

# PRELIMINARY REPORT OF 060526

last update on Fri May 26 10:50:01 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 2006-05-25 00:00:00 to 2006-05-26 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	29	56	11	1	21
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	29	56	11	1	21
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	29	56	11	1	21
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	29	56	11	1	21

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	52	29	34	56
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	44	52	29	34	56
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	52	29	34	56
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	52	29	34	56

## 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	20060526 055509
H	20060523 173336

### 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
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☒

**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	-3.966060	0.017044	0.015574
7	P1	-3.094355	0.017043	-0.091498
11	P1	-4.107784	0.018311	-0.033781
15	P1	-6.127366	0.020337	-0.027409
19	P1	-3.316745	0.008436	-0.032781
22	P1	-4.524798	0.010932	0.017904
26	P1	-3.998943	0.019742	0.061250
30	P1	-5.744059	0.019270	-0.040336
3	P1	-16.602468	0.293614	0.168667
7	P1	-17.085114	0.186714	-0.260625
11	P1	-16.882883	0.329947	-0.228004
15	P1	-13.204551	0.208111	-0.179655
19	P1	-14.239494	0.047417	-0.151753
22	P1	-16.151394	0.398375	-0.086525
26	P1	-15.301010	0.258243	0.162915
30	P1	-16.968477	0.348907	-0.278389

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.237703	0.083149	0.131820
7	P2	-22.125748	0.099889	0.157556
11	P2	-15.967380	0.112040	0.132262
15	P2	-7.170025	0.093426	-0.003391
19	P2	-9.165123	0.086283	-0.025612
22	P2	-18.107960	0.083806	-0.096093
26	P2	-16.356682	0.089110	-0.092025
30	P2	-19.595036	0.085506	0.052190

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.192290	0.003759	0.002908
7	P3	-8.192290	0.003759	0.002908
11	P3	-8.192290	0.003759	0.002908
15	P3	-8.192290	0.003759	0.002908
19	P3	-8.192290	0.003759	0.002908
22	P3	-8.192290	0.003759	0.002908
26	P3	-8.192309	0.003760	0.003016
30	P3	-8.192309	0.003760	0.003016

**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	-3.768816	0.085458	-0.113027
7	P1	-2.623798	0.123026	0.081049
11	P1	-2.867956	0.039492	-0.018953
15	P1	-3.499311	0.056249	0.012161
19	P1	-3.394996	0.014645	-0.026187
22	P1	-5.092881	0.021438	0.031043
26	P1	-5.838060	0.020478	-0.024906
30	P1	-5.185123	0.043233	-0.046816
3	P1	-11.606394	0.137362	-0.056487
7	P1	-9.961978	0.168632	0.040989
11	P1	-10.194257	0.111267	0.032450
15	P1	-10.625180	0.161450	0.084713
19	P1	-15.498812	0.085301	-0.090584
22	P1	-20.854277	1.258012	-0.242943

26	P1	-16.479742	0.364862	-0.121434
30	P1	-18.063082	0.475311	0.251698

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.916647	0.071654	0.072584
7	P2	-22.525192	0.175629	-0.001827
11	P2	-11.192206	0.049470	0.008194
15	P2	-4.902020	0.042159	-0.053150
19	P2	-6.878162	0.041193	-0.027086
22	P2	-8.191778	0.052463	-0.042726
26	P2	-24.088696	0.125965	-0.102002
30	P2	-22.061304	0.088000	-0.050614

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.025283	0.003846	0.002233
7	P3	-8.025433	0.003850	0.002232
11	P3	-8.025372	0.003826	0.002118
15	P3	-8.025267	0.003848	0.002172
19	P3	-8.025381	0.003854	0.002574
22	P3	-8.025427	0.003835	0.002247
26	P3	-8.025314	0.003839	0.001796
30	P3	-8.025362	0.003849	0.002103

## 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	0.000533108
	stdev	1.89433e-07
MEAN Q	mean	0.000514232
	stdev	2.27152e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134859
	stdev	0.00116363
STDEV Q	mean	0.135203
	stdev	0.00118066



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006052[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_IMM_1PNPDE20060524_004516_000001932048_00016_22114_6100.N1	1	0
ASA_IMM_1PNPDE20060524_155402_000000702048_00025_22123_6119.N1	1	0
ASA_WSM_1PNPDE20060524_013517_000000852048_00017_22115_0566.N1	0	39
ASA_WSM_1PNPDE20060524_113721_000001472048_00023_22121_0630.N1	0	45
ASA_WSM_1PNPDE20060526_021326_000000852048_00046_22144_0919.N1	0	28



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

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler

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

### 7.3 - Doppler evolution versus ANX for WVS

#### Evolution Doppler error versus ANX

<input type="checkbox"/>
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### 7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

<input type="checkbox"/>
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Ascending

<input type="checkbox"/>
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Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

<input type="checkbox"/>
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Ascending

<input type="checkbox"/>
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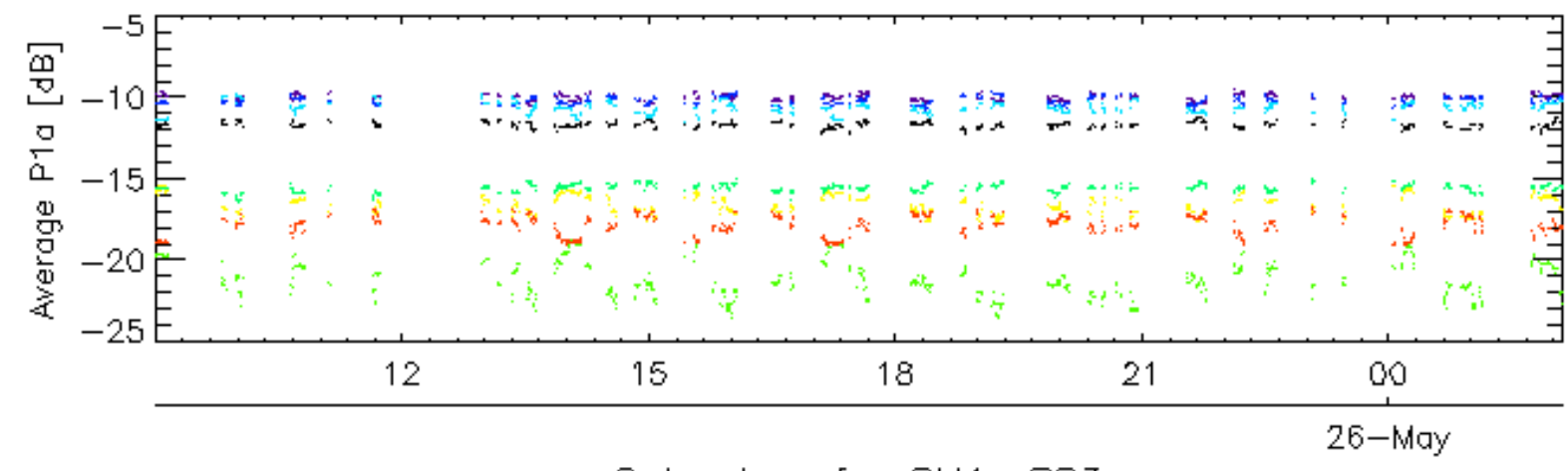
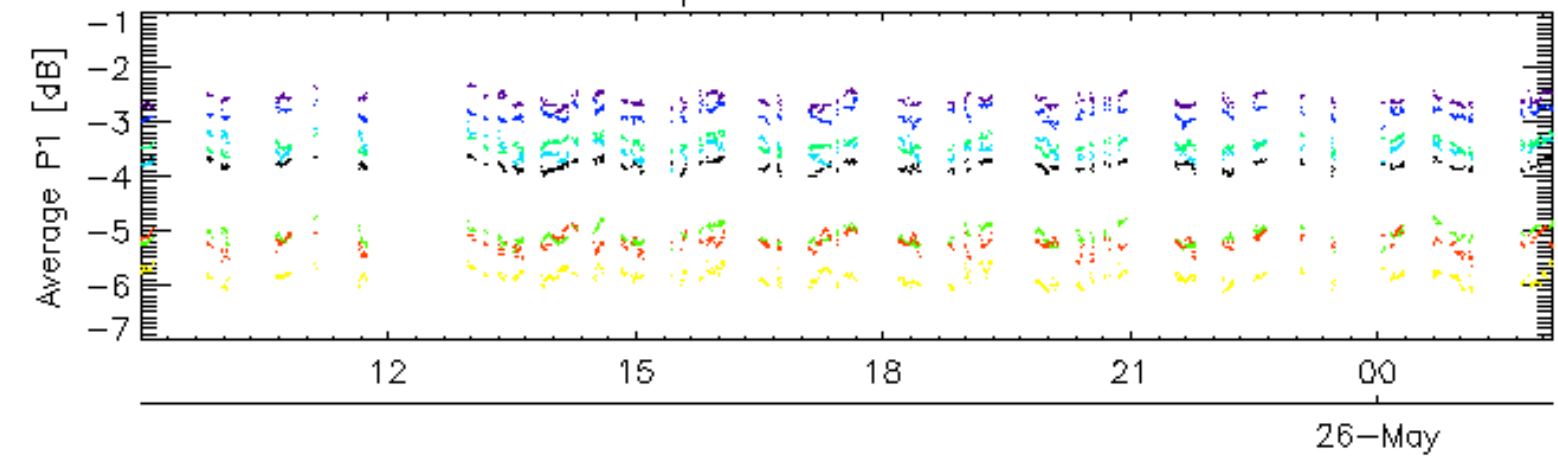
Descending

### 7.6 - Doppler evolution versus ANX for GM1

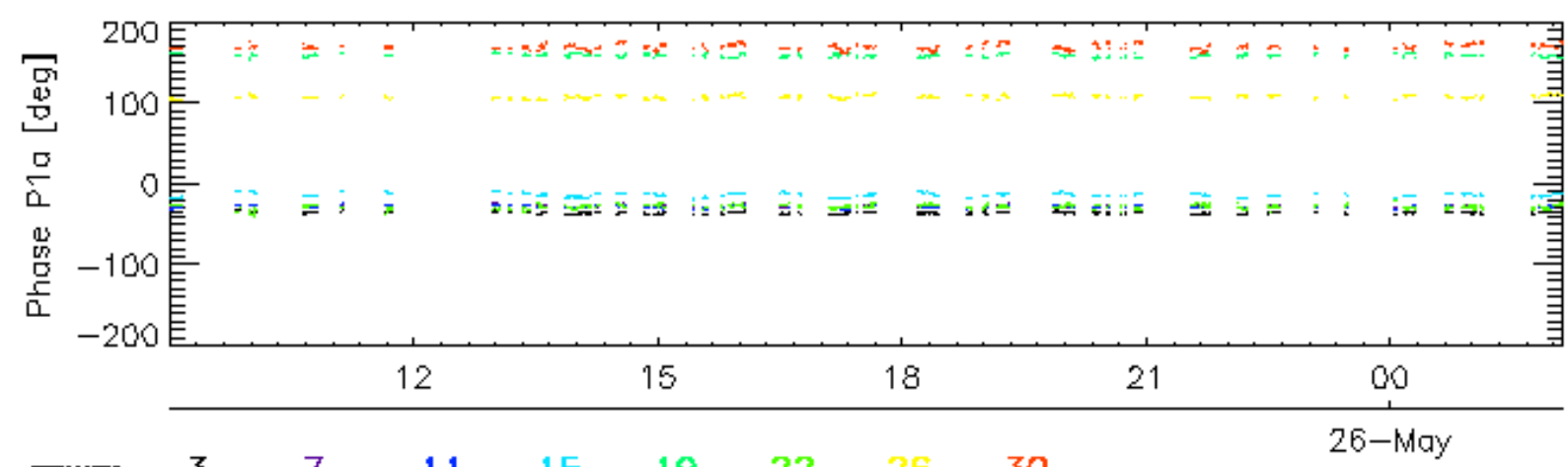
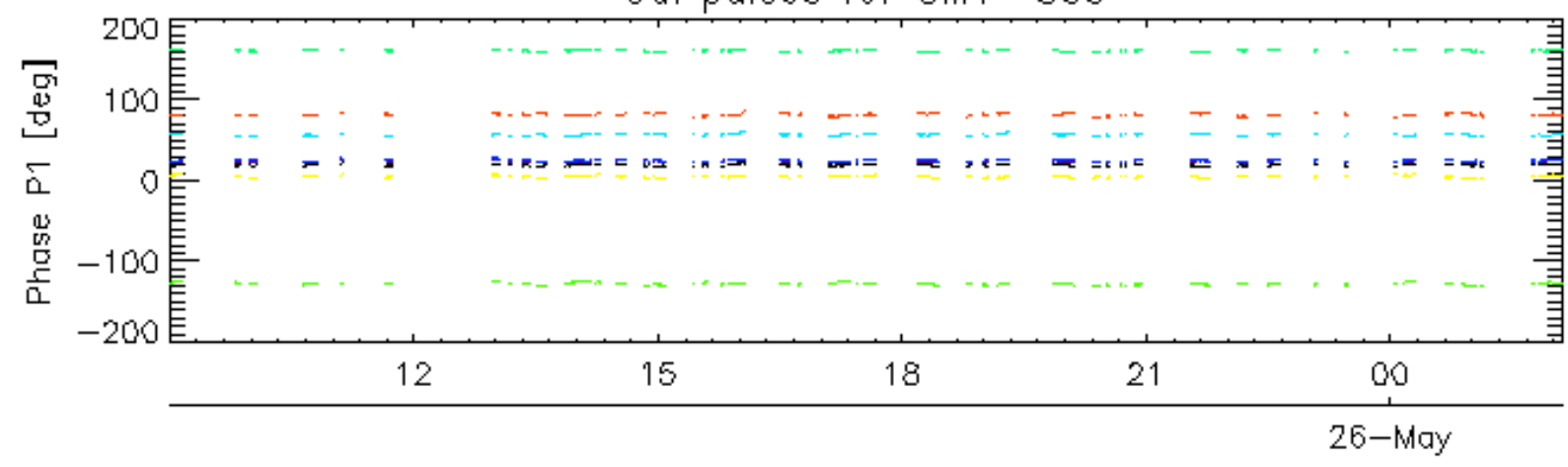
Evolution Doppler error versus ANX

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

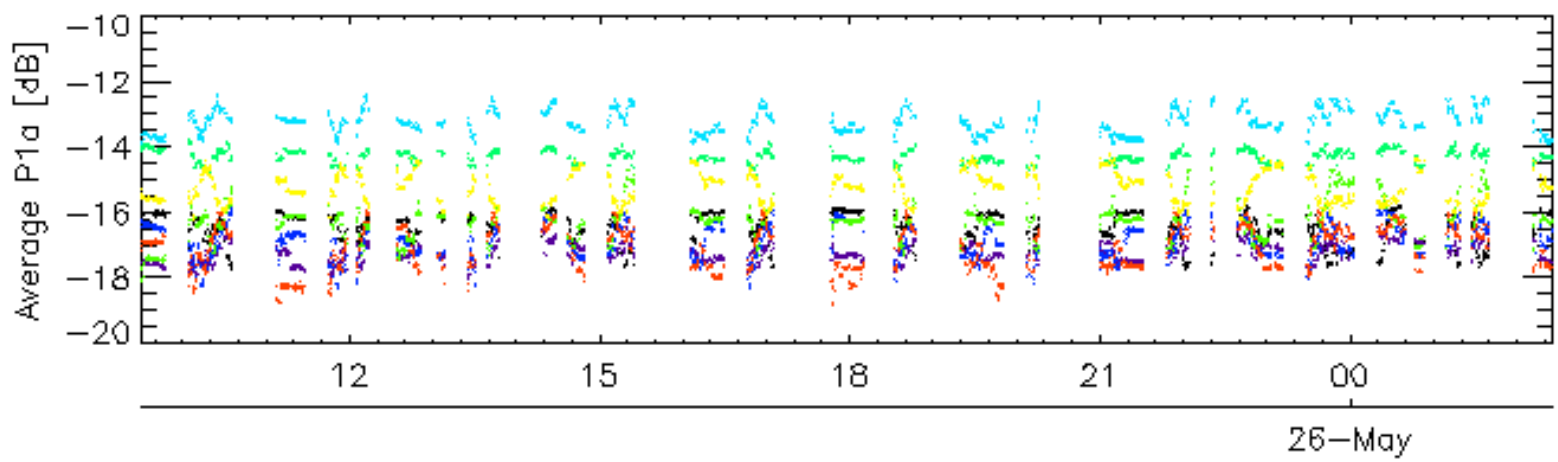
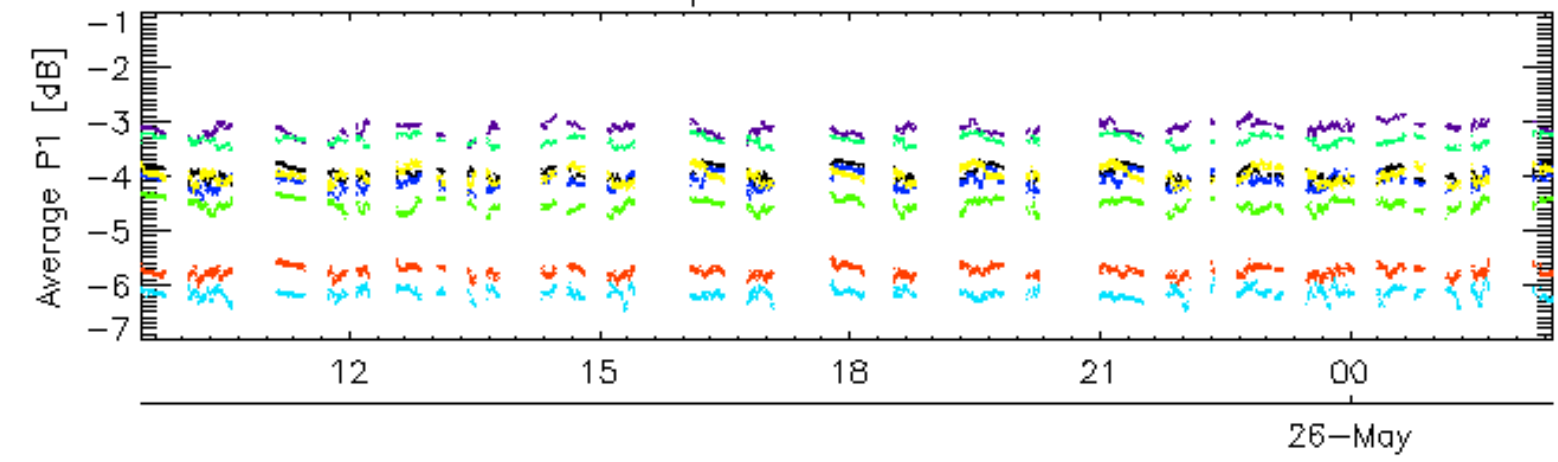


