

# PRELIMINARY REPORT OF 060628

last update on Wed Jun 28 16:47:19 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 2006-06-27 00:00:00 to 2006-06-28 16:47:19

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	72	14	0	26
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	72	14	0	26
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	72	14	0	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	72	14	0	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	21	34	38	15	69
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	21	34	38	15	69
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	21	34	38	15	69
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	21	34	38	15	69

## 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	20060626 180518
H	20060627 173341

### 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
<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

**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	-3.940058	0.046806	-0.054755
7	P1	-3.135492	0.012843	-0.013425
11	P1	-4.101799	0.016564	-0.007498
15	P1	-6.150720	0.019585	-0.082870
19	P1	-3.360207	0.008554	-0.058055
22	P1	-4.521151	0.011609	-0.050812
26	P1	-3.964206	0.017038	0.029509
30	P1	-5.752593	0.008931	-0.035395
3	P1	-16.540667	0.575153	-0.170893
7	P1	-17.231373	0.137016	-0.091804
11	P1	-16.969198	0.281989	-0.077997
15	P1	-13.197438	0.198363	0.114565
19	P1	-14.357800	0.051706	-0.147902
22	P1	-16.153116	0.373304	0.063305
26	P1	-15.197867	0.226436	0.118802
30	P1	-17.148563	0.411094	-0.018796

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.111057	0.081798	0.135302
7	P2	-22.001701	0.098189	0.100445
11	P2	-15.845220	0.111394	0.095510
15	P2	-7.154232	0.094983	-0.009427
19	P2	-9.167243	0.086642	0.006960
22	P2	-18.167988	0.083395	-0.031828
26	P2	-16.407593	0.088790	-0.048910
30	P2	-19.552763	0.087873	-0.004443

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.183660	0.003921	-0.018448
7	P3	-8.183660	0.003921	-0.018448
11	P3	-8.183660	0.003921	-0.018448
15	P3	-8.183660	0.003921	-0.018448
19	P3	-8.183660	0.003921	-0.018448
22	P3	-8.183660	0.003921	-0.018448
26	P3	-8.183660	0.003921	-0.018448
30	P3	-8.183660	0.003921	-0.018448

**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	-3.811822	0.052453	-0.096326
7	P1	-2.572476	0.012482	-0.000907
11	P1	-2.855571	0.013316	0.003461
15	P1	-3.515238	0.032524	-0.085522
19	P1	-3.412485	0.014433	-0.024512
22	P1	-5.082830	0.019556	-0.004003
26	P1	-5.856805	0.016073	-0.029213
30	P1	-5.190658	0.026441	-0.013549
3	P1	-11.643563	0.141824	-0.089247
7	P1	-9.975012	0.034747	-0.025283
11	P1	-10.234205	0.059078	-0.013140
15	P1	-10.693771	0.135760	-0.009758
19	P1	-15.541269	0.077379	-0.026449
22	P1	-20.940681	1.177414	-0.015869

26	P1	-16.444805	0.332641	0.093838
30	P1	-17.879644	0.372724	0.084360

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.787203	0.075255	0.200881
7	P2	-22.472063	0.132261	0.081889
11	P2	-11.126616	0.048953	0.092359
15	P2	-4.919778	0.049647	-0.021050
19	P2	-6.880568	0.054254	-0.002932
22	P2	-8.208057	0.043472	-0.003355
26	P2	-24.157150	0.069696	-0.073261
30	P2	-22.053144	0.056961	0.039876

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018543	0.004836	-0.014050
7	P3	-8.018595	0.004820	-0.013961
11	P3	-8.018517	0.004832	-0.014214
15	P3	-8.018451	0.004836	-0.013942
19	P3	-8.018463	0.004831	-0.013524
22	P3	-8.018633	0.004818	-0.013947
26	P3	-8.018654	0.004830	-0.014009
30	P3	-8.018509	0.004814	-0.013876

## 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	0.000563995
	stdev	1.68687e-07
MEAN Q	mean	0.000528635
	stdev	2.18877e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137327
	stdev	0.00115820
STDEV Q	mean	0.137686
	stdev	0.00117593



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006062[678]

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_1PNPDE20060628_004521_000001932049_00016_22615_0034.N1	1	0
ASA_IMM_1PNPDE20060628_010203_000000692049_00017_22616_0025.N1	1	0
ASA_WVS_1PNPDE20060626_232711_000000002049_00001_22600_3027.N1	1	0
ASA_WSM_1PNPDE20060626_033514_000000862048_00491_22589_5429.N1	0	22
ASA_WSM_1PNPDE20060627_181149_000000852049_00013_22612_0030.N1	0	6

ASA_WSM_1PNPDE20060627_231143_000000672049_00016_22615_0072.N1	0	53
ASA_WSM_1PNPDK20060626_134018_000003002048_00497_22595_8394.N1	0	32



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

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler

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

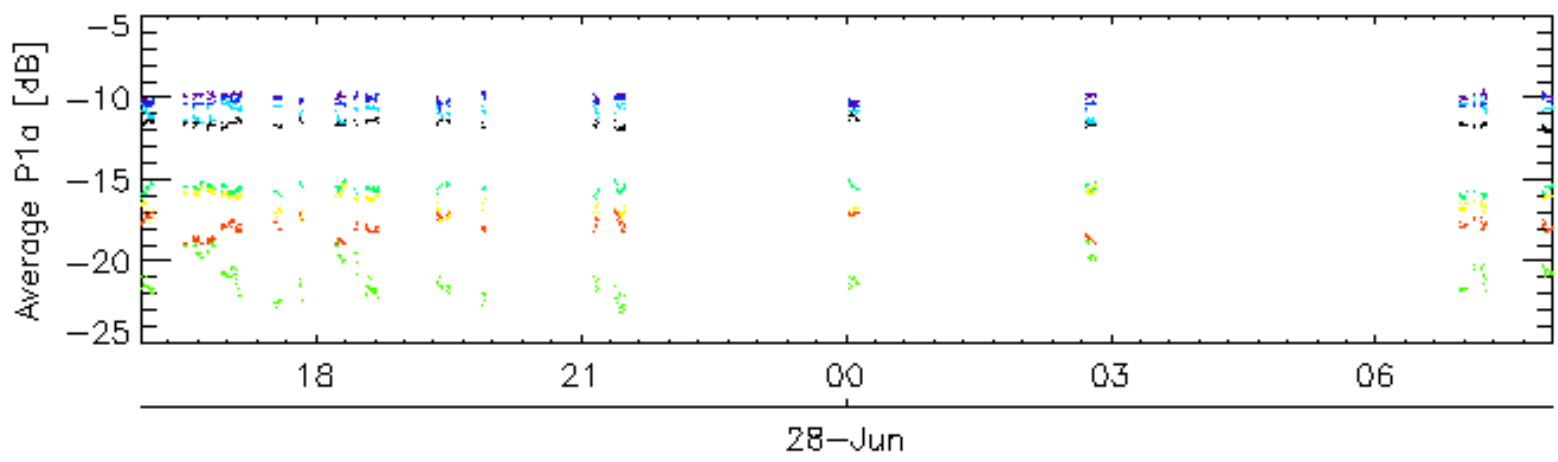
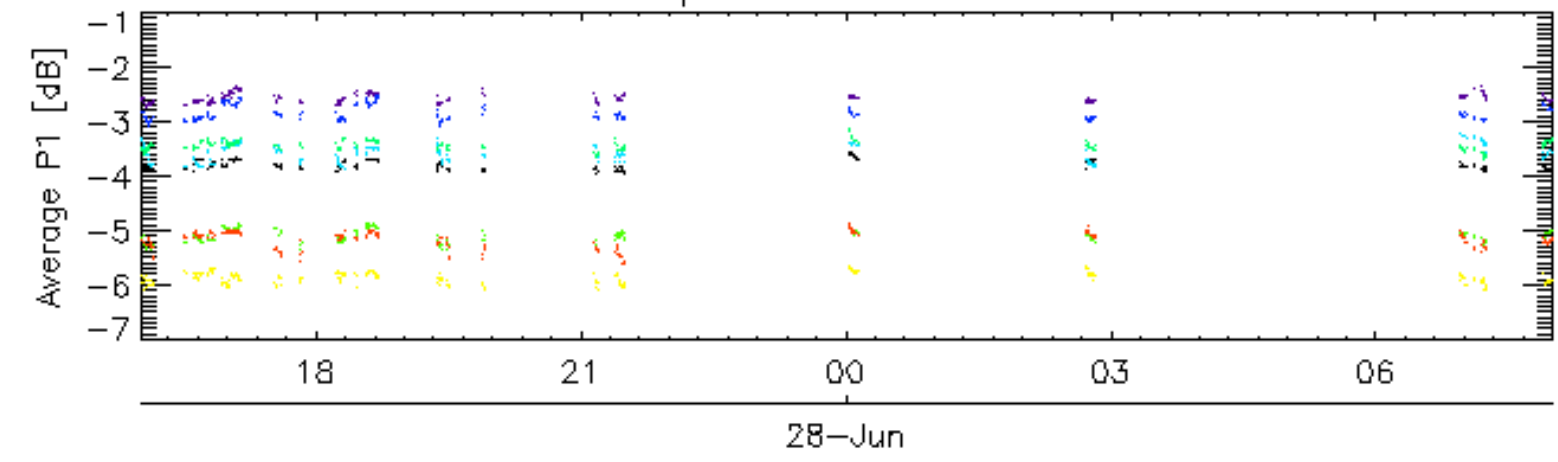
### 7.5 - Absolute Doppler for GM1

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

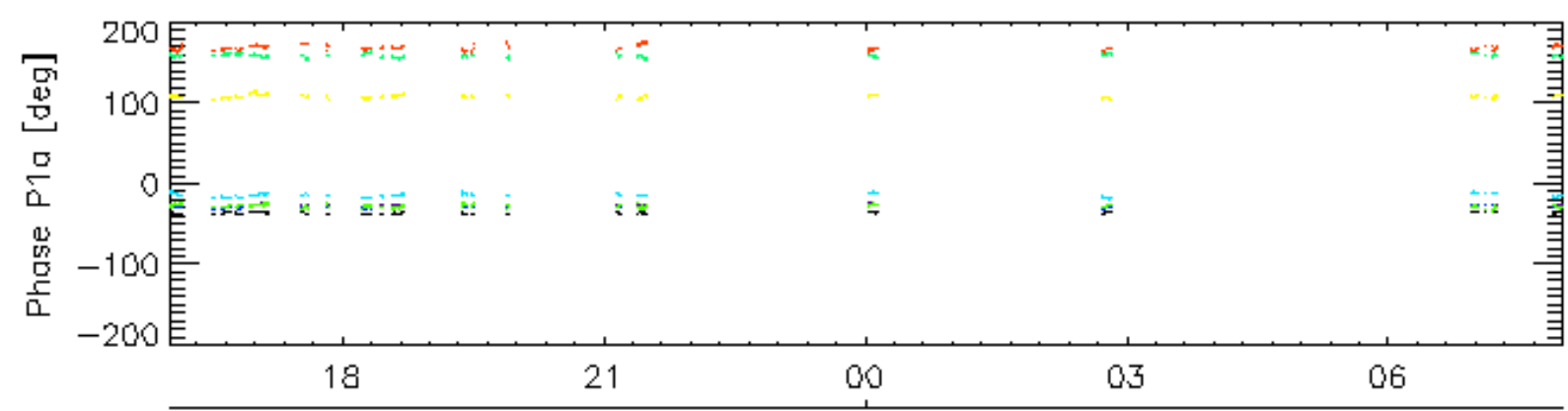
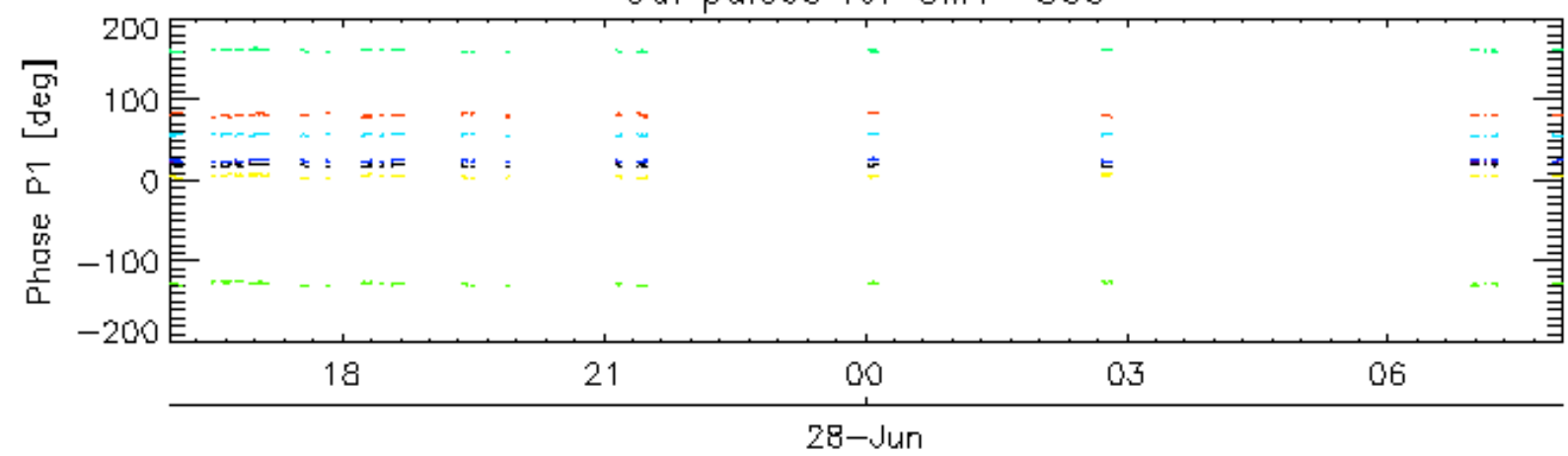
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

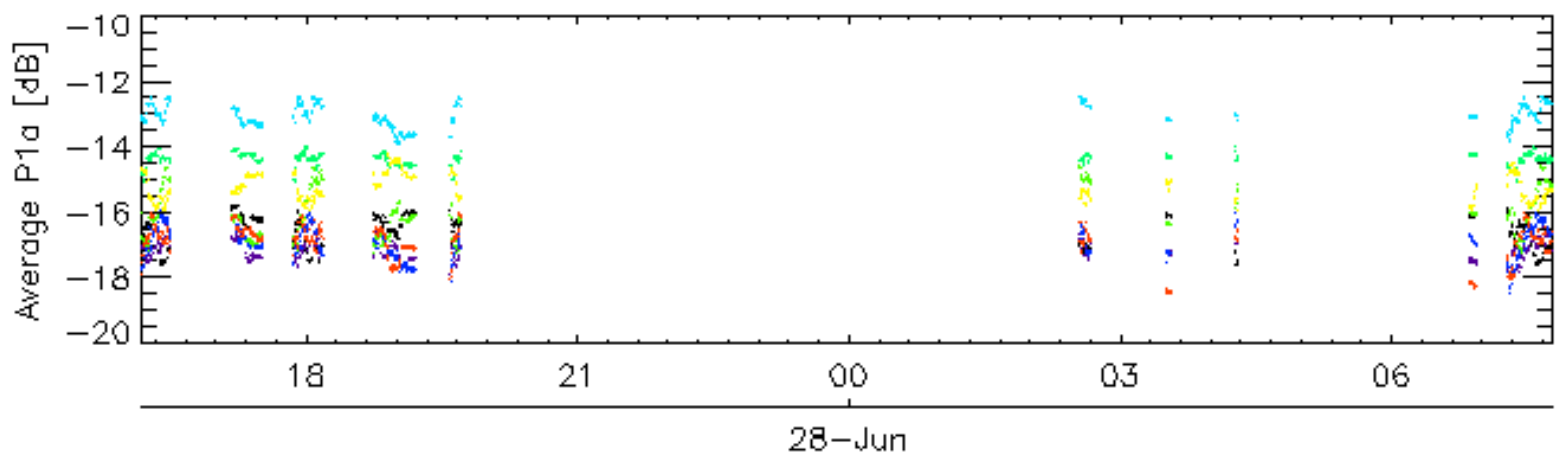
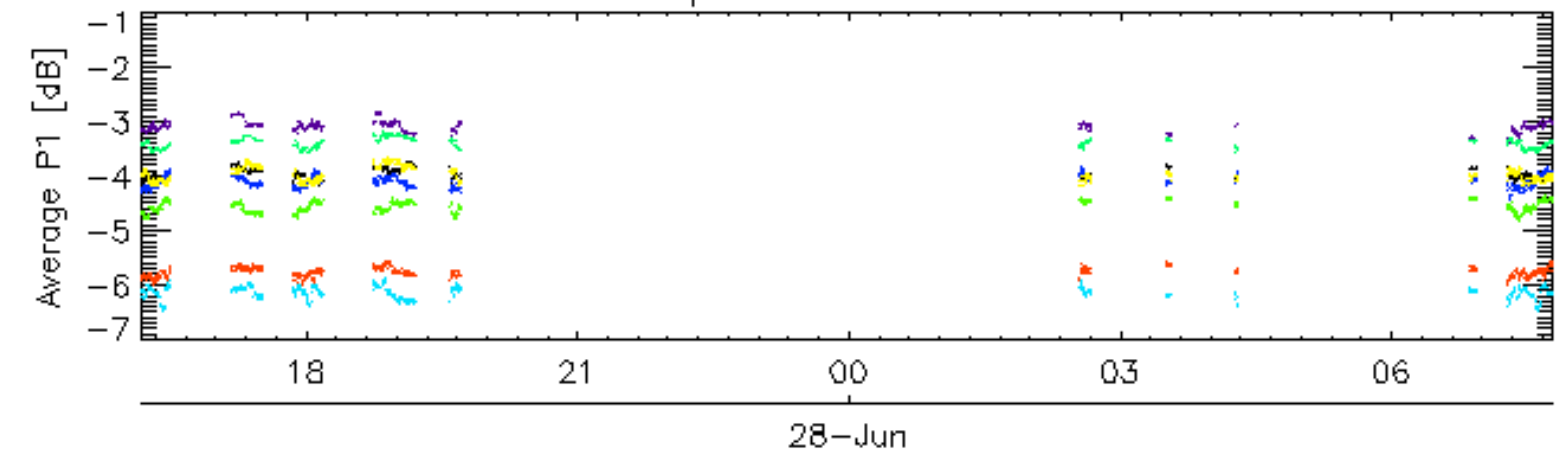


