

# PRELIMINARY REPORT OF 060212

last update on Sun Feb 12 16:42:13 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 2006-02-11 00:00:00 to 2006-02-12 16:42:13

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	0	12	0	23
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	45	0	12	0	23
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	45	0	12	0	23
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	0	12	0	23

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	49	49	45	7	40
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	49	49	45	7	40
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	49	49	45	7	40
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	49	49	45	7	40

## 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	20060212 095339
H	20060211 084440

### MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

### 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
<input type="checkbox"/>

**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	-4.013313	0.008322	0.035363
7	P1	-3.001040	0.012607	-0.003858
11	P1	-4.092258	0.022006	0.020472
15	P1	-6.059160	0.018123	0.000914
19	P1	-3.257643	0.006613	-0.021178
22	P1	-4.473875	0.018269	0.018413
26	P1	-4.196018	0.013162	0.043680
30	P1	-5.771703	0.010453	0.002264
3	P1	-16.909855	0.265299	0.019966
7	P1	-16.646145	0.124415	-0.102345
11	P1	-16.591114	0.300927	0.071510
15	P1	-13.171058	0.110618	0.142245
19	P1	-13.888663	0.070522	-0.028947
22	P1	-15.793468	0.557891	0.218855
26	P1	-15.765584	0.248280	0.028212
30	P1	-16.572161	0.307716	0.065675

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.550089	0.092224	0.164500
7	P2	-22.433901	0.096096	0.084585
11	P2	-16.270679	0.102080	0.080572
15	P2	-7.194407	0.103121	0.041090
19	P2	-9.158453	0.096896	0.028548
22	P2	-17.940763	0.093847	-0.007449
26	P2	-16.213188	0.100685	0.009249
30	P2	-19.640676	0.084619	0.012828

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.202729	0.007350	0.021881
7	P3	-8.202729	0.007350	0.021881
11	P3	-8.202729	0.007350	0.021881
15	P3	-8.202729	0.007350	0.021881
19	P3	-8.202729	0.007350	0.021881
22	P3	-8.202729	0.007350	0.021881
26	P3	-8.202729	0.007350	0.021881
30	P3	-8.202729	0.007350	0.021881

#### 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	-3.734146	0.011344	-0.033673
7	P1	-2.742558	0.007586	-0.002788
11	P1	-2.880471	0.013112	-0.067406
15	P1	-3.493621	0.020688	-0.093655
19	P1	-3.380175	0.012007	-0.009276
22	P1	-5.140058	0.021730	-0.060733
26	P1	-5.848330	0.017884	0.032952
30	P1	-5.232769	0.027767	0.044279
3	P1	-11.541717	0.041887	-0.037113
7	P1	-9.920717	0.047836	-0.046566
11	P1	-10.125485	0.055257	-0.166188
15	P1	-10.664535	0.097990	-0.143813
19	P1	-15.457402	0.062152	0.045864
22	P1	-20.451435	1.242715	0.406086
26	P1	-16.637341	0.352298	0.434769
30	P1	-18.212067	0.327138	-0.152551

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.328802	0.038275	0.235067
7	P2	-22.767153	0.070411	0.234199
11	P2	-11.374384	0.025951	0.152430
15	P2	-4.887368	0.028193	0.075898
19	P2	-6.896227	0.025118	0.051593
22	P2	-8.183196	0.025897	0.030011
26	P2	-23.956087	0.025742	0.024491
30	P2	-22.087038	0.018850	0.012366

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.039430	0.002642	0.034182
7	P3	-8.039312	0.002652	0.033940
11	P3	-8.039295	0.002655	0.034112
15	P3	-8.039381	0.002659	0.033756
19	P3	-8.039538	0.002654	0.033790
22	P3	-8.039474	0.002652	0.034155
26	P3	-8.039512	0.002655	0.033623
30	P3	-8.039375	0.002665	0.034296

## 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	0.000566105
	stdev	1.64317e-07
MEAN Q	mean	0.000526097
	stdev	2.09649e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140055
	stdev	0.00115142
STDEV Q	mean	0.140417
	stdev	0.00117105



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006021[012]

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_1PNPDE20060210_052944_000000042045_00048_20643_2658.N1	0	248
ASA_IMM_1PNPDE20060210_054350_000000352045_00048_20643_2602.N1	1	0
ASA_IMM_1PNPDE20060211_005021_000002372045_00059_20654_2678.N1	1	0
ASA_WVS_1PNPDE20060210_040752_000000002045_00047_20642_0876.N1	1	0
ASA_WVS_1PNPDE20060211_065800_000000002045_00063_20658_0912.N1	1	0
ASA_WSM_1PNPDK20060211_123449_000000362045_00066_20661_2941.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)


Ascending

Descending

### 7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Ascending

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)



<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

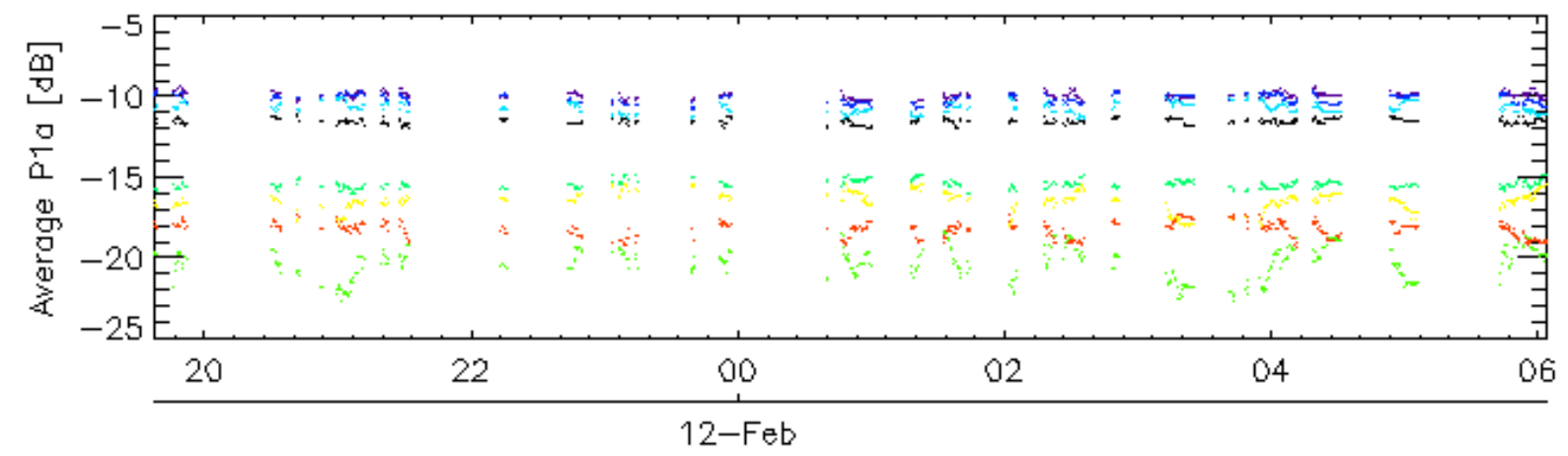
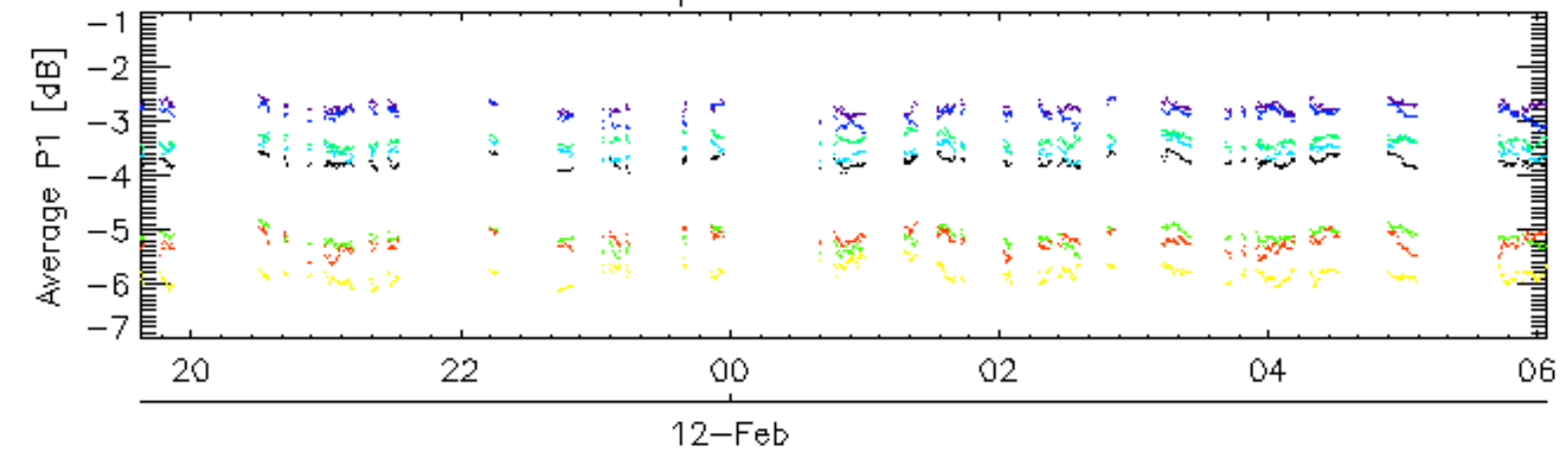
### 7.5 - Absolute Doppler for GM1

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

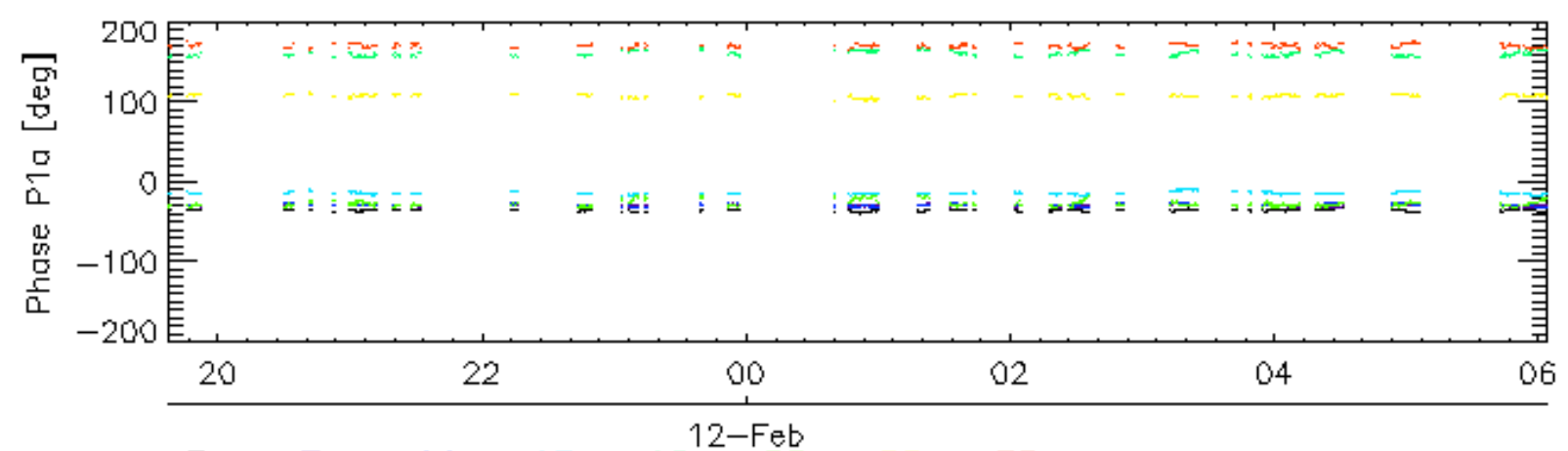
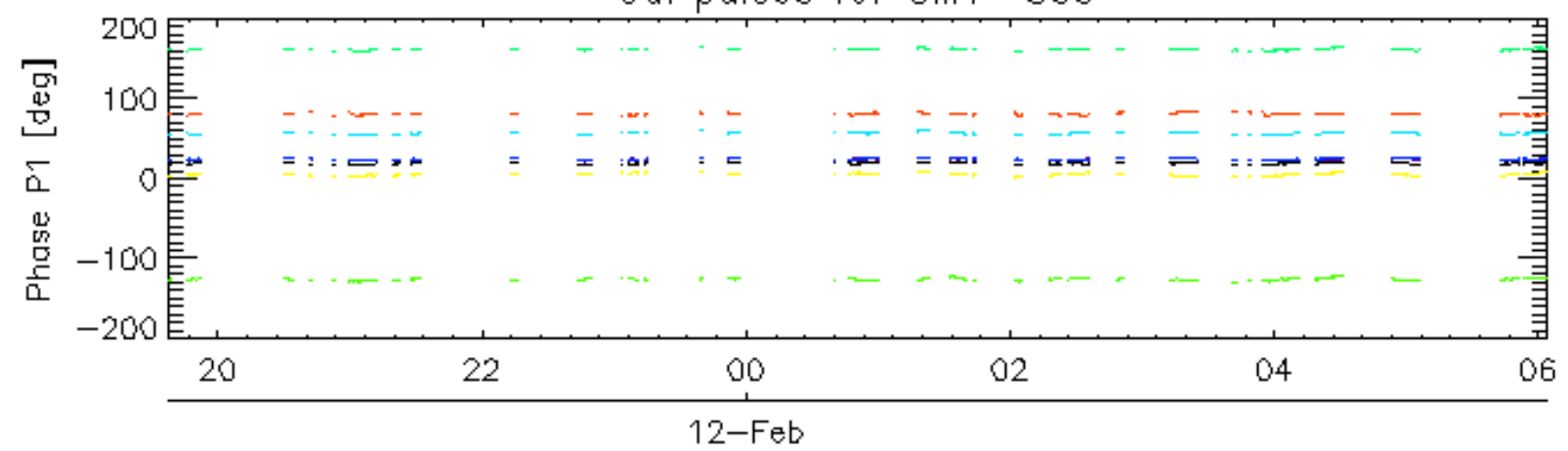
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

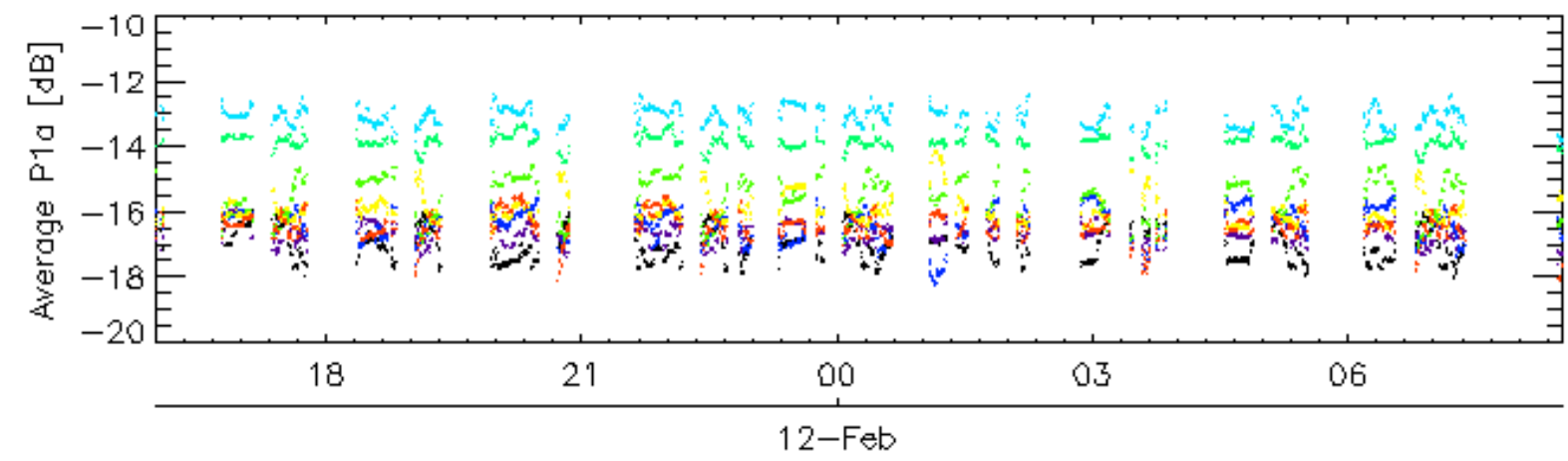
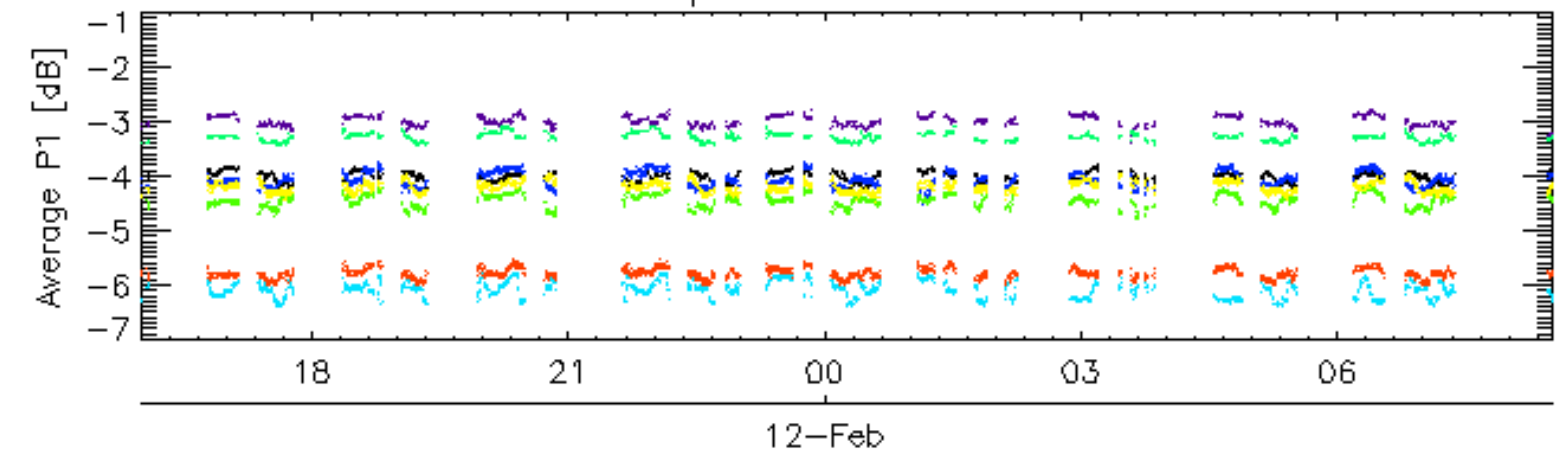


