

# PRELIMINARY REPORT OF 060527

last update on Sat May 27 16:46:19 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 2006-05-26 00:00:00 to 2006-05-27 16:46:19

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	69	14	0	26
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	69	14	0	26
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	69	14	0	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	69	14	0	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	57	36	26	73
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	57	36	26	73
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	57	36	26	73
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	57	36	26	73

## 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	20060526 055509
H	20060527 084444

### 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	-3.964548	0.017241	0.021315
7	P1	-3.097744	0.017135	-0.097282
11	P1	-4.108451	0.018331	-0.031568
15	P1	-6.129500	0.020295	-0.023956
19	P1	-3.317338	0.008464	-0.037803
22	P1	-4.523661	0.011028	0.023623
26	P1	-3.996231	0.019434	0.052458
30	P1	-5.743745	0.019331	-0.043179
3	P1	-16.595106	0.292454	0.184472
7	P1	-17.096432	0.187896	-0.277401
11	P1	-16.896280	0.327114	-0.188117
15	P1	-13.209796	0.208803	-0.157354
19	P1	-14.246165	0.047075	-0.138924
22	P1	-16.153906	0.393541	-0.093251
26	P1	-15.292676	0.254886	0.114782
30	P1	-16.985291	0.353358	-0.294384

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.232321	0.082716	0.128958
7	P2	-22.119797	0.099920	0.159625
11	P2	-15.960807	0.111688	0.131123
15	P2	-7.169204	0.093349	-0.001159
19	P2	-9.165840	0.086010	-0.030203
22	P2	-18.112103	0.083714	-0.097893
26	P2	-16.359657	0.088857	-0.093021
30	P2	-19.592590	0.085553	0.055532

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.191862	0.003743	0.004308
7	P3	-8.191862	0.003743	0.004308
11	P3	-8.191862	0.003743	0.004308
15	P3	-8.191862	0.003743	0.004308
19	P3	-8.191862	0.003743	0.004308
22	P3	-8.191862	0.003743	0.004308
26	P3	-8.191878	0.003744	0.004431
30	P3	-8.191878	0.003744	0.004431

#### 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	-3.770278	0.085475	-0.116640
7	P1	-2.620488	0.123067	0.079501
11	P1	-2.866598	0.039420	-0.021401
15	P1	-3.499364	0.056533	0.010348
19	P1	-3.396084	0.014744	-0.030375
22	P1	-5.091697	0.021401	0.027647
26	P1	-5.840163	0.020478	-0.023980
30	P1	-5.184721	0.043226	-0.049126
3	P1	-11.606660	0.138229	-0.077164
7	P1	-9.962683	0.168352	0.044701
11	P1	-10.193806	0.111178	0.016655
15	P1	-10.626729	0.162223	0.061623
19	P1	-15.503407	0.086099	-0.097693
22	P1	-20.865648	1.237931	-0.224309
26	P1	-16.481697	0.359053	-0.114171
30	P1	-18.046328	0.471617	0.232255

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.914120	0.072067	0.068501
7	P2	-22.524885	0.176108	-0.011858
11	P2	-11.191977	0.049600	0.010462
15	P2	-4.904146	0.042286	-0.052565
19	P2	-6.880168	0.041151	-0.023421
22	P2	-8.194347	0.052464	-0.044928
26	P2	-24.092522	0.125883	-0.110338
30	P2	-22.061932	0.088322	-0.058930

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024664	0.003937	0.003588
7	P3	-8.024733	0.003943	0.003670
11	P3	-8.024711	0.003922	0.003362
15	P3	-8.024555	0.003937	0.003660
19	P3	-8.024727	0.003941	0.003803
22	P3	-8.024763	0.003923	0.003580
26	P3	-8.024617	0.003925	0.003006
30	P3	-8.024698	0.003938	0.003342

## 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	0.000533359
	stdev	1.88355e-07
MEAN Q	mean	0.000515432
	stdev	2.26457e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134838
	stdev	0.00116222
STDEV Q	mean	0.135181
	stdev	0.00117931



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006052[567]

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_1PNPDE20060526_054354_00000352048_00048_22146_6225.N1	1	0
ASA_IMM_1PNPDE20060527_005025_00001722048_00059_22157_6265.N1	1	0
ASA_WSM_1PNPDE20060526_021326_00000852048_00046_22144_0919.N1	0	28
ASA_WSM_1PNPDE20060526_203642_00000922048_00057_22155_1065.N1	0	47
ASA_WSM_1PNPDE20060527_000327_000003292048_00059_22157_1091.N1	0	34
ASA_WSM_1PNPDK20060526_151921_000000552048_00054_22152_6150.N1	0	42





## 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

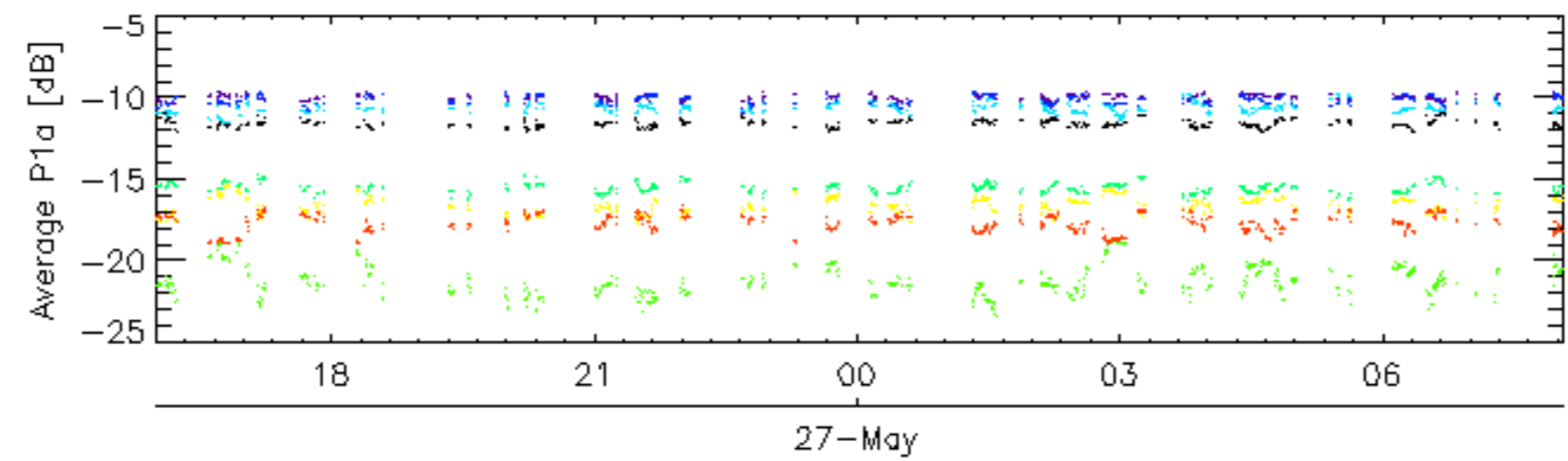
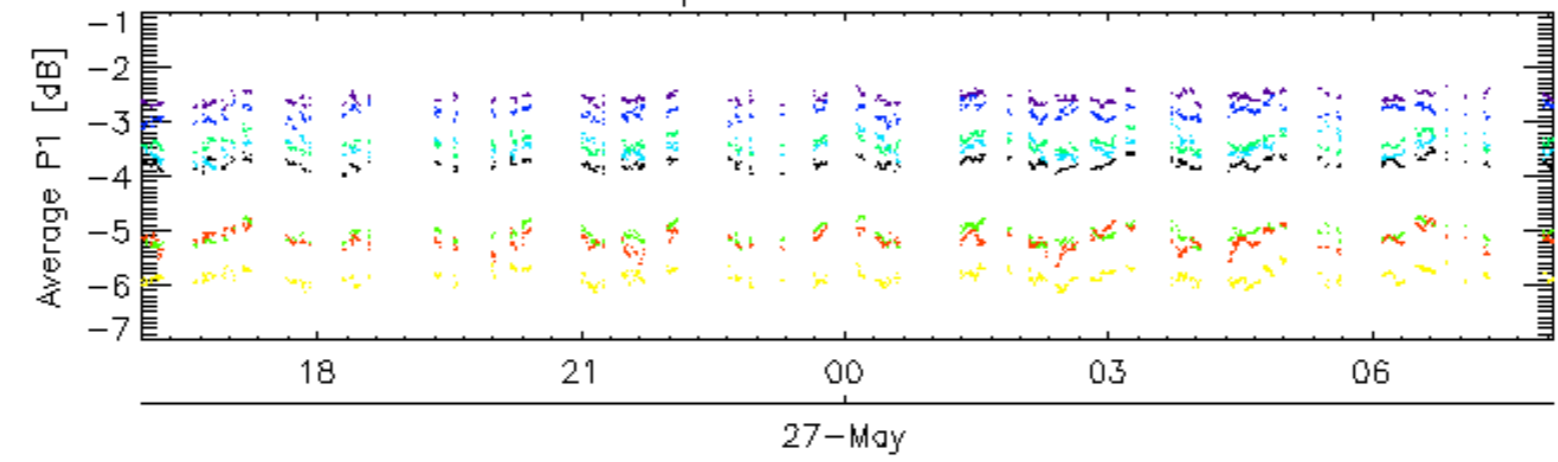
### 7.5 - Absolute Doppler for GM1

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

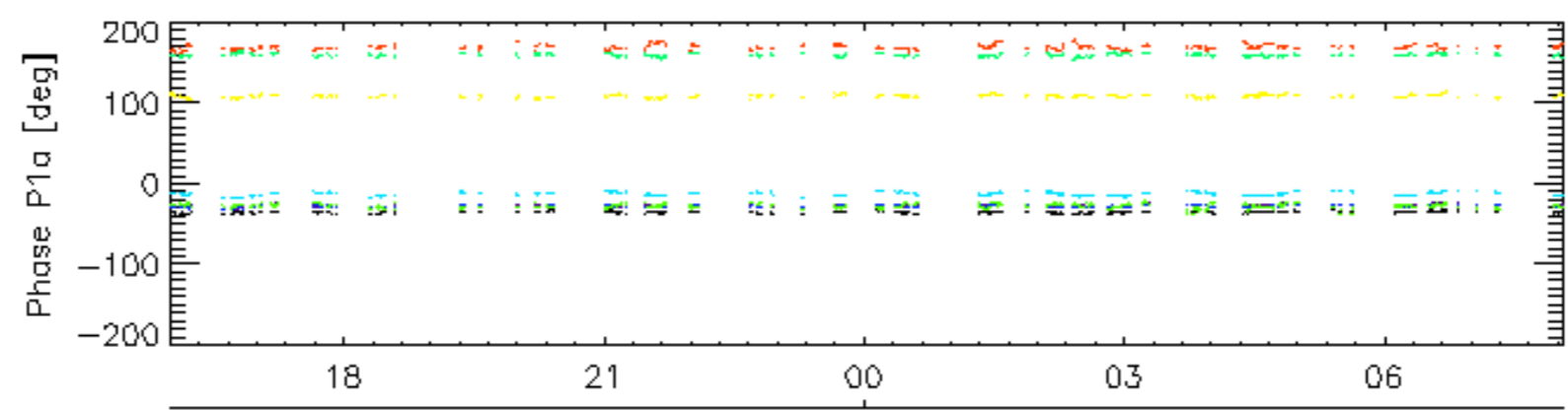
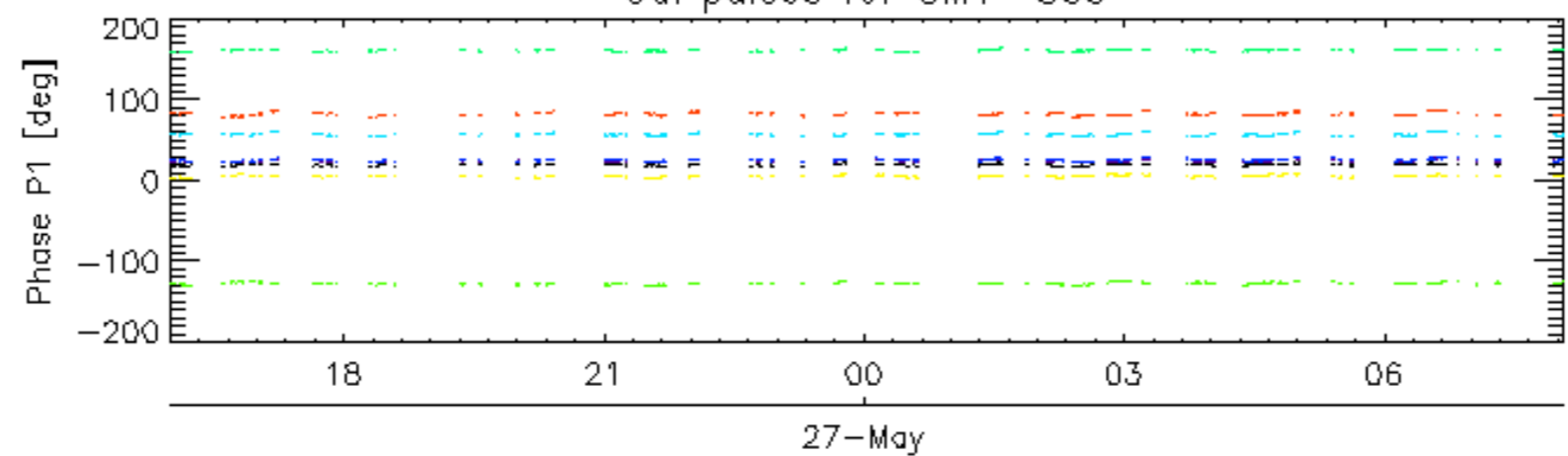
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

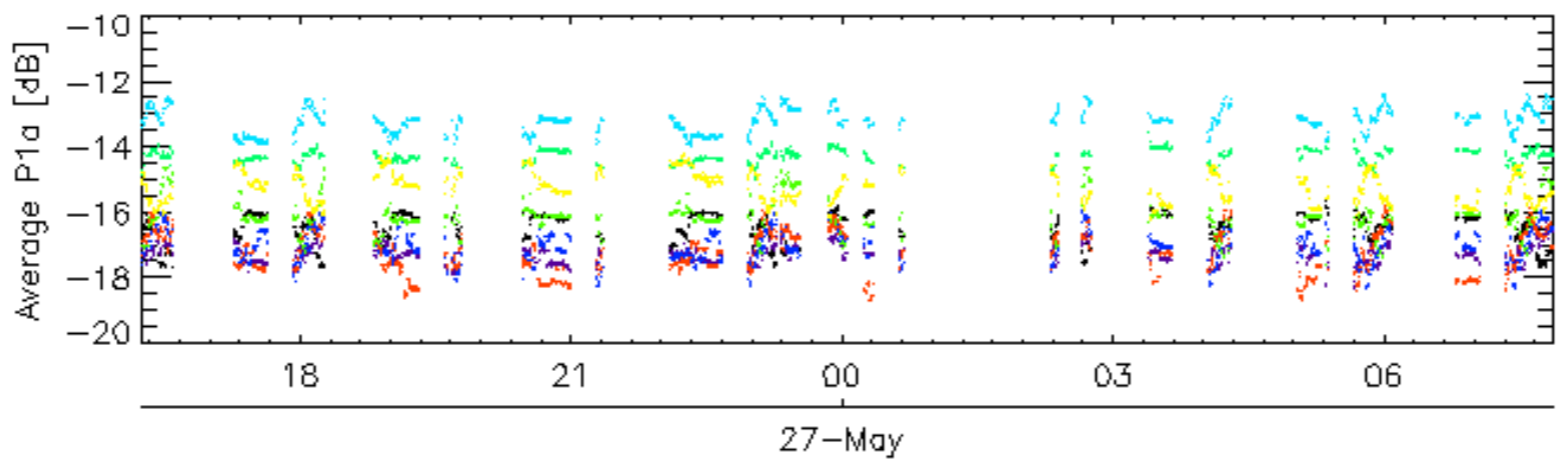
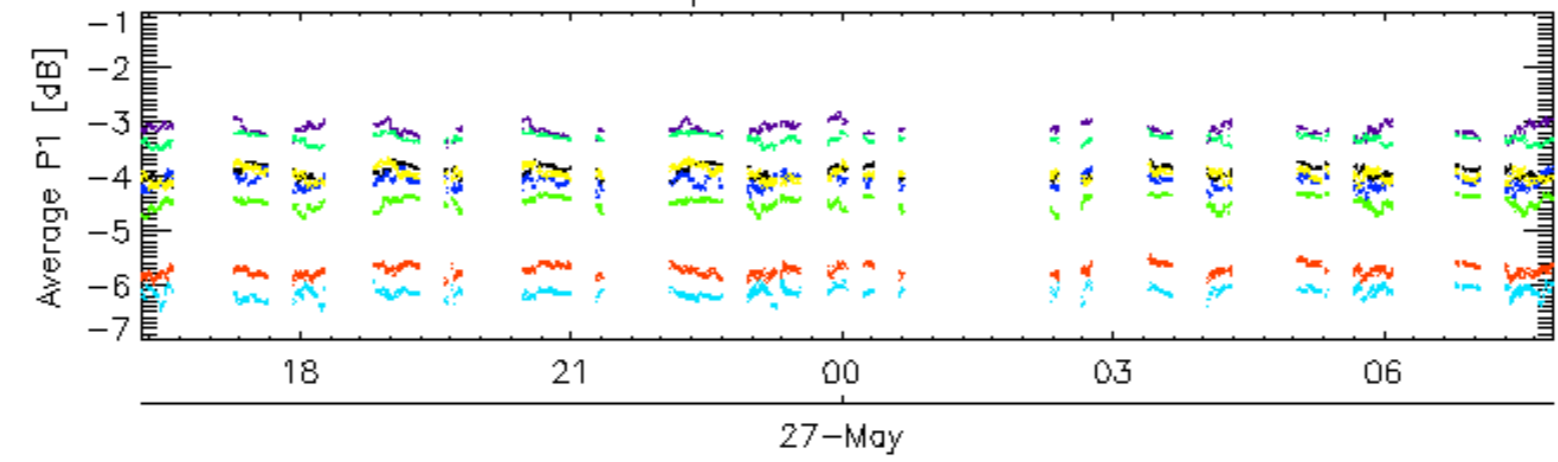


