

# PRELIMINARY REPORT OF 060611

last update on Sun Jun 11 16:42:50 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 2006-06-10 00:00:00 to 2006-06-11 16:42:50

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	68	15	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	68	15	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	68	15	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	68	15	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	38	35	19	31
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	38	38	35	19	31
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	38	35	19	31
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	38	35	19	31

## 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	20060609 033420
H	20060610 030243

### 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	-3.945284	0.018007	0.052893
7	P1	-3.121338	0.016826	-0.043091
11	P1	-4.108062	0.018777	0.013297
15	P1	-6.139169	0.019972	-0.012096
19	P1	-3.334319	0.008389	-0.055682
22	P1	-4.514336	0.011541	0.015020
26	P1	-3.978836	0.017480	0.021057
30	P1	-5.747158	0.008870	0.005380
3	P1	-16.535906	0.262092	0.066161
7	P1	-17.188387	0.148700	-0.129573
11	P1	-16.937824	0.310137	-0.018907
15	P1	-13.204421	0.218170	0.074943
19	P1	-14.292496	0.049586	-0.110264
22	P1	-16.163940	0.379274	0.029715
26	P1	-15.246563	0.238928	0.083290
30	P1	-17.067787	0.398199	-0.193107

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.176905	0.079930	0.124642
7	P2	-22.057560	0.096019	0.109561
11	P2	-15.908514	0.109704	0.117772
15	P2	-7.160462	0.092352	0.016652
19	P2	-9.166567	0.084744	-0.008716
22	P2	-18.139359	0.082882	-0.067839
26	P2	-16.382967	0.087370	-0.045543
30	P2	-19.566669	0.085867	0.047003

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.184679	0.004125	0.011549
7	P3	-8.184679	0.004125	0.011549
11	P3	-8.184679	0.004125	0.011549
15	P3	-8.184679	0.004125	0.011549
19	P3	-8.184679	0.004125	0.011549
22	P3	-8.184679	0.004125	0.011549
26	P3	-8.184679	0.004125	0.011549
30	P3	-8.184679	0.004125	0.011549

#### 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	-3.785808	0.064207	-0.061441
7	P1	-2.597332	0.031533	0.018817
11	P1	-2.864426	0.023482	-0.004992
15	P1	-3.502135	0.049830	-0.043602
19	P1	-3.401754	0.014329	-0.022945
22	P1	-5.083374	0.019913	-0.006447
26	P1	-5.844918	0.015663	-0.016758
30	P1	-5.189439	0.026728	0.015336
3	P1	-11.613493	0.081613	-0.021122
7	P1	-9.967185	0.053258	-0.019375
11	P1	-10.210189	0.086751	-0.088905
15	P1	-10.636370	0.152048	-0.172474
19	P1	-15.521595	0.076145	-0.039011
22	P1	-20.909344	1.202494	-0.027808
26	P1	-16.482559	0.345280	0.075980
30	P1	-17.962896	0.383581	0.203463

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.867056	0.069481	0.119383
7	P2	-22.503504	0.127856	0.040947
11	P2	-11.168761	0.047084	0.068418
15	P2	-4.911571	0.047564	-0.021261
19	P2	-6.878420	0.052142	-0.014745
22	P2	-8.201405	0.042460	-0.030628
26	P2	-24.117935	0.066914	-0.082848
30	P2	-22.065420	0.054349	-0.007989

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018739	0.004752	0.001975
7	P3	-8.018933	0.004753	0.002246
11	P3	-8.018839	0.004738	0.002429
15	P3	-8.018700	0.004749	0.001849
19	P3	-8.018833	0.004752	0.002119
22	P3	-8.018911	0.004740	0.001912
26	P3	-8.018869	0.004742	0.001833
30	P3	-8.018810	0.004741	0.002013

## 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	0.000531257
	stdev	1.90570e-07
MEAN Q	mean	0.000507690
	stdev	2.29726e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134230
	stdev	0.00119565
STDEV Q	mean	0.134571
	stdev	0.00121251



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006061[901]

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_1PNPDE20060610_110007_000000342048_00266_22364_6947.N1	0	18
ASA_WSM_1PNPDE20060610_015903_000001462048_00261_22359_3573.N1	0	75
ASA_WSM_1PNPDE20060610_033801_000000852048_00262_22360_3591.N1	0	39
ASA_WSM_1PNPDE20060610_184505_000001842048_00271_22369_3667.N1	0	58
ASA_WSM_1PNPDE20060611_021040_000000862048_00275_22373_3687.N1	0	2







## 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)


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Ascending
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Descending
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### 7.5 - Absolute Doppler for GM1

<b>Evolution of Absolute Doppler</b>
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Ascending
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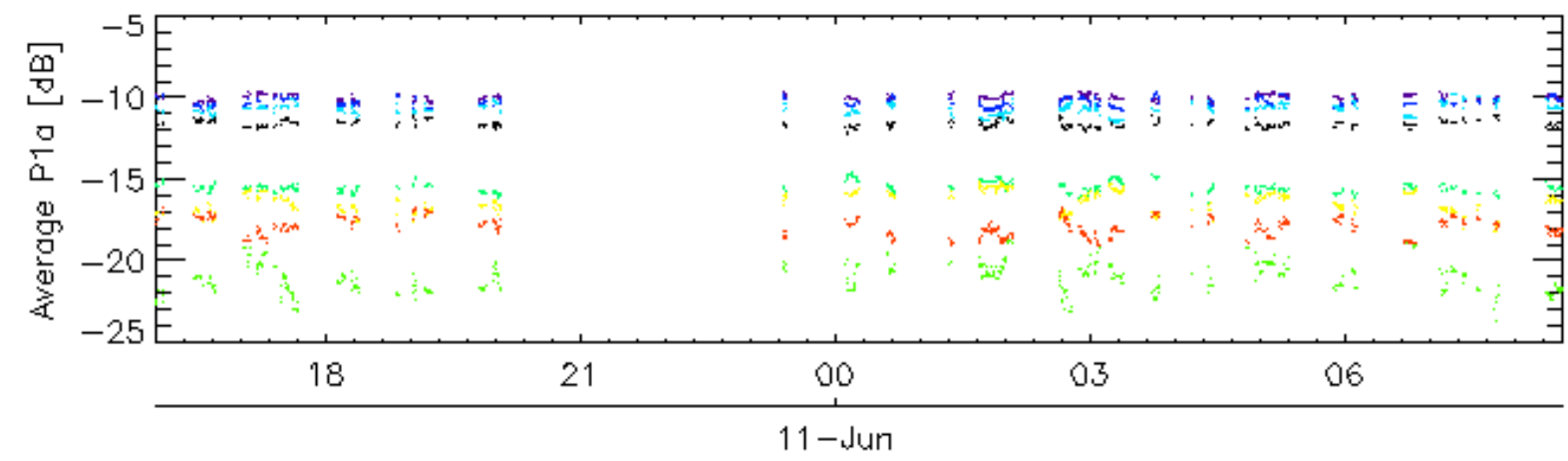
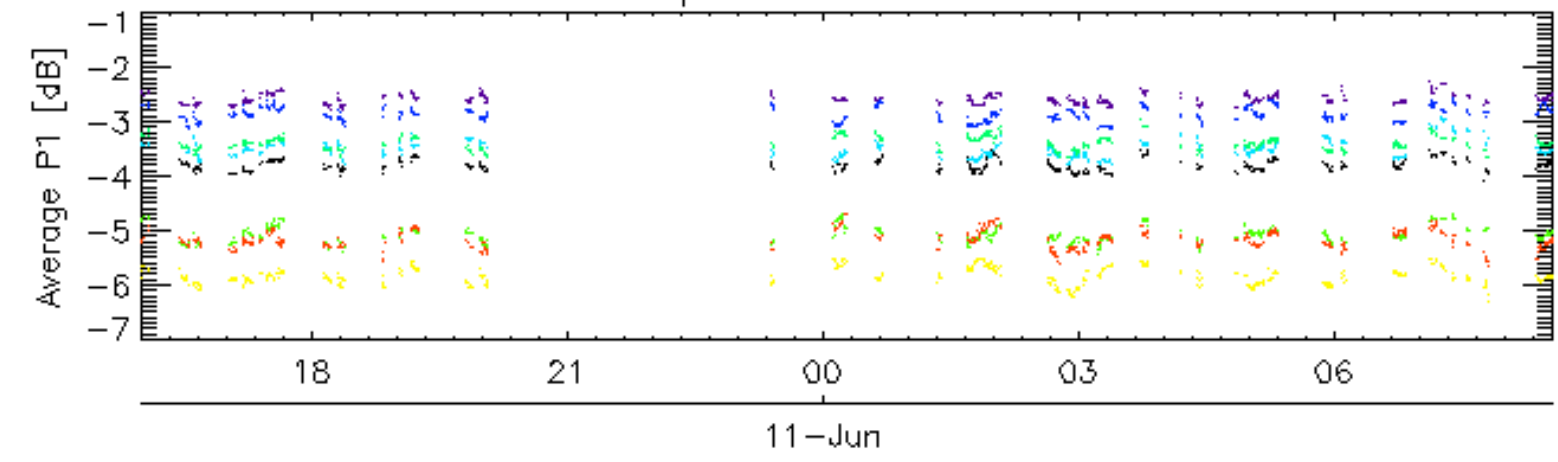
Descending
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### 7.6 - Doppler evolution versus ANX for GM1

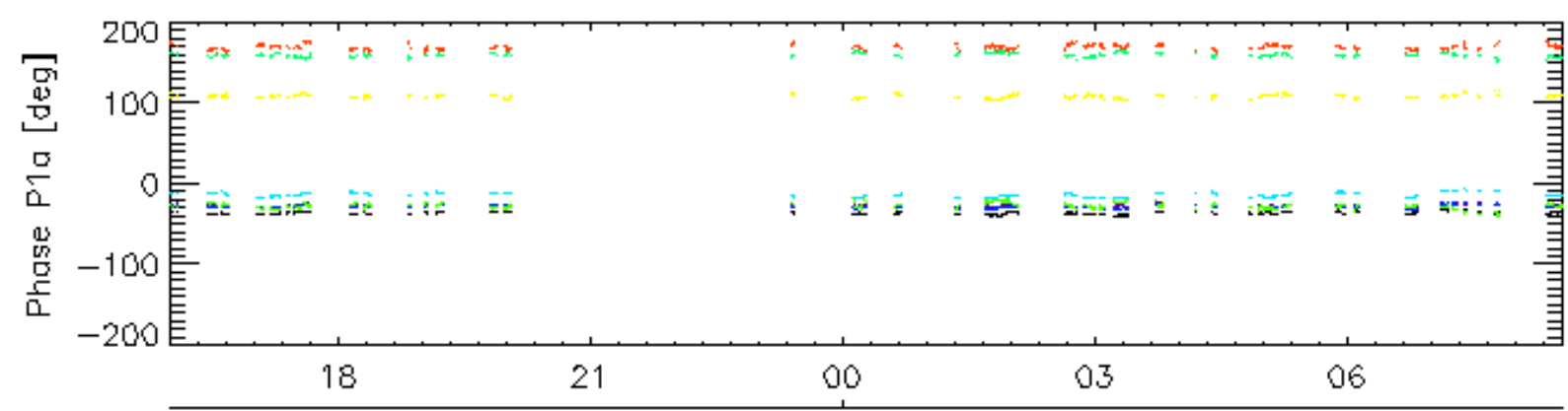
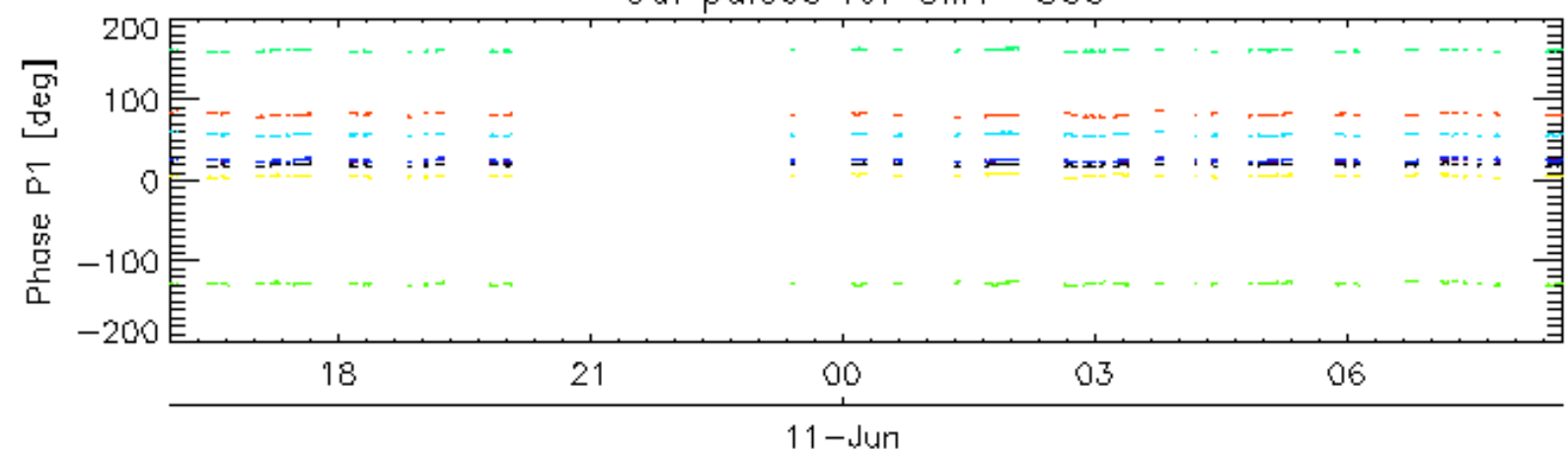
<b>Evolution Doppler error versus ANX</b>
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Cal pulses for GM1 SS3

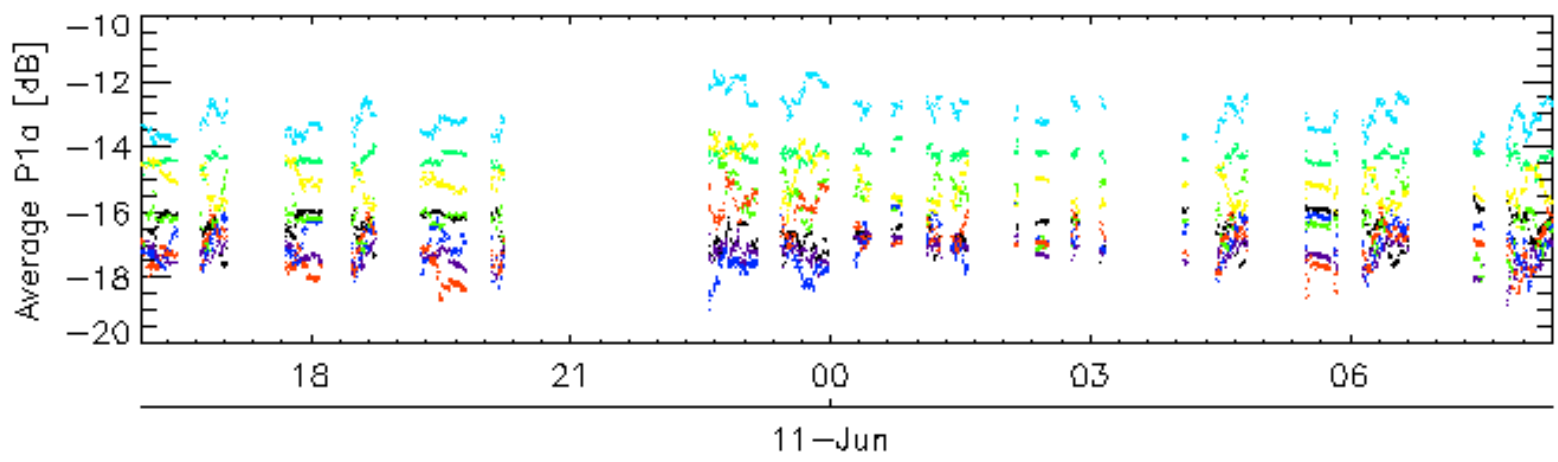
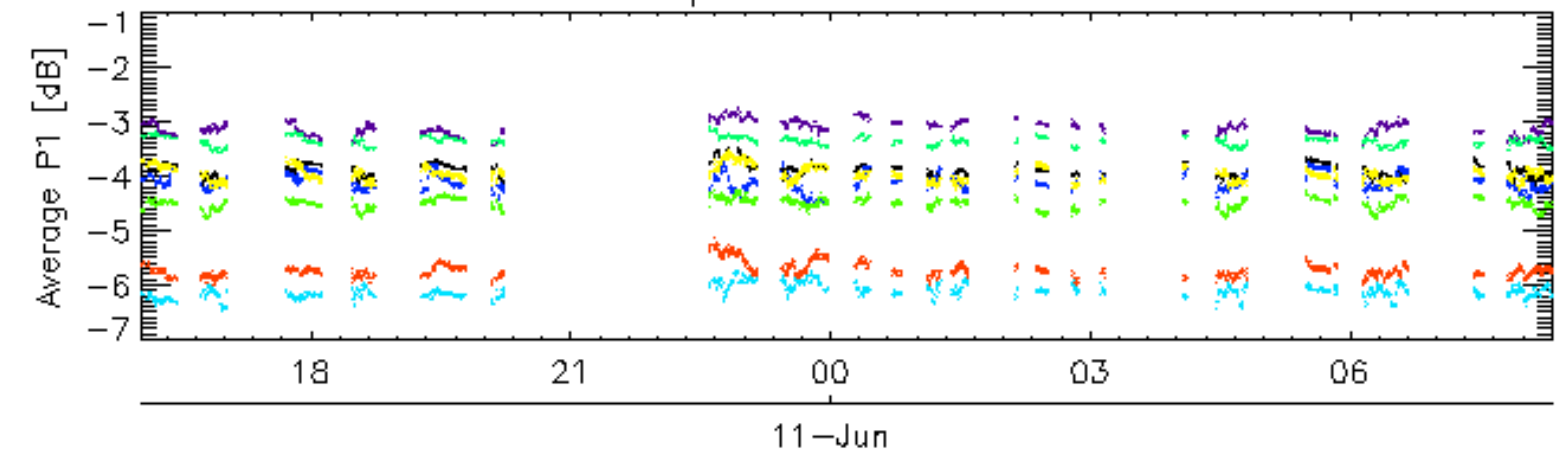