Cal pulses for GM1 SS3

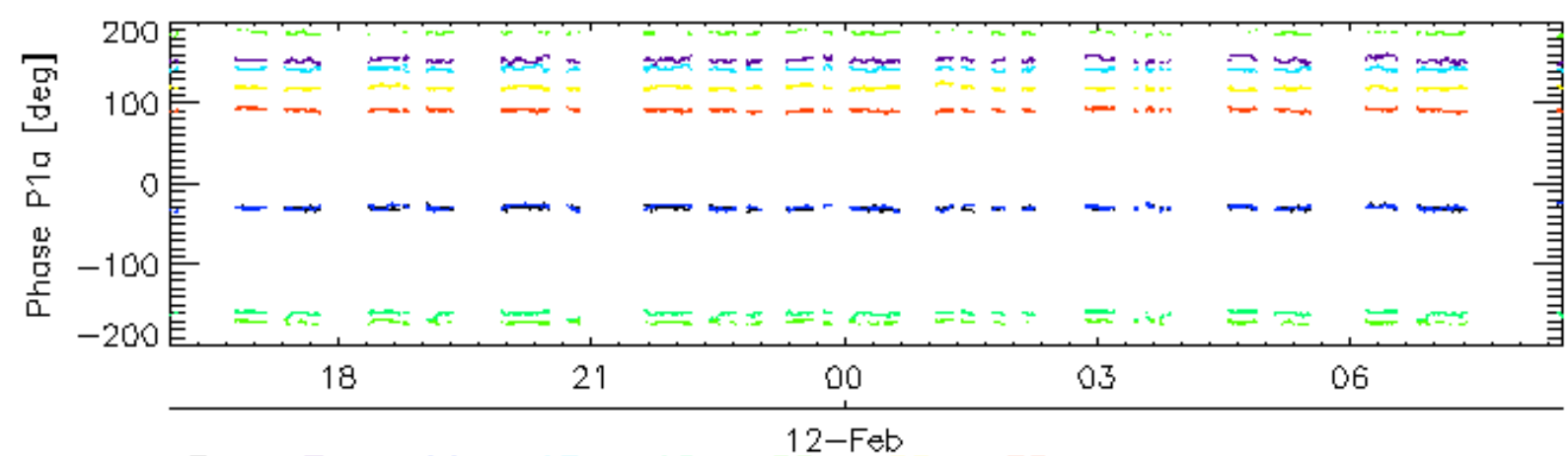
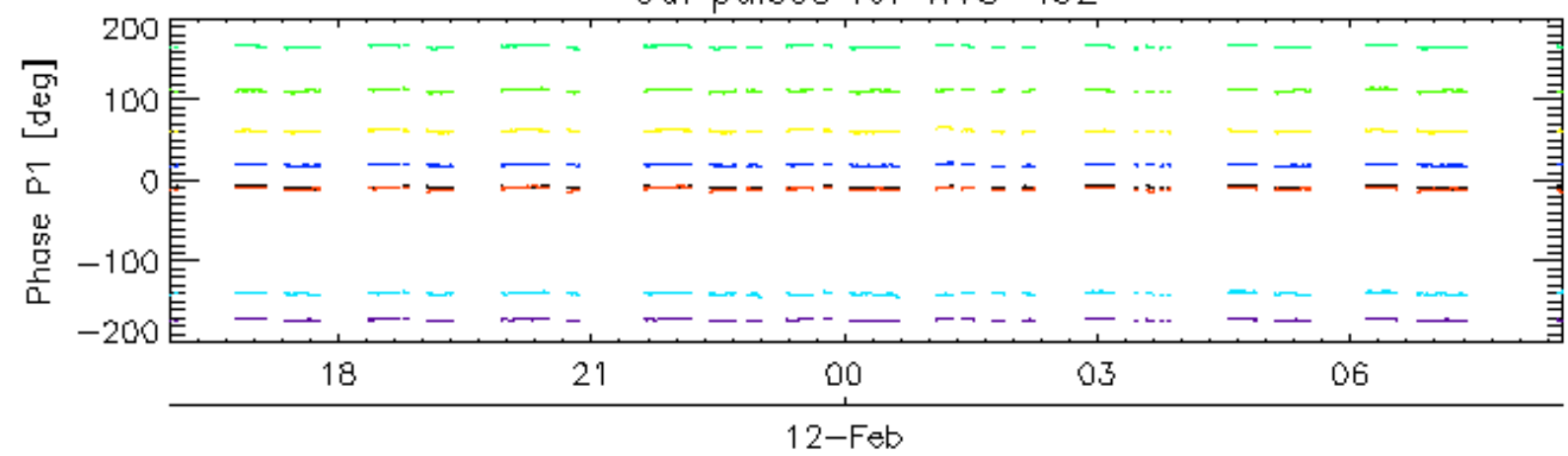


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

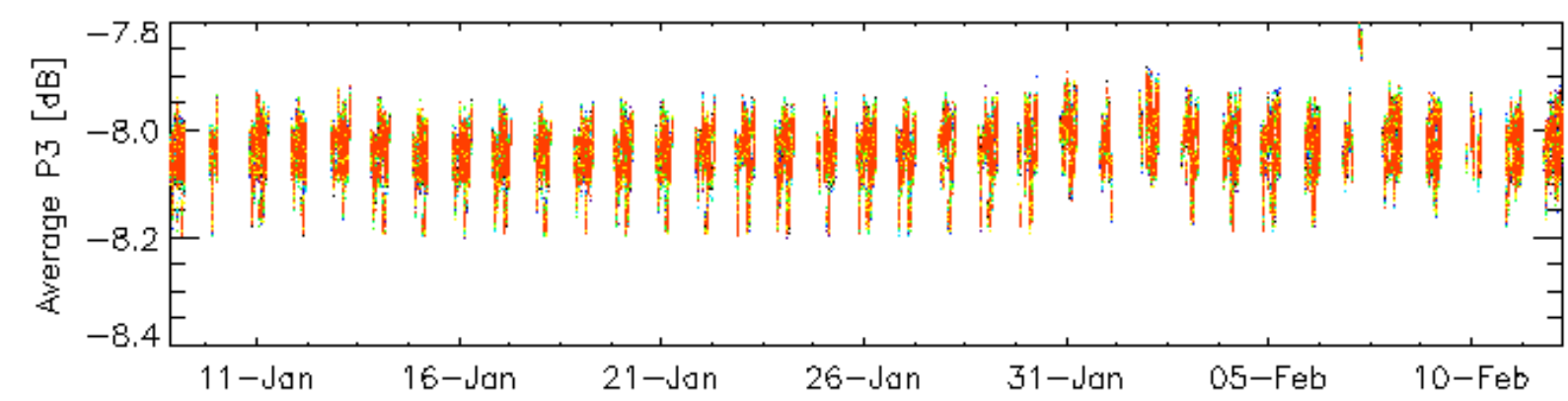
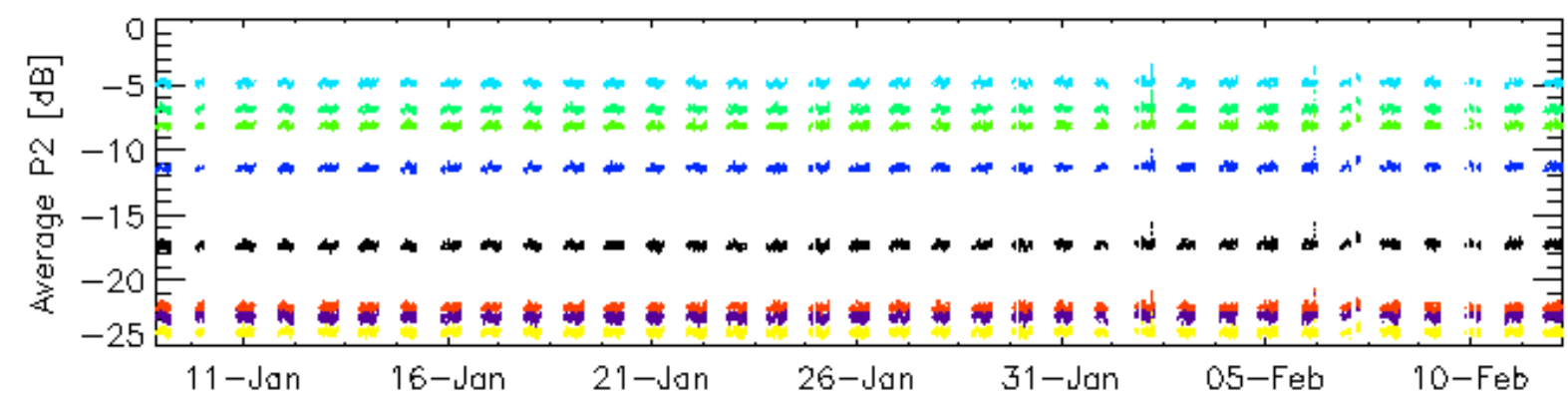
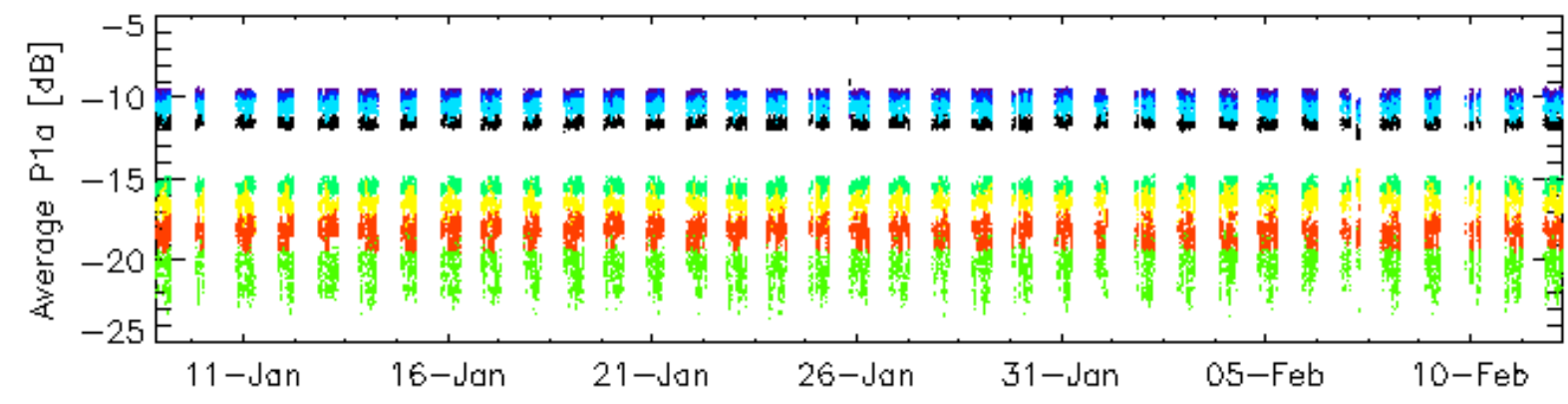
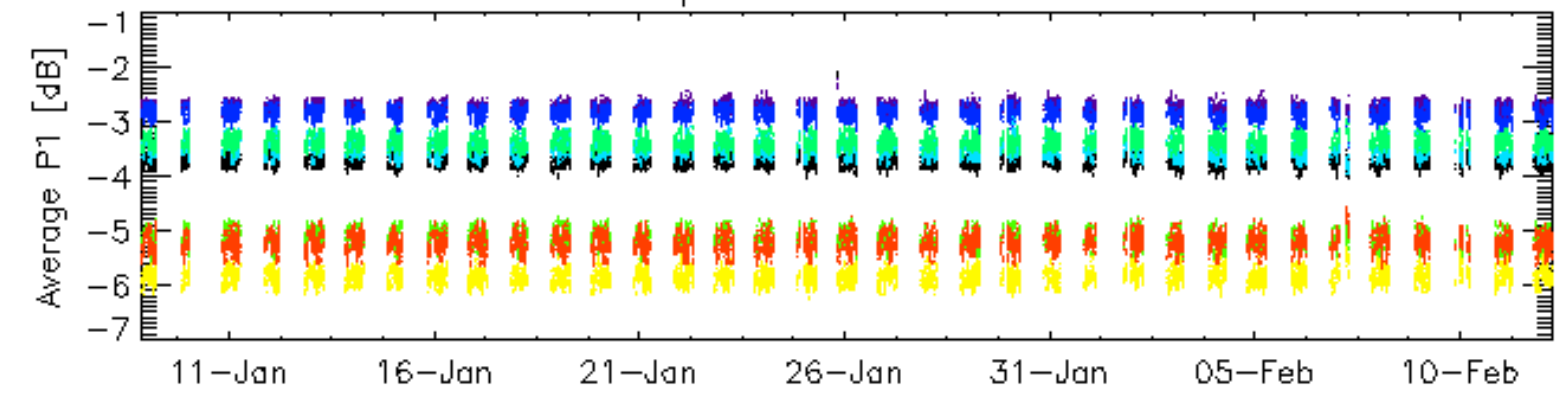


Cal pulses for WVS IS2



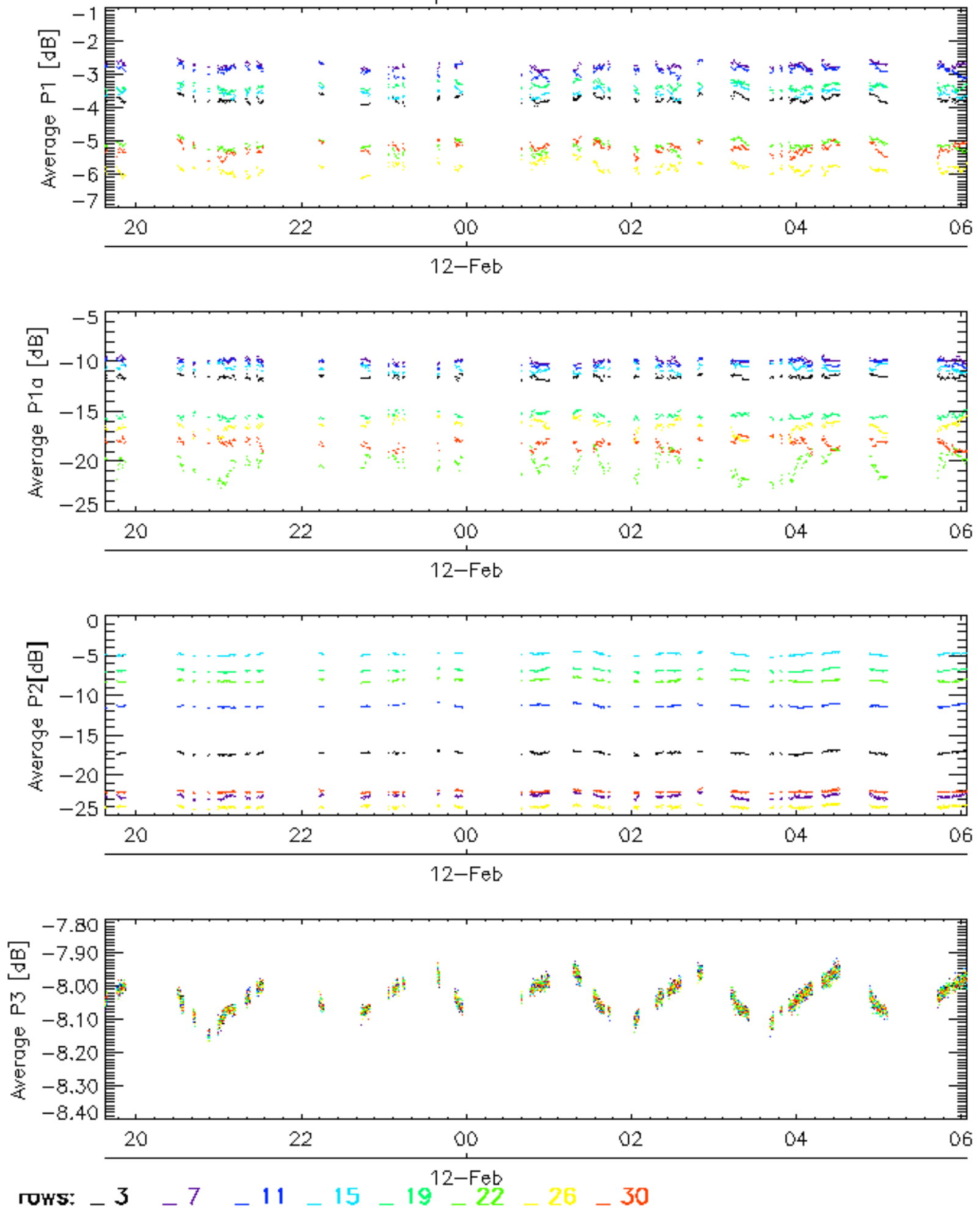
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

