

# PRELIMINARY REPORT OF 050616

last update on Thu Jun 16 11:38:46 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 2005-06-15 00:00:00 to 2005-06-16 11:38:47

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	29	53	10	4	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	29	53	10	4	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	29	53	10	4	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	29	53	10	4	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	36	42	0	0	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	36	42	0	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	36	42	0	0	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	36	42	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	20050614 085038
H	20050615 081901

### 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
☒	☒
☒	☒
☒	☒
☒	☒

**4 - Internal calibration Results**

No anomalies observed.

**4.1 - Daily statistics**

**4.1.1 - Evolution for WVS**

Evolution of cal pulses for WVS
☒
☒

**4.1.2 - Evolution for GM1**

Evolution of cal pulses for GM1
☒
☒

**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	-3.332304	0.008002	0.012765
7	P1	-3.140791	0.015278	-0.027160
11	P1	-4.623328	0.033980	0.004972
15	P1	-5.490679	0.042198	0.001251
19	P1	-3.742505	0.004437	-0.034749
22	P1	-4.587605	0.016305	-0.017717
26	P1	-4.849163	0.021310	0.022045
30	P1	-7.141077	0.026841	-0.006458
3	P1	-15.569776	0.117145	0.113190
7	P1	-15.591125	0.116317	-0.078187
11	P1	-21.380699	0.306036	-0.163856
15	P1	-11.293367	0.049864	0.075171
19	P1	-14.416341	0.032890	-0.078223
22	P1	-15.941369	0.321708	0.061050
26	P1	-17.720537	0.385683	0.012877
30	P1	-17.820379	0.215126	0.112136

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.003706	0.079965	0.114910
7	P2	-22.190474	0.098035	0.046760
11	P2	-13.940559	0.094067	0.222985
15	P2	-7.136397	0.088508	-0.026908
19	P2	-9.614729	0.089557	0.031037
22	P2	-16.882500	0.088226	0.012591
26	P2	-16.505056	0.090584	-0.003824
30	P2	-18.793495	0.076658	0.029877

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.162615	0.002756	0.001987
7	P3	-8.162615	0.002756	0.001987
11	P3	-8.162615	0.002756	0.001987
15	P3	-8.162615	0.002756	0.001987
19	P3	-8.162615	0.002756	0.001987
22	P3	-8.162615	0.002756	0.001987
26	P3	-8.162615	0.002756	0.001987
30	P3	-8.162615	0.002756	0.001987

#### 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	-2.796864	0.017497	-0.021385
7	P1	-2.940346	0.035144	0.002865
11	P1	-3.960216	0.018157	-0.010144
15	P1	-3.530738	0.026812	-0.012223
19	P1	-3.634691	0.016095	-0.022400
22	P1	-5.635468	0.047856	0.022410
26	P1	-7.298968	0.041332	-0.037925
30	P1	-6.290973	0.044257	-0.031640
3	P1	-10.841020	0.083928	-0.023126
7	P1	-10.381822	0.190342	-0.039318
11	P1	-12.555477	0.140775	-0.032182
15	P1	-11.612312	0.101306	-0.010018
19	P1	-15.615629	0.066274	-0.022907
22	P1	-26.035927	3.417909	-0.381250
26	P1	-15.623317	0.393762	0.013718
30	P1	-20.212307	1.182540	0.034413

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.746864	0.050144	0.082293
7	P2	-22.132786	0.113463	0.104546
11	P2	-9.888654	0.063623	0.163201
15	P2	-5.121827	0.046072	-0.044266
19	P2	-6.911920	0.058798	-0.034509
22	P2	-7.105891	0.076546	-0.024978
26	P2	-23.951971	0.095580	0.005735
30	P2	-21.947832	0.048639	-0.028947

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.995170	0.004053	-0.000888
7	P3	-7.995092	0.004048	-0.001315
11	P3	-7.995229	0.004030	-0.001568
15	P3	-7.995129	0.004029	-0.001204
19	P3	-7.995100	0.004045	-0.001619
22	P3	-7.995239	0.004034	-0.001096
26	P3	-7.995210	0.004038	-0.001593
30	P3	-7.995212	0.004039	-0.001554

## 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	0.000460883
	stdev	2.16035e-07
MEAN Q	mean	0.000500252
	stdev	2.27894e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128087
	stdev	0.000963487
STDEV Q	mean	0.128323
	stdev	0.000974241



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005061[456]

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_1PNPDK20050614_125657_000001402038_00110_17198_0363.N1	1	0
ASA_WVS_1PNPDE20050615_045037_000000002038_00119_17207_0246.N1	1	0
ASA_WVS_1PNPDE20050615_045037_000000152038_00119_17207_0245.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)


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)


Ascending




Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

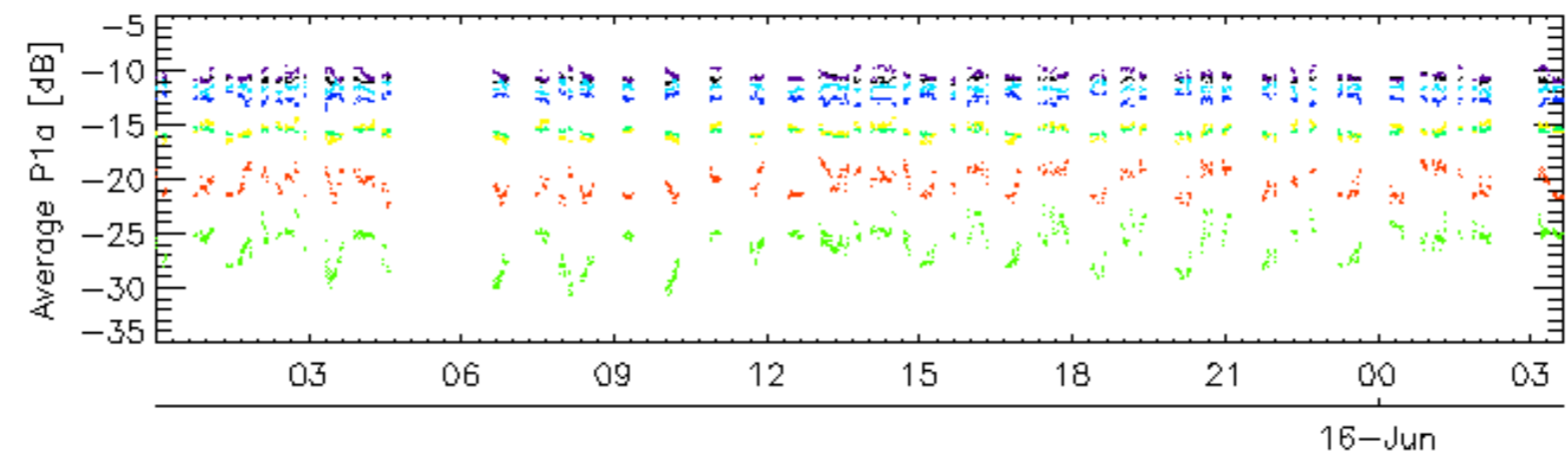
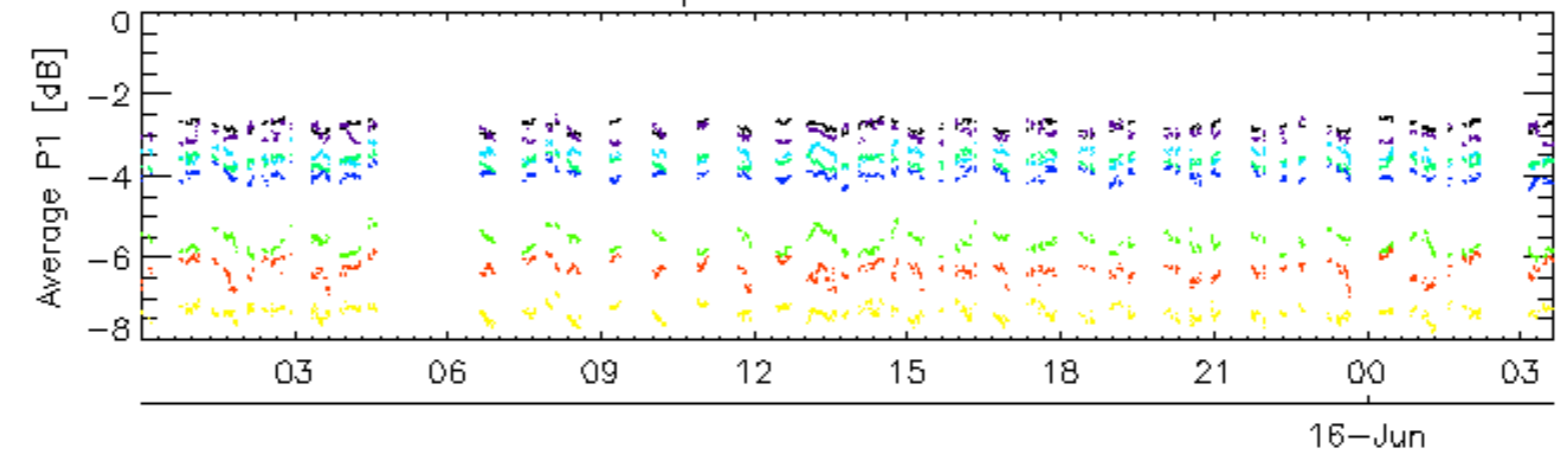
Ascending

Descending

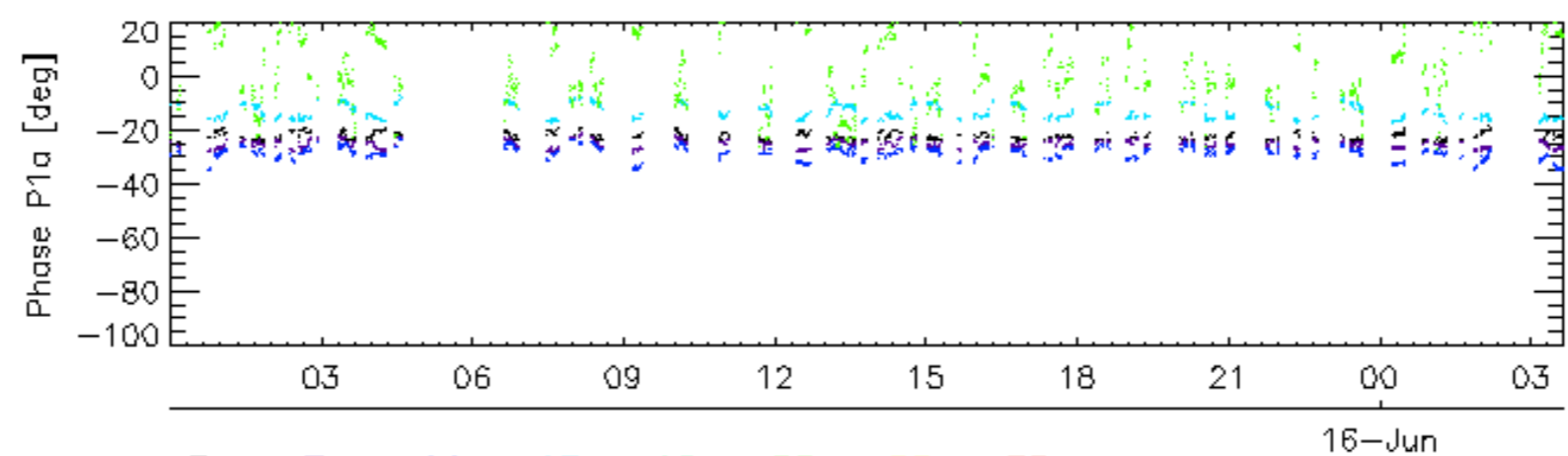
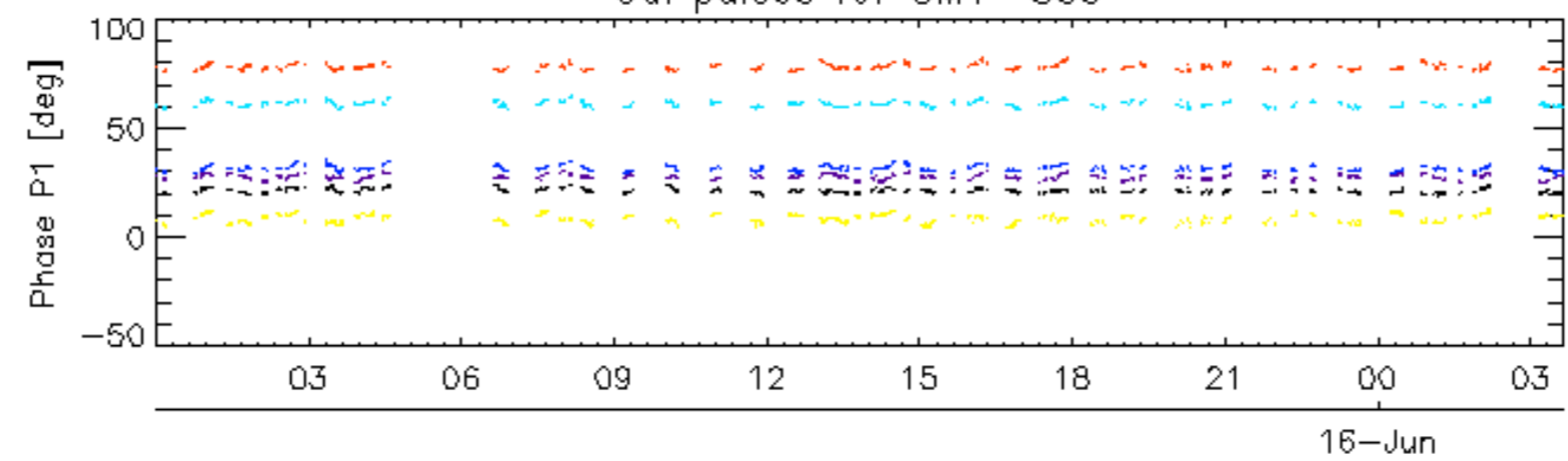
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

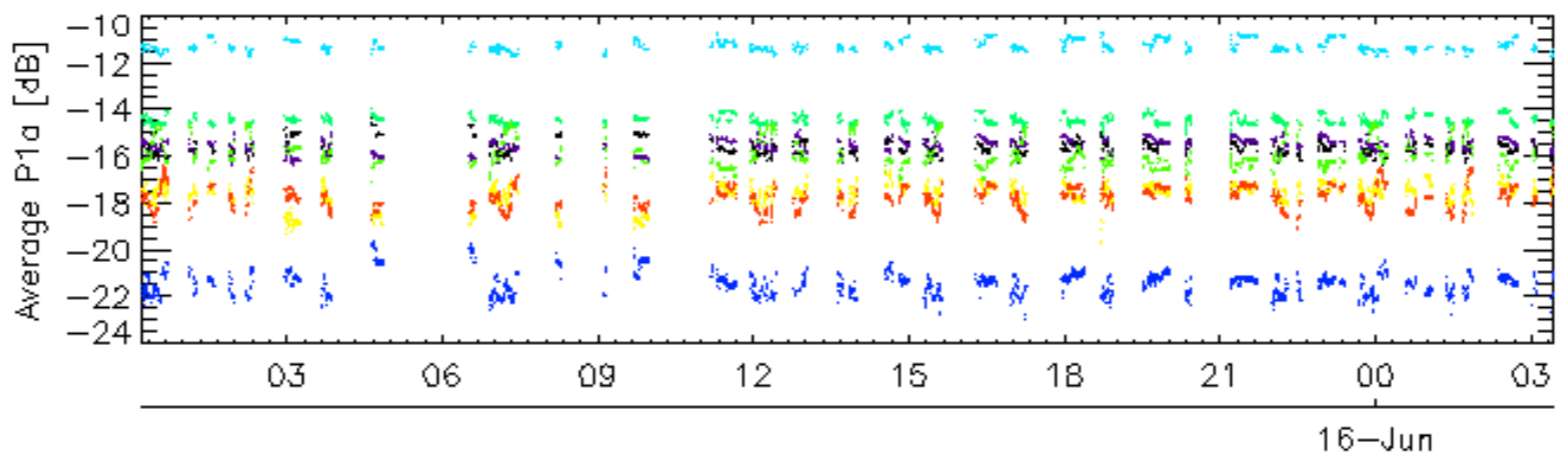
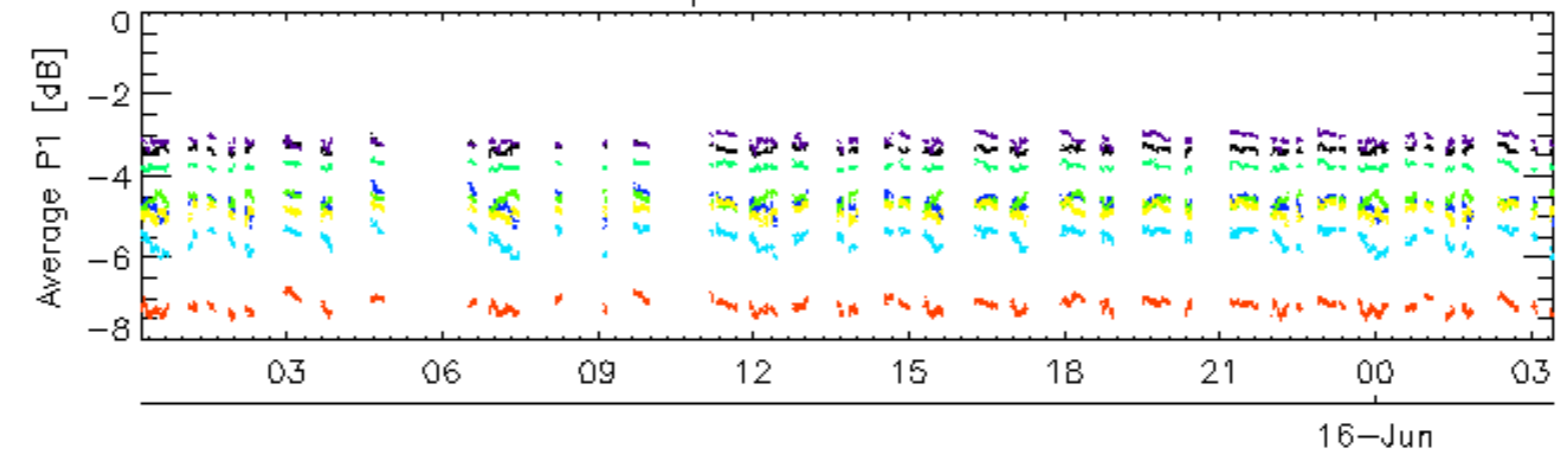


