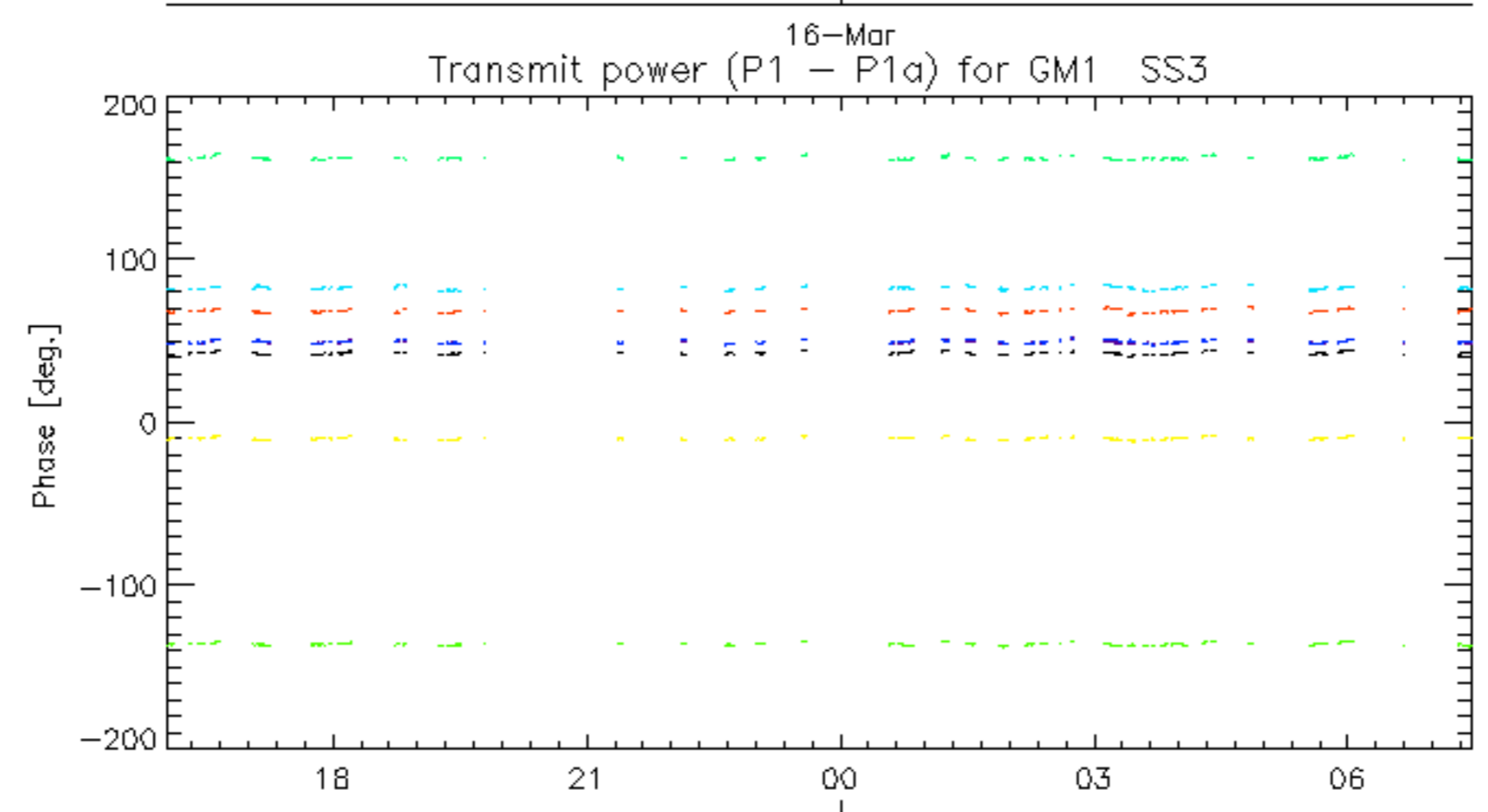
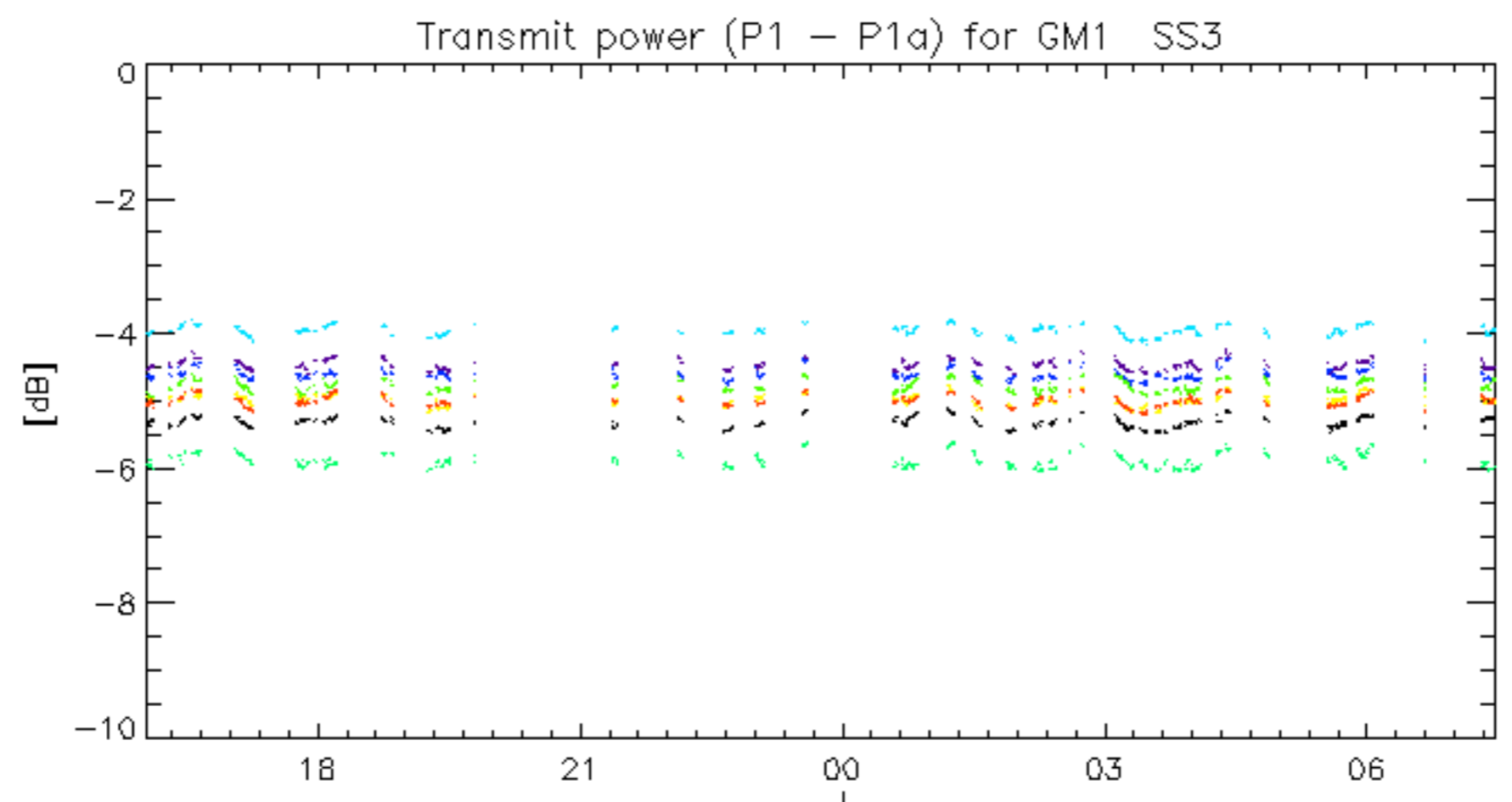




