

# PRELIMINARY REPORT OF 060826

last update on Sat Aug 26 16:38:54 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 2006-08-25 00:00:00 to 2006-08-26 16:38:54

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	67	20	6	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	45	67	20	6	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	45	67	20	6	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	67	20	6	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	30	60	48	18	58
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	30	60	48	18	58
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	30	60	48	18	58
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	30	60	48	18	58

## 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	20060825 063527
H	20060826 060350

### 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	-3.943500	0.009861	0.002688
7	P1	-3.081887	0.051219	0.101690
11	P1	-4.088052	0.063048	0.045068
15	P1	-6.201728	0.093547	-0.004268
19	P1	-3.455518	0.010125	-0.089113
22	P1	-4.560771	0.024523	0.021924
26	P1	-3.923703	0.019809	-0.031183
30	P1	-5.758674	0.026014	0.033252
3	P1	-16.540333	0.257656	-0.011279
7	P1	-16.865705	0.646649	1.126029
11	P1	-16.872688	0.298952	0.236801
15	P1	-12.996762	0.159086	0.158922
19	P1	-14.517221	0.055496	-0.064996
22	P1	-15.883316	0.539988	0.341594
26	P1	-15.143658	0.218150	-0.157522
30	P1	-17.036858	0.340533	0.218397

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.881773	0.083352	0.092175
7	P2	-21.864485	0.098898	0.003889
11	P2	-15.755926	0.113972	0.037170
15	P2	-7.106419	0.096664	0.030205
19	P2	-9.118569	0.089972	0.014846
22	P2	-18.139853	0.084356	0.026273
26	P2	-16.399294	0.090558	0.004640
30	P2	-19.485605	0.090306	0.037016

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172777	0.003521	-0.003519
7	P3	-8.172777	0.003521	-0.003519
11	P3	-8.172777	0.003521	-0.003519
15	P3	-8.172777	0.003521	-0.003519
19	P3	-8.172777	0.003521	-0.003519
22	P3	-8.172777	0.003521	-0.003519
26	P3	-8.172825	0.003520	-0.003606
30	P3	-8.172825	0.003520	-0.003606

#### 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	-3.831050	0.021369	-0.010721
7	P1	-2.497250	0.284848	0.353740
11	P1	-2.894262	0.141876	-0.014384
15	P1	-3.644954	0.147728	-0.077842
19	P1	-3.430209	0.025380	0.000885
22	P1	-5.078763	0.034237	0.029540
26	P1	-5.868516	0.024026	-0.016979
30	P1	-5.187208	0.044627	0.048692
3	P1	-11.622033	0.066333	0.002231
7	P1	-9.916533	0.188037	0.212009
11	P1	-10.288544	0.082891	-0.081738
15	P1	-10.806427	0.174397	-0.174476
19	P1	-15.550896	0.527009	0.119369
22	P1	-20.878473	1.747866	0.264732
26	P1	-16.131769	0.408505	0.243864
30	P1	-17.954683	0.726349	0.181592

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.485434	0.083761	0.130122
7	P2	-22.273218	0.201149	0.158911
11	P2	-10.962062	0.055163	0.157366
15	P2	-4.884653	0.042688	0.028186
19	P2	-6.859817	0.039960	0.007624
22	P2	-8.183532	0.061972	0.025310
26	P2	-24.171204	0.127944	0.006531
30	P2	-21.974379	0.078374	0.040818

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.013777	0.003673	-0.012063
7	P3	-8.013687	0.003671	-0.012335
11	P3	-8.013786	0.003671	-0.012288
15	P3	-8.013844	0.003674	-0.012264
19	P3	-8.013815	0.003685	-0.012591
22	P3	-8.013956	0.003659	-0.012010
26	P3	-8.013733	0.003661	-0.012240
30	P3	-8.013668	0.003672	-0.011830

## 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	0.000551129
	stdev	1.78772e-07
MEAN Q	mean	0.000529595
	stdev	2.16446e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136249
	stdev	0.00108332
STDEV Q	mean	0.136595
	stdev	0.00109965



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006082[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_1PNPDE20060824_200913_000000372050_00343_23443_4344.N1	0	29
ASA_IMM_1PNPDE20060825_010619_000000812050_00346_23446_4356.N1	1	0
ASA_WSM_1PNPDE20060824_014431_000000982050_00332_23432_9170.N1	0	23
ASA_WSM_1PNPDE20060824_142441_000000862050_00340_23440_9286.N1	0	62
ASA_WSM_1PNPDE20060824_160850_000002082050_00341_23441_9284.N1	0	46
ASA_WSM_1PNPDE20060825_171327_000002322050_00356_23456_9475.N1	0	4





## 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)


Ascending

Descending

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler


Ascending

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)



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

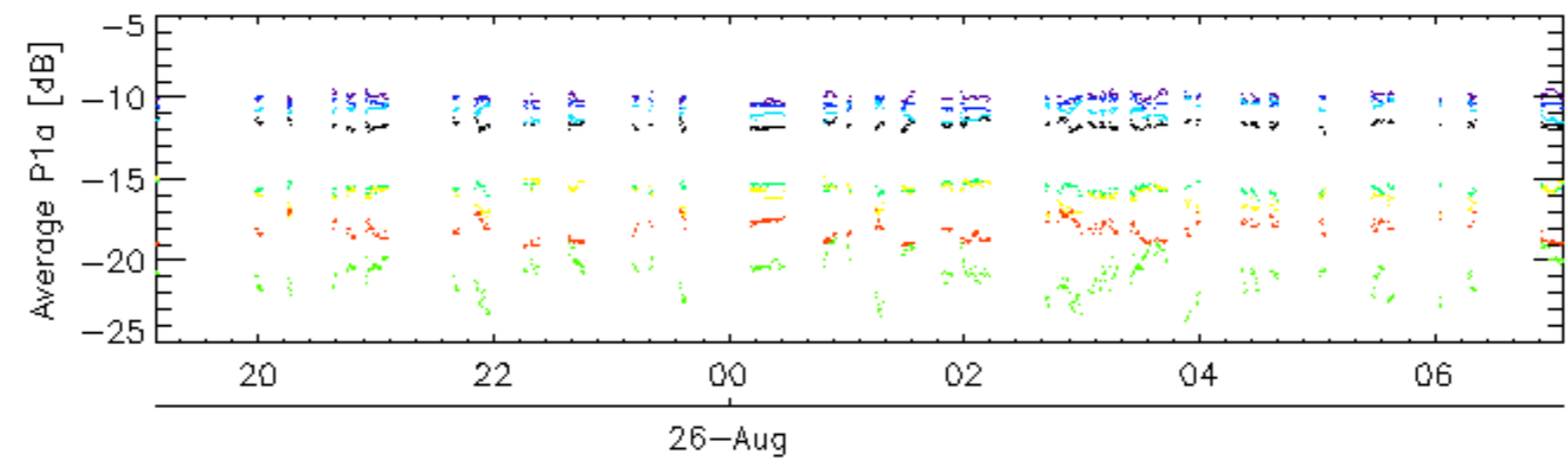
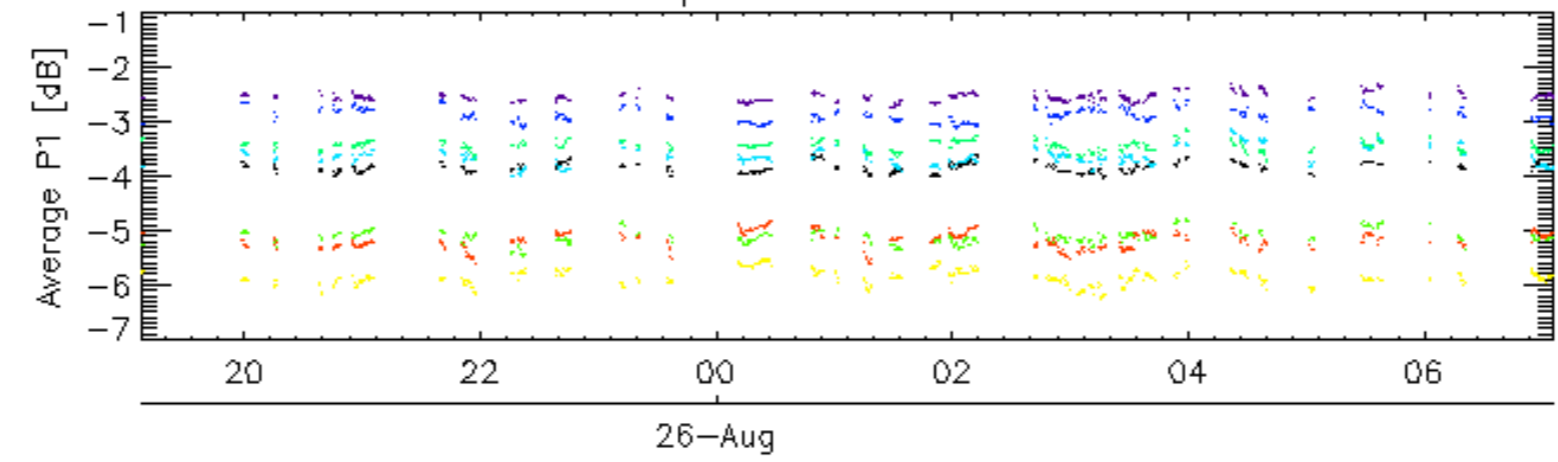
### 7.5 - Absolute Doppler for GM1

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

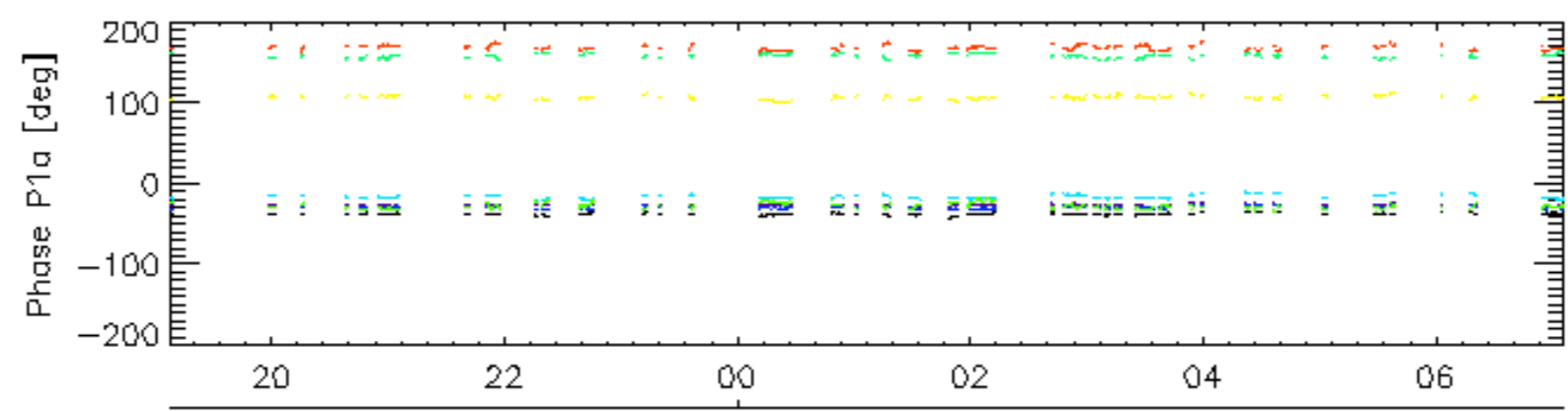
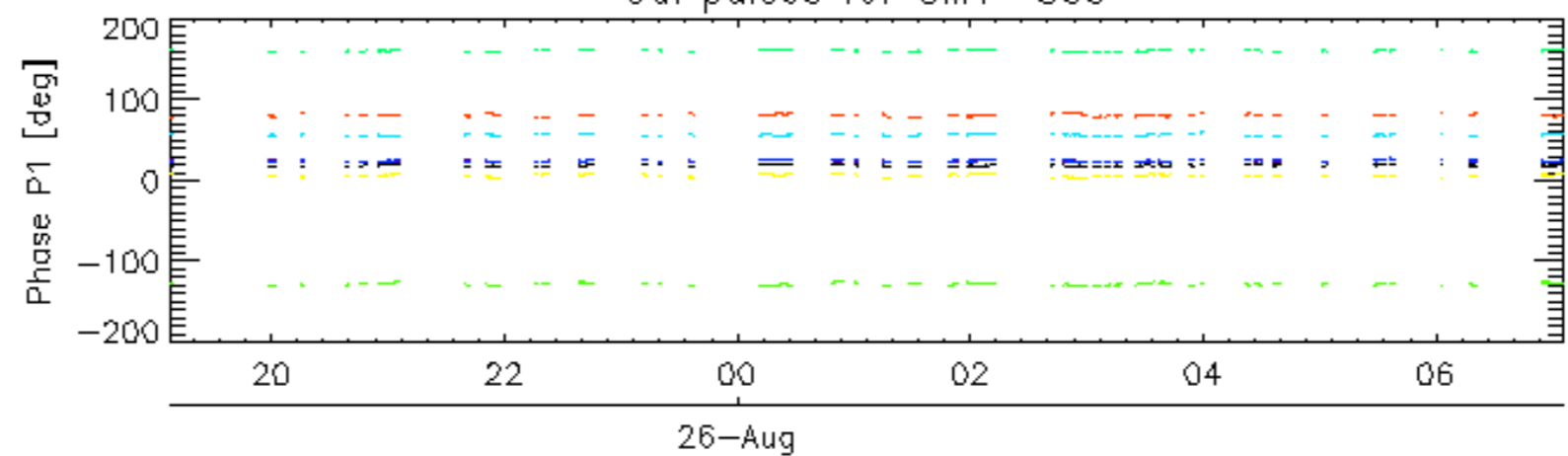
### 7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

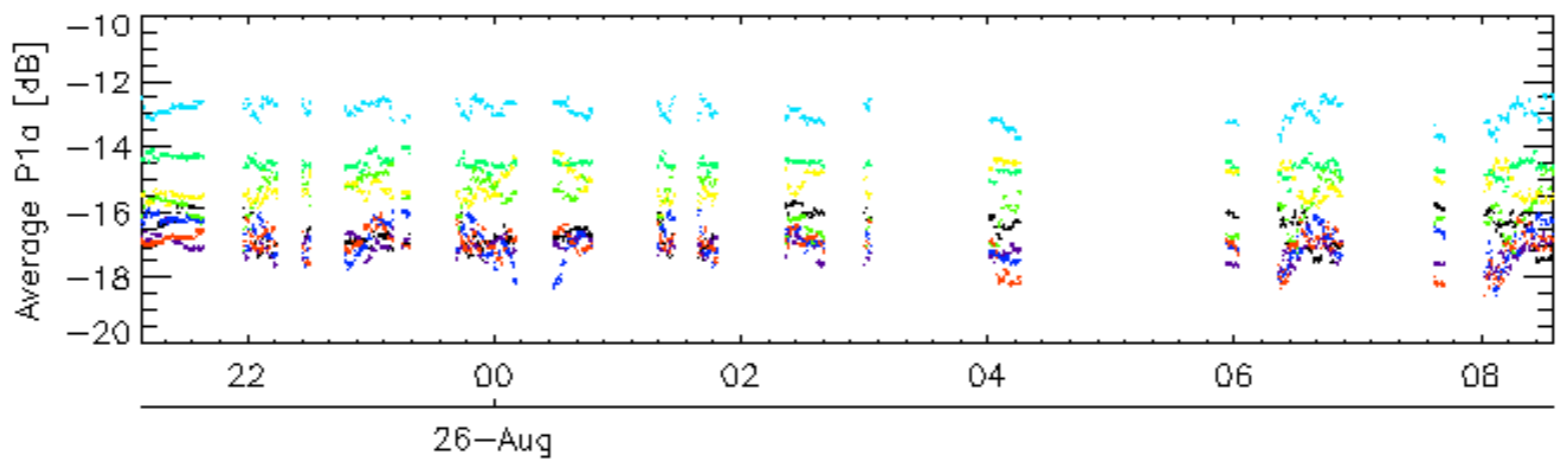
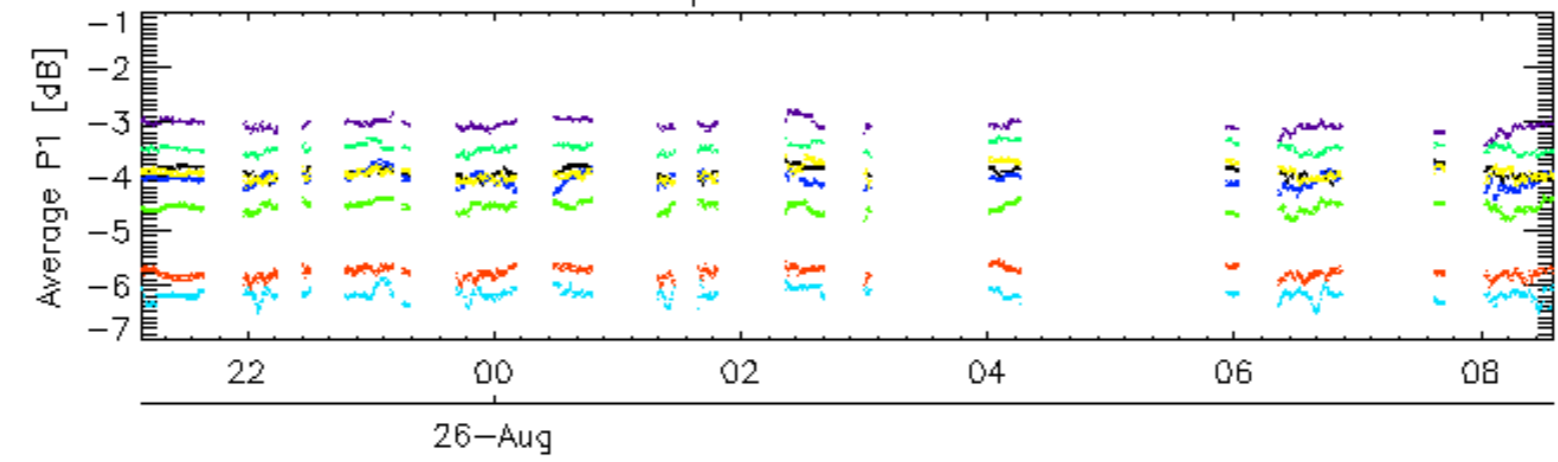


