

# PRELIMINARY REPORT OF 050608

last update on Wed Jun 8 11:26:13 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

No unavailabilities during the reported period.

### 2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-06-07 00:00:00 to 2005-06-08 11:26:13

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	28	55	9	2	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	28	55	9	2	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	28	55	9	2	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	28	55	9	2	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	47	59	0	0	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	47	59	0	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	47	59	0	0	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	47	59	0	0	0

## 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	20050606 180521
H	20050607 173344

### 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"/>
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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	-3.335421	0.007995	0.021123
7	P1	-3.139512	0.014981	-0.030101
11	P1	-4.625742	0.034254	0.032244
15	P1	-5.496926	0.043500	0.037931
19	P1	-3.737746	0.004283	-0.020895
22	P1	-4.585110	0.016158	-0.008250
26	P1	-4.853808	0.022246	0.038570
30	P1	-7.138498	0.027967	-0.008109
3	P1	-15.590331	0.115949	0.157001
7	P1	-15.586143	0.115408	-0.094785
11	P1	-21.352831	0.295593	-0.078847
15	P1	-11.315253	0.048005	0.109072
19	P1	-14.404346	0.032210	-0.071345
22	P1	-15.940219	0.325953	-0.013059
26	P1	-17.722387	0.402725	-0.058612
30	P1	-17.843456	0.215938	0.040582

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.023756	0.078325	0.073395
7	P2	-22.203375	0.096211	0.029465
11	P2	-13.981684	0.094198	0.199737
15	P2	-7.133882	0.086565	-0.038269
19	P2	-9.621942	0.088724	0.037492
22	P2	-16.884176	0.087079	0.004873
26	P2	-16.504782	0.089746	-0.005236
30	P2	-18.800894	0.075971	0.040063

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.164431	0.002694	0.002061
7	P3	-8.164431	0.002694	0.002061
11	P3	-8.164431	0.002694	0.002061
15	P3	-8.164431	0.002694	0.002061
19	P3	-8.164431	0.002694	0.002061
22	P3	-8.164431	0.002694	0.002061
26	P3	-8.164431	0.002694	0.002061
30	P3	-8.164431	0.002694	0.002061

#### 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	-2.794468	0.013471	-0.025643
7	P1	-2.944314	0.031316	0.060327
11	P1	-3.957906	0.017885	-0.018165
15	P1	-3.530142	0.023625	-0.006061
19	P1	-3.632632	0.015877	-0.018275
22	P1	-5.642191	0.045863	0.025148
26	P1	-7.294909	0.038872	0.020437
30	P1	-6.288484	0.045912	-0.036712
3	P1	-10.838072	0.041241	-0.033056
7	P1	-10.378847	0.167709	0.079618
11	P1	-12.546858	0.114338	-0.045576
15	P1	-11.611558	0.083880	0.019166
19	P1	-15.615167	0.063764	-0.003837
22	P1	-25.988712	3.275442	-0.422838
26	P1	-15.630089	0.383710	0.033633
30	P1	-20.217190	1.119607	0.147195

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.766321	0.041394	0.044395
7	P2	-22.160137	0.040184	0.086110
11	P2	-9.920855	0.058087	0.164470
15	P2	-5.116508	0.044679	-0.049735
19	P2	-6.911827	0.058461	-0.008766
22	P2	-7.105067	0.036750	-0.007933
26	P2	-23.953947	0.037061	-0.025527
30	P2	-21.950109	0.039246	-0.005355

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.996922	0.003839	0.002071
7	P3	-7.996726	0.003835	0.002068
11	P3	-7.996830	0.003833	0.001818
15	P3	-7.996798	0.003821	0.001965
19	P3	-7.996746	0.003839	0.001972
22	P3	-7.996926	0.003827	0.002395
26	P3	-7.996765	0.003840	0.001970
30	P3	-7.996879	0.003847	0.002004

## 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	0.000453650
	stdev	2.19623e-07
MEAN Q	mean	0.000493154
	stdev	2.30400e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127399
	stdev	0.000977495
STDEV Q	mean	0.127635
	stdev	0.000988053



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005060[678]

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)

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



### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

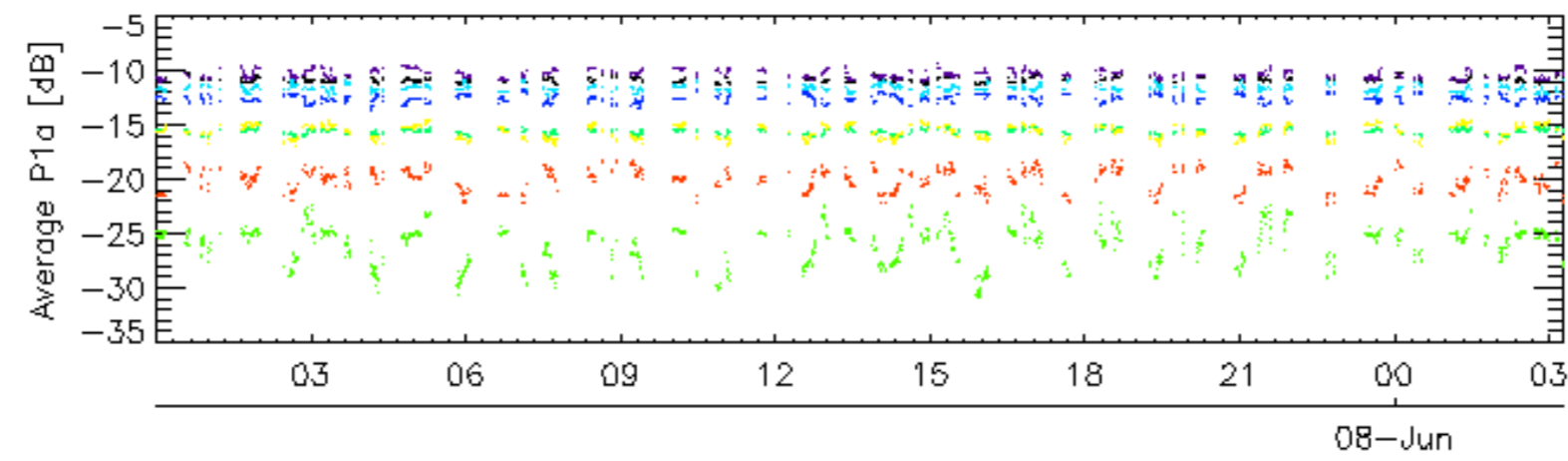
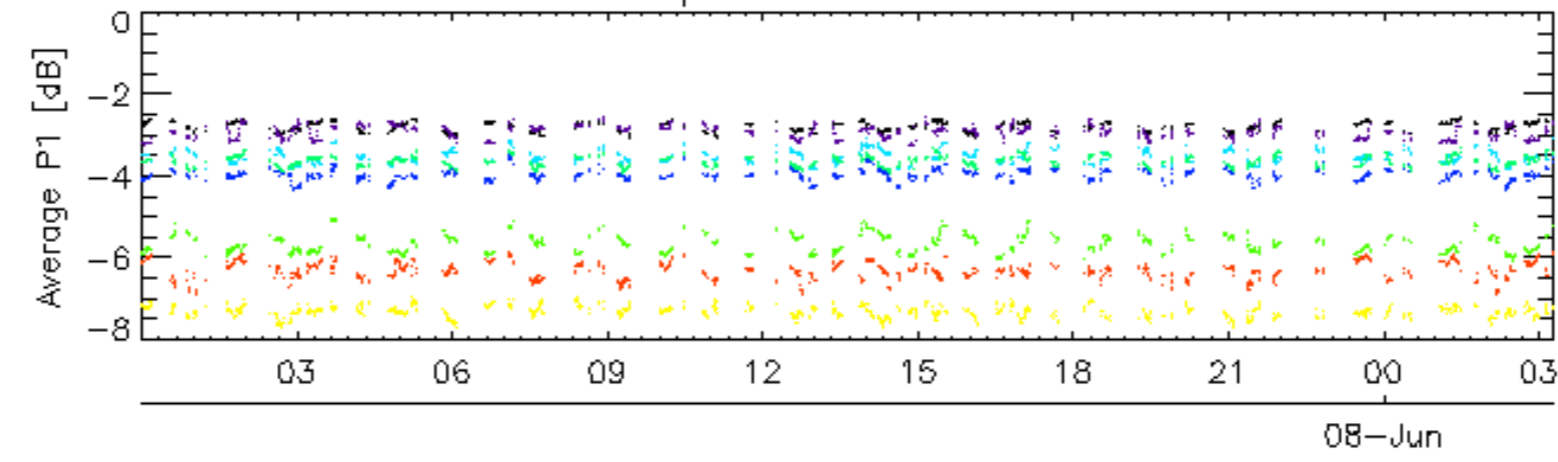
Ascending

Descending

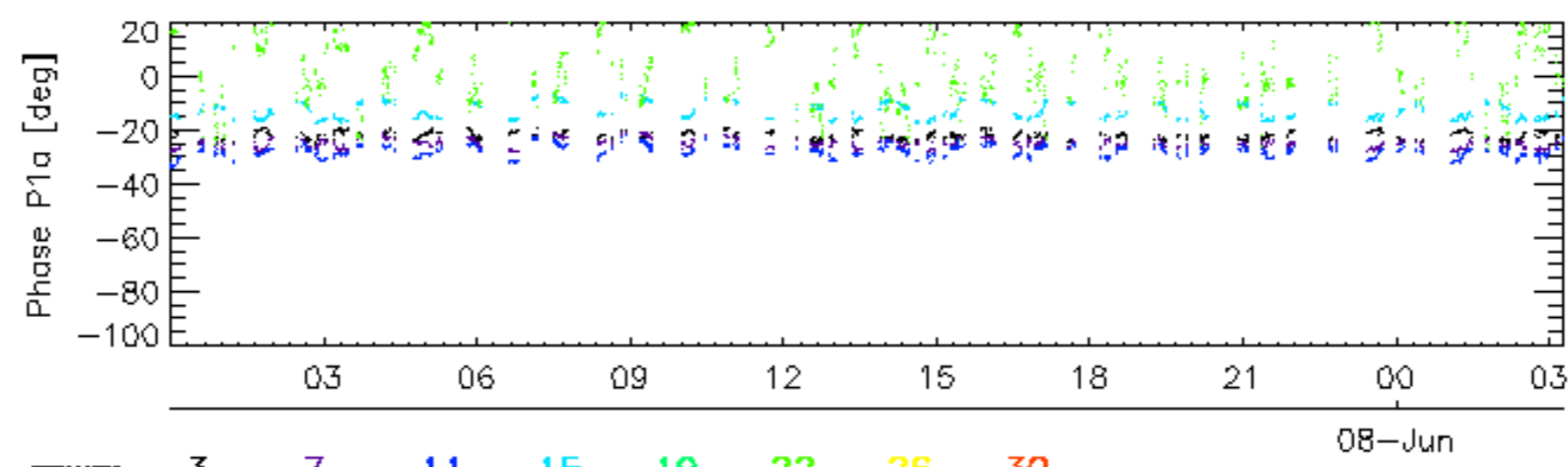
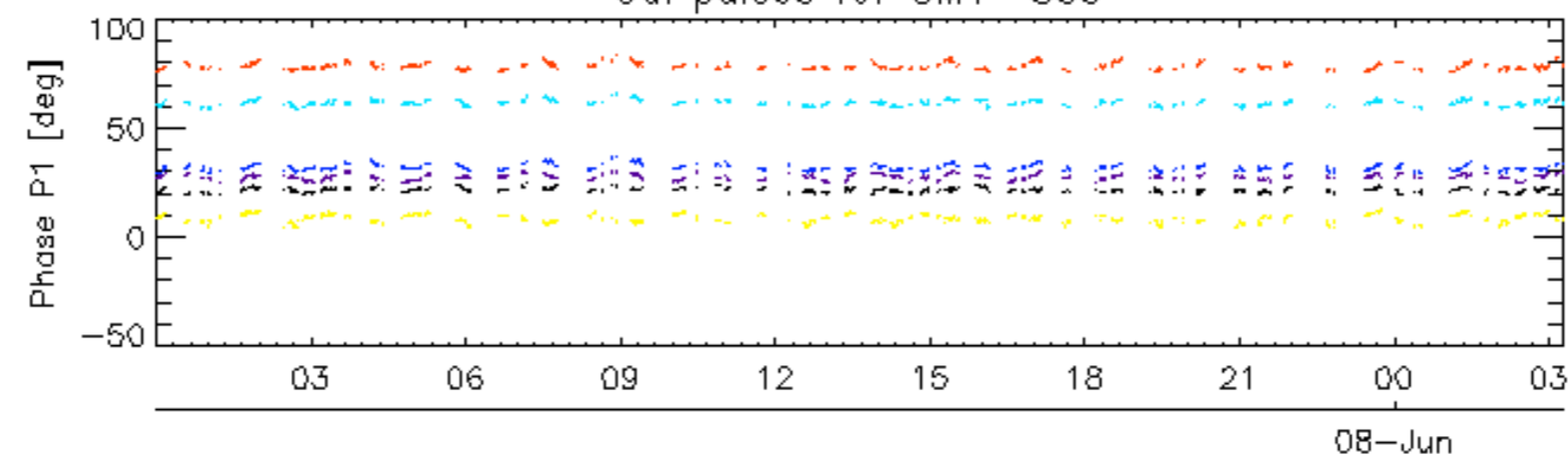
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

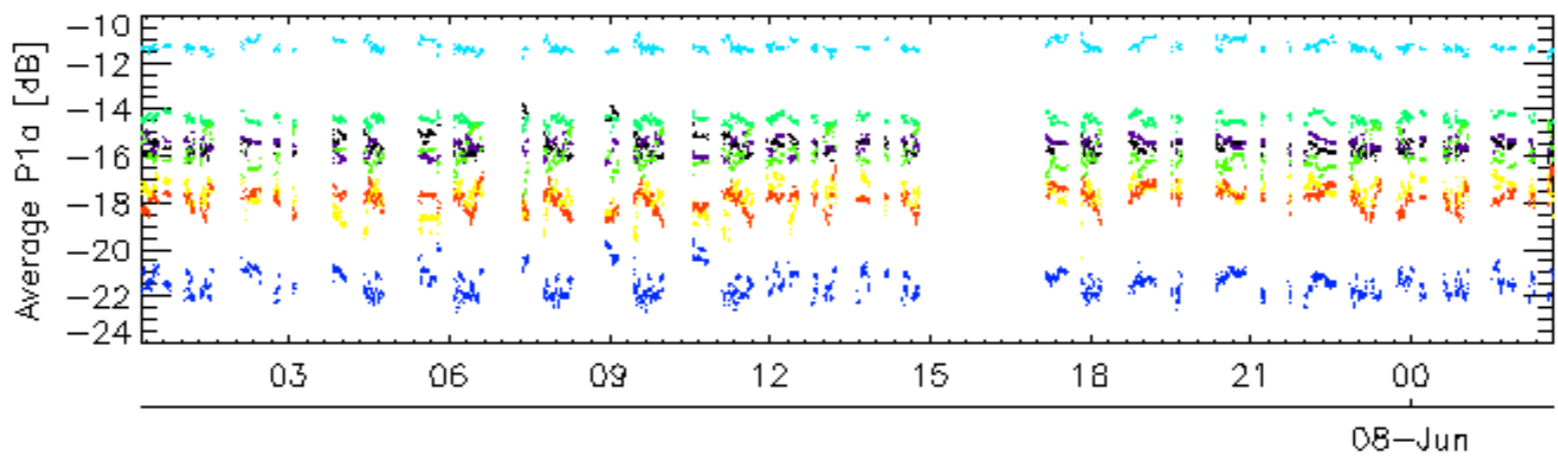
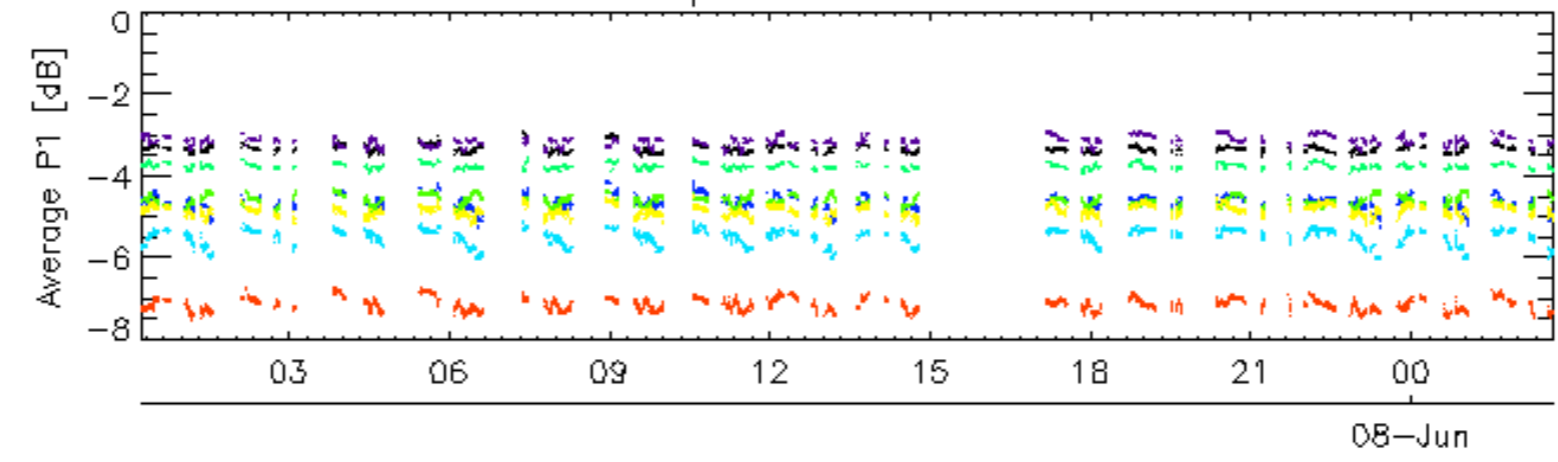


