

# PRELIMINARY REPORT OF 060206

last update on Mon Feb 6 16:38:52 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 2006-02-05 00:00:00 to 2006-02-06 16:38:52

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	0	7	0	28
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	44	0	7	0	28
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	0	7	0	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	0	7	0	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	44	28	8	49
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	44	28	8	49
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	44	28	8	49
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	44	28	8	49

### 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	20060204 204858
H	20060205 183645

### 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

**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	-4.020848	0.007866	0.050336
7	P1	-3.002183	0.013488	-0.014700
11	P1	-4.093864	0.022489	0.022749
15	P1	-6.060208	0.017543	0.006060
19	P1	-3.253631	0.006318	-0.017702
22	P1	-4.476604	0.019320	0.025097
26	P1	-4.201588	0.013007	0.042222
30	P1	-5.770649	0.010089	0.002737
3	P1	-16.918177	0.264903	0.104704
7	P1	-16.637018	0.126540	-0.111763
11	P1	-16.598423	0.299410	0.003548
15	P1	-13.200765	0.112790	0.110607
19	P1	-13.888781	0.072694	-0.022660
22	P1	-15.835217	0.566732	0.221609
26	P1	-15.764735	0.248142	0.042355
30	P1	-16.589100	0.321932	0.014498

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.574028	0.093431	0.144503
7	P2	-22.448528	0.096773	0.099944
11	P2	-16.283300	0.102860	0.092796
15	P2	-7.202714	0.103451	0.048752
19	P2	-9.165296	0.097587	0.023327
22	P2	-17.941349	0.093864	-0.017079
26	P2	-16.216494	0.101152	0.005330
30	P2	-19.645672	0.084195	0.023046

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.206671	0.007316	0.024831
7	P3	-8.206671	0.007316	0.024831
11	P3	-8.206671	0.007316	0.024831
15	P3	-8.206671	0.007316	0.024831
19	P3	-8.206671	0.007316	0.024831
22	P3	-8.206671	0.007316	0.024831
26	P3	-8.206671	0.007316	0.024831
30	P3	-8.206671	0.007316	0.024831

**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	-3.728612	0.011046	-0.041001
7	P1	-2.745653	0.007595	0.013124
11	P1	-2.872561	0.011949	-0.061164
15	P1	-3.480415	0.019660	-0.087766
19	P1	-3.378597	0.012332	-0.035680
22	P1	-5.132846	0.021692	-0.081563
26	P1	-5.850740	0.016435	-0.004431
30	P1	-5.237516	0.028179	0.023196
3	P1	-11.532476	0.039077	-0.045643
7	P1	-9.918908	0.047736	-0.023081
11	P1	-10.103372	0.050615	-0.150272
15	P1	-10.646586	0.091666	-0.122096
19	P1	-15.464704	0.061245	0.008109
22	P1	-20.503614	1.254136	0.389457

26	P1	-16.698185	0.342001	0.433290
30	P1	-18.194345	0.328777	-0.157266

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.366821	0.034935	0.185239
7	P2	-22.801729	0.066096	0.192060
11	P2	-11.397609	0.022521	0.113621
15	P2	-4.896369	0.027189	0.042462
19	P2	-6.904728	0.023705	0.020820
22	P2	-8.186672	0.023892	-0.014391
26	P2	-23.957832	0.025580	-0.000734
30	P2	-22.087883	0.019020	-0.005046

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044796	0.002508	0.025901
7	P3	-8.044636	0.002506	0.025471
11	P3	-8.044619	0.002506	0.026117
15	P3	-8.044772	0.002521	0.025920
19	P3	-8.044790	0.002509	0.026172
22	P3	-8.044720	0.002505	0.025746
26	P3	-8.044781	0.002503	0.025513
30	P3	-8.044755	0.002522	0.026145

## 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	0.000566884
	stdev	1.63939e-07
MEAN Q	mean	0.000527837
	stdev	2.10809e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139937
	stdev	0.00115647
STDEV Q	mean	0.140299
	stdev	0.00117591



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006020[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_WSM_1PNPDE20060204_033233_000002132044_00462_20556_3632.N1	0	1
ASA_WSM_1PNPDE20060206_040934_000000612044_00491_20585_3904.N1	0	1
ASA_APM_1PNPDE20060205_141423_000000822044_00483_20577_0339.N1	0	30





## 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

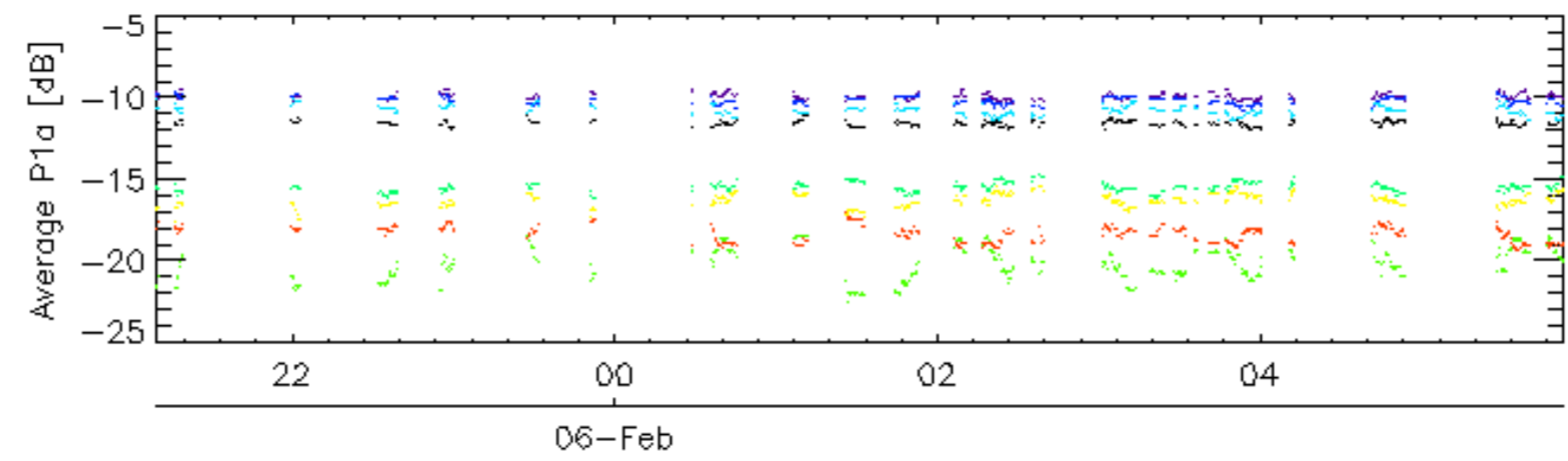
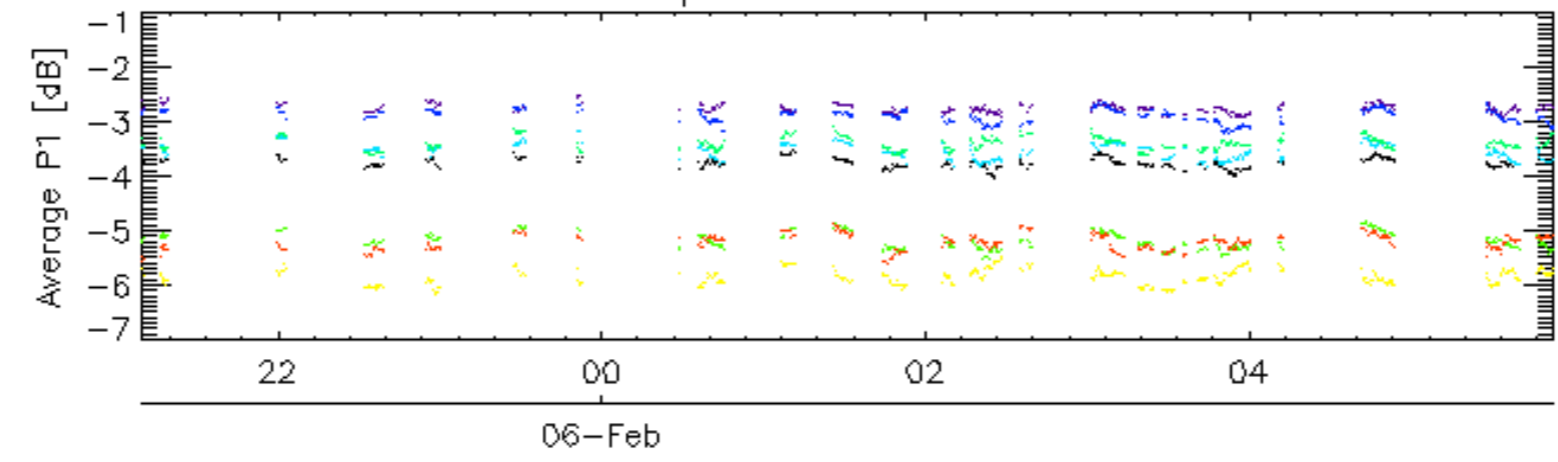
### 7.5 - Absolute Doppler for GM1

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

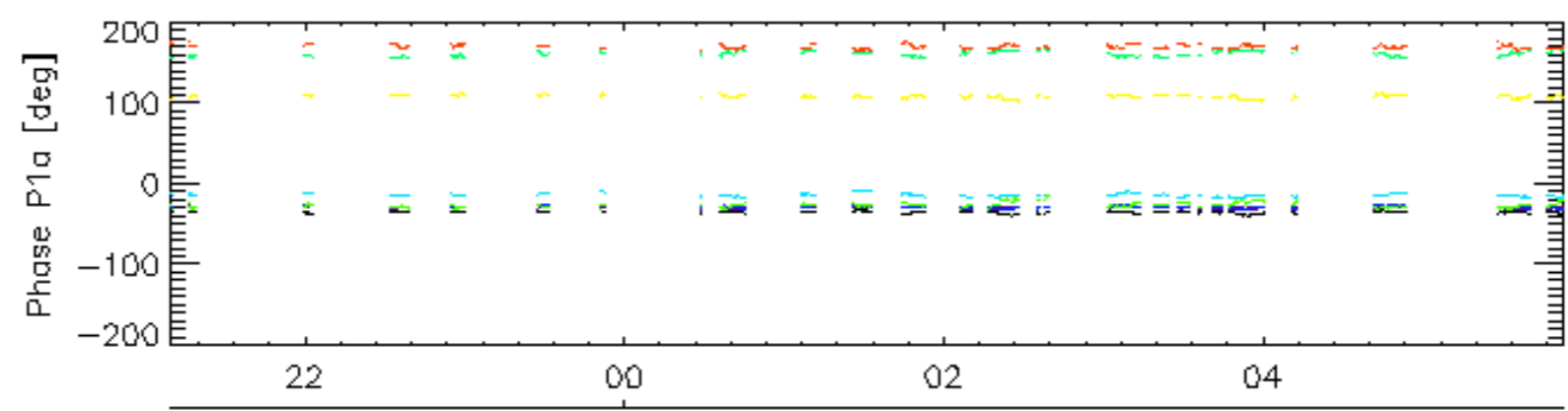
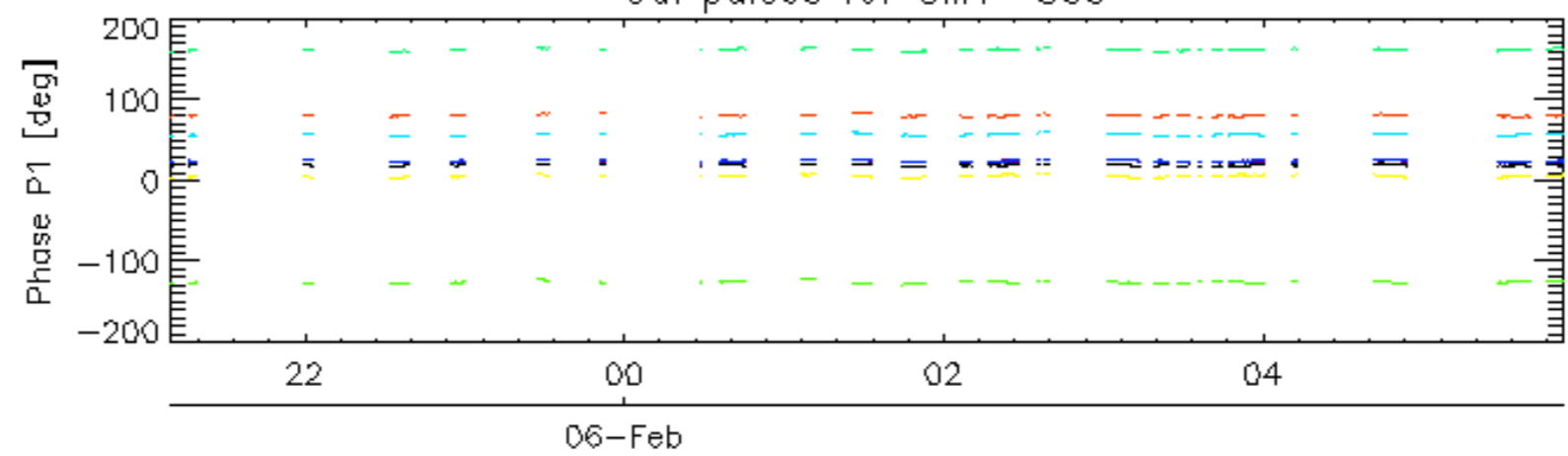
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

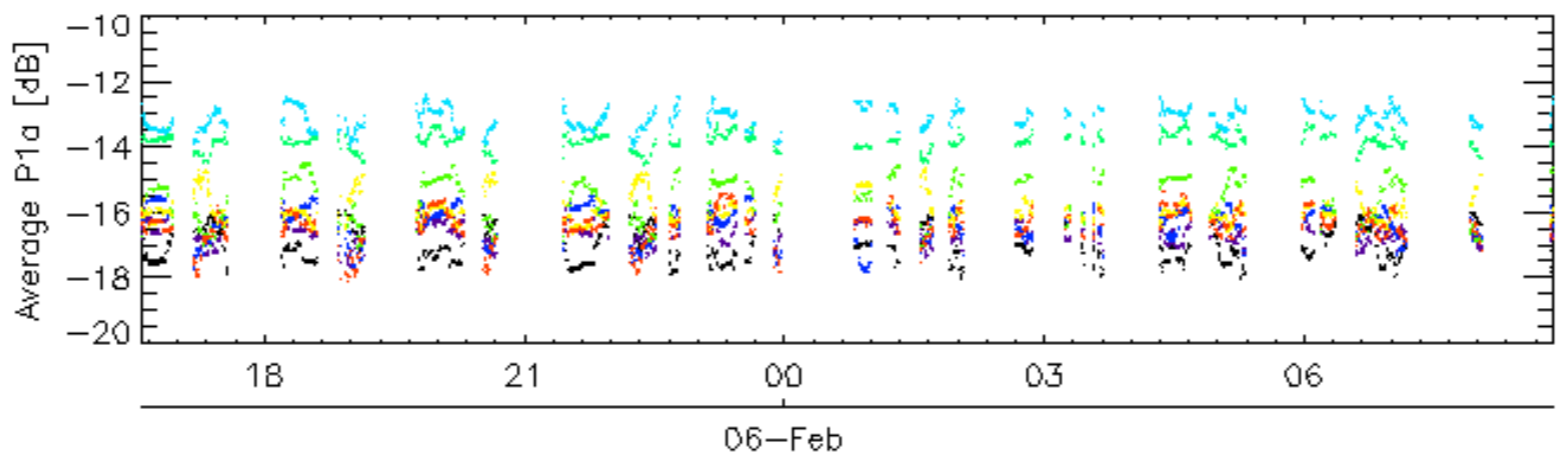
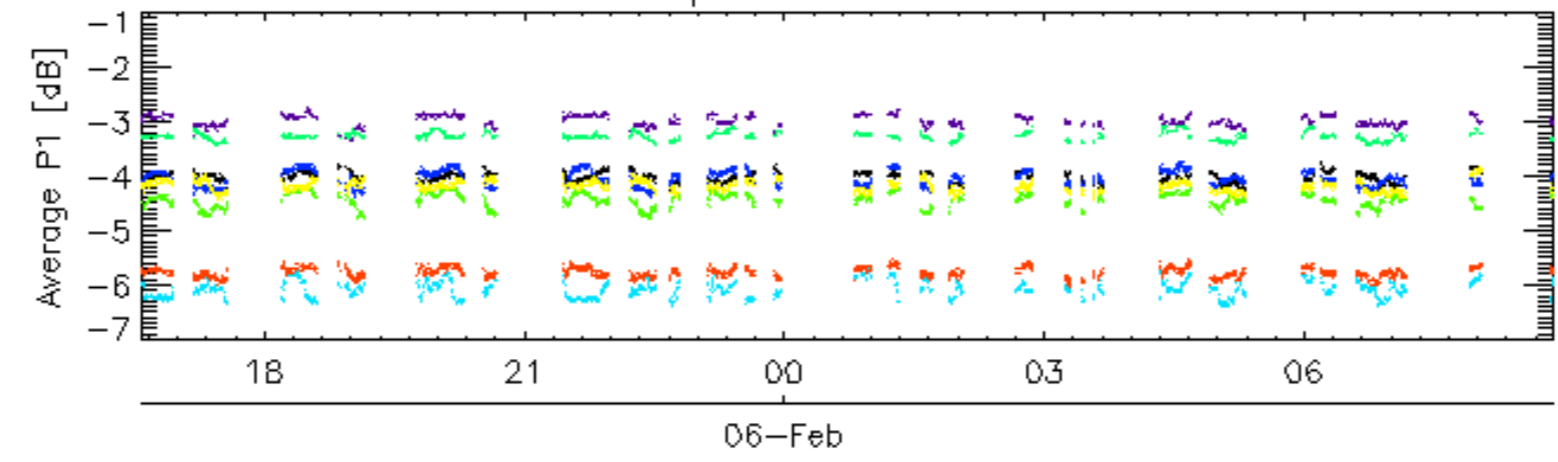


