

# PRELIMINARY REPORT OF 050312

ATTENTION: This report is automatically generated no comments are provided on data analysis

**last update on Mon Mar 14 09:23:00 GMT 2005**

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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

ASAR unavailable after an autonomous transition to PRE-OP mode due to a telemetry error on parameter B1380

From 12-03-2005 15:51:15 to 15:56:28

### 2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-03-13 00:00:00 to 2005-03-14 09:23:00

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	26	44	3	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	26	44	3	0	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	26	44	3	0	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	26	44	3	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	44	48	8	6	2
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	44	48	8	6	2
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	44	48	8	6	2
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	44	48	8	6	2

### 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	20050311 033421
H	20050310 040558

### MSM in V/V polarisation

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

☒	☒
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### 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
☒
☒

#### 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

#### 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	-3.365519	0.007540	0.017414
7	P1	-3.089723	0.007840	-0.018783
11	P1	-4.695661	0.021972	-0.024986
15	P1	-5.659182	0.030491	-0.011643
19	P1	-3.675532	0.003958	-0.031547
22	P1	-4.518998	0.012963	0.021483
26	P1	-4.950288	0.015544	-0.005197
30	P1	-7.183927	0.018227	-0.038050
3	P1	-15.973104	0.064219	0.002768
7	P1	-15.521502	0.048582	-0.019912
11	P1	-20.954836	0.278239	-0.121797
15	P1	-11.576829	0.026234	0.001762
19	P1	-14.273393	0.024897	-0.112305
22	P1	-15.659837	0.312785	0.222234
26	P1	-17.594433	0.230678	0.016656
30	P1	-17.955889	0.475508	-0.075659

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.104103	0.084648	0.068142
7	P2	-22.295181	0.098693	0.074655
11	P2	-14.467532	0.103691	0.201029
15	P2	-7.047444	0.093760	0.038813
19	P2	-9.638822	0.093834	0.035775
22	P2	-16.932678	0.094695	0.058798
26	P2	-16.447104	0.093062	0.018771
30	P2	-18.874634	0.082044	0.050889

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.165713	0.005379	-0.000389
7	P3	-8.165713	0.005379	-0.000389
11	P3	-8.165713	0.005379	-0.000389
15	P3	-8.165713	0.005379	-0.000389
19	P3	-8.165713	0.005379	-0.000389
22	P3	-8.165713	0.005379	-0.000389
26	P3	-8.165713	0.005379	-0.000389
30	P3	-8.165713	0.005379	-0.000389

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1
<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	-2.732195	0.011225	0.027572
7	P1	-3.018795	0.033670	-0.076072
11	P1	-3.990294	0.014296	-0.025754
15	P1	-3.569864	0.015994	-0.037660
19	P1	-3.590384	0.013355	-0.015259
22	P1	-5.746425	0.036301	-0.036651
26	P1	-7.292351	0.025055	0.008205
30	P1	-6.226633	0.040058	0.019262
3	P1	-10.751452	0.053124	-0.002315
7	P1	-10.305634	0.145753	-0.188823
11	P1	-12.568432	0.092605	0.032846
15	P1	-11.767283	0.066523	-0.027288

19	P1	-15.567832	0.043015	0.005866
22	P1	-24.403721	1.148733	-0.342887
26	P1	-15.480860	0.158597	0.065032
30	P1	-20.199661	1.074386	-0.117273

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.815319	0.031721	0.080434
7	P2	-22.381056	0.035974	0.067235
11	P2	-10.221166	0.047065	0.197563
15	P2	-4.977564	0.020404	0.010375
19	P2	-6.828390	0.029098	0.014954
22	P2	-7.110683	0.029384	0.065696
26	P2	-23.851475	0.025540	0.018794
30	P2	-21.905016	0.030969	0.052790

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998725	0.002753	0.000864
7	P3	-7.998660	0.002765	0.001039
11	P3	-7.998611	0.002777	0.000902
15	P3	-7.998753	0.002766	0.000843
19	P3	-7.998624	0.002781	0.001020
22	P3	-7.998684	0.002759	0.000943
26	P3	-7.998652	0.002767	0.001045
30	P3	-7.998693	0.002774	0.001473

## 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	0.000465594
	stdev	2.18861e-07
MEAN Q	mean	0.000513105
	stdev	2.31061e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128893
	stdev	0.00100052
STDEV Q	mean	0.129137
	stdev	0.00101160



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005031[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
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## 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)


Acsending

Descending

### 7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

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)


Acsending



<input type="checkbox"/>
Descending

### 7.5 - Absolute Doppler for GM1

#### Evolution of Absolute Doppler

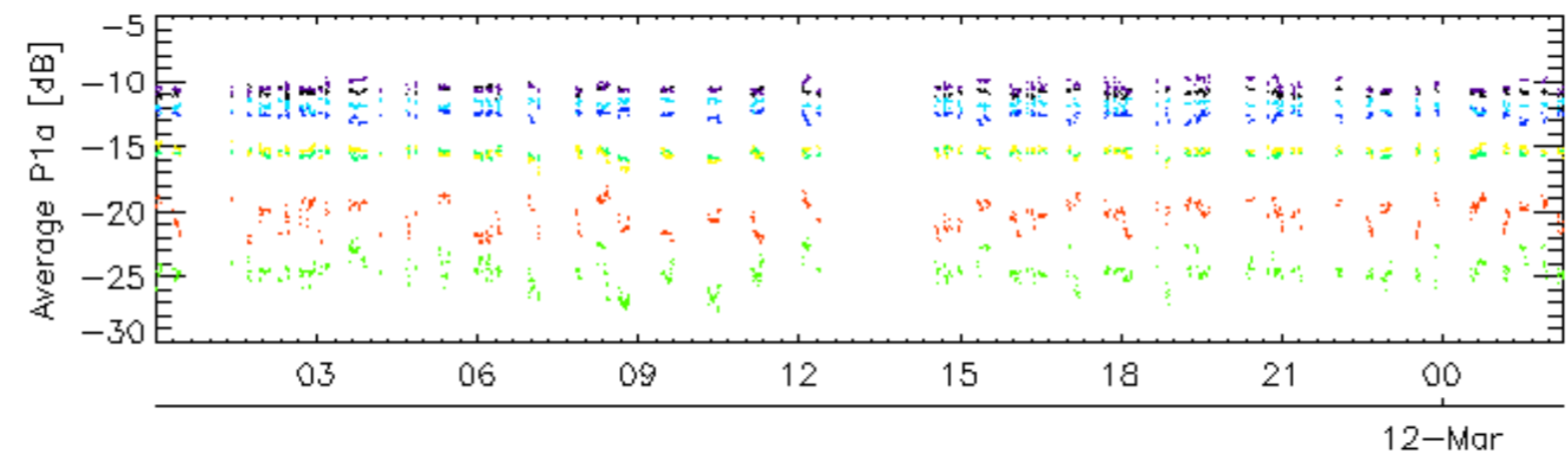
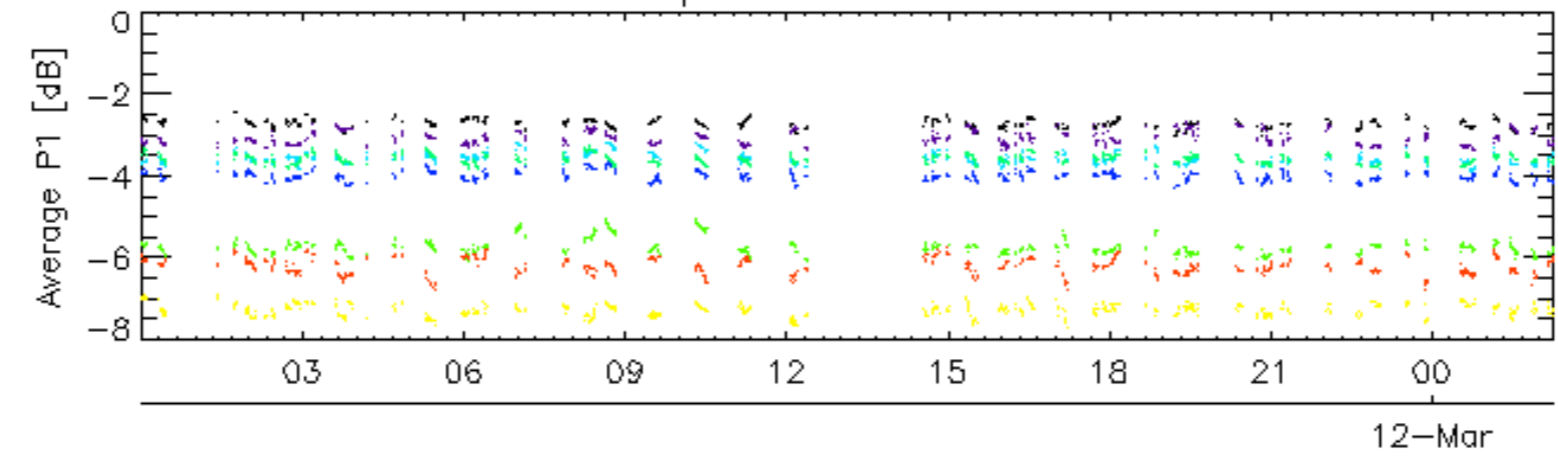
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

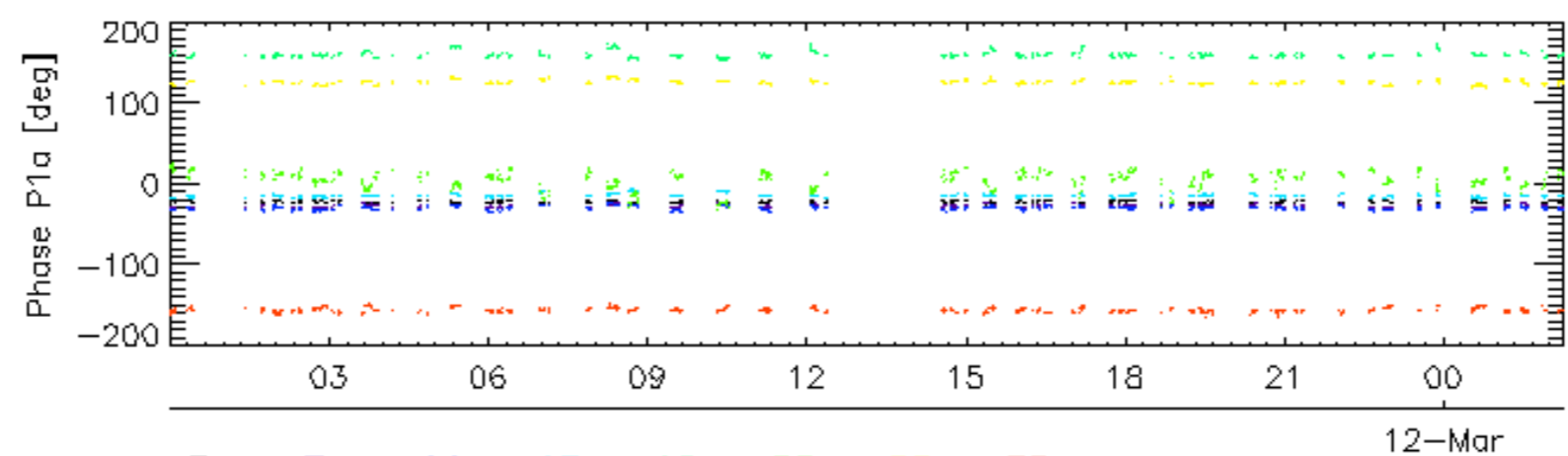
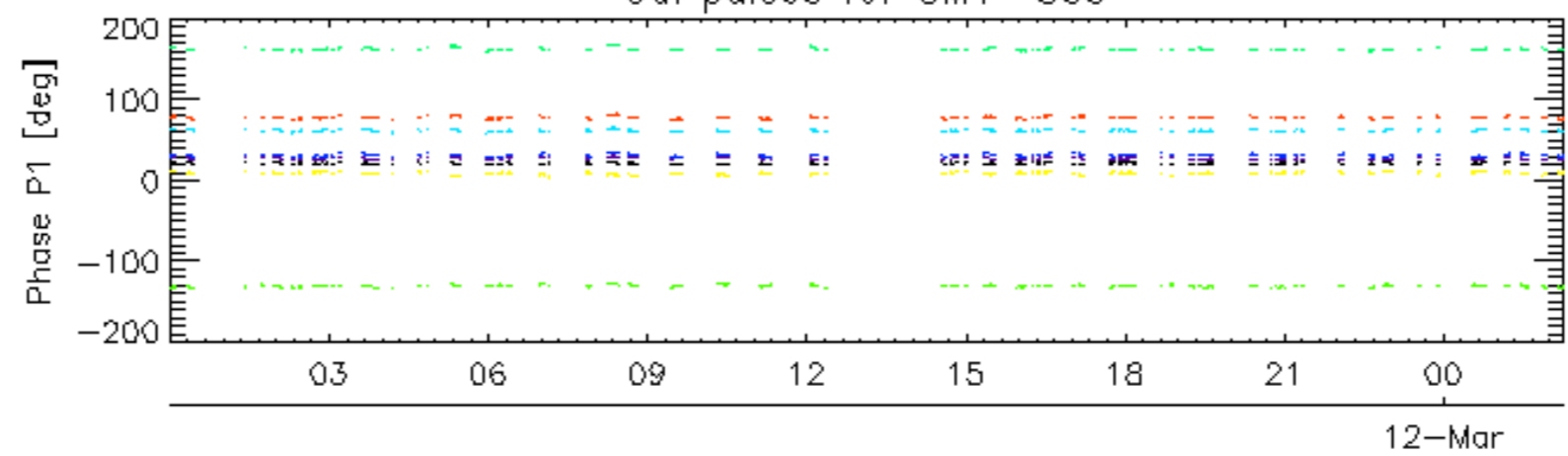
#### Evolution Doppler error versus ANX

<input type="checkbox"/>
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Cal pulses for GM1 SS3

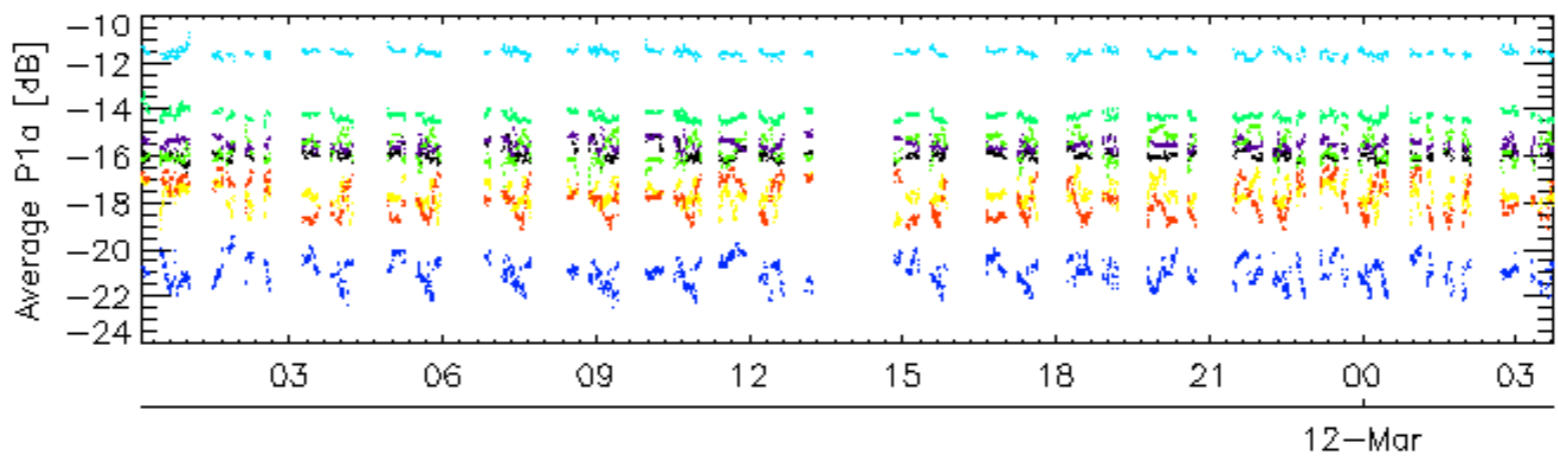
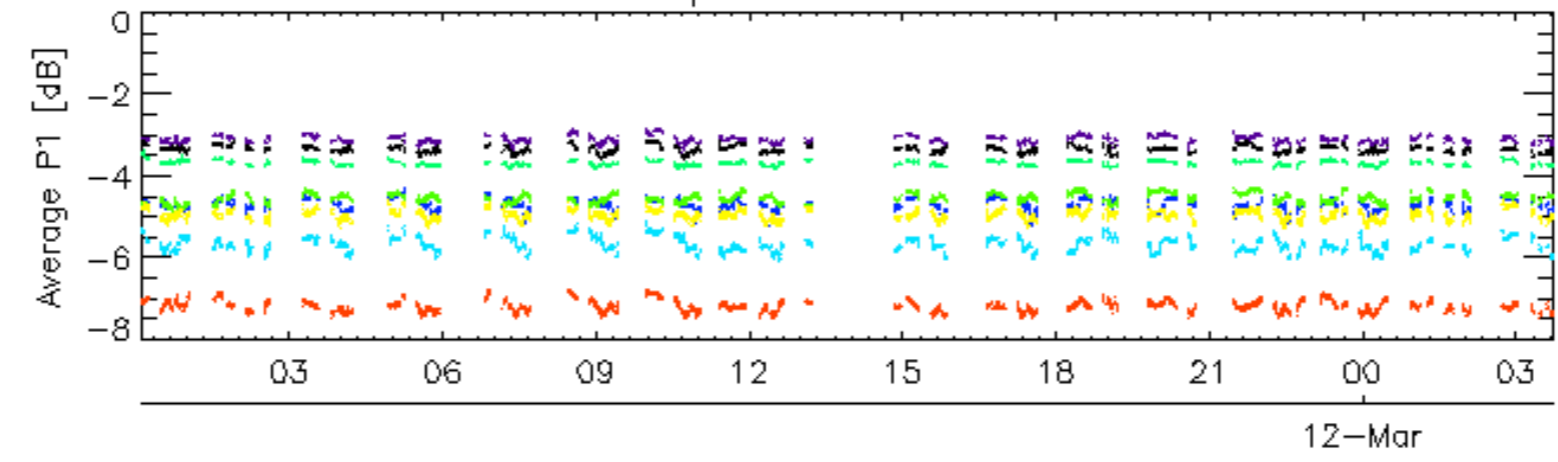


