

# PRELIMINARY REPORT OF 060324

last update on Fri Mar 24 17:17:25 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 2006-03-23 00:00:00 to 2006-03-24 17:17:25

PDHS-K
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AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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**PDHS-E**

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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### 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	20060323 074708
H	20060324 071531

#### 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

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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	-4.002691	0.009178	0.000546
7	P1	-3.011041	0.008437	-0.022535
11	P1	-4.059374	0.018978	0.001273
15	P1	-6.092185	0.020832	-0.061674
19	P1	-3.298387	0.006623	-0.045125
22	P1	-4.460866	0.014356	-0.021003
26	P1	-4.178647	0.112314	0.223437
30	P1	-5.787090	0.170399	0.142040
3	P1	-16.978949	0.250901	0.031184
7	P1	-16.737572	0.101733	-0.109230
11	P1	-16.479235	0.316129	0.047137
15	P1	-13.053939	0.092295	-0.019713
19	P1	-13.950157	0.051850	-0.098099
22	P1	-15.578644	0.457310	-0.042456
26	P1	-15.748449	0.367653	0.014671
30	P1	-16.502960	0.320013	-0.132582

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.383505	0.086674	0.072599
7	P2	-22.354839	0.095898	0.127224
11	P2	-16.221401	0.100257	0.025424
15	P2	-7.165728	0.097769	-0.006702
19	P2	-9.133958	0.090156	-0.014810
22	P2	-17.950842	0.087977	-0.067354
26	P2	-16.219213	0.093834	-0.051786
30	P2	-19.650763	0.083990	-0.027093

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.195220	0.005633	-0.001842
7	P3	-8.195220	0.005633	-0.001842
11	P3	-8.195220	0.005633	-0.001842
15	P3	-8.195220	0.005633	-0.001842
19	P3	-8.195220	0.005633	-0.001842
22	P3	-8.195220	0.005633	-0.001842

26	P3	-8.195220	0.005633	-0.001842
30	P3	-8.195220	0.005633	-0.001840

#### 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	-3.830694	2.635458	0.351344
7	P1	-2.812940	2.767190	0.416858
11	P1	-3.010538	2.786359	0.399544
15	P1	-3.654804	2.762517	0.428661
19	P1	-3.454858	2.675719	0.363547
22	P1	-5.253730	2.460539	0.328331
26	P1	-5.910408	2.637990	0.707146
30	P1	-5.258587	2.500012	0.463620
3	P1	-11.639760	1.735380	0.259133
7	P1	-10.033556	1.922665	0.286167
11	P1	-10.335355	1.916811	0.277480
15	P1	-10.884307	1.932250	0.257733
19	P1	-15.453032	1.426310	0.240407
22	P1	-20.327997	2.102387	0.107280
26	P1	-16.281933	1.929664	0.169536
30	P1	-18.300488	1.642702	0.389510

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.079720	1.825332	0.096671
7	P2	-22.529642	2.143001	-0.048125

11	P2	-11.261129	1.981361	0.194637
15	P2	-4.901479	2.574085	0.352694
19	P2	-6.909336	2.316432	0.325367
22	P2	-8.201327	2.172086	0.275217
26	P2	-23.913197	2.188229	-0.307829
30	P2	-22.042496	2.063825	-0.182349

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.023097	0.002259	0.006005
7	P3	-8.023107	0.002258	0.006249
11	P3	-8.023067	0.002272	0.006359
15	P3	-8.023161	0.002265	0.006565
19	P3	-8.023102	0.002270	0.006034
22	P3	-8.023181	0.002259	0.006437
26	P3	-8.023148	0.002264	0.006294
30	P3	-8.023015	0.002271	0.006263

## 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	0.000562323
	stdev	1.71298e-07
MEAN Q	mean	0.000521639

stdev 2.18372e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138524
	stdev	0.00117217
STDEV Q	mean	0.138891
	stdev	0.00119049



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006032[234]

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_1PNPDE20060322_022153_00000622046_00118_21214_1325.N1	1	0
ASA_IMM_1PNPDE20060323_171613_00000622046_00141_21237_1423.N1	0	11
ASA_GM1_1PNPDK20060322_104938_000006342046_00123_21219_0707.N1	0	21
ASA_GM1_1PNPDK20060322_134342_000003622046_00124_21220_0718.N1	0	22
ASA_WSM_1PNPDE20060322_171612_00000672046_00127_21223_2011.N1	0	65
ASA_WSM_1PNPDE20060323_022501_000001282046_00132_21228_2100.N1	0	40
ASA_WSM_1PNPDE20060323_193804_00000182046_00142_21238_2168.N1	0	329



## 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

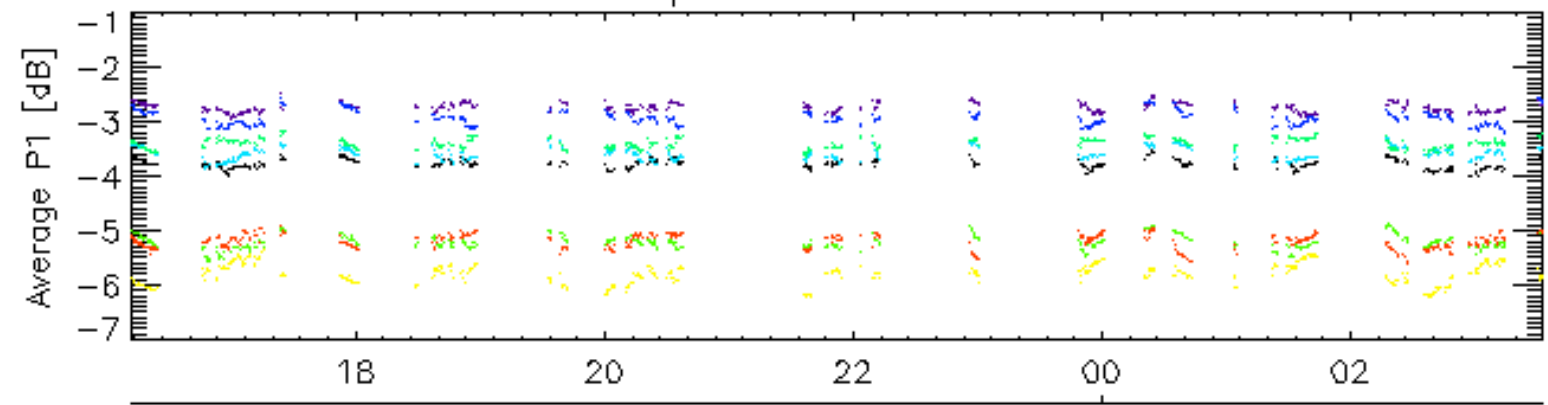
Ascending

Descending

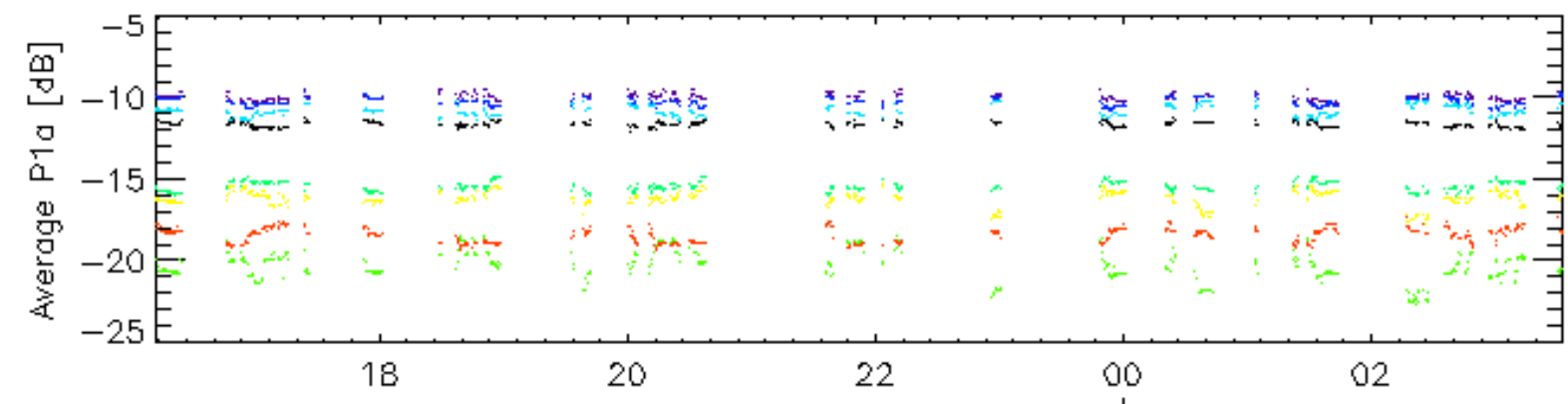
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

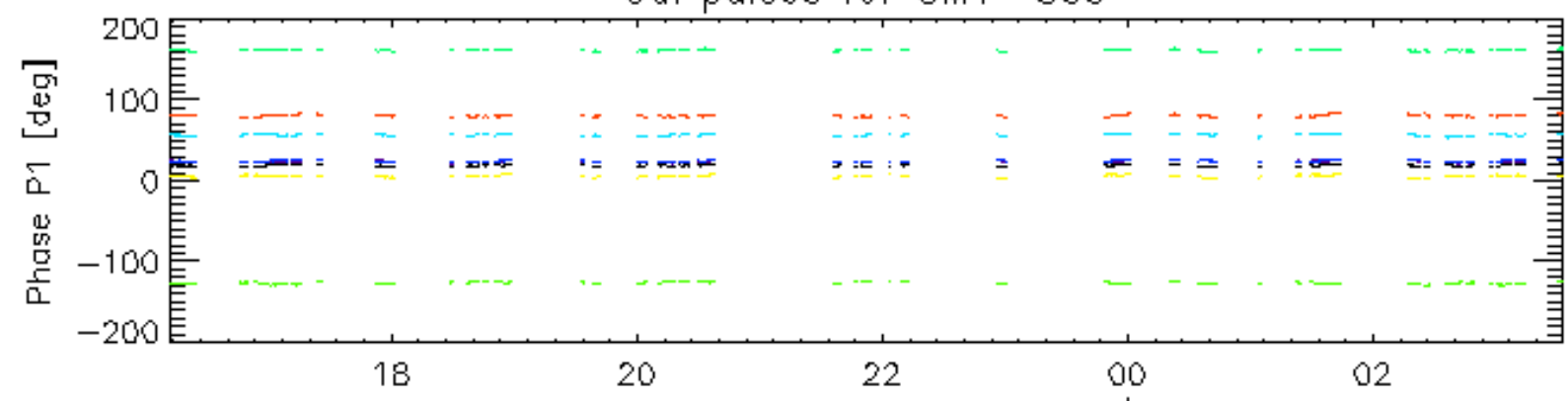


24-Mar

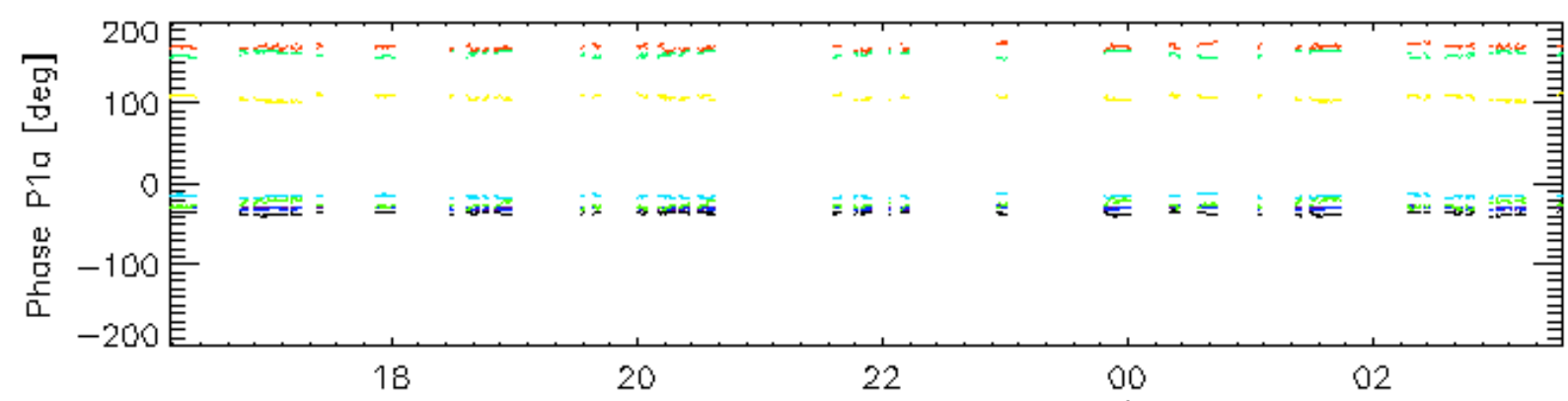


24-Mar

Cal pulses for GM1 SS3



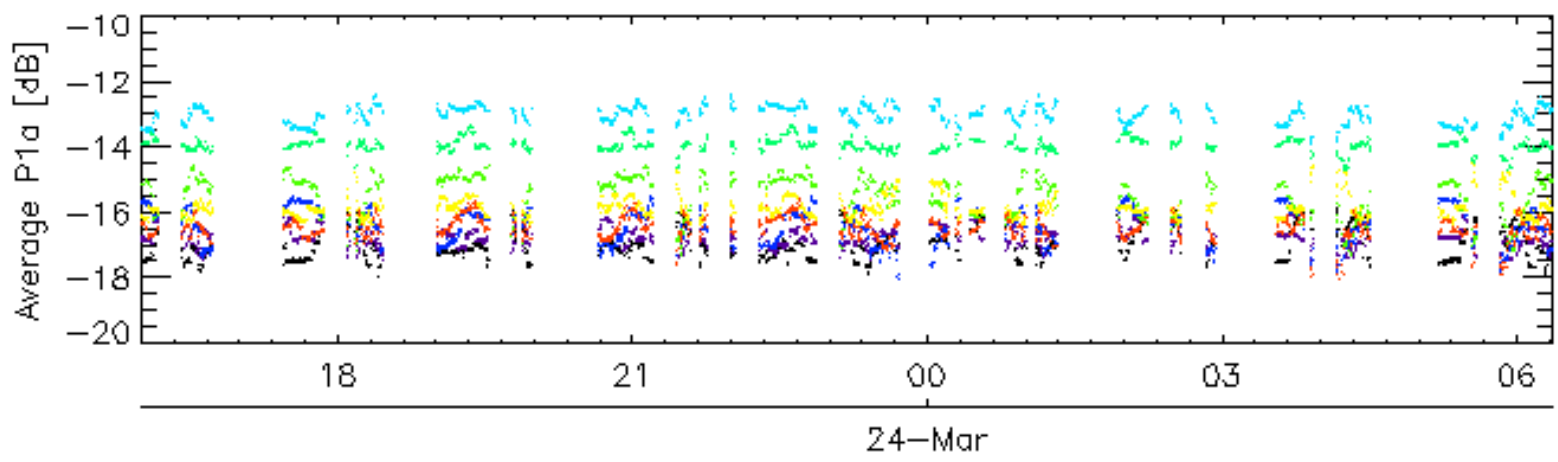
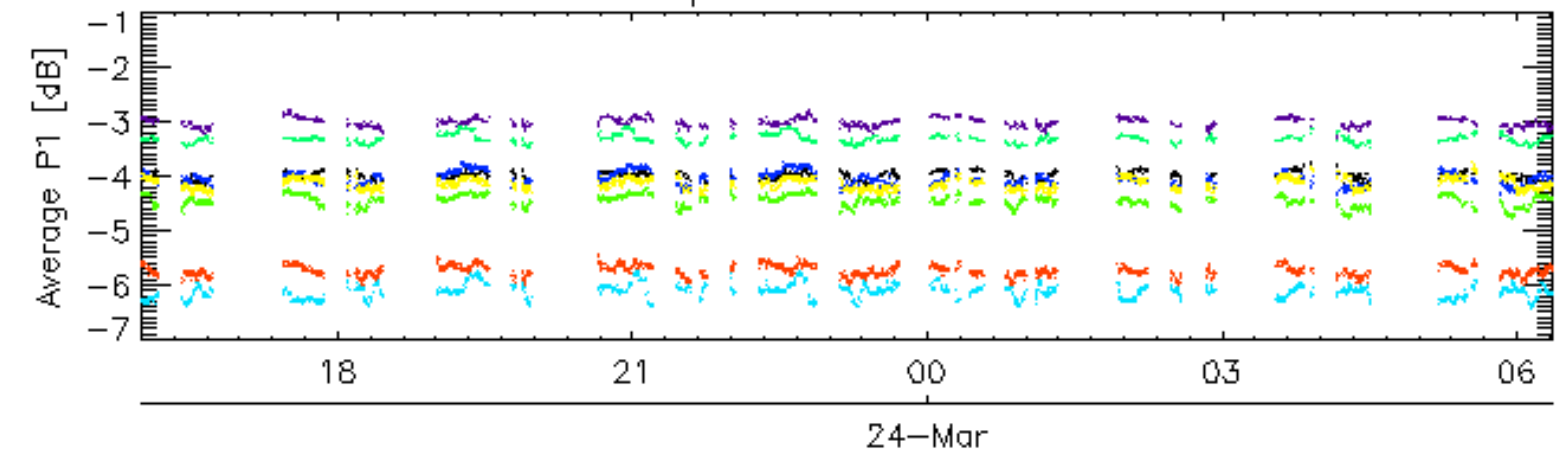
24-Mar