Cal pulses for GM1 SS3

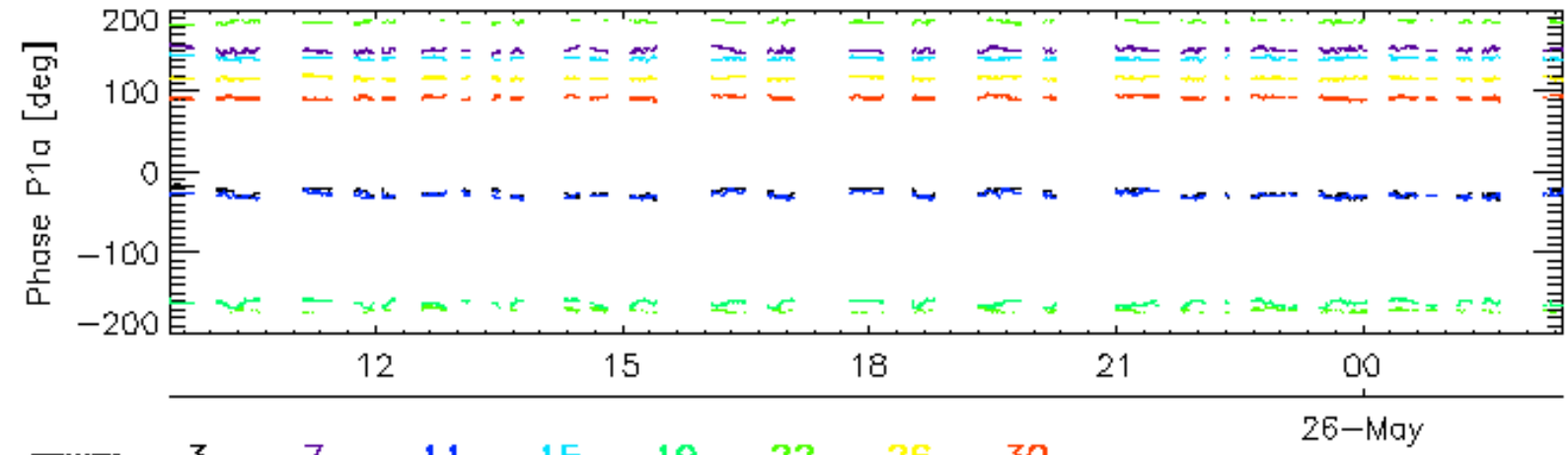
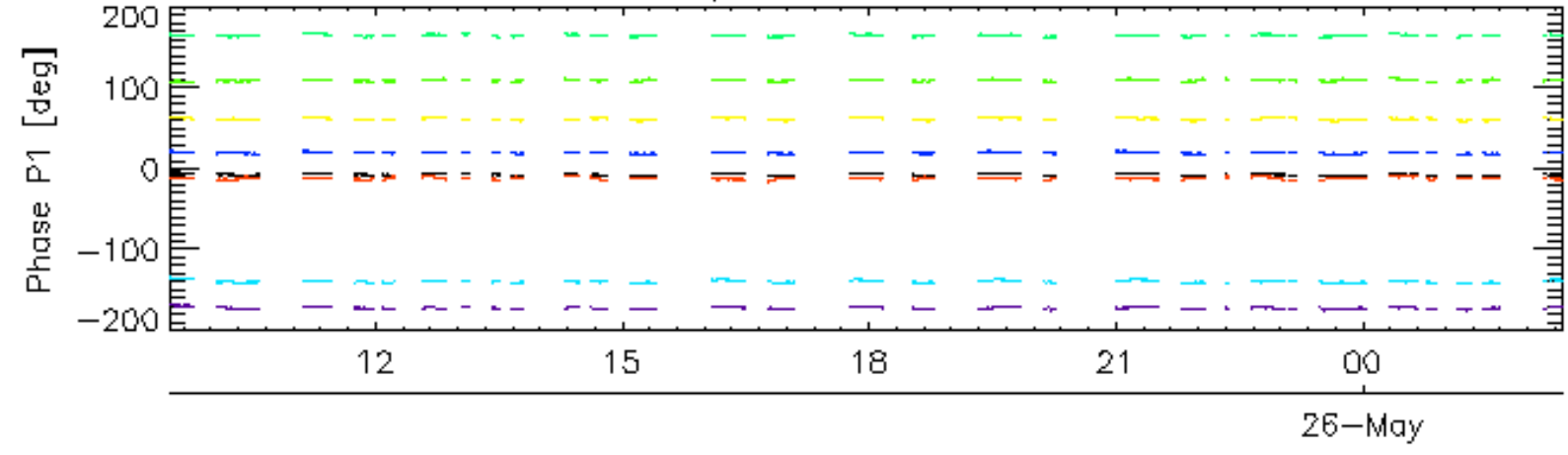


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

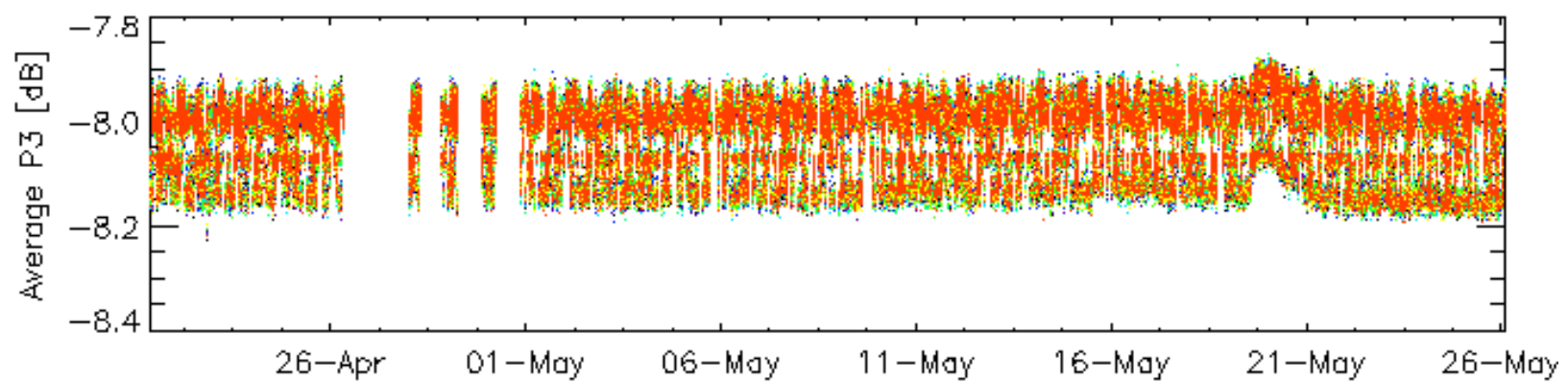
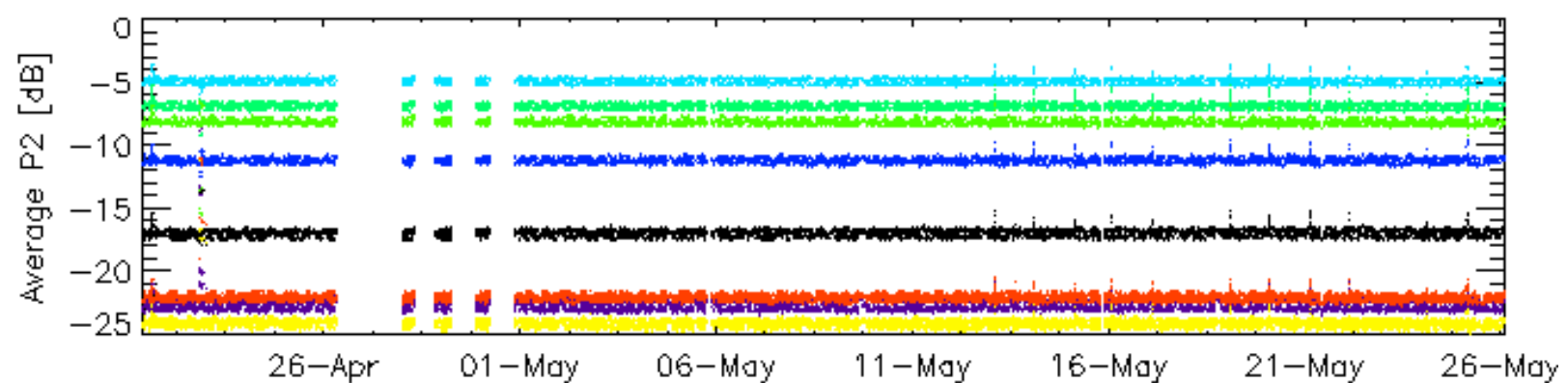
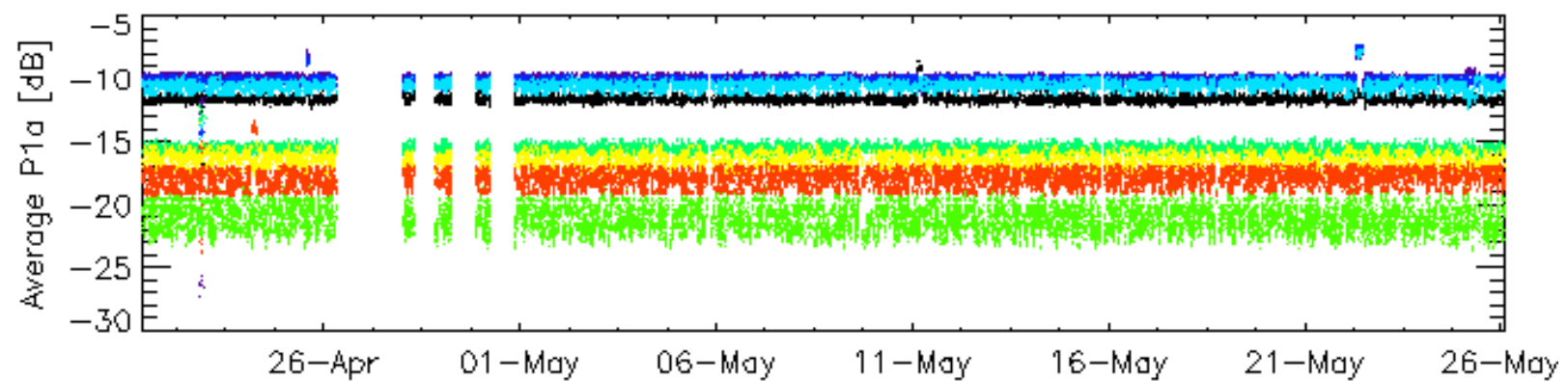
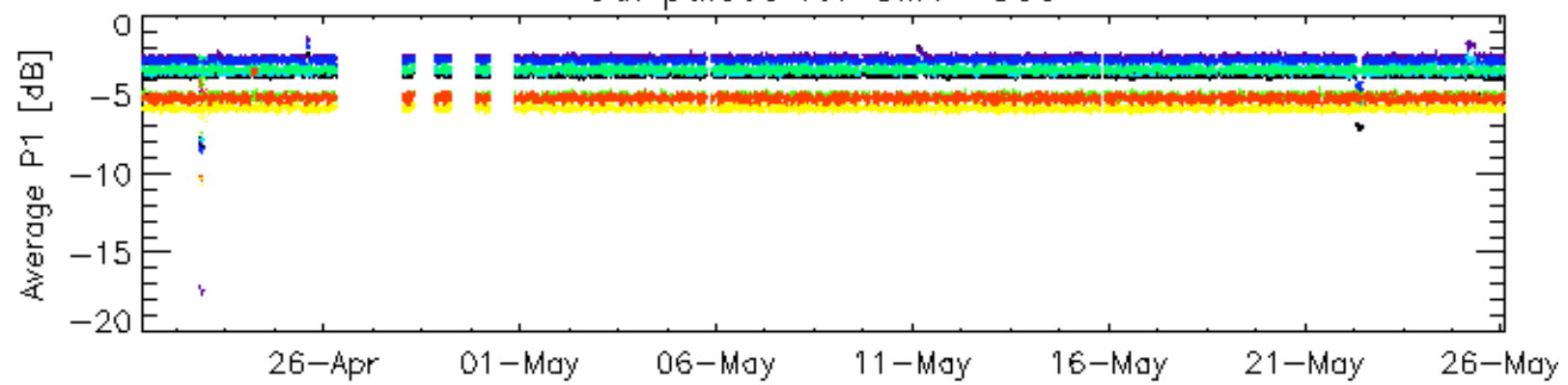


Cal pulses for WVS IS2



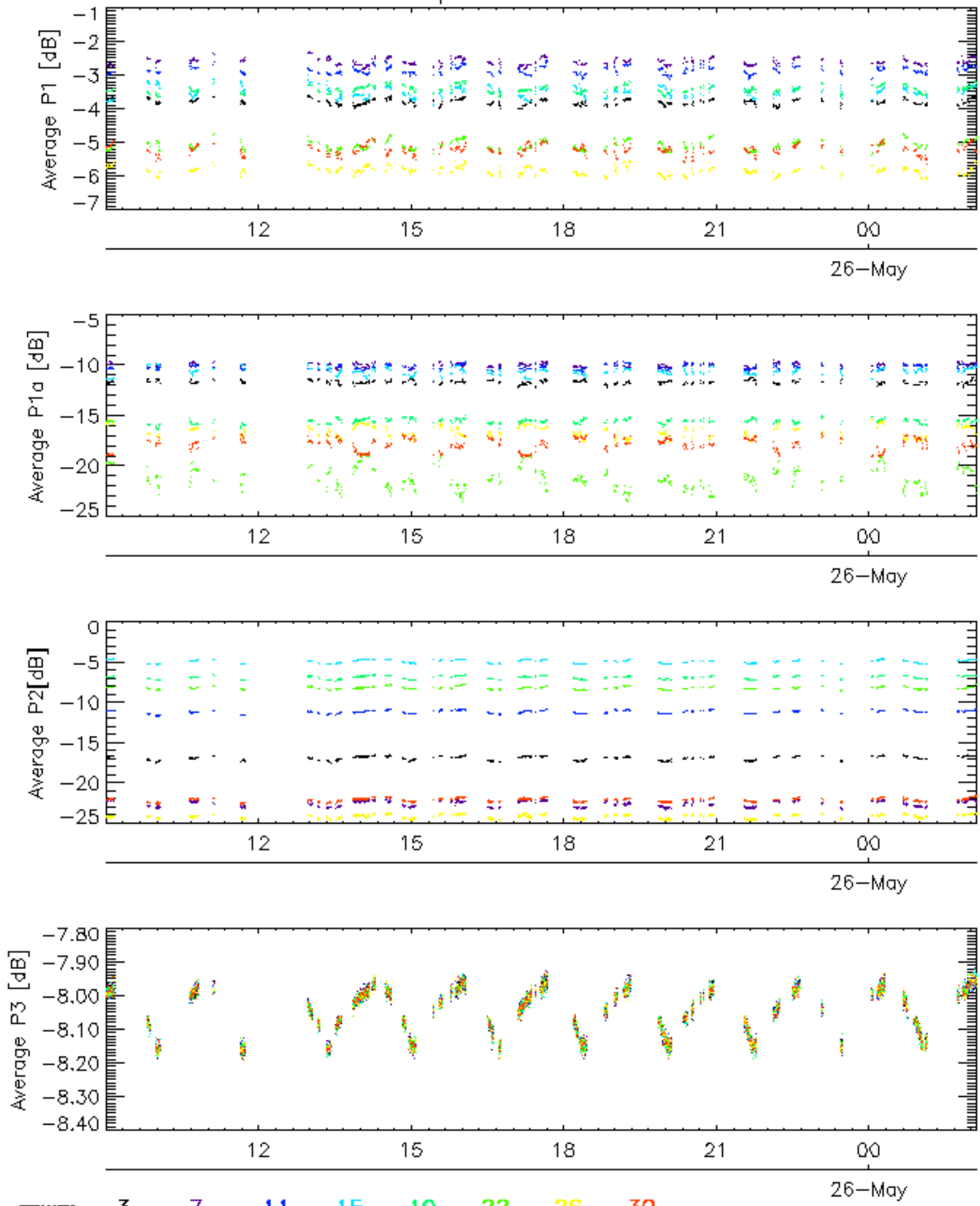
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