Cal pulses for GM1 SS3

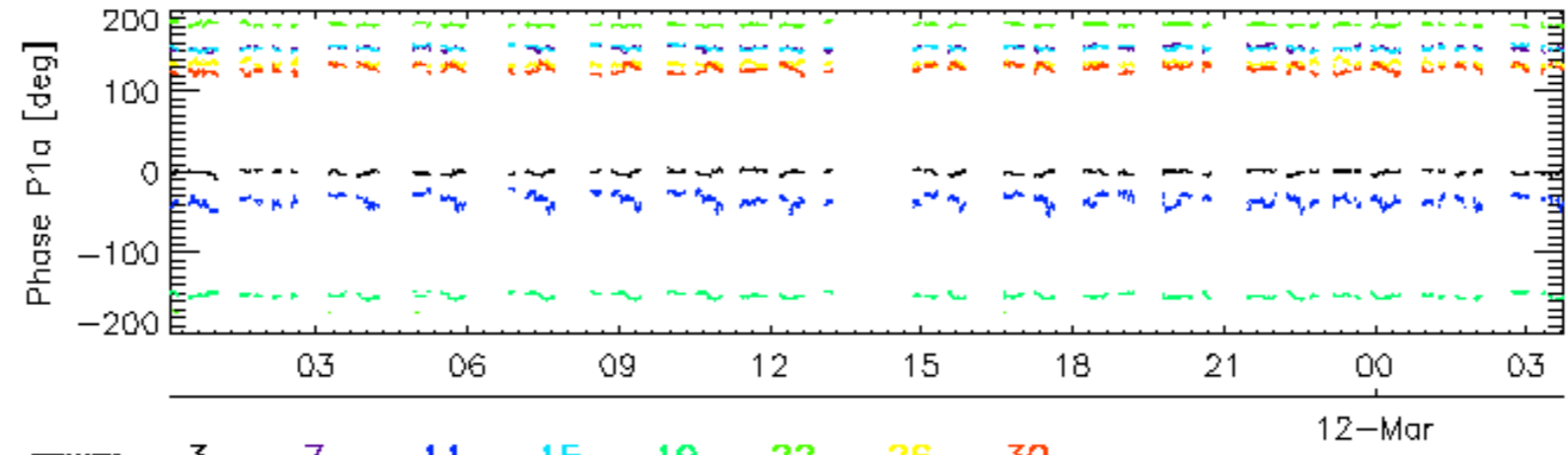
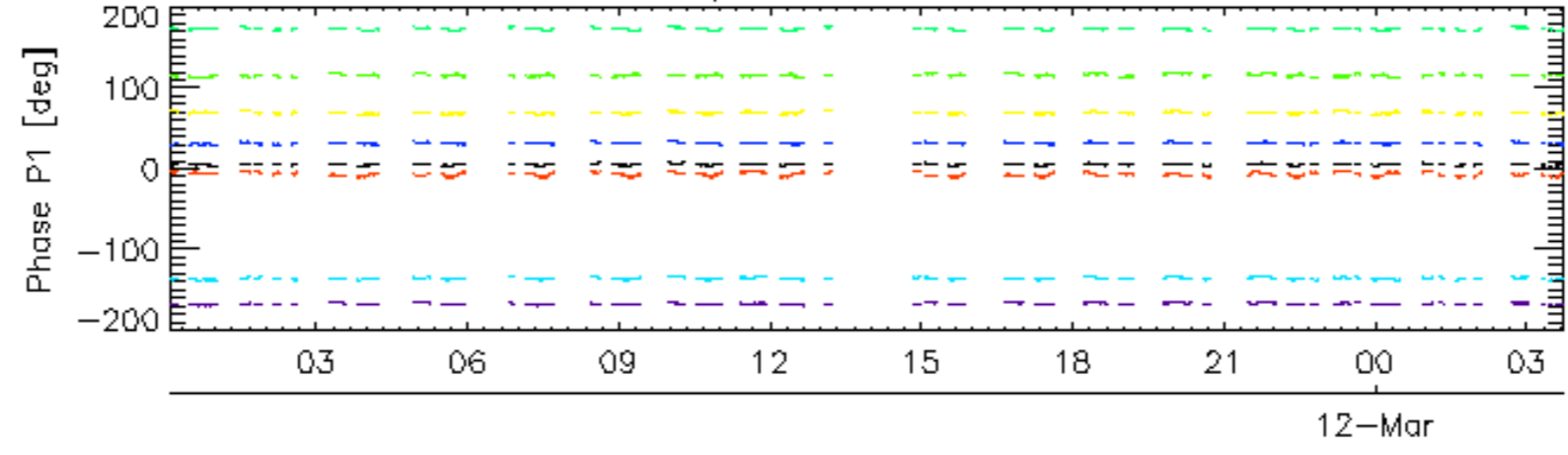


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

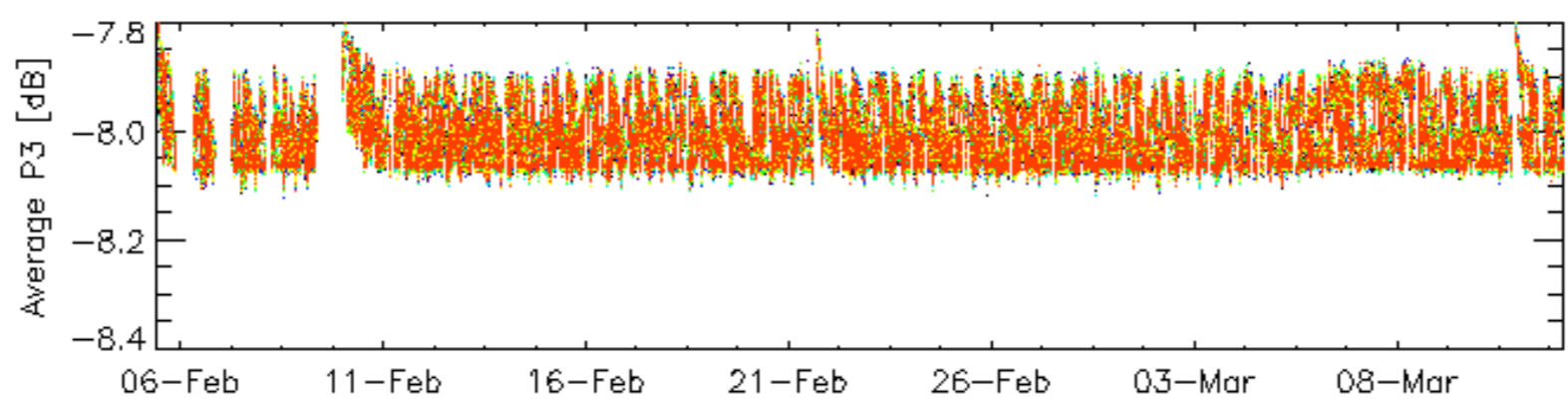
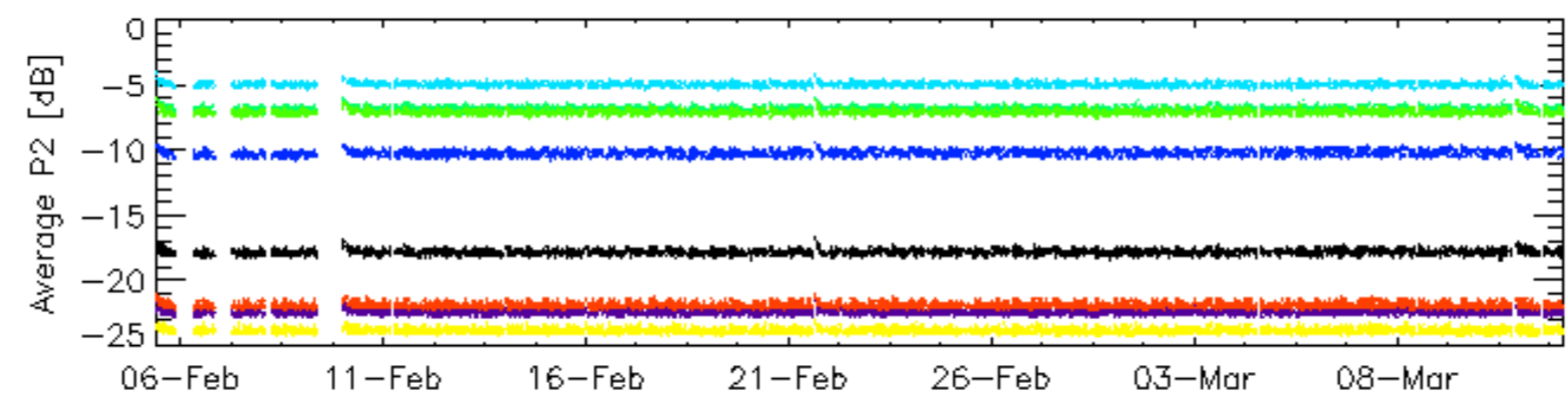
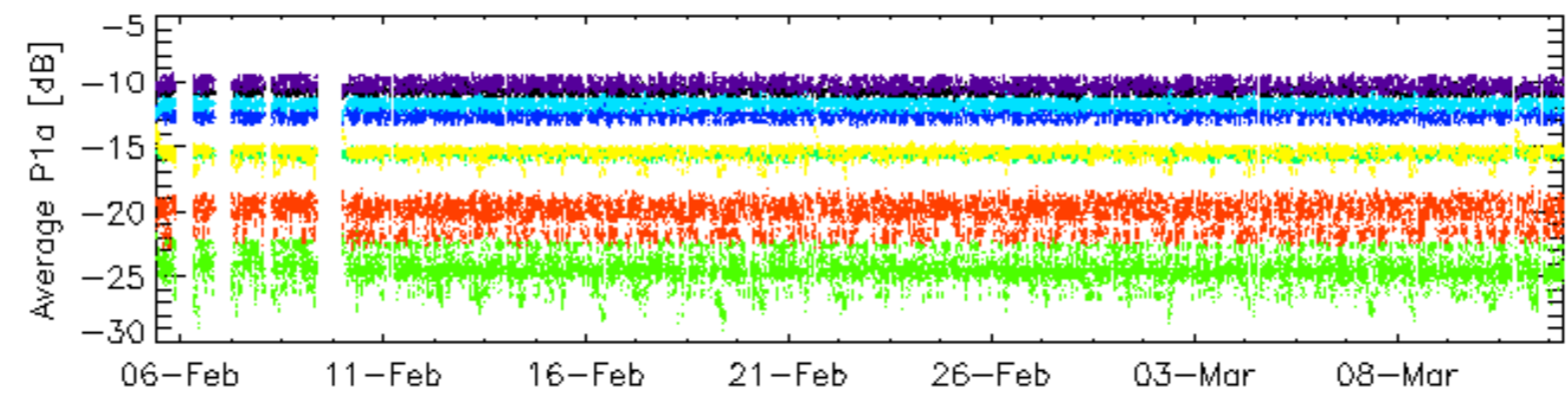
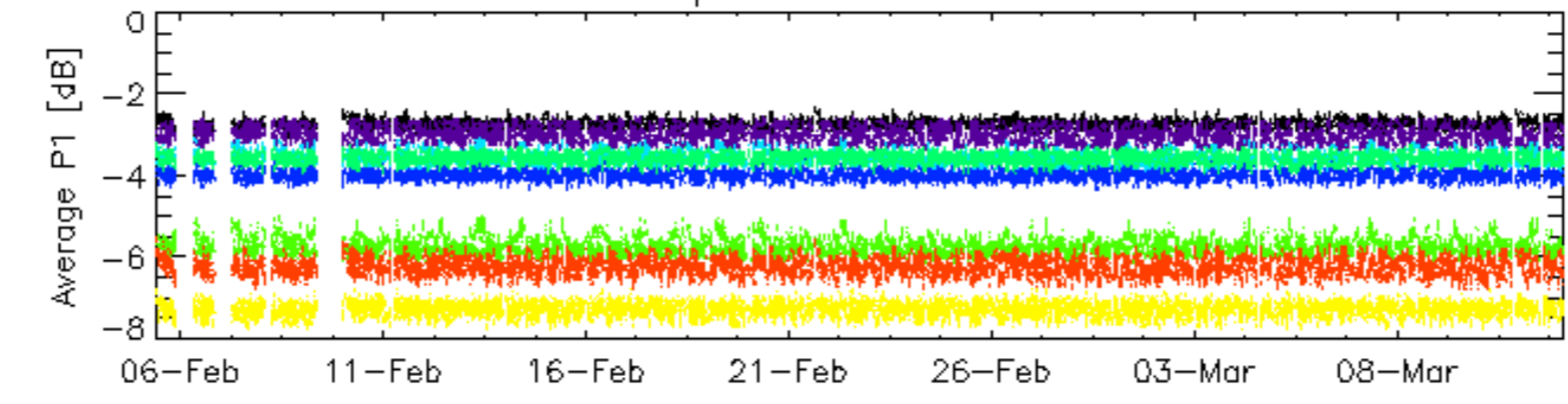


Cal pulses for WVS IS2



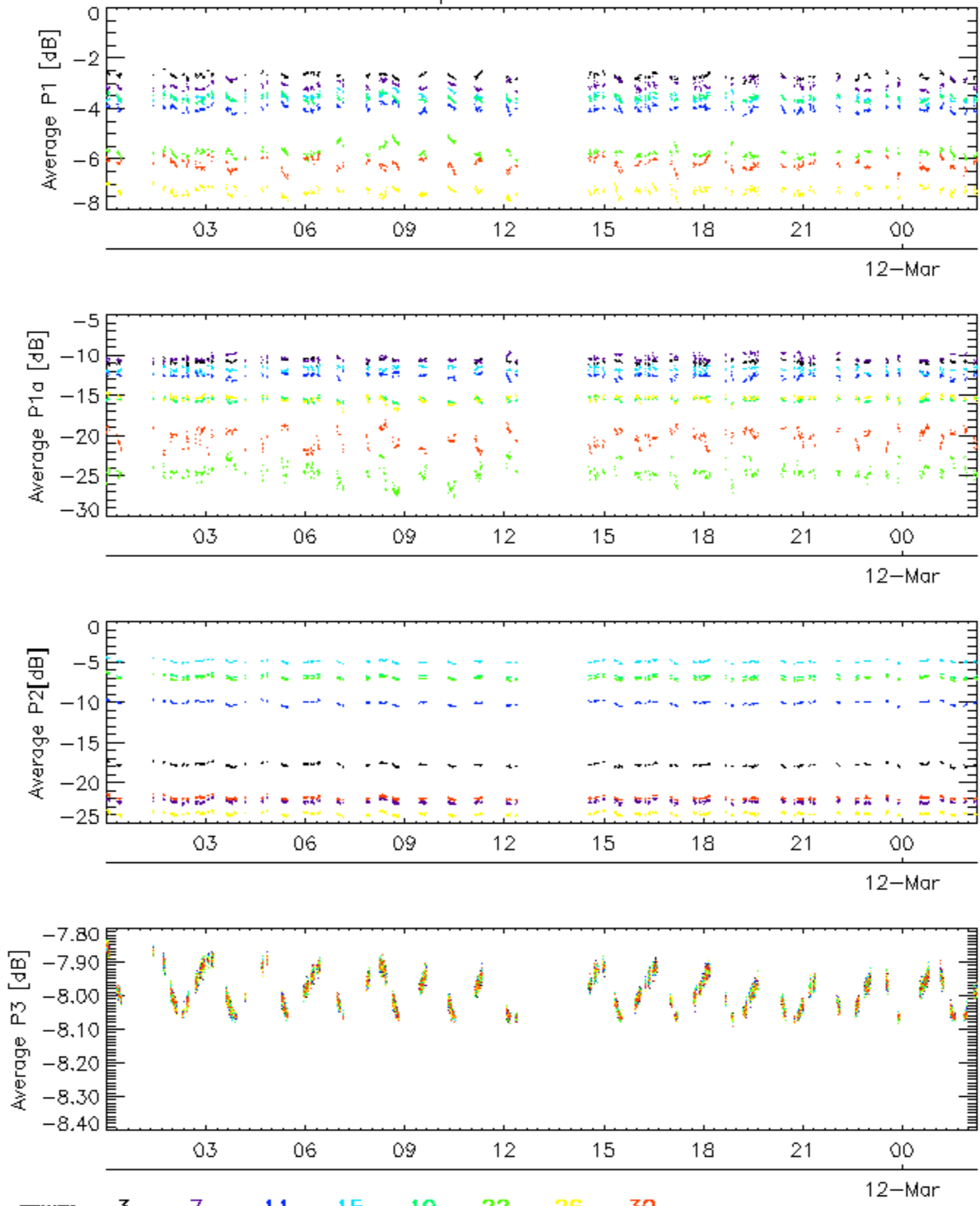
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

