

PRELIMINARY REPORT OF 060923

last update on Sat Sep 23 16:41:48 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 2006-09-22 00:00:00 to 2006-09-23 16:41:48

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	65	9	3	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	40	65	9	3	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	65	9	3	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	65	9	3	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	26	47	33	19	73
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	26	47	33	19	73
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	26	47	33	19	73
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	26	47	33	19	73

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	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
☒	☒
☒	☒
☒	☒
☒	☒

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
☒

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	-3.942433	0.009899	-0.015985
7	P1	-3.059795	0.010991	-0.047976
11	P1	-4.059950	0.018411	-0.034523
15	P1	-6.184484	0.015598	-0.016956
19	P1	-3.528565	0.050235	-0.057139
22	P1	-4.573692	0.028182	-0.082370
26	P1	-3.953769	0.019049	-0.051800
30	P1	-5.803353	0.153596	-0.088436
3	P1	-16.601337	0.254553	-0.078851
7	P1	-16.952841	0.396948	-0.739114
11	P1	-16.797062	0.342765	-0.050882
15	P1	-12.896771	0.103484	0.119683
19	P1	-14.637911	0.460335	-0.116531
22	P1	-15.692917	0.558054	-0.027213
26	P1	-15.224539	0.201872	-0.042198
30	P1	-16.938316	0.394578	-0.058332

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.820860	0.083960	0.024951
7	P2	-21.852331	0.096127	0.049089
11	P2	-15.748112	0.107200	-0.011871
15	P2	-7.093512	0.099802	-0.015980
19	P2	-9.122143	0.091917	-0.036156
22	P2	-18.124535	0.087750	-0.026659
26	P2	-16.412468	0.094814	-0.054668
30	P2	-19.472309	0.090436	-0.022501

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.182366	0.005170	-0.034224
7	P3	-8.182366	0.005170	-0.034224
11	P3	-8.182366	0.005170	-0.034224
15	P3	-8.182366	0.005170	-0.034224
19	P3	-8.182366	0.005170	-0.034224
22	P3	-8.182366	0.005170	-0.034224
26	P3	-8.182366	0.005170	-0.034224
30	P3	-8.182366	0.005170	-0.034224

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	-3.849694	0.009127	-0.043403
7	P1	-2.497106	0.039298	-0.227935
11	P1	-2.879541	0.022659	-0.050167
15	P1	-3.654929	0.028914	-0.034446
19	P1	-3.466691	0.077654	-0.020783
22	P1	-5.097539	0.035908	-0.046604
26	P1	-5.871989	0.023964	-0.012619
30	P1	-5.203869	0.076857	-0.054091
3	P1	-11.637583	0.046874	-0.033603
7	P1	-9.961691	0.064000	-0.246453
11	P1	-10.345353	0.062238	-0.077226
15	P1	-10.856696	0.150884	0.010829
19	P1	-15.691354	3.555295	0.048834
22	P1	-20.808115	1.700603	-0.379765
26	P1	-15.939601	0.388484	0.065511
30	P1	-18.061802	0.803037	-0.273221

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.410442	0.055047	0.042653
7	P2	-22.191555	0.088853	0.062325
11	P2	-10.900048	0.042373	0.006165
15	P2	-4.860535	0.037087	-0.003780
19	P2	-6.849281	0.037881	-0.021900
22	P2	-8.158285	0.032744	-0.000127
26	P2	-24.173120	0.052216	-0.035723
30	P2	-21.962523	0.041985	-0.011787

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.028057	0.003945	-0.044058
7	P3	-8.027864	0.003944	-0.044083
11	P3	-8.027906	0.003953	-0.044144
15	P3	-8.027952	0.003967	-0.044068
19	P3	-8.027994	0.003968	-0.043756
22	P3	-8.028102	0.003935	-0.043969
26	P3	-8.028096	0.003957	-0.043768
30	P3	-8.027905	0.003945	-0.044242

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	0.000547987
	stdev	1.78714e-07
MEAN Q	mean	0.000520887
	stdev	2.19223e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136281
	stdev	0.00113916
STDEV Q	mean	0.136634
	stdev	0.00115640



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006092[123]

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_1PNPDE20060921_231435_000001192051_00245_23846_6212.N1	1	0
ASA_IMM_1PNPDE20060922_155111_000001142051_00254_23855_6240.N1	1	0
ASA_IMM_1PNPDE20060923_002304_000002162051_00260_23861_6274.N1	1	0
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
ASA_WSM_1PNPDE20060921_230849_000000972051_00245_23846_3396.N1	0	54
ASA_WSM_1PNPDE20060923_015903_000001462051_00261_23862_3490.N1	0	76



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)

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

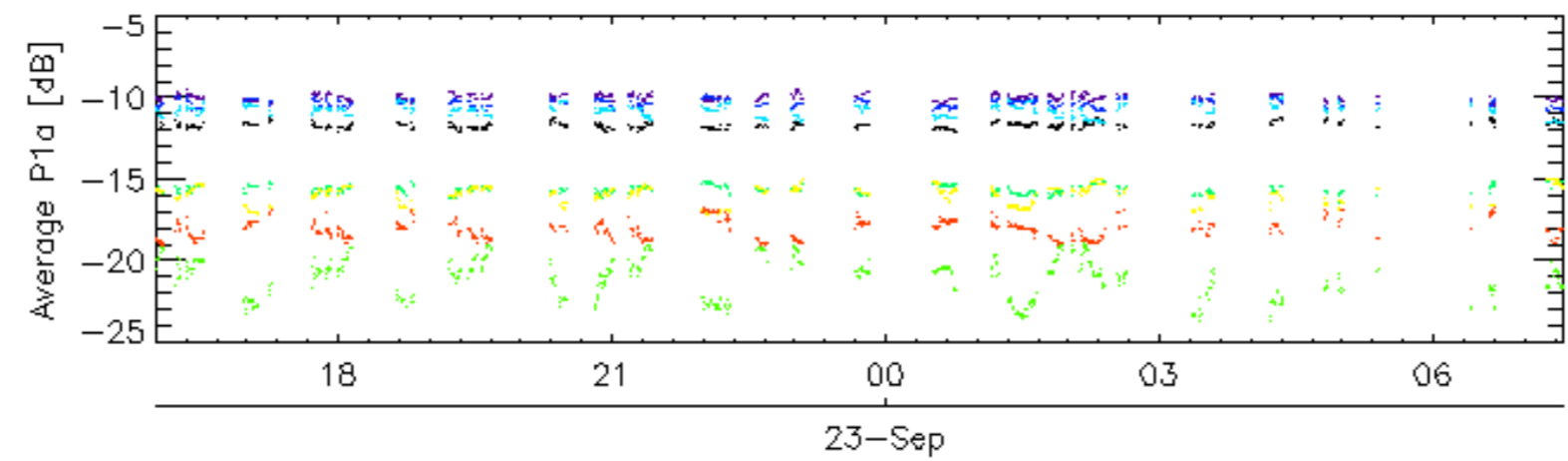
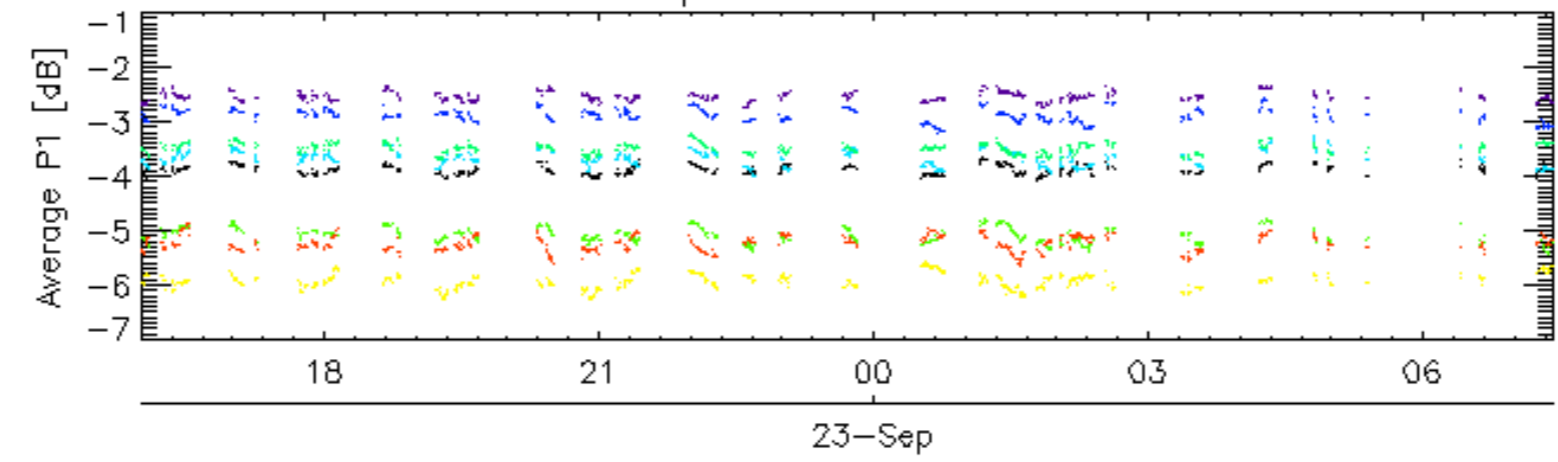
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

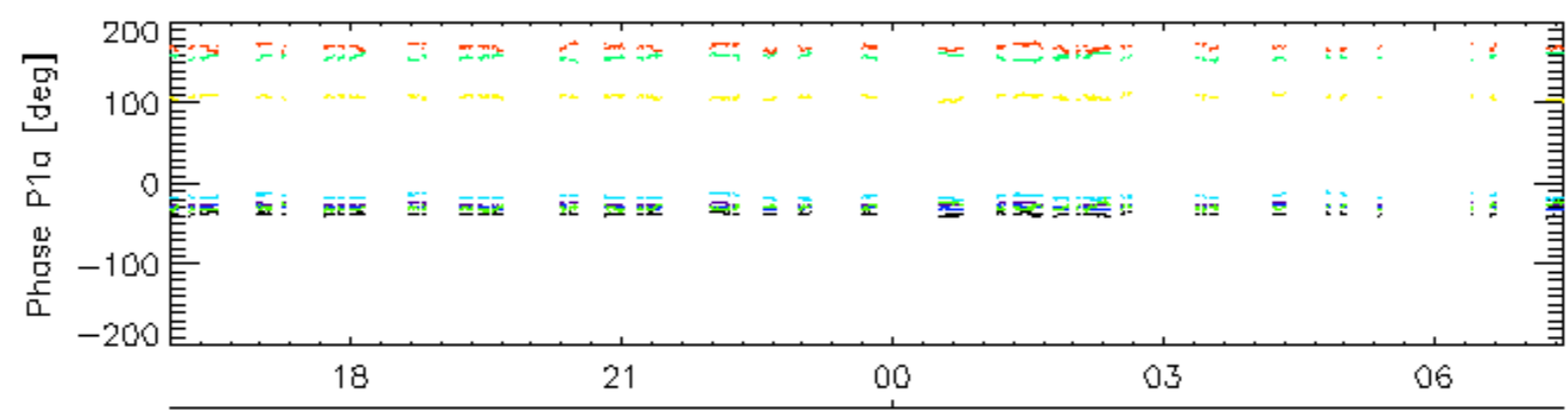
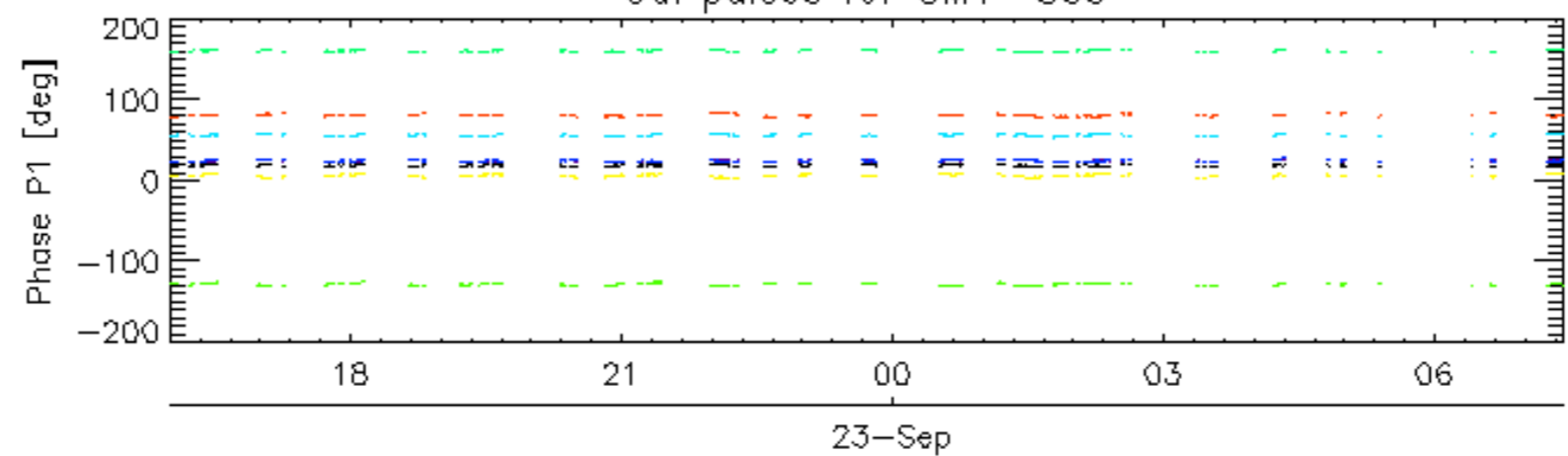
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

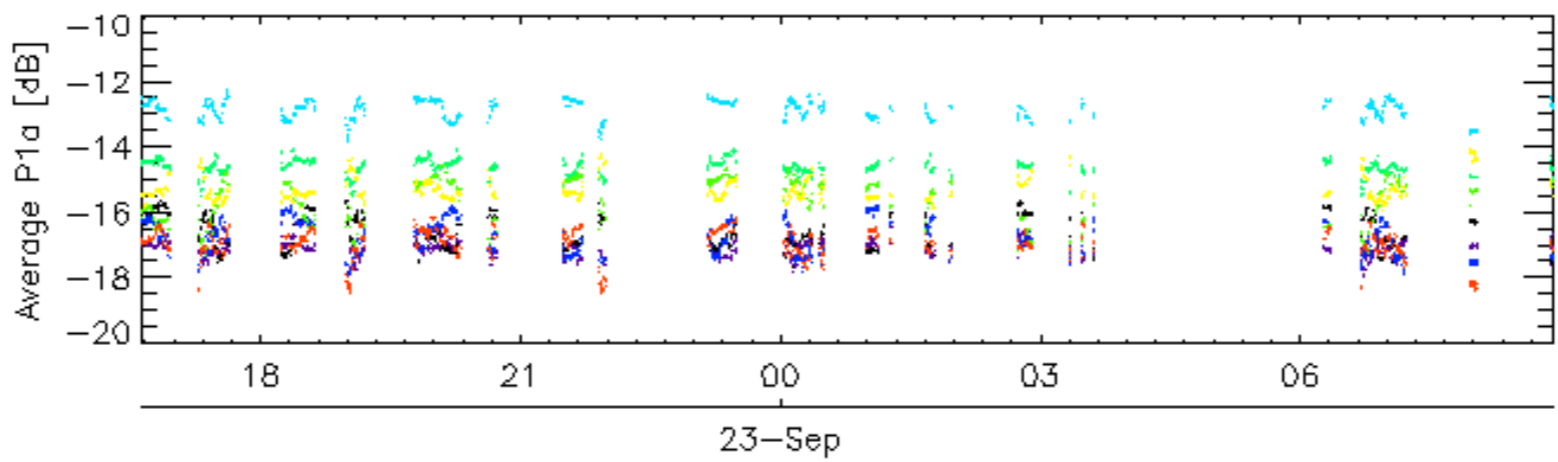
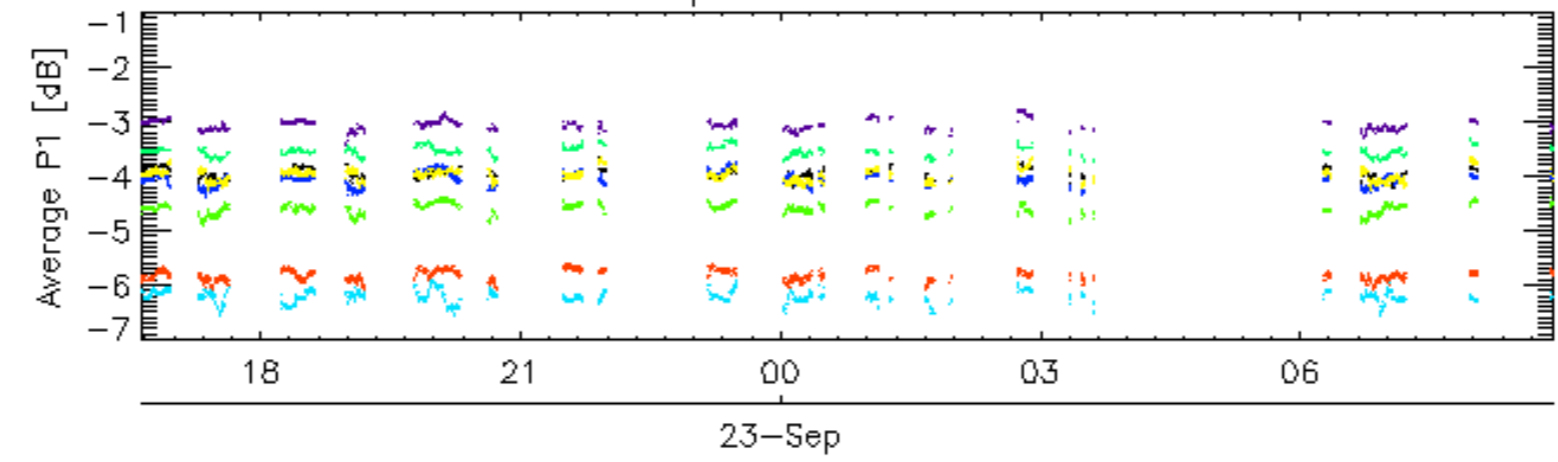