Cal pulses for GM1 SS3

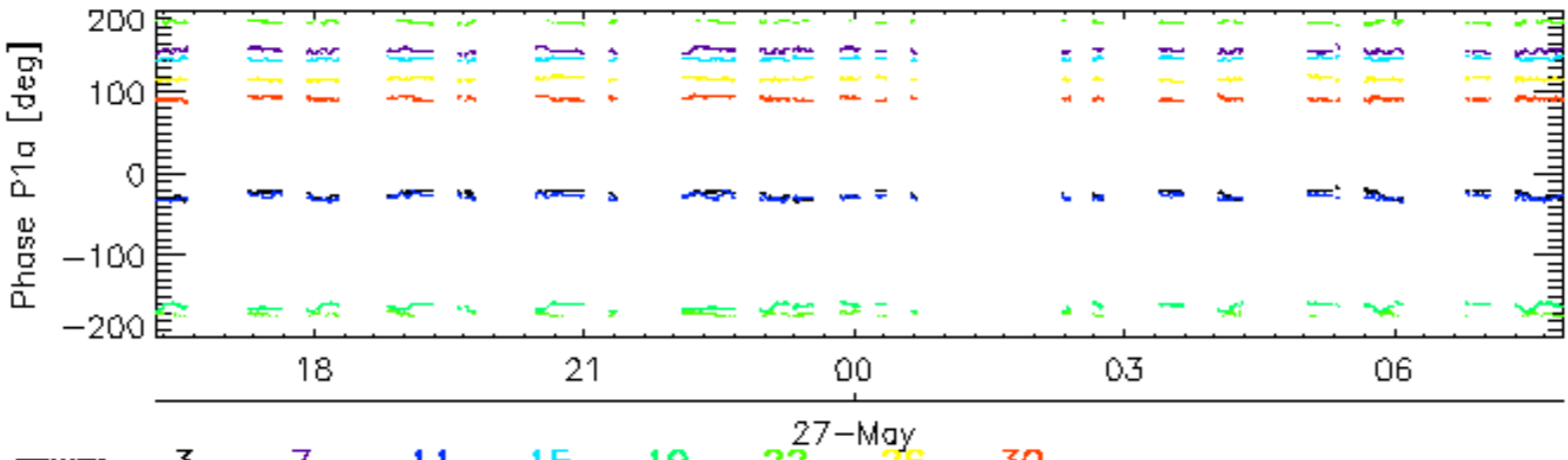
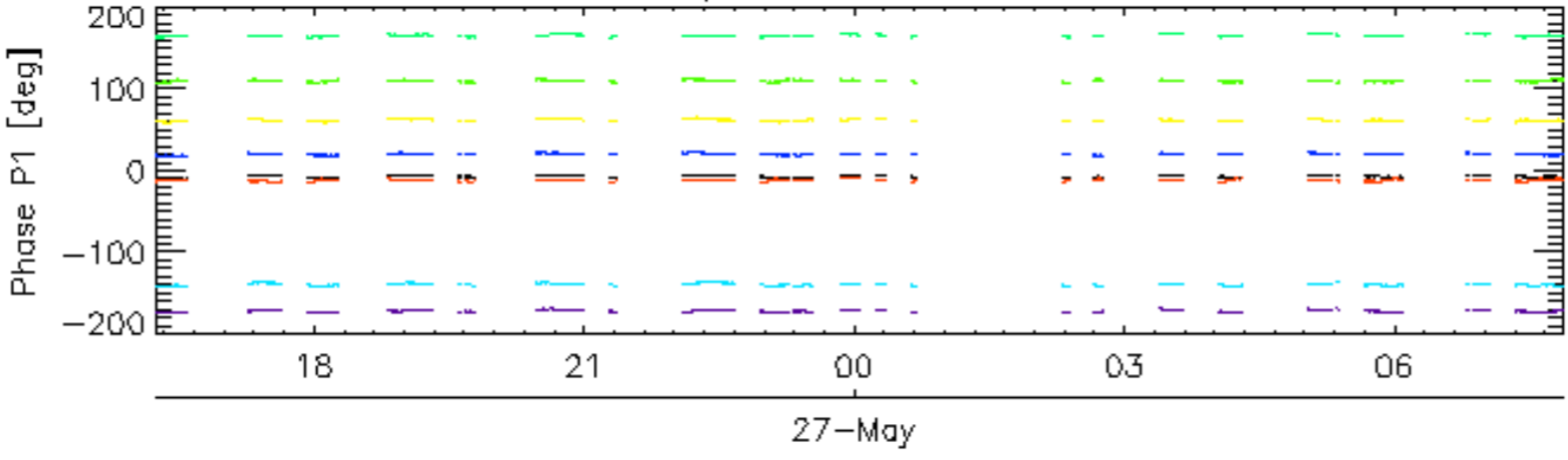


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

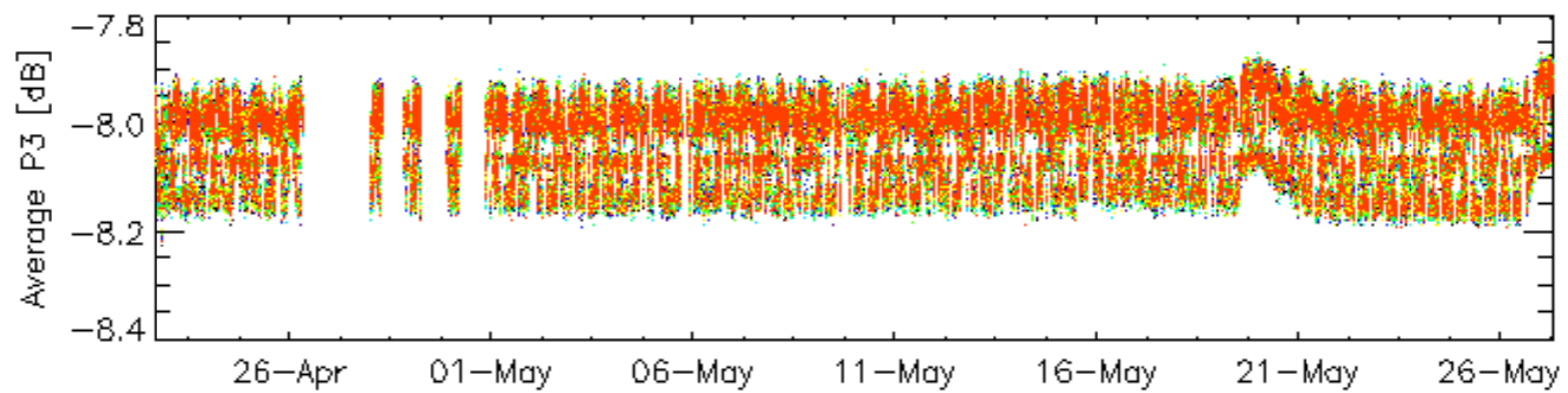
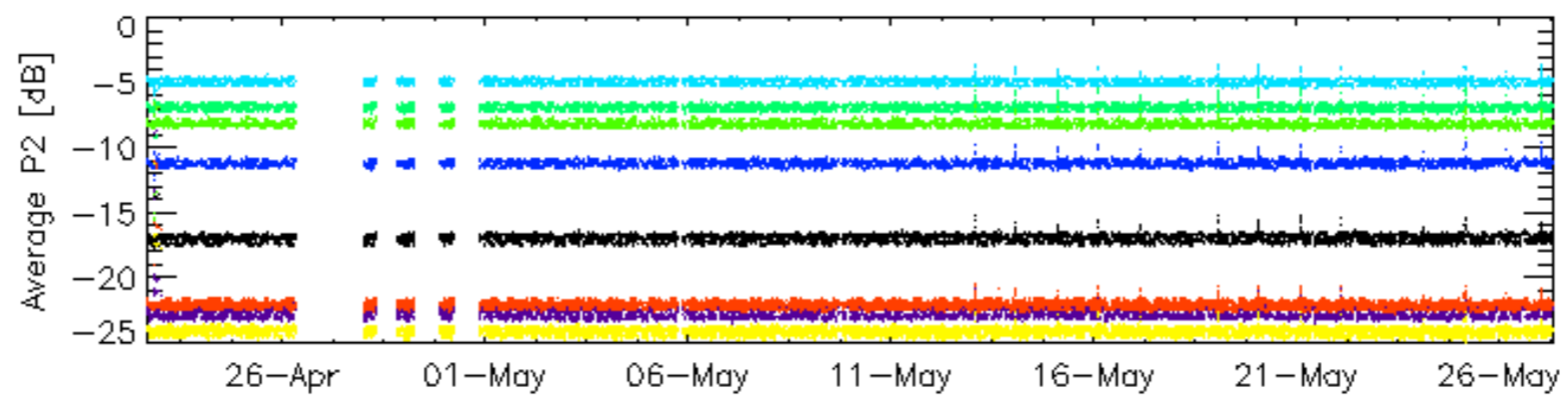
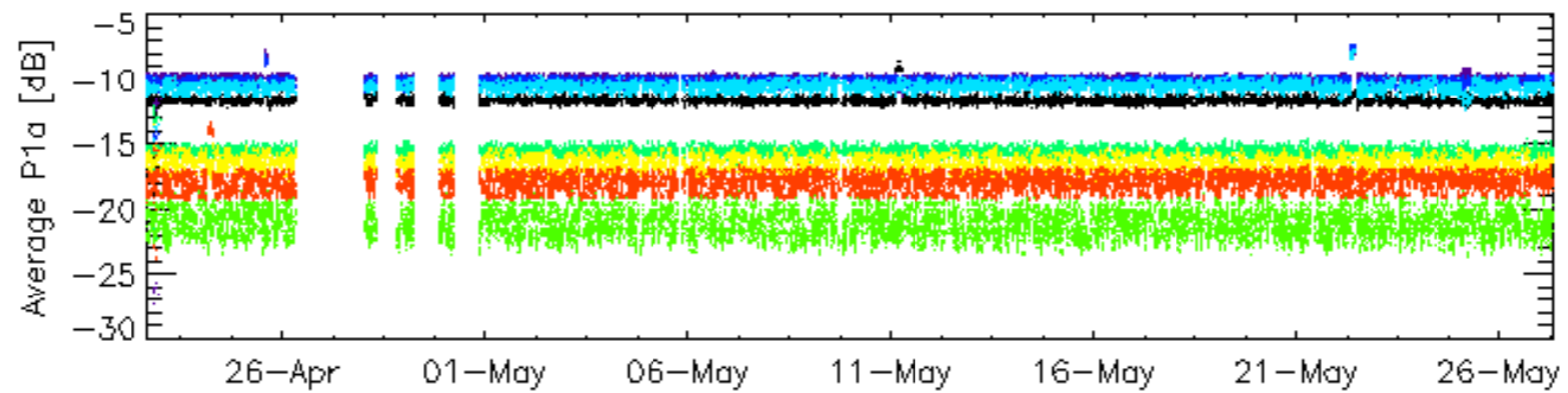
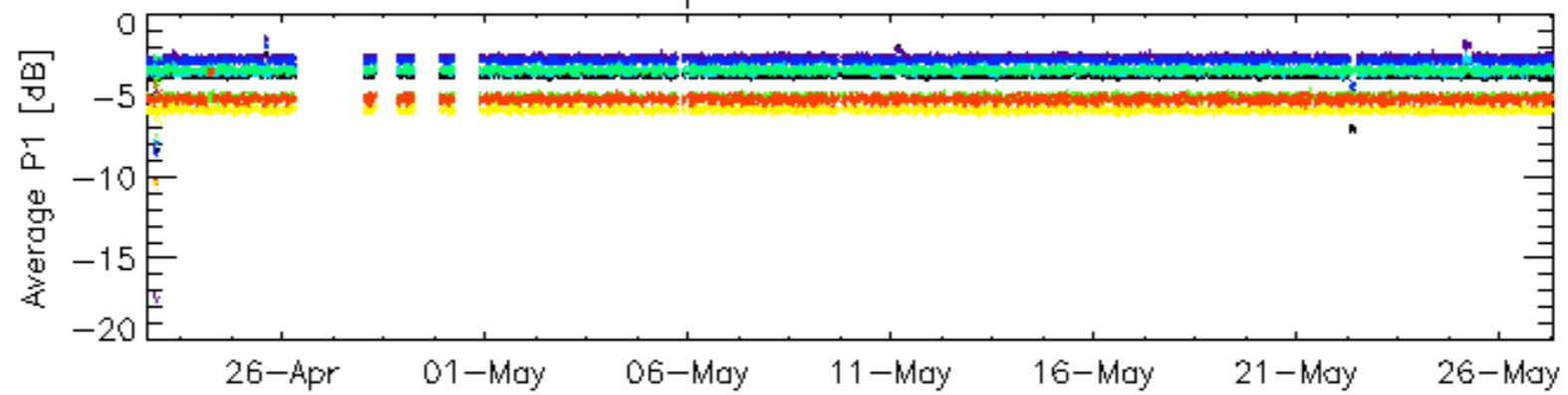


Cal pulses for WVS IS2



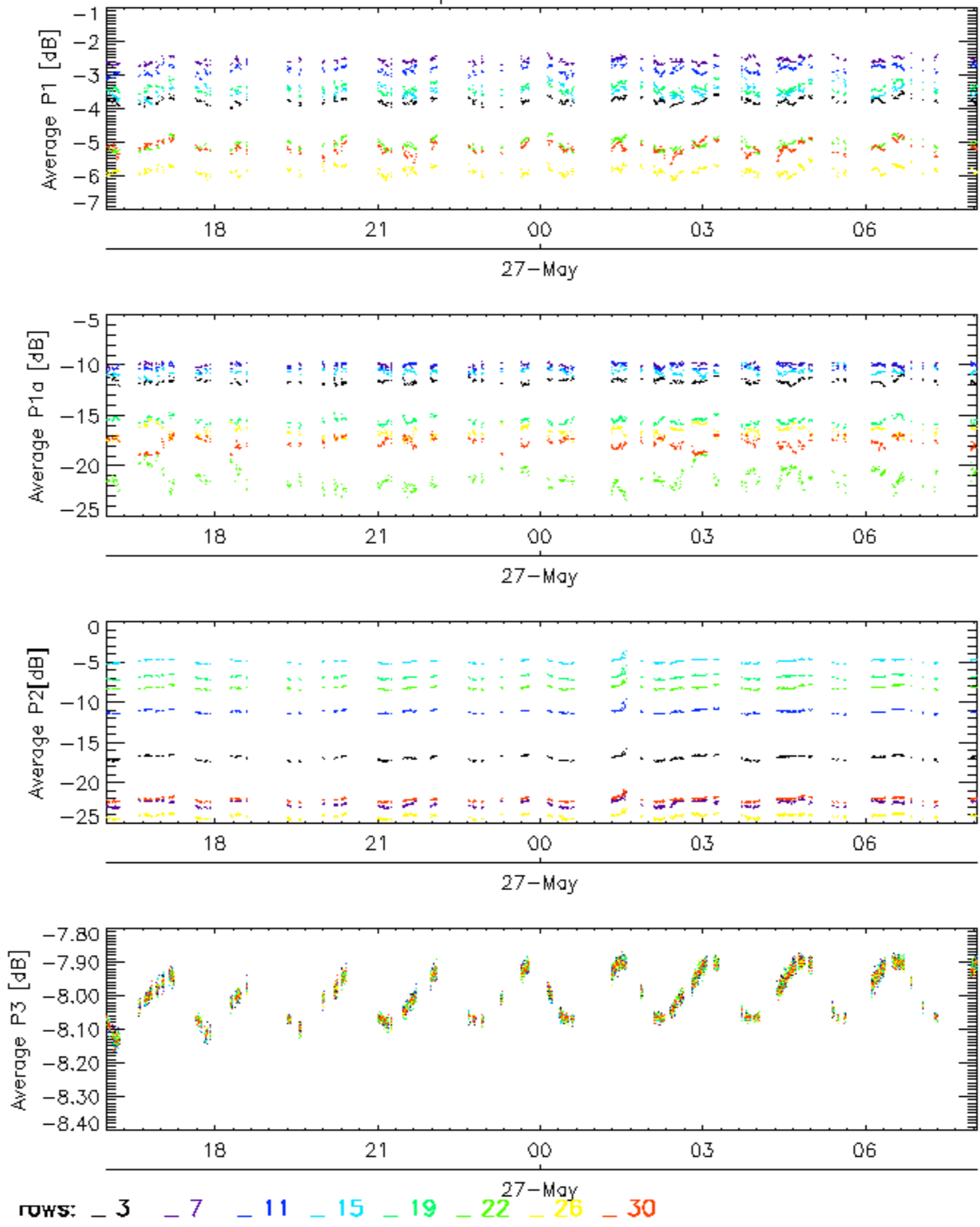
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Cal pulses for GM1 SS3

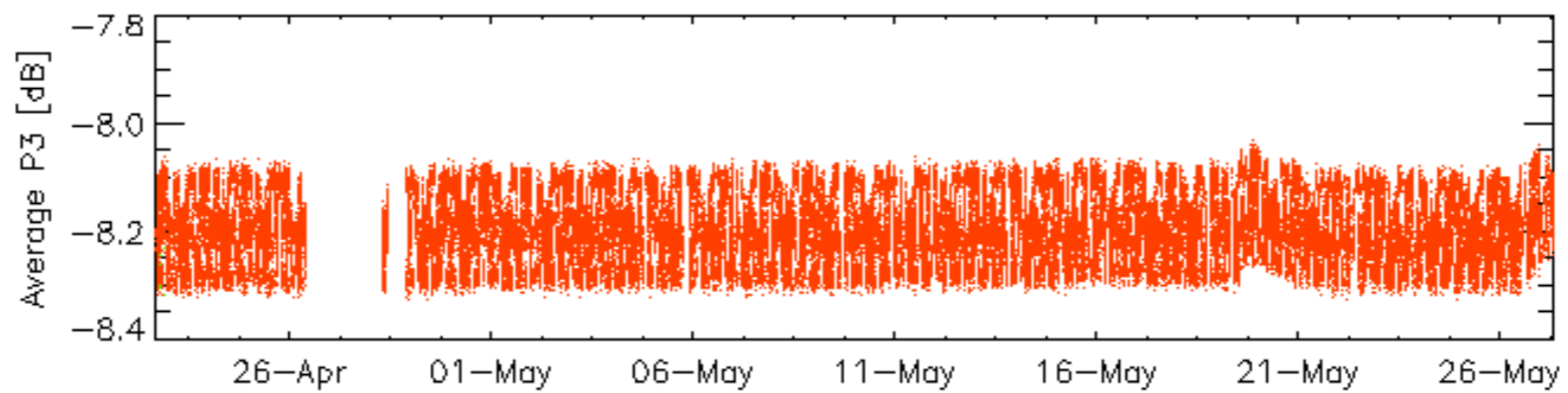
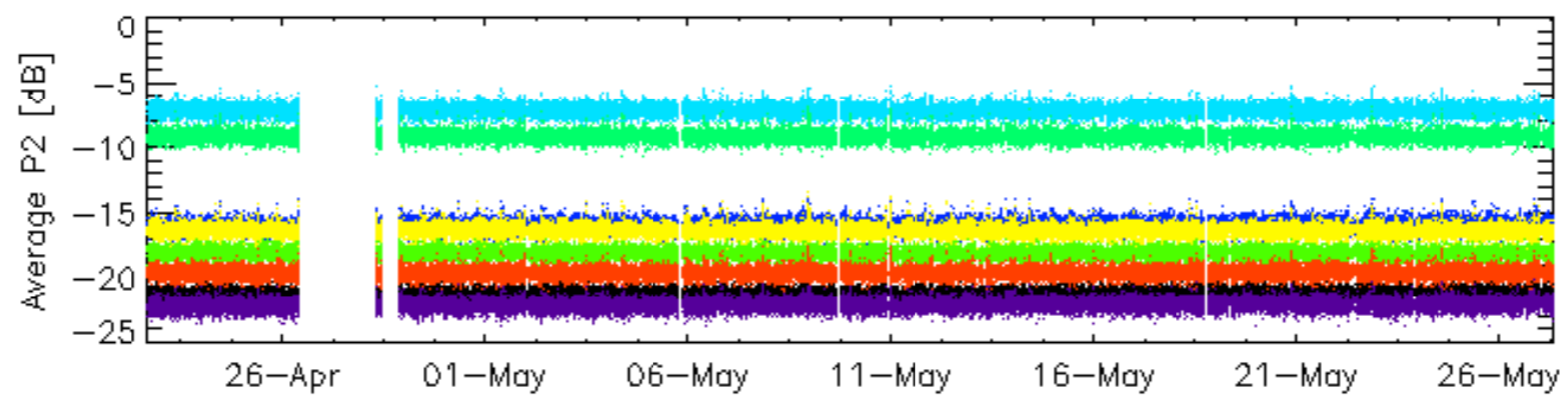
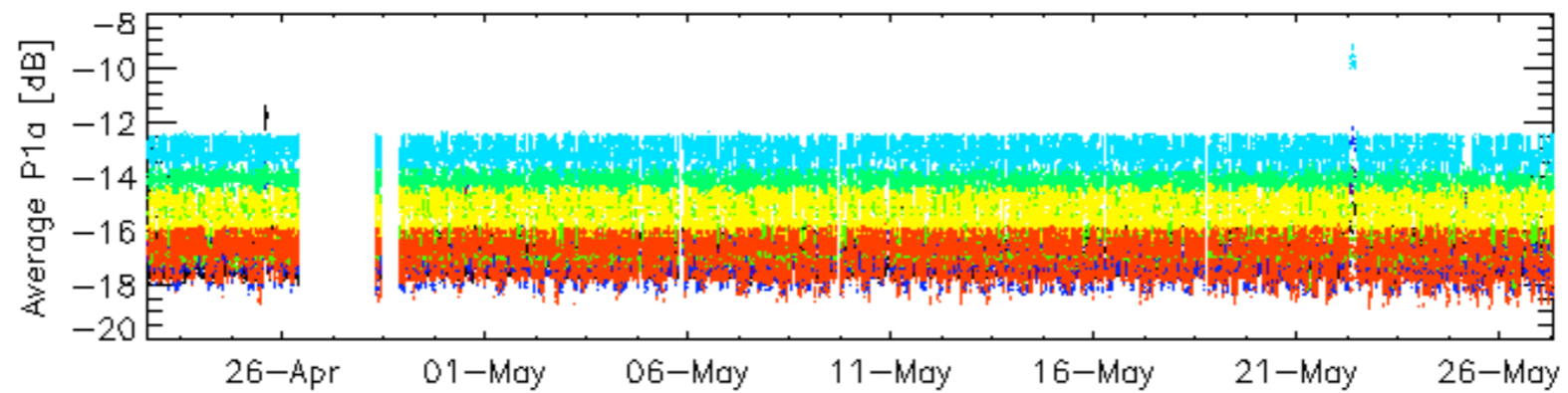
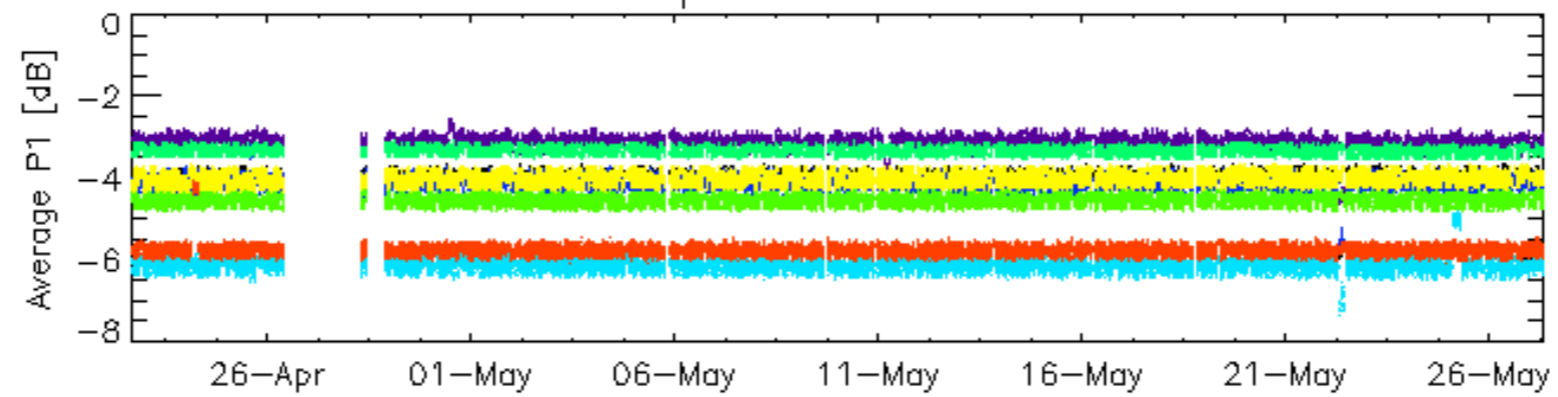