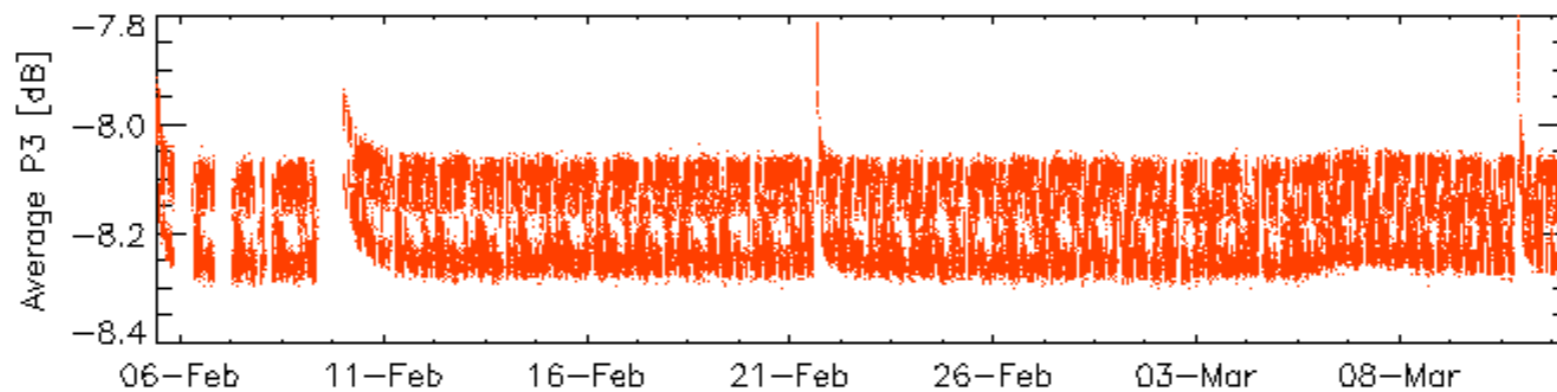
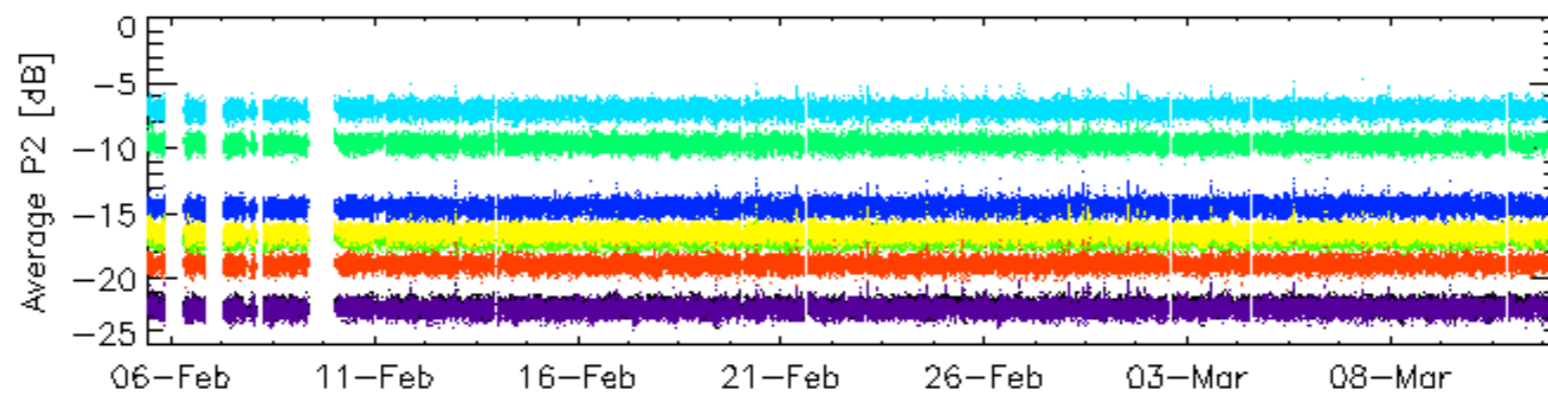
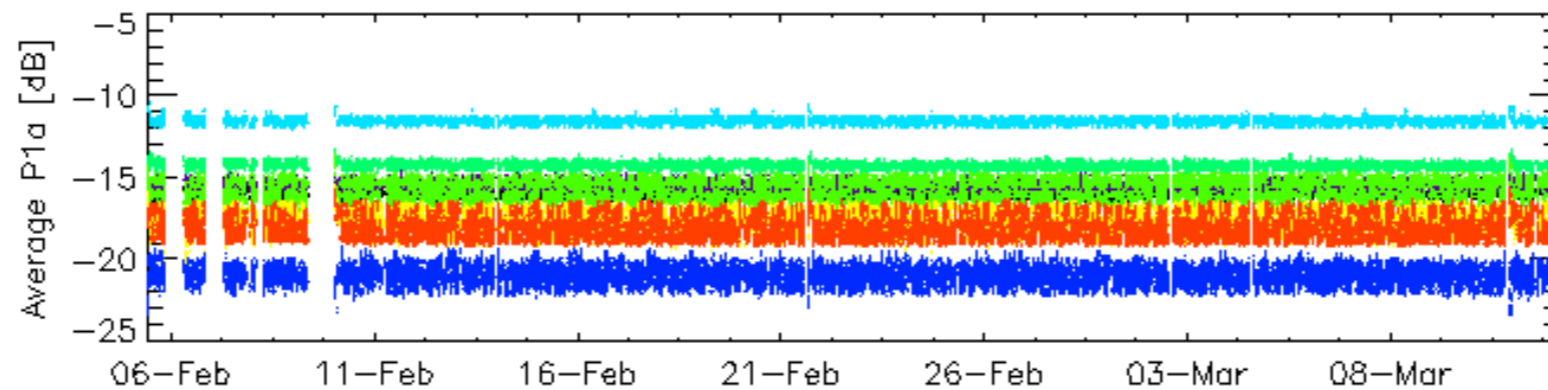
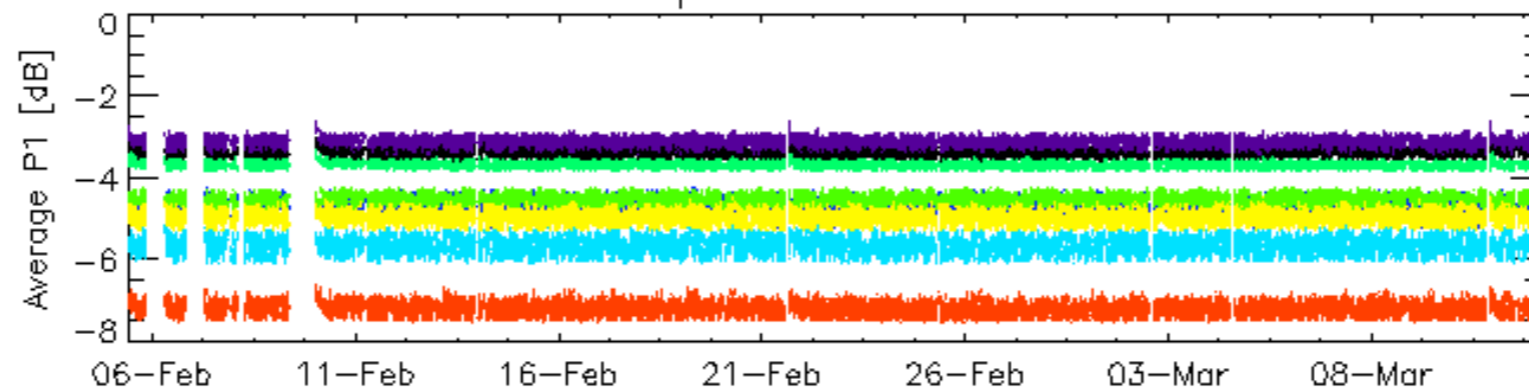


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3



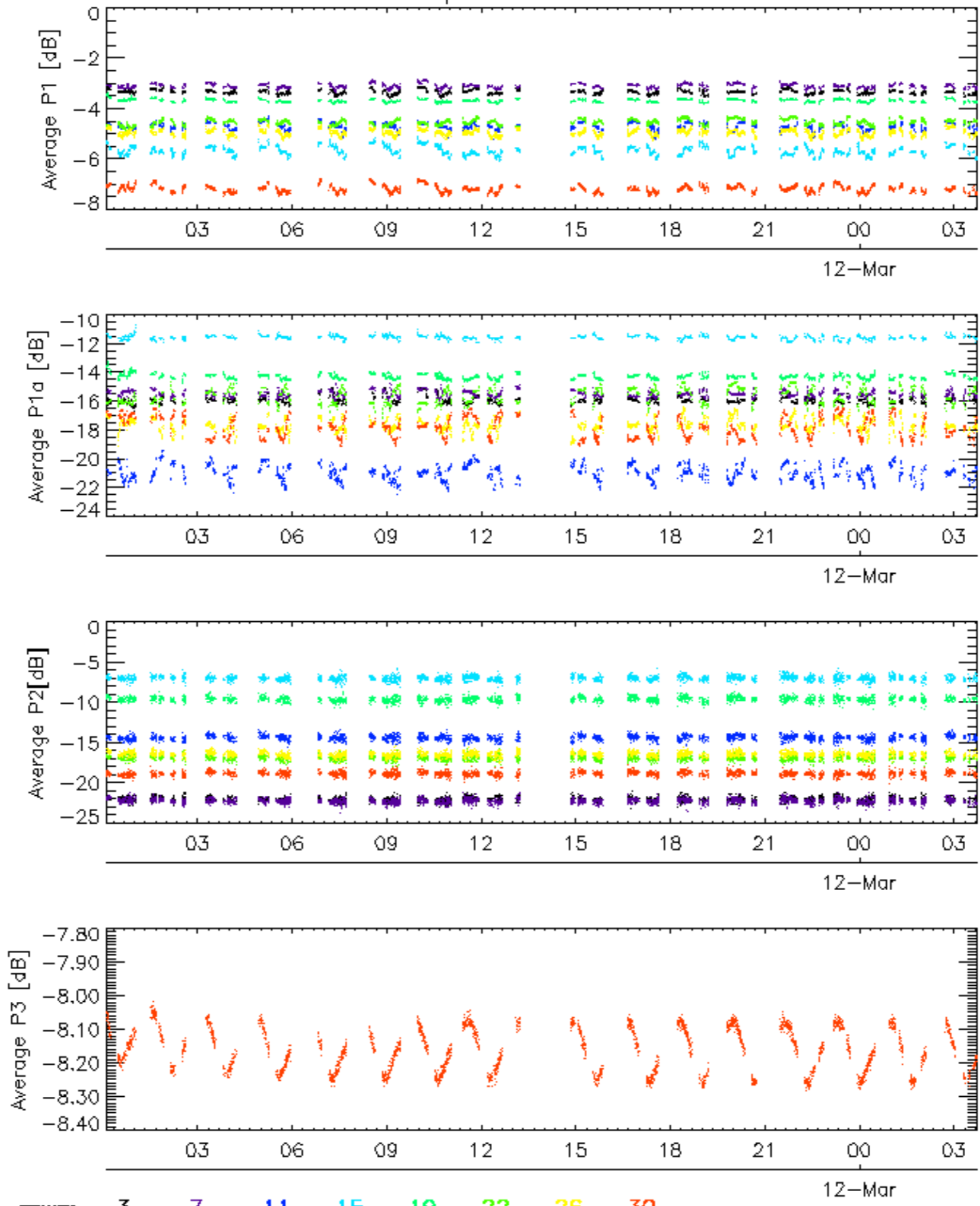
Cal pulses for WVS IS2



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

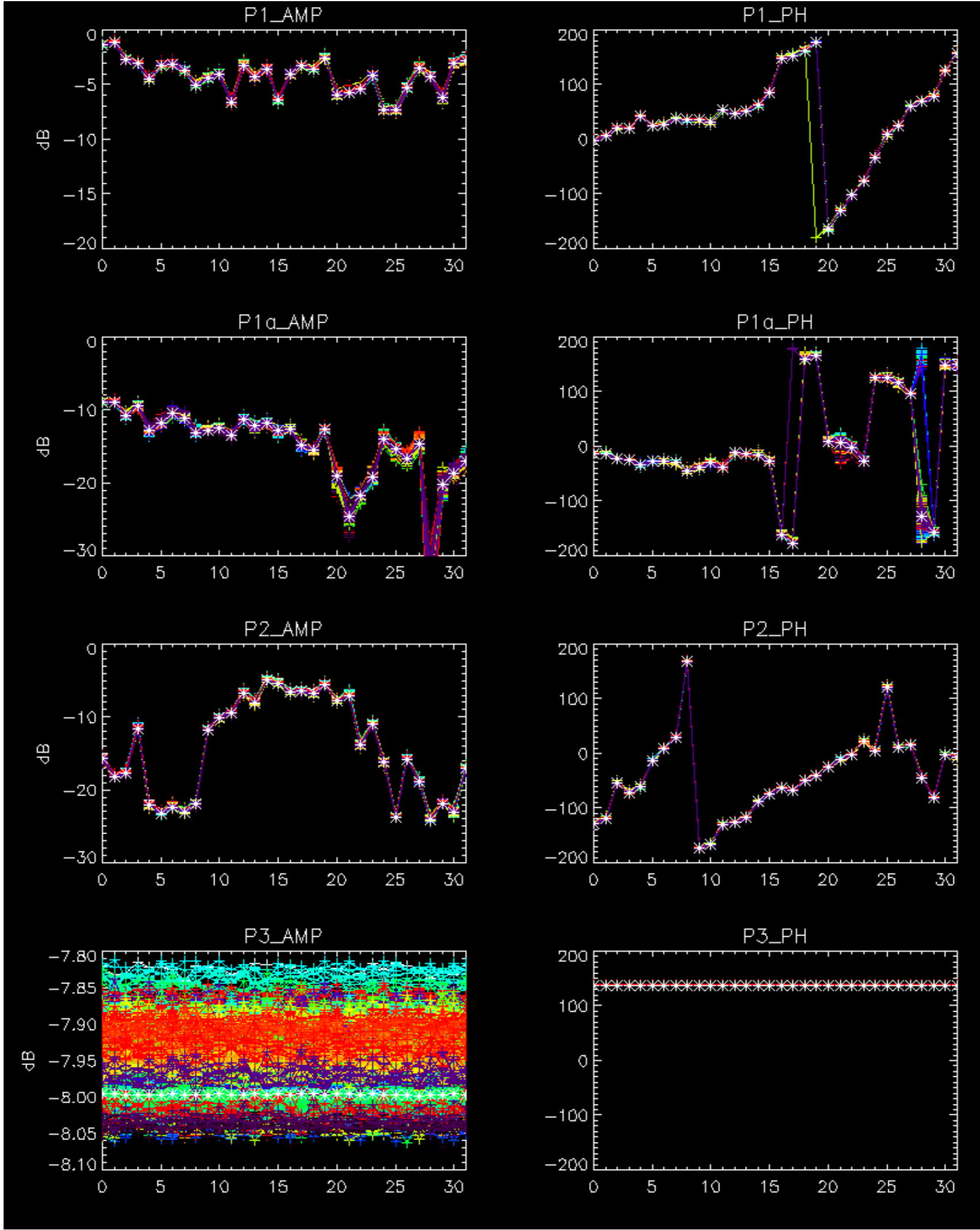


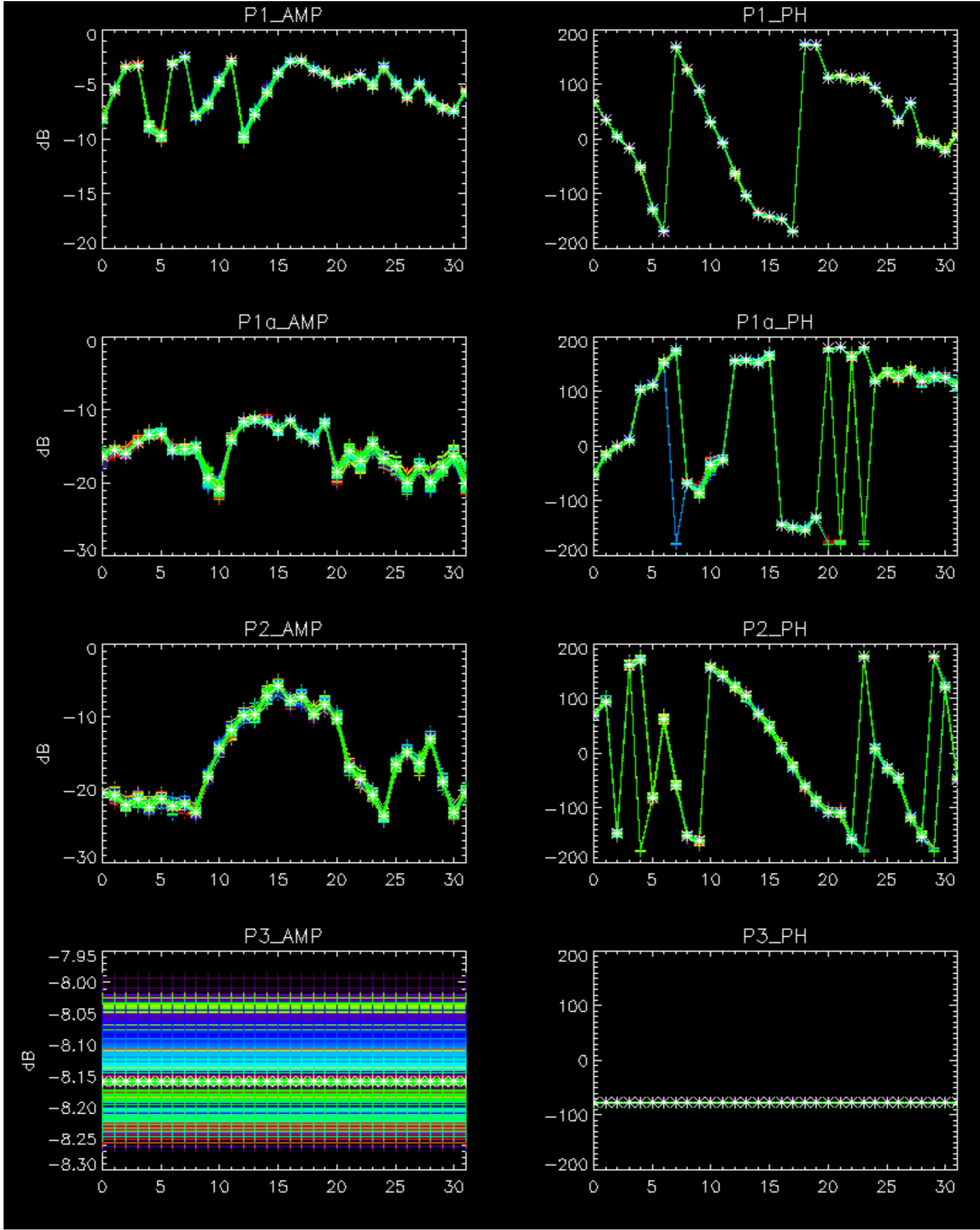
Cal pulses for WVS IS2



No anomalies observed.





