

# PRELIMINARY REPORT OF 060906

last update on Wed Sep 6 16:42:11 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 2006-09-05 00:00:00 to 2006-09-06 16:42:11

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	69	15	5	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	37	69	15	5	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	69	15	5	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	69	15	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	61	38	12	101
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	33	61	38	12	101
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	33	61	38	12	101
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	33	61	38	12	101

### 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	20060904 180514
H	20060905 173337

### MSM in V/V 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"/>

### 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
☒
☒

### 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	-3.941830	0.009795	0.005844
7	P1	-3.074294	0.051652	0.103445
11	P1	-4.079597	0.065541	0.108361
15	P1	-6.202890	0.095527	0.087832
19	P1	-3.492359	0.045476	-0.141788
22	P1	-4.564002	0.024606	0.009110
26	P1	-3.931953	0.020505	-0.031746
30	P1	-5.781903	0.131169	-0.099437
3	P1	-16.559105	0.263469	-0.096807
7	P1	-16.840681	0.638476	0.009143
11	P1	-16.817896	0.313036	0.117475
15	P1	-12.946003	0.145555	0.067428
19	P1	-14.575974	0.399960	-0.290225
22	P1	-15.792001	0.554117	0.371744
26	P1	-15.183918	0.208280	-0.116291
30	P1	-16.974747	0.403758	0.222253

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.852573	0.083845	0.098002
7	P2	-21.860056	0.098598	-0.010108
11	P2	-15.749437	0.111644	0.017228
15	P2	-7.097504	0.098005	0.022932
19	P2	-9.113676	0.091345	0.003293
22	P2	-18.129408	0.085354	0.032629
26	P2	-16.398697	0.092457	-0.006417
30	P2	-19.475023	0.090209	0.022437

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.174635	0.003972	-0.008218
7	P3	-8.174635	0.003972	-0.008218
11	P3	-8.174635	0.003972	-0.008218
15	P3	-8.174635	0.003972	-0.008218
19	P3	-8.174635	0.003972	-0.008218
22	P3	-8.174635	0.003972	-0.008218
26	P3	-8.174682	0.003971	-0.008109
30	P3	-8.174682	0.003971	-0.008109

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1

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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	-3.837127	0.021434	-0.020422
7	P1	-2.497309	0.283314	0.181340
11	P1	-2.903236	0.141919	0.121870
15	P1	-3.666277	0.145429	0.082390
19	P1	-3.450239	0.074175	-0.120132
22	P1	-5.088191	0.034518	-0.016725
26	P1	-5.868327	0.028241	-0.000238
30	P1	-5.196512	0.079291	-0.052217
3	P1	-11.630210	0.067199	-0.015725
7	P1	-9.922993	0.189121	0.037944
11	P1	-10.316494	0.084411	-0.045679
15	P1	-10.842673	0.177221	-0.083129
19	P1	-15.656665	3.244341	-0.679652
22	P1	-20.855324	1.722297	0.264236

26	P1	-16.044592	0.415181	0.303314
30	P1	-18.002468	0.788036	-0.068719

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.447281	0.080739	0.102479
7	P2	-22.233362	0.194215	0.101430
11	P2	-10.926310	0.055989	0.091147
15	P2	-4.872201	0.041438	0.032174
19	P2	-6.853581	0.040569	0.019369
22	P2	-8.172995	0.061832	0.040878
26	P2	-24.166739	0.126993	0.001553
30	P2	-21.964436	0.077446	0.016065

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.017288	0.003656	-0.013203
7	P3	-8.017160	0.003657	-0.012904
11	P3	-8.017186	0.003662	-0.012489
15	P3	-8.017172	0.003668	-0.012494
19	P3	-8.017217	0.003677	-0.013063
22	P3	-8.017386	0.003644	-0.012951
26	P3	-8.017211	0.003657	-0.013135
30	P3	-8.017156	0.003656	-0.012896

## 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	0.000550528
	stdev	1.77236e-07
MEAN Q	mean	0.000530492
	stdev	2.16018e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136129
	stdev	0.00108292
STDEV Q	mean	0.136473
	stdev	0.00109916



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006090[456]

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_1PNPDE20060906_004518_000001932051_00016_23617_5564.N1	1	0
ASA_IMM_1PNPDE20060906_010159_000000692051_00017_23618_5567.N1	1	0
ASA_WVS_1PNPDE20060904_232552_000000002051_00001_23602_1997.N1	1	0
ASA_WSM_1PNPDE20060904_184217_000000852050_00500_23600_0914.N1	0	41
ASA_WSM_1PNPDE20060905_162916_000001222051_00012_23613_1099.N1	0	57



## 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"/>
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Ascending

<input type="checkbox"/>
--------------------------

Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

<input type="checkbox"/>
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Ascending

<input type="checkbox"/>
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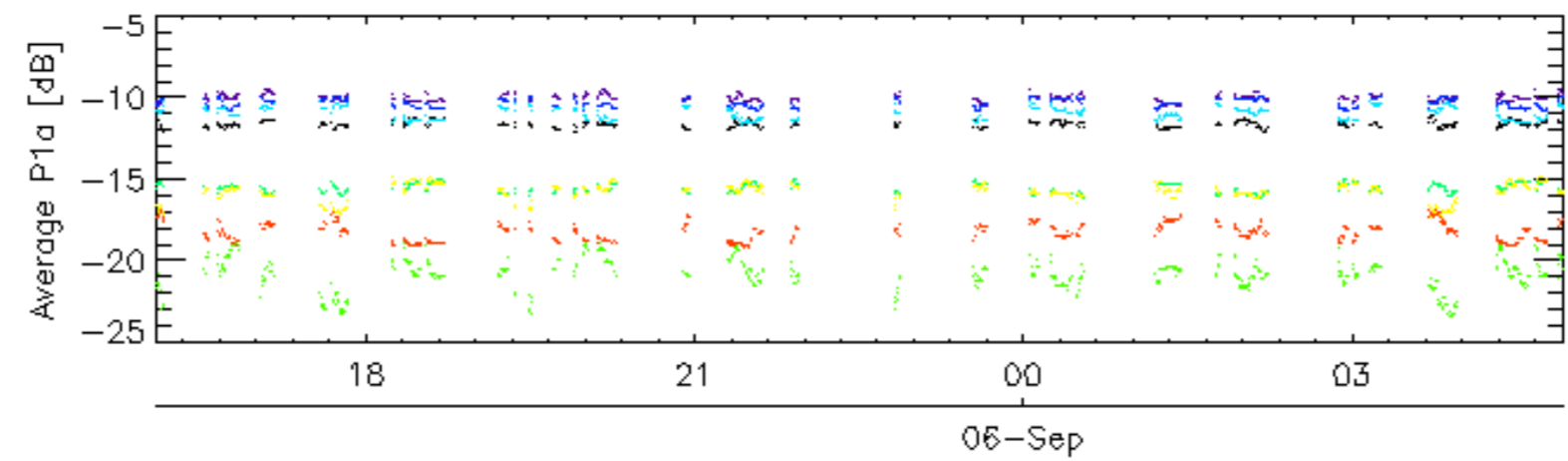
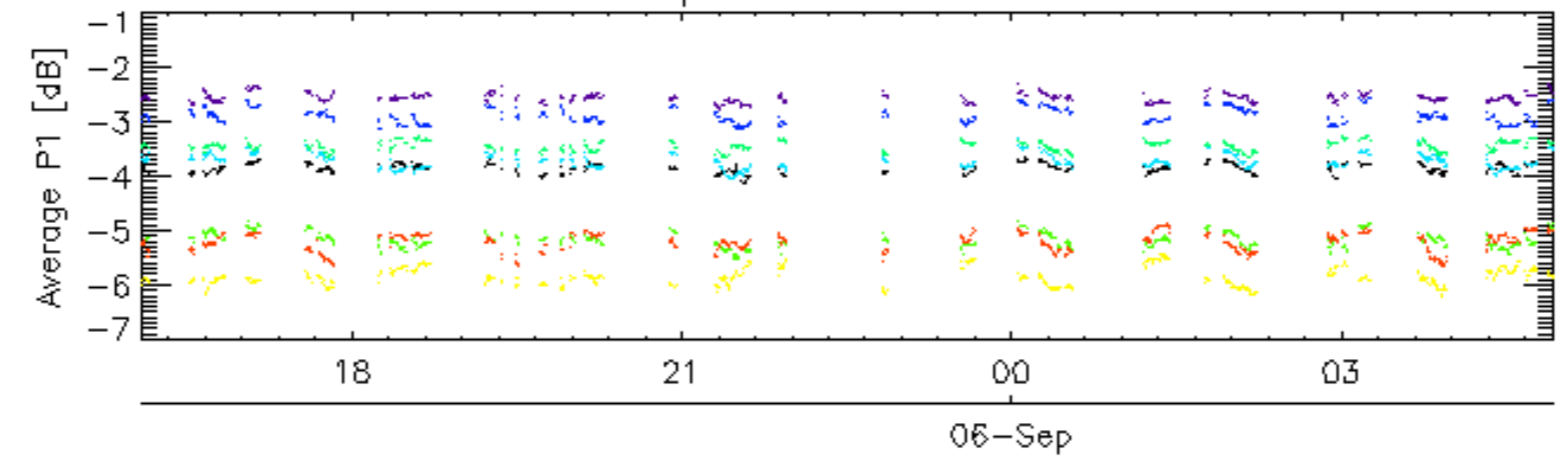
Descending

### 7.6 - Doppler evolution versus ANX for GM1

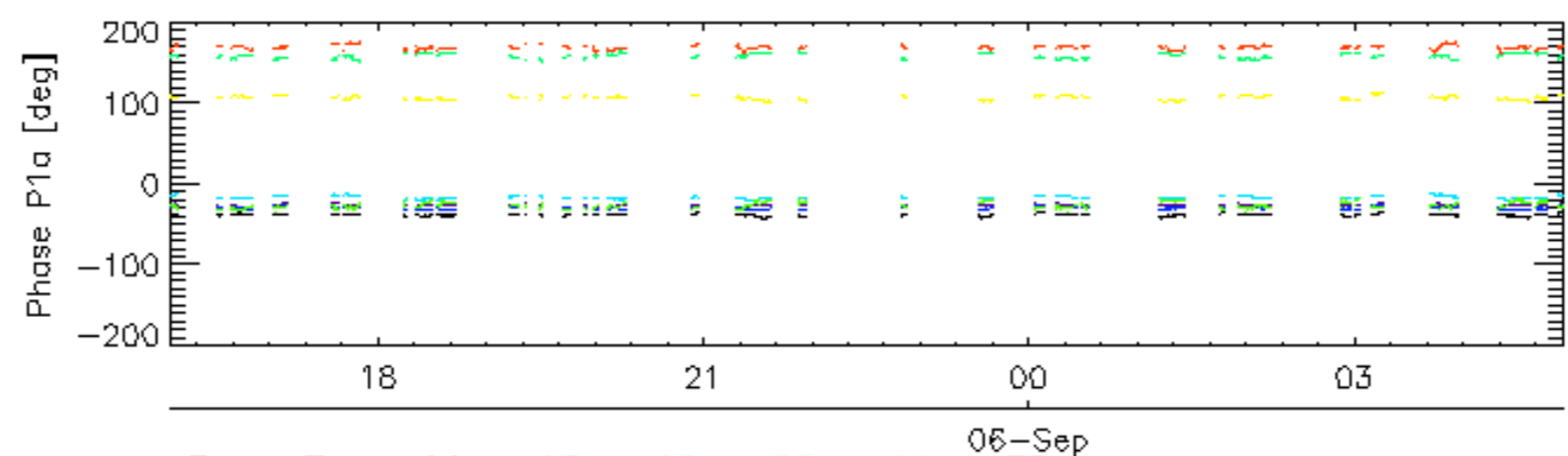
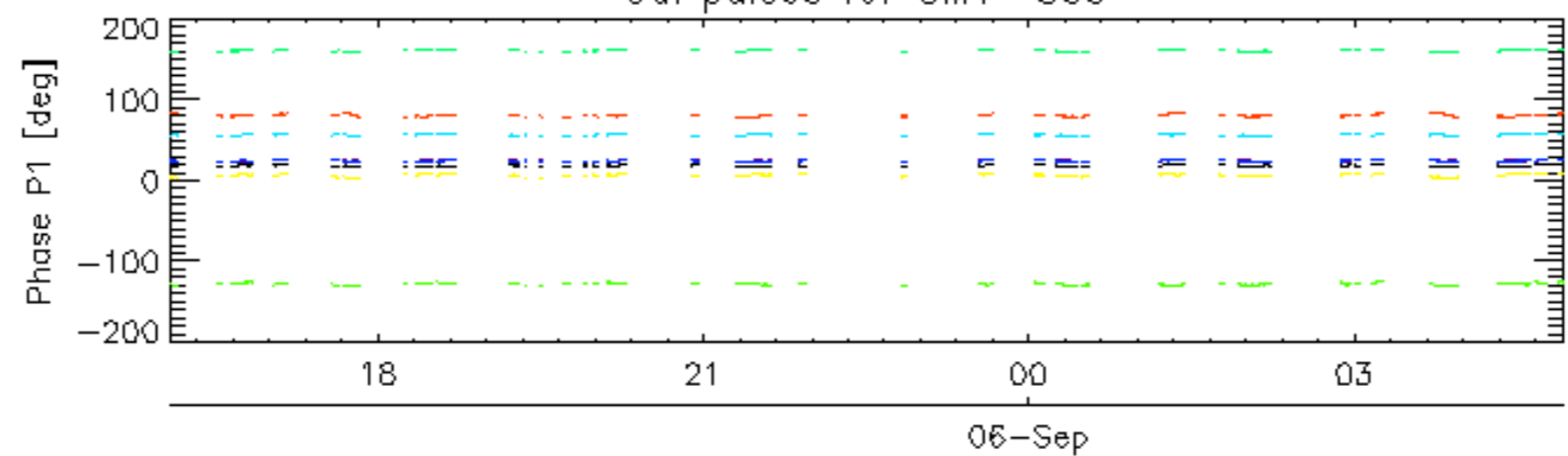
Evolution Doppler error versus ANX

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

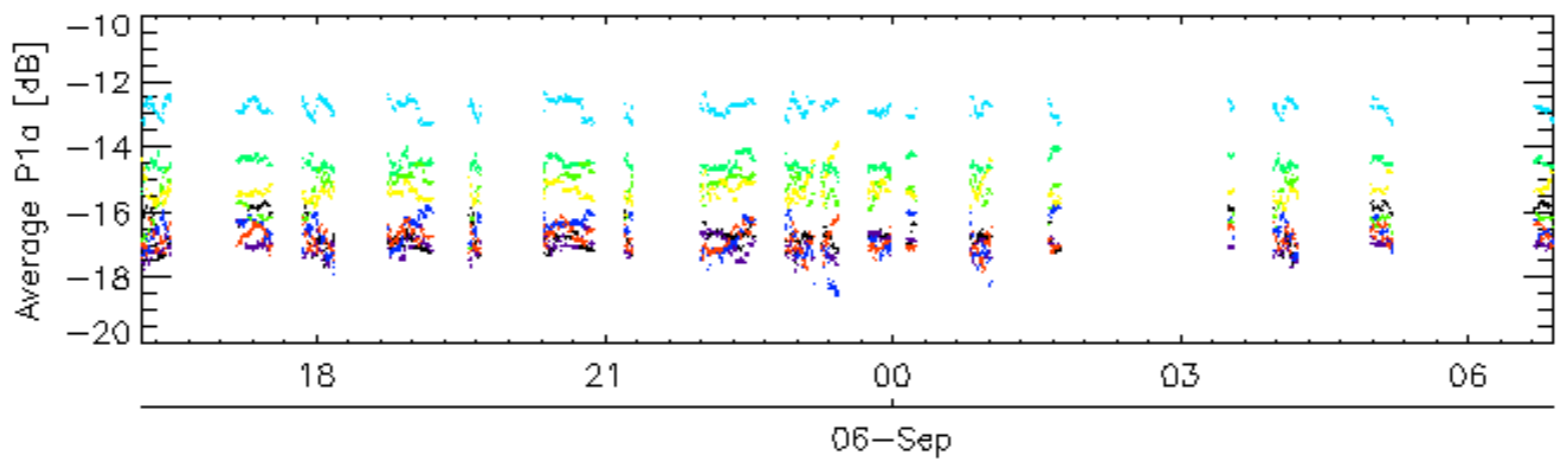
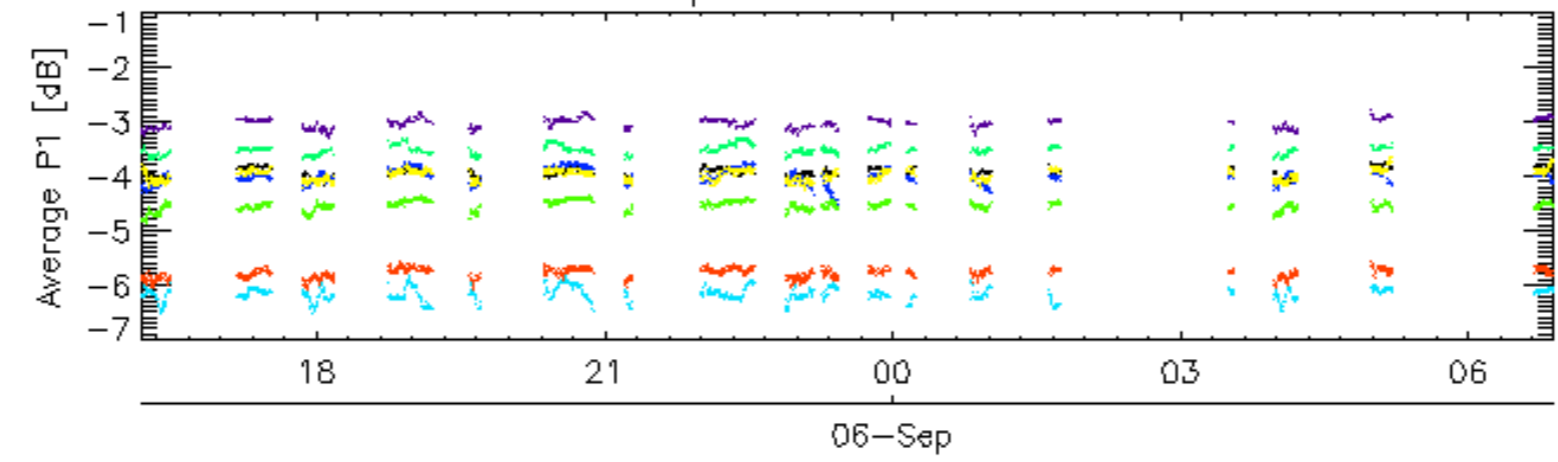


