

# PRELIMINARY REPORT OF 060625

last update on Sun Jun 25 16:45:47 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 2006-06-24 00:00:00 to 2006-06-25 16:45:47

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	35	63	21	0	18
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	35	63	21	0	18
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	35	63	21	0	18
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	35	63	21	0	18

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	21	26	66	17	25
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	21	26	66	17	25
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	21	26	66	17	25
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	21	26	66	17	25

## 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	20060624 204907
H	20060623 143820

### 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	-3.944746	0.051322	-0.029621
7	P1	-3.138947	0.015495	-0.016692
11	P1	-4.106007	0.019604	0.009282
15	P1	-6.151974	0.020409	-0.056421
19	P1	-3.356598	0.008542	-0.059457
22	P1	-4.519585	0.011667	-0.040225
26	P1	-3.967416	0.016936	0.027726
30	P1	-5.752719	0.008961	-0.027852
3	P1	-16.540451	0.569106	-0.147546
7	P1	-17.229176	0.149171	-0.124218
11	P1	-16.963217	0.308702	-0.118087
15	P1	-13.198646	0.216368	0.060742
19	P1	-14.347965	0.052509	-0.161071
22	P1	-16.162090	0.369166	0.019551
26	P1	-15.206779	0.227312	0.138179
30	P1	-17.148220	0.412893	-0.088201

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.123686	0.081658	0.131956
7	P2	-22.011808	0.098115	0.108738
11	P2	-15.854165	0.112037	0.113059
15	P2	-7.157229	0.095111	-0.005512
19	P2	-9.171046	0.086712	0.003915
22	P2	-18.167667	0.083487	-0.044543
26	P2	-16.406429	0.088616	-0.055356
30	P2	-19.555897	0.087760	0.004793

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.185867	0.003966	-0.014037
7	P3	-8.185867	0.003966	-0.014037
11	P3	-8.185867	0.003966	-0.014037
15	P3	-8.185867	0.003966	-0.014037
19	P3	-8.185867	0.003966	-0.014037
22	P3	-8.185867	0.003966	-0.014037
26	P3	-8.185867	0.003966	-0.014037
30	P3	-8.185867	0.003966	-0.014037

#### 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	-3.822449	0.093501	-0.034503
7	P1	-2.585339	0.030522	0.059643
11	P1	-2.862261	0.022989	0.044152
15	P1	-3.522259	0.052202	-0.017506
19	P1	-3.411999	0.014448	-0.019633
22	P1	-5.083453	0.019709	0.003922
26	P1	-5.856340	0.016066	-0.028601
30	P1	-5.191651	0.026465	-0.011025
3	P1	-11.641970	0.142220	-0.114219
7	P1	-9.970370	0.049155	-0.067805
11	P1	-10.221969	0.086600	-0.073334
15	P1	-10.681717	0.161701	-0.065271
19	P1	-15.541151	0.077157	-0.026169
22	P1	-20.947845	1.162617	-0.049846
26	P1	-16.457222	0.331291	0.092124
30	P1	-17.888584	0.373081	0.129187

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.805803	0.075297	0.209022
7	P2	-22.480120	0.131821	0.105319
11	P2	-11.136864	0.049243	0.101490
15	P2	-4.921117	0.049462	-0.009435
19	P2	-6.883152	0.054249	0.010734
22	P2	-8.209397	0.043460	0.006860
26	P2	-24.152937	0.069426	-0.063650
30	P2	-22.058313	0.056995	0.049736

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.020433	0.004910	-0.006679
7	P3	-8.020502	0.004890	-0.006609
11	P3	-8.020453	0.004901	-0.006999
15	P3	-8.020462	0.004901	-0.006483
19	P3	-8.020362	0.004902	-0.006444
22	P3	-8.020577	0.004887	-0.006951
26	P3	-8.020577	0.004904	-0.006717
30	P3	-8.020477	0.004889	-0.006545

## 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	0.000560290
	stdev	1.70914e-07
MEAN Q	mean	0.000526452
	stdev	2.19491e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137150
	stdev	0.00115905
STDEV Q	mean	0.137508
	stdev	0.00117685



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006062[345]

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_1PNPDE20060625_003958_000001552048_00474_22572_8683.N1	1	0
ASA_IMM_1PNPDE20060625_005615_000000362048_00475_22573_8684.N1	1	0
ASA_IMM_1PNPDE20060625_022556_000000362048_00476_22574_8697.N1	1	0
ASA_IMM_1PNPDE20060625_063915_000001102048_00478_22576_8747.N1	1	0
ASA_WSM_1PNPDE20060624_230552_000001102048_00474_22572_5298.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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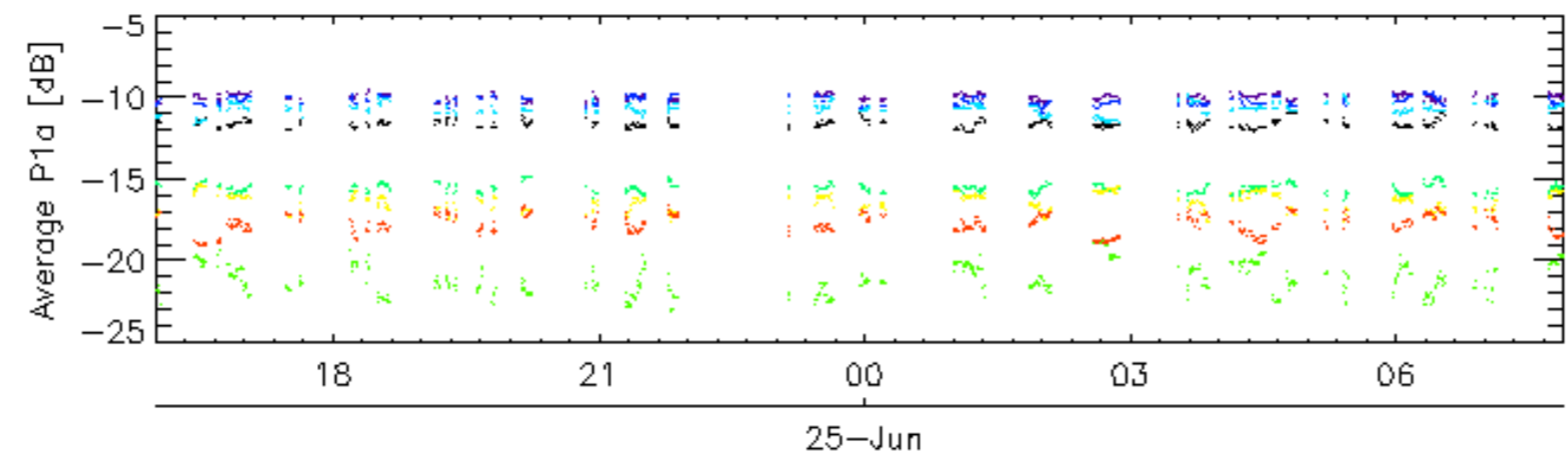
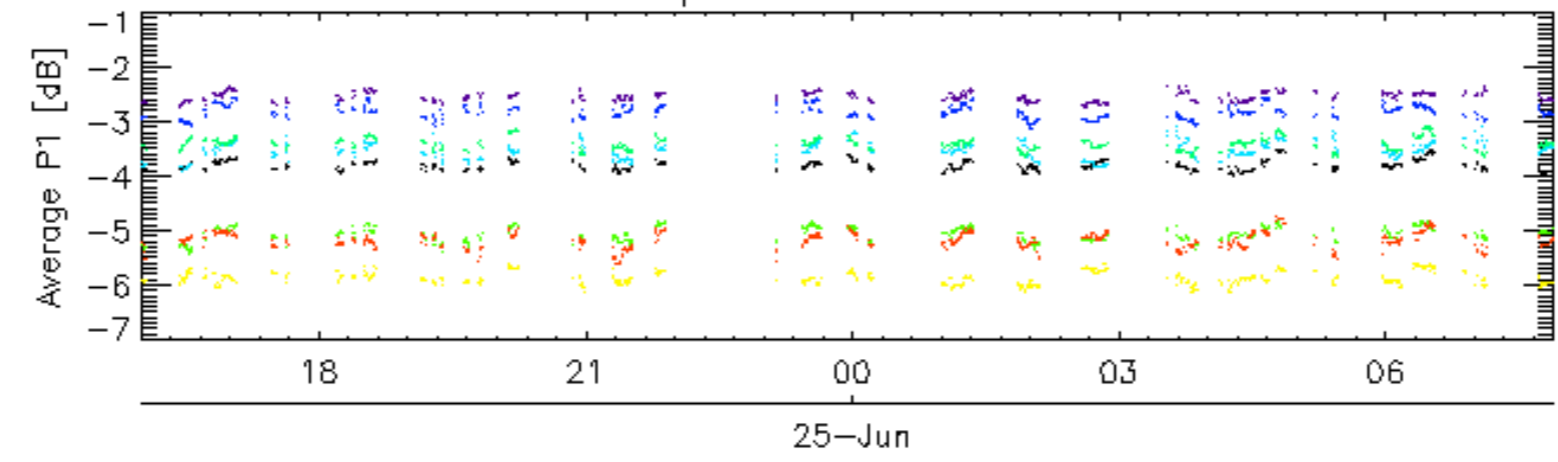
Descending
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### 7.6 - Doppler evolution versus ANX for GM1

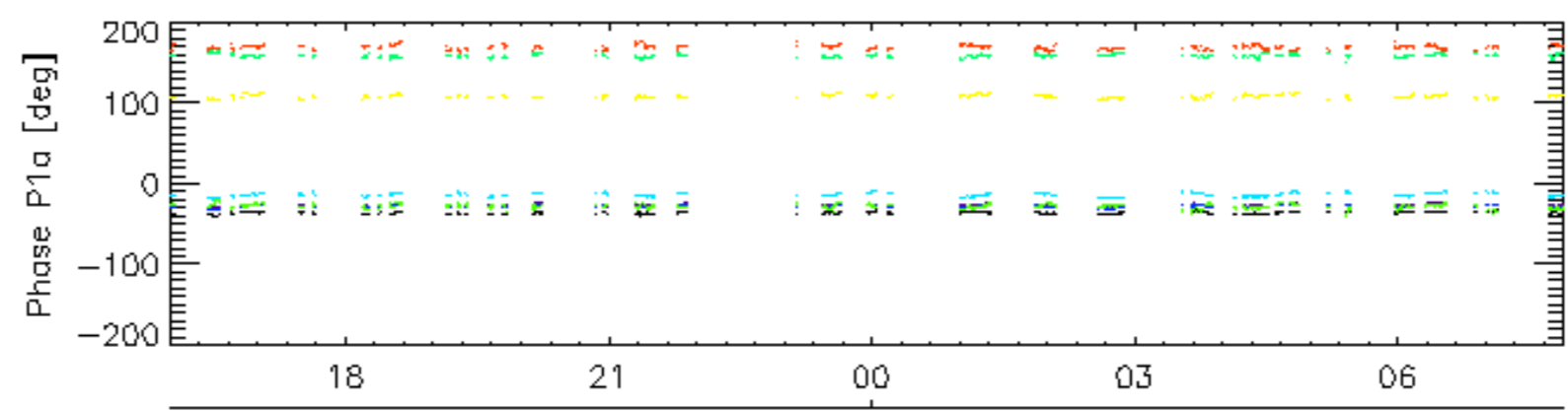
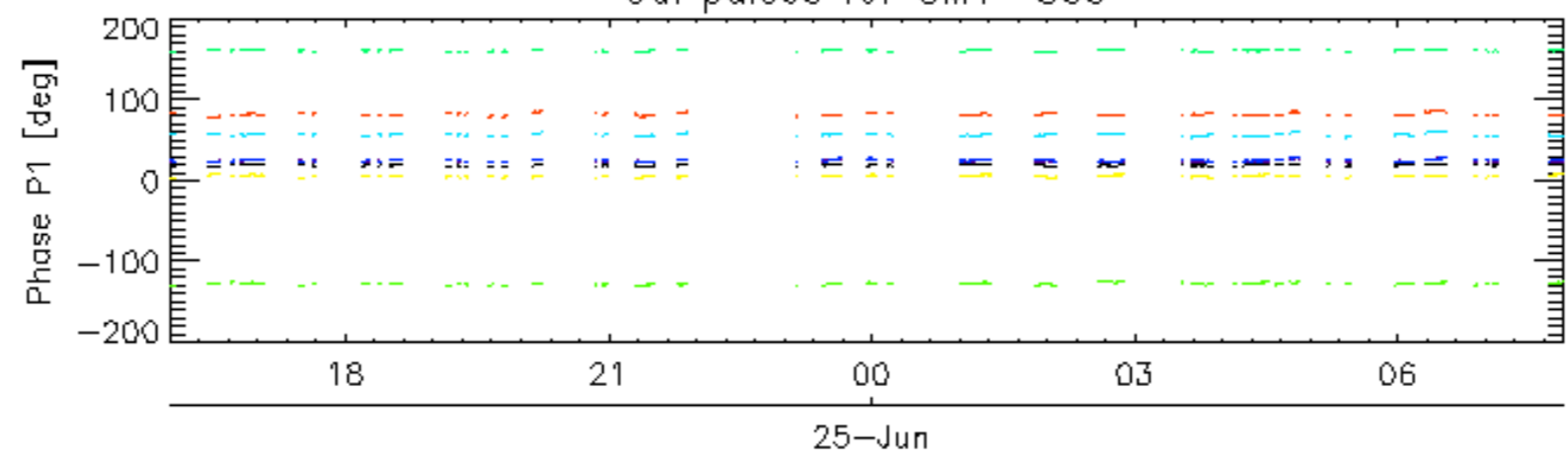
<b>Evolution Doppler error versus ANX</b>
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Cal pulses for GM1 SS3

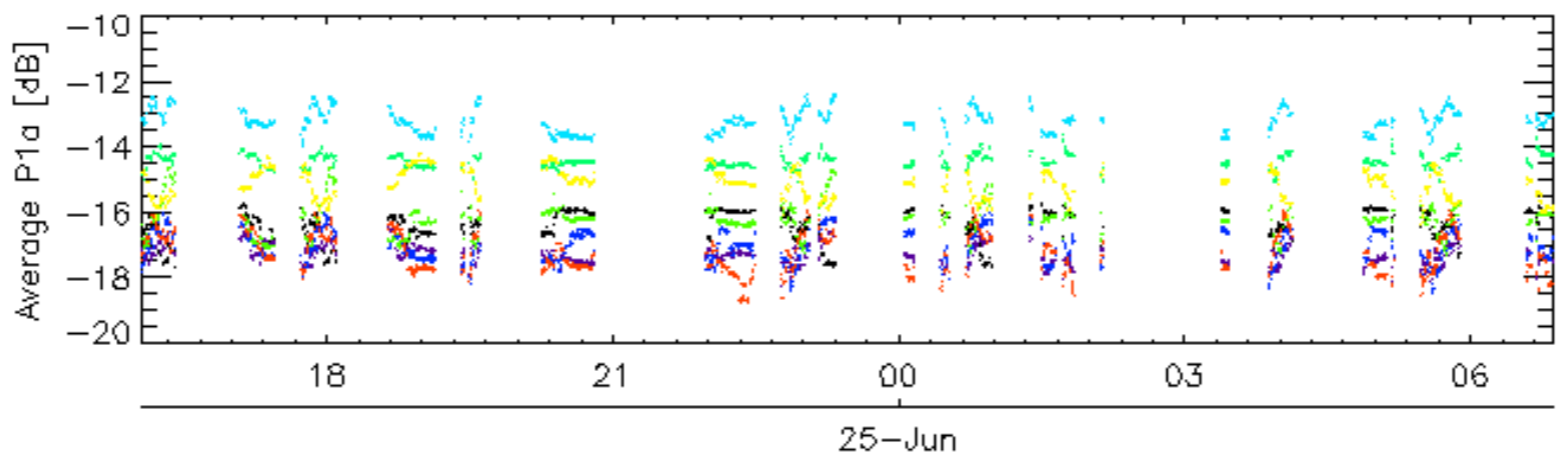
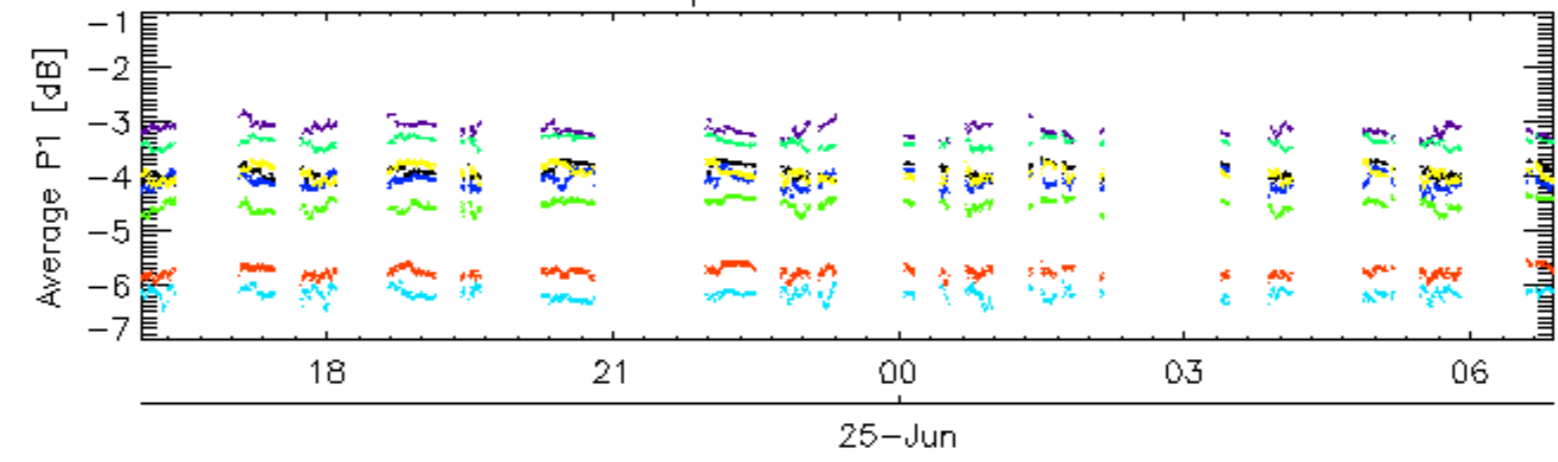


