

# PRELIMINARY REPORT OF 050810

last update on Wed Aug 10 10:50:01 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 2005-08-09 00:00:00 to 2005-08-10 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	29	51	15	7	21
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	29	51	15	7	21
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	29	51	15	7	21
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	29	51	15	7	21

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	27	50	12	2	14
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	27	50	12	2	14
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	27	50	12	2	14
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	27	50	12	2	14

## 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	20050809 042901
H	20050808 050038

### 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**

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☒

**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**

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**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	-3.320144	0.029003	-0.022791
7	P1	-3.156048	0.029233	-0.075150
11	P1	-4.710732	0.032679	-0.036930
15	P1	-5.589442	0.051739	-0.076624
19	P1	-3.794466	0.004181	-0.044330
22	P1	-4.640471	0.104415	-0.000012
26	P1	-4.852633	0.135952	0.031827
30	P1	-7.244740	0.138331	0.006511
3	P1	-15.553581	0.076499	0.075372
7	P1	-15.511585	0.155157	0.041991
11	P1	-21.732187	0.260791	-0.182056
15	P1	-11.291906	0.073570	0.015037
19	P1	-14.486423	0.036419	-0.038575
22	P1	-15.702566	0.345516	0.162014
26	P1	-17.358225	0.199382	0.216847
30	P1	-17.763147	0.416439	-0.163046

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.821974	0.083598	0.089047
7	P2	-21.979441	0.100780	0.122265
11	P2	-13.574788	0.106227	0.205103
15	P2	-7.071307	0.091695	0.027028
19	P2	-9.589595	0.094613	-0.017753
22	P2	-16.840178	0.096720	0.043541
26	P2	-16.507959	0.098400	-0.014242
30	P2	-18.796898	0.086757	-0.035886

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.157065	0.002517	-0.005450
7	P3	-8.157065	0.002517	-0.005450
11	P3	-8.157065	0.002517	-0.005450
15	P3	-8.157065	0.002517	-0.005450
19	P3	-8.157065	0.002517	-0.005450
22	P3	-8.157065	0.002517	-0.005450
26	P3	-8.157065	0.002517	-0.005450
30	P3	-8.157065	0.002517	-0.005450

#### 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	-2.806360	0.099365	-0.106139
7	P1	-2.973280	0.060825	-0.074852
11	P1	-4.010505	0.015899	-0.053706
15	P1	-3.612911	0.063592	-0.138808
19	P1	-3.631382	0.015865	0.023009
22	P1	-5.694031	0.105774	-0.049935
26	P1	-7.397093	0.185400	0.037497
30	P1	-6.329842	0.101472	0.050953
3	P1	-10.885053	0.052775	-0.238007
7	P1	-10.465342	0.168512	-0.023505
11	P1	-12.641328	0.102838	-0.062760
15	P1	-11.599590	0.099732	0.041625
19	P1	-15.507864	0.068443	0.137806
22	P1	-25.611677	2.919444	0.466648
26	P1	-15.308253	0.317344	0.253169
30	P1	-20.048555	1.265987	-0.008444

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.554670	0.044067	0.164174
7	P2	-22.026205	0.039124	0.054578
11	P2	-9.610533	0.063652	0.209210
15	P2	-5.106949	0.041900	0.057122
19	P2	-6.887799	0.062713	0.067213
22	P2	-7.059674	0.037373	0.062003
26	P2	-23.967163	0.037704	0.025604
30	P2	-21.948236	0.043027	0.030079

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998290	0.004059	0.002358
7	P3	-7.998197	0.004049	0.002222
11	P3	-7.998164	0.004063	0.001995
15	P3	-7.998122	0.004056	0.002466
19	P3	-7.998226	0.004058	0.002537
22	P3	-7.998214	0.004048	0.002476
26	P3	-7.998173	0.004038	0.002459
30	P3	-7.998136	0.004043	0.002231

## 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	0.000466308
	stdev	2.18280e-07
MEAN Q	mean	0.000496325
	stdev	2.32538e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128670
	stdev	0.000984834
STDEV Q	mean	0.128929
	stdev	0.000995195



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005080[890]

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_1PNPDE20050809_003745_000001282039_00403_17992_1934.N1	1	0
ASA_IMM_1PNPDE20050809_115630_000000512039_00410_17999_1980.N1	1	0
ASA_IMM_1PNPDK20050808_090909_000000532039_00394_17983_1173.N1	0	2
ASA_IMM_1PNPDK20050809_071403_000003212039_00407_17996_1275.N1	0	3
ASA_GM1_1PNPDK20050809_060814_000011362039_00406_17995_1848.N1	0	6
ASA_WSM_1PNPDE20050808_020810_000000612039_00389_17978_3490.N1	0	1
ASA_WSM_1PNPDE20050808_020911_000000552039_00389_17978_3492.N1	0	1
ASA_WSM_1PNPDK20050808_092904_000000862039_00394_17983_1477.N1	0	1
ASA_WSM_1PNPDK20050809_065945_000000672039_00407_17996_1563.N1	0	1

ASA_WSM_1PNPDK20050809_082826_000000672039_00408_17997_1572.N1	0	65
ASA_APM_1PNPDK20050809_071316_000000432039_00407_17996_0215.N1	0	1



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

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler

<input type="checkbox"/>
Ascending
<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

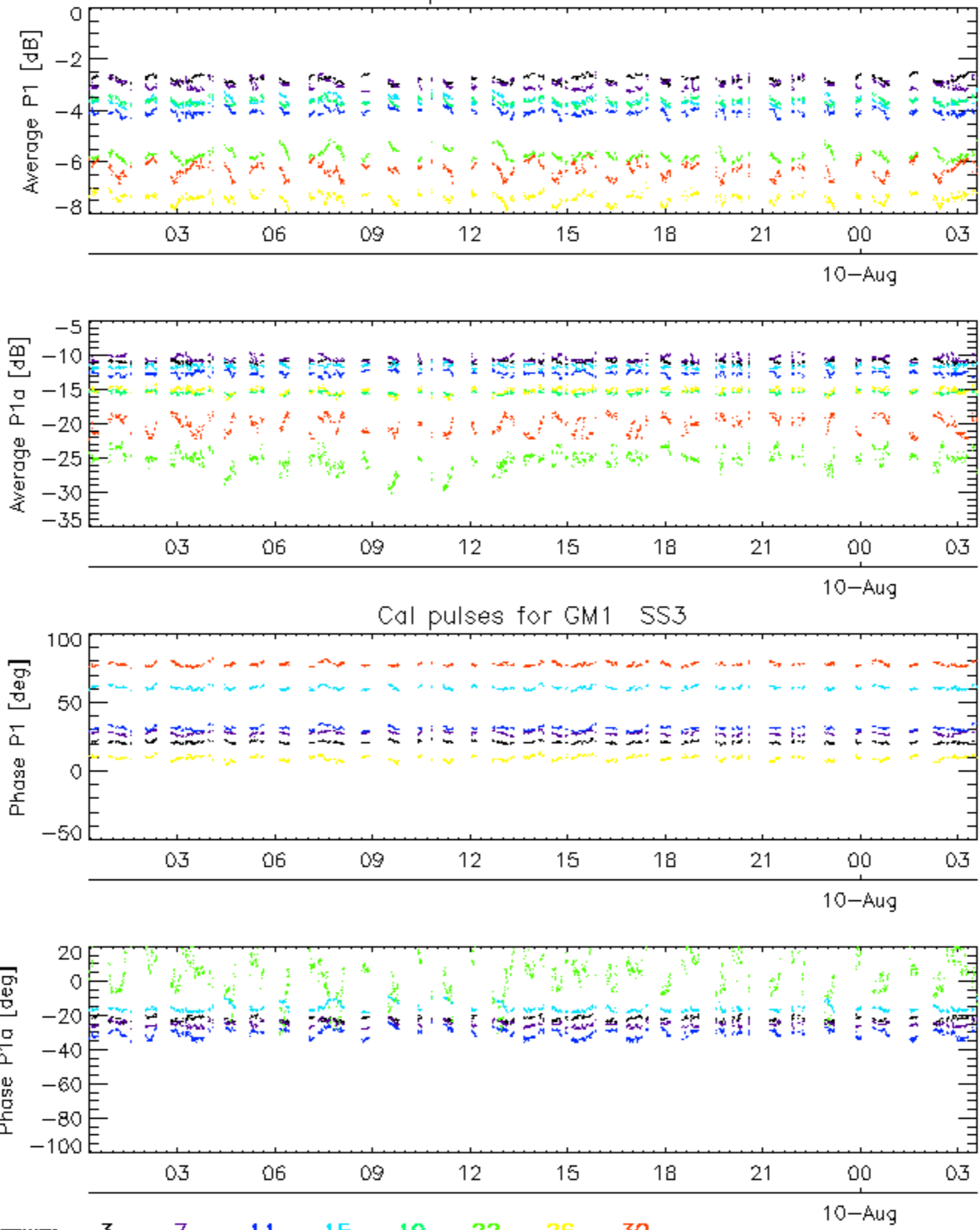
### 7.5 - Absolute Doppler for GM1

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

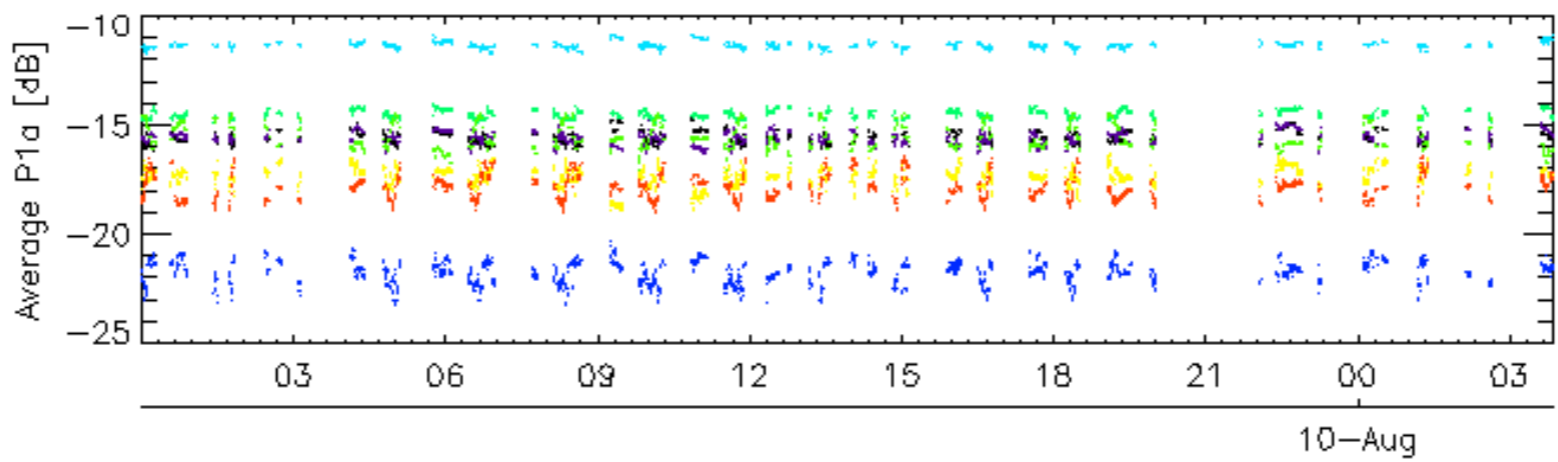
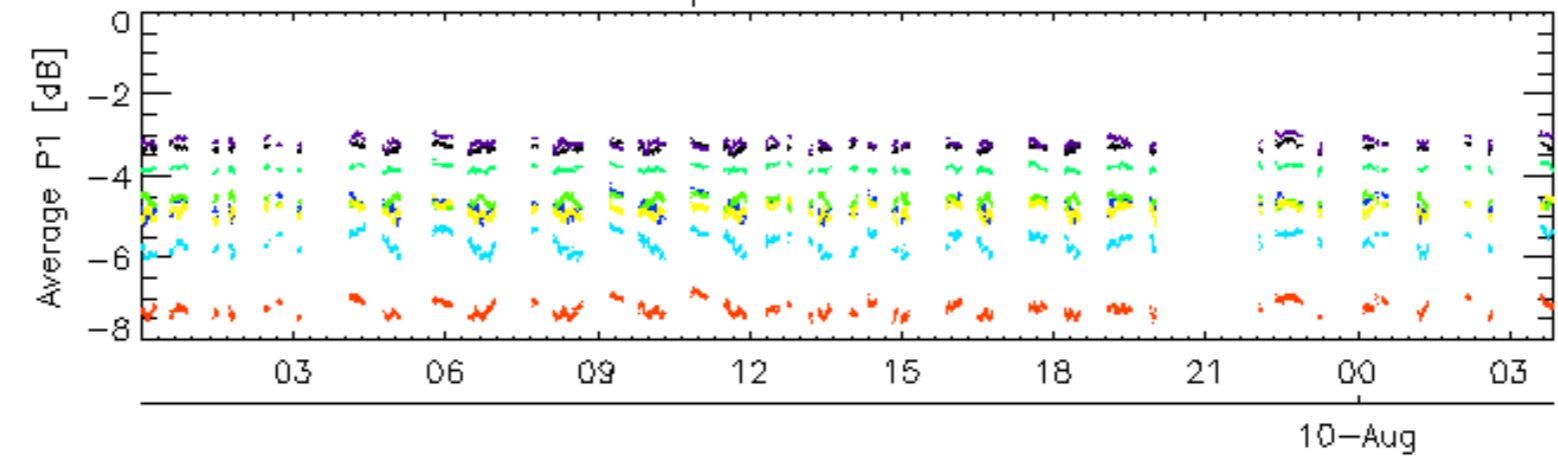
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

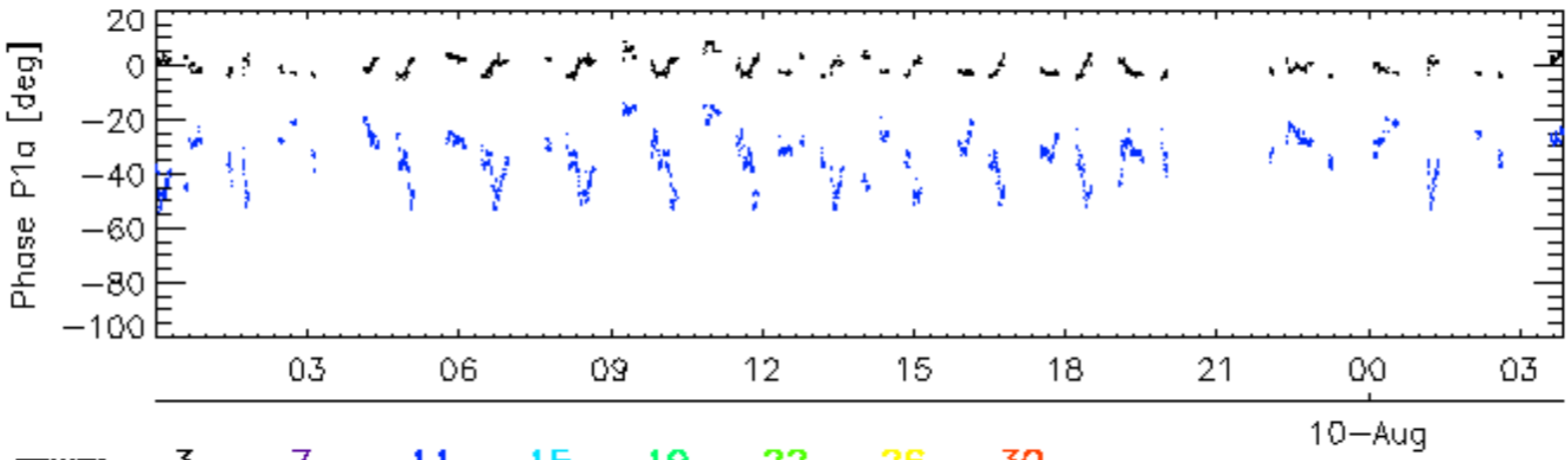
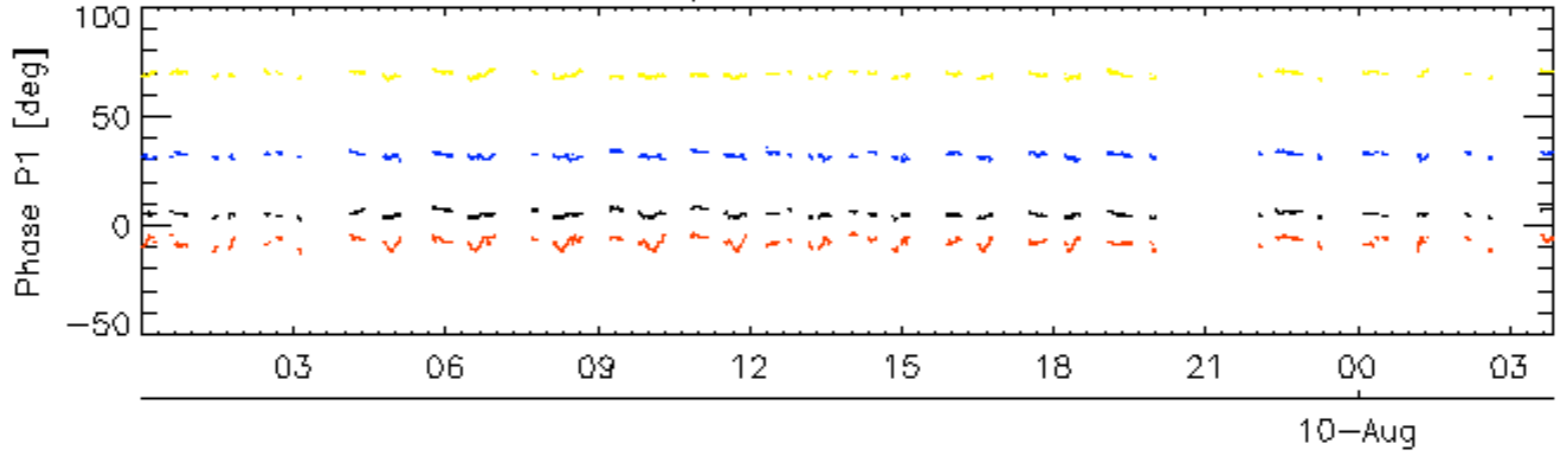
Cal pulses for GM1 SS3