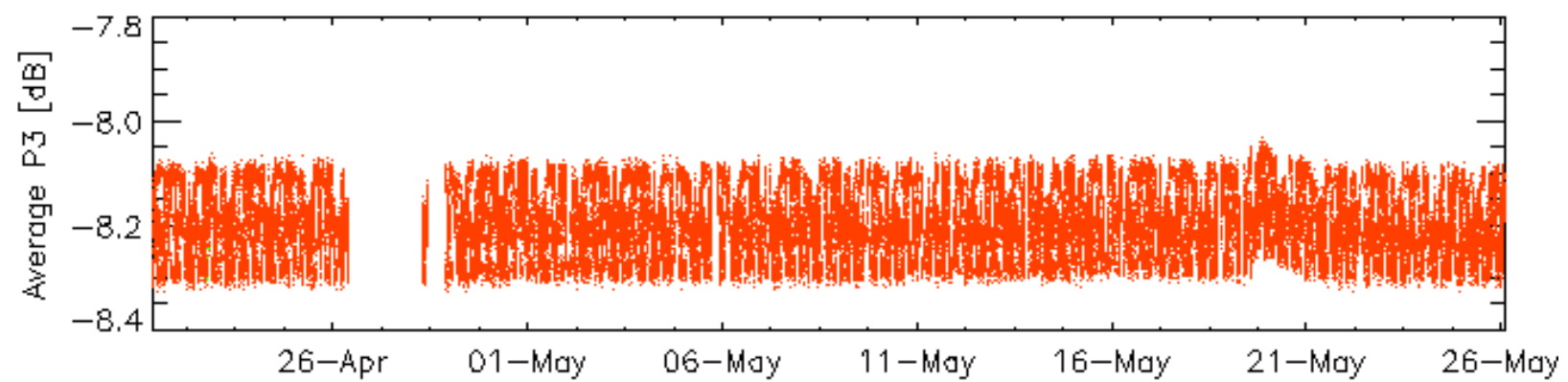
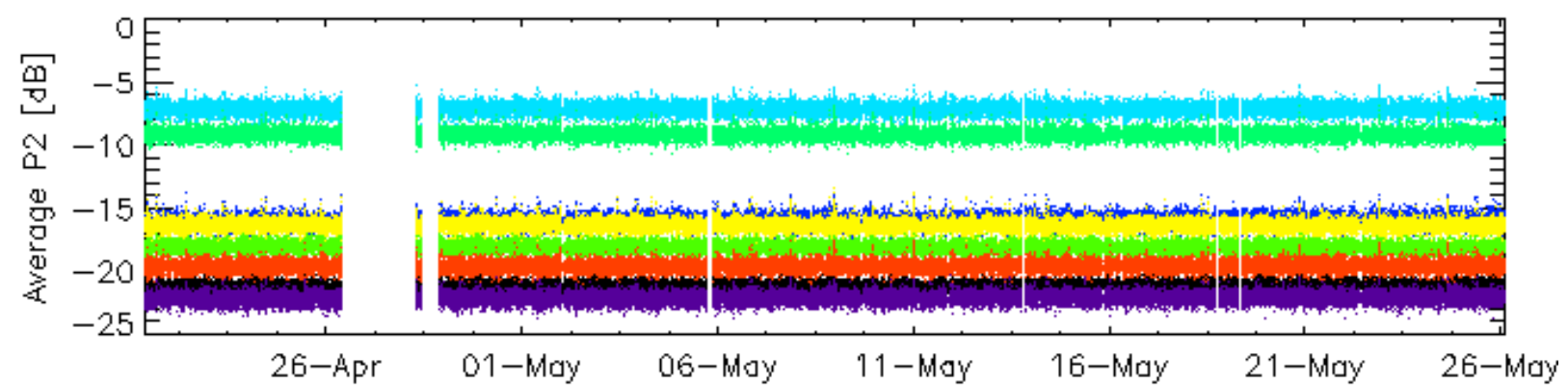
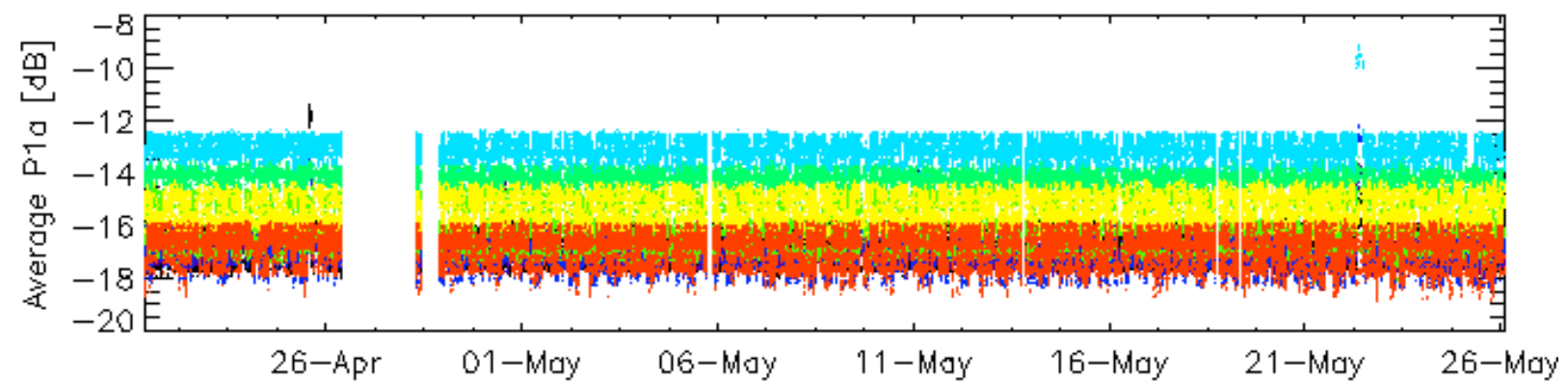
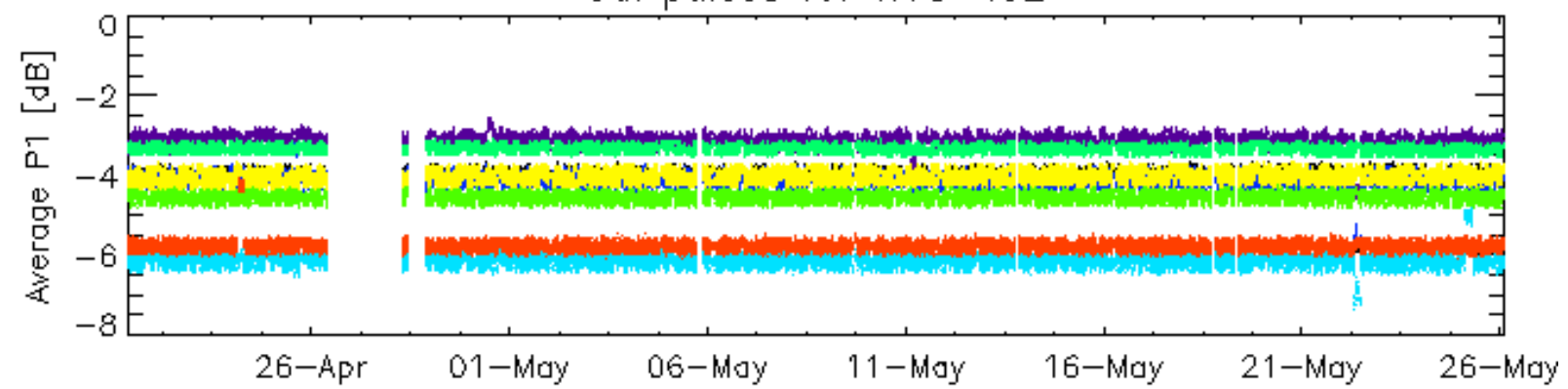


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3



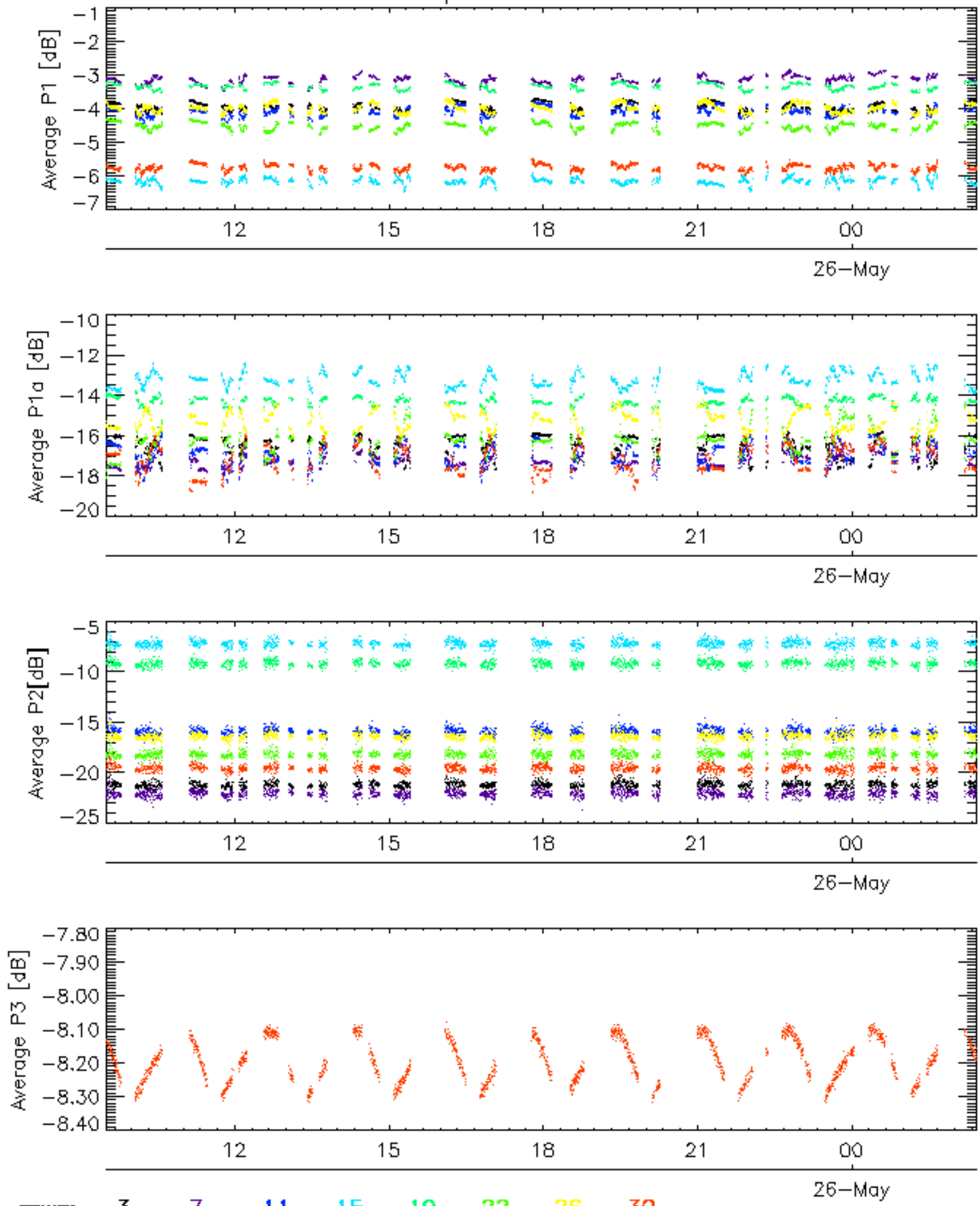
Cal pulses for WVS IS2



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



Cal pulses for WVS IS2

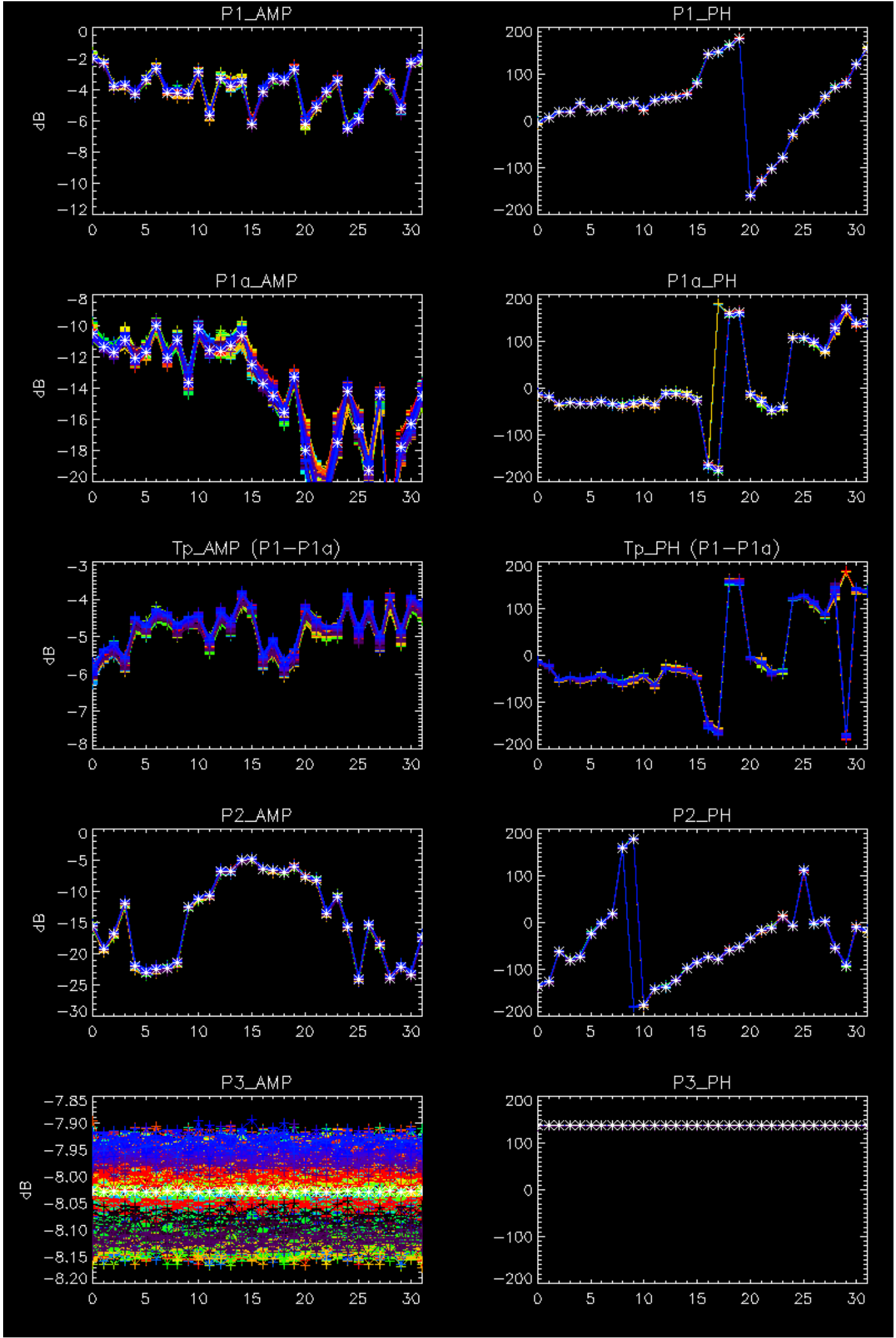


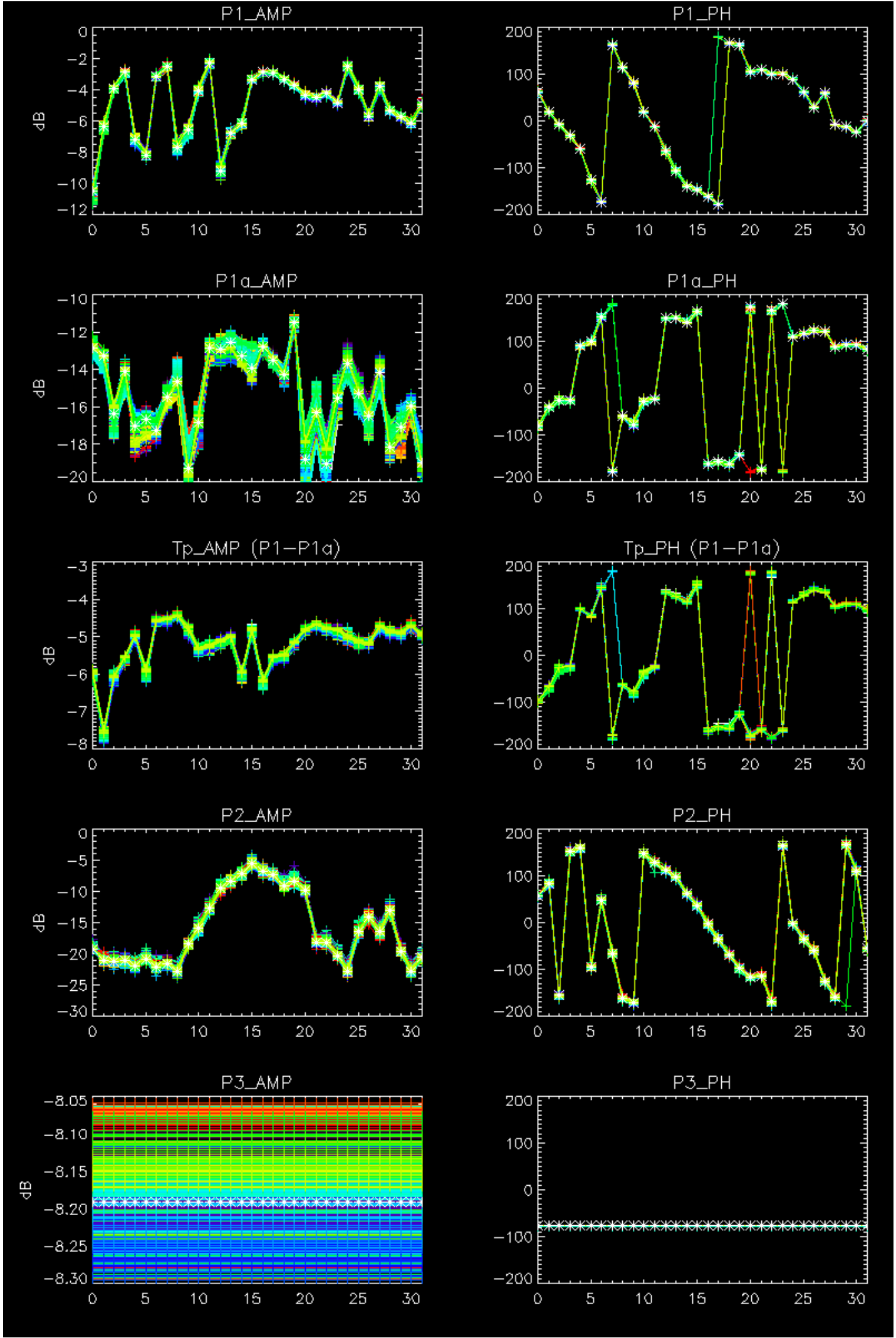
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No anomalies observed on available browse products



No anomalies observed.