Cal pulses for GM1 SS3

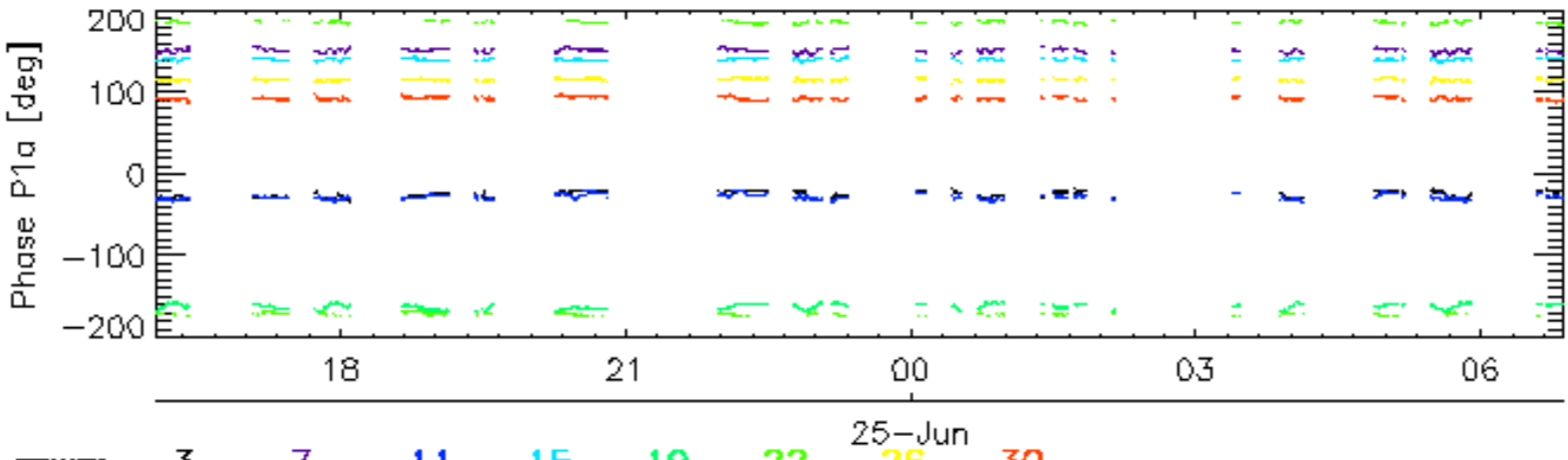
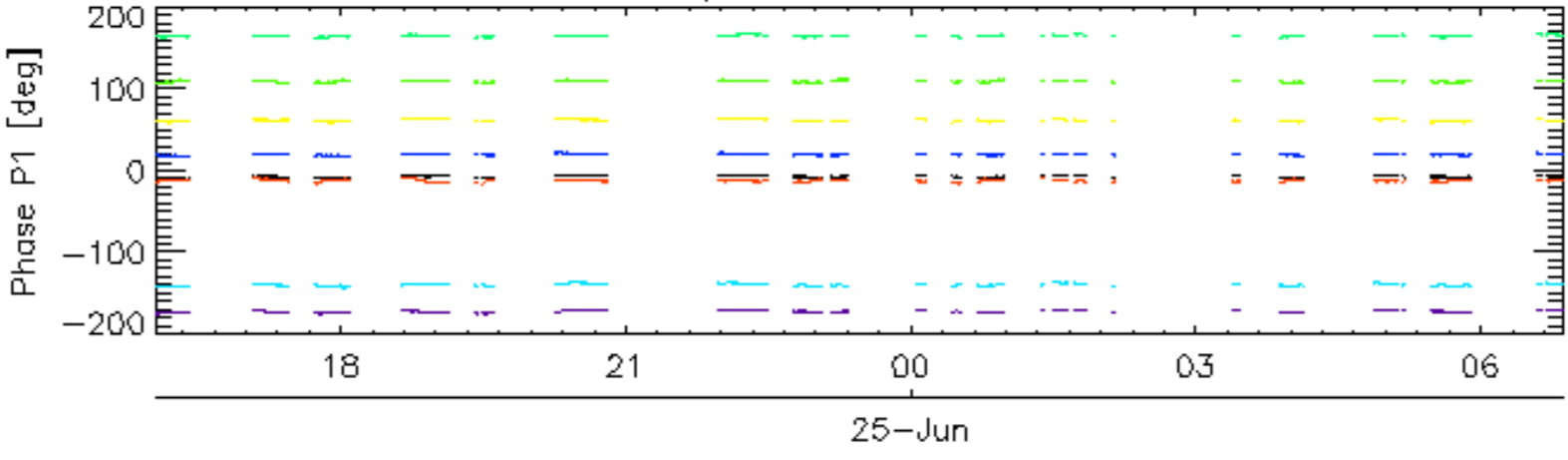


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

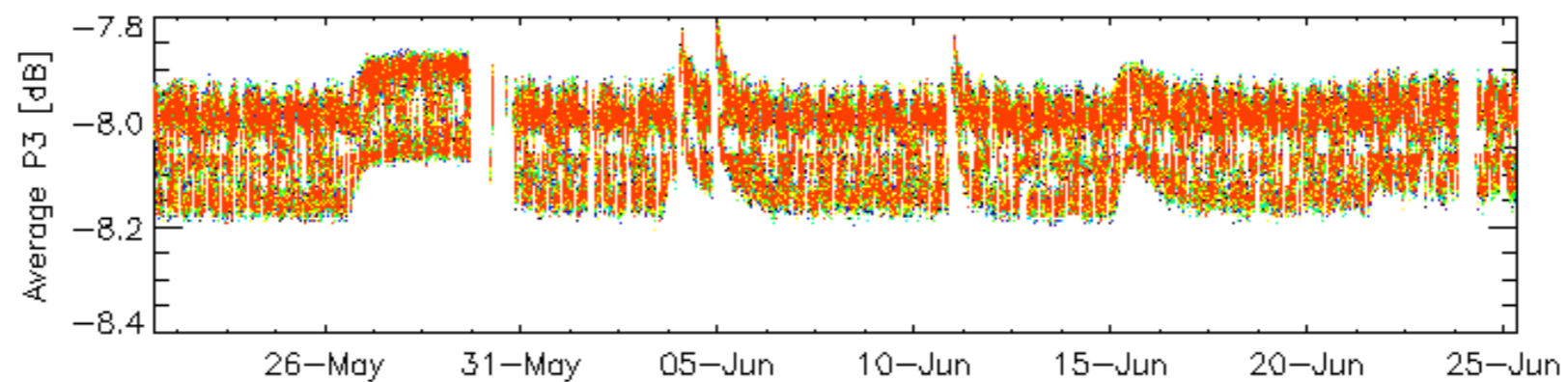
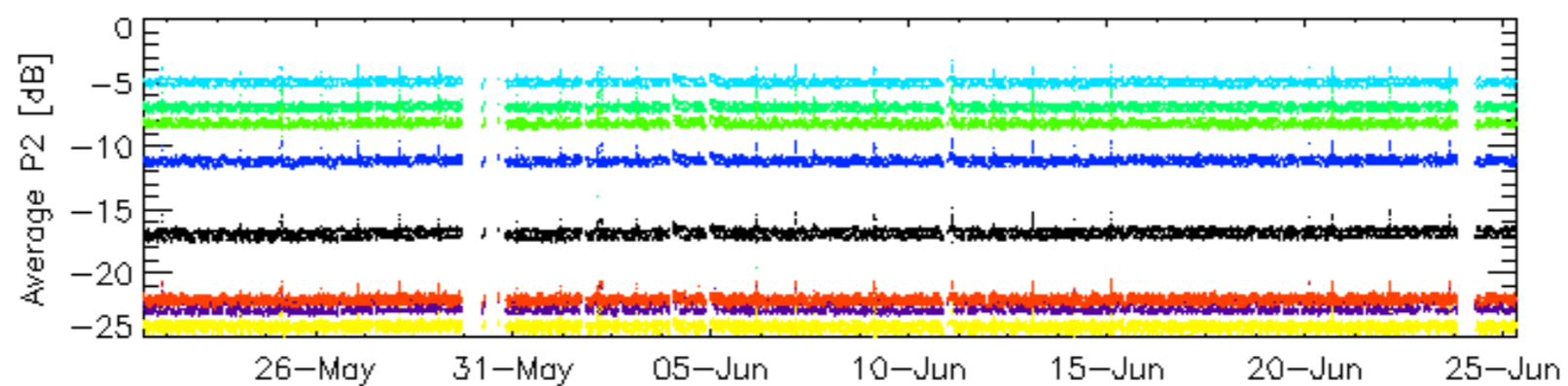
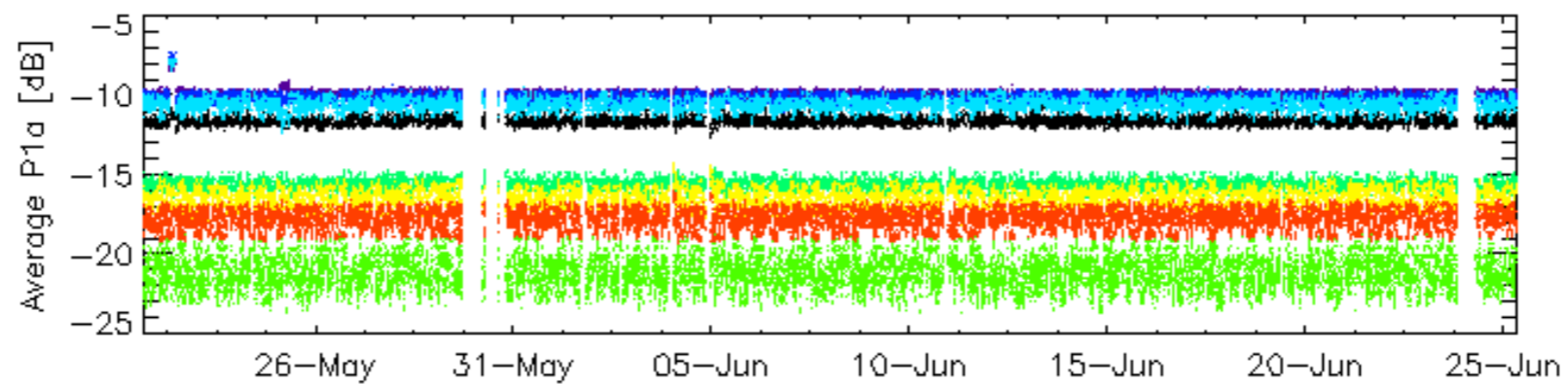
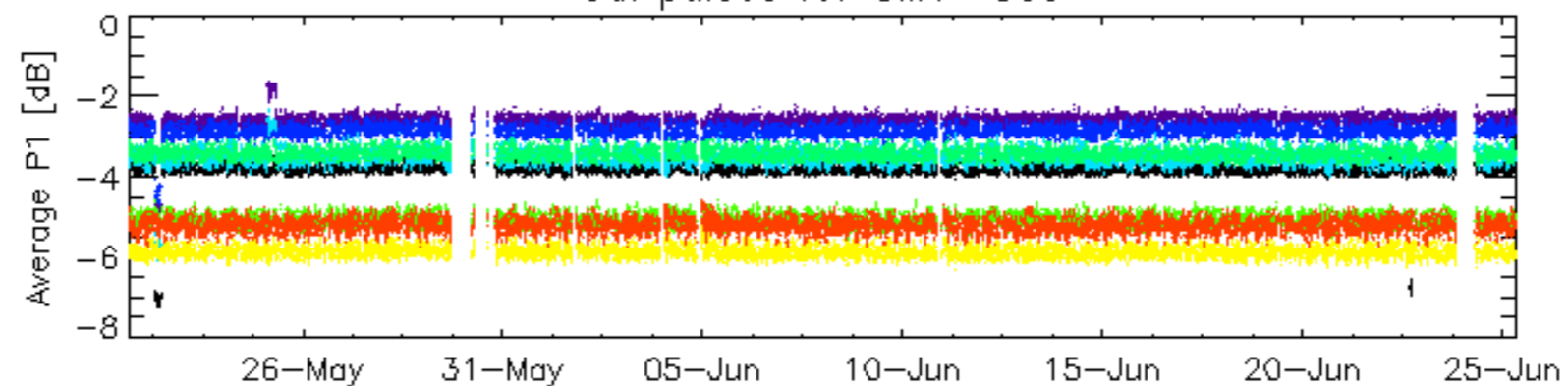


