

# PRELIMINARY REPORT OF 060216

last update on Thu Feb 16 16:42:55 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 2006-02-15 00:00:00 to 2006-02-16 16:42:55

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	0	14	0	14
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	0	14	0	14
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	0	14	0	14
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	0	14	0	14

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	37	41	8	36
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	37	37	41	8	36
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	37	41	8	36
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	37	41	8	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	20060216 074711
H	20060215 081848

### 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	-4.012081	0.008479	0.031800
7	P1	-3.003421	0.012298	0.012280
11	P1	-4.092277	0.021551	0.026534
15	P1	-6.063267	0.018691	-0.005004
19	P1	-3.262096	0.006612	-0.028337
22	P1	-4.474094	0.018014	0.030789
26	P1	-4.192821	0.013117	0.031903
30	P1	-5.774248	0.010211	0.004770
3	P1	-16.908699	0.265492	-0.064077
7	P1	-16.655754	0.122098	-0.060922
11	P1	-16.584900	0.304713	0.134478
15	P1	-13.164959	0.109466	0.183679
19	P1	-13.895983	0.069224	-0.009503
22	P1	-15.779004	0.550601	0.319764
26	P1	-15.766589	0.249073	-0.028824
30	P1	-16.574696	0.299306	0.128964

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.534161	0.091741	0.178281
7	P2	-22.429371	0.095587	0.077929
11	P2	-16.265017	0.101942	0.063607
15	P2	-7.194046	0.102735	0.049291
19	P2	-9.159675	0.096127	0.034244
22	P2	-17.944193	0.092802	0.012389
26	P2	-16.216473	0.099871	0.015293
30	P2	-19.643463	0.084435	0.015994

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.203364	0.007180	0.025183
7	P3	-8.203364	0.007180	0.025183
11	P3	-8.203364	0.007180	0.025183
15	P3	-8.203364	0.007180	0.025183
19	P3	-8.203364	0.007180	0.025183
22	P3	-8.203364	0.007180	0.025183
26	P3	-8.203364	0.007180	0.025183
30	P3	-8.203364	0.007180	0.025183

**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	-3.737700	0.011217	-0.031958
7	P1	-2.744097	0.007632	-0.019206
11	P1	-2.887507	0.013858	-0.070504
15	P1	-3.503256	0.020940	-0.104823
19	P1	-3.380283	0.011553	0.004642
22	P1	-5.146435	0.022181	-0.068784
26	P1	-5.843296	0.018426	0.063657
30	P1	-5.228476	0.026845	0.050503
3	P1	-11.547434	0.042221	-0.030586
7	P1	-9.926754	0.048480	-0.053783
11	P1	-10.141428	0.057593	-0.172388
15	P1	-10.681539	0.101179	-0.177563
19	P1	-15.449682	0.062967	0.076579
22	P1	-20.422897	1.214250	0.434970

26	P1	-16.597626	0.357421	0.496689
30	P1	-18.223616	0.325161	-0.246470

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.305346	0.039226	0.261394
7	P2	-22.747587	0.072557	0.281447
11	P2	-11.359050	0.026914	0.170637
15	P2	-4.880586	0.027492	0.099548
19	P2	-6.892198	0.024982	0.061488
22	P2	-8.180382	0.025746	0.054301
26	P2	-23.954479	0.025835	0.036874
30	P2	-22.087318	0.018453	0.018132

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.037181	0.002601	0.033616
7	P3	-8.037051	0.002608	0.033417
11	P3	-8.037011	0.002601	0.033652
15	P3	-8.037086	0.002610	0.033292
19	P3	-8.037192	0.002612	0.033661
22	P3	-8.037186	0.002615	0.034213
26	P3	-8.037264	0.002606	0.033566
30	P3	-8.037107	0.002620	0.033880

## 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	0.000561798
	stdev	1.67689e-07
MEAN Q	mean	0.000520716
	stdev	2.12230e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139675
	stdev	0.00117031
STDEV Q	mean	0.140038
	stdev	0.00118978



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006021[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_1PNPDE20060214_061558_000002202045_00106_20701_3109.N1	1	0







## 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


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### 7.4 - Unbiased Doppler Error for GM1

#### Evolution of unbiased Doppler error (Real - Expected)


Acsending



<input type="checkbox"/>
Descending

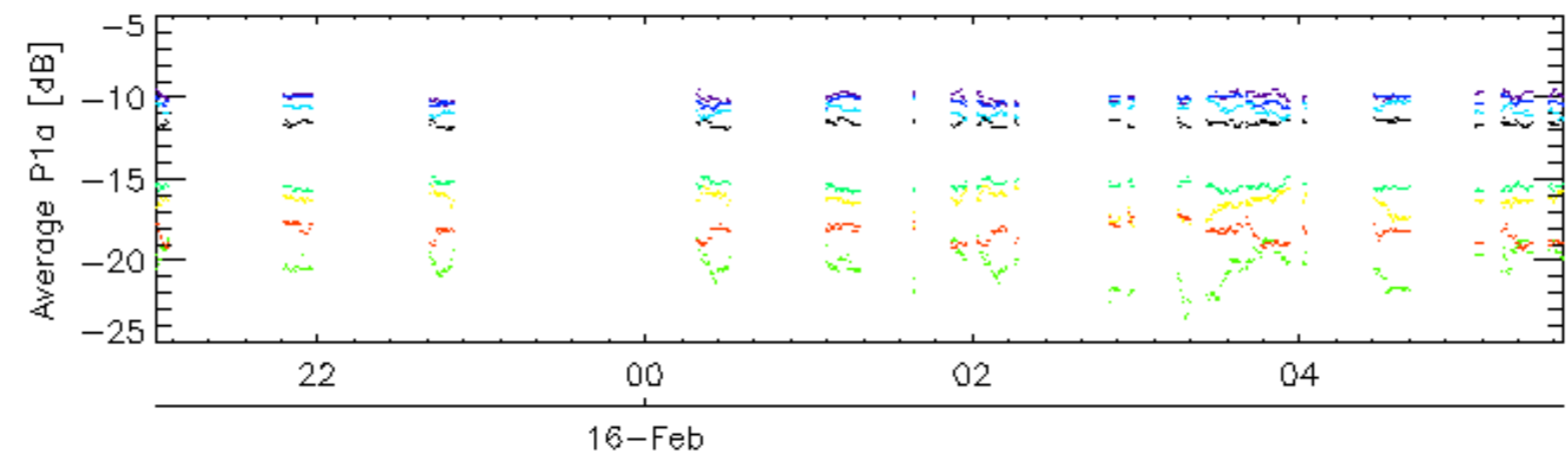
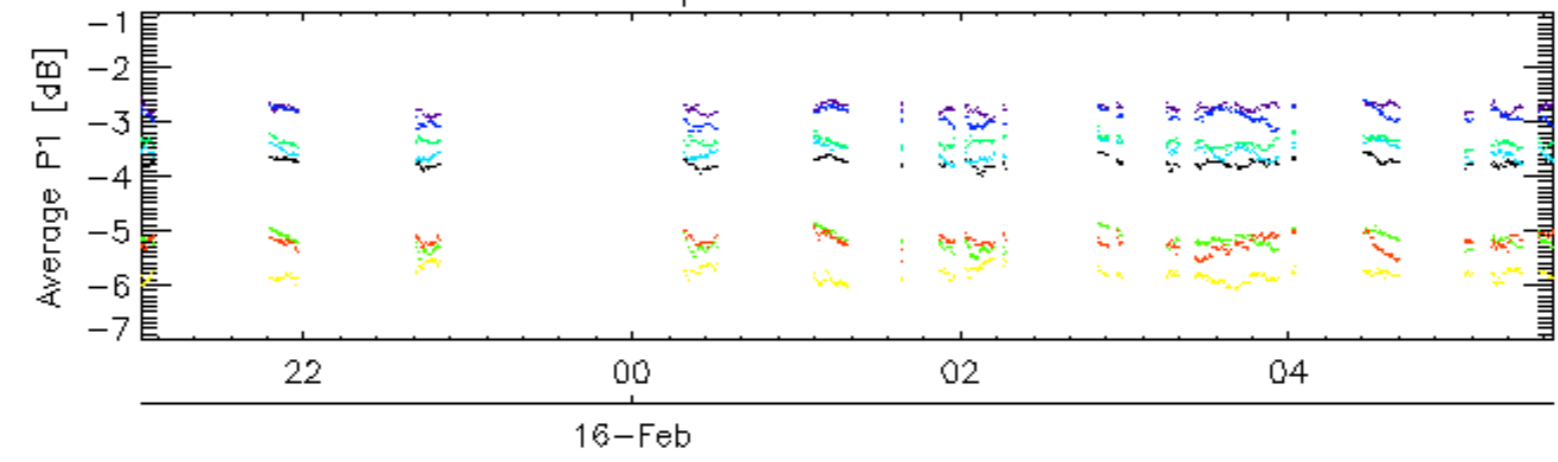
### 7.5 - Absolute Doppler for GM1

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

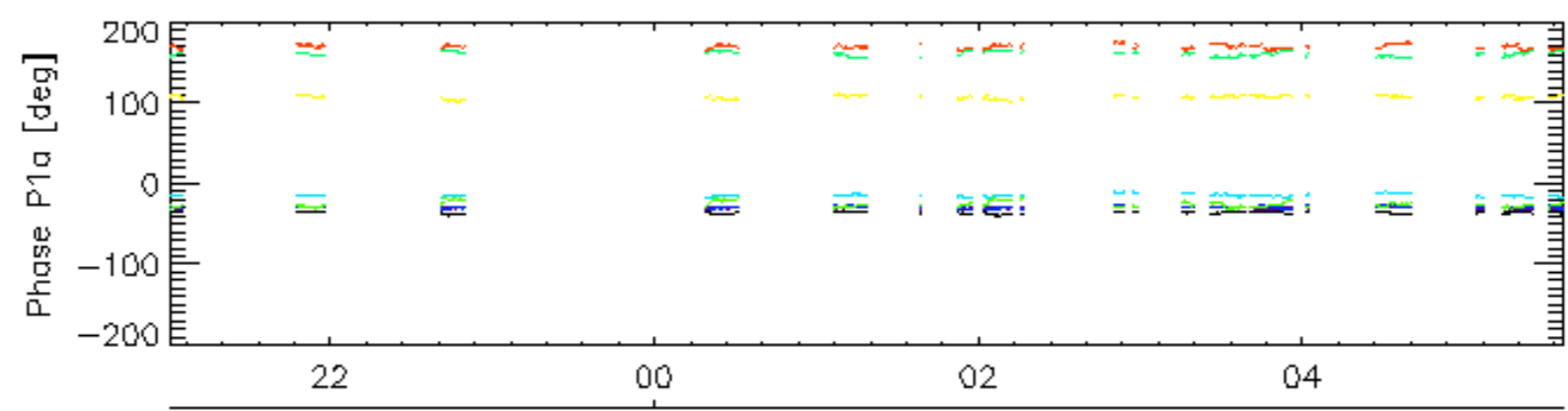
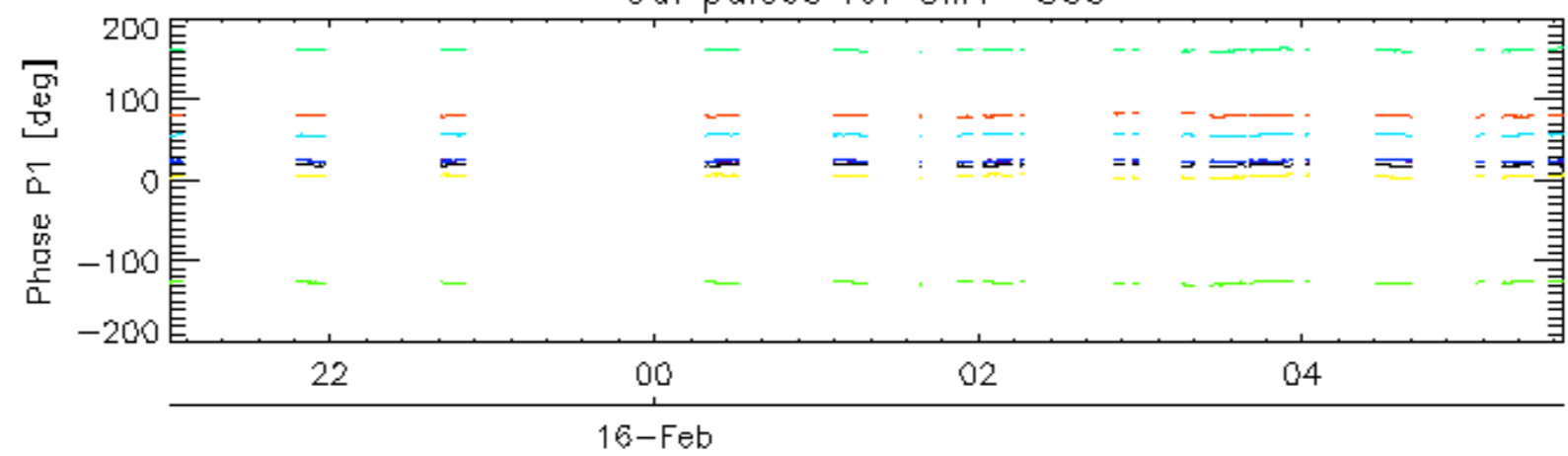
### 7.6 - Doppler evolution versus ANX for GM1

<b>Evolution Doppler error versus ANX</b>
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Cal pulses for GM1 SS3

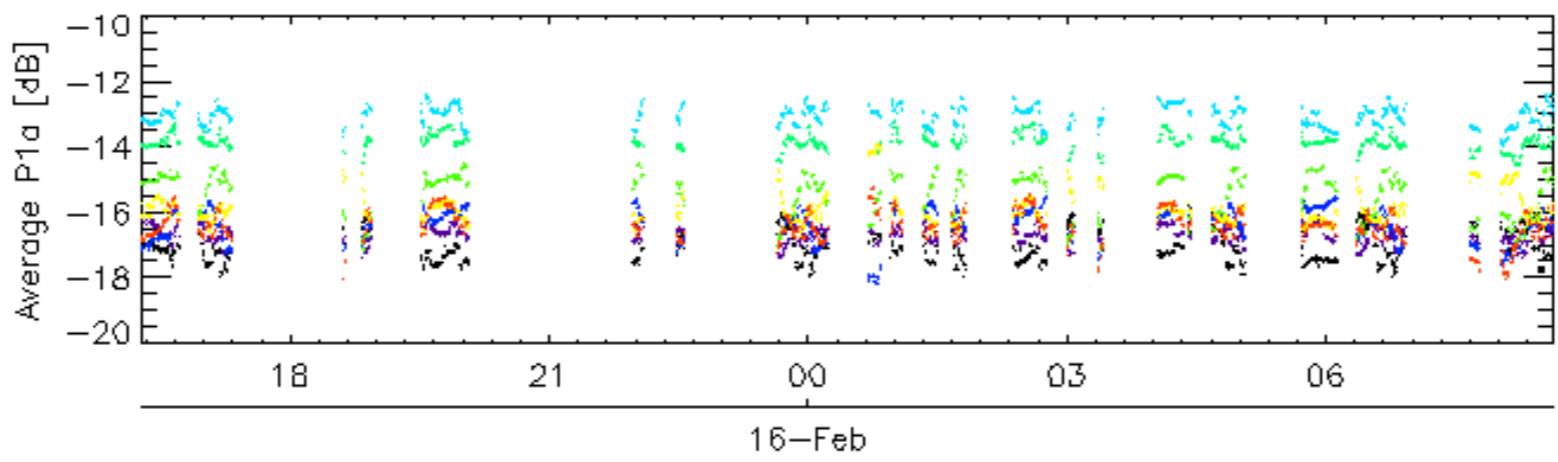
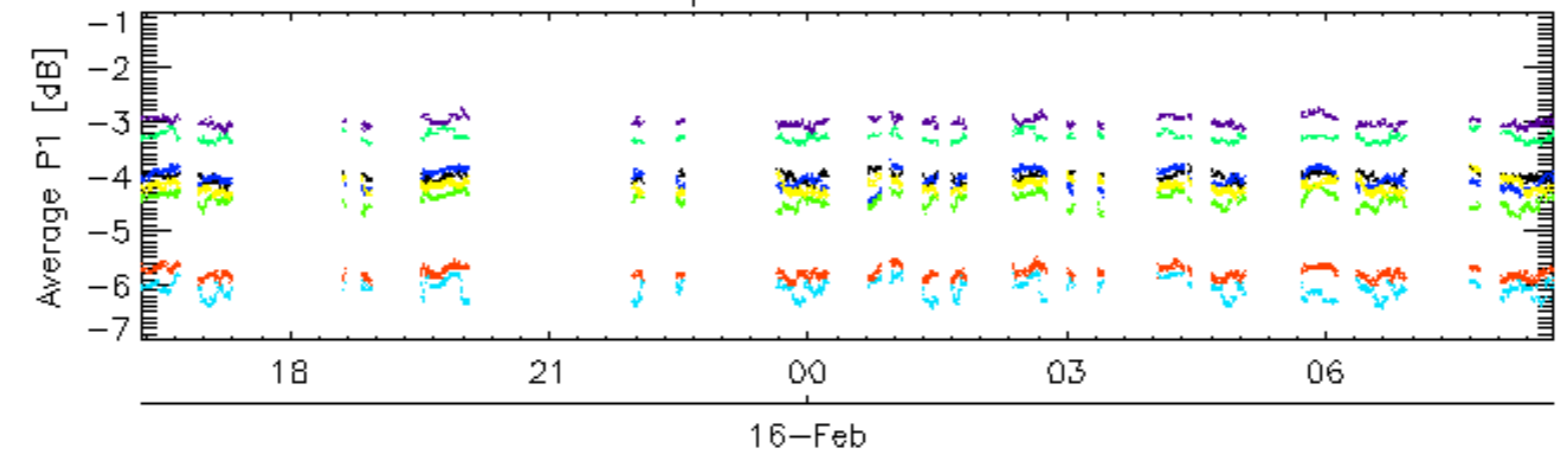


