

# REPORT OF 040625

last update on Fri Jun 25 14:10:21 GMT 2004

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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 - Browse Visual Inspection

No anomalies observed on available browse products

### 2.3 - Data Analysis

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

### 3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied.

No anomalies observed on available MS products:

Polarisation	Start Time
V	20040623 190117
H	20040624 201015

#### 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	-3.510900	0.011316	0.051276
7	P1	-3.325745	0.015799	-0.011704
11	P1	-4.530058	0.038783	-0.004009
15	P1	-5.679277	0.059588	0.008568
19	P1	-3.428701	0.005149	-0.021709
22	P1	-4.560369	0.010989	0.006610
24	P1	-4.913489	0.016302	0.019973
30	P1	-6.842844	0.023156	-0.024981
3	P1	-16.097517	0.230847	0.053069
7	P1	-13.993896	0.108594	-0.000820

11	P1	-19.843630	0.313250	-0.222641
15	P1	-11.783291	0.046742	0.043663
19	P1	-13.809798	0.038073	-0.046158
22	P1	-16.578697	0.425322	0.152312
24	P1	-14.701502	0.306249	0.088589
30	P1	-17.670422	0.374755	-0.064325

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.421307	0.082660	0.050957
7	P2	-22.864244	0.126088	0.072060
11	P2	-15.638976	0.143040	0.121274
15	P2	-7.196745	0.098188	0.053489
19	P2	-9.569932	0.154814	0.060407
22	P2	-17.556019	0.105918	0.135978
24	P2	-20.877491	0.088405	0.063937
30	P2	-19.441872	0.080002	0.075533

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143693	0.002015	0.003042
7	P3	-8.143689	0.002016	0.003032
11	P3	-8.143694	0.002015	0.003055
15	P3	-8.143703	0.002015	0.003100
19	P3	-8.143713	0.002015	0.003156
22	P3	-8.143718	0.002015	0.003195
24	P3	-8.143719	0.002015	0.003200
30	P3	-8.143695	0.002010	0.003158

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1	
<input type="checkbox"/>	
<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	-3.149224	0.136054	0.014552
7	P1	-2.807745	0.072884	0.007059
11	P1	-3.790582	0.021807	-0.024975
15	P1	-4.269221	1.027200	-0.014553
19	P1	-3.353937	0.049094	-0.013646
22	P1	-5.721893	0.044959	-0.002049
24	P1	-4.050748	0.080945	-0.014812
30	P1	-6.096017	0.060961	-0.030227
3	P1	-11.034558	0.431276	0.028222
7	P1	-9.762011	0.250162	-0.006495
11	P1	-11.760127	0.169410	-0.061884
15	P1	-11.844119	0.281633	-0.046044
19	P1	-14.986978	0.823735	0.002865
22	P1	-21.478851	8.918546	0.128200
24	P1	-17.363846	0.280623	-0.045819
30	P1	-21.726929	4.165854	0.005132

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.166840	0.043307	0.035203
7	P2	-22.949167	0.029245	0.073338
11	P2	-11.045974	0.216614	0.149778
15	P2	-5.004525	0.044234	0.024758
19	P2	-6.932724	0.043464	-0.006540
22	P2	-7.689365	0.023451	0.082706
24	P2	-11.078192	0.071942	0.044710
30	P2	-22.405354	0.092896	0.101336

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.984133	0.003300	0.000808

7	P3	-7.983994	0.003288	0.000776
11	P3	-7.984031	0.003298	0.000980
15	P3	-7.984135	0.003284	0.000979
19	P3	-7.984013	0.003301	0.000749
22	P3	-7.984198	0.003284	0.000867
24	P3	-7.983903	0.003316	0.000410
30	P3	-7.984056	0.003291	0.000932

### 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	0.000489290
	stdev	2.12762e-07
MEAN Q	mean	0.000541757
	stdev	2.37989e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129286
	stdev	0.00101365
STDEV Q	mean	0.129528

stdev 0.00102559



### 5.3 - Gain imbalance I/Q



## 6 - Doppler Analysis

Preliminary report. The data is not yet controlled

### 6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)

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

### 6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

### 6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>
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### 6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 6.5 - Absolute Doppler for GM1

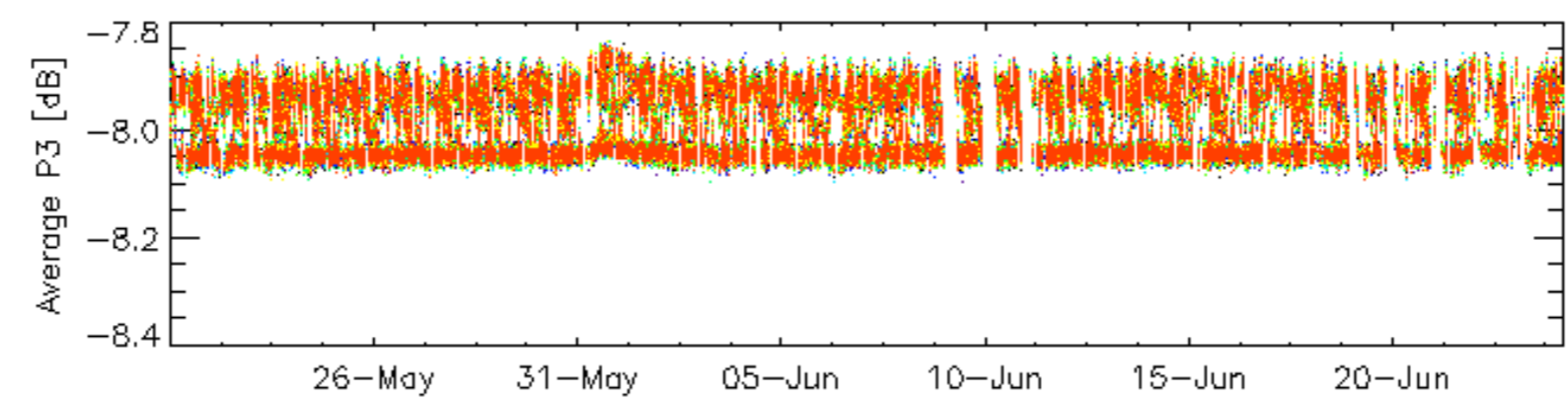
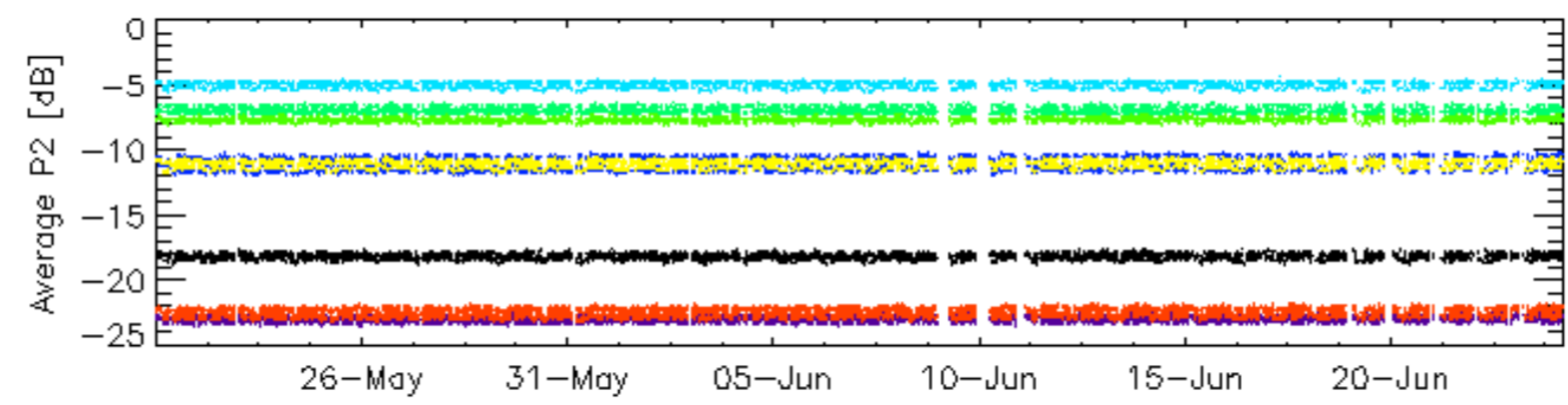
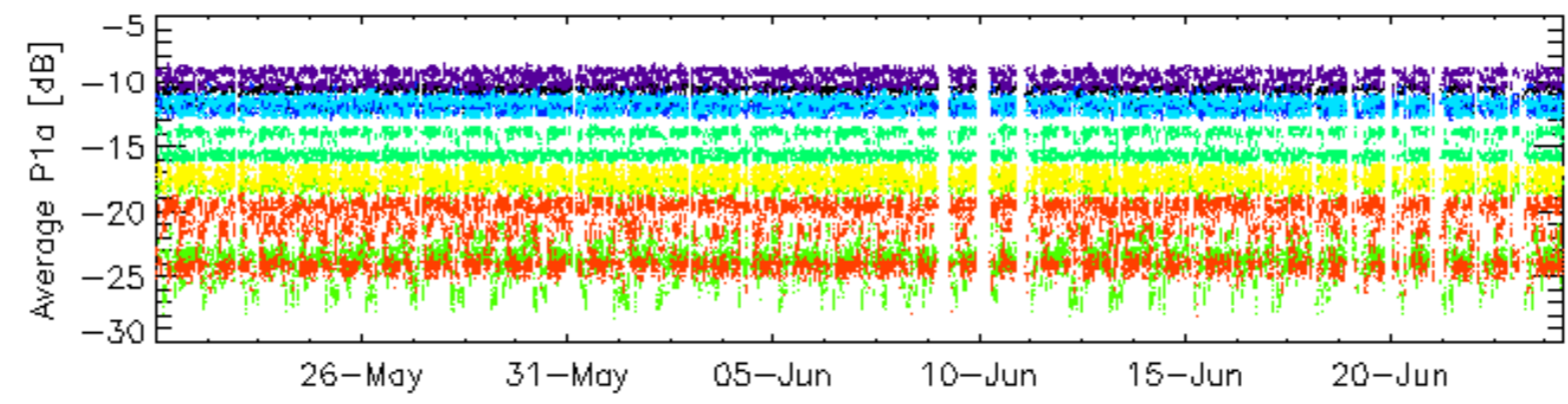
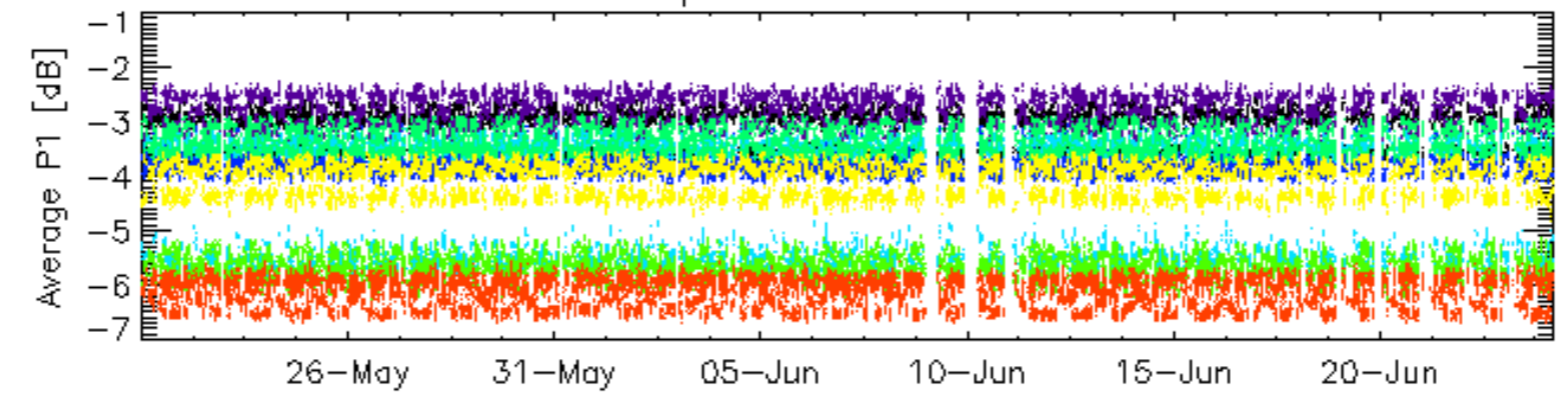
Evolution of Absolute Doppler
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Ascending
<input type="checkbox"/>
Descending

### 6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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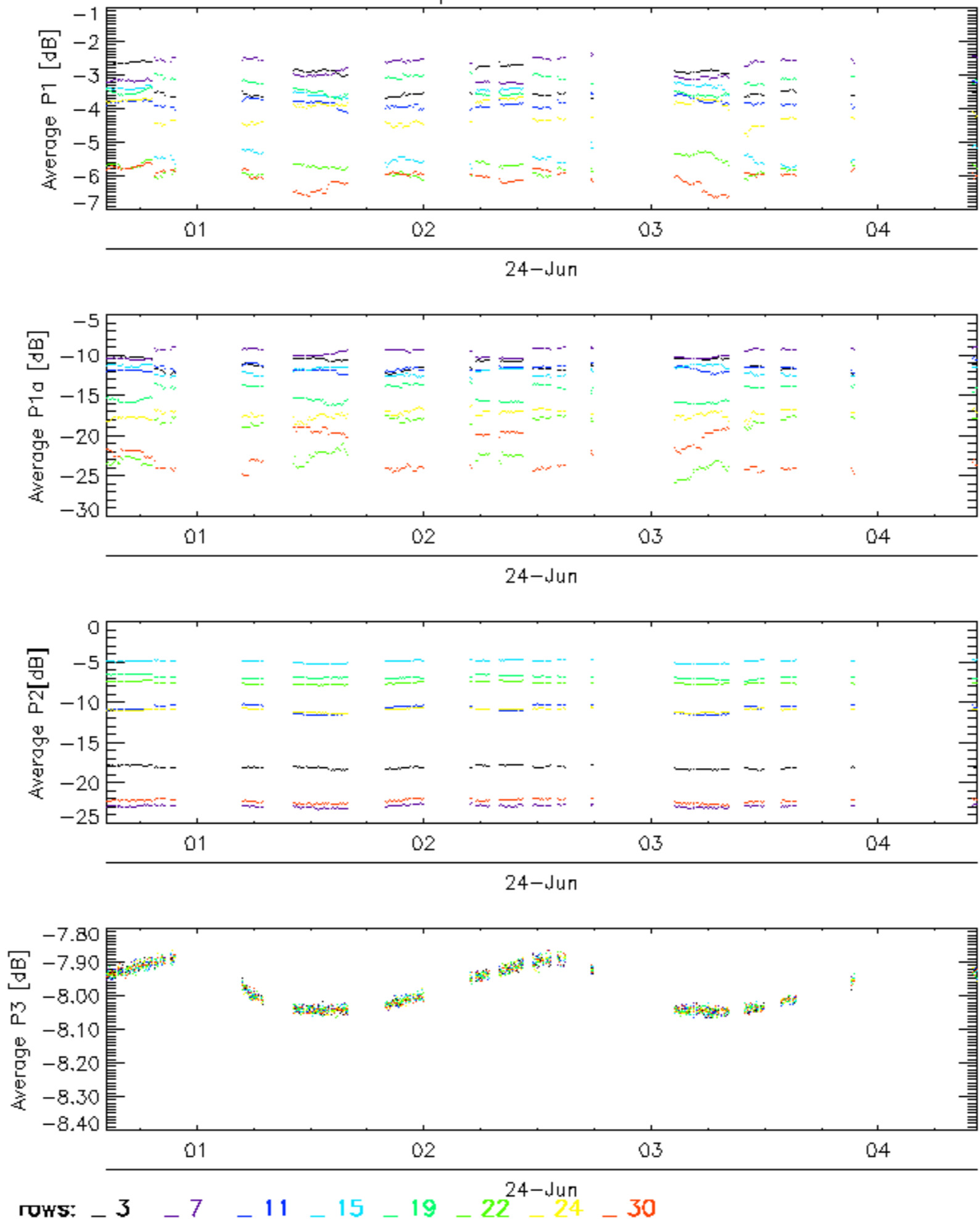