Cal pulses for WVS IS2

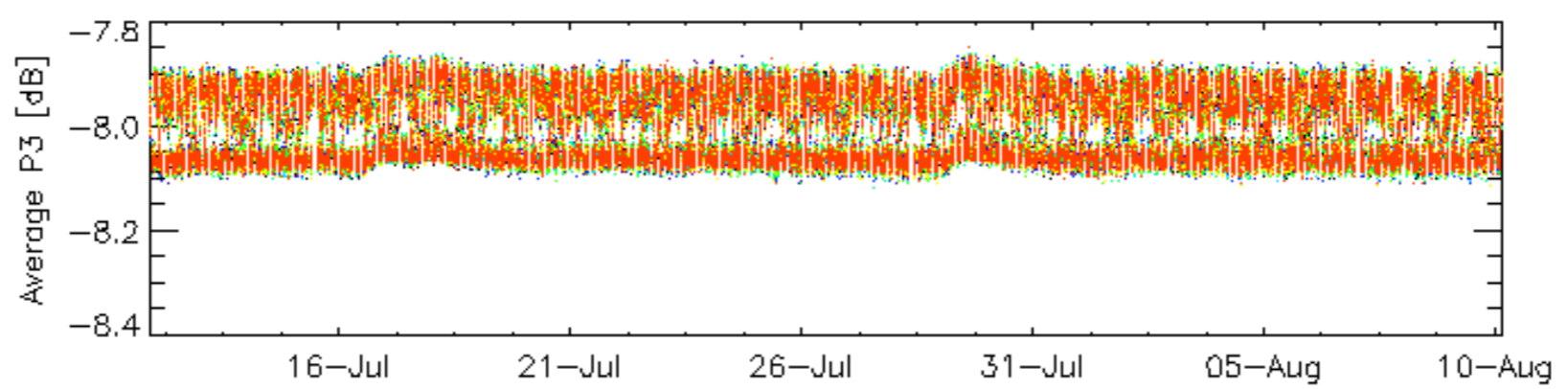
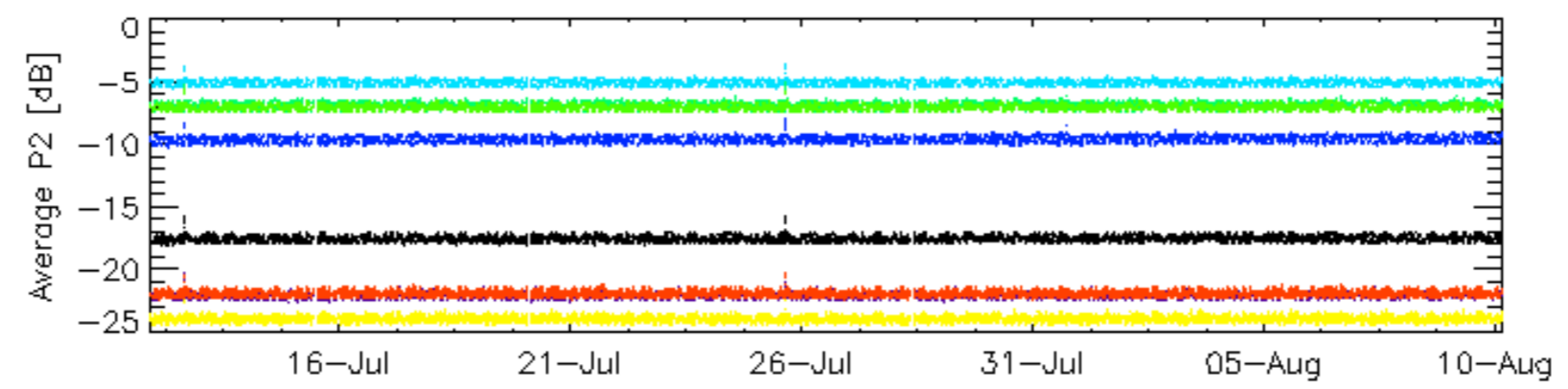
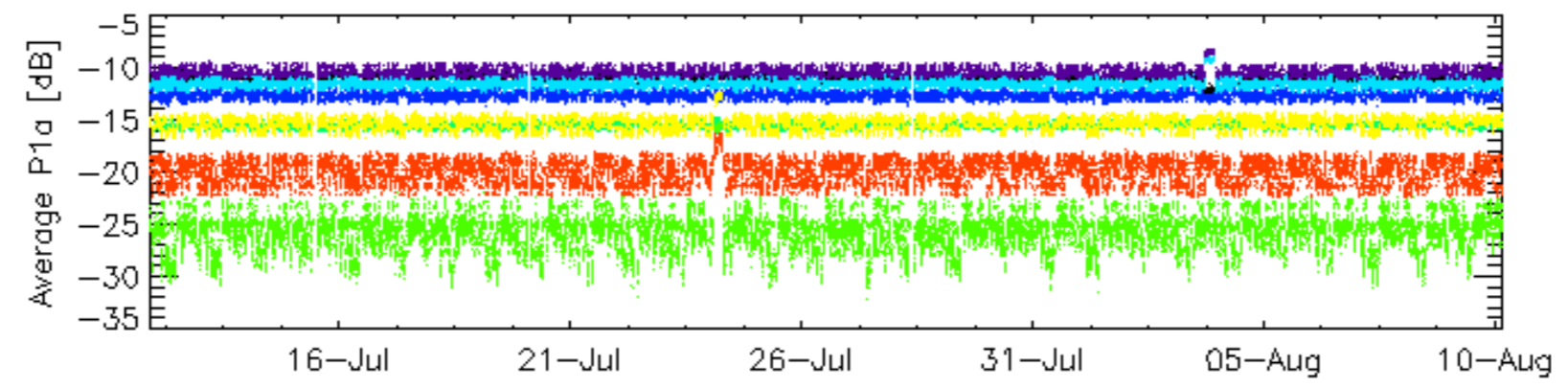
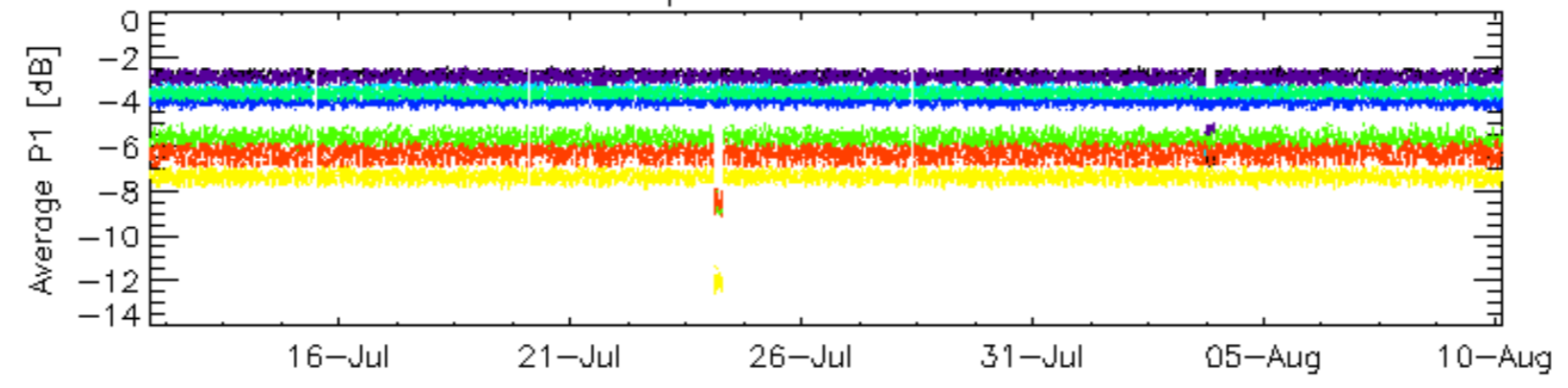


Cal pulses for WVS IS2



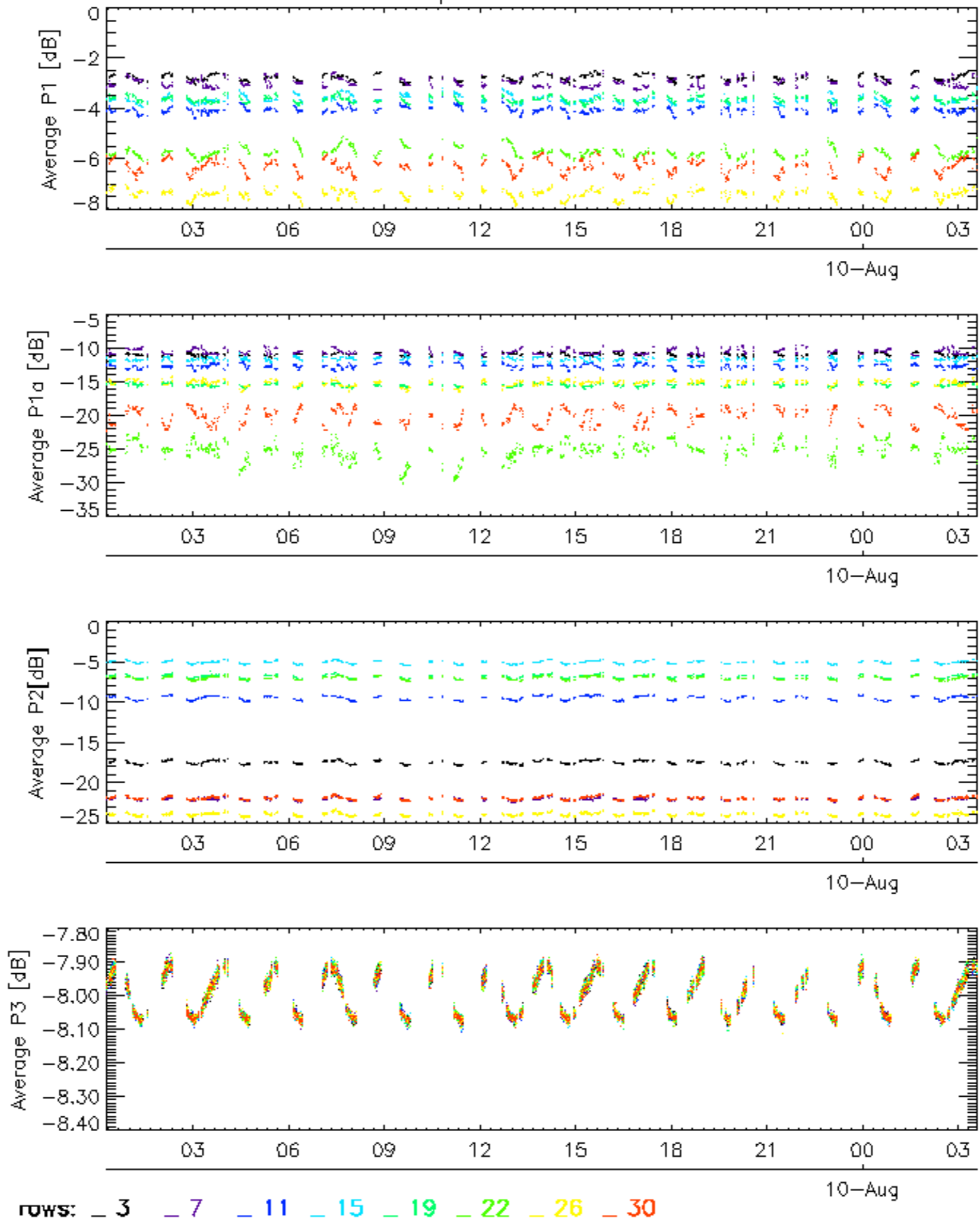
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

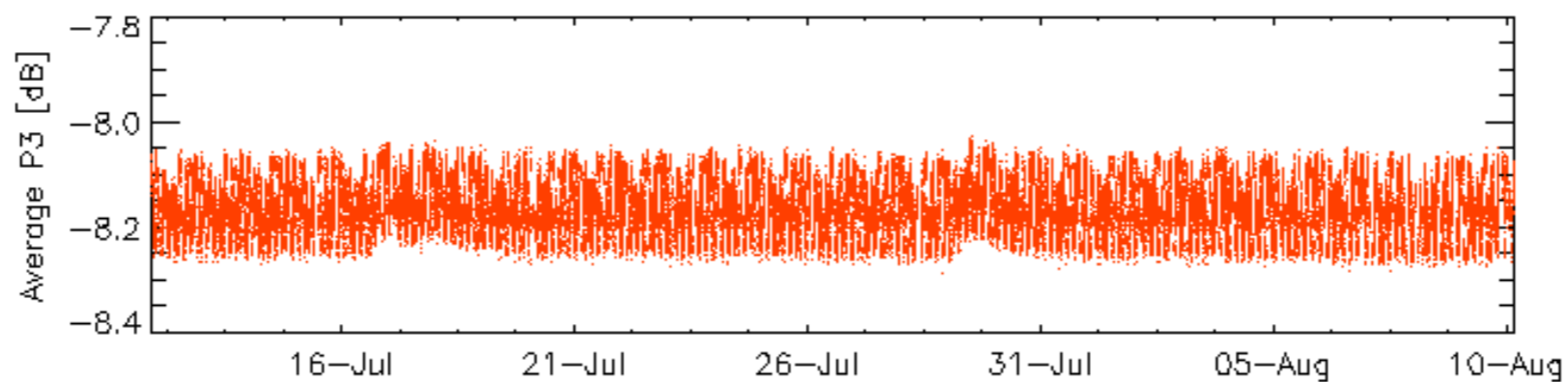
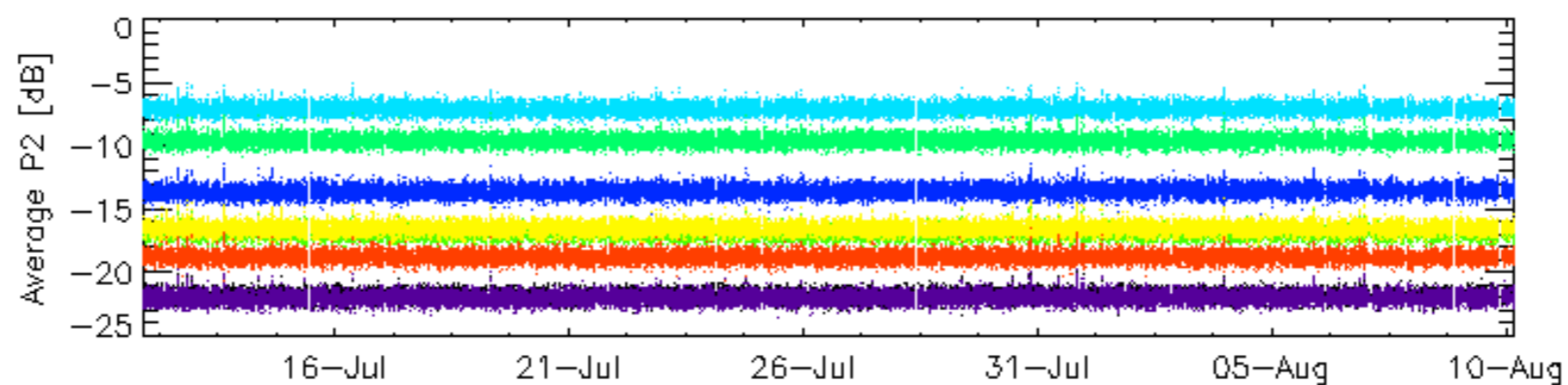
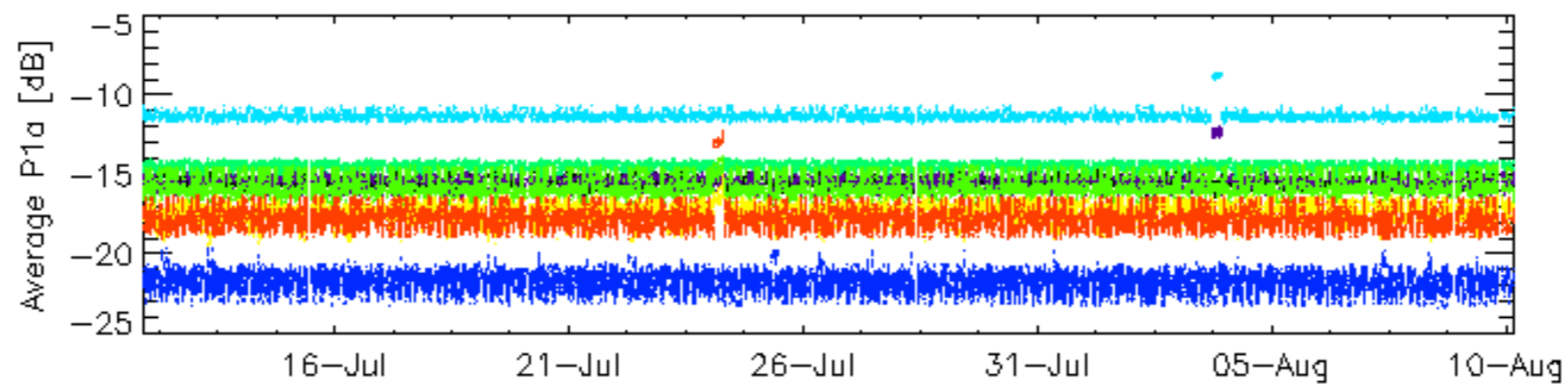
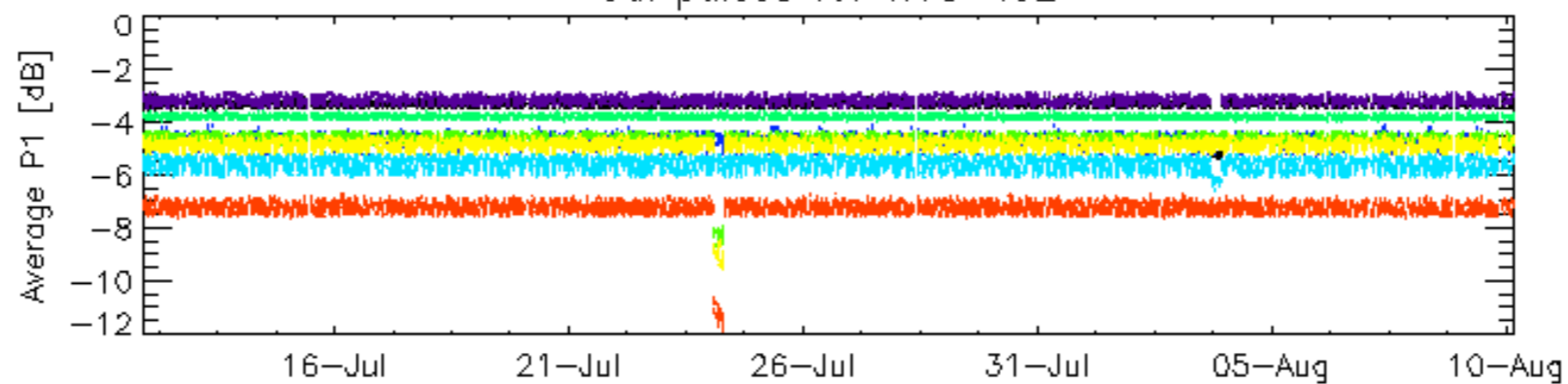


