

# PRELIMINARY REPORT OF 060220

last update on Mon Feb 20 16:44:50 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 2006-02-19 00:00:00 to 2006-02-20 16:44:50

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	47	0	14	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	47	0	14	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	47	0	14	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	47	0	14	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	46	44	41	6	52
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	46	44	41	6	52
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	44	41	6	52
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	44	41	6	52

### 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	20060218 064357
H	20060219 061220

### 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	-4.007497	0.008819	0.024856
7	P1	-3.003246	0.012033	0.032823
11	P1	-4.089577	0.022242	0.045592
15	P1	-6.062708	0.019442	0.003701
19	P1	-3.264355	0.006606	-0.026253
22	P1	-4.469840	0.017337	0.047613
26	P1	-4.188445	0.012955	0.025876
30	P1	-5.773196	0.010308	0.013507
3	P1	-16.918911	0.261682	-0.183514
7	P1	-16.664614	0.119334	-0.017399
11	P1	-16.584593	0.324371	0.171763
15	P1	-13.141323	0.111459	0.246695
19	P1	-13.897594	0.066532	0.010674
22	P1	-15.738918	0.538102	0.456184
26	P1	-15.756423	0.263212	-0.051984
30	P1	-16.557356	0.294731	0.237019

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.512672	0.091367	0.209771
7	P2	-22.420996	0.094577	0.066283
11	P2	-16.256828	0.100554	0.051229
15	P2	-7.186285	0.101673	0.063126
19	P2	-9.154290	0.095345	0.058015
22	P2	-17.940029	0.092427	0.047716
26	P2	-16.214073	0.098396	0.033357
30	P2	-19.639606	0.084188	0.027921

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.199519	0.007152	0.033499
7	P3	-8.199519	0.007152	0.033499
11	P3	-8.199519	0.007152	0.033499
15	P3	-8.199519	0.007152	0.033499
19	P3	-8.199519	0.007152	0.033499
22	P3	-8.199519	0.007152	0.033499
26	P3	-8.199519	0.007152	0.033499
30	P3	-8.199519	0.007152	0.033499

**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	-3.739807	0.011367	-0.017525
7	P1	-2.745776	0.007755	-0.031534
11	P1	-2.894130	0.014615	-0.059890
15	P1	-3.512528	0.020608	-0.096840
19	P1	-3.380741	0.011193	0.021945
22	P1	-5.151925	0.022180	-0.053182
26	P1	-5.838485	0.019401	0.087399
30	P1	-5.221855	0.027288	0.053261
3	P1	-11.552726	0.045216	-0.061649
7	P1	-9.935388	0.050280	-0.063189
11	P1	-10.160550	0.059934	-0.154723
15	P1	-10.696331	0.102253	-0.156496
19	P1	-15.447152	0.063111	0.084778
22	P1	-20.386417	1.195978	0.379047

26	P1	-16.550060	0.372225	0.457866
30	P1	-18.236975	0.325956	-0.247667

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.276552	0.043038	0.296681
7	P2	-22.720739	0.078217	0.303771
11	P2	-11.340748	0.030328	0.184843
15	P2	-4.871163	0.029856	0.125645
19	P2	-6.884709	0.027552	0.084433
22	P2	-8.174815	0.029161	0.091153
26	P2	-23.950043	0.027683	0.060683
30	P2	-22.085133	0.019713	0.035868

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.033760	0.003152	0.037666
7	P3	-8.033744	0.003147	0.037838
11	P3	-8.033683	0.003151	0.037957
15	P3	-8.033794	0.003155	0.037914
19	P3	-8.033813	0.003157	0.038017
22	P3	-8.033806	0.003155	0.038440
26	P3	-8.033896	0.003151	0.038004
30	P3	-8.033694	0.003156	0.037885

## 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	0.000559415
	stdev	1.69444e-07
MEAN Q	mean	0.000519248
	stdev	2.13486e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139220
	stdev	0.00116990
STDEV Q	mean	0.139578
	stdev	0.00118892



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006021[890]

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_1PNPDE20060210_052944_000000042045_00048_20643_2658.N1	0	248
ASA_IMM_1PNPDE20060210_054350_000000352045_00048_20643_2602.N1	1	0
ASA_IMM_1PNPDE20060219_004051_000000622045_00174_20769_3606.N1	1	0
ASA_IMM_1PNPDK20060219_083053_000000502045_00179_20774_1057.N1	0	29
ASA_WVS_1PNPDE20060210_040752_000000002045_00047_20642_0876.N1	1	0

ASA_WSM_1PNPDE20060218_112322_000001222045_00166_20761_5431.N1	0	60
ASA_WSM_1PNPDE20060219_183349_000001282045_00185_20780_5578.N1	0	40



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

### 7.2 - Absolute Doppler for WVS

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

### 7.3 - Doppler evolution versus ANX for WVS

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



### 7.4 - Unbiased Doppler Error for GM1

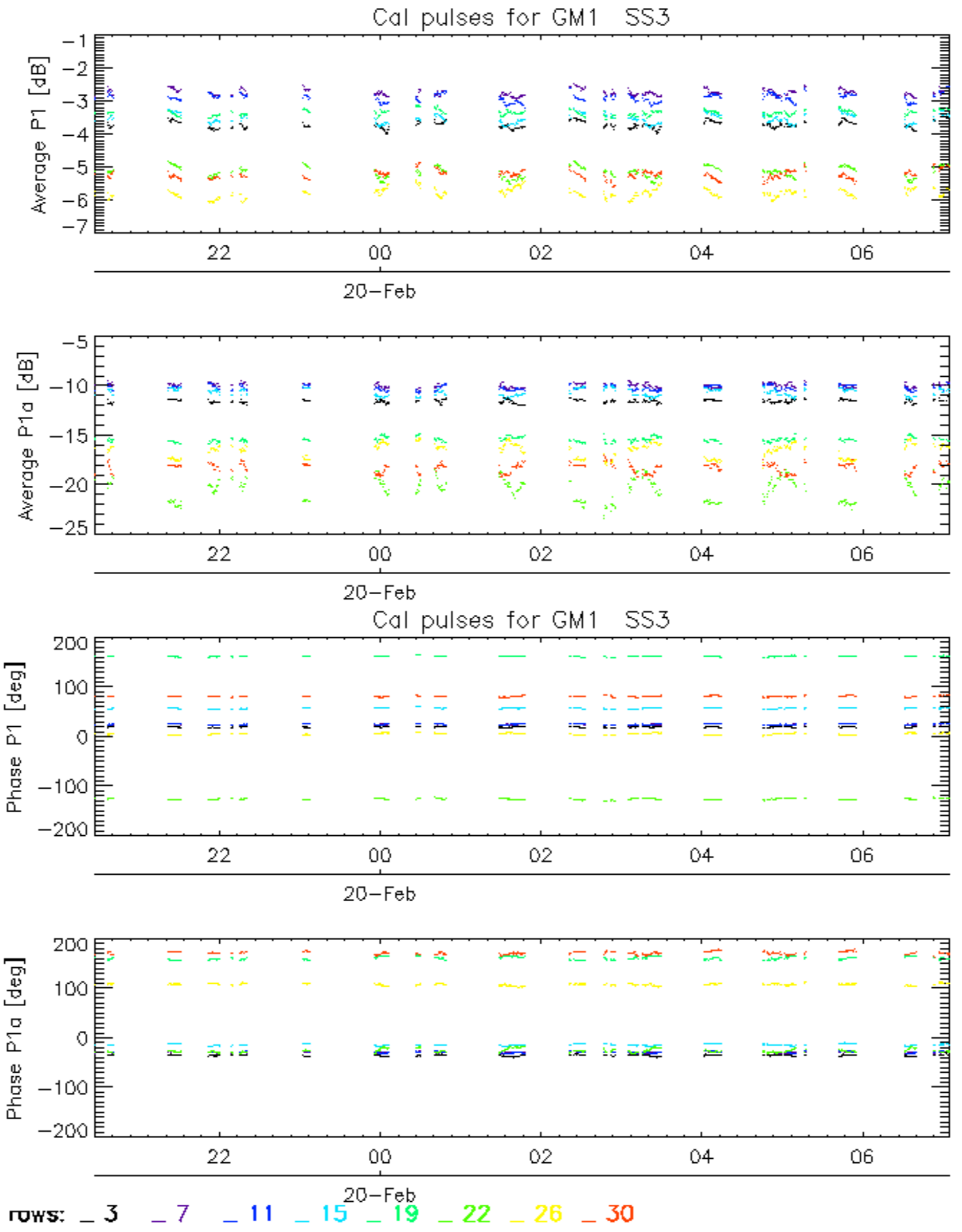
Evolution of unbiased Doppler error (Real - Expected)
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 7.5 - Absolute Doppler for GM1

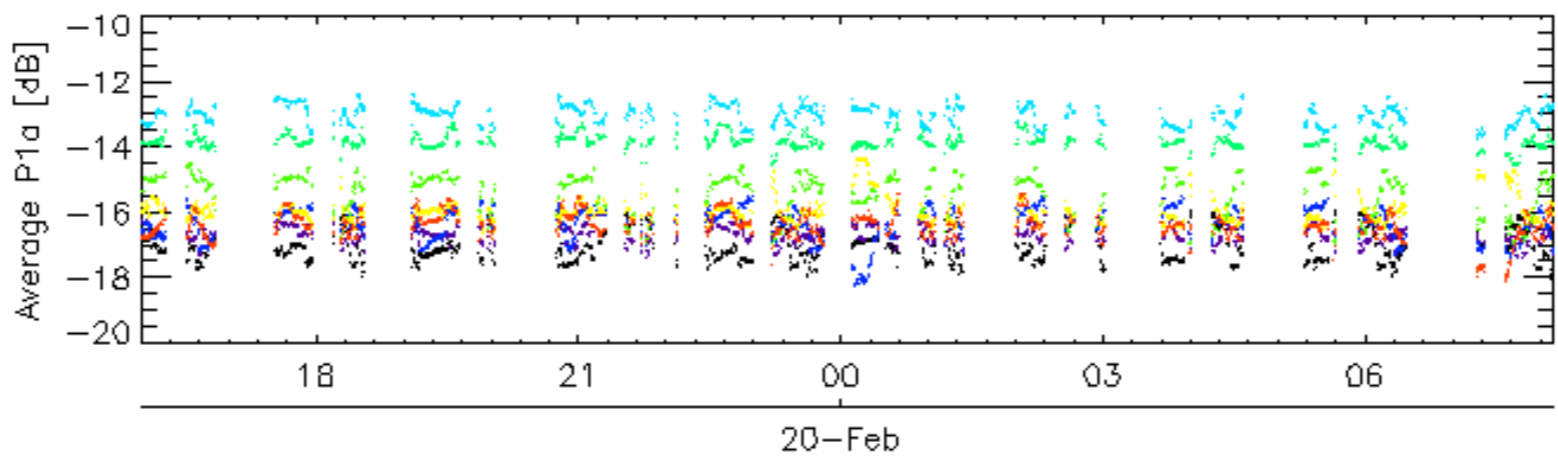
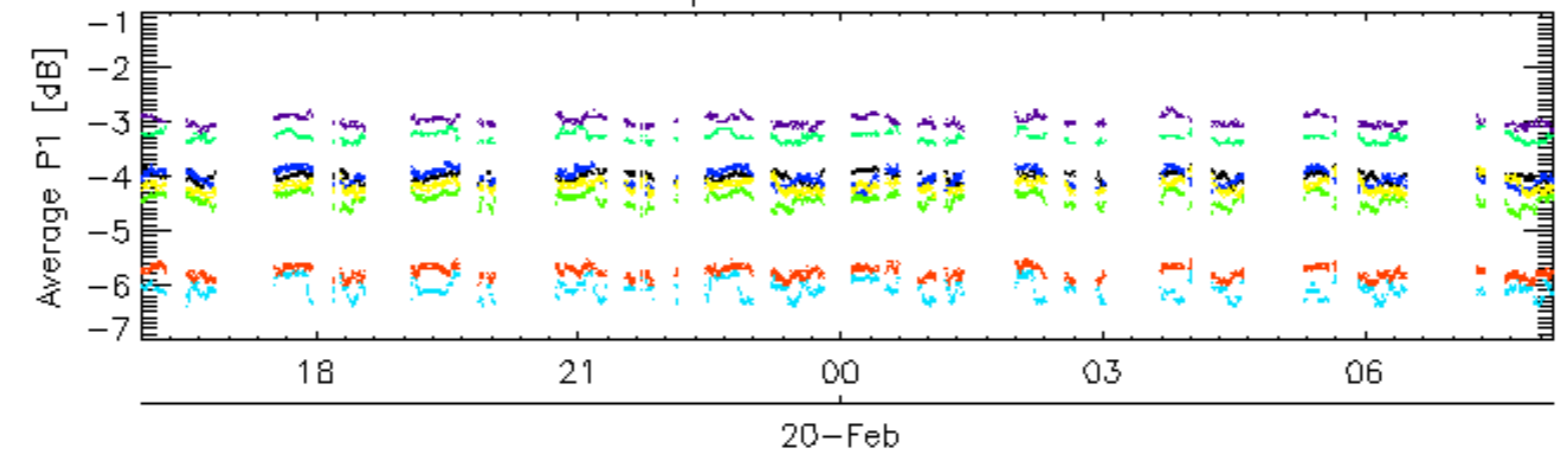
Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

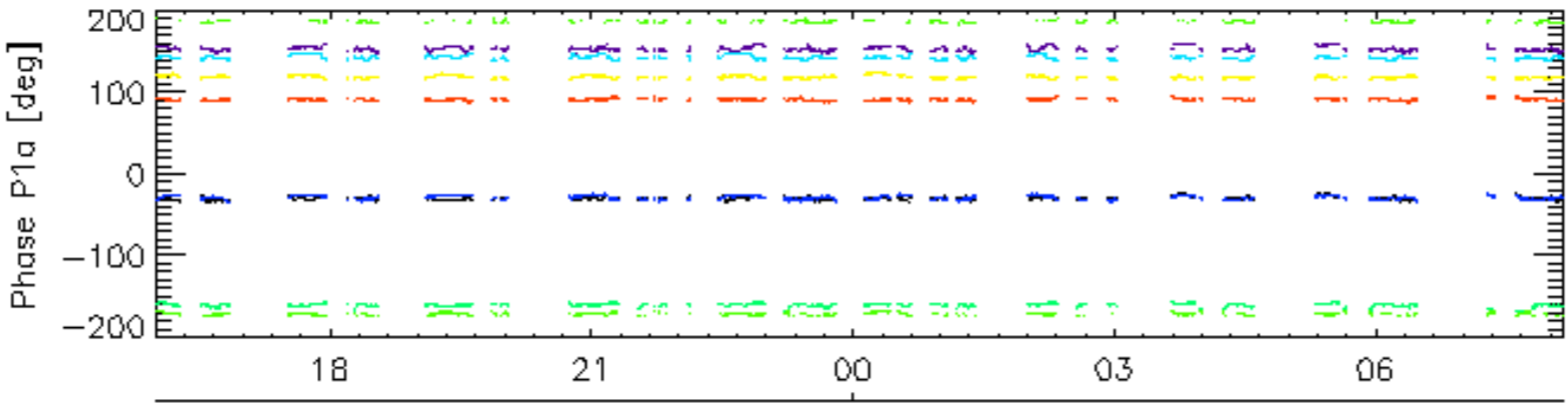
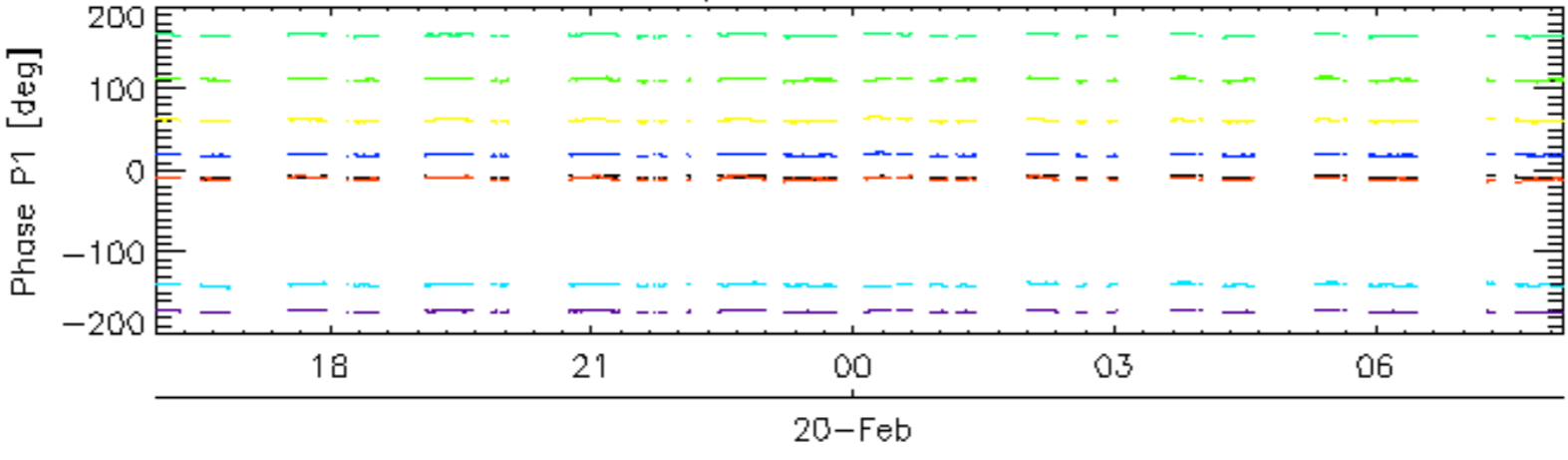
Evolution Doppler error versus ANX
<input type="checkbox"/>