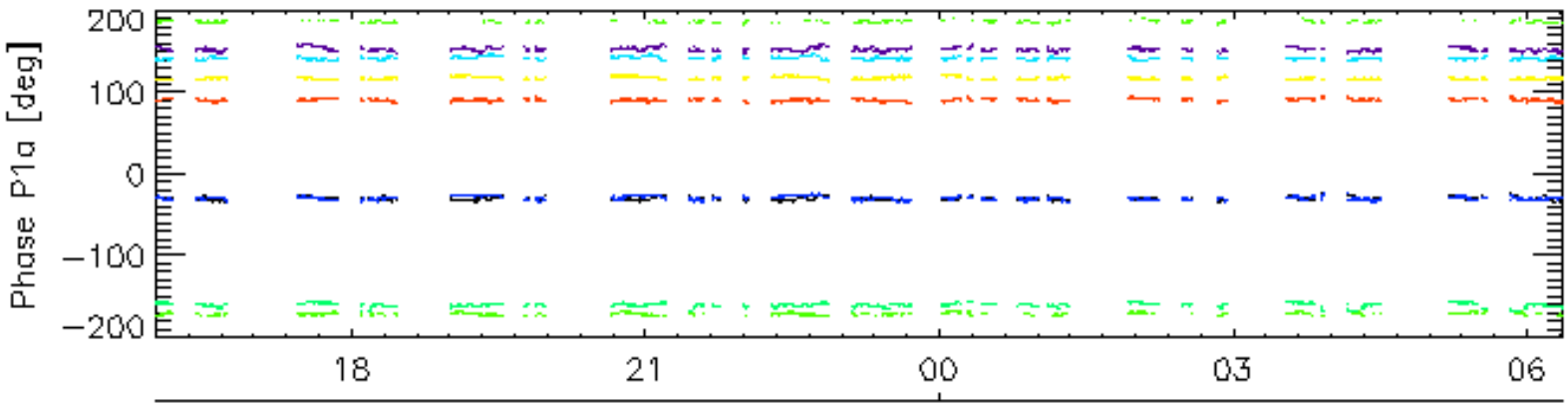
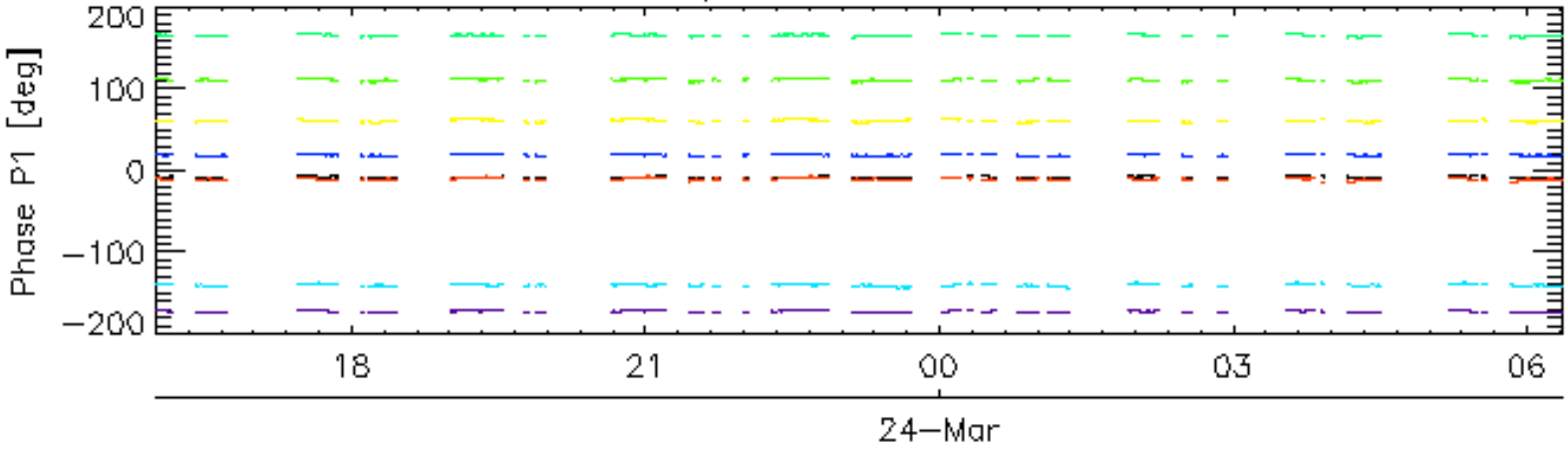
24-Mar

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

Cal pulses for WVS IS2

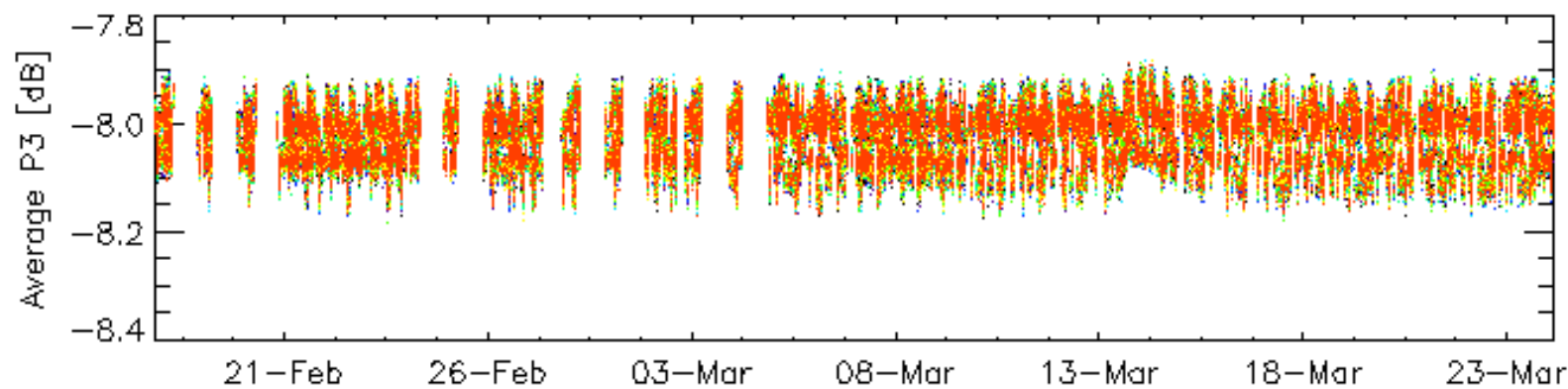
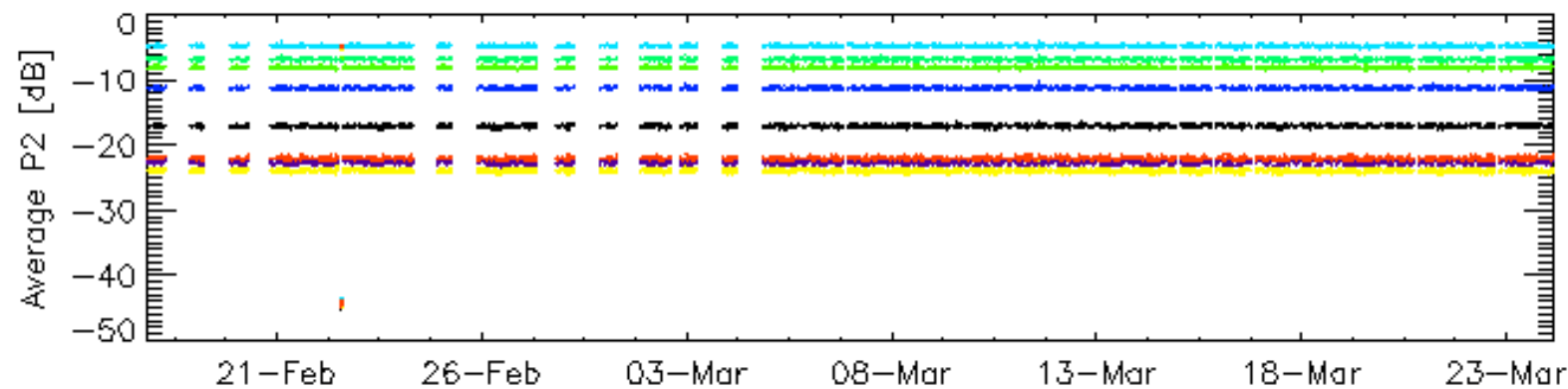
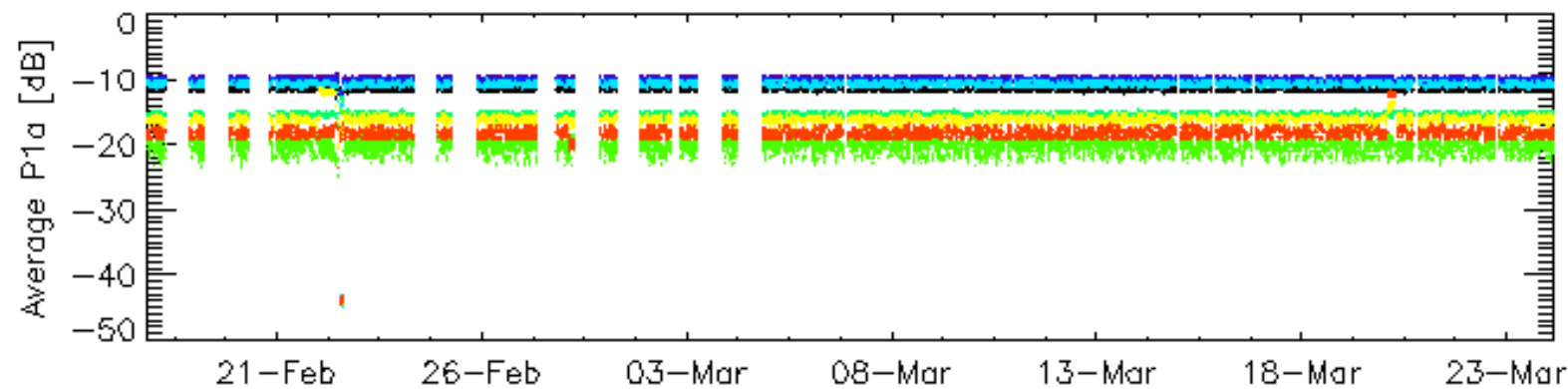
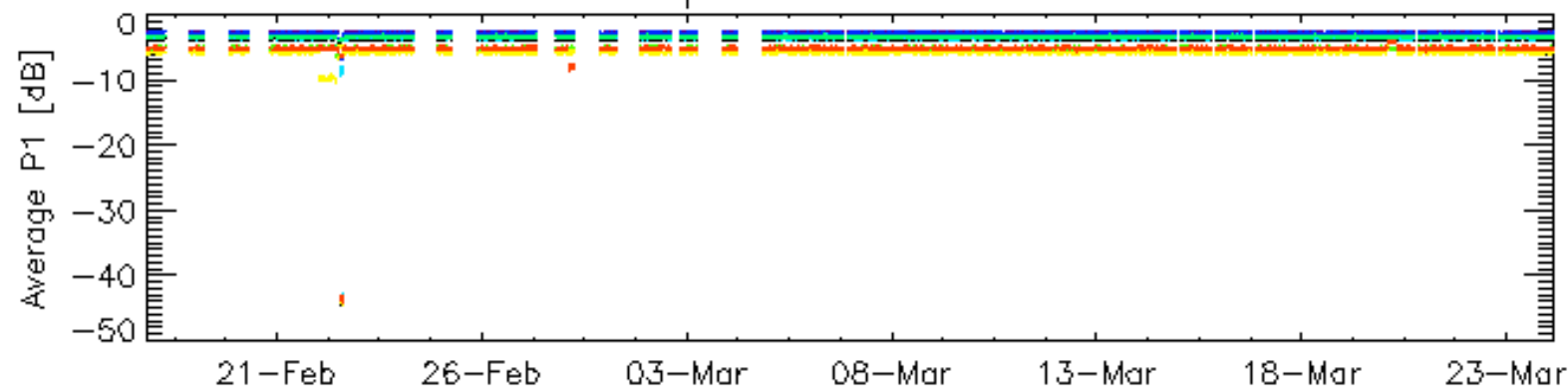


Cal pulses for WVS IS2



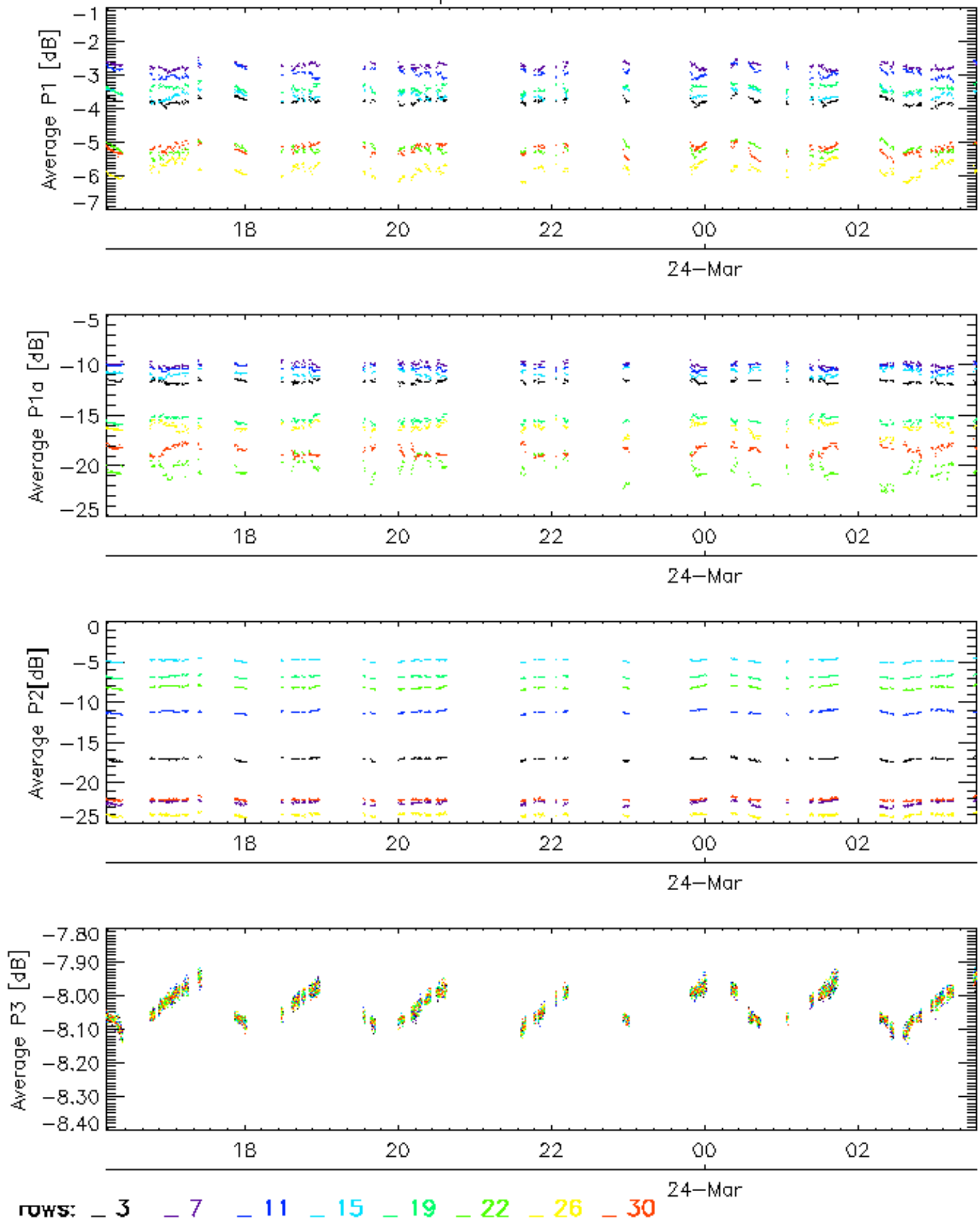
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30 24-Mar

Cal pulses for GM1 SS3

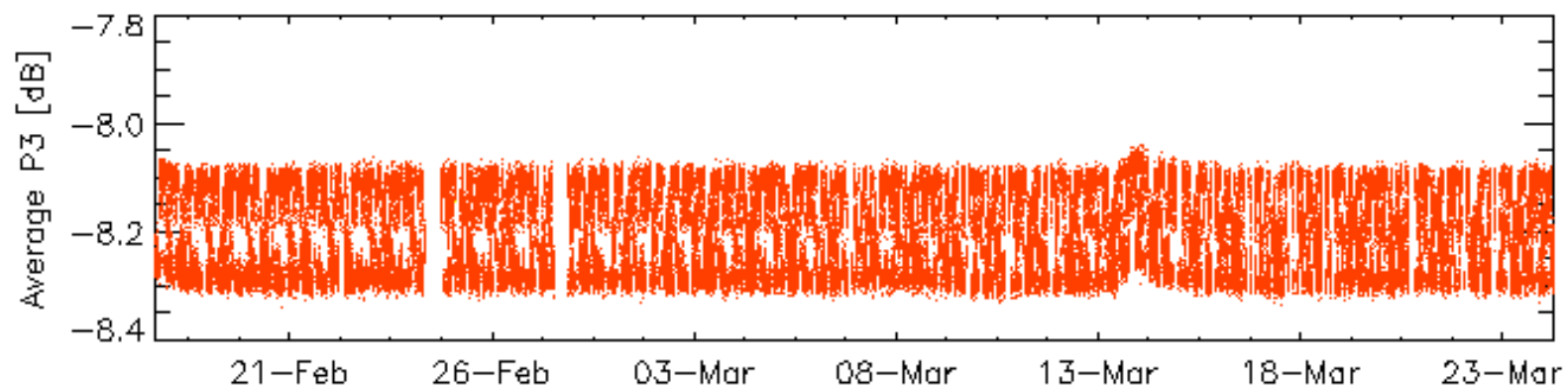
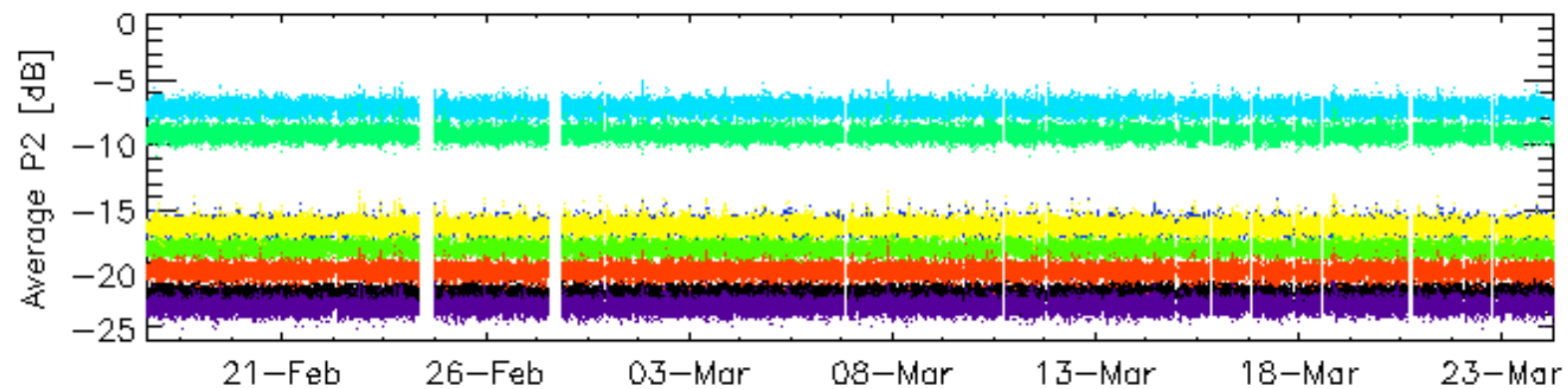
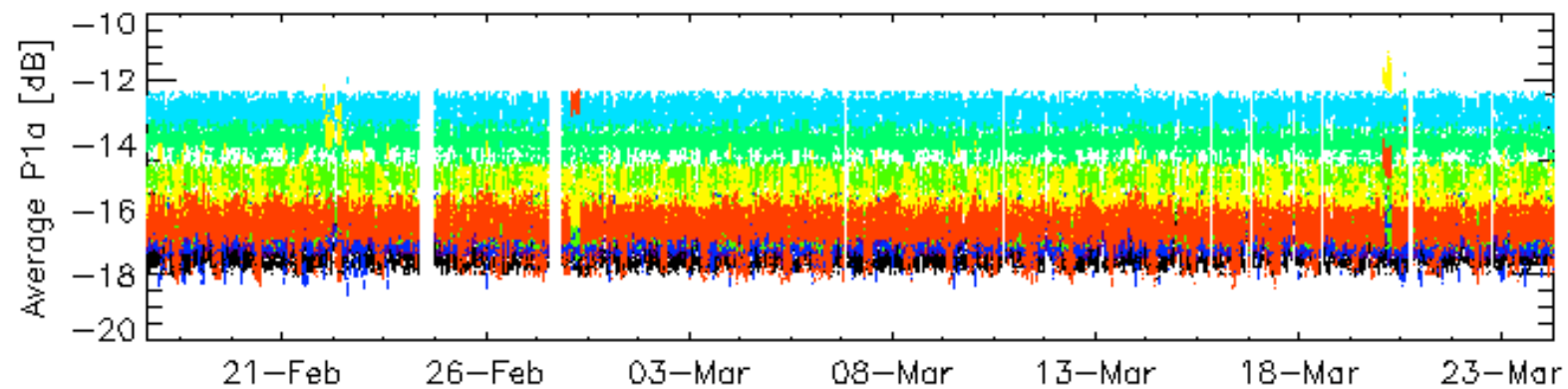
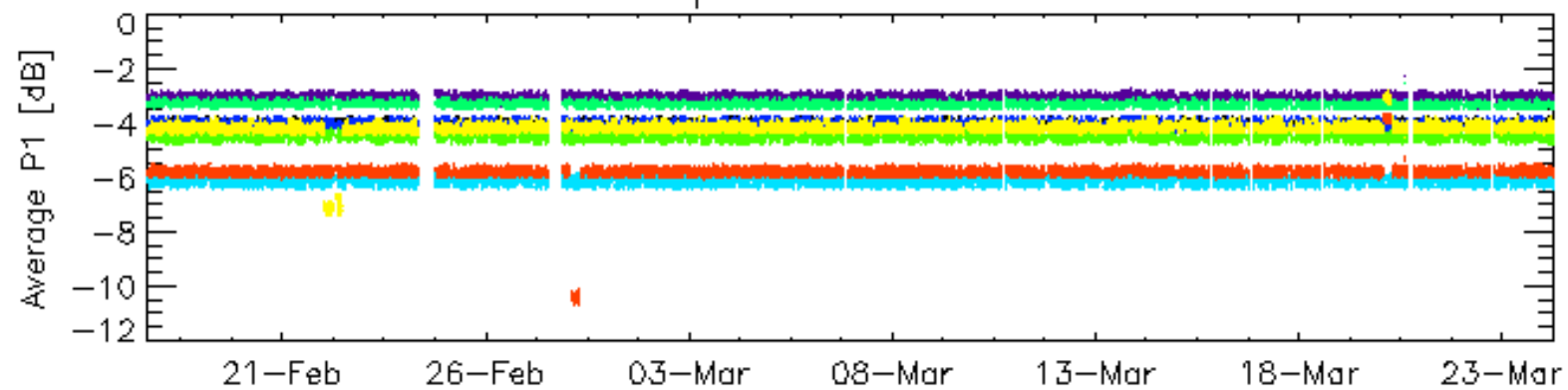