Cal pulses for GM1 SS3

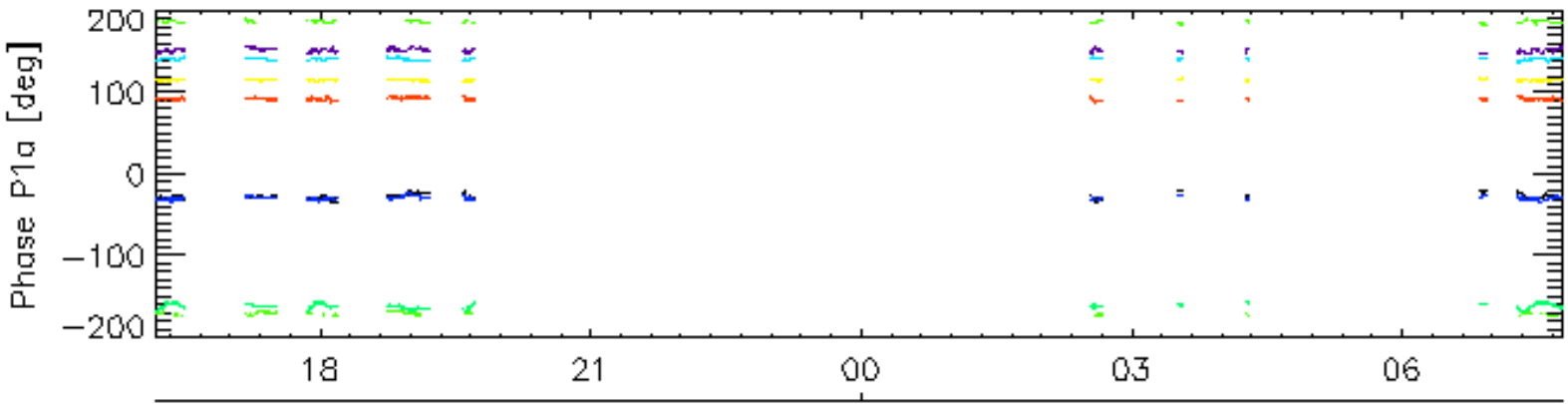
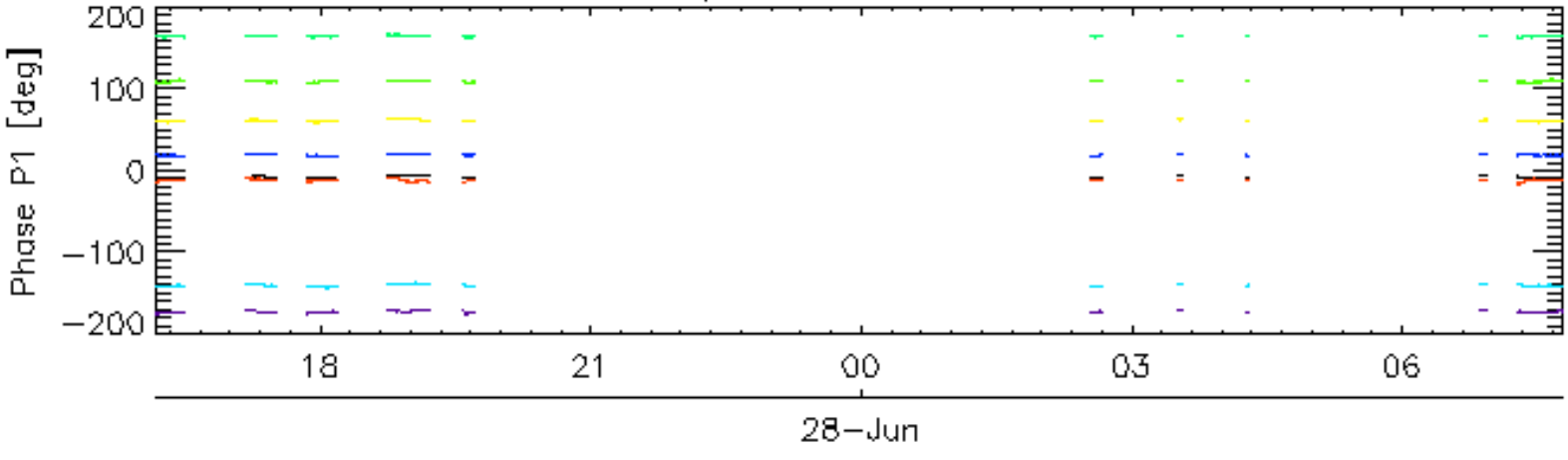


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

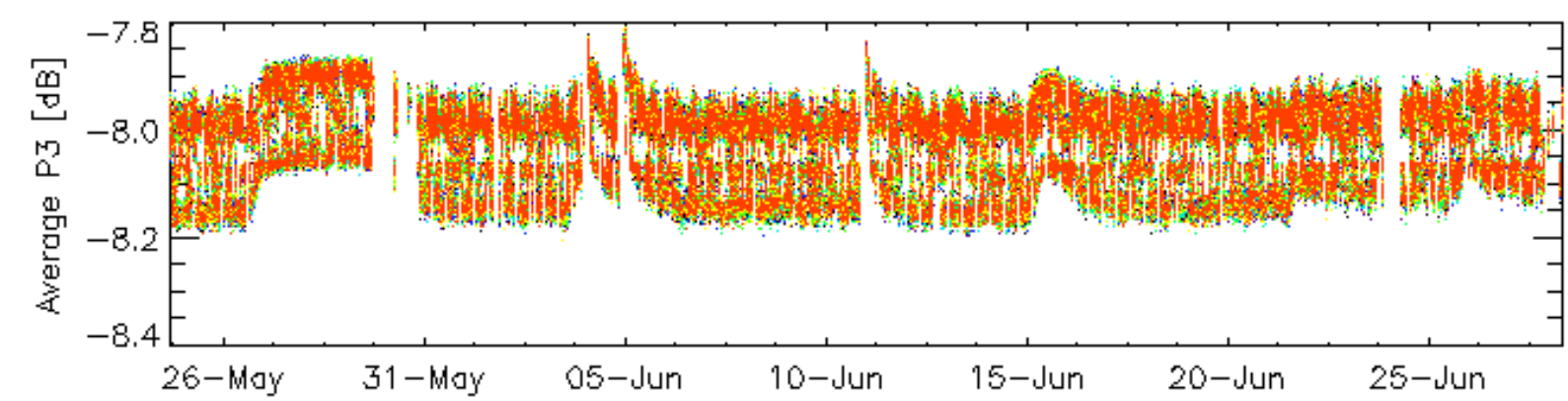
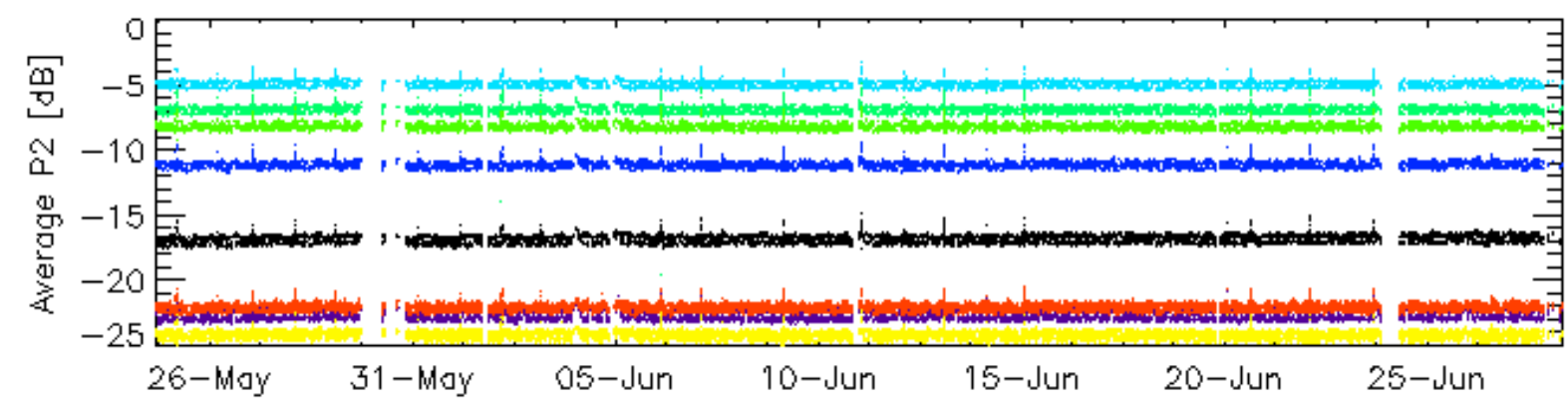
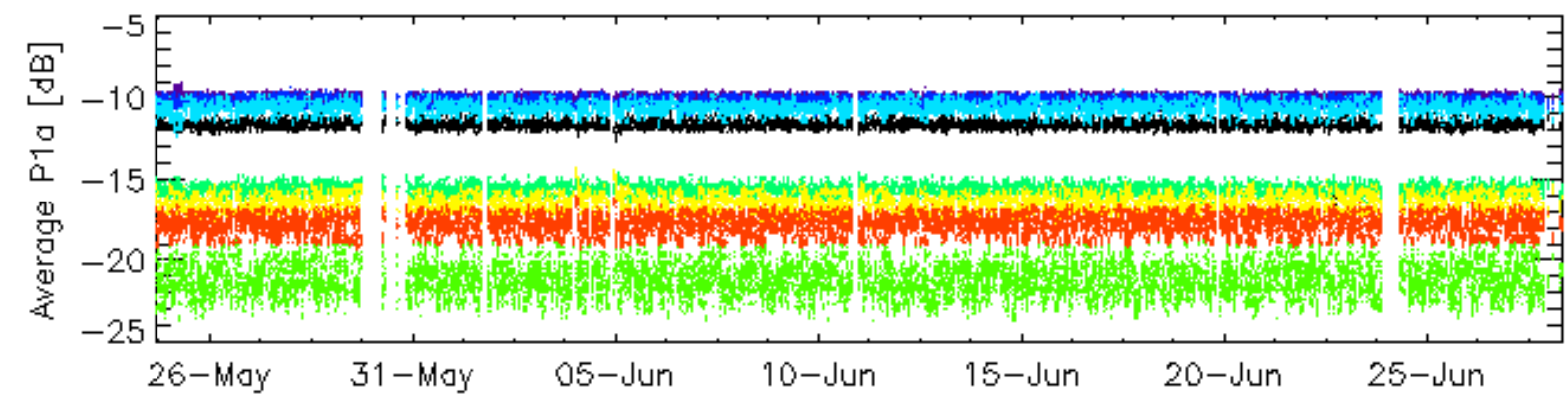
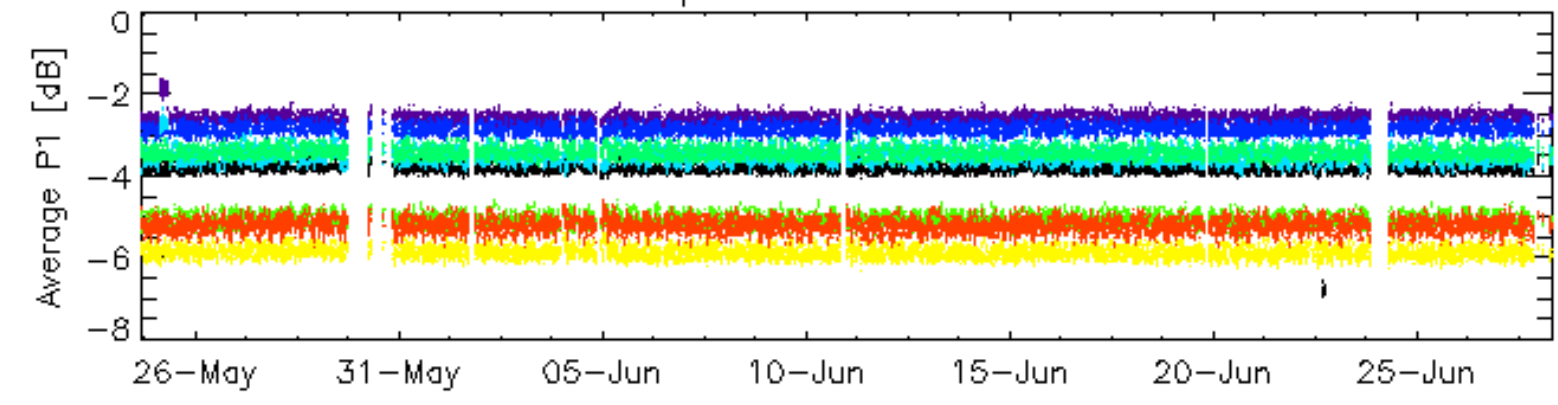


Cal pulses for WVS IS2



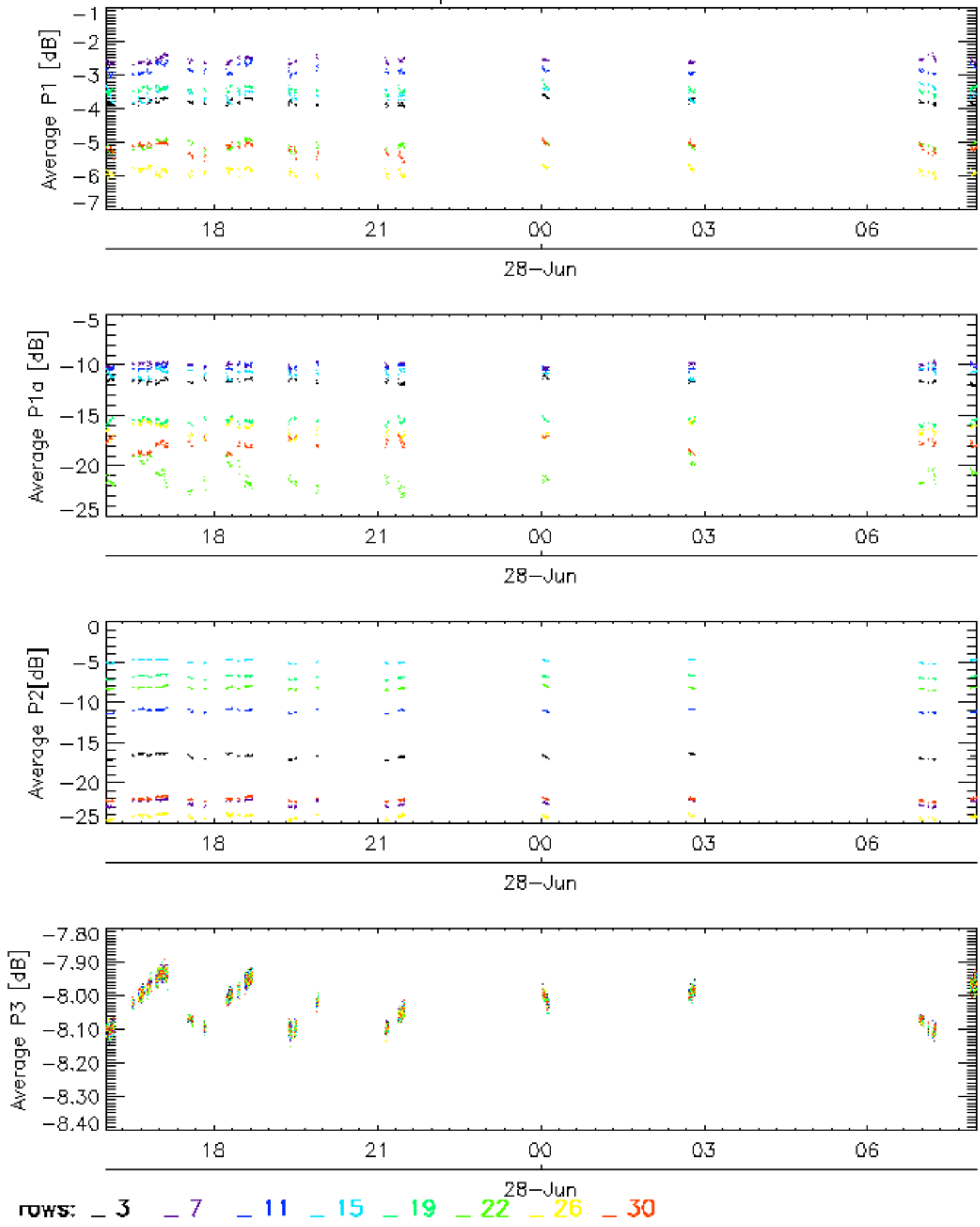
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