Cal pulses for GM1 SS3

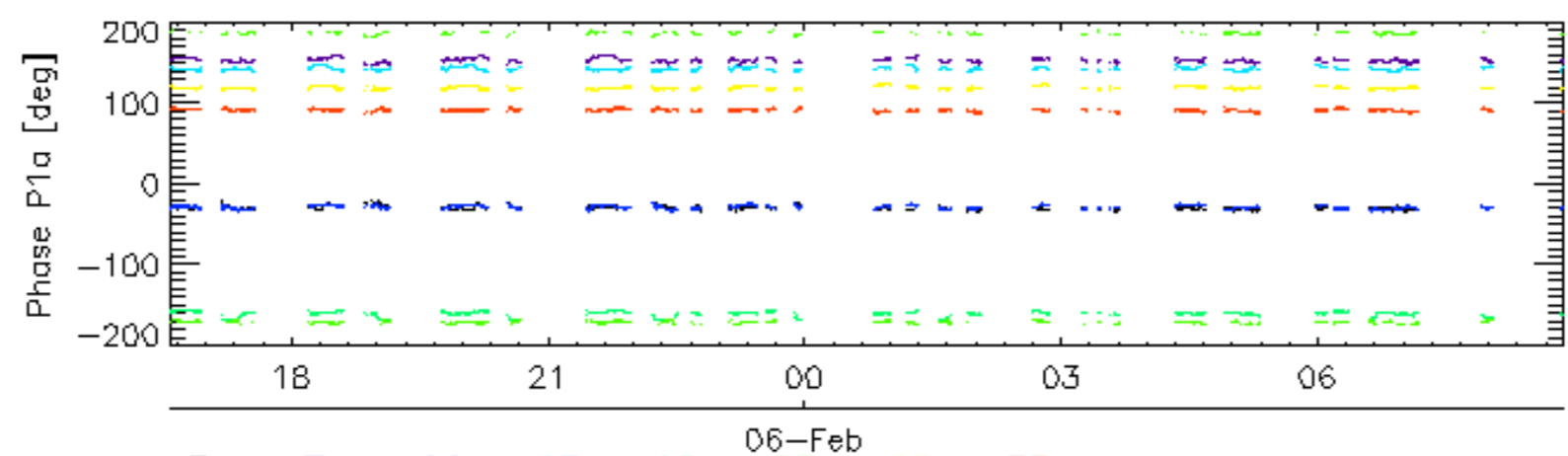
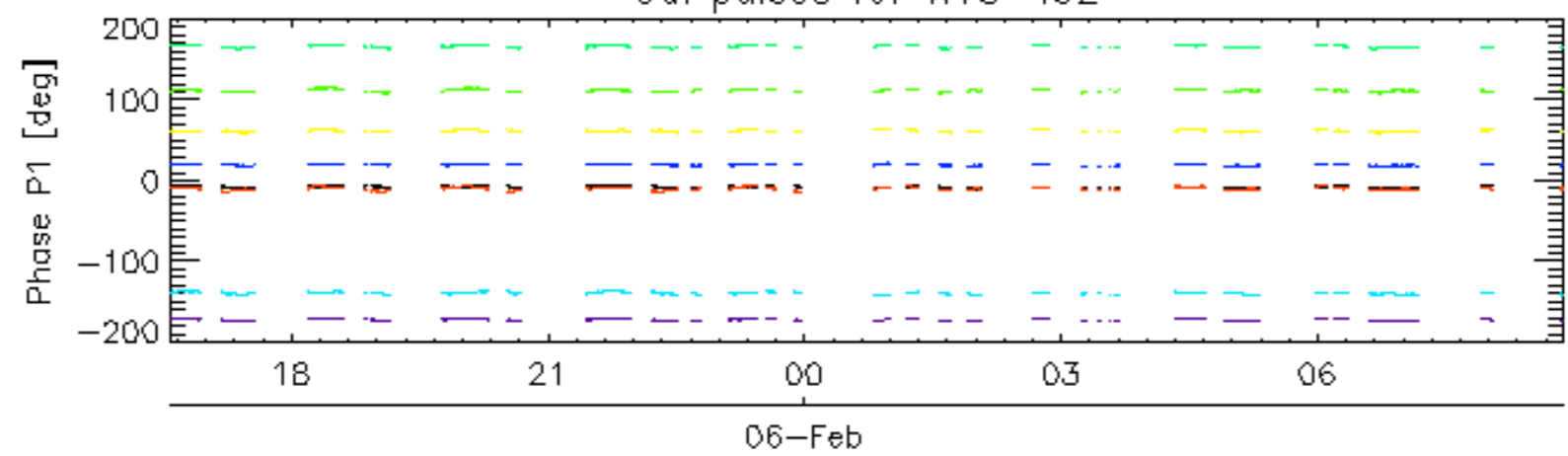


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

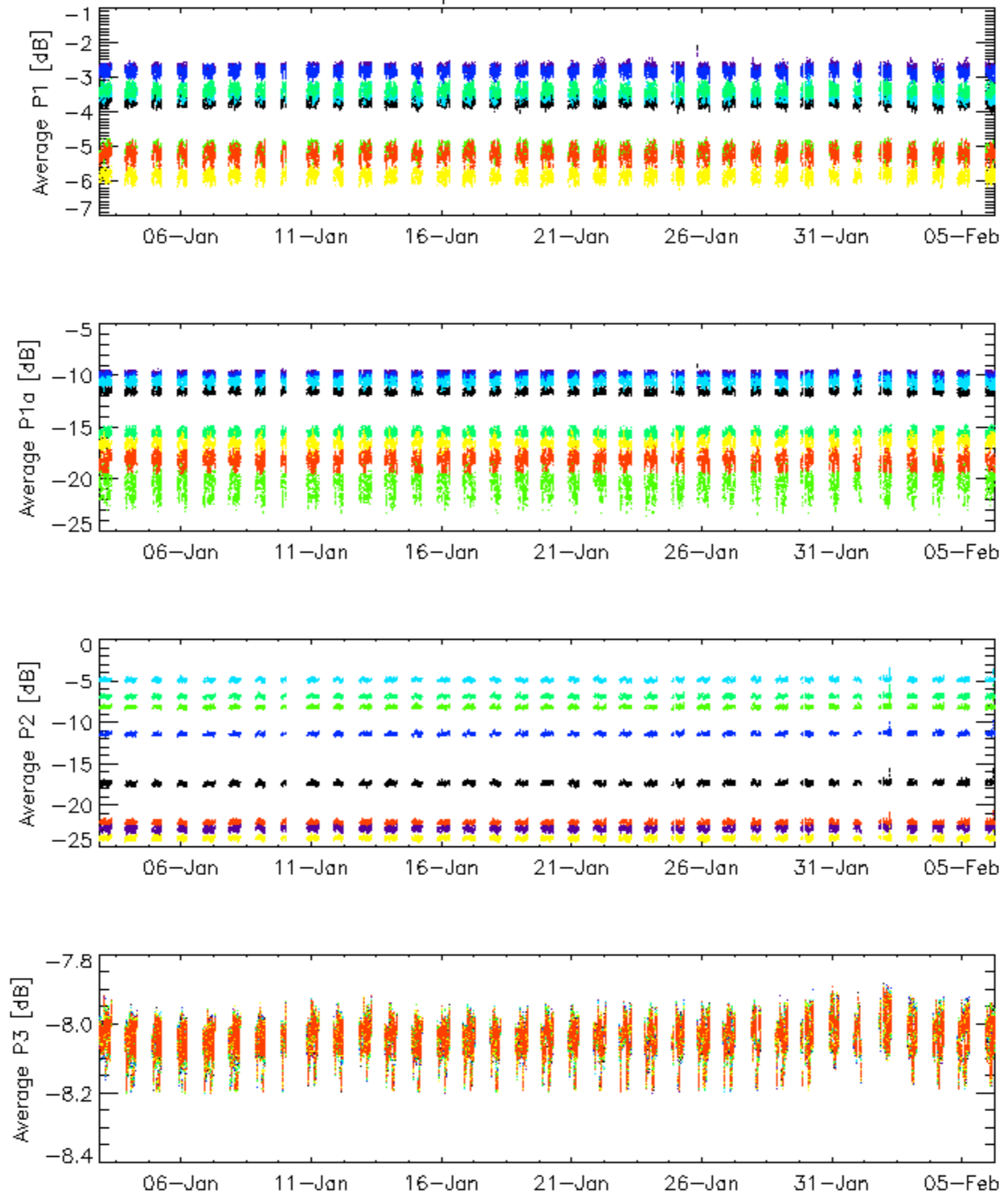


Cal pulses for WVS IS2



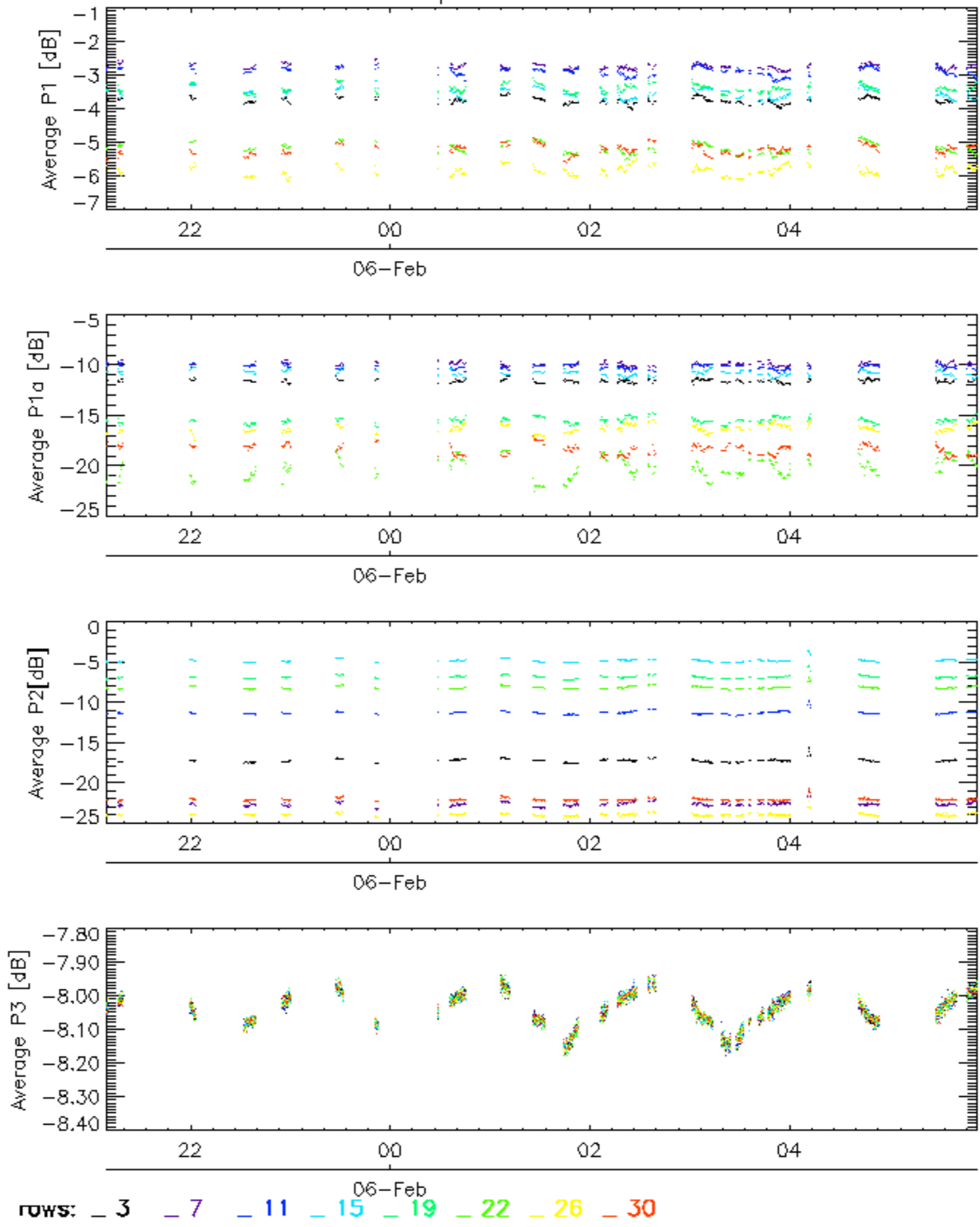
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

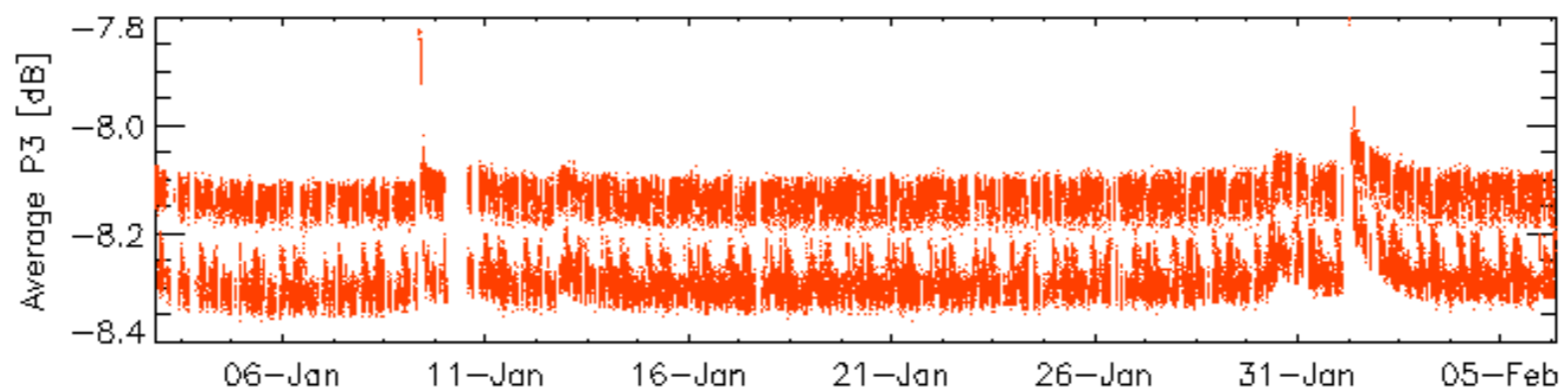
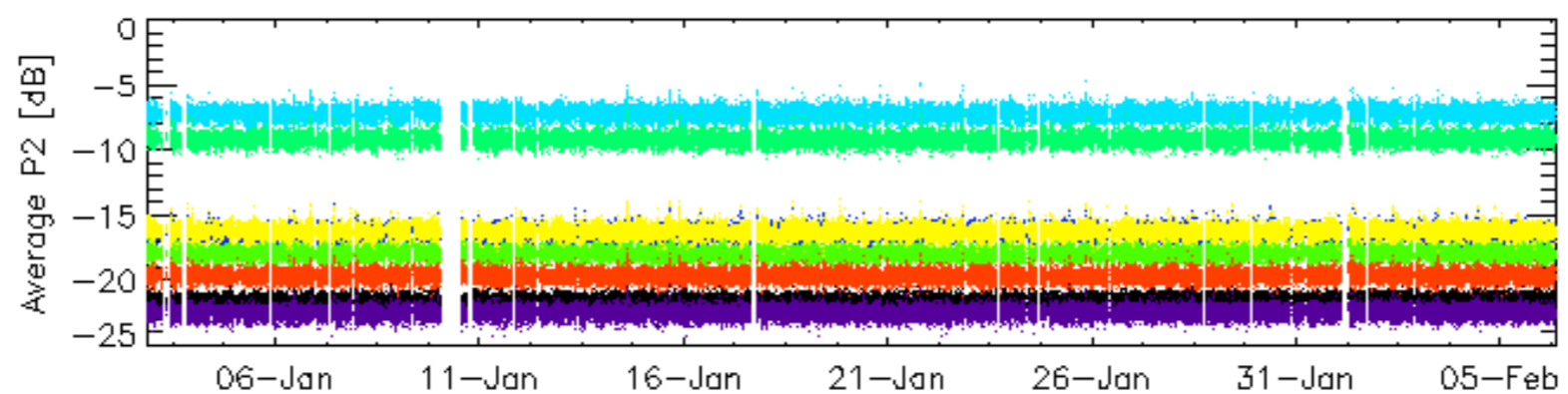
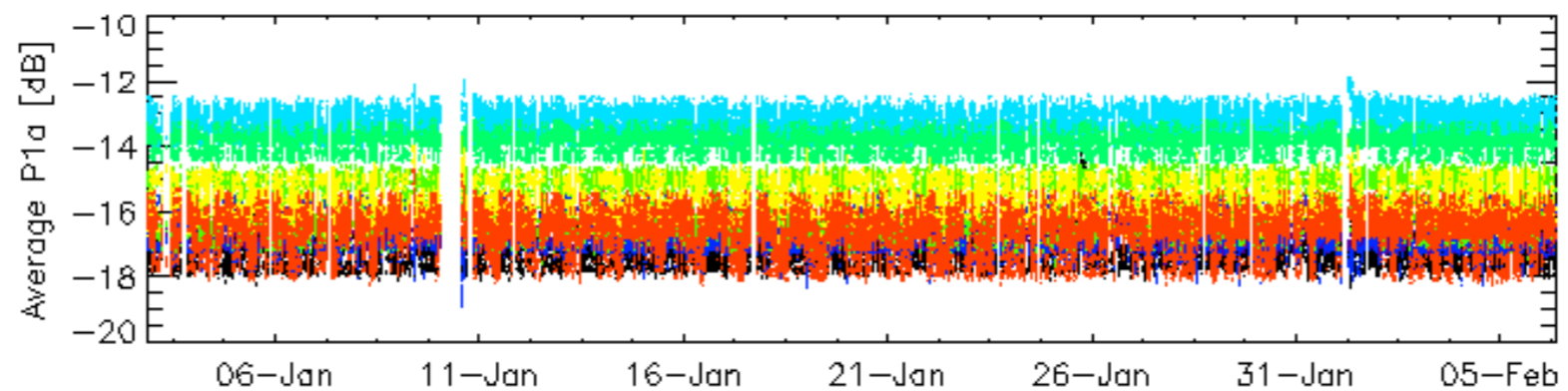
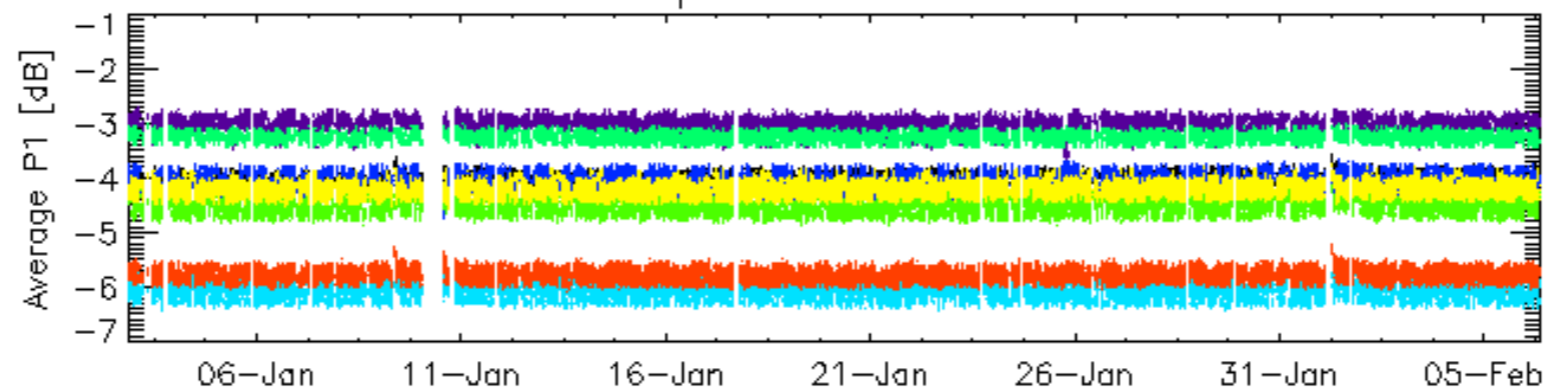