rows: [\\_ 3](#) [\\_ 7](#) [\\_ 11](#) [\\_ 15](#) [\\_ 19](#) [\\_ 22](#) [\\_ 26](#) [\\_ 30](#)

Cal pulses for GM1 SS3

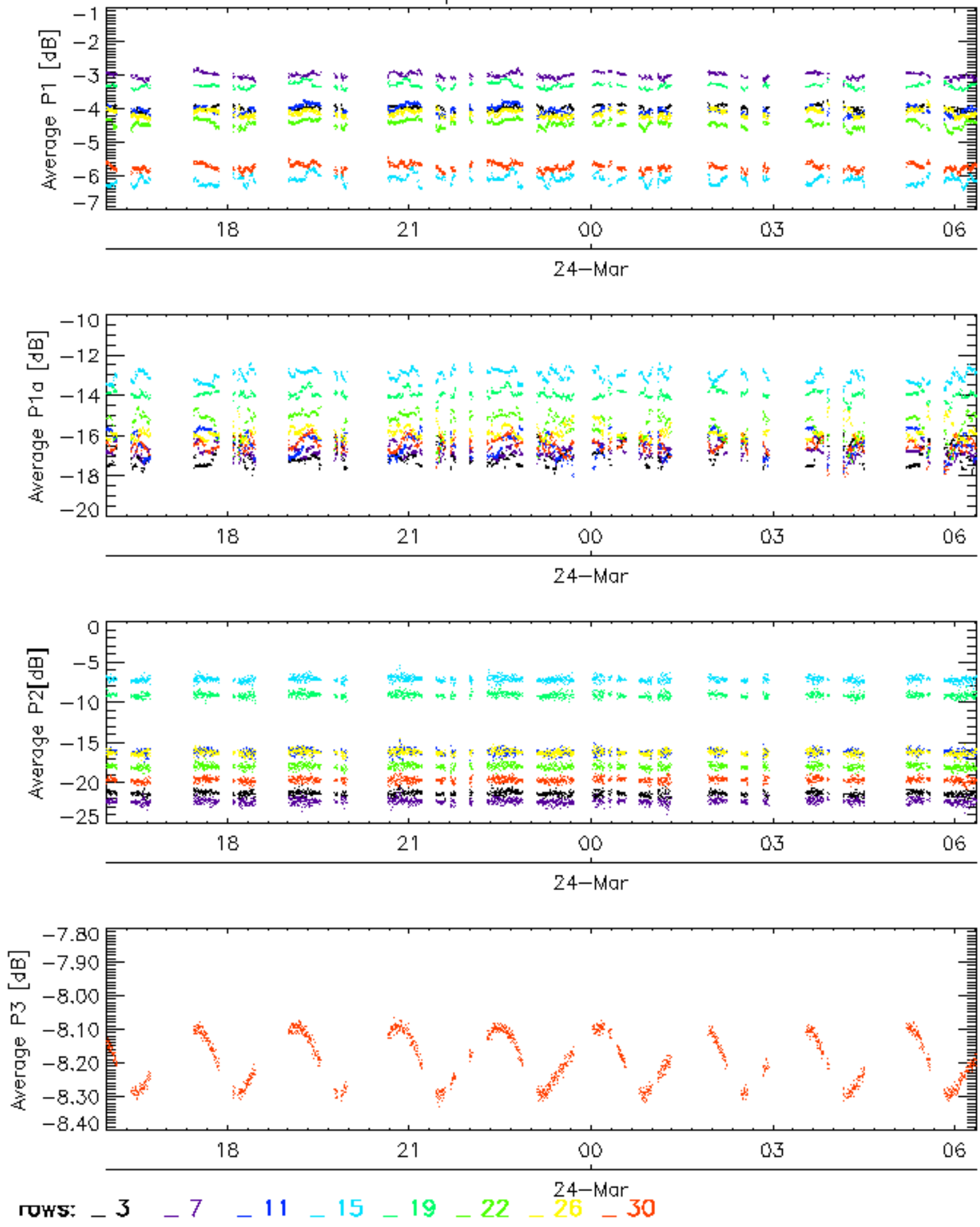


Cal pulses for WVS IS2



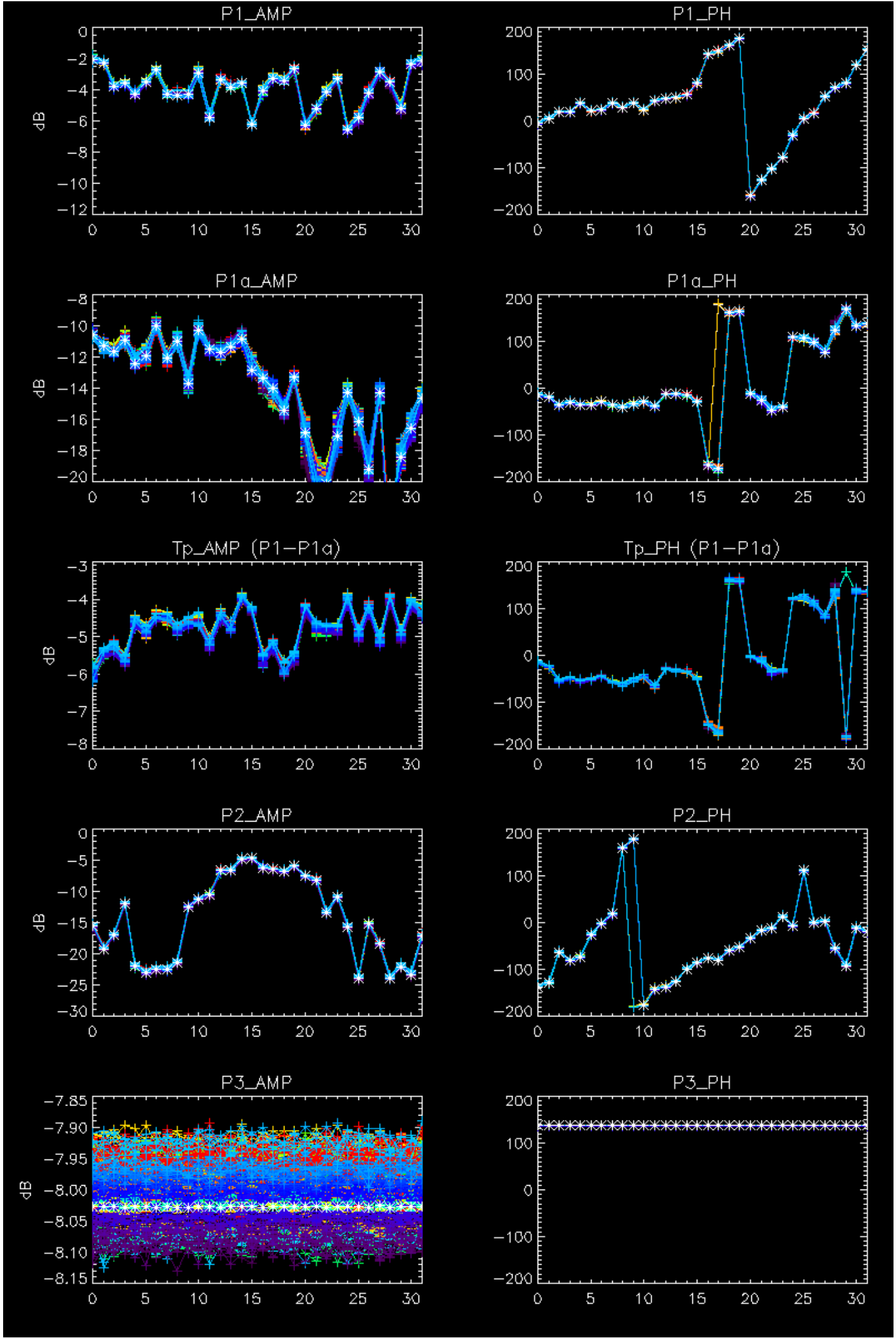
rows: [3](#) [7](#) [11](#) [15](#) [19](#) [22](#) [26](#) [30](#)

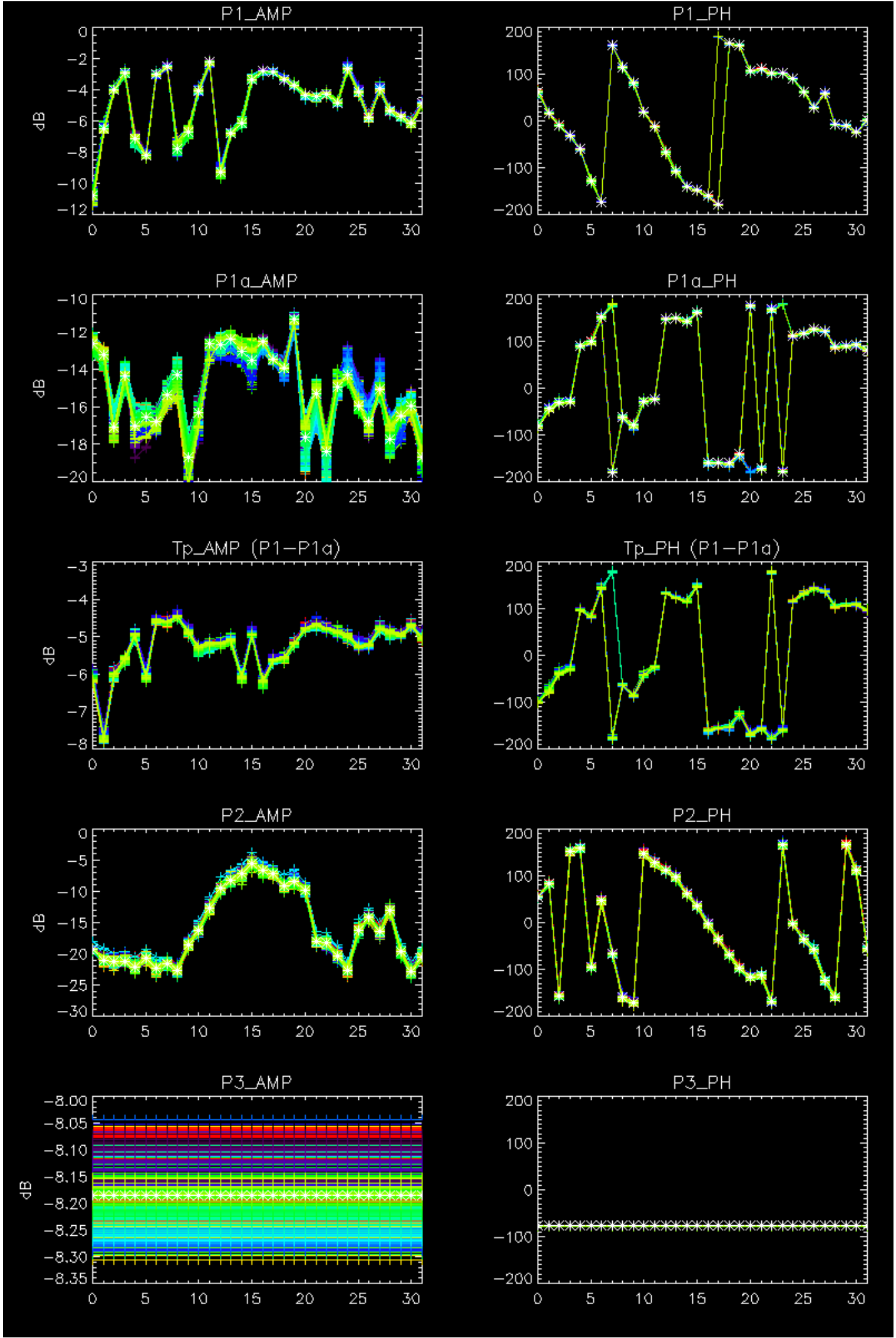
Cal pulses for WVS IS2



No anomalies observed.