Cal pulses for GM1 SS3

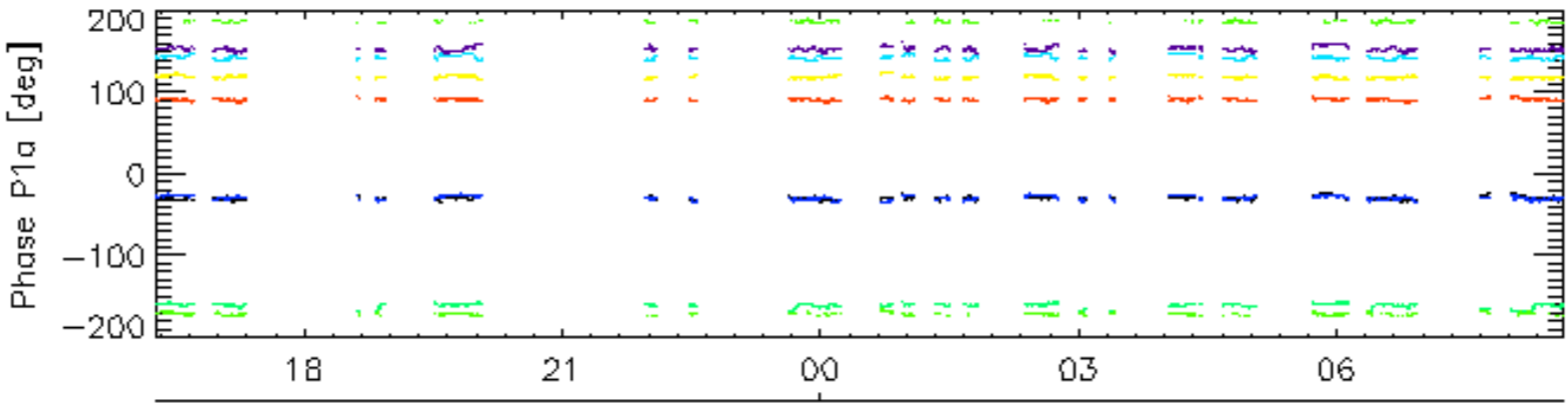
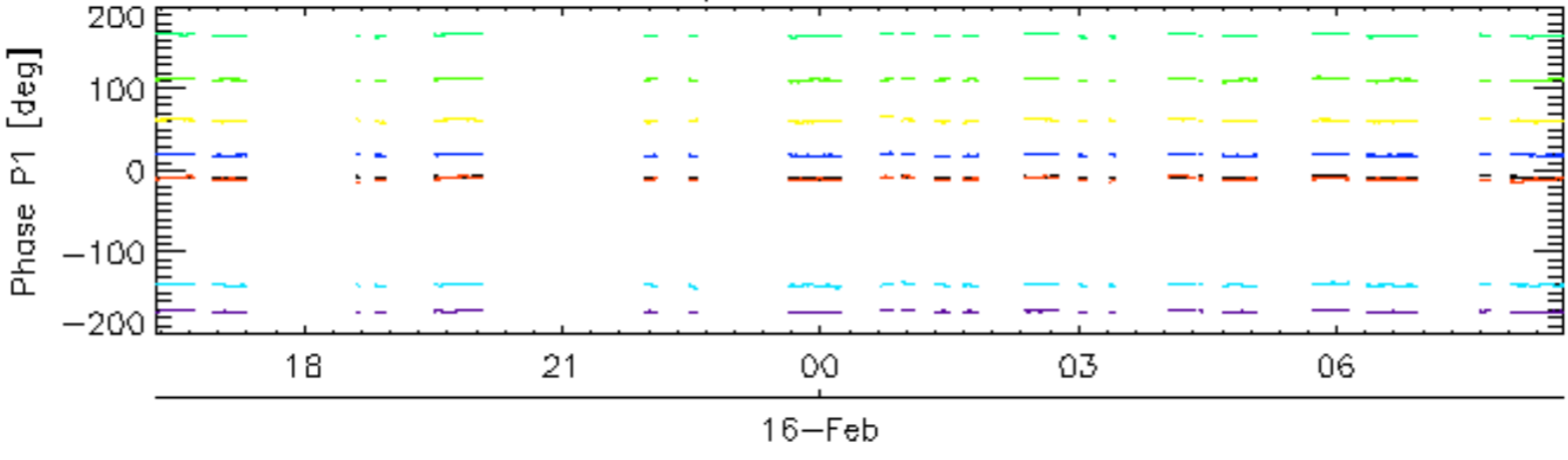


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

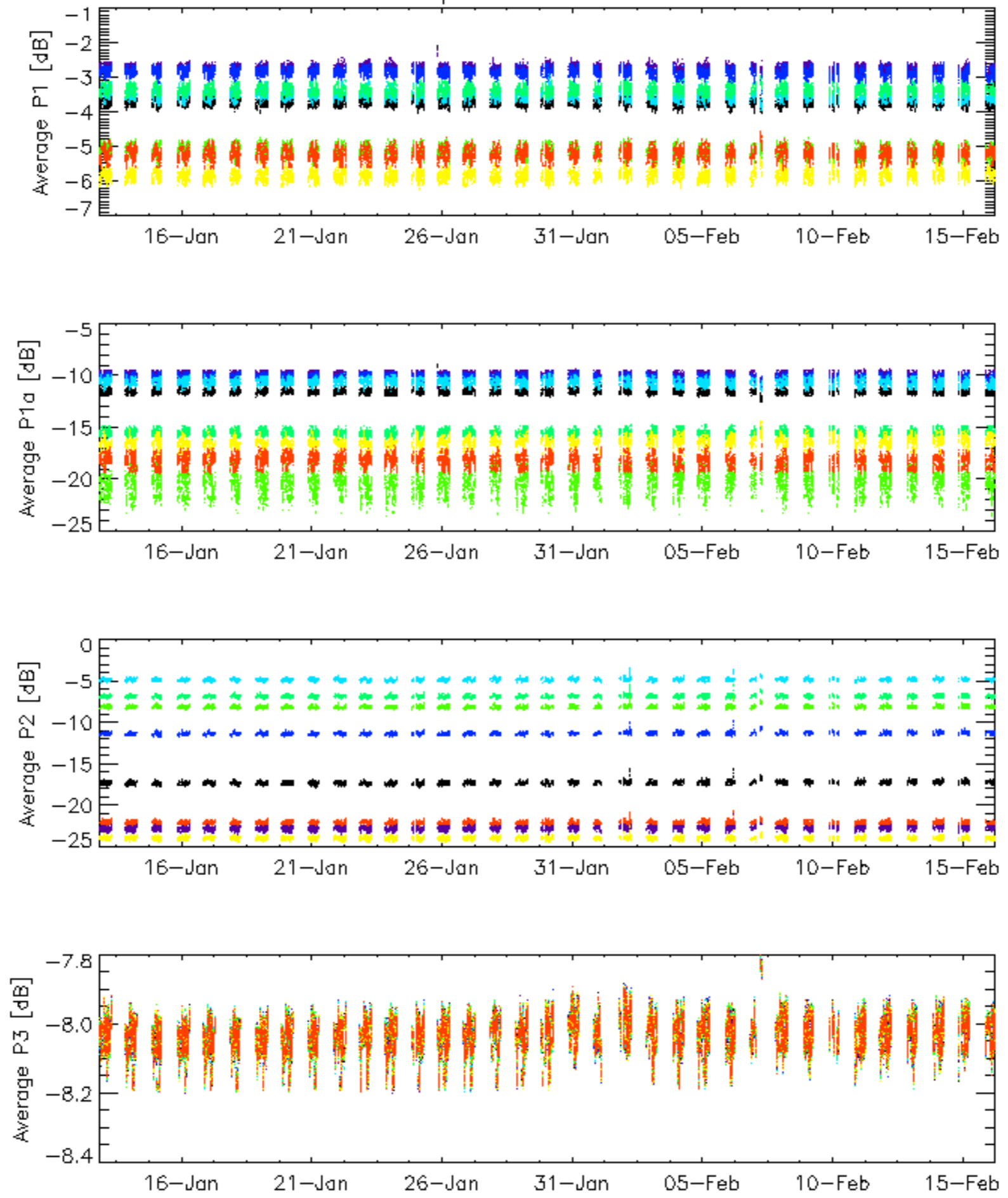


Cal pulses for WVS IS2



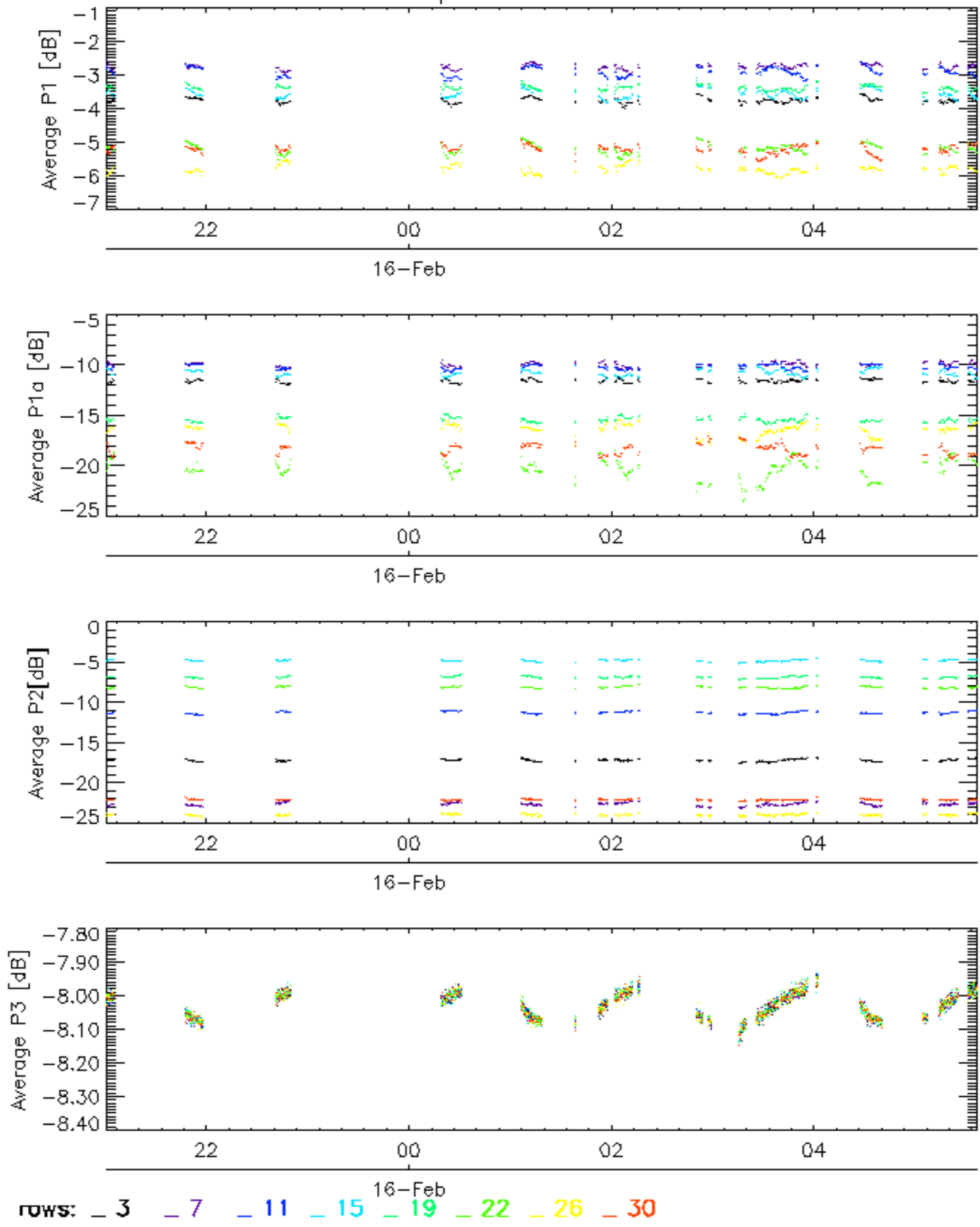
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

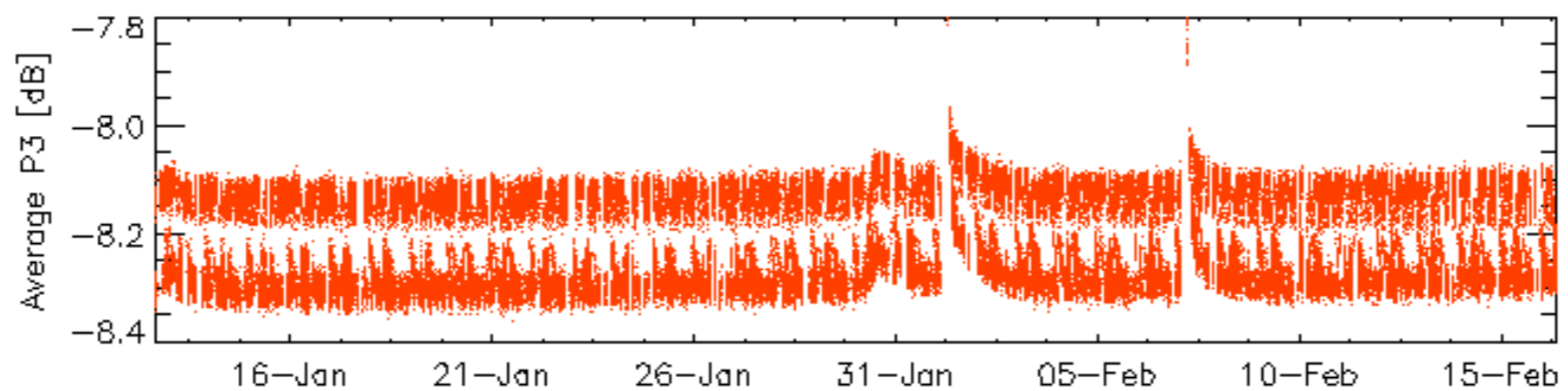
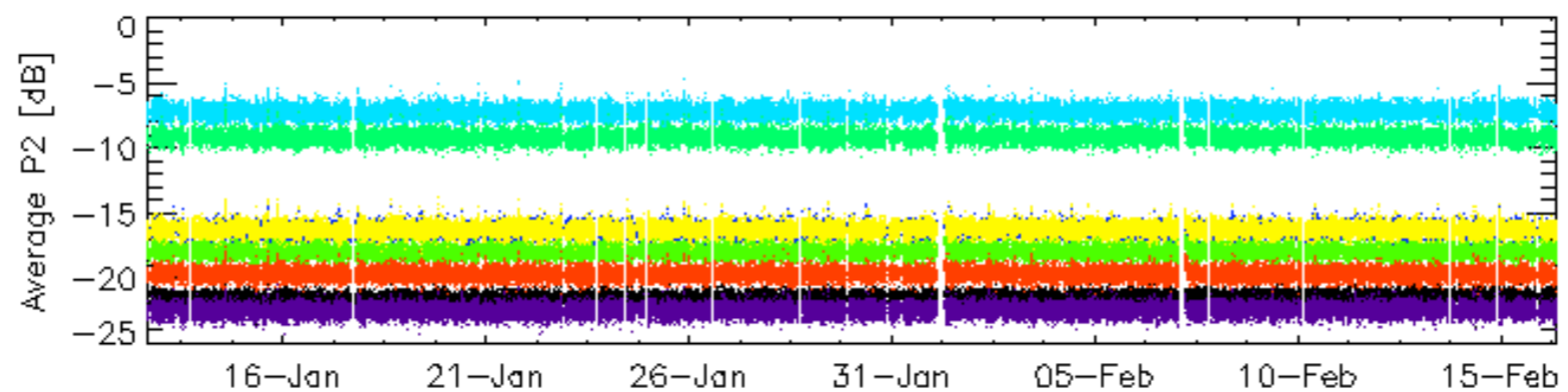
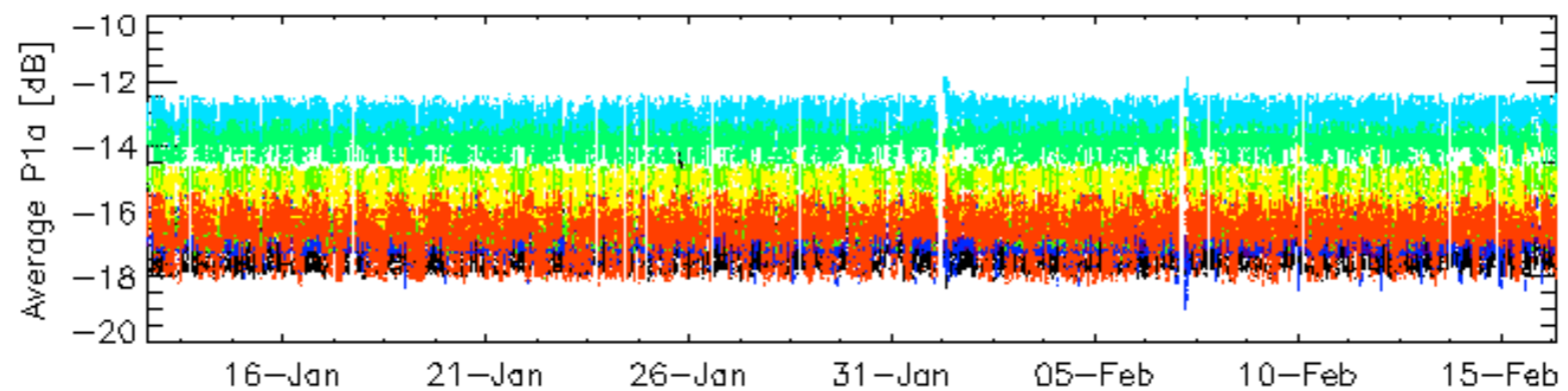
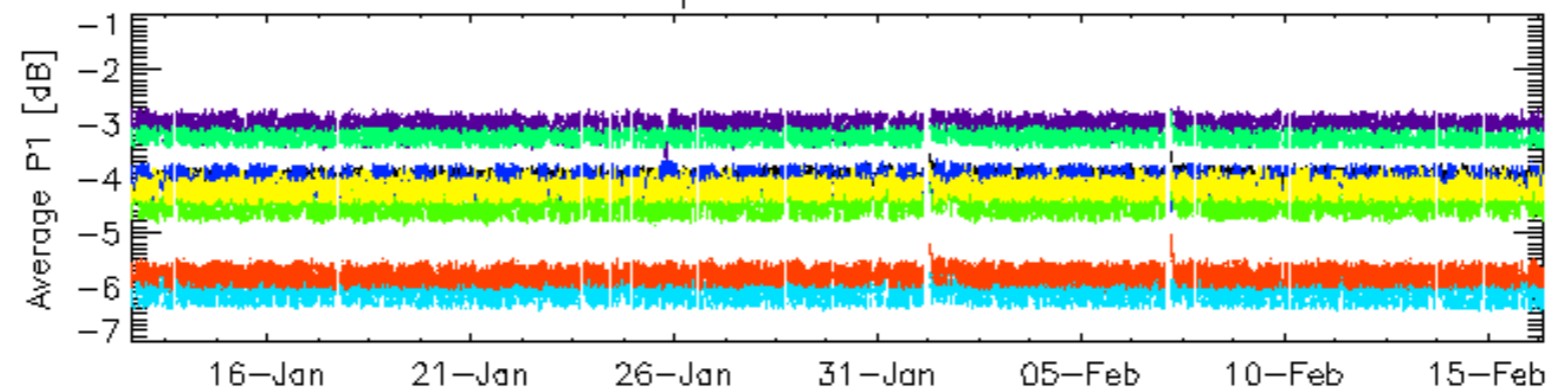


