

PRELIMINARY REPORT OF 060922

last update on Fri Sep 22 16:41:55 GMT 2006

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2006-09-21 00:00:00 to 2006-09-22 16:41:55

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	24	42	12	5	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	24	42	12	5	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	24	42	12	5	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	24	42	12	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	22	60	37	18	62
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	22	60	37	18	62
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	22	60	37	18	62
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	22	60	37	18	62

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	20060922 033419
H	20060921 040556

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
<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

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.941738	0.009886	-0.009539
7	P1	-3.055222	0.011317	-0.063018
11	P1	-4.057986	0.018441	-0.035162
15	P1	-6.183261	0.015627	-0.009266
19	P1	-3.526495	0.050293	-0.060727
22	P1	-4.572173	0.028092	-0.074818
26	P1	-3.952570	0.019118	-0.048447
30	P1	-5.801472	0.153622	-0.088953
3	P1	-16.599854	0.254432	-0.080705
7	P1	-16.882101	0.517389	-1.047347
11	P1	-16.794491	0.344463	-0.059296
15	P1	-12.898825	0.103815	0.129167
19	P1	-14.634460	0.460440	-0.137668
22	P1	-15.692974	0.558552	-0.001280
26	P1	-15.223164	0.202607	-0.032962
30	P1	-16.937763	0.396142	-0.038422

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.821609	0.083788	0.031787
7	P2	-21.855639	0.096001	0.049069
11	P2	-15.747676	0.106843	-0.008077
15	P2	-7.092015	0.099255	-0.012475
19	P2	-9.120598	0.091625	-0.033499
22	P2	-18.123667	0.087247	-0.016568
26	P2	-16.410830	0.094651	-0.052335
30	P2	-19.471869	0.090276	-0.012165

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.181030	0.005068	-0.029034
7	P3	-8.181030	0.005068	-0.029034
11	P3	-8.181030	0.005068	-0.029034
15	P3	-8.181030	0.005068	-0.029034
19	P3	-8.181030	0.005068	-0.029034
22	P3	-8.181030	0.005068	-0.029034
26	P3	-8.181030	0.005068	-0.029034
30	P3	-8.181030	0.005068	-0.029034

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

✕

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.848218	0.009102	-0.042114
7	P1	-2.475560	0.052277	-0.329295
11	P1	-2.879445	0.022491	-0.049575
15	P1	-3.654838	0.028831	-0.033806
19	P1	-3.465034	0.077919	-0.028629
22	P1	-5.098261	0.035831	-0.048103
26	P1	-5.870236	0.023979	-0.010672
30	P1	-5.202105	0.076989	-0.052866
3	P1	-11.636215	0.046935	-0.032336
7	P1	-9.944819	0.071359	-0.319561
11	P1	-10.344011	0.061980	-0.086268
15	P1	-10.858954	0.150566	0.009906
19	P1	-15.687954	3.565481	-0.001705
22	P1	-20.799036	1.700662	-0.299384

26	P1	-15.941862	0.390919	0.103026
30	P1	-18.060034	0.807983	-0.287037

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.411501	0.055424	0.056299
7	P2	-22.191919	0.088754	0.065137
11	P2	-10.899755	0.042435	0.010818
15	P2	-4.859422	0.037585	0.000876
19	P2	-6.848886	0.038074	-0.013353
22	P2	-8.157285	0.032924	0.005861
26	P2	-24.172426	0.052442	-0.027129
30	P2	-21.961710	0.042371	-0.011389

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.026577	0.003924	-0.039967
7	P3	-8.026424	0.003920	-0.039832
11	P3	-8.026433	0.003928	-0.039884
15	P3	-8.026488	0.003945	-0.039759
19	P3	-8.026538	0.003945	-0.039633
22	P3	-8.026578	0.003913	-0.039763
26	P3	-8.026638	0.003934	-0.039685
30	P3	-8.026474	0.003925	-0.039805

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	0.000546597
	stdev	1.80033e-07
MEAN Q	mean	0.000520026
	stdev	2.19672e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136187
	stdev	0.00114189
STDEV Q	mean	0.136540
	stdev	0.00115916



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006092[012]

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_1PNPDE20060920_001749_000001822051_00217_23818_6049.N1	1	0
ASA_IMM_1PNPDE20060920_015825_000001852051_00218_23819_6068.N1	1	0
ASA_IMM_1PNPDE20060920_234612_000001712051_00231_23832_6130.N1	1	0
ASA_WSM_1PNPDE20060920_163137_000000672051_00226_23827_3061.N1	0	95
ASA_WSM_1PNPDE20060920_183929_000002982051_00228_23829_3078.N1	0	14

ASA_WSM_1PNPDE20060921_033637_000001462051_00233_23834_3151.N1	0	1
ASA_WSM_1PNPDE20060921_162641_000001032051_00241_23842_3224.N1	0	40
ASA_WSM_1PNPDE20060921_180903_000000852051_00242_23843_3234.N1	0	34



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"/>

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

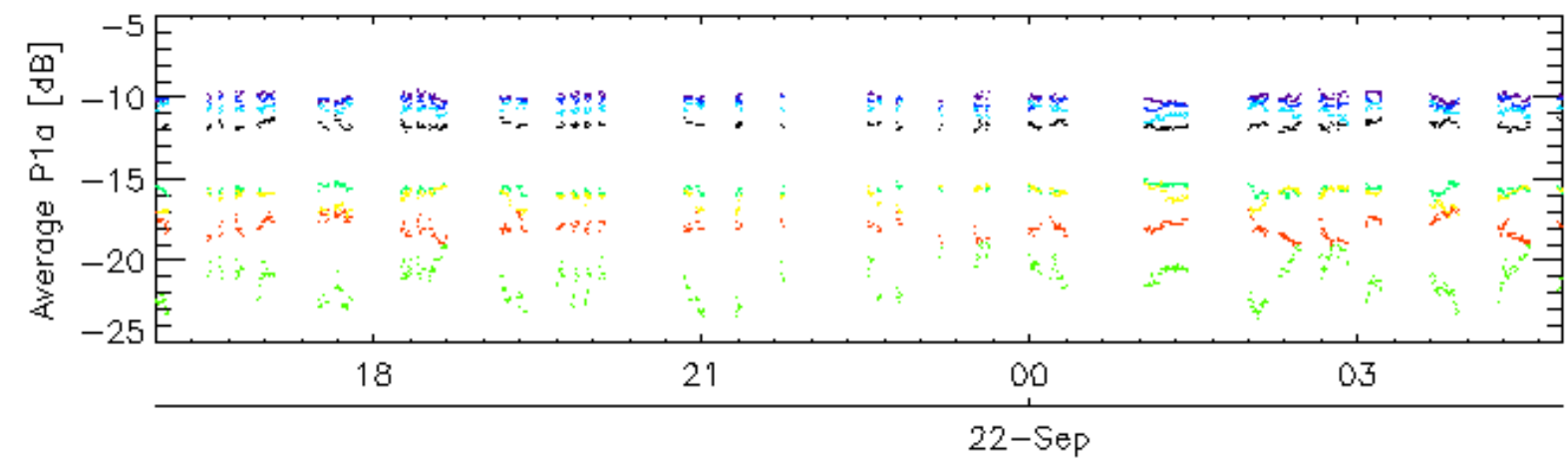
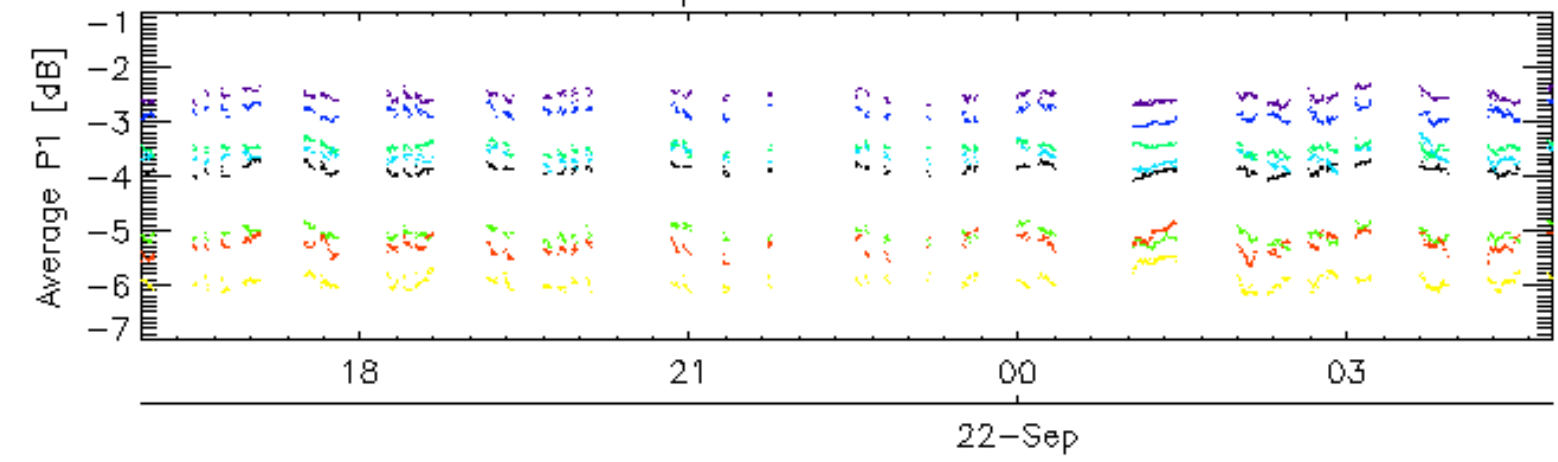
7.5 - Absolute Doppler for GM1

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

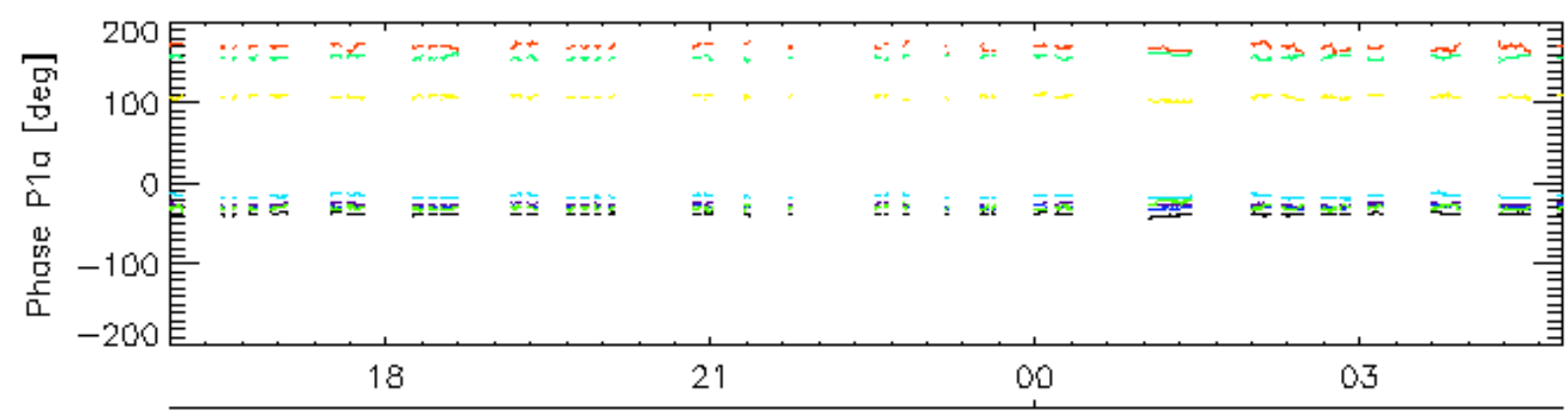
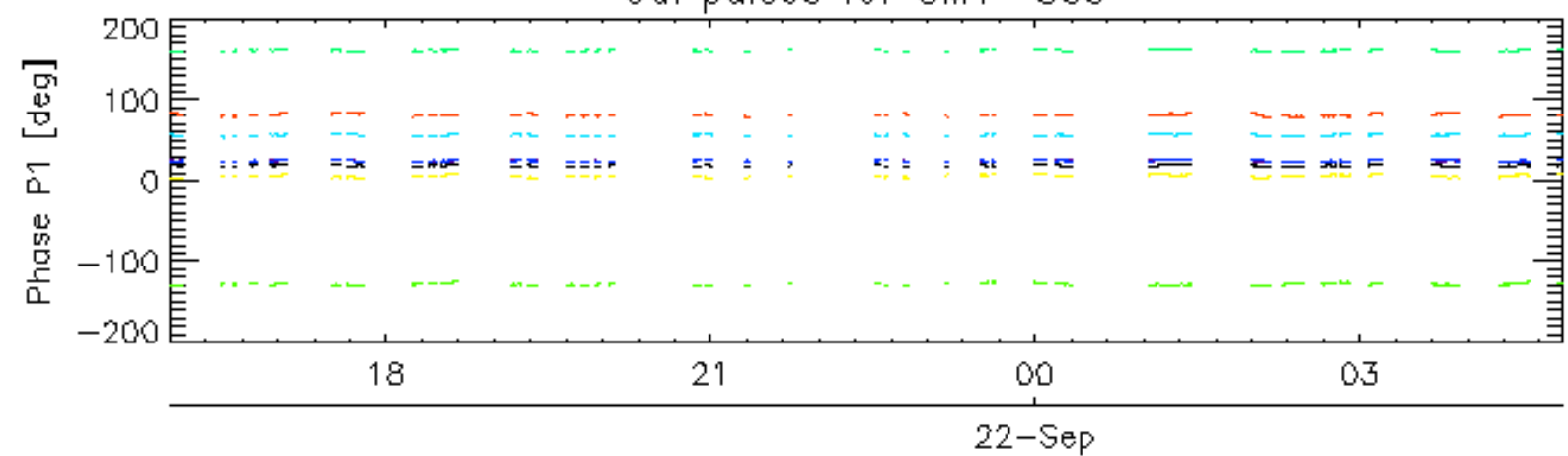
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

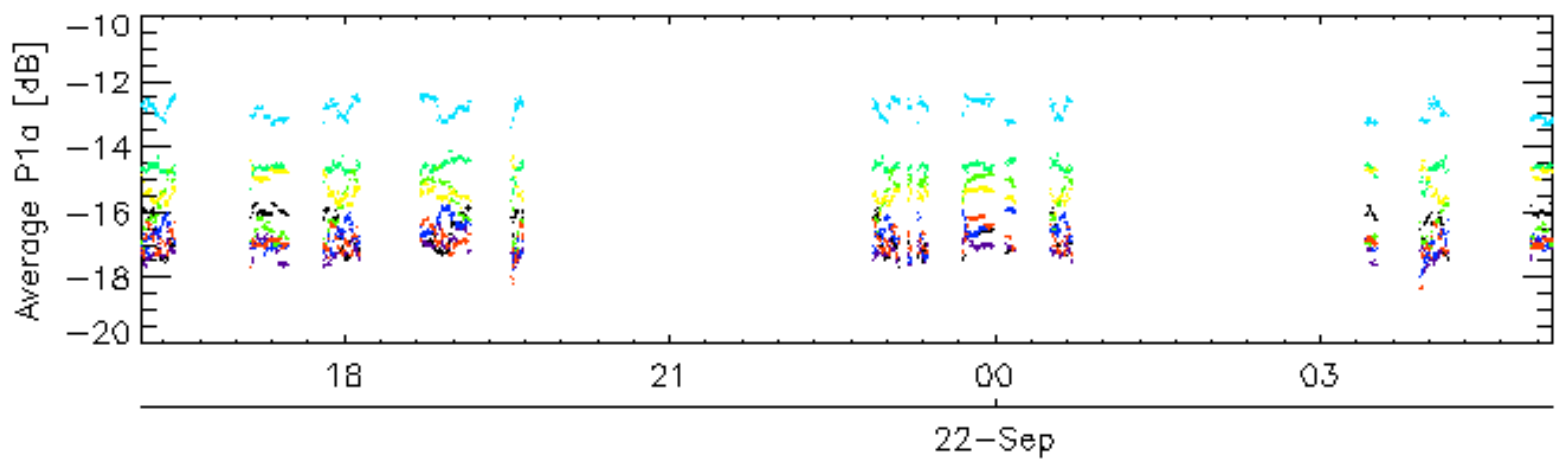
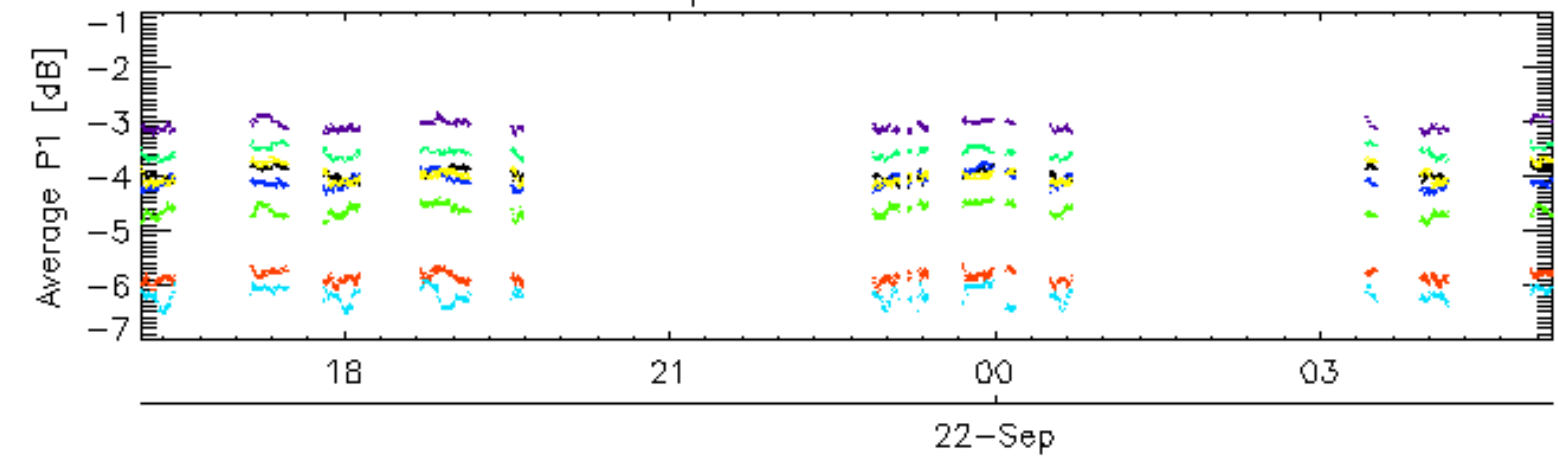