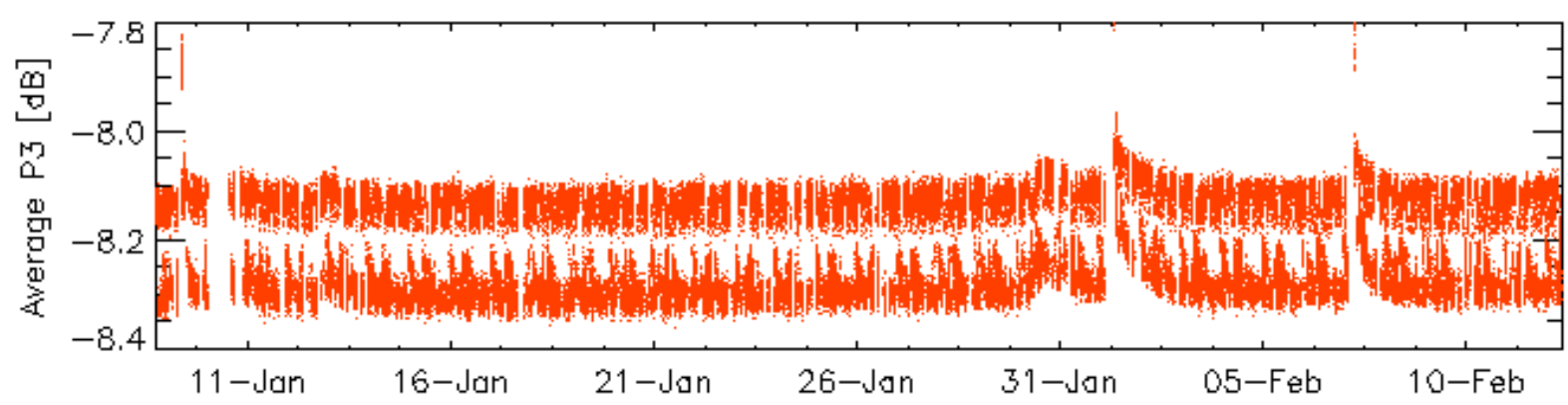
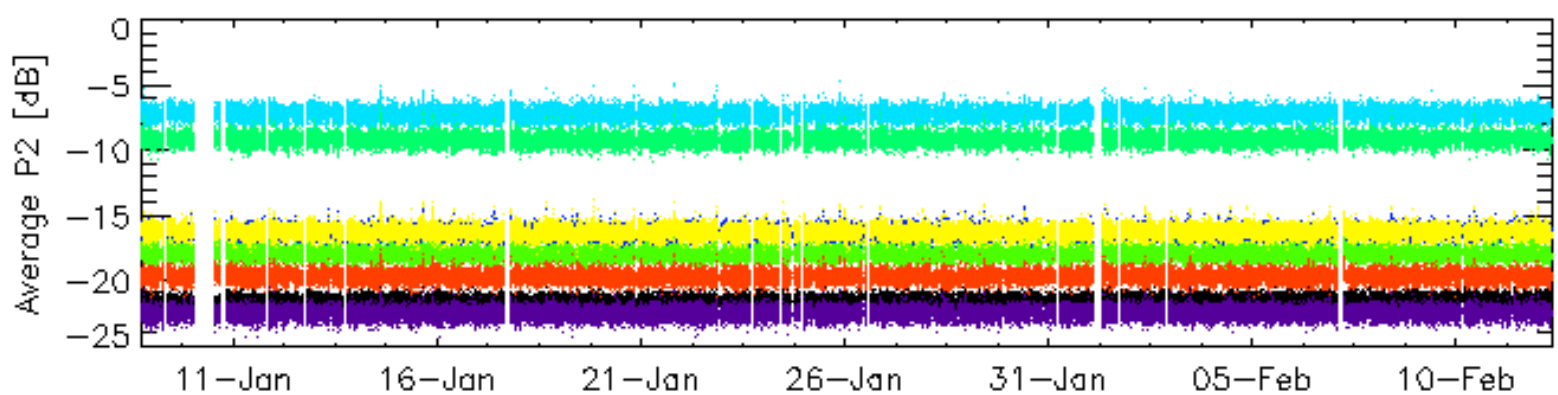
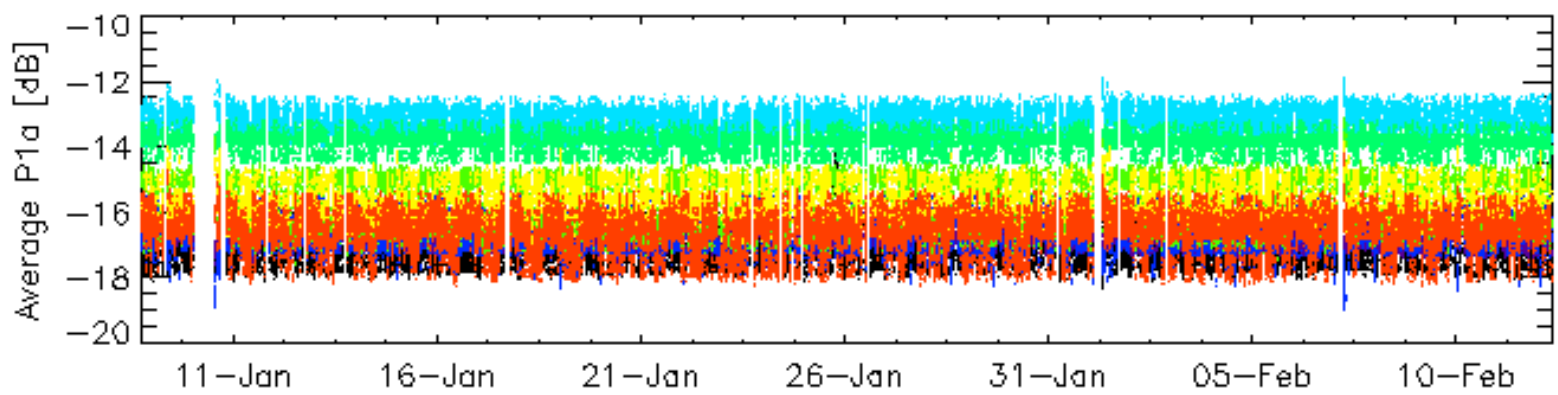
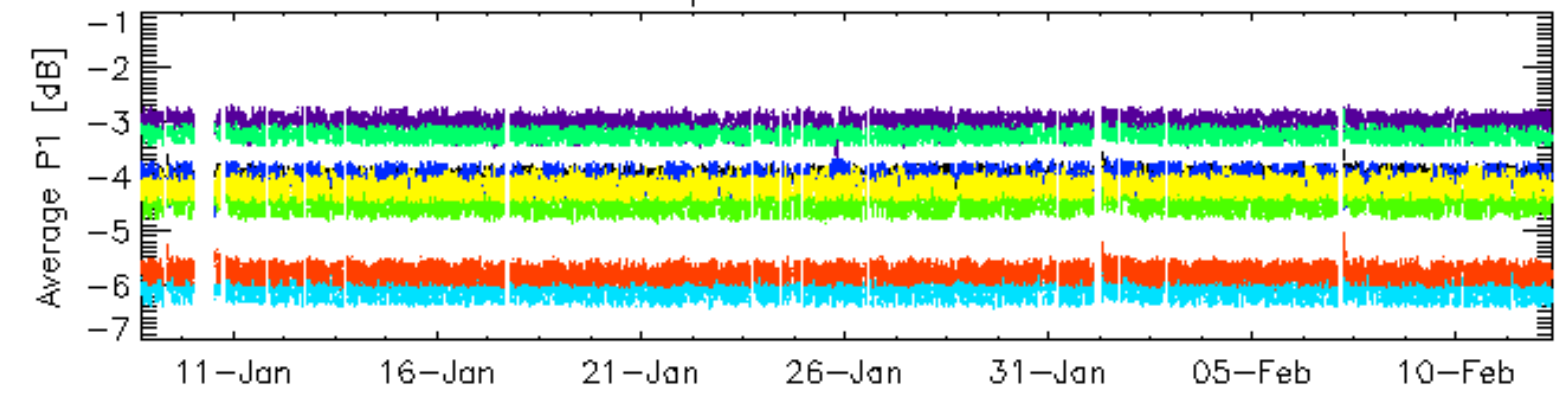


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

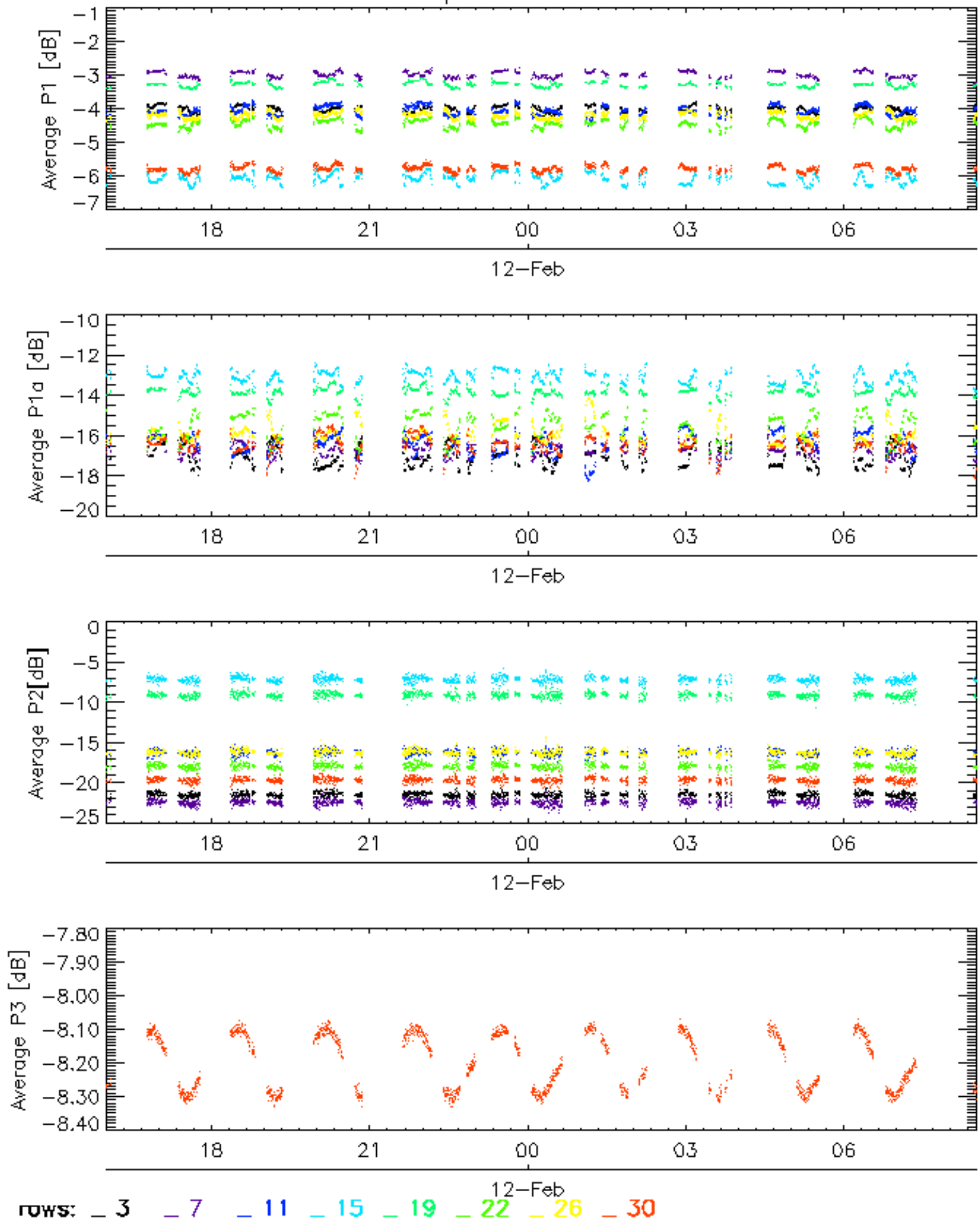


Cal pulses for WVS IS2



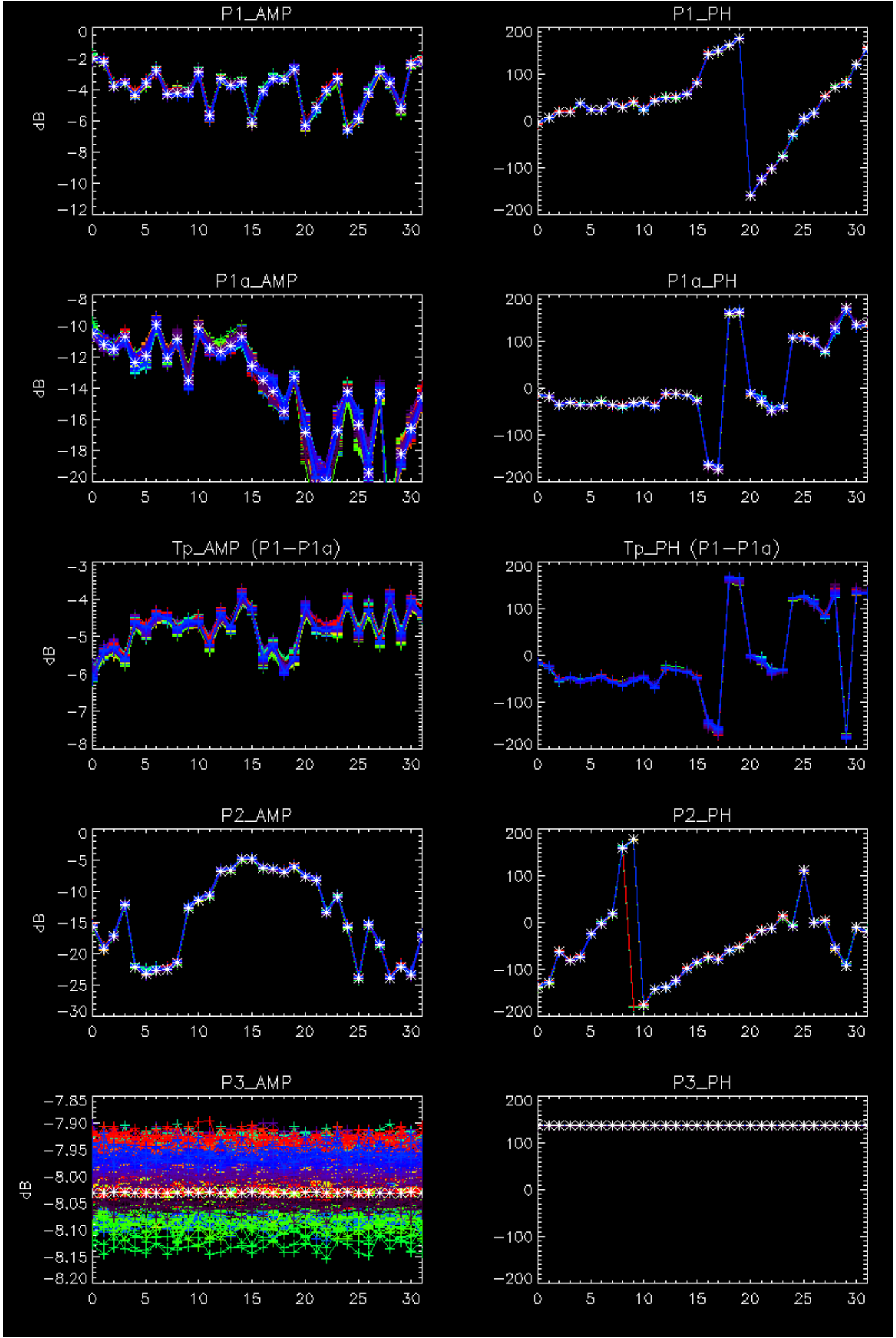
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

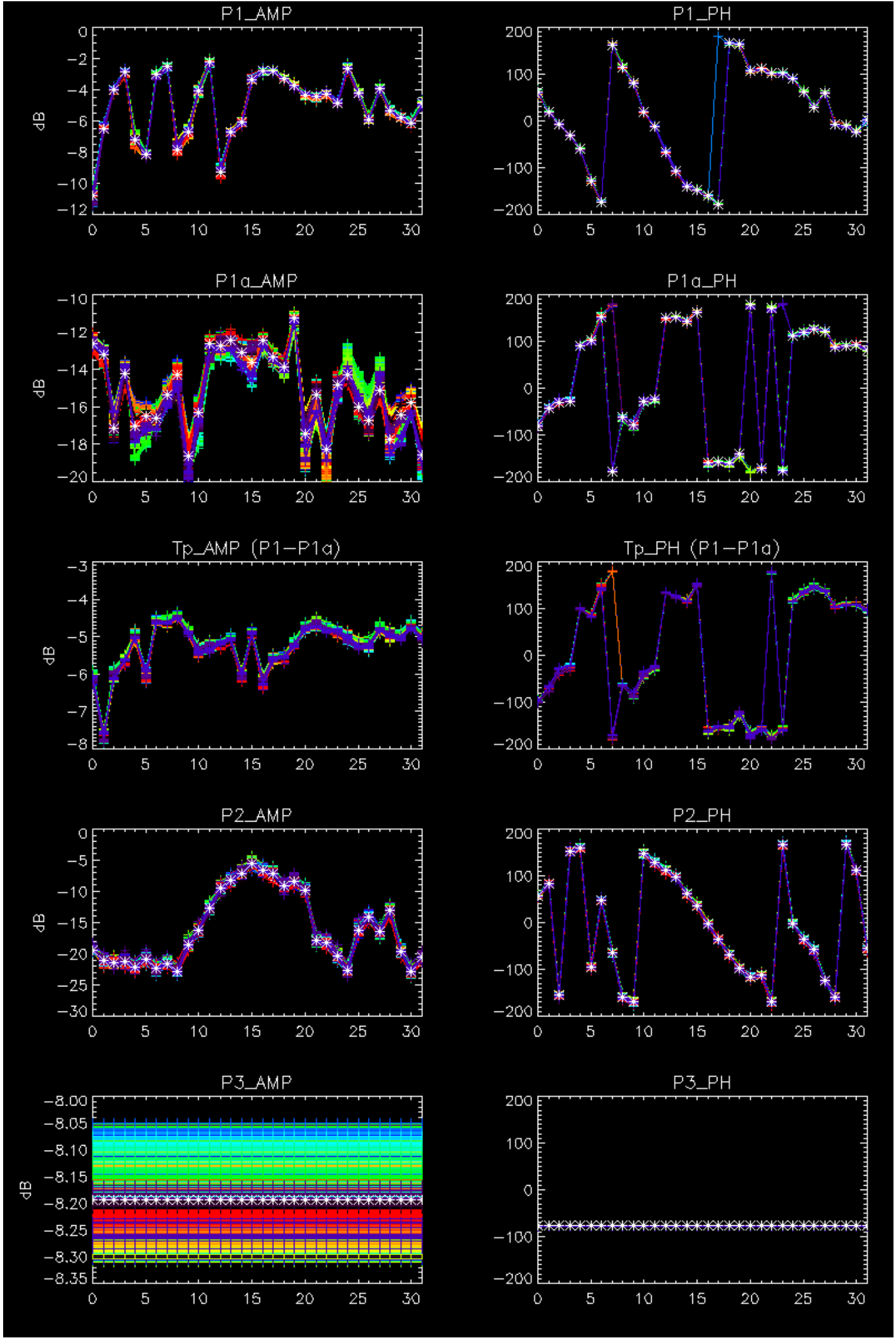
Cal pulses for WVS IS2



No anomalies observed.