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

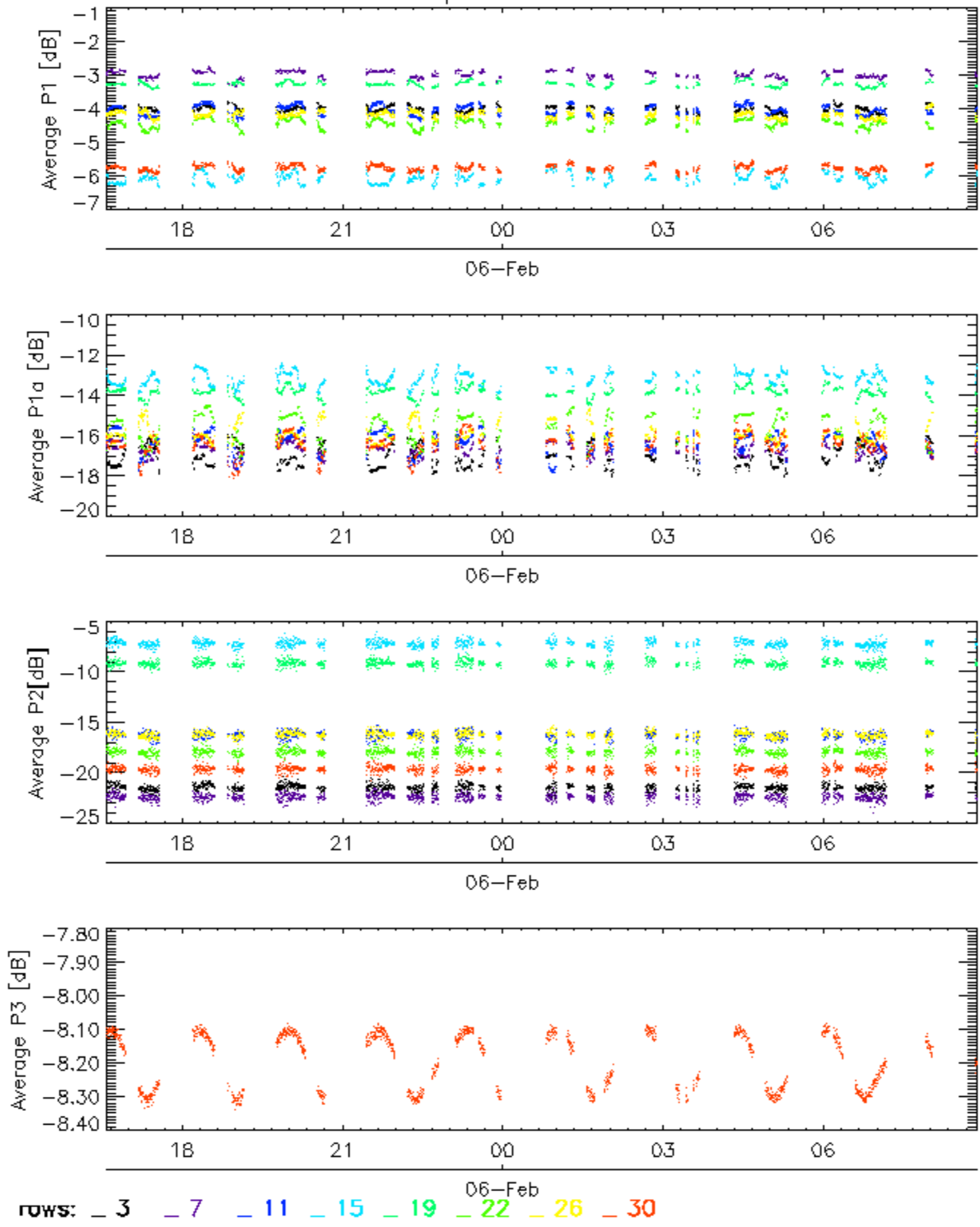


Cal pulses for WVS IS2



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

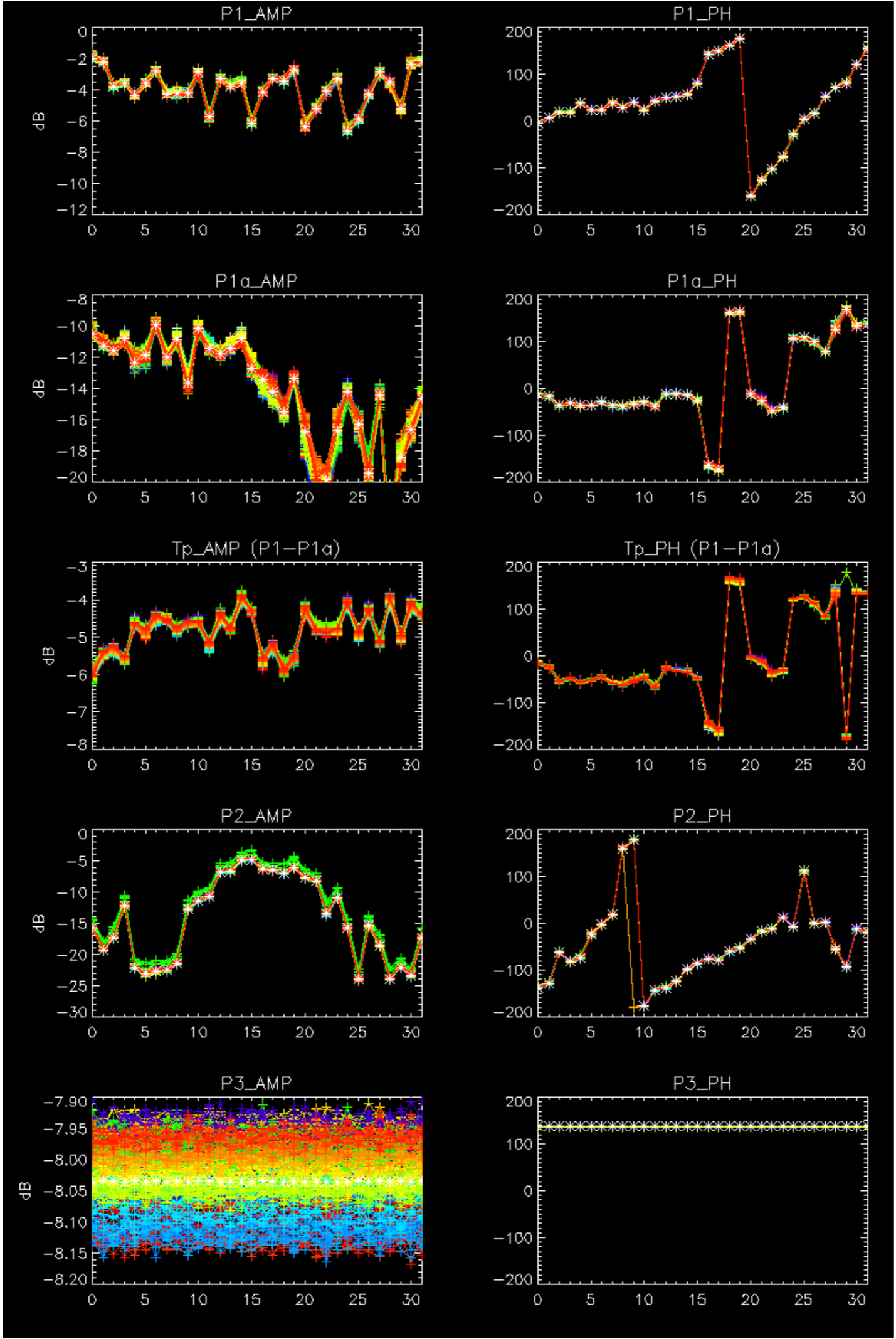
Cal pulses for WVS IS2

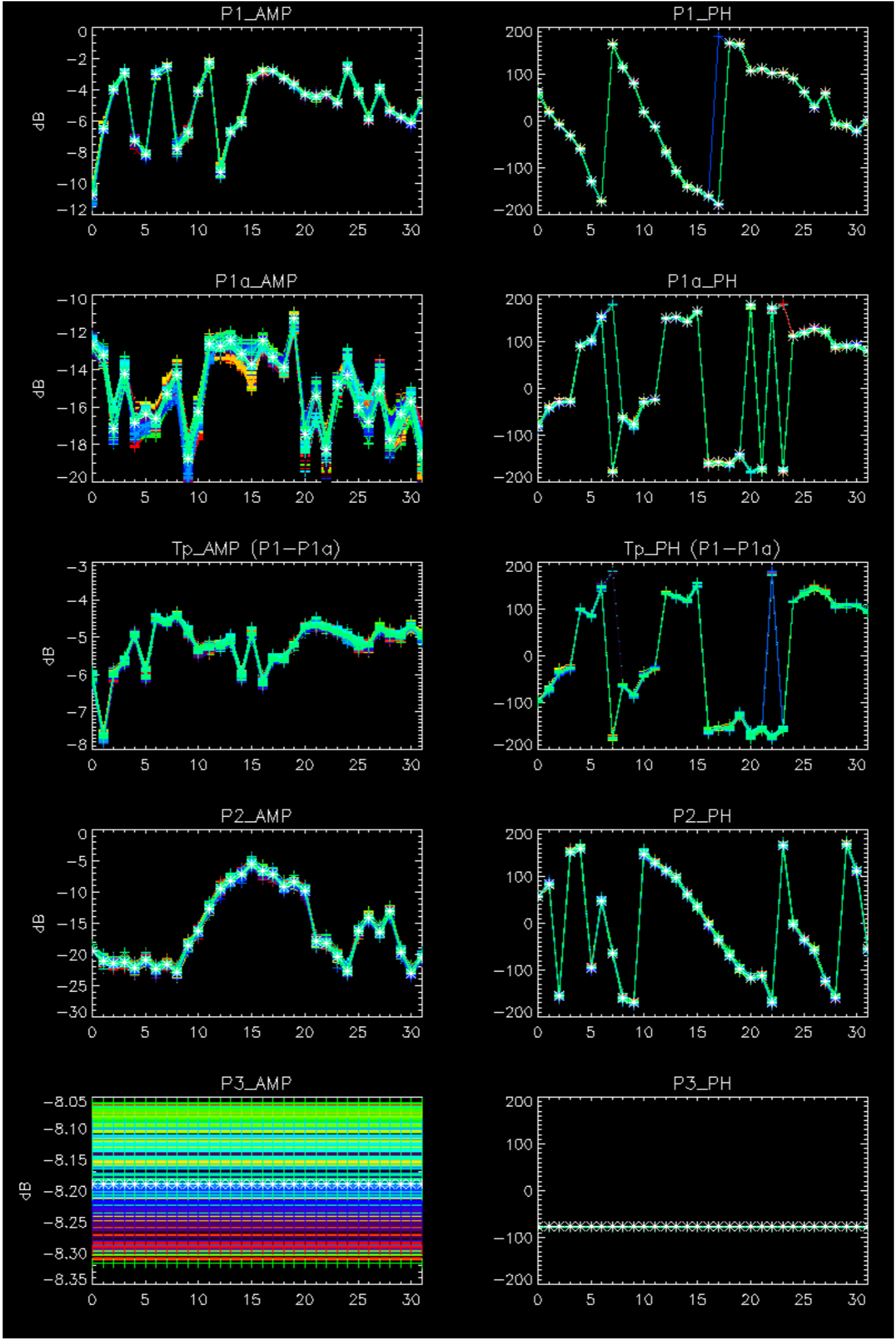


No anomalies observed on available browse products



No anomalies observed.

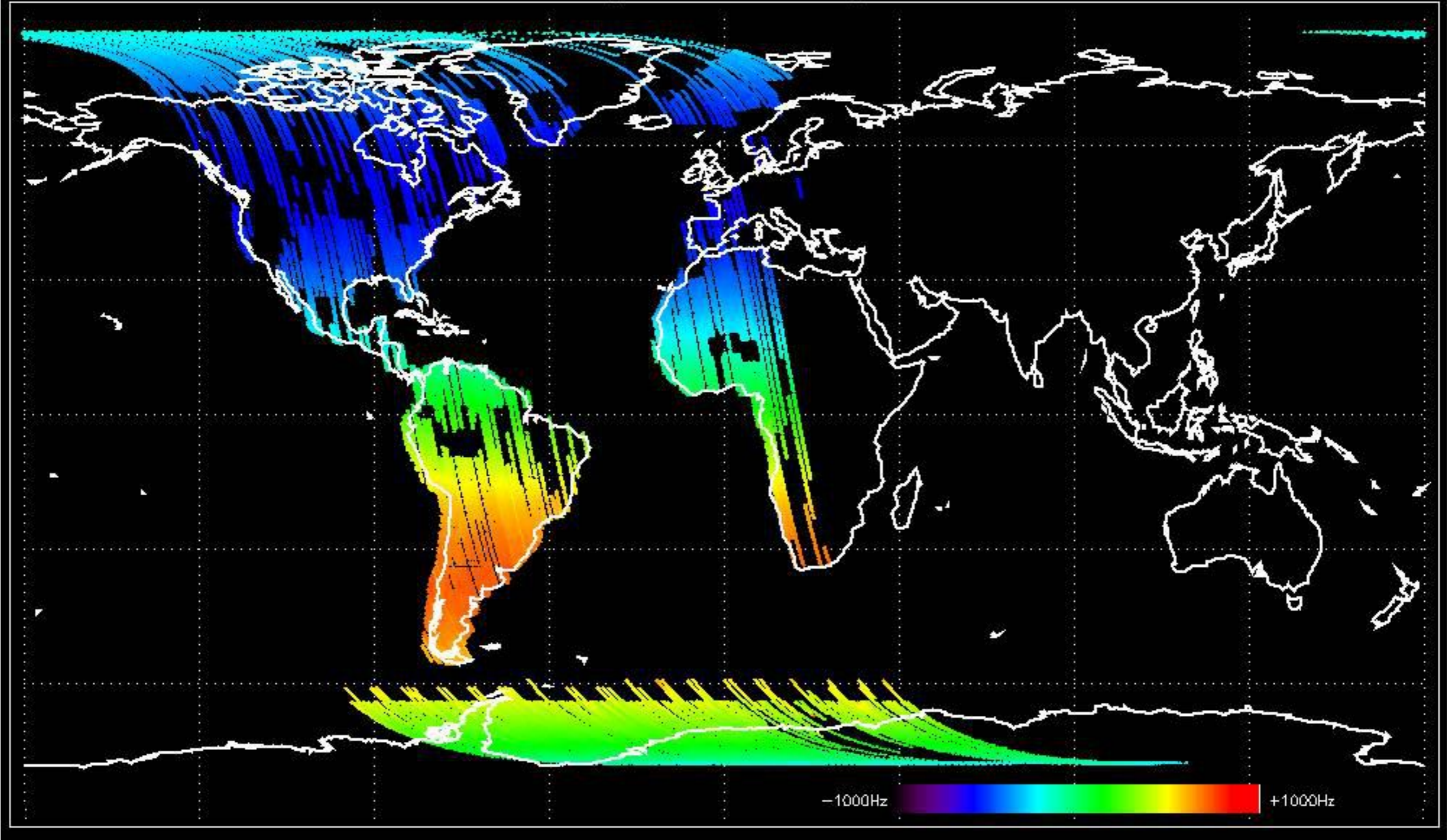




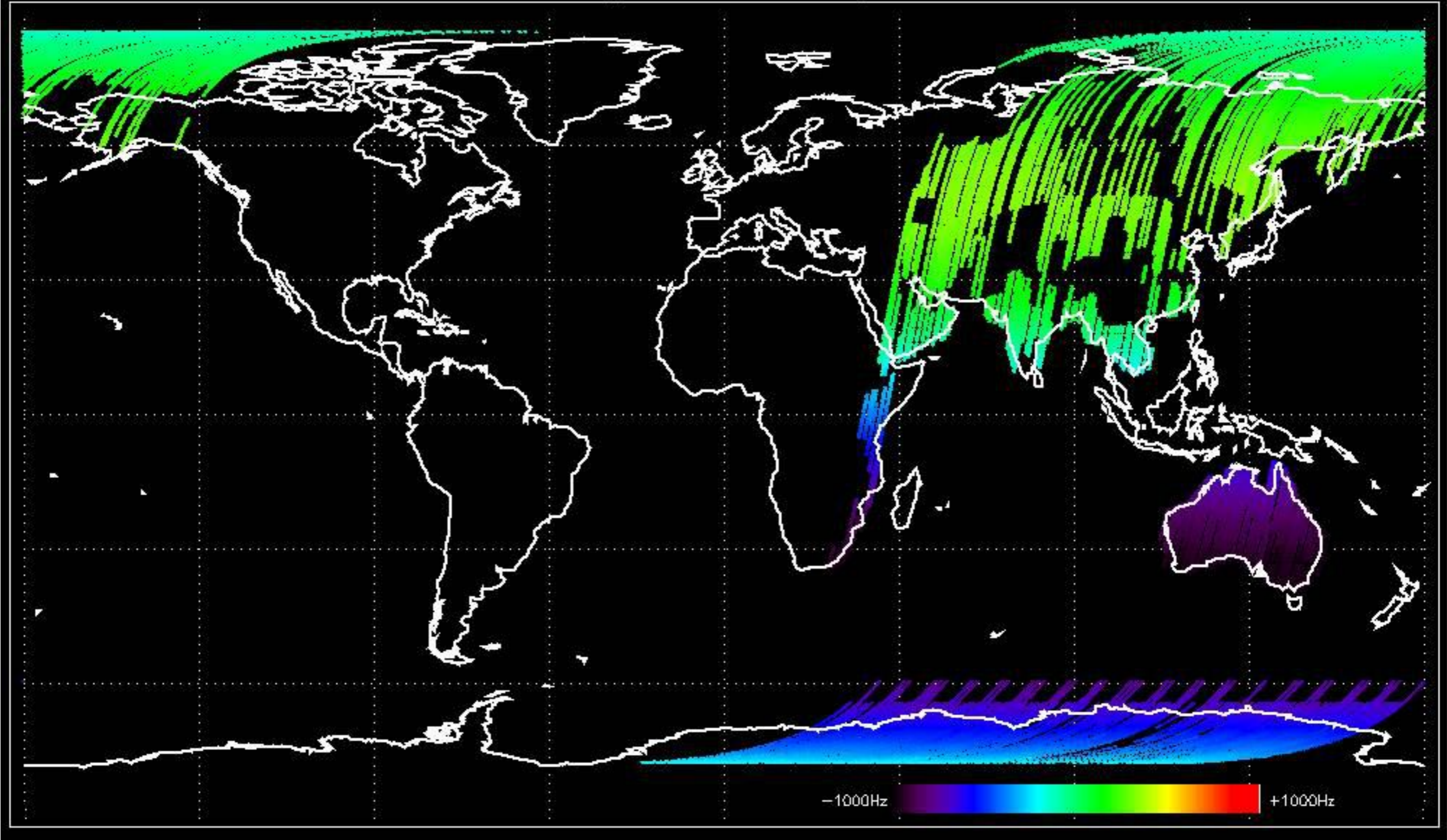
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