Cal pulses for GM1 SS3

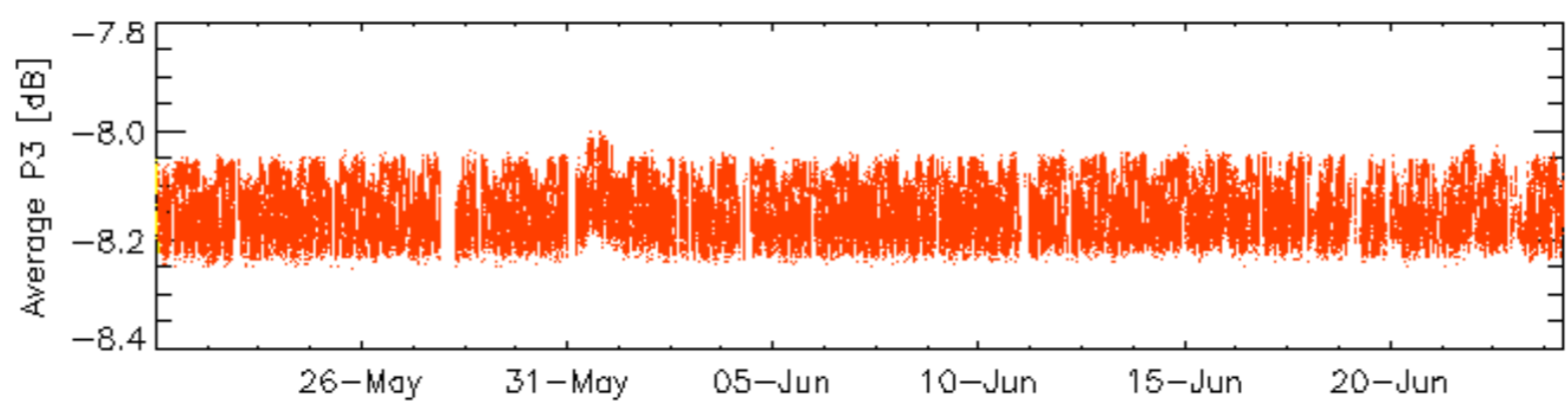
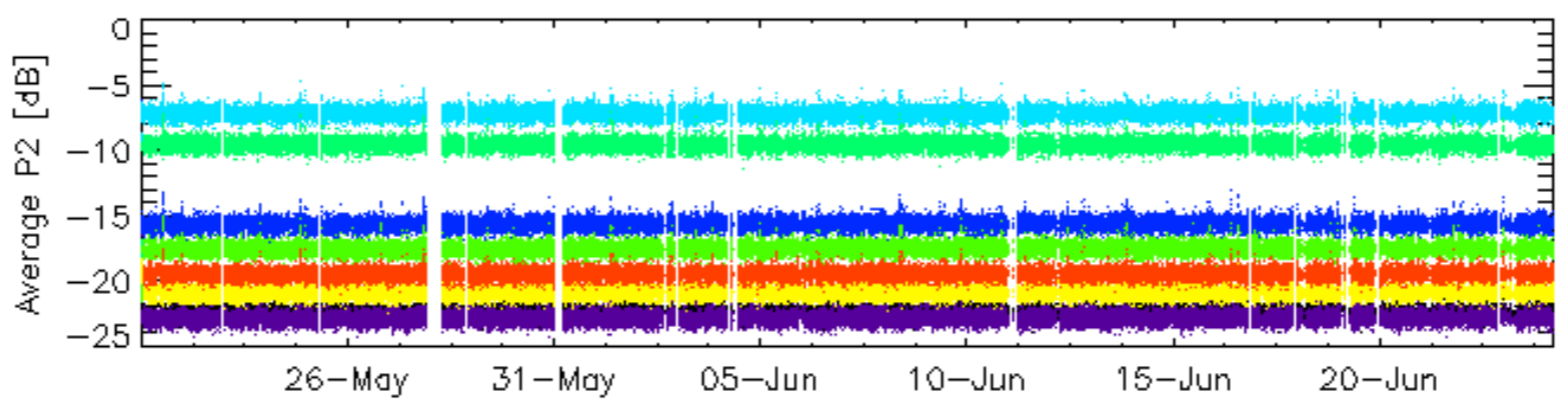
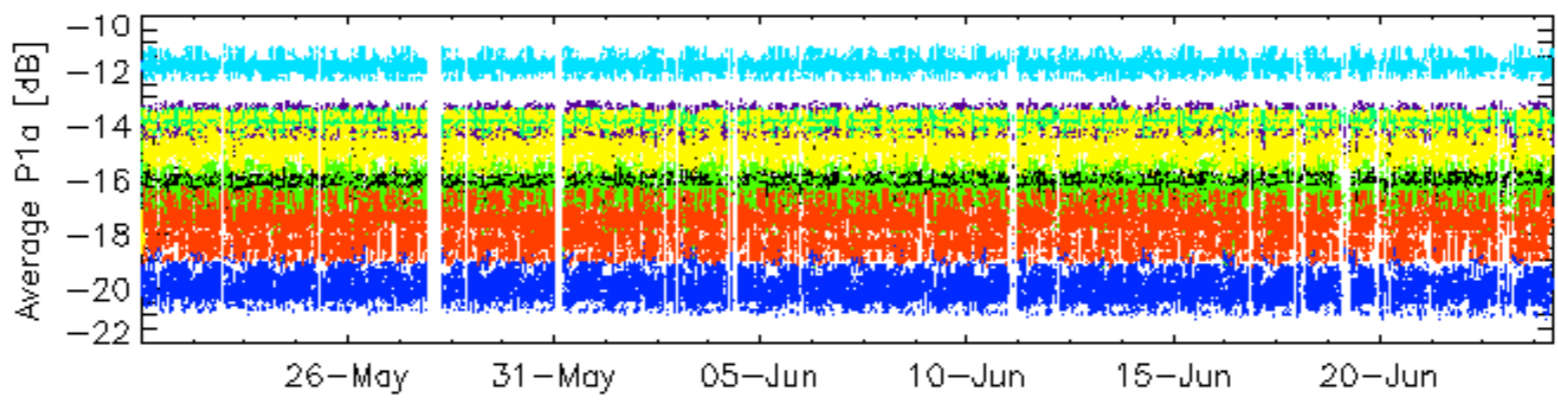
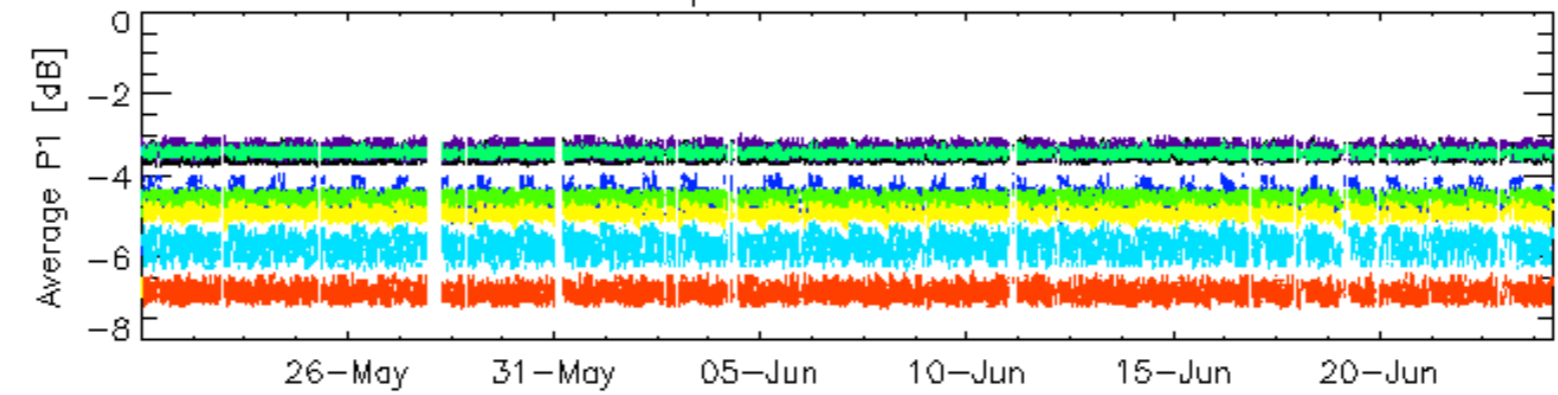