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

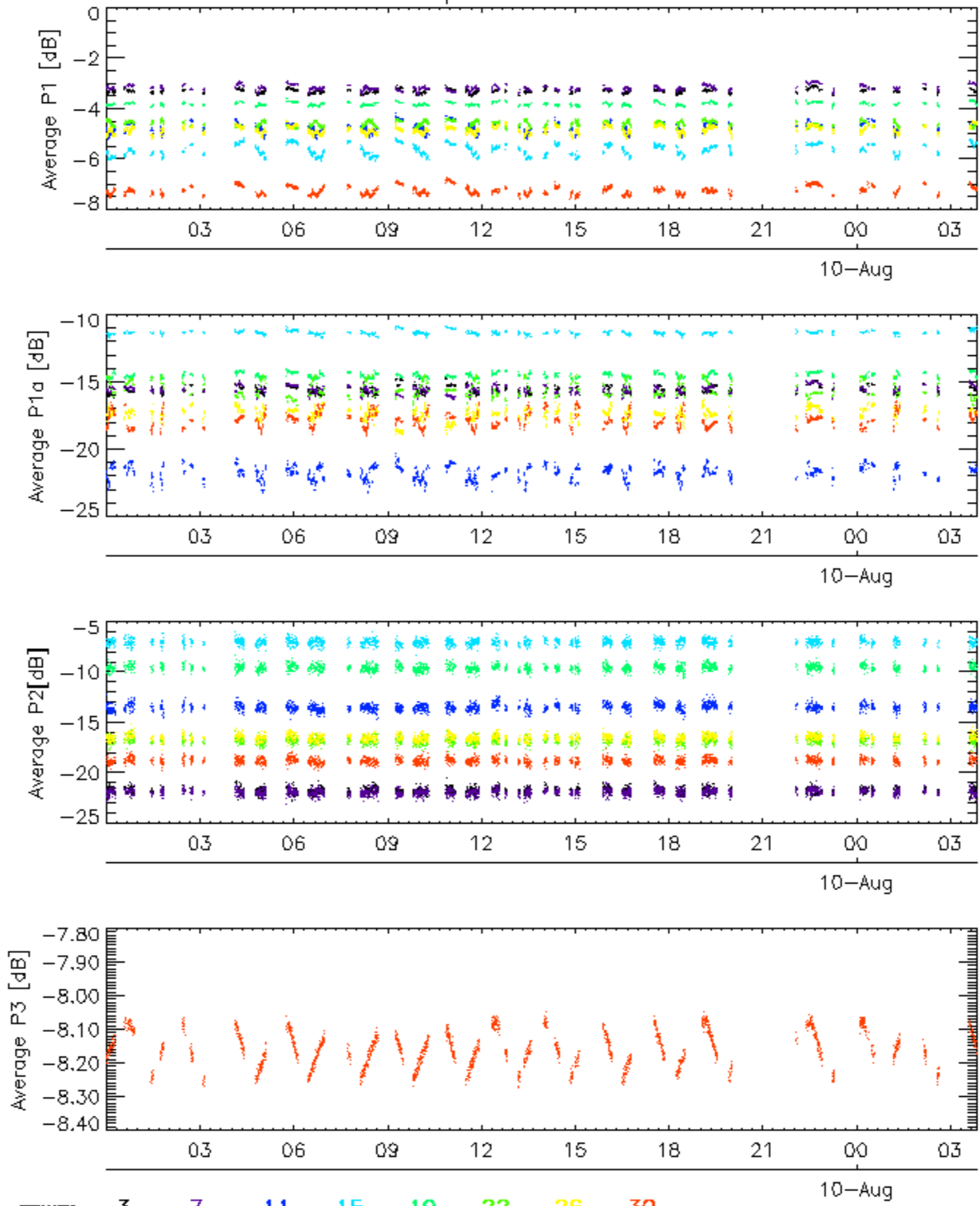


Cal pulses for WVS IS2



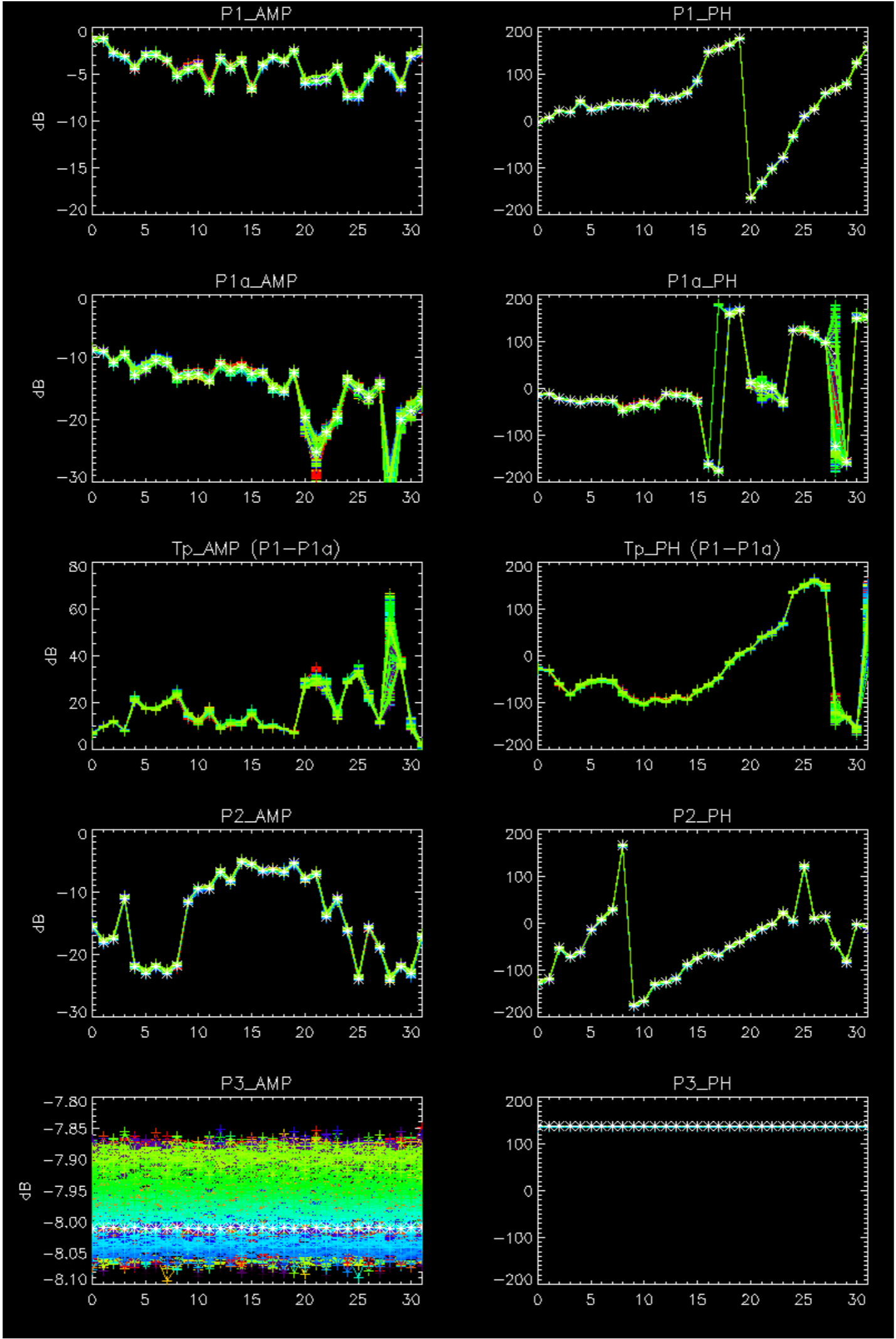
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

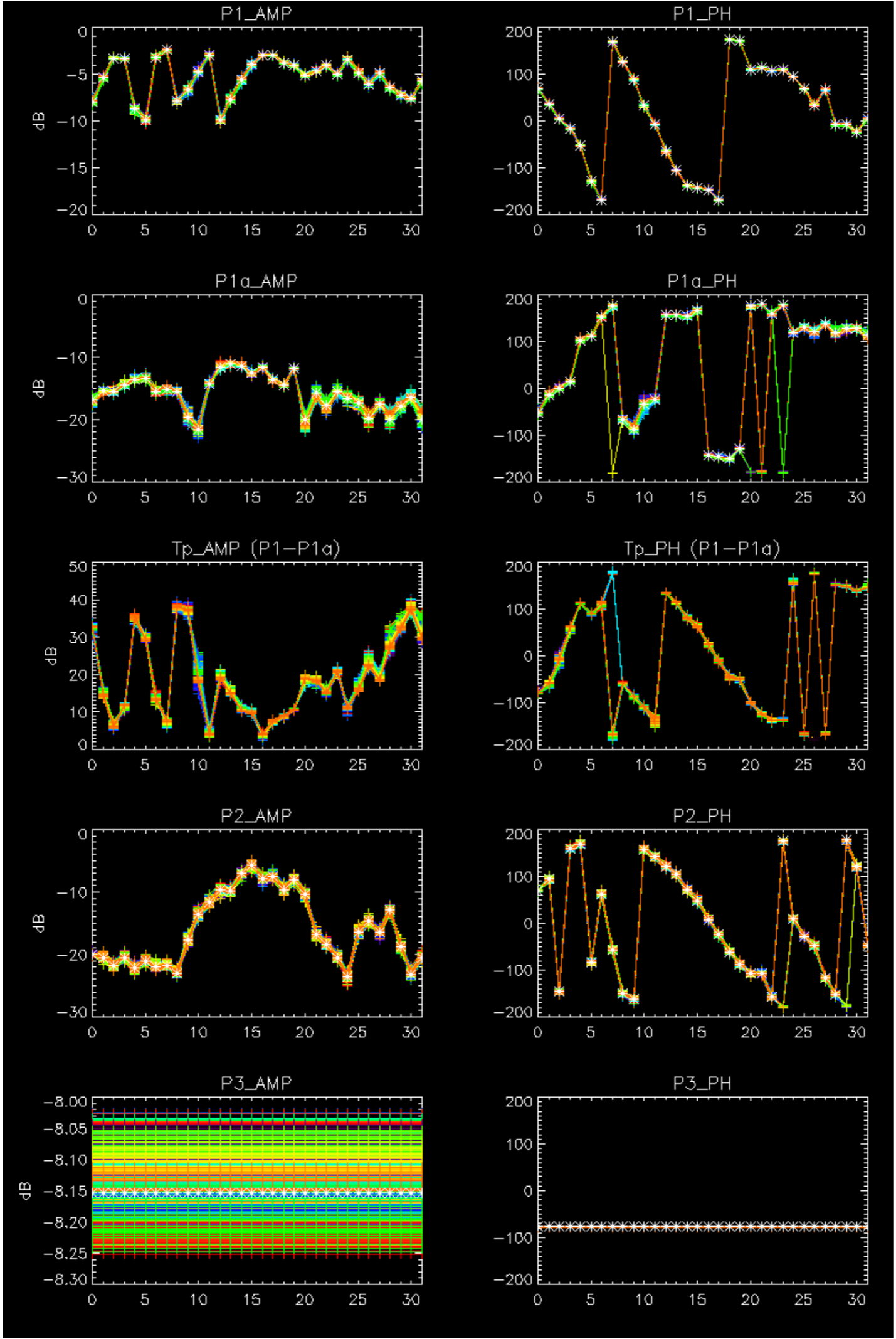
Cal pulses for WVS IS2



No anomalies observed.