Cal pulses for GM1 SS3

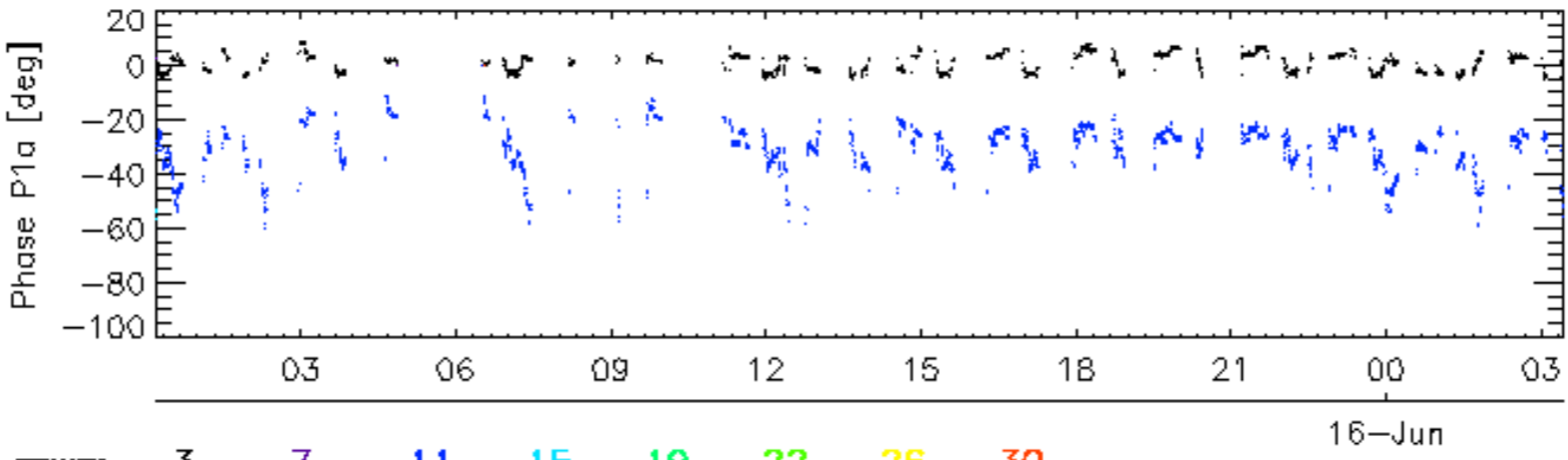
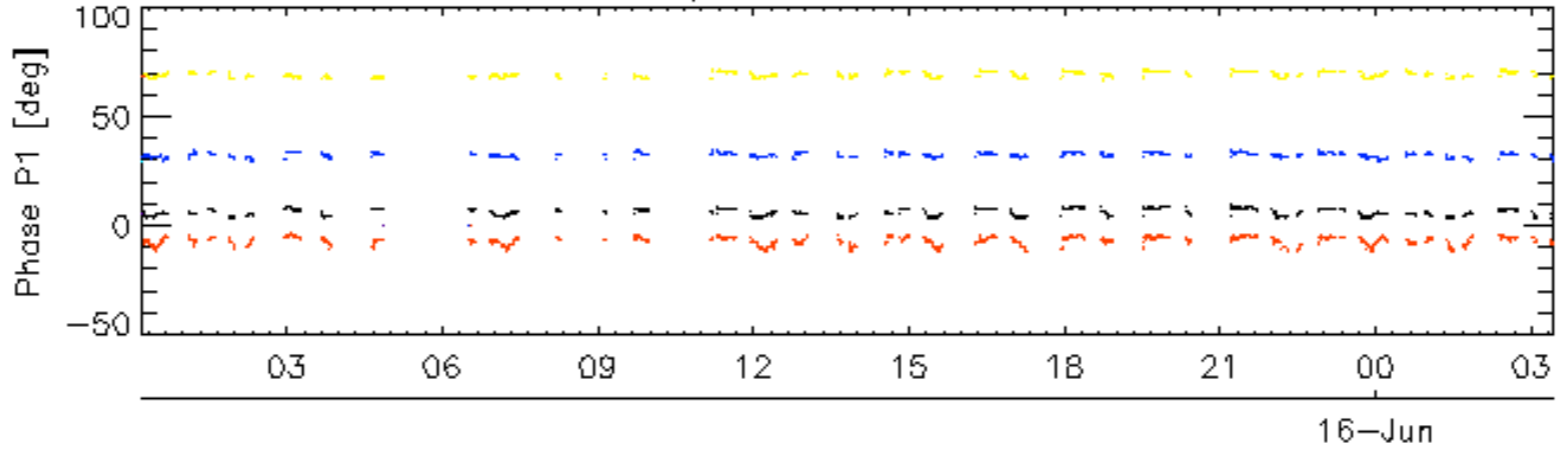


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

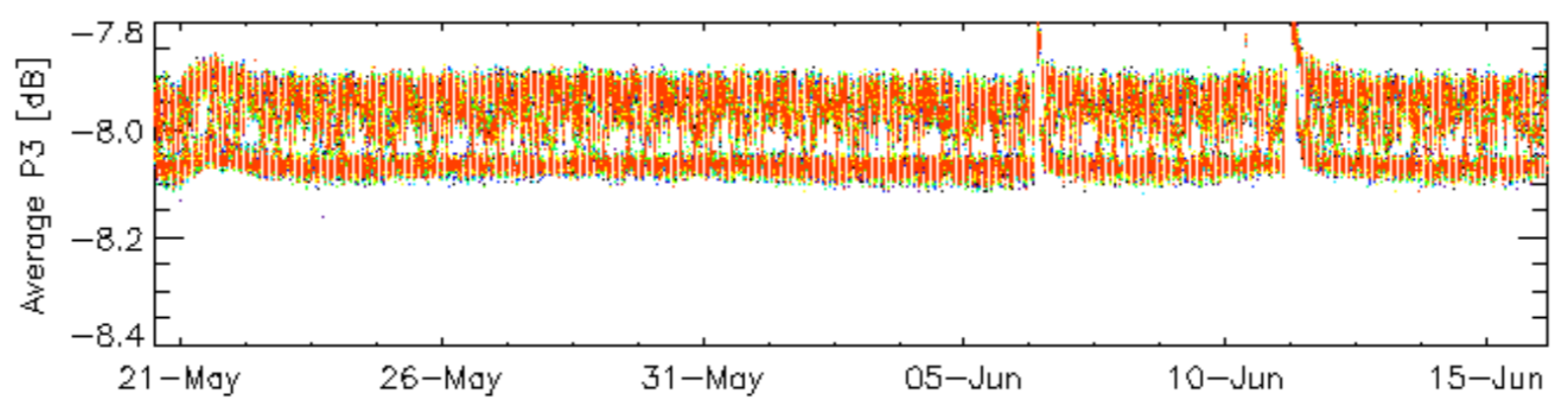
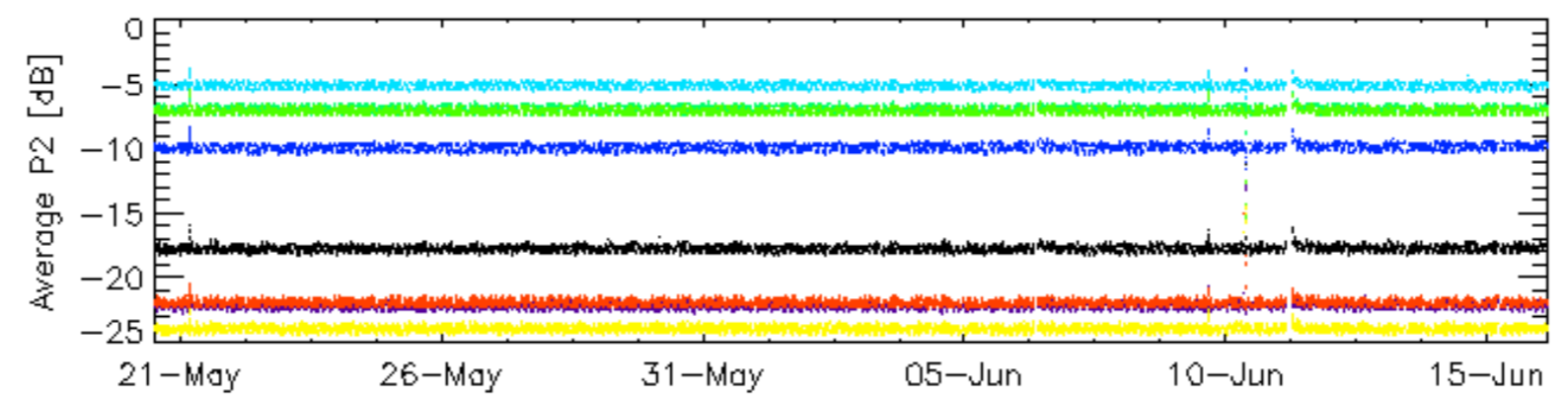
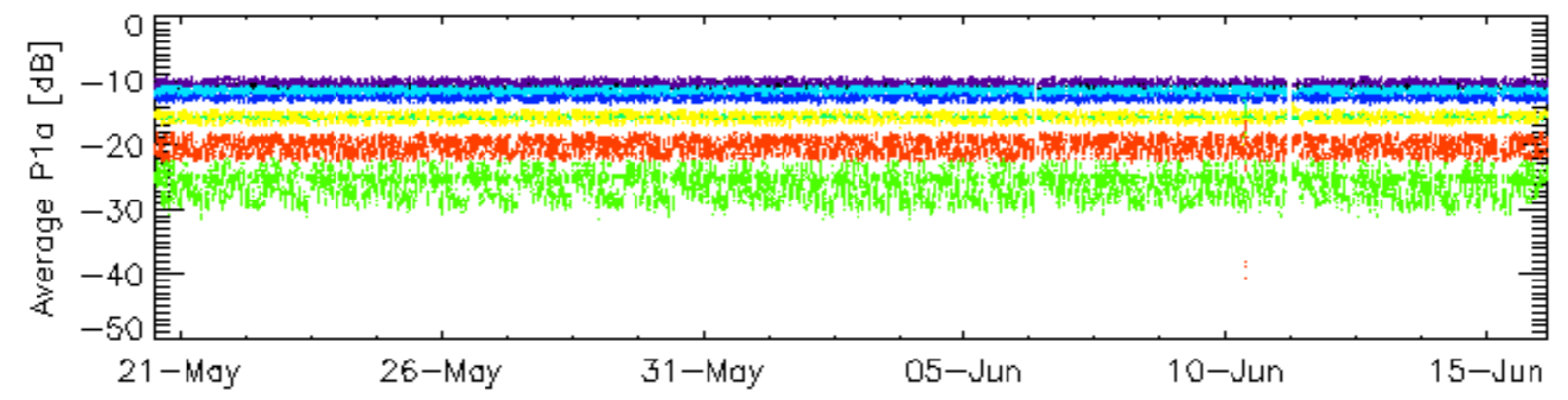
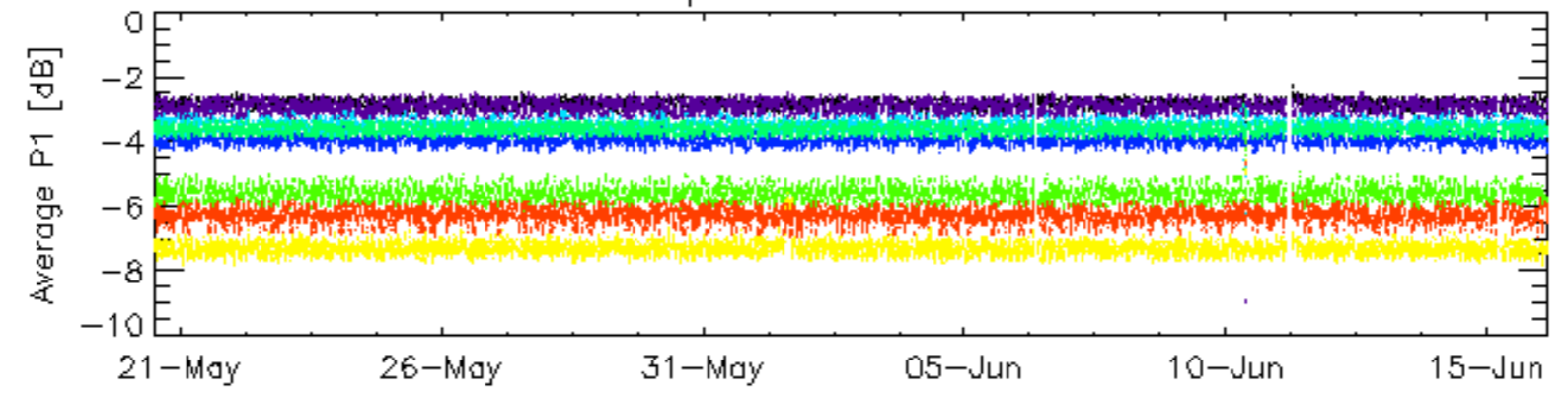


Cal pulses for WVS IS2



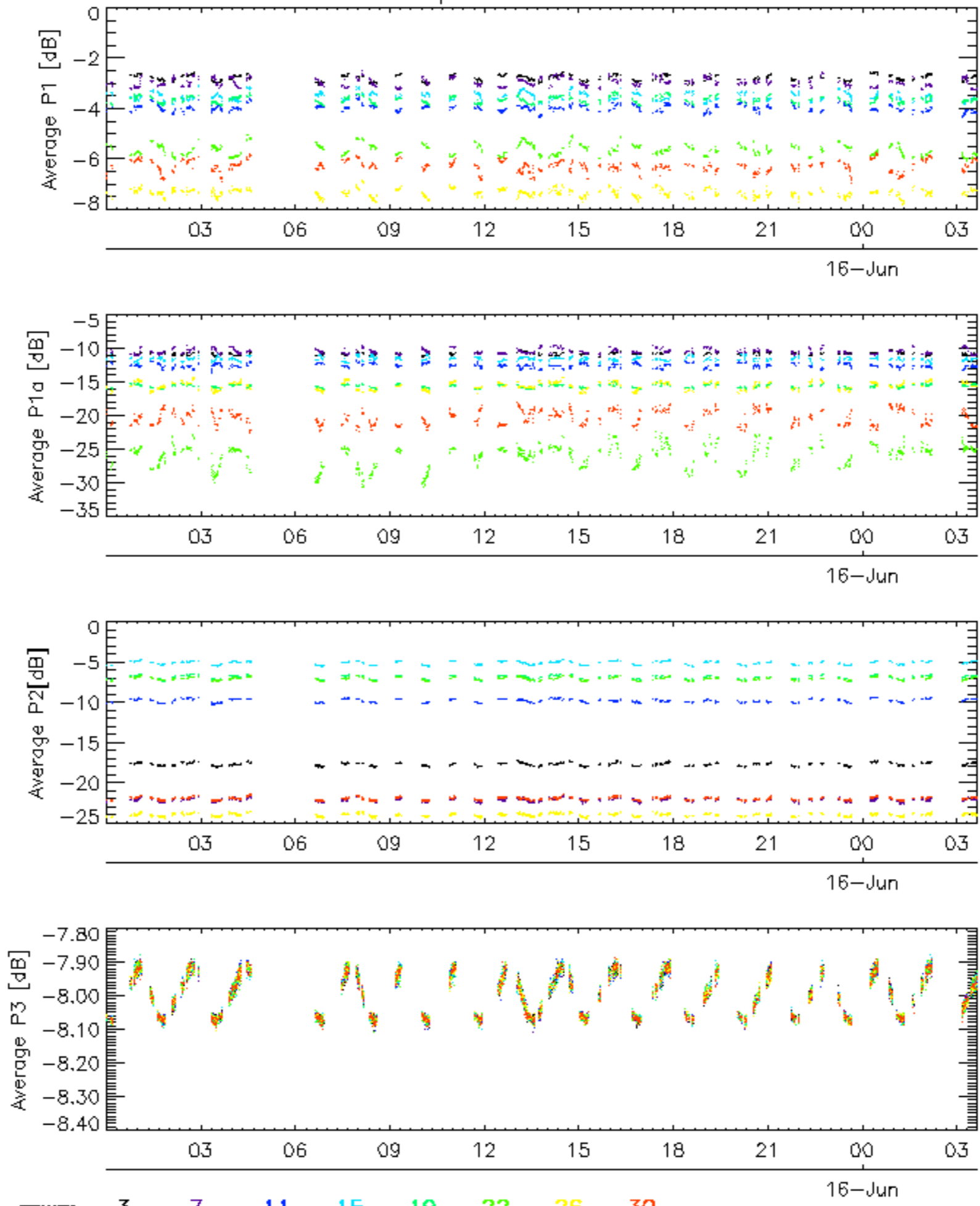
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