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

### Cal pulses for GM1 SS3

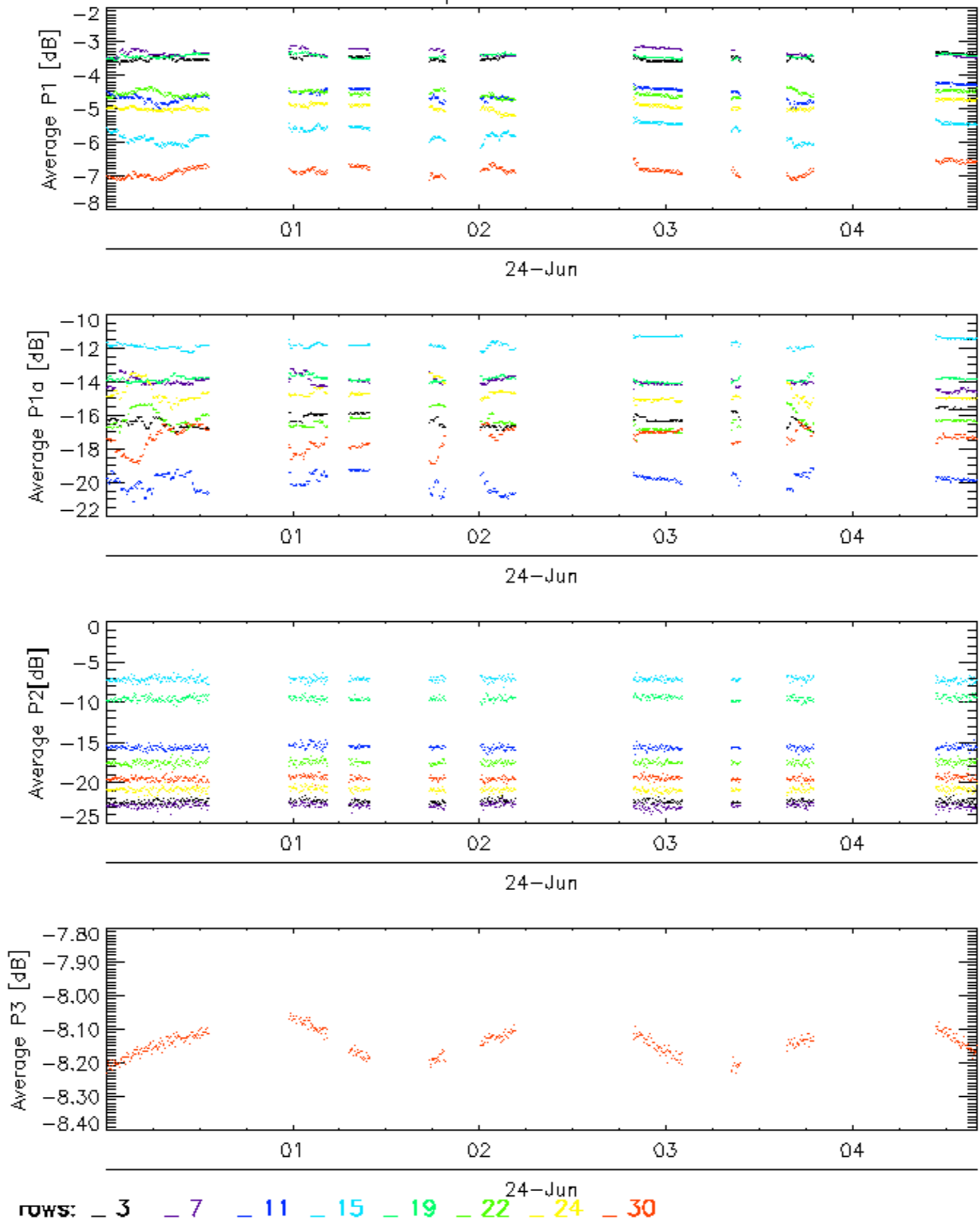


Cal pulses for WVS IS2



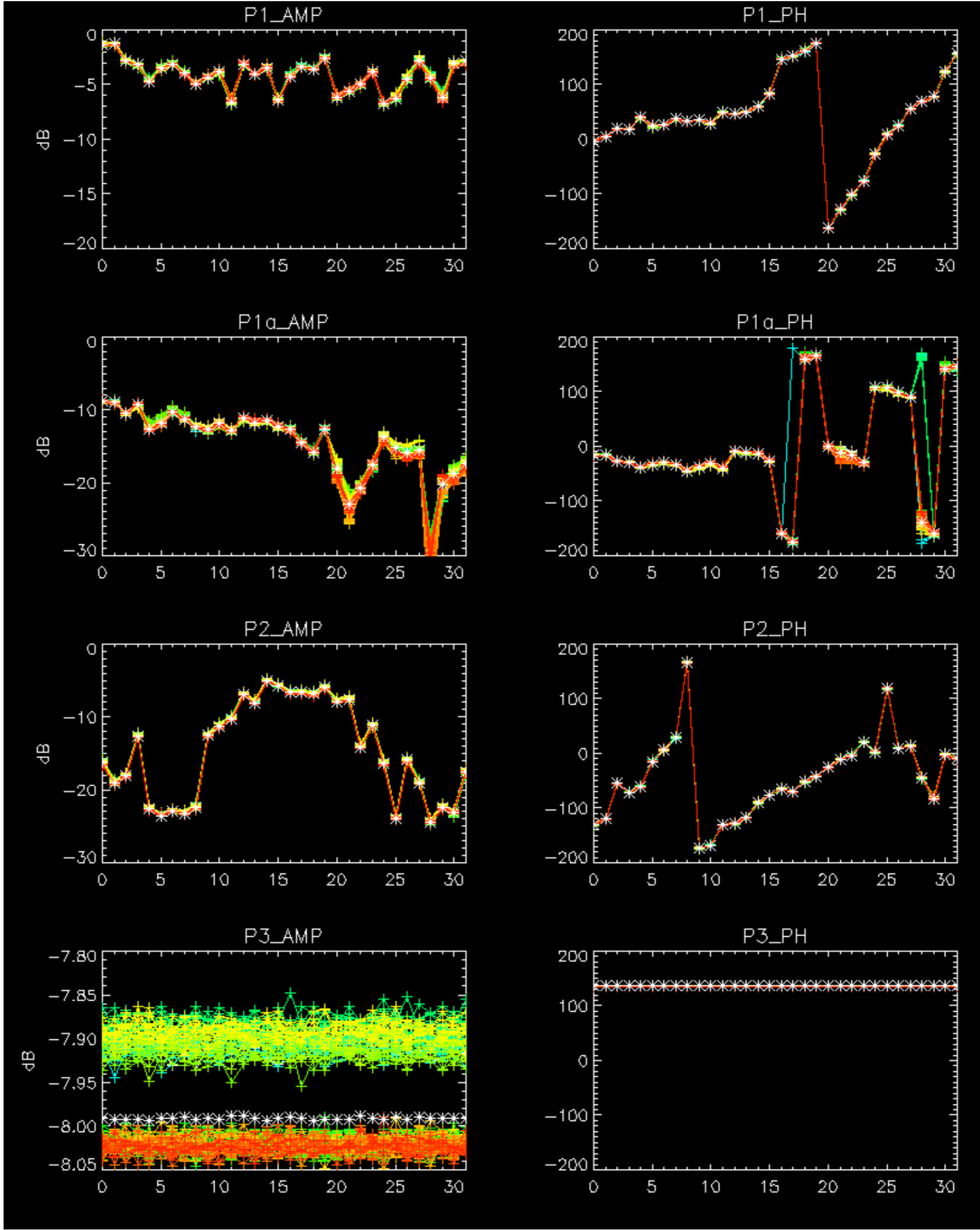
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 24 \_ 30

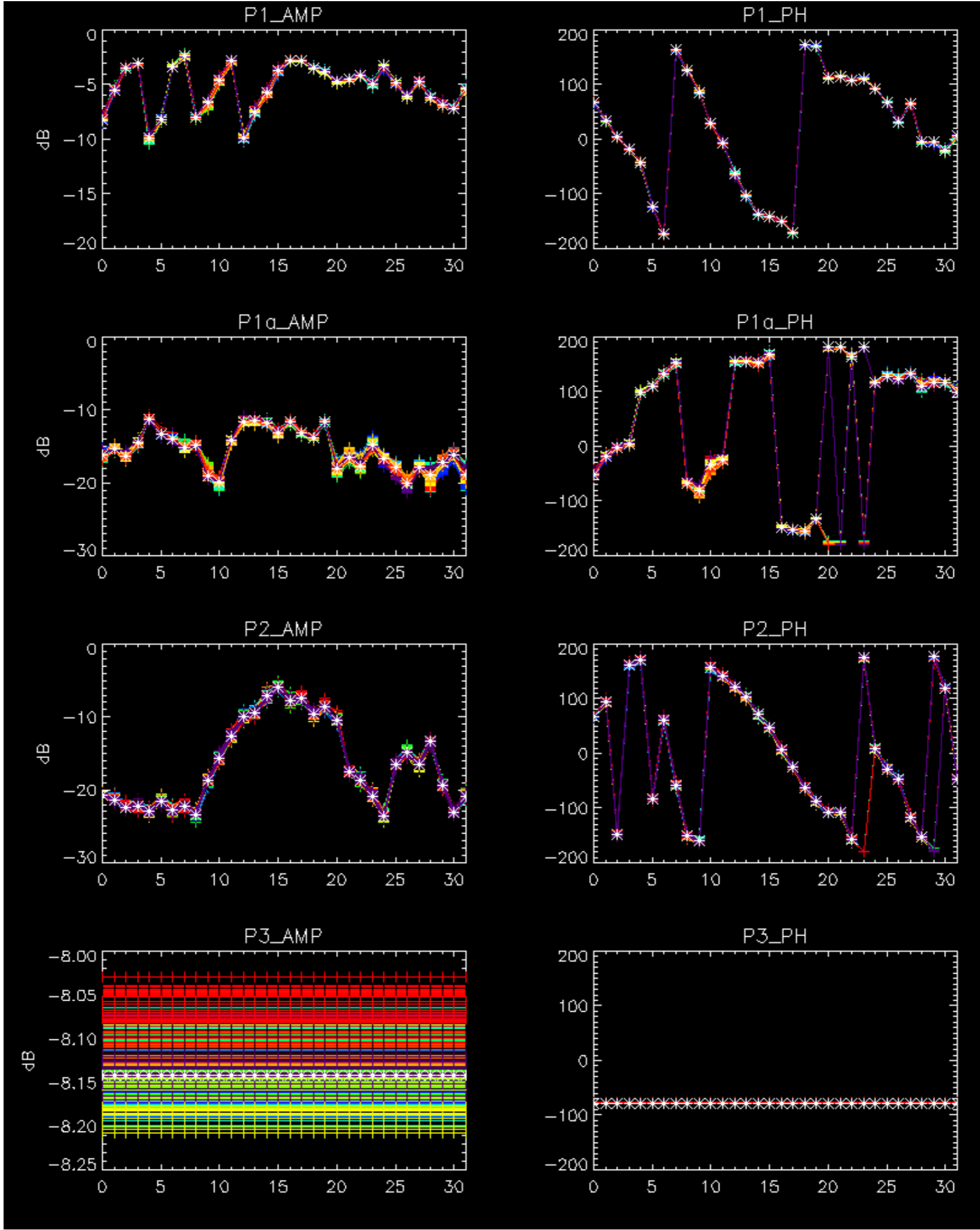
Cal pulses for WVS IS2



No anomalies observed on available browse products

No anomalies observed.



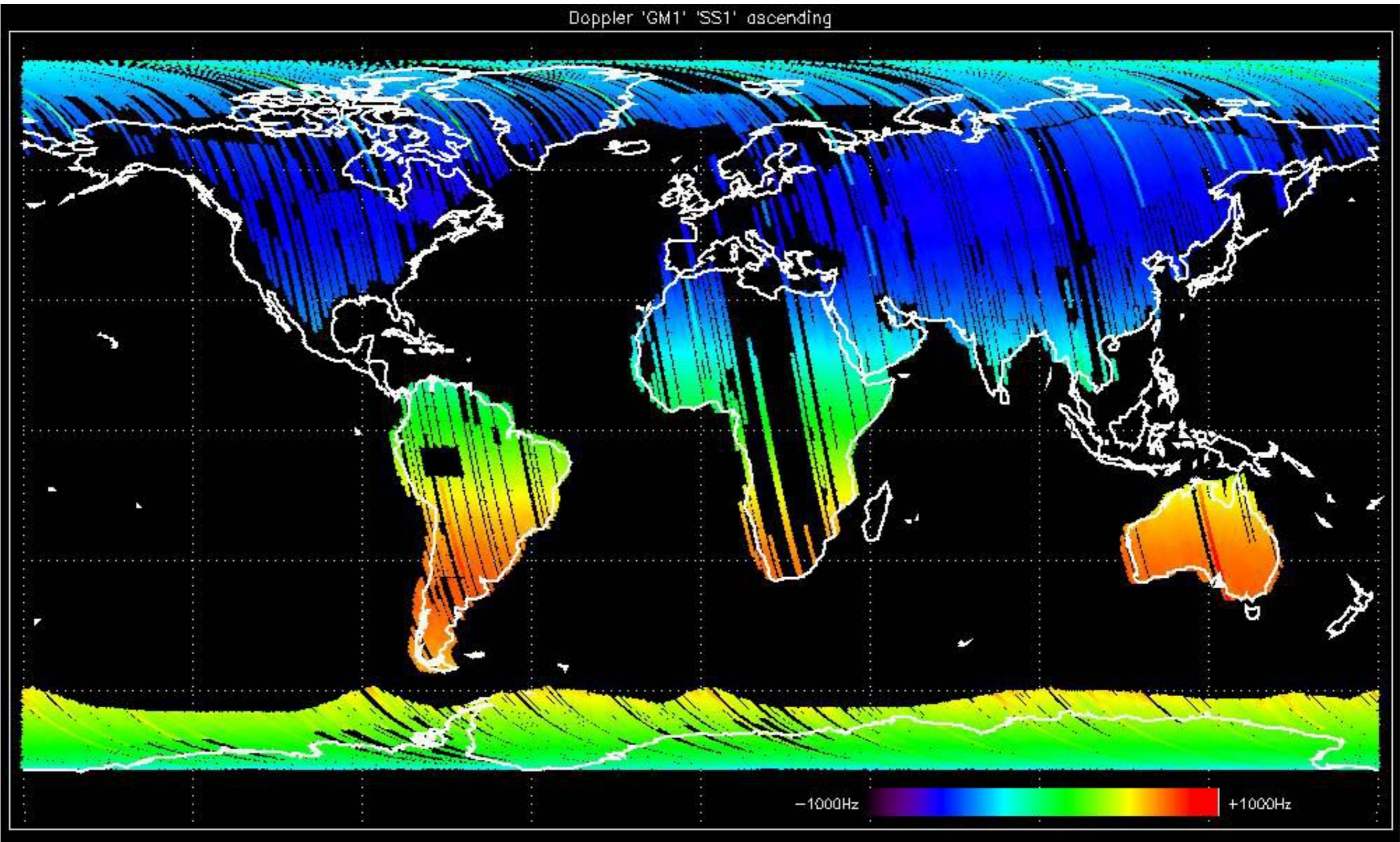




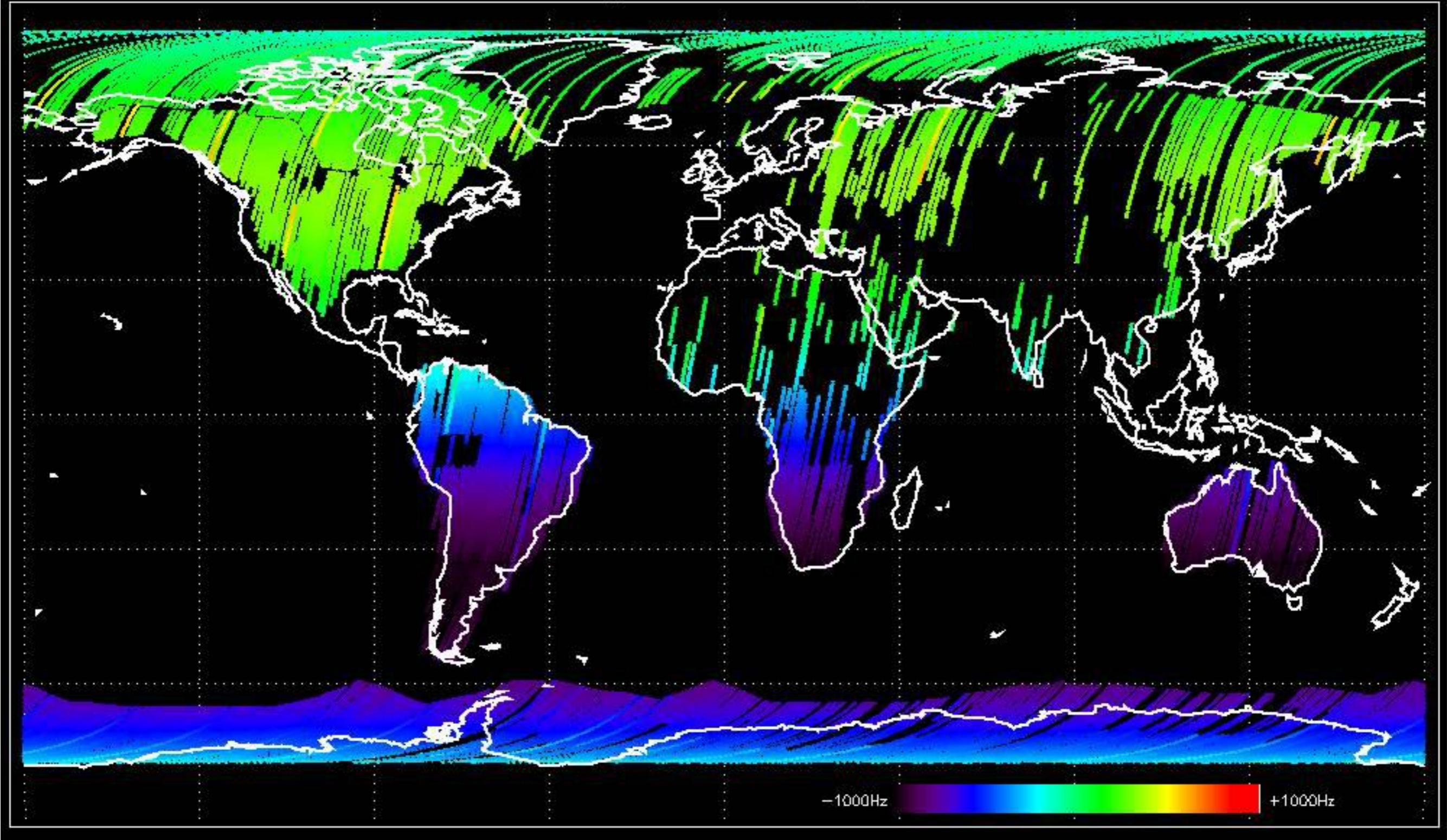
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



