

# PRELIMINARY REPORT OF 060312

last update on Sun Mar 12 16:28:10 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 2006-03-11 00:00:00 to 2006-03-12 16:28:10

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	58	16	0	10
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	58	16	0	10
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	58	16	0	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	58	16	0	10

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	51	70	19	24
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	51	70	19	24
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	51	70	19	24
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	51	70	19	24

## 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	20060311 204857
H	20060310 143810

### 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	-4.002375	0.009631	-0.008247
7	P1	-3.003959	0.008816	-0.031974
11	P1	-4.068864	0.020826	0.046863
15	P1	-6.076625	0.021730	-0.047031
19	P1	-3.285740	0.006716	-0.040337
22	P1	-4.459894	0.015040	0.000455
26	P1	-4.202177	0.106921	0.059740
30	P1	-5.803881	0.151042	-0.048591
3	P1	-16.974930	0.250256	-0.039742
7	P1	-16.703964	0.103802	-0.122659
11	P1	-16.509085	0.328123	0.108210
15	P1	-13.058837	0.095285	0.019648
19	P1	-13.924351	0.055880	-0.095641
22	P1	-15.595097	0.477419	0.076201
26	P1	-15.764243	0.314324	-0.064373
30	P1	-16.488478	0.314660	-0.033144

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.418819	0.087705	0.114493
7	P2	-22.387344	0.094758	0.070666
11	P2	-16.231062	0.100494	0.040256
15	P2	-7.166913	0.099109	0.010261
19	P2	-9.134636	0.091644	0.008397
22	P2	-17.935883	0.090884	-0.036640
26	P2	-16.208118	0.095348	-0.015213
30	P2	-19.642988	0.084814	-0.037142

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.194477	0.006235	-0.008076
7	P3	-8.194477	0.006235	-0.008076
11	P3	-8.194477	0.006235	-0.008076
15	P3	-8.194477	0.006235	-0.008076
19	P3	-8.194477	0.006235	-0.008076
22	P3	-8.194477	0.006235	-0.008076
26	P3	-8.194477	0.006235	-0.008076
30	P3	-8.194477	0.006235	-0.008077

#### 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	-3.851252	3.531245	0.131700
7	P1	-2.846874	3.705674	0.187754
11	P1	-3.033321	3.730423	0.149218
15	P1	-3.677226	3.698220	0.155687
19	P1	-3.477705	3.585149	0.119120
22	P1	-5.270727	3.292920	0.105305
26	P1	-5.968451	3.498397	0.280819
30	P1	-5.303158	3.330860	0.156098
3	P1	-11.651164	2.317440	0.127774
7	P1	-10.046607	2.565422	0.103161
11	P1	-10.340577	2.555686	0.029092
15	P1	-10.882943	2.559392	0.047173
19	P1	-15.475016	1.882837	0.048376
22	P1	-20.311249	2.485136	0.111586
26	P1	-16.332037	2.426415	0.163820
30	P1	-18.363550	1.734235	0.018166

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.115093	2.437721	0.138283
7	P2	-22.551622	2.845441	0.005051
11	P2	-11.285780	2.648149	0.134391
15	P2	-4.925016	3.441529	0.141092
19	P2	-6.932726	3.098403	0.132936
22	P2	-8.220031	2.906507	0.093065
26	P2	-23.881857	2.920024	-0.152557
30	P2	-22.029579	2.759004	-0.079604

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024019	0.002595	-0.001006
7	P3	-8.023955	0.002595	-0.000863
11	P3	-8.023997	0.002606	-0.000820
15	P3	-8.024083	0.002594	-0.001090
19	P3	-8.023989	0.002615	-0.000646
22	P3	-8.024071	0.002590	-0.000869
26	P3	-8.024077	0.002597	-0.000629
30	P3	-8.023930	0.002597	-0.000687

## 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	0.000554121
	stdev	1.77015e-07
MEAN Q	mean	0.000513501
	stdev	2.21401e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138056
	stdev	0.00119458
STDEV Q	mean	0.138416
	stdev	0.00121266



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006031[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_1PNPDE20060310_124102_000000362045_00453_21048_0326.N1	1	0
ASA_IMM_1PNPDE20060311_015053_000001992045_00461_21056_0412.N1	0	1
ASA_IMM_1PNPDE20060312_003948_000001552045_00474_21069_0566.N1	1	0
ASA_IMM_1PNPDE20060312_005604_000000362045_00475_21070_0559.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0586.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0595.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)


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

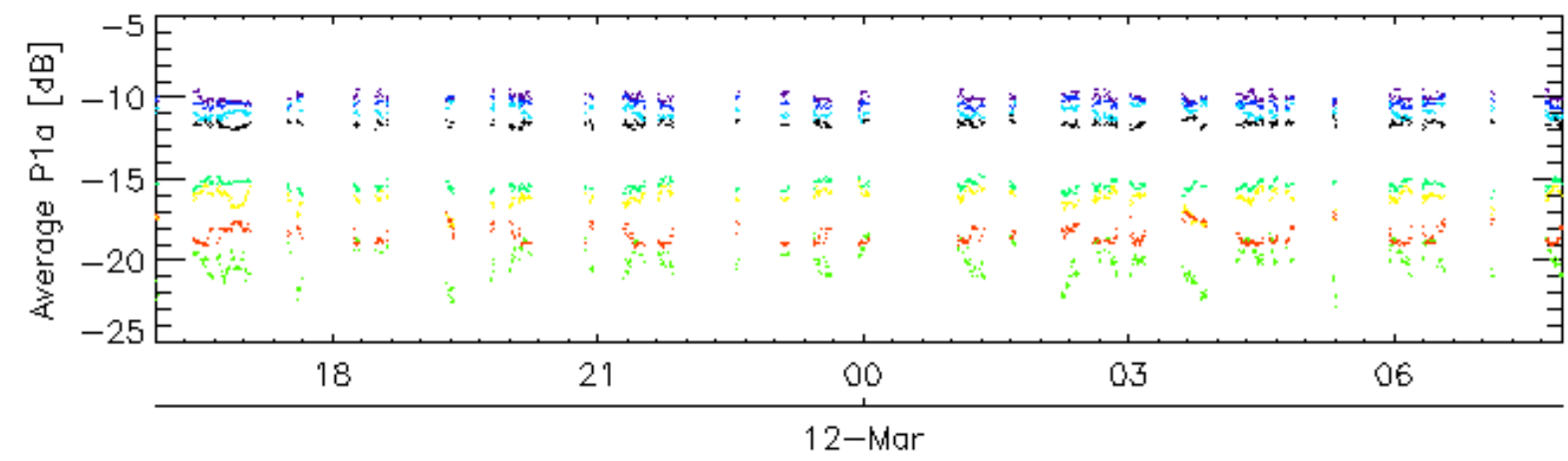
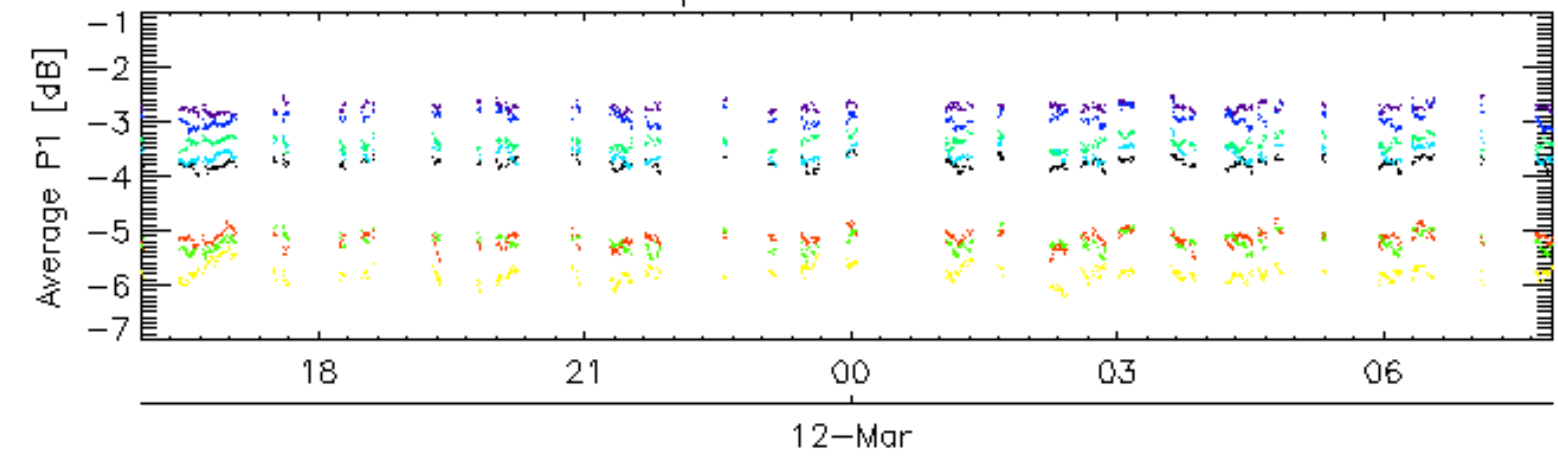
### 7.5 - Absolute Doppler for GM1

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

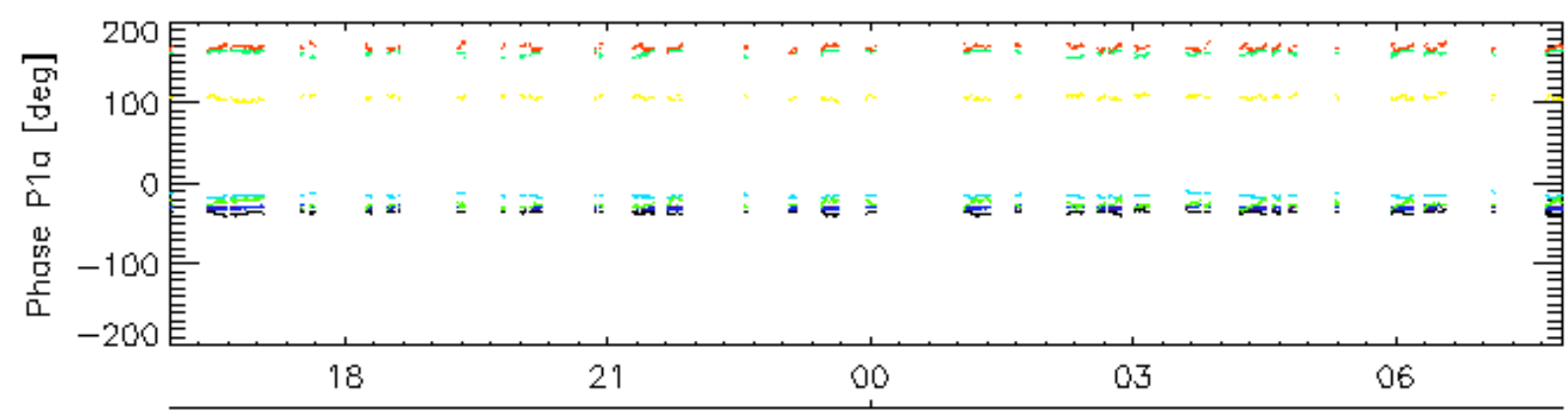
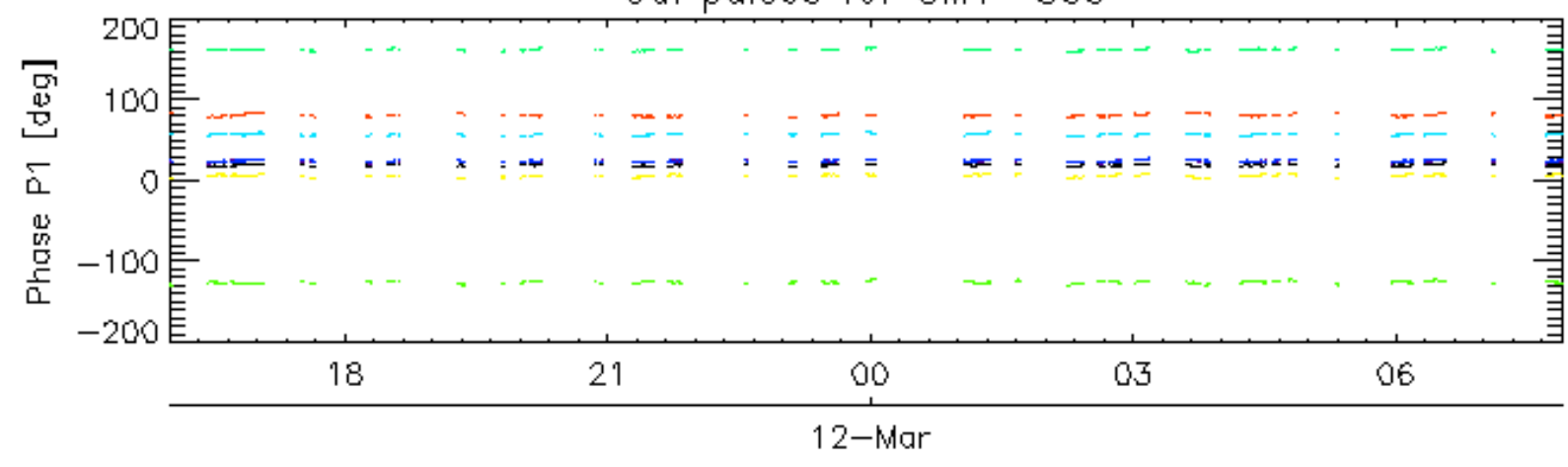
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

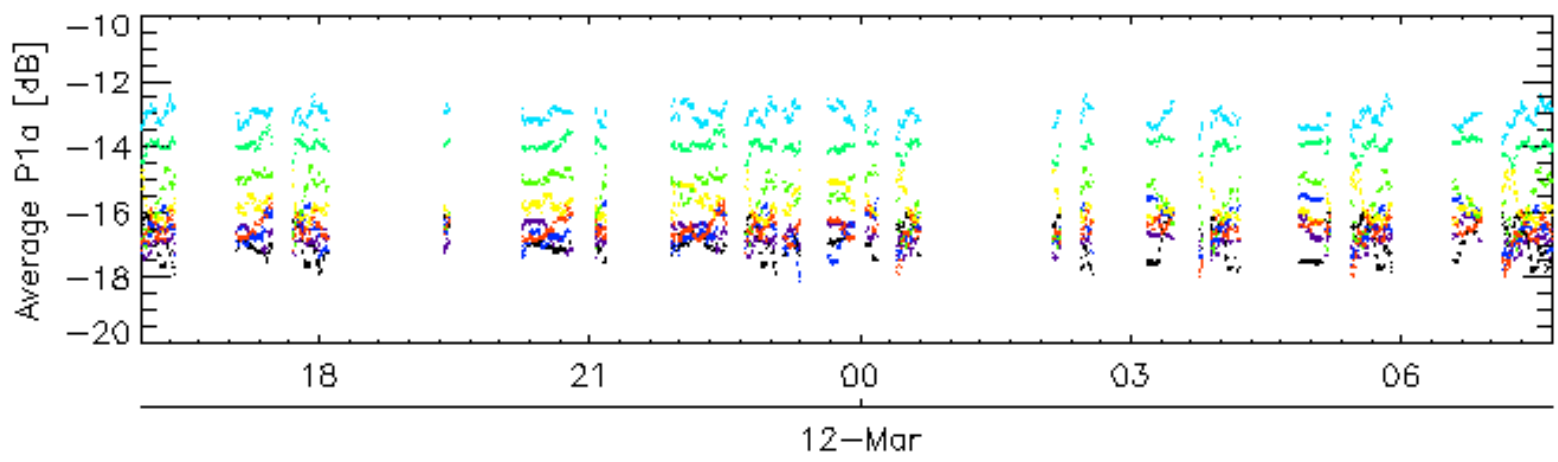
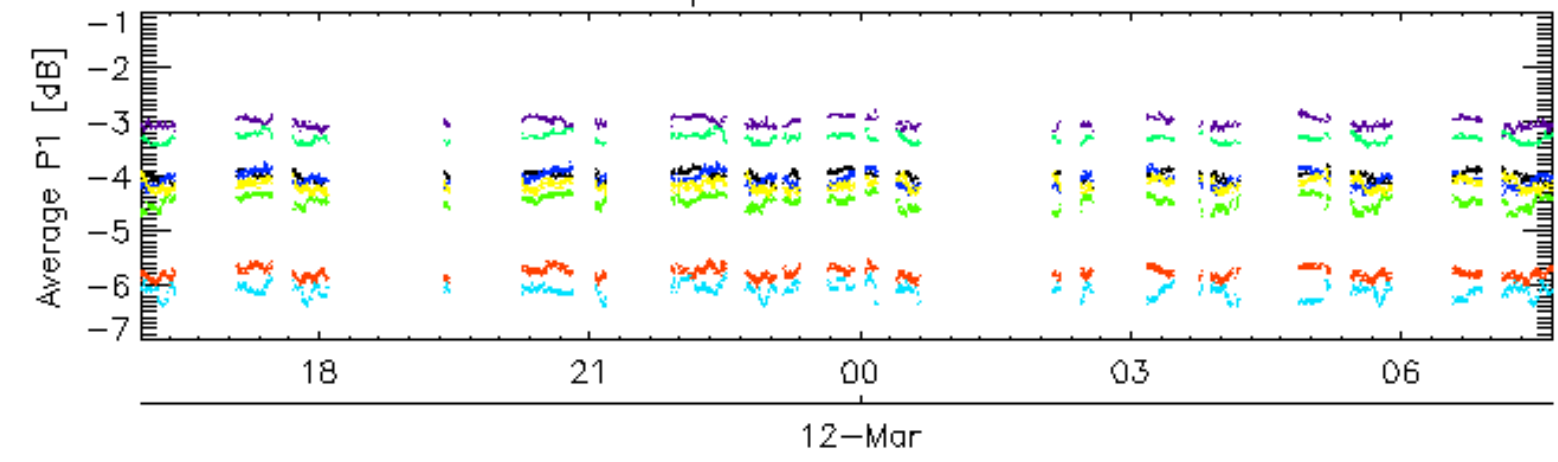