Cal pulses for WVS IS2



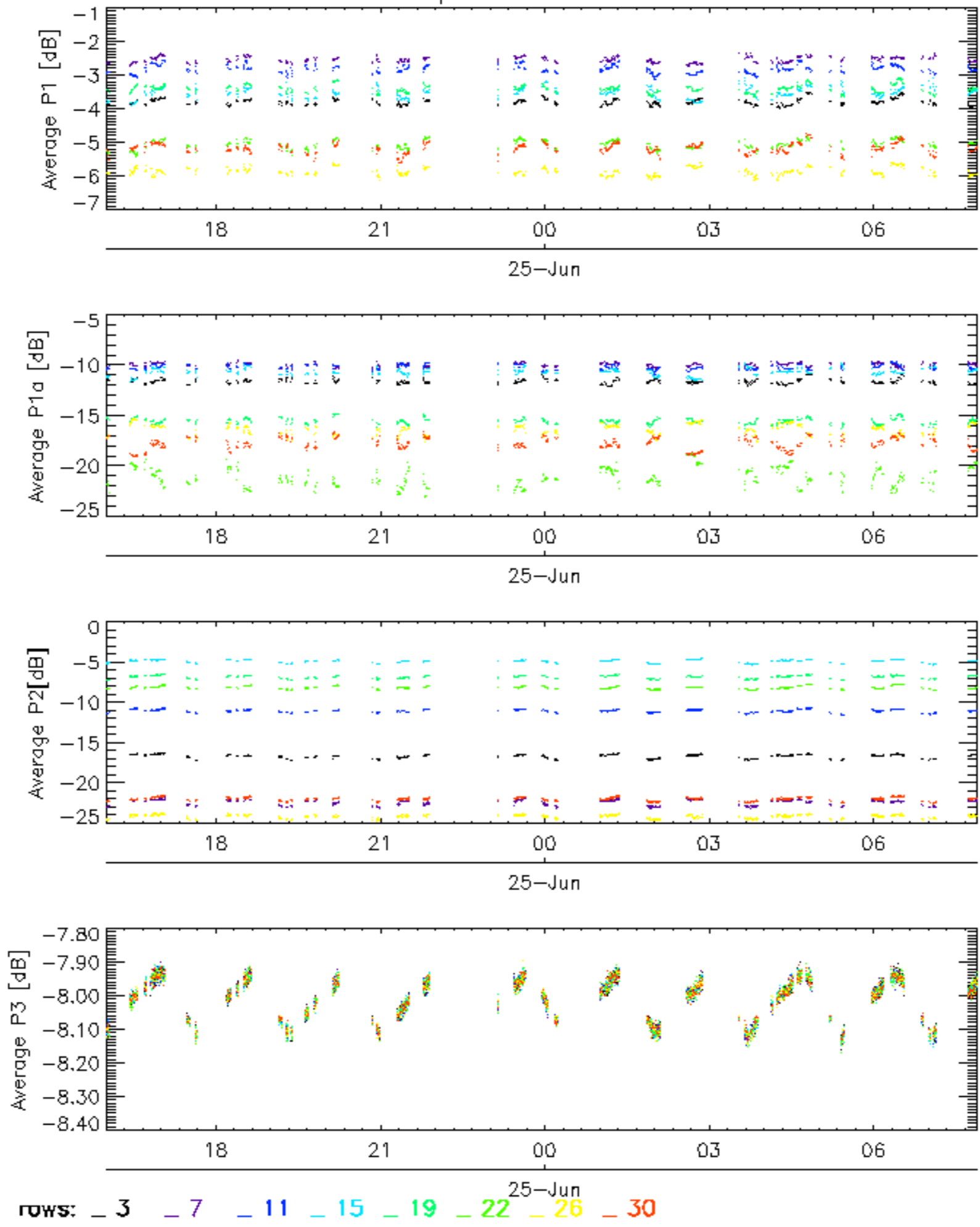
rows: 3 7 11 15 19 22 26 30

### Cal pulses for GM1 SS3

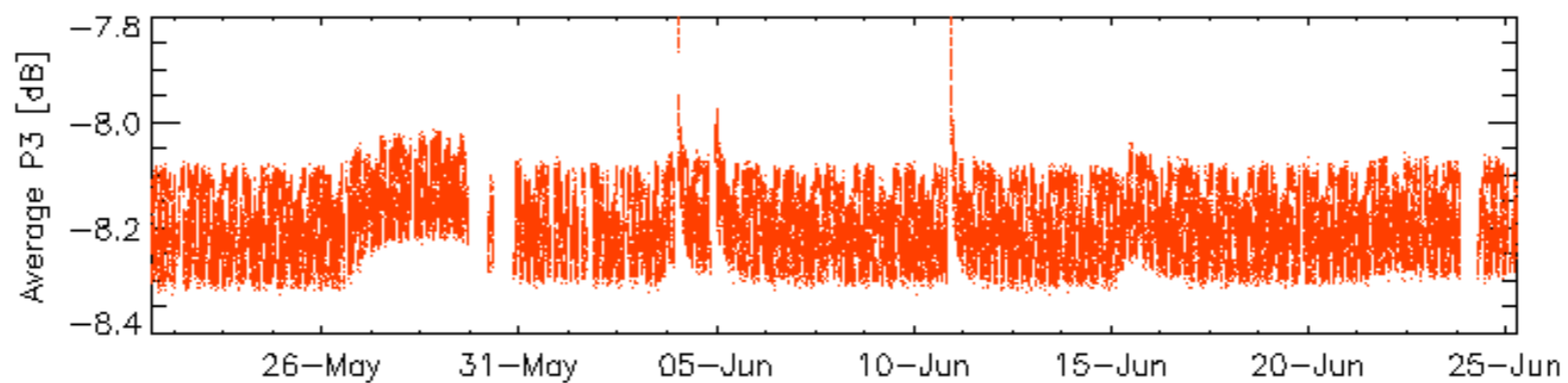
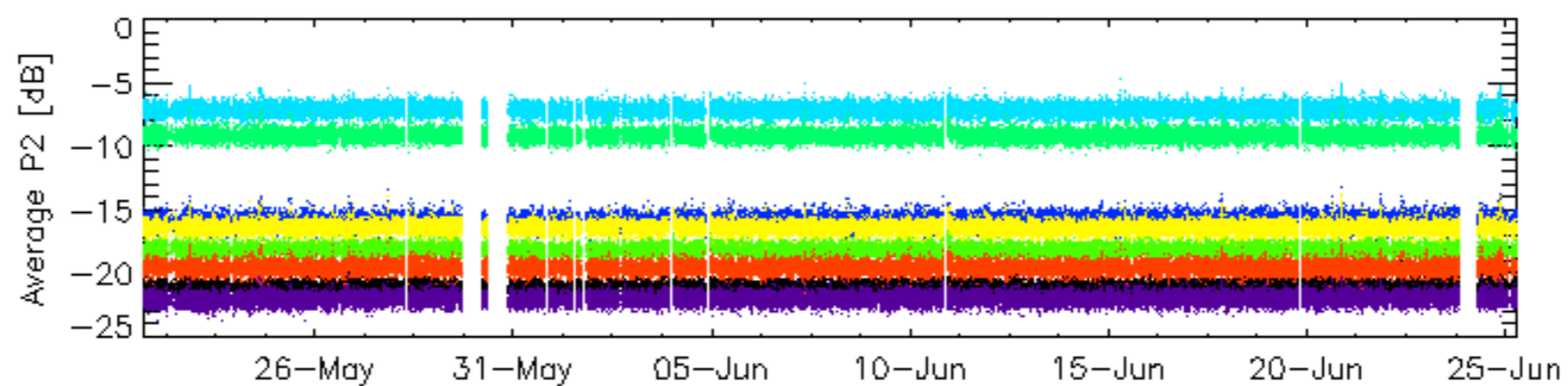
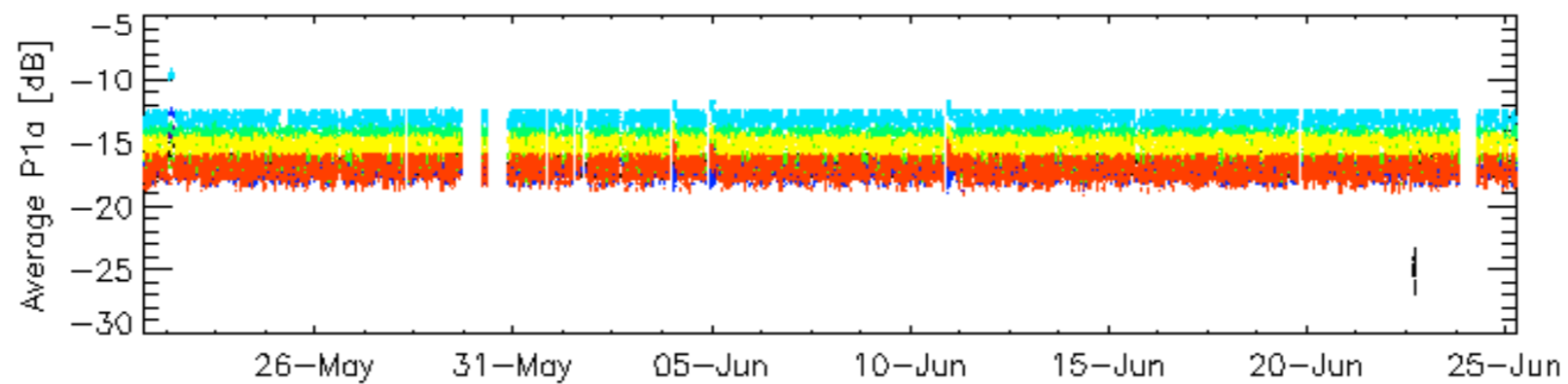
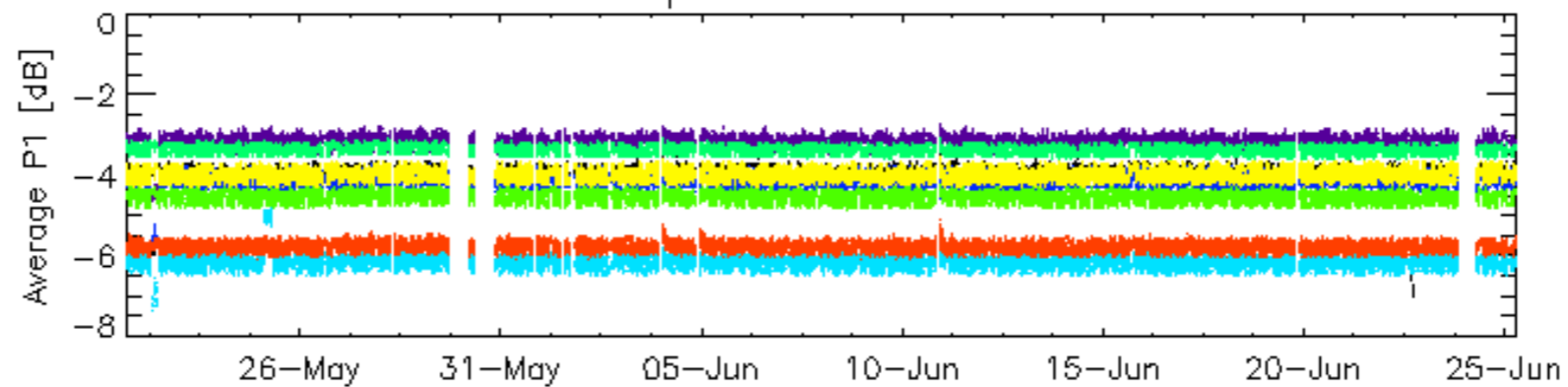


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

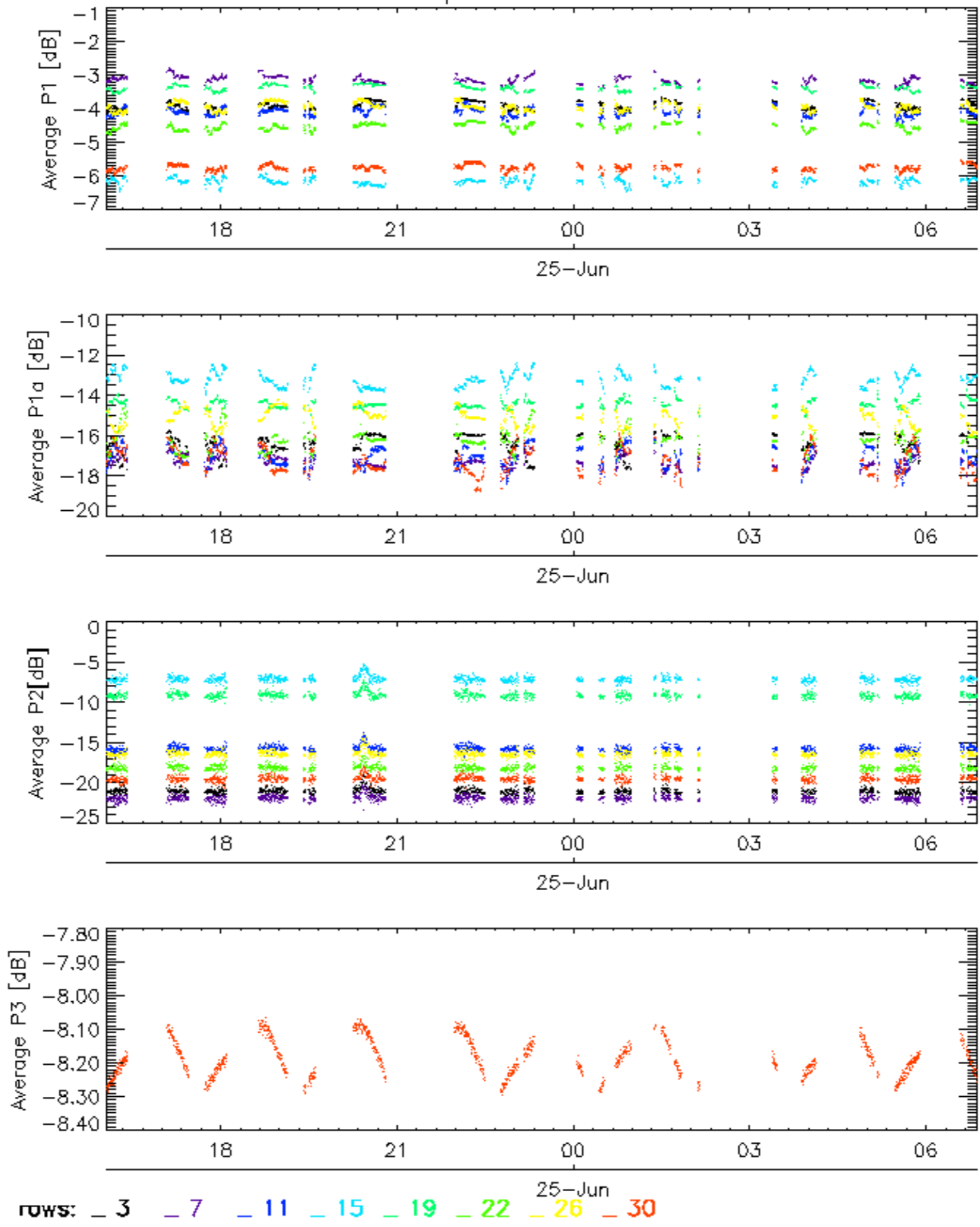


Cal pulses for WVS IS2



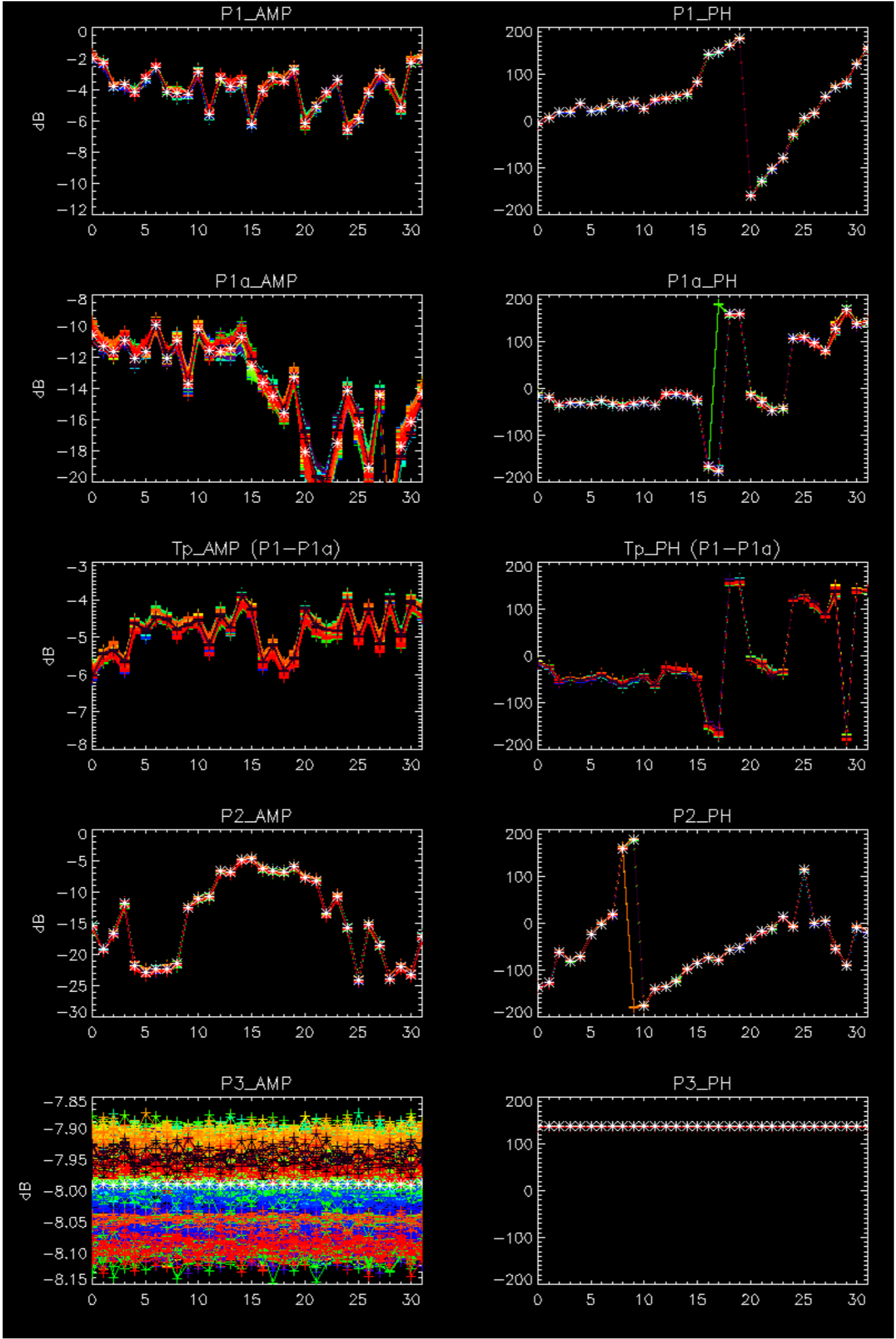
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

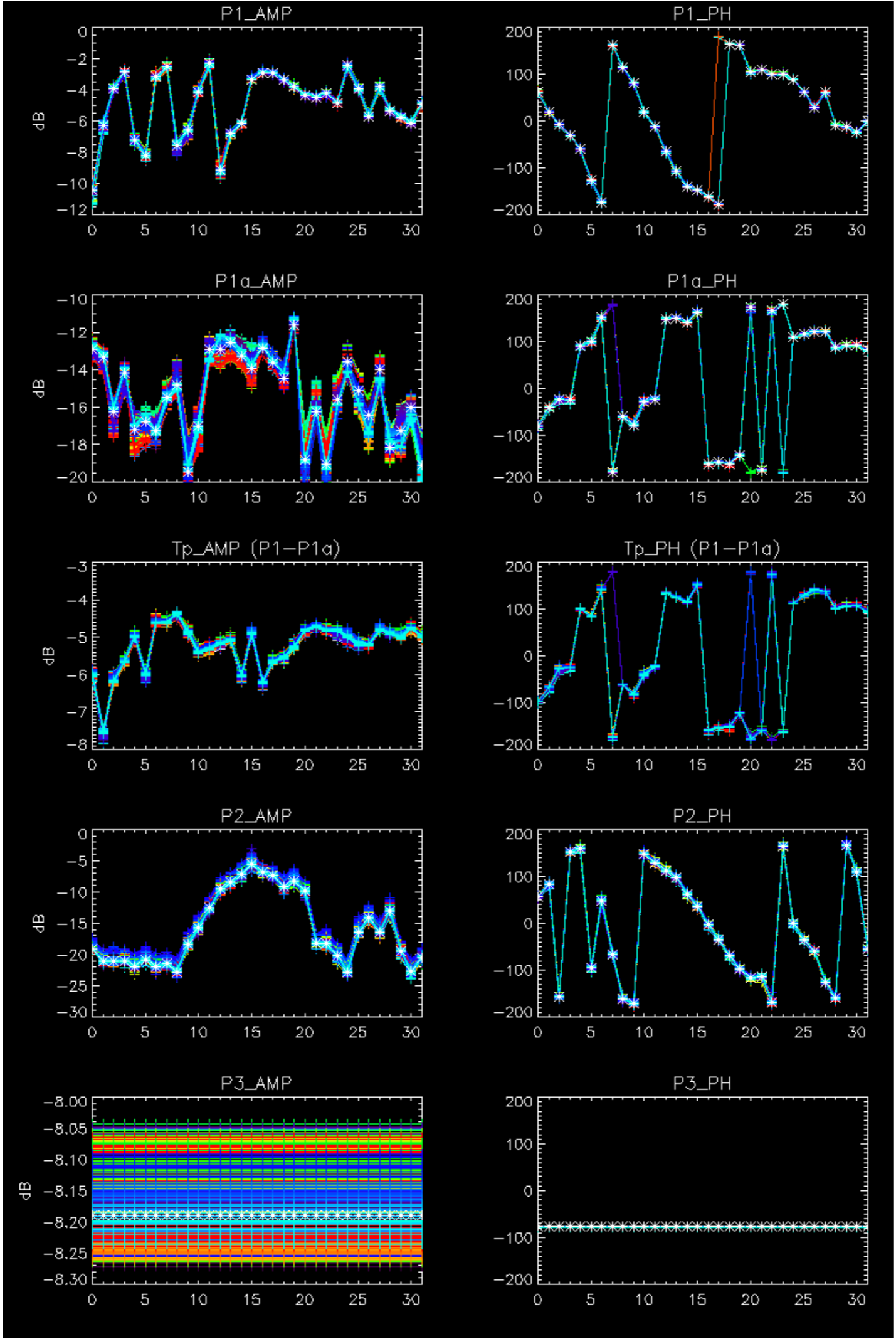
Cal pulses for WVS IS2



No anomalies observed.