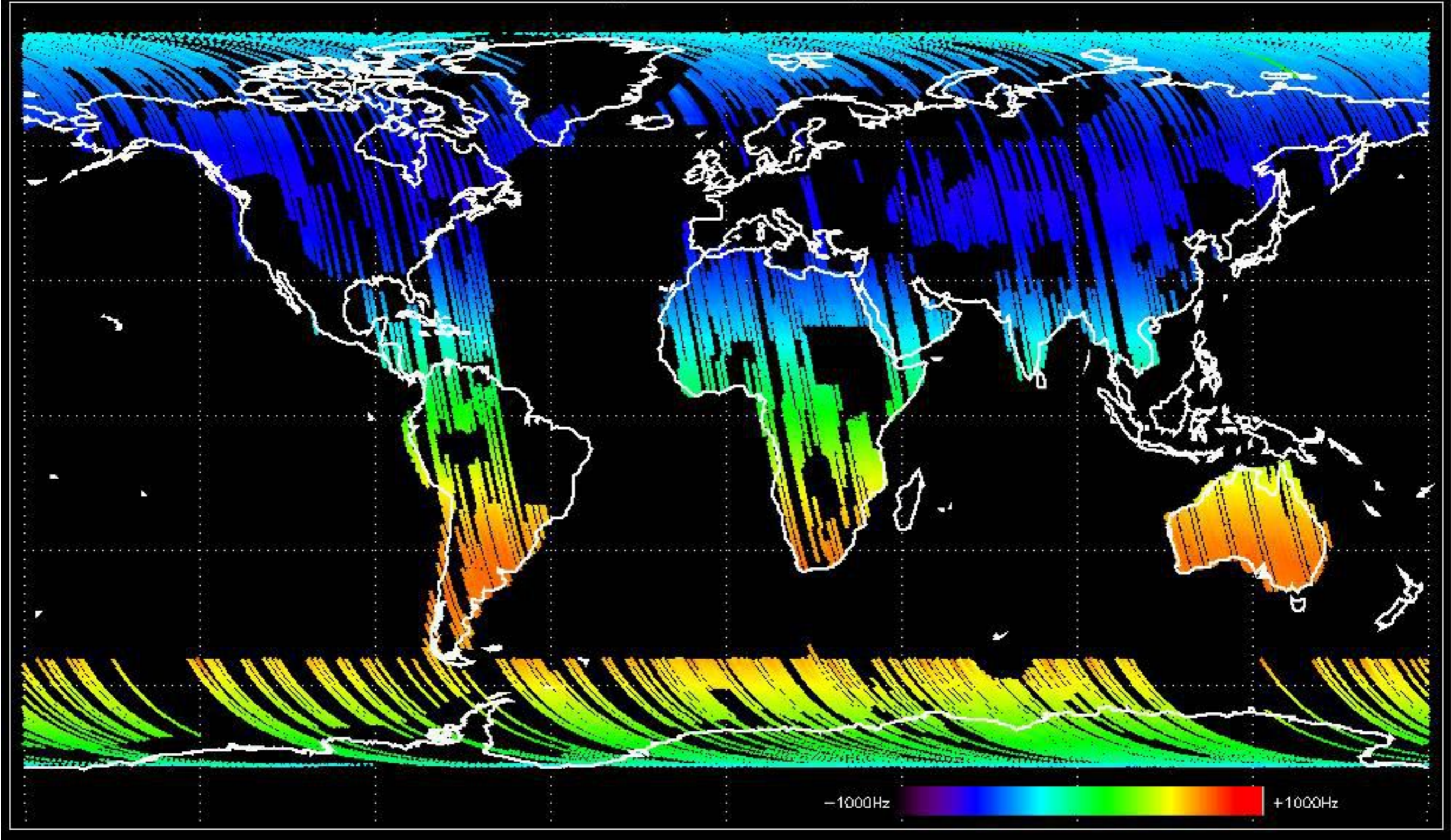




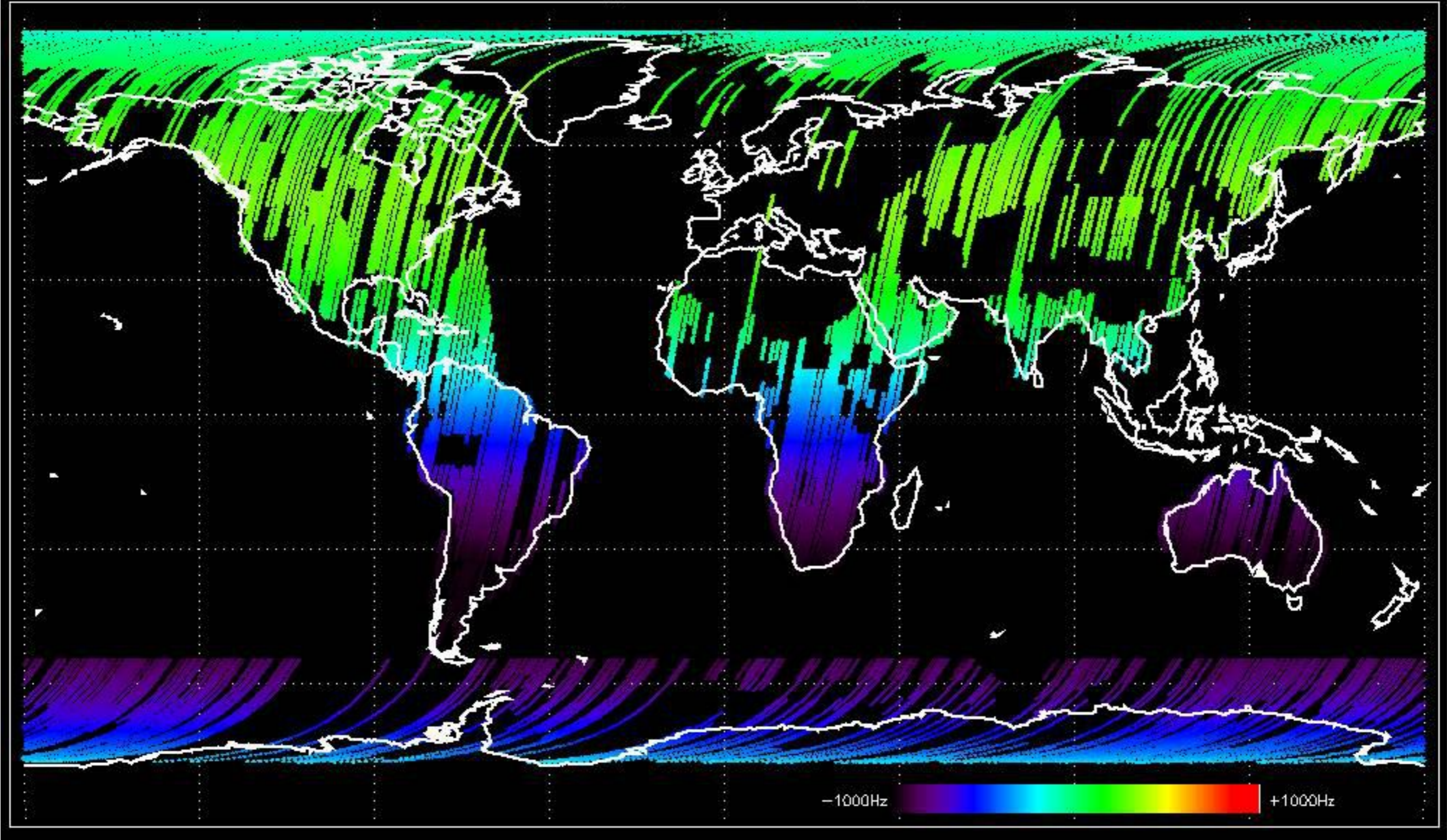
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



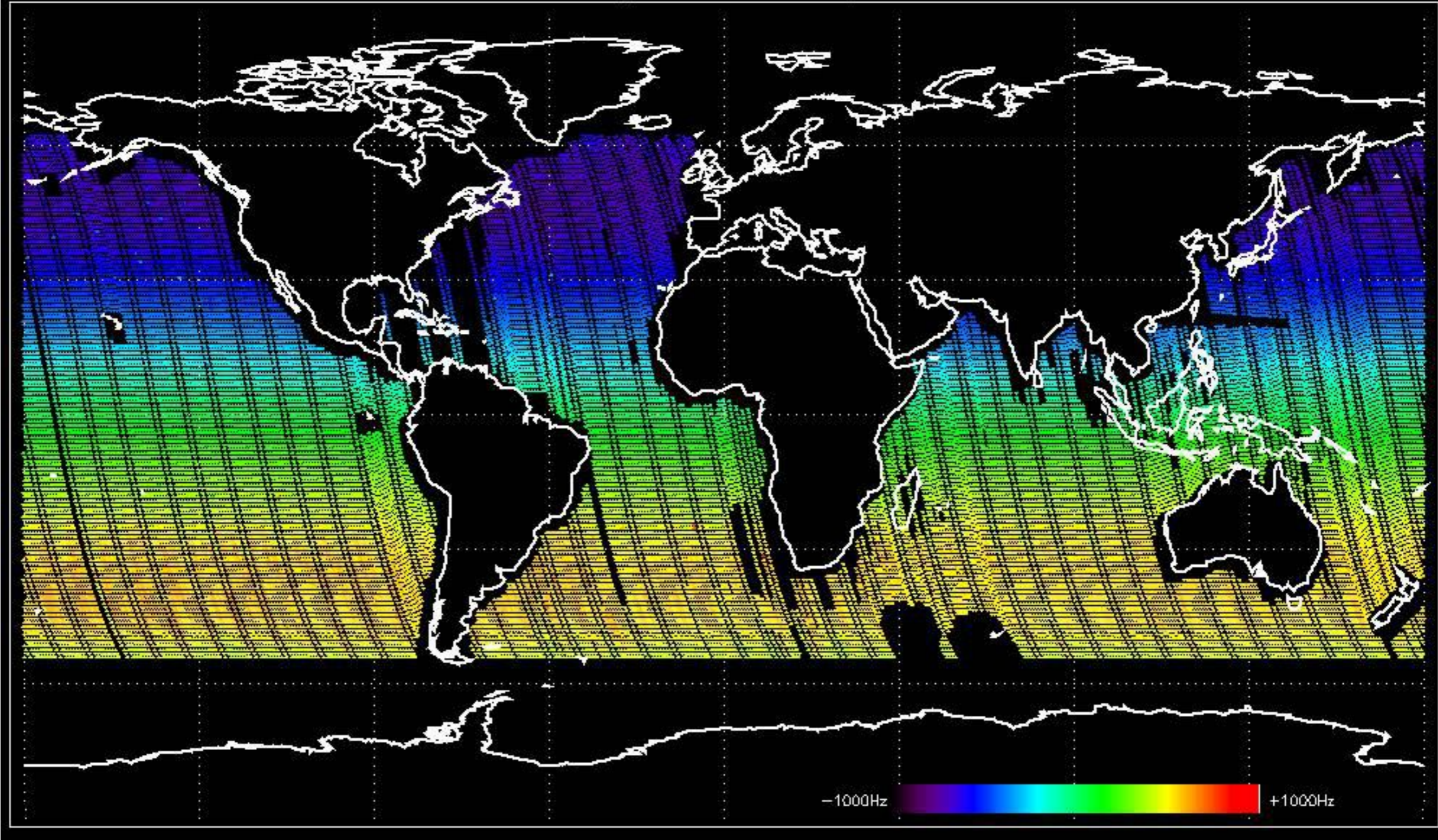
Doppler 'GM1' 'SS1' ascending



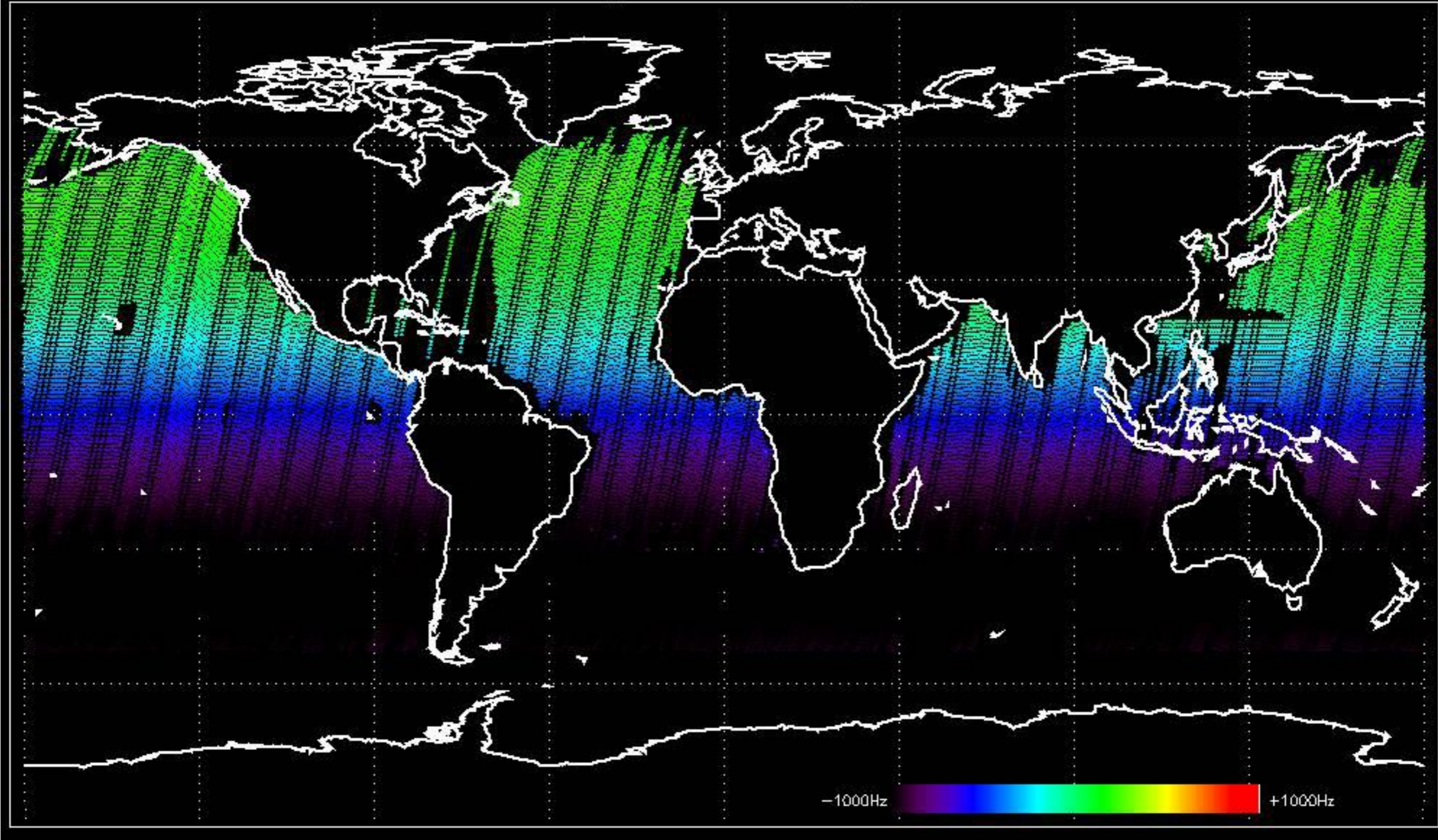
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

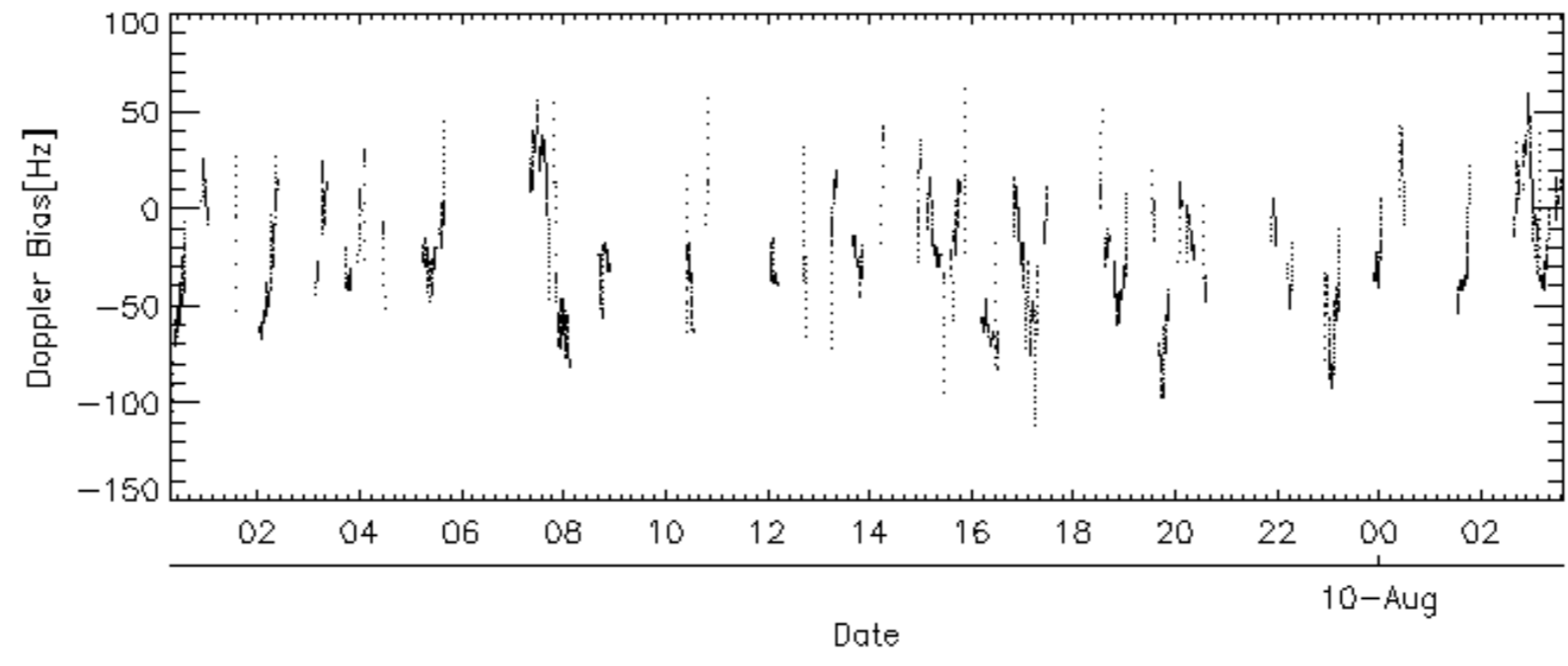
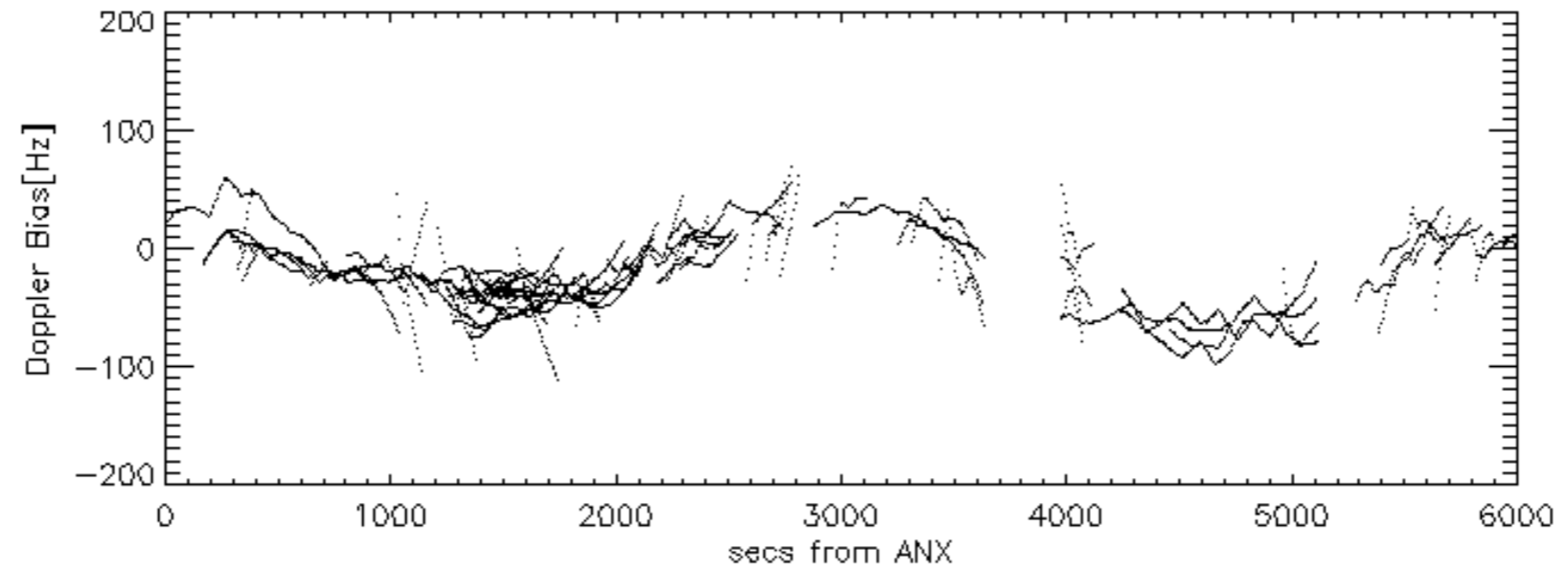
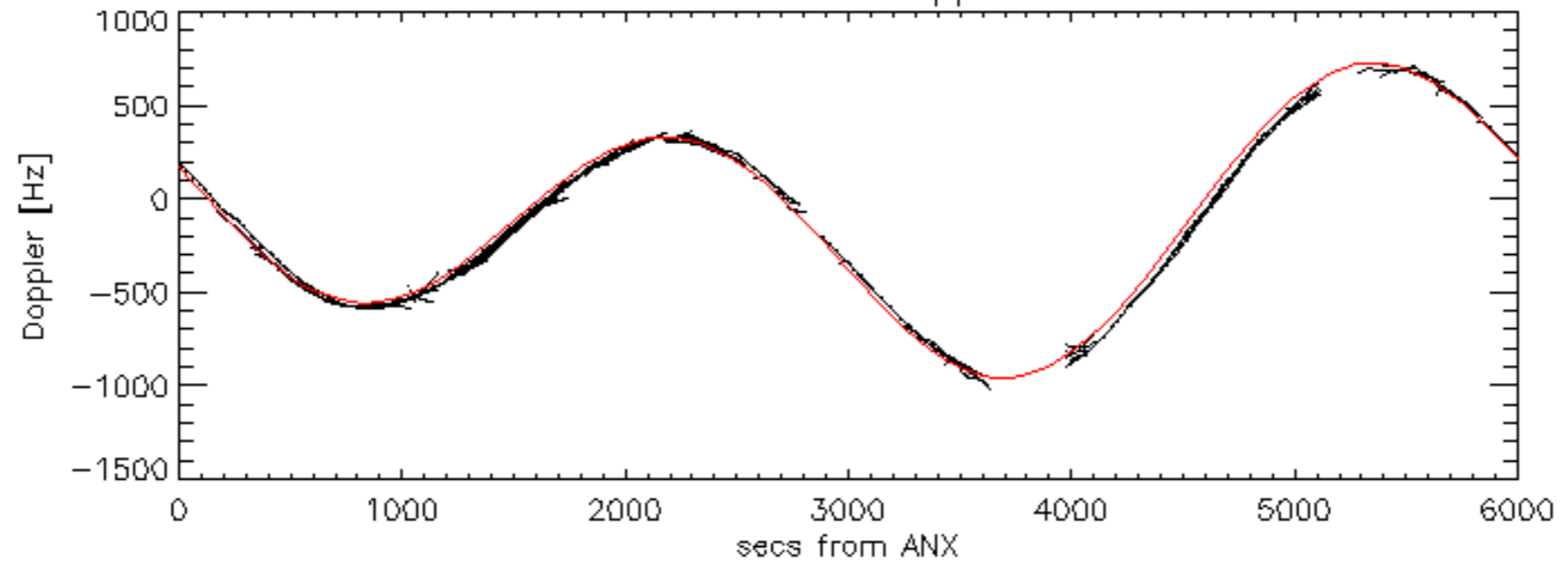