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

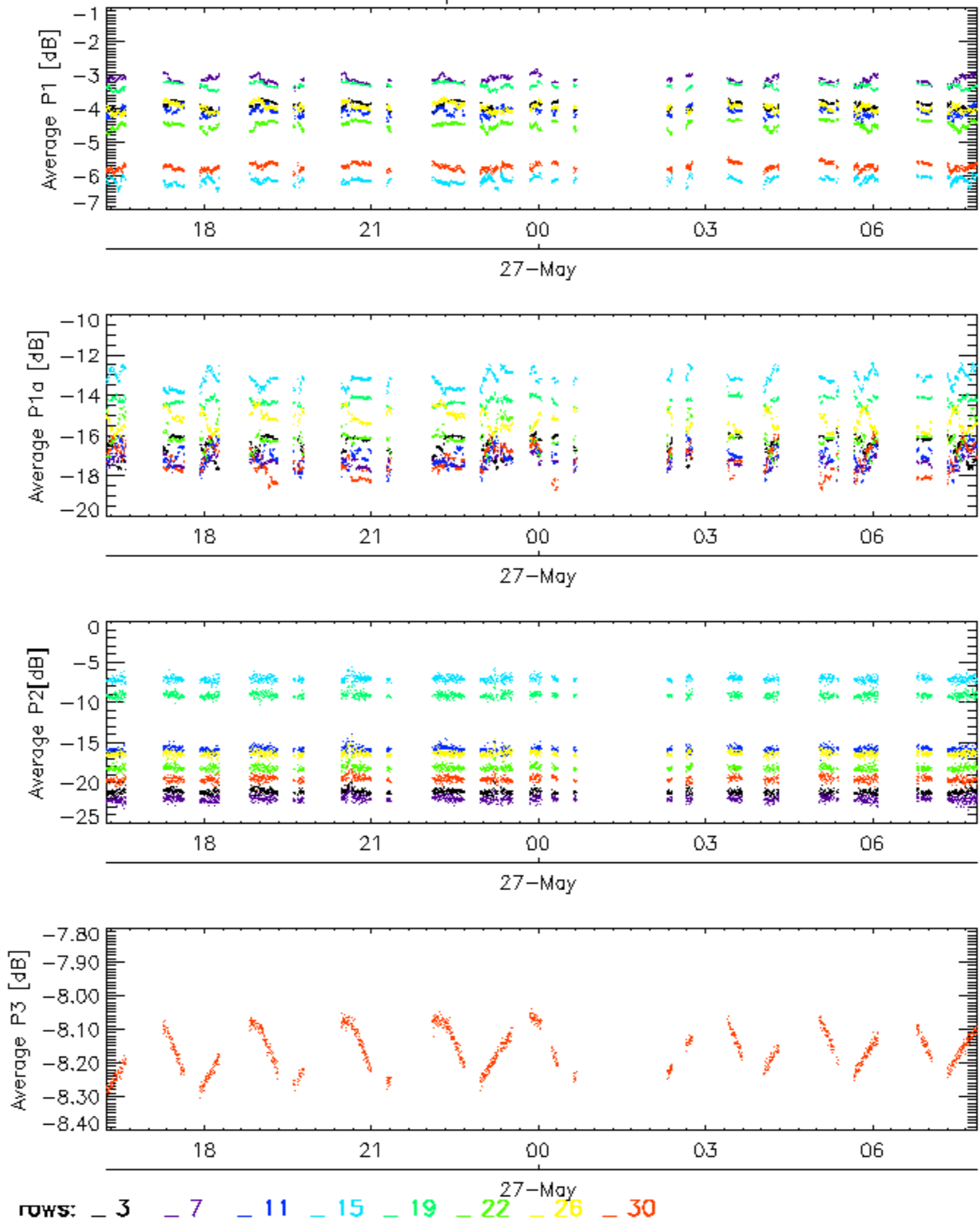


Cal pulses for WVS IS2



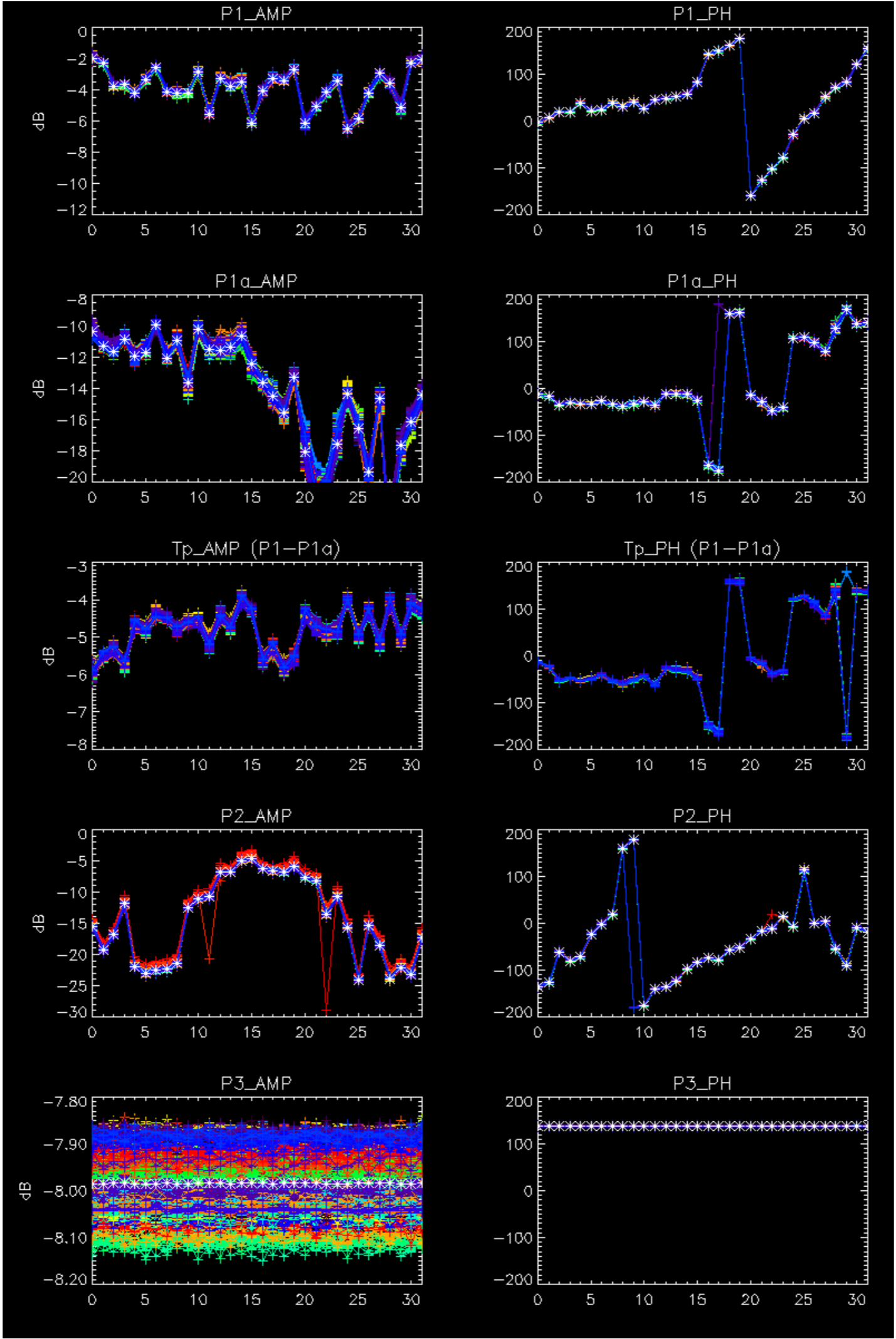
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

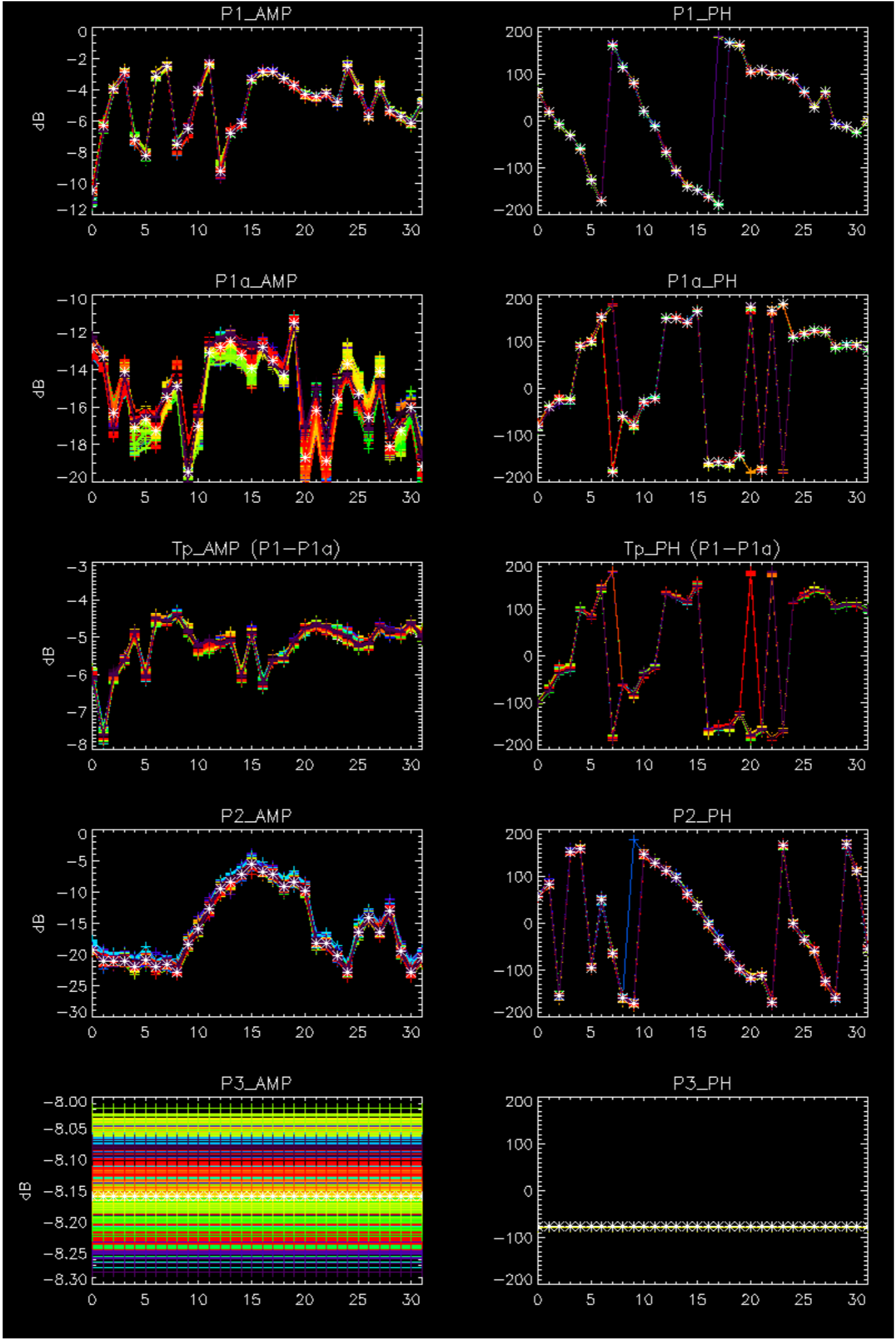
Cal pulses for WVS IS2



No anomalies observed.