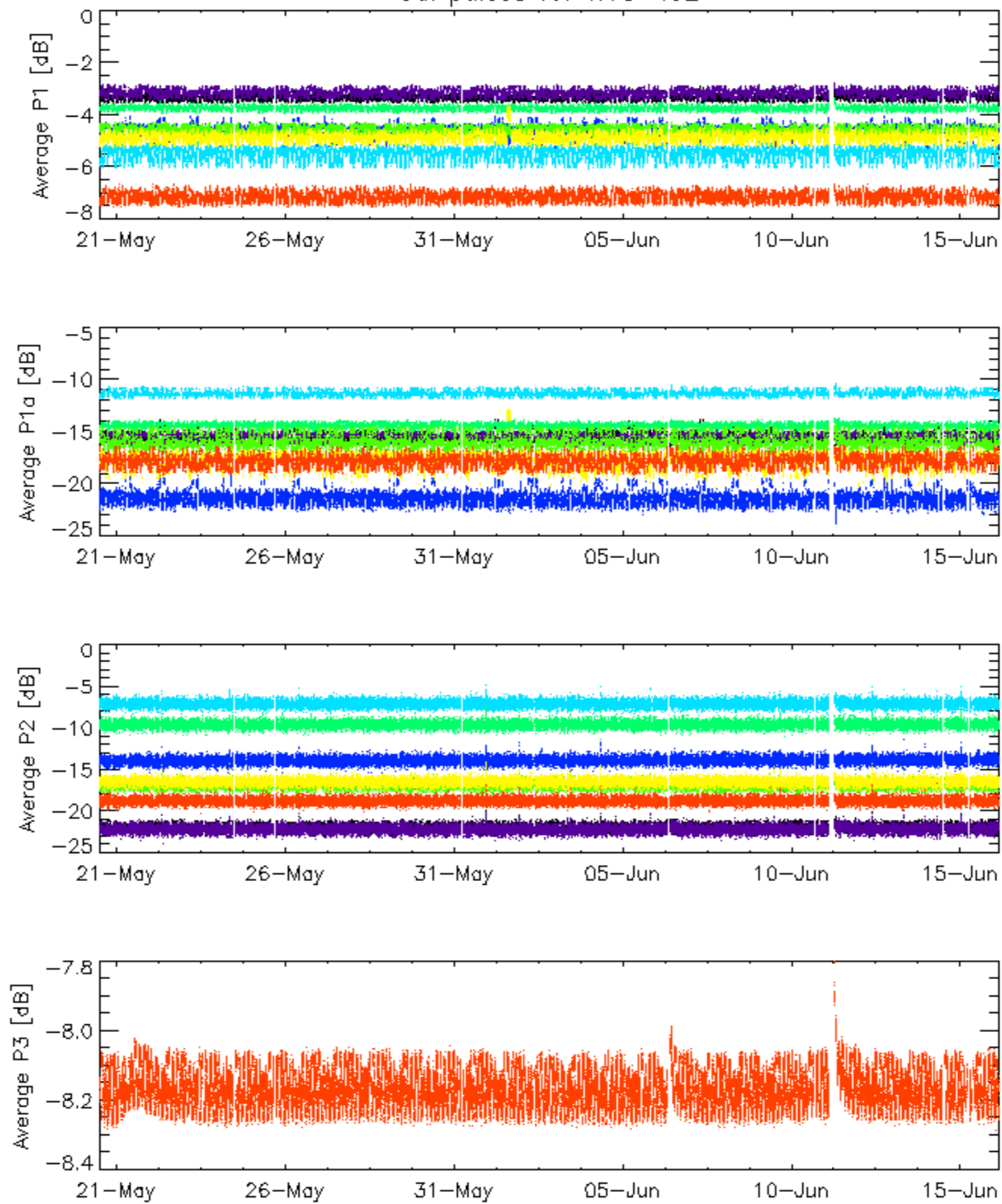


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

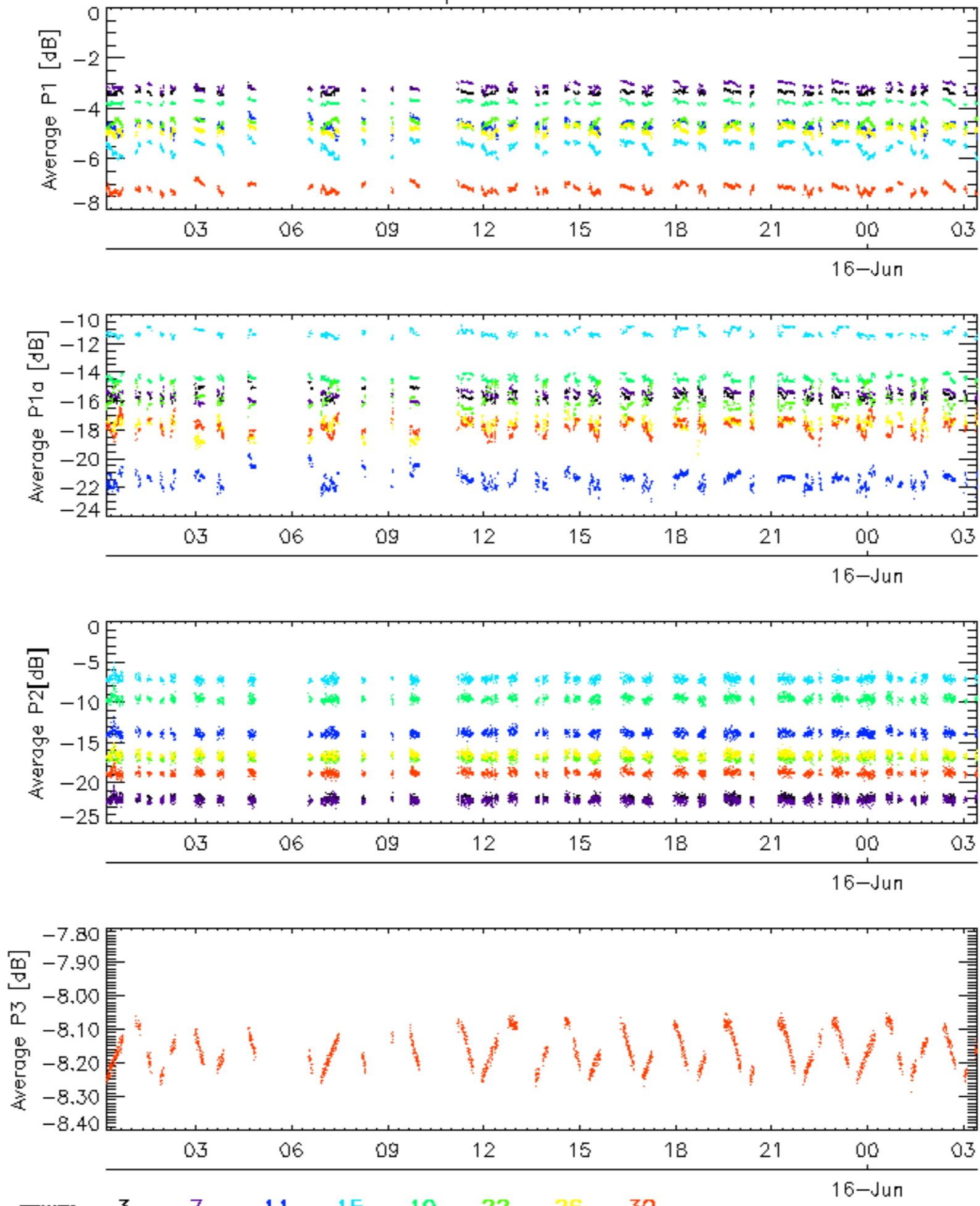


Cal pulses for WVS IS2



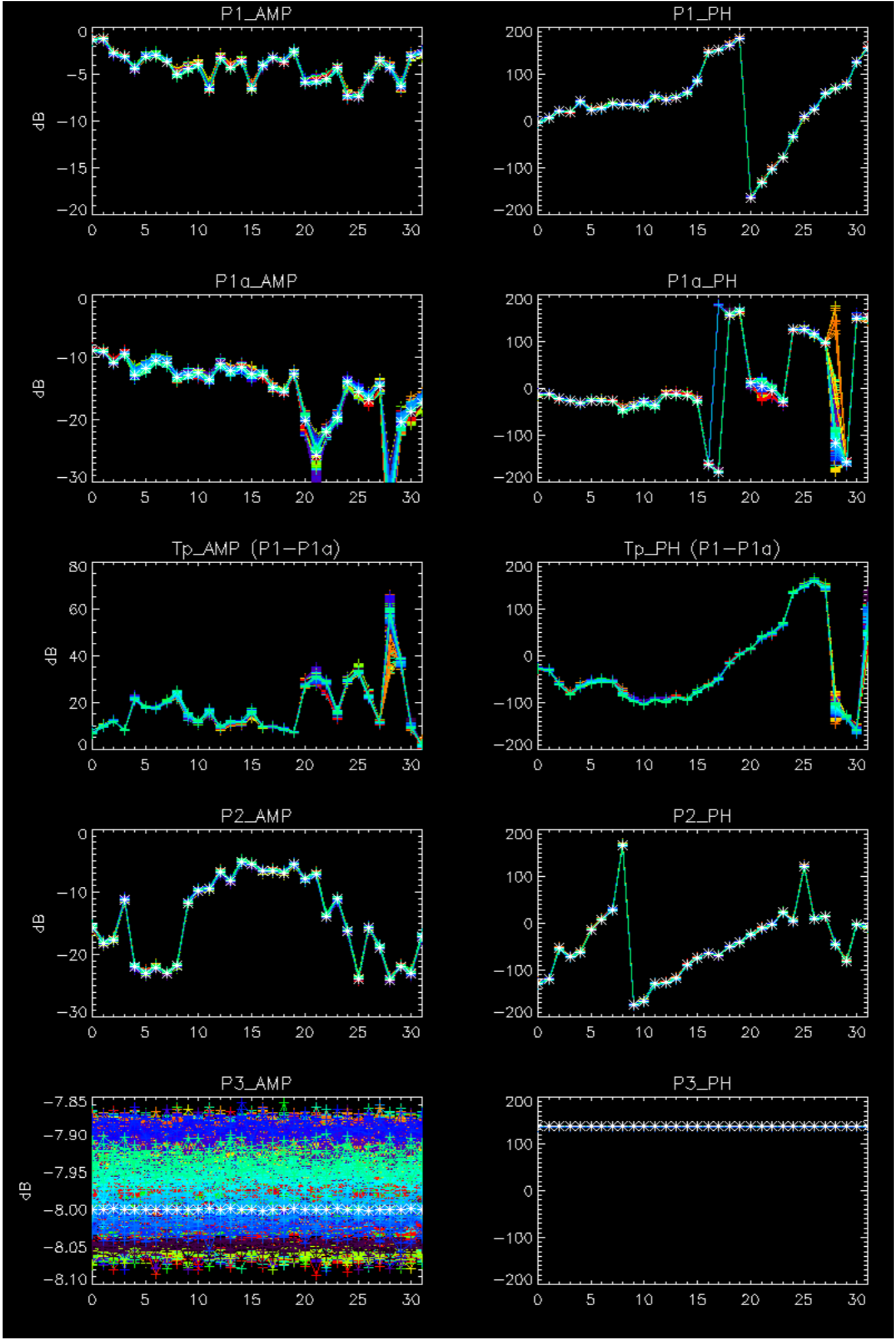
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

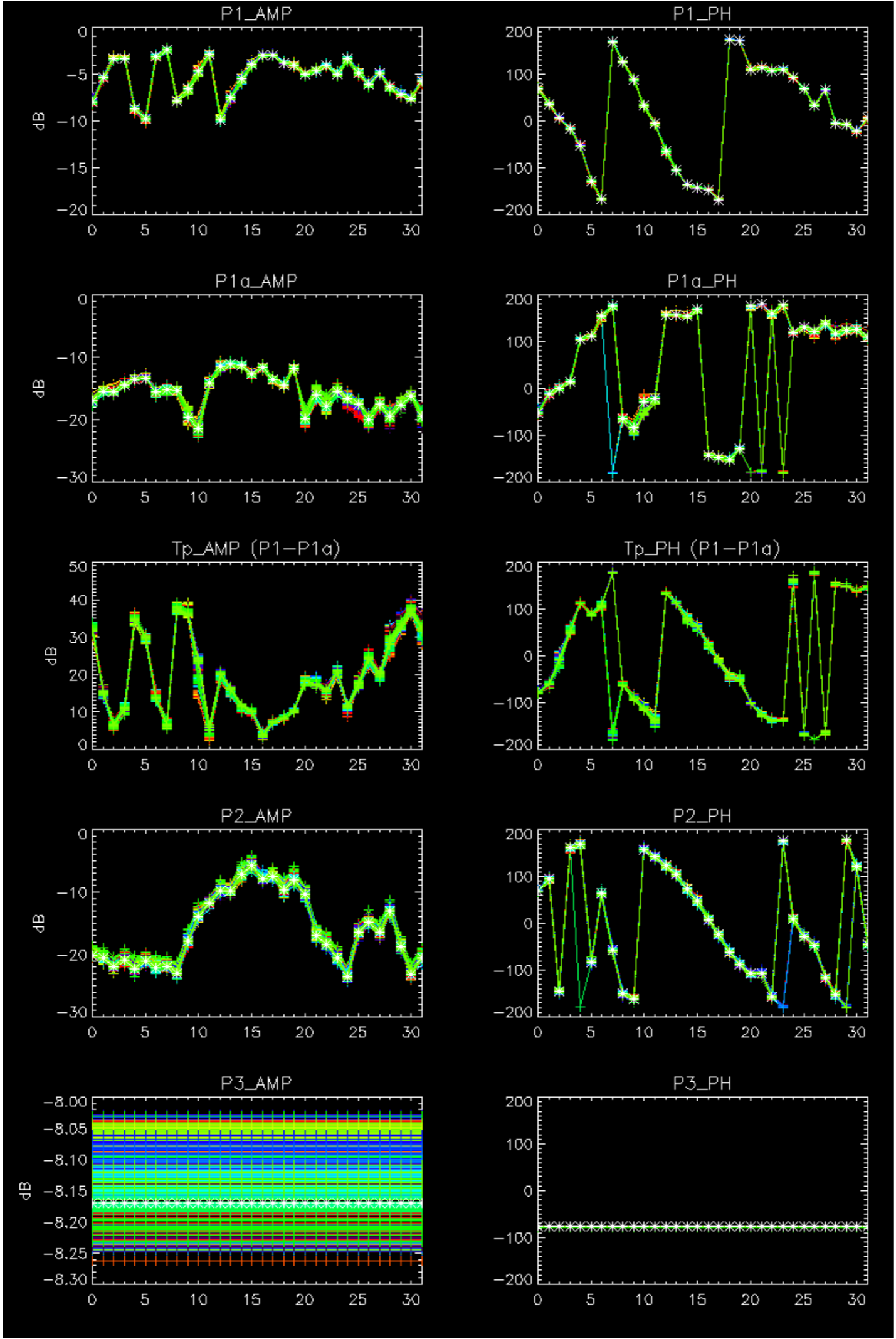
Cal pulses for WVS IS2



No anomalies observed.



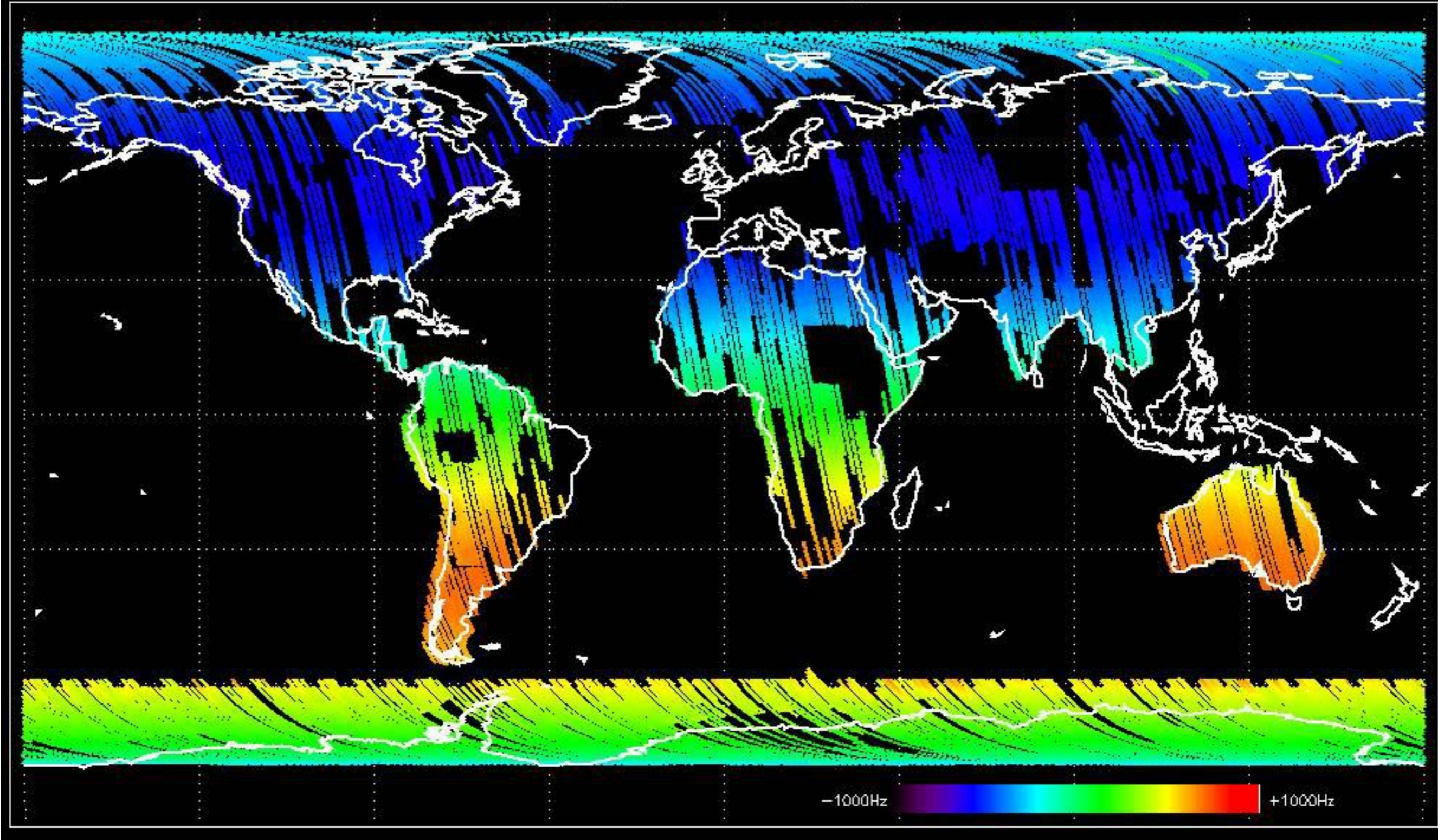




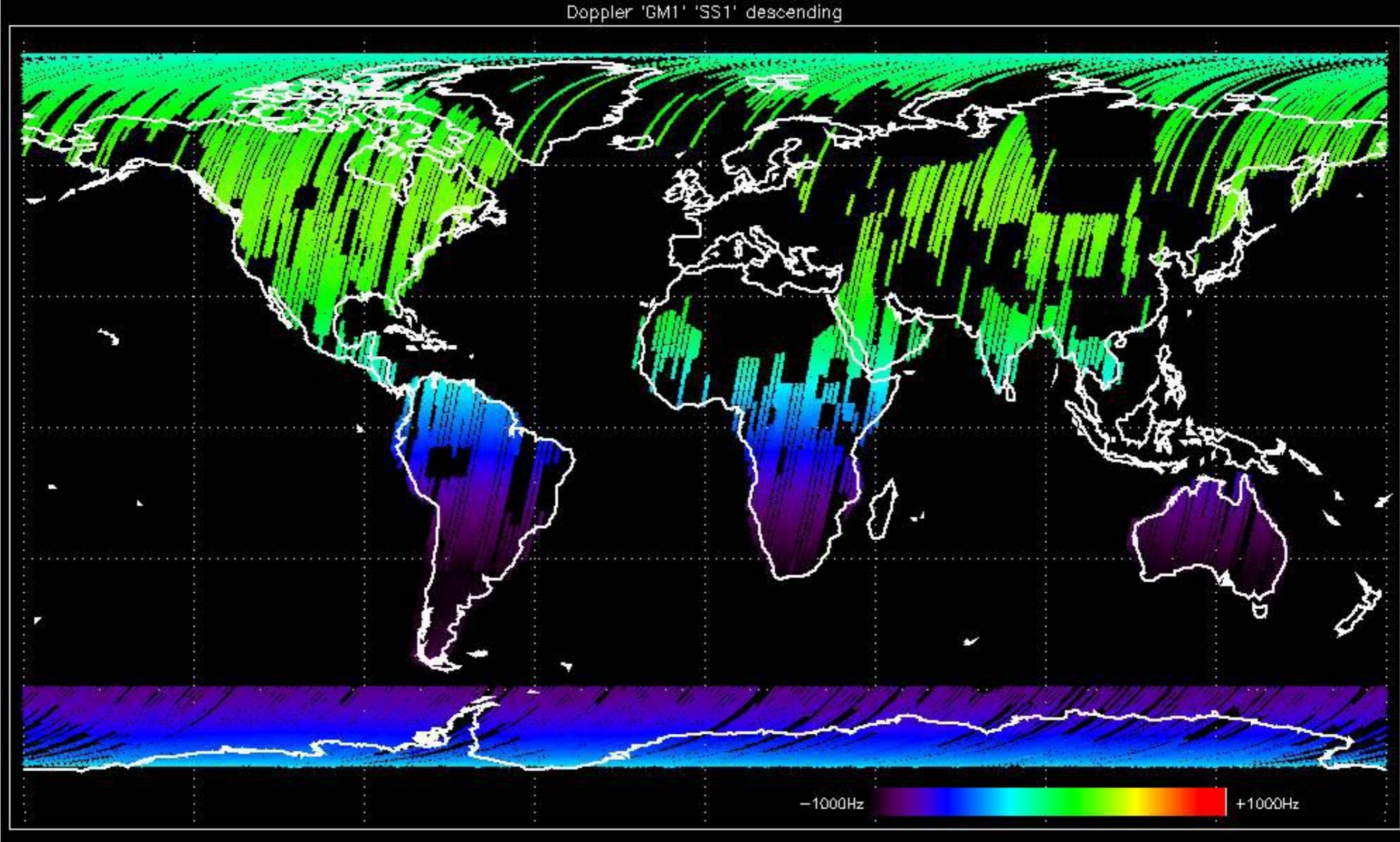
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