Cal pulses for GM1 SS3

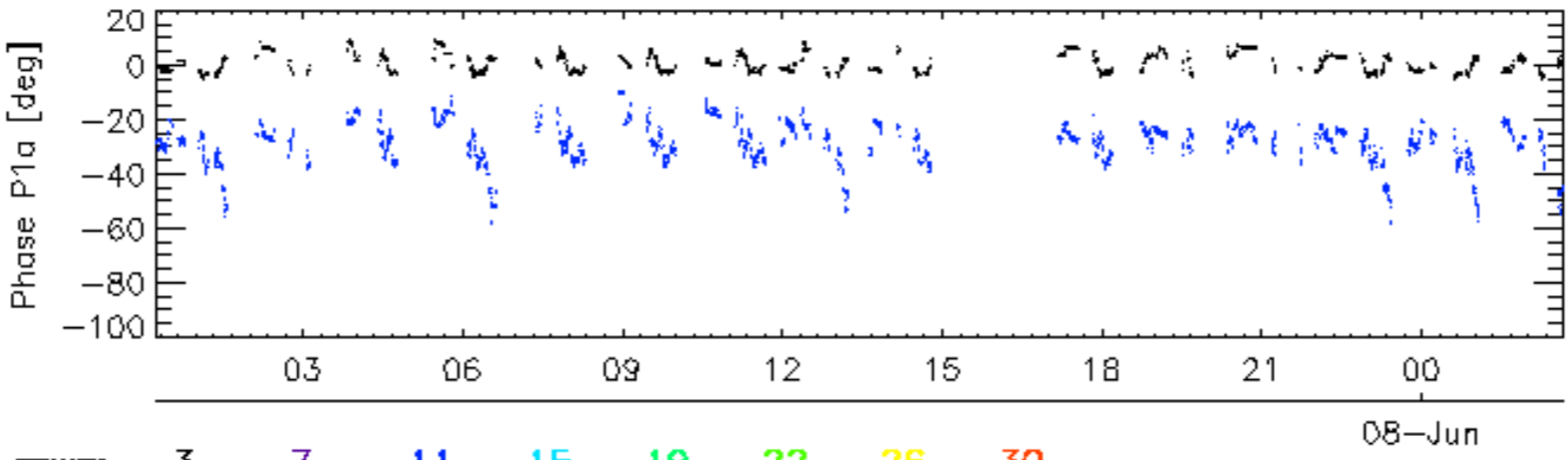
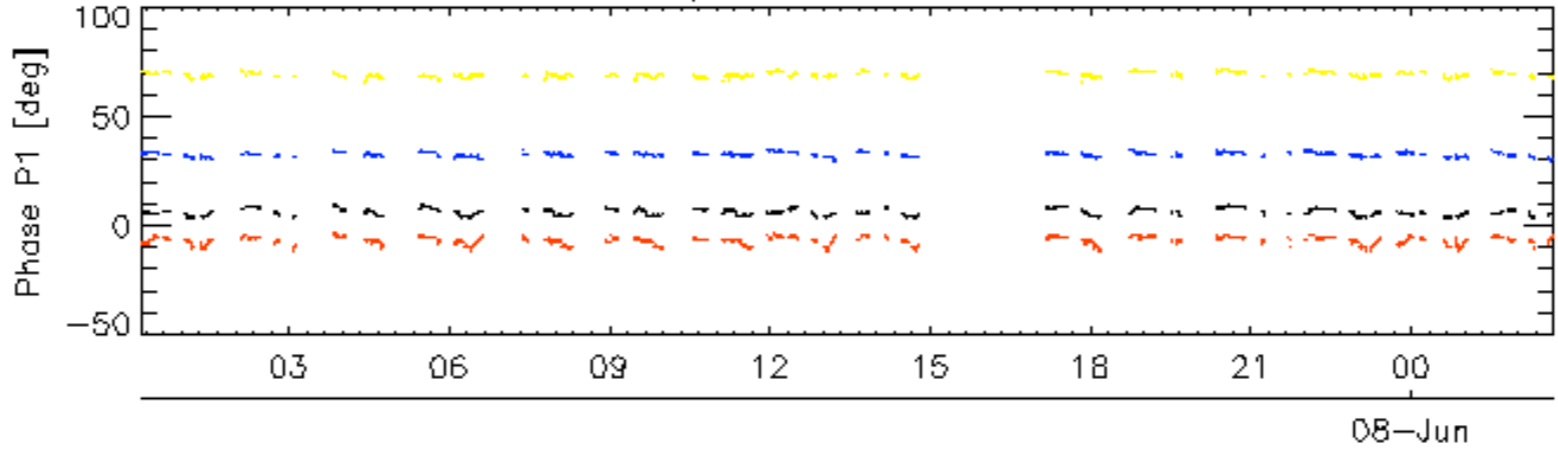


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

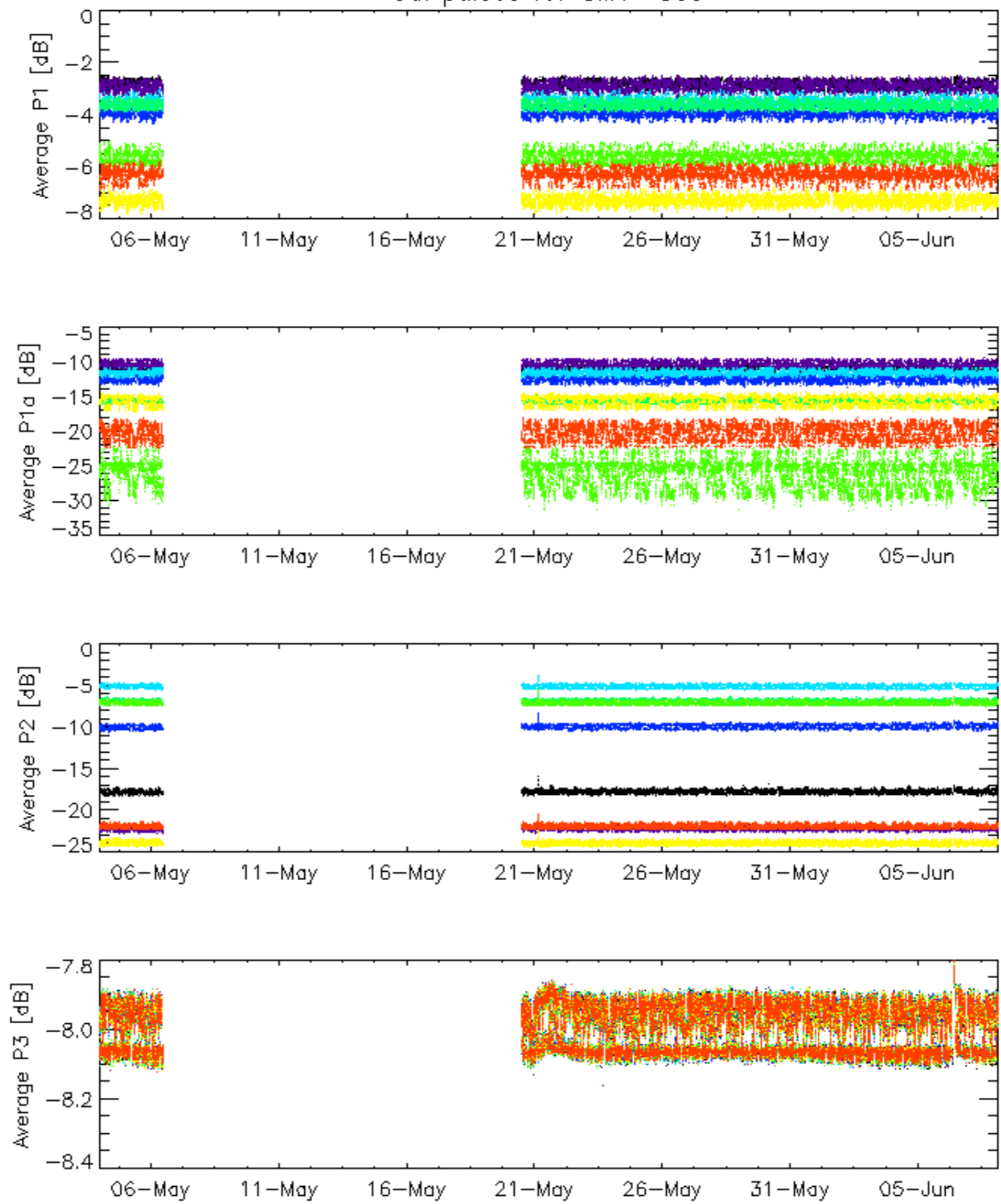


Cal pulses for WVS IS2



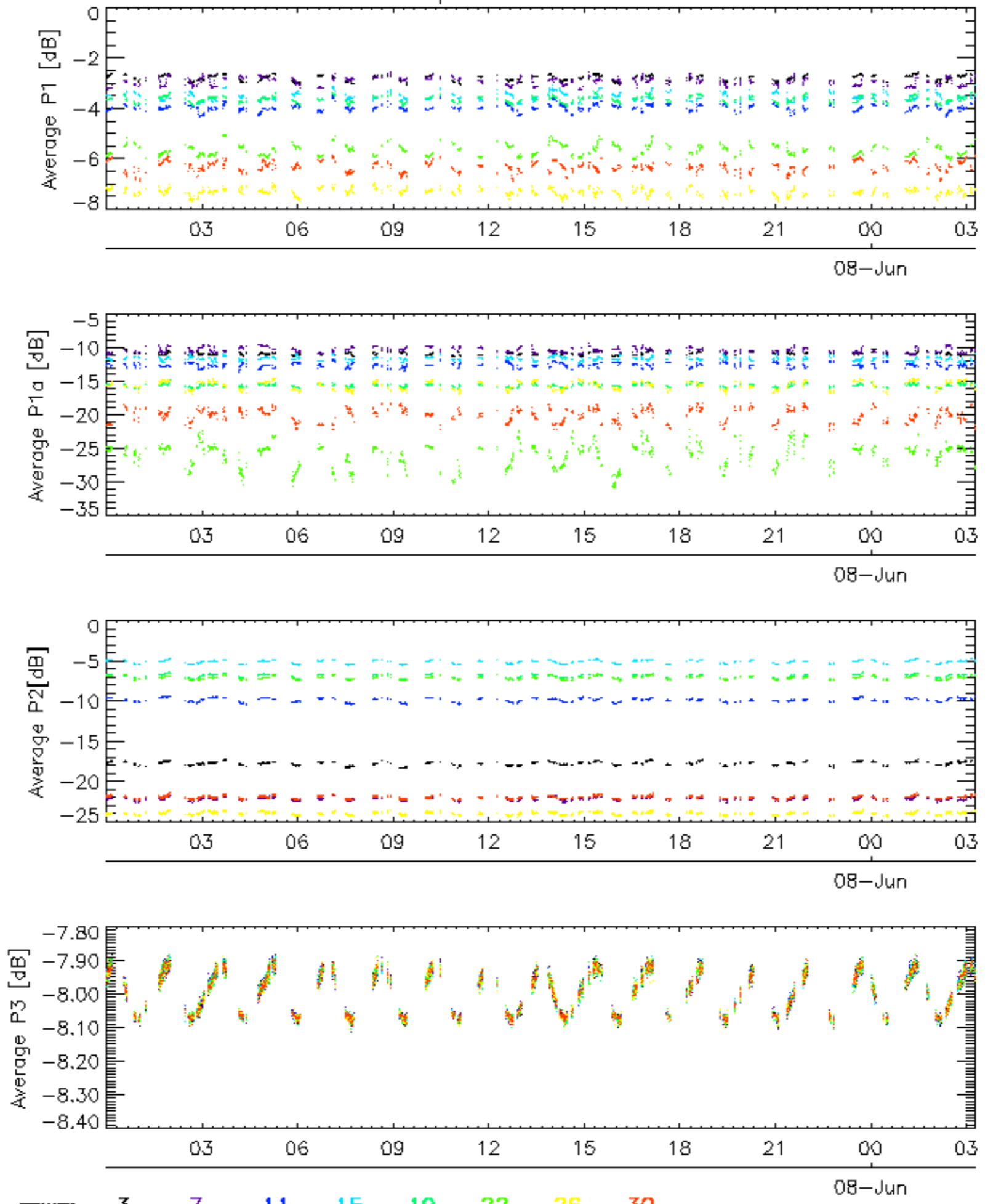
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



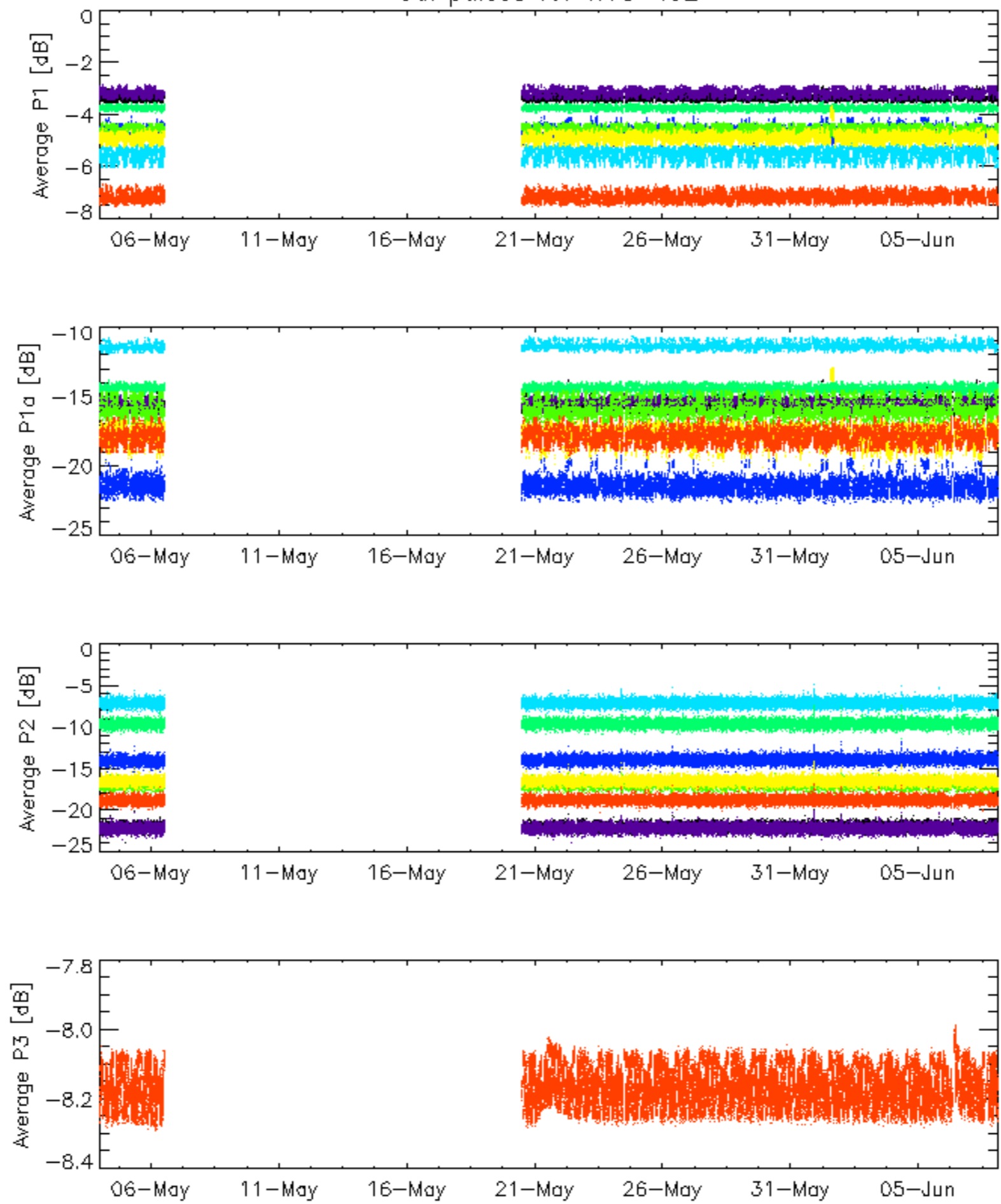
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3