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

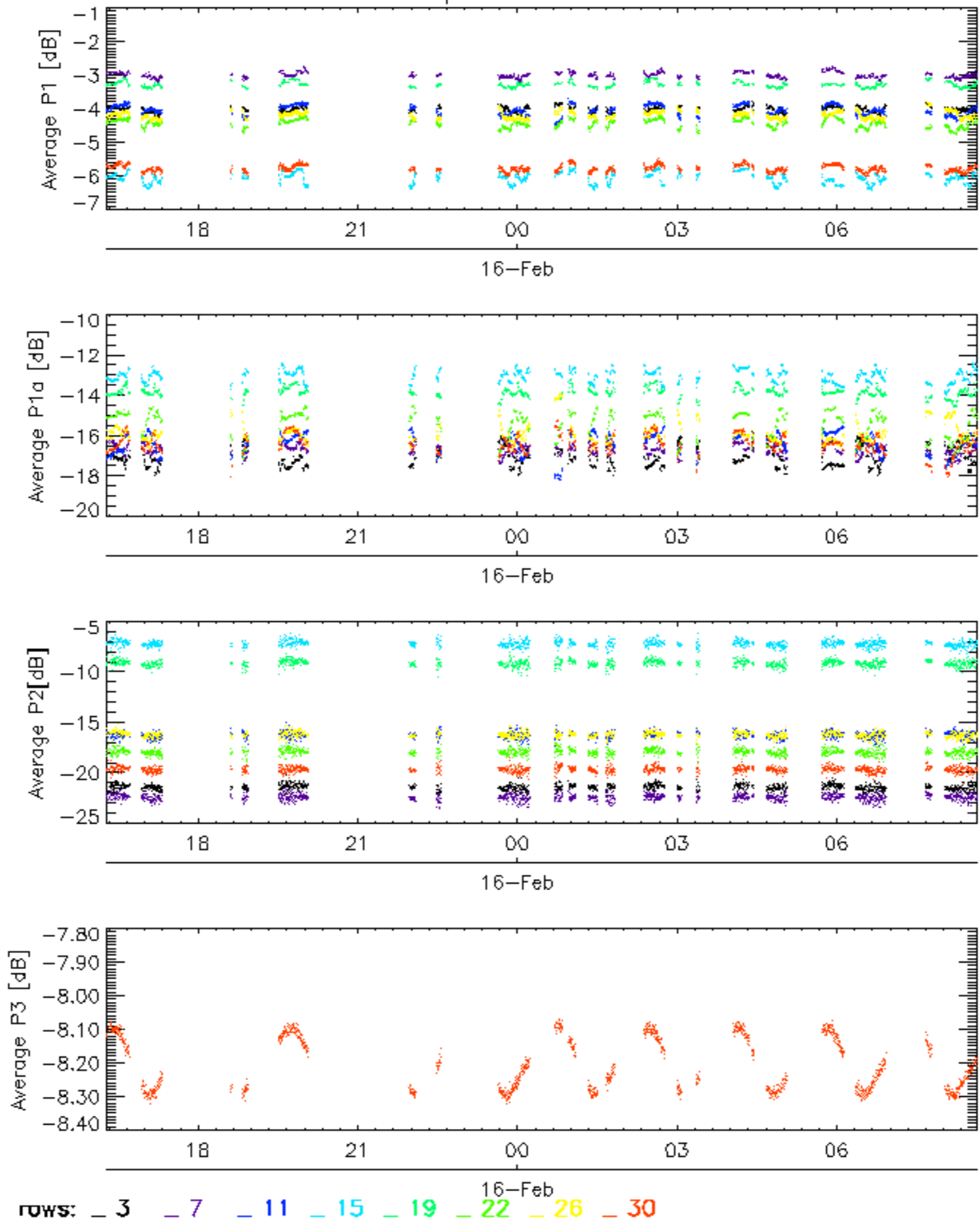


Cal pulses for WVS IS2



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

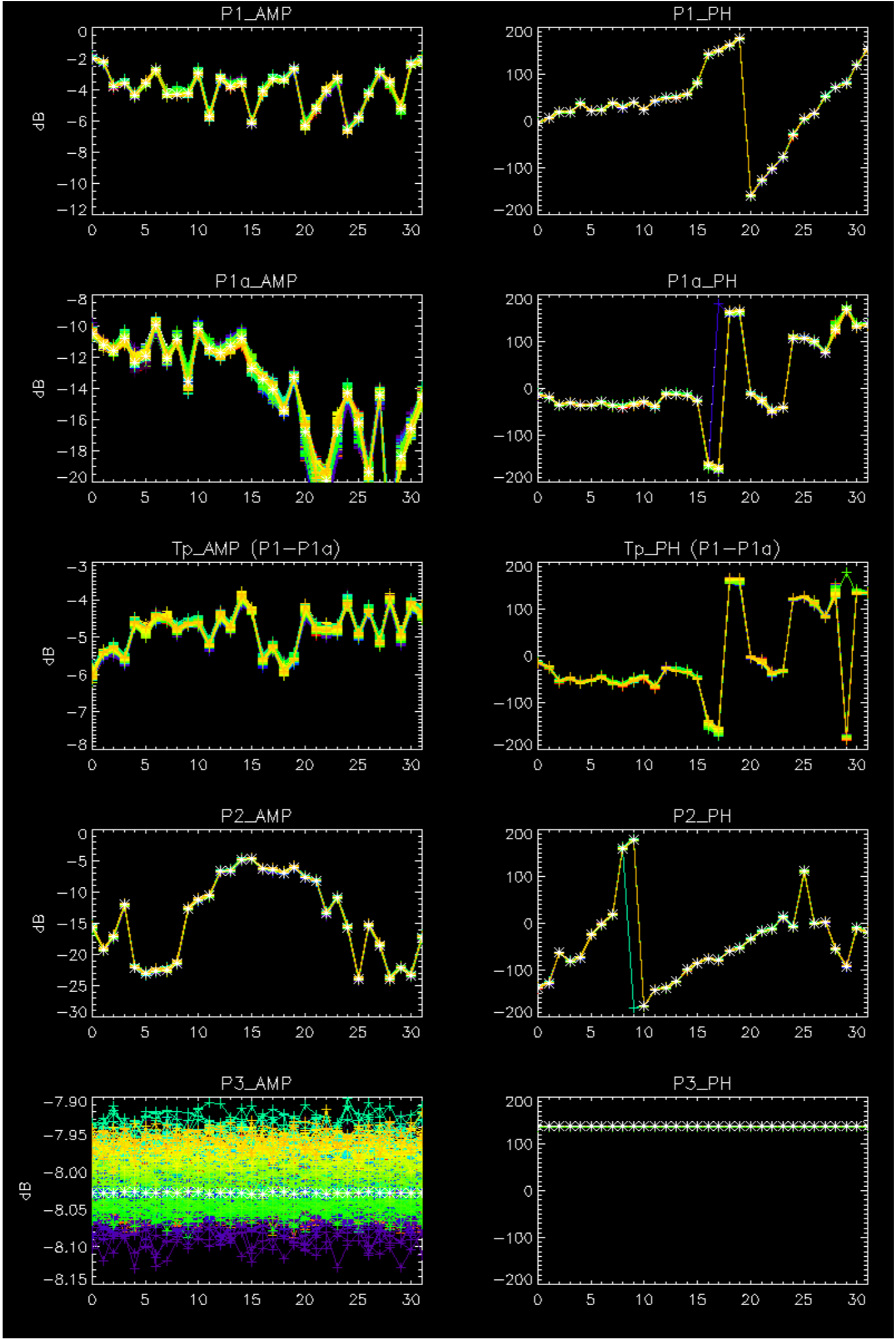
Cal pulses for WVS IS2

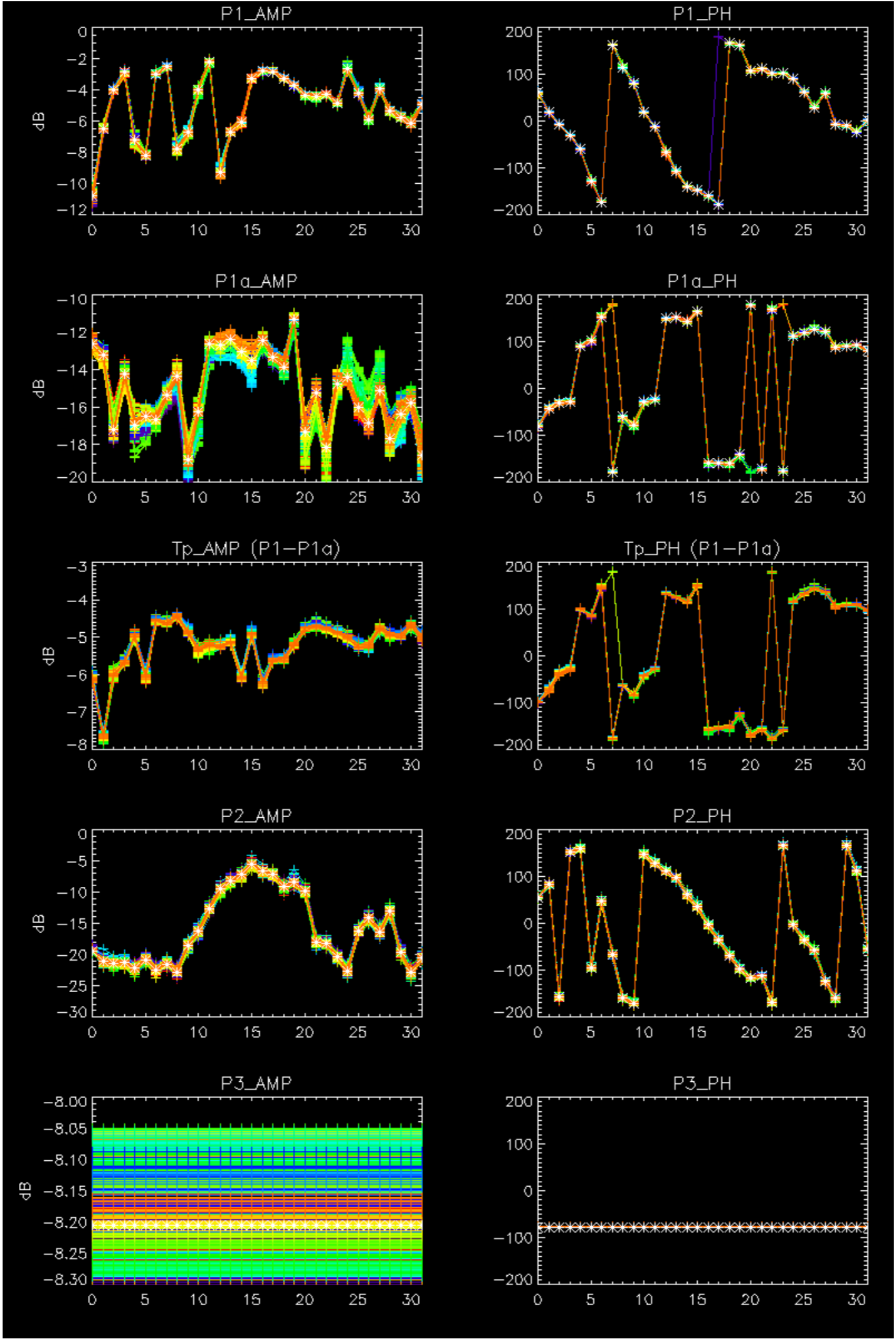


No anomalies observed on available browse products



No anomalies observed.

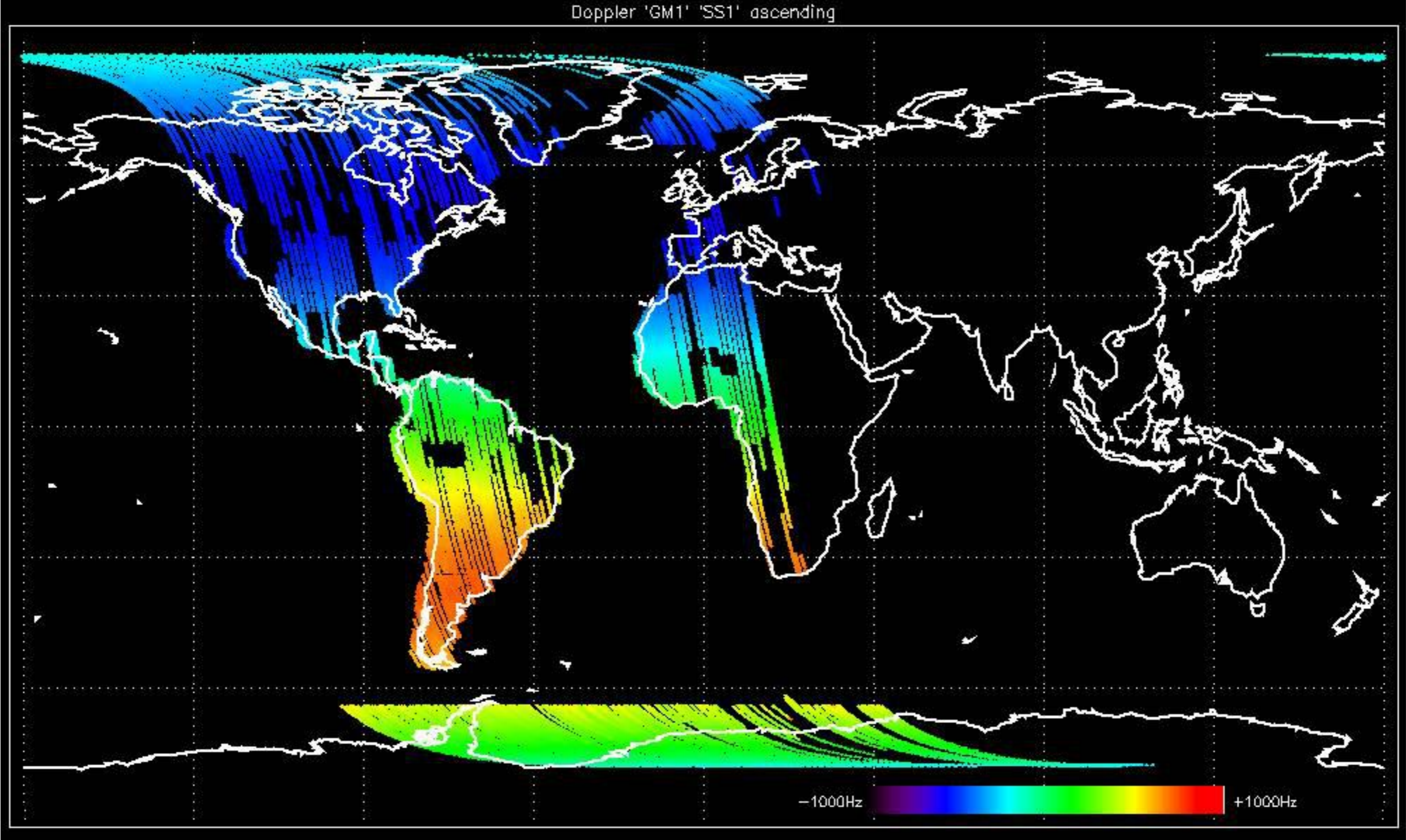




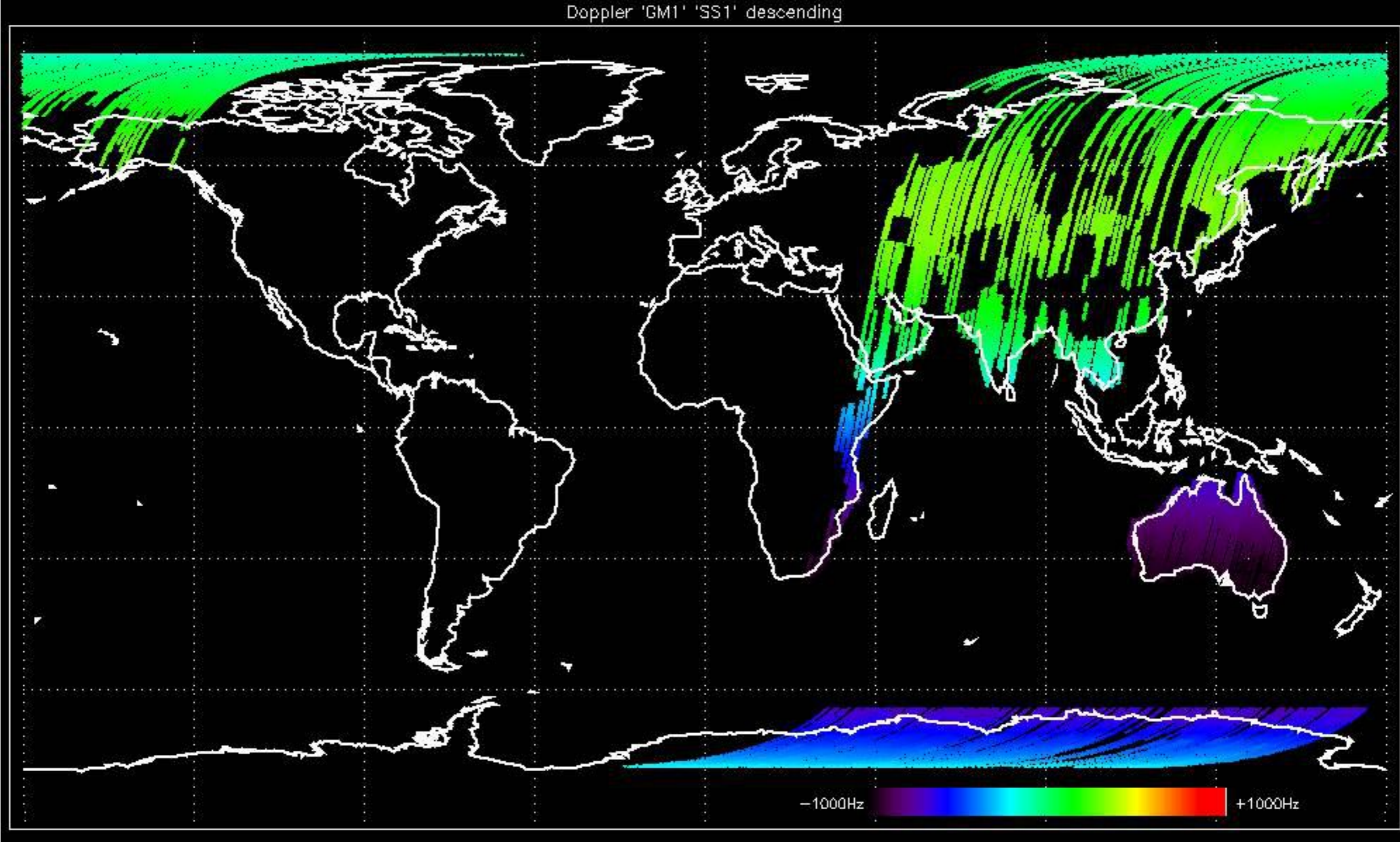
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