Cal pulses for GM1 SS3

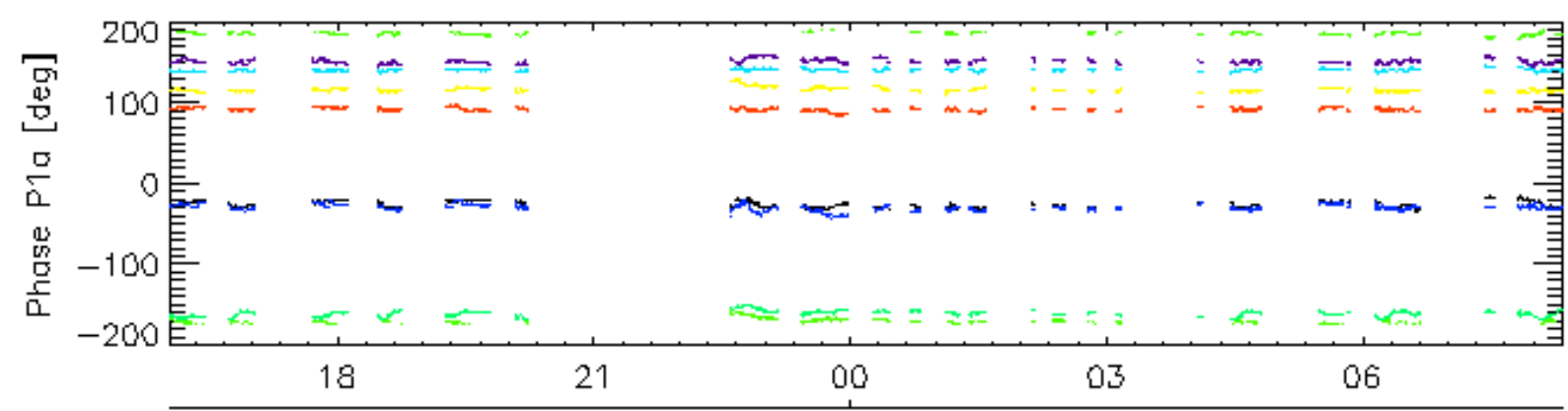
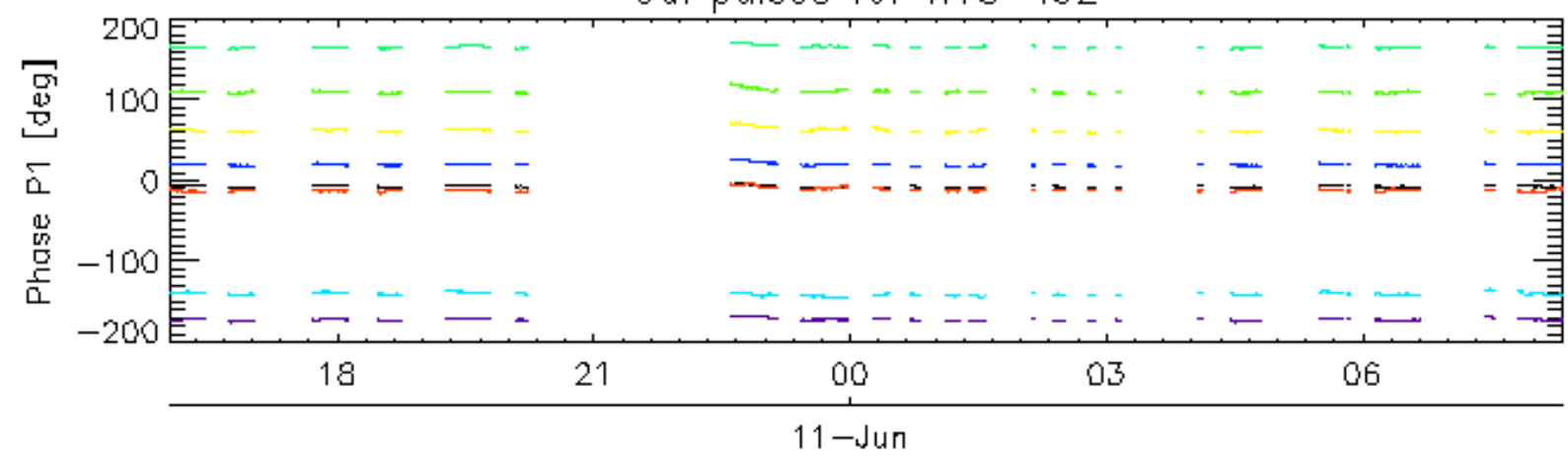


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

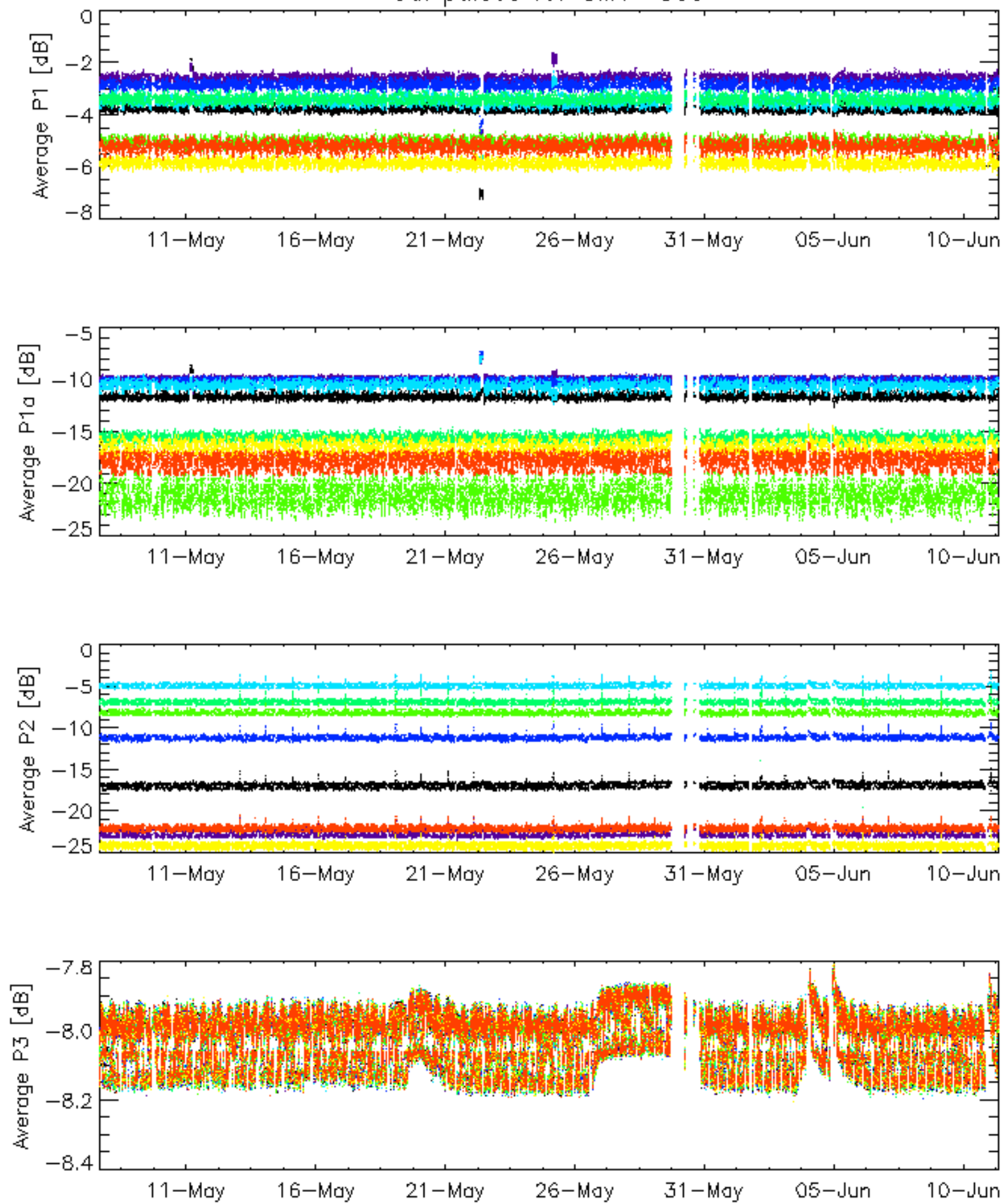


Cal pulses for WVS IS2



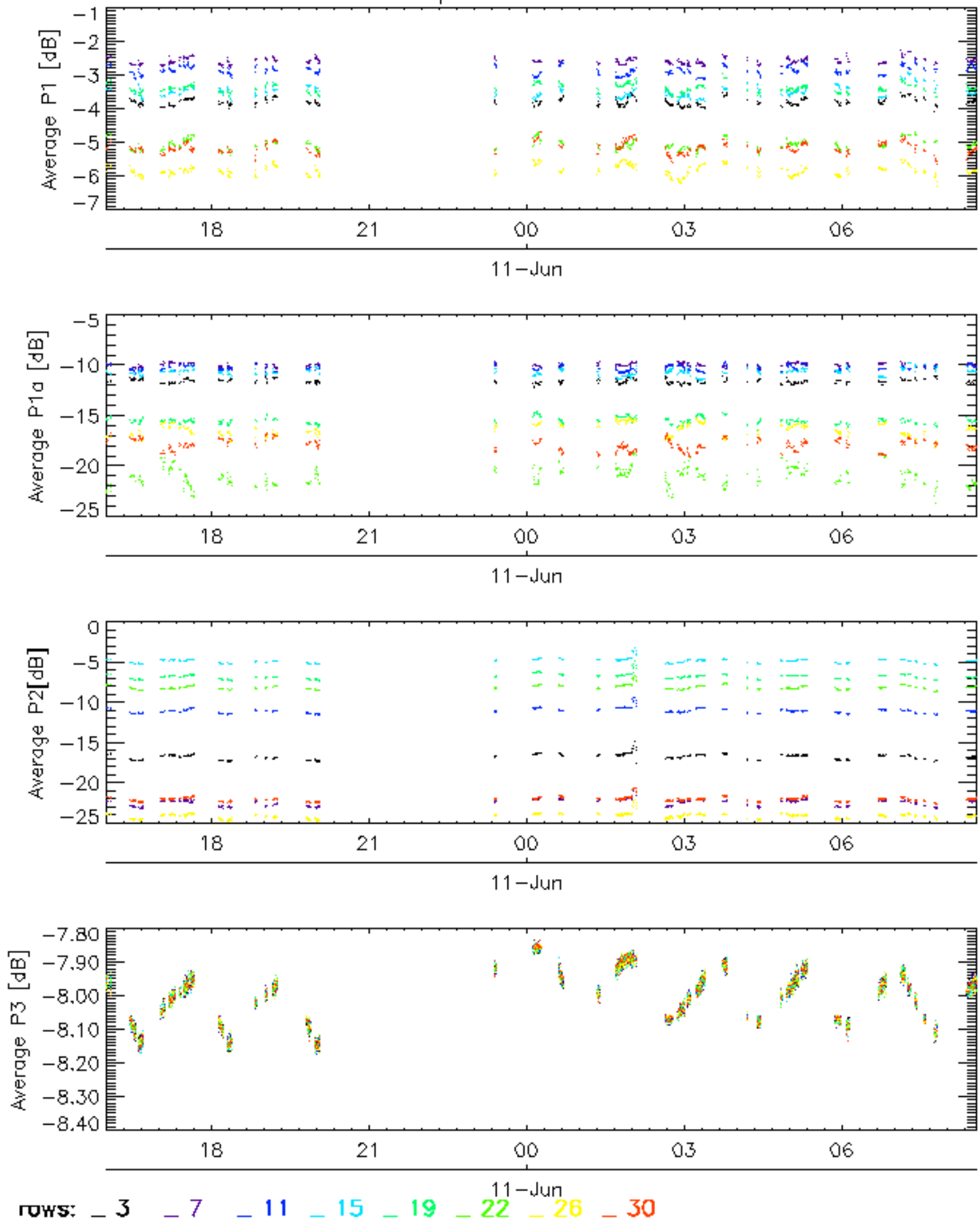
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

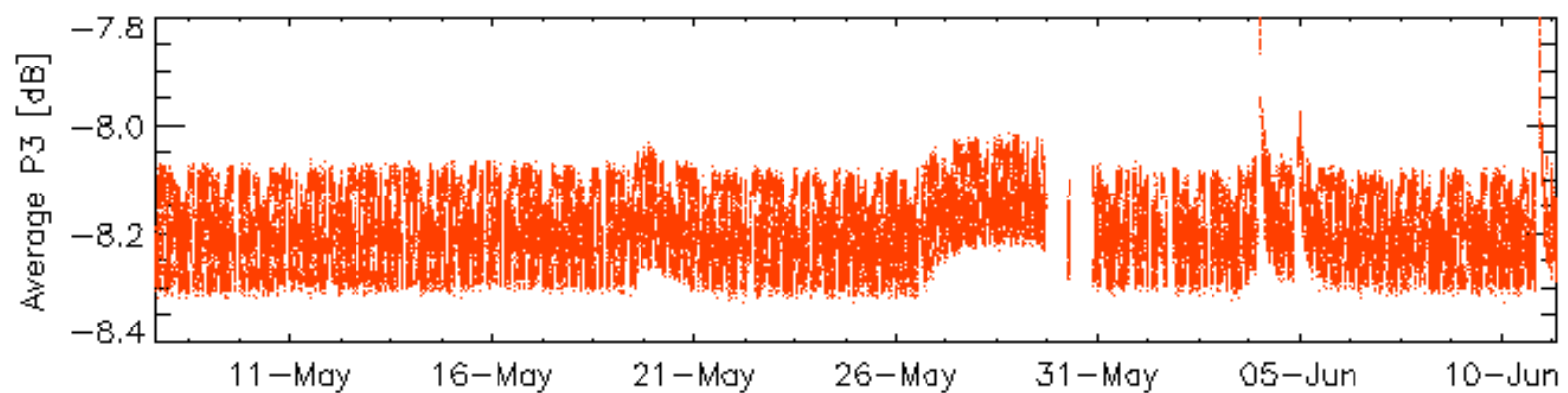
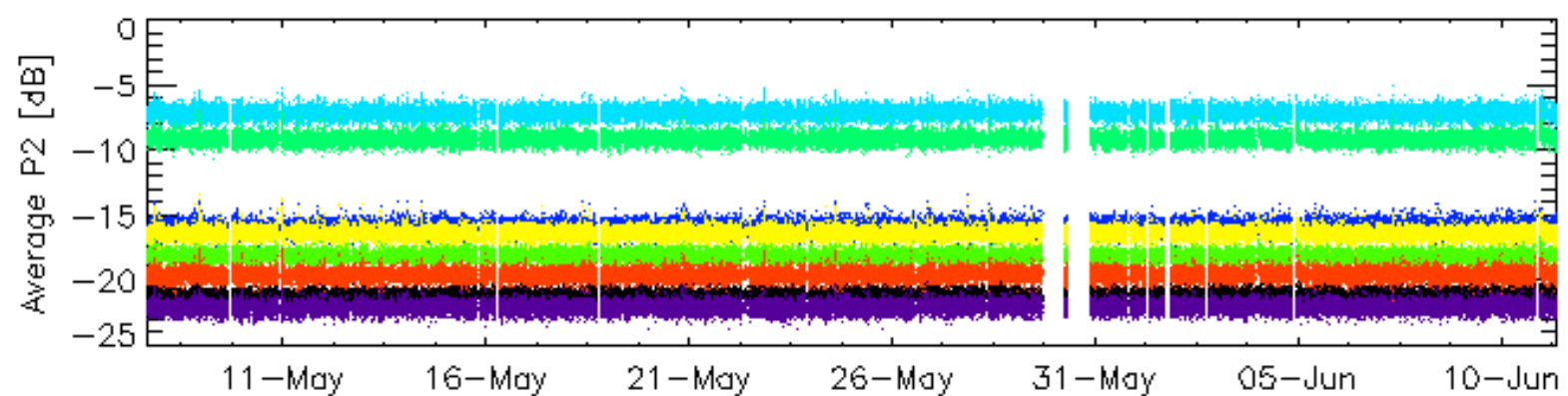
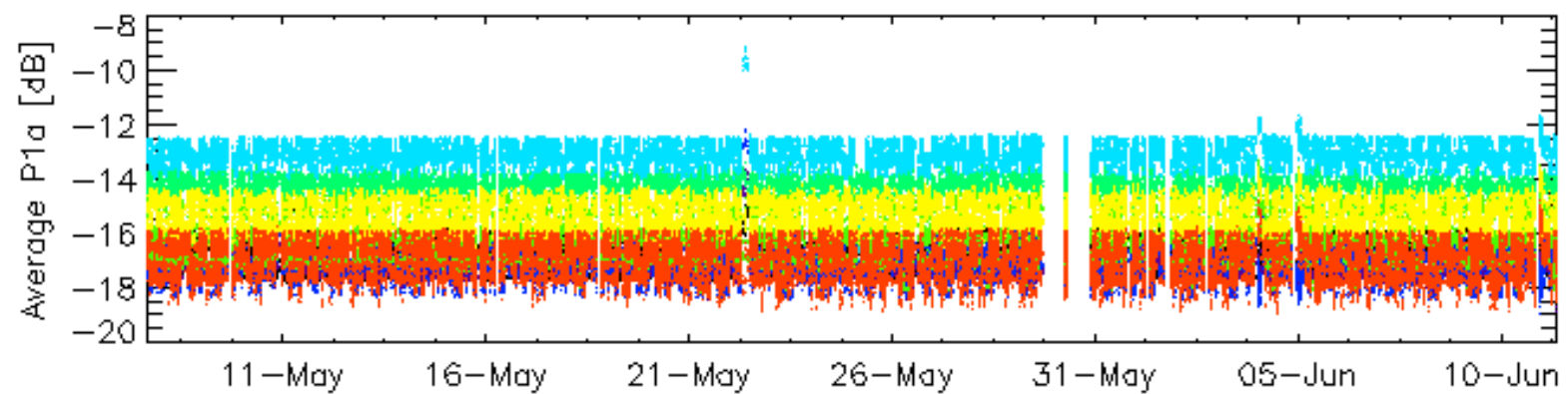
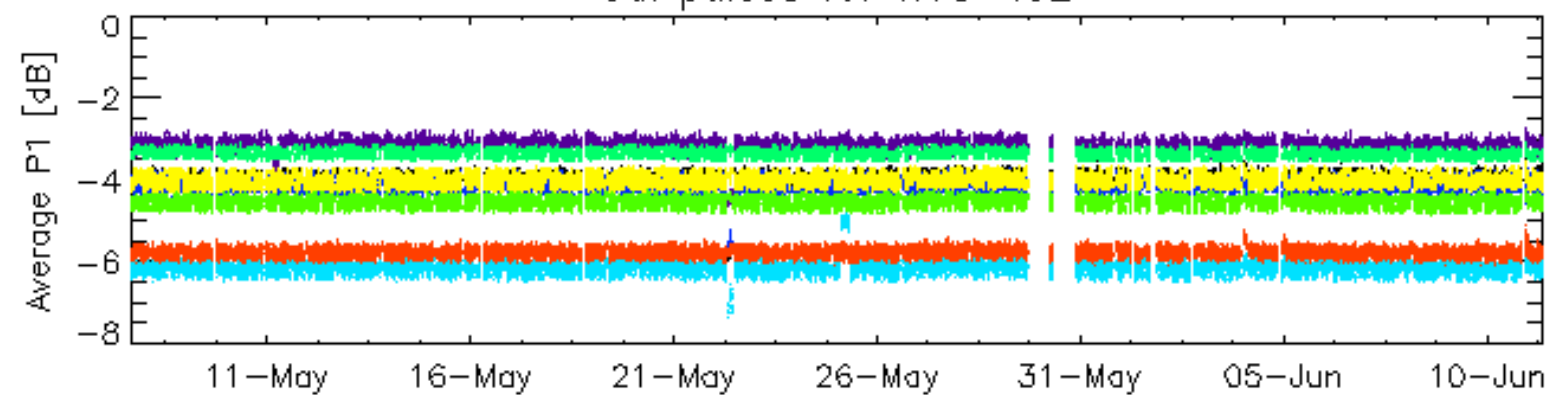