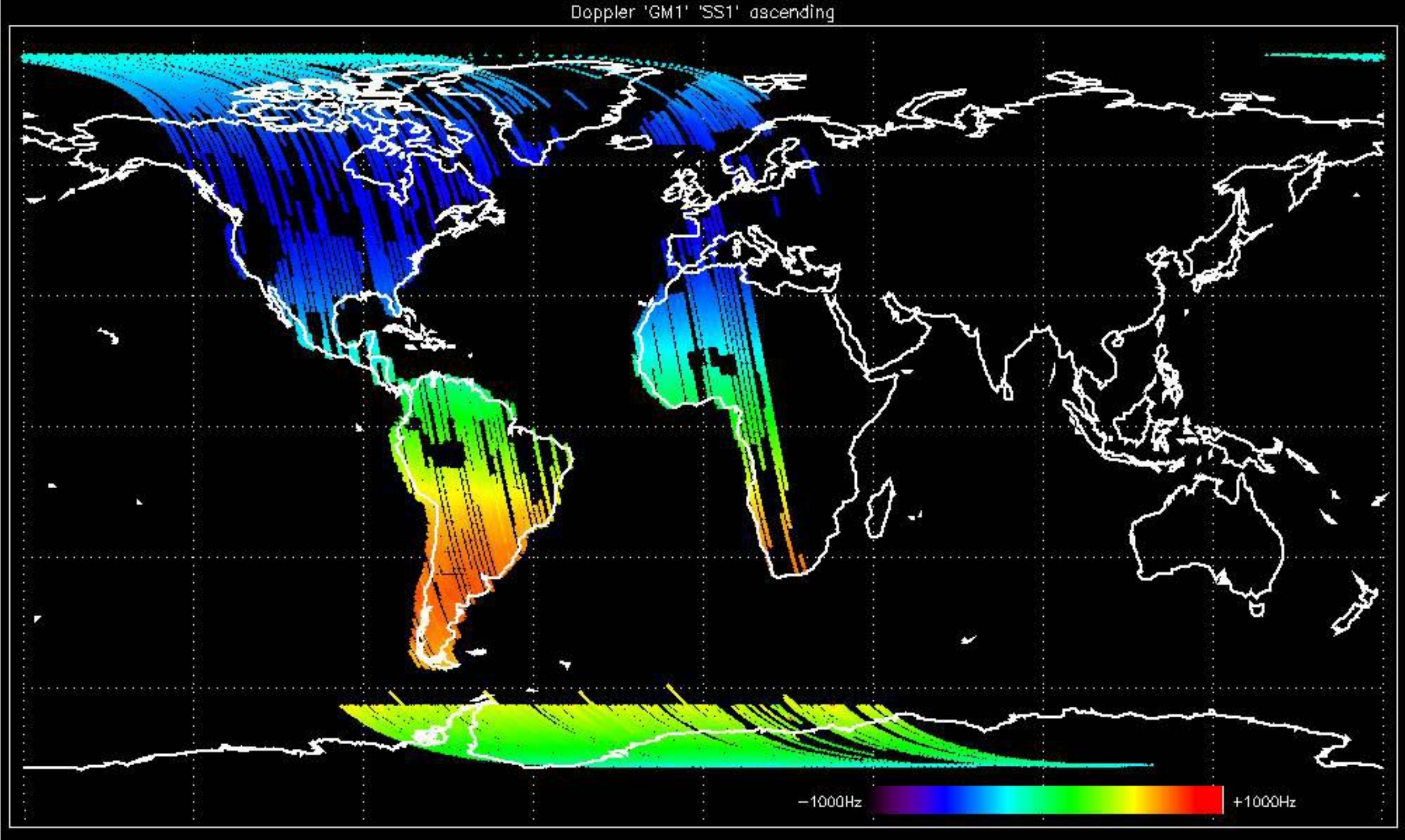


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



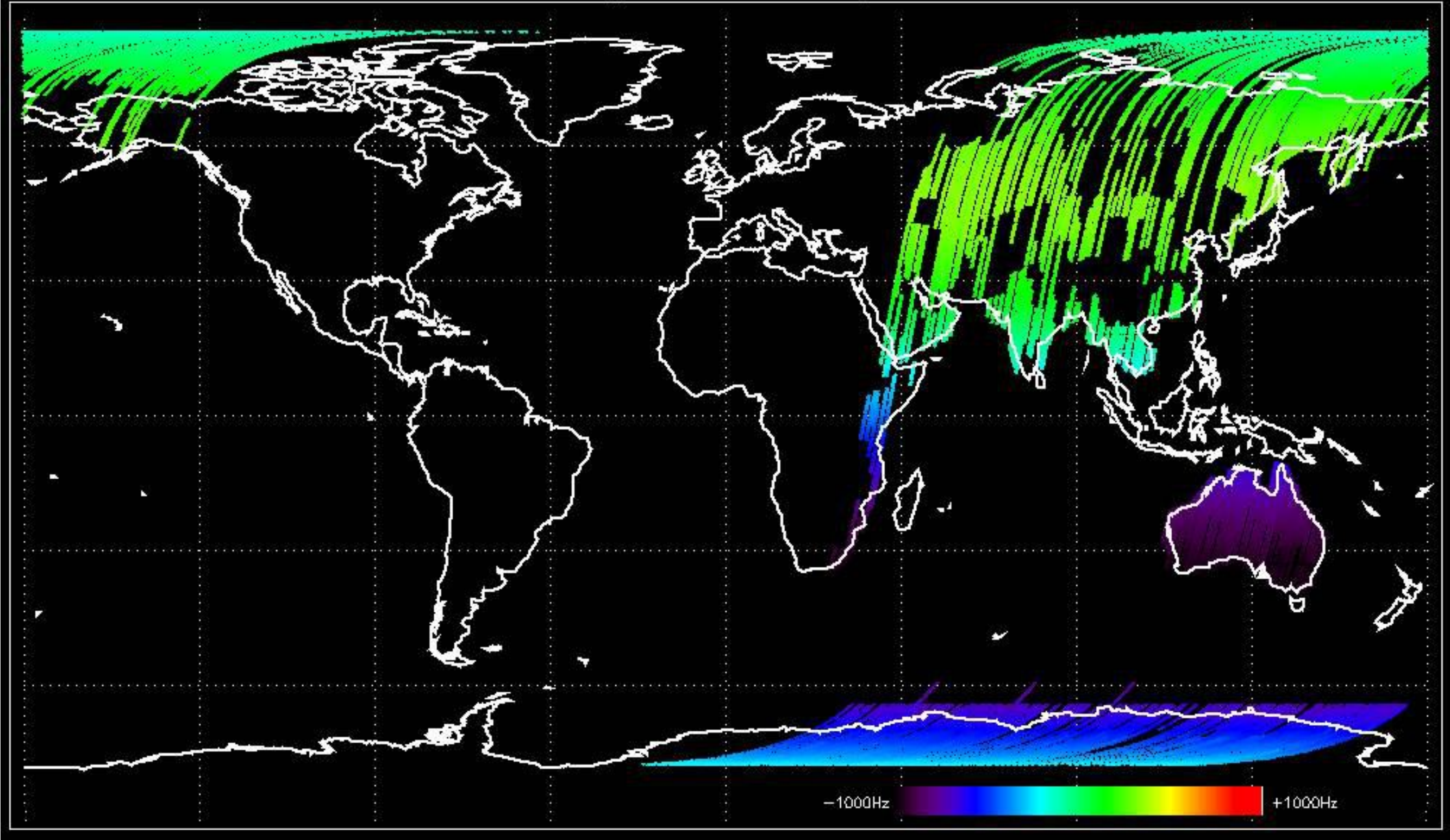


Doppler 'GM1' 'SS1' ascending



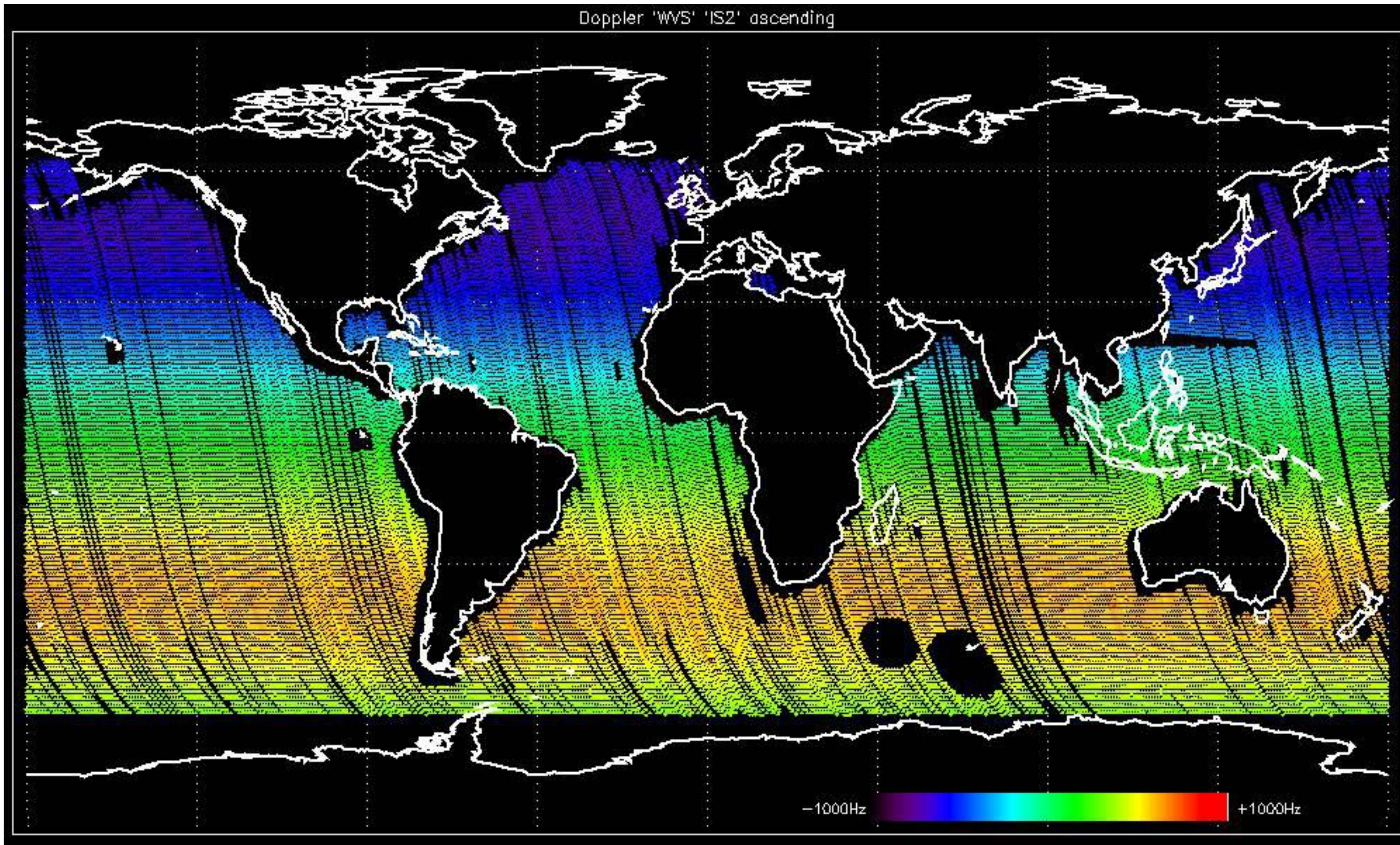


Doppler 'GM1' 'SS1' descending



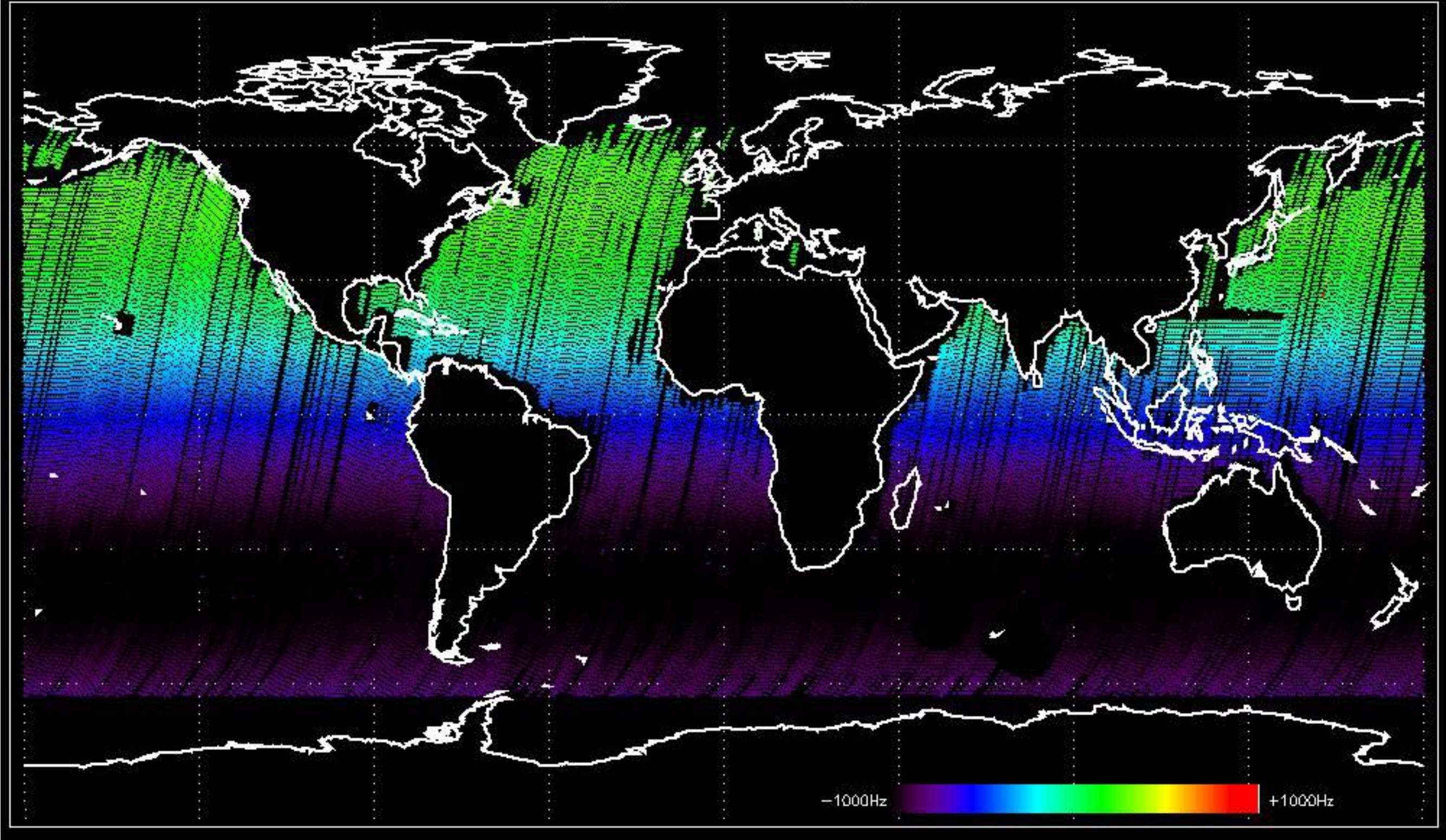


Doppler 'WVS' 'IS2' ascending

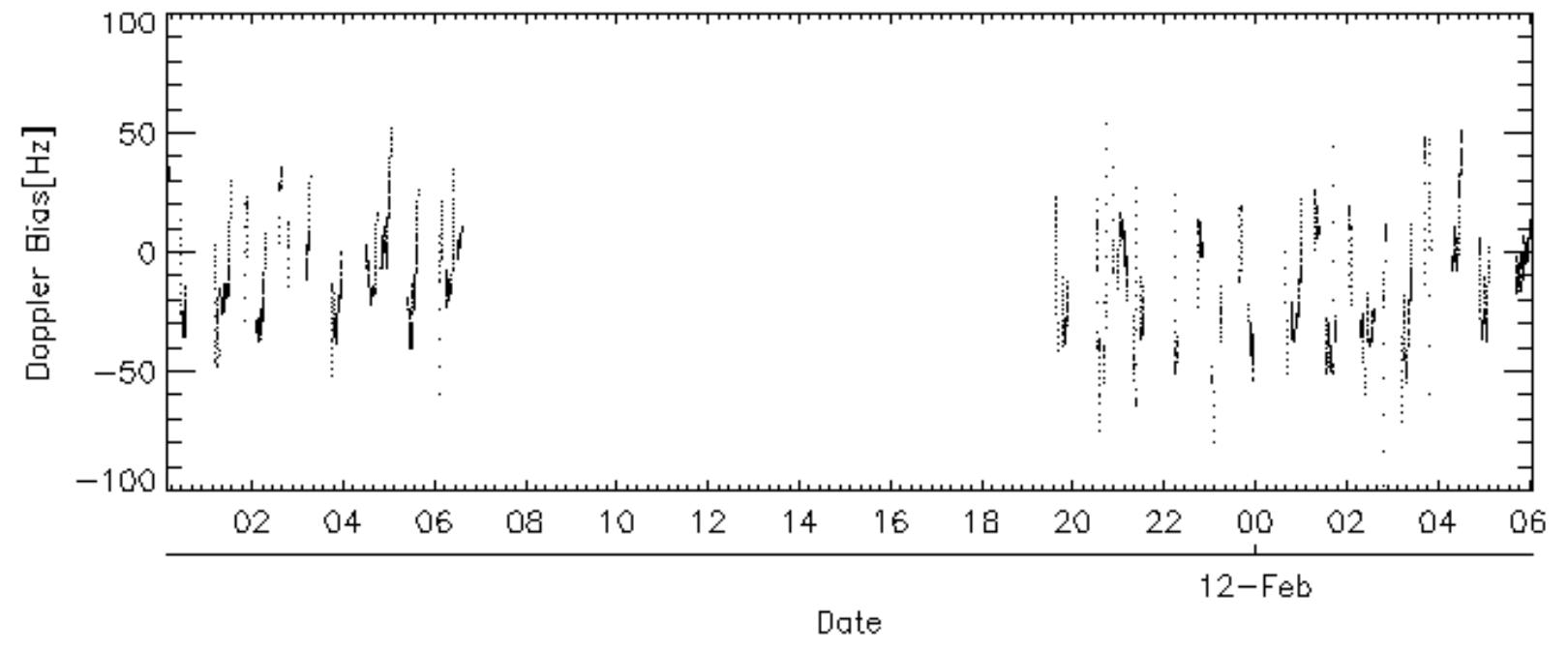
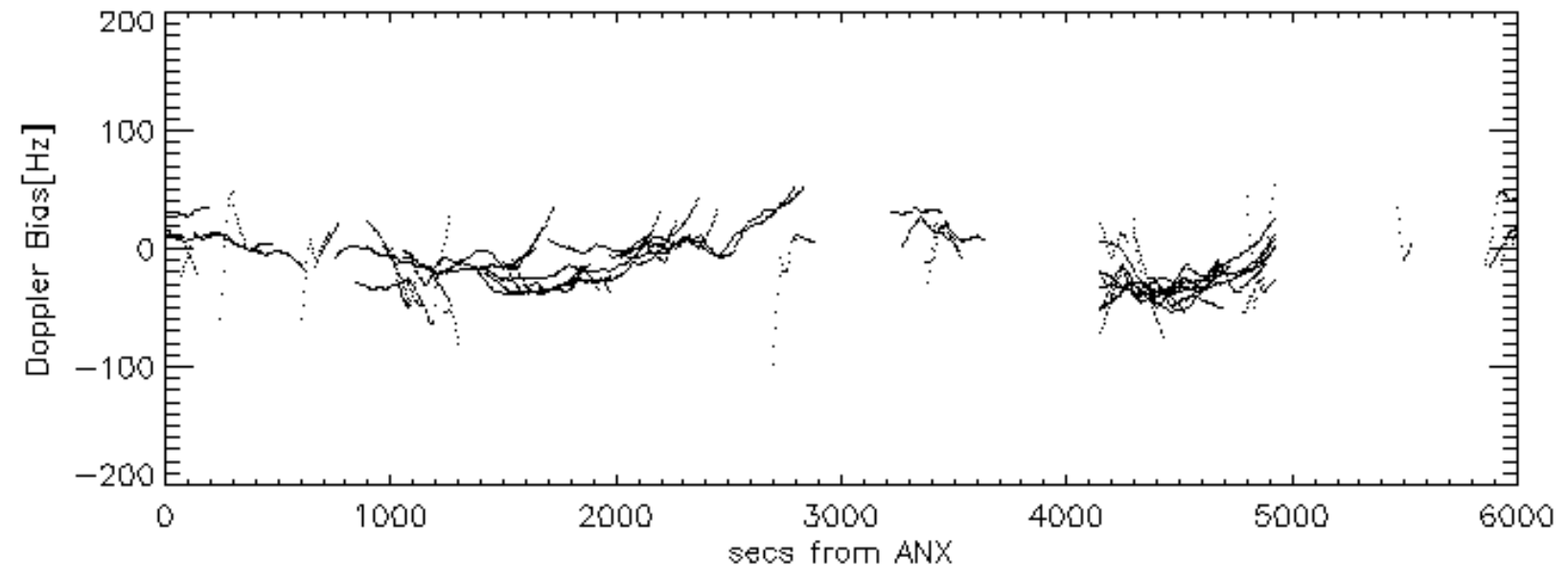
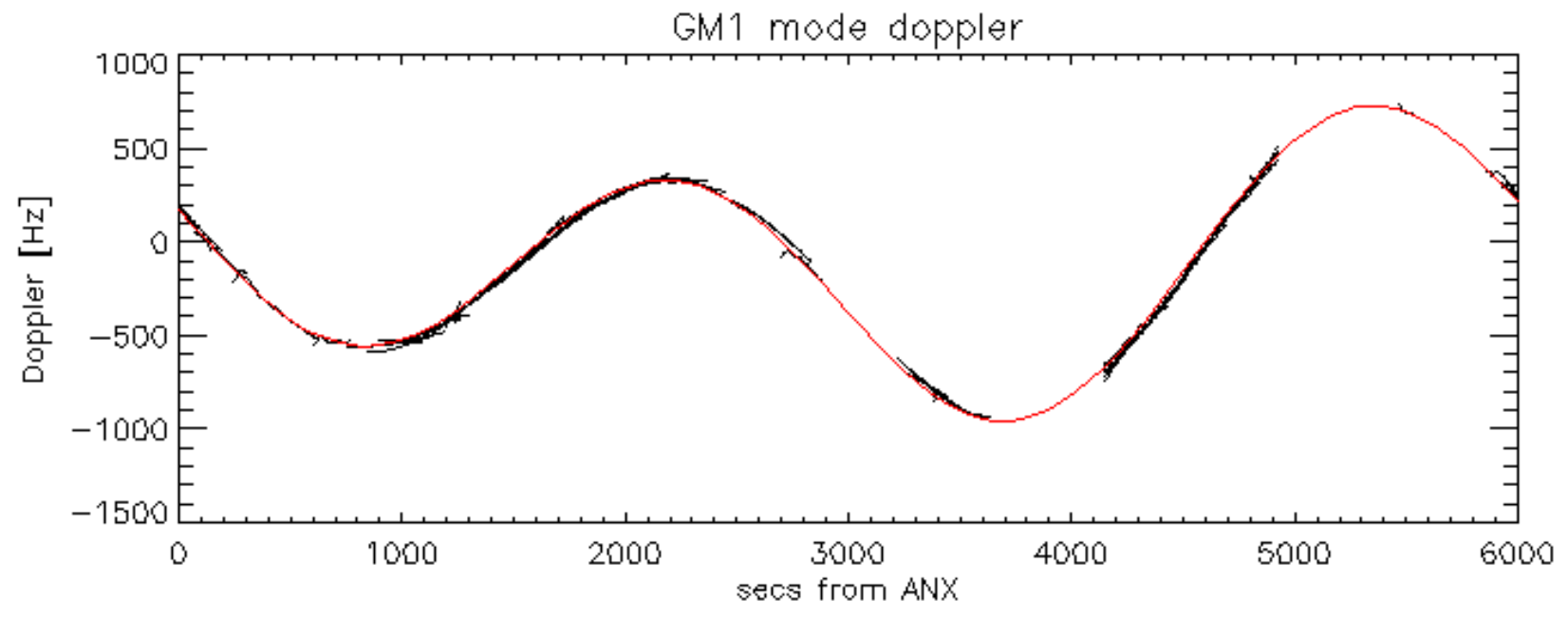