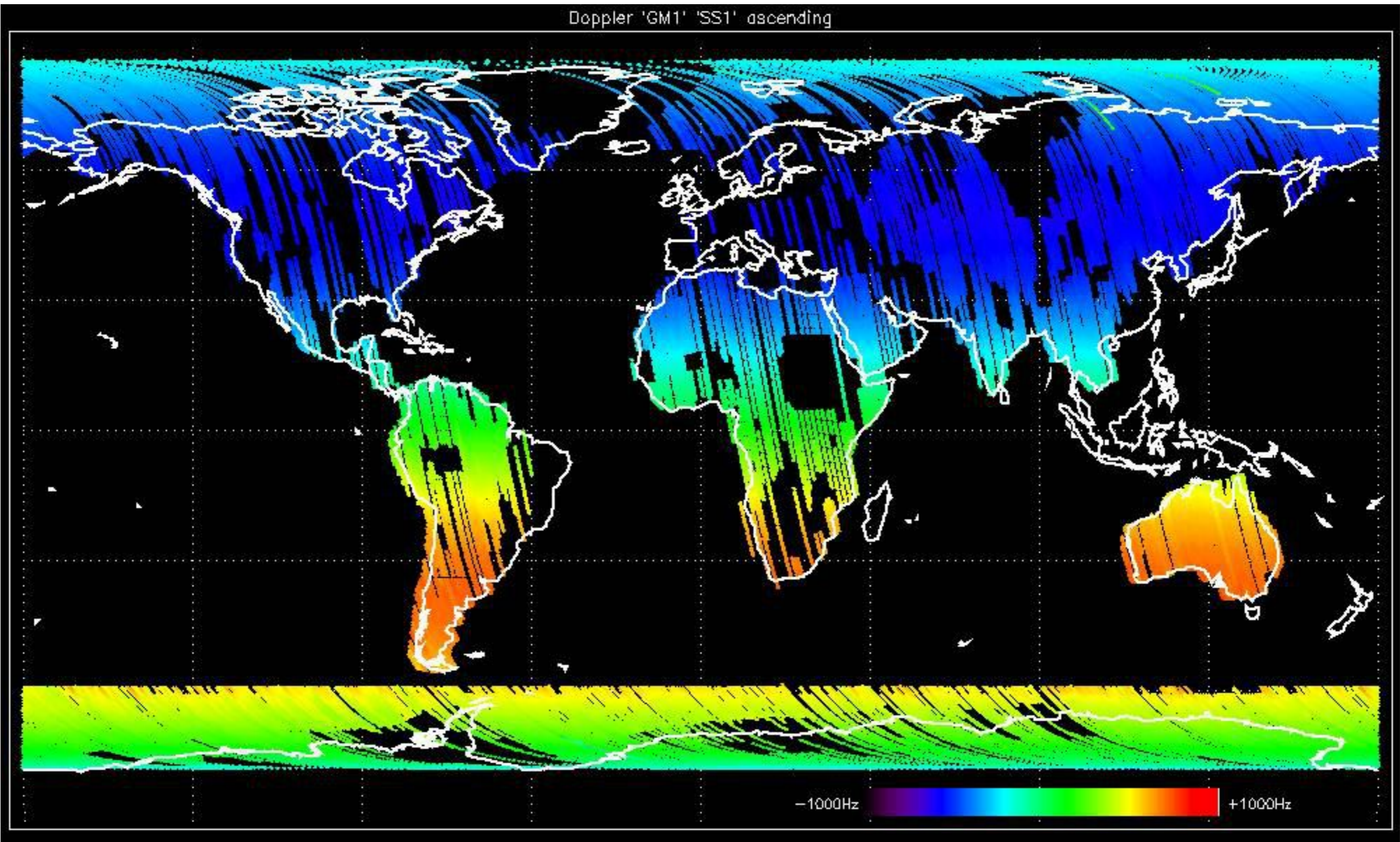




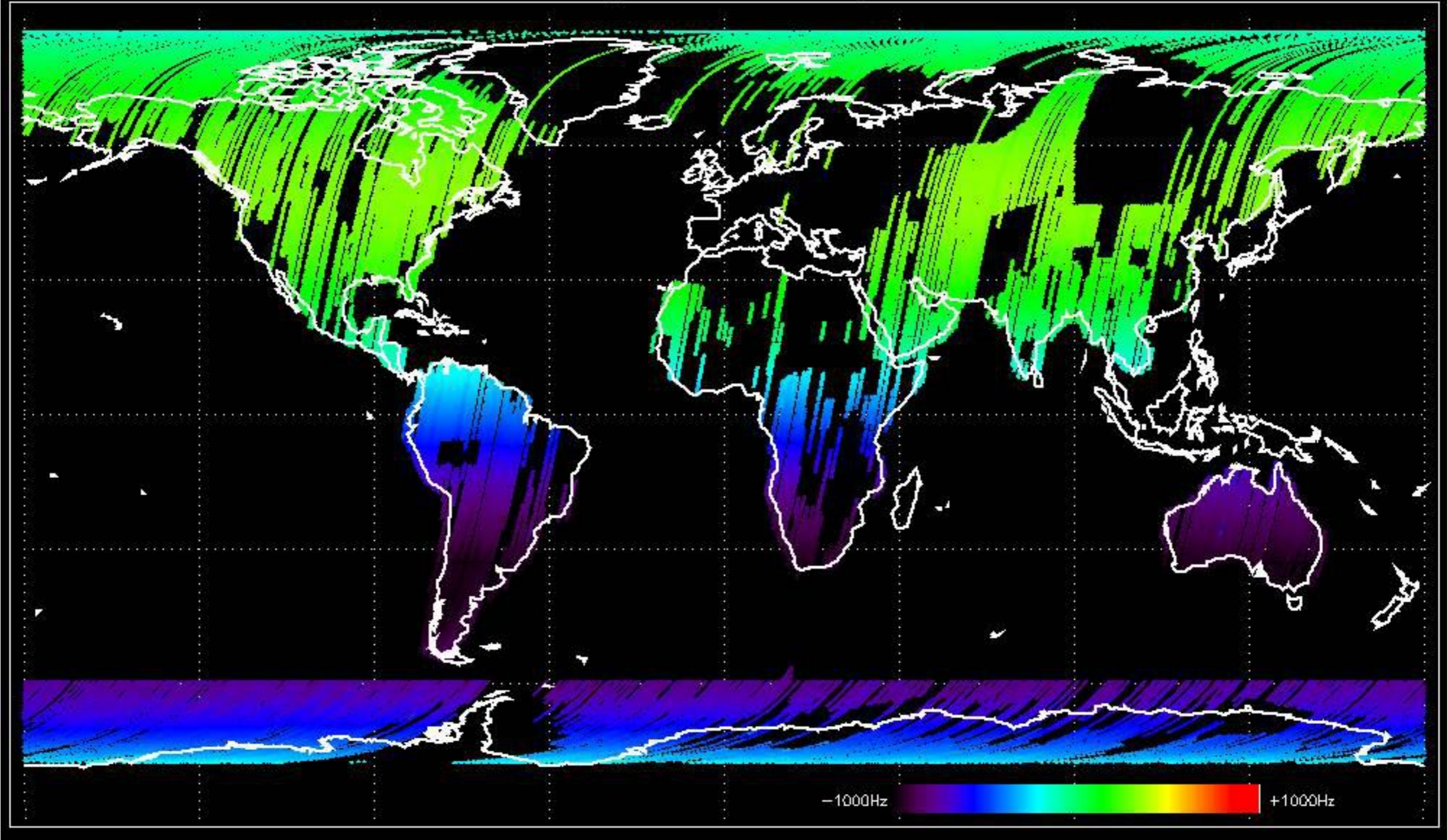
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



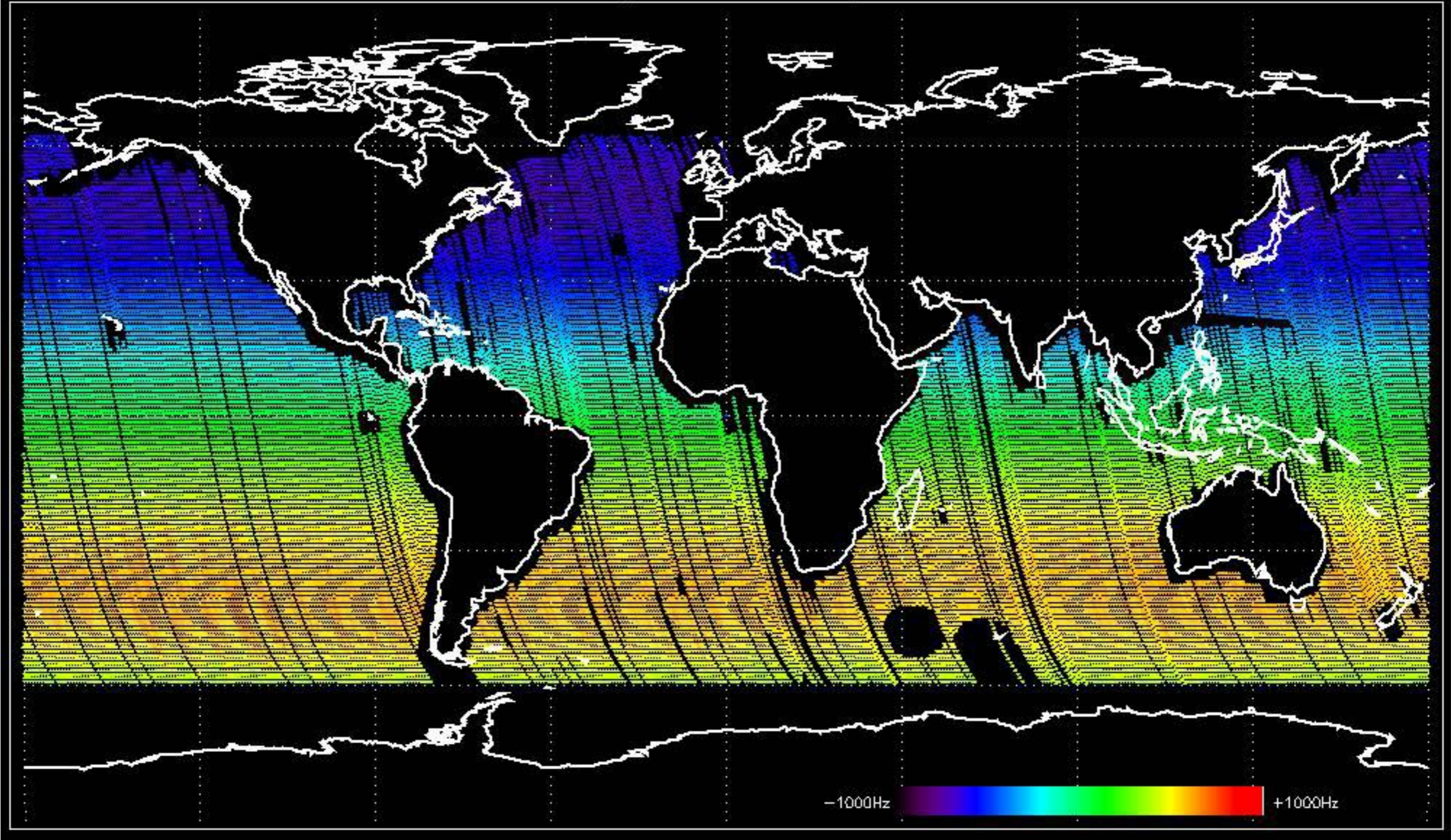
Doppler 'GM1' 'SS1' ascending



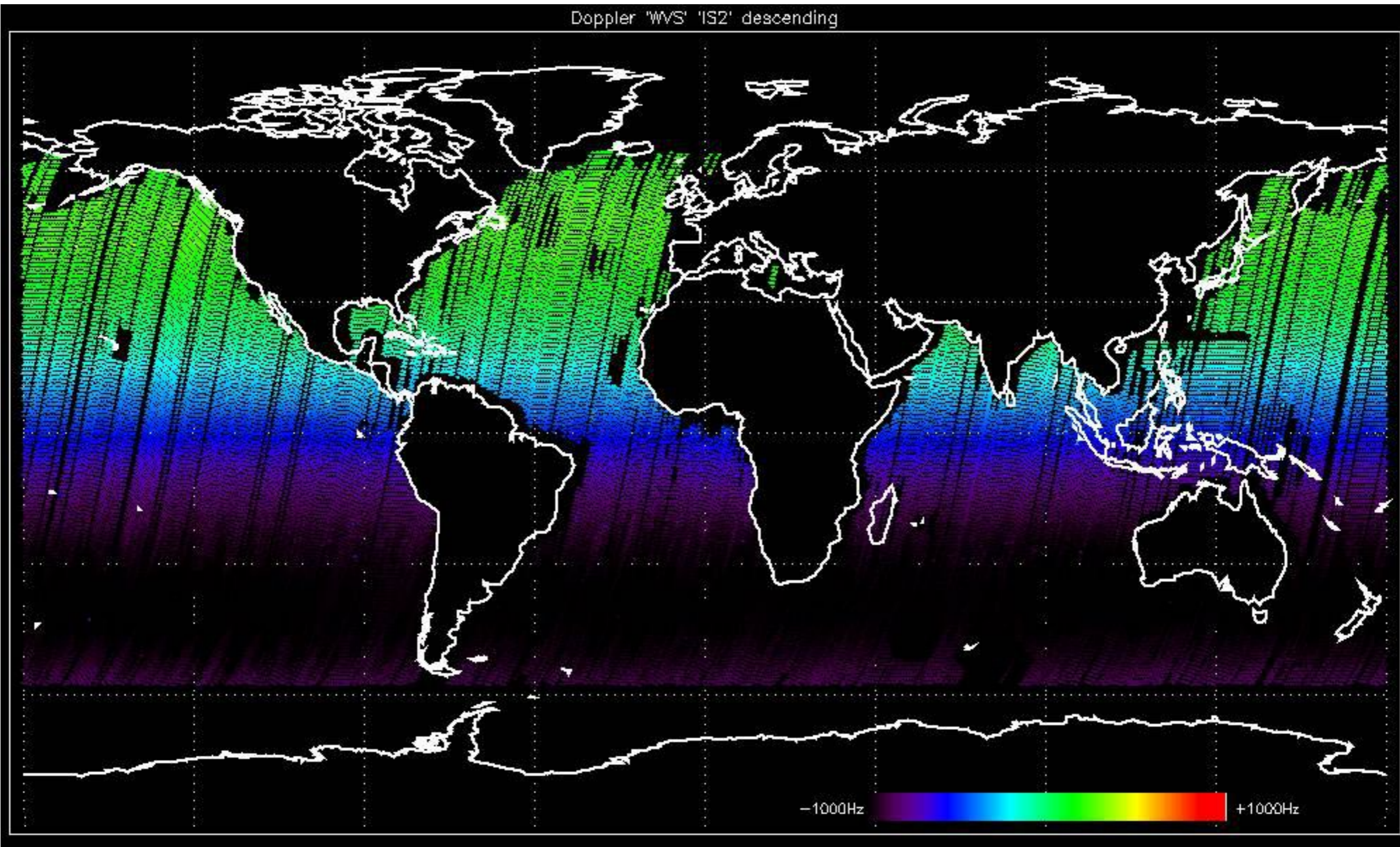
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

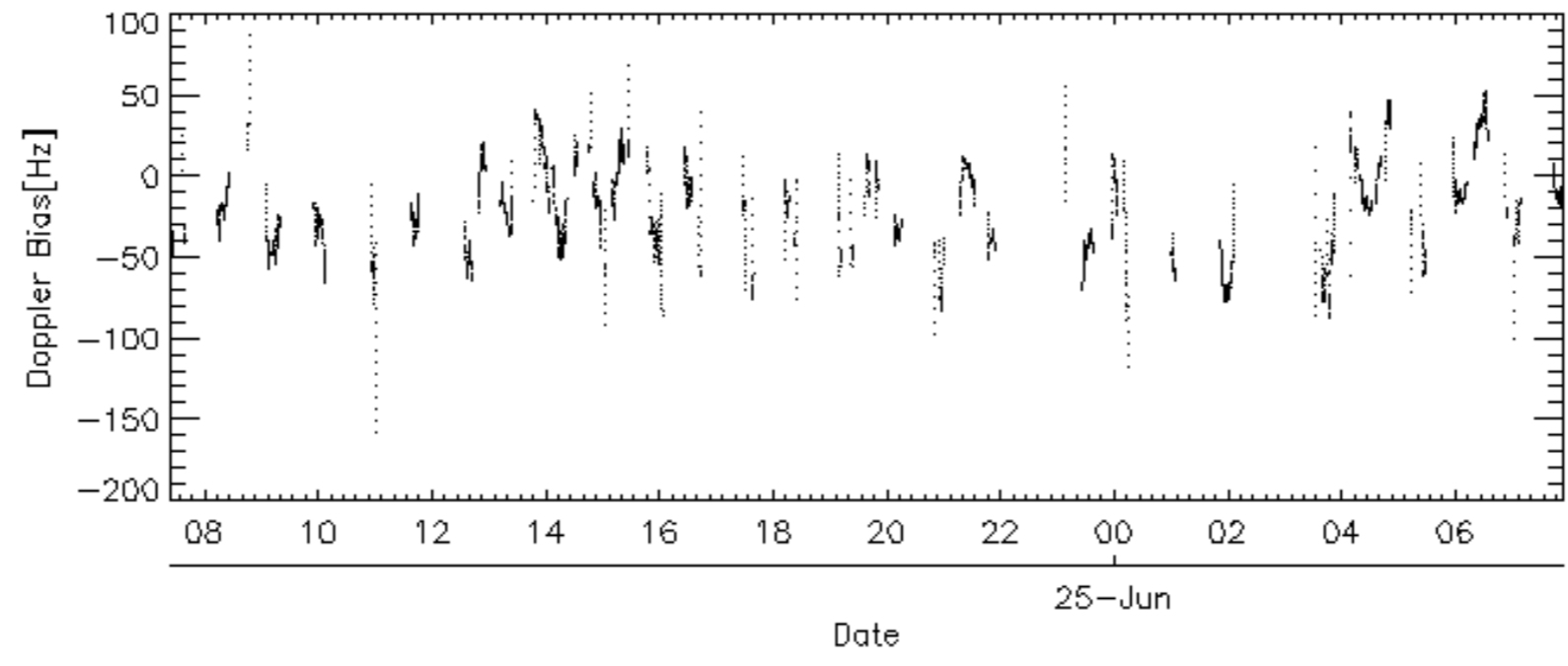
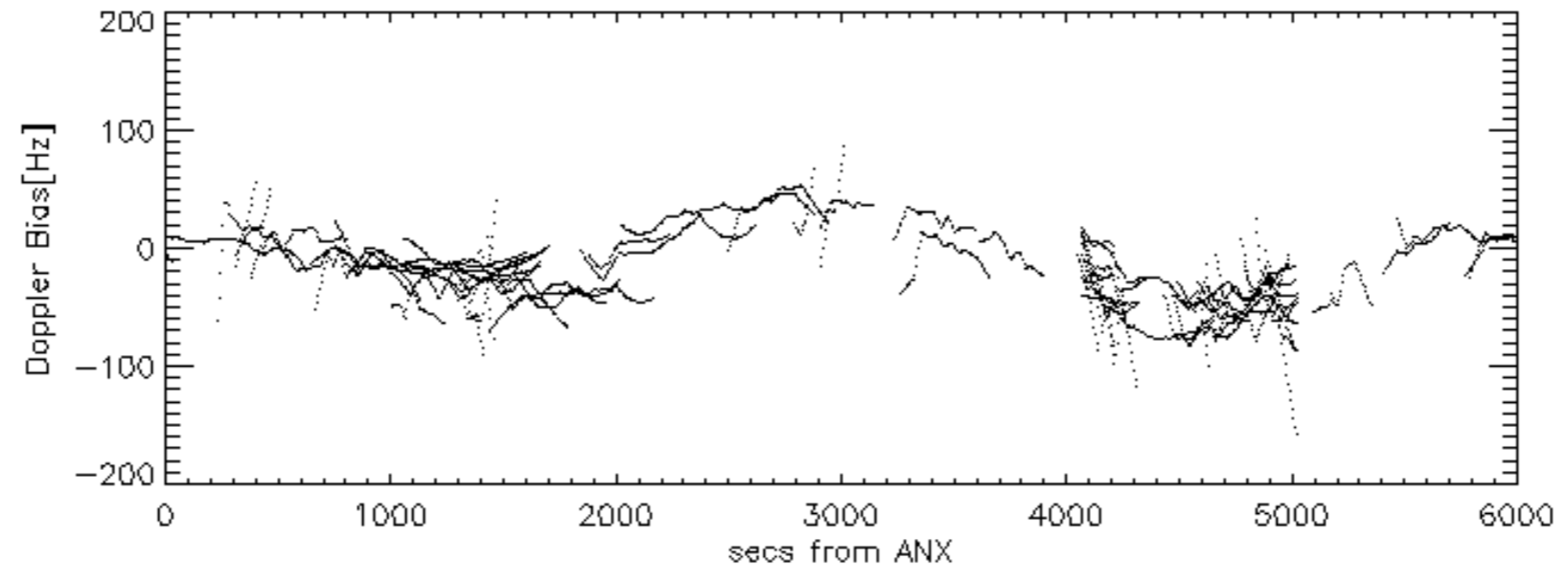
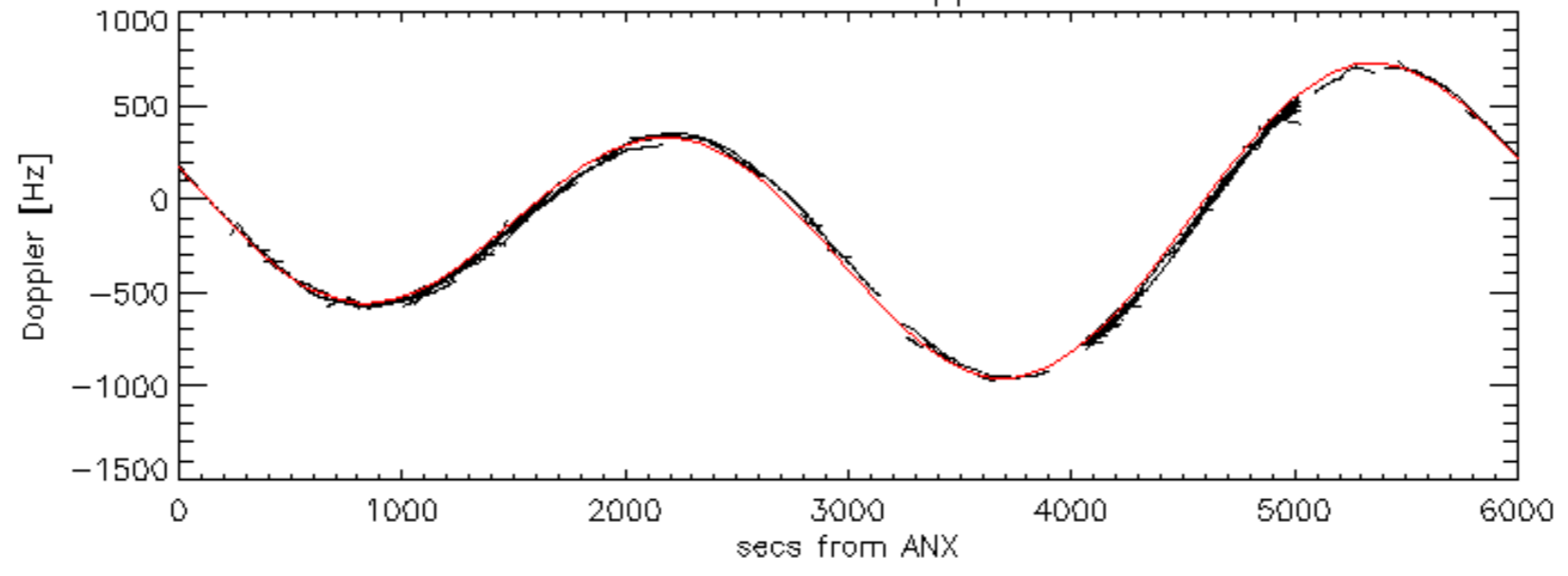