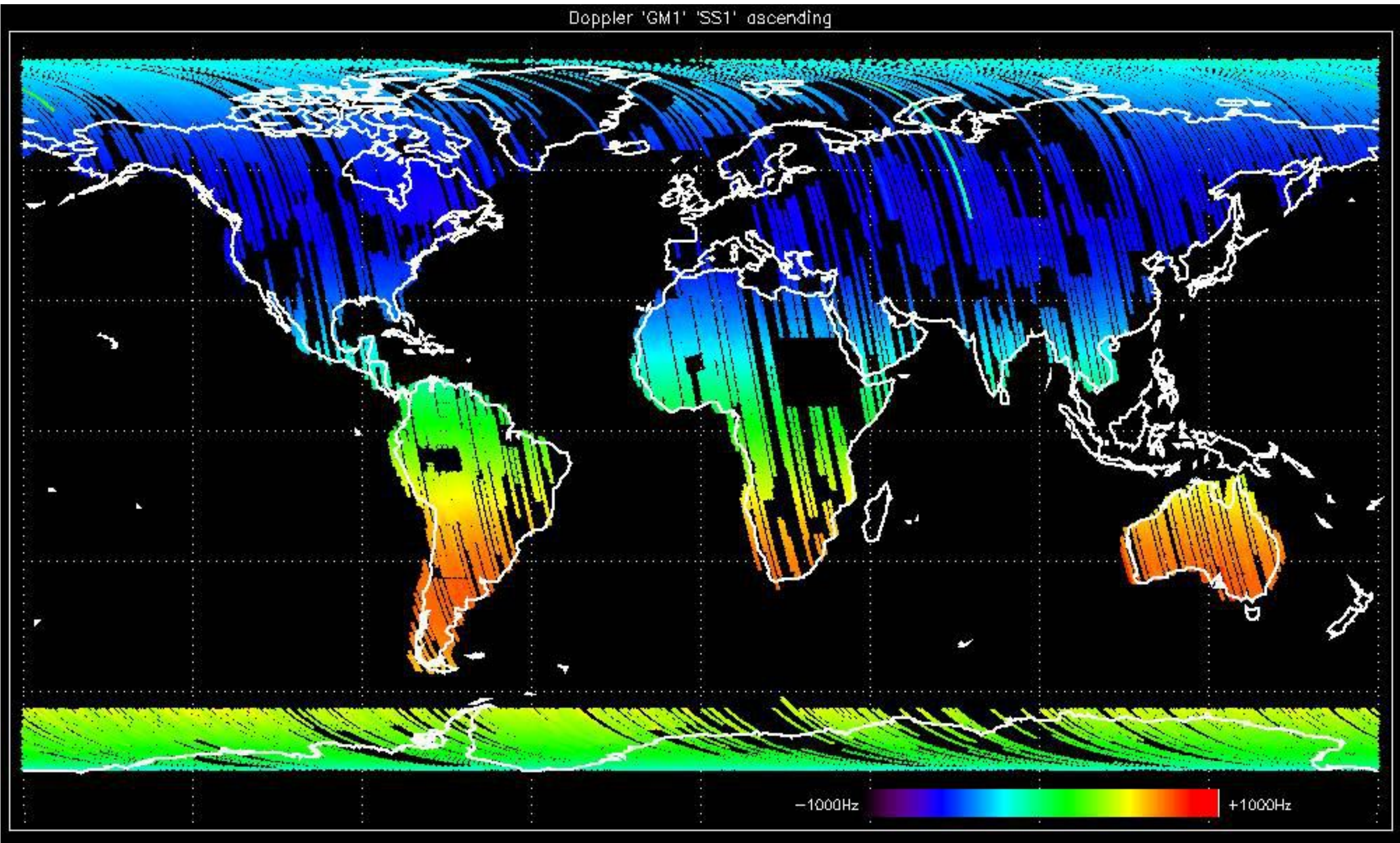


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



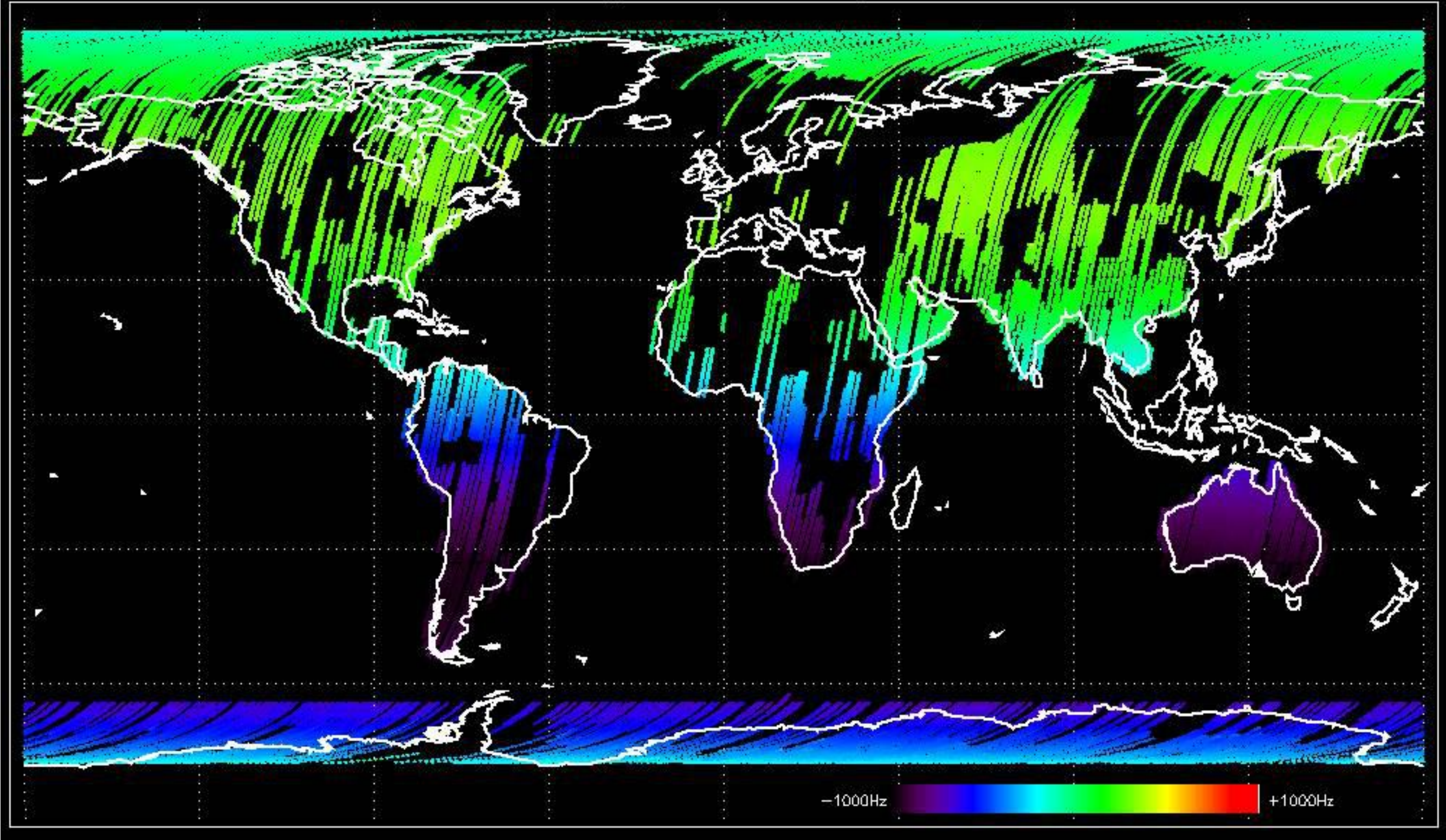


Doppler 'GM1' 'SS1' ascending



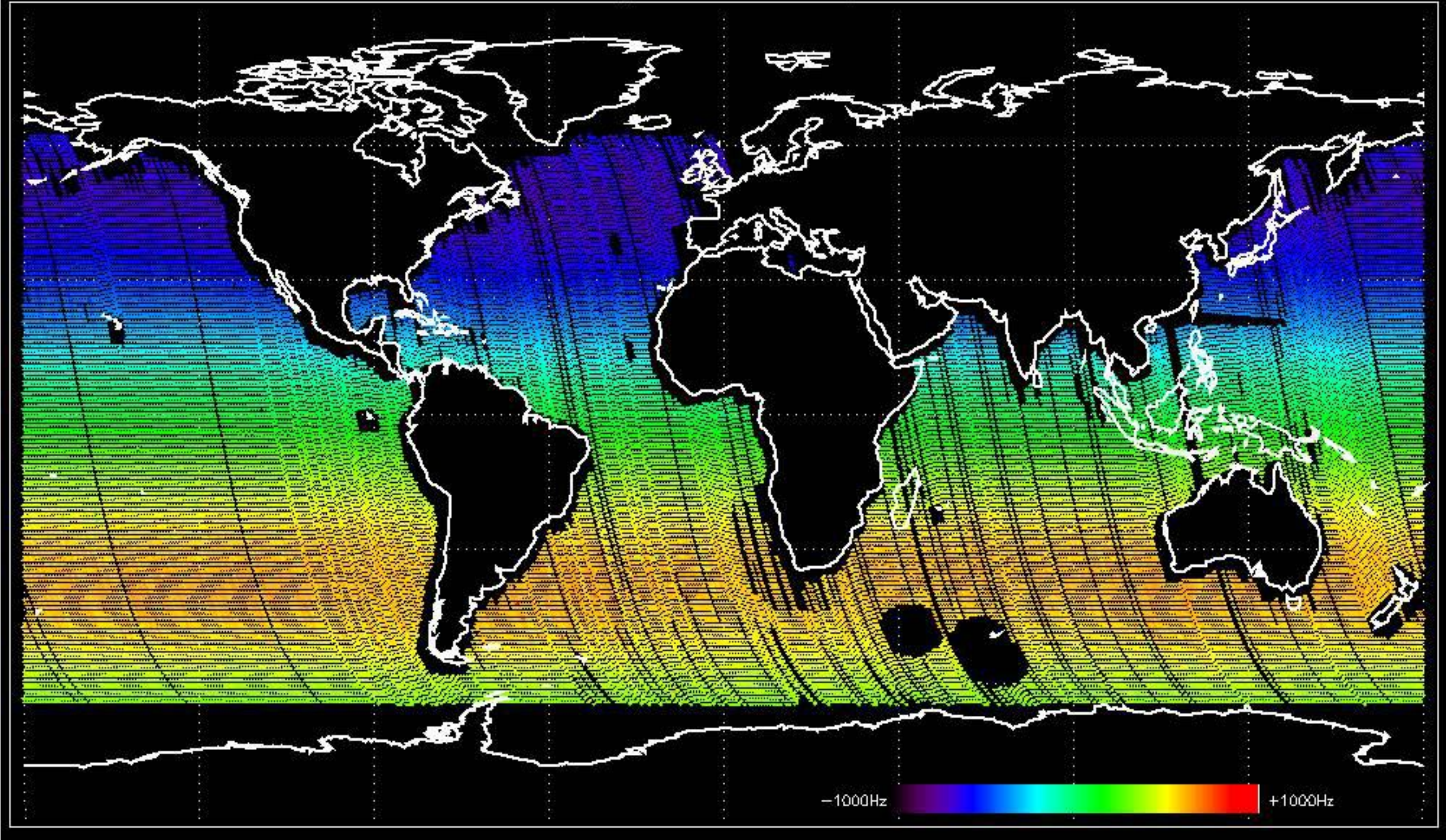


Doppler 'GM1' 'SS1' descending



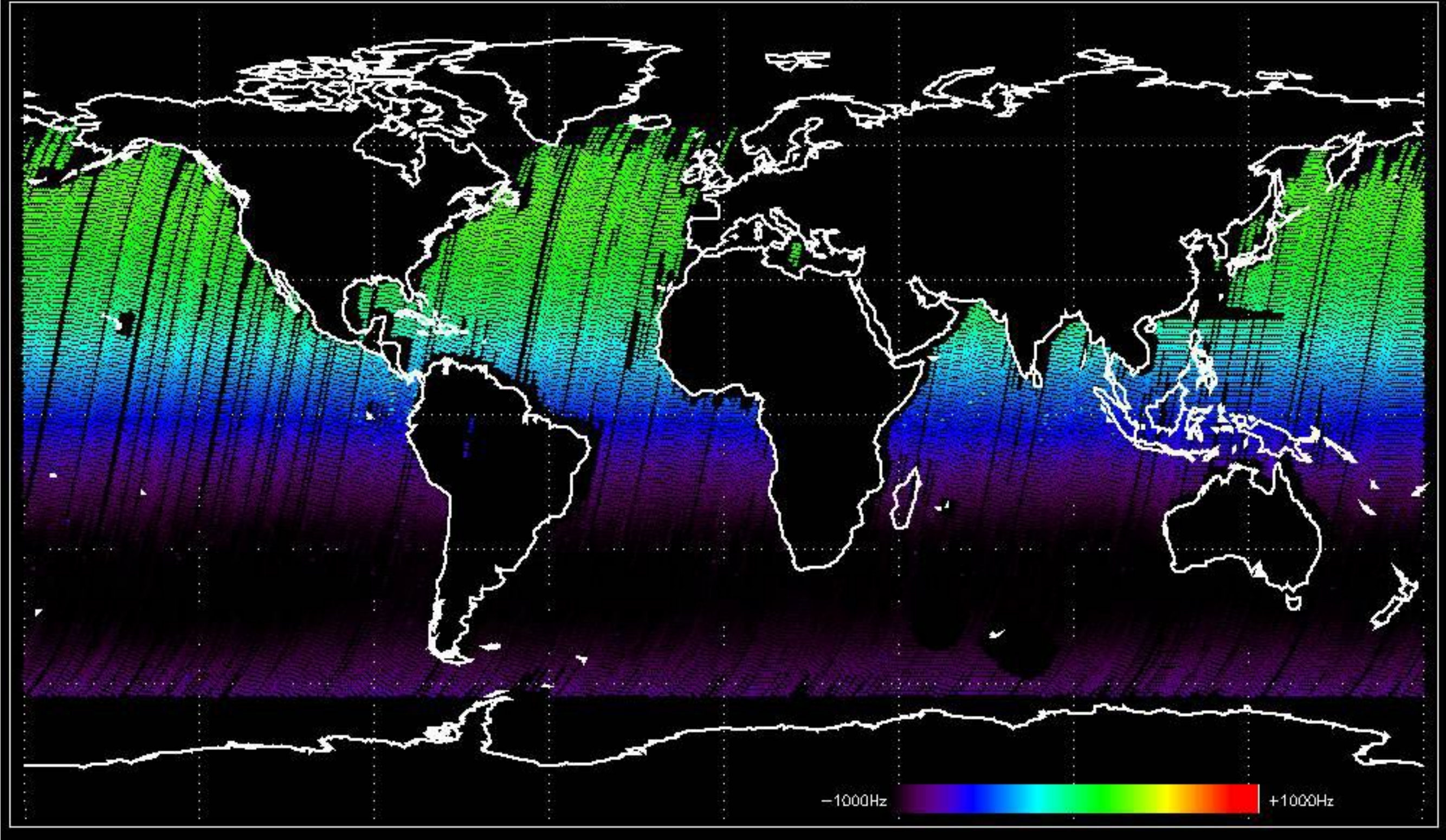


Doppler 'WVS' 'IS2' ascending



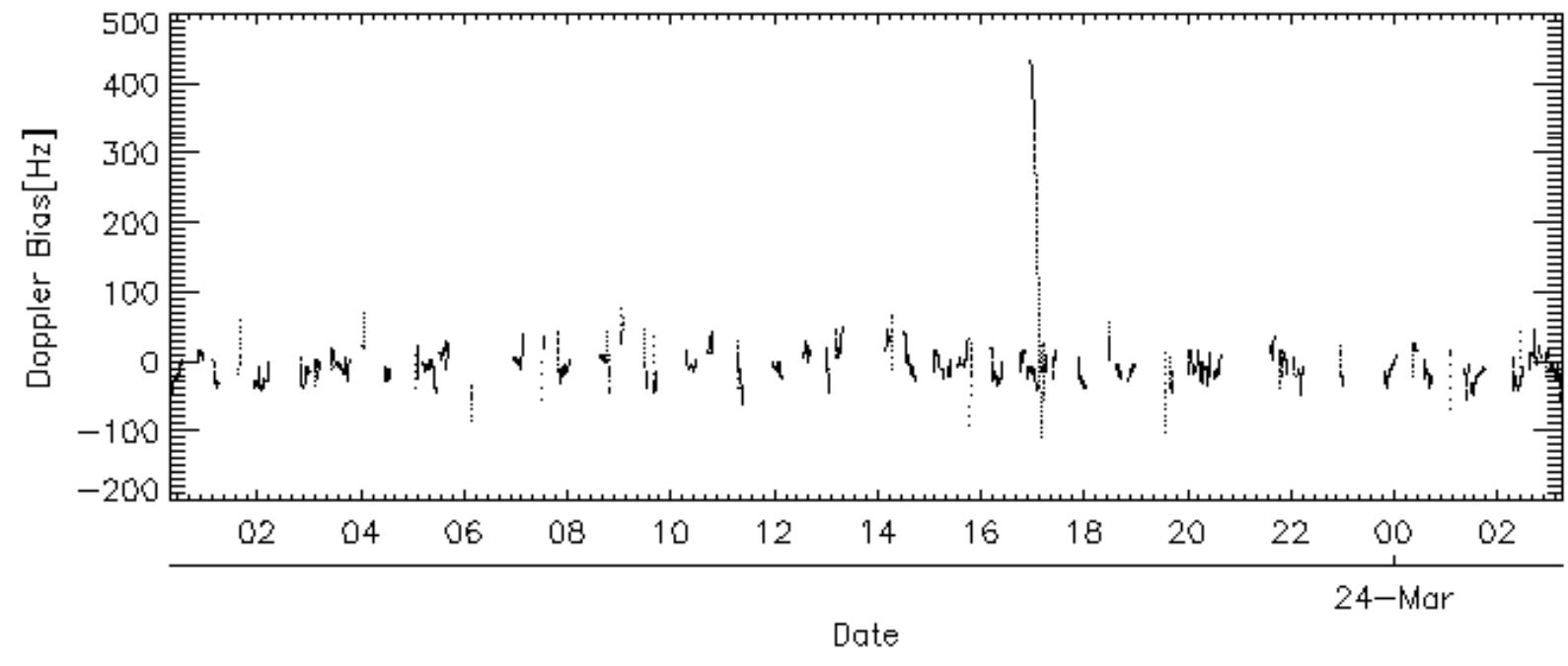
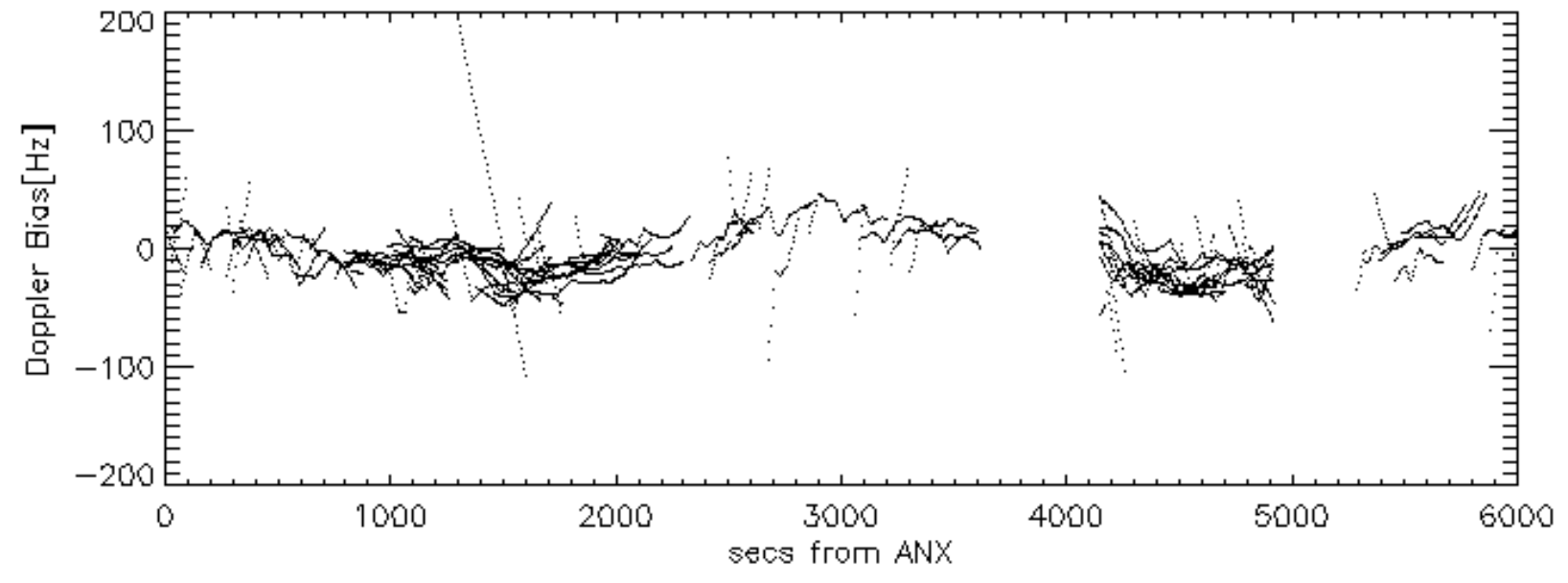
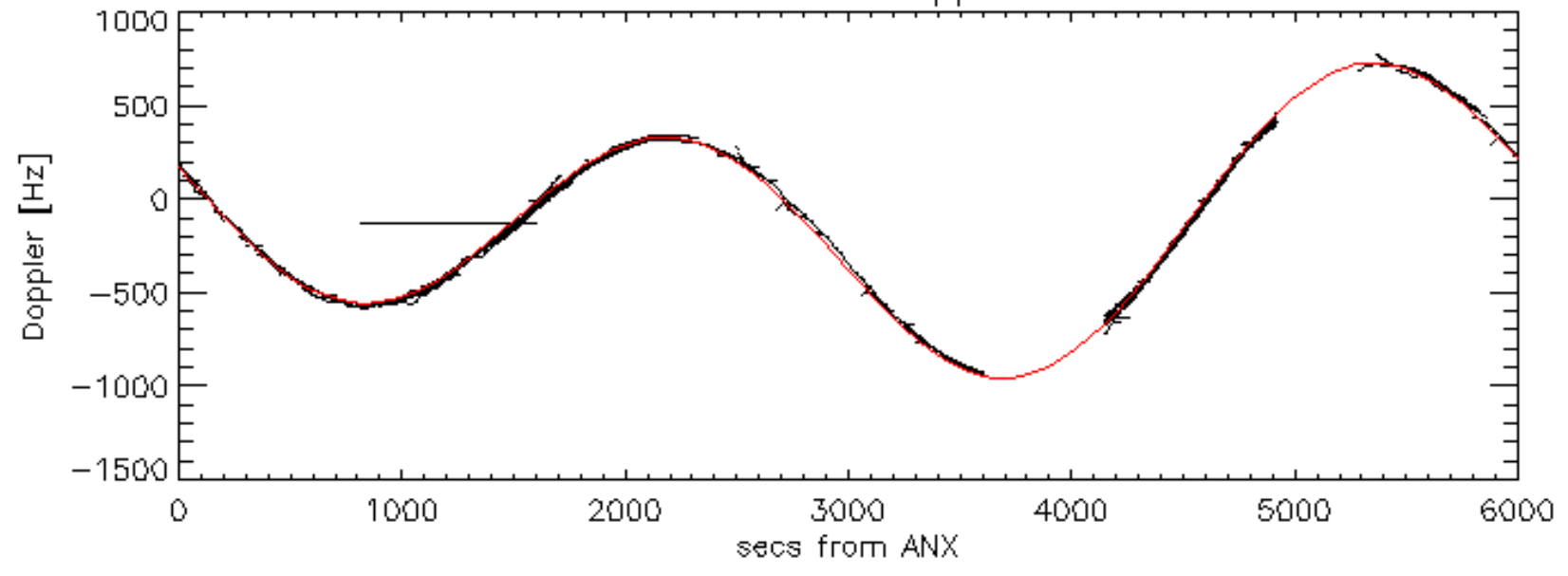