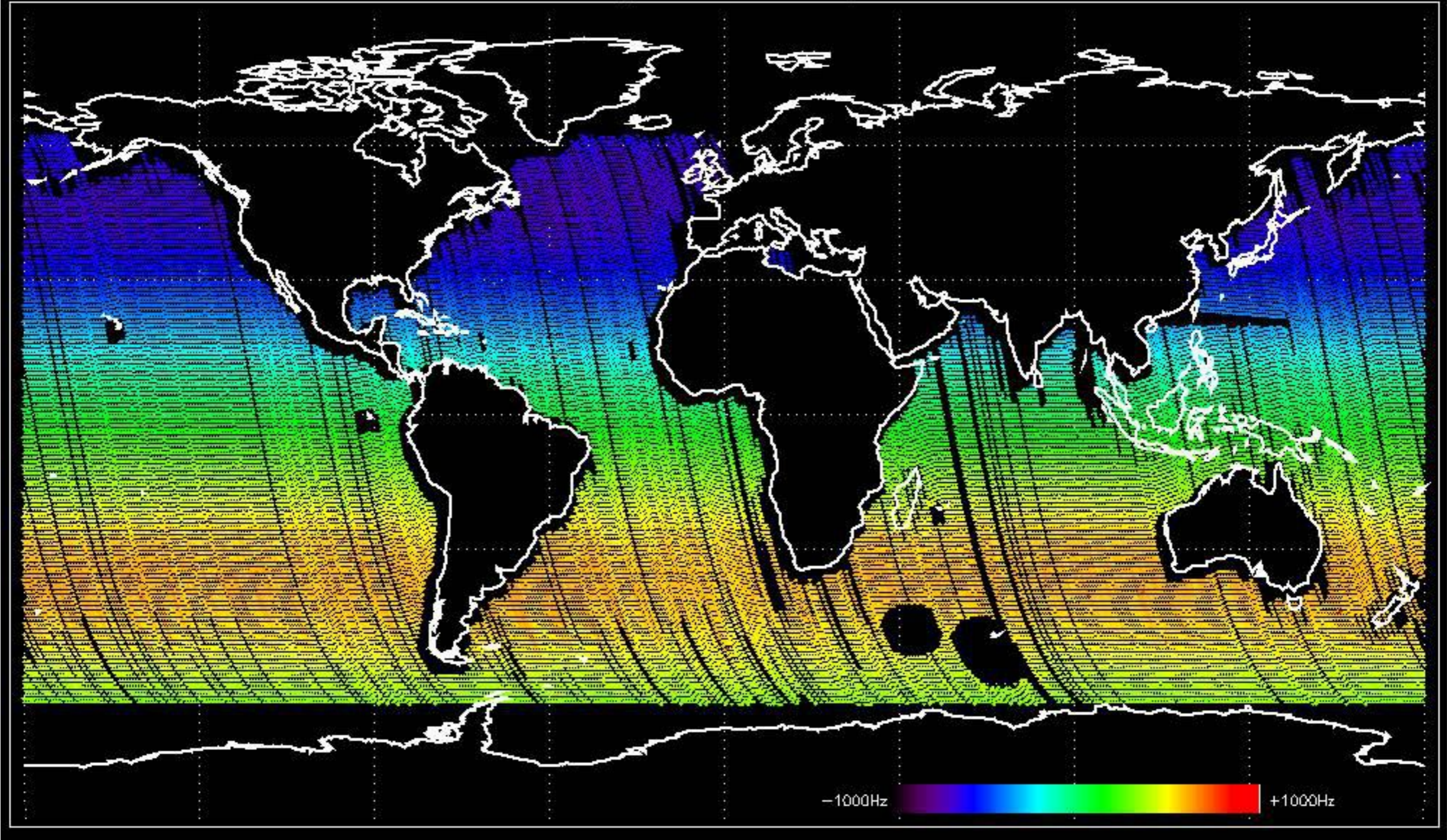
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

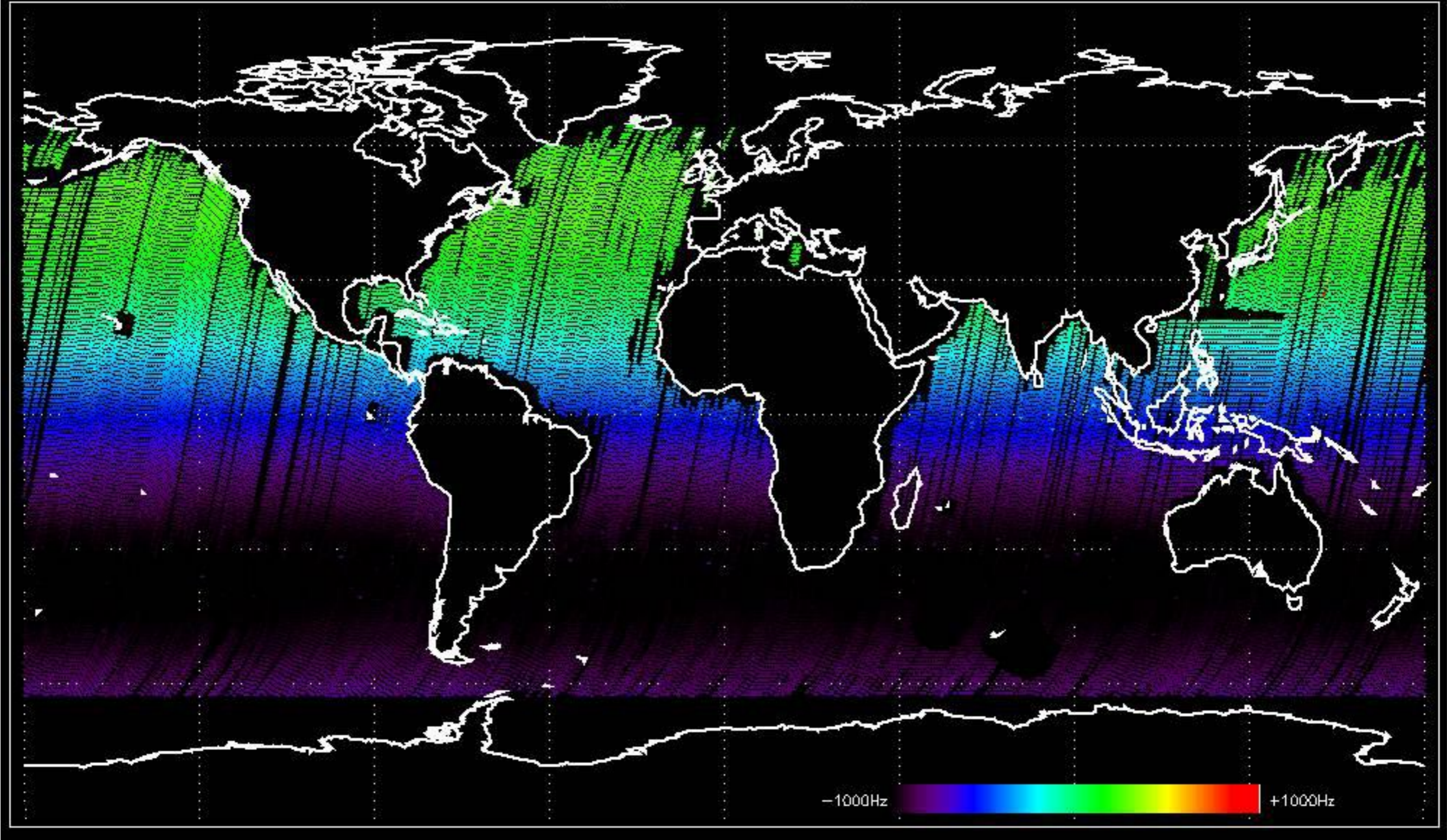


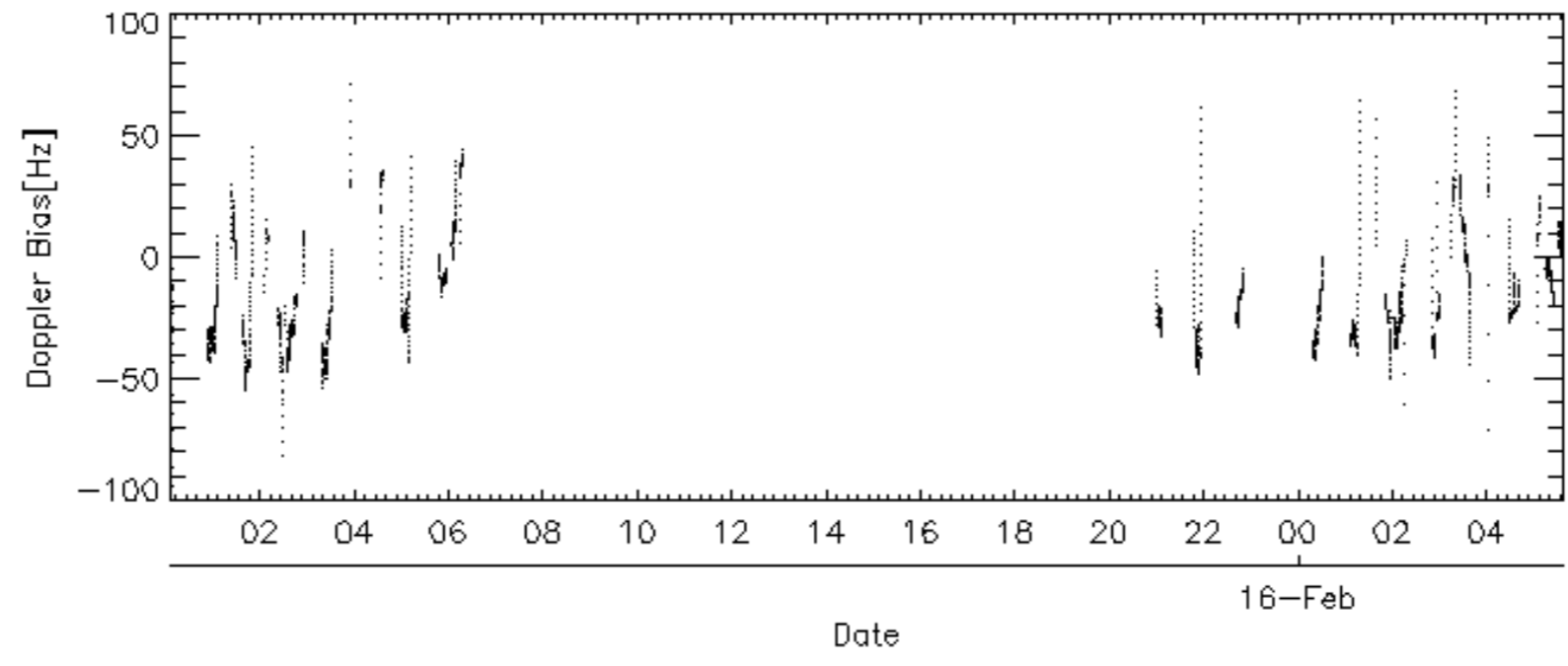
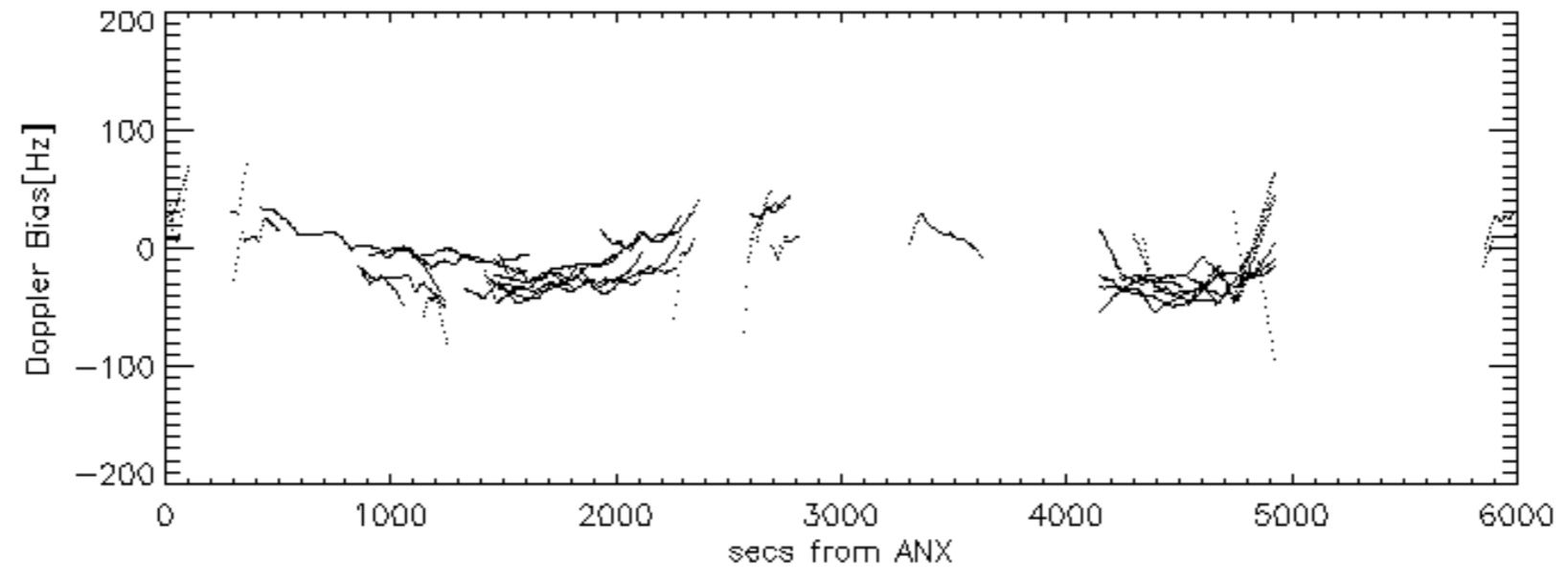
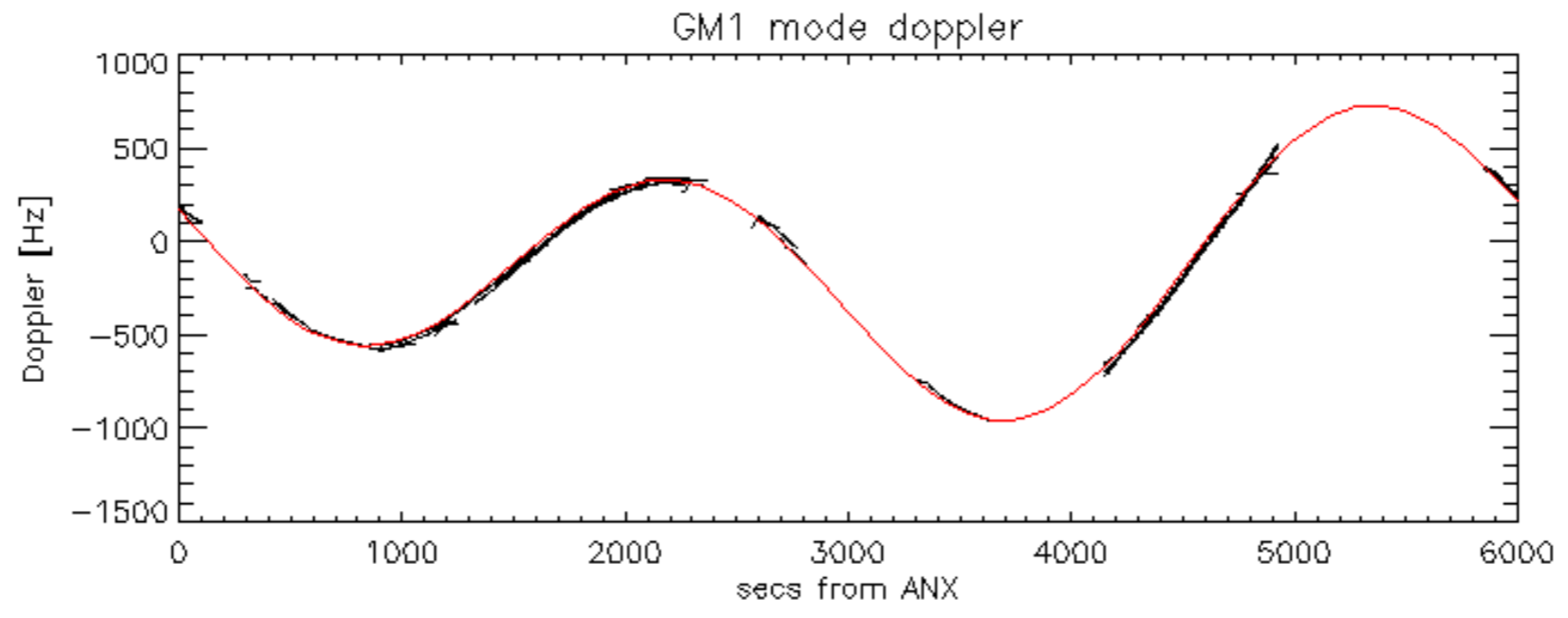
Doppler 'WVS' 'IS2' ascending