Cal pulses for GM1 SS3

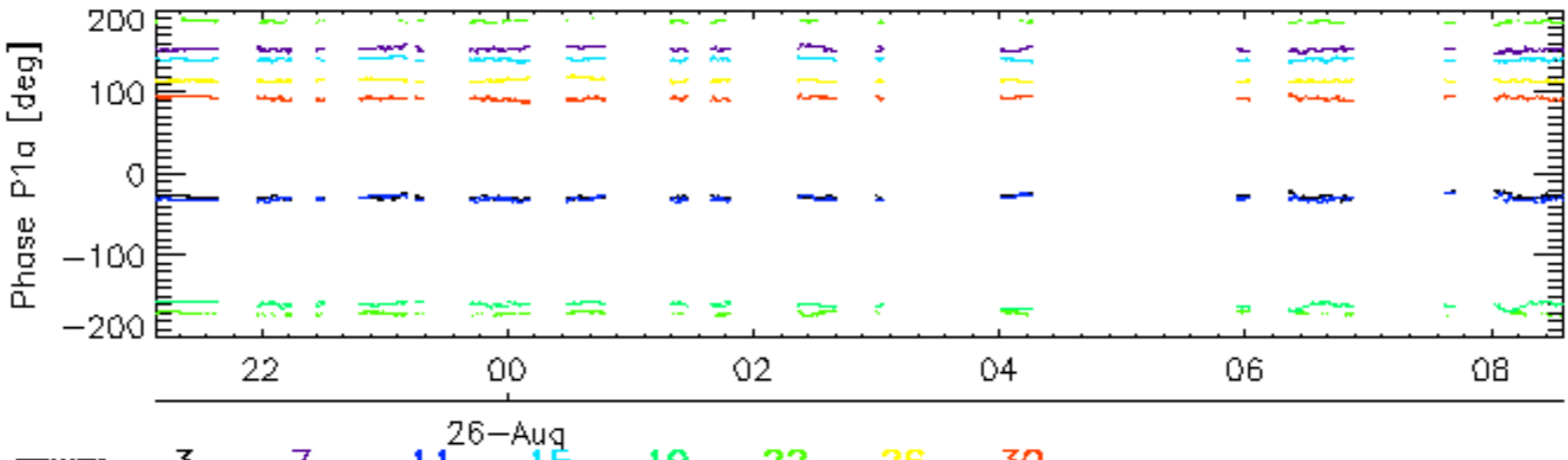
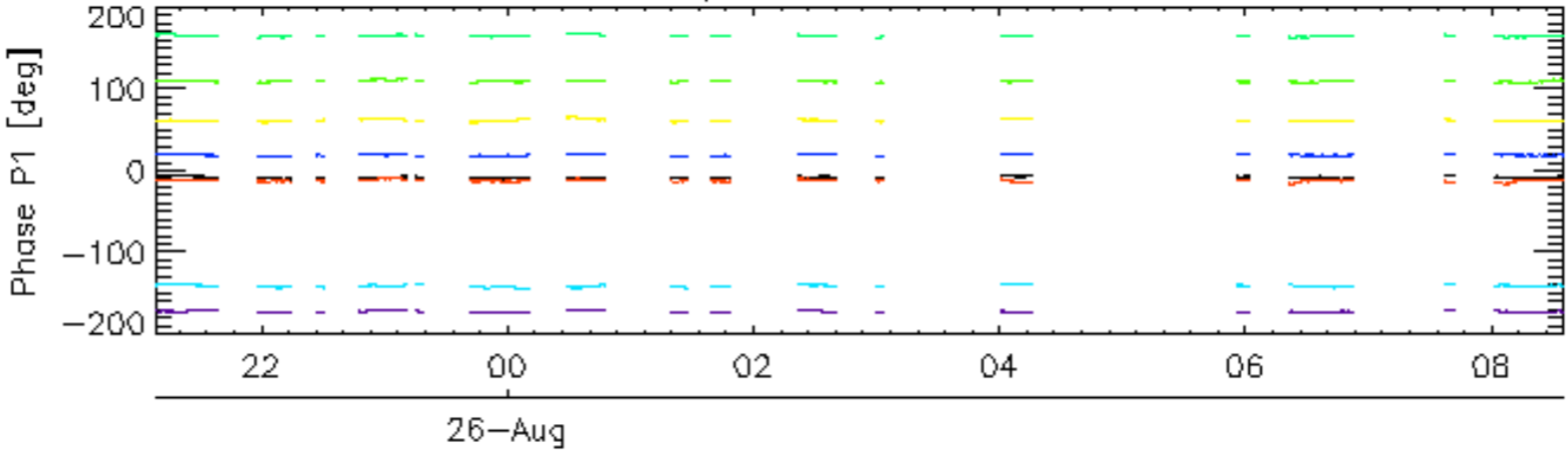


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

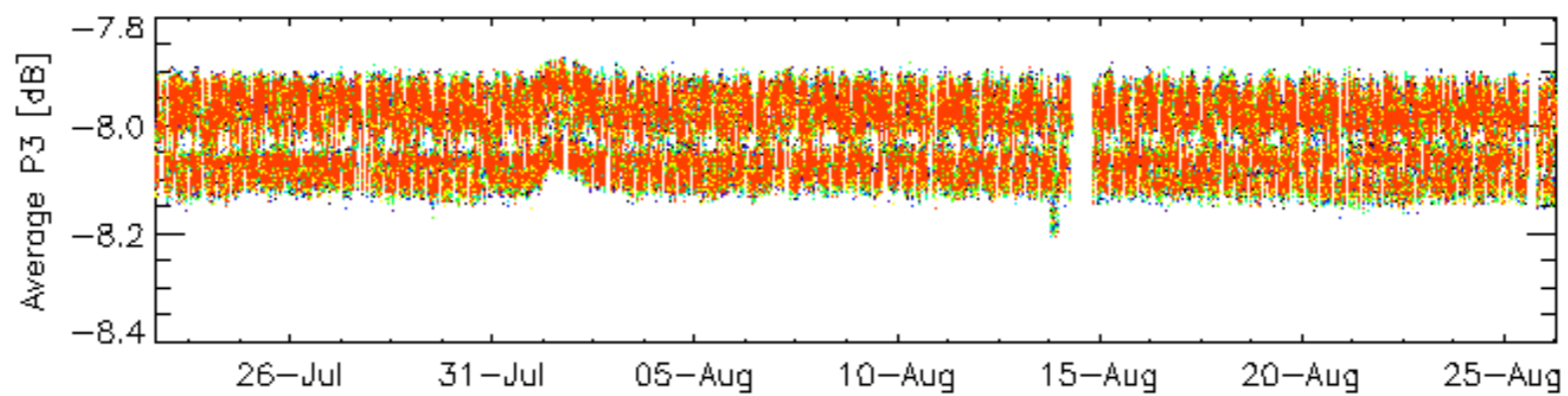
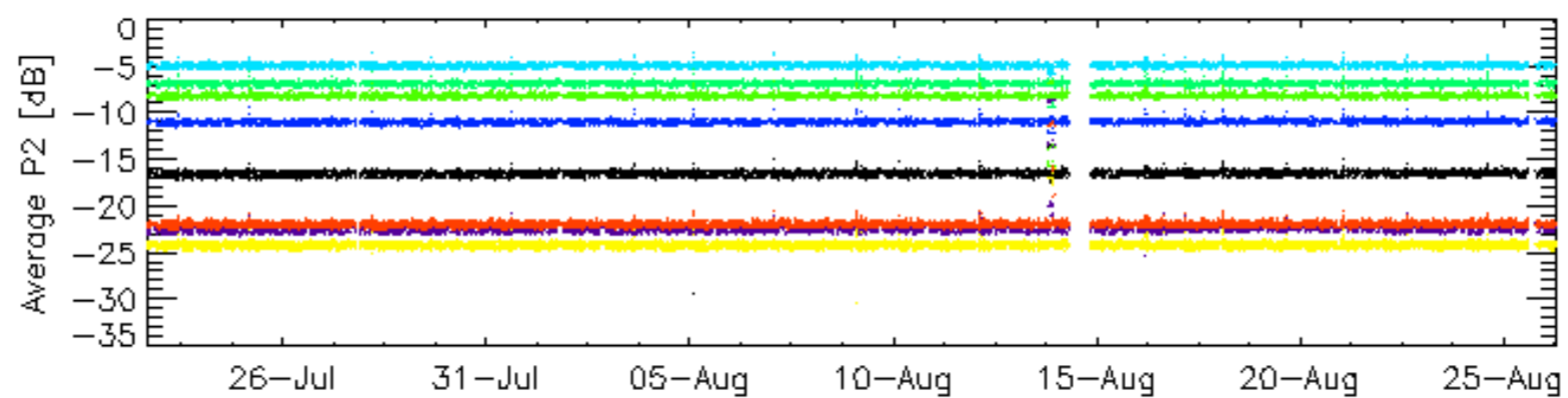
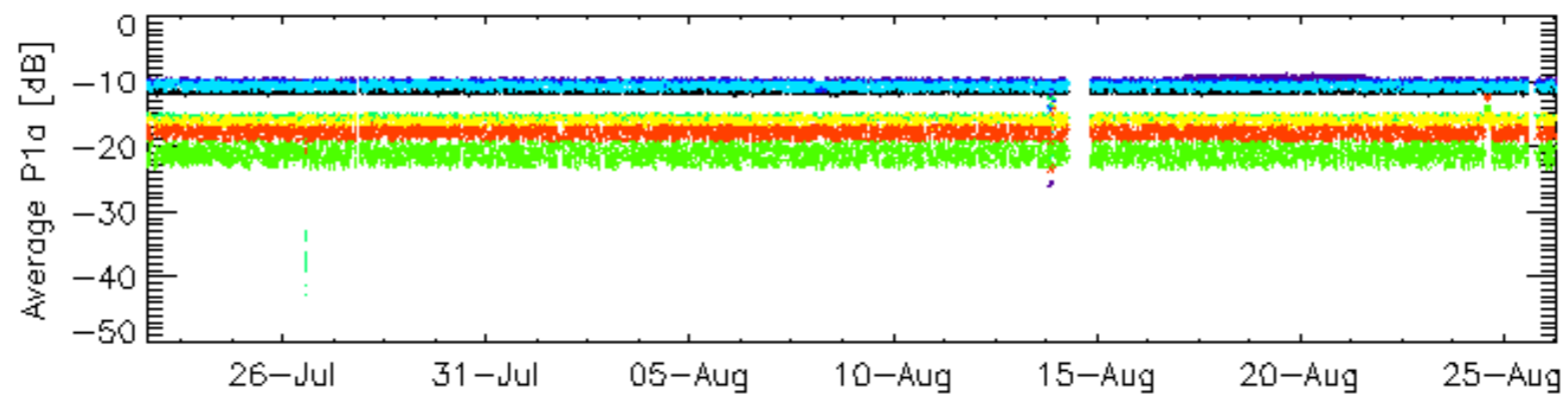
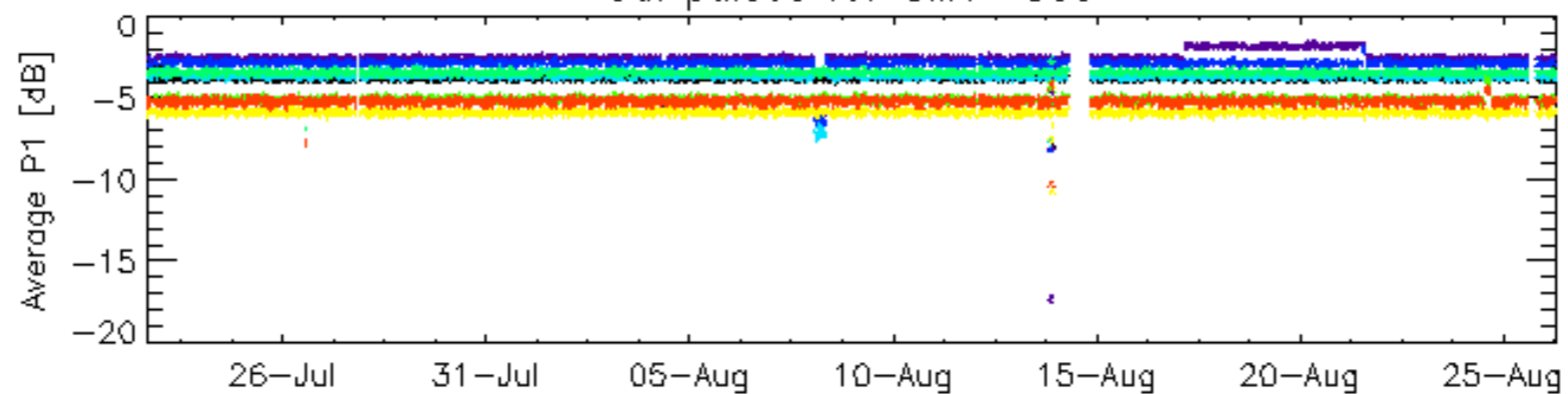


Cal pulses for WVS IS2



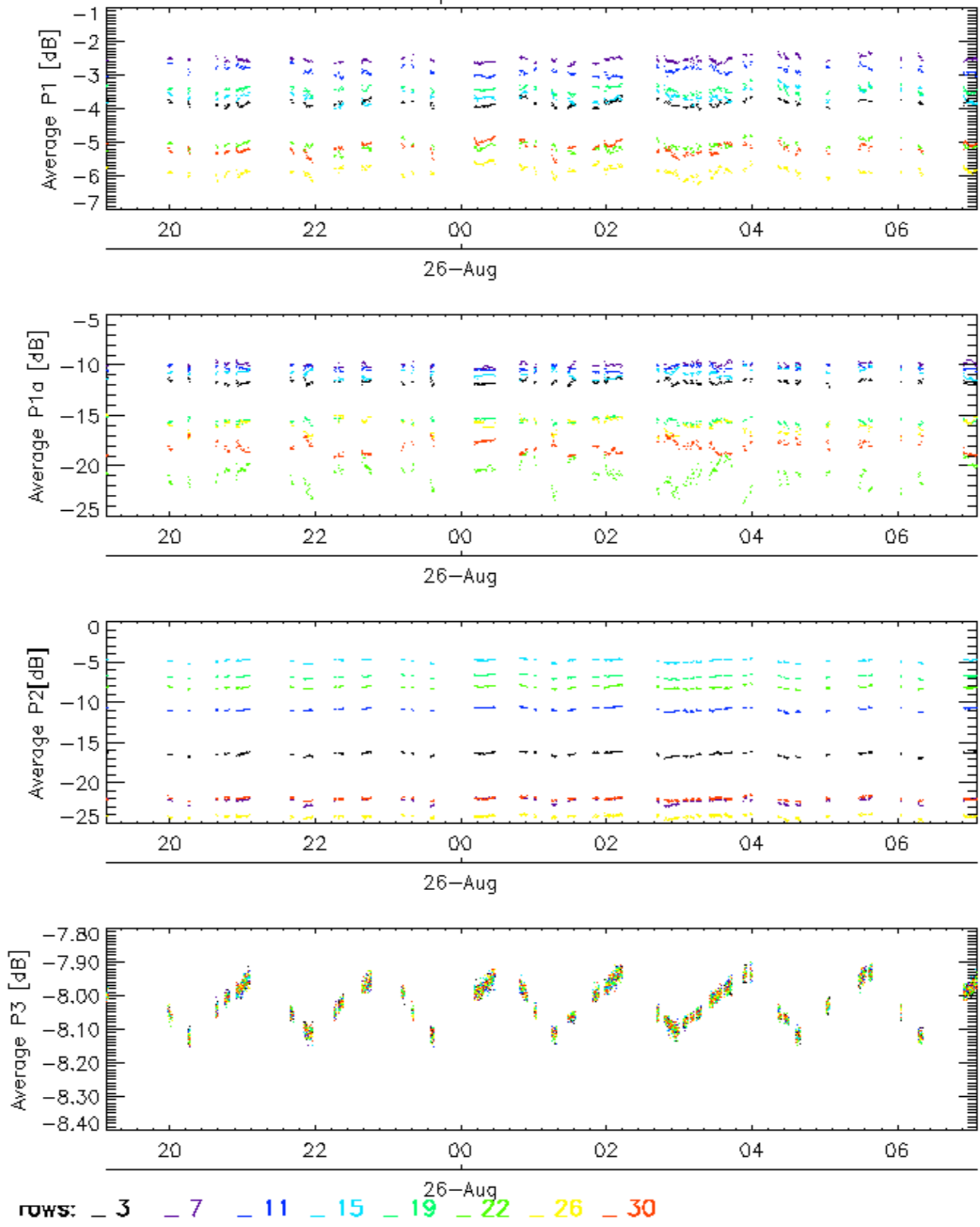
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

