

# PRELIMINARY REPORT OF 070505

last update on Sat May 5 23:13:51 GMT 2007

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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 2007-05-04 00:00:00 to 2007-05-05 23:13:51

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	63	104	18	0	27
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	63	104	18	0	27
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	63	104	18	0	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	63	104	18	0	27

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	45	53	67	9	41
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	45	53	67	9	41
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	45	53	67	9	41
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	53	67	9	41

## 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	20070505 204903
H	20070504 143816

### 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)
3	P1a	-15.121032	0.147011	-0.256848
7	P1a	-17.562735	0.096790	-0.092440
11	P1a	-17.551052	0.362957	-0.648815
15	P1a	-13.038413	0.131965	-0.373731
19	P1a	-15.360908	0.071885	-0.291570
22	P1a	-15.936873	0.399658	-0.326541
26	P1a	-15.006837	0.217691	0.304284
30	P1a	-17.762144	0.368766	-0.653307

**P1t Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.773316	0.010402	-0.048910
7	P1	-3.151051	0.009038	-0.027405
11	P1	-4.208579	0.012895	-0.003753
15	P1	-6.420850	0.020044	-0.133773
19	P1	-3.782228	0.011085	0.030655
22	P1	-4.748417	0.009628	-0.014169
26	P1	-3.915988	0.019362	0.053229
30	P1	-5.967155	0.009368	0.012361

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.660202	0.090766	-0.004804
7	P2	-21.550251	0.089308	0.110733
11	P2	-15.338651	0.117585	0.185294
15	P2	-7.129289	0.088423	-0.025576
19	P2	-9.119684	0.080635	-0.004701
22	P2	-18.088547	0.077105	-0.007371
26	P2	-16.627140	0.082070	-0.079421
30	P2	-19.272951	0.082106	0.045404

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.245526	0.005197	-0.007577
7	P3	-8.245526	0.005197	-0.007577
11	P3	-8.245526	0.005197	-0.007577
15	P3	-8.245526	0.005197	-0.007577
19	P3	-8.245526	0.005197	-0.007577
22	P3	-8.245526	0.005197	-0.007577
26	P3	-8.245526	0.005197	-0.007577
30	P3	-8.245526	0.005197	-0.007577

#### 4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



#### P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.214355	0.115987	-0.114027
7	P1a	-10.052106	0.175031	0.069847
11	P1a	-10.685668	0.090028	0.033186
15	P1a	-10.822386	0.159553	0.132916
19	P1a	-15.816282	0.087637	-0.116647
22	P1a	-21.403852	1.459777	-0.331927
26	P1a	-15.513361	0.366994	-0.181883
30	P1a	-18.309067	0.453282	0.124369

#### P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.455032	0.046058	-0.011776
7	P1	-2.401828	0.091359	0.069092
11	P1	-2.884285	0.023210	0.057754
15	P1	-3.813983	0.036081	0.051300
19	P1	-3.591058	0.014542	-0.030324
22	P1	-4.965305	0.023359	0.075257
26	P1	-6.041397	0.025206	-0.047422
30	P1	-5.340728	0.032065	-0.028186

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.183548	0.065011	-0.069157
7	P2	-22.044237	0.176377	-0.046224
11	P2	-10.639503	0.043885	-0.038736
15	P2	-4.926865	0.041291	-0.069323
19	P2	-6.870351	0.039886	-0.020263
22	P2	-8.108502	0.081948	0.014464
26	P2	-24.324364	0.133733	-0.026413
30	P2	-21.708452	0.102657	0.044481

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.090890	0.004918	0.000136
7	P3	-8.090881	0.004920	0.000239
11	P3	-8.090711	0.004919	0.000019
15	P3	-8.090671	0.004920	-0.000086
19	P3	-8.090780	0.004939	0.000102
22	P3	-8.090688	0.004911	0.000361
26	P3	-8.090771	0.004920	0.000163
30	P3	-8.090663	0.004912	0.000174

## 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	0.000546569
	stdev	1.98212e-07
MEAN Q	mean	0.000497775
	stdev	2.41919e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135704
	stdev	0.00122120
STDEV Q	mean	0.136093
	stdev	0.00123879



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2007050[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_1PNPDK20070504_083350_00000612057_00451_27058_4312.N1	0	26
ASA_GM1_1PNPDK20070504_103913_000001632057_00452_27059_6905.N1	0	15
ASA_GM1_1PNPDK20070504_103940_000001322057_00452_27059_4839.N1	0	15
ASA_GM1_1PNPDK20070504_140155_000001502057_00454_27061_5837.N1	0	14
ASA_GM1_1PNPDK20070504_141822_000001632057_00454_27061_5839.N1	0	7
ASA_GM1_1PNPDK20070504_144335_000006462057_00454_27061_5971.N1	0	23
ASA_WSM_1PNPDE20070503_112609_000001152057_00438_27045_6978.N1	0	42
ASA_WSM_1PNPDE20070503_190521_000001092057_00443_27050_7140.N1	0	57
ASA_WSM_1PNPDE20070504_023250_000000852057_00447_27054_7677.N1	0	27



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

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler

<input type="checkbox"/>
Acsending
<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

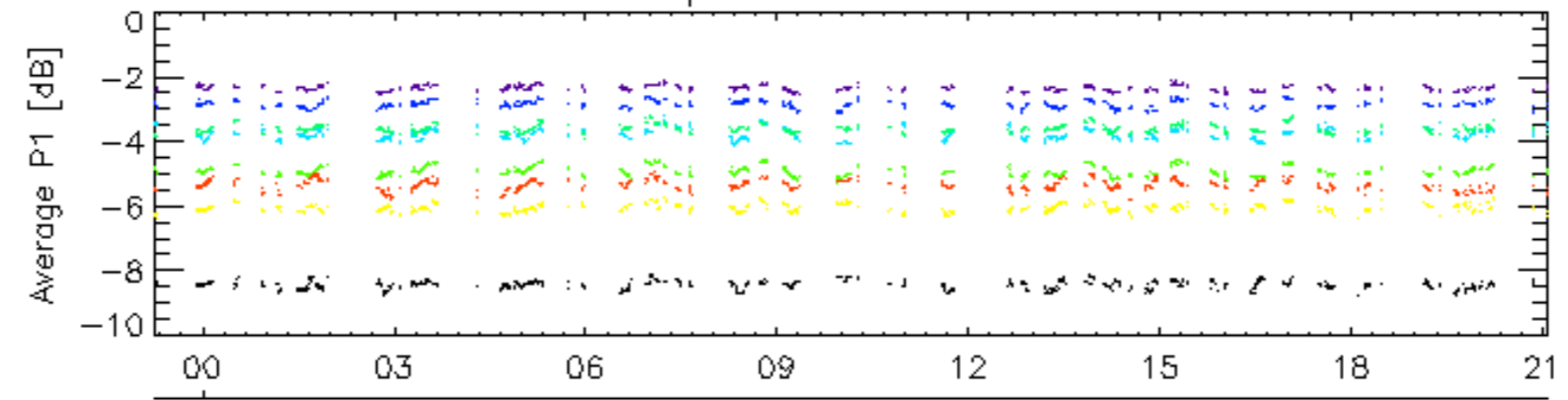
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

### 7.6 - Doppler evolution versus ANX for GM1

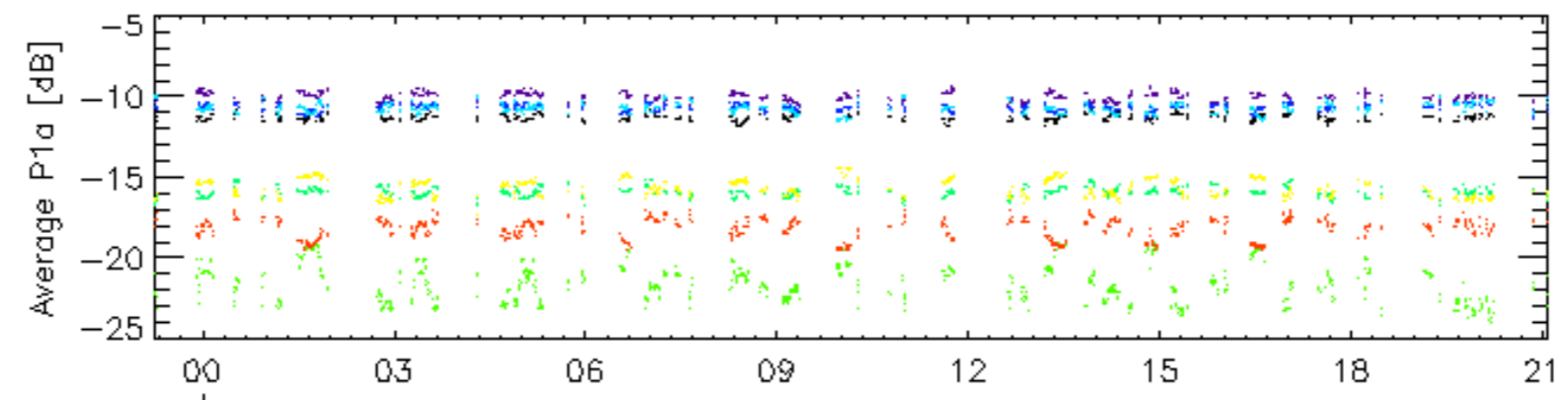
Evolution Doppler error versus ANX

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

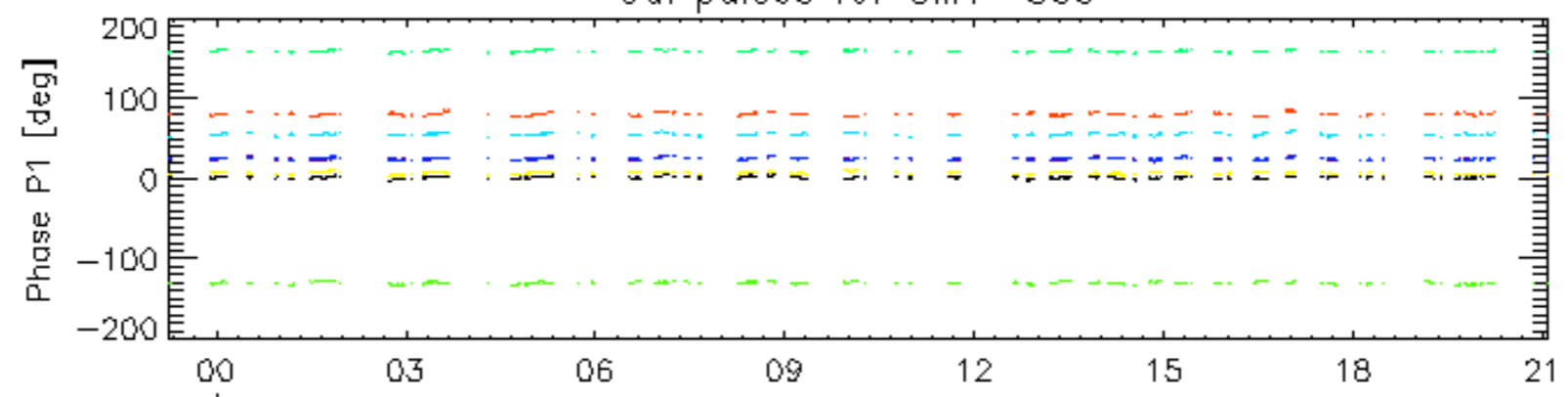


05-May

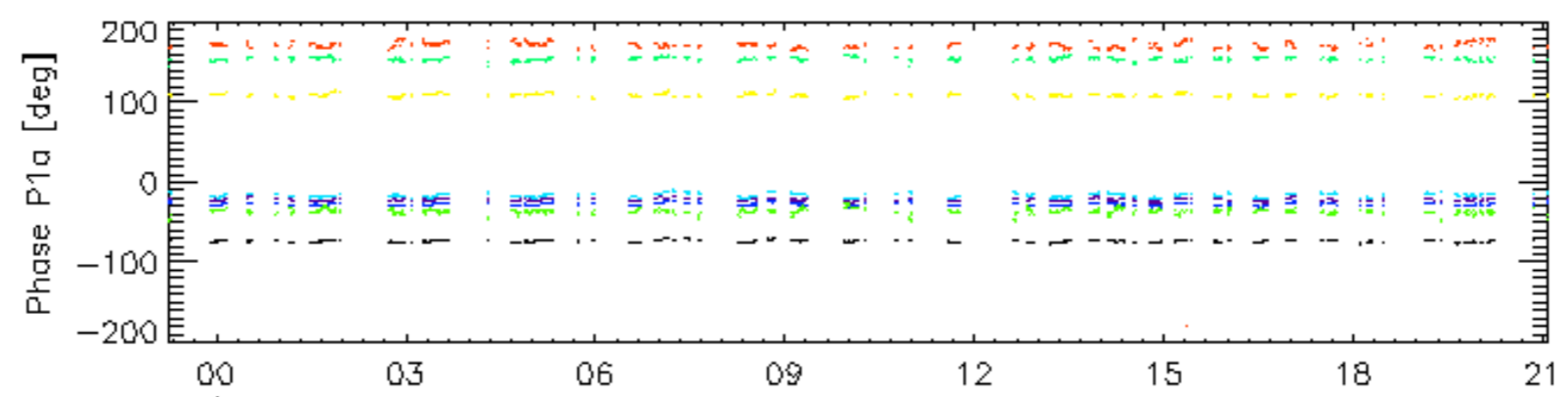


05-May

Cal pulses for GM1 SS3

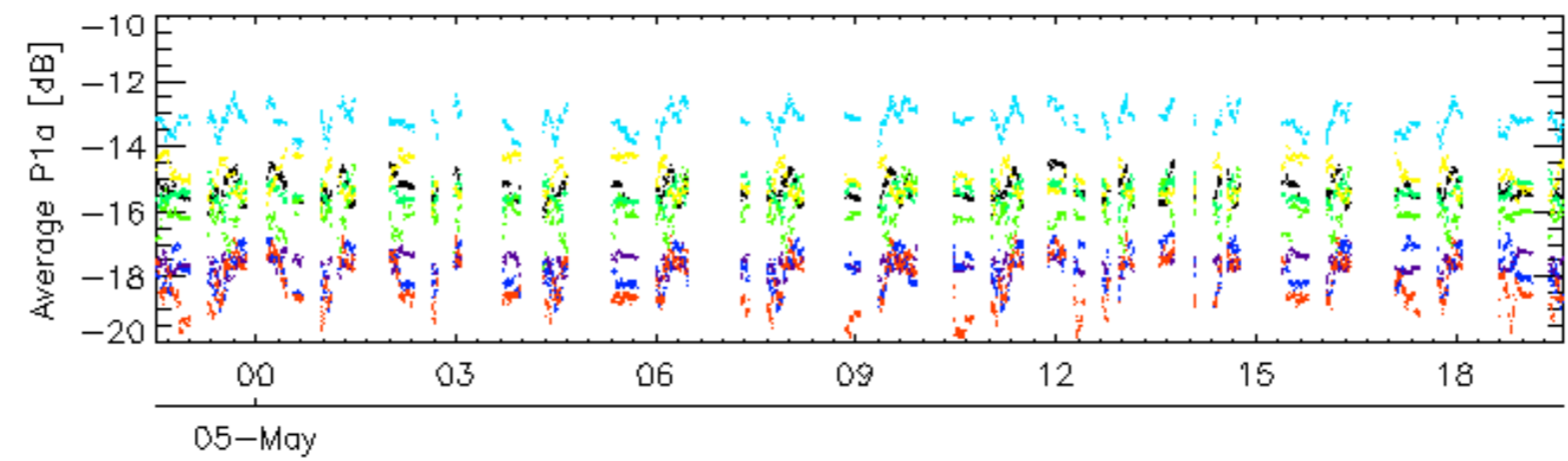
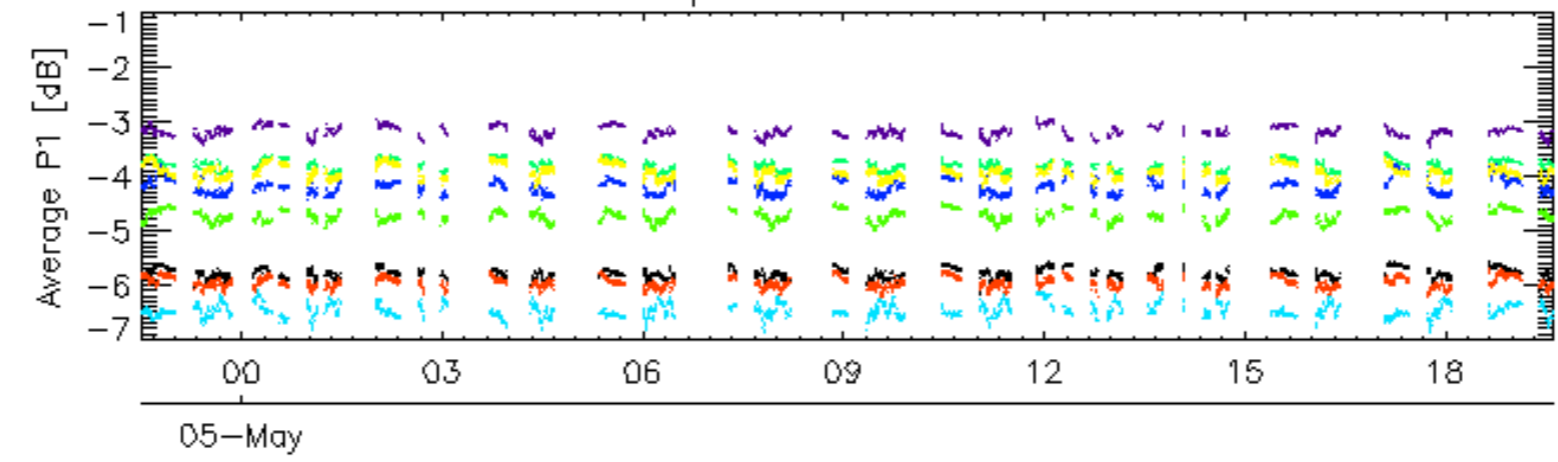


05-May

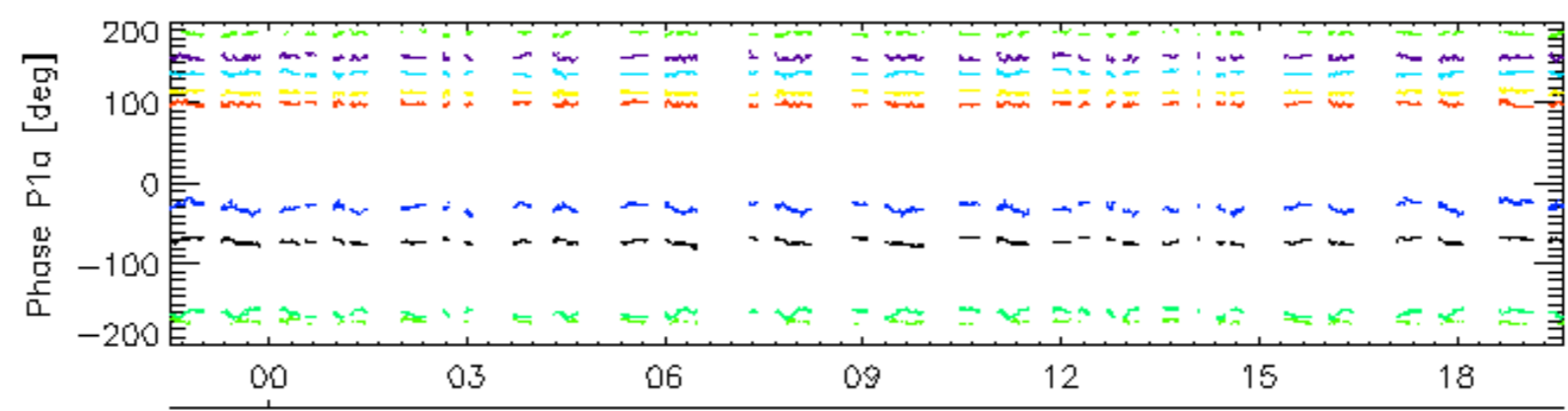
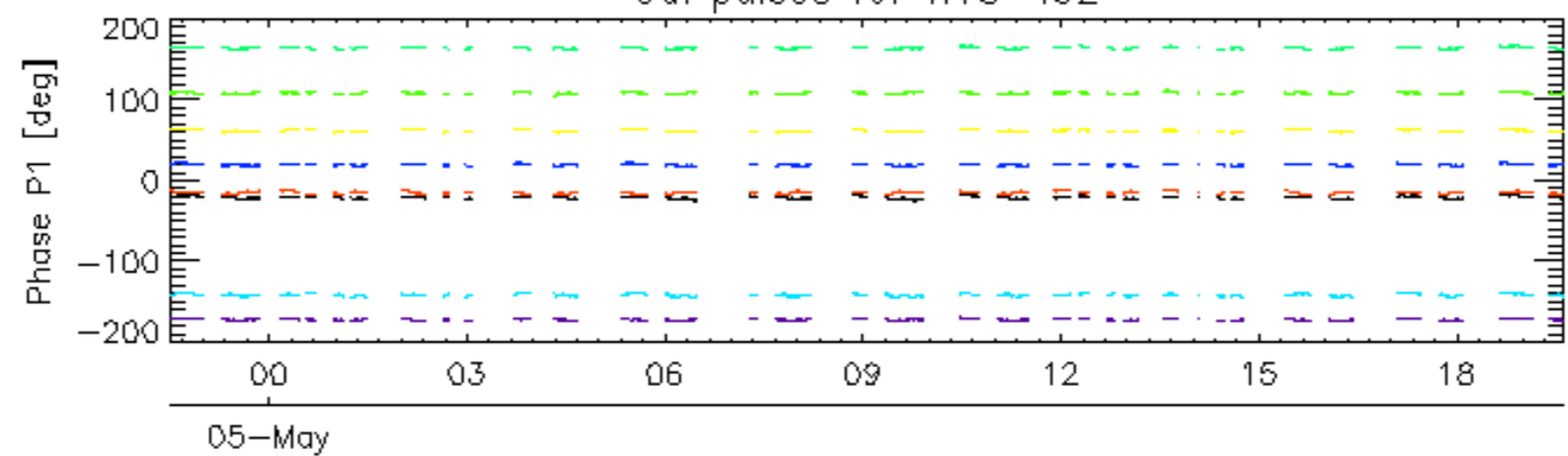