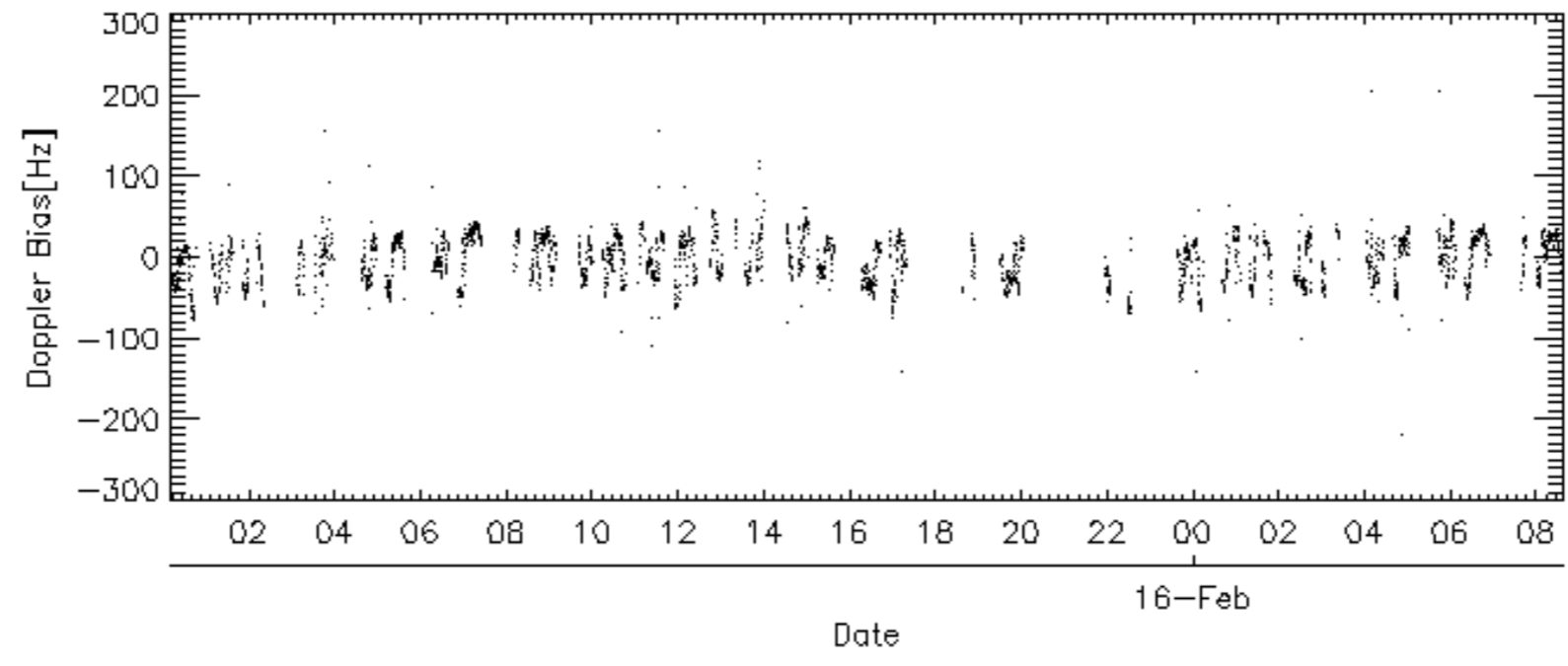
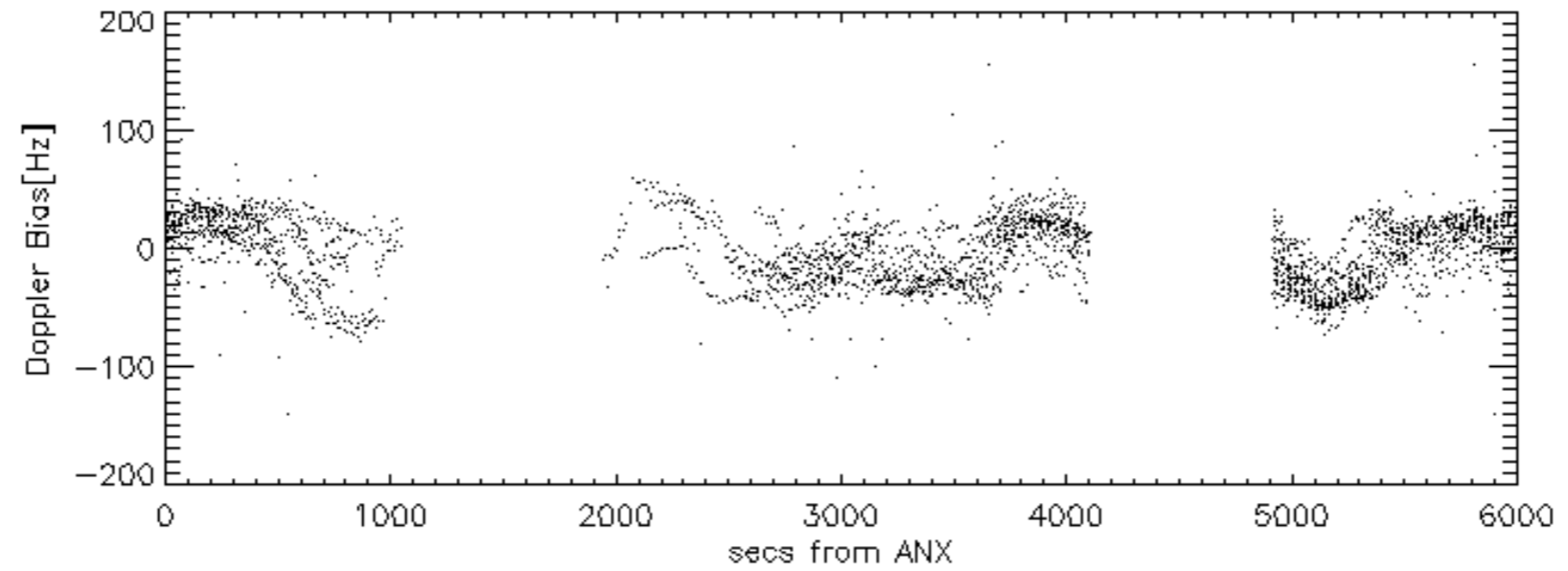
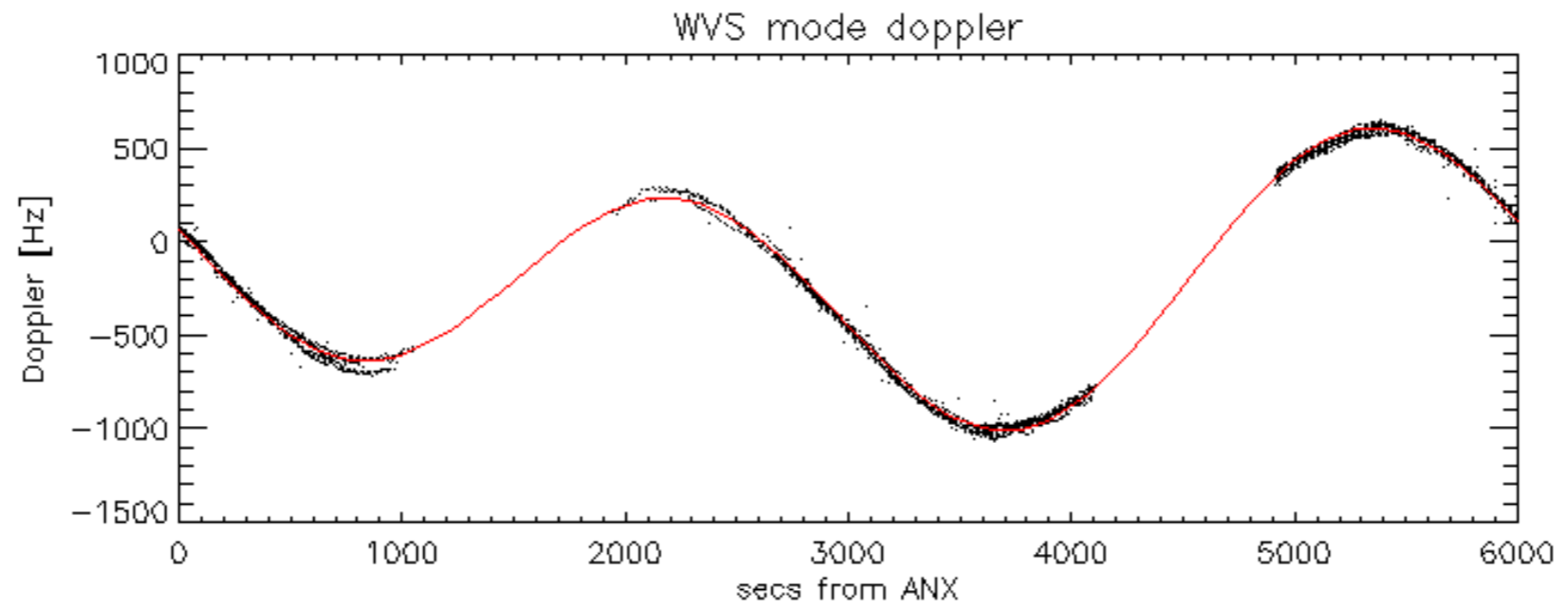




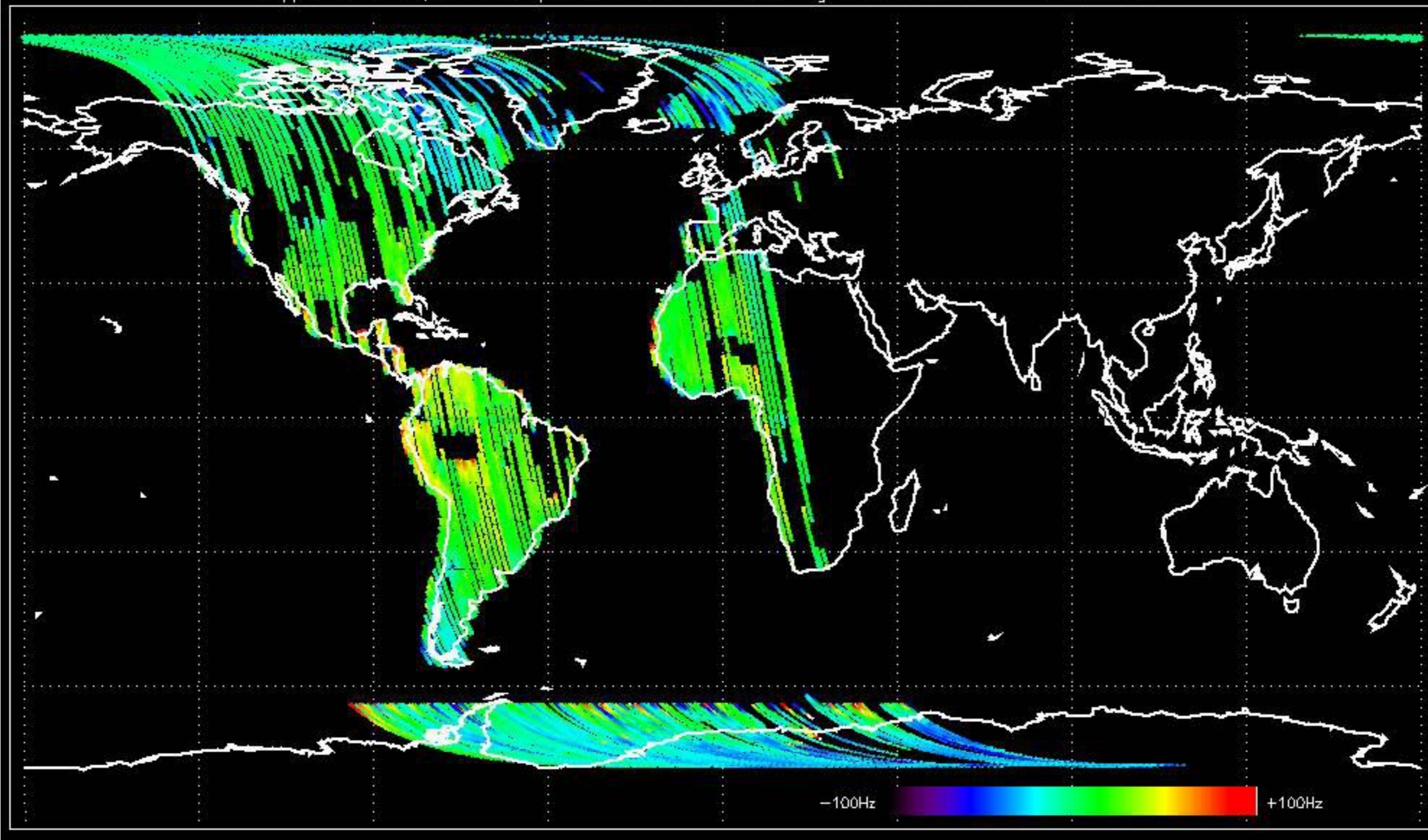
Doppler 'WVS' 'IS2' descending



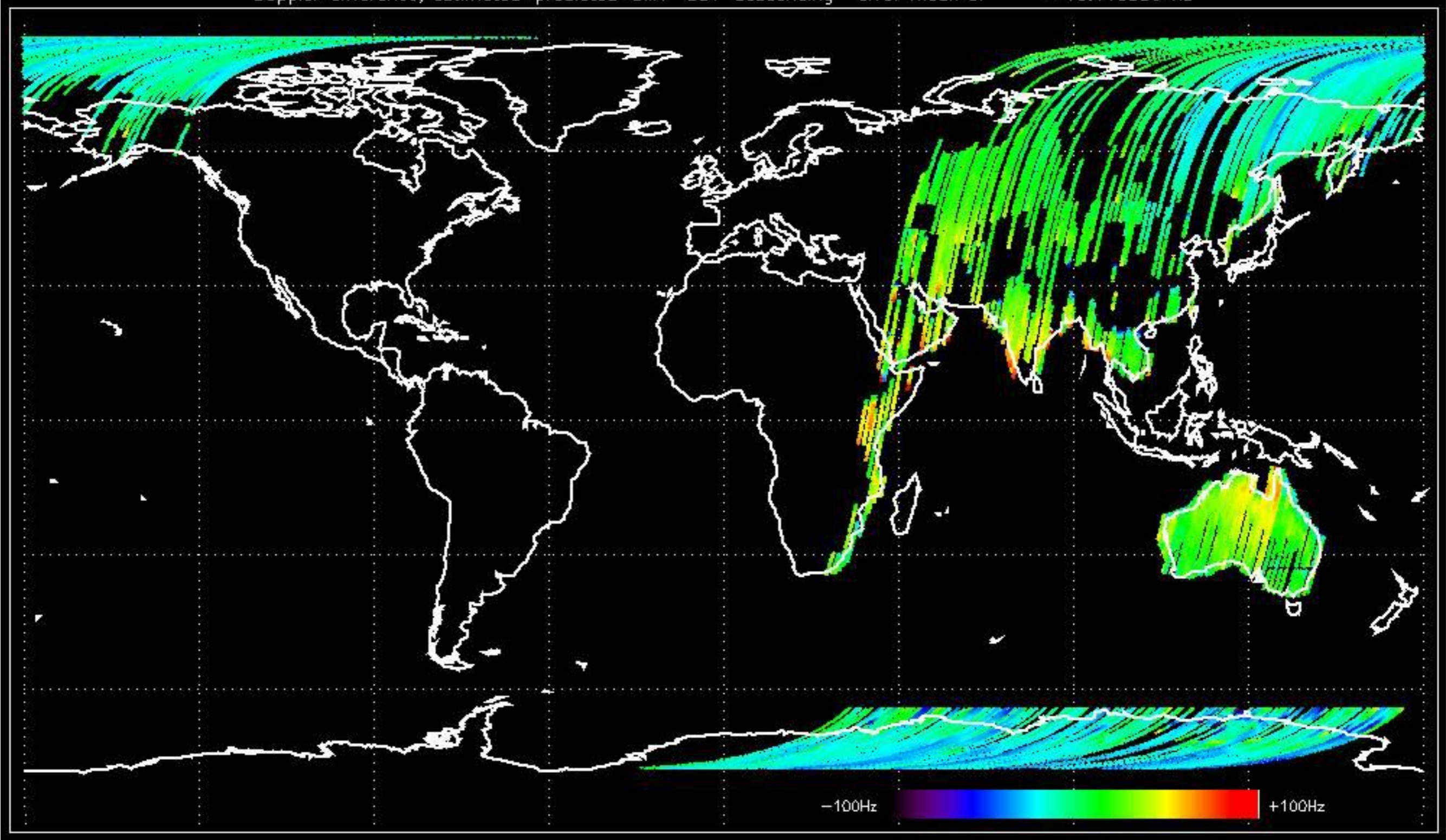




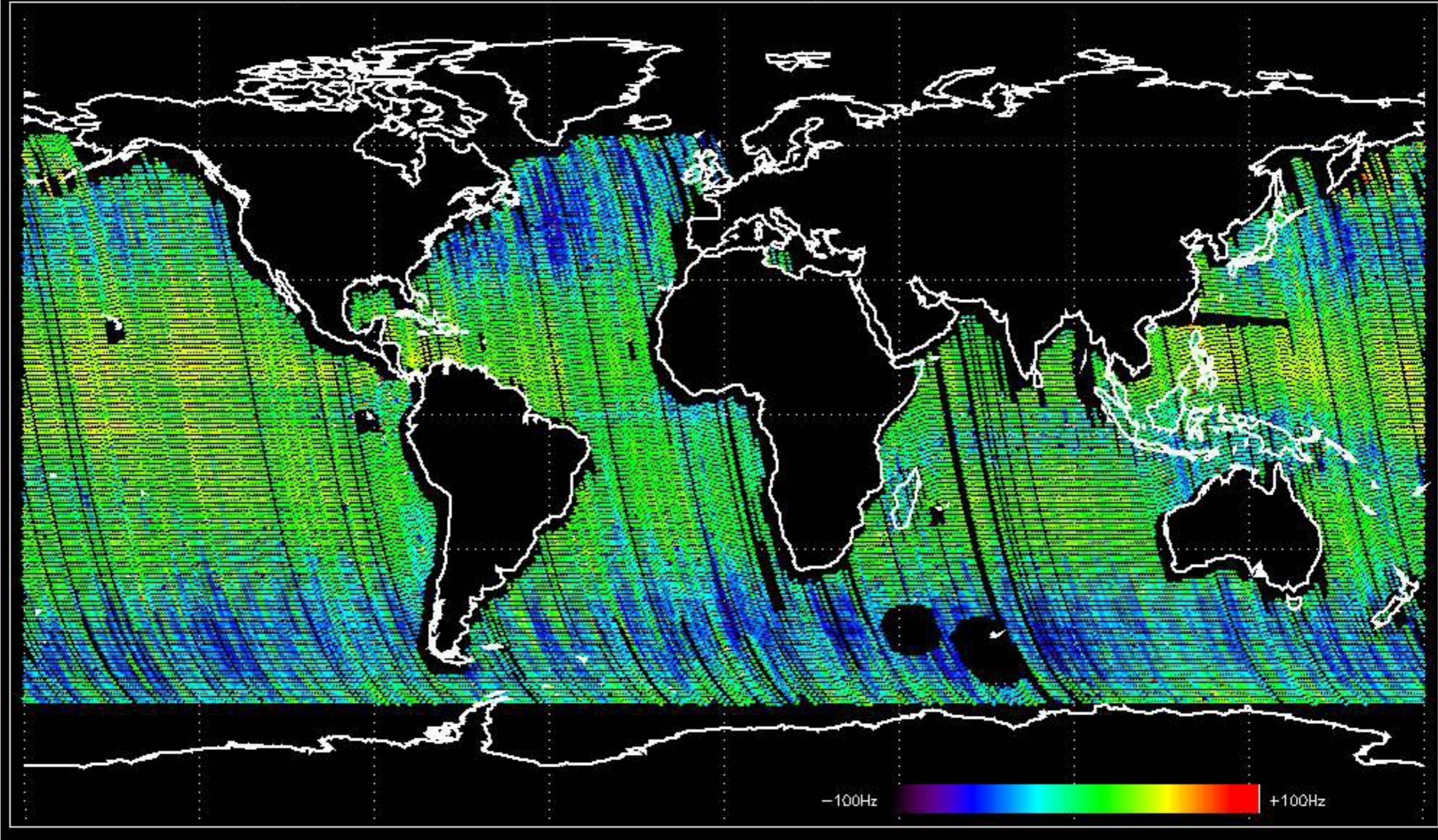
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.023954 Hz