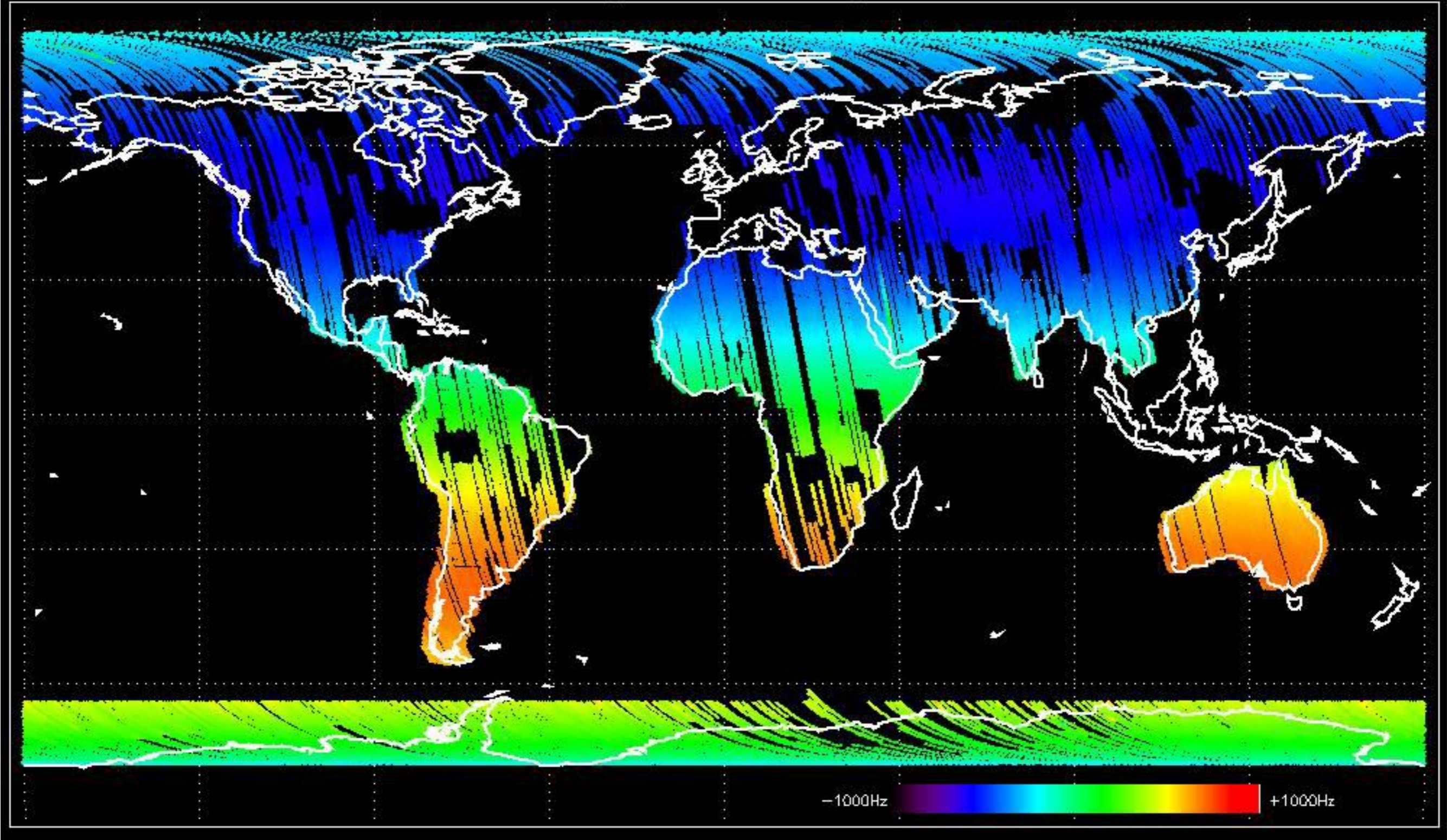


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



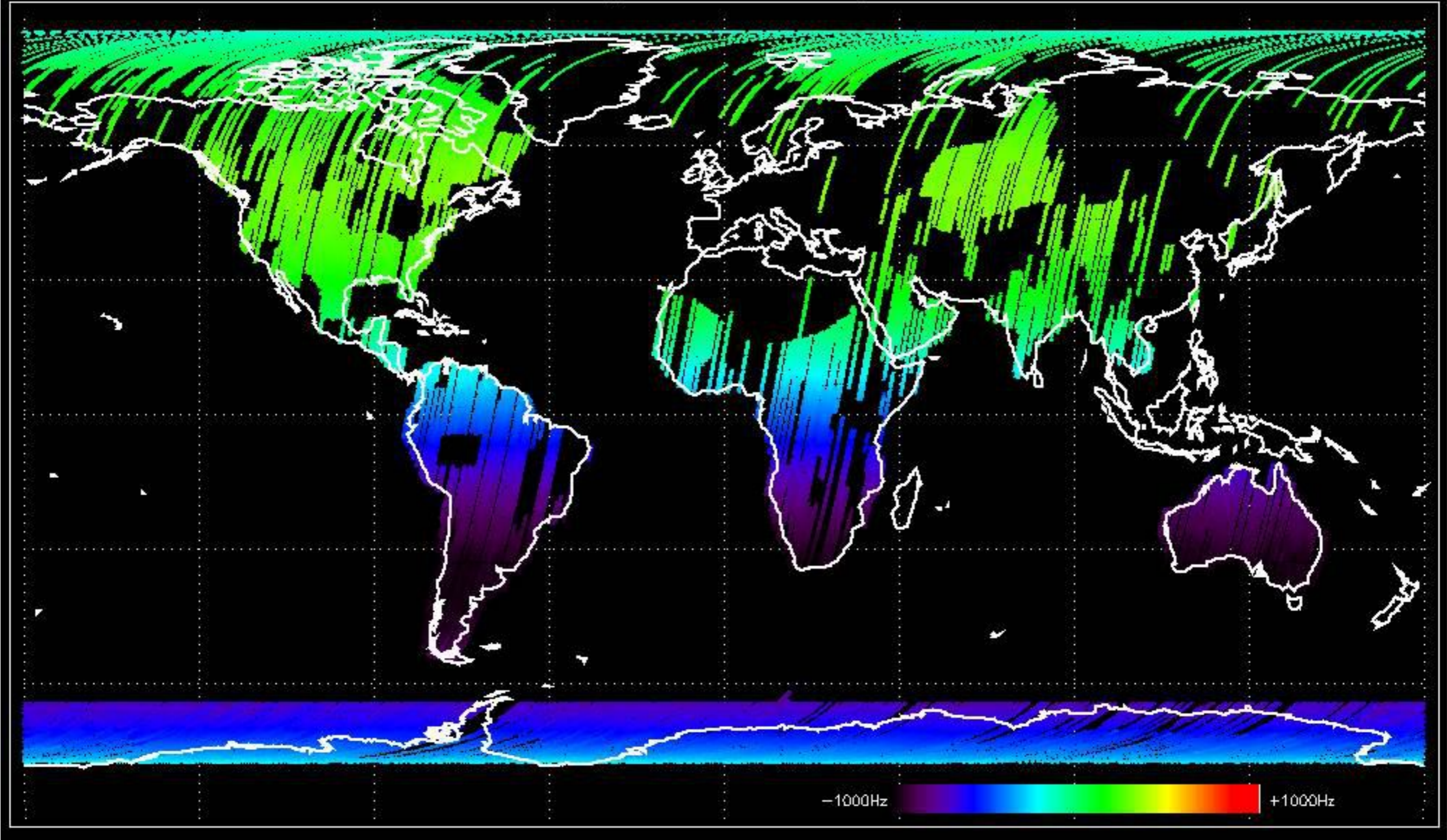


Doppler 'GM1' 'SS1' ascending



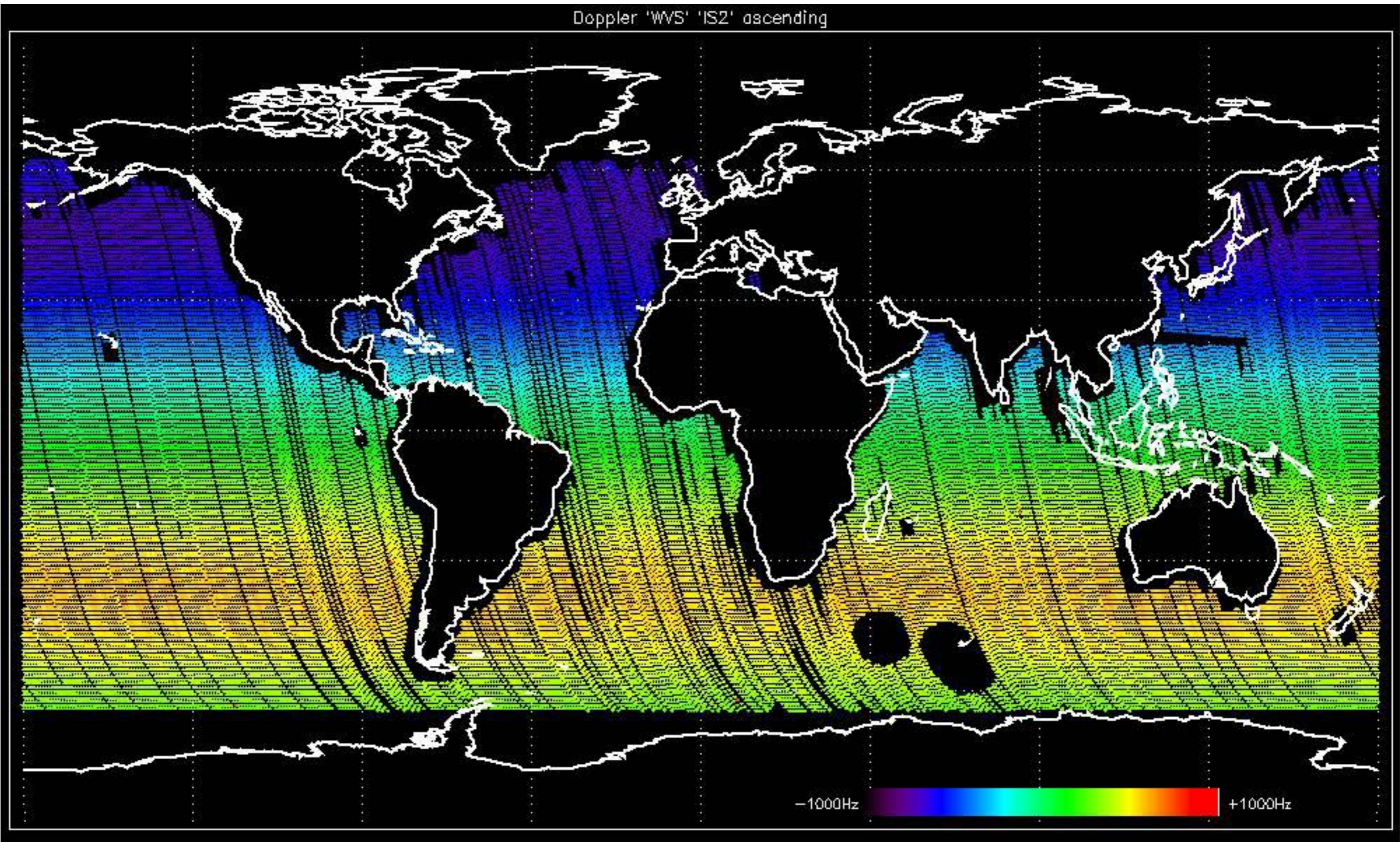


Doppler 'GM1' 'SS1' descending



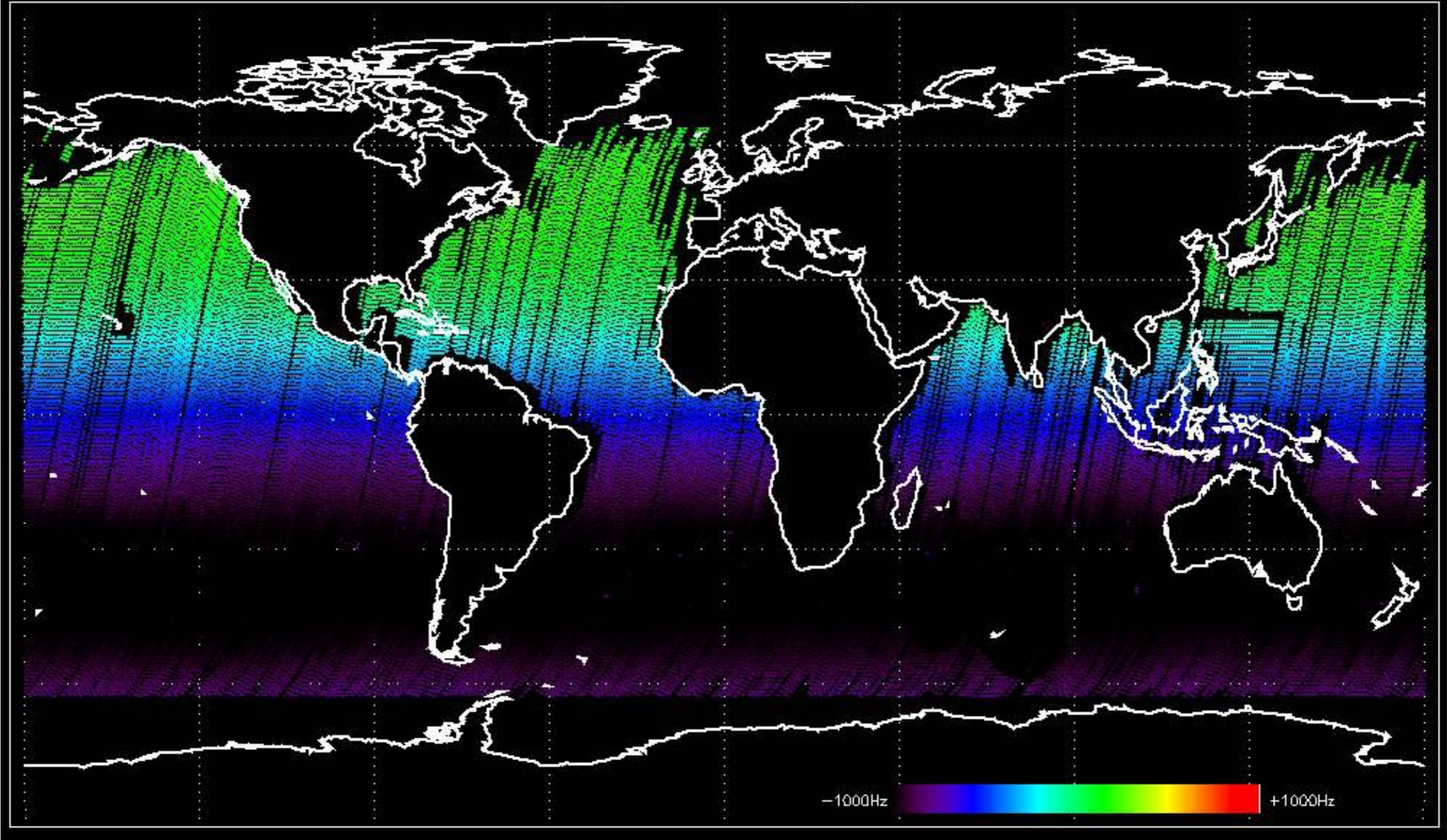


Doppler 'WVS' 'IS2' ascending



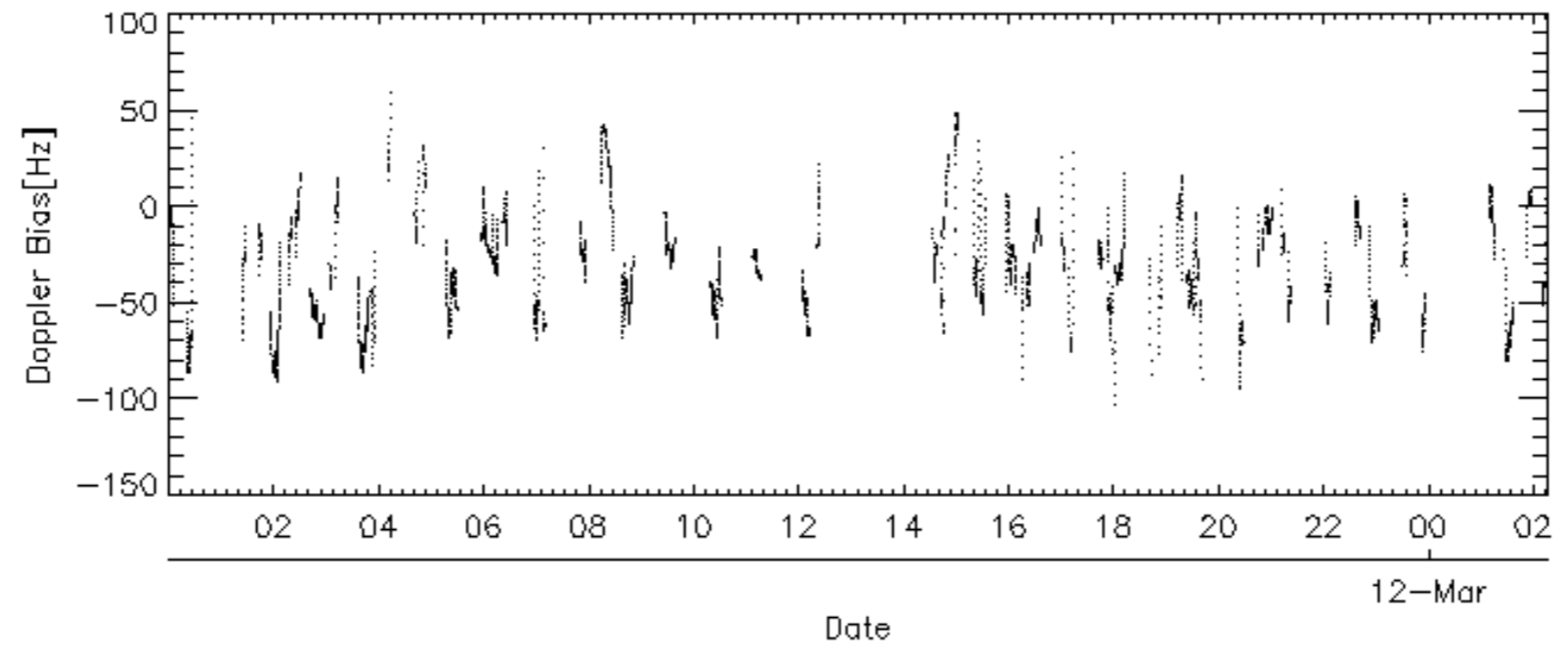
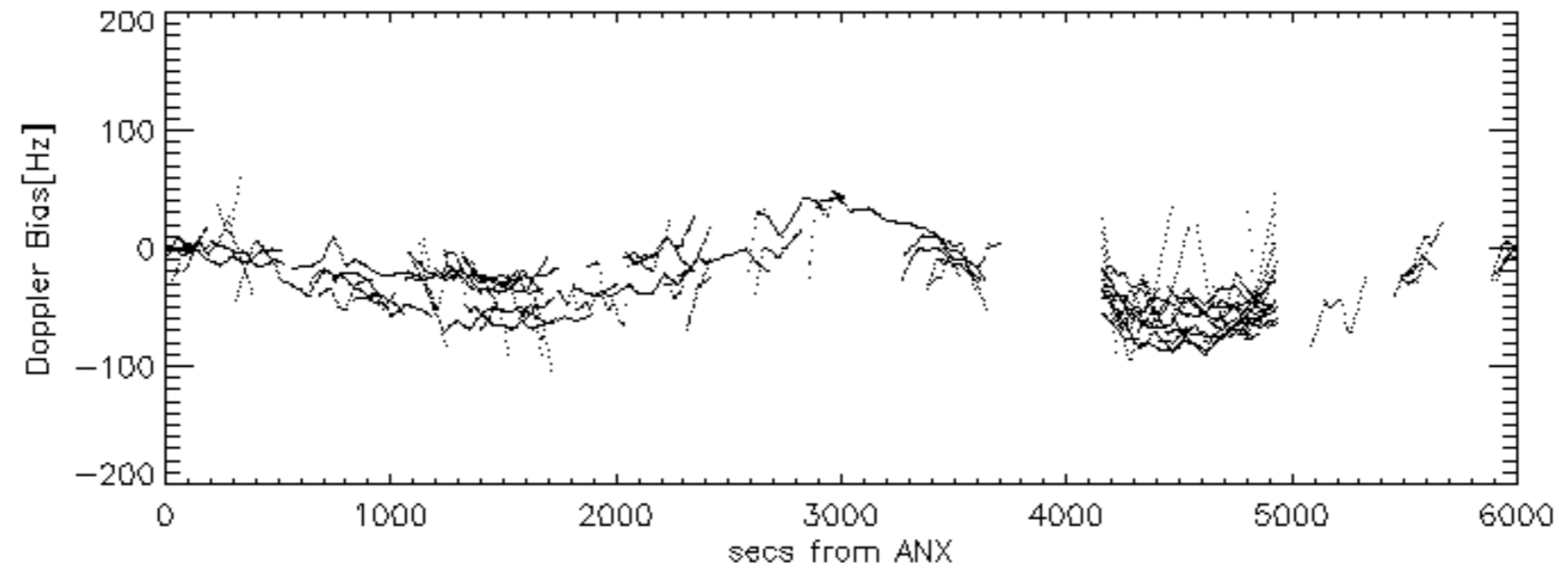
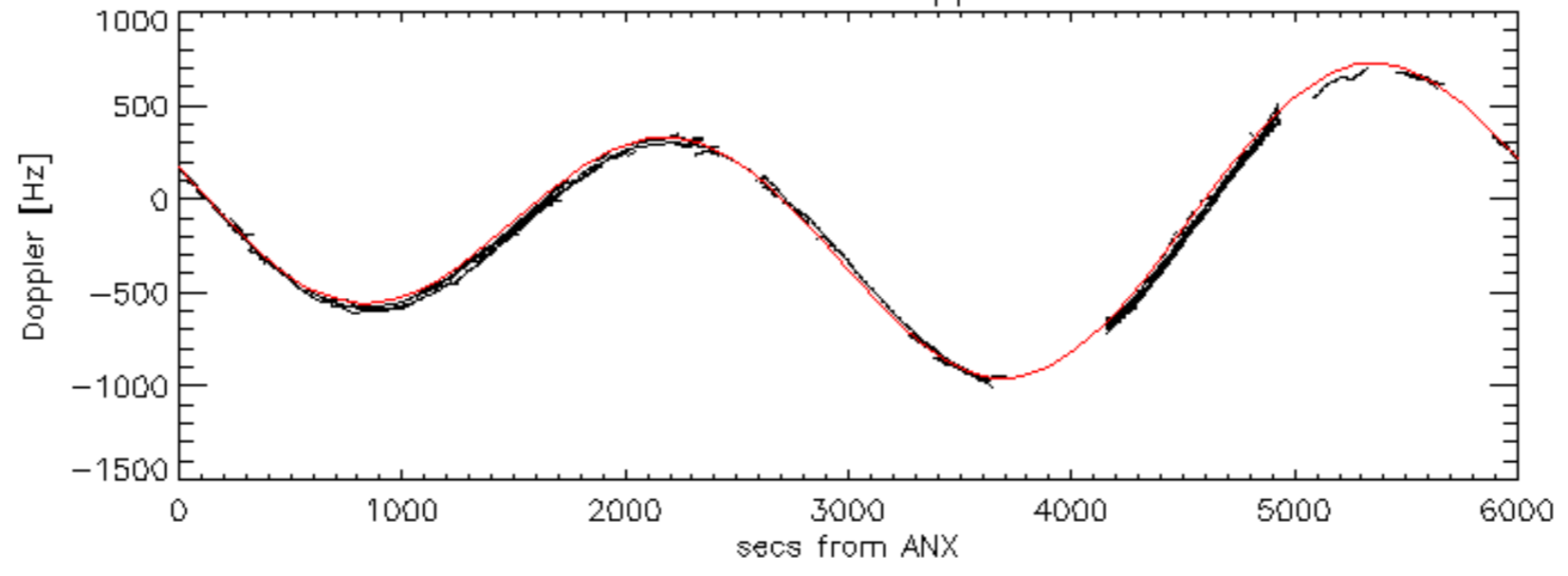