Cal pulses for WVS IS2

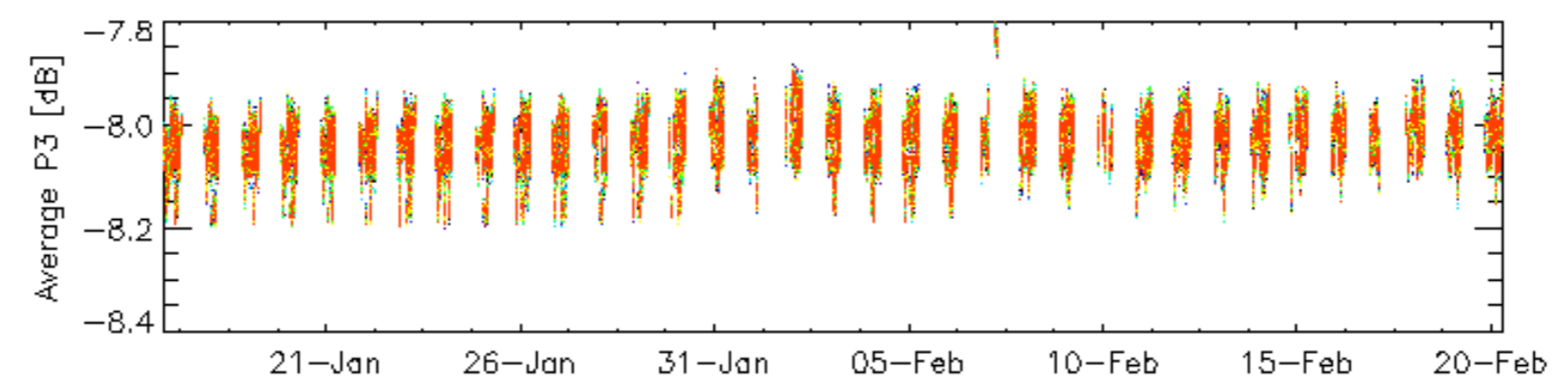
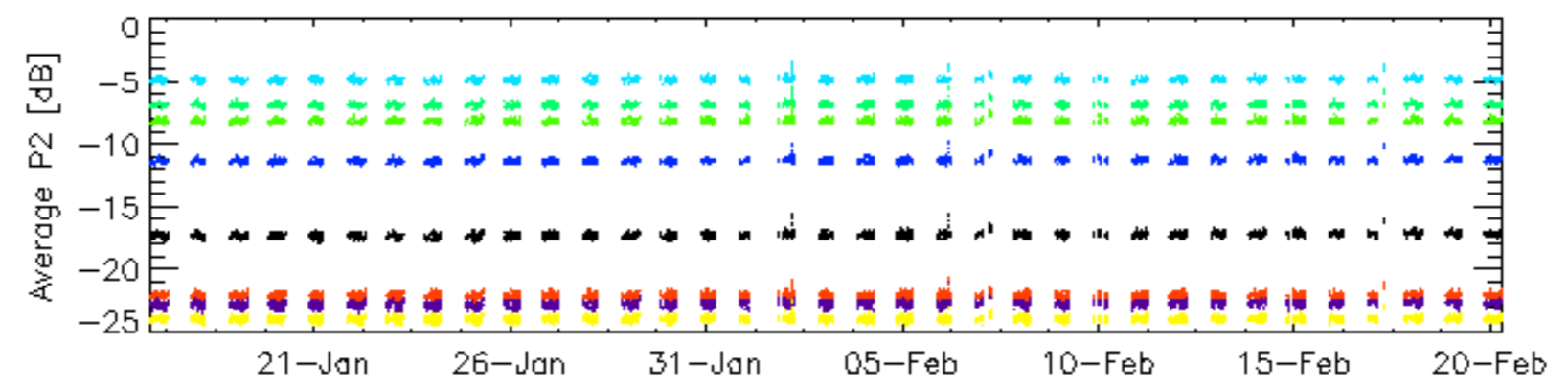
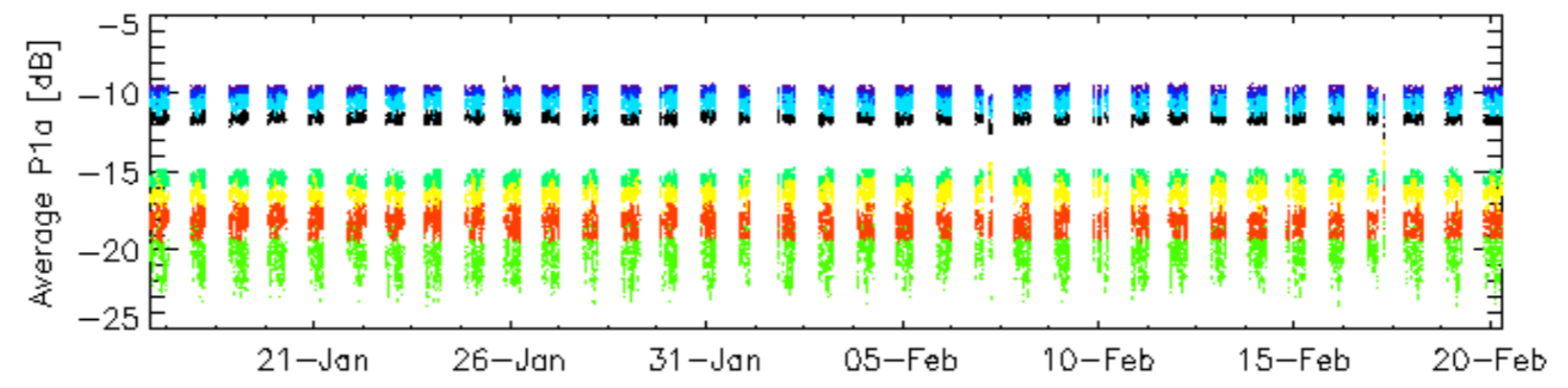
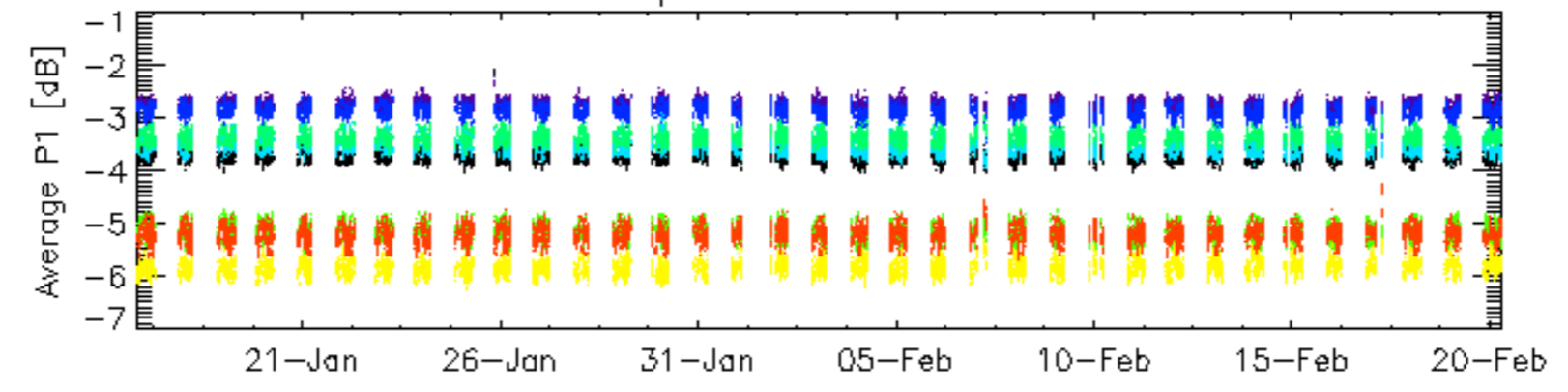


Cal pulses for WVS IS2



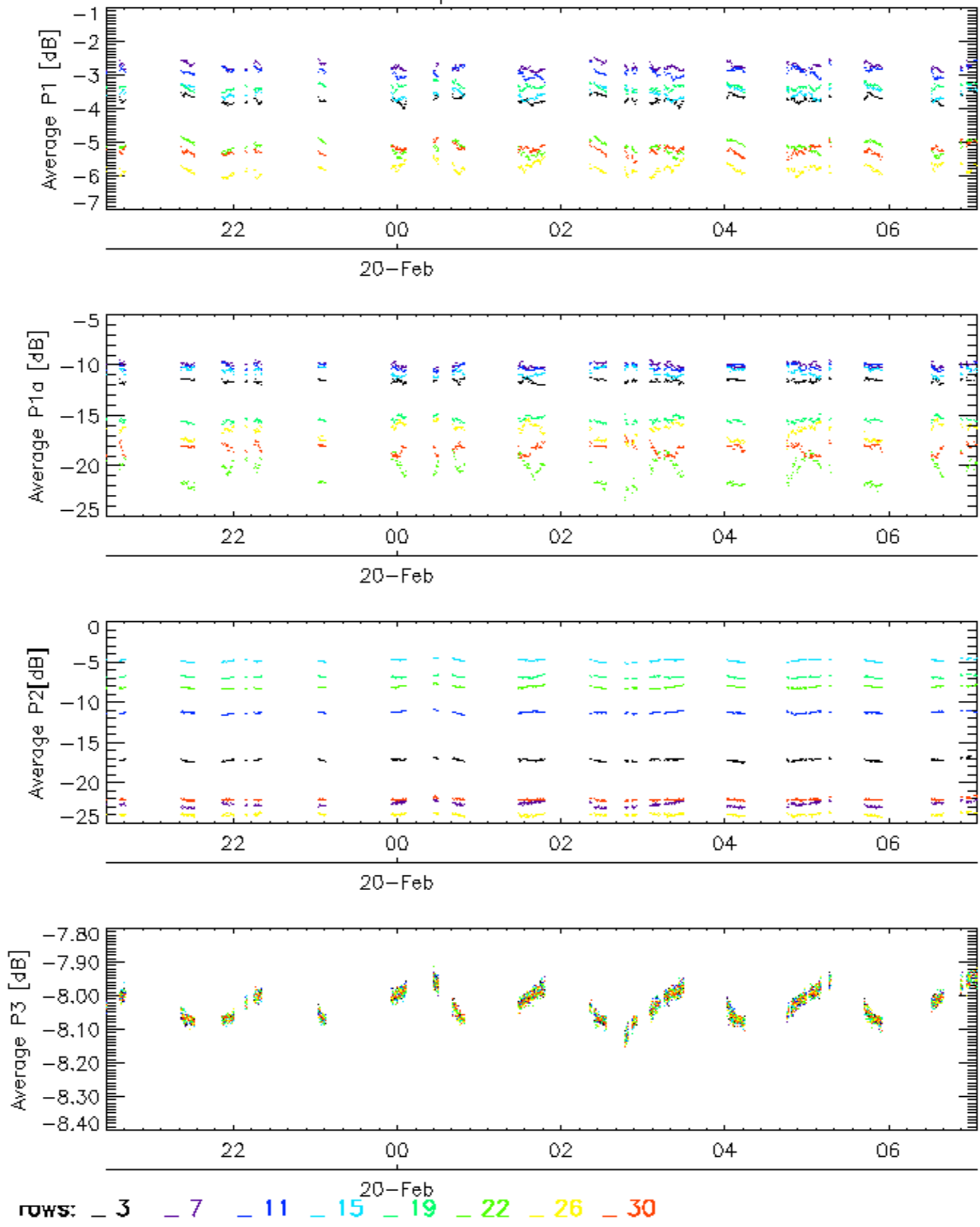
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



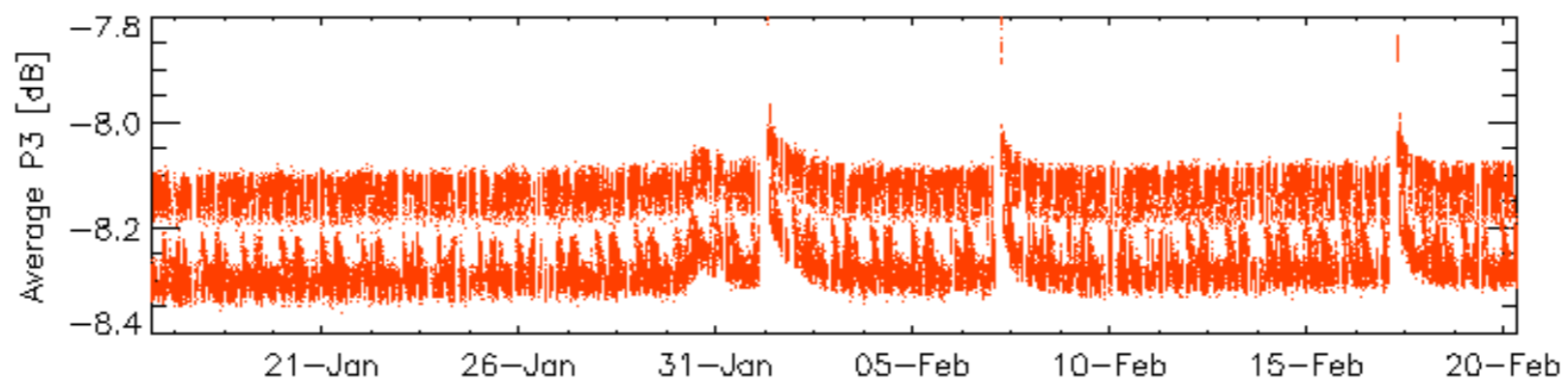
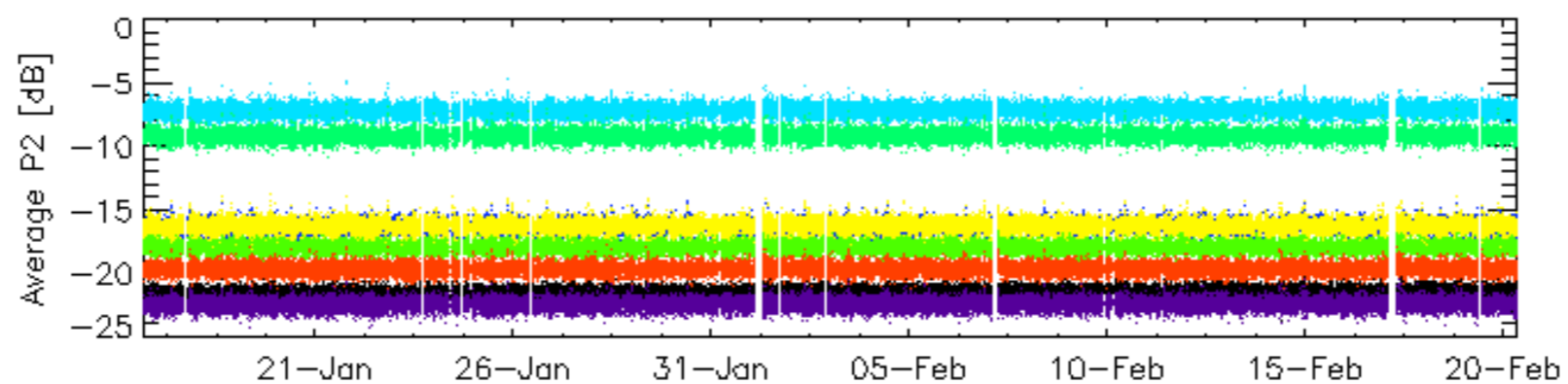
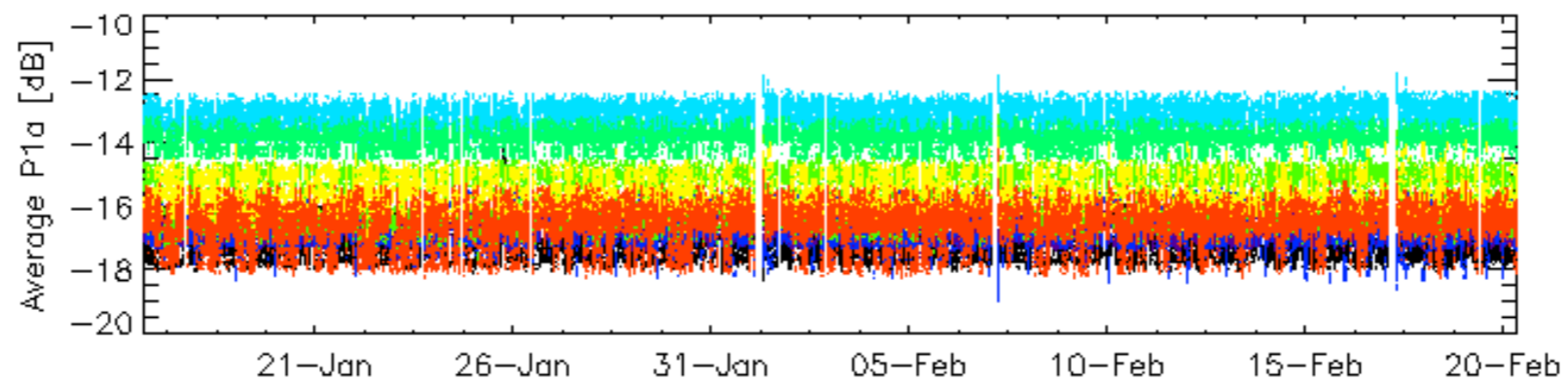
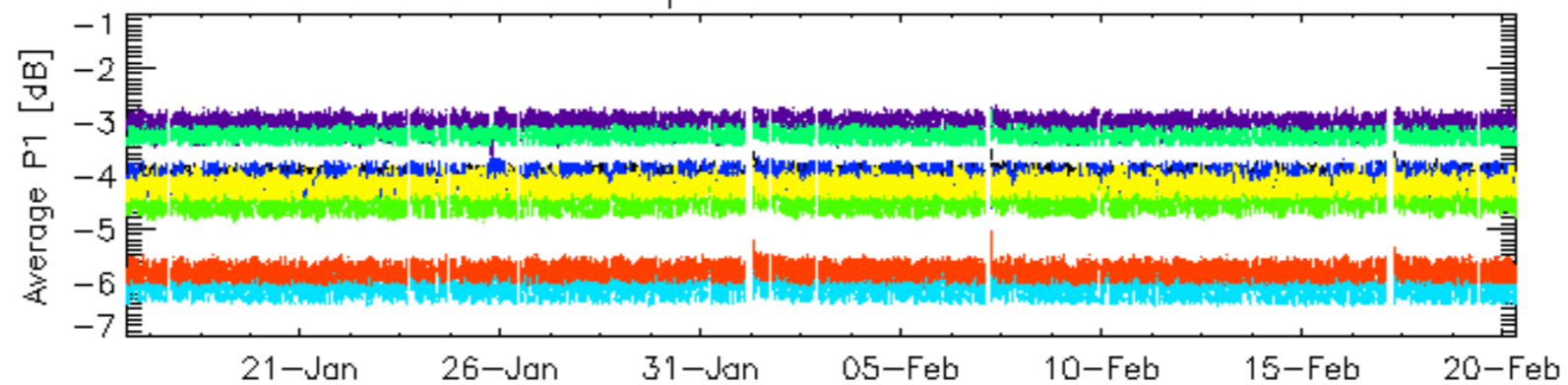
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3