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3



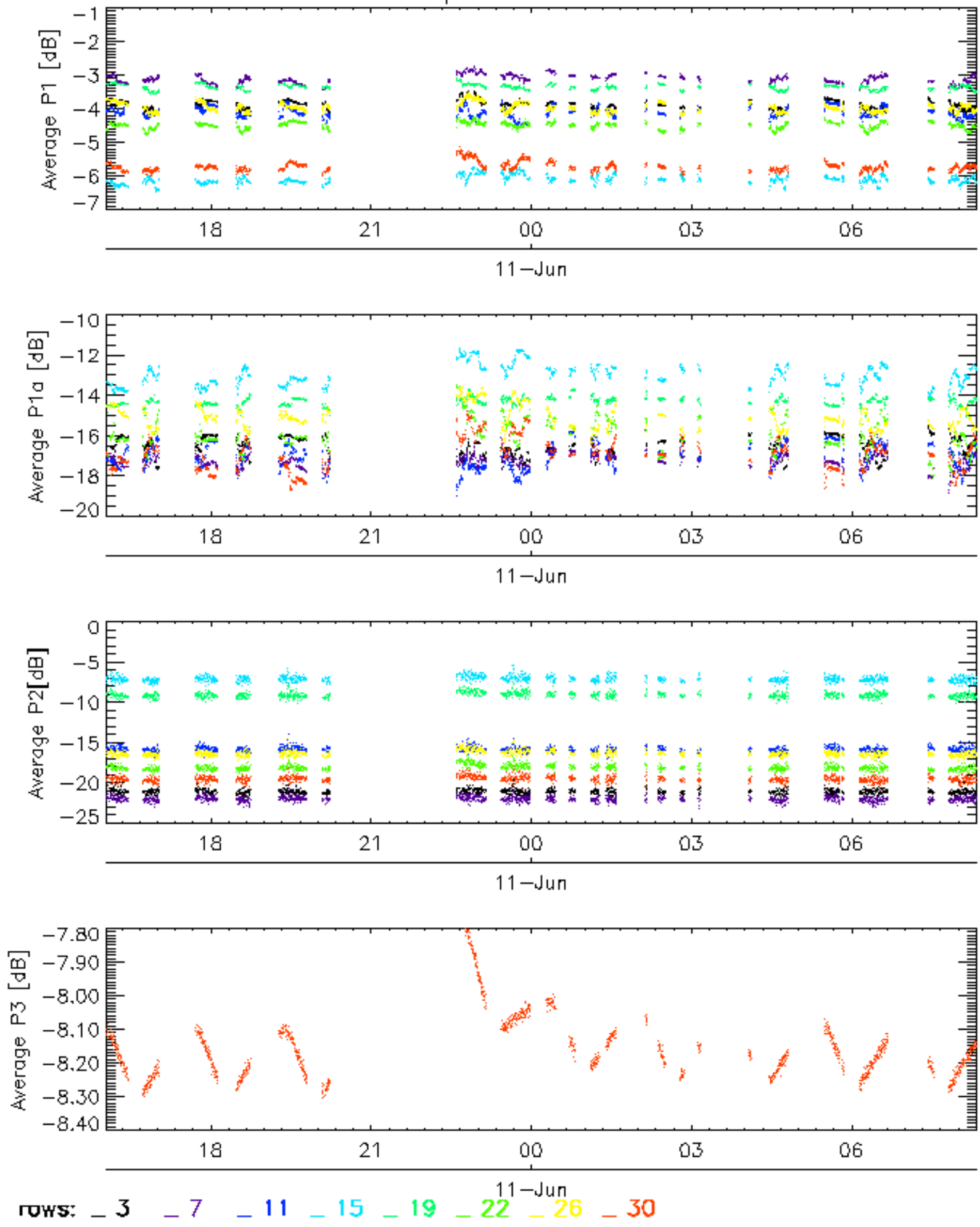
Cal pulses for WVS IS2



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

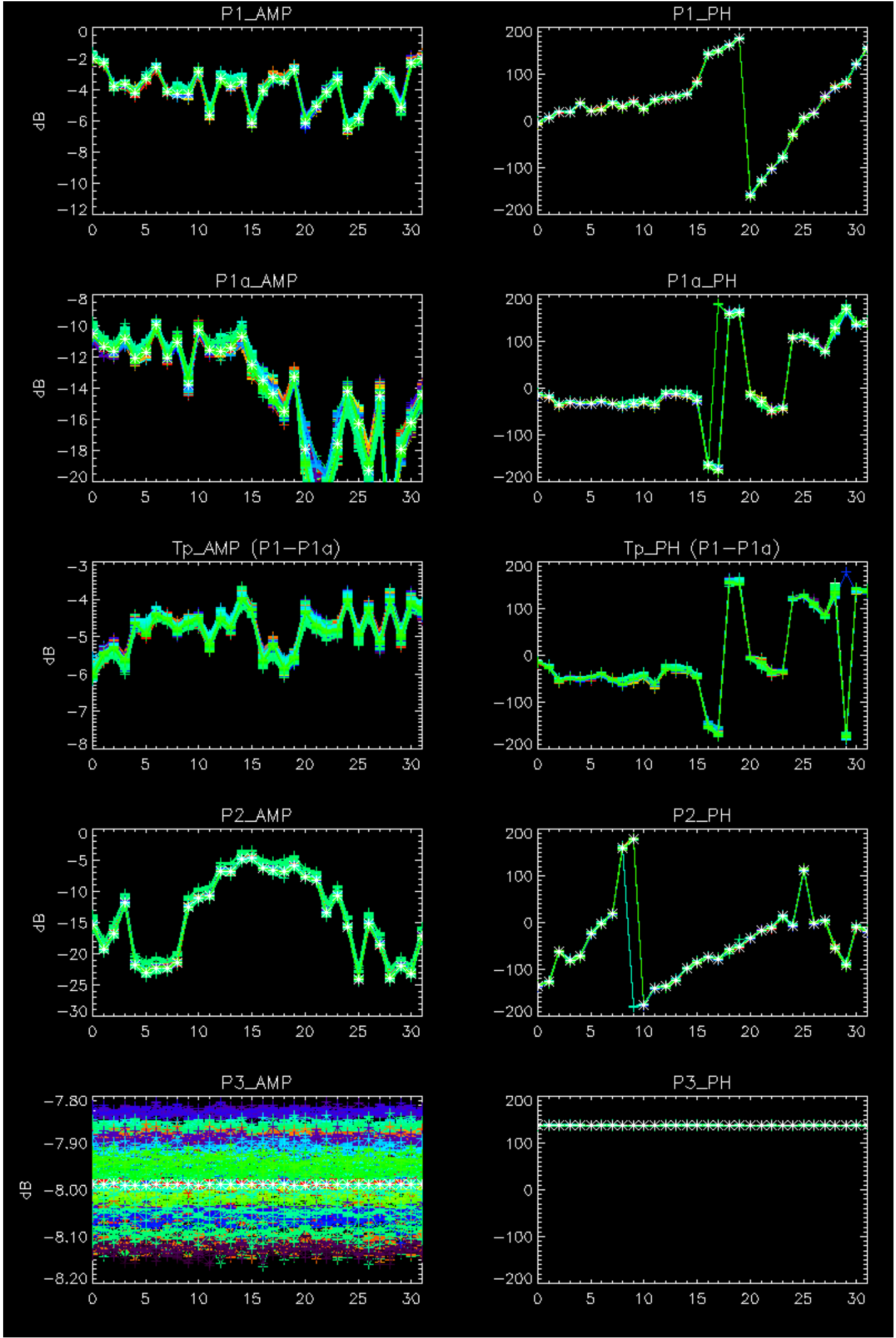


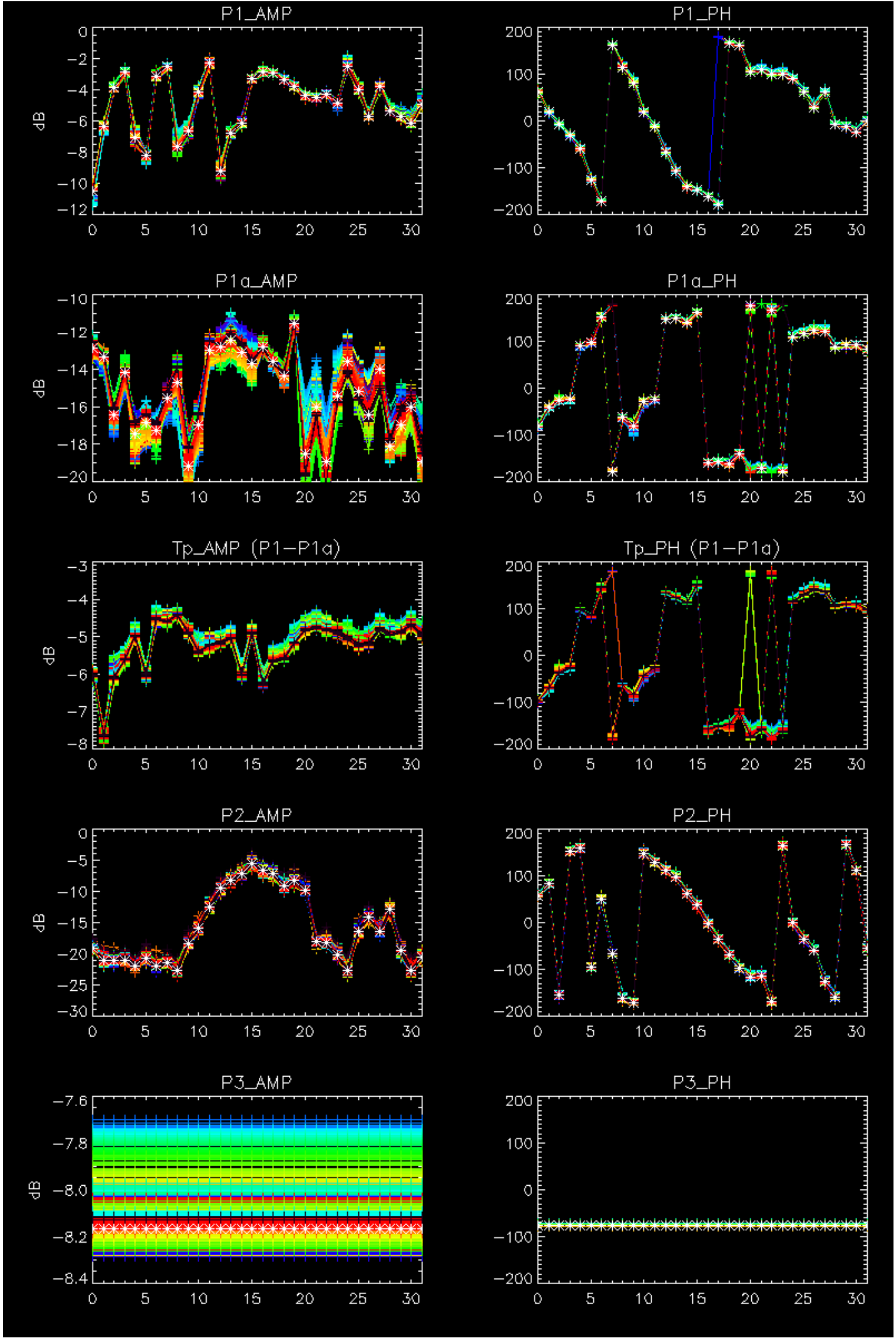
Cal pulses for WVS IS2



No anomalies observed.