Cal pulses for GM1 SS3

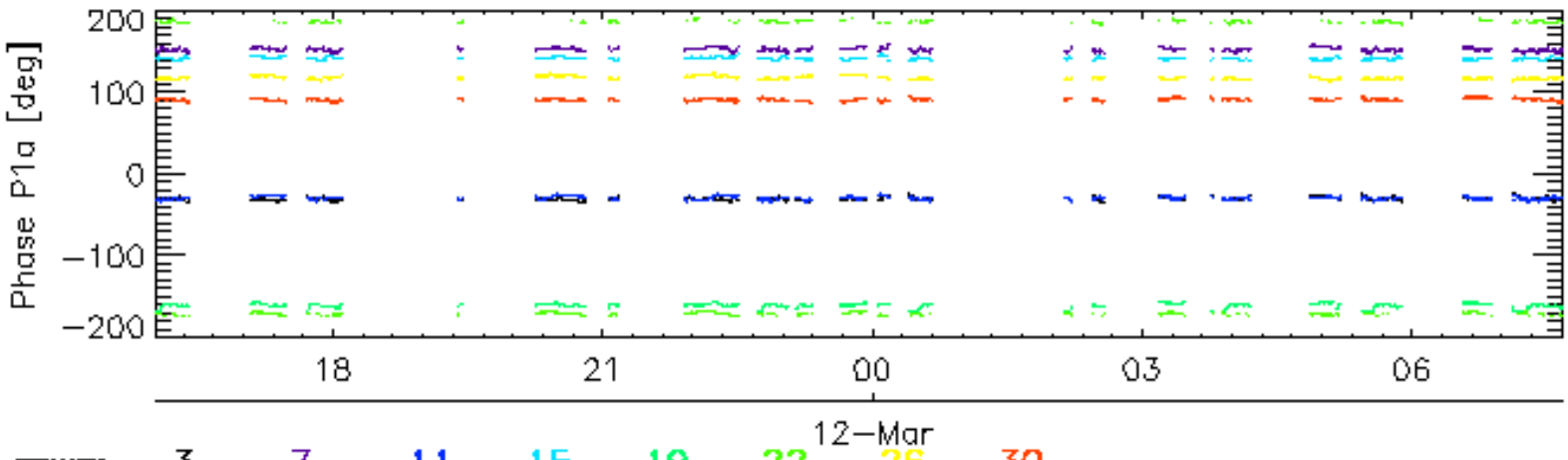
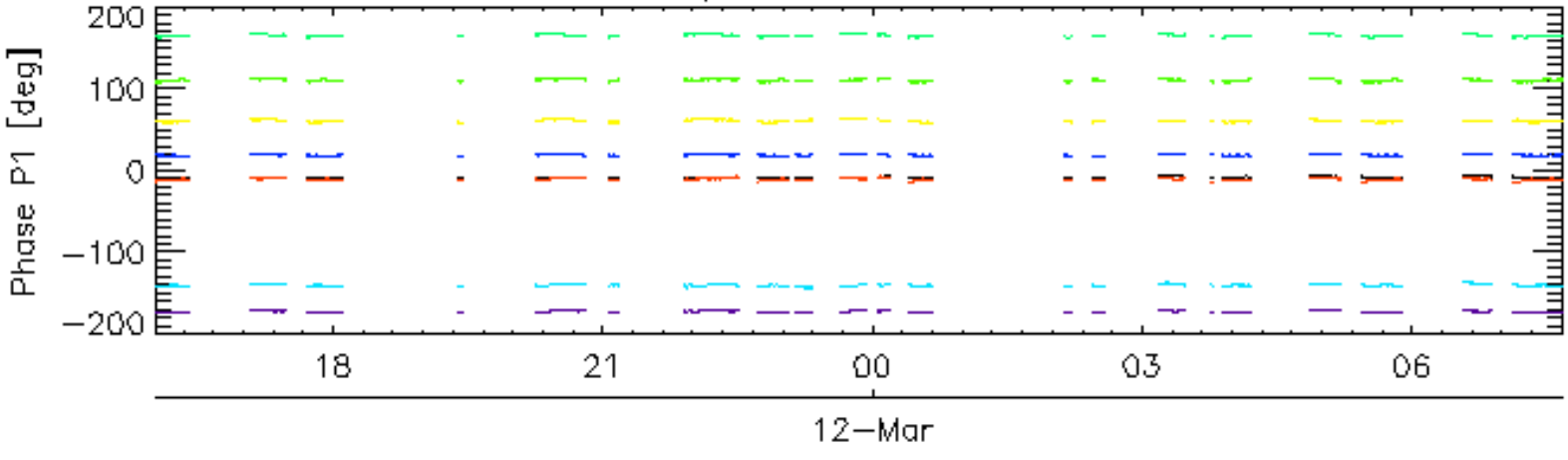


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

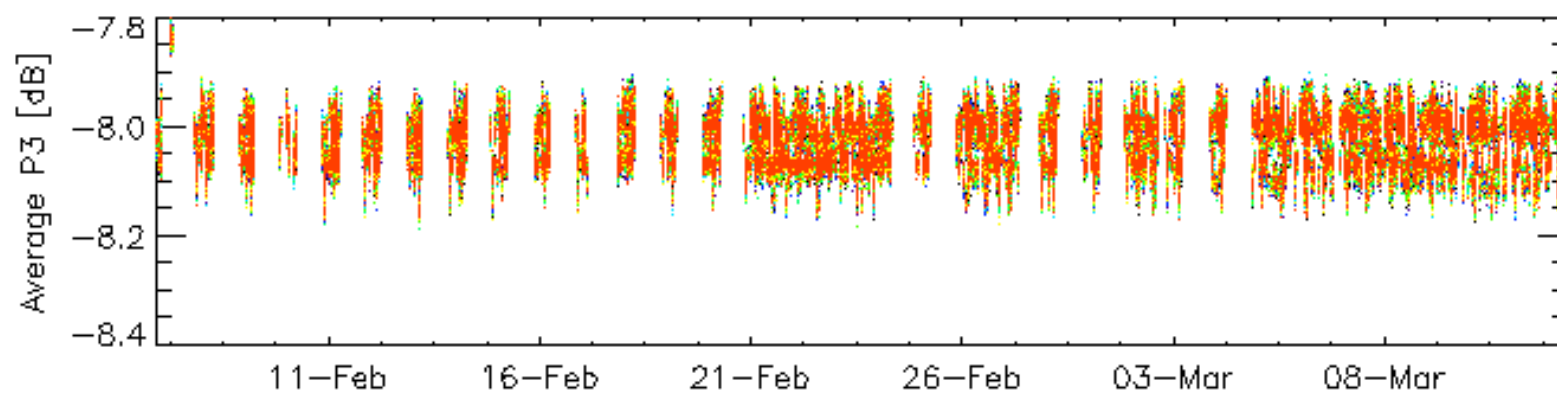
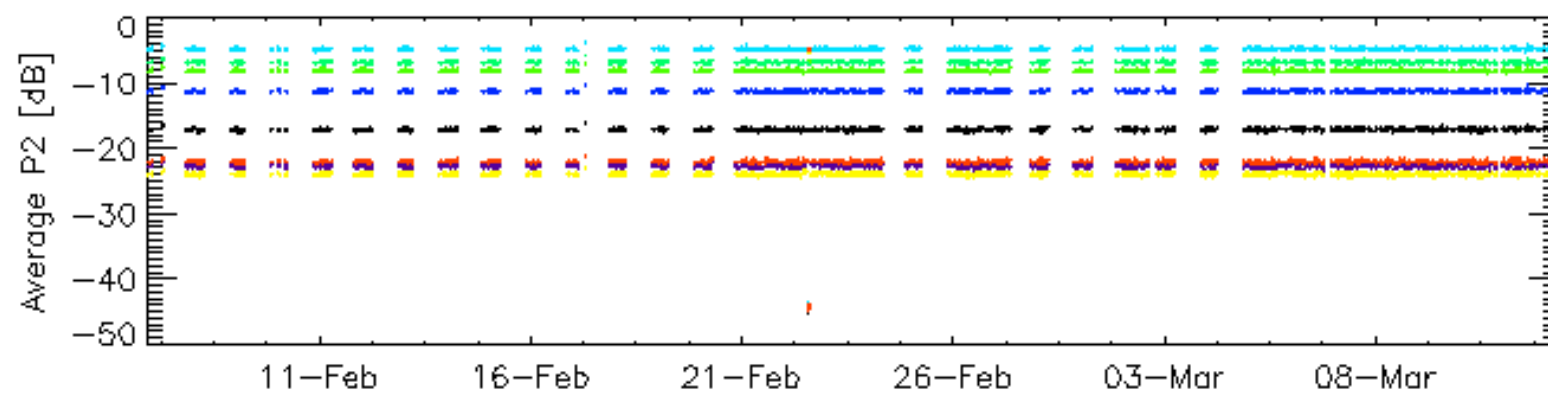
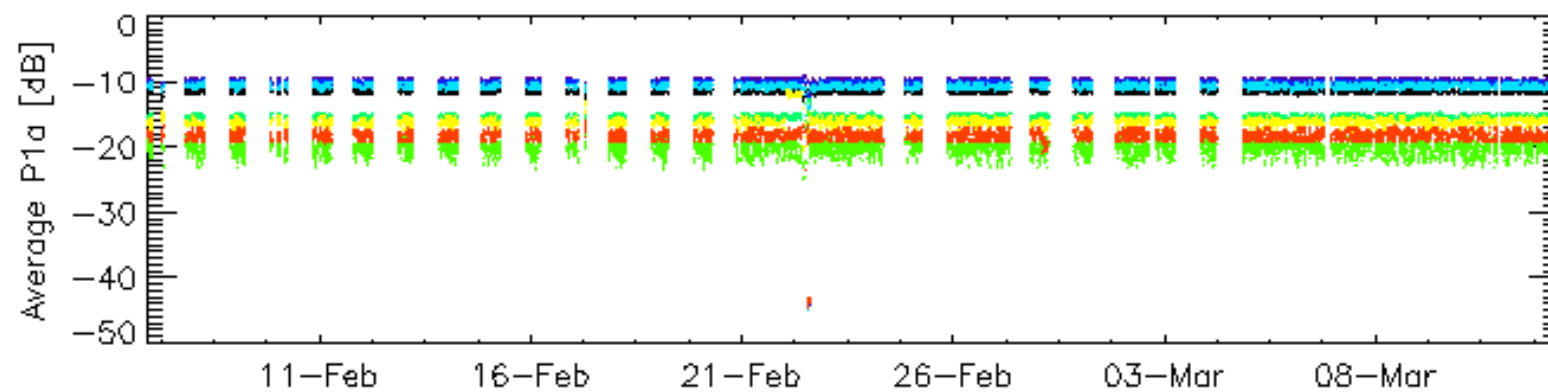
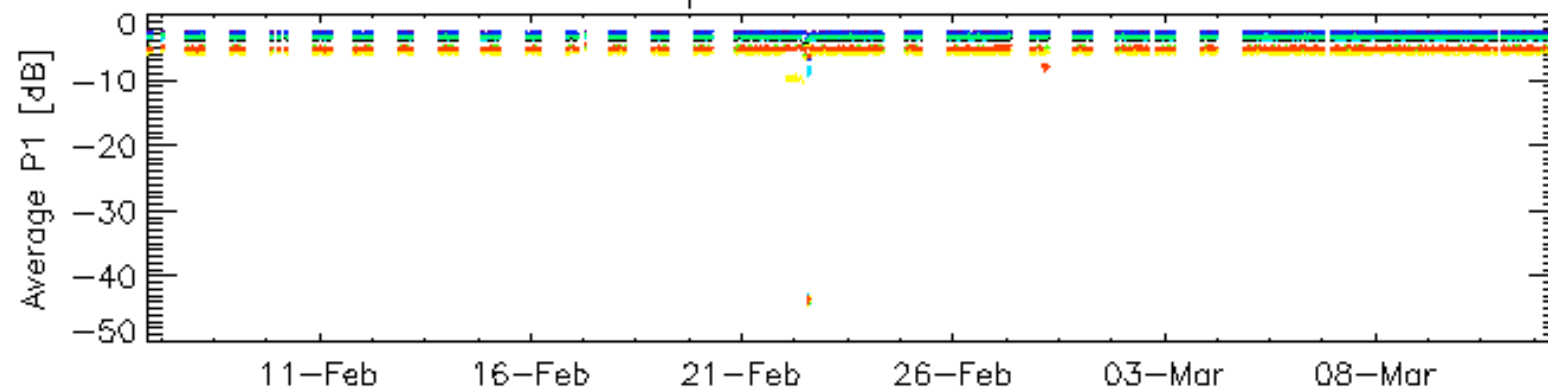


Cal pulses for WVS IS2



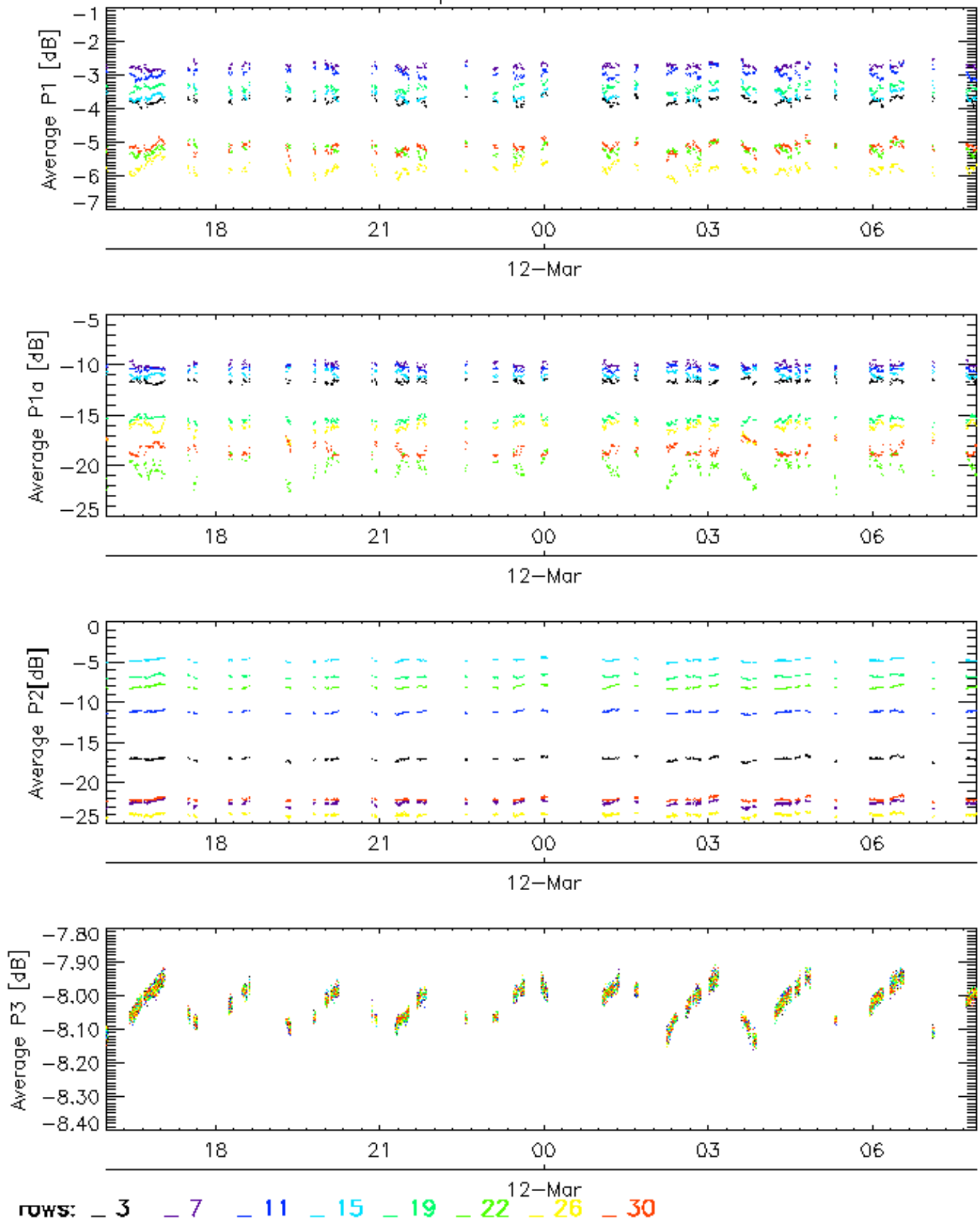
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