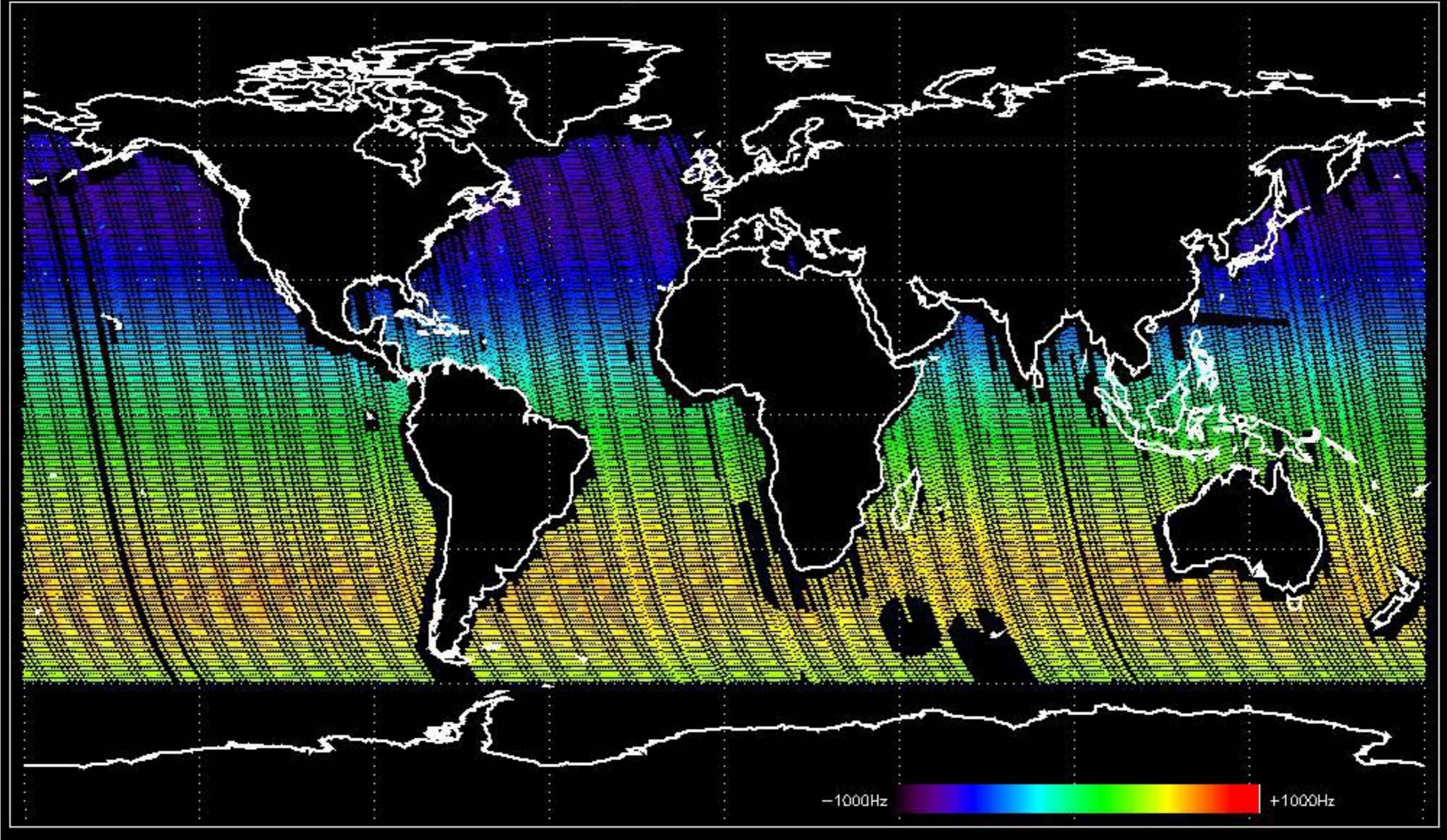
Doppler 'GM1' 'SS1' ascending



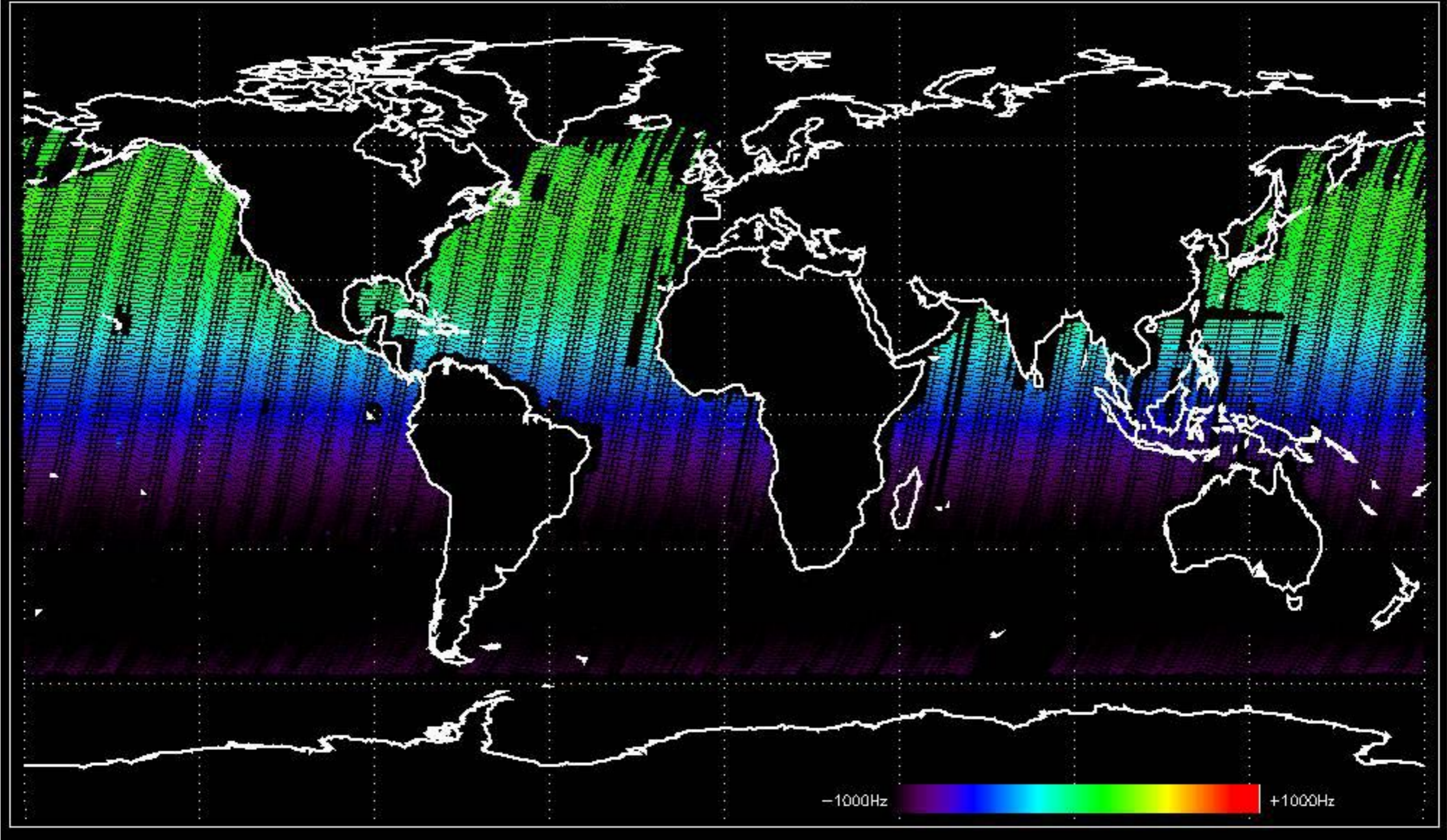
Doppler 'GM1' 'SS1' descending



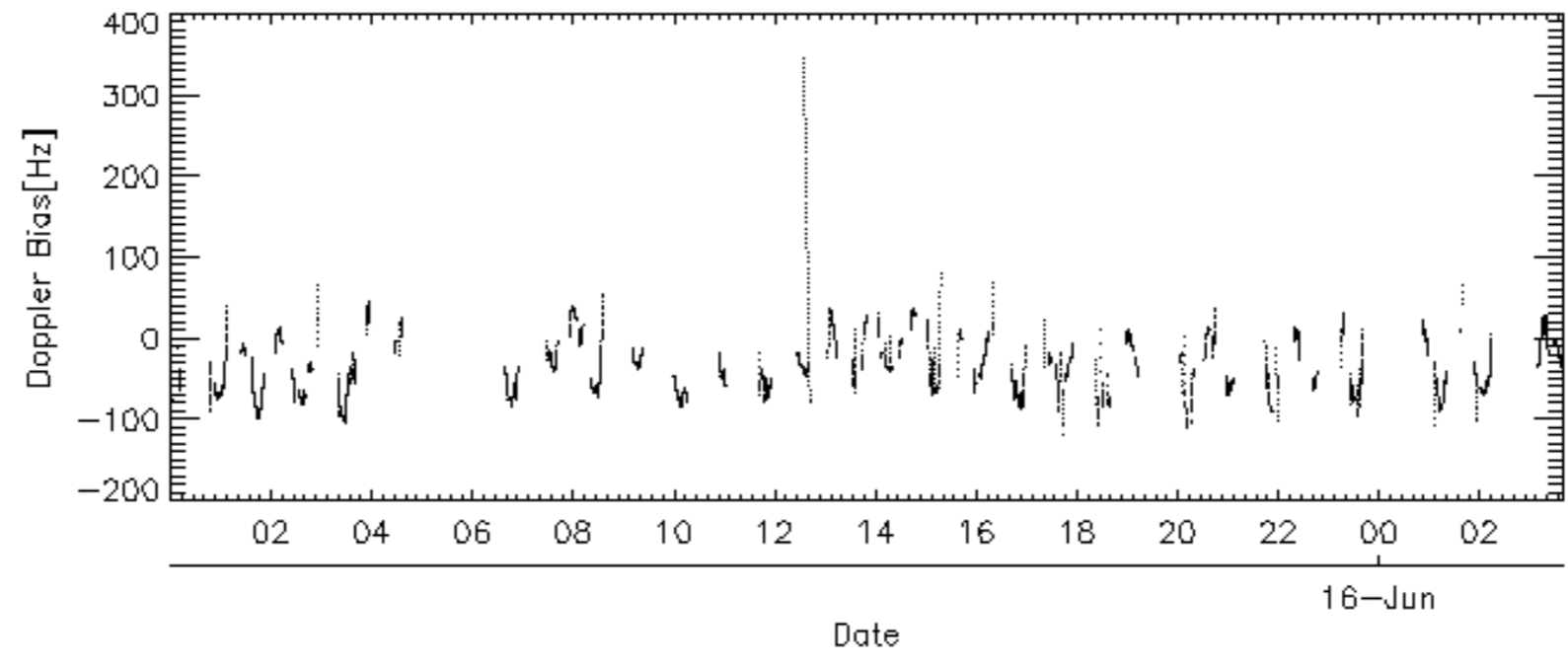
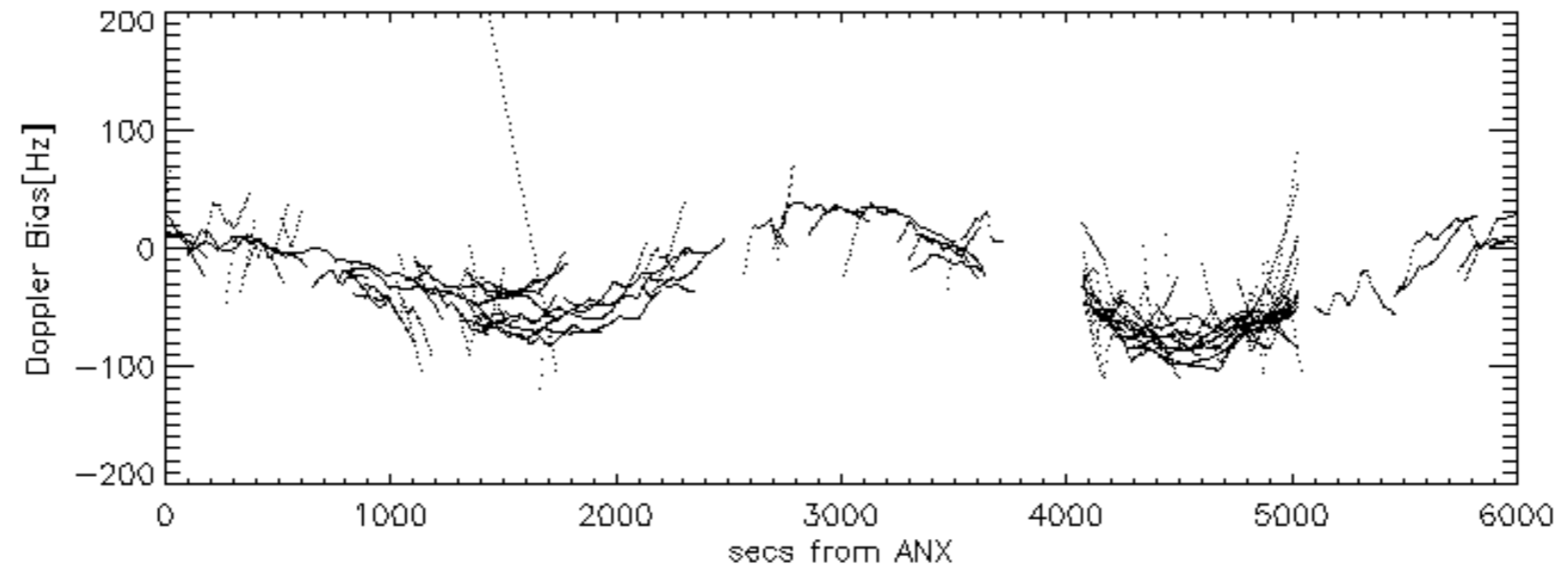
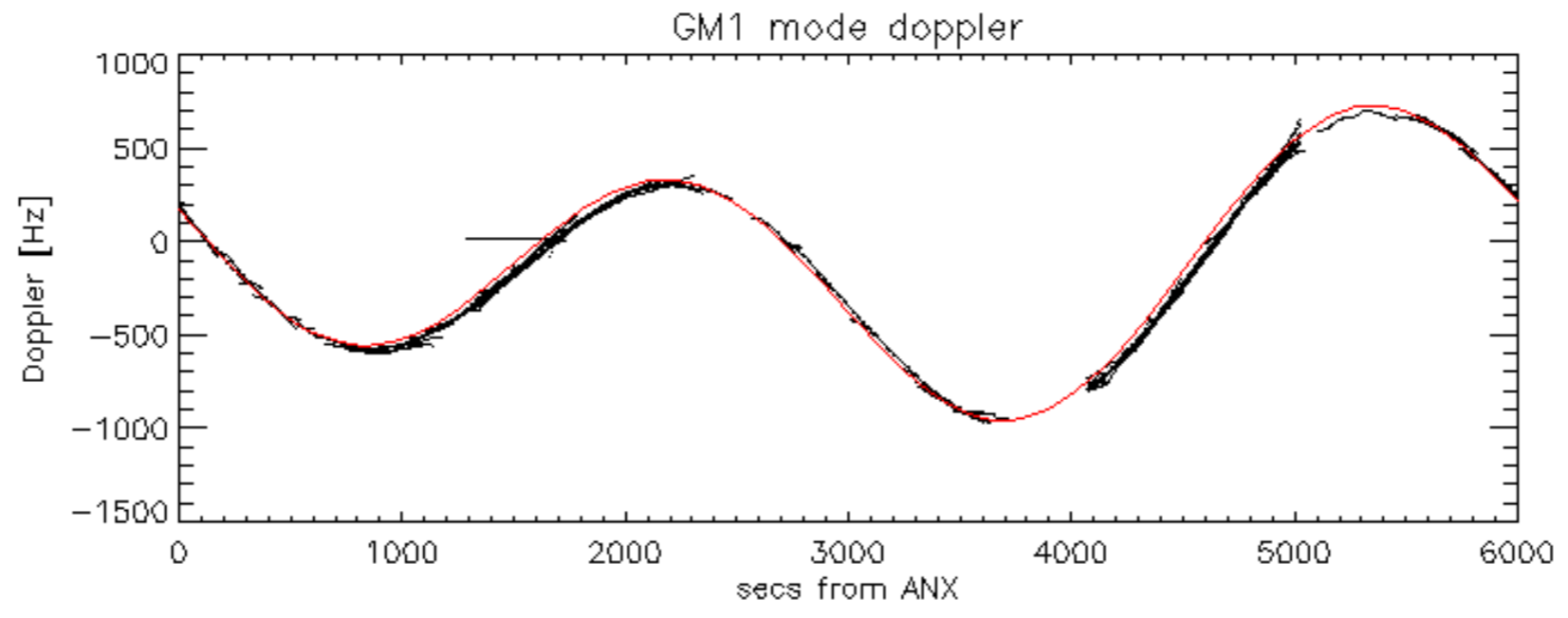
Doppler 'WVS' 'IS2' ascending