Cal pulses for GM1 SS3

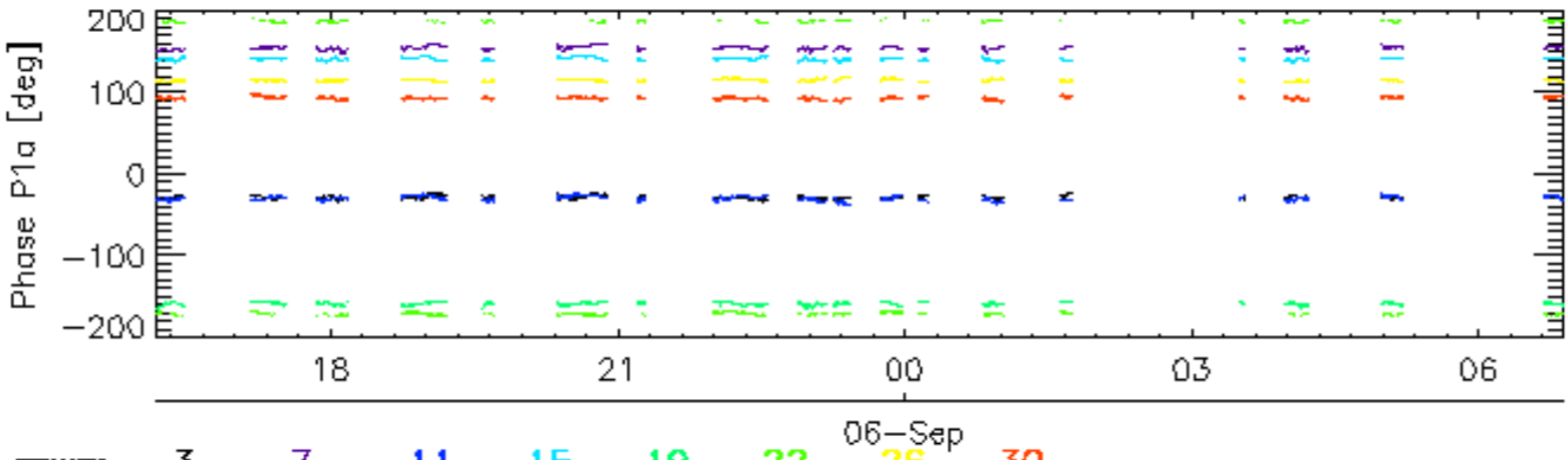
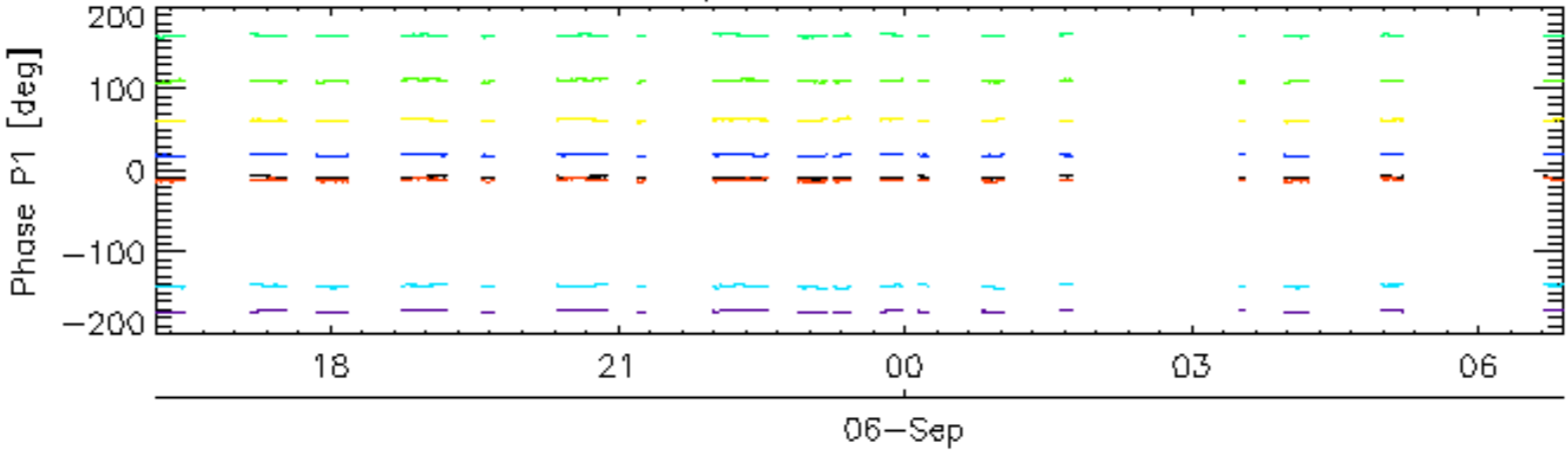


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

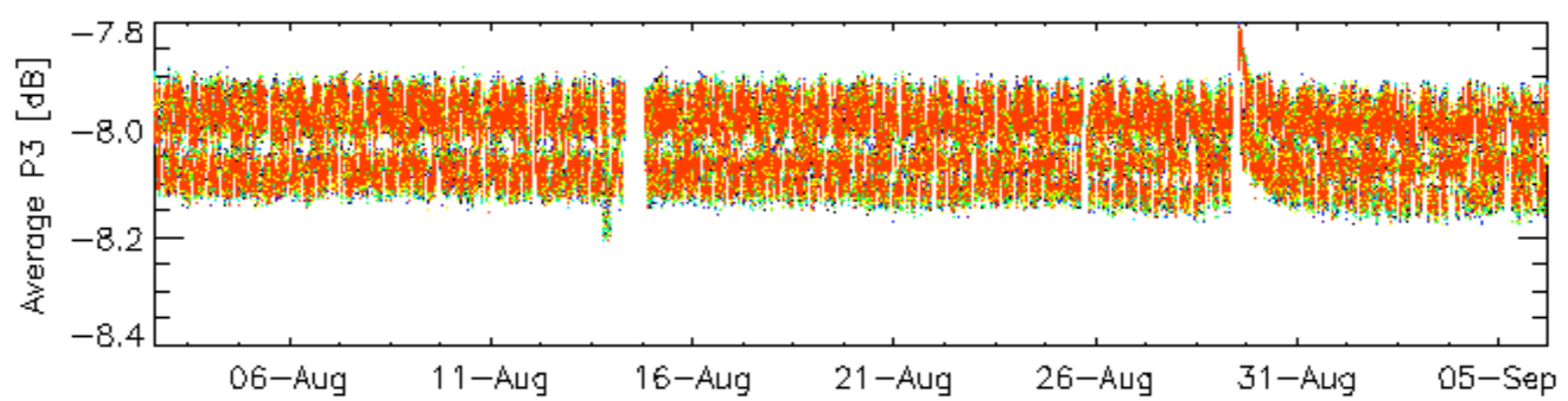
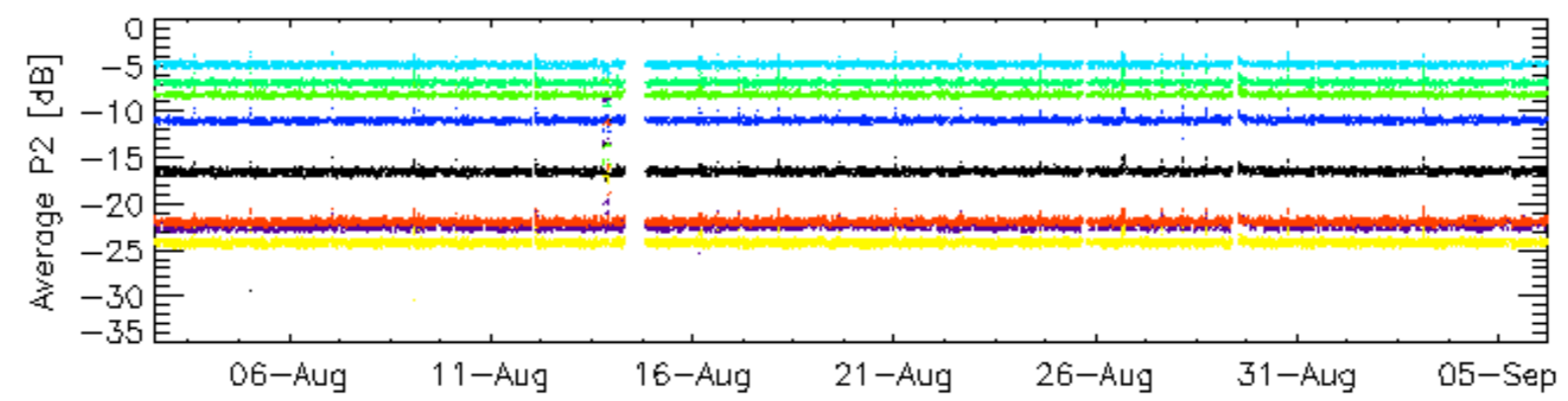
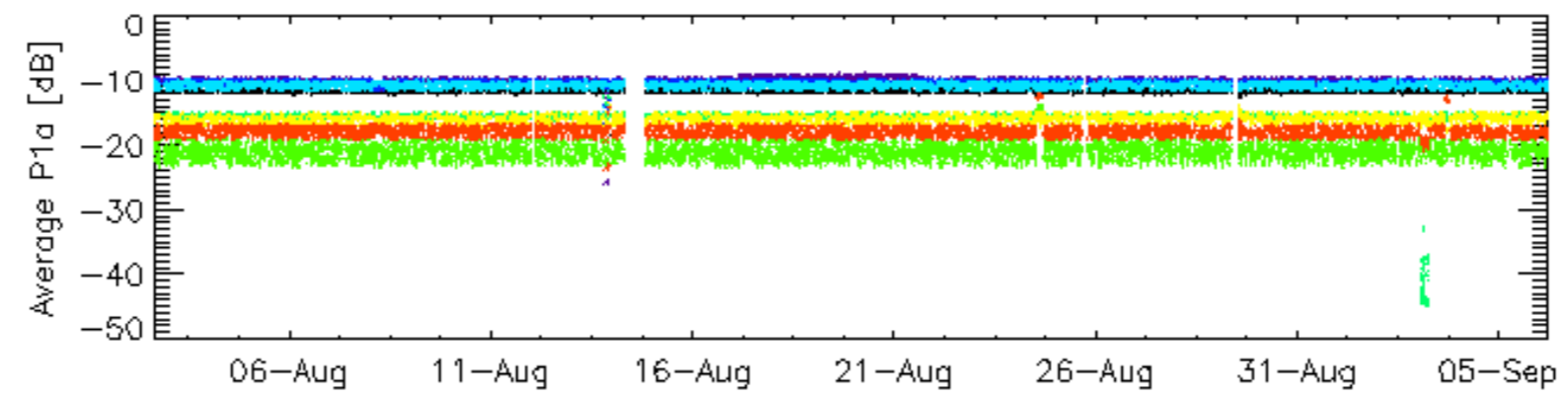
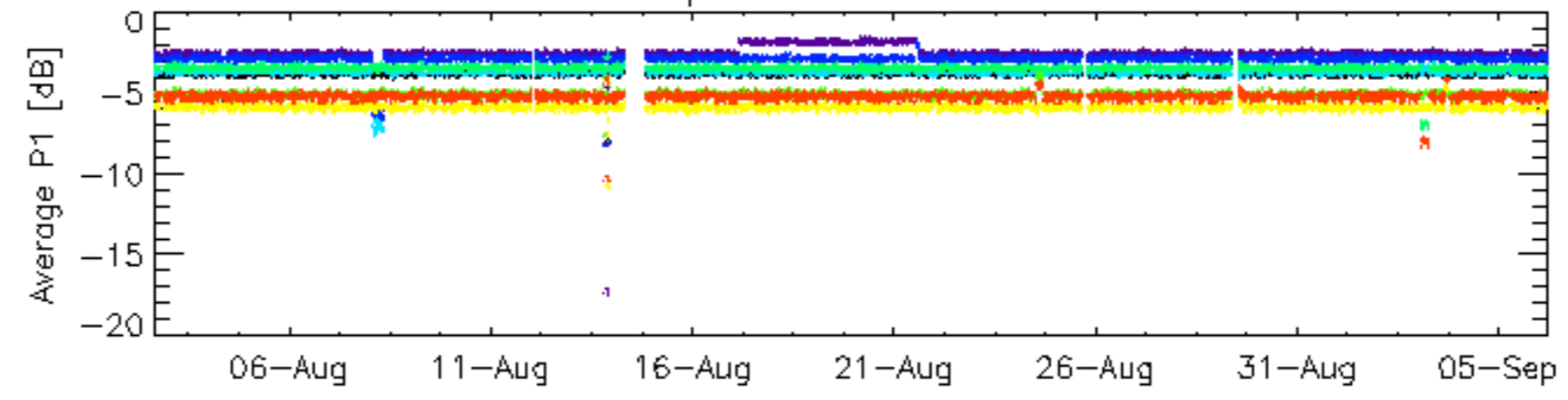


Cal pulses for WVS IS2



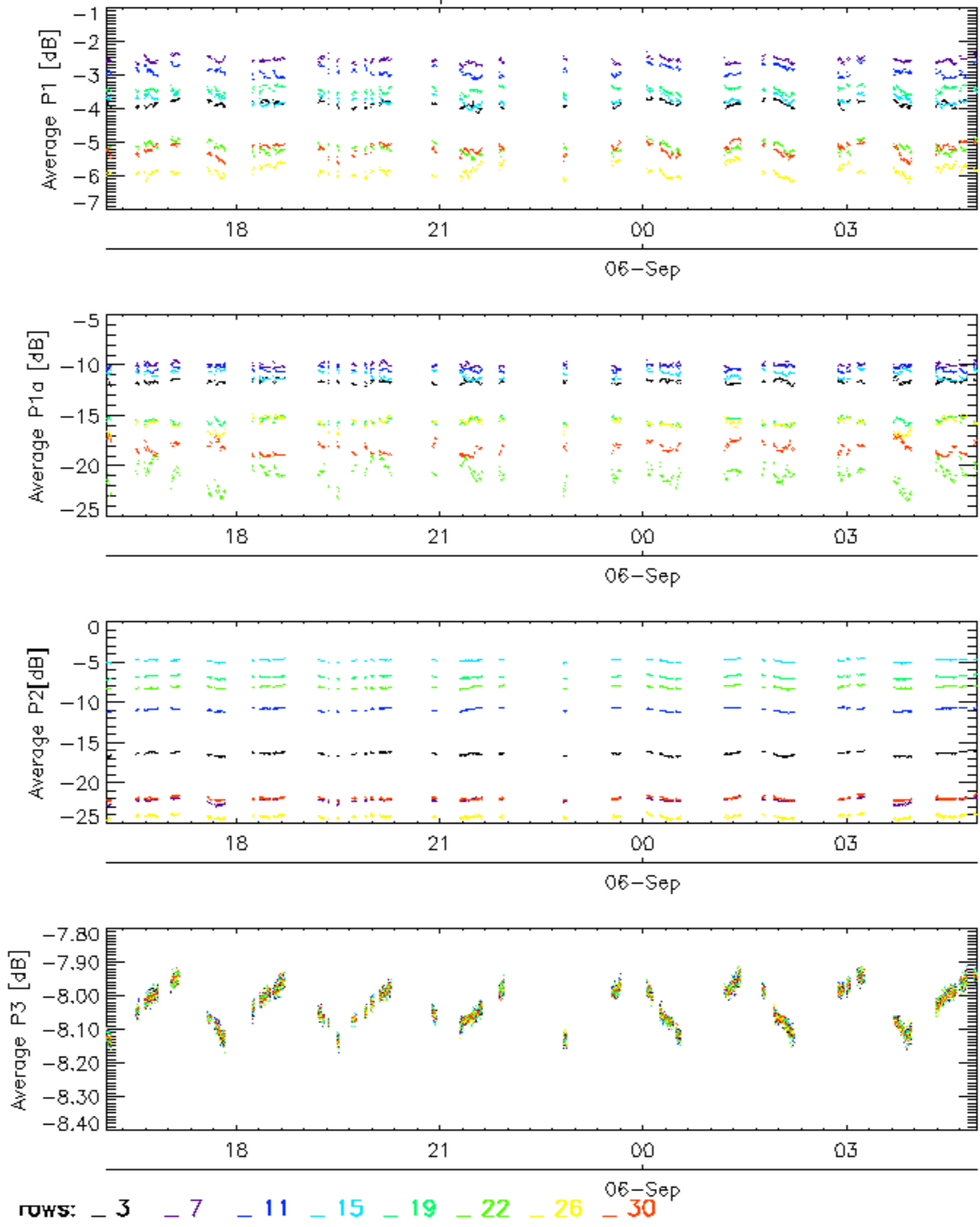
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

