

# PRELIMINARY REPORT OF 060603

last update on Sat Jun 3 16:43:19 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 2006-06-02 00:00:00 to 2006-06-03 16:43:19

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	60	17	0	13
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	60	17	0	13
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	60	17	0	13
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	60	17	0	13

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	55	27	15	67
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	39	55	27	15	67
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	55	27	15	67
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	55	27	15	67

## 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	20060603 064401
H	20060602 071538

### 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	-3.956849	0.016922	0.048918
7	P1	-3.107361	0.017222	-0.075829
11	P1	-4.107734	0.017856	0.005612
15	P1	-6.134331	0.019743	-0.004142
19	P1	-3.321947	0.008422	-0.042920
22	P1	-4.517833	0.011361	0.033547
26	P1	-3.986737	0.018363	0.040650
30	P1	-5.747938	0.008151	0.017178
3	P1	-16.570618	0.259852	0.216845
7	P1	-17.134352	0.183693	-0.236906
11	P1	-16.919714	0.309041	-0.044181
15	P1	-13.215257	0.207499	-0.037011
19	P1	-14.264070	0.047812	-0.096068
22	P1	-16.161320	0.377017	-0.052192
26	P1	-15.272274	0.244047	0.051345
30	P1	-17.029043	0.367397	-0.265659

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.209417	0.080823	0.135110
7	P2	-22.091396	0.097567	0.160383
11	P2	-15.936143	0.110011	0.134678
15	P2	-7.163752	0.091830	0.021420
19	P2	-9.166227	0.084291	-0.010266
22	P2	-18.124619	0.082112	-0.088137
26	P2	-16.368799	0.087074	-0.065004
30	P2	-19.580530	0.085008	0.071759

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.186807	0.003840	0.019235
7	P3	-8.186807	0.003840	0.019235
11	P3	-8.186807	0.003840	0.019235
15	P3	-8.186807	0.003840	0.019235
19	P3	-8.186807	0.003840	0.019235
22	P3	-8.186807	0.003840	0.019235
26	P3	-8.186807	0.003840	0.019235
30	P3	-8.186807	0.003840	0.019235

#### 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	-3.777292	0.065651	-0.083462
7	P1	-2.605367	0.032477	0.057893
11	P1	-2.865342	0.023918	0.009112
15	P1	-3.497083	0.049323	-0.009877
19	P1	-3.396725	0.014016	-0.023351
22	P1	-5.087804	0.020015	0.028422
26	P1	-5.839407	0.014841	-0.026261
30	P1	-5.189190	0.026172	0.007479
3	P1	-11.615438	0.080116	-0.023411
7	P1	-9.962361	0.054137	0.041367
11	P1	-10.199852	0.085548	-0.003222
15	P1	-10.626070	0.148780	-0.056519
19	P1	-15.509410	0.075846	-0.074779
22	P1	-20.884171	1.231526	-0.057210
26	P1	-16.483261	0.347368	0.010397
30	P1	-18.014614	0.387397	0.288319

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.895962	0.063677	0.089993
7	P2	-22.520514	0.121649	0.053690
11	P2	-11.182990	0.042879	0.042743
15	P2	-4.905642	0.044189	-0.029078
19	P2	-6.878234	0.043428	-0.007927
22	P2	-8.195461	0.039350	-0.044760
26	P2	-24.107485	0.062685	-0.046061
30	P2	-22.064175	0.050858	-0.009442

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.020019	0.004415	0.019724
7	P3	-8.020136	0.004409	0.019727
11	P3	-8.020099	0.004393	0.019560
15	P3	-8.019969	0.004402	0.019399
19	P3	-8.020131	0.004408	0.019555
22	P3	-8.020155	0.004390	0.019422
26	P3	-8.020048	0.004395	0.018958
30	P3	-8.020030	0.004402	0.019353

## 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	0.000529413
	stdev	1.91794e-07
MEAN Q	mean	0.000511025
	stdev	2.30662e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.133888
	stdev	0.00118307
STDEV Q	mean	0.134226
	stdev	0.00119966



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006060[123]

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_1PNPDE20060602_042646_000000522048_00147_22245_6548.N1	1	0
ASA_WSM_1PNPDE20060601_182816_000002692048_00142_22240_2073.N1	0	70
ASA_WSM_1PNPDE20060602_201721_000000852048_00157_22255_2313.N1	0	43
ASA_WSM_1PNPDE20060603_035851_000000852048_00162_22260_2386.N1	0	39







## 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)


Acsending



<input type="checkbox"/>
Descending

### 7.5 - Absolute Doppler for GM1

#### Evolution of Absolute Doppler

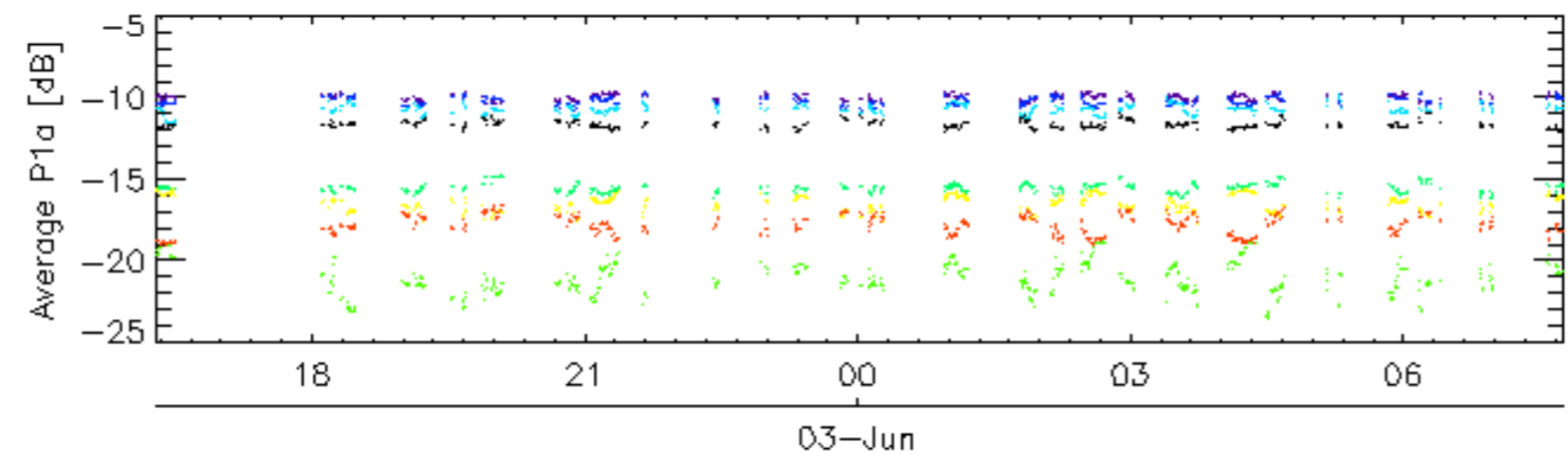
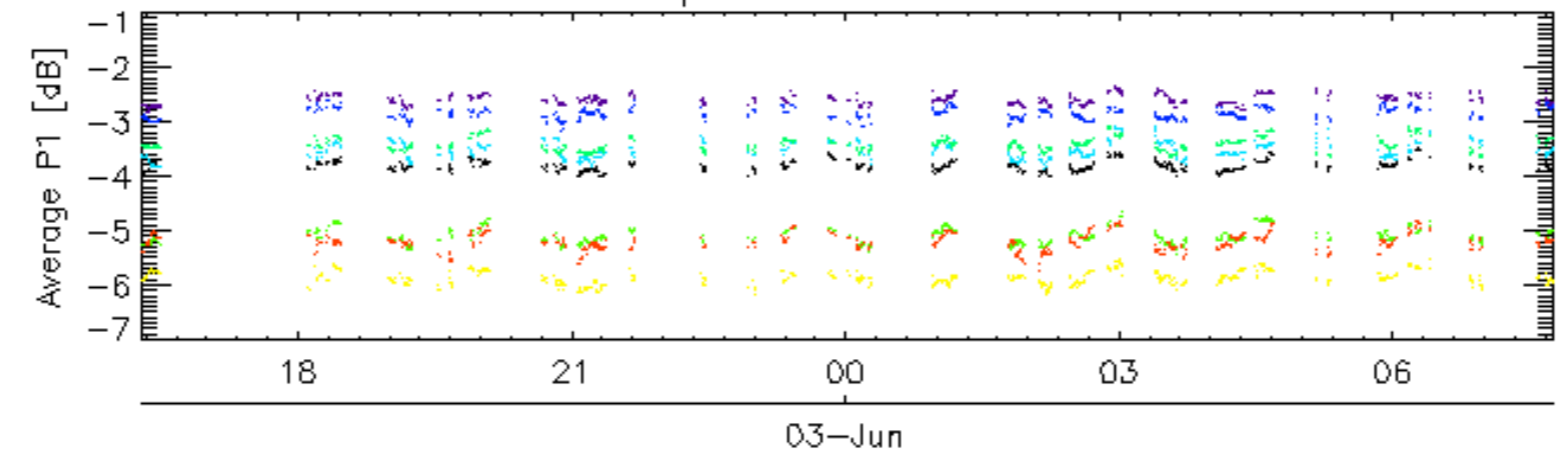
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

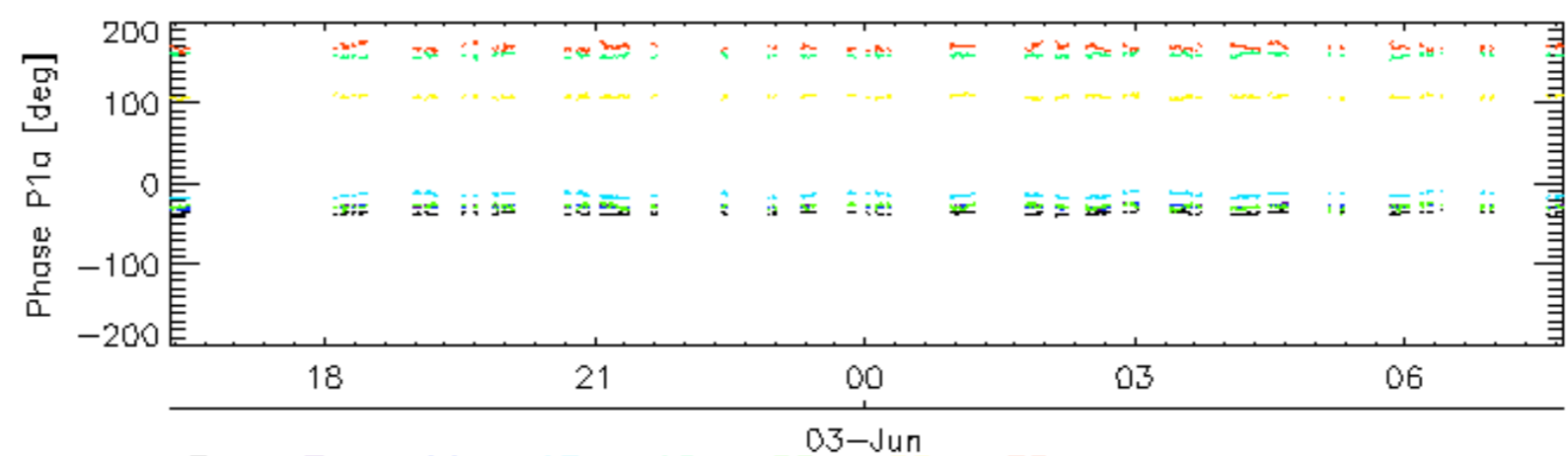
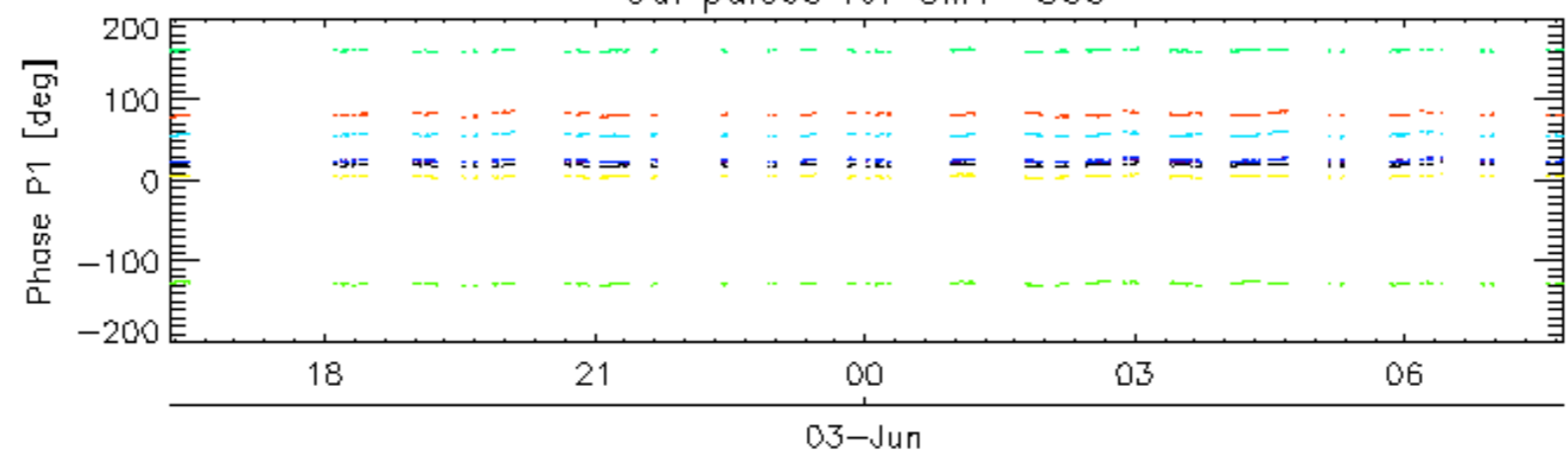
#### Evolution Doppler error versus ANX

<input type="checkbox"/>
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Cal pulses for GM1 SS3

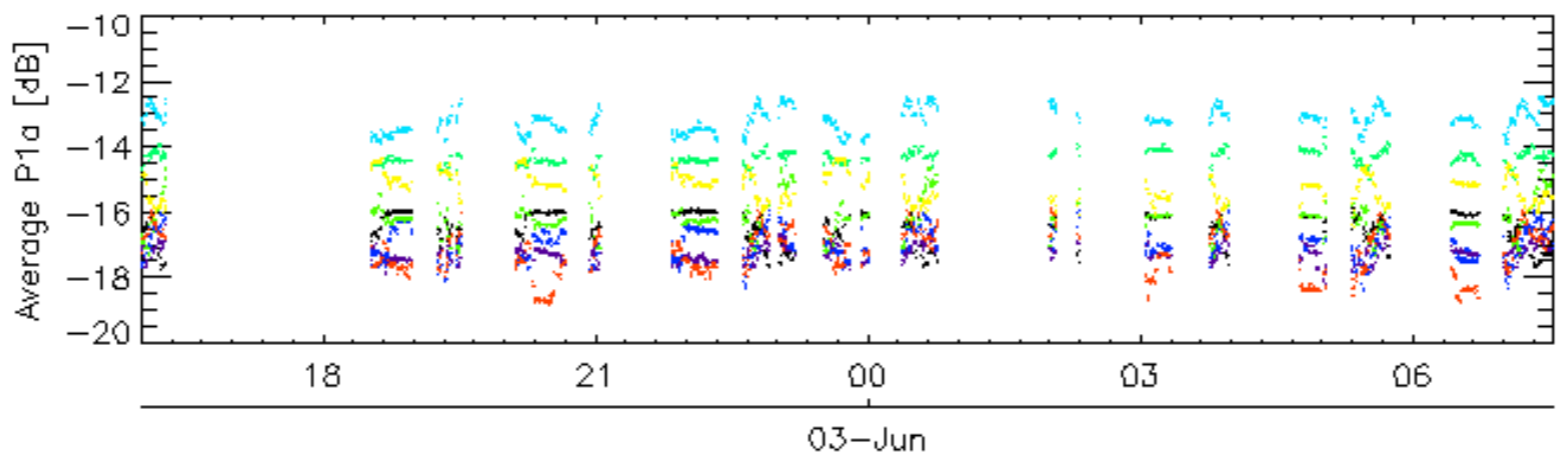
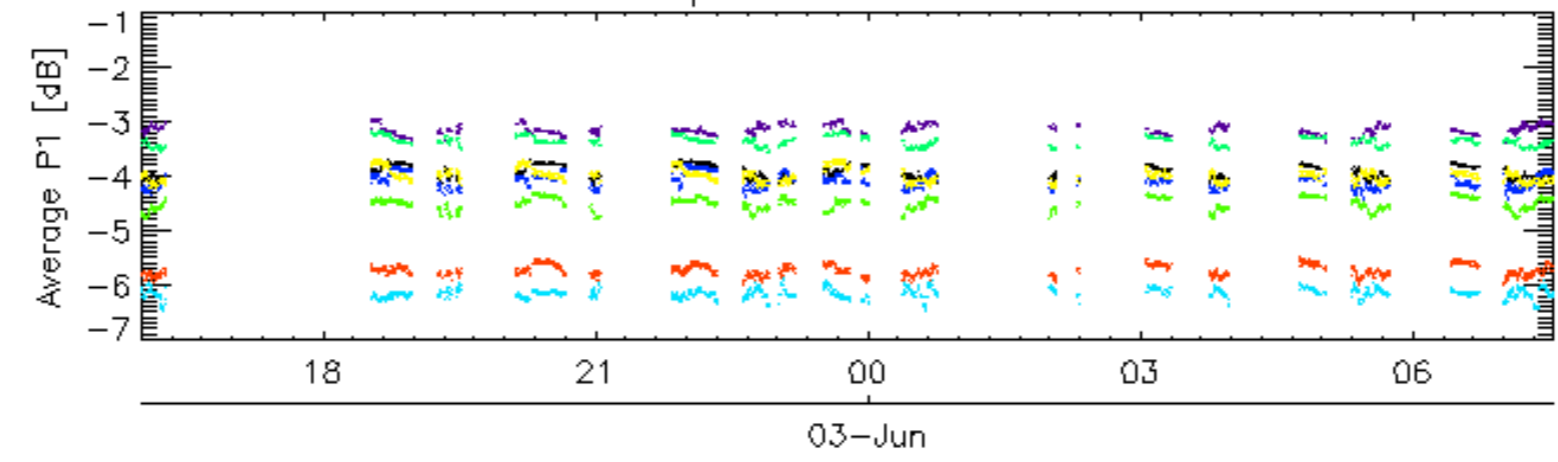