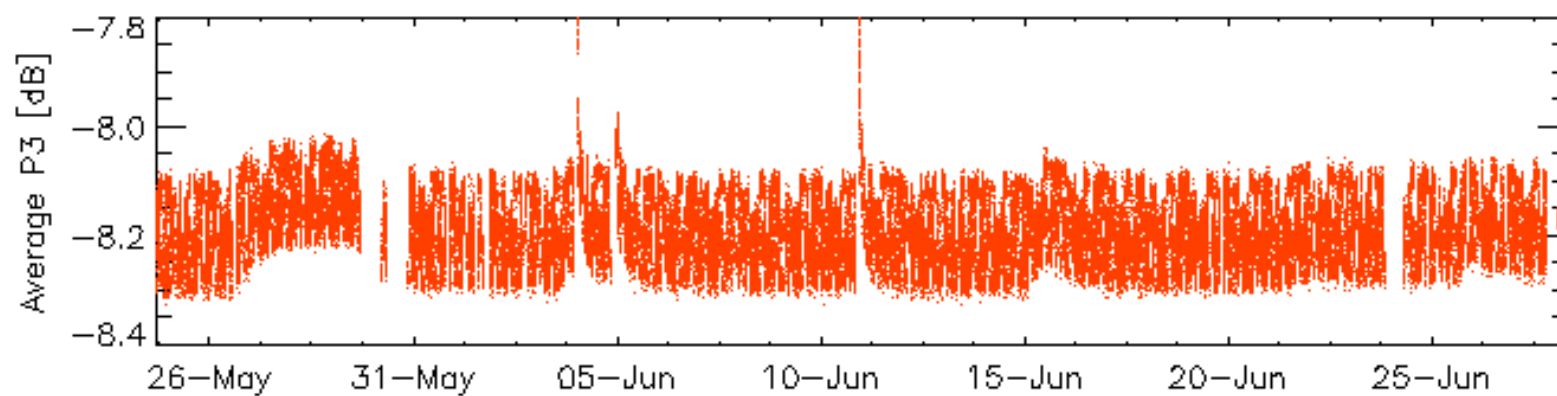
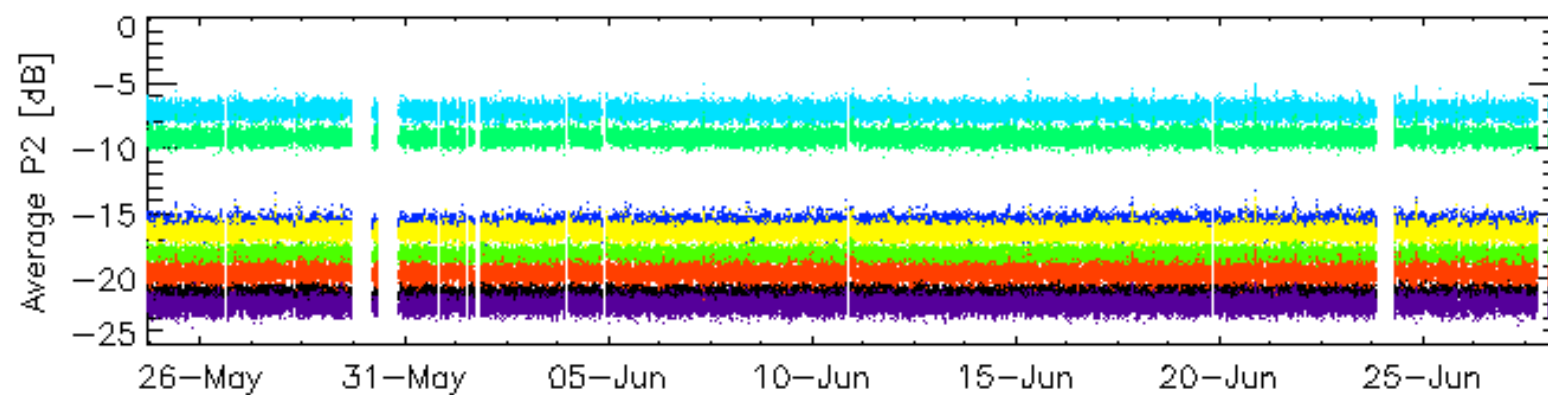
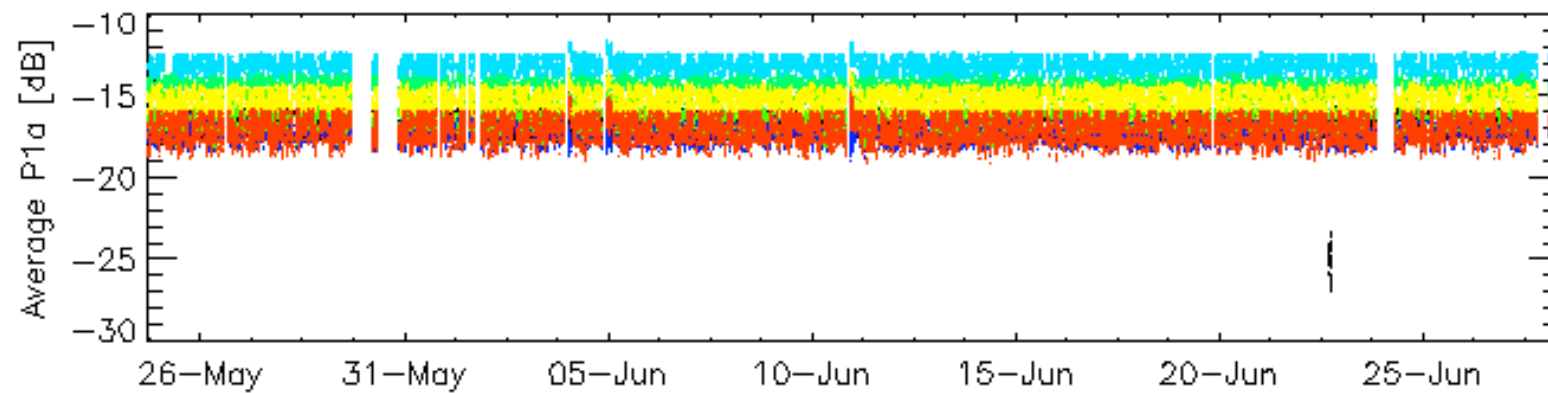
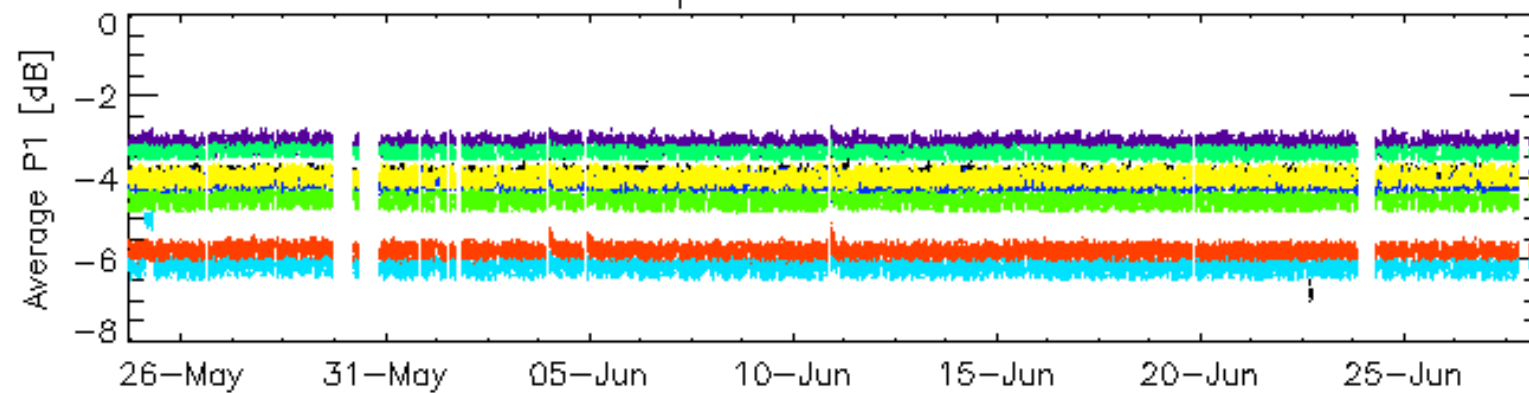


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

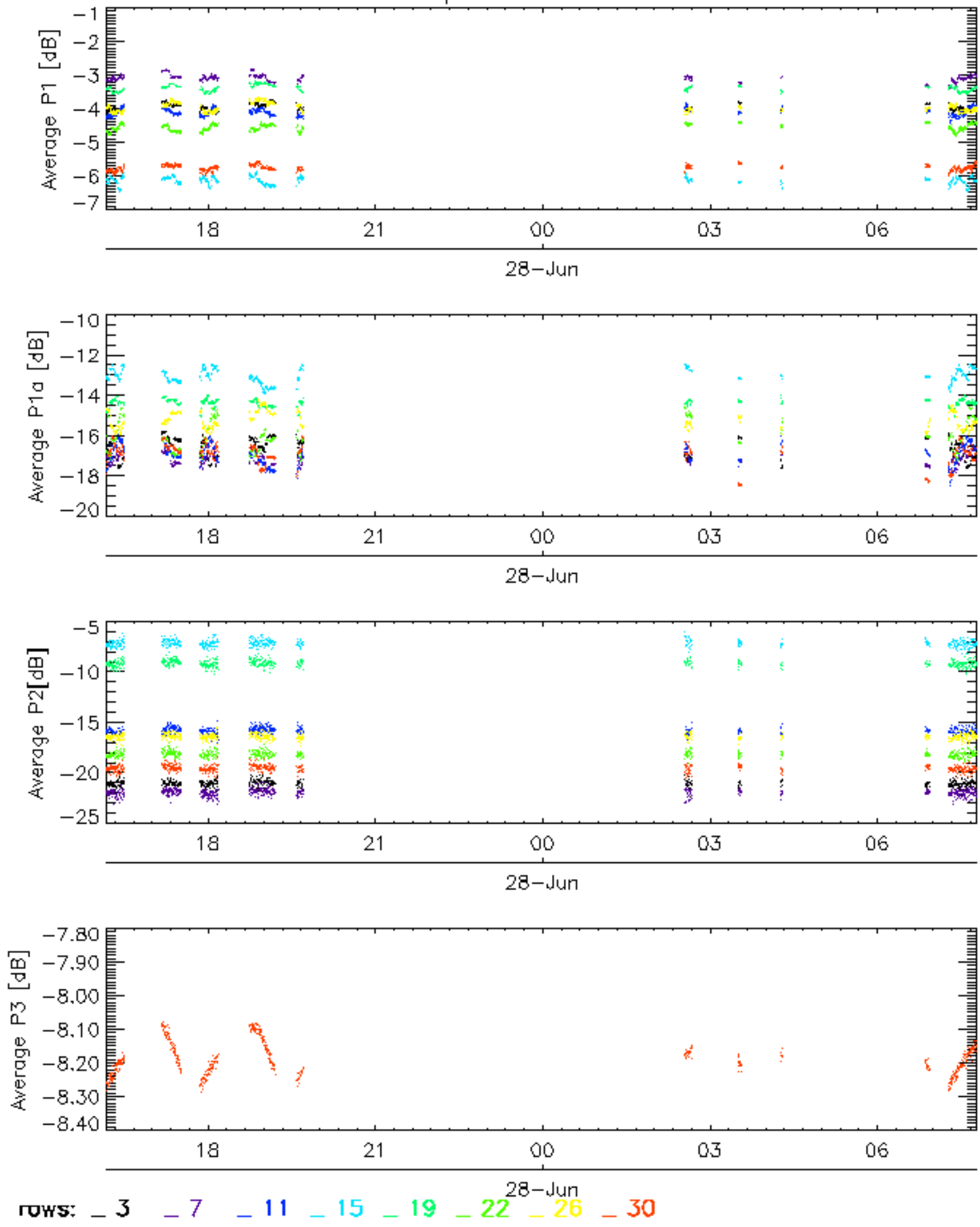


Cal pulses for WVS IS2



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

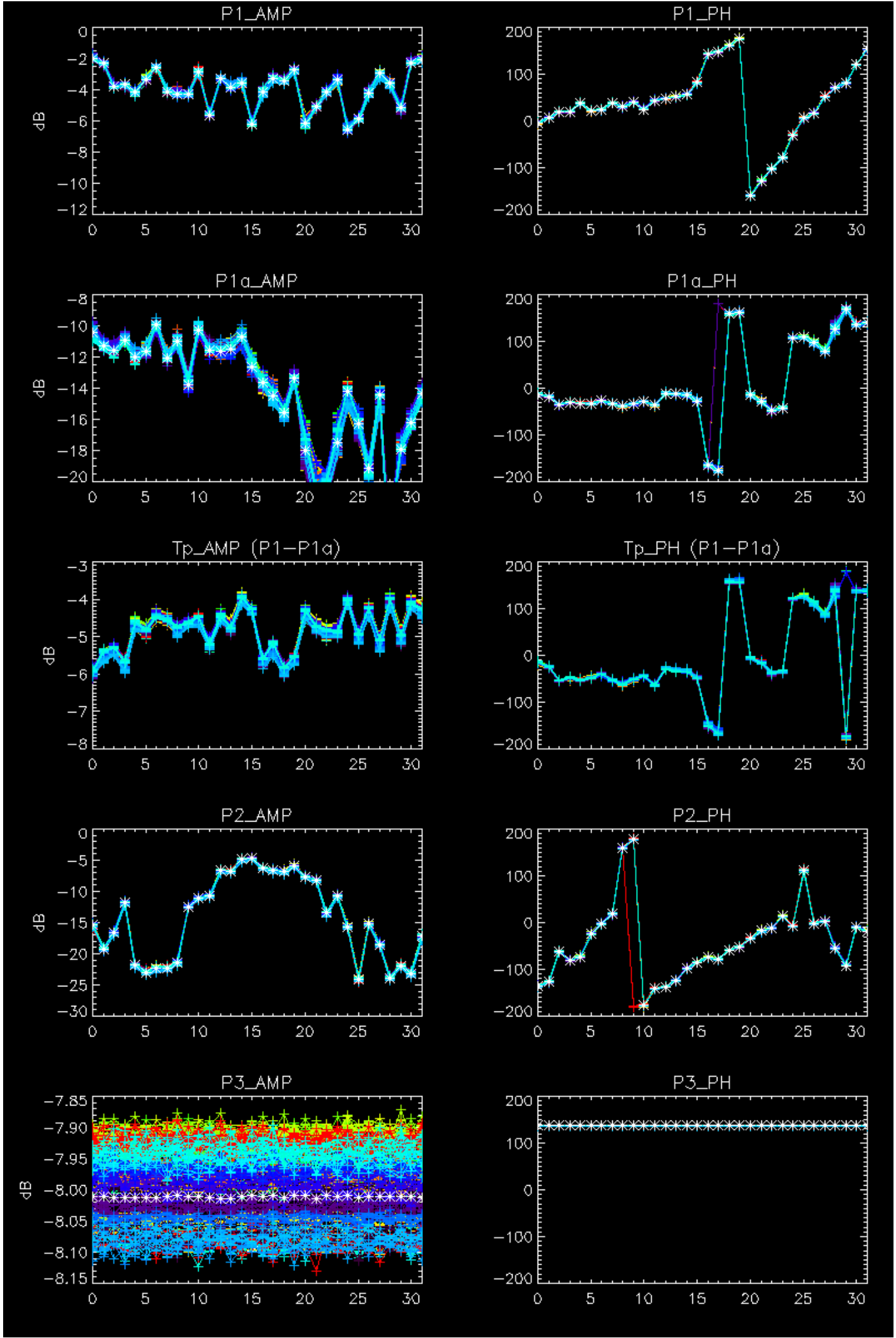
Cal pulses for WVS IS2

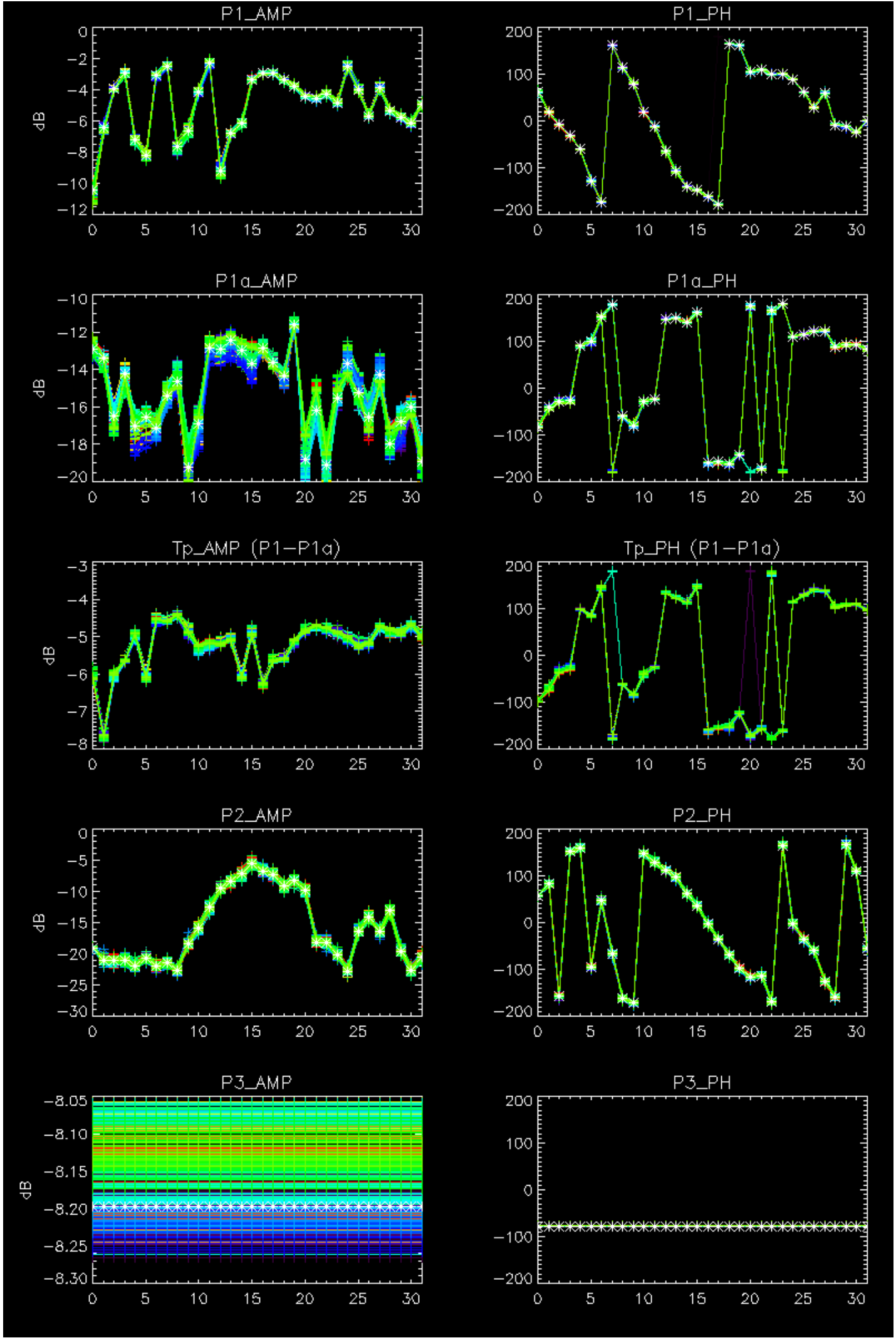


No anomalies observed on available browse products



No anomalies observed.