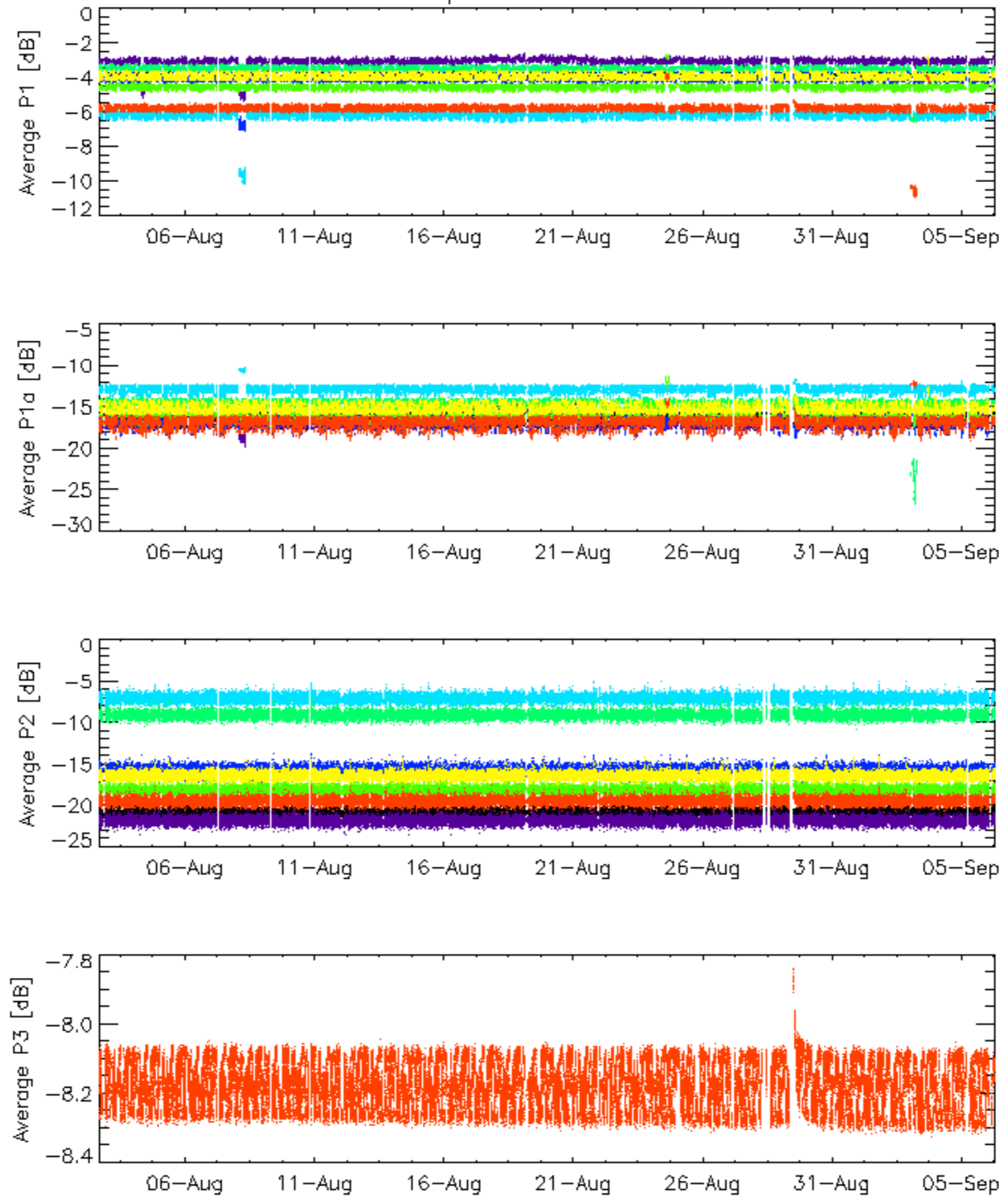


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

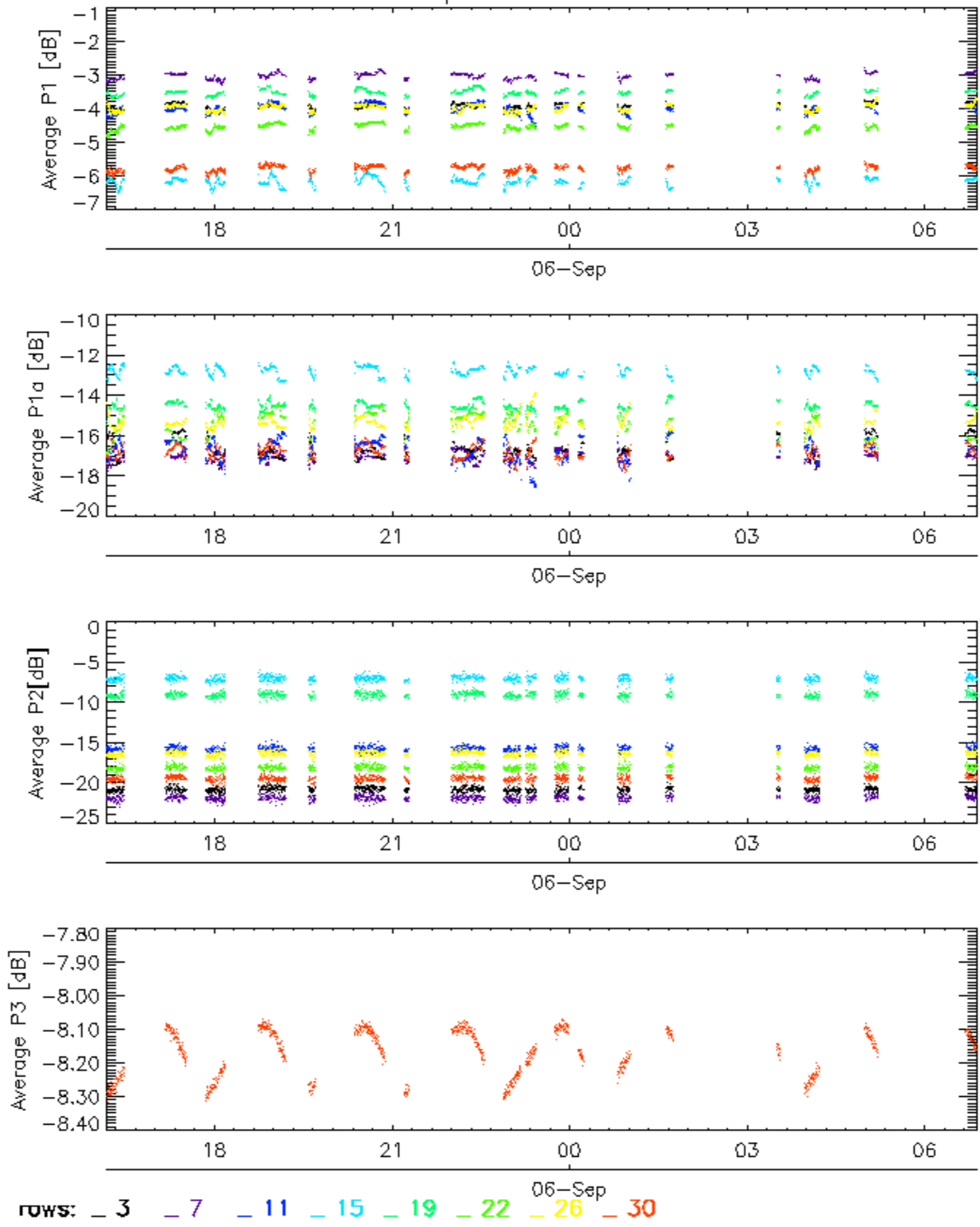


Cal pulses for WVS IS2



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

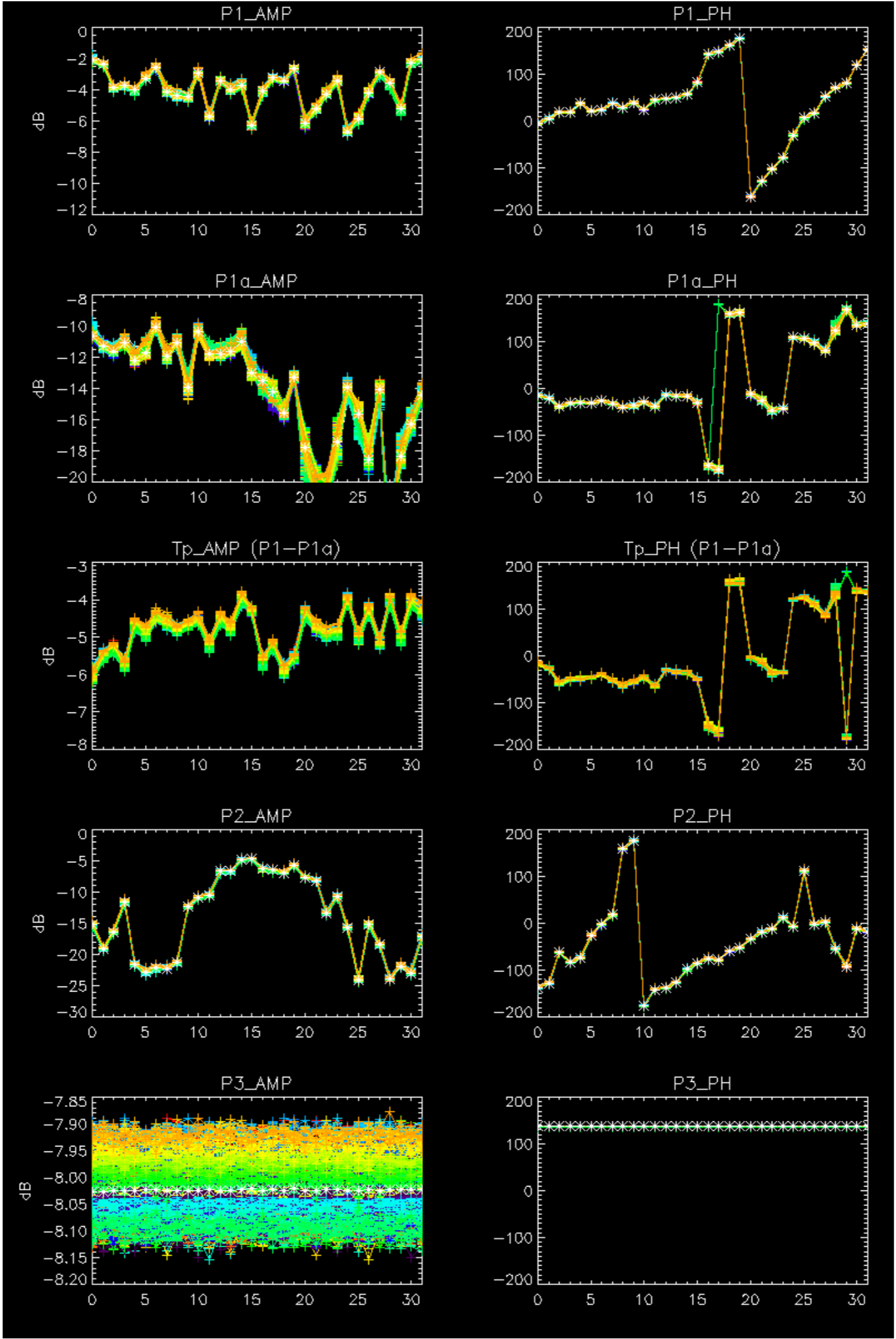
Cal pulses for WVS IS2

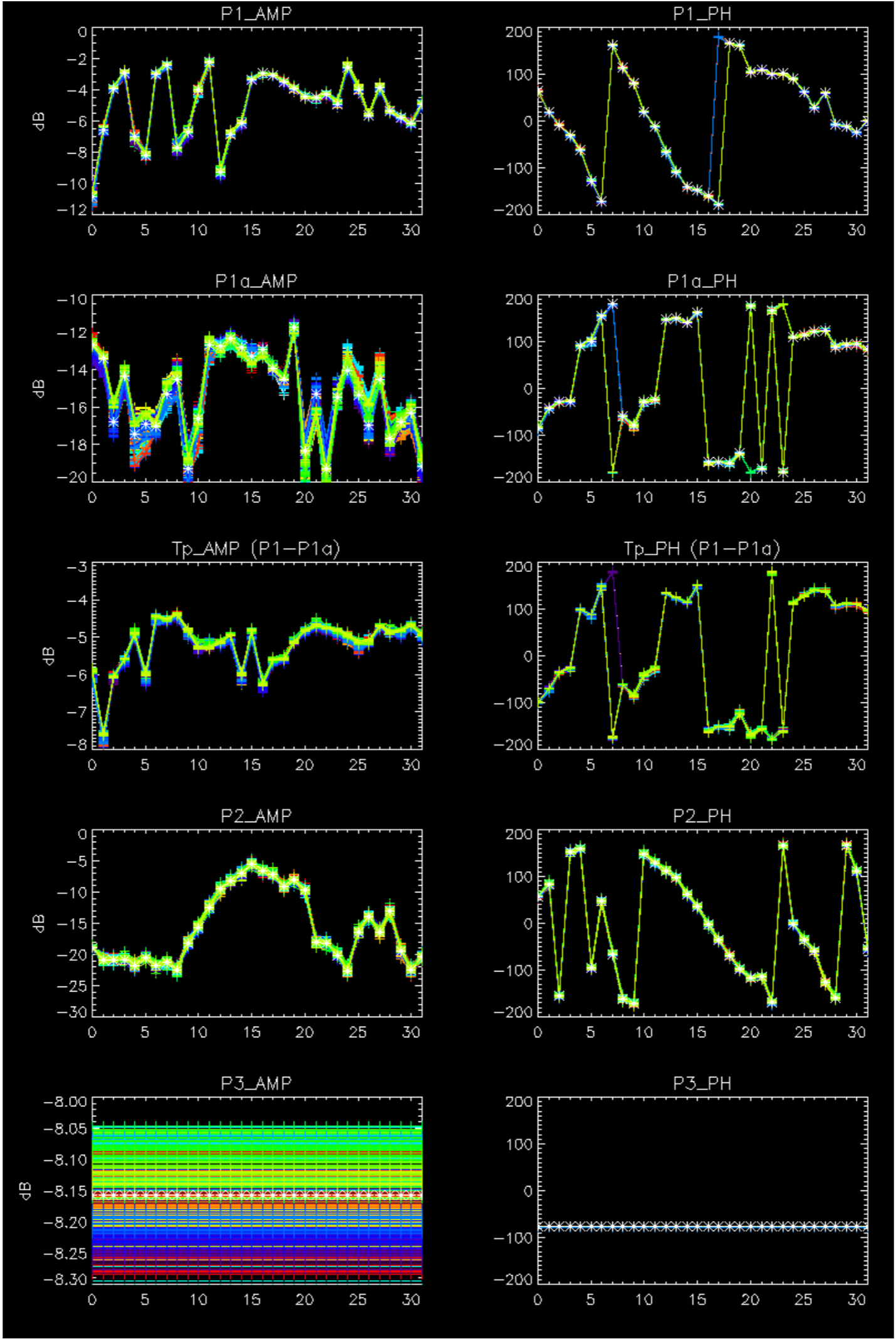


No anomalies observed on available browse products



No anomalies observed.

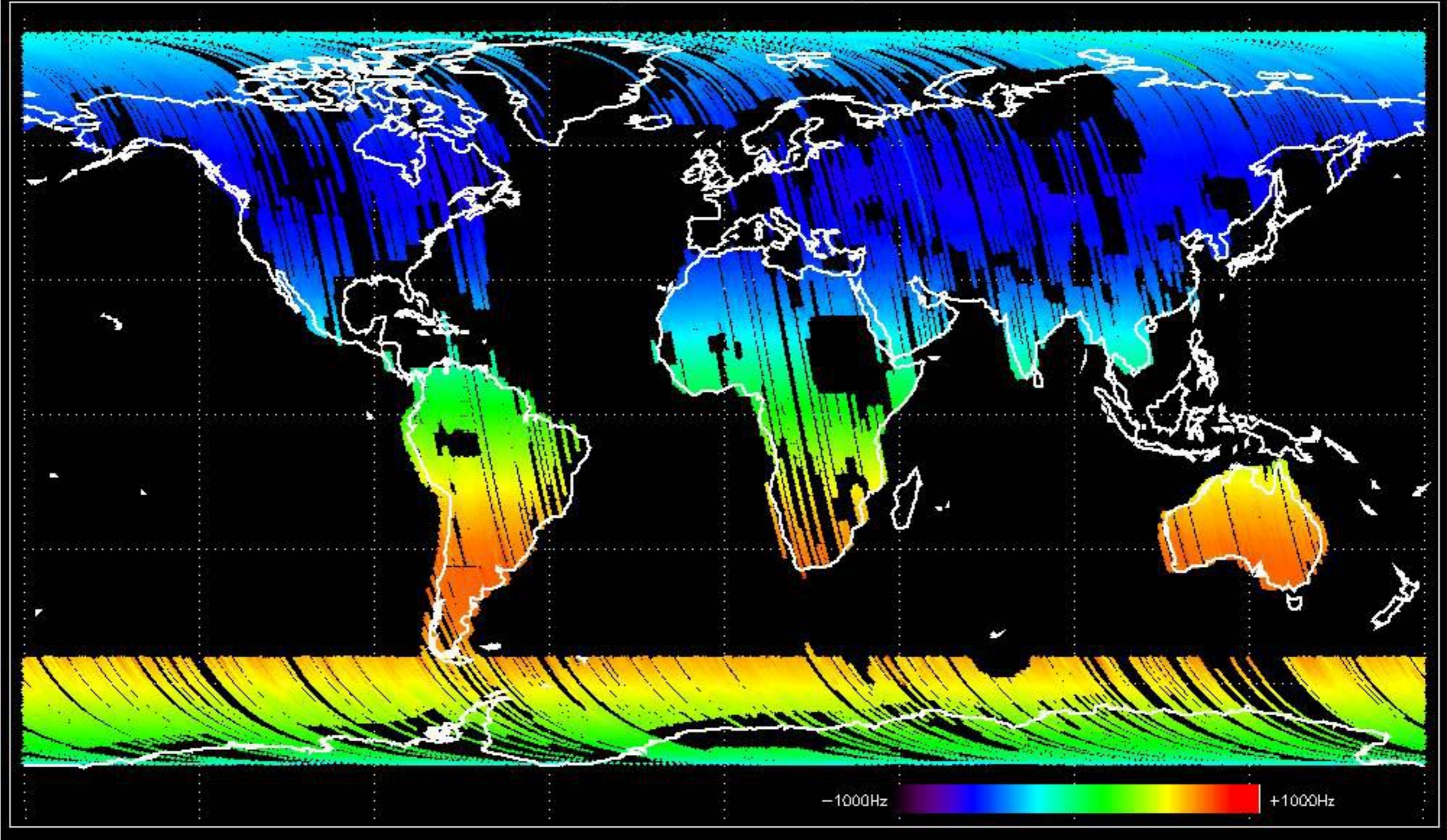




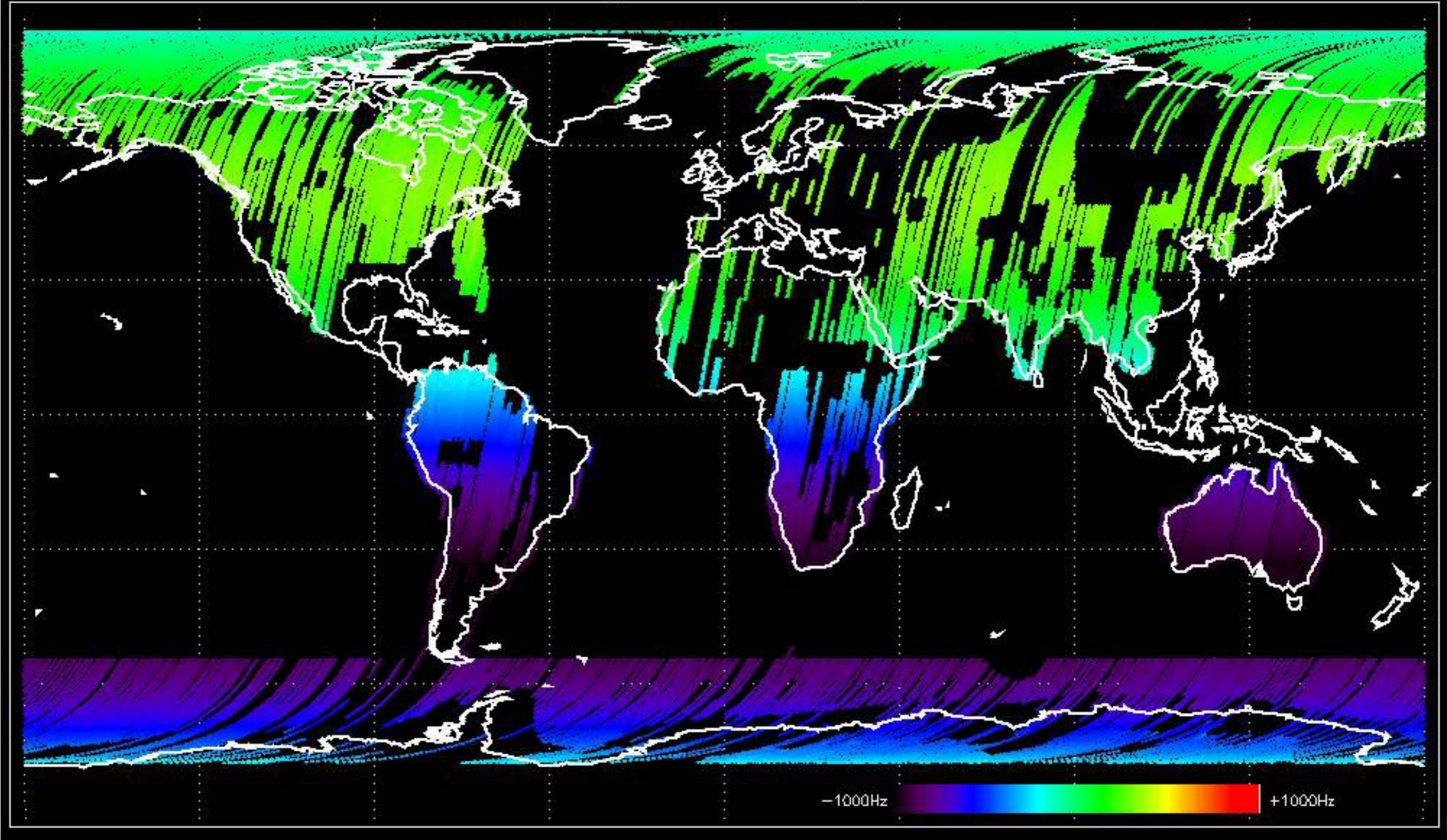
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