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

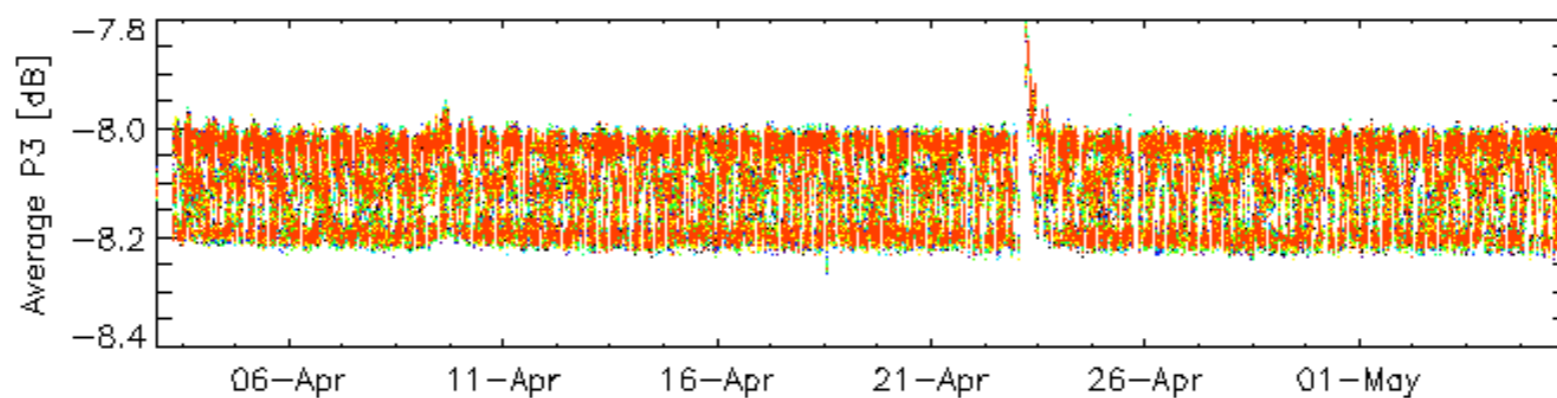
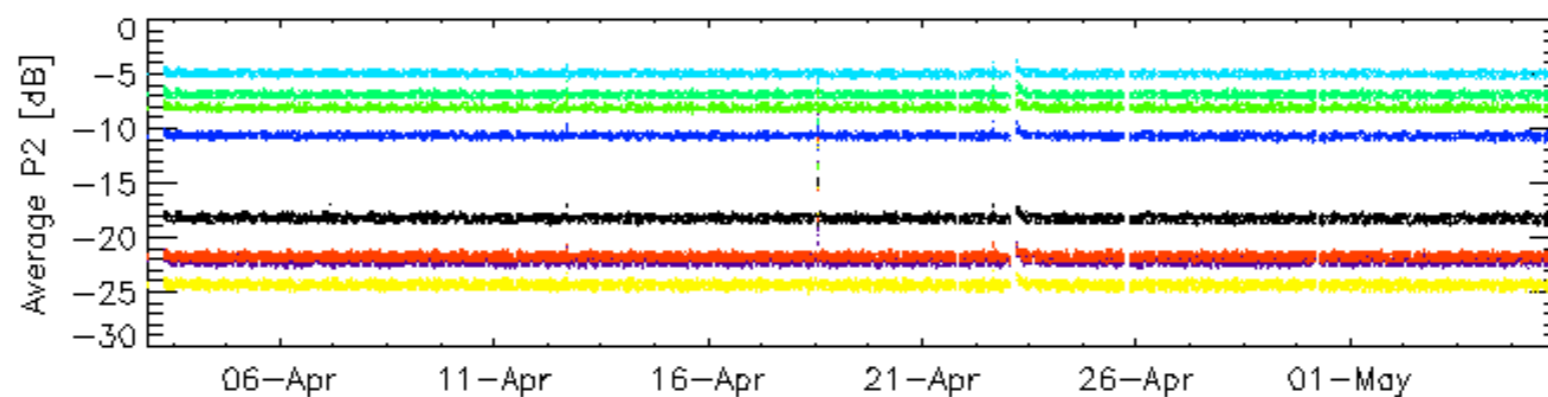
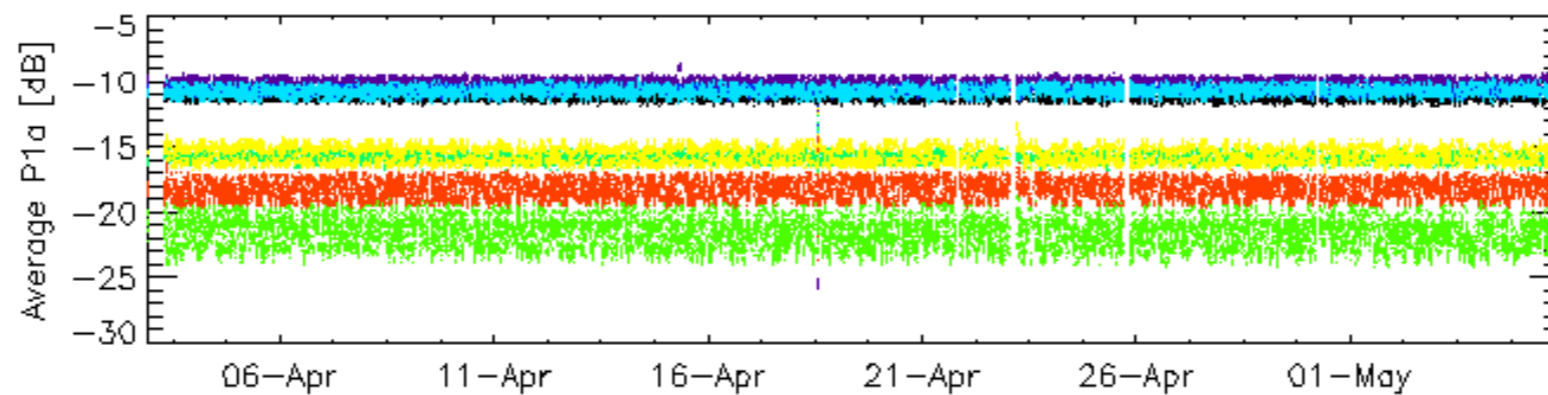
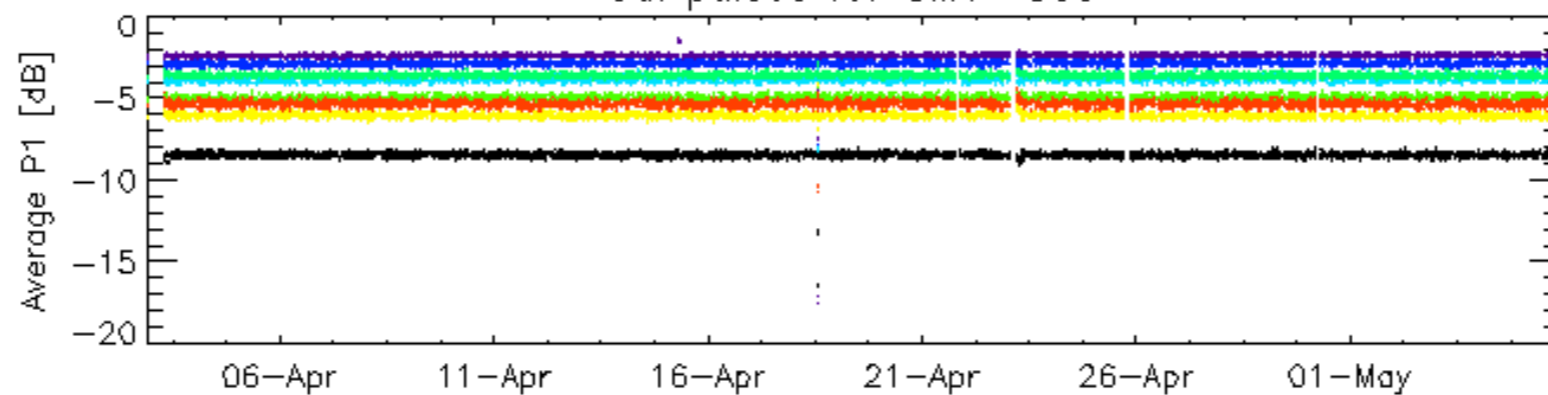


Cal pulses for WVS IS2



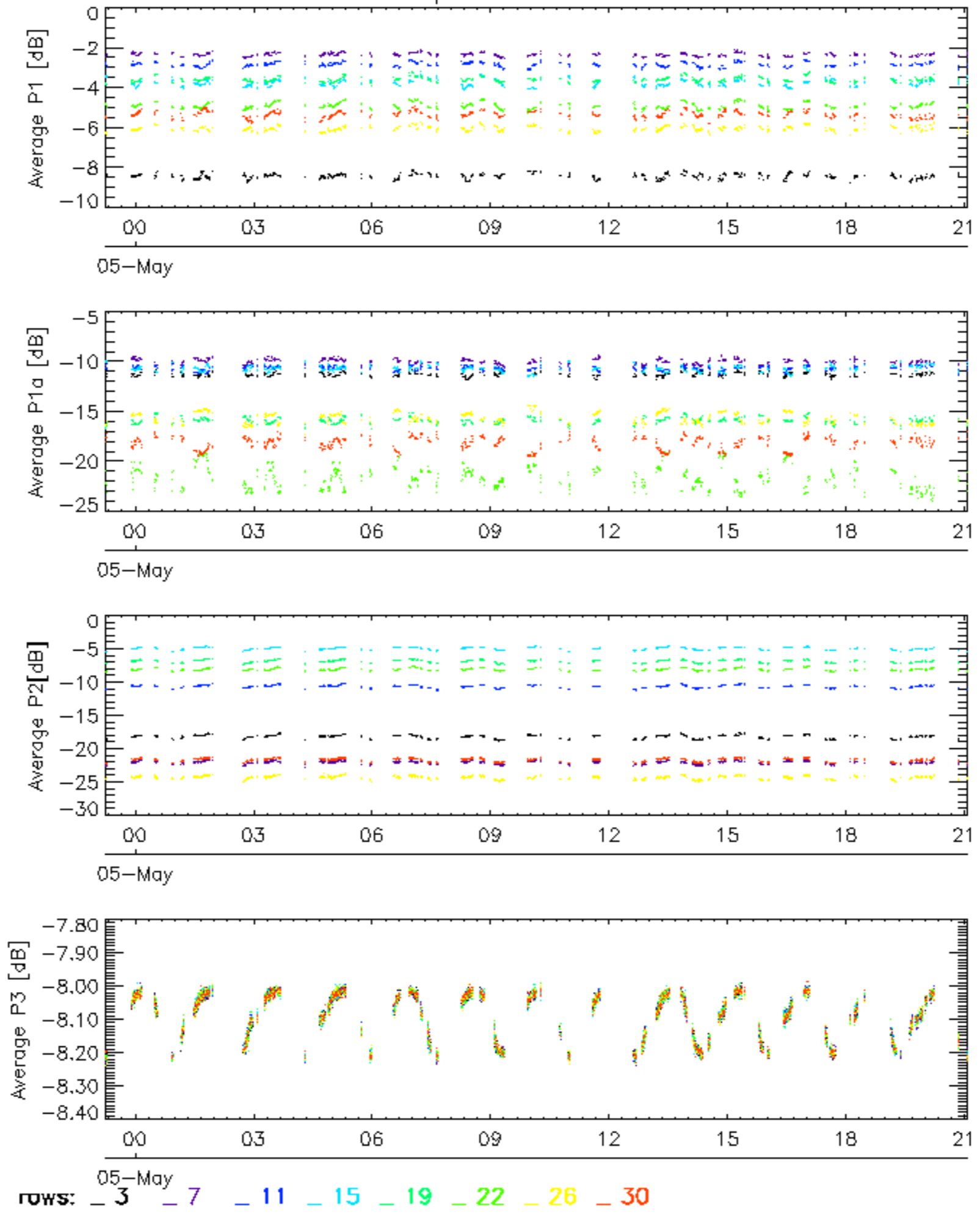
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

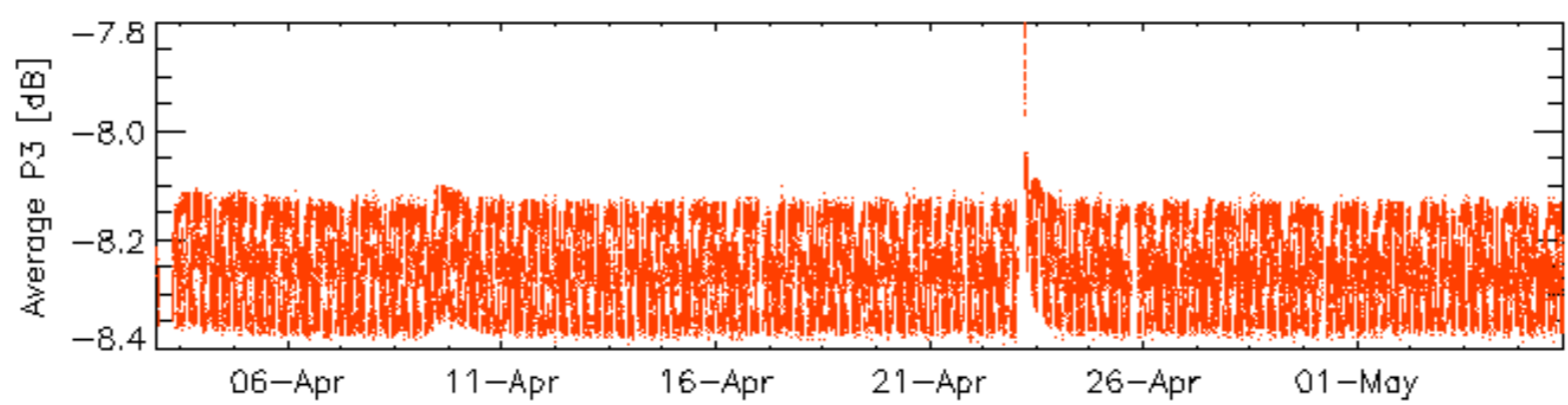
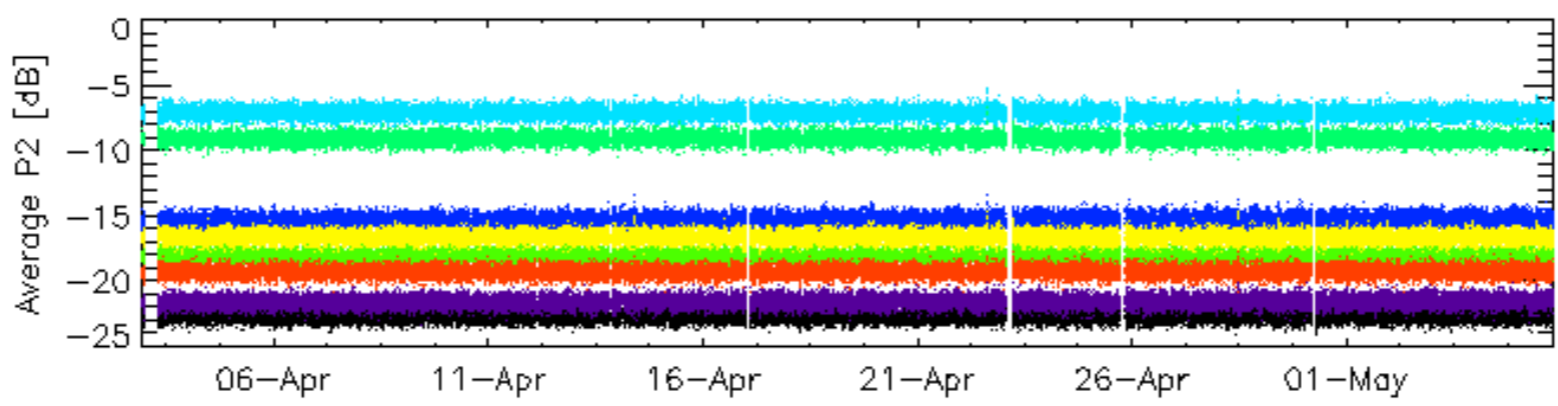
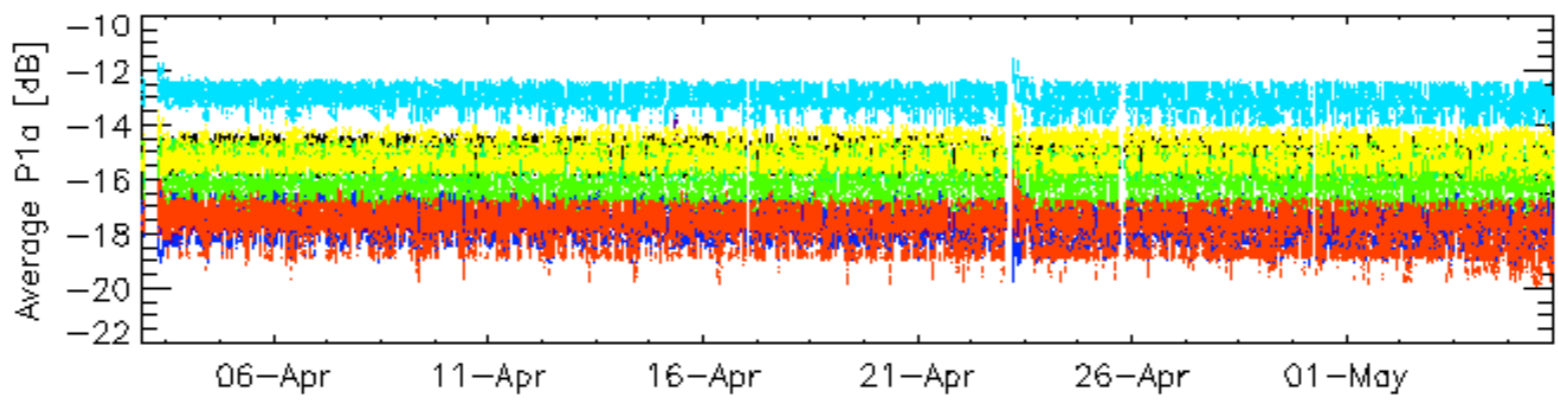
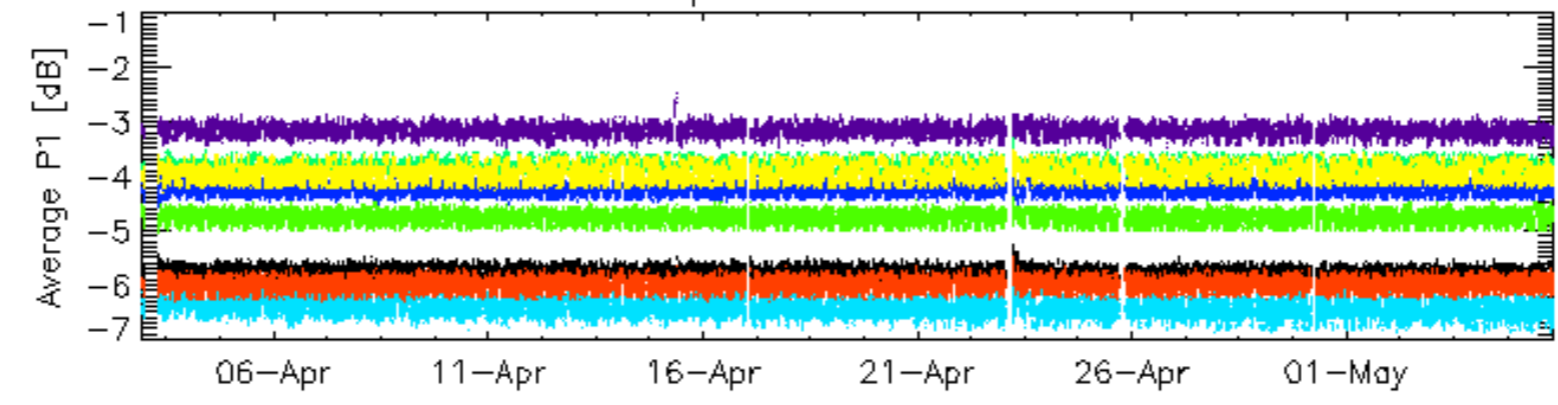