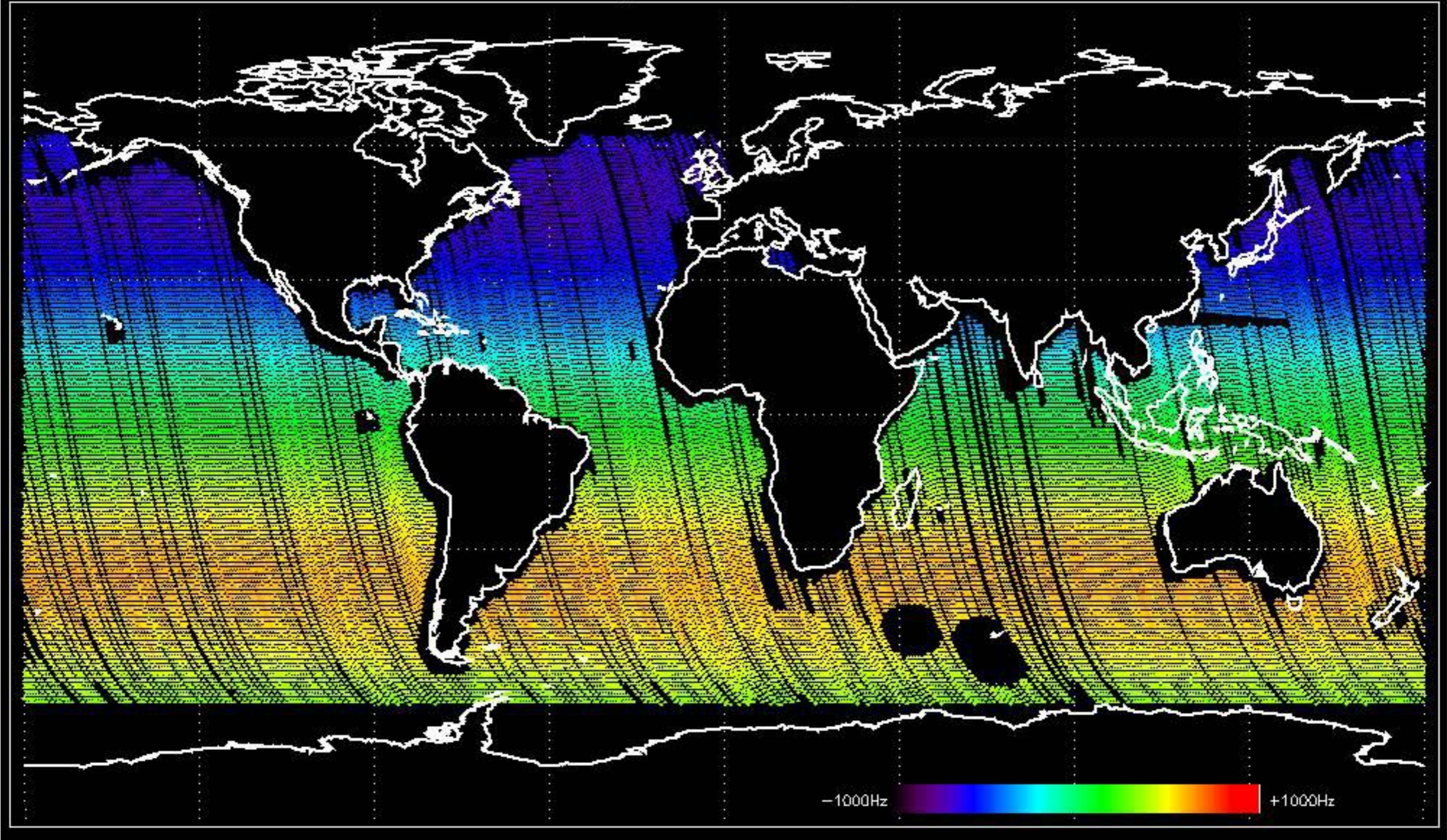
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

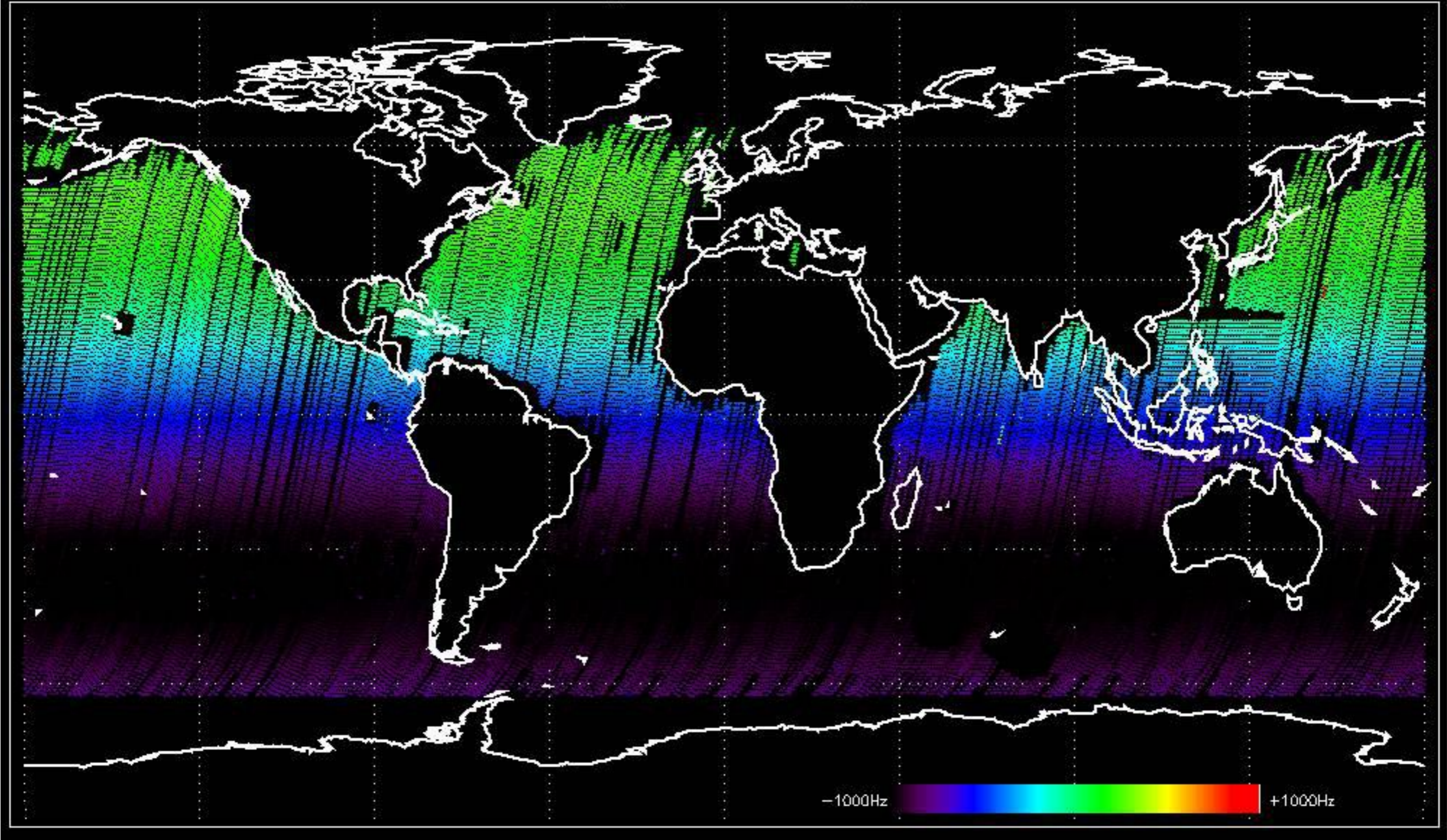


Doppler 'WVS' 'IS2' ascending

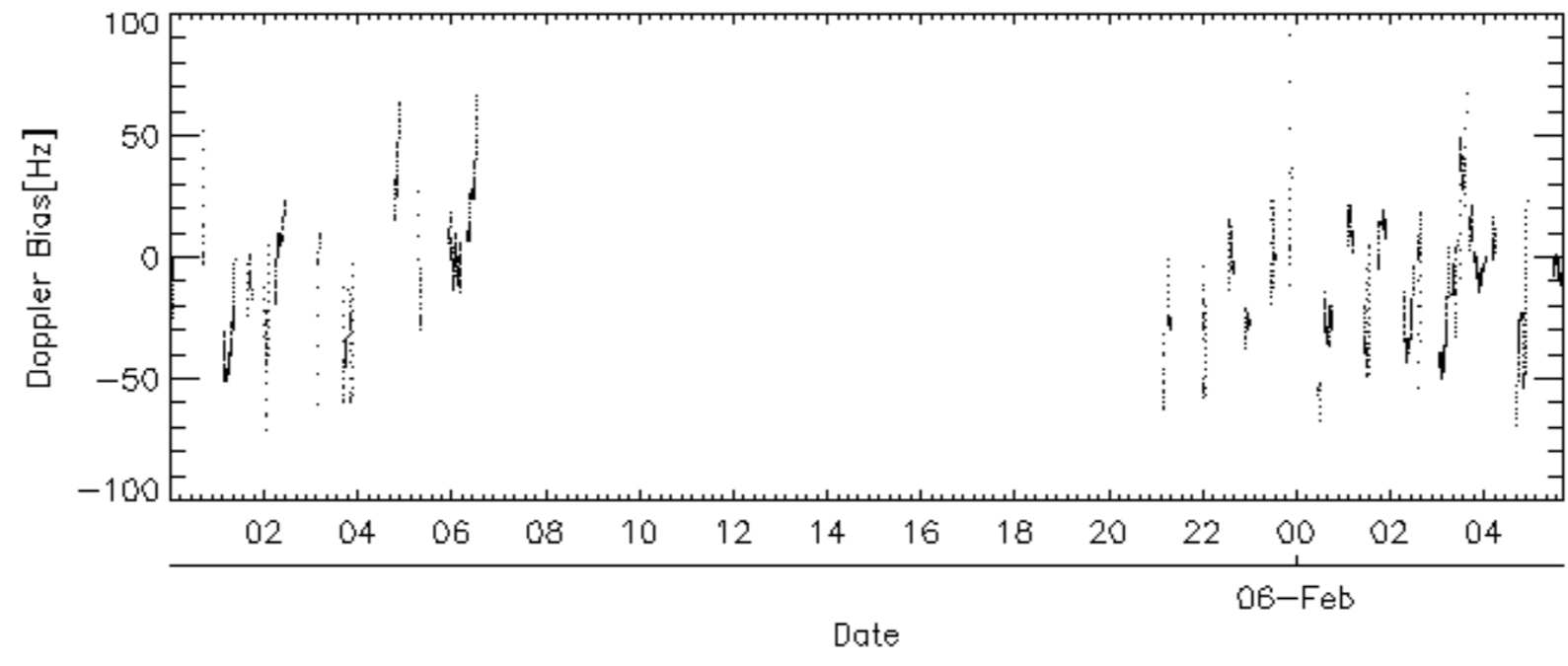
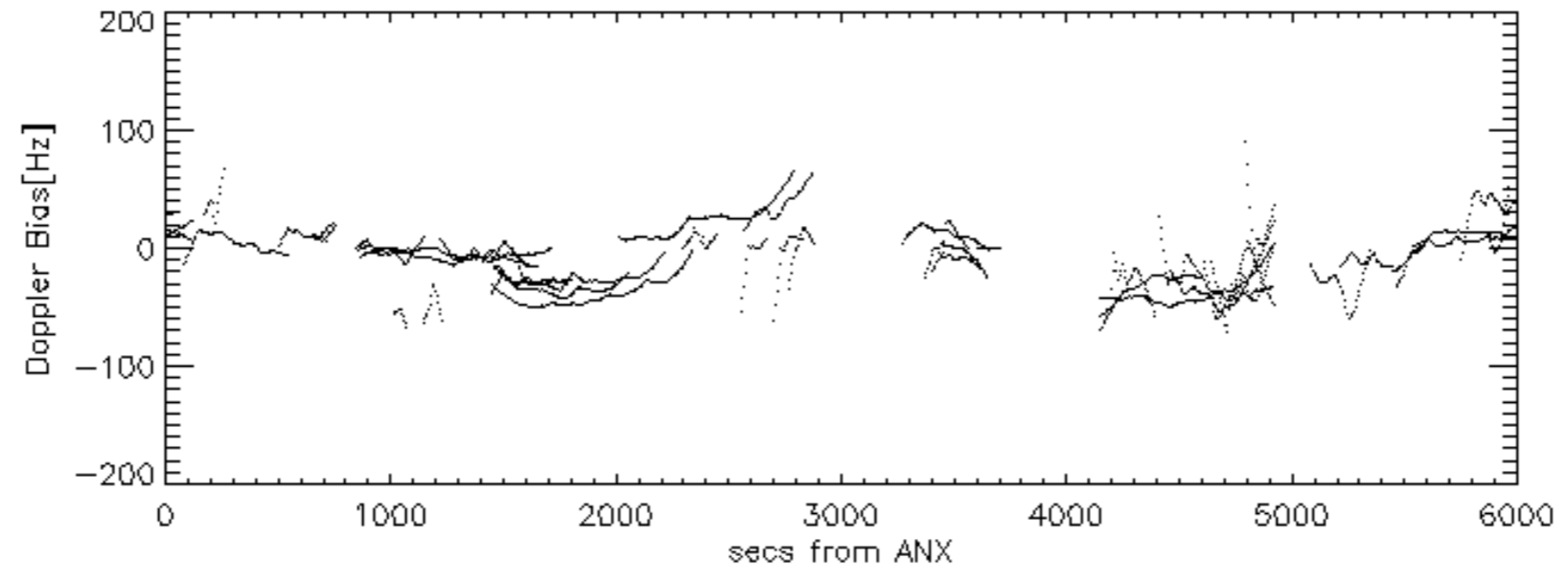
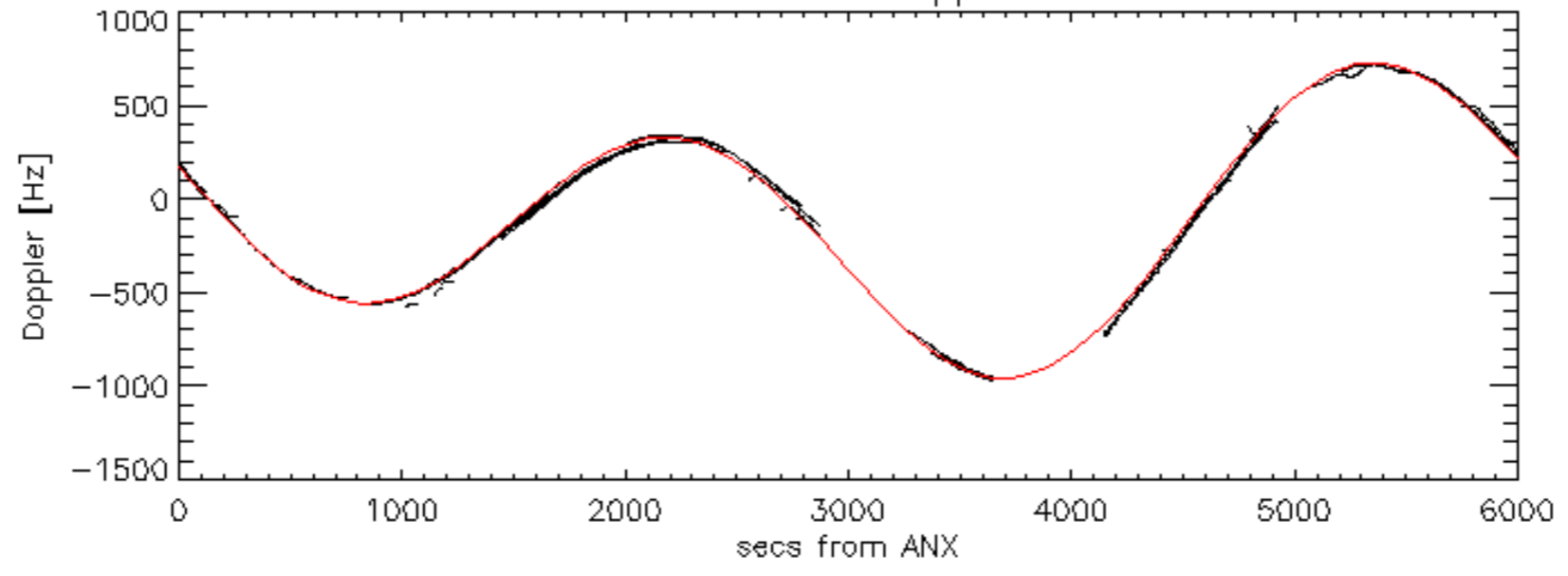