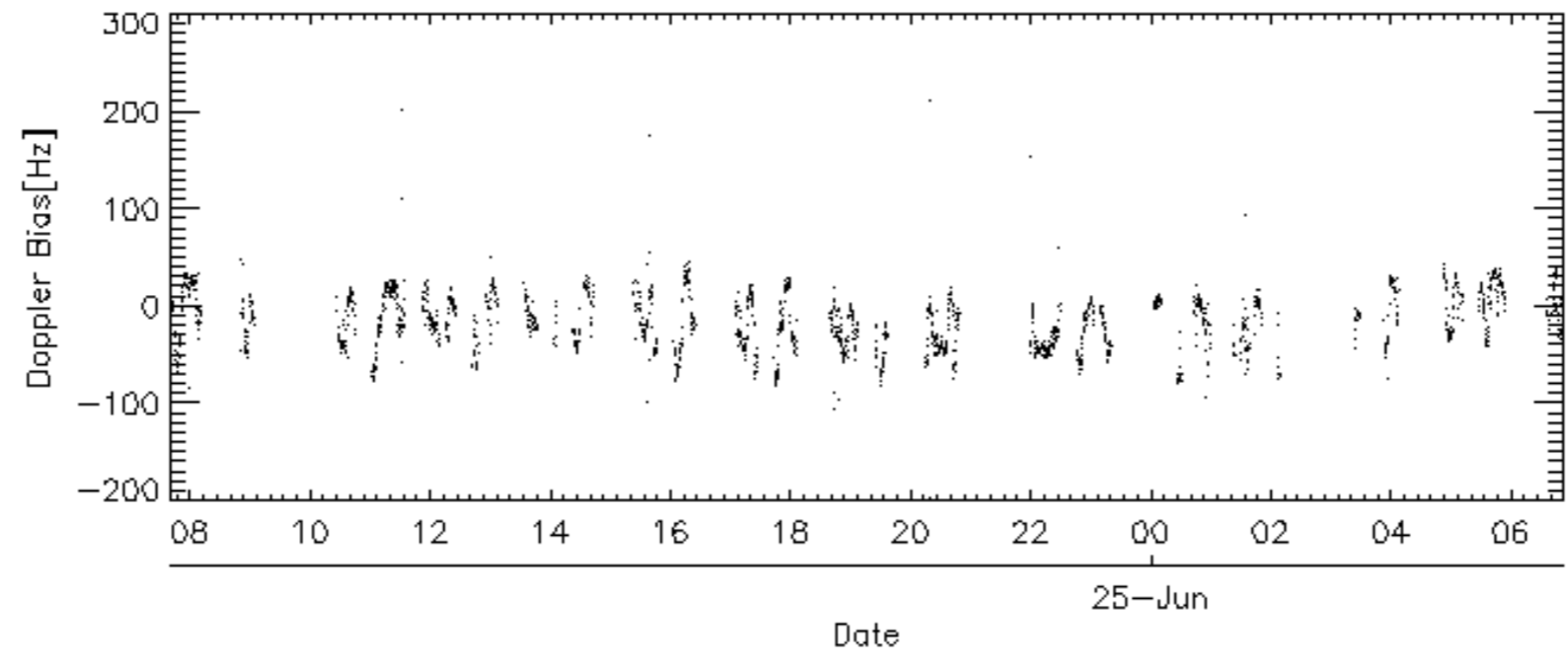
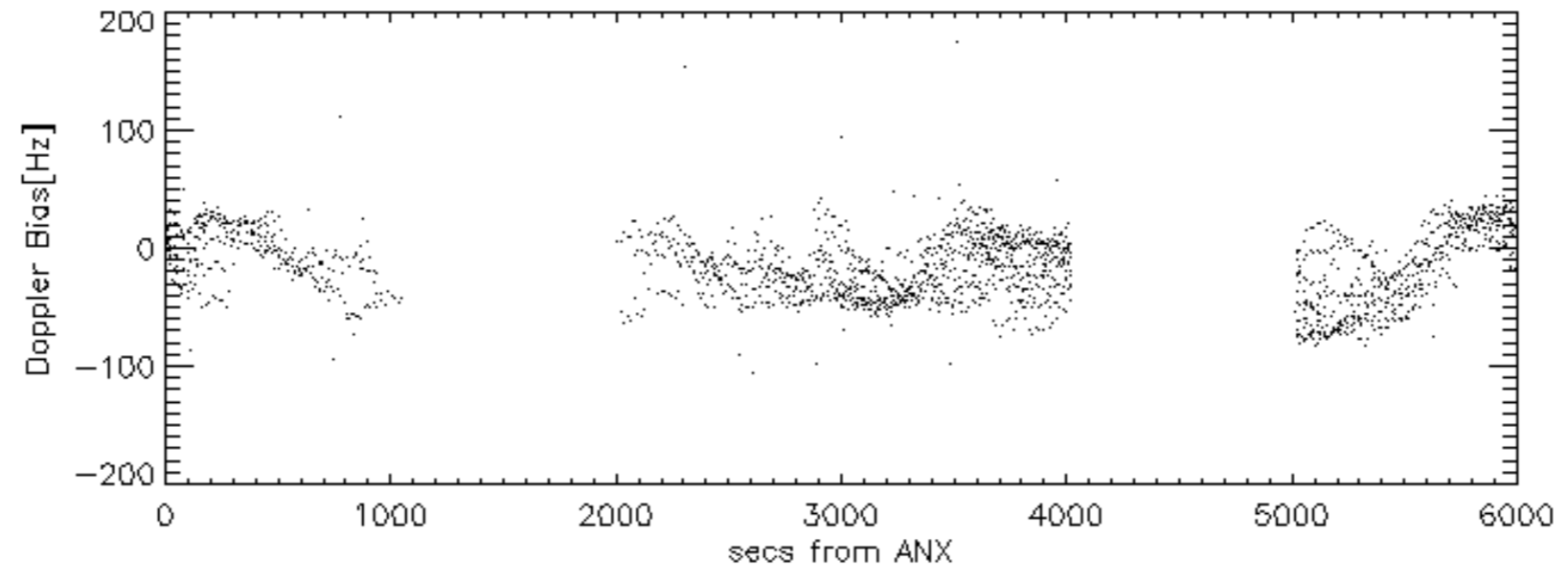
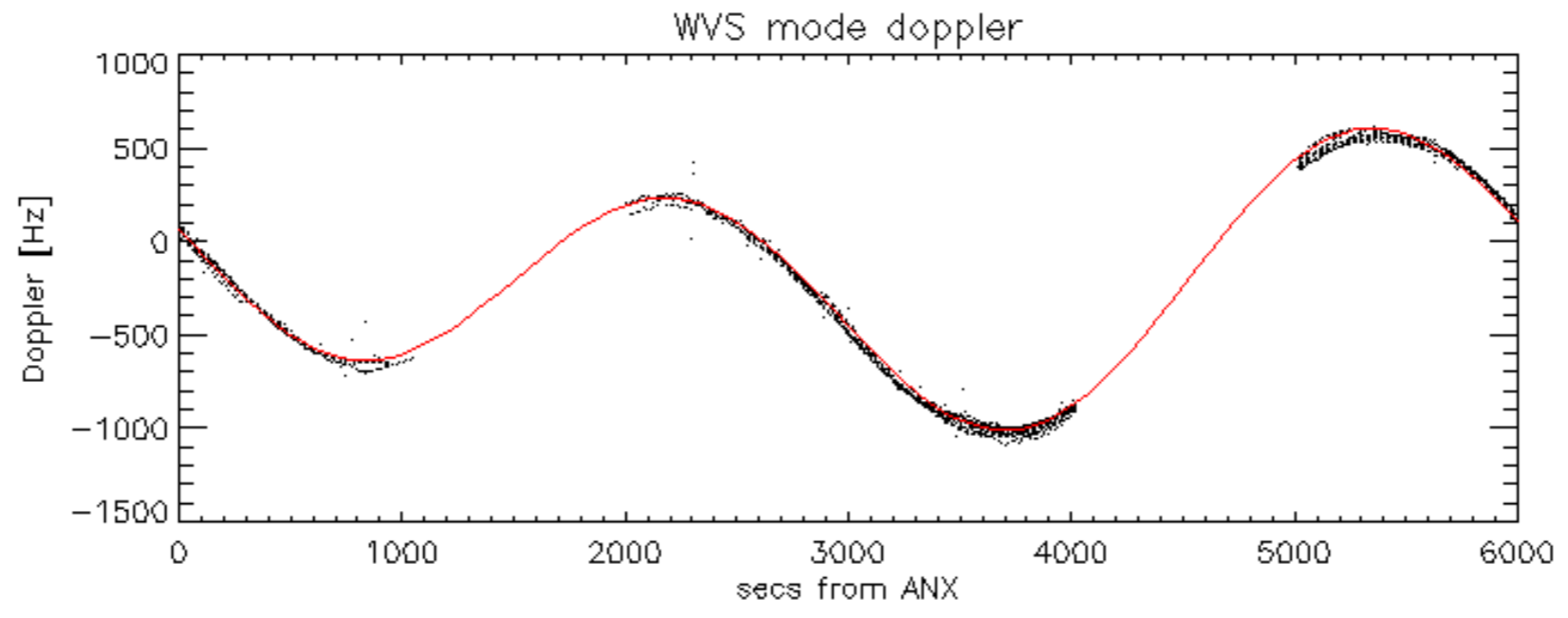
Doppler 'WVS' 'IS2' descending