Doppler 'WVS' 'IS2' descending

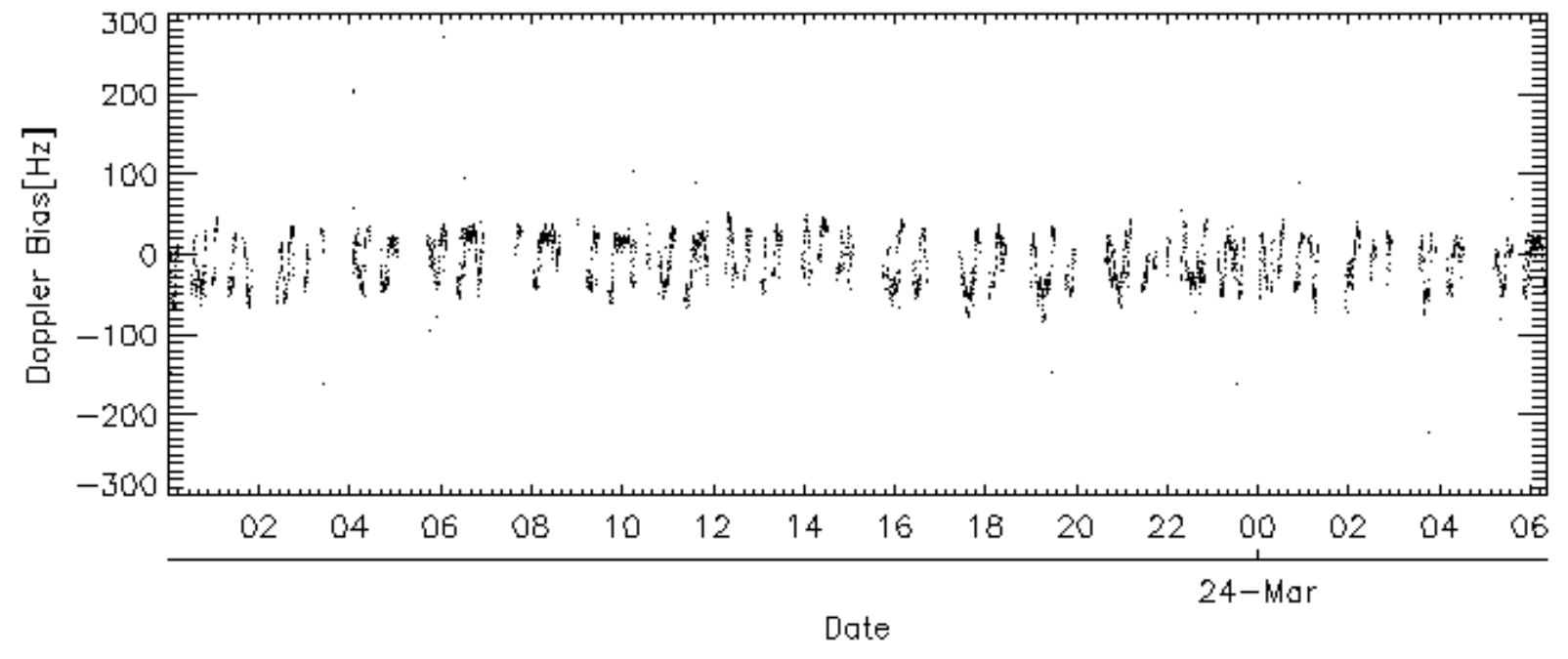
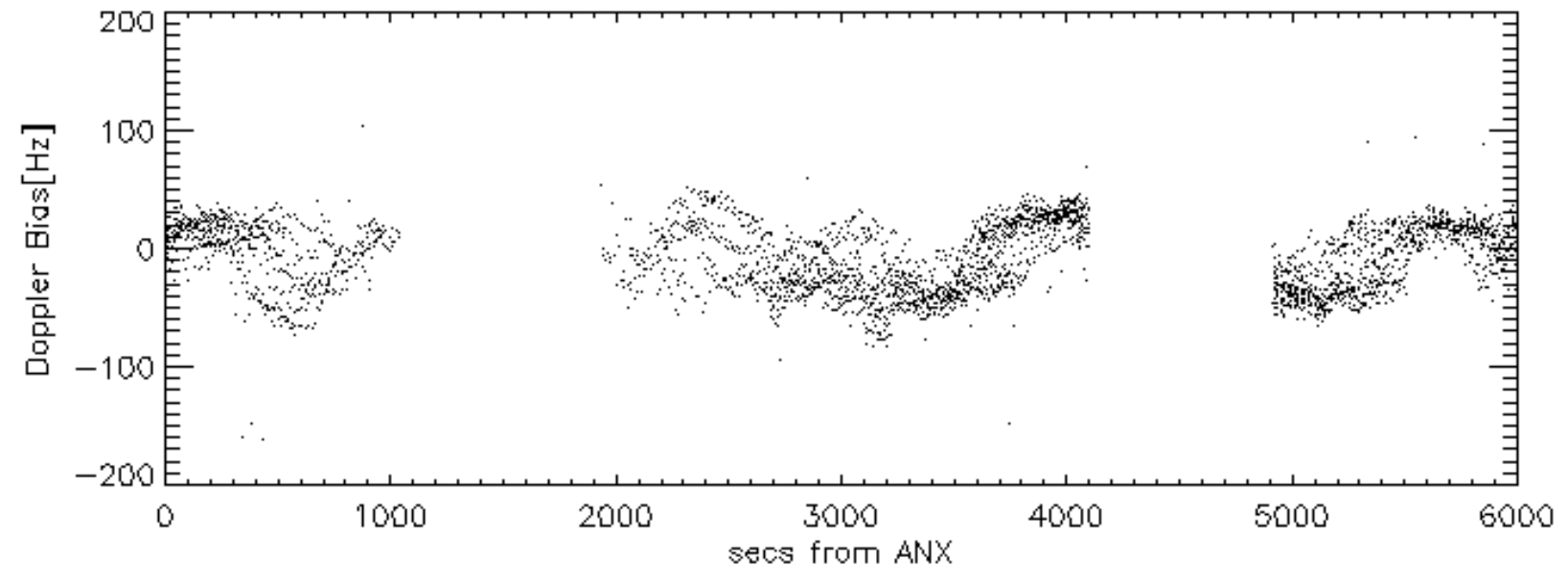
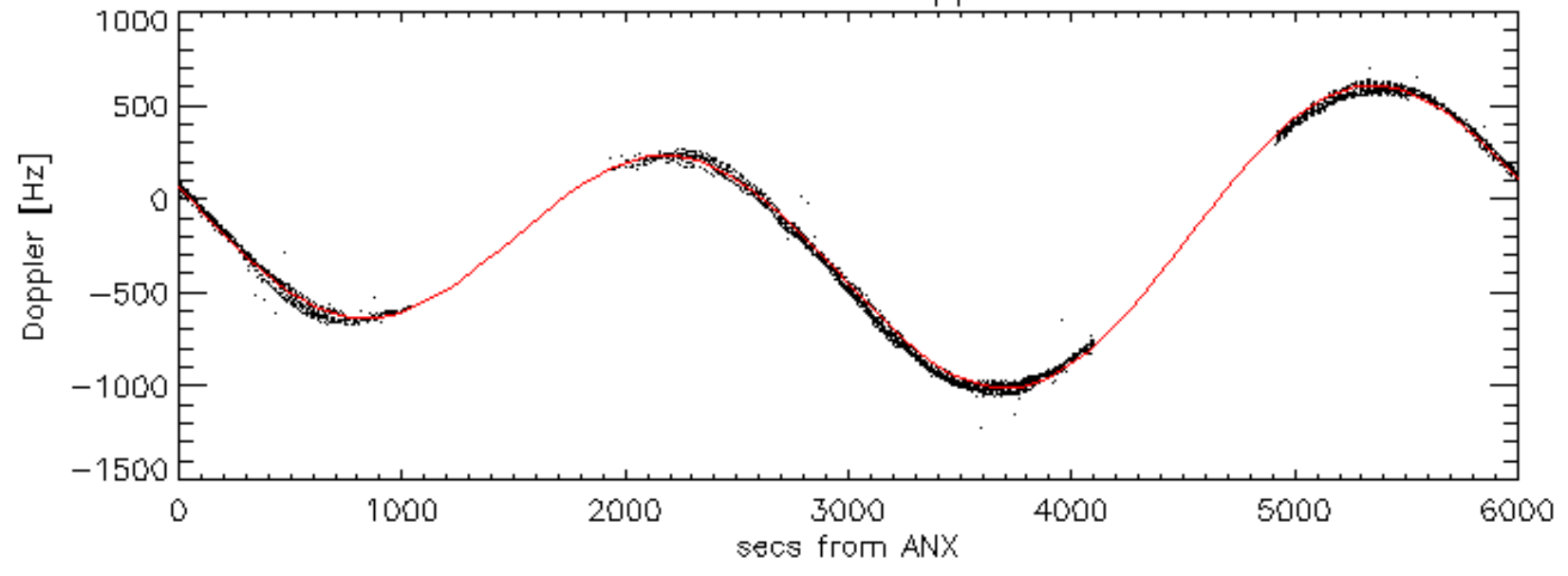