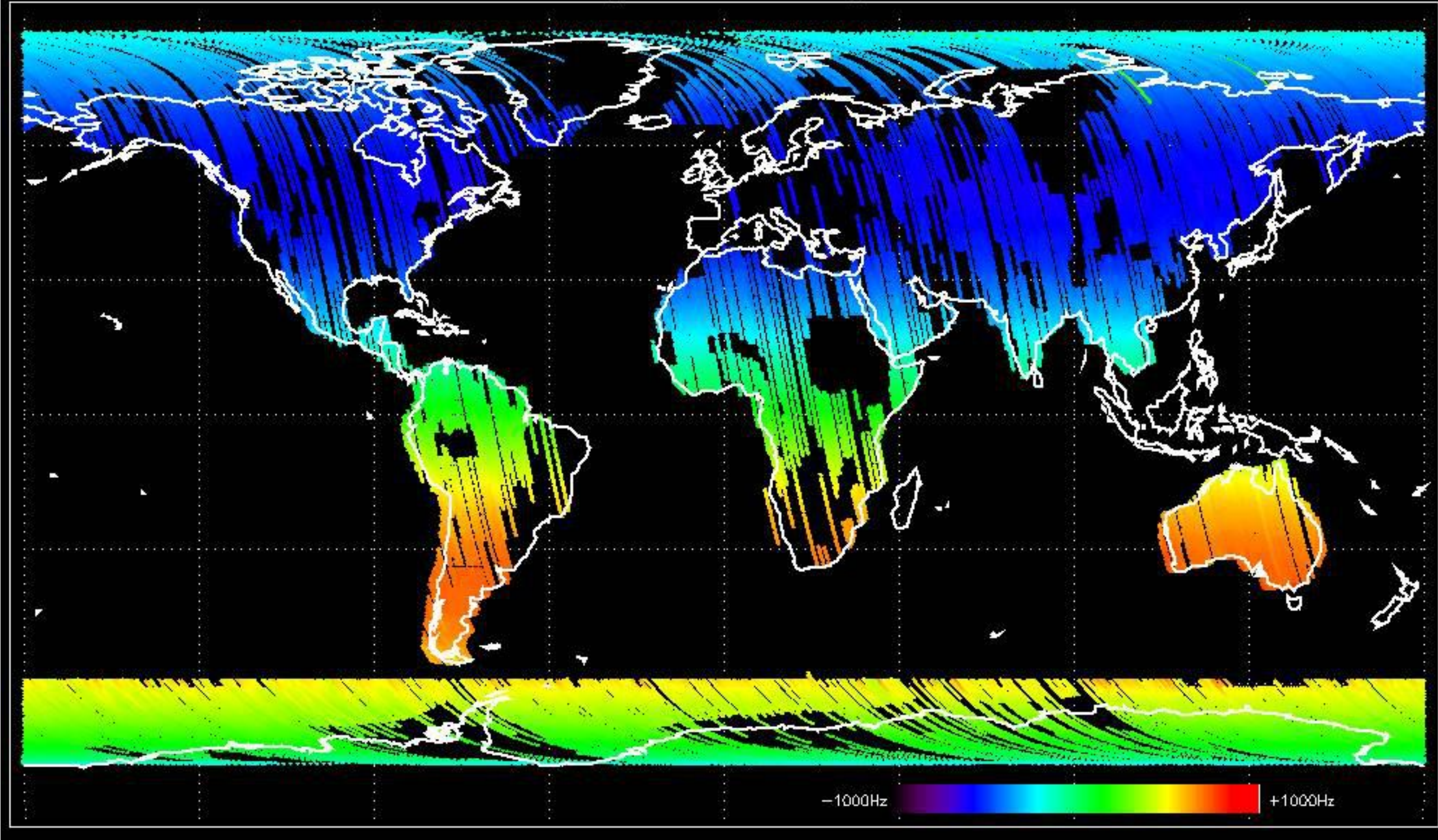


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



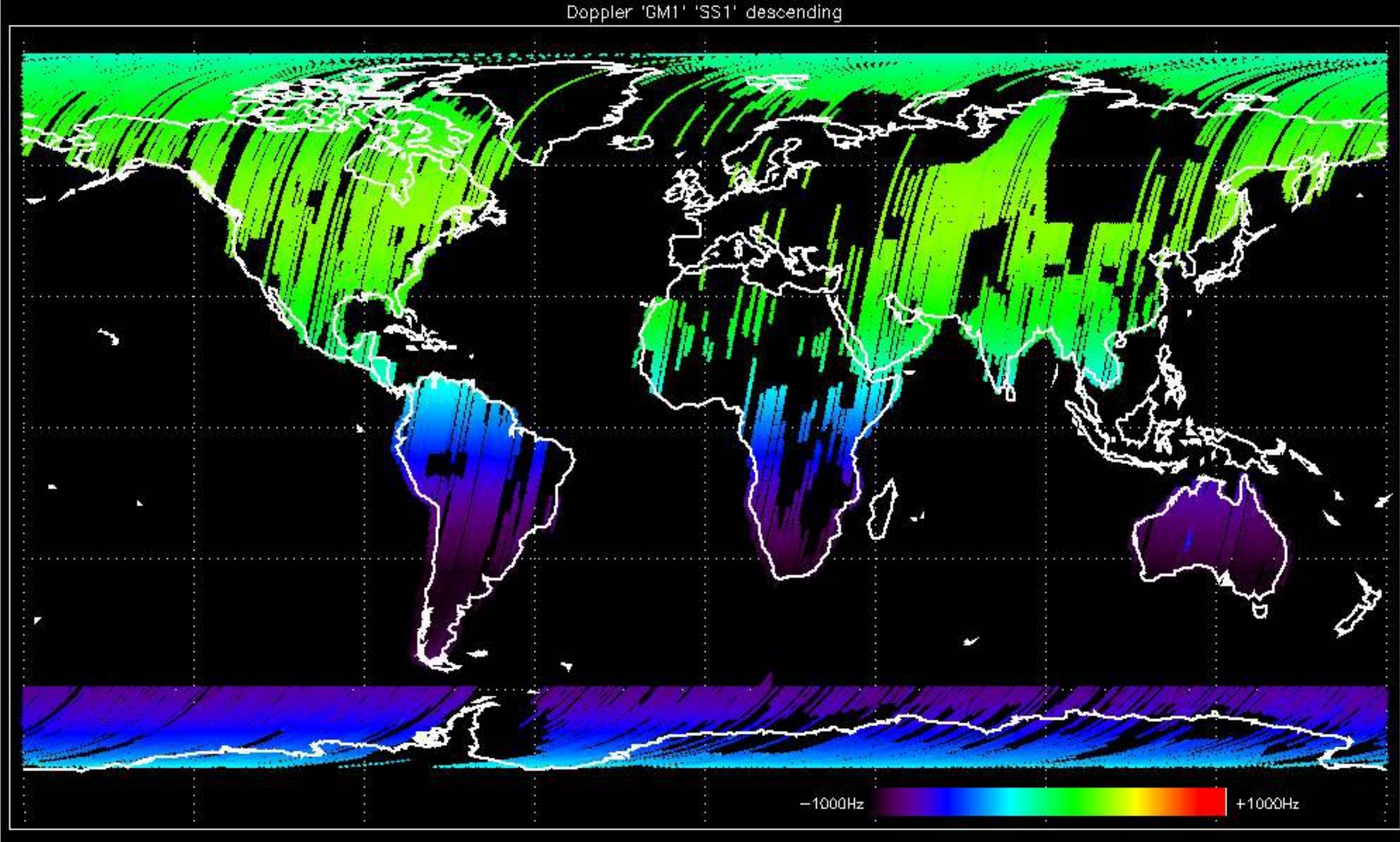


Doppler 'GM1' 'SS1' ascending



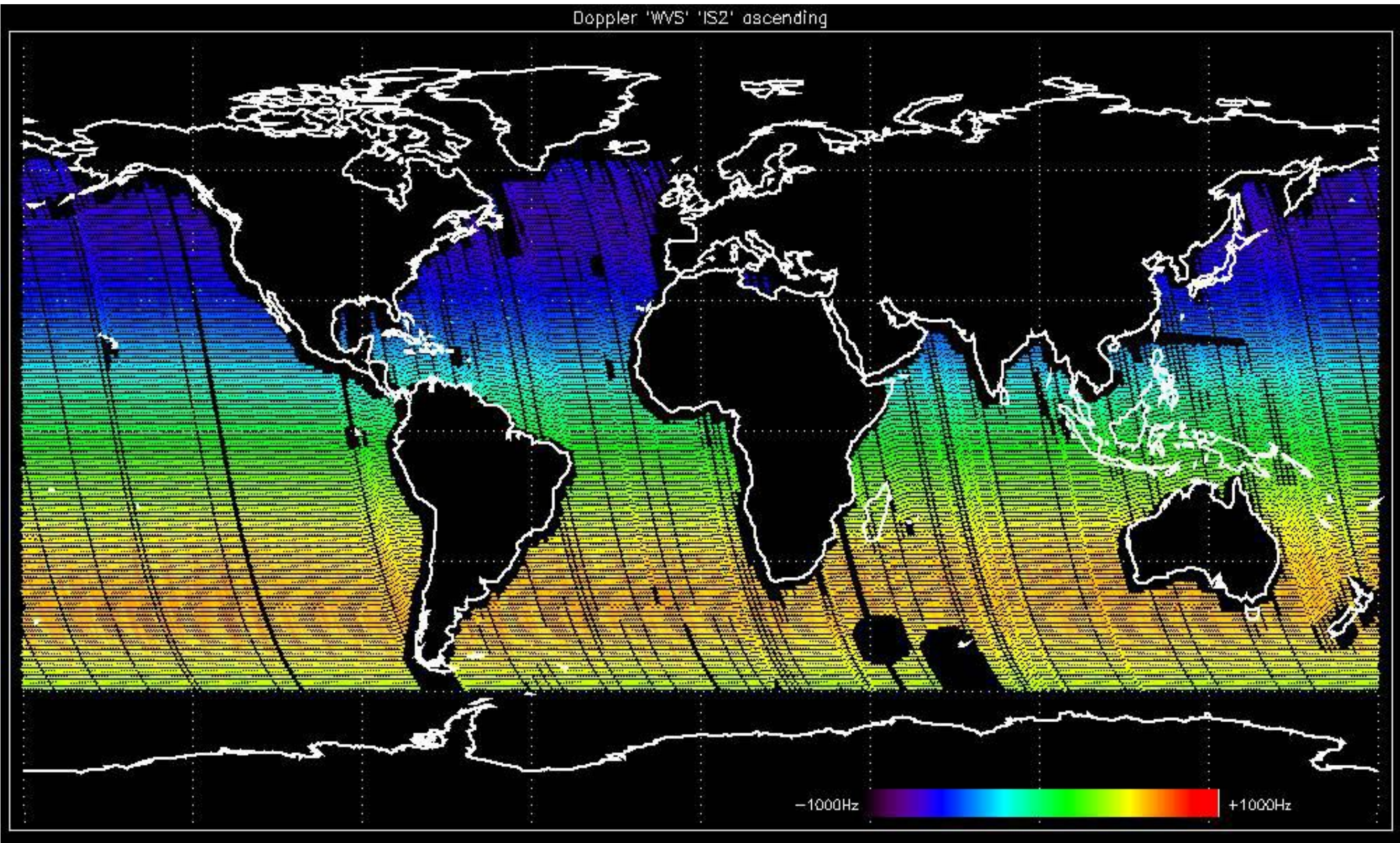


Doppler 'GM1' 'SS1' descending



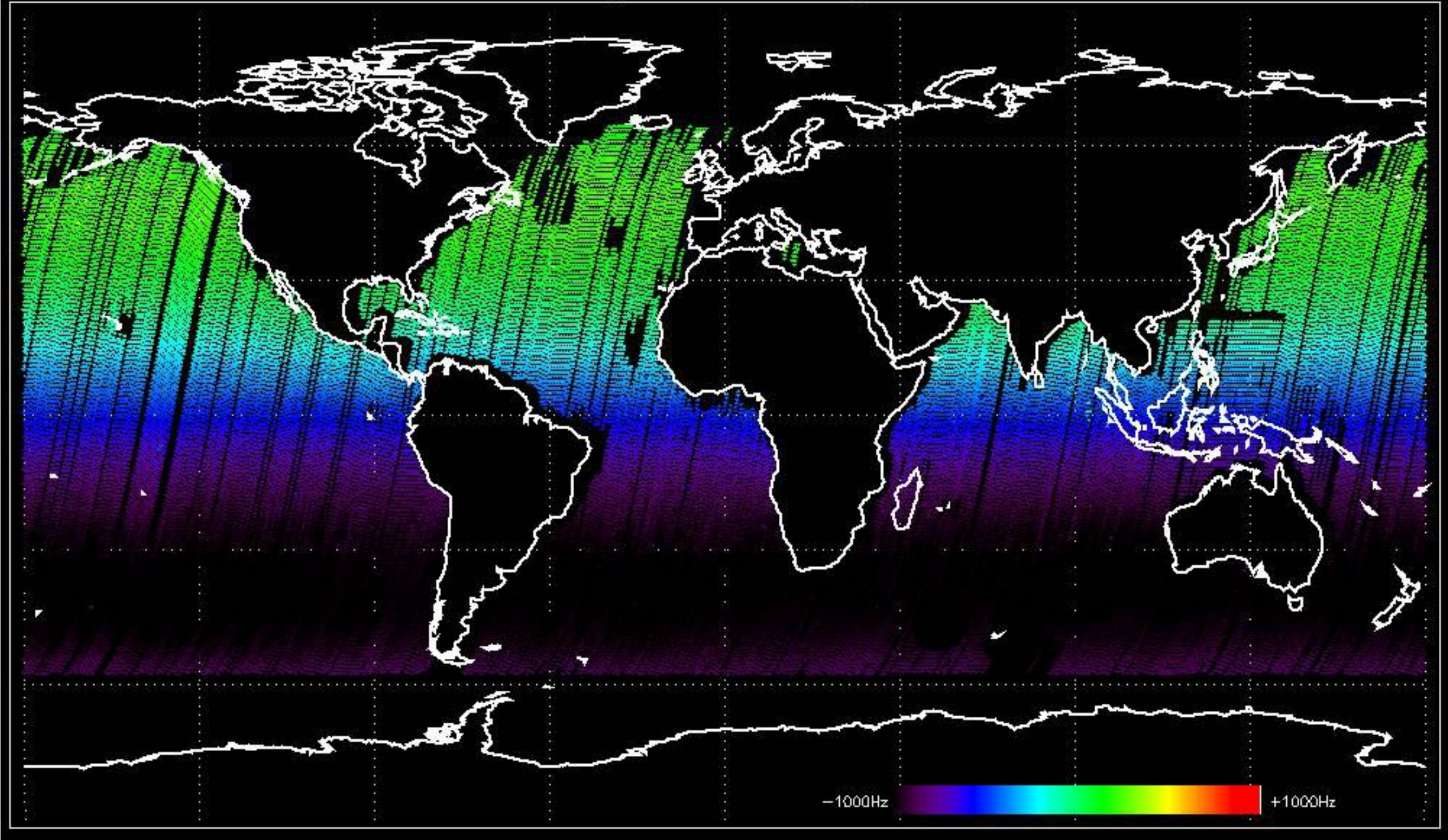


Doppler 'WVS' 'IS2' ascending



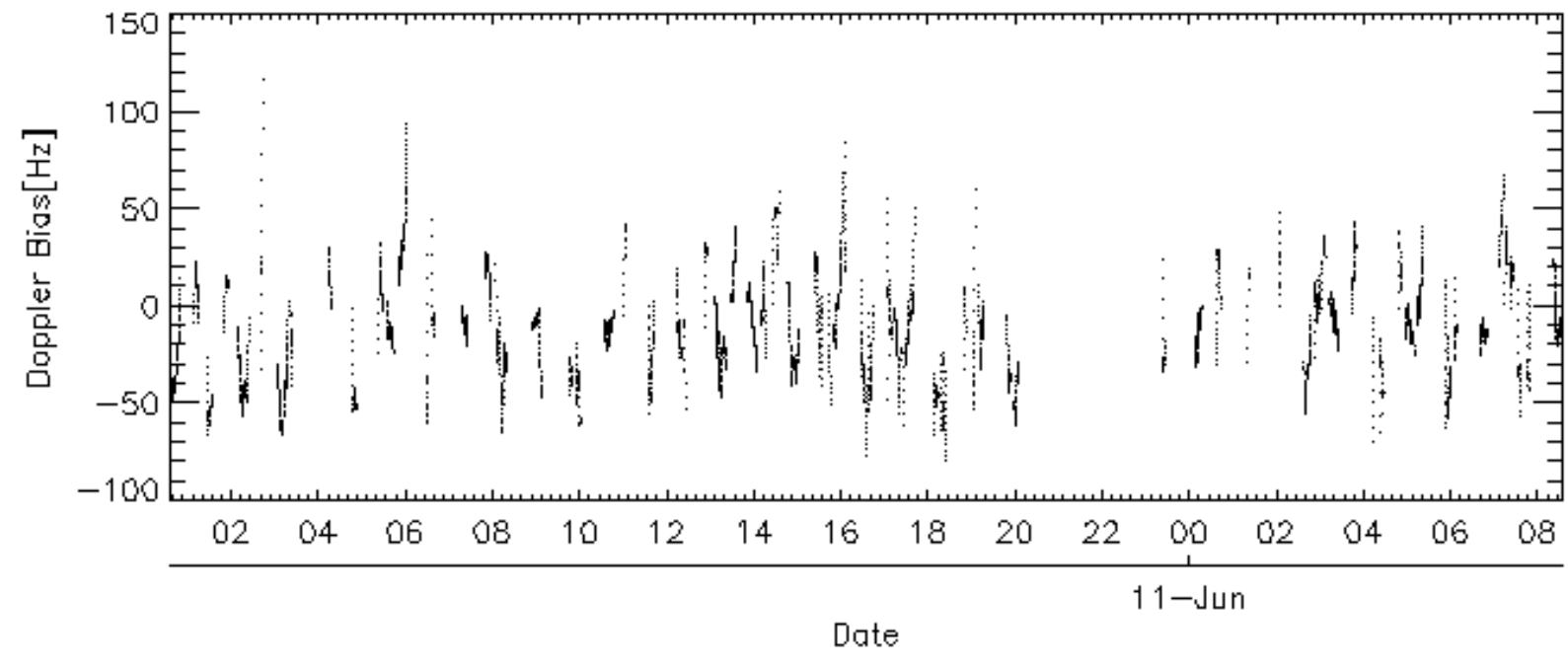
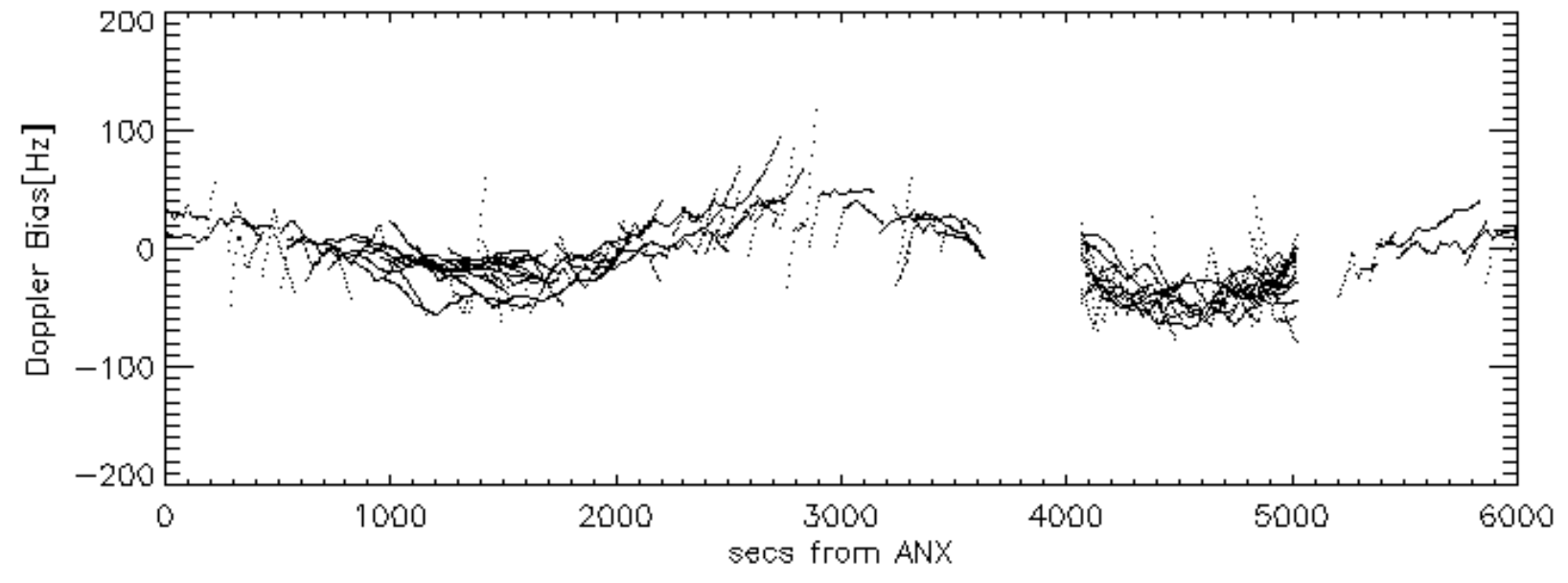
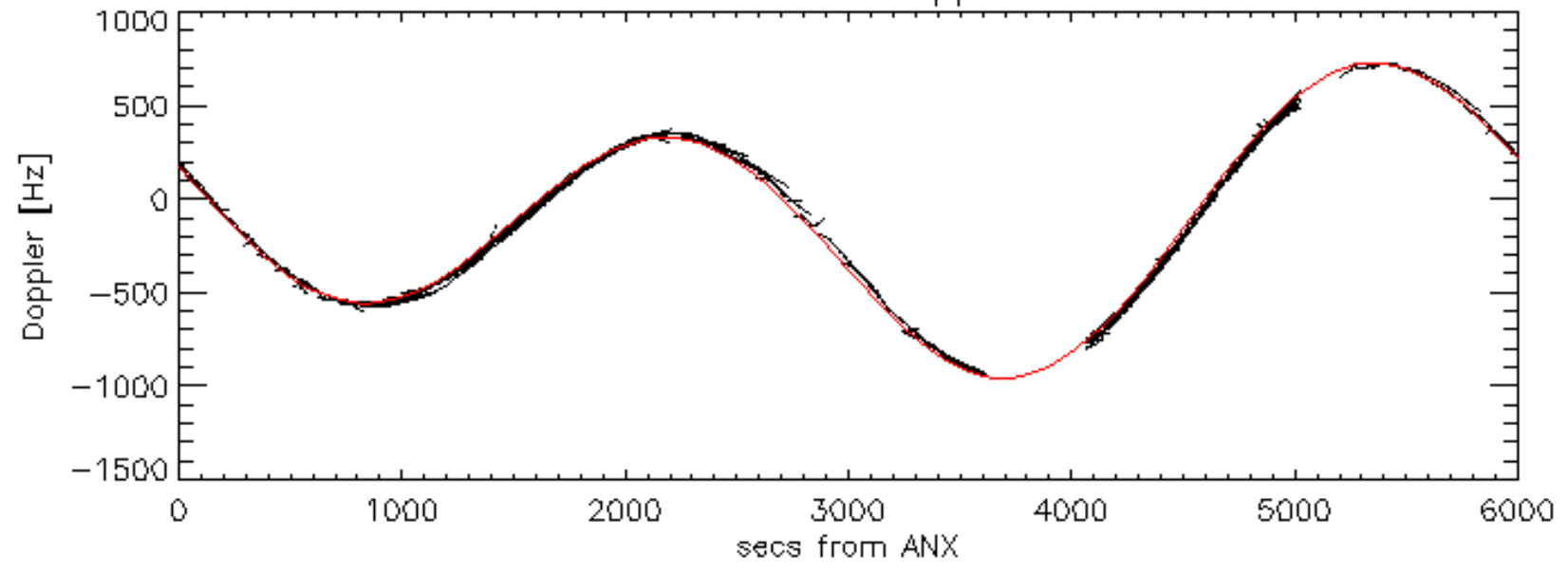