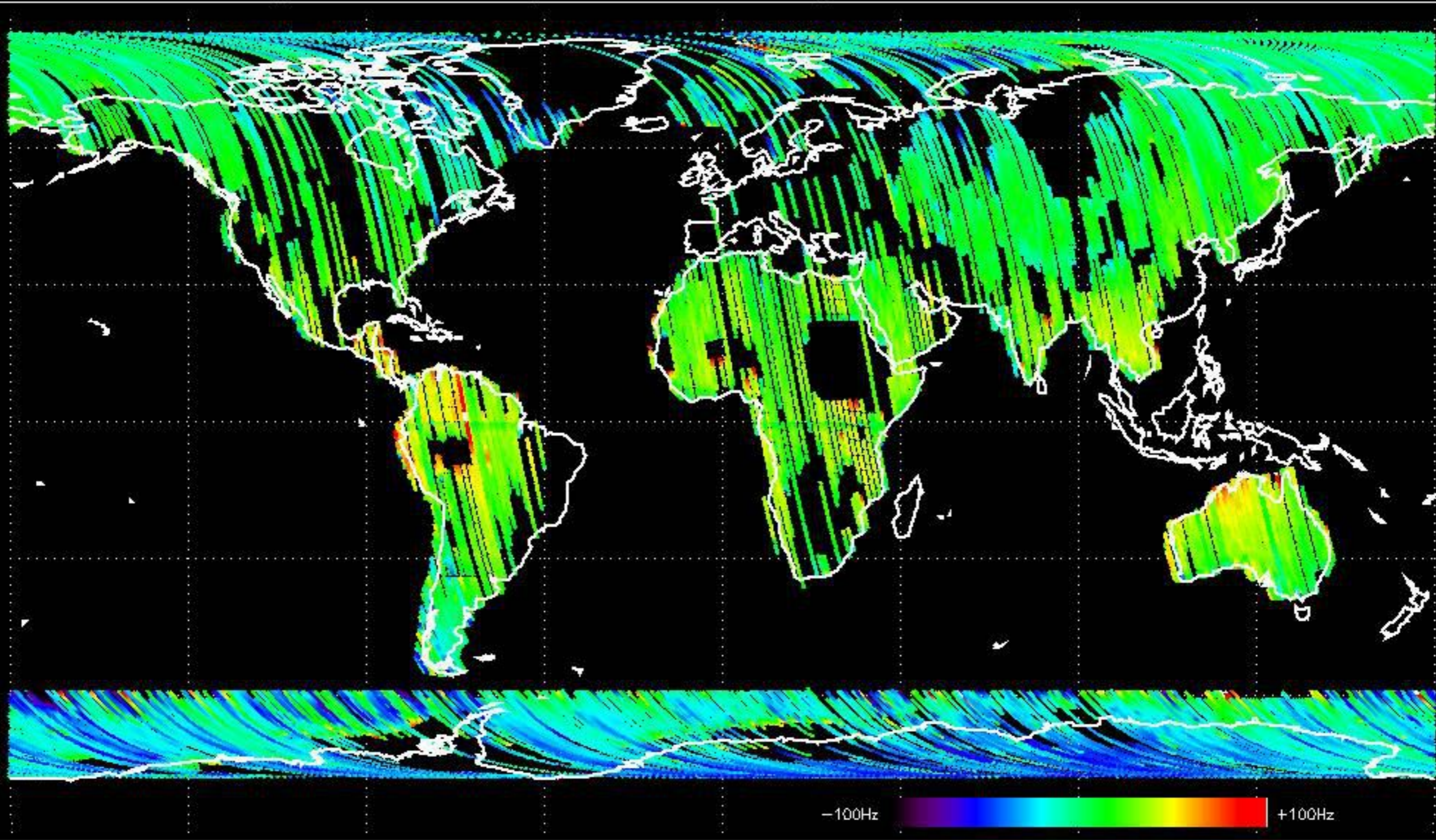


GM1 mode doppler

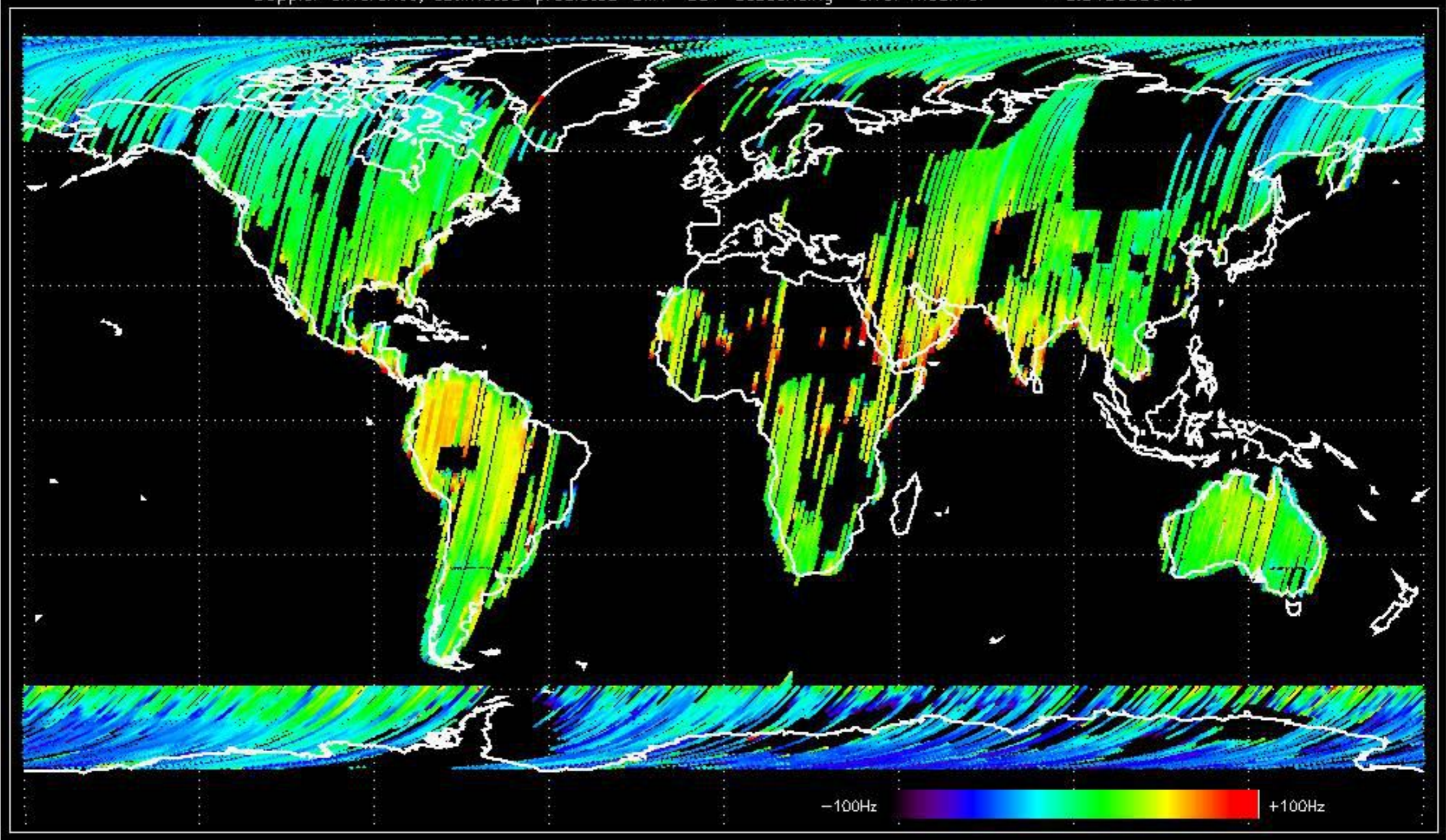




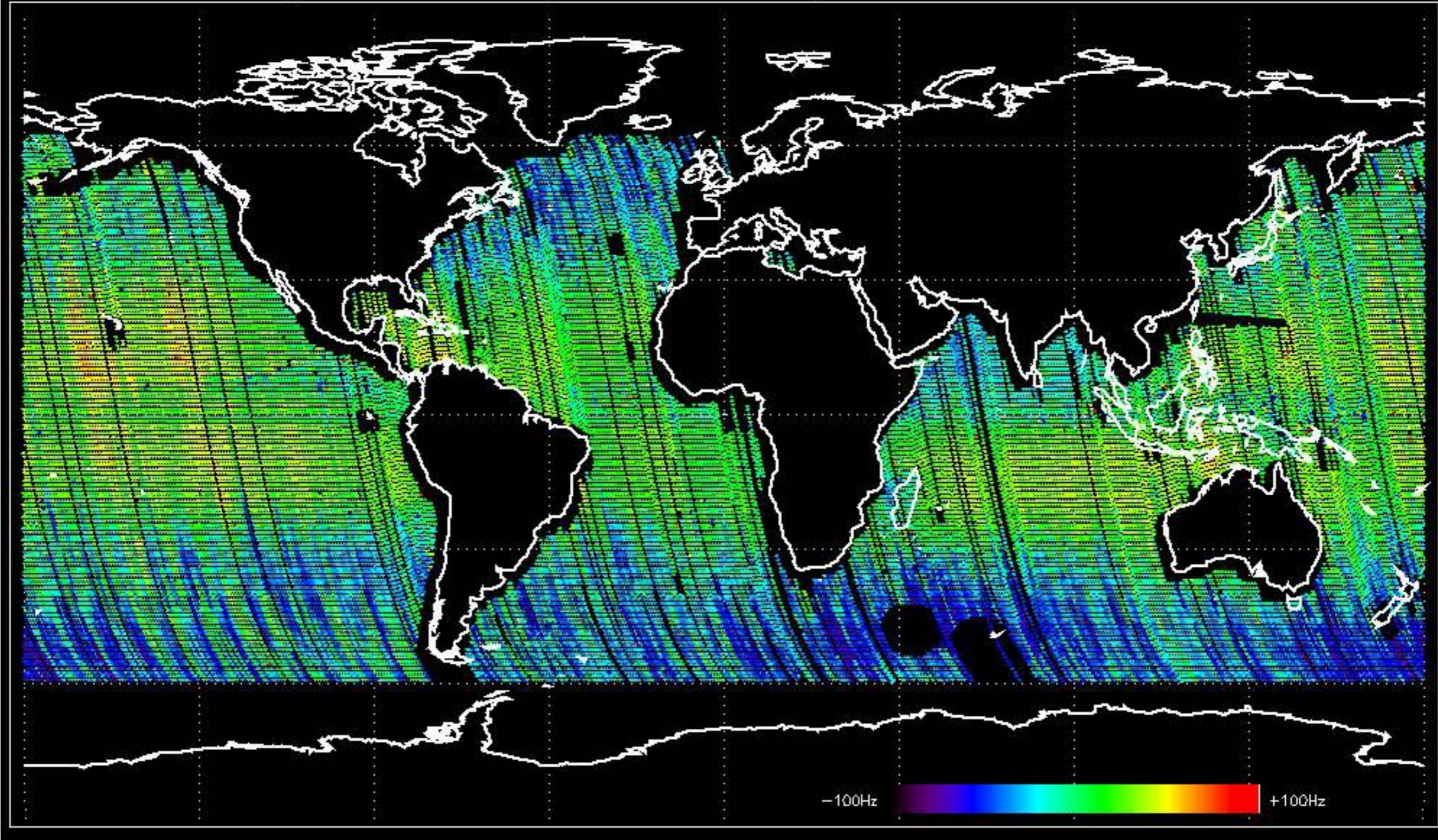
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.433340 Hz



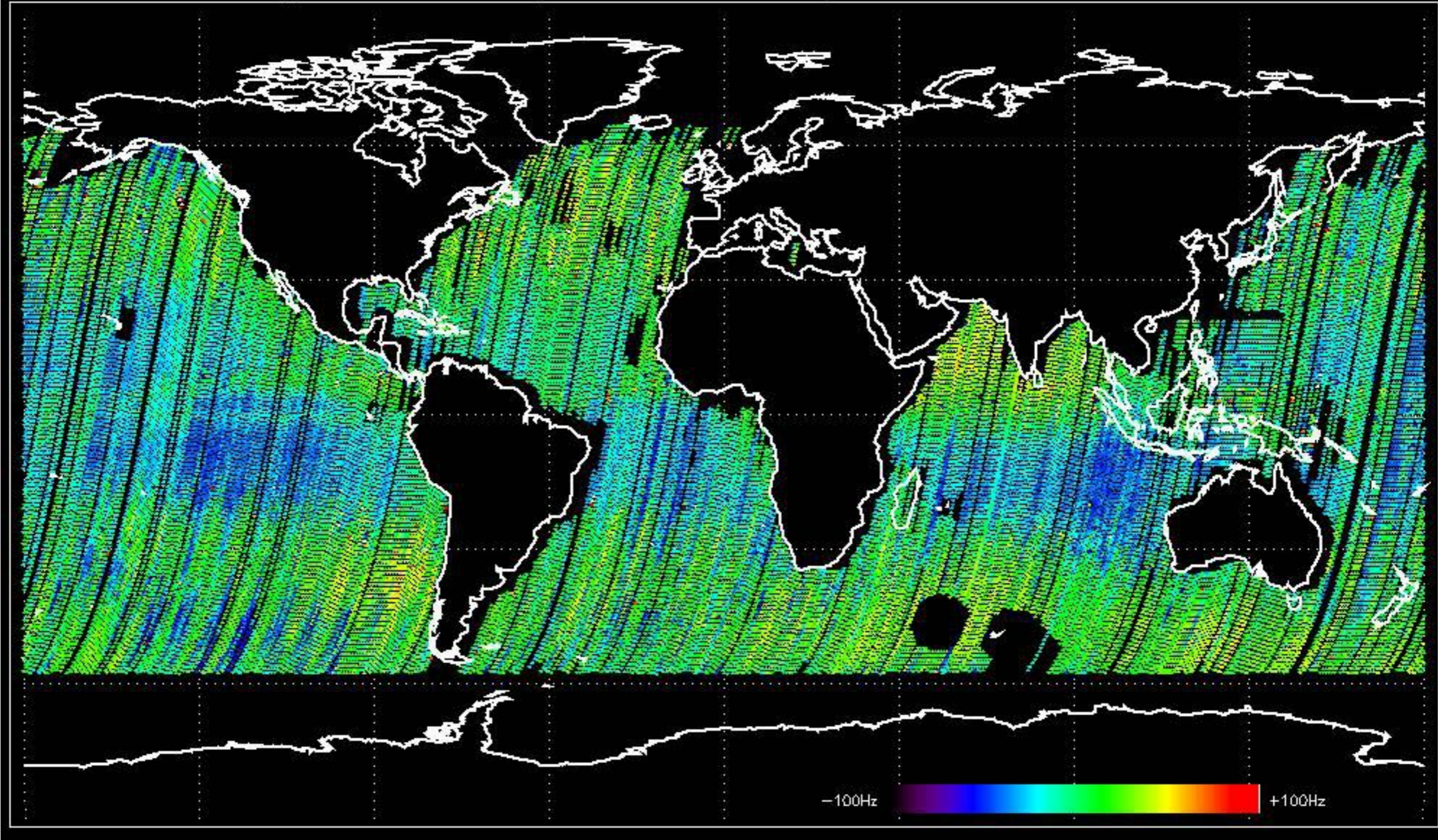
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.8130586 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.2444881 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.792116 Hz



No anomalies observed on available MS products:

No anomalies observed.











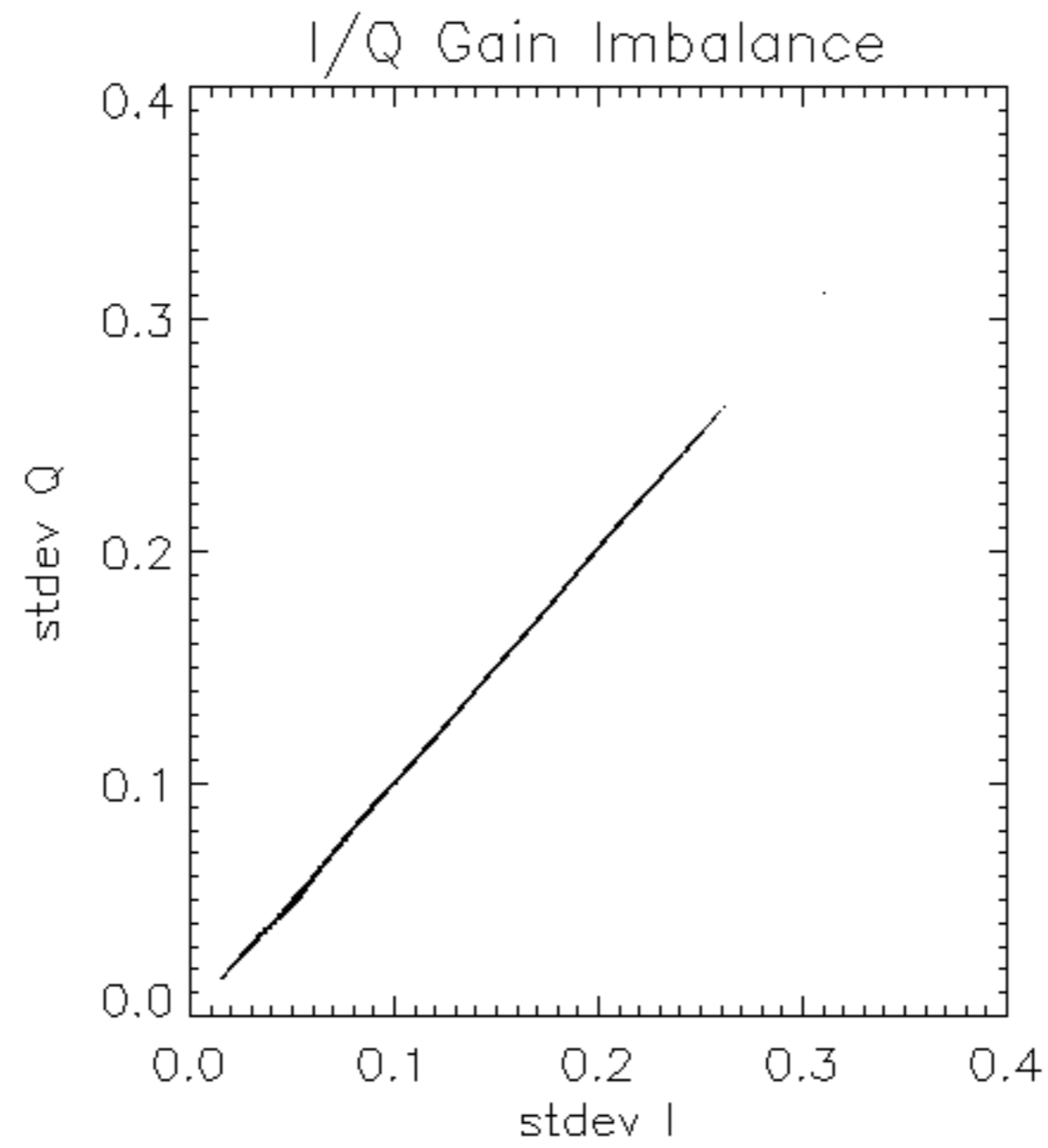


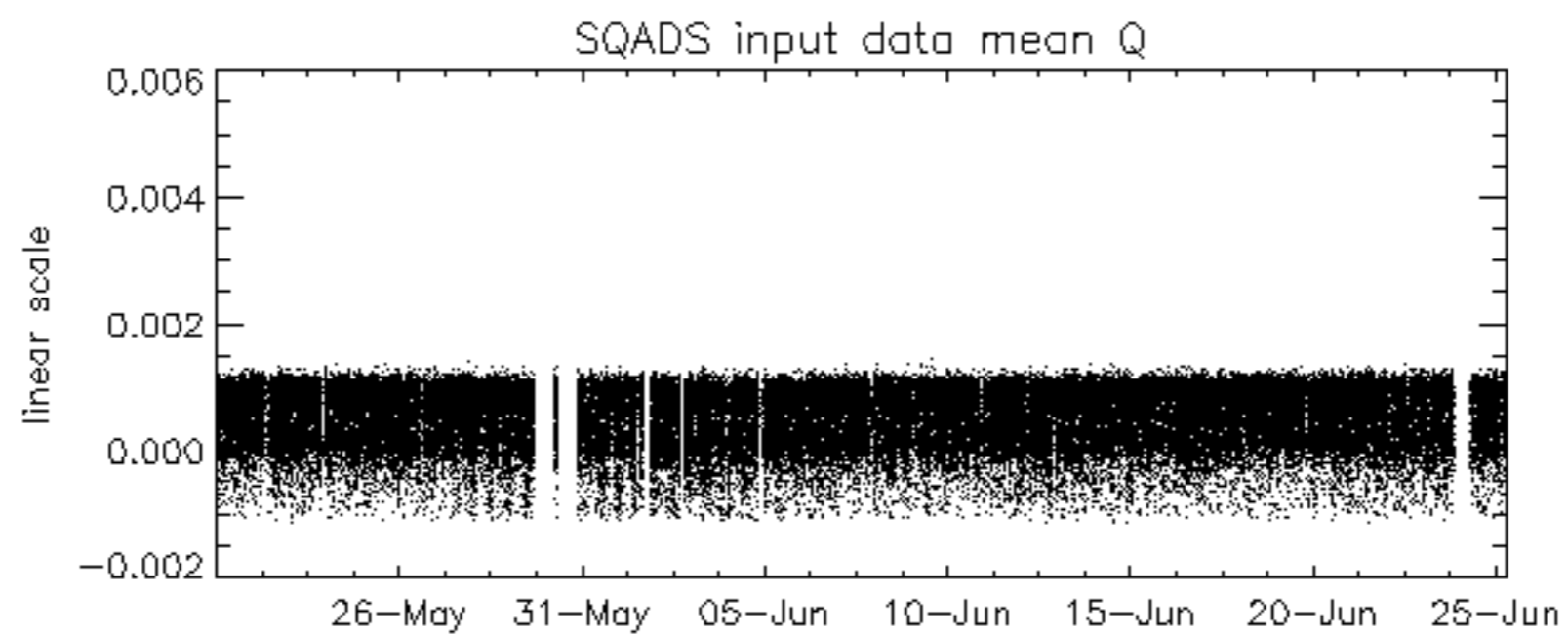
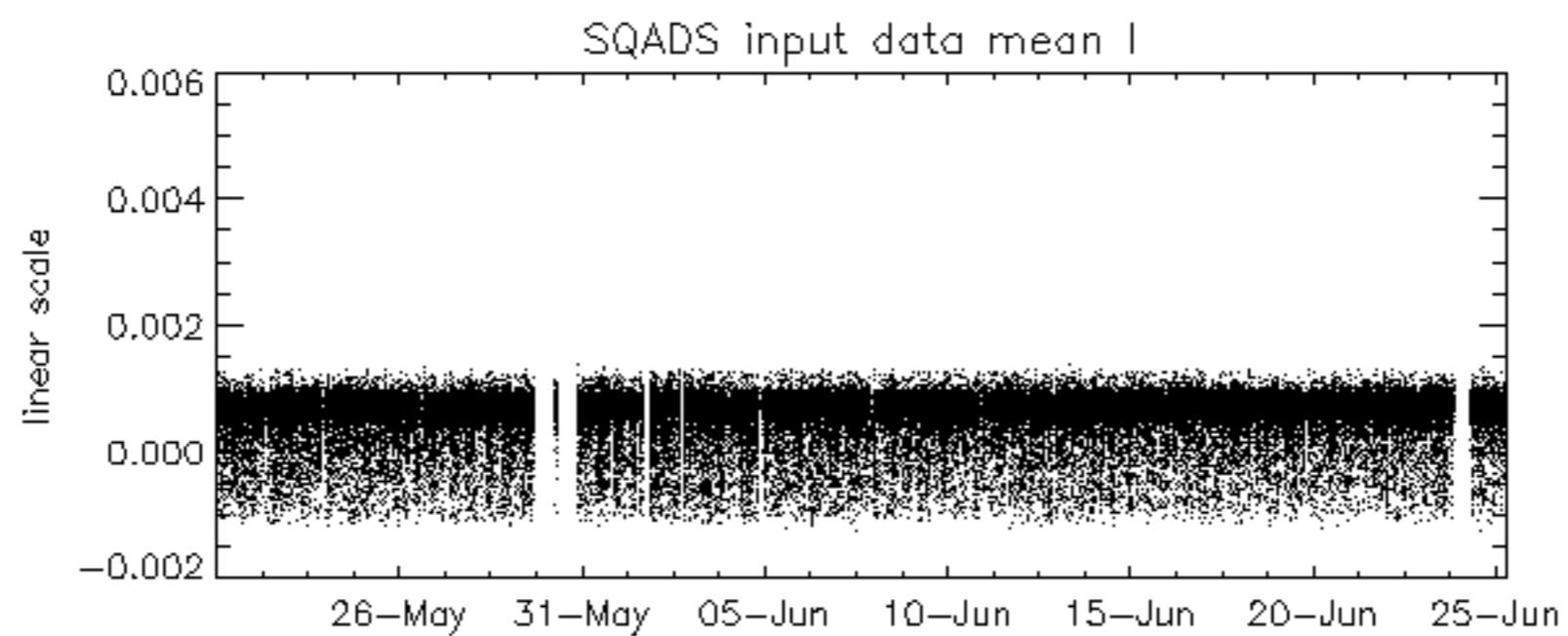
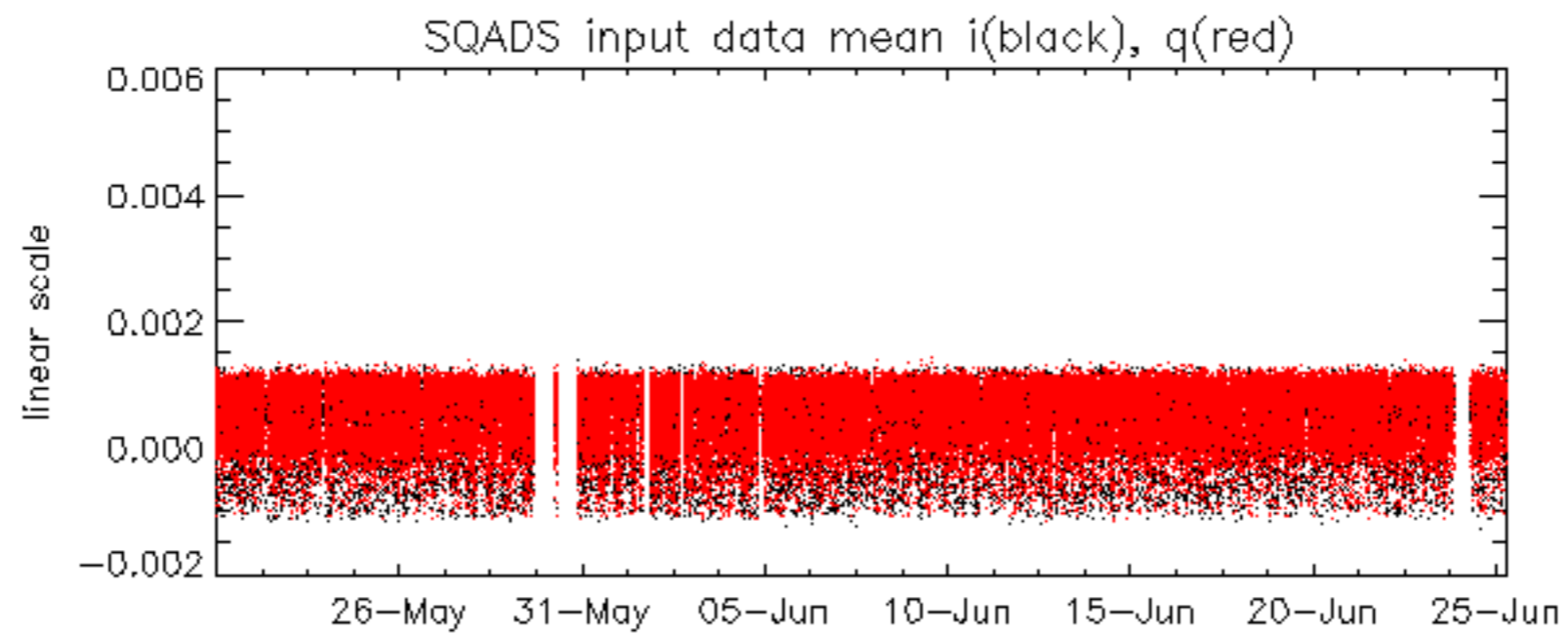