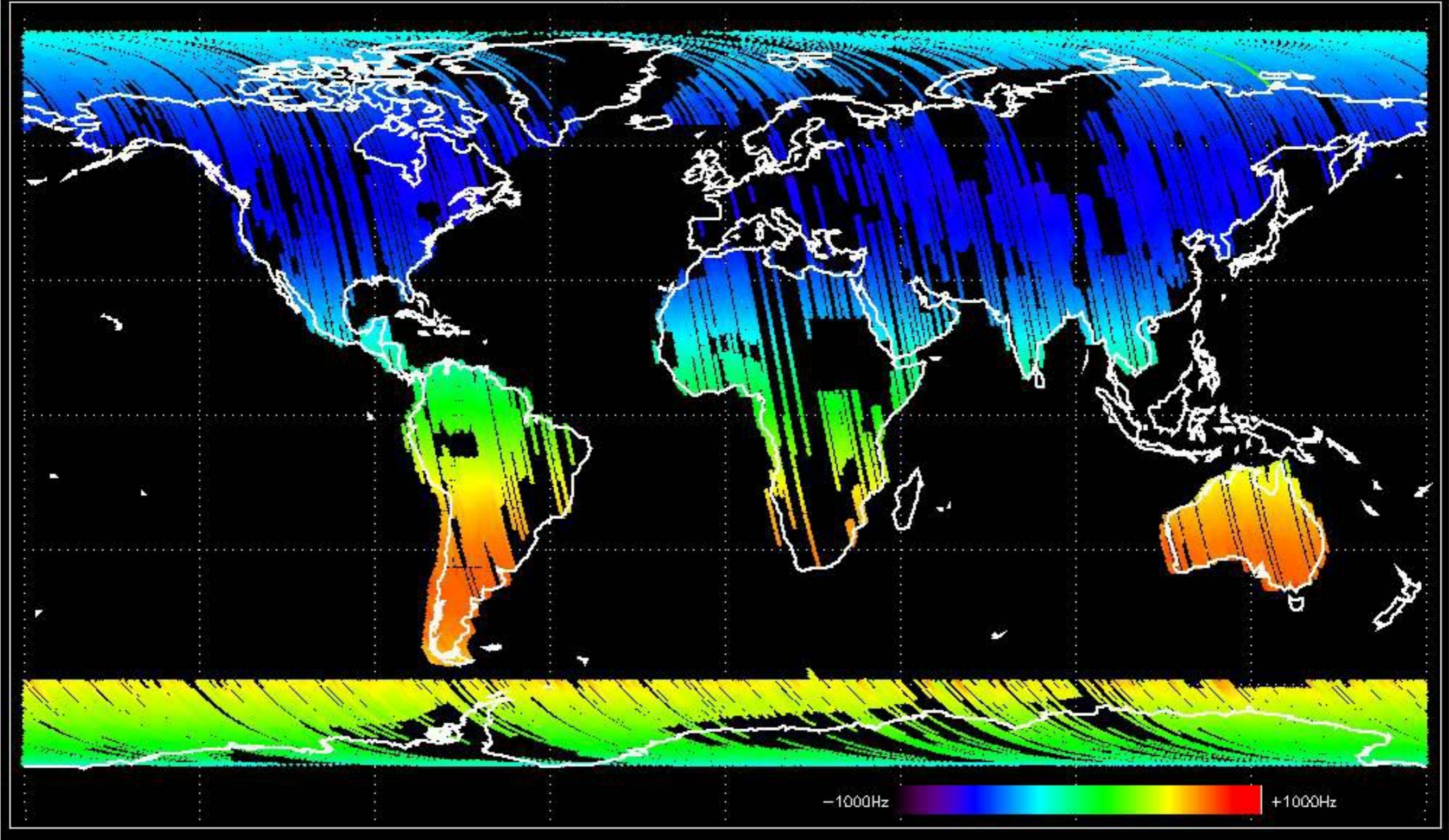




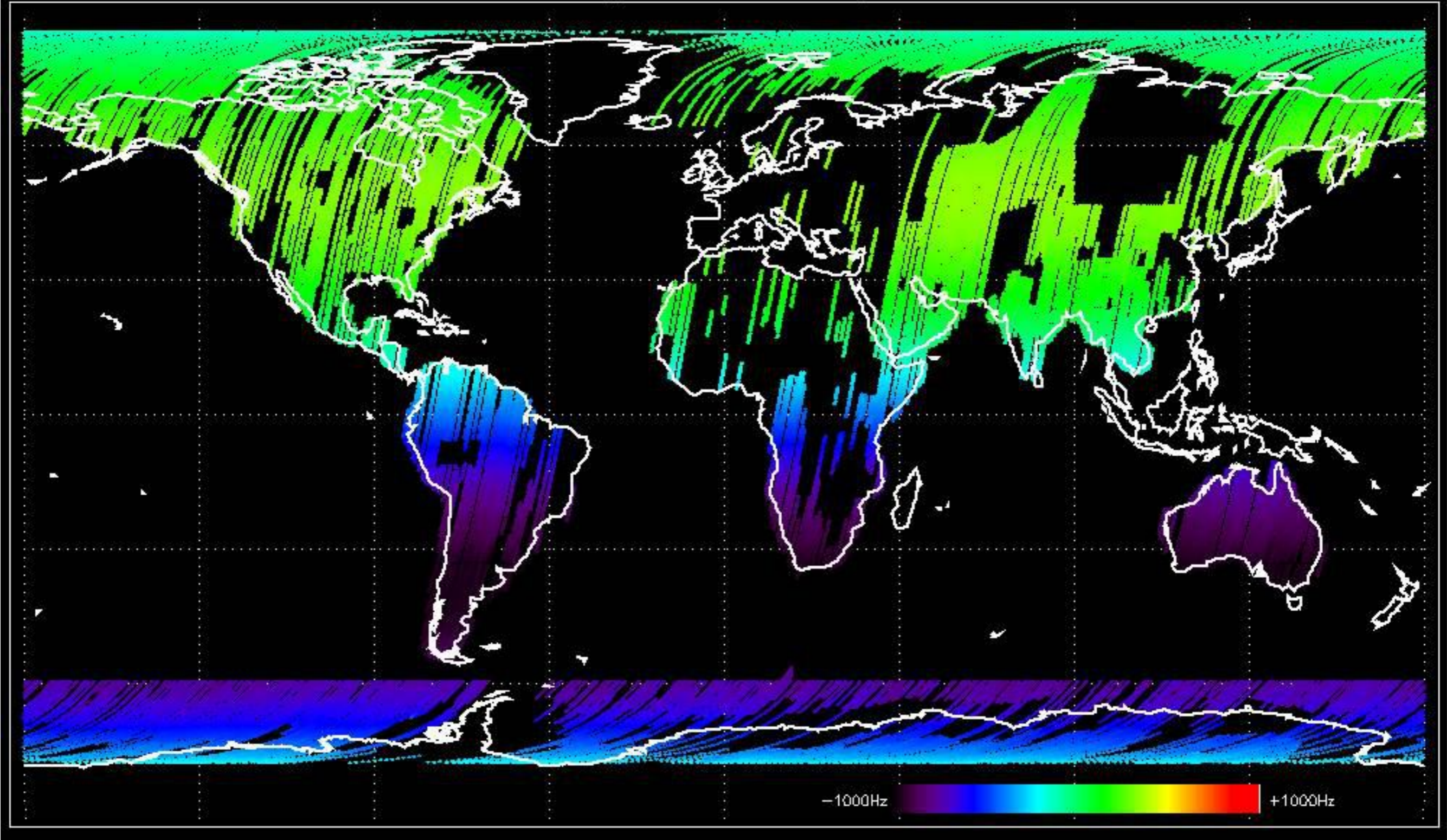
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



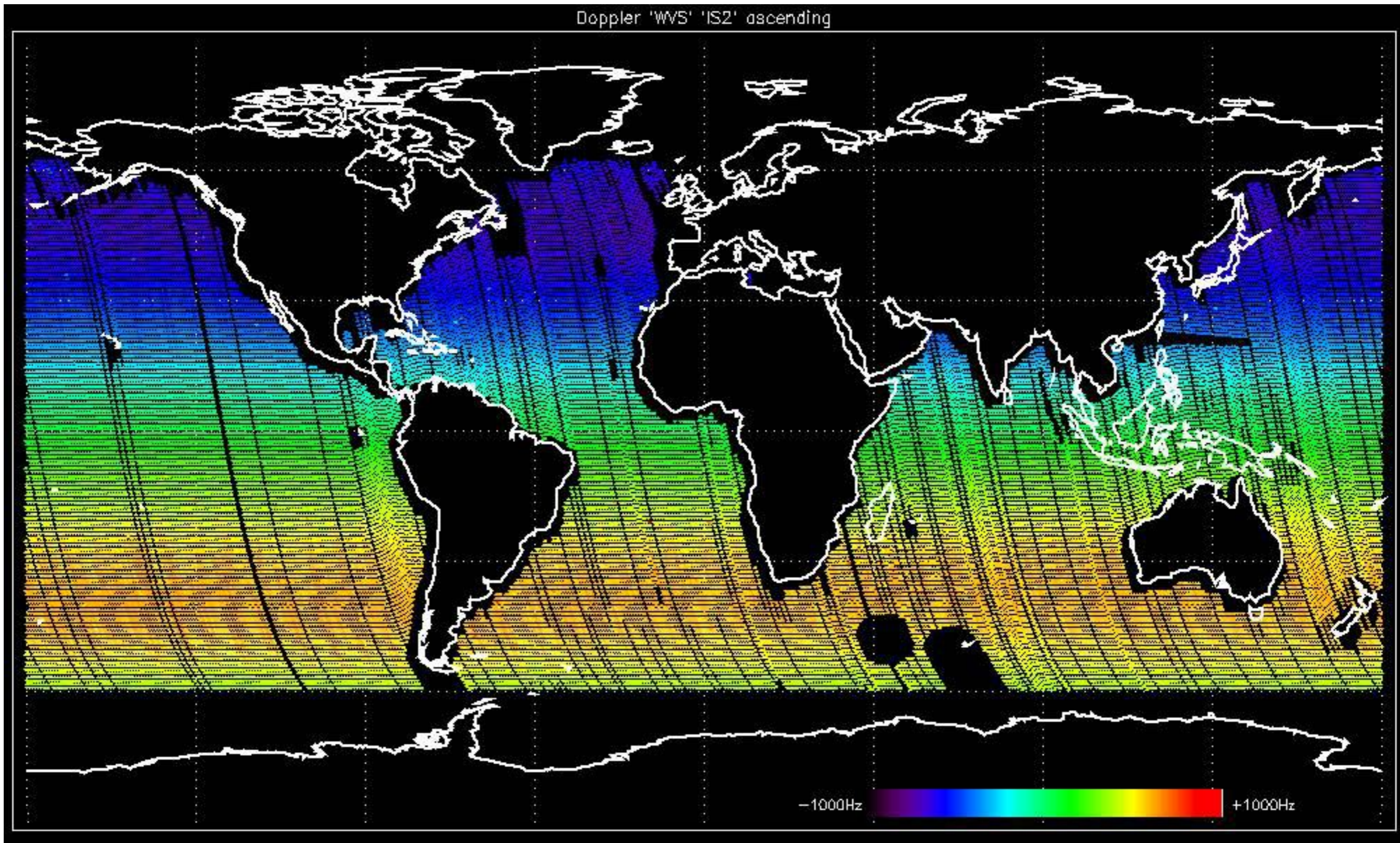
Doppler 'GM1' 'SS1' ascending



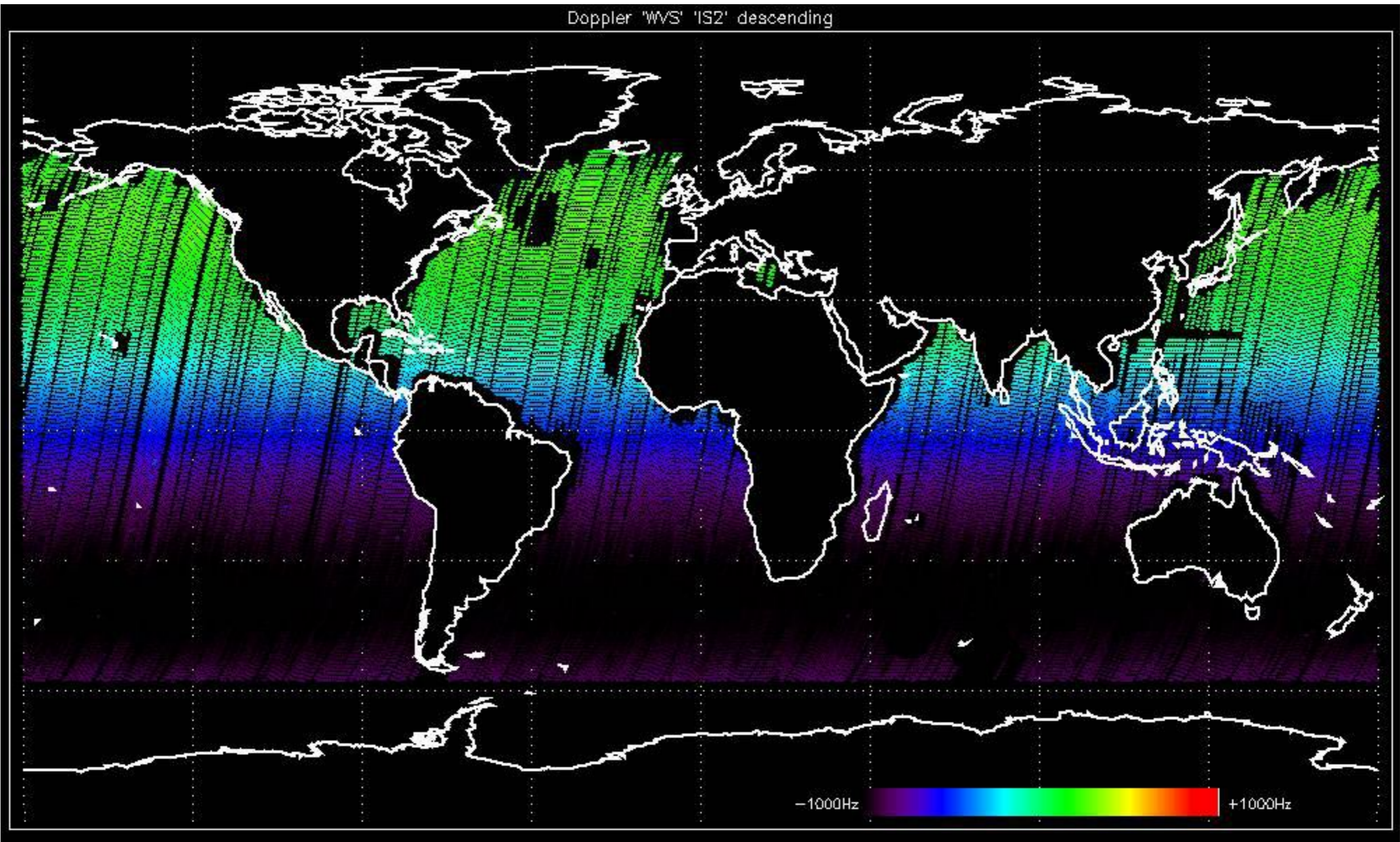
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

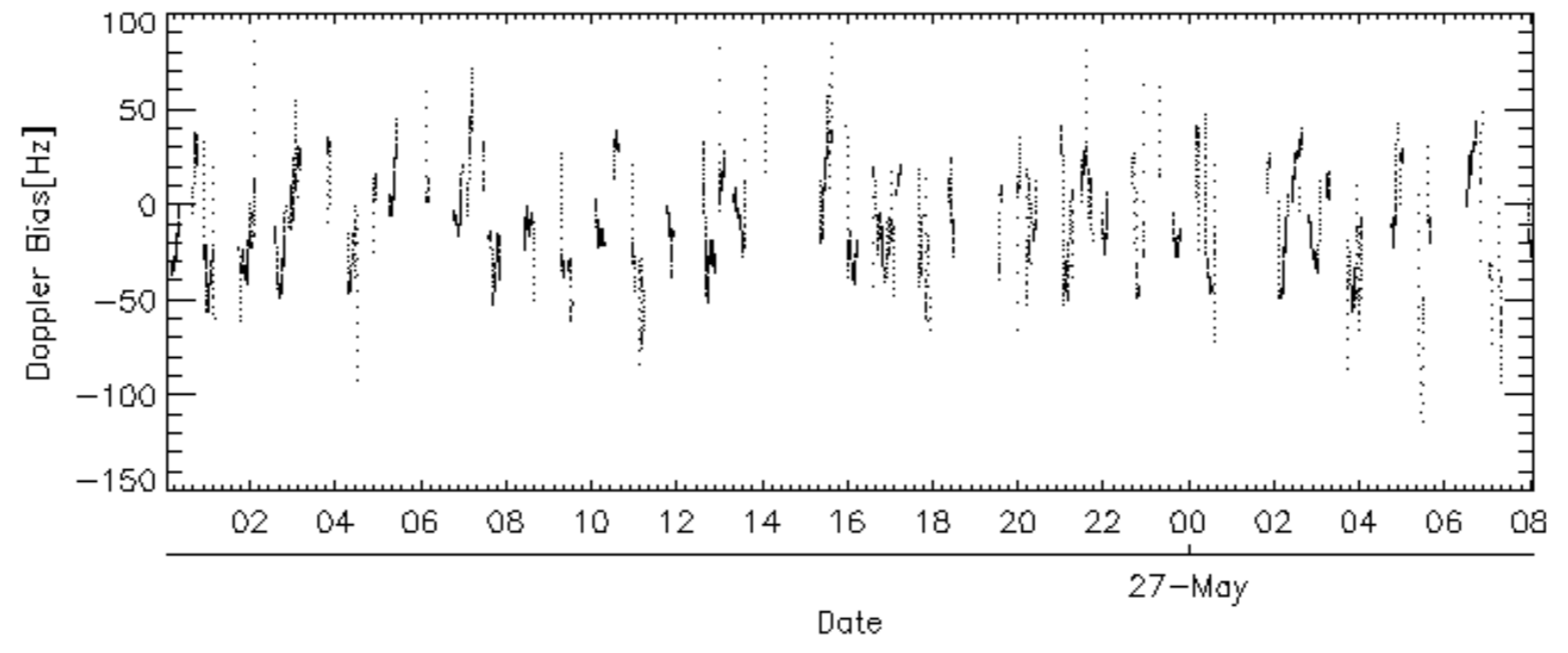
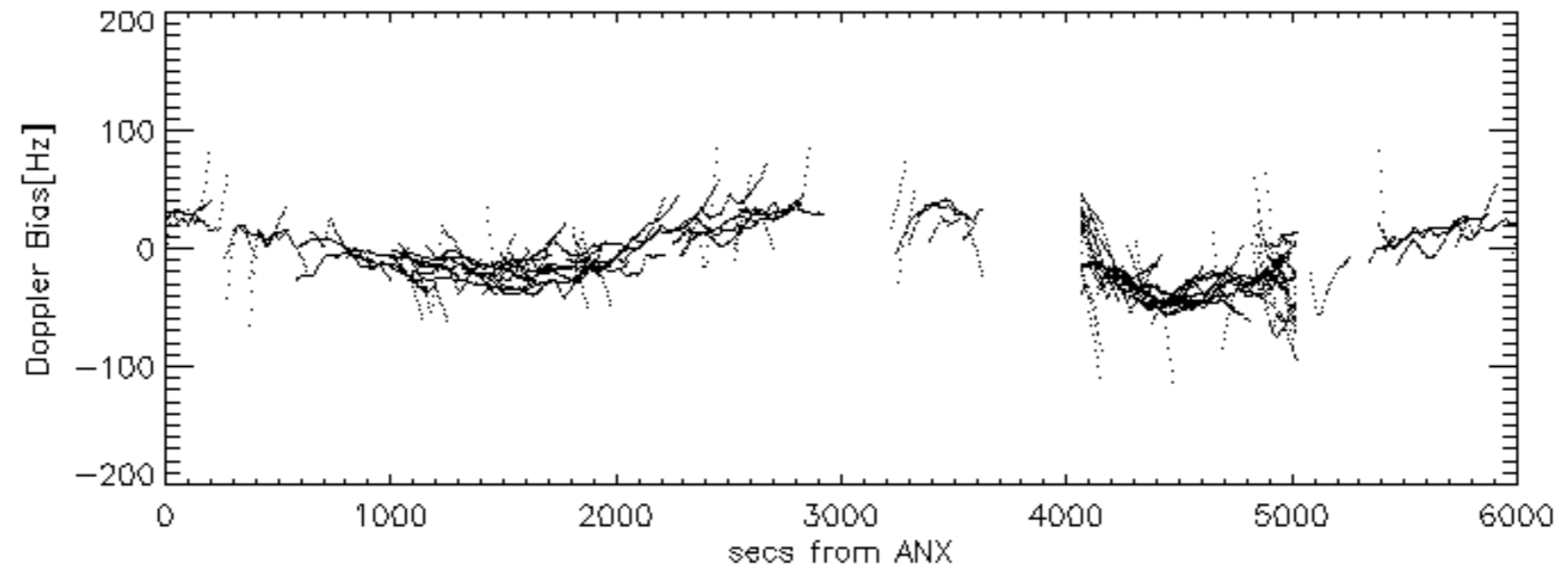
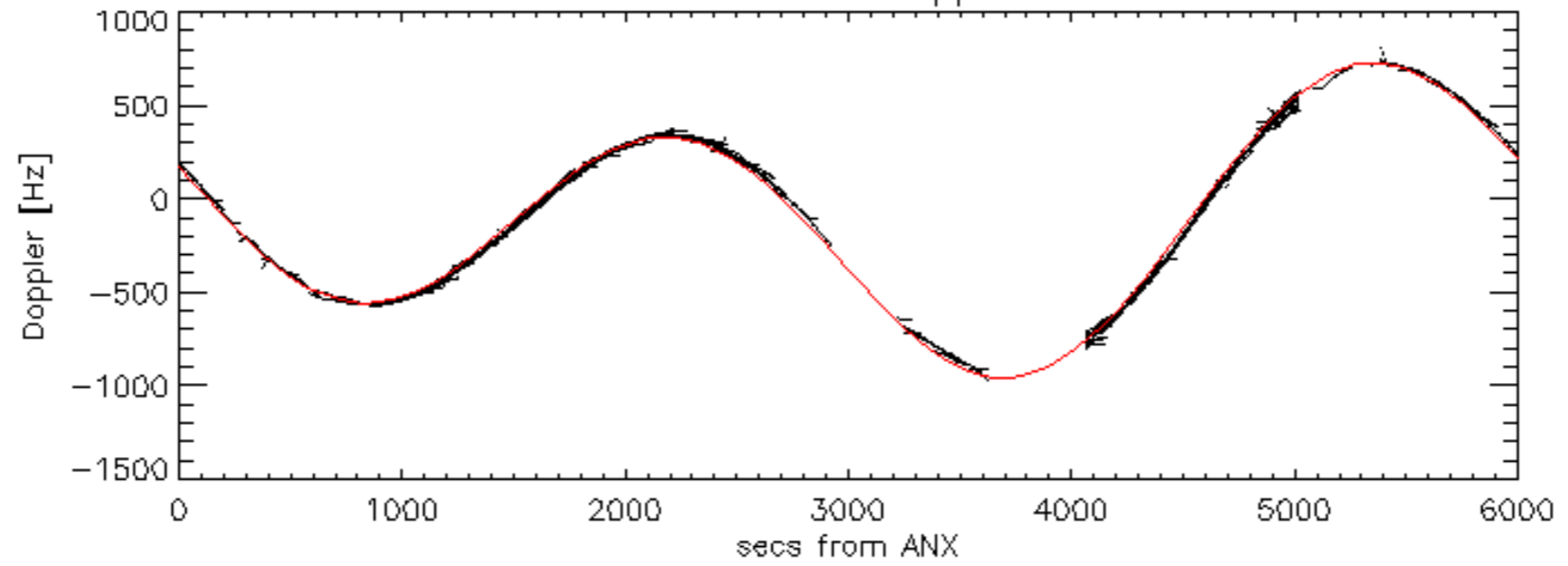