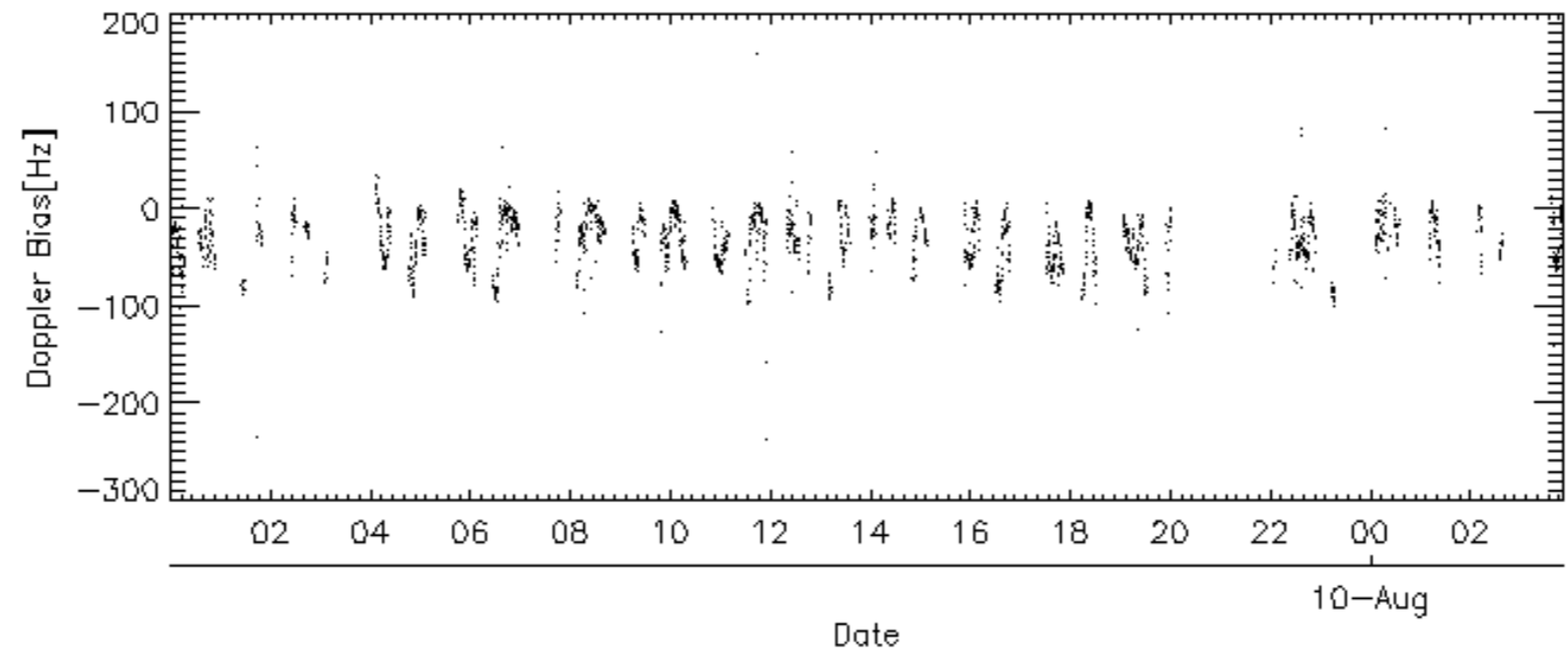
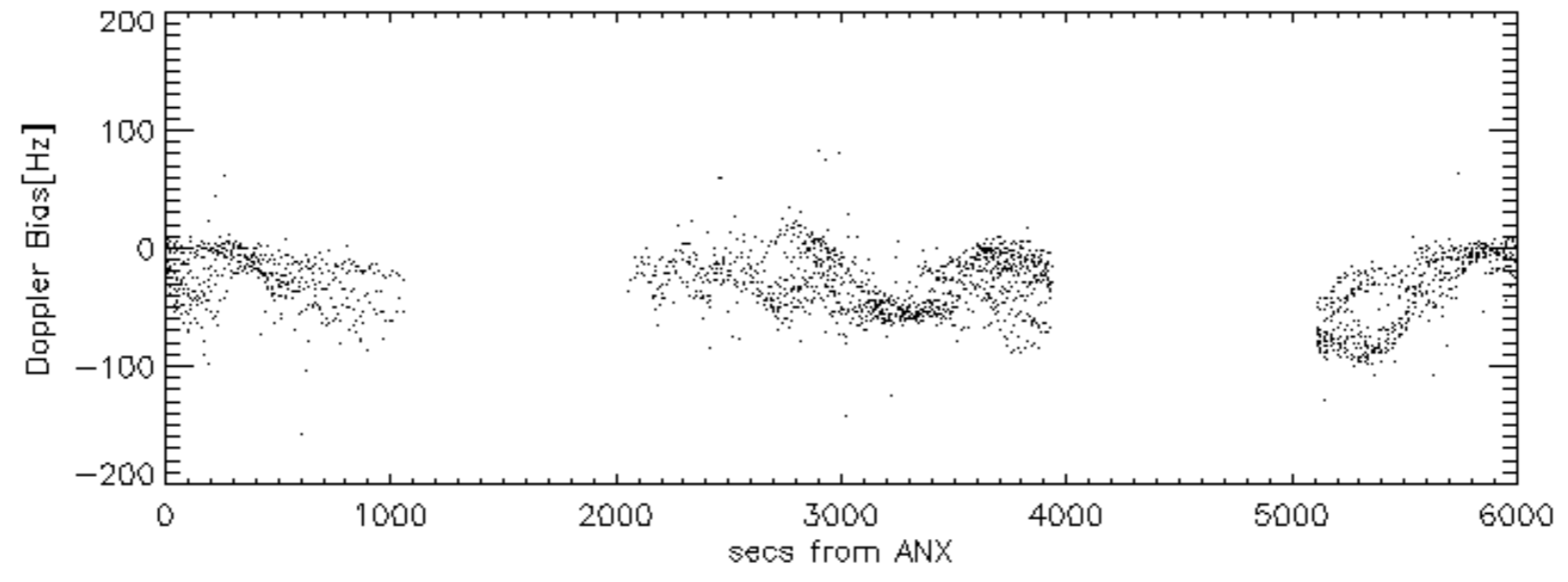
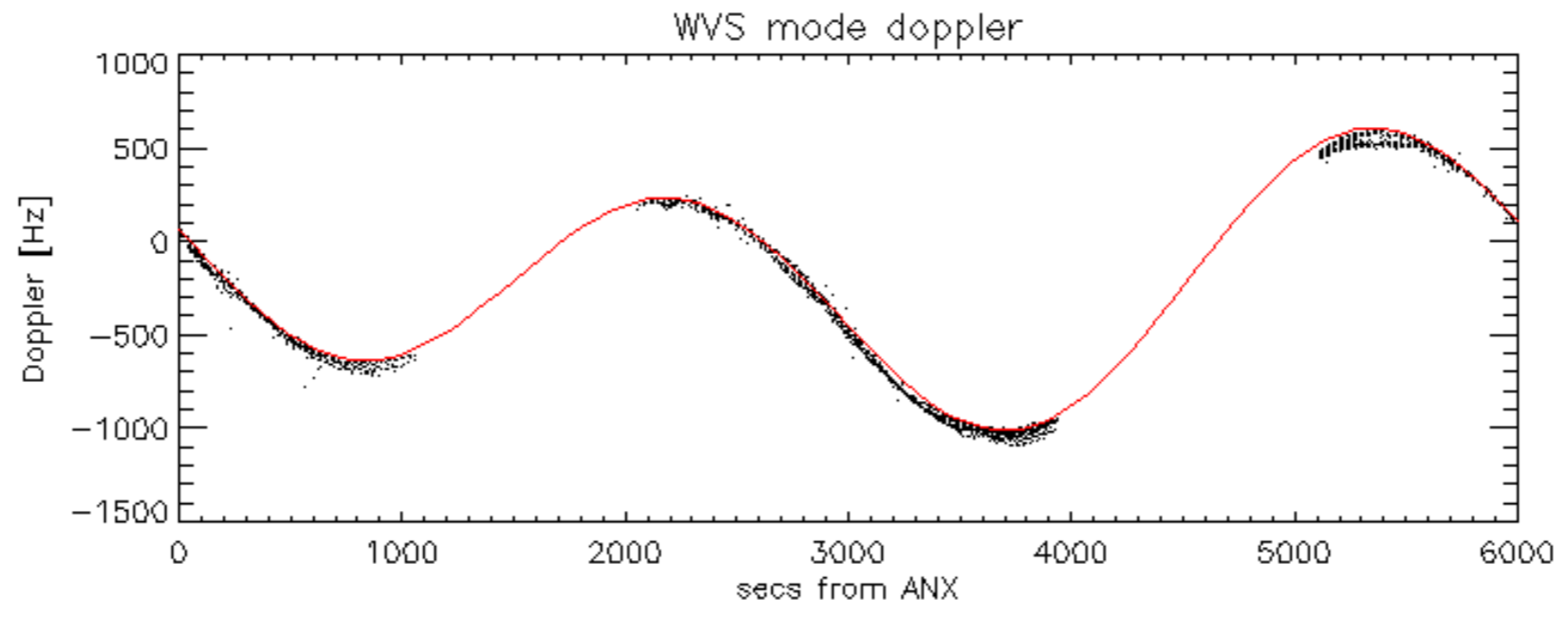
Doppler 'WVS' 'IS2' descending