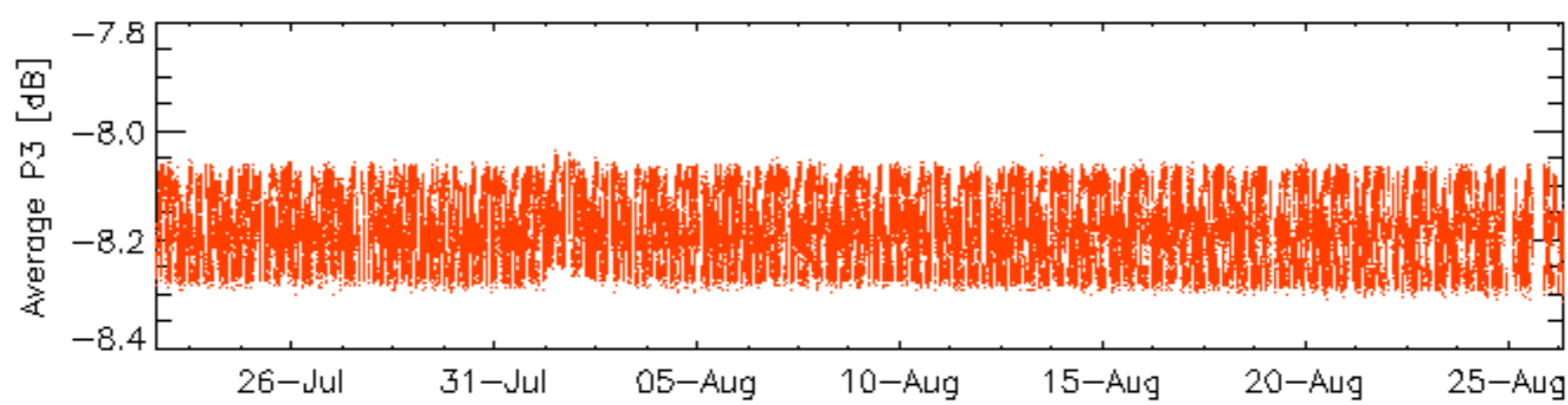
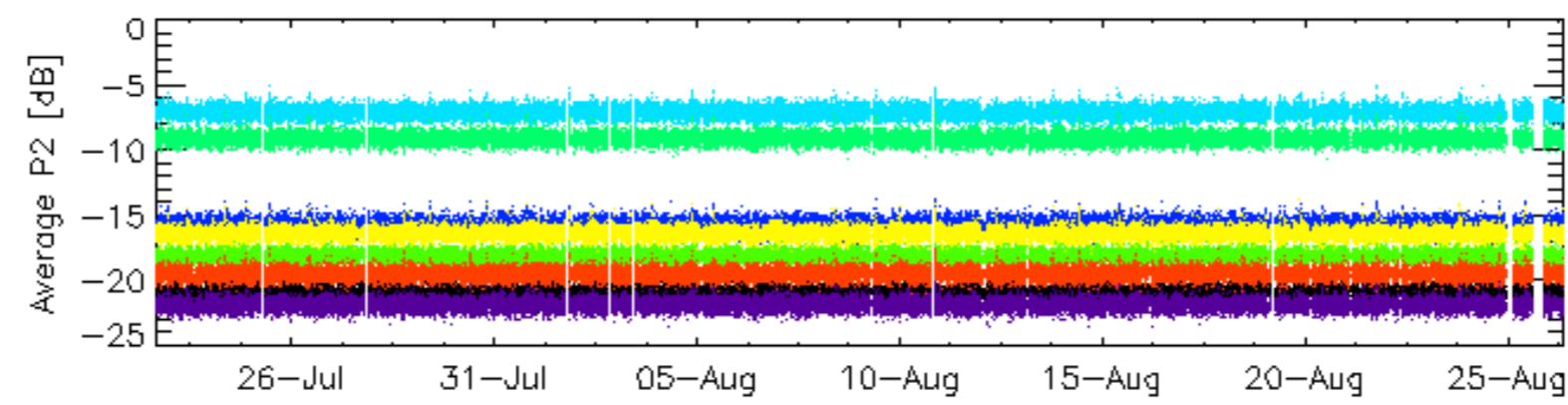
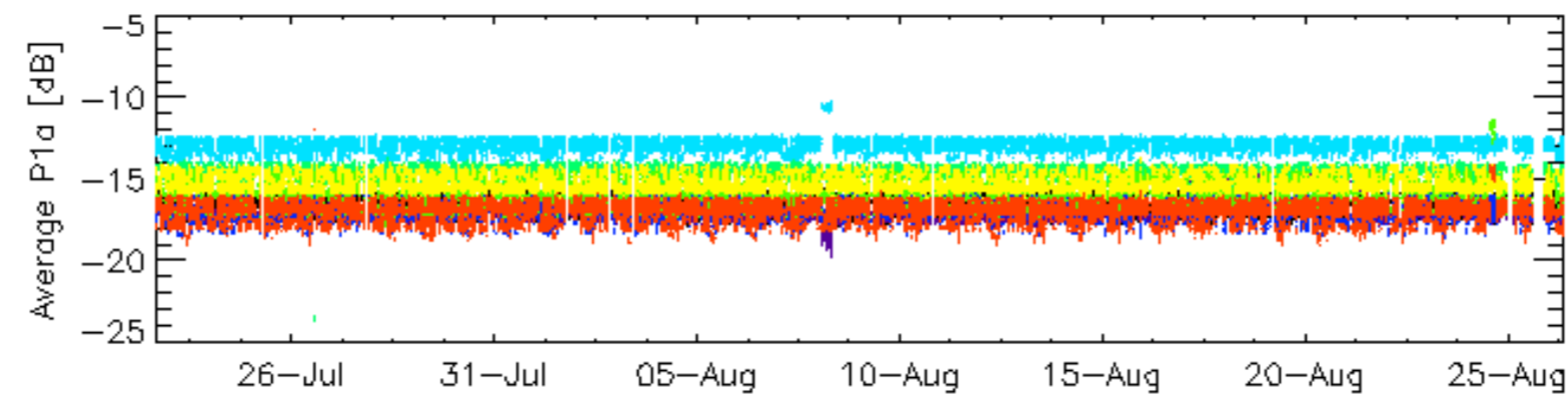
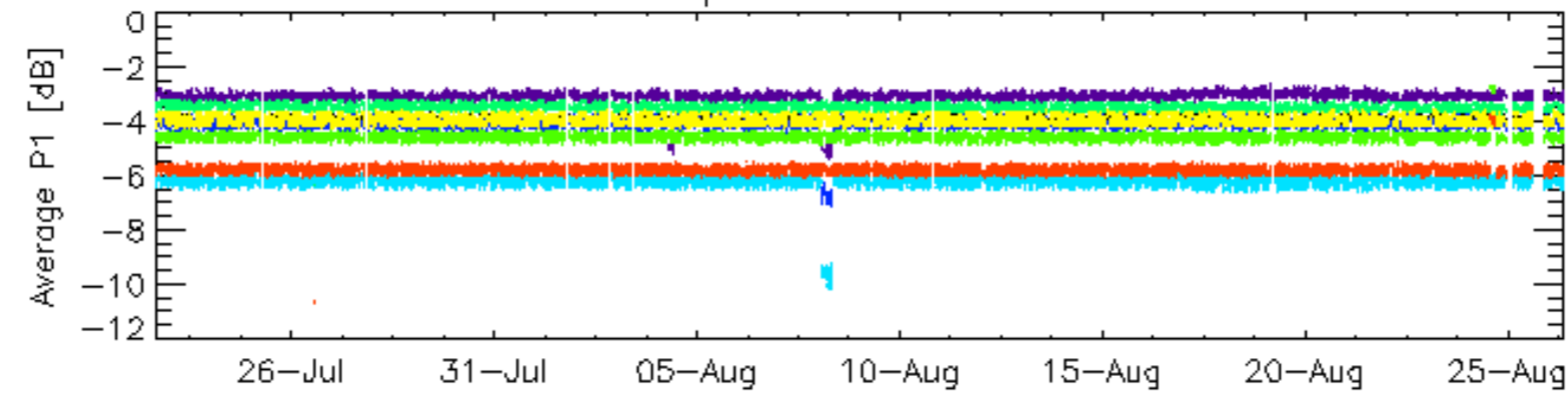


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

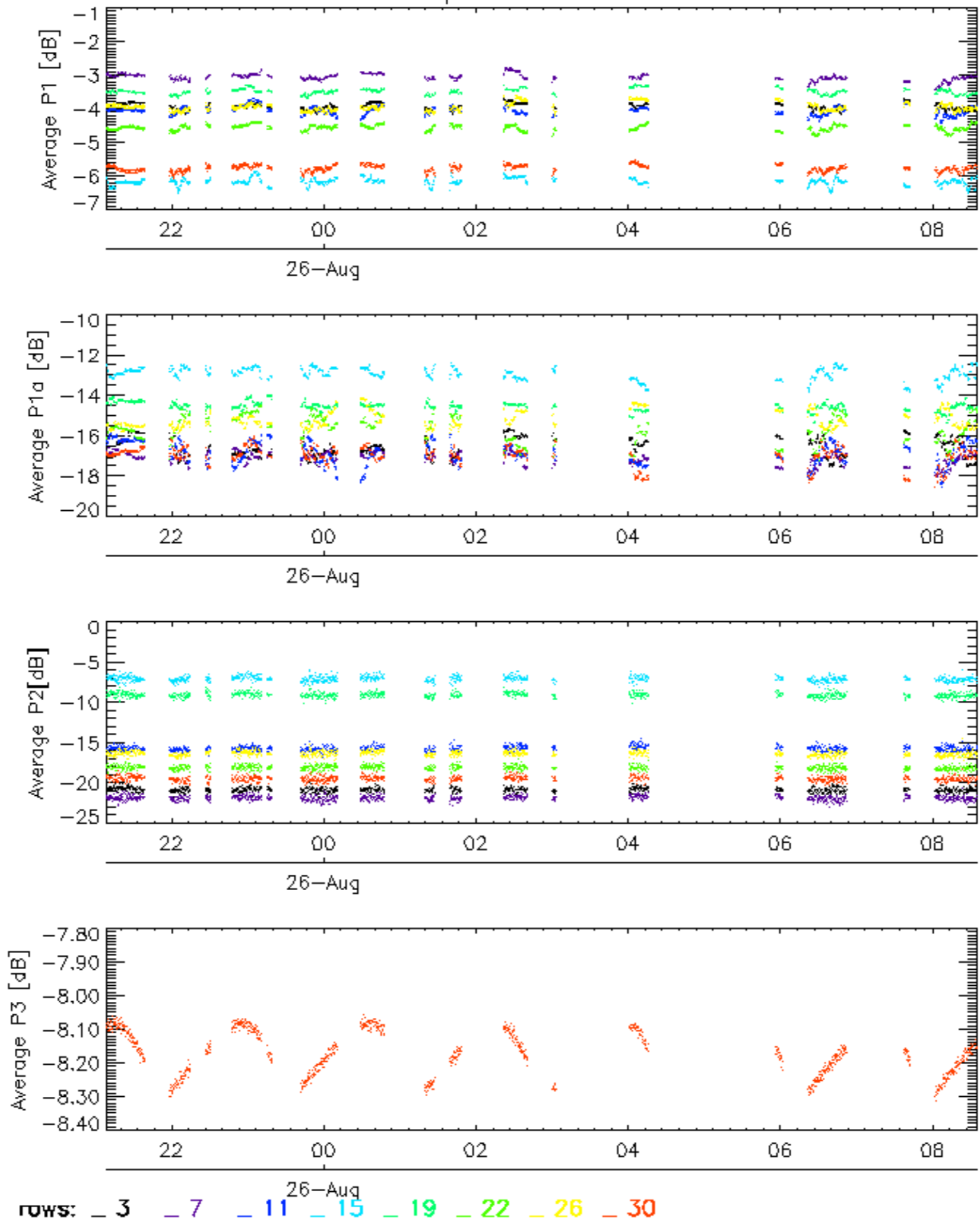


Cal pulses for WVS IS2



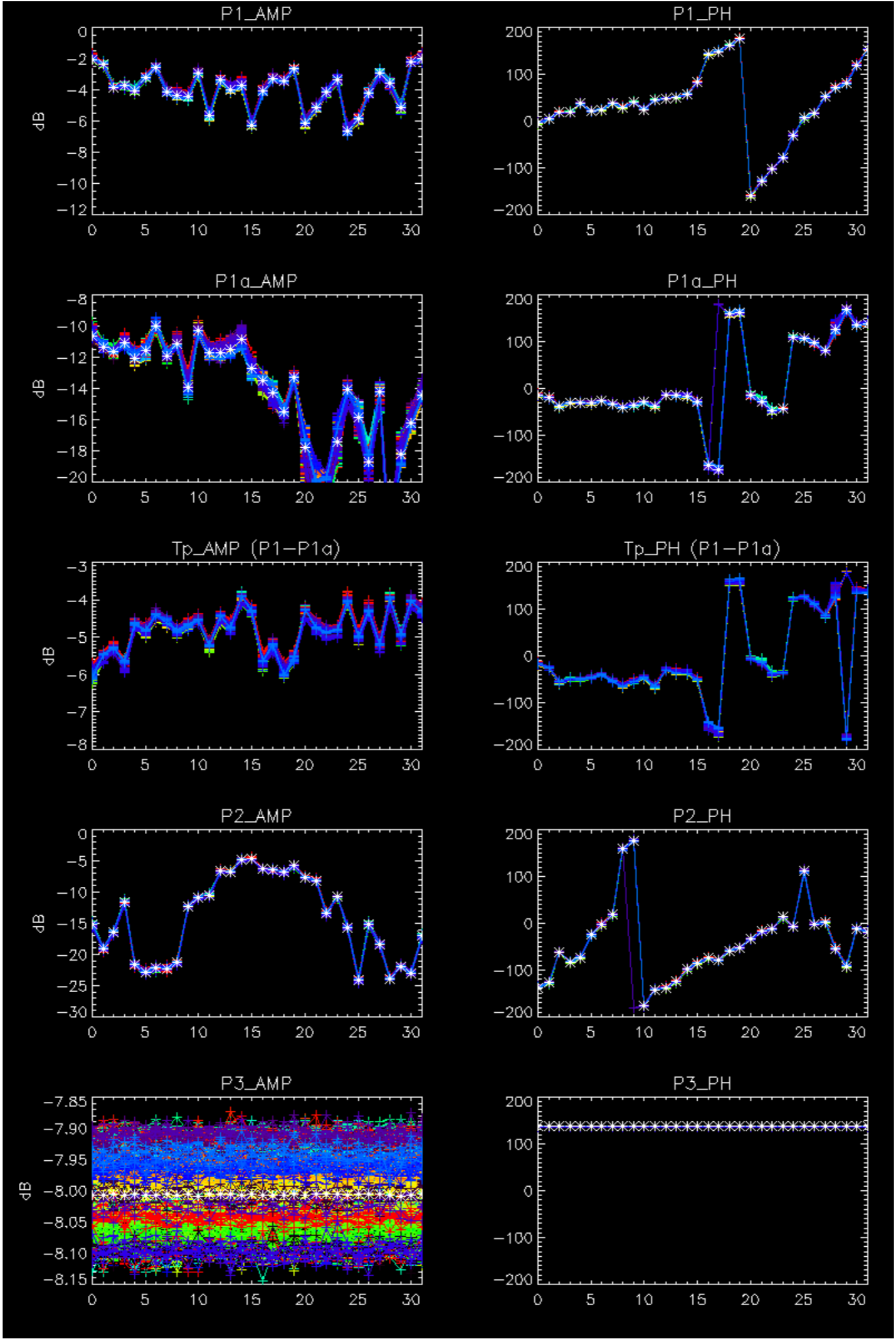
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

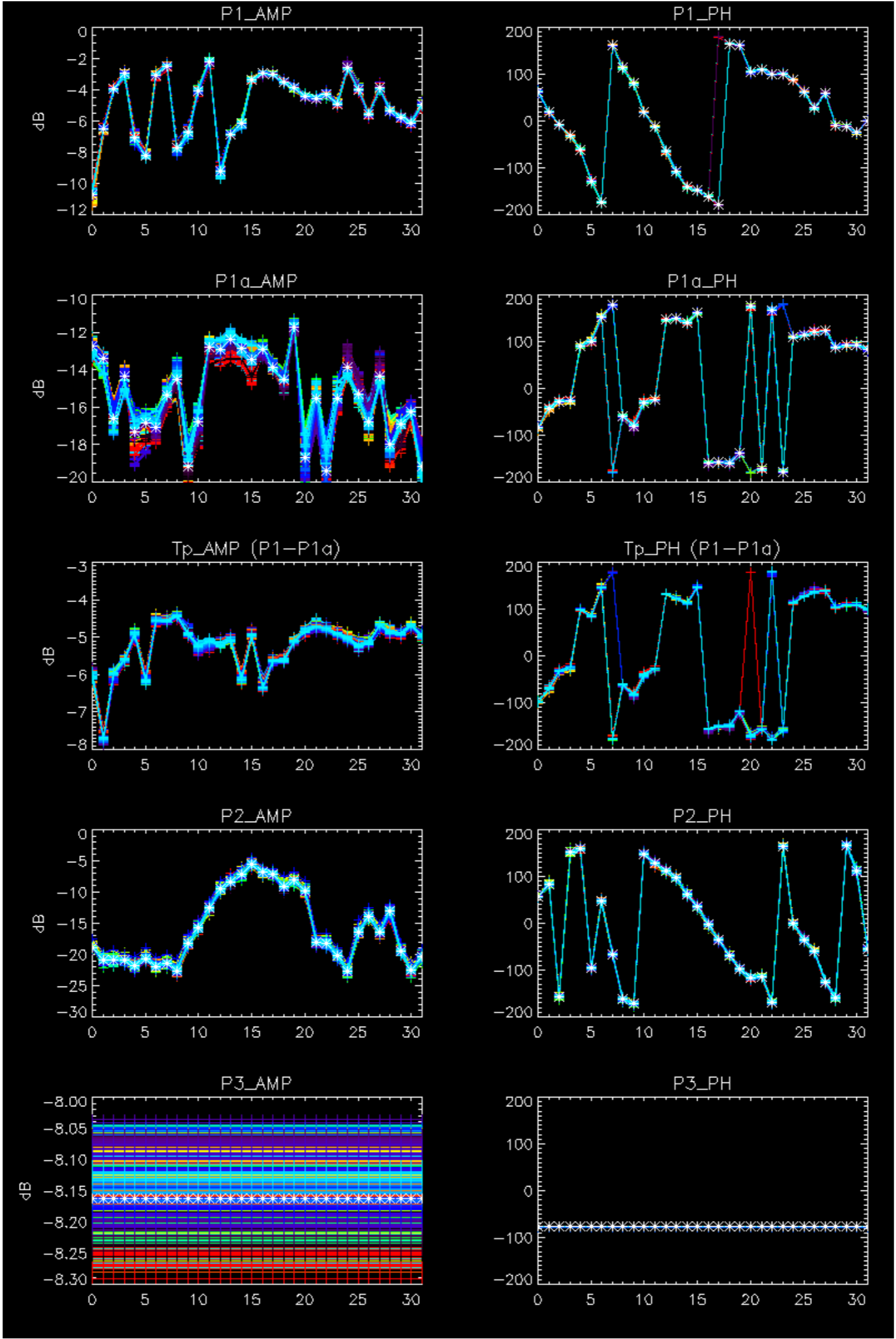
### Cal pulses for WVS IS2



No anomalies observed.