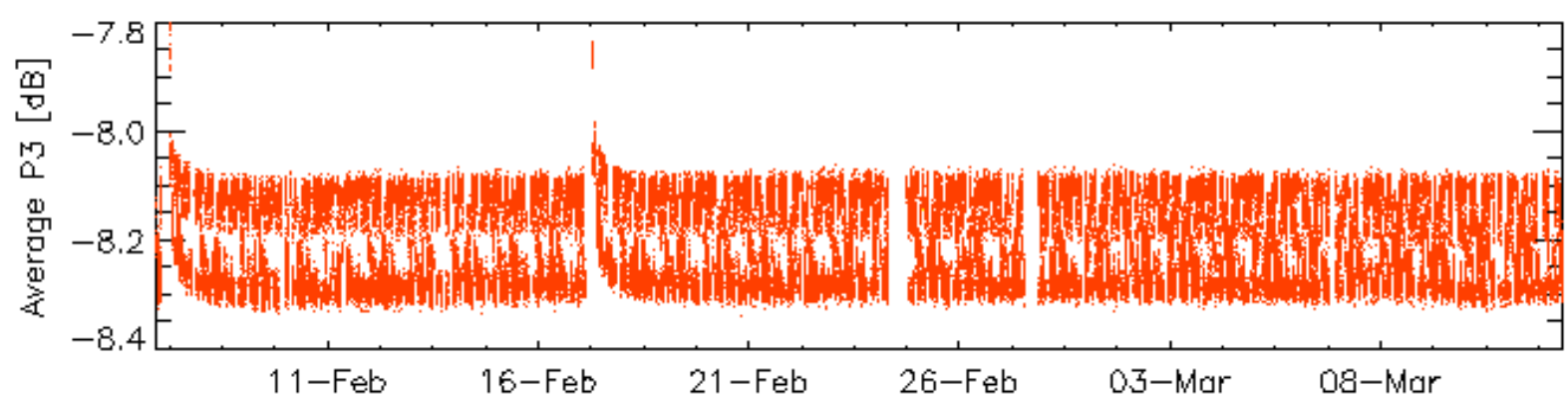
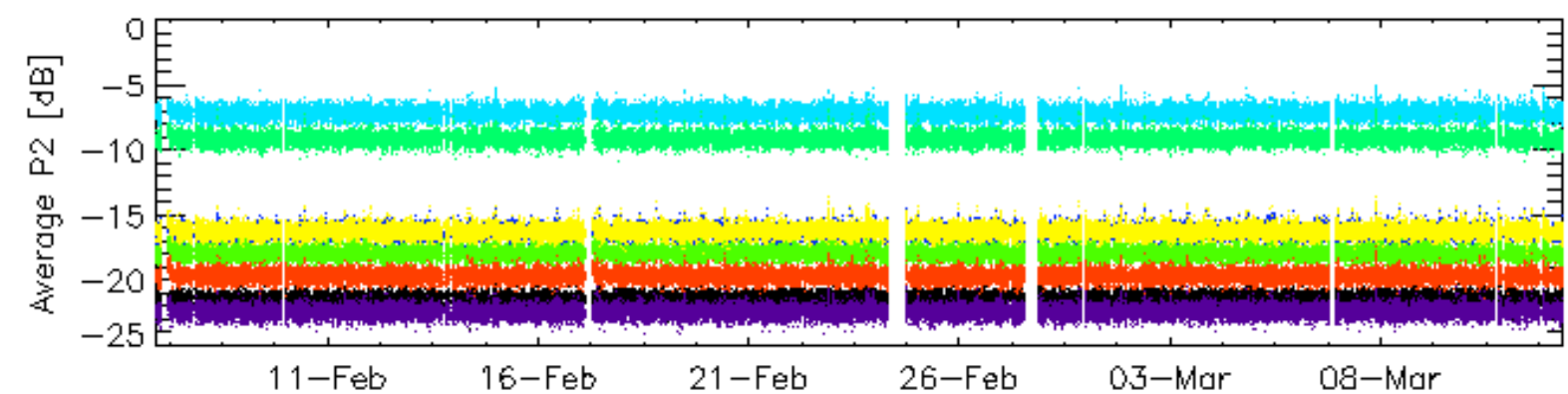
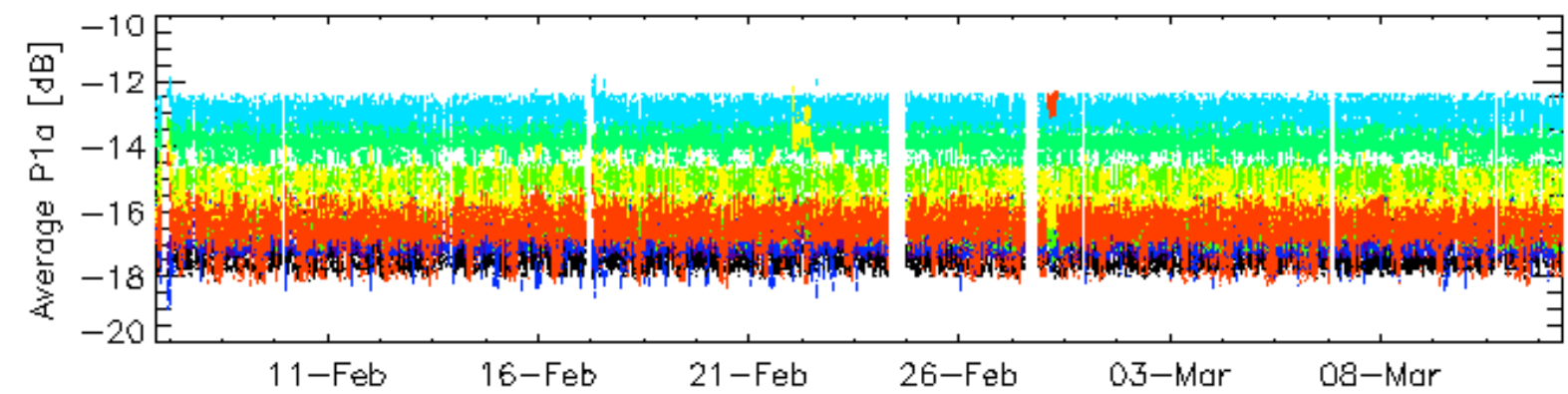
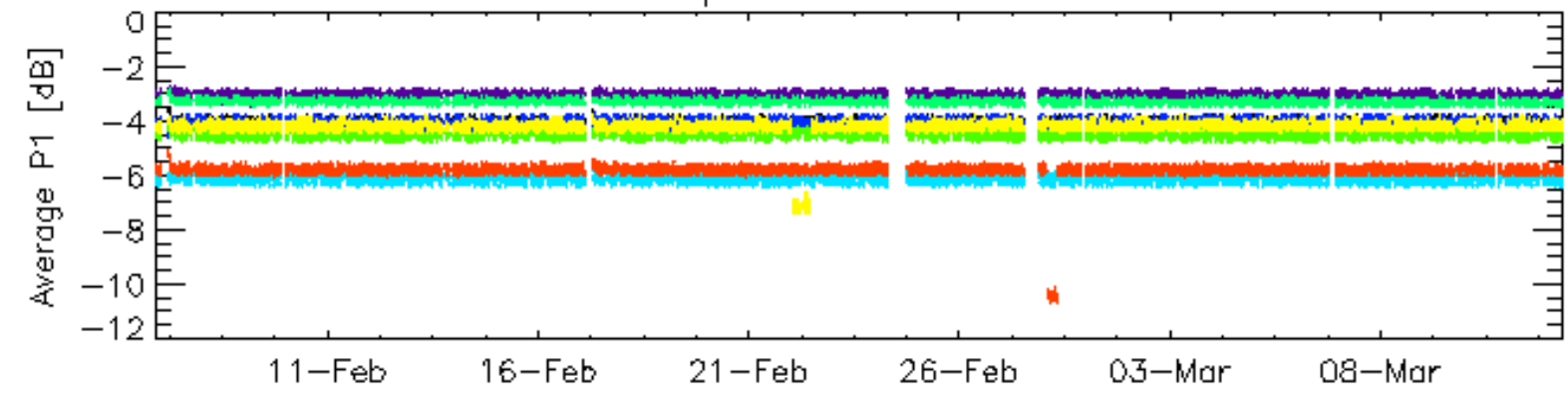


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

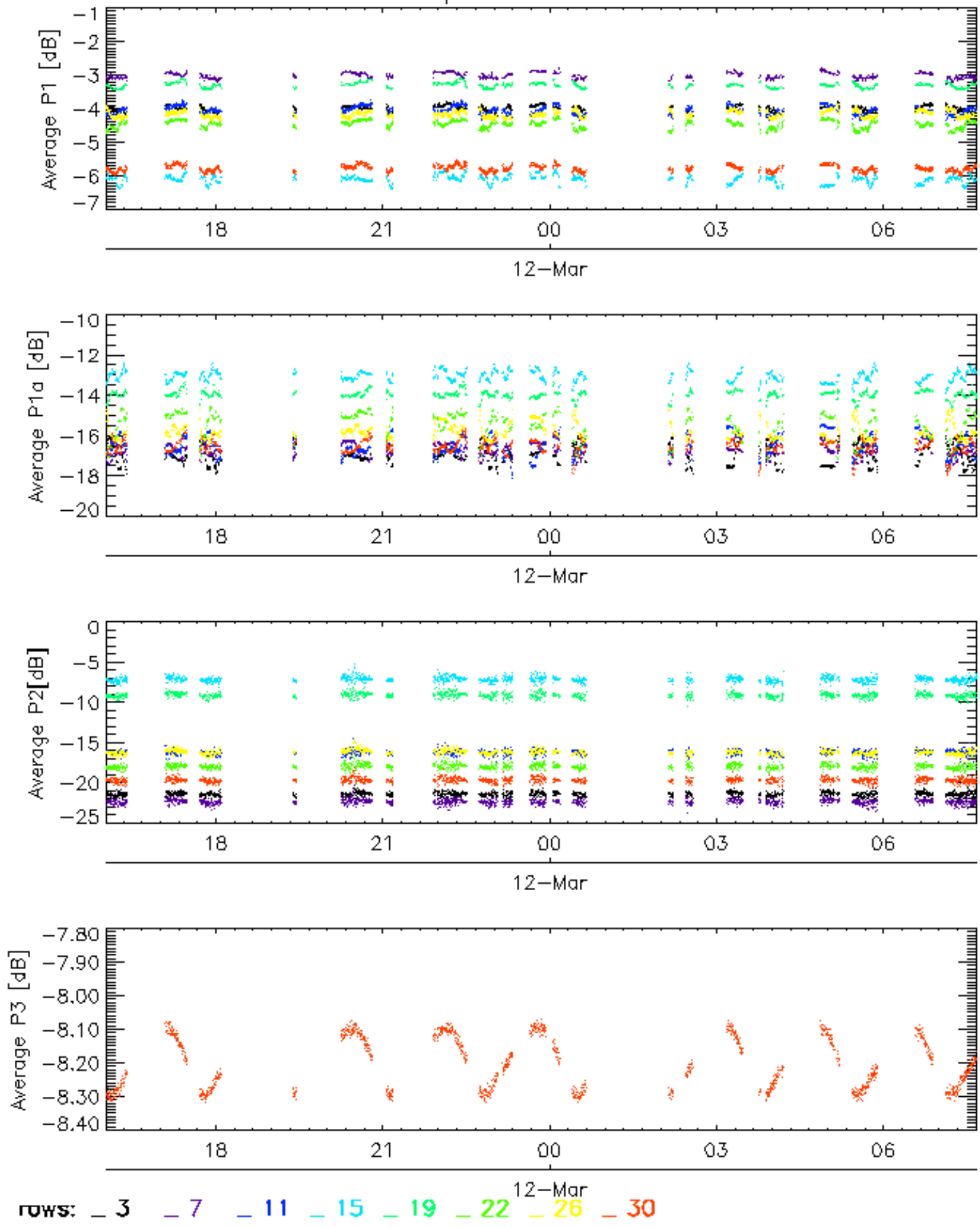


Cal pulses for WVS IS2



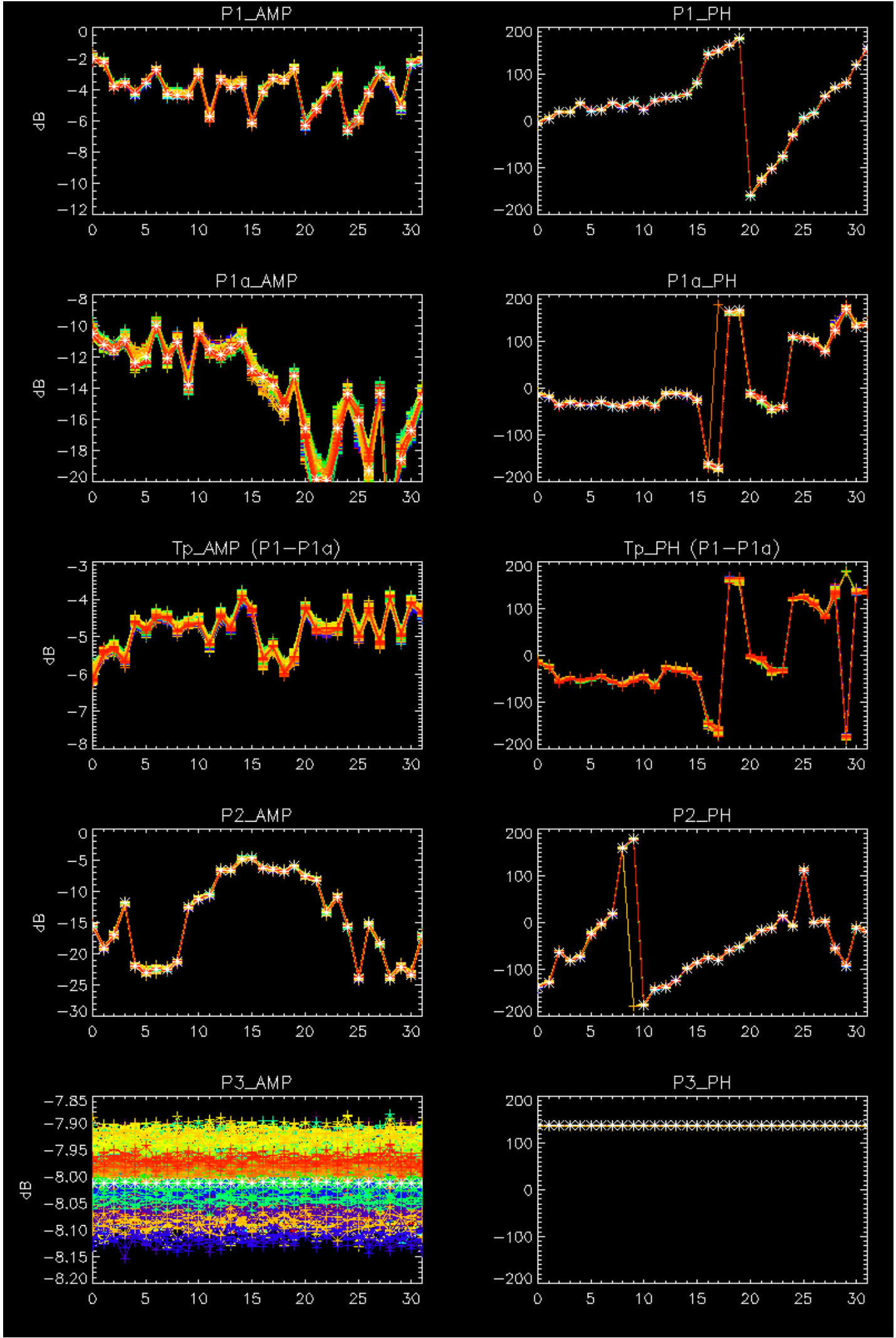
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

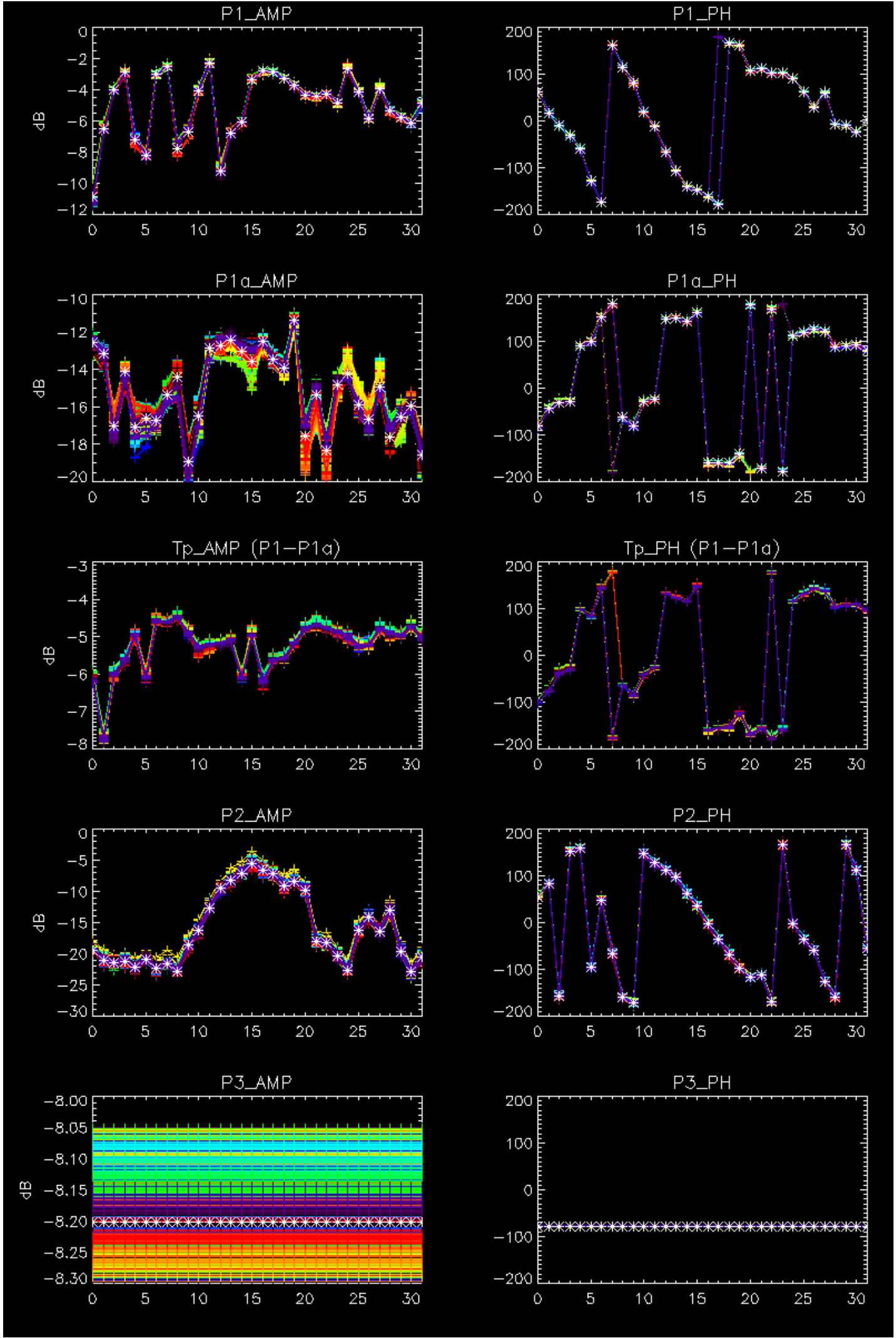
Cal pulses for WVS IS2



No anomalies observed.