Cal pulses for GM1 SS3

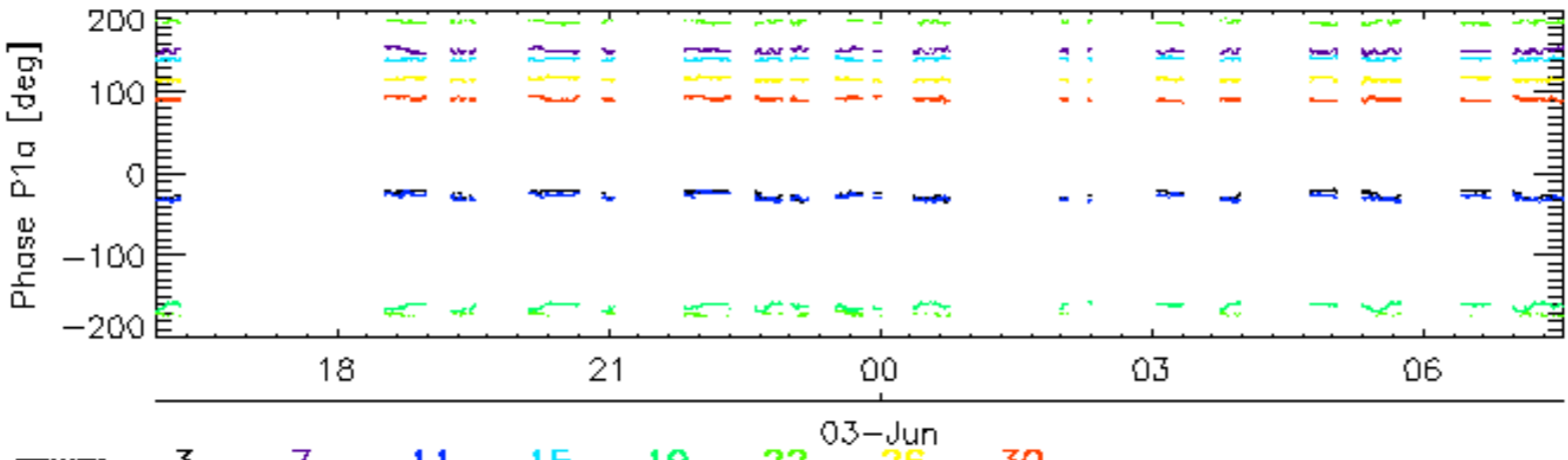
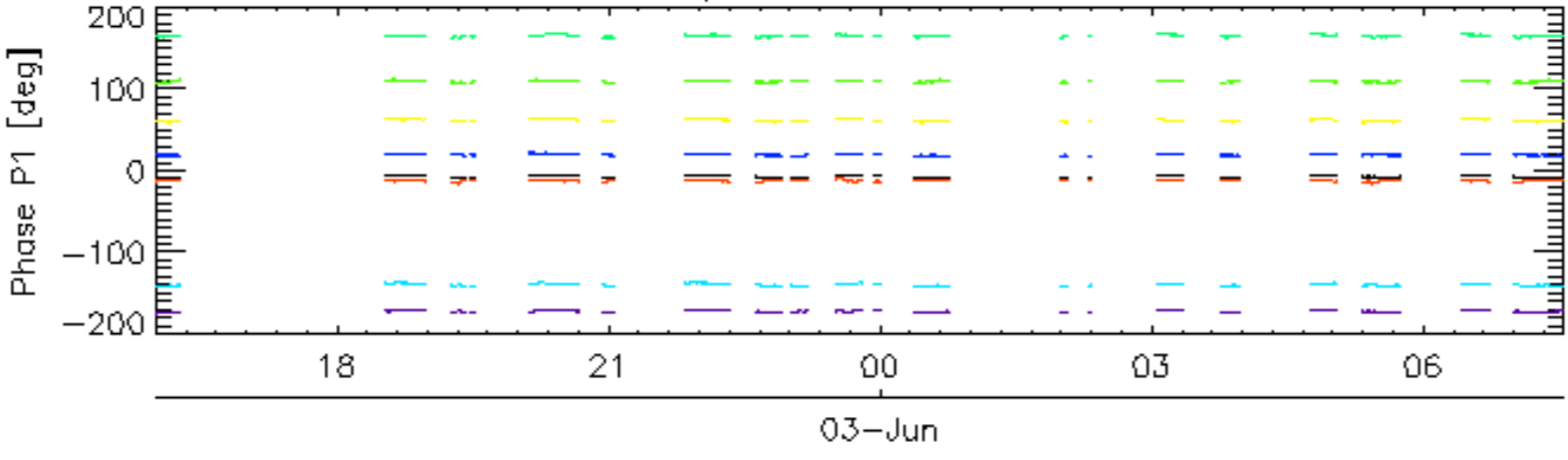


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

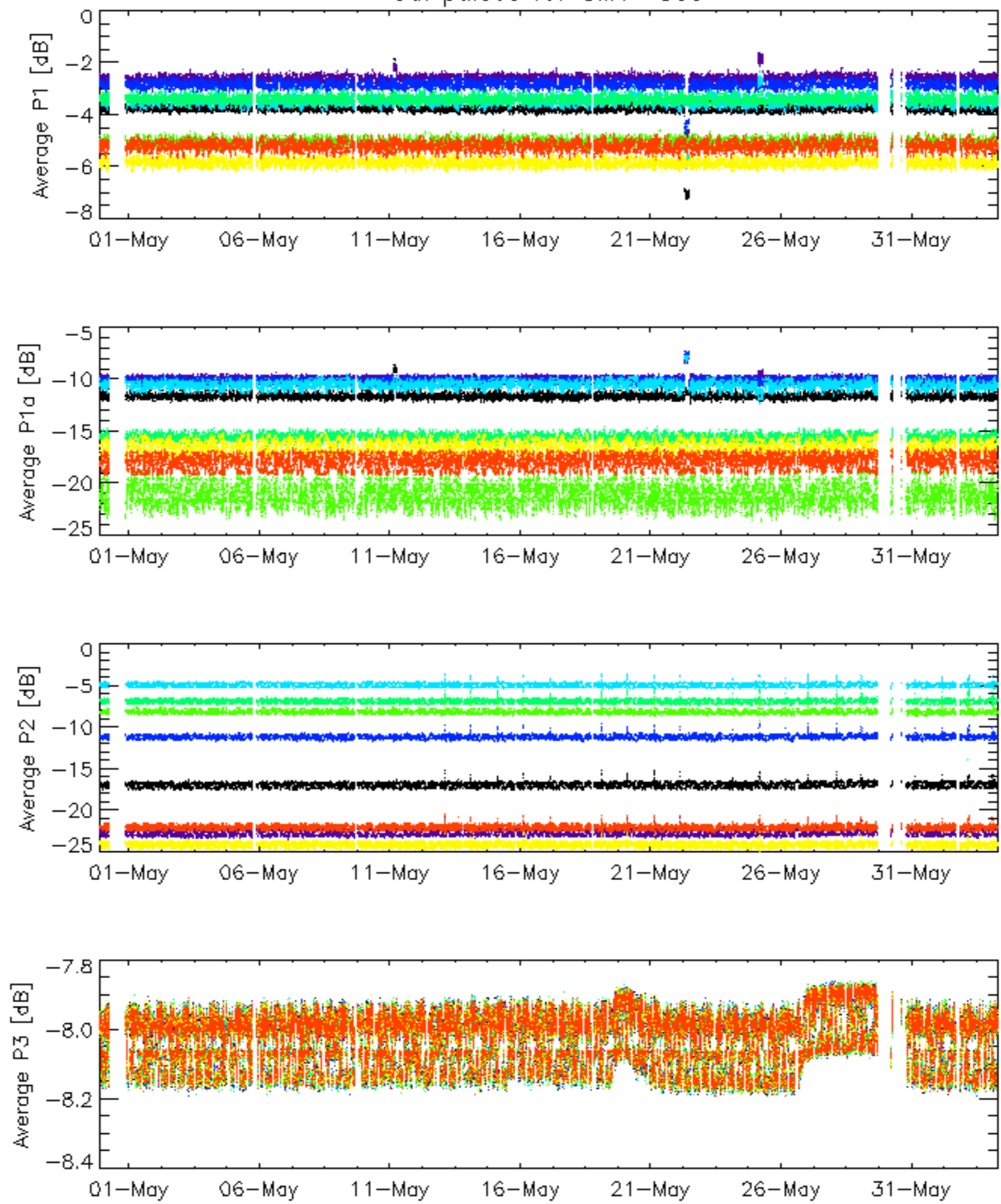


Cal pulses for WVS IS2



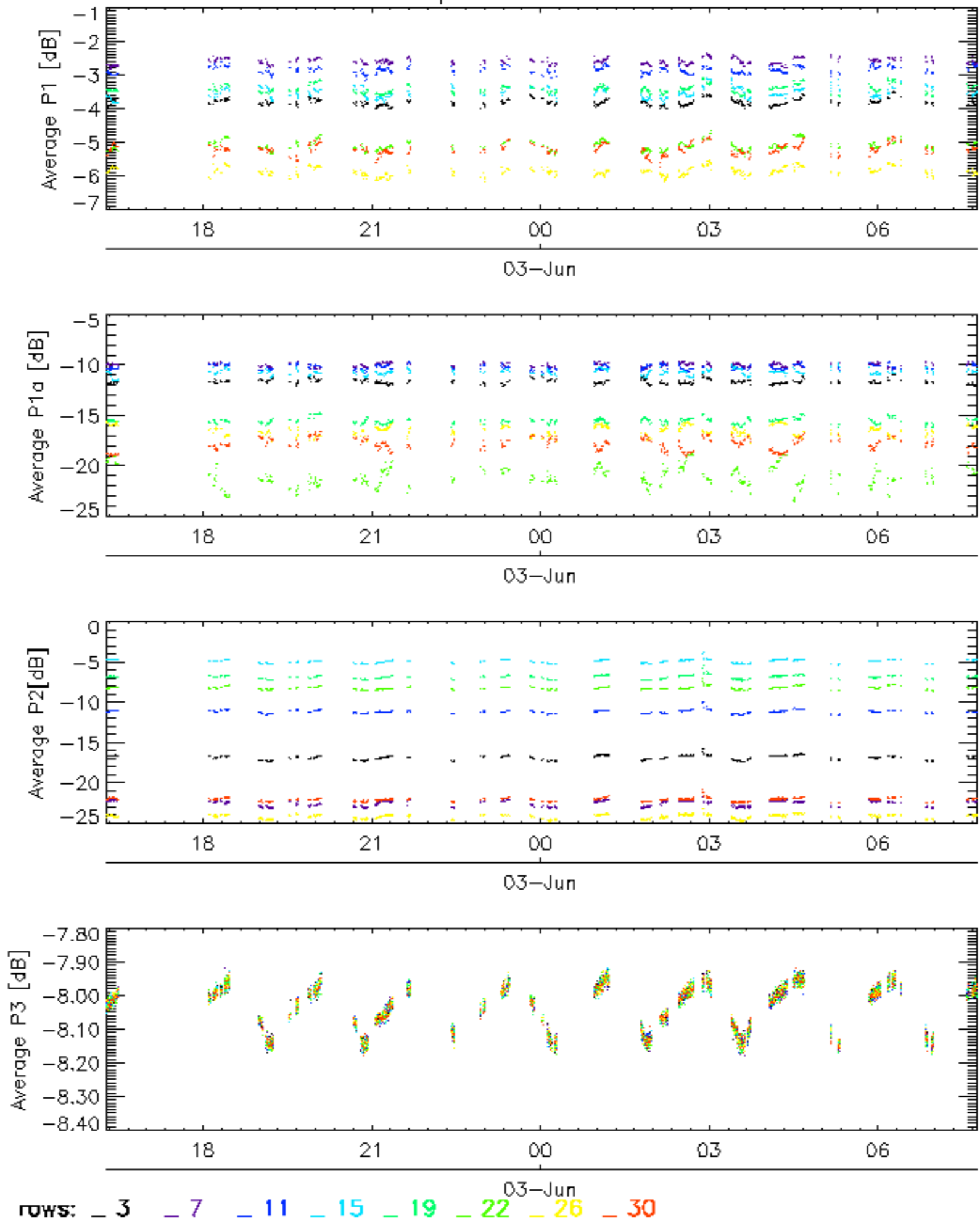
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

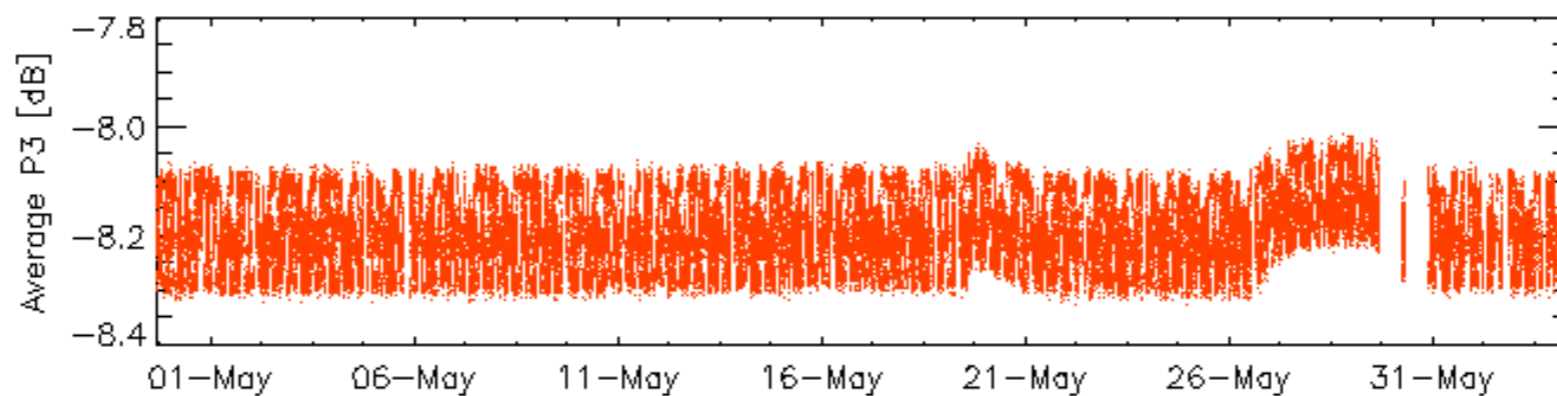
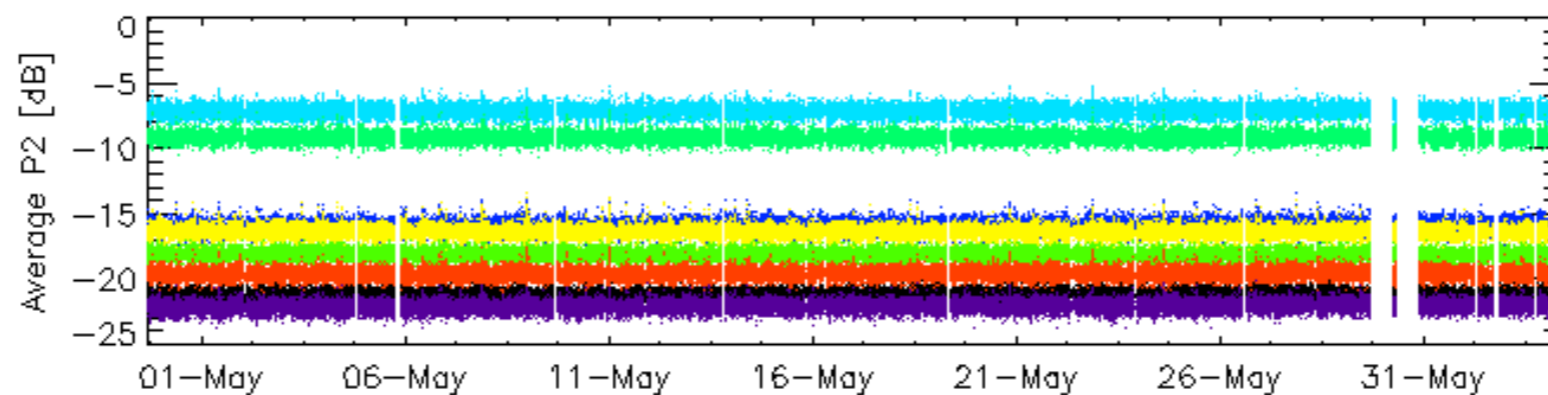
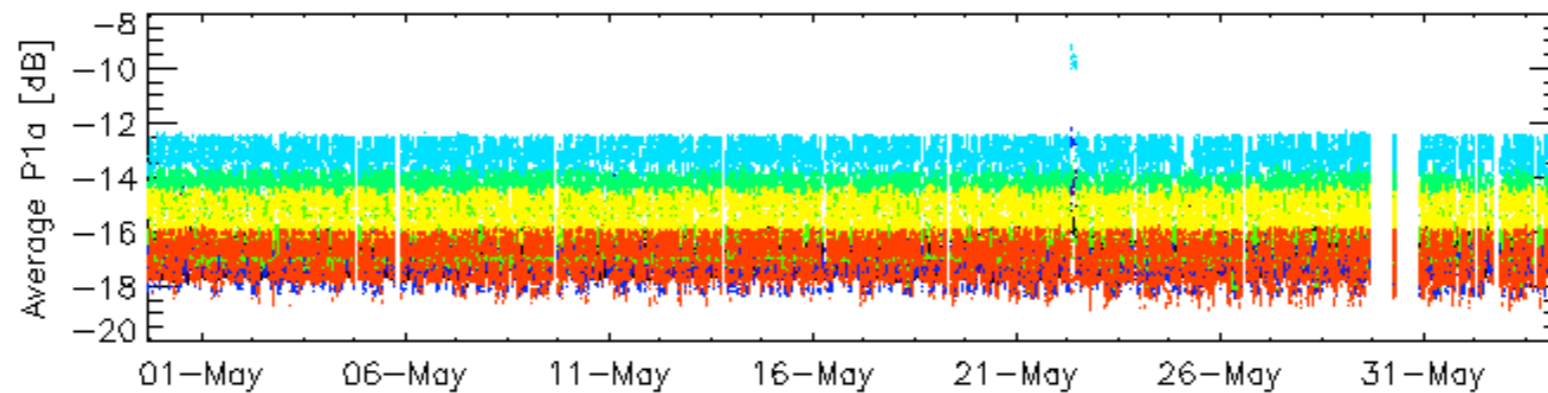
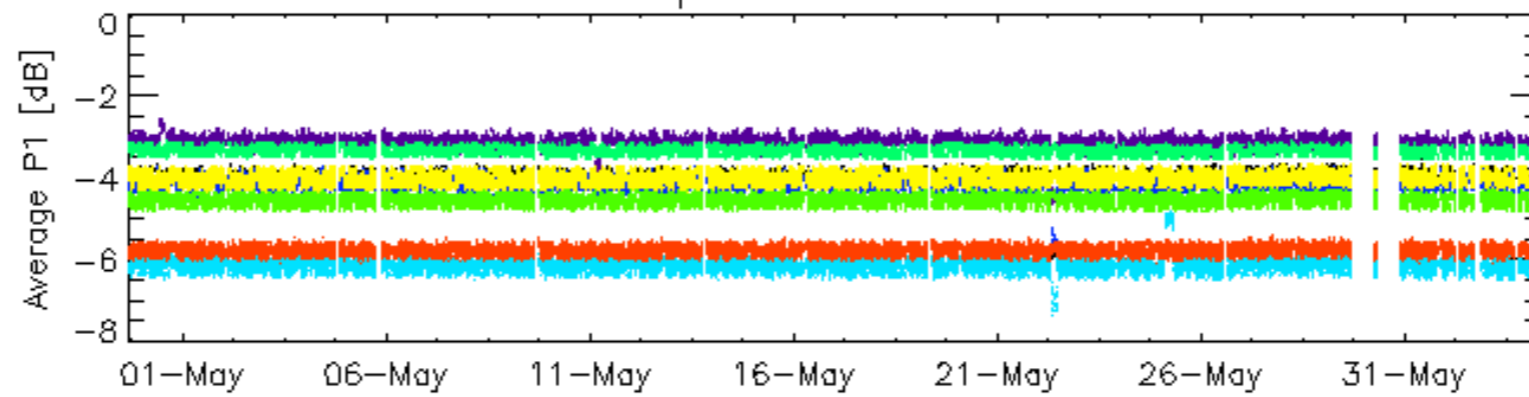