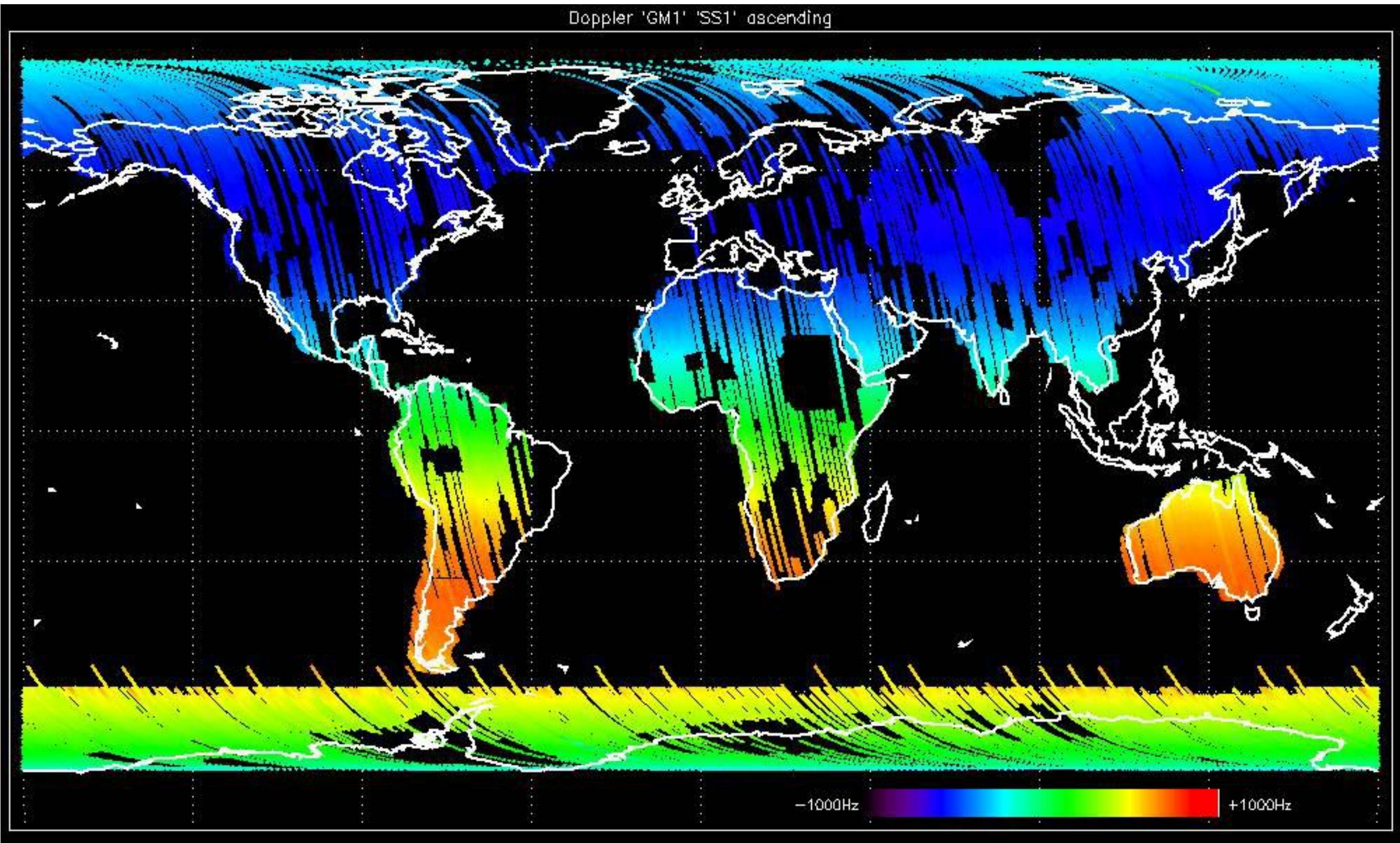


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



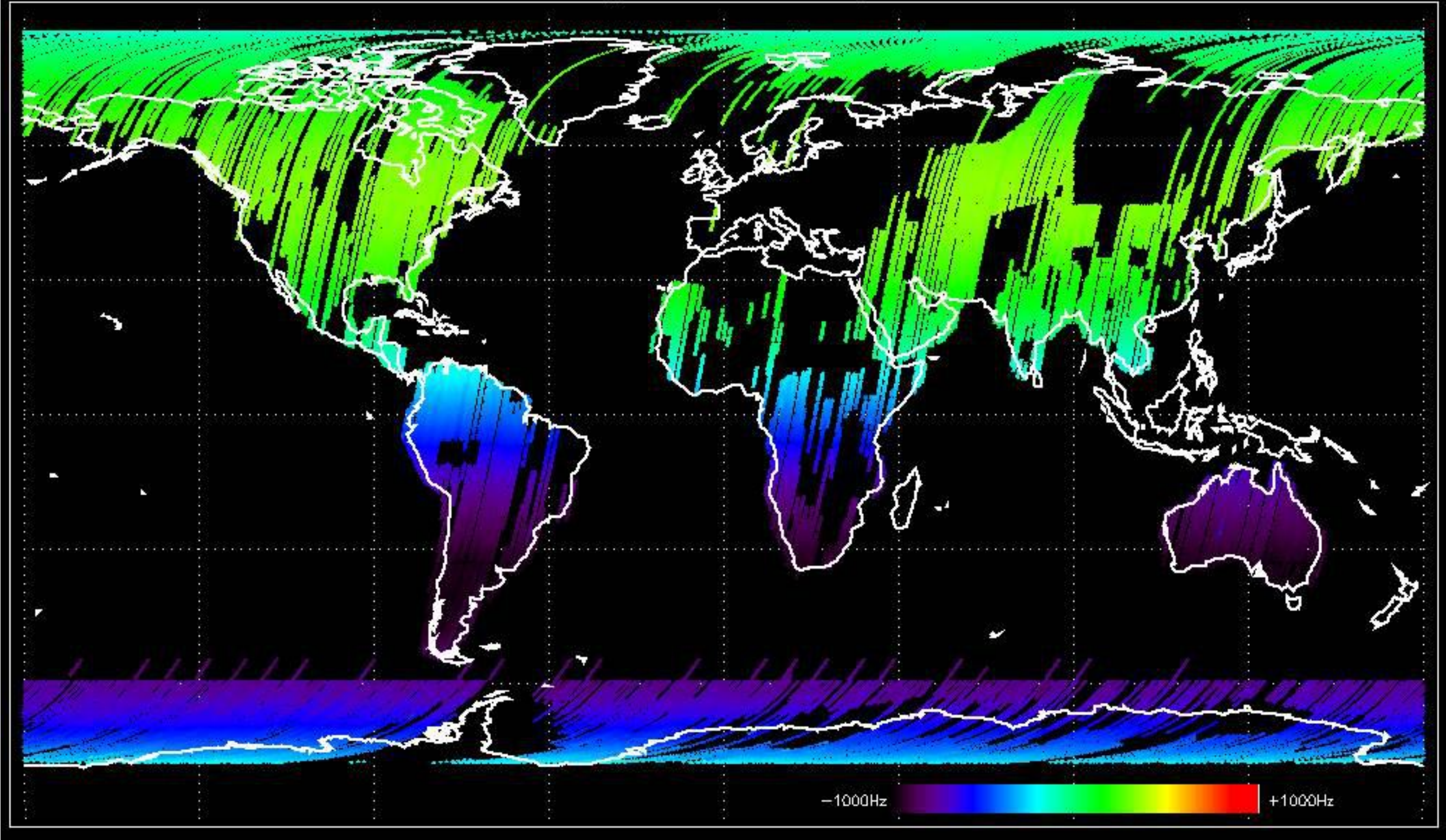


Doppler 'GM1' 'SS1' ascending



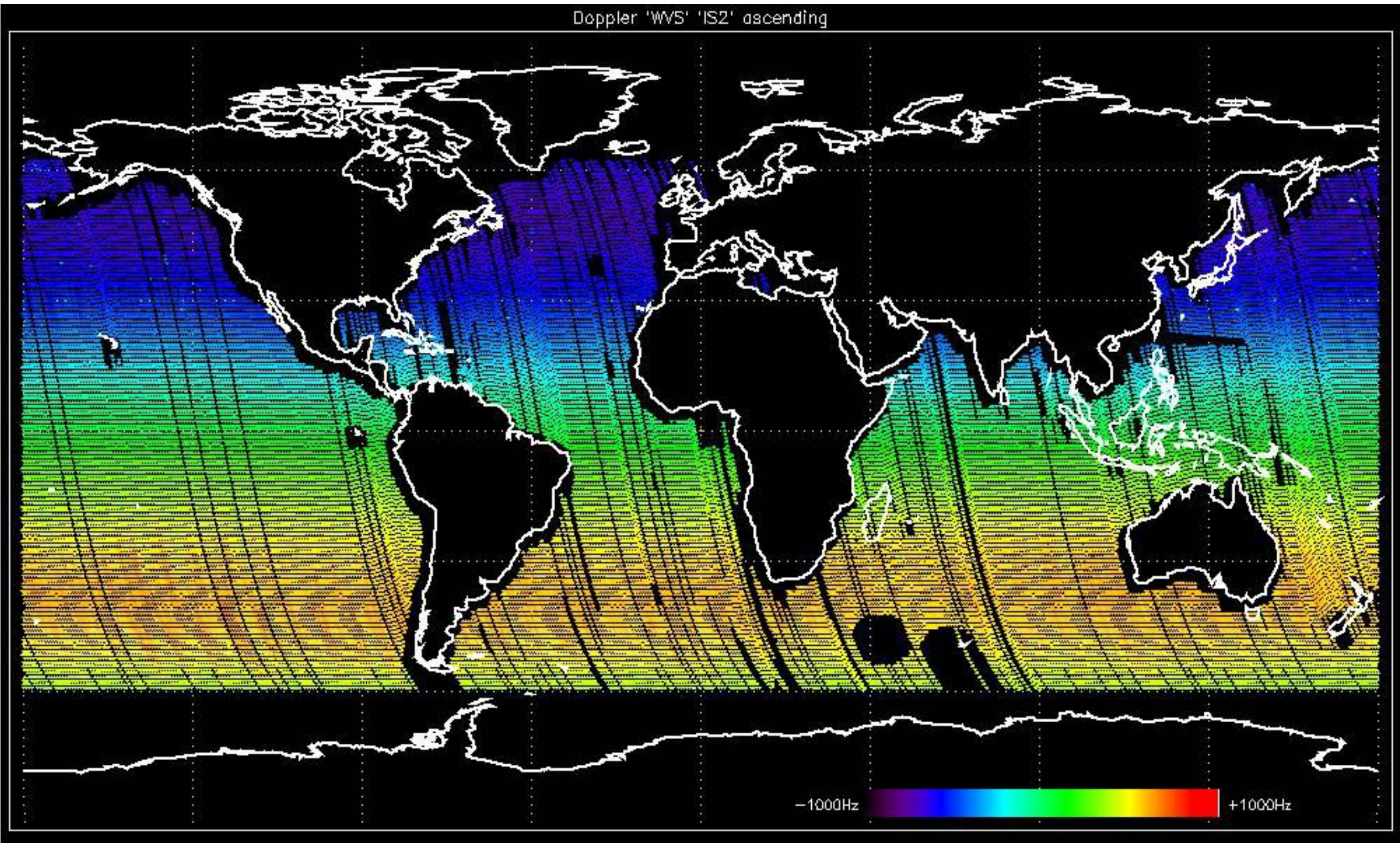


Doppler 'GM1' 'SS1' descending



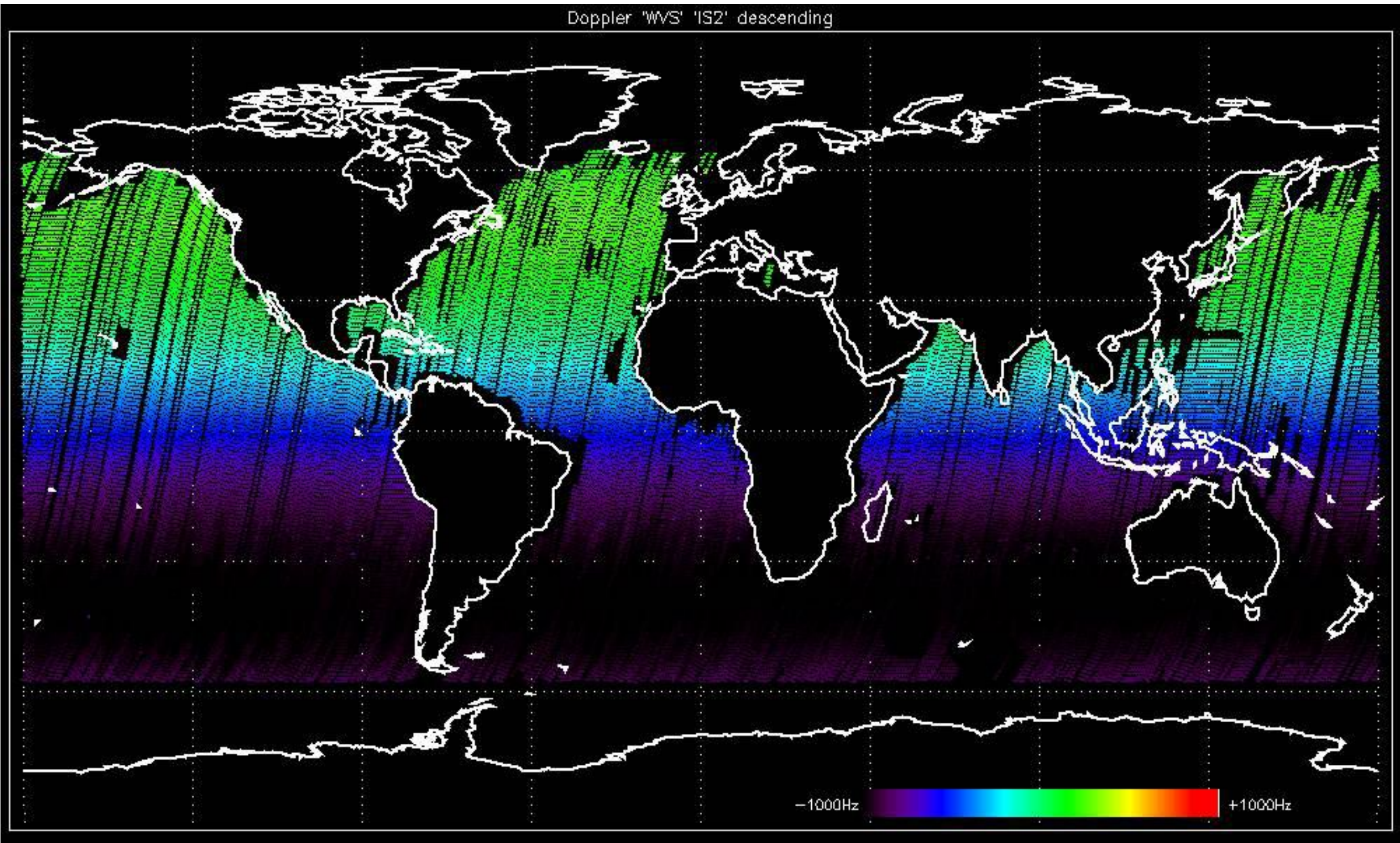


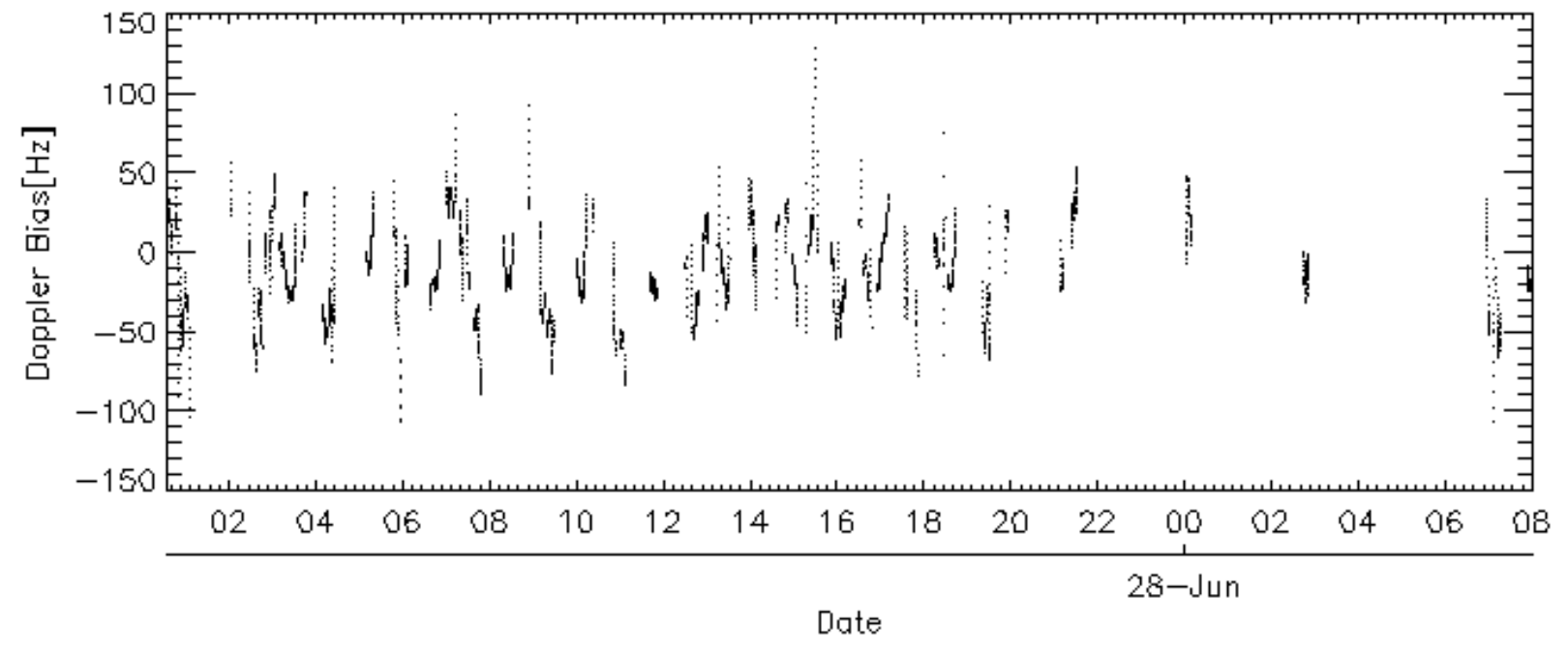
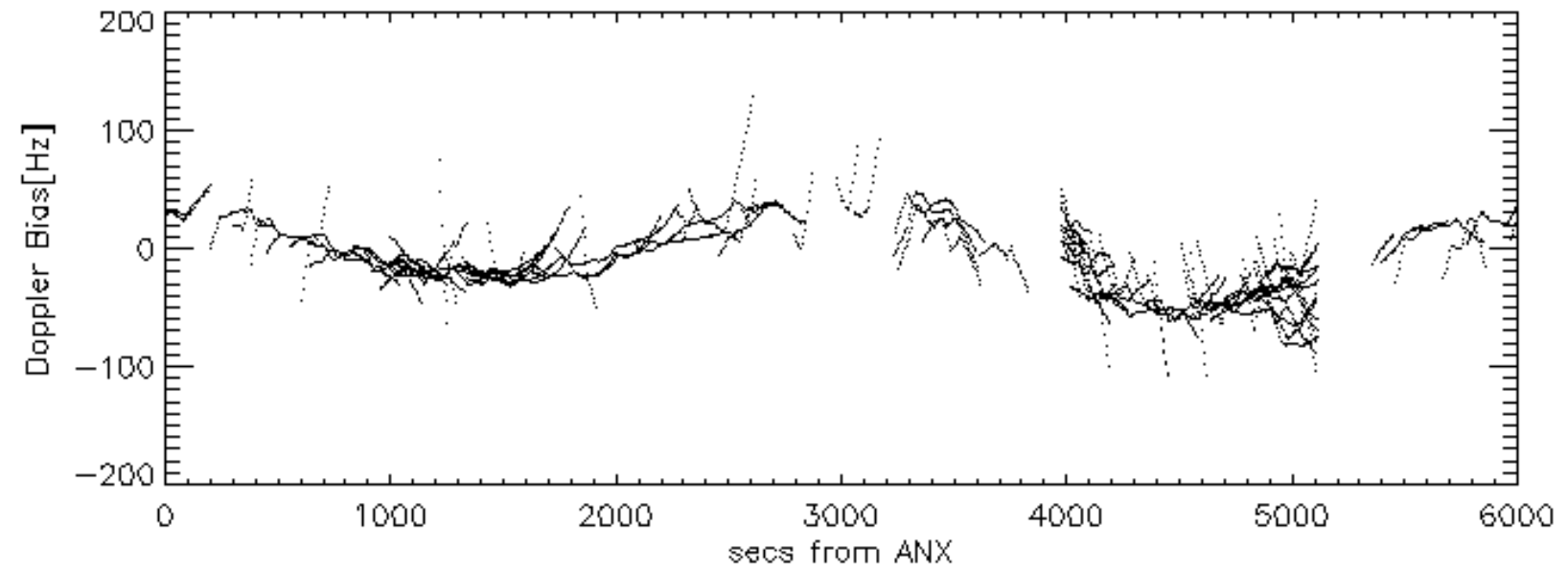
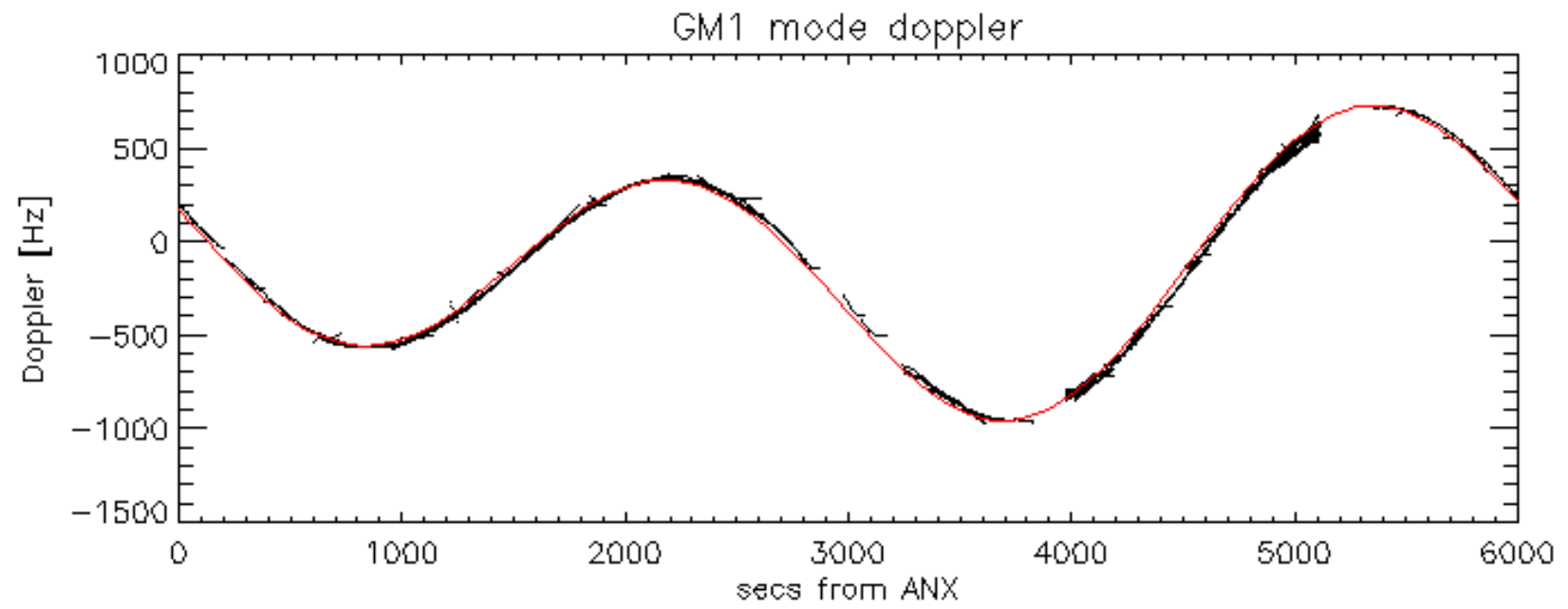
Doppler 'WVS' 'IS2' ascending