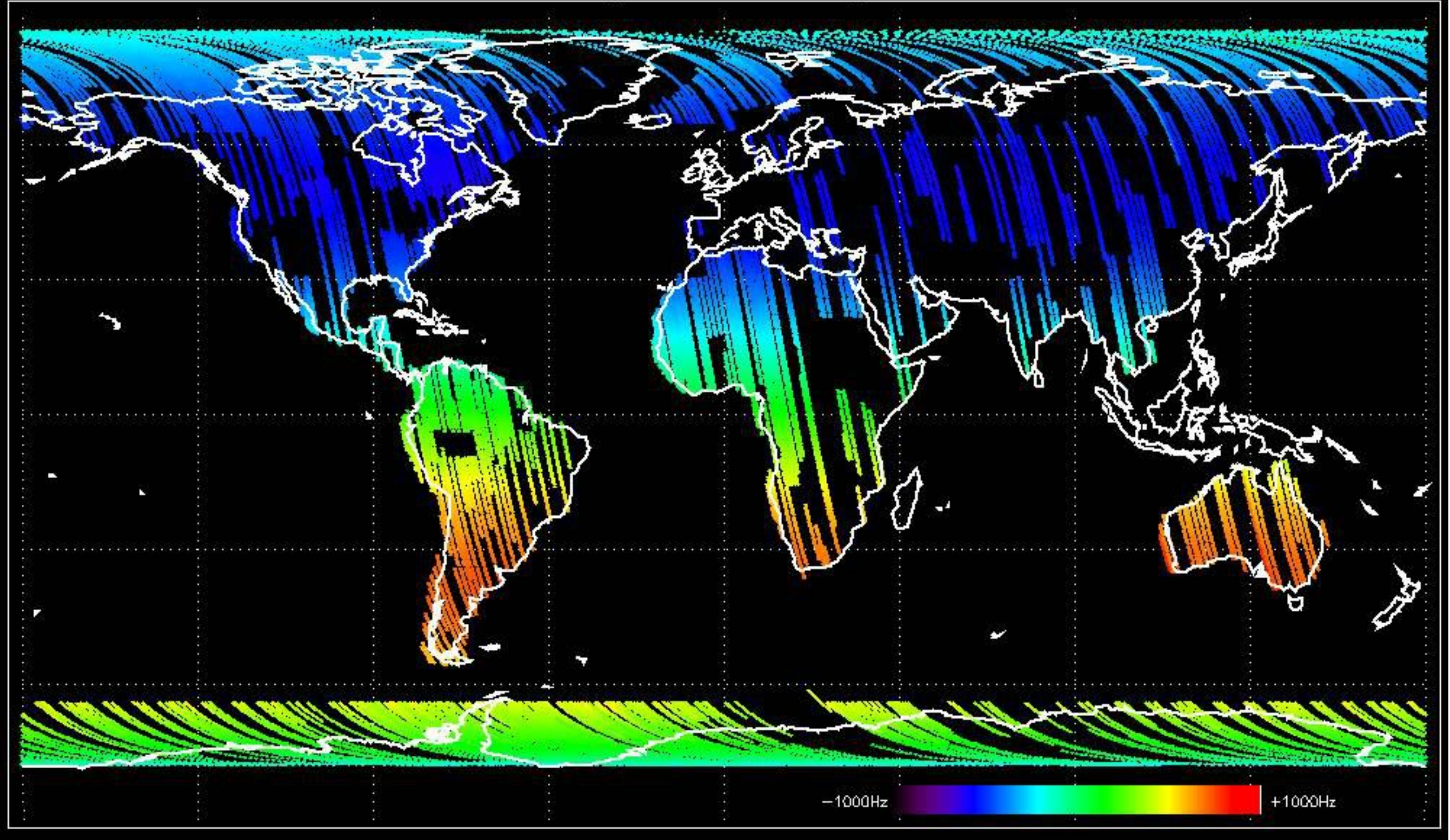


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



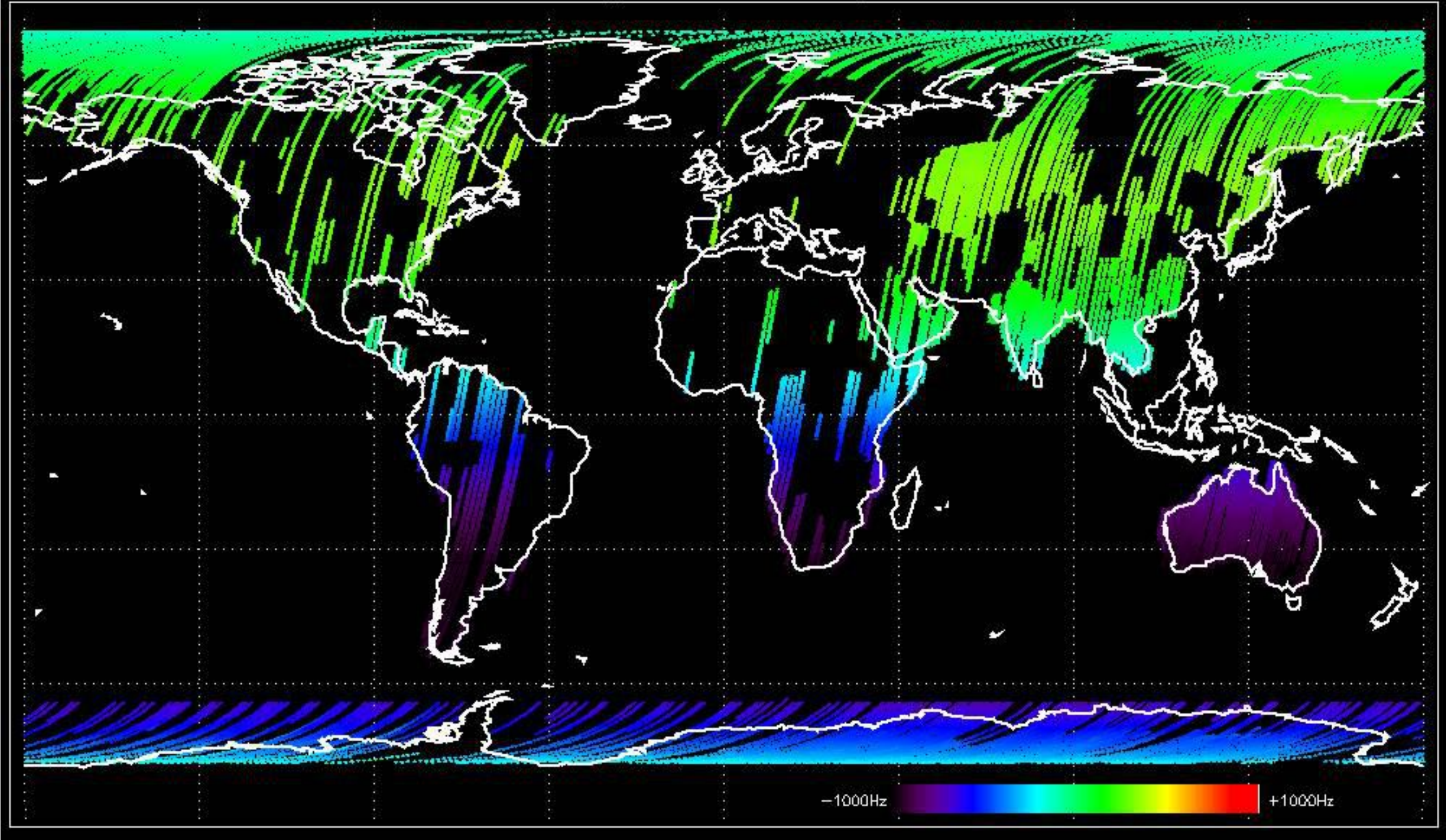


Doppler 'GM1' 'SS1' ascending



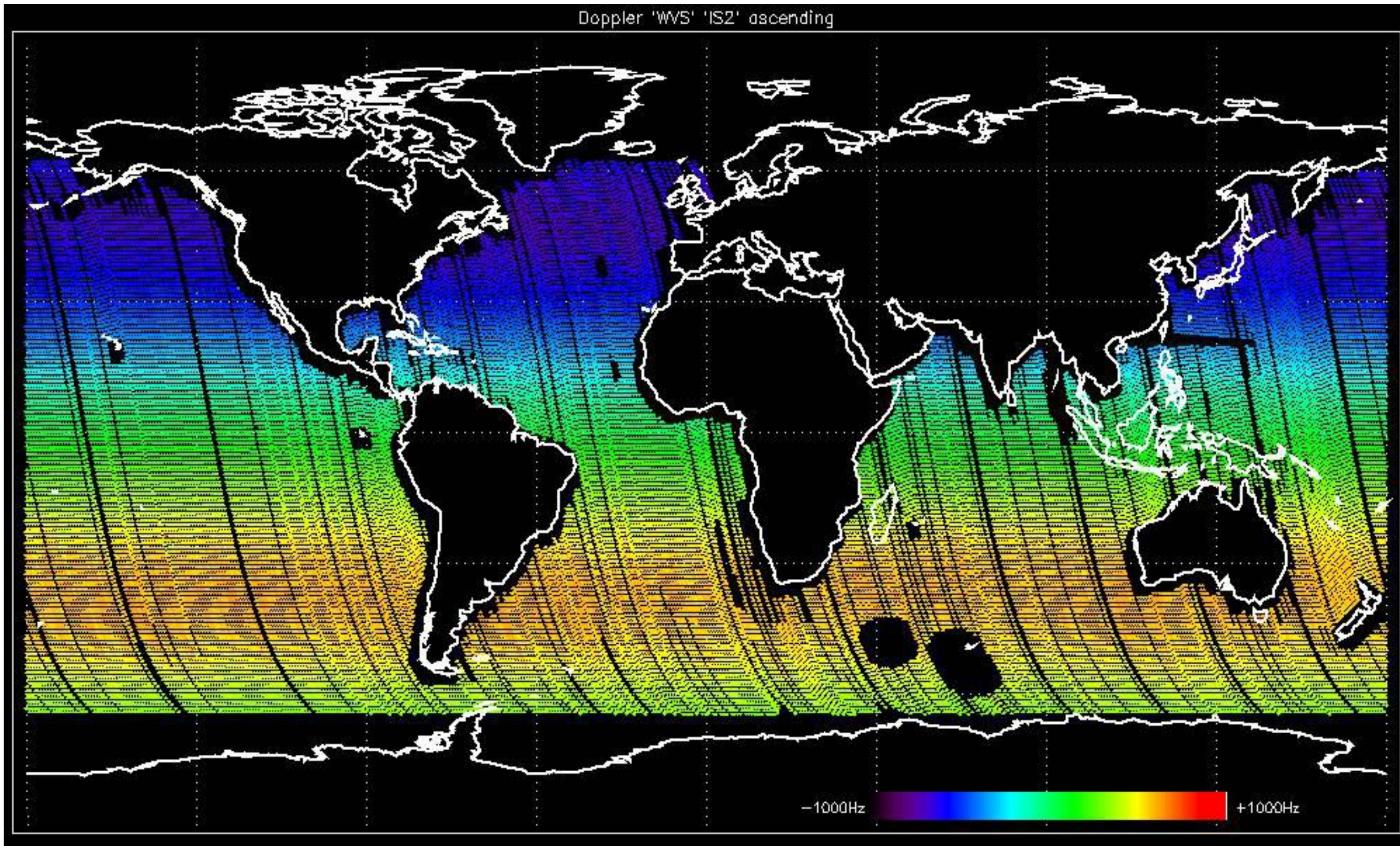


Doppler 'GM1' 'SS1' descending



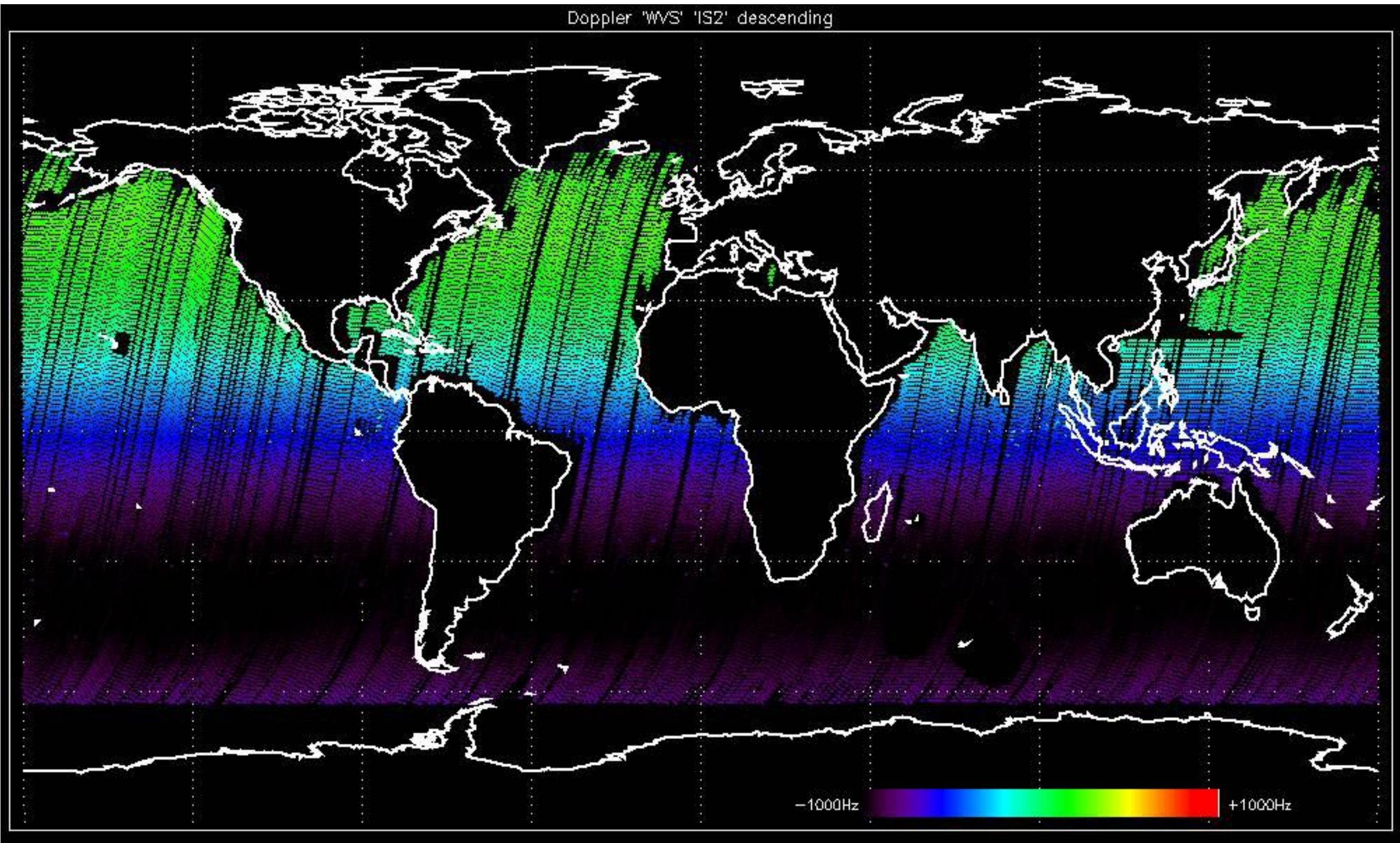


Doppler 'WVS' 'IS2' ascending



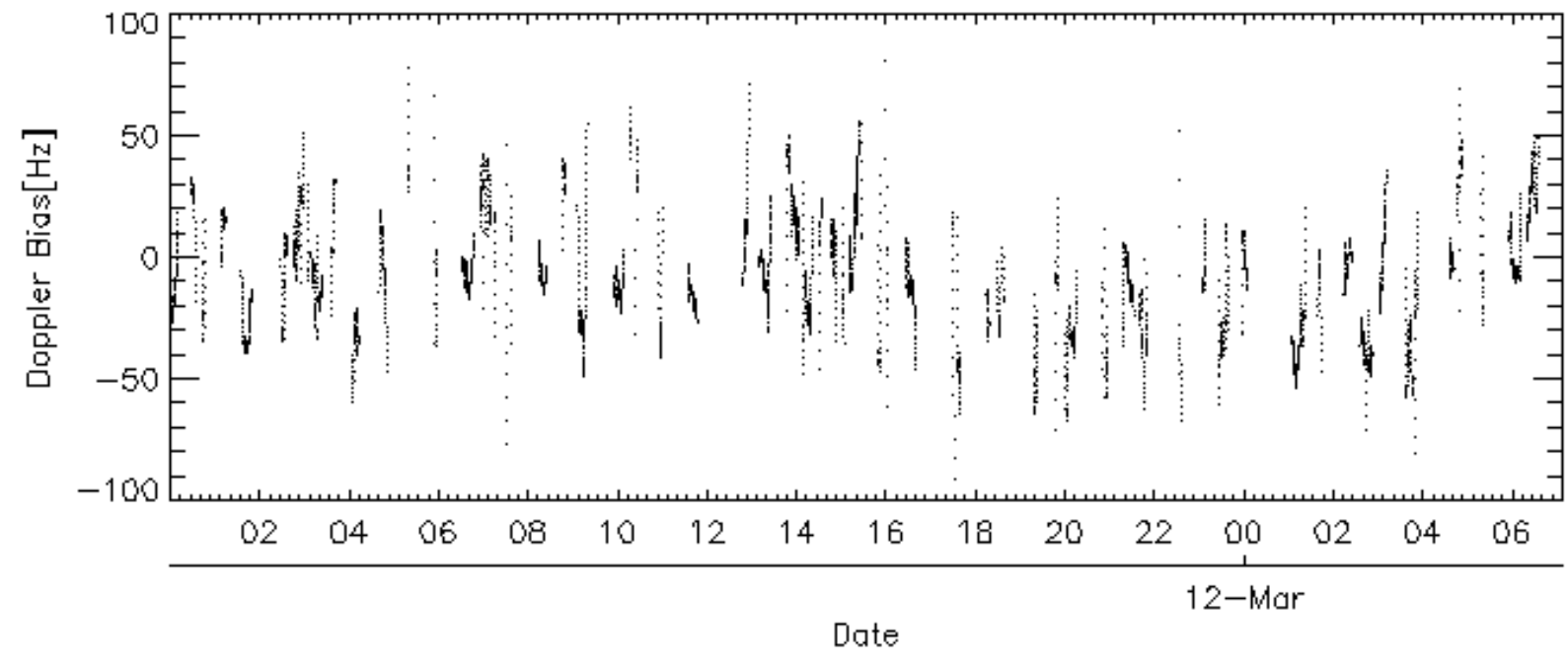
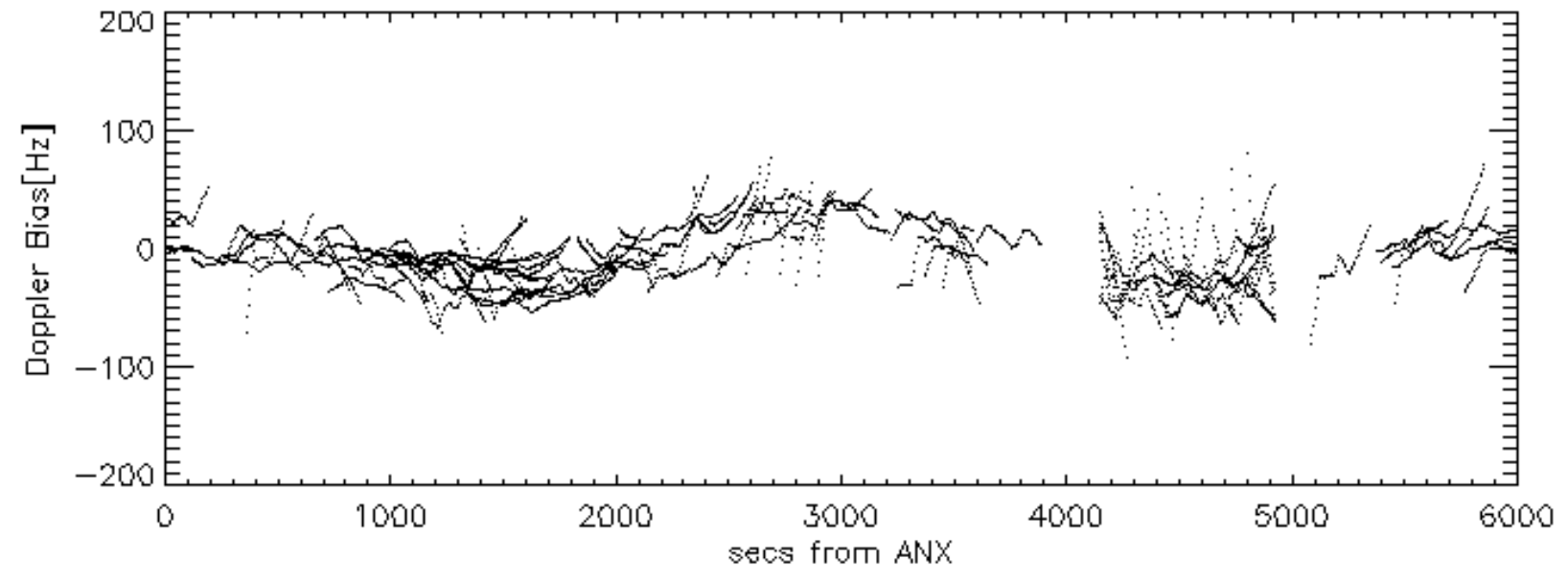
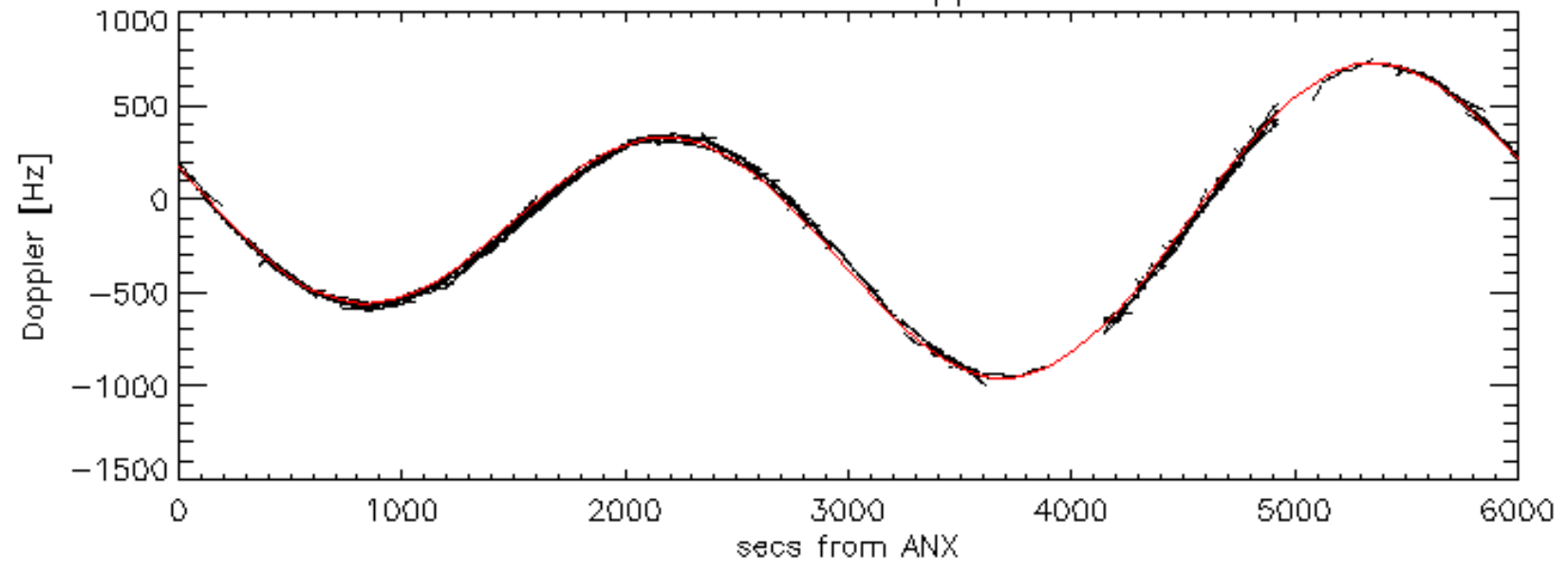