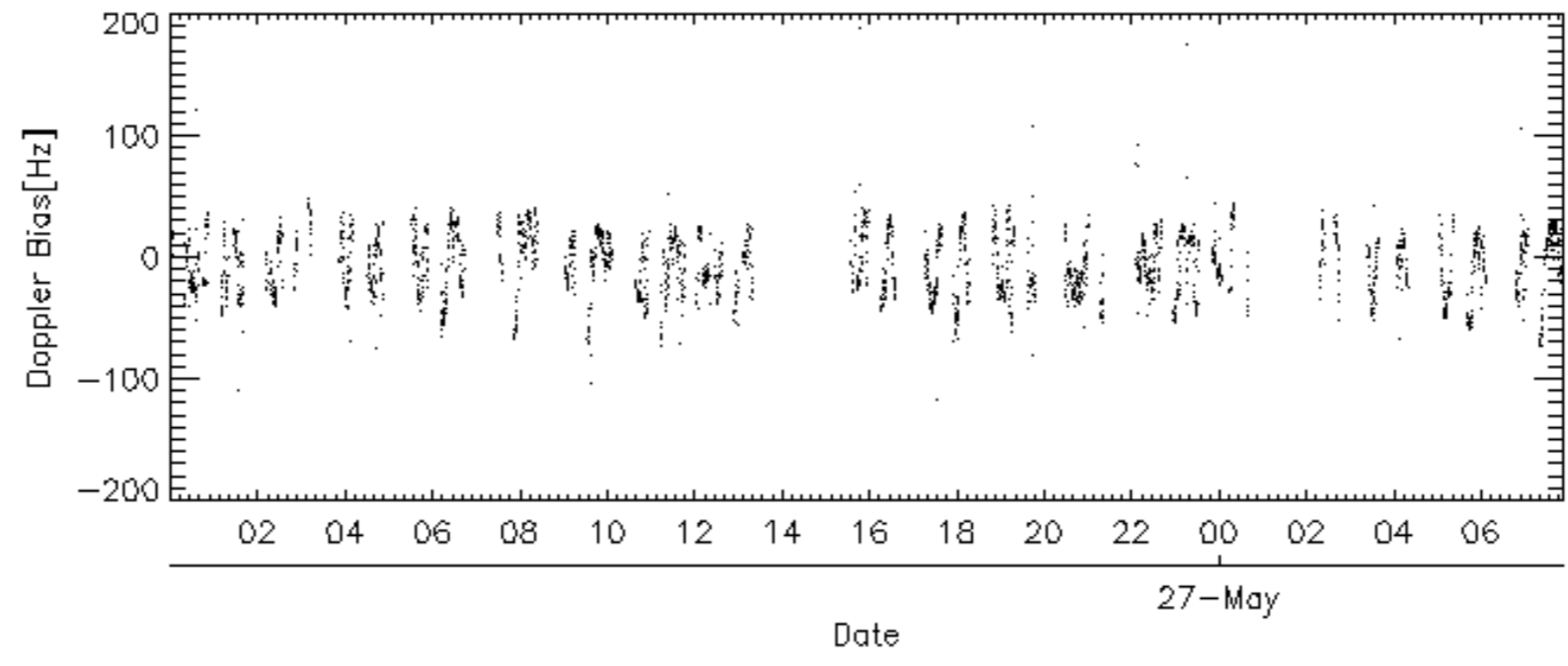
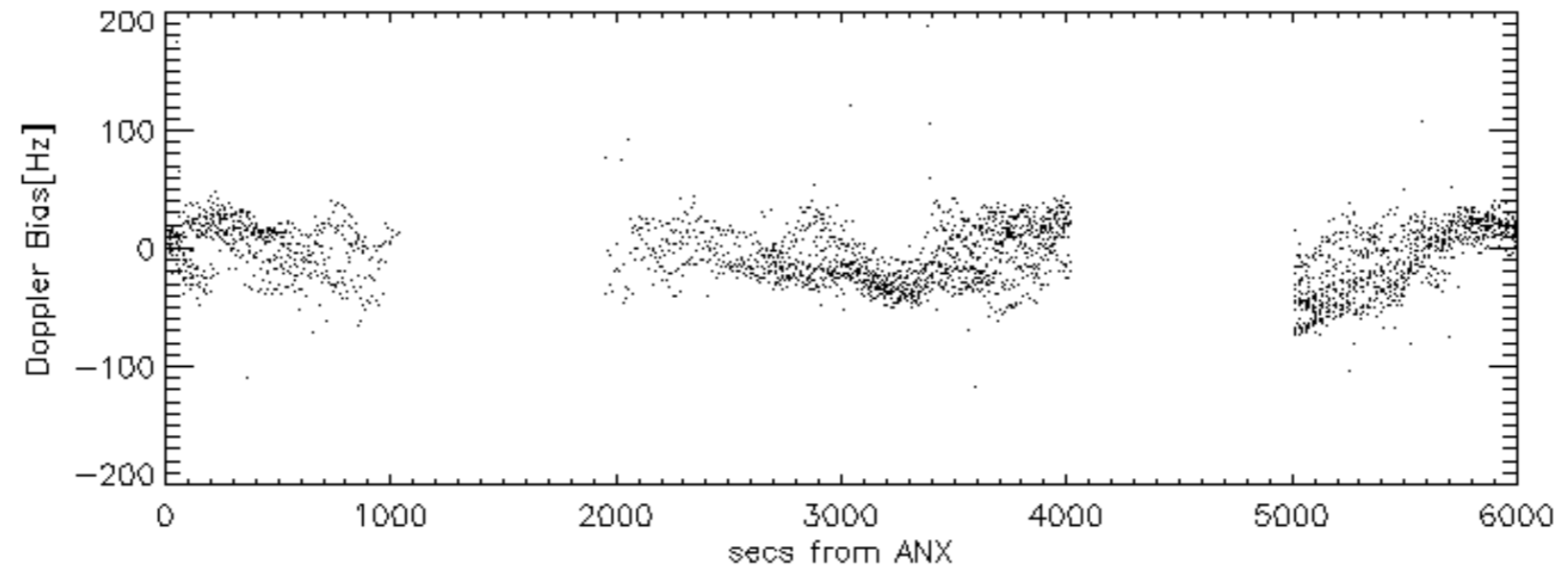
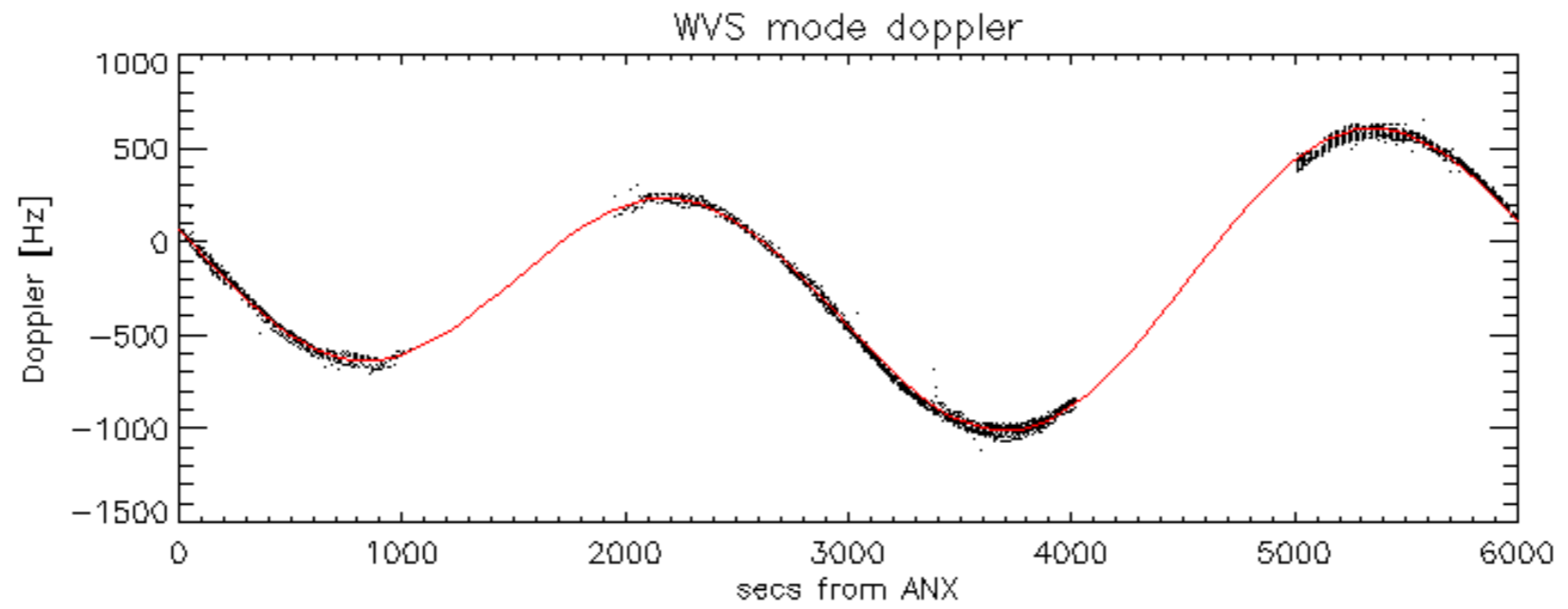
Doppler 'WVS' 'IS2' descending



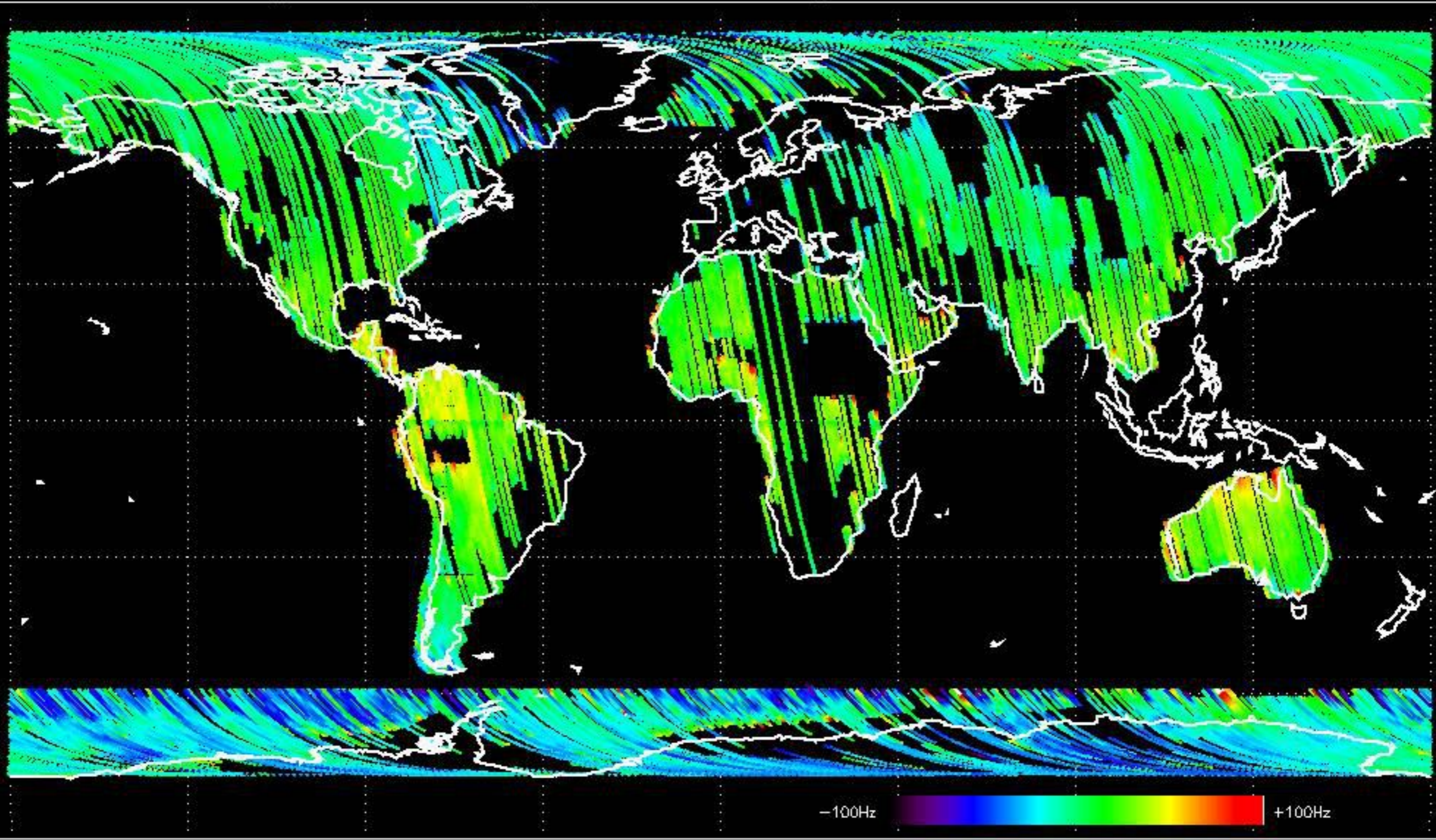


GM1 mode doppler

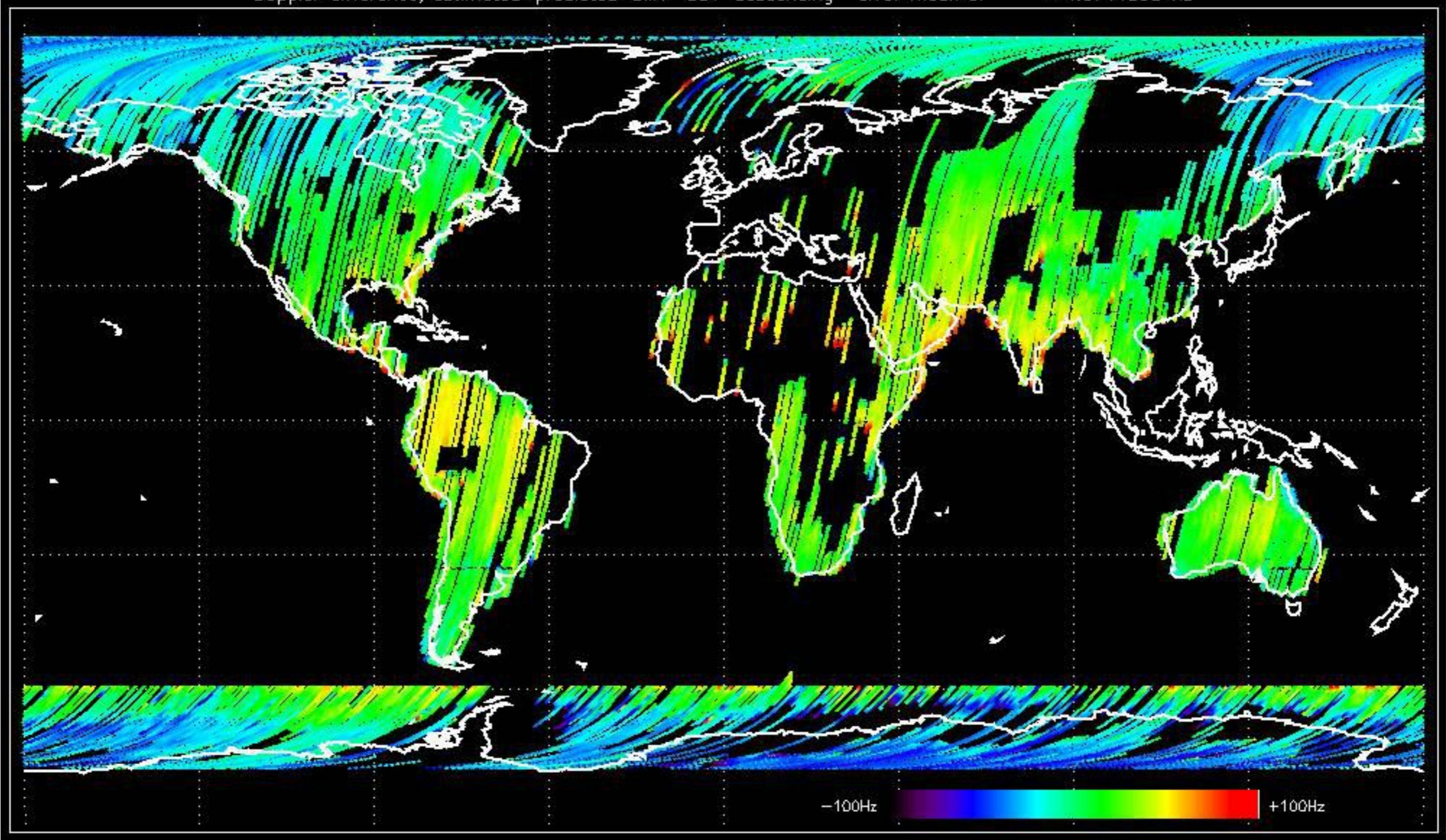




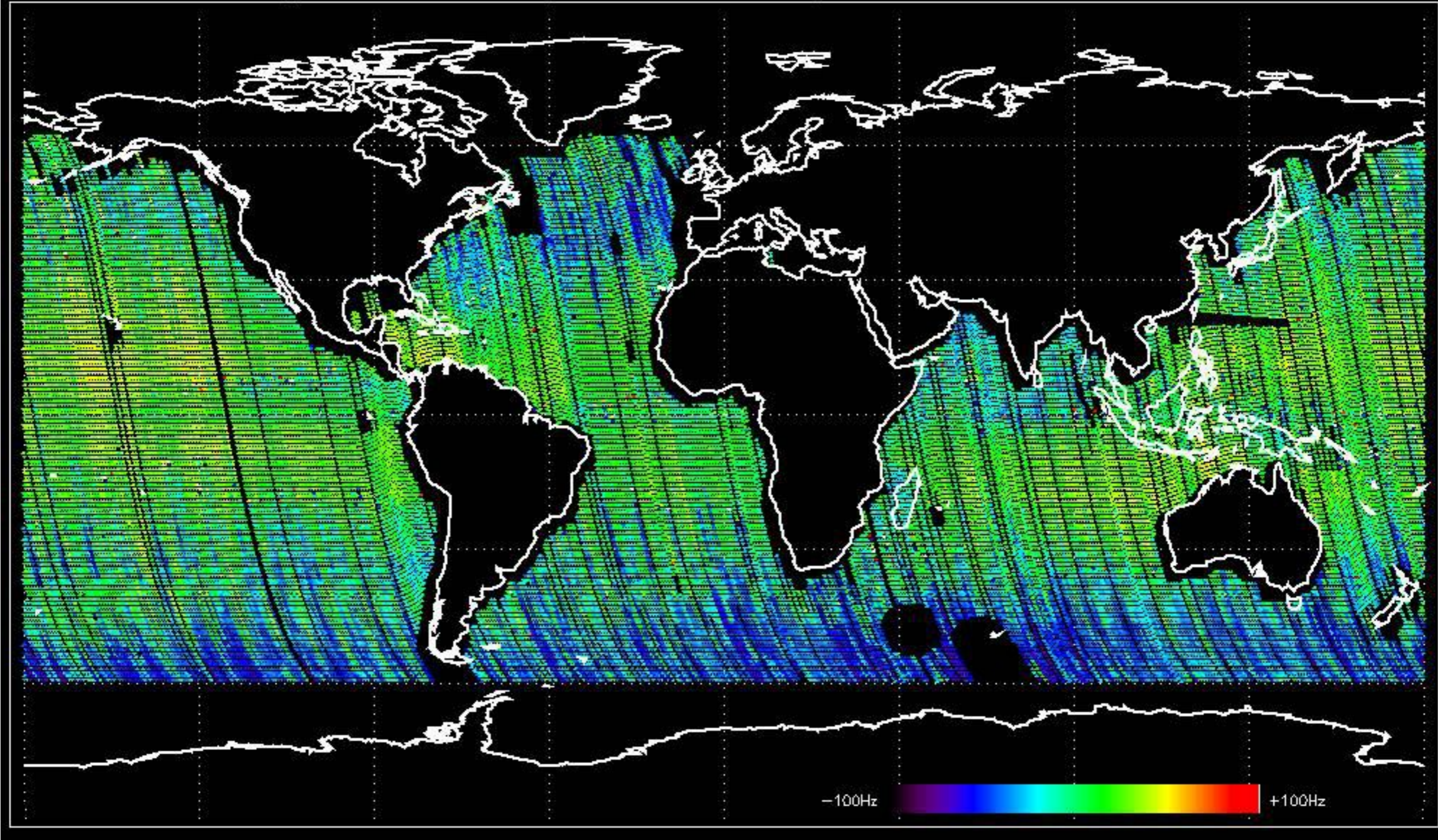
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.271685 Hz