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

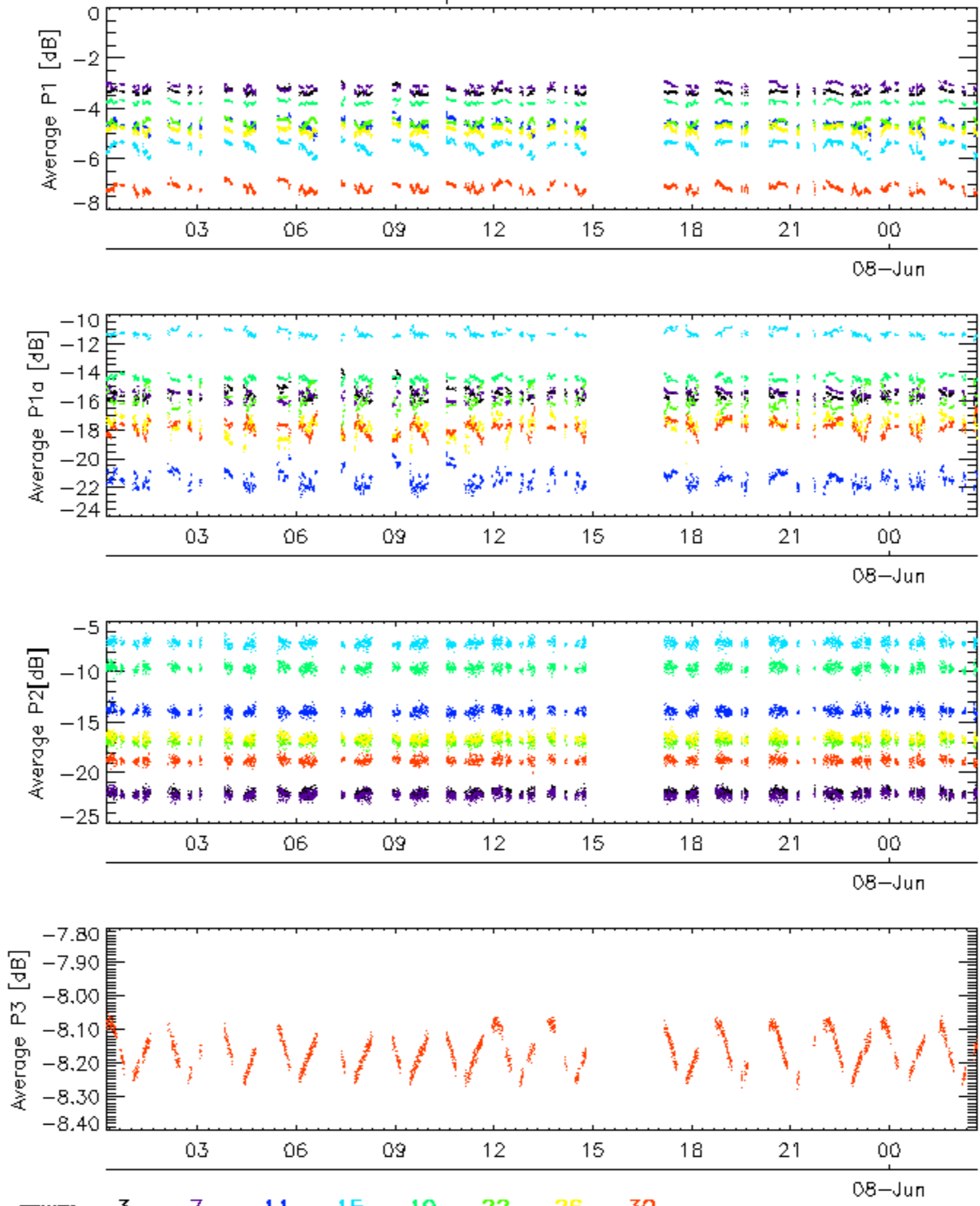
Cal pulses for WVS IS2



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

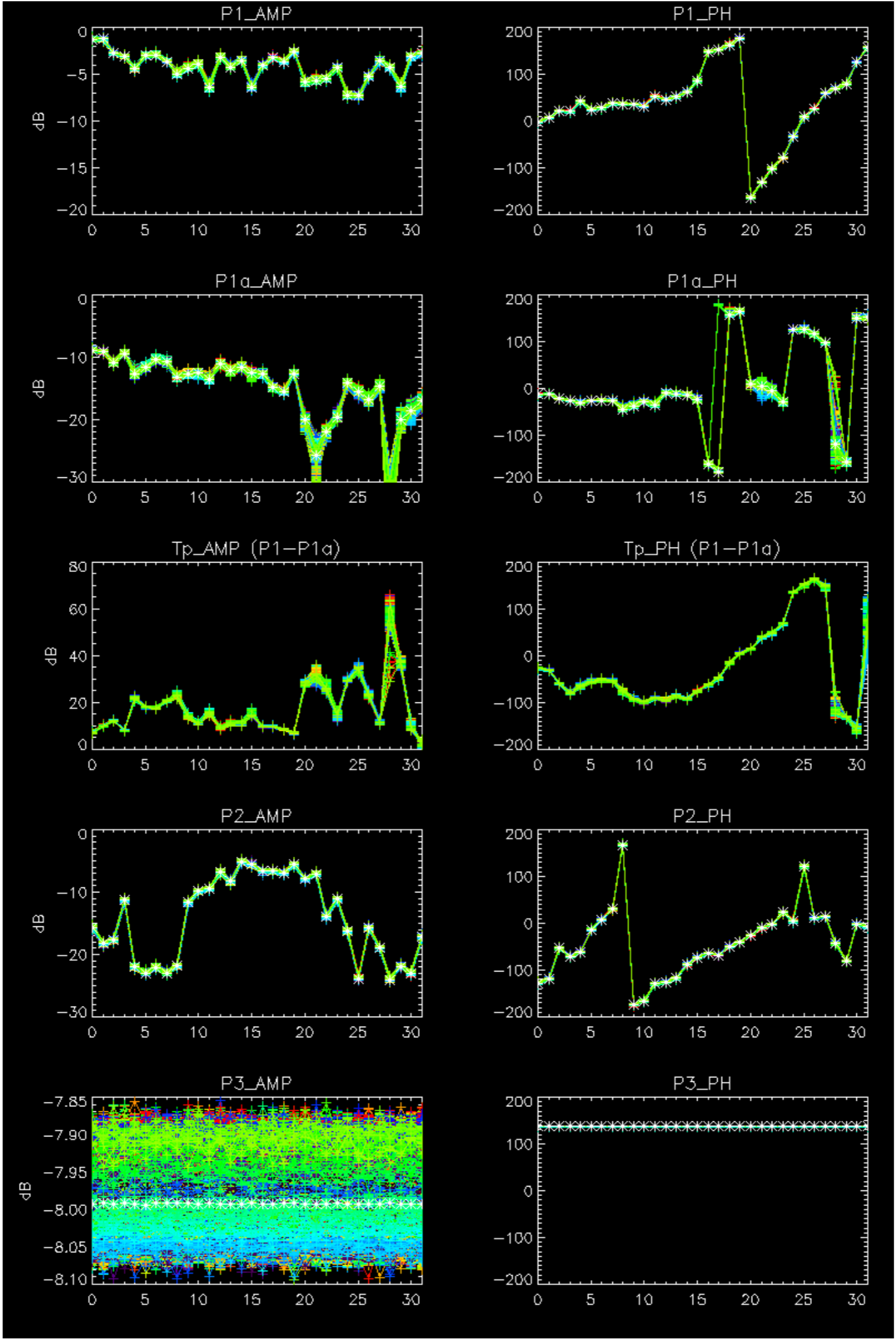


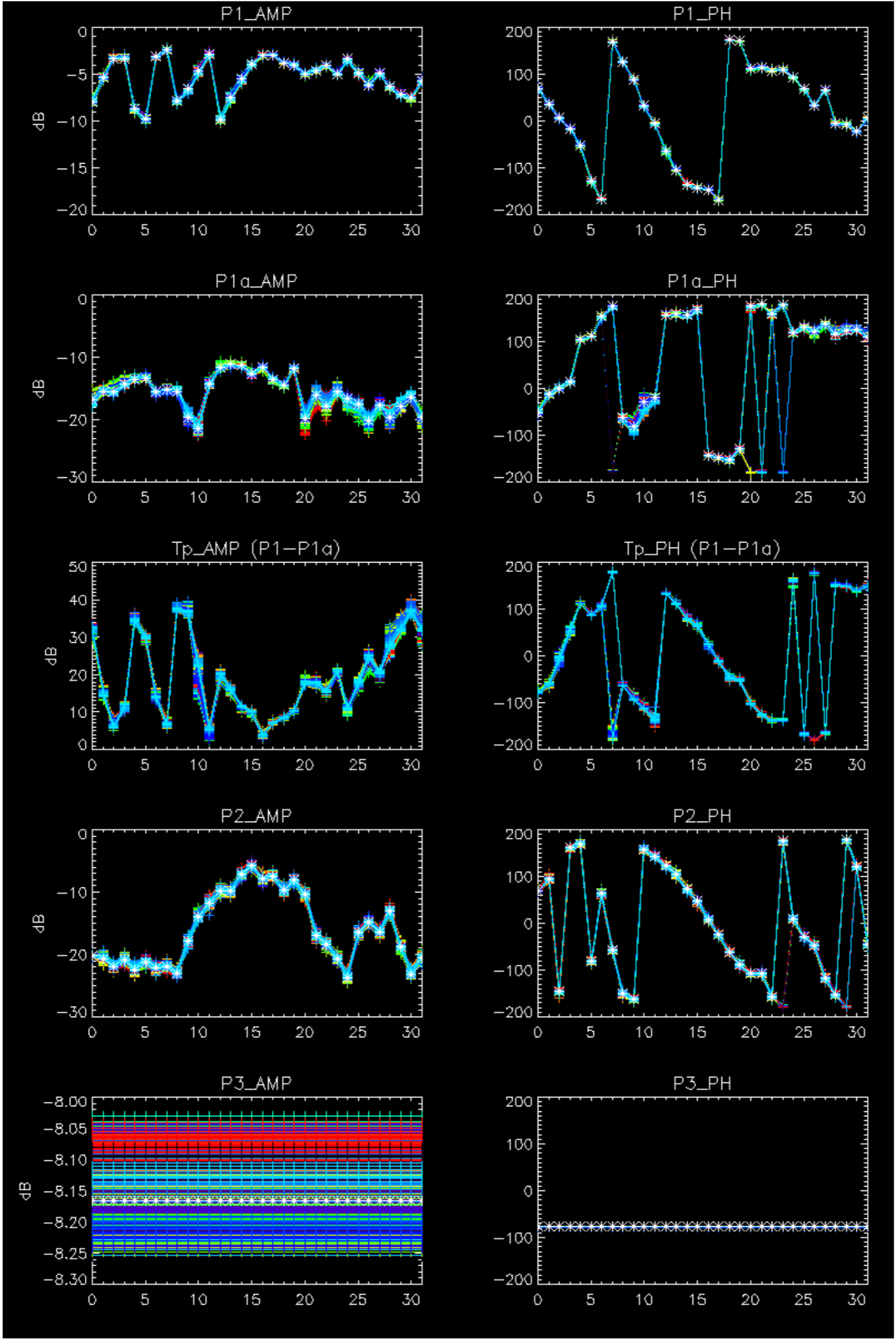
Cal pulses for WVS IS2



No anomalies observed.