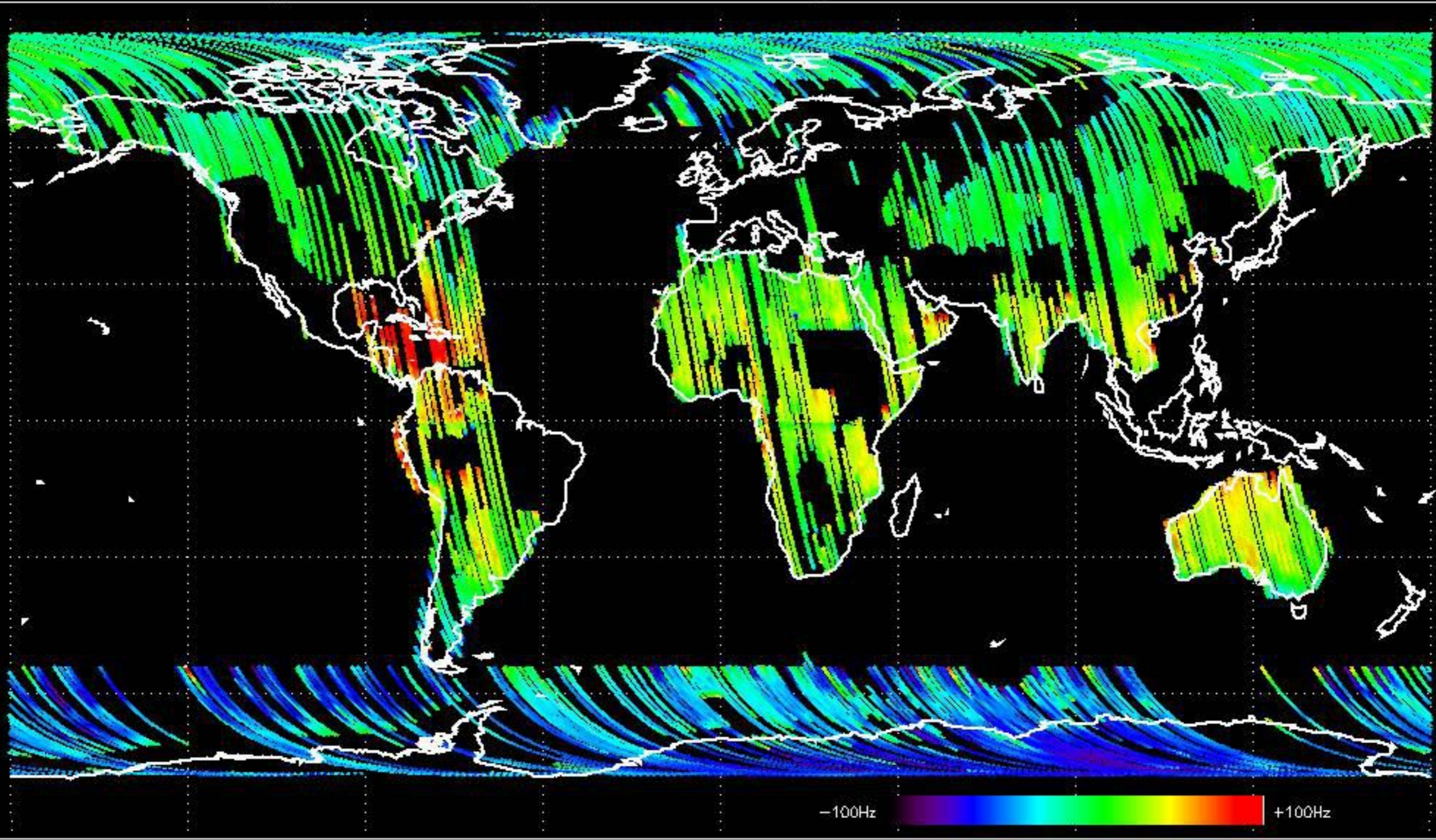


GM1 mode doppler



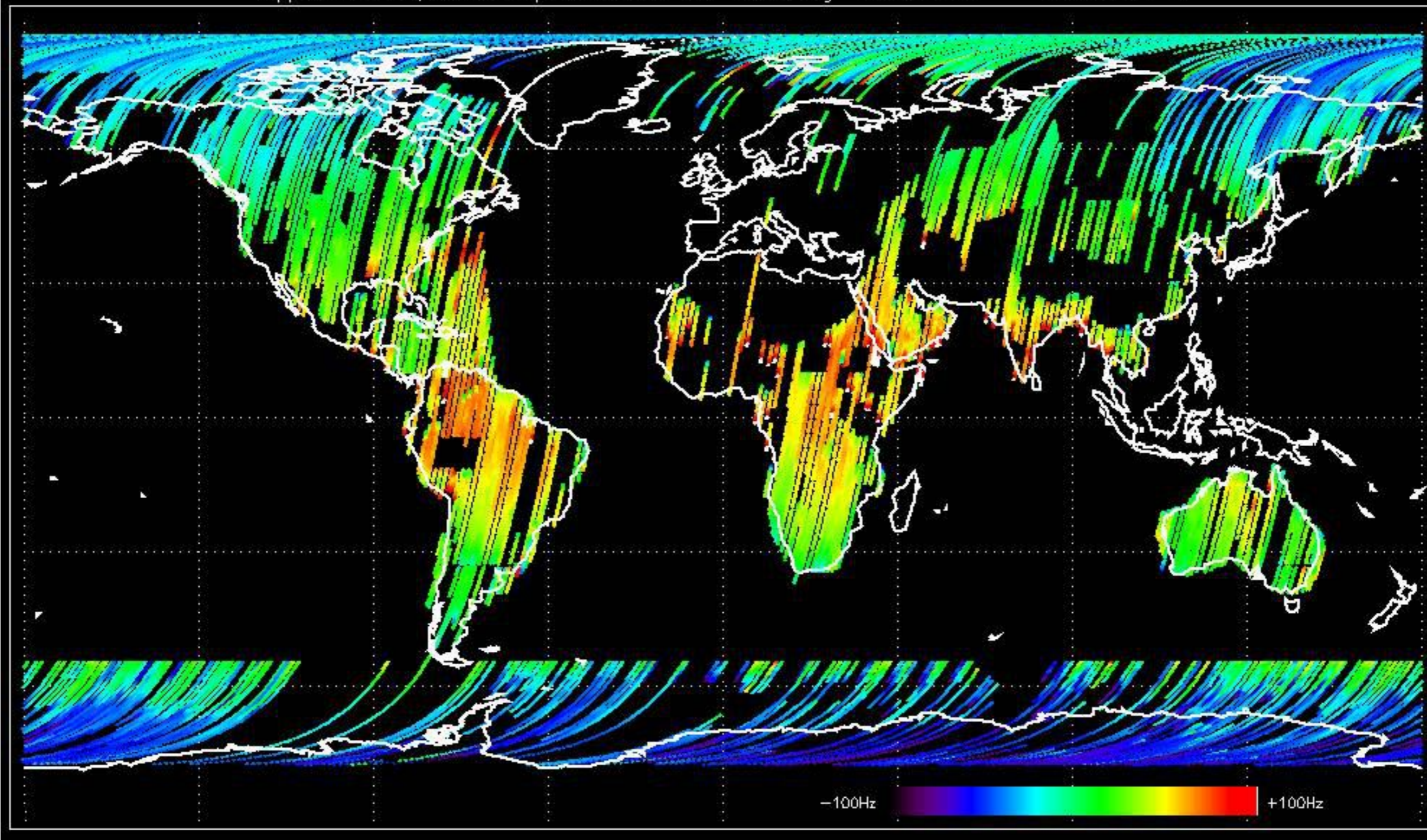


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.368635 Hz

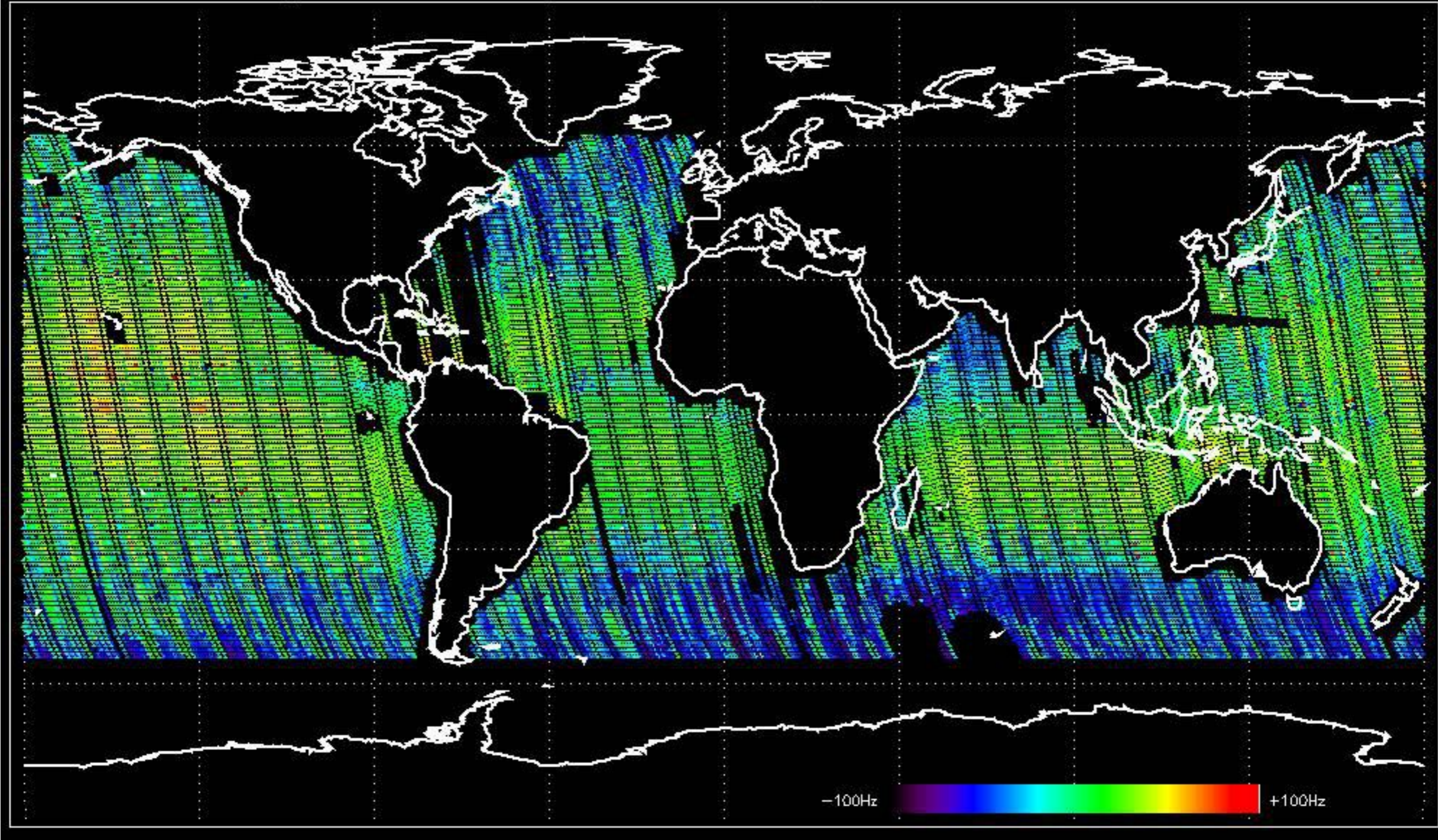


-100Hz +100Hz

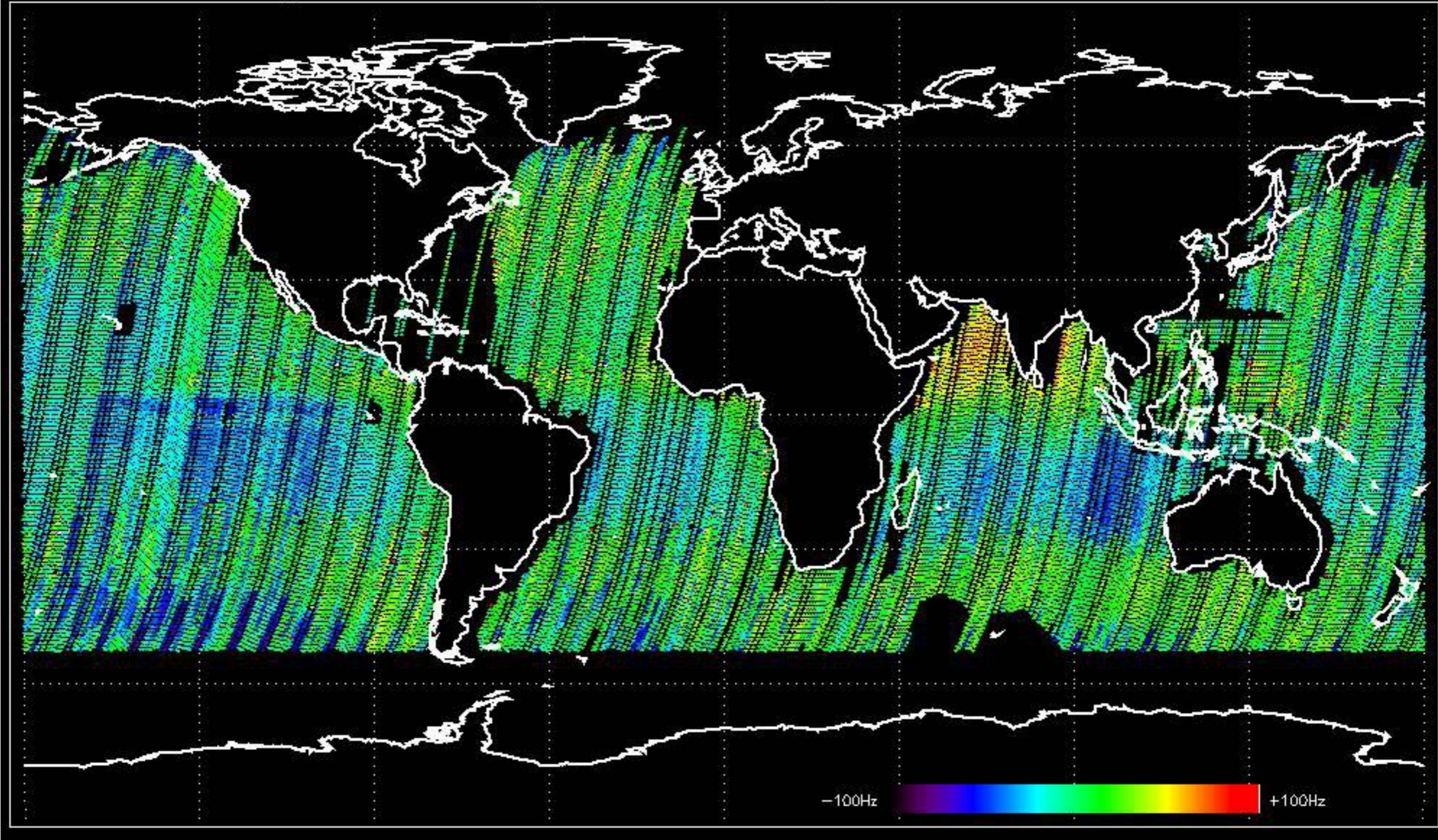
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -25.137611 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.107407 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.919915 Hz



No anomalies observed on available MS products:

No anomalies observed.











