

# PRELIMINARY REPORT OF 070327

last update on Tue Mar 27 23:55:48 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 2007-03-26 00:00:00 to 2007-03-27 23:55:48

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	27	44	11	2	19
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	51	89	12	3	36
ASA_CON_AXVIEC20070326_152930_20070327_000000_20070328_000000	24	45	1	1	17
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	51	89	12	3	36
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	51	89	12	3	36

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	26	31	34	8	20
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	44	59	58	12	57
ASA_CON_AXVIEC20070326_152930_20070327_000000_20070328_000000	18	28	24	4	37
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	44	59	58	12	57
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	59	58	12	57

## 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	20070327 042852
H	20070326 050029

### 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
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☒

### 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)
3	P1a	-15.107639	0.124005	0.063300
7	P1a	-17.484690	0.103381	-0.118212
11	P1a	-17.270292	0.349308	-0.007364
15	P1a	-12.883945	0.088984	0.025491
19	P1a	-15.167604	0.077109	-0.071851
22	P1a	-15.504560	0.567444	-0.447994
26	P1a	-15.084955	0.460759	-0.184383
30	P1a	-17.406944	0.303928	-0.234027

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.744637	0.010524	-0.025087
7	P1	-3.135378	0.008581	-0.009489
11	P1	-4.170580	0.015219	-0.051145
15	P1	-6.373798	0.016557	0.026989
19	P1	-3.775662	0.007564	-0.024121
22	P1	-4.680937	0.048419	-0.108150
26	P1	-3.926735	0.040841	-0.033796
30	P1	-5.921129	0.073547	-0.120442

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.644648	0.093540	0.036768
7	P2	-21.603325	0.082319	0.038034
11	P2	-15.498754	0.101424	0.153523
15	P2	-7.079595	0.094592	-0.039591
19	P2	-9.107895	0.083684	-0.012967
22	P2	-18.091597	0.078215	0.040506
26	P2	-16.559555	0.086150	-0.054645
30	P2	-19.319420	0.081410	0.095383

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.233917	0.006532	0.005387
7	P3	-8.233917	0.006532	0.005387
11	P3	-8.233917	0.006532	0.005387
15	P3	-8.233917	0.006532	0.005387
19	P3	-8.233917	0.006532	0.005387
22	P3	-8.233917	0.006532	0.005387
26	P3	-8.233841	0.006534	0.005767
30	P3	-8.233841	0.006534	0.005767

**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	-11.097099	0.053097	-0.089475
7	P1a	-10.072545	0.136184	-0.019768
11	P1a	-10.680669	0.063681	-0.026526
15	P1a	-10.937582	0.142712	0.108673
19	P1a	-15.715486	0.072156	-0.136197
22	P1a	-20.902349	1.513750	-0.110975
26	P1a	-15.255314	0.319273	-0.090233
30	P1a	-18.374475	0.711583	0.044535

**P1t Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.414143	0.040665	-0.060618
7	P1	-2.426370	0.023187	-0.007675
11	P1	-2.921181	0.019348	0.013671
15	P1	-3.848686	0.039567	-0.009417
19	P1	-3.563176	0.011153	-0.039868
22	P1	-5.030610	0.032493	0.047333

26	P1	-5.955585	0.053265	-0.053665
30	P1	-5.275830	0.031225	-0.034871

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.106186	0.037438	-0.037595
7	P2	-21.956341	0.061265	-0.030791
11	P2	-10.635727	0.033543	0.025255
15	P2	-4.833017	0.031524	-0.043507
19	P2	-6.814520	0.033829	-0.024750
22	P2	-8.078910	0.034382	-0.008213
26	P2	-24.289701	0.041737	0.019872
30	P2	-21.719500	0.043827	0.036997

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.062184	0.004026	-0.014407
7	P3	-8.062086	0.004024	-0.014496
11	P3	-8.062192	0.004023	-0.014815
15	P3	-8.062307	0.004028	-0.014514
19	P3	-8.062189	0.004036	-0.014024
22	P3	-8.062258	0.004031	-0.014945
26	P3	-8.062018	0.004007	-0.014384
30	P3	-8.062149	0.004018	-0.014643

## 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	0.000645661
	stdev	2.68433e-07
MEAN Q	mean	0.000339997
	stdev	2.78210e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.101224
	stdev	0.00238956
STDEV Q	mean	0.101165
	stdev	0.00244631



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2007032[567]

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_GM1_1PNPDK20070326_142221_000001572056_00397_26503_4278.N1	0	6
ASA_WSM_1PNPDE20070325_143215_000000852056_00383_26489_6157.N1	0	16
ASA_WSM_1PNPDE20070325_233836_000001842056_00388_26494_6666.N1	0	62
ASA_WSM_1PNPDE20070326_185948_000000672056_00400_26506_7466.N1	0	54
ASA_WSM_1PNPDE20070327_004727_000000852056_00403_26509_7928.N1	0	26

ASA_WSM_1PNPDE20070327_140944_000000862056_00411_26517_8651.N1	0	22
ASA_WSM_1PNPDE20070327_150733_000000862056_00412_26518_8655.N1	0	33
ASA_WSM_1PNPDE20070327_183104_000000852056_00414_26520_8729.N1	0	16
ASA_WSM_1PNPDK20070326_140038_000000792056_00397_26503_4251.N1	0	16
ASA_APM_1PNPDE20070325_161458_000000402056_00384_26490_6131.N1	11	0





## 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



#### 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

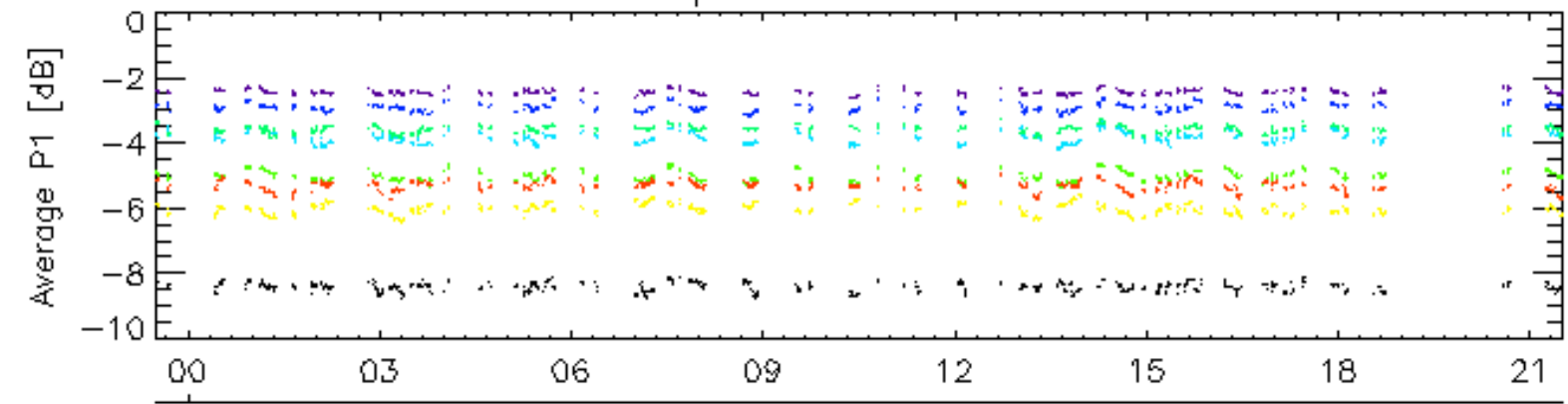
Ascending

Descending

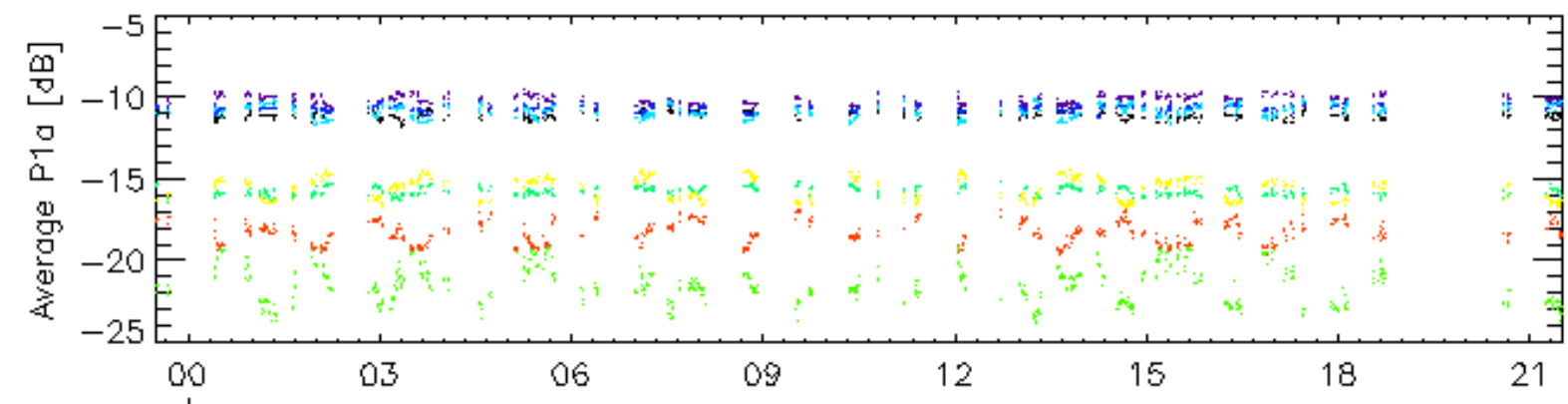
#### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