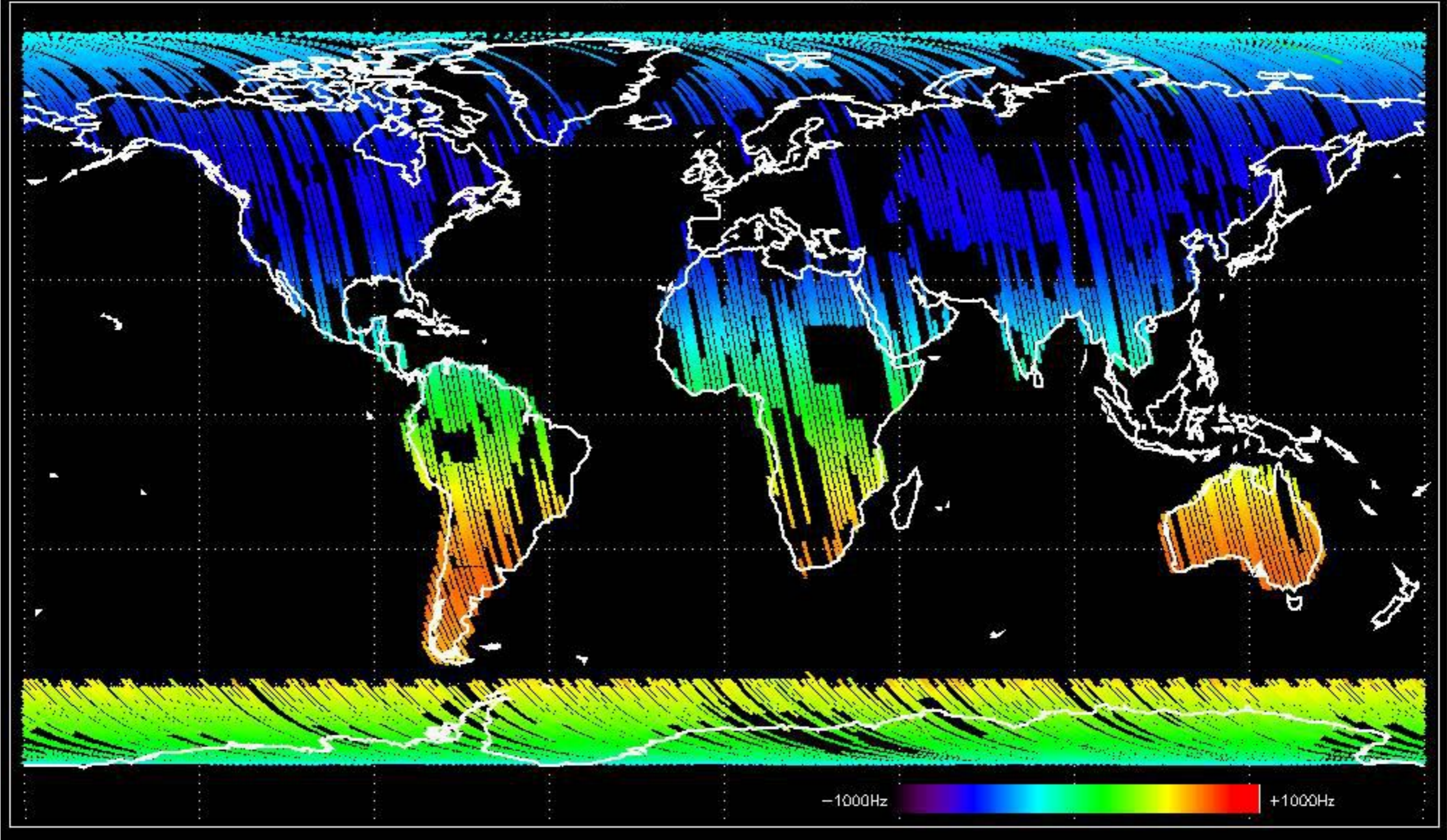


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



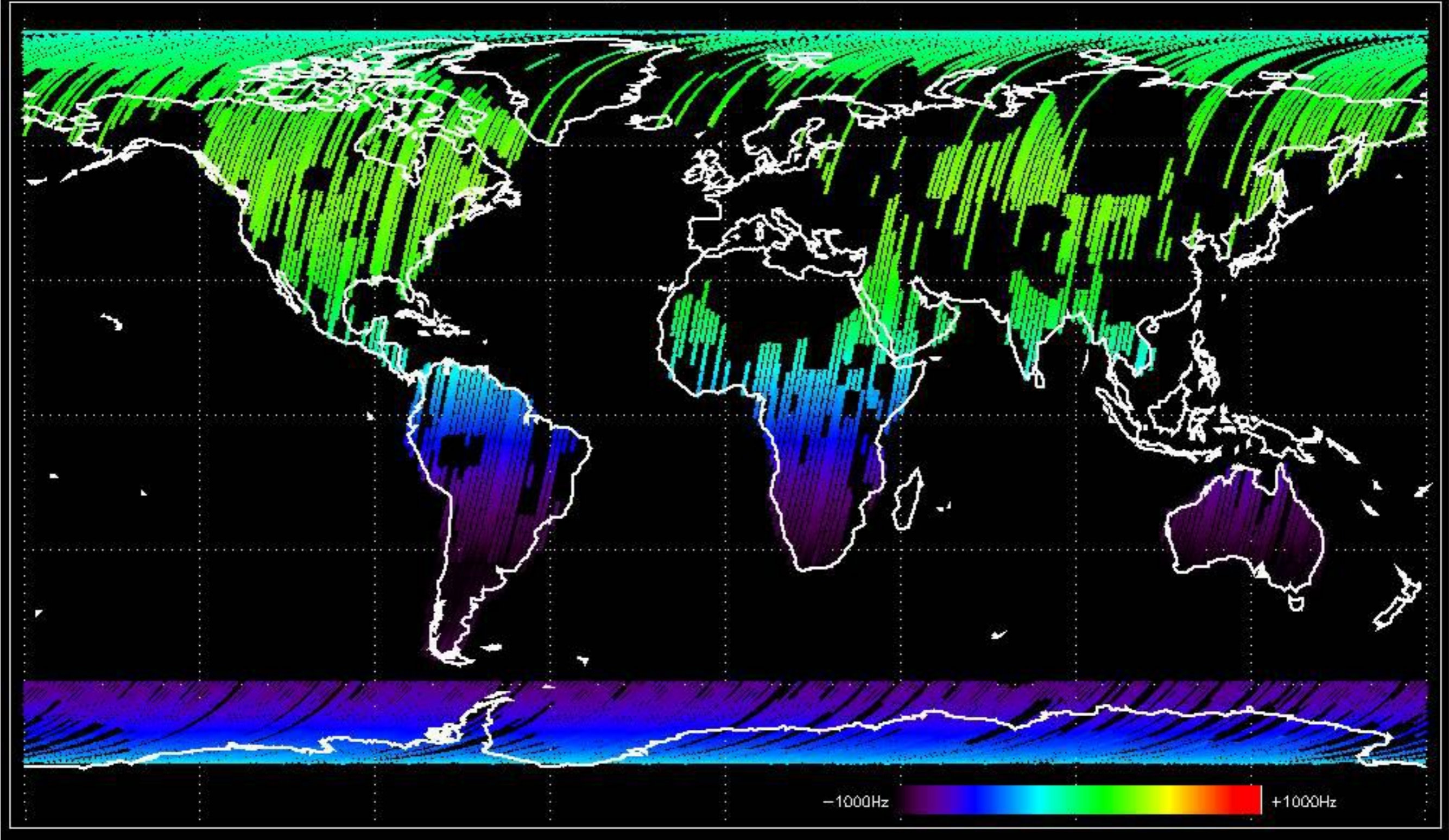


Doppler 'GM1' 'SS1' ascending



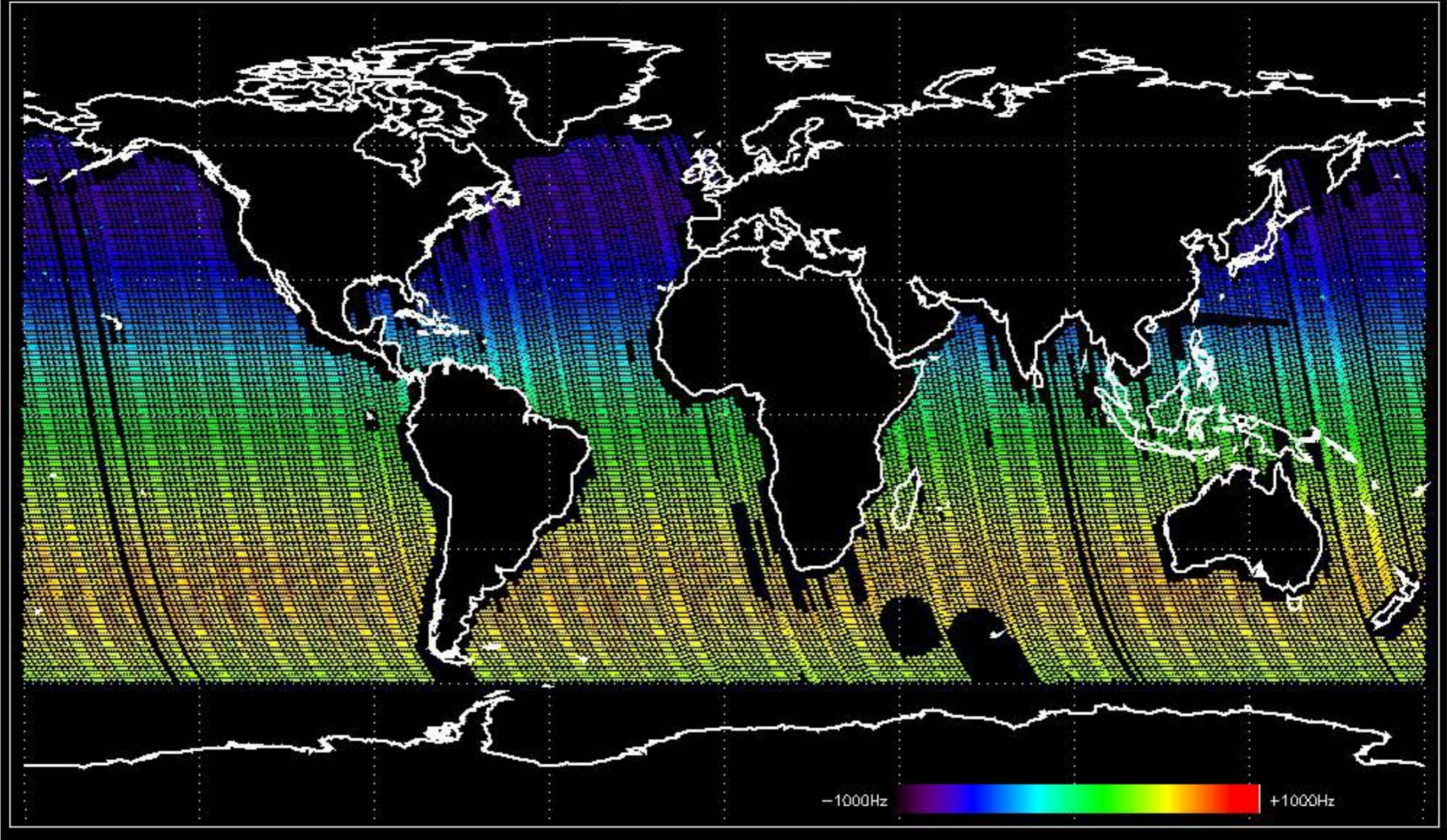


Doppler 'GM1' 'SS1' descending



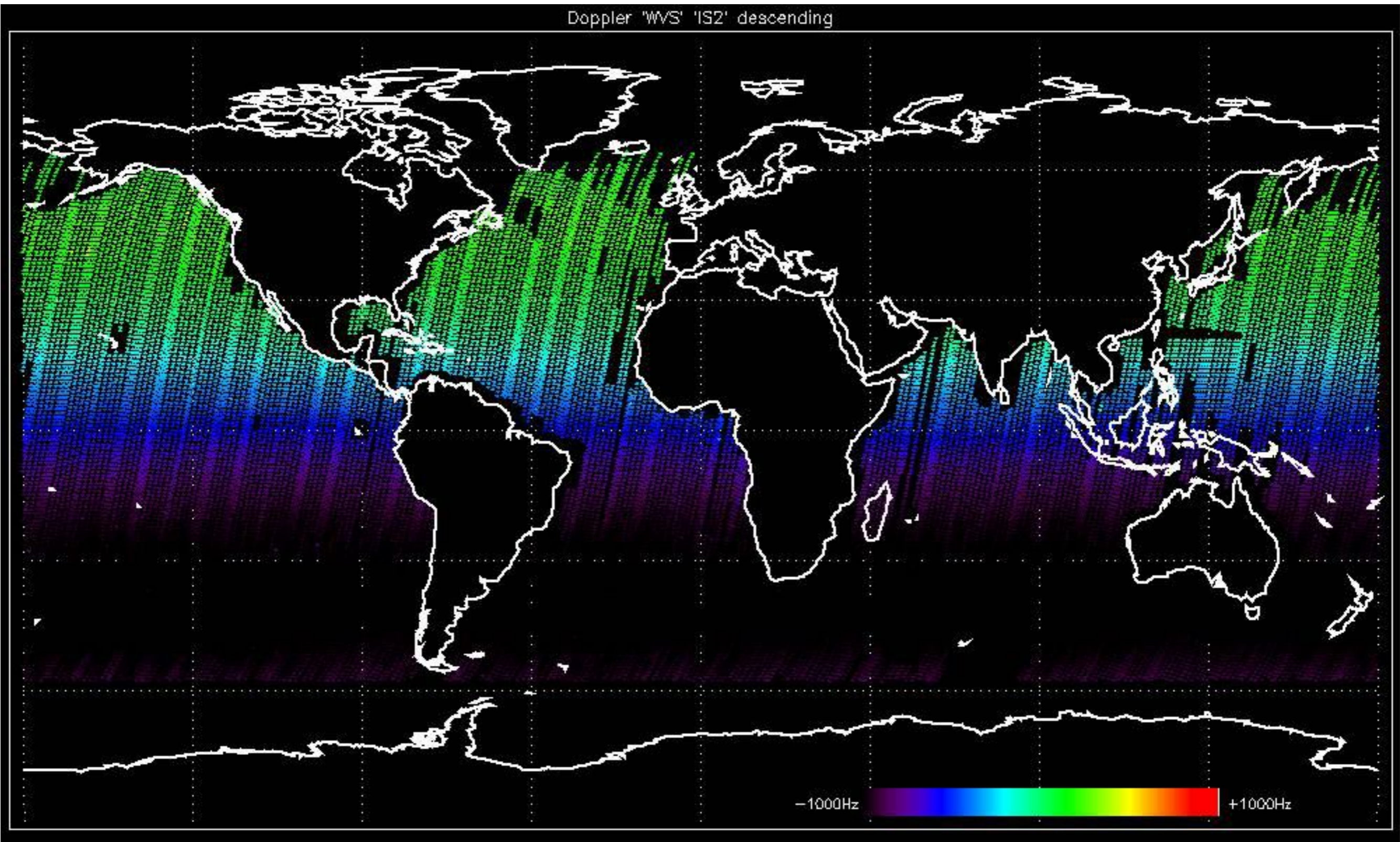


Doppler 'WVS' 'IS2' ascending



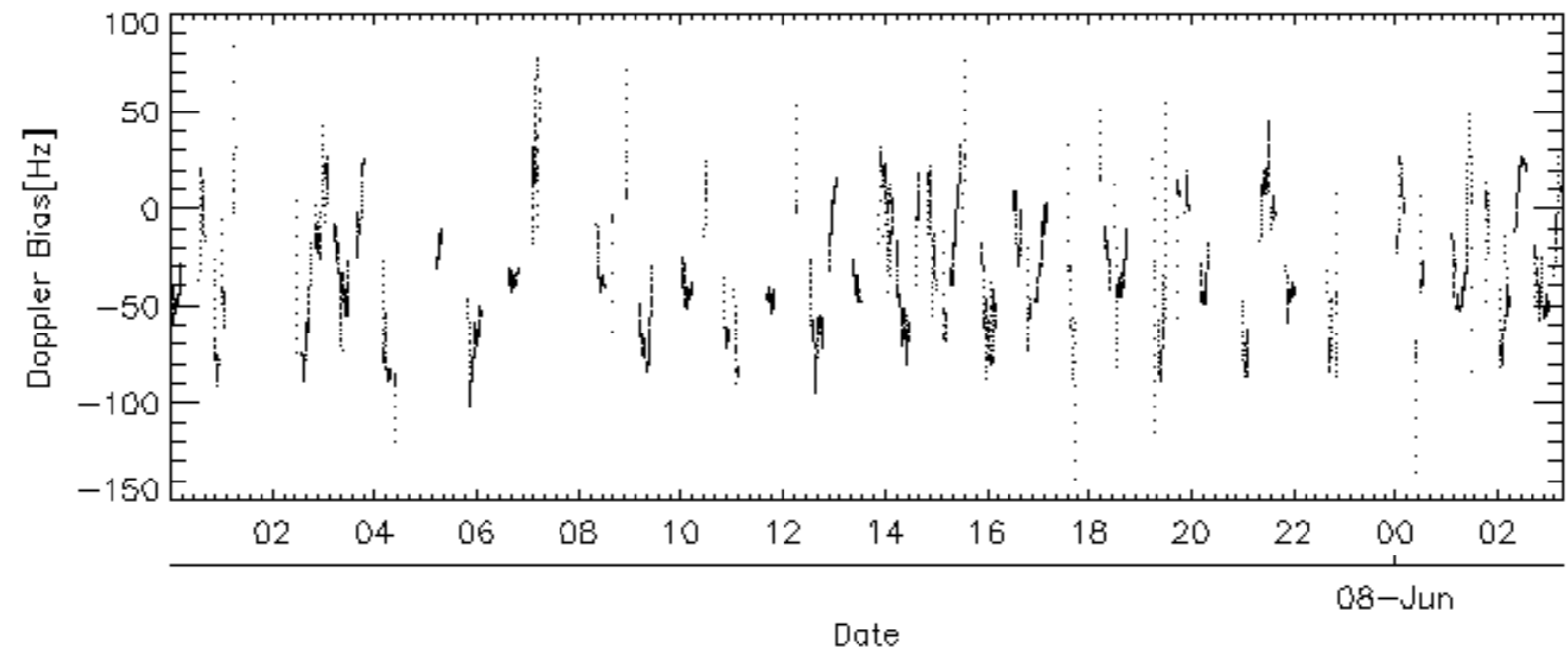
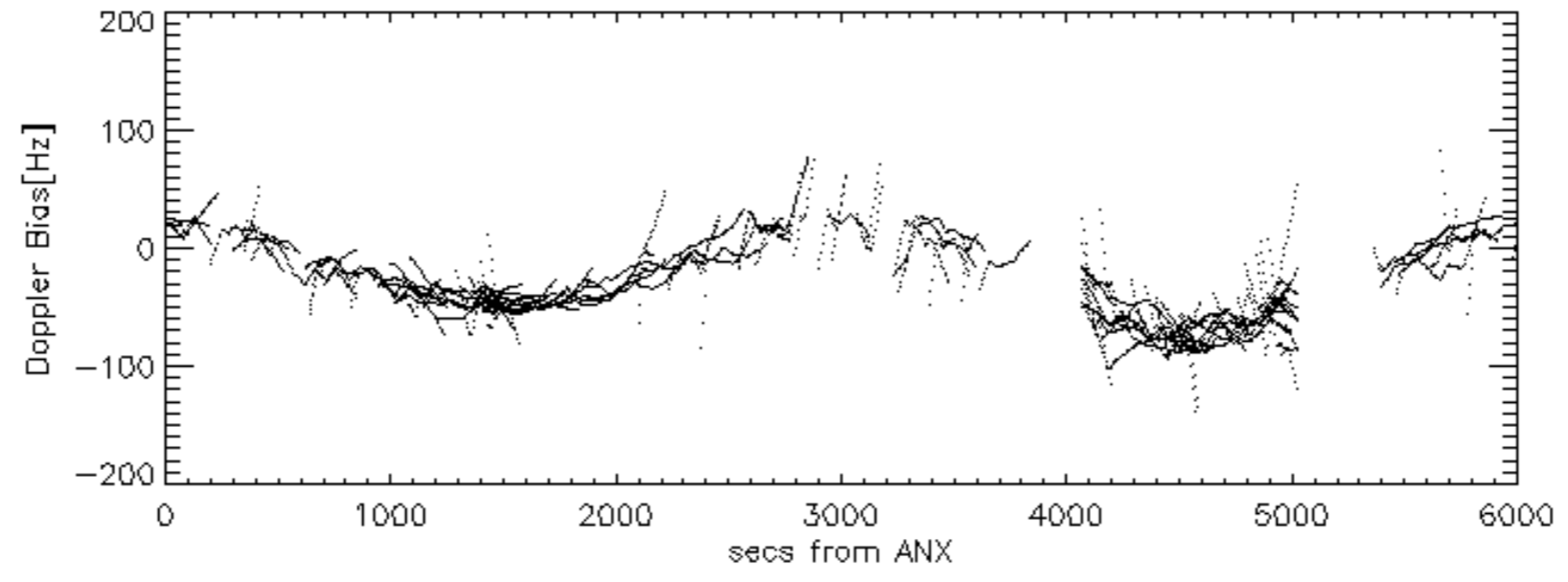
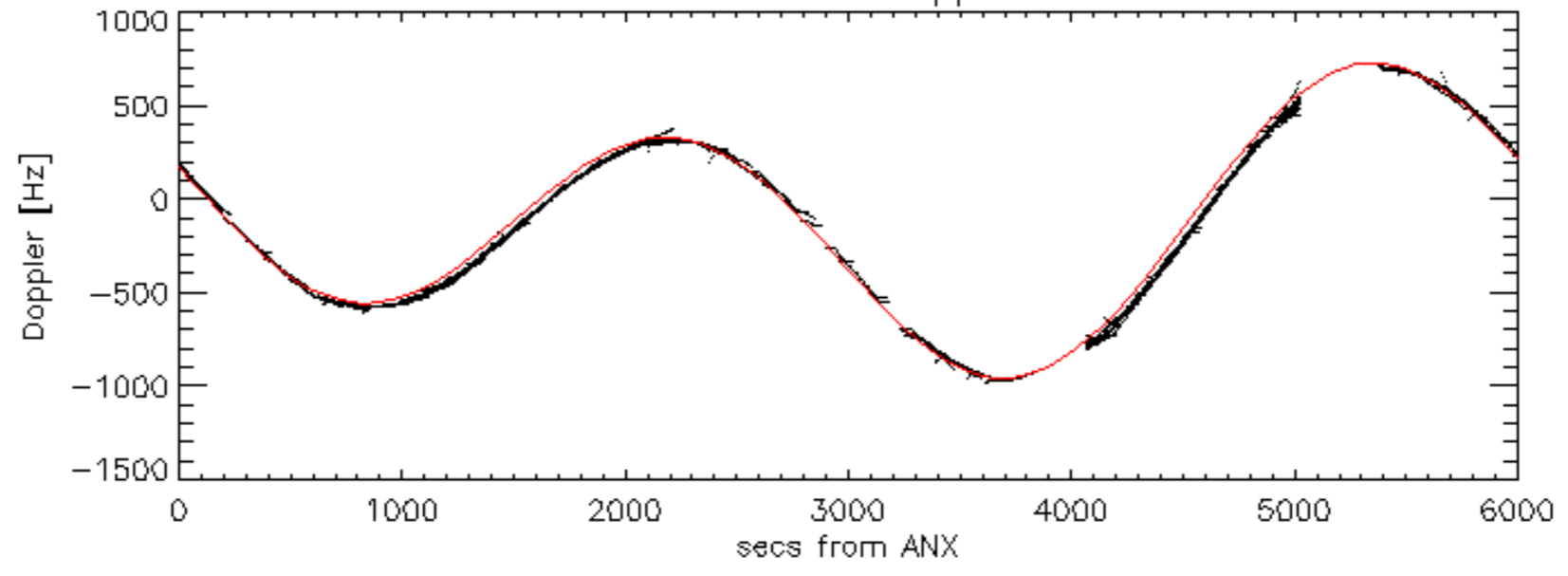