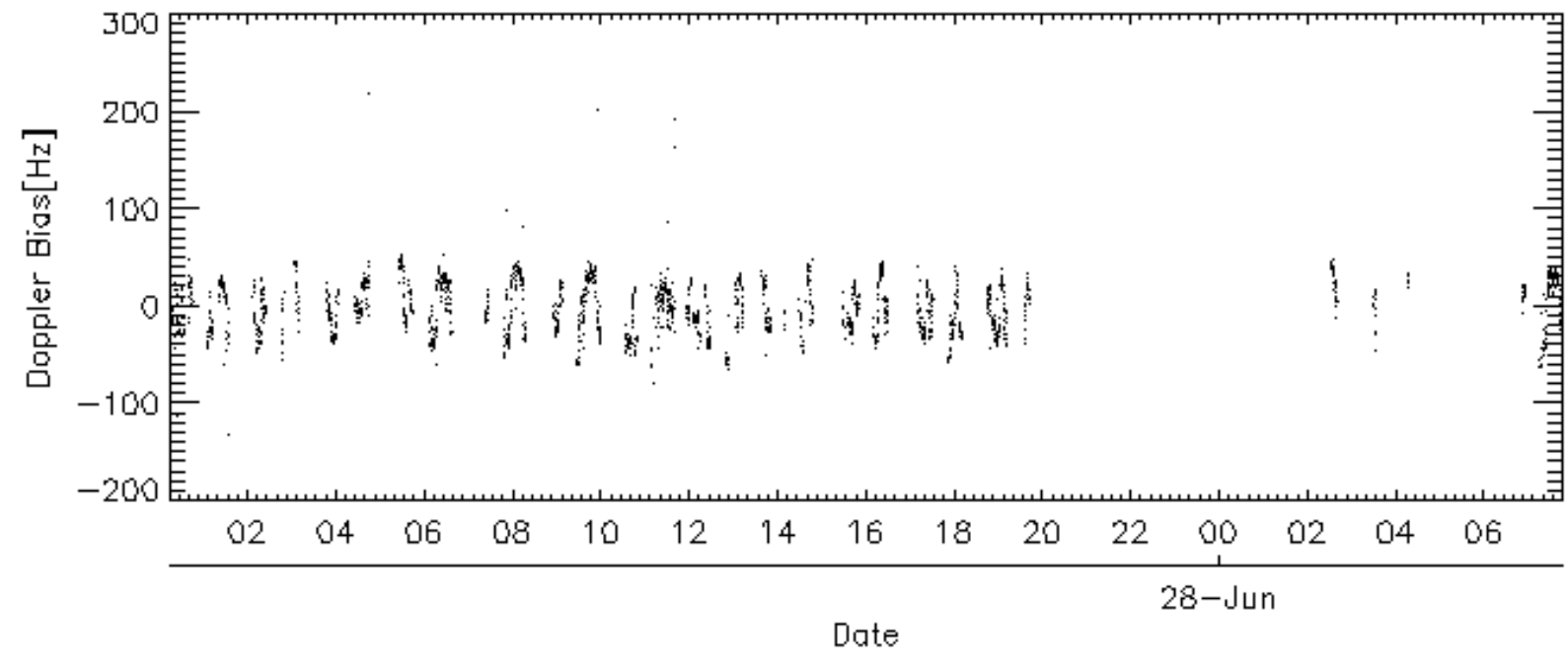
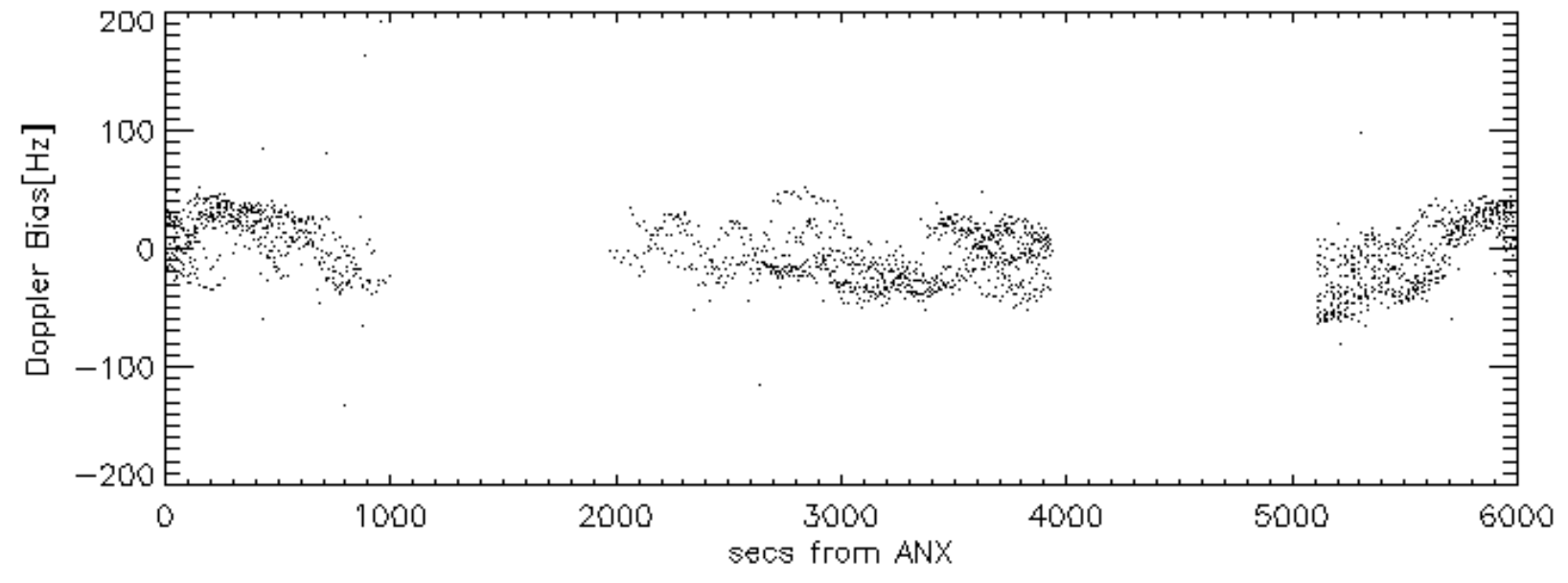
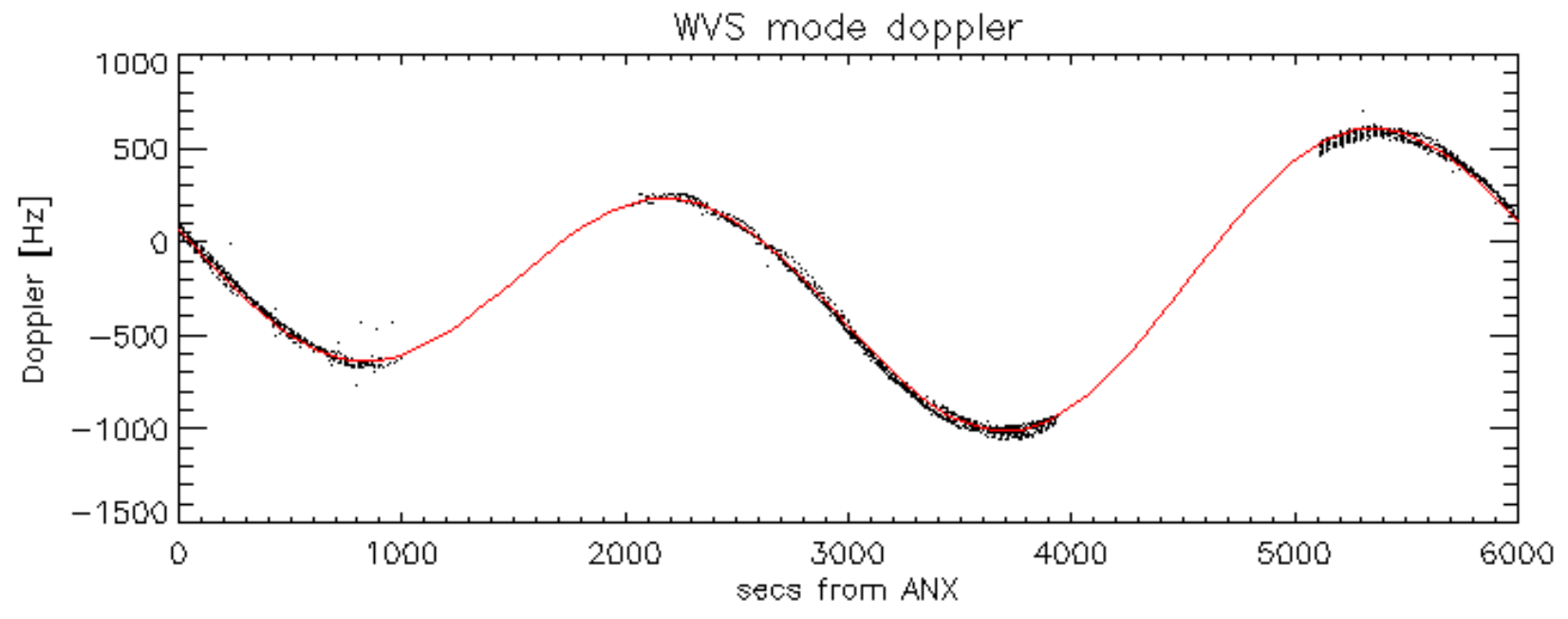