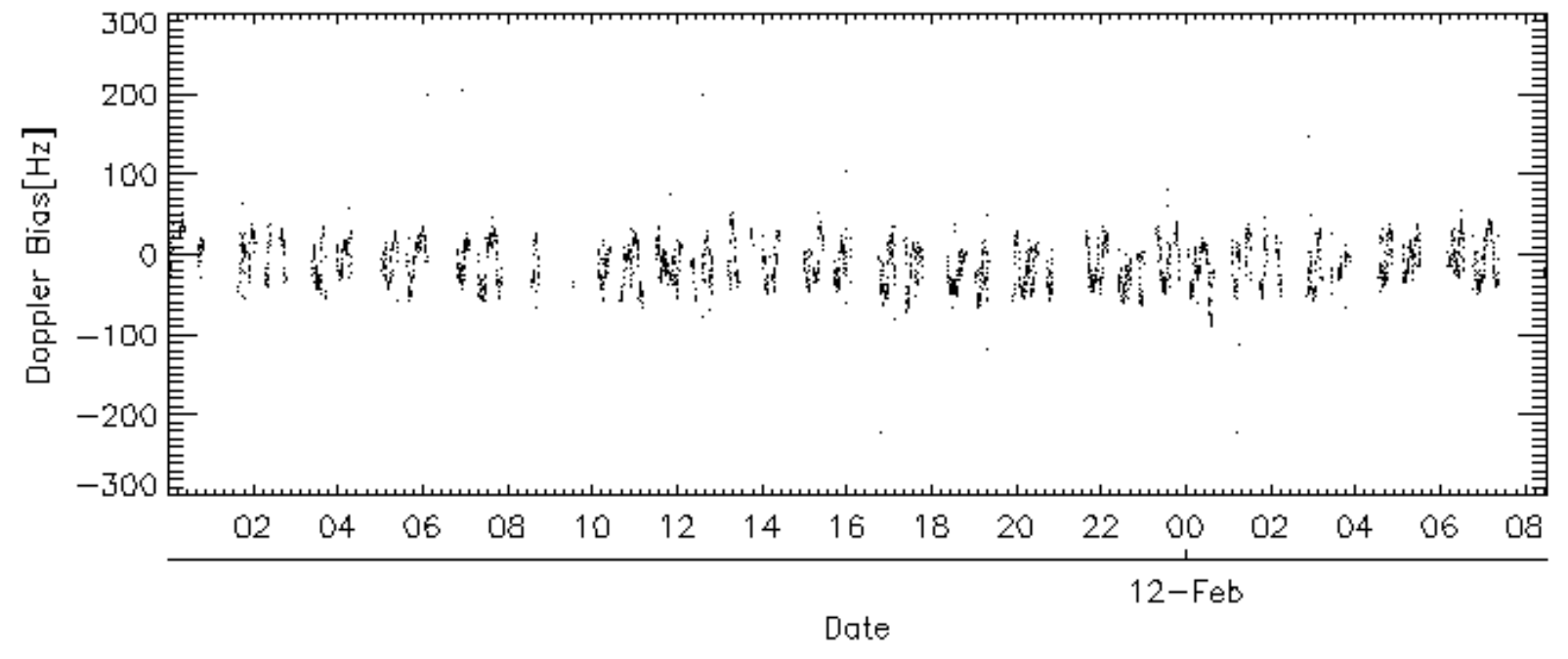
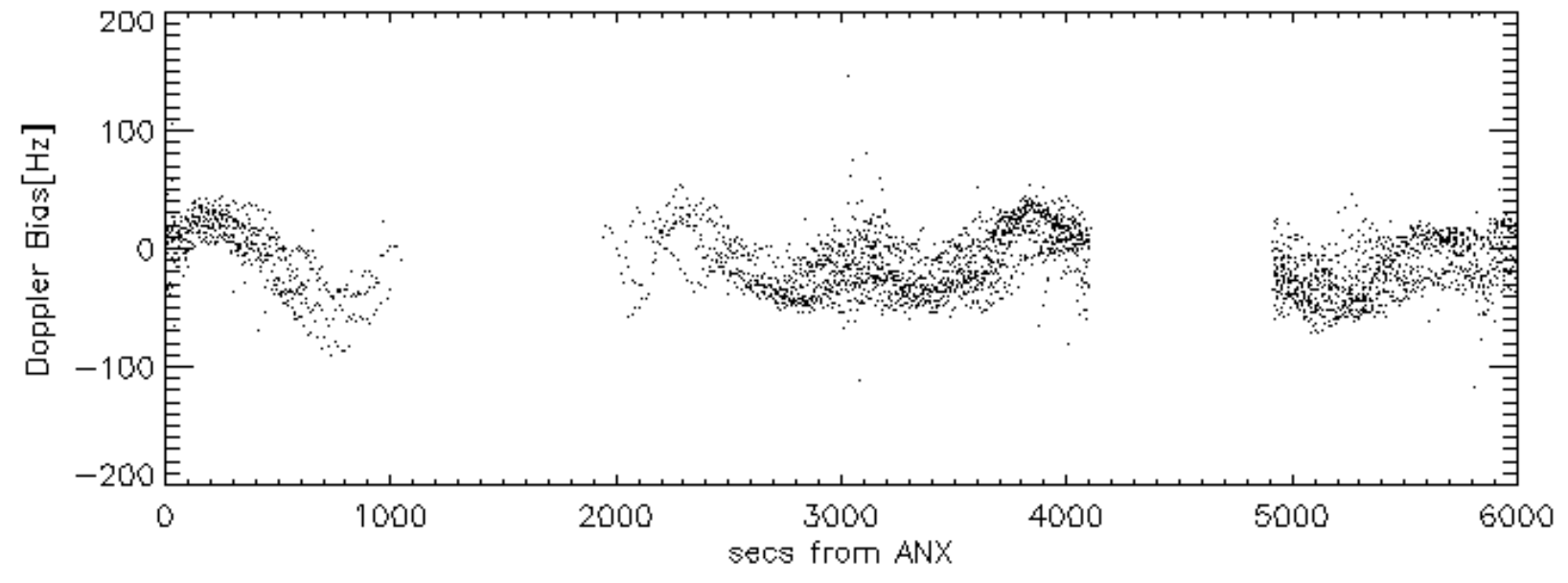
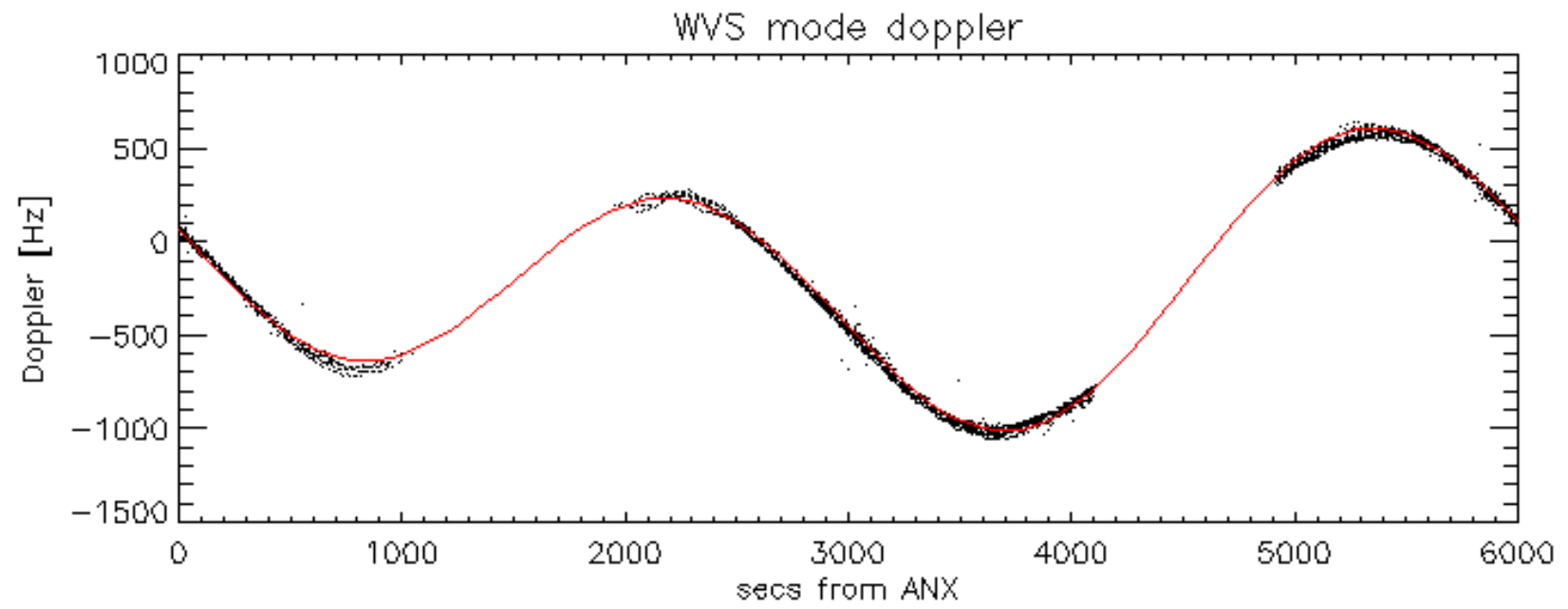