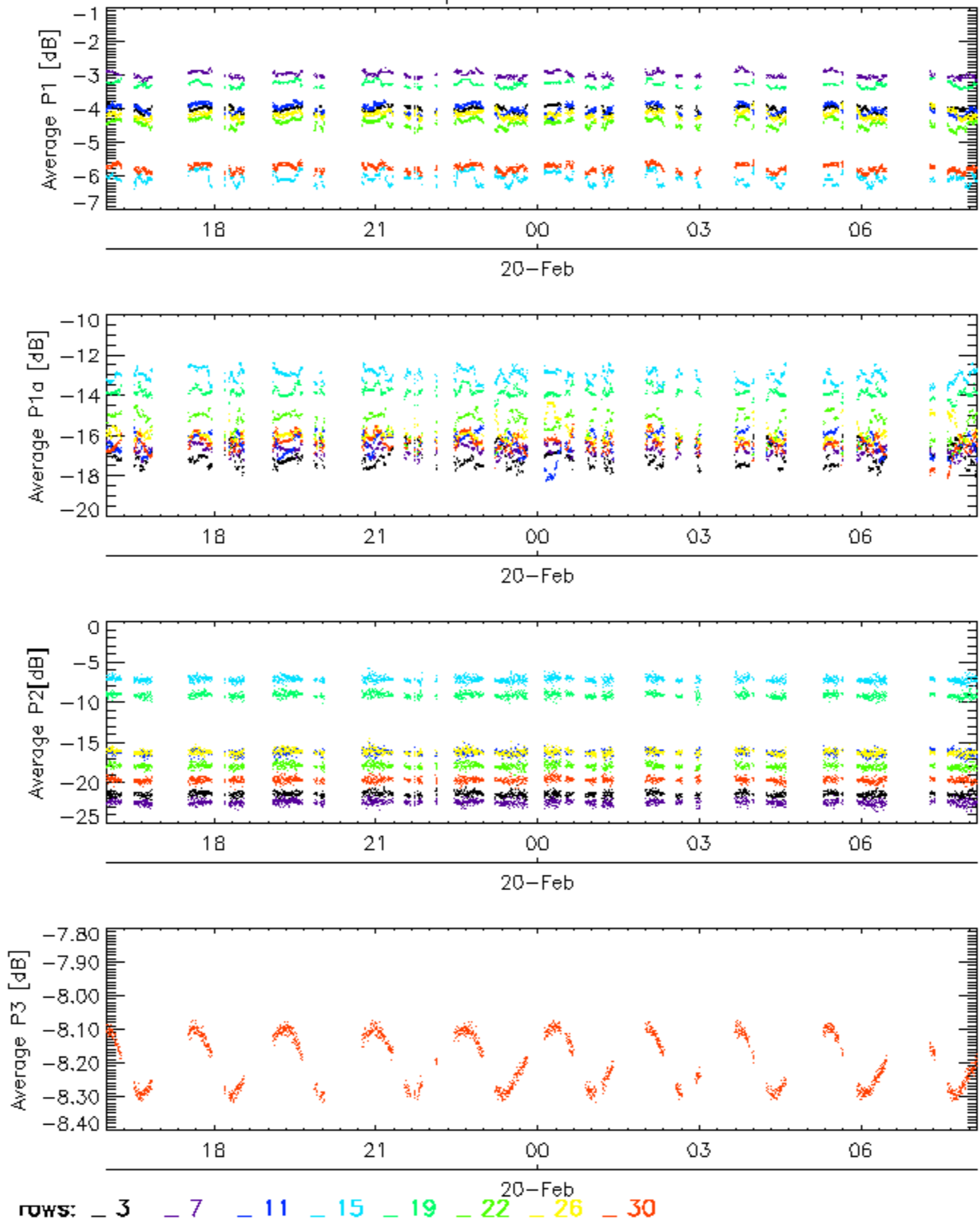
rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2



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

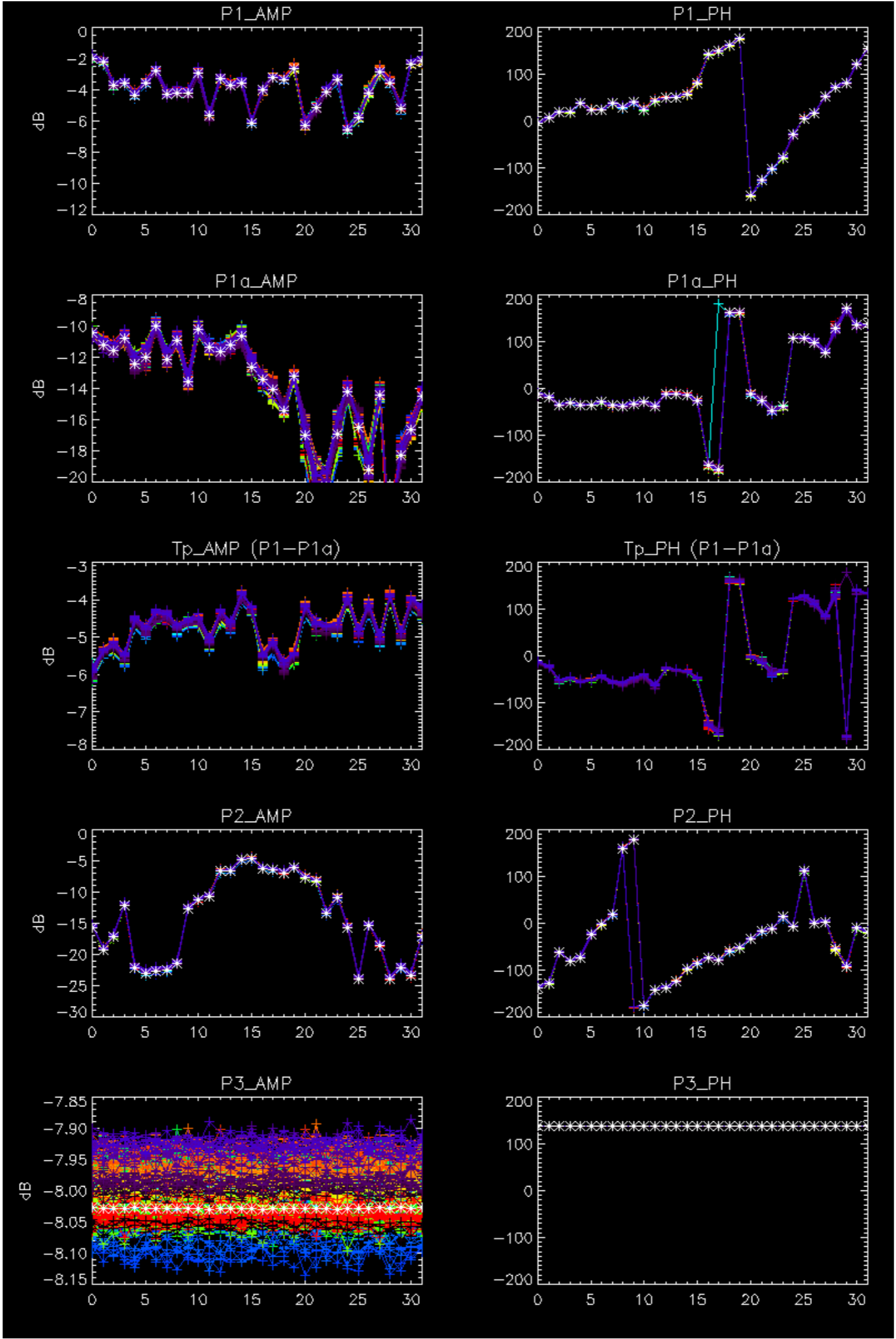
Cal pulses for WVS IS2

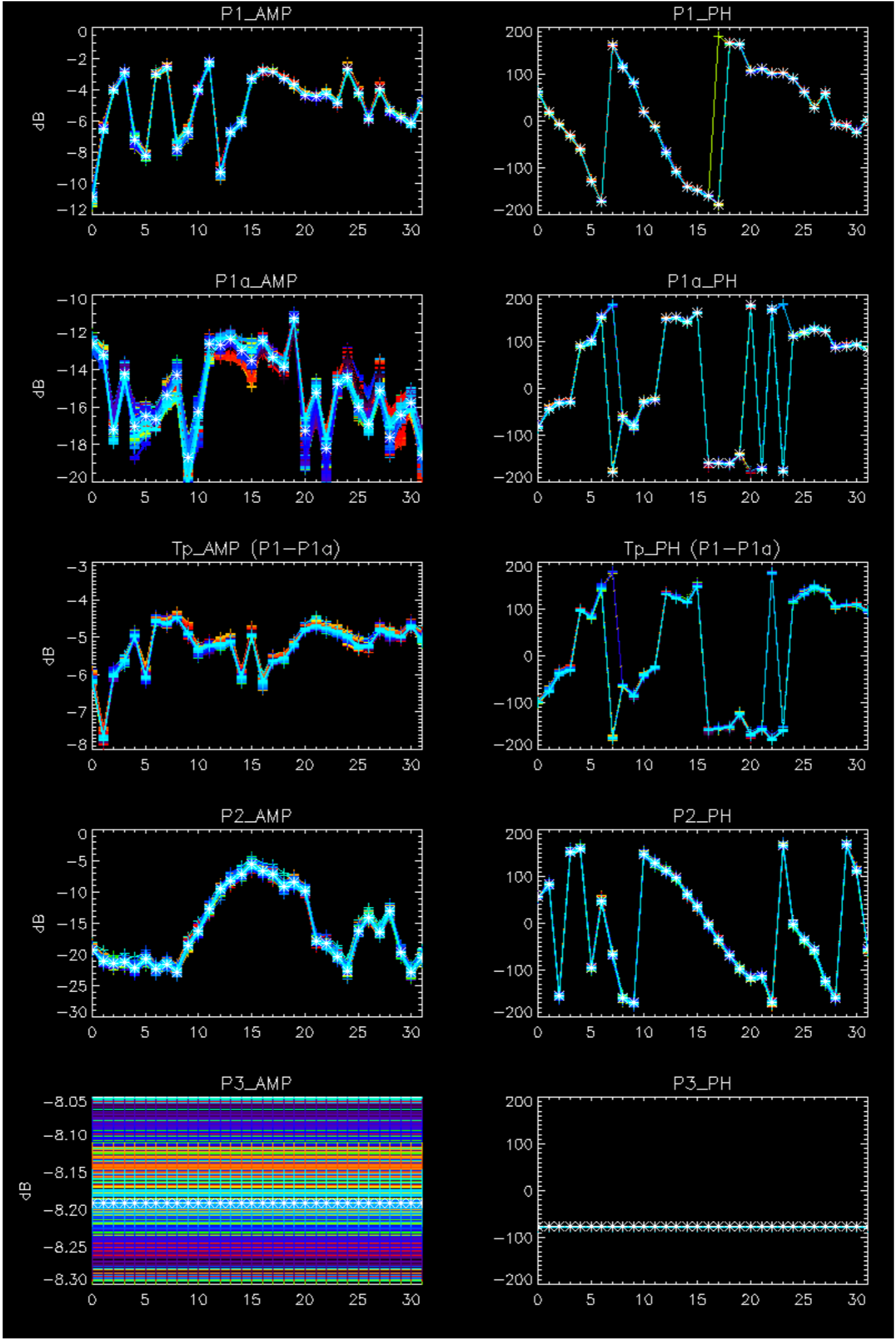


No anomalies observed on available browse products



No anomalies observed.

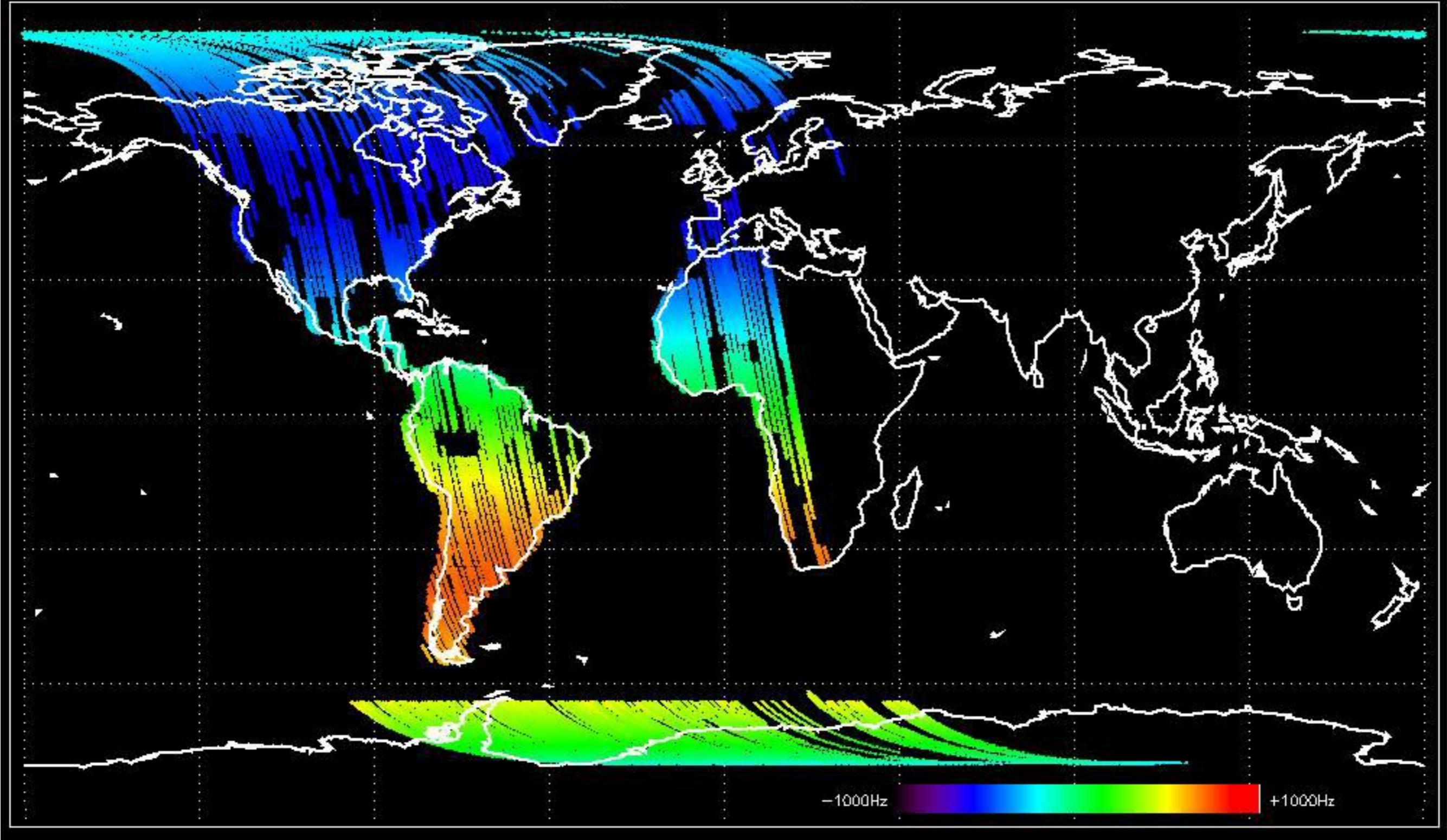




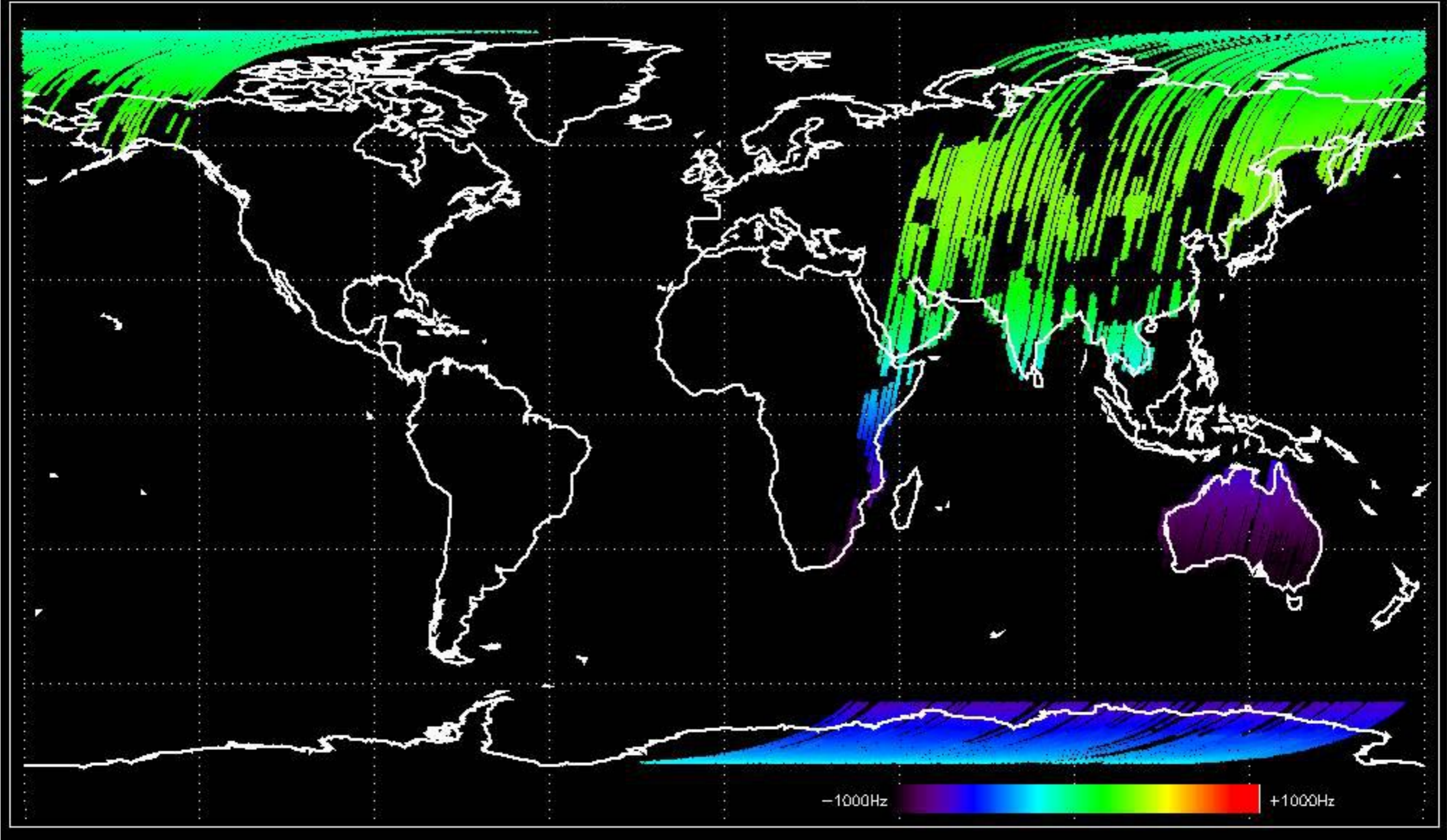
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