Cal pulses for GM1 SS3

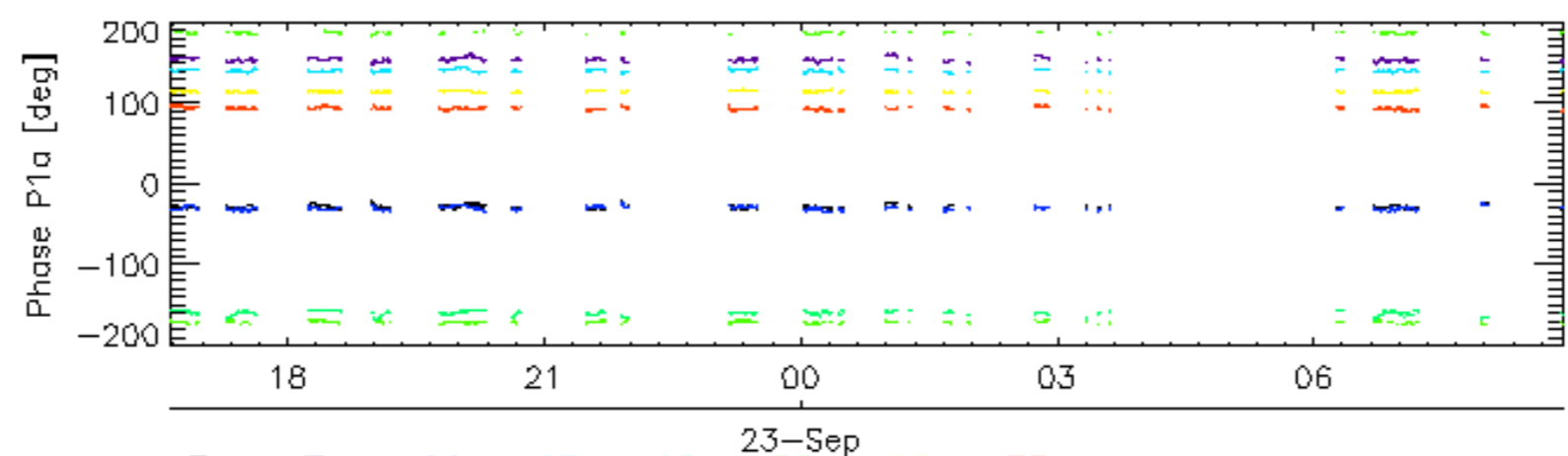
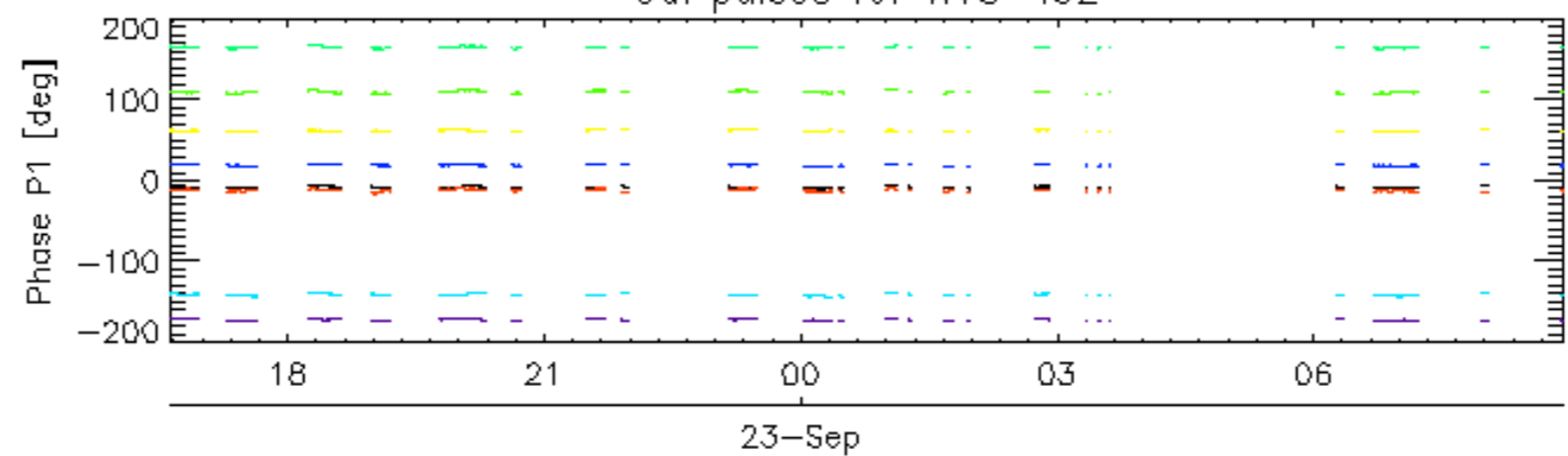


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

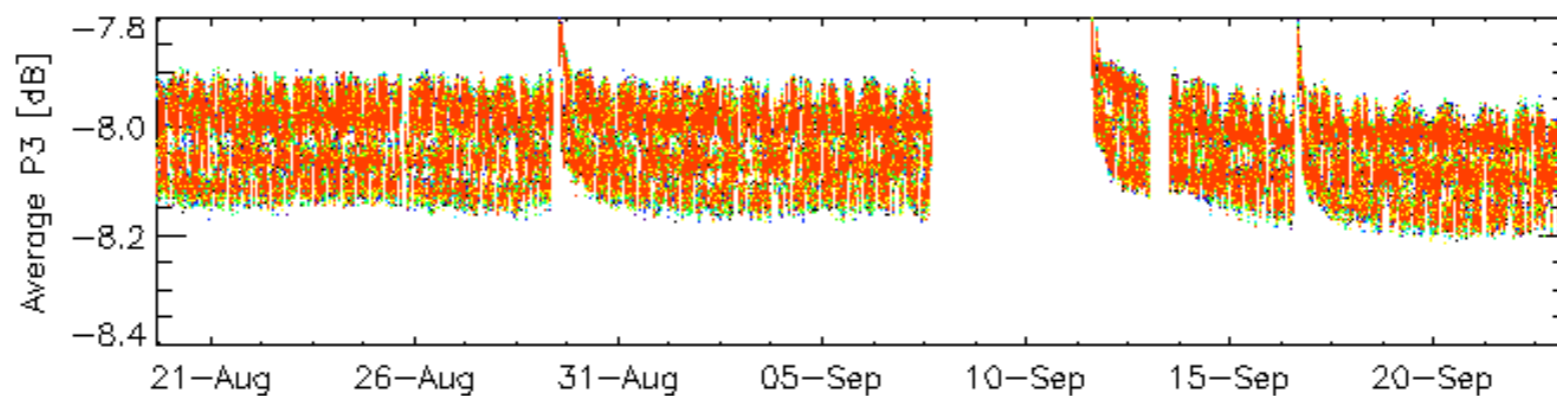
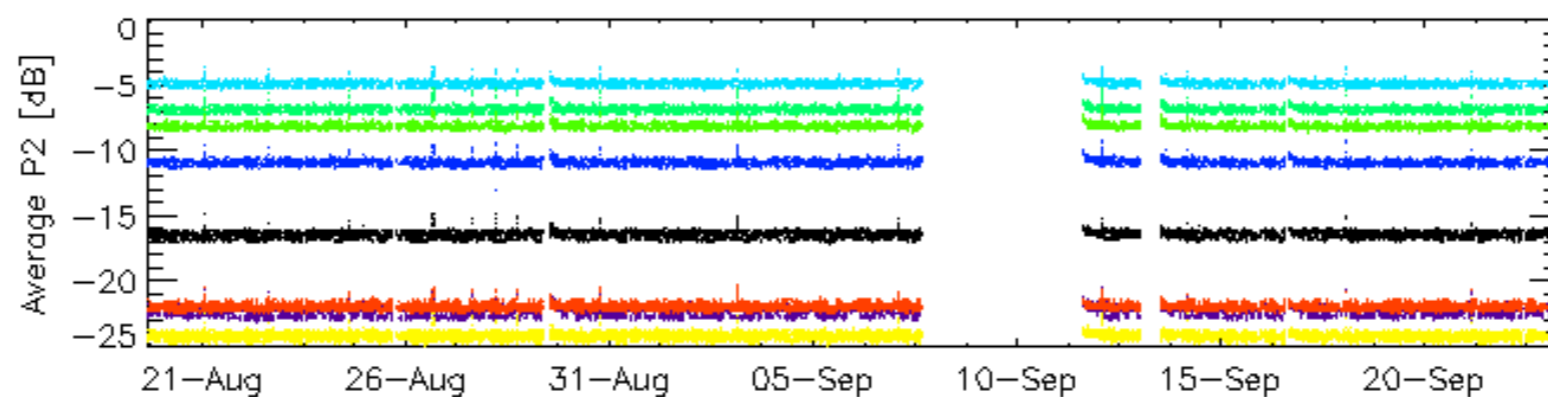
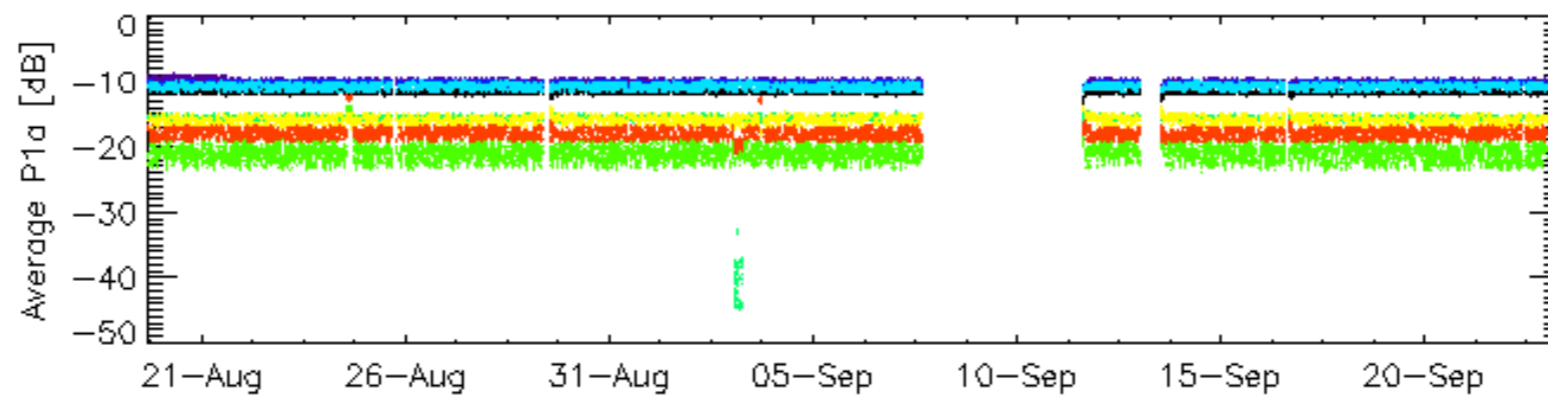
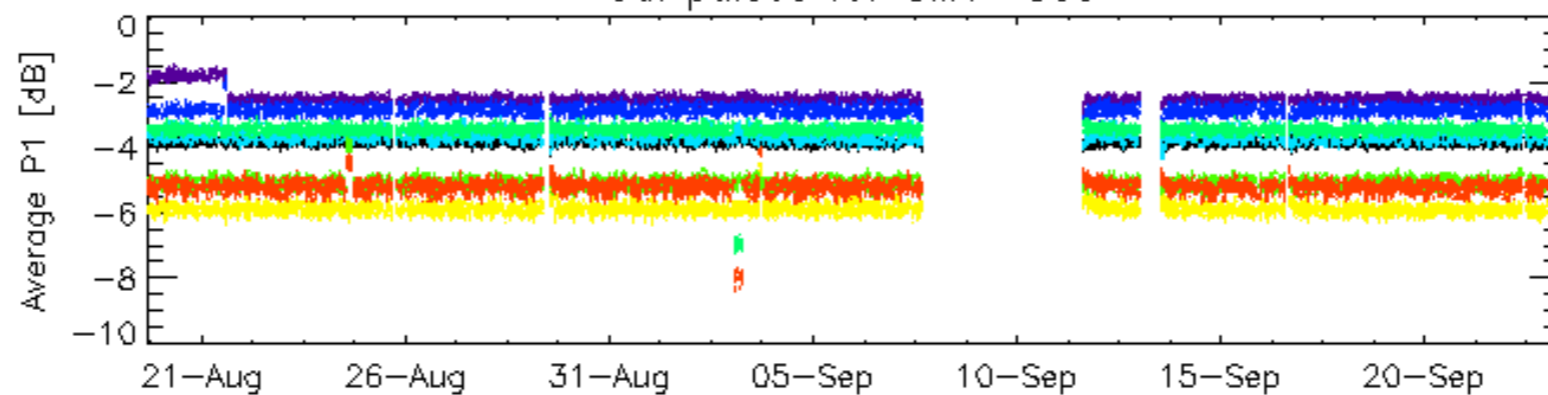


Cal pulses for WVS IS2



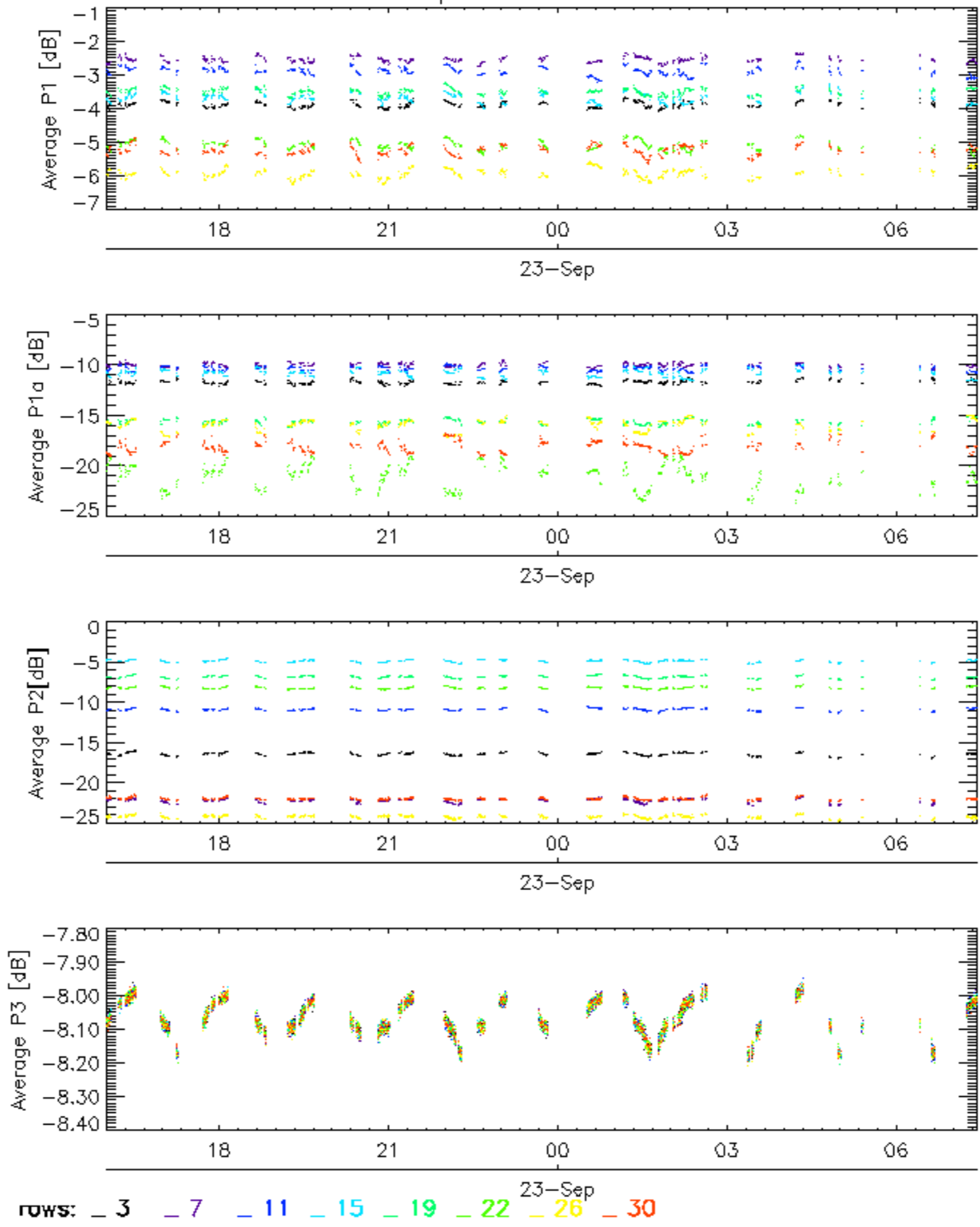
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