Doppler 'WVS' 'IS2' descending

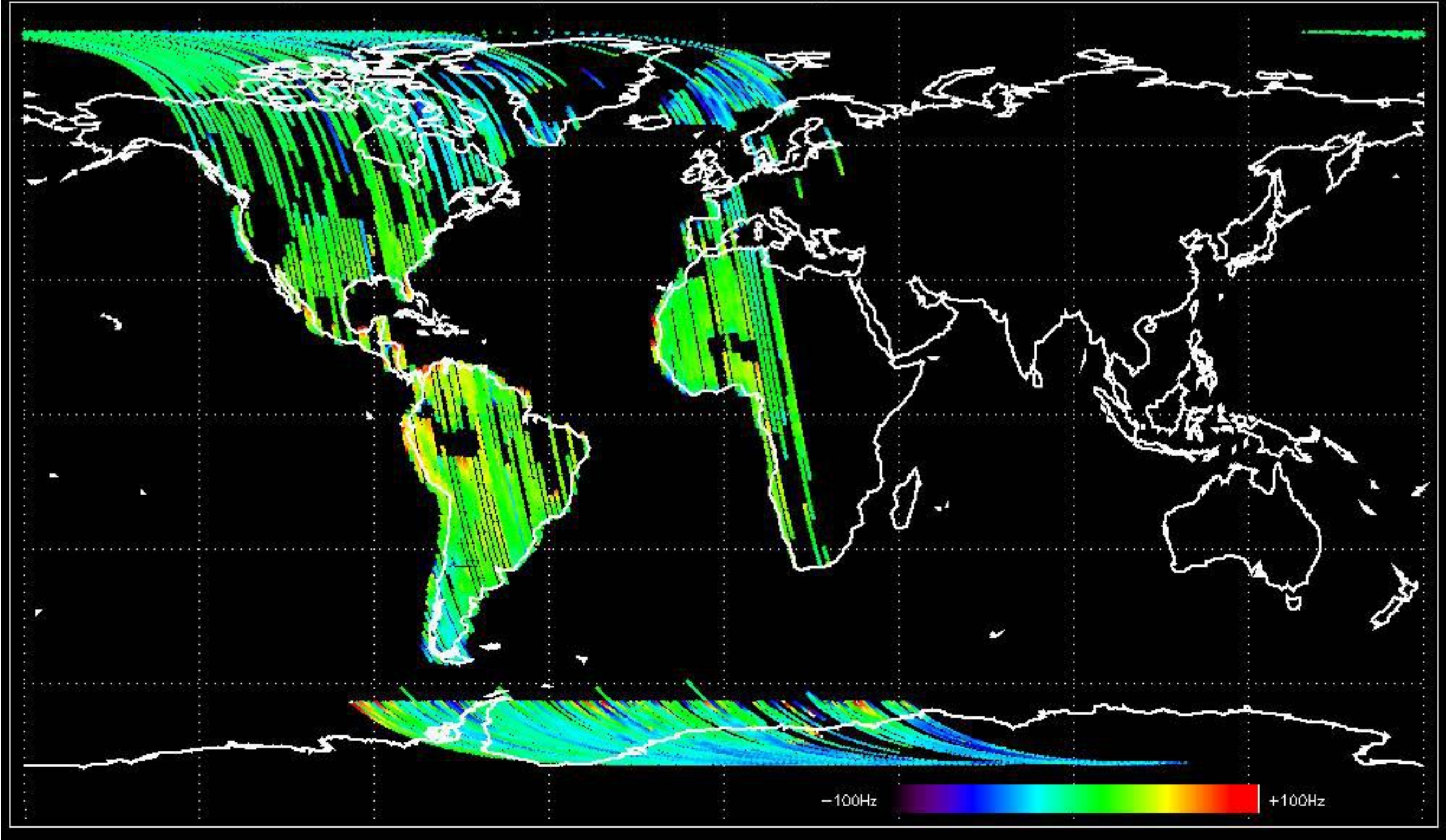






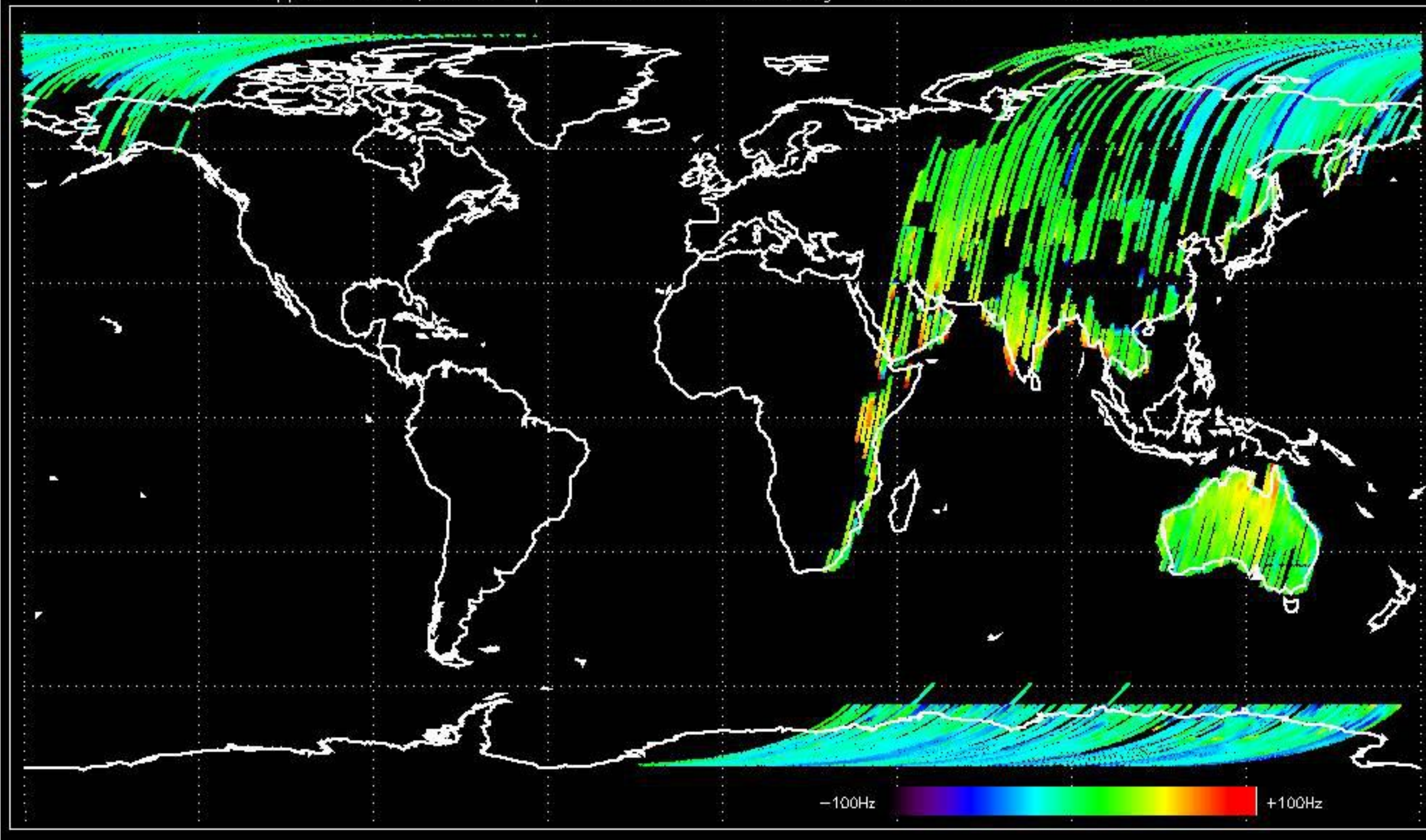


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -11.297288 Hz



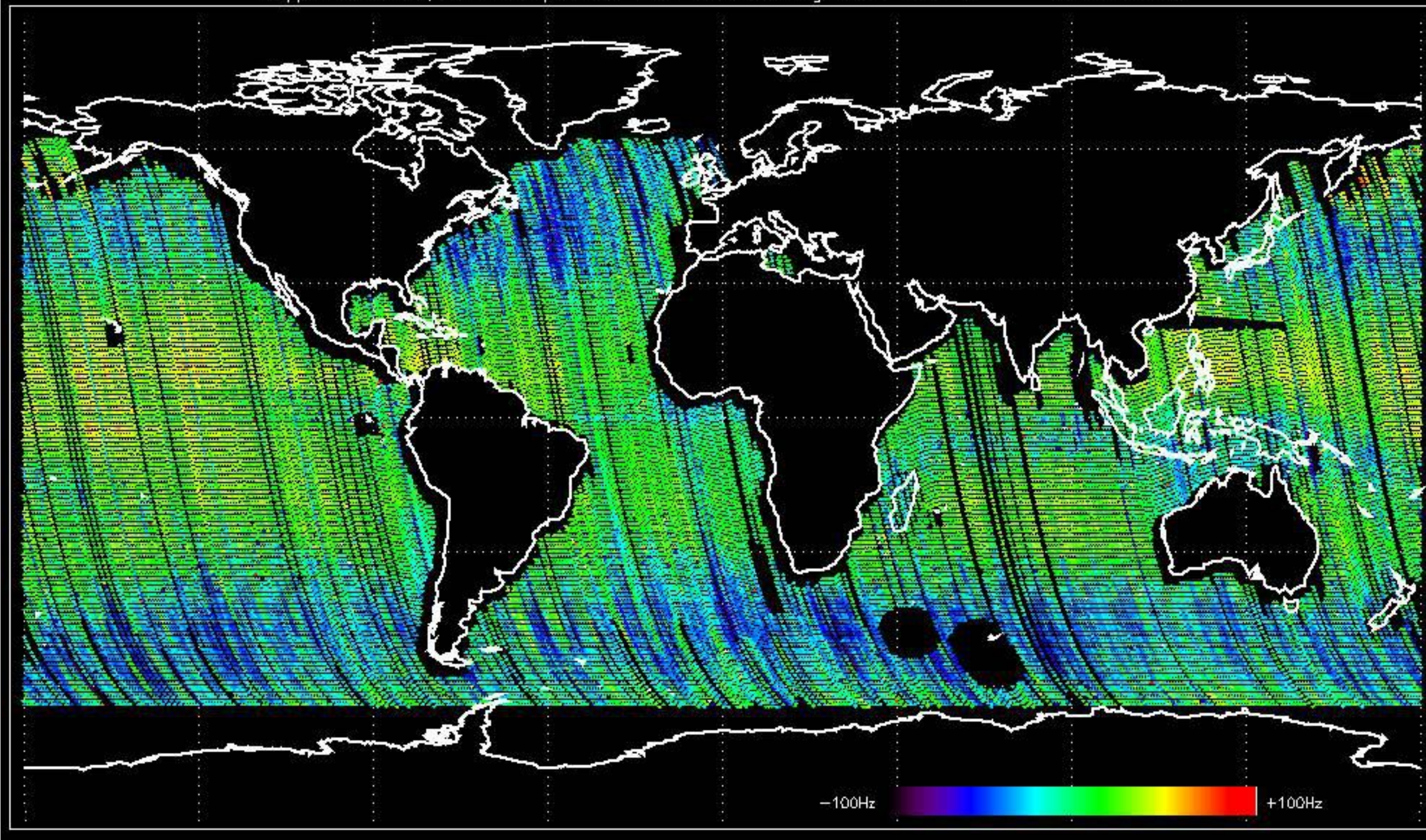


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.779315 Hz



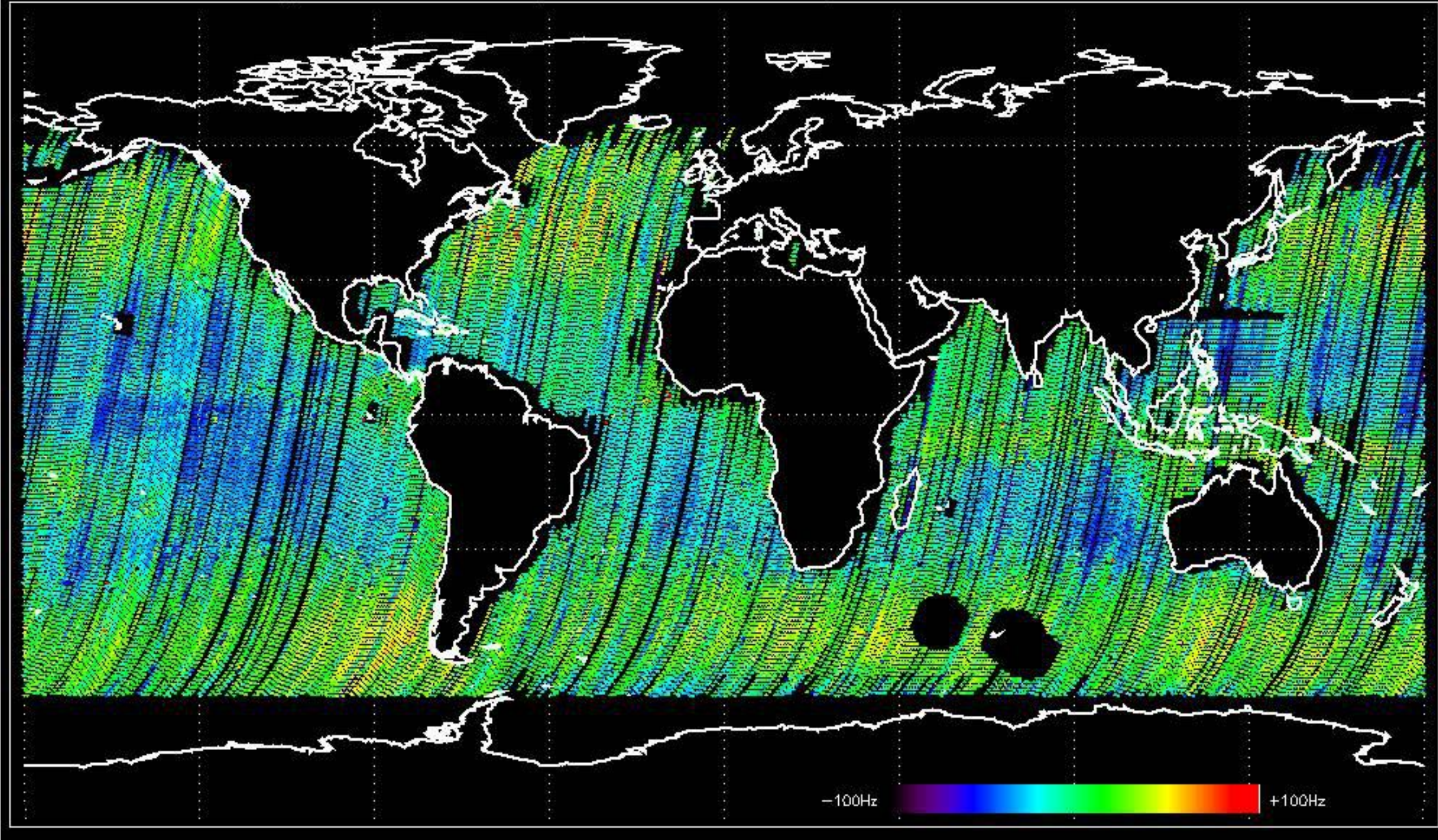


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.3382816 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.102966 Hz





No anomalies observed on available MS products:

No anomalies observed.



















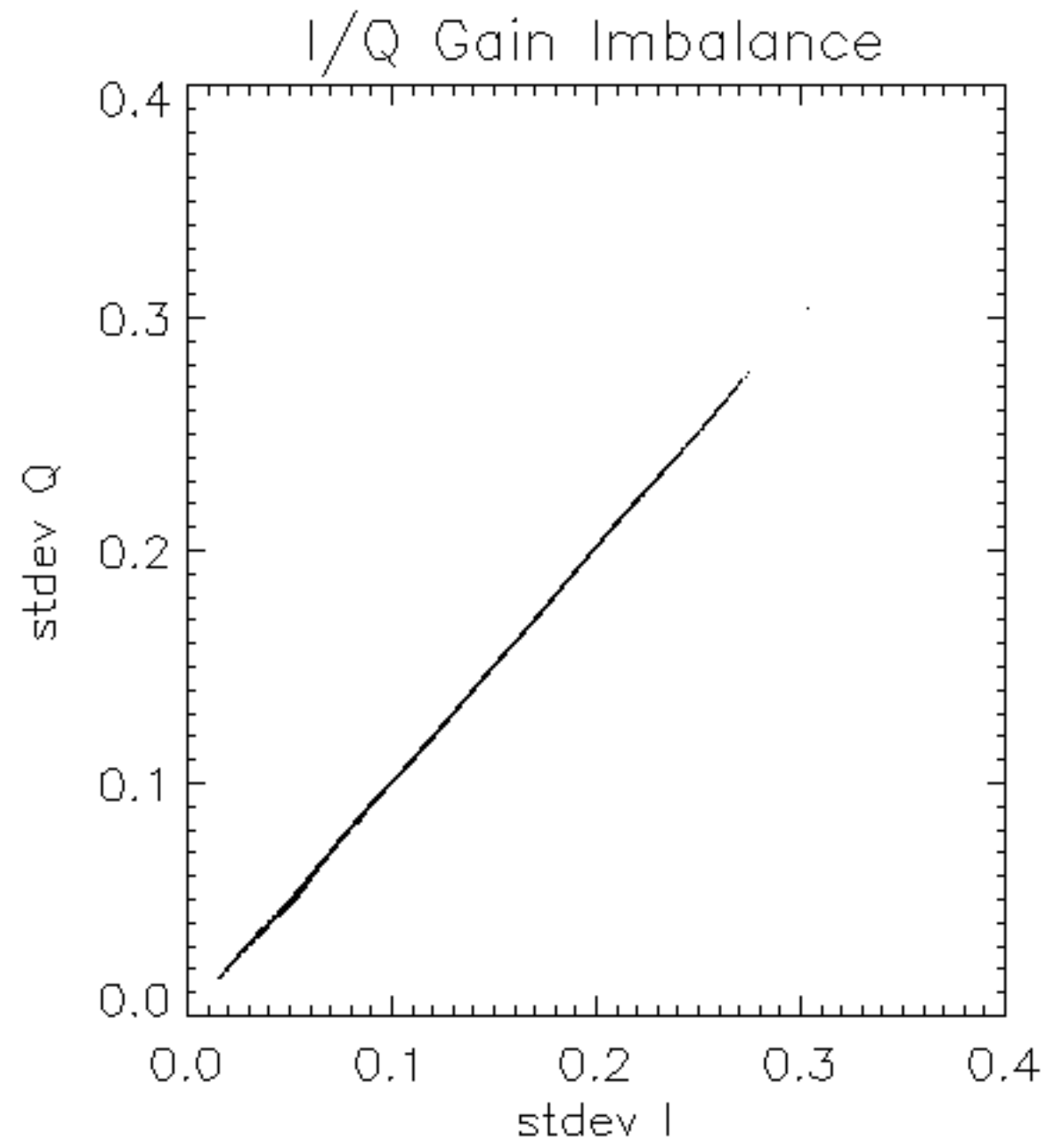


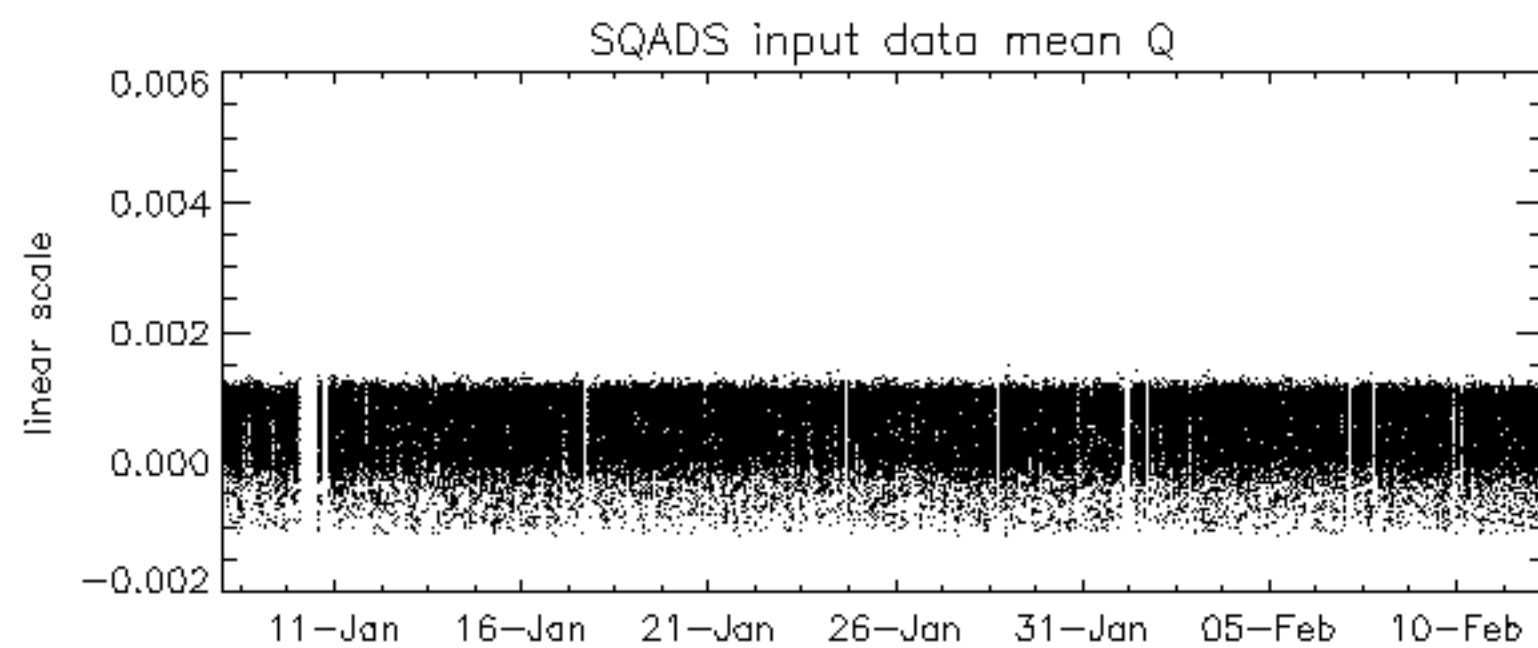
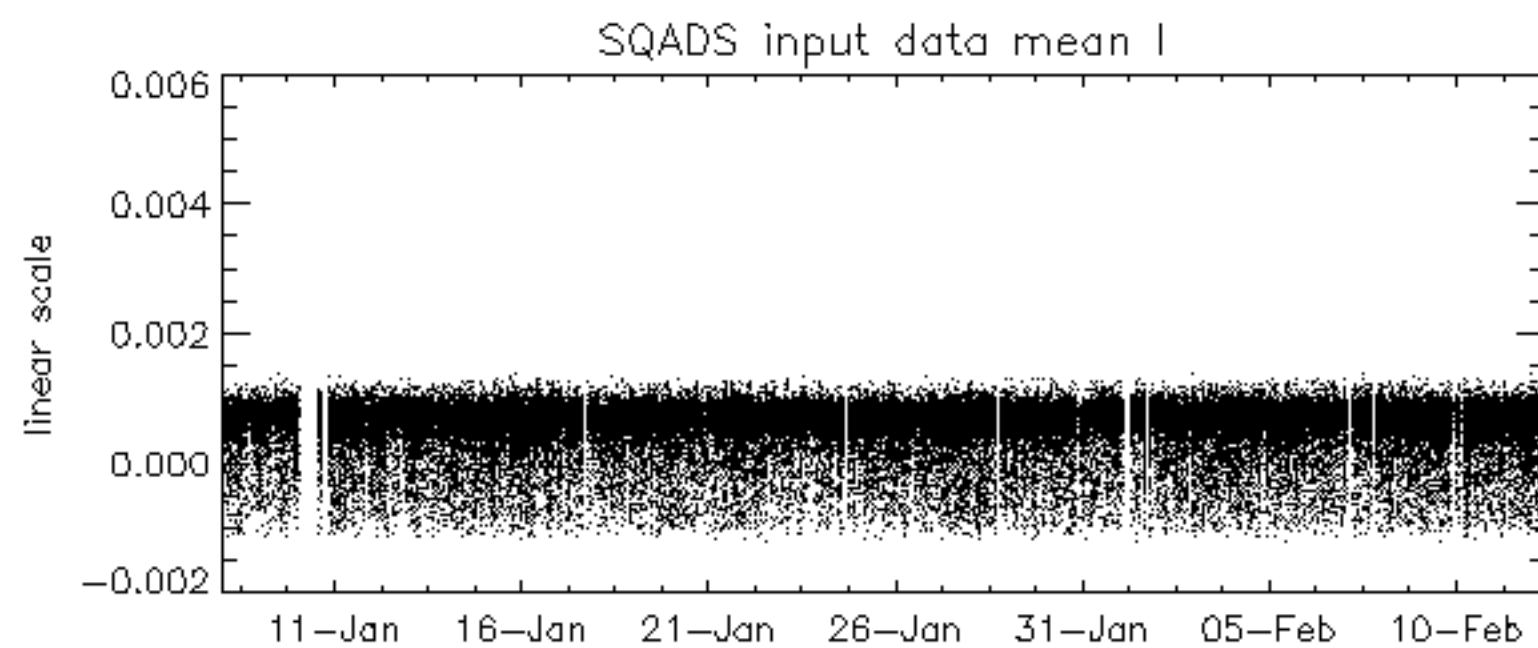
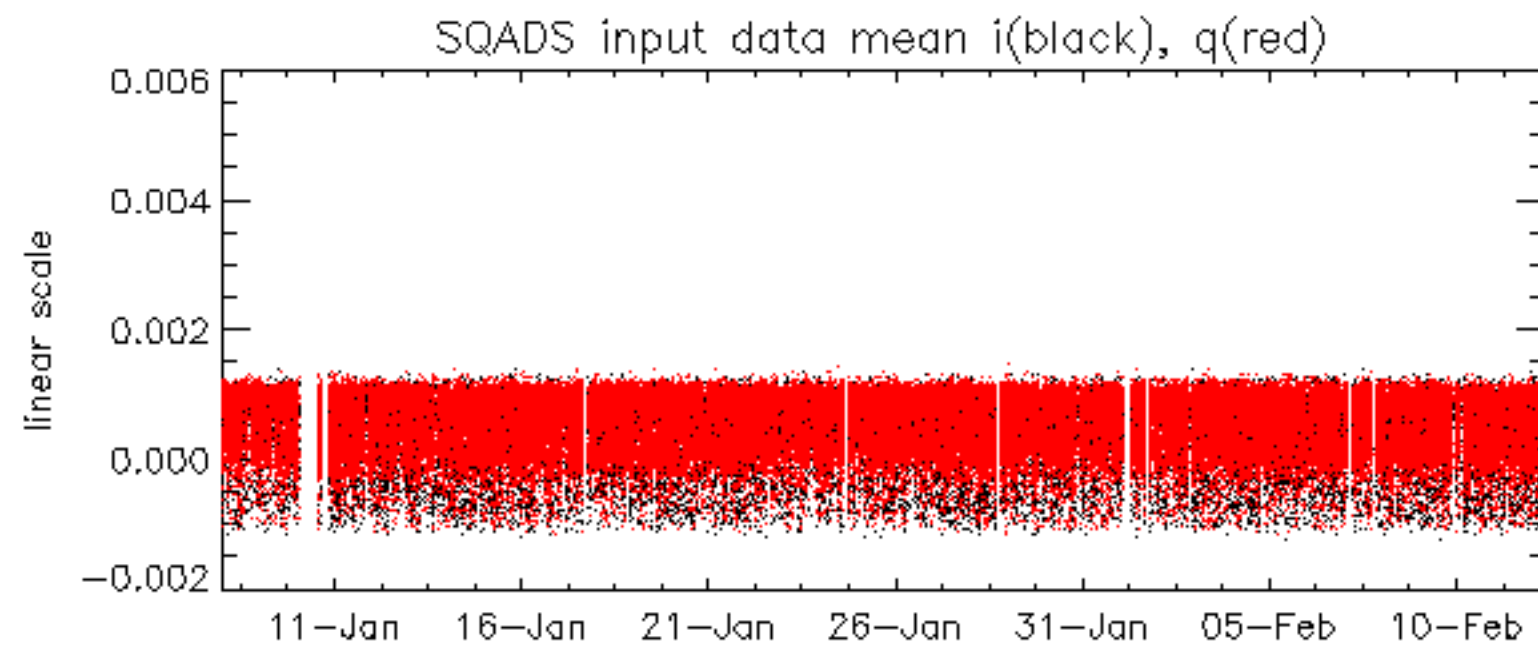