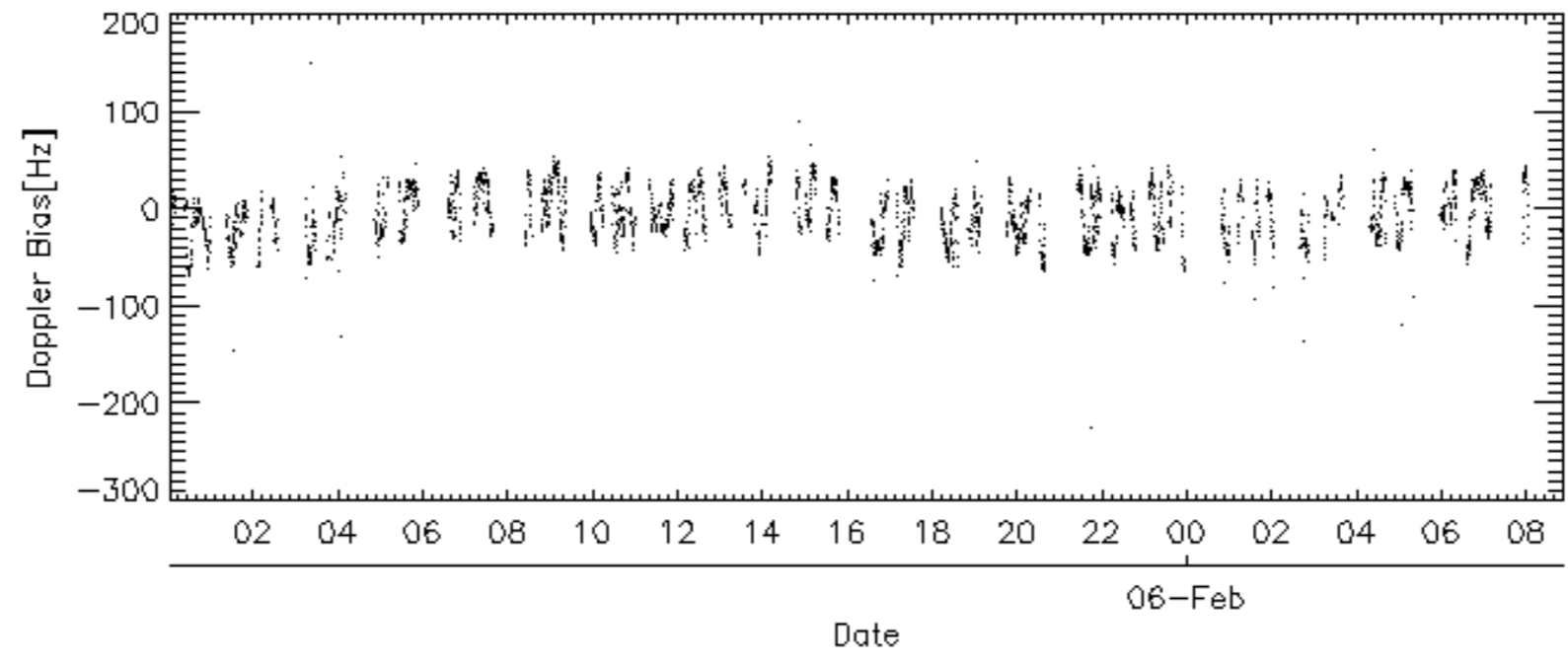
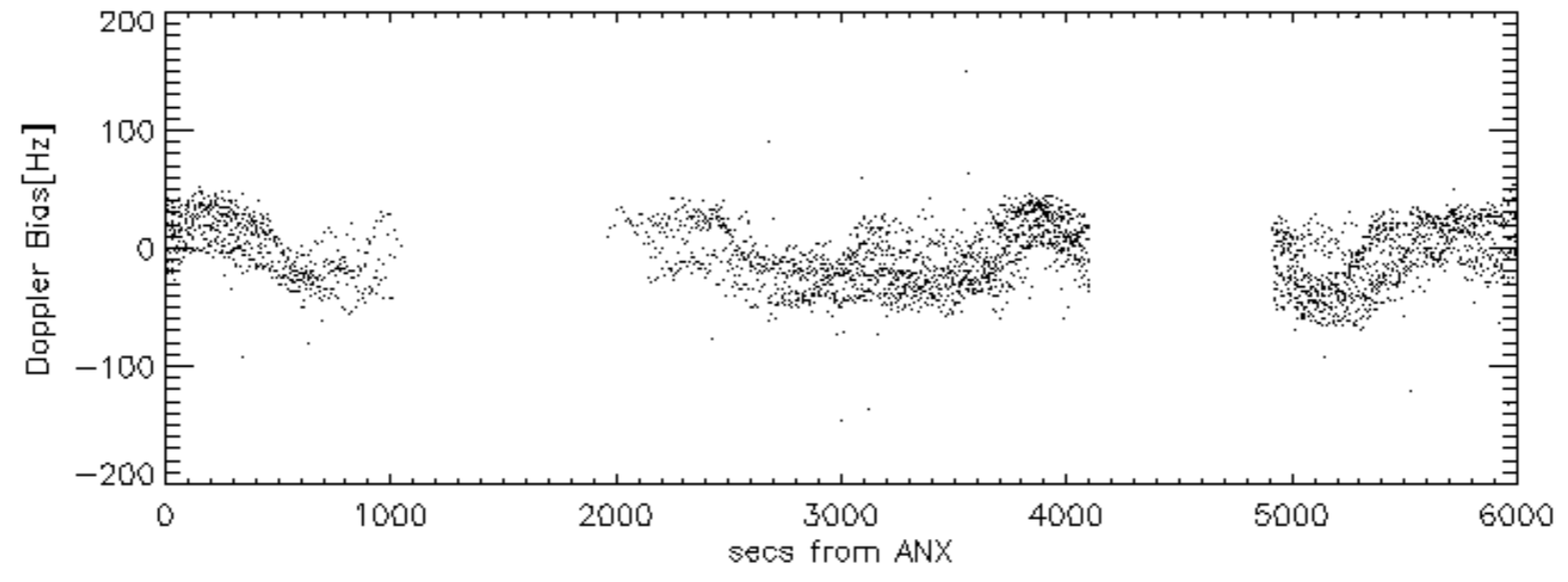
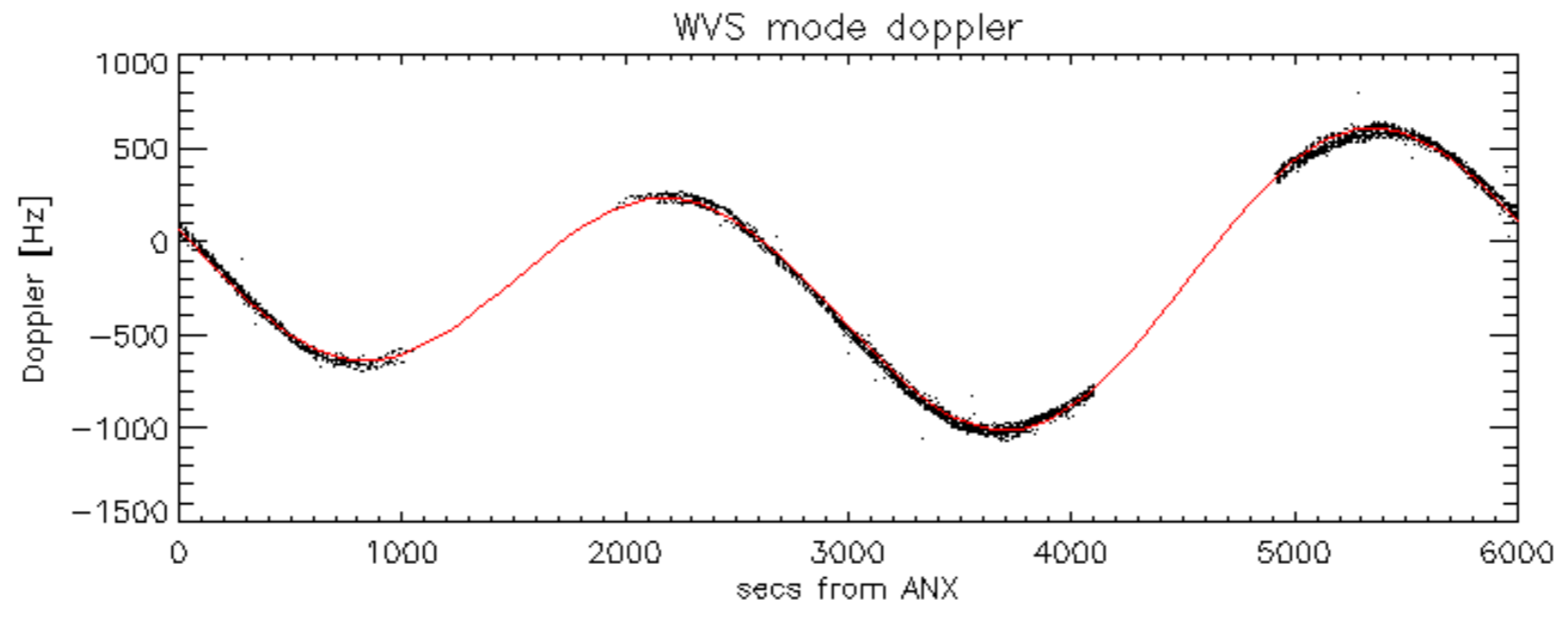


Doppler 'WVS' 'IS2' descending

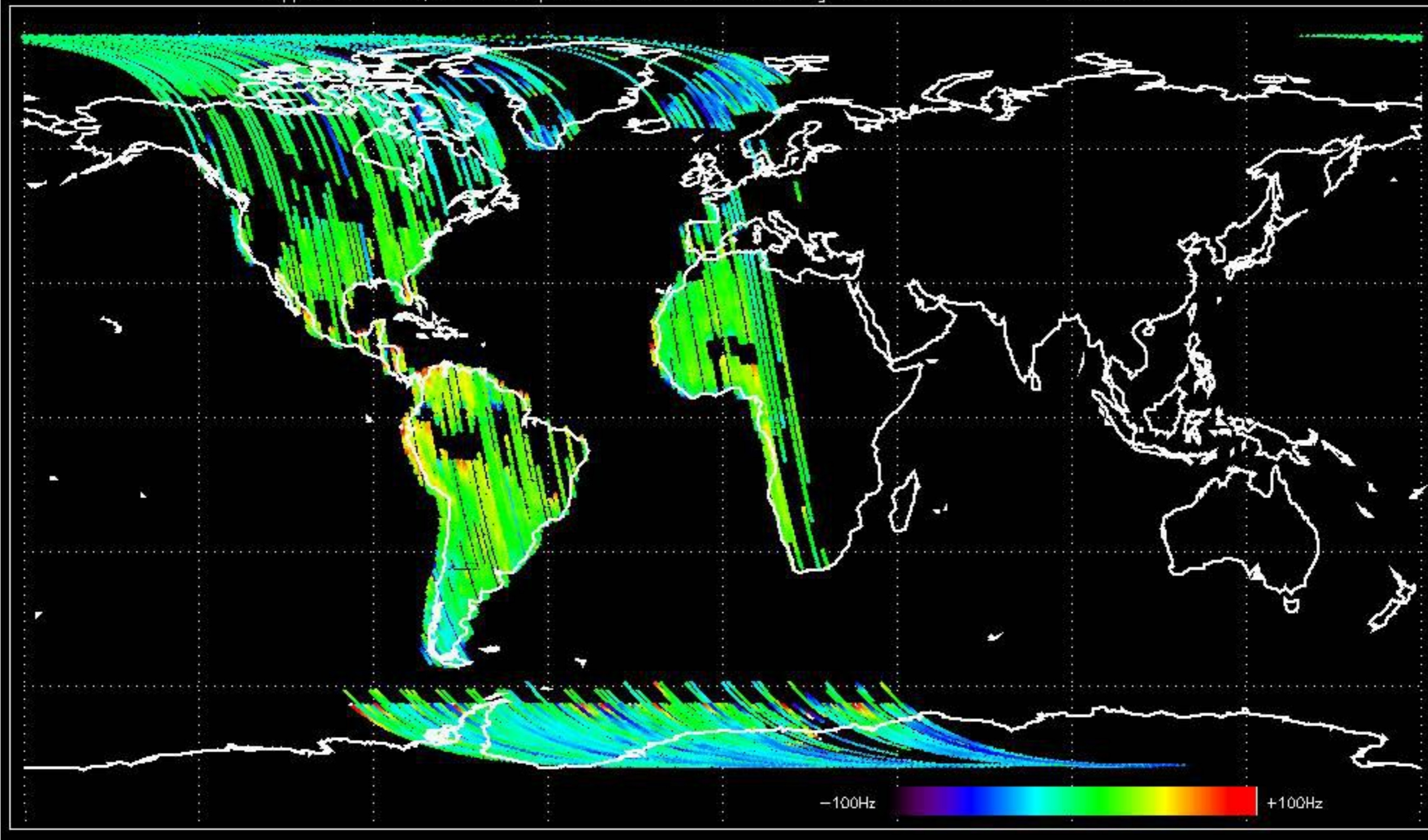


GM1 mode doppler

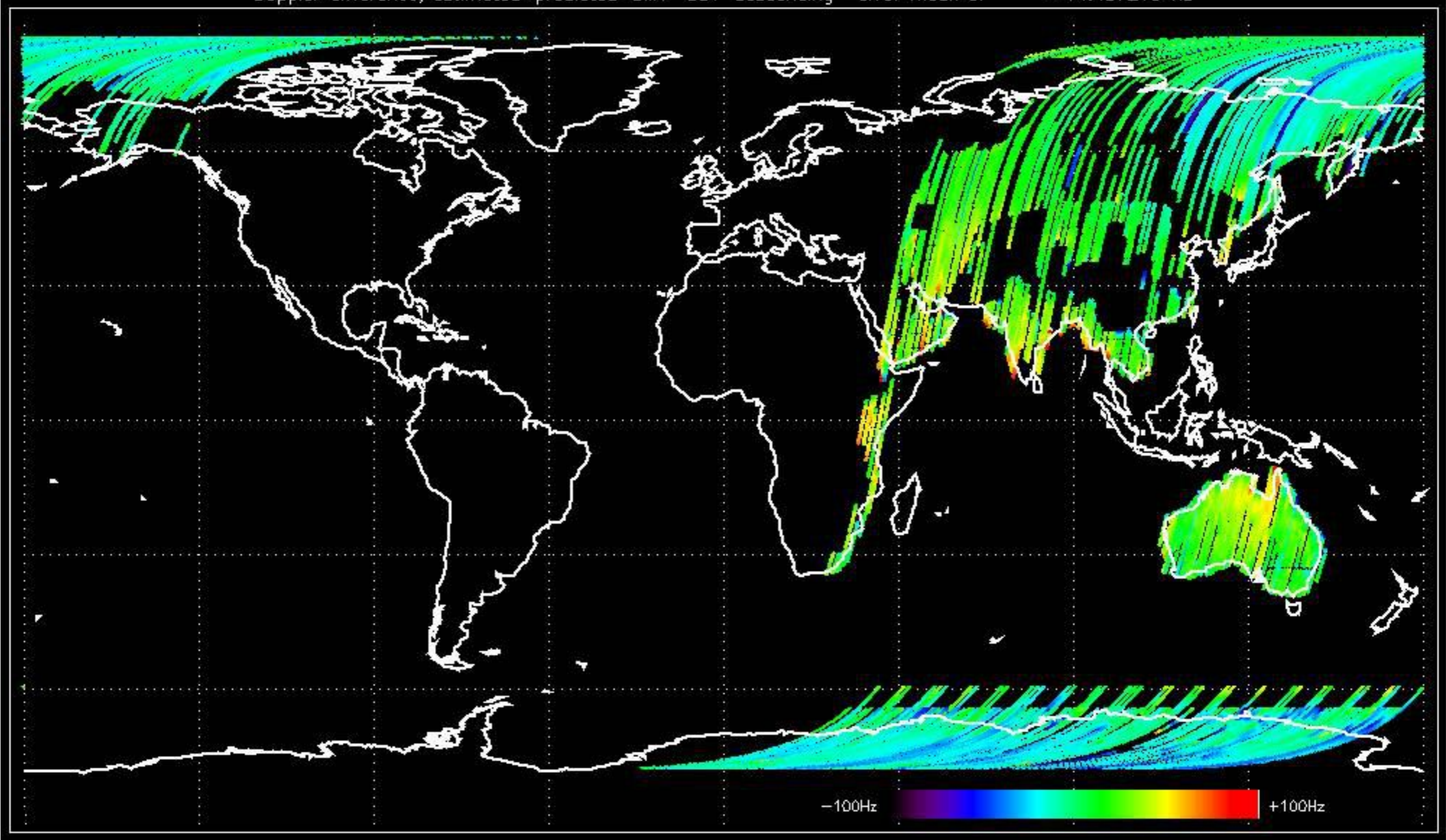




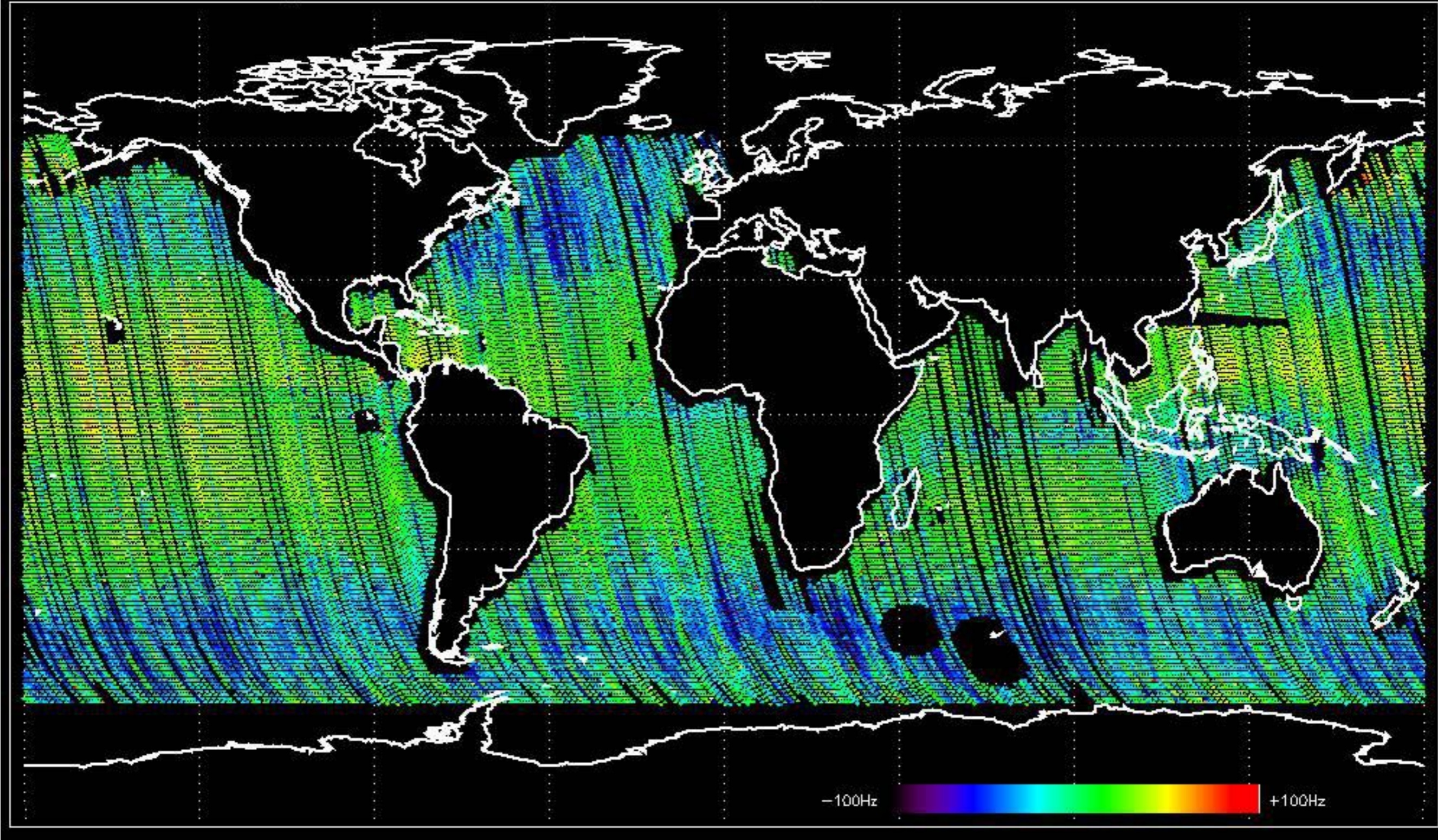
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.439186 Hz



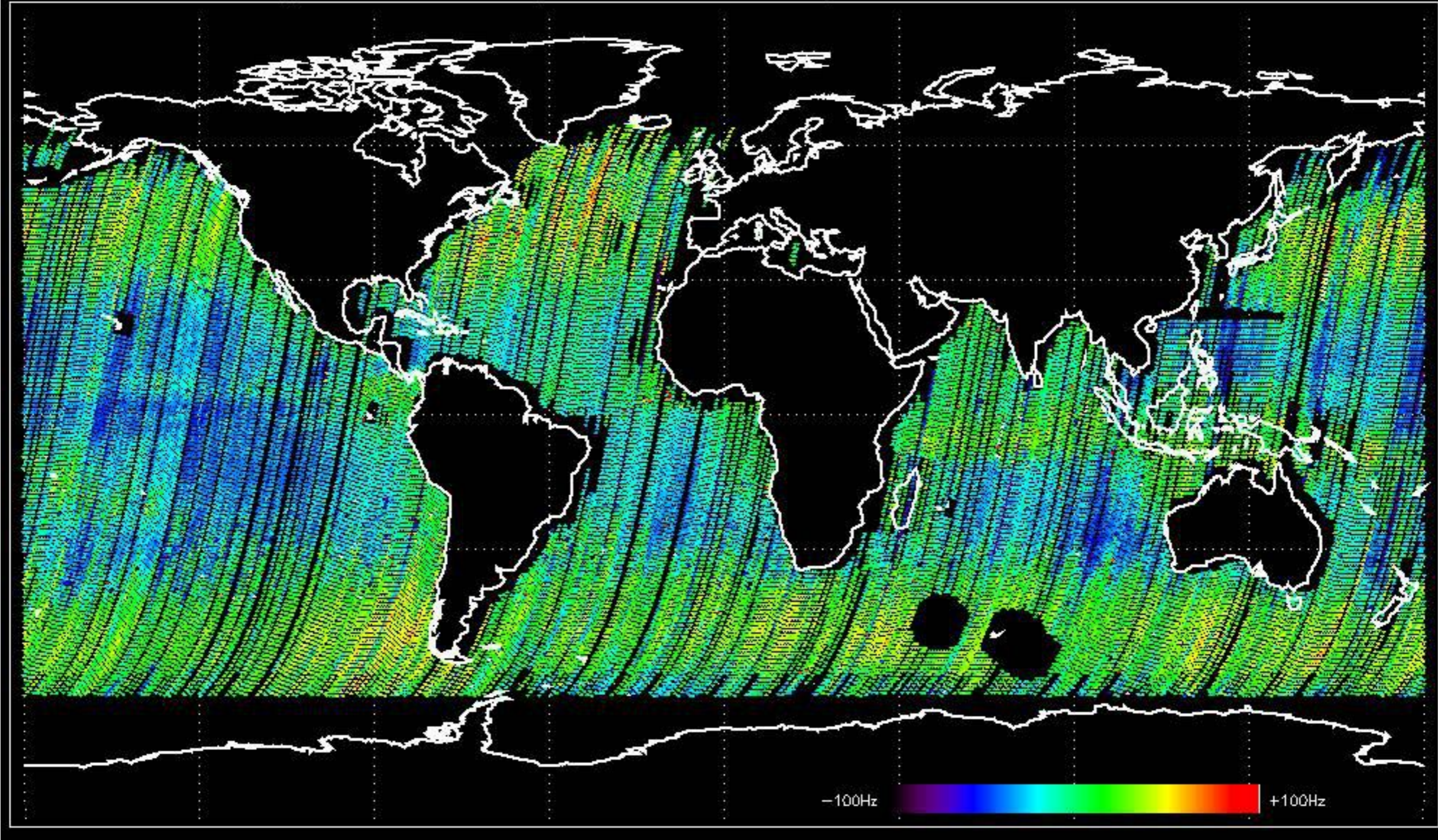
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.457210 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.2549260 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.226176 Hz