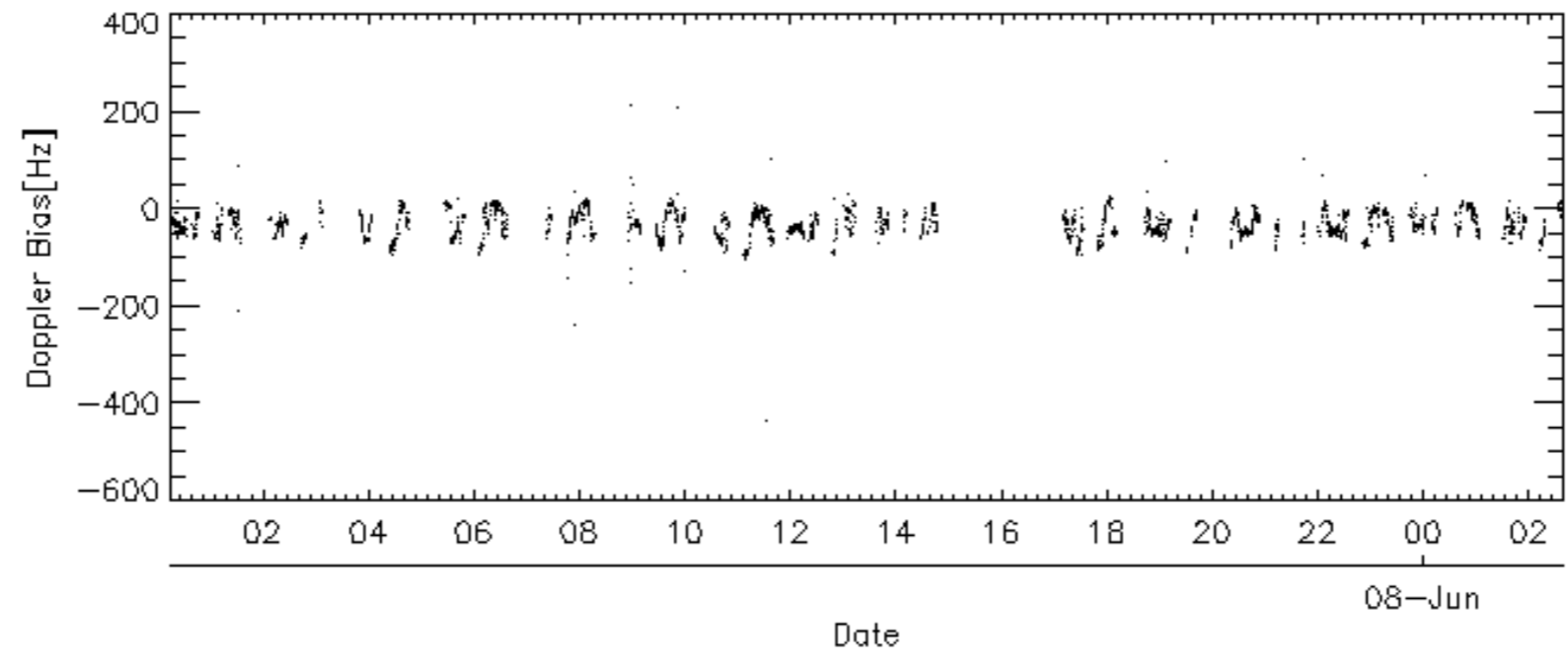
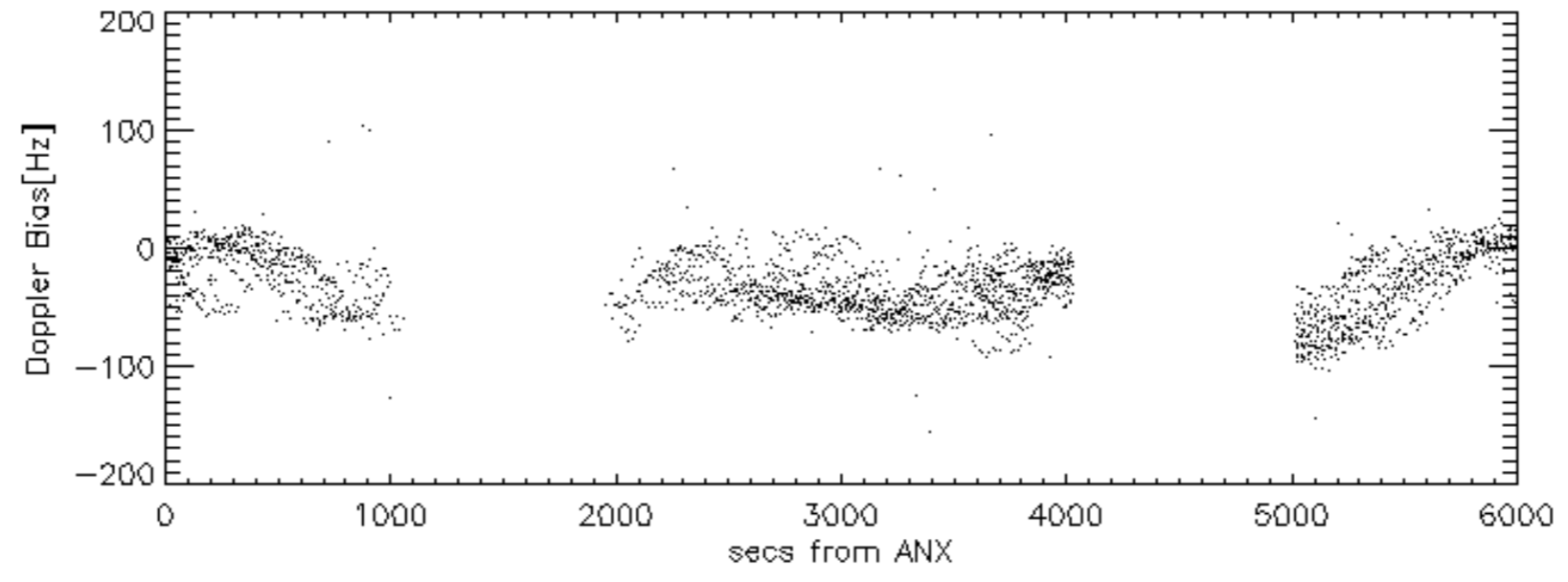
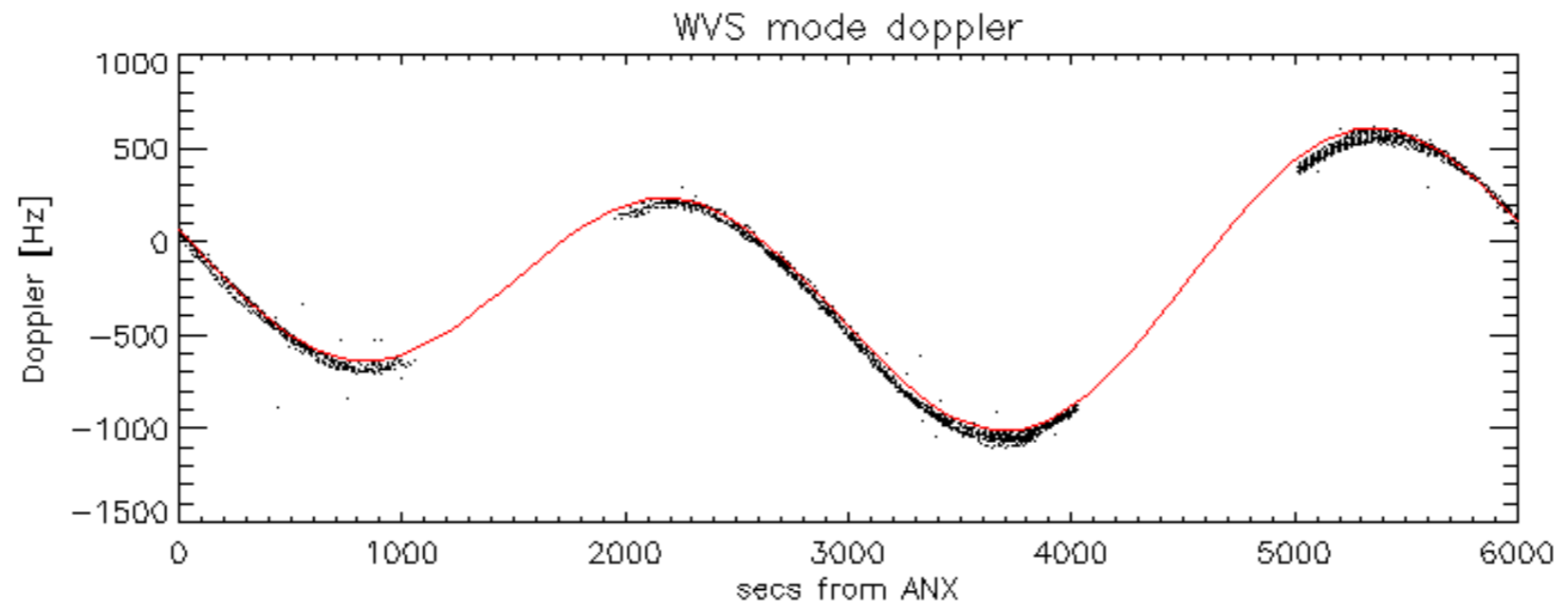
Doppler 'WVS' 'IS2' descending