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

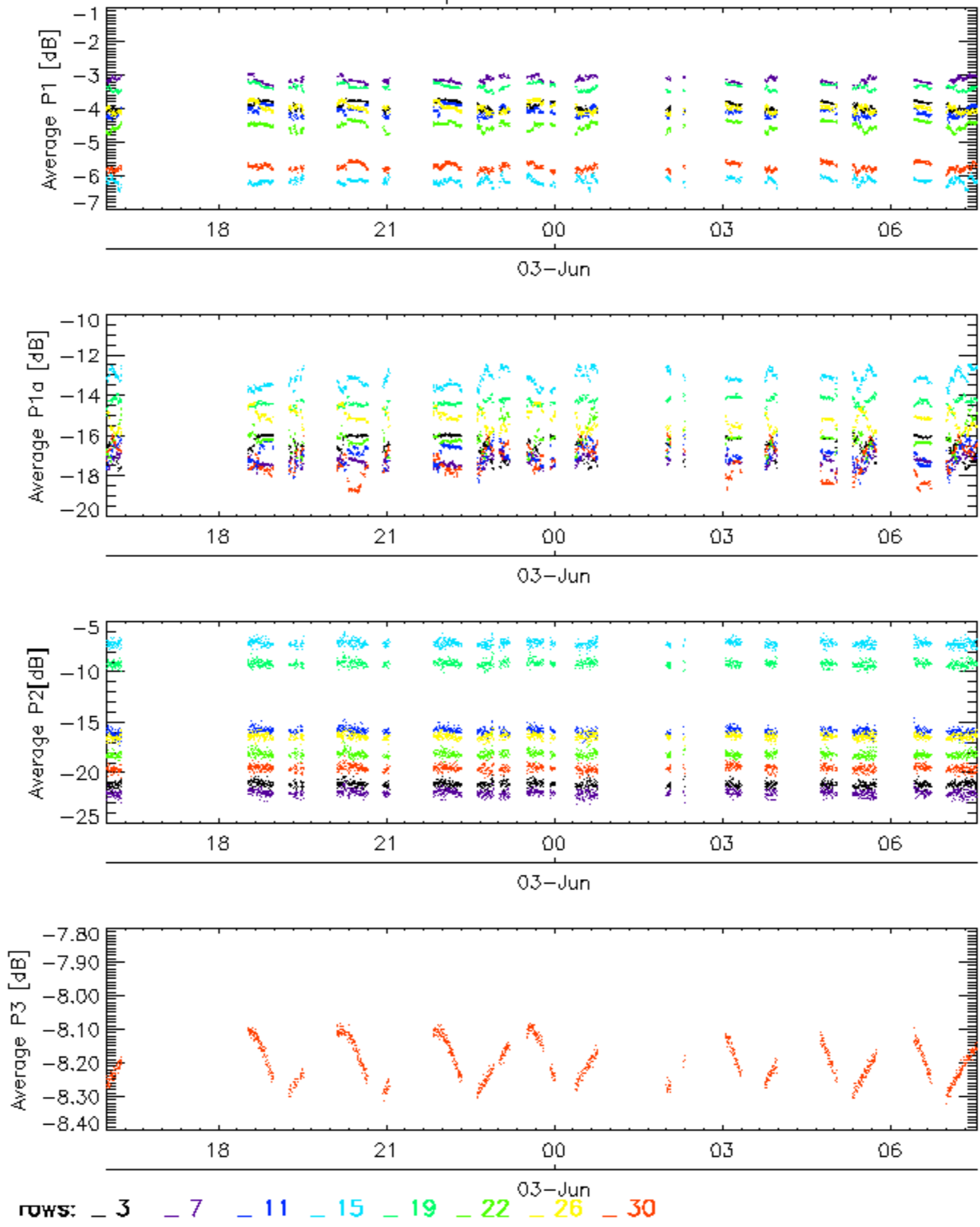


Cal pulses for WVS IS2



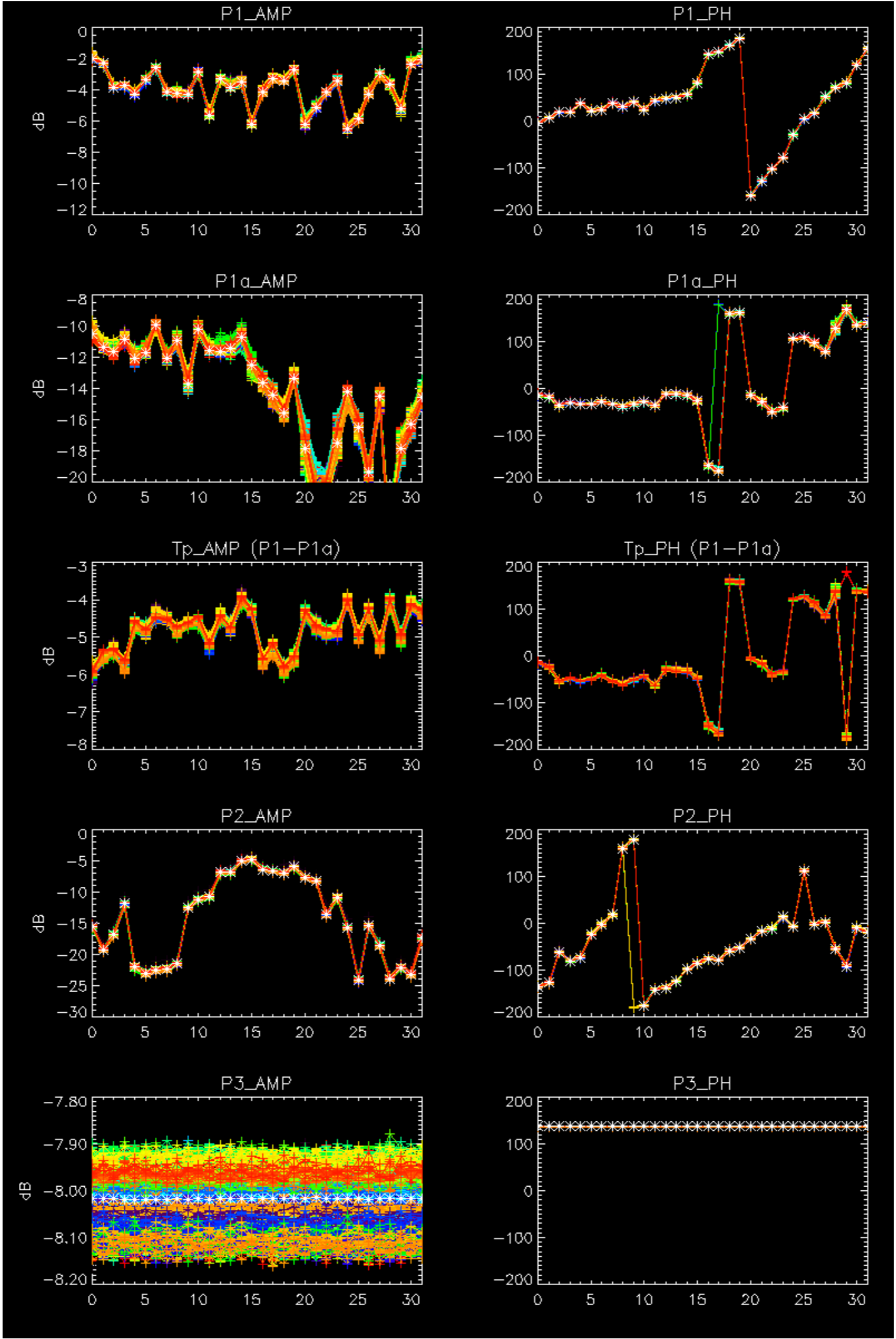
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

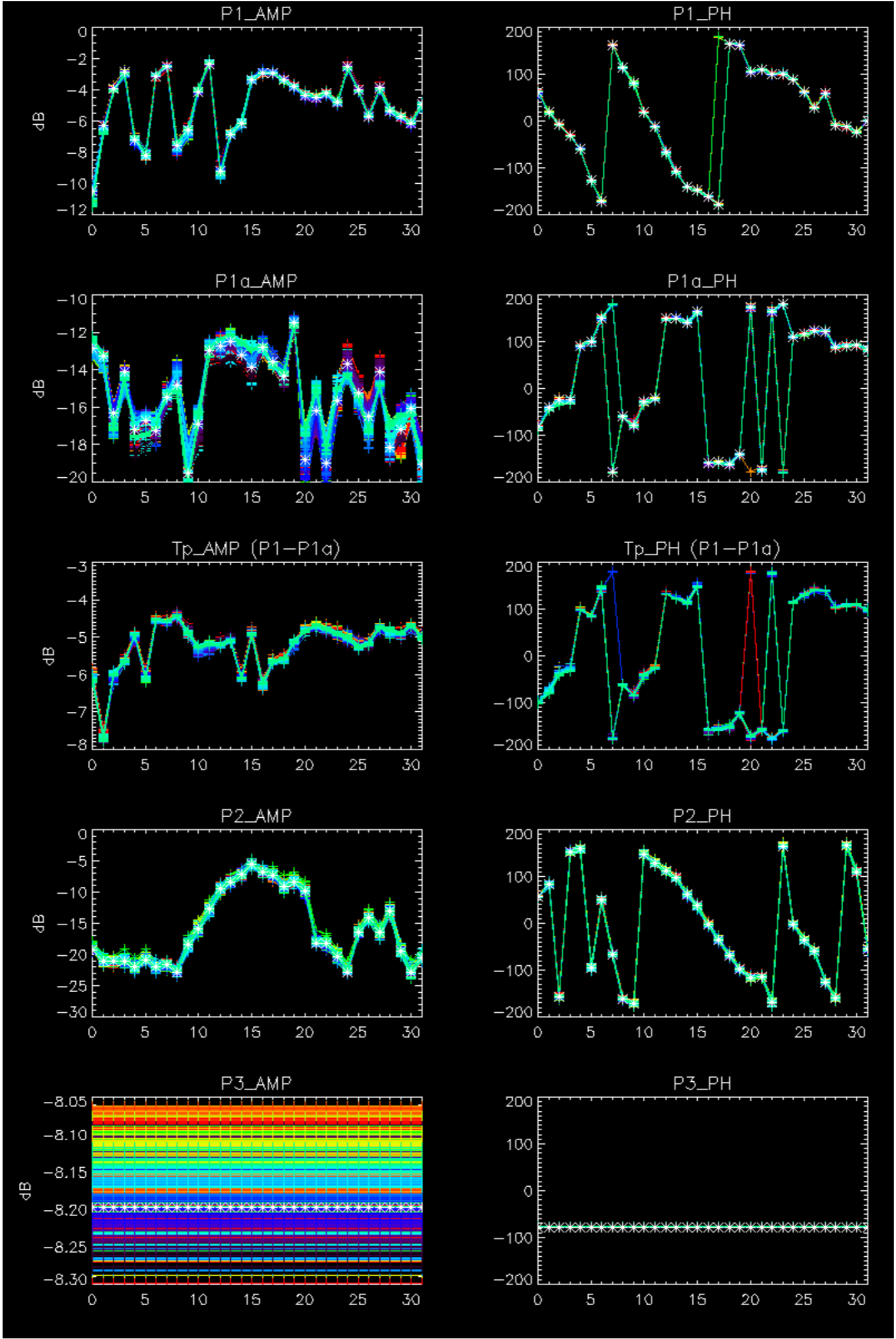
Cal pulses for WVS IS2



No anomalies observed.



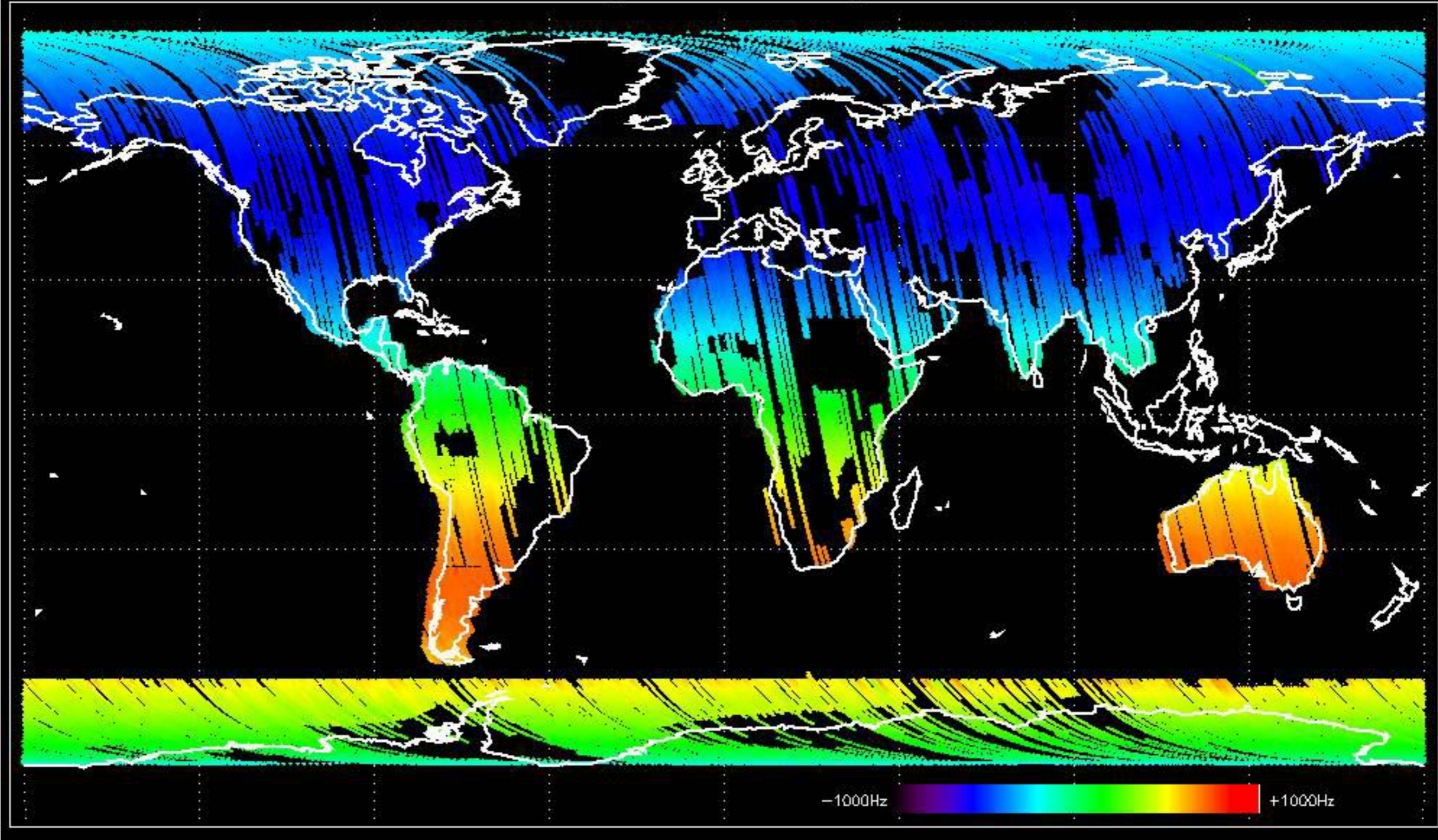




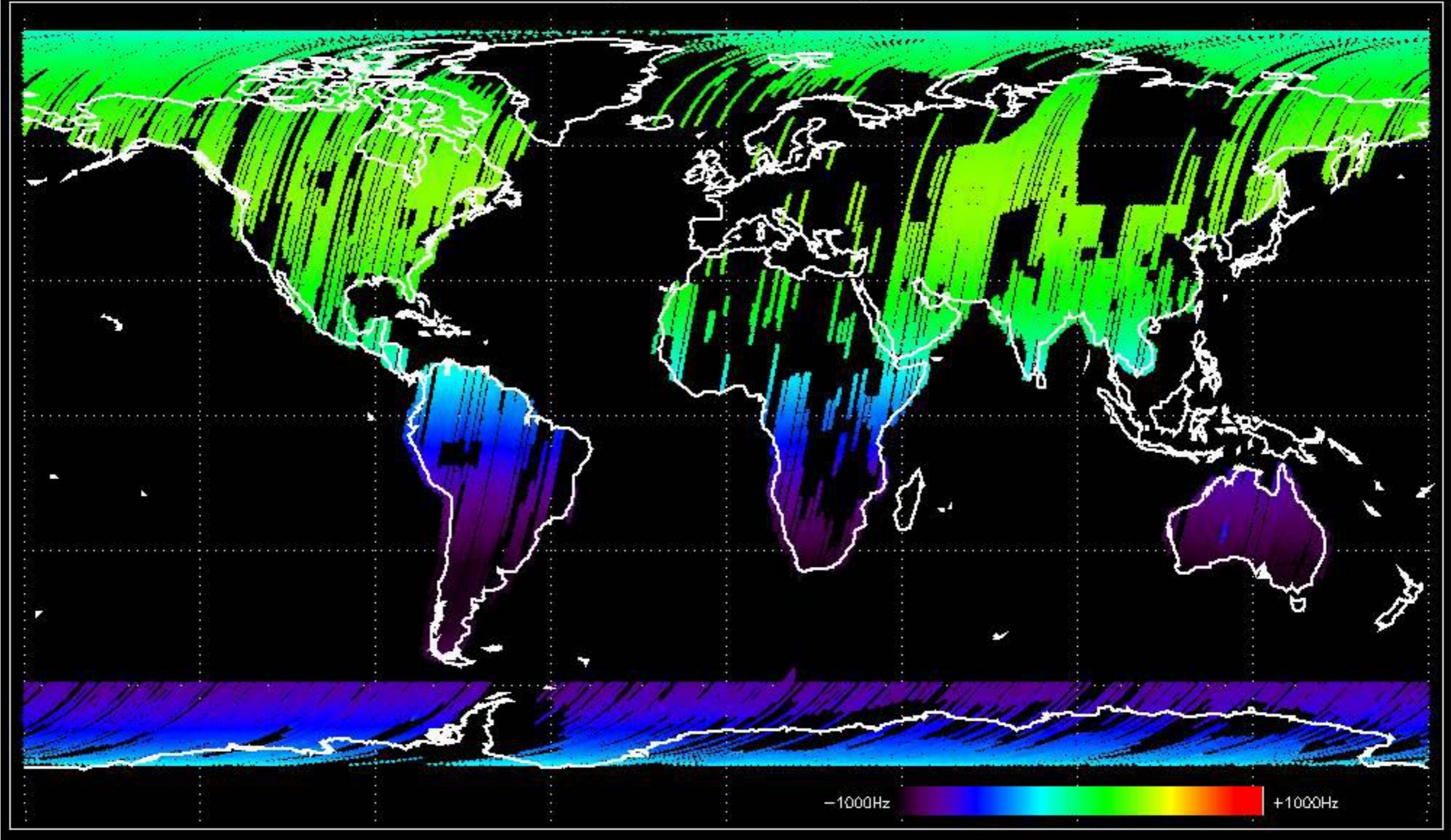
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