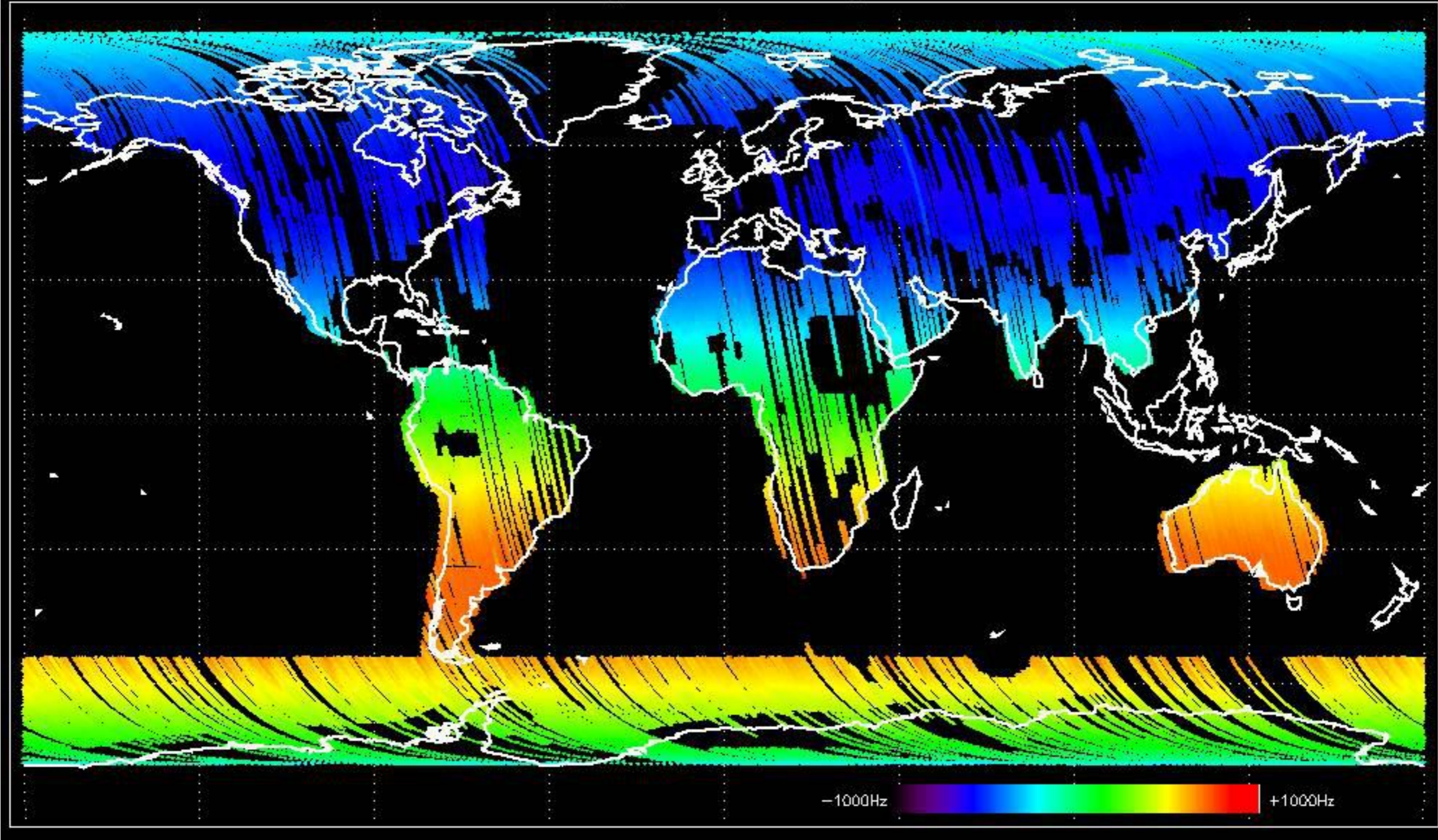


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



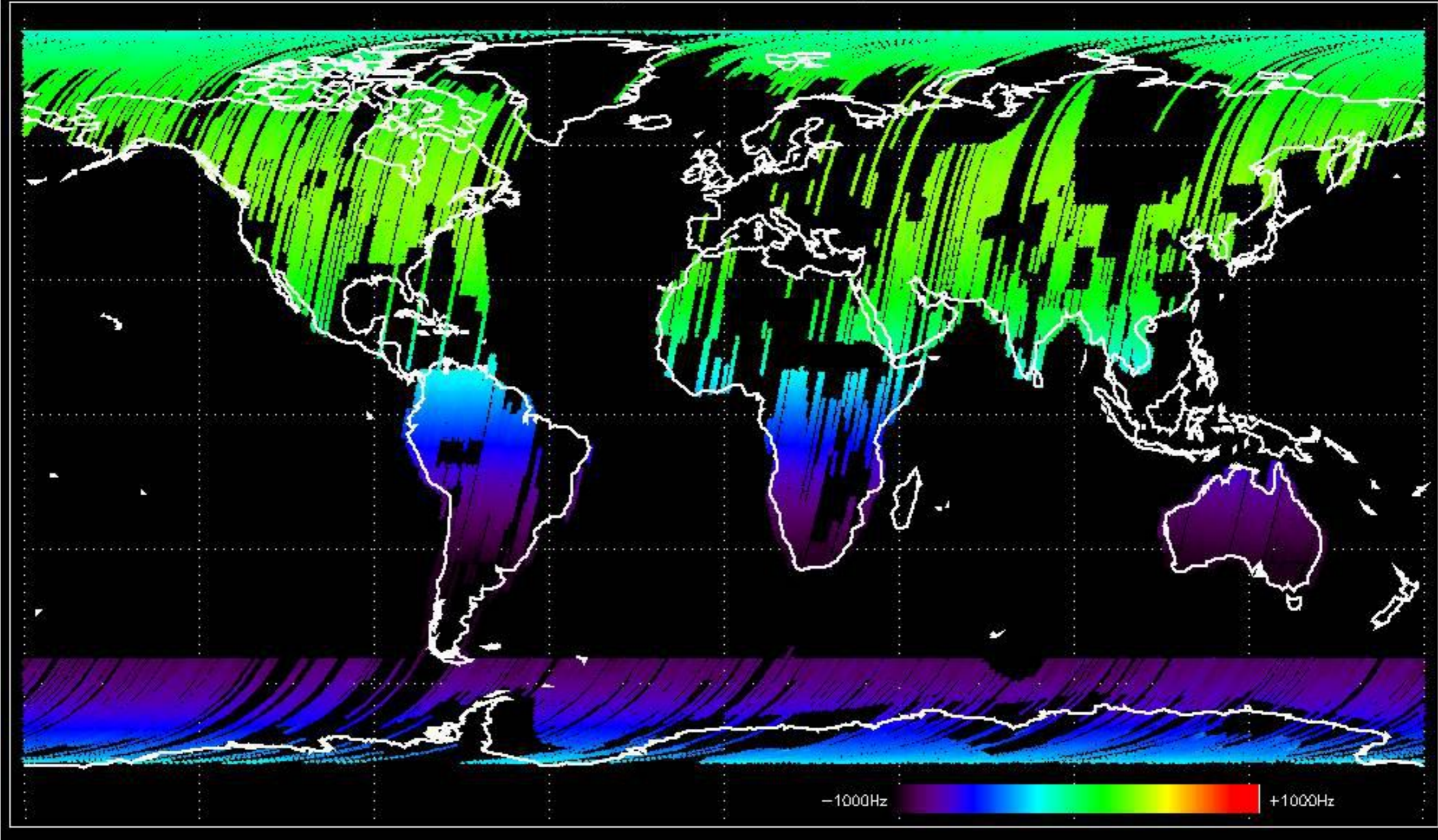


Doppler 'GM1' 'SS1' ascending



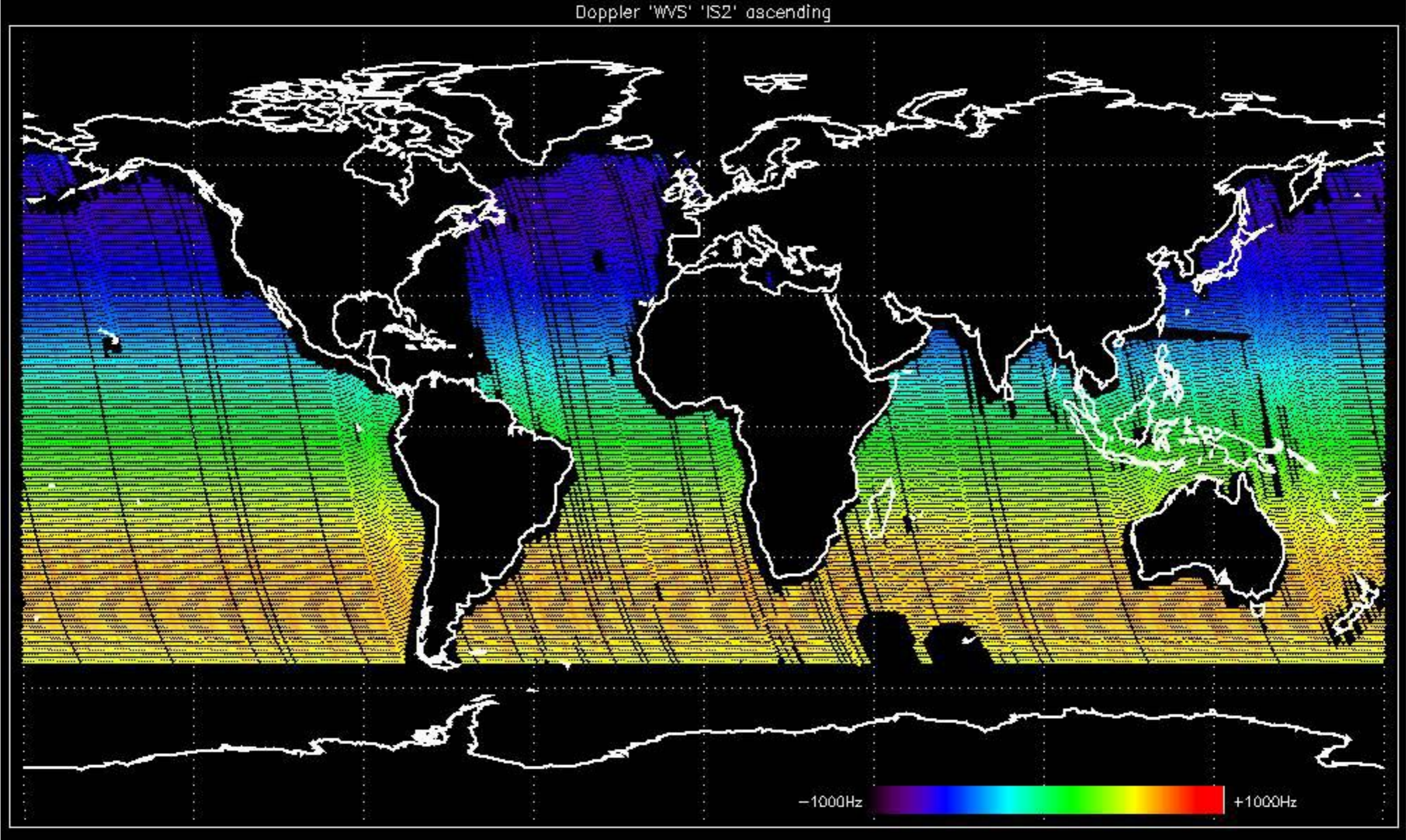


Doppler 'GM1' 'SS1' descending



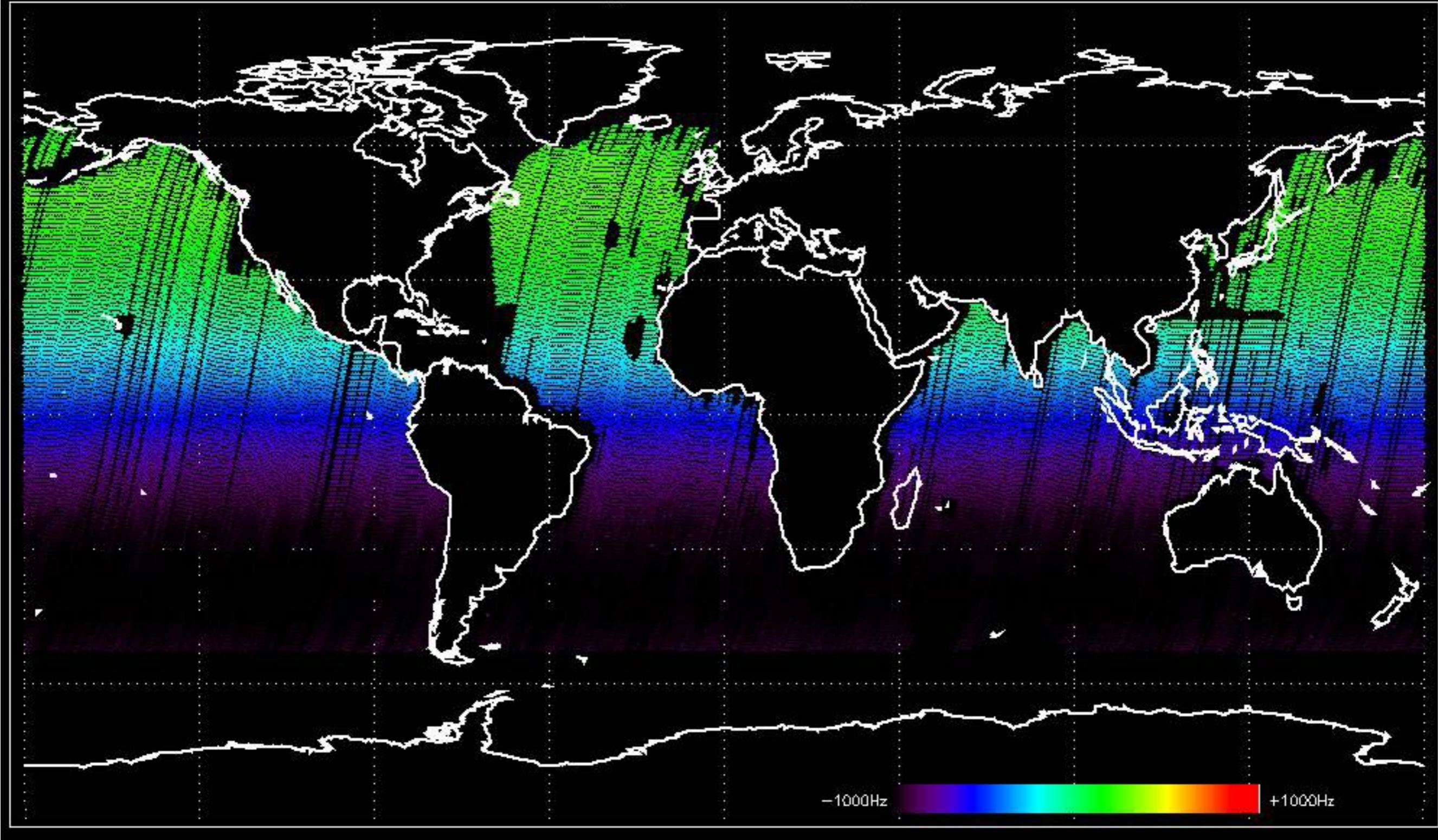


Doppler 'WVS' 'IS2' ascending



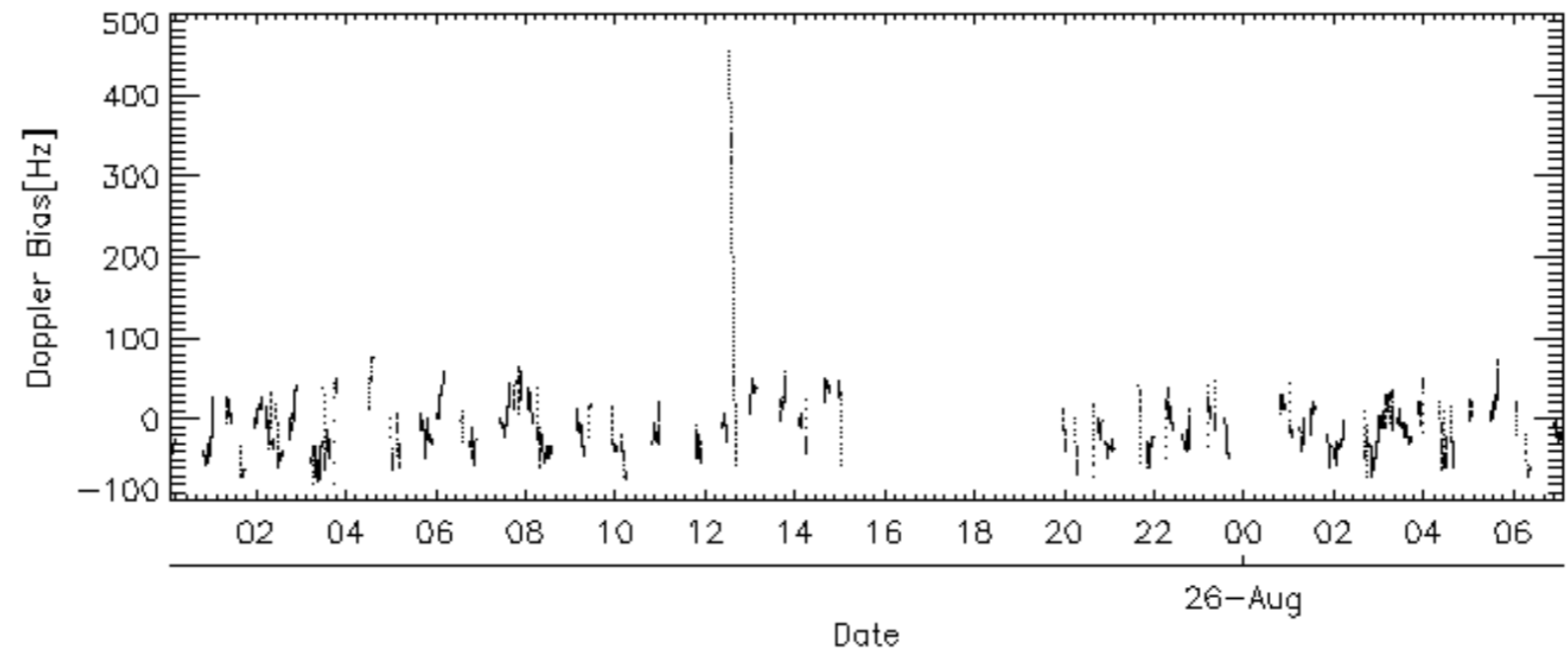
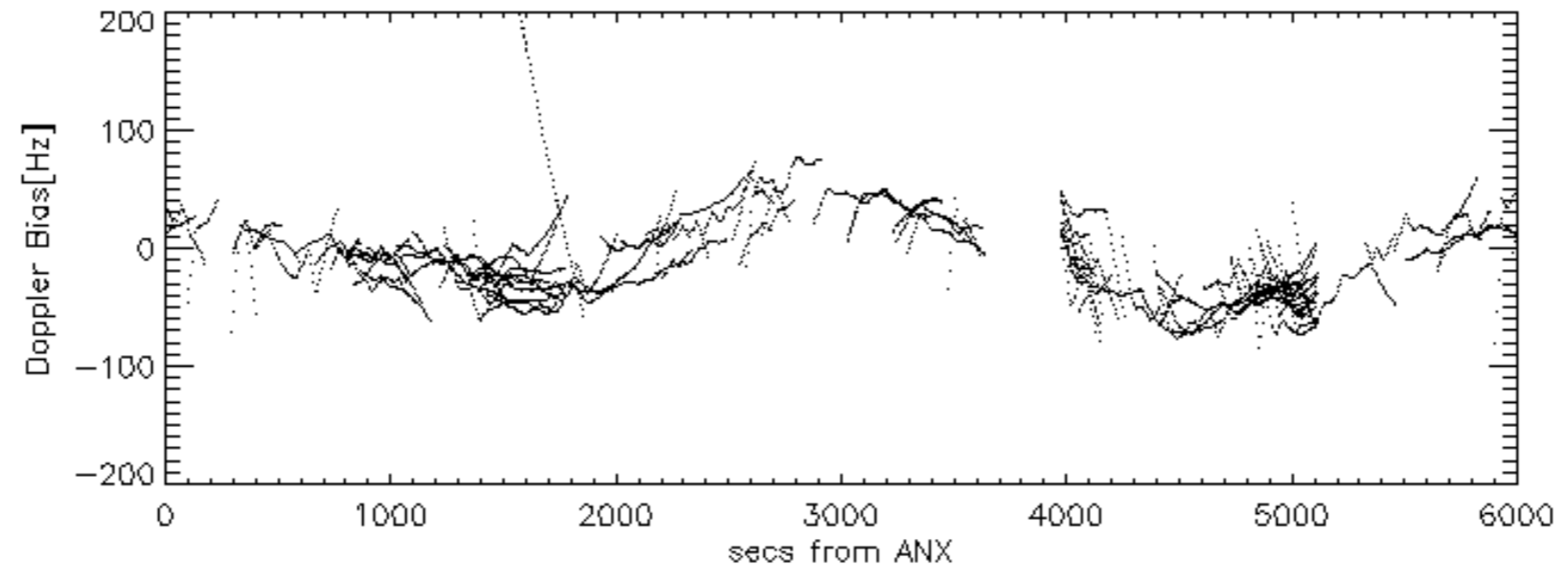
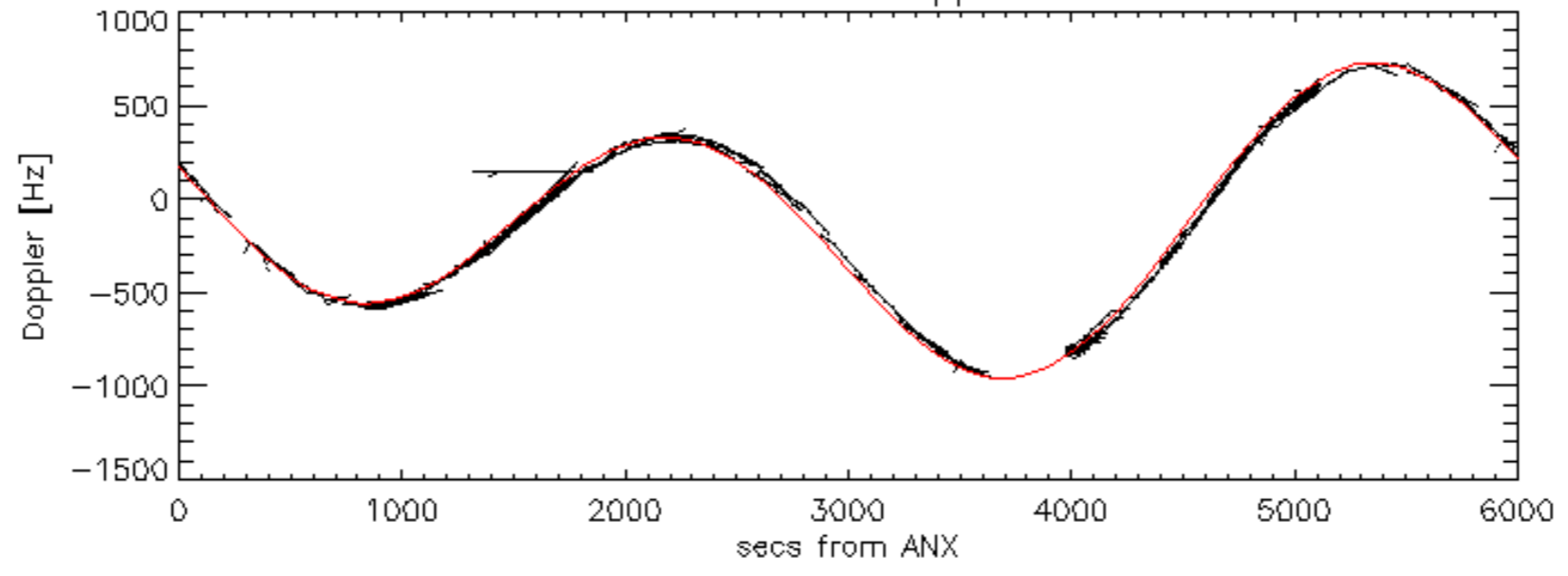