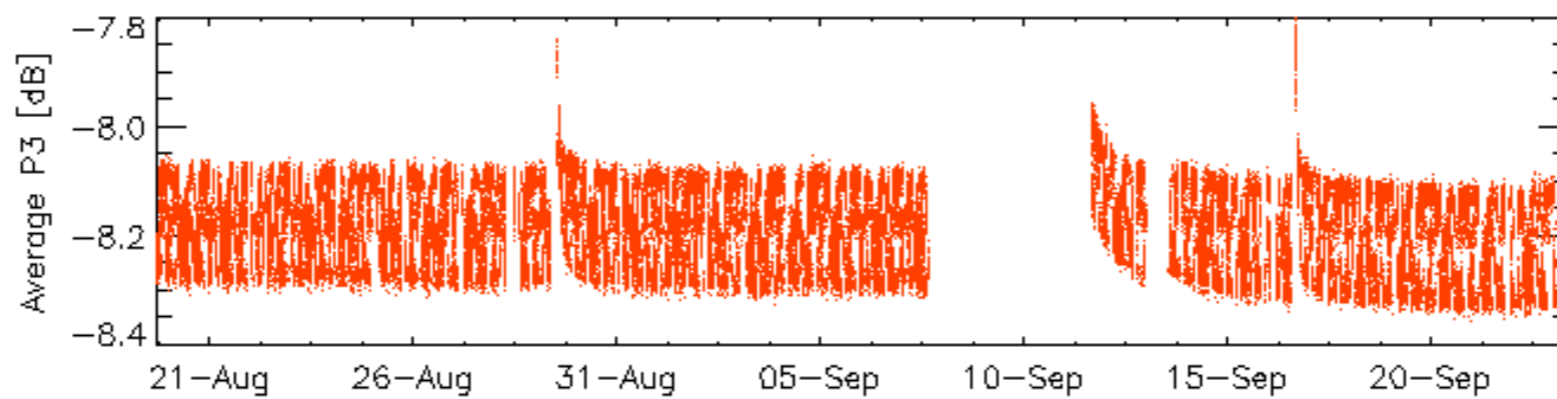
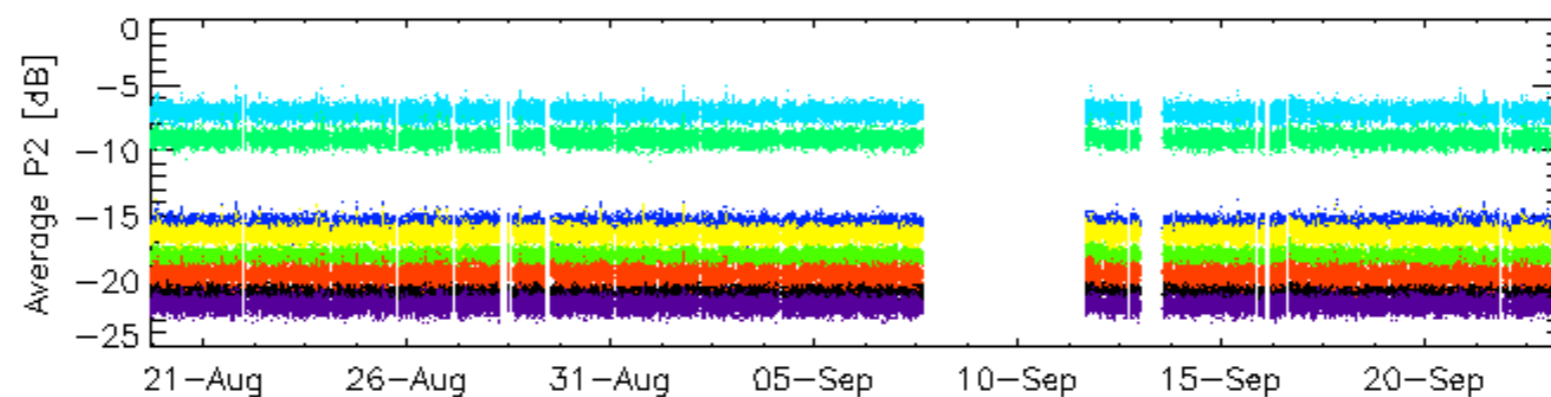
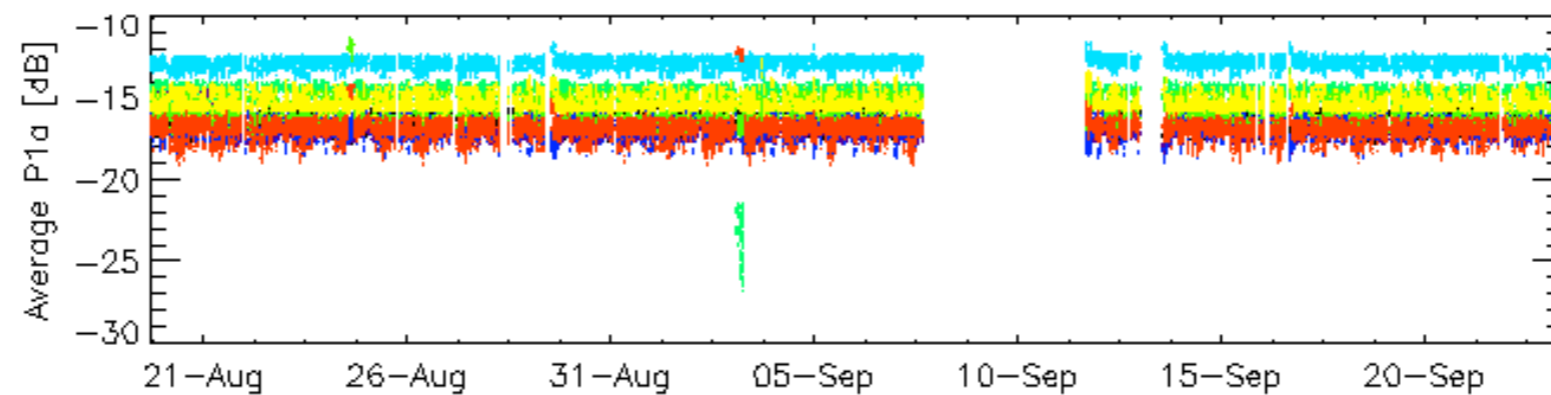
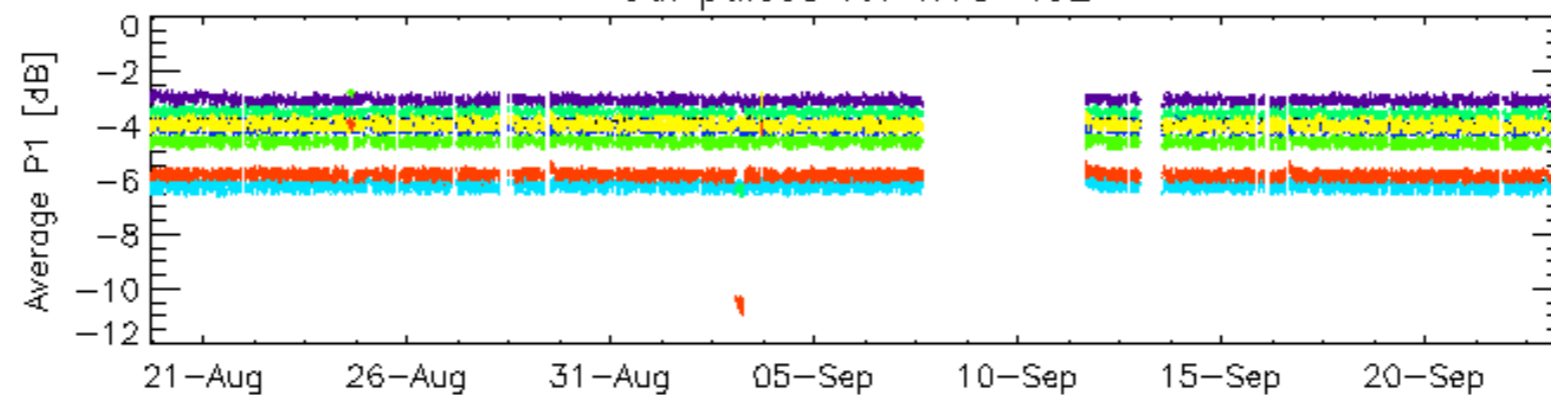


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

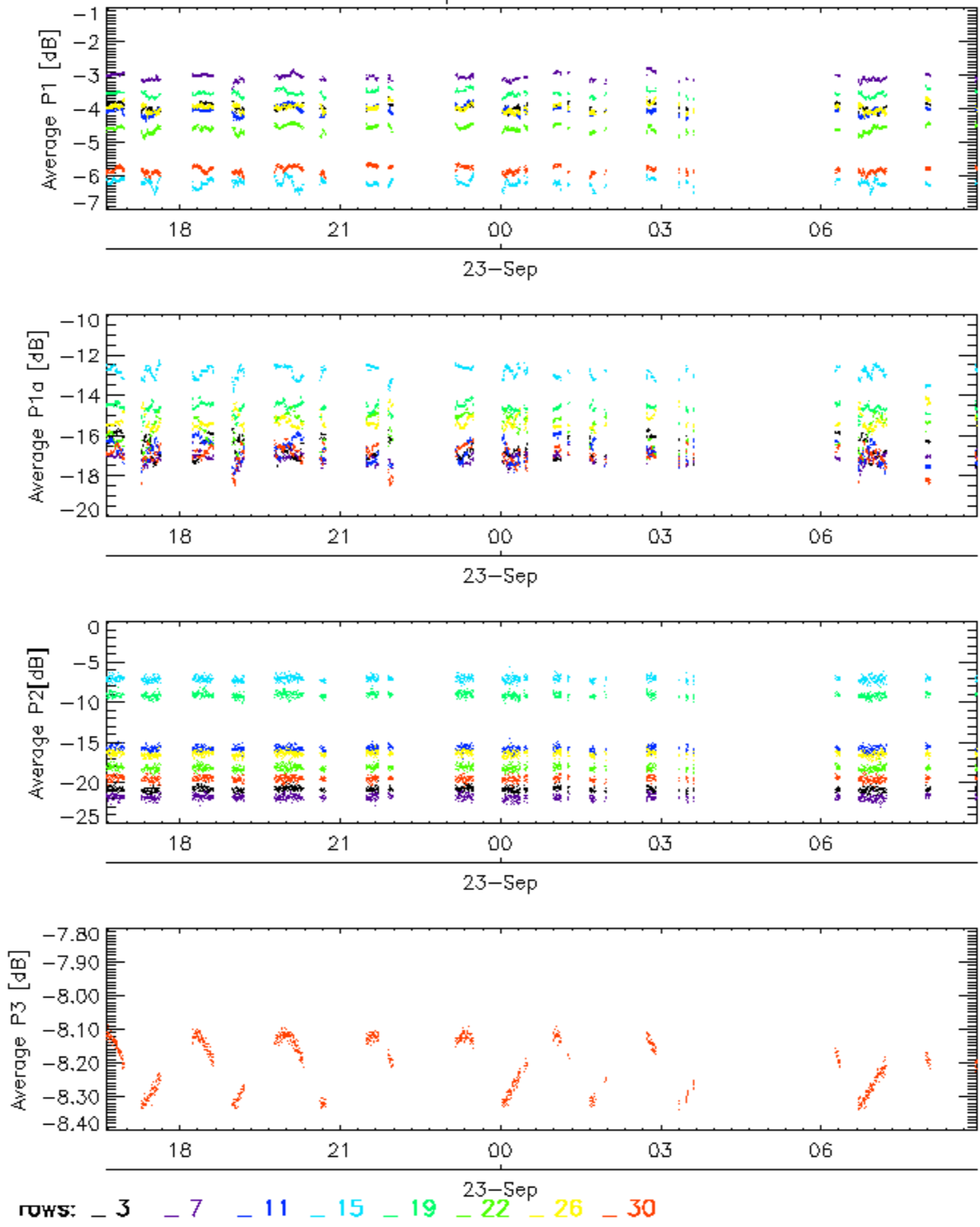


Cal pulses for WVS IS2

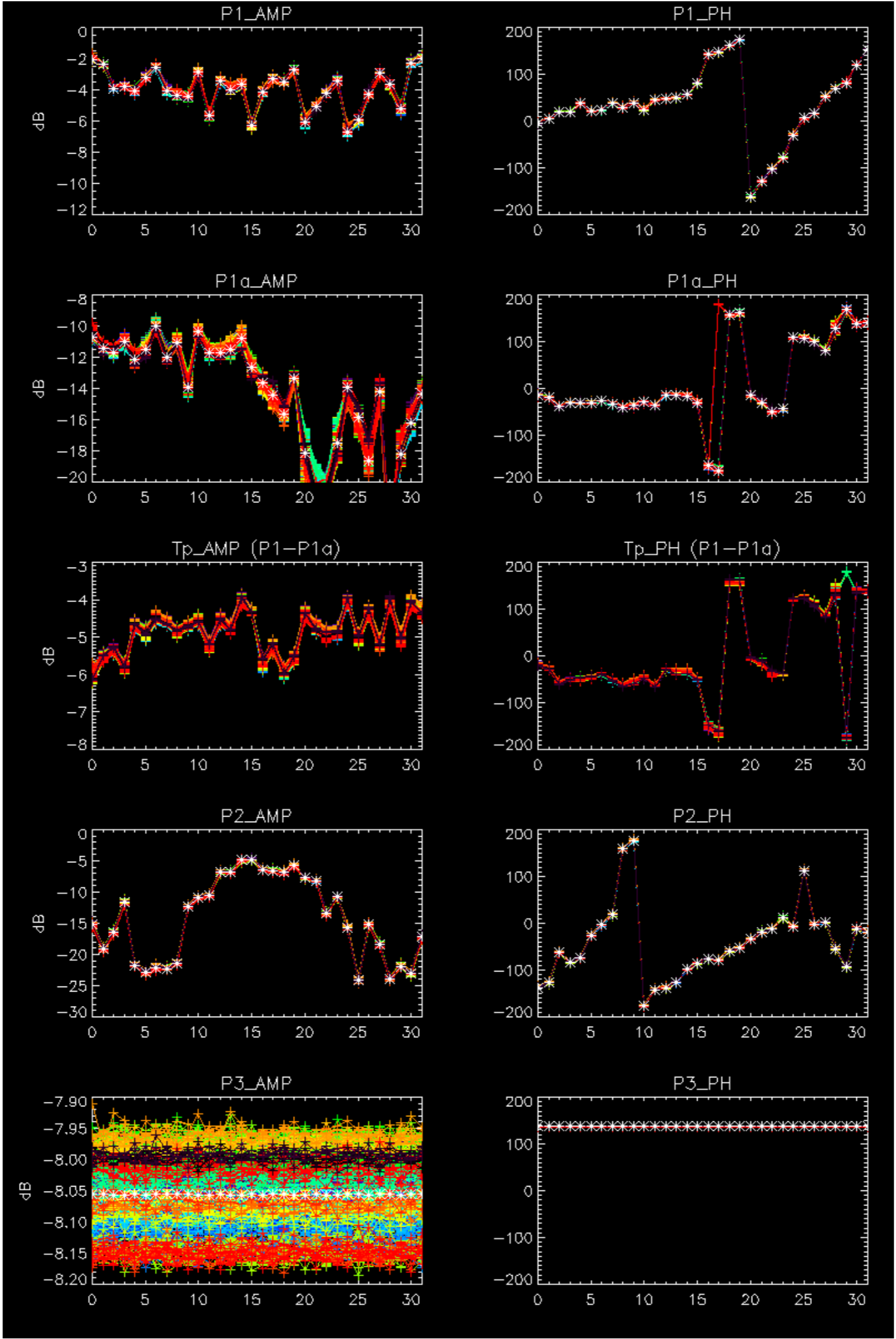


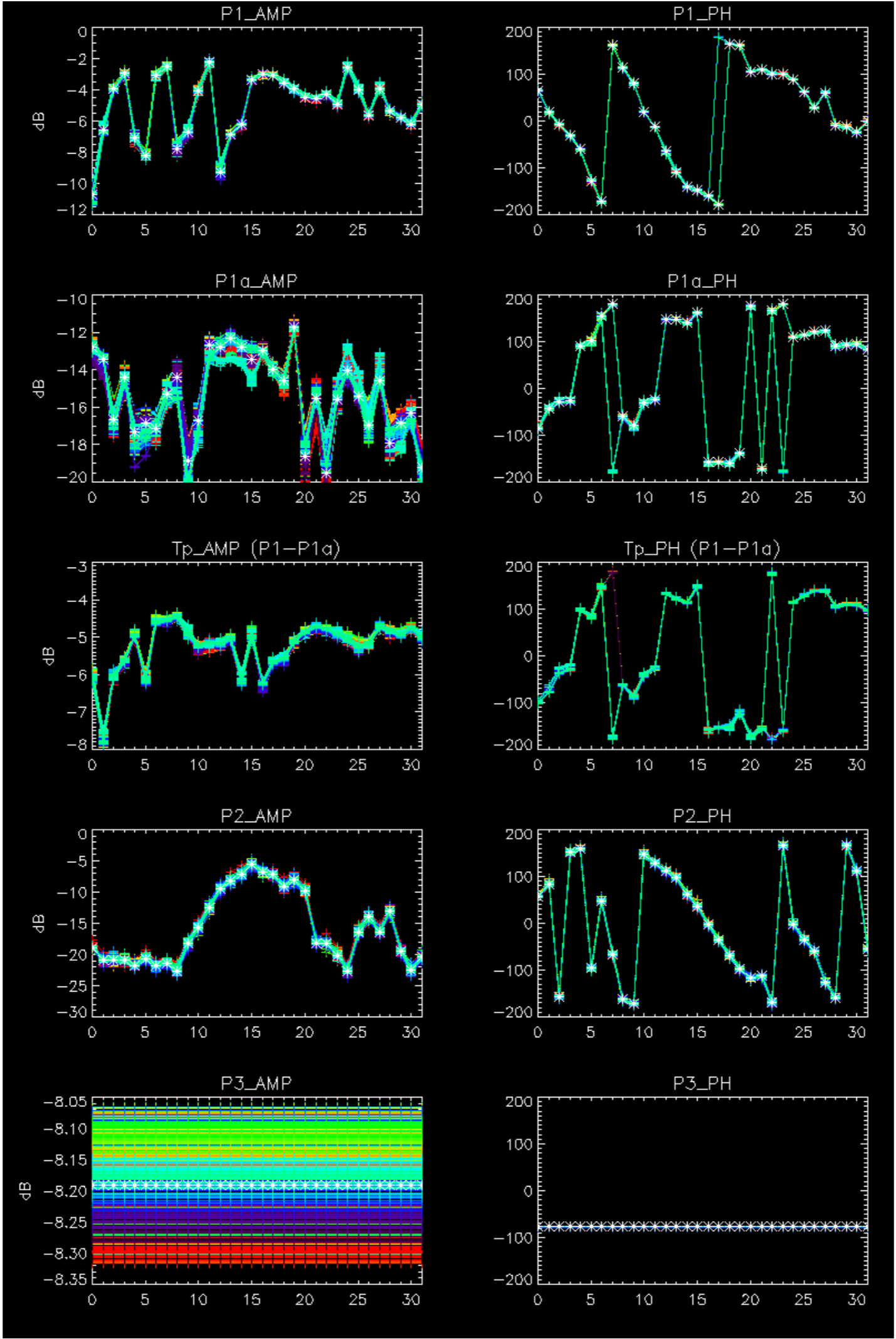
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



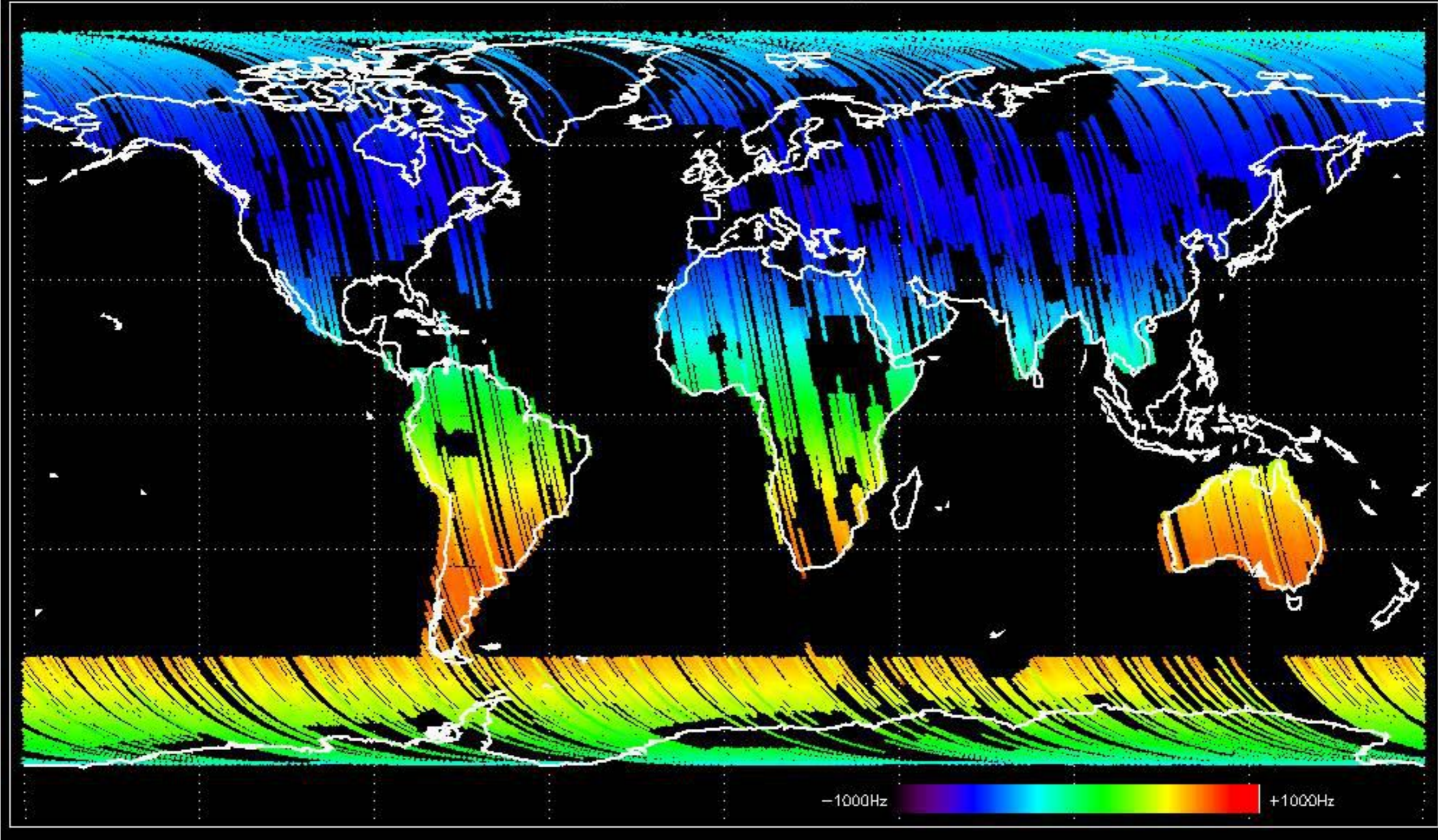
No anomalies observed.