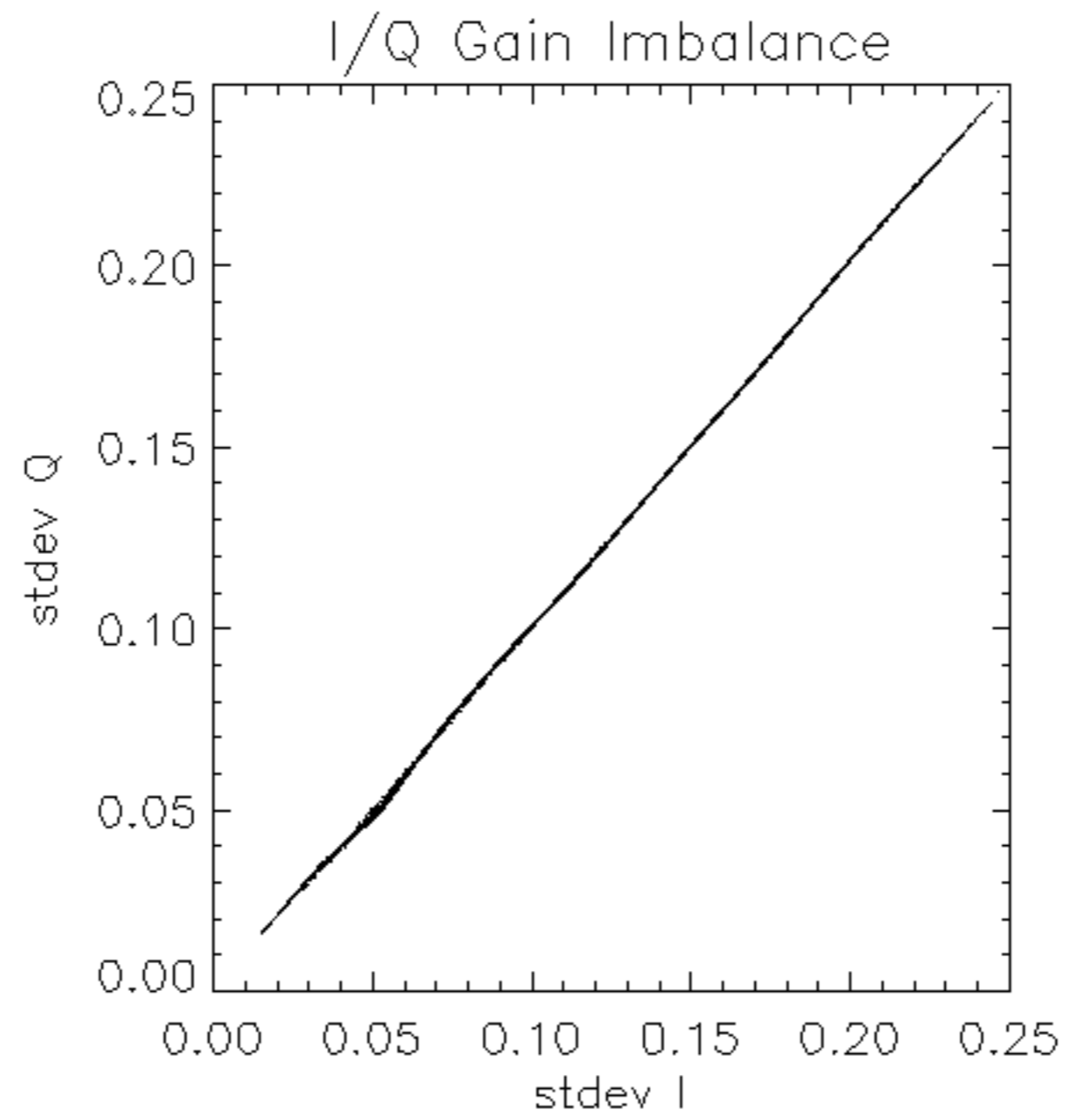


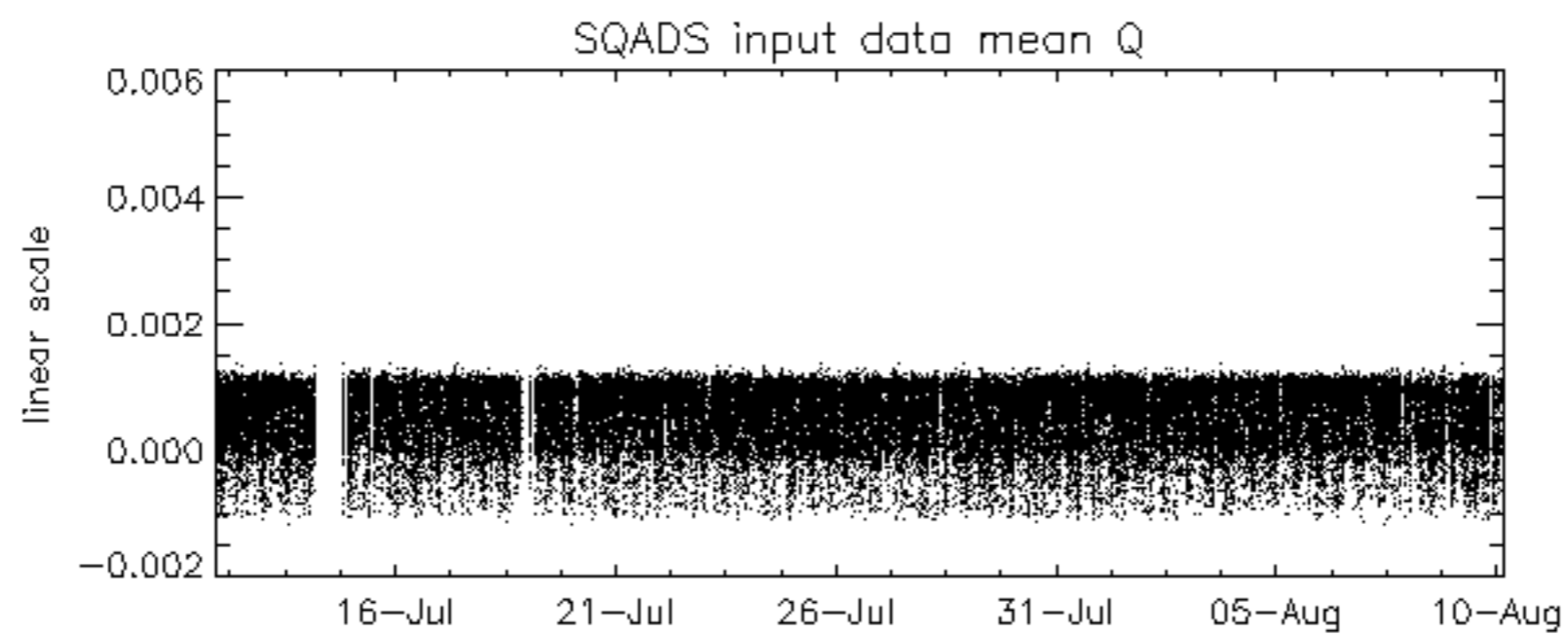
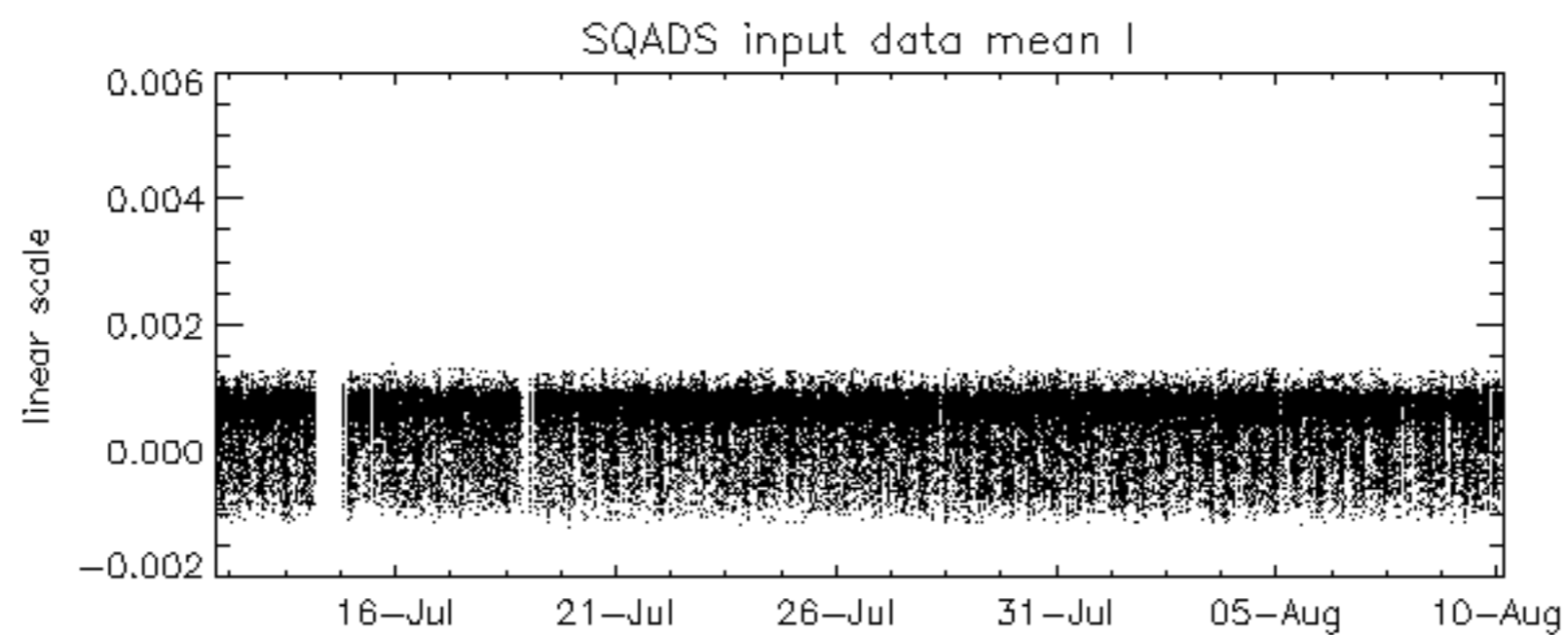
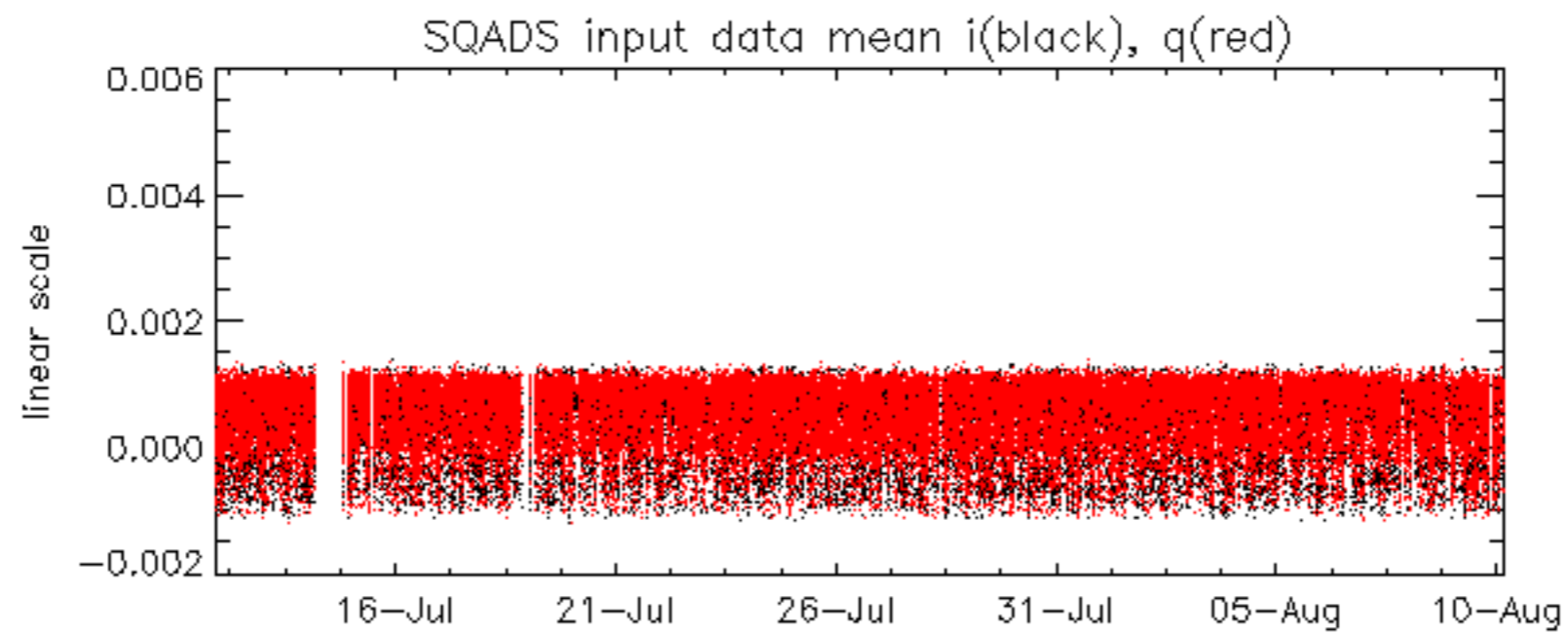


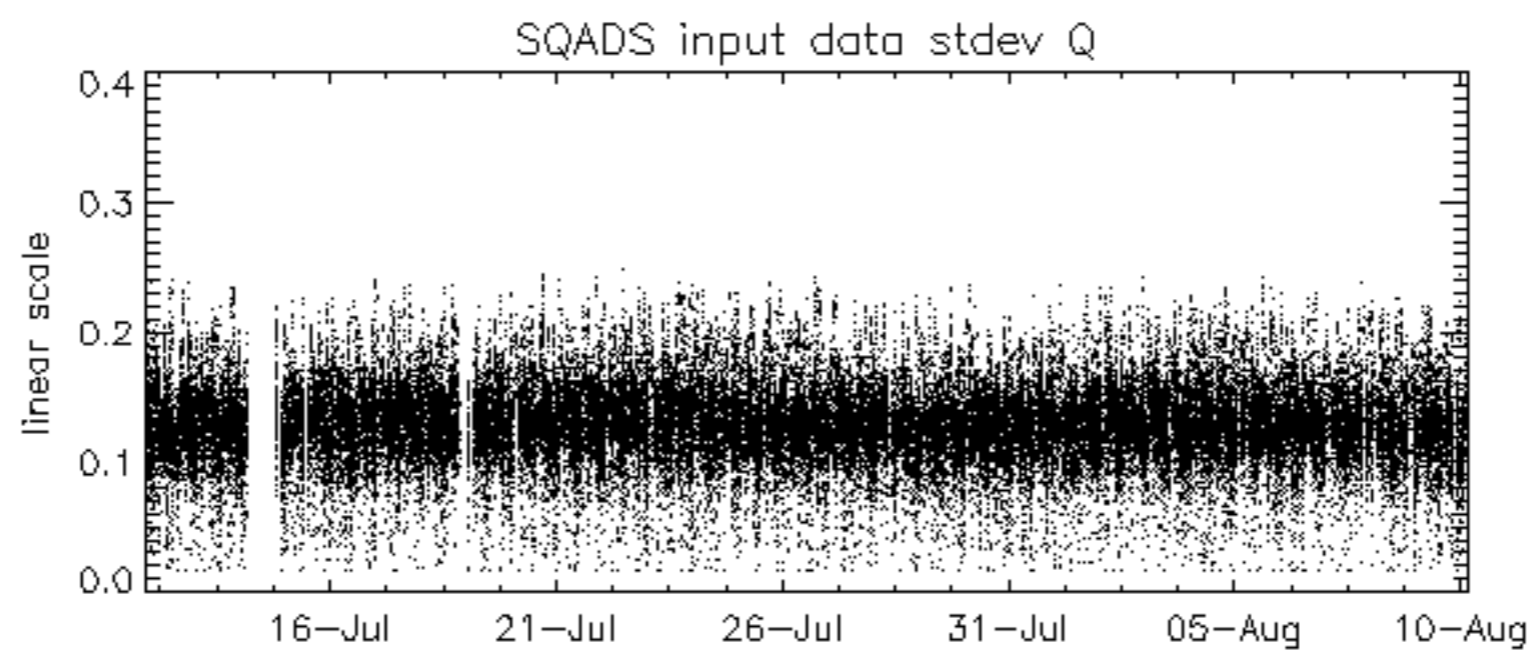
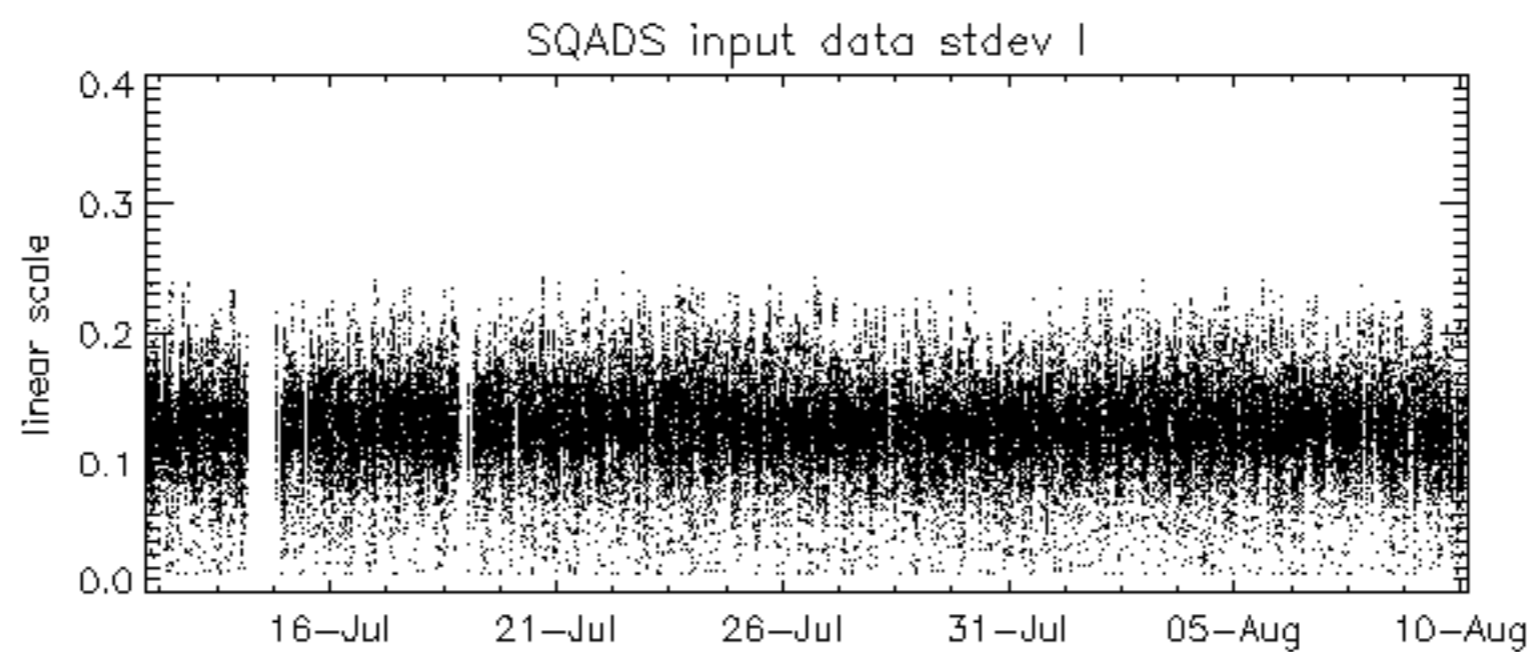
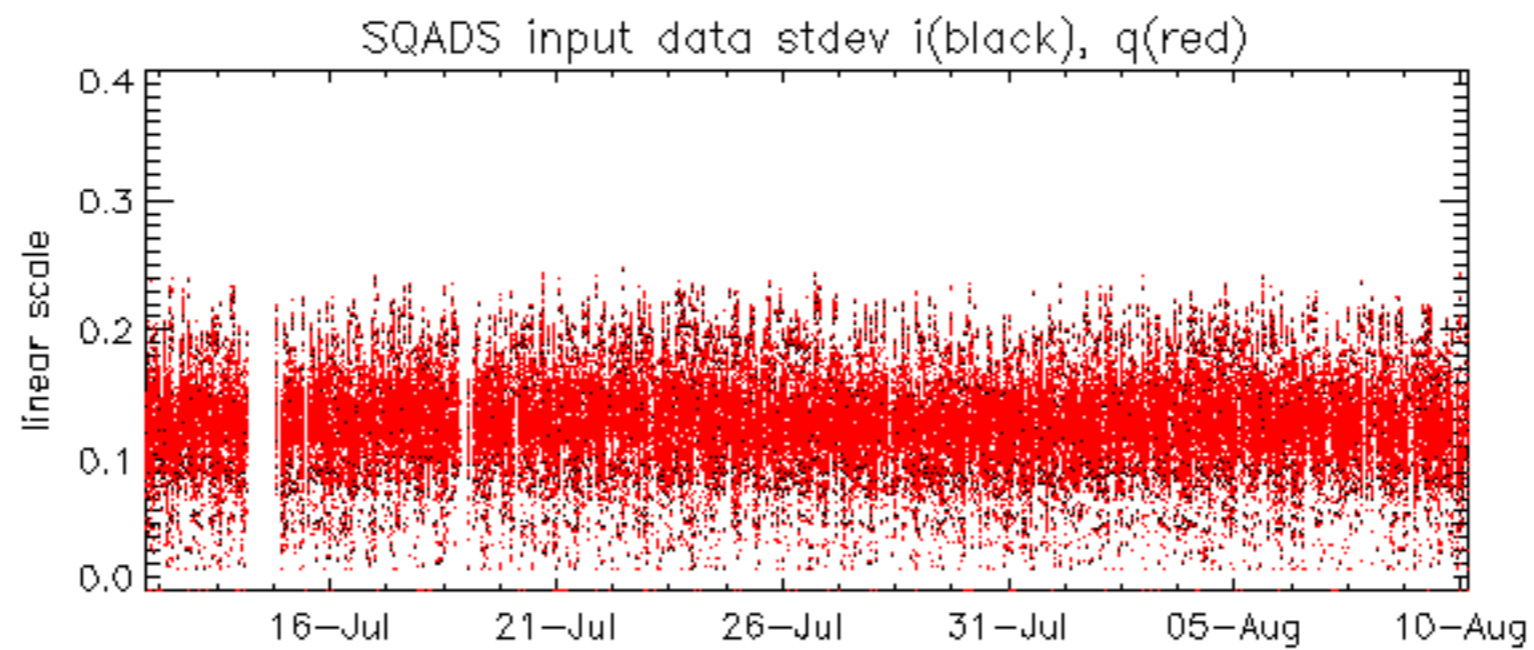




















Summary of analysis for the last 3 days 2005080[890]