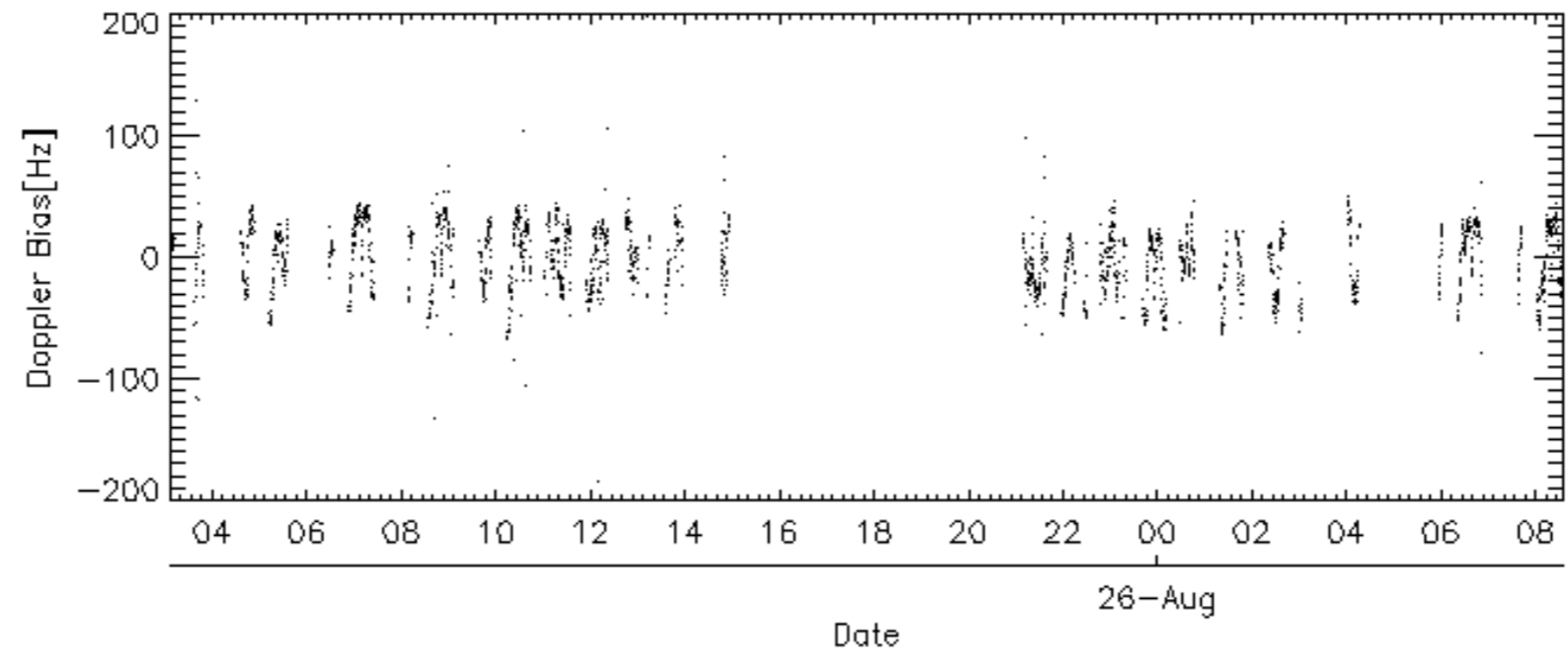
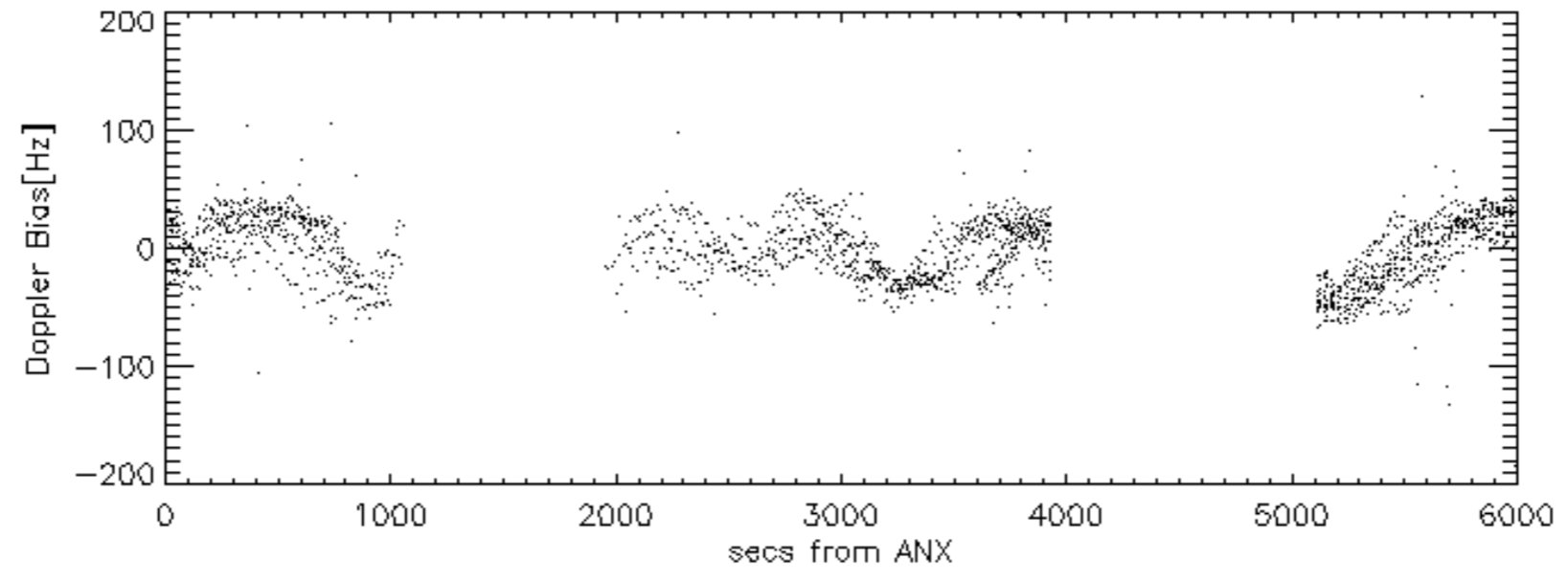
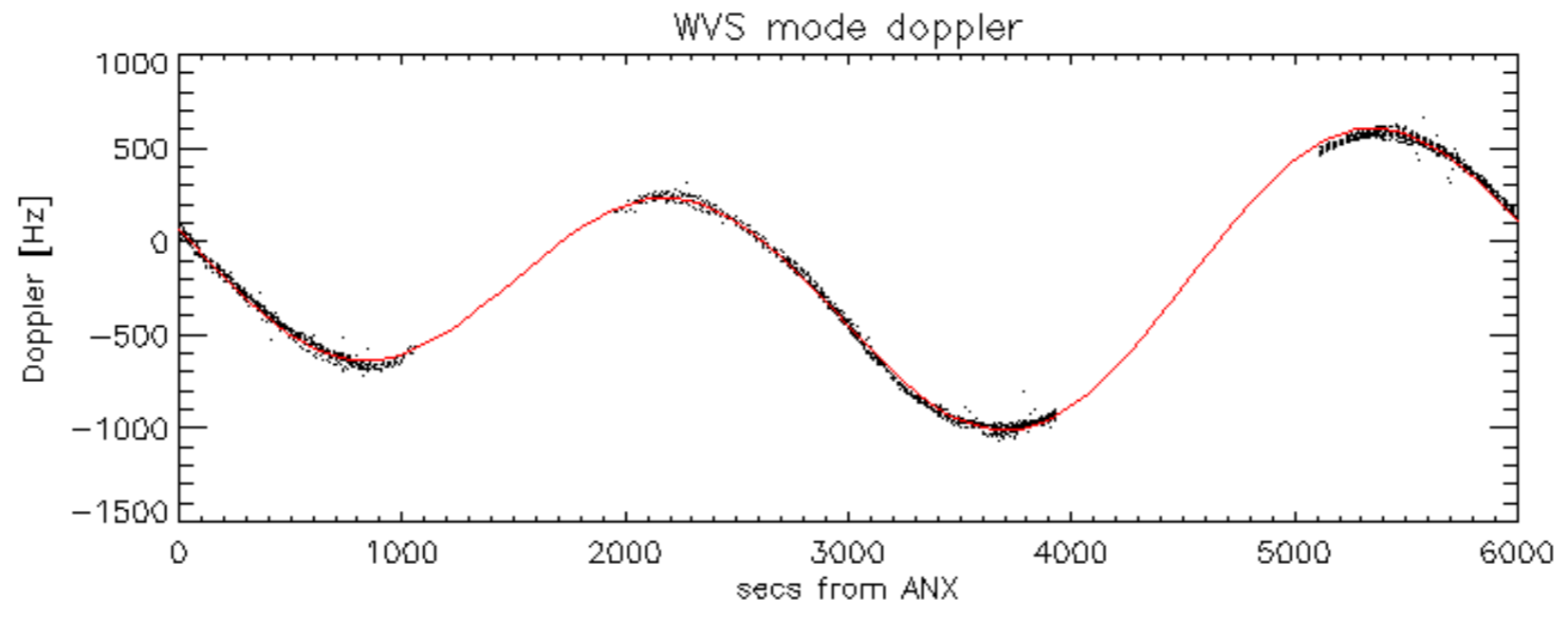
Doppler 'WVS' 'IS2' descending