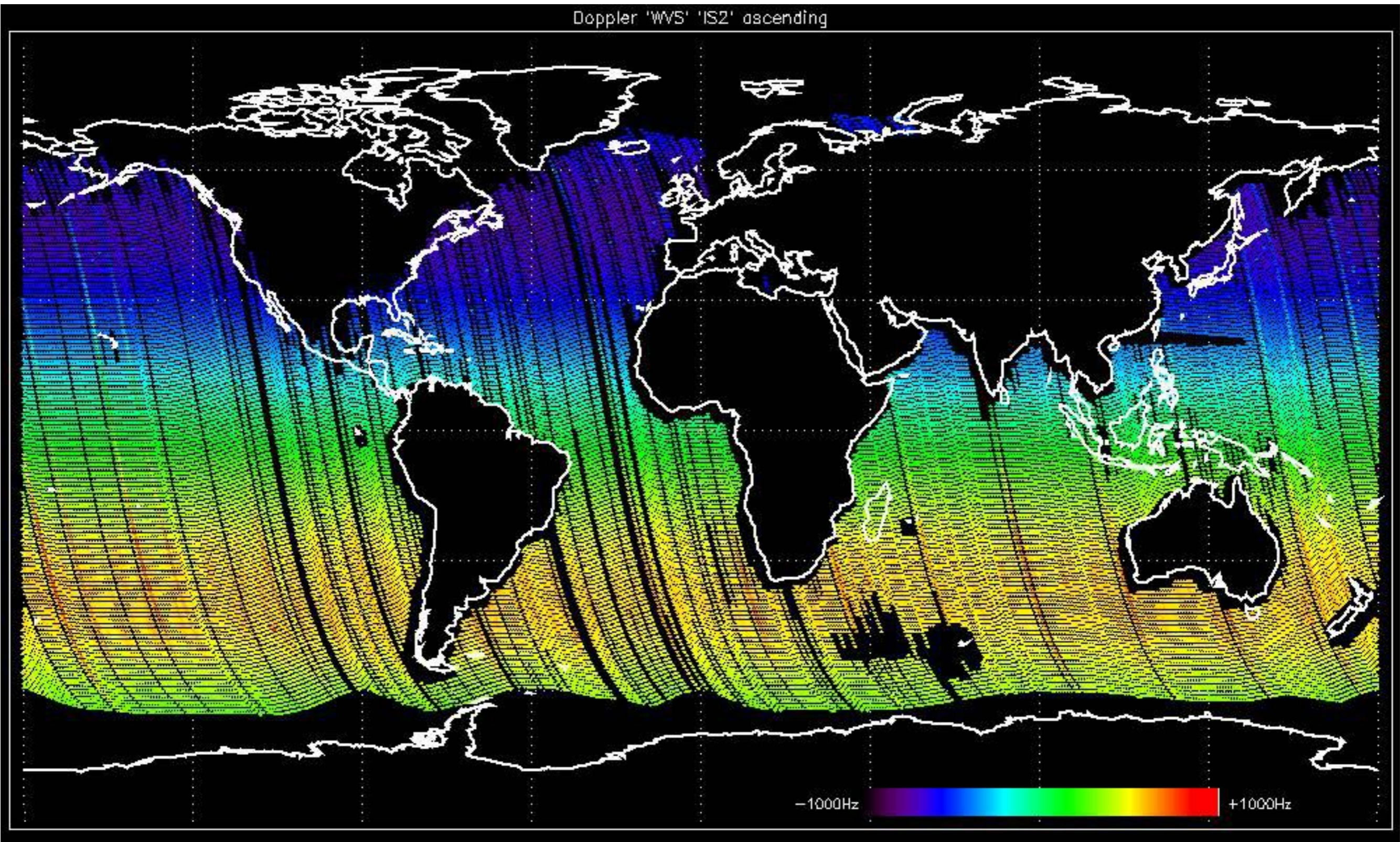
Doppler 'GM1' 'SS1' ascending



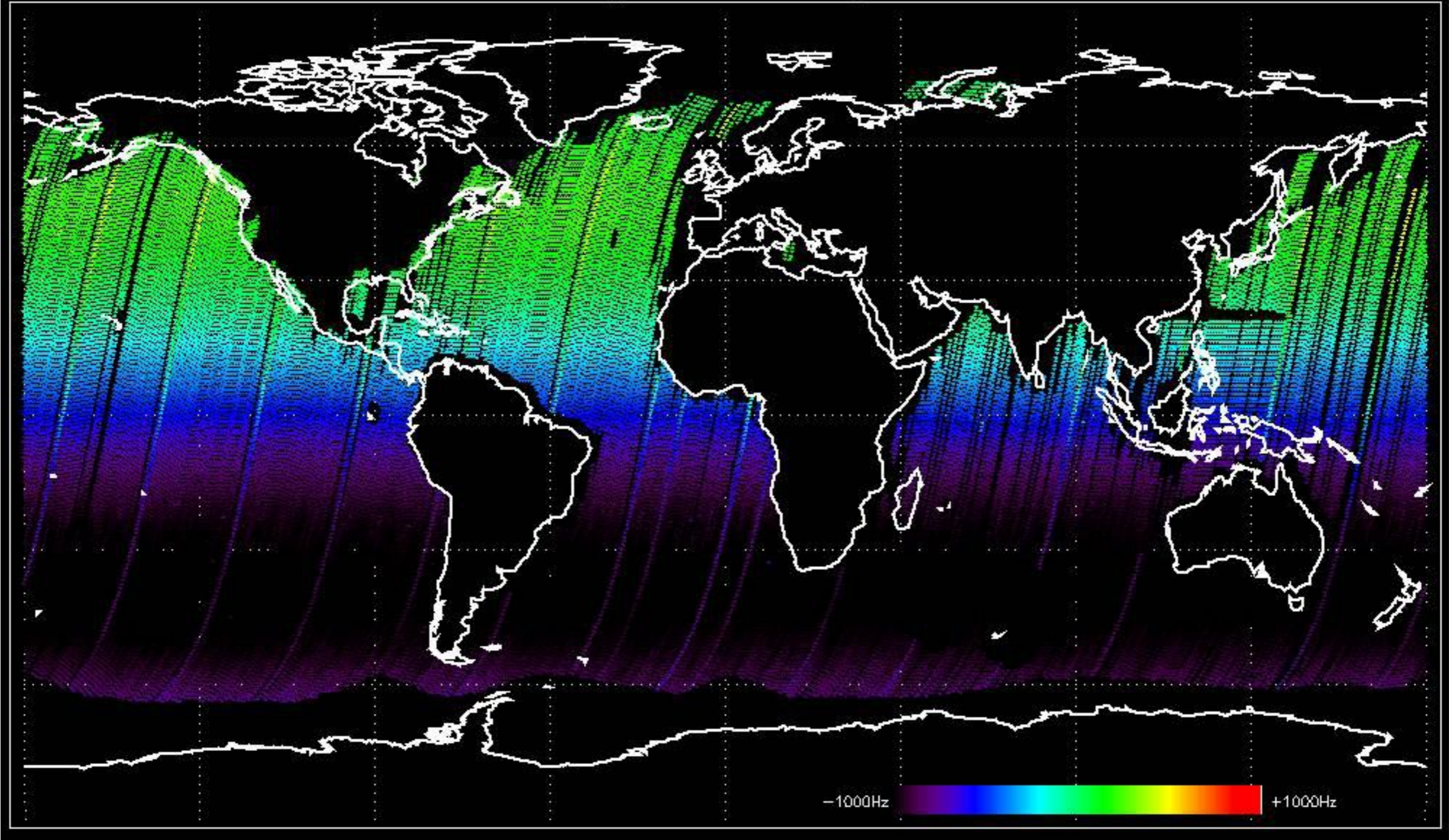
Doppler 'GM1' 'SS1' descending



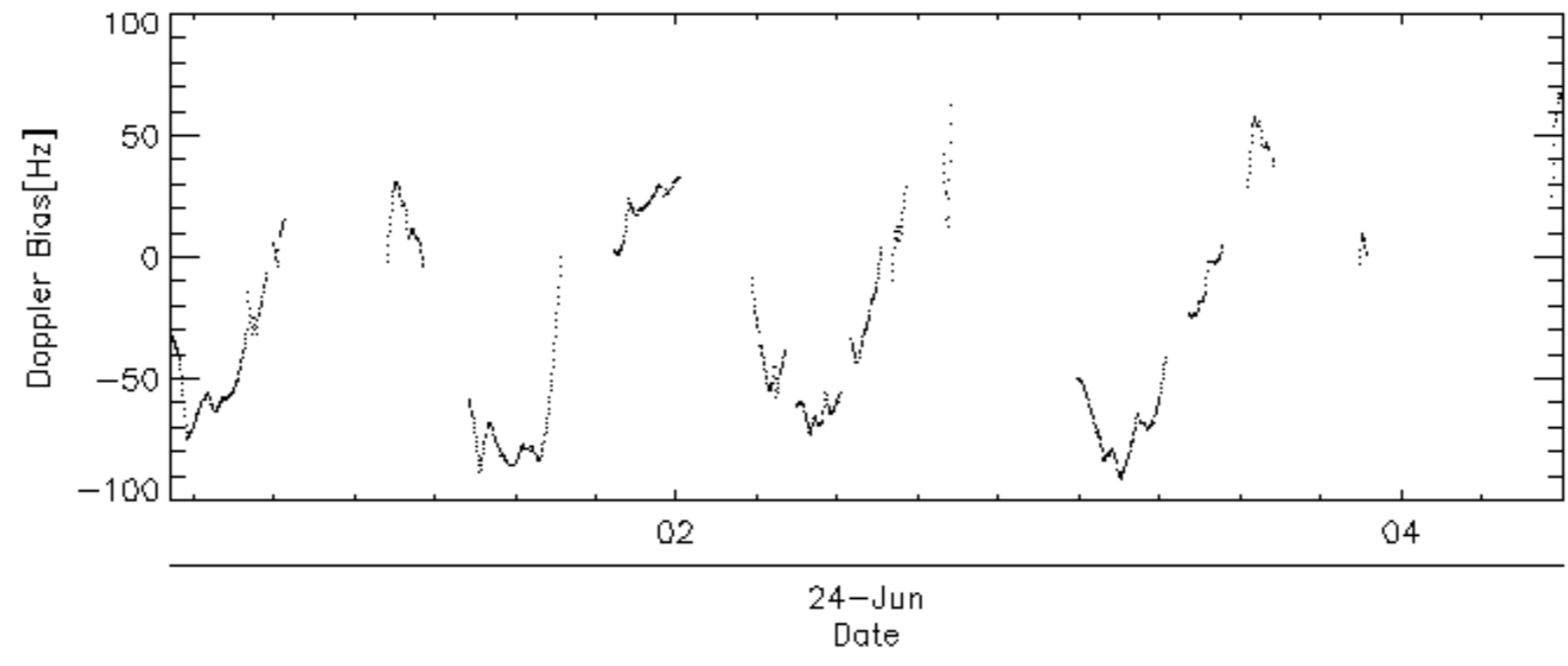
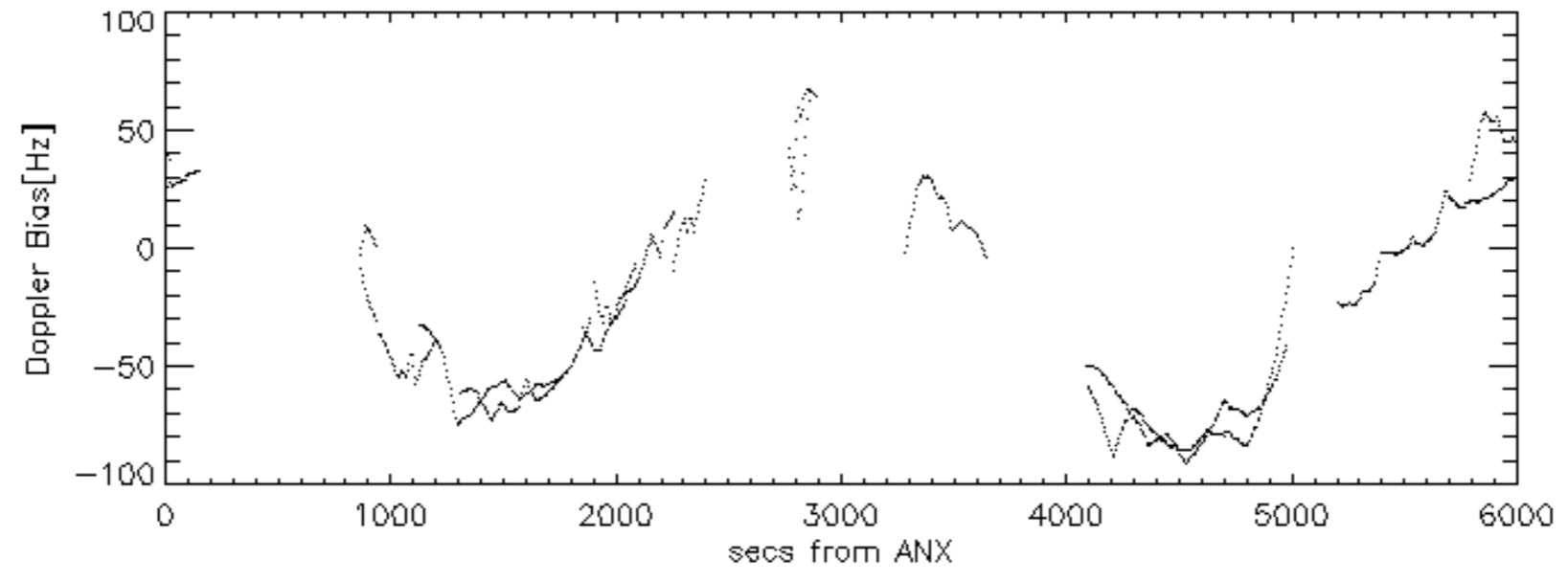
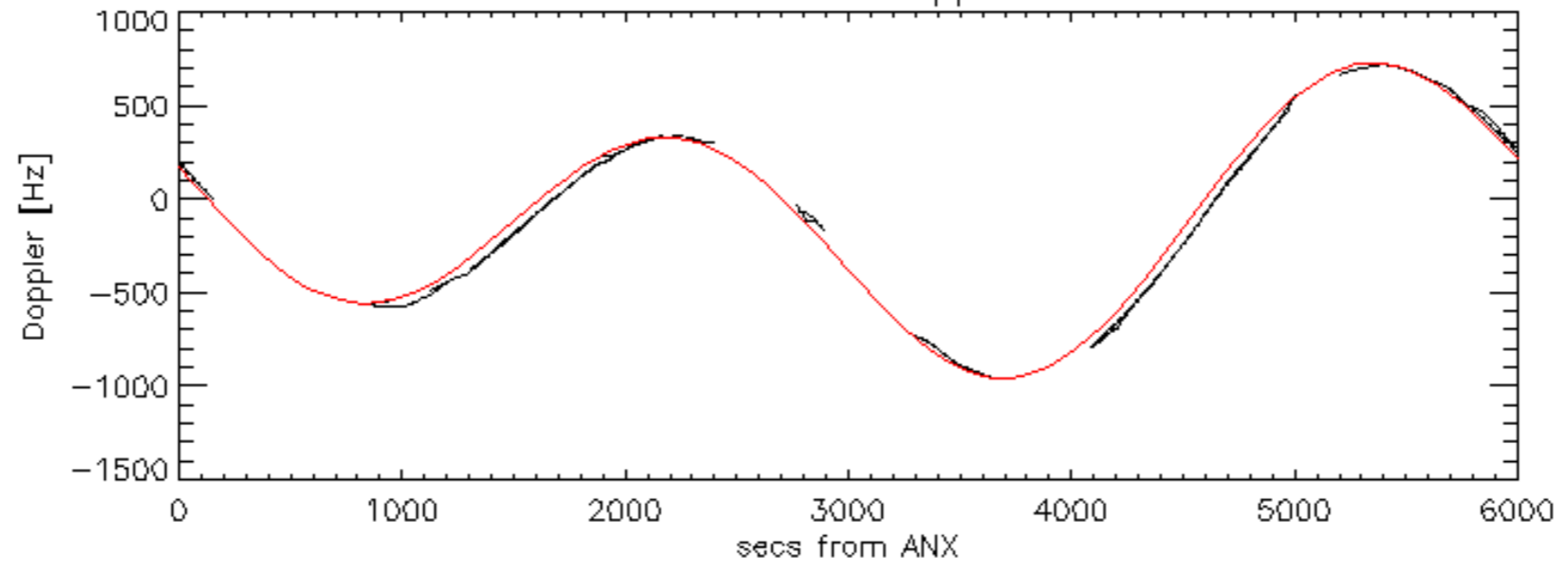
Doppler 'WVS' 'IS2' ascending