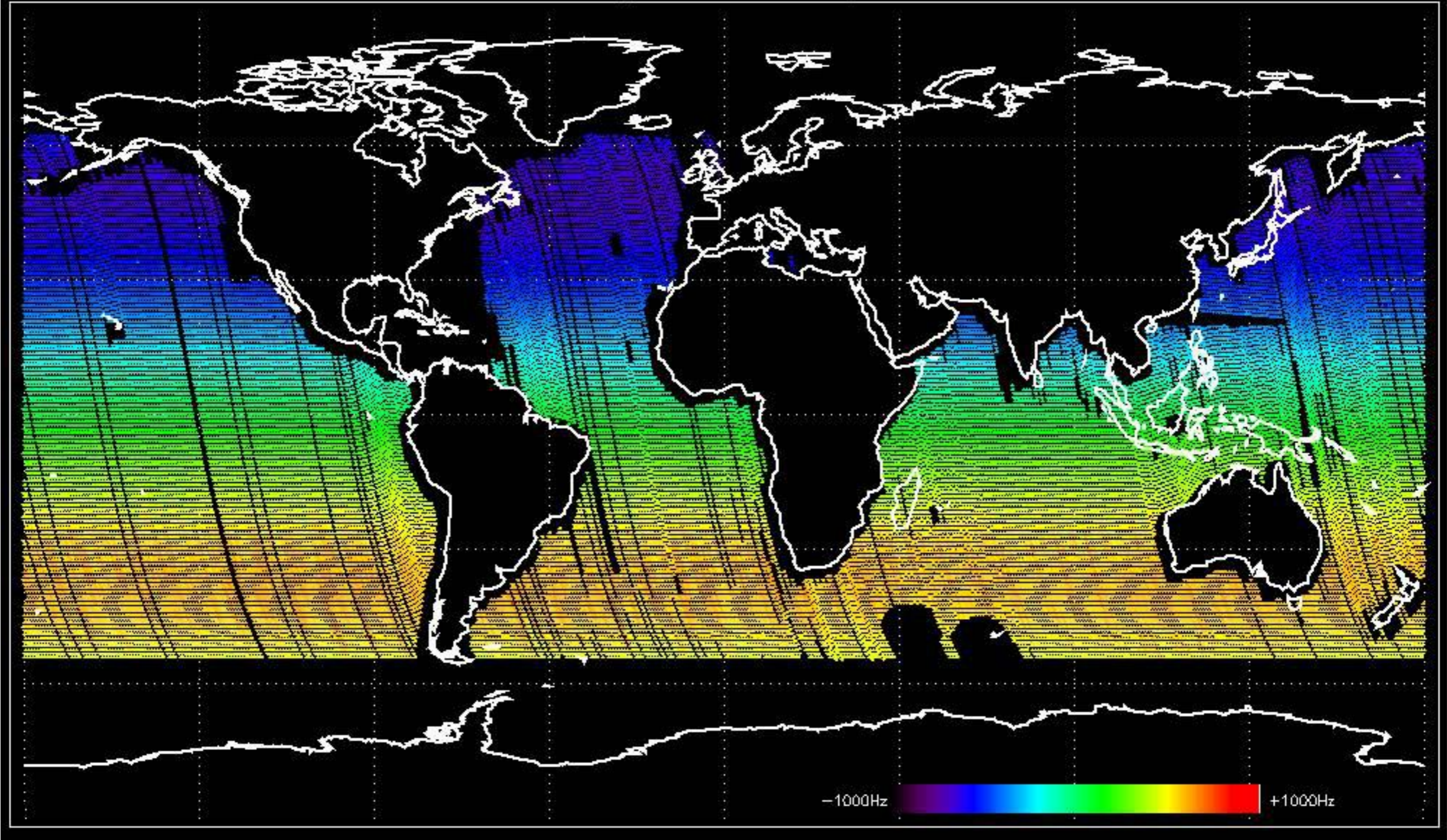
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

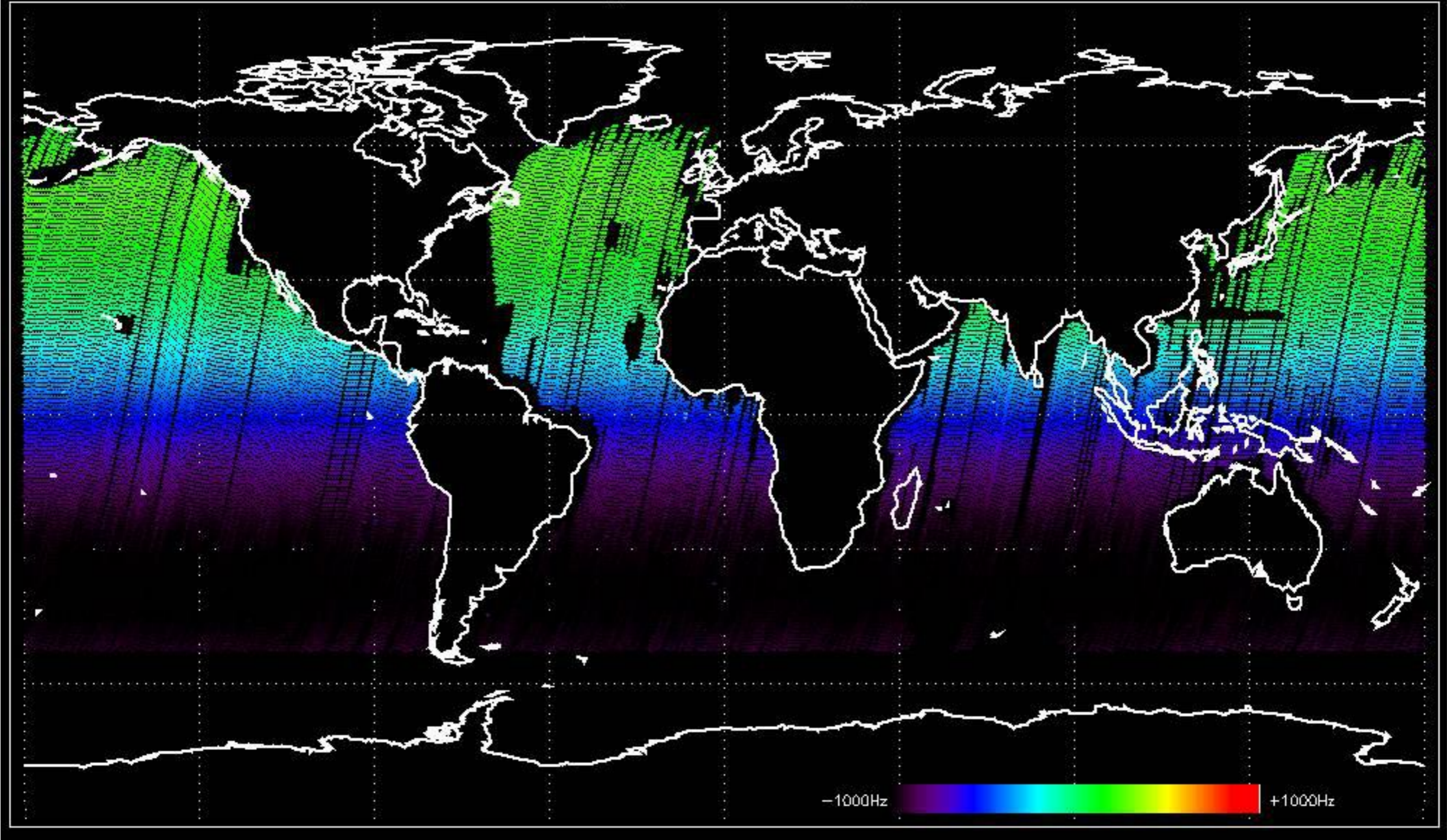


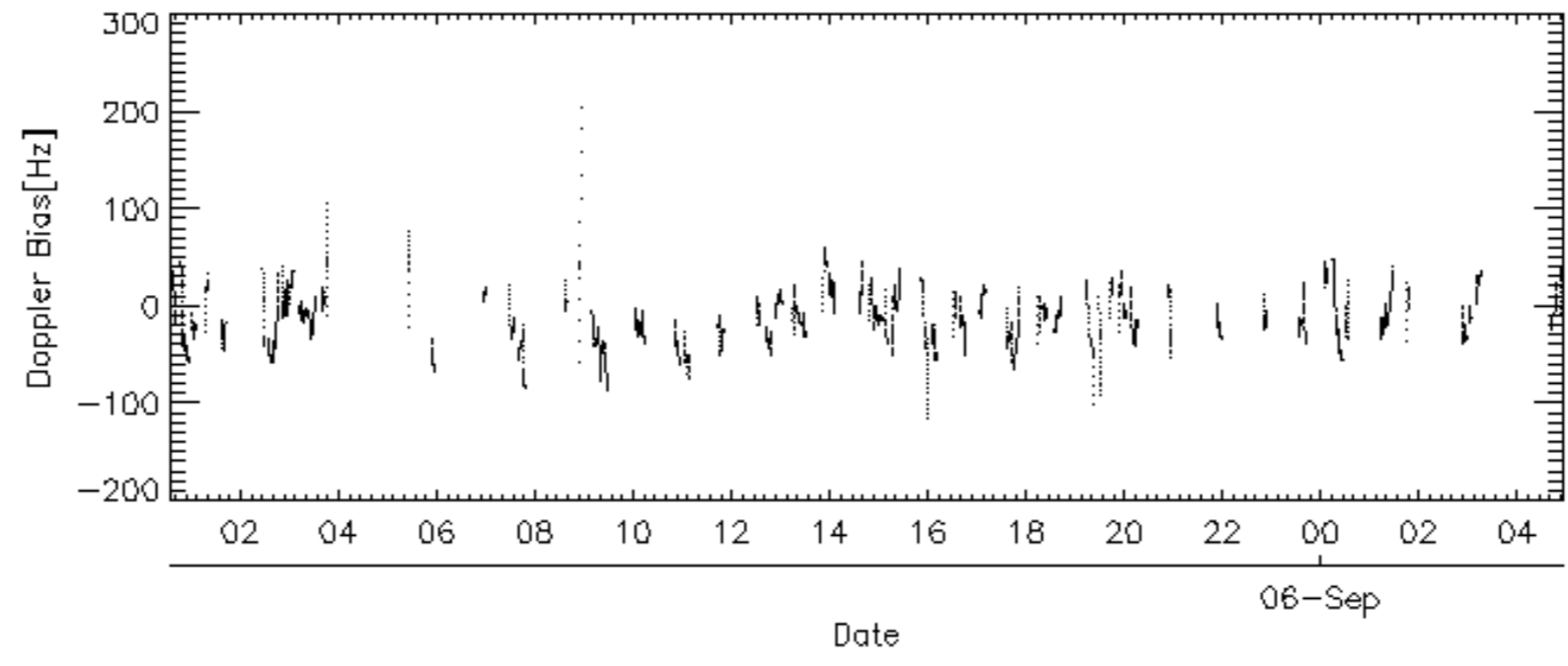
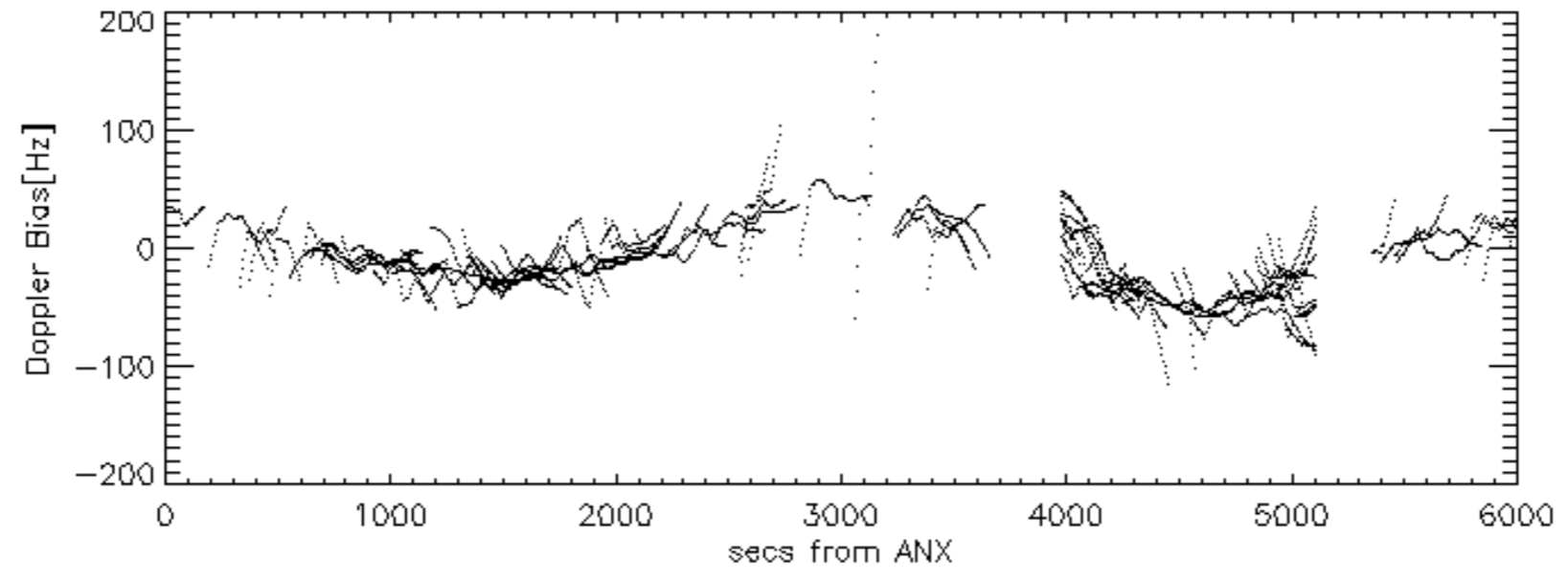
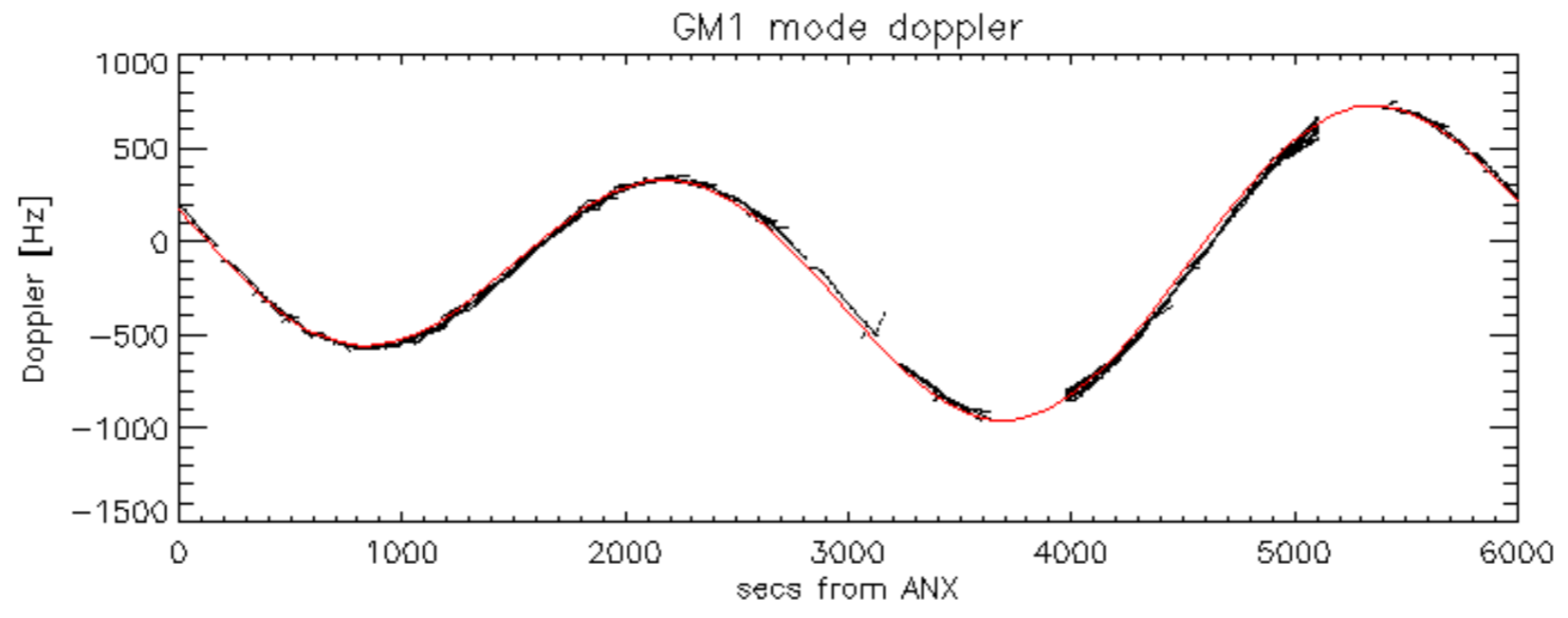
Doppler 'WVS' 'IS2' ascending