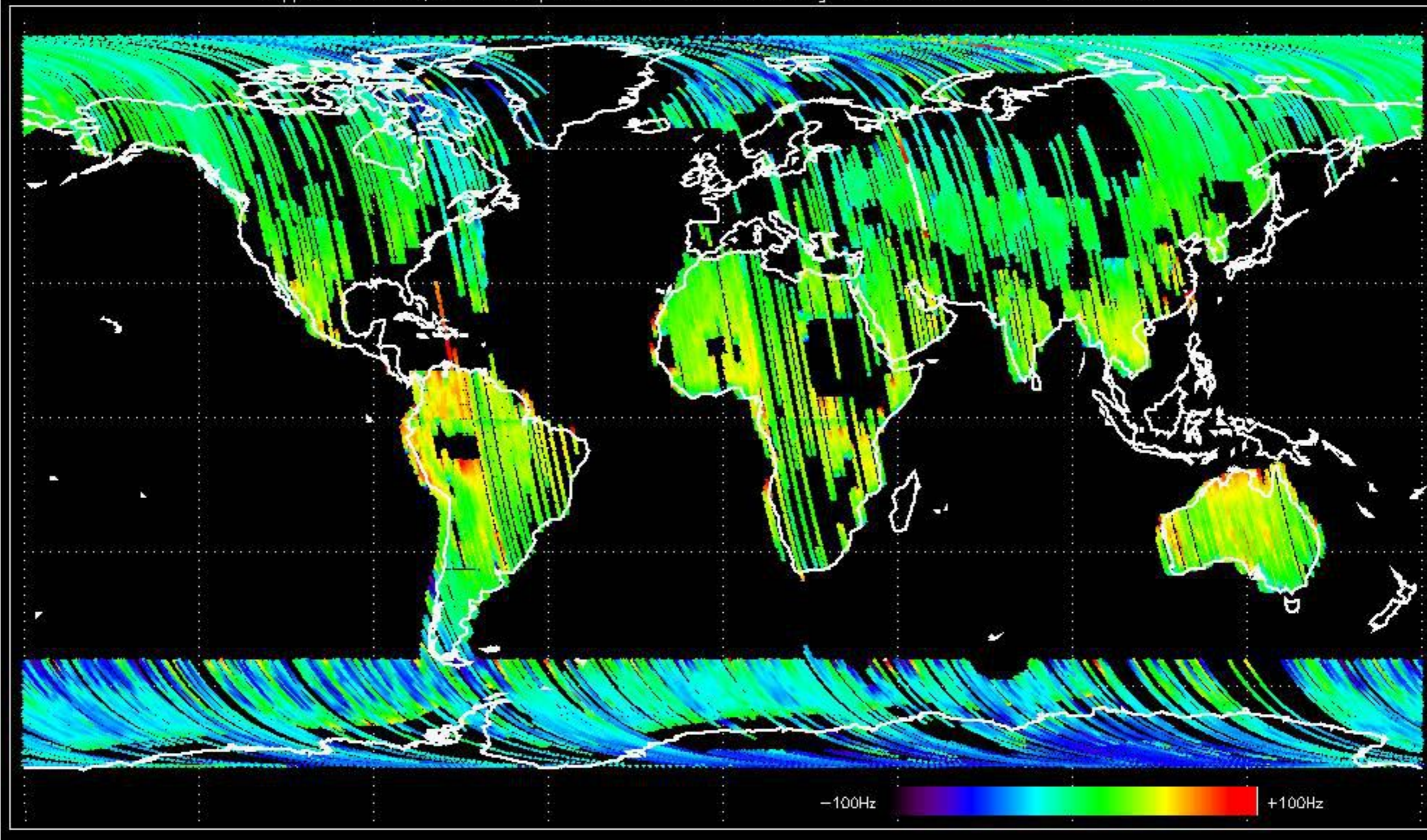
GM1 mode doppler





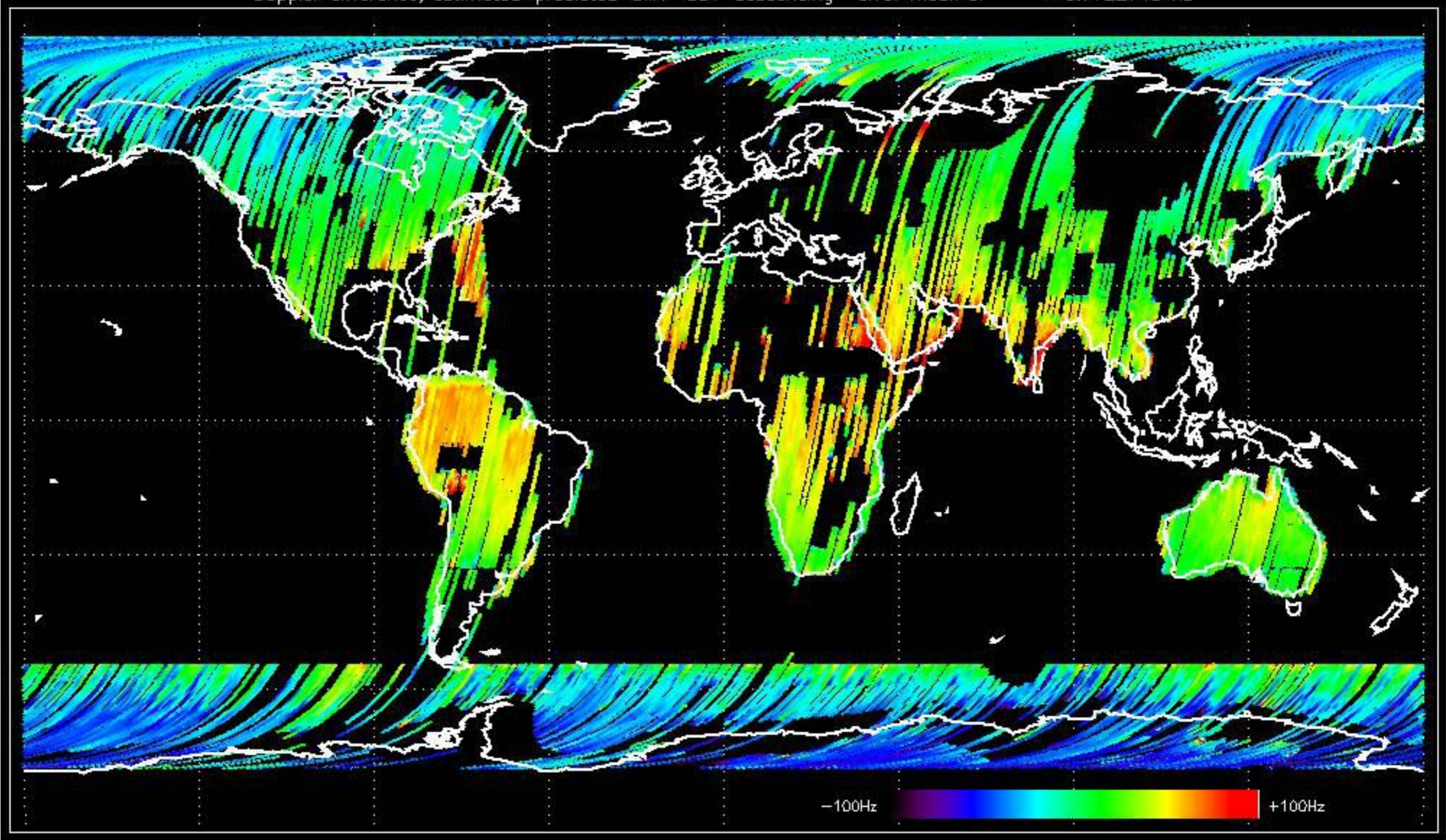


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.325799 Hz



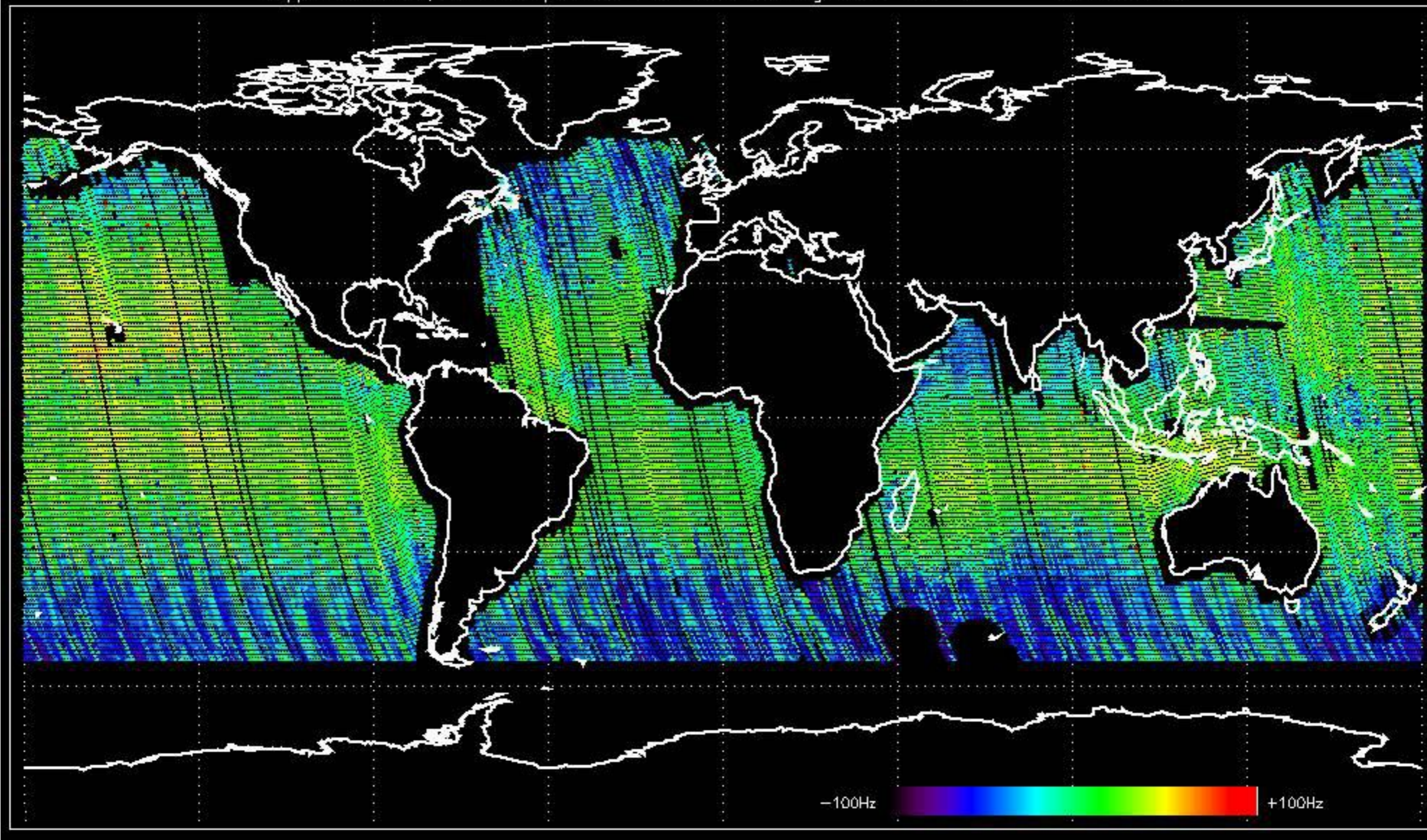


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.7722748 Hz



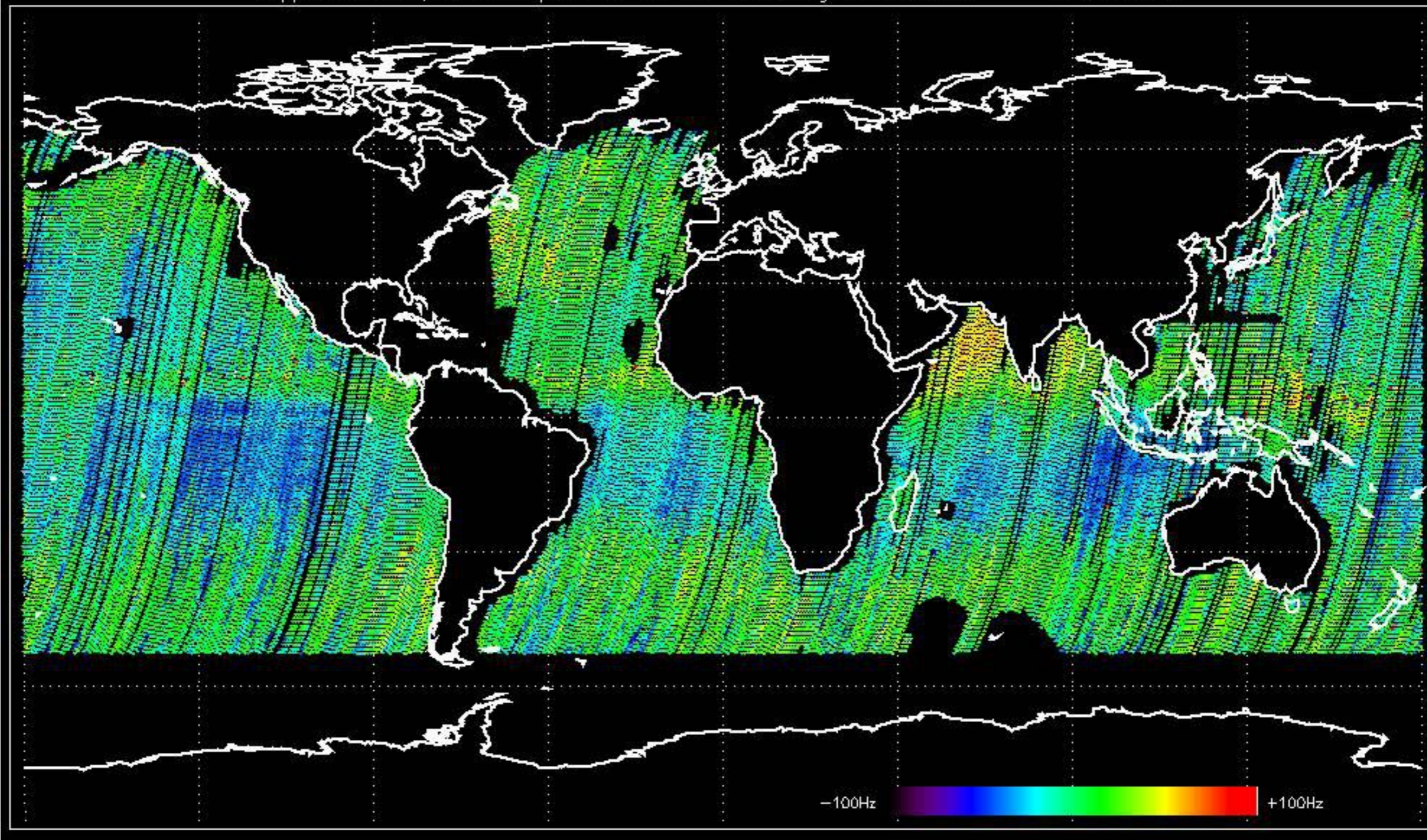


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -3.5155171 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.4489345 Hz





No anomalies observed on available MS products:

No anomalies observed.





















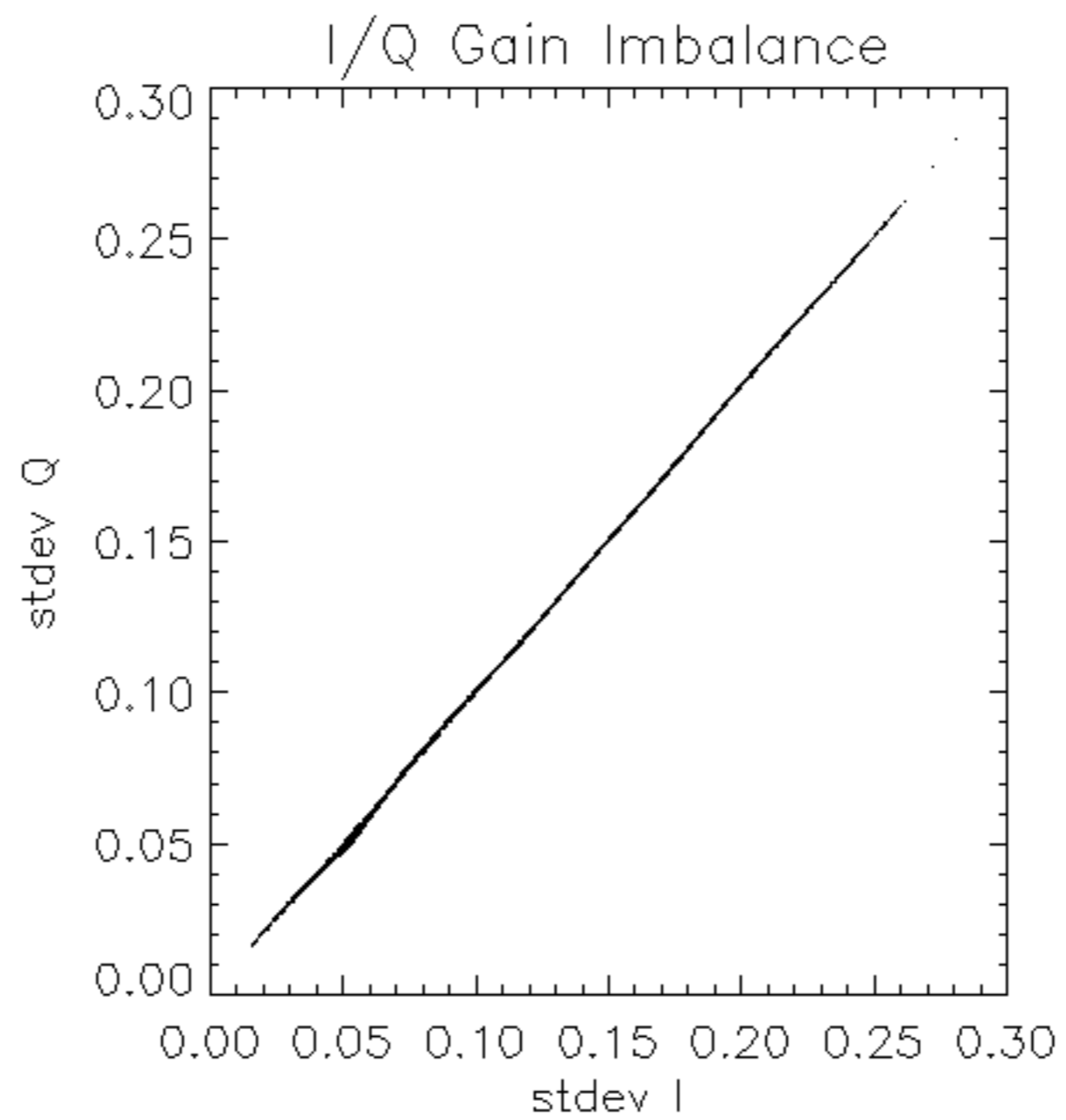


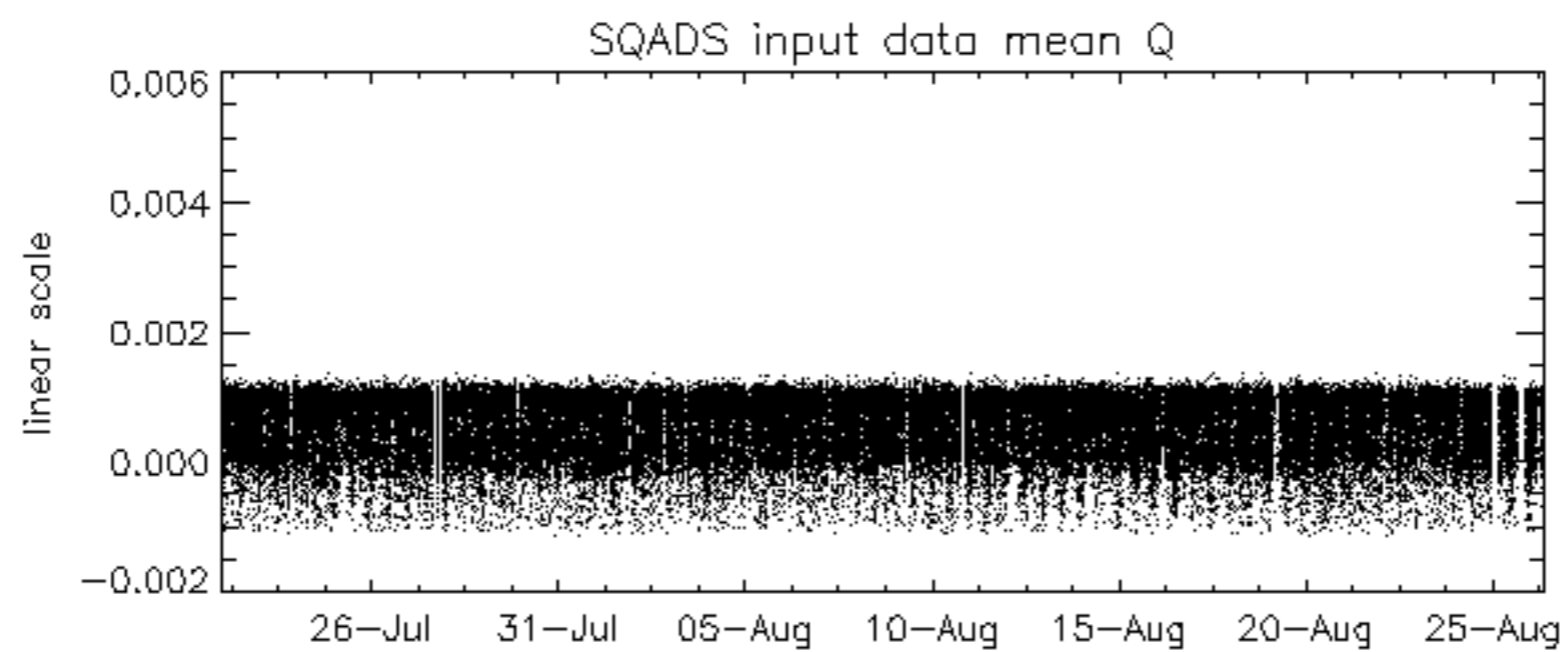
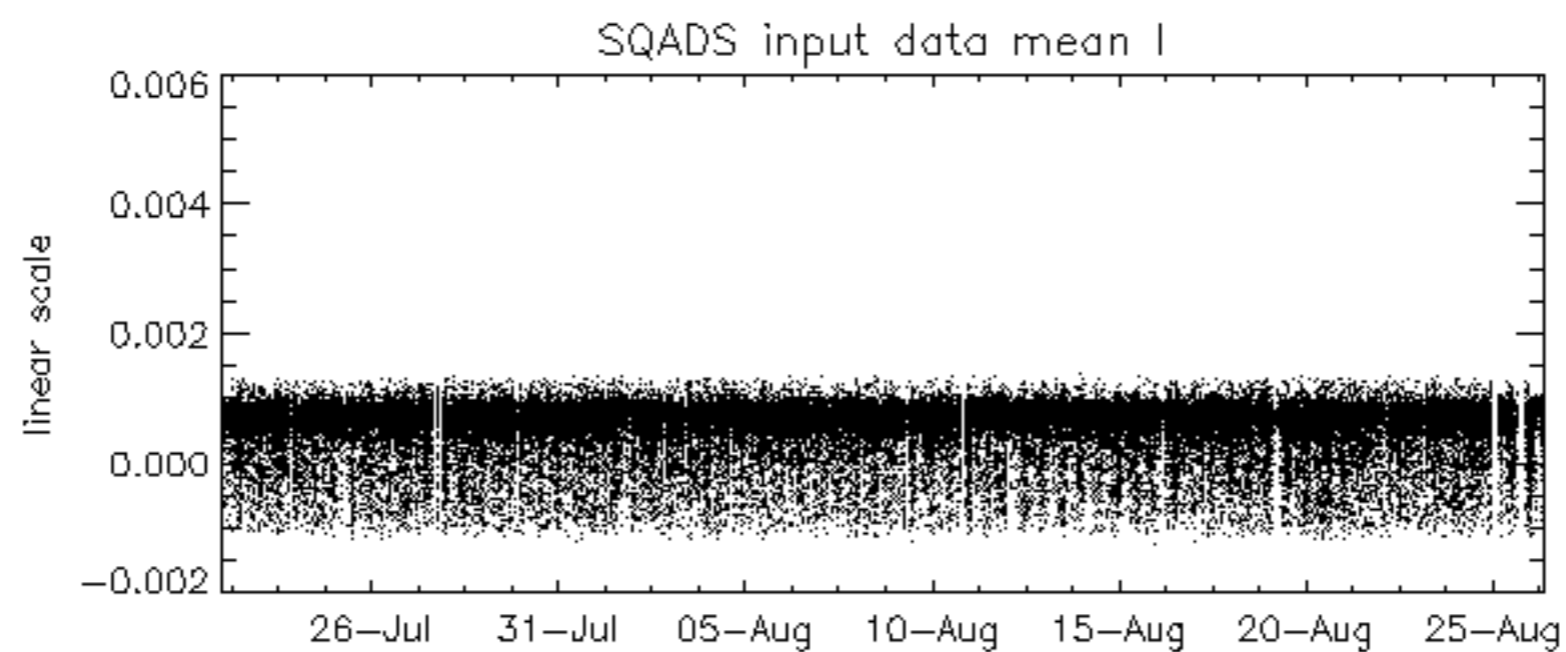
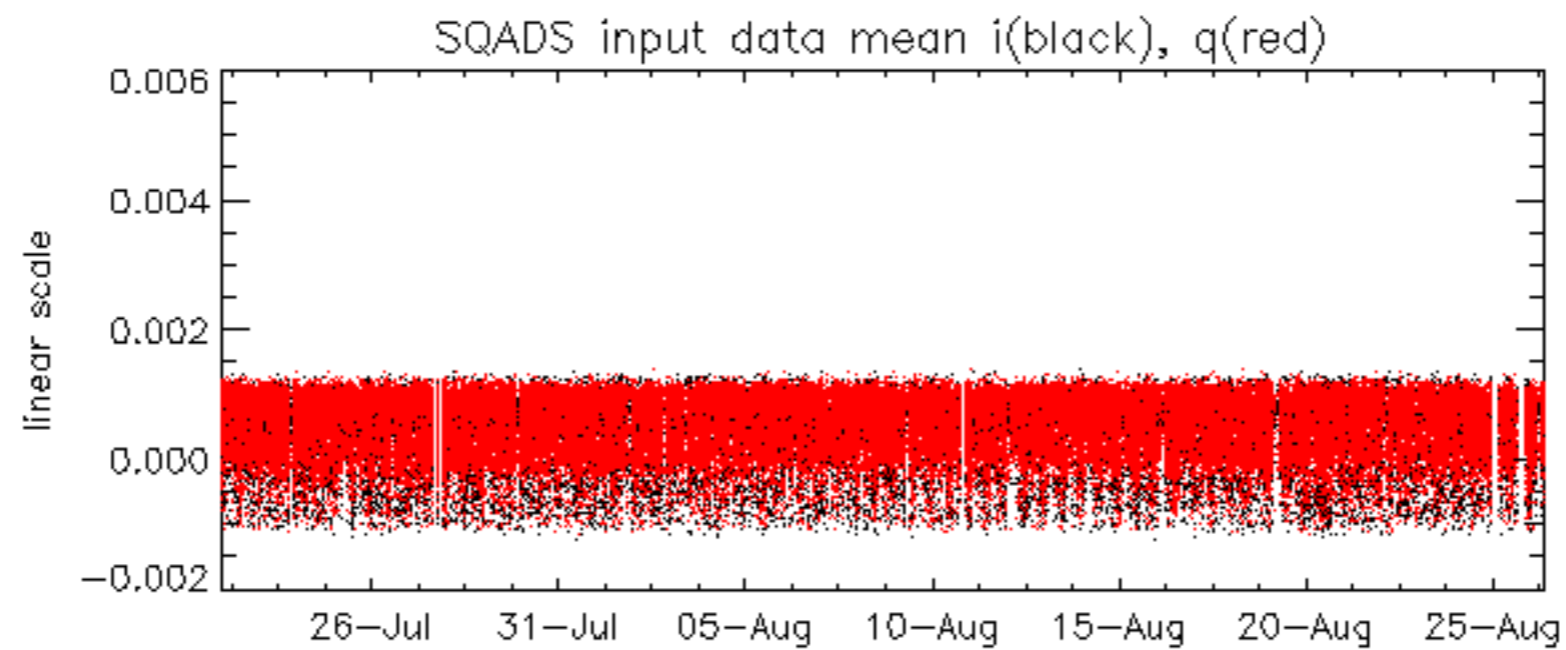