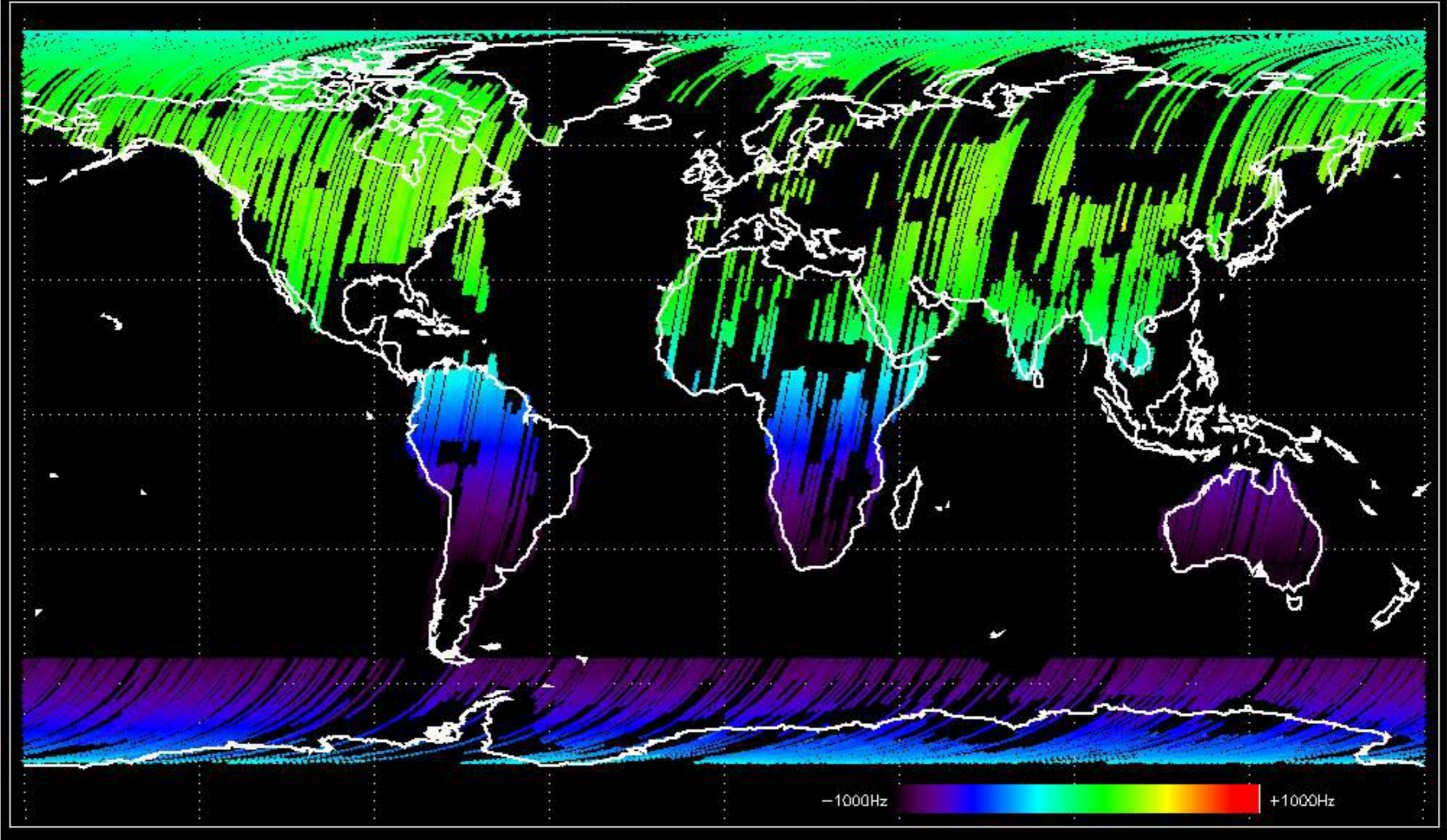


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

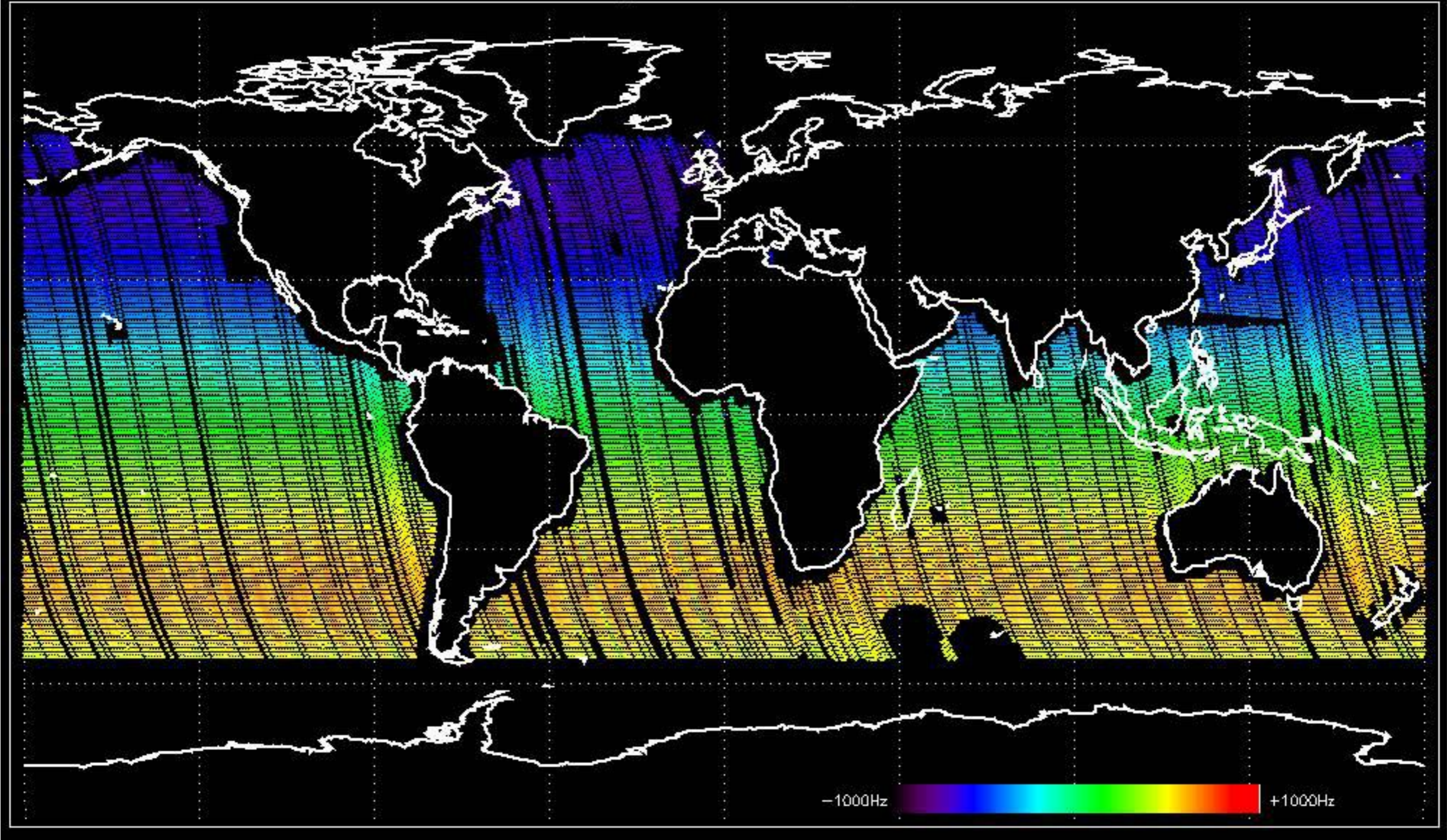
Doppler 'GM1' 'SS1' ascending



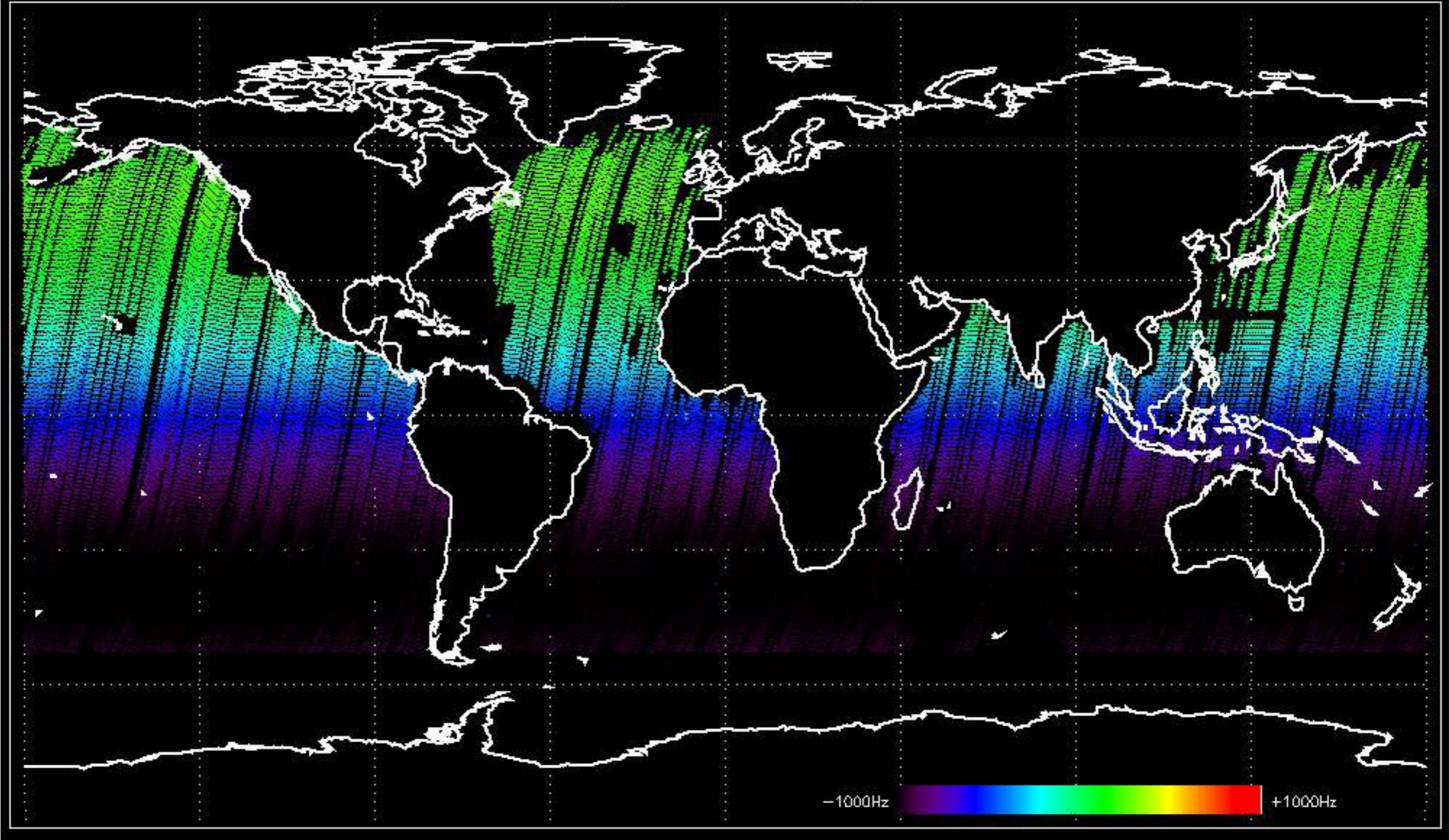
Doppler 'GM1' 'SS1' descending

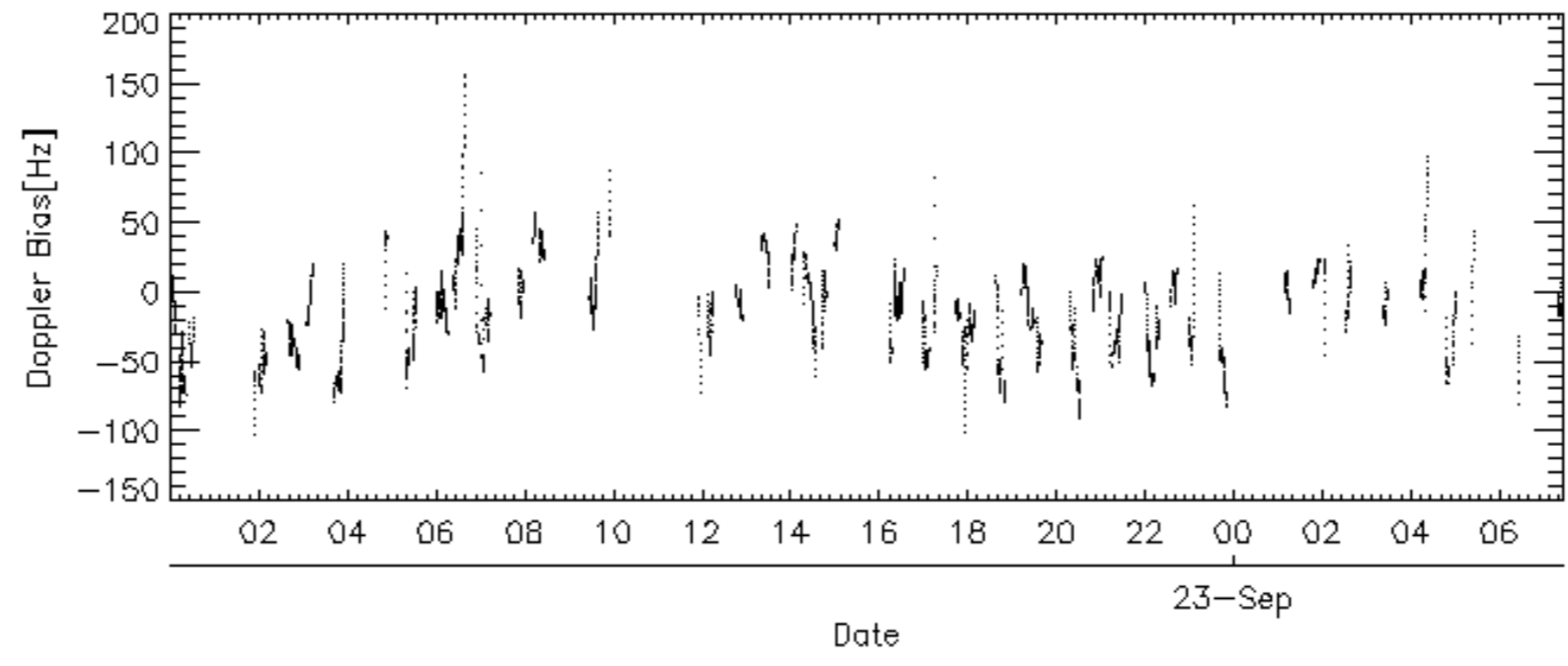
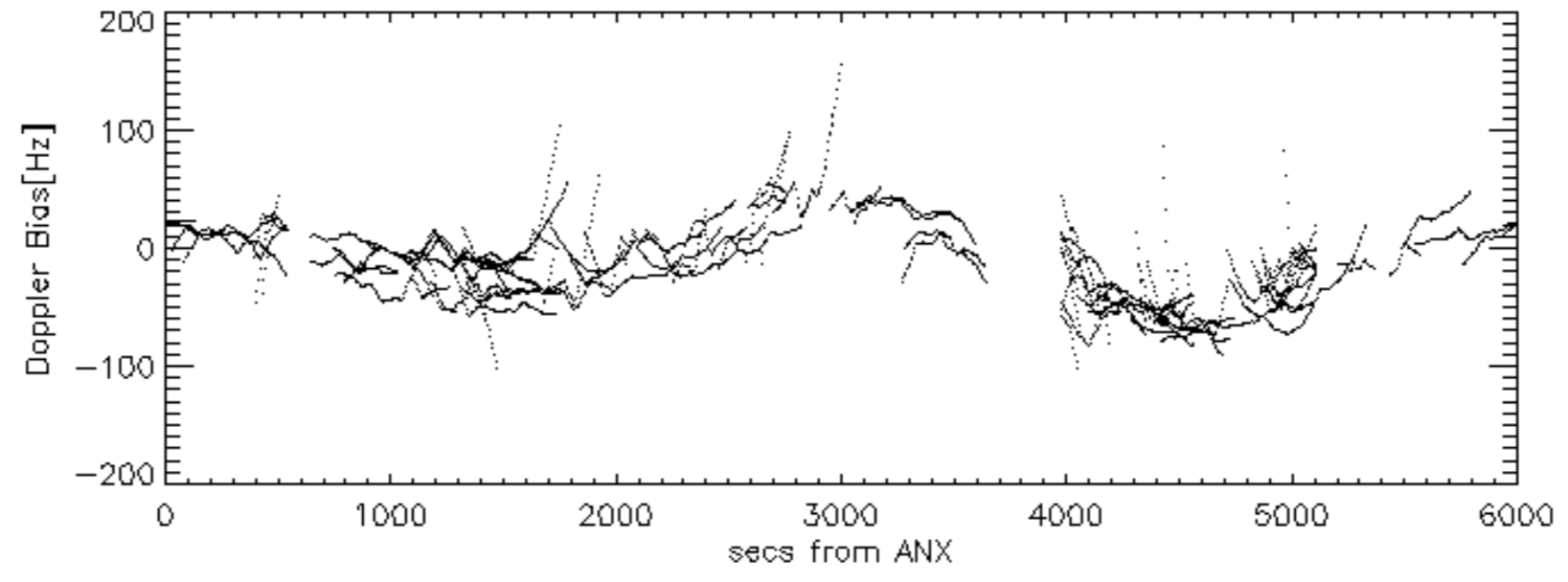
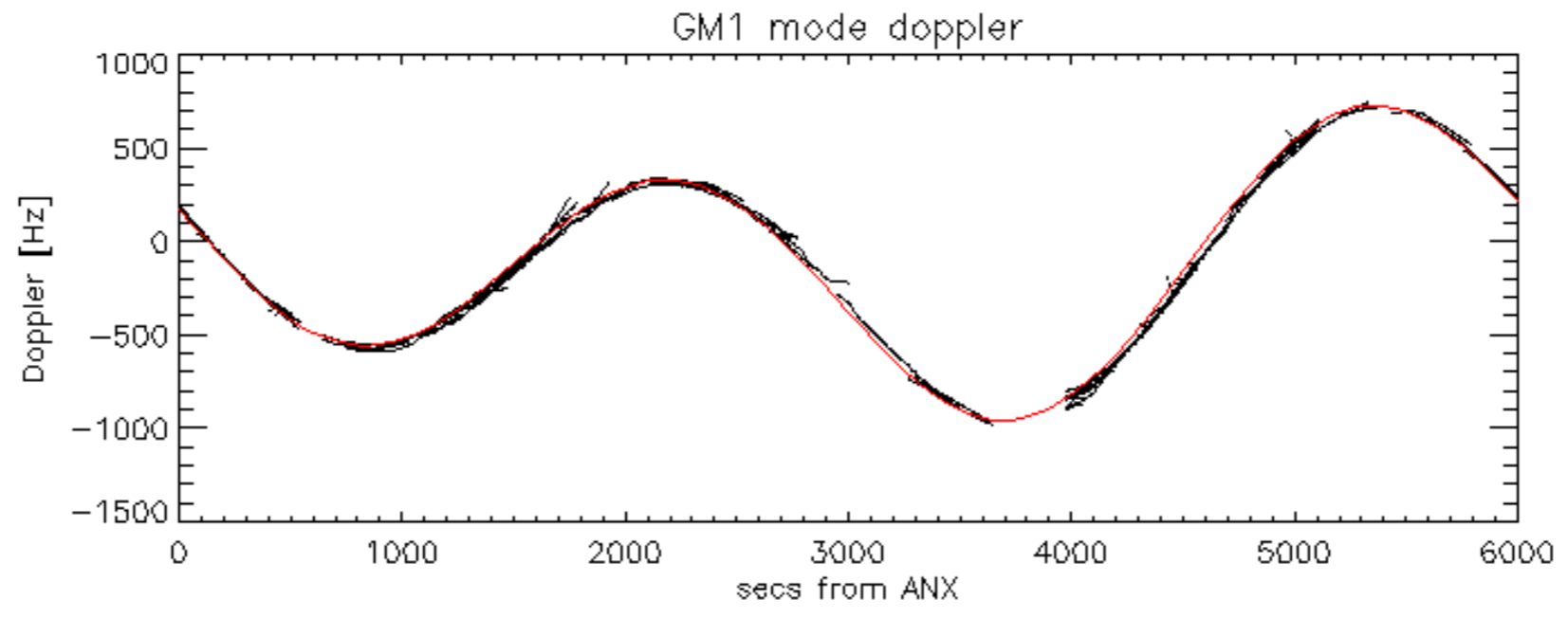