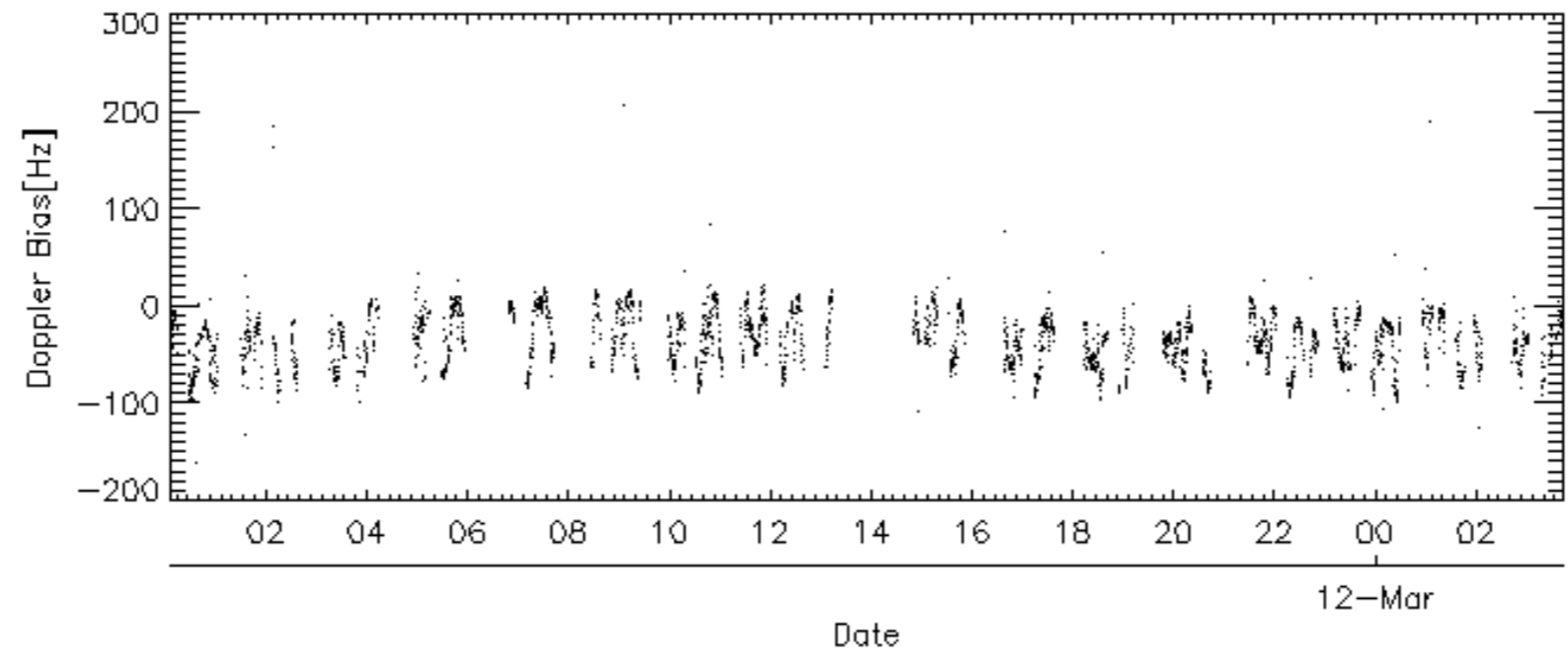
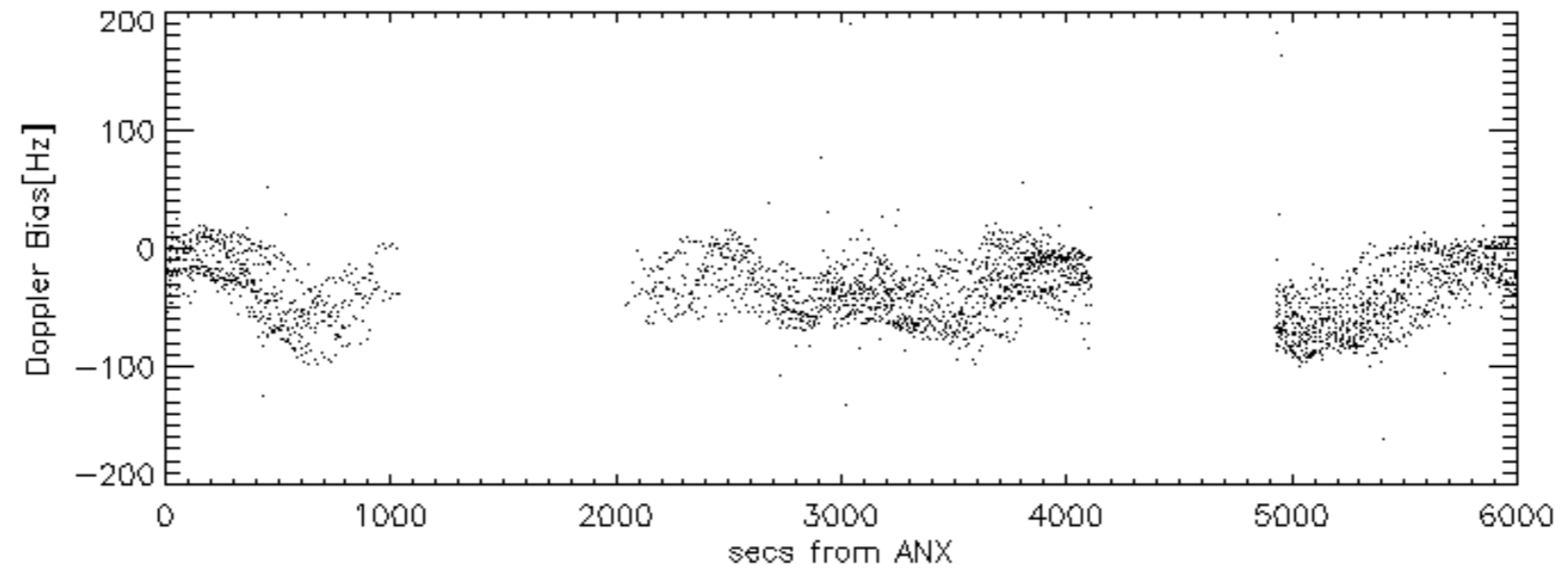
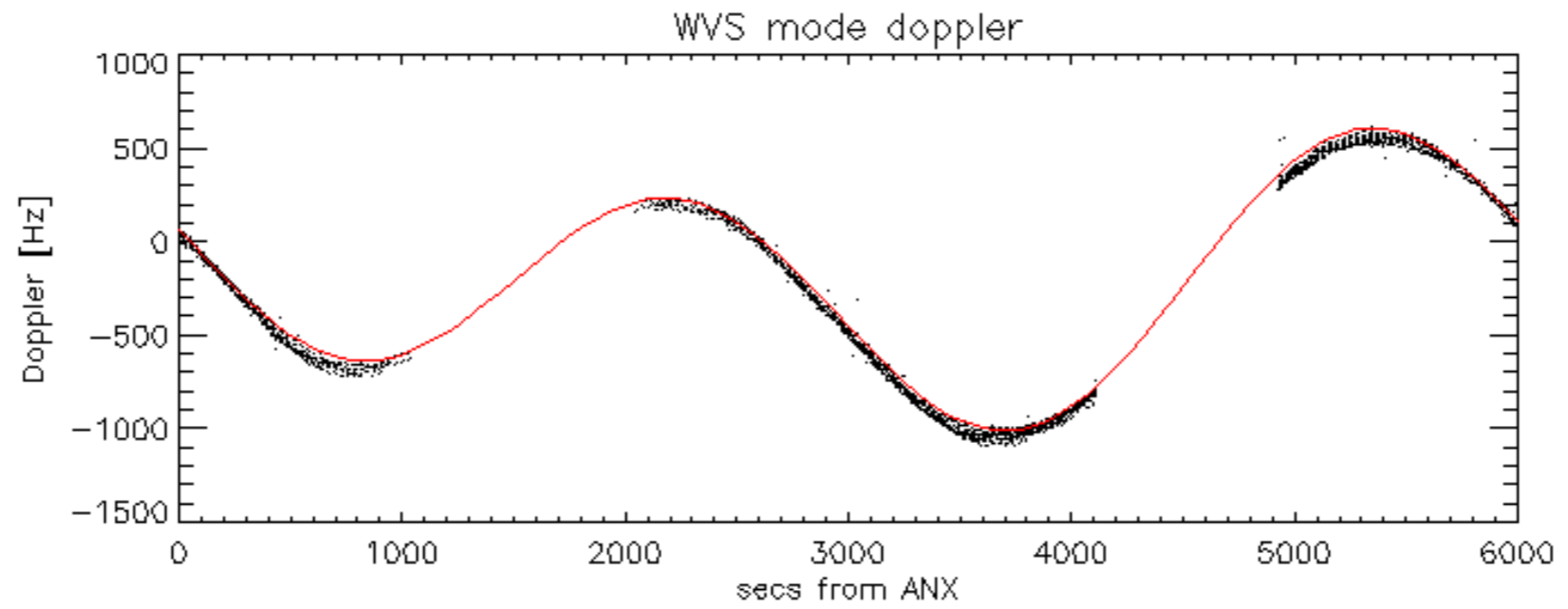
Doppler 'WVS' 'IS2' descending





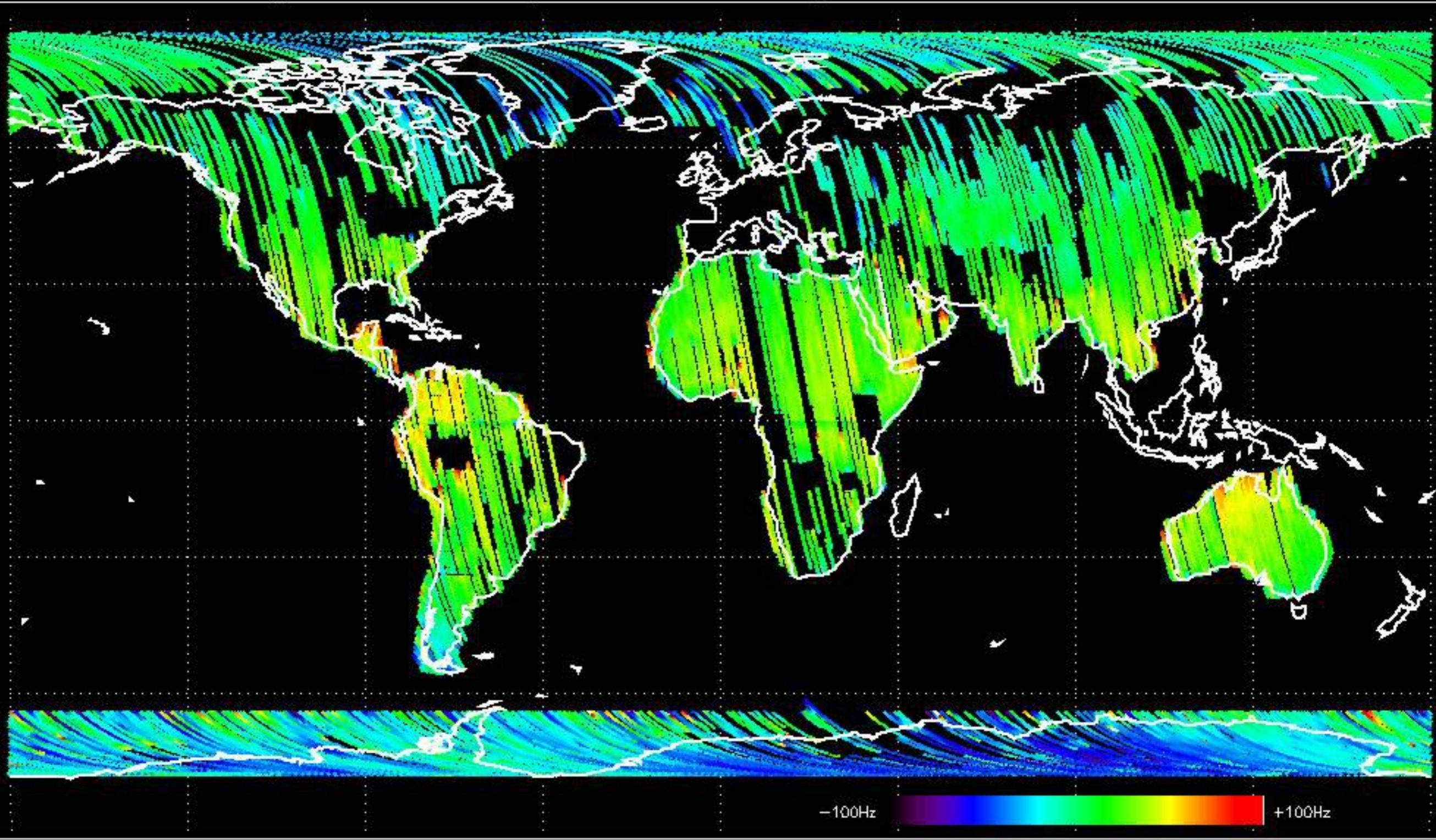
GM1 mode doppler







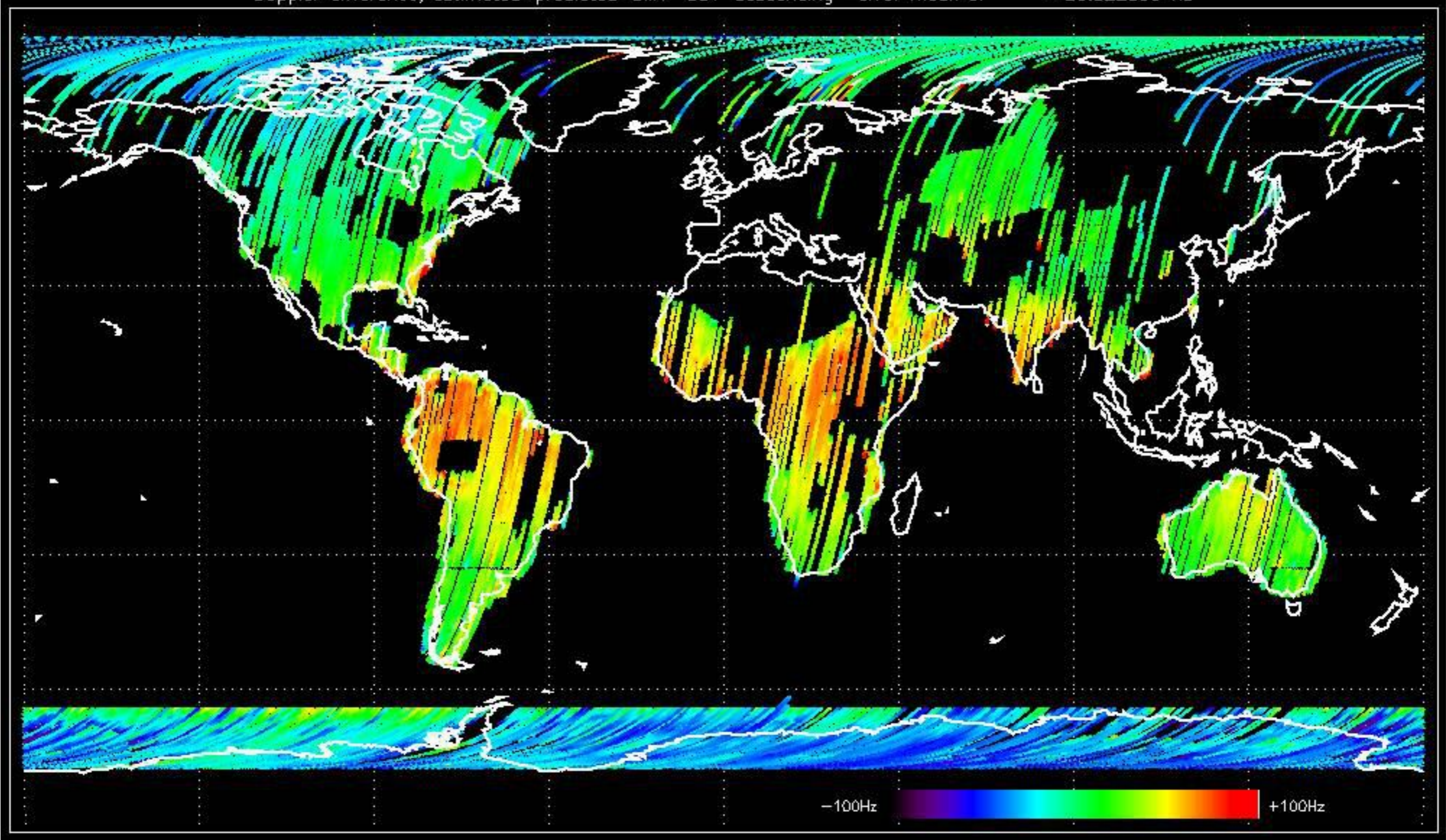
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -29.924131 Hz