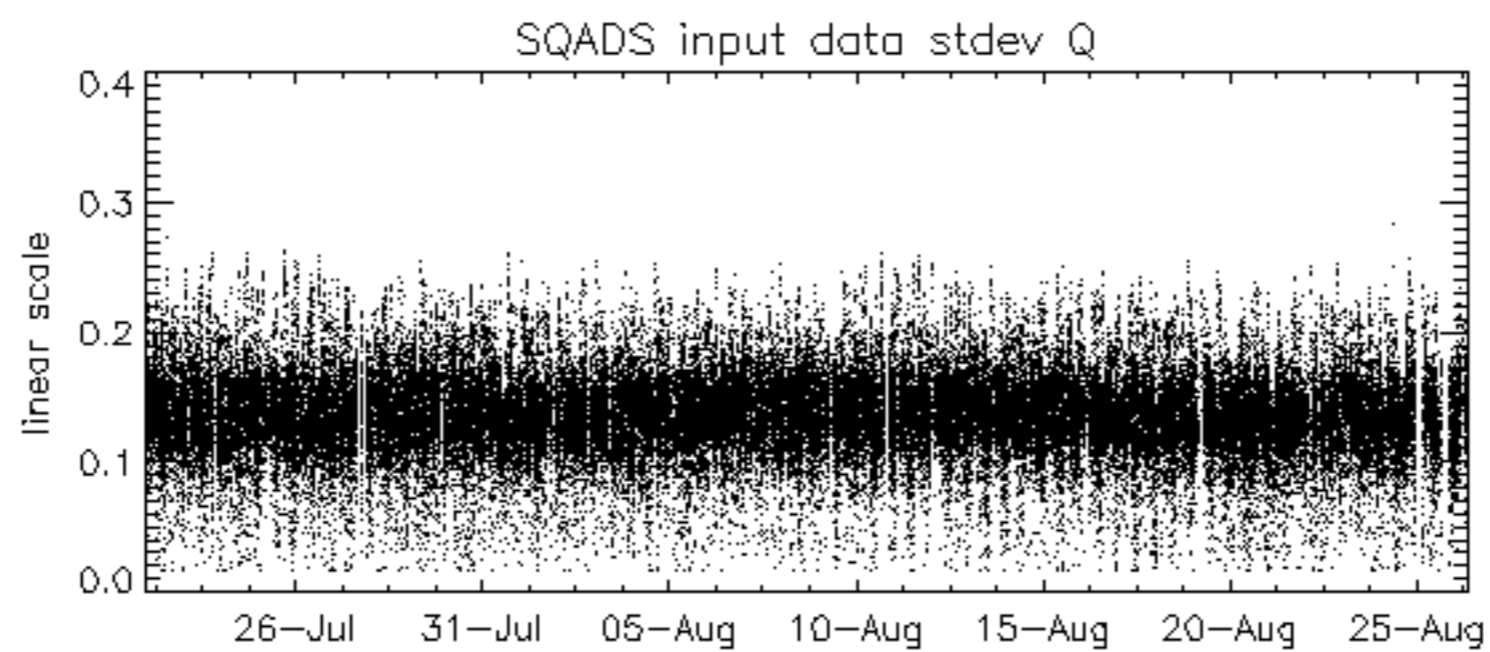
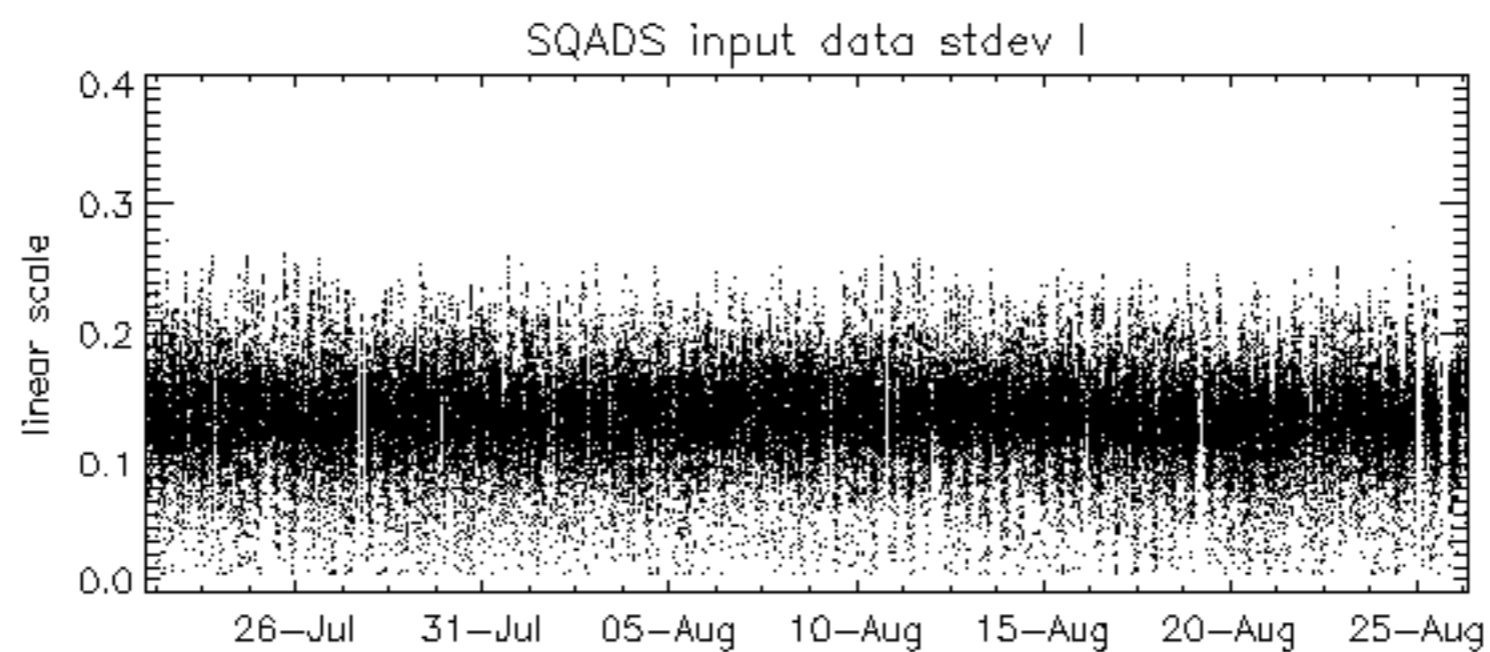
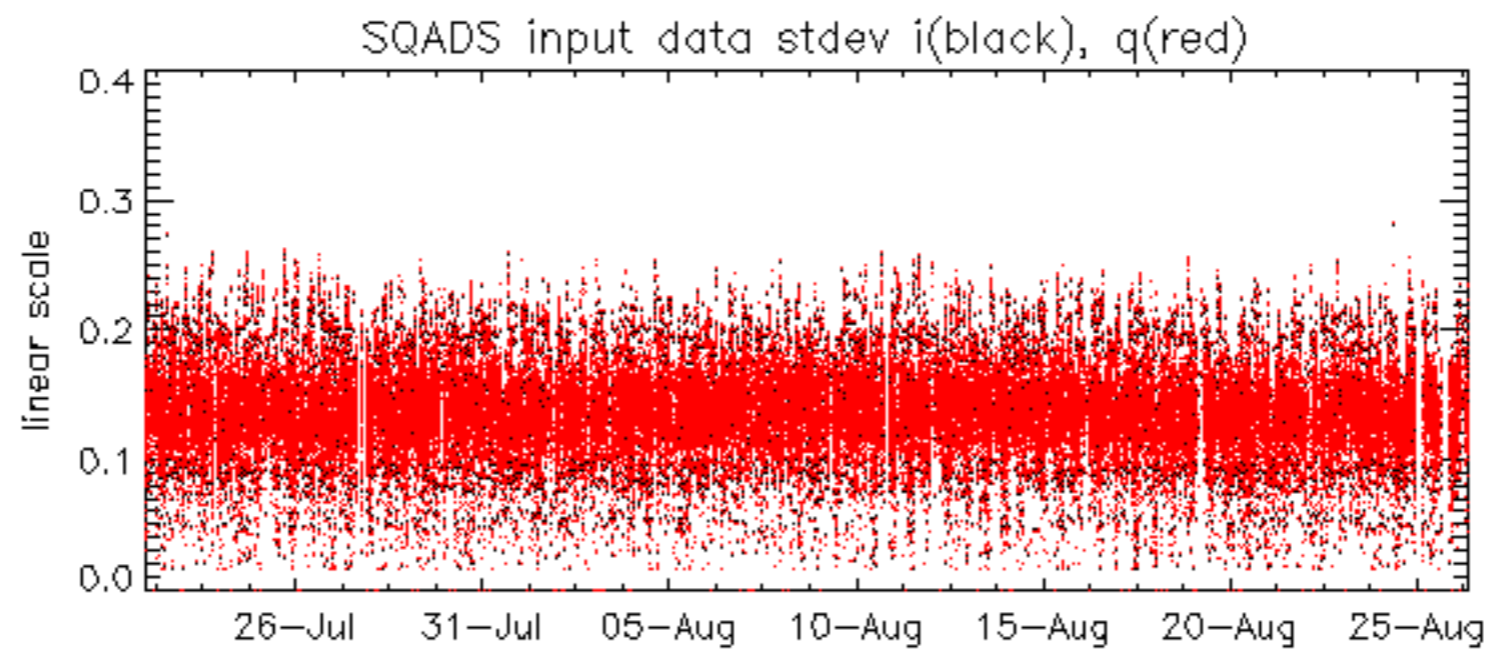
























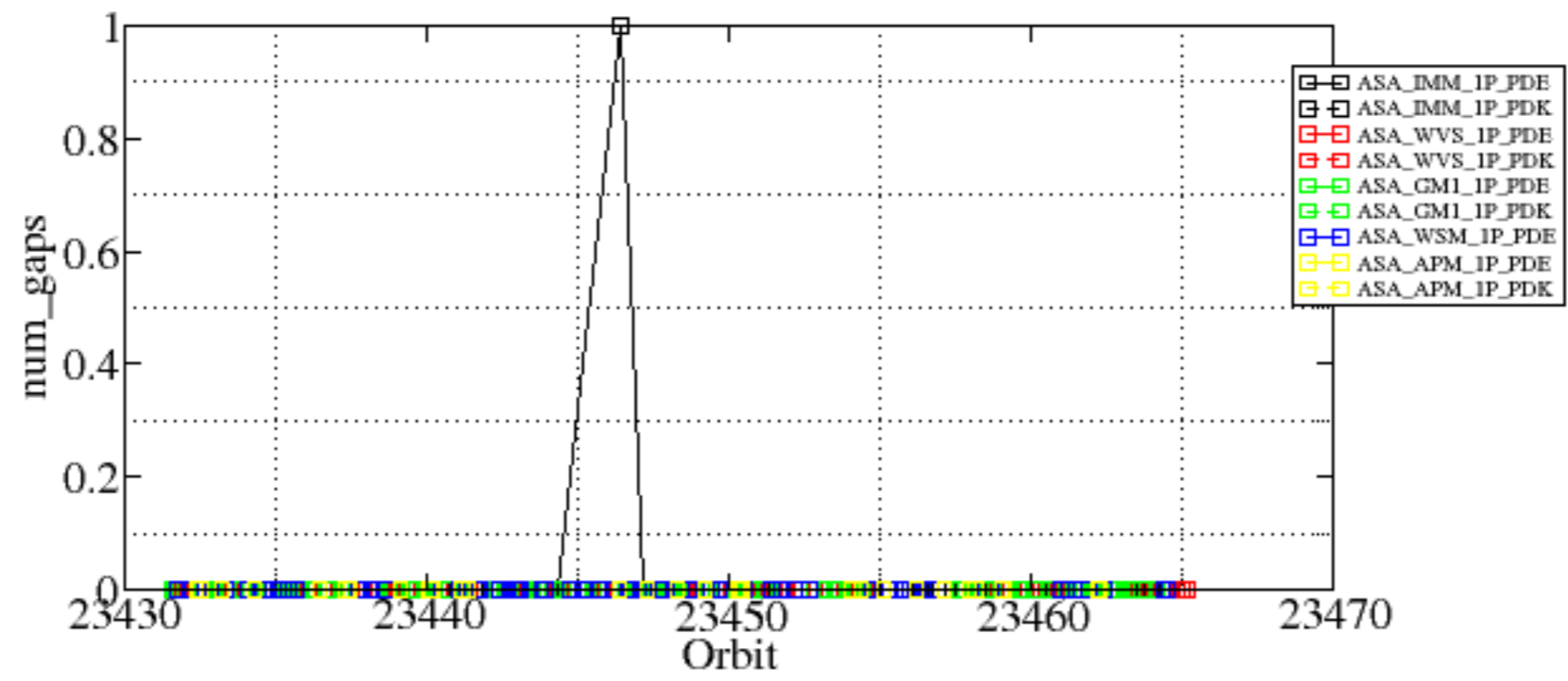




Summary of analysis for the last 3 days 2006082[456]

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

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060824_200913_000000372050_00343_23443_4344.N1	0	29
ASA_IMM_1PNPDE20060825_010619_000000812050_00346_23446_4356.N1	1	0
ASA_WSM_1PNPDE20060824_014431_000000982050_00332_23432_9170.N1	0	23
ASA_WSM_1PNPDE20060824_142441_000000862050_00340_23440_9286.N1	0	62
ASA_WSM_1PNPDE20060824_160850_000002082050_00341_23441_9284.N1	0	46
ASA_WSM_1PNPDE20060825_171327_000002322050_00356_23456_9475.N1	0	4