GM1 mode doppler

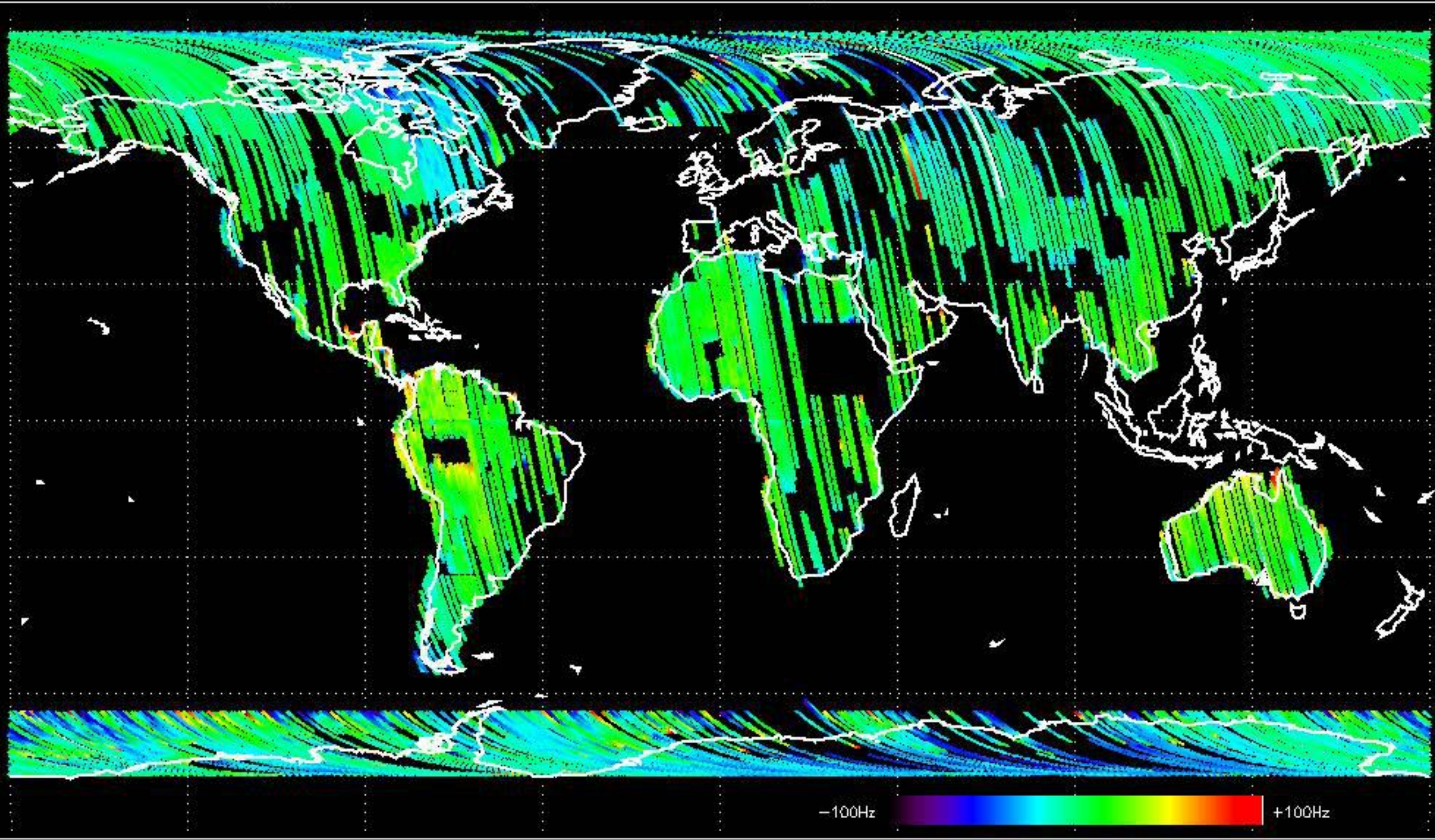


### WVS mode doppler



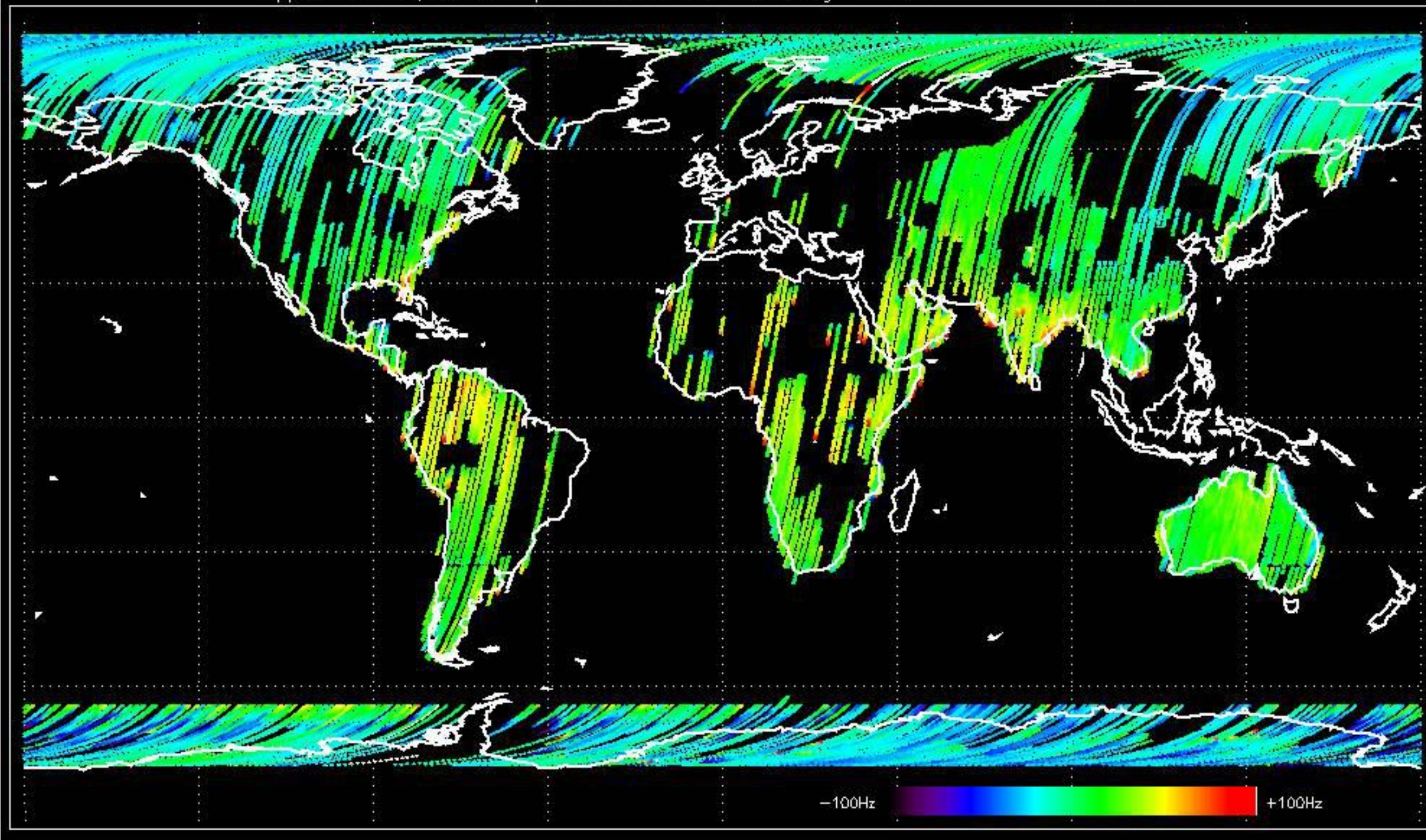


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -8.2055732 Hz



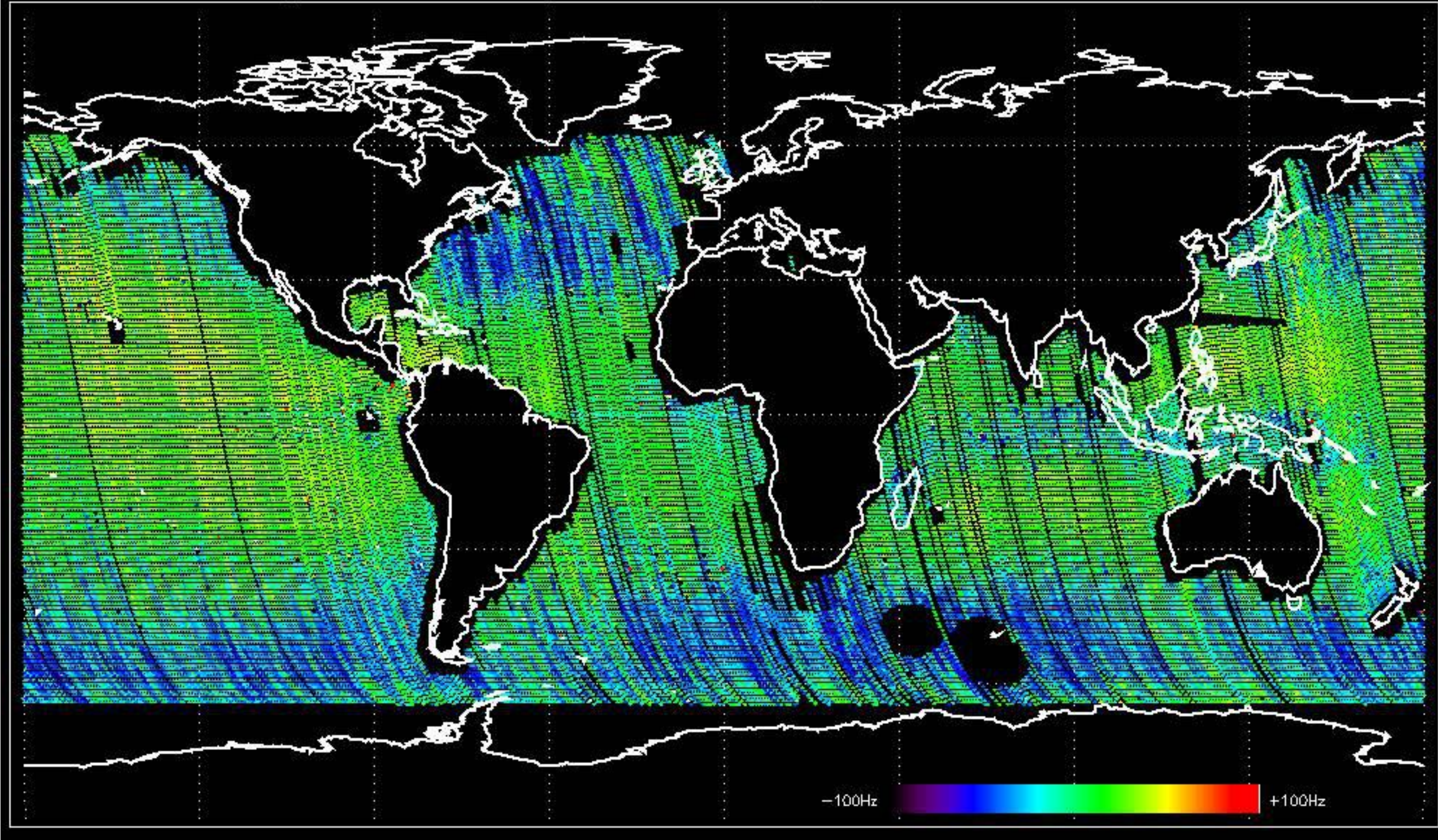


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -6.7692363 Hz



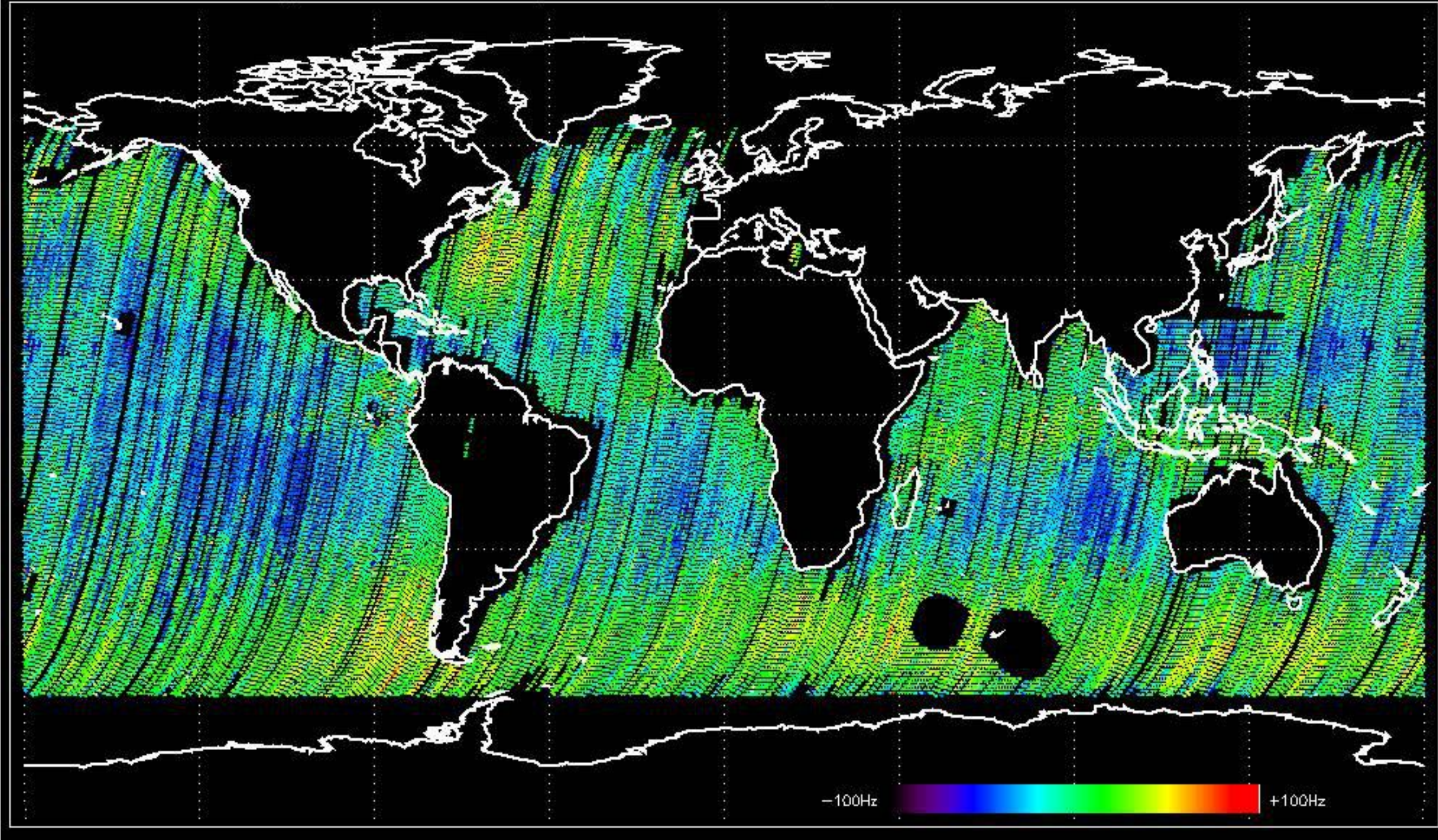


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.6759083 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.4211465 Hz





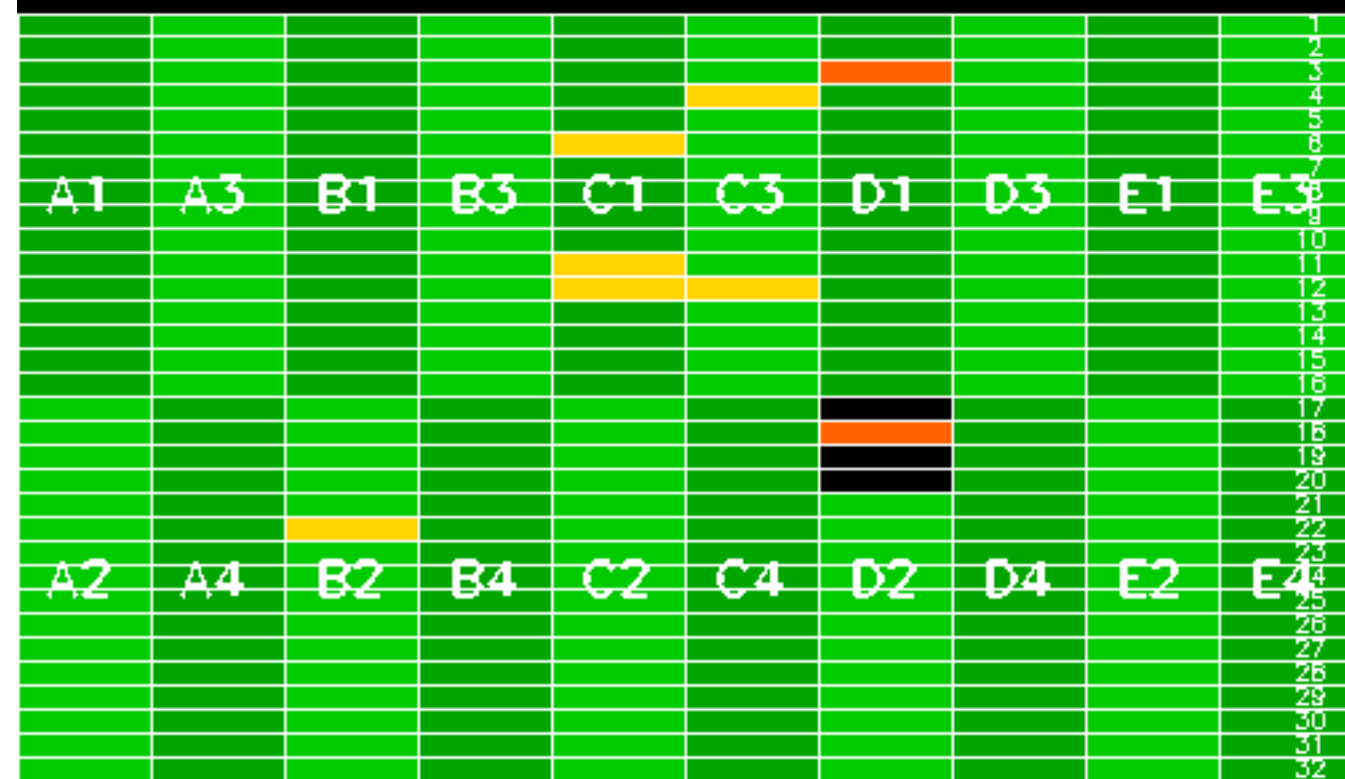
No anomalies observed on available MS products:

No anomalies observed.