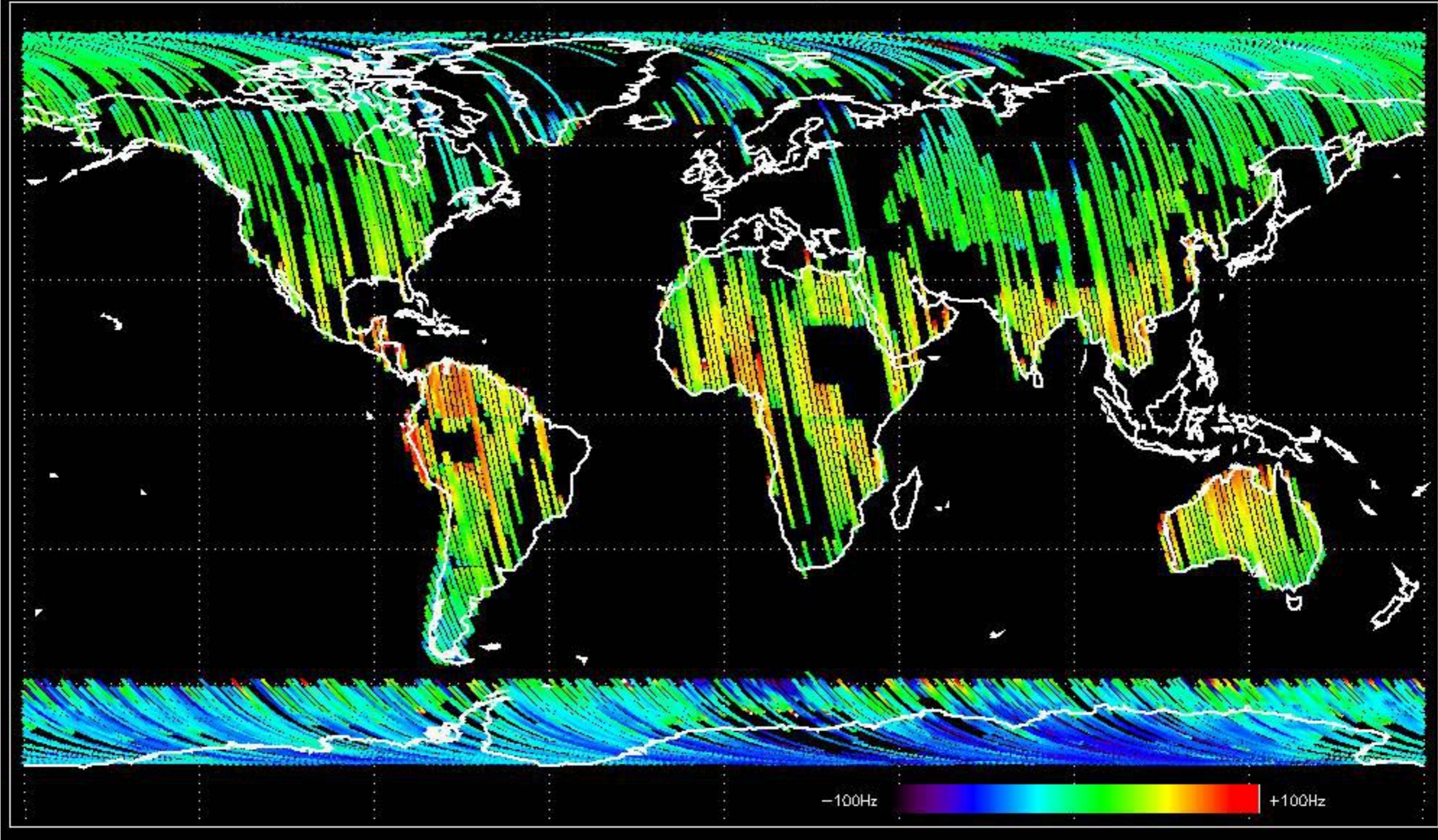
GM1 mode doppler





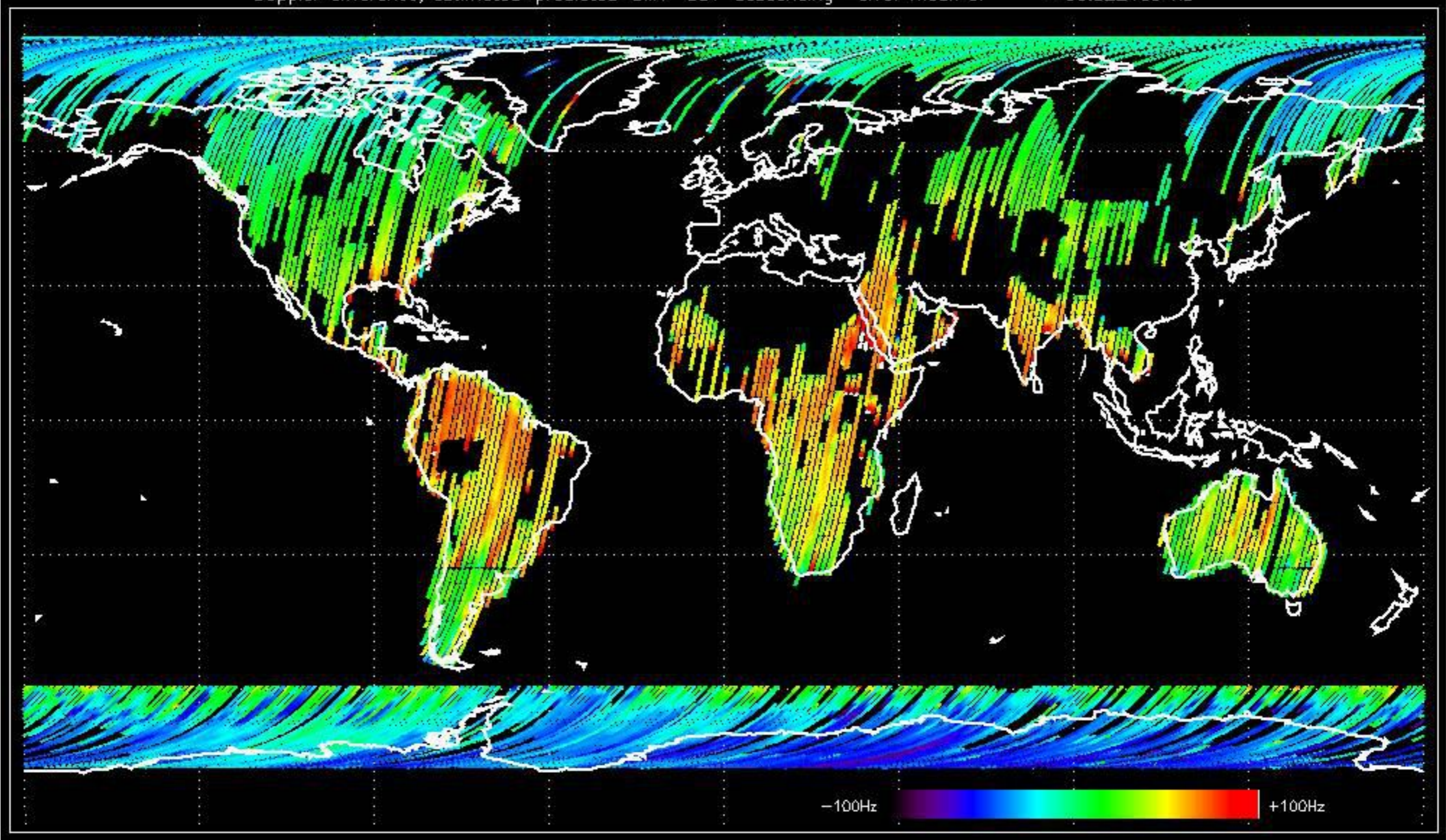


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -39.375859 Hz



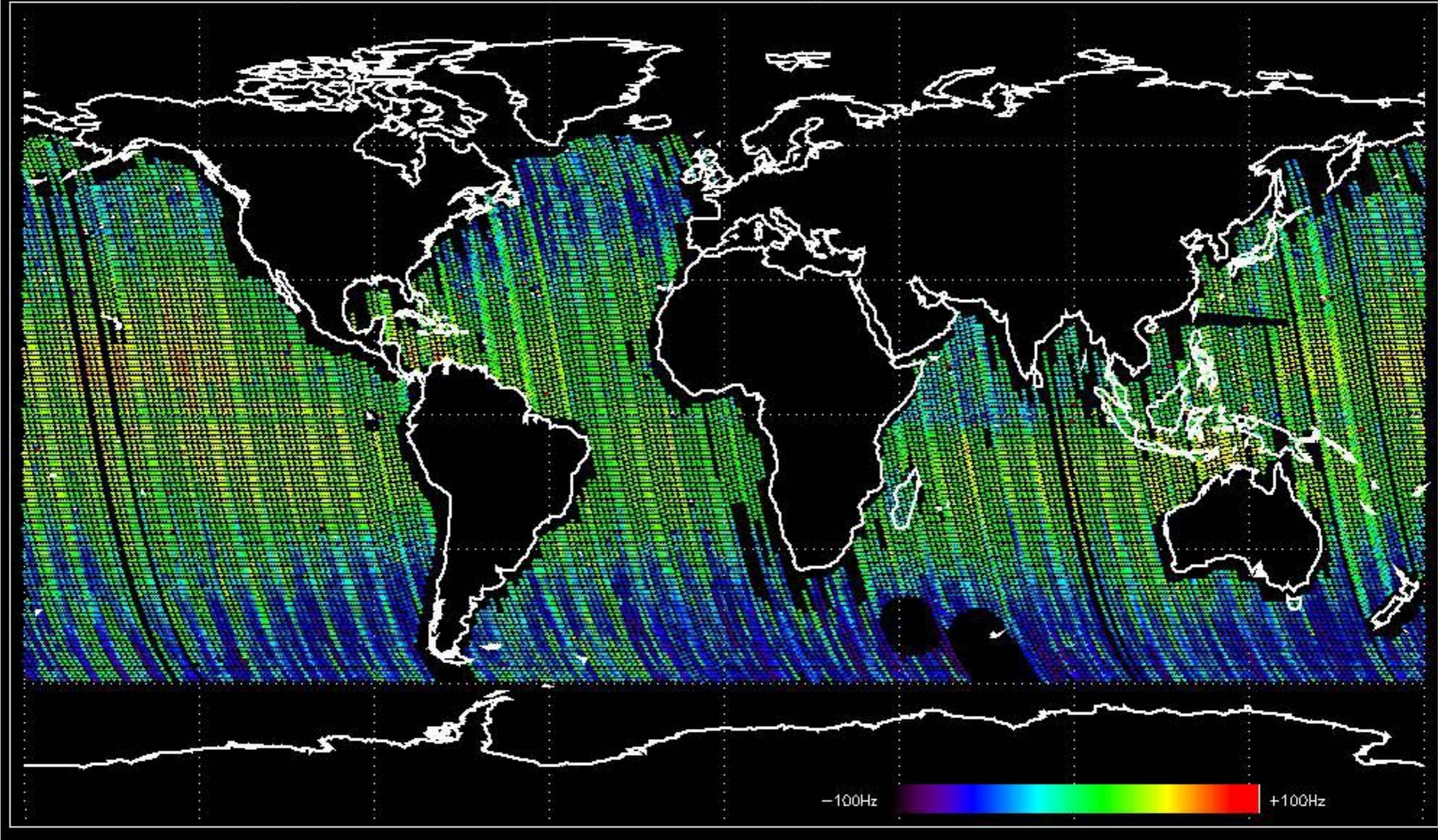


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -35.522460 Hz



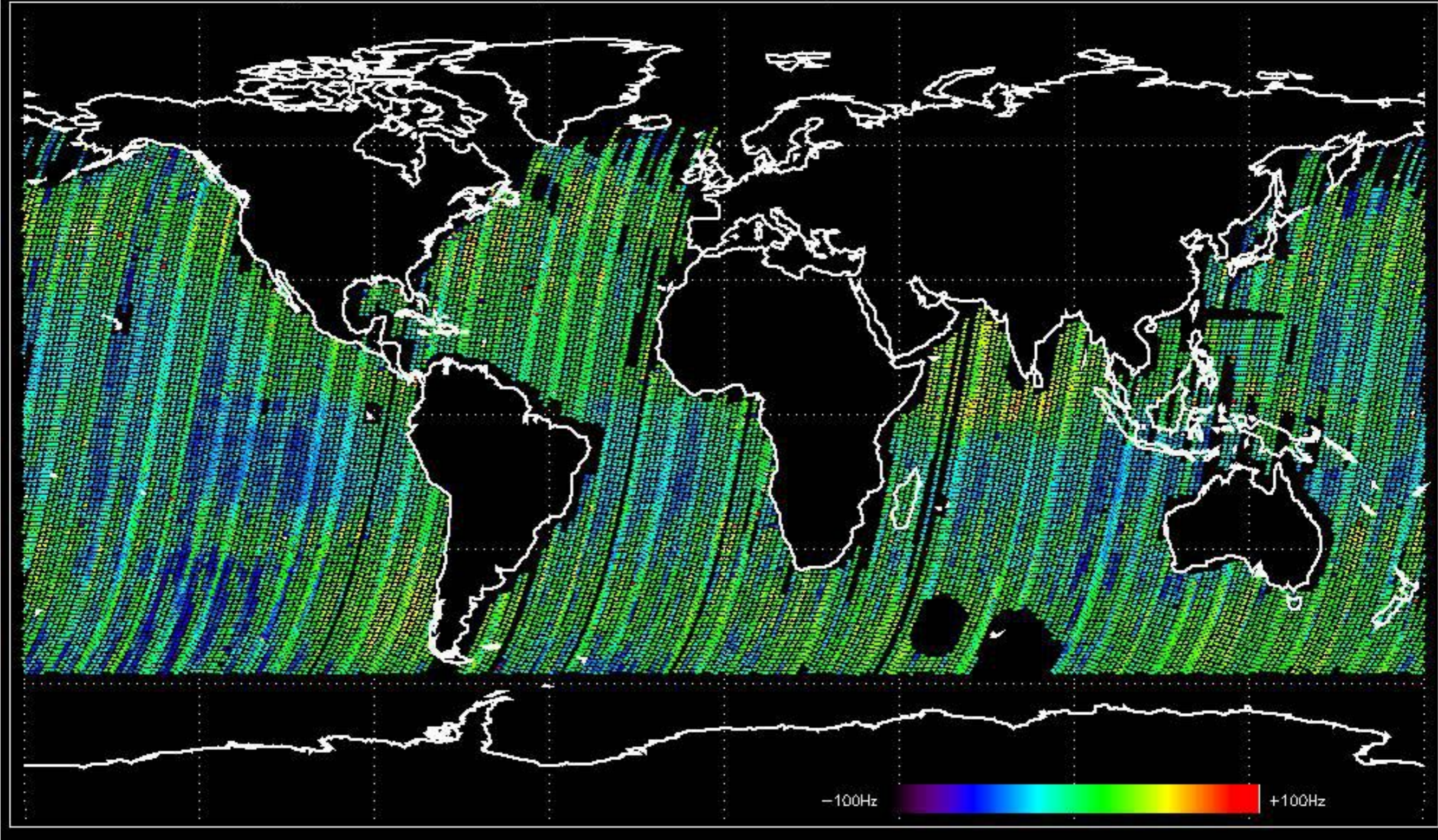


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -31.043048 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -38.776131 Hz





No anomalies observed on available MS products:

No anomalies observed.













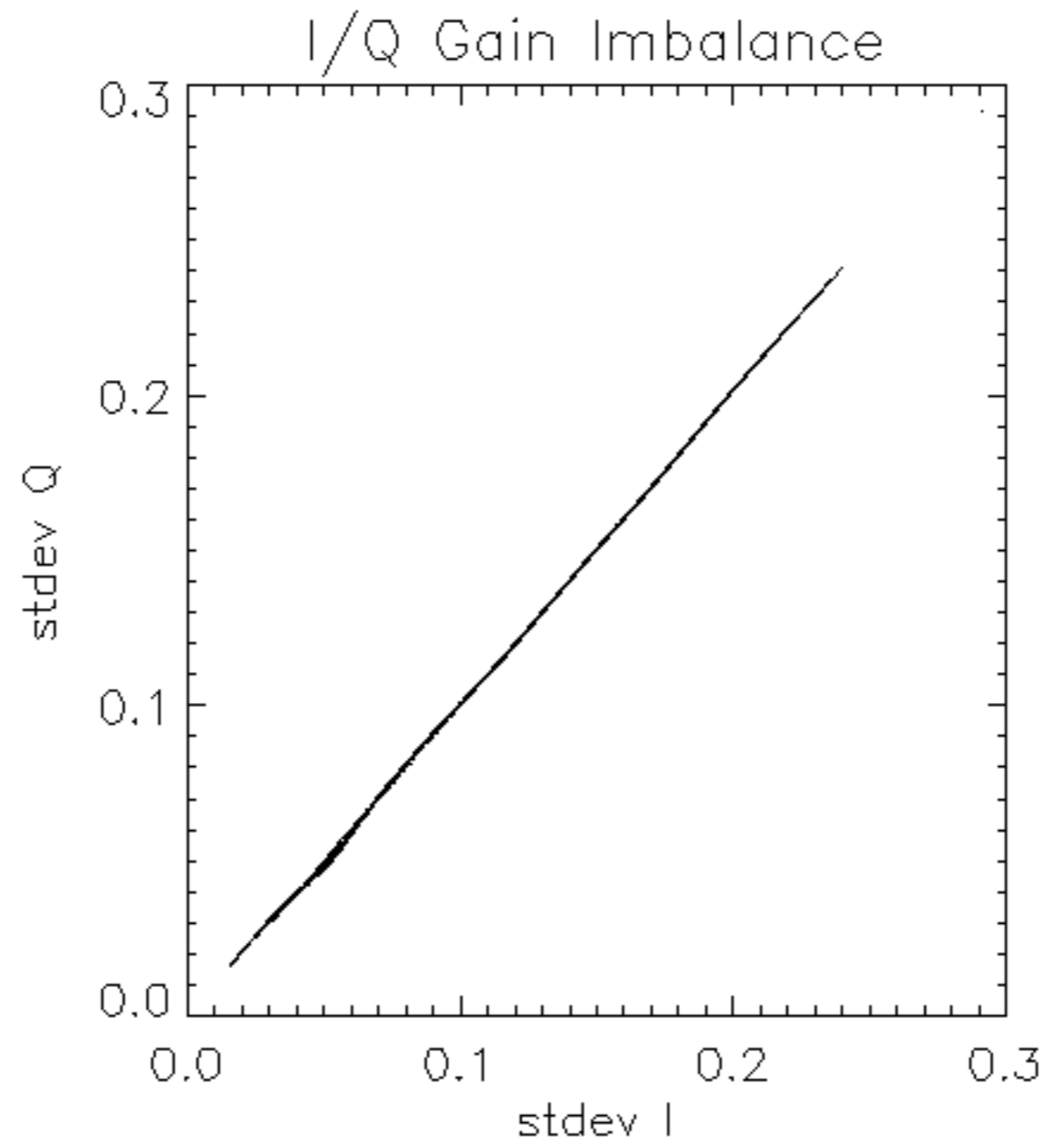




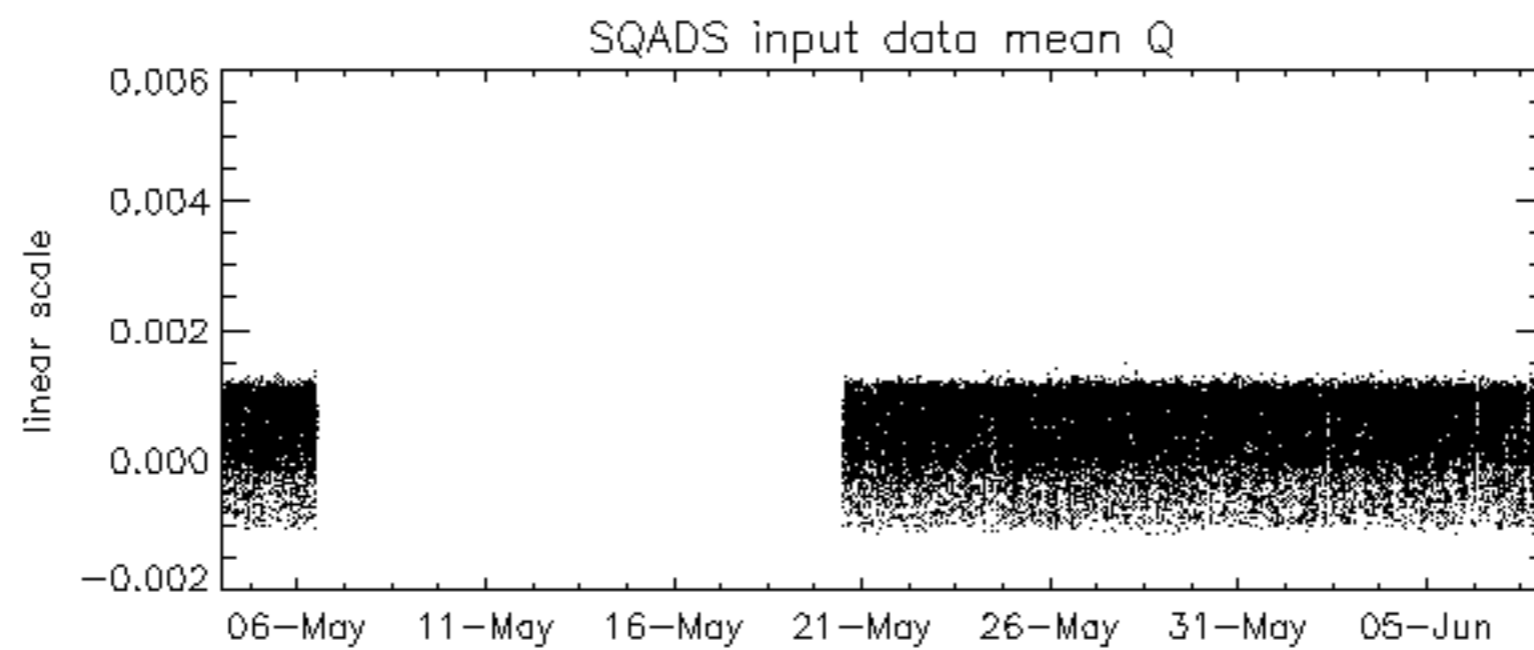
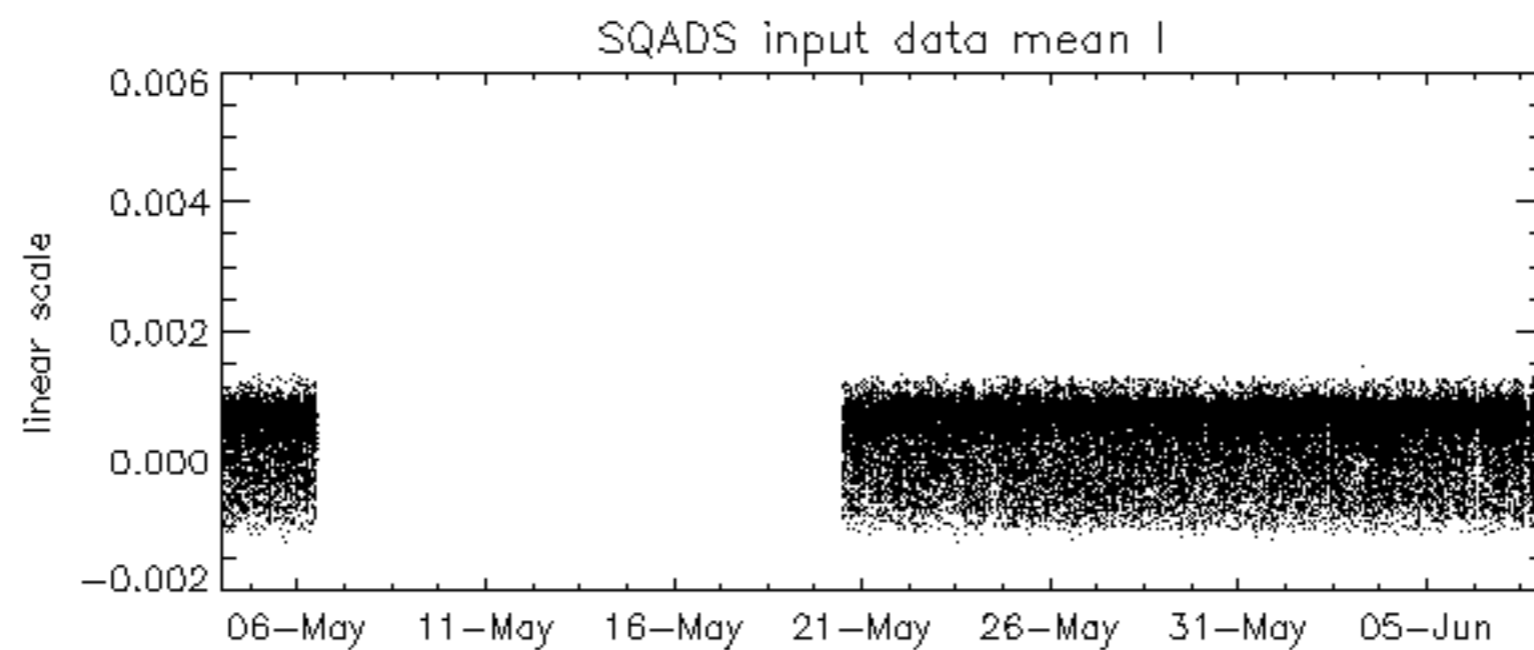
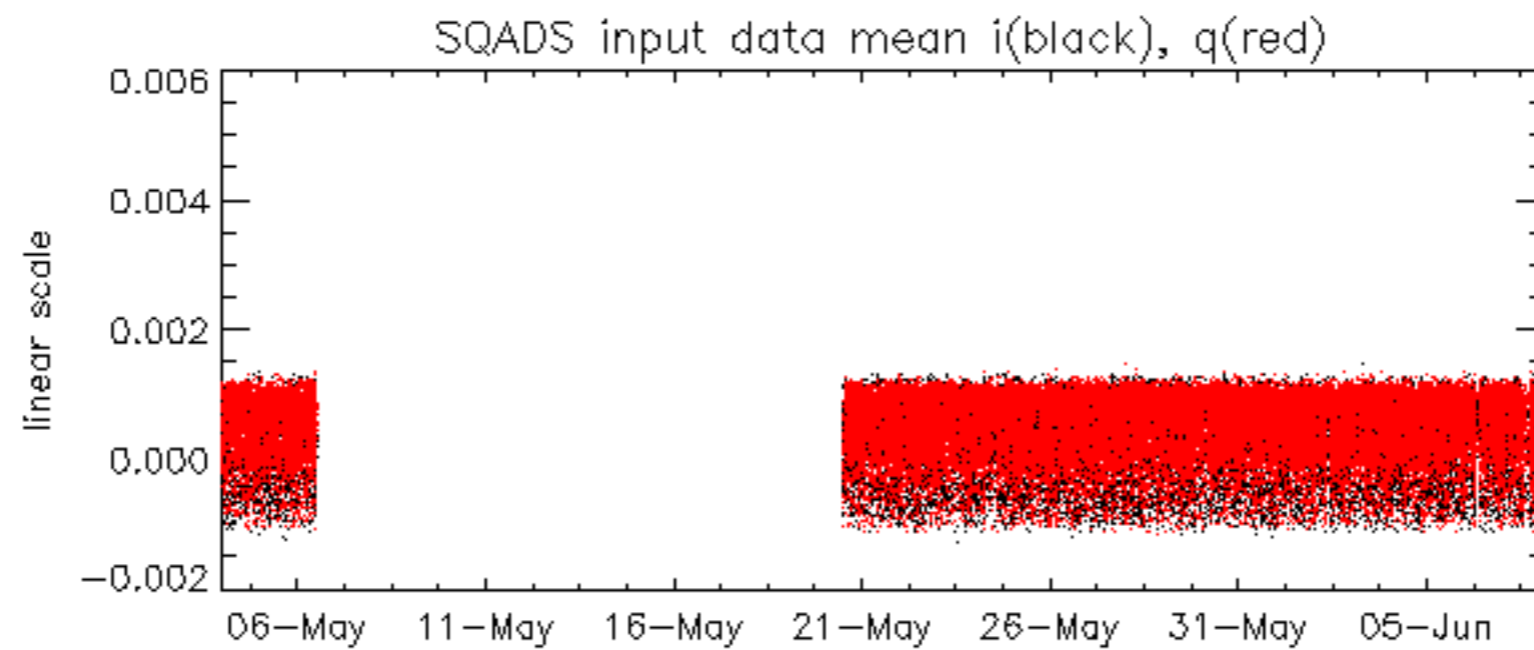