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

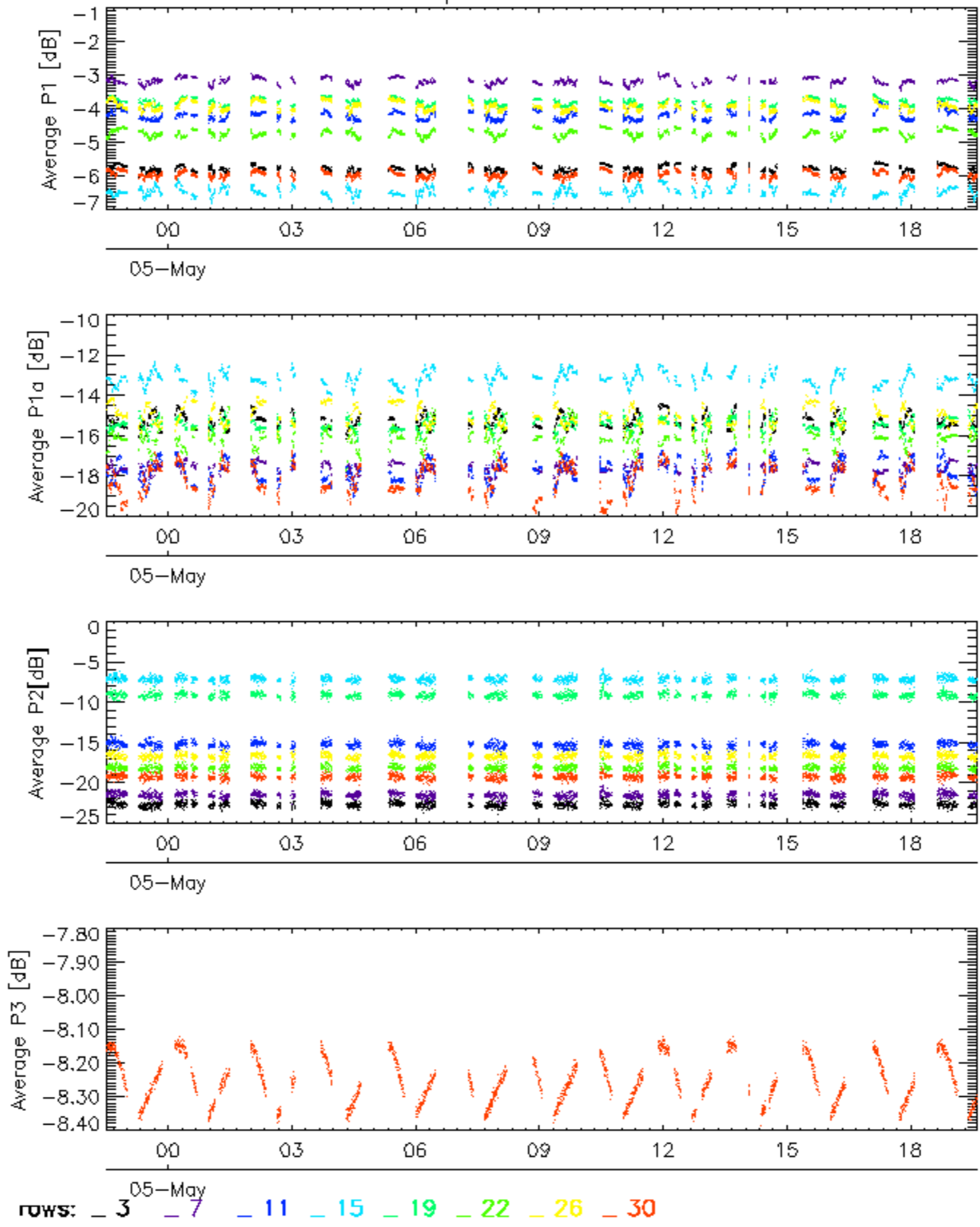


Cal pulses for WVS IS2



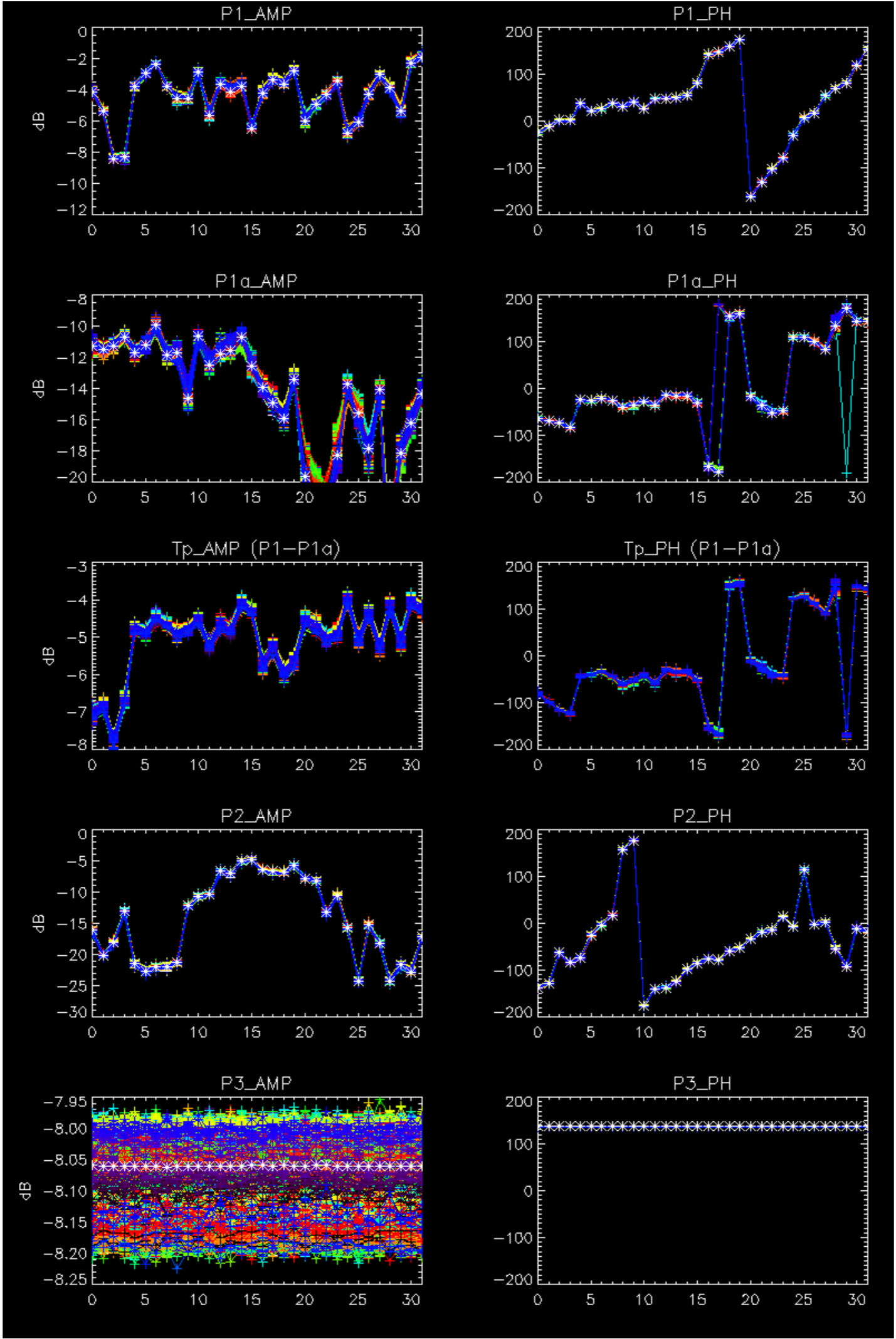
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

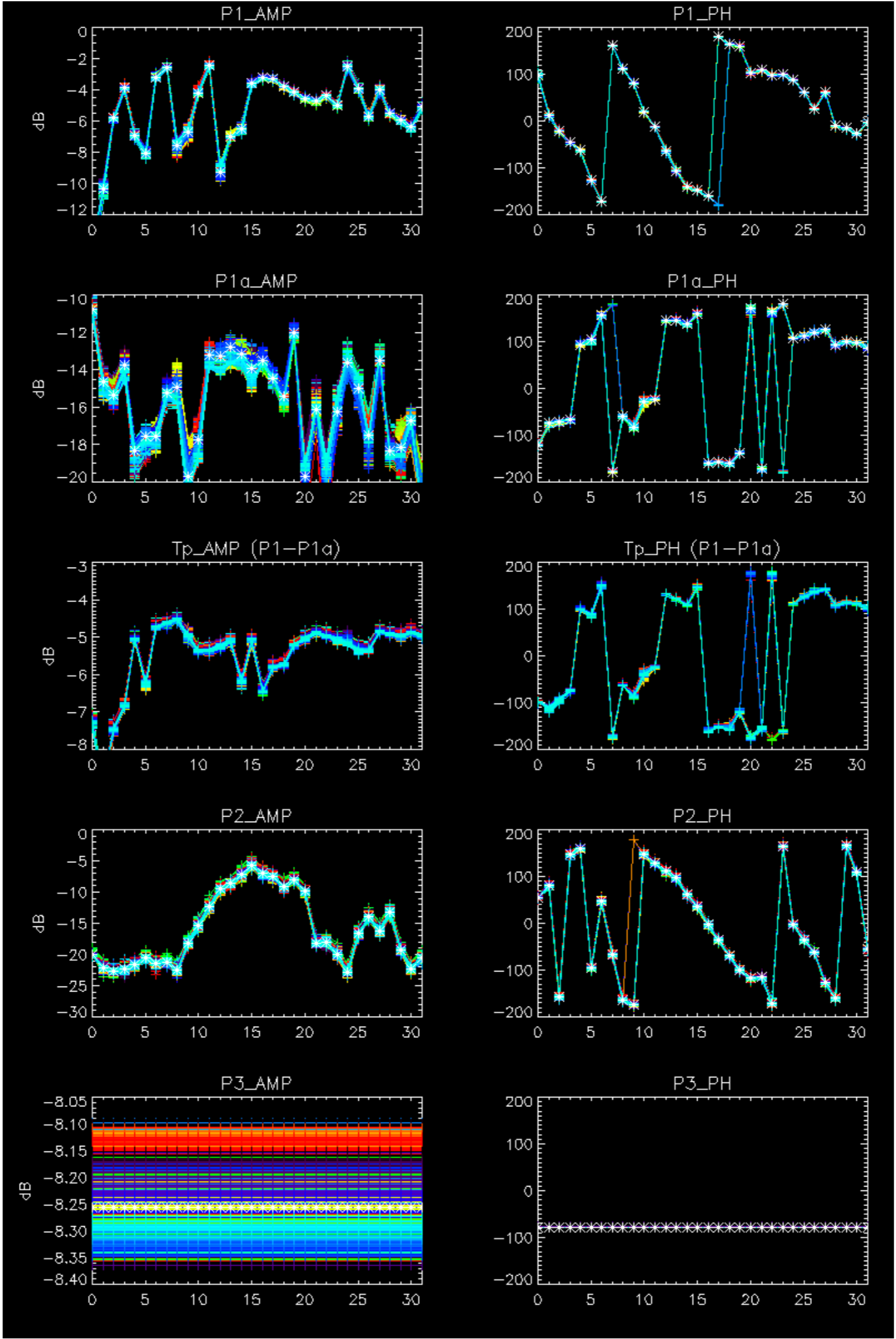
Cal pulses for WVS IS2



No anomalies observed.



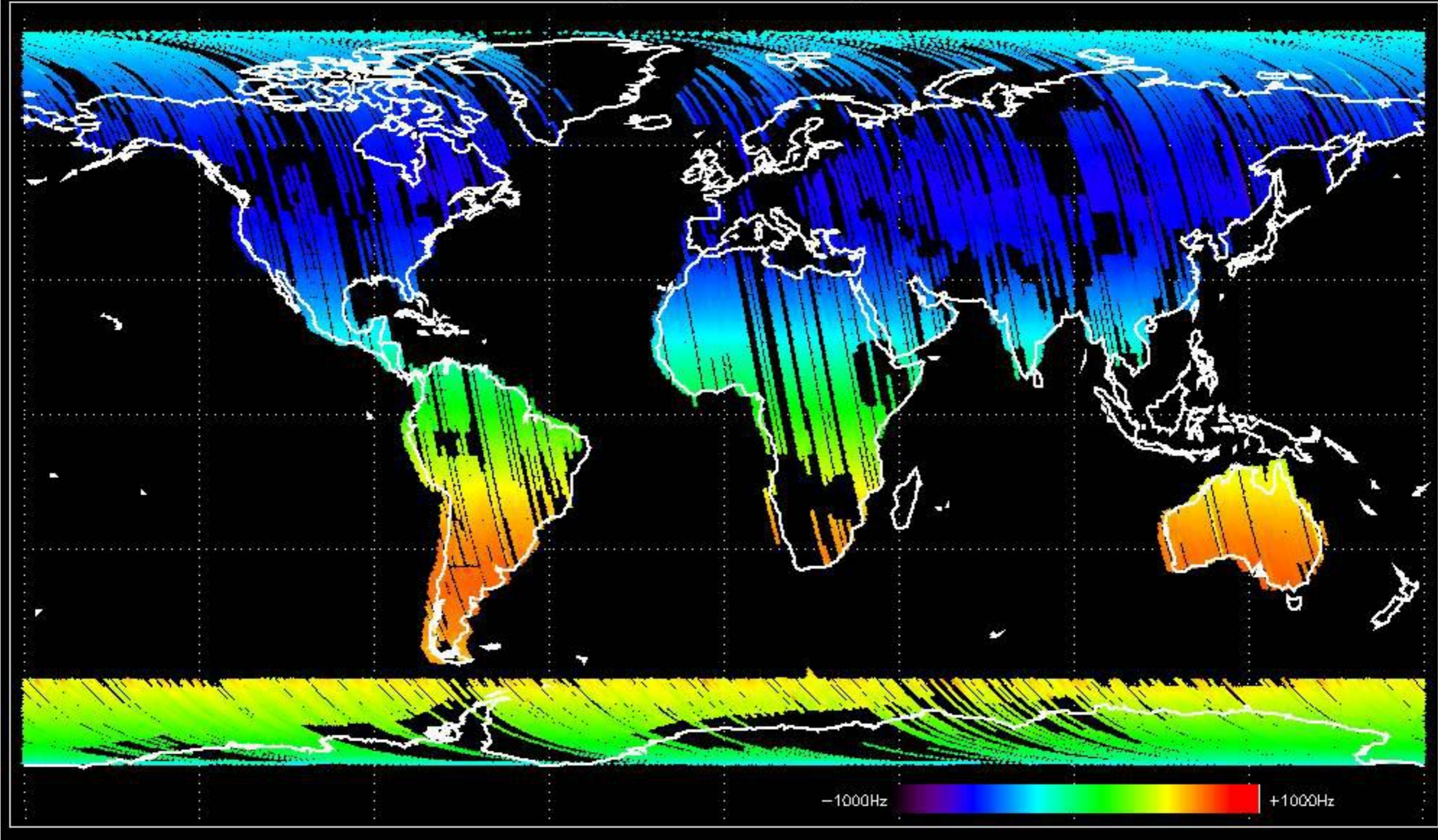




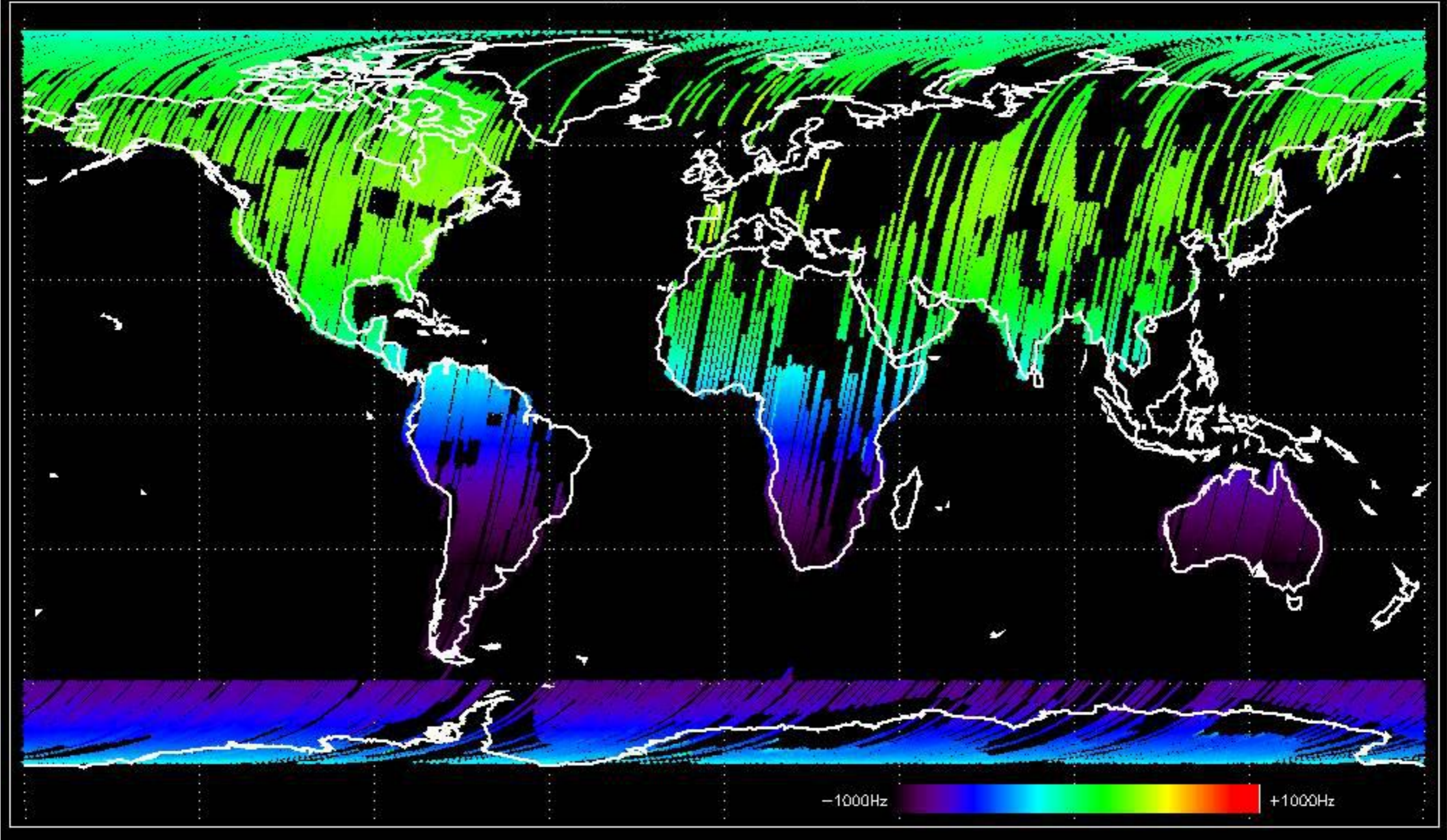
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