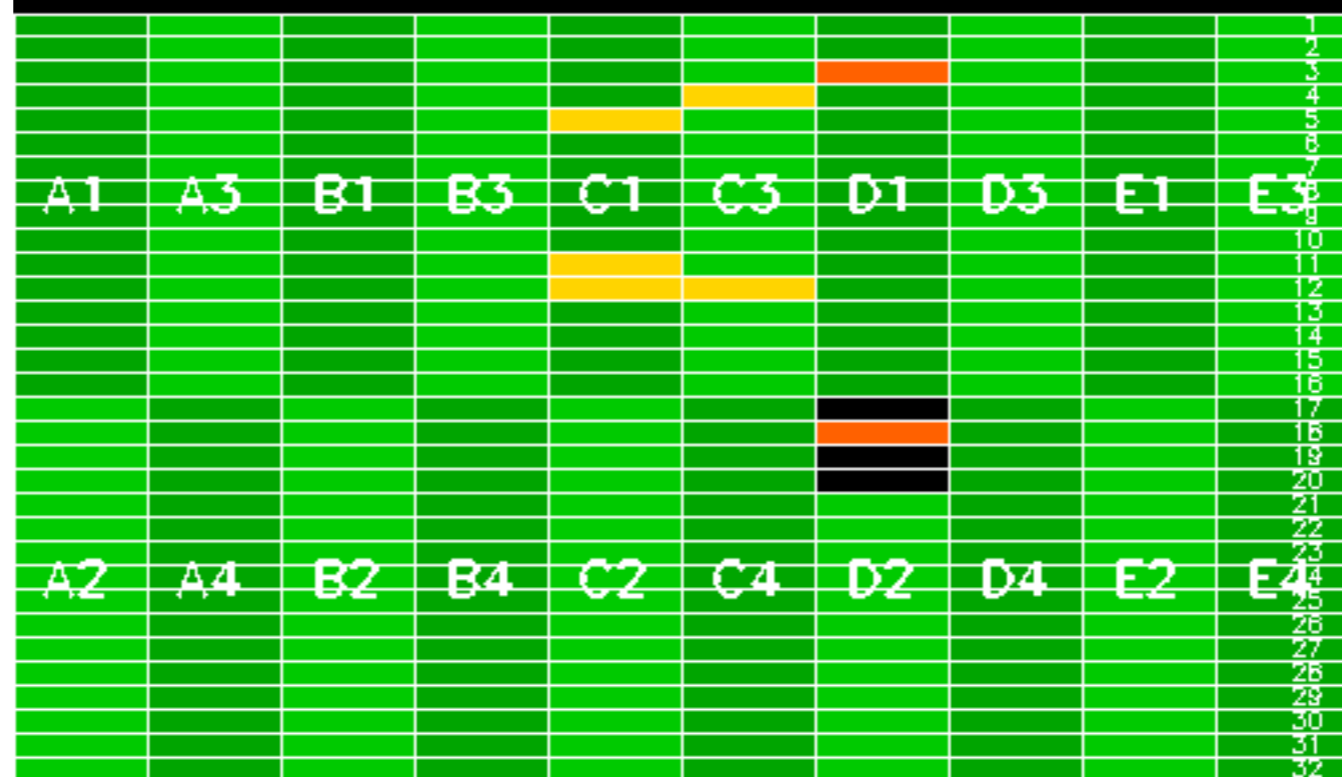


No anomalies observed on available MS products:



No anomalies observed.

Reference: 2001-02-09 13:50:42 H RxGain  
 Test : 2006-02-05 18:36:45 H









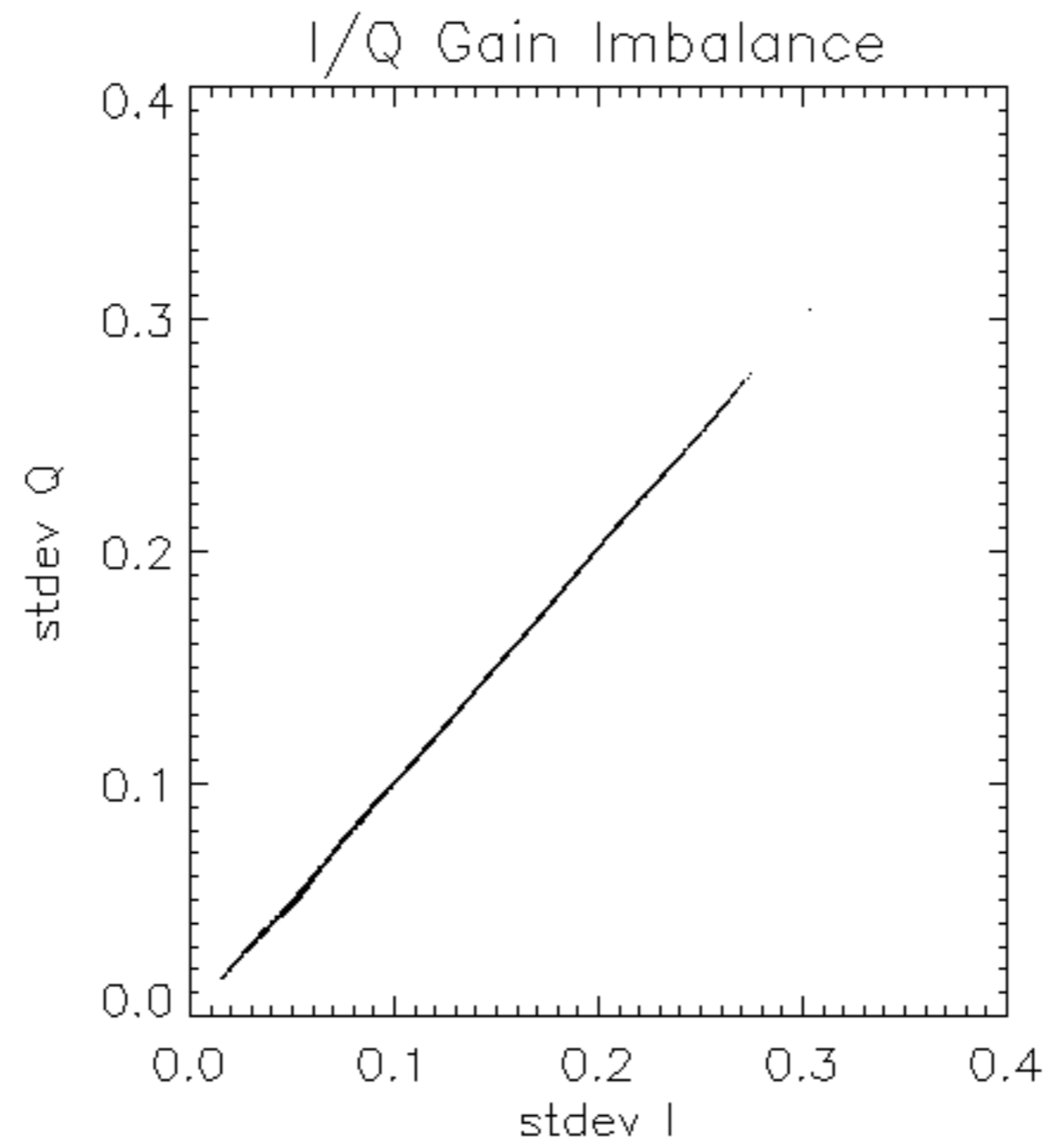


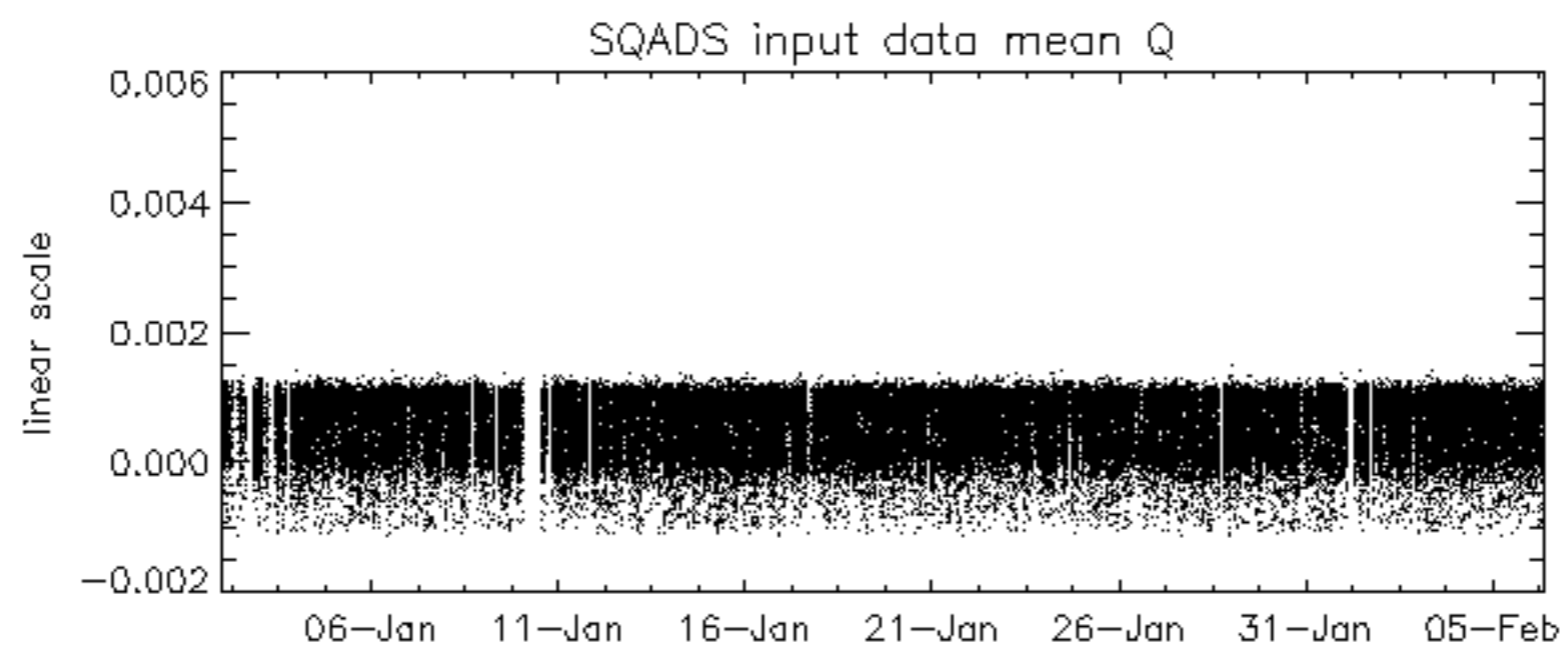
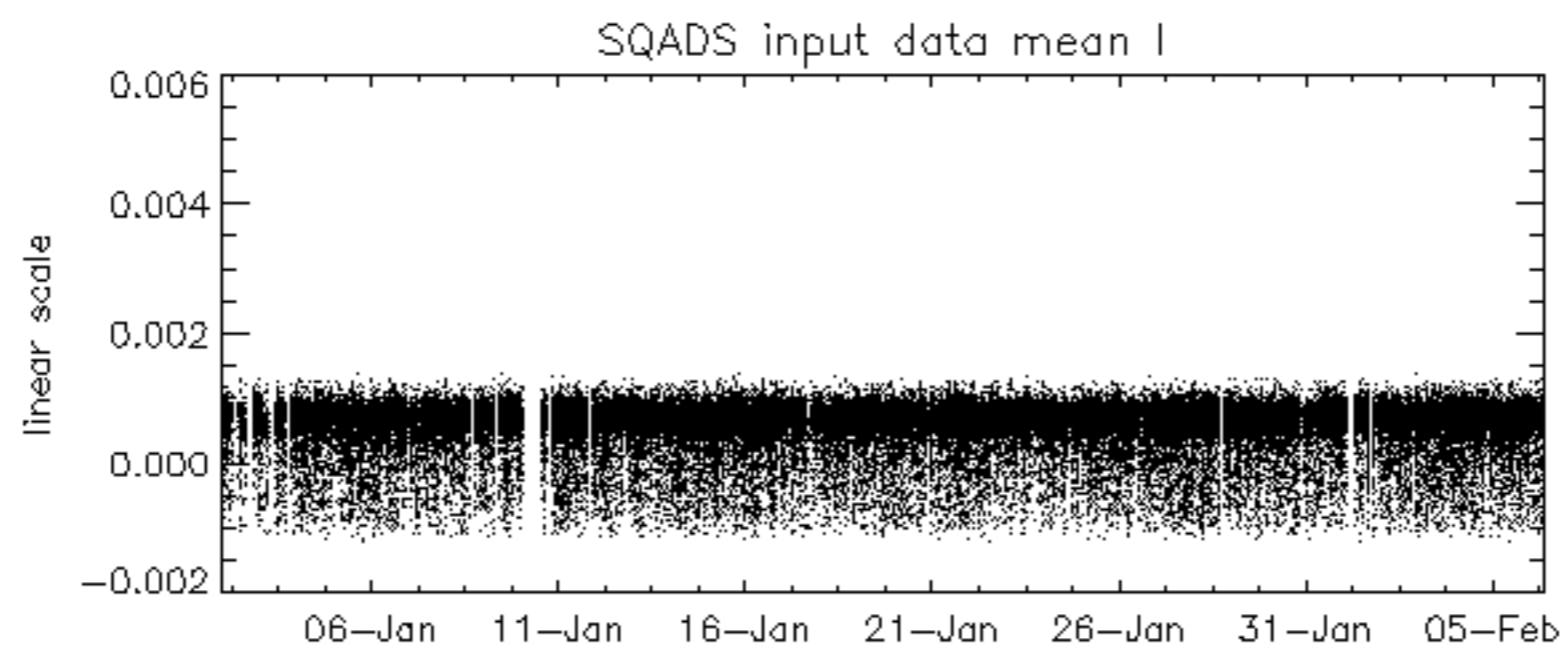
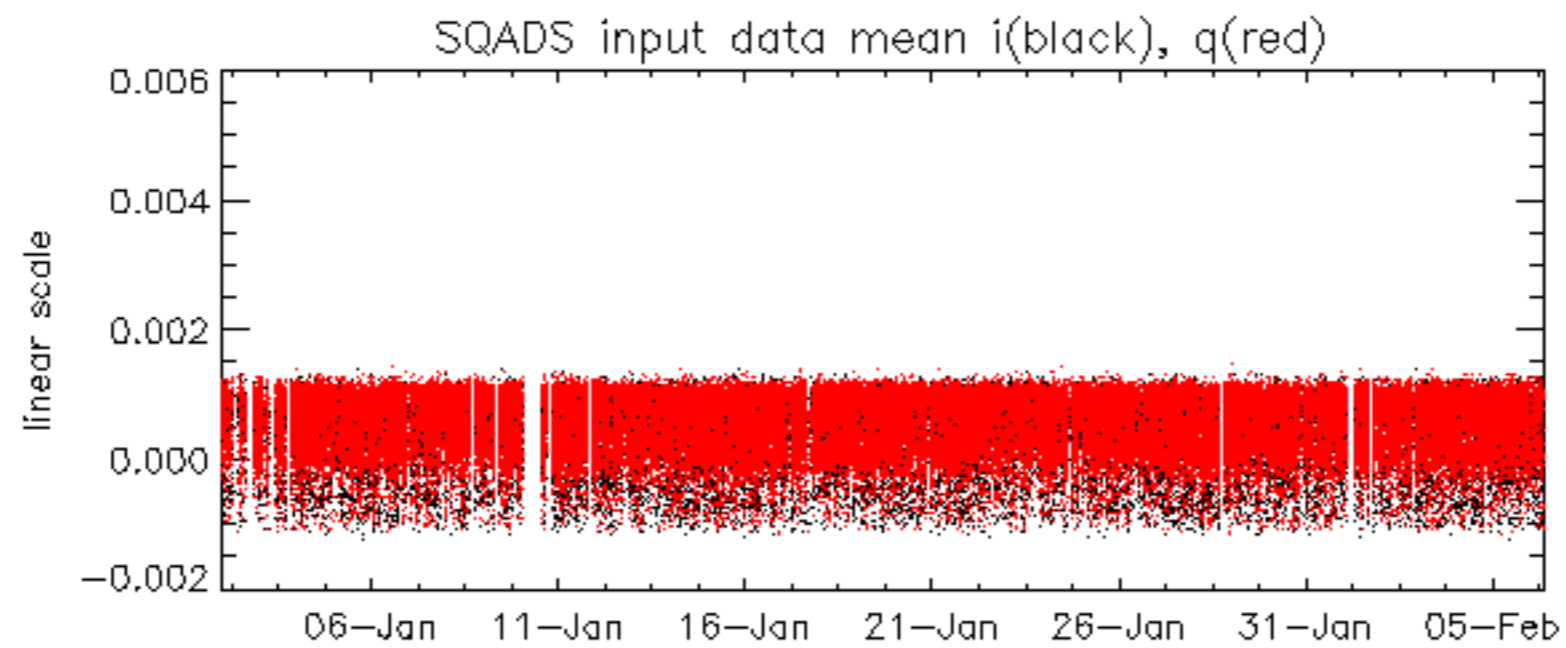