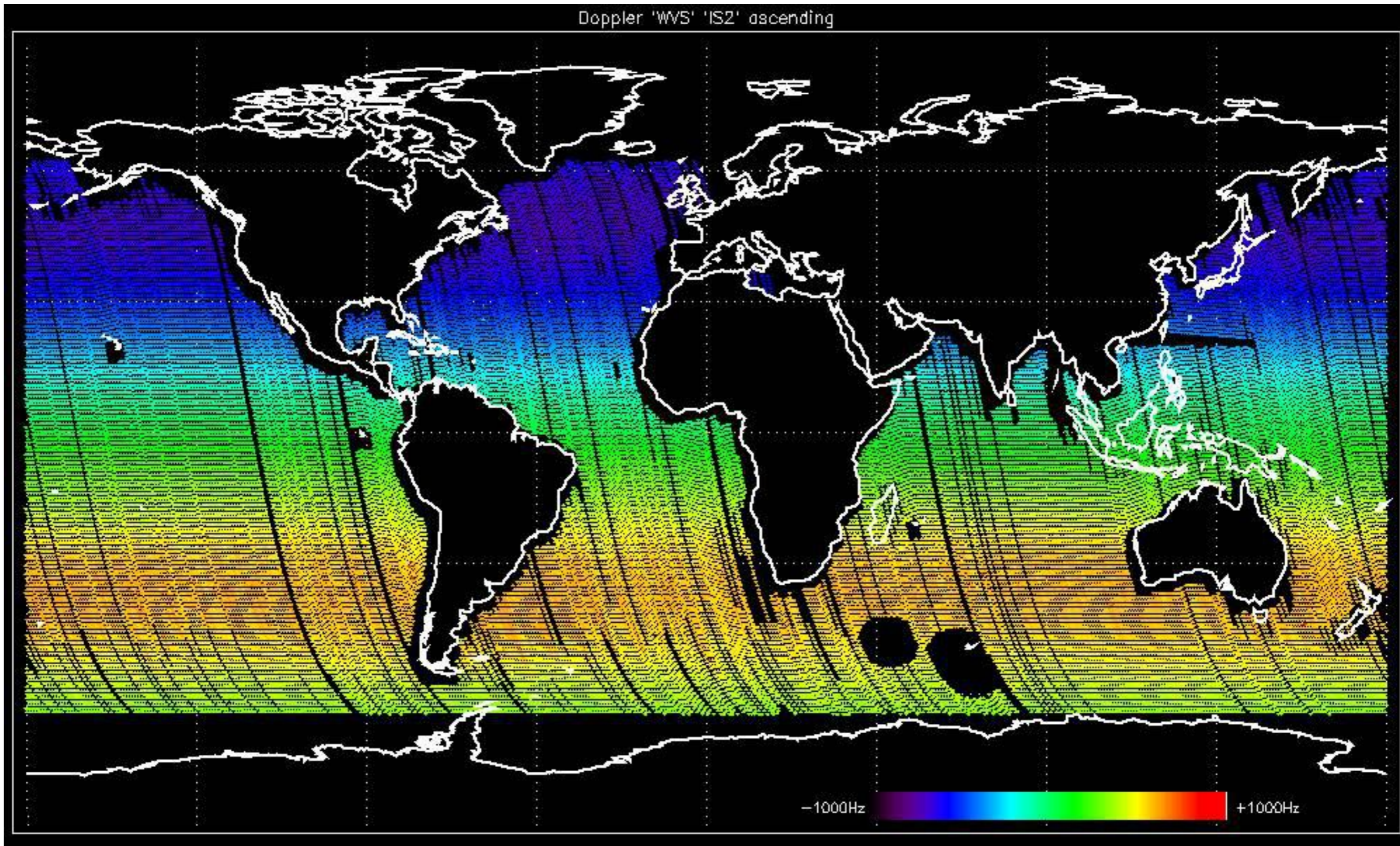
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

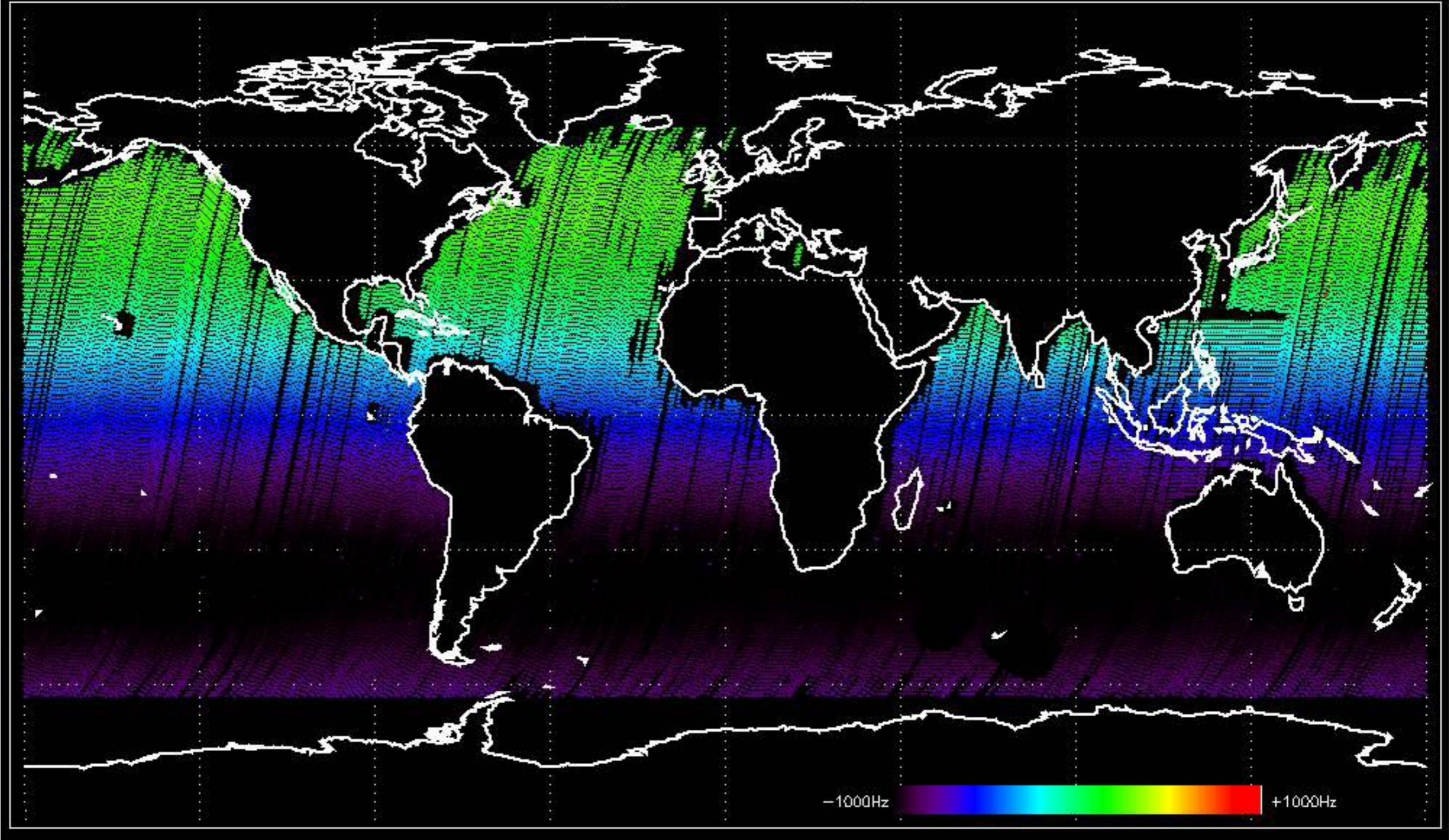


Doppler 'WVS' 'IS2' ascending

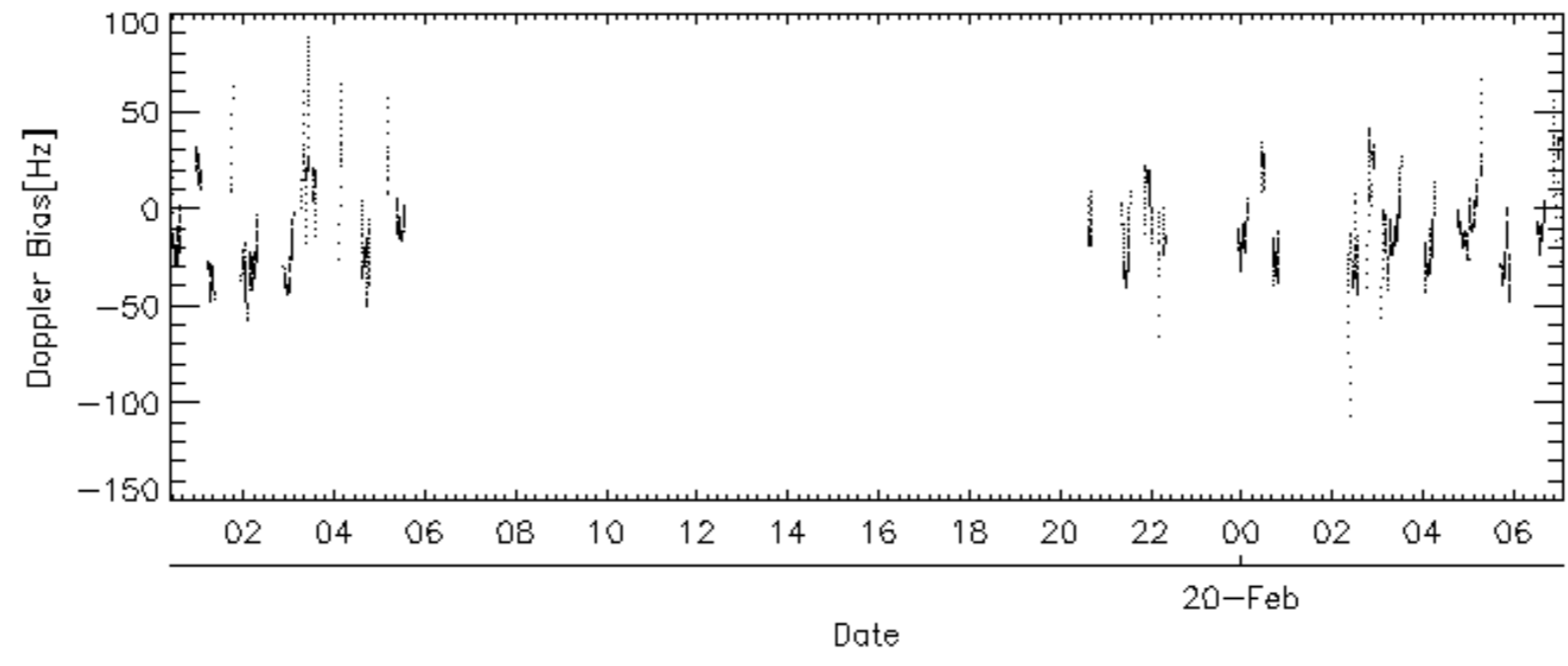
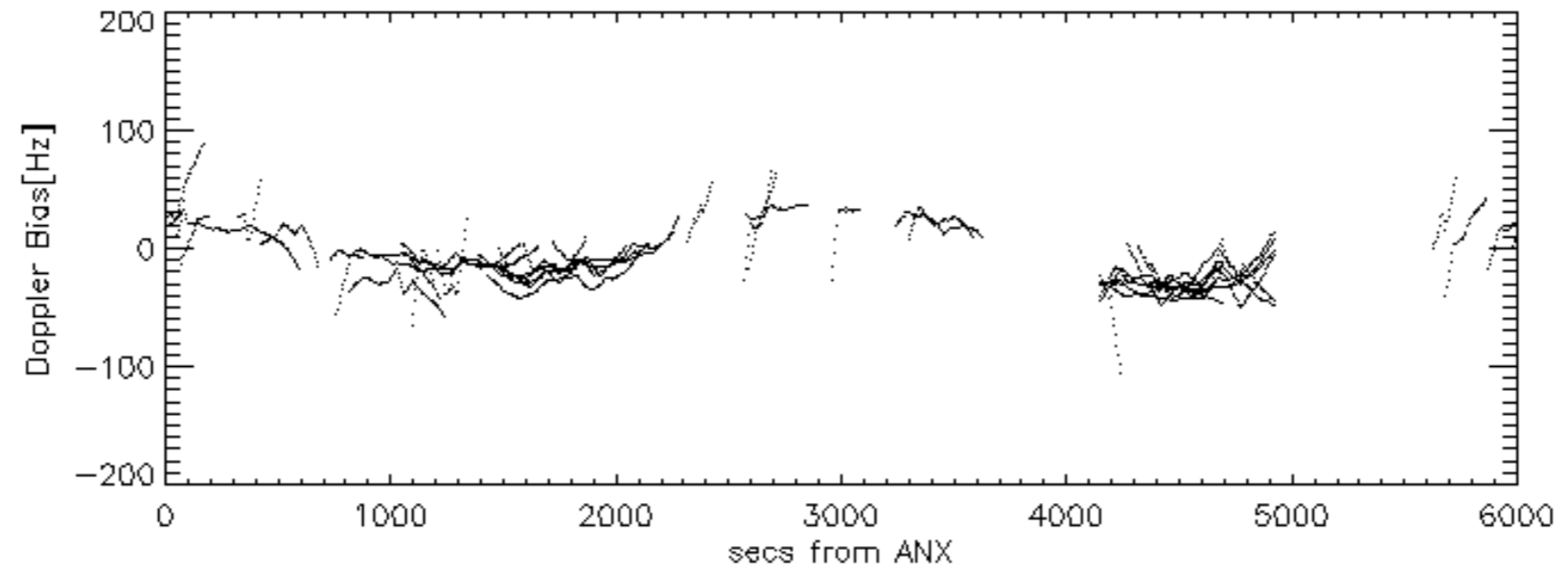
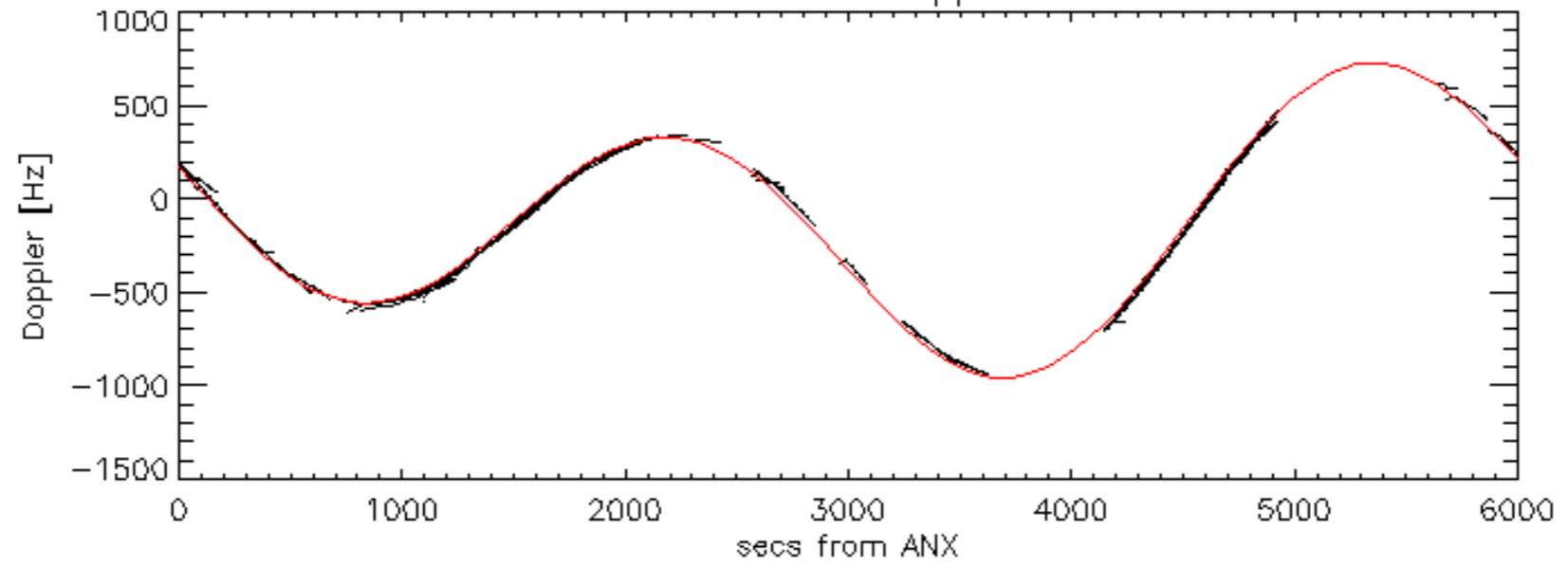