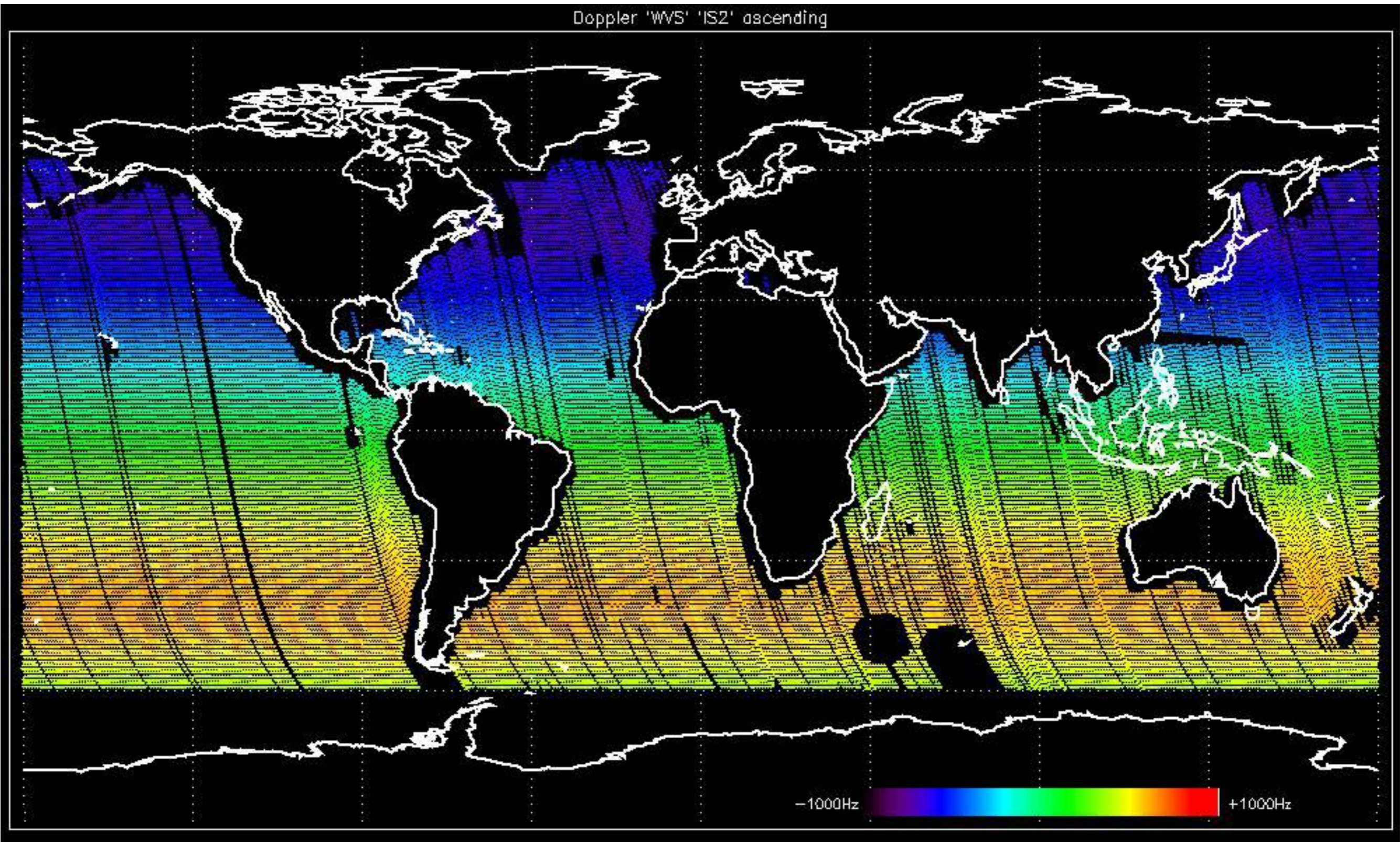
Doppler 'GM1' 'SS1' ascending



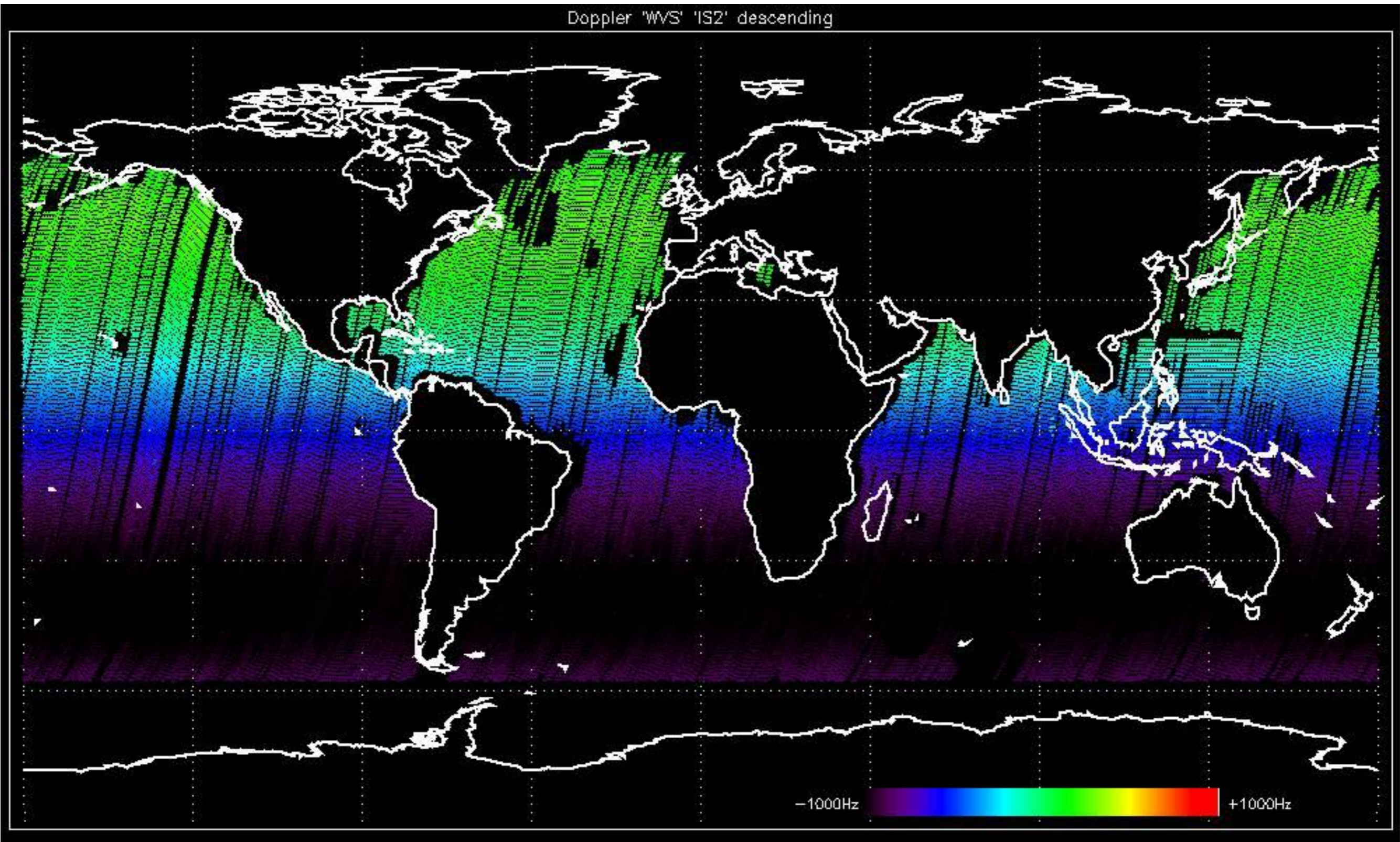
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

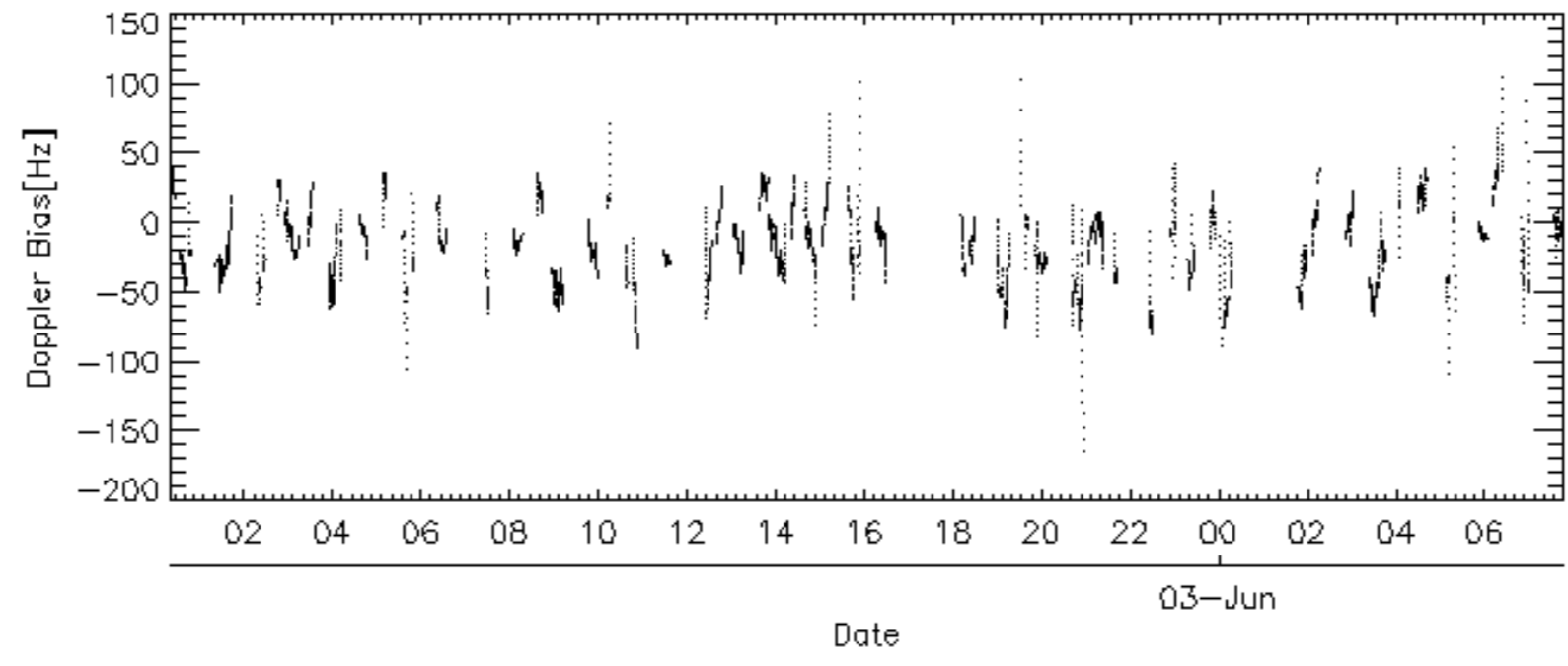
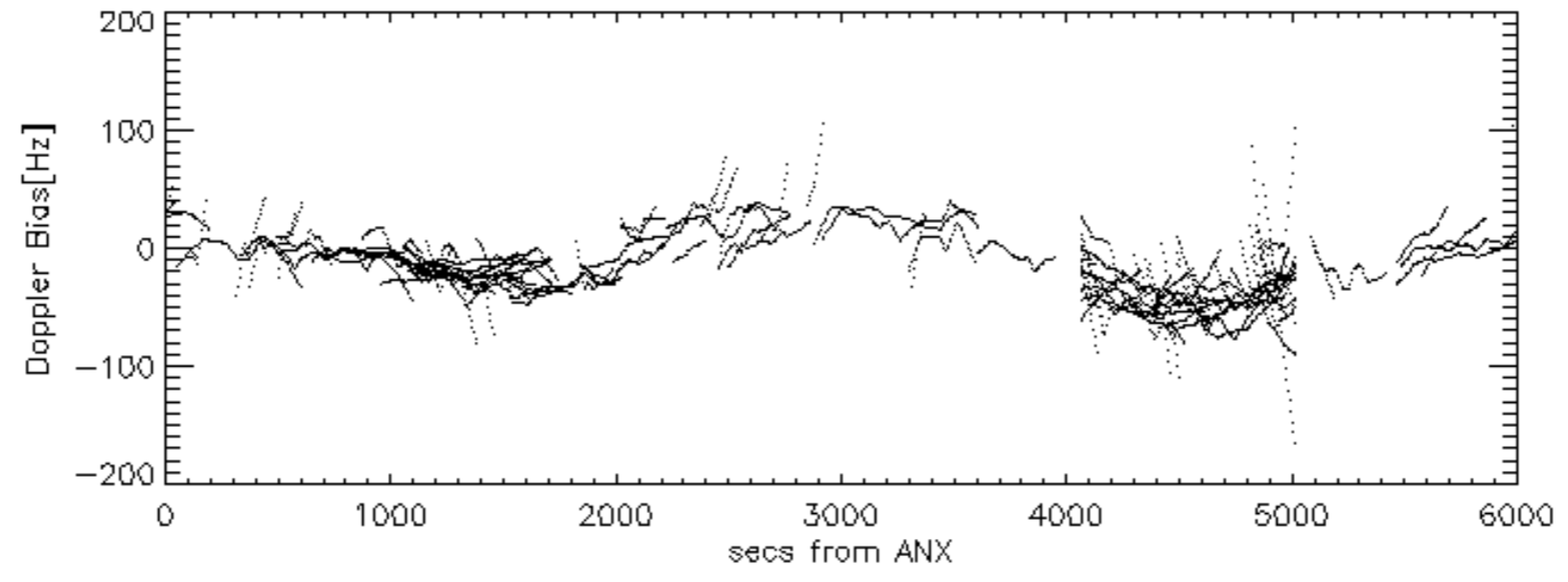
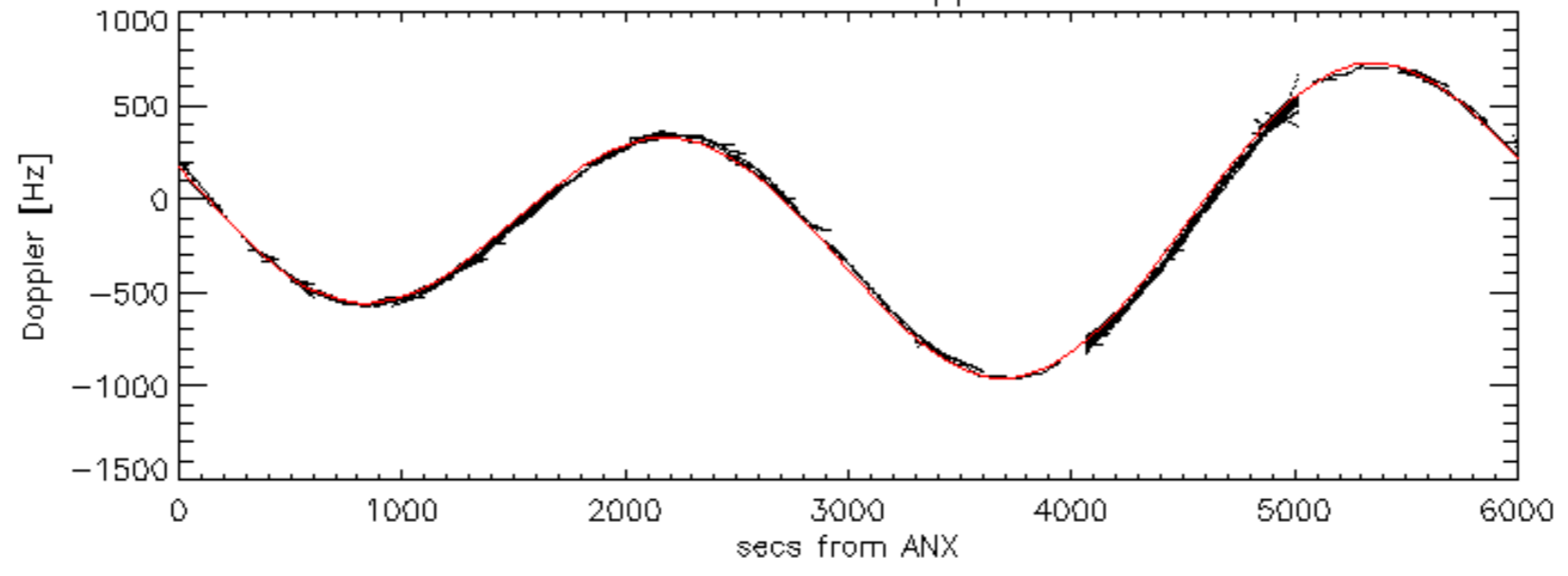