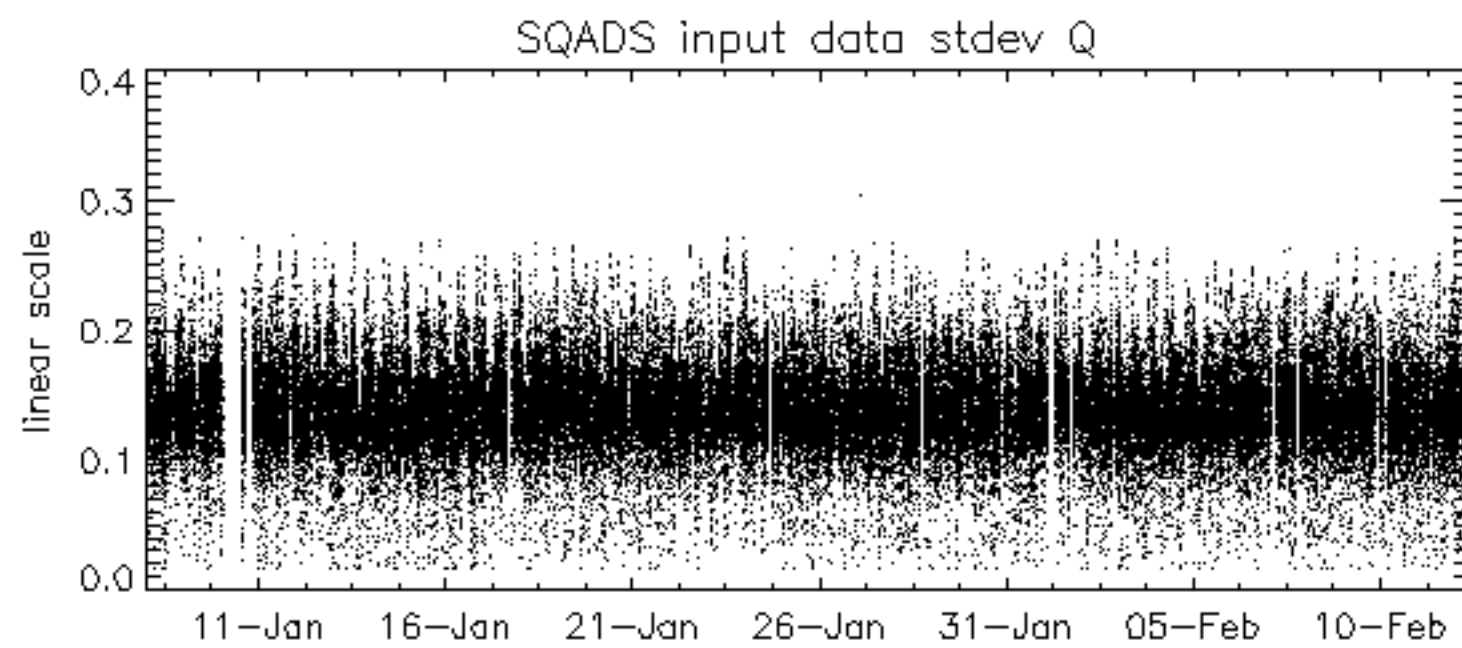
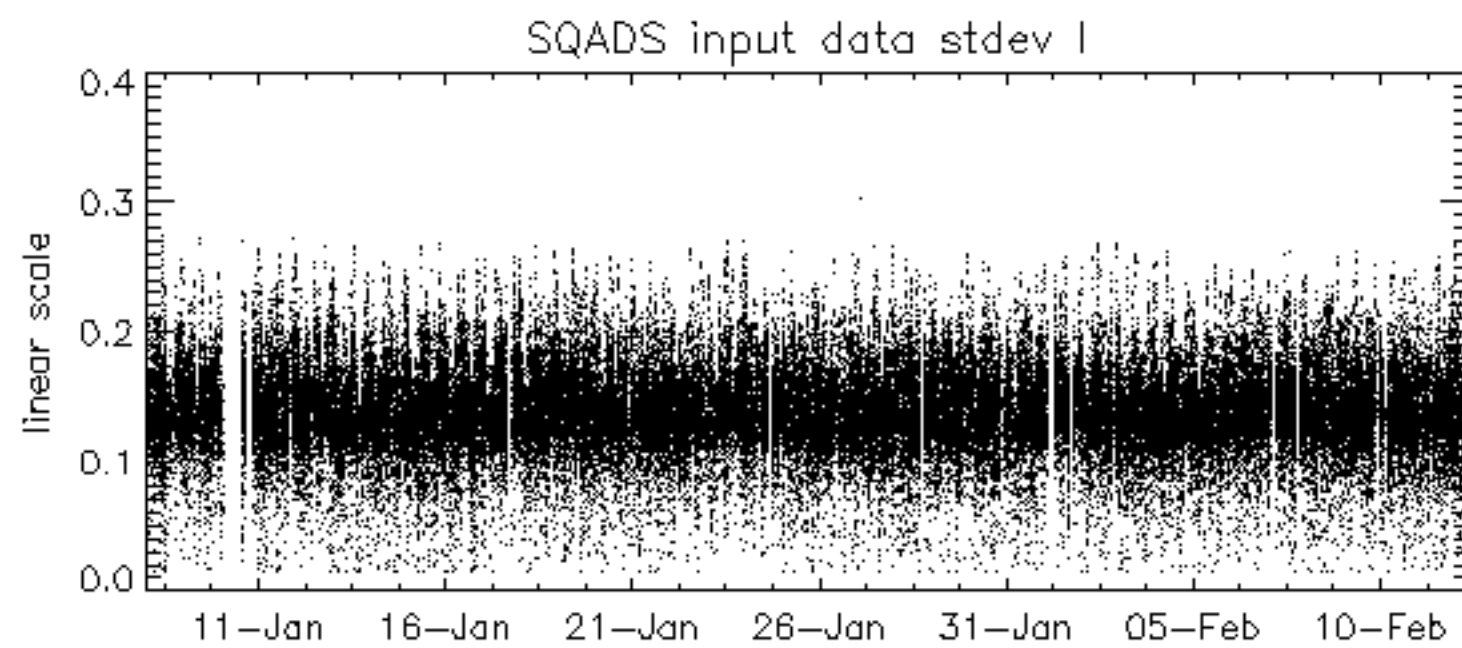
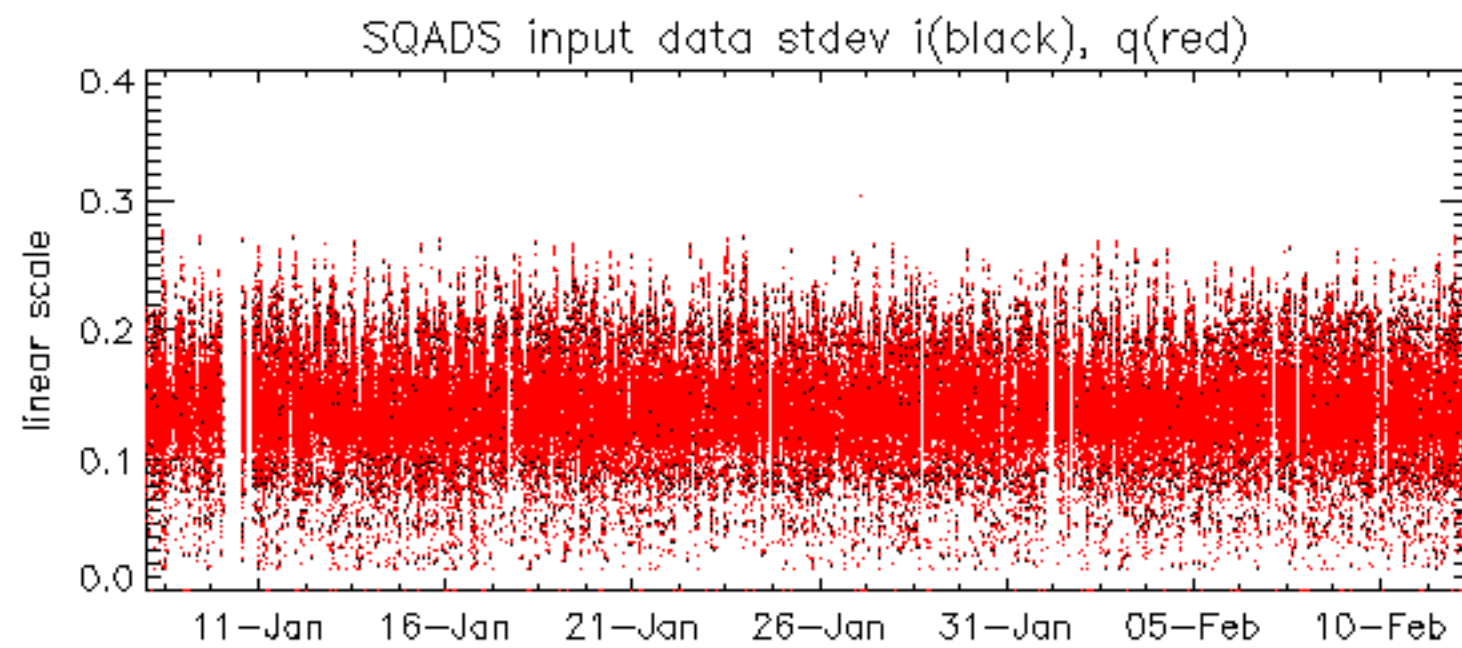






















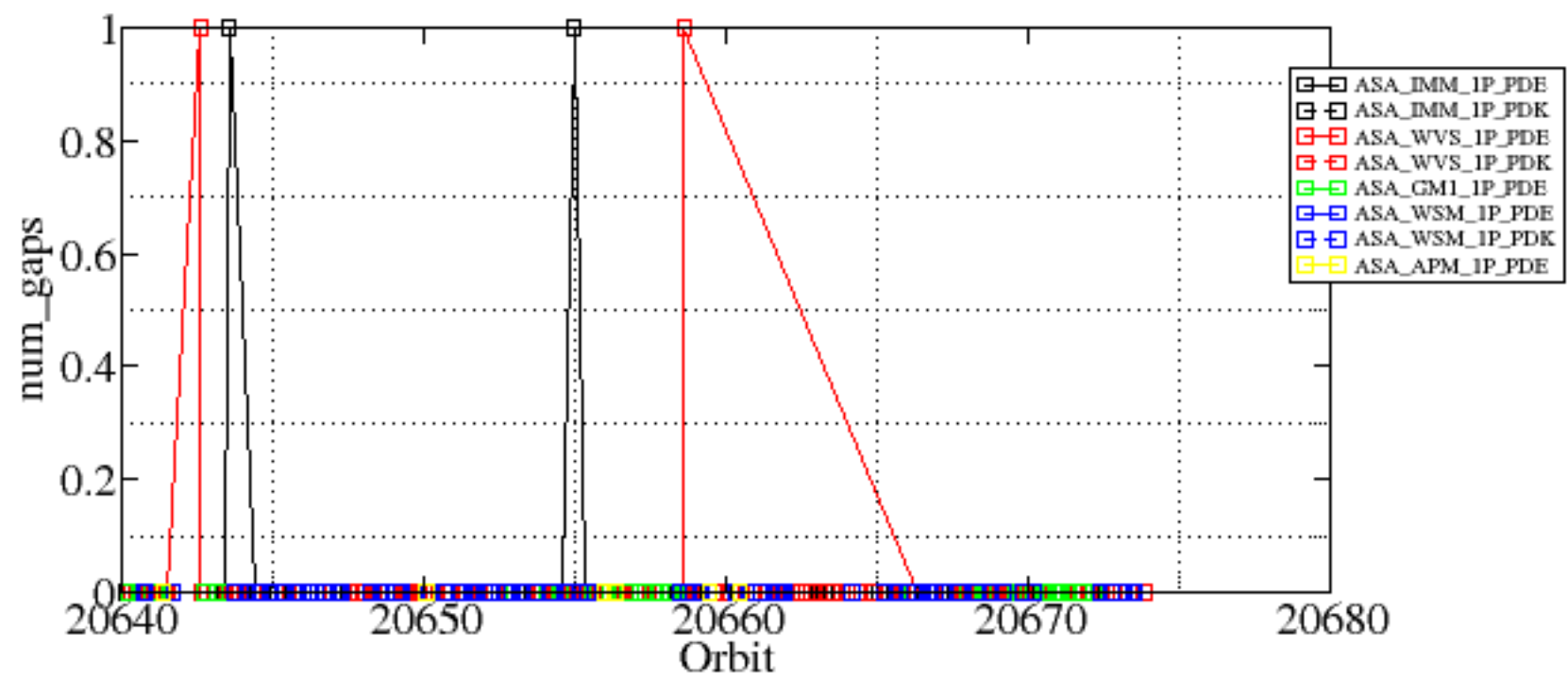




Summary of analysis for the last 3 days 2006021[012]

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_1PNPDE20060210_052944_000000042045_00048_20643_2658.N1	0	248
ASA_IMM_1PNPDE20060210_054350_000000352045_00048_20643_2602.N1	1	0
ASA_IMM_1PNPDE20060211_005021_000002372045_00059_20654_2678.N1	1	0
ASA_WVS_1PNPDE20060210_040752_00000002045_00047_20642_0876.N1	1	0
ASA_WVS_1PNPDE20060211_065800_00000002045_00063_20658_0912.N1	1	0
ASA_WSM_1PNPDK20060211_123449_000000362045_00066_20661_2941.N1	0	1