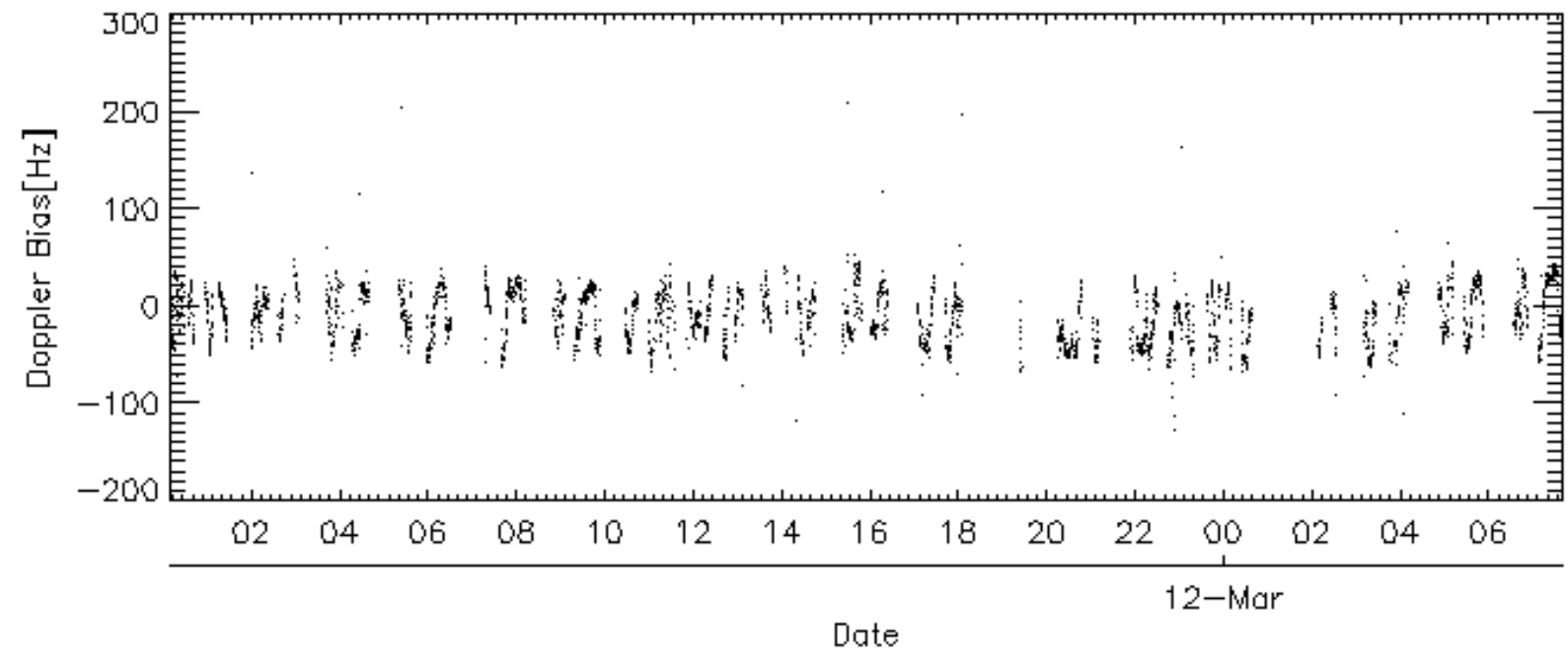
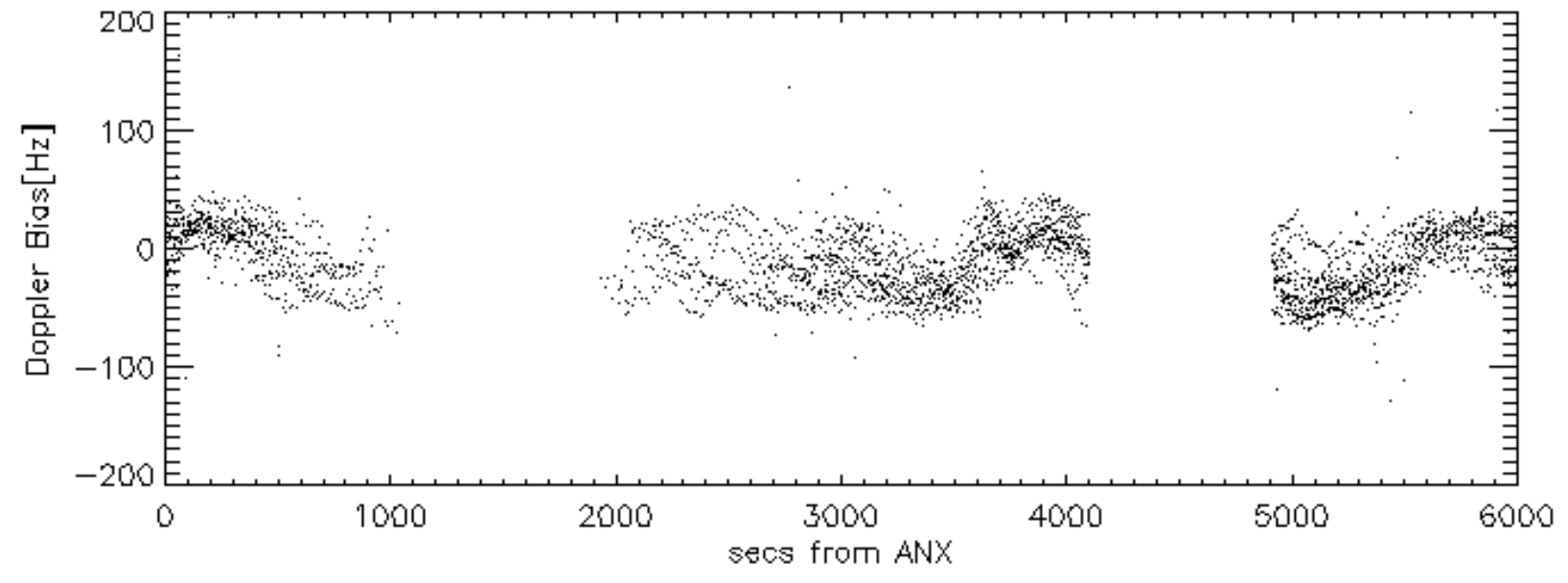
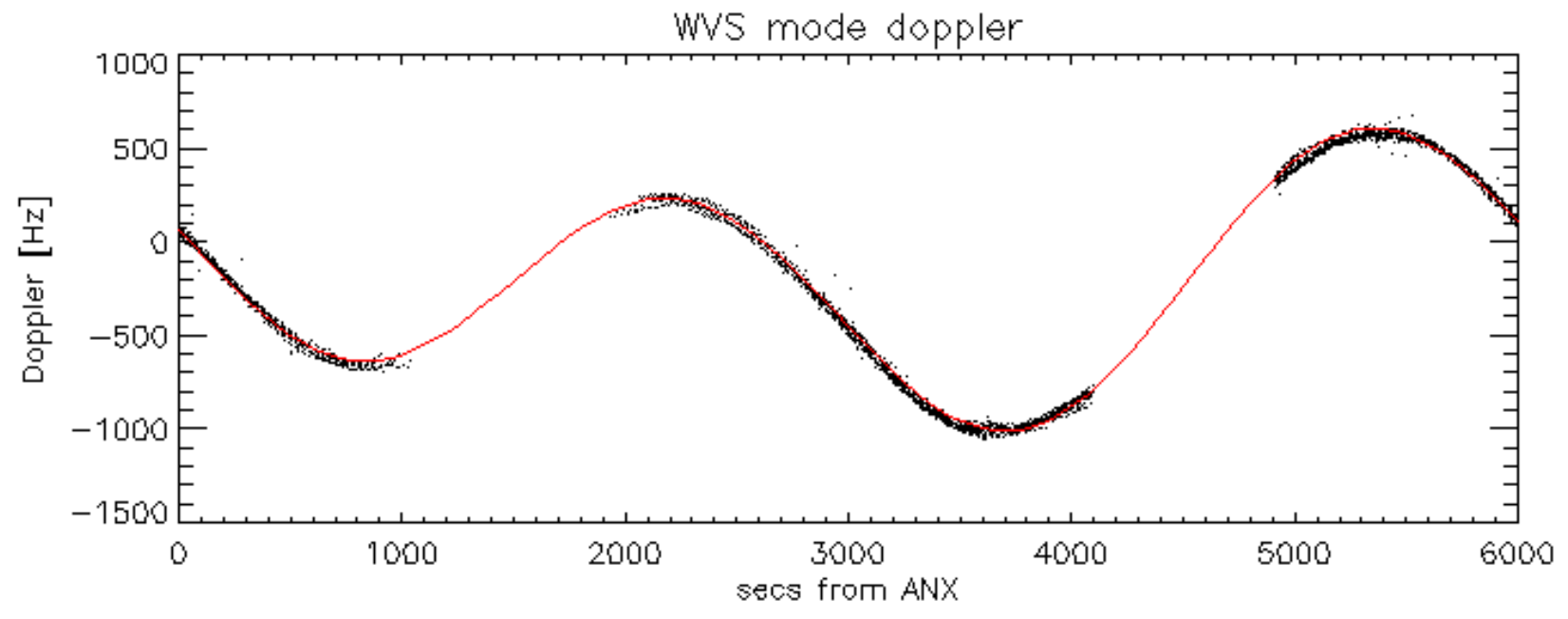
Doppler 'WVS' 'IS2' descending