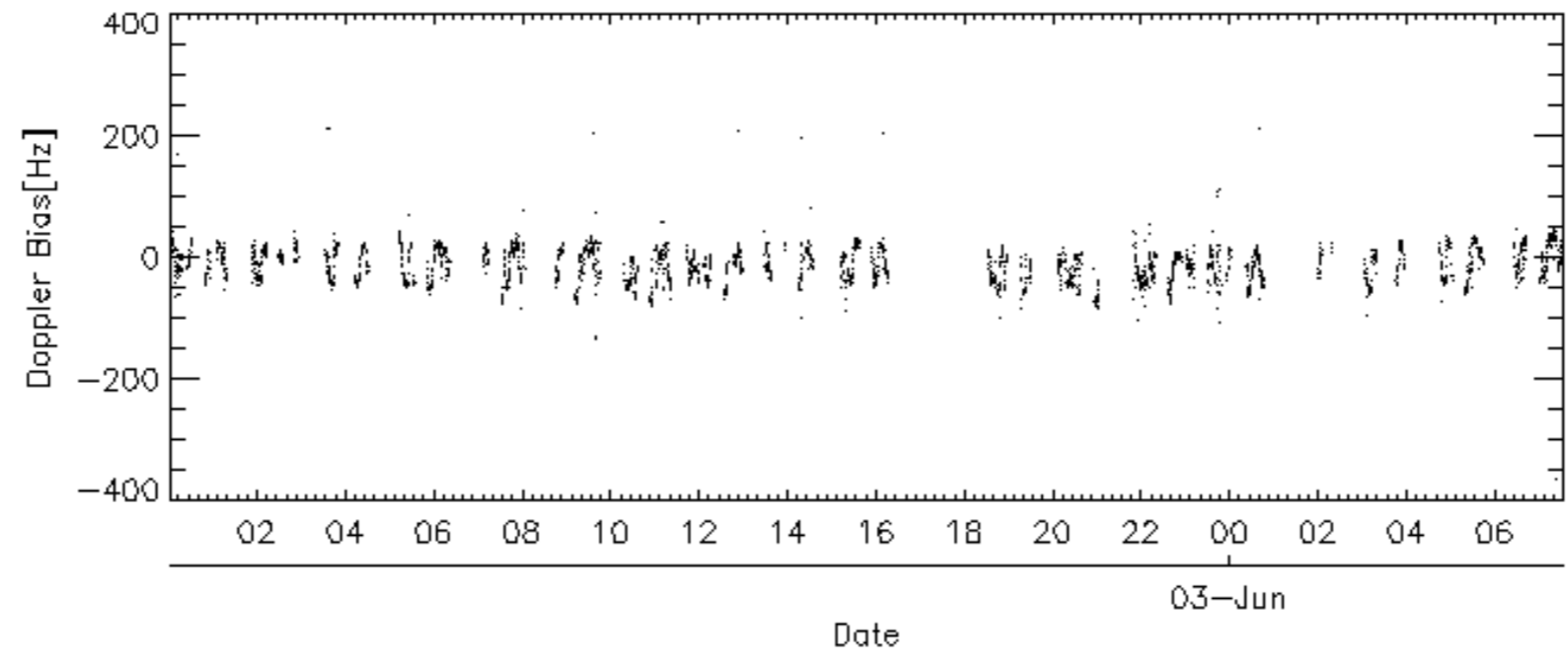
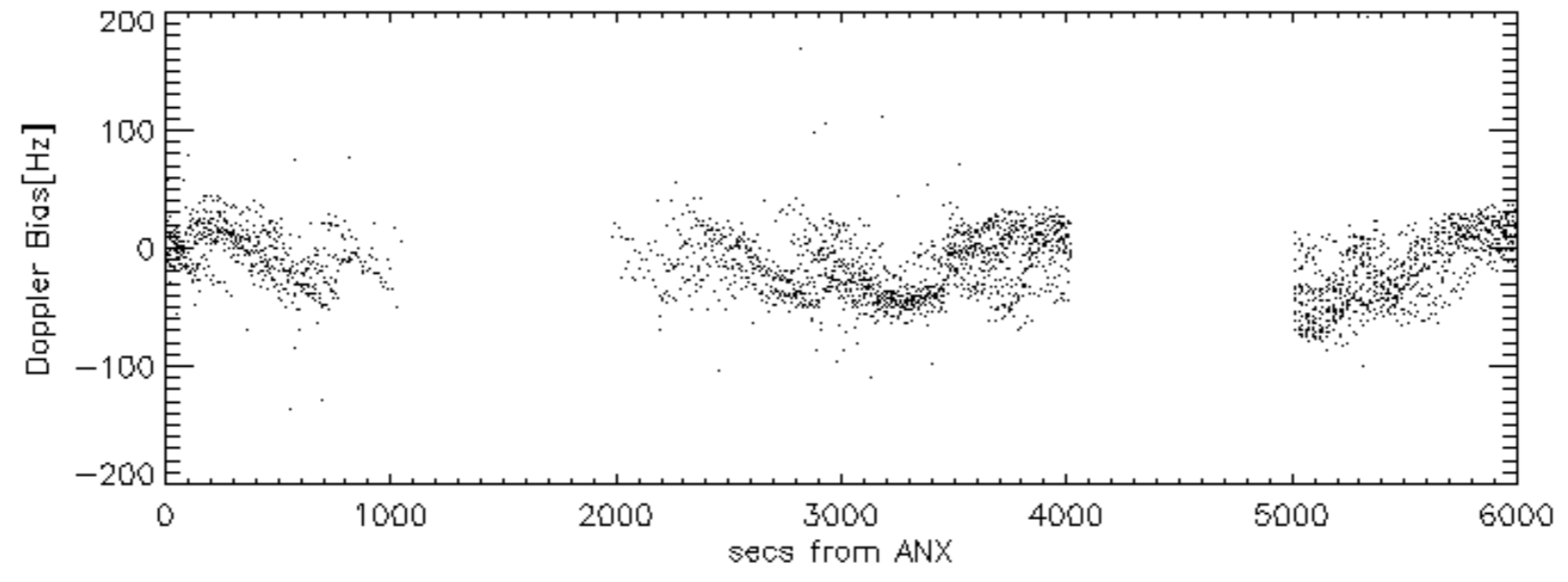
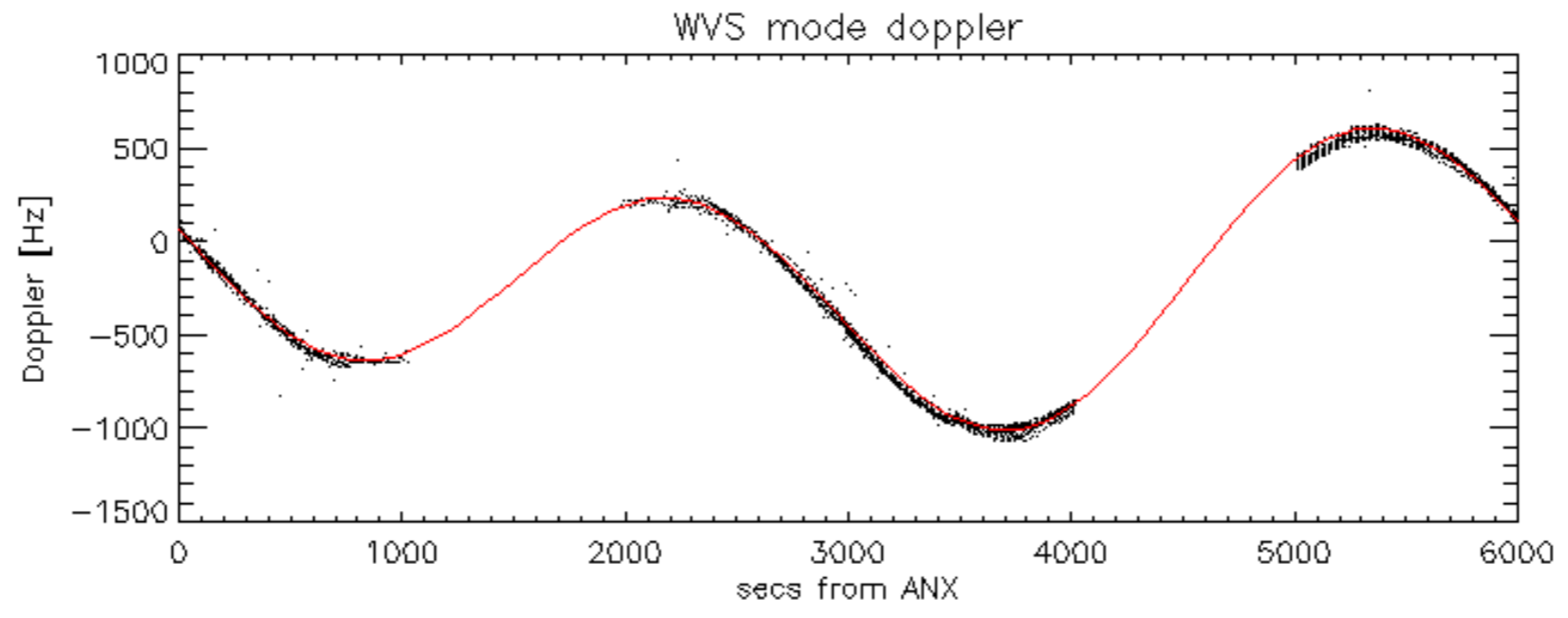
Doppler 'WVS' 'IS2' descending



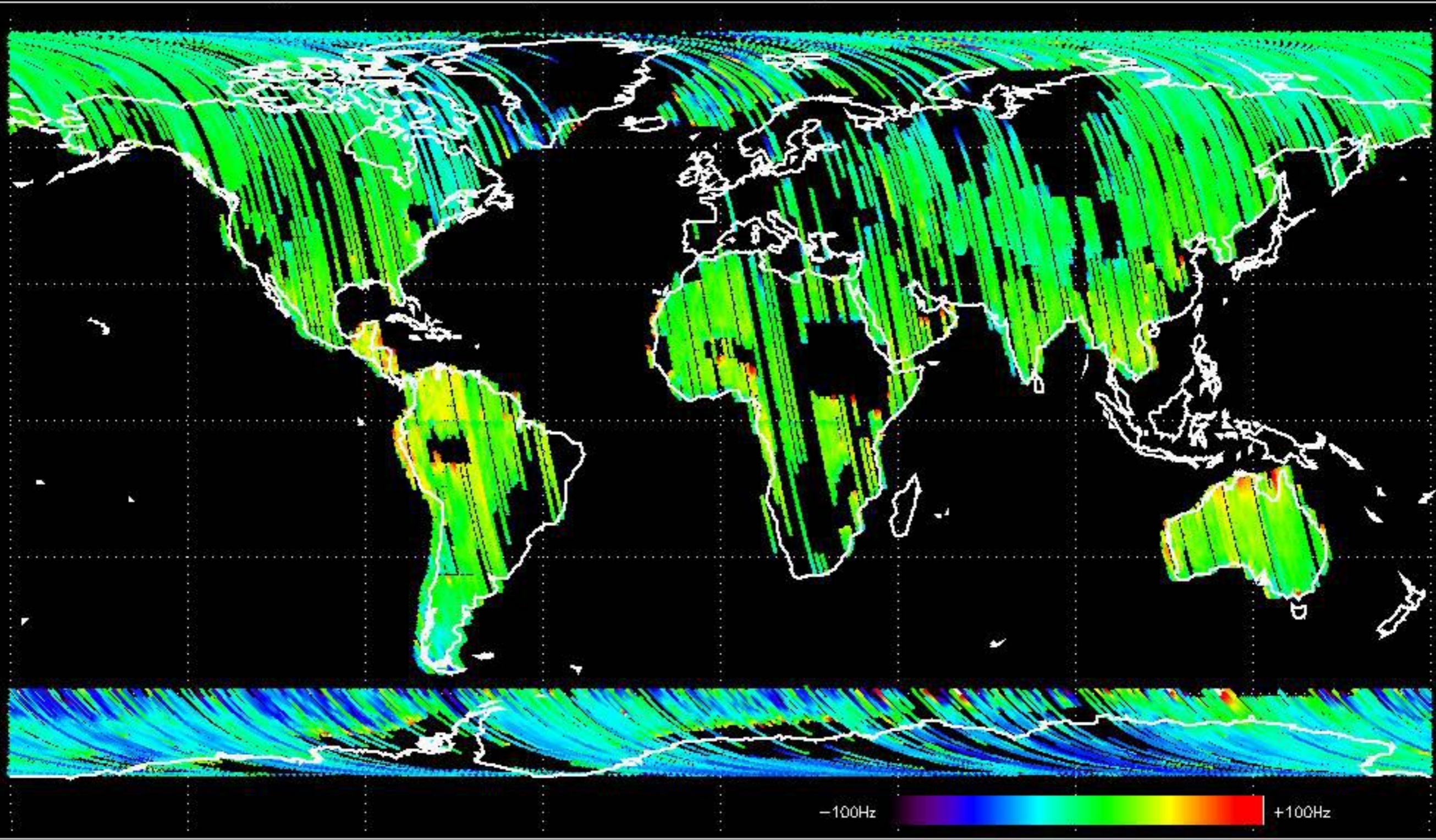


GM1 mode doppler

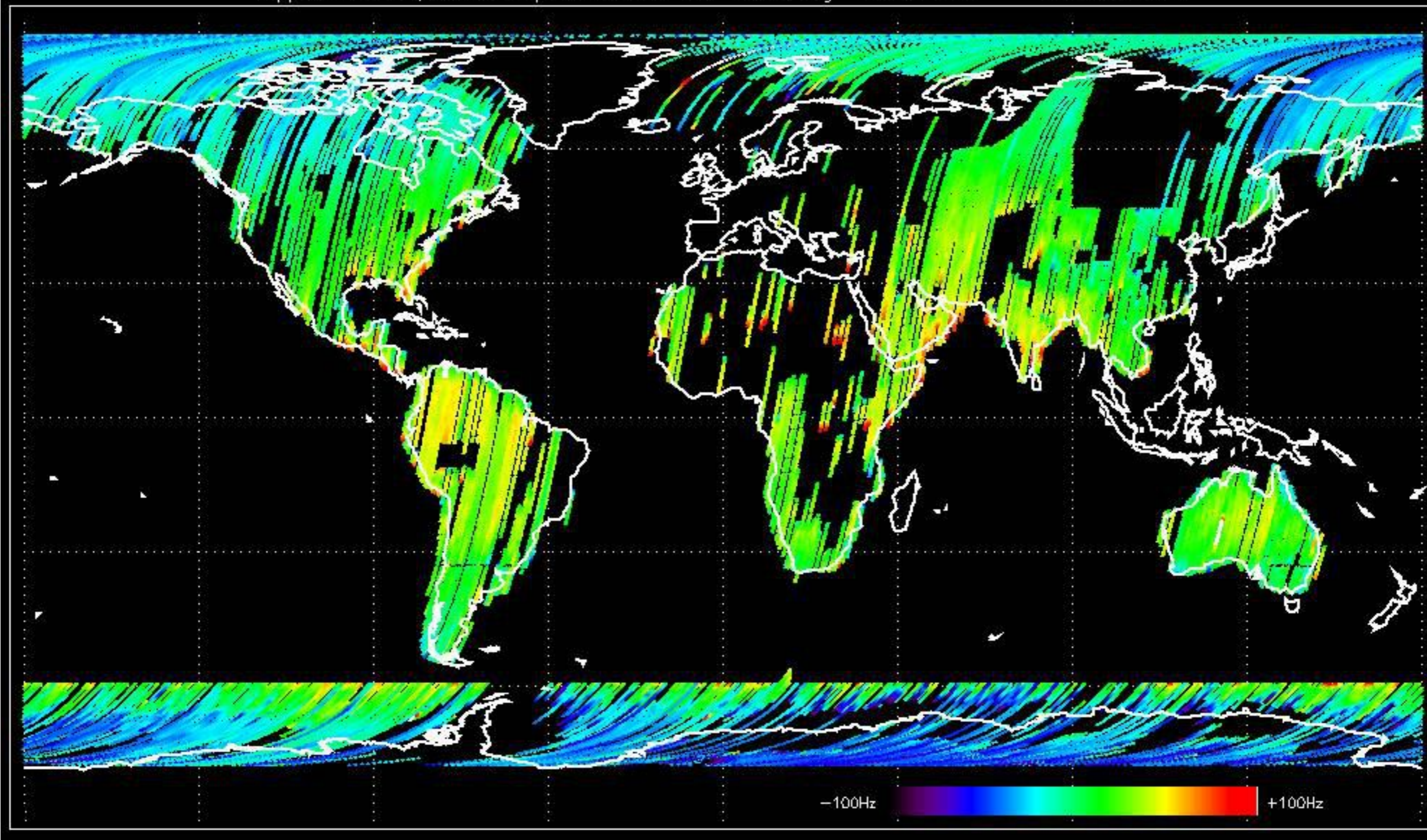




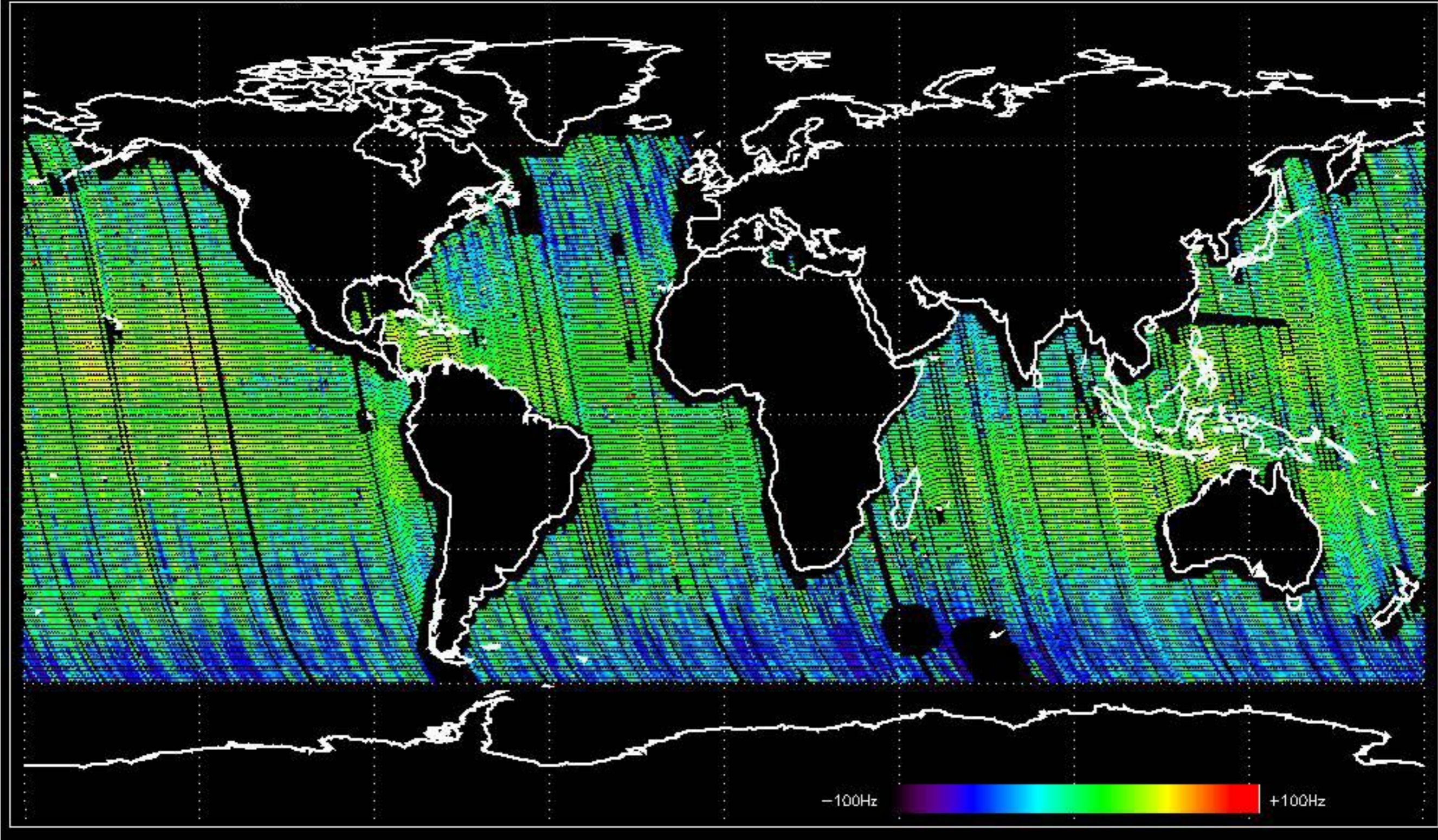
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.193591 Hz