Cal pulses for GM1 SS3

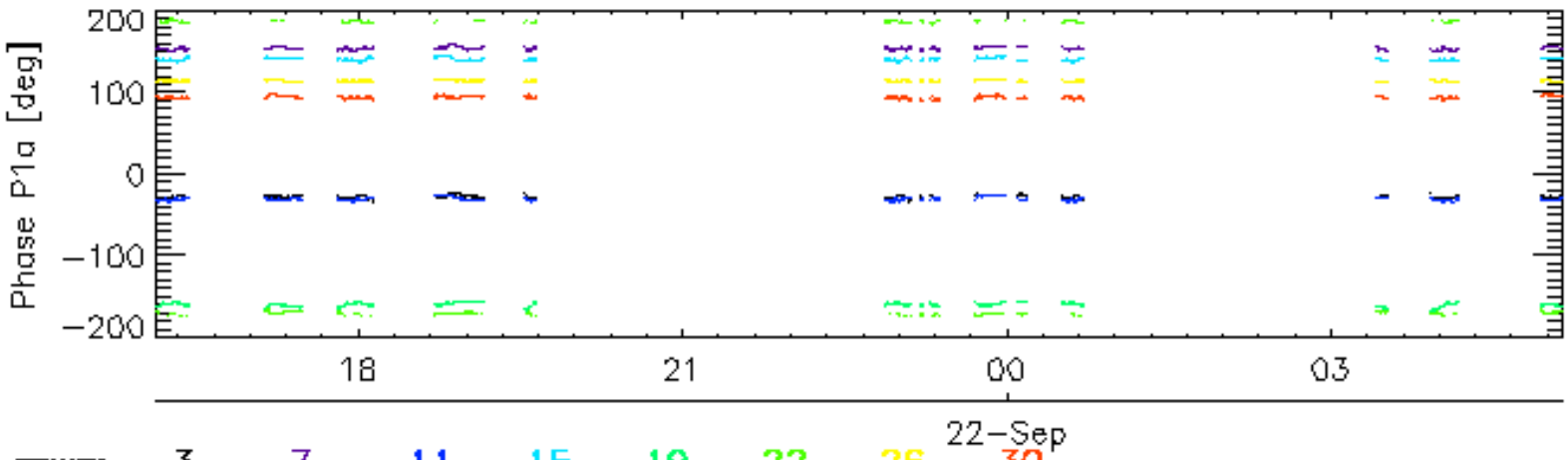
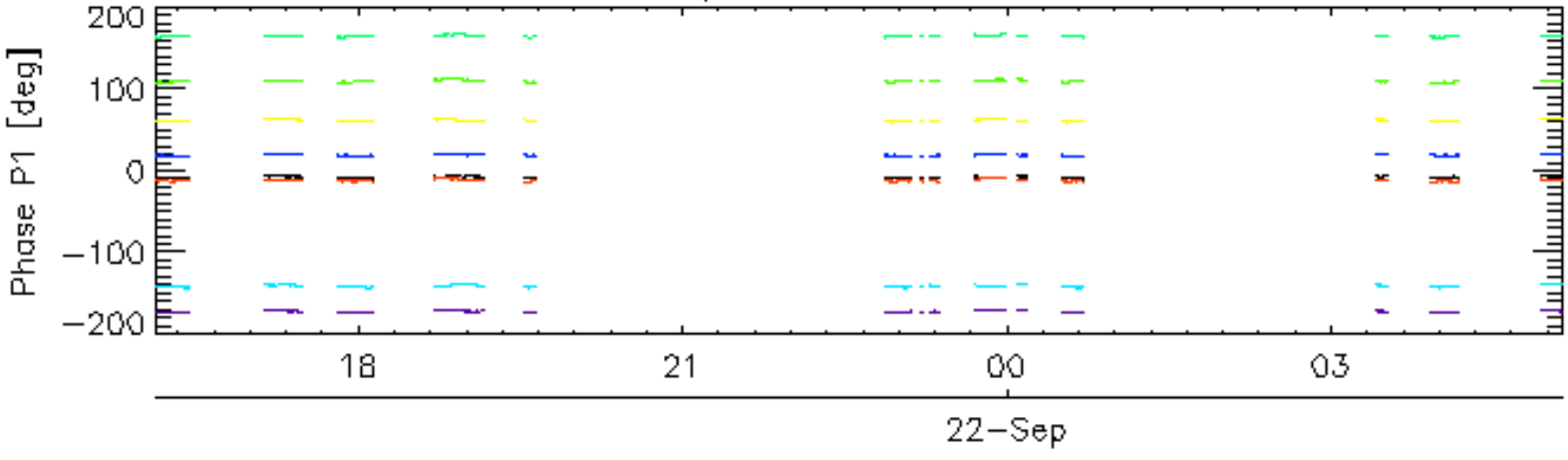


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

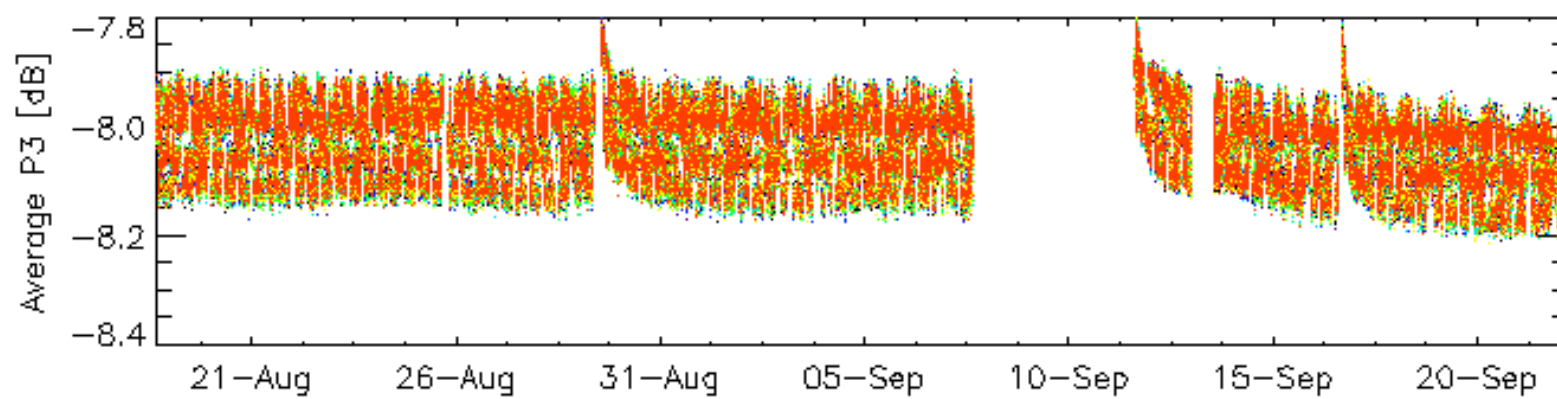
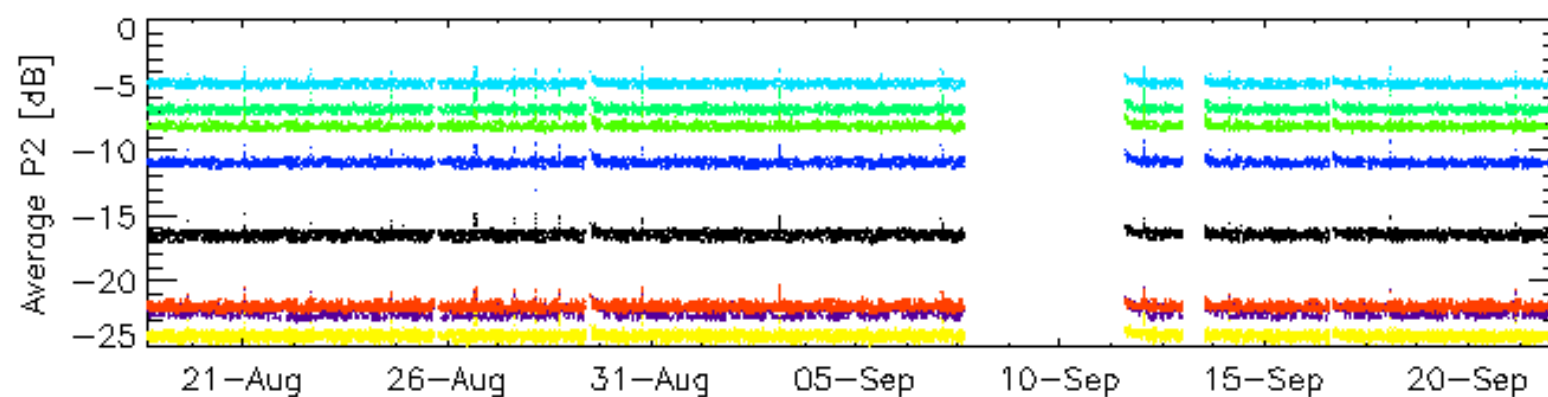
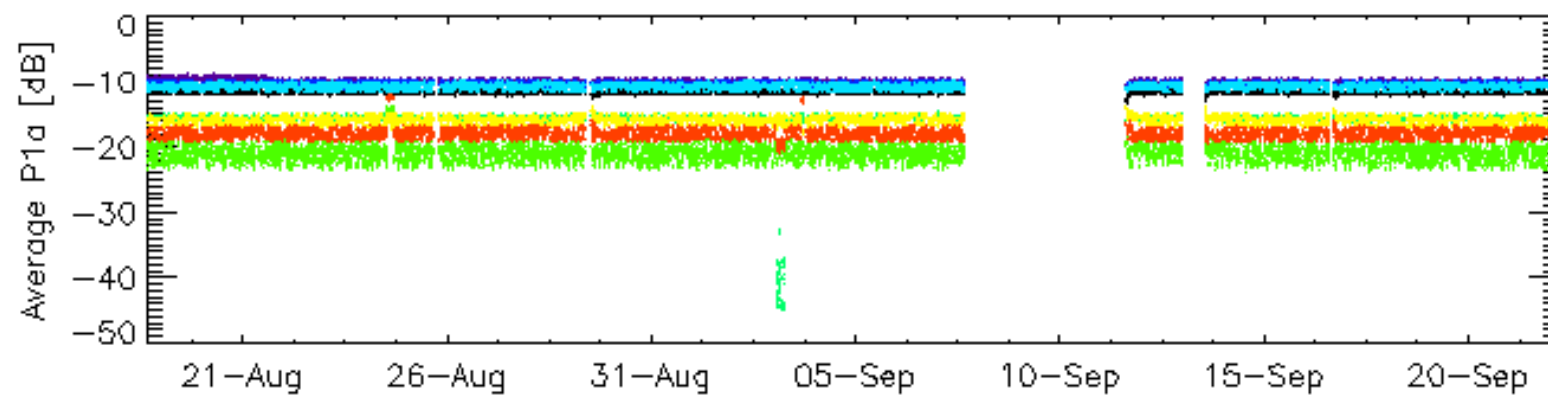
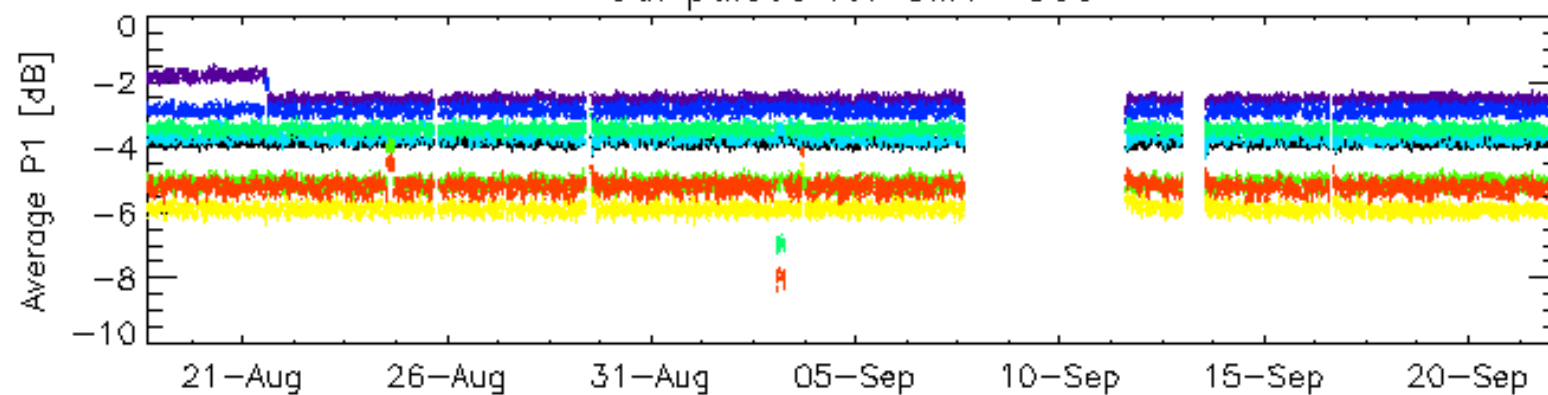


Cal pulses for WVS IS2



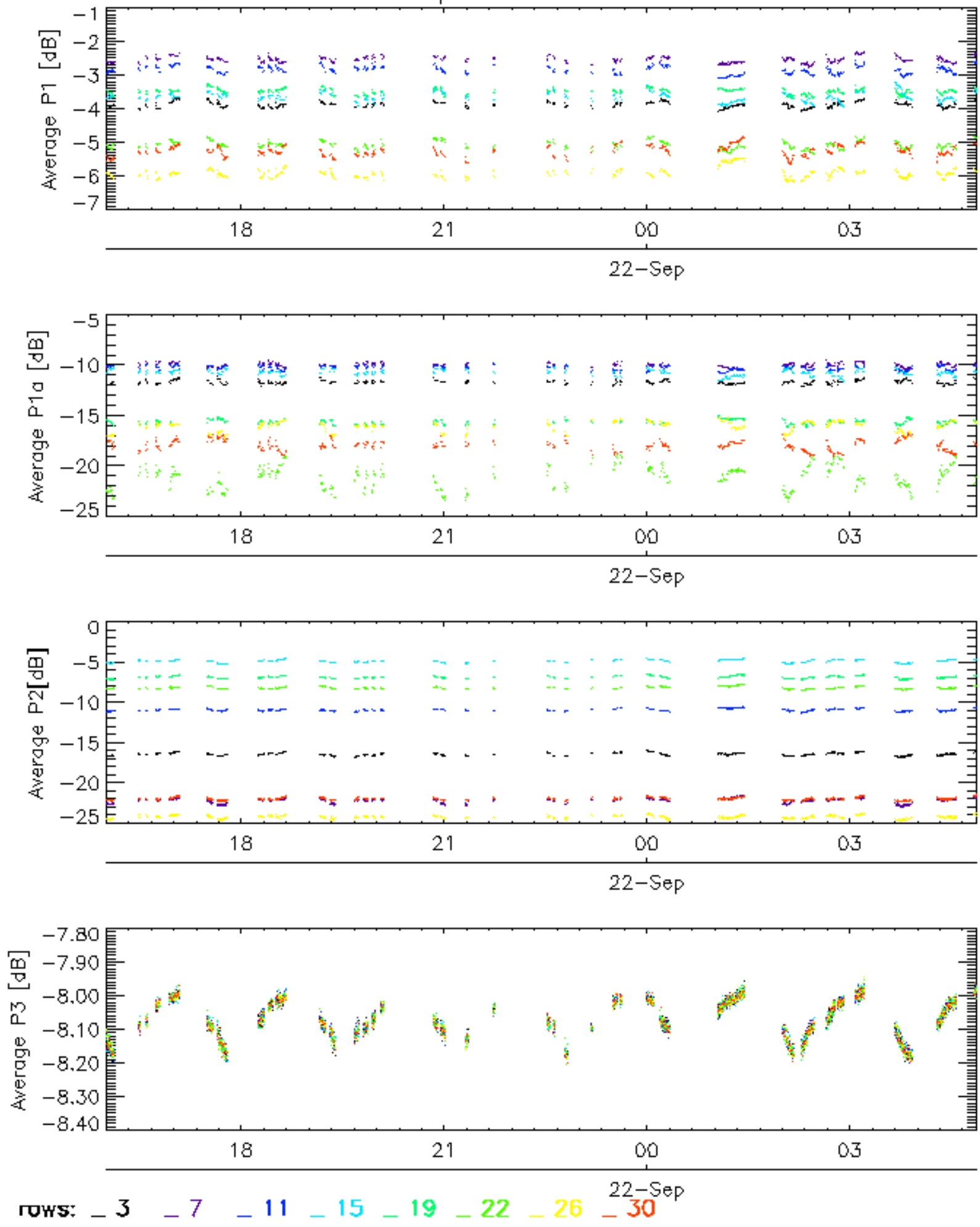
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 22-Sep

Cal pulses for GM1 SS3

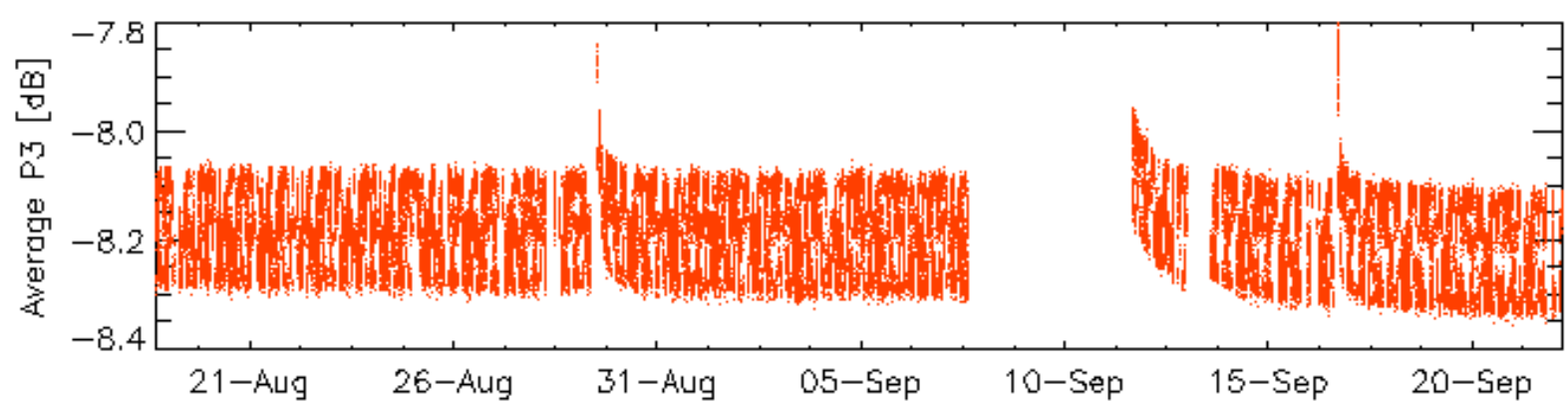
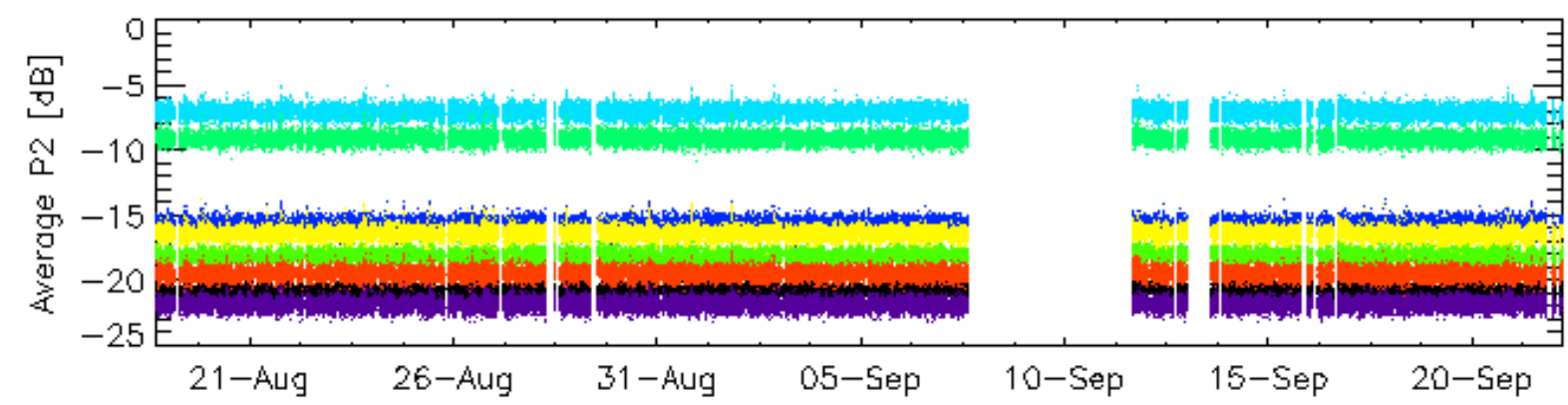
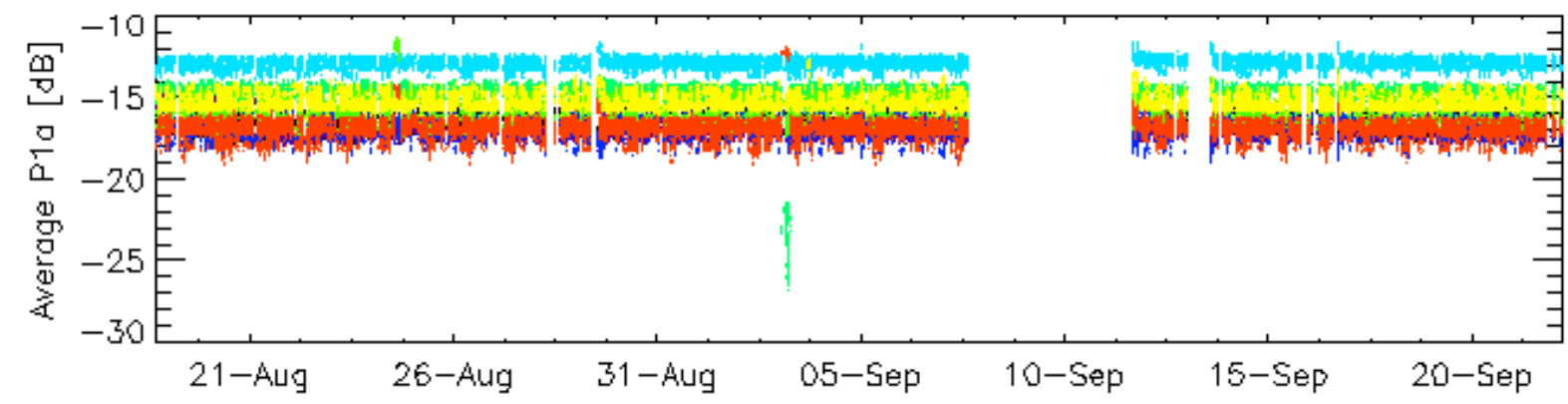
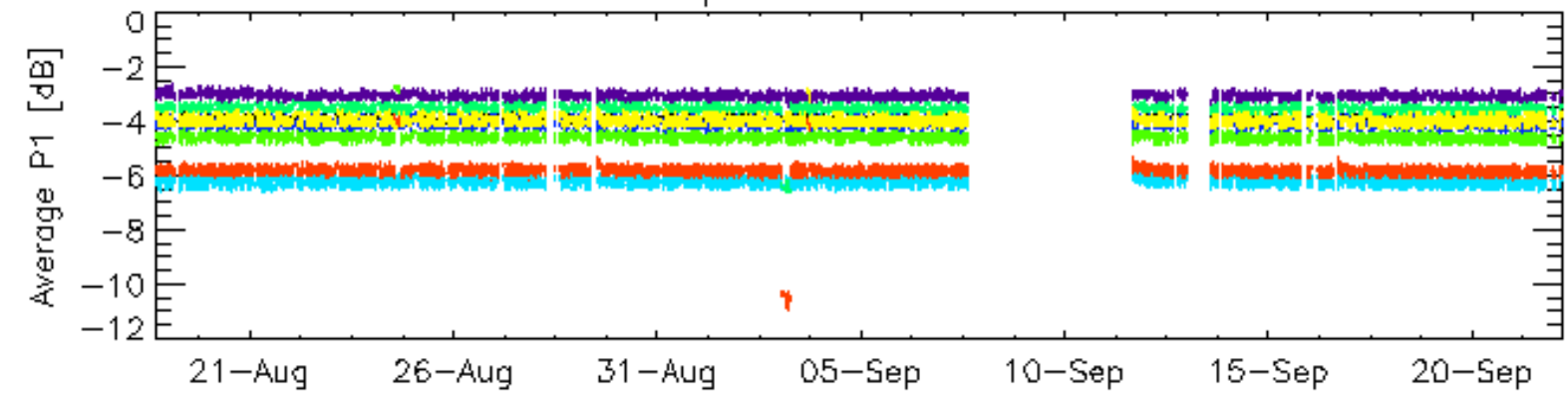