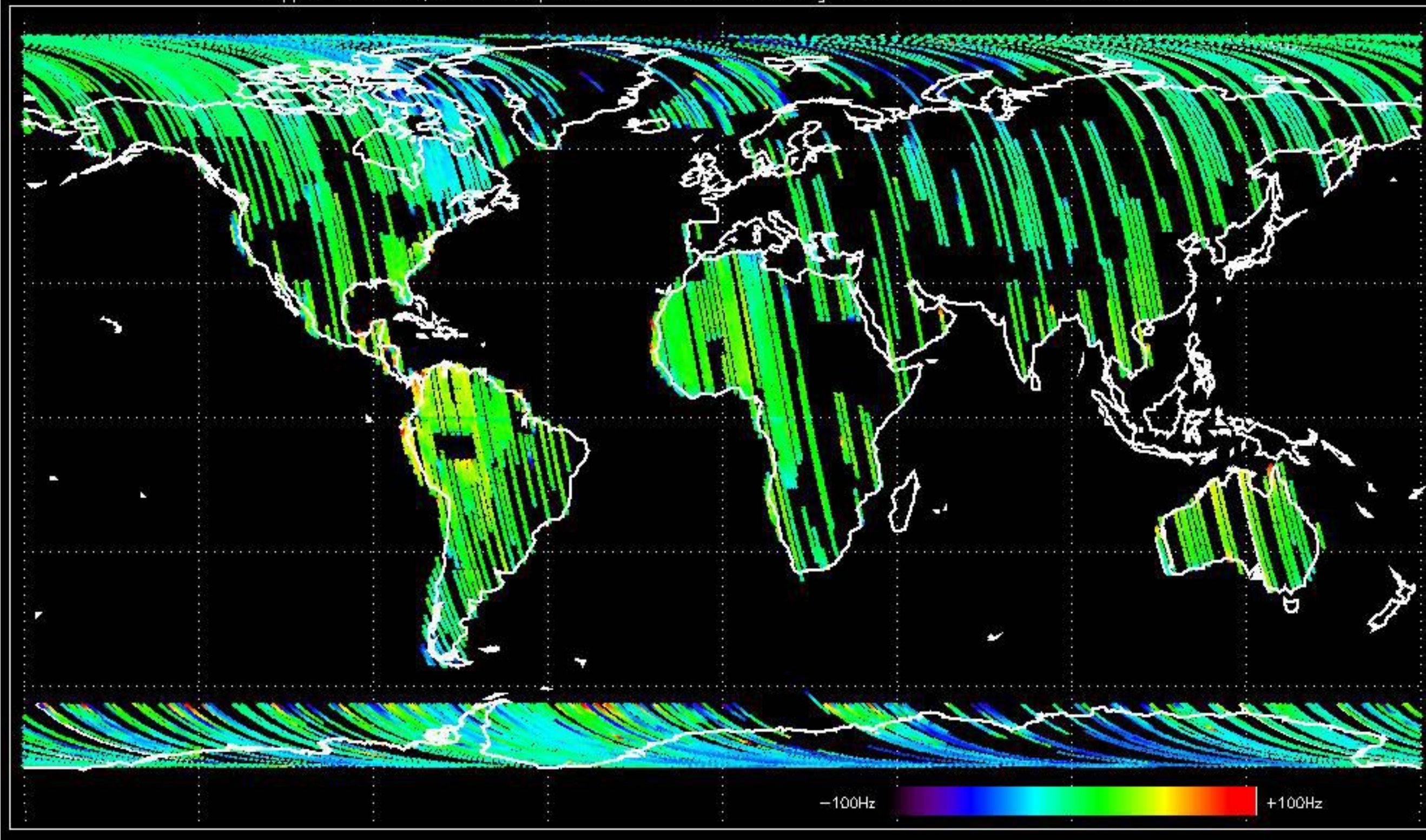
GM1 mode doppler





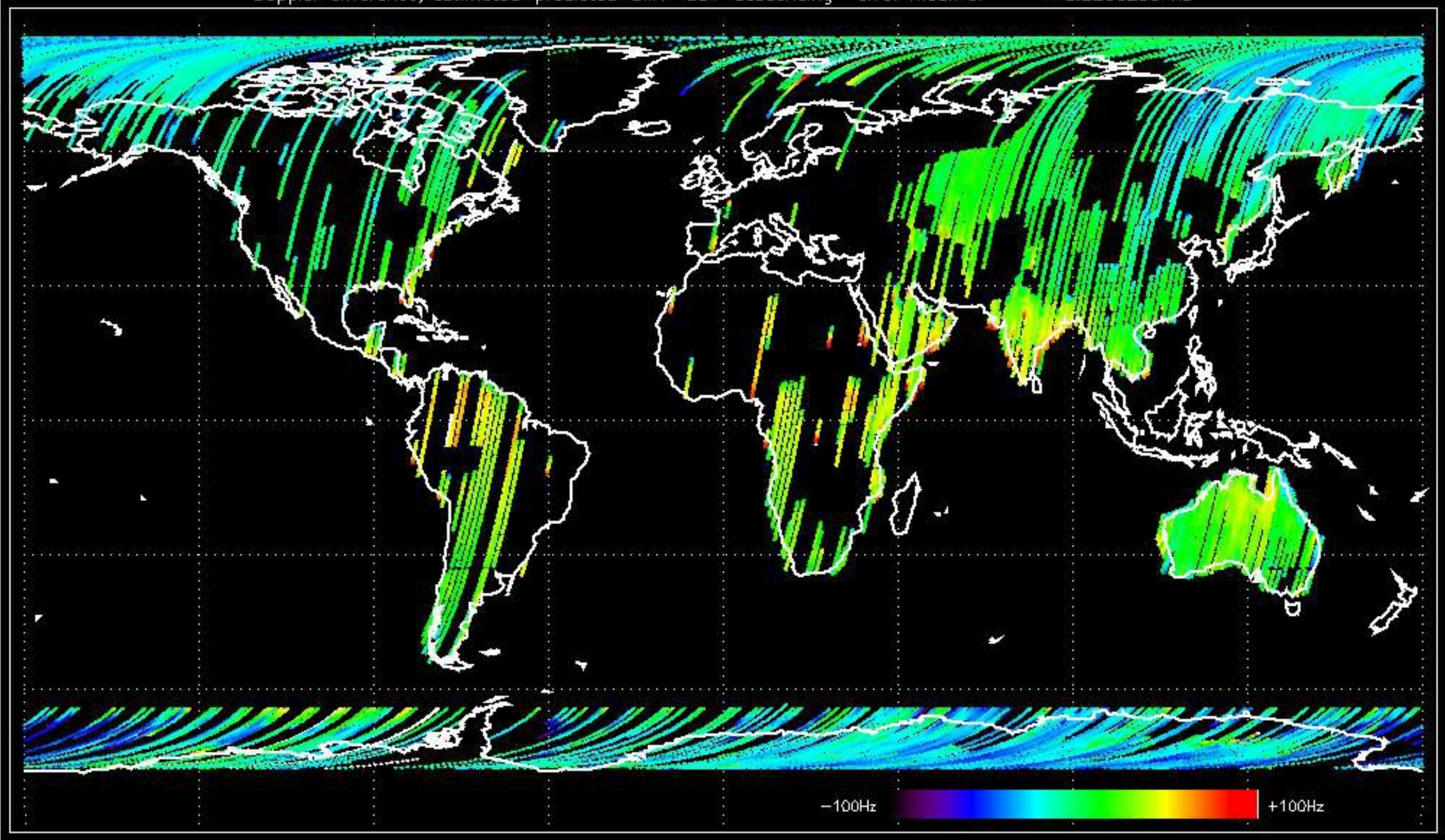


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -9.5723138 Hz



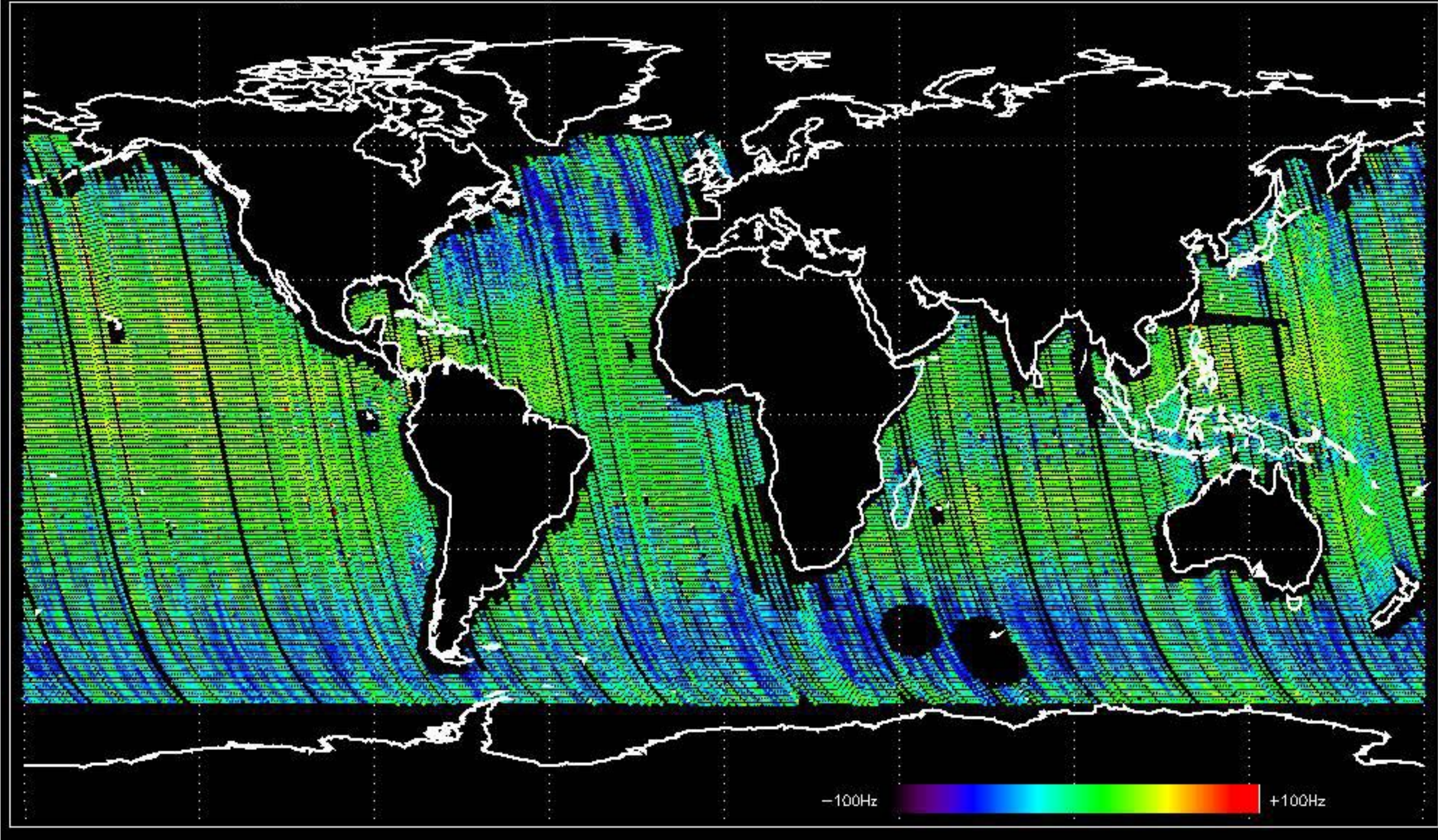


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.2200290 Hz



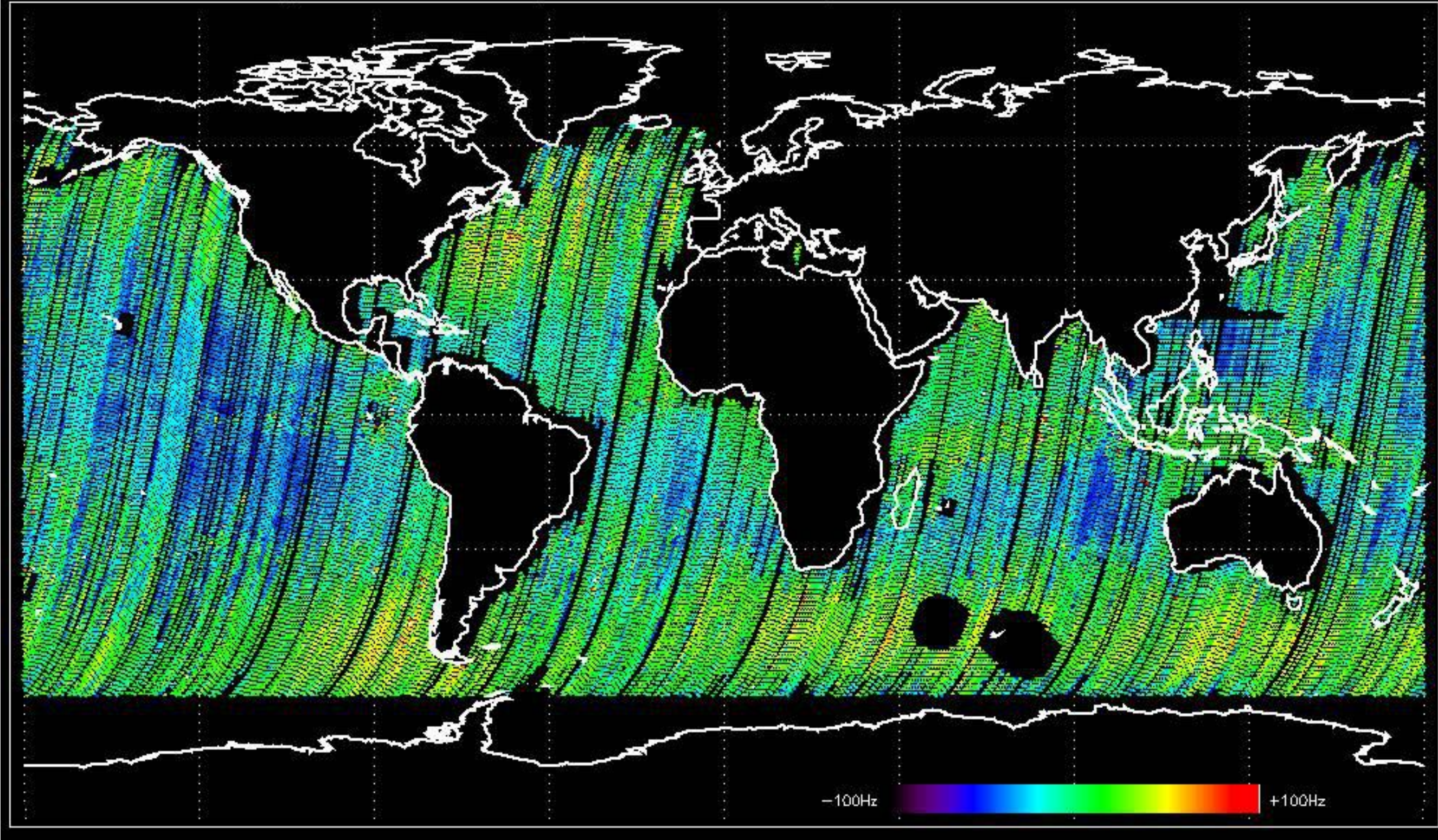


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.1084960 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.5736154 Hz





No anomalies observed on available MS products:

No anomalies observed.











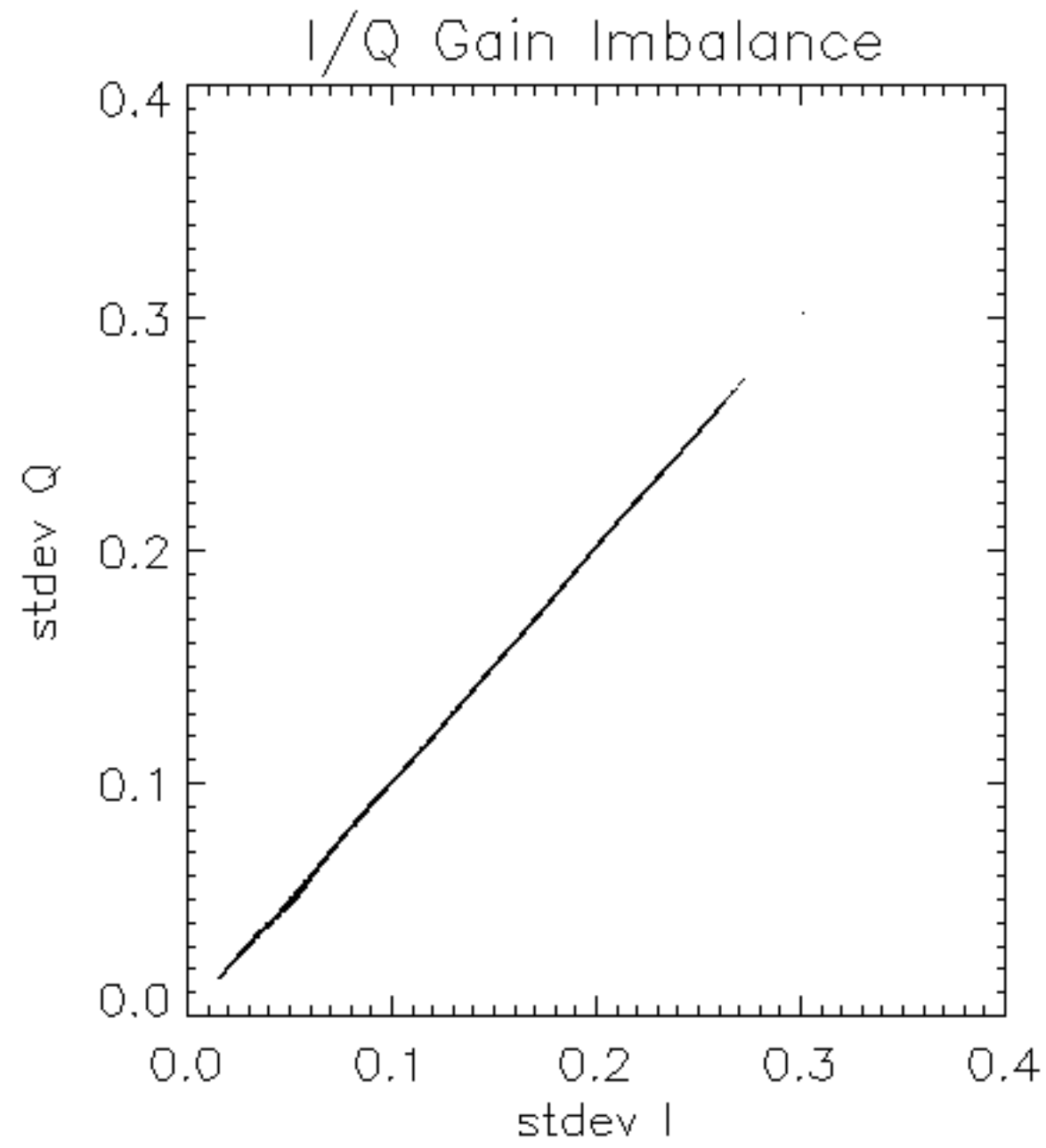


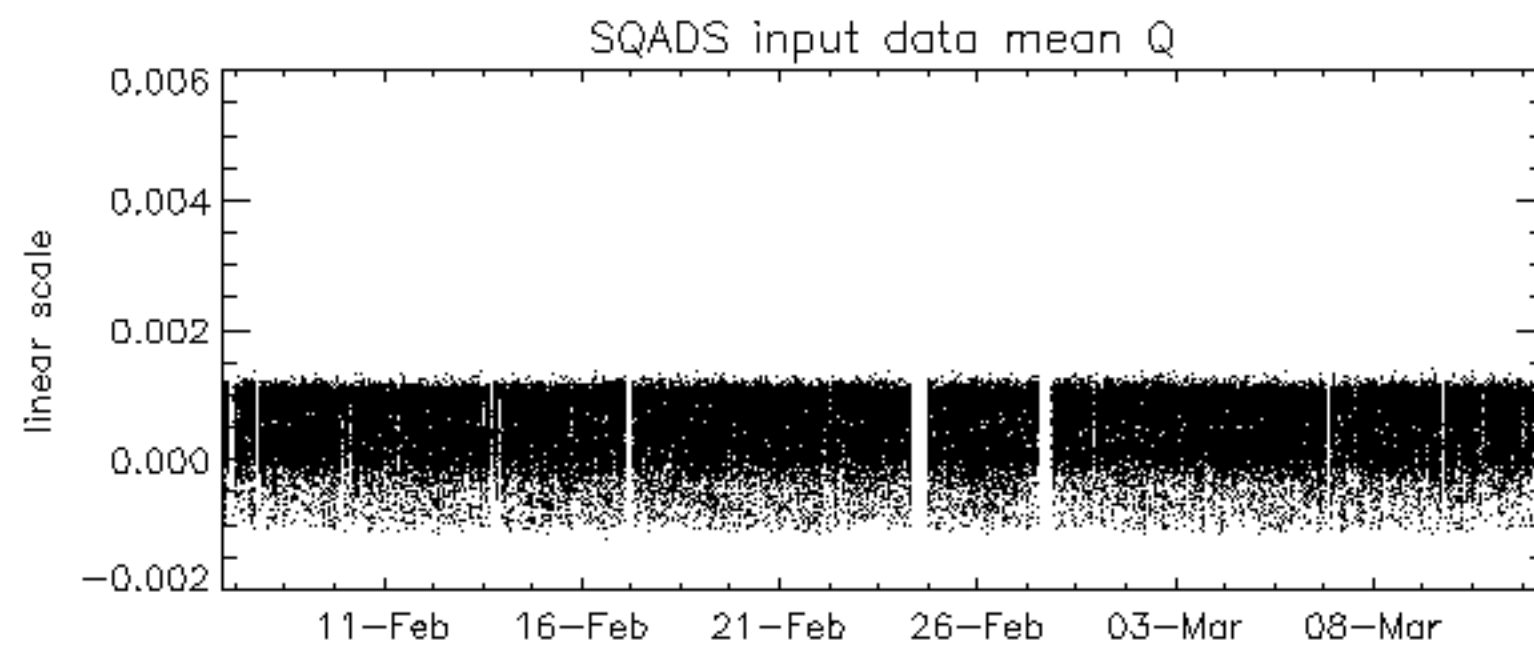
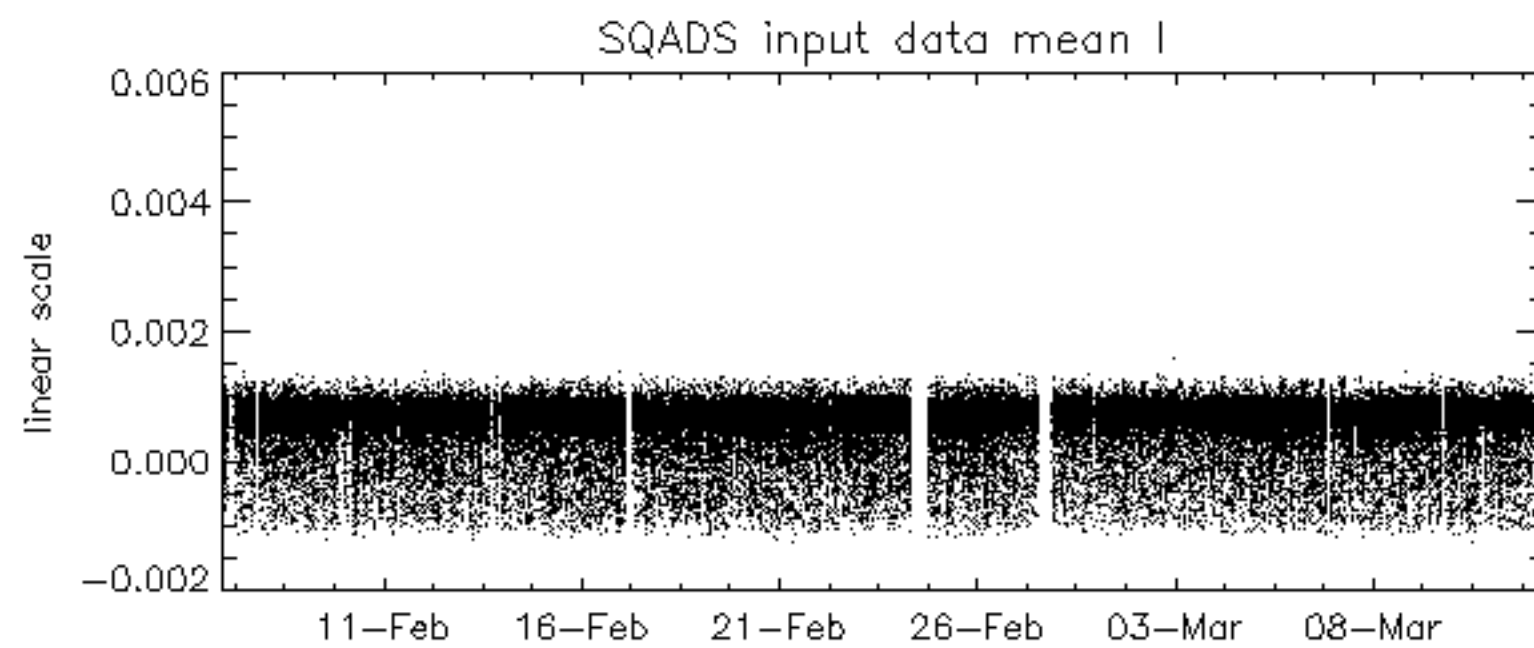
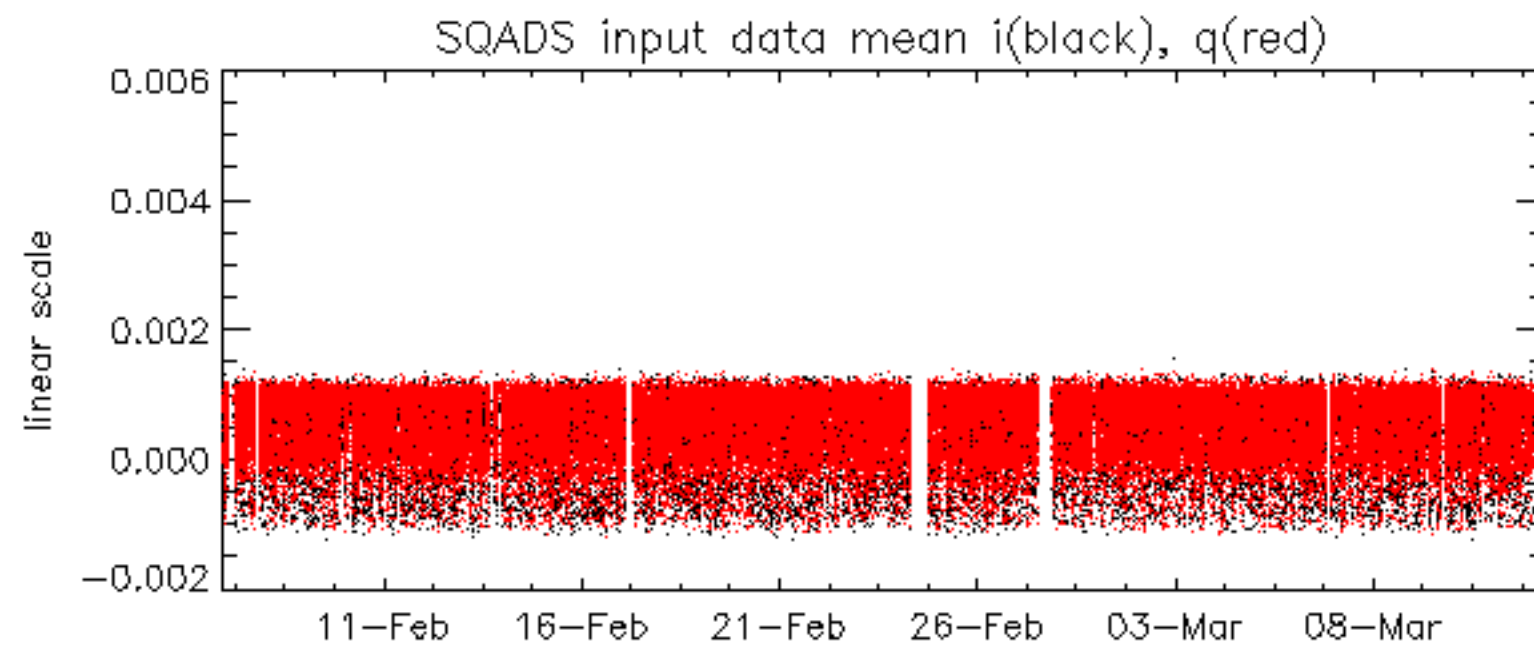