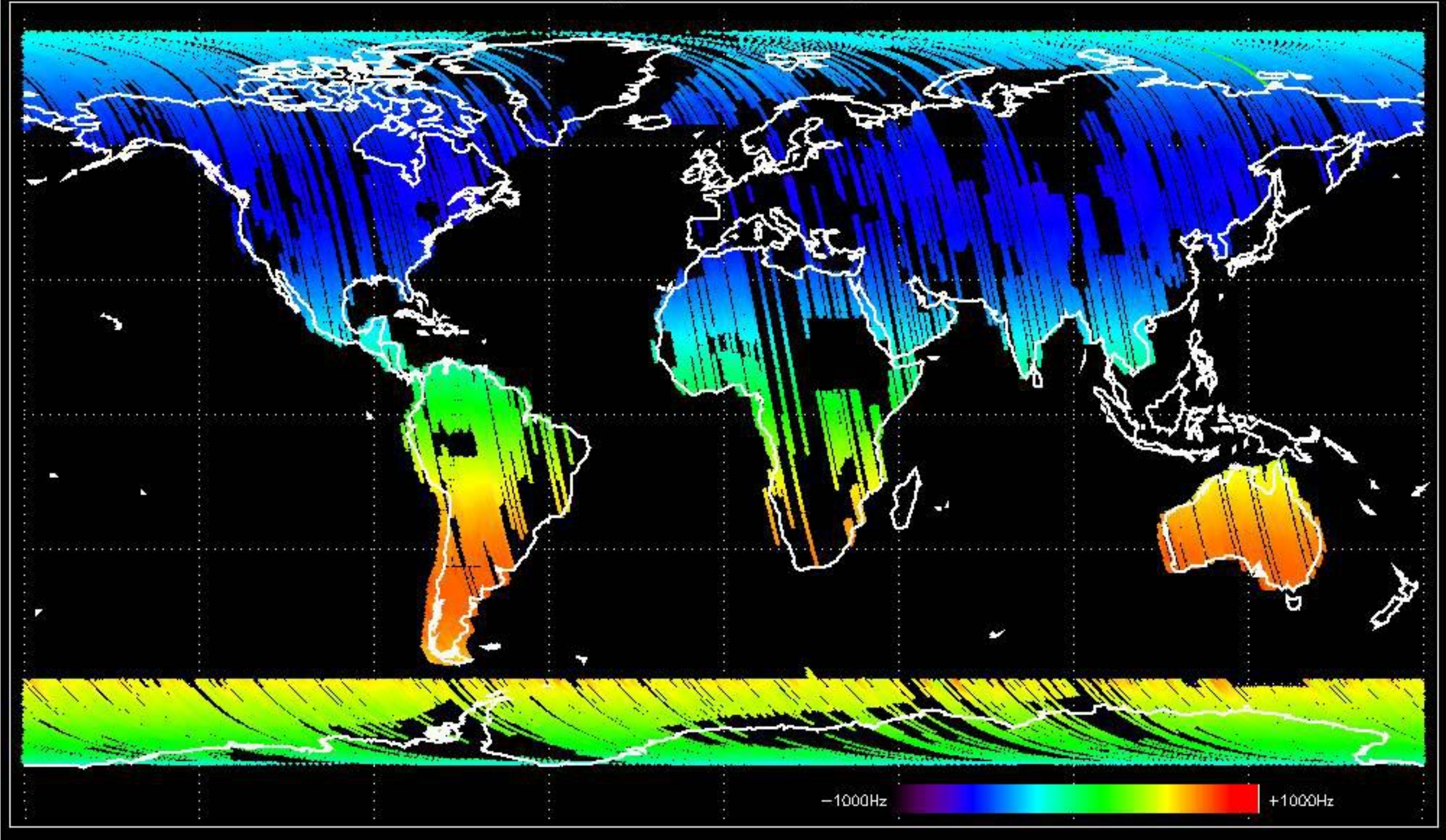


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



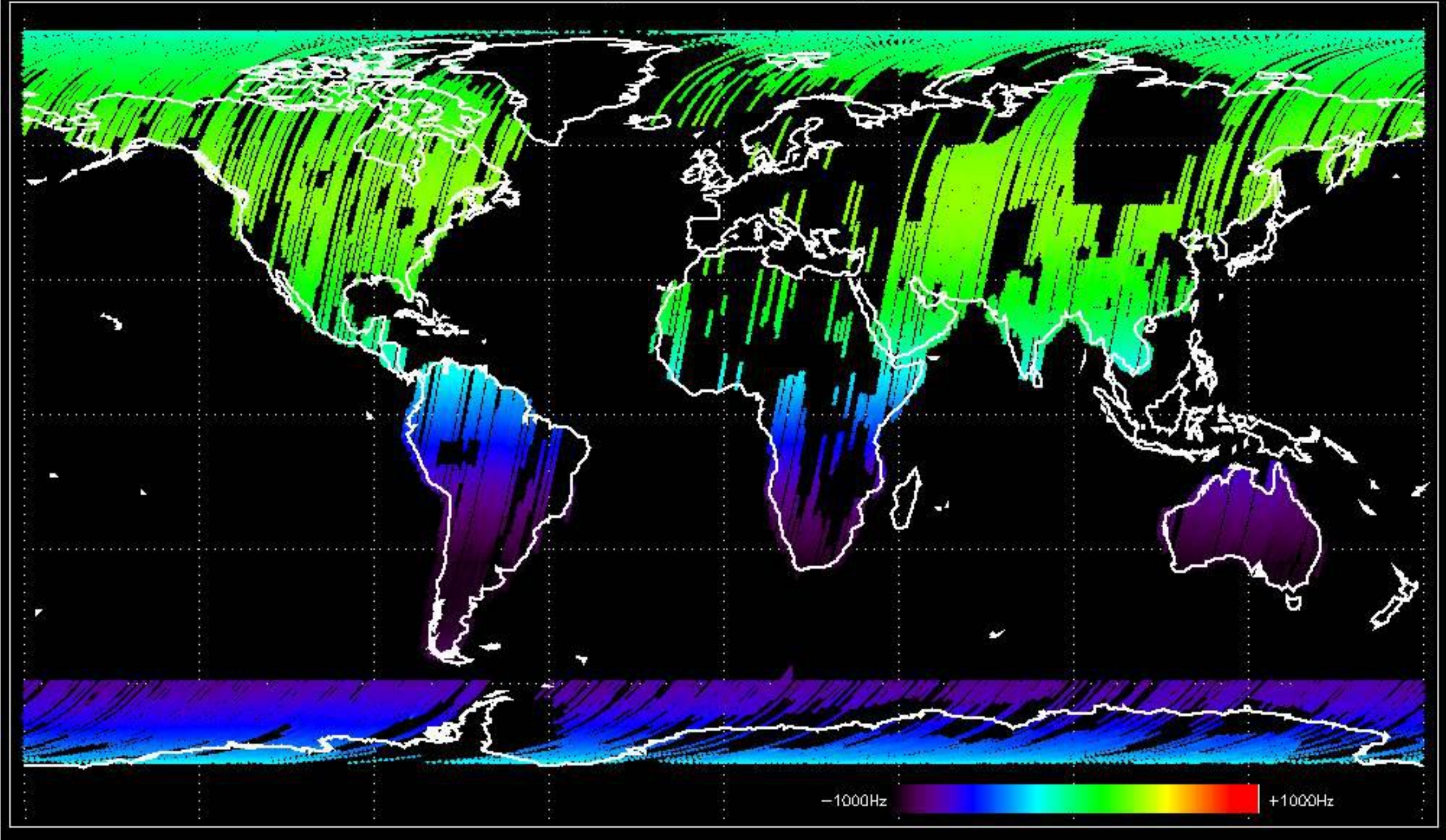


Doppler 'GM1' 'SS1' ascending



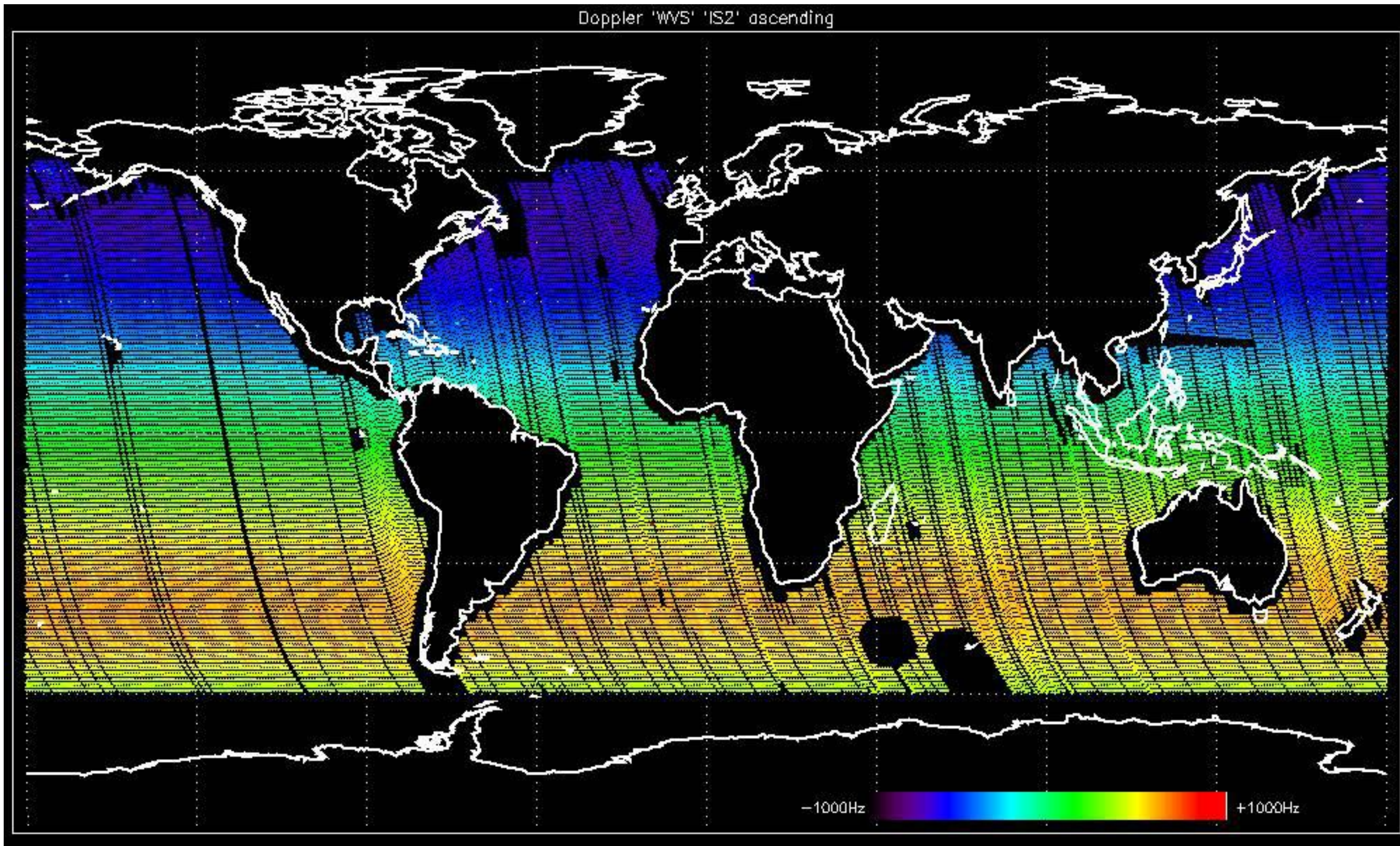


Doppler 'GM1' 'SS1' descending



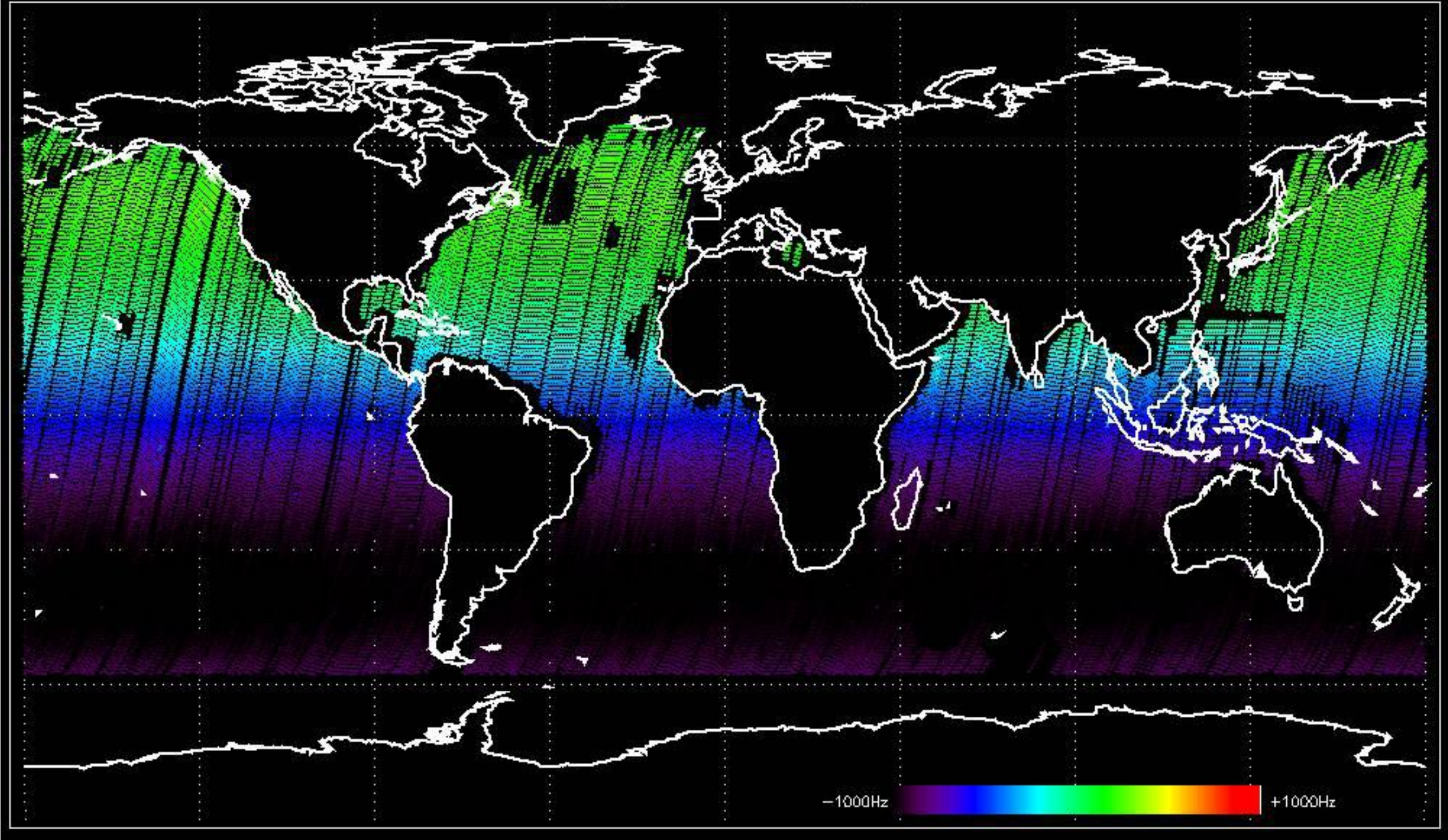


Doppler 'WVS' 'IS2' ascending

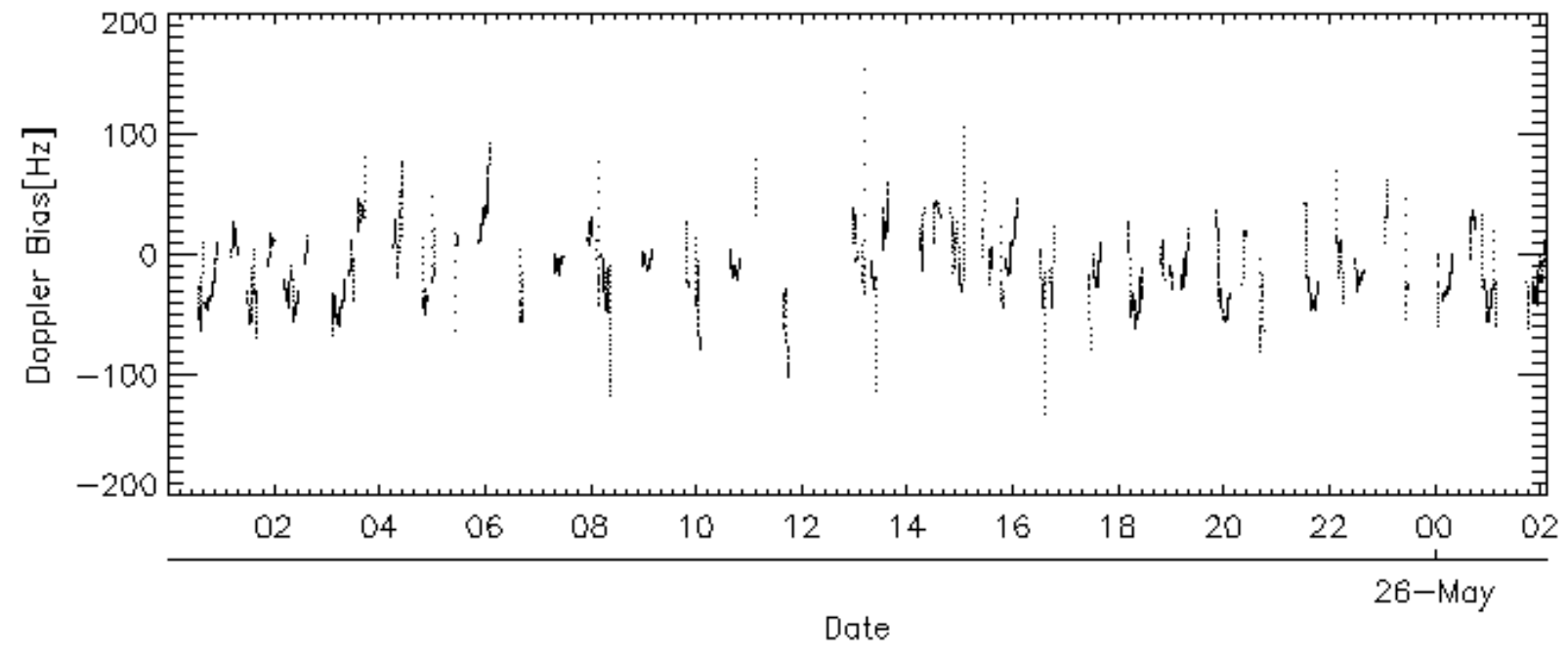
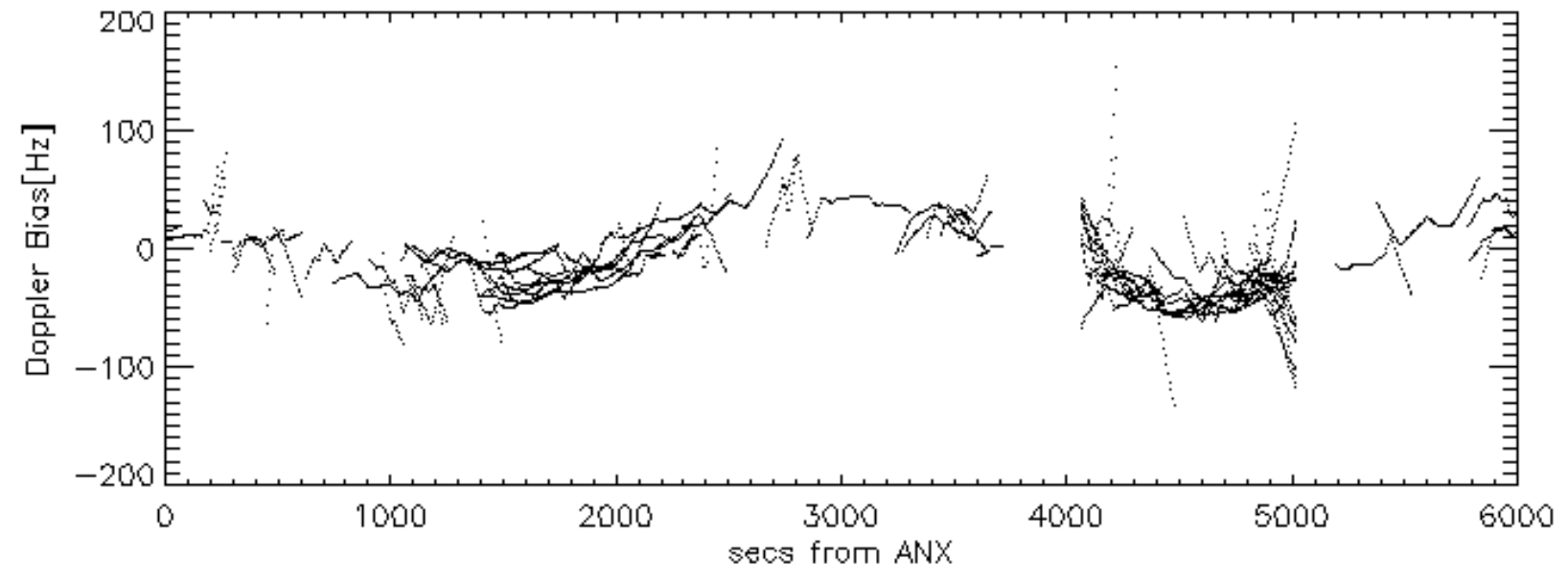
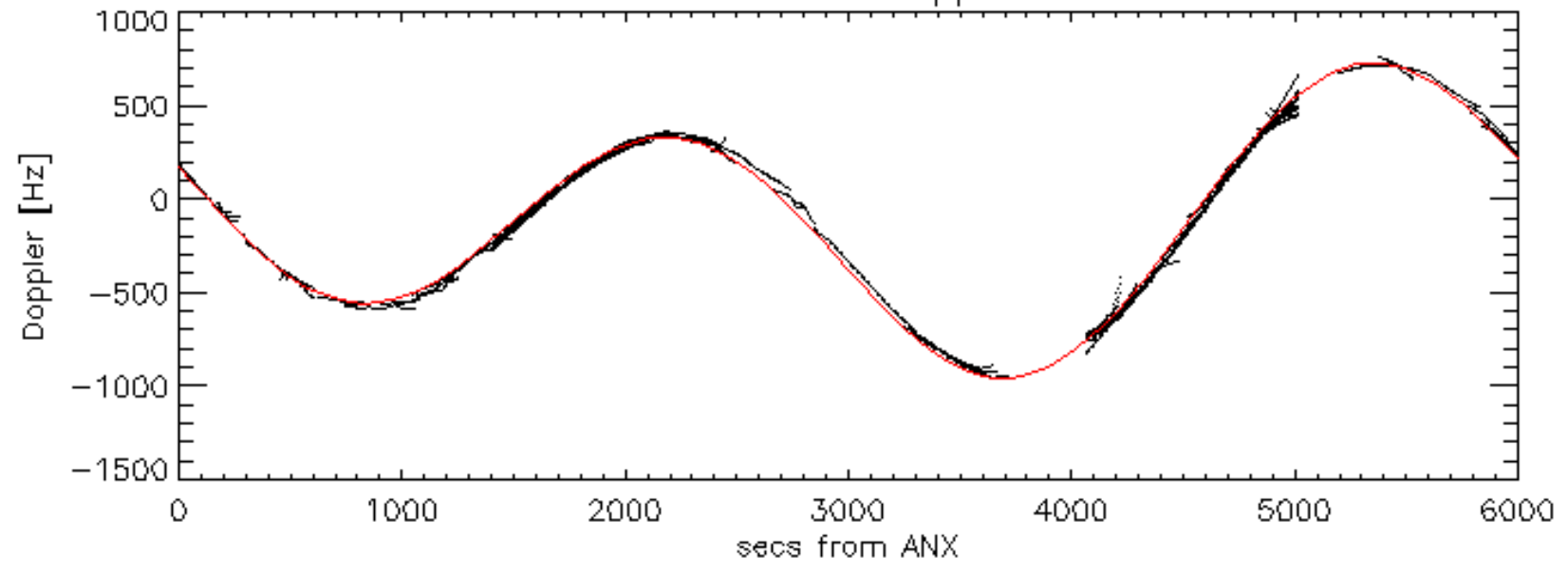