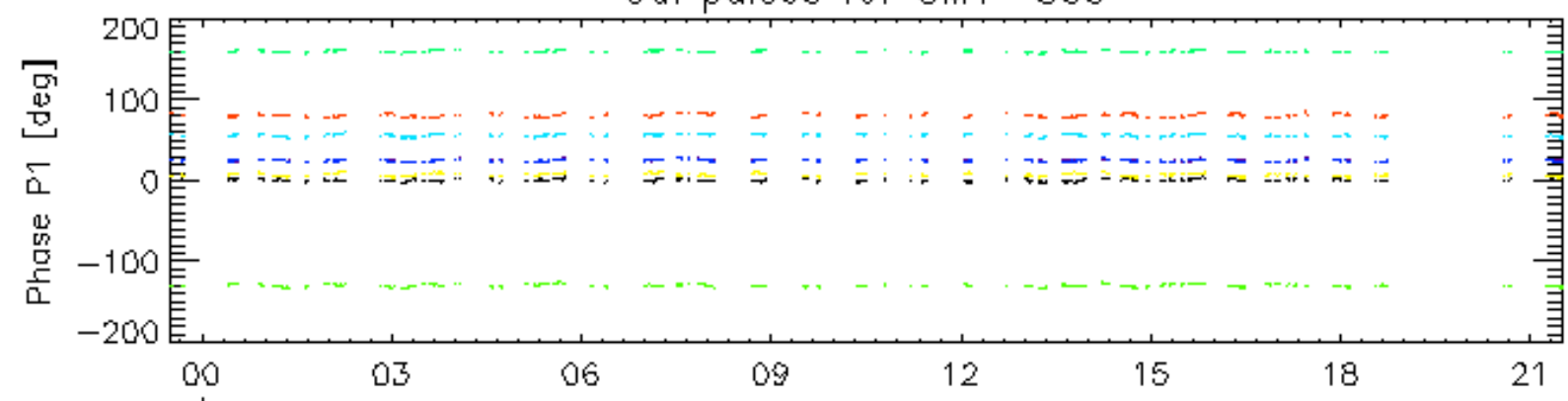


27-Mar

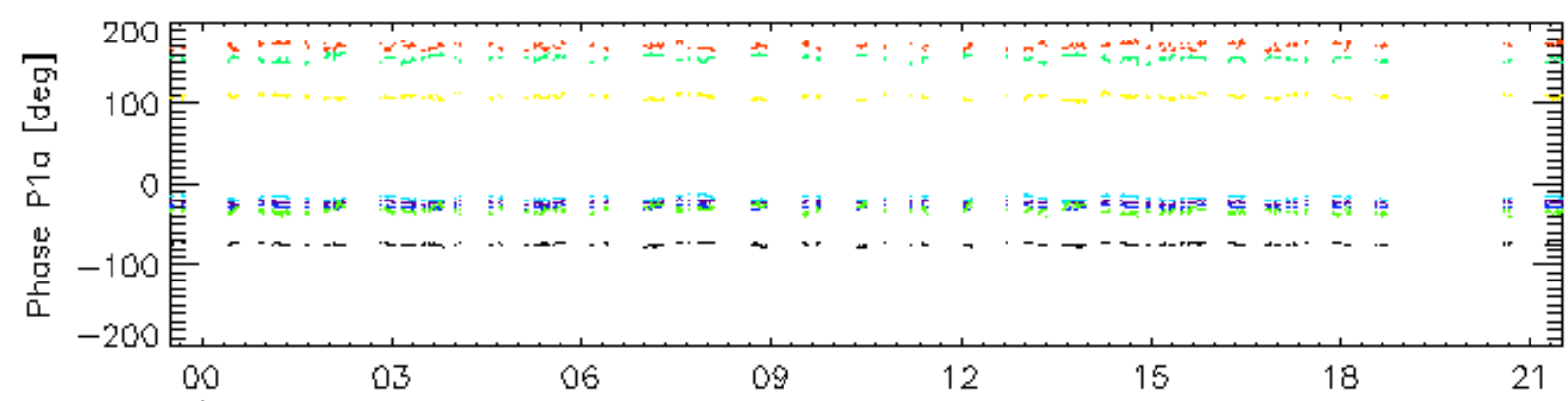


27-Mar

Cal pulses for GM1 SS3



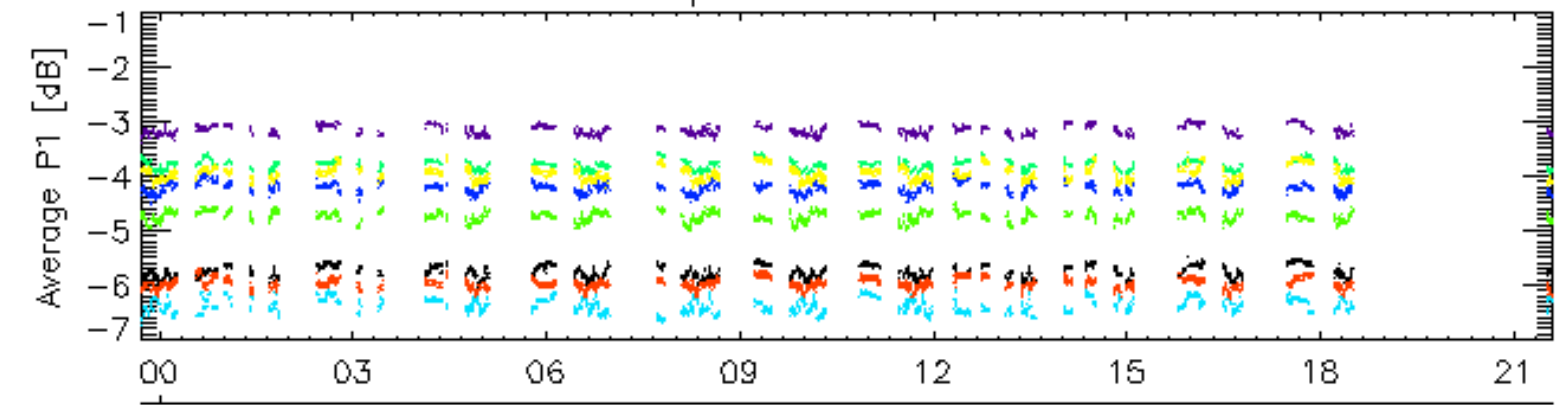
27-Mar



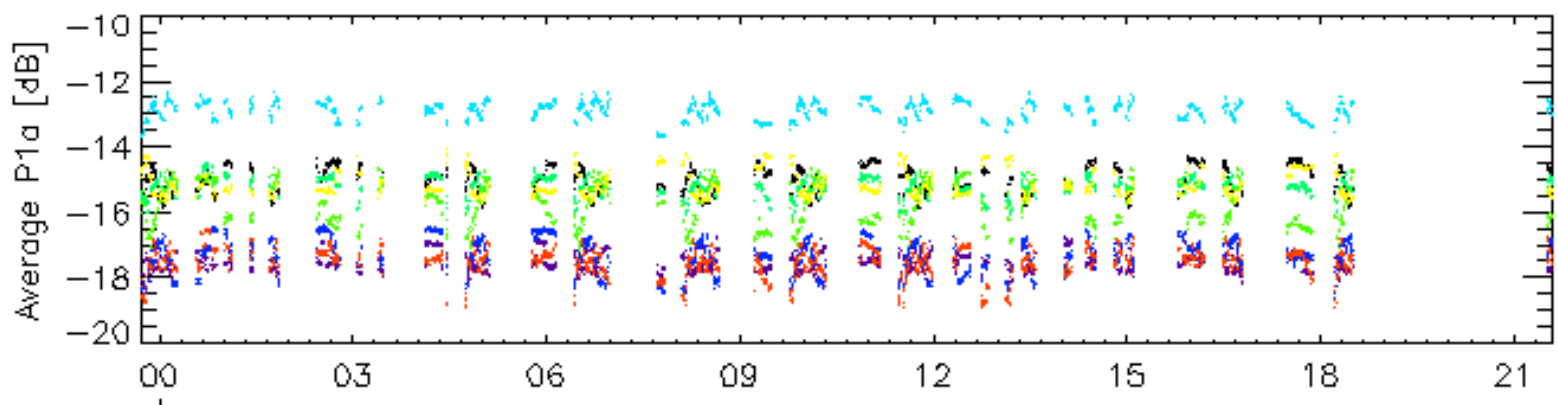
27-Mar

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

Cal pulses for WVS IS2

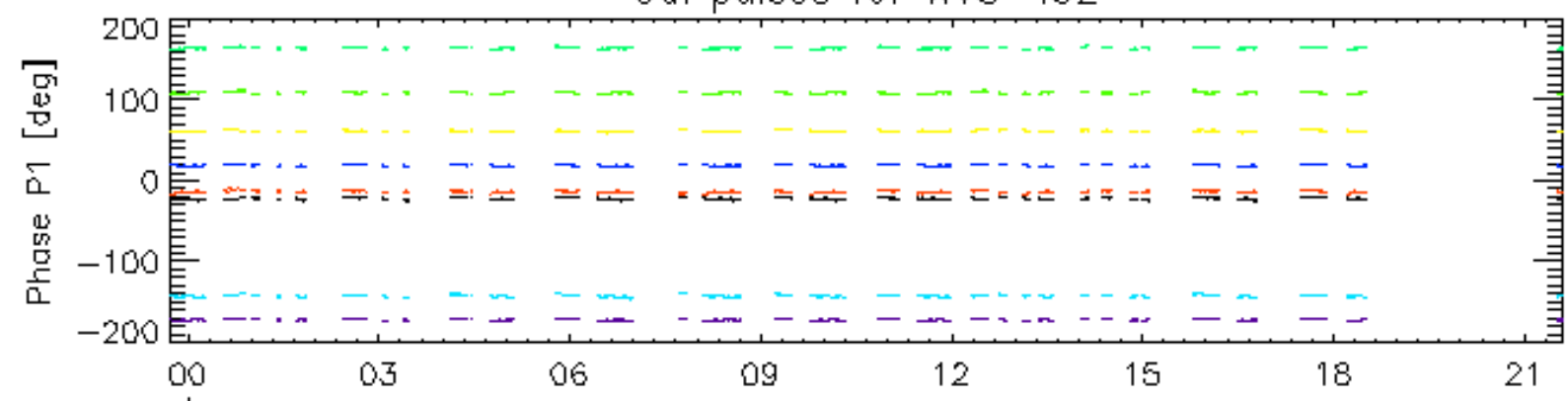


27-Mar

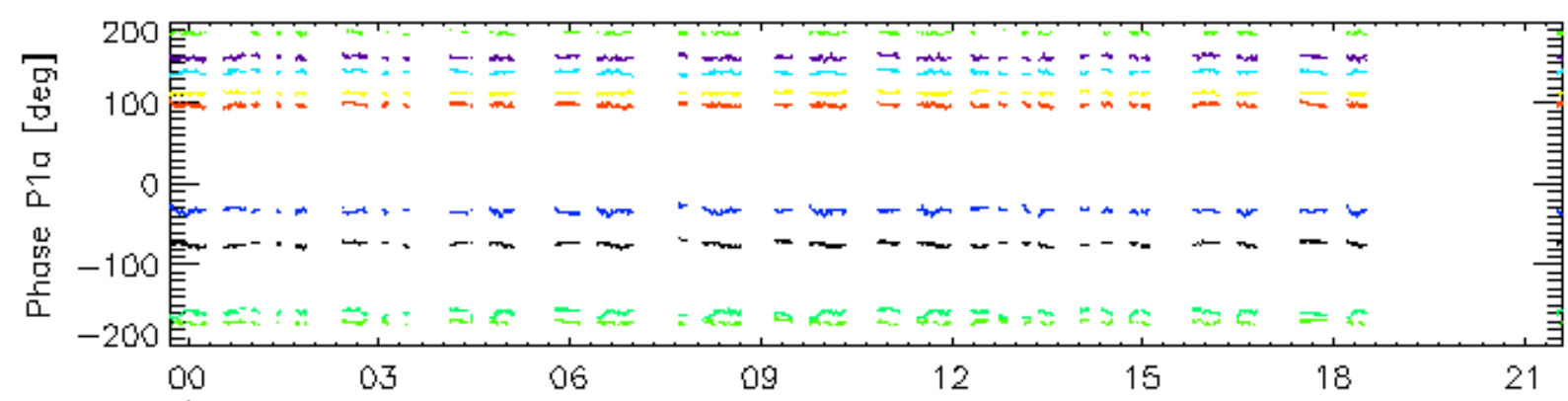


27-Mar

Cal pulses for WVS IS2



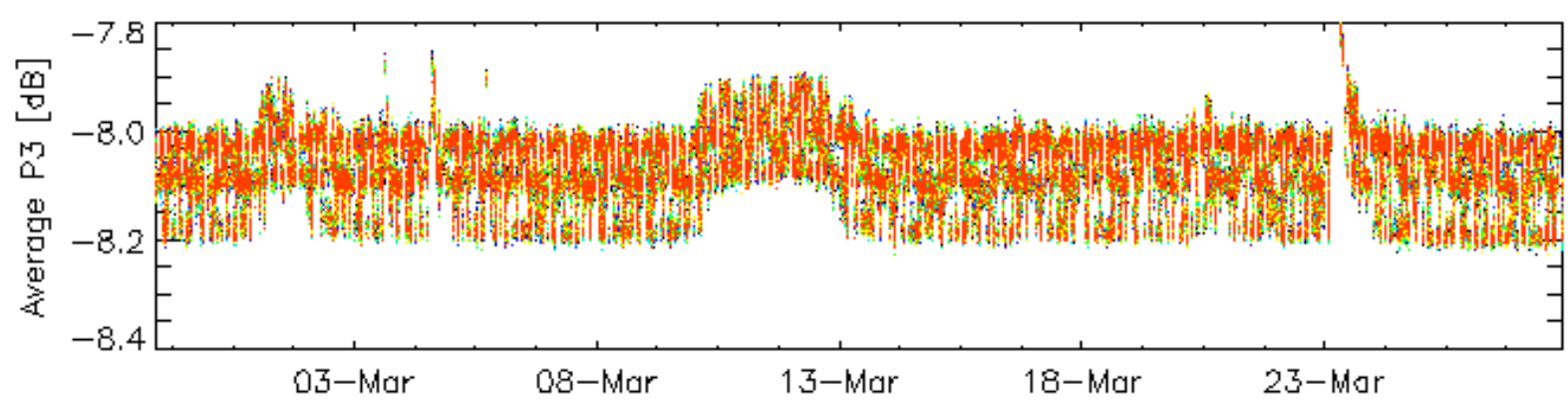
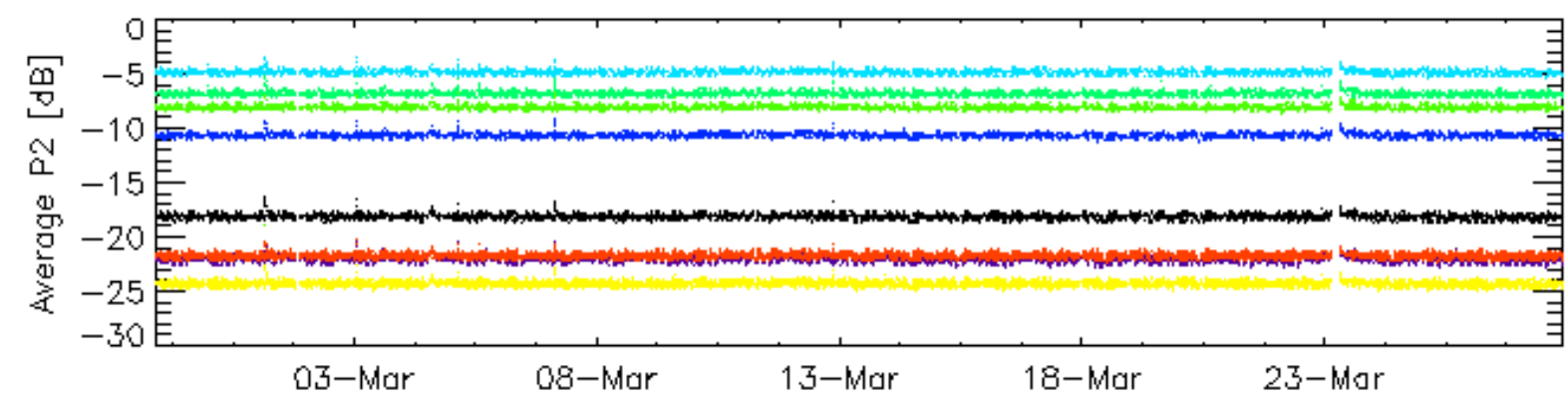
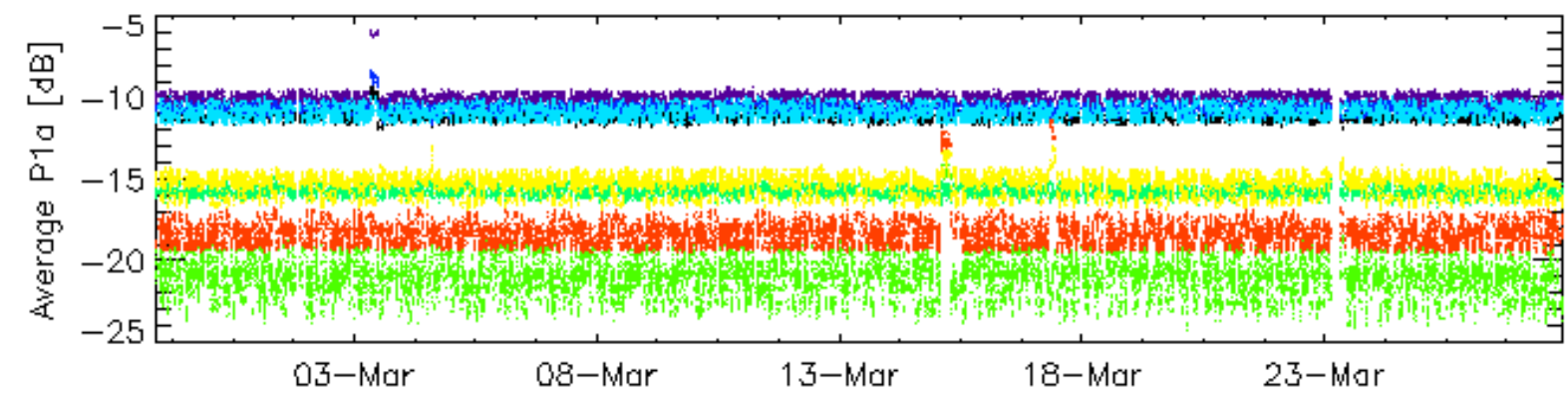
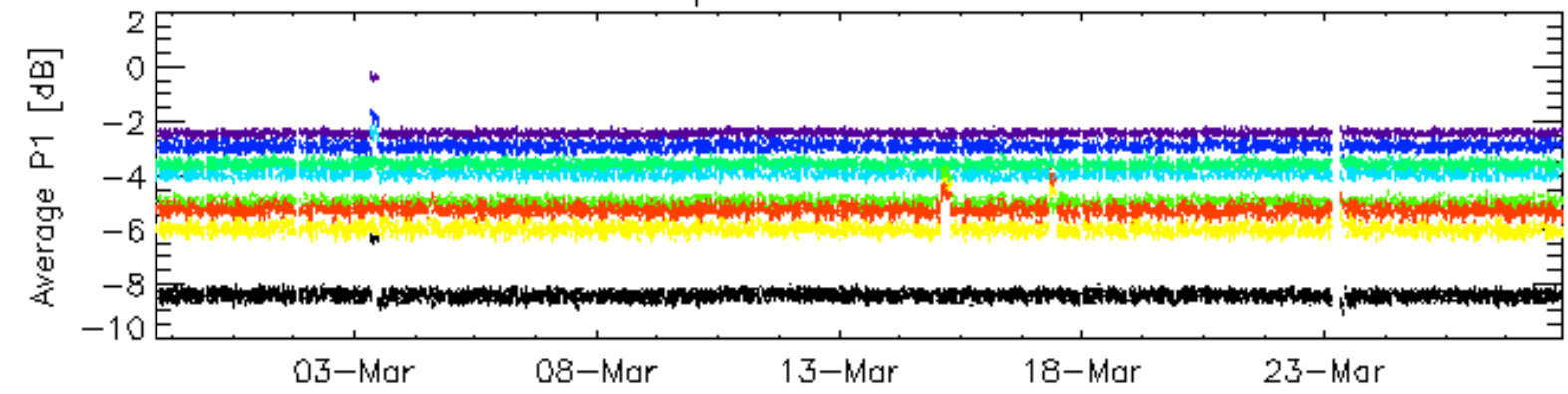
27-Mar



27-Mar

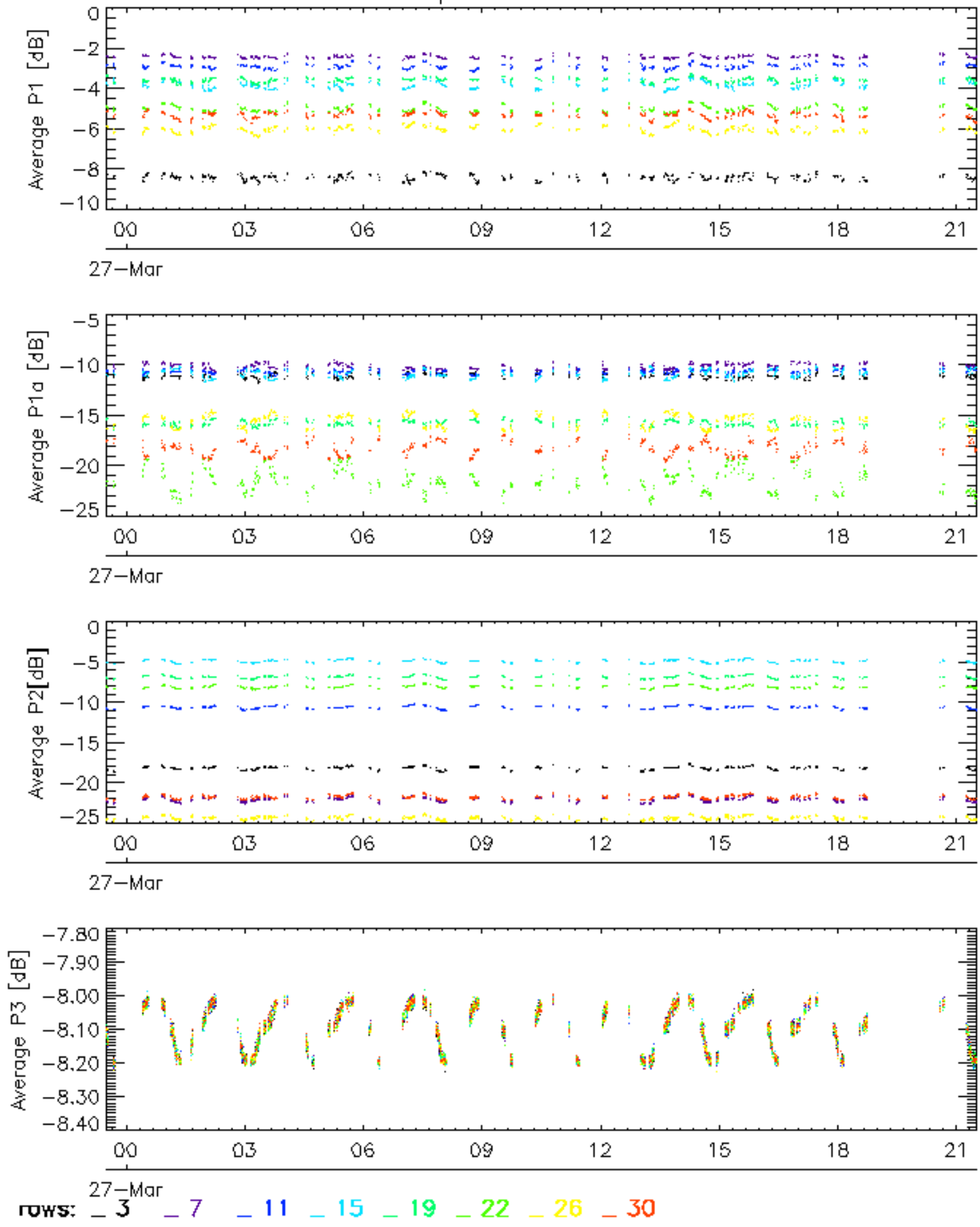
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3

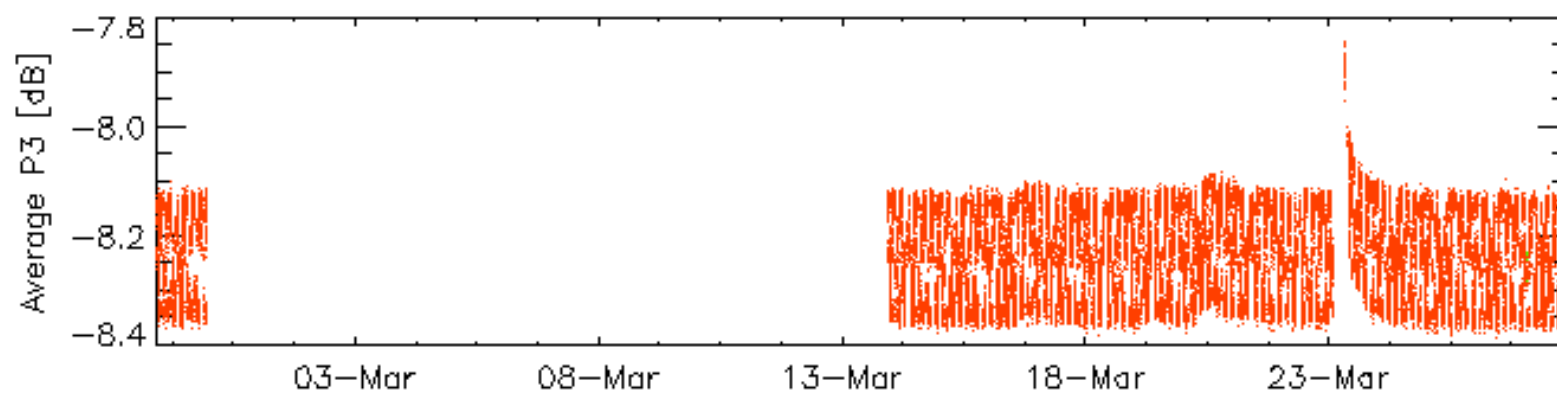
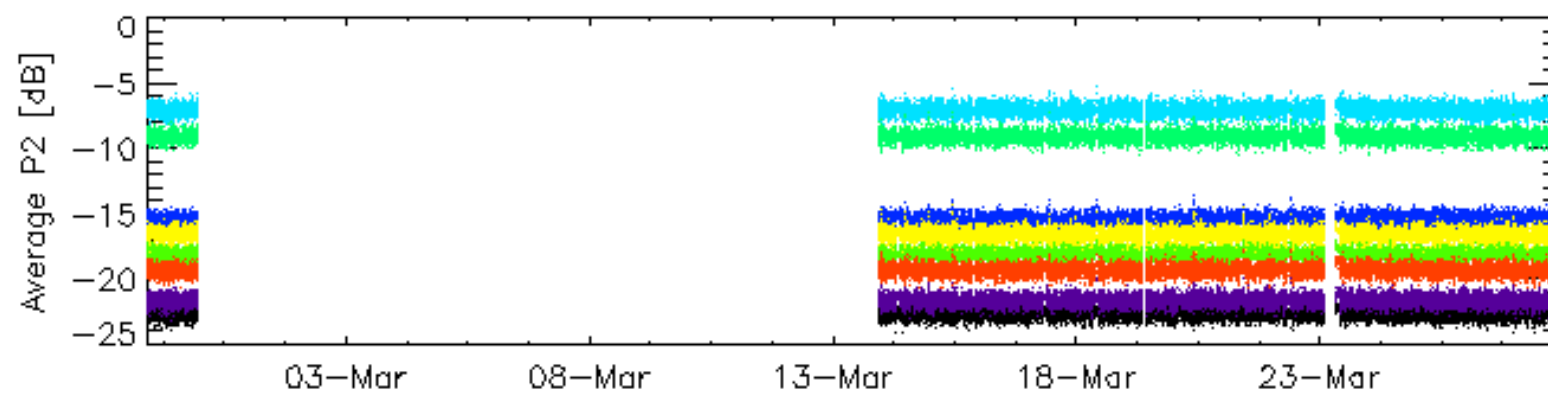
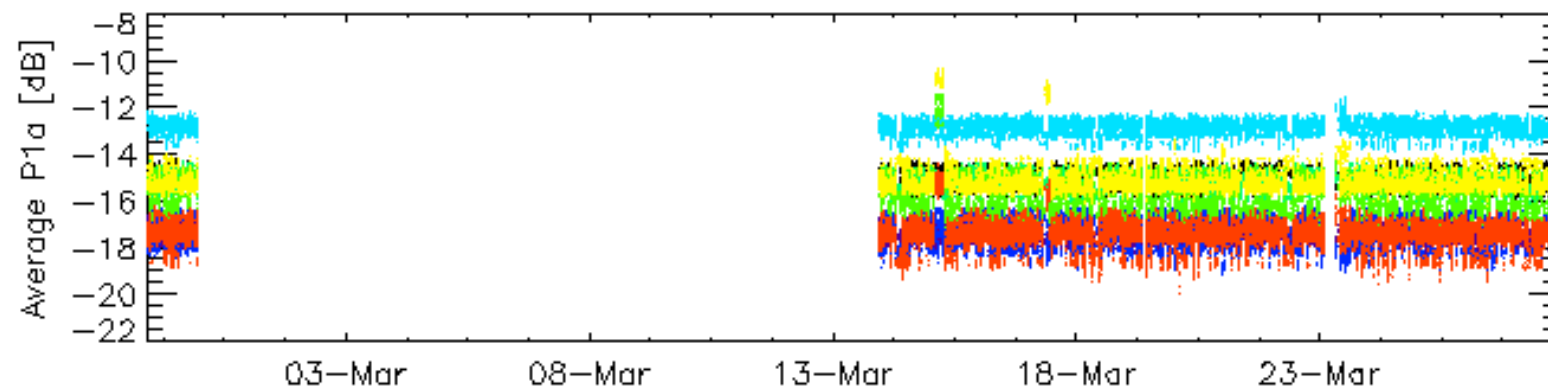
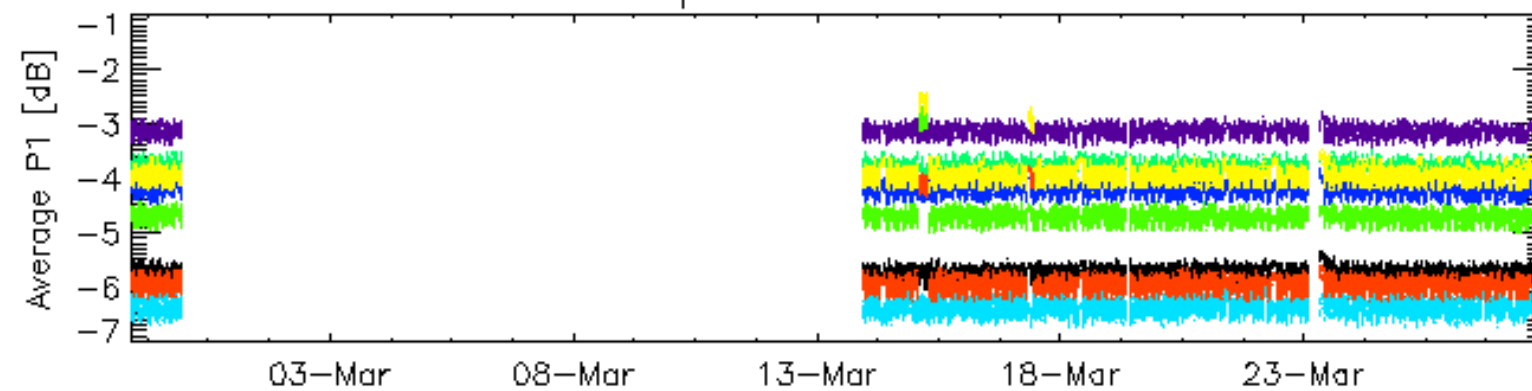