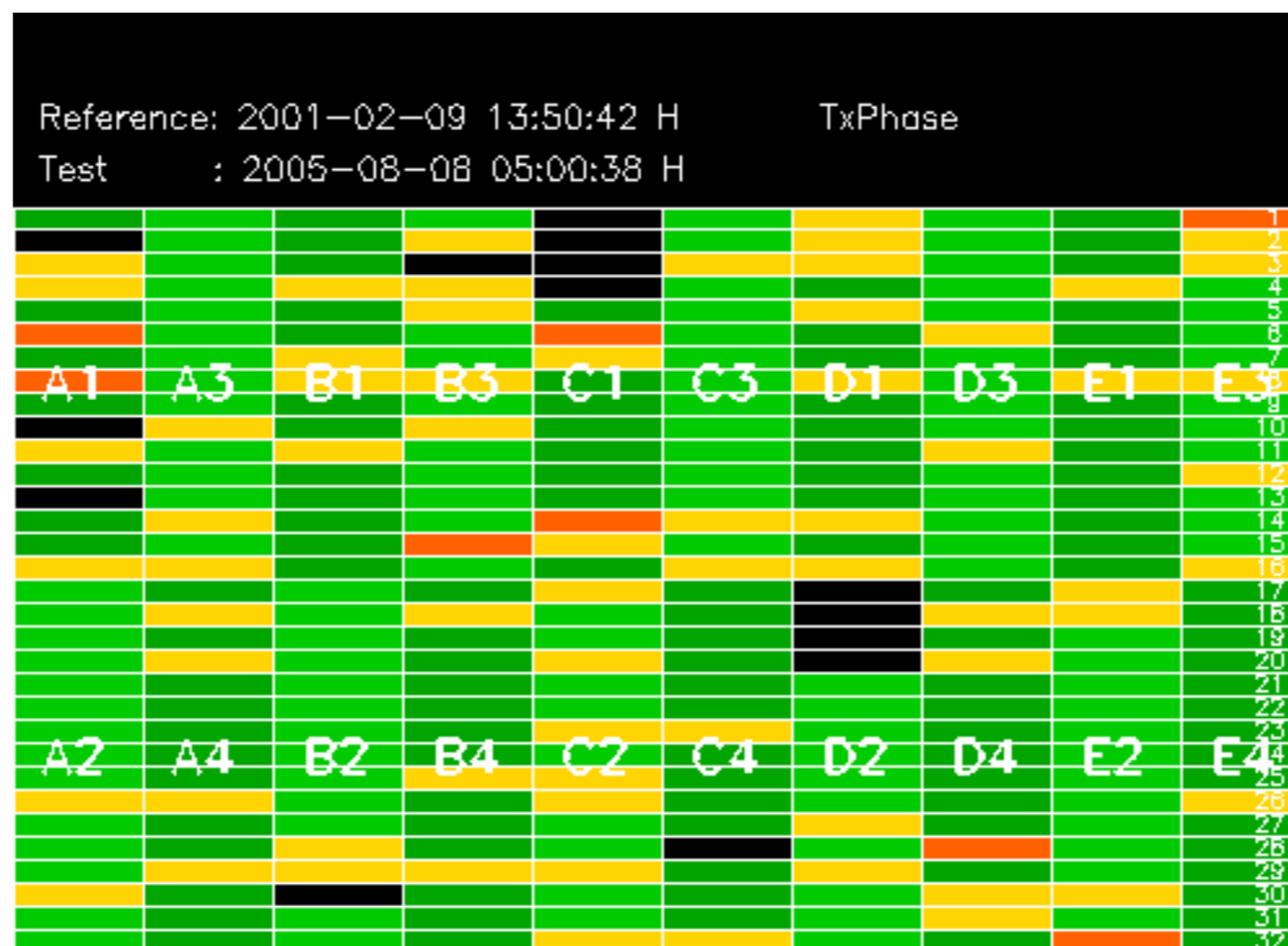
The assumptions is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050809_003745_000001282039_00403_17992_1934.N1	1	0
ASA_IMM_1PNPDE20050809_115630_000000512039_00410_17999_1980.N1	1	0
ASA_IMM_1PNPDK20050808_090909_000000532039_00394_17983_1173.N1	0	2
ASA_IMM_1PNPDK20050809_071403_000003212039_00407_17996_1275.N1	0	3
ASA_GM1_1PNPDK20050809_060814_000011362039_00406_17995_1848.N1	0	6
ASA_WSM_1PNPDE20050808_020810_000000612039_00389_17978_3490.N1	0	1
ASA_WSM_1PNPDE20050808_020911_000000552039_00389_17978_3492.N1	0	1
ASA_WSM_1PNPDK20050808_092904_000000862039_00394_17983_1477.N1	0	1
ASA_WSM_1PNPDK20050809_065945_000000672039_00407_17996_1563.N1	0	1
ASA_WSM_1PNPDK20050809_082826_000000672039_00408_17997_1572.N1	0	65
ASA_APM_1PNPDK20050809_071316_000000432039_00407_17996_0215.N1	0	1





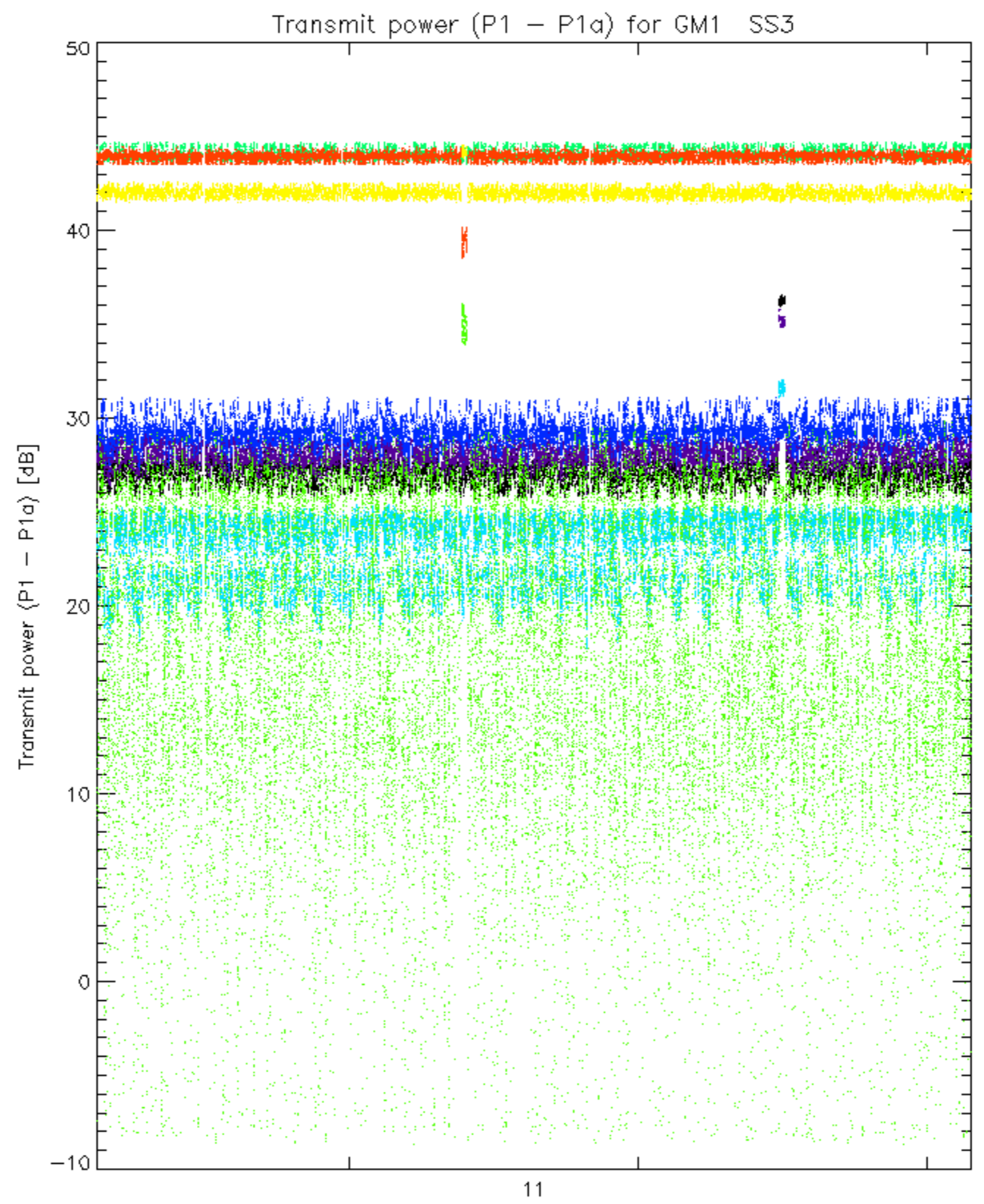




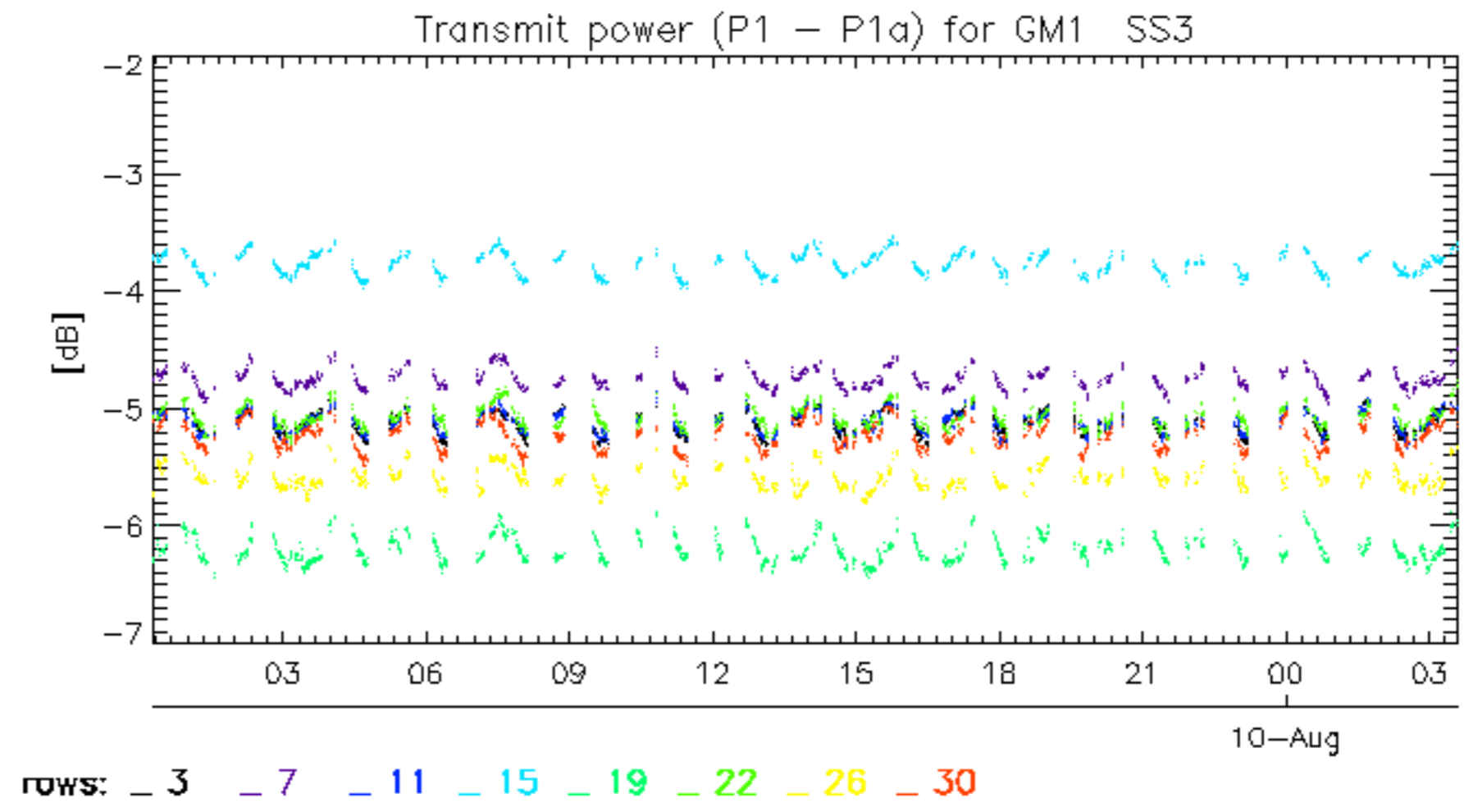




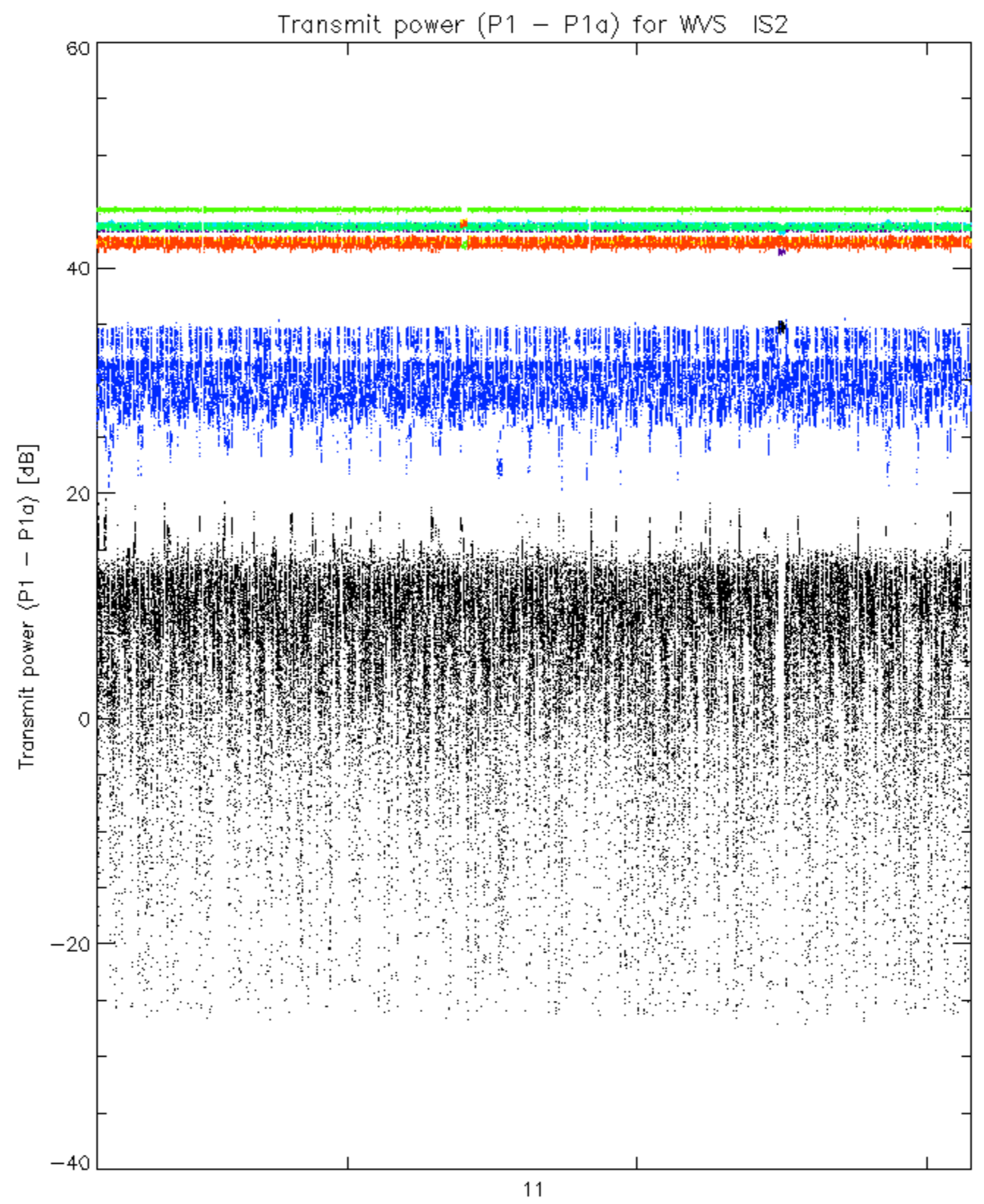




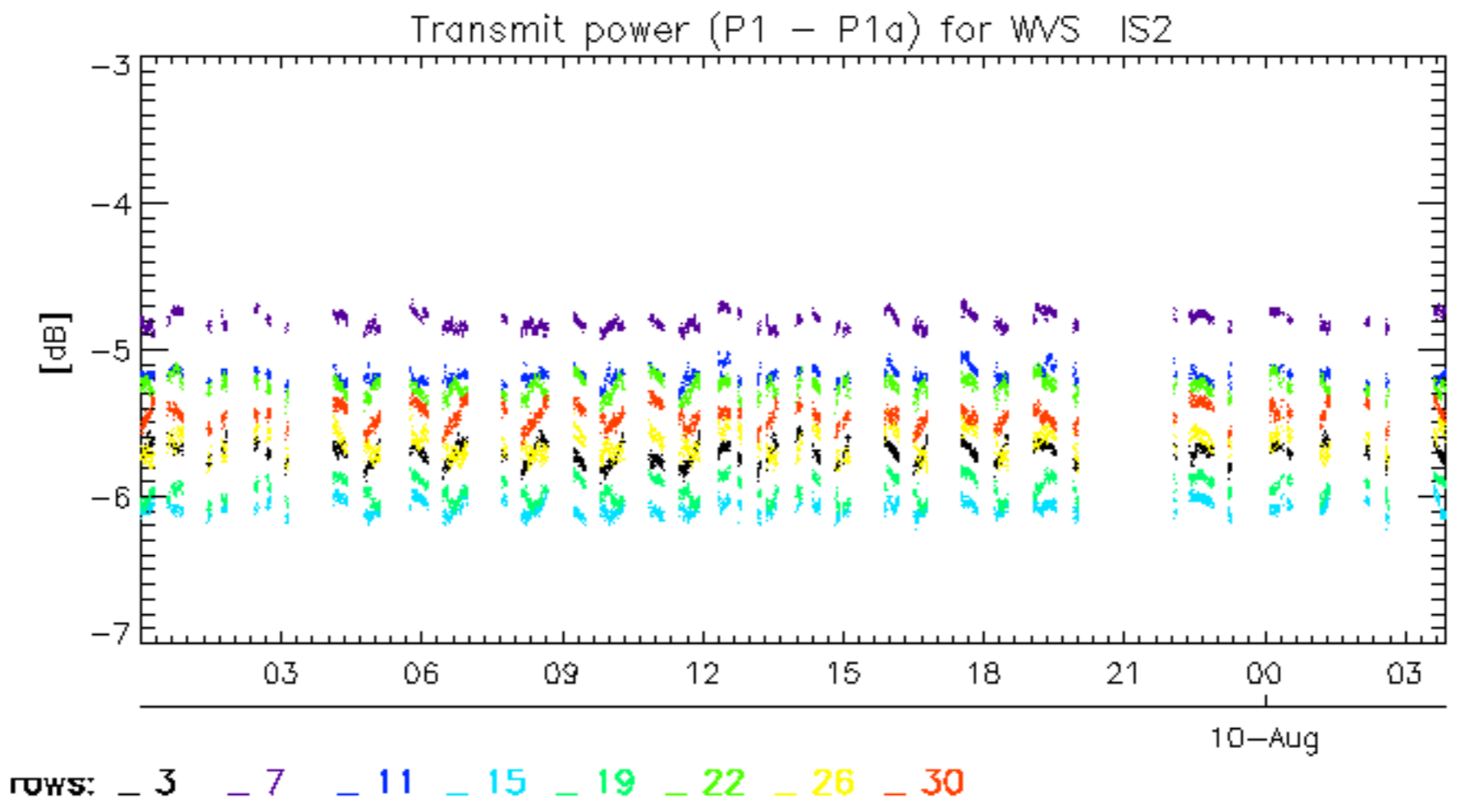
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30







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



No unavailabilities during the reported period.