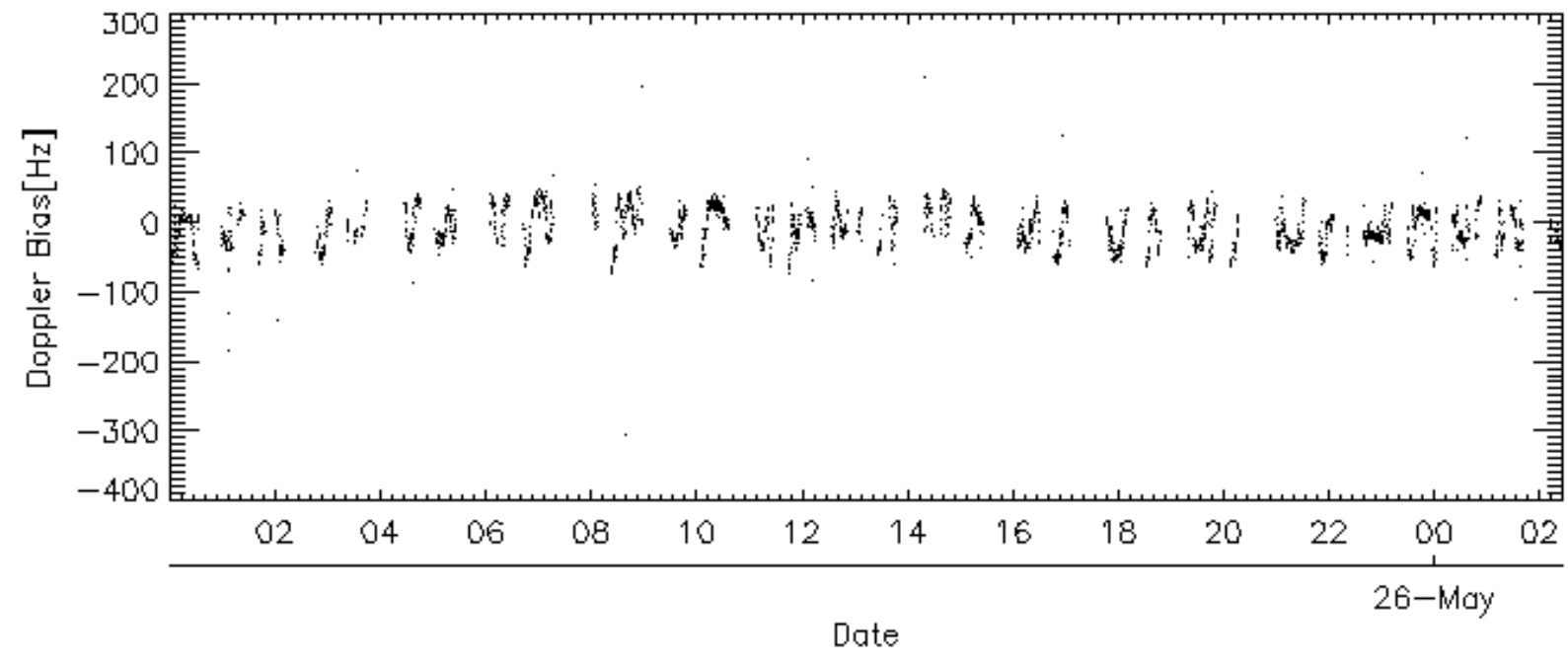
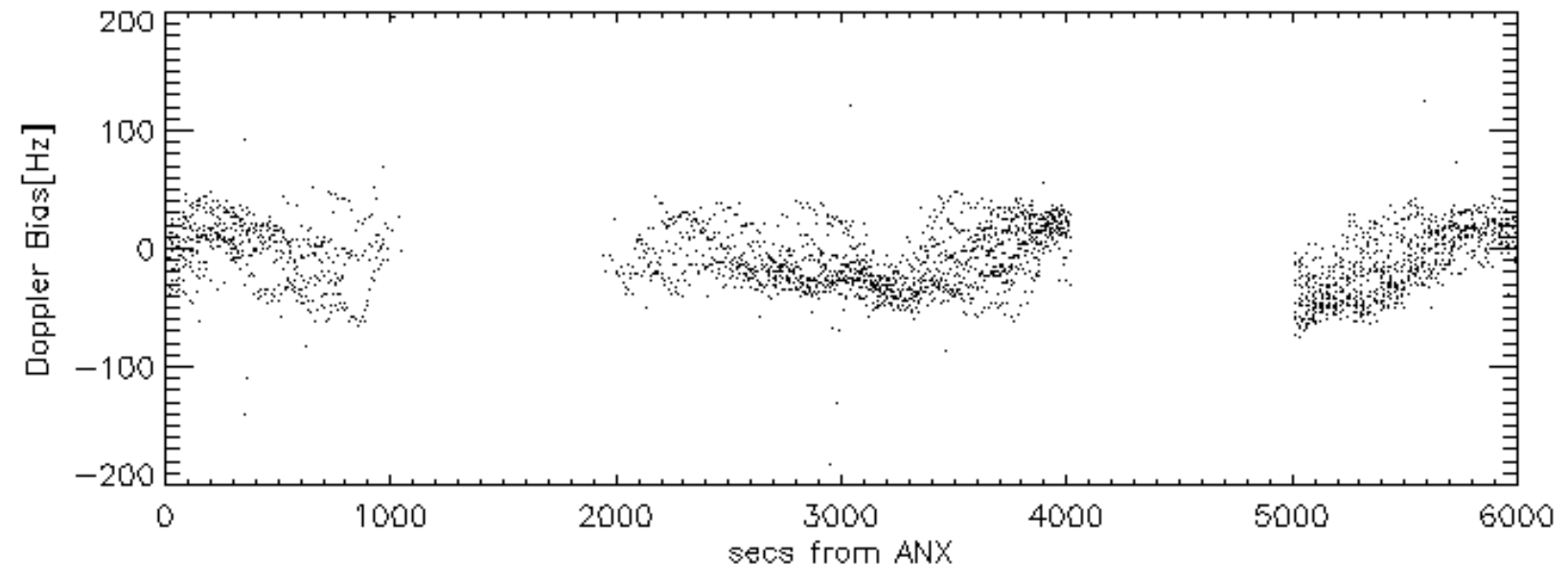
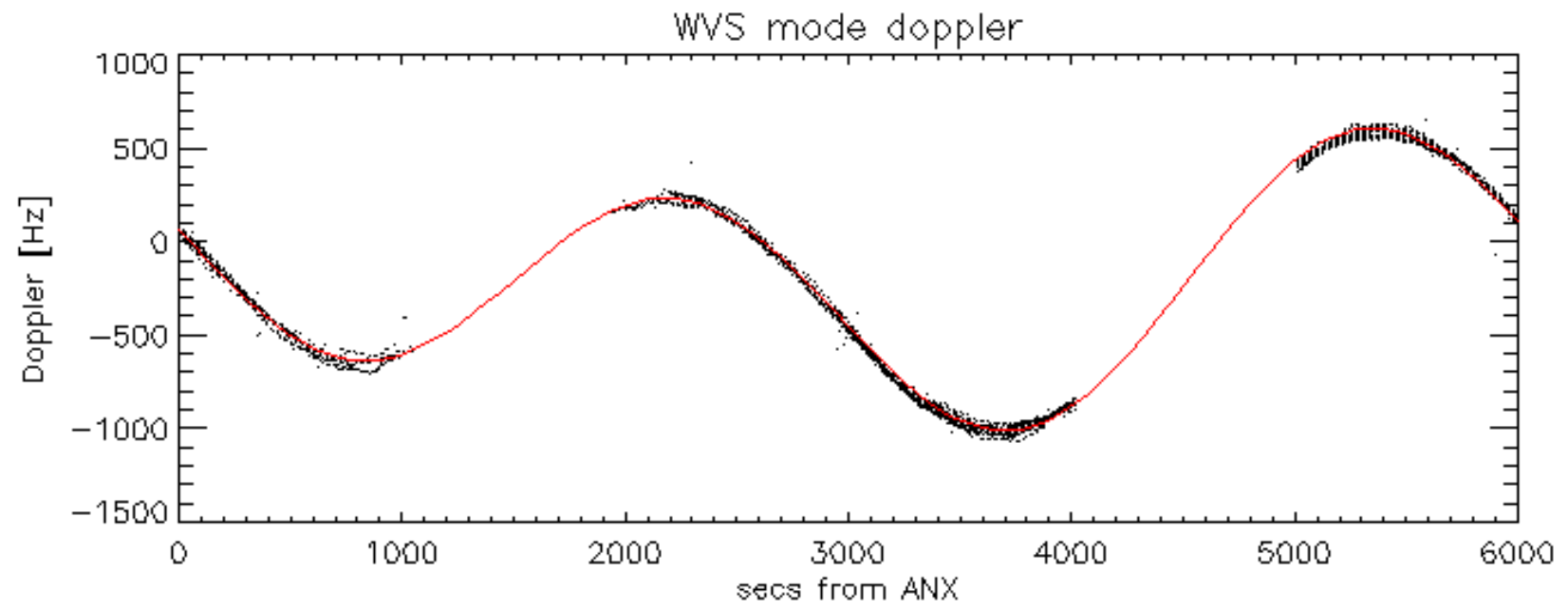
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