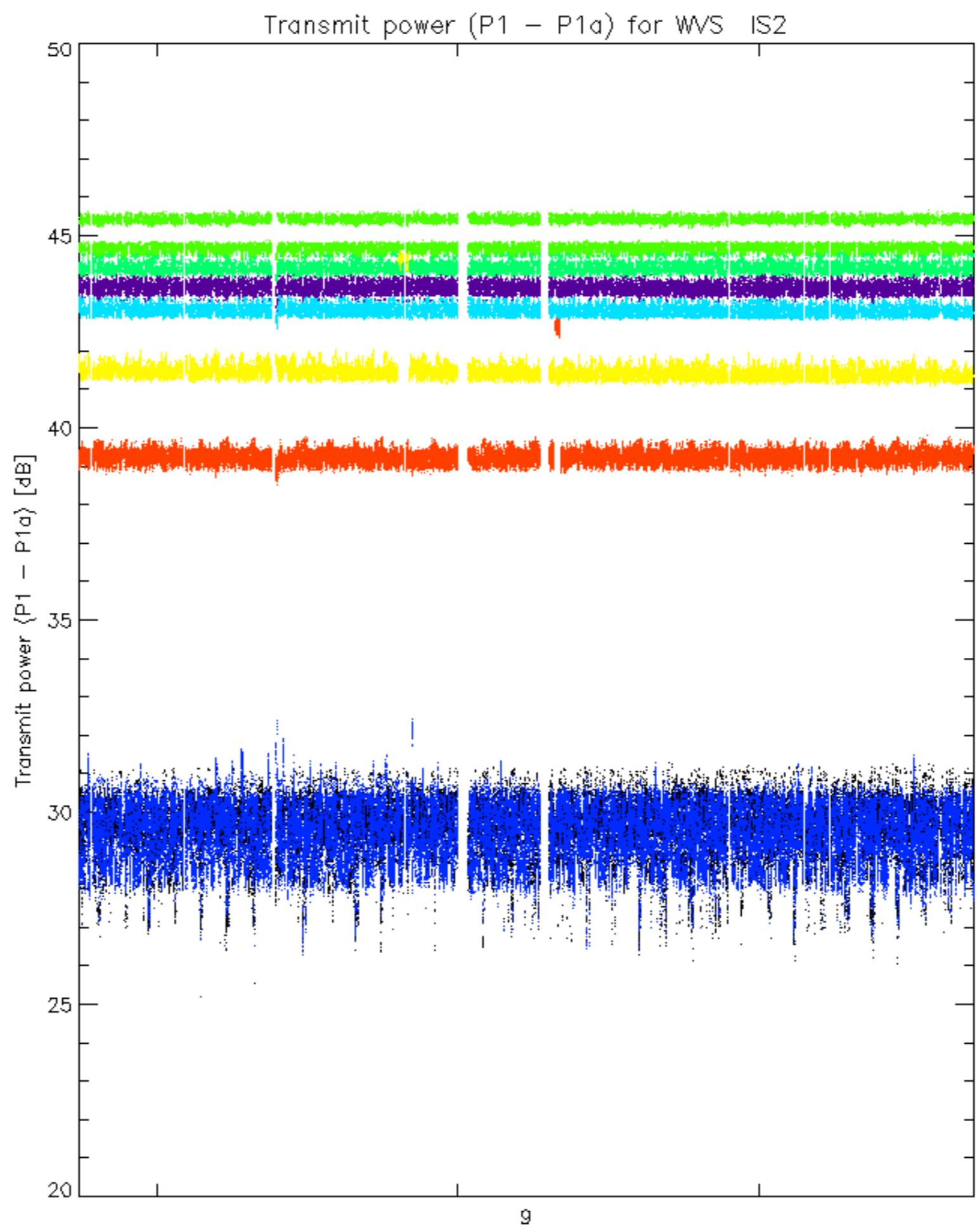