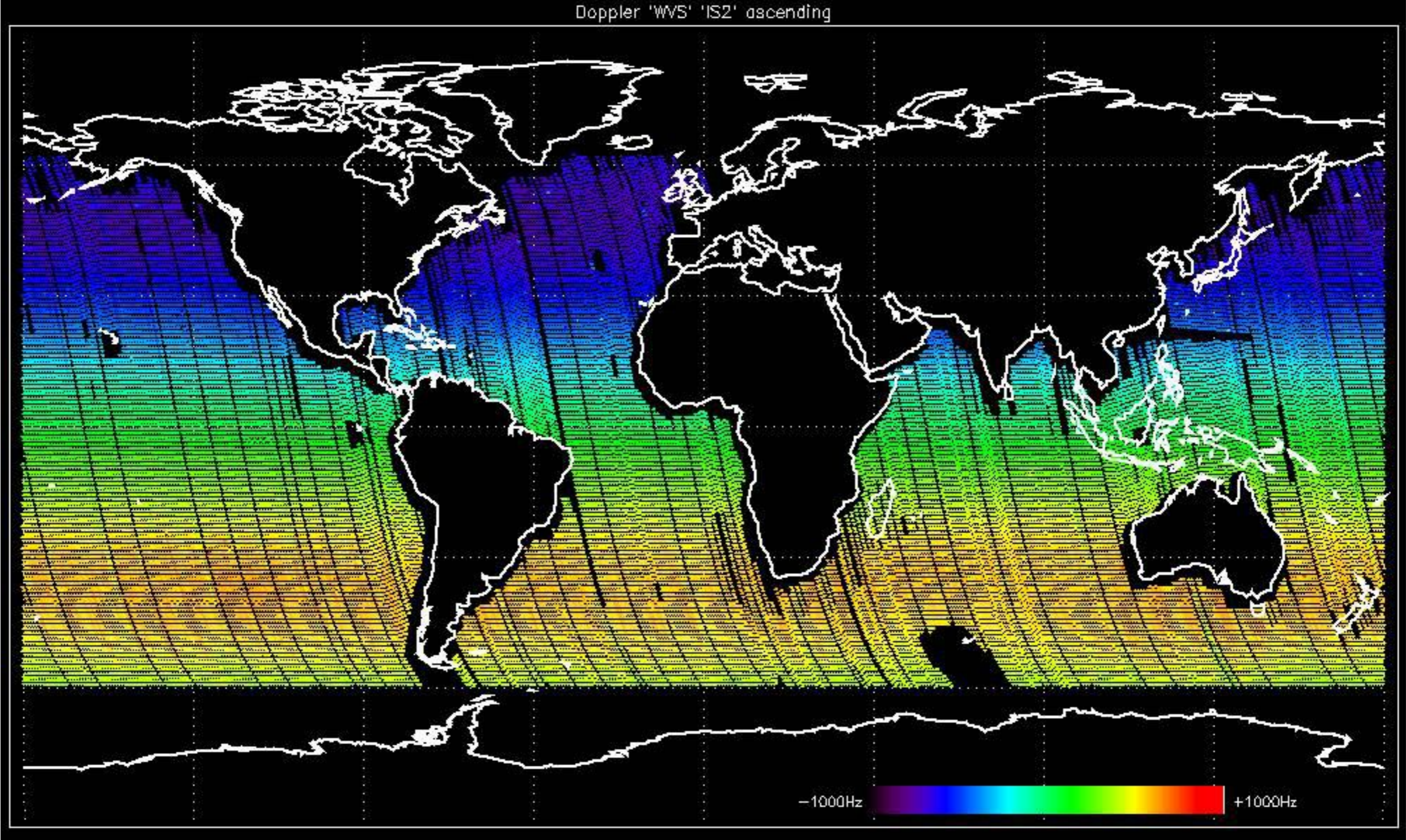
Doppler 'GM1' 'SS1' ascending



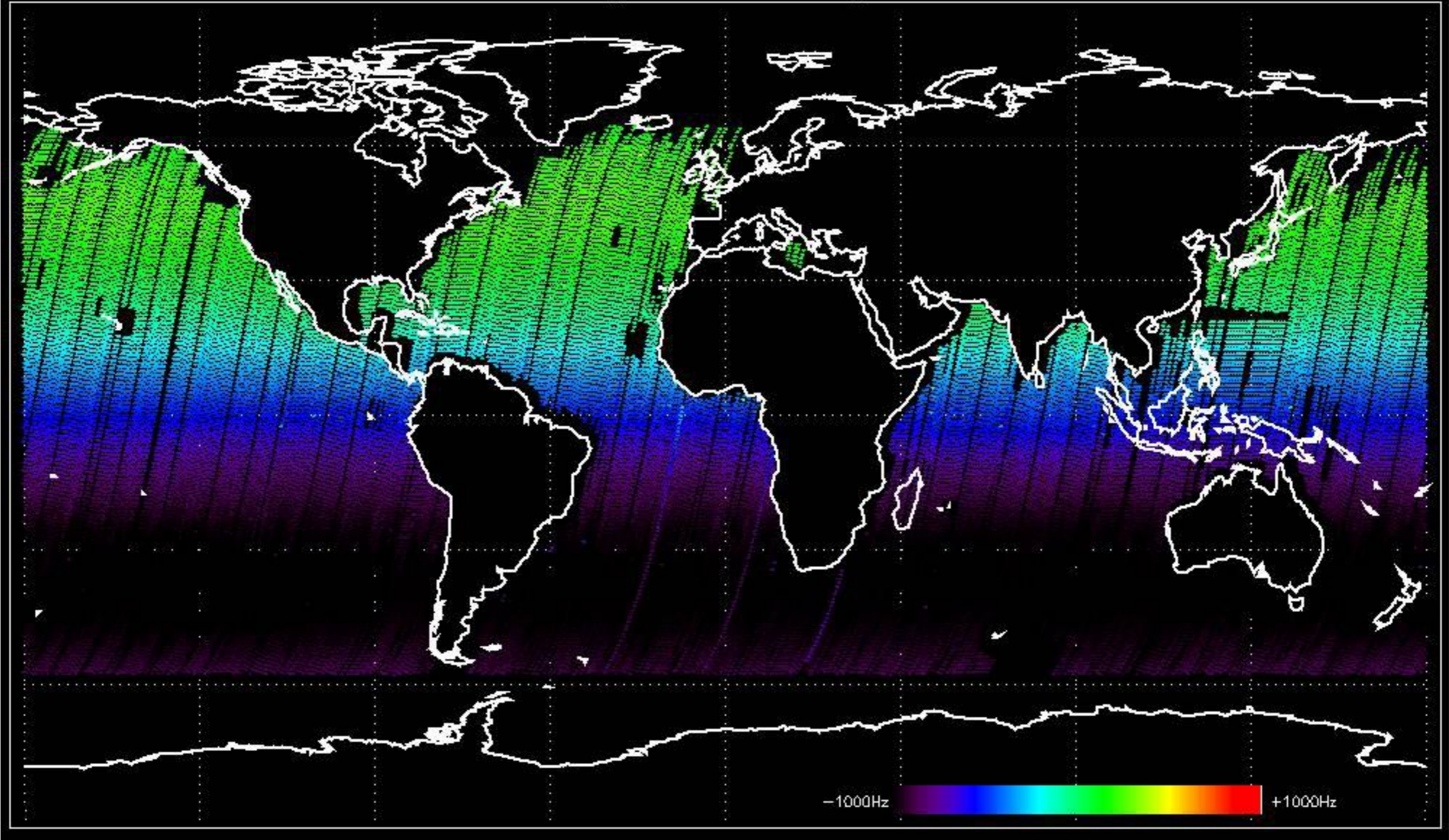
Doppler 'GM1' 'SS1' descending



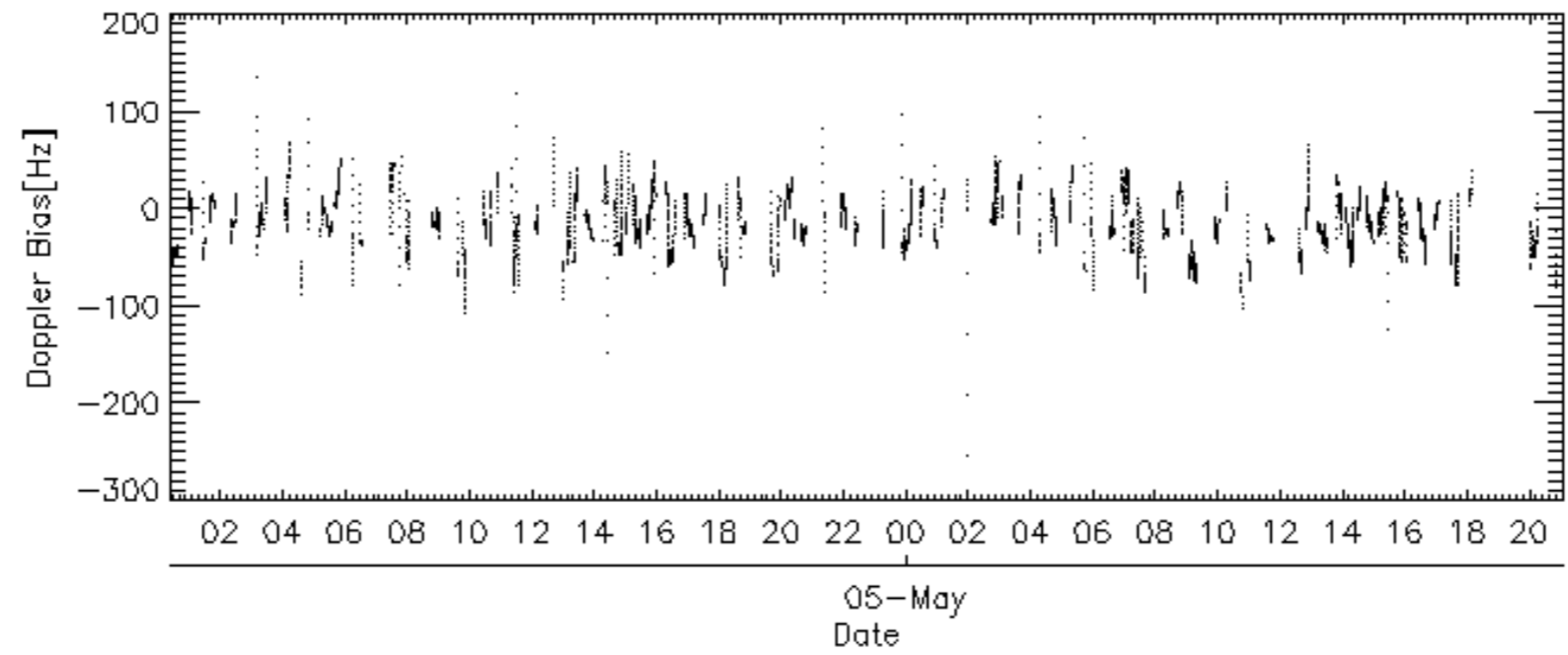
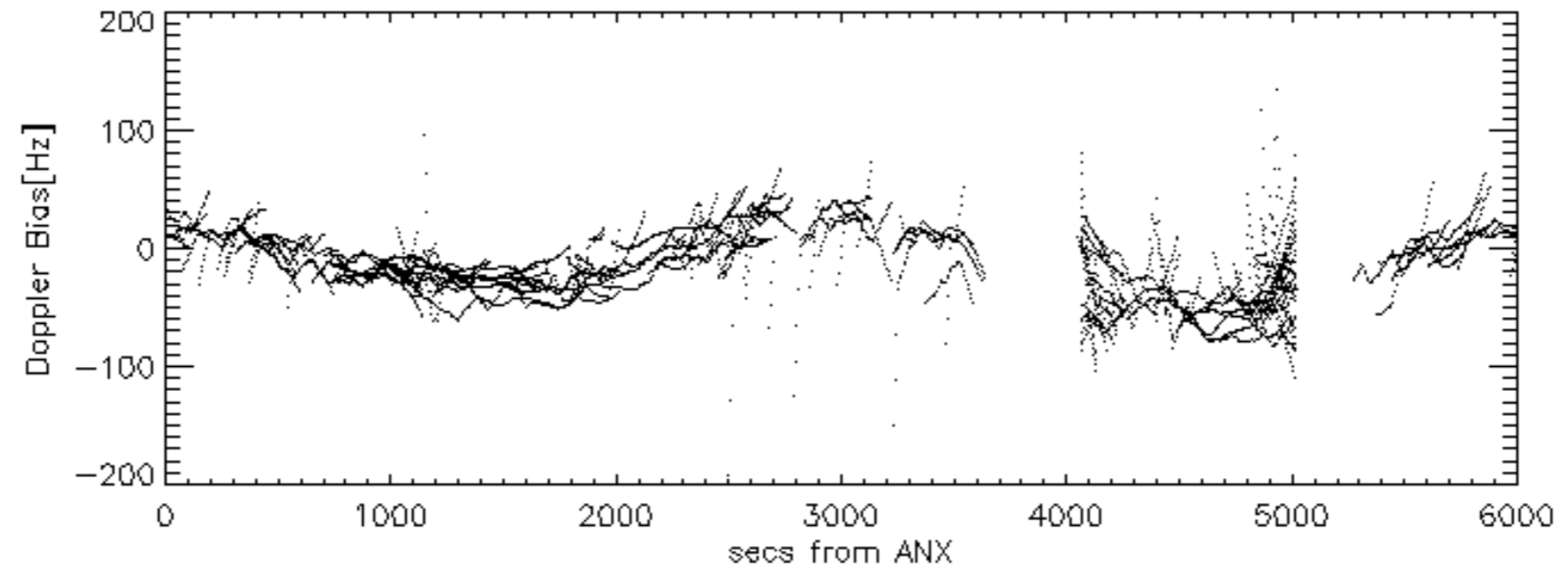
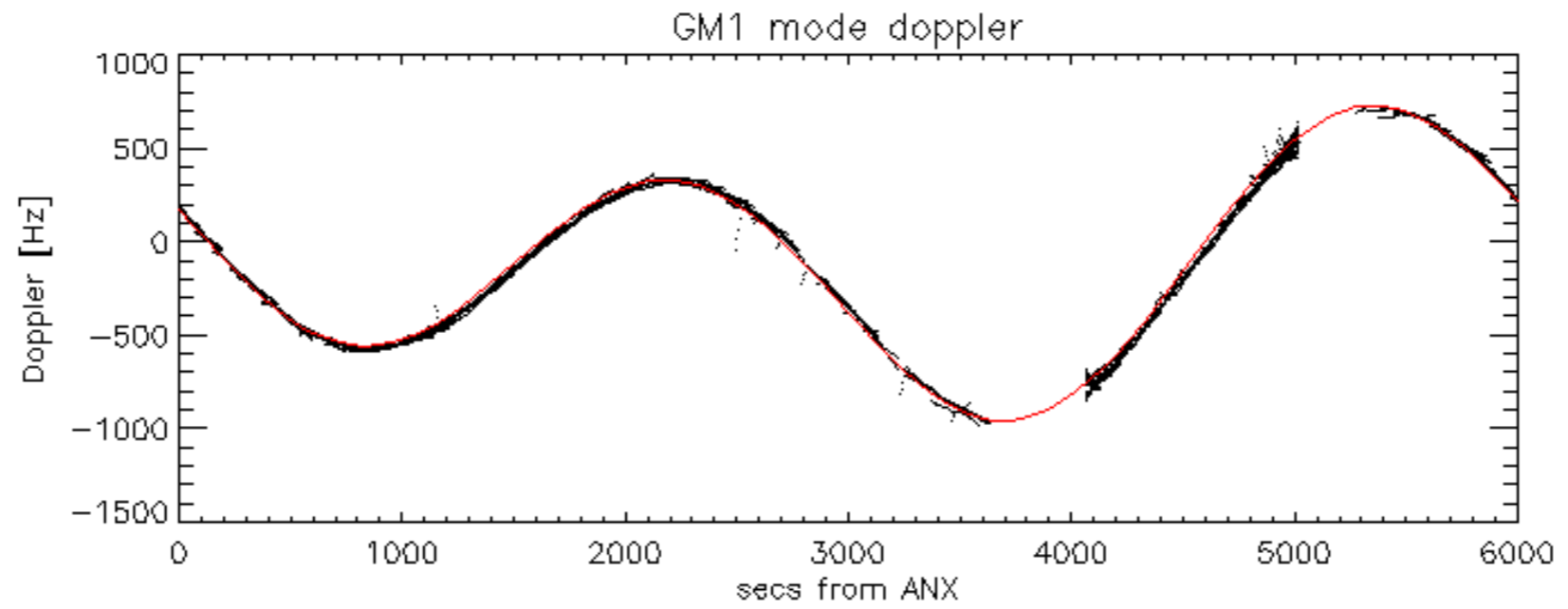
Doppler 'WVS' 'IS2' ascending

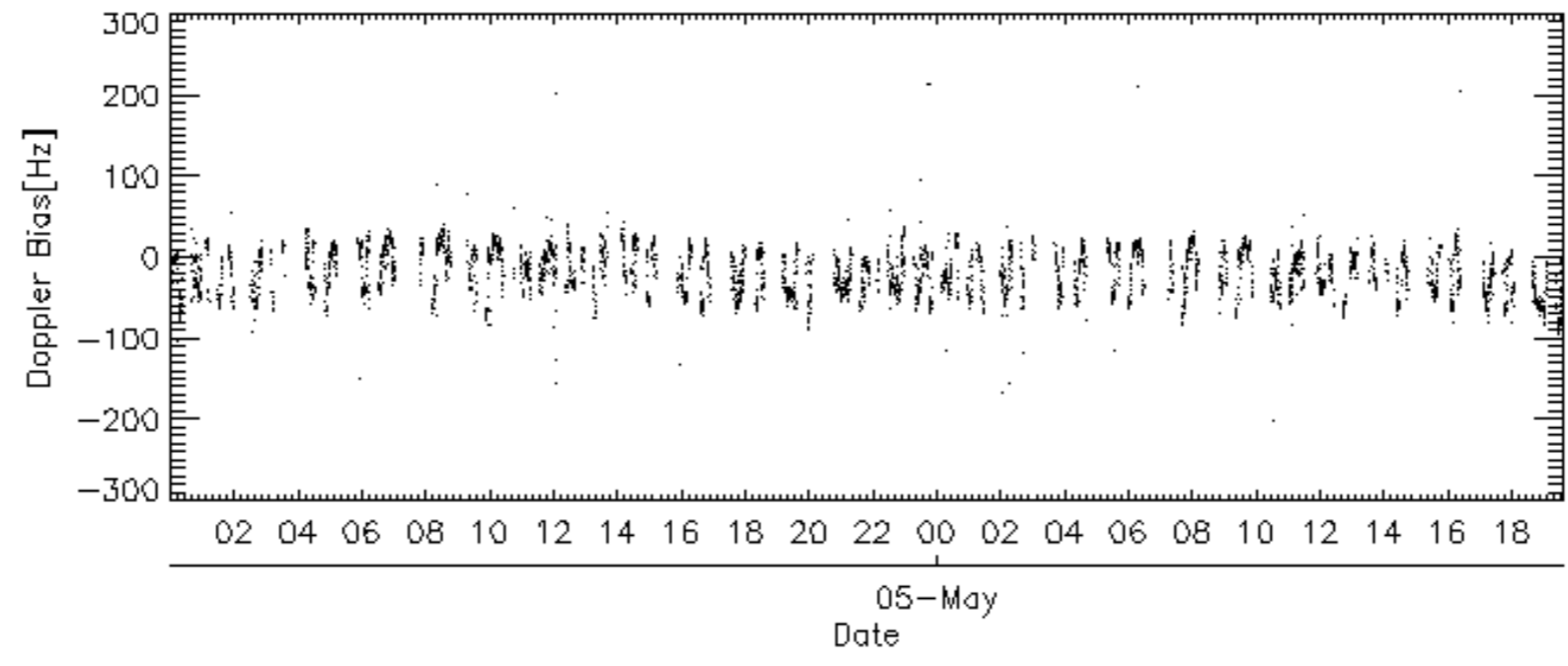
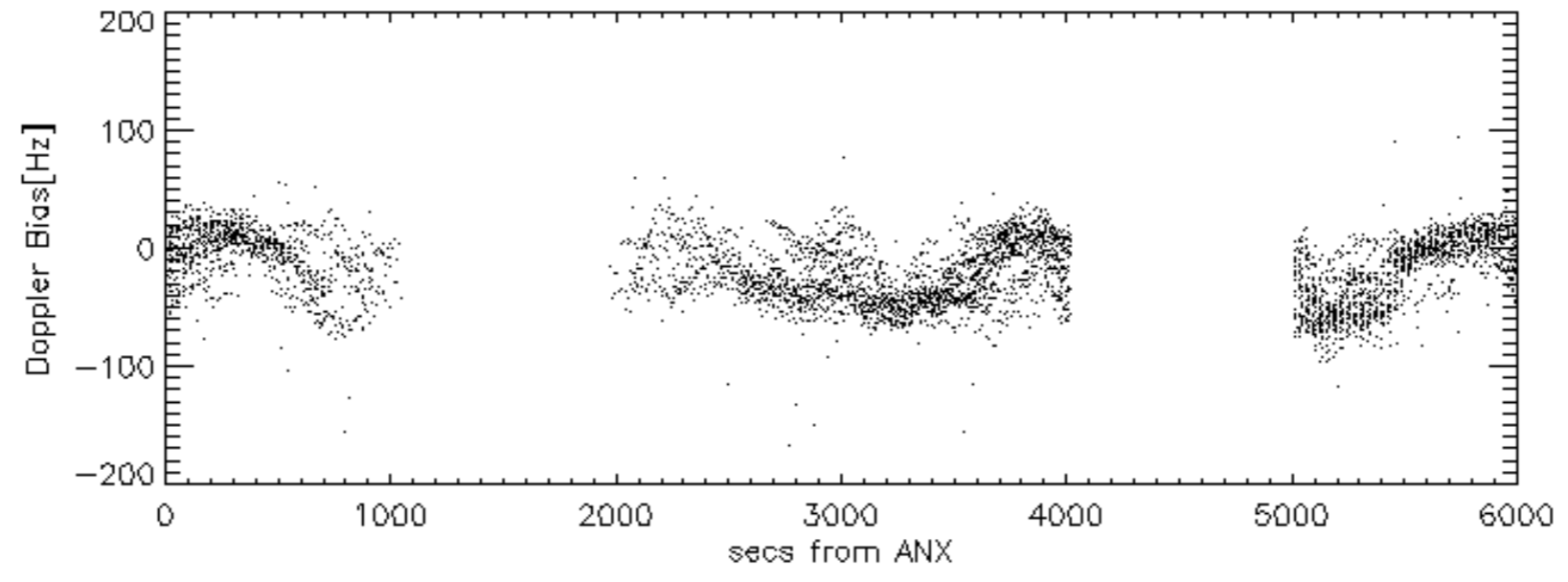
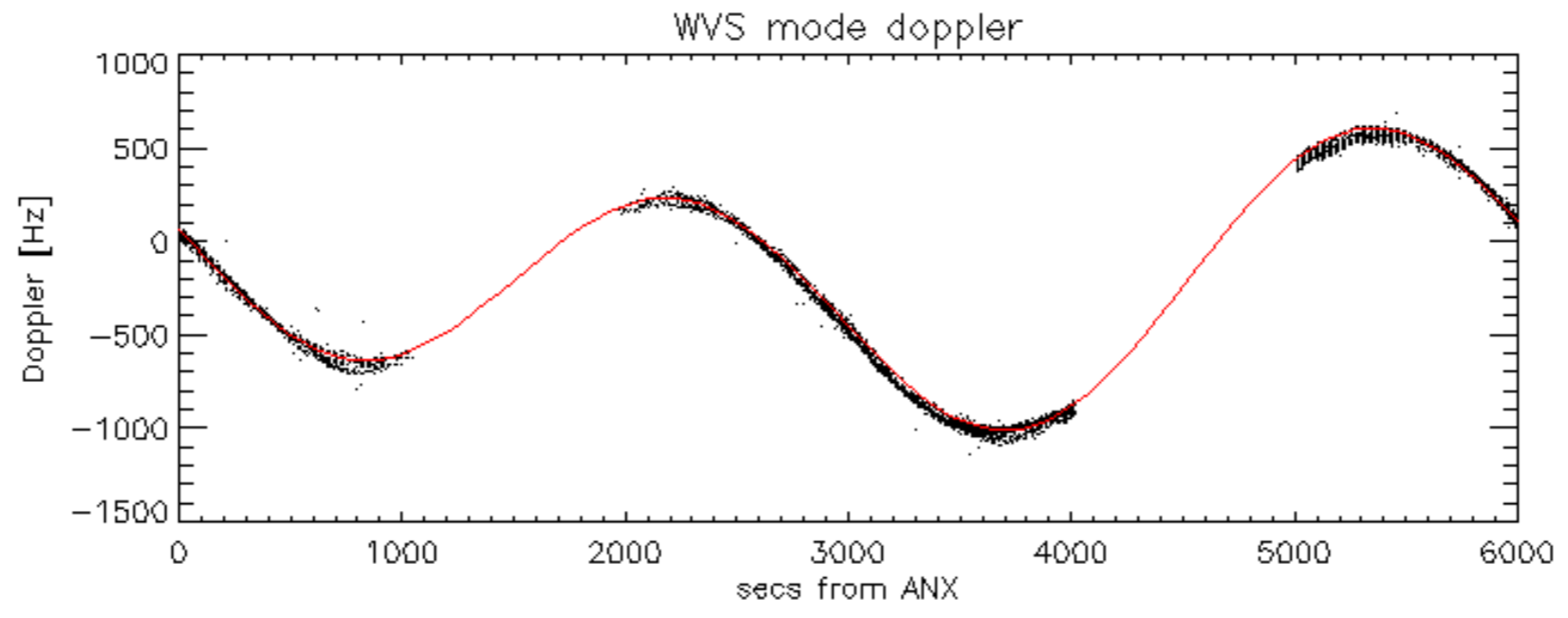