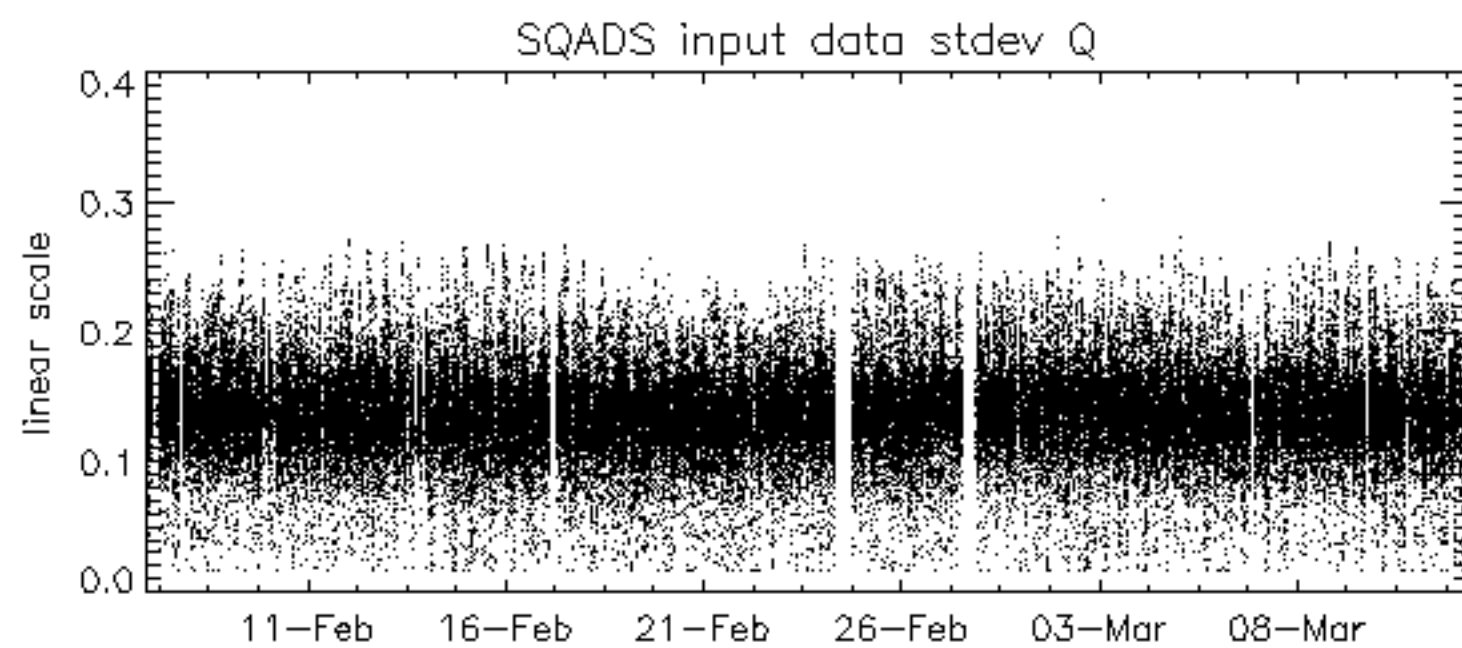
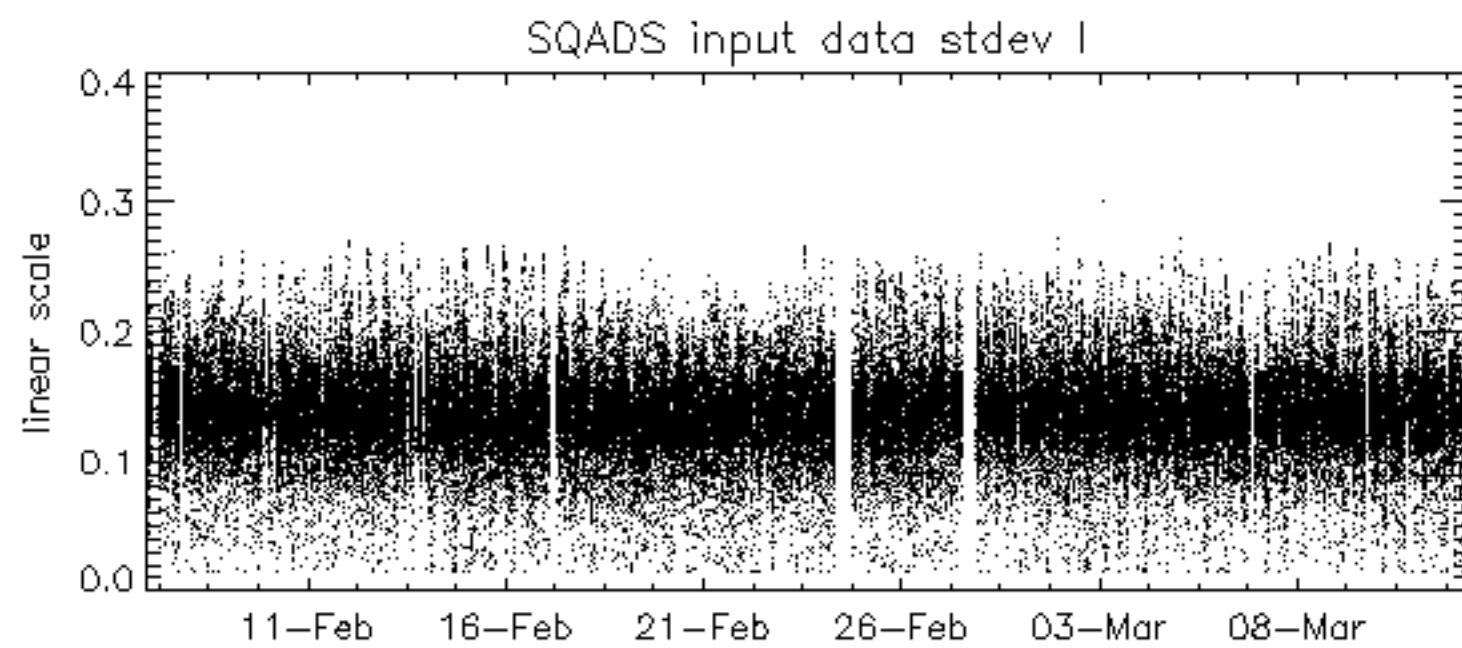
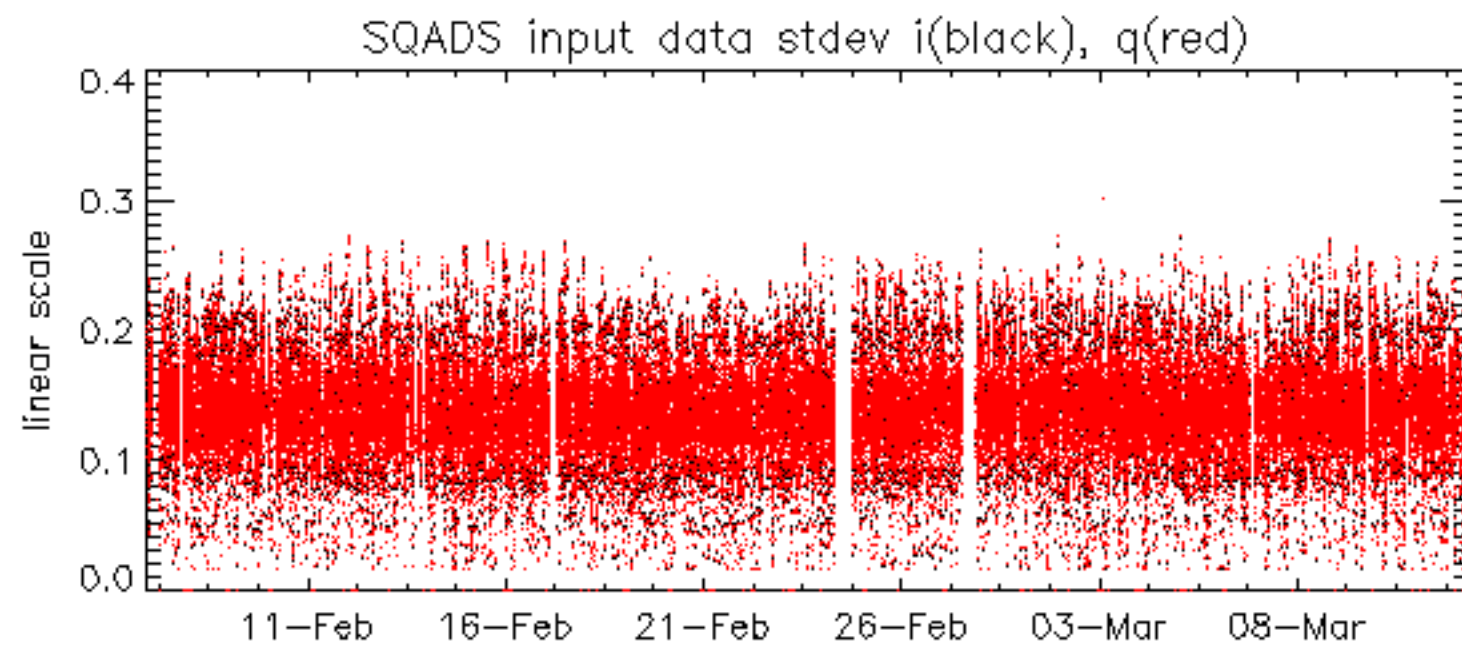




















Summary of analysis for the last 3 days 2006031[012]

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_1PNPDE20060310_124102_000000362045_00453_21048_0326.N1	1	0
ASA_IMM_1PNPDE20060311_015053_000001992045_00461_21056_0412.N1	0	1
ASA_IMM_1PNPDE20060312_003948_000001552045_00474_21069_0566.N1	1	0
ASA_IMM_1PNPDE20060312_005604_000000362045_00475_21070_0559.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0586.N1	1	0
ASA_IMM_1PNPDE20060312_022546_000000362045_00476_21071_0595.N1	1	0