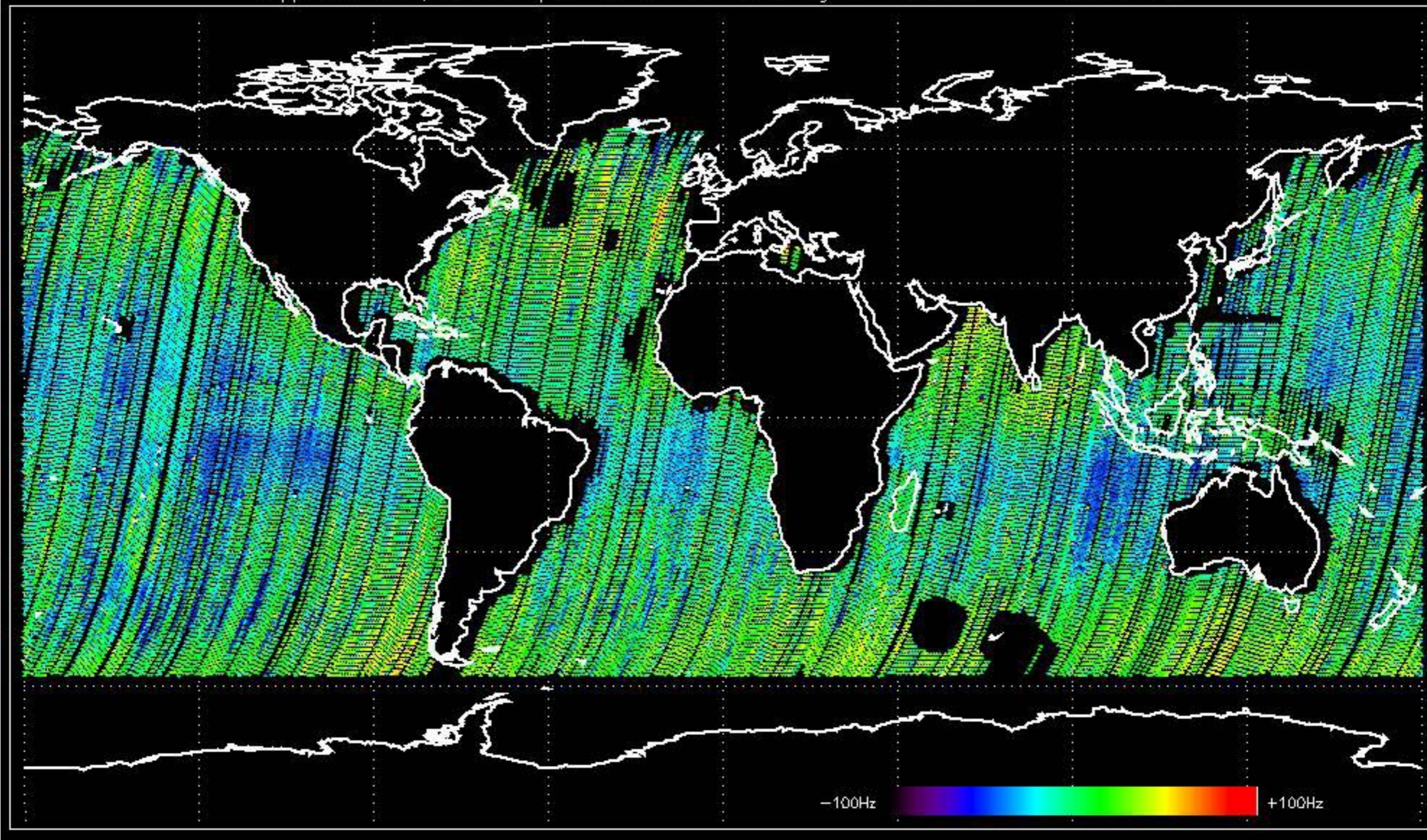
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.0711398 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.5108514 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.812725 Hz



No anomalies observed on available MS products:

No anomalies observed.



















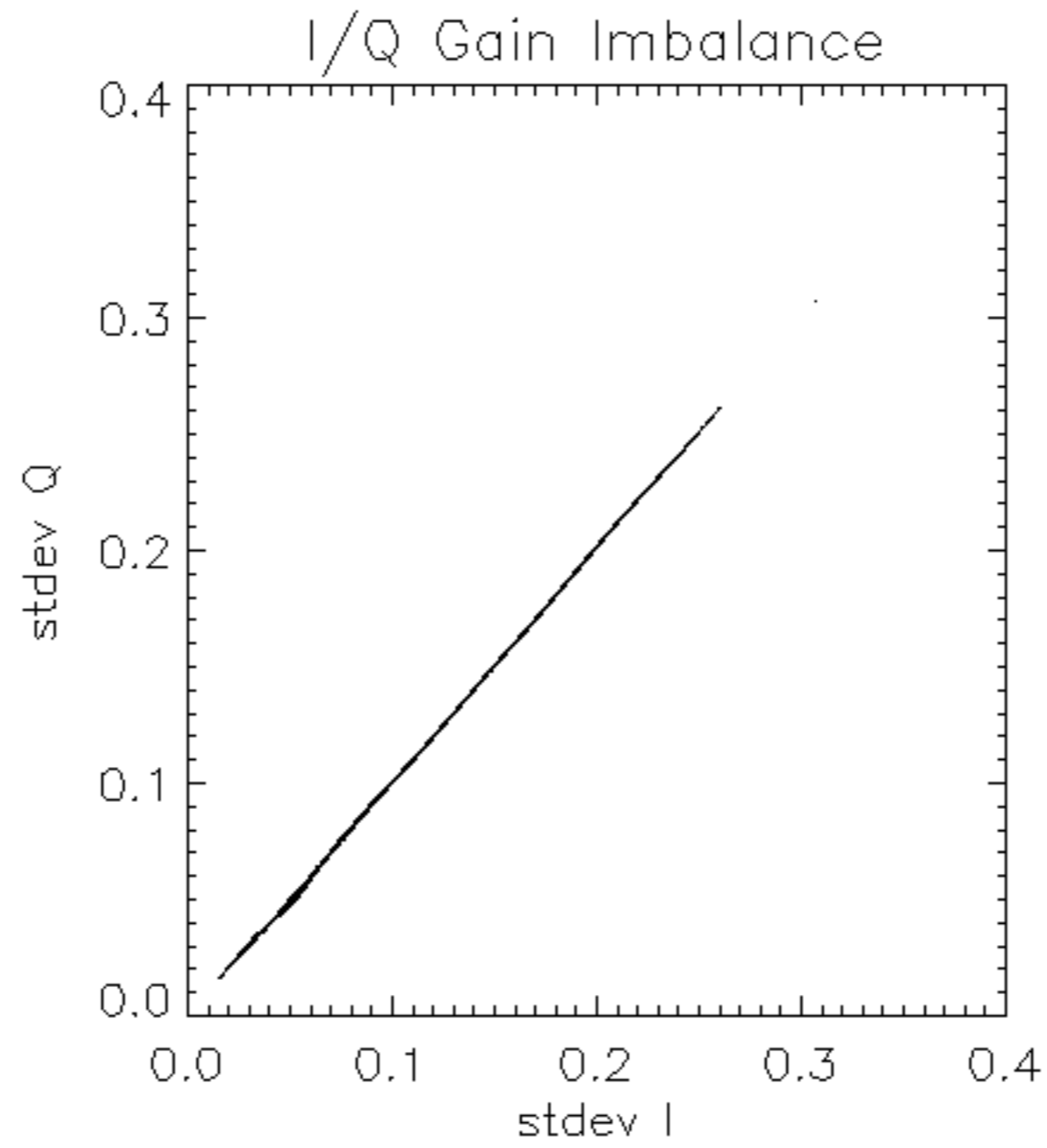


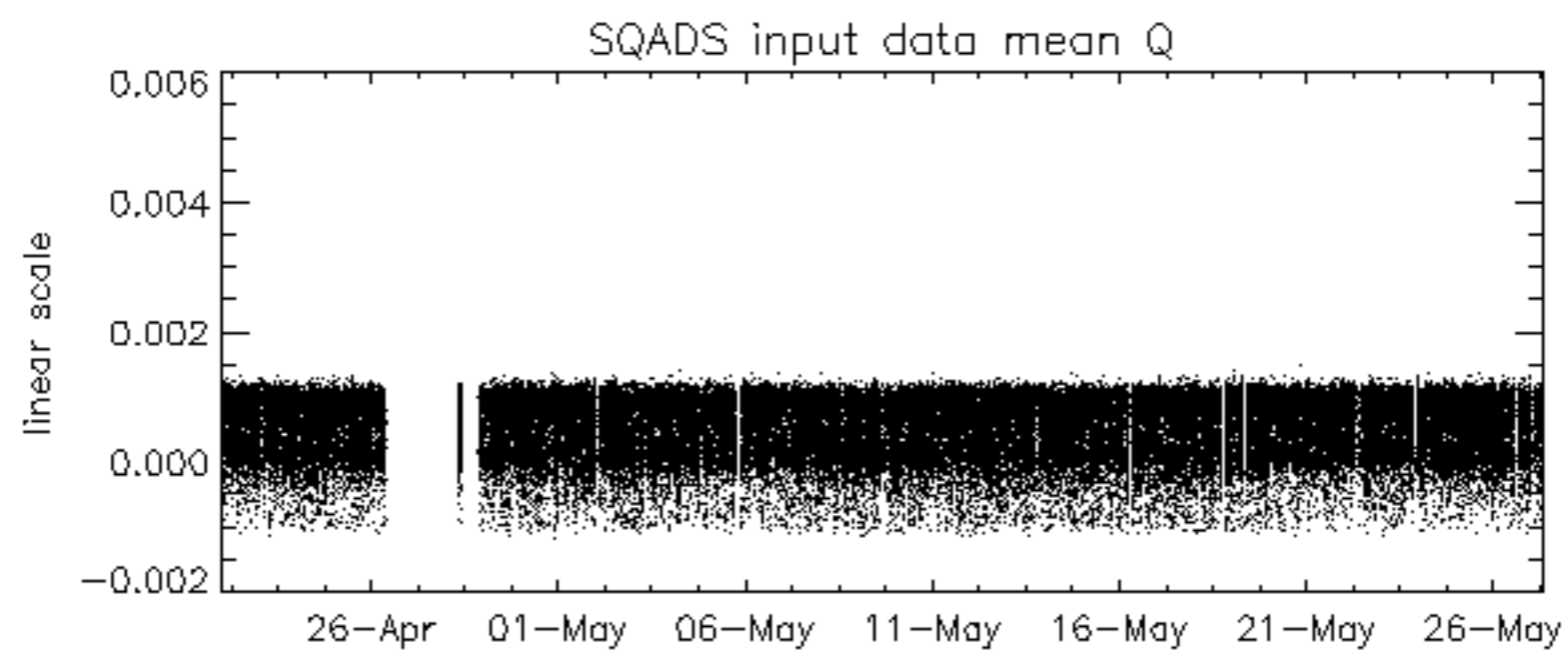
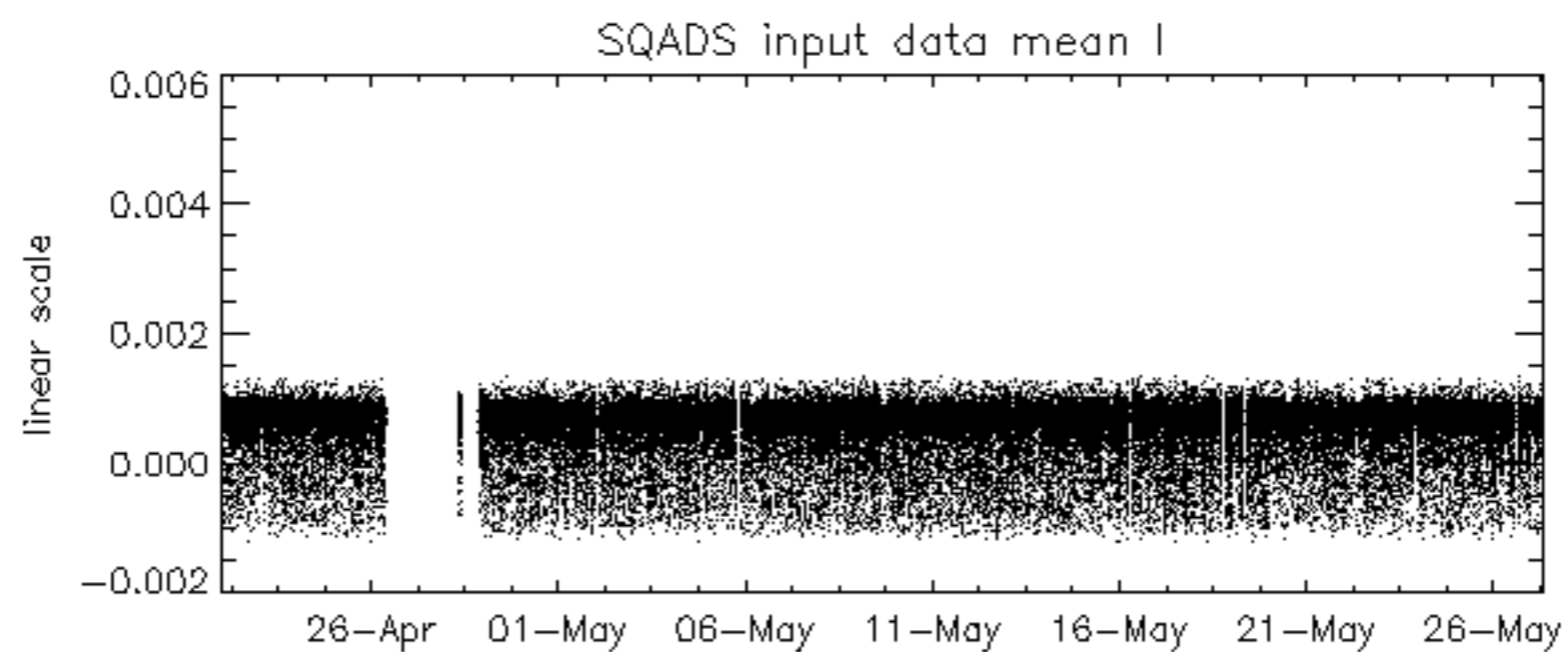
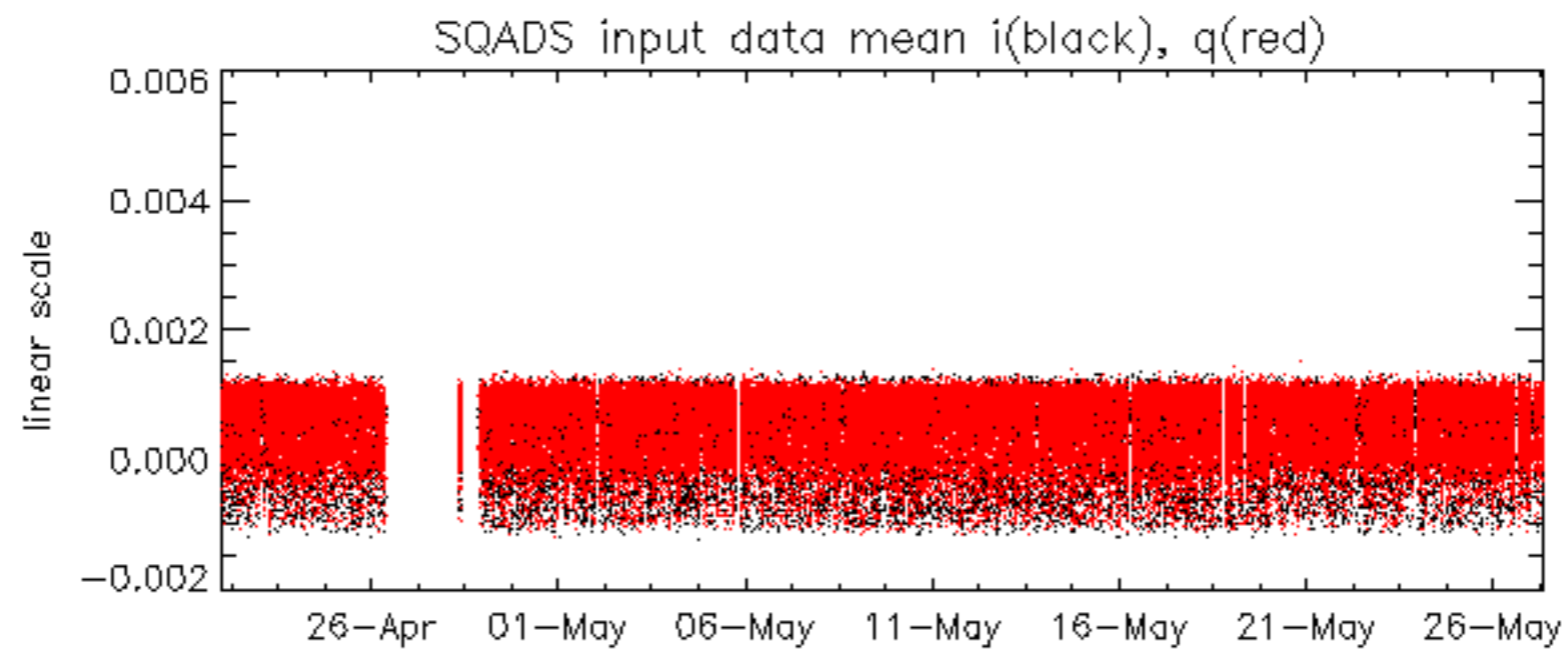