Doppler 'WVS' 'IS2' descending

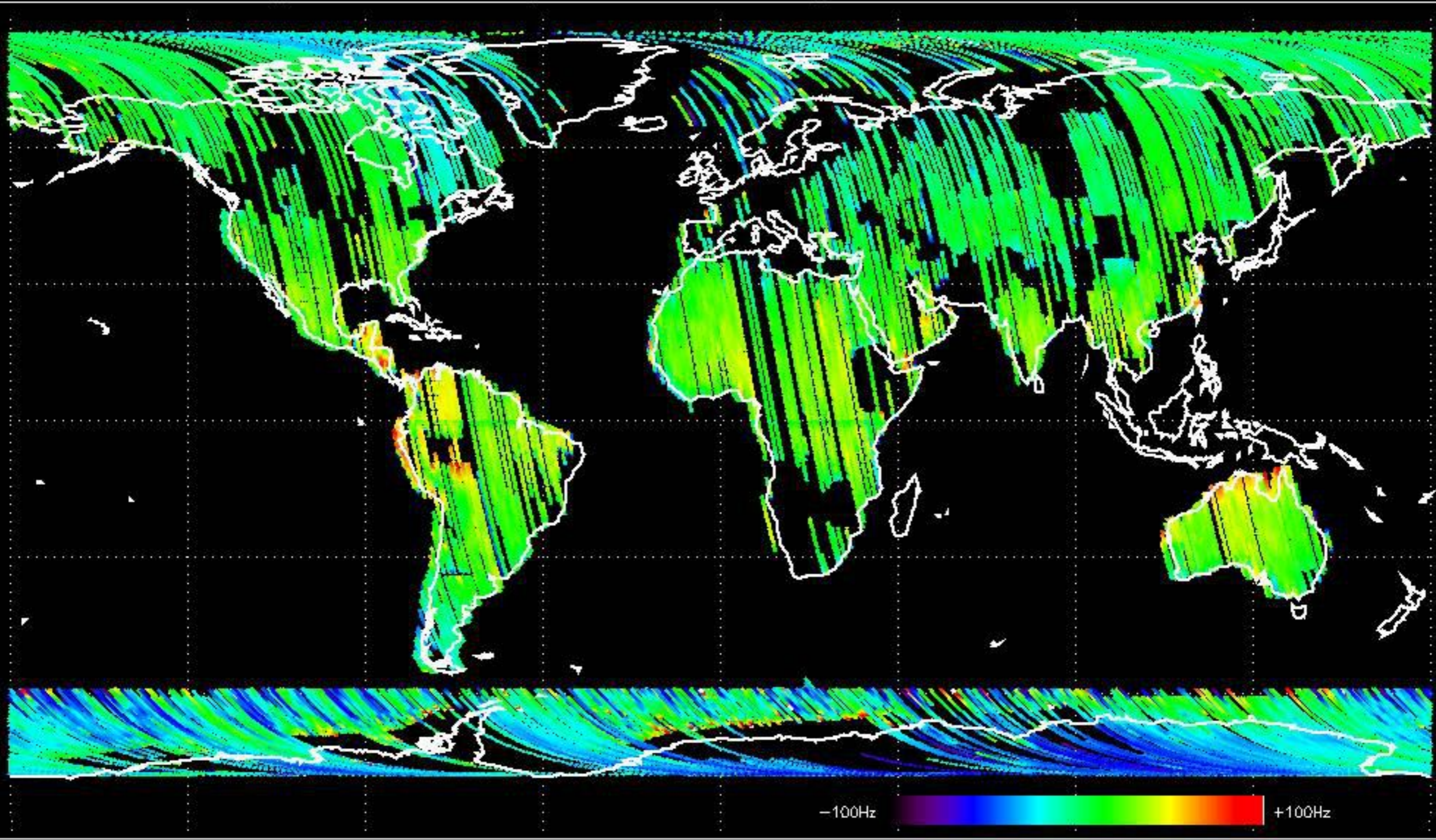




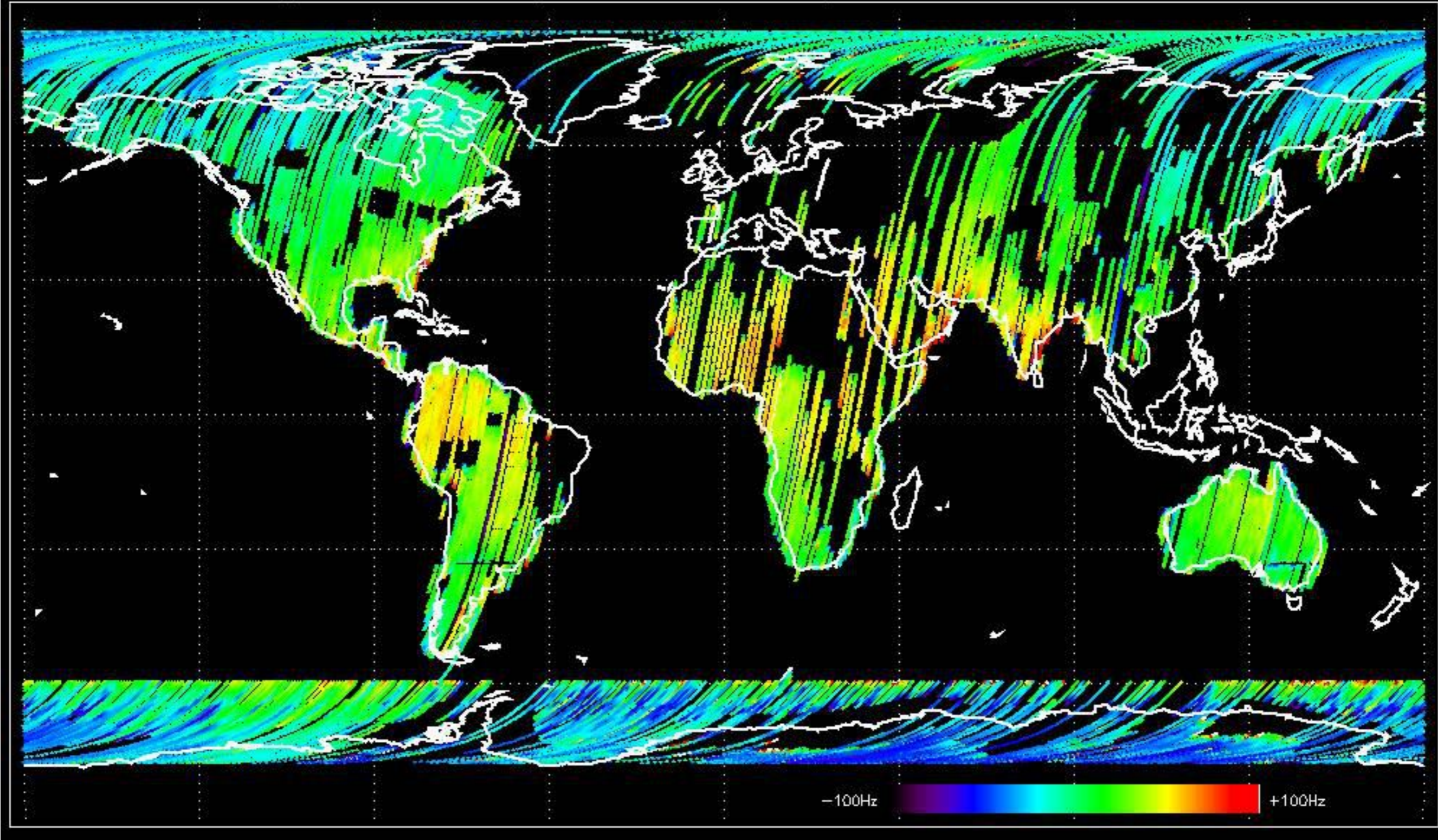




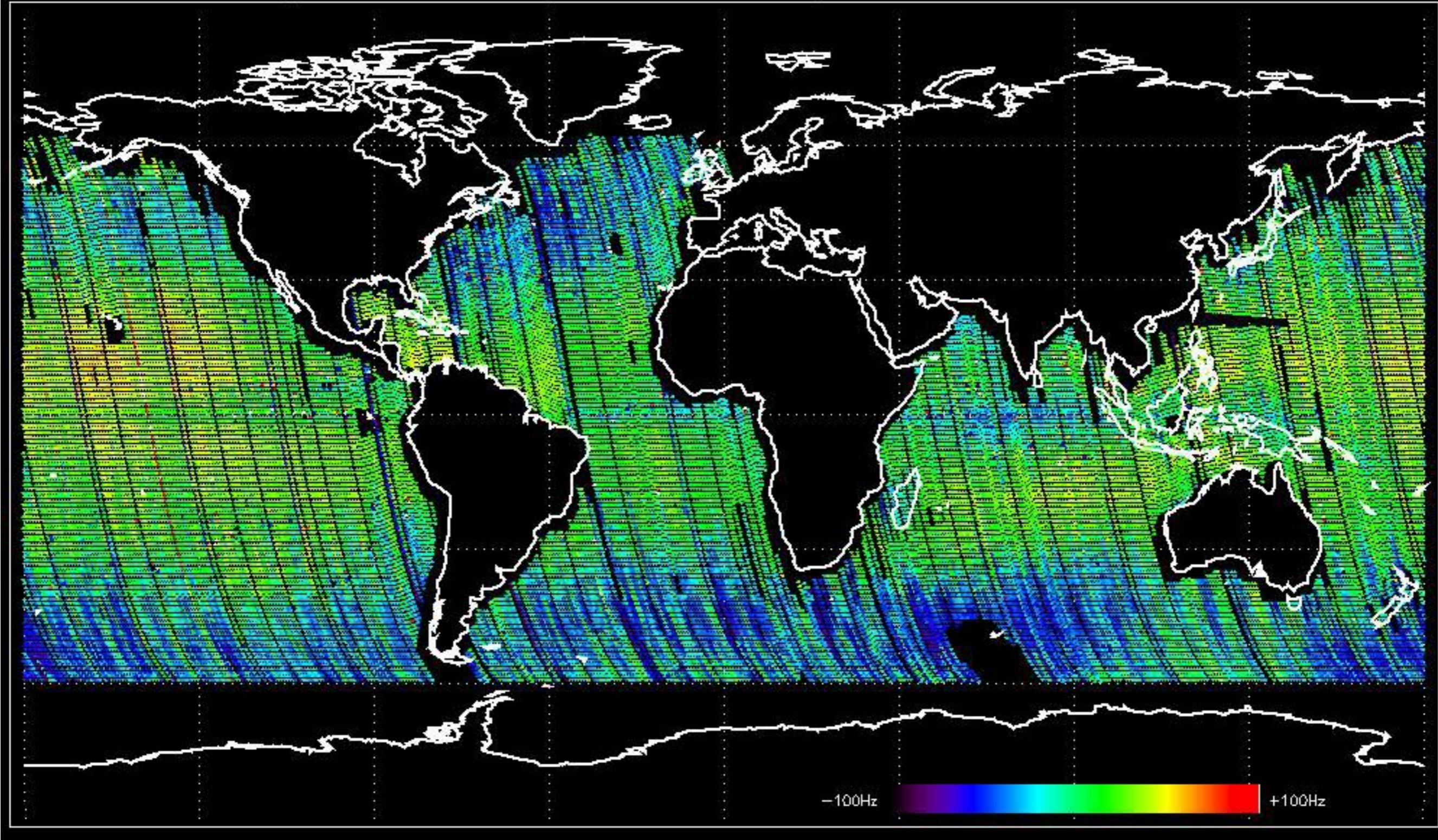
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -24.780910 Hz



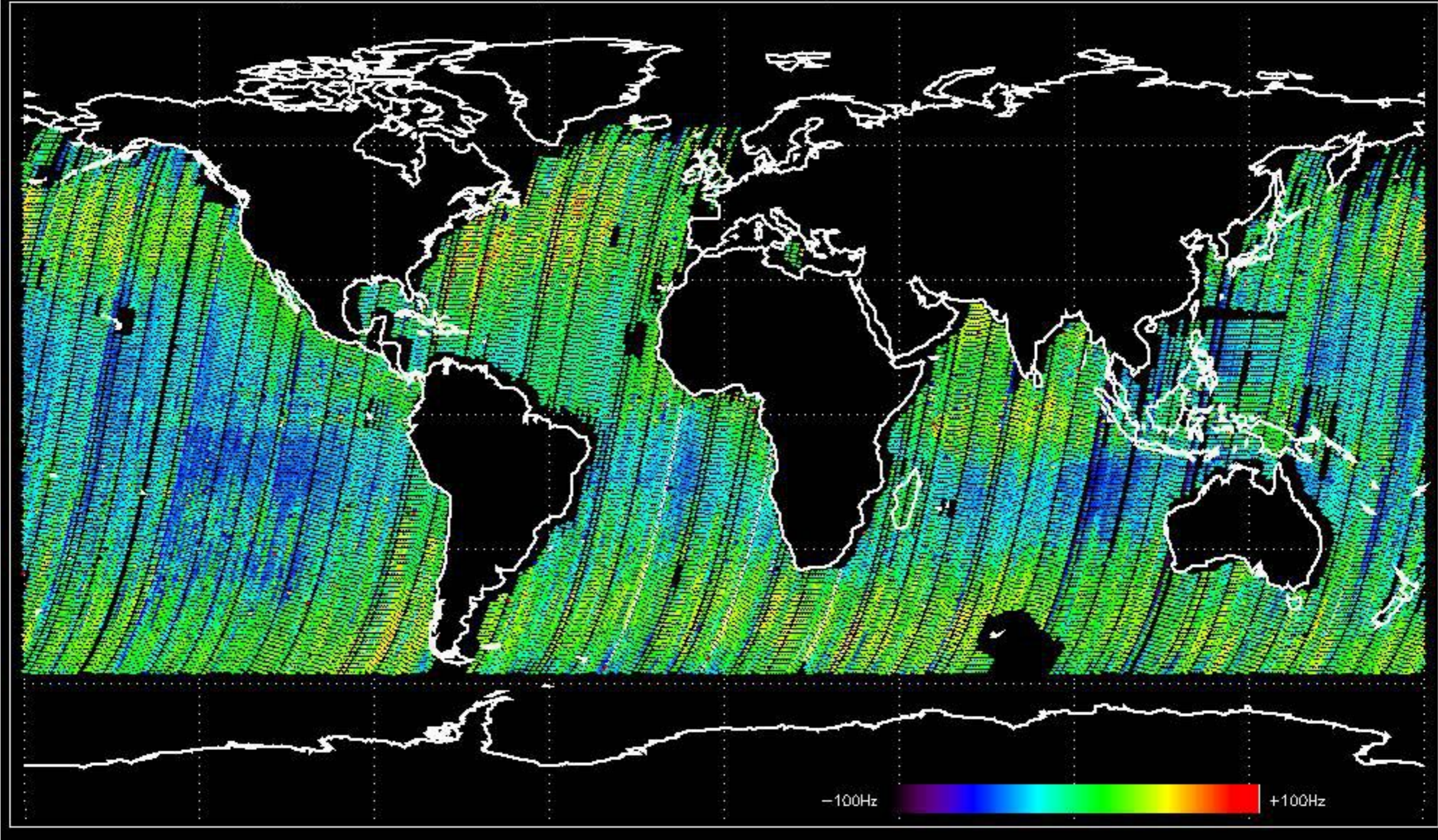
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.535199 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -19.082106 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.562129 Hz



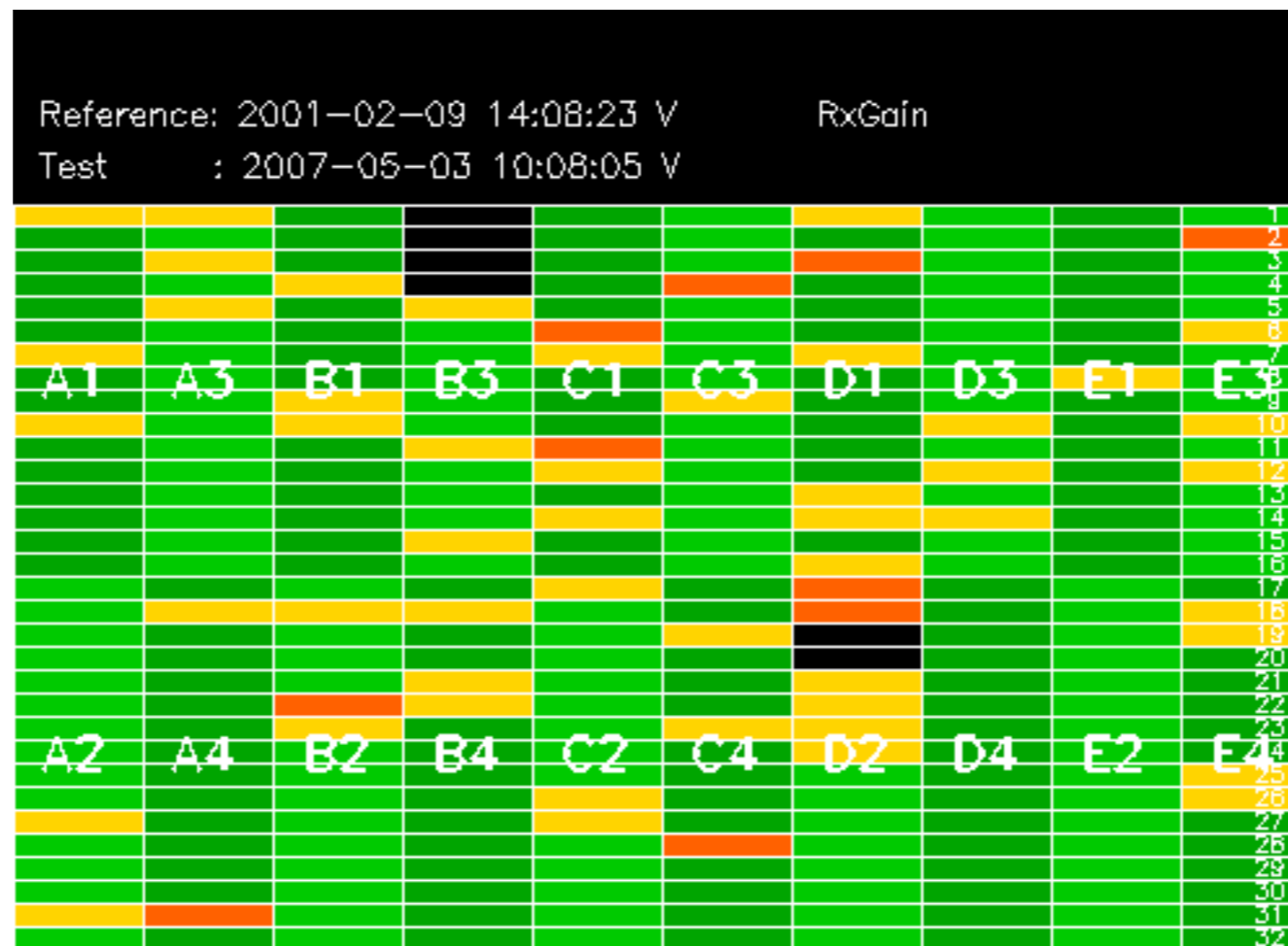
No anomalies observed on available MS products:

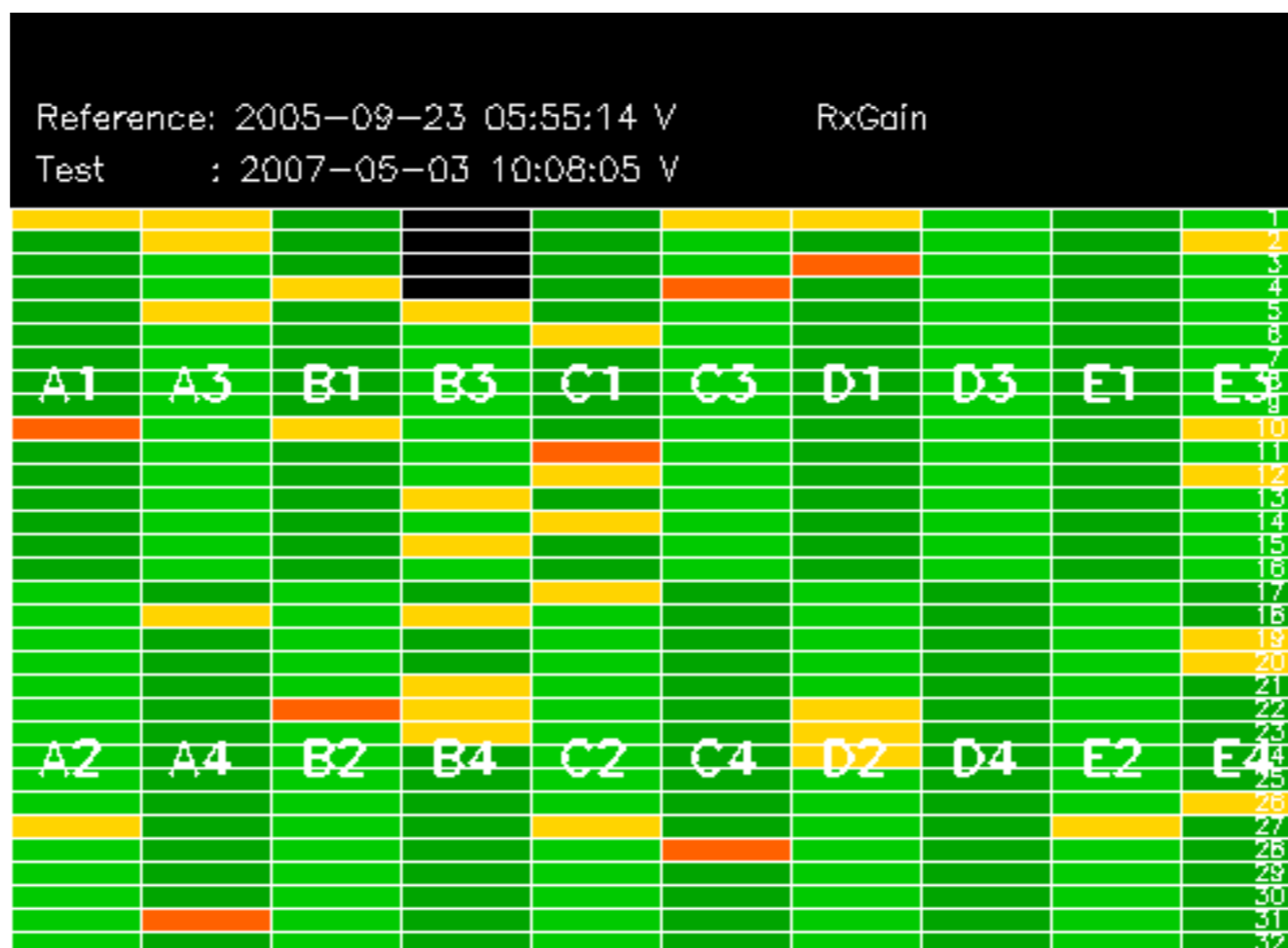
No anomalies observed.