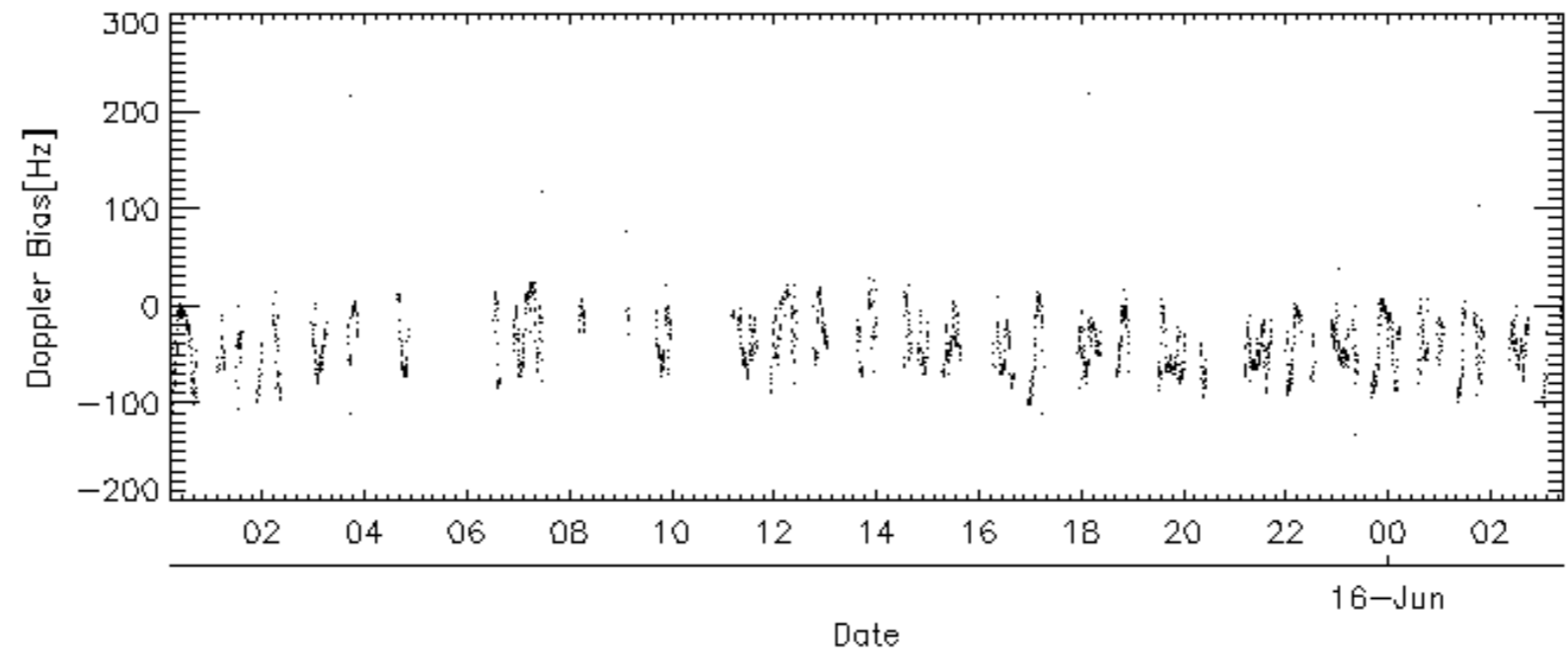
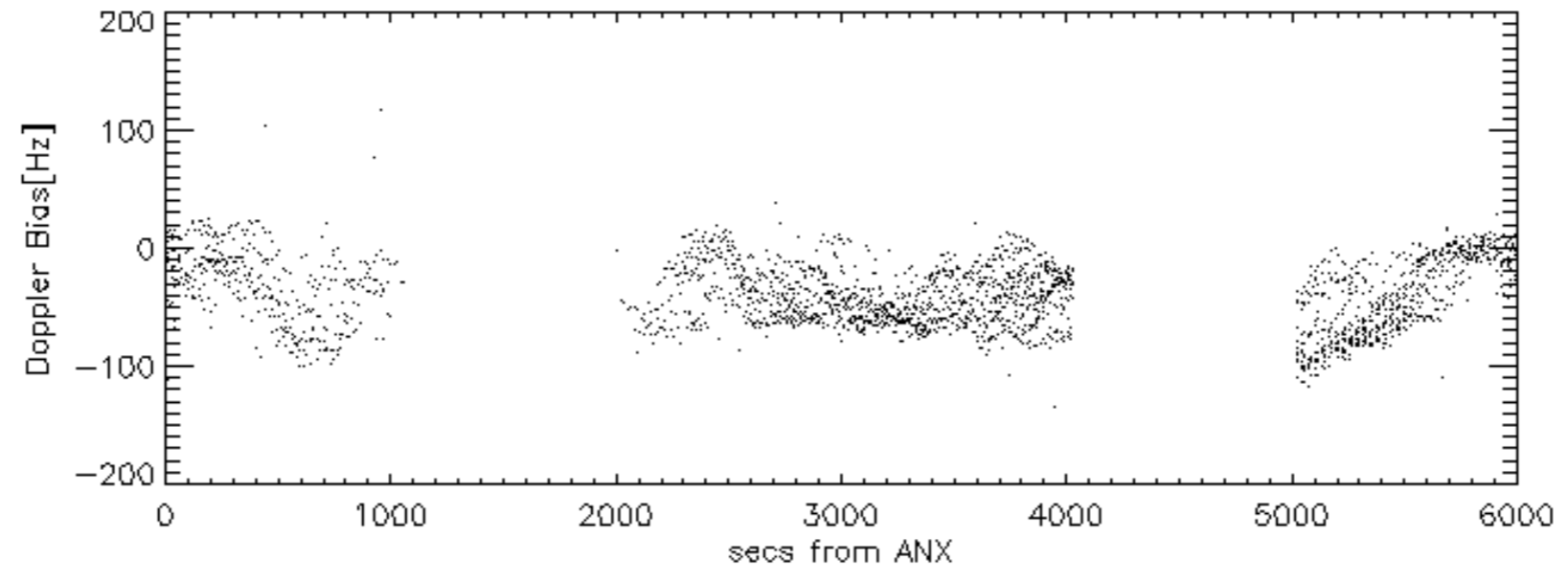
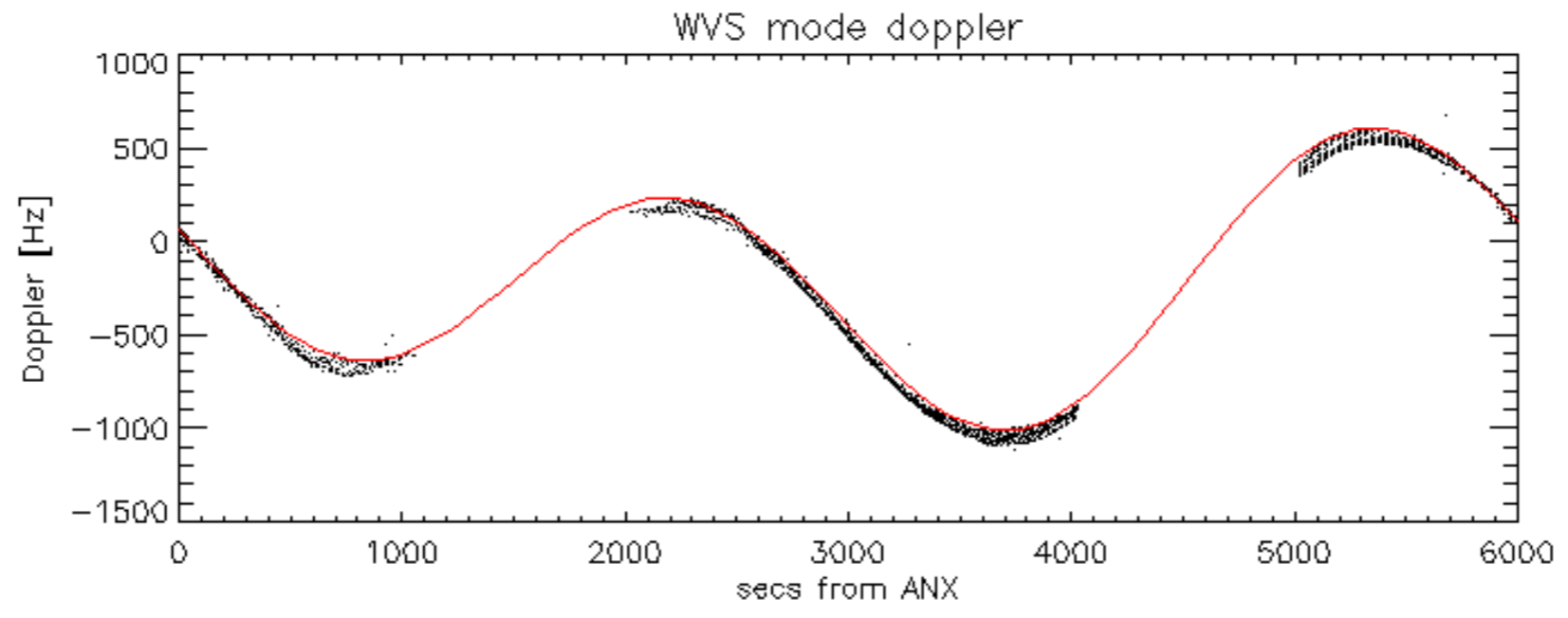


Doppler 'WVS' 'IS2' descending

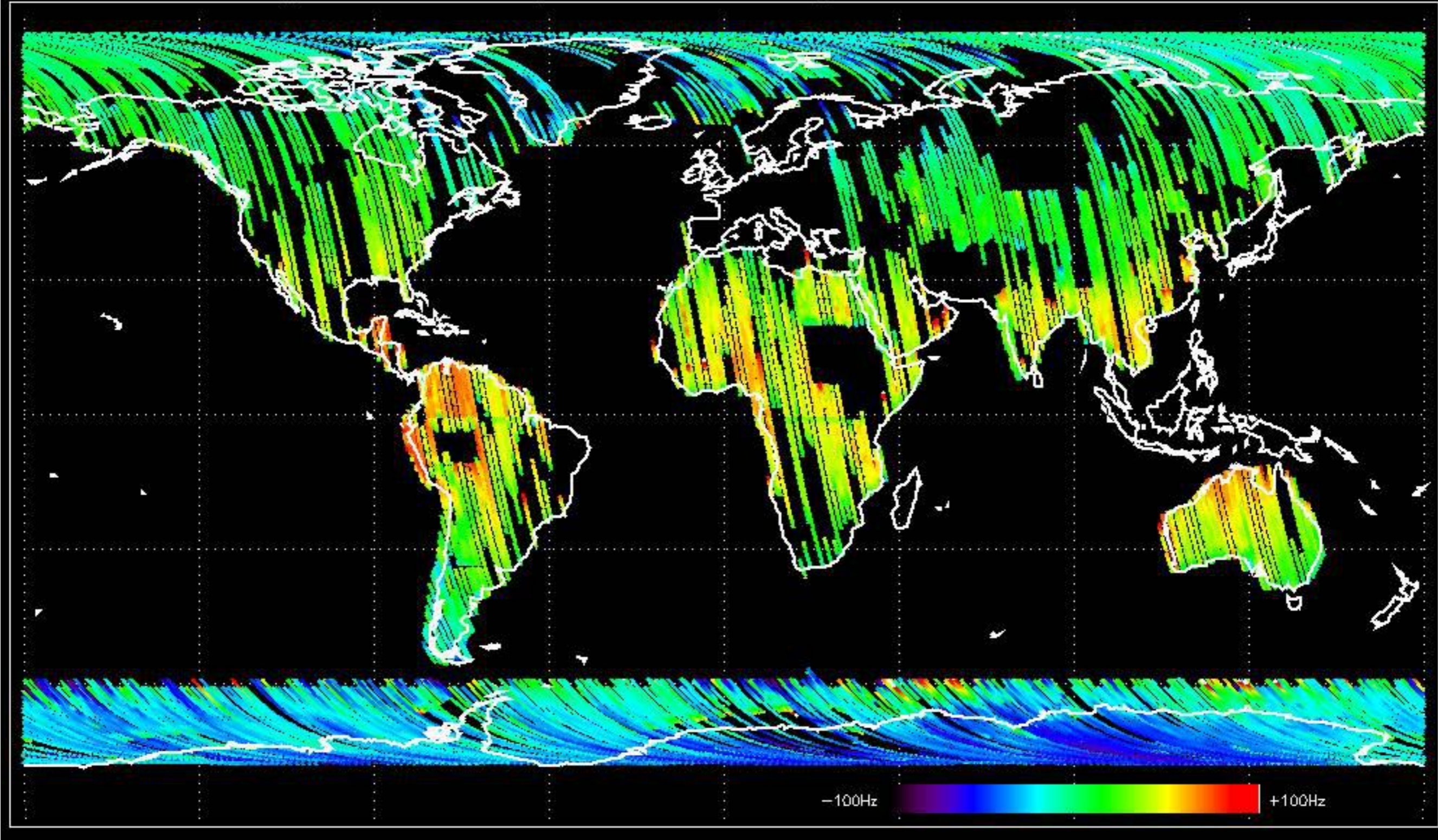




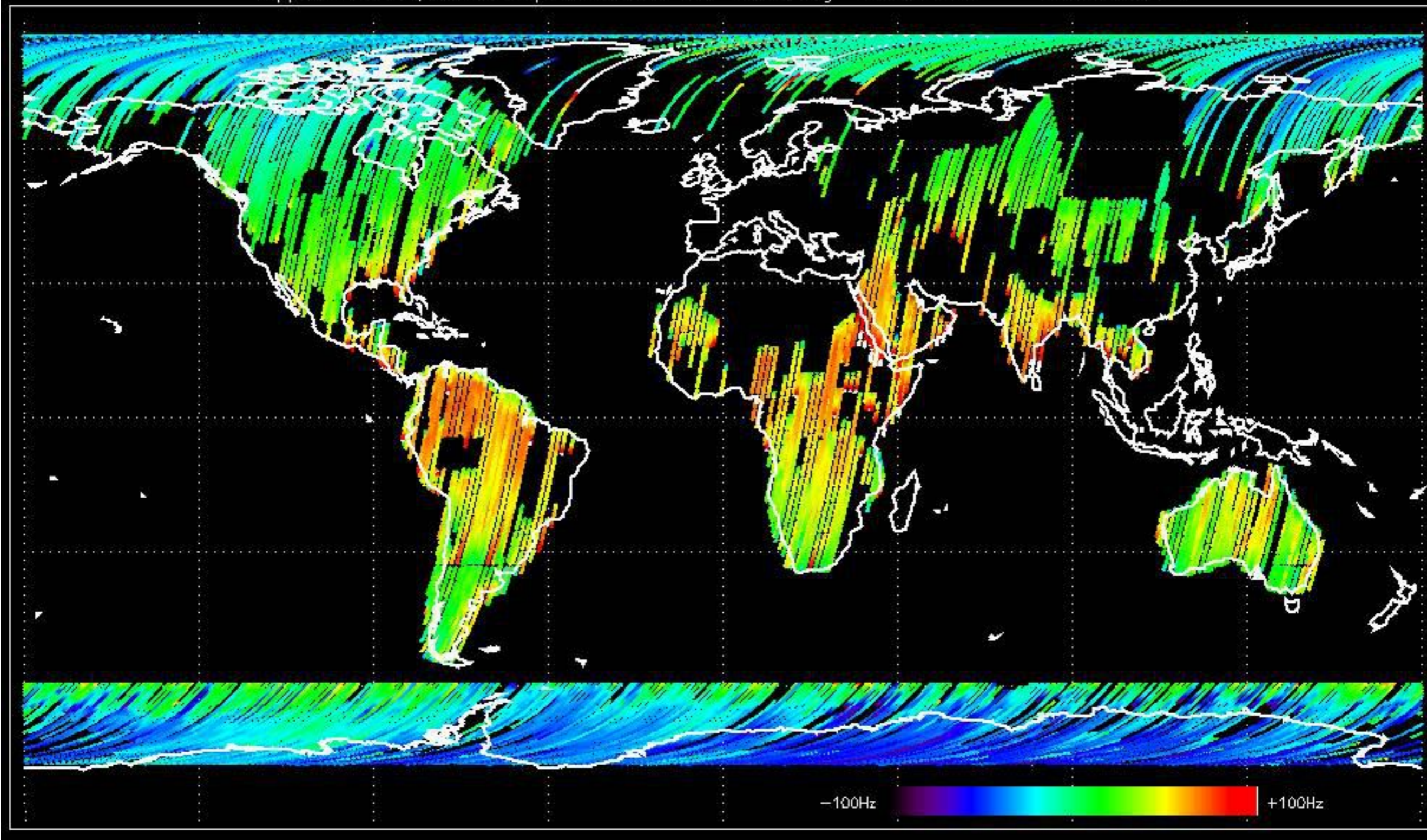




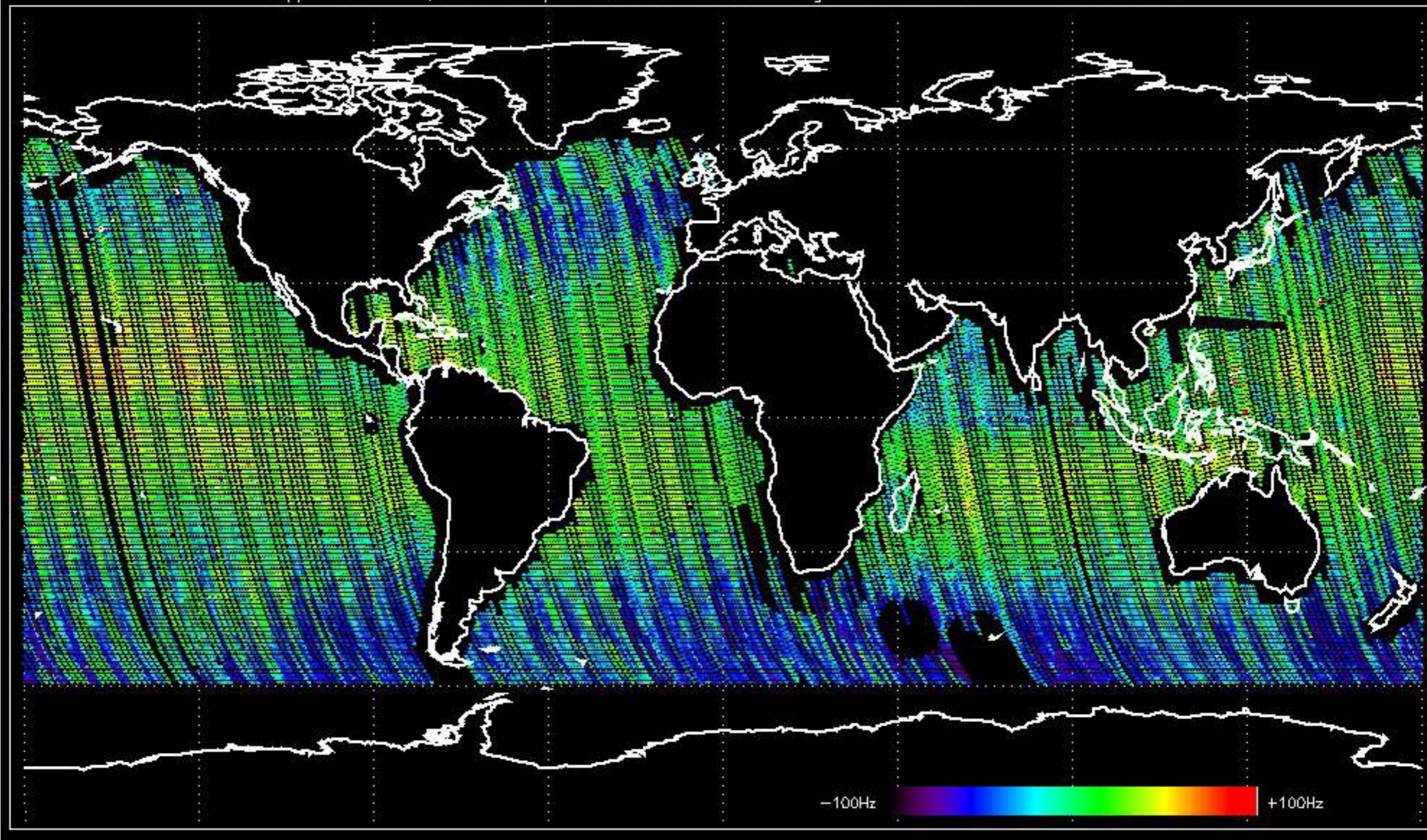
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -39.241552 Hz