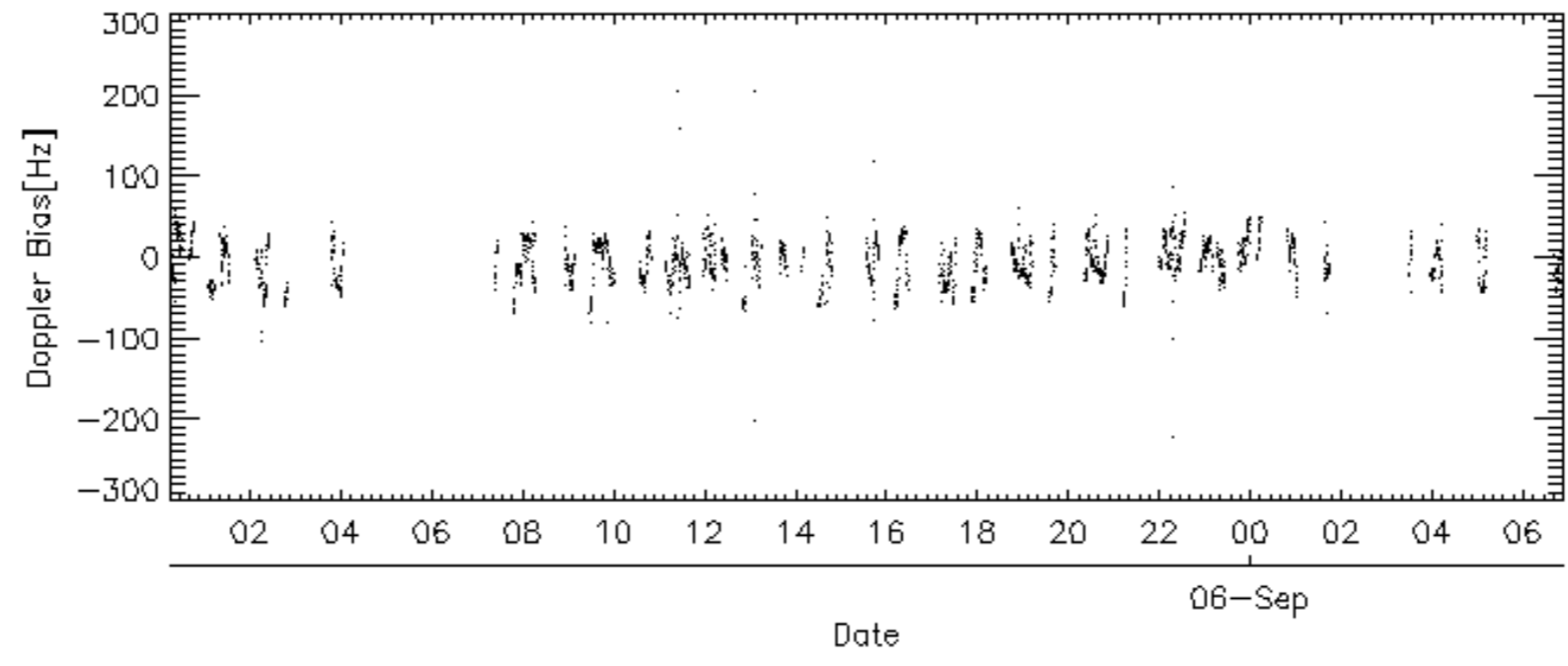
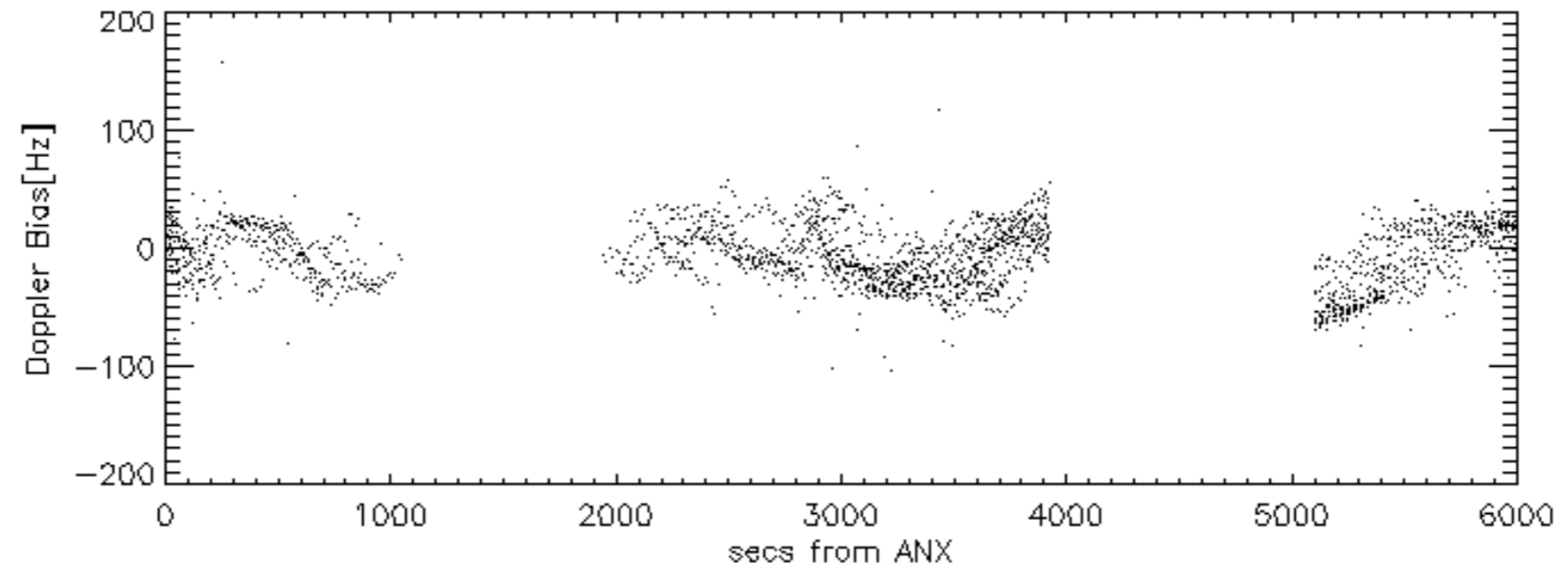
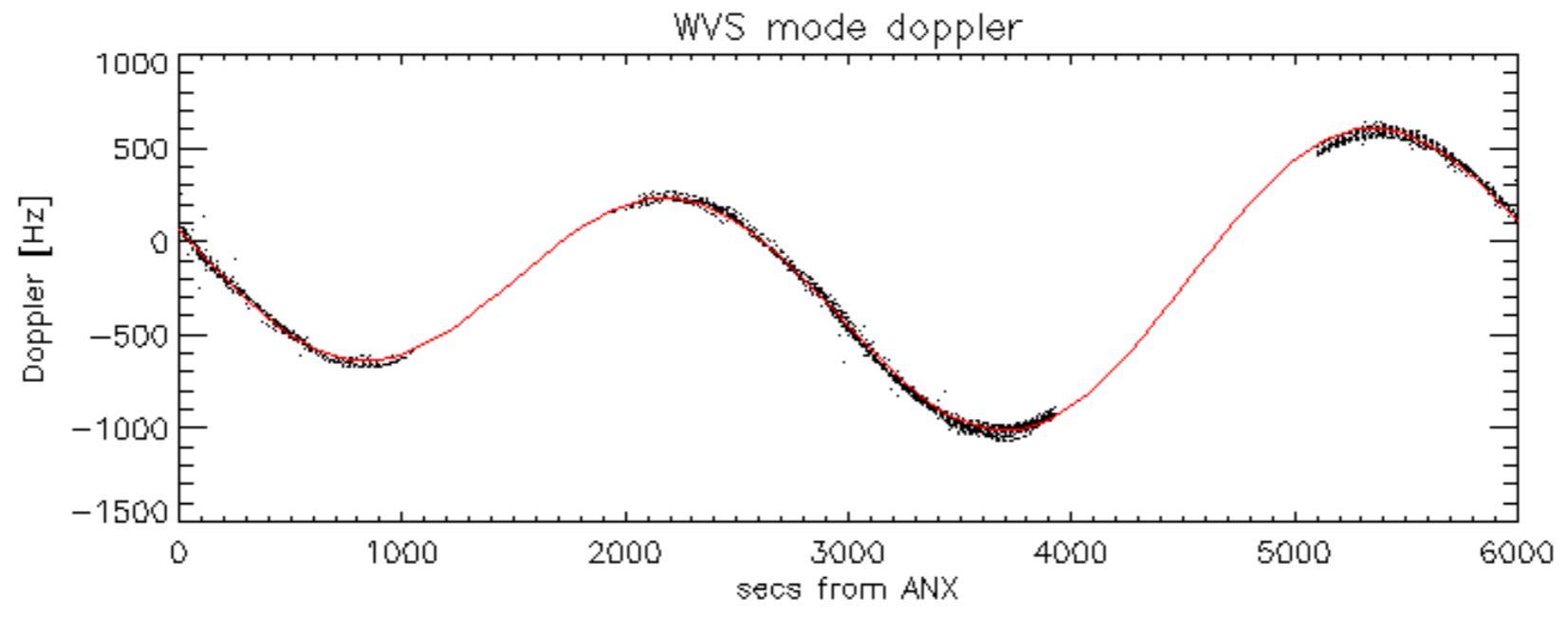




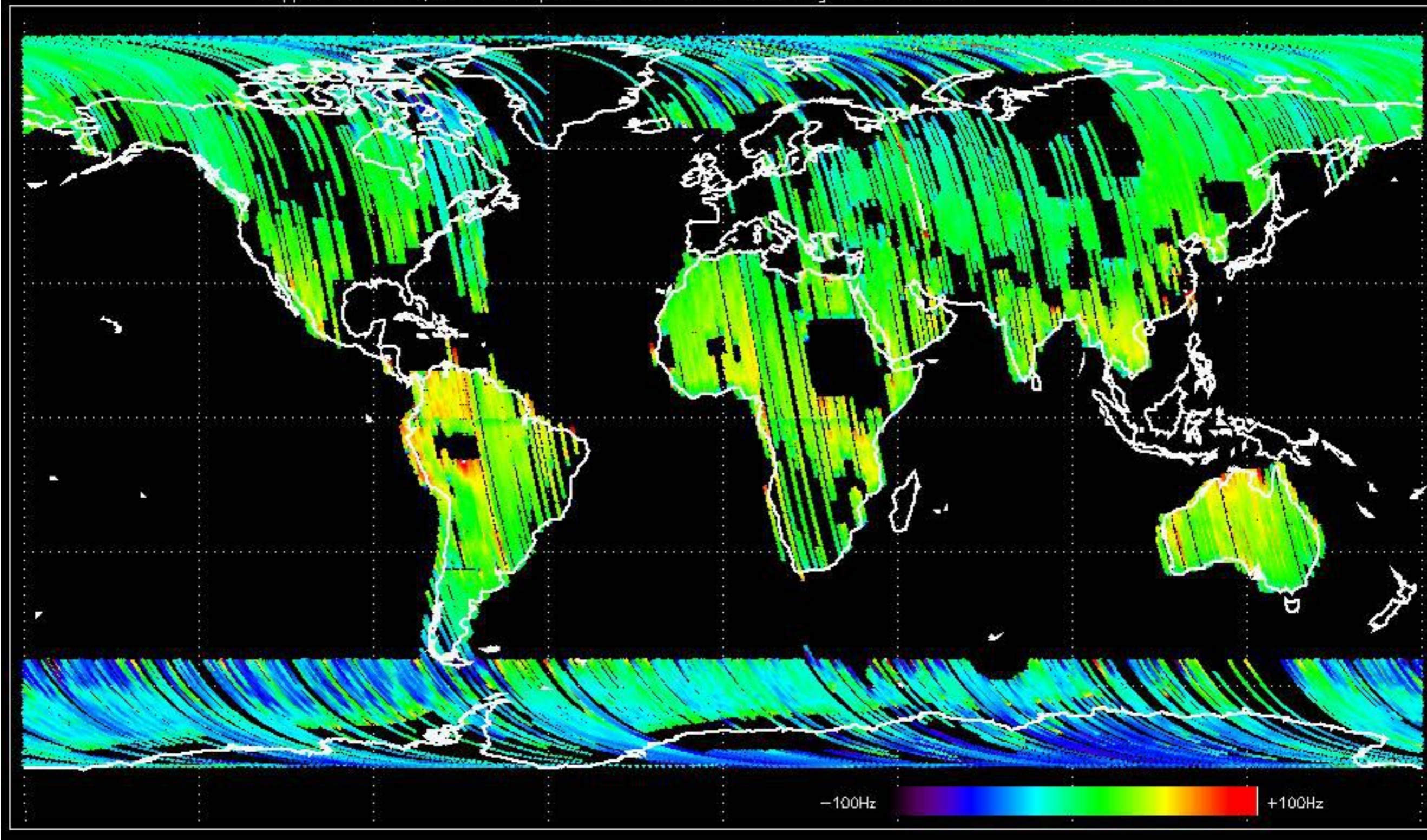
Doppler 'WVS' 'IS2' descending



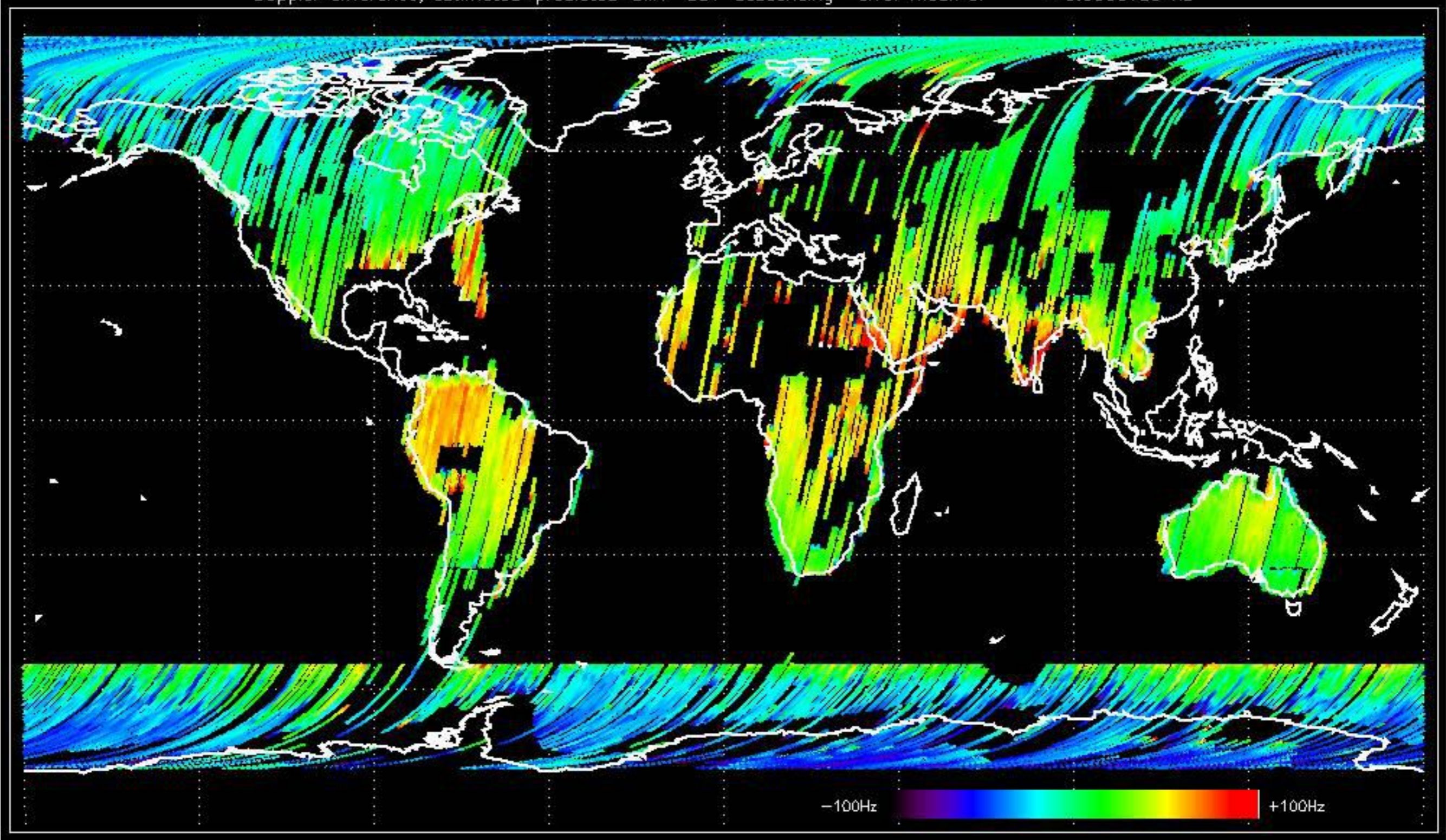




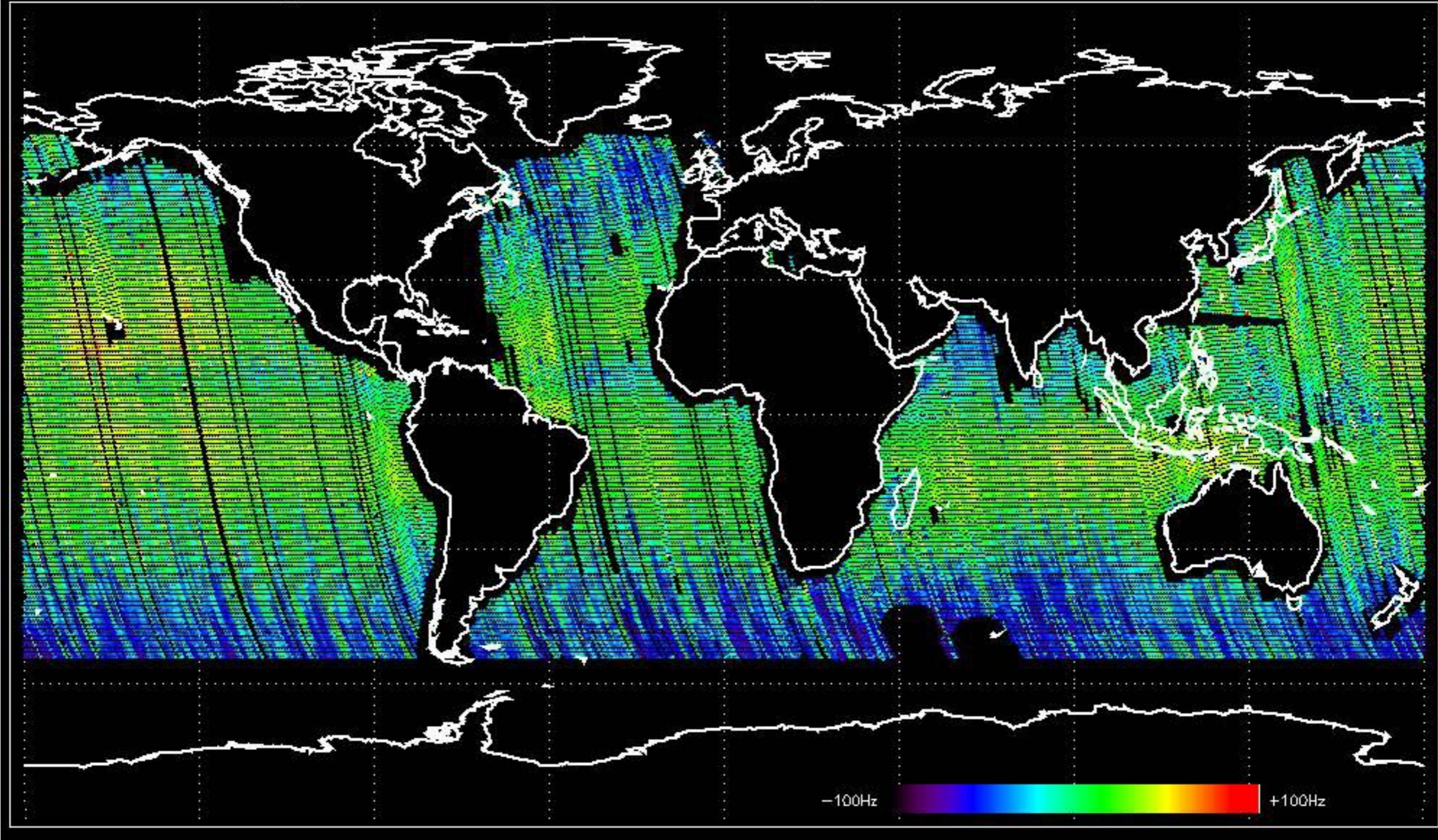
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.807745 Hz