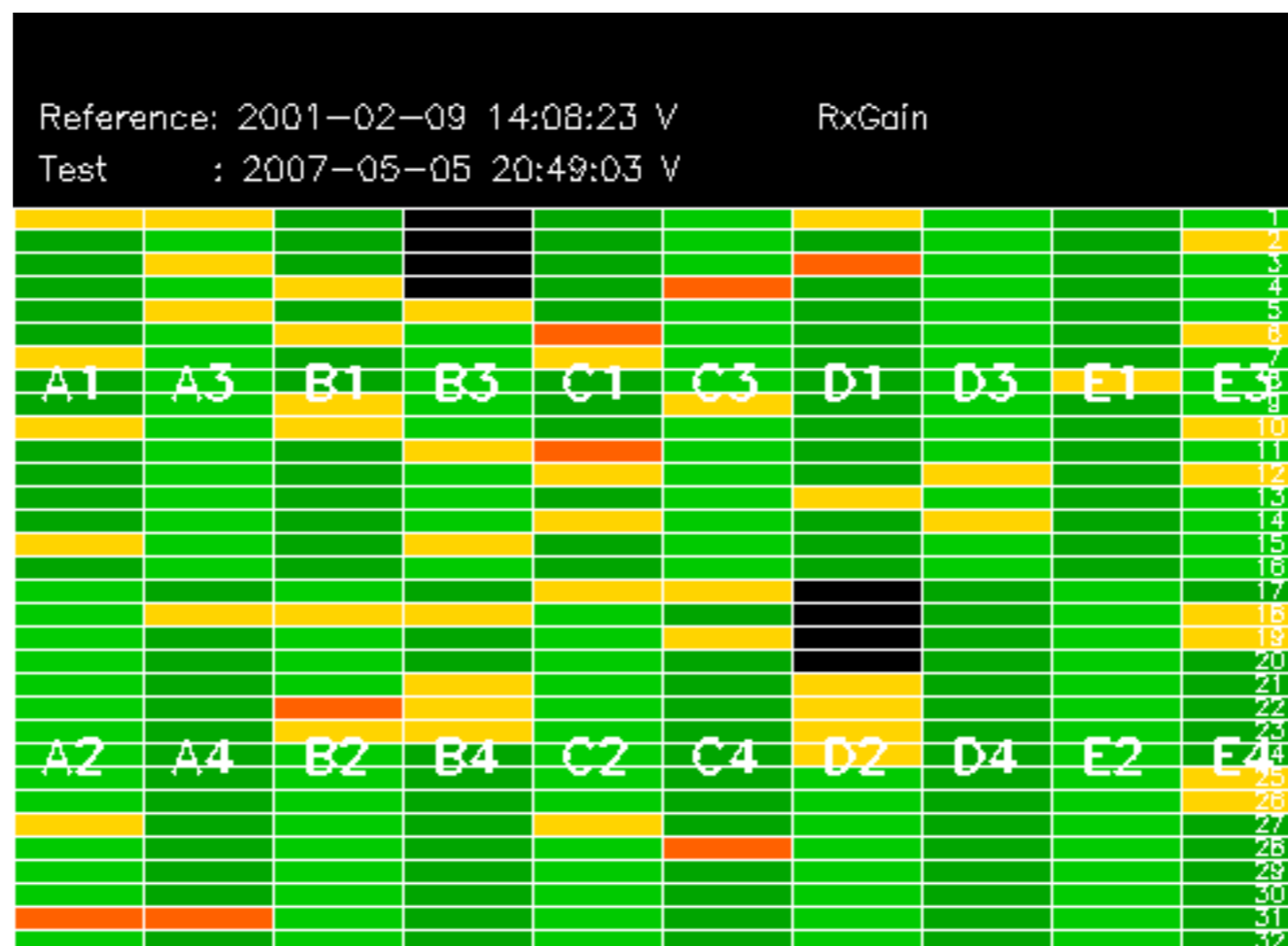












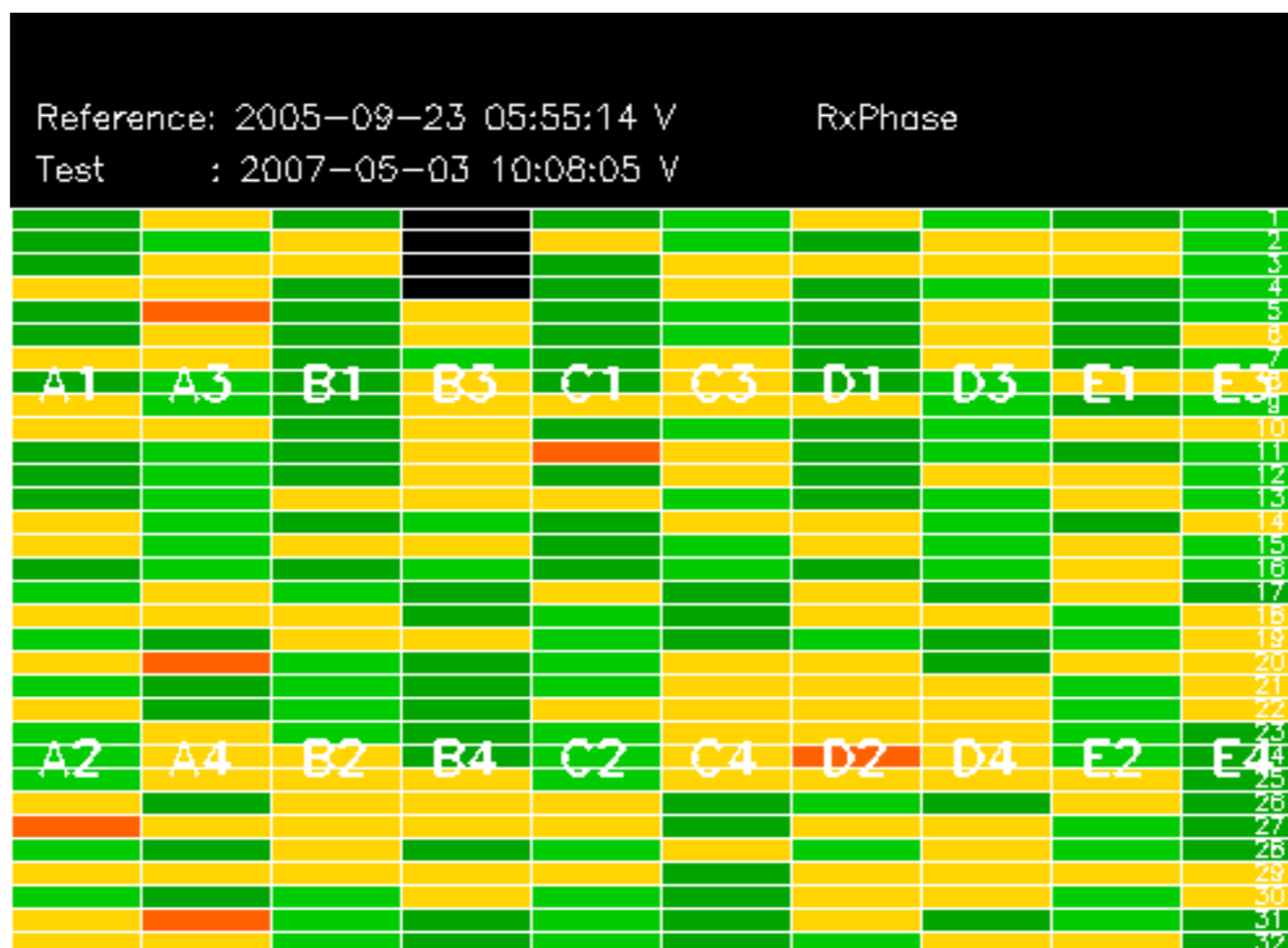






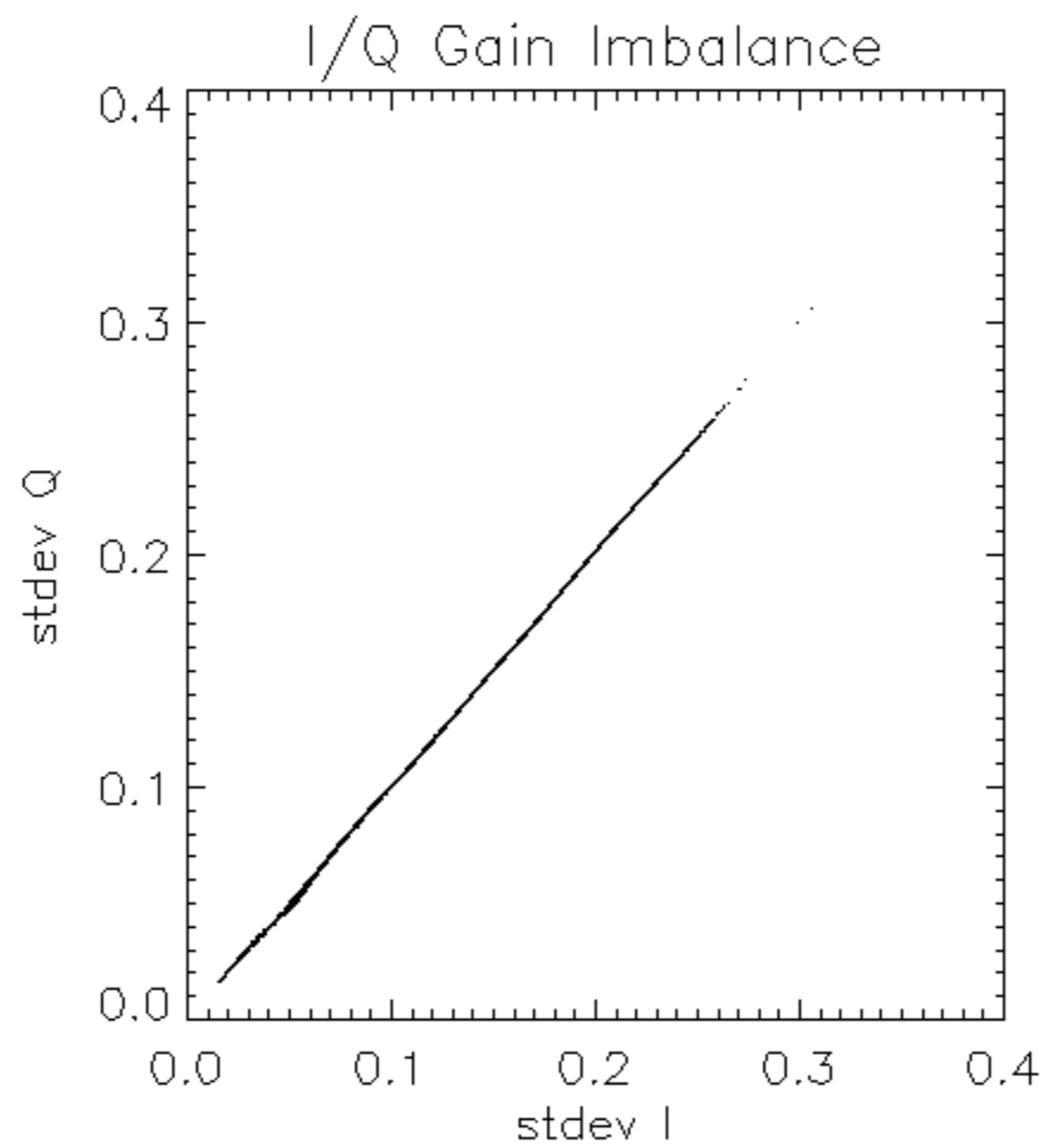


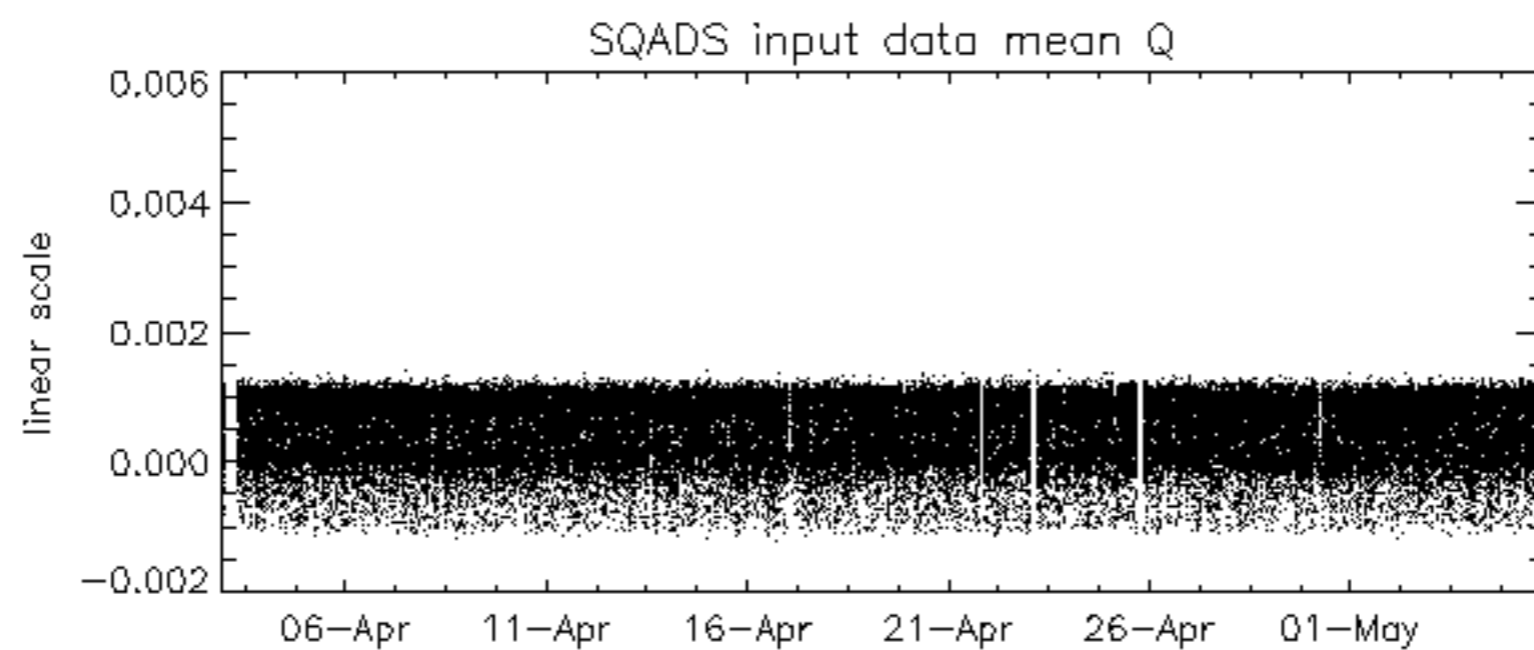
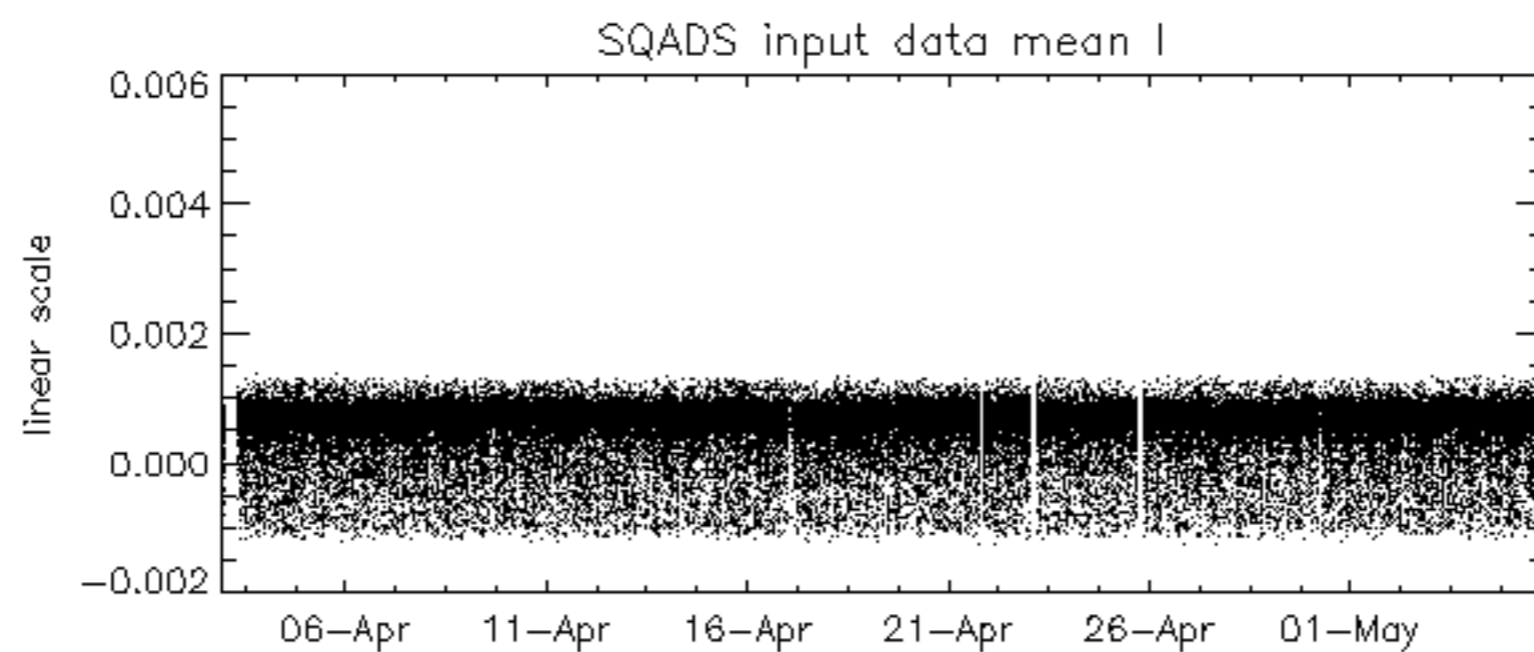
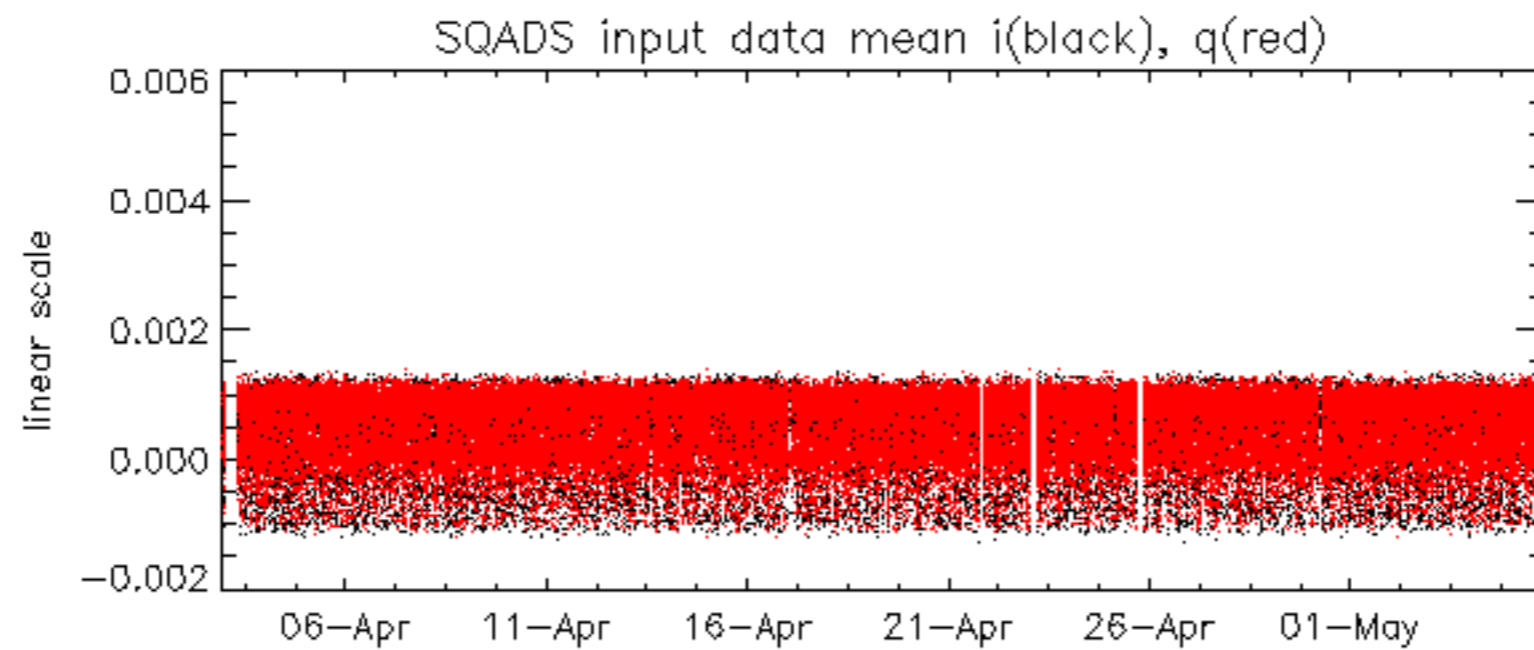