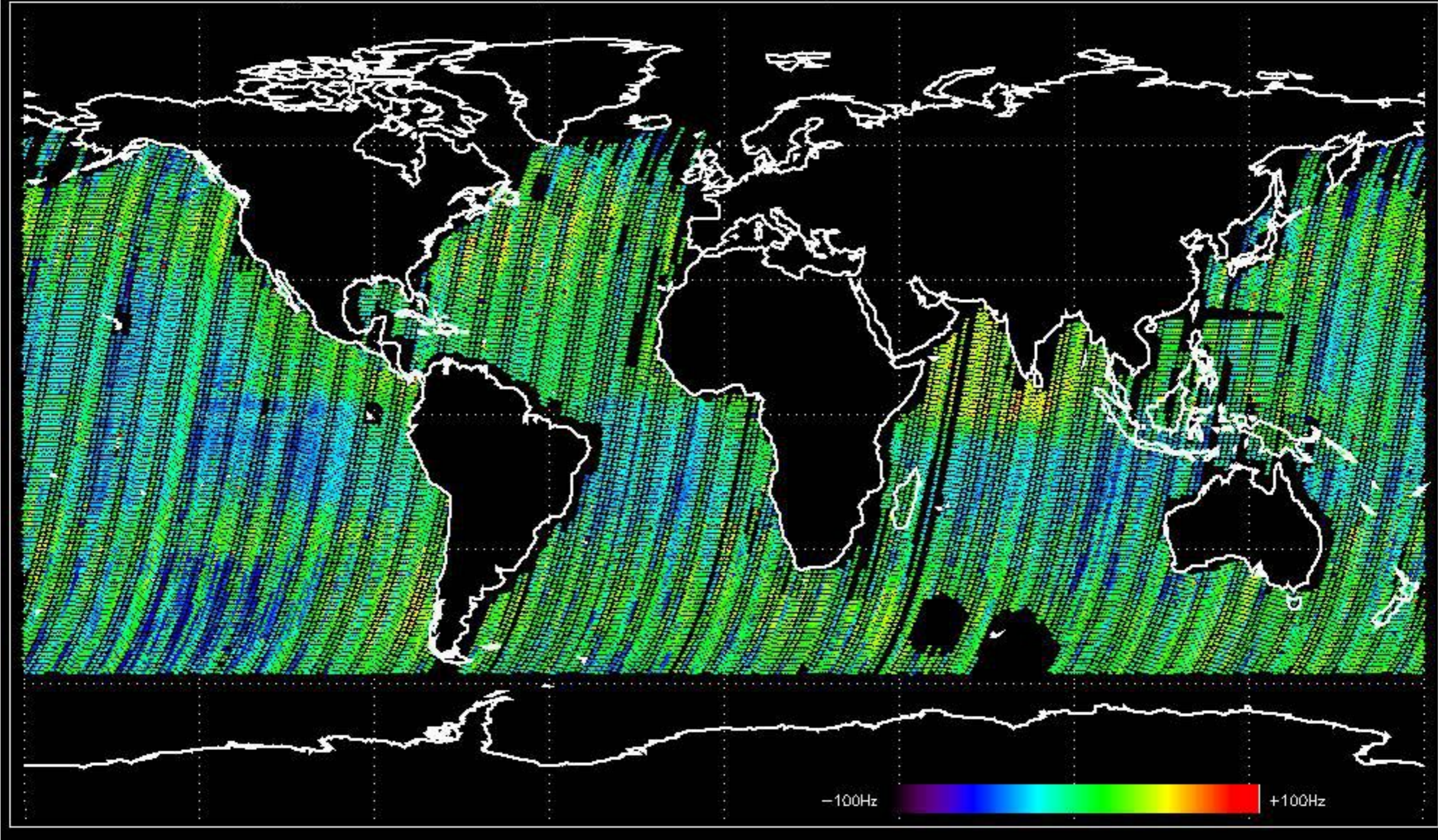
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -34.720322 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -31.496152 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -39.598897 Hz



No anomalies observed on available MS products:

No anomalies observed.











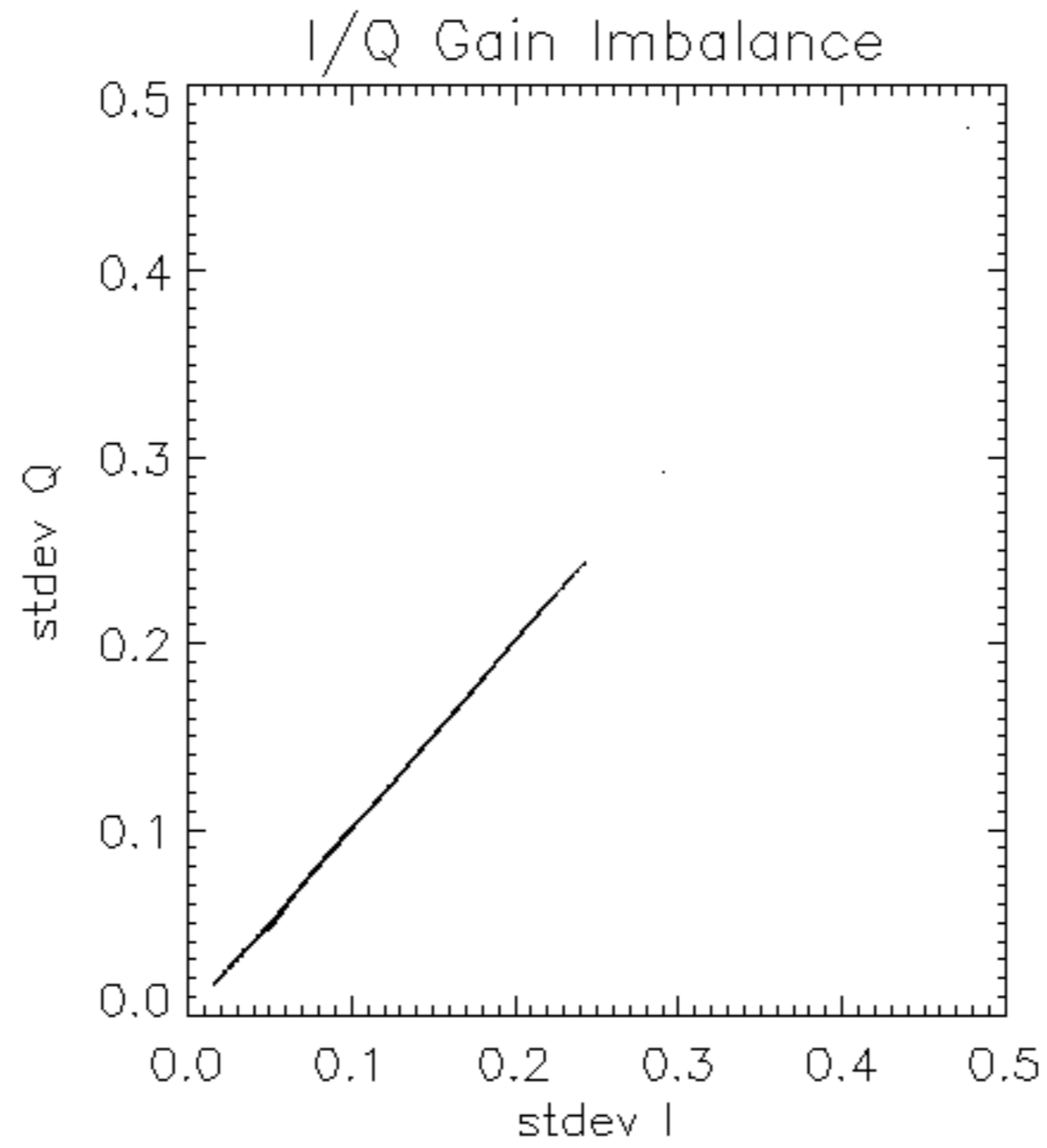


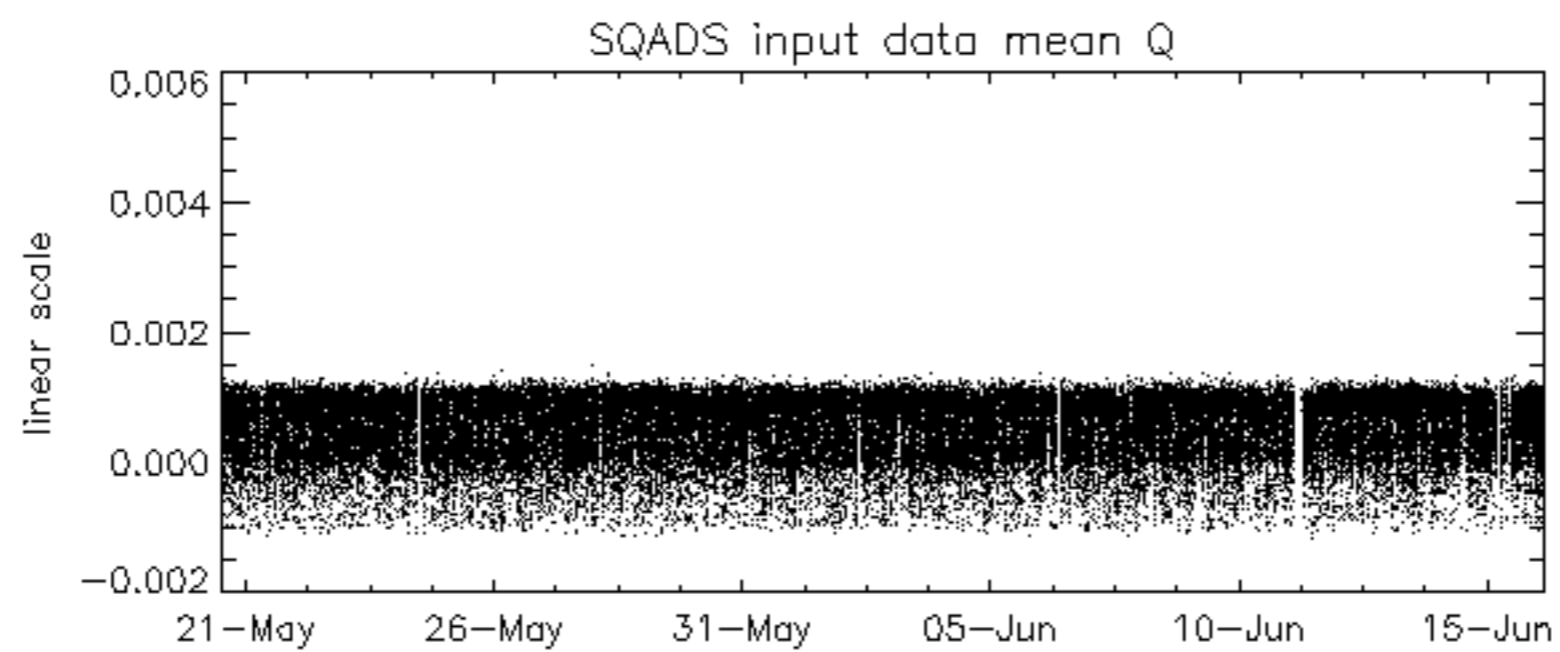
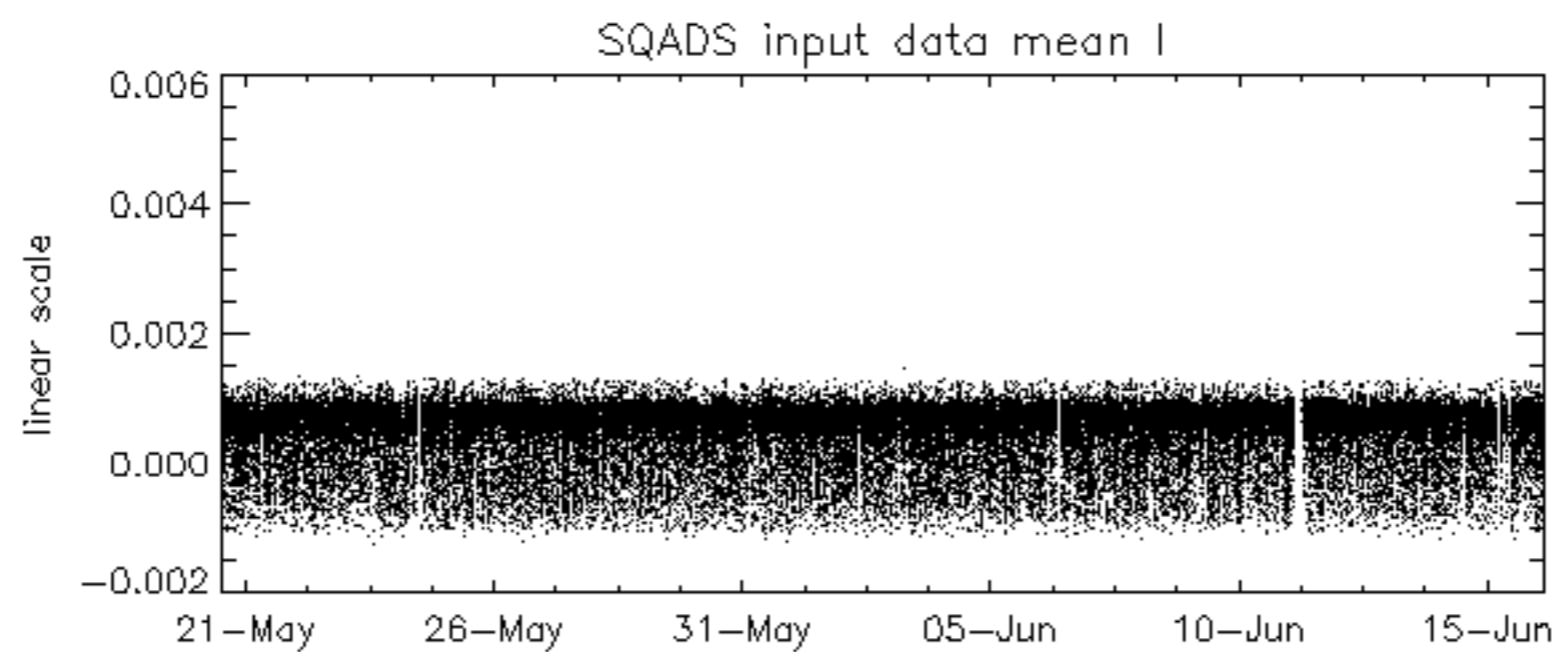
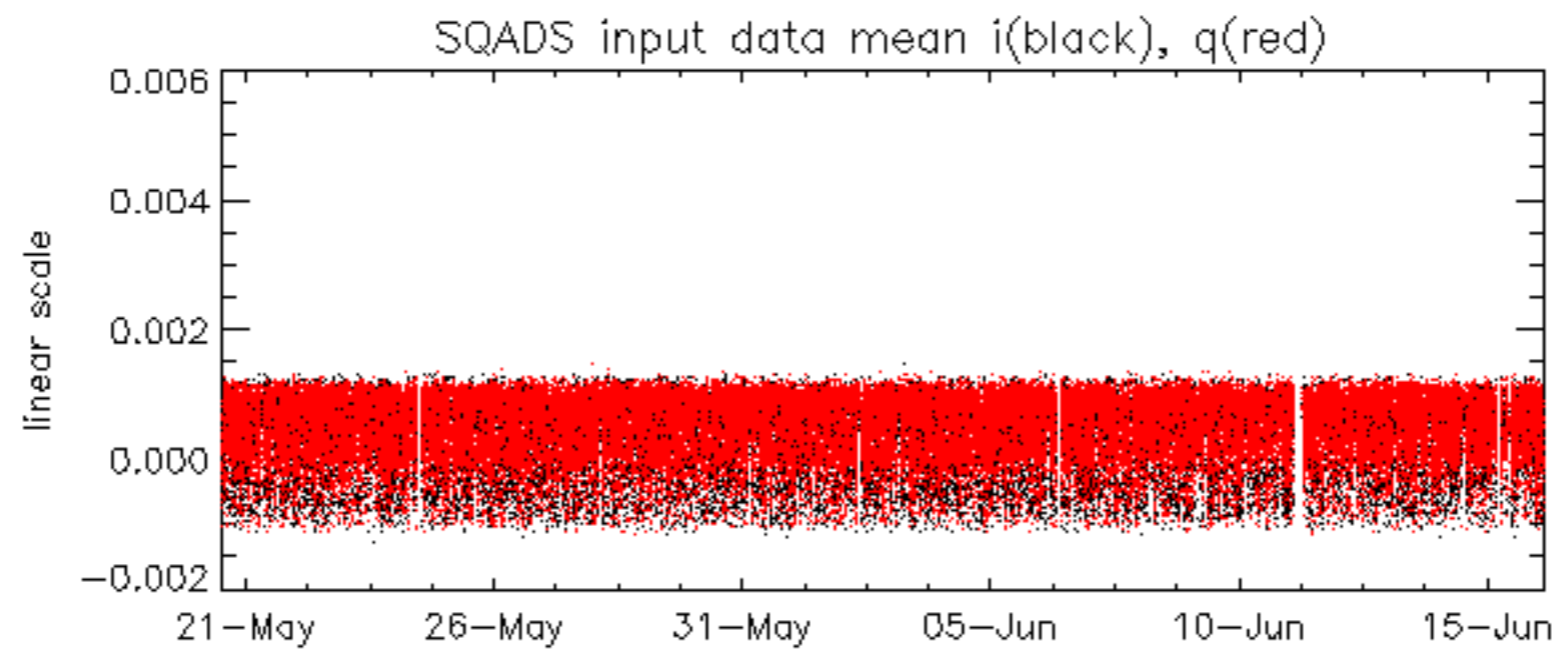