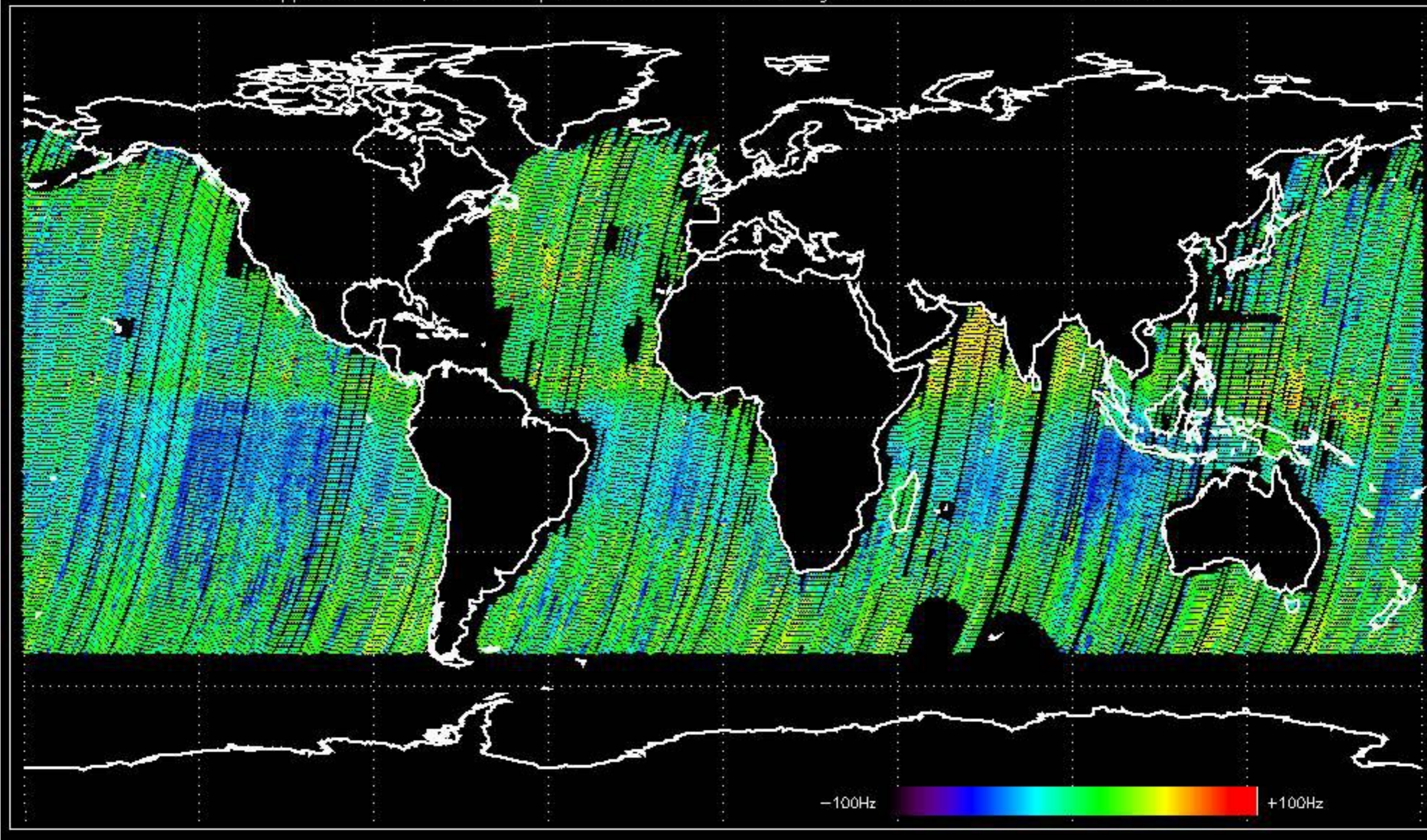
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.6006135 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -5.2833978 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.6477961 Hz



No anomalies observed on available MS products:



No anomalies observed.







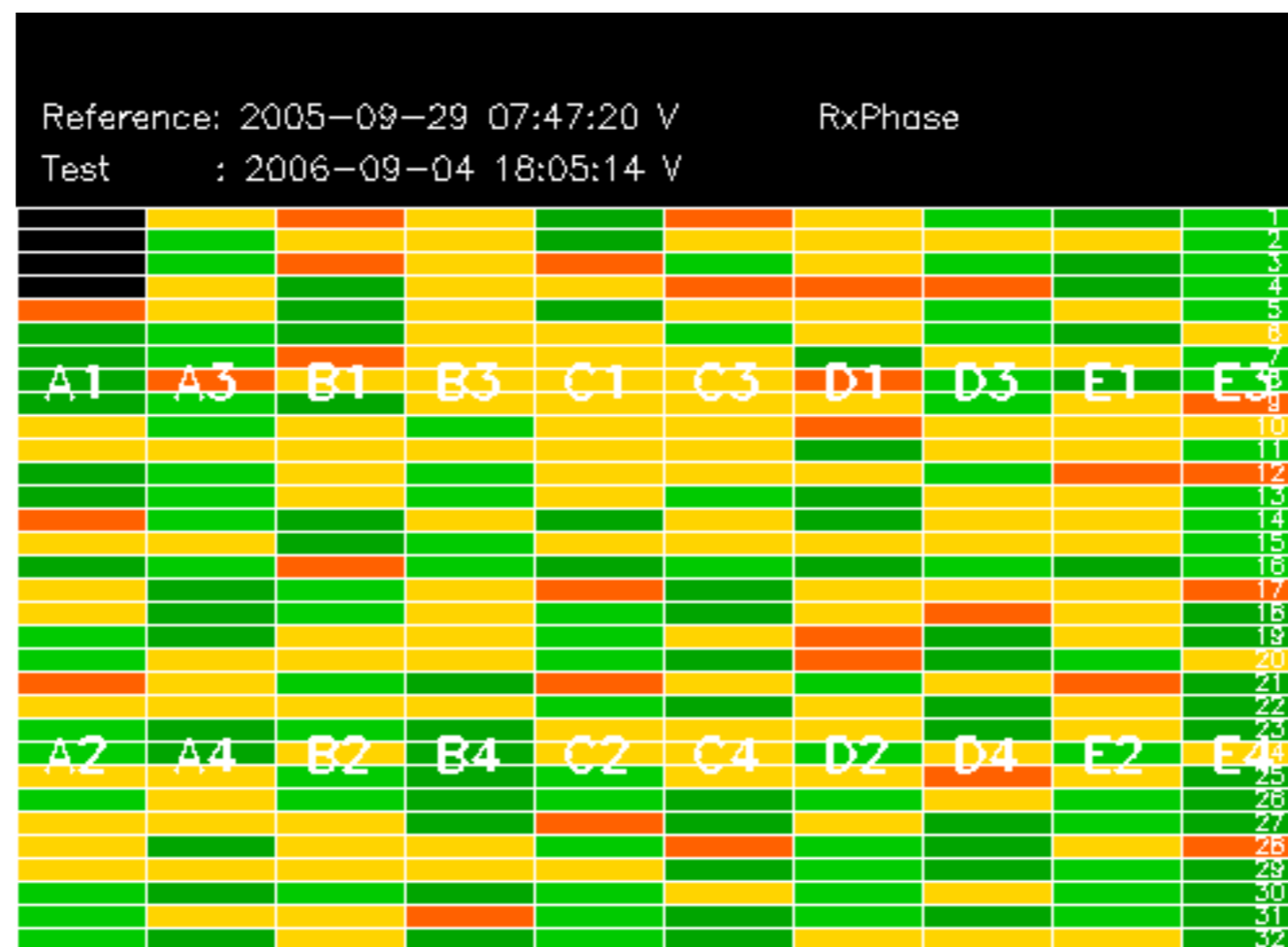


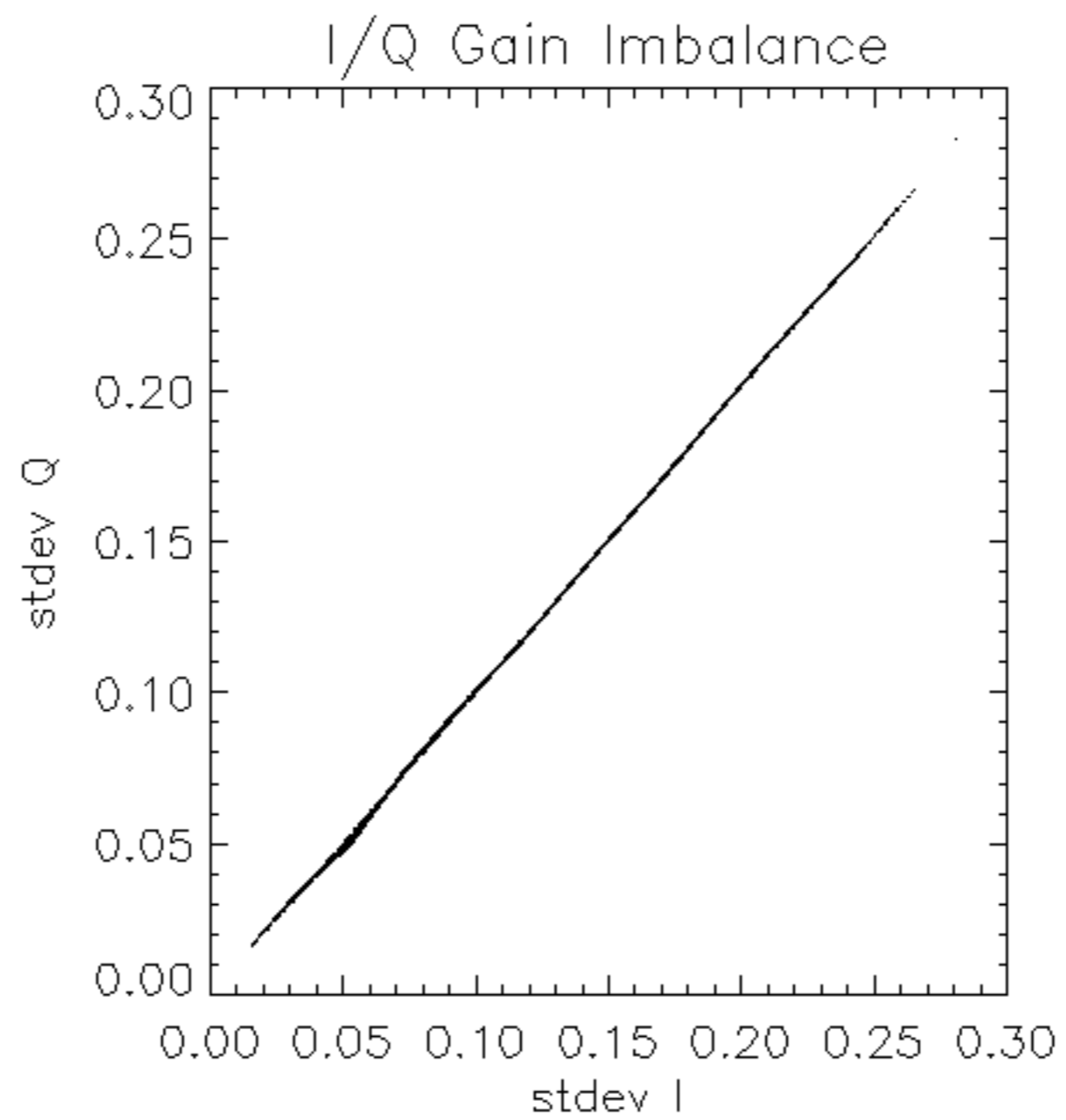


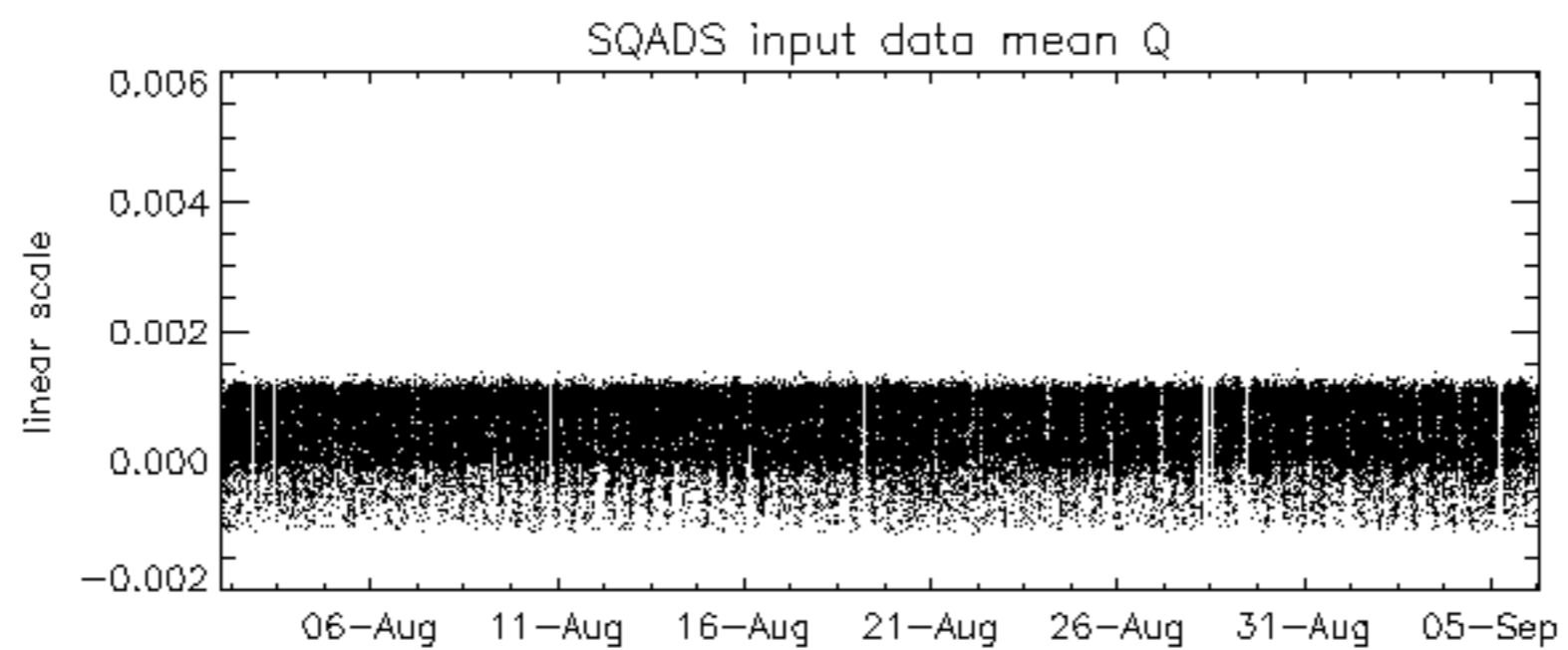
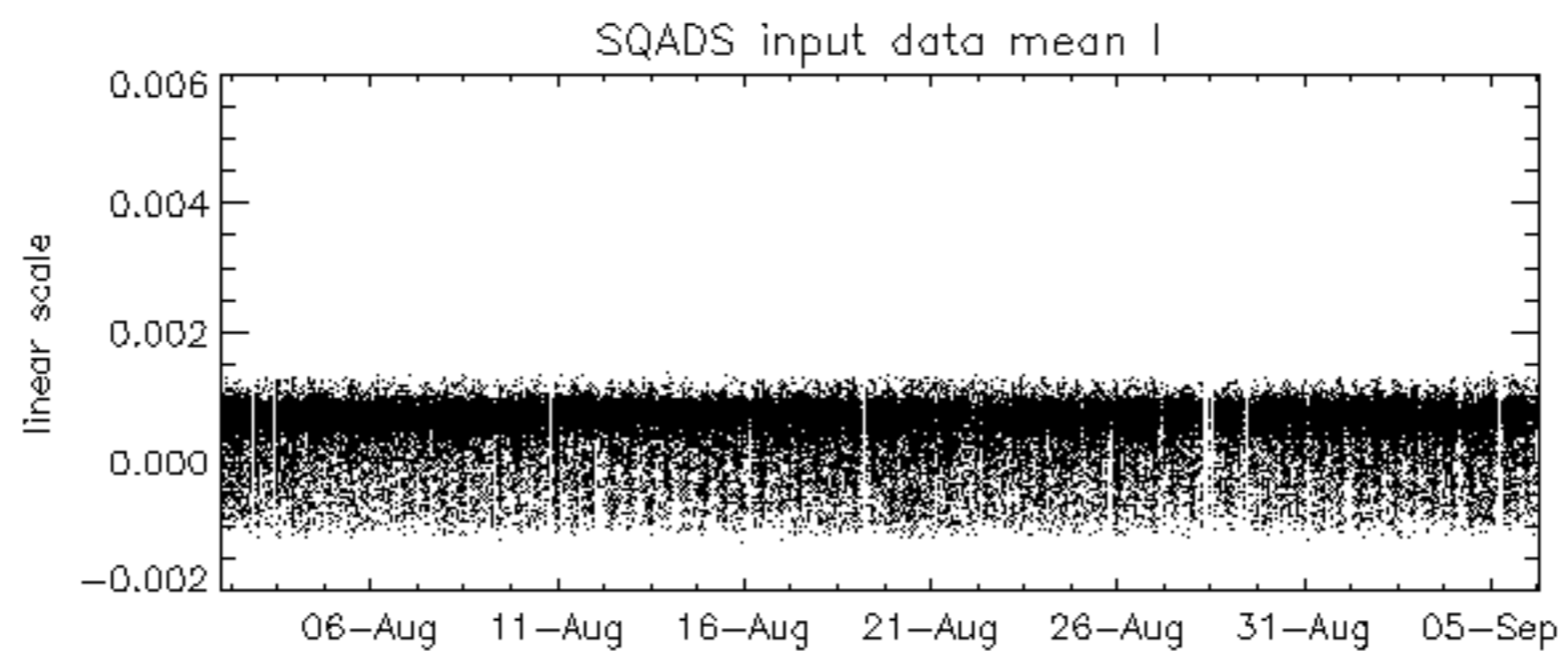
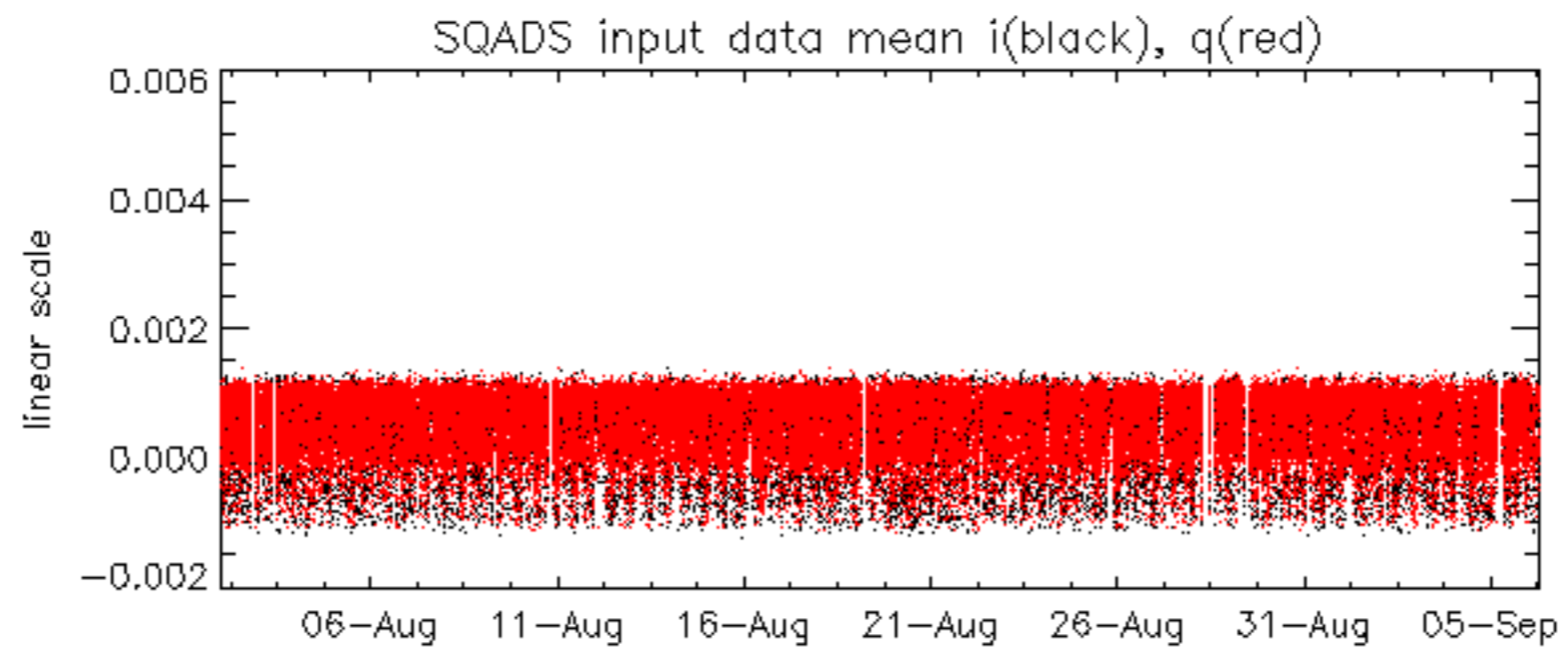