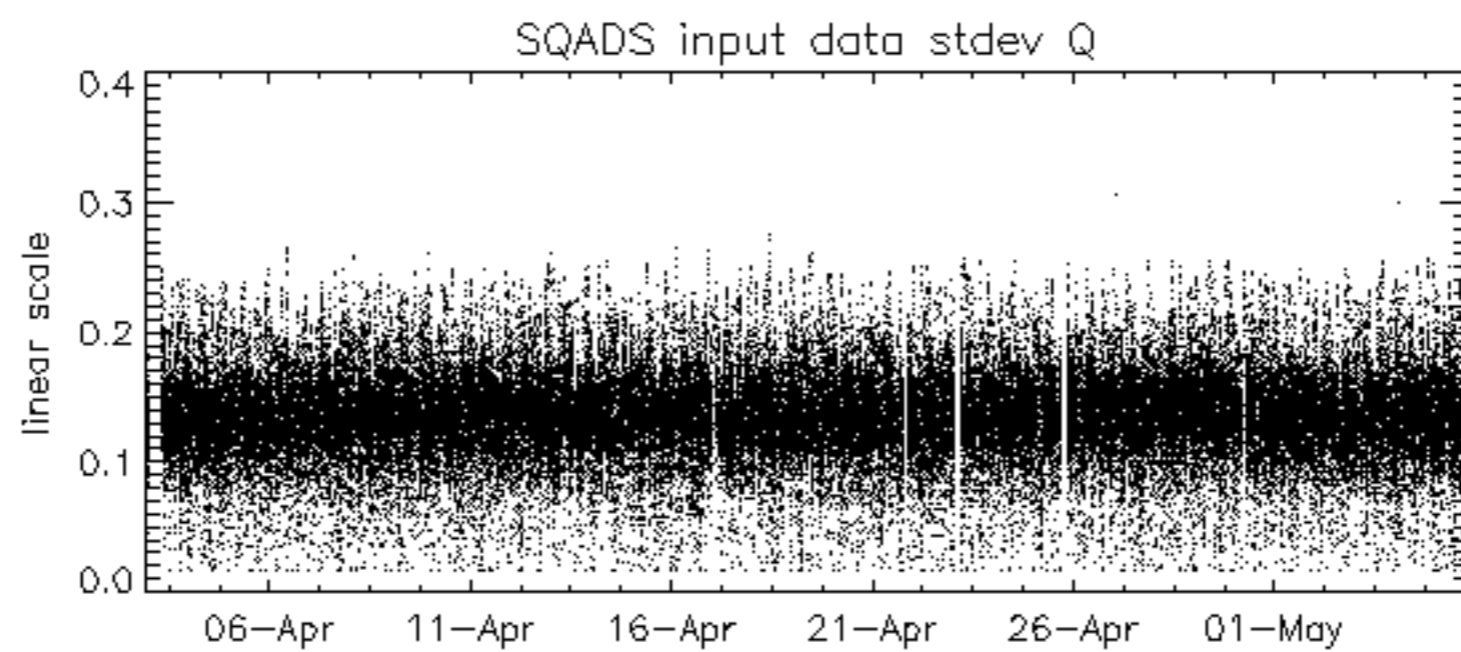
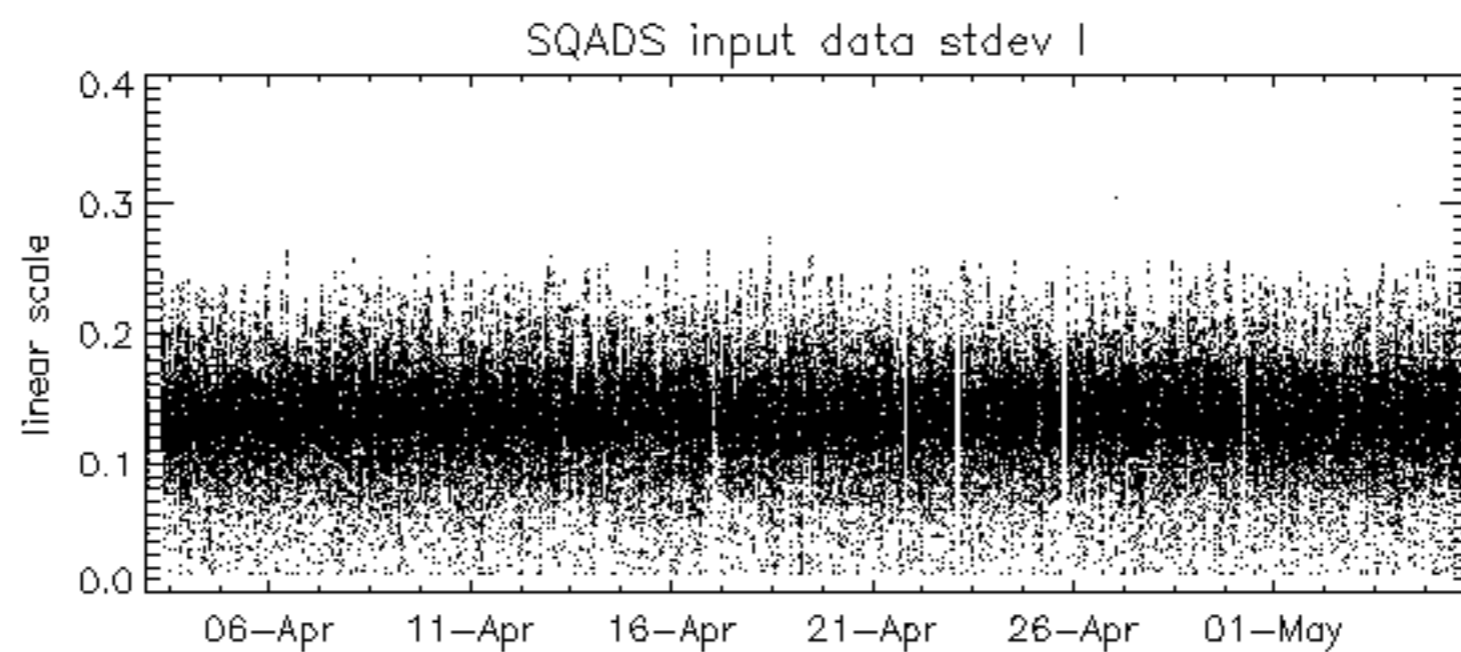
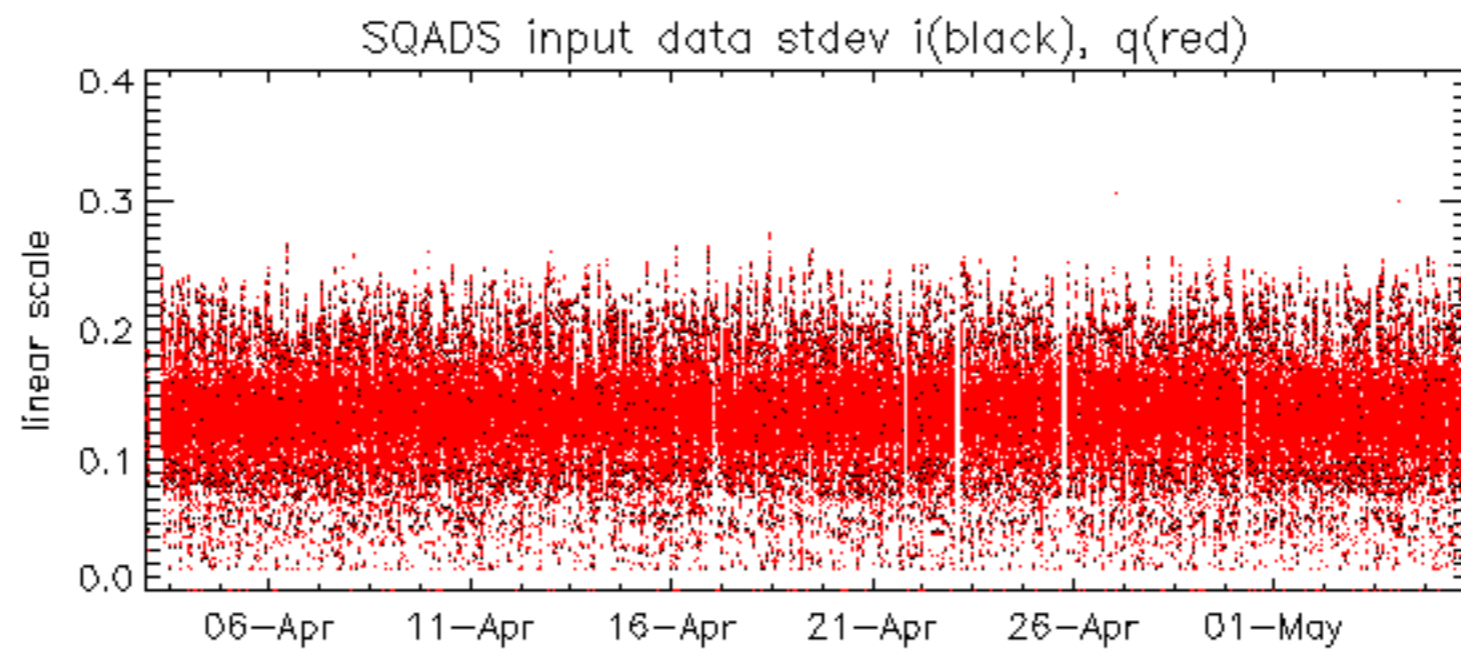






















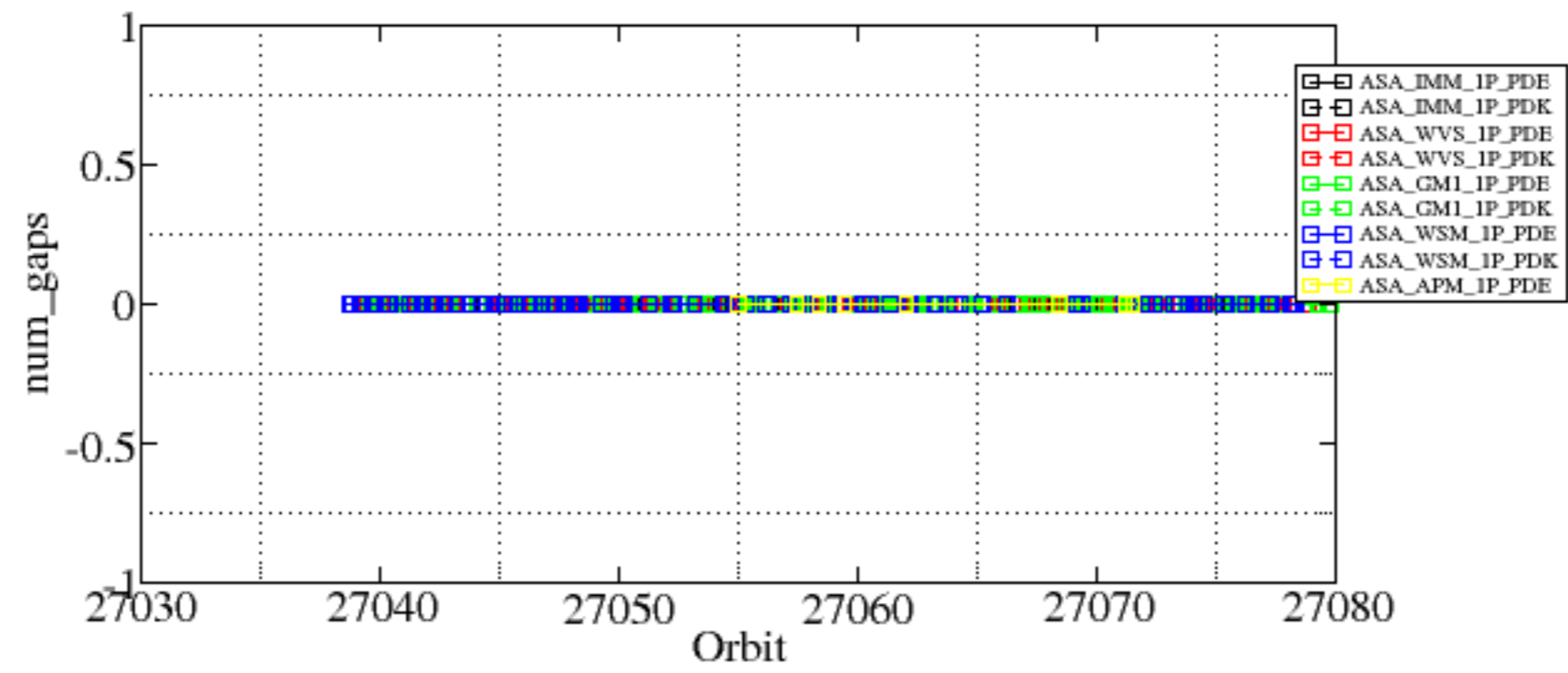




Summary of analysis for the last 3 days 2007050[345]

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_1PNPDK20070504_083350_000000612057_00451_27058_4312.N1	0	26
ASA_GM1_1PNPDK20070504_103913_000001632057_00452_27059_6905.N1	0	15
ASA_GM1_1PNPDK20070504_103940_000001322057_00452_27059_4839.N1	0	15
ASA_GM1_1PNPDK20070504_140155_000001502057_00454_27061_5837.N1	0	14
ASA_GM1_1PNPDK20070504_141822_000001632057_00454_27061_5839.N1	0	7
ASA_GM1_1PNPDK20070504_144335_000006462057_00454_27061_5971.N1	0	23
ASA_WSM_1PNPDE20070503_112609_000001152057_00438_27045_6978.N1	0	42
ASA_WSM_1PNPDE20070503_190521_000001092057_00443_27050_7140.N1	0	57
ASA_WSM_1PNPDE20070504_023250_000000852057_00447_27054_7677.N1	0	27
ASA_WSM_1PNPDE20070505_134710_000000852057_00468_27075_9521.N1	0	26