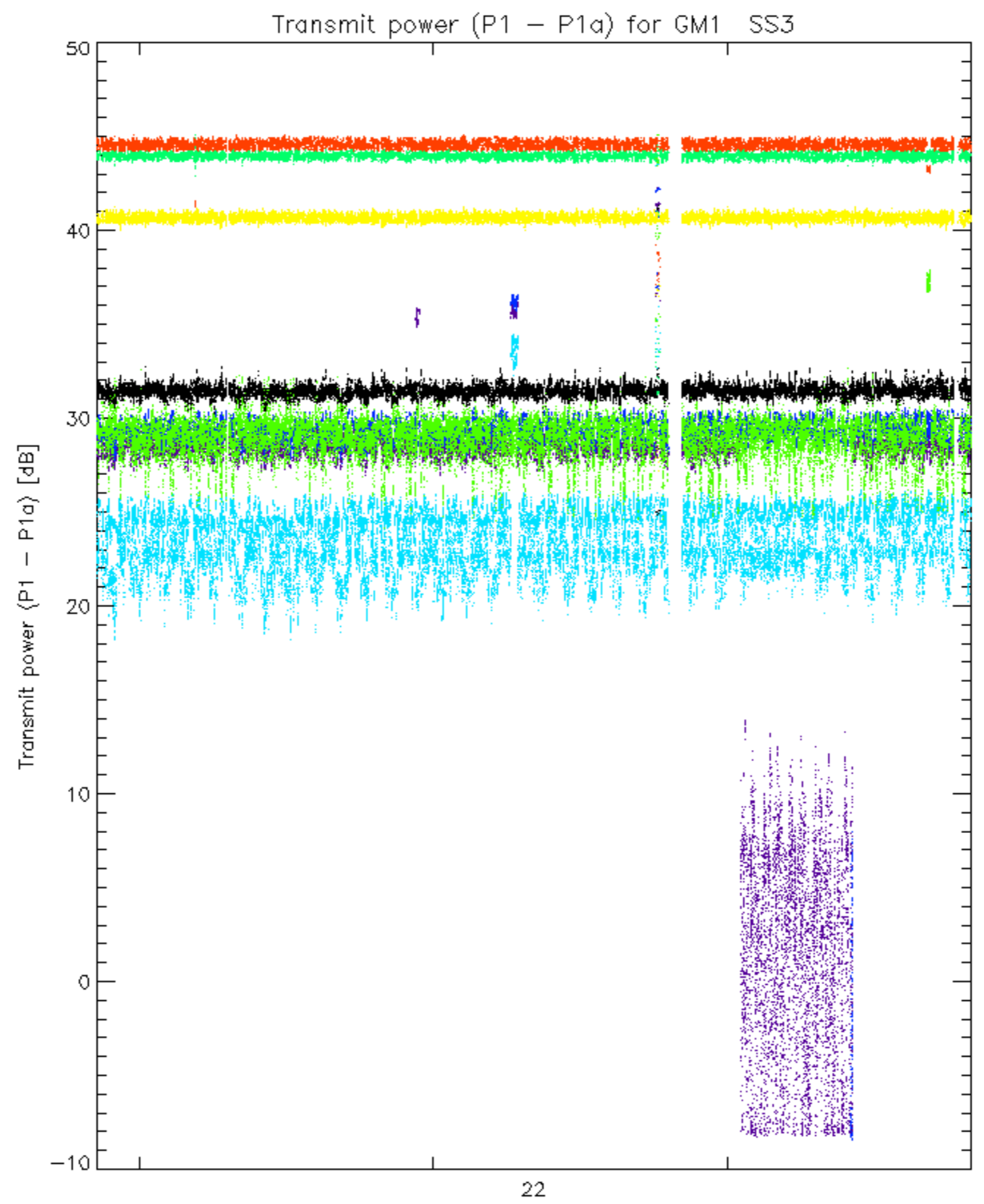


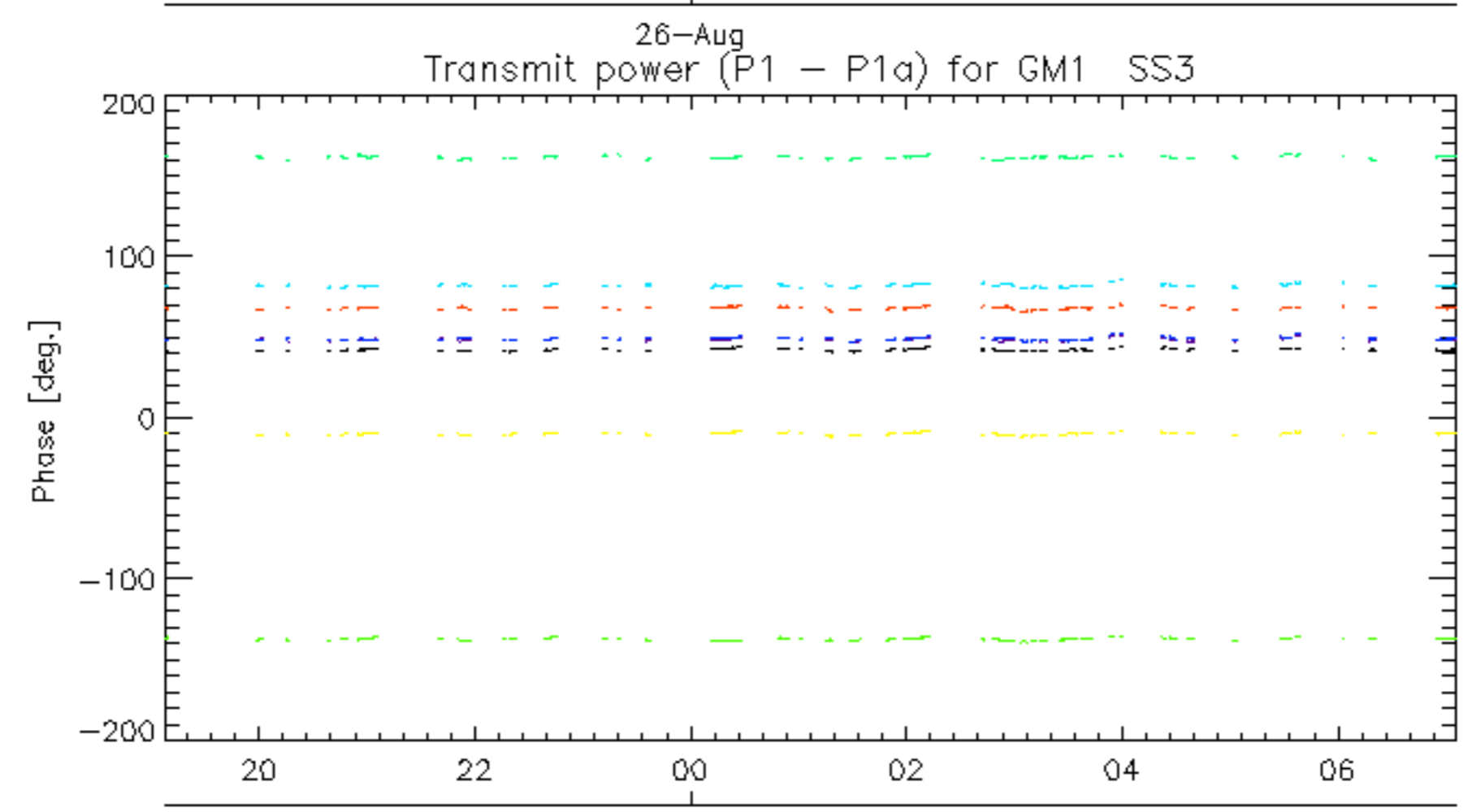
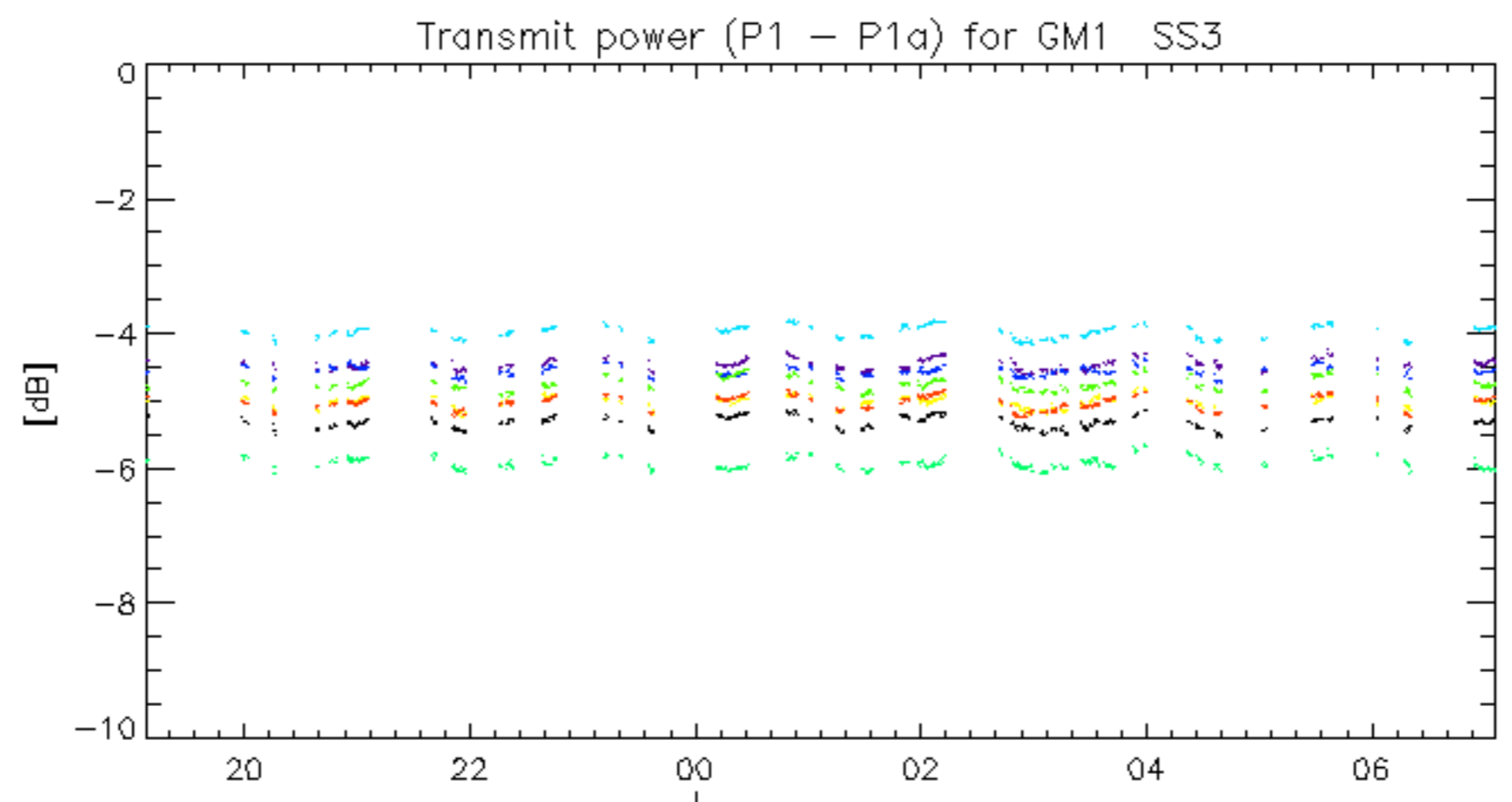






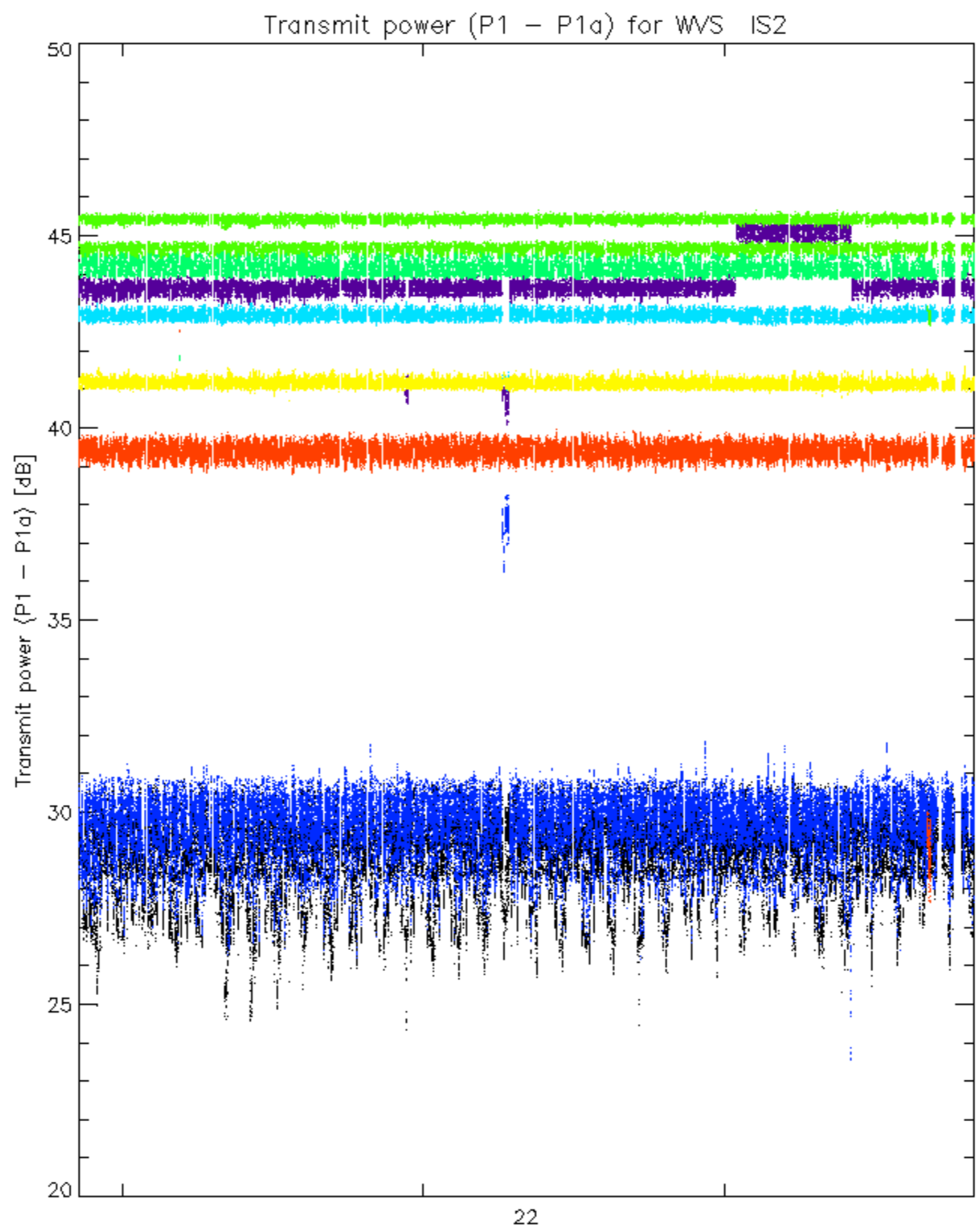




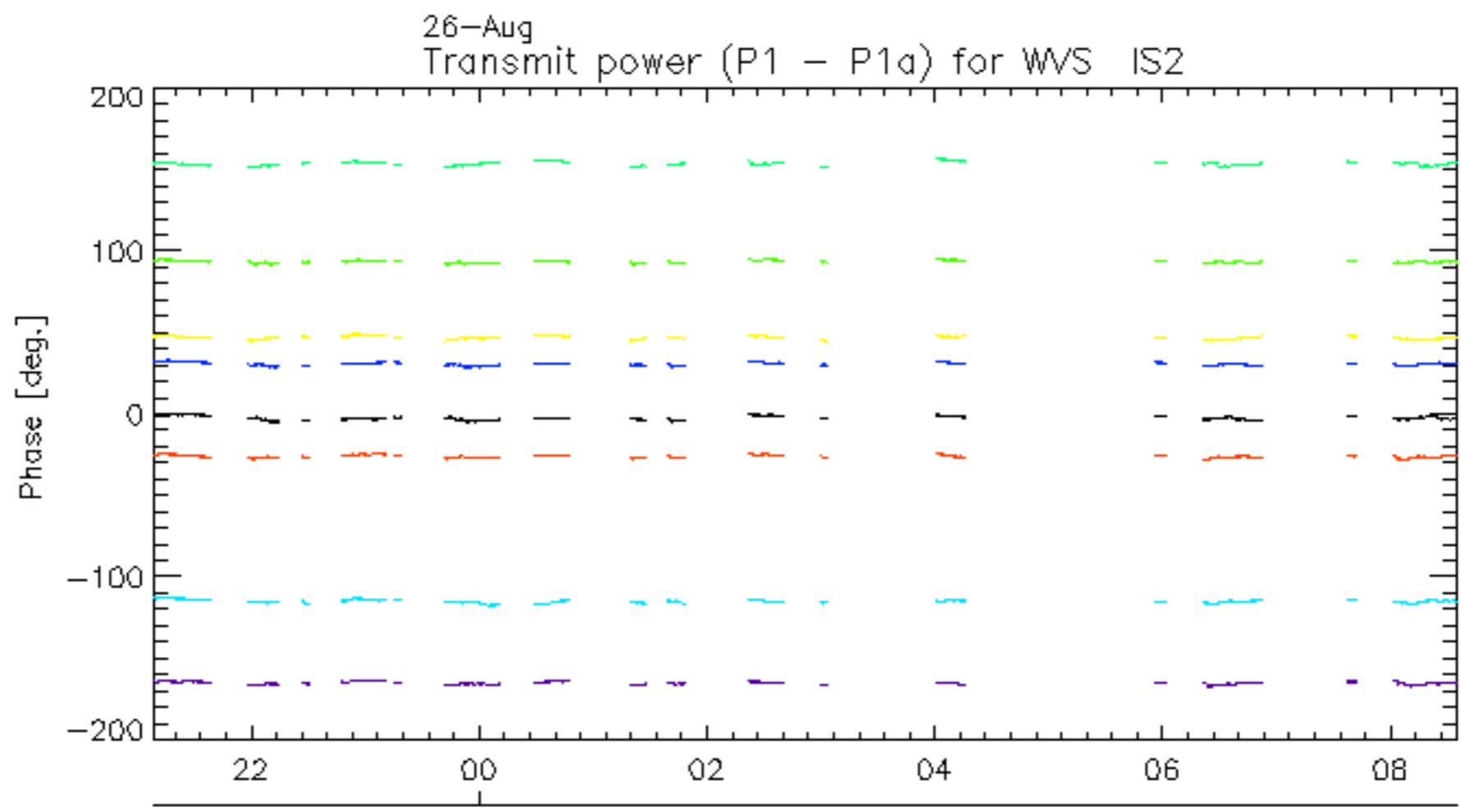
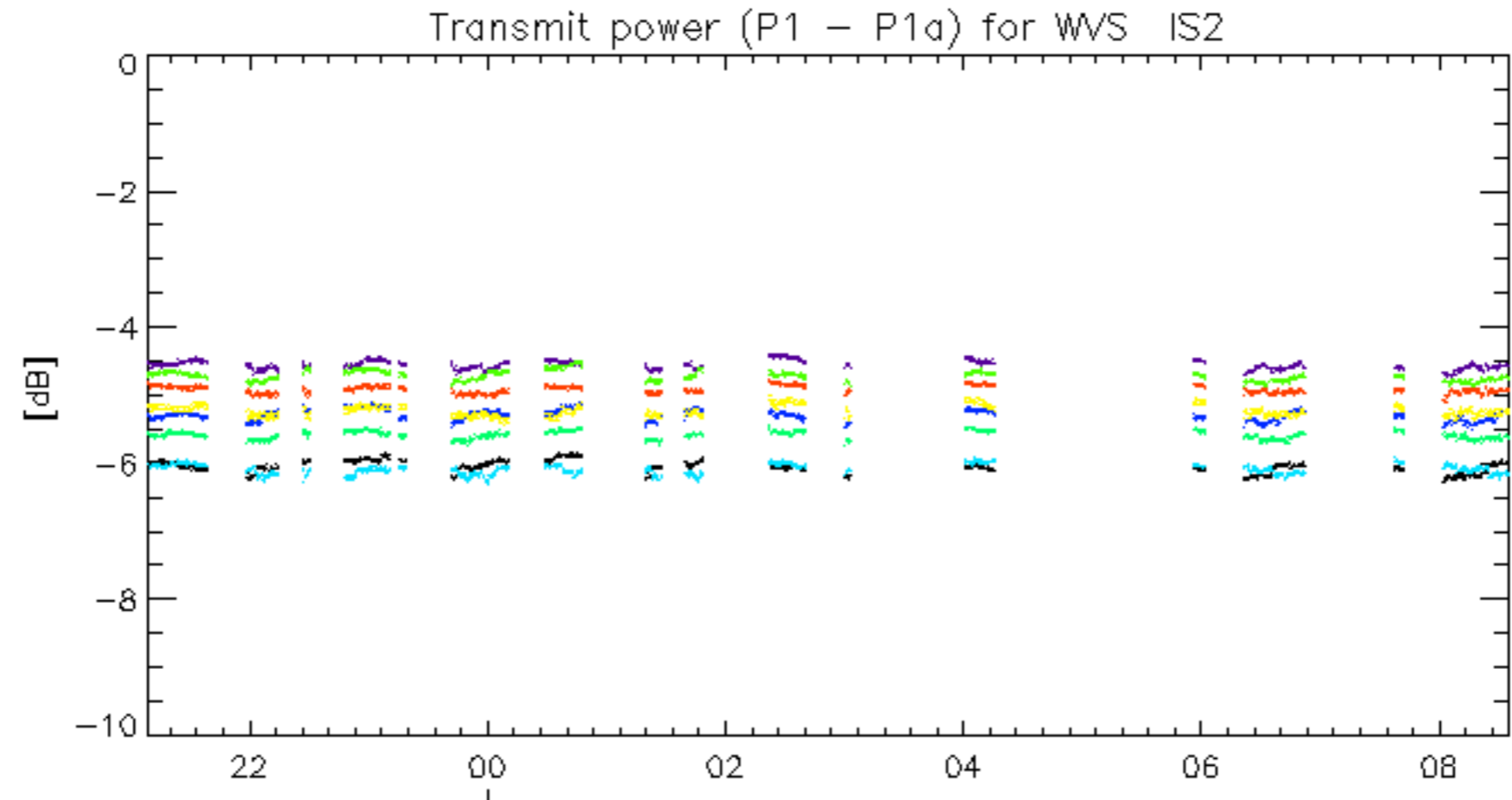


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No unavailabilities during the reported period.