Doppler 'WVS' 'IS2' ascending

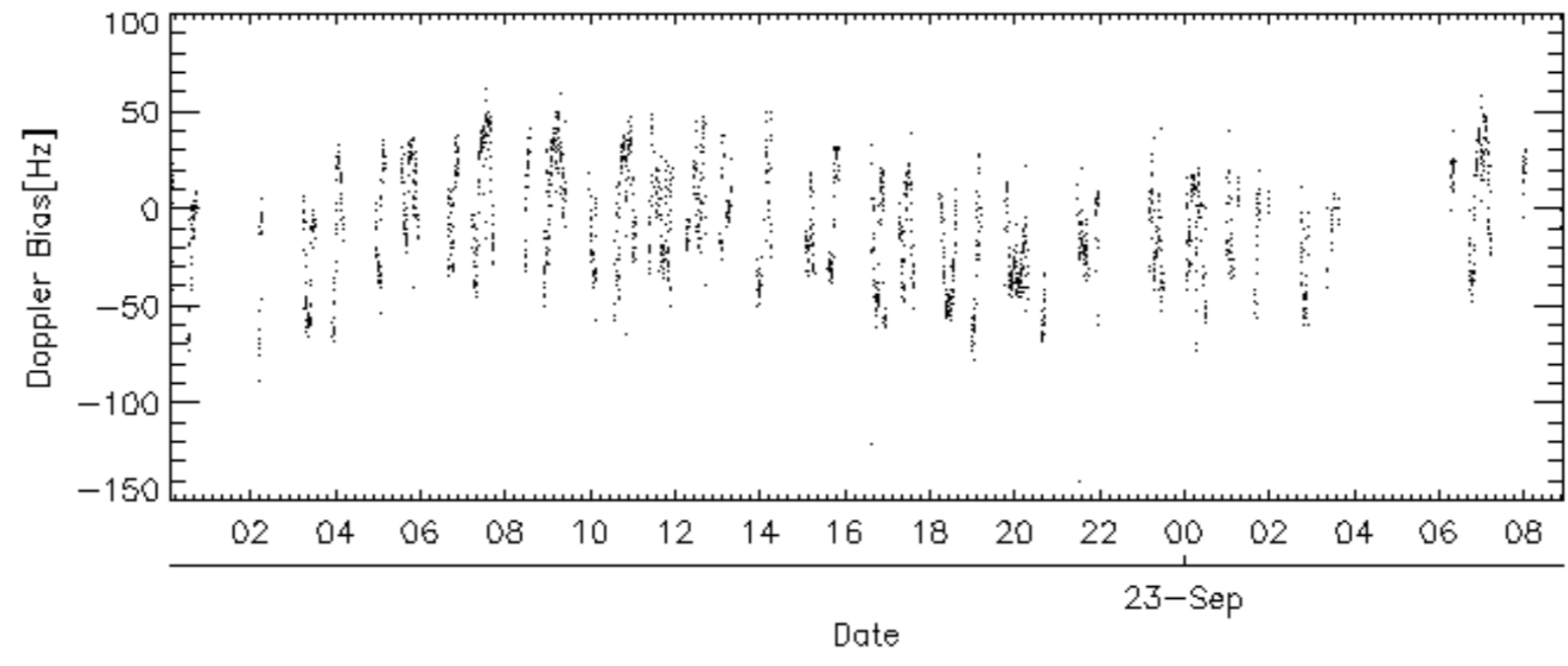
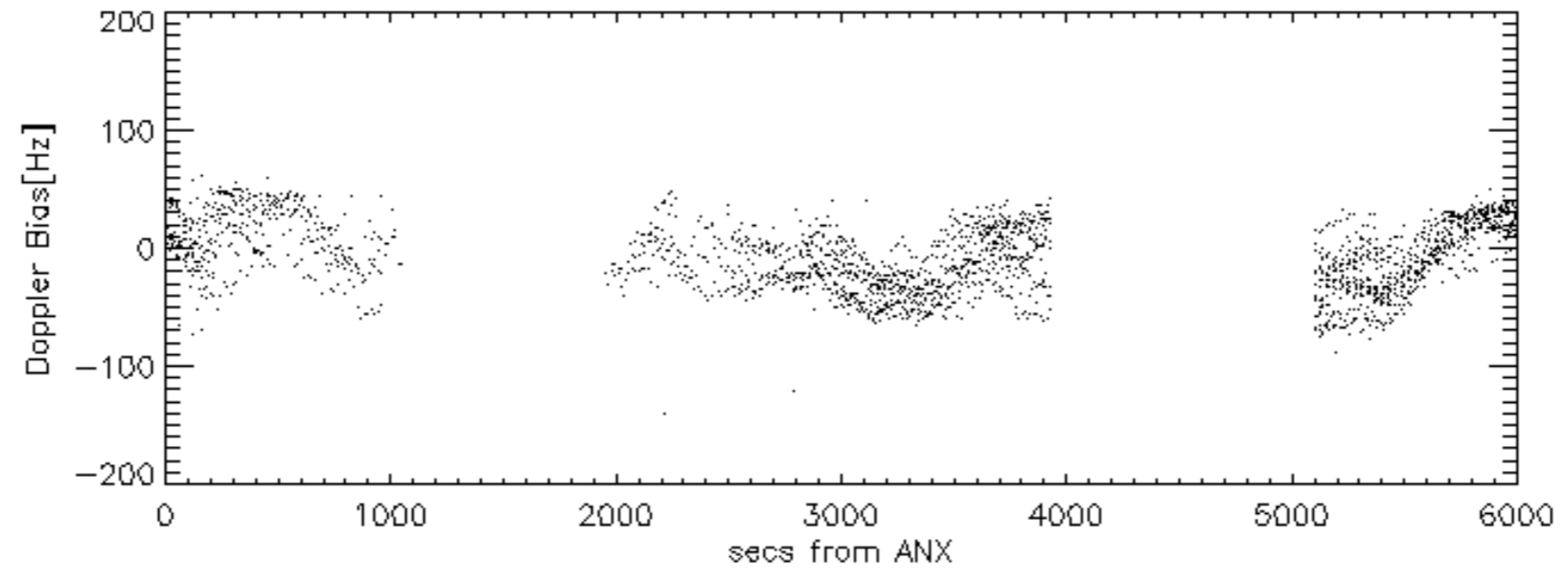
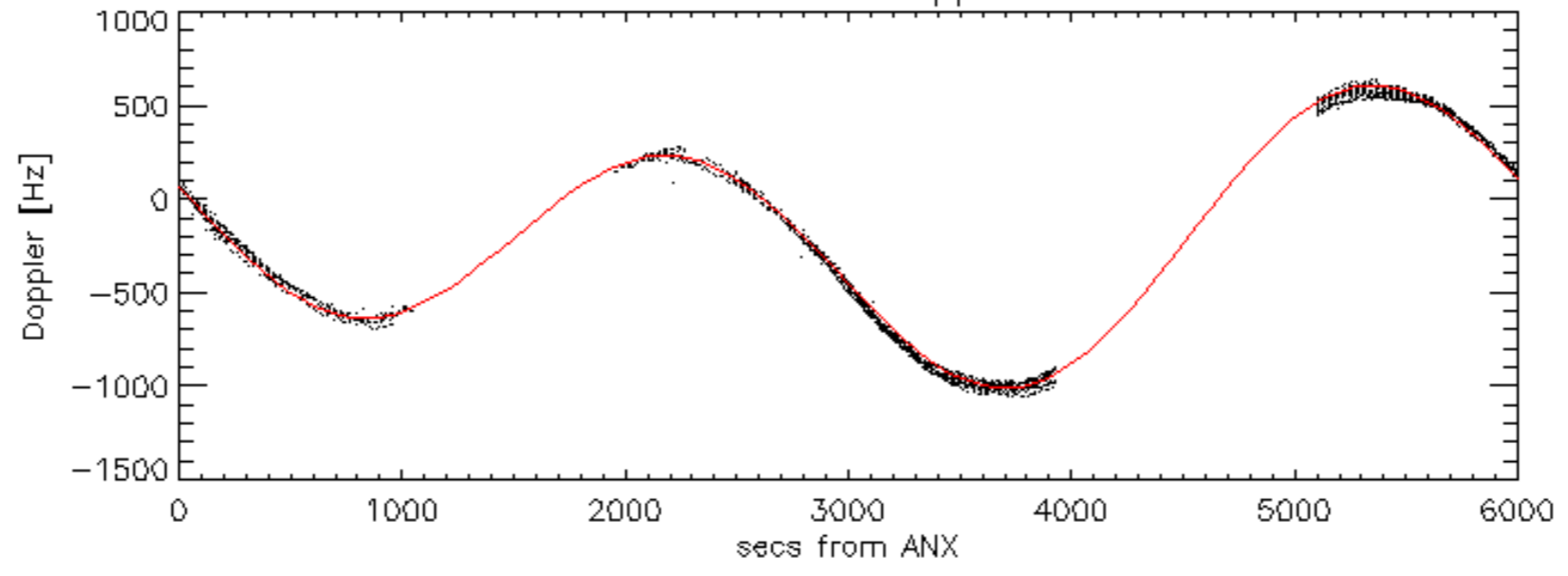