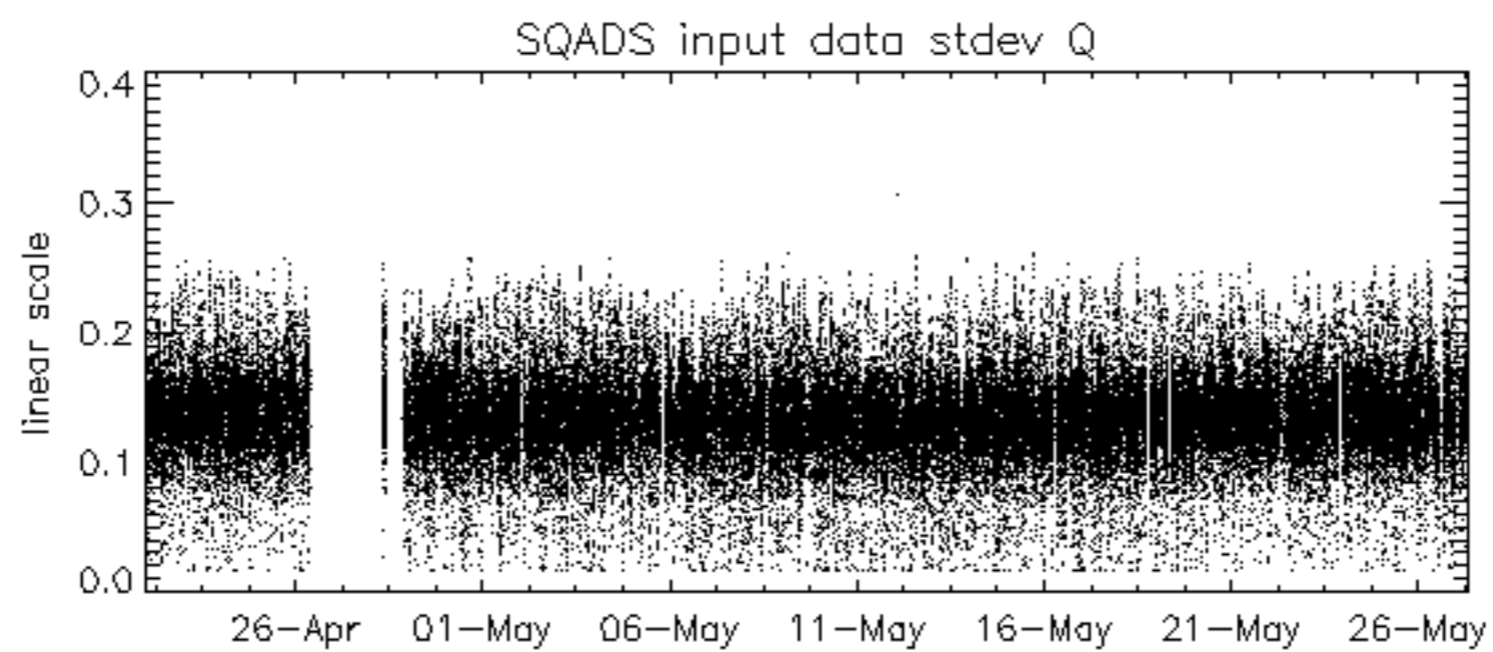
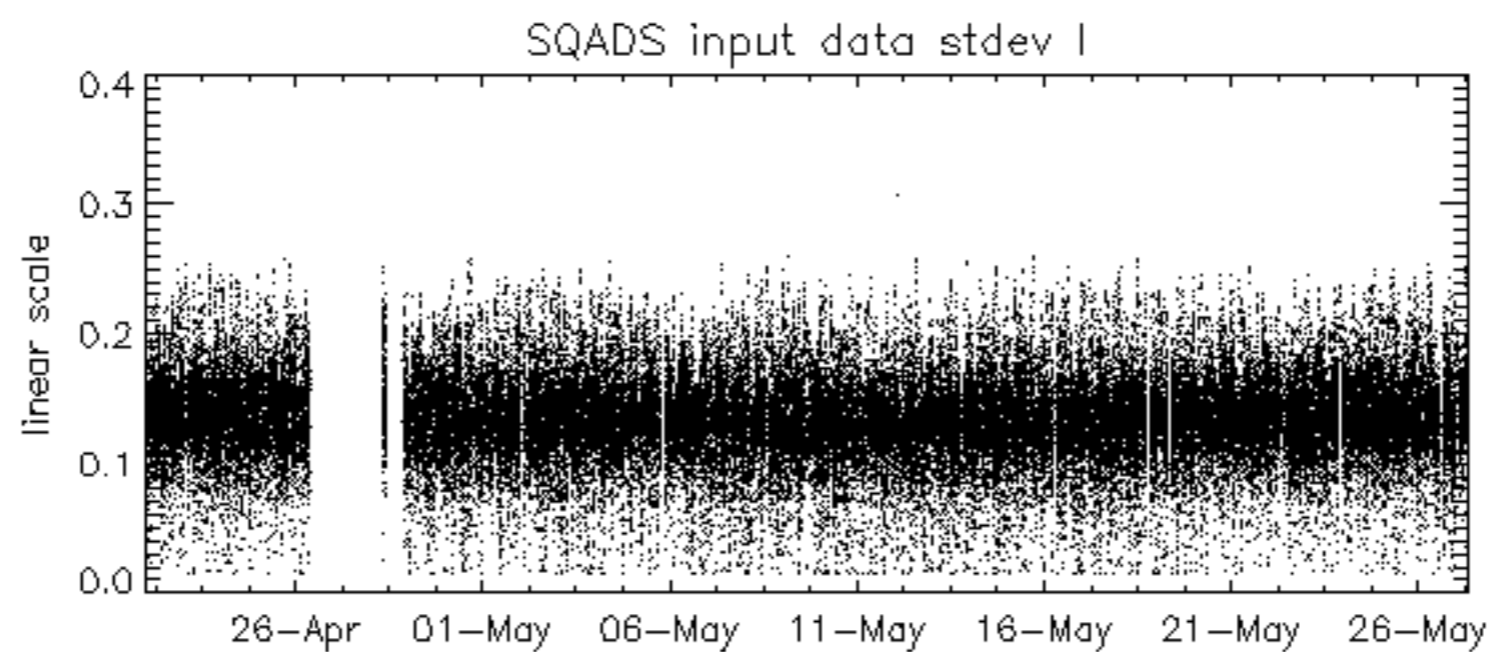
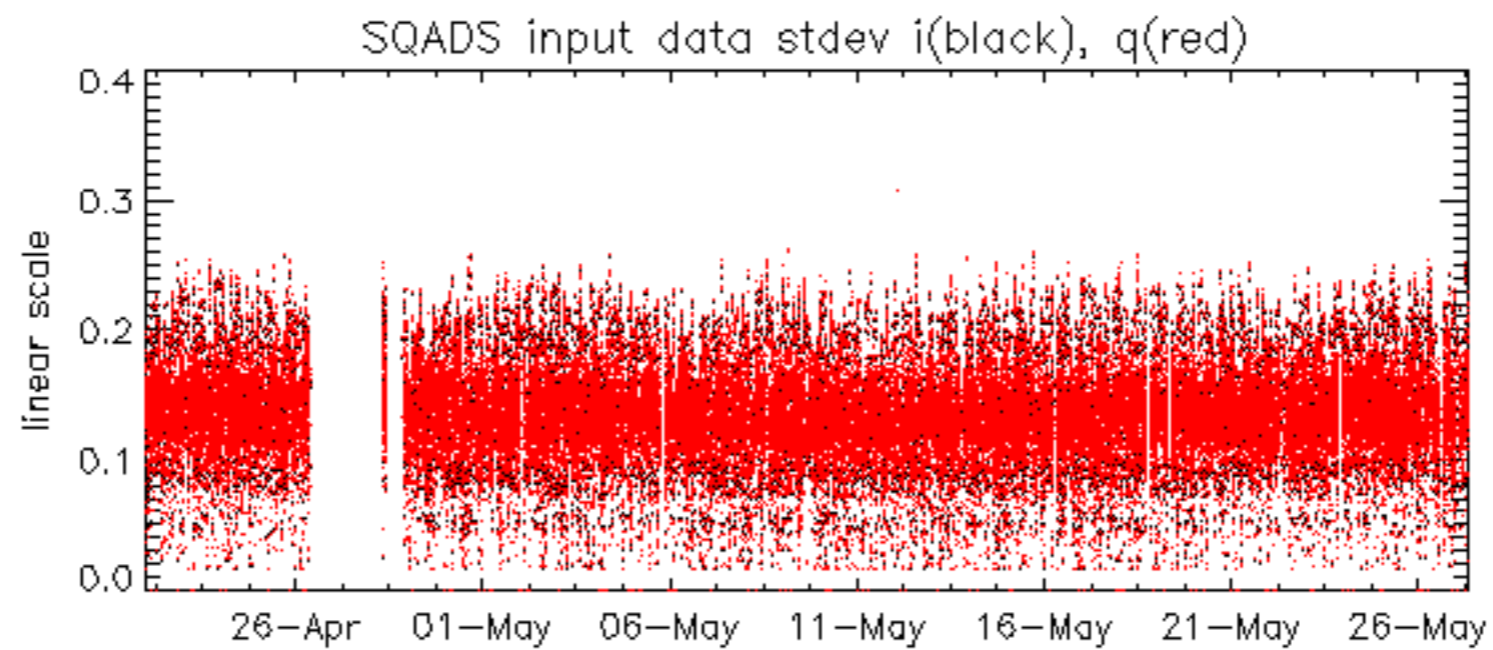






















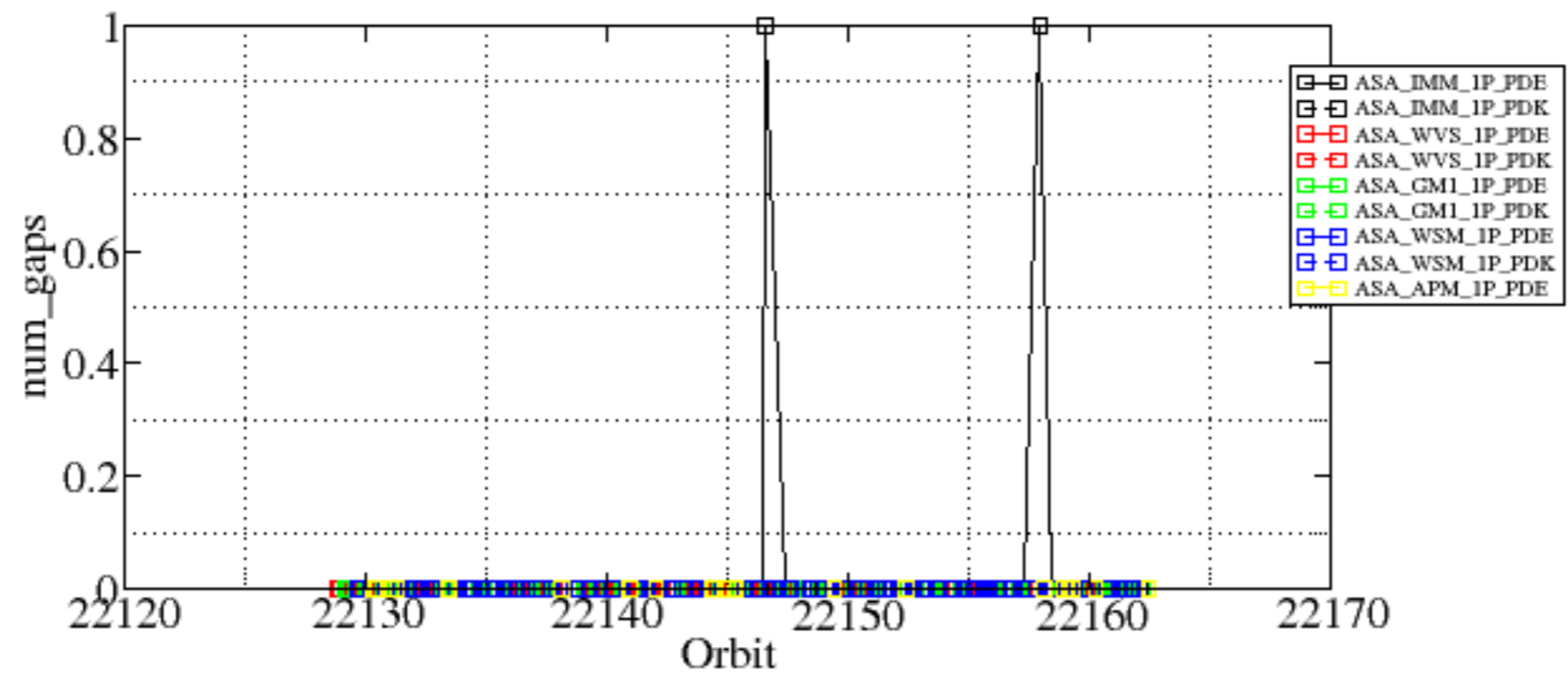




Summary of analysis for the last 3 days 2006052[567]

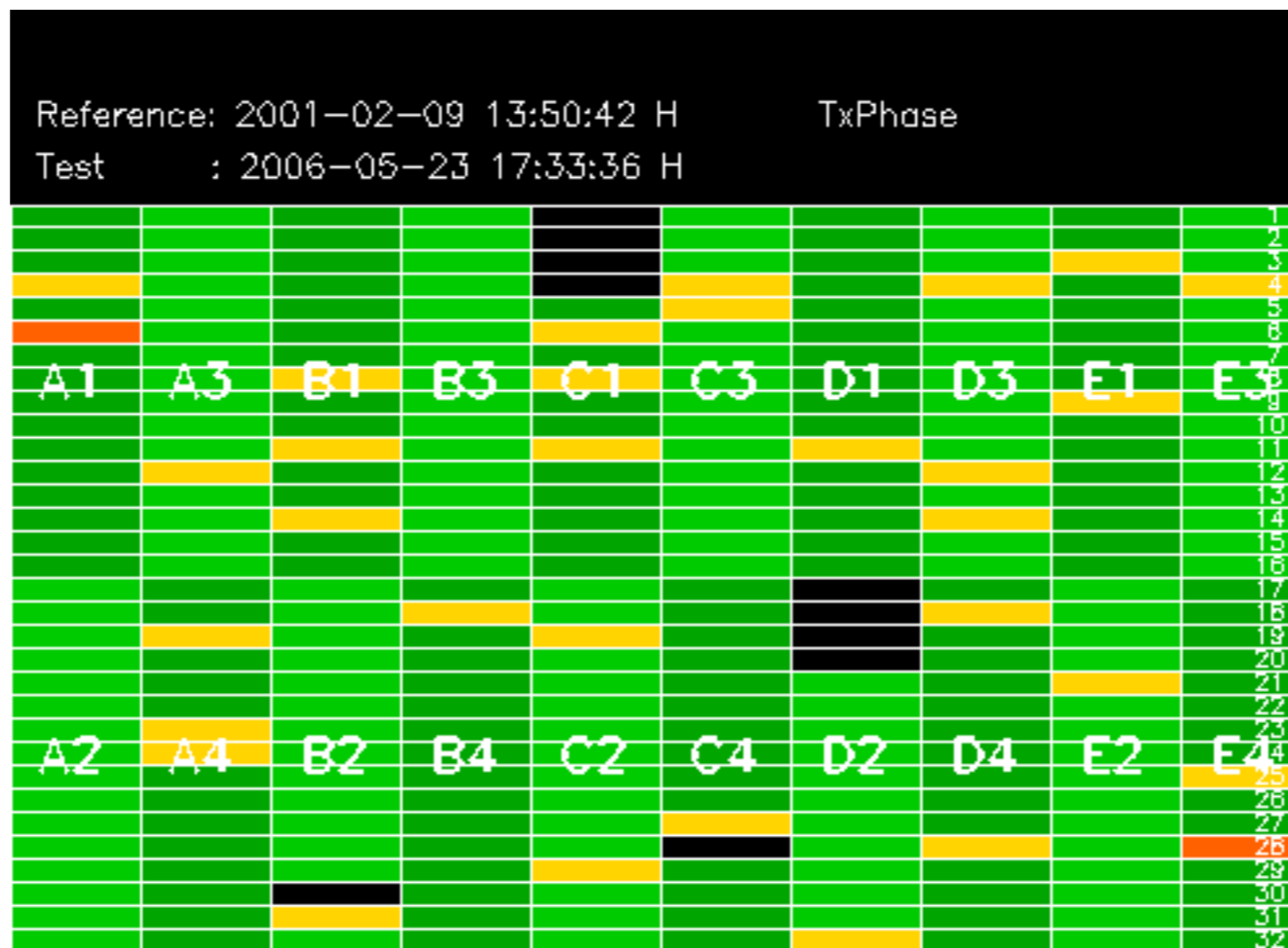
The assumption is taken that the SQUADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060526_054354_00000352048_00048_22146_6225.N1	1	0
ASA_IMM_1PNPDE20060527_005025_000001722048_00059_22157_6265.N1	1	0
ASA_WSM_1PNPDE20060526_021326_000000852048_00046_22144_0919.N1	0	28
ASA_WSM_1PNPDE20060526_203642_000000922048_00057_22155_1065.N1	0	47
ASA_WSM_1PNPDE20060527_000327_000003292048_00059_22157_1091.N1	0	34
ASA_WSM_1PNPDK20060526_151921_000000552048_00054_22152_6150.N1	0	42