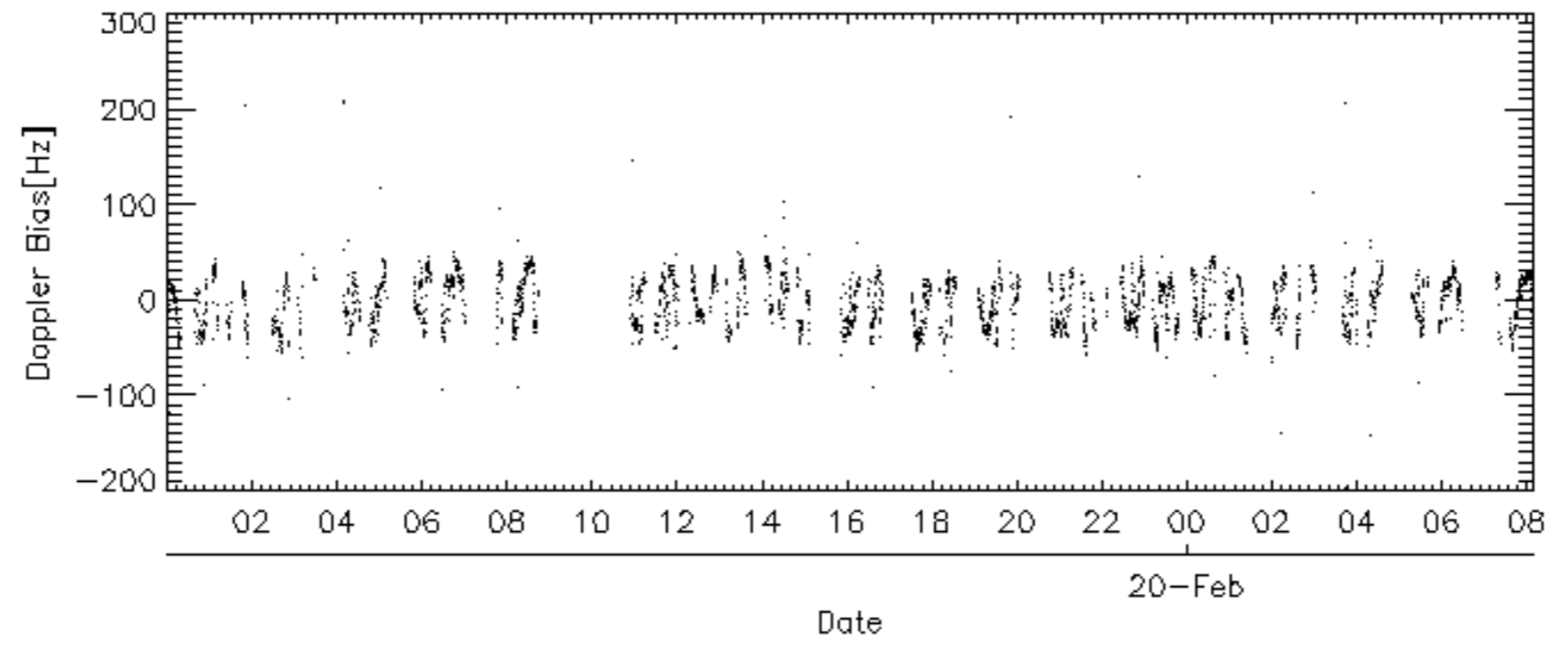
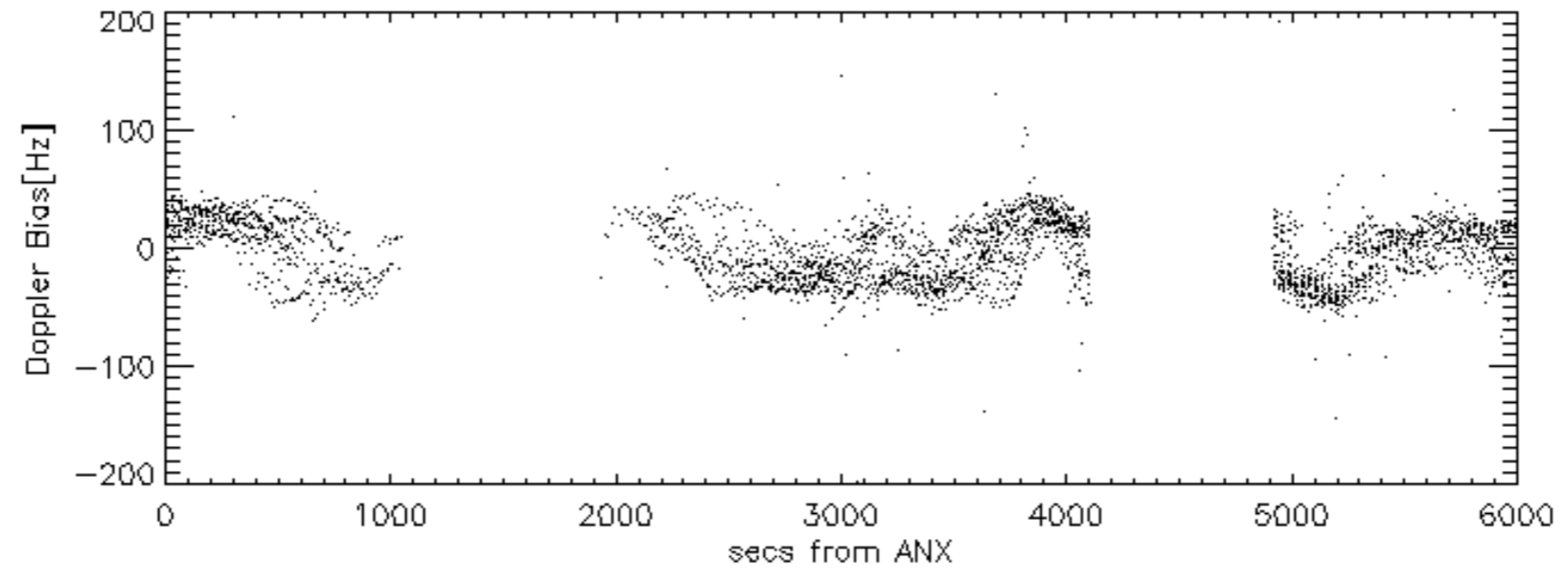
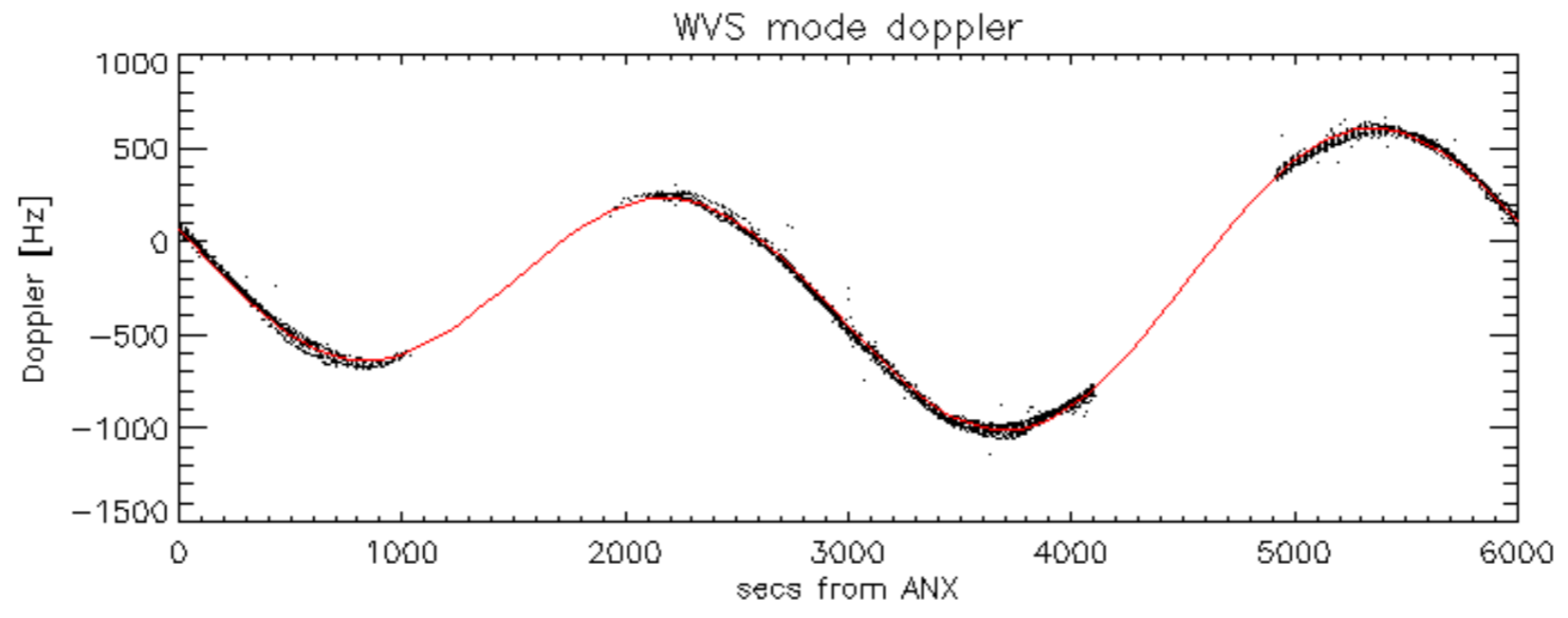