Doppler 'WVS' 'IS2' descending



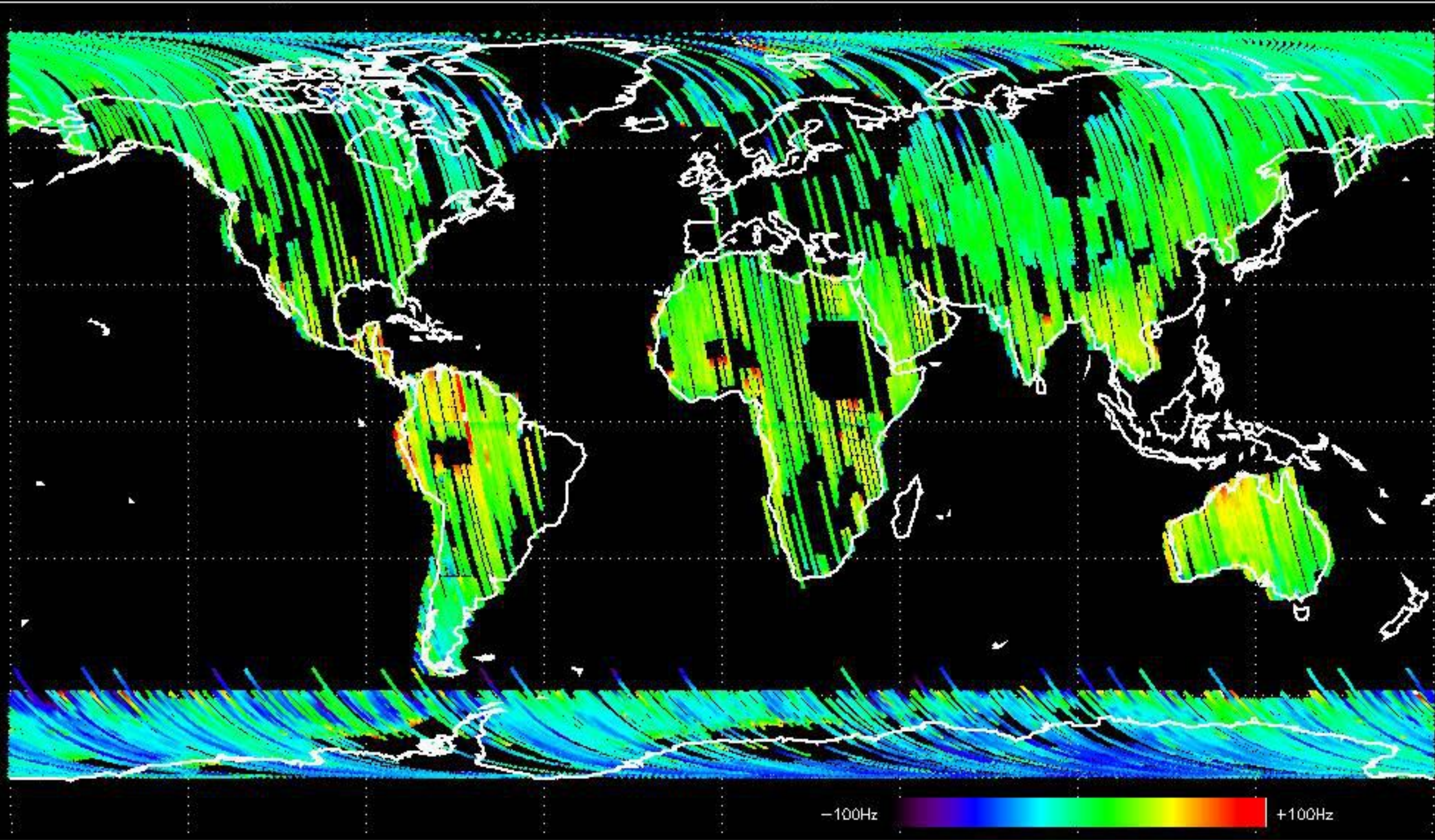






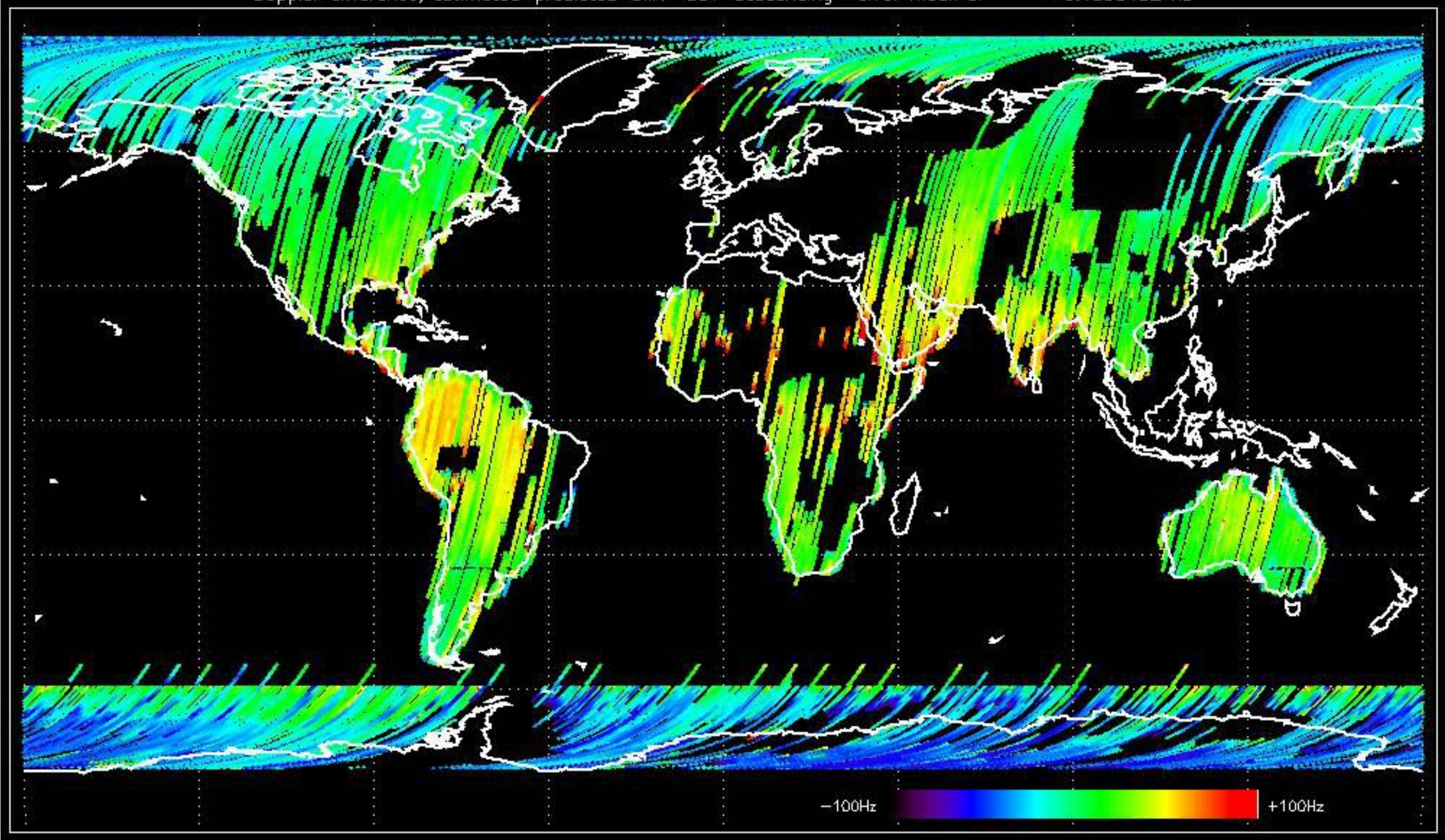


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.788168 Hz



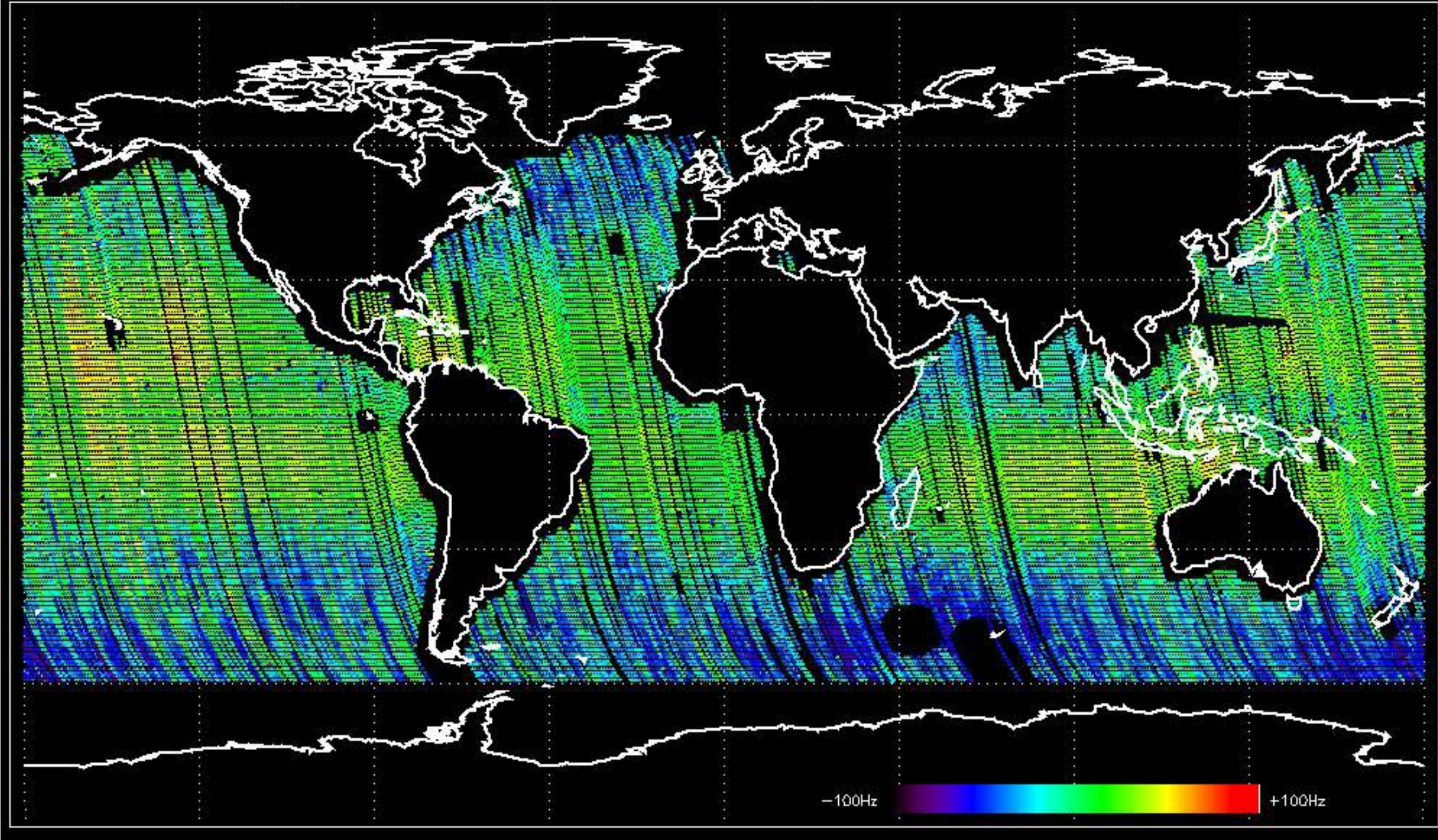


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.1898452 Hz



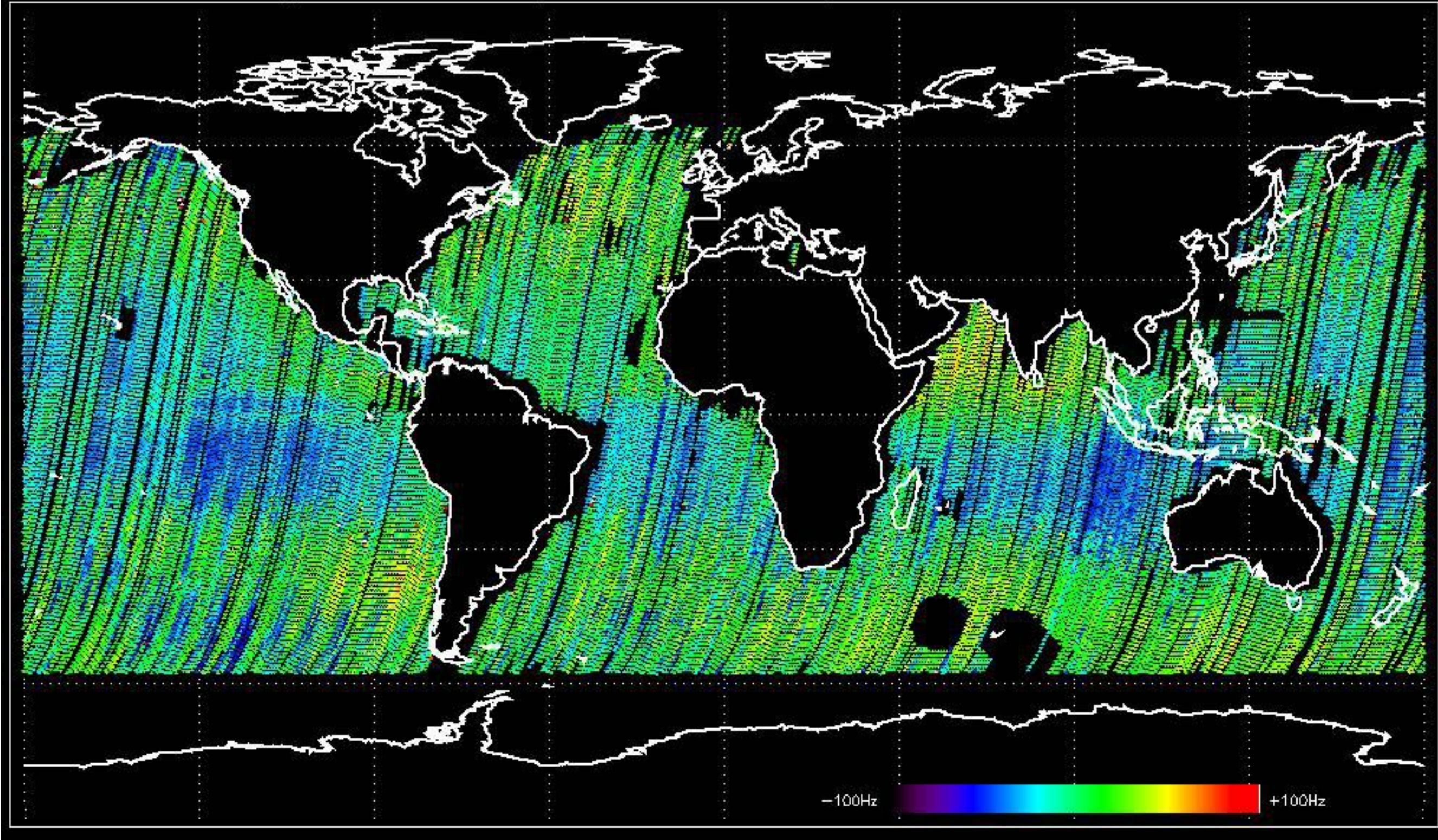


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.7981644 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.981372 Hz





No anomalies observed on available MS products:



No anomalies observed.









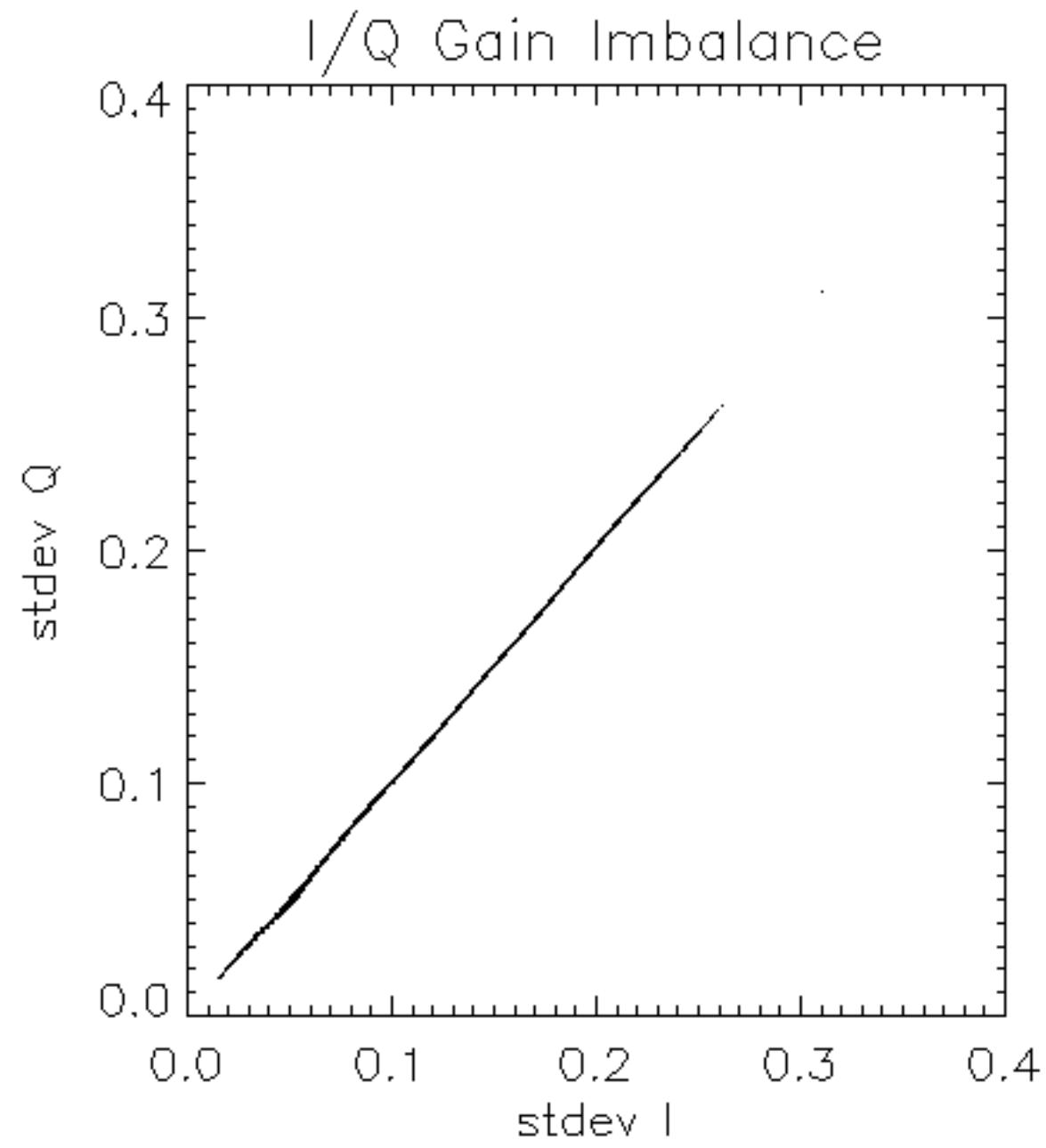


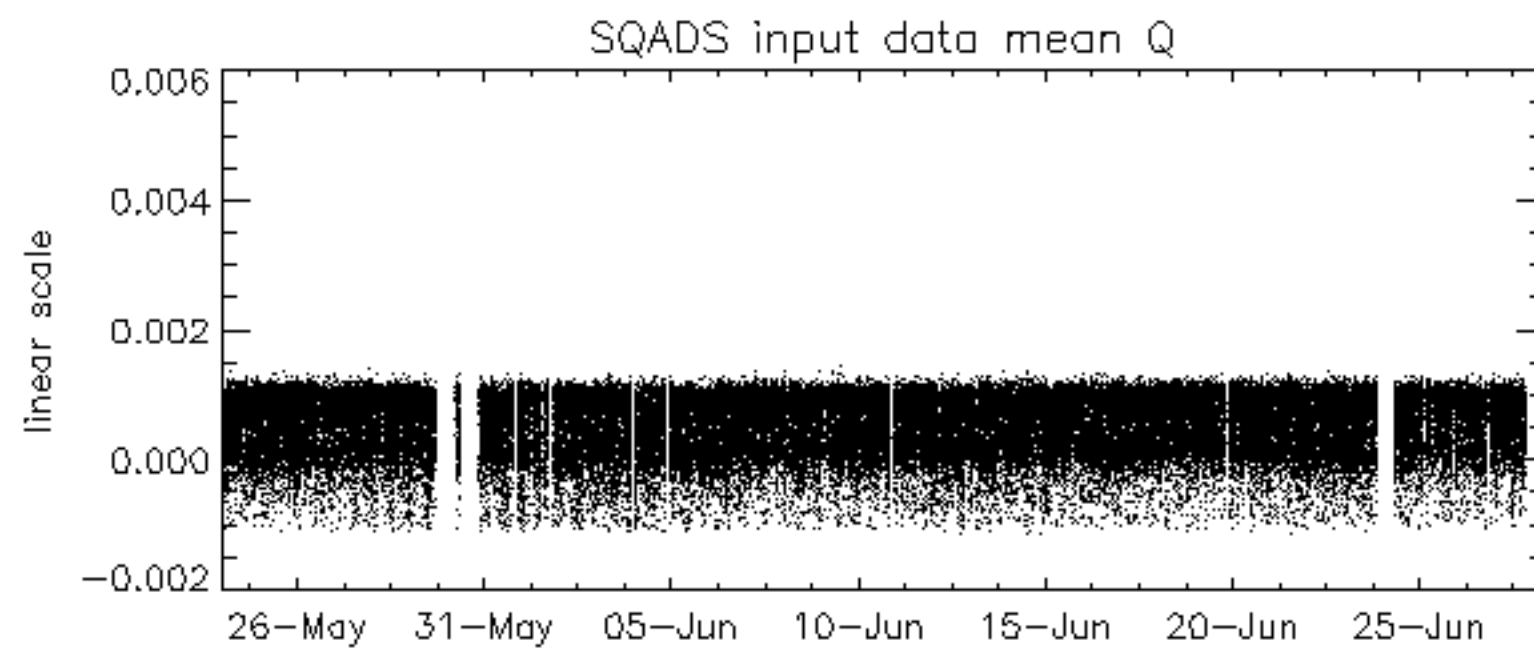
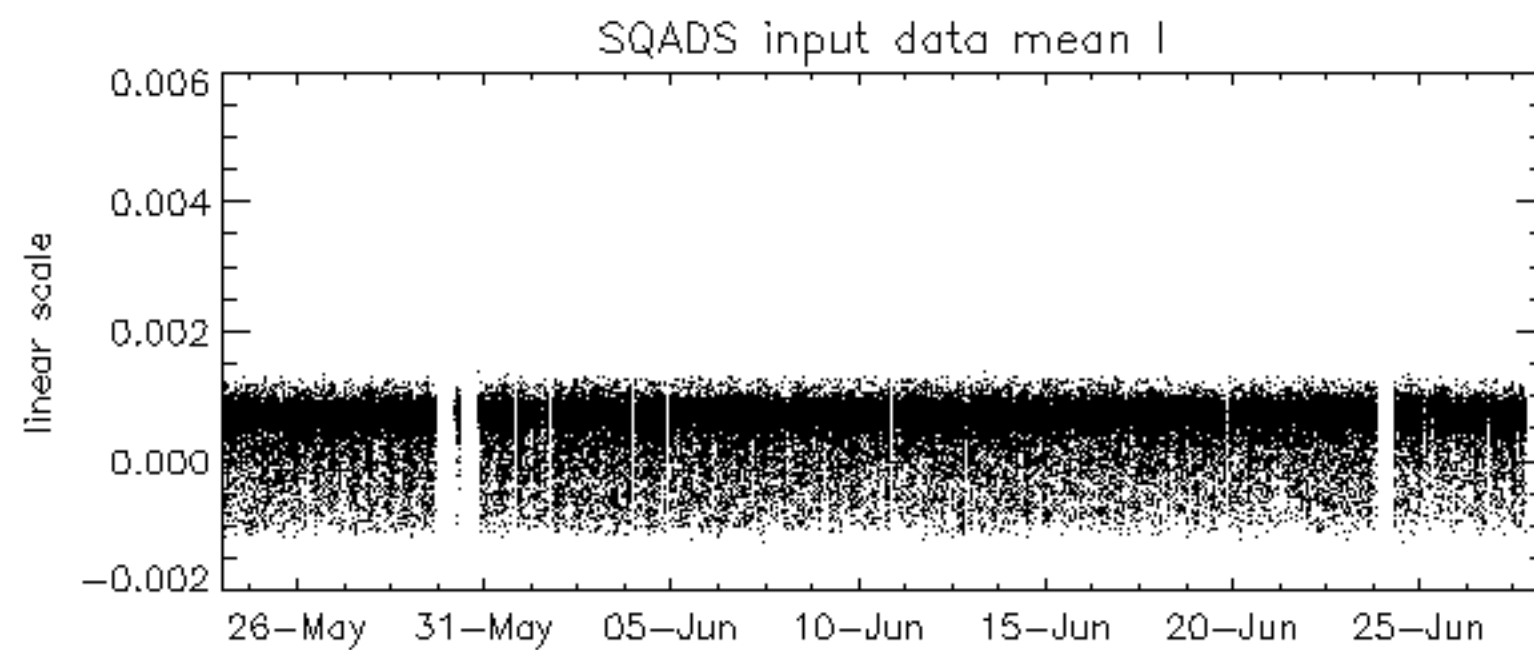
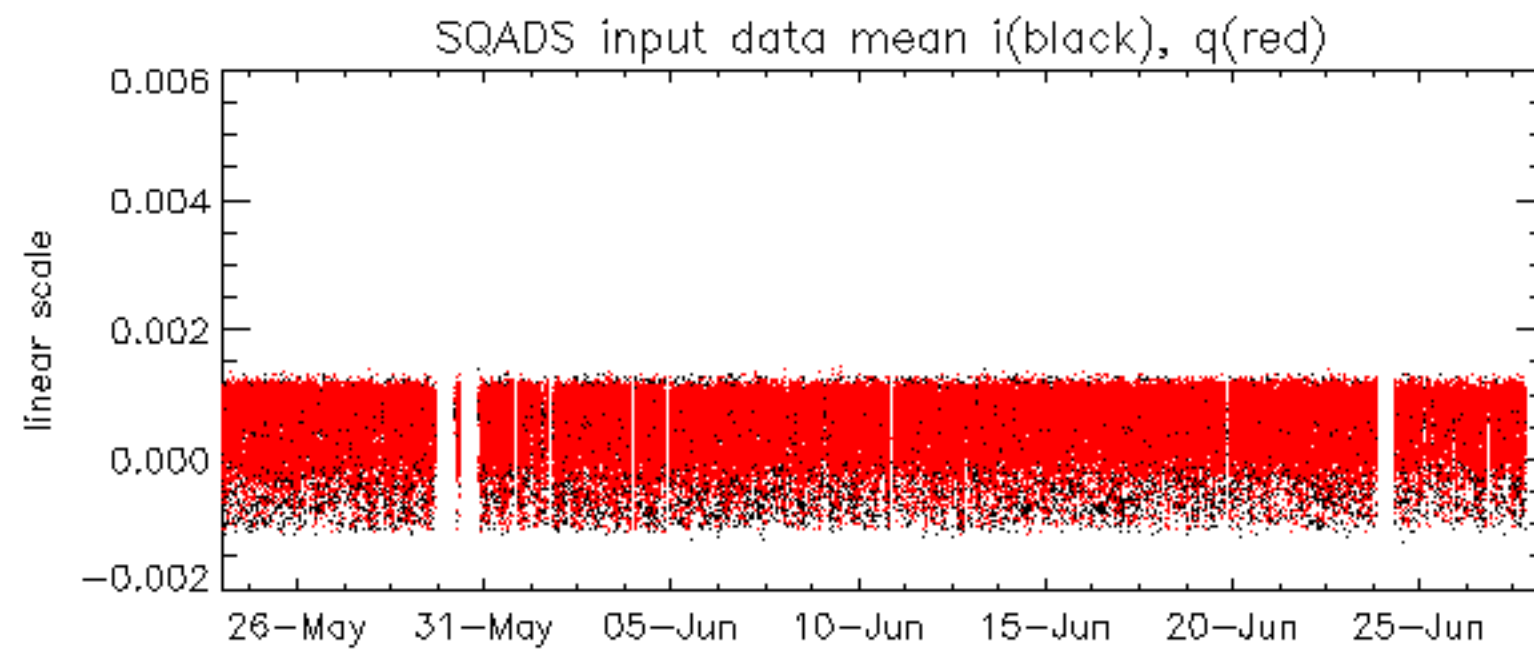