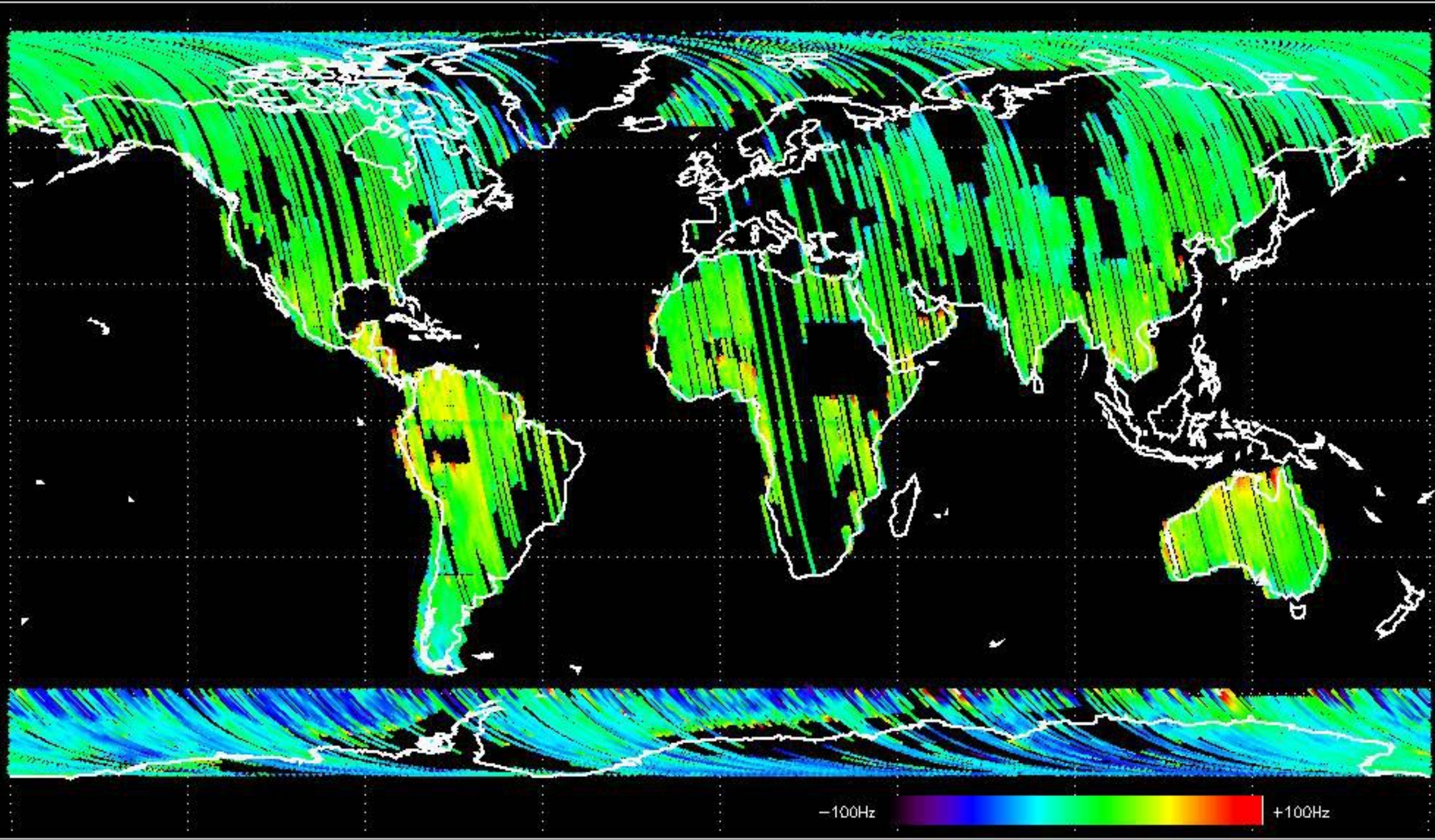






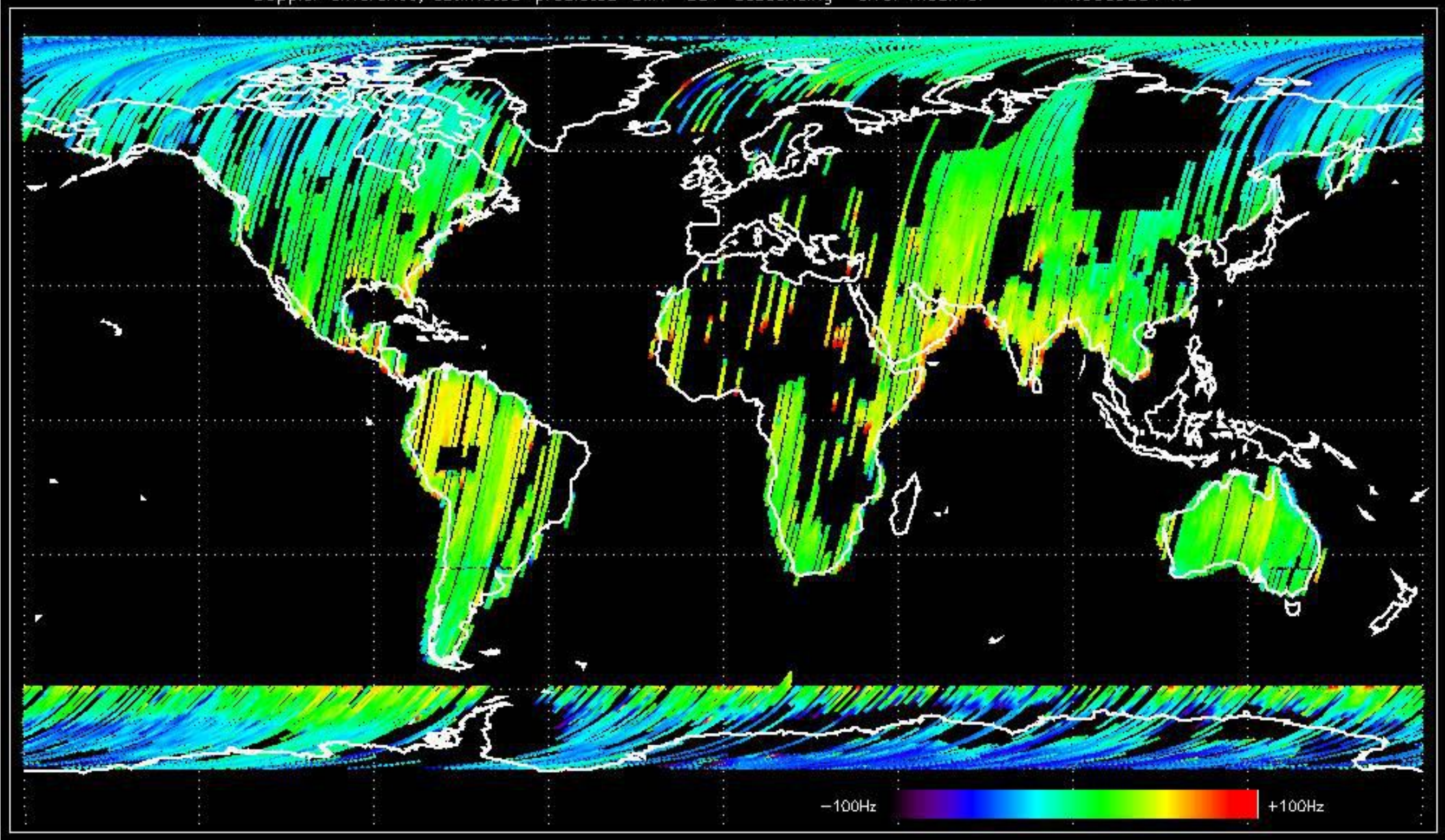


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.164925 Hz



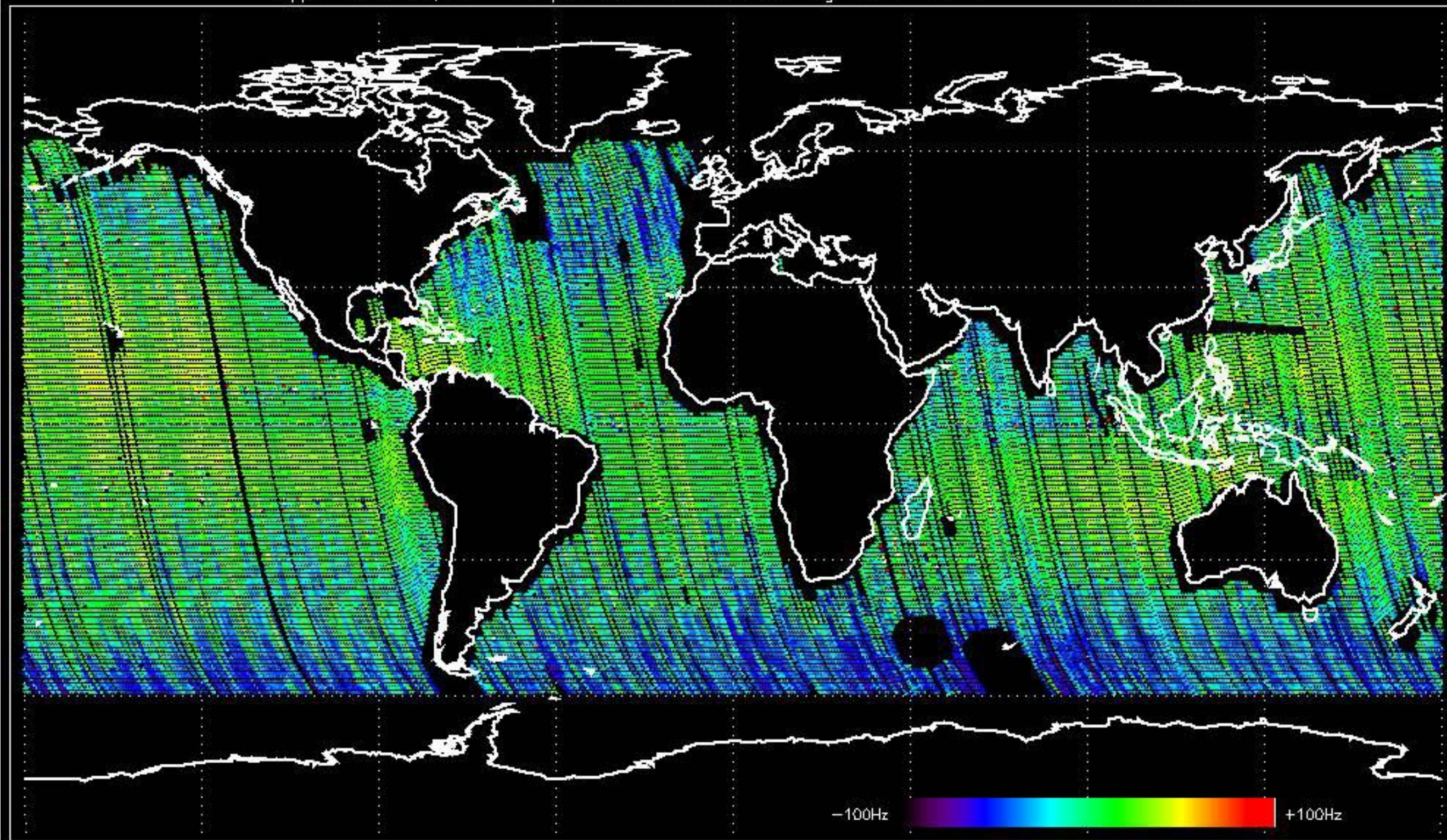


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.0009304 Hz



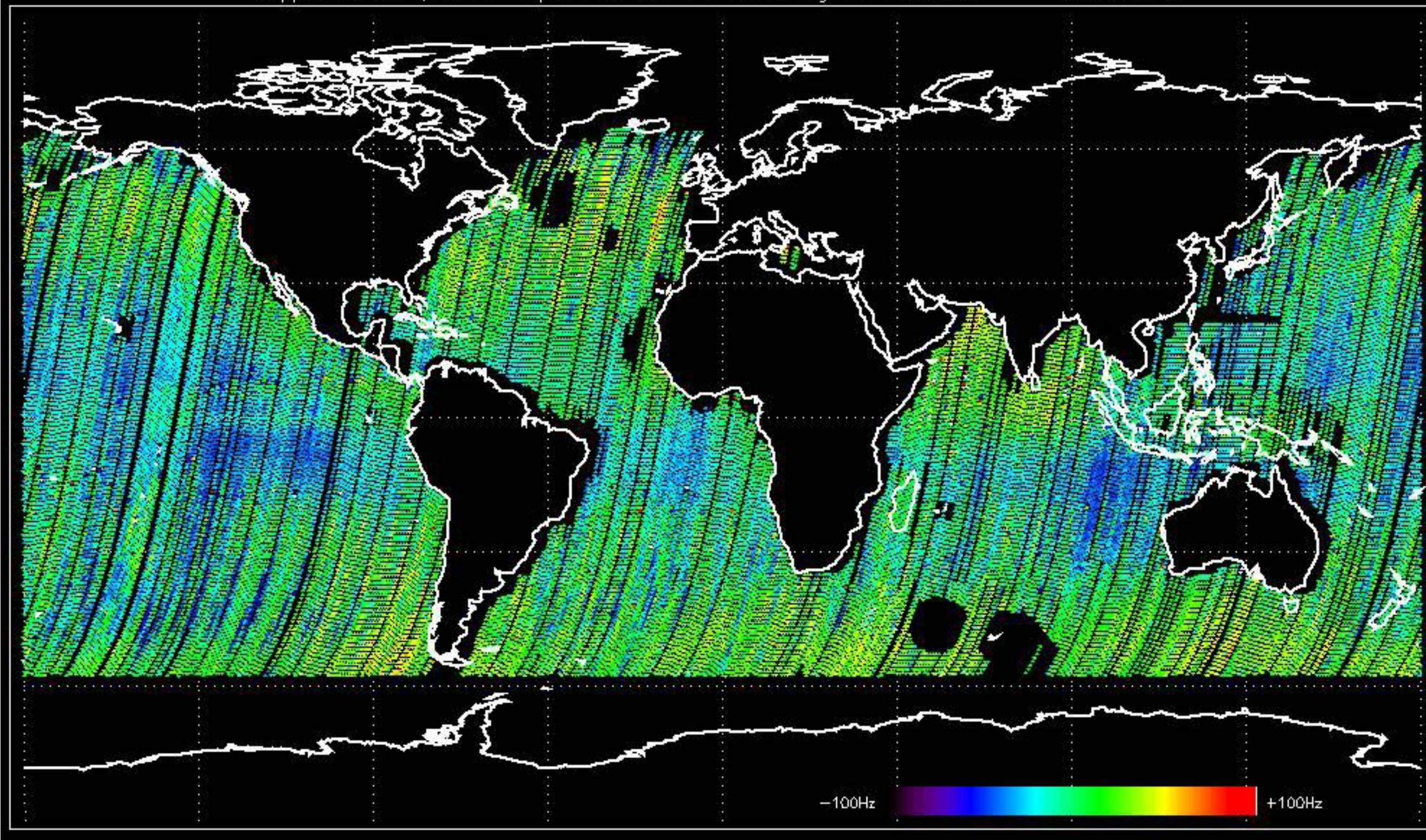


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.4497836 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.825586 Hz





No anomalies observed on available MS products:



No anomalies observed.

















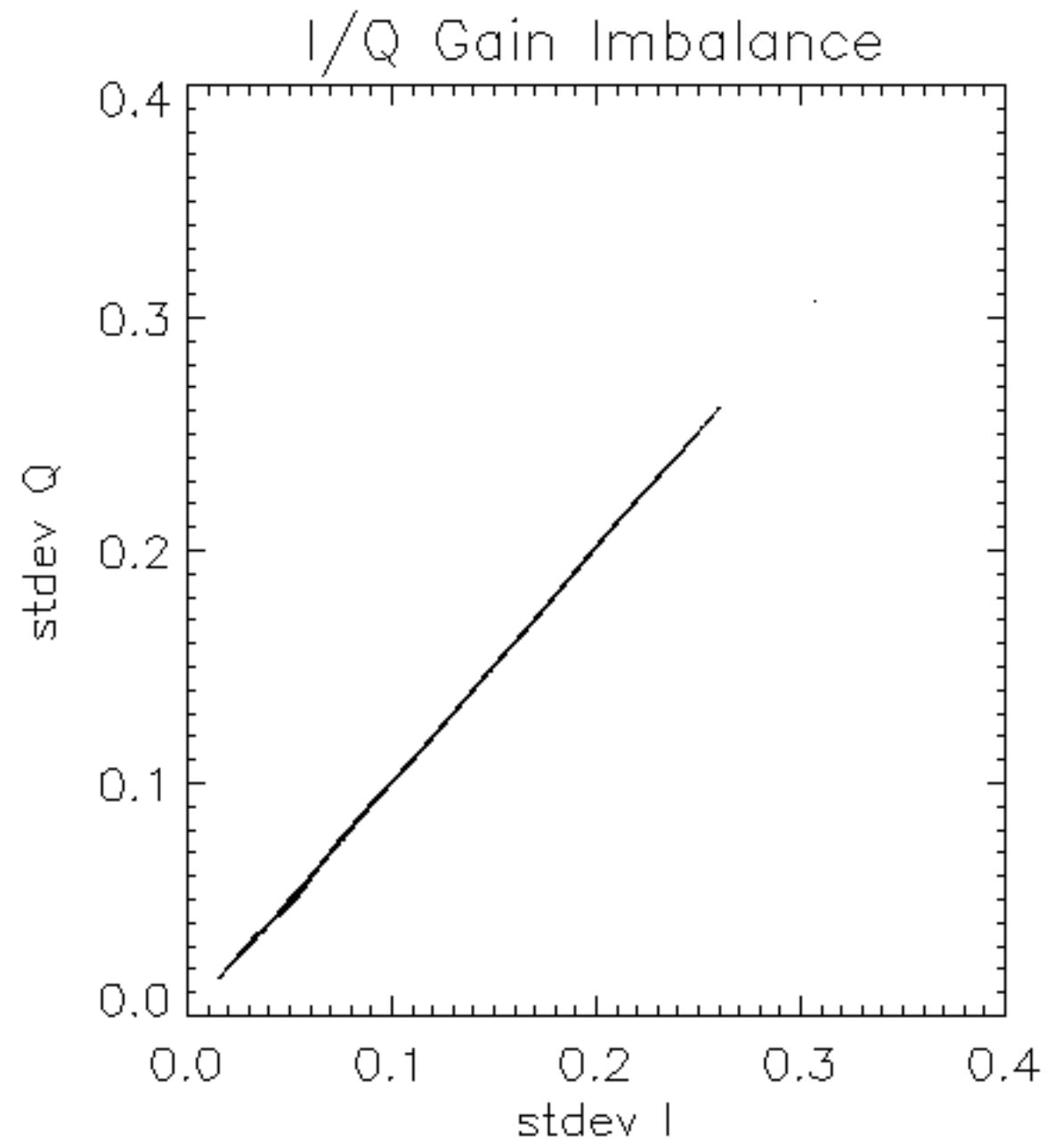


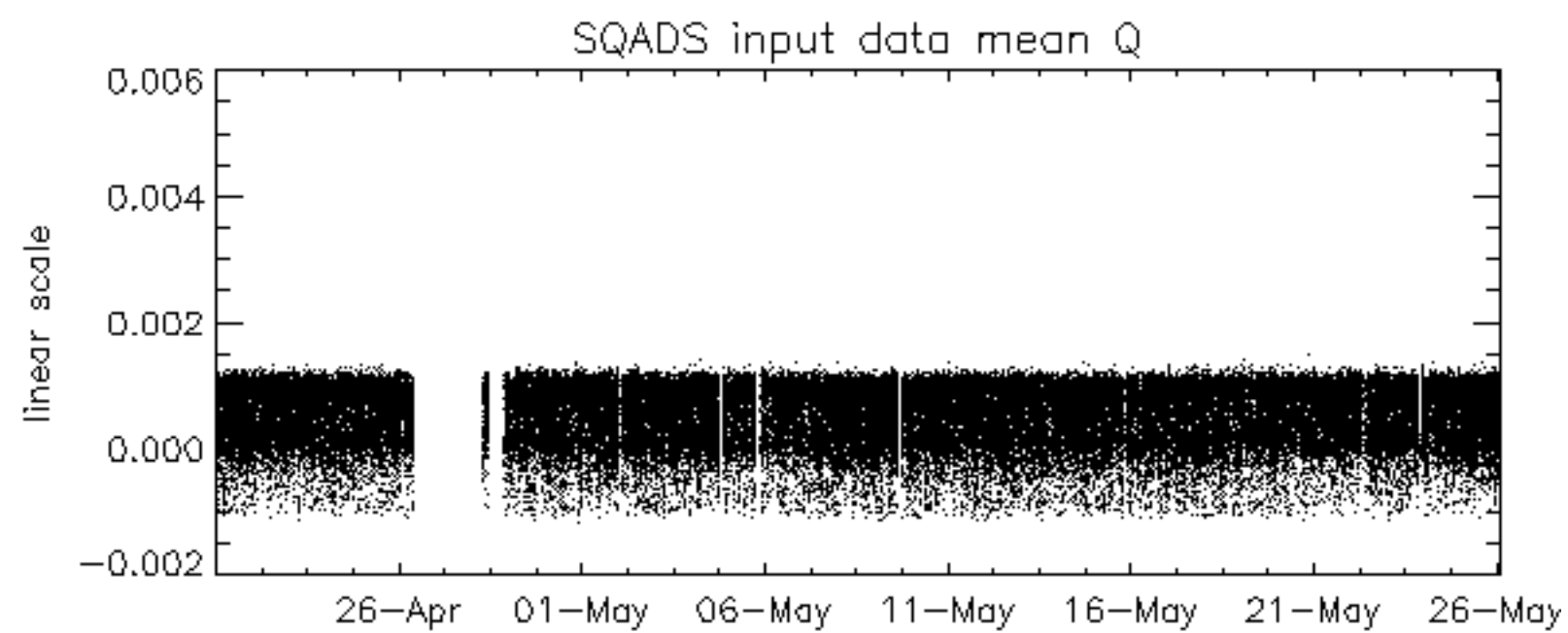
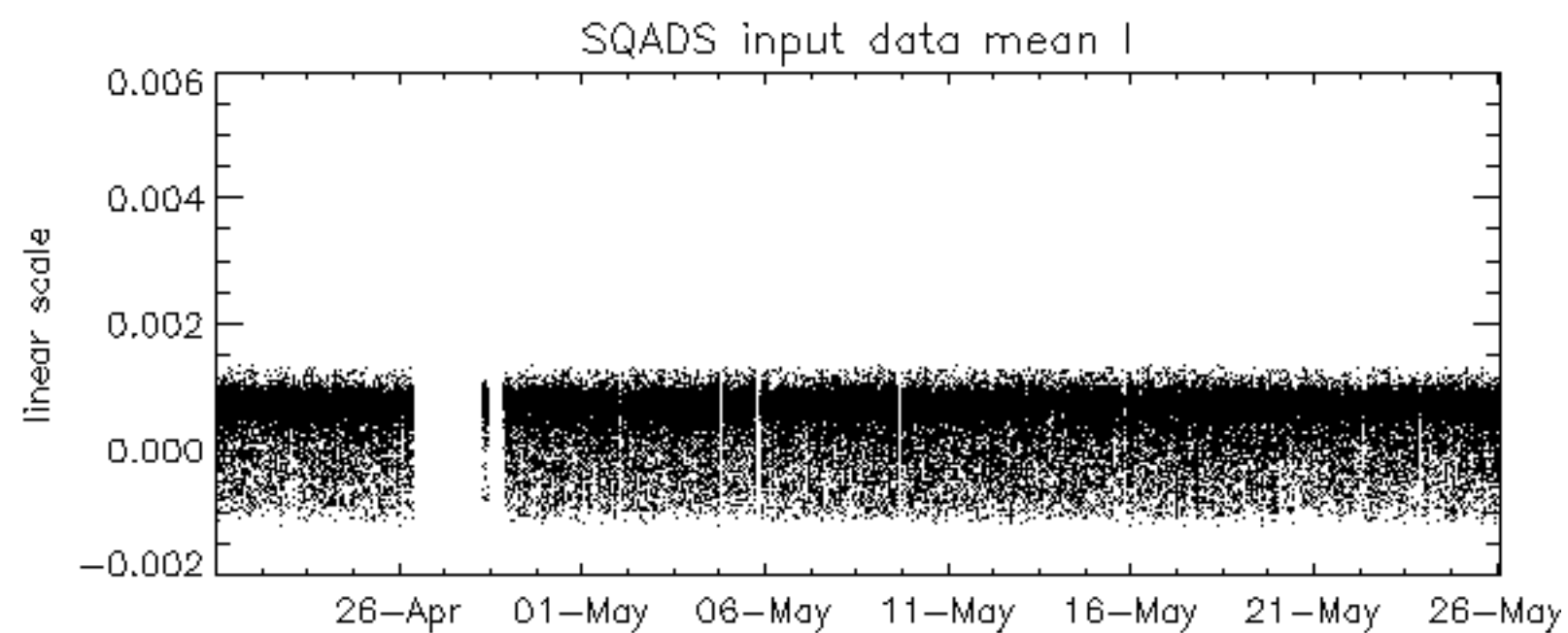
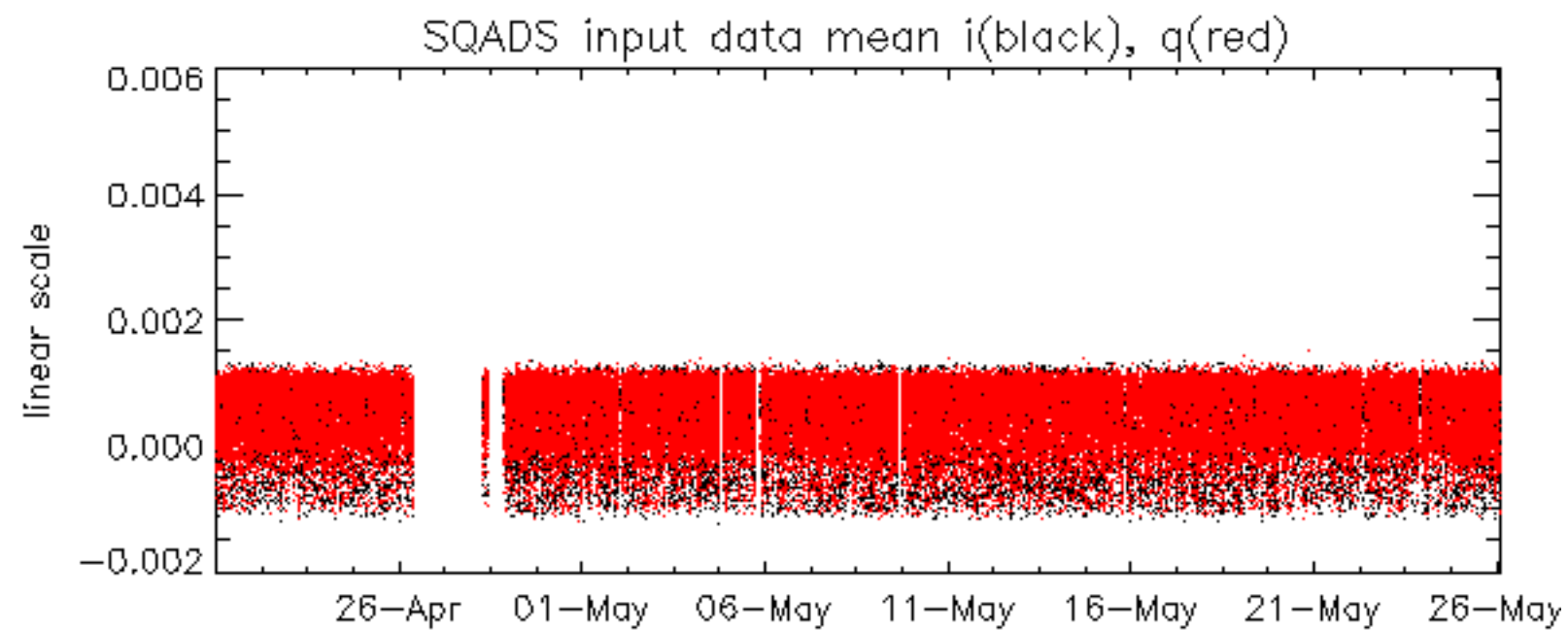