Doppler 'WVS' 'IS2' descending

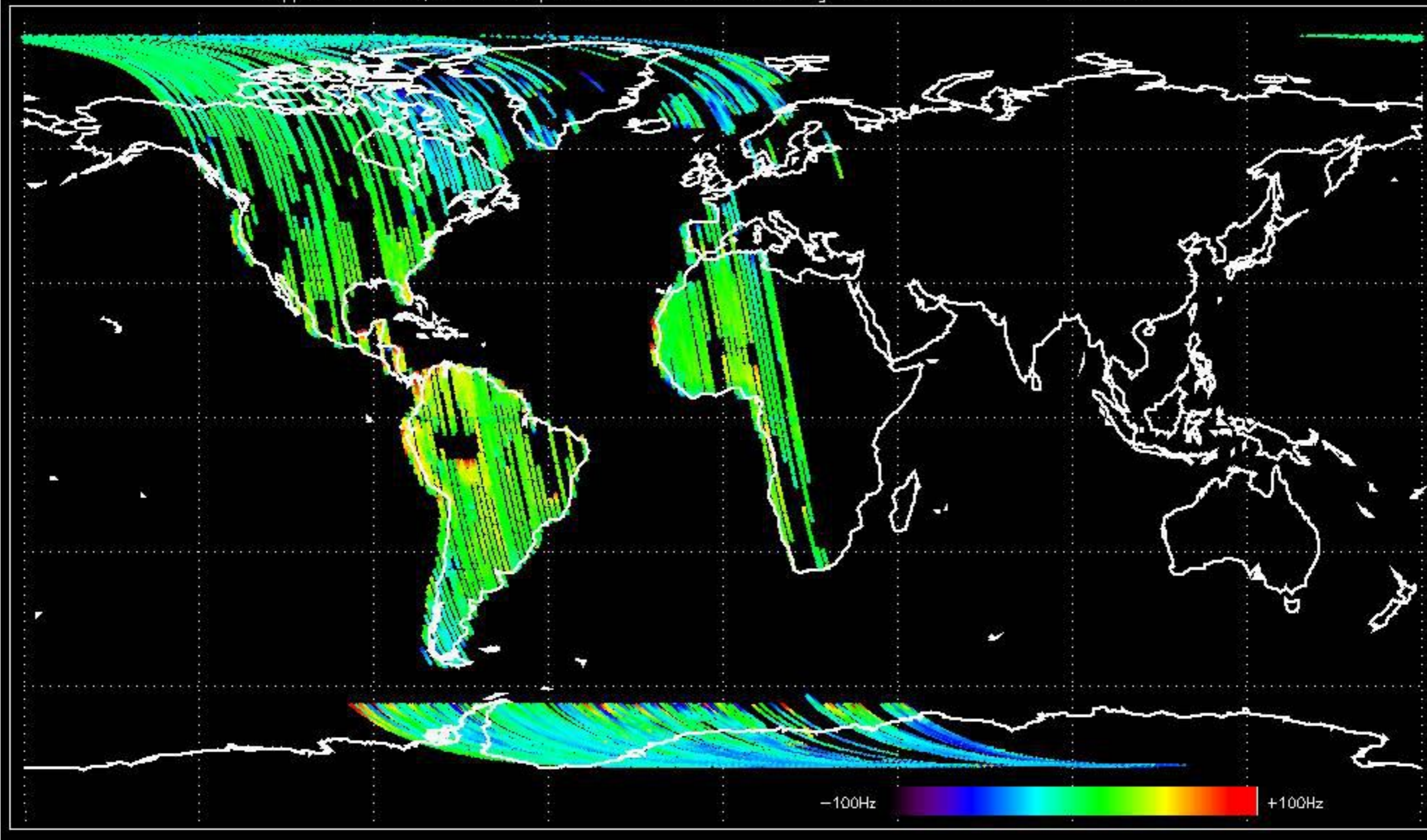


GM1 mode doppler

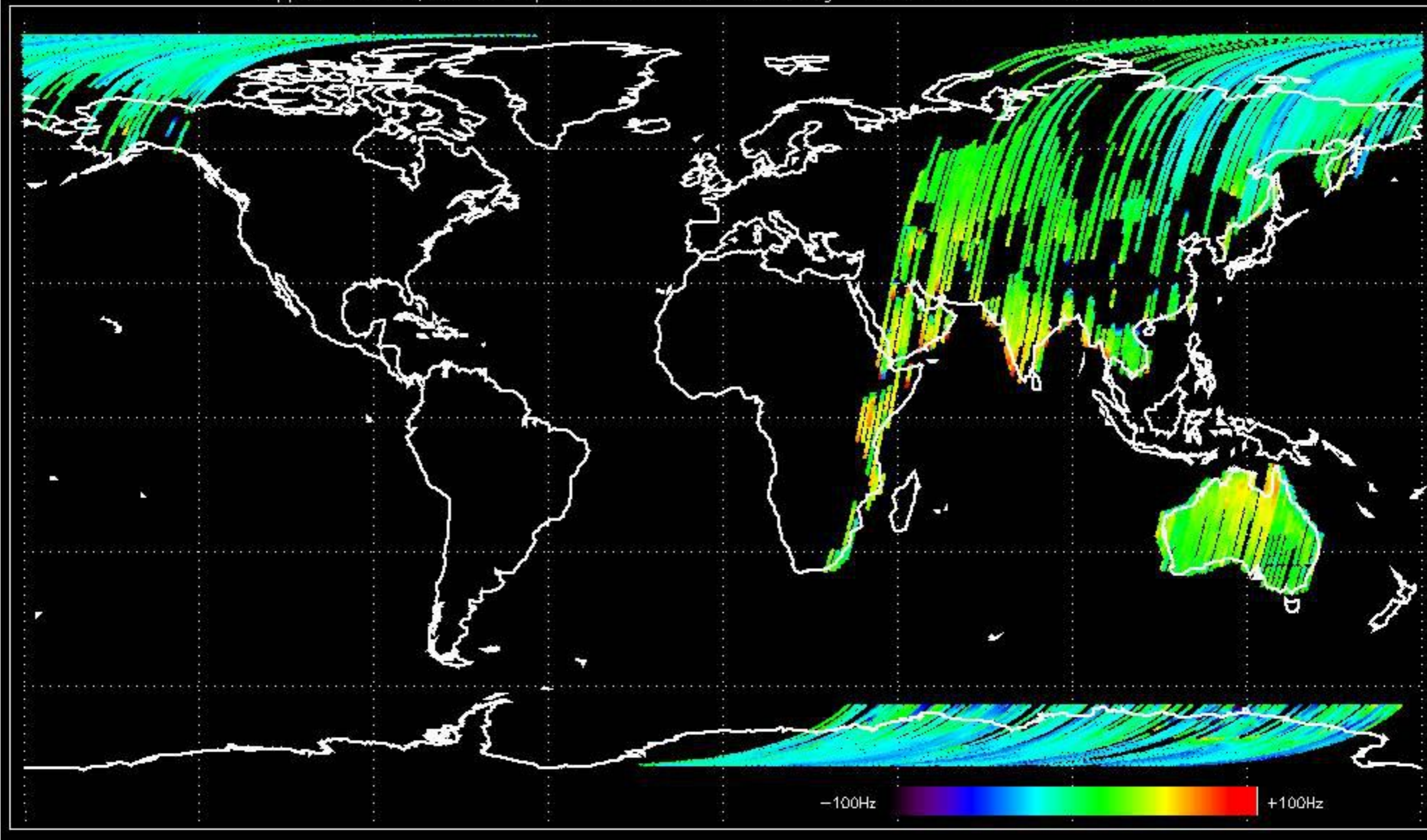




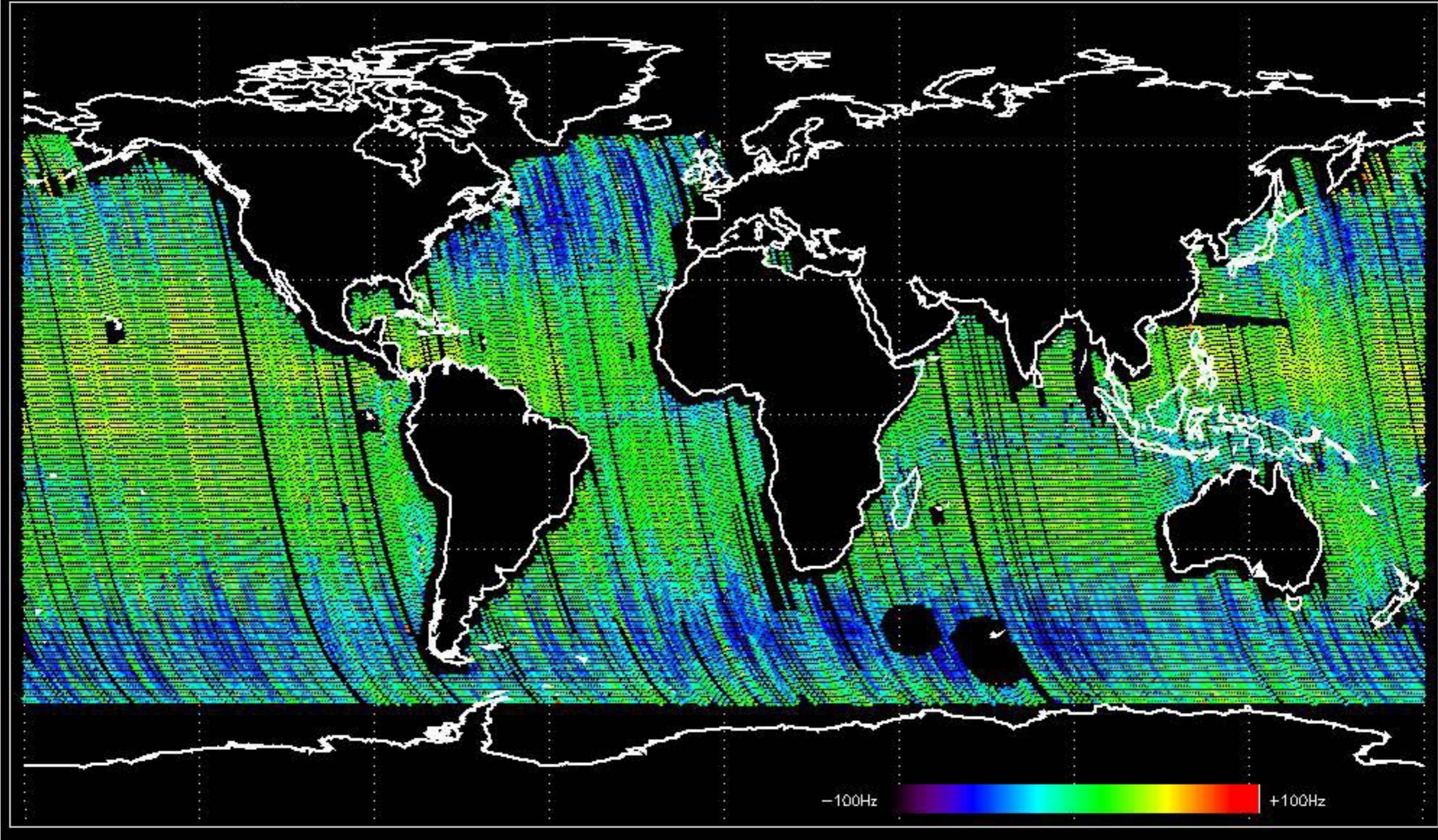
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.270217 Hz



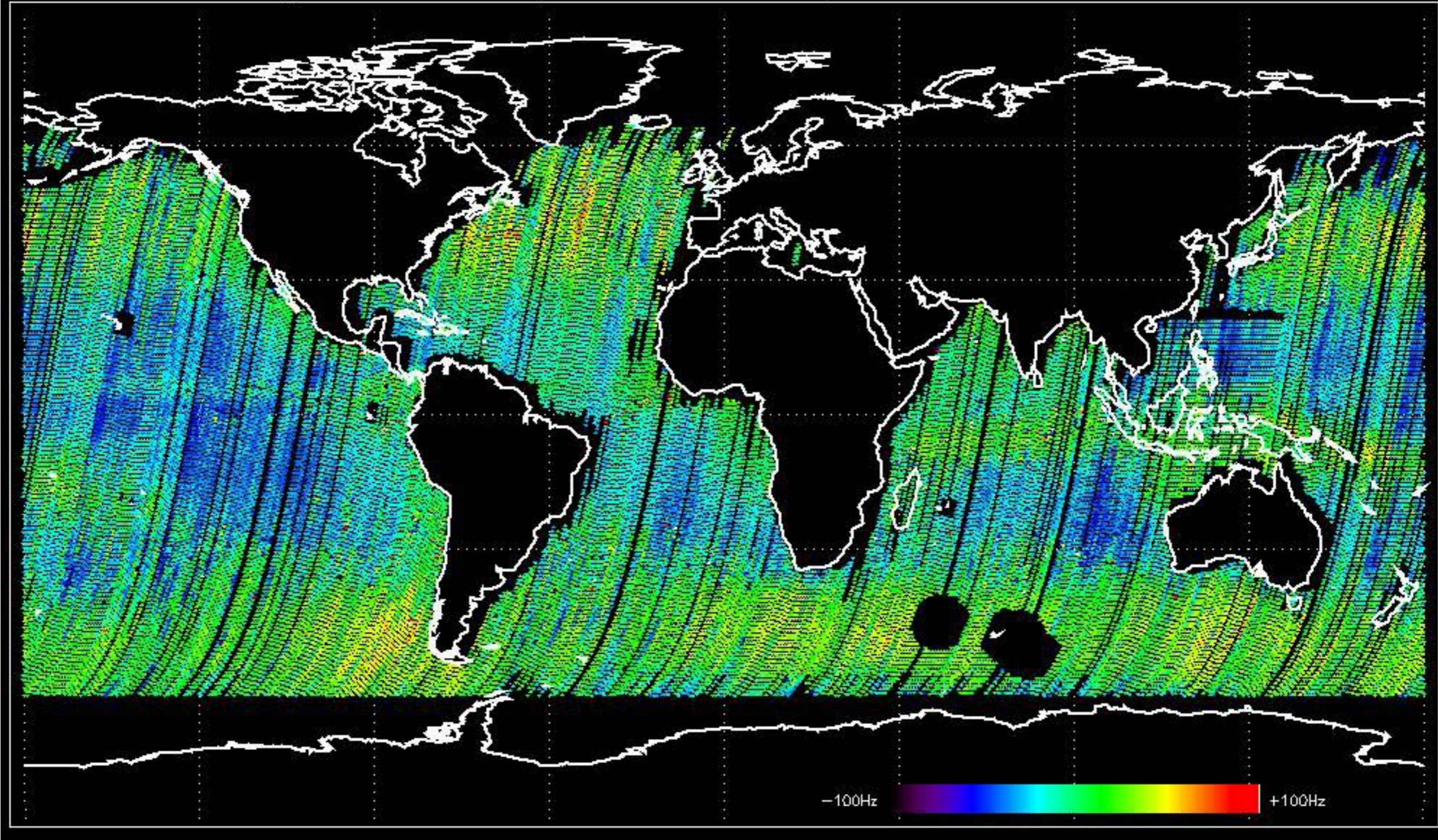
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.102384 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.0535739 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.9637817 Hz



No anomalies observed on available MS products:



No anomalies observed.









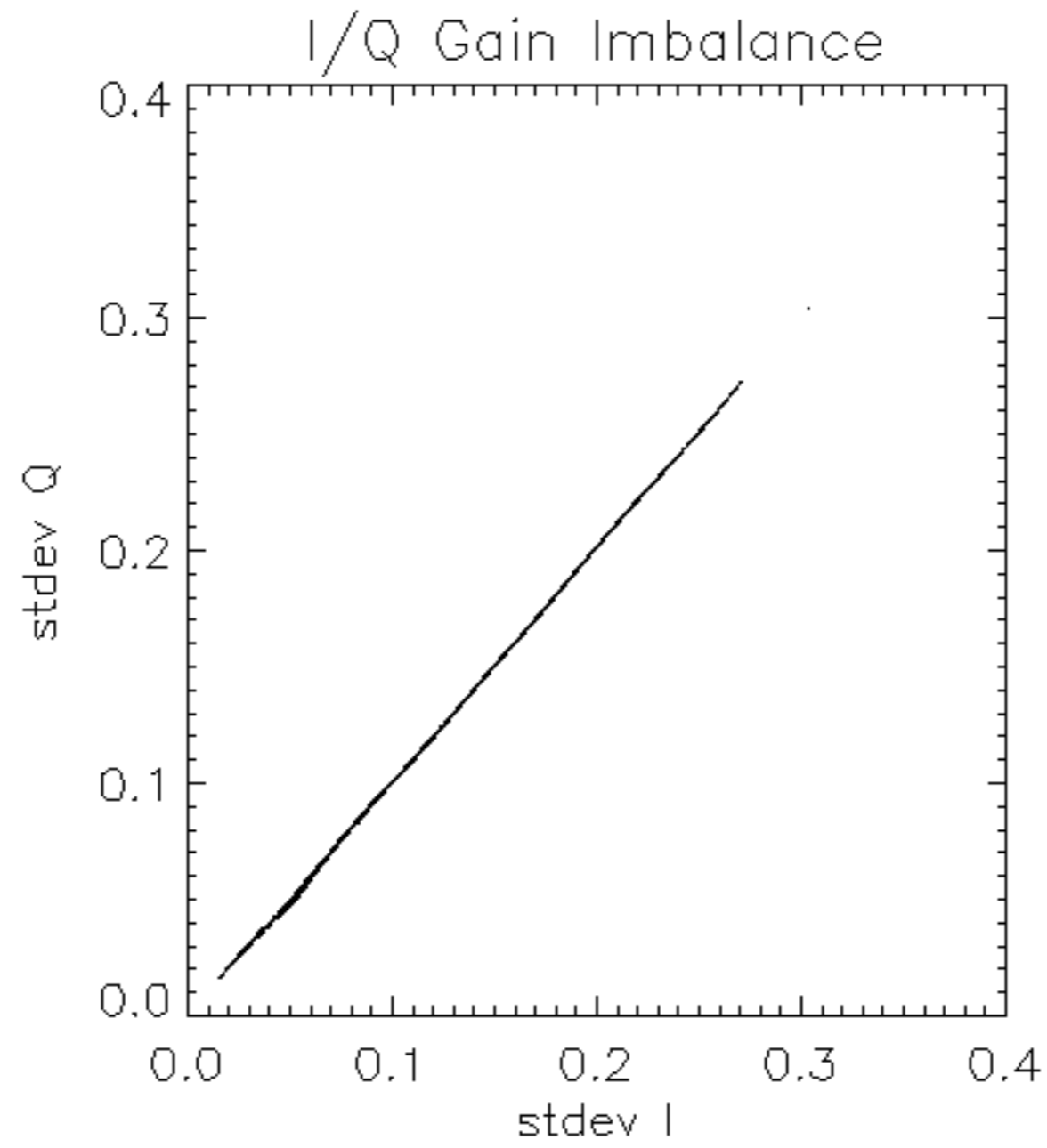


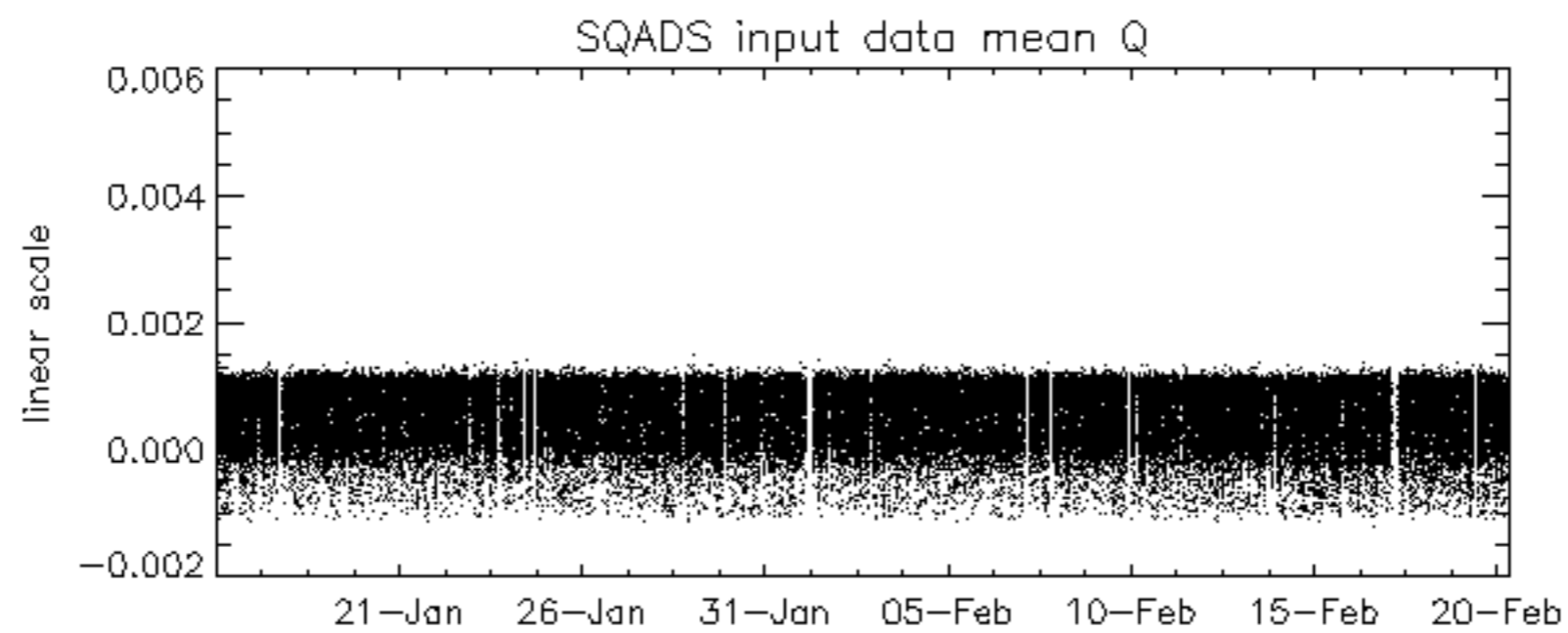
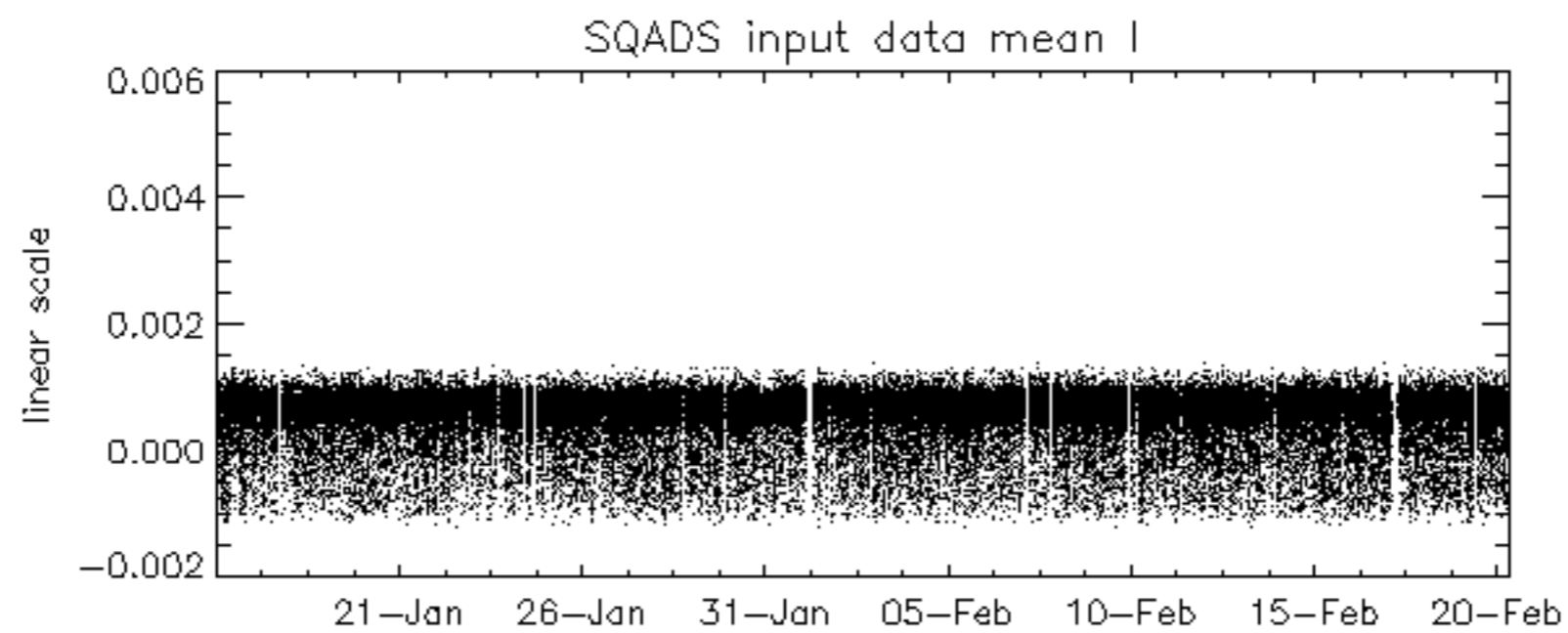
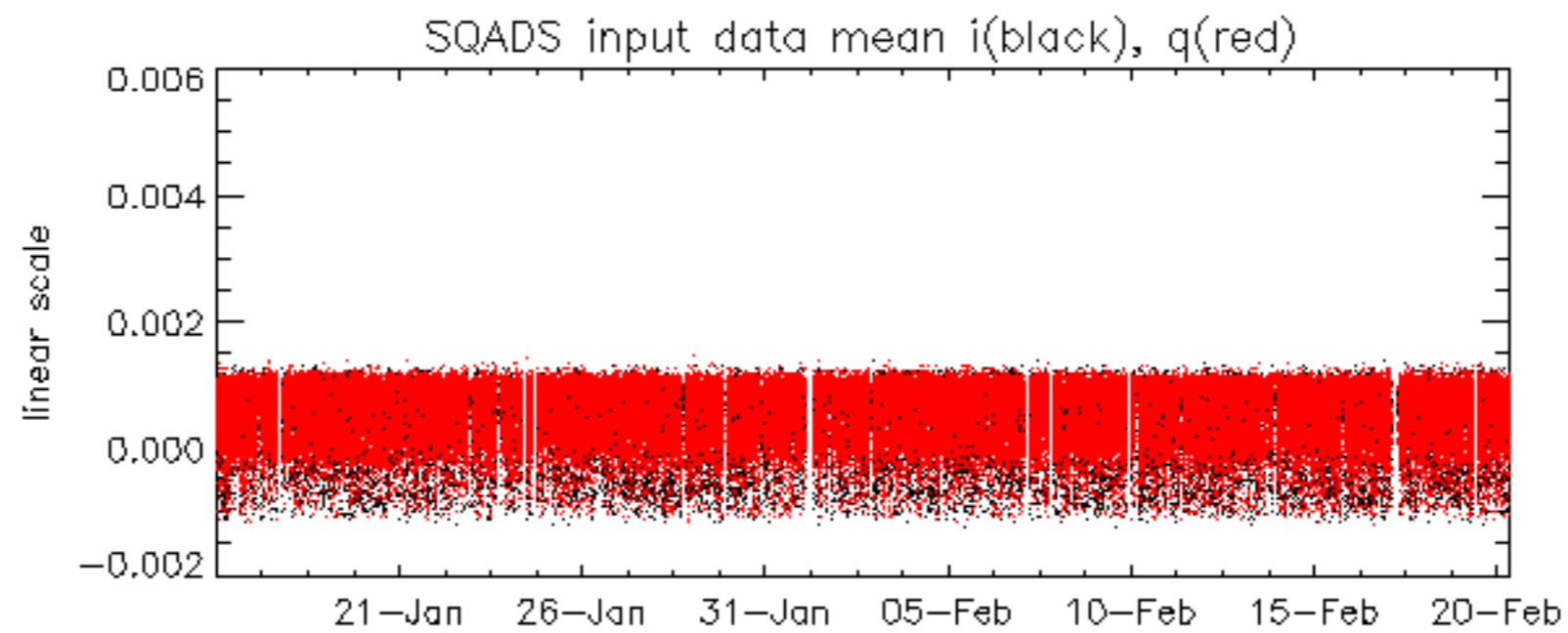