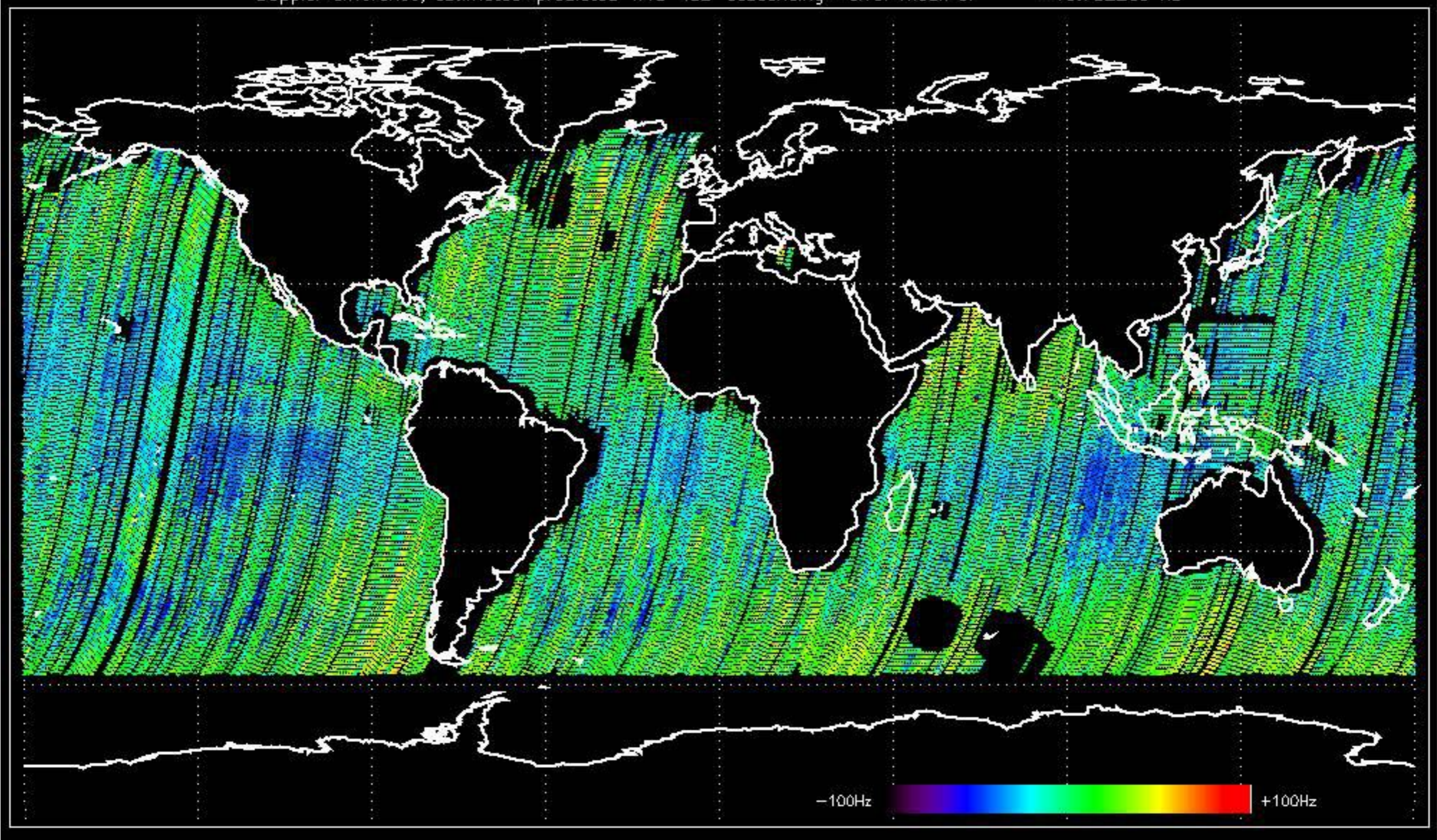
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.8384119 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.1803381 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.752269 Hz



No anomalies observed on available MS products:

No anomalies observed.



















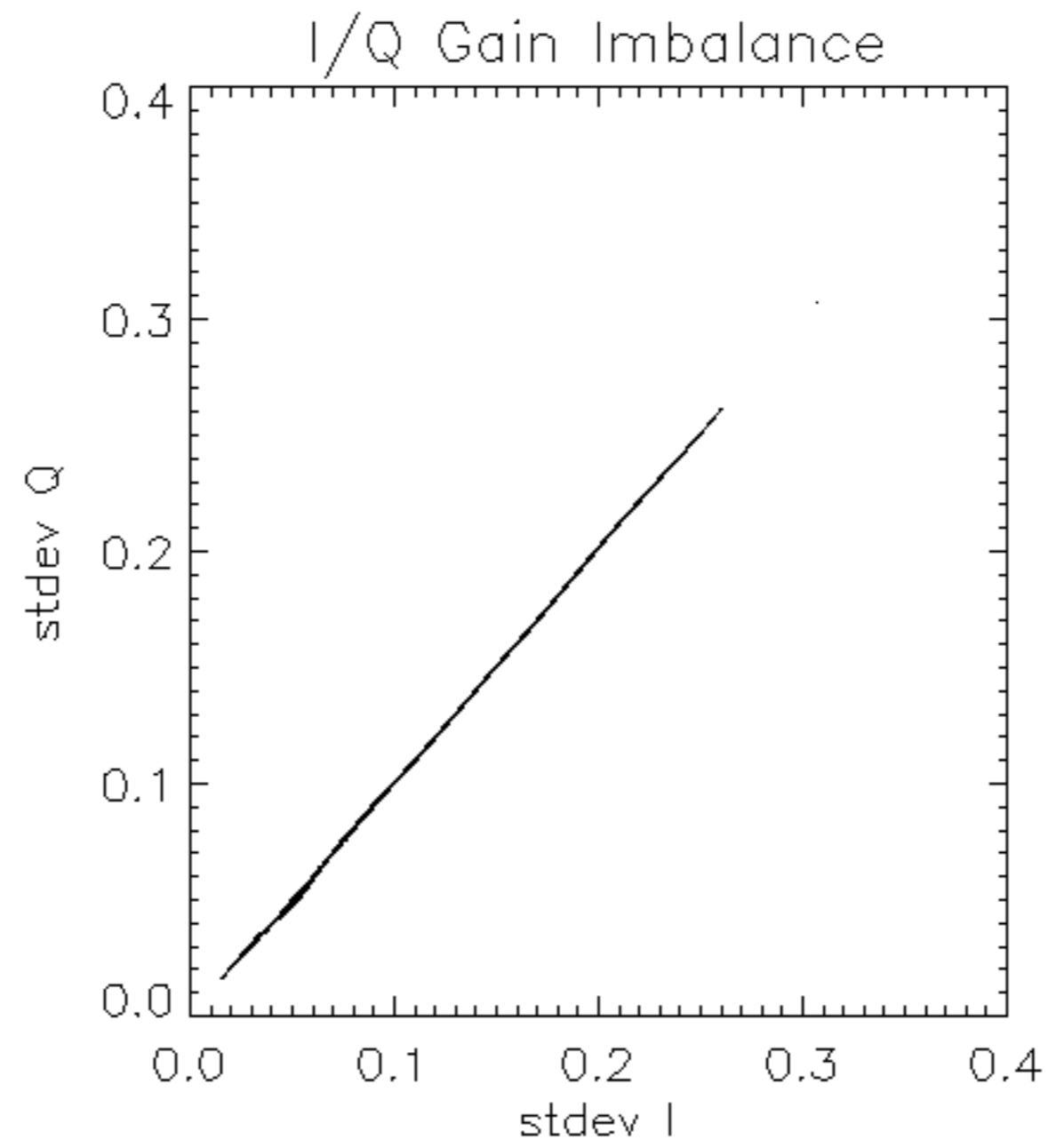


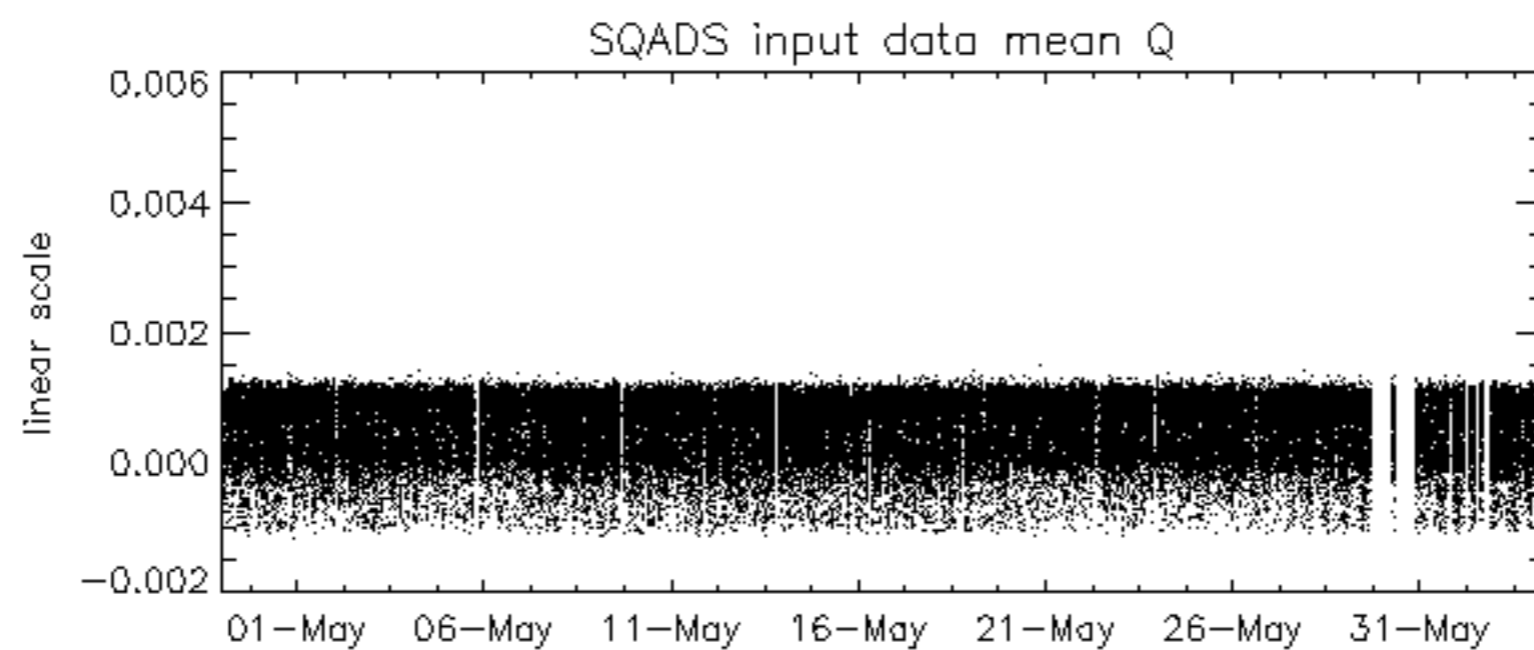
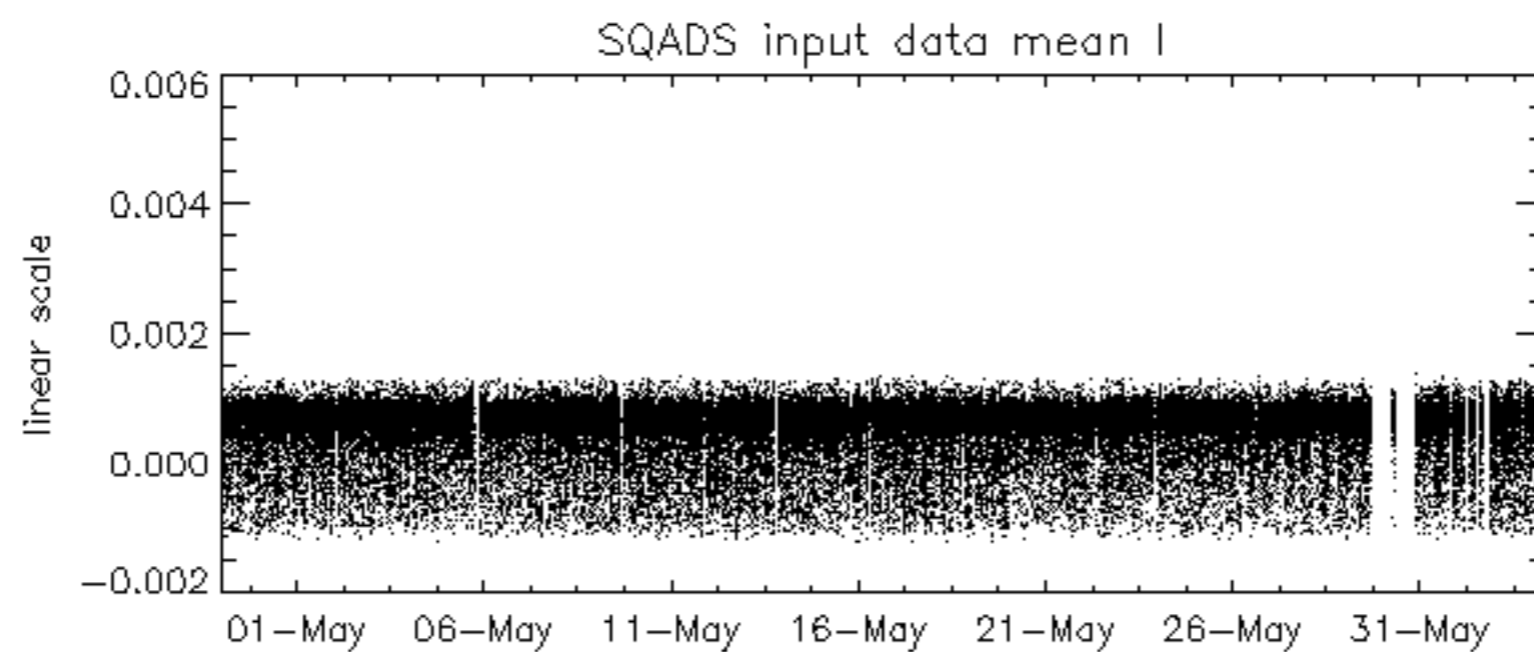
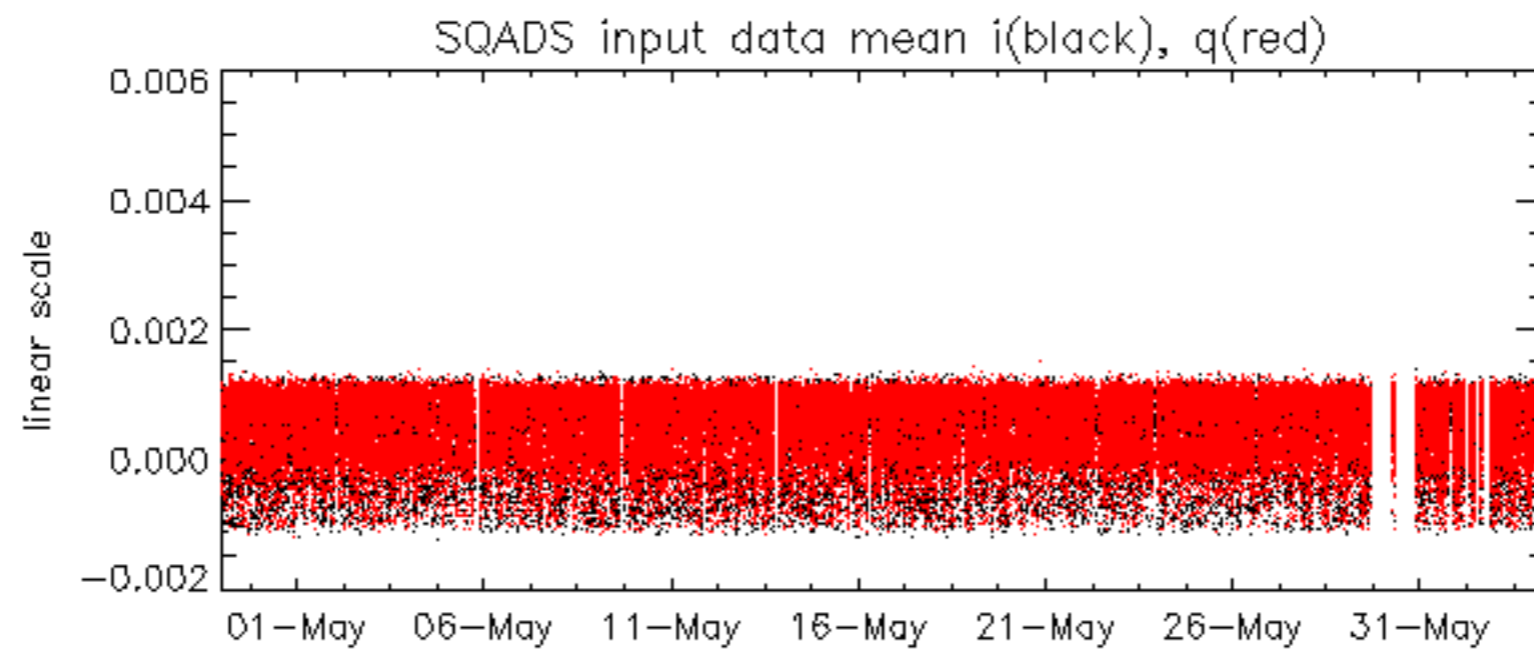