Reference: 2001-02-09 13:50:42 H RxGain

Test : 2006-03-22 08:18:45 H

















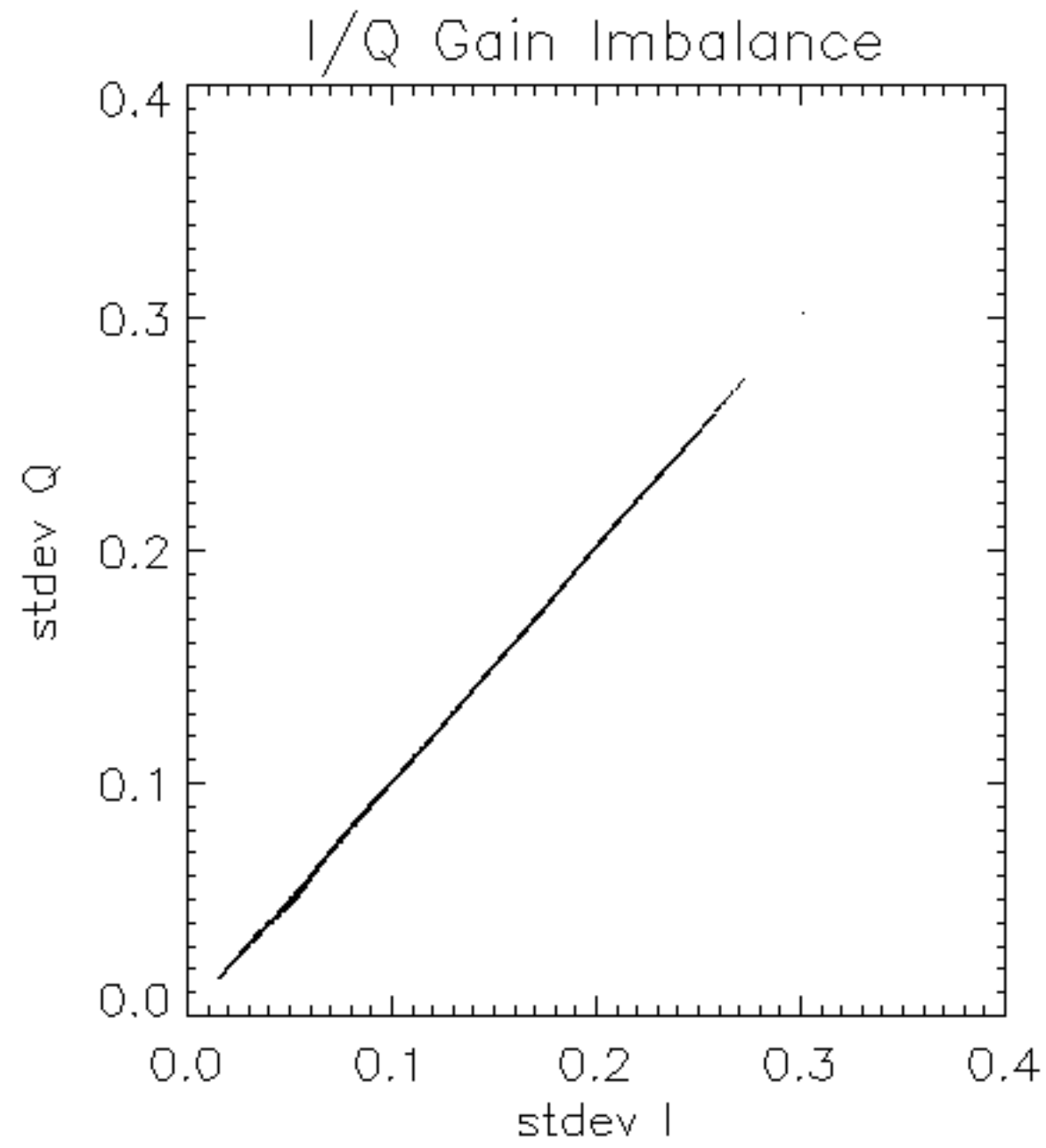


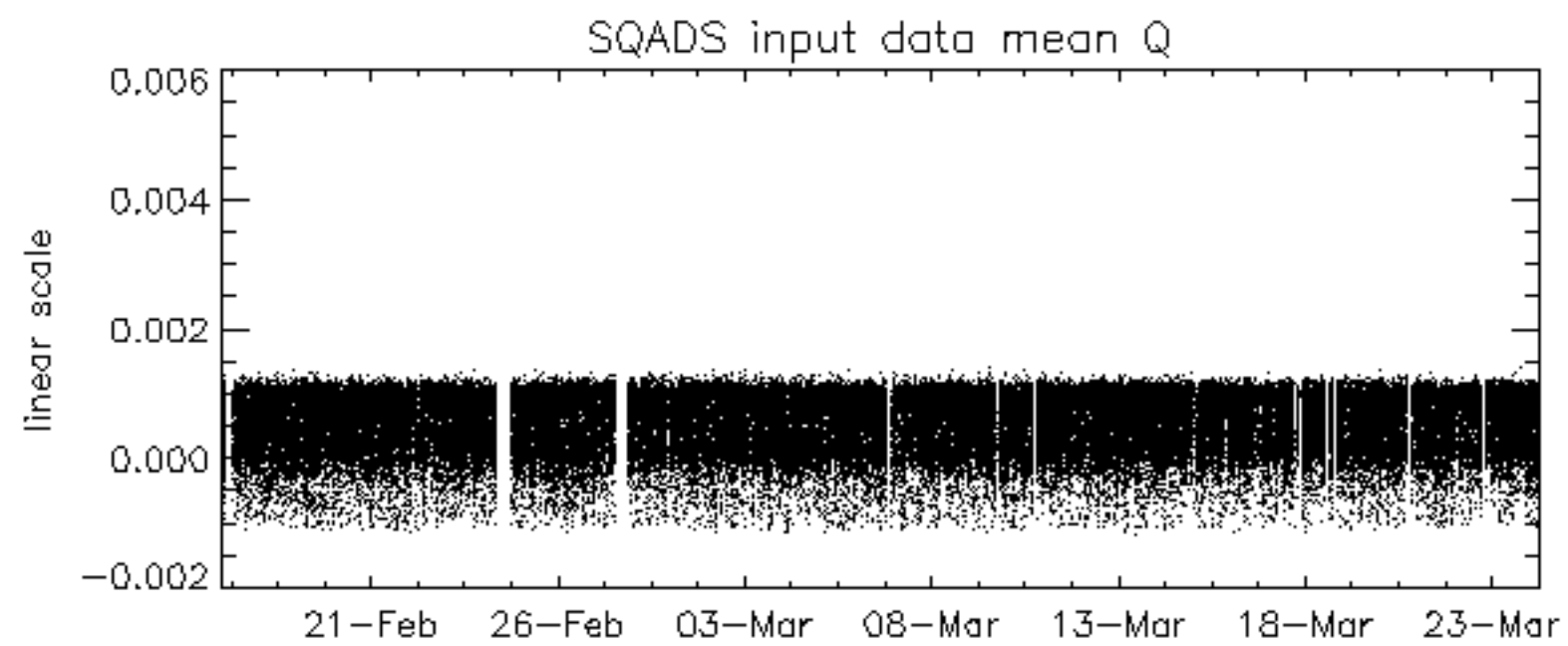
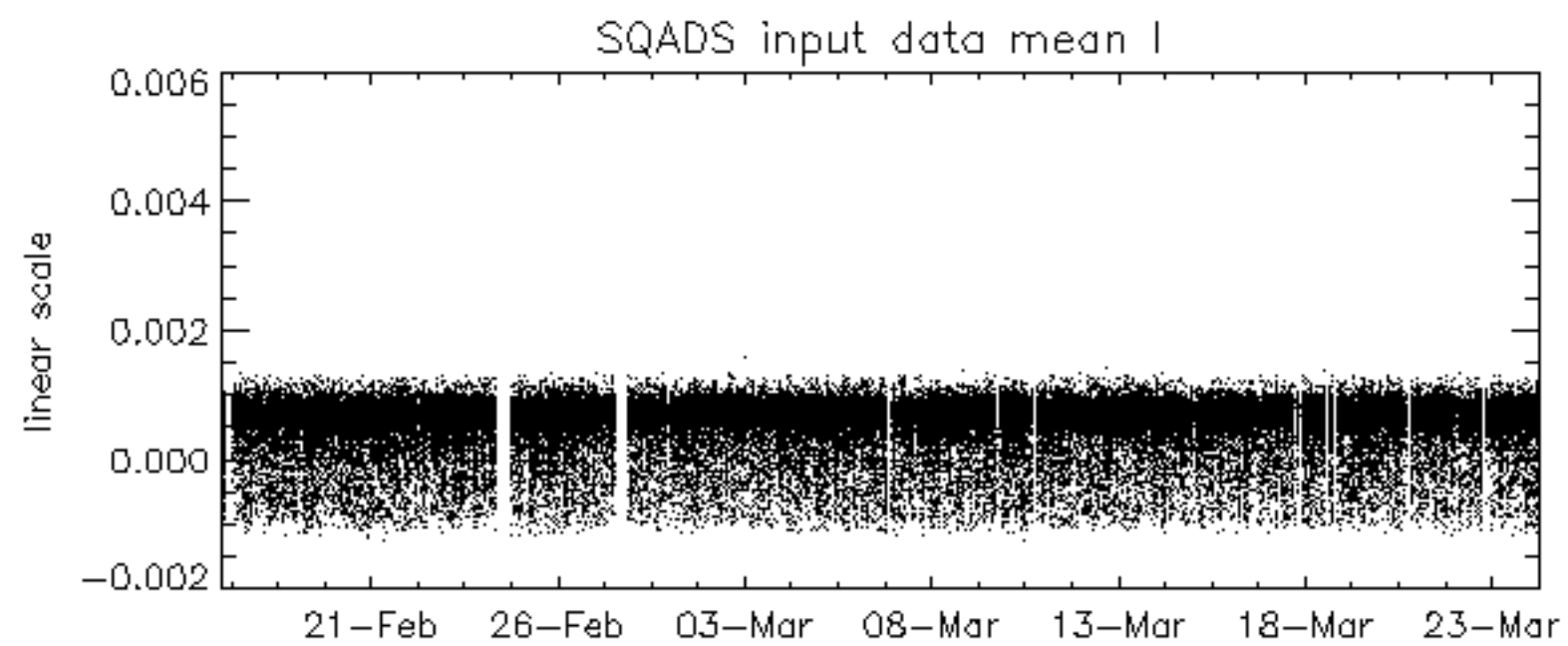
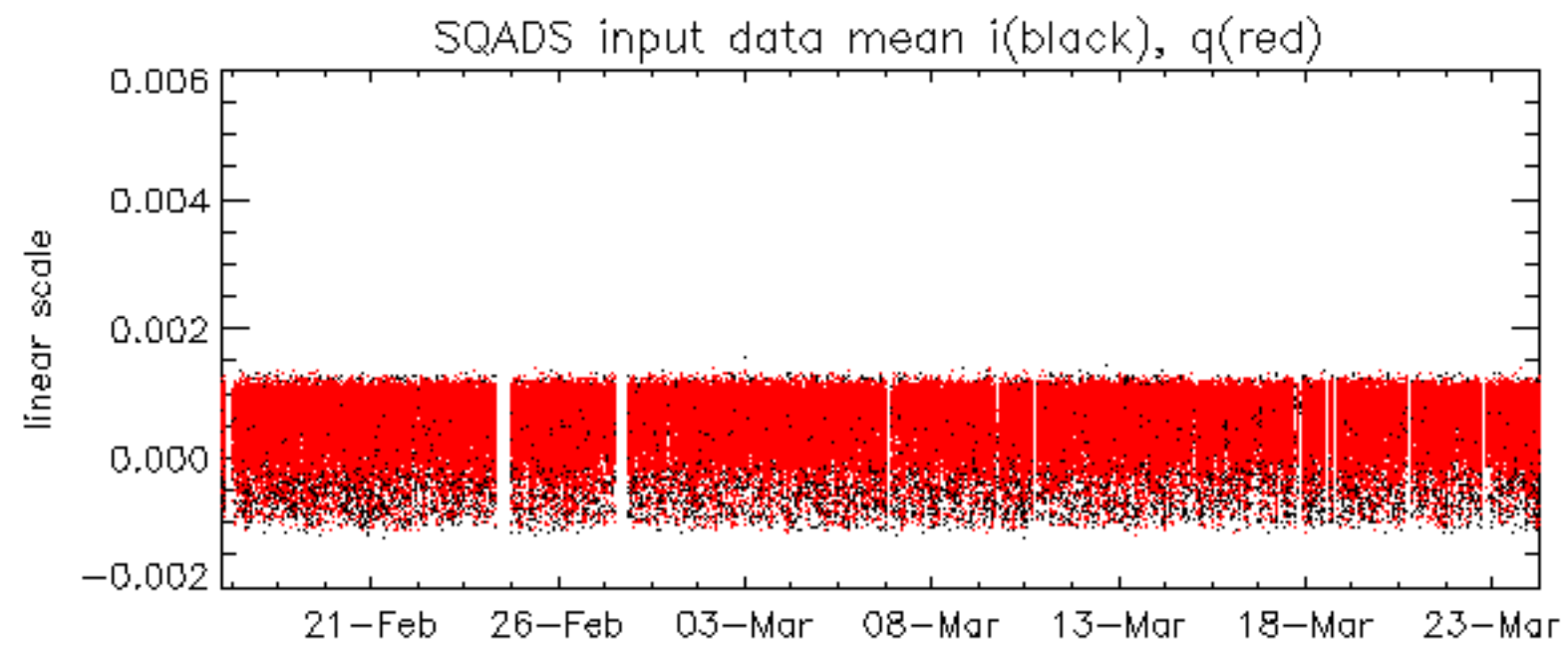


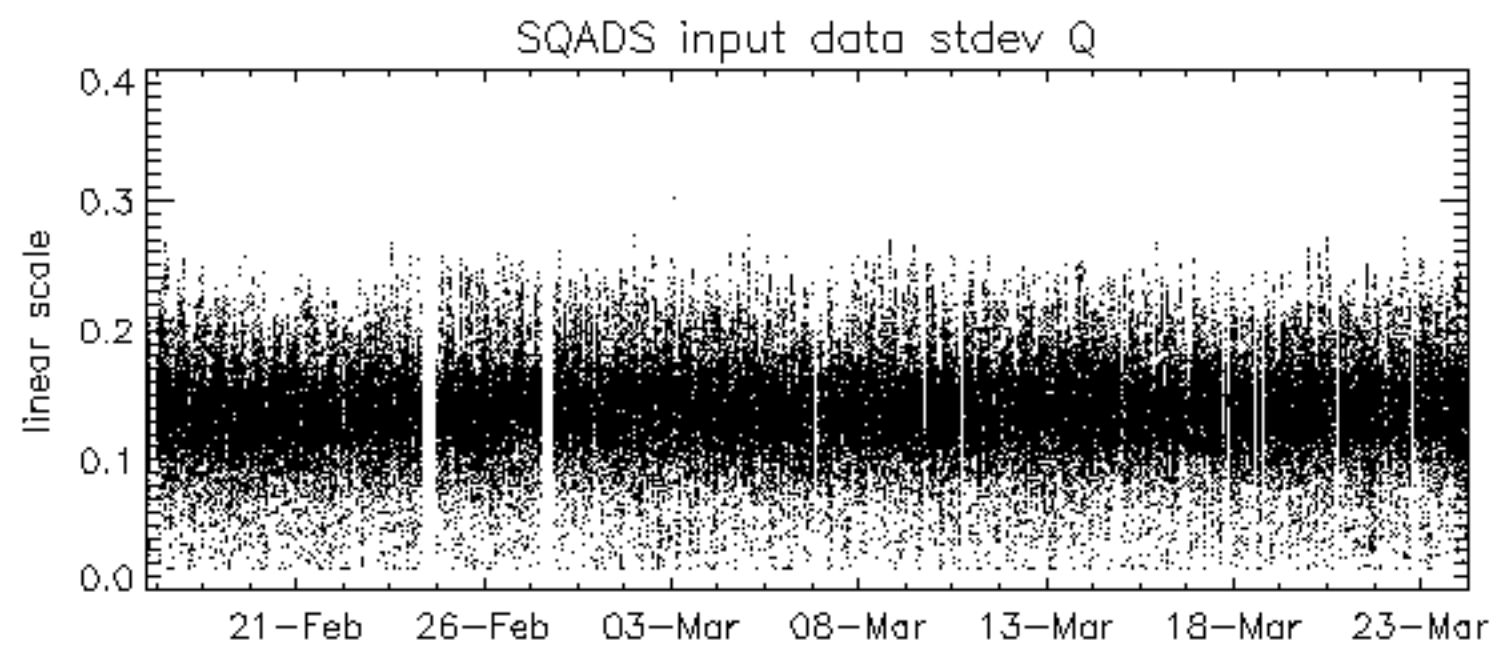
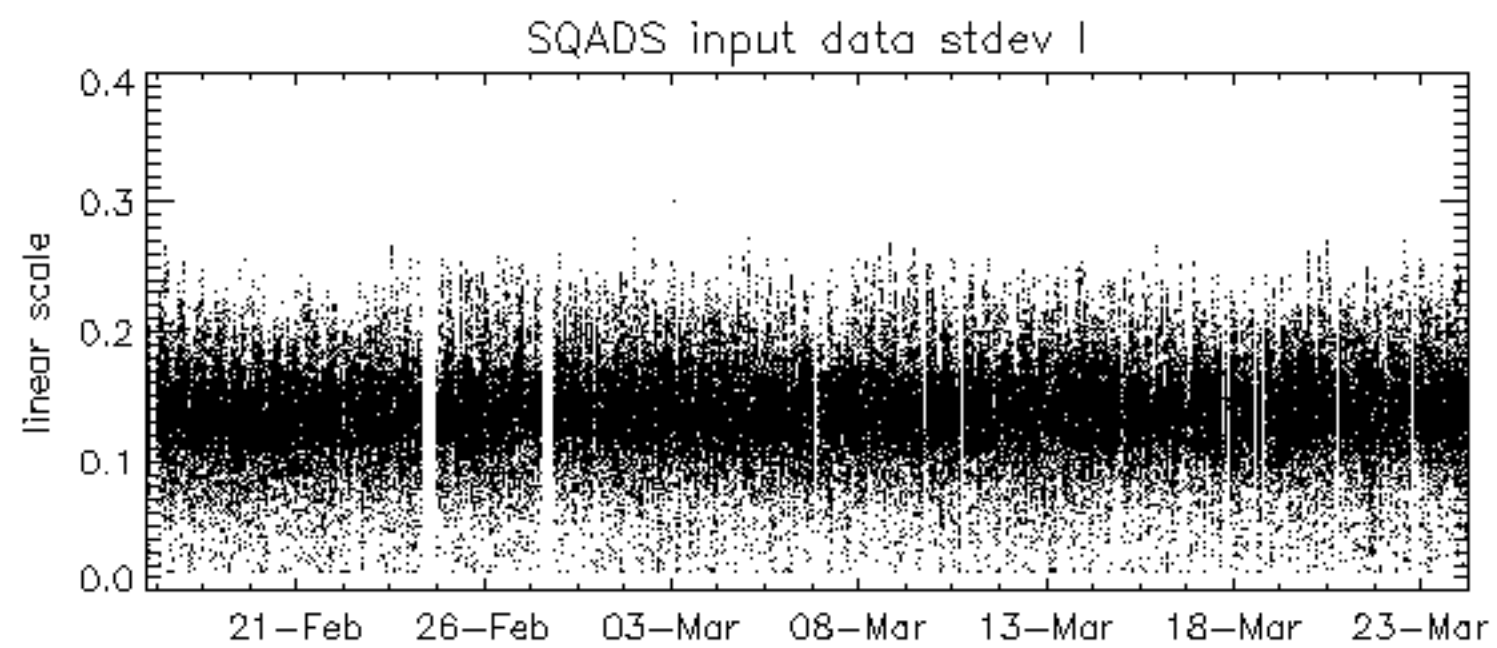
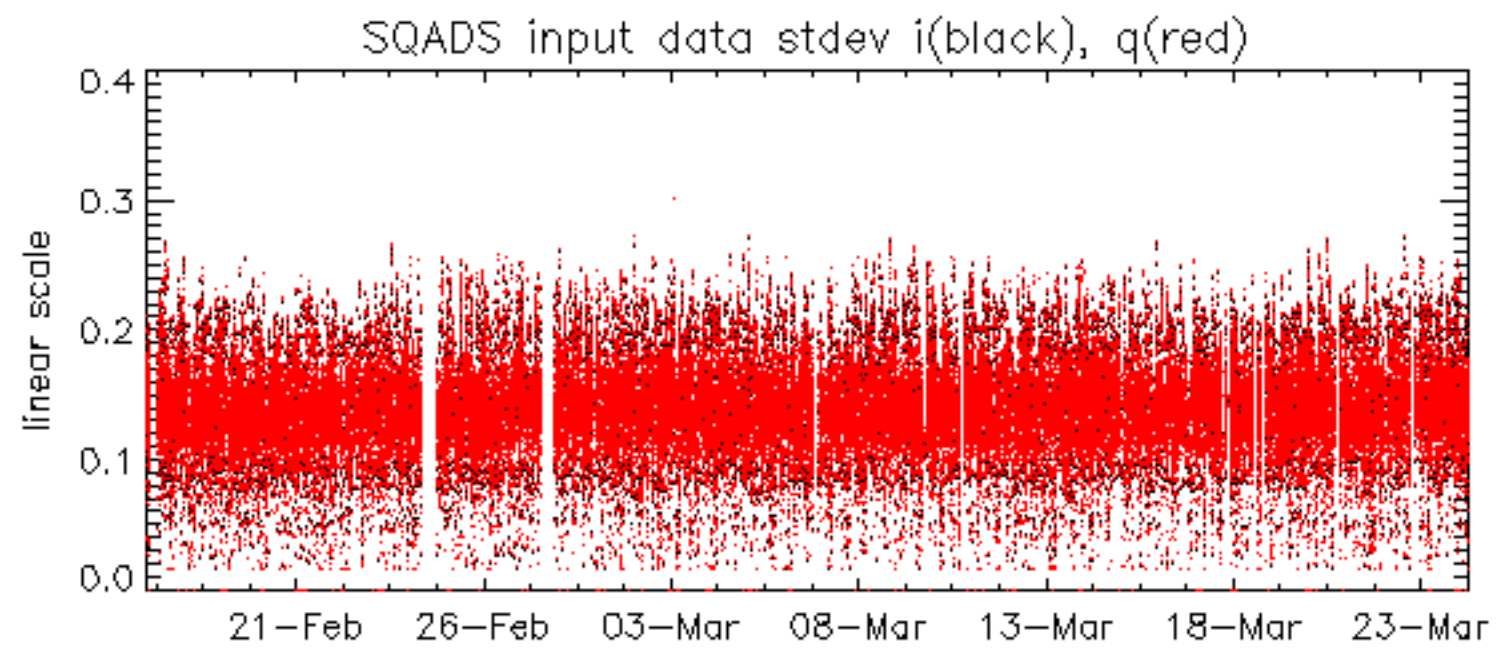


























Summary of analysis for the last 3 days 2006032[234]

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_1PNPDE20060322_022153_00000622046_00118_21214_1325.N1	1	0
ASA_IMM_1PNPDE20060323_171613_00000622046_00141_21237_1423.N1	0	11
ASA_GM1_1PNPDK20060322_104938_000006342046_00123_21219_0707.N1	0	21
ASA_GM1_1PNPDK20060322_134342_00000622046_00124_21220_0718.N1	0	22
ASA_WSM_1PNPDE20060322_171612_00000672046_00127_21223_2011.N1	0	65
ASA_WSM_1PNPDE20060323_022501_000001282046_00132_21228_2100.N1	0	40
ASA_WSM_1PNPDE20060323_193804_00000182046_00142_21238_2168.N1	0	329