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

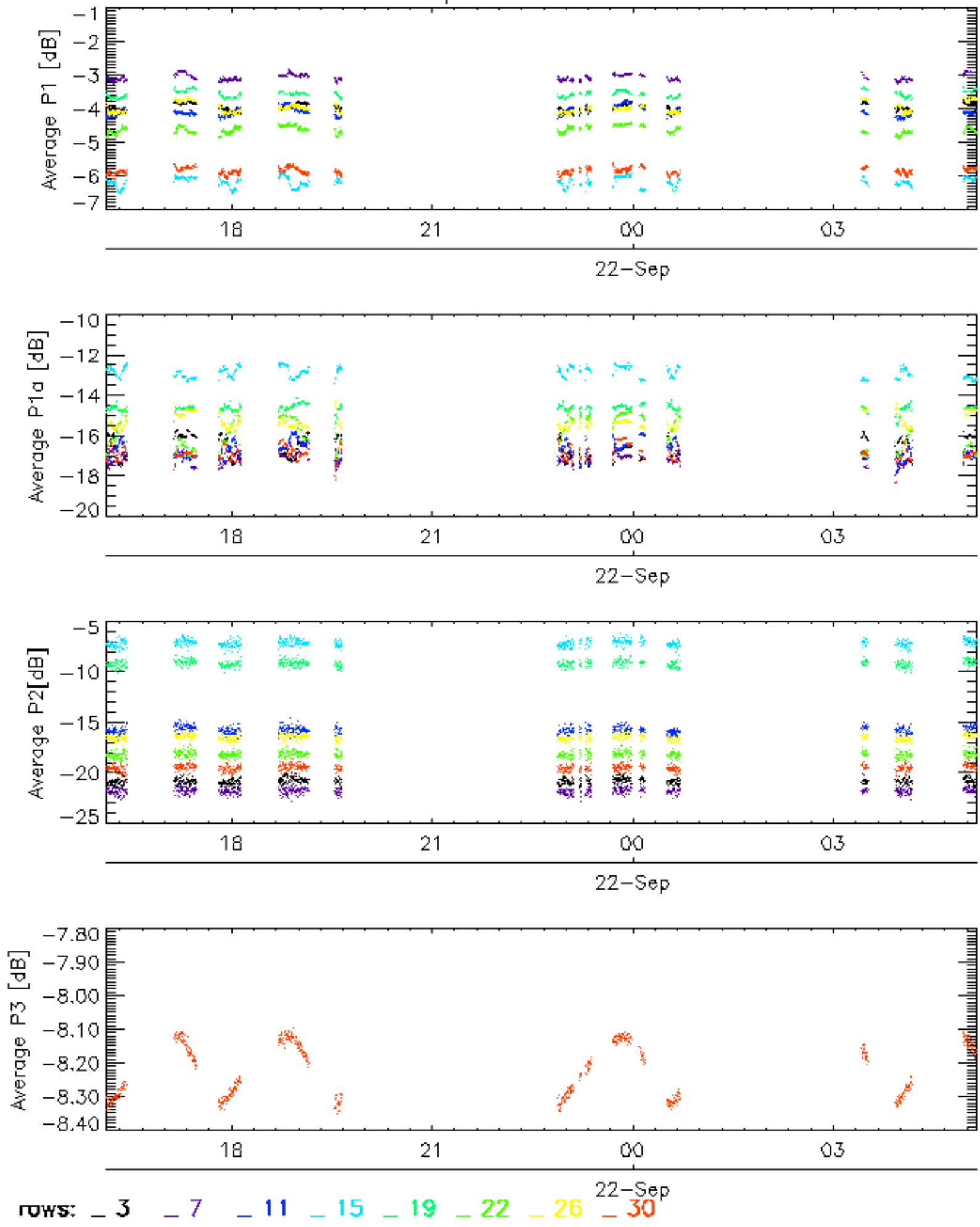


Cal pulses for WVS IS2



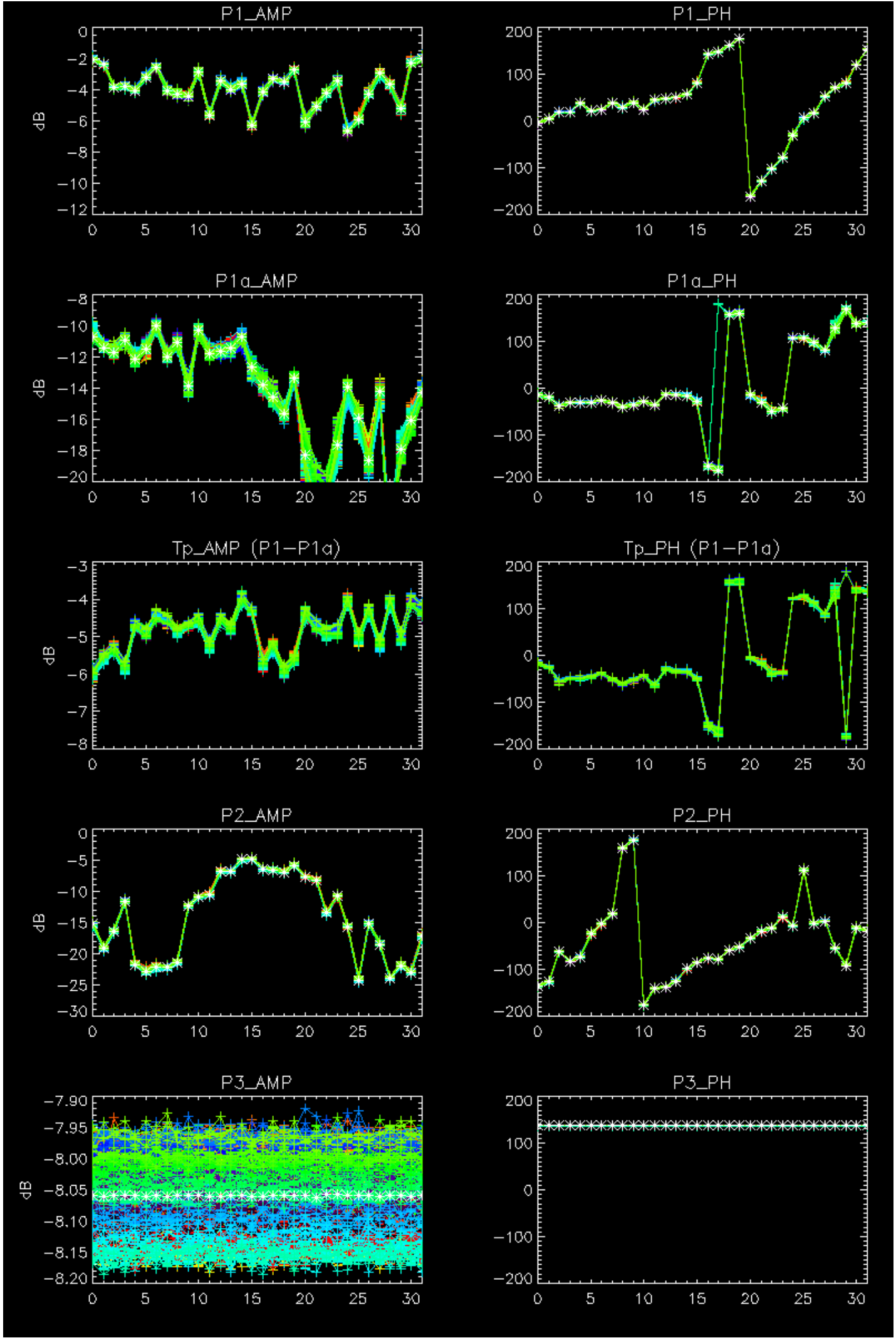
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

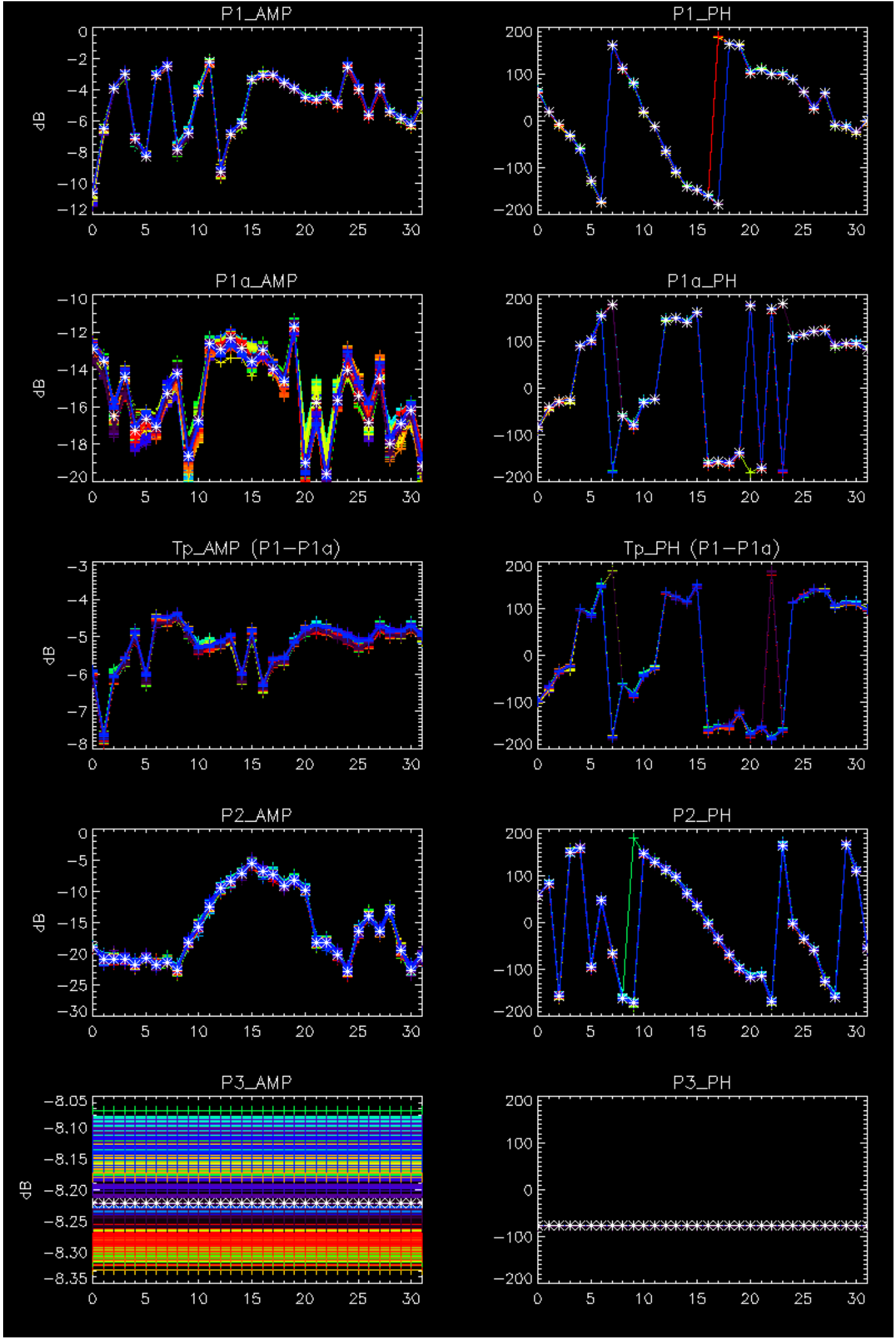
Cal pulses for WVS IS2



No anomalies observed on available browse products

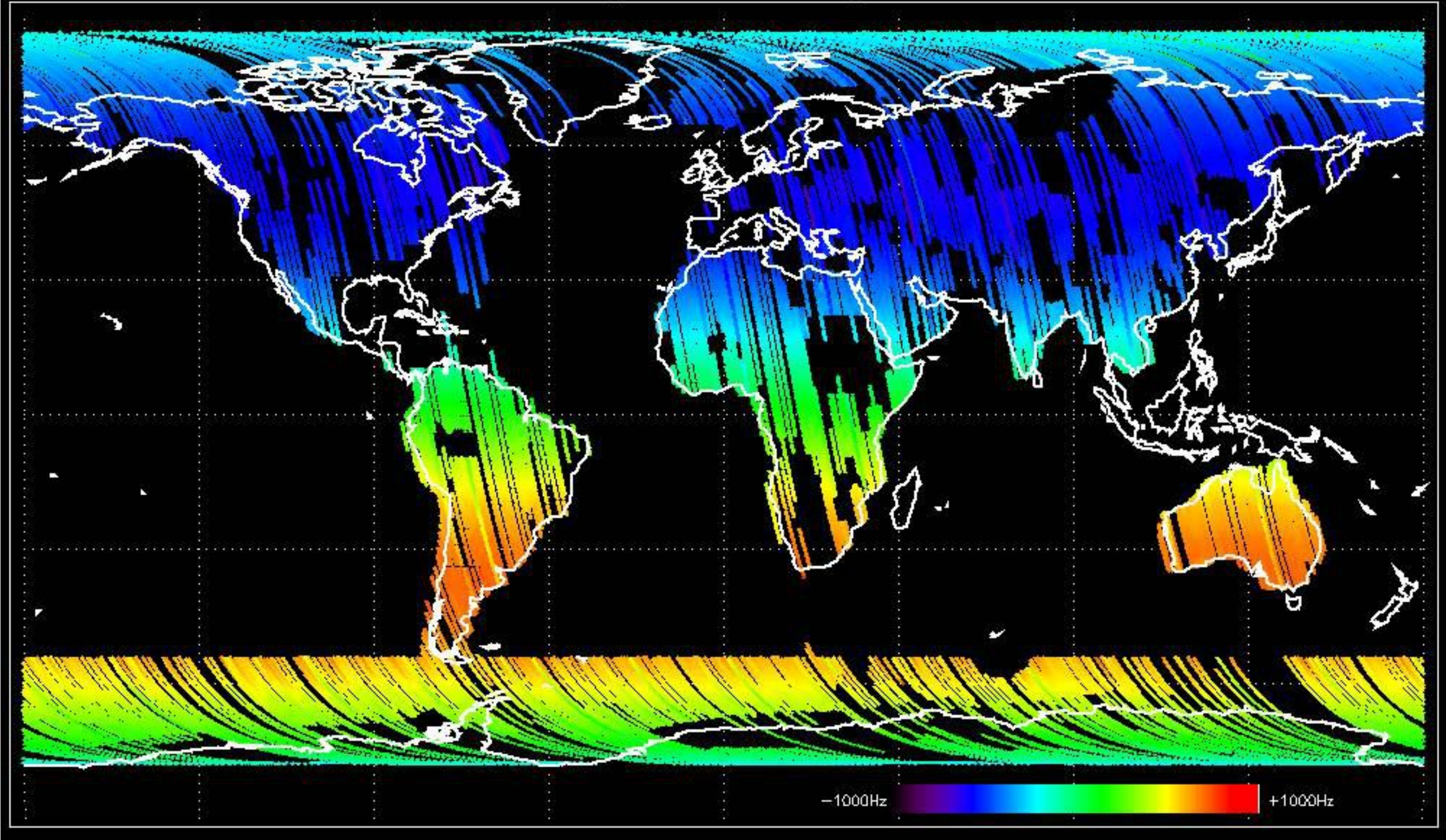
No anomalies observed.