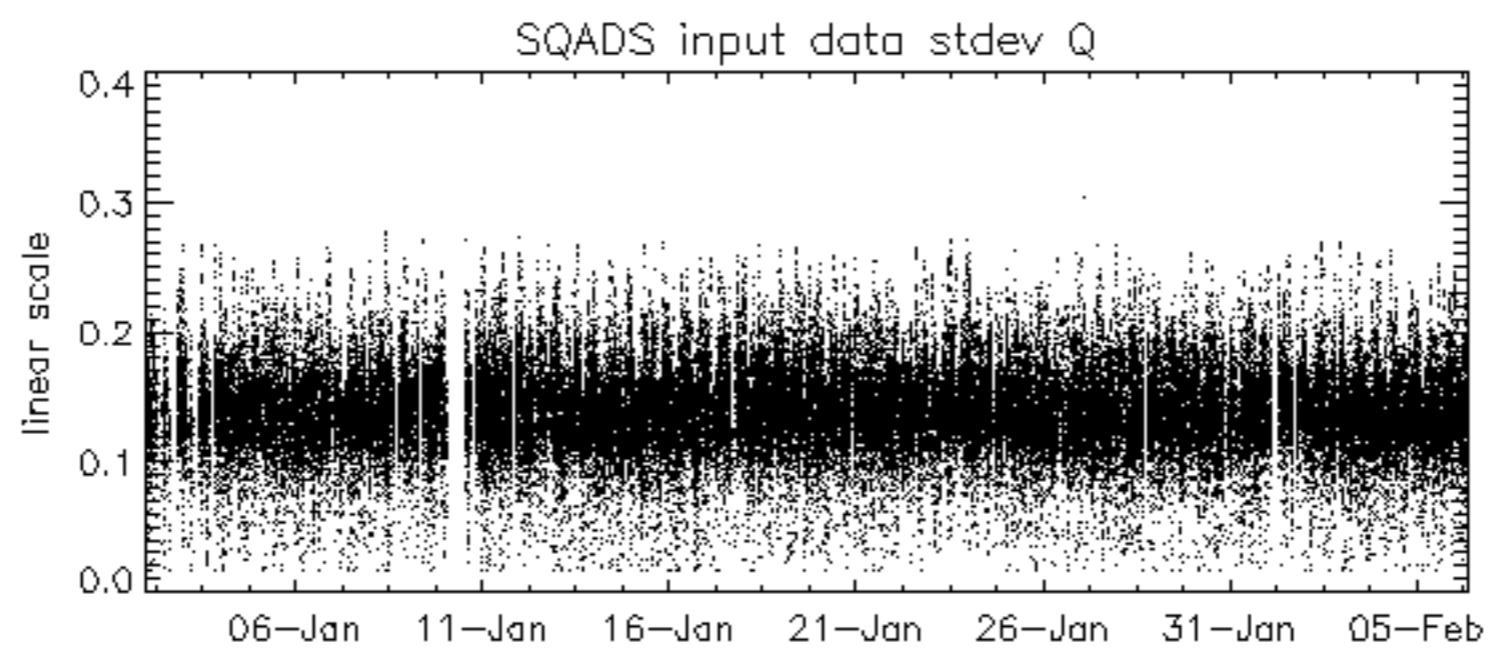
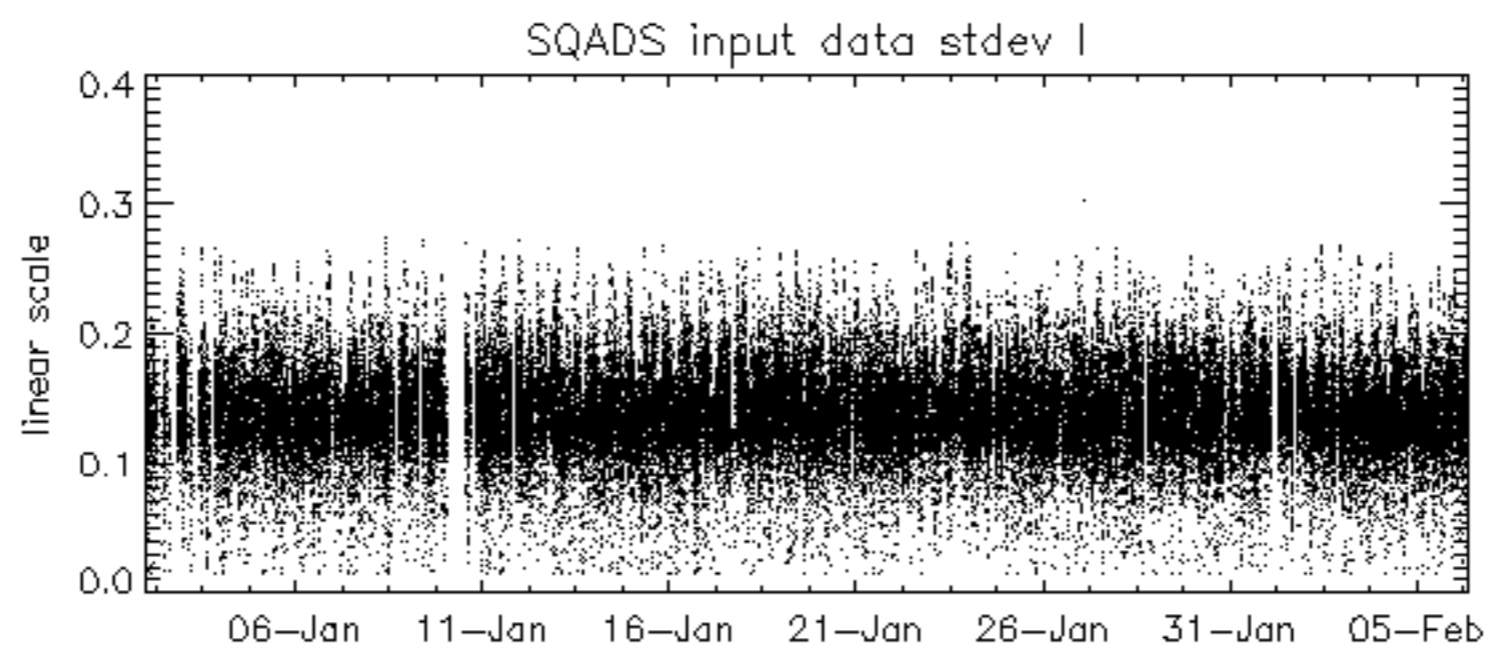
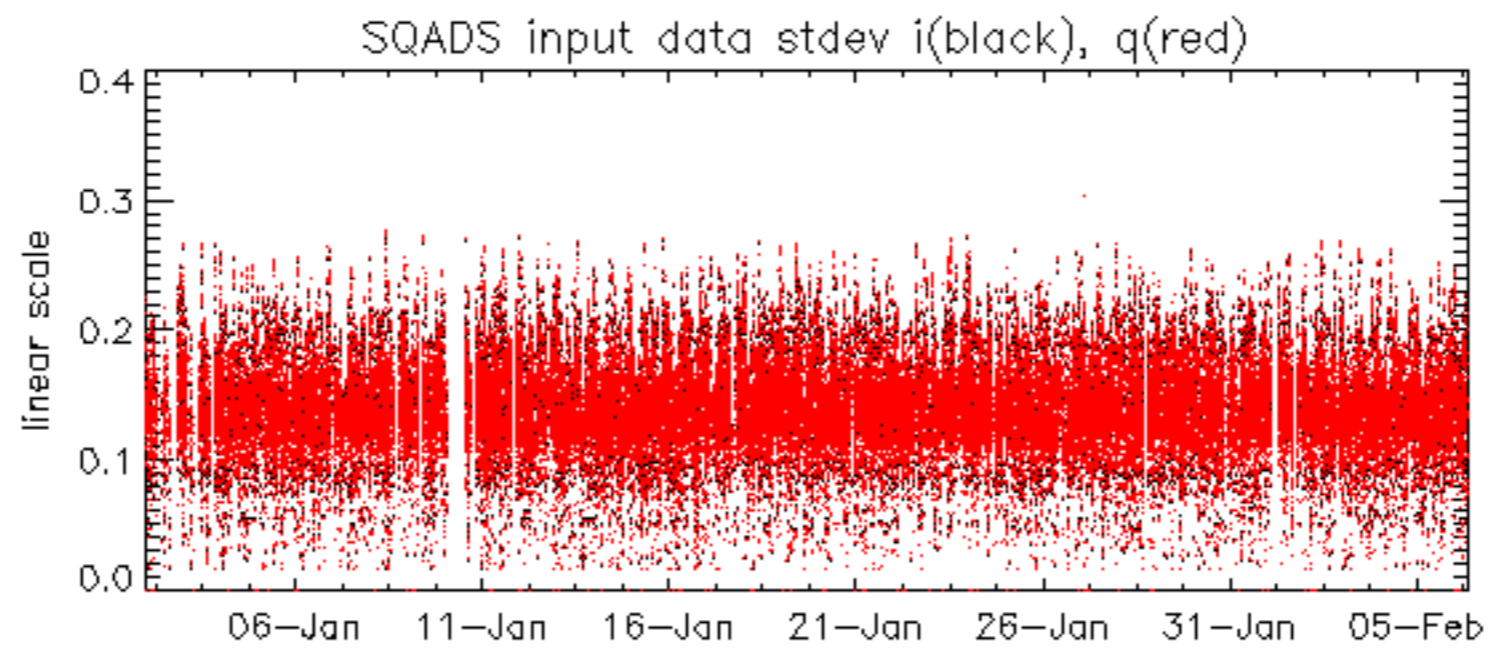


















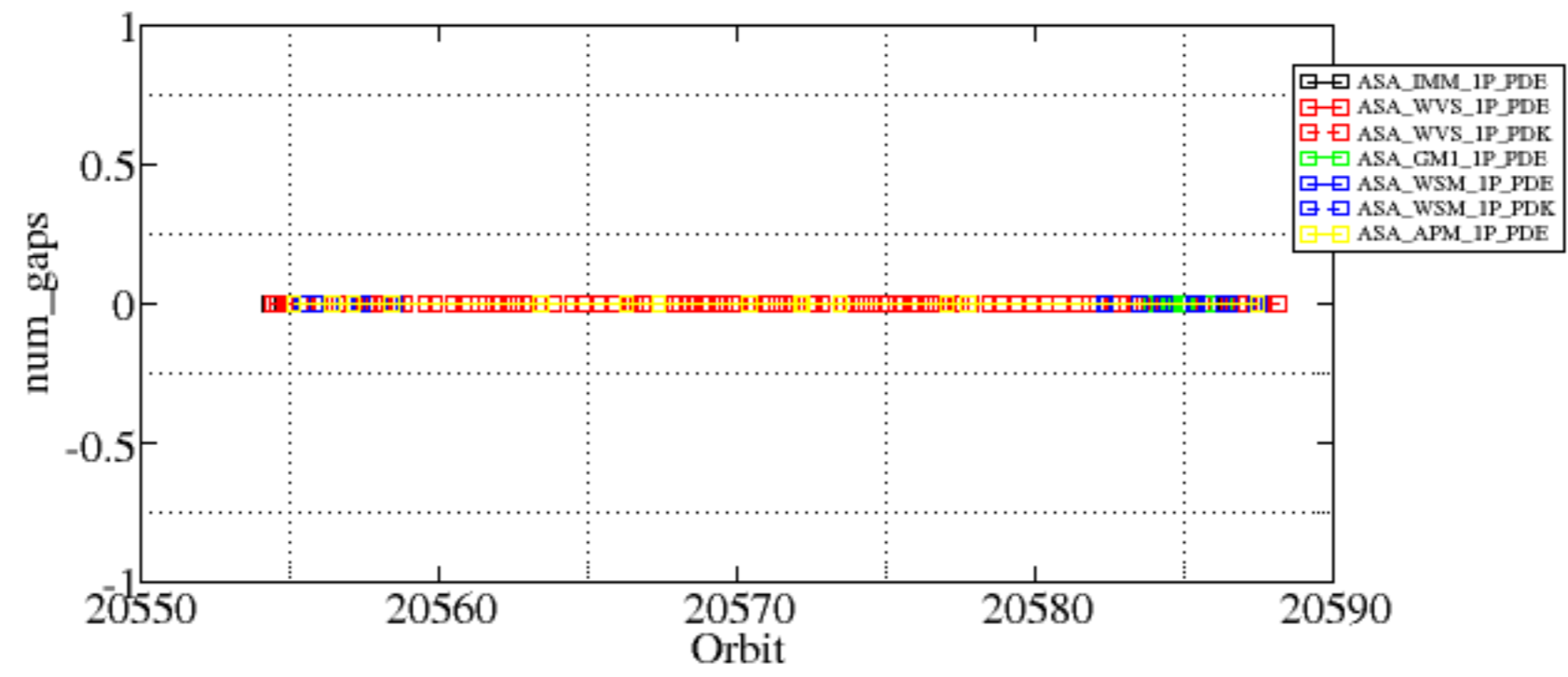


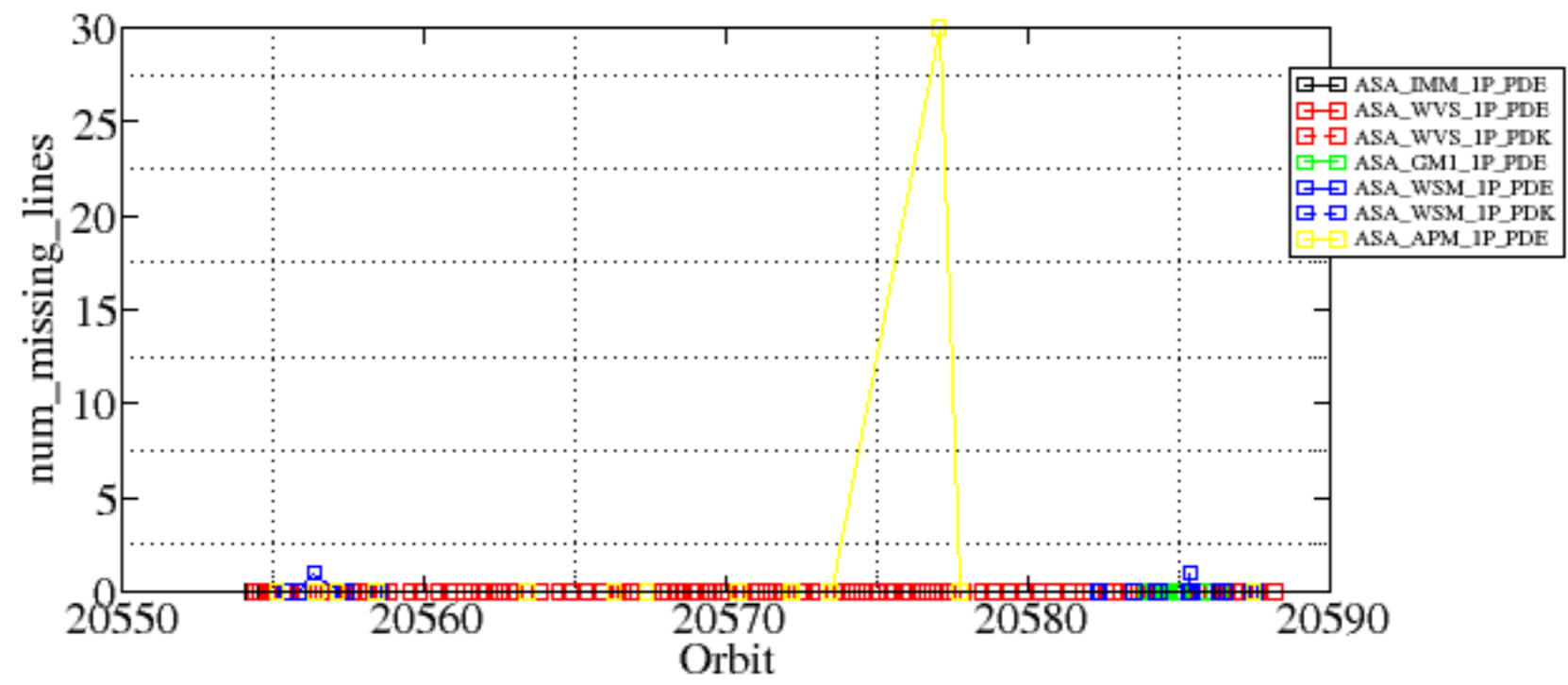


Summary of analysis for the last 3 days 2006020[456]

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_WSM_1PNPDE20060204_033233_000002132044_00462_20556_3632.N1	0	1
ASA_WSM_1PNPDE20060206_040934_00000612044_00491_20585_3904.N1	0	1
ASA_APM_1PNPDE20060205_141423_00000822044_00483_20577_0339.N1	0	30