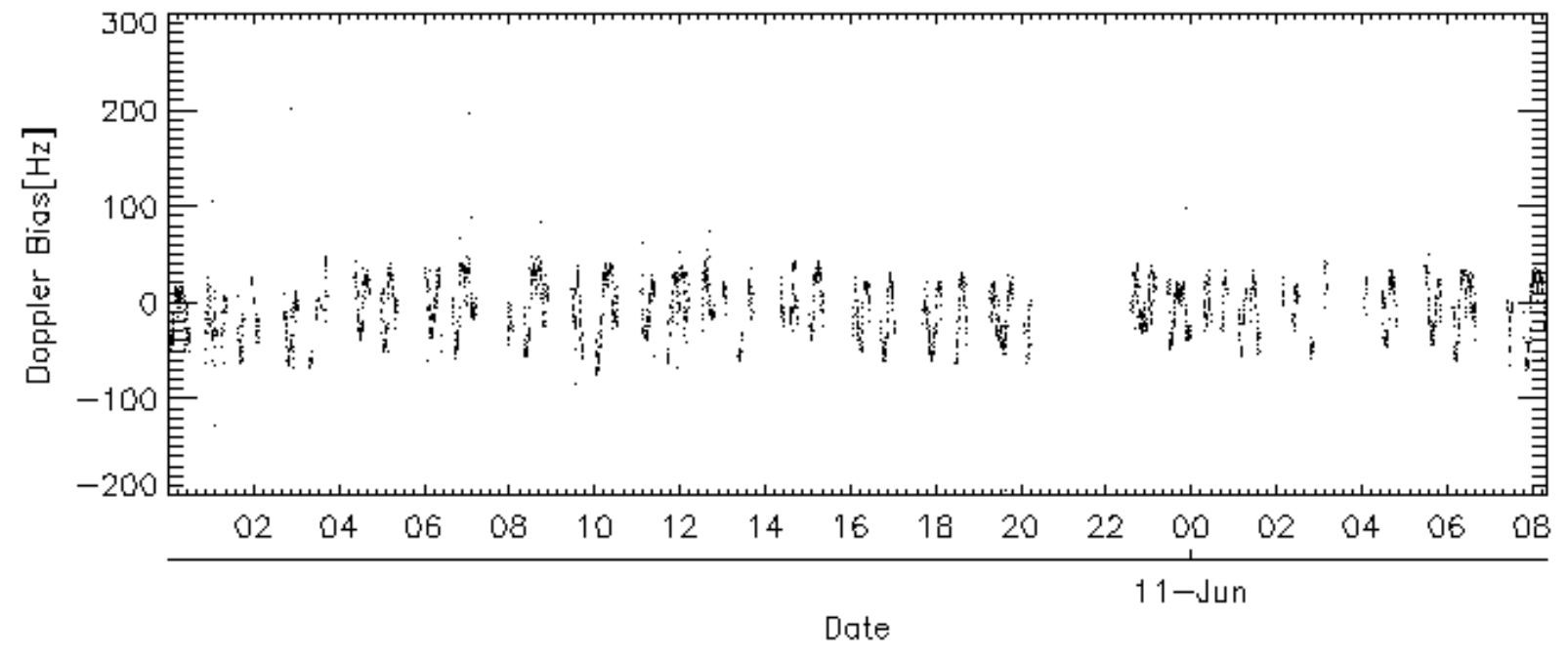
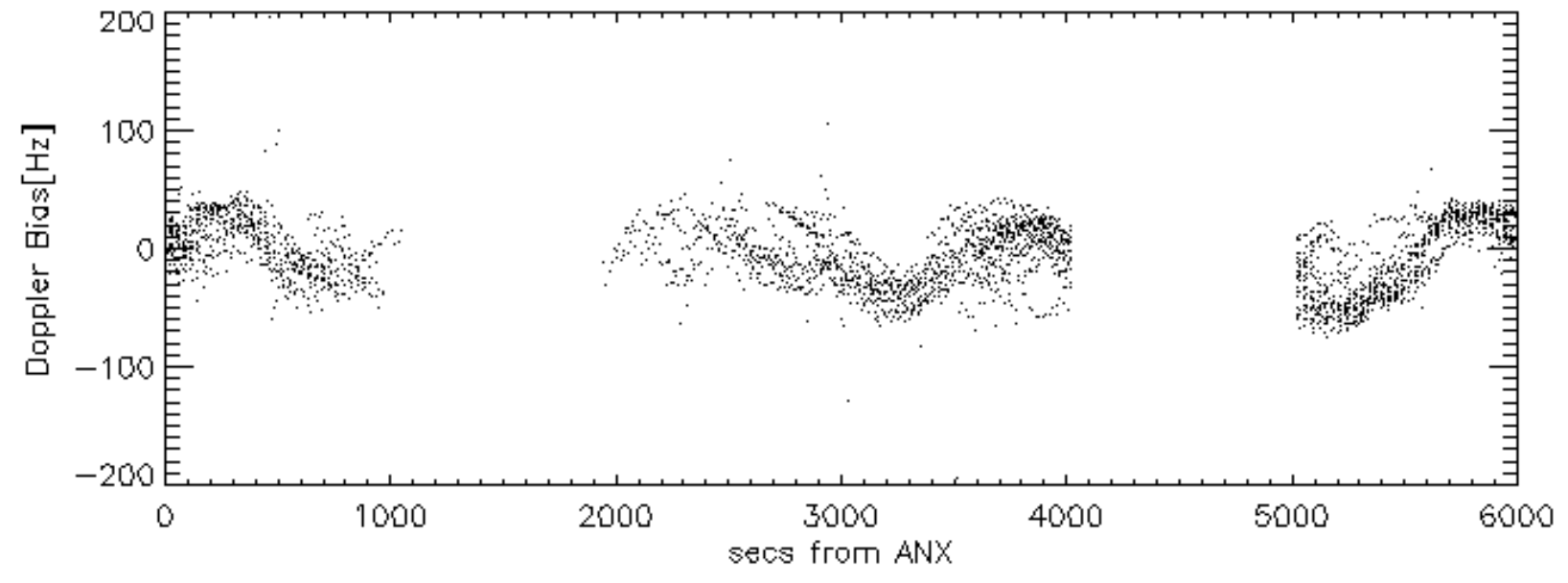
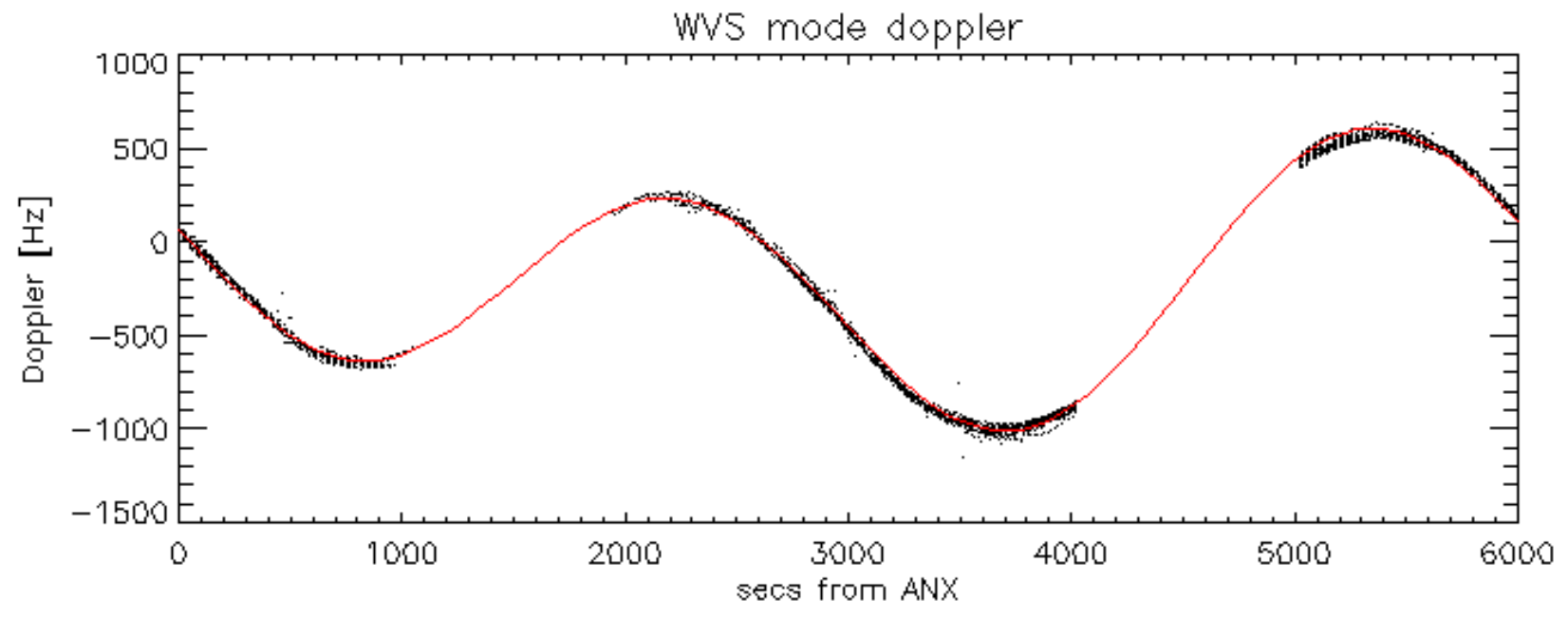
Doppler 'WVS' 'IS2' descending