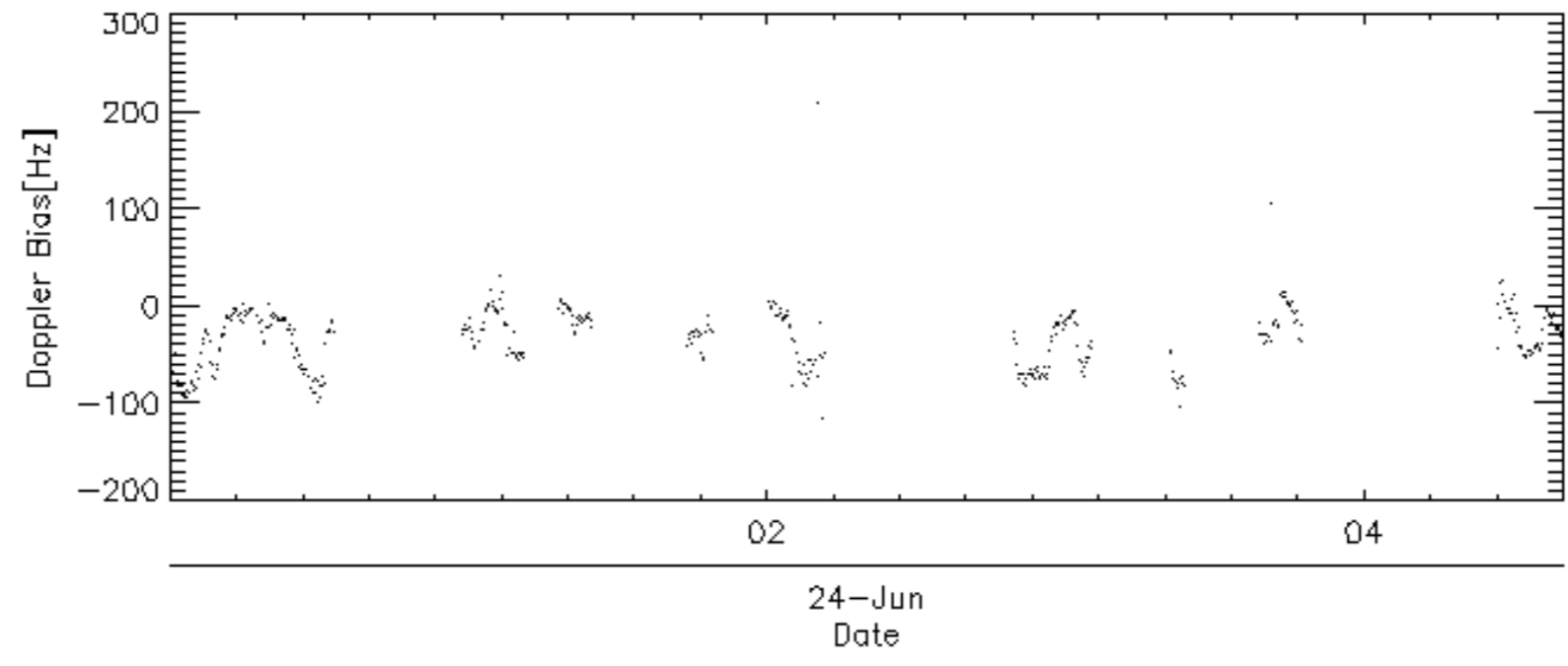
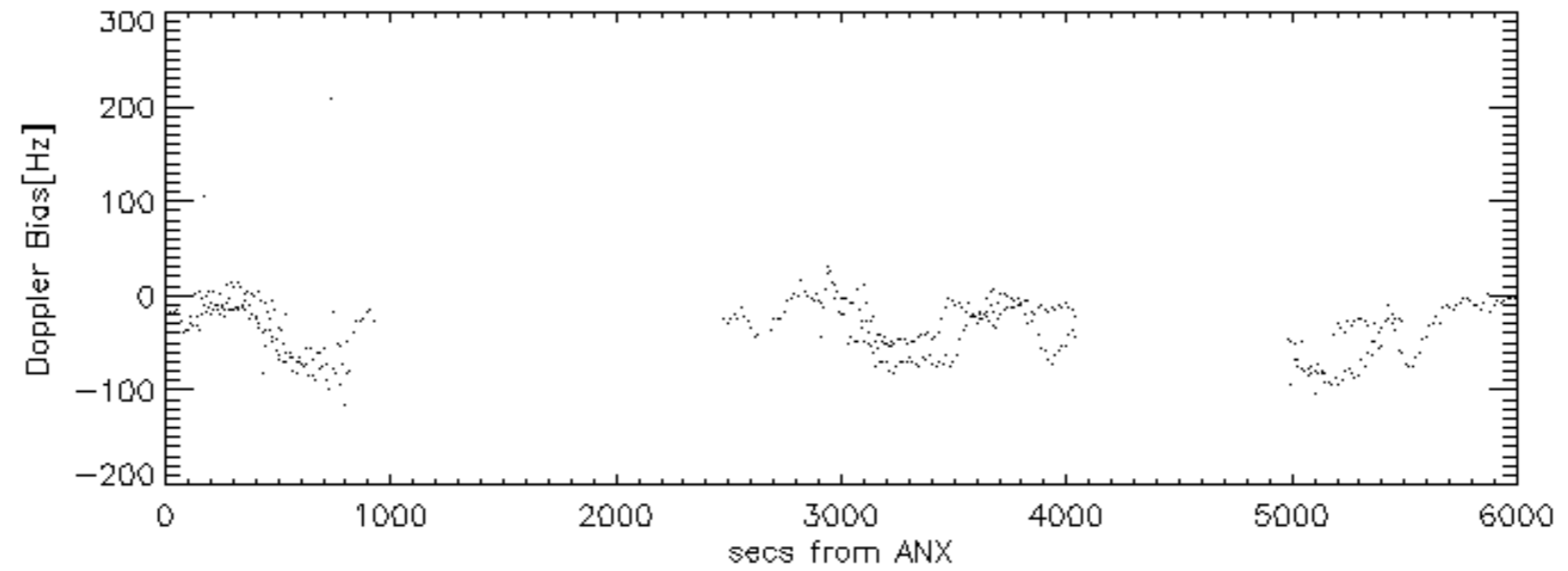
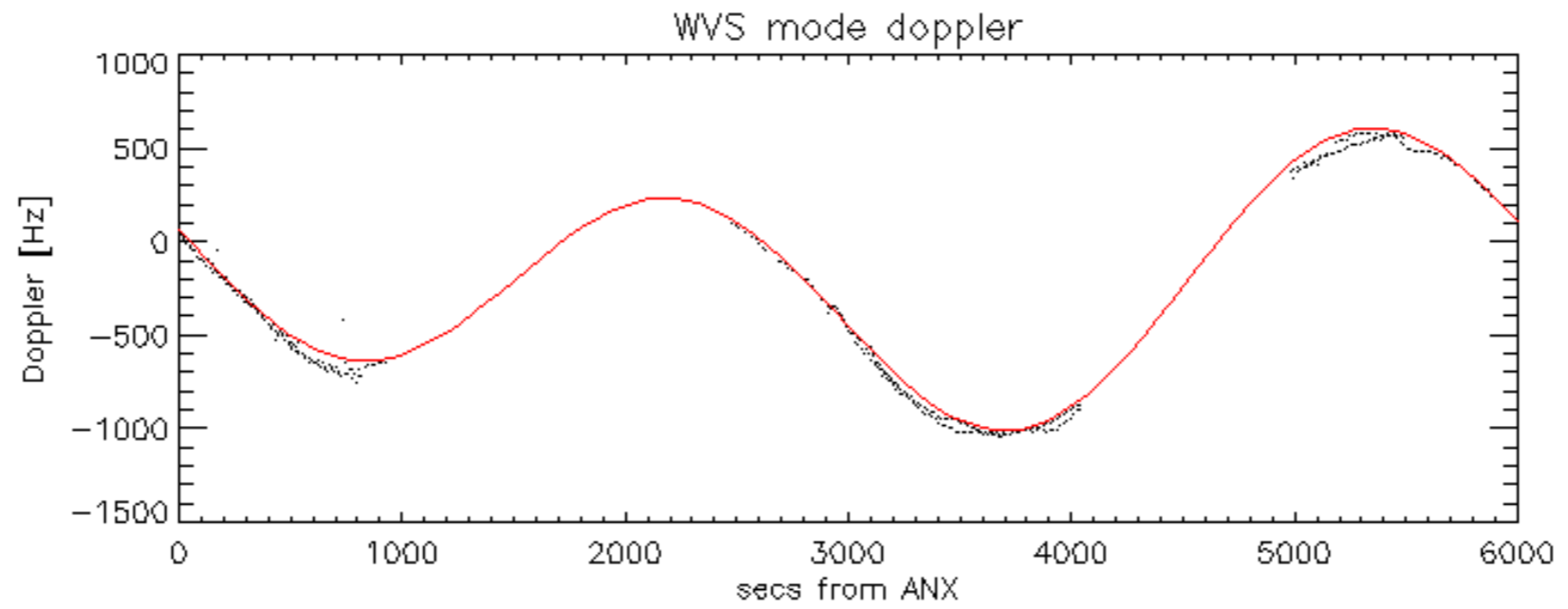