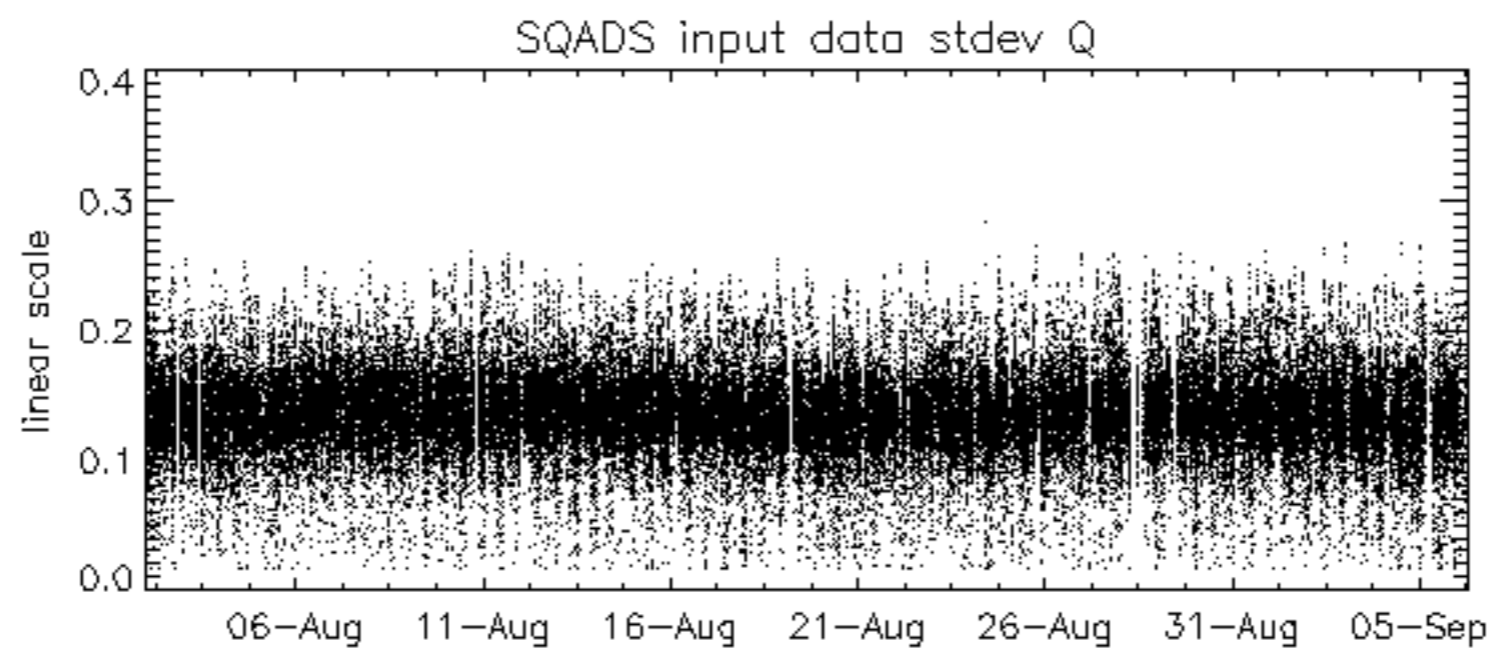
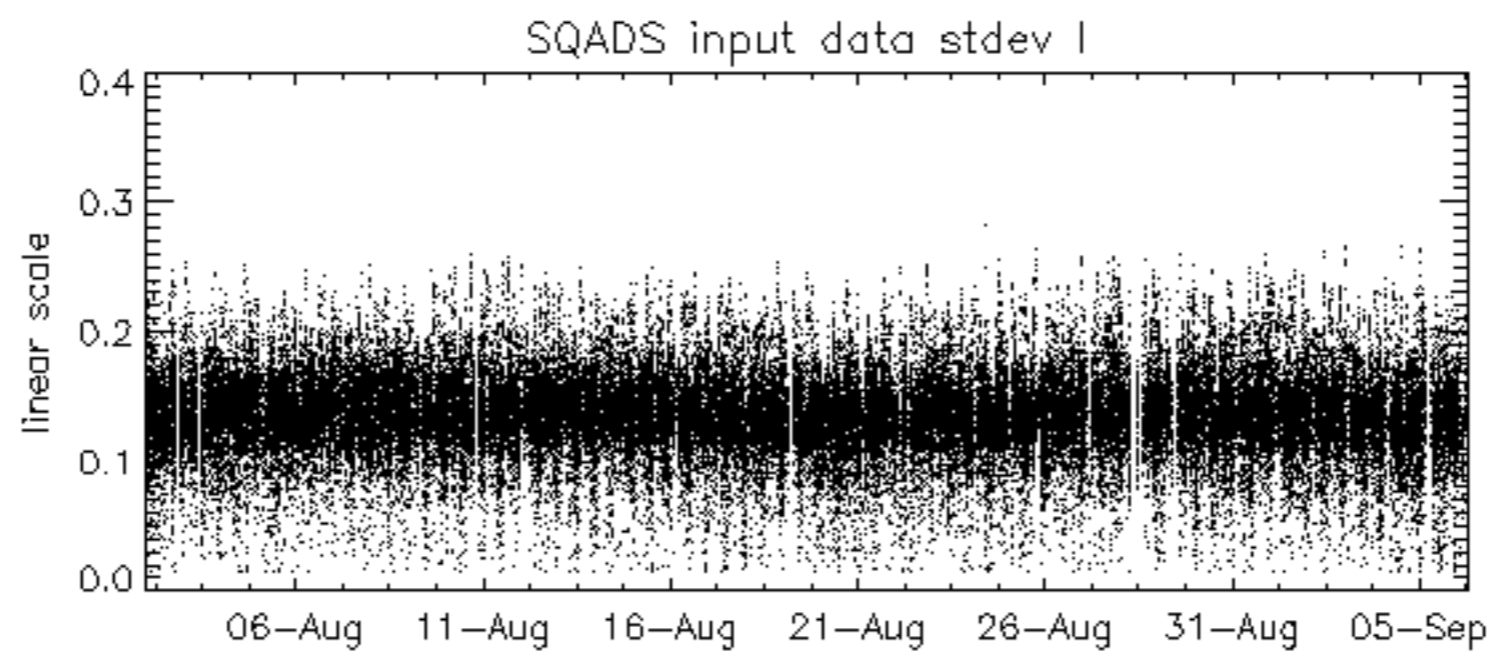
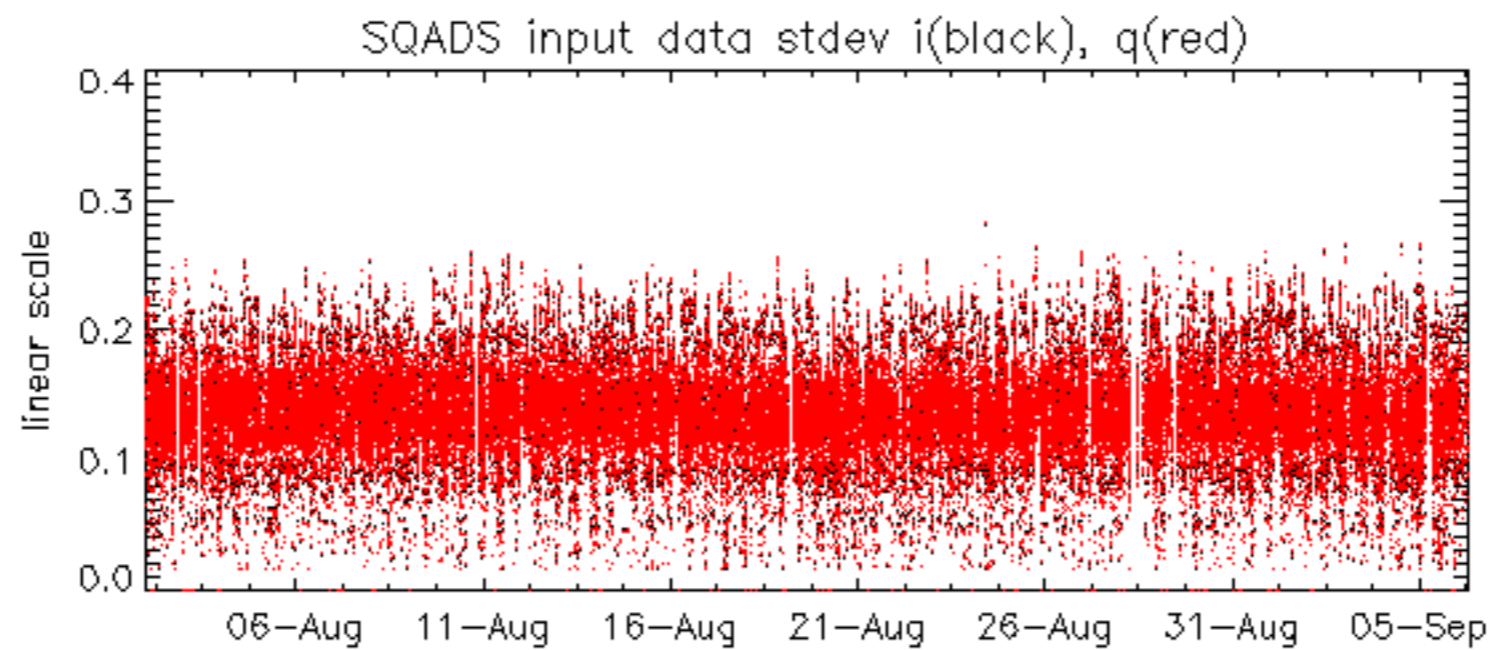






















Summary of analysis for the last 3 days 2006090[456]

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_1PNPDE20060906_004518_000001932051_00016_23617_5564.N1	1	0
ASA_IMM_1PNPDE20060906_010159_000000692051_00017_23618_5567.N1	1	0
ASA_WVS_1PNPDE20060904_232552_00000002051_00001_23602_1997.N1	1	0
ASA_WSM_1PNPDE20060904_184217_000000852050_00500_23600_0914.N1	0	41
ASA_WSM_1PNPDE20060905_162916_000001222051_00012_23613_1099.N1	0	57