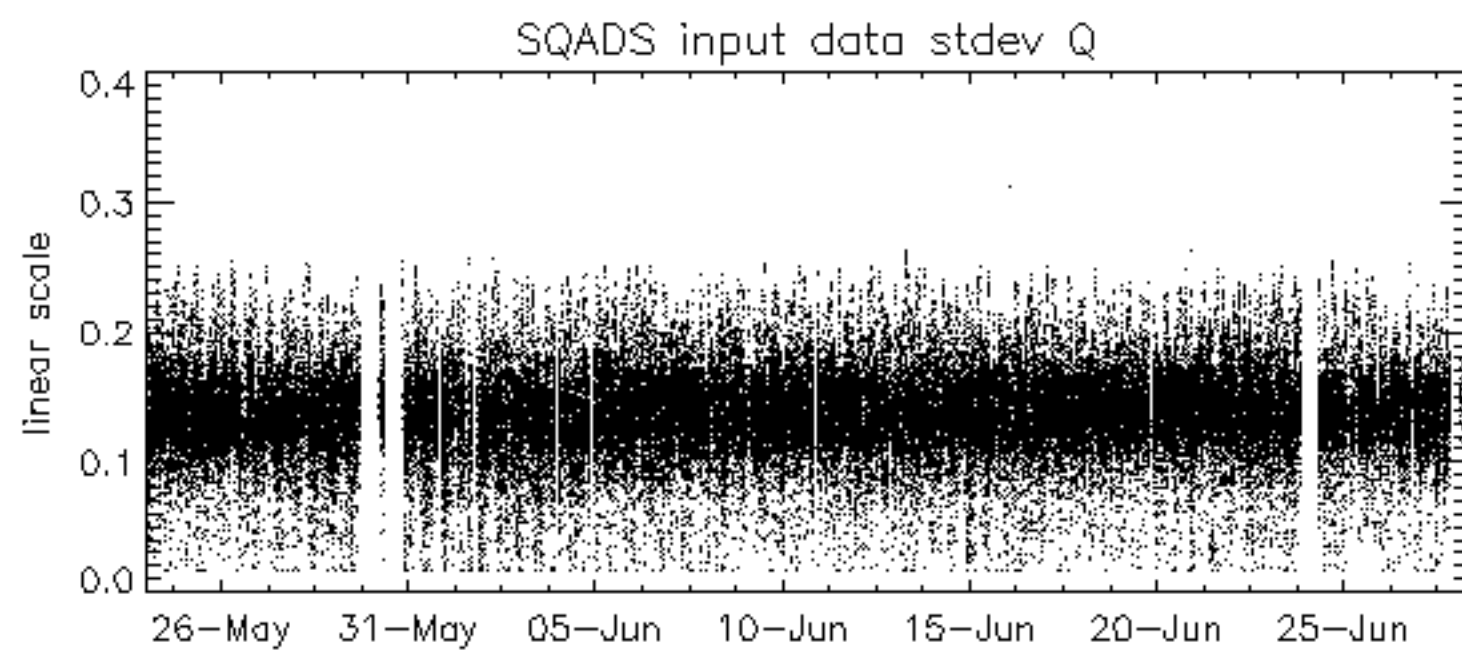
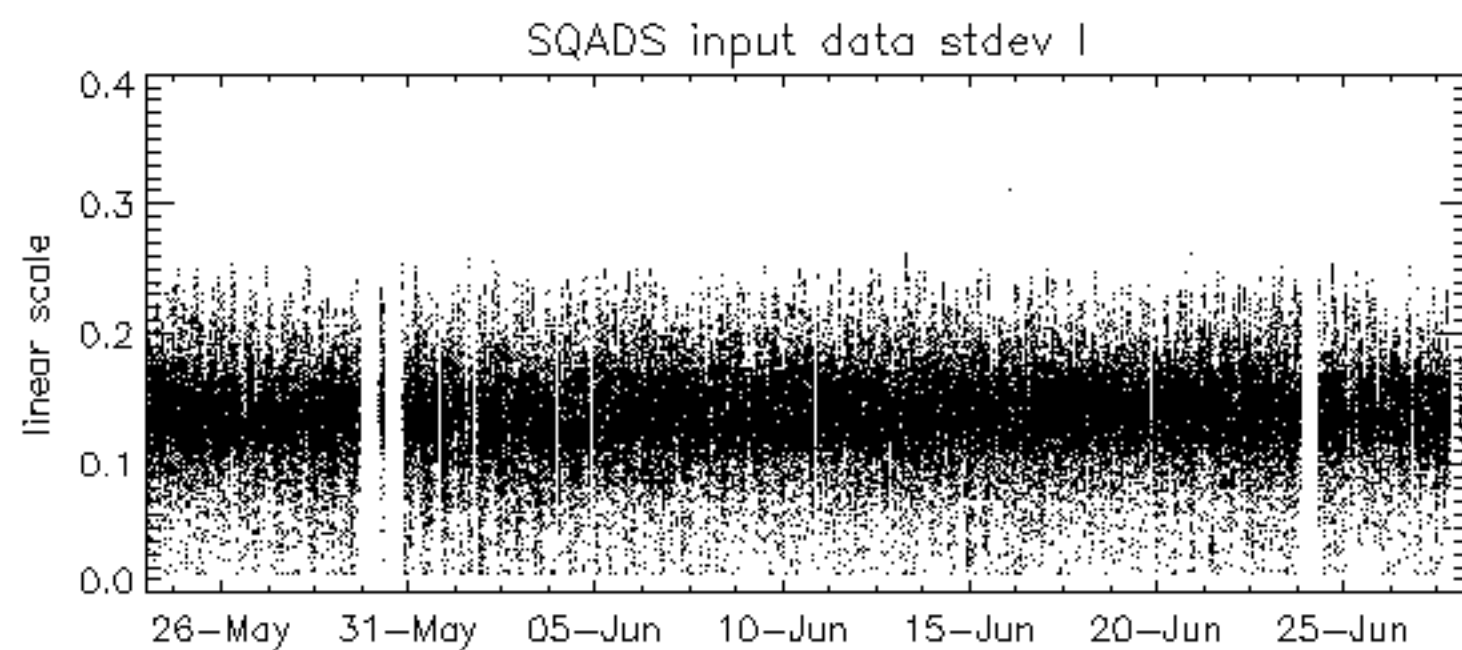
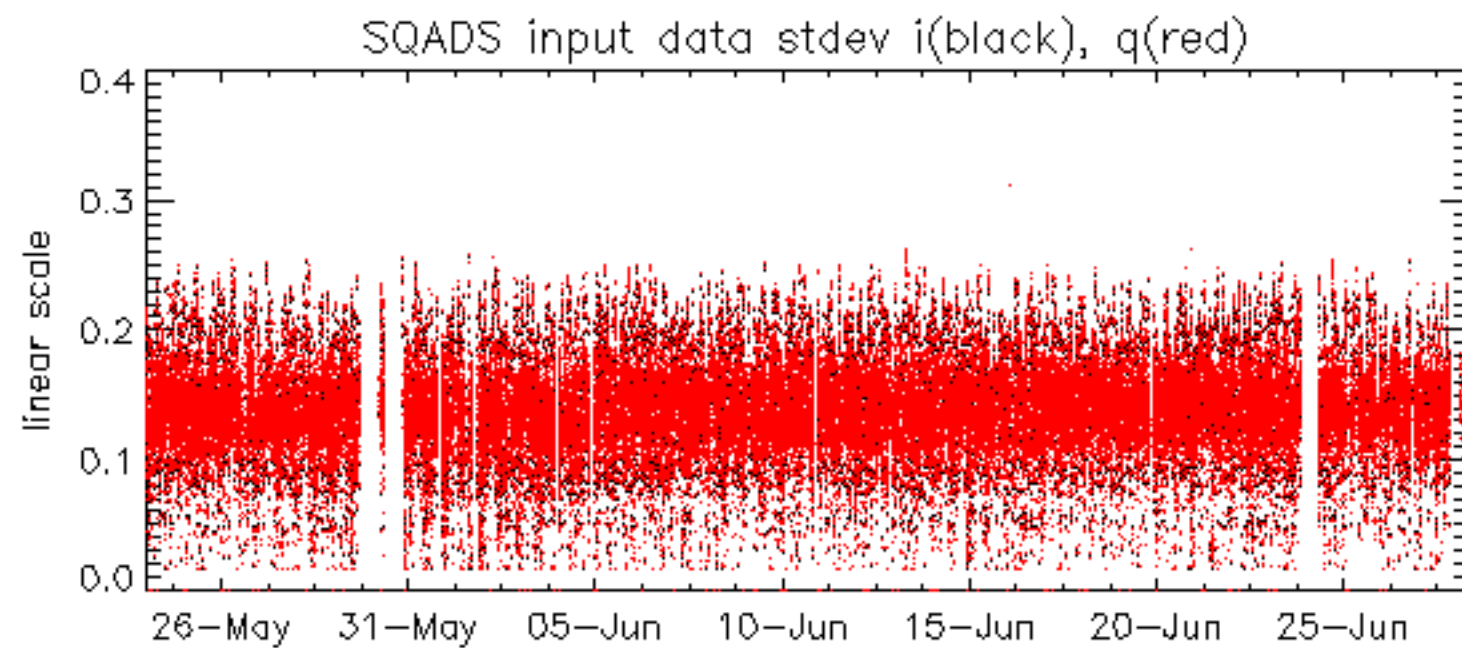


















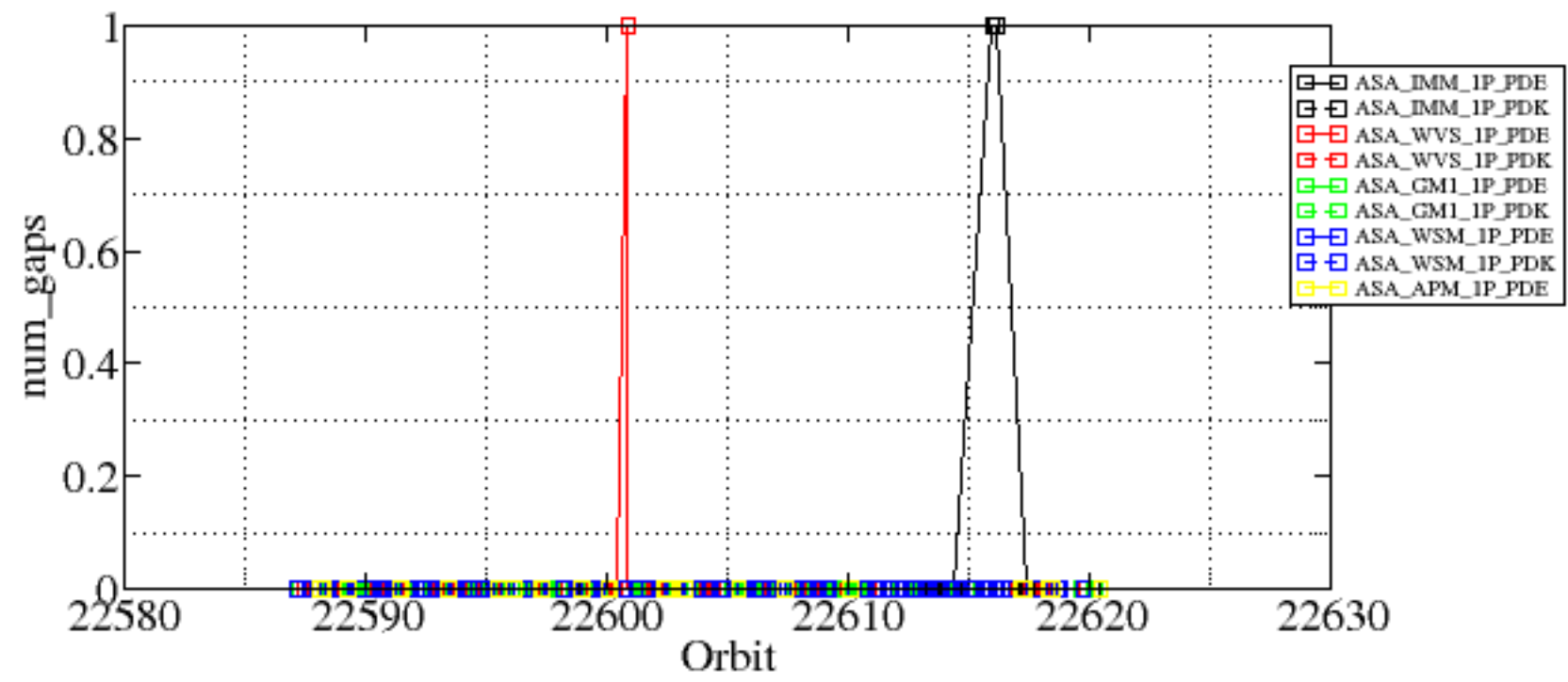




Summary of analysis for the last 3 days 2006062[678]

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_1PNPDE20060628_004521_000001932049_00016_22615_0034.N1	1	0
ASA_IMM_1PNPDE20060628_010203_000000692049_00017_22616_0025.N1	1	0
ASA_WVS_1PNPDE20060626_232711_000000002049_00001_22600_3027.N1	1	0
ASA_WSM_1PNPDE20060626_033514_000000862048_00491_22589_5429.N1	0	22
ASA_WSM_1PNPDE20060627_181149_000000852049_00013_22612_0030.N1	0	6
ASA_WSM_1PNPDE20060627_231143_000000672049_00016_22615_0072.N1	0	53
ASA_WSM_1PNPDK20060626_134018_000003002048_00497_22595_8394.N1	0	32