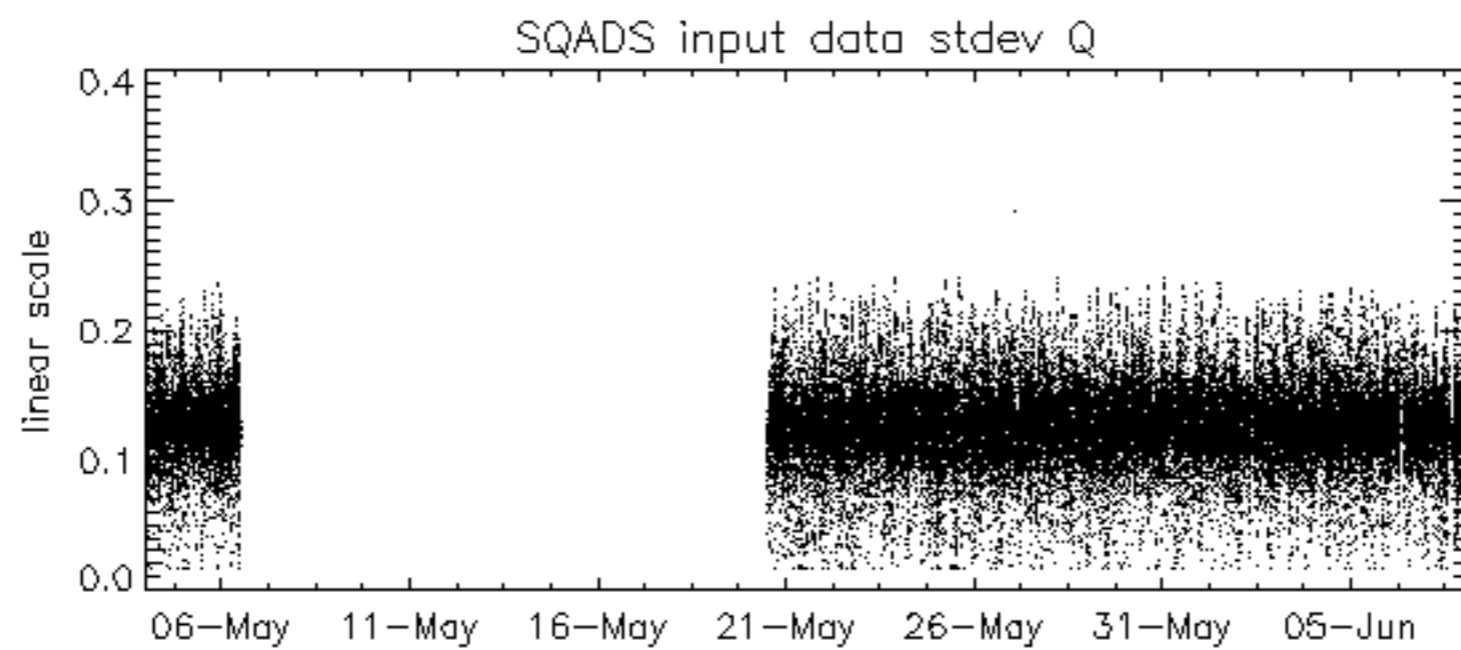
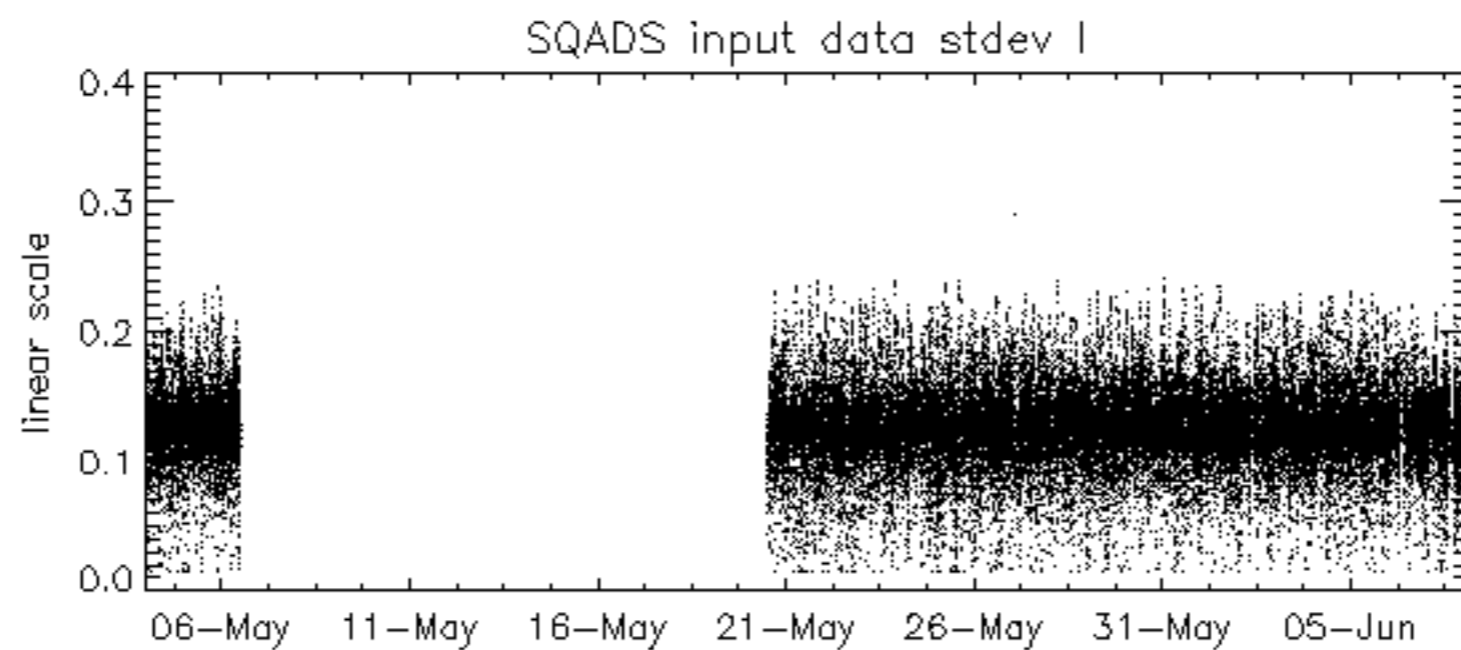
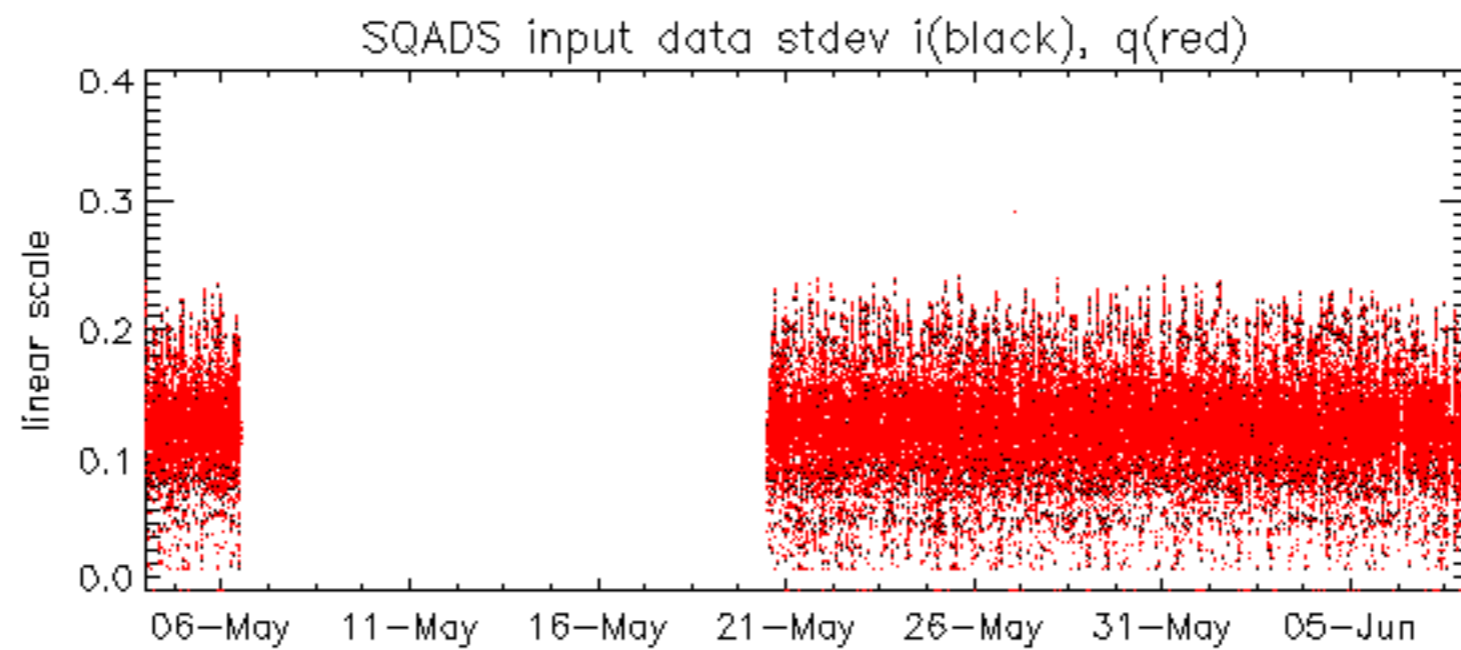




















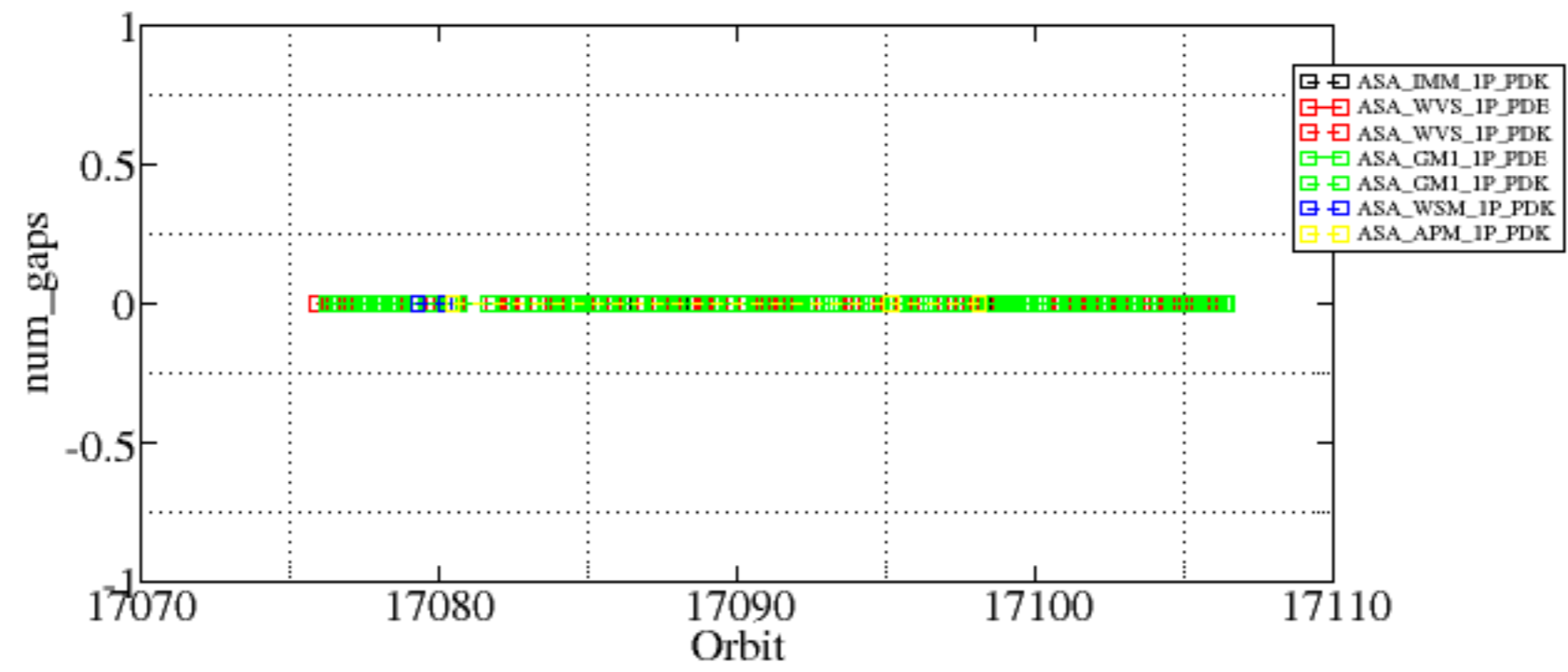


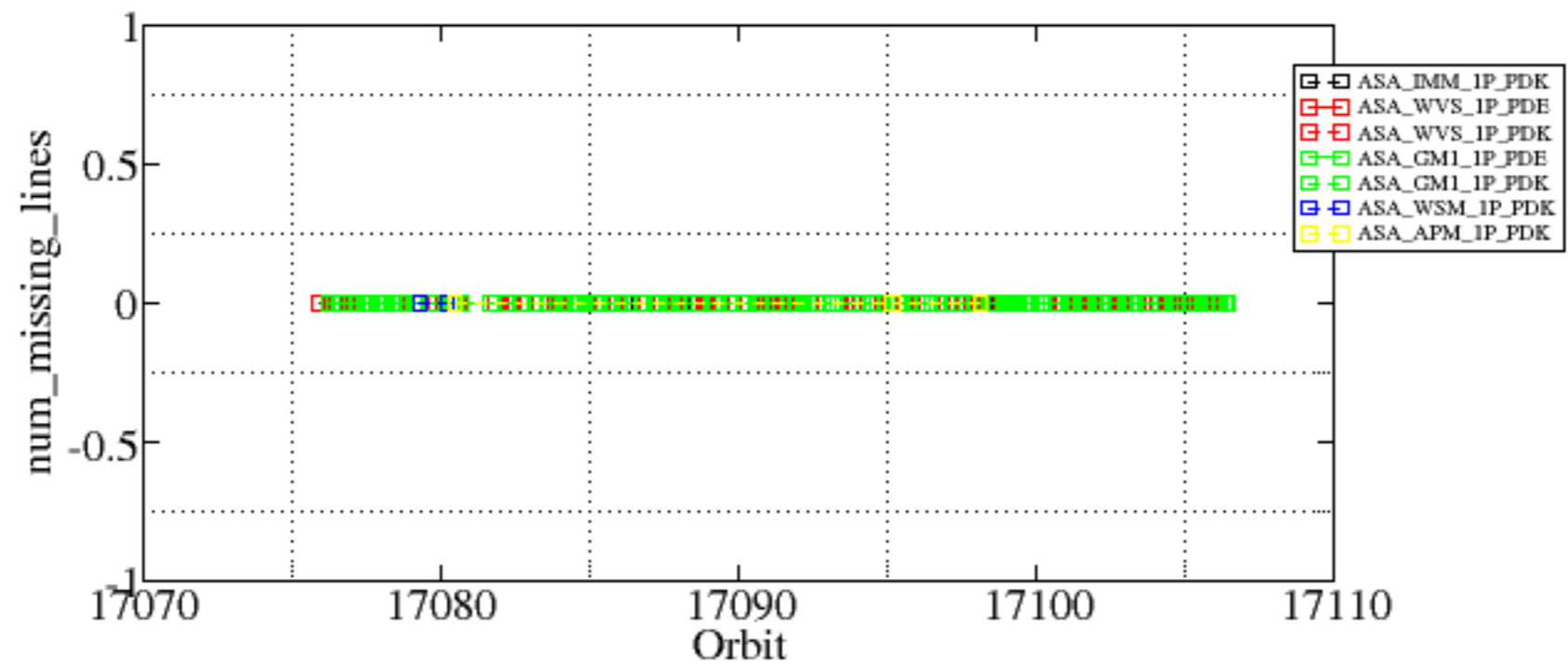


Summary of analysis for the last 3 days 2005060[678]