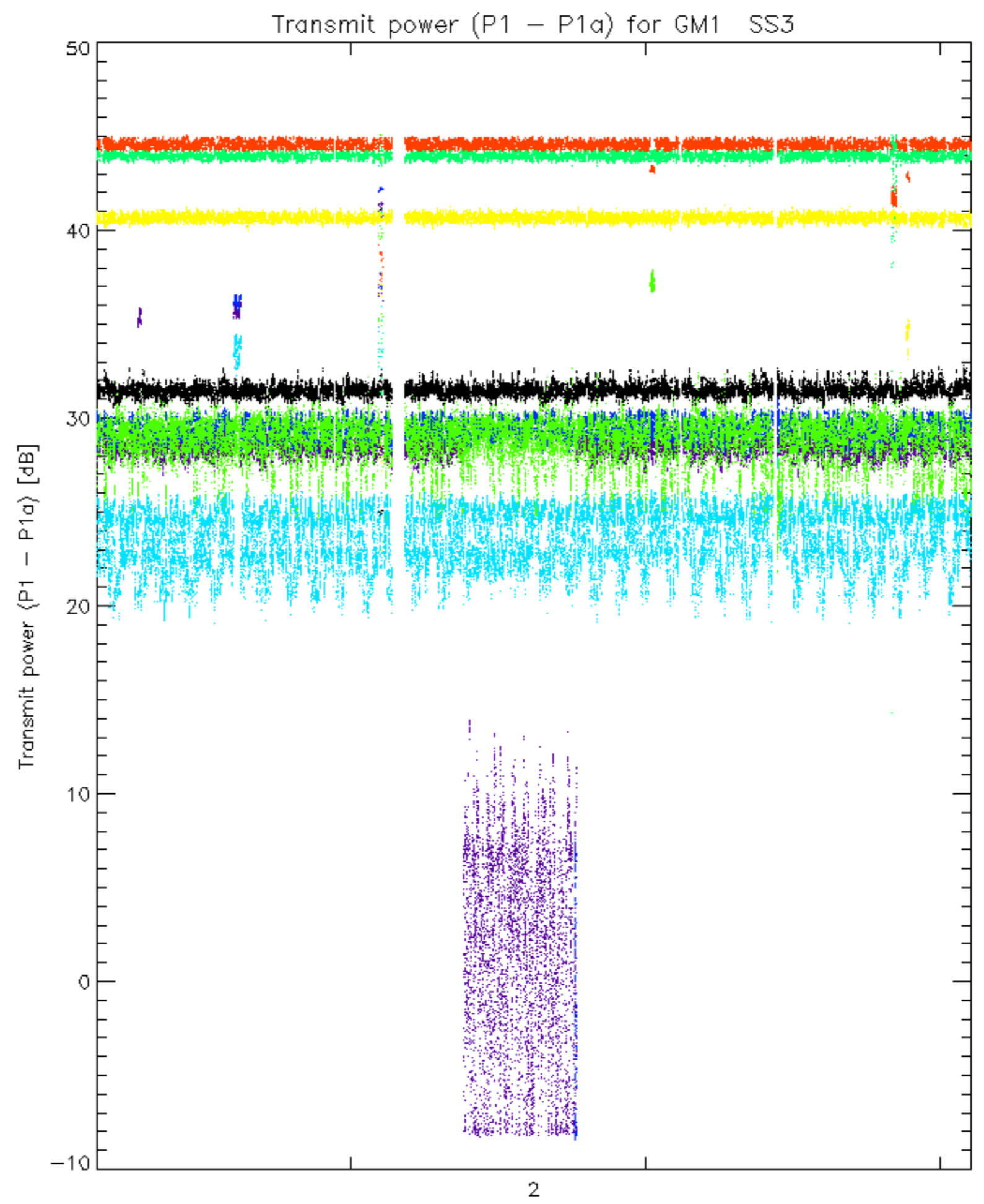






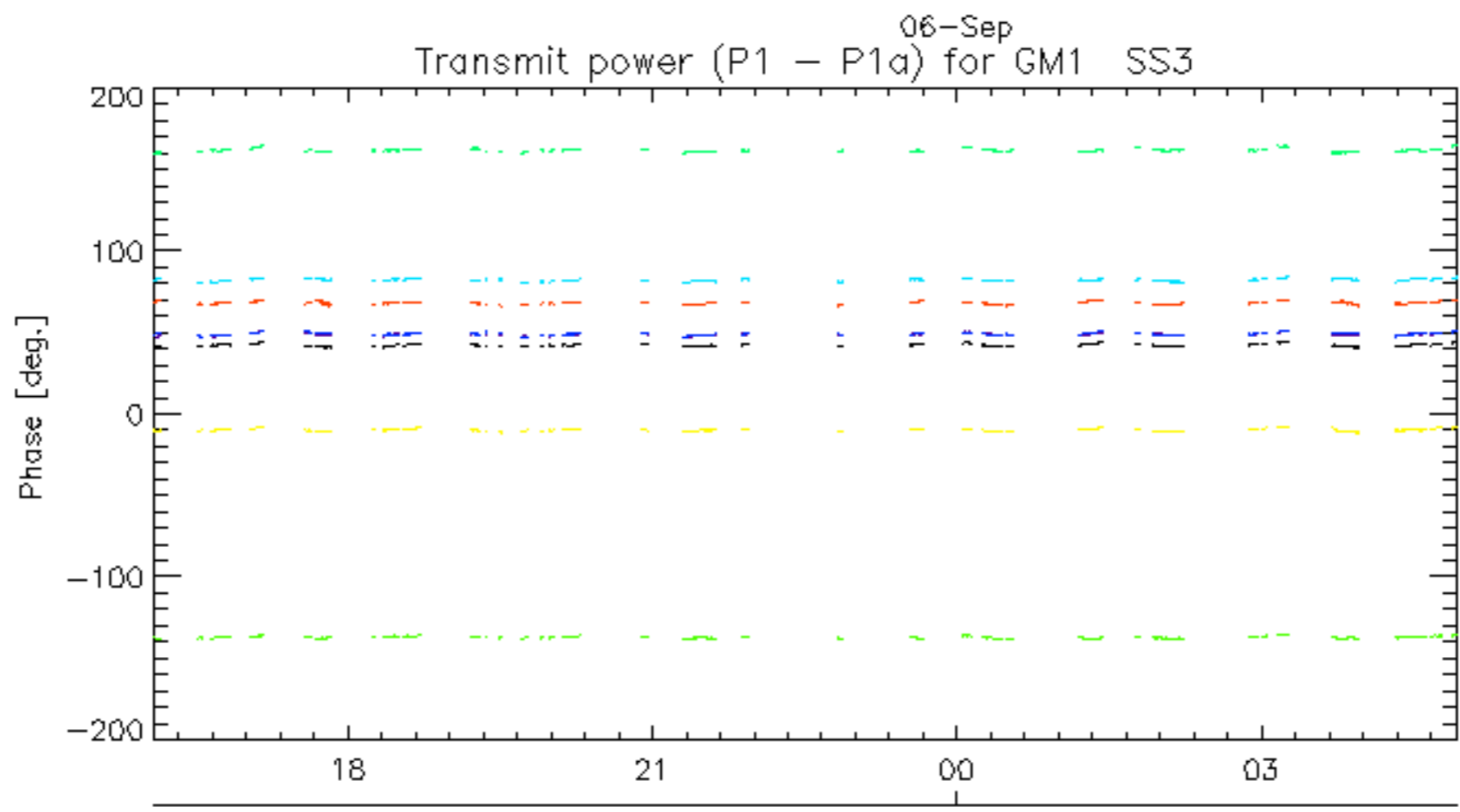
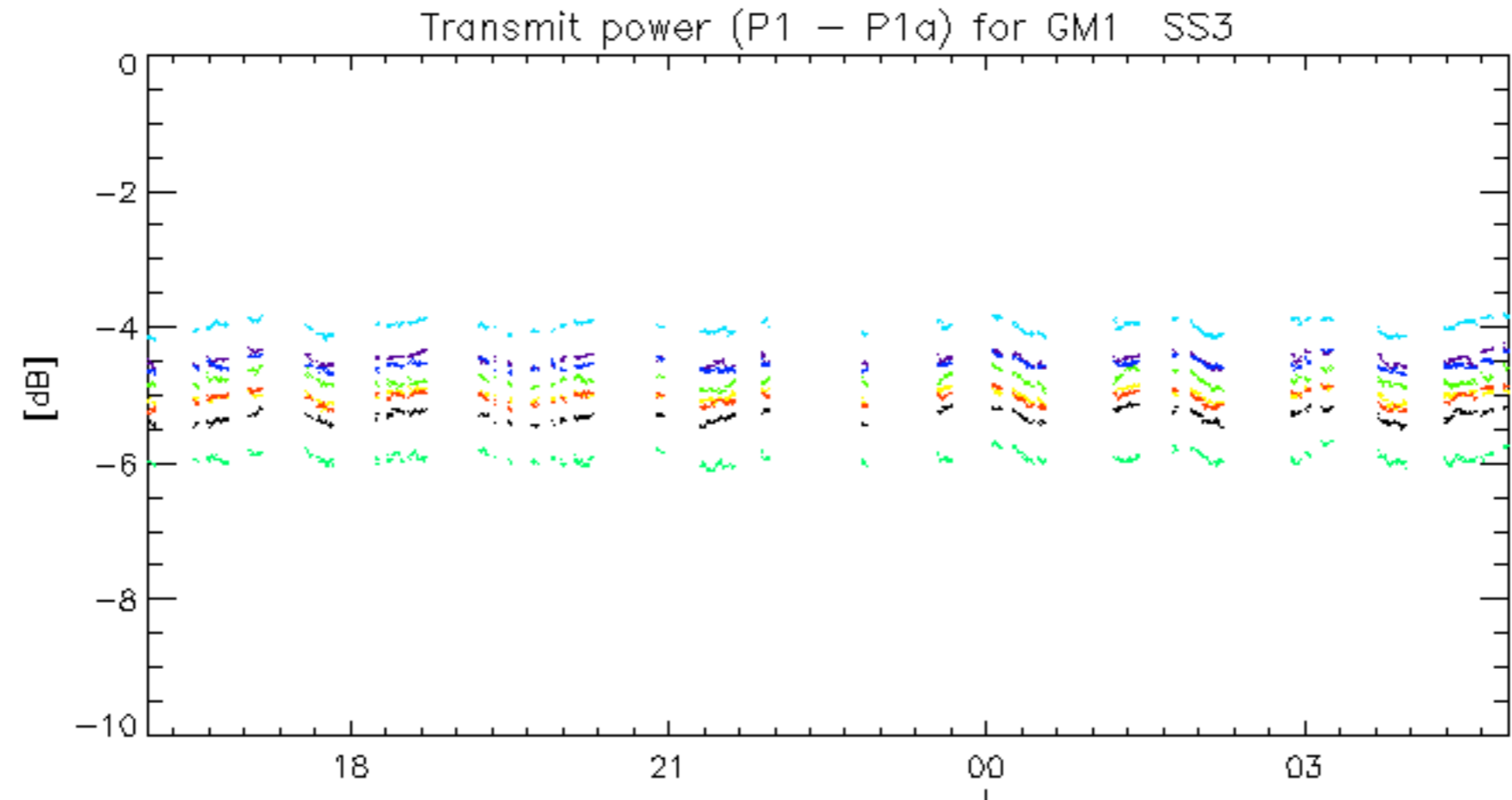




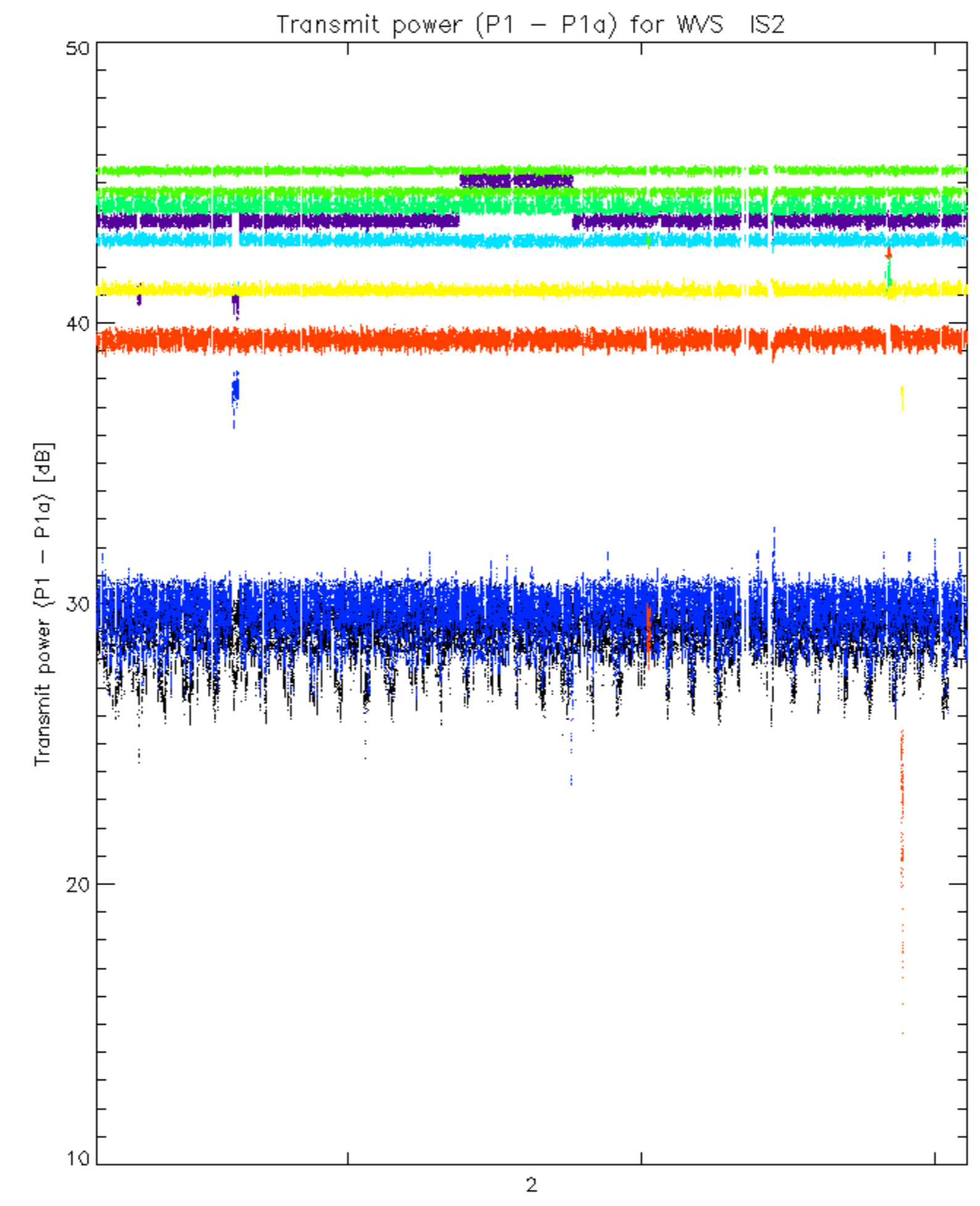


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

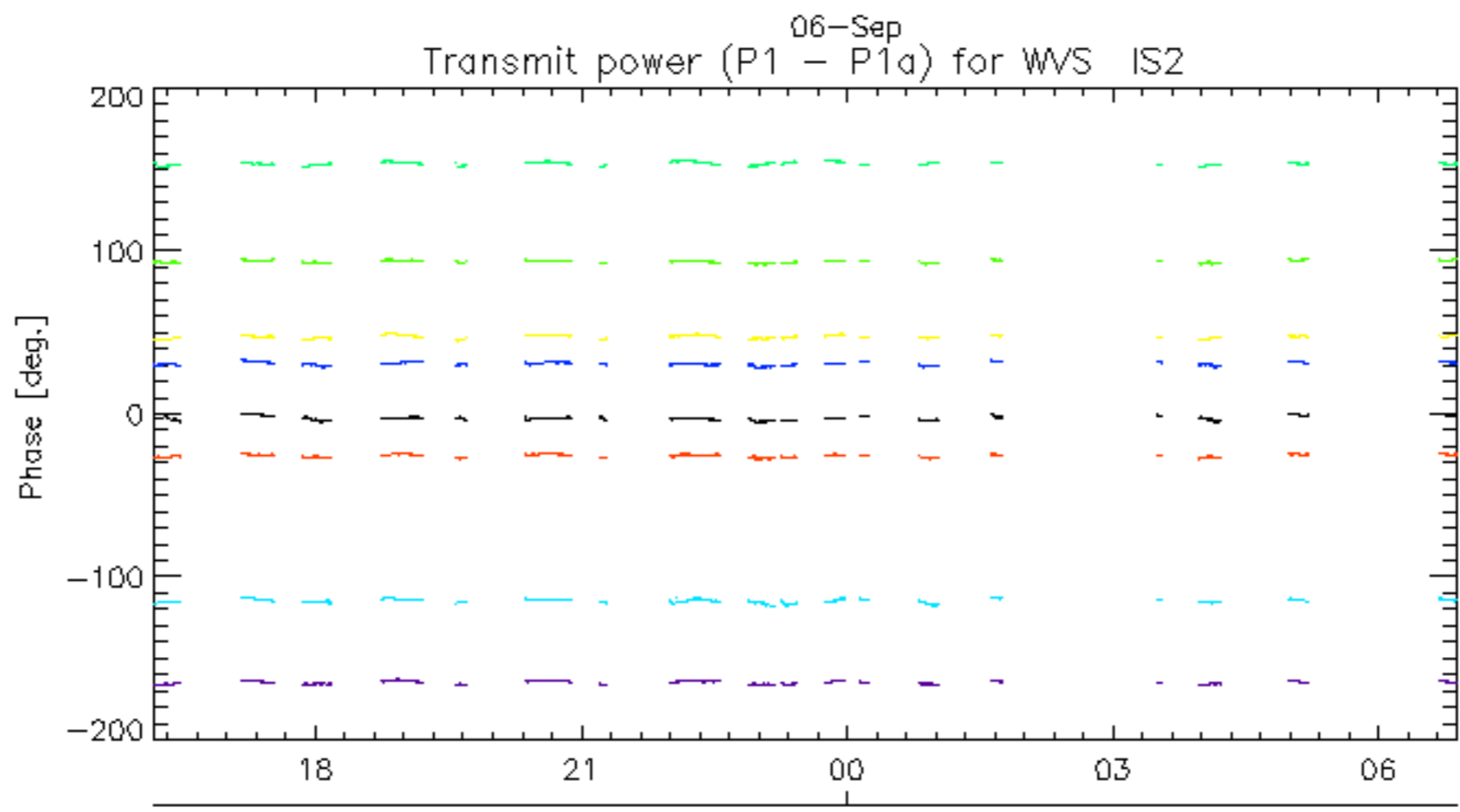
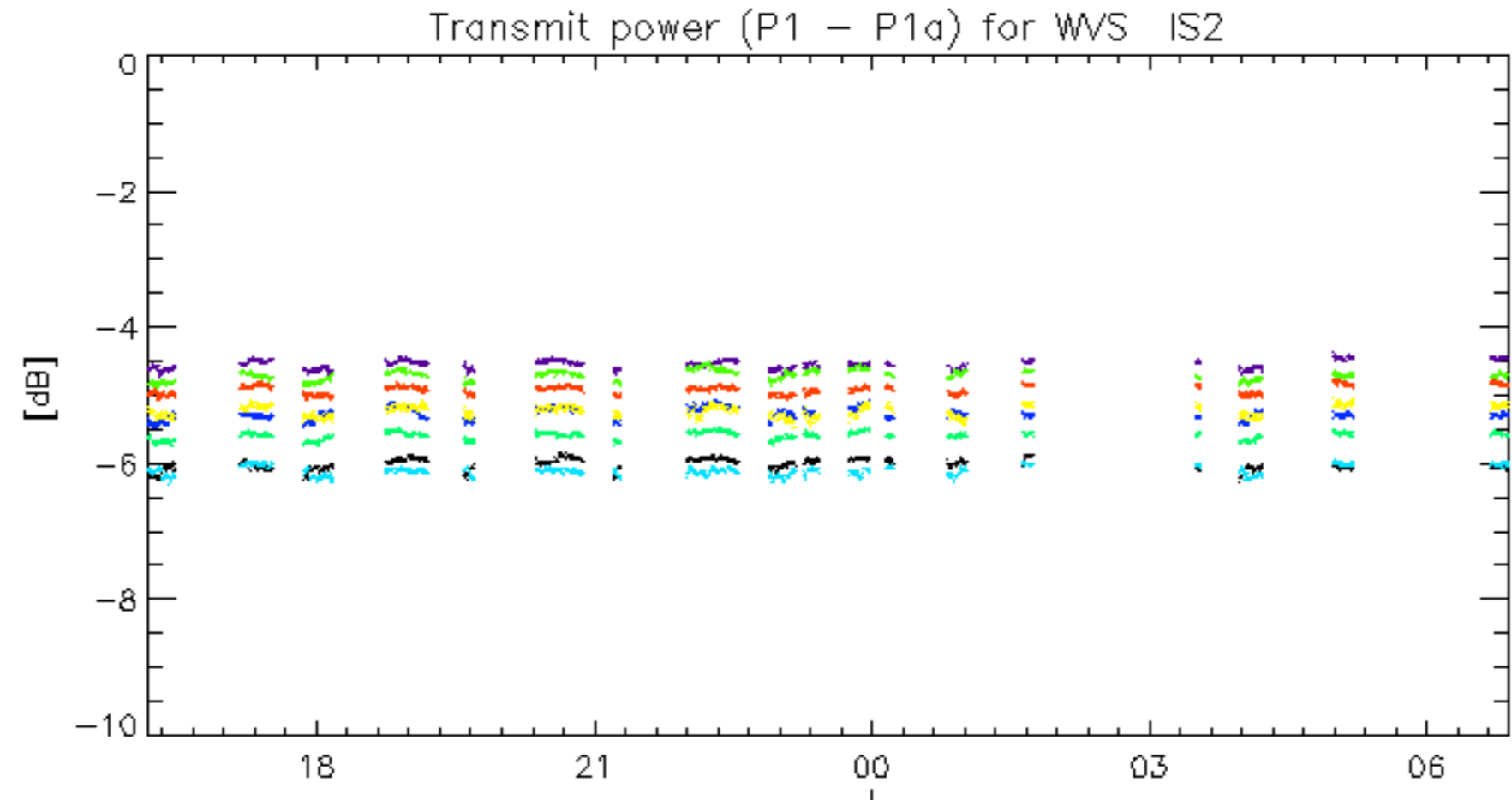




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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

No unavailabilities during the reported period.