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3



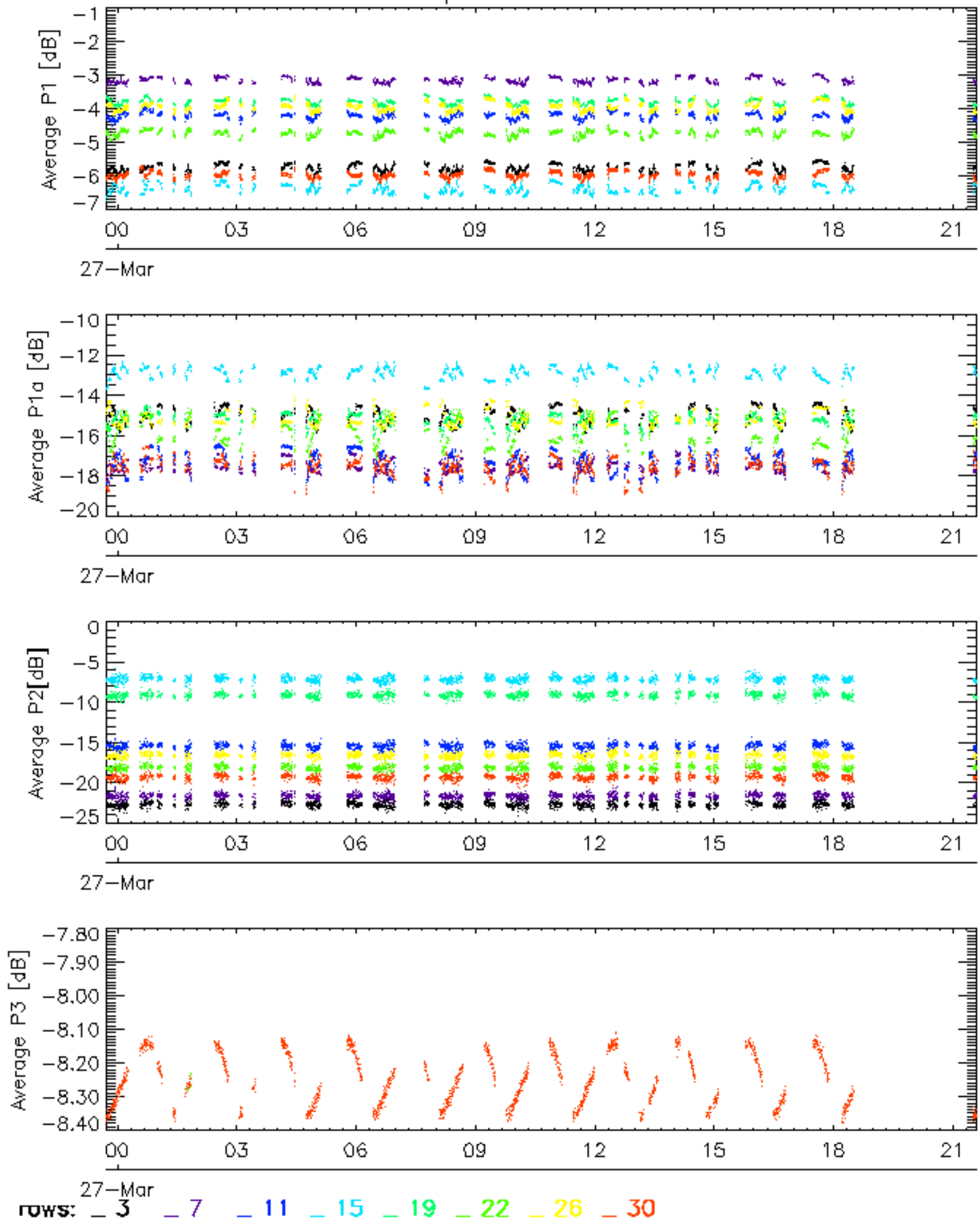
Cal pulses for WVS IS2



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



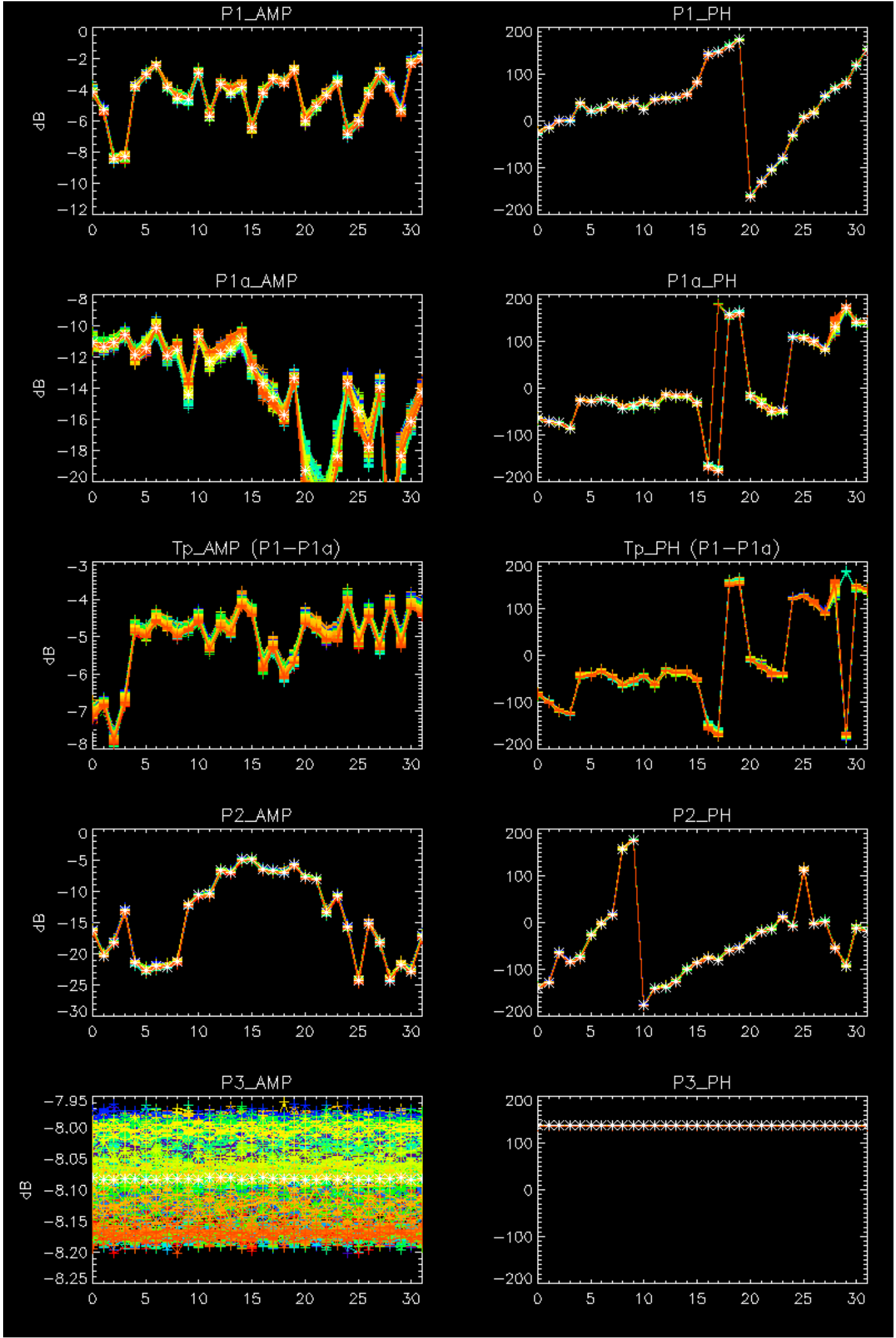
Cal pulses for WVS IS2

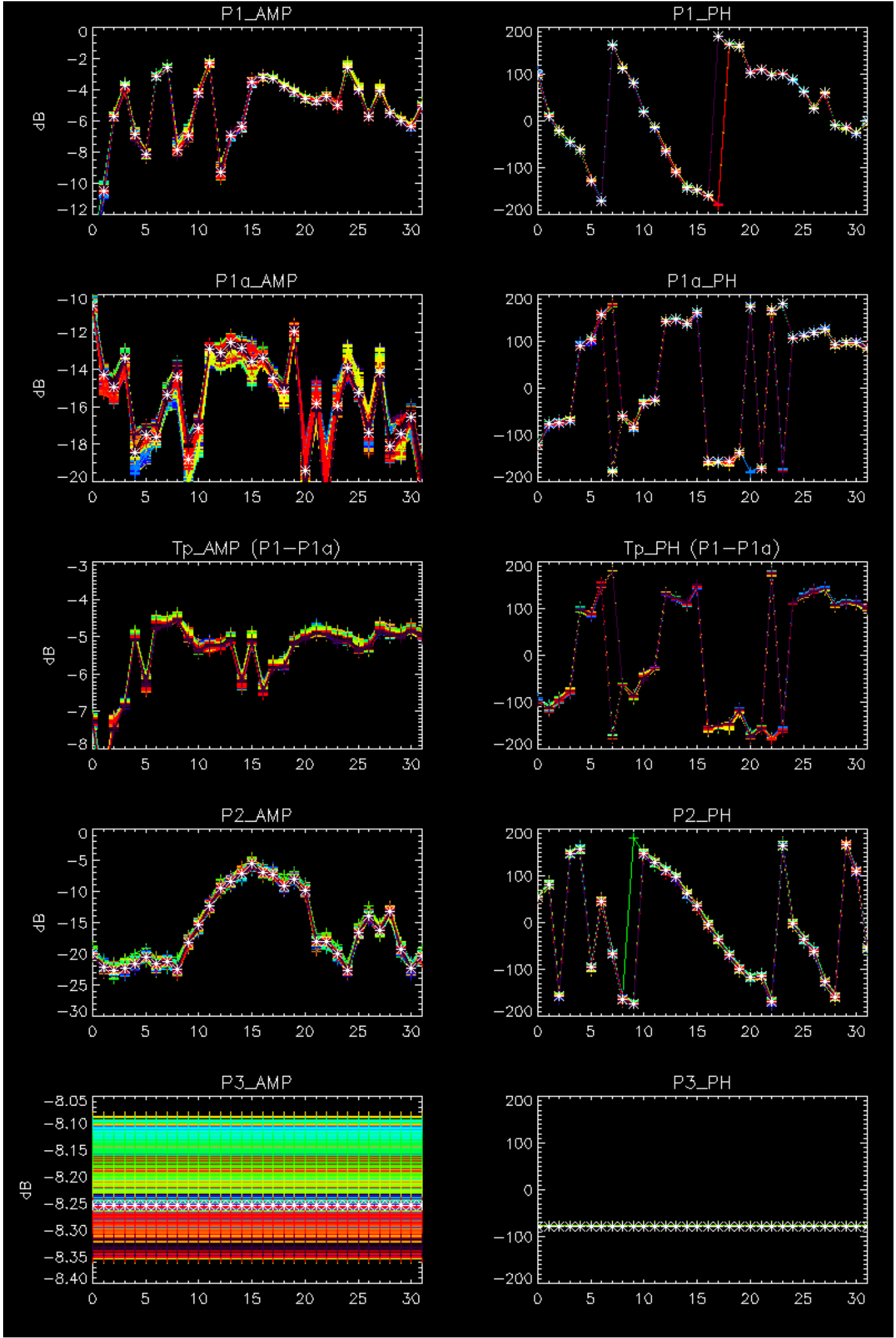


No anomalies observed on available browse products



No anomalies observed.