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

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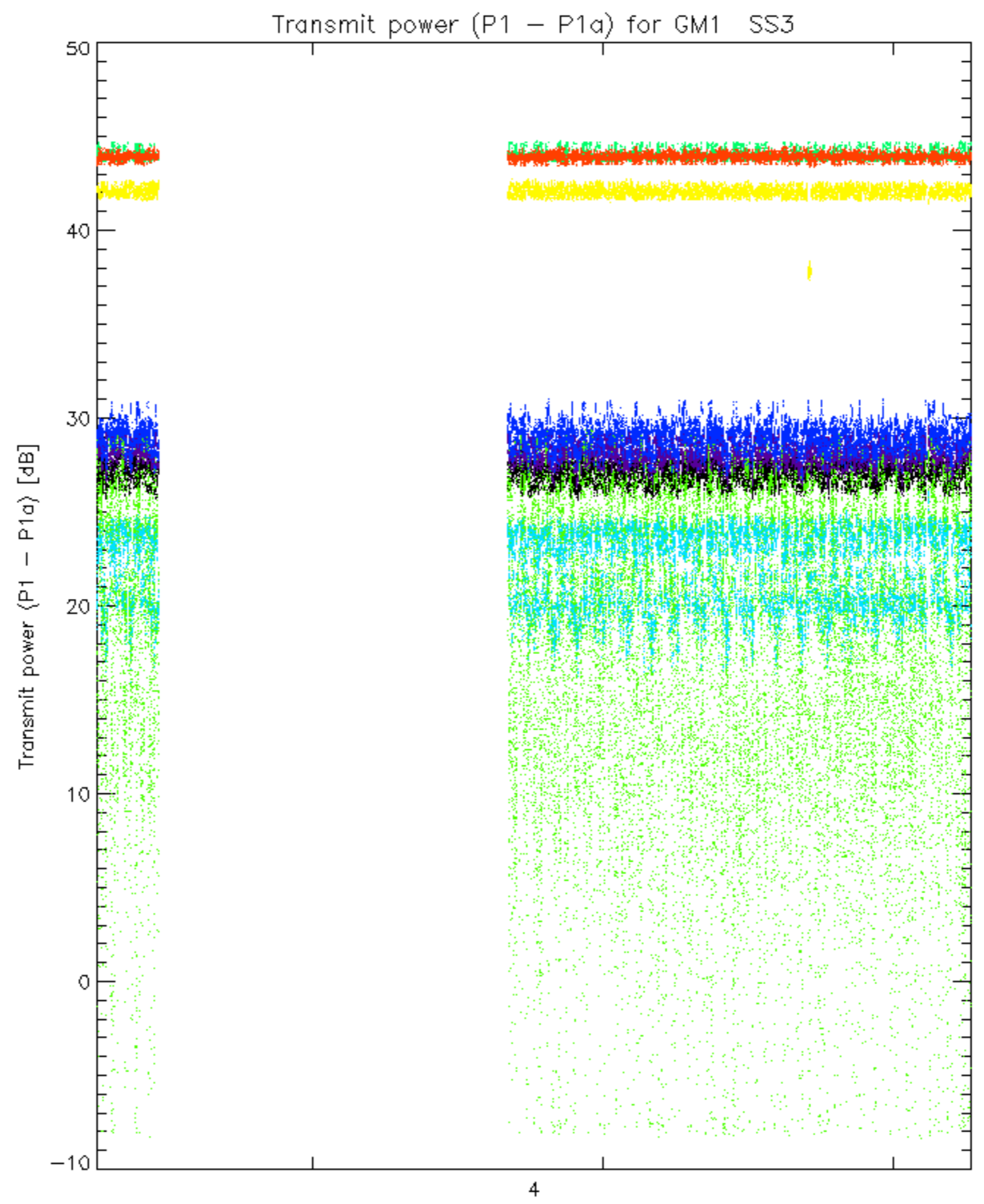




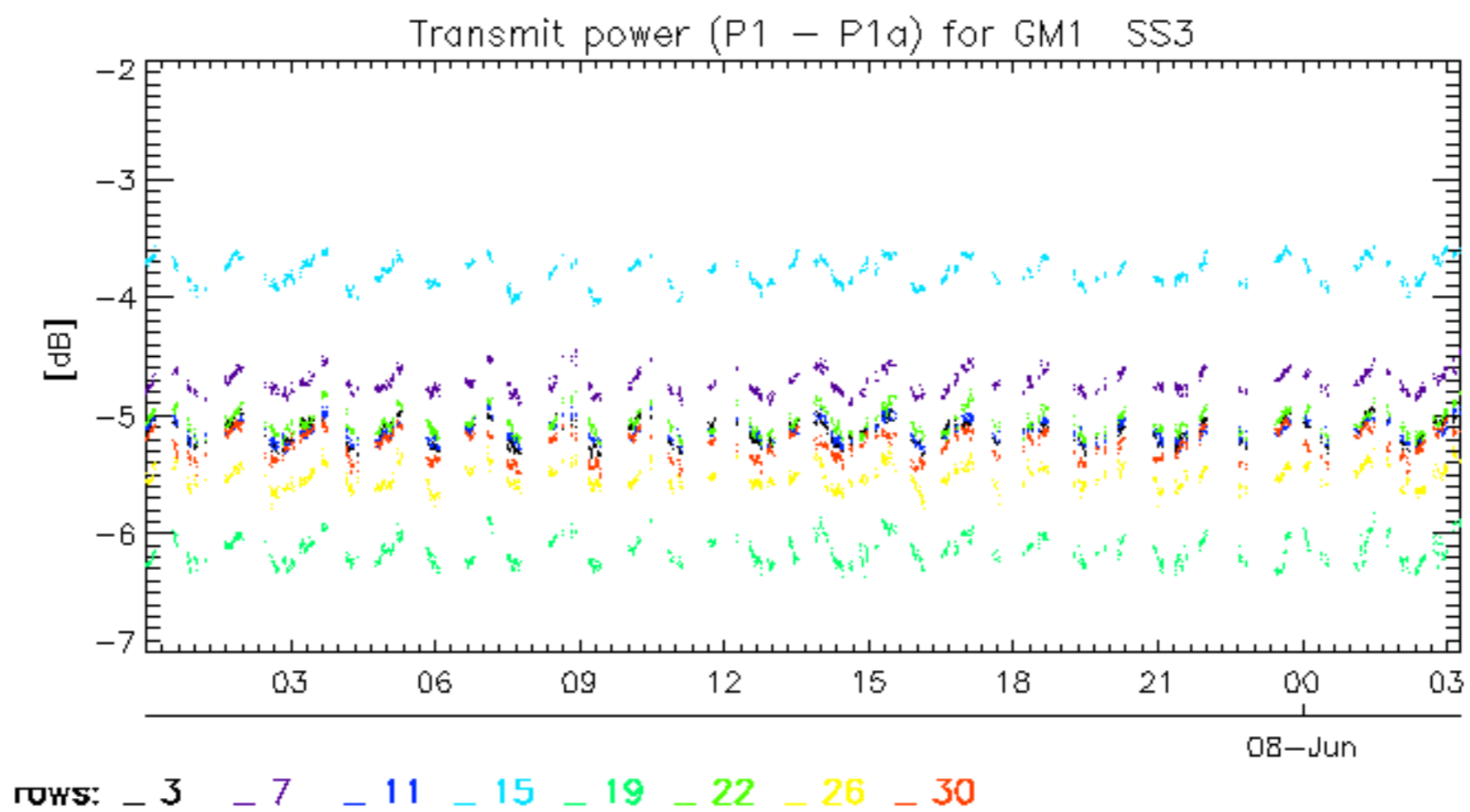


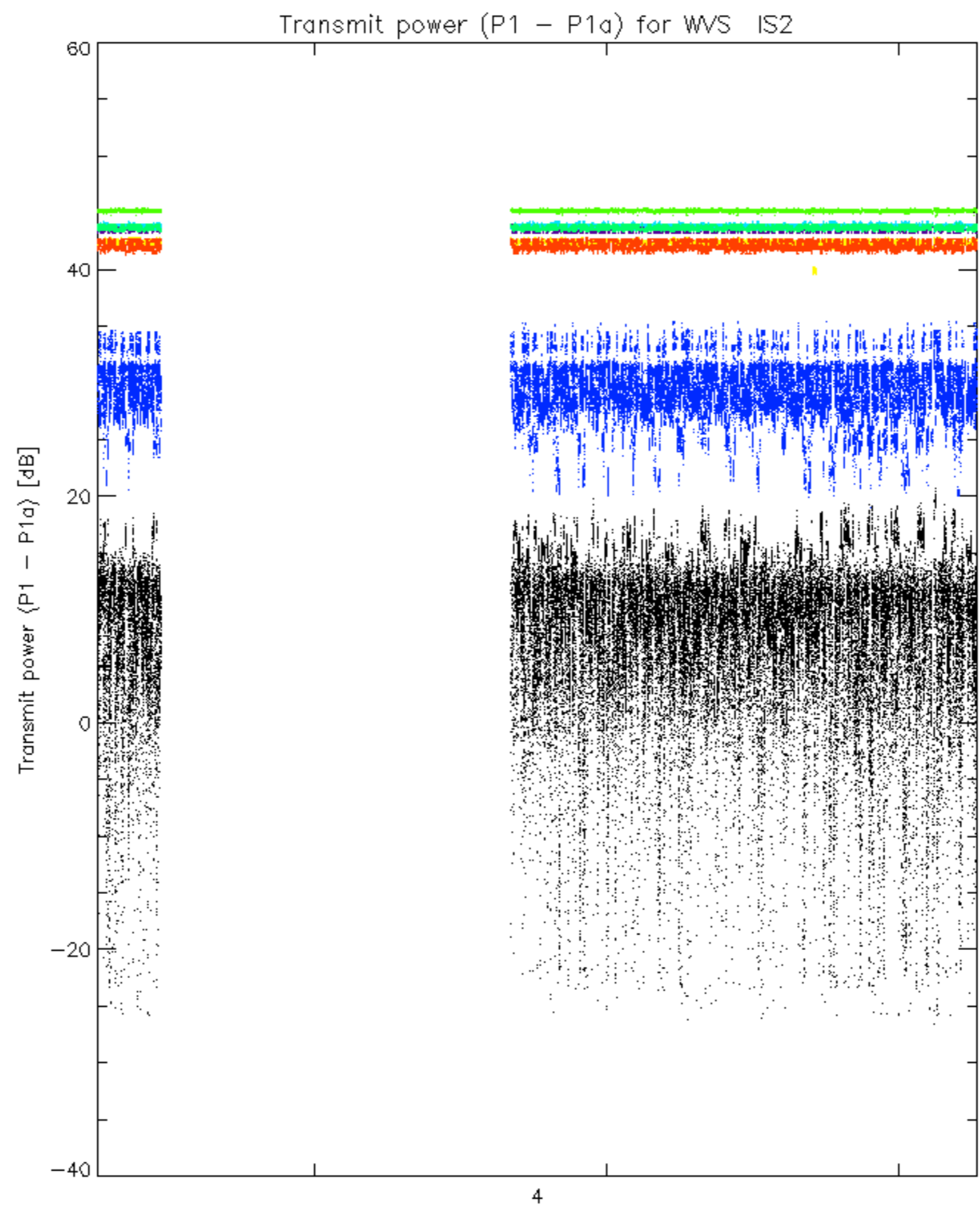




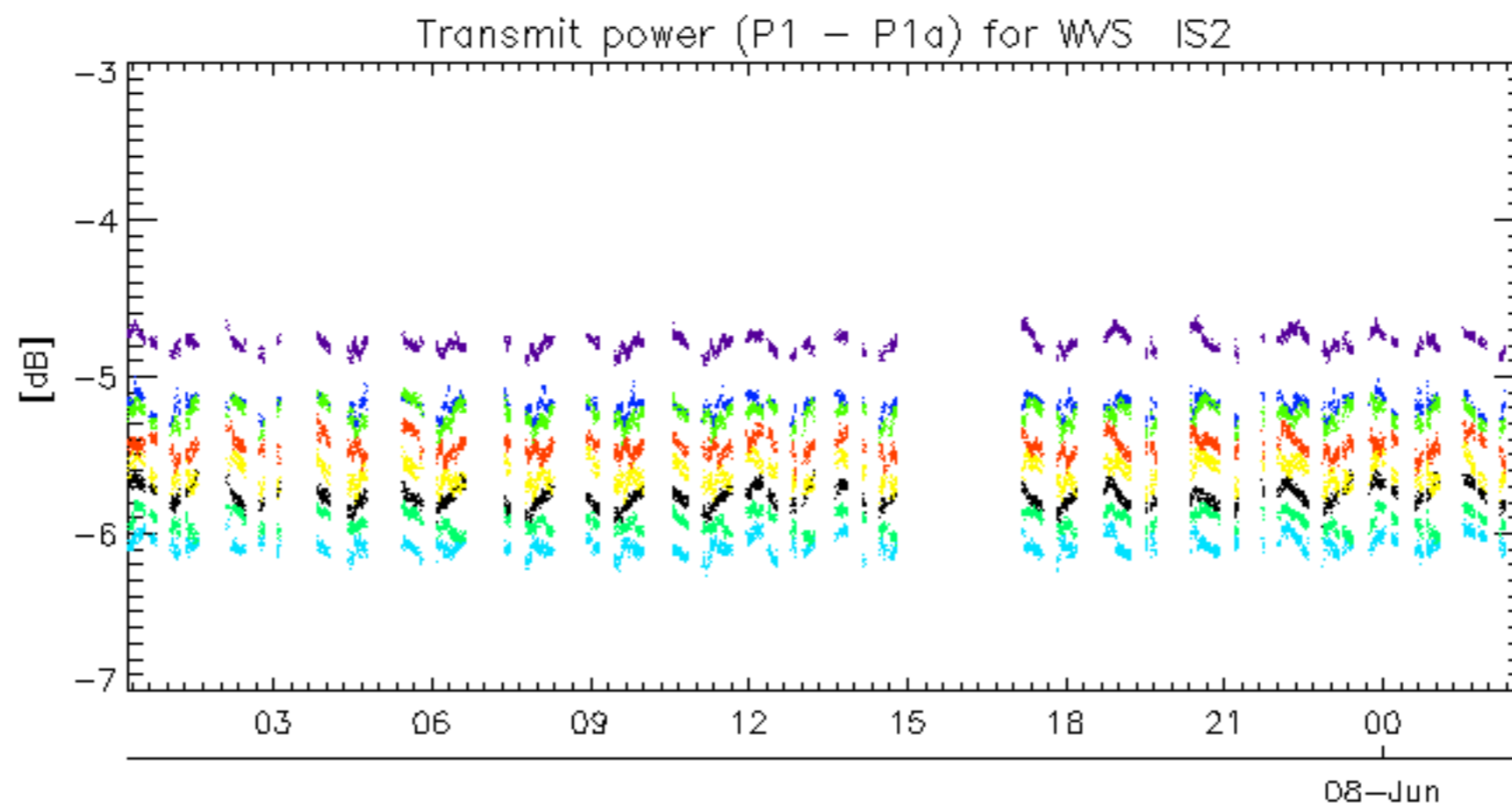








rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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

No unavailabilities during the reported period.