Doppler 'WVS' 'IS2' descending

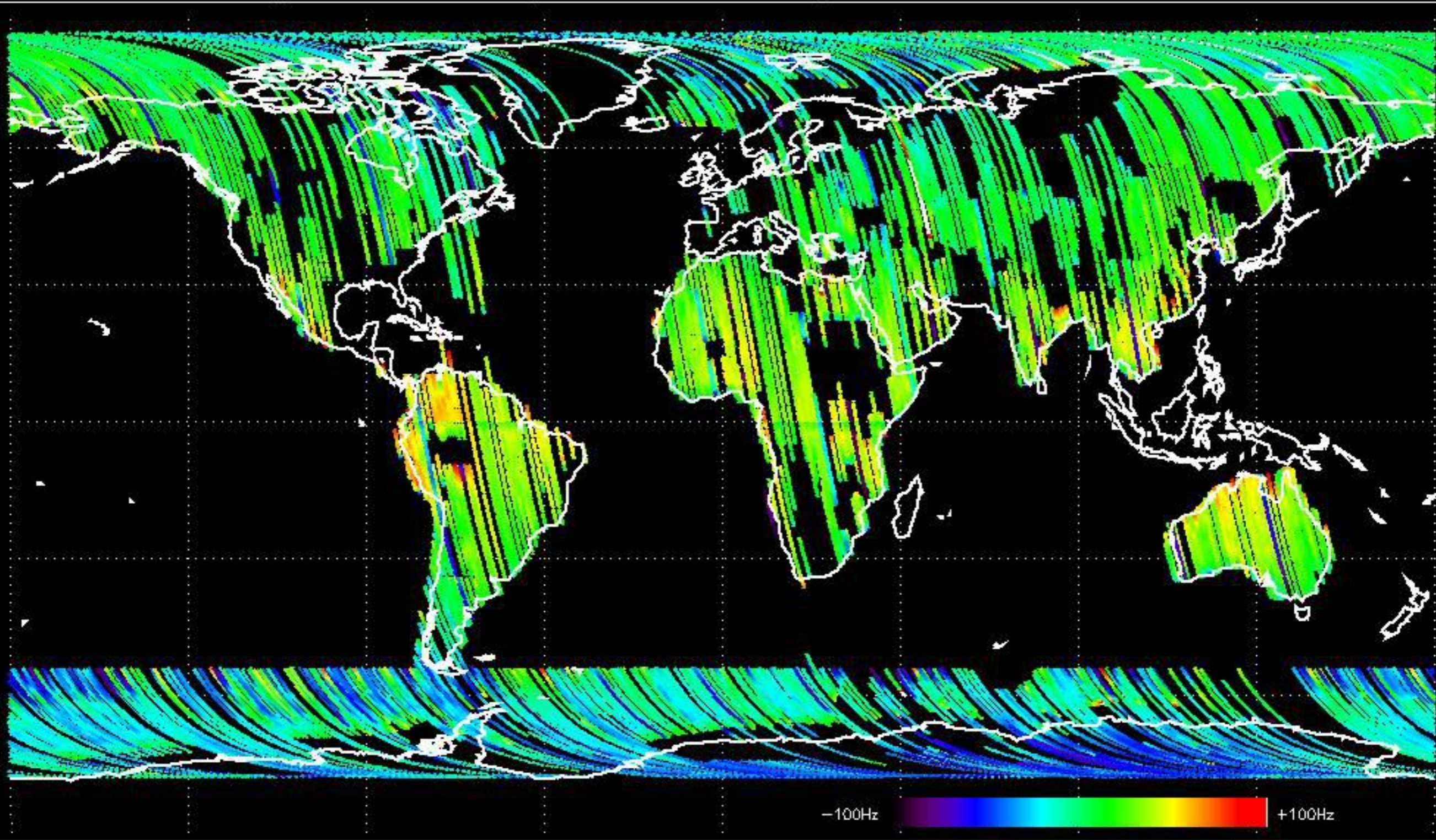




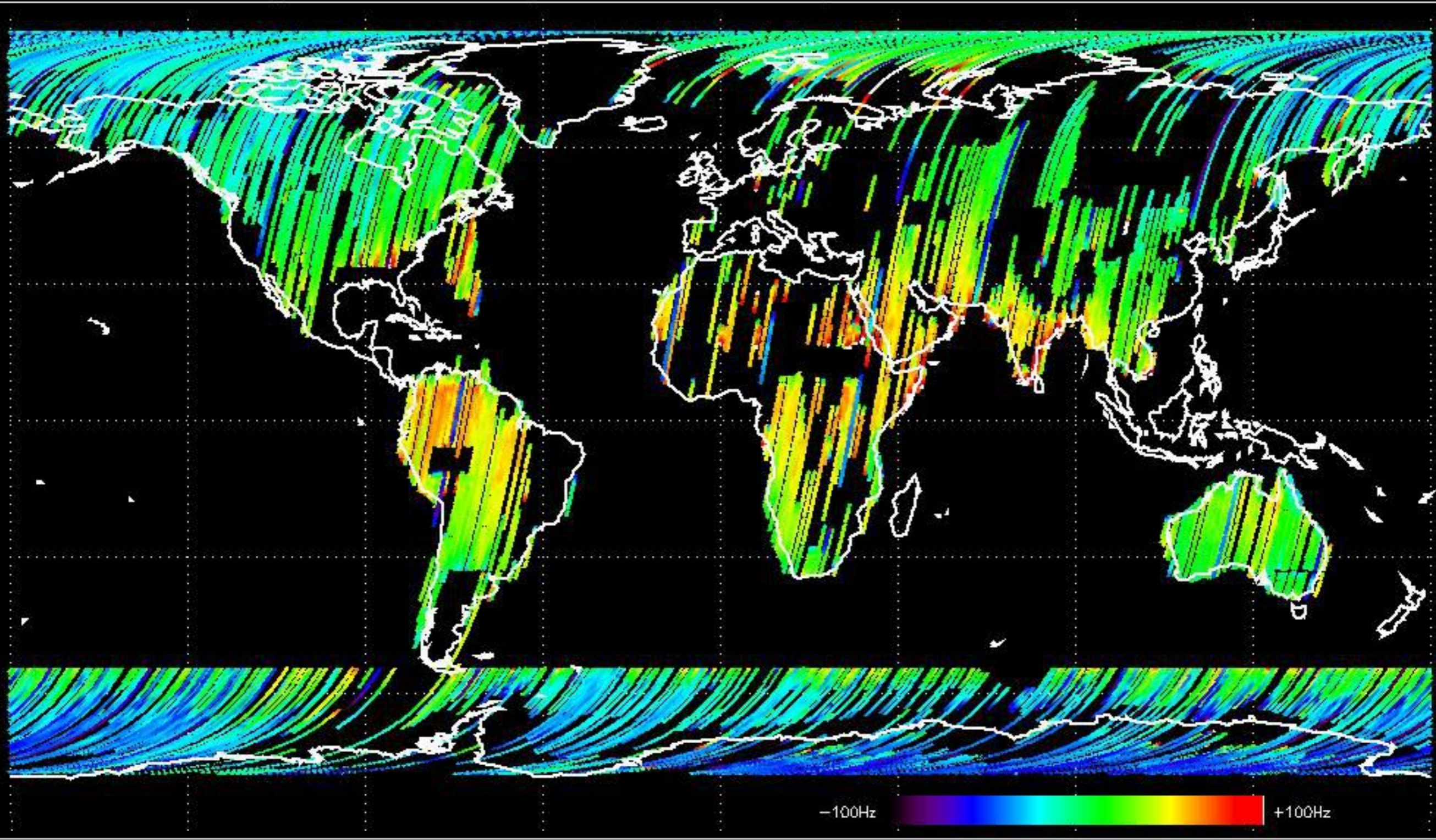
WVS mode doppler



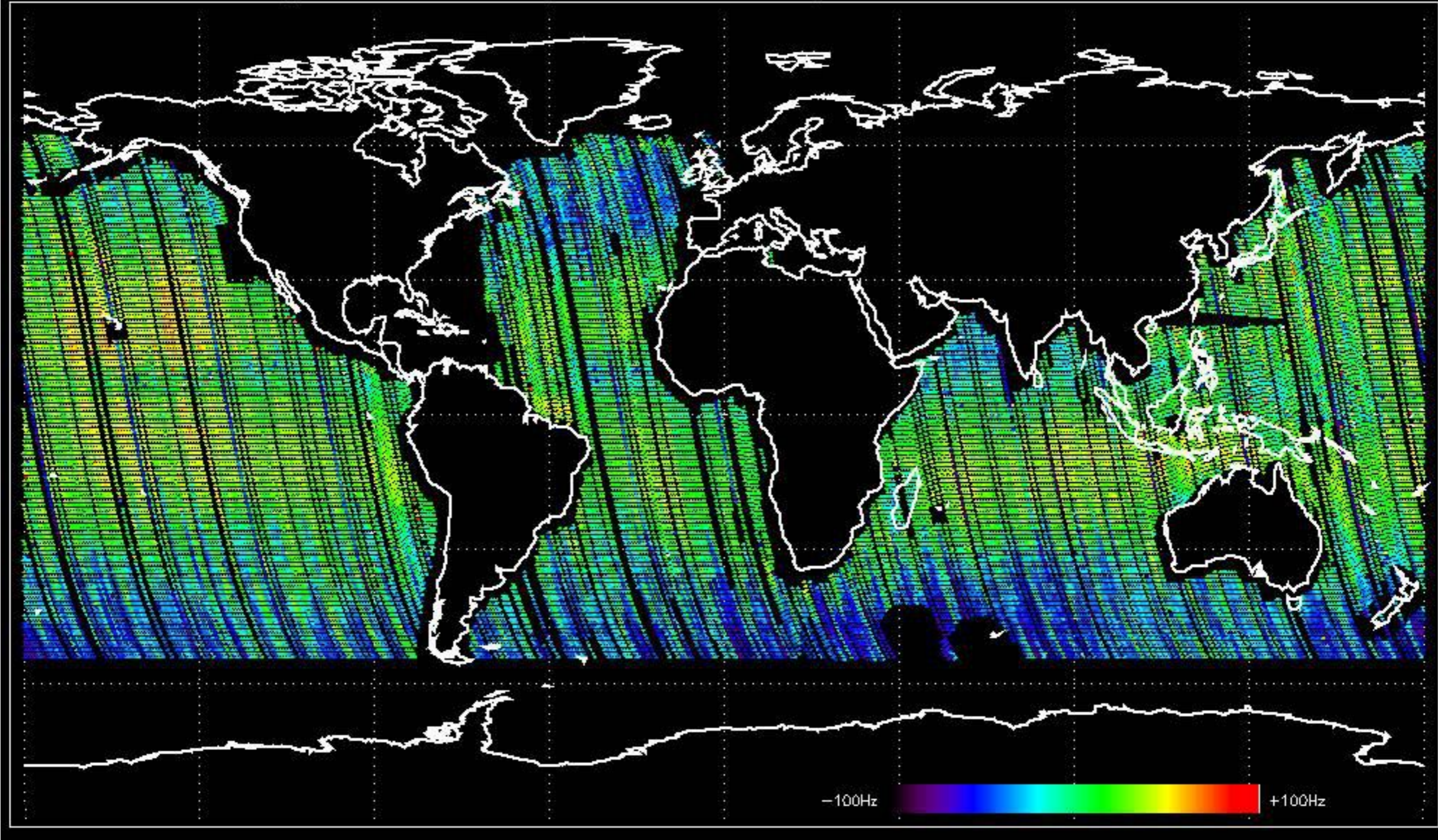
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.032646 Hz



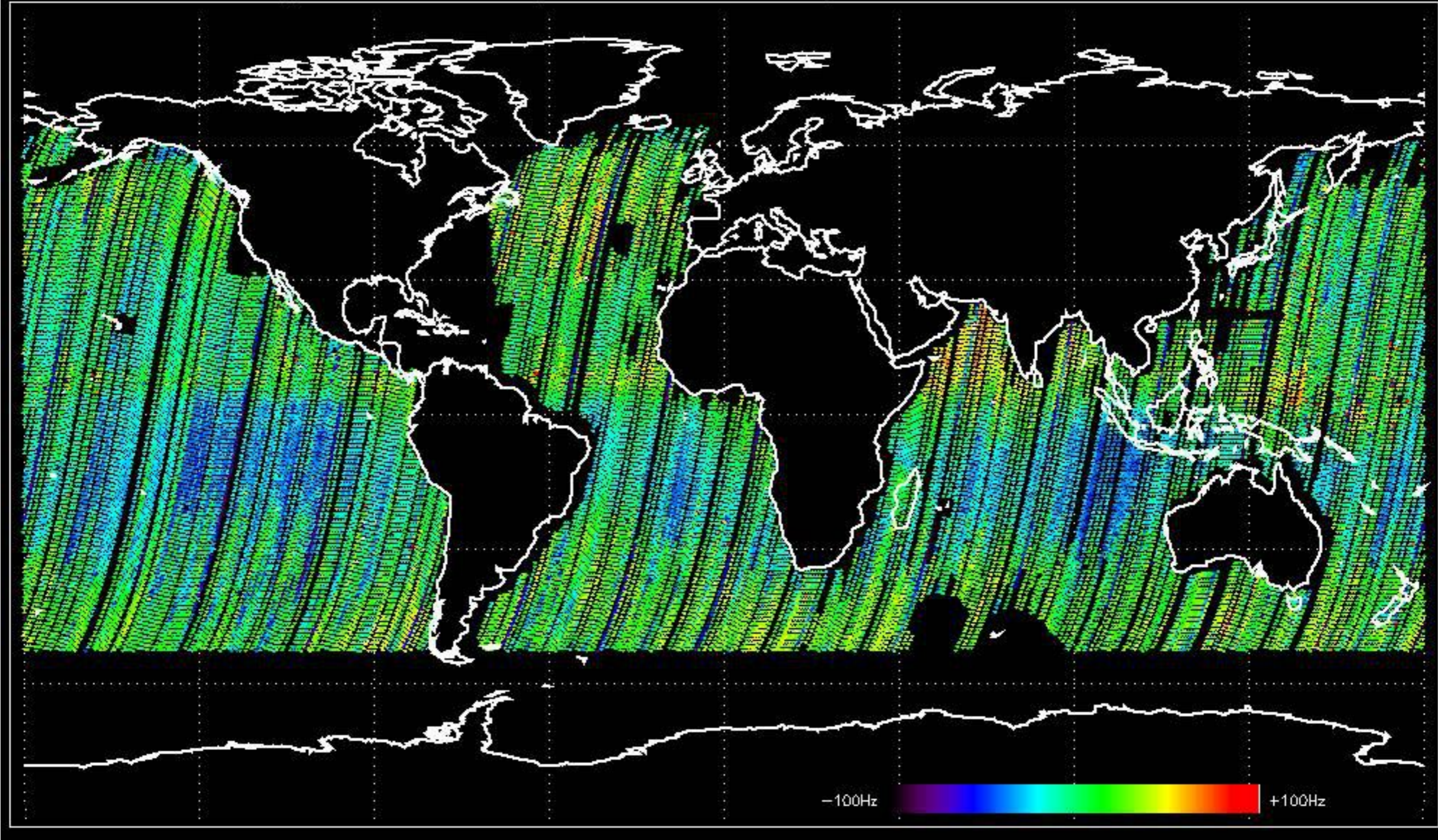
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.389853 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.725051 Hz

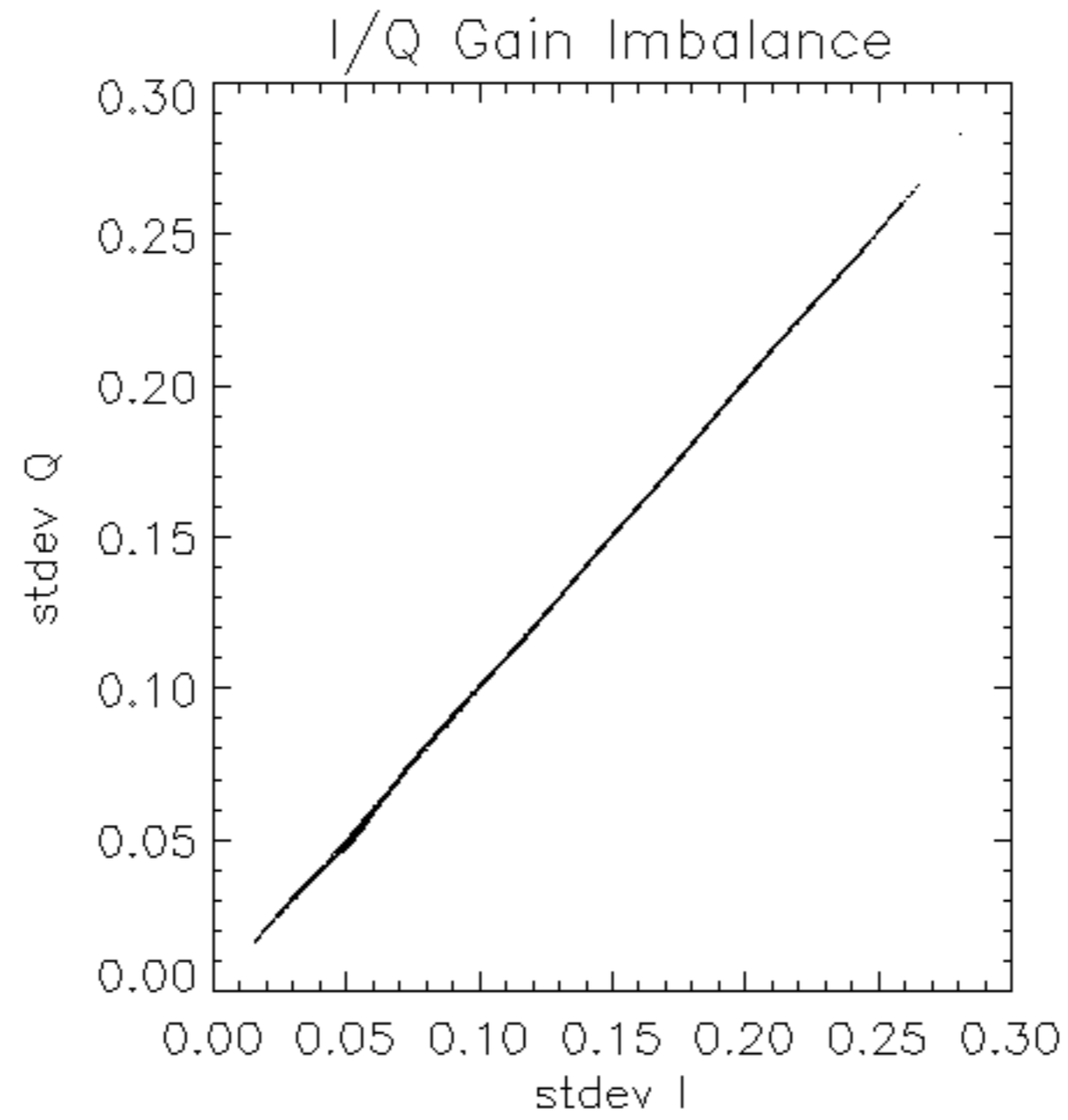


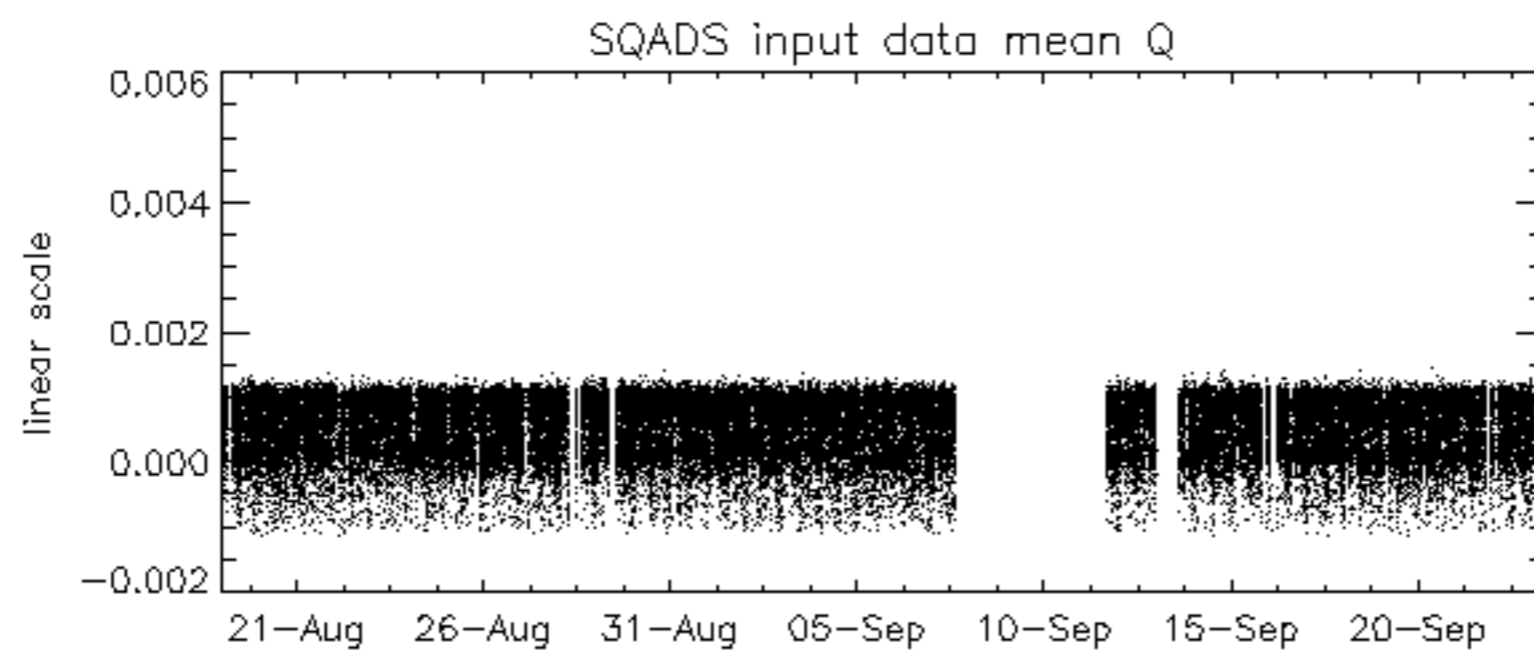
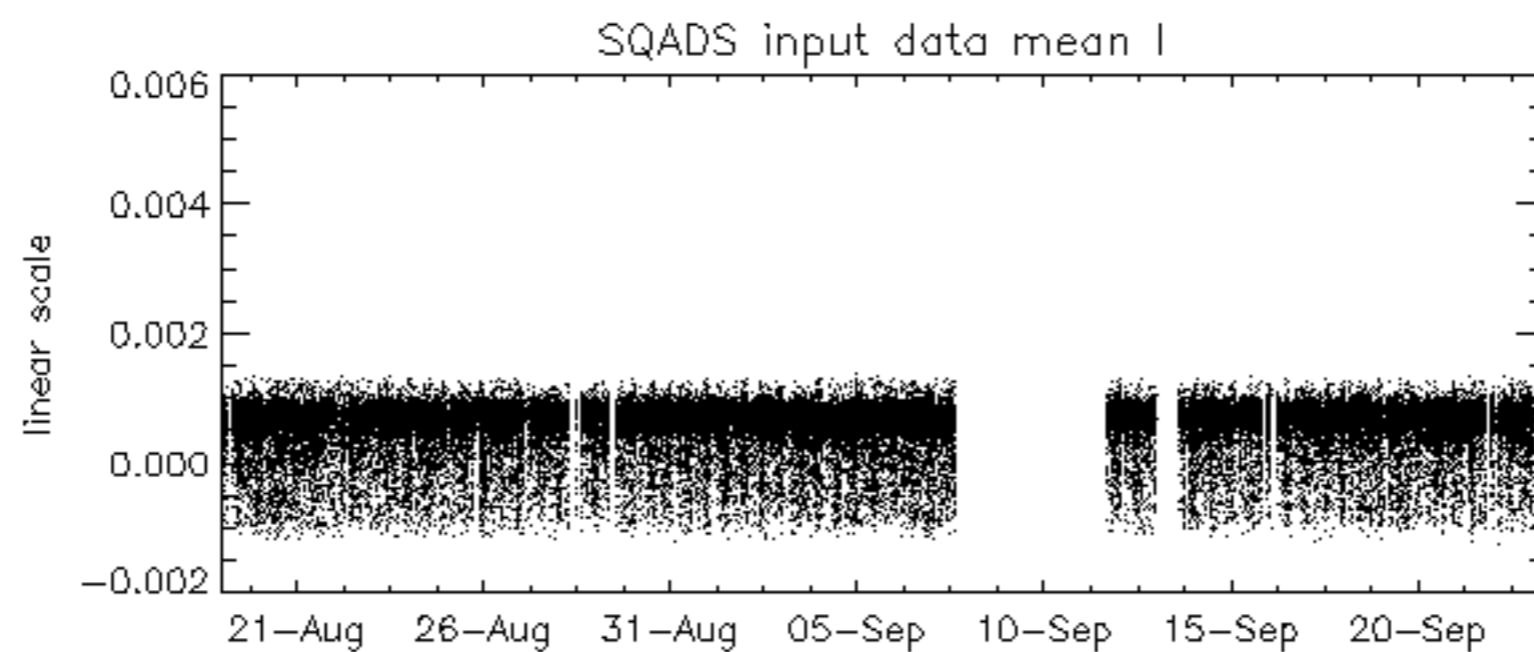
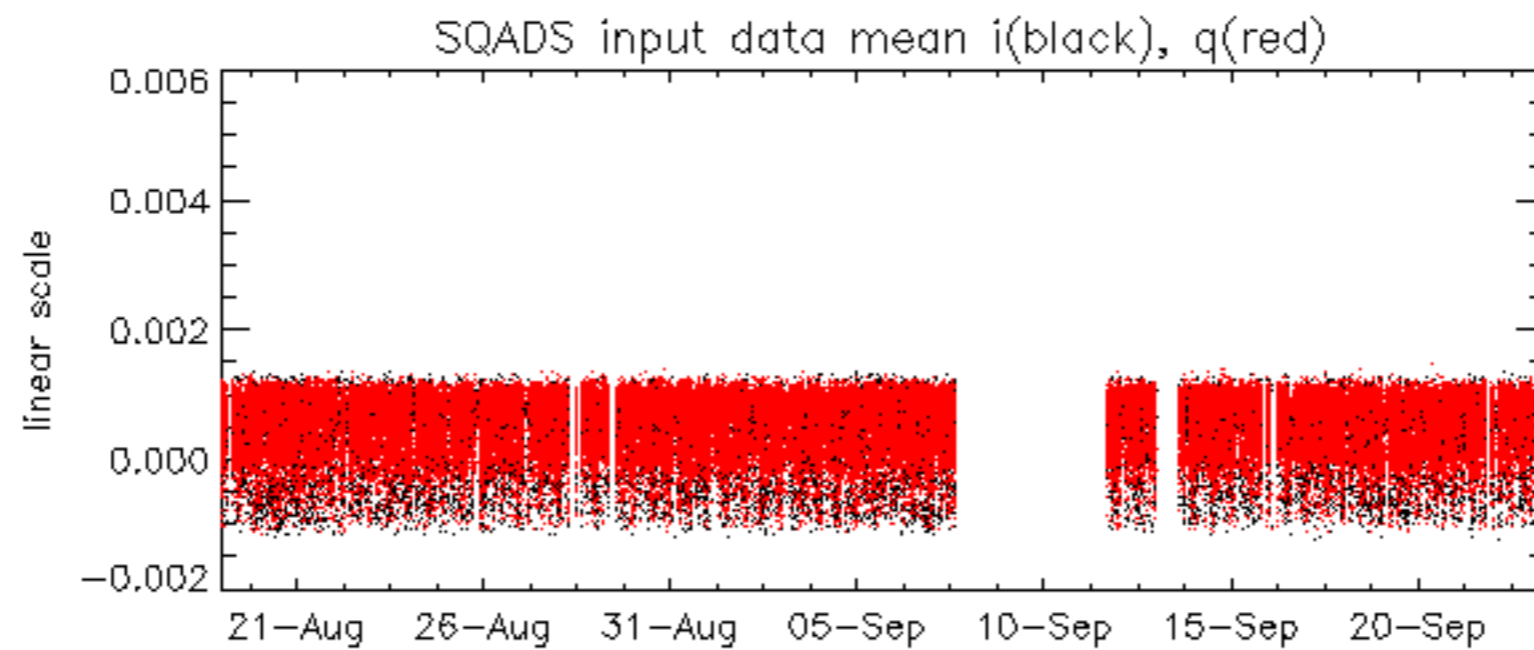
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.668100 Hz