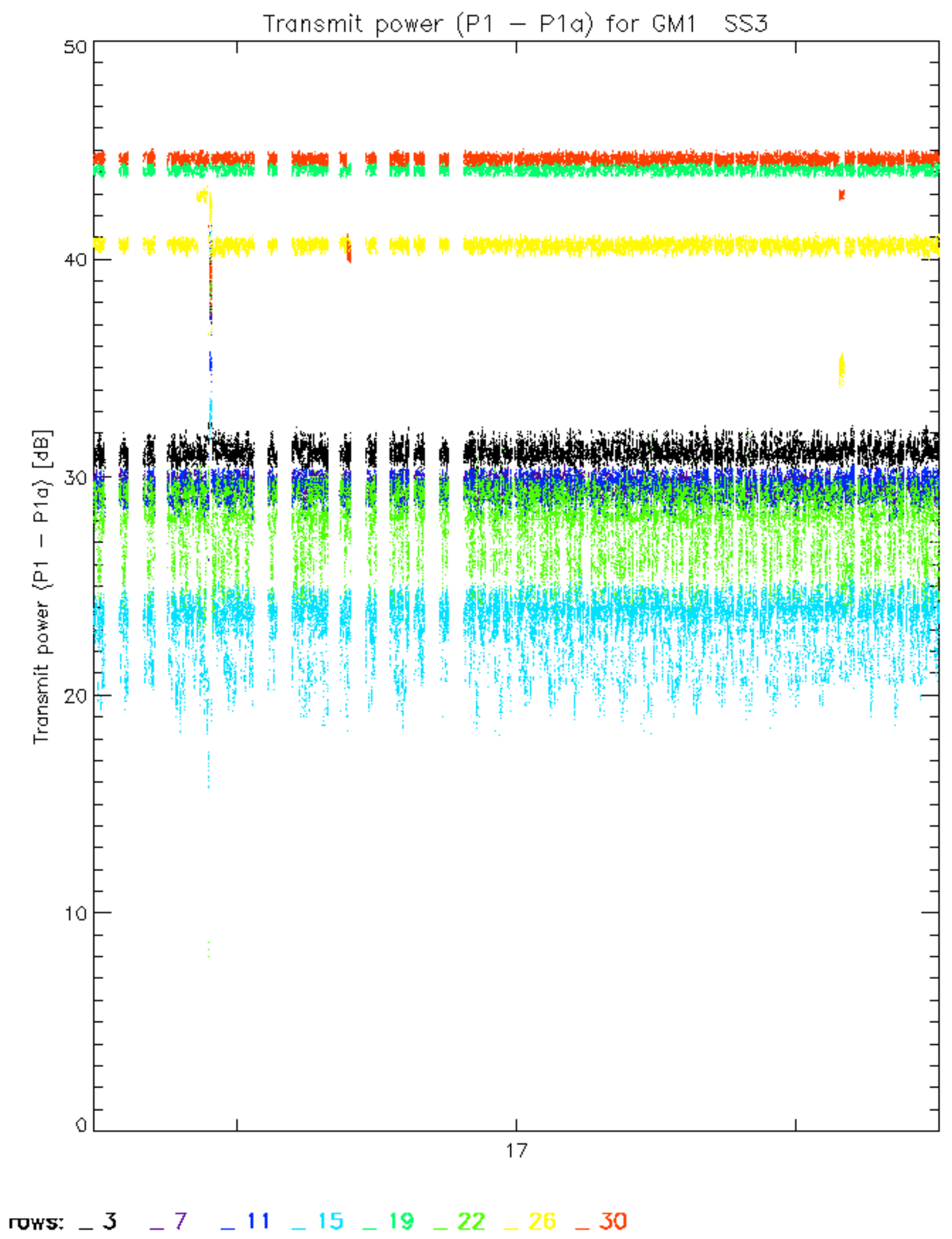


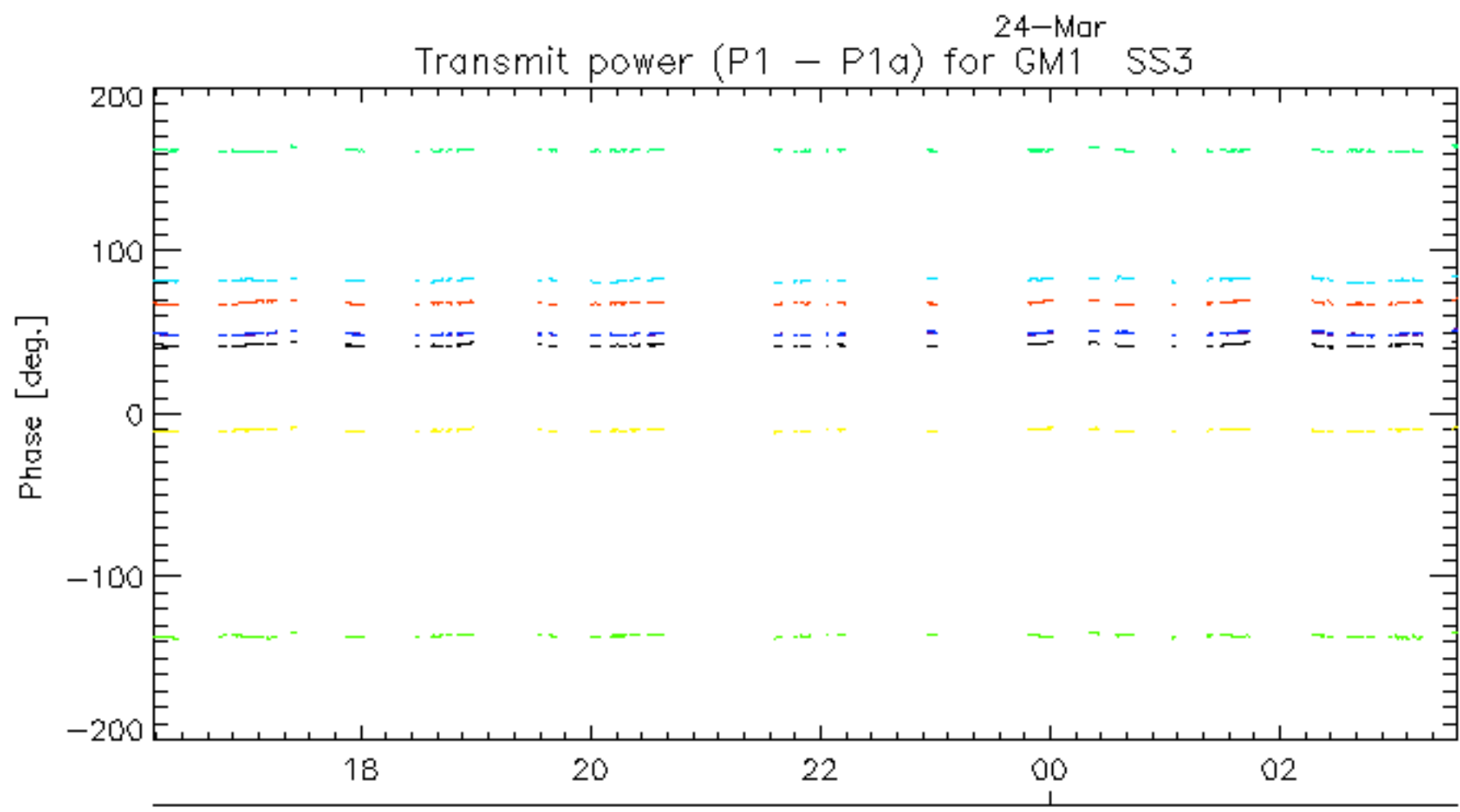
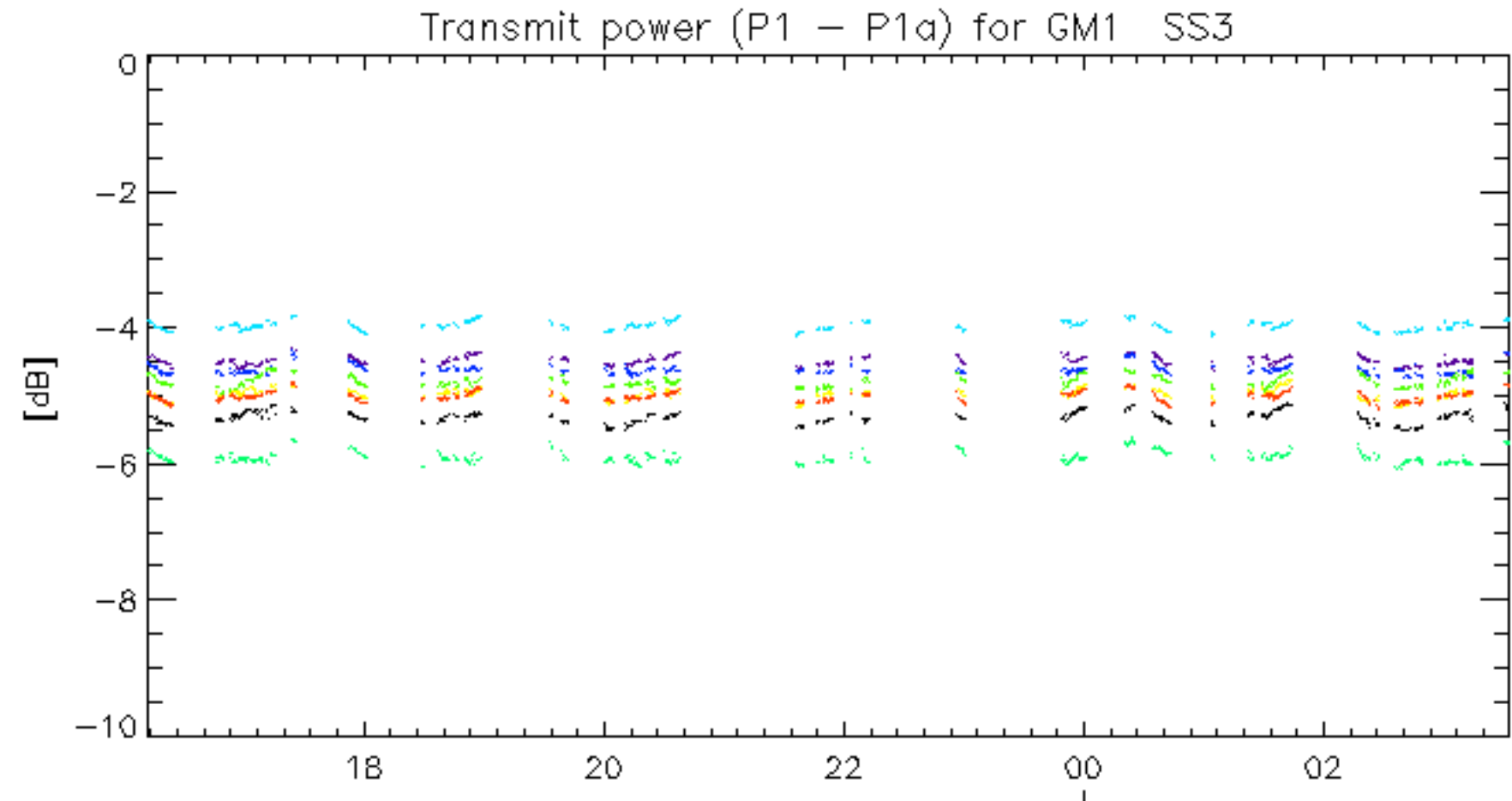






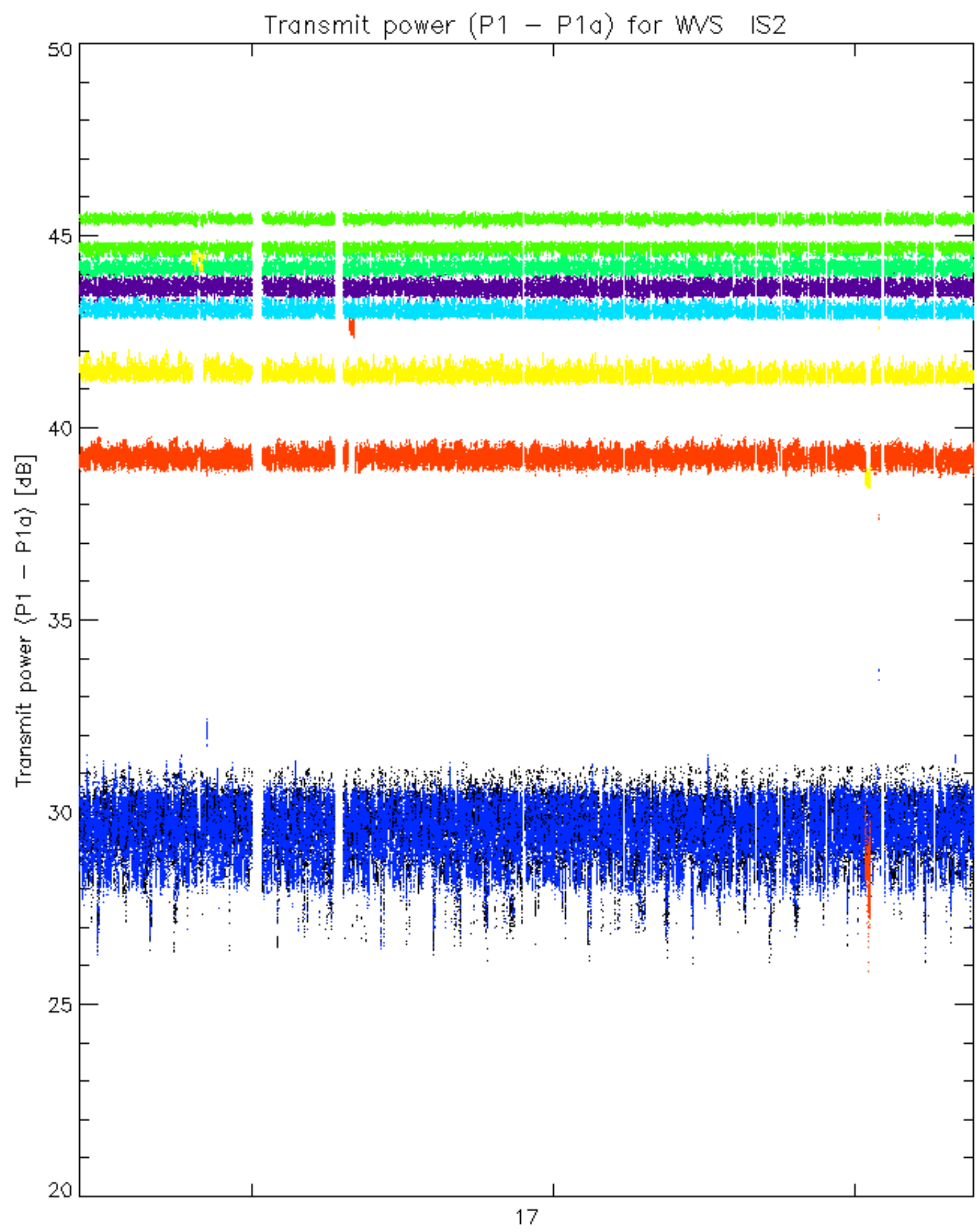




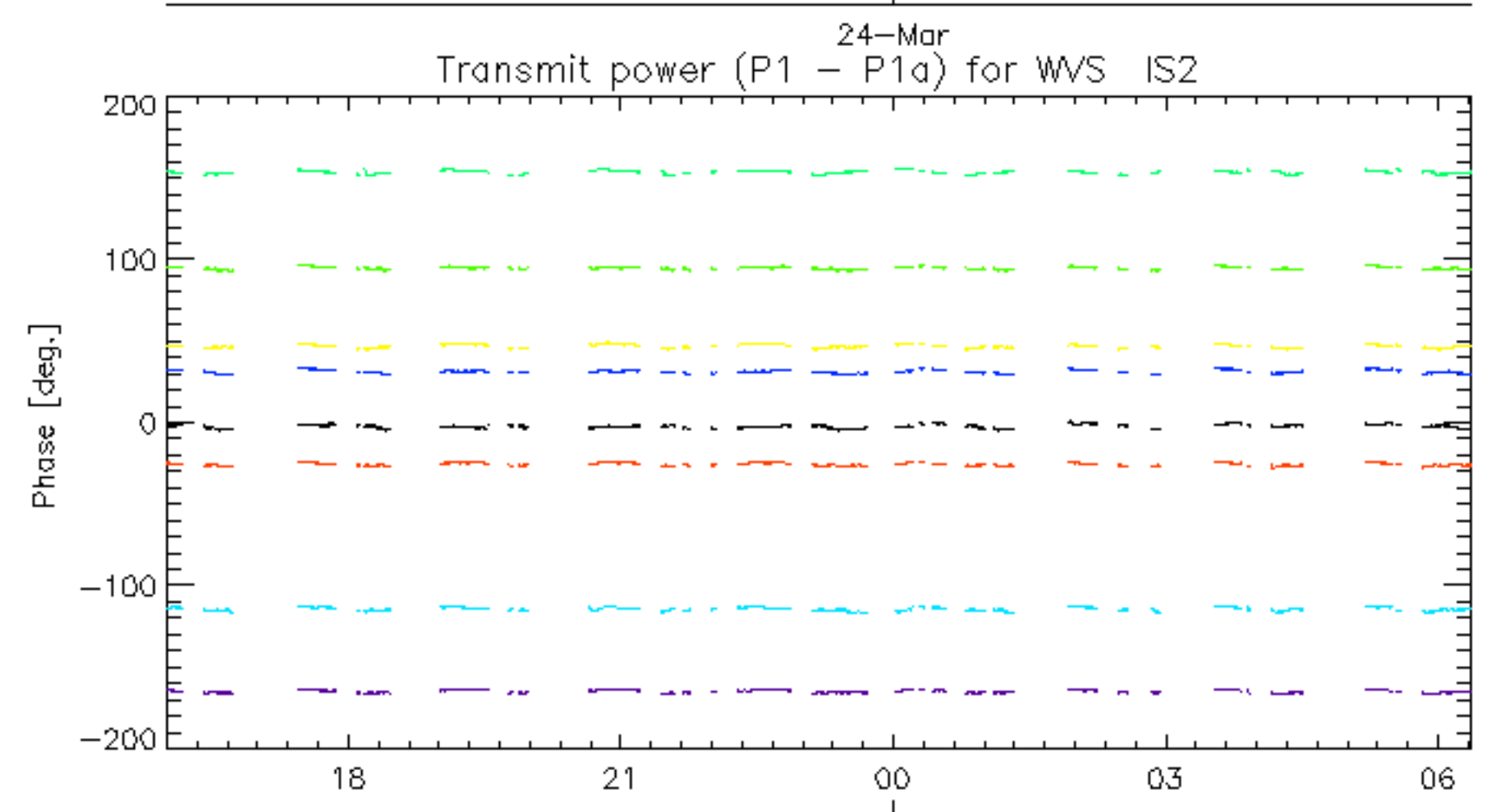
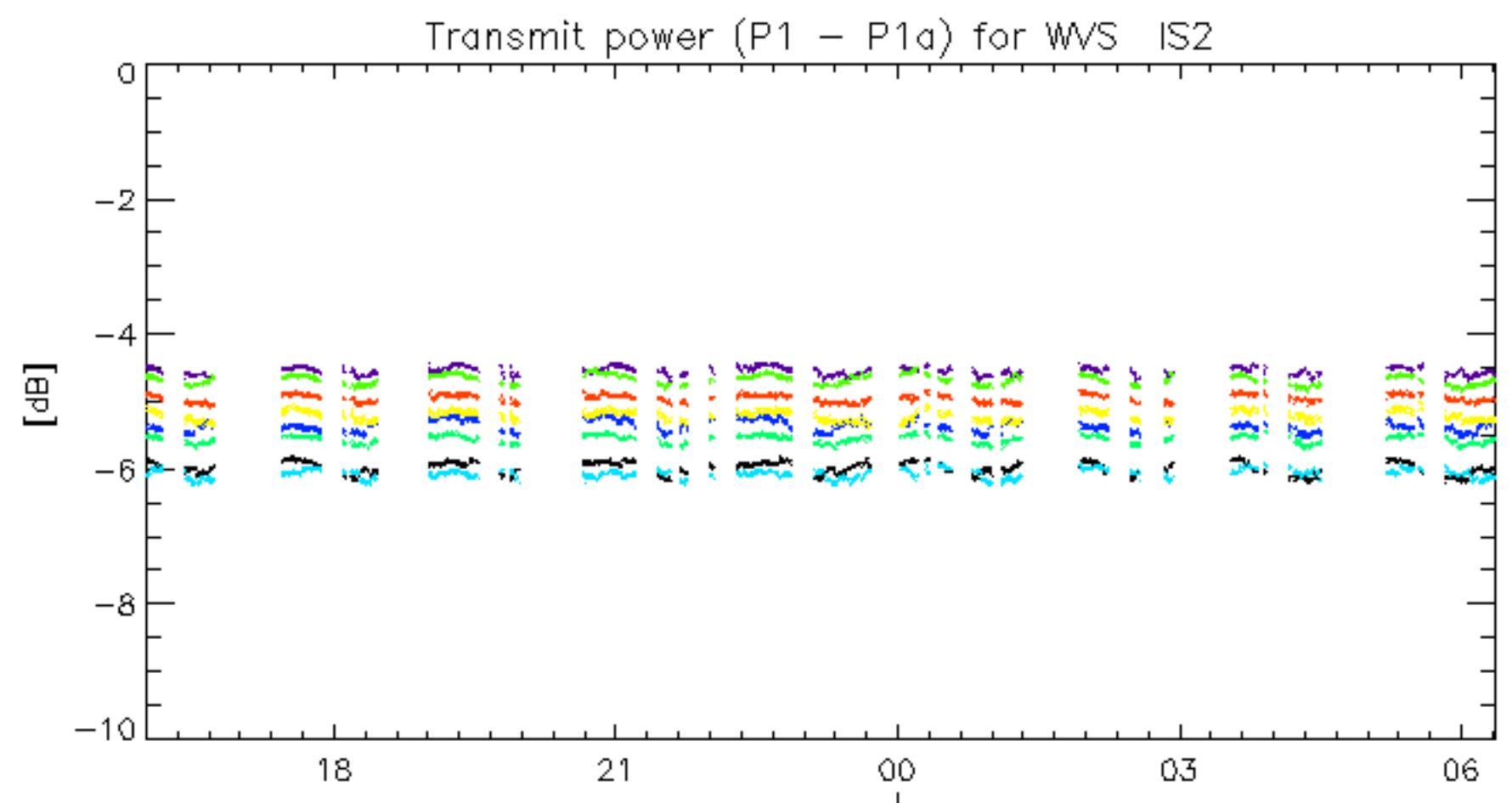


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.