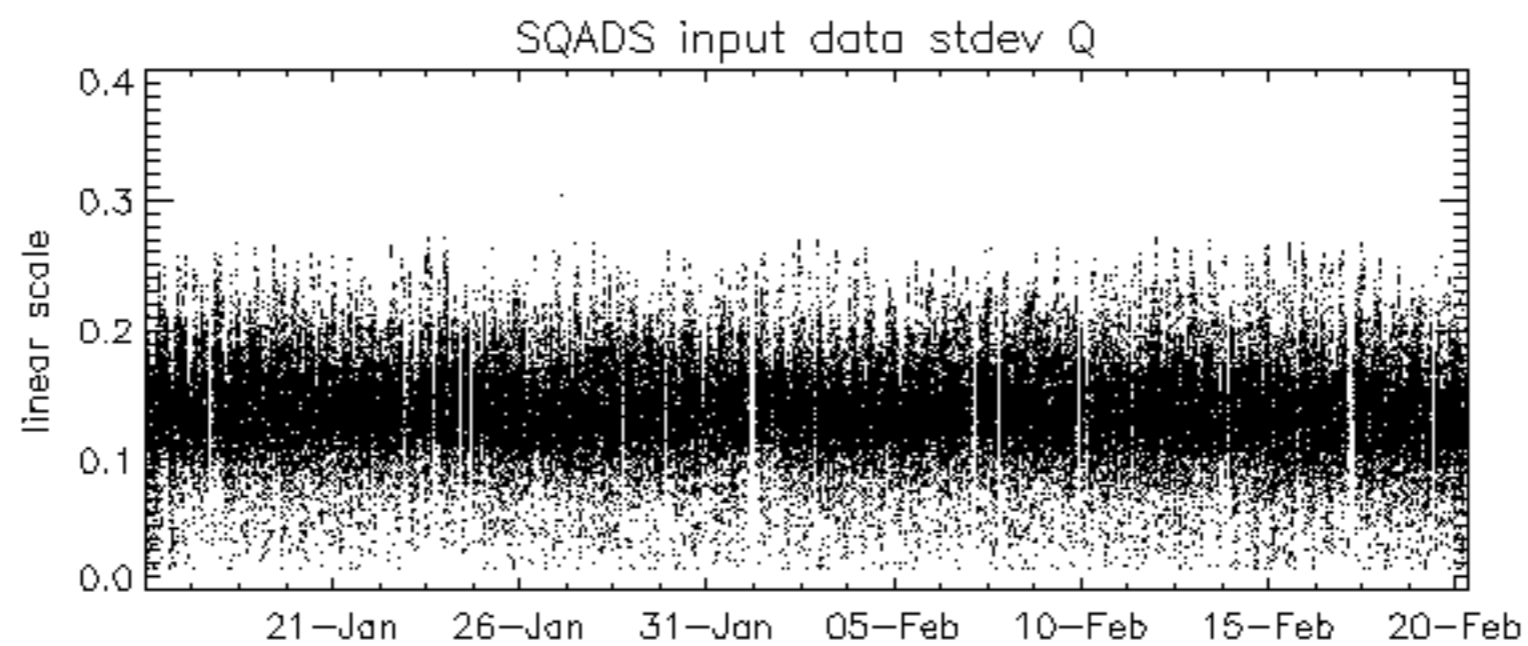
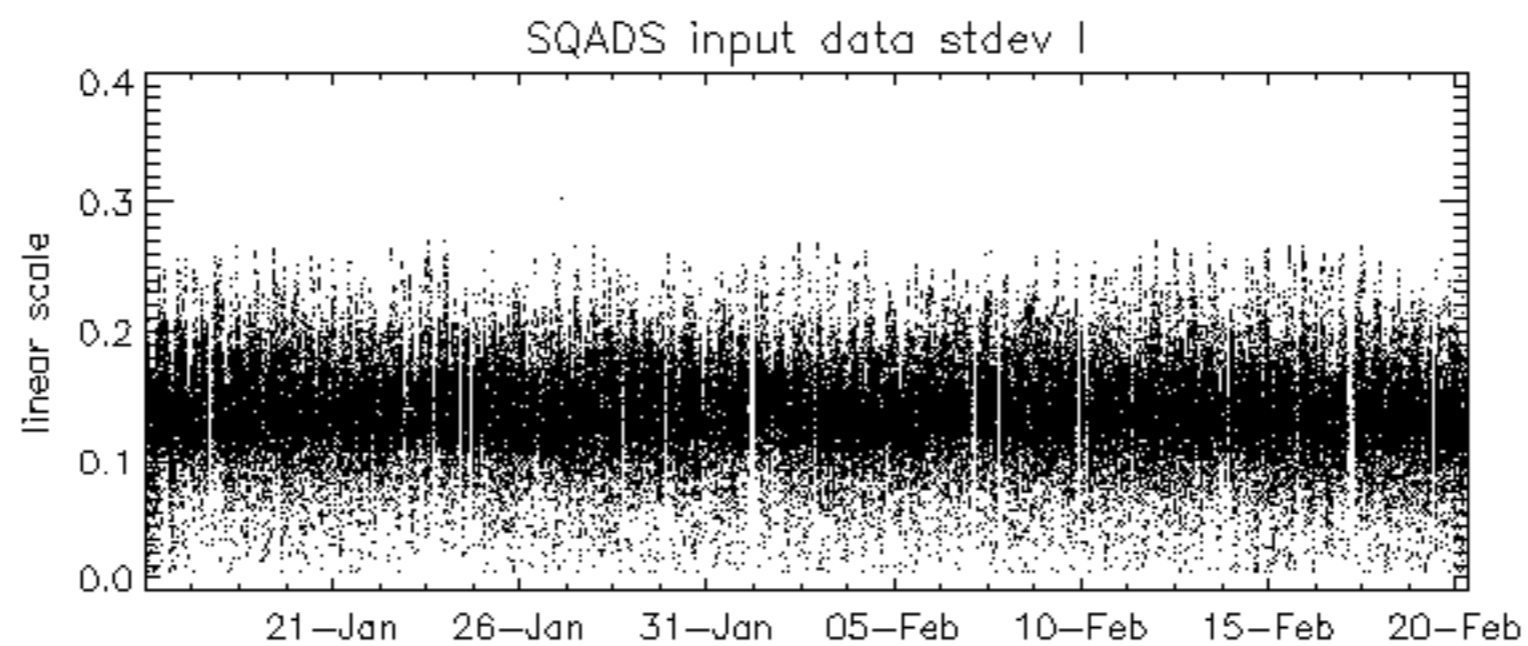
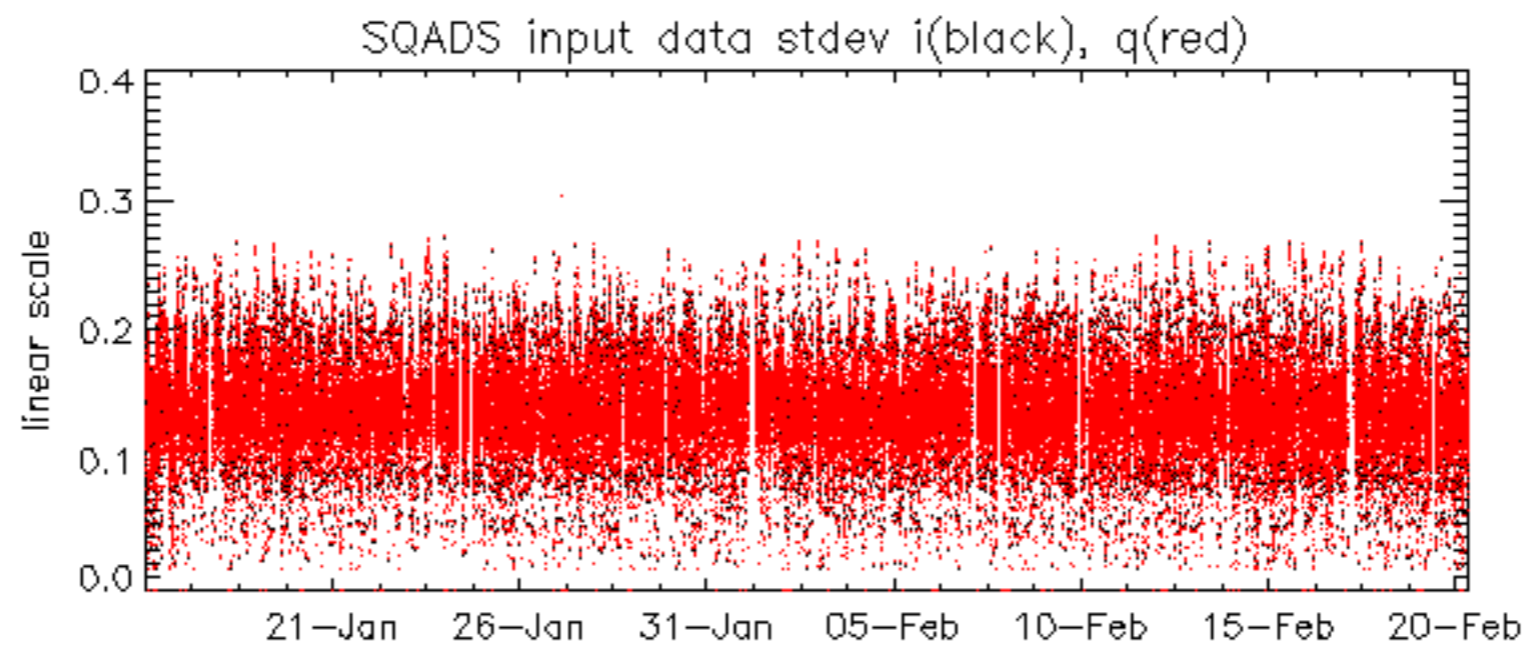






















Summary of analysis for the last 3 days 2006021[890]

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_1PNPDE20060219_004051_000000622045_00174_20769_3606.N1	1	0
ASA_IMM_1PNPDK20060219_083053_000000502045_00179_20774_1057.N1	0	29
ASA_WVS_1PNPDE20060210_040752_000000002045_00047_20642_0876.N1	1	0
ASA_WSM_1PNPDE20060218_112322_000001222045_00166_20761_5431.N1	0	60
ASA_WSM_1PNPDE20060219_183349_000001282045_00185_20780_5578.N1	0	40