-100Hz +100Hz

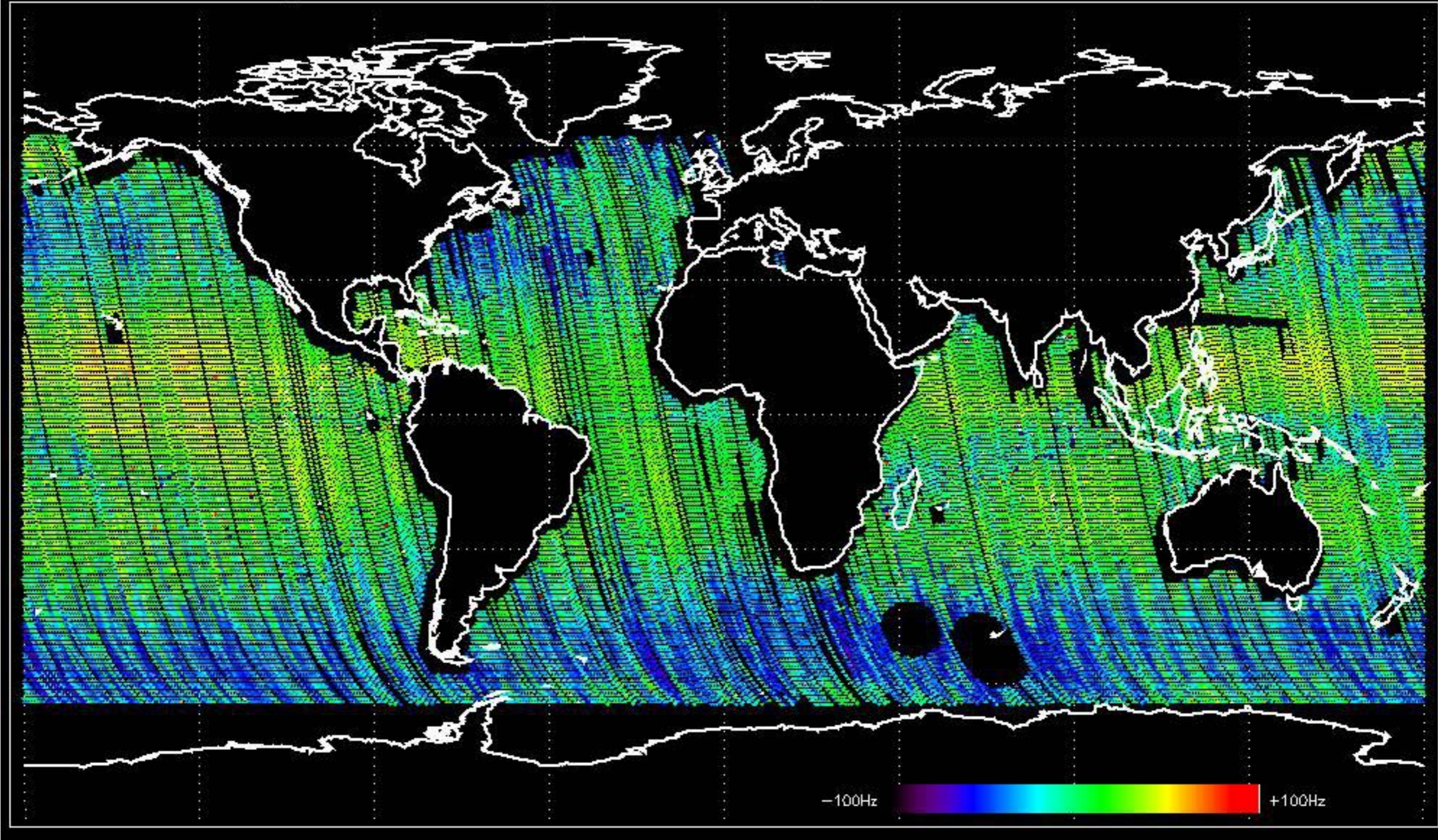


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -26.522093 Hz



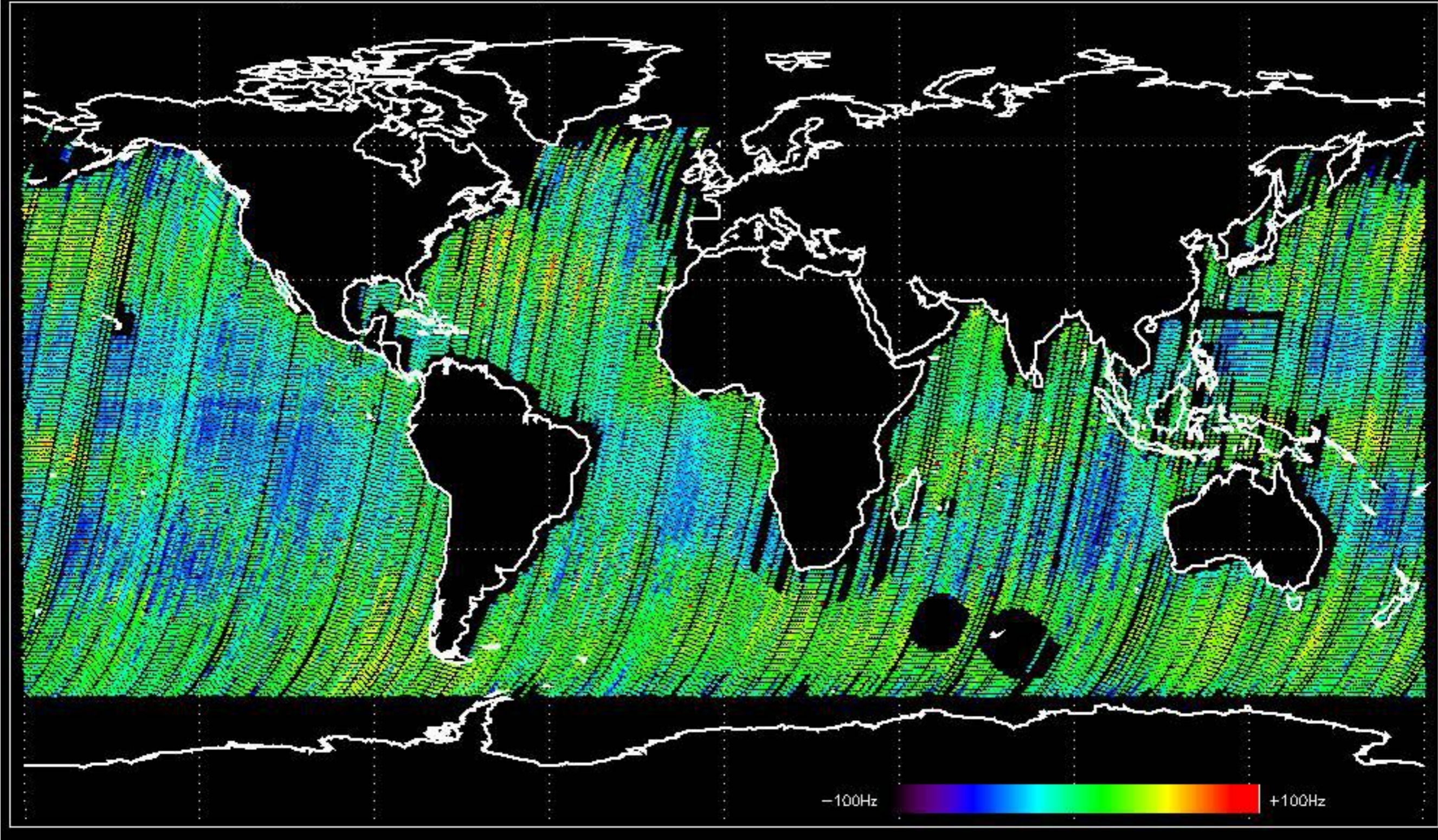


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.699447 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -32.616088 Hz





No anomalies observed on available MS products:

No anomalies observed.











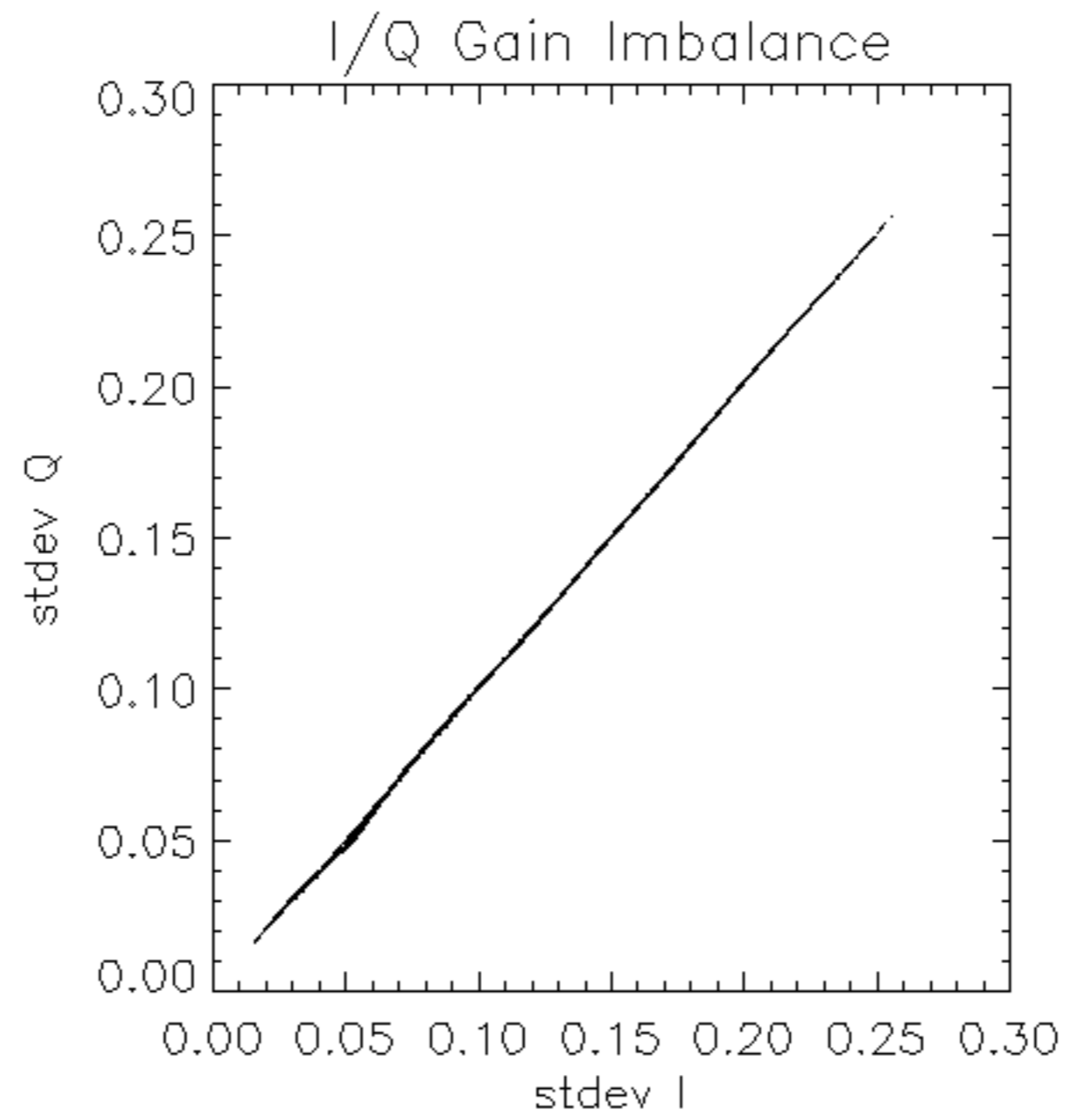


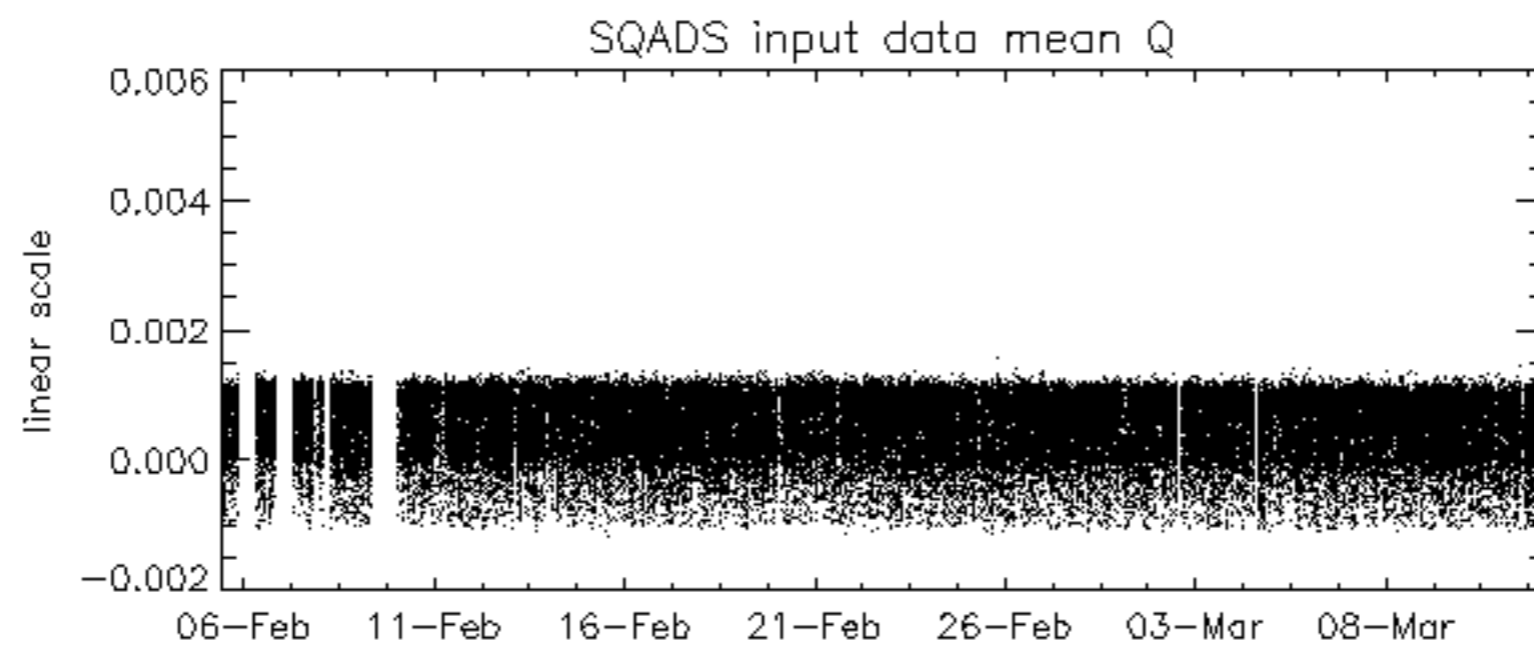
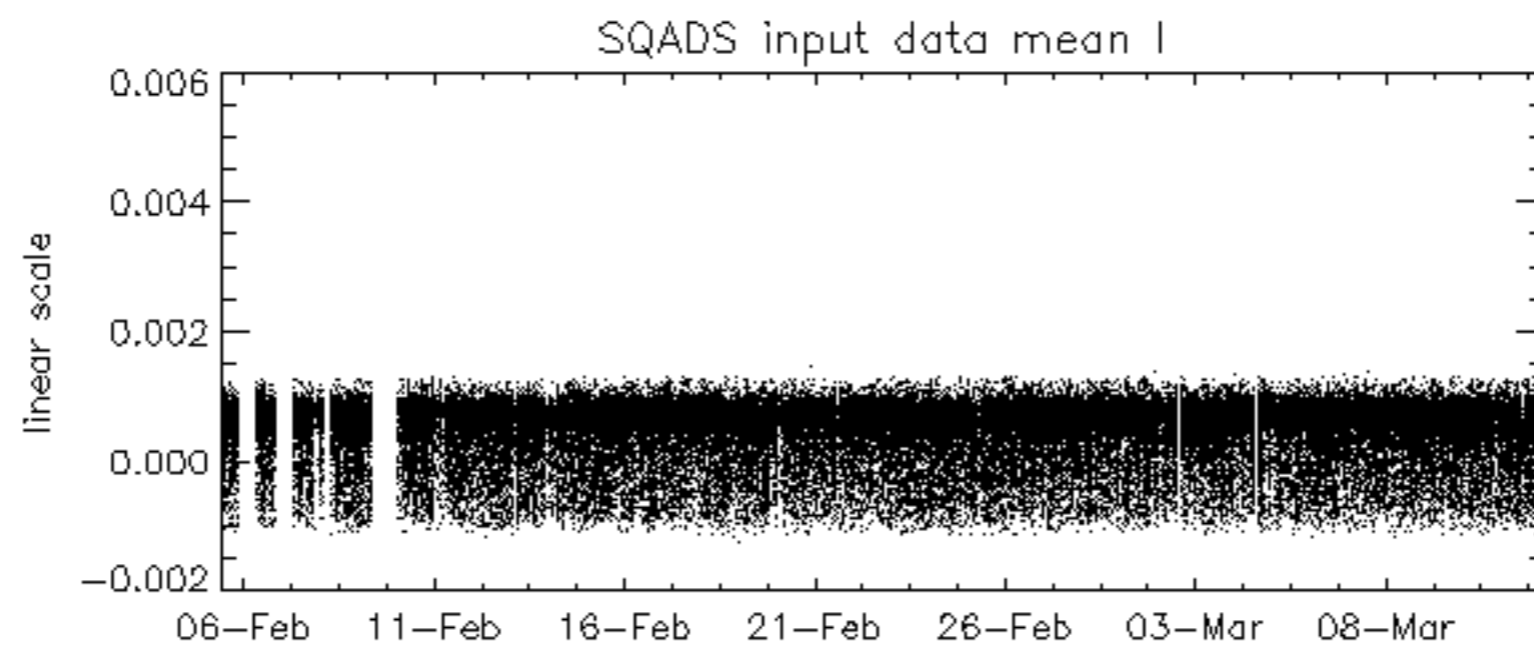
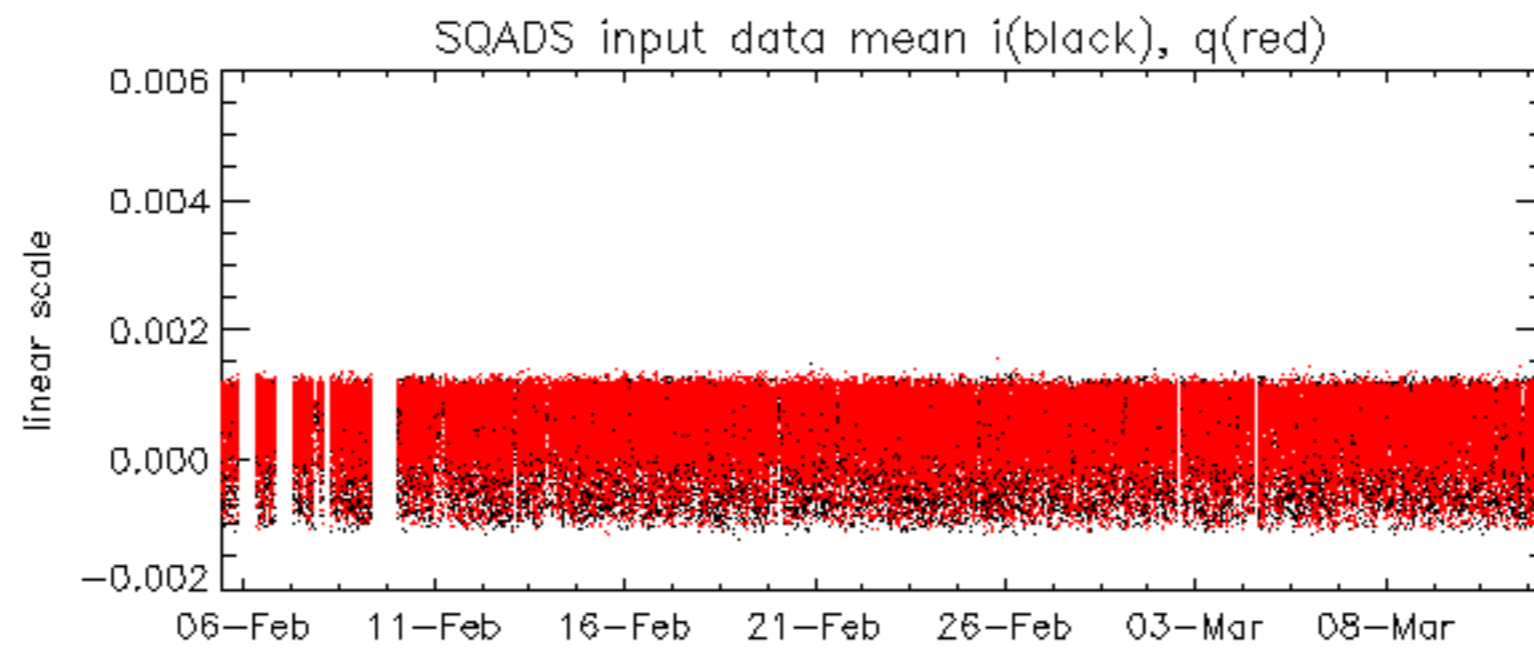