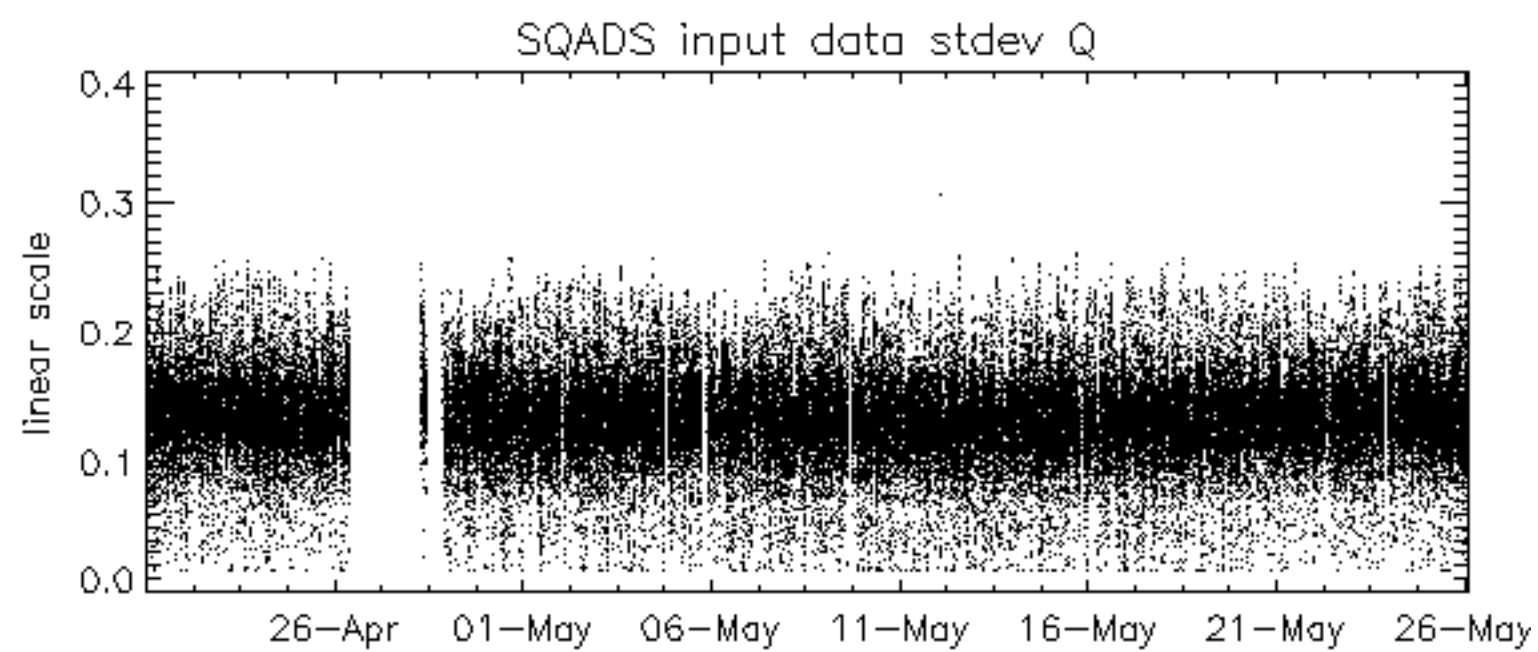
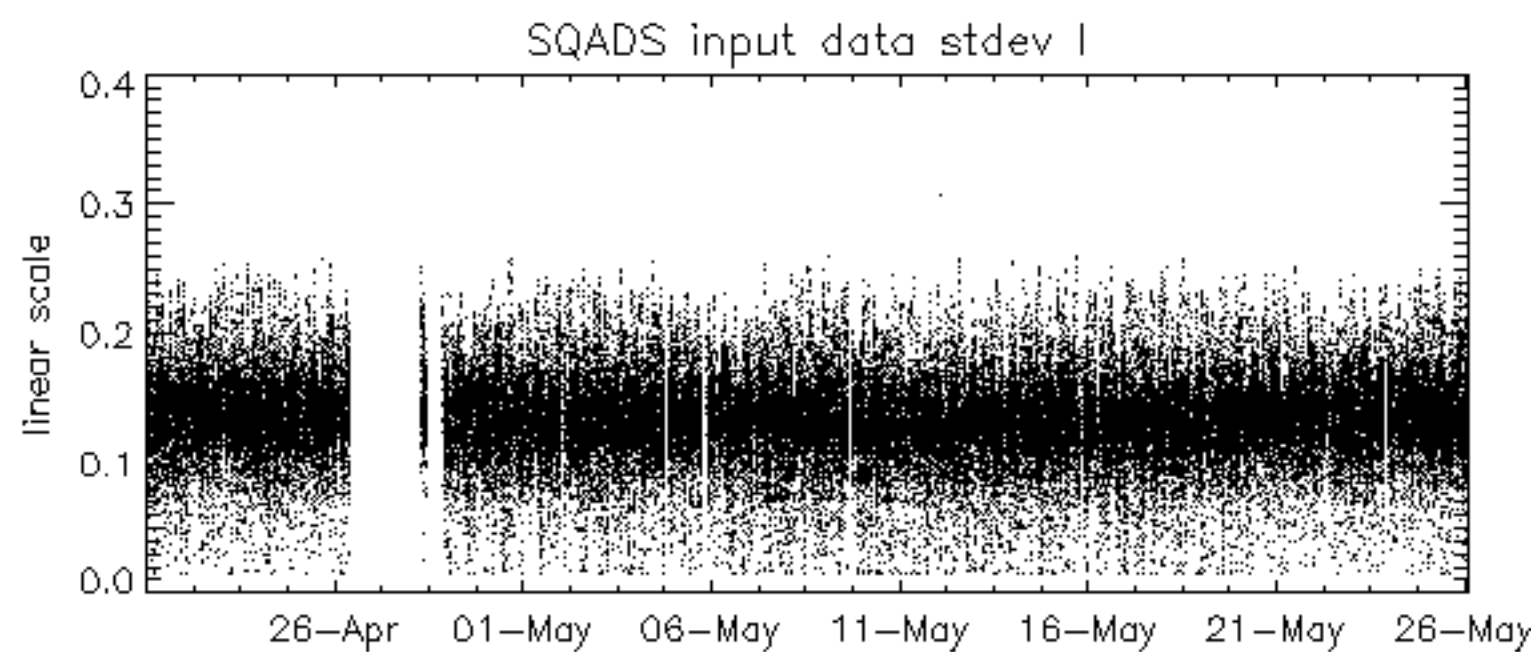
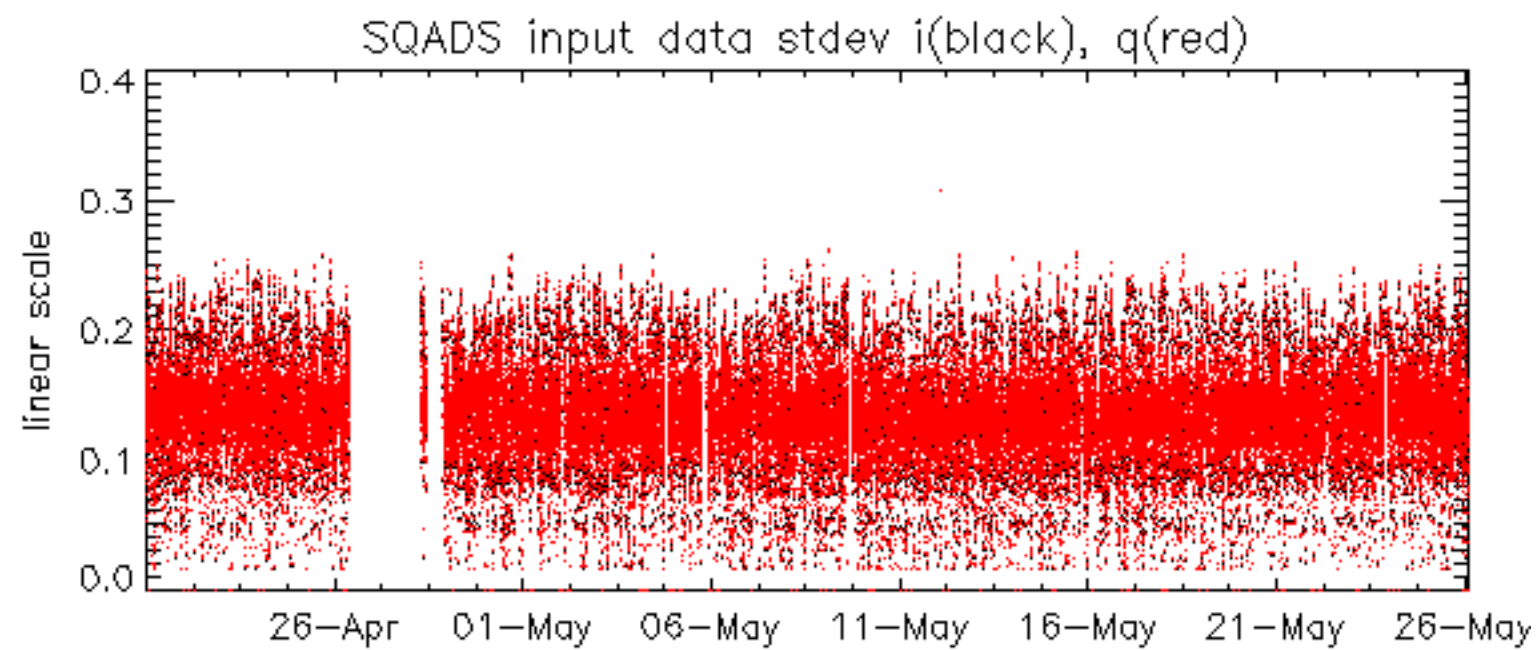






















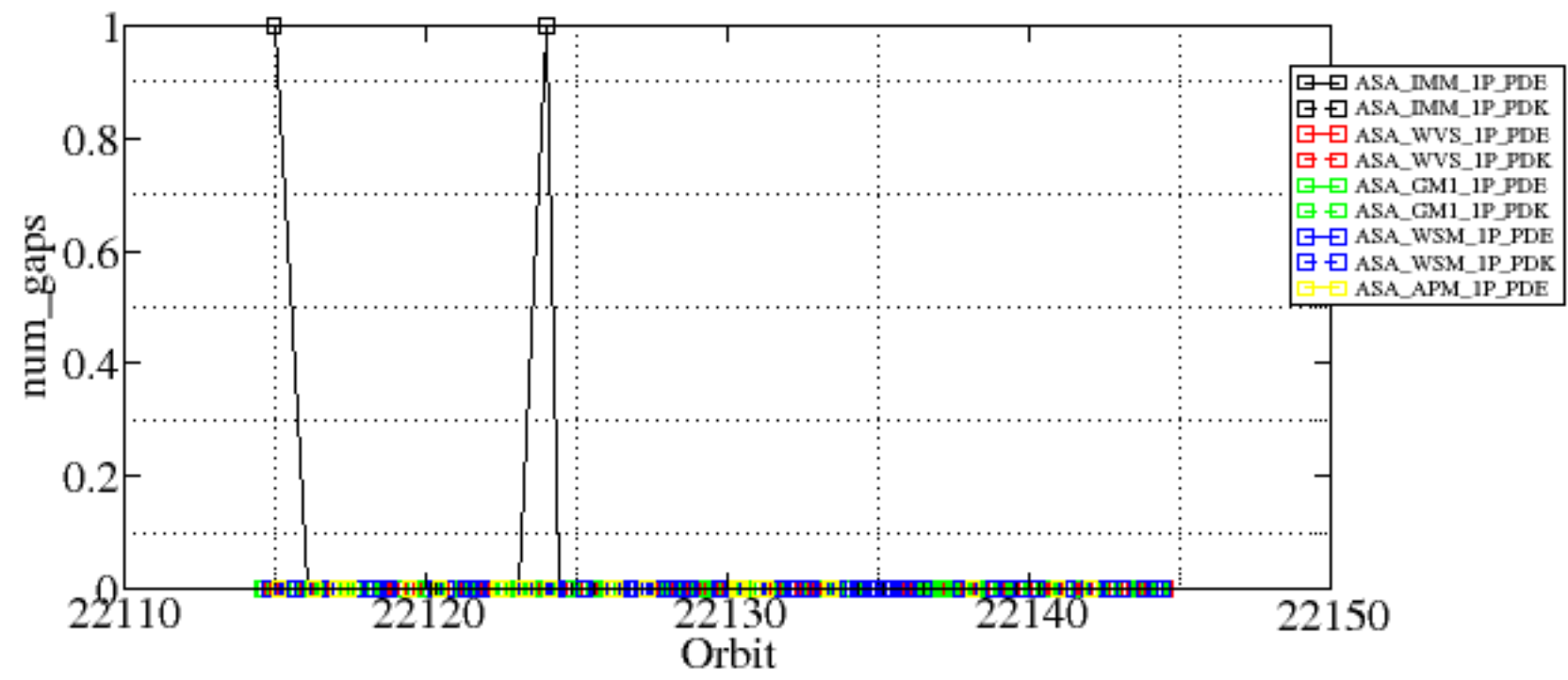




Summary of analysis for the last 3 days 2006052[456]

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_IMM_1PNPDE20060524_004516_000001932048_00016_22114_6100.N1	1	0
ASA_IMM_1PNPDE20060524_155402_000000702048_00025_22123_6119.N1	1	0
ASA_WSM_1PNPDE20060524_013517_000000852048_00017_22115_0566.N1	0	39
ASA_WSM_1PNPDE20060524_113721_000001472048_00023_22121_0630.N1	0	45
ASA_WSM_1PNPDE20060526_021326_000000852048_00046_22144_0919.N1	0	28
ASA_WSM_1PNPDK20060524_122911_000003912048_00023_22121_5942.N1	0	1