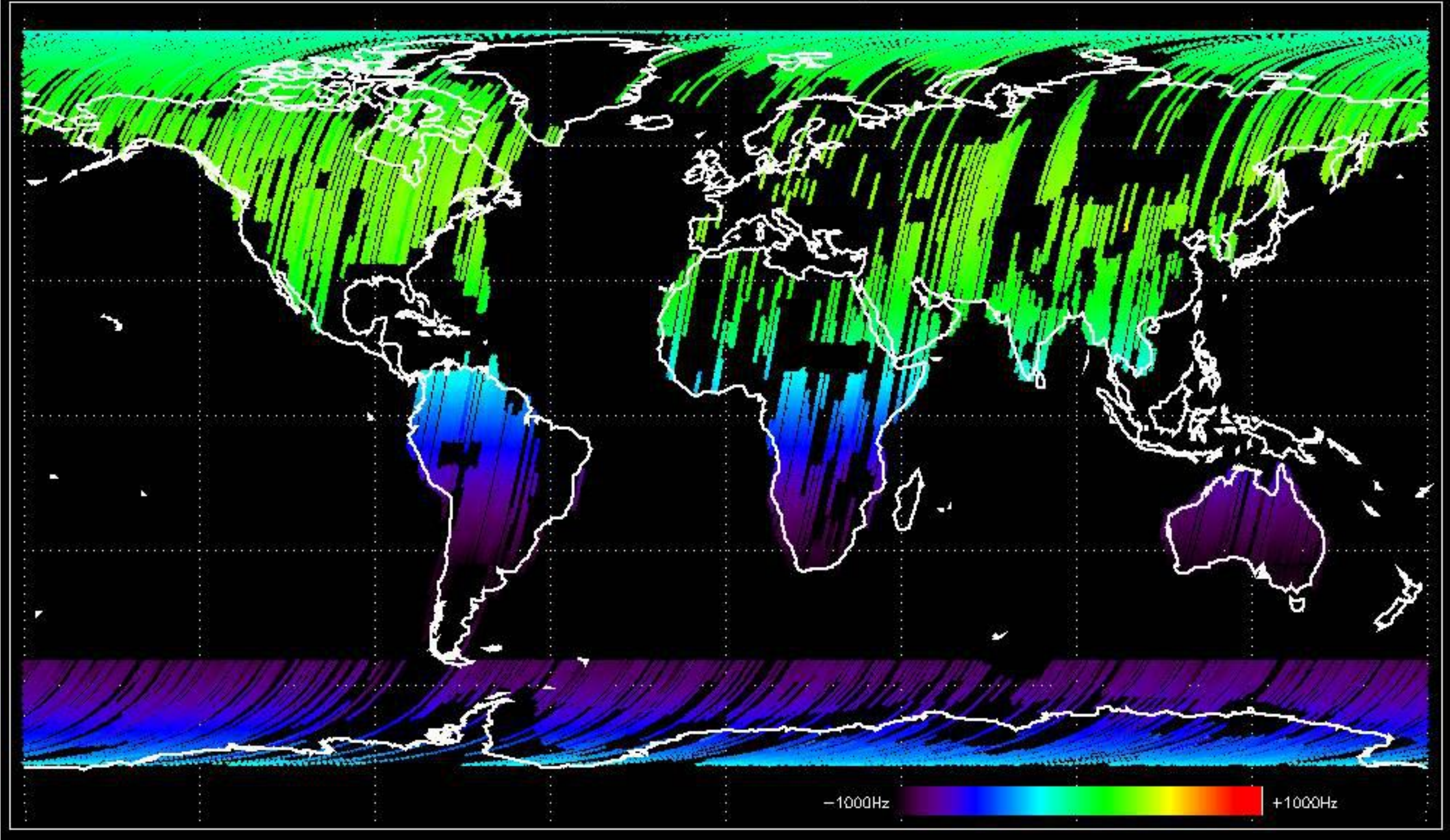


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

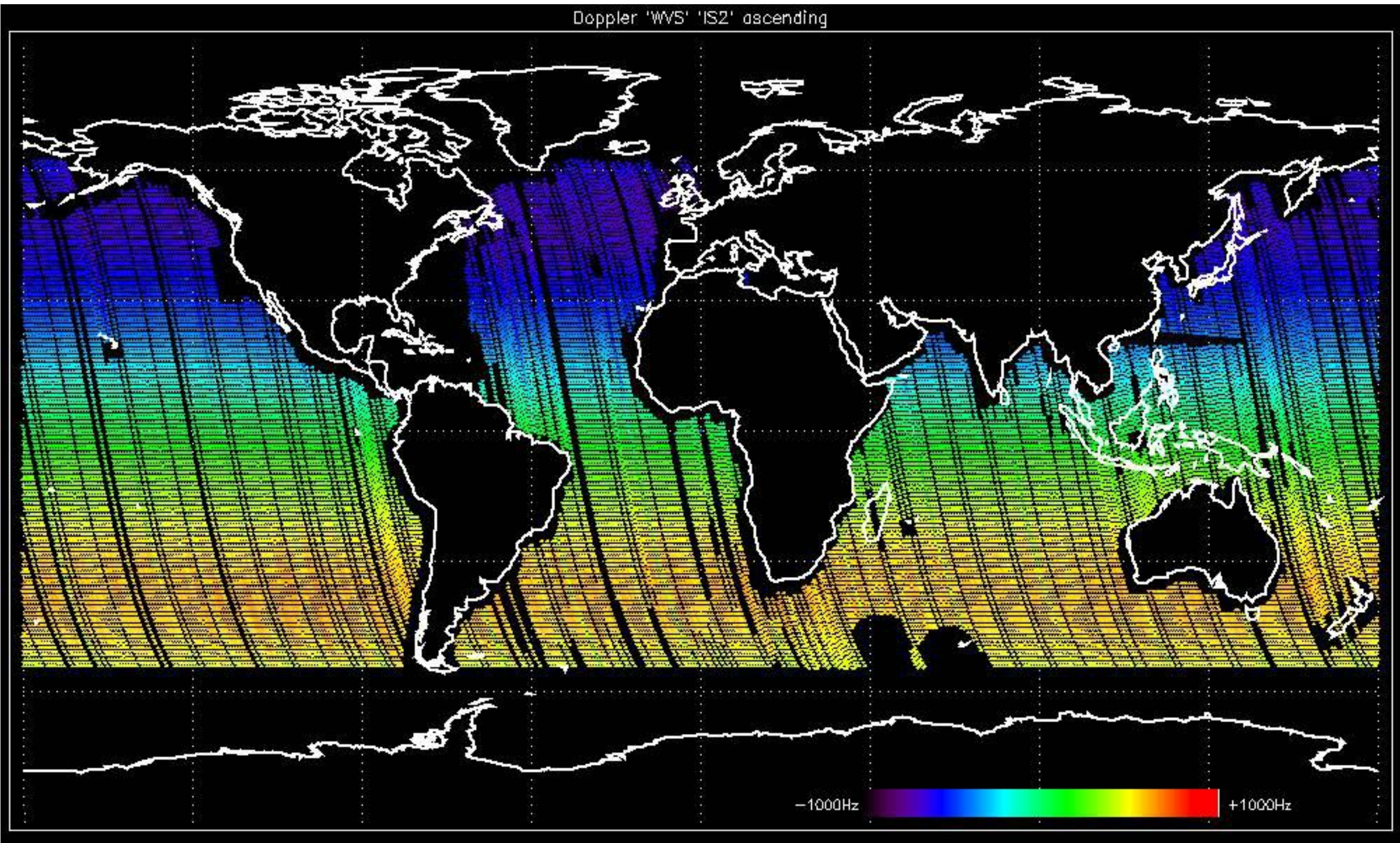
Doppler 'GM1' 'SS1' ascending



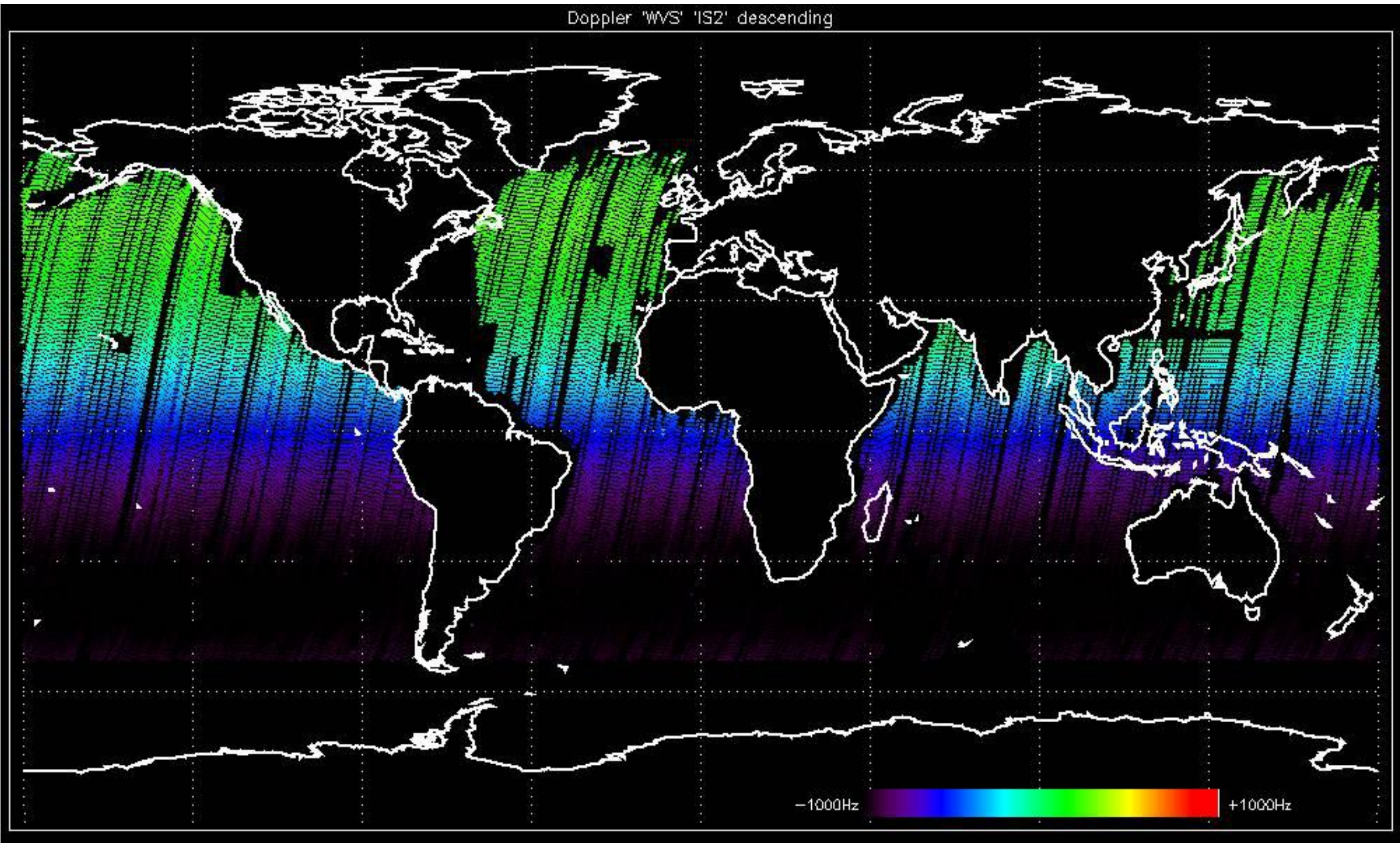
Doppler 'GM1' 'SS1' descending



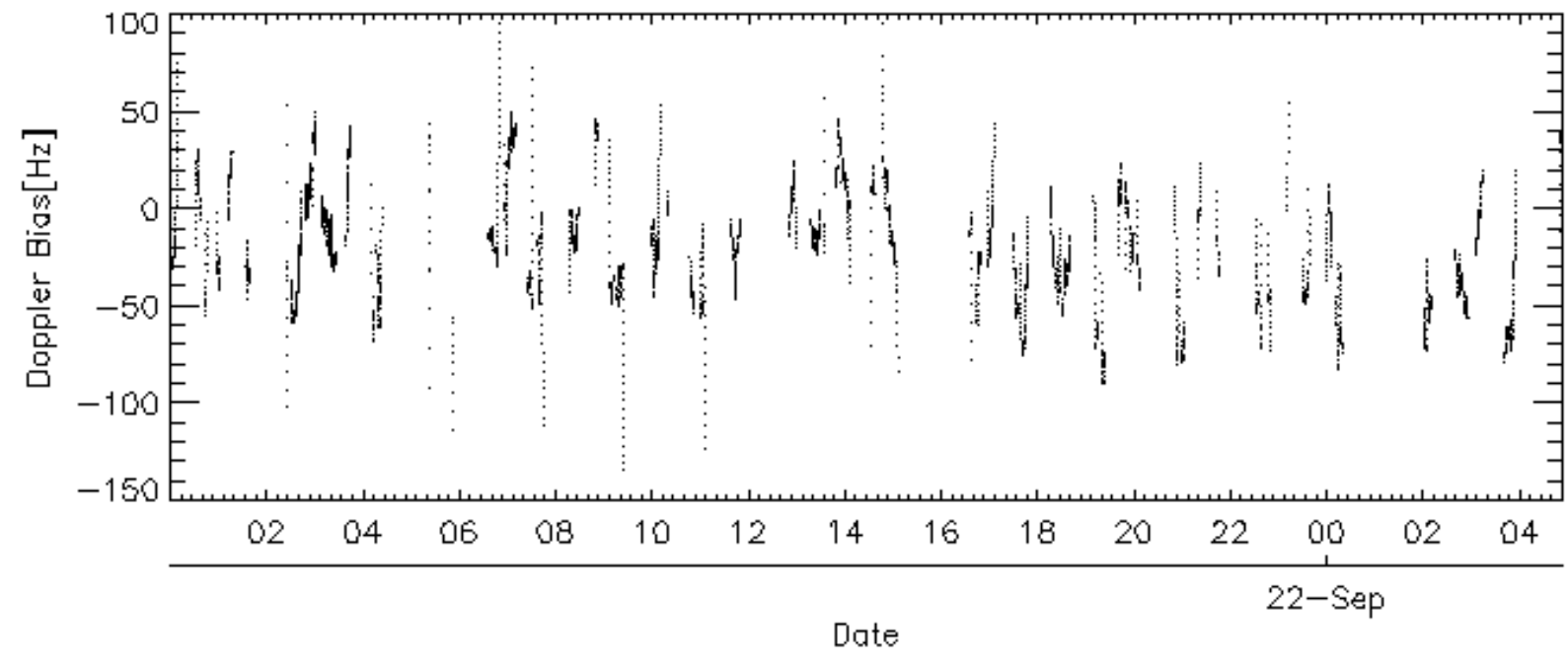
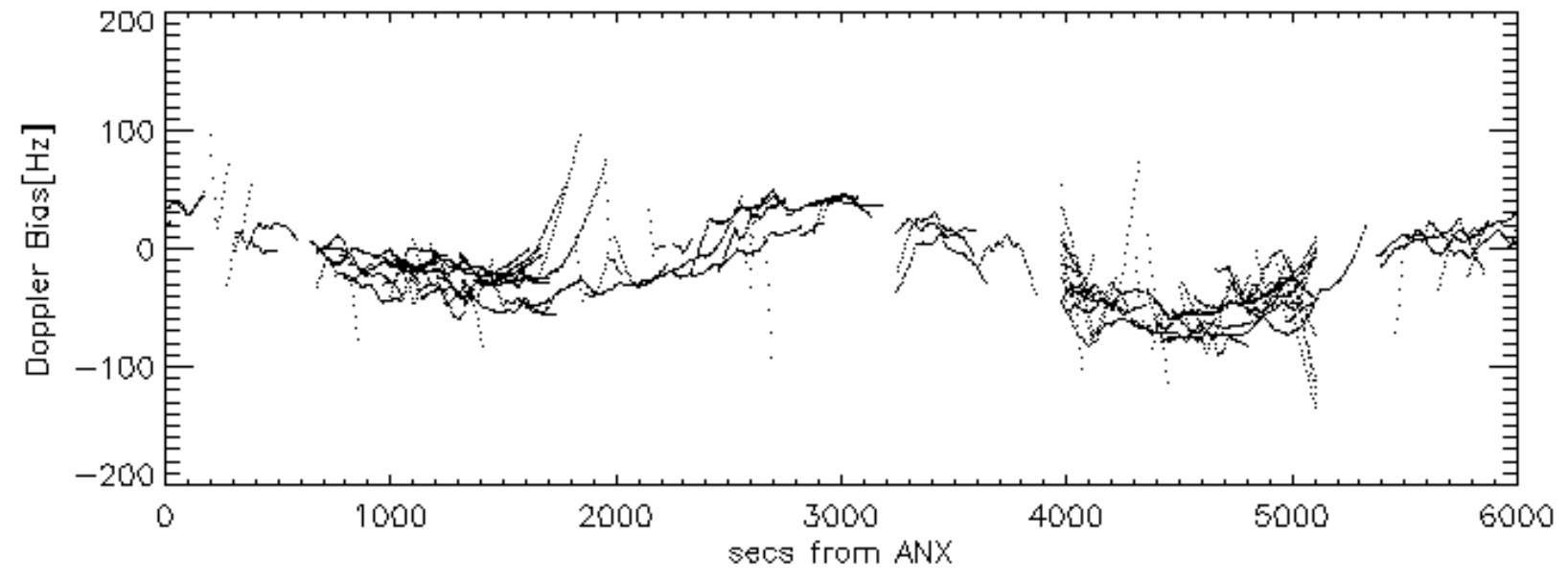
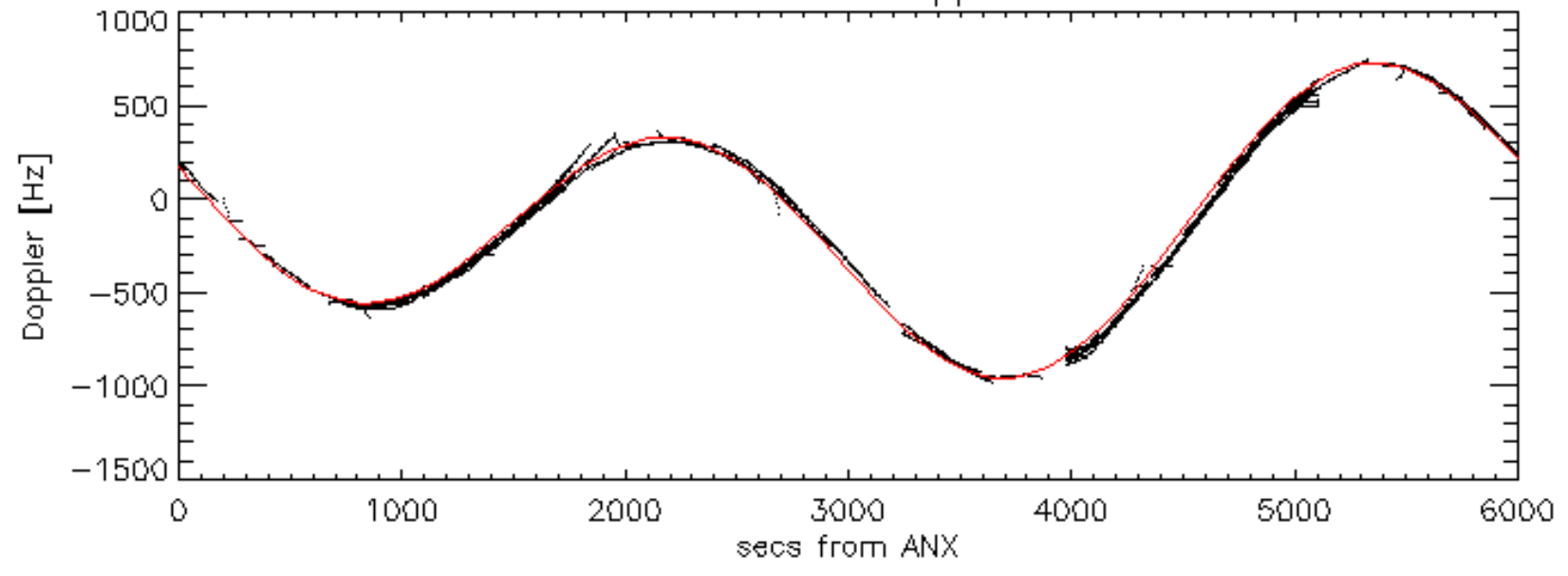
Doppler 'WVS' 'IS2' ascending