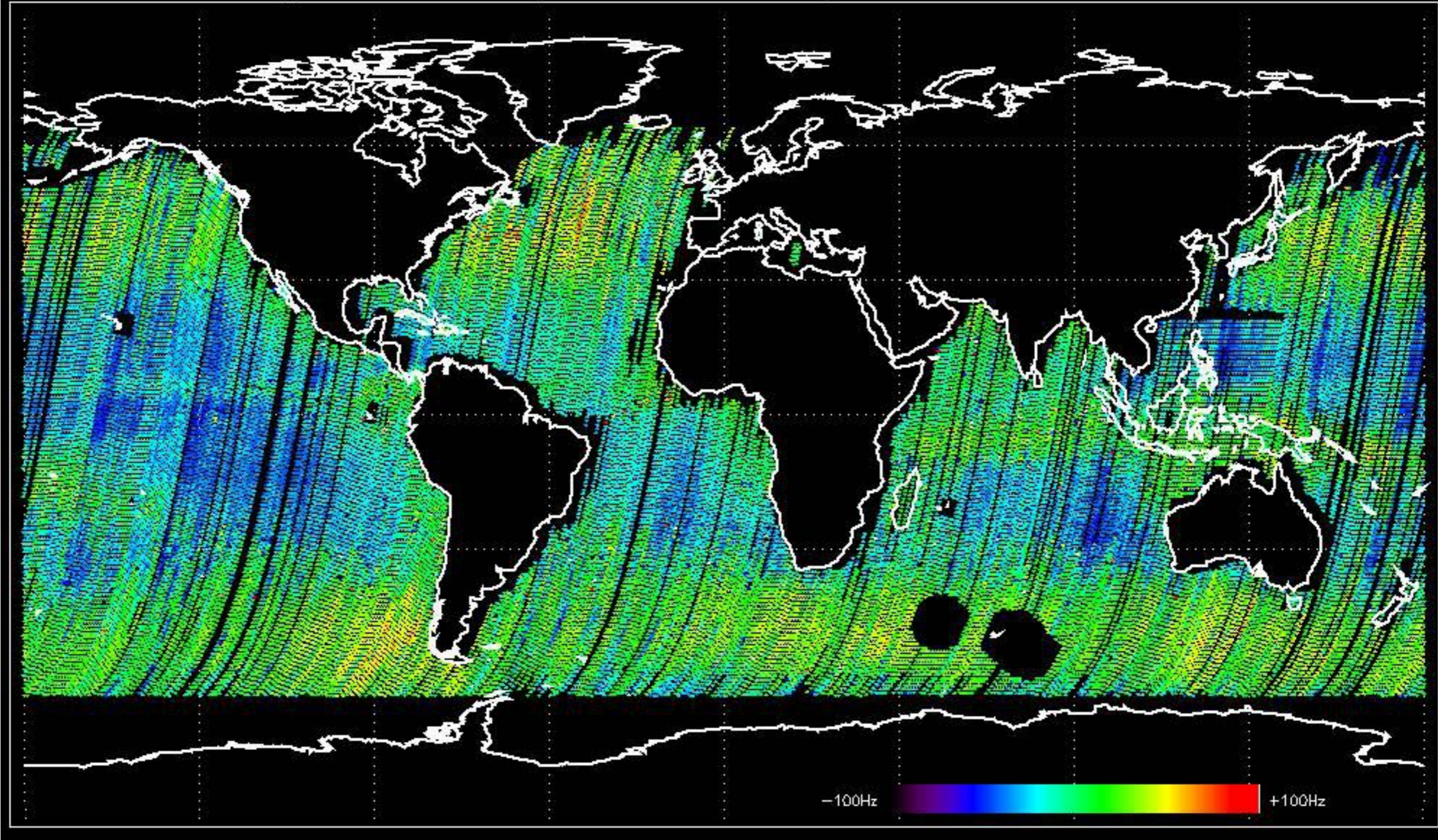
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.116056 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.5866011 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.4459144 Hz



No anomalies observed on available MS products:



No anomalies observed.

















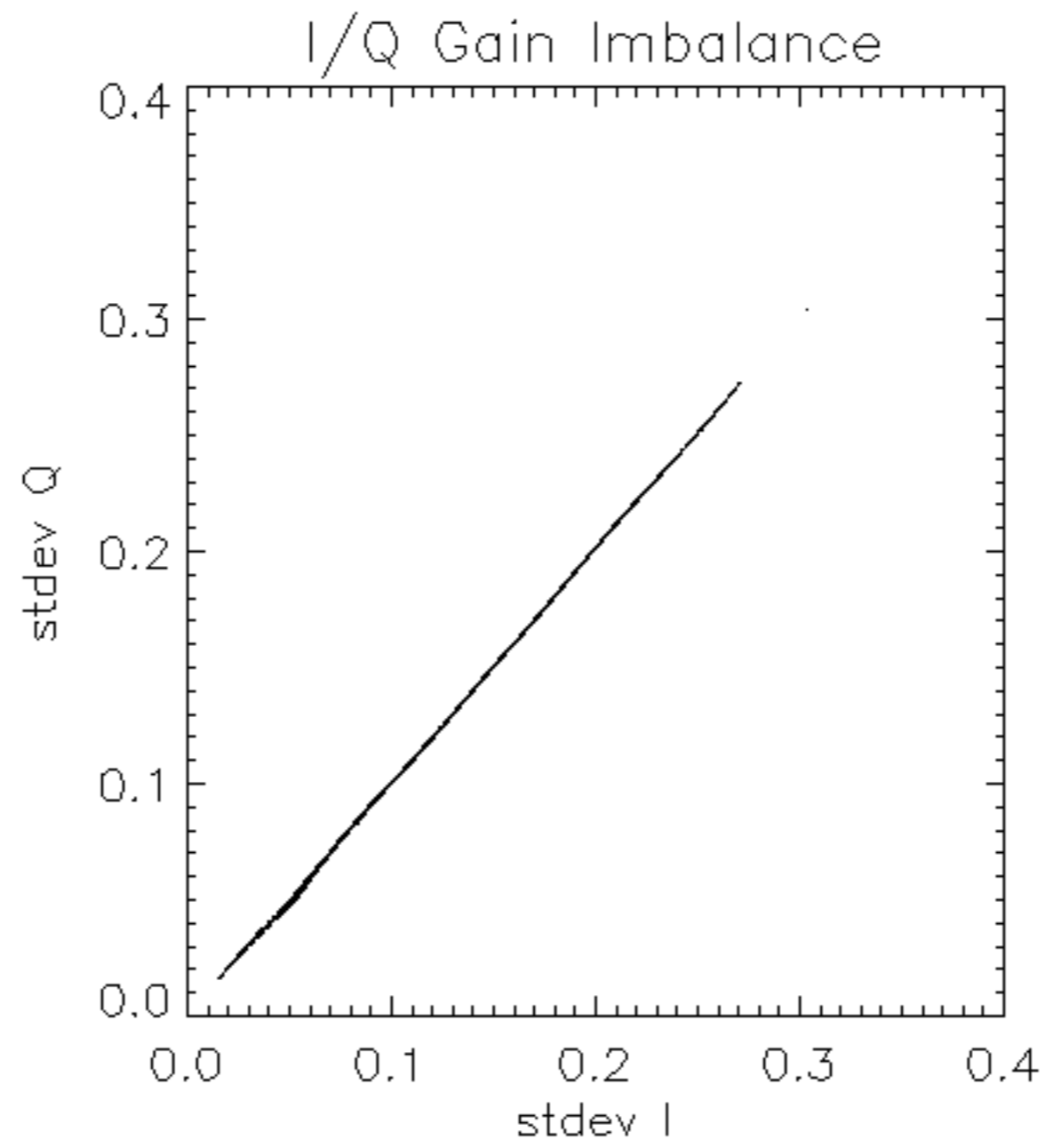


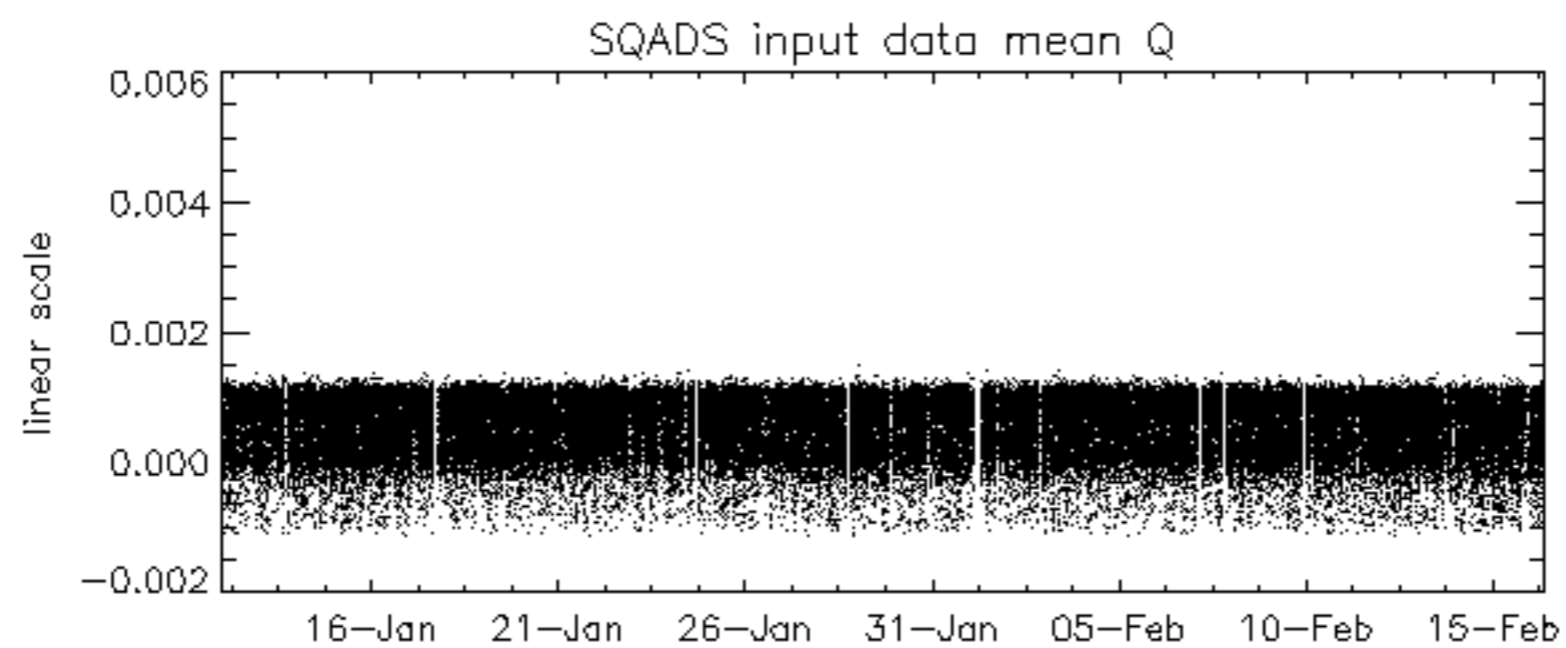
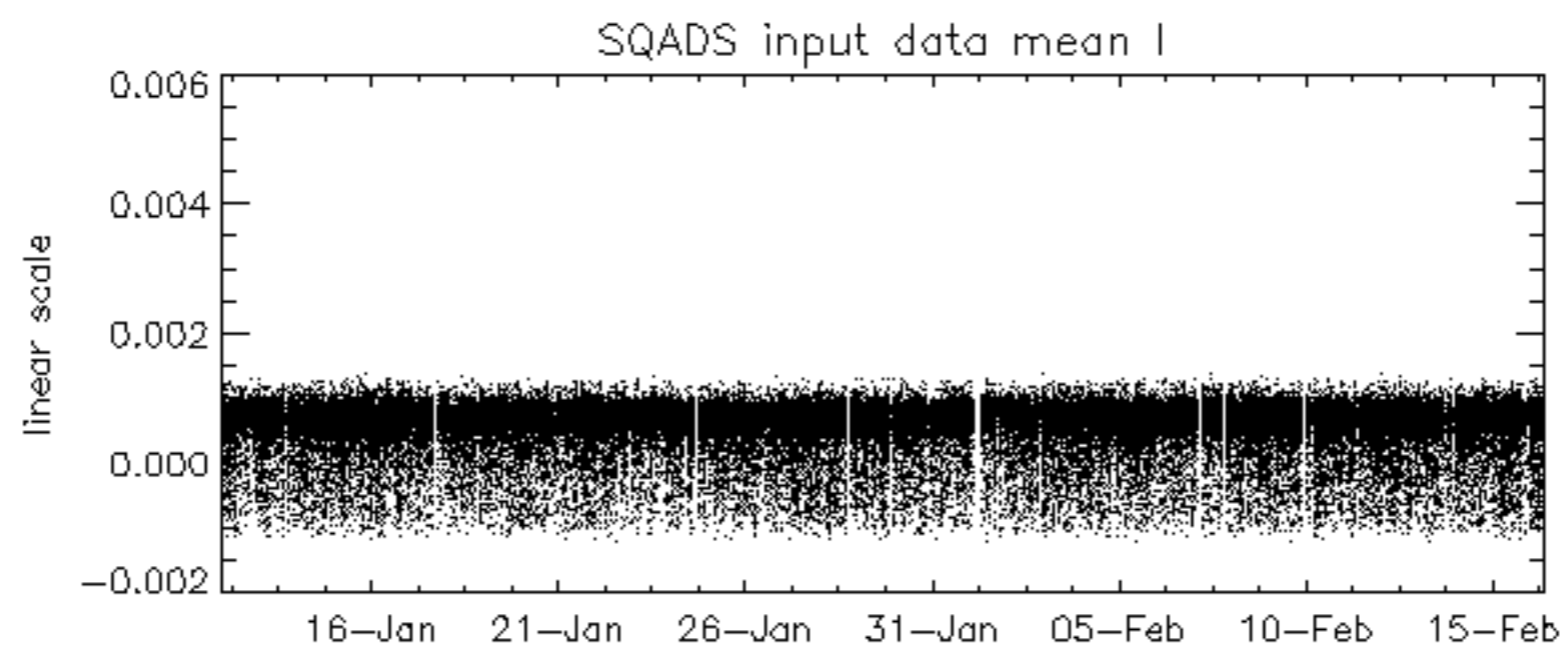
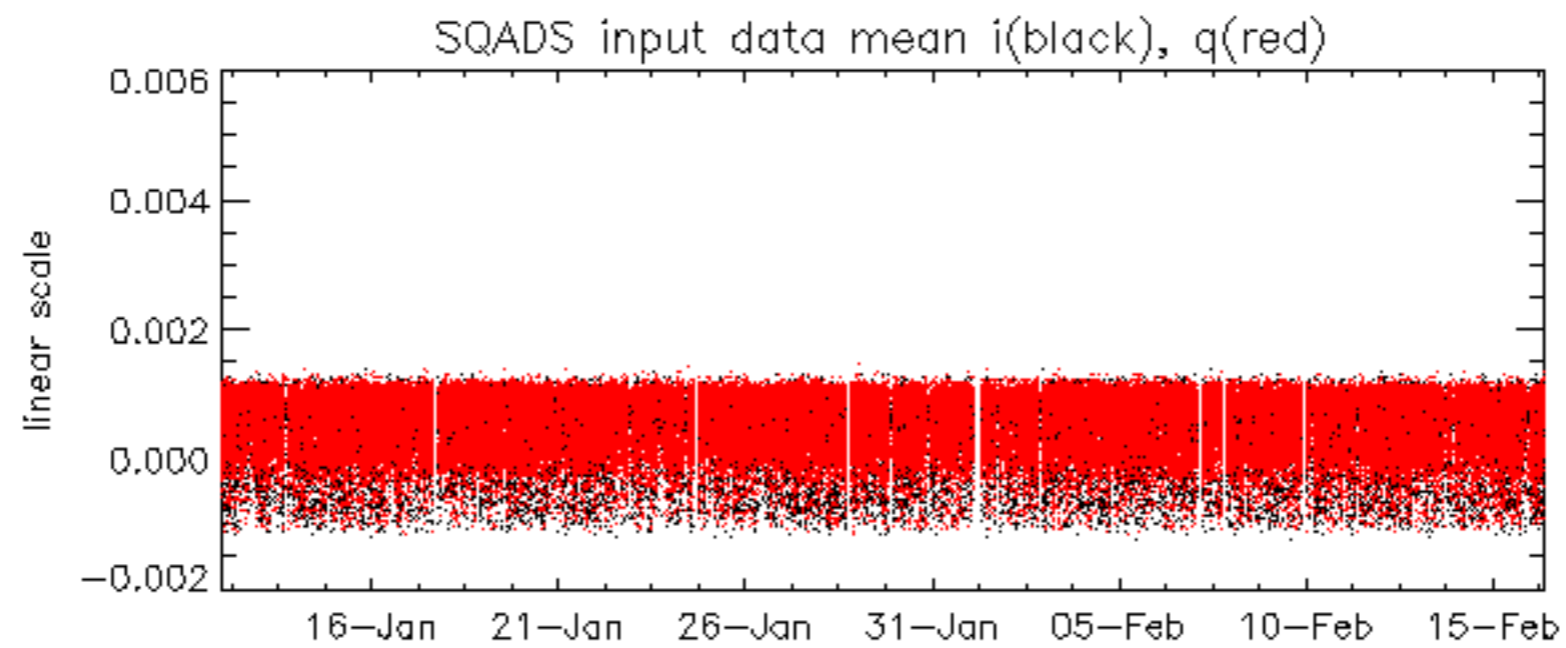