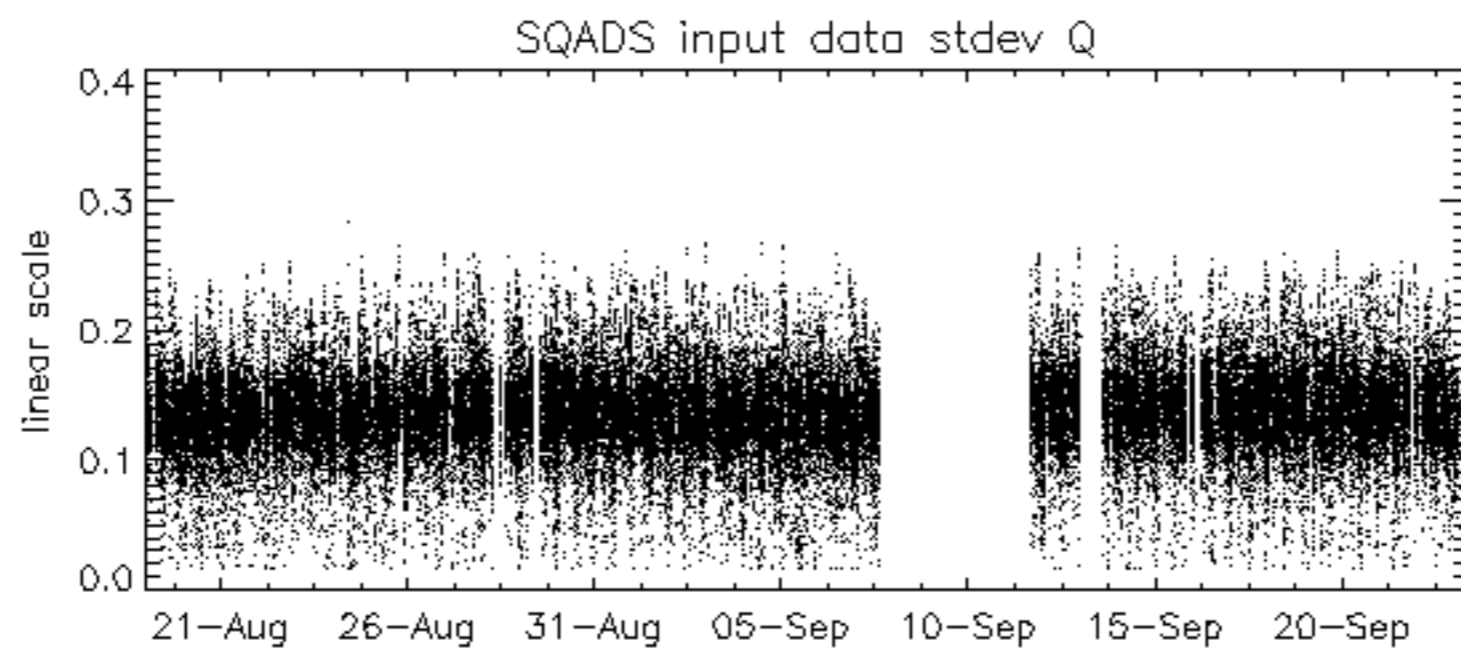
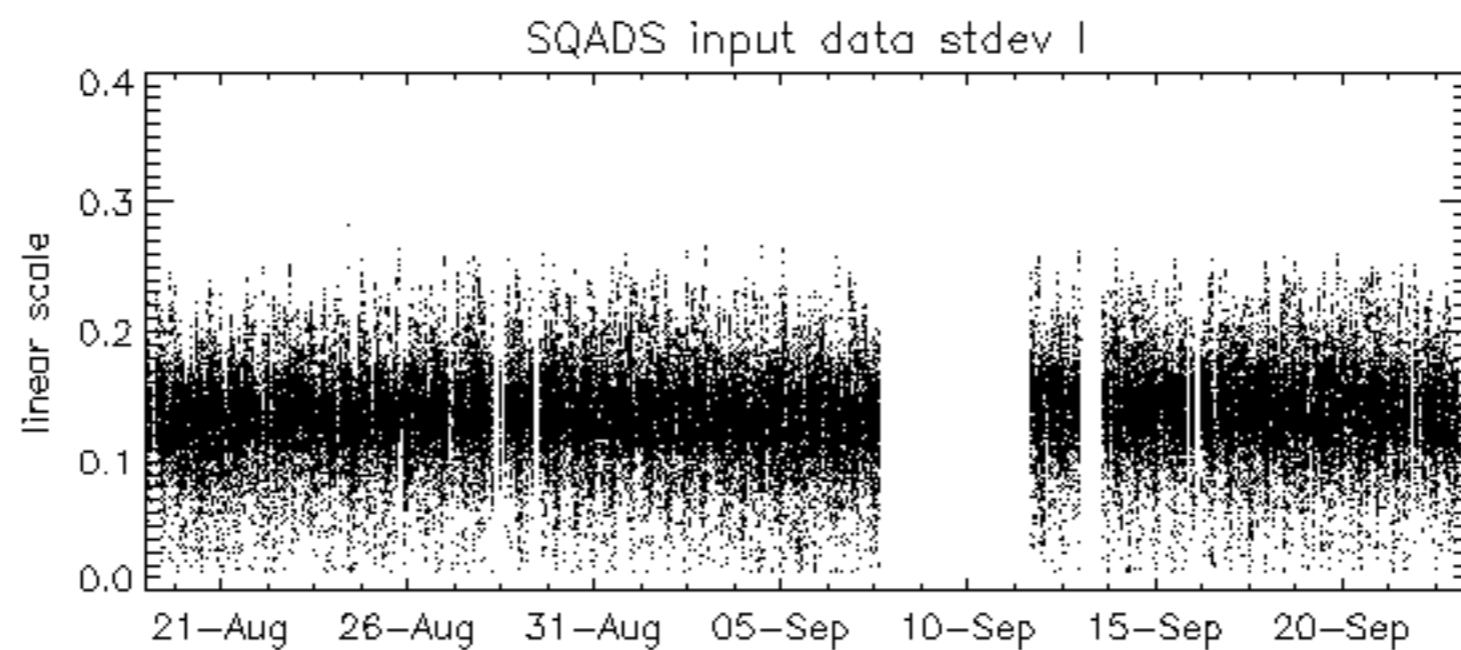
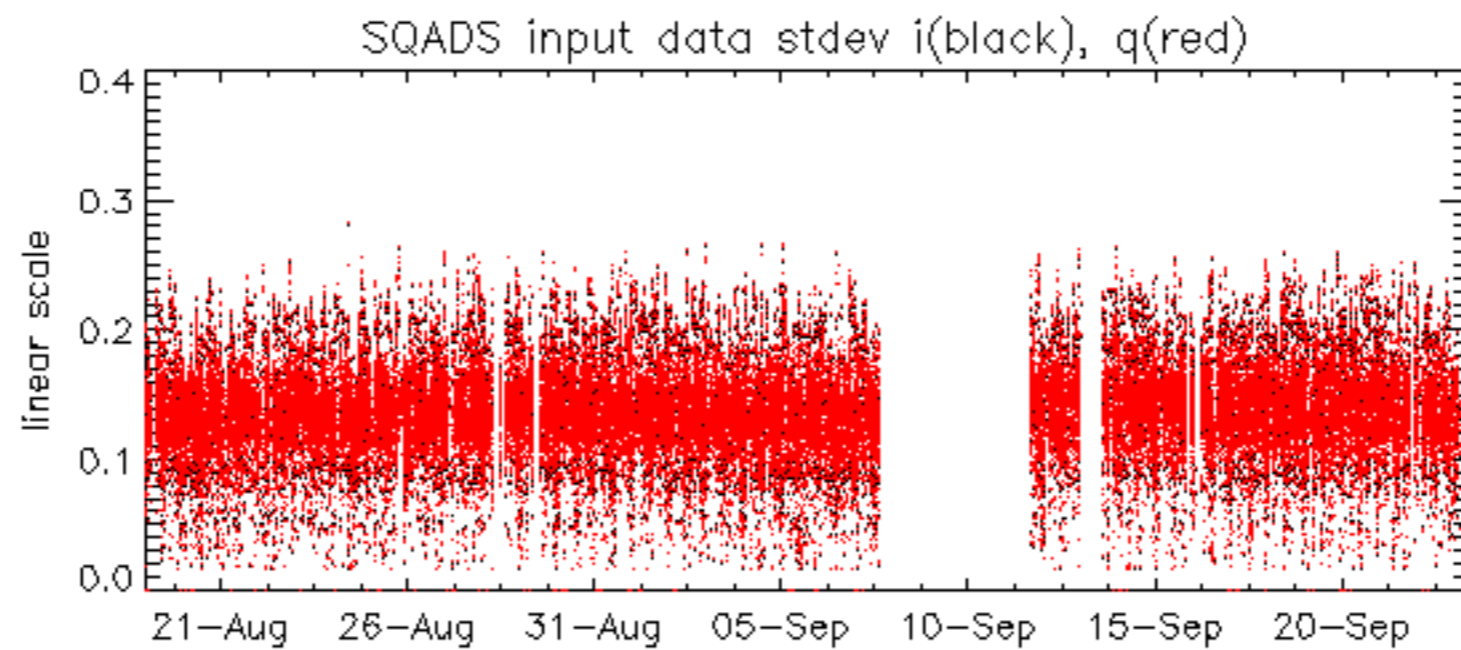


No anomalies observed on available MS products:

No anomalies observed.



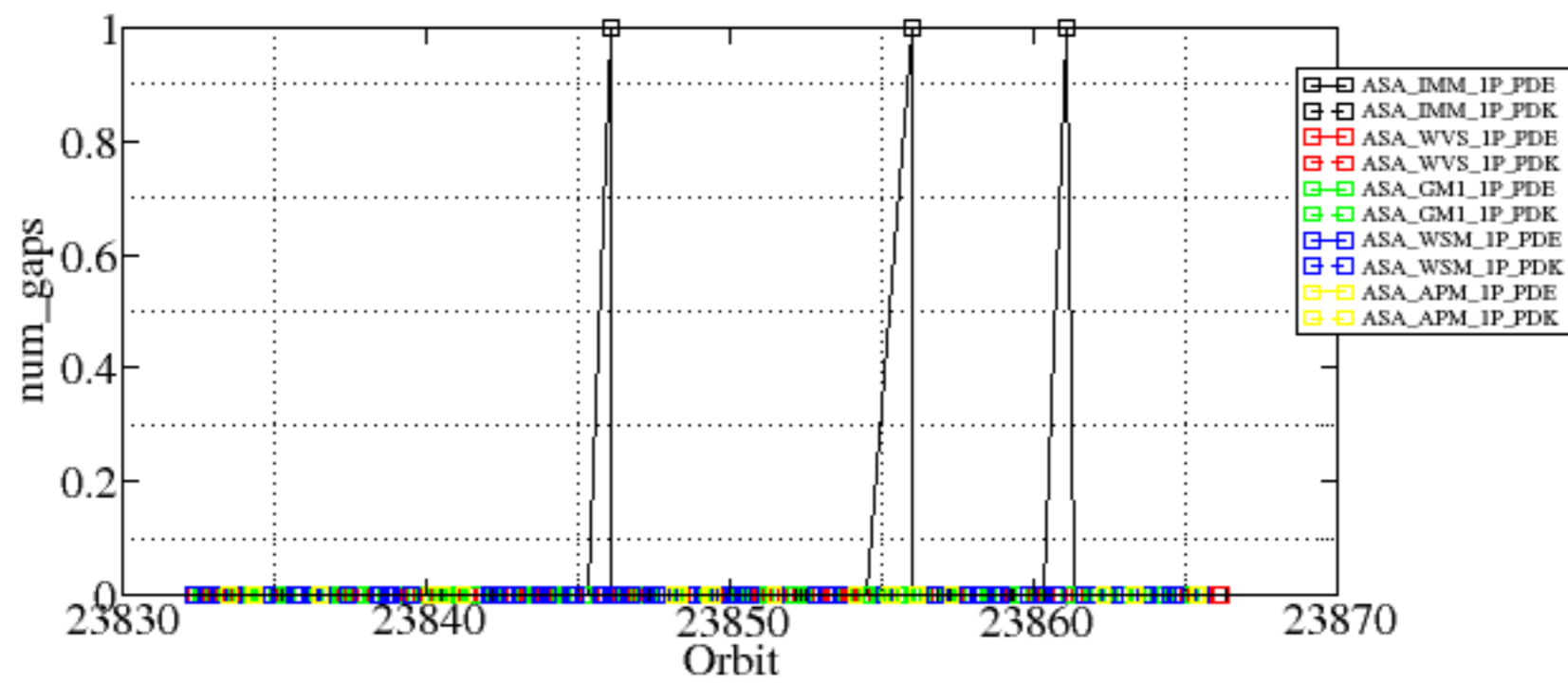


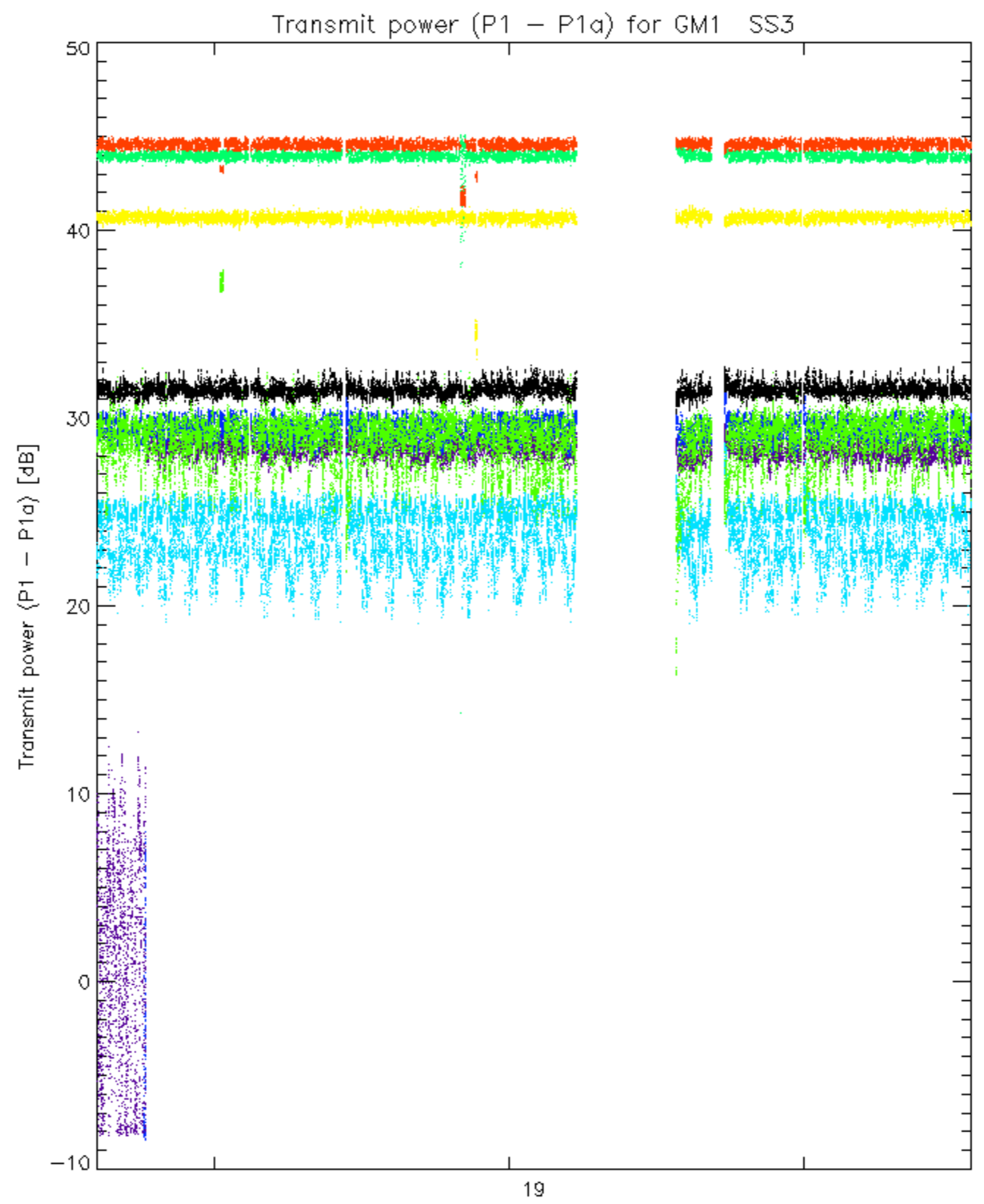


Summary of analysis for the last 3 days 2006092[123]