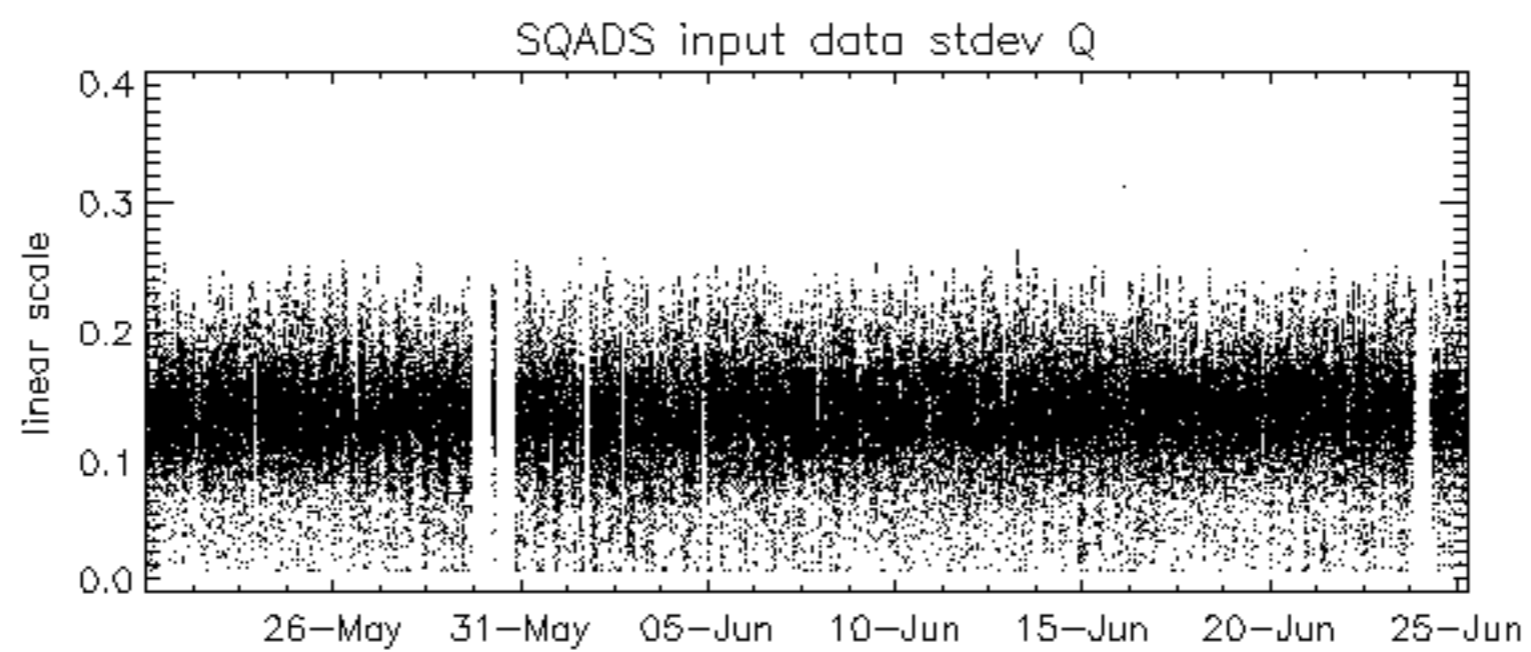
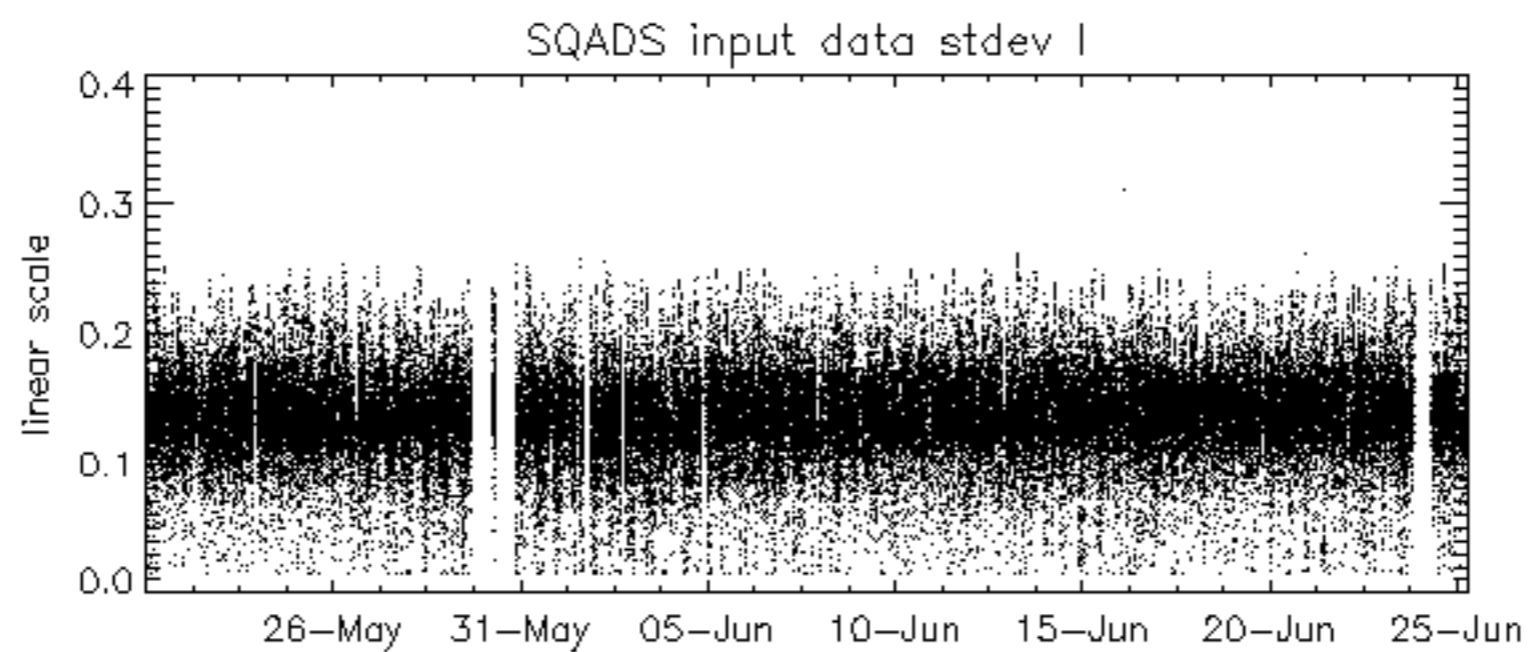
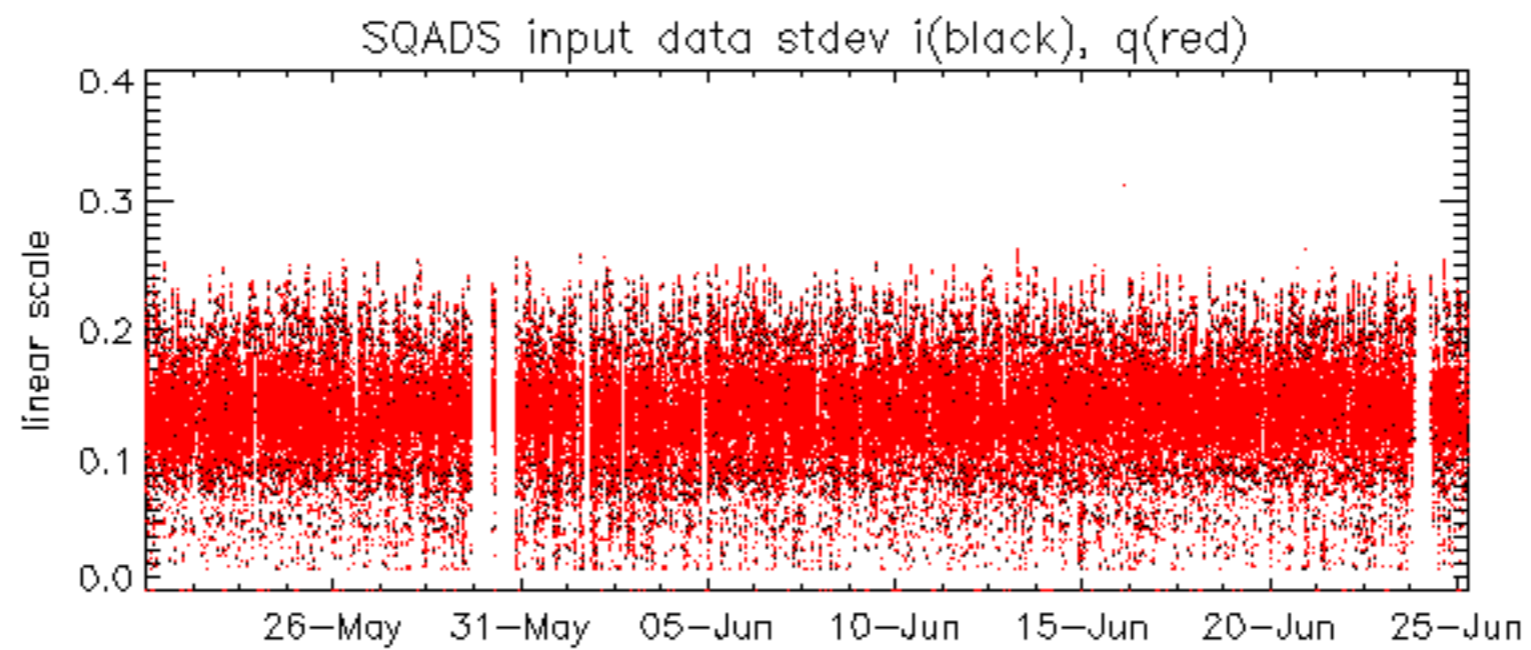




















Summary of analysis for the last 3 days 2006062[345]

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_1PNPDE20060625_003958_000001552048_00474_22572_8683.N1	1	0
ASA_IMM_1PNPDE20060625_005615_000000362048_00475_22573_8684.N1	1	0
ASA_IMM_1PNPDE20060625_022556_000000362048_00476_22574_8697.N1	1	0
ASA_IMM_1PNPDE20060625_063915_000001102048_00478_22576_8747.N1	1	0
ASA_WSM_1PNPDE20060624_230552_000001102048_00474_22572_5298.N1	0	2