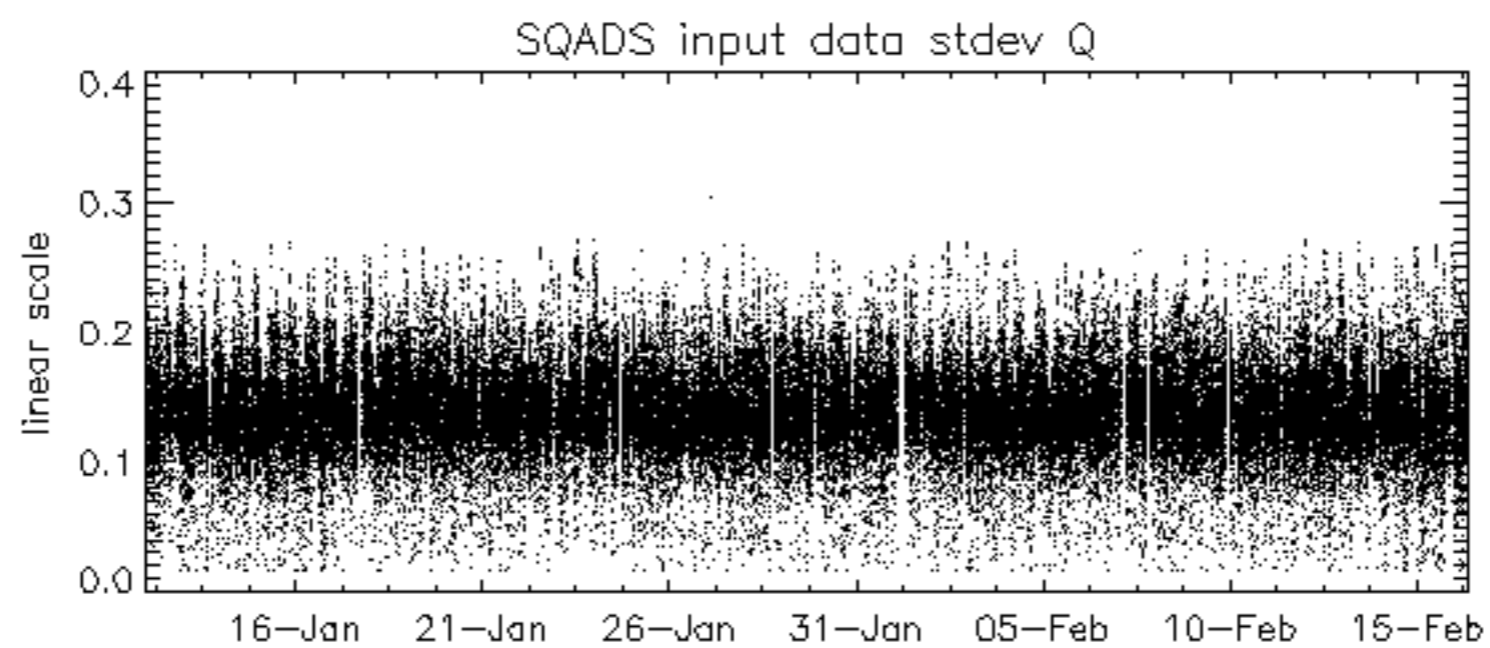
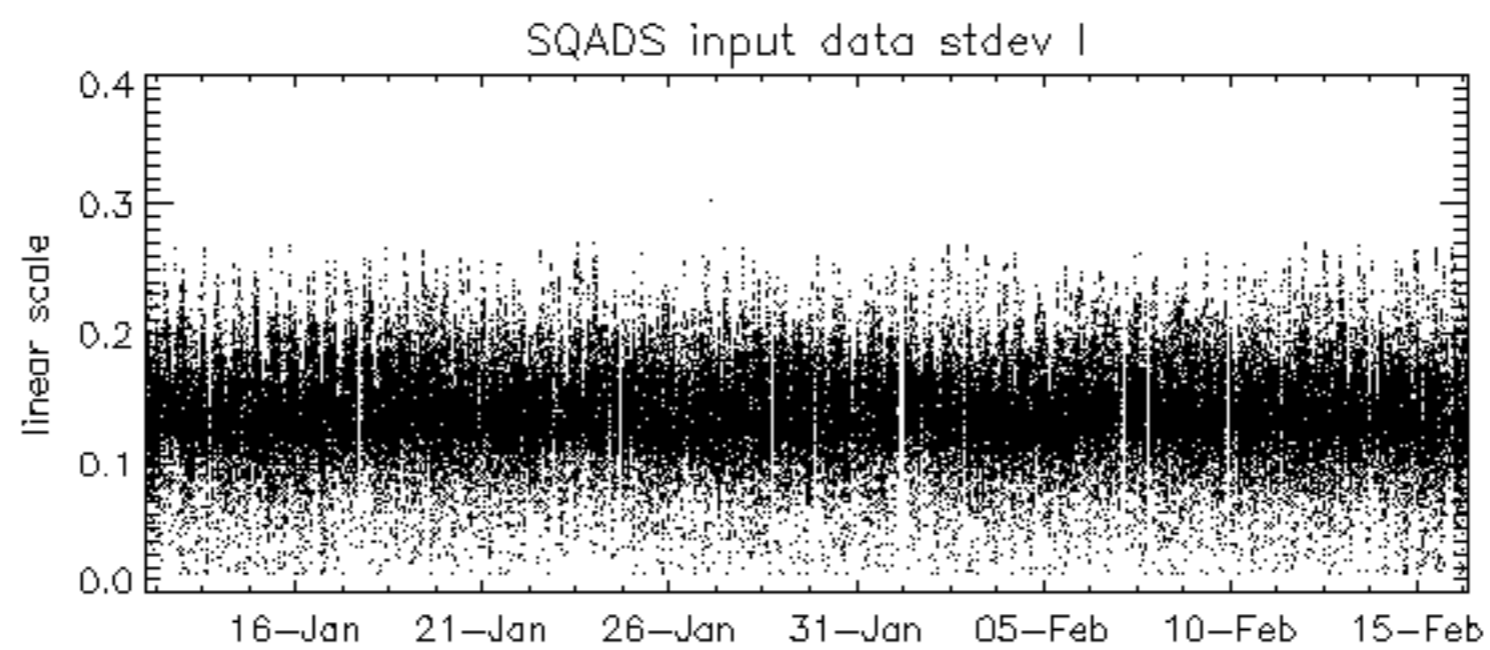
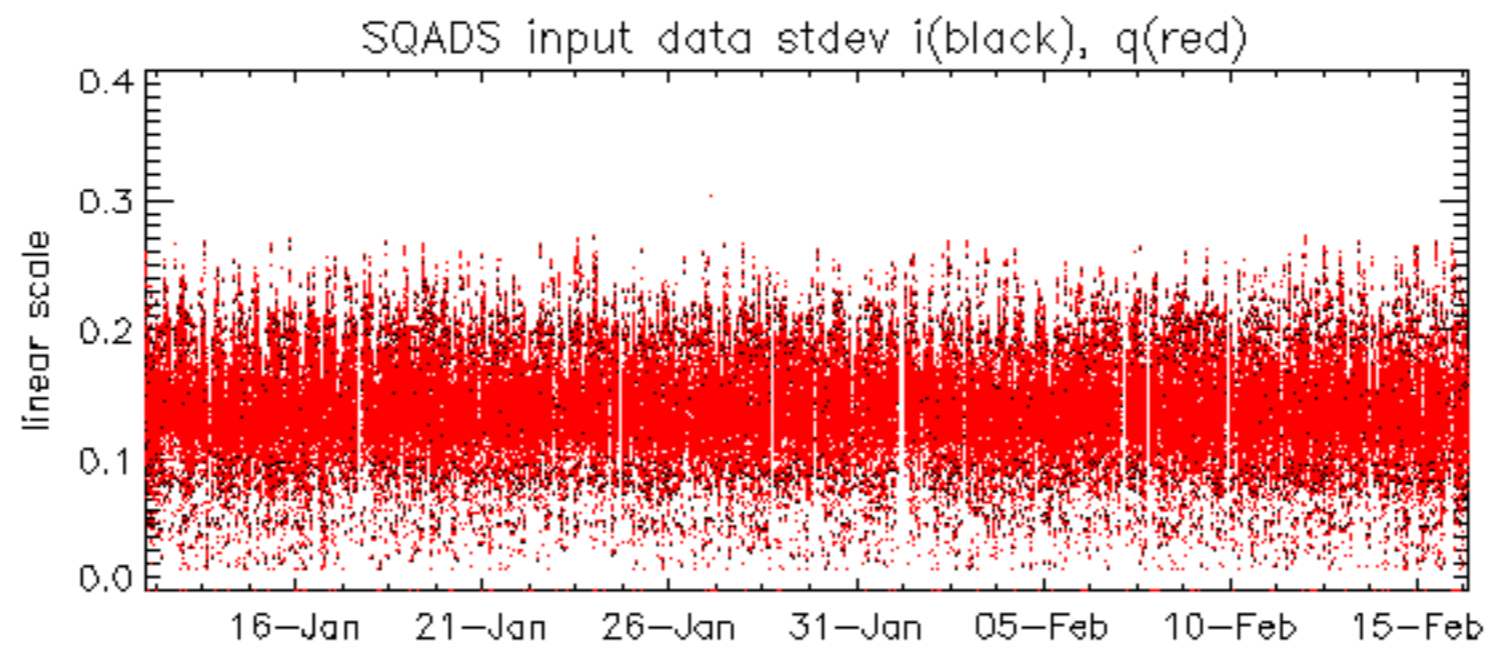


























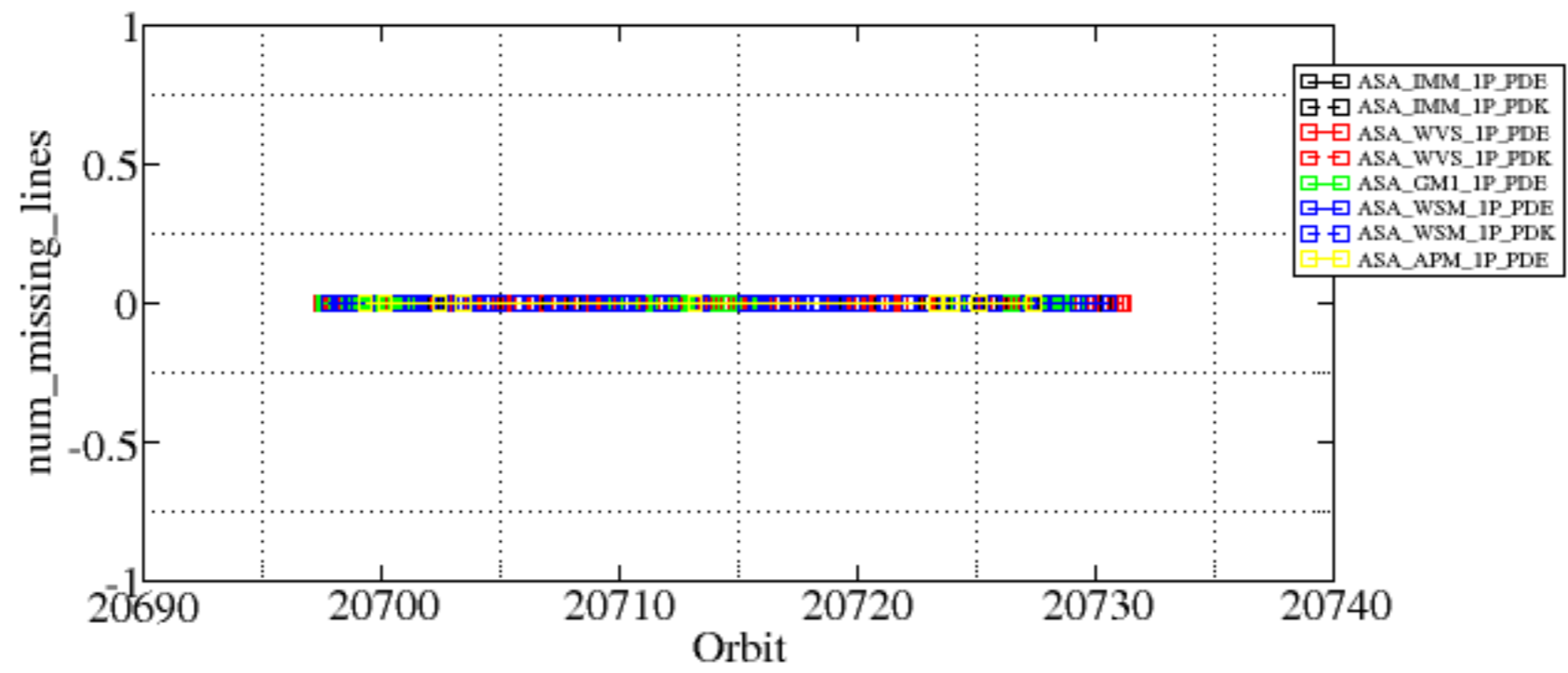
Summary of analysis for the last 3 days 2006021[456]

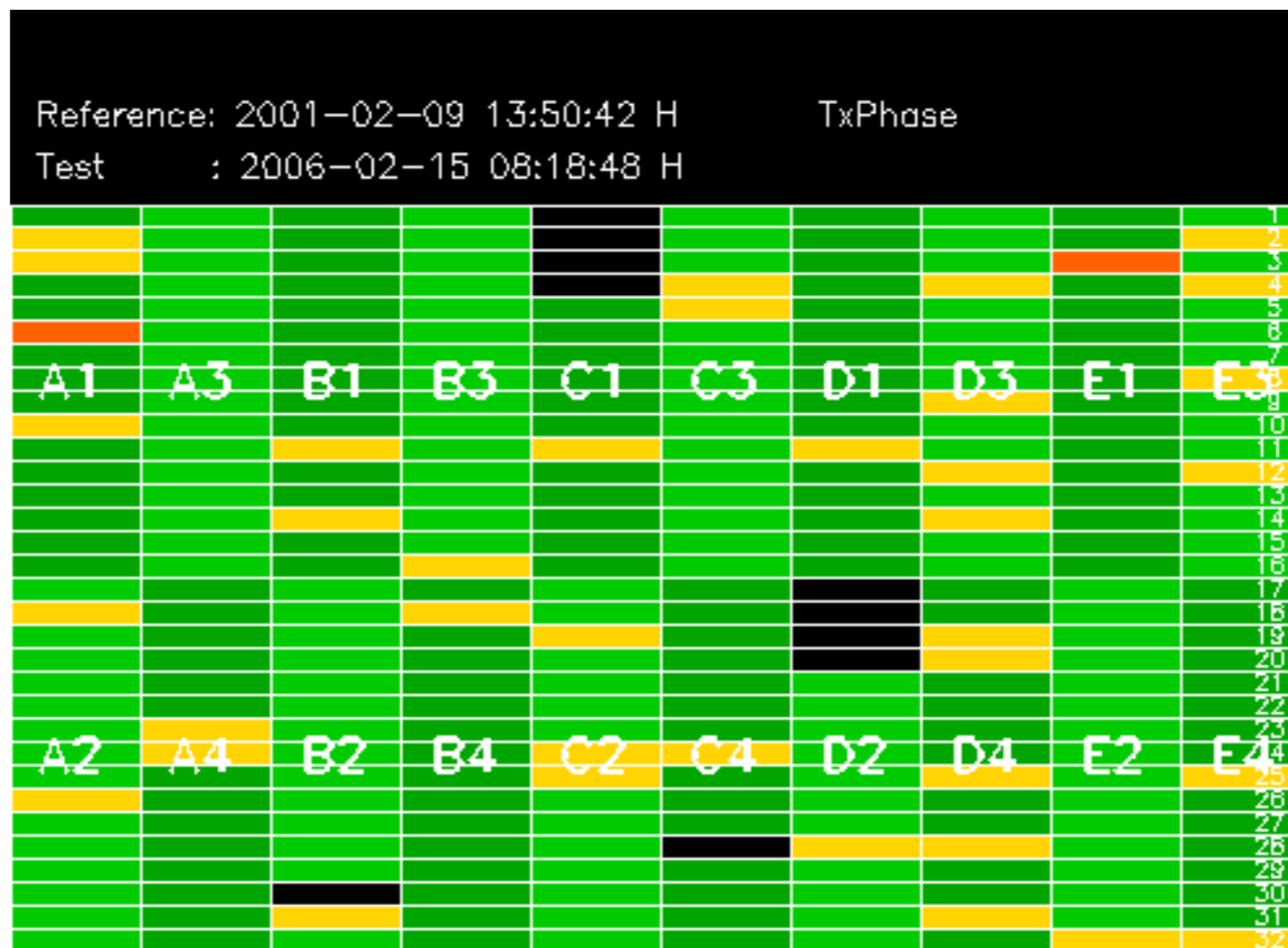
The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060214_061558_000002202045_00106_20701_3109.N1	1	0