Doppler 'WVS' 'IS2' descending



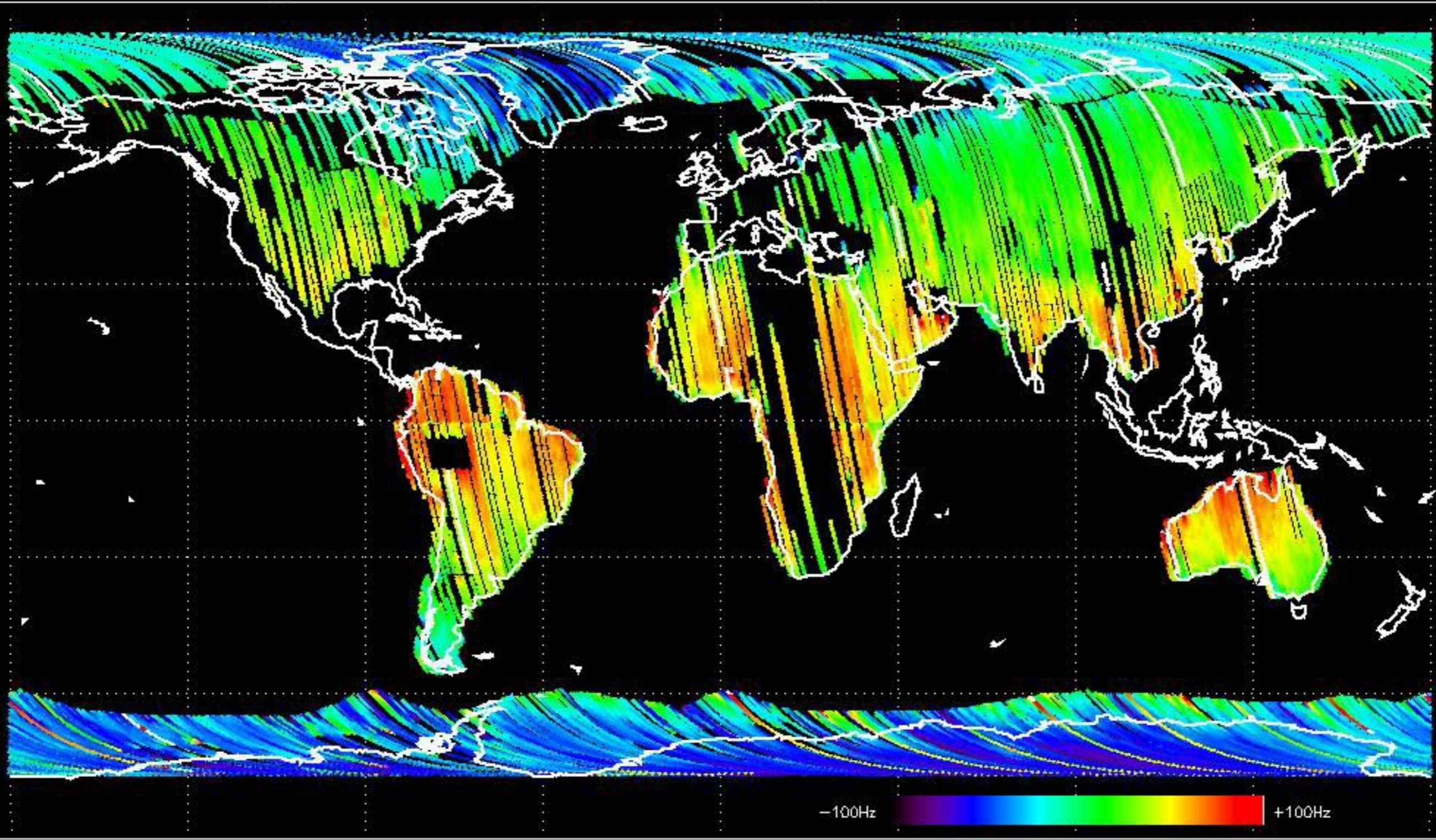
GM1 mode doppler



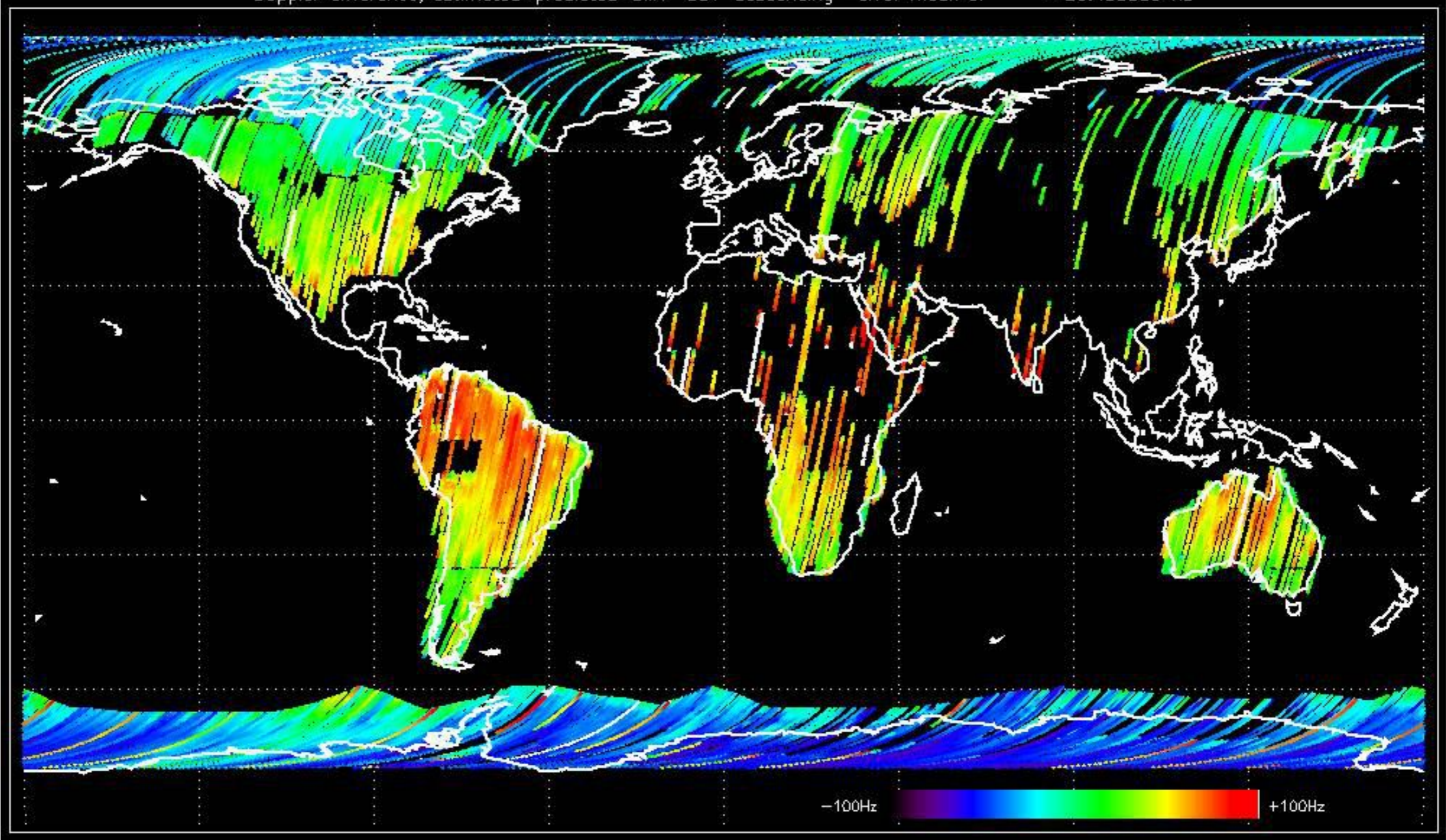




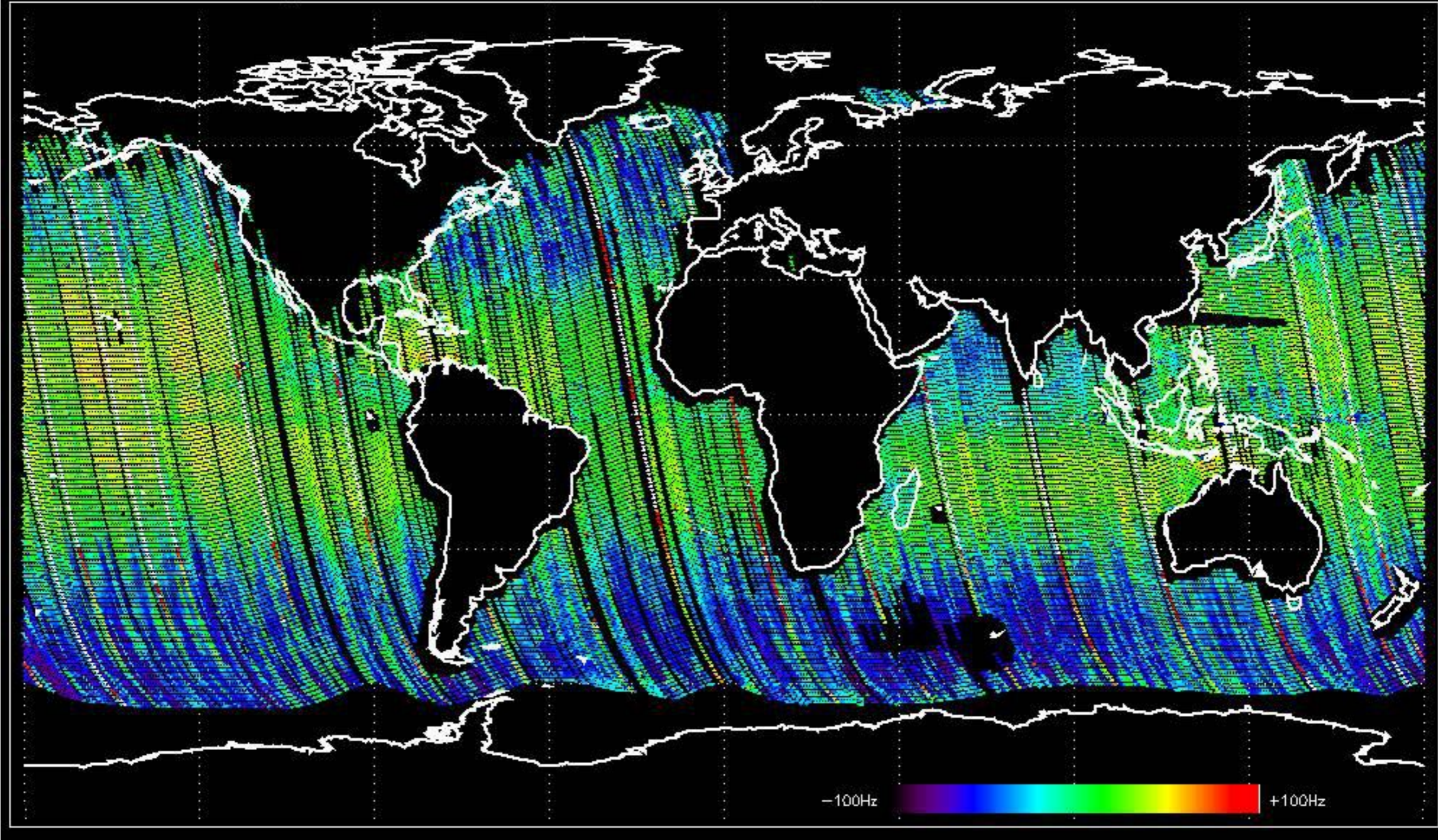
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -25.634411 Hz



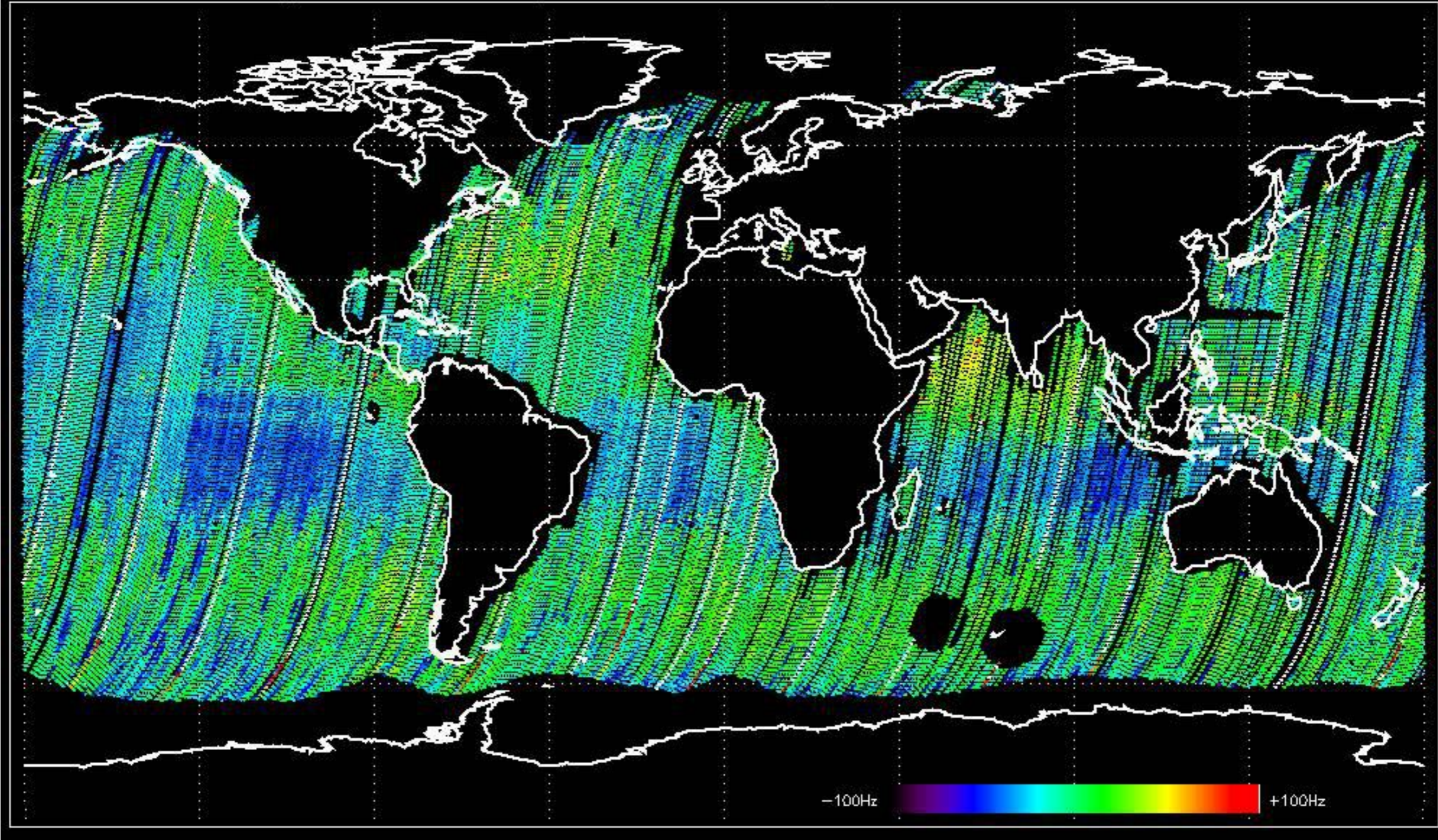
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -23.453580 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -26.715277 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -24.088117 Hz



The MS mode provides an internal health check on an individual module basis.  
The purpose of this mode is to identify to identify any malfunctioning modules and  
to identify modules for which calibration offsets are to be applied.  
No anomalies observed on available MS products:

No anomalies observed.