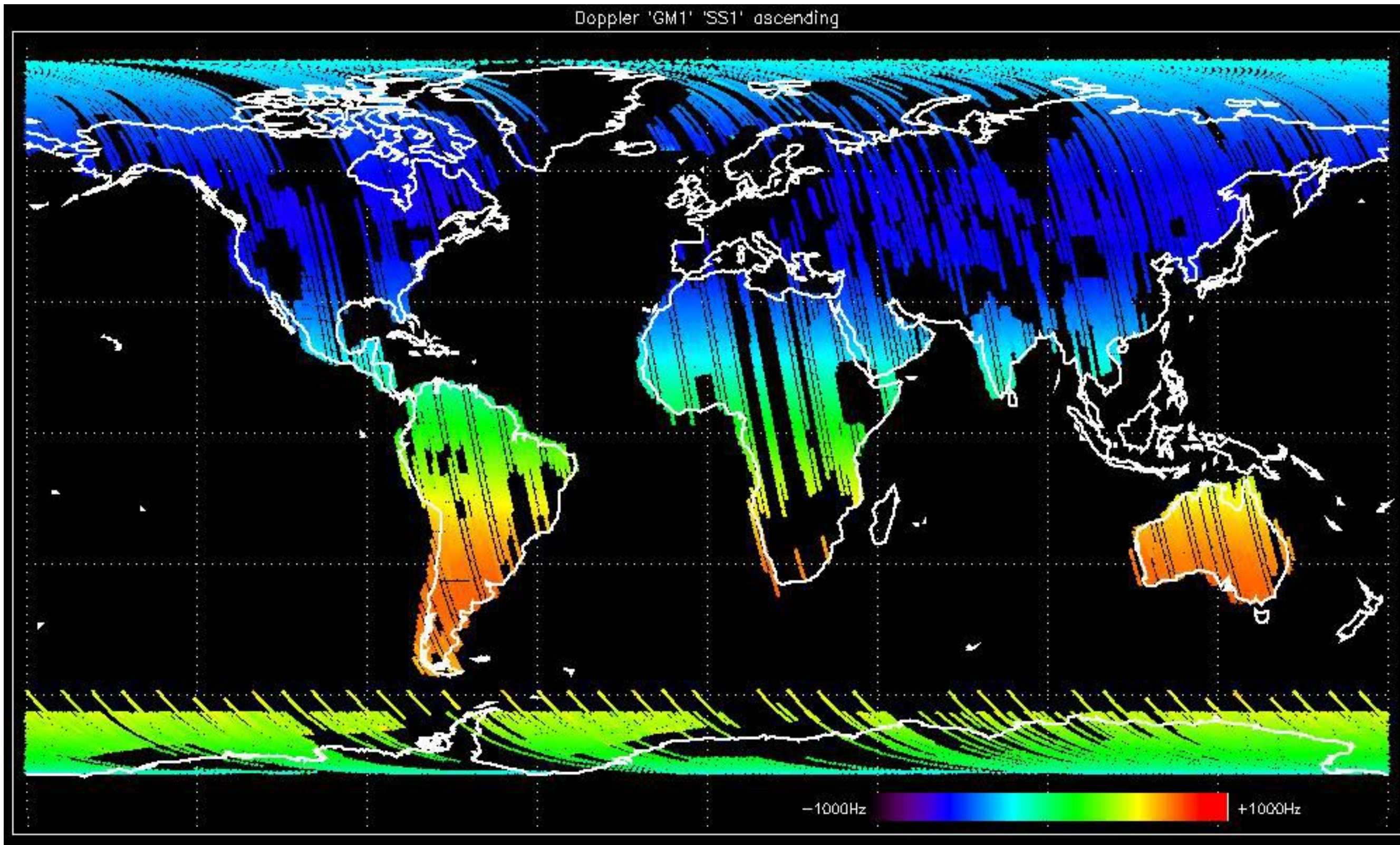


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



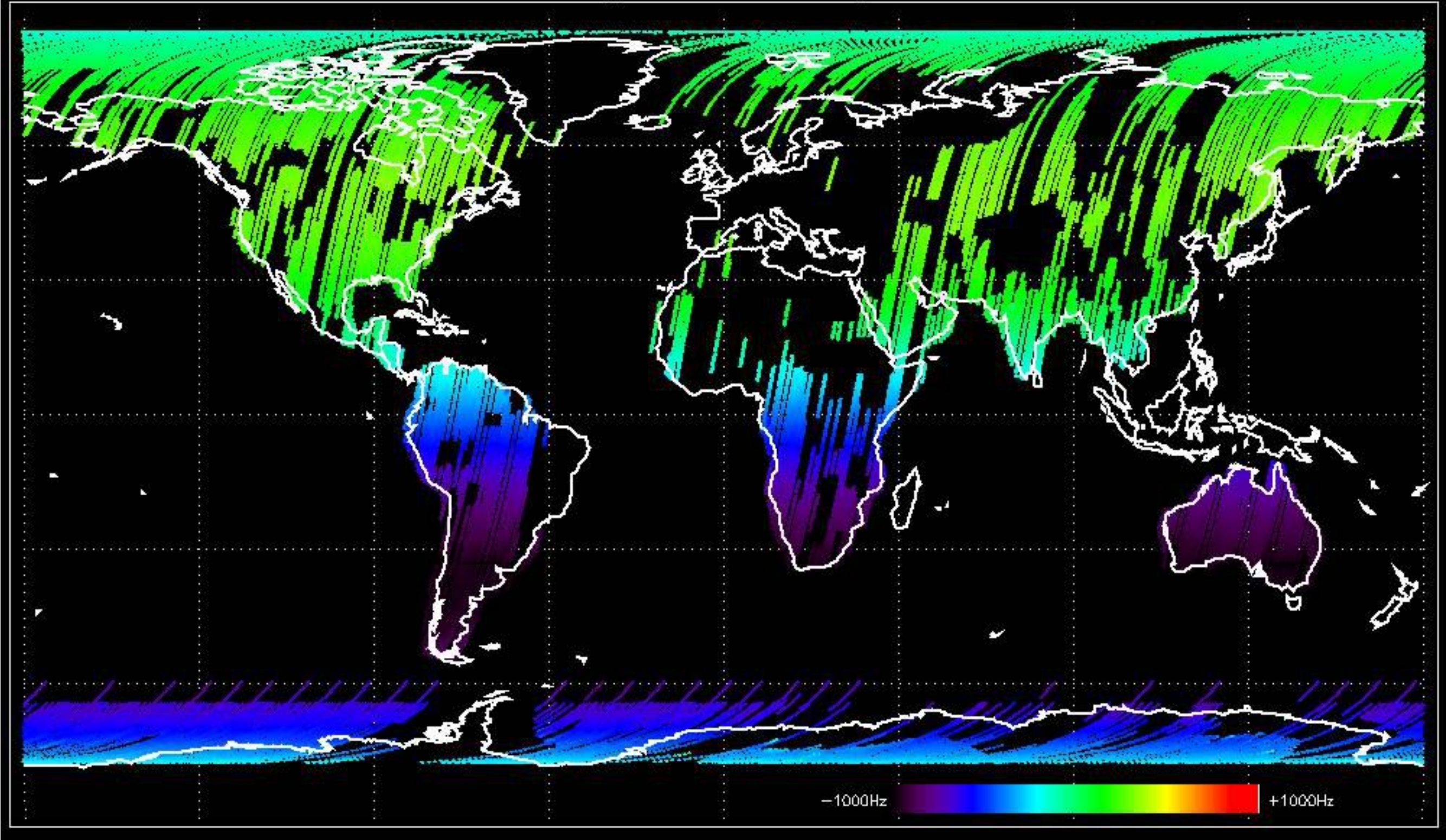


Doppler 'GM1' 'SS1' ascending



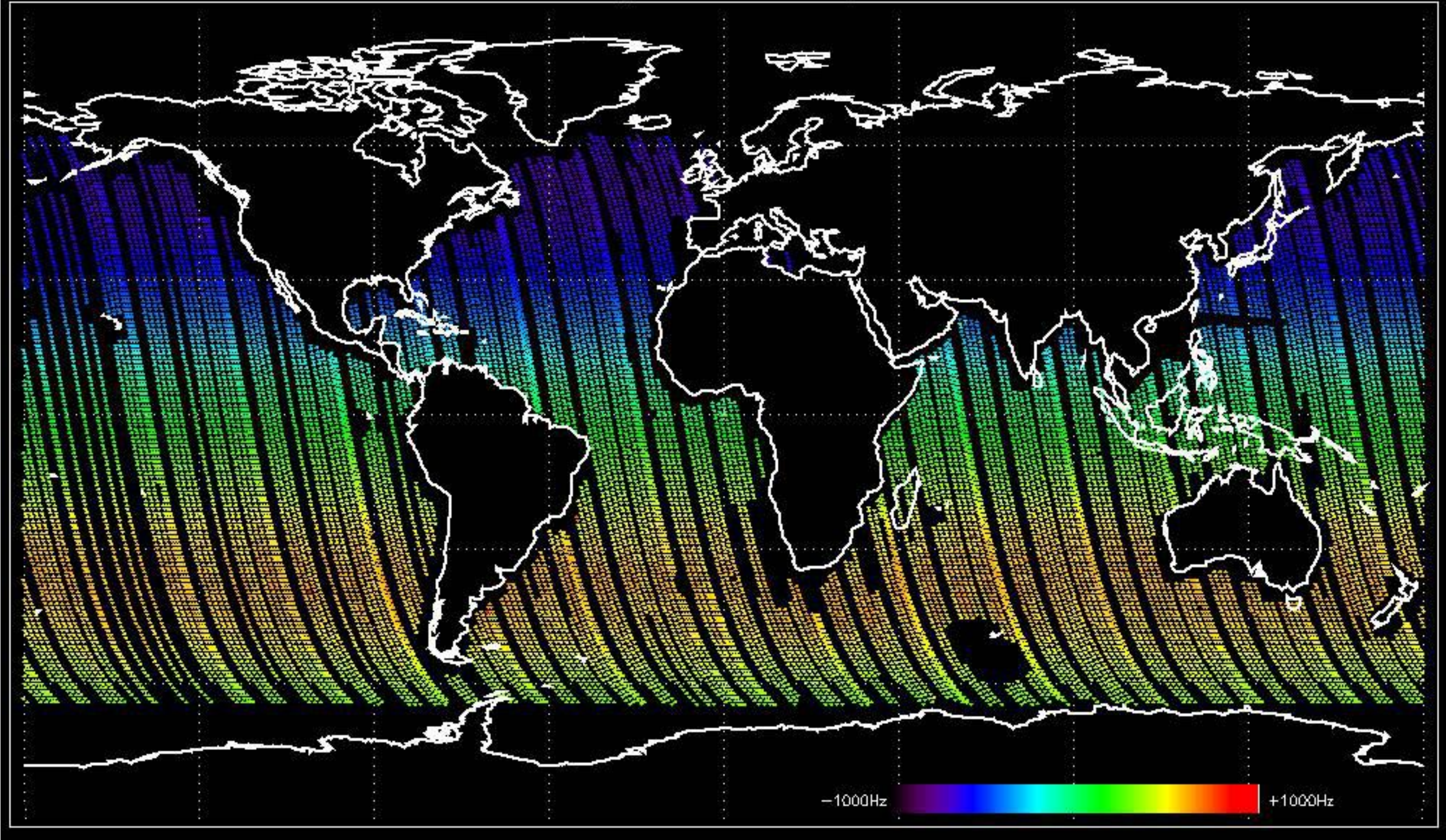


Doppler 'GM1' 'SS1' descending



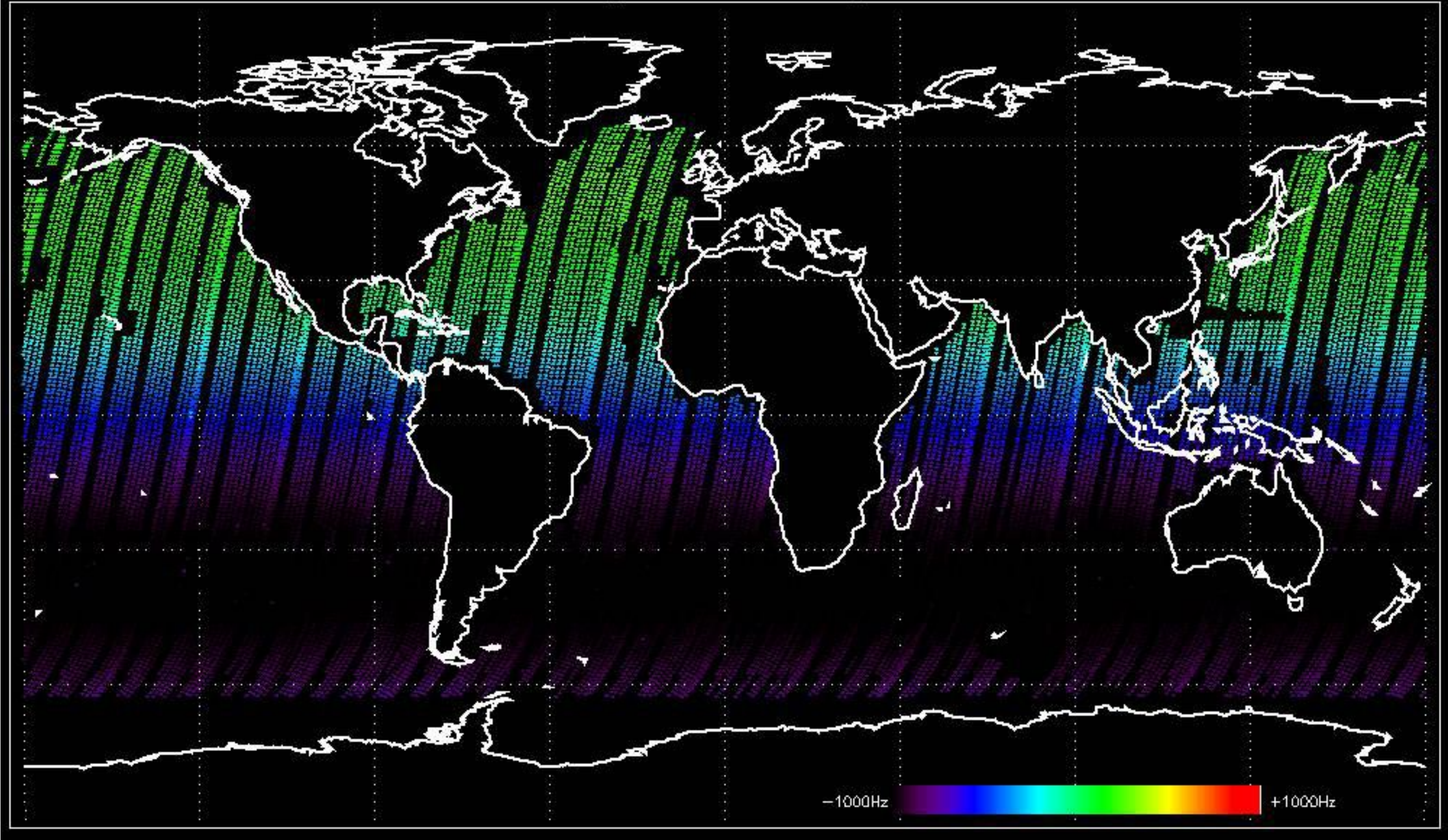


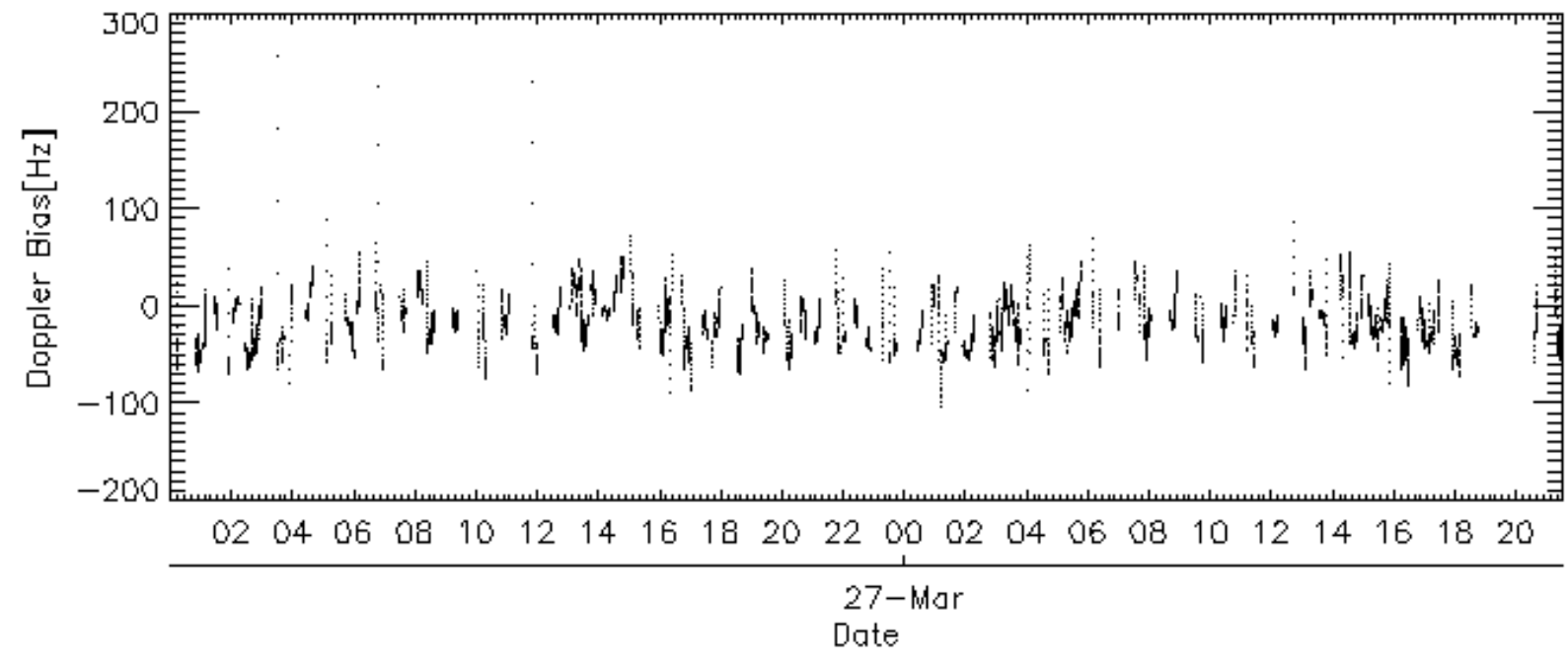
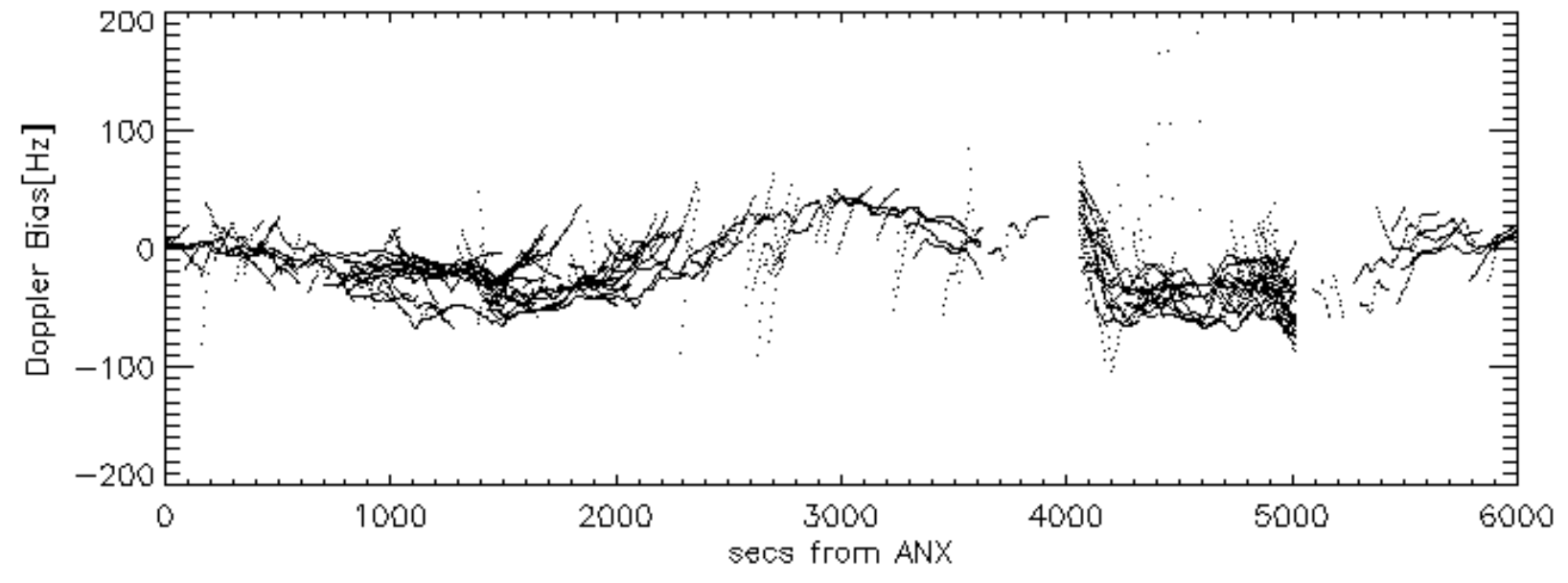
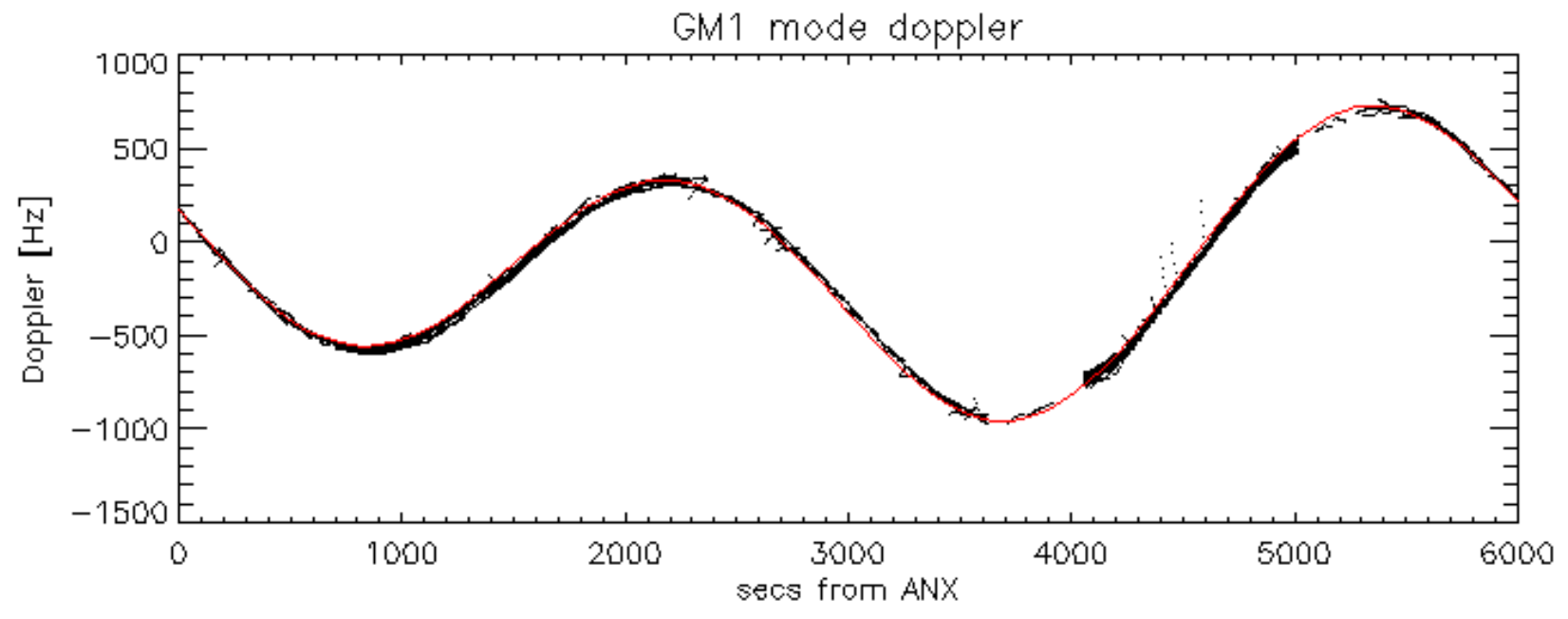
Doppler 'WVS' 'IS2' ascending



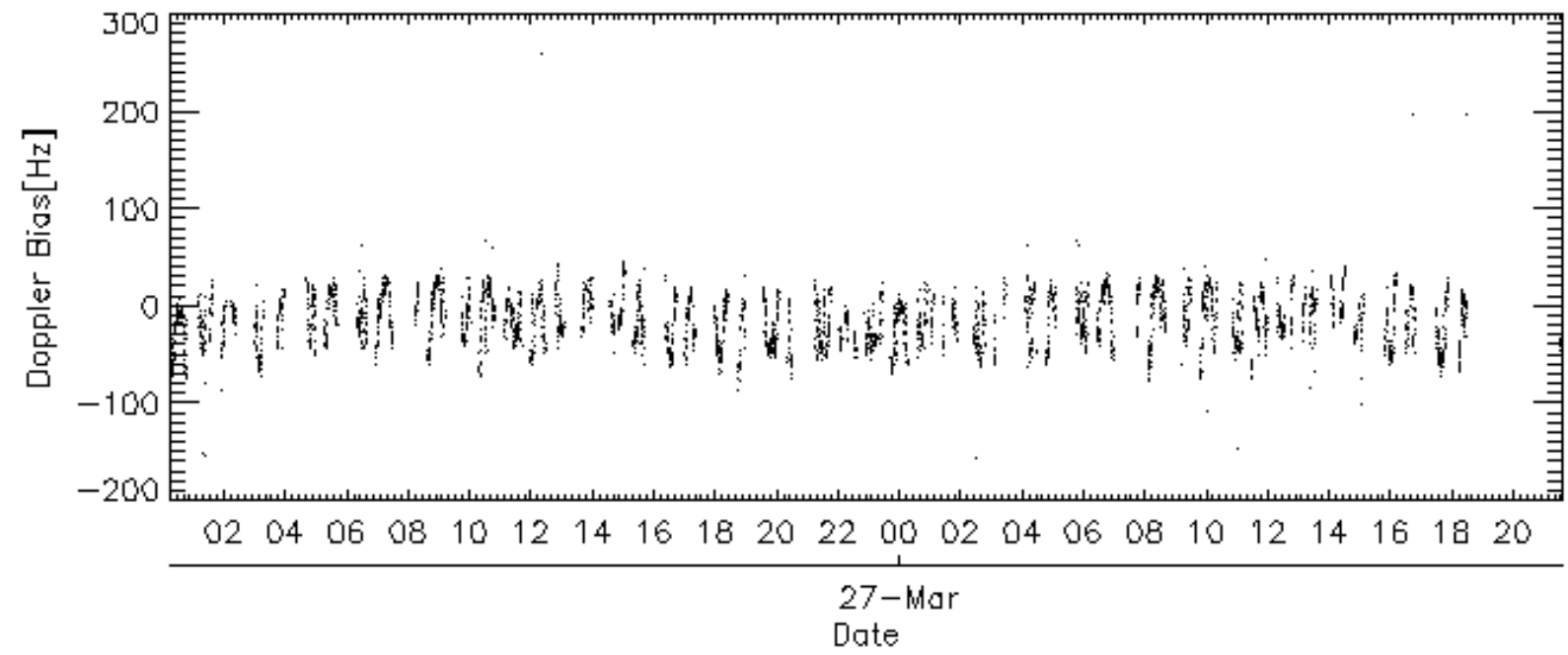
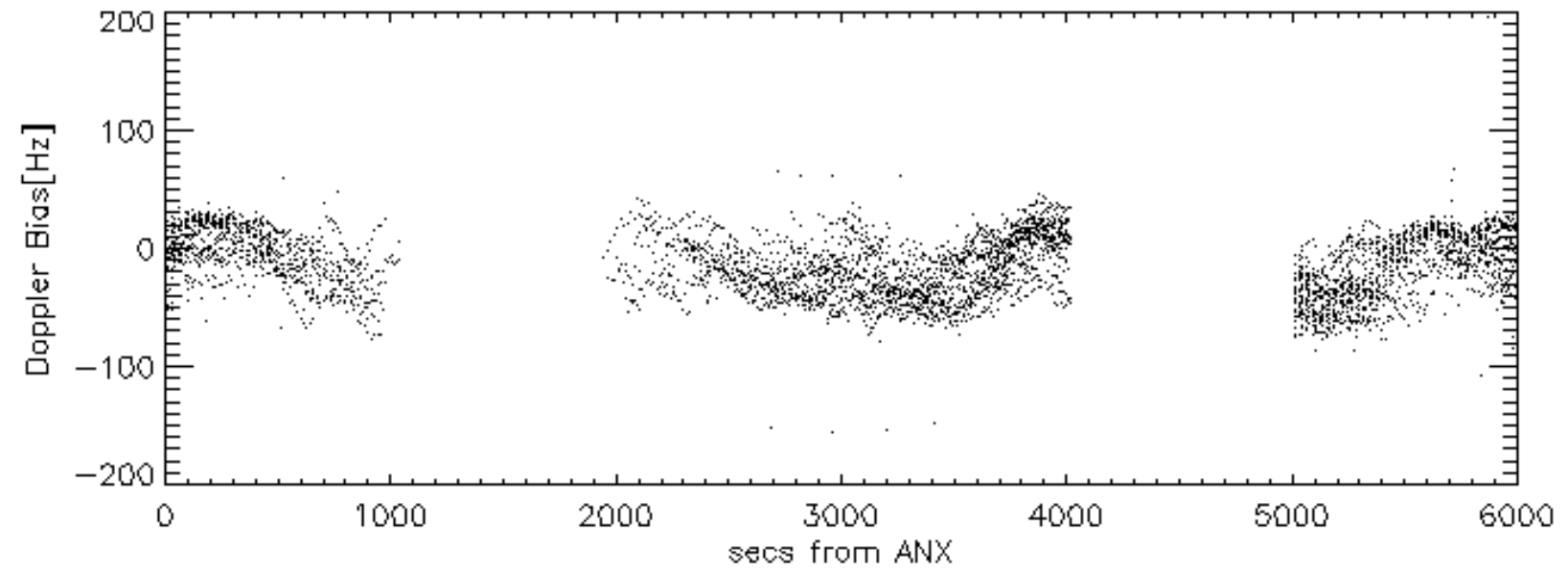
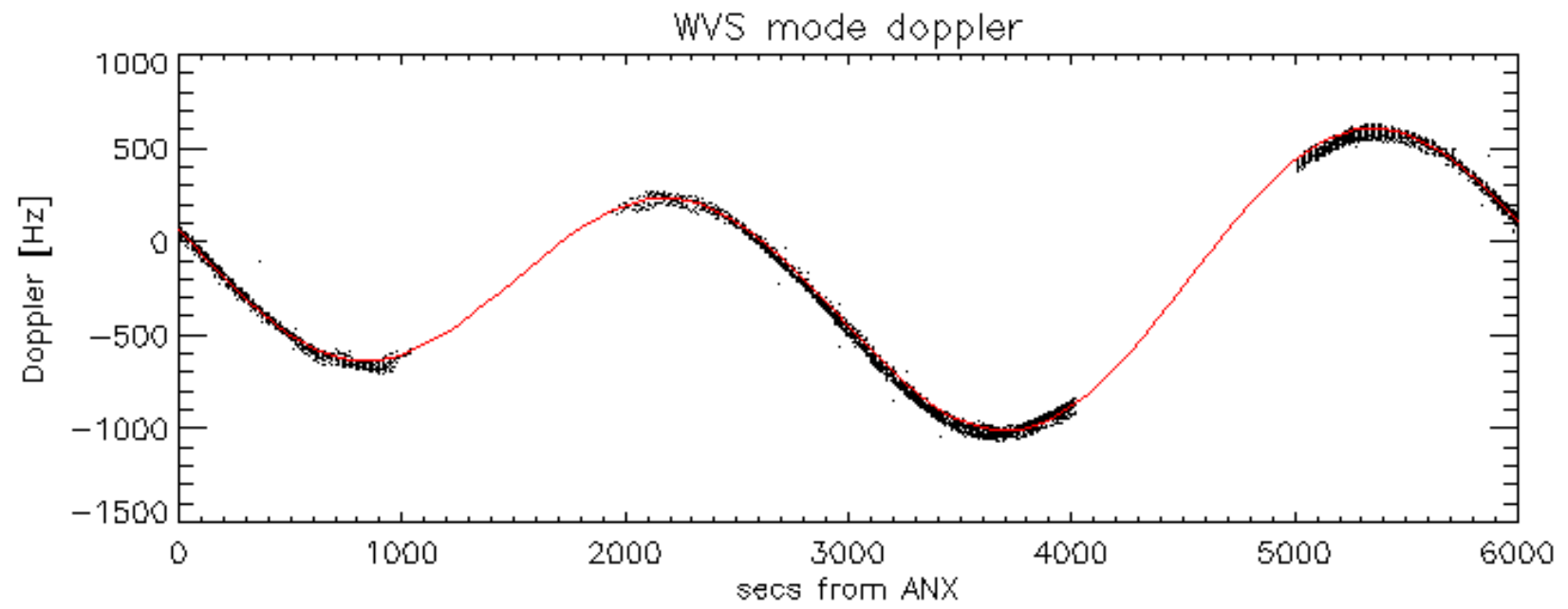