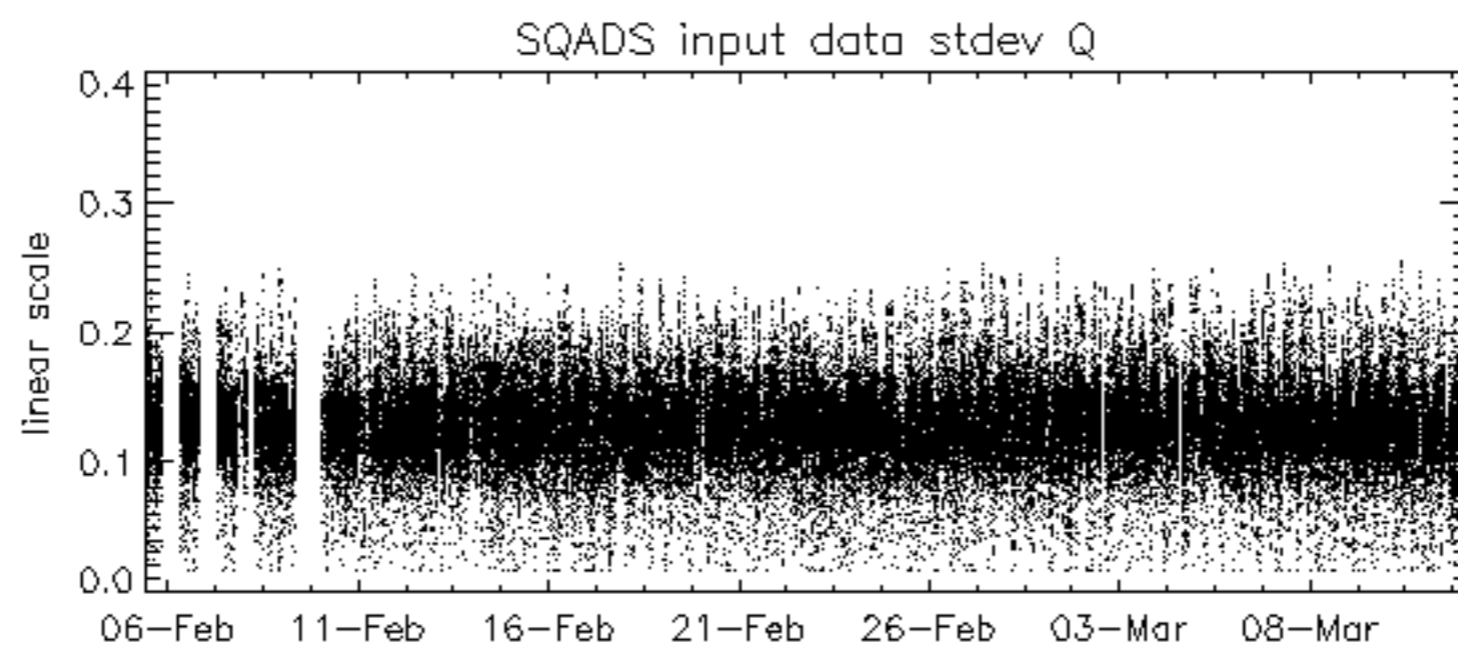
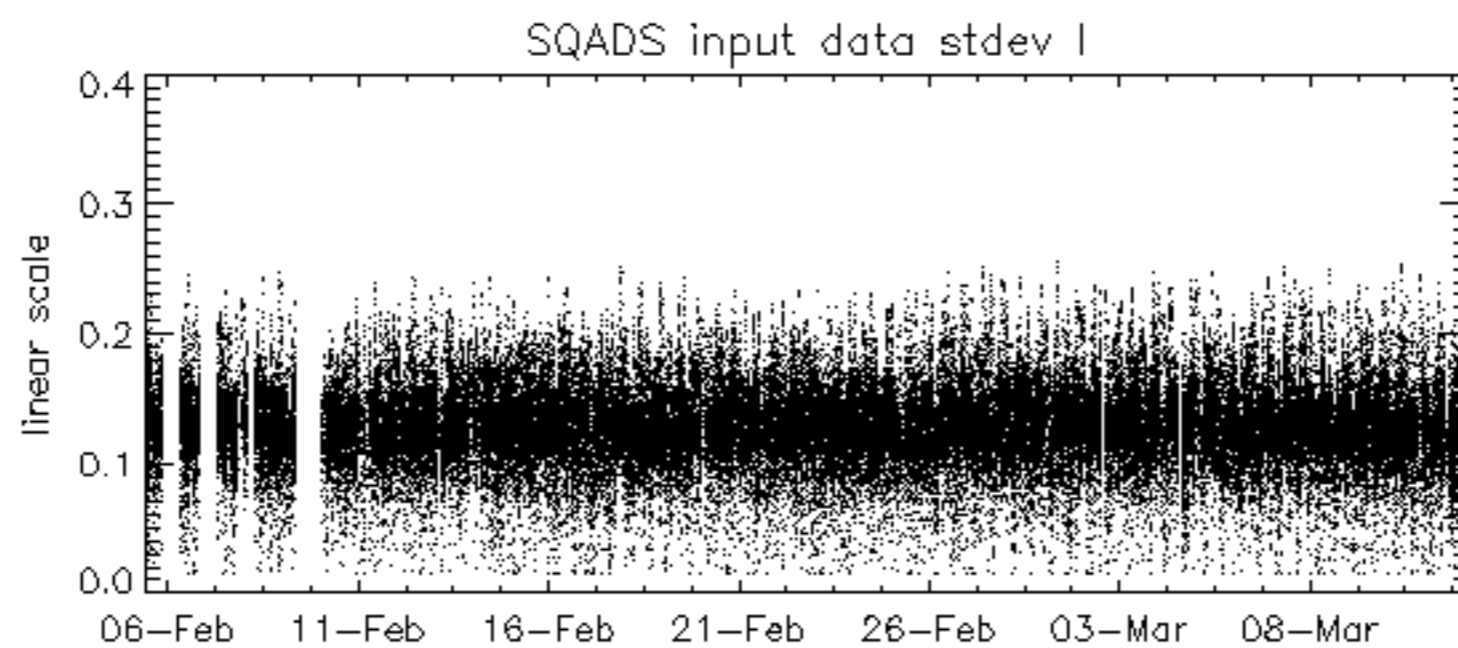
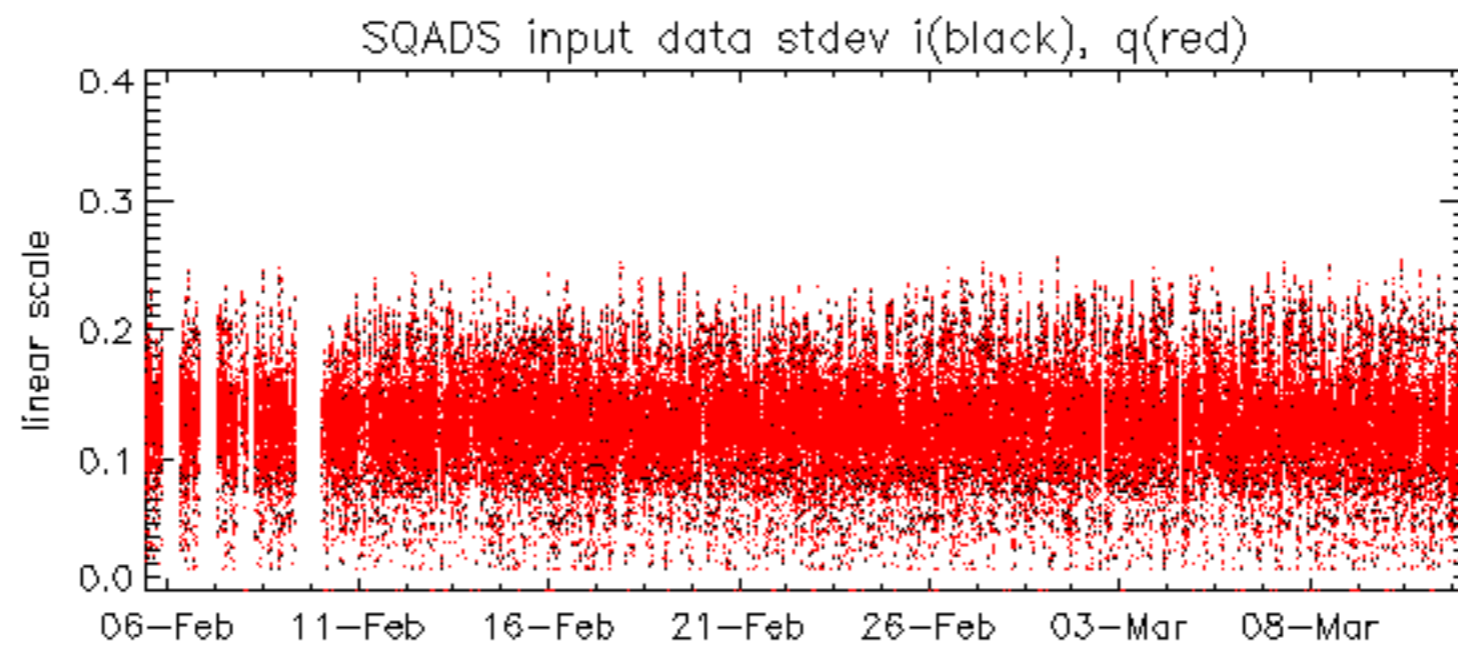




















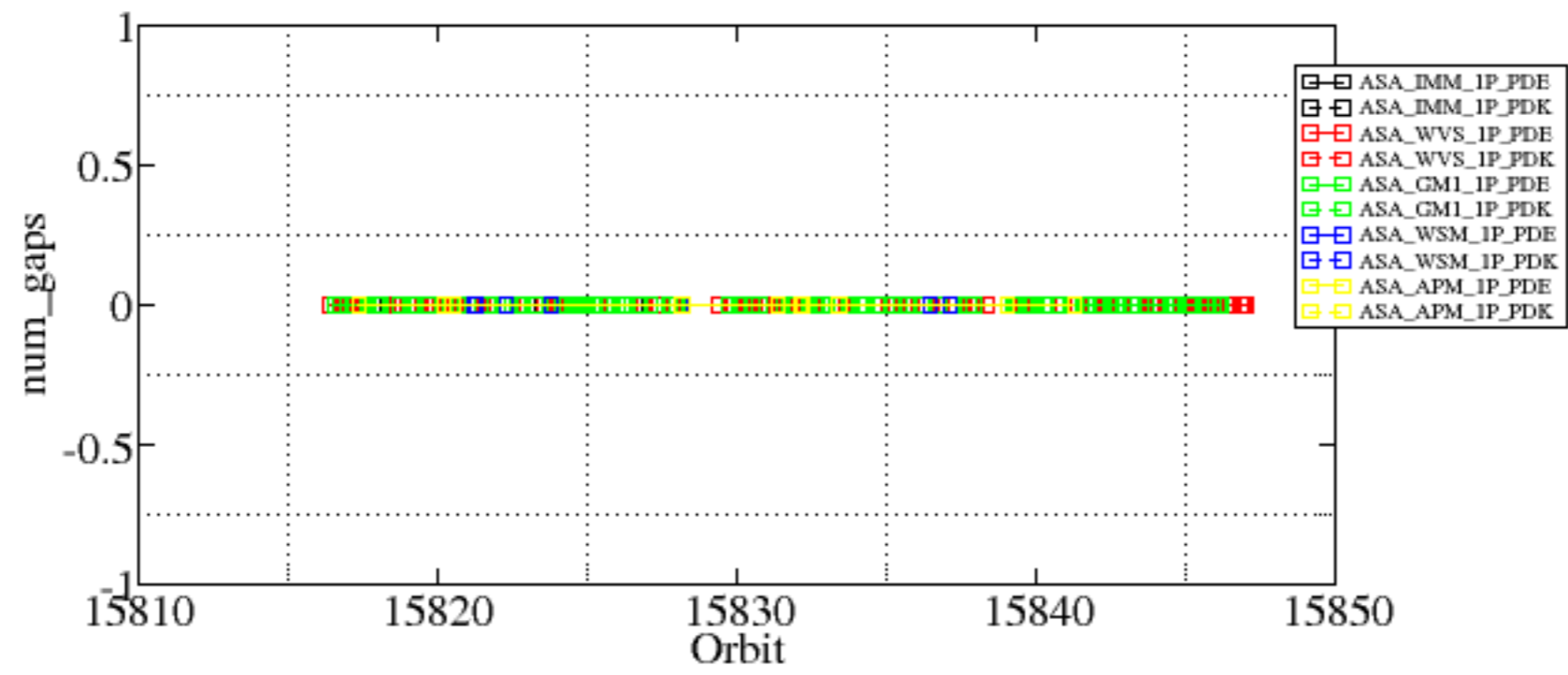




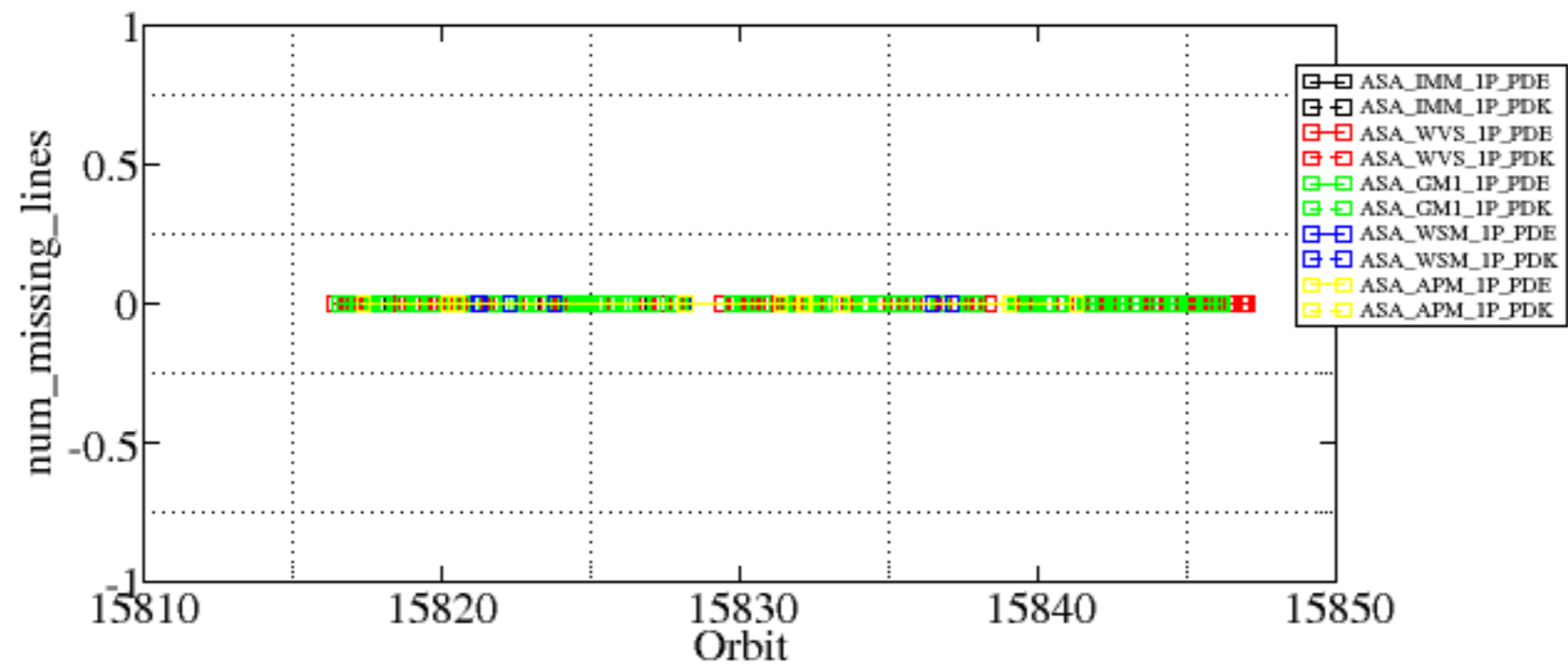
Summary of analysis for the last 3 days 2005031[012]