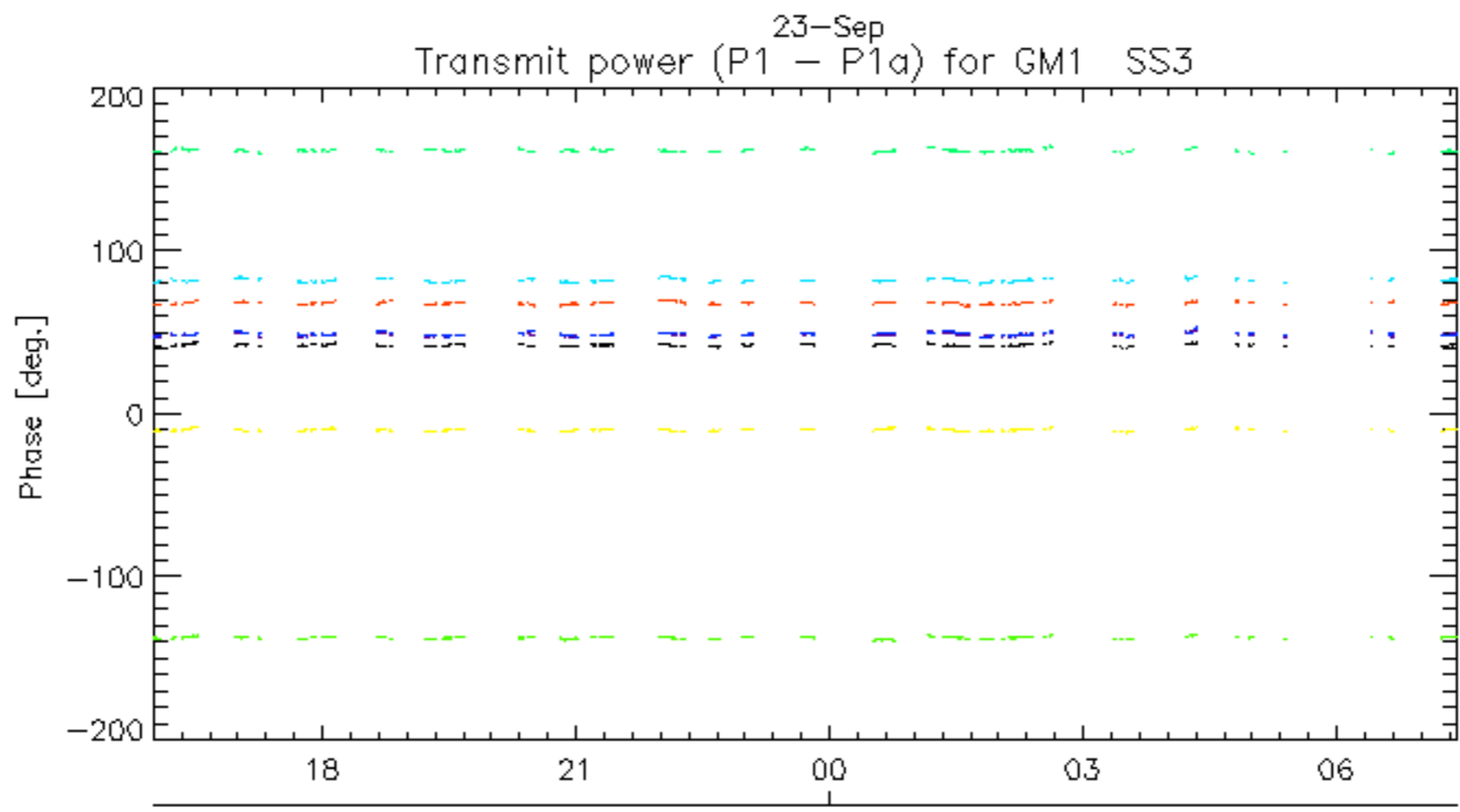
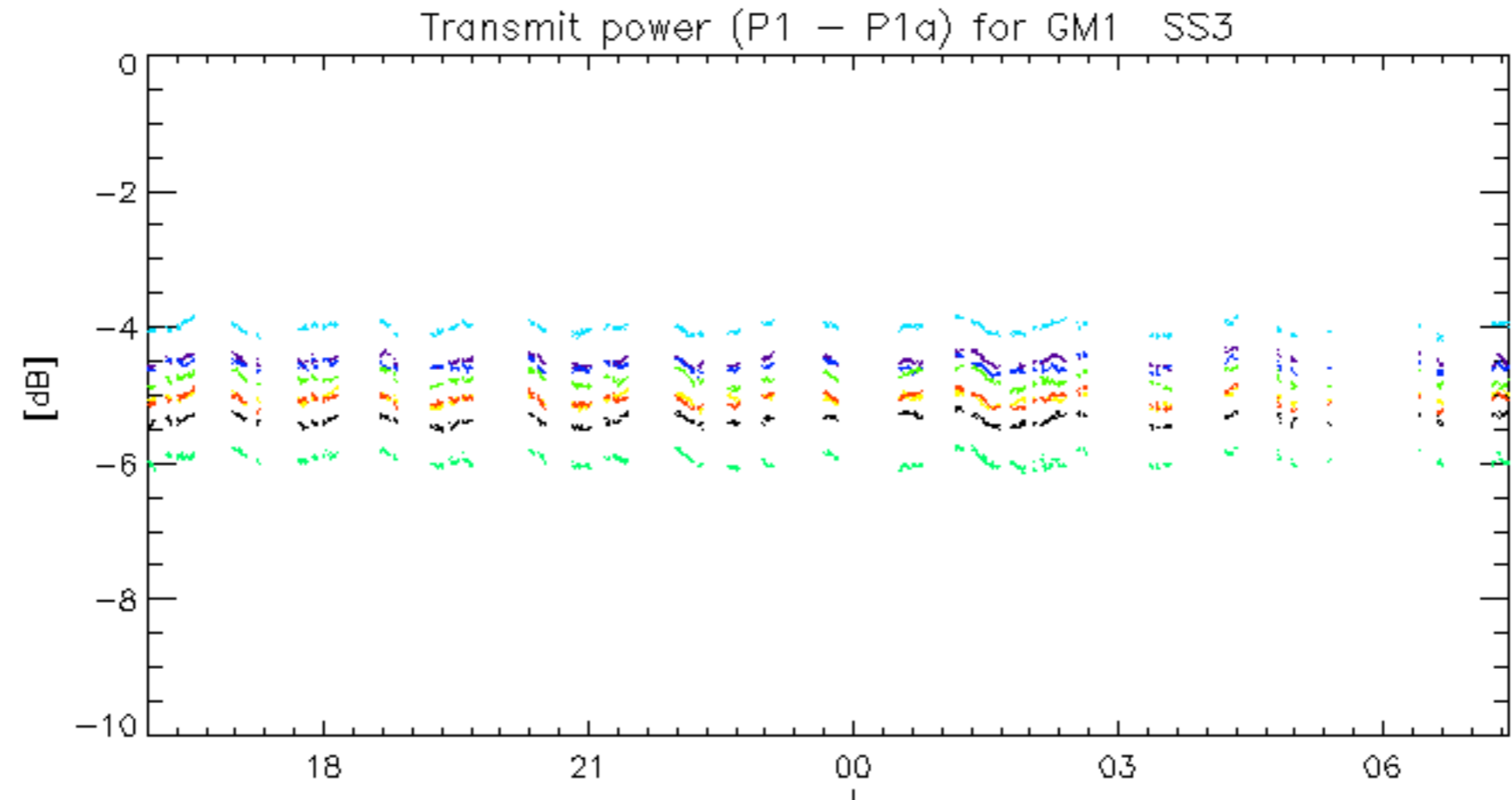
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060921_231435_000001192051_00245_23846_6212.N1	1	0
ASA_IMM_1PNPDE20060922_155111_000001142051_00254_23855_6240.N1	1	0
ASA_IMM_1PNPDE20060923_002304_000002162051_00260_23861_6274.N1	1	0
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ASA_WSM_1PNPDE20060921_230849_000000972051_00245_23846_3396.N1	0	54
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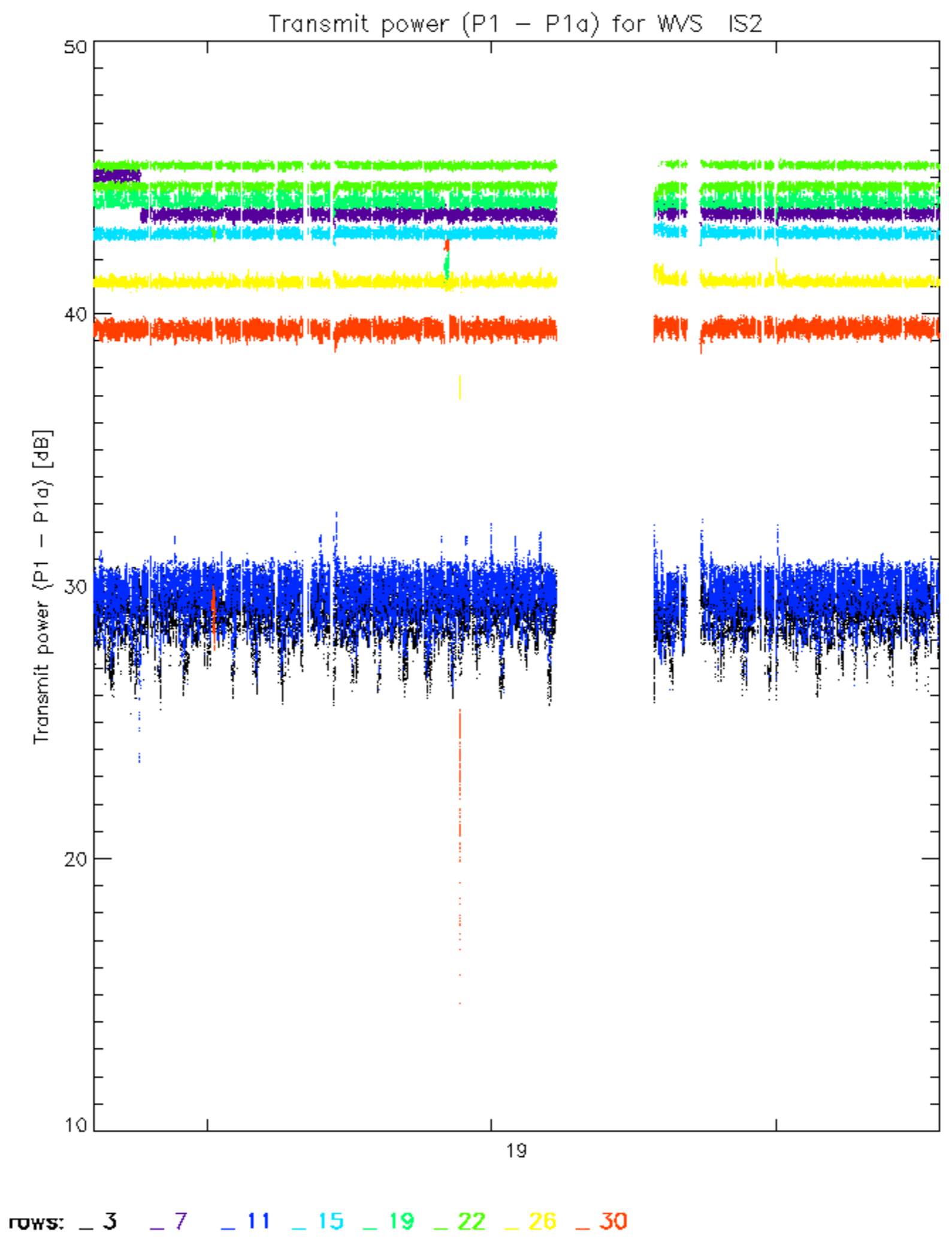


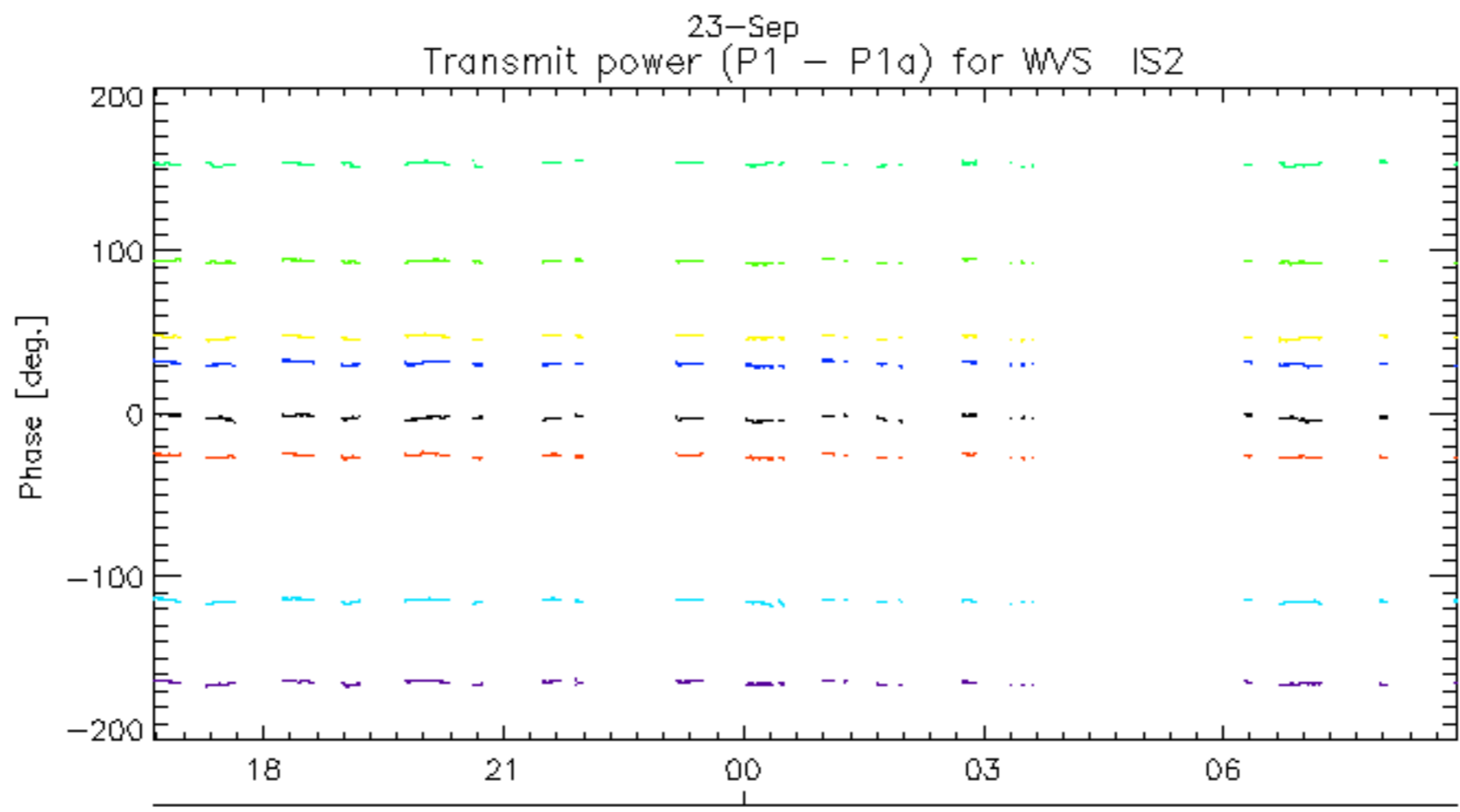
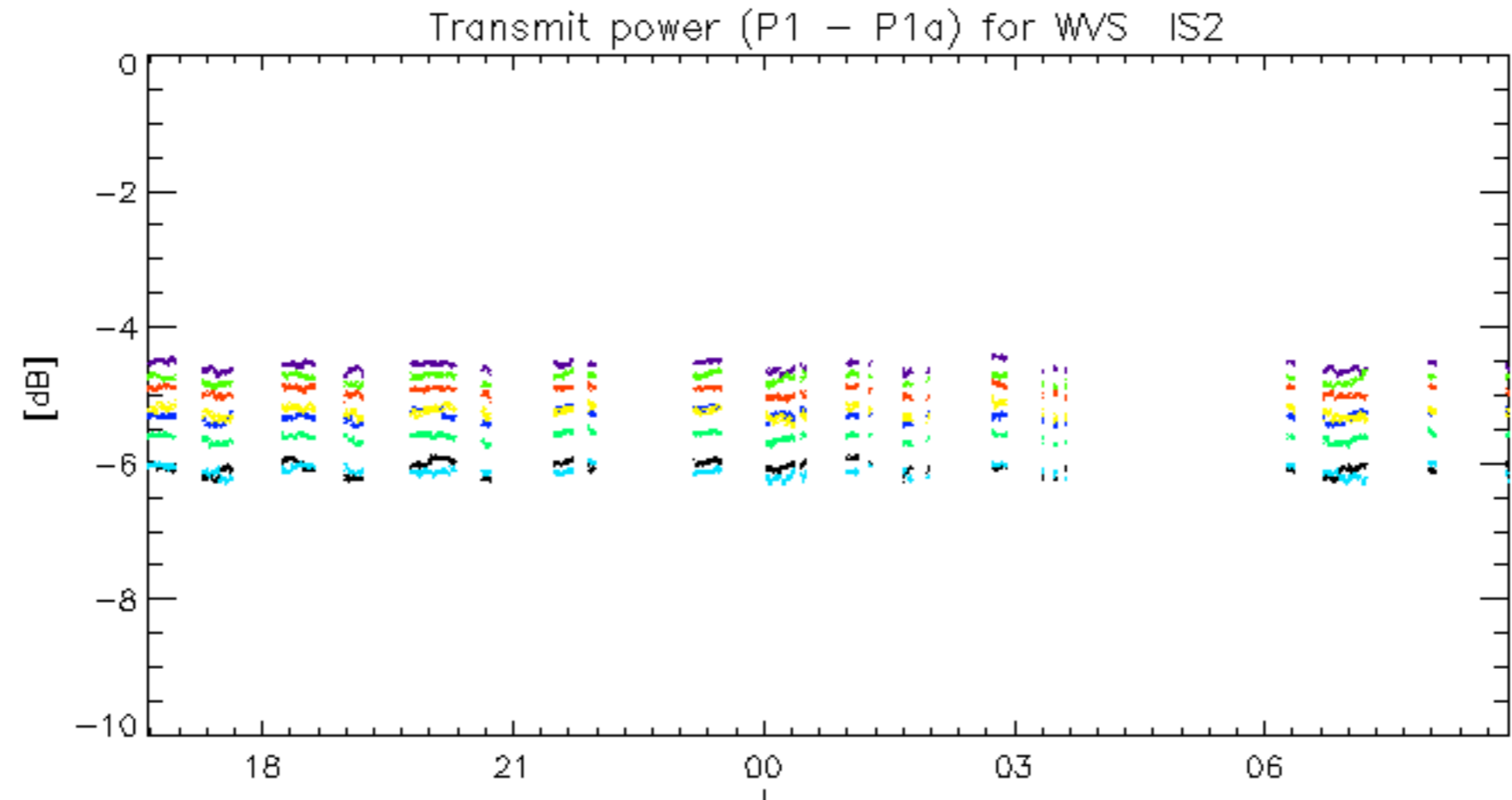


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No unavailabilities during the reported period.