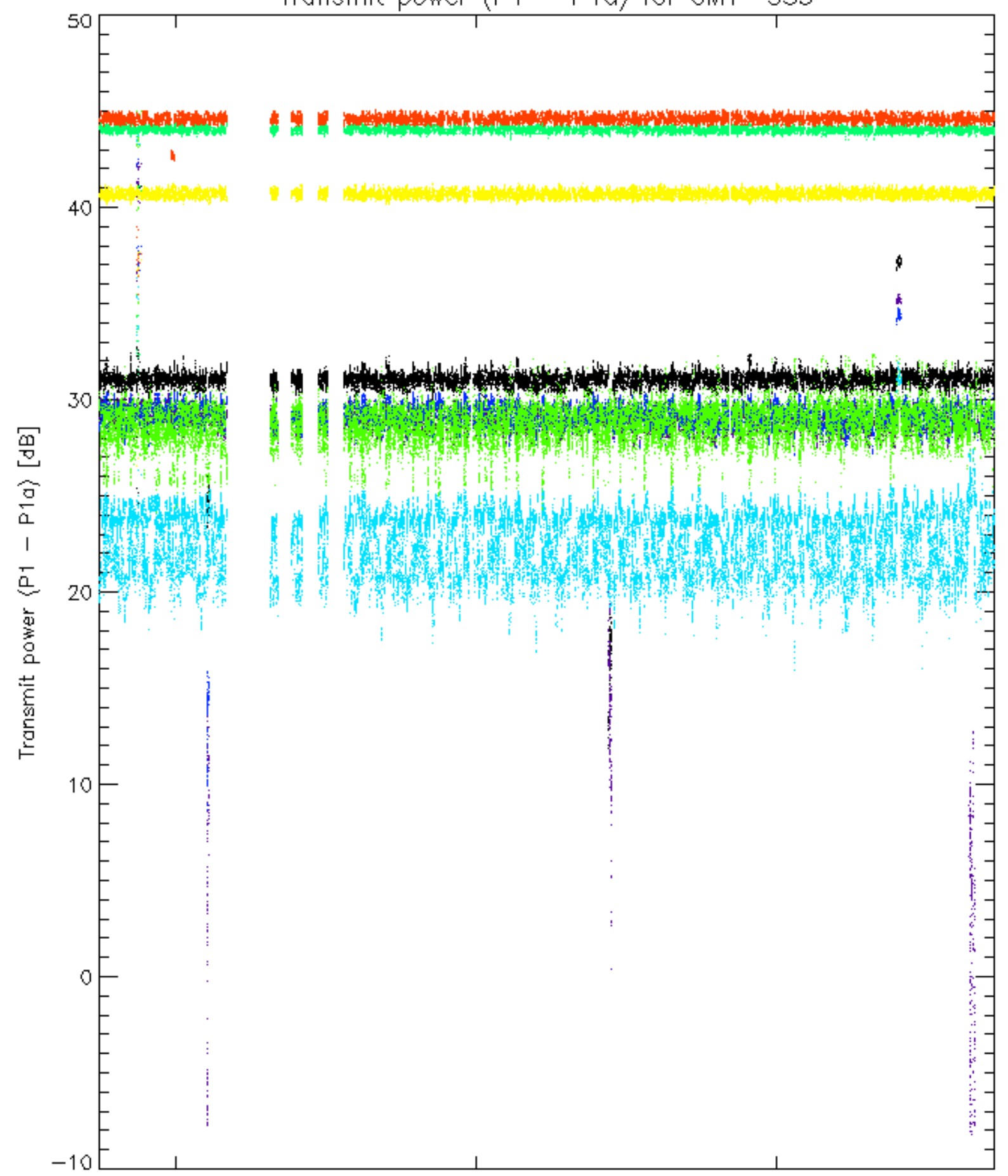




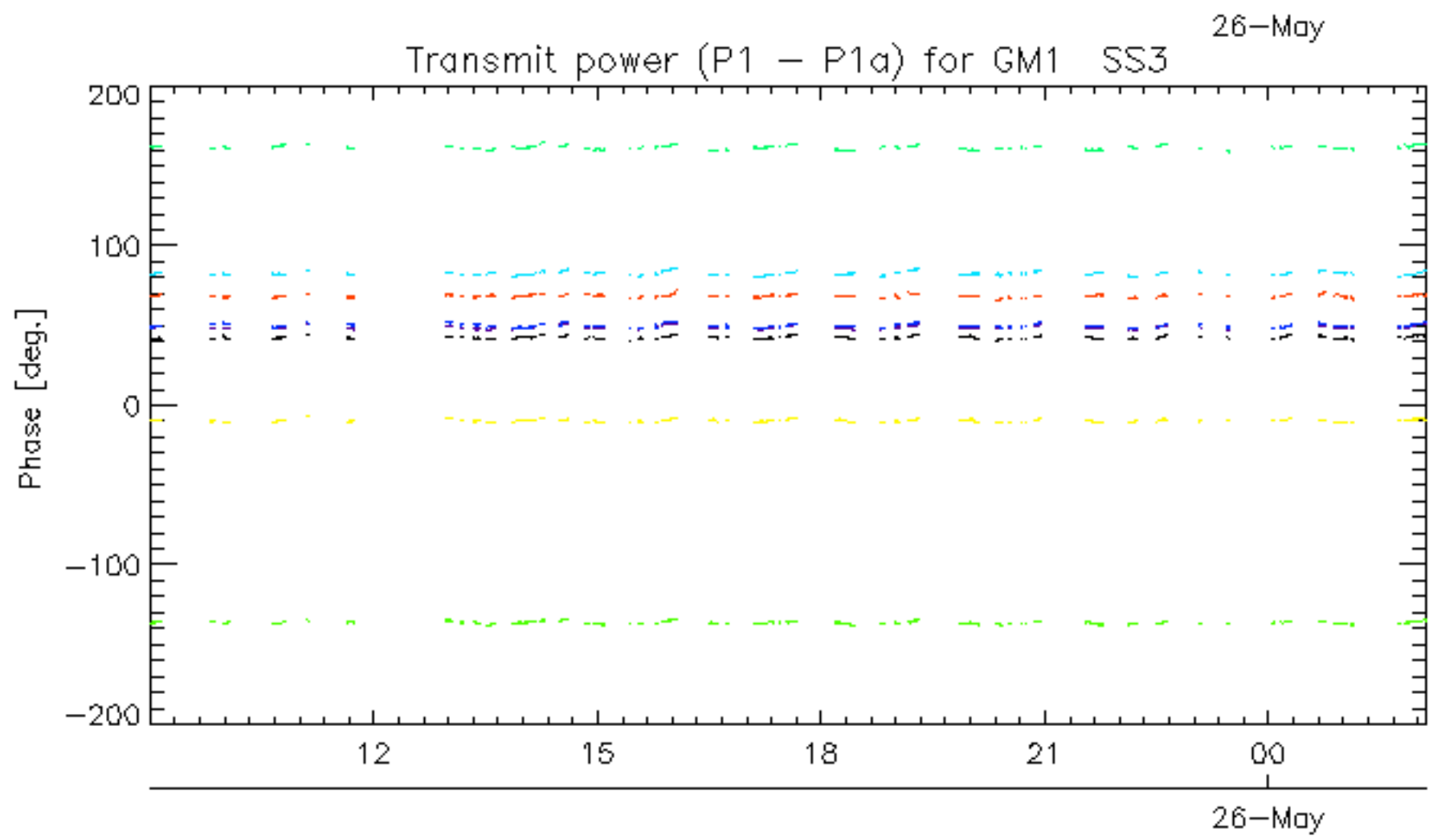
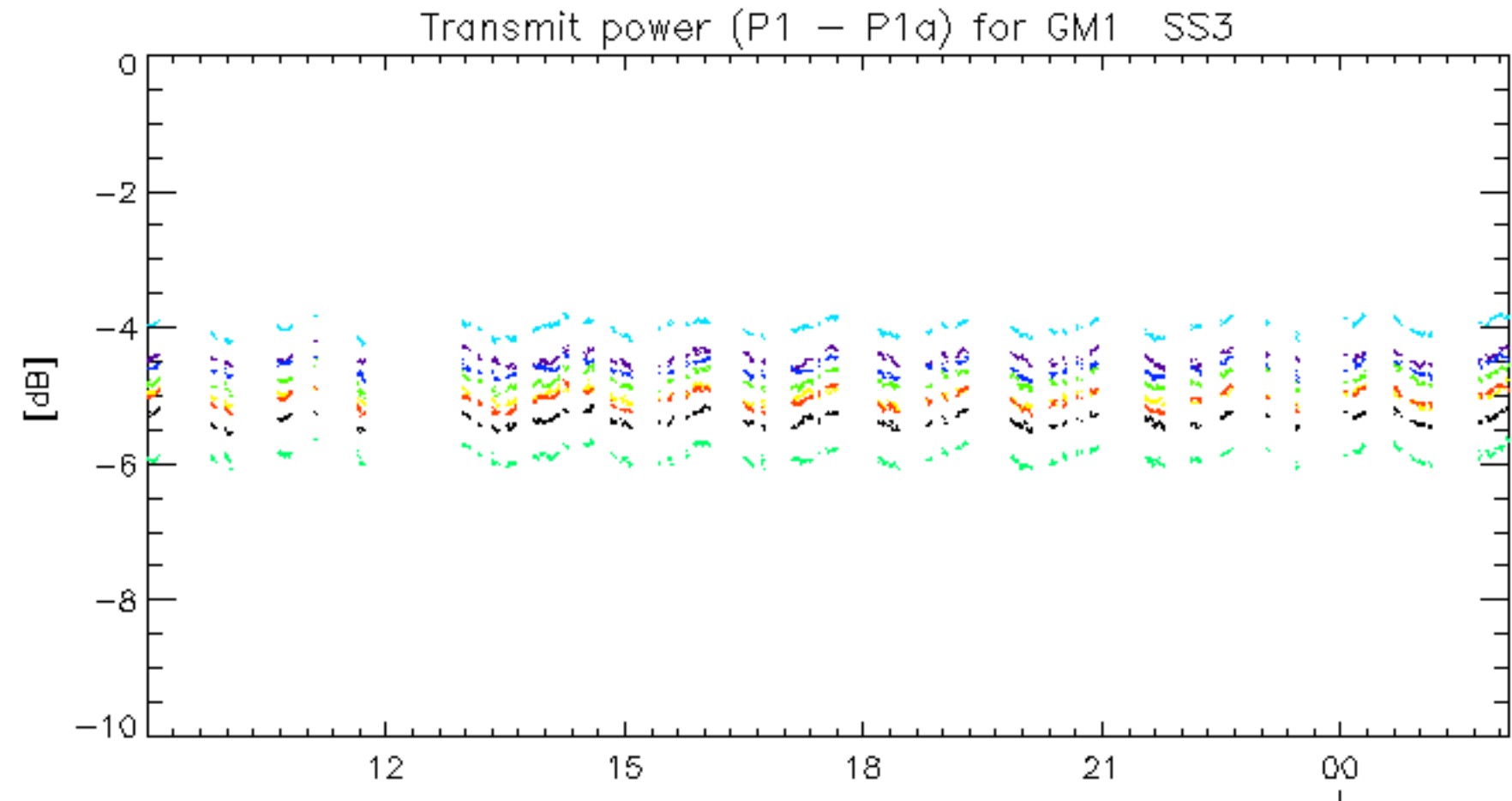




Transmit power (P1 - P1a) for GM1 SS3

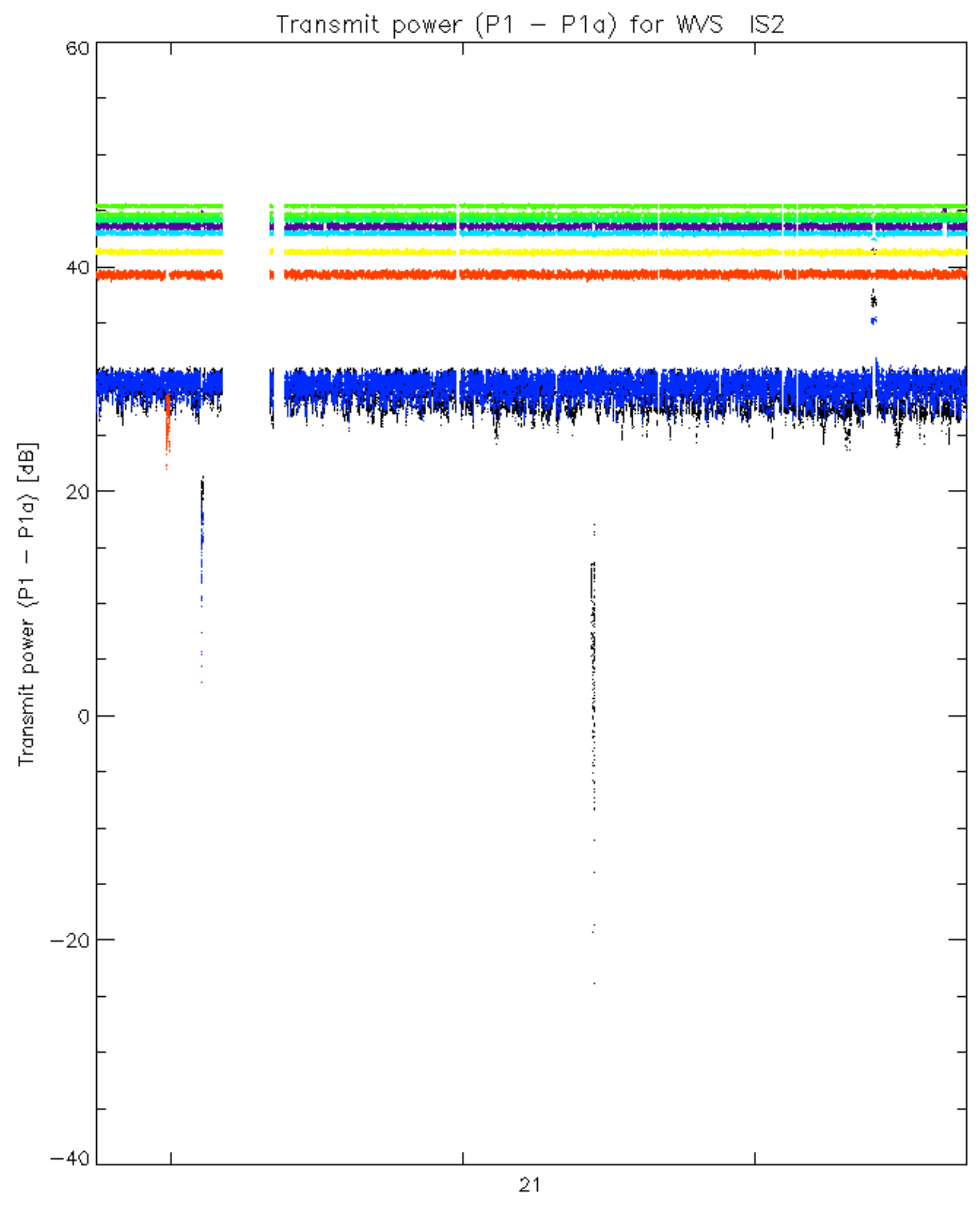


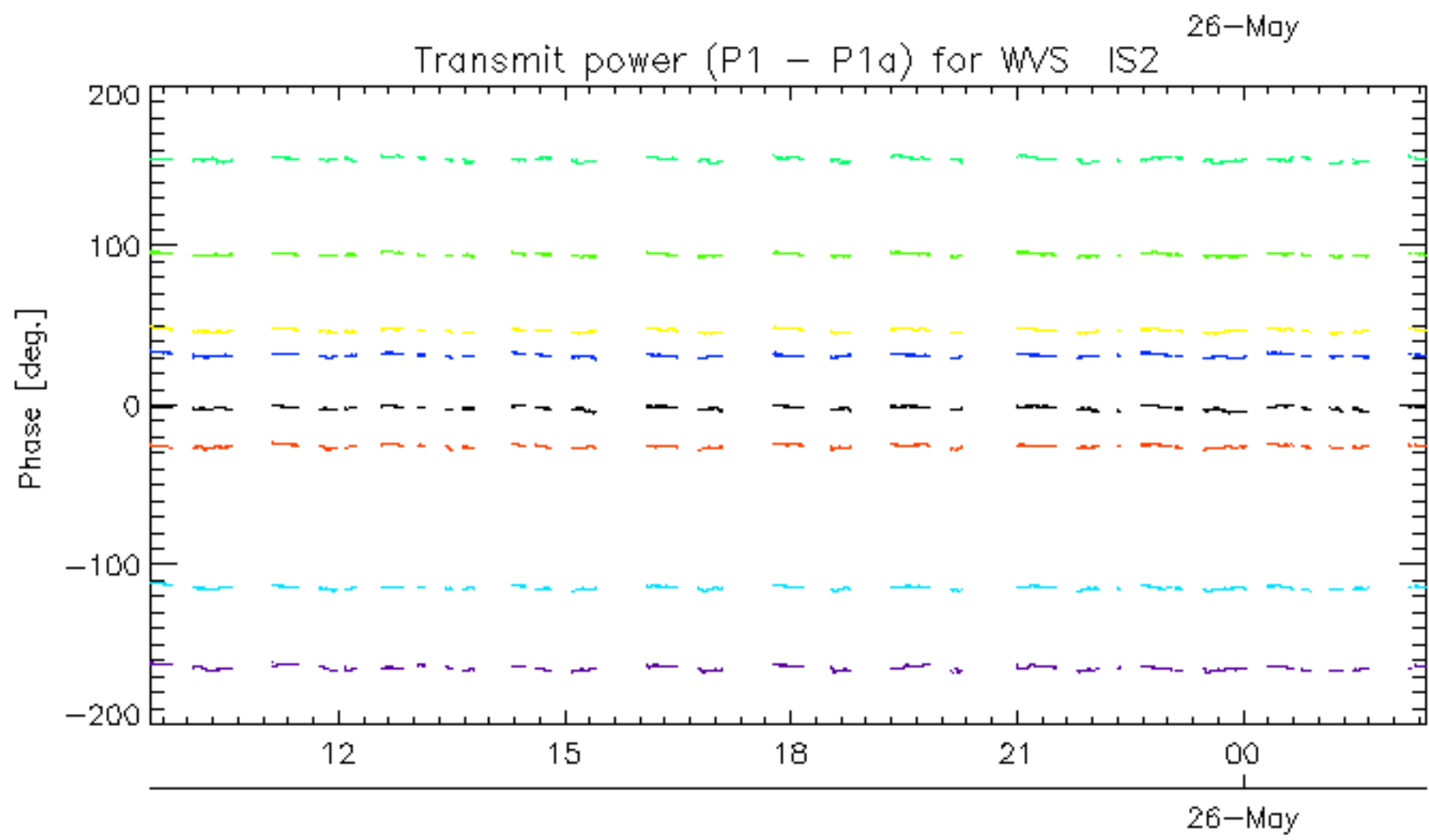
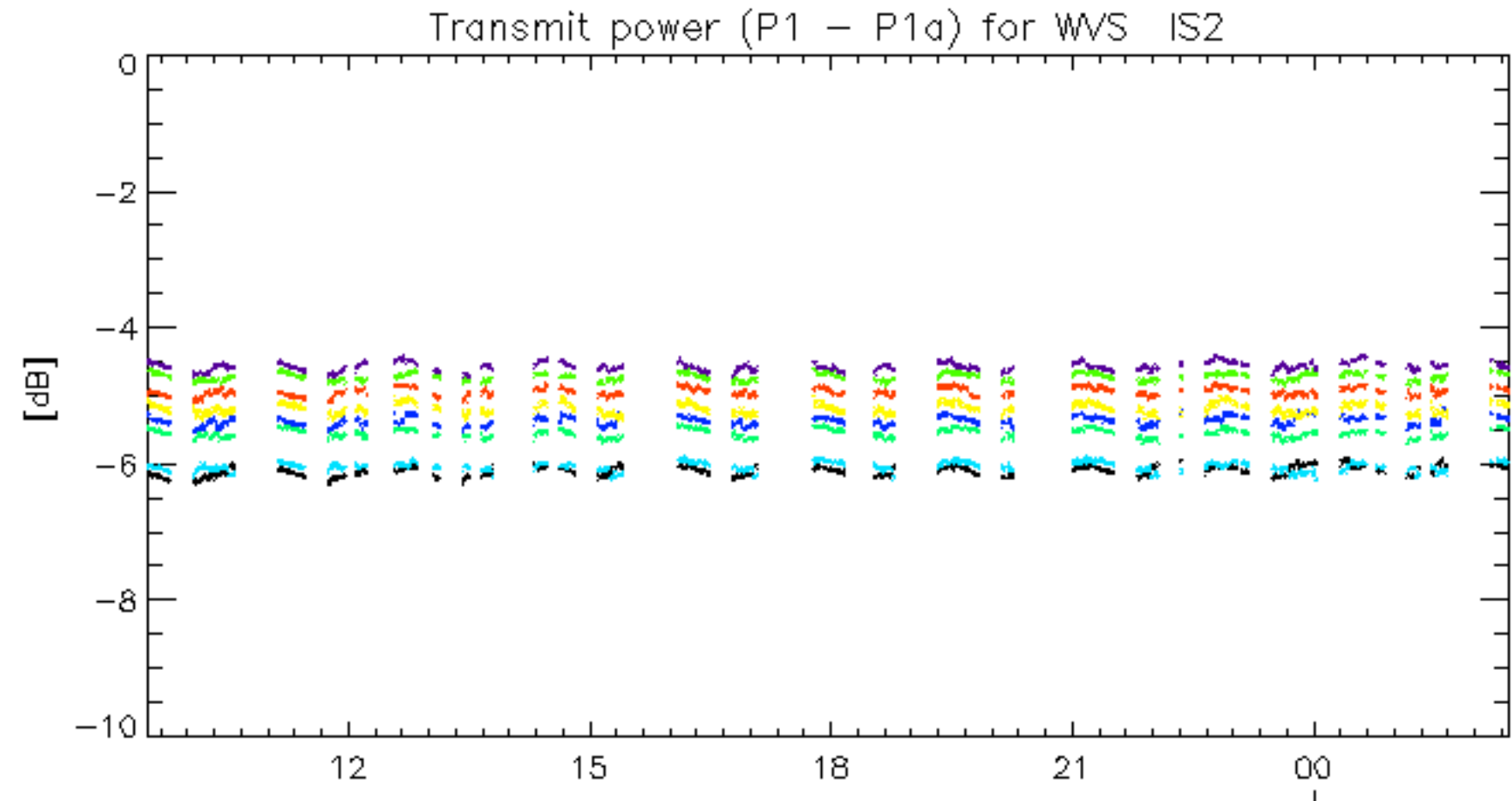
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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







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

No unavailabilities during the reported period.