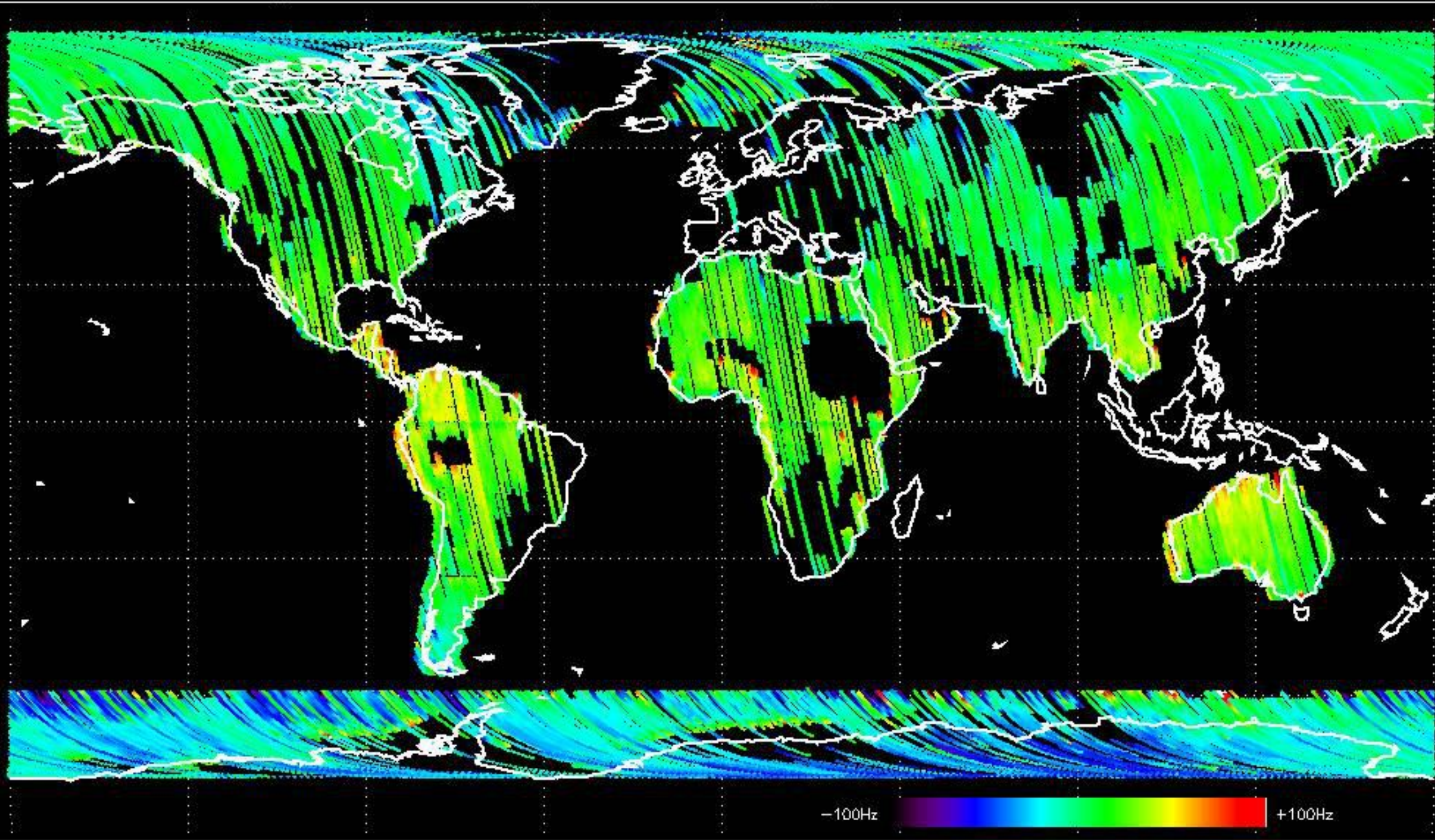
GM1 mode doppler





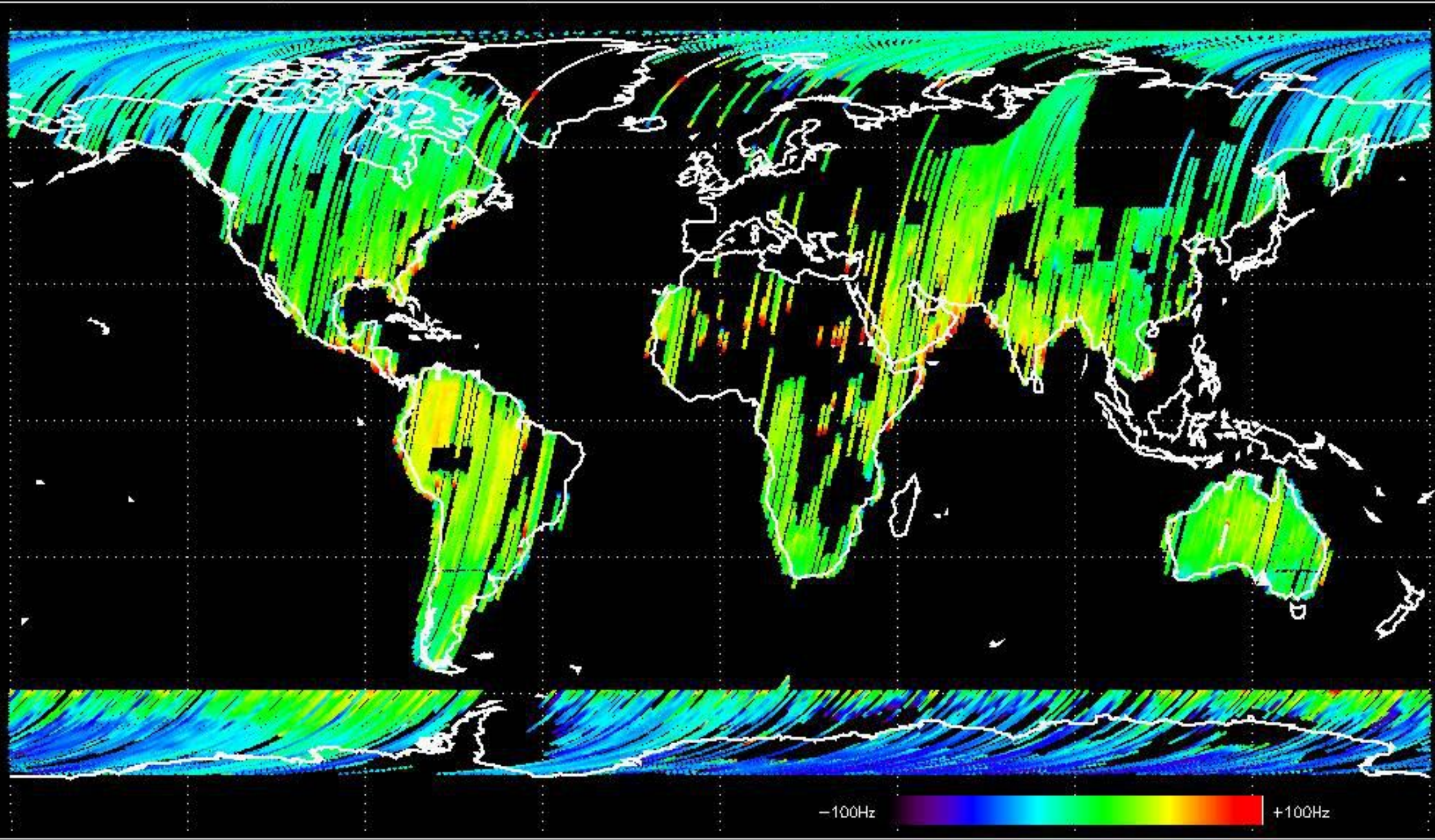


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.856121 Hz



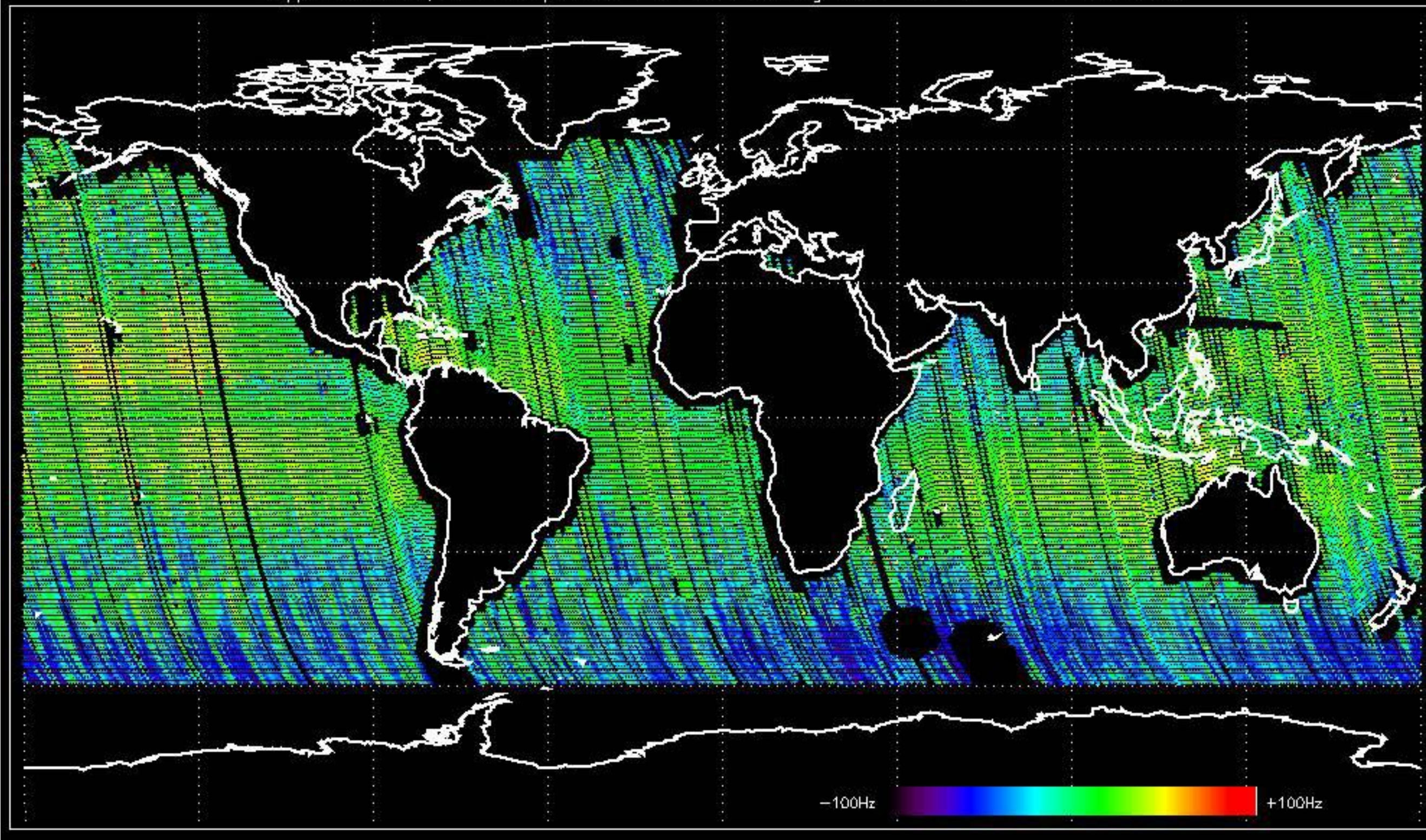


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -5.7013926 Hz



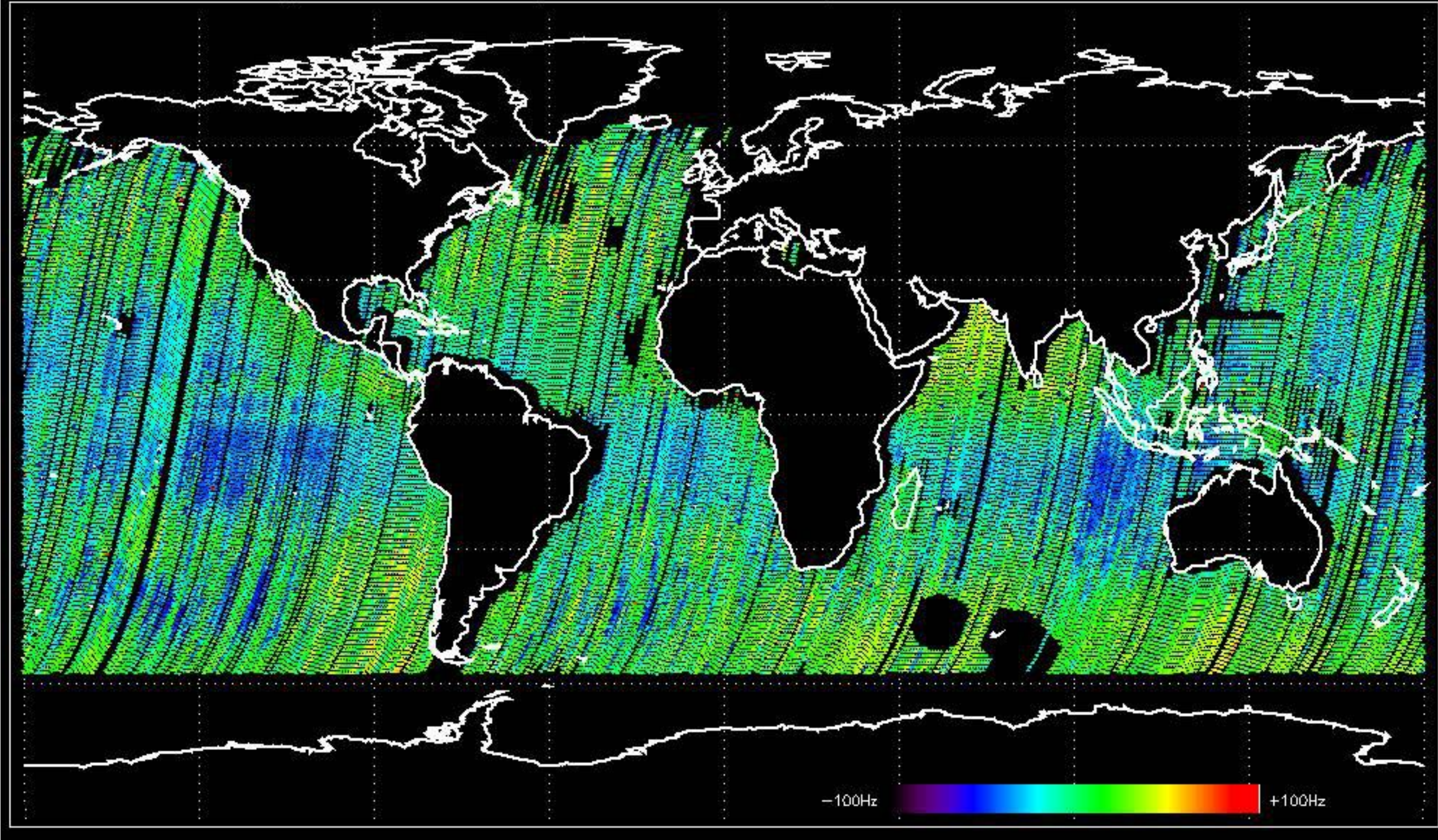


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.4972474 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.924448 Hz





No anomalies observed on available MS products:

No anomalies observed.











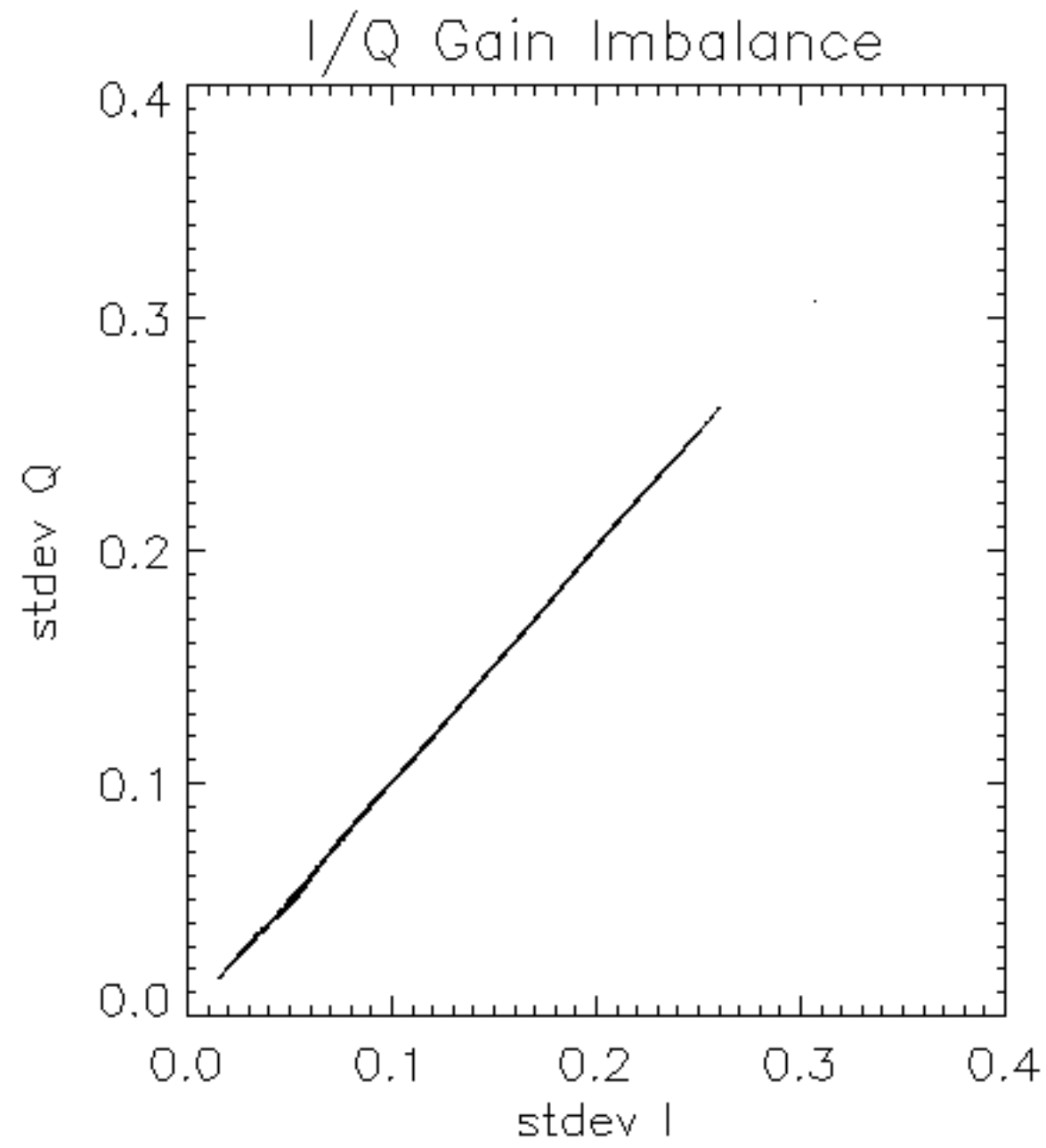


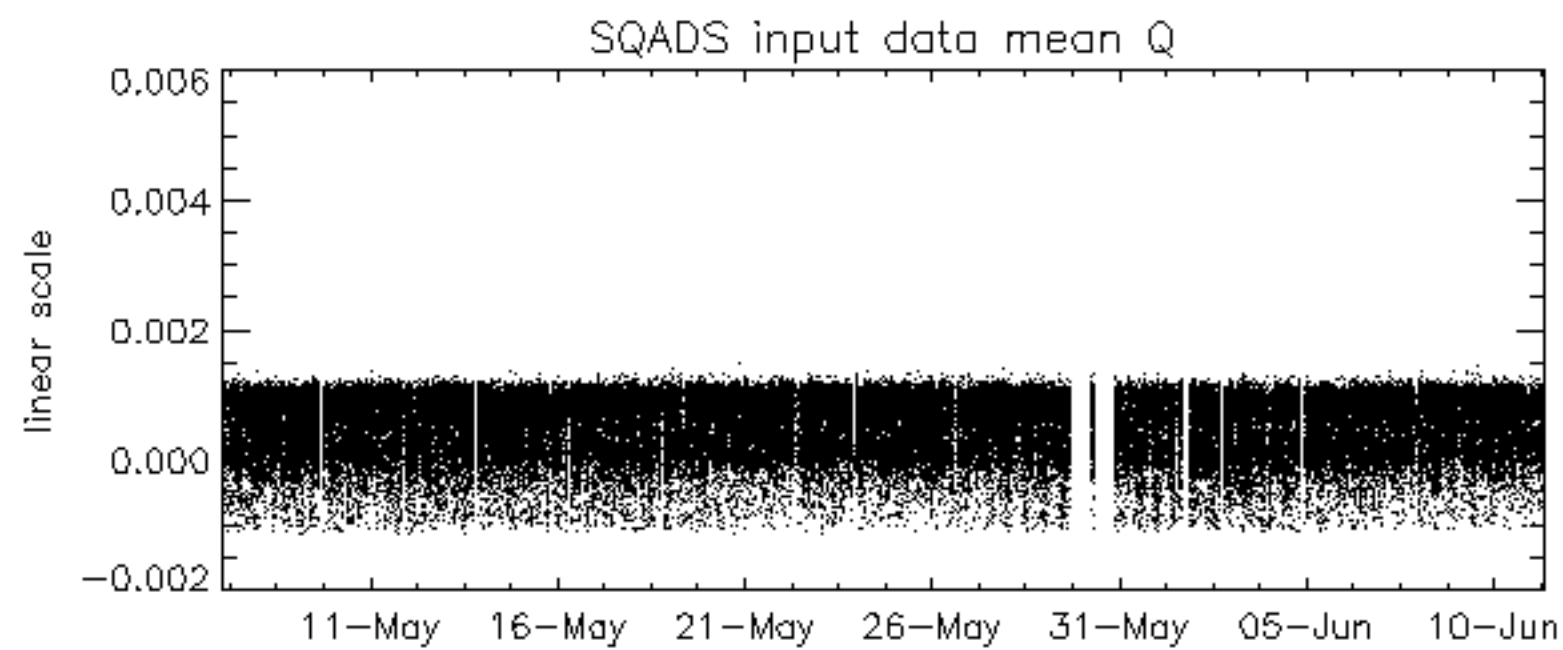
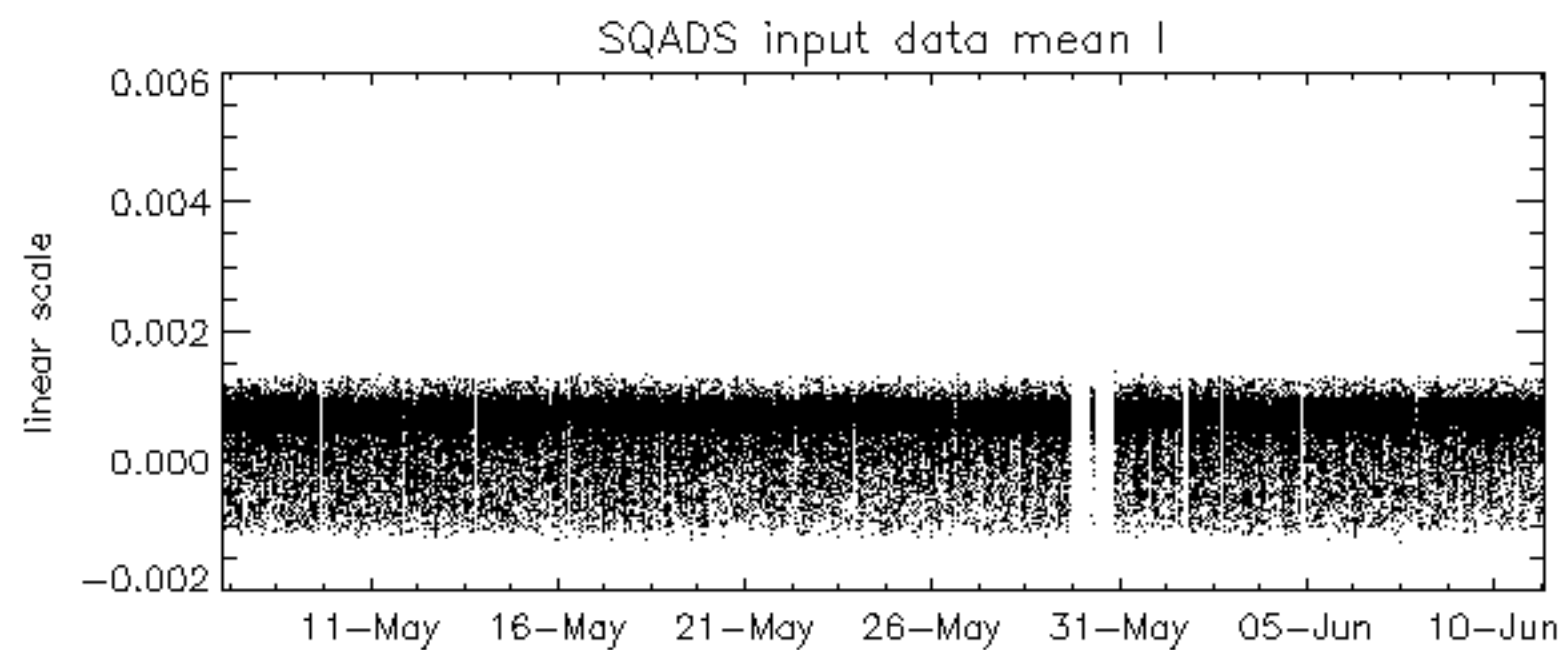
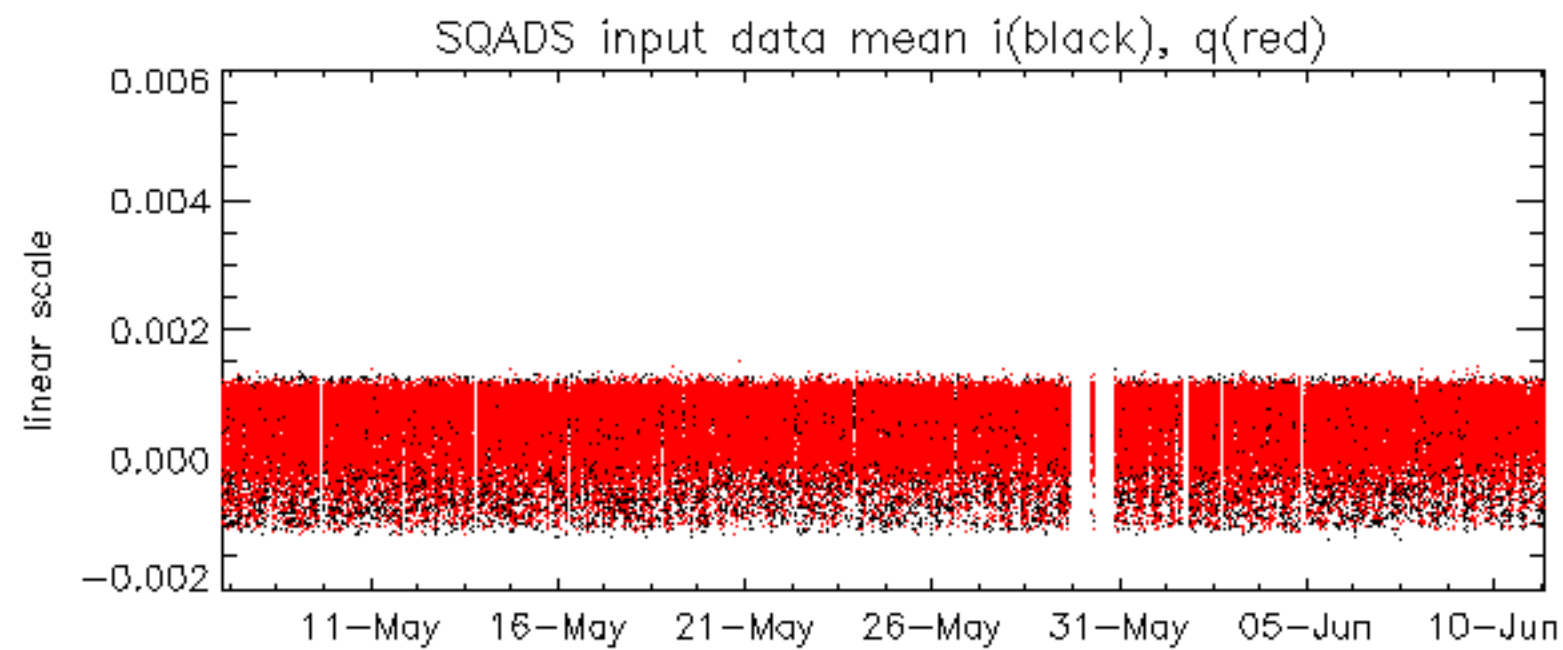