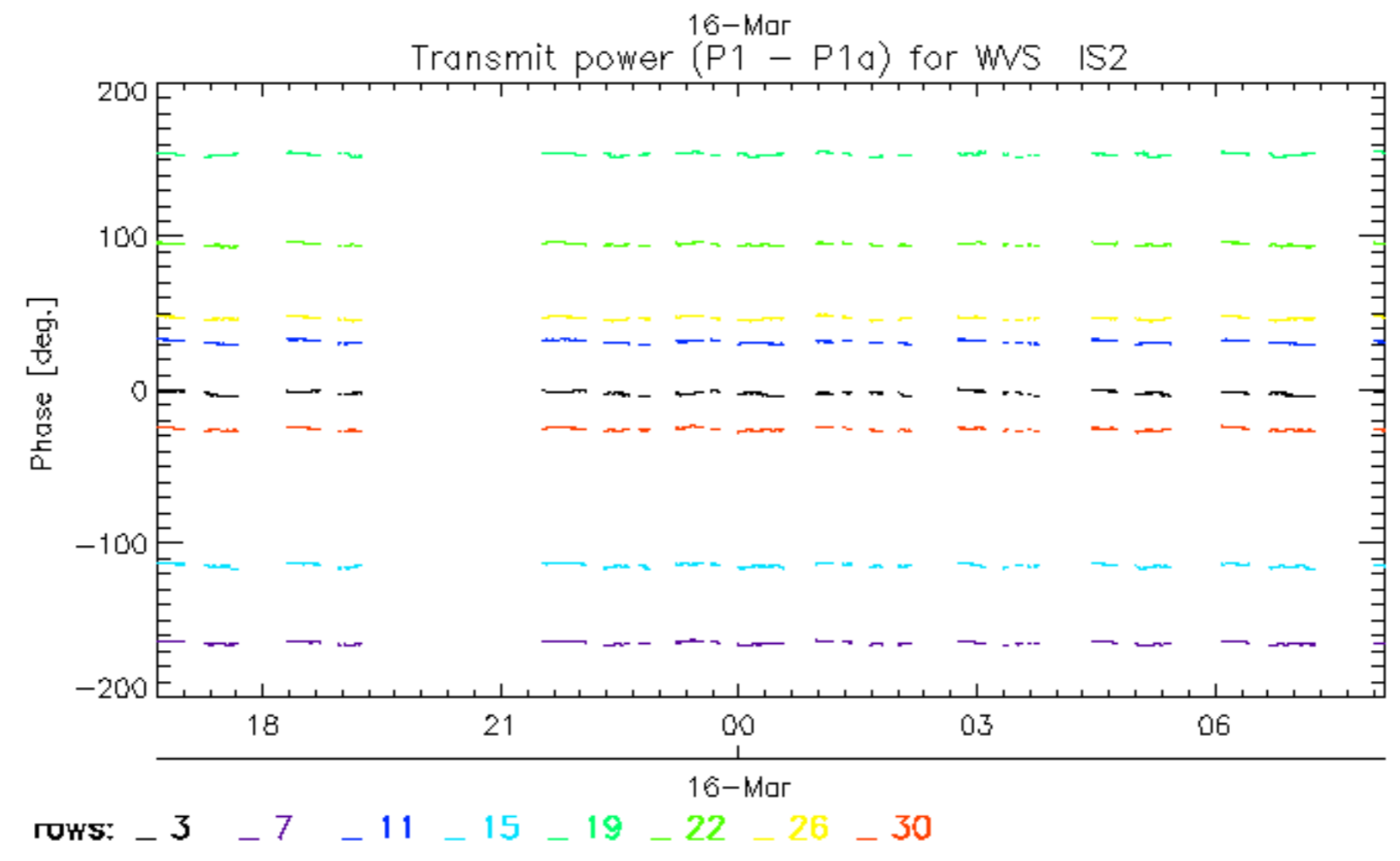
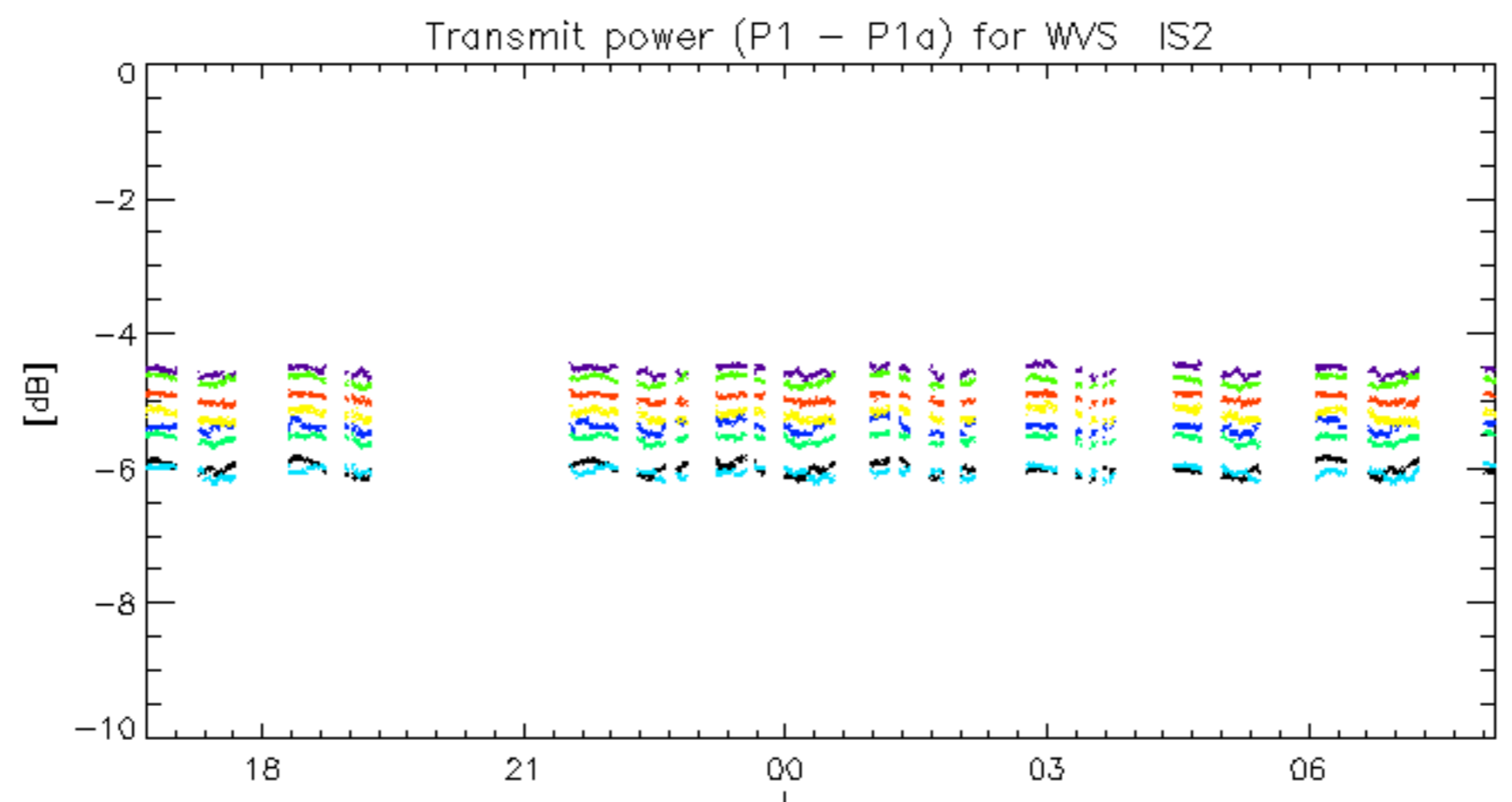
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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No unavailabilities during the reported period.