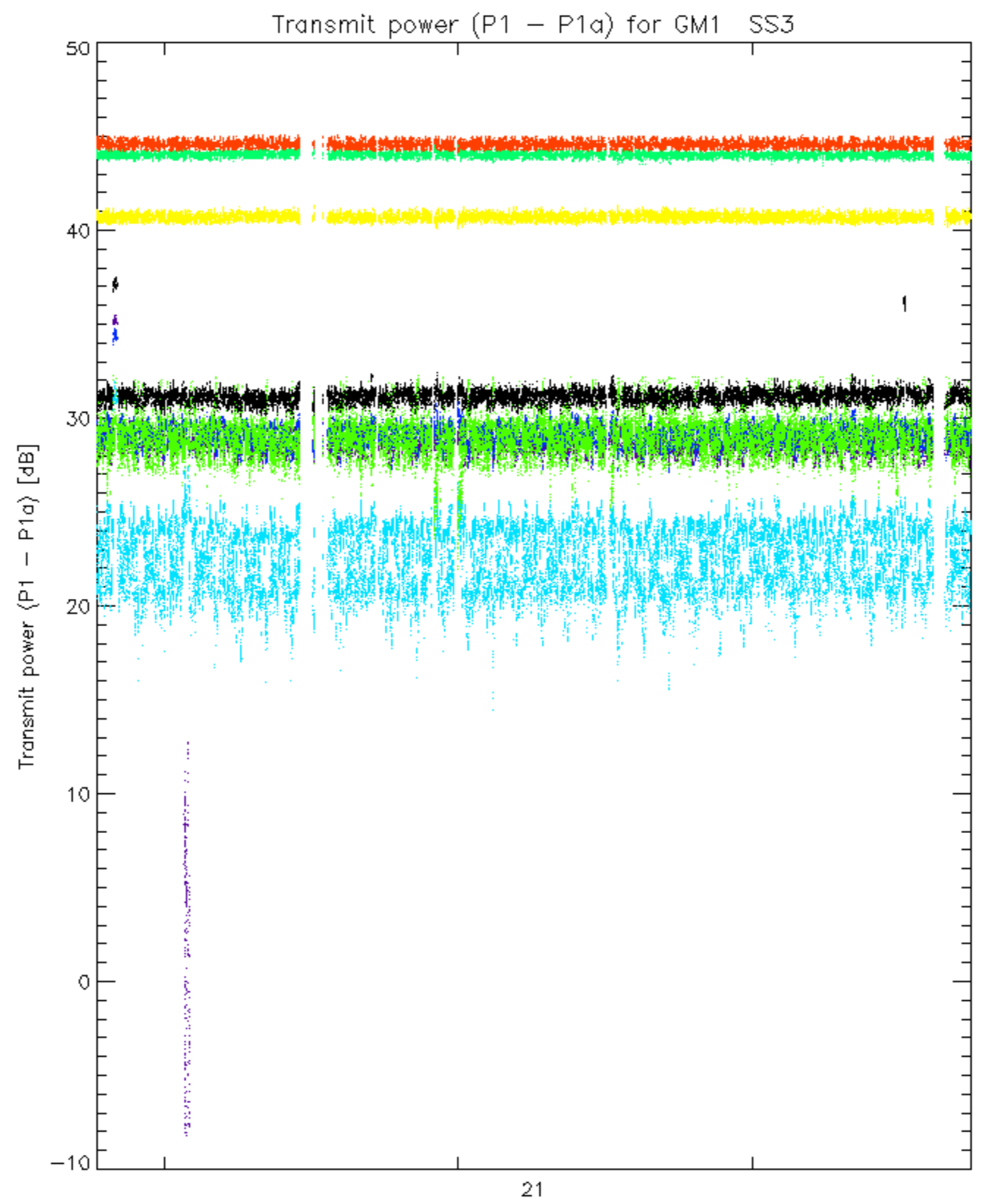




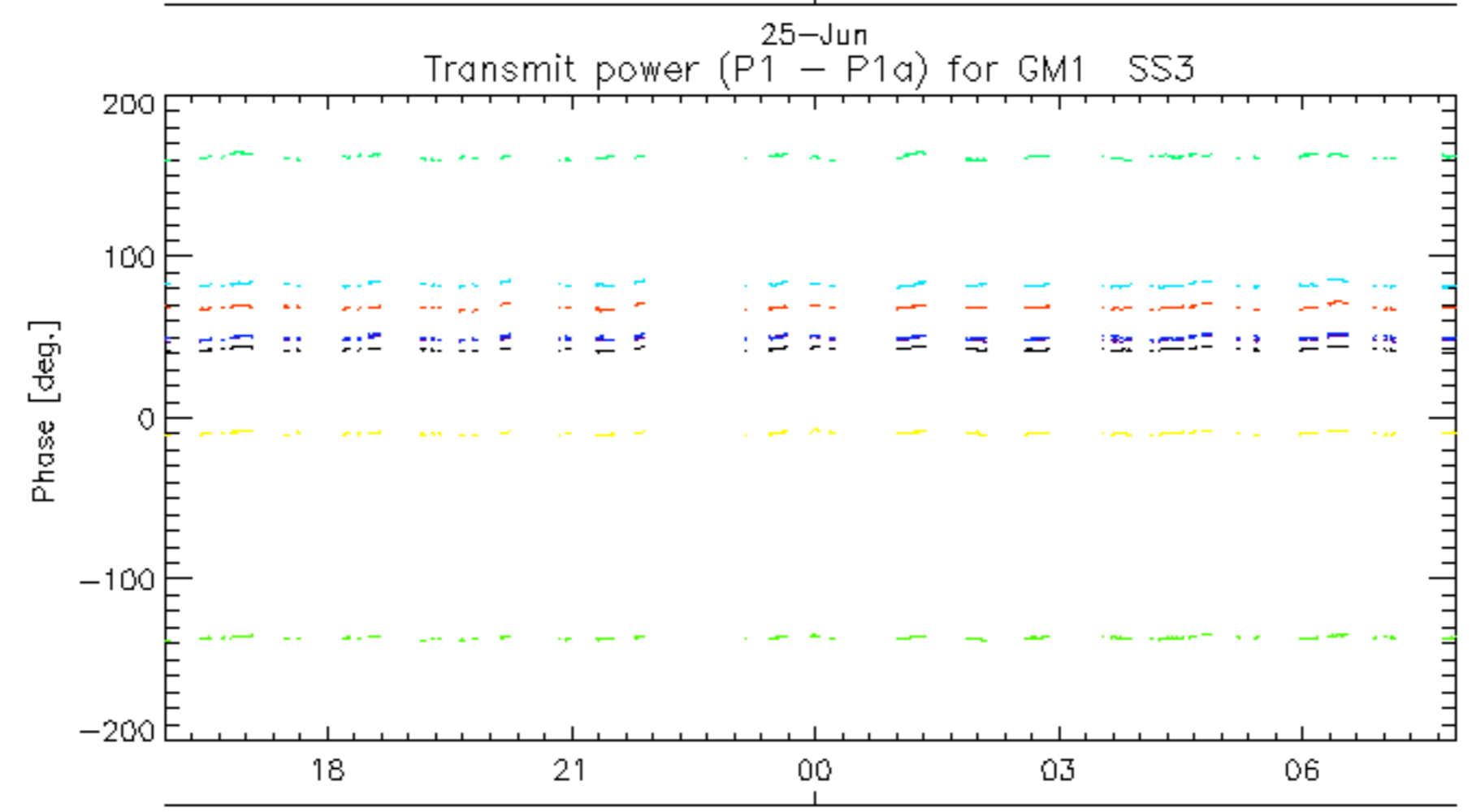
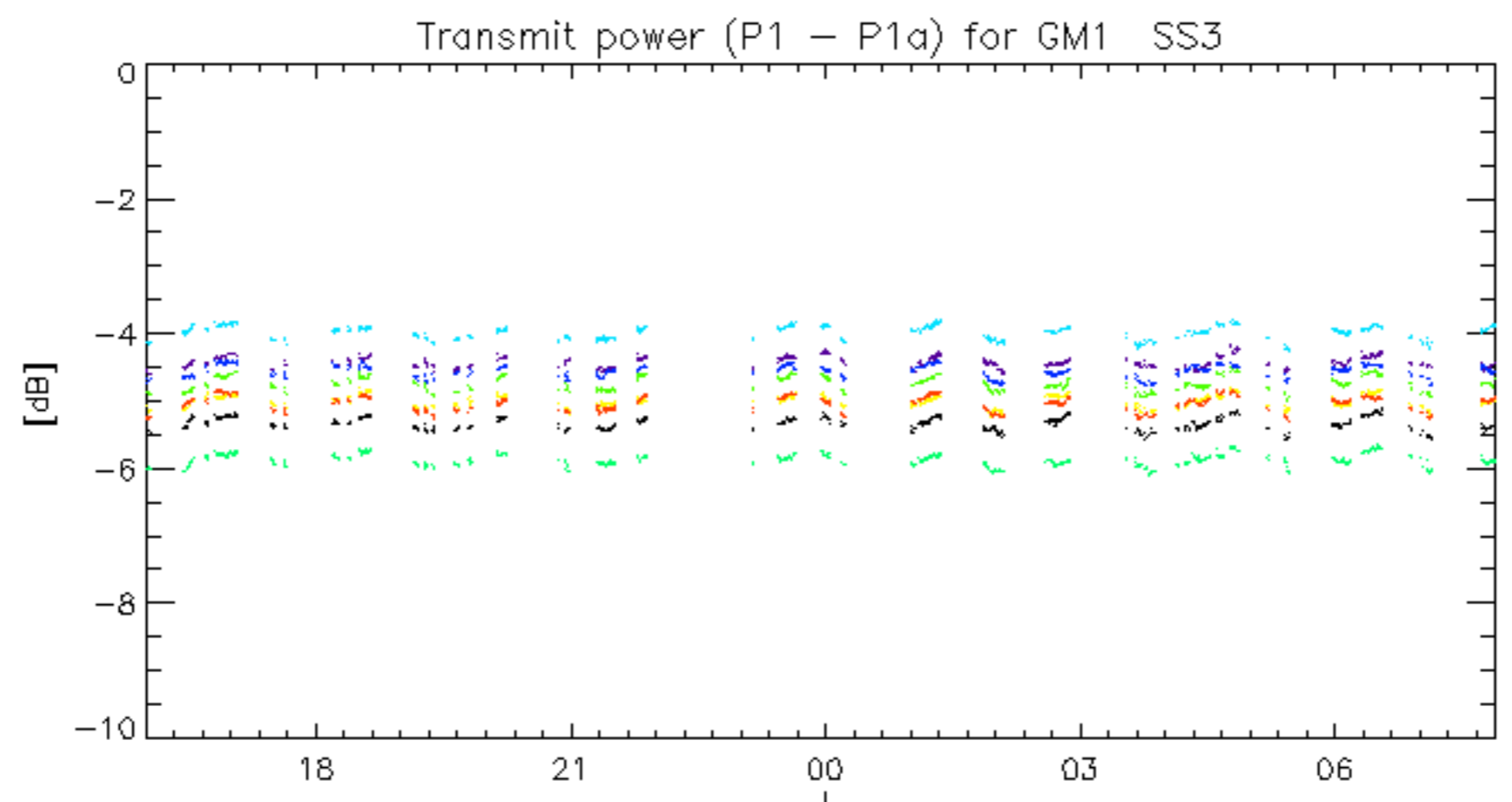






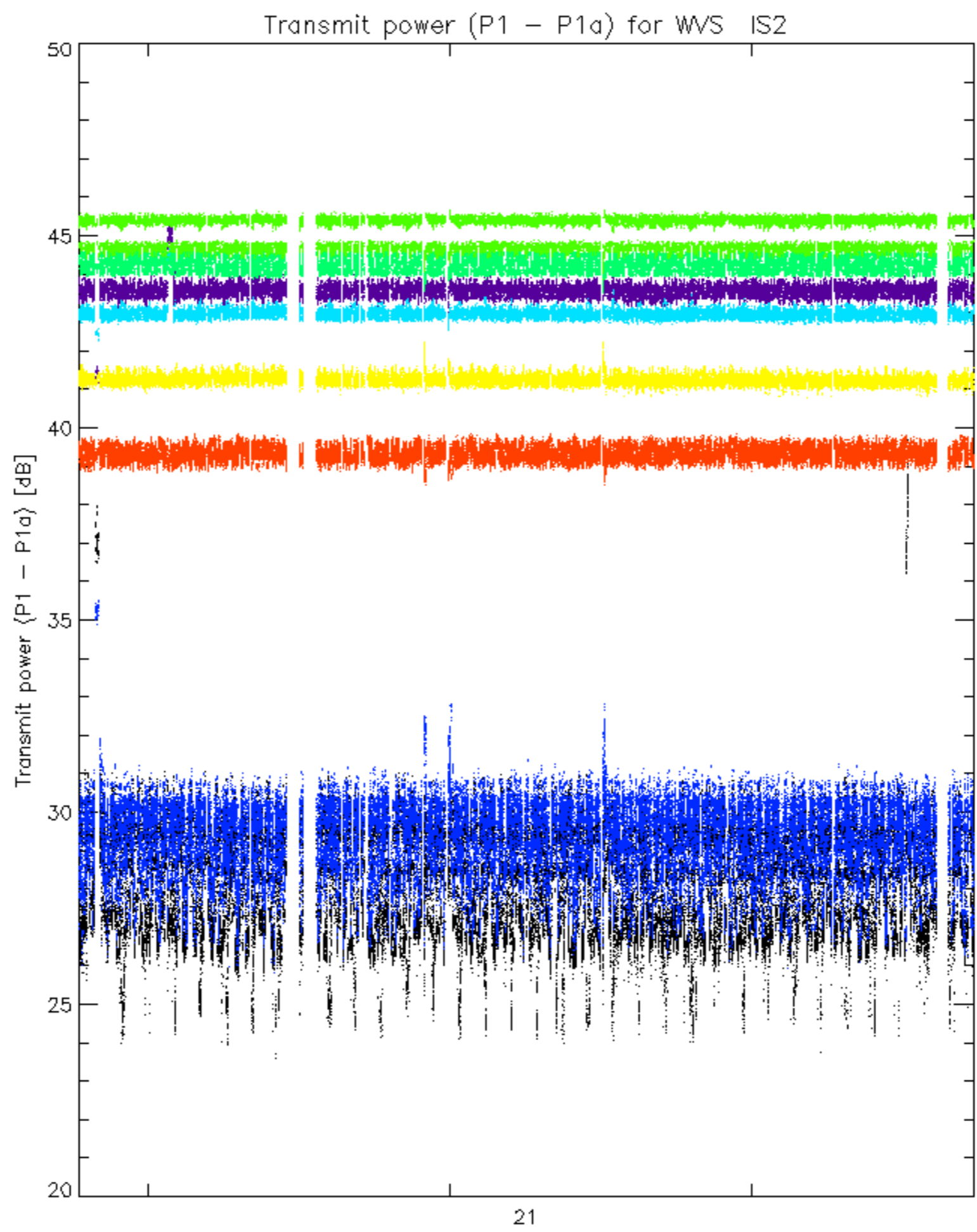


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

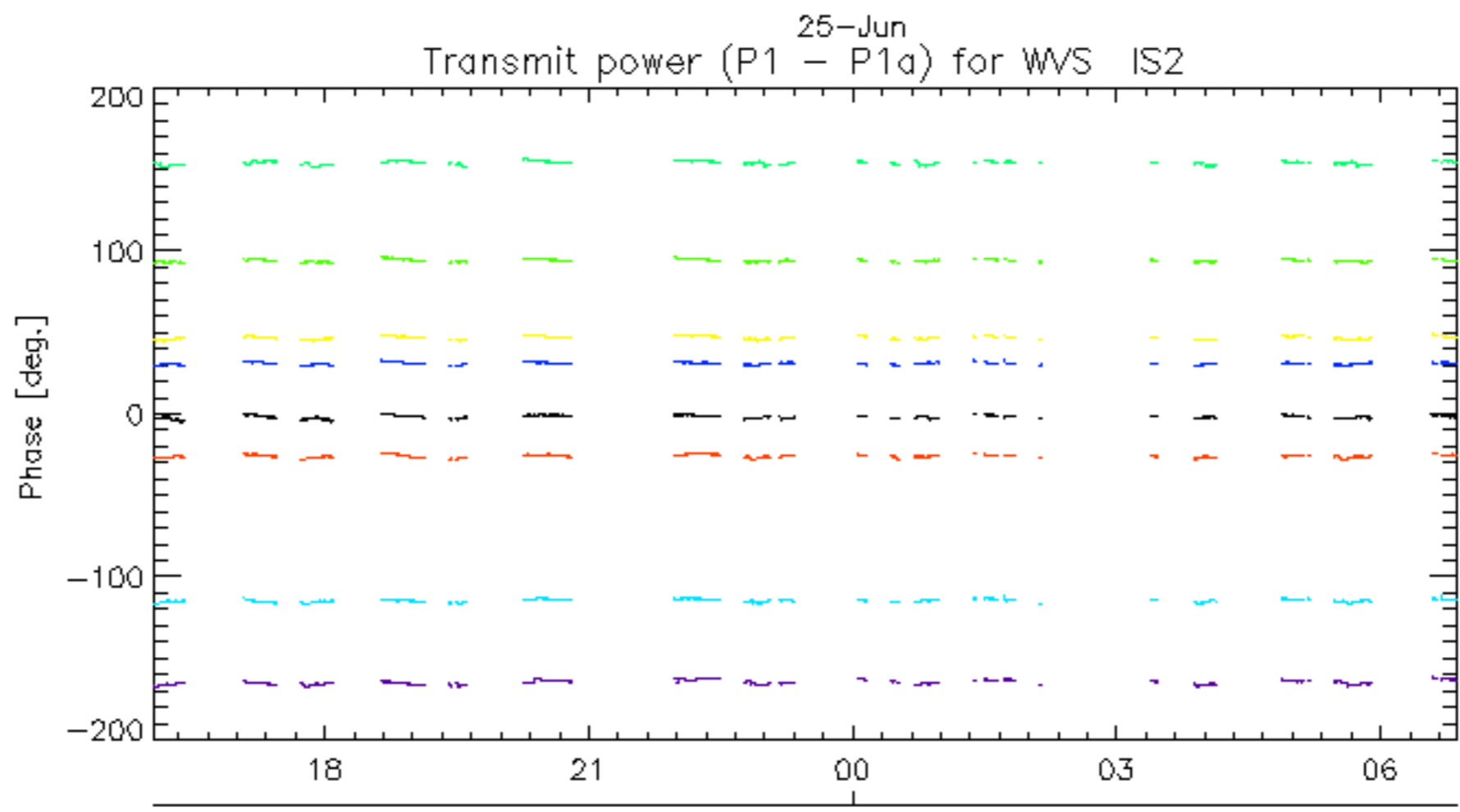
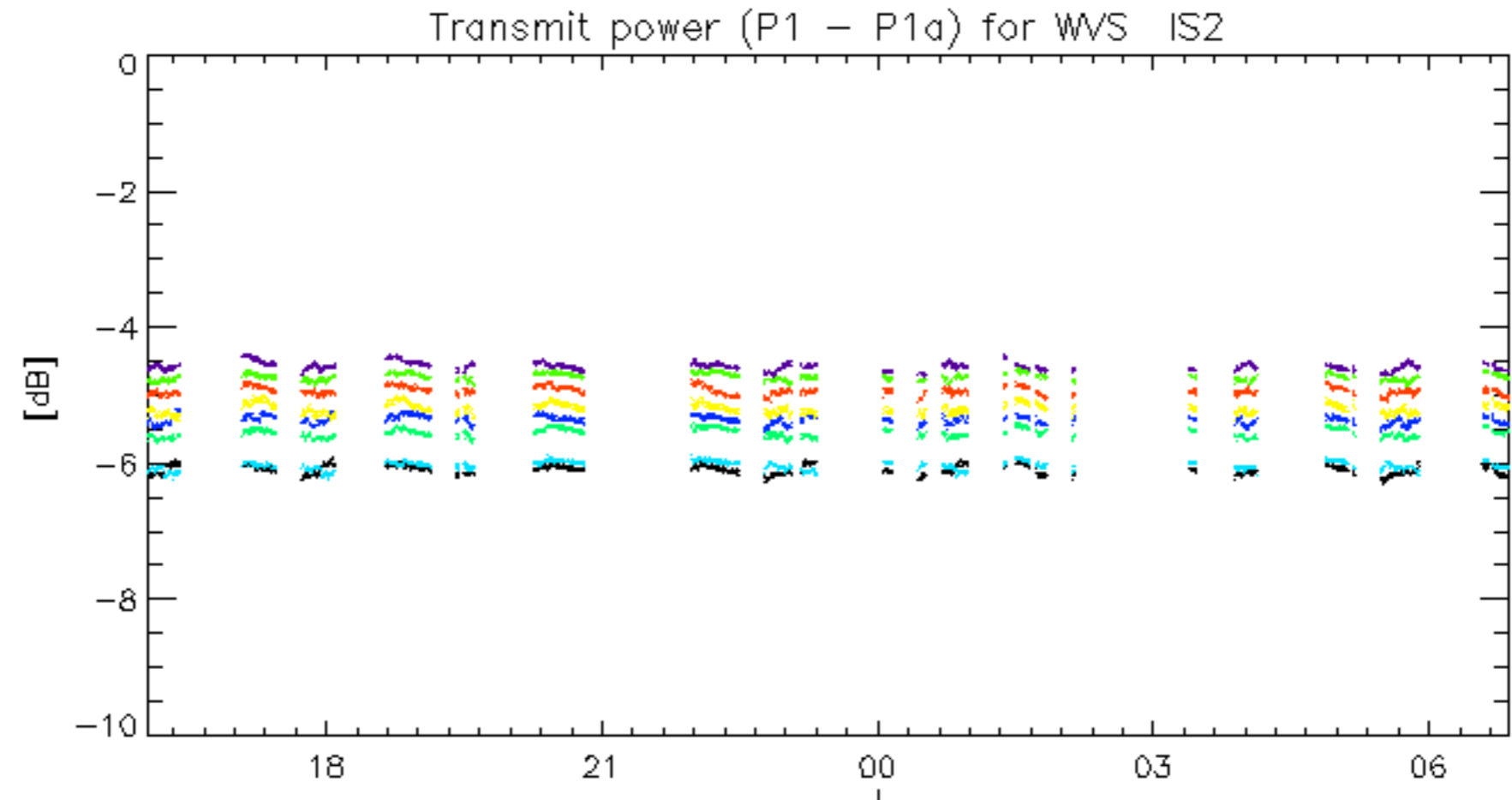


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No unavailabilities during the reported period.