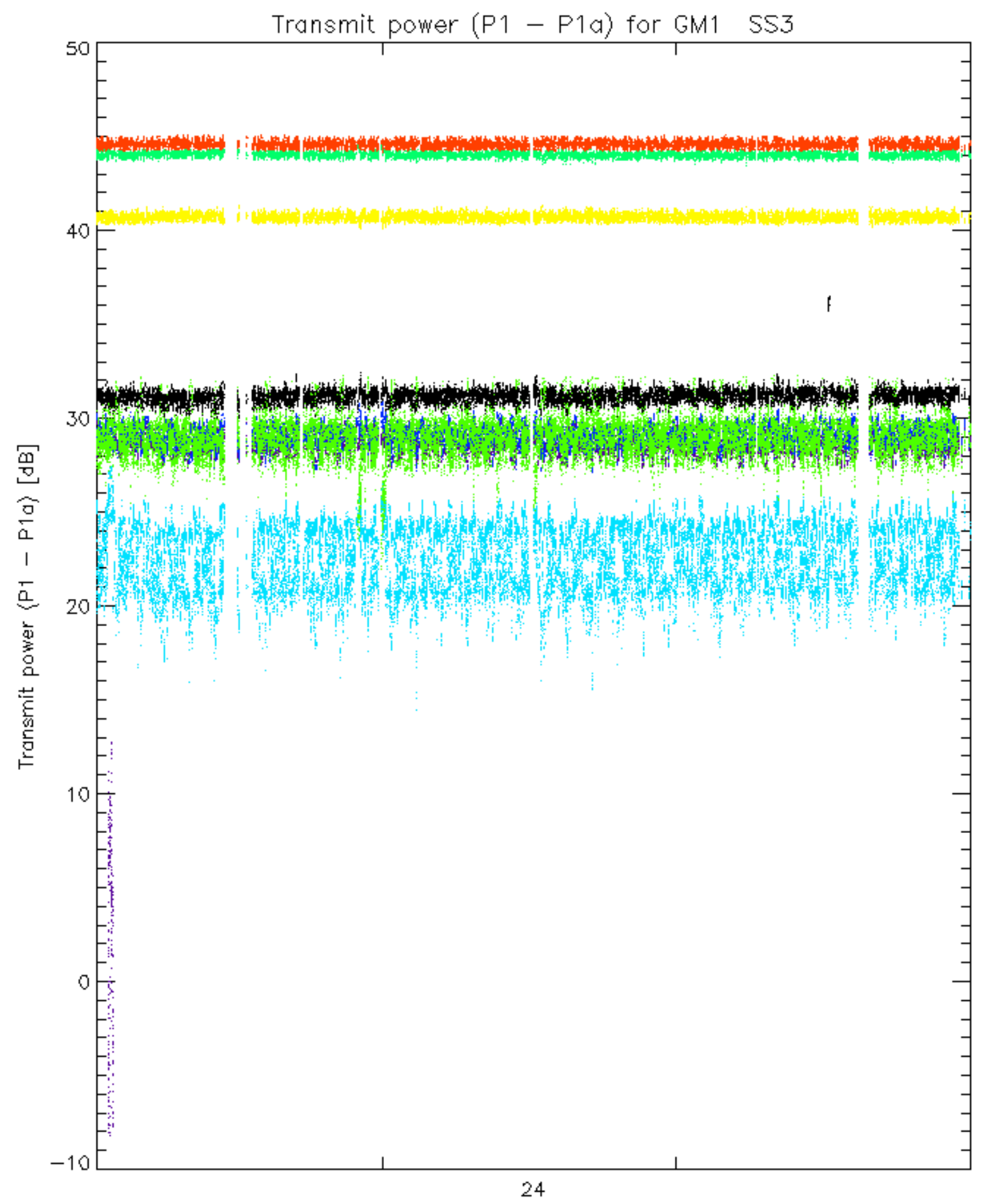






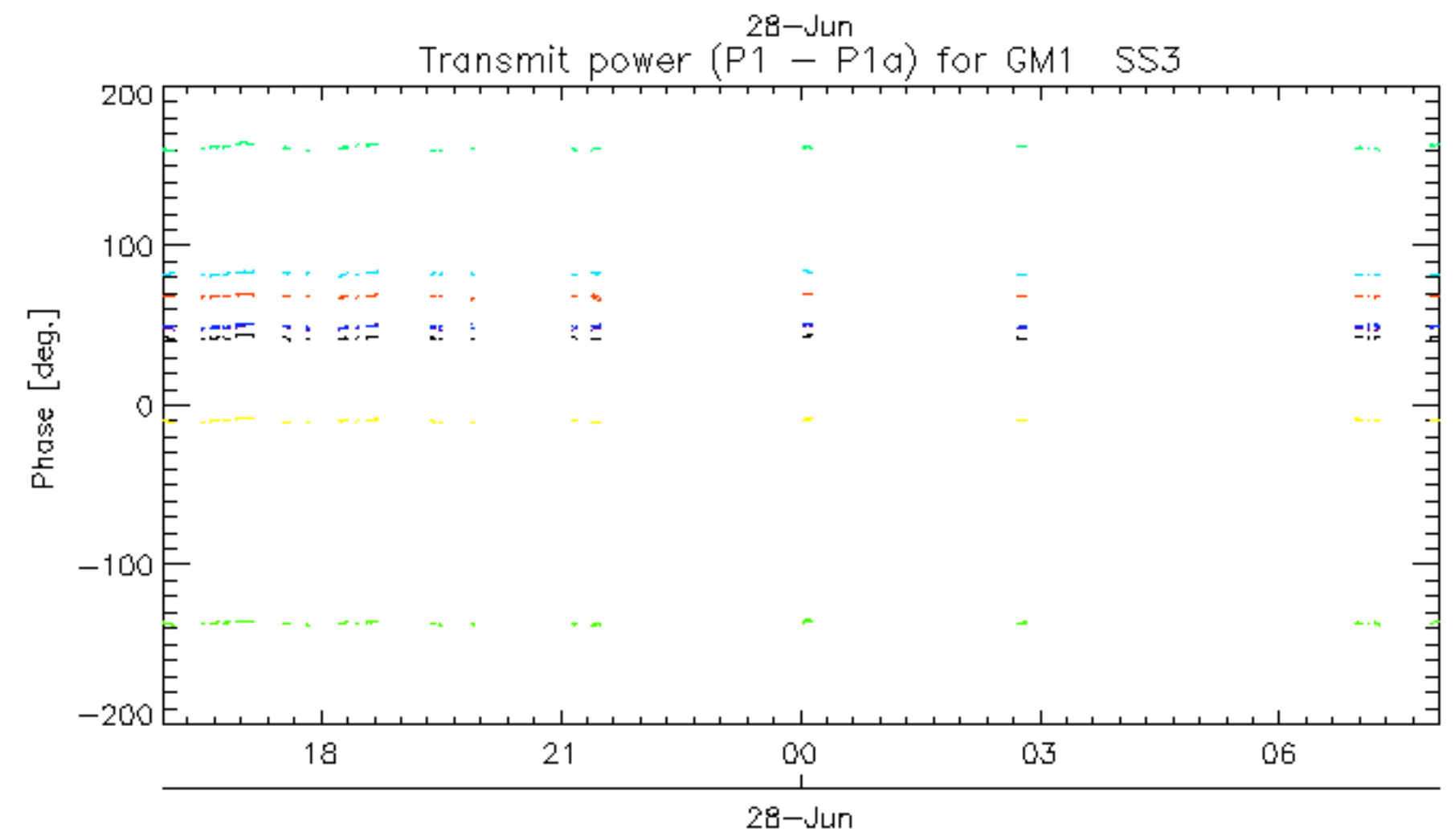
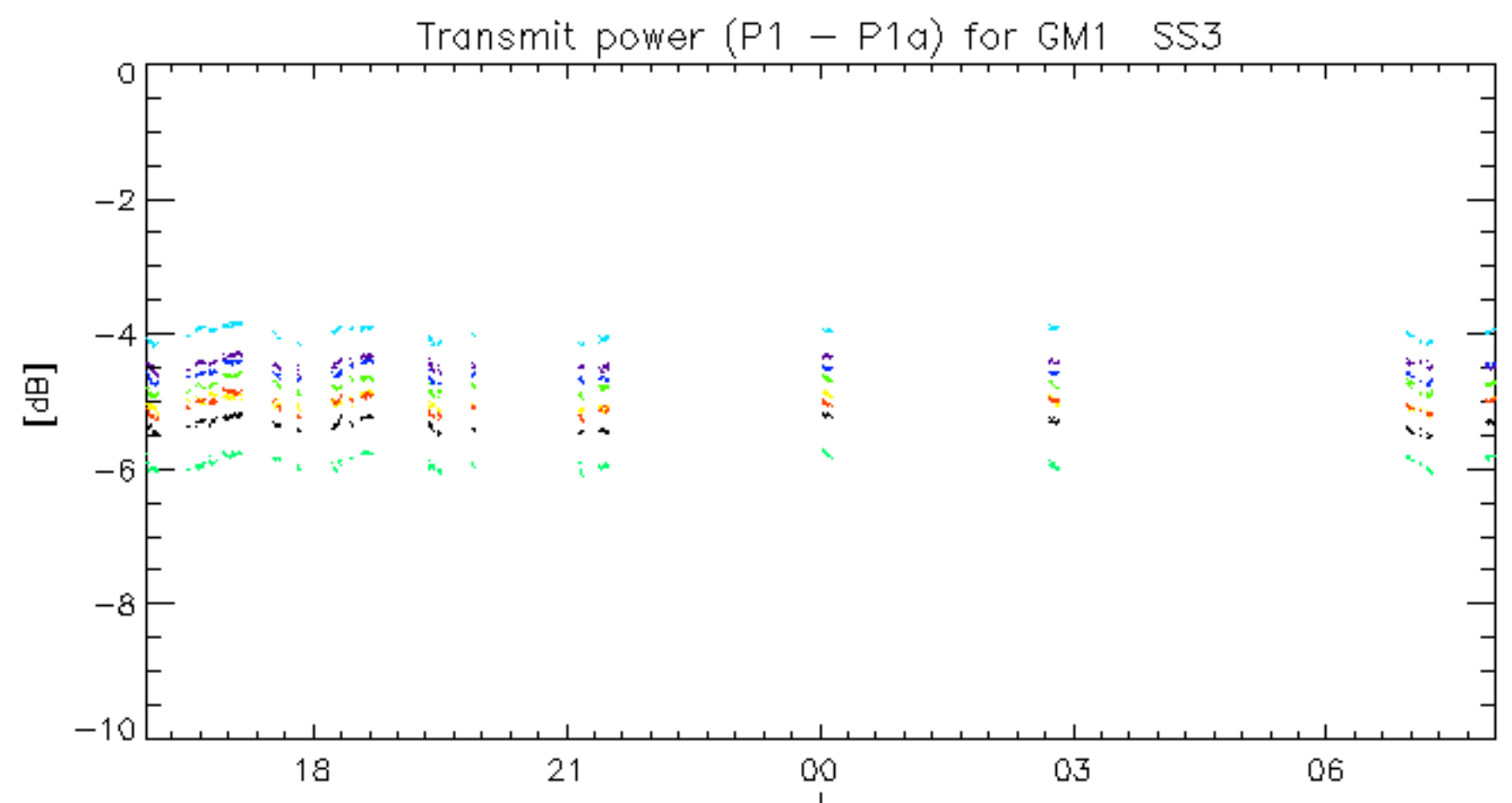




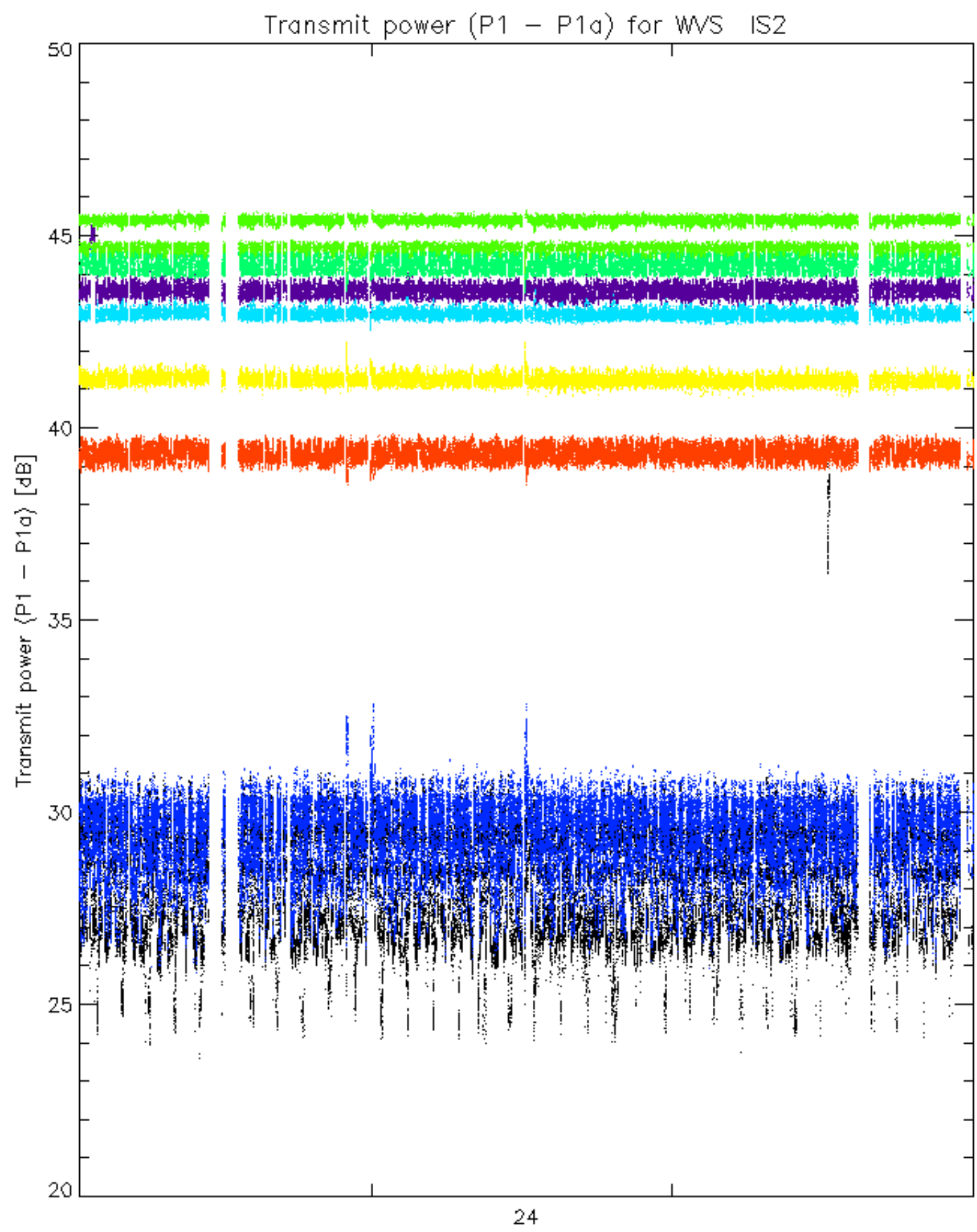


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

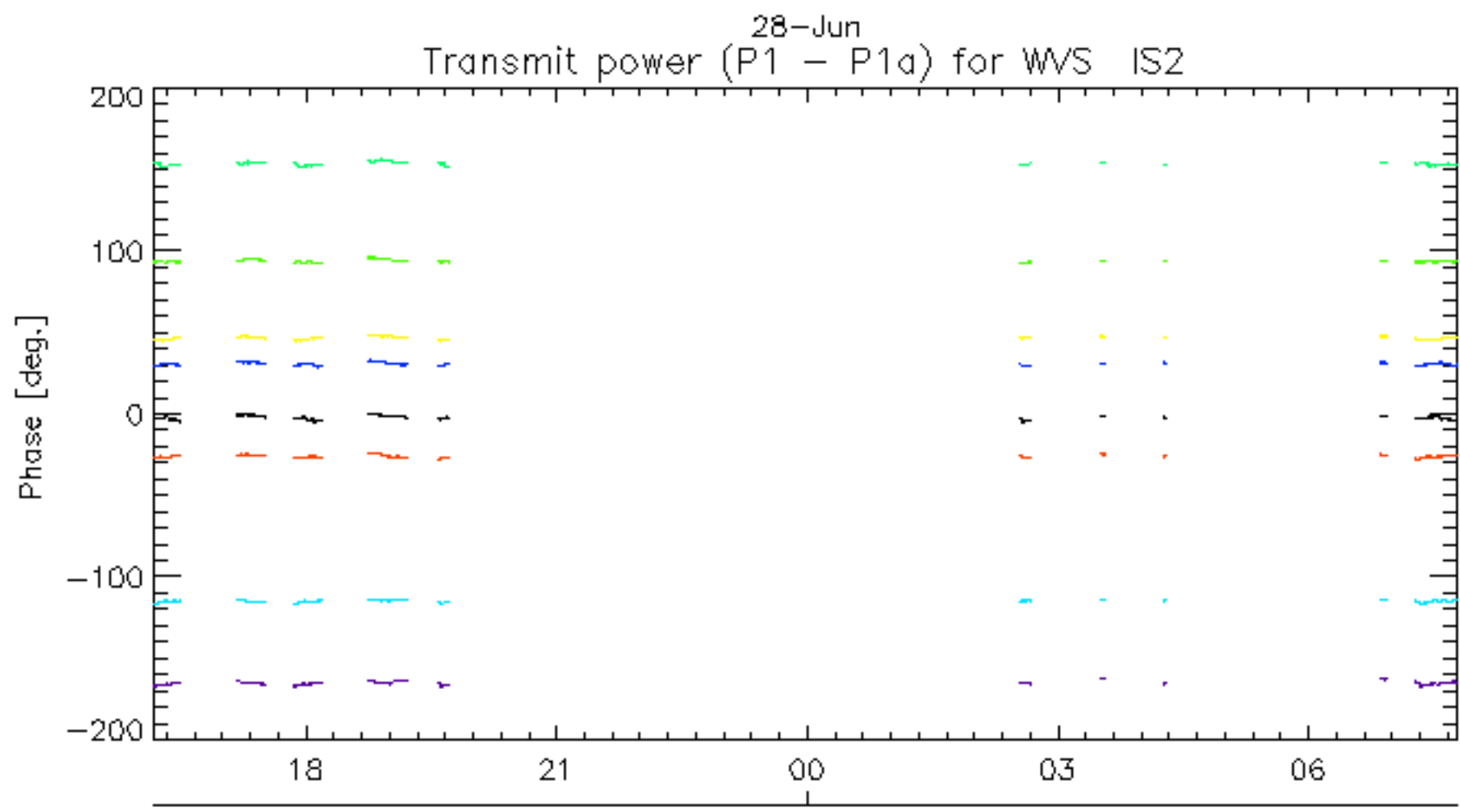
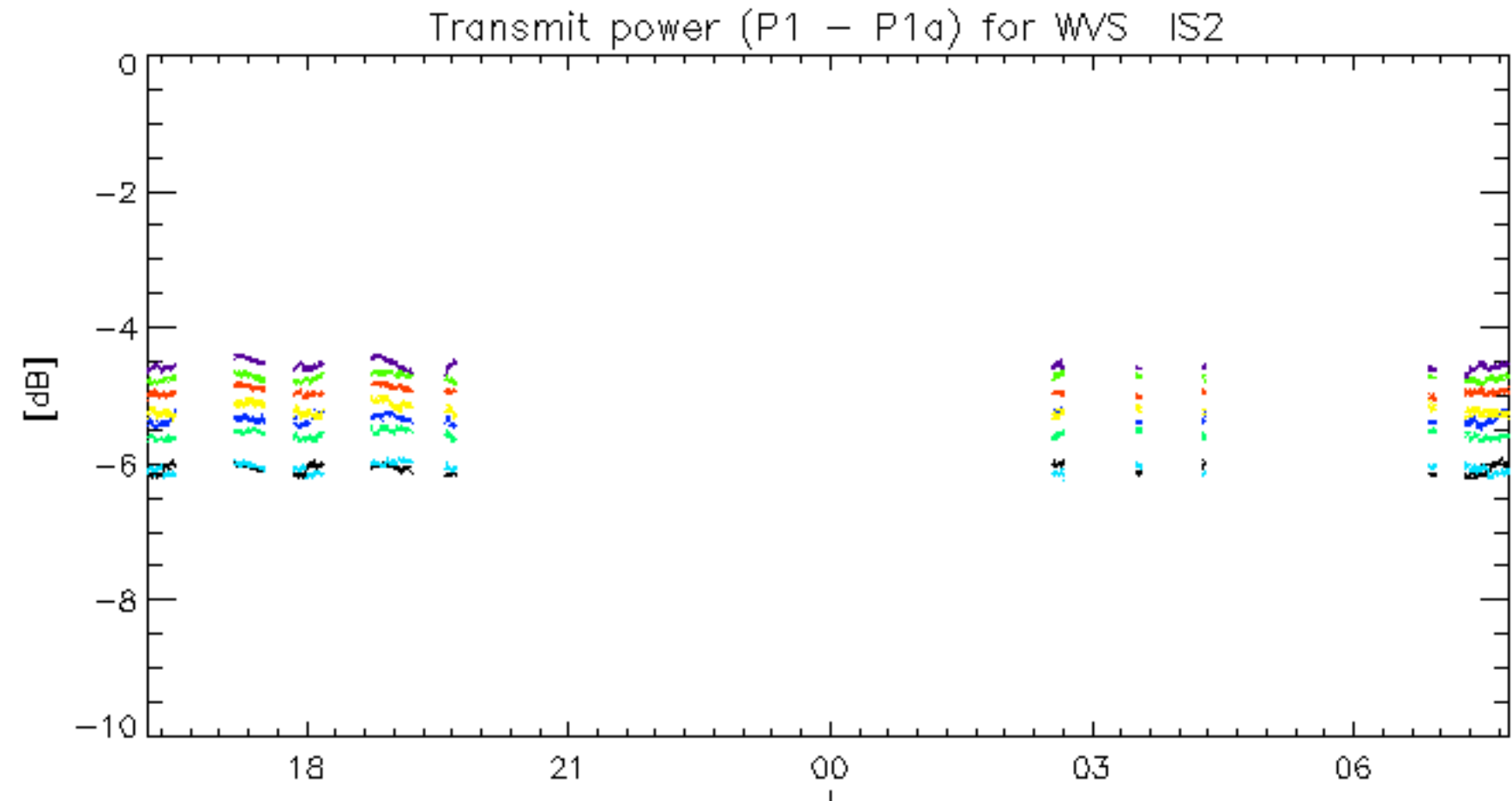




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rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No unavailabilities during the reported period.