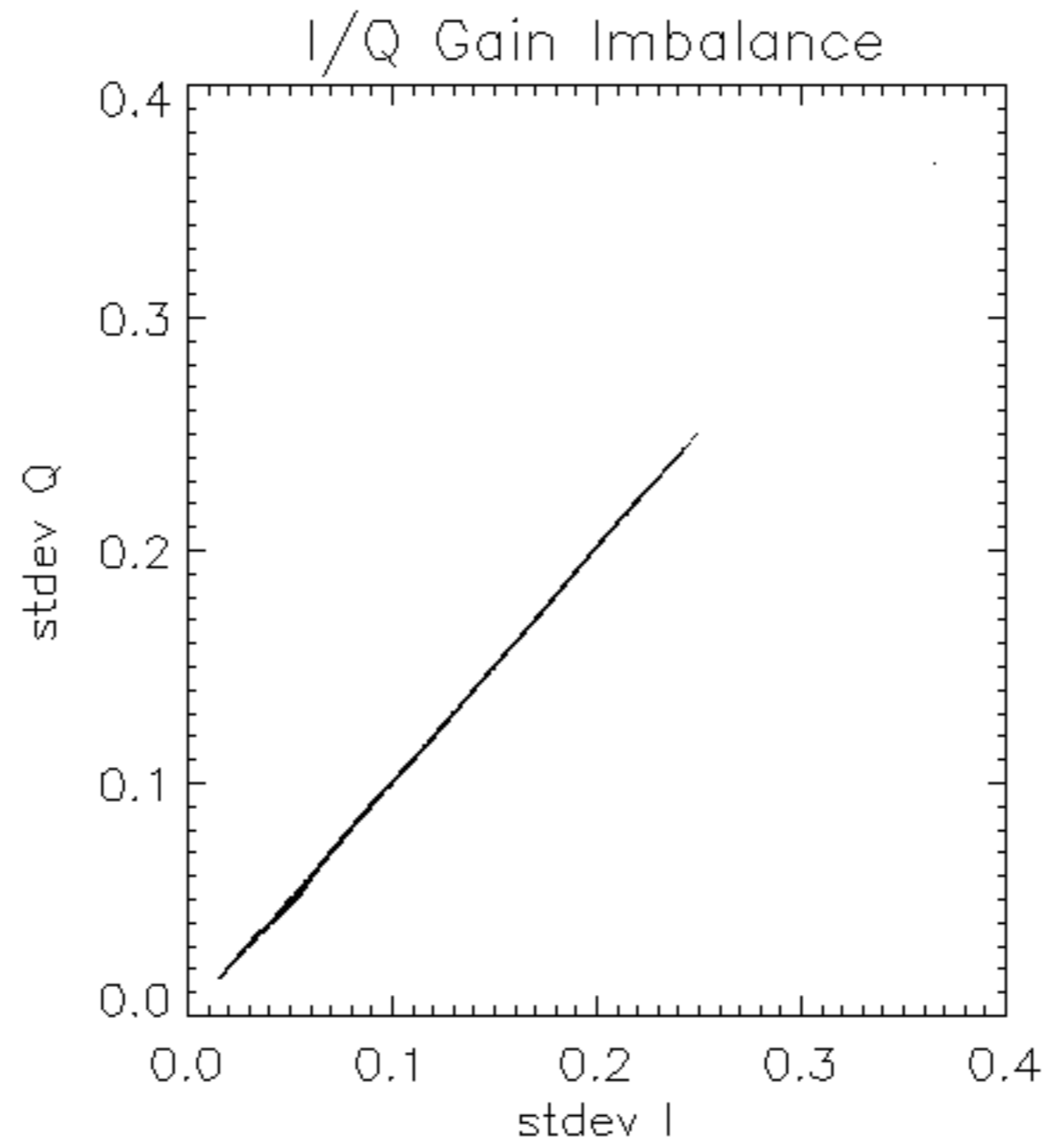


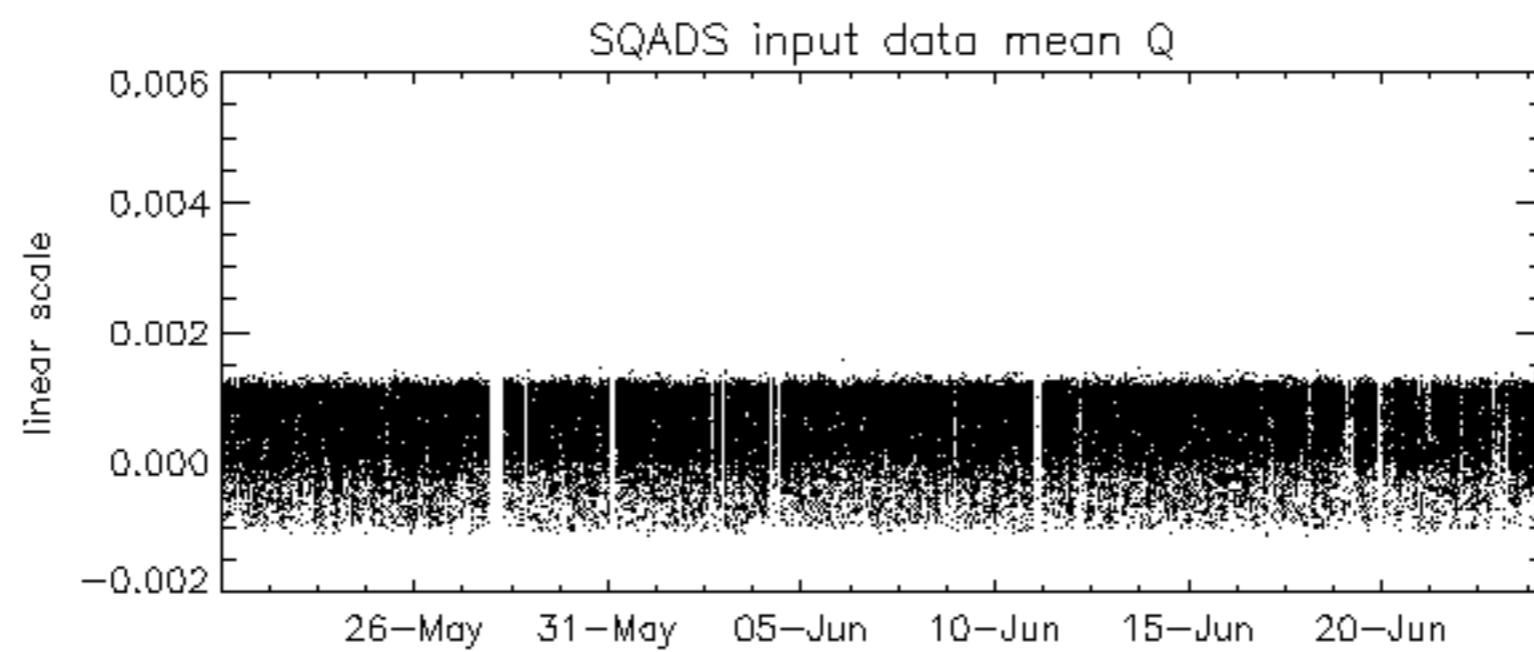
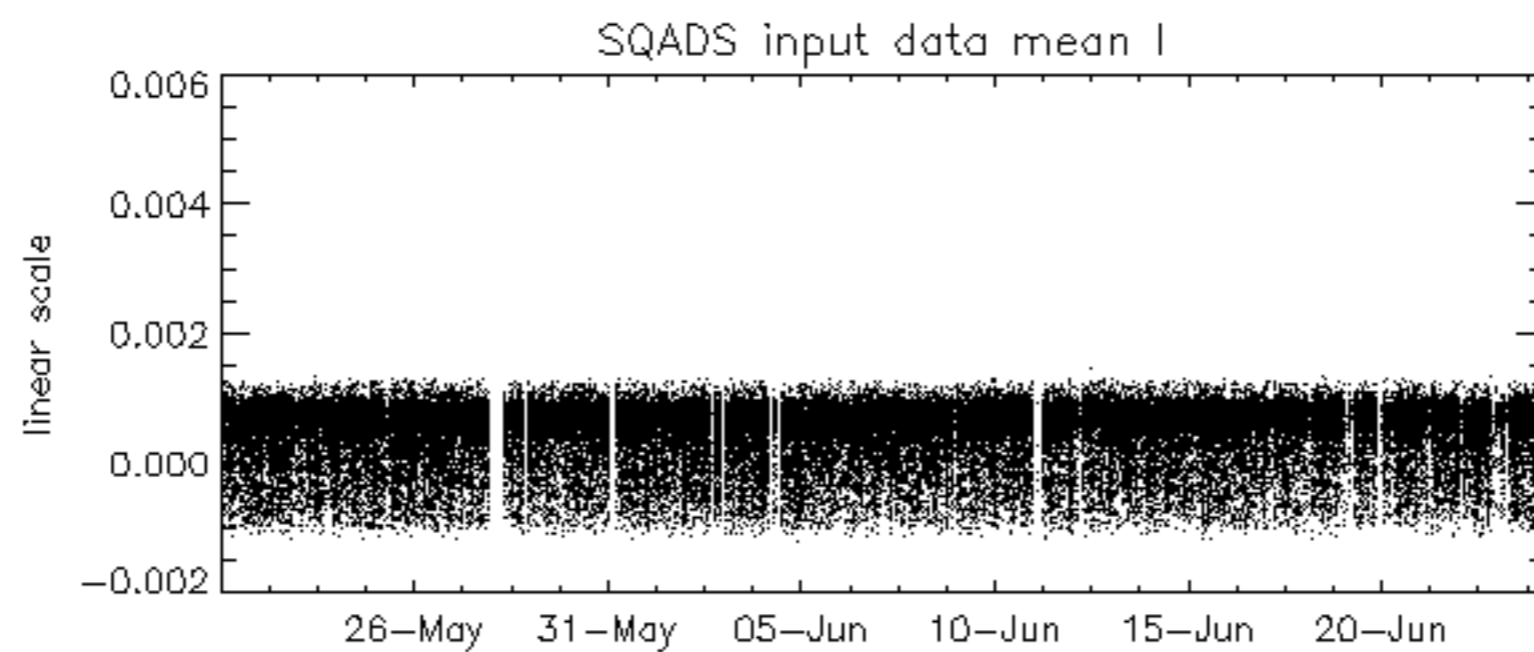
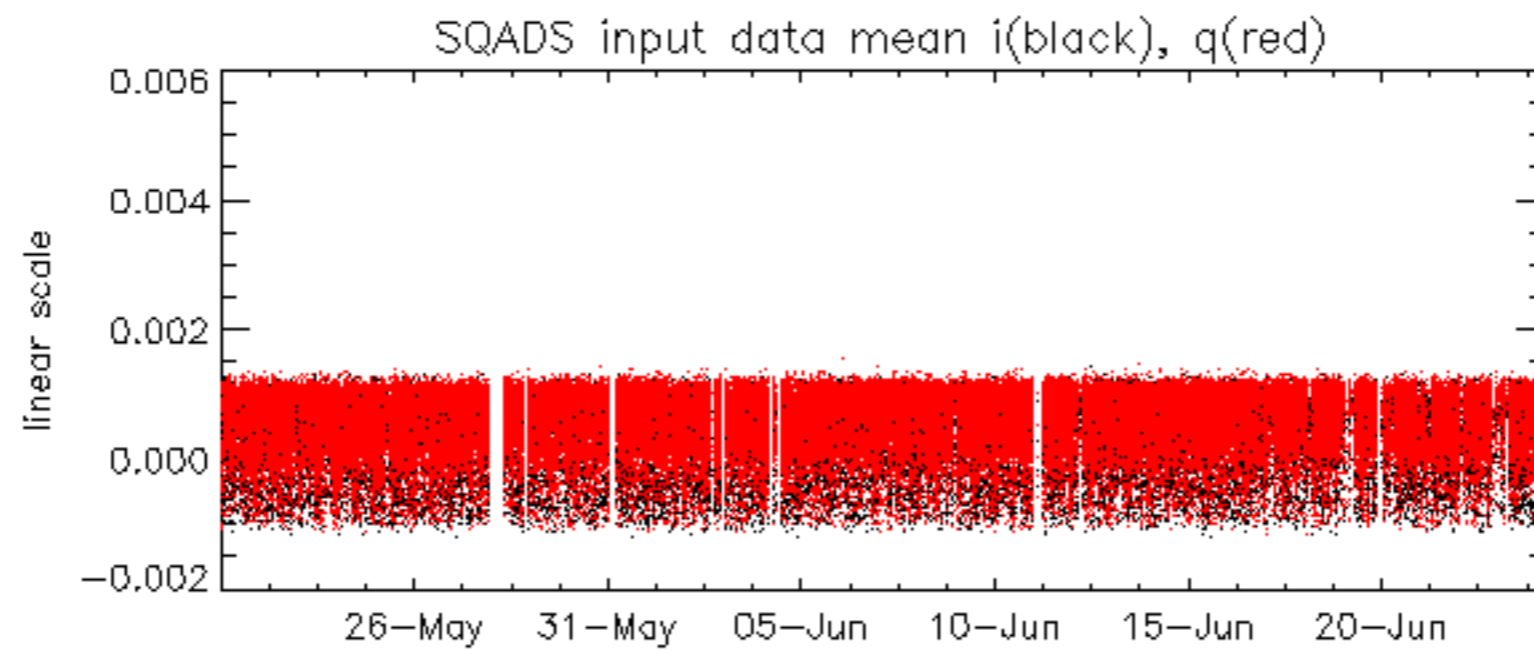