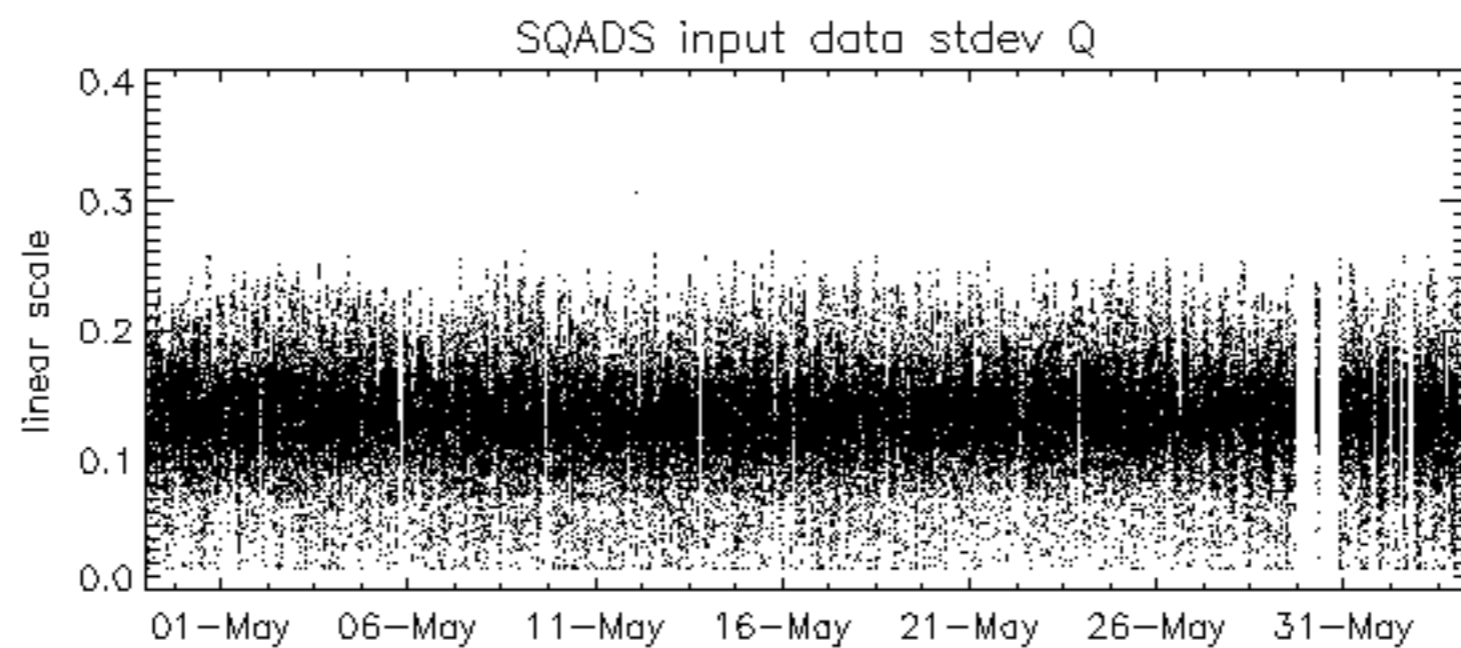
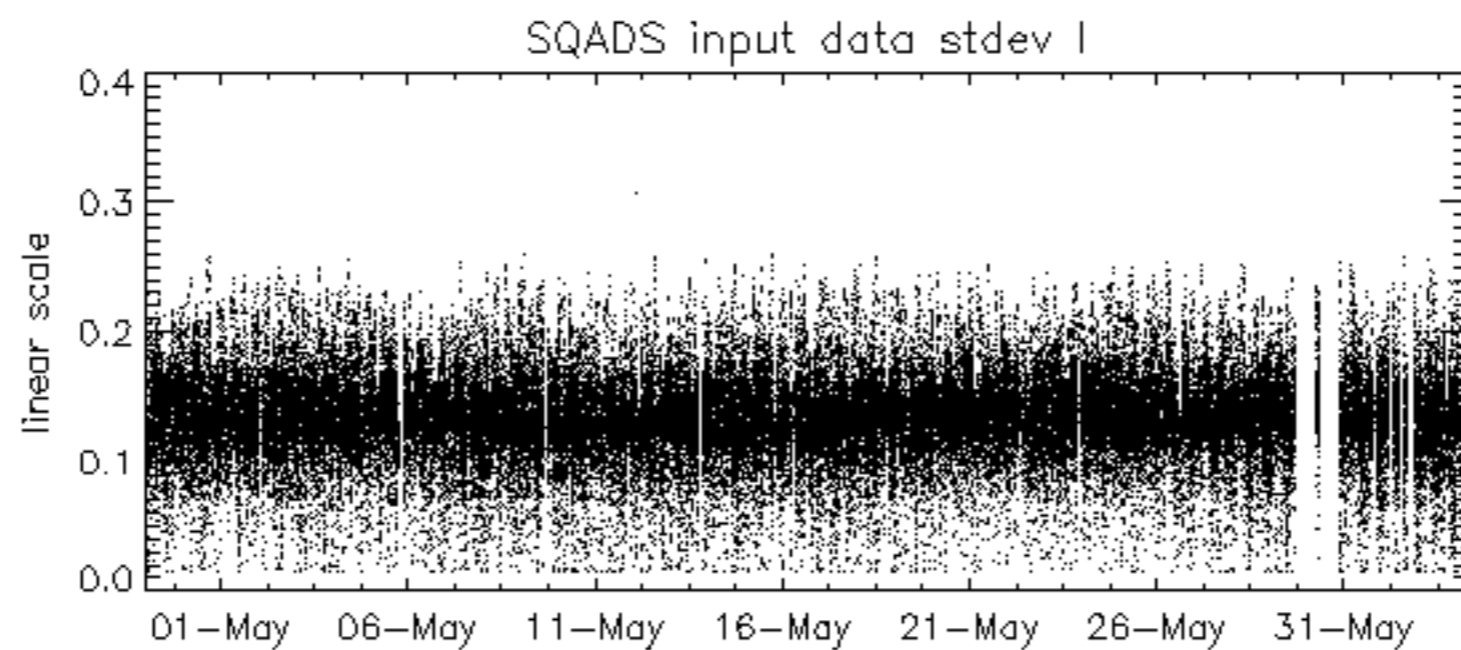
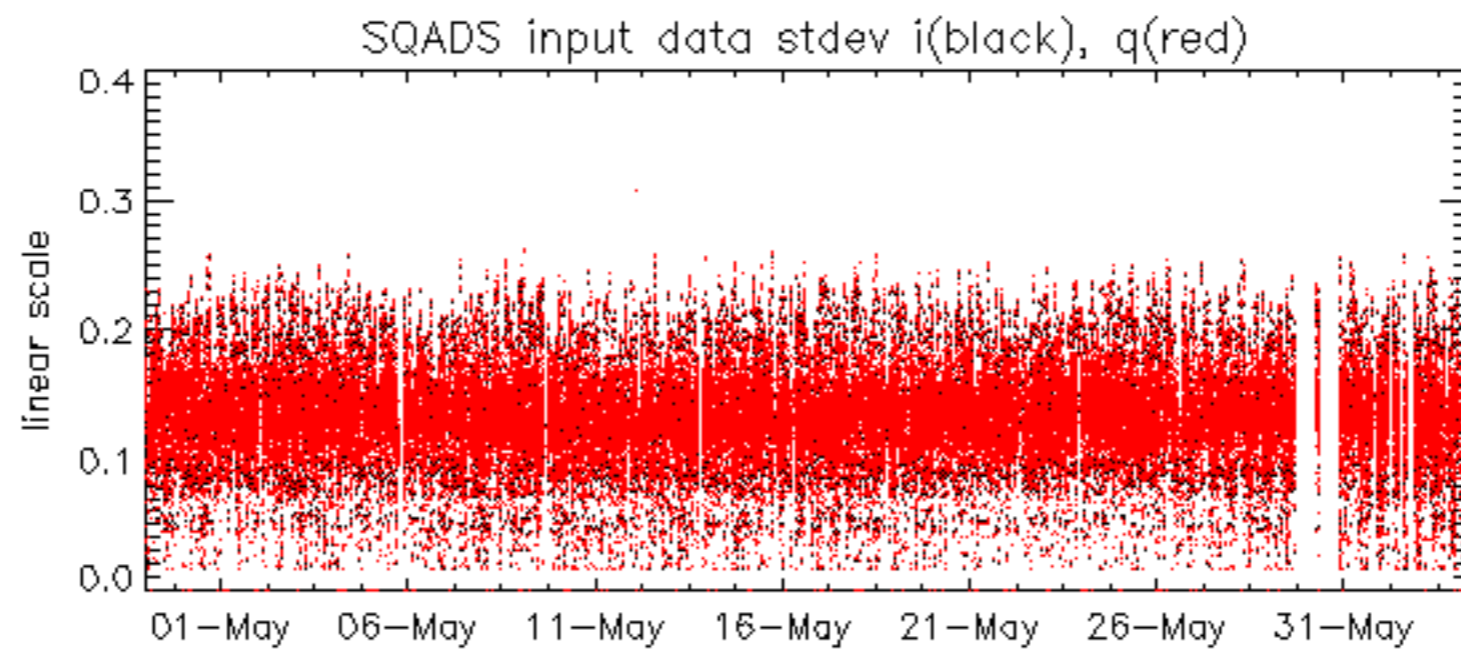






















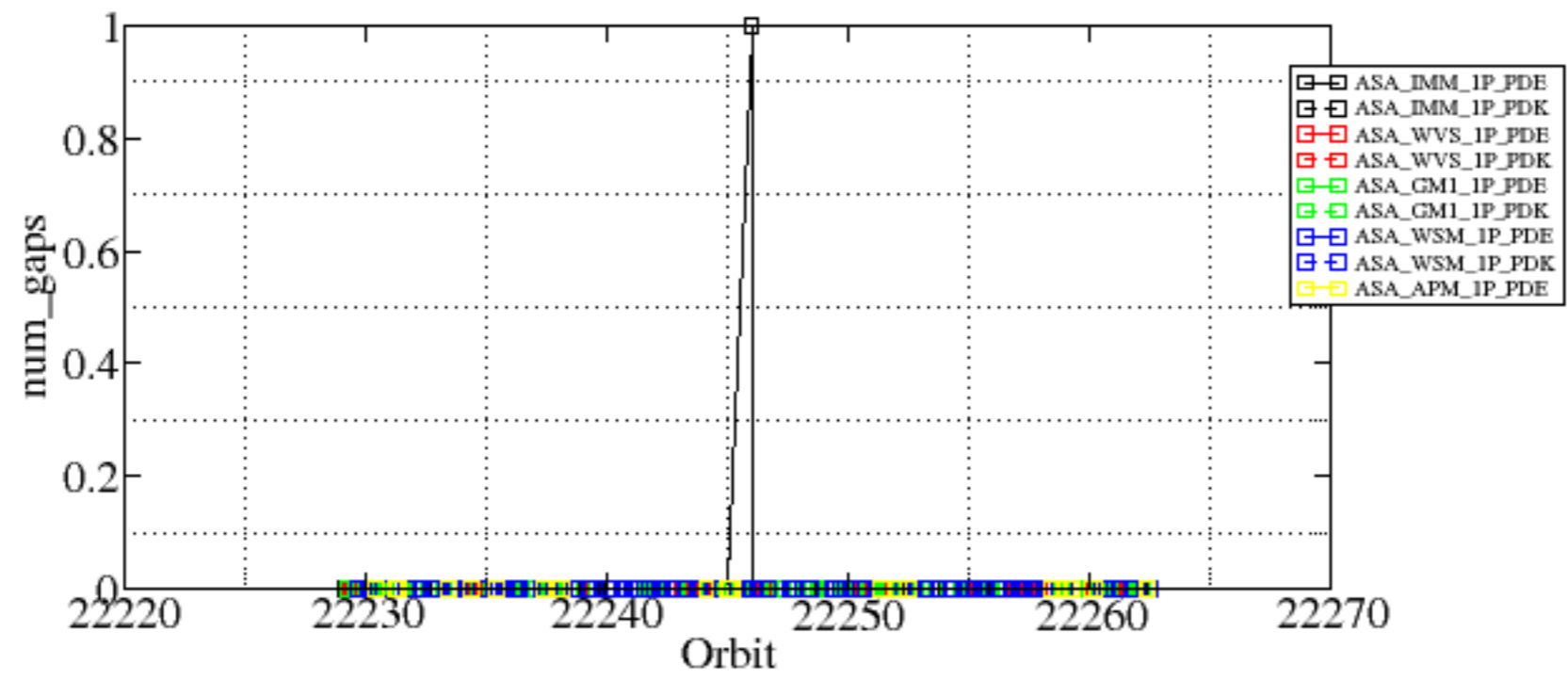




Summary of analysis for the last 3 days 2006060[123]

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_1PNPDE20060602_042646_00000522048_00147_22245_6548.N1	1	0
ASA_WSM_1PNPDE20060601_182816_000002692048_00142_22240_2073.N1	0	70
ASA_WSM_1PNPDE20060602_201721_000000852048_00157_22255_2313.N1	0	43
ASA_WSM_1PNPDE20060603_035851_000000852048_00162_22260_2386.N1	0	39