The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

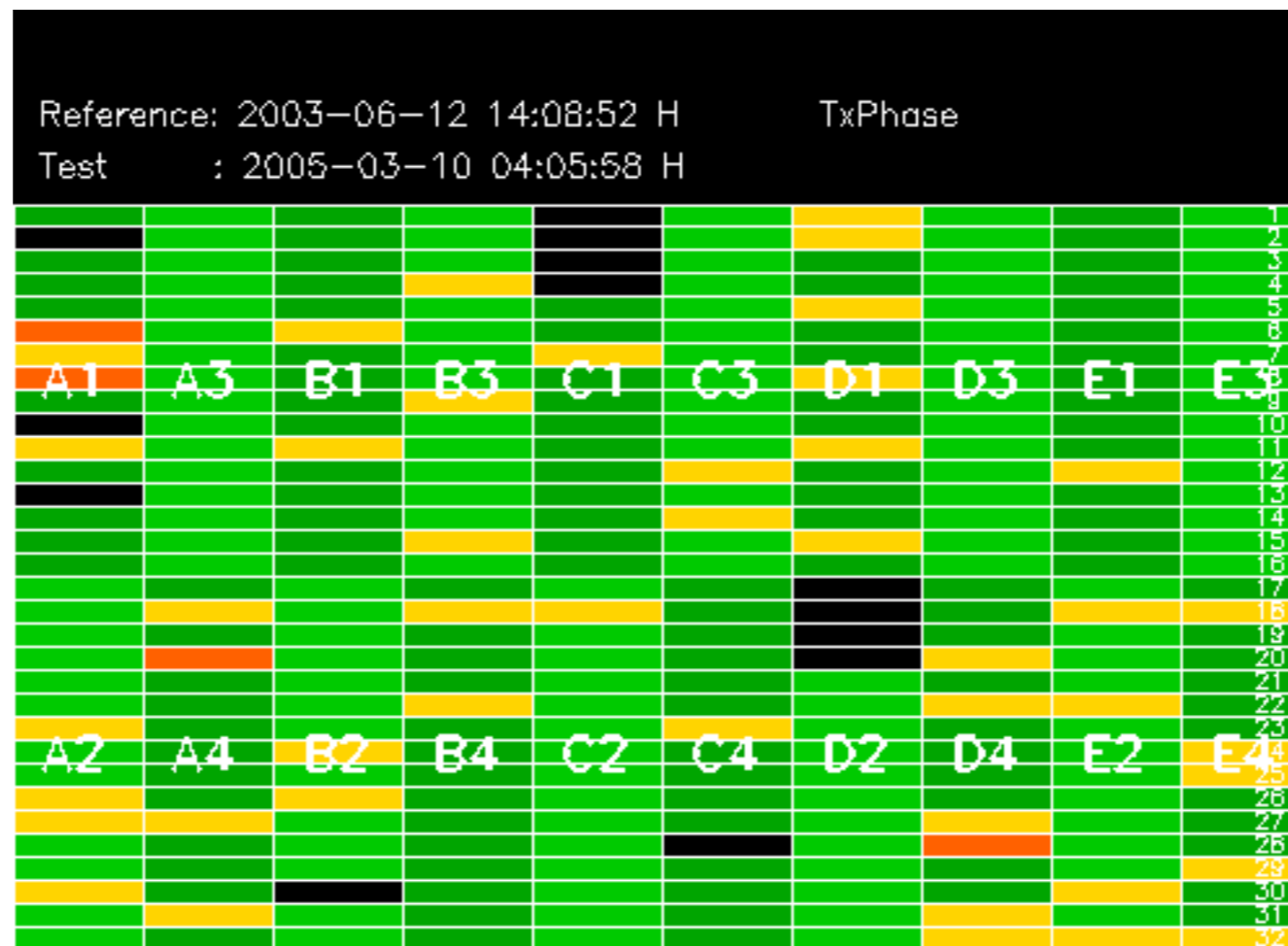
Filename	num_gaps	num_missing_lines



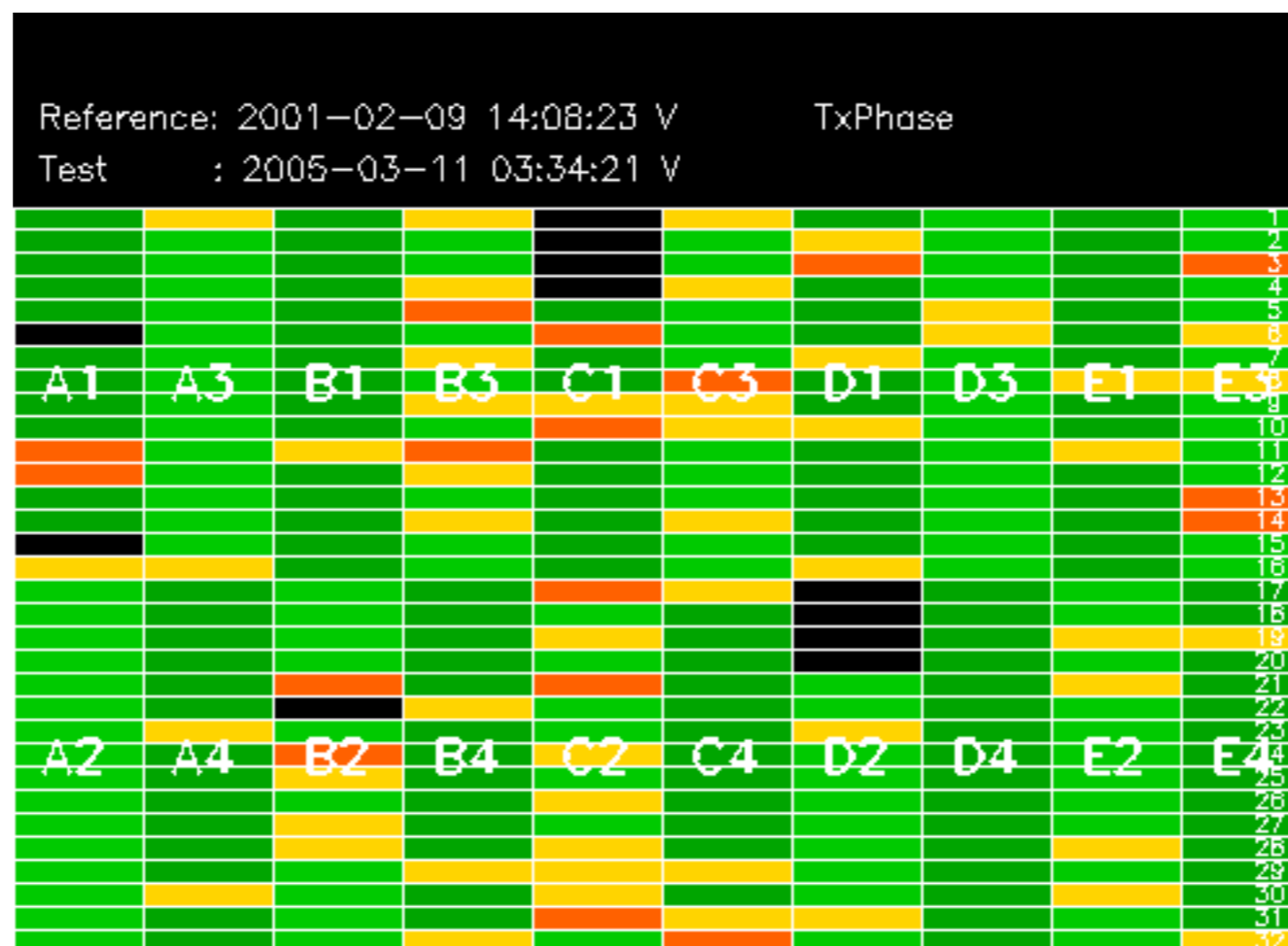




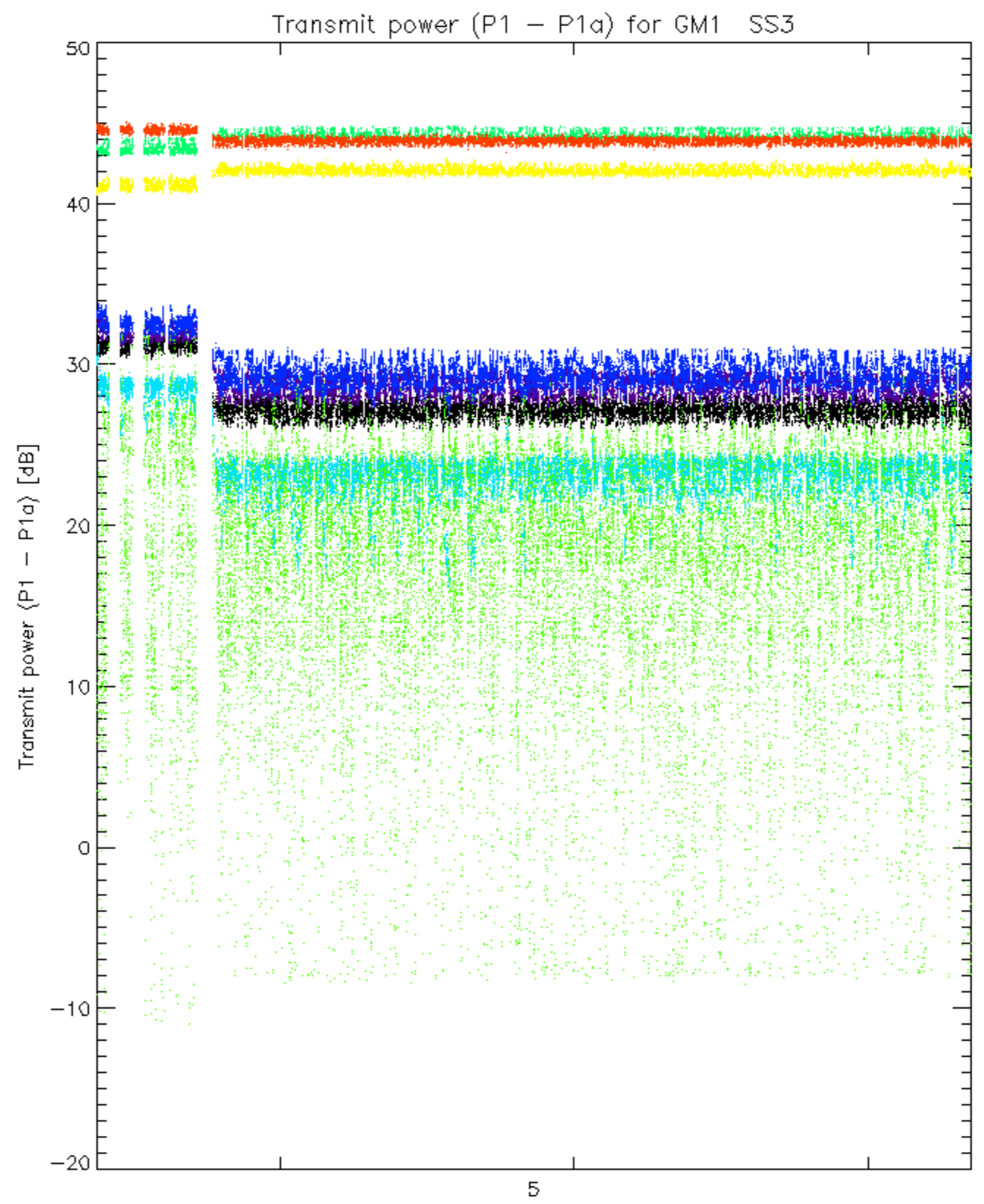




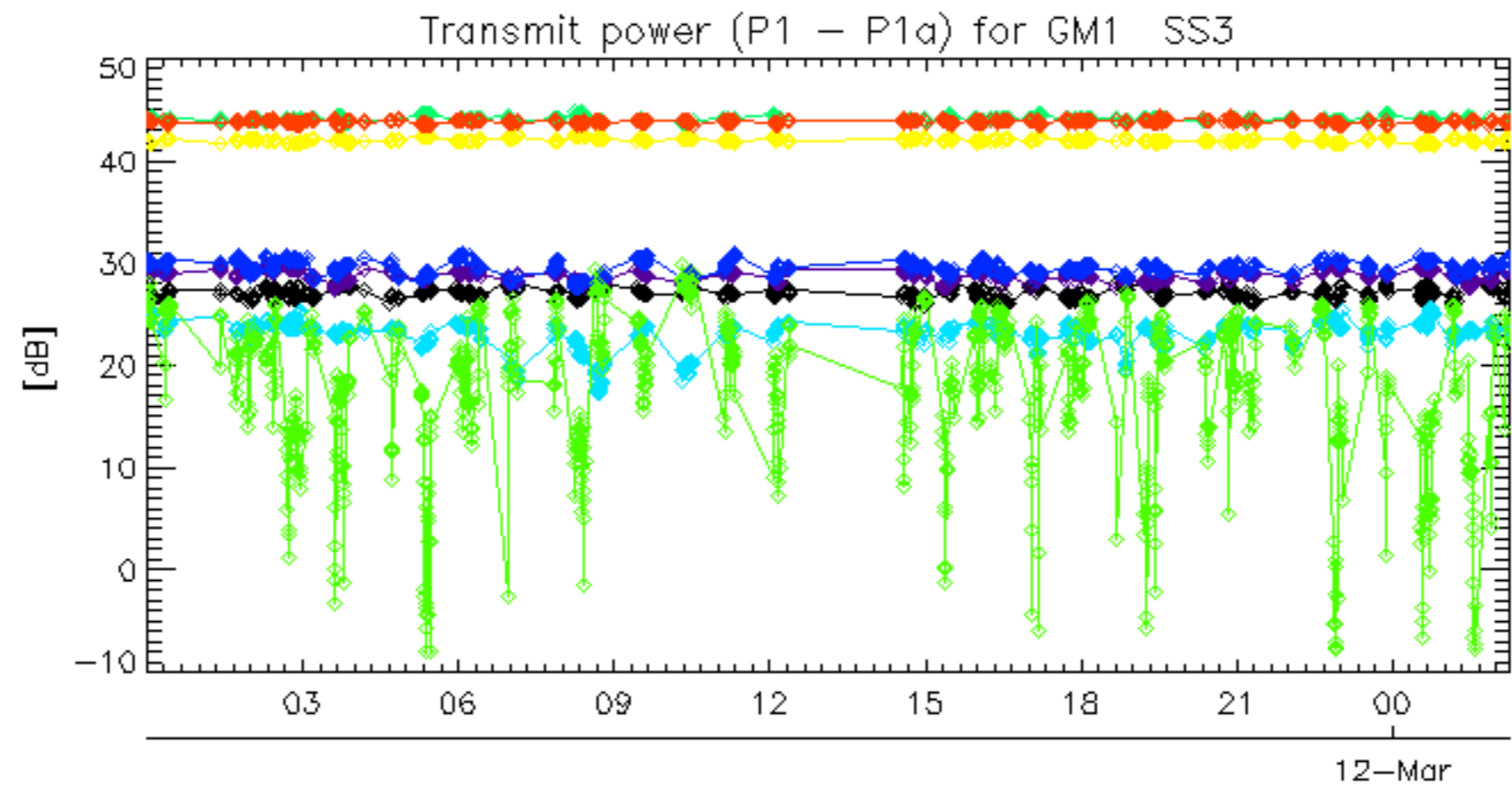






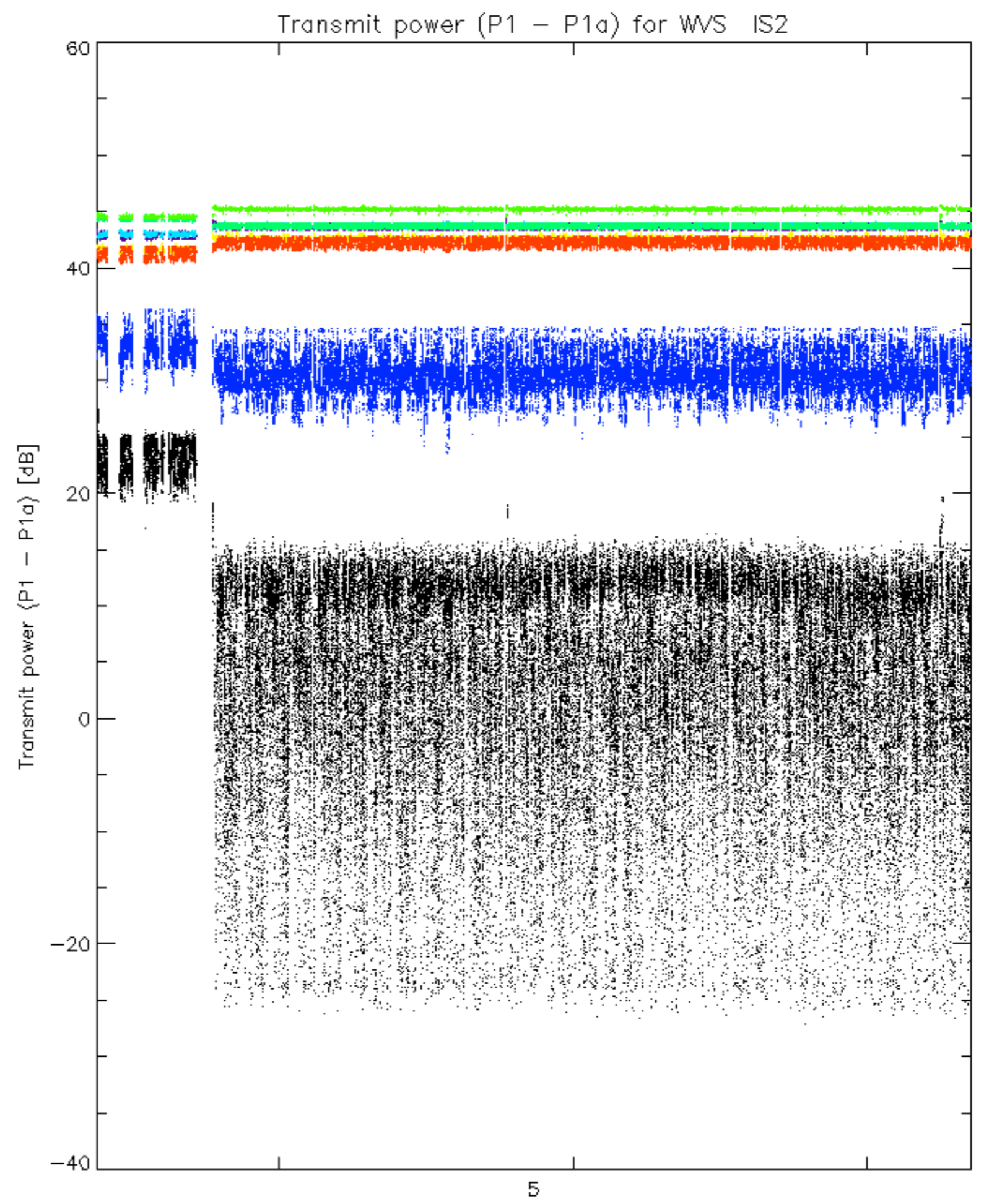


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

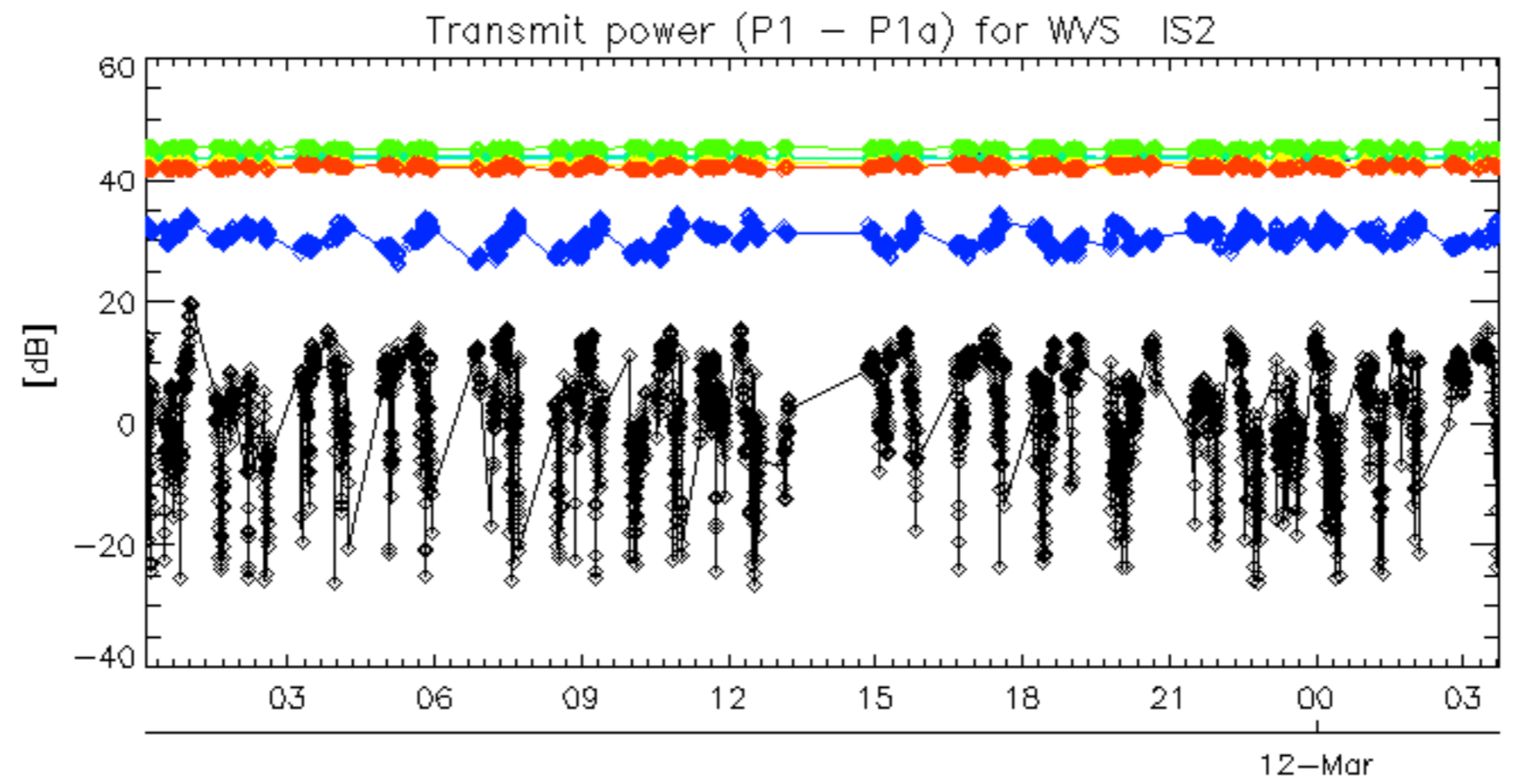


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

ASAR unavailable after an autonomous transition to PRE-OP mode due to a telemetry error on parameter B1380

From 12-03-2005 15:51:15 to 15:56:28