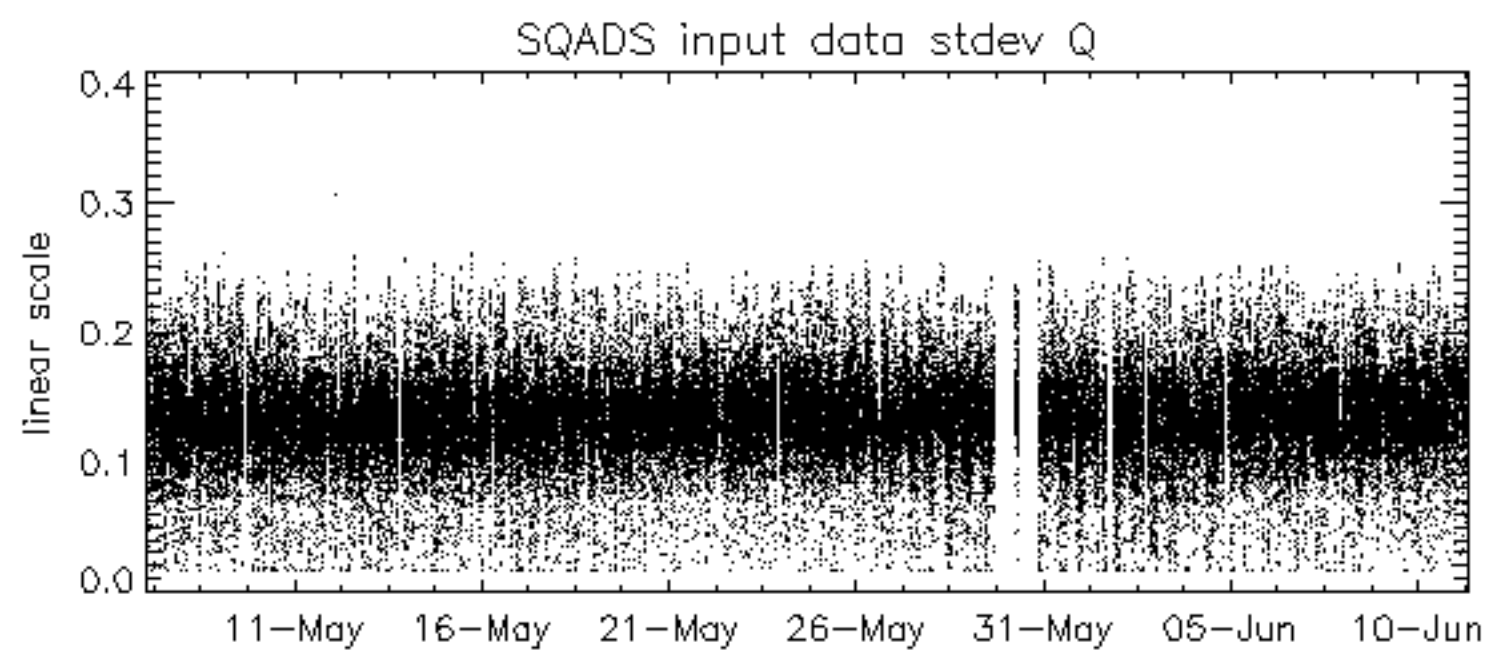
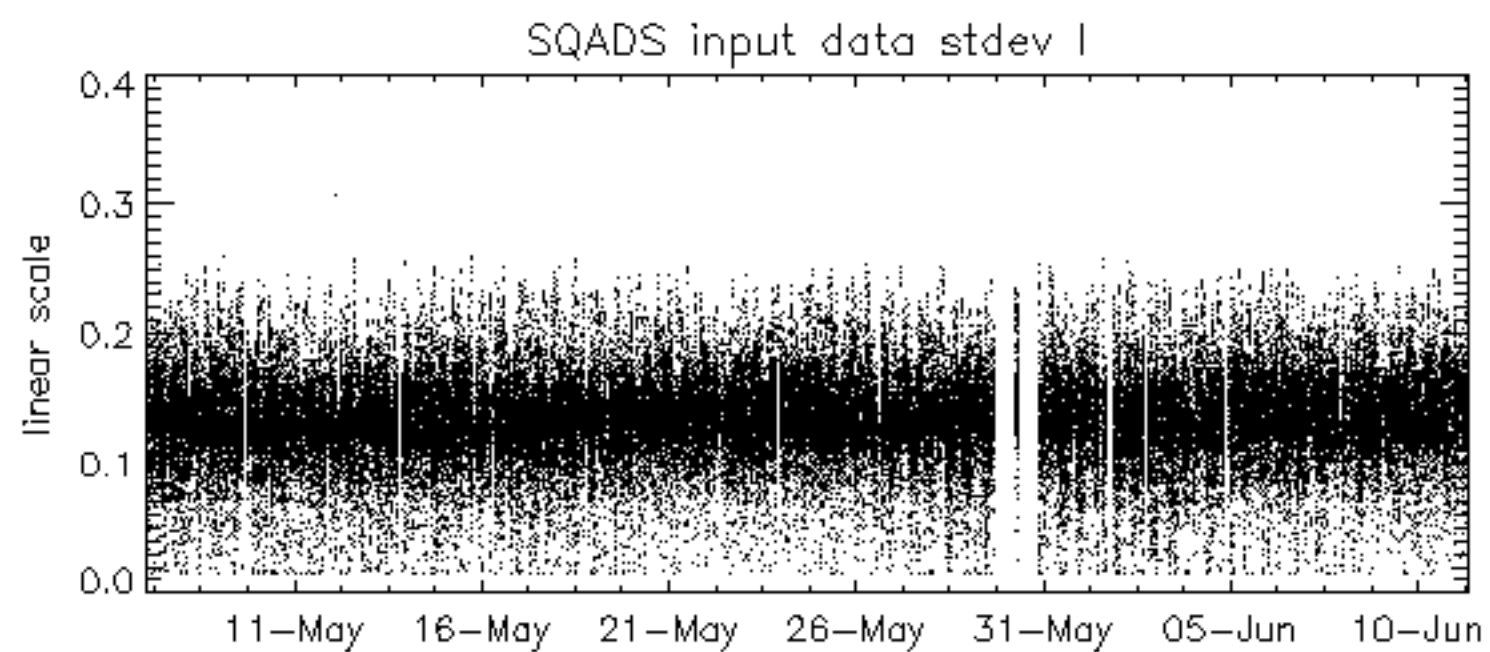
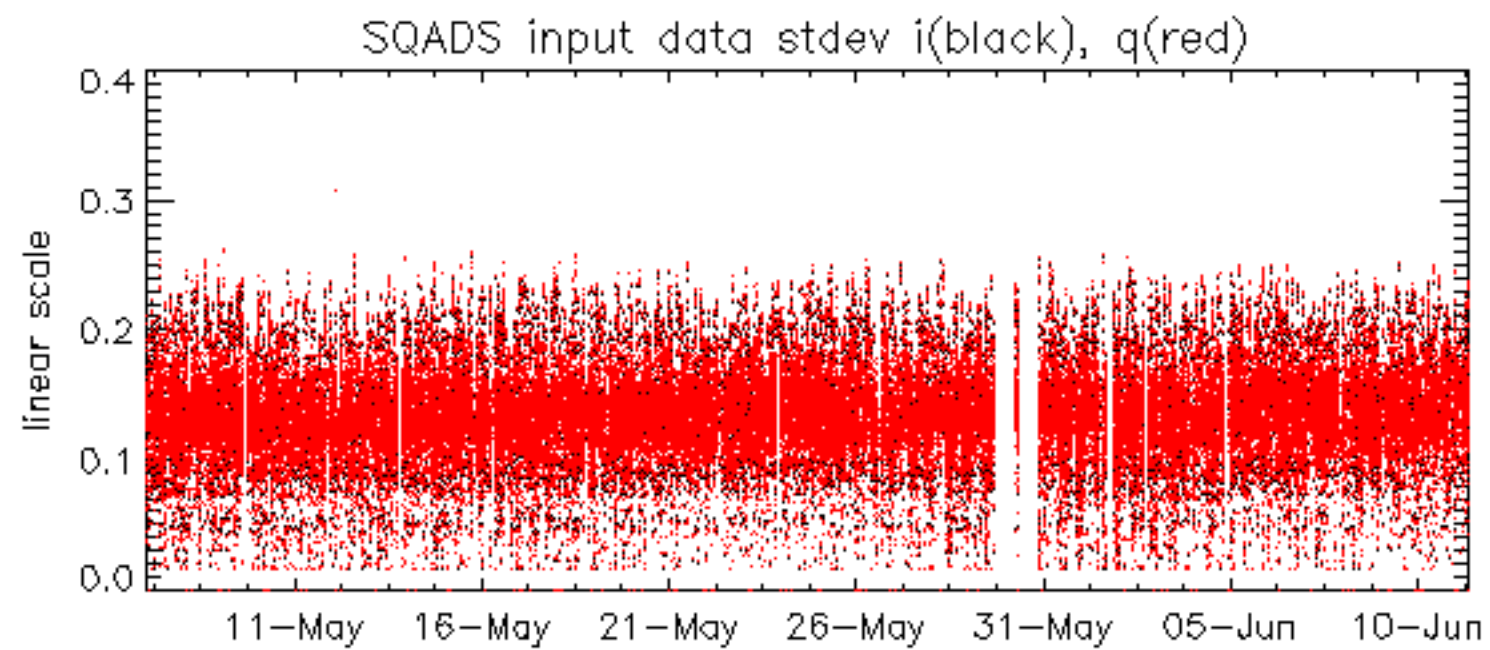




















Summary of analysis for the last 3 days 2006061[901]

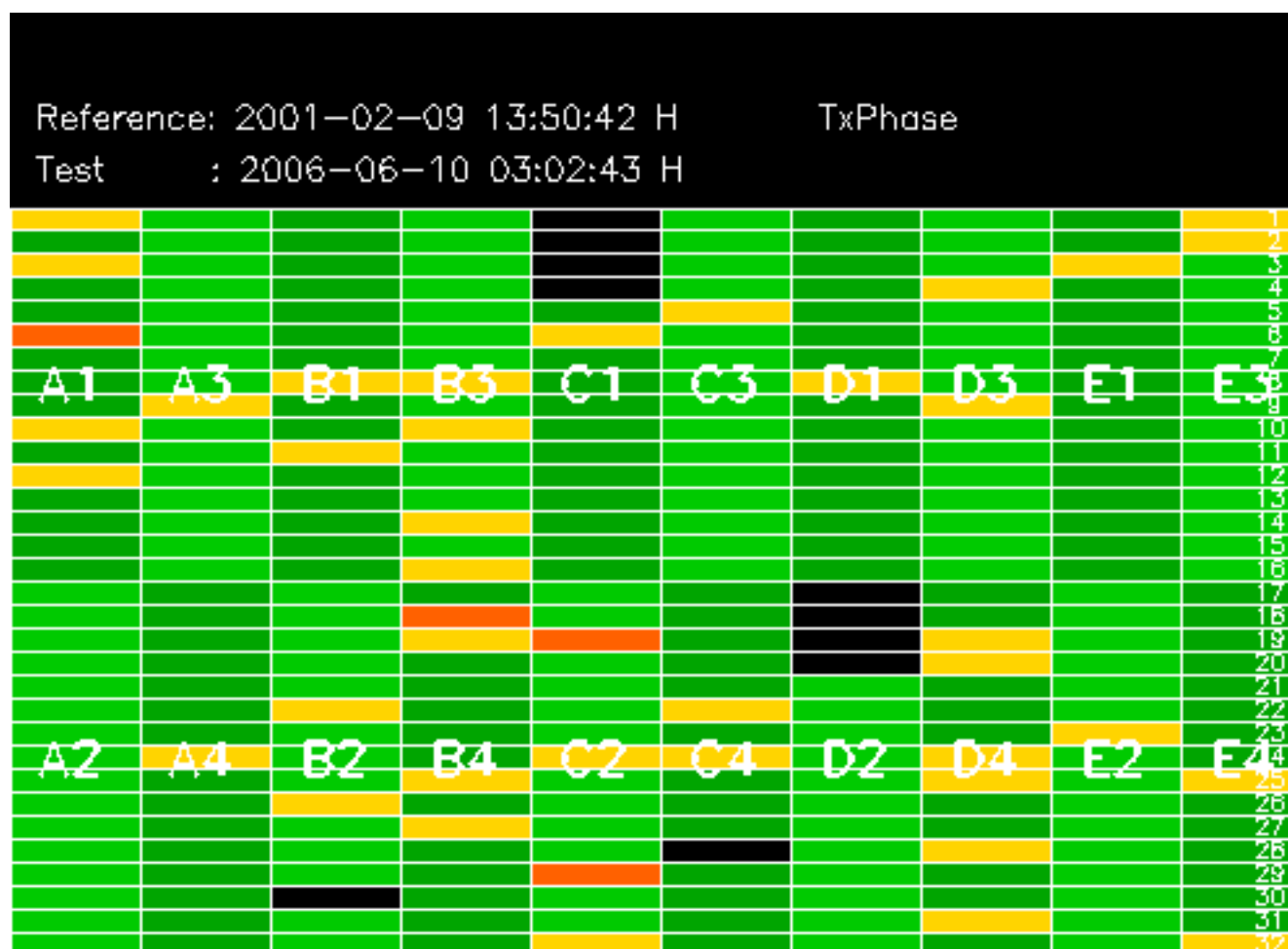
The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060610_110007_000000342048_00266_22364_6947.N1	0	18
ASA_WSM_1PNPDE20060610_015903_000001462048_00261_22359_3573.N1	0	75
ASA_WSM_1PNPDE20060610_033801_000000852048_00262_22360_3591.N1	0	39
ASA_WSM_1PNPDE20060610_184505_000001842048_00271_22369_3667.N1	0	58
ASA_WSM_1PNPDE20060611_021040_000000862048_00275_22373_3687.N1	0	2