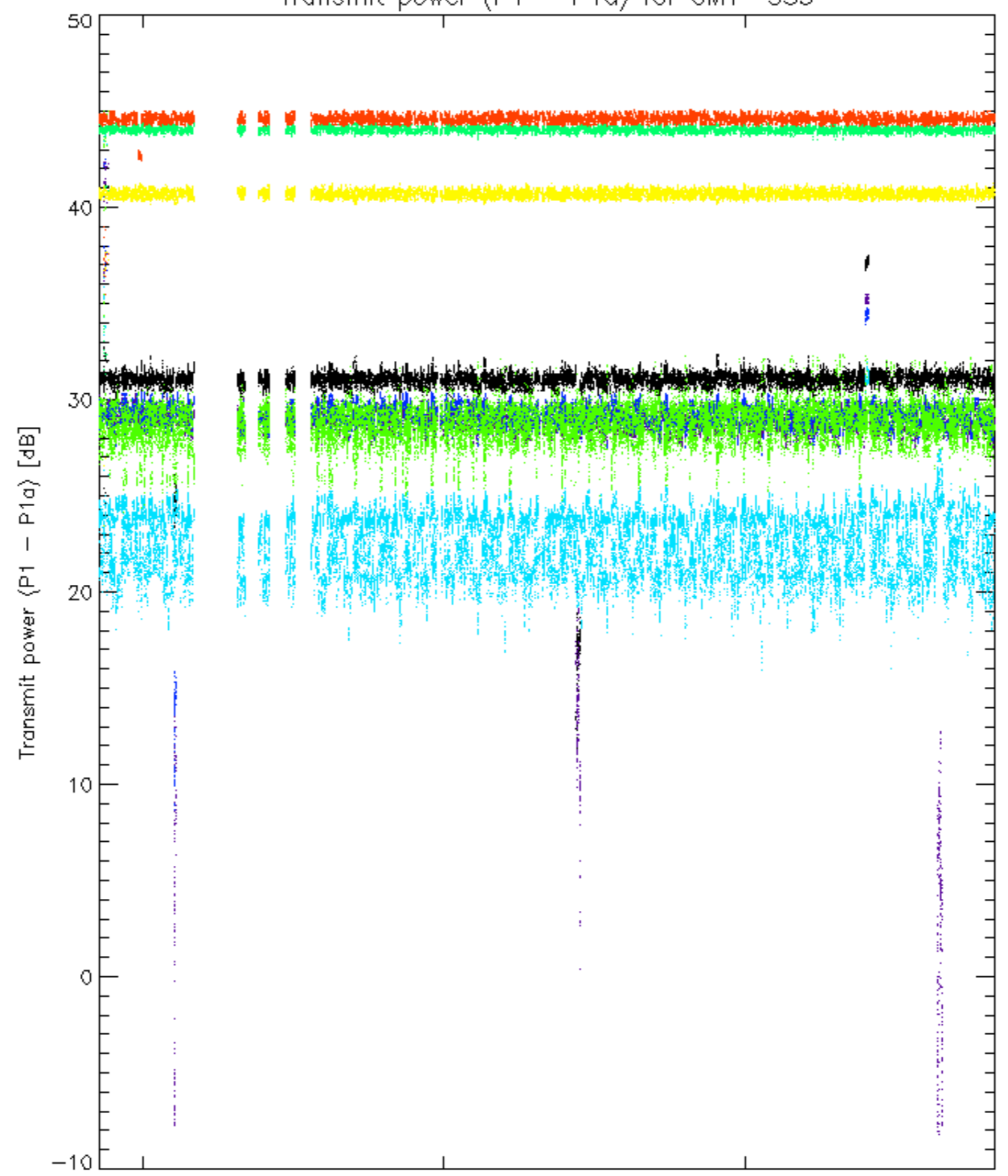




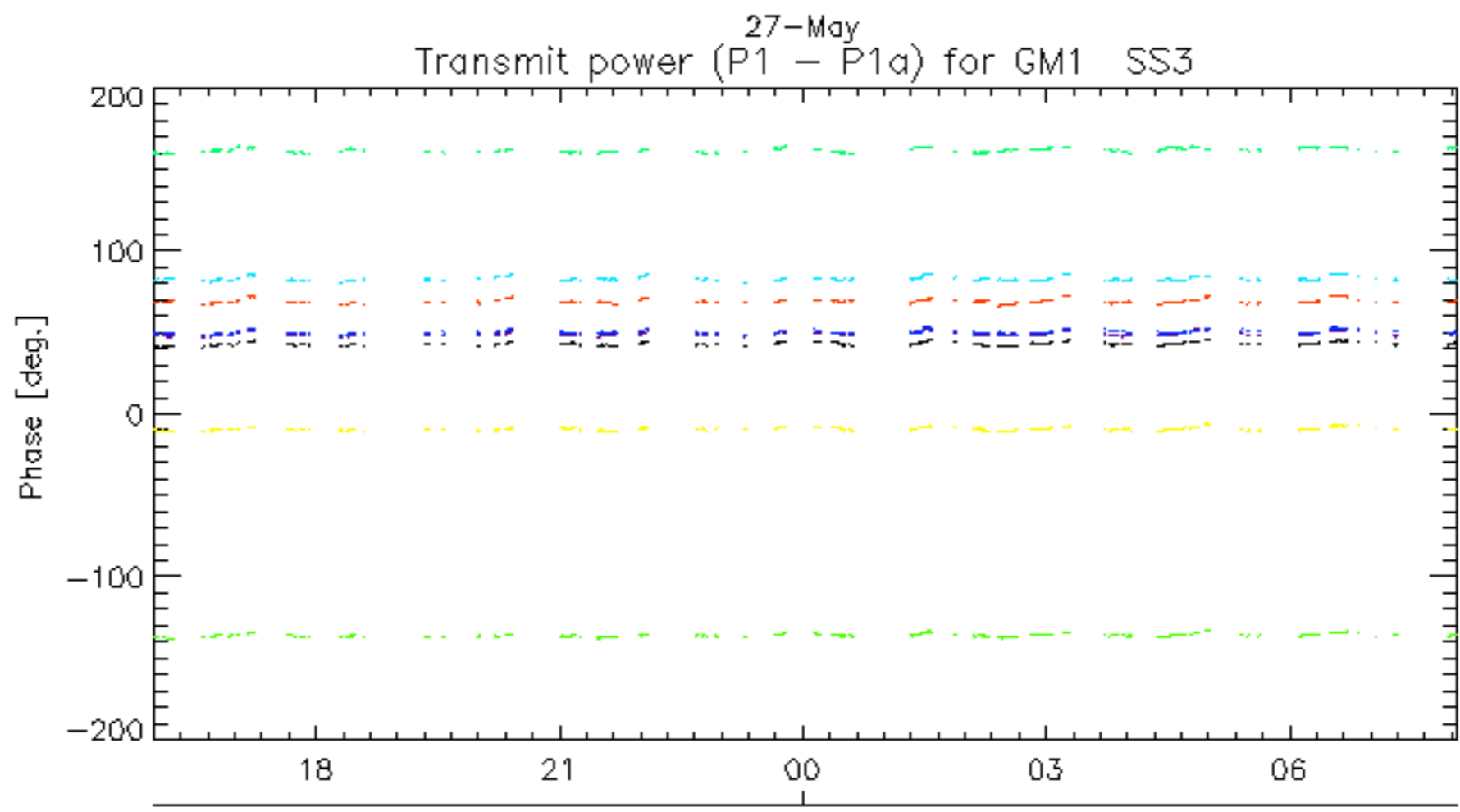
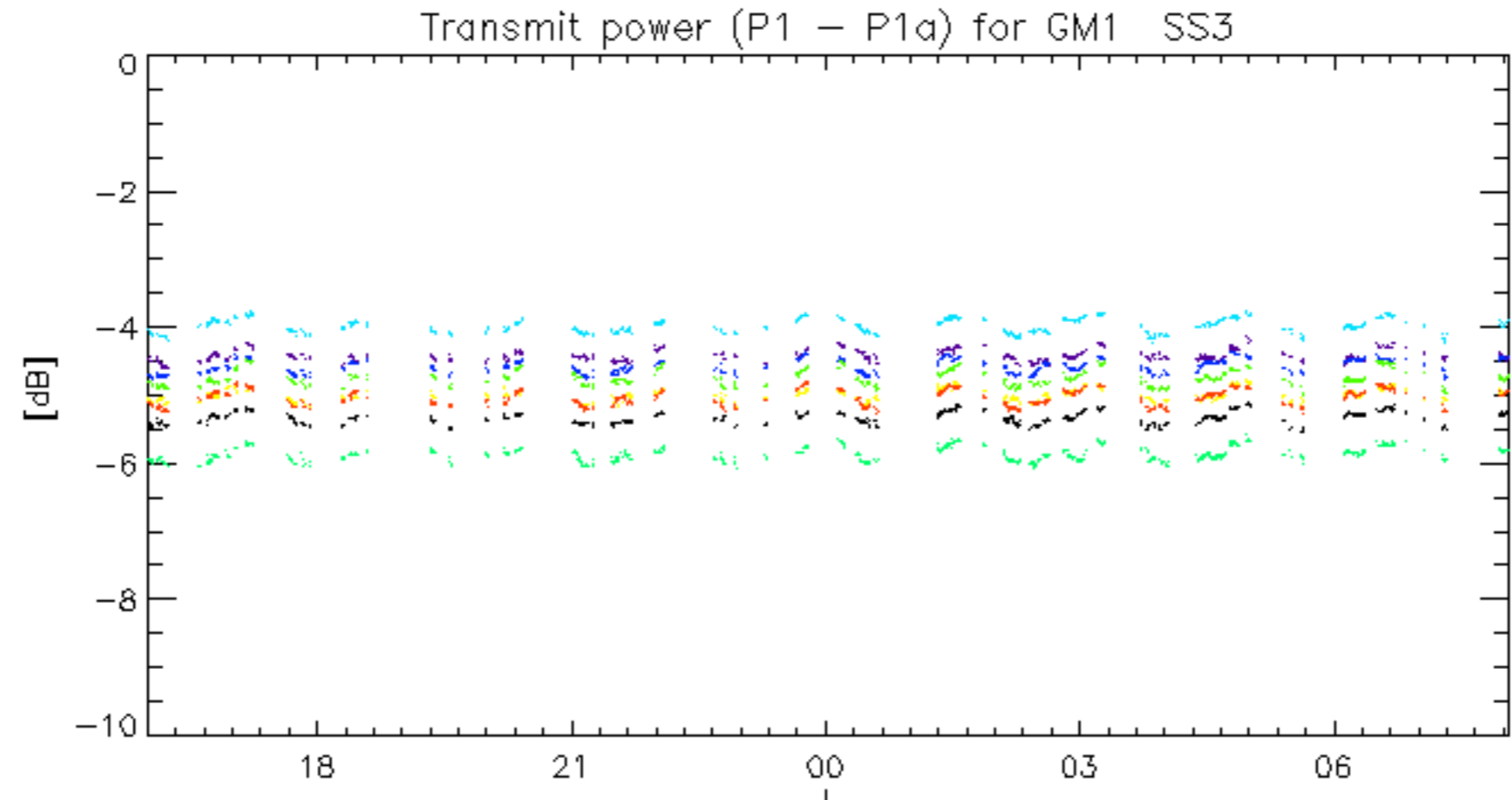




Transmit power (P1 - P1a) for GM1 SS3

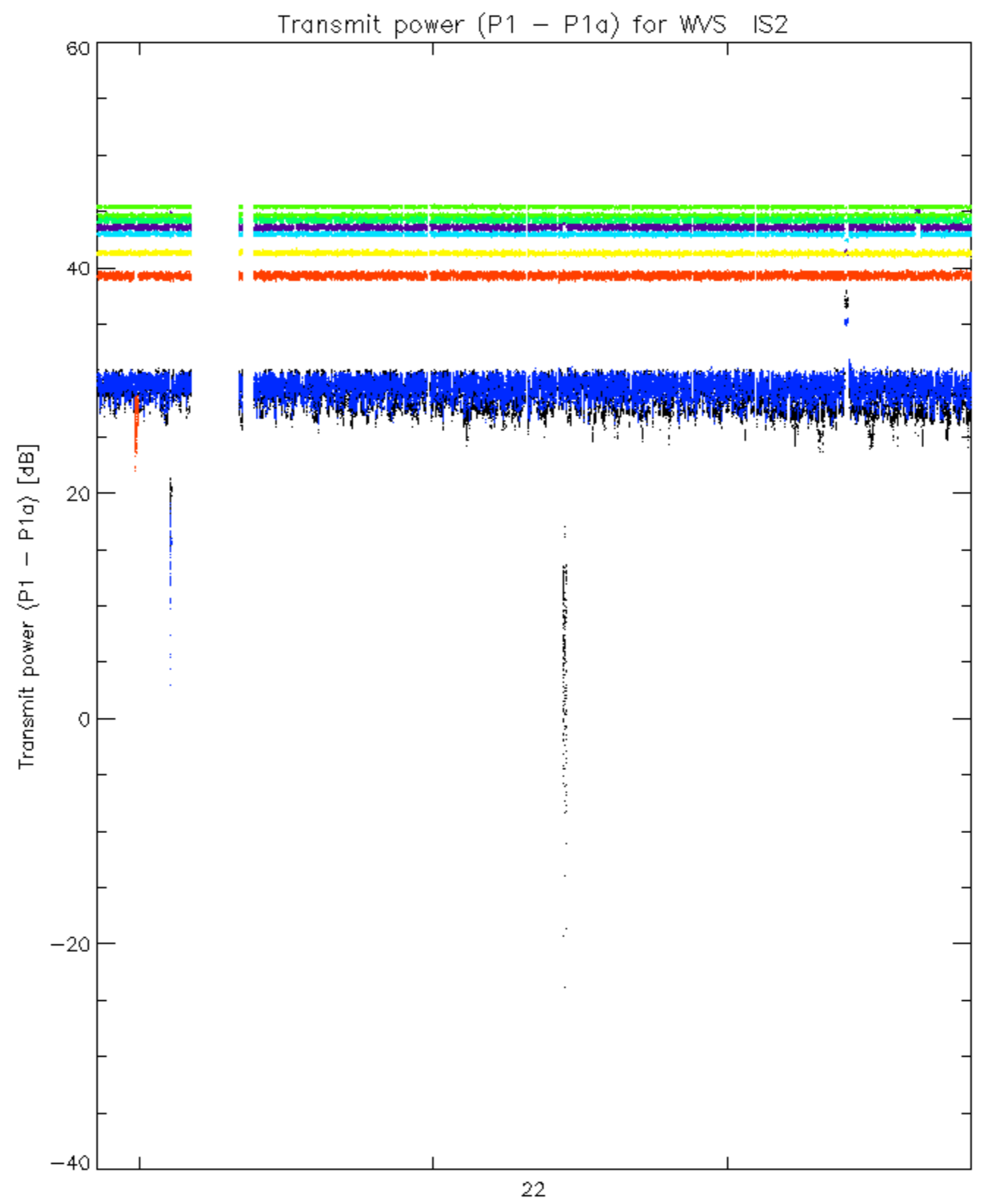


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

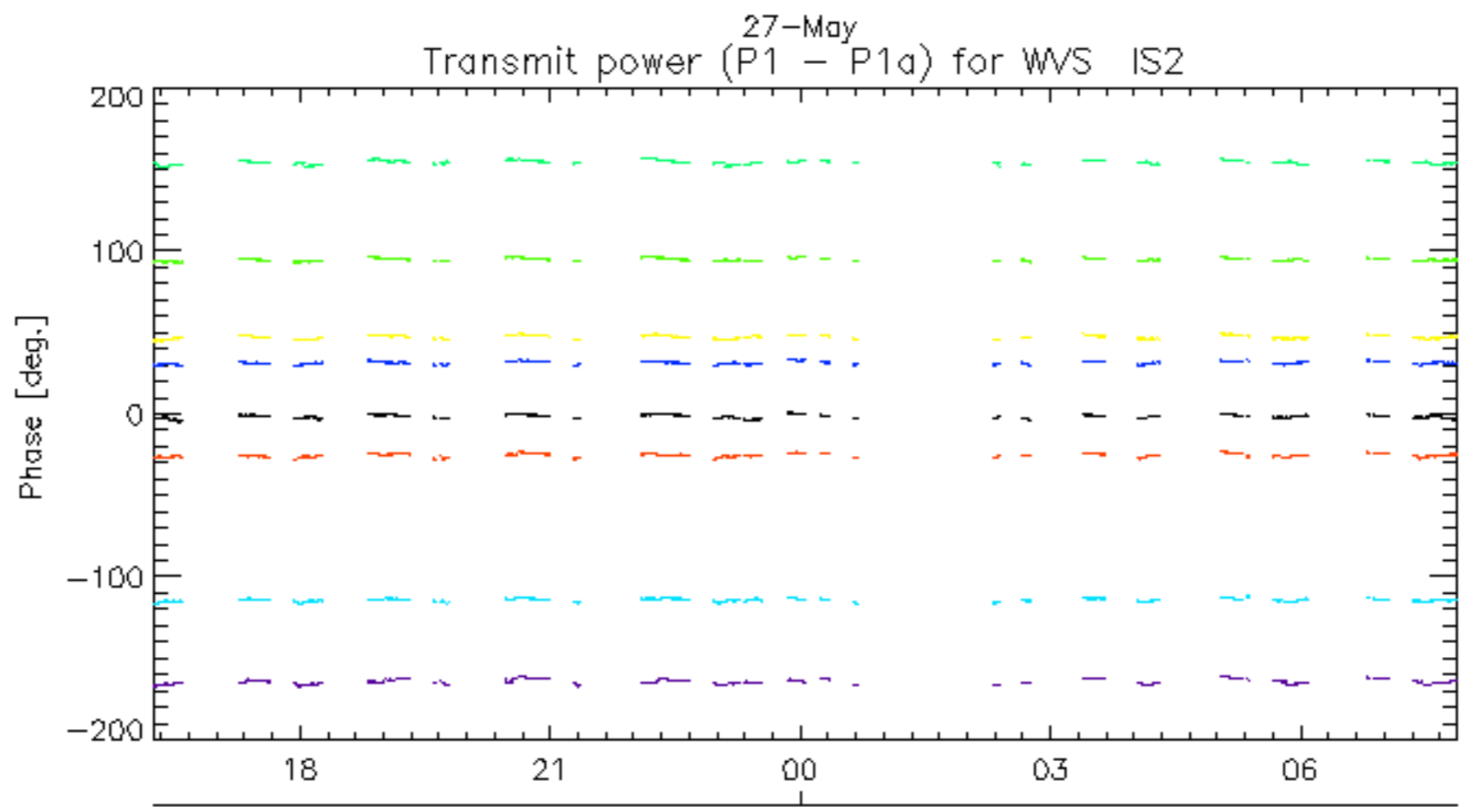
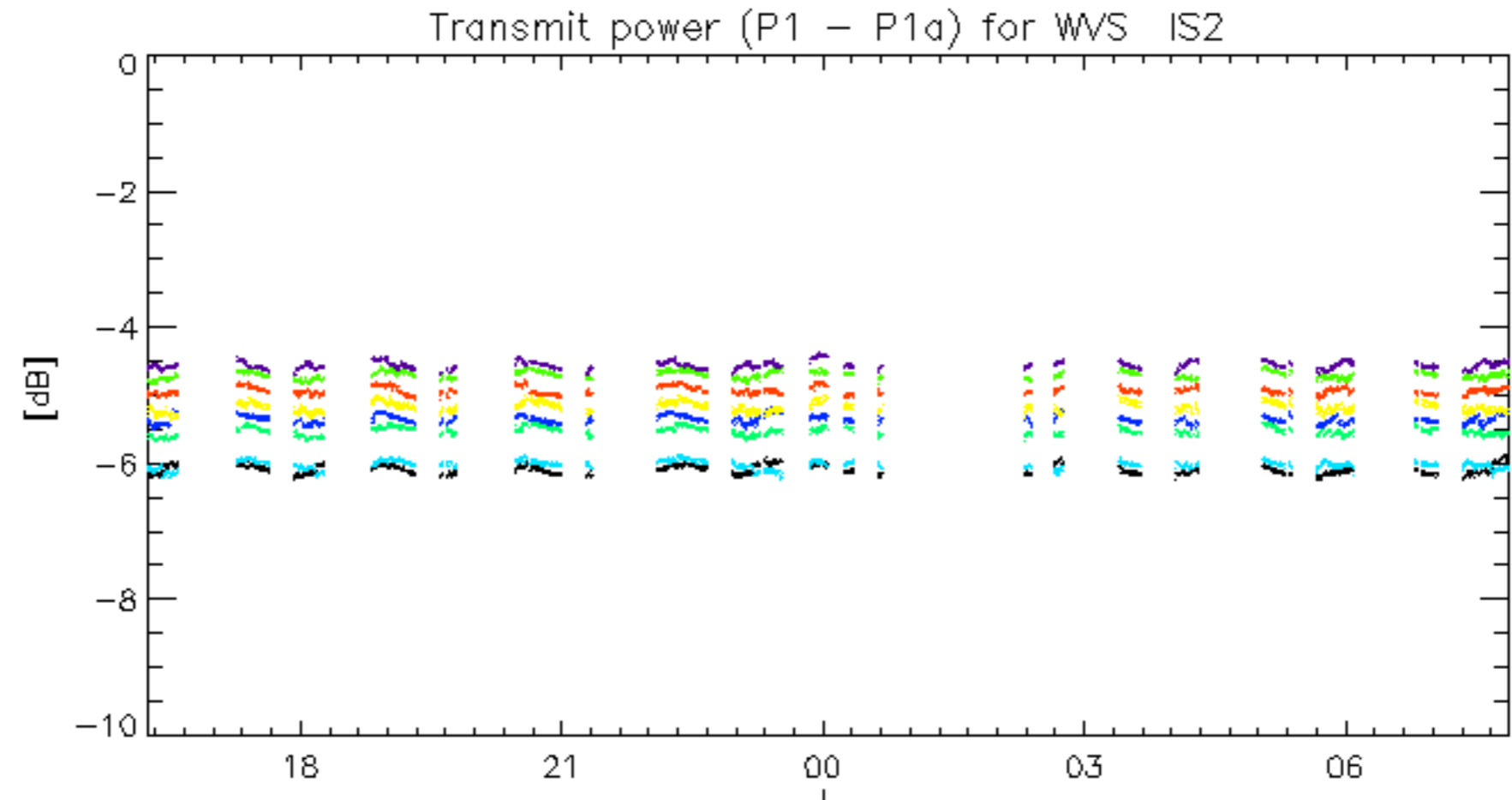


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



rows: **3** **7** **11** **15** **19** **22** **26** **30**

No unavailabilities during the reported period.