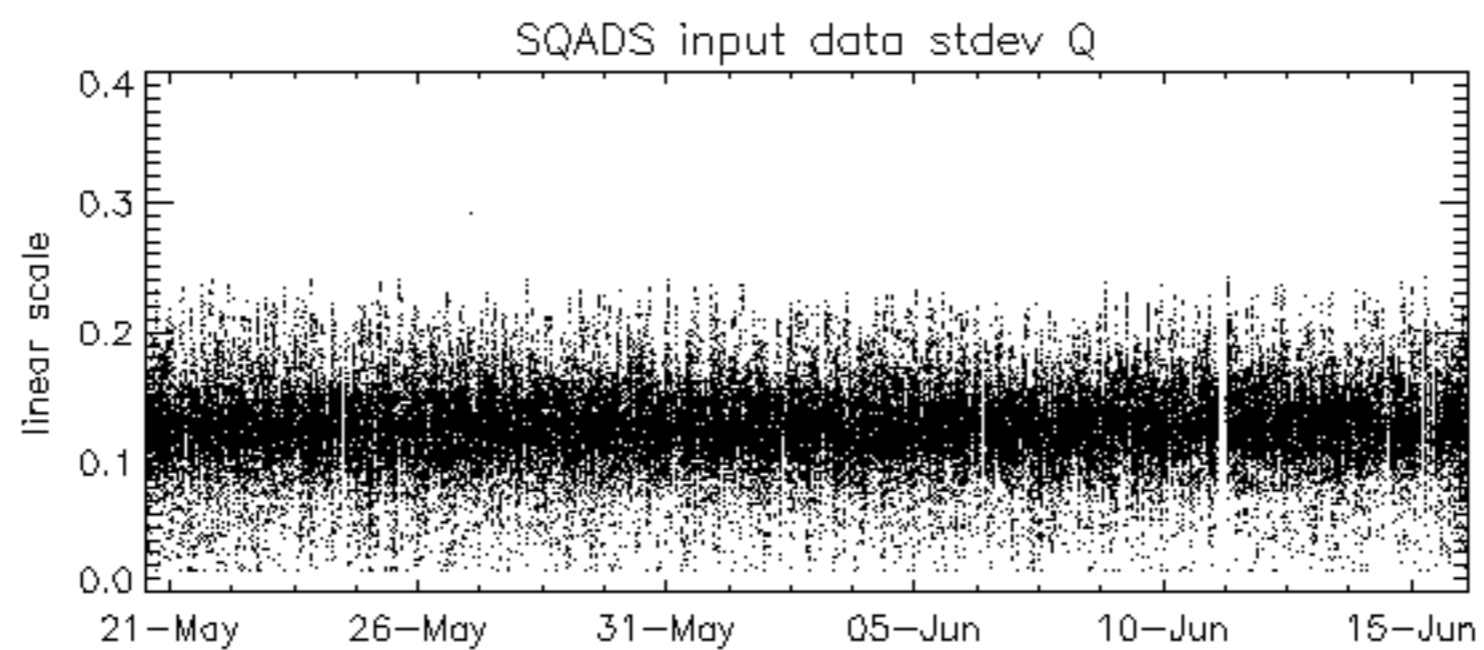
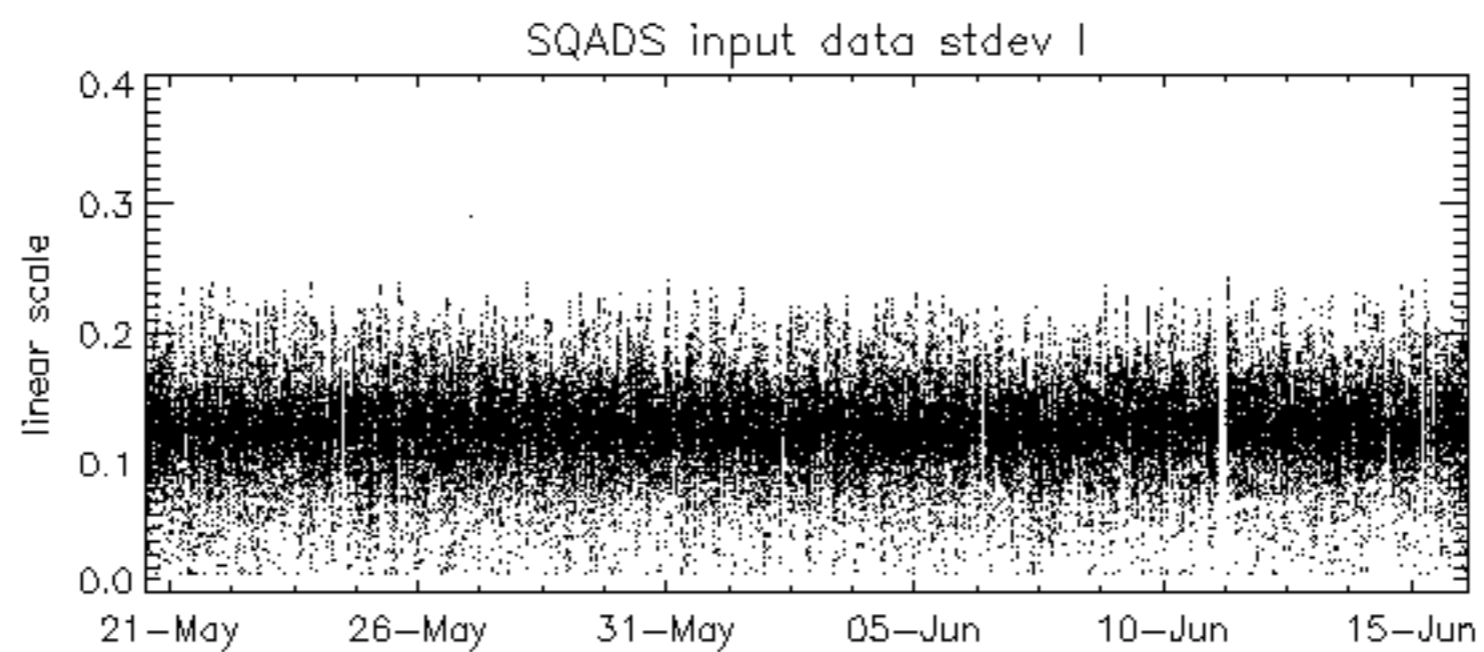
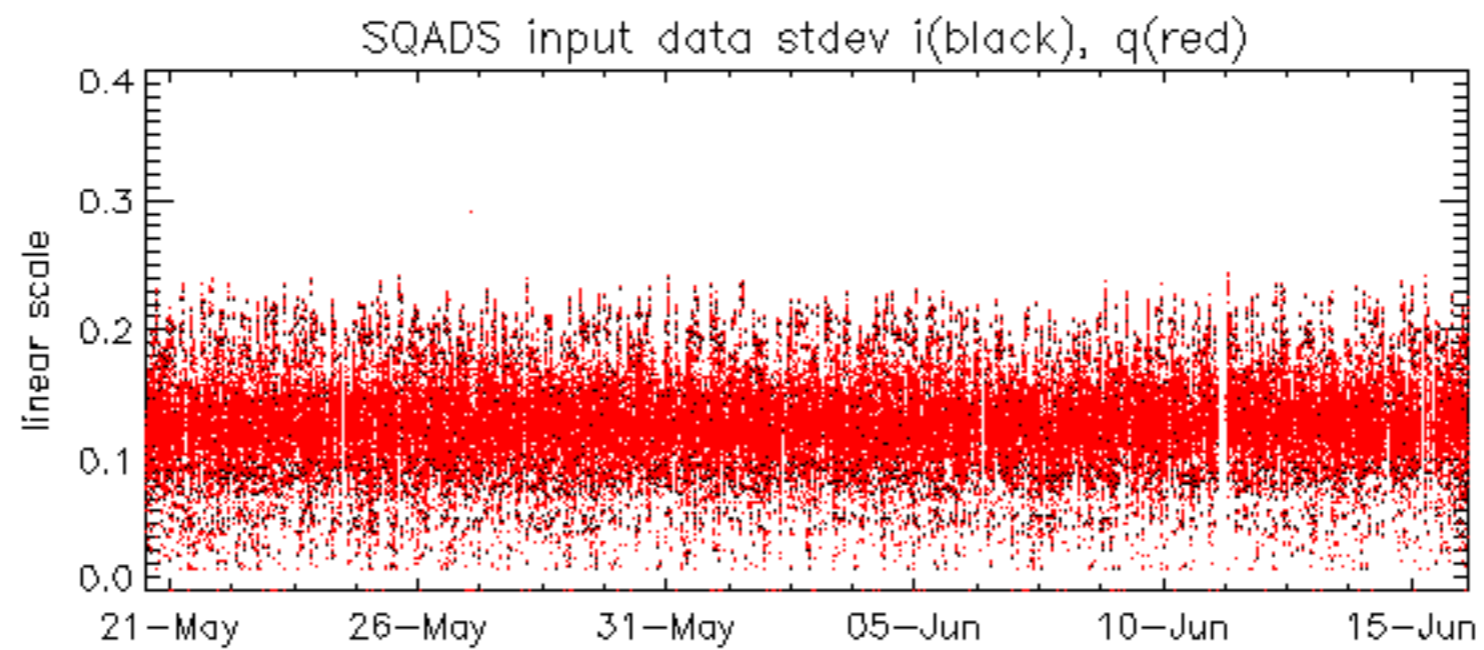


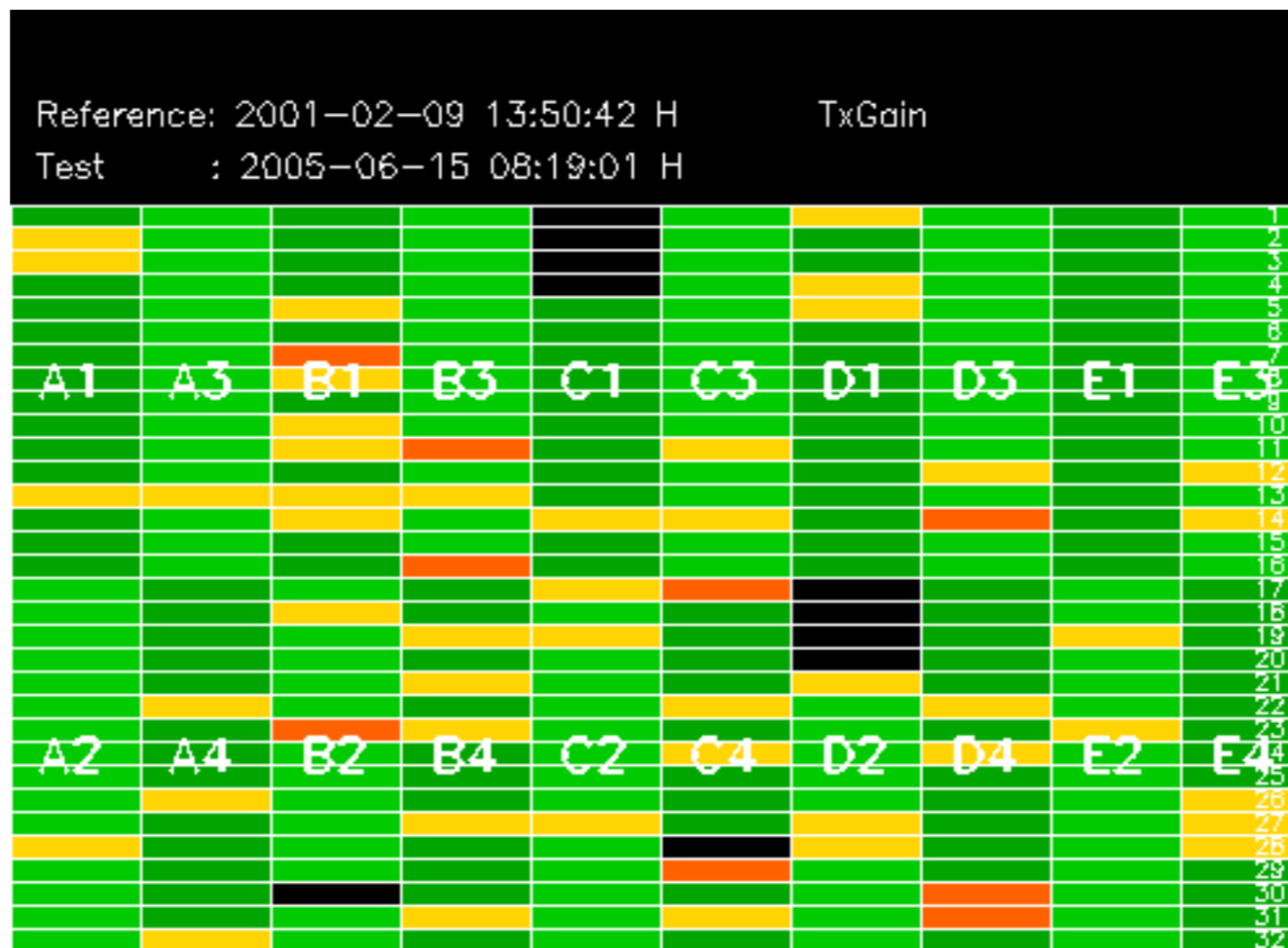


















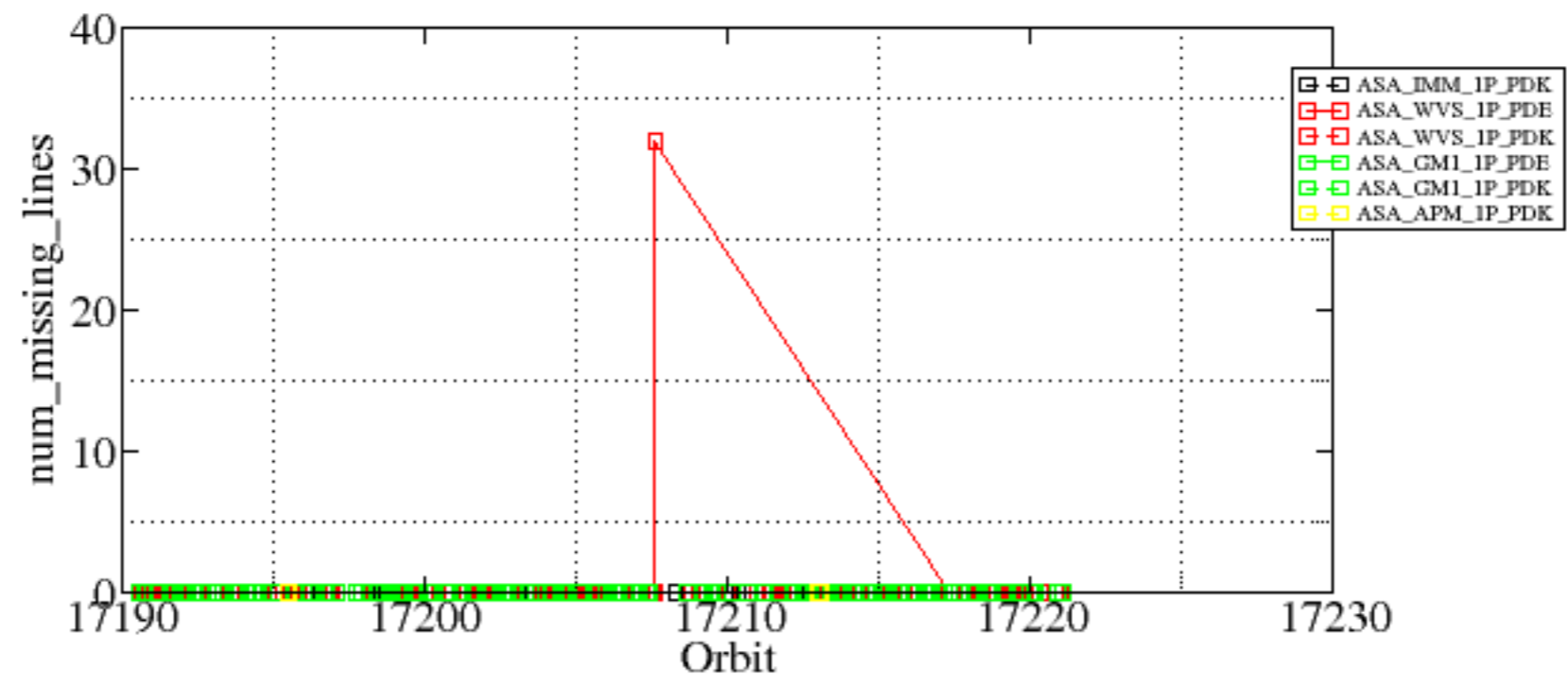
Summary of analysis for the last 3 days 2005061[456]