Doppler 'WVS' 'IS2' descending



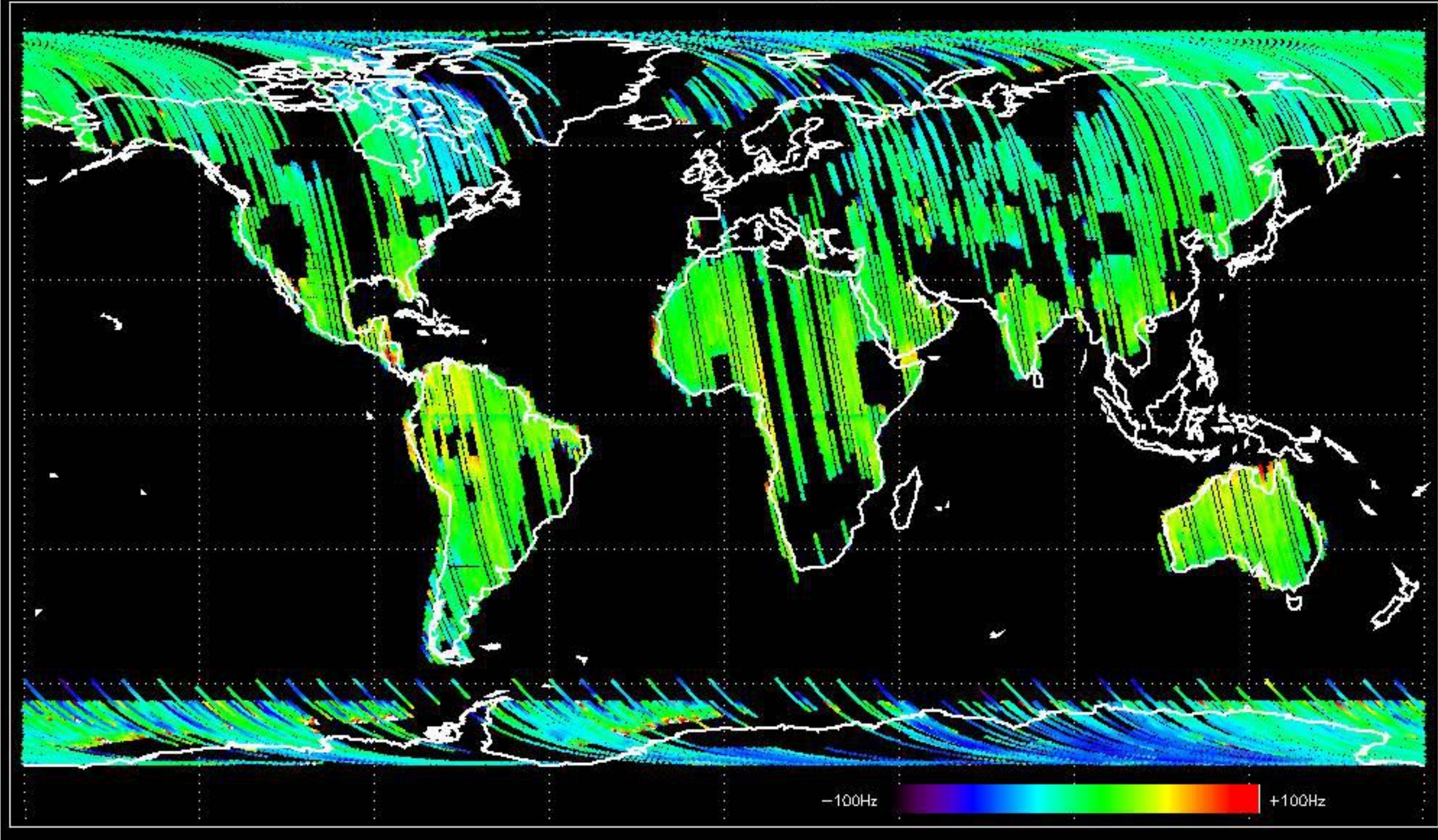






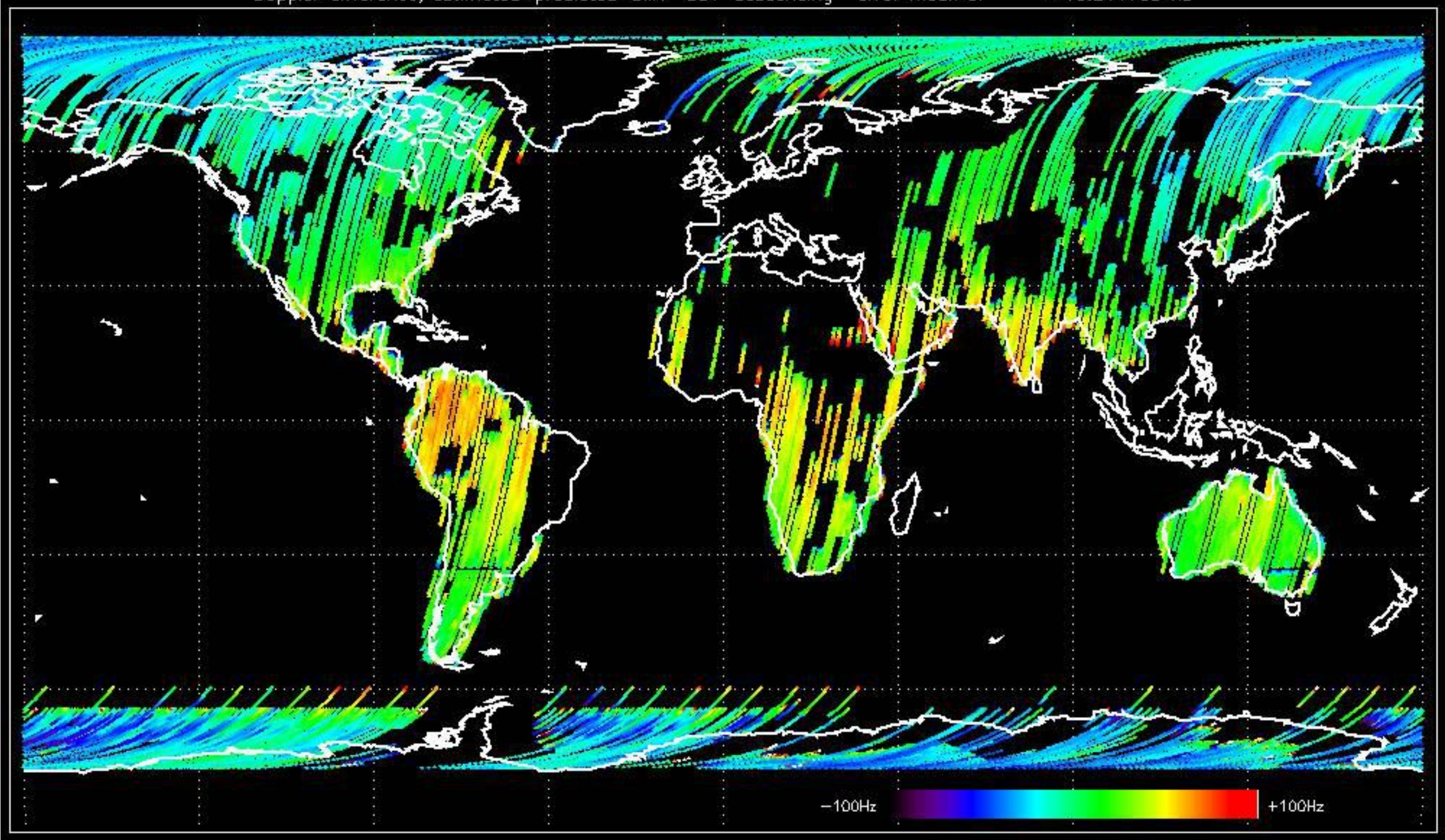


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.576506 Hz



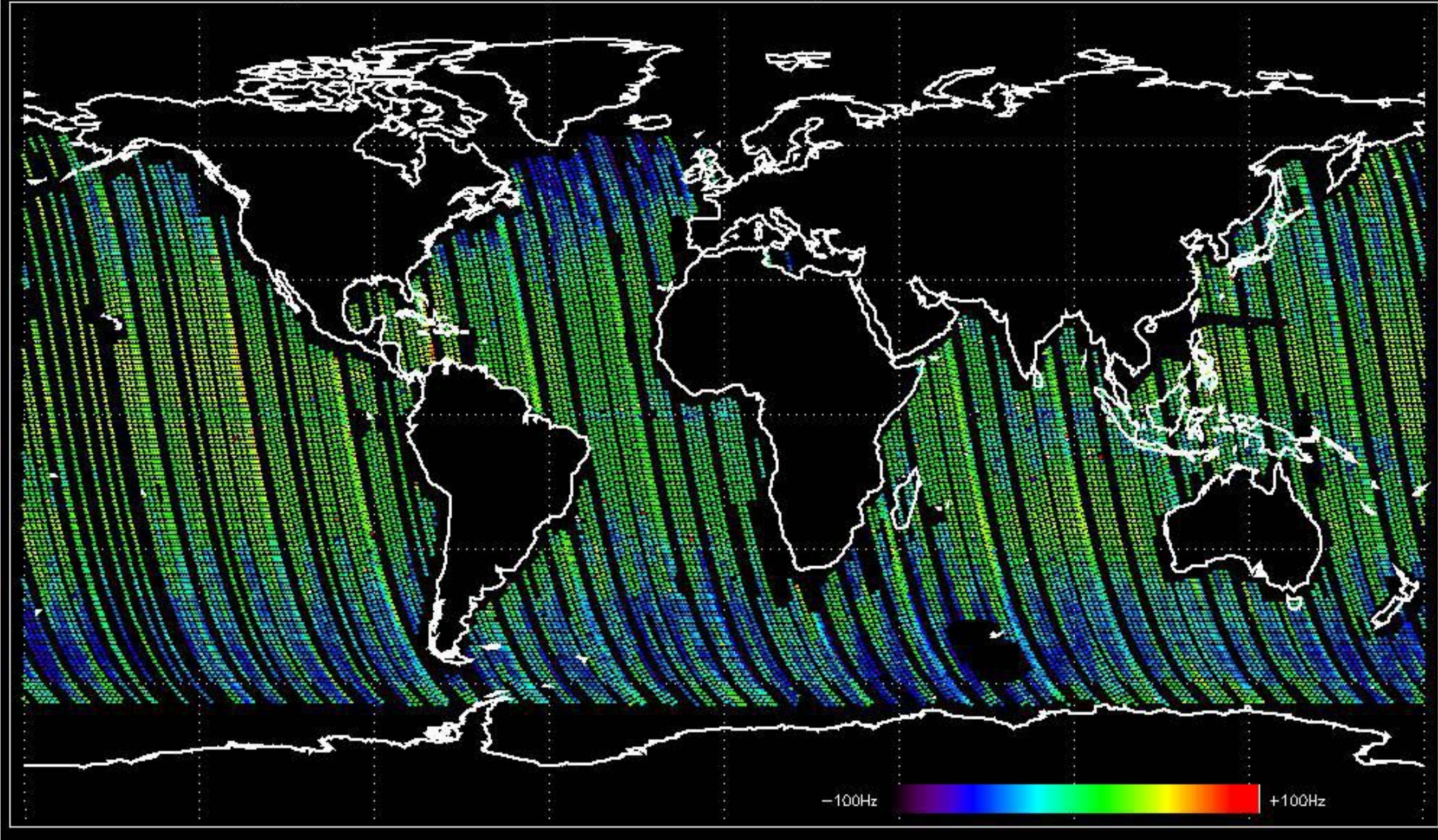


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.241168 Hz



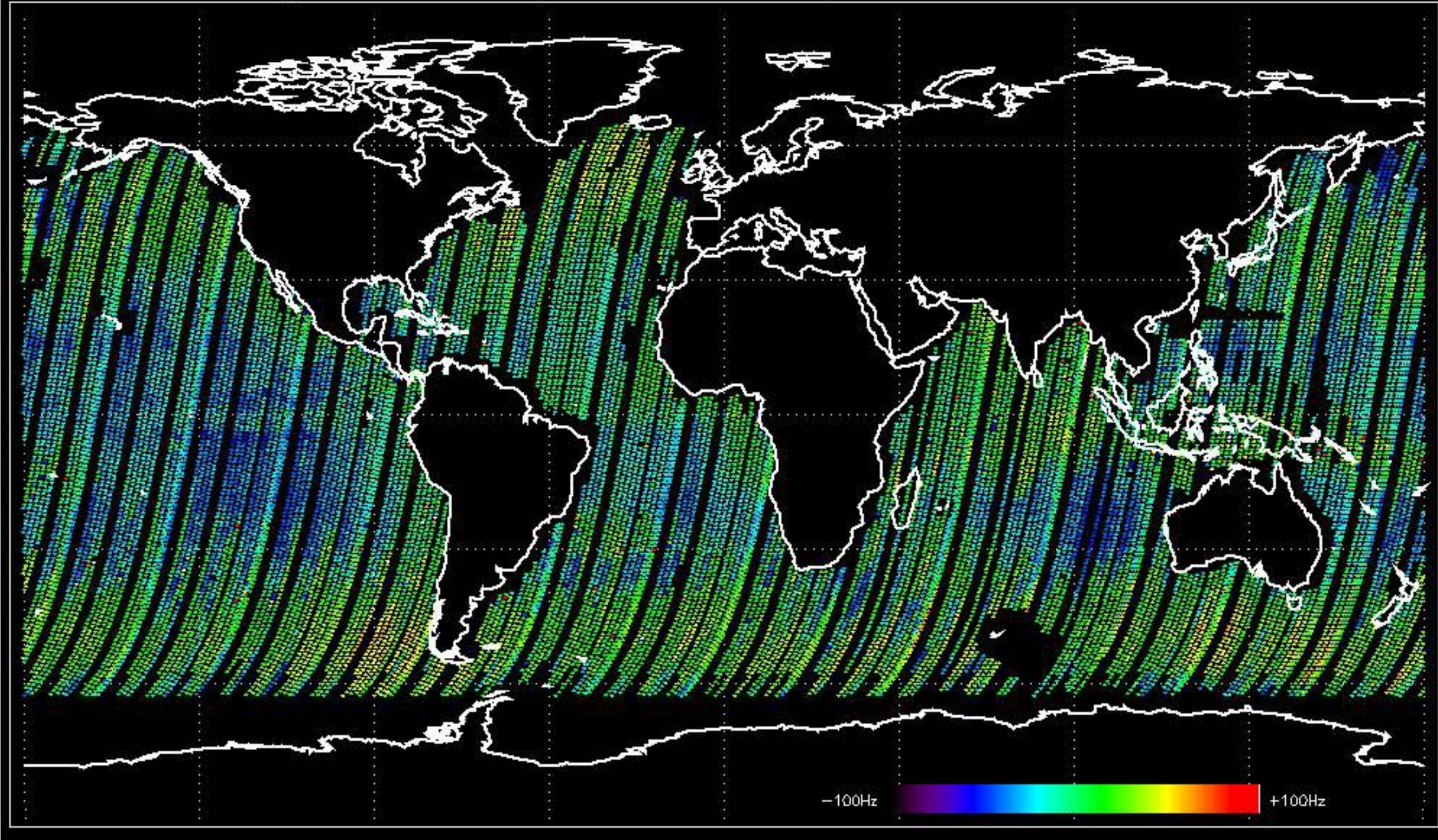


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.785389 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -15.129080 Hz

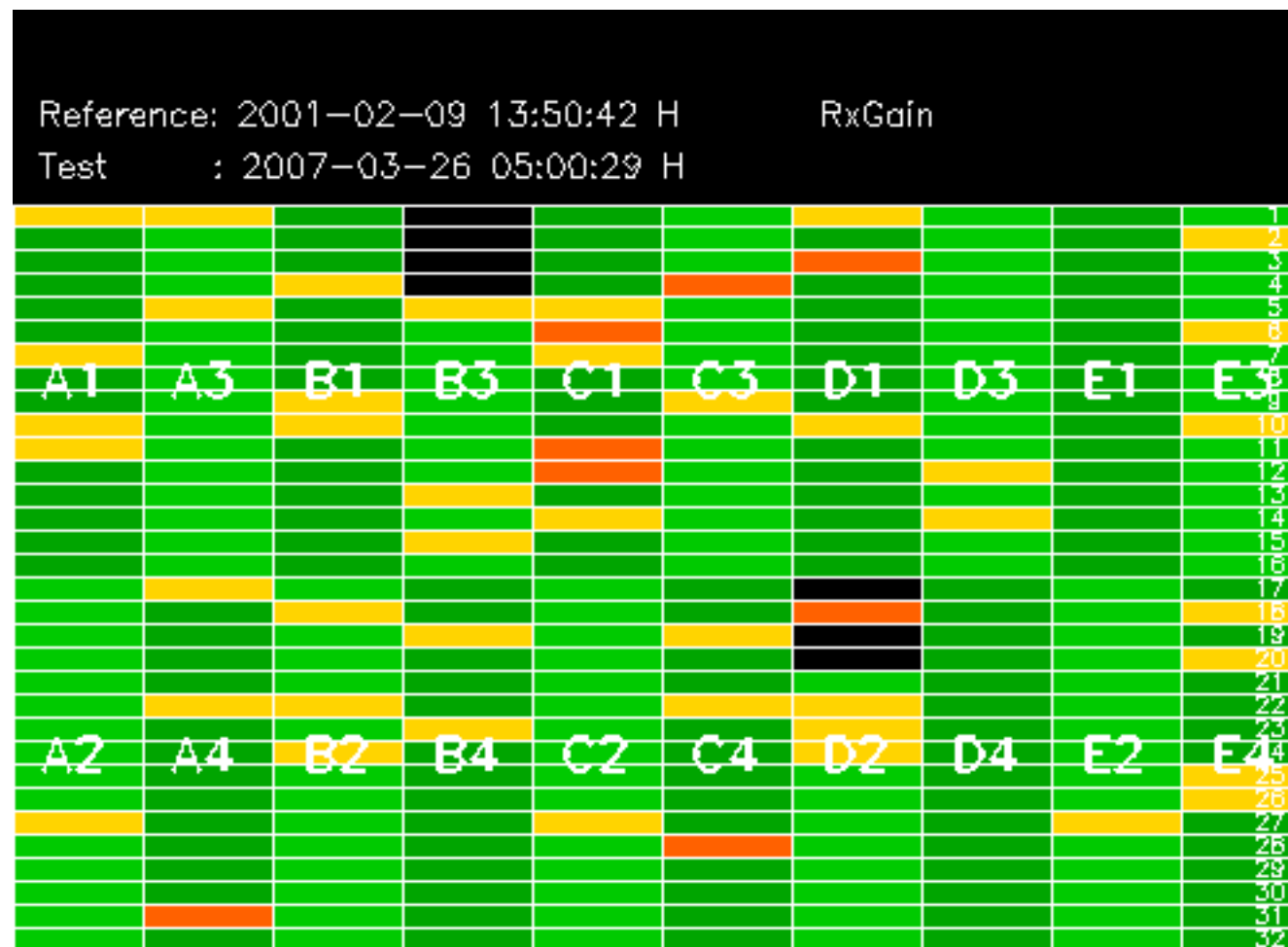




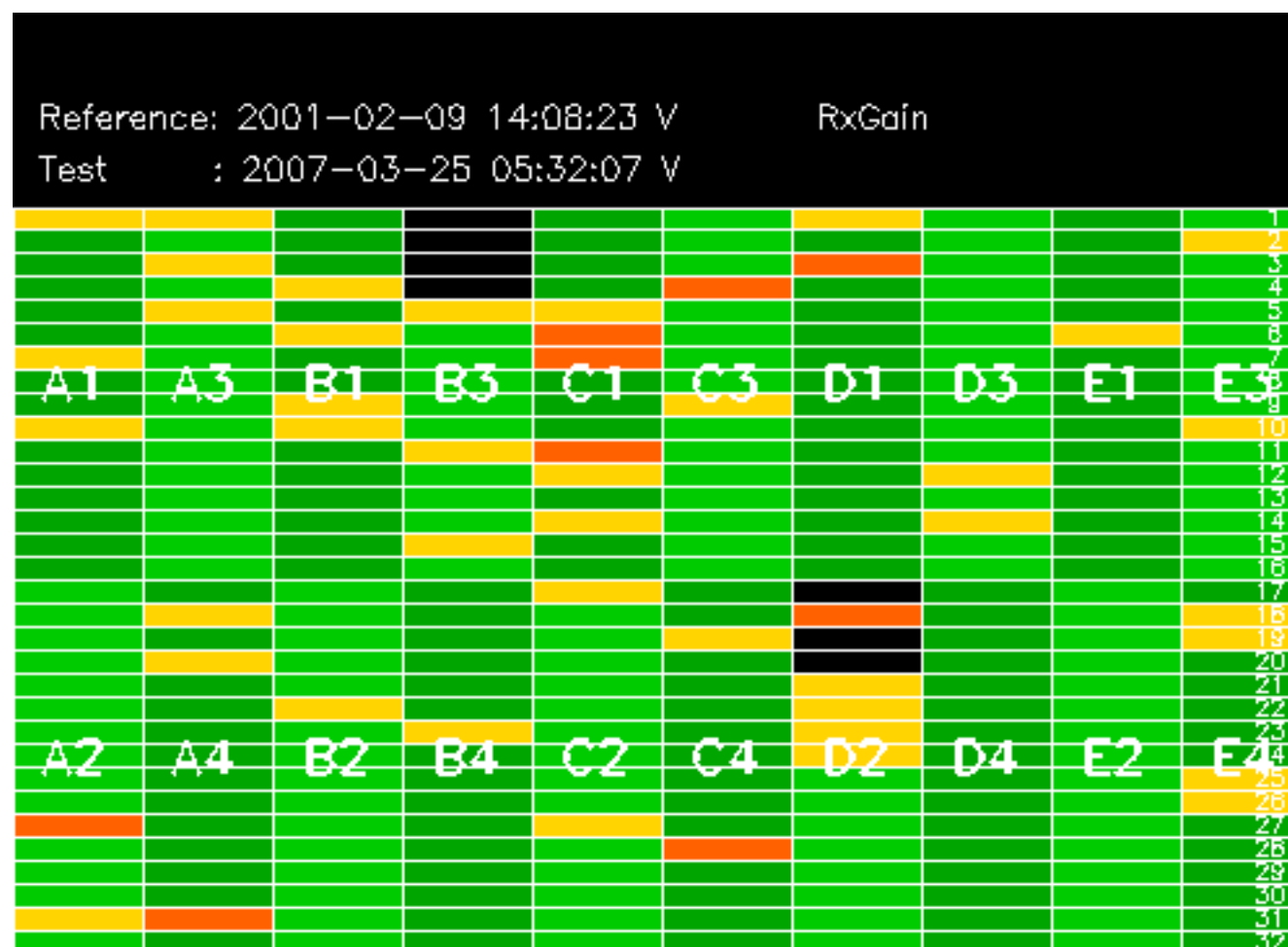
No anomalies observed on available MS products:

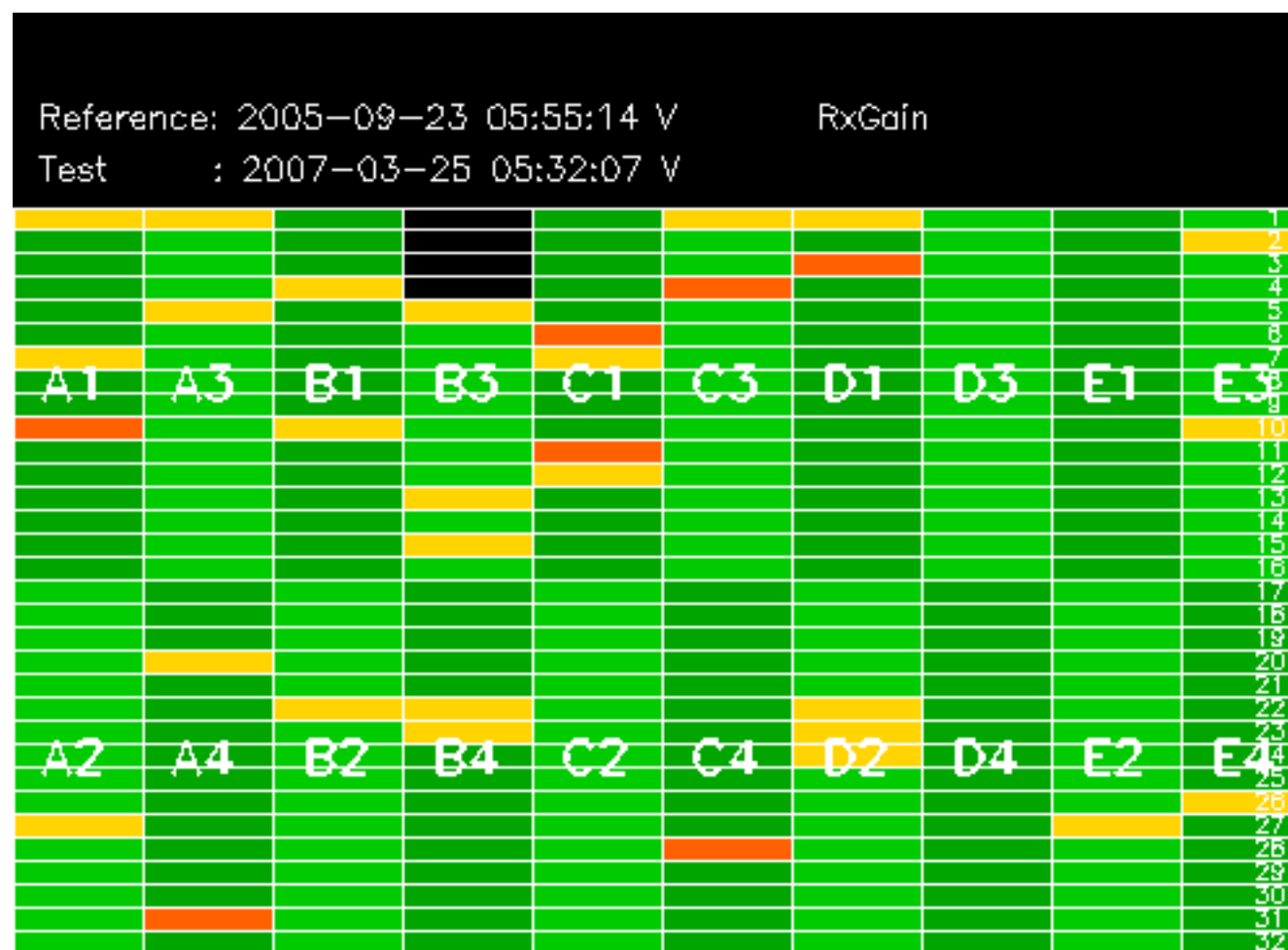


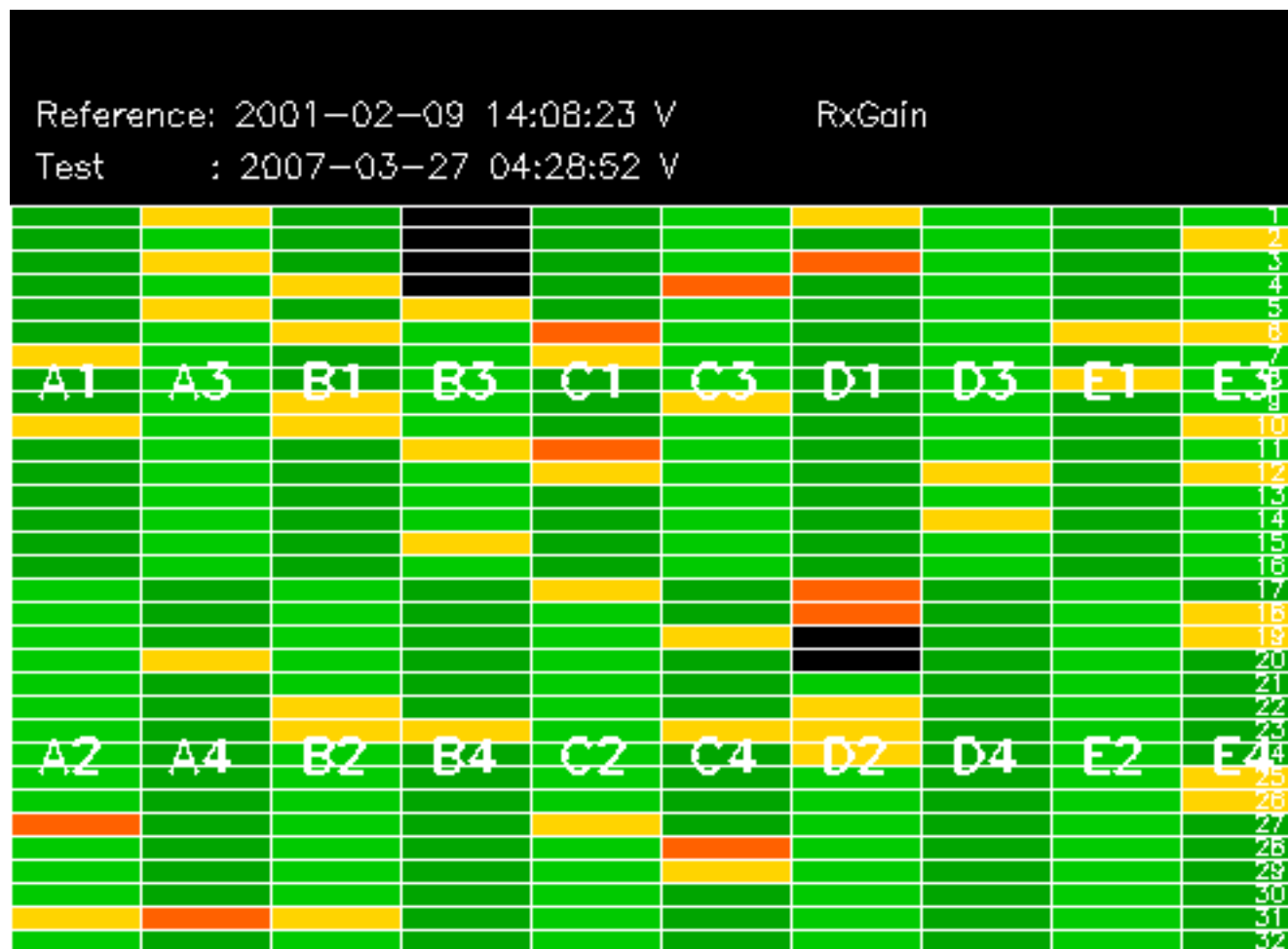
No anomalies observed.