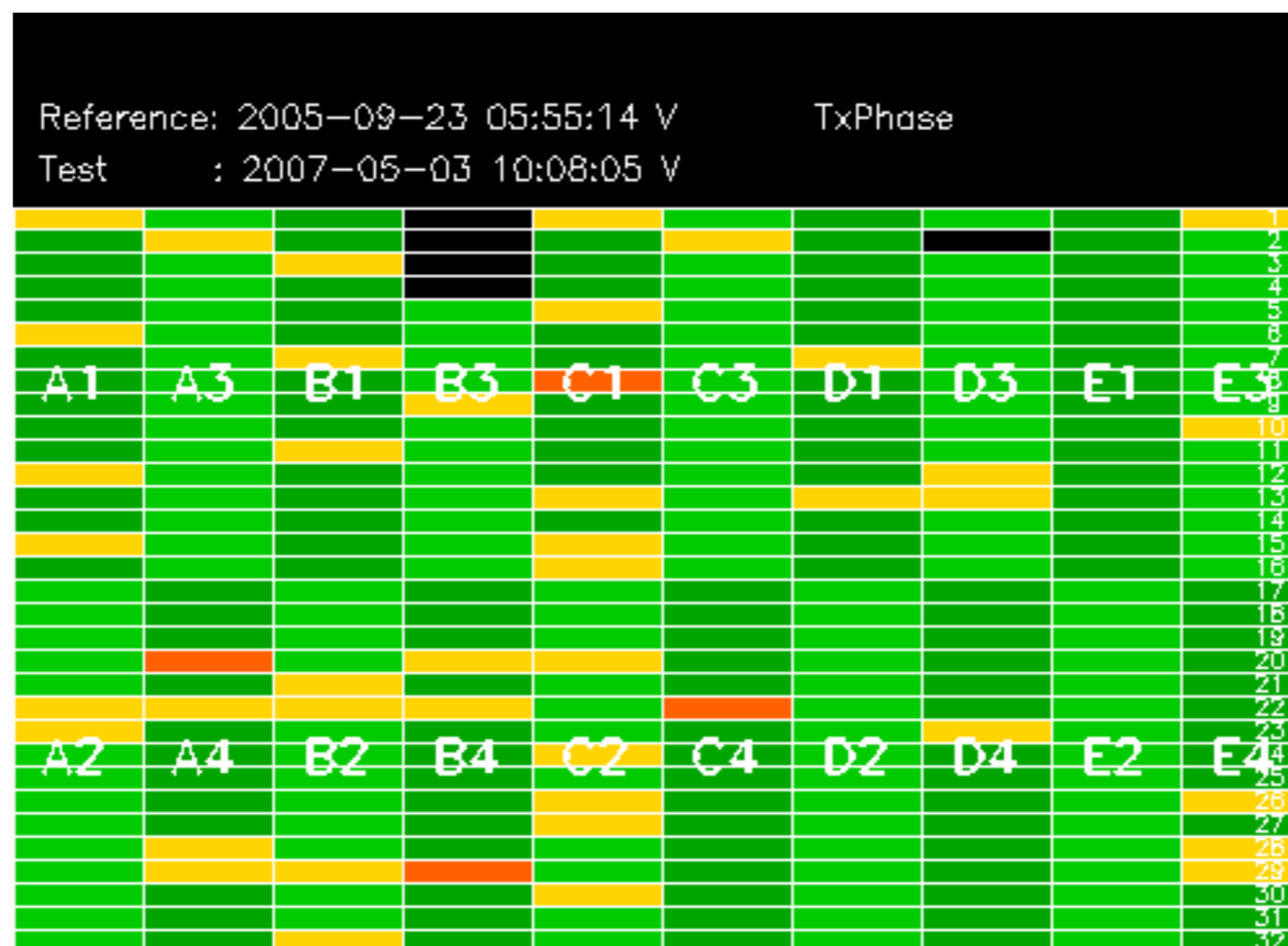


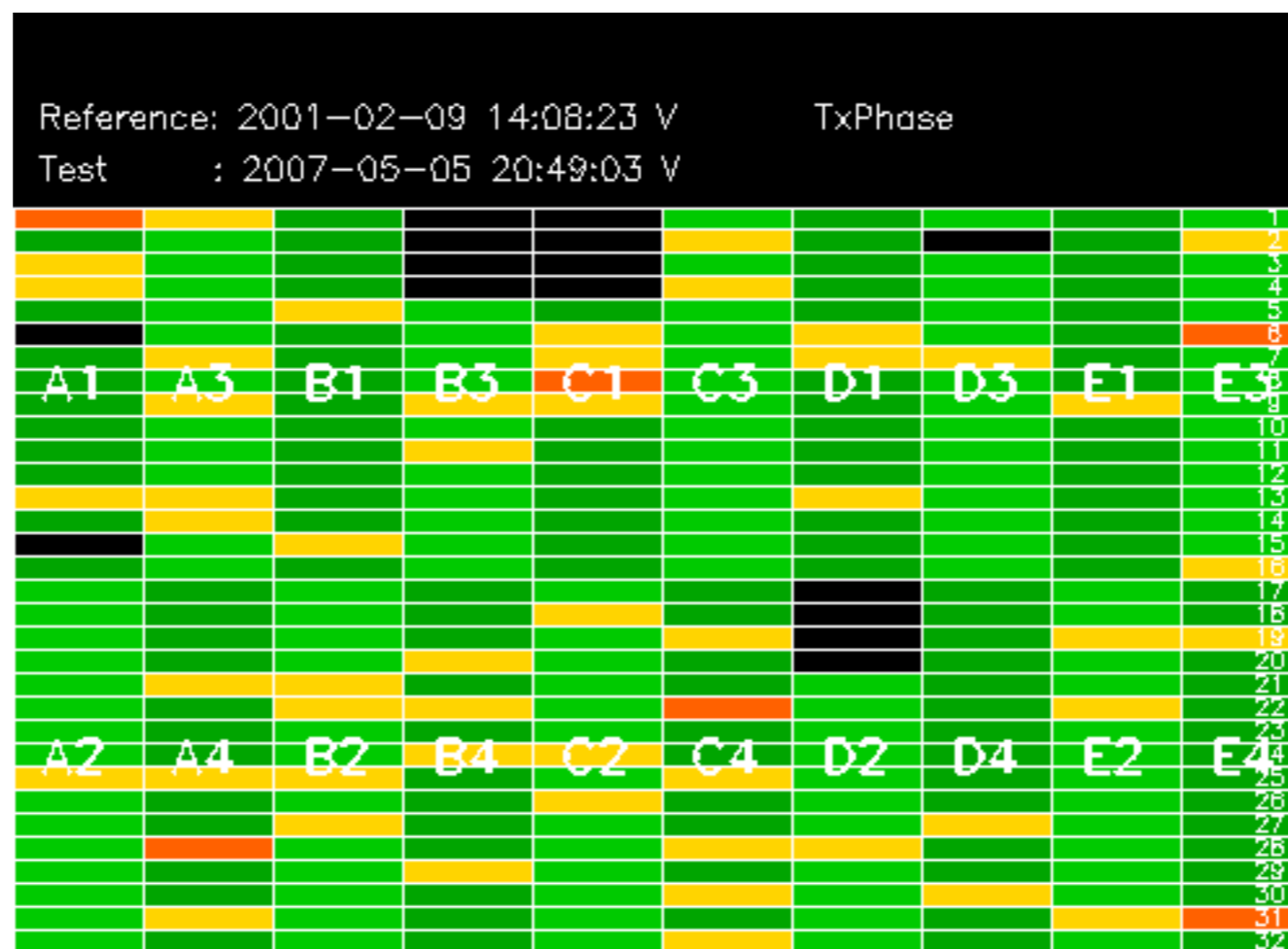


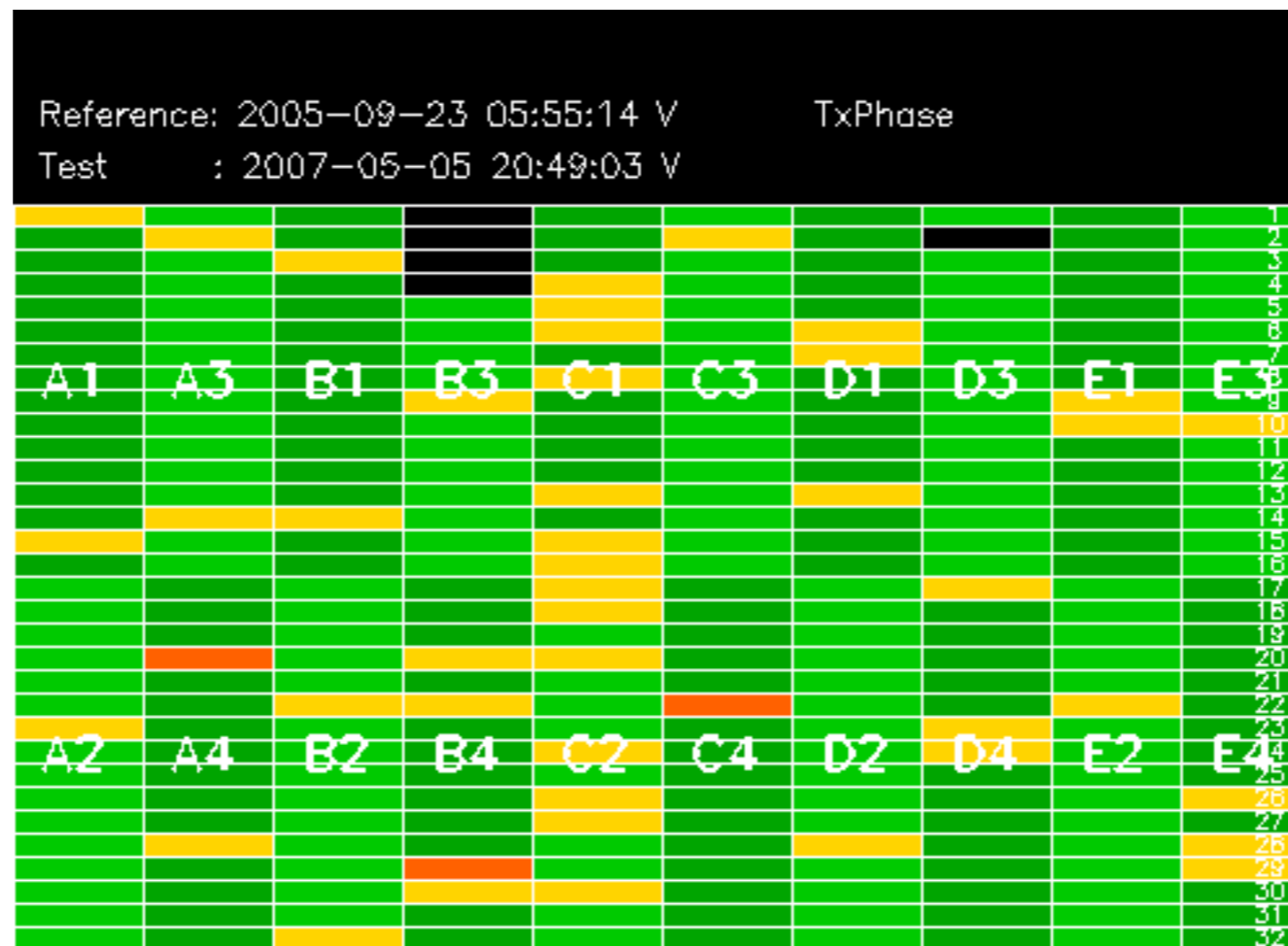


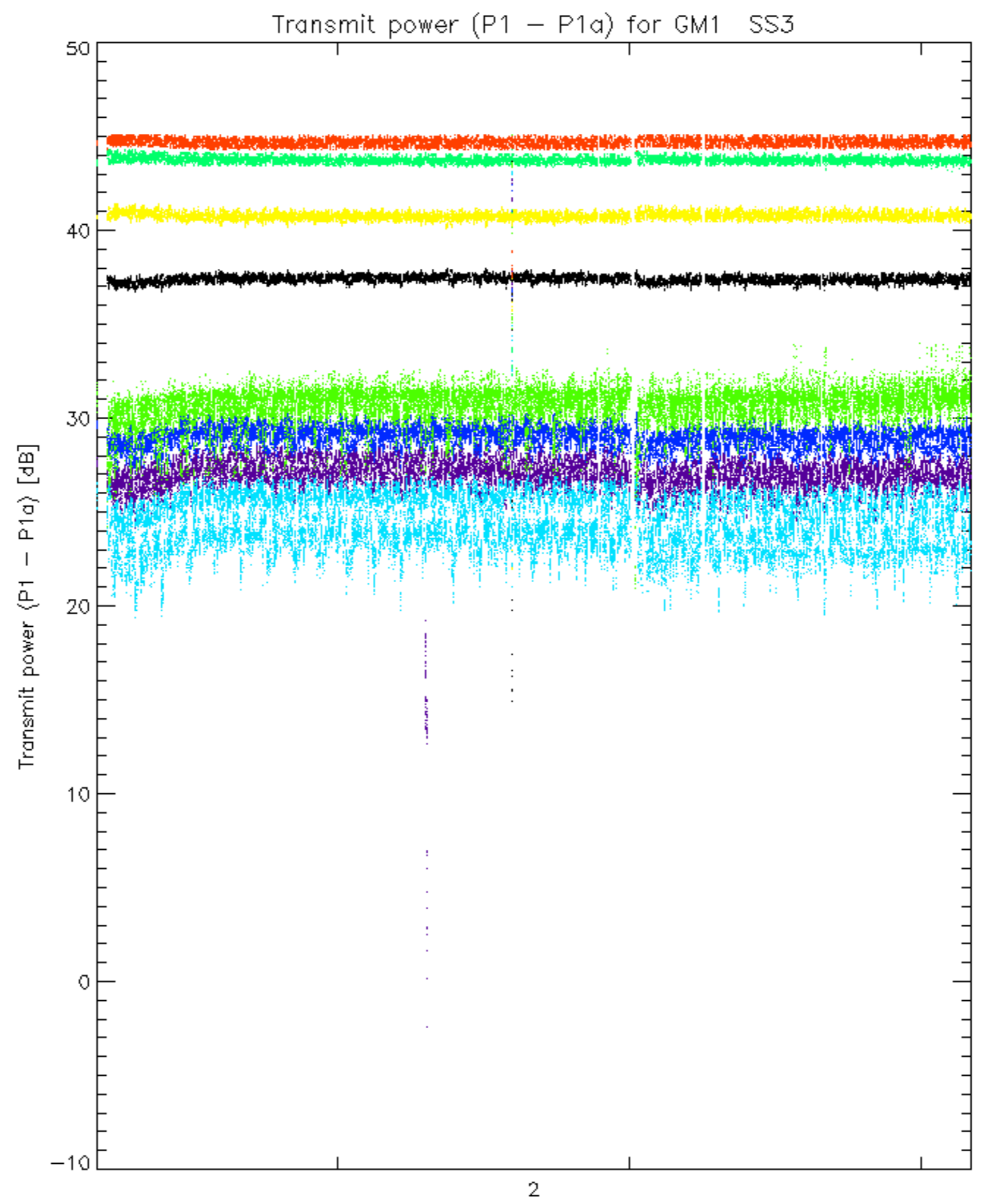




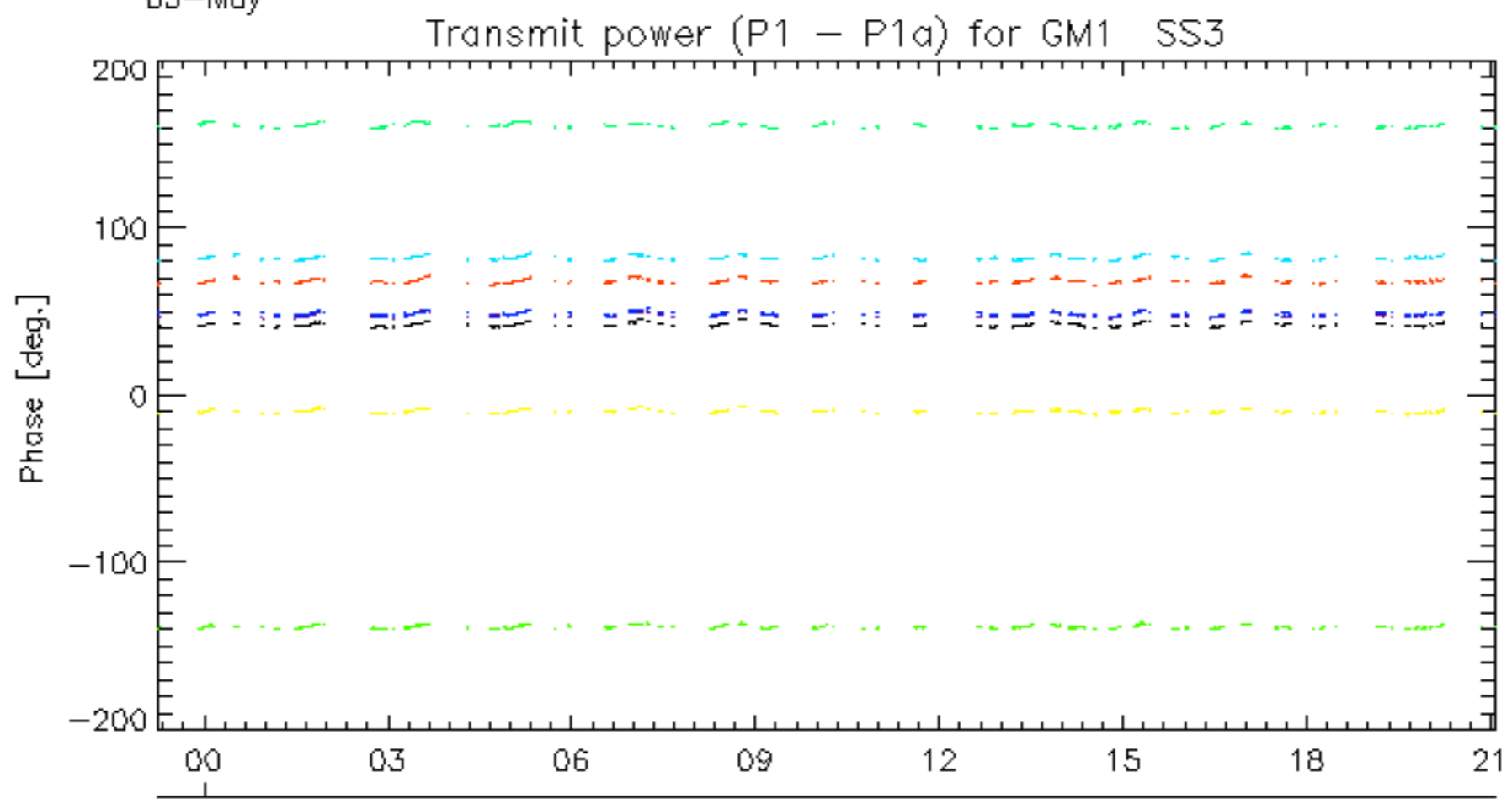
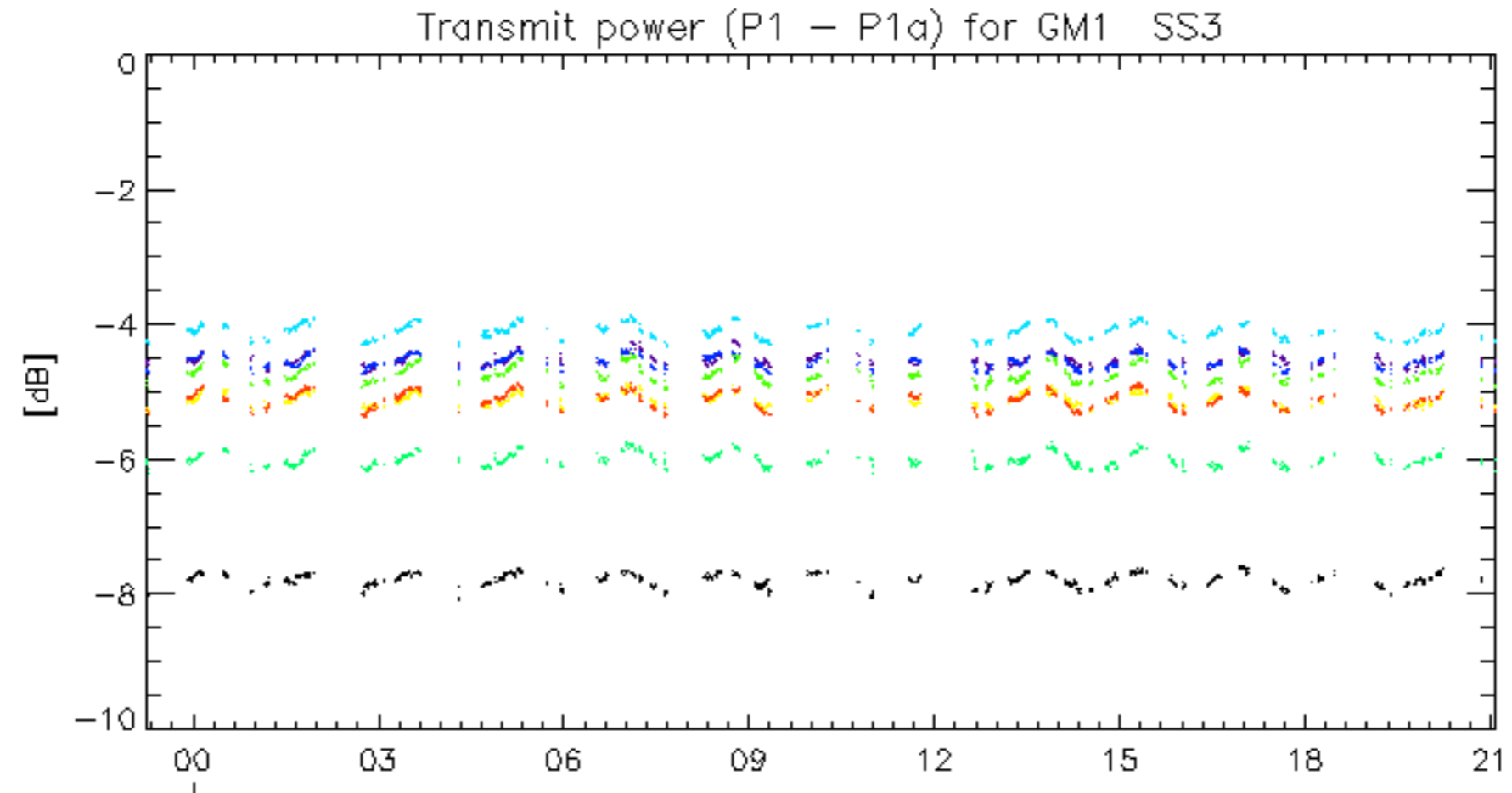






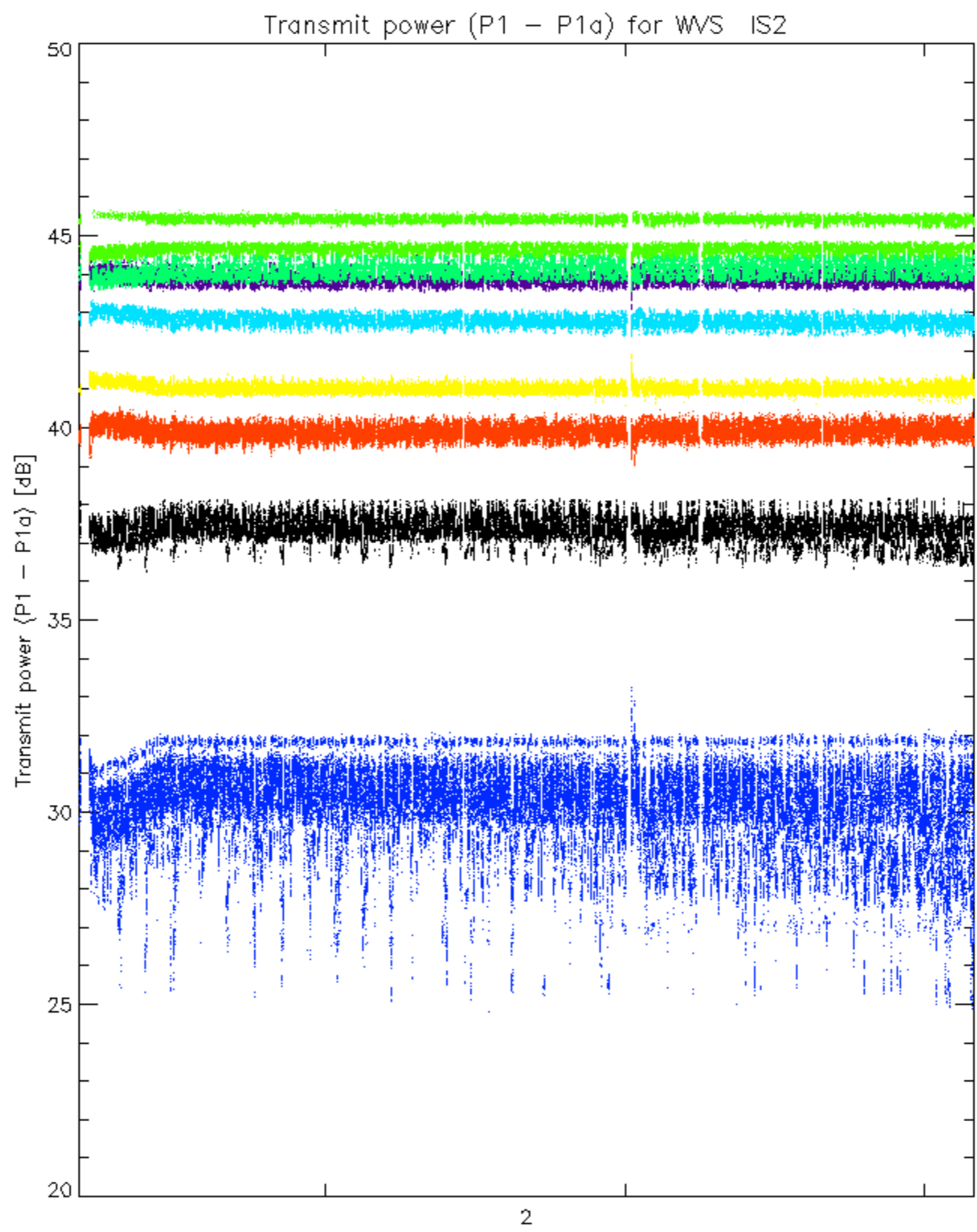


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

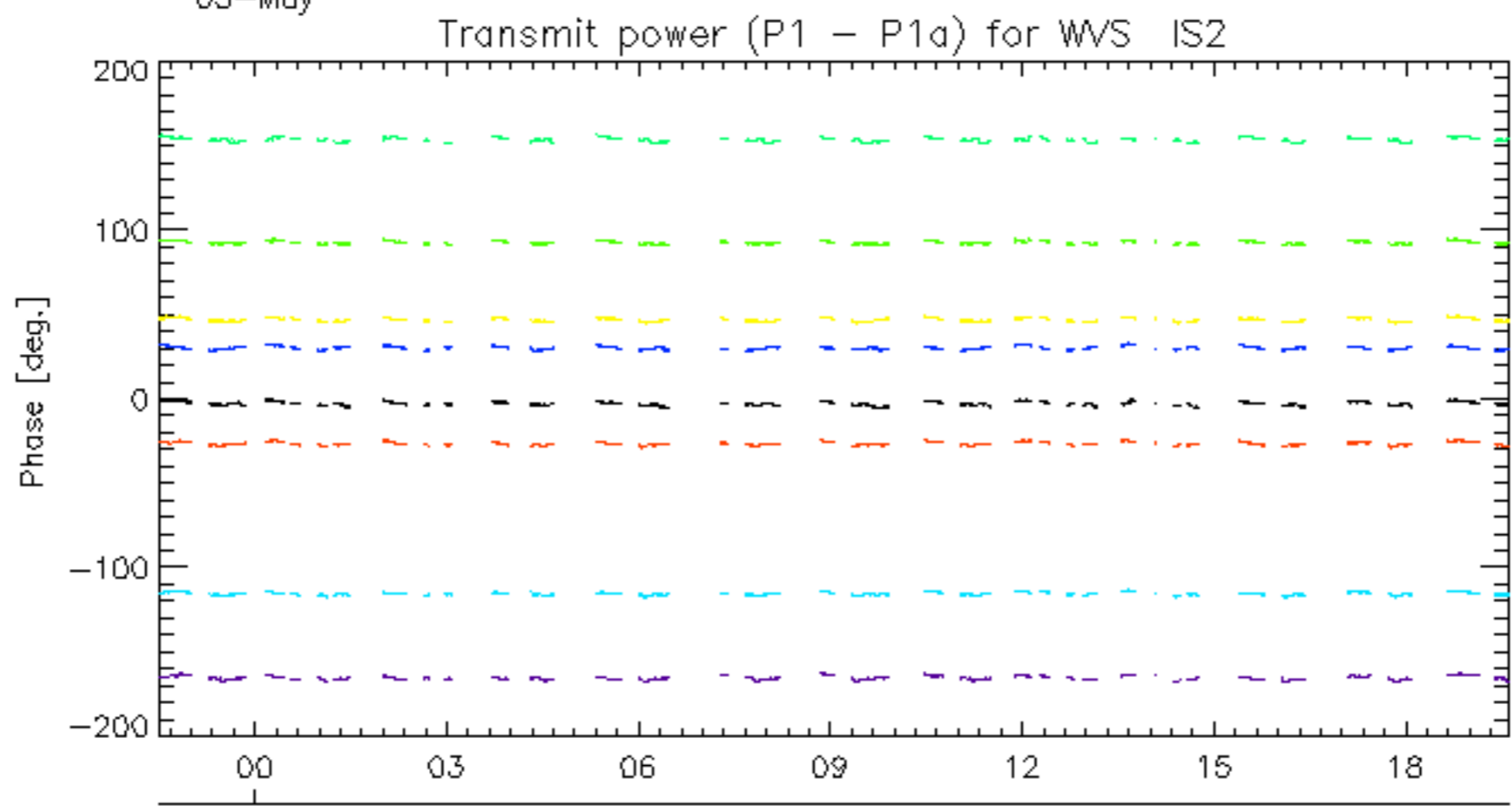
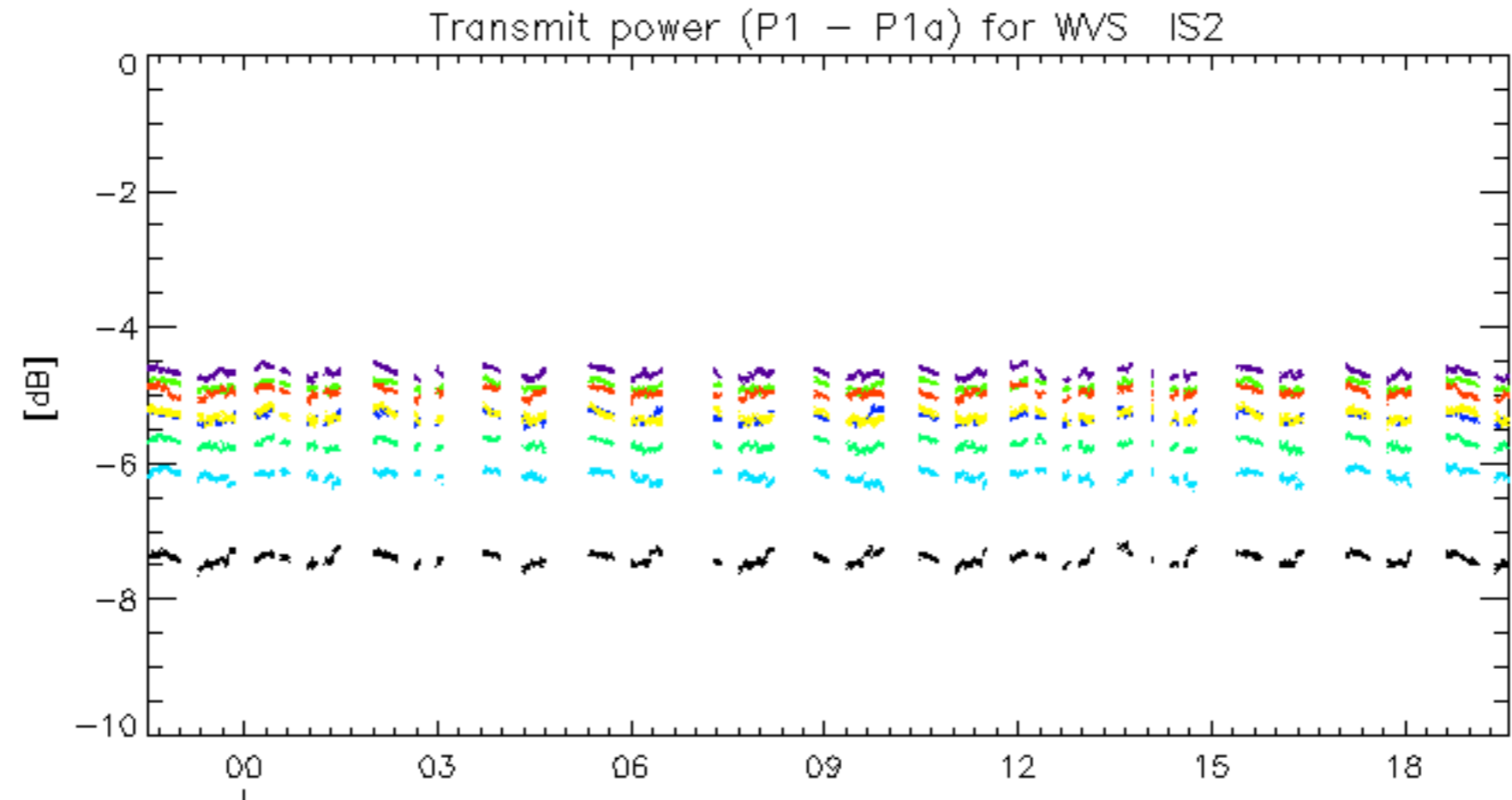


rows: 3 7 11 15 19 22 26 30





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



rows: **3** **7** **11** **15** **19** **22** **26** **30**

No unavailabilities during the reported period.