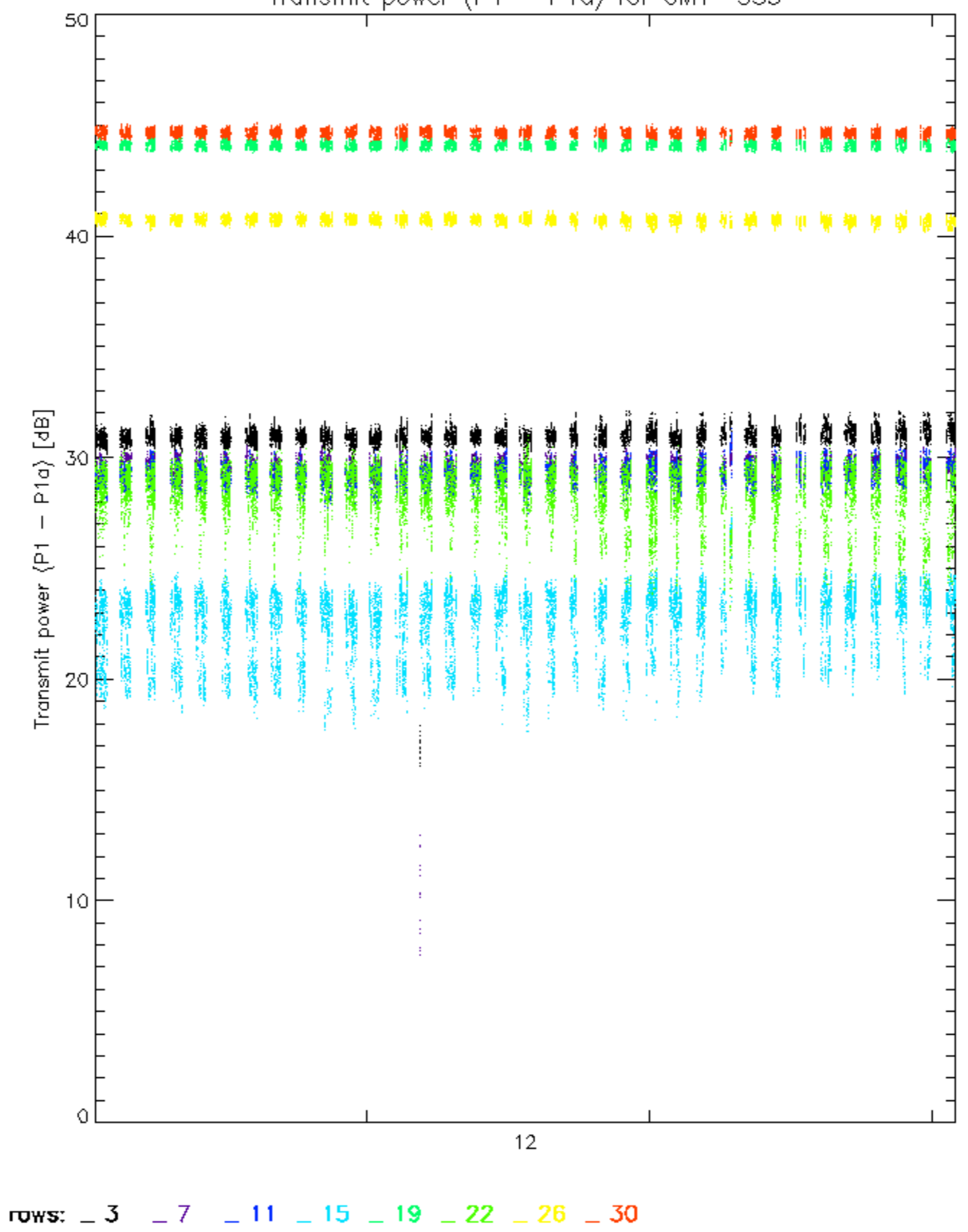




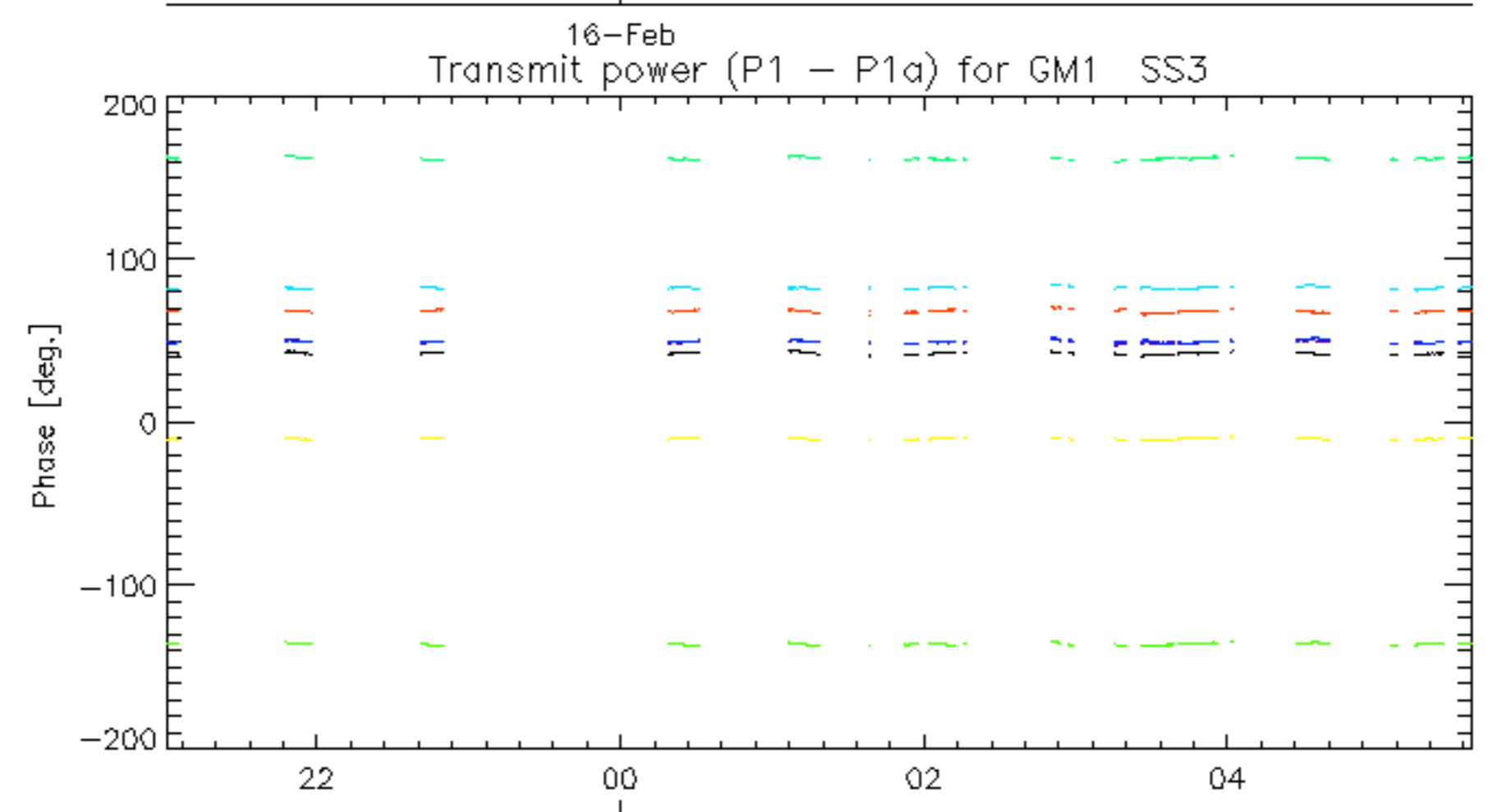
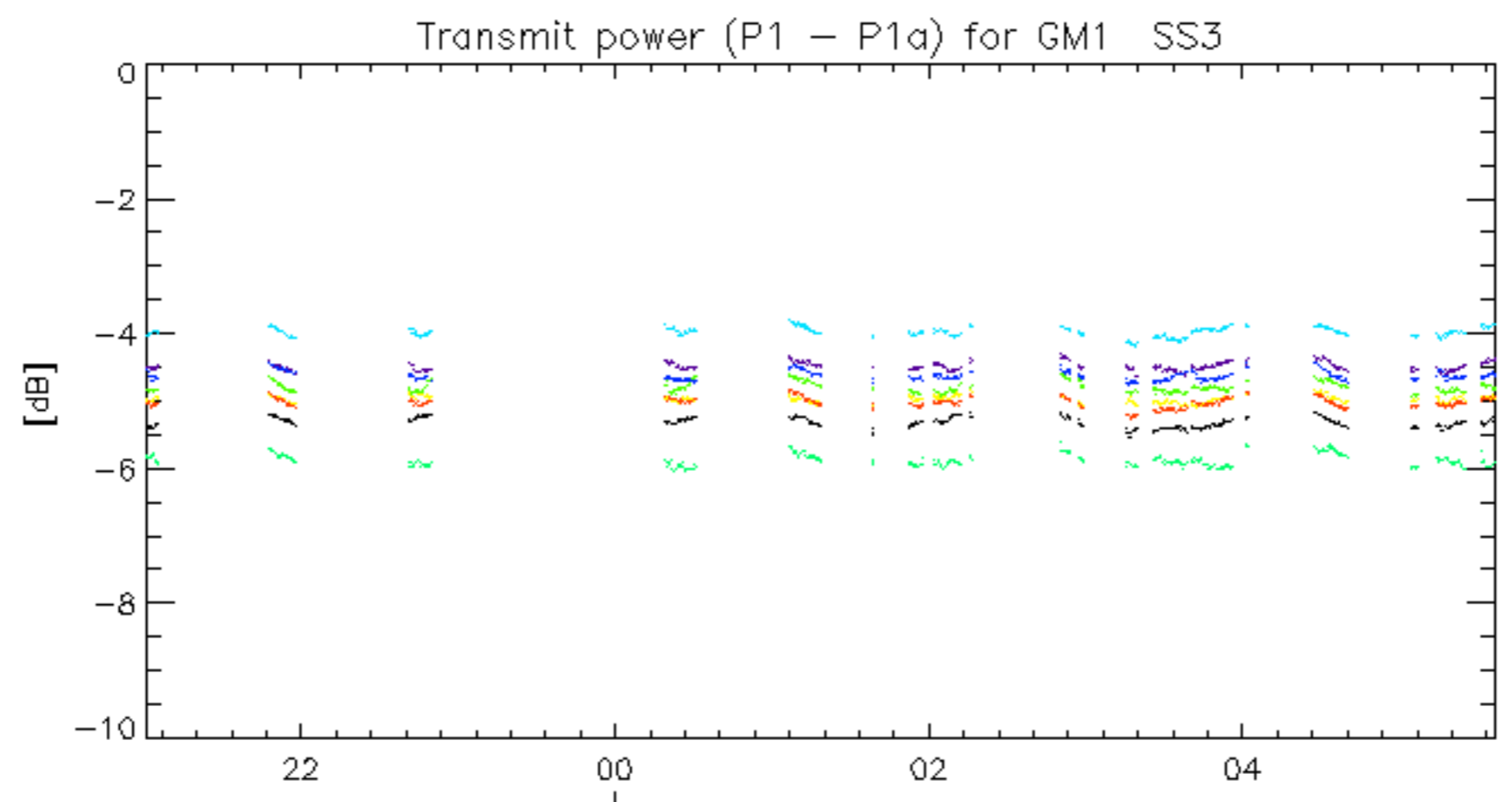




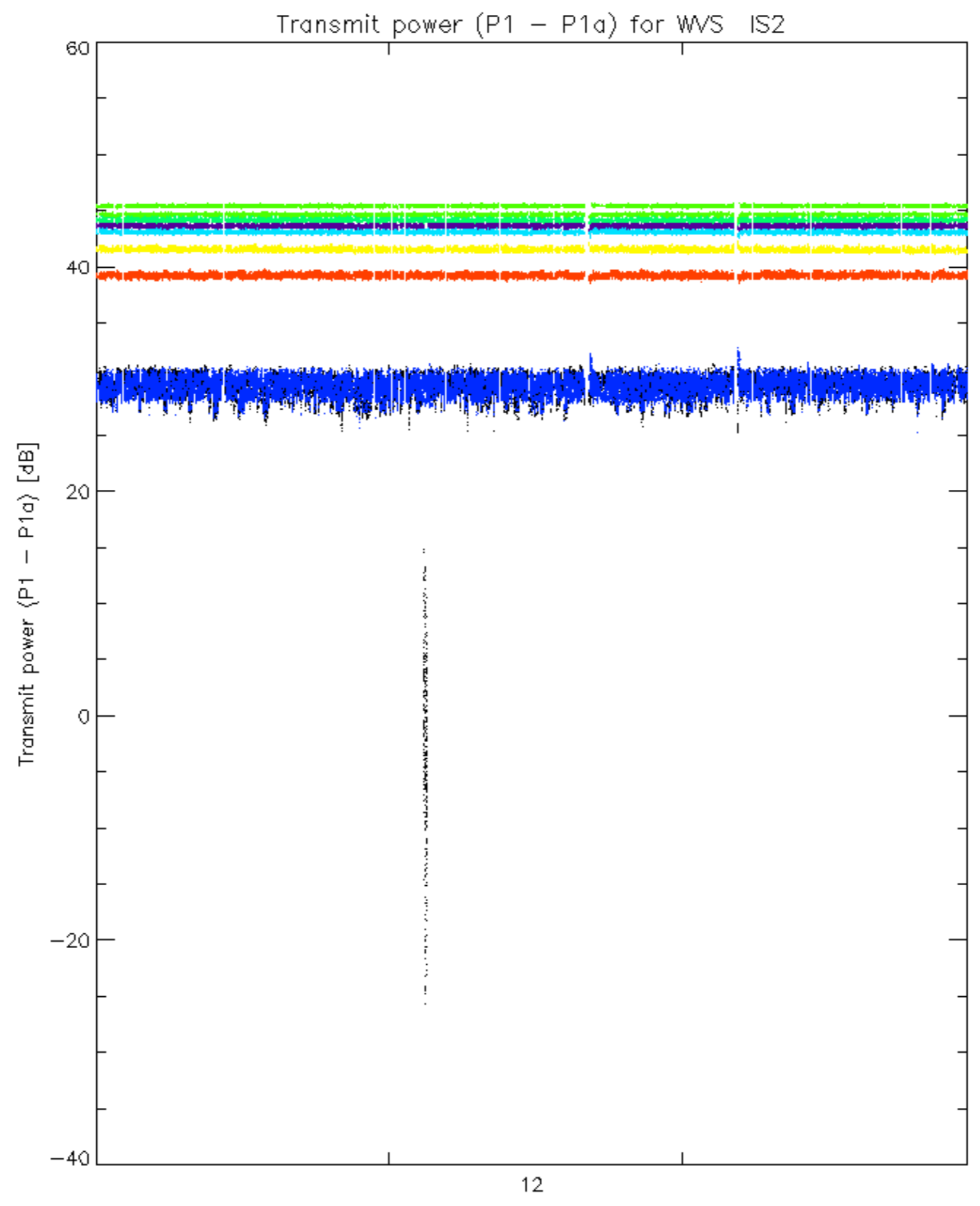
Transmit power (P1 - P1a) for GM1 SS3



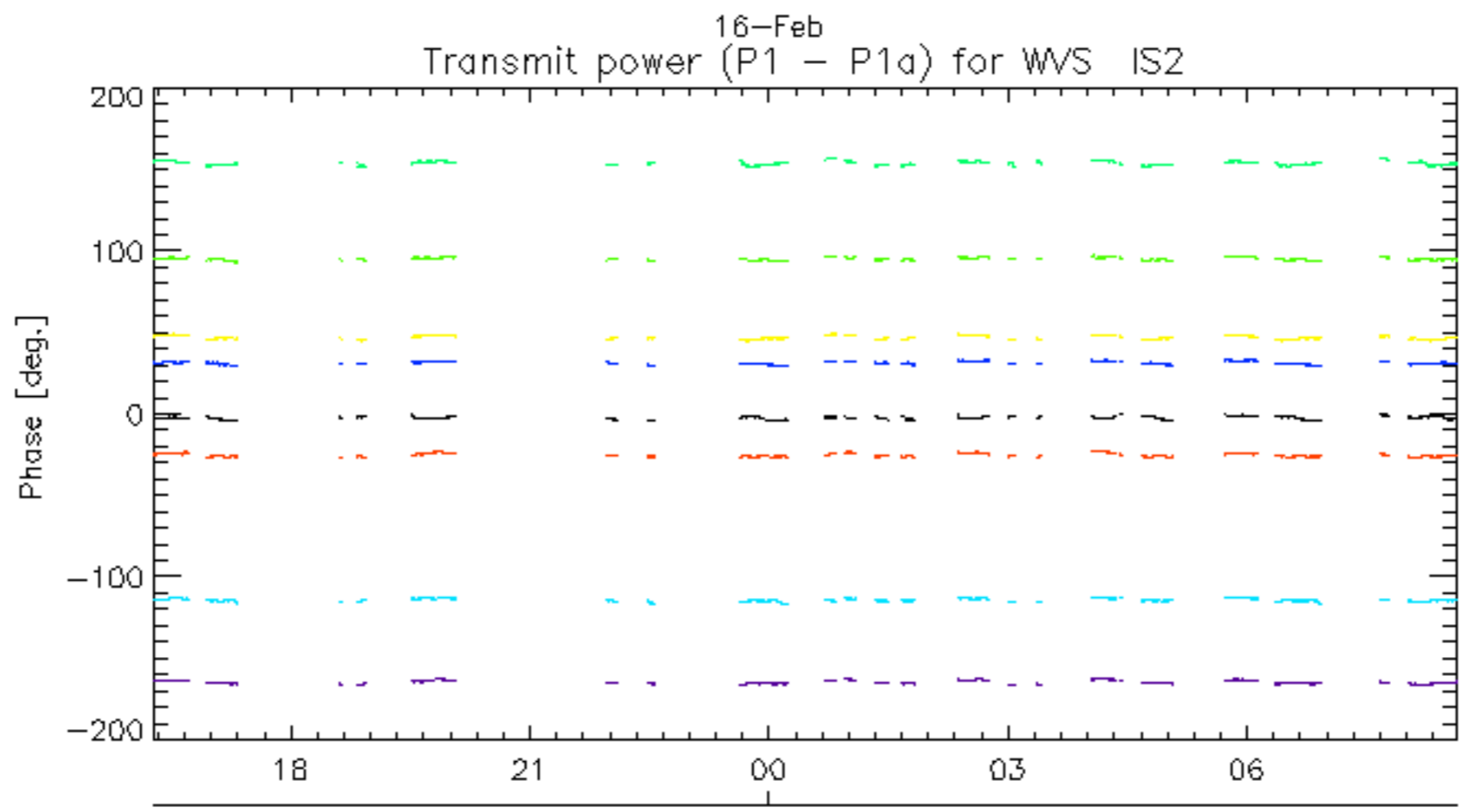
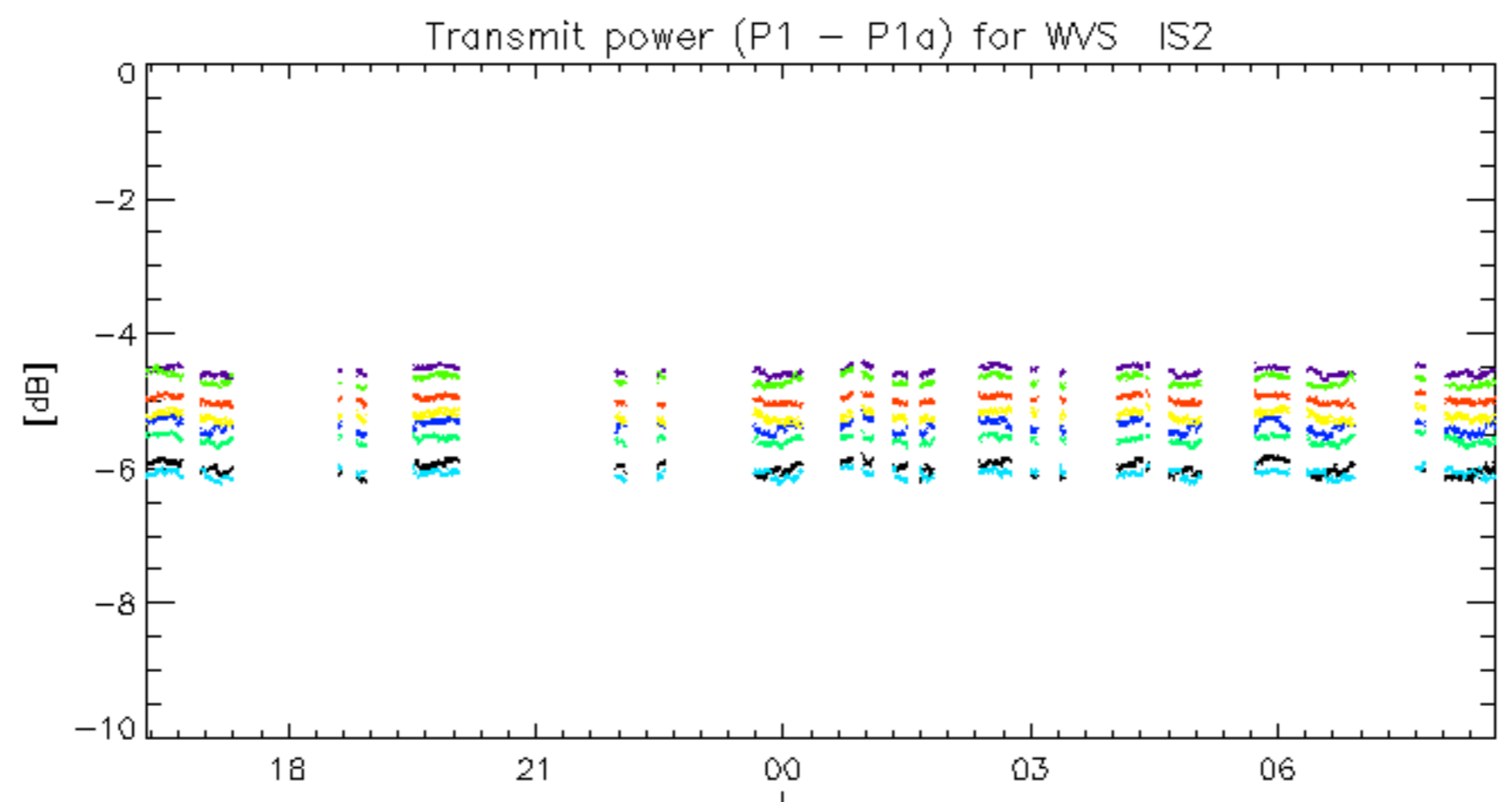




16-Feb  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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

No unavailabilities during the reported period.