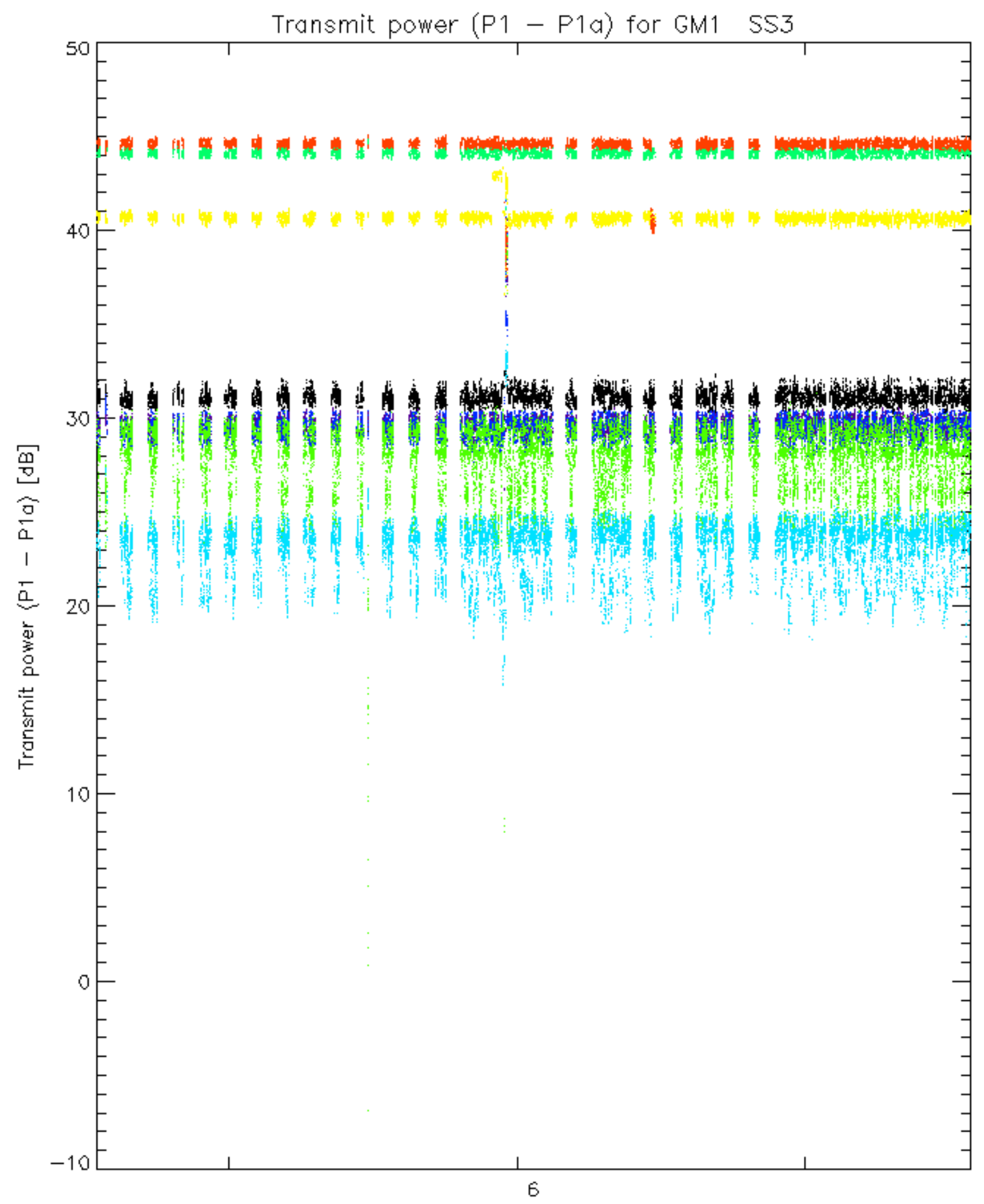


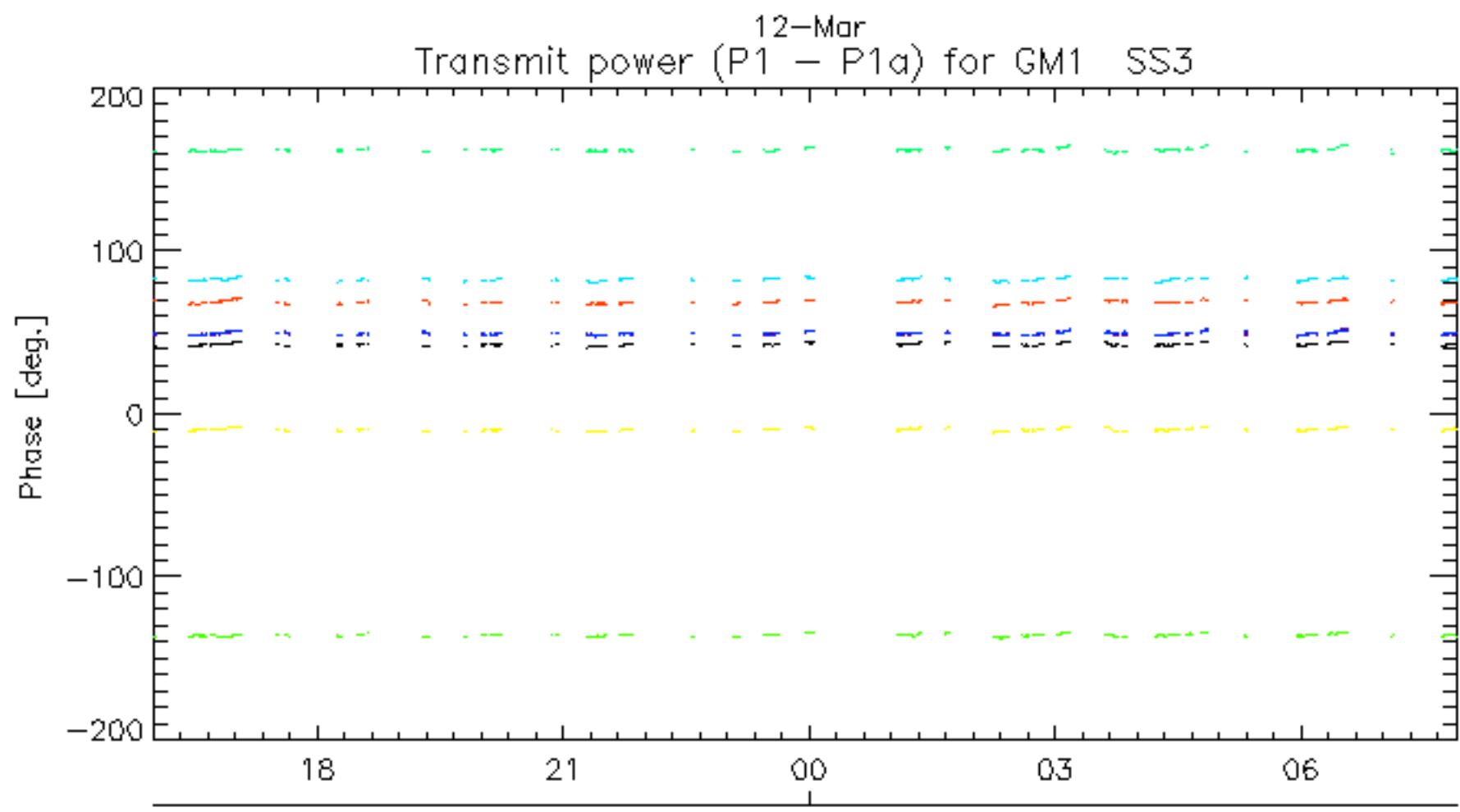
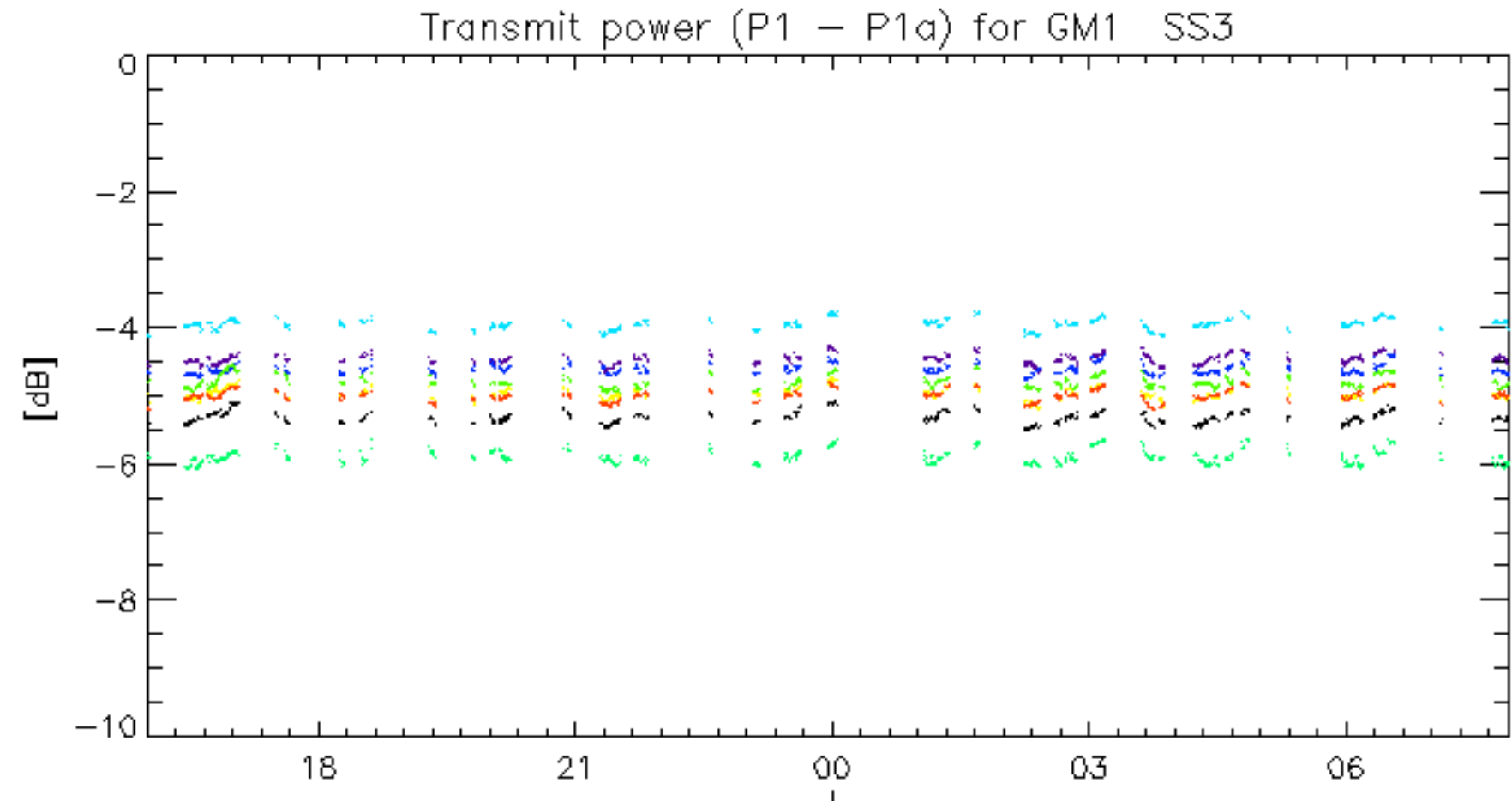






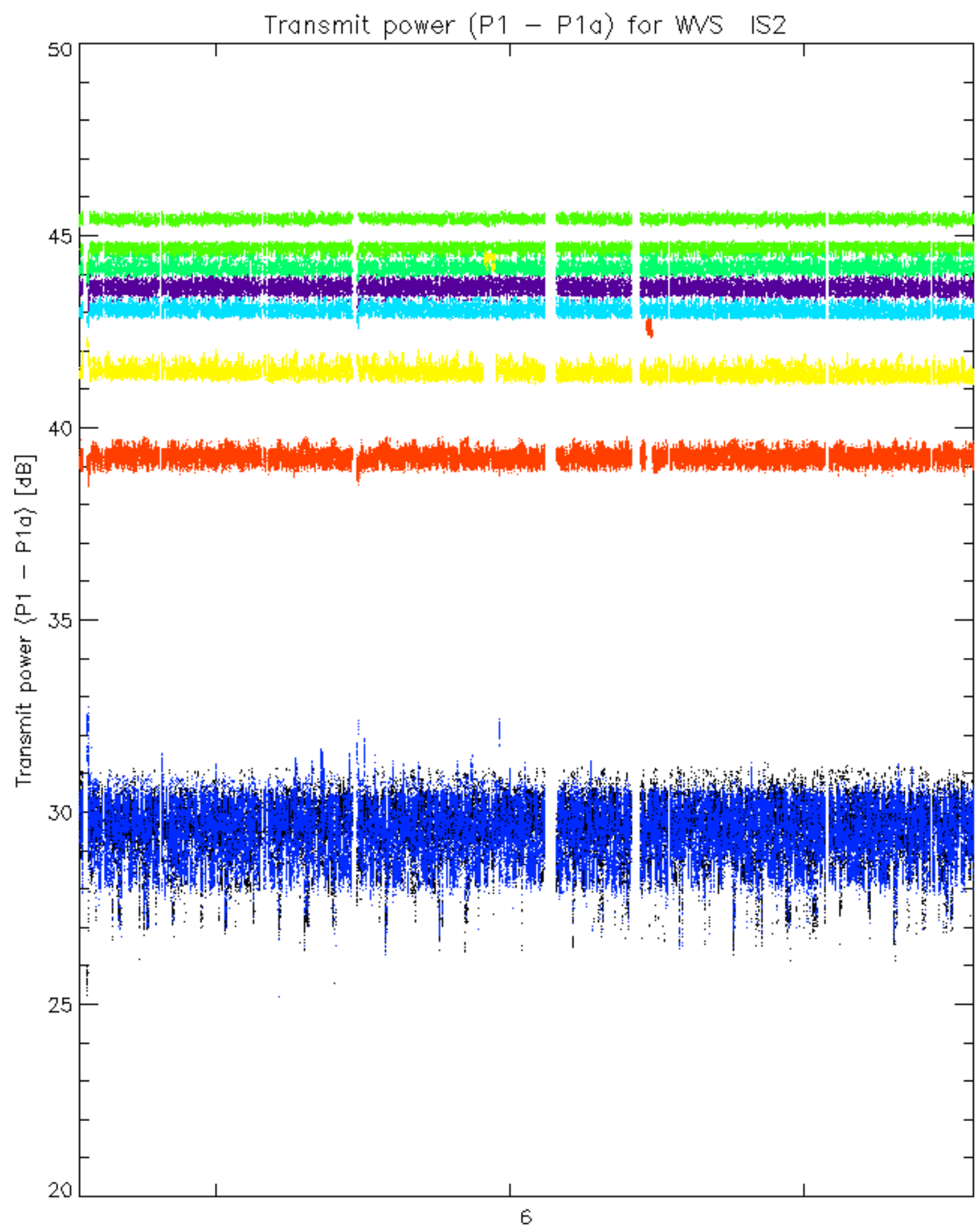




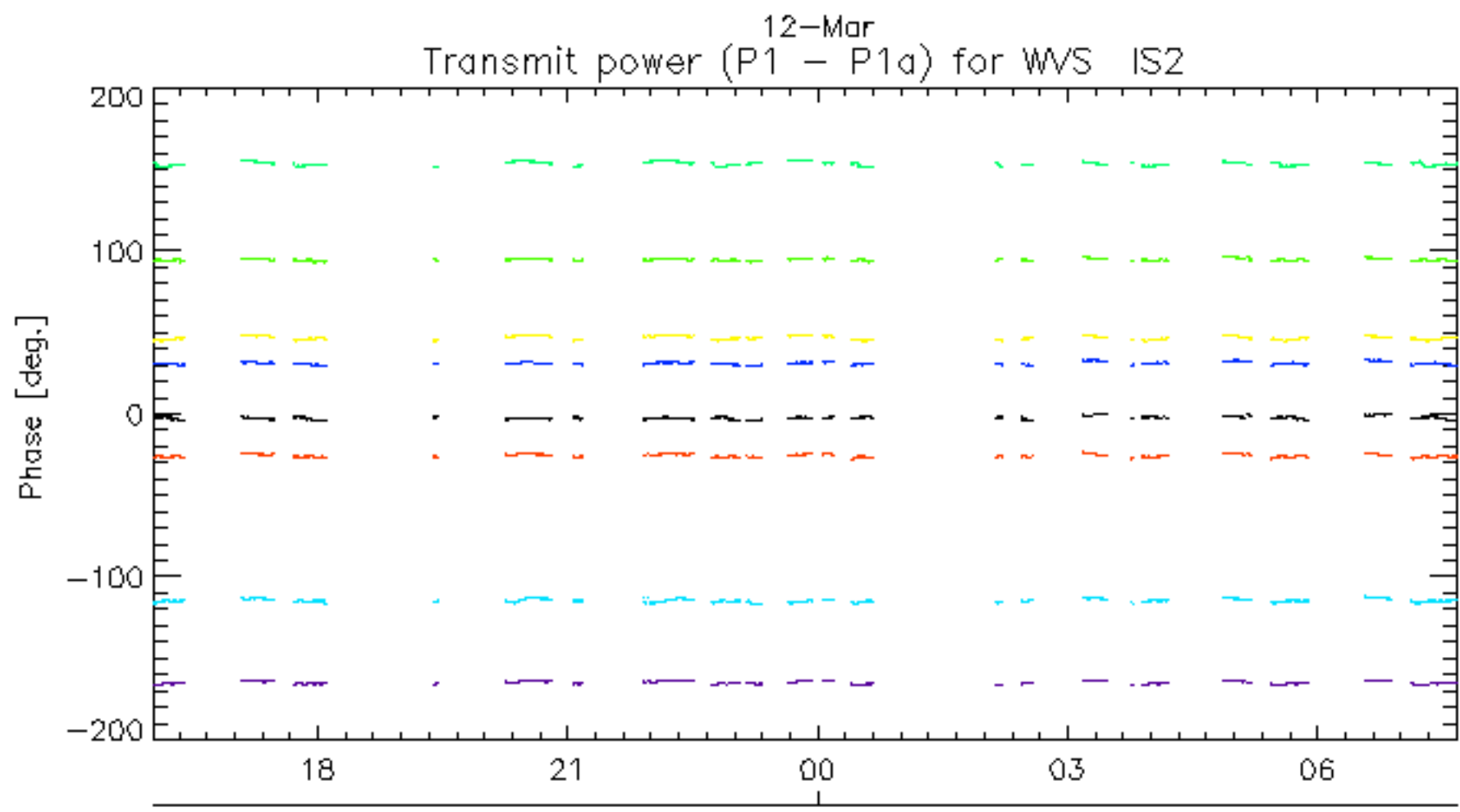
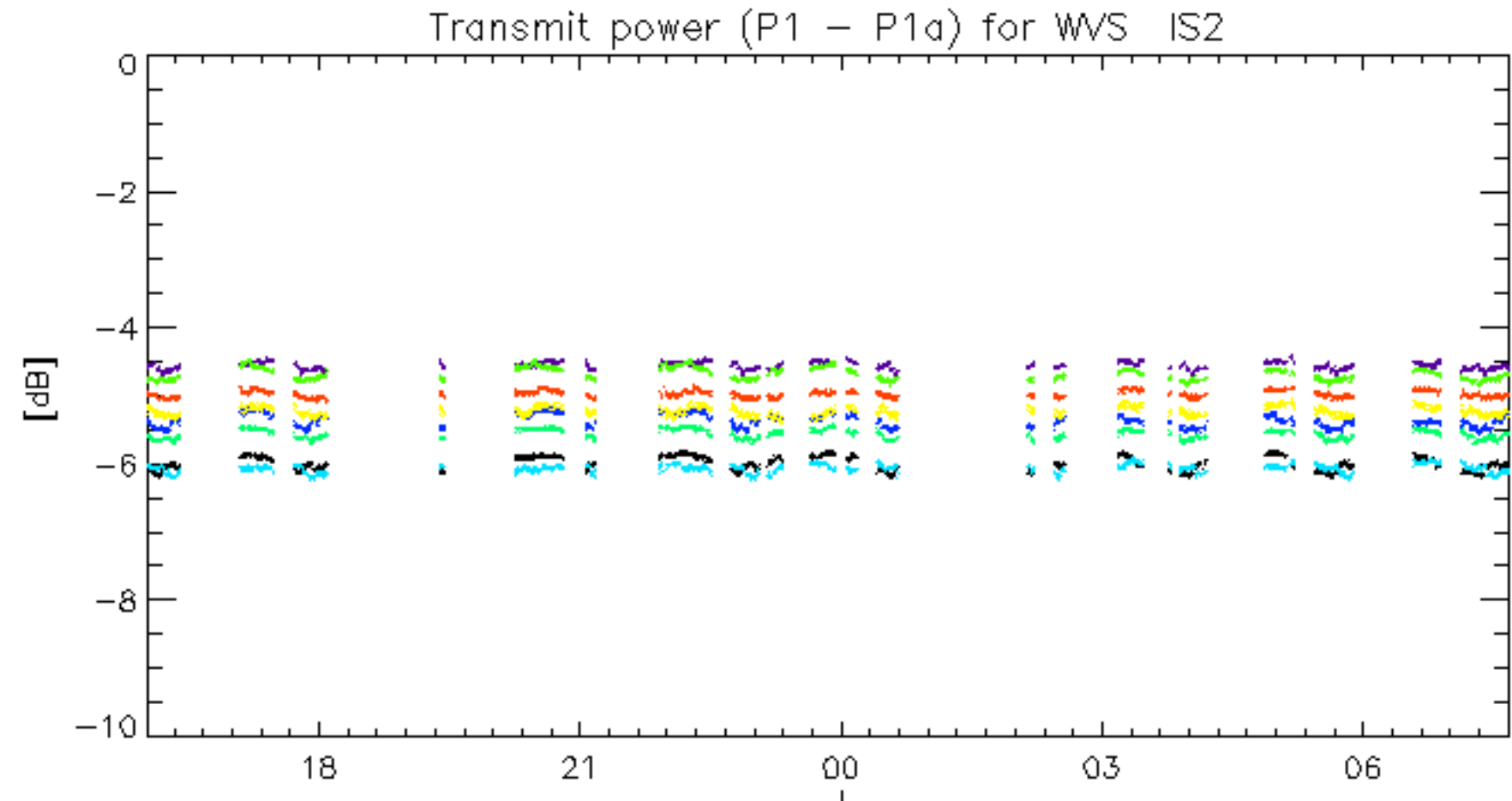


12-Mar  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.