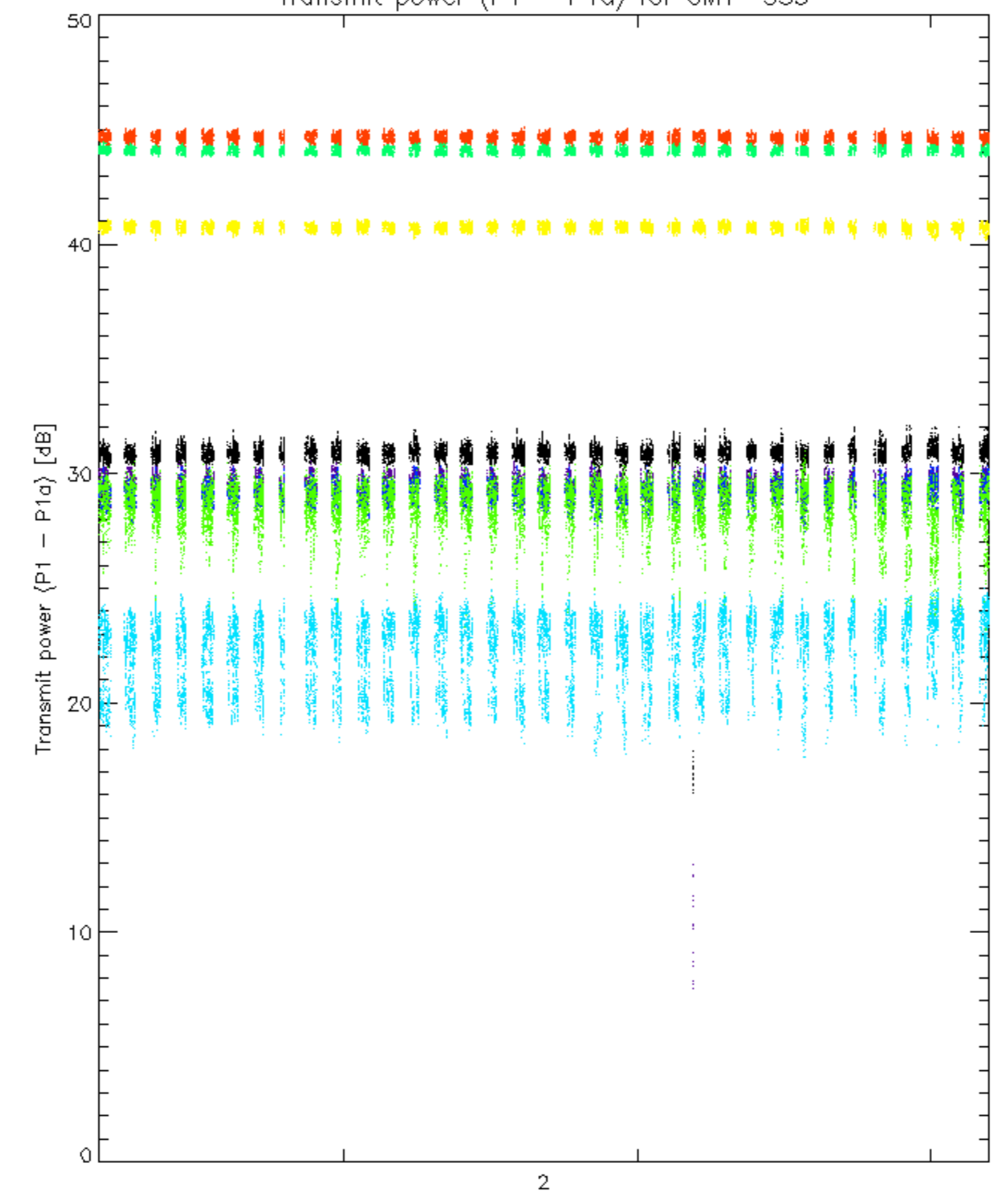






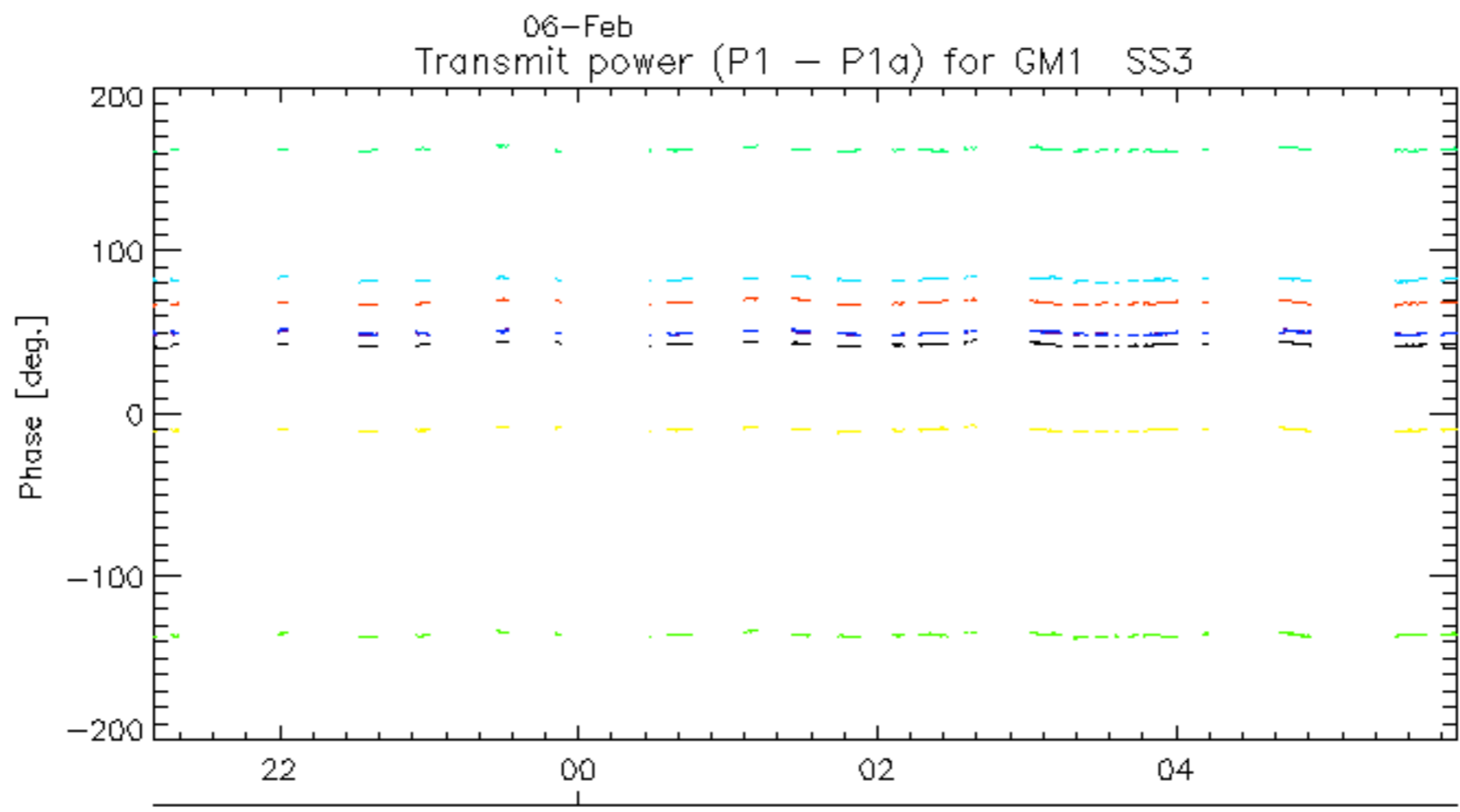
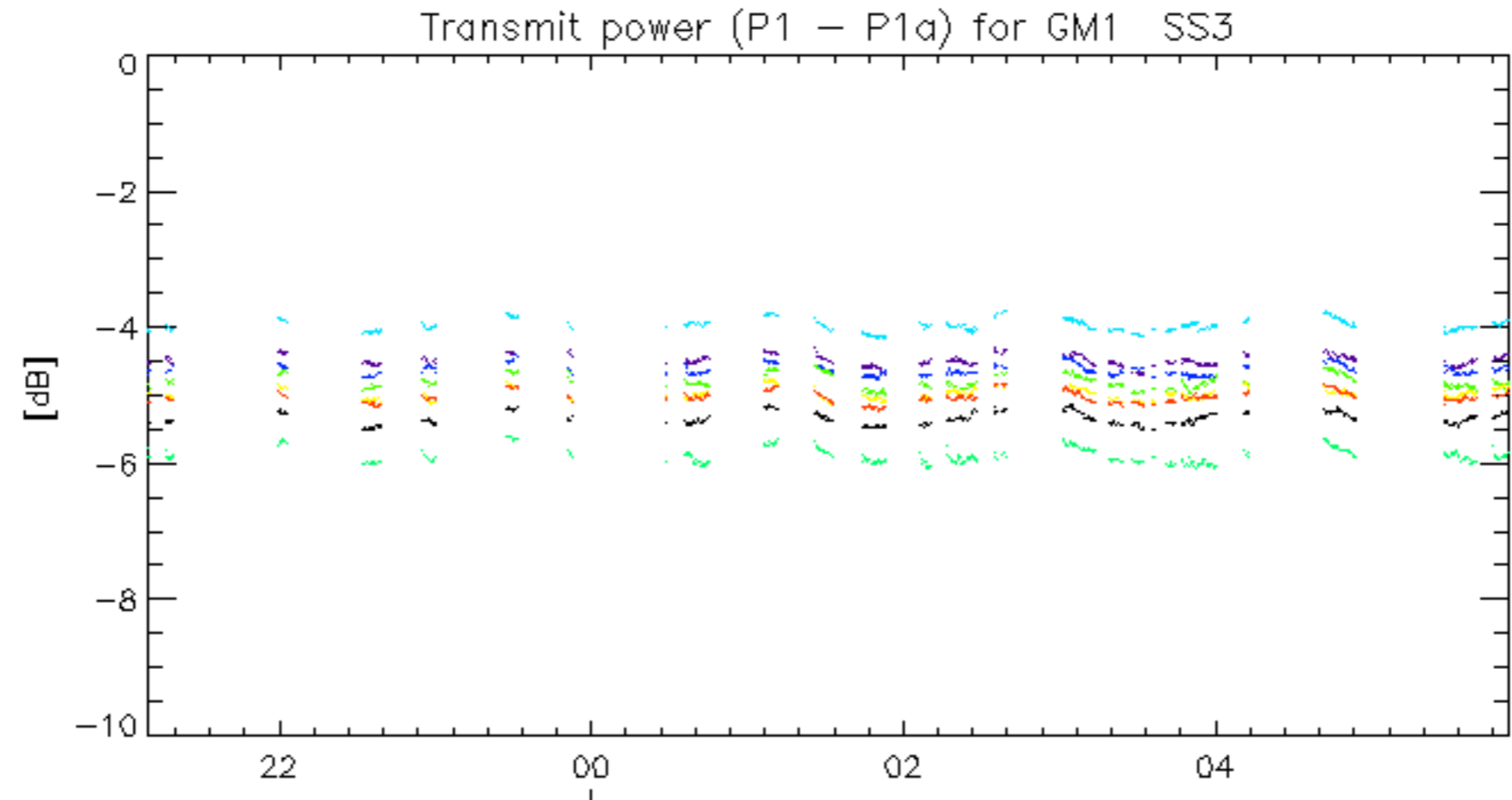


Transmit power (P1 - P1a) for GM1 SS3

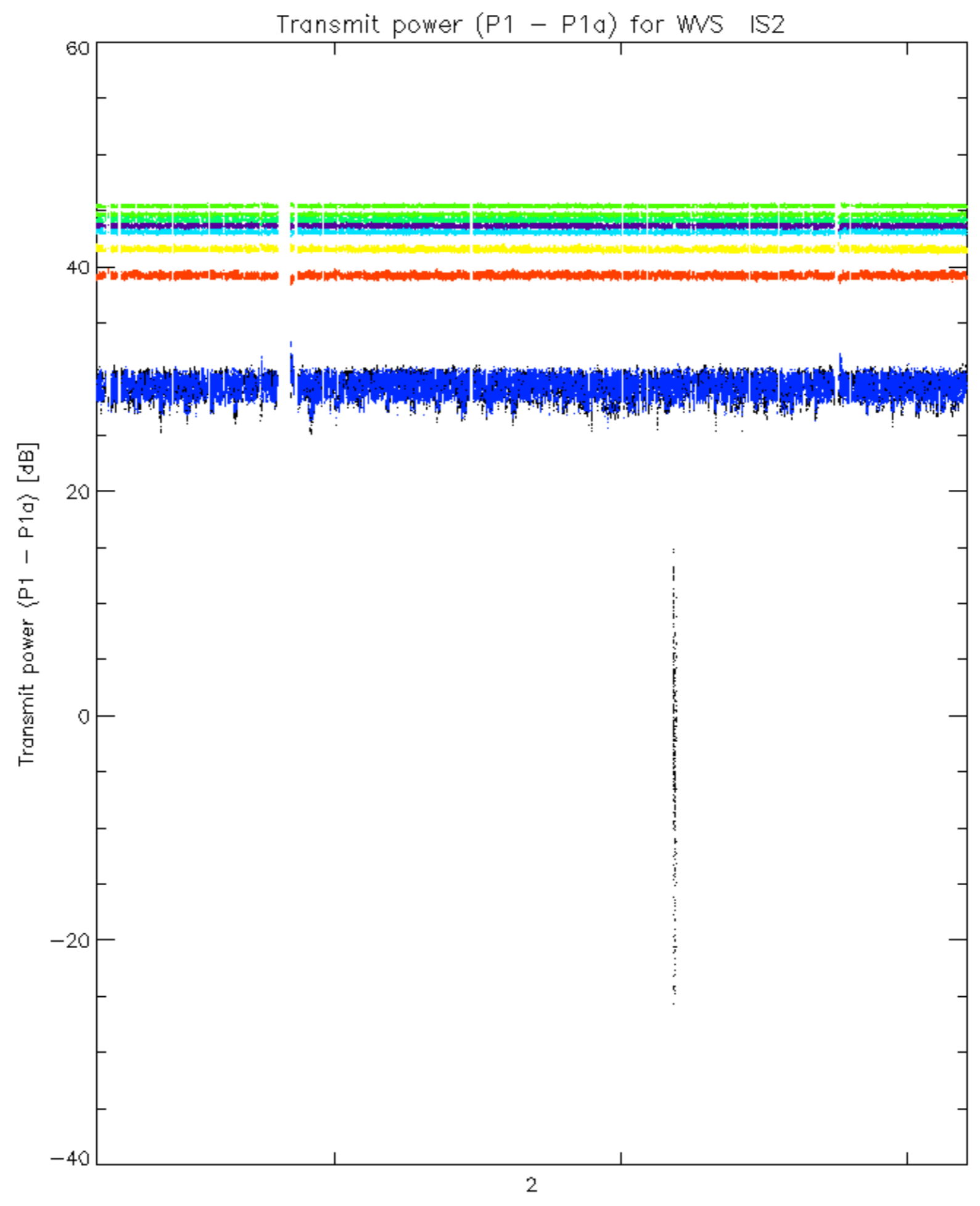


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

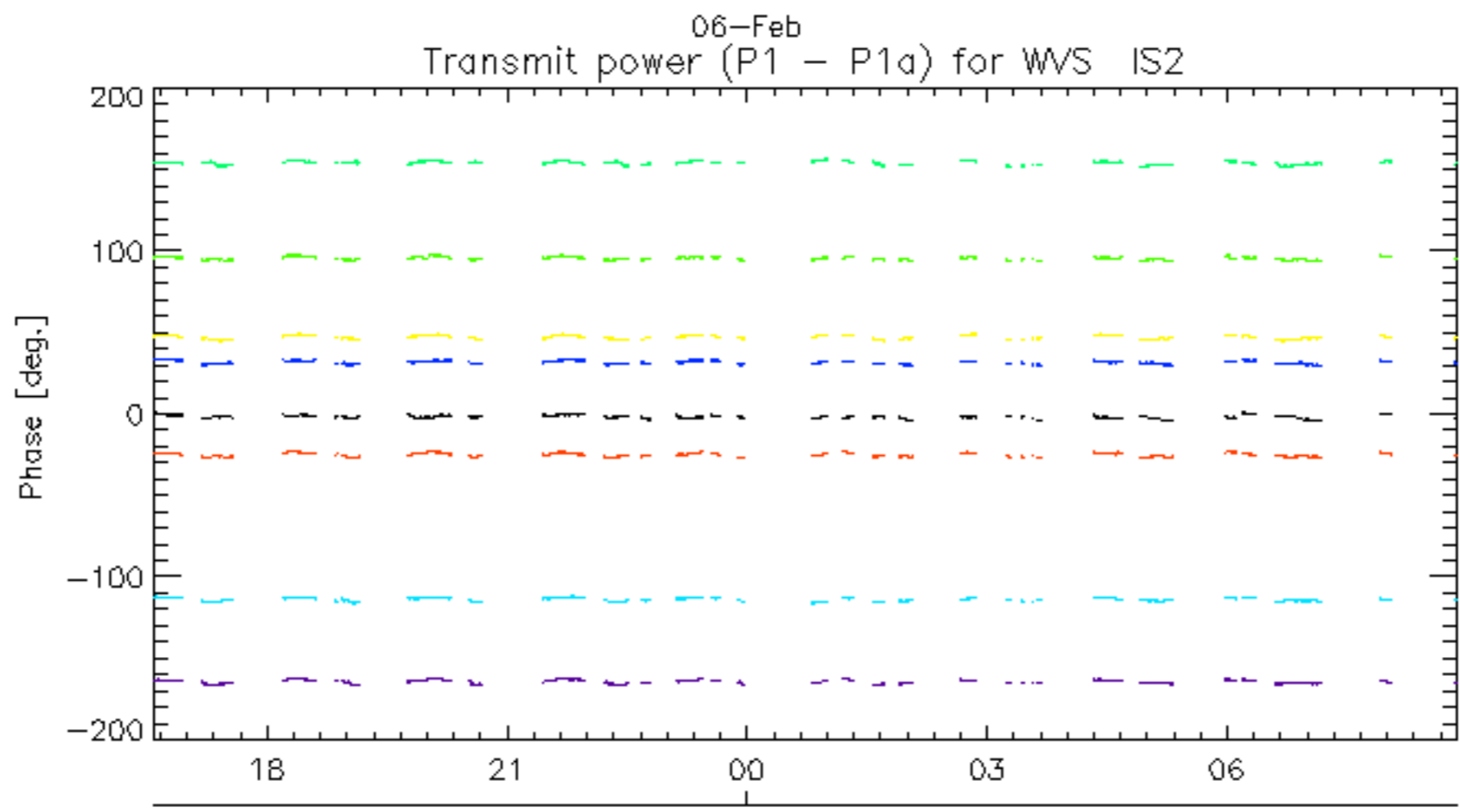
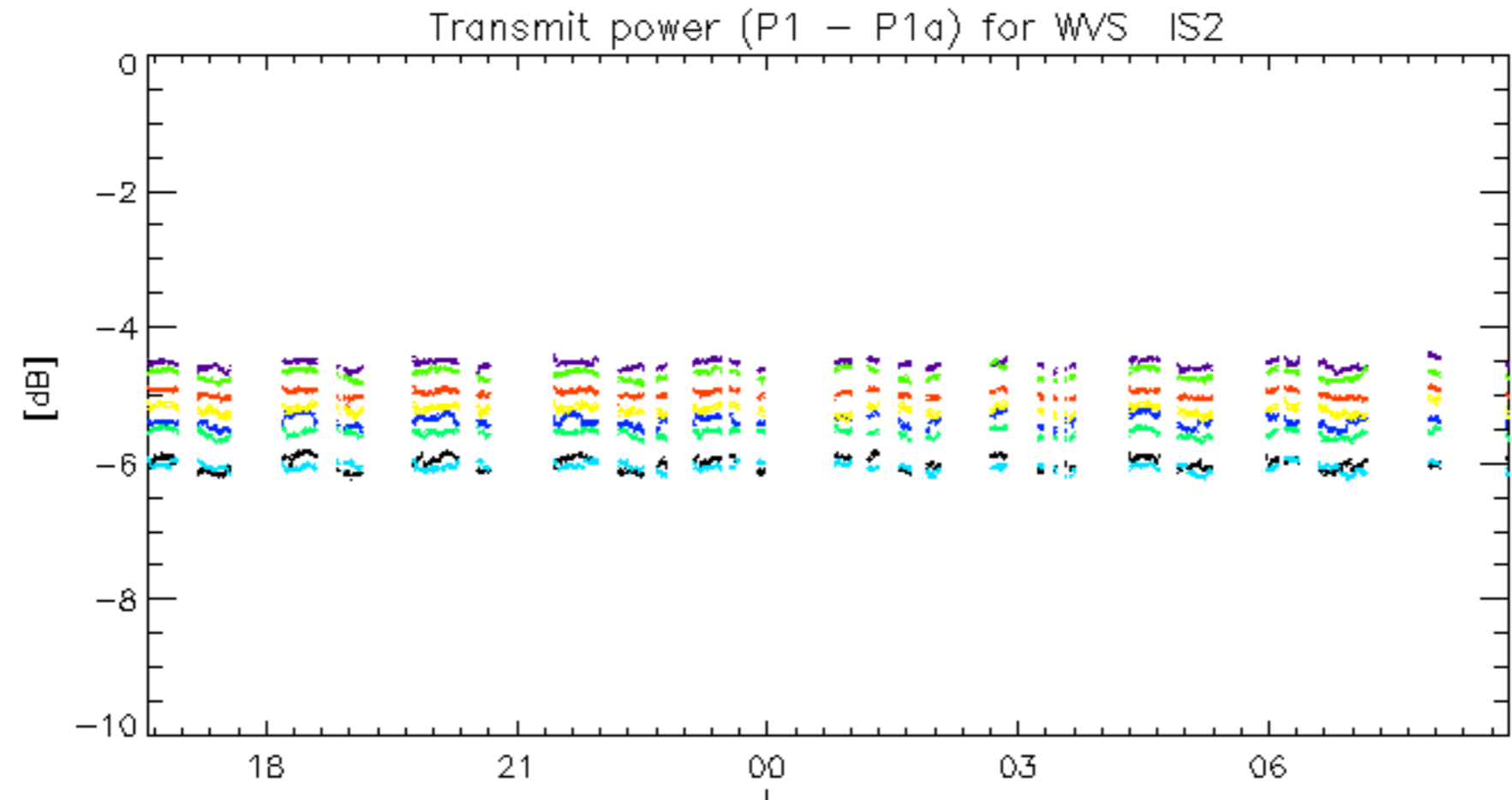




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rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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

No unavailabilities during the reported period.