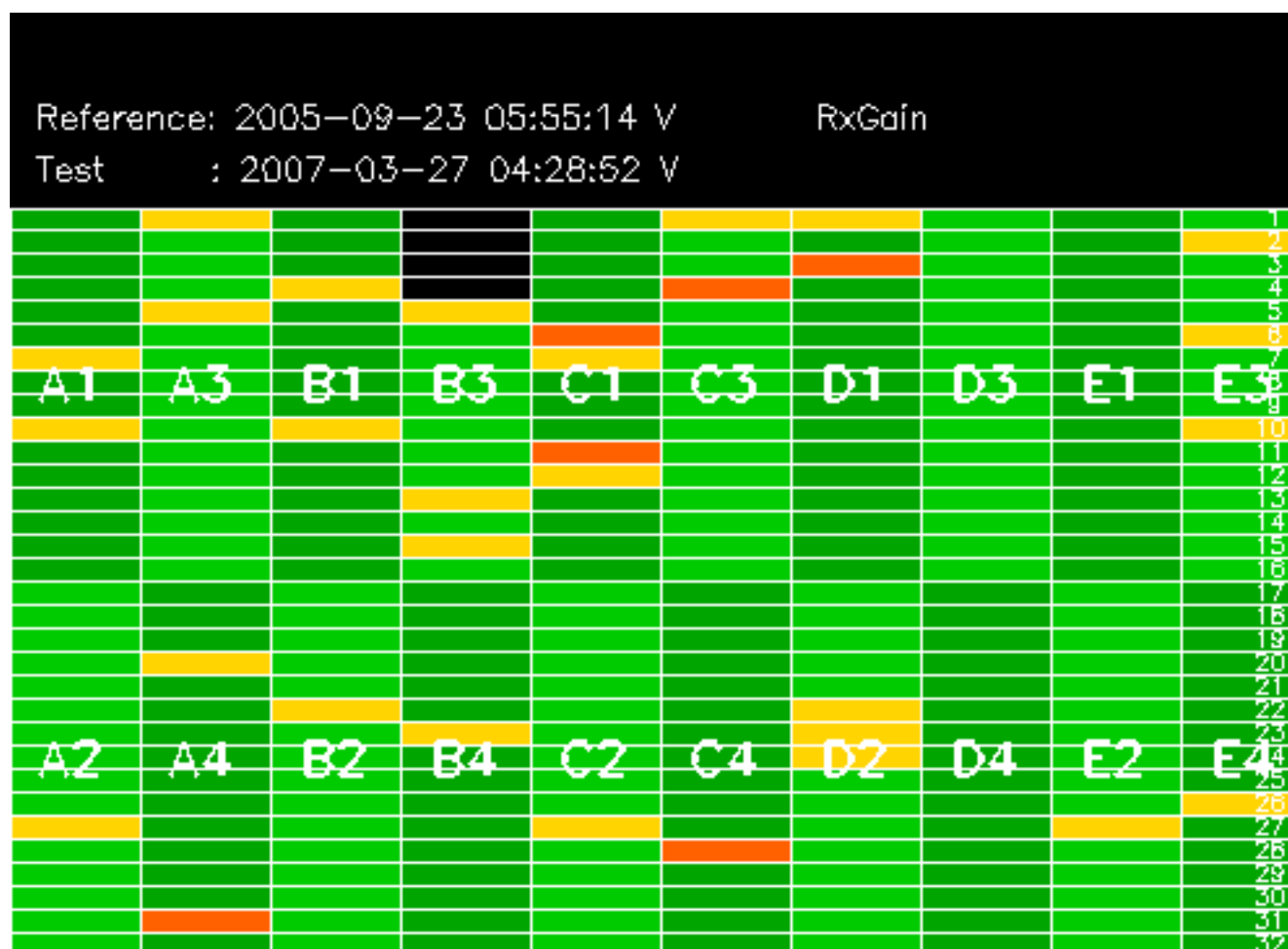






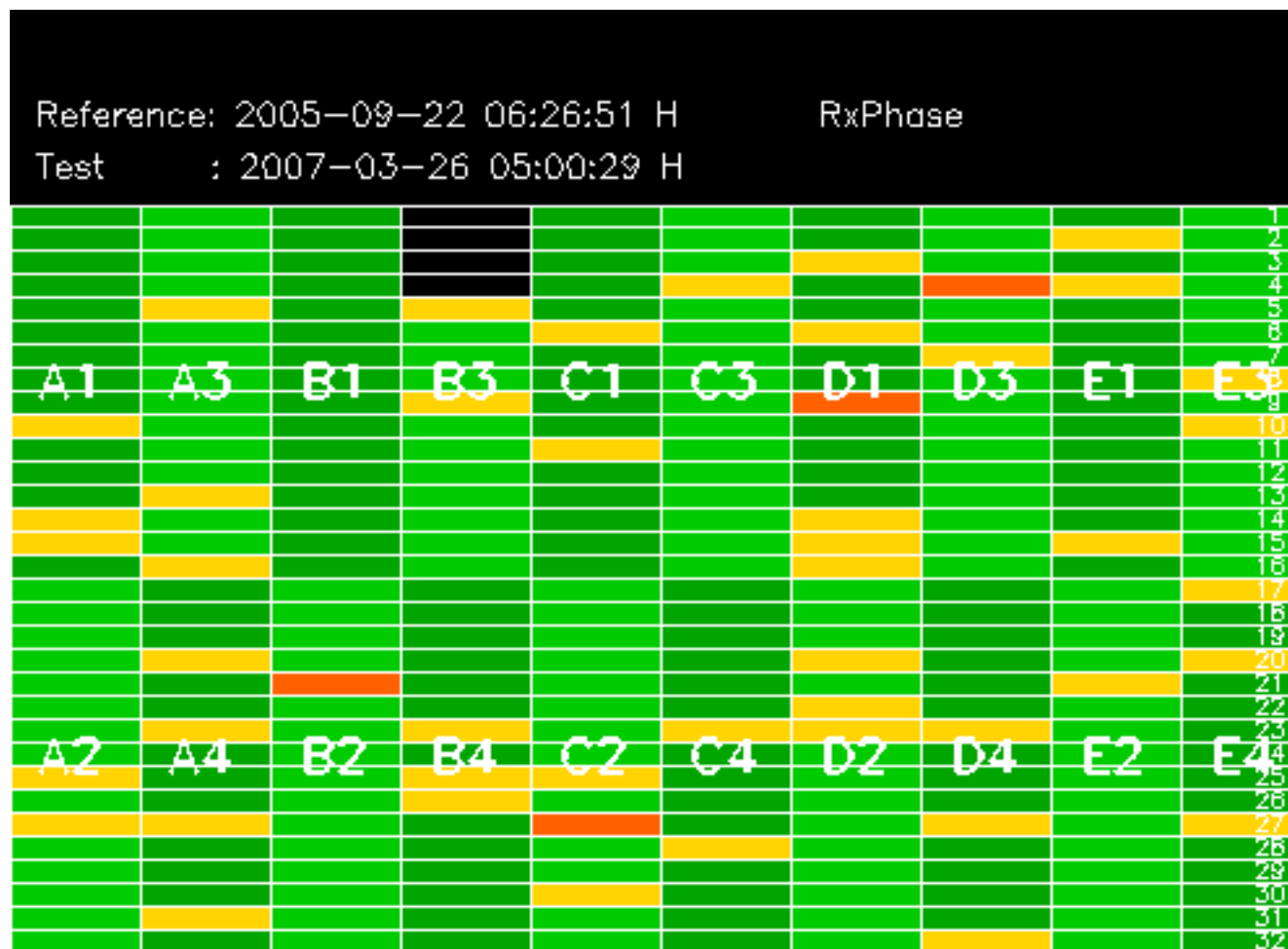






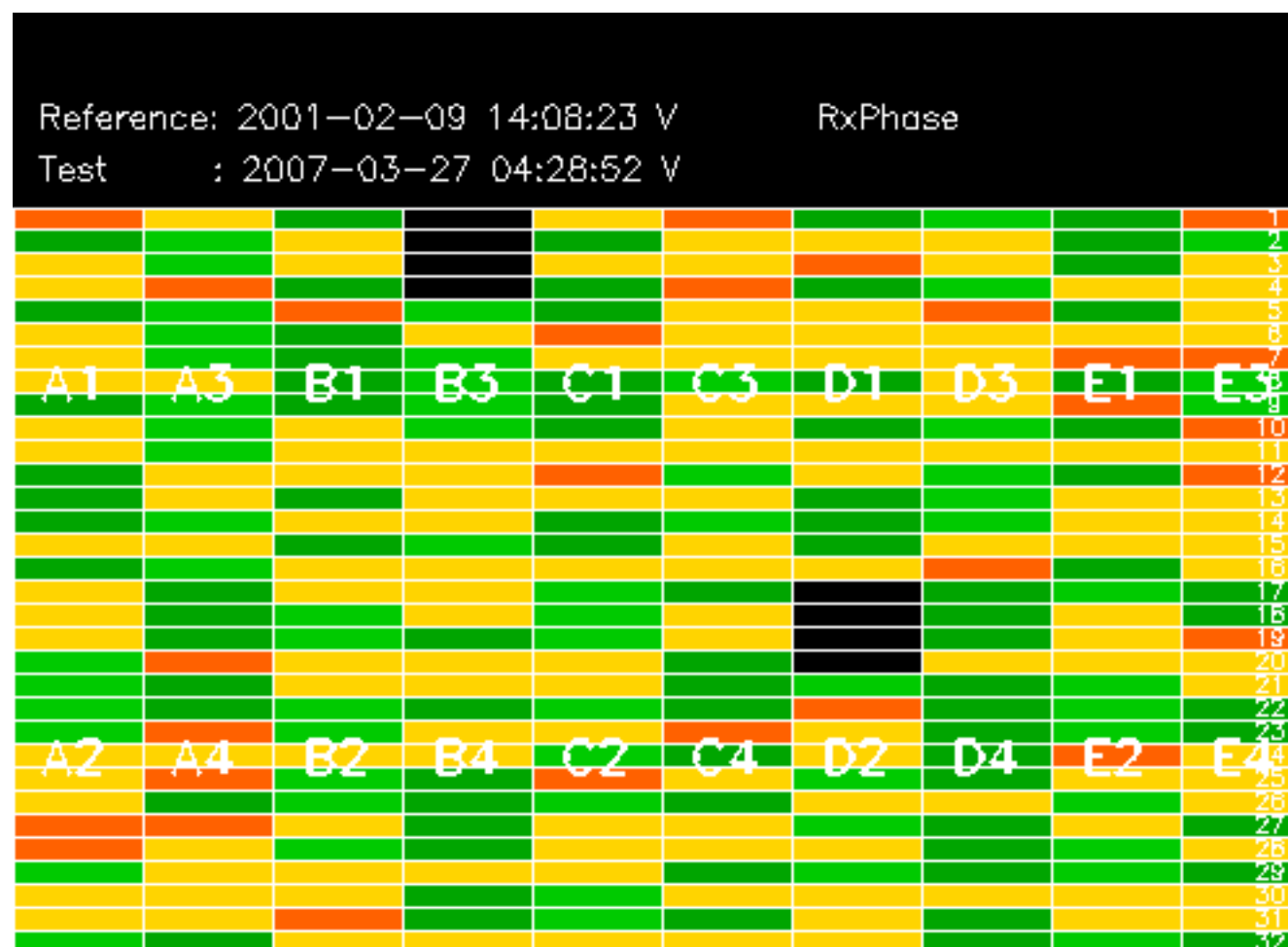




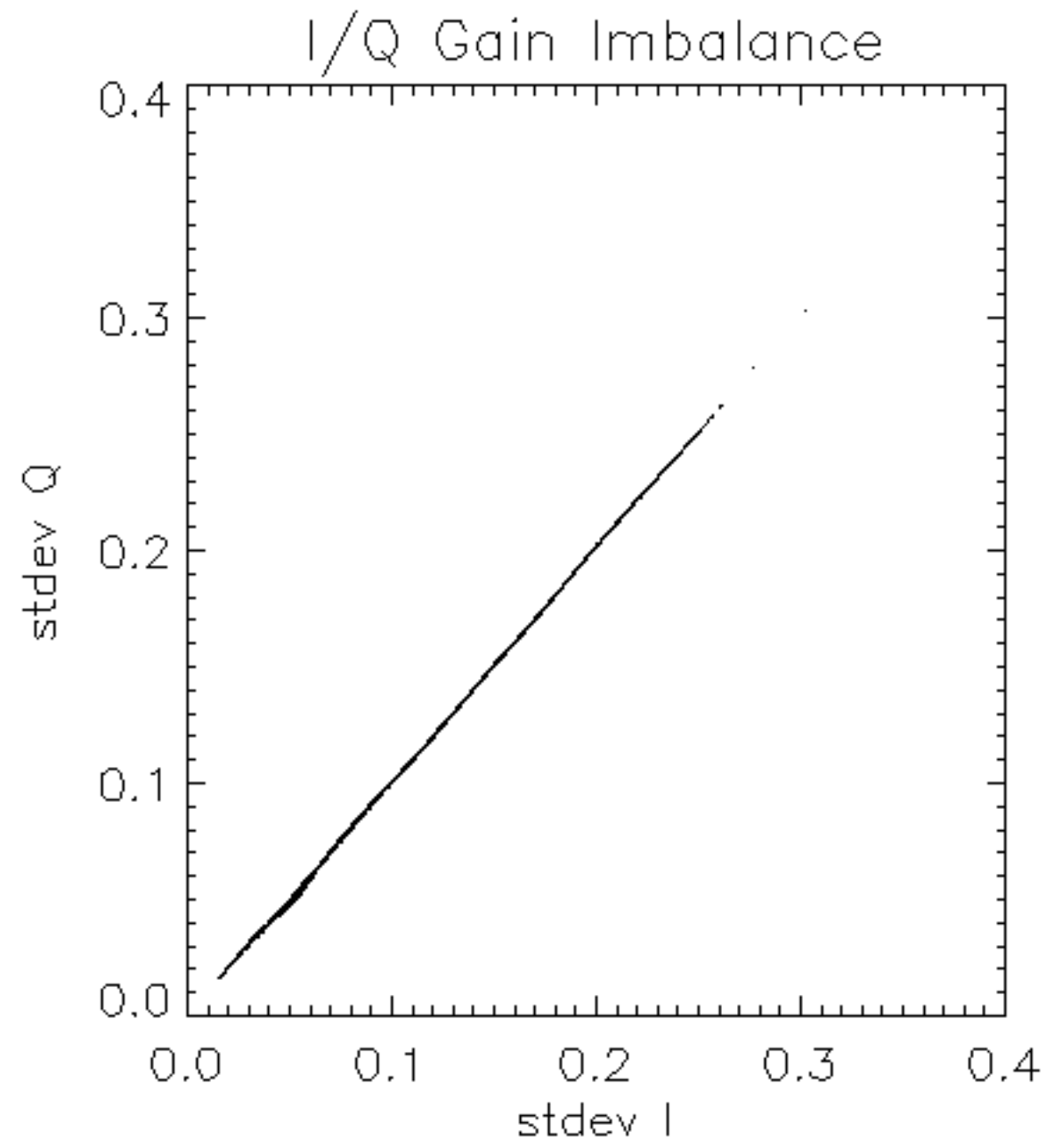


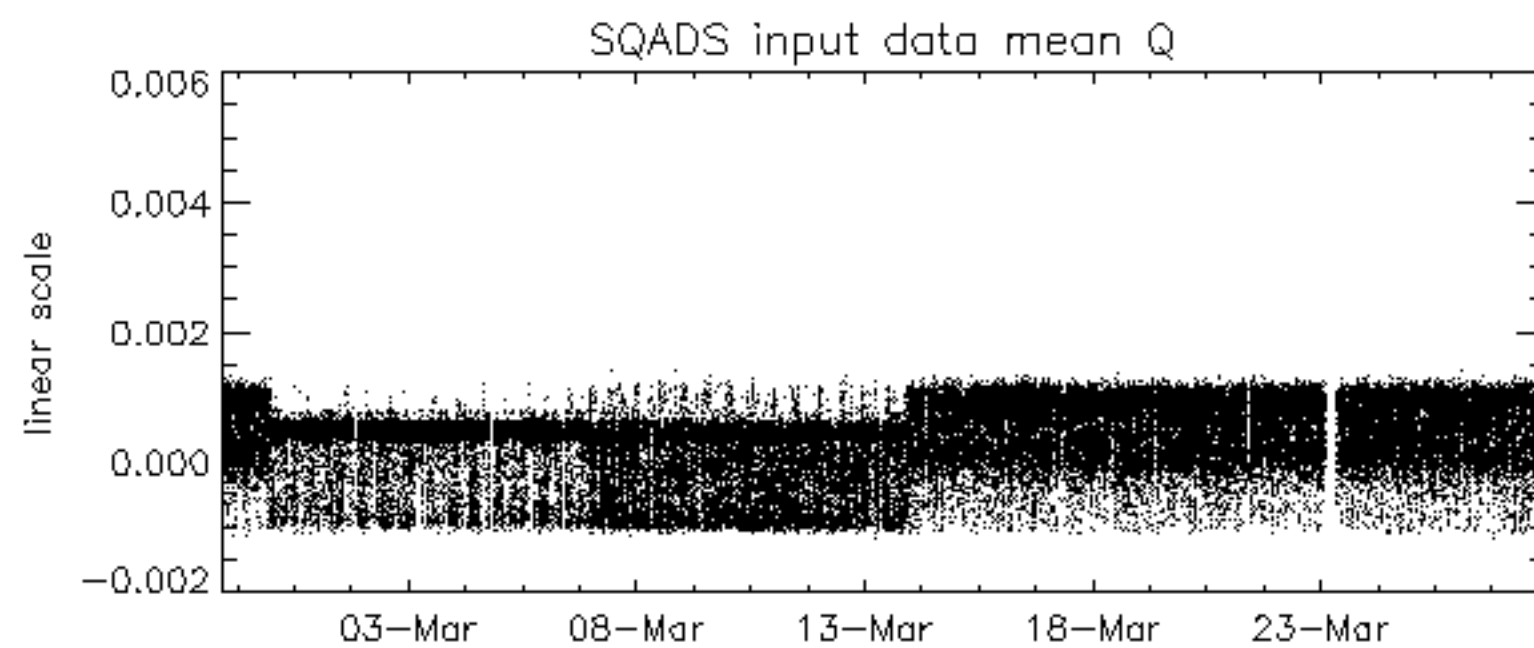
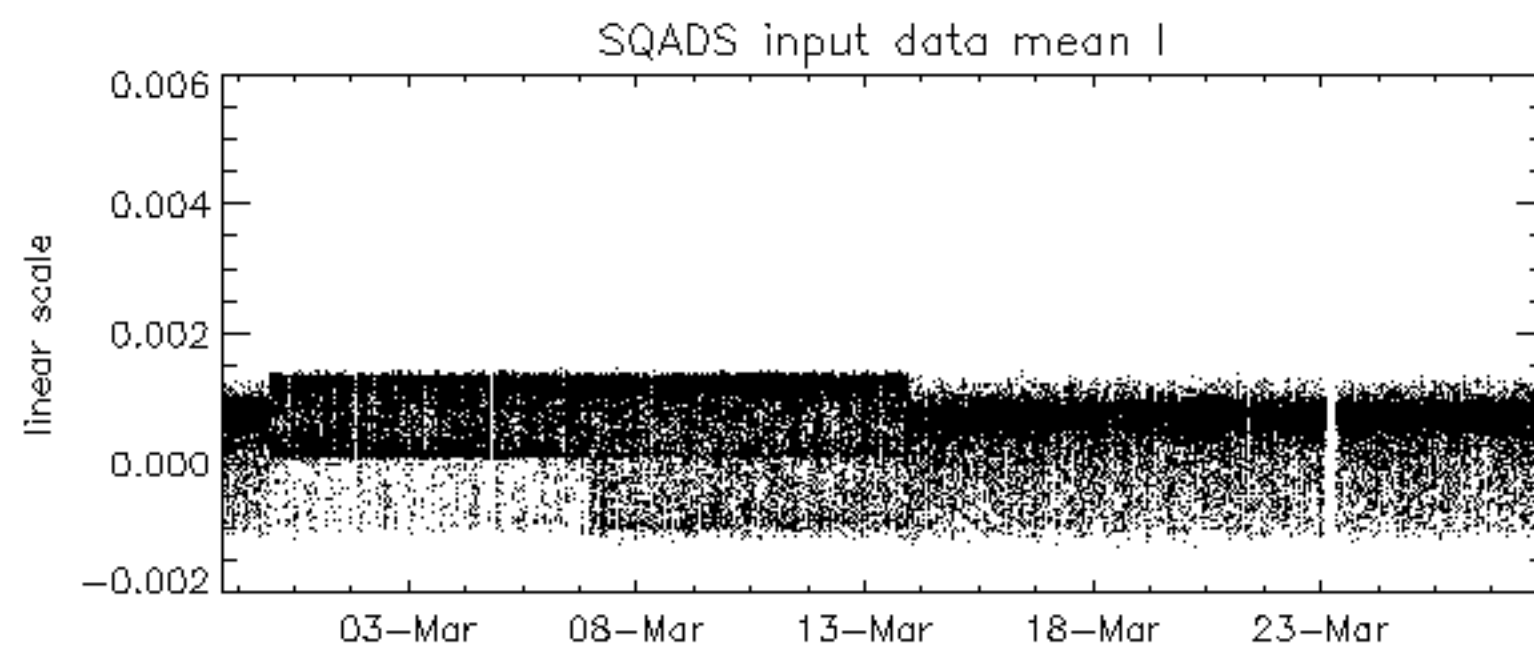
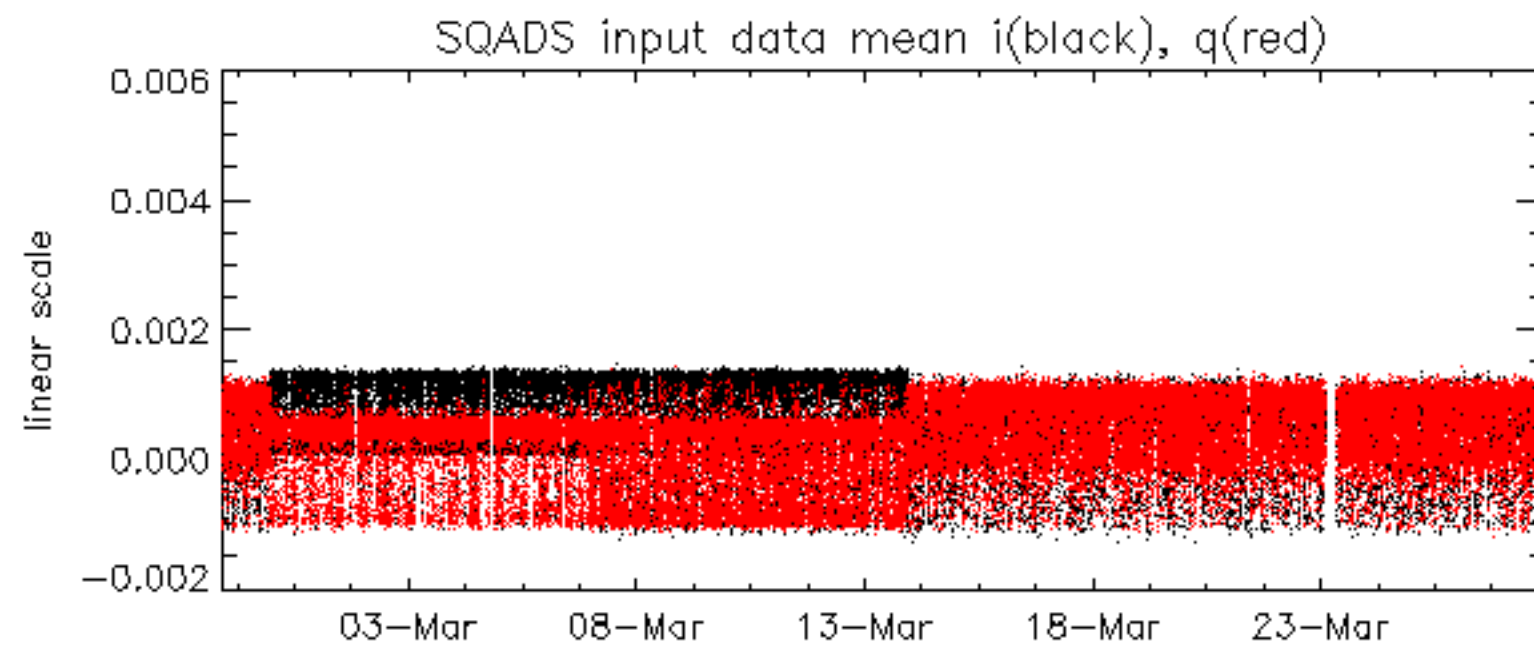


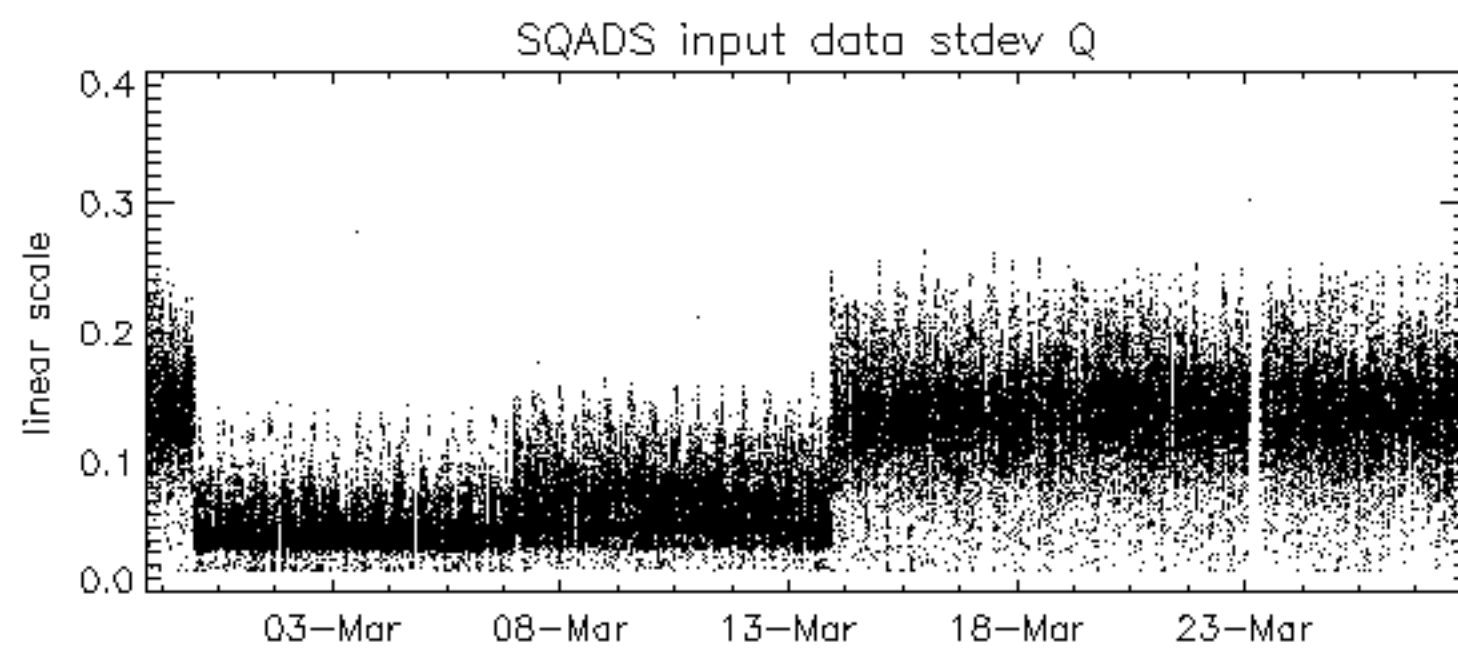
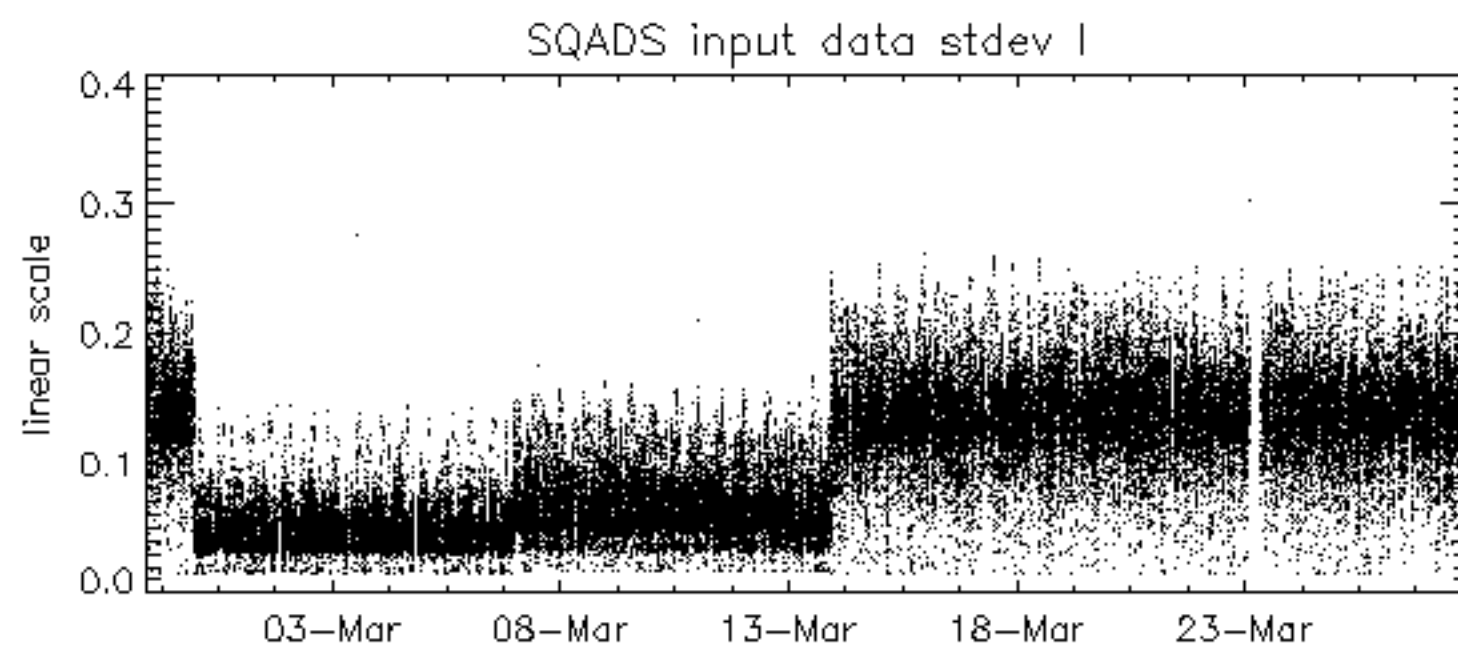
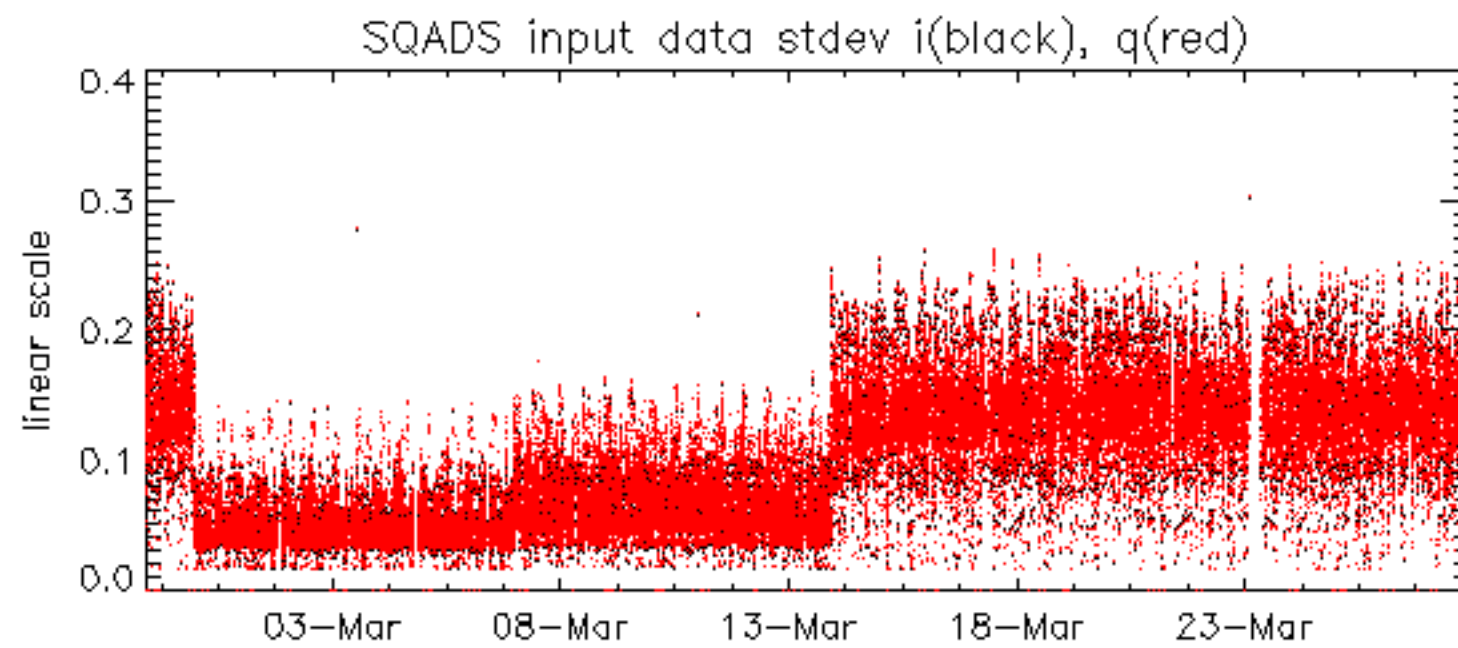


























Summary of analysis for the last 3 days 2007032[567]

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_GM1_1PNPDK20070326_142221_000001572056_00397_26503_4278.N1	0	6
ASA_WSM_1PNPDE20070325_143215_000000852056_00383_26489_6157.N1	0	16
ASA_WSM_1PNPDE20070325_233836_000001842056_00388_26494_6666.N1	0	62
ASA_WSM_1PNPDE20070326_185948_000000672056_00400_26506_7466.N1	0	54
ASA_WSM_1PNPDE20070327_004727_000000852056_00403_26509_7928.N1	0	26
ASA_WSM_1PNPDE20070327_140944_000000862056_00411_26517_8651.N1	0	22
ASA_WSM_1PNPDE20070327_150733_000000862056_00412_26518_8655.N1	0	33
ASA_WSM_1PNPDE20070327_183104_000000852056_00414_26520_8729.N1	0	16
ASA_WSM_1PNPDK20070326_140038_000000792056_00397_26503_4251.N1	0	16
ASA_APM_1PNPDE20070325_161458_000000402056_00384_26490_6131.N1	11	0