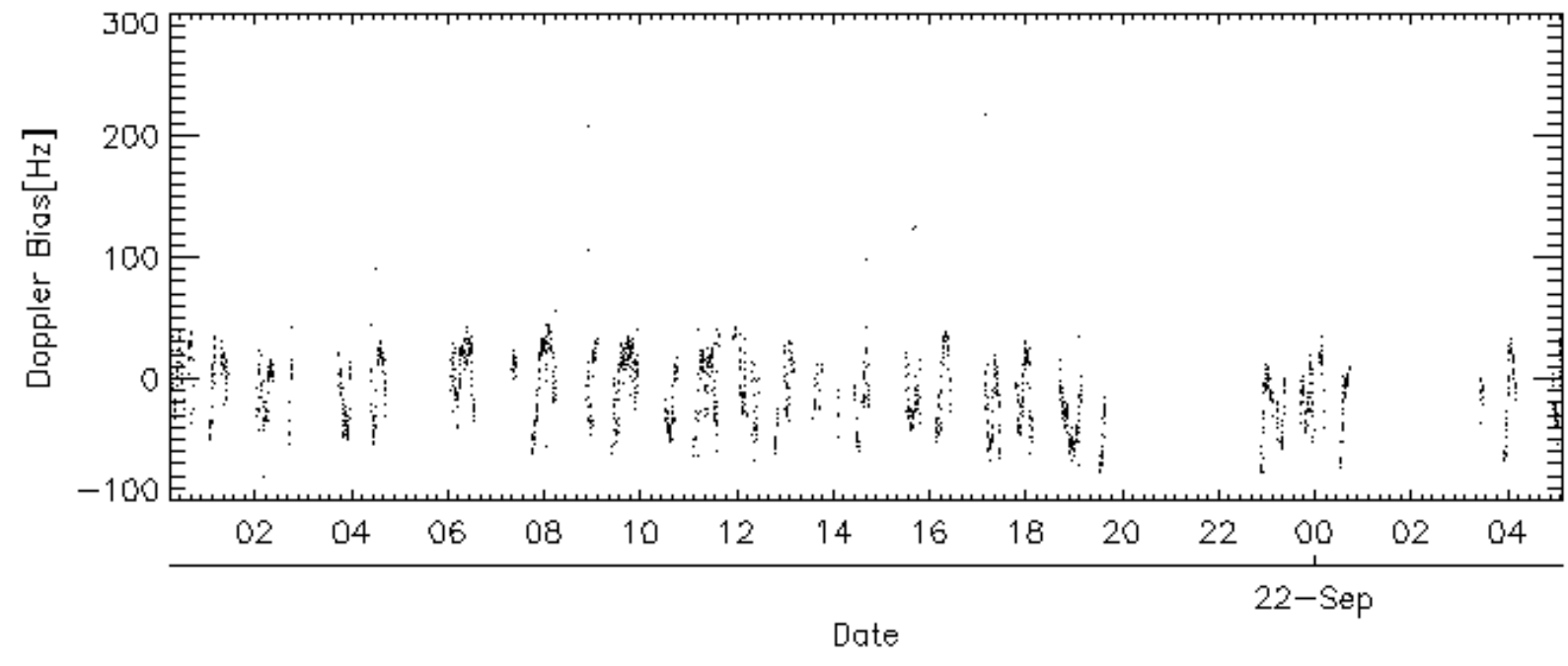
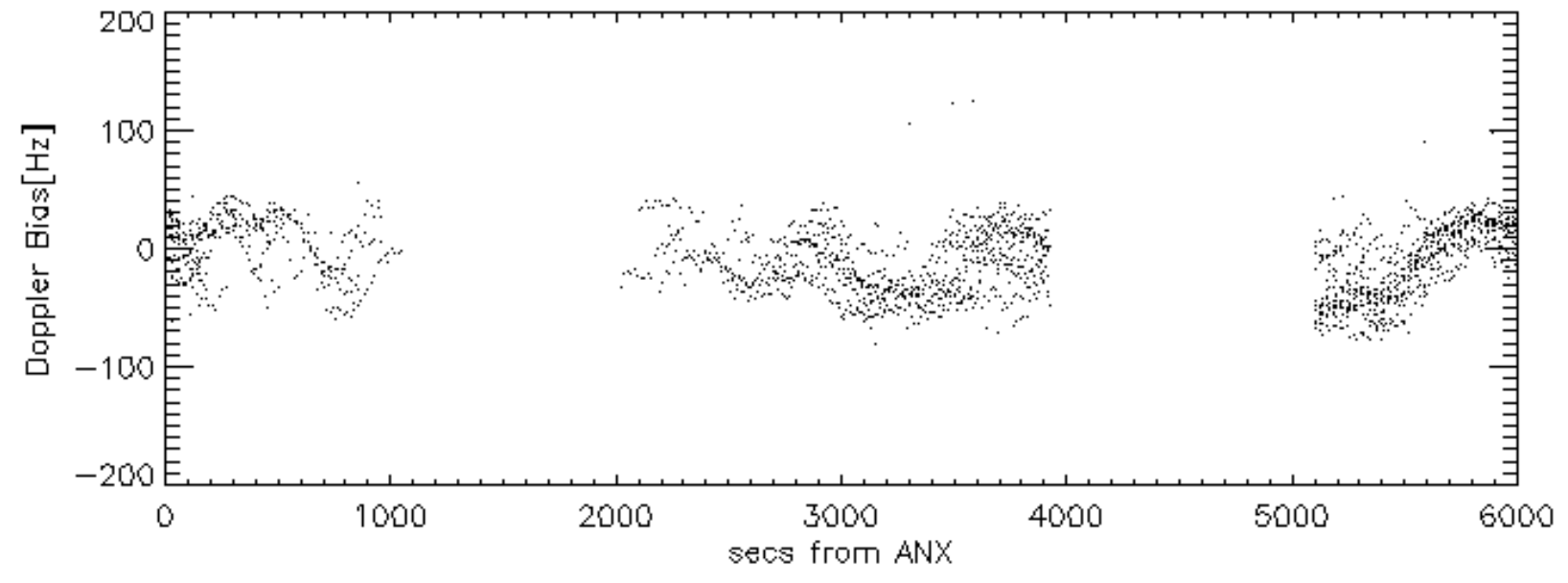
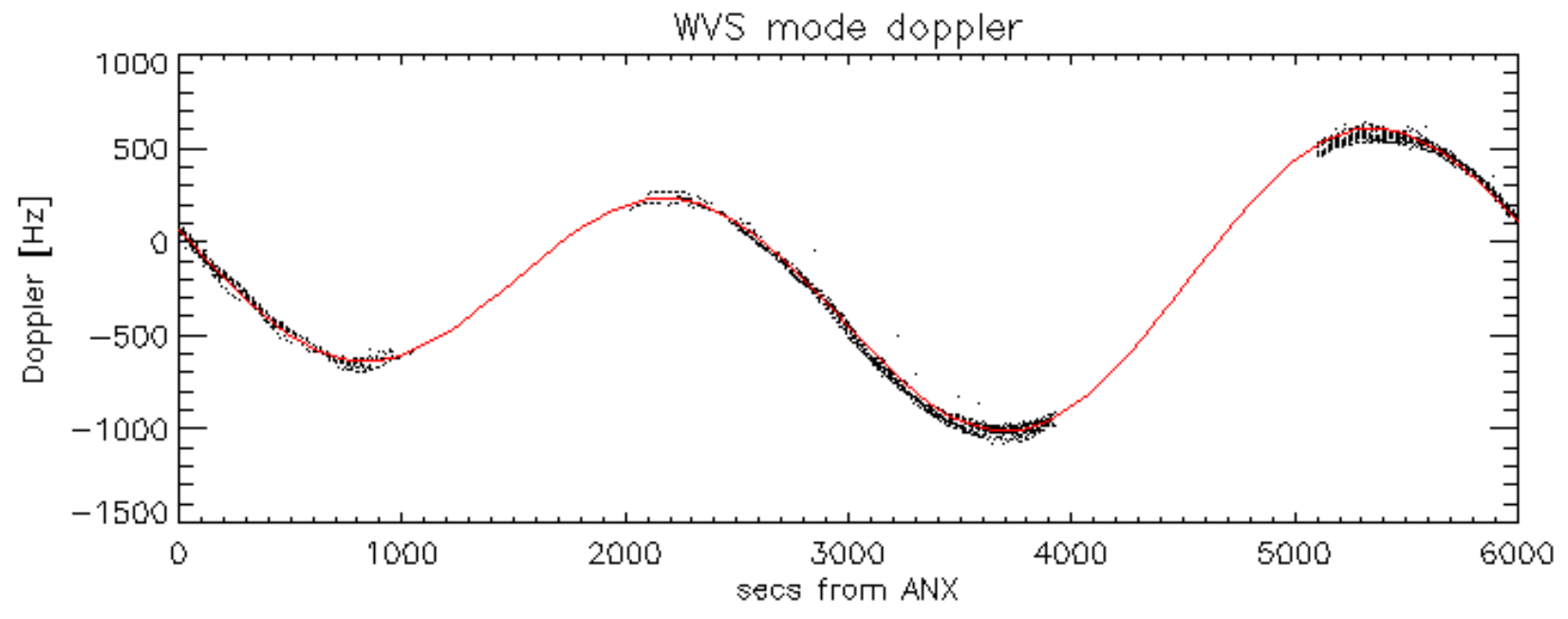