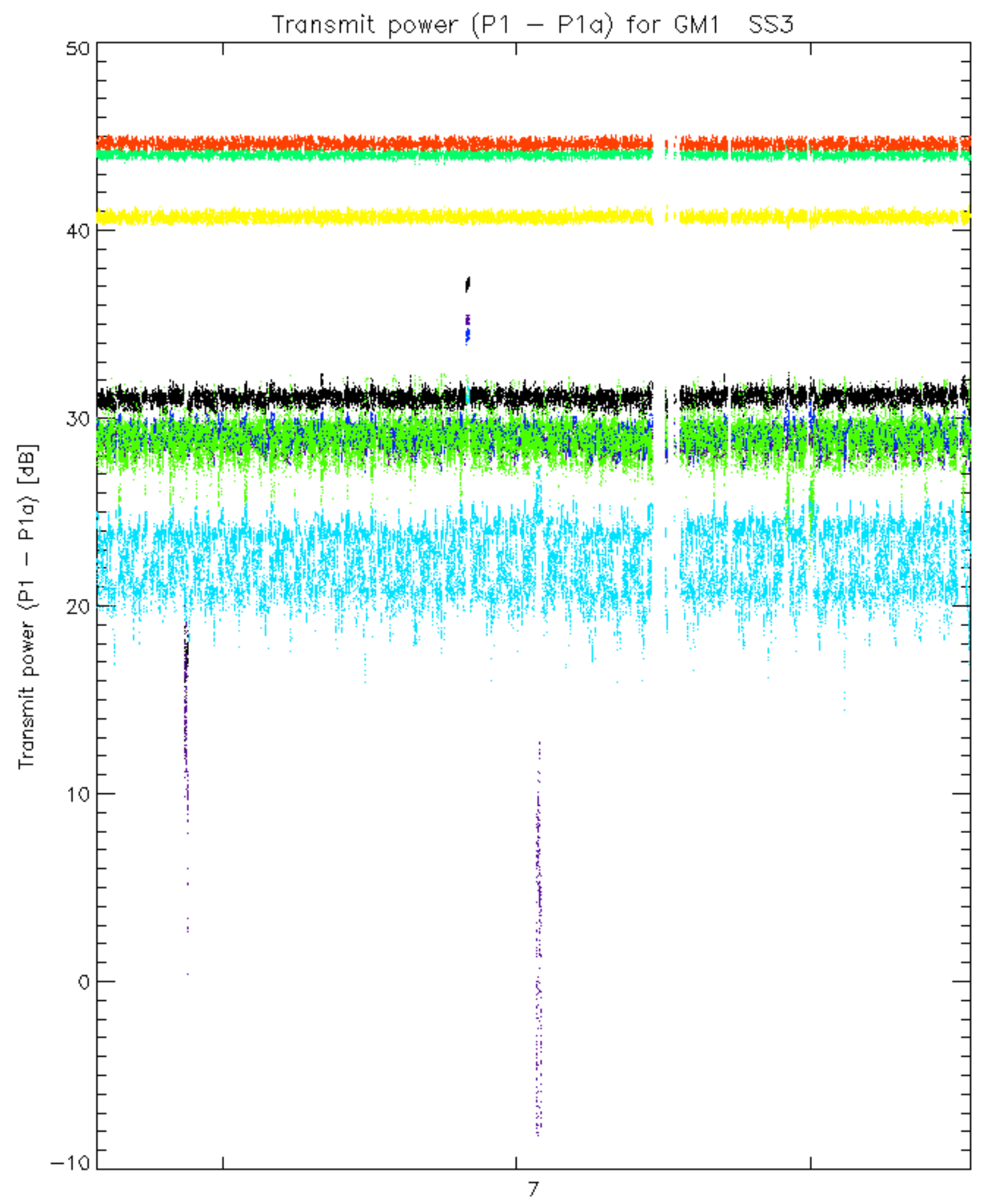




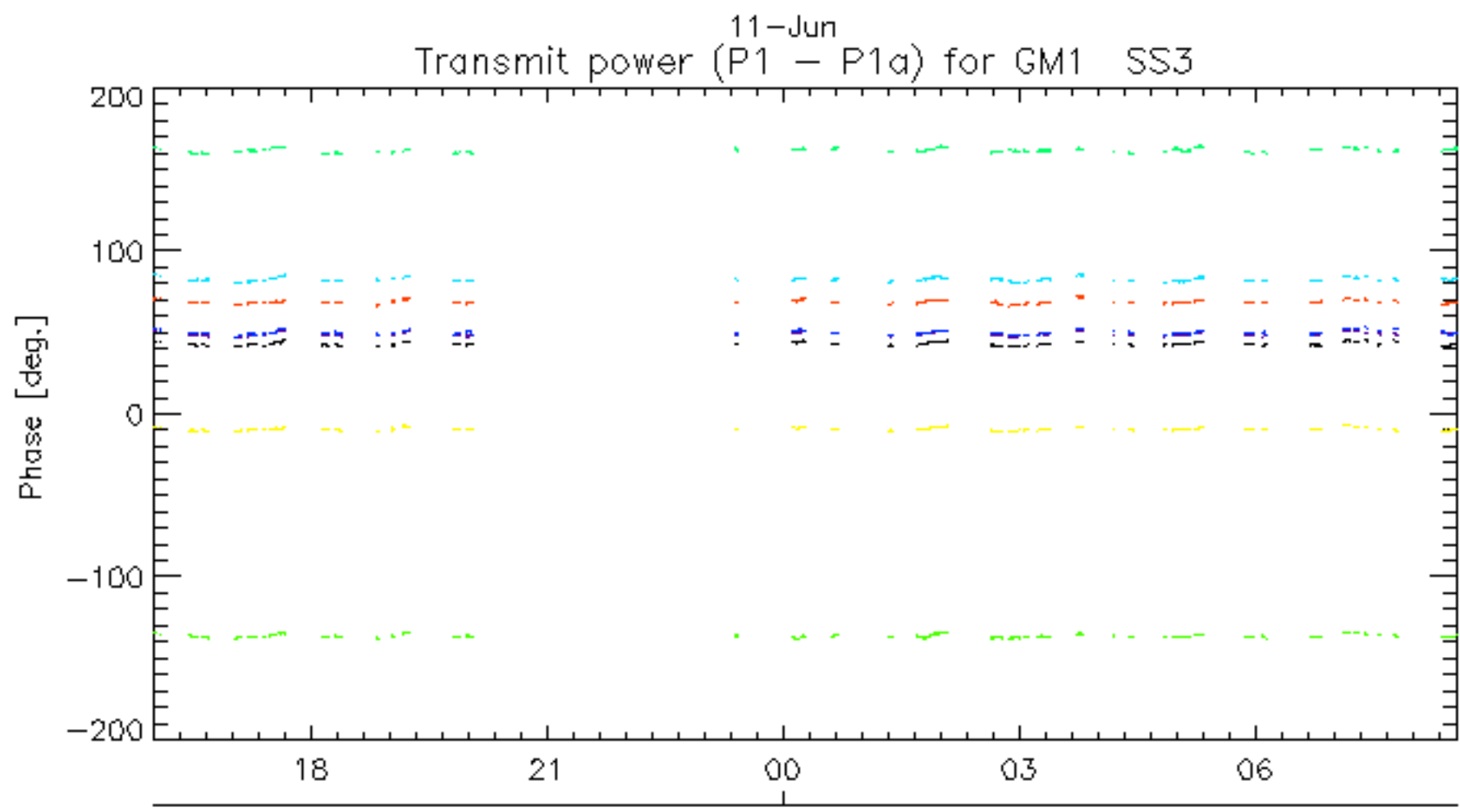
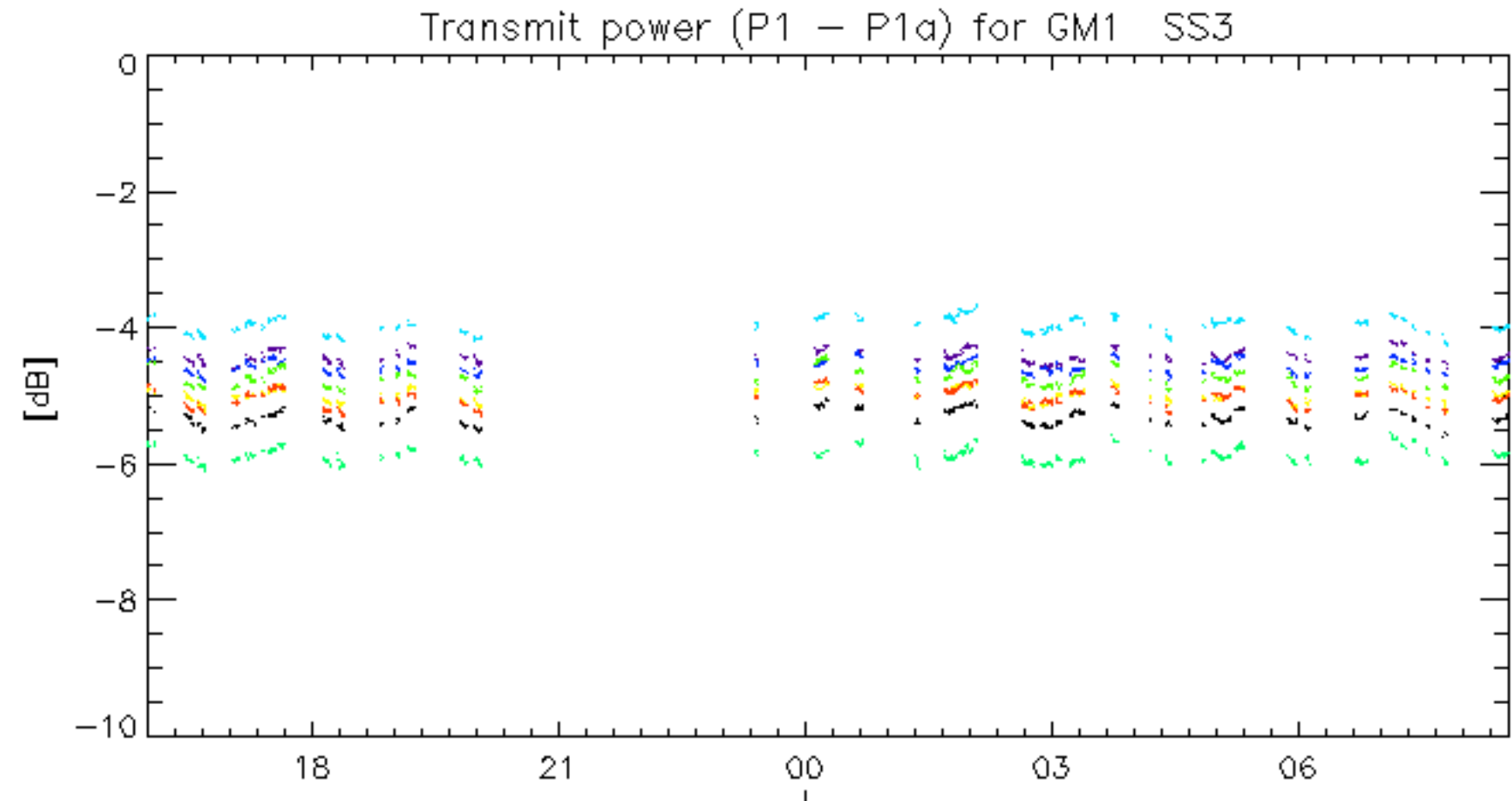






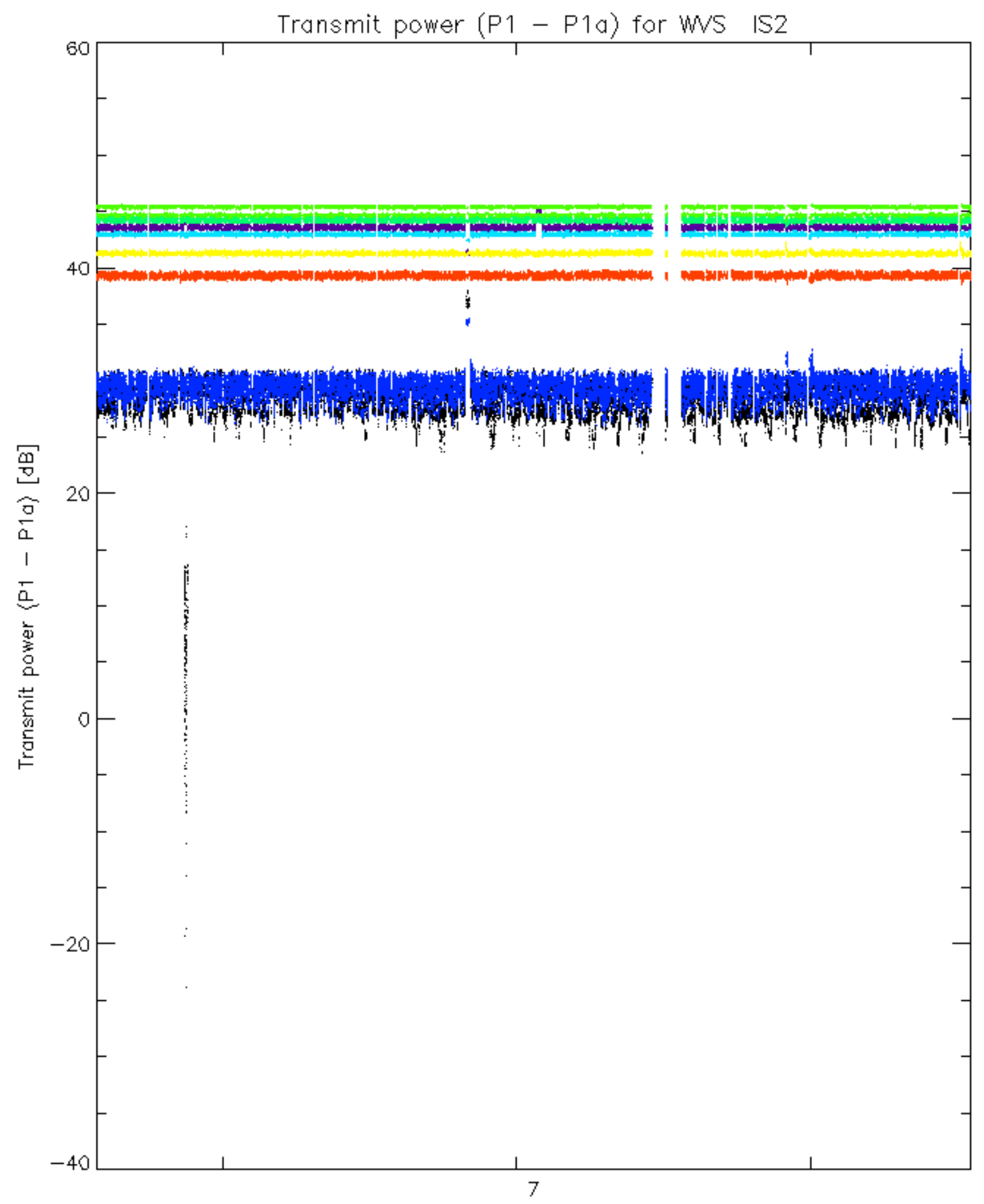


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

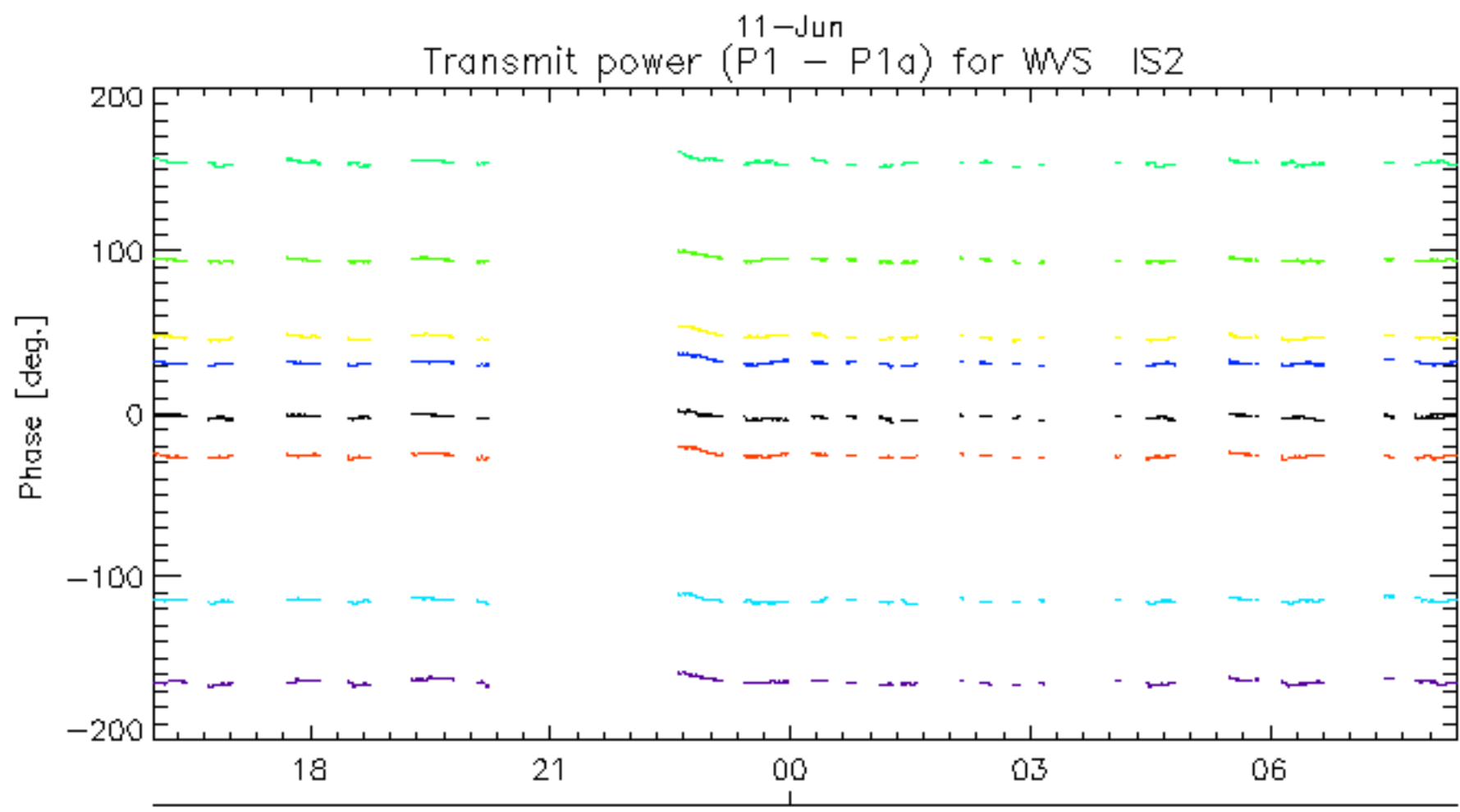
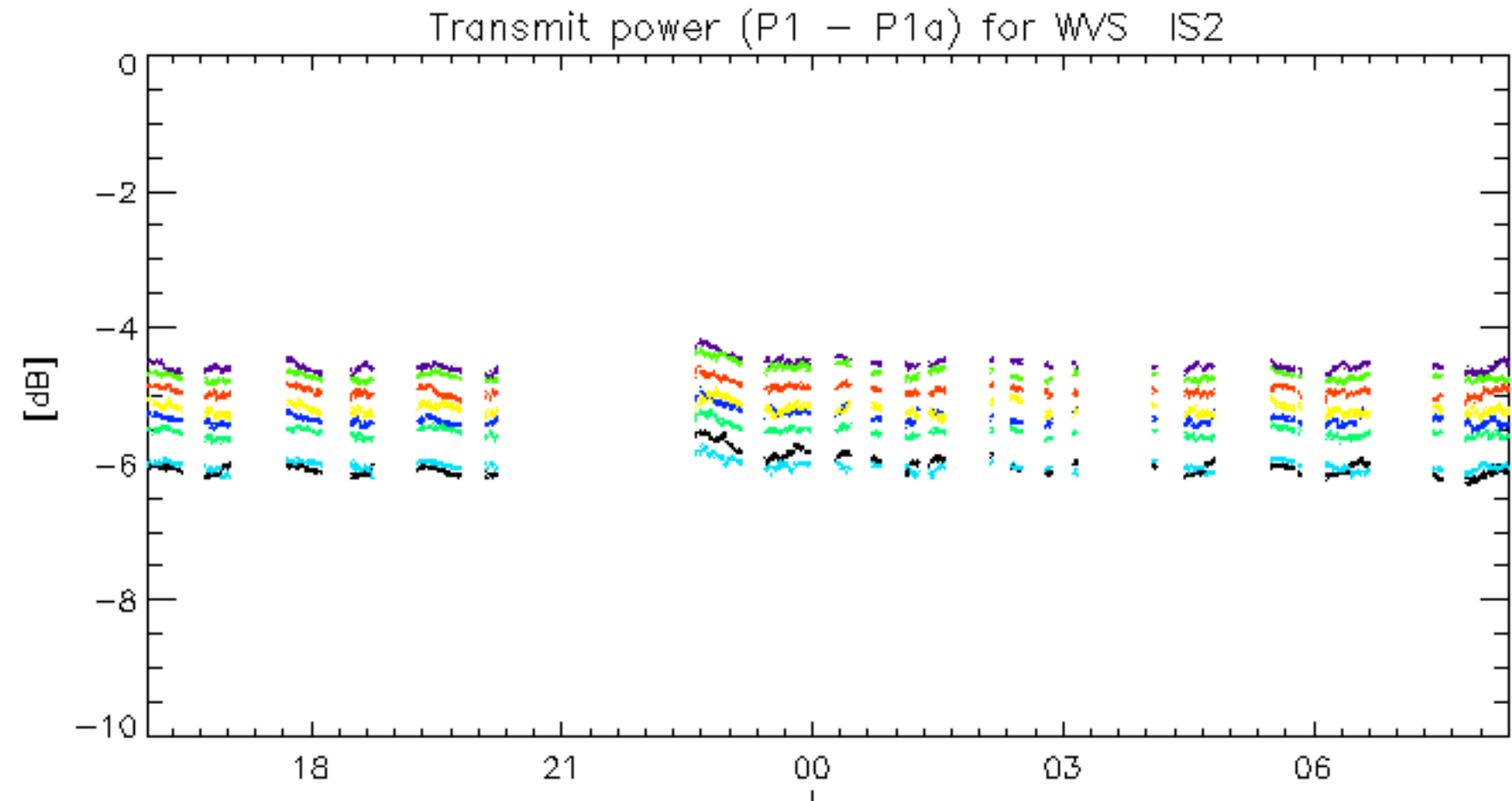


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.