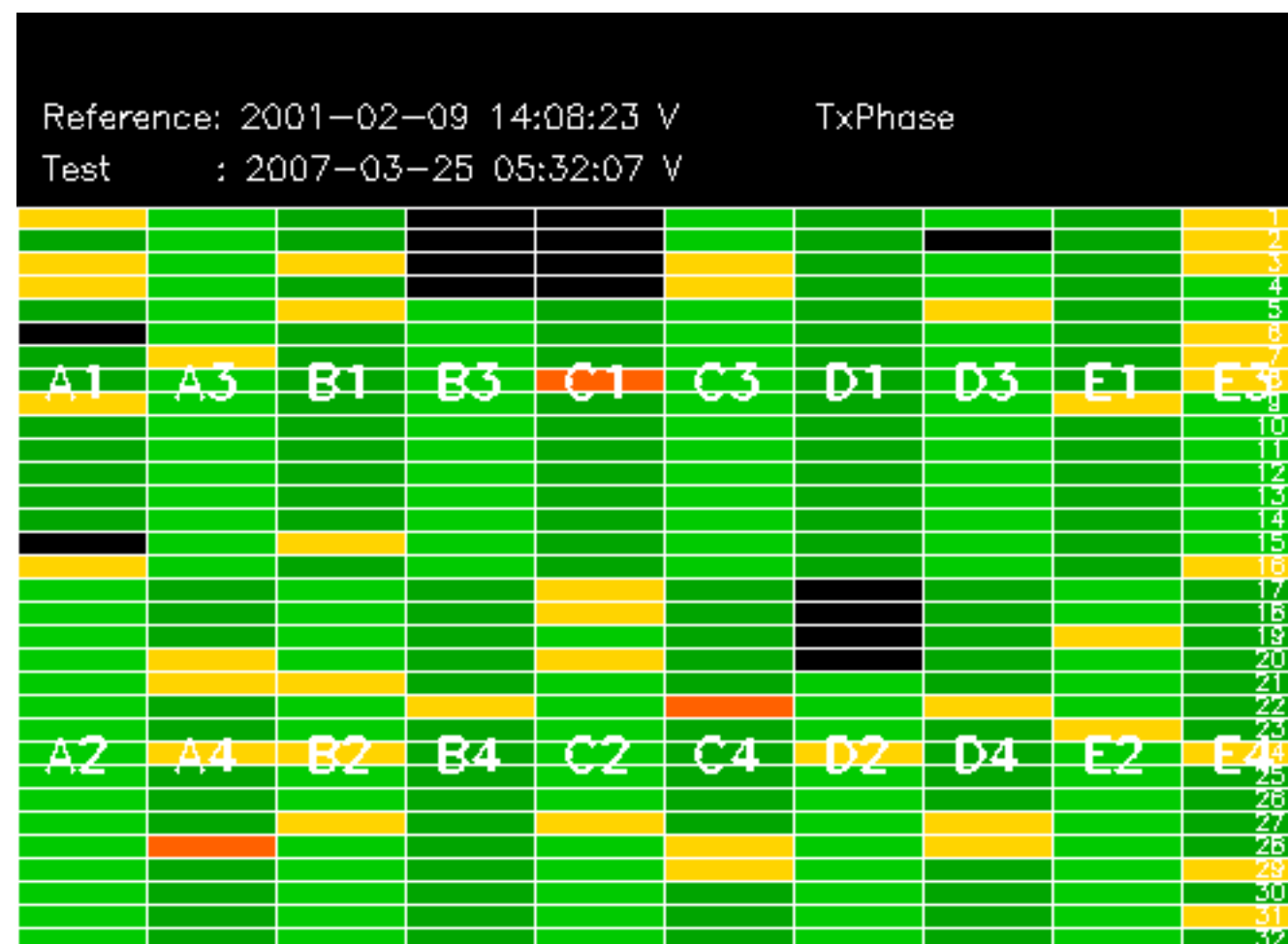






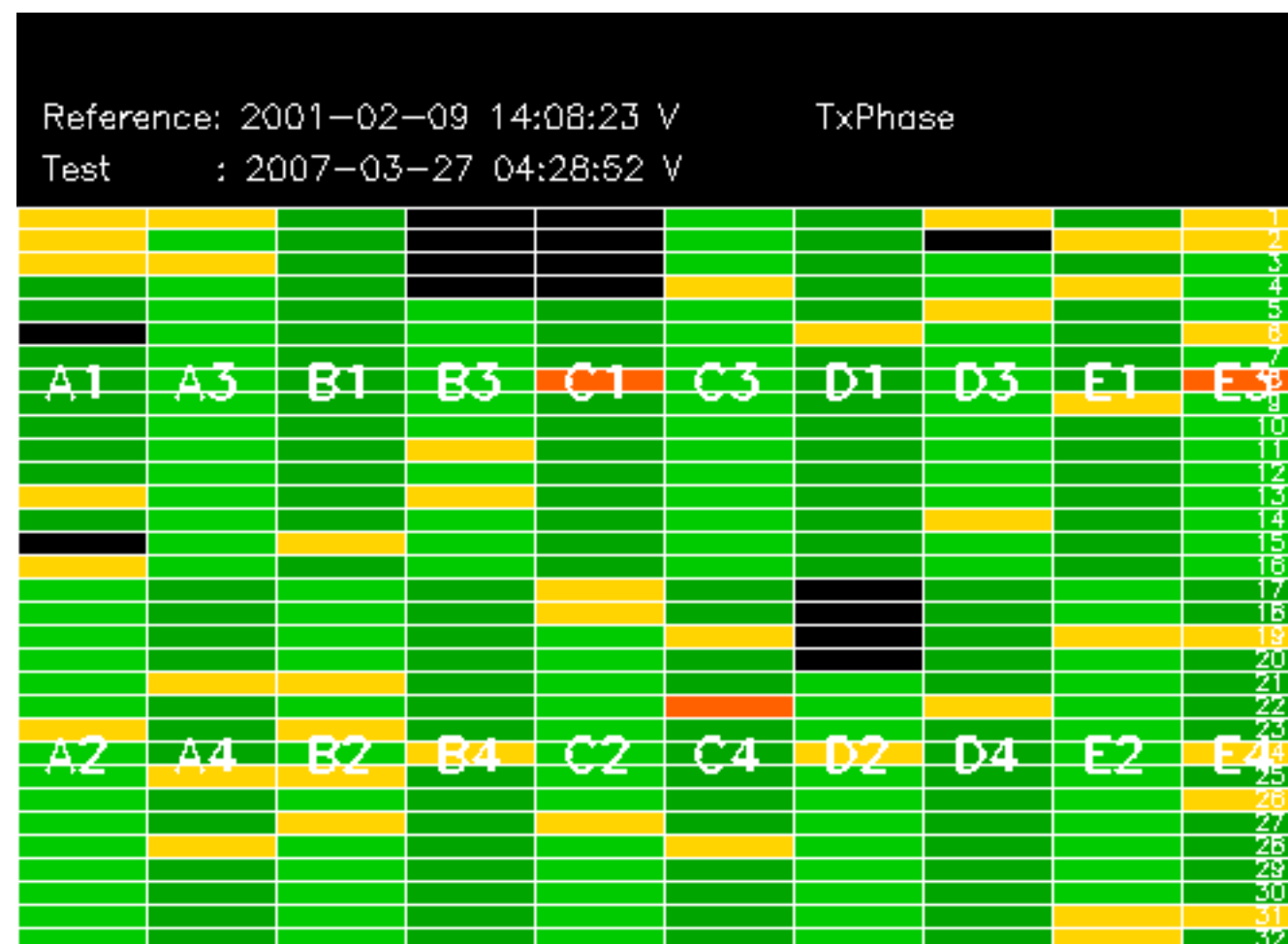




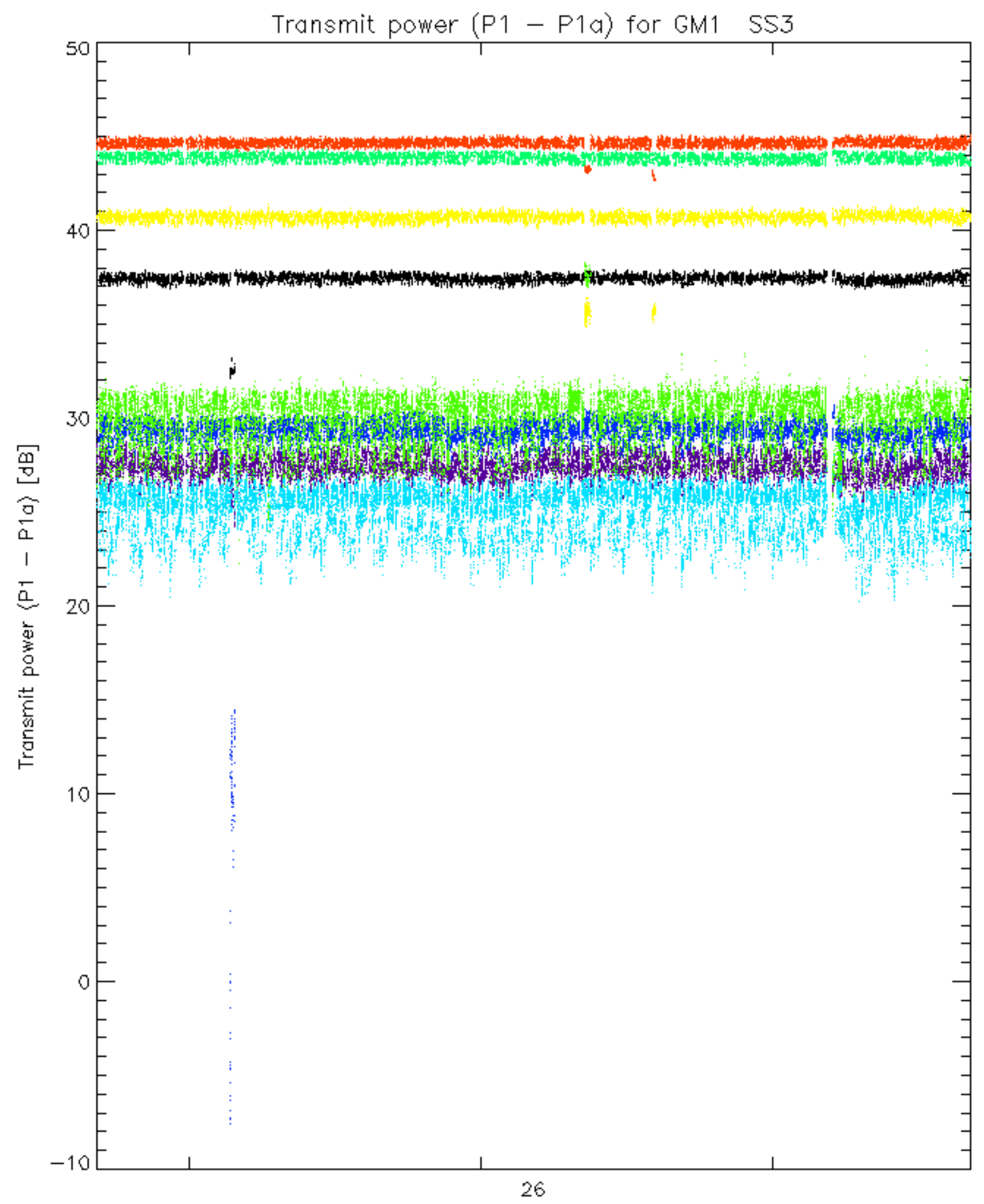




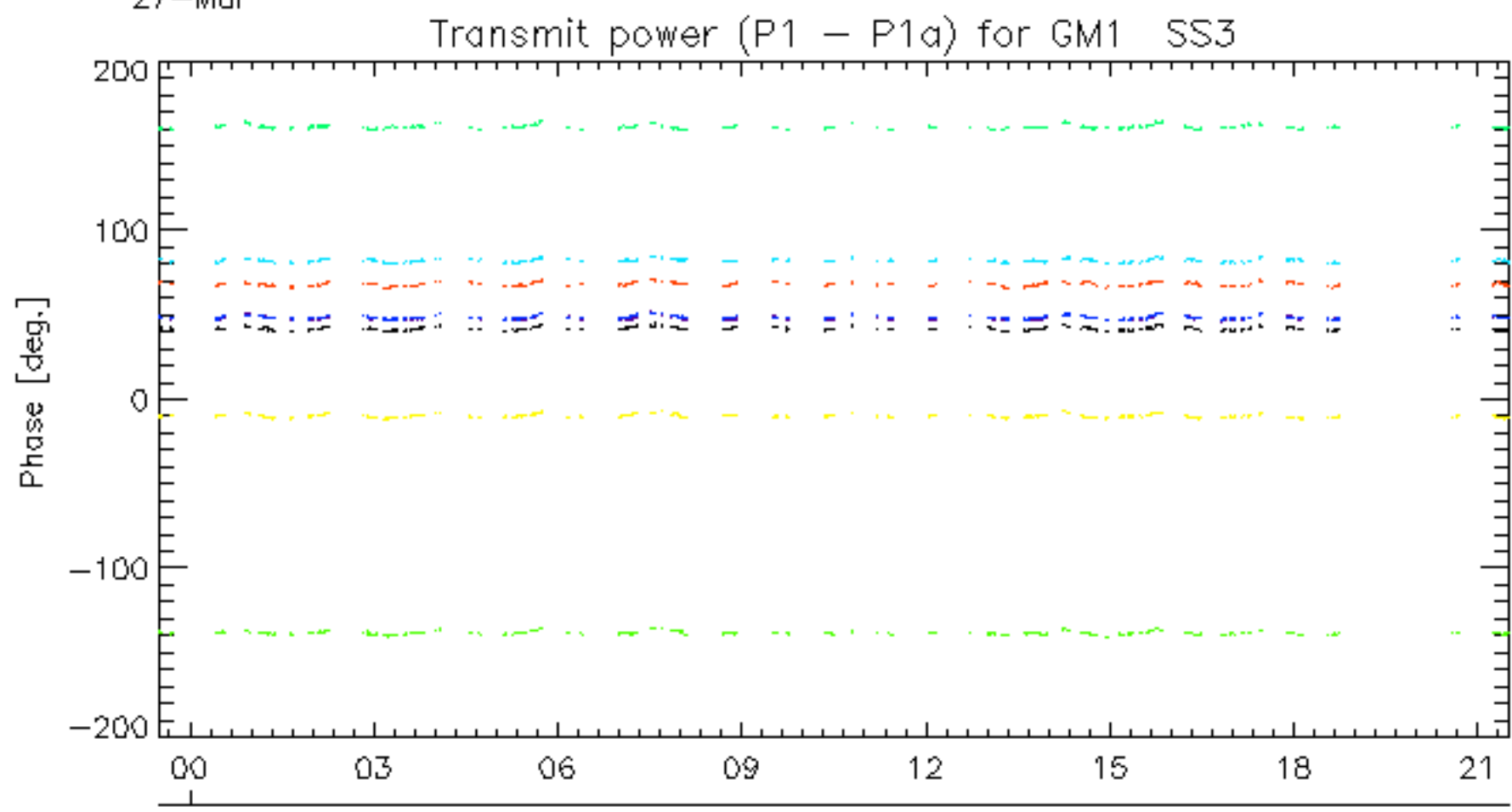
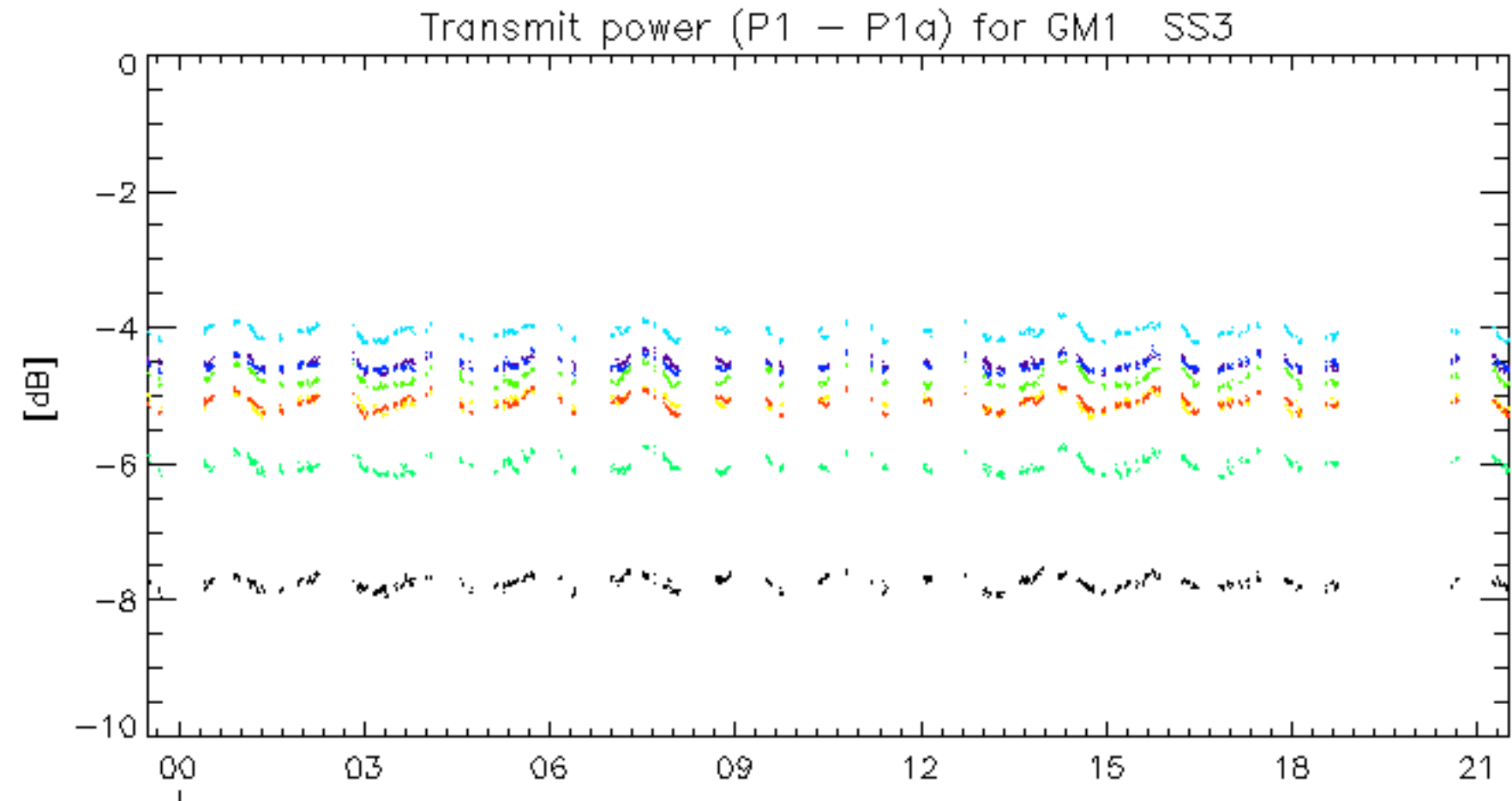






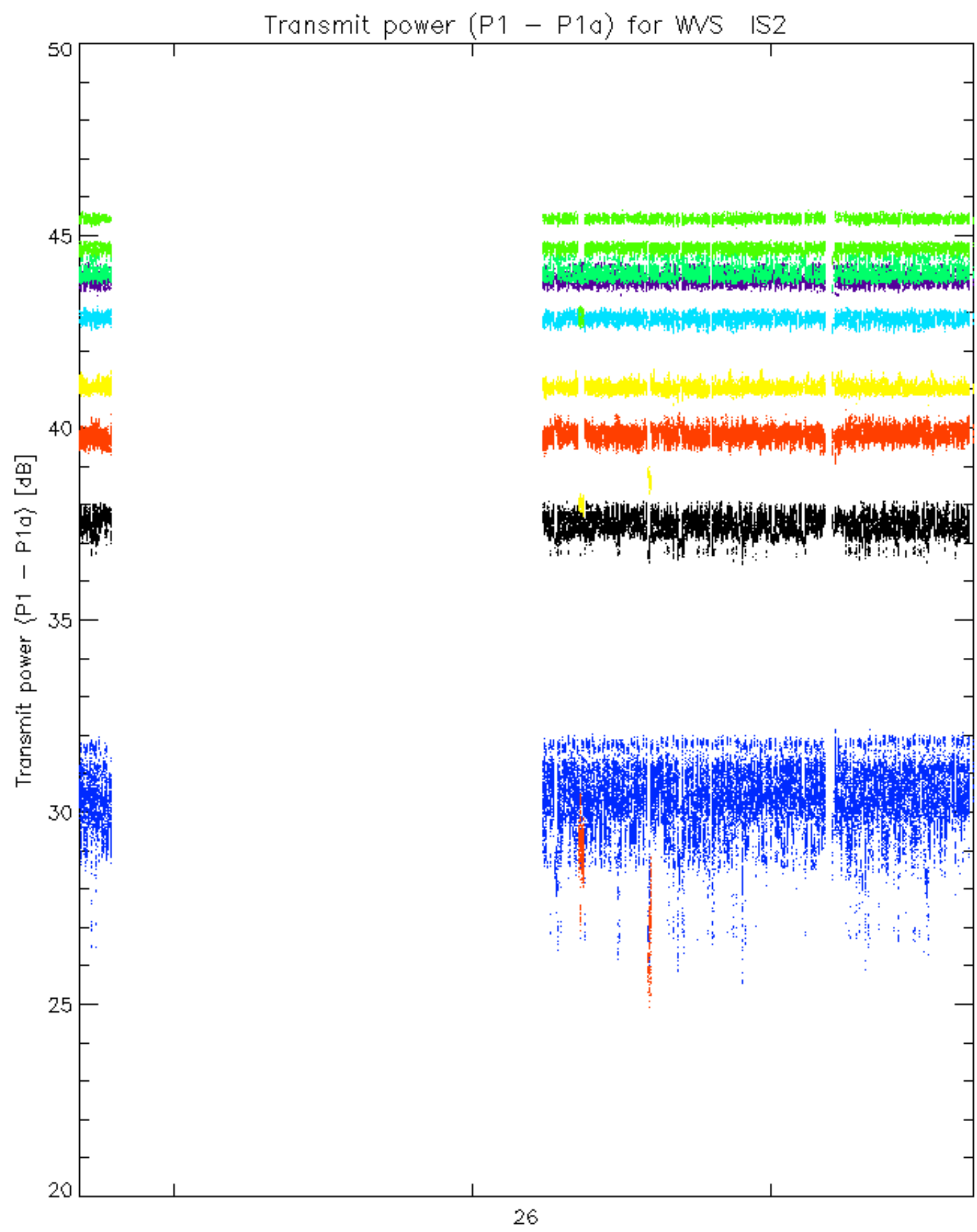


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

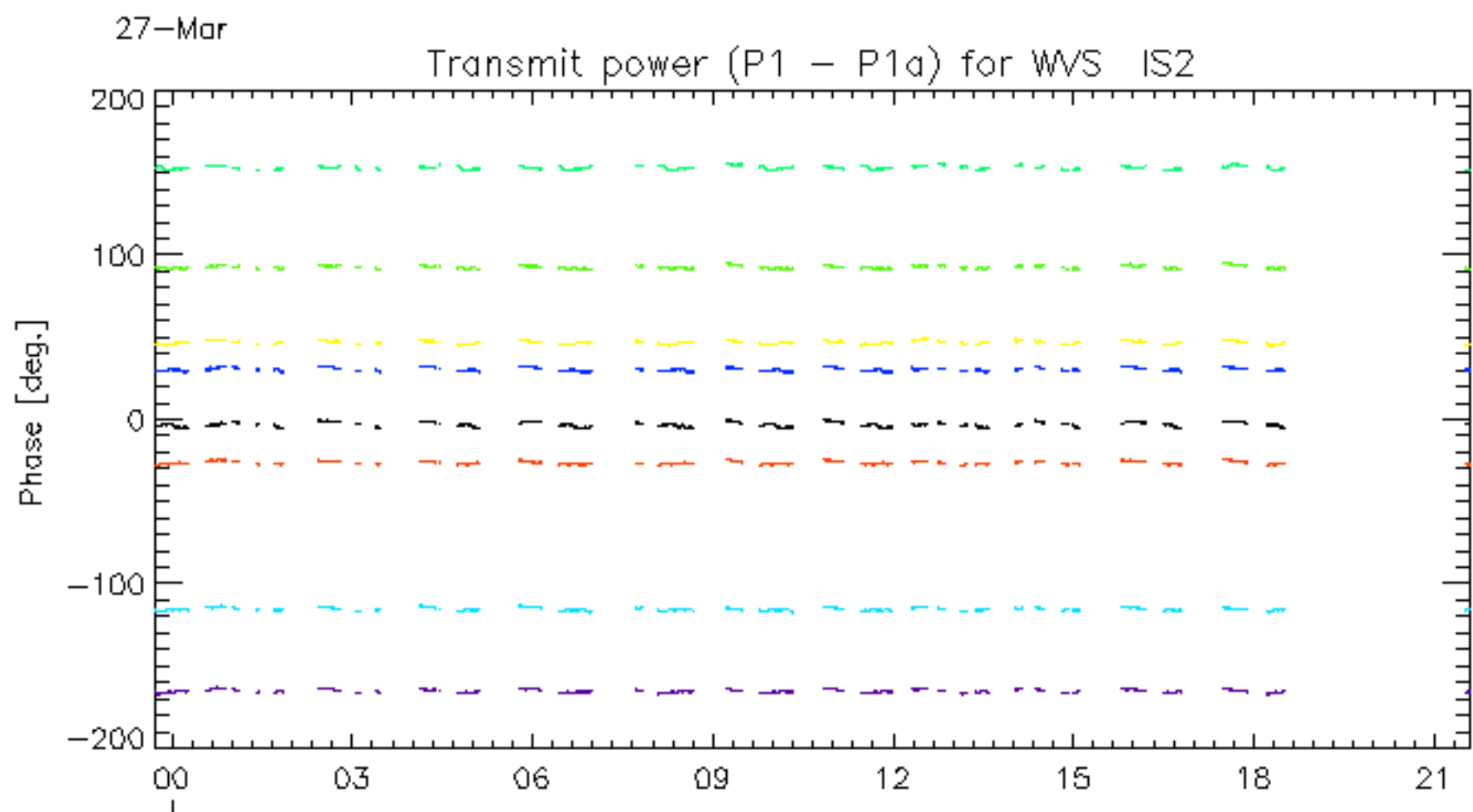
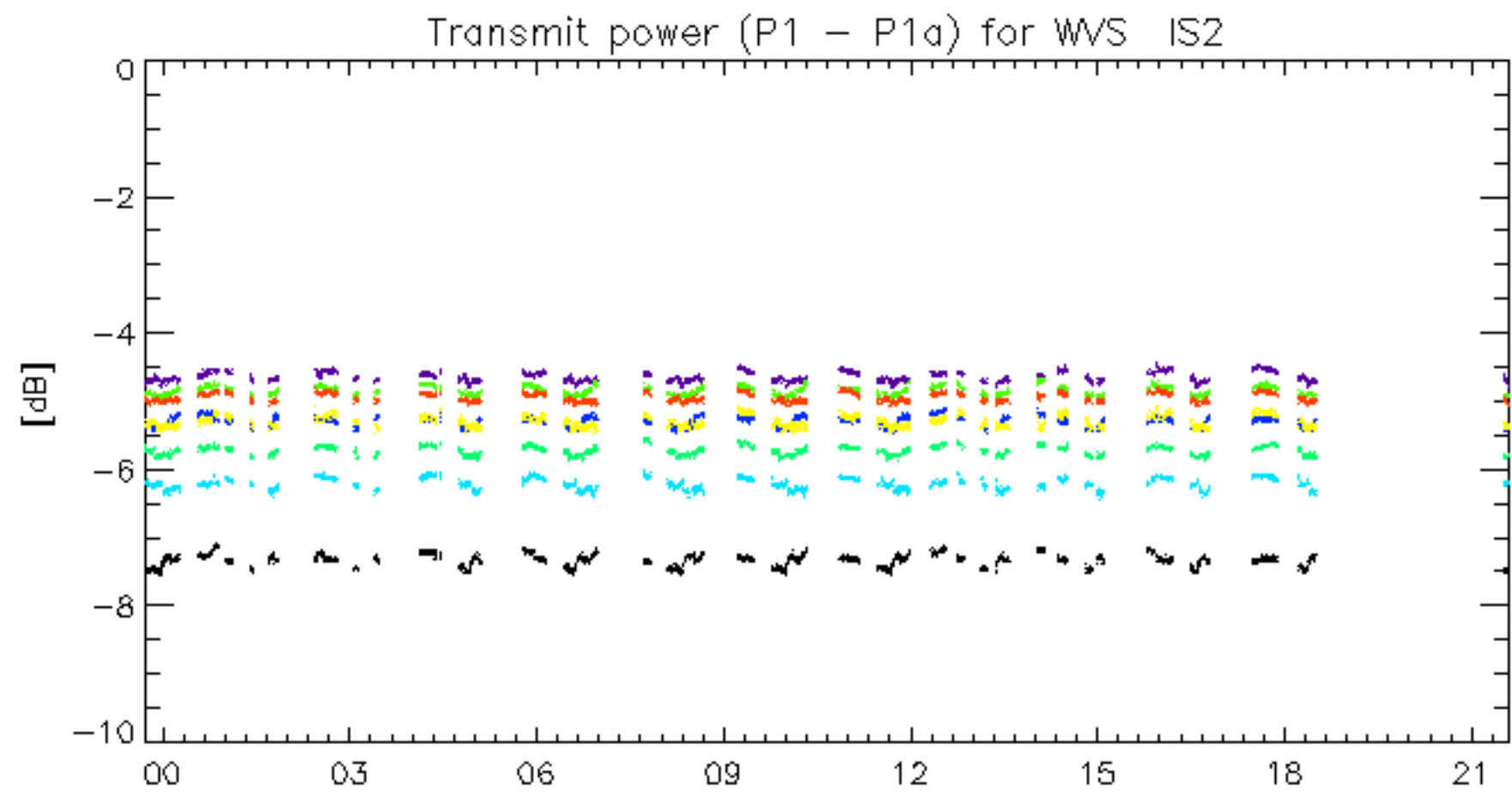


rows: **3** **7** **11** **15** **19** **22** **26** **30**





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



27-Mar

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

No unavailabilities during the reported period.