Doppler 'WVS' 'IS2' descending

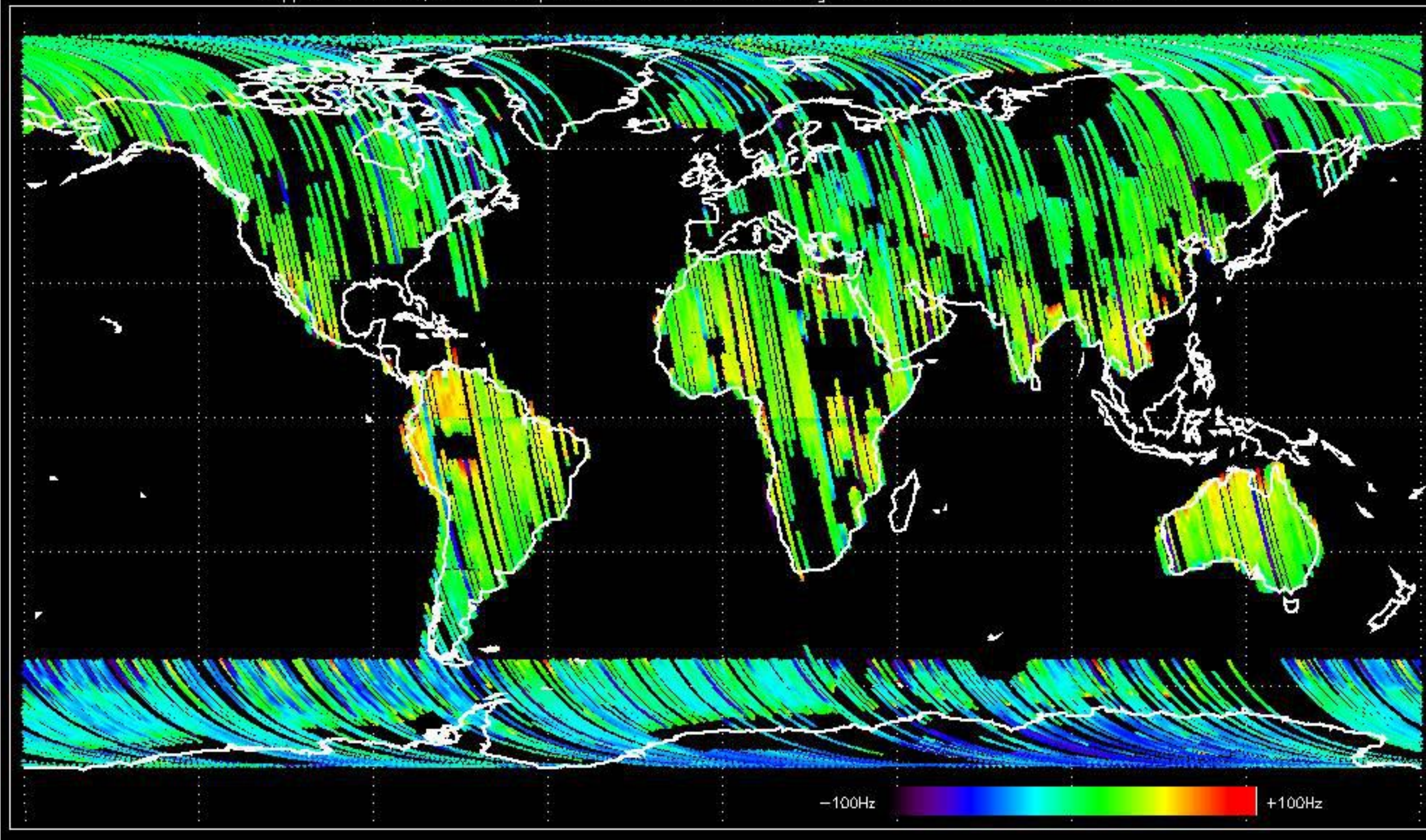


GM1 mode doppler

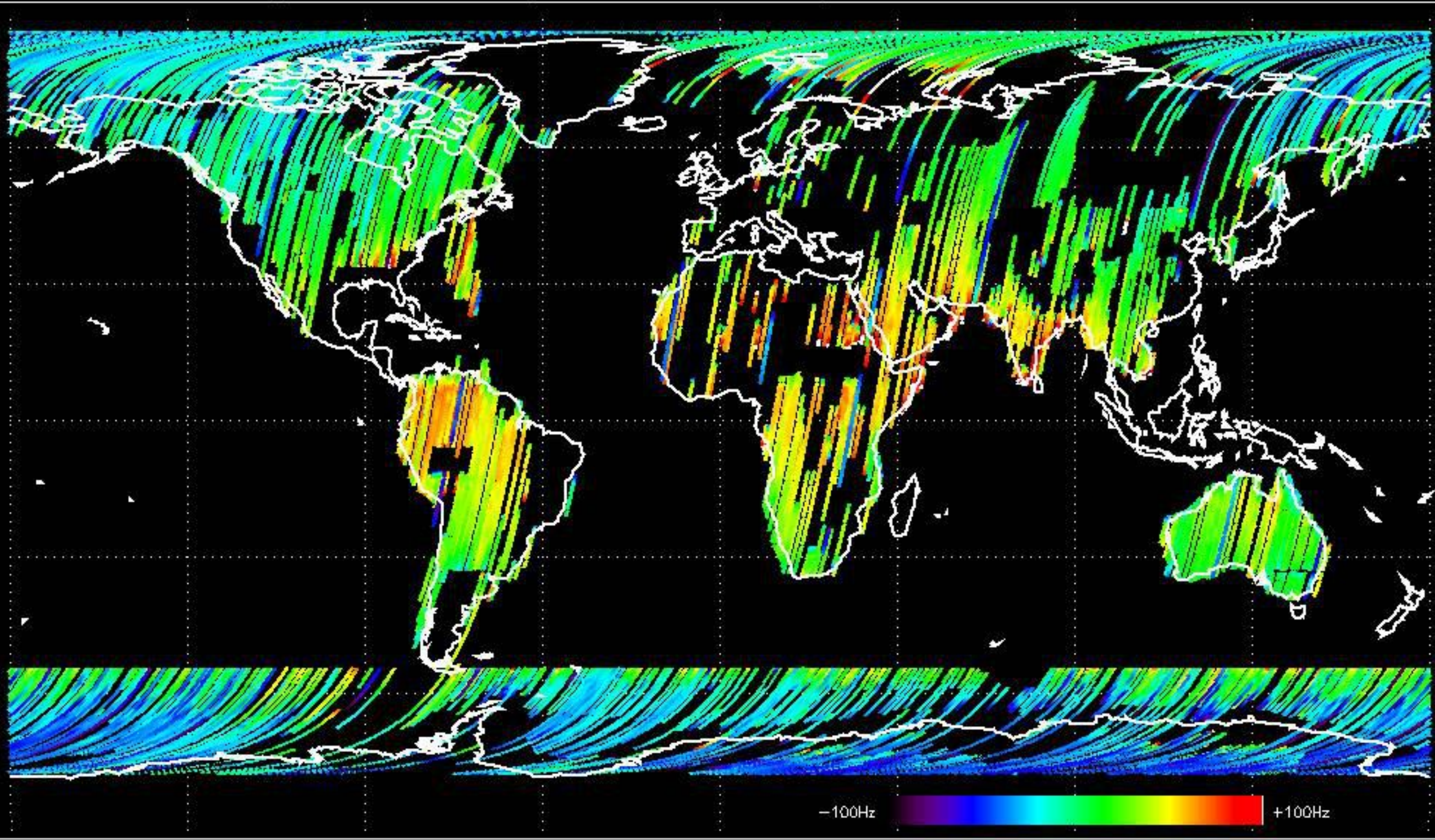




Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.121087 Hz

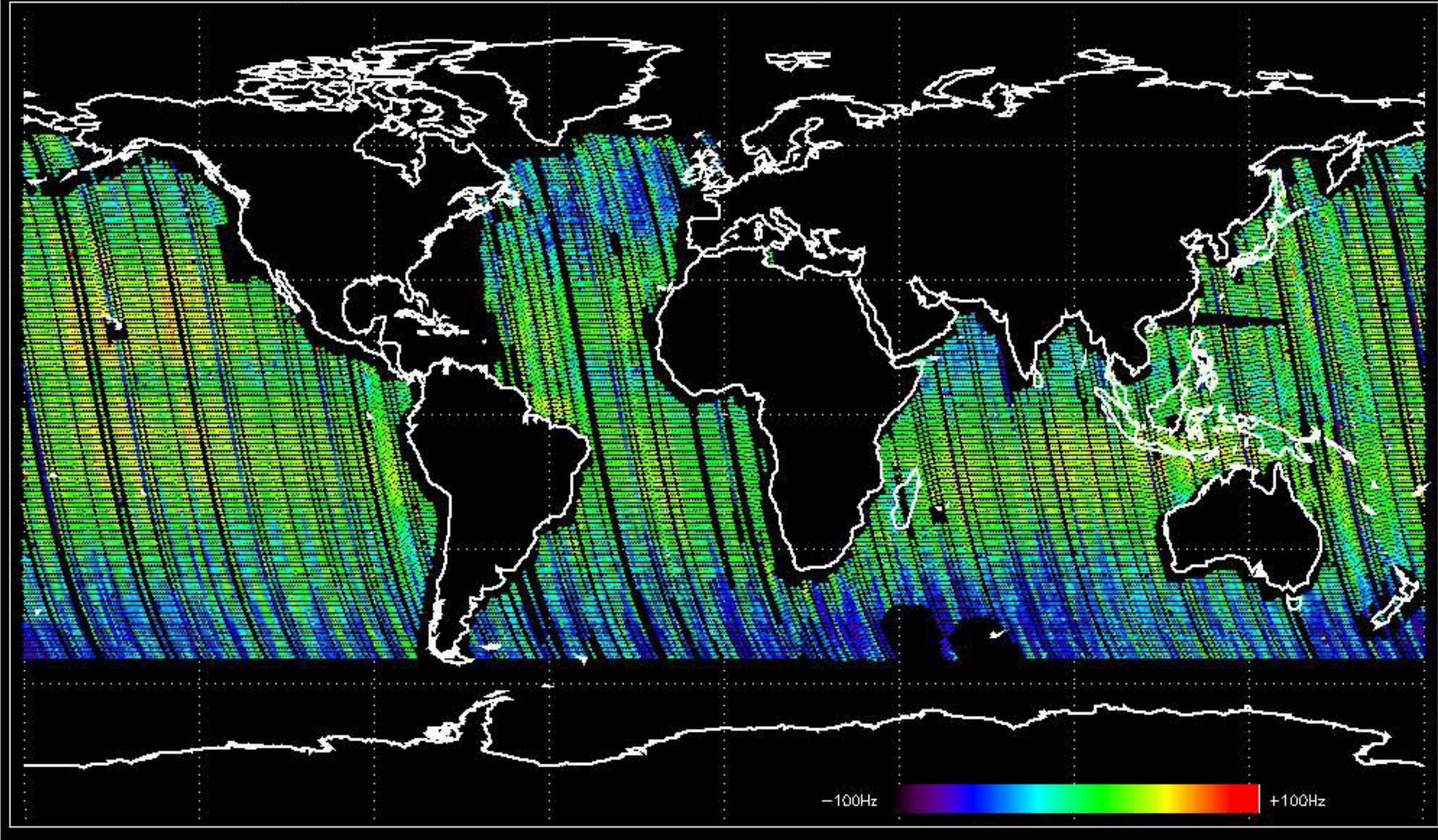


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.641734 Hz

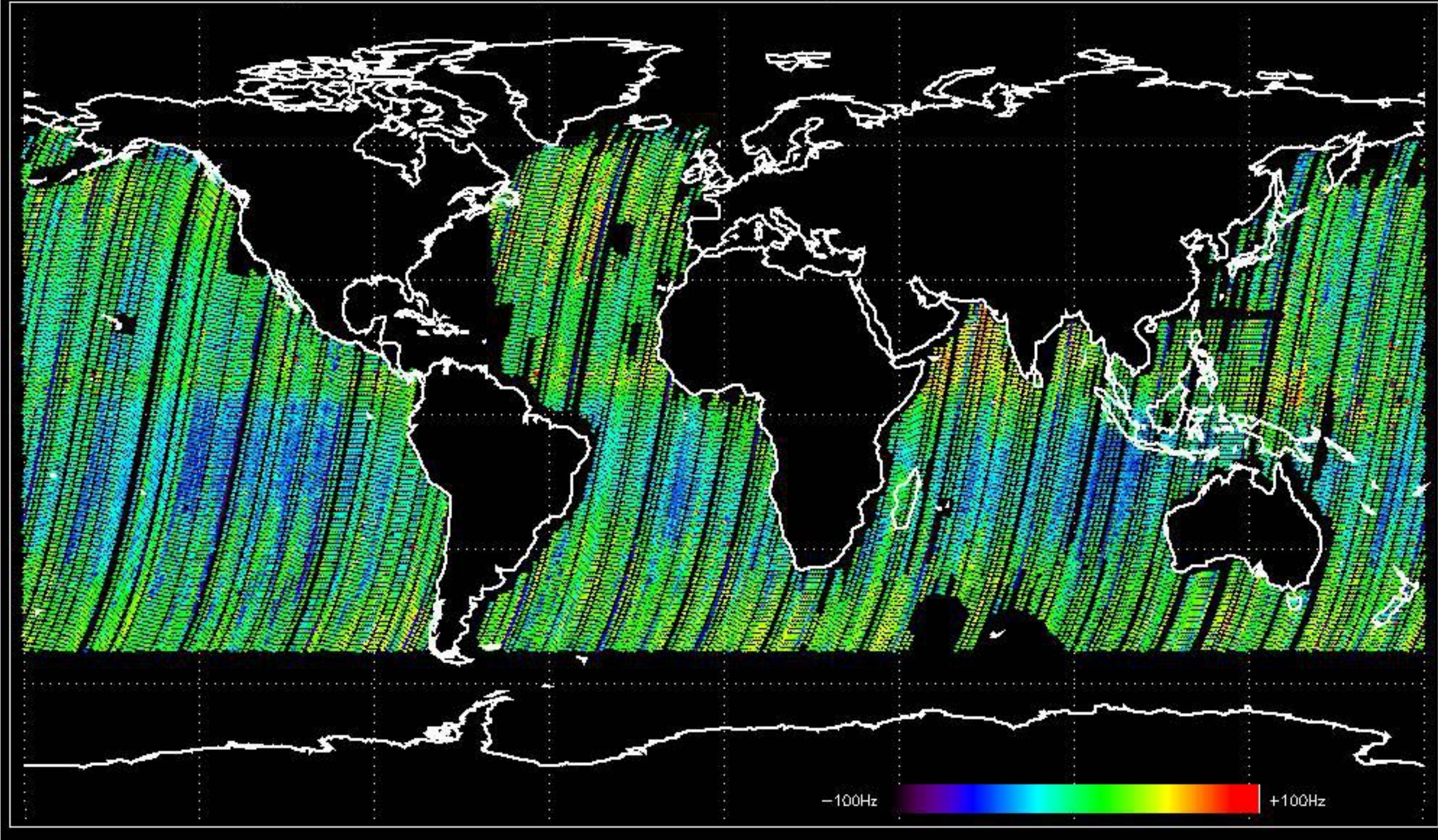


-100Hz +100Hz

Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.954402 Hz

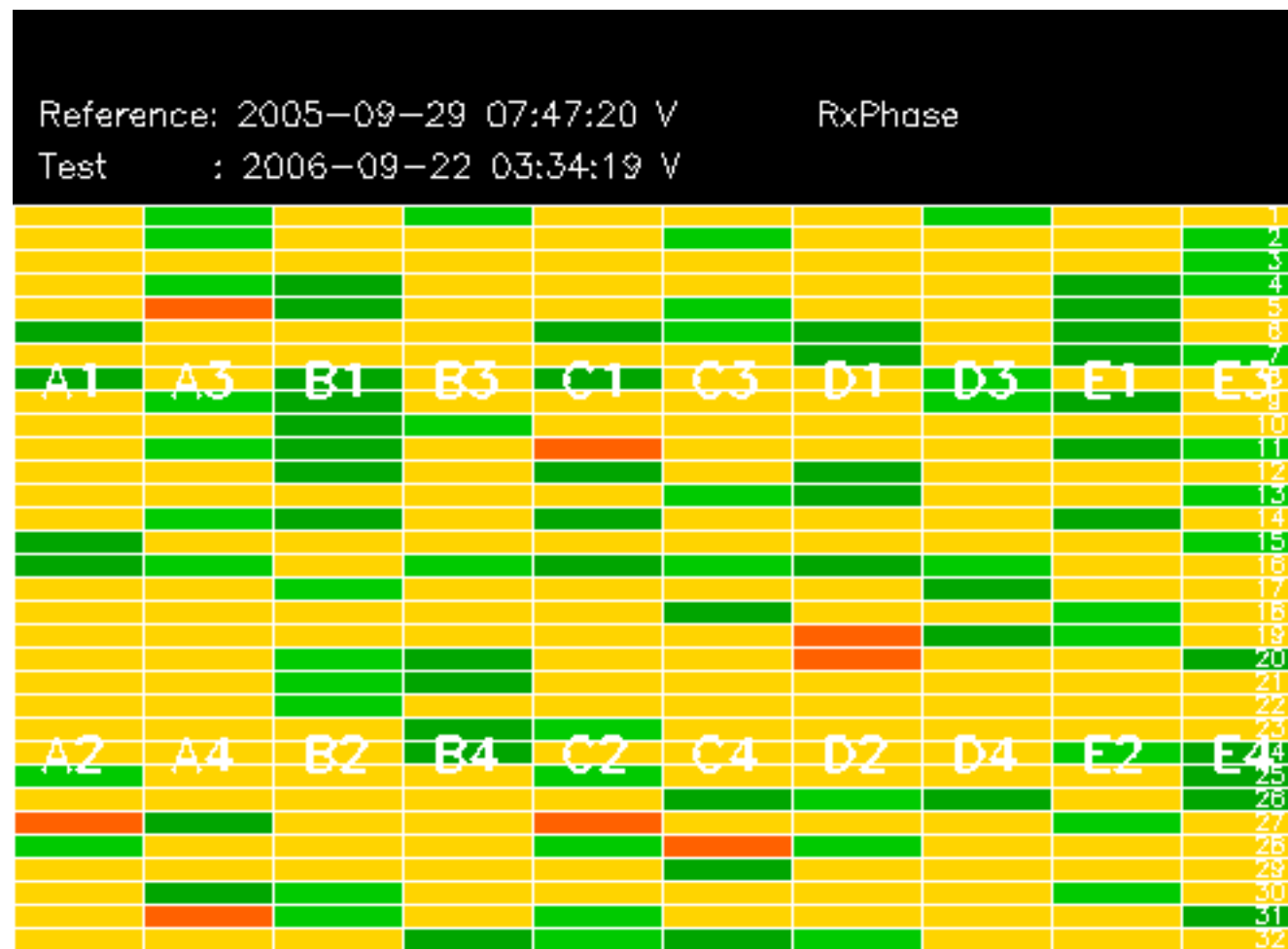


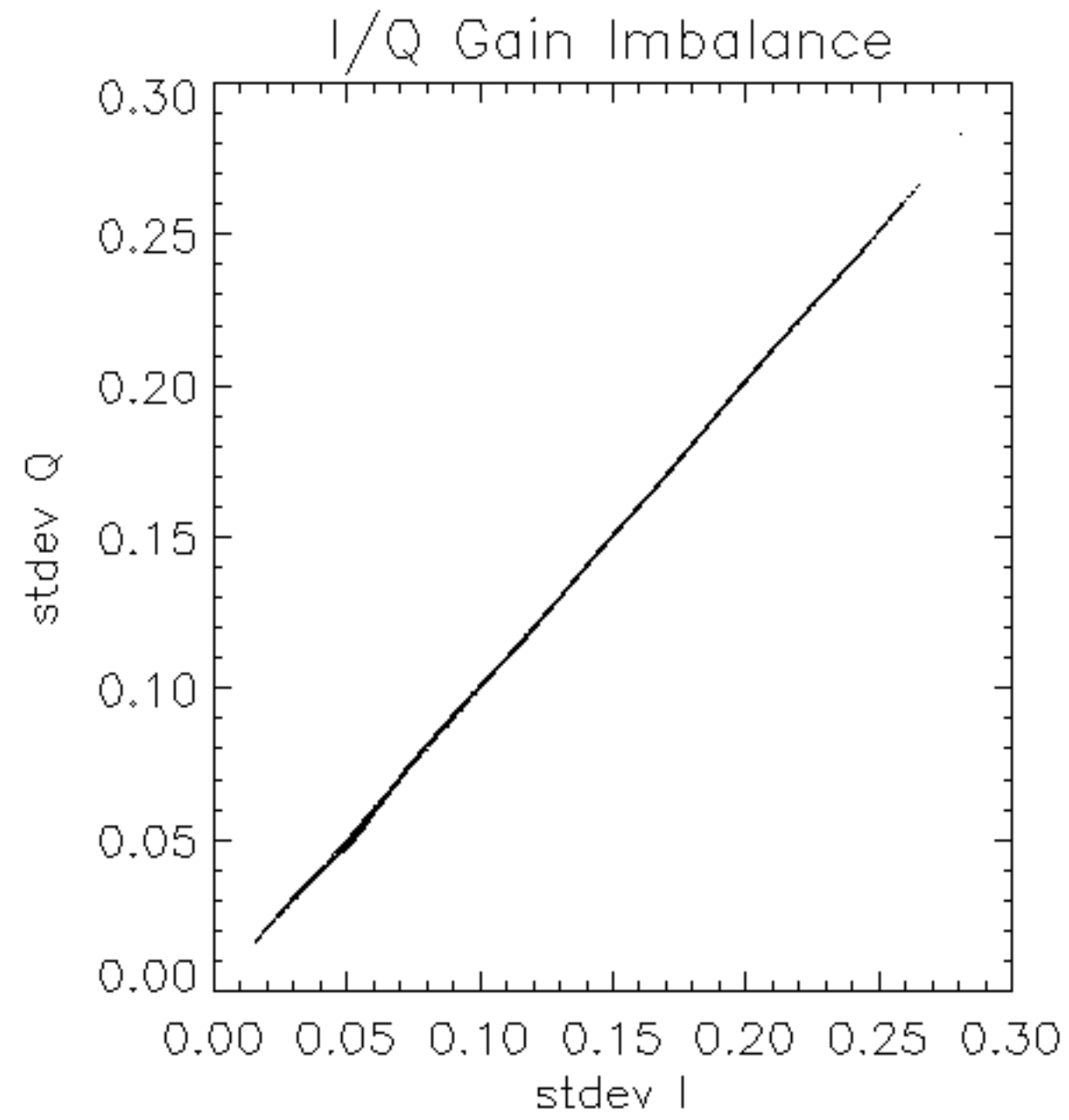
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.505243 Hz

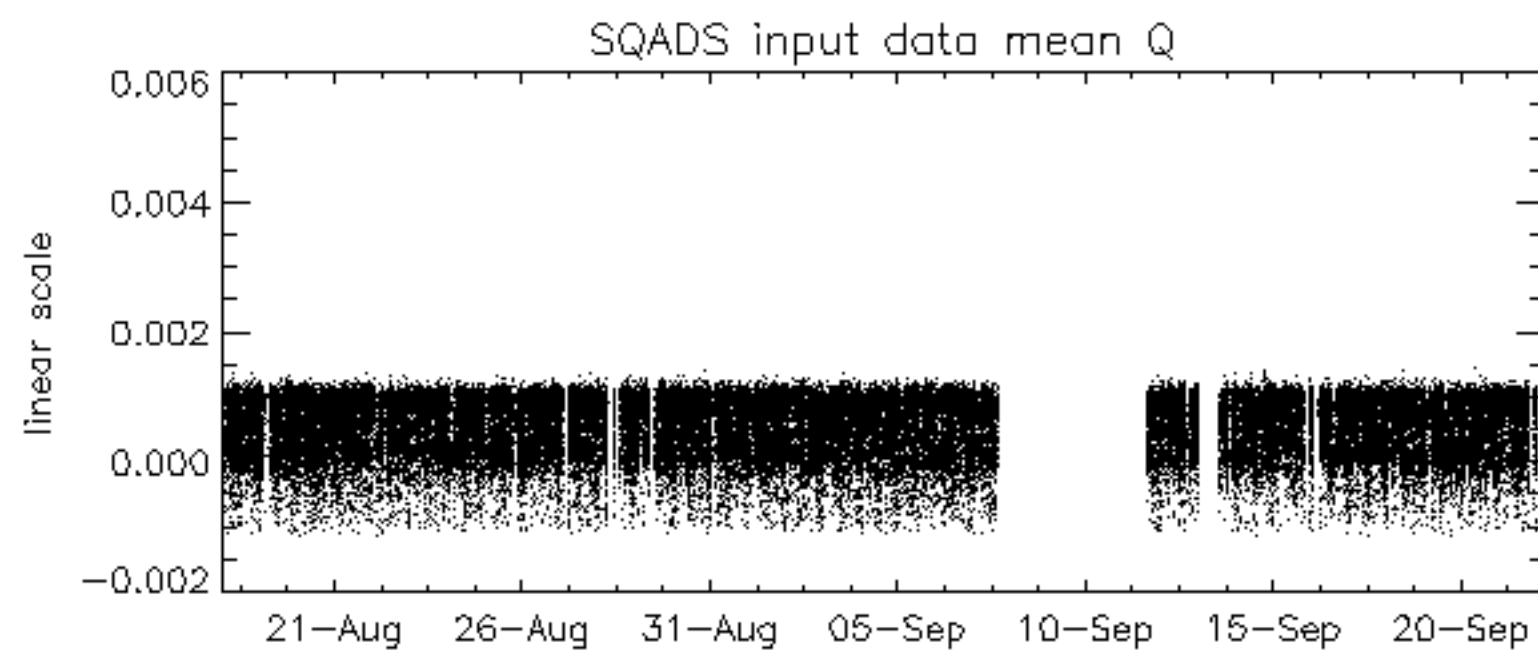
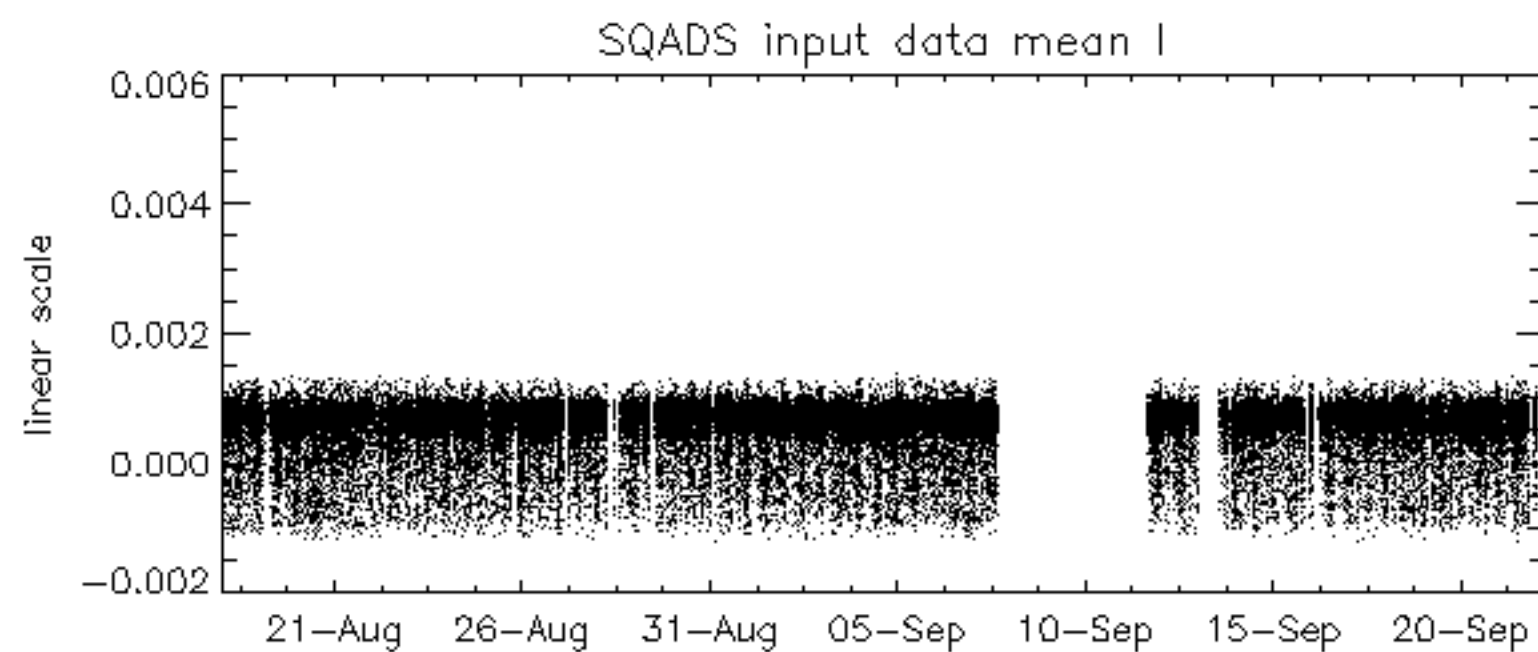
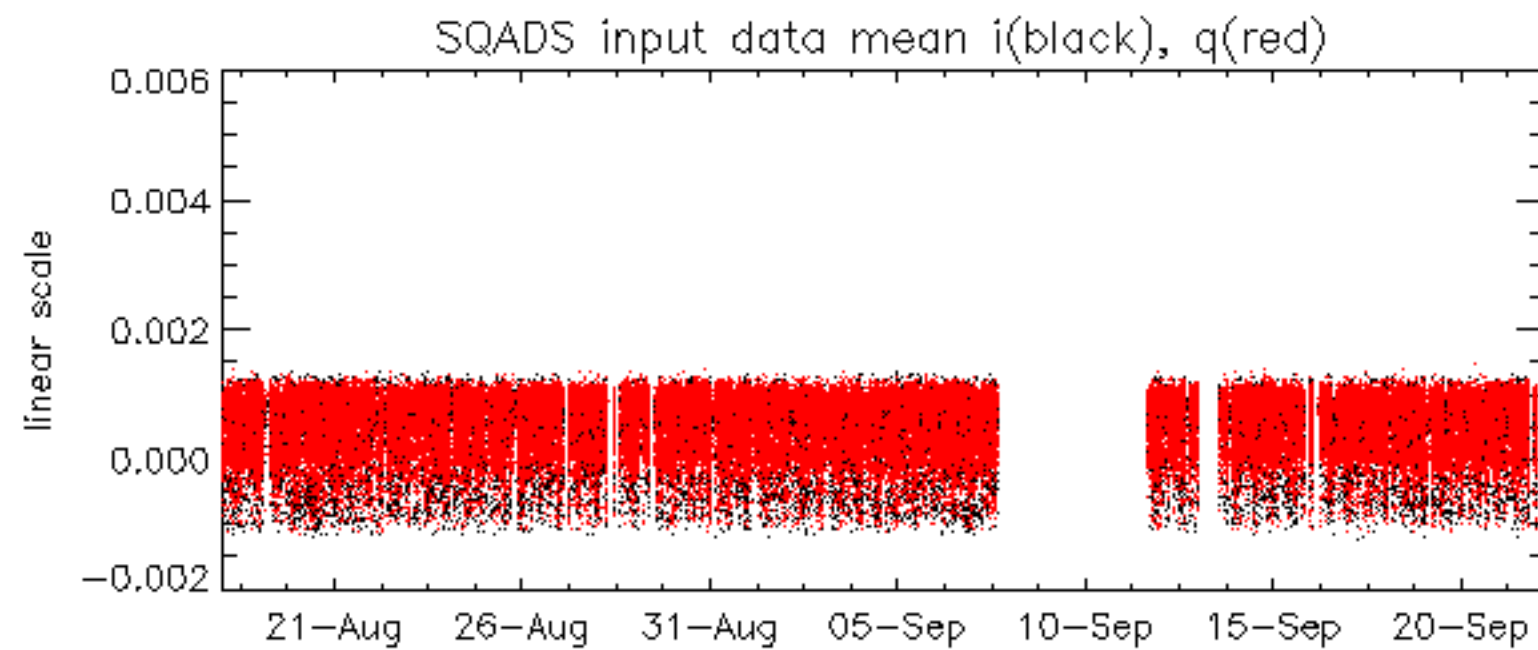