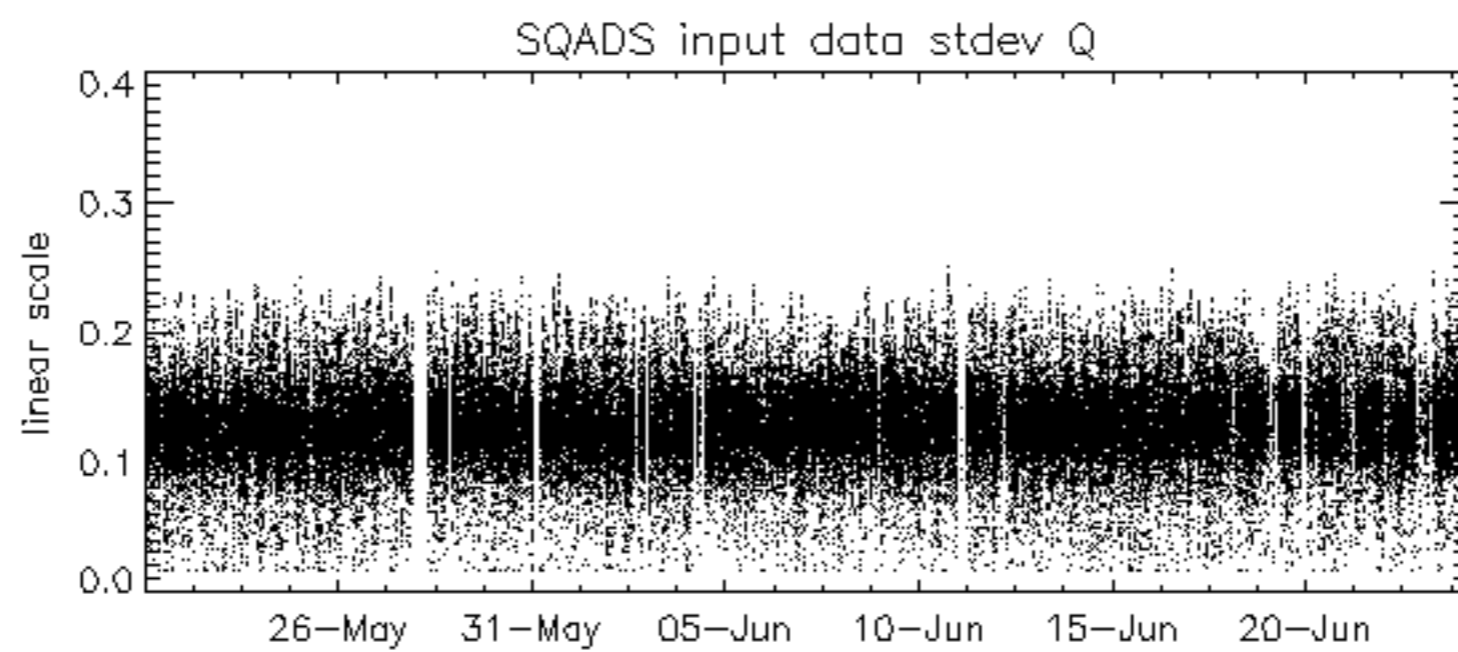
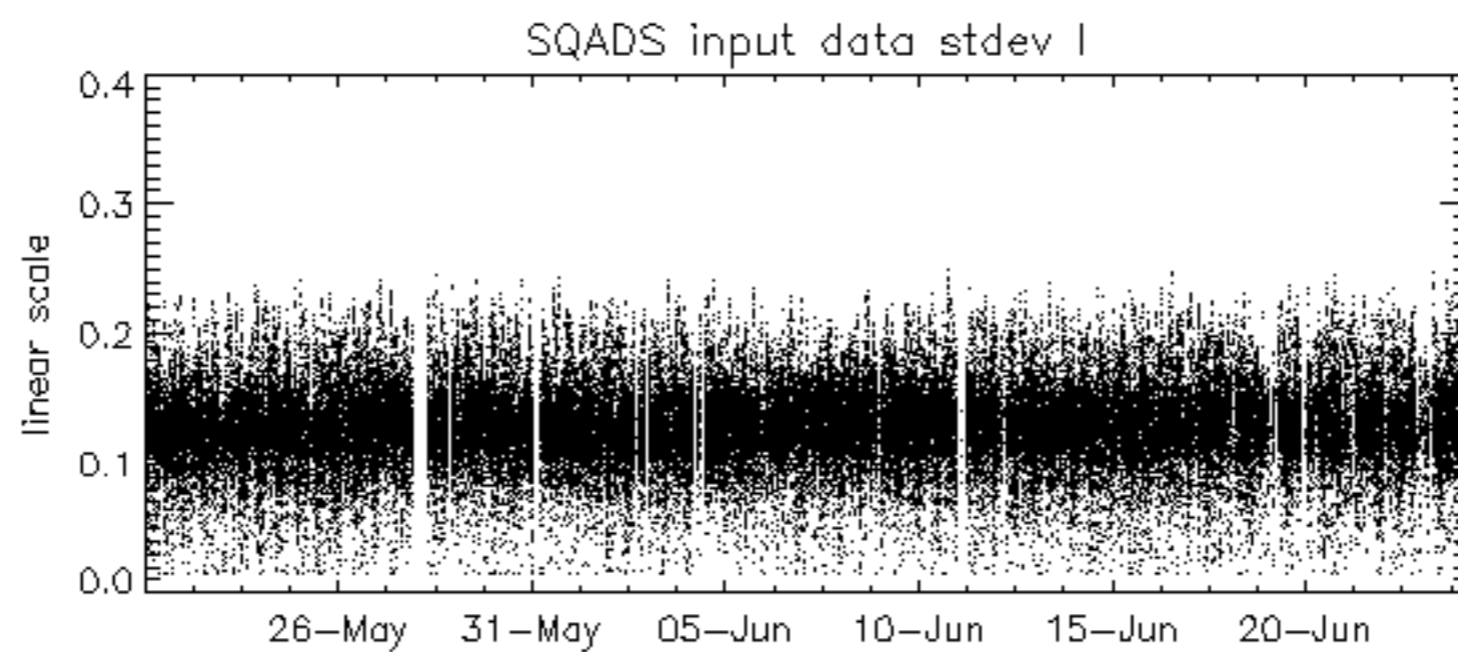
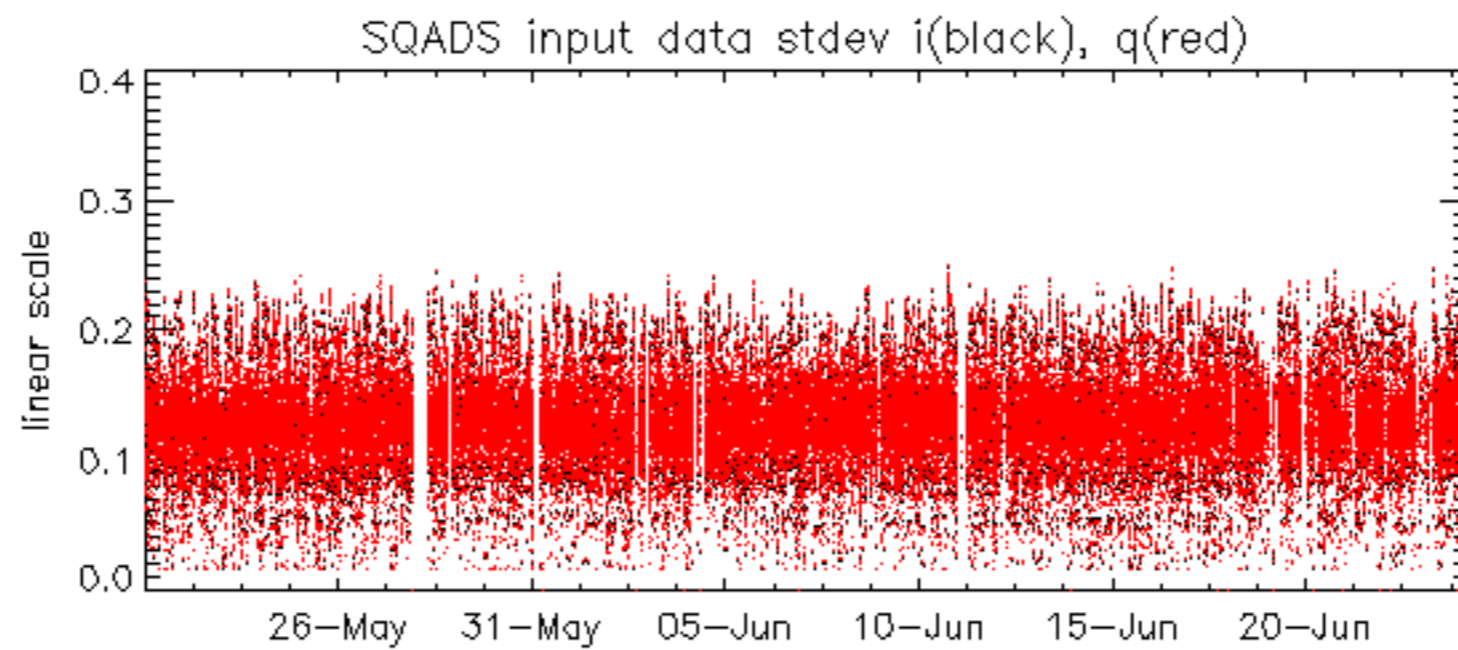




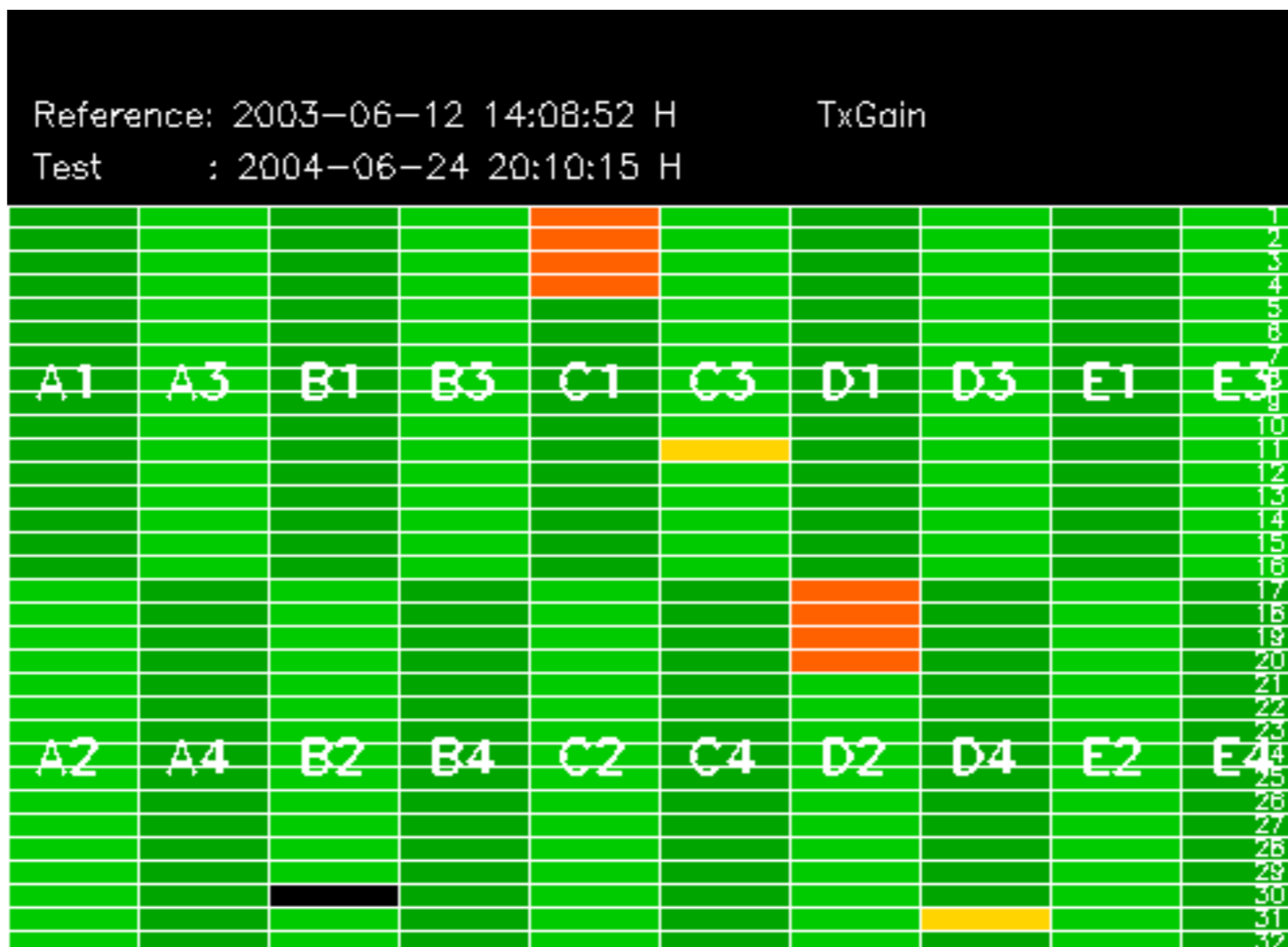
















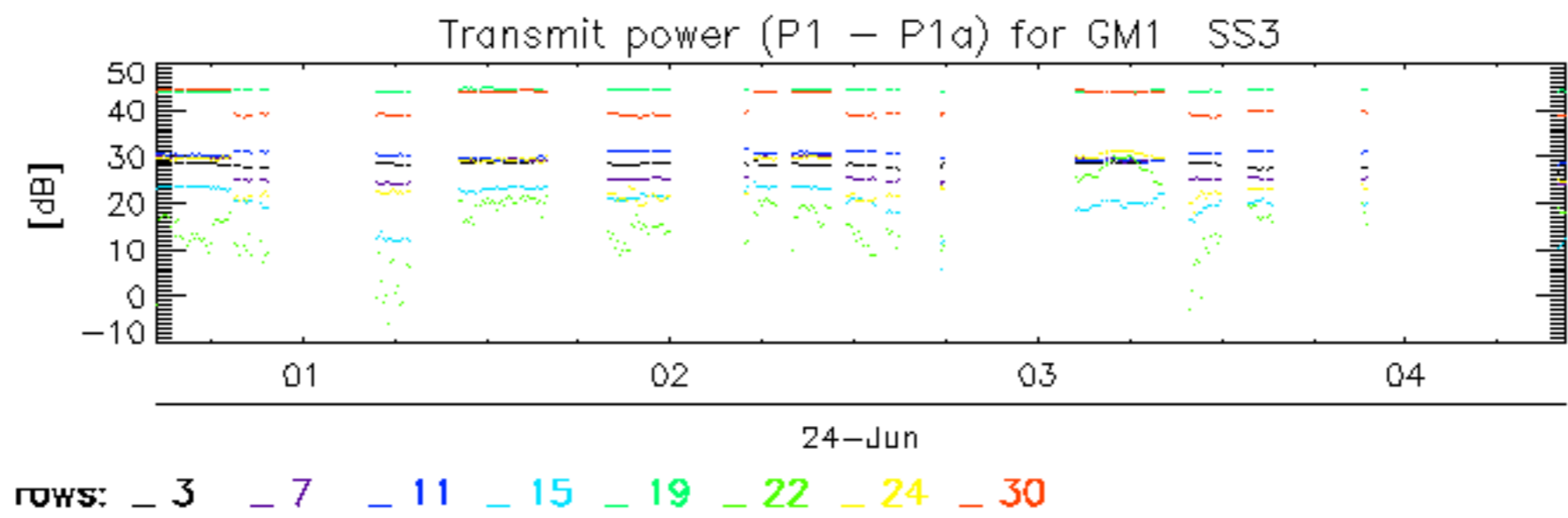


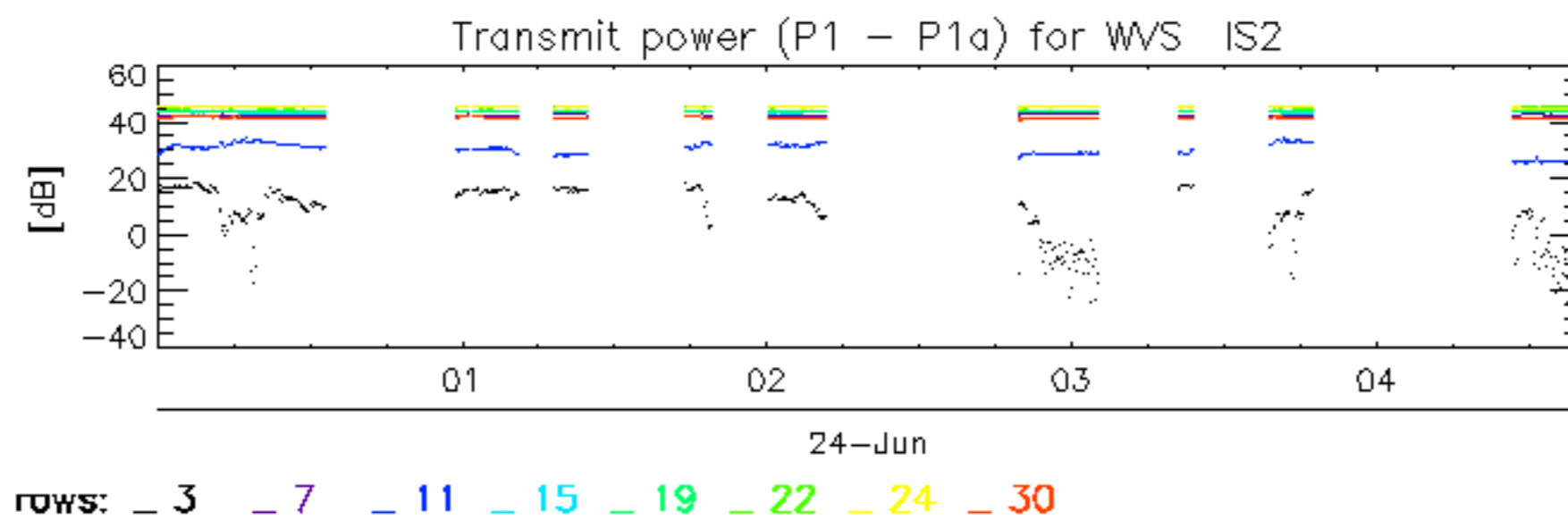












No unavailabilities during the reported period.