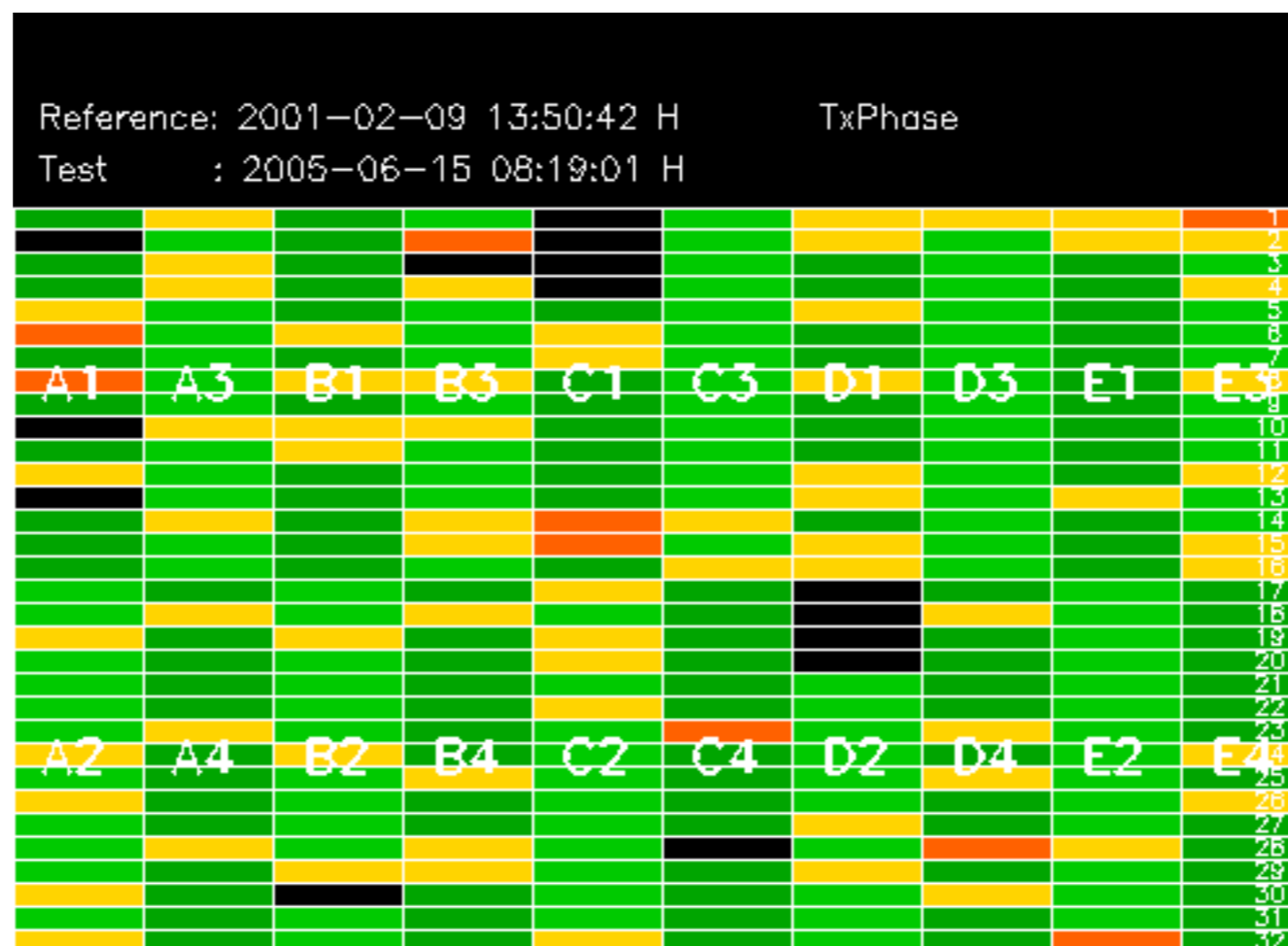
The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050614_125657_000001402038_00110_17198_0363.N1	1	0
ASA_WVS_1PNPDE20050615_045037_00000002038_00119_17207_0246.N1	1	0
ASA_WVS_1PNPDE20050615_045037_000000152038_00119_17207_0245.N1	0	32





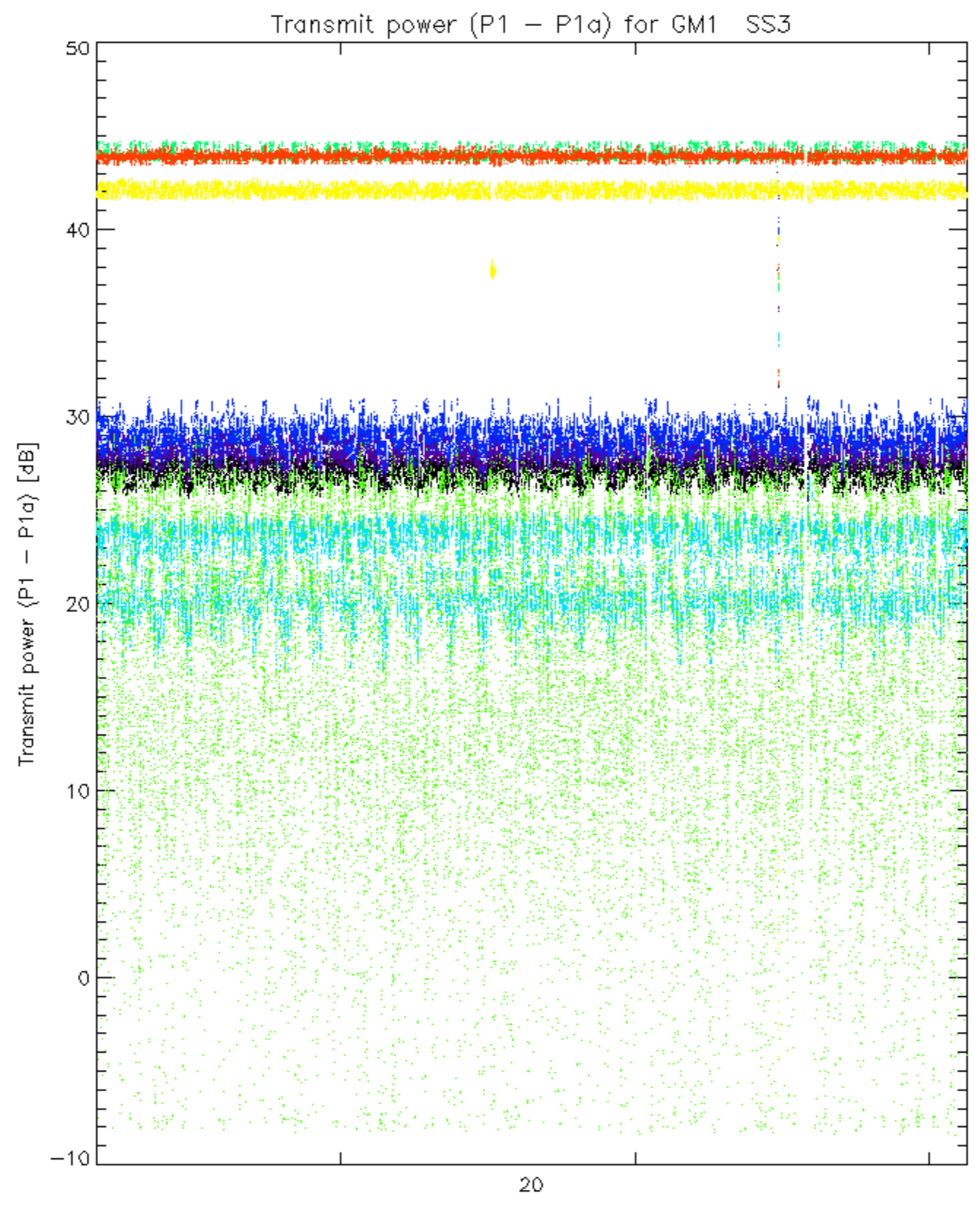




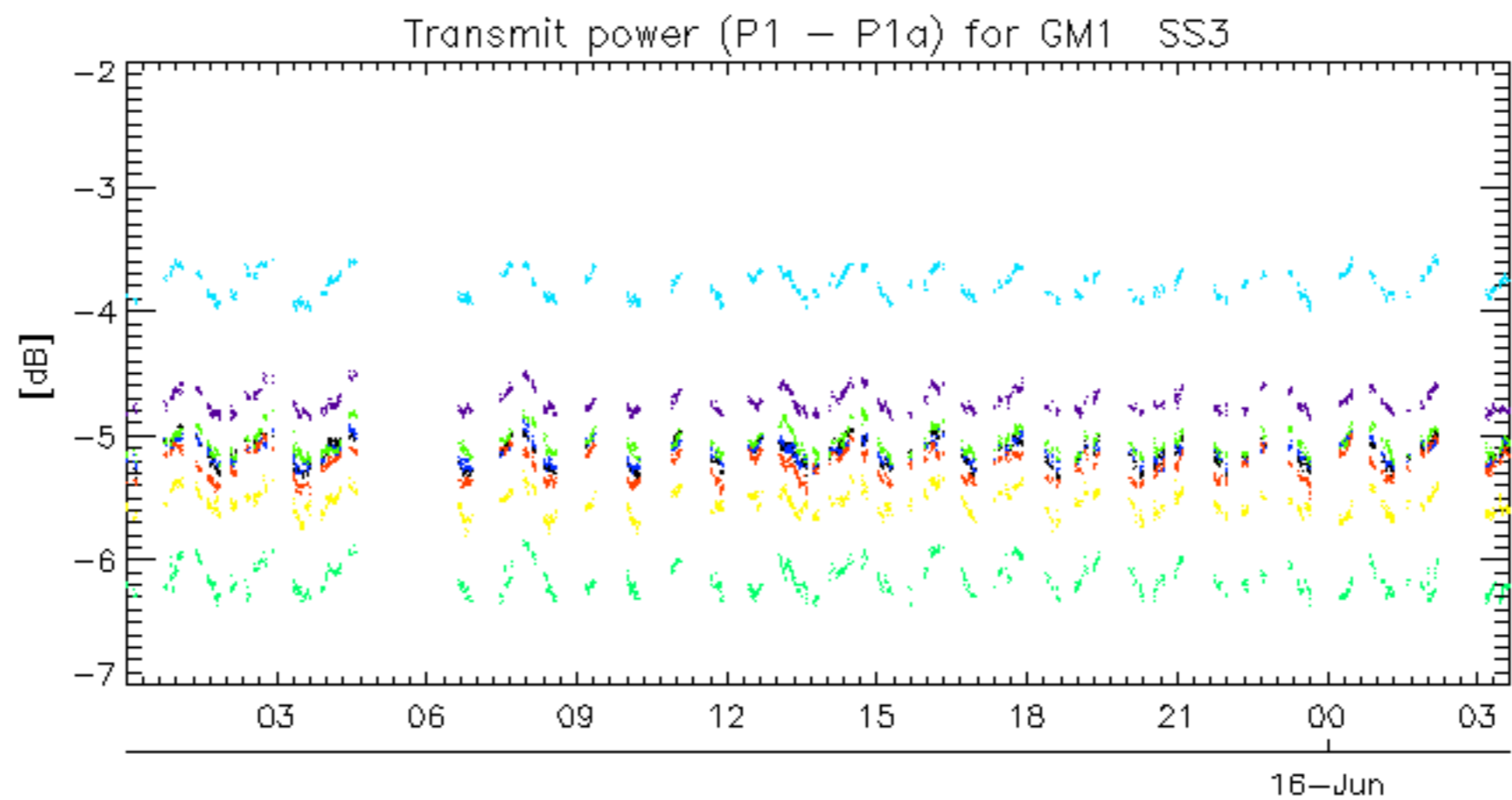






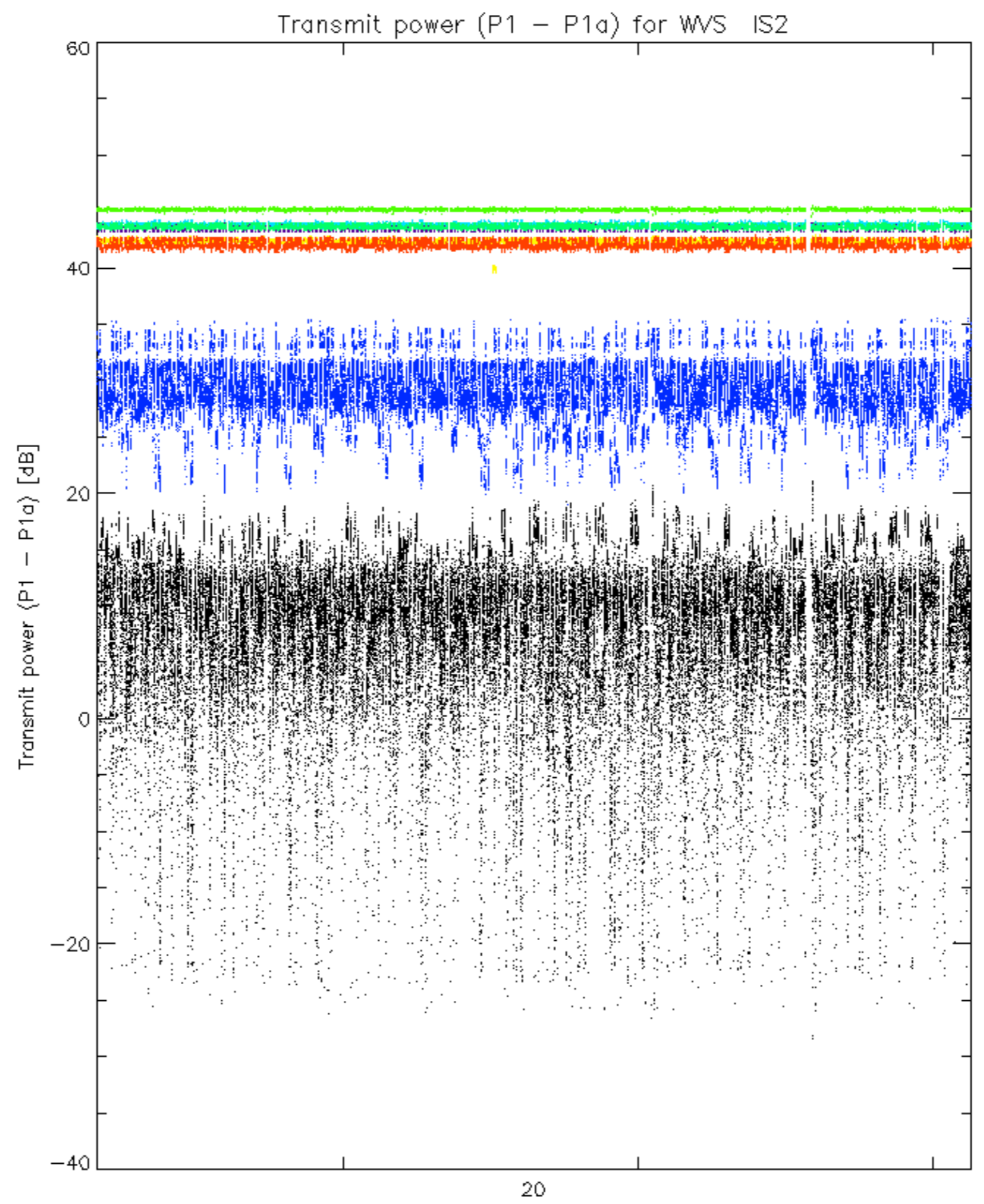


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

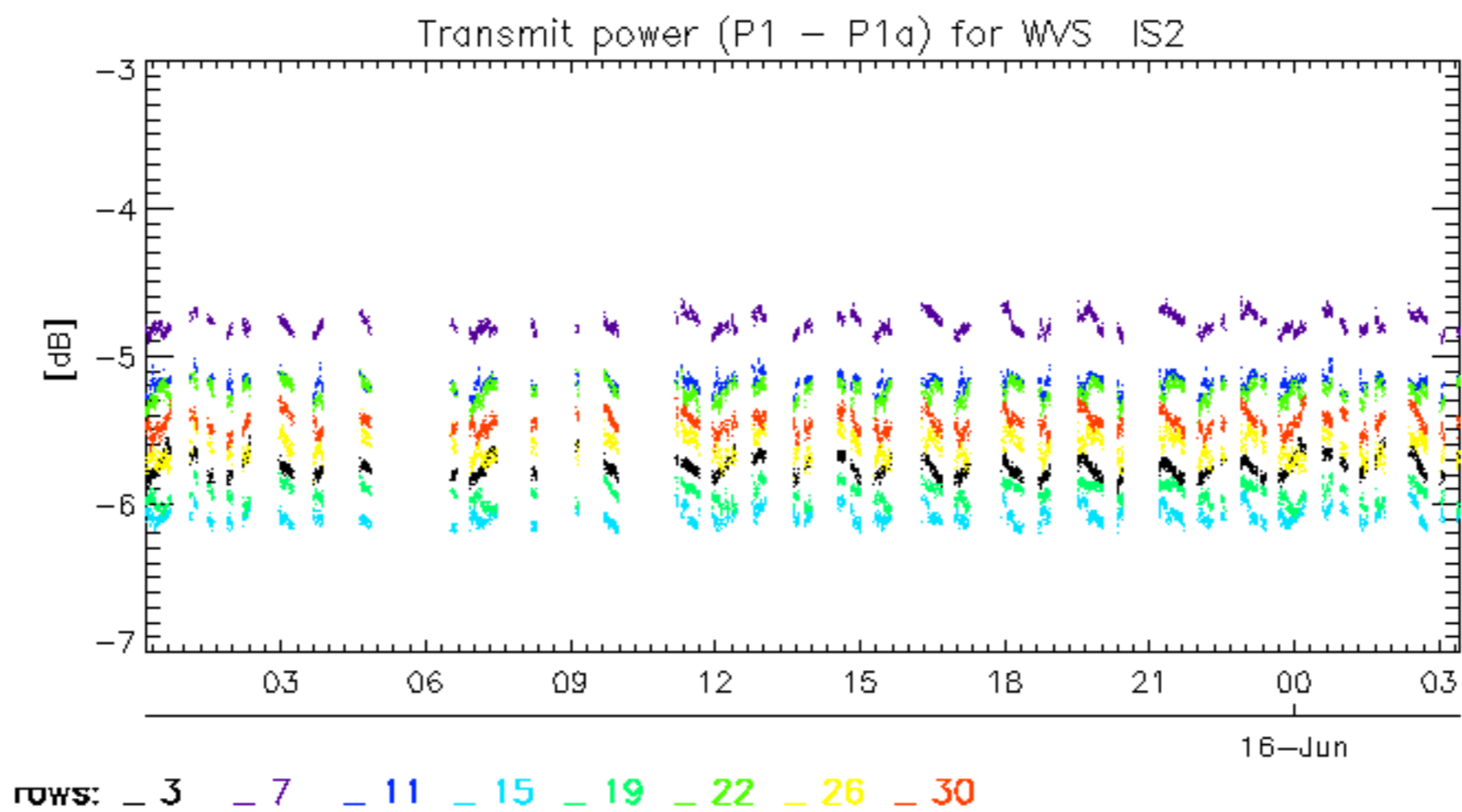


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



No unavailabilities during the reported period.