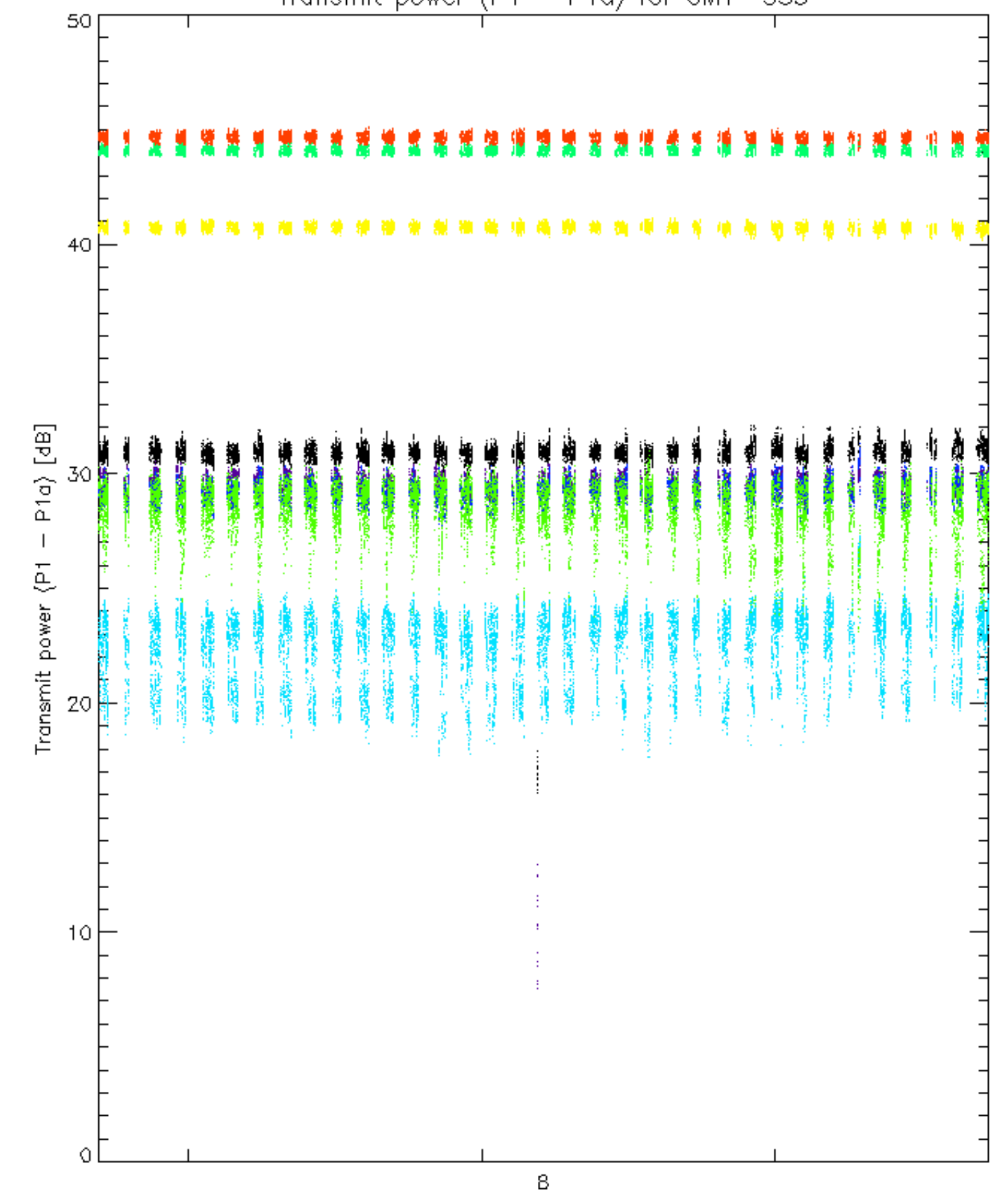




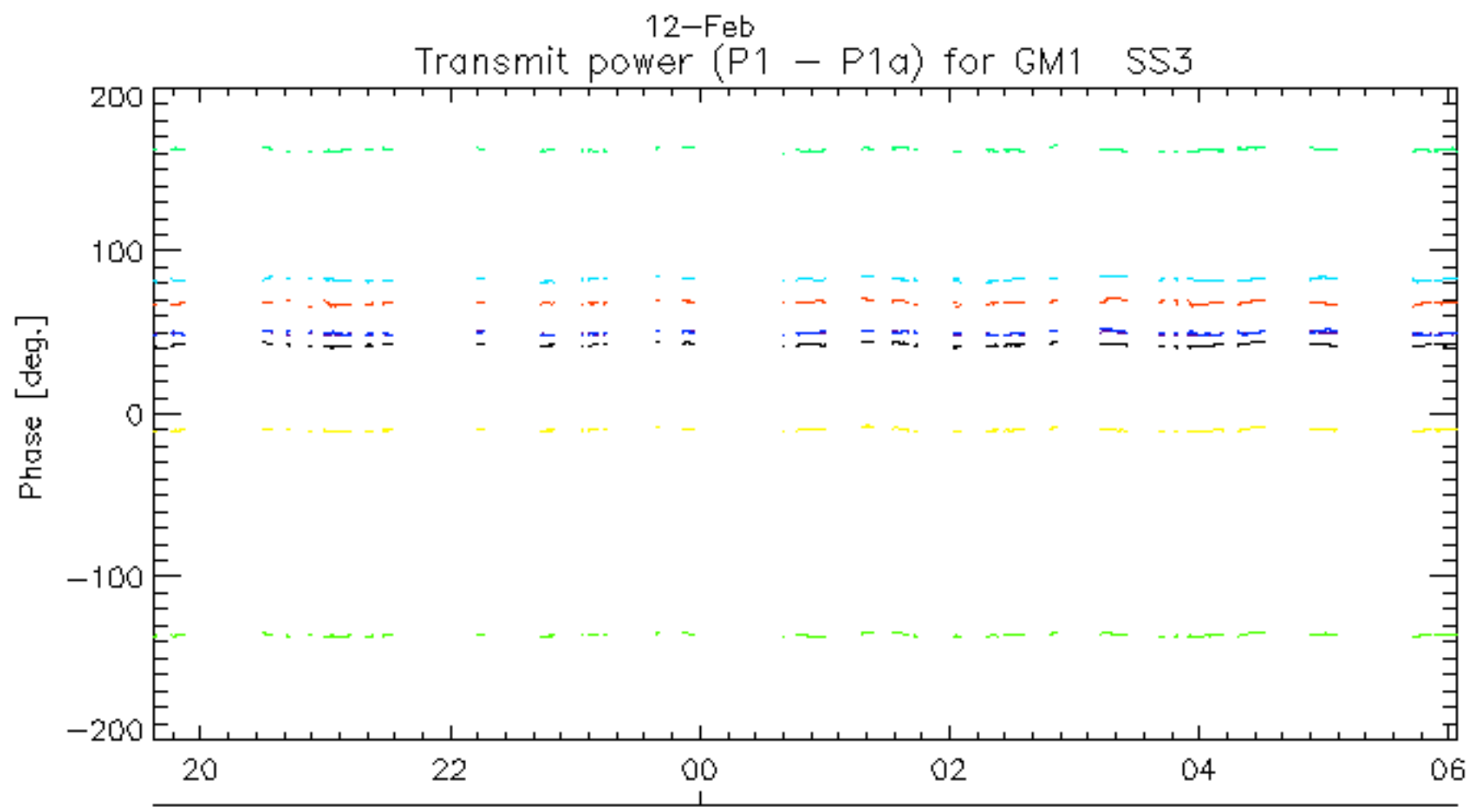
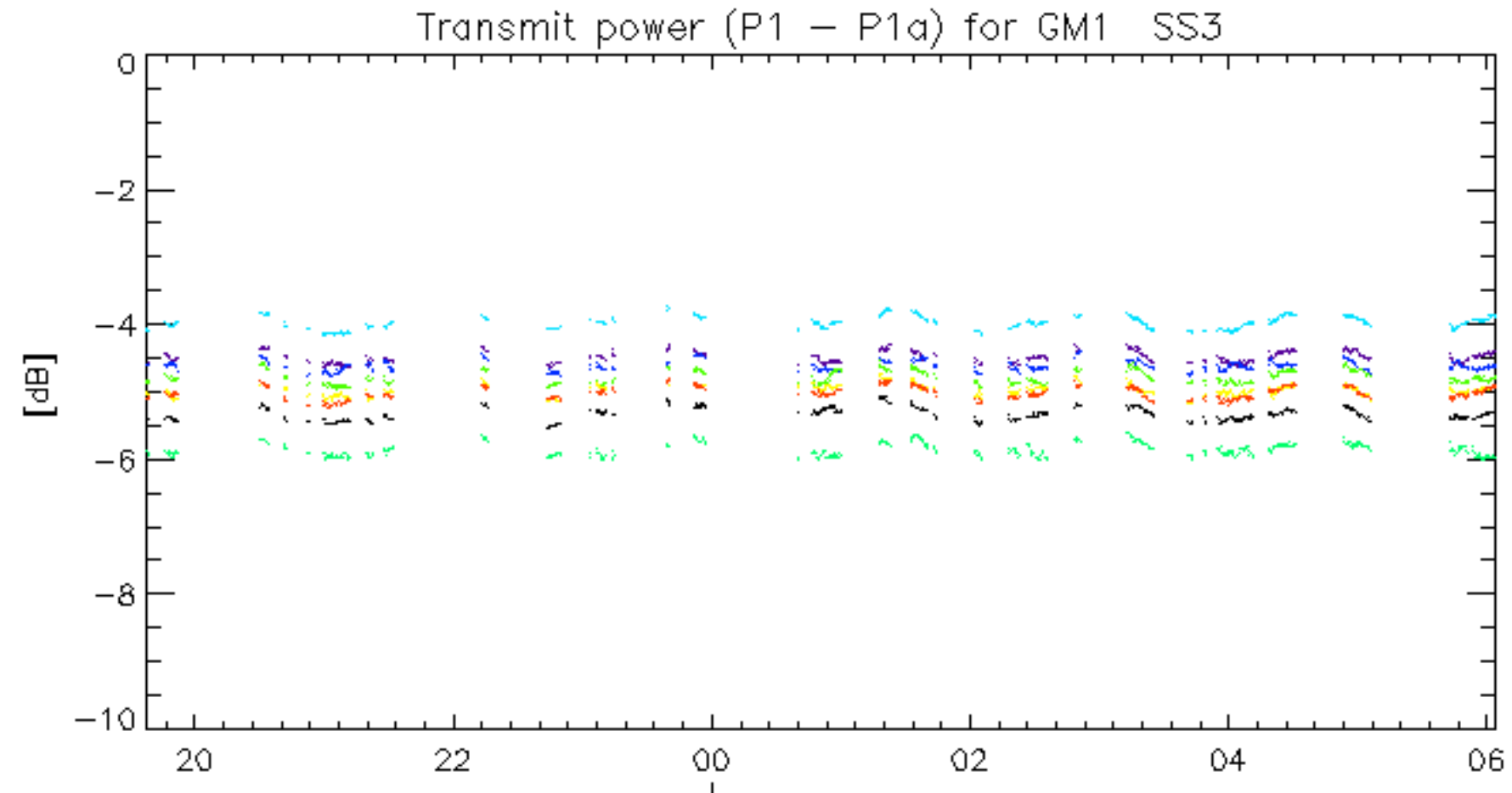




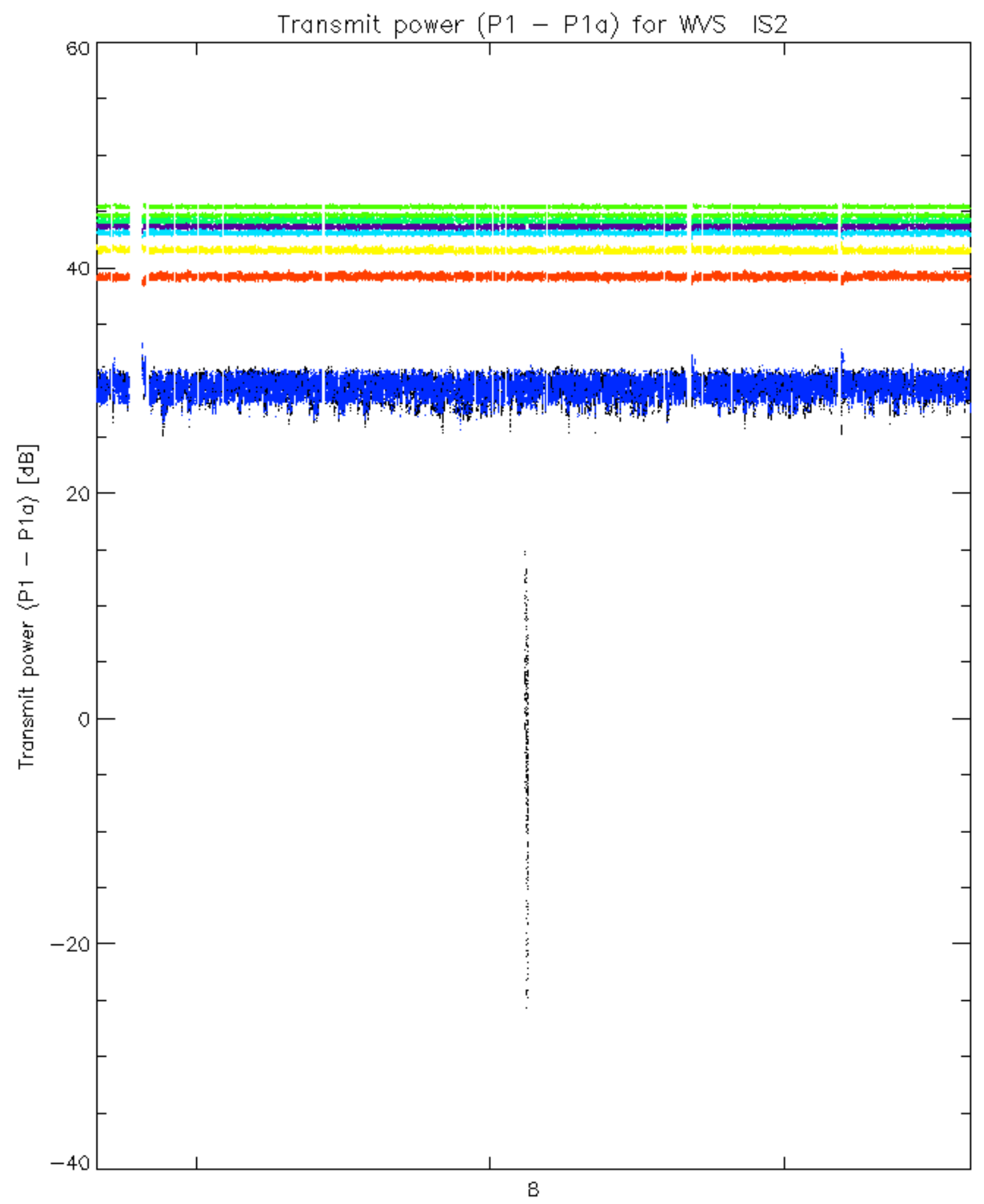
Transmit power (P1 - P1a) for GM1 SS3



rows: 3 7 11 15 19 22 26 30

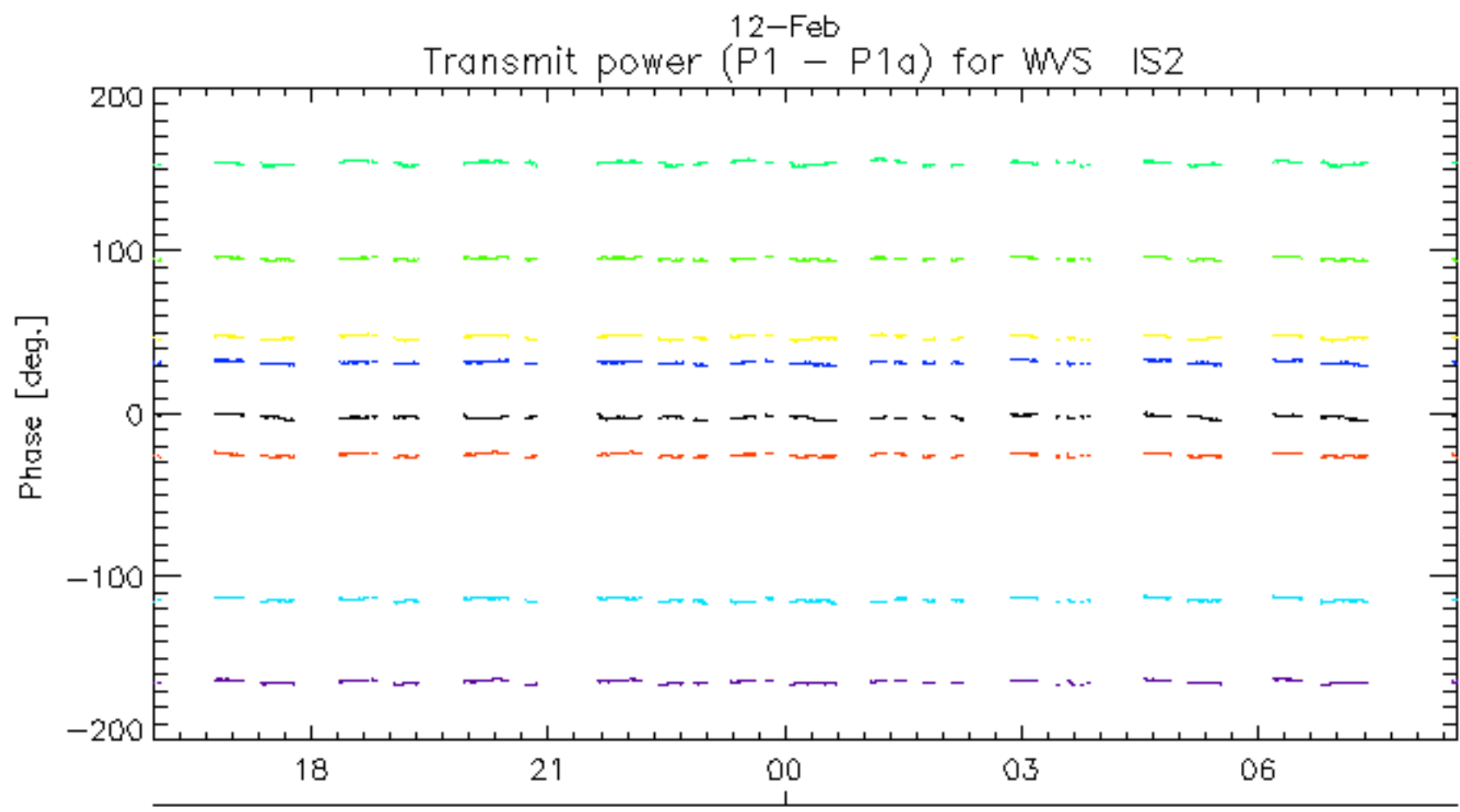
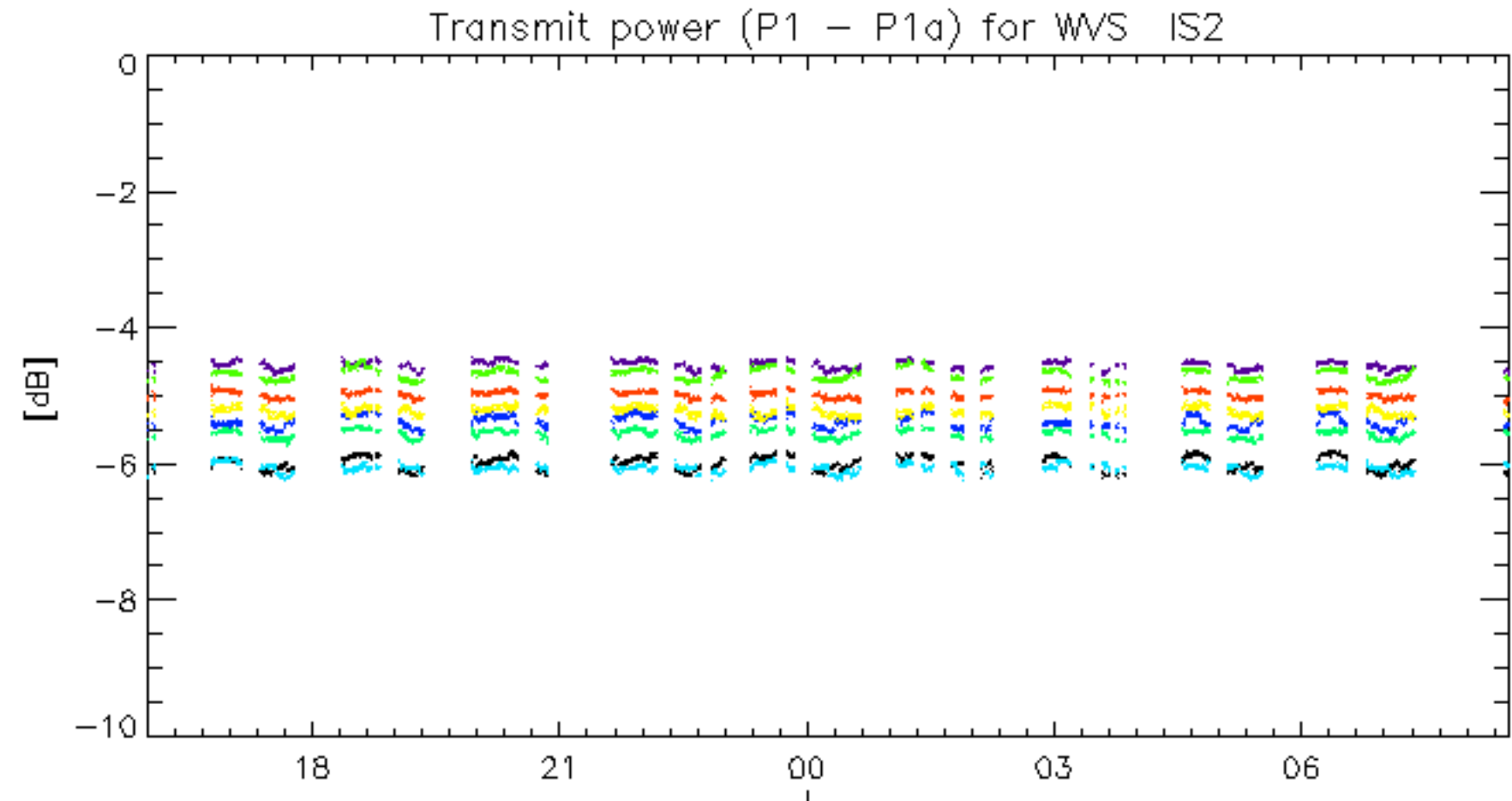


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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





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

No unavailabilities during the reported period.