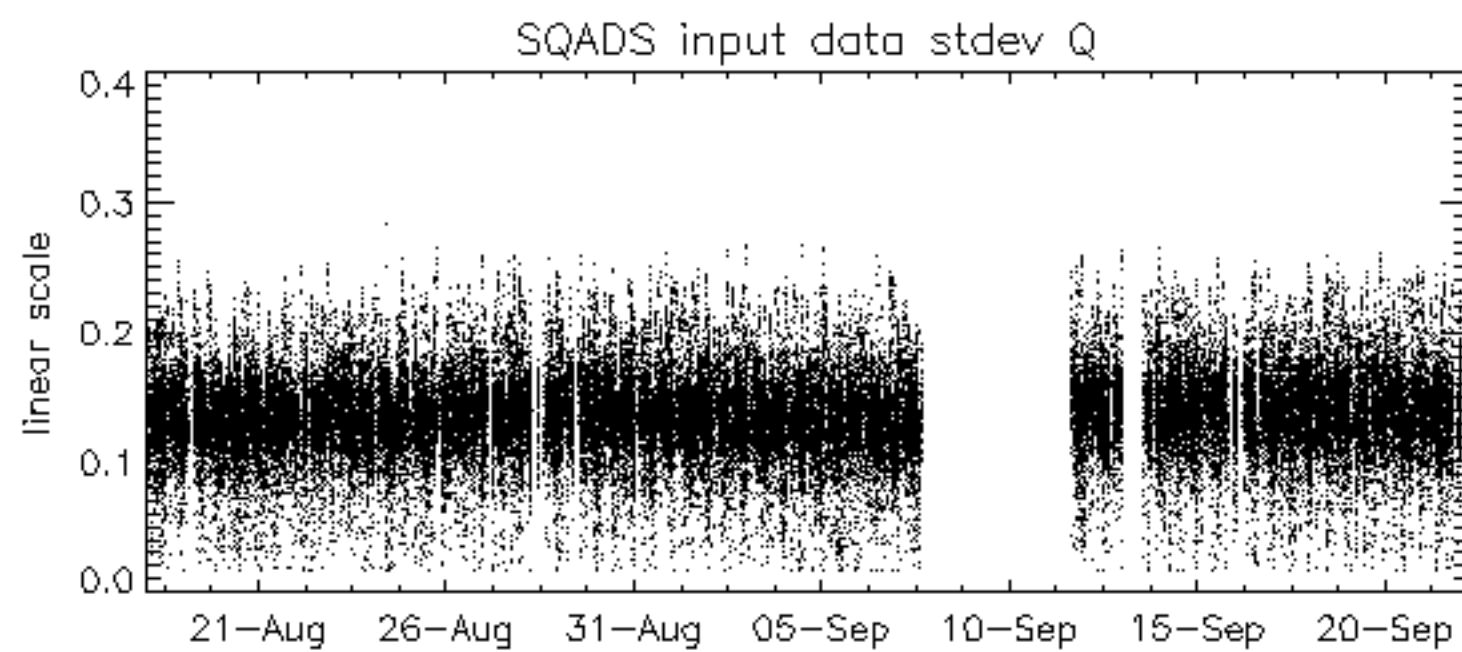
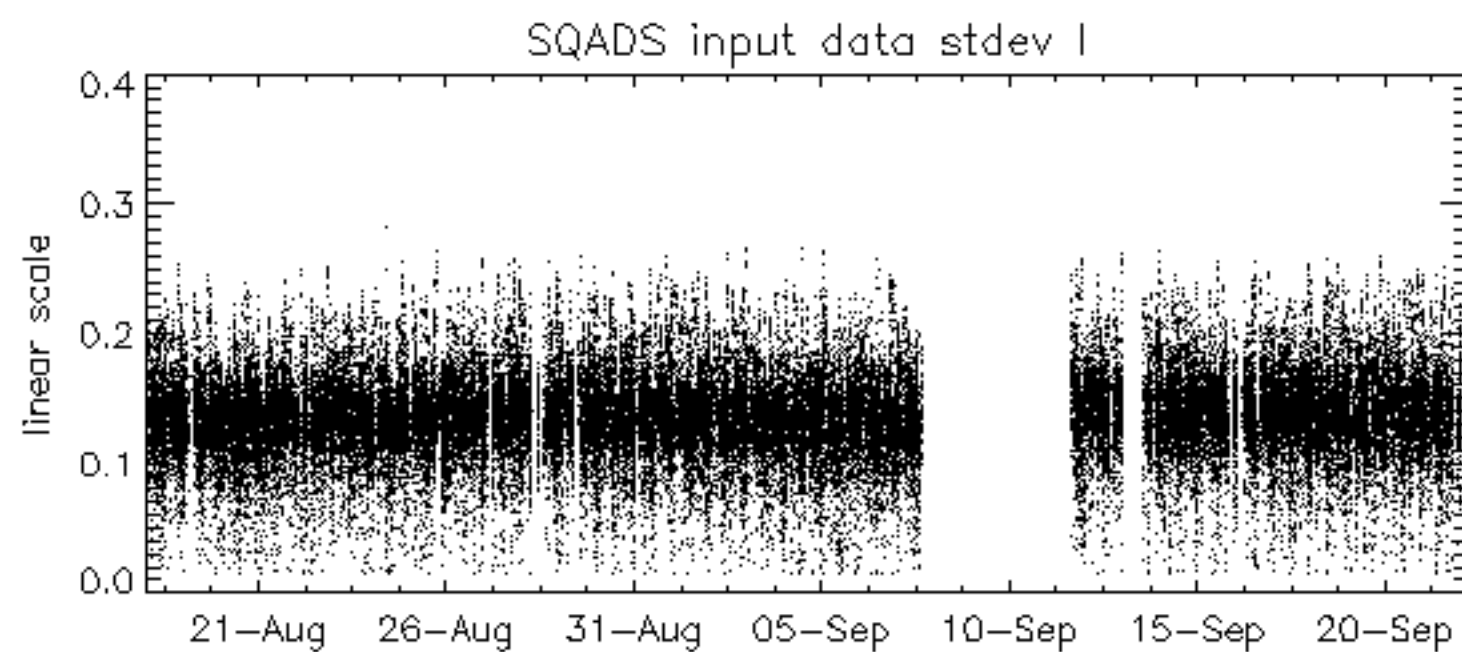
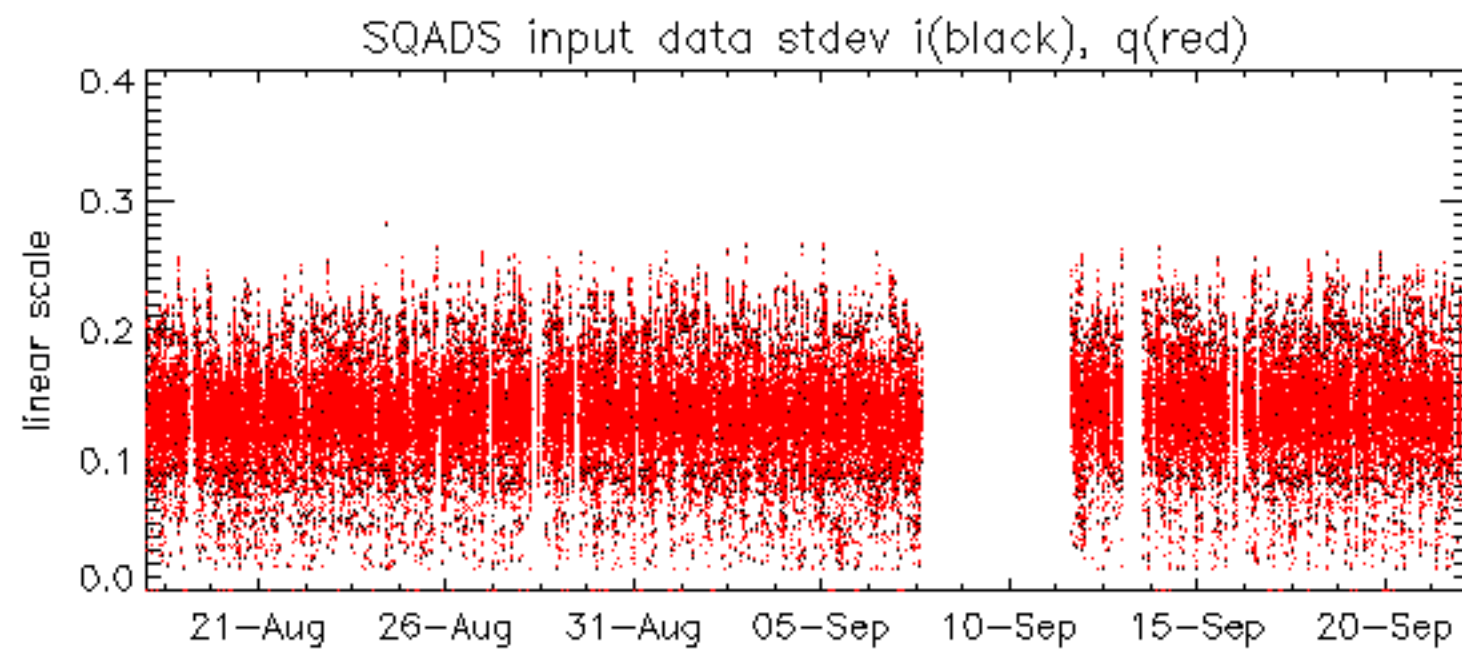
No anomalies observed on available MS products:

No anomalies observed.





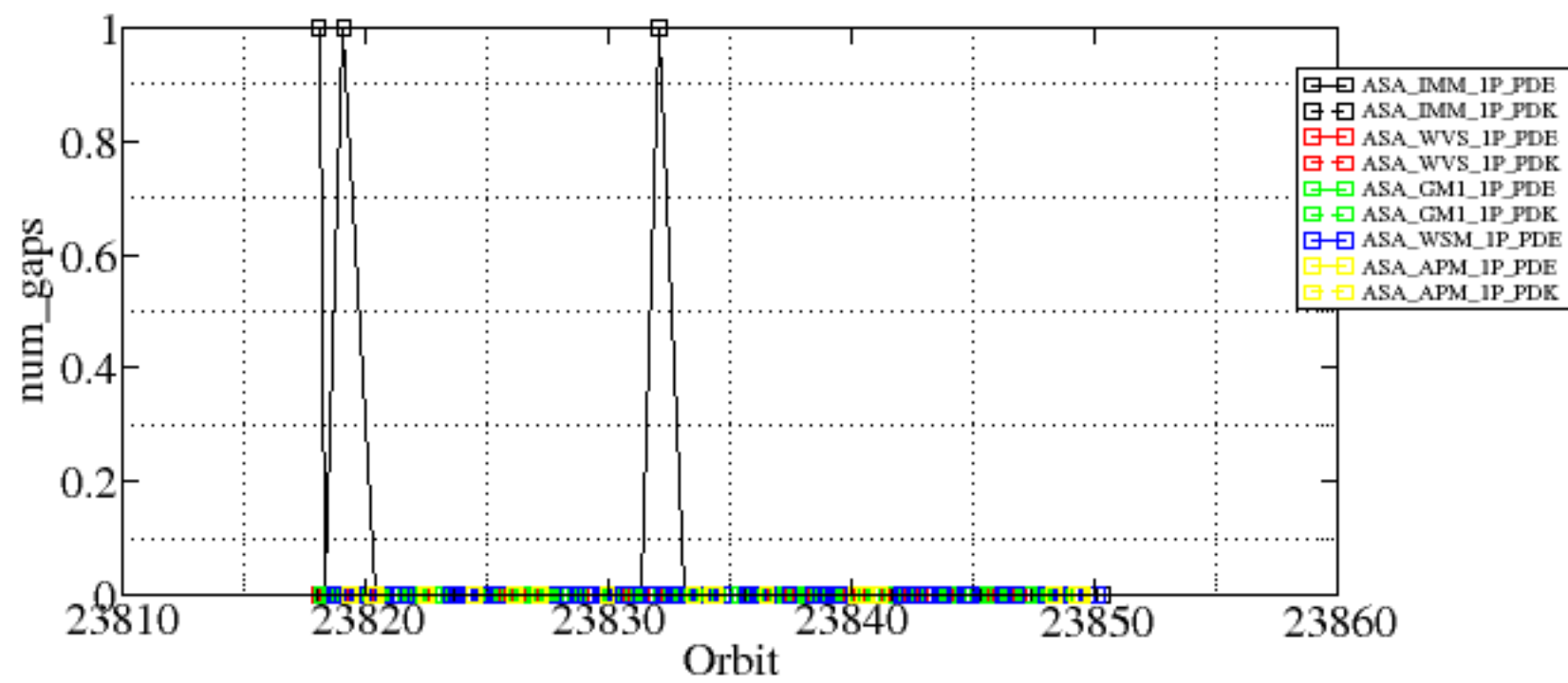


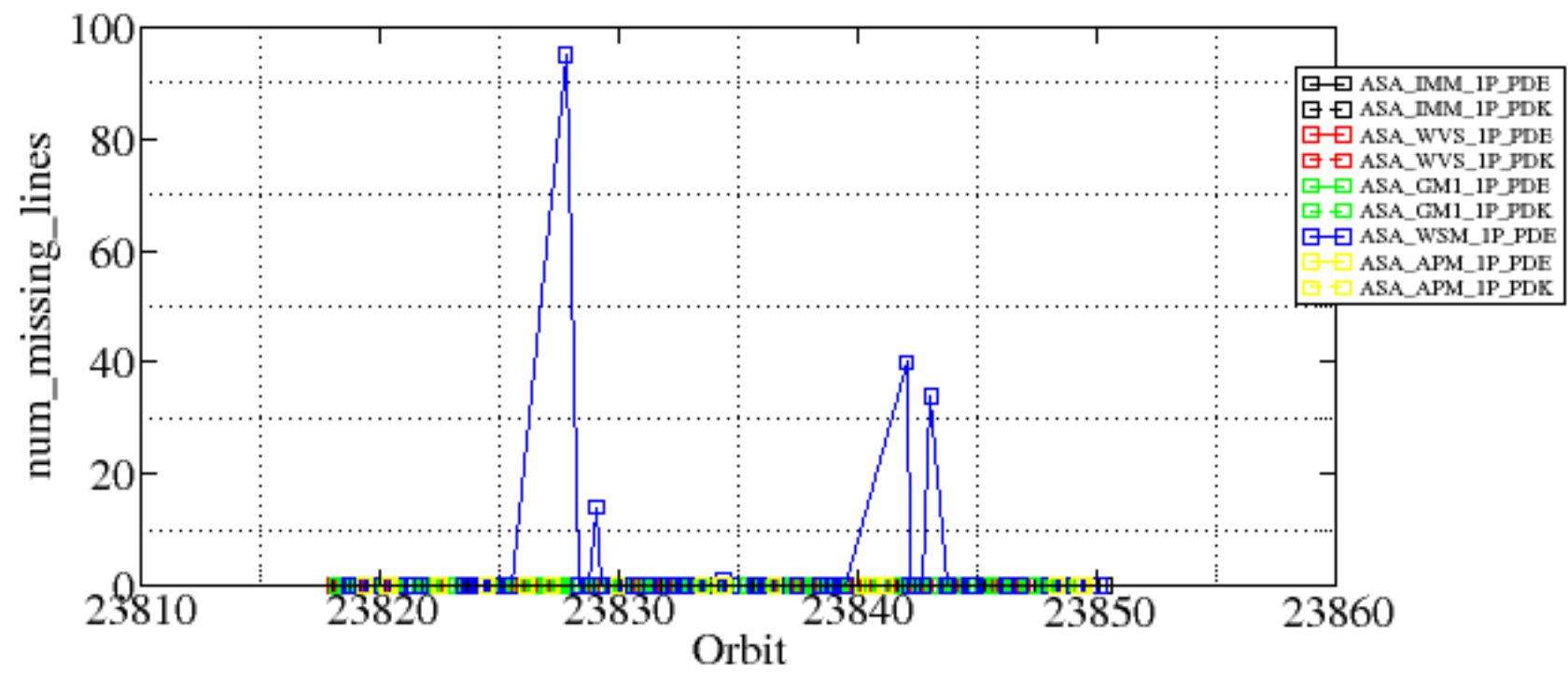


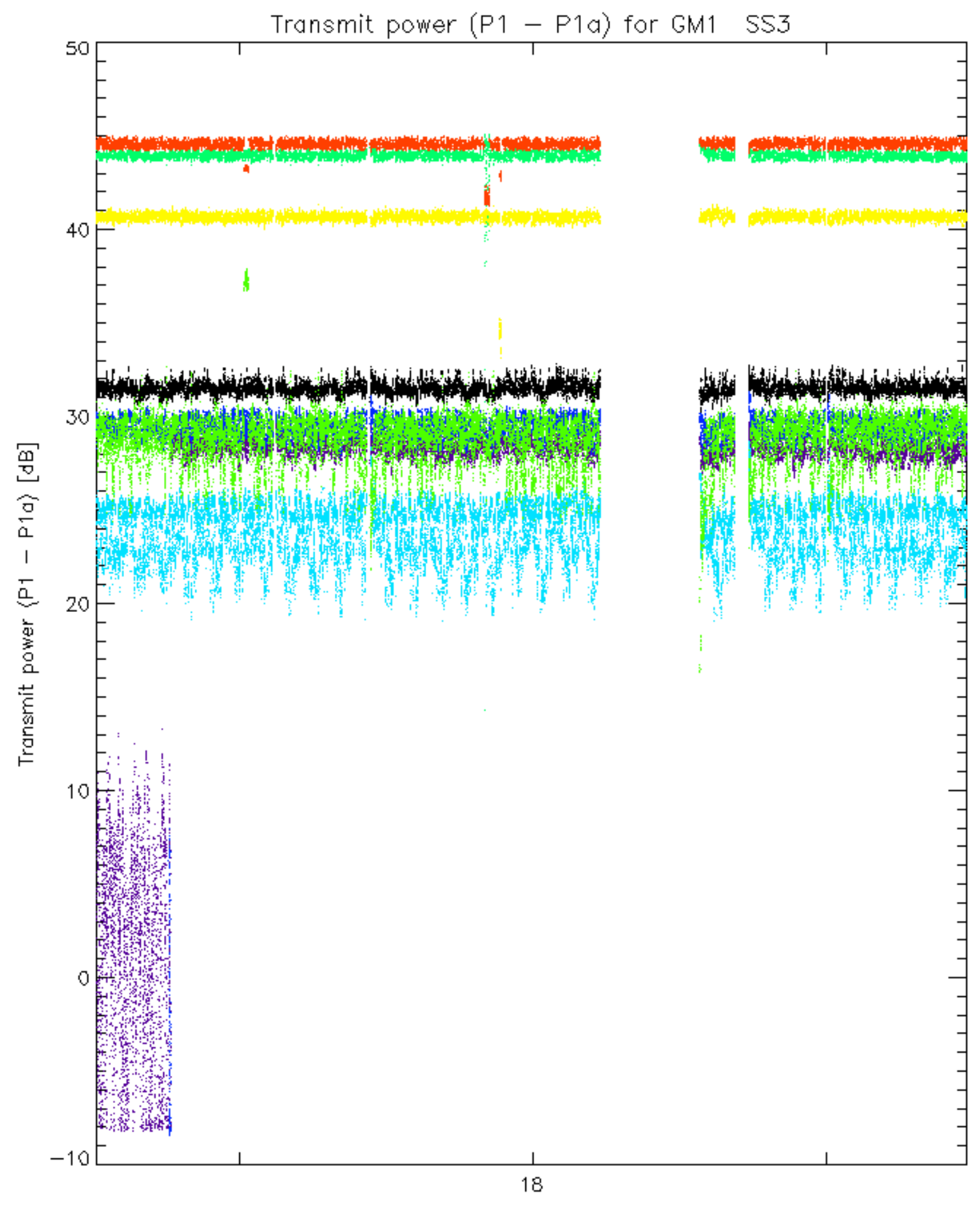
Summary of analysis for the last 3 days 2006092[012]