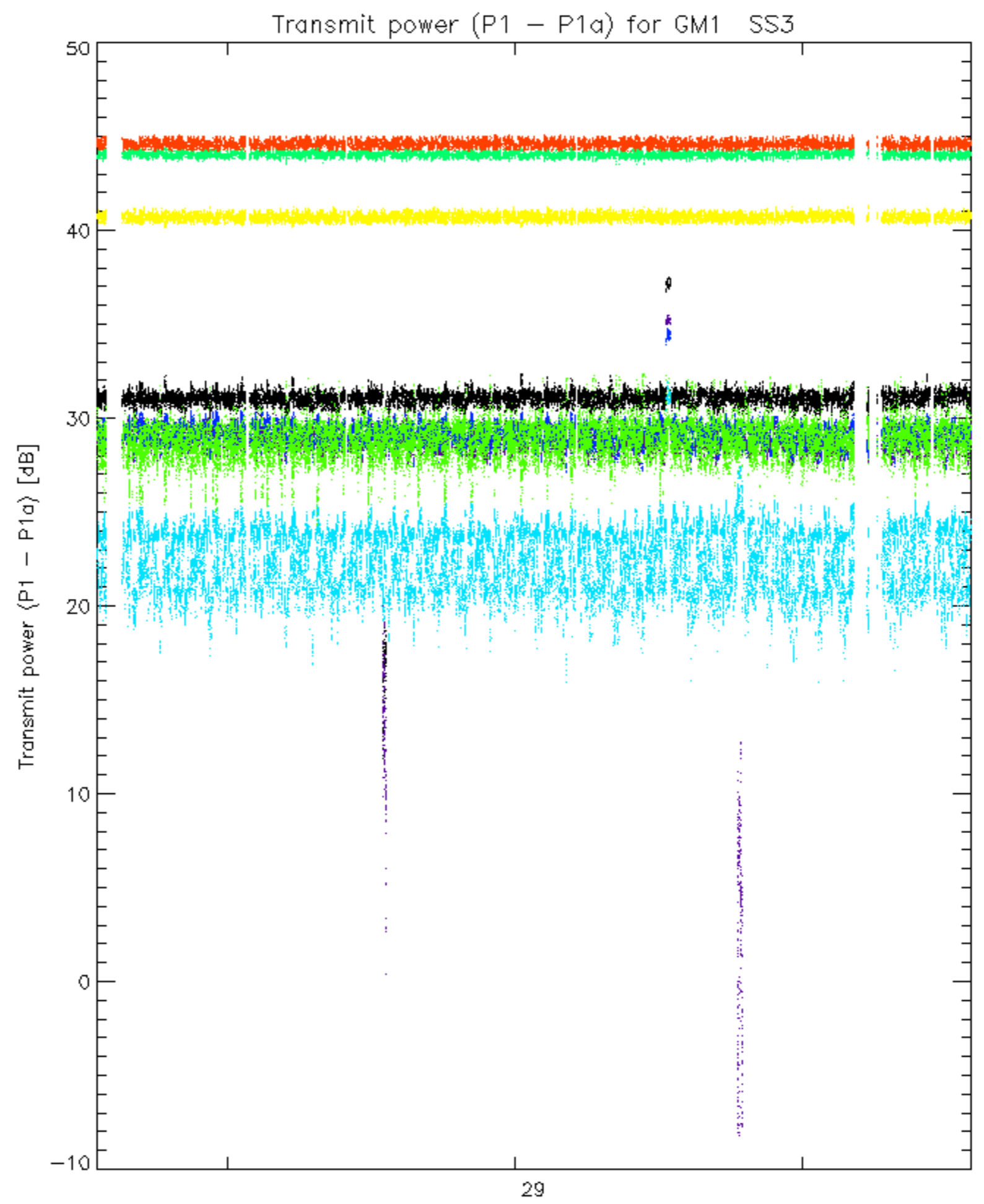




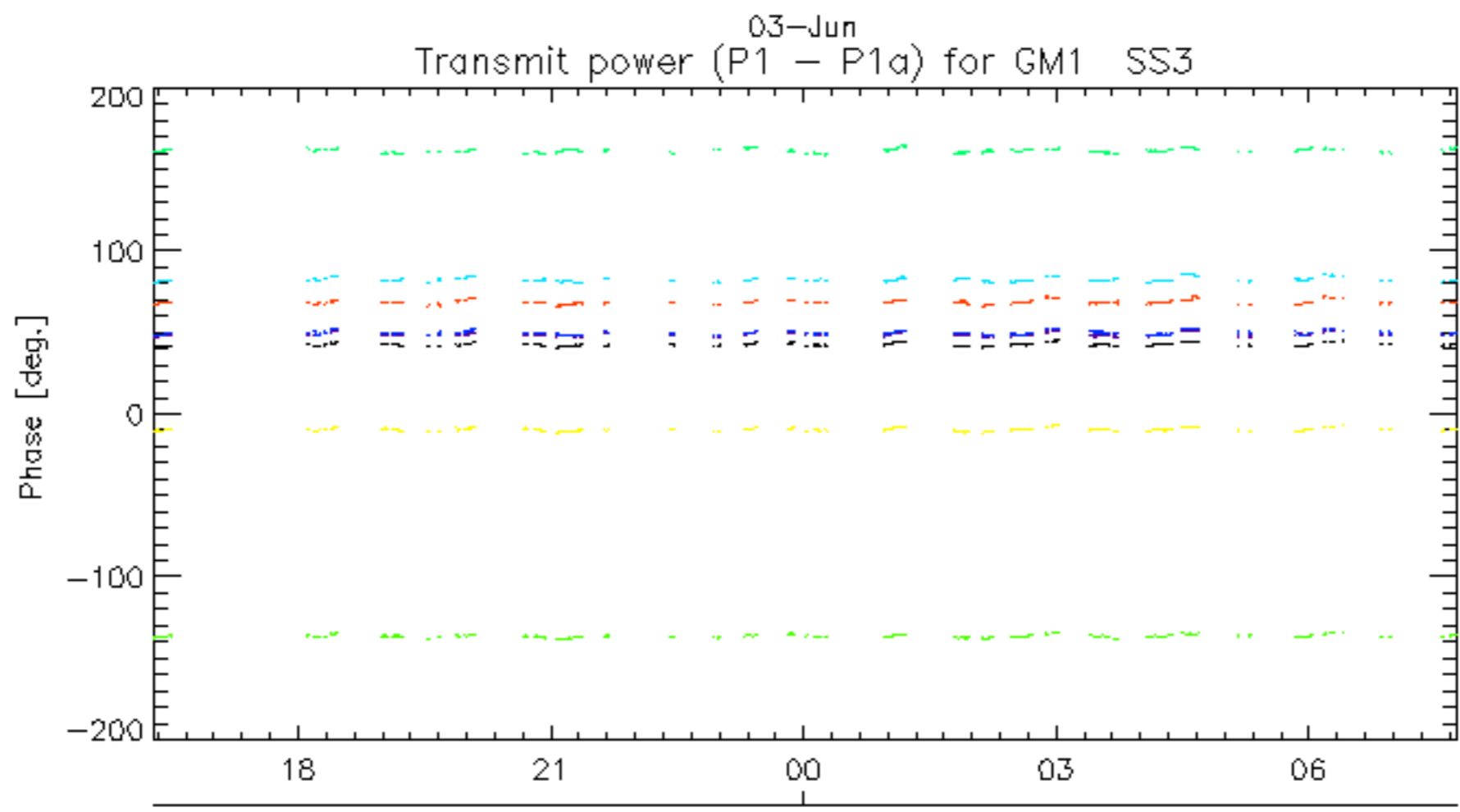
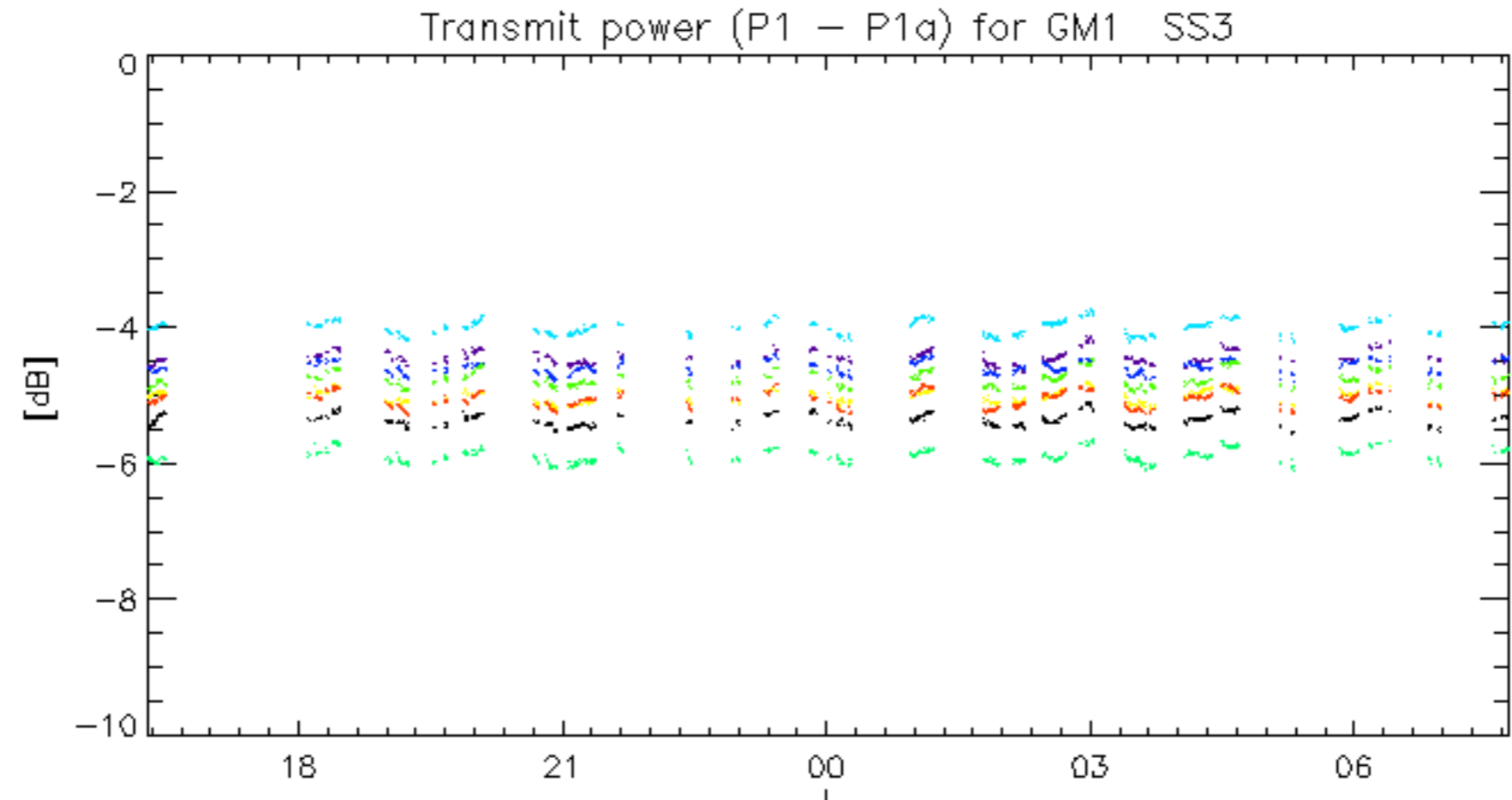






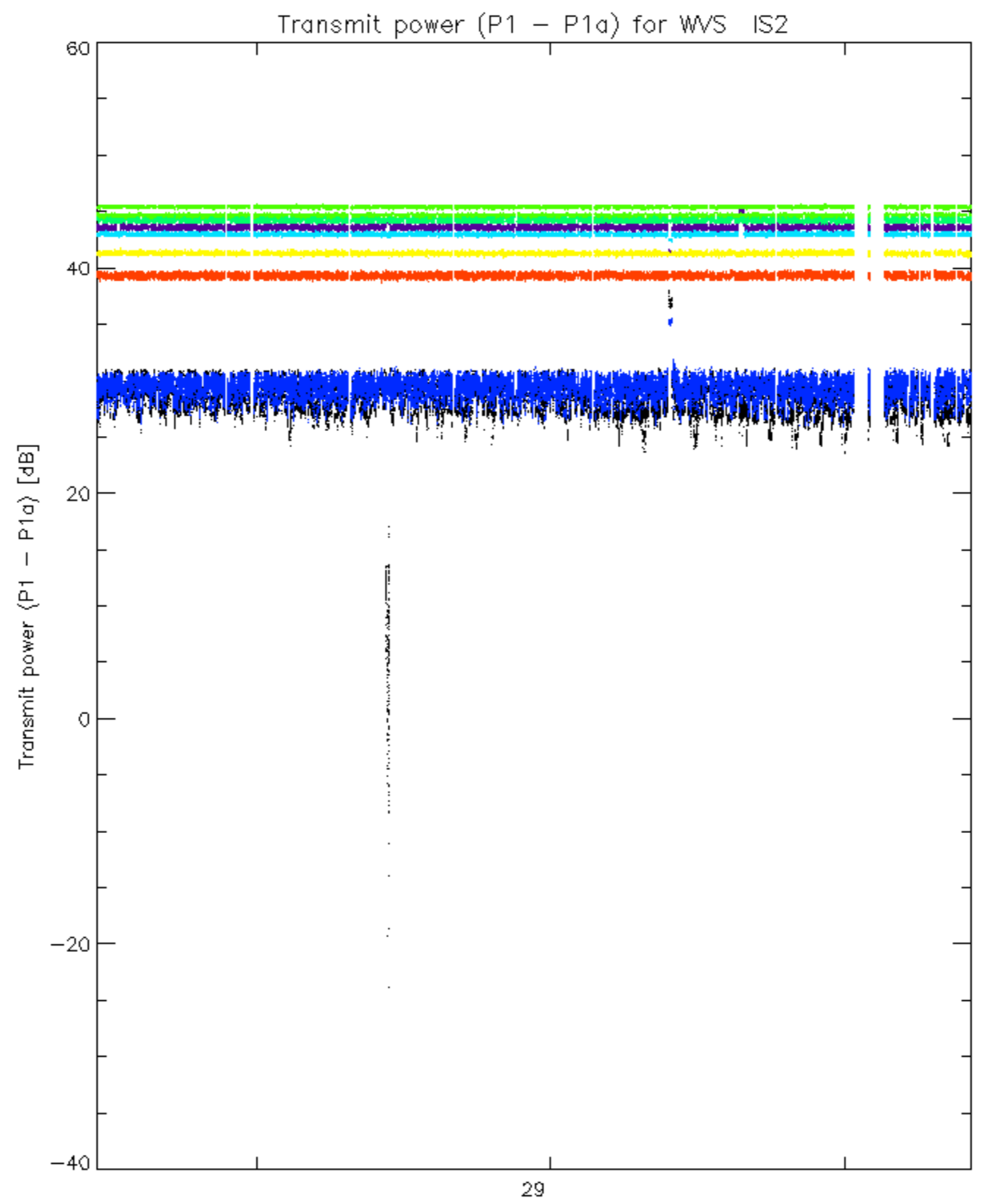


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

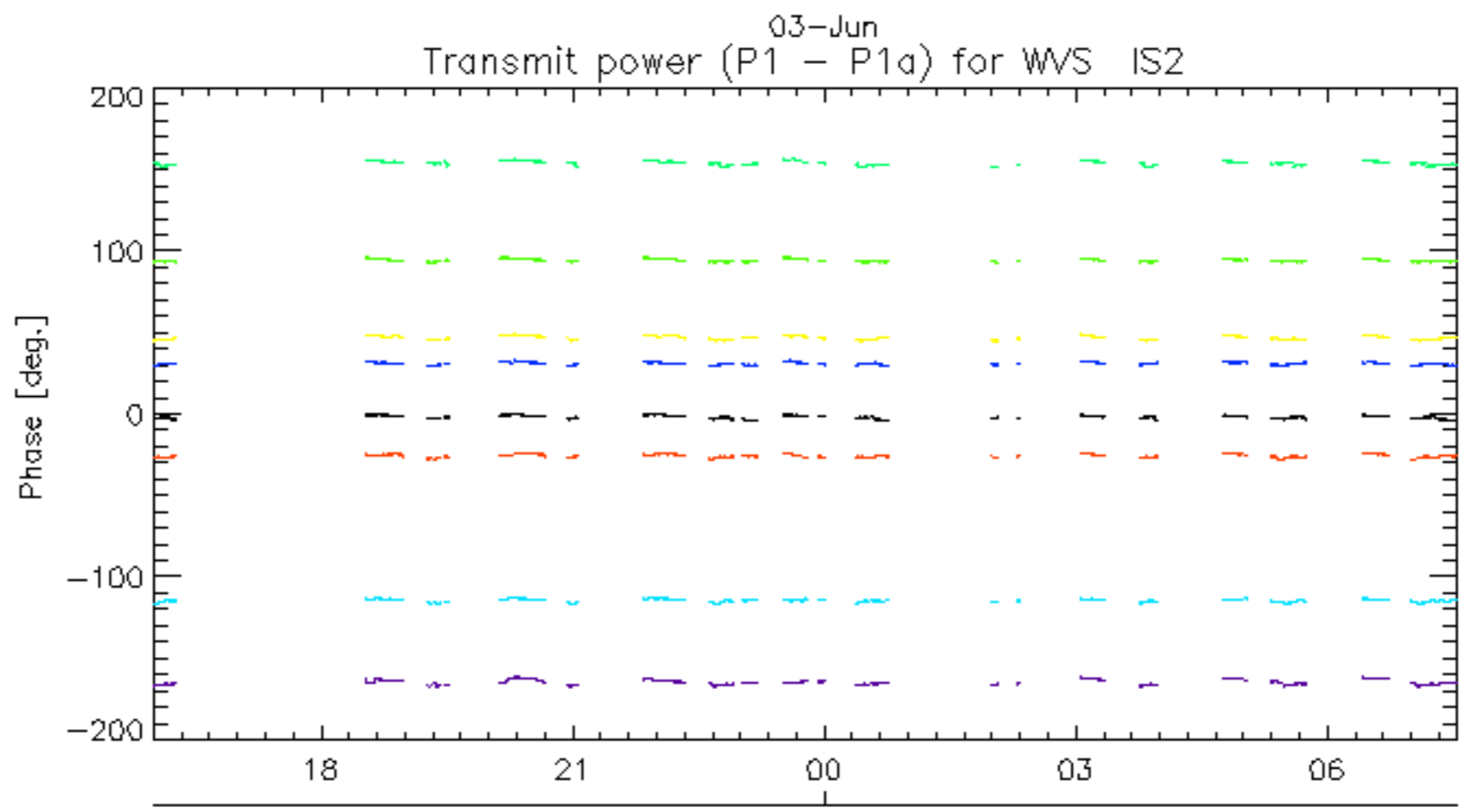
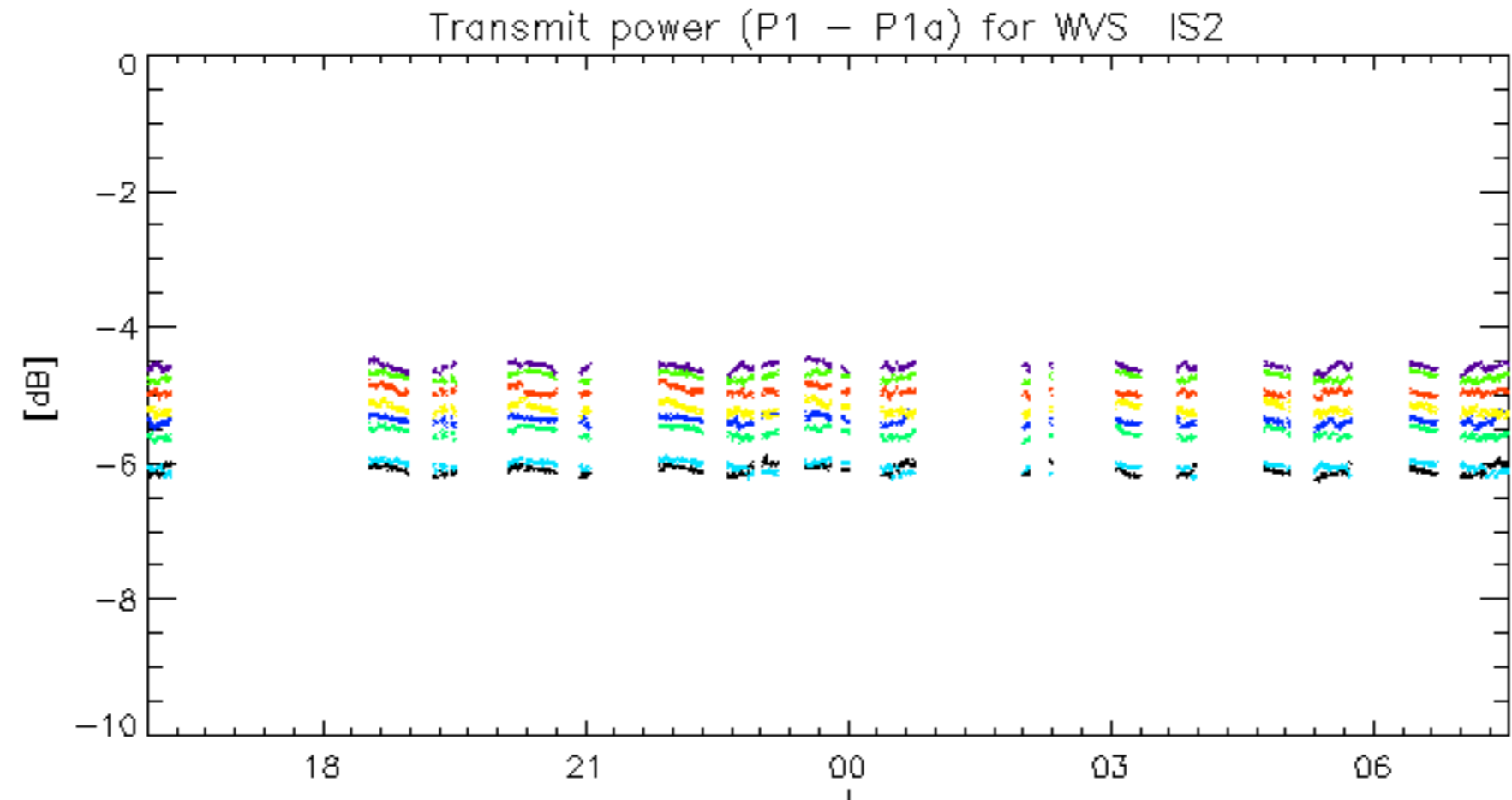


03-Jun  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.