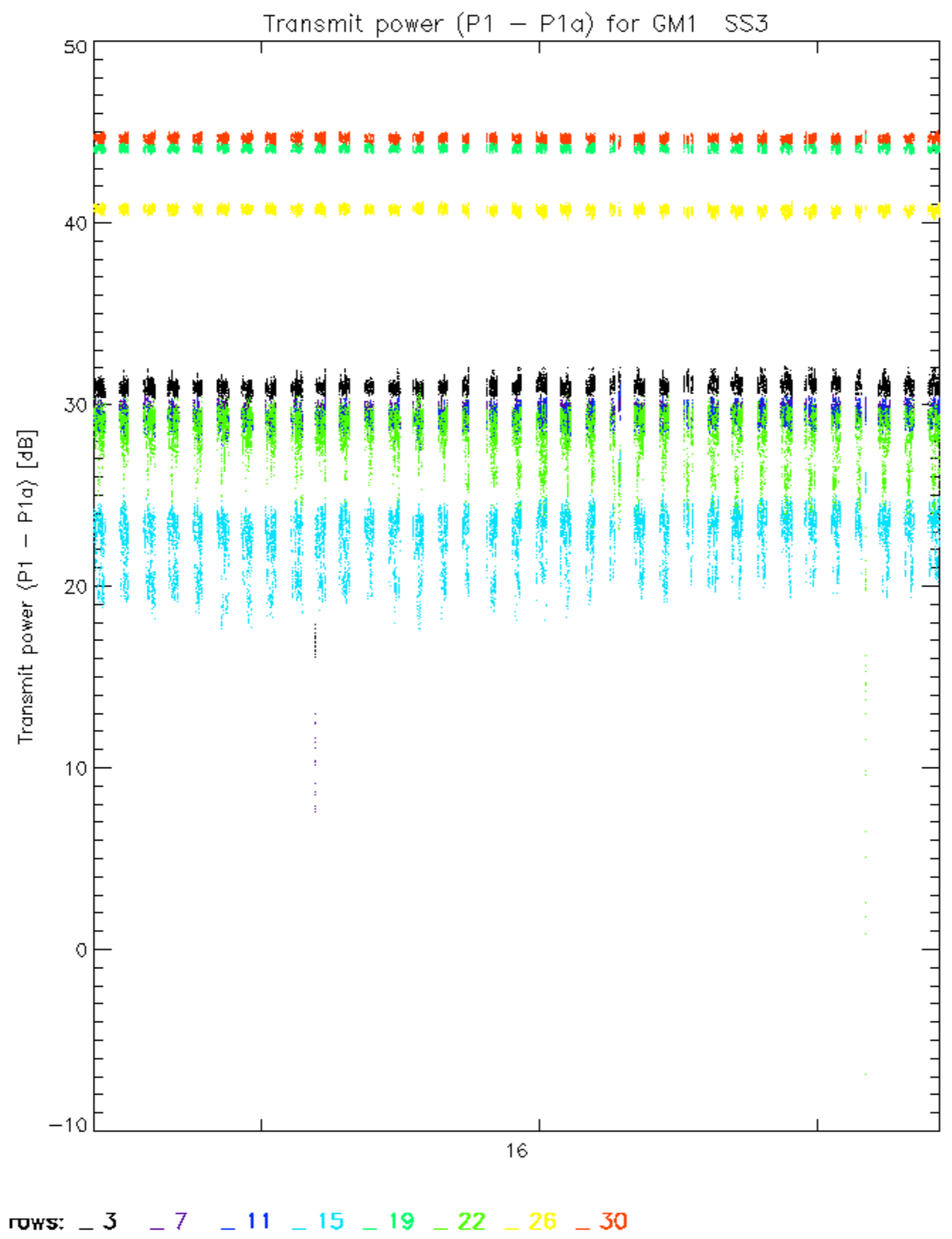




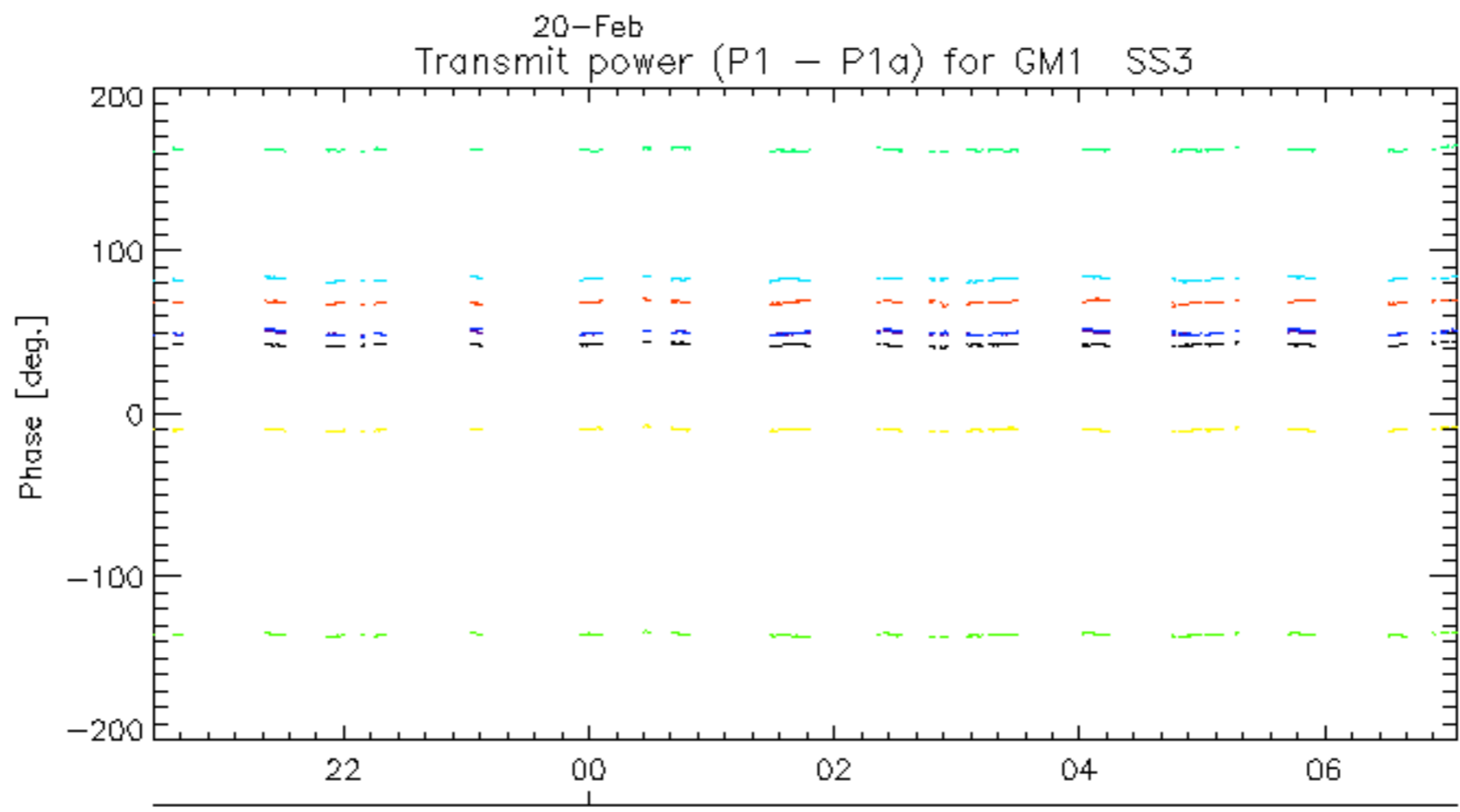
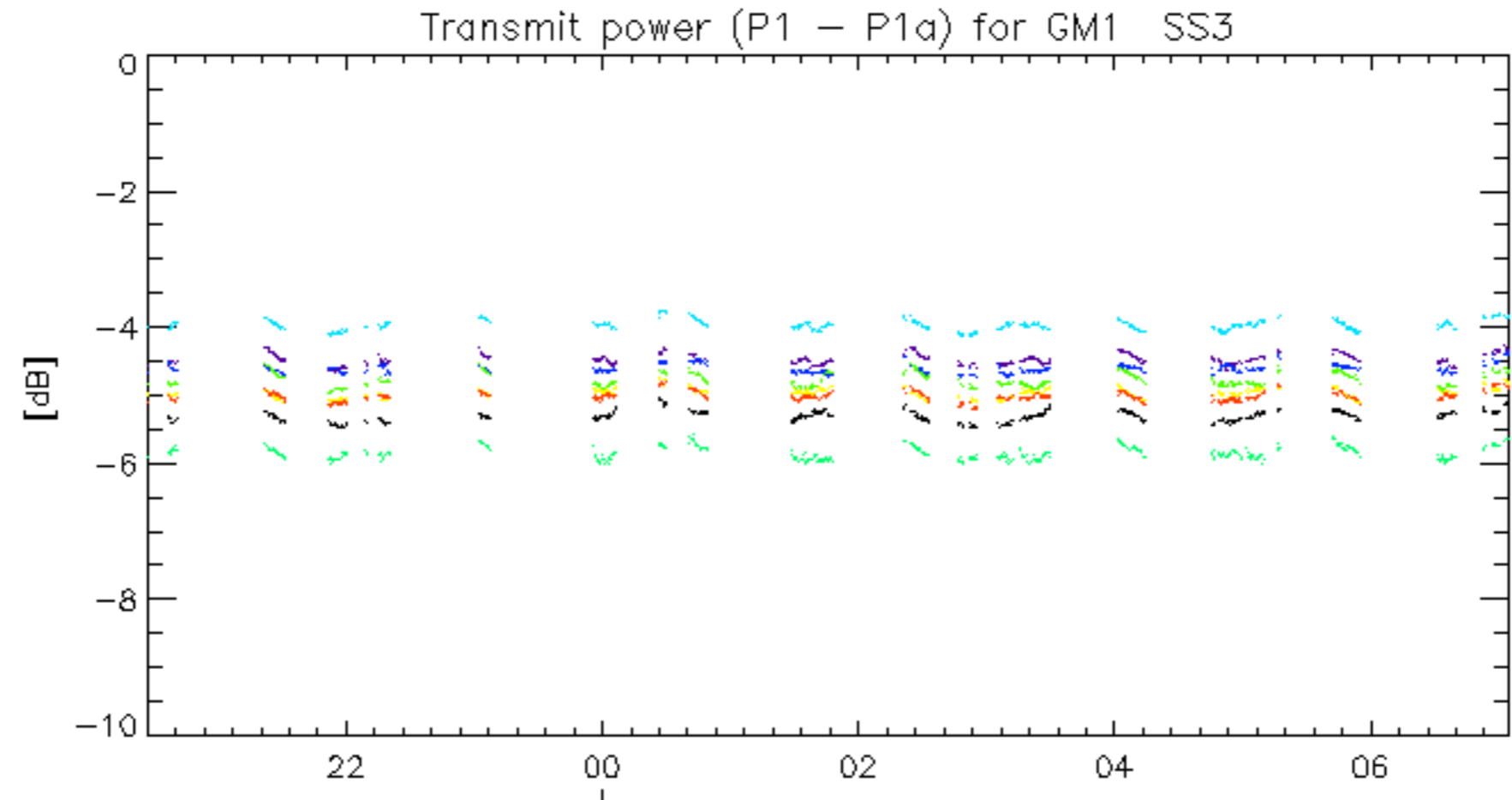




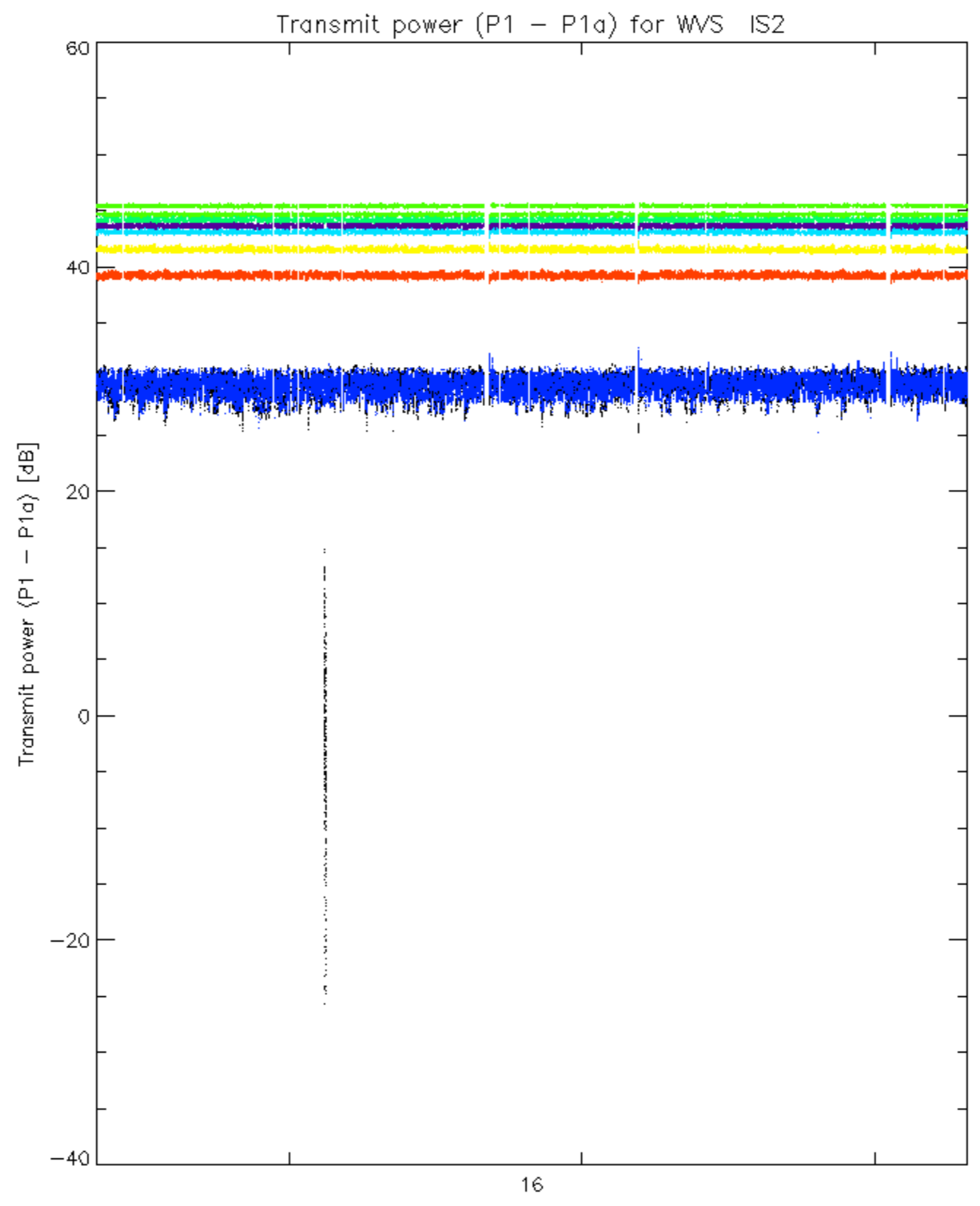




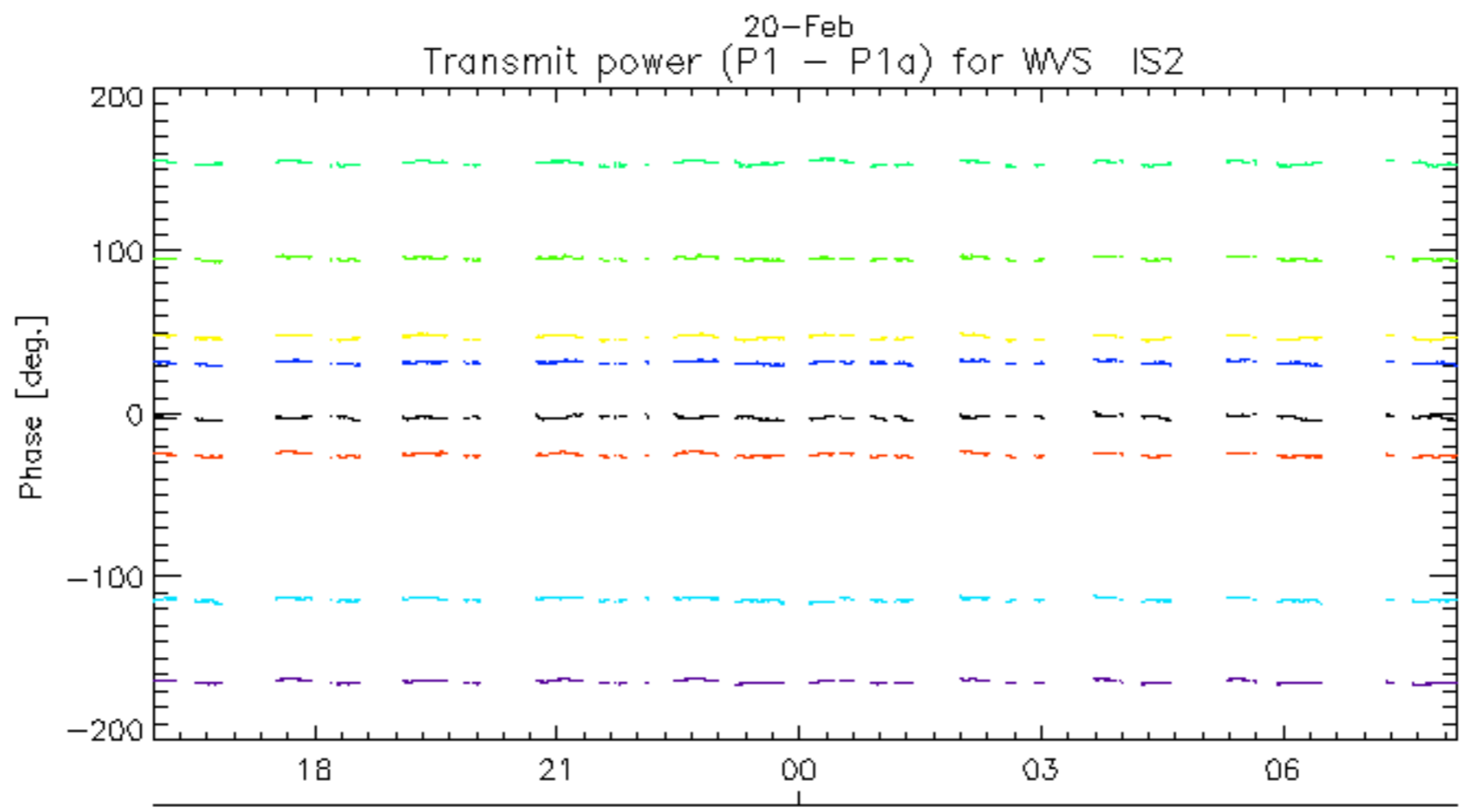
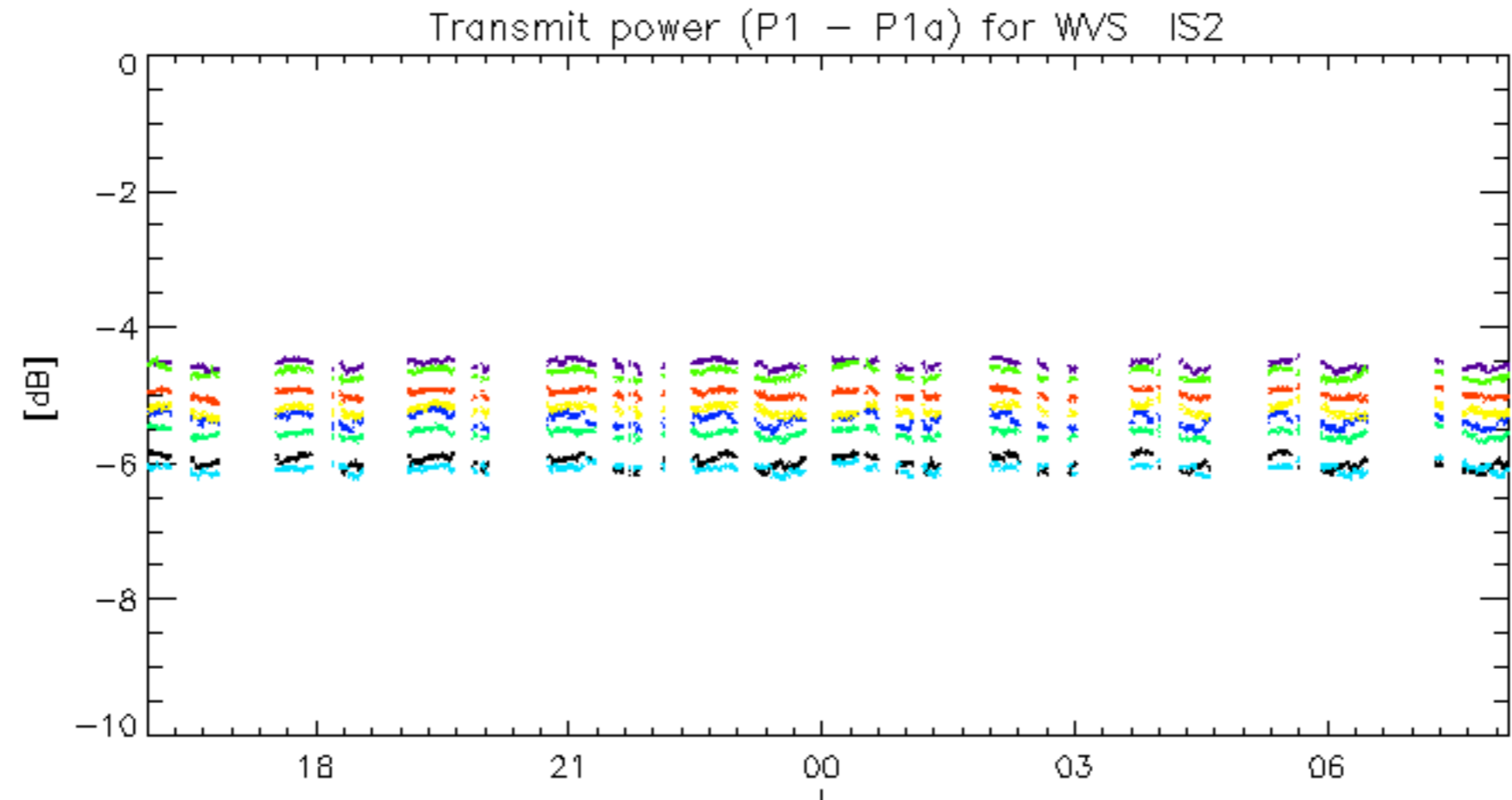




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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

No unavailabilities during the reported period.