The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

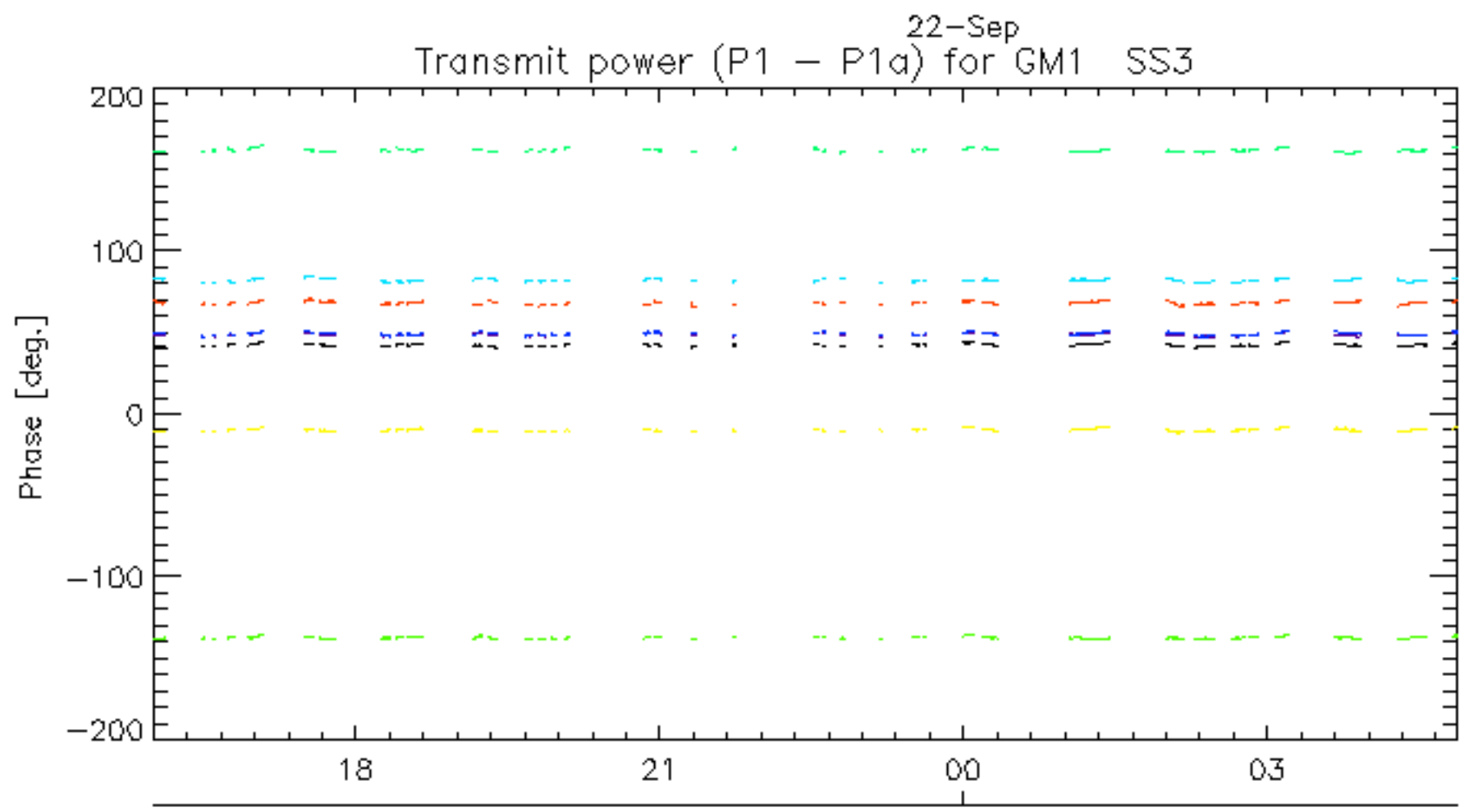
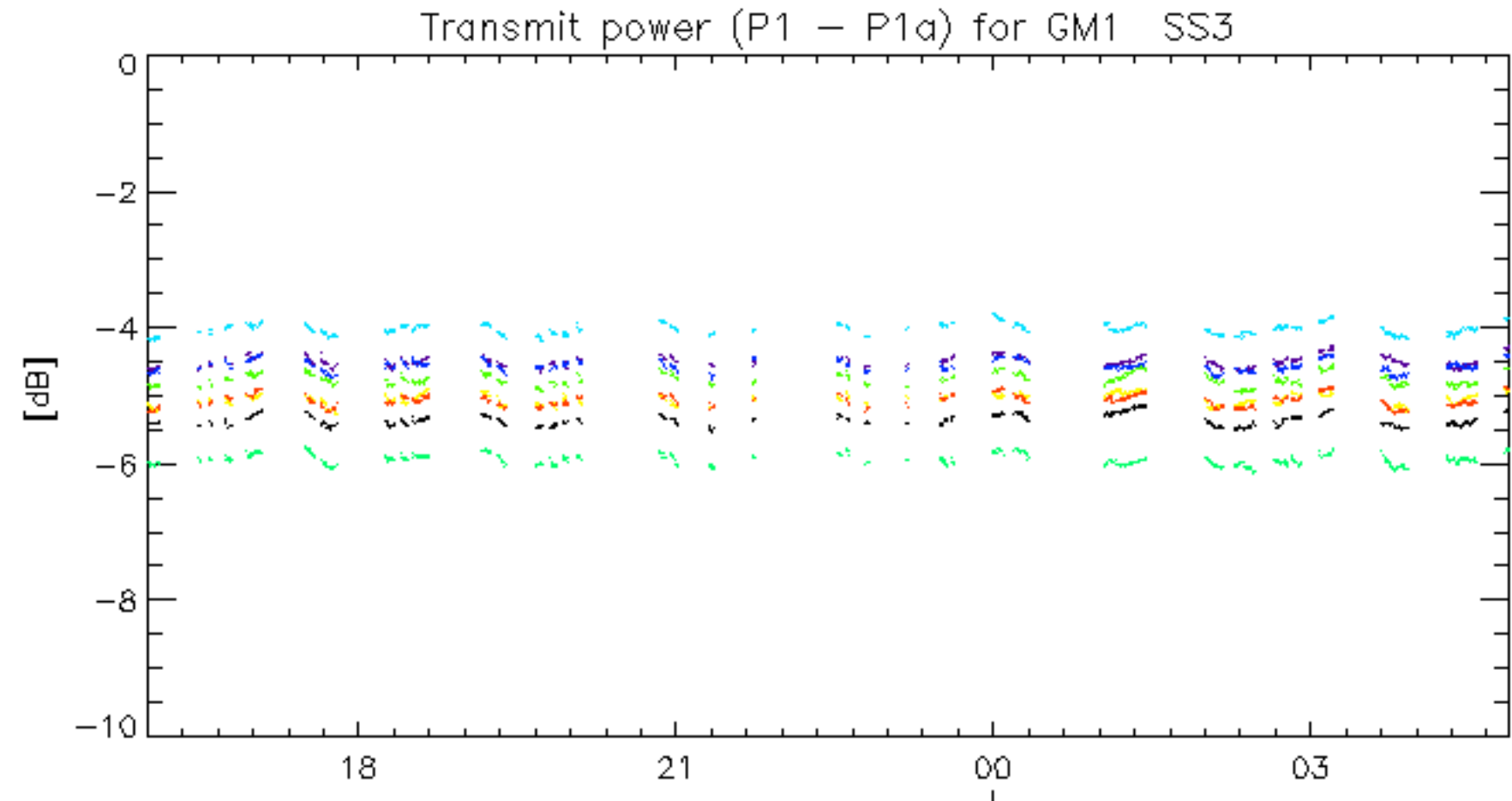
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060920_001749_000001822051_00217_23818_6049.N1	1	0
ASA_IMM_1PNPDE20060920_015825_000001852051_00218_23819_6068.N1	1	0
ASA_IMM_1PNPDE20060920_234612_000001712051_00231_23832_6130.N1	1	0
ASA_WSM_1PNPDE20060920_163137_000000672051_00226_23827_3061.N1	0	95
ASA_WSM_1PNPDE20060920_183929_000002982051_00228_23829_3078.N1	0	14
ASA_WSM_1PNPDE20060921_033637_000001462051_00233_23834_3151.N1	0	1
ASA_WSM_1PNPDE20060921_162641_000001032051_00241_23842_3224.N1	0	40
ASA_WSM_1PNPDE20060921_180903_000000852051_00242_23843_3234.N1	0	34



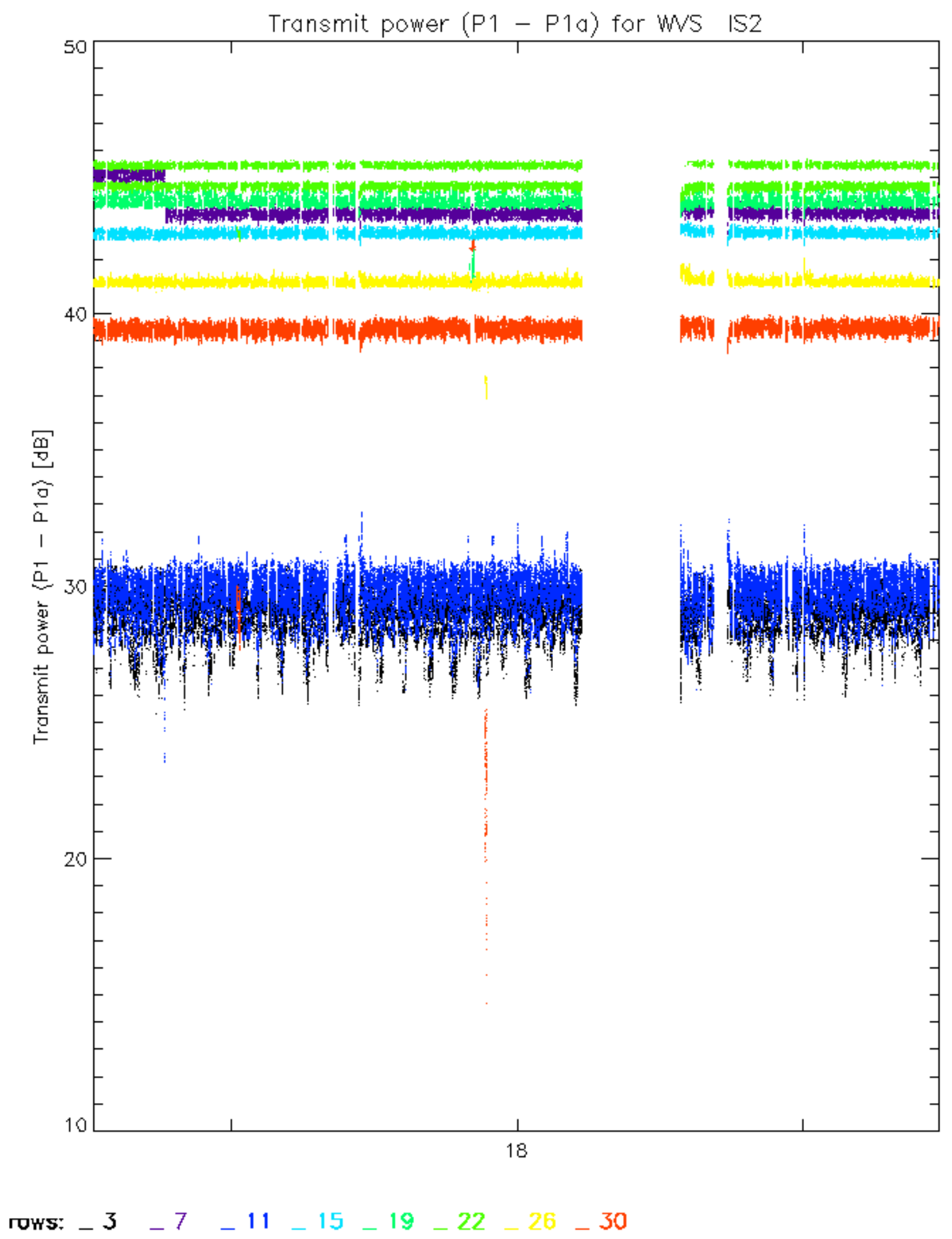


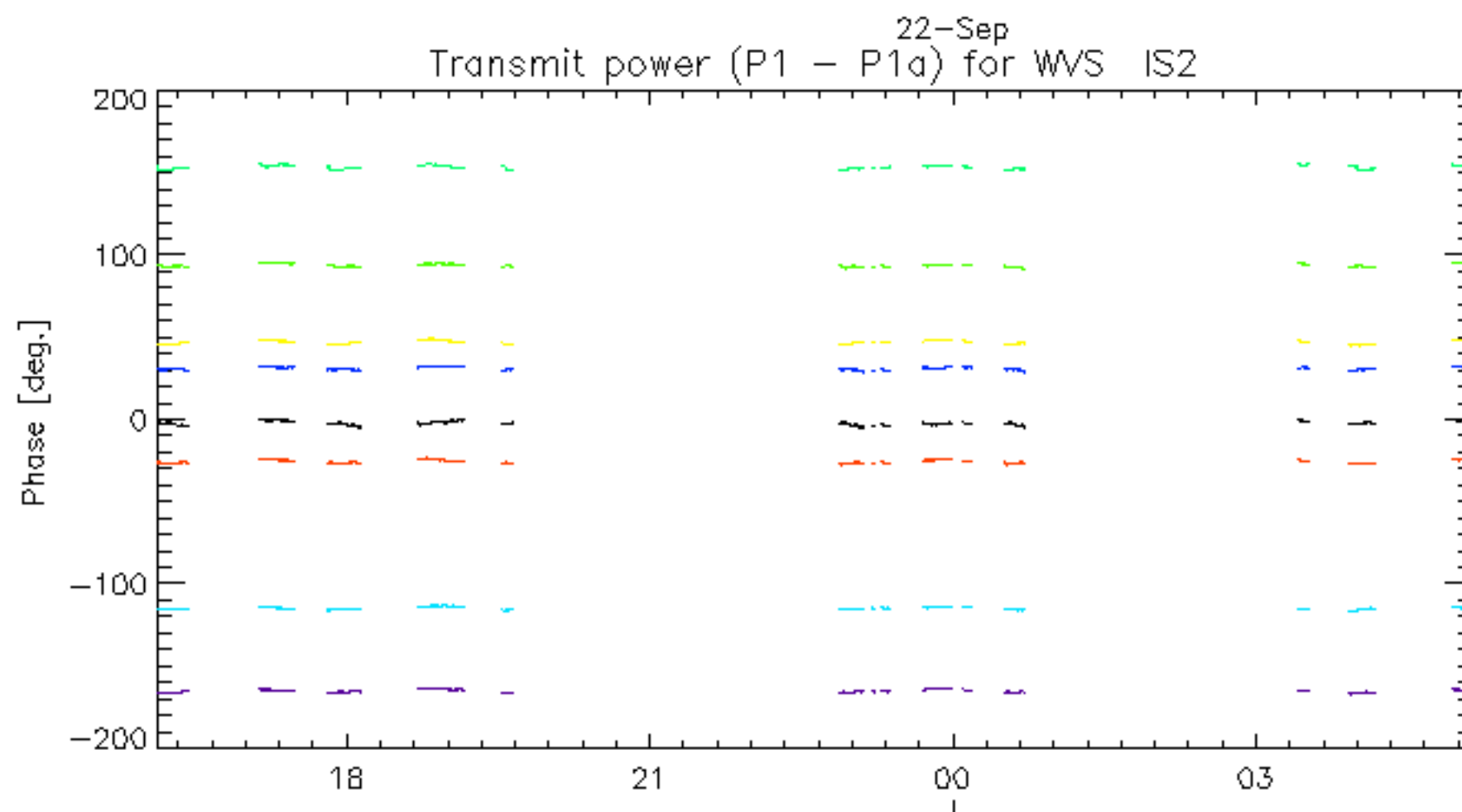
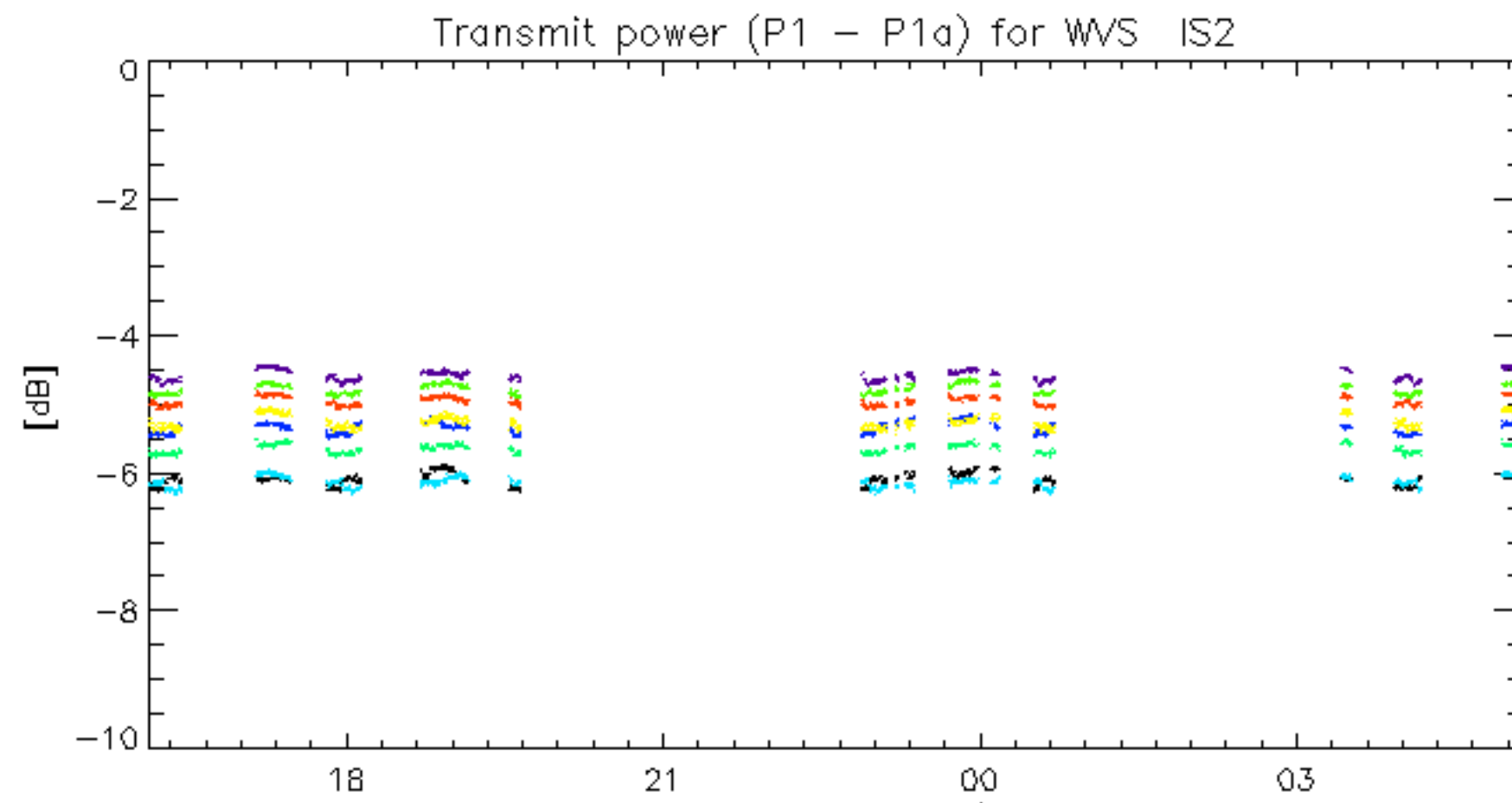


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.