

PRELIMINARY REPORT OF 060904

last update on Mon Sep 4 16:40:33 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 2006-09-03 00:00:00 to 2006-09-04 16:40:33

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	76	17	3	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	40	76	17	3	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	76	17	3	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	76	17	3	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	32	53	65	19	64
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	32	53	65	19	64
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	32	53	65	19	64
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	32	53	65	19	64

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	20060902 204904
H	20060903 183651

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
<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	-3.941650	0.009870	0.003490
7	P1	-3.075330	0.051511	0.101148
11	P1	-4.080767	0.064875	0.088702
15	P1	-6.201765	0.094942	0.069471
19	P1	-3.487978	0.045452	-0.150214
22	P1	-4.563365	0.024581	0.003152
26	P1	-3.929916	0.020648	-0.022099
30	P1	-5.779940	0.130628	-0.102192
3	P1	-16.554260	0.265181	-0.071414
7	P1	-16.846327	0.639936	0.198910
11	P1	-16.821087	0.309792	0.110198
15	P1	-12.952552	0.146954	0.065405
19	P1	-14.569263	0.398706	-0.324763
22	P1	-15.809017	0.552432	0.314743
26	P1	-15.179649	0.210149	-0.097477
30	P1	-16.978933	0.409349	0.228712

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.856783	0.084553	0.098521
7	P2	-21.858952	0.099154	-0.008708
11	P2	-15.749493	0.112683	0.030911
15	P2	-7.097913	0.098247	0.023164
19	P2	-9.113889	0.091960	0.003830
22	P2	-18.130590	0.085863	0.033716
26	P2	-16.397594	0.093060	-0.008989
30	P2	-19.475075	0.090939	0.028184

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173405	0.003895	-0.009968
7	P3	-8.173405	0.003895	-0.009968
11	P3	-8.173405	0.003895	-0.009968
15	P3	-8.173405	0.003895	-0.009968
19	P3	-8.173405	0.003895	-0.009968
22	P3	-8.173405	0.003895	-0.009968
26	P3	-8.173453	0.003895	-0.009895
30	P3	-8.173453	0.003895	-0.009895

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	-3.834827	0.021405	-0.021639
7	P1	-2.496403	0.283210	0.215223
11	P1	-2.899765	0.141730	0.100337
15	P1	-3.660107	0.145884	0.059341
19	P1	-3.448824	0.074308	-0.127180
22	P1	-5.084416	0.034319	-0.001776
26	P1	-5.868465	0.027753	-0.010077
30	P1	-5.197208	0.079252	-0.052247
3	P1	-11.630850	0.067128	-0.018472
7	P1	-9.918687	0.188364	0.073418
11	P1	-10.308854	0.084250	-0.055004
15	P1	-10.830214	0.176122	-0.083887
19	P1	-15.657720	3.242218	-0.748005
22	P1	-20.858887	1.738989	0.279254
26	P1	-16.065813	0.415905	0.287695
30	P1	-17.988426	0.788812	-0.007784

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.453260	0.081560	0.106202
7	P2	-22.241383	0.195498	0.110732
11	P2	-10.932769	0.055941	0.101023
15	P2	-4.874174	0.042009	0.029745
19	P2	-6.853671	0.040853	0.019697
22	P2	-8.175478	0.061963	0.036754
26	P2	-24.167046	0.127483	0.011639
30	P2	-21.965176	0.077857	0.019146

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.015715	0.003712	-0.015388
7	P3	-8.015594	0.003719	-0.015584
11	P3	-8.015636	0.003718	-0.014882
15	P3	-8.015663	0.003720	-0.014811
19	P3	-8.015725	0.003735	-0.015316
22	P3	-8.015798	0.003706	-0.015280
26	P3	-8.015654	0.003715	-0.015527
30	P3	-8.015637	0.003716	-0.015258

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	0.000552477
	stdev	1.76375e-07
MEAN Q	mean	0.000531714
	stdev	2.15496e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136398
	stdev	0.00107532
STDEV Q	mean	0.136743
	stdev	0.00109179



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006090[234]

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_1PNPDE20060903_005612_000000342050_00475_23575_5292.N1	1	0
ASA_IMM_1PNPDE20060903_180745_000001852050_00485_23585_5391.N1	1	0
ASA_WVS_1PNPDE20060903_050530_000000002050_00477_23577_1939.N1	1	0
ASA_WSM_1PNPDE20060902_020157_000000862050_00461_23561_0501.N1	0	34
ASA_WSM_1PNPDE20060902_180620_000001292050_00471_23571_0584.N1	0	67
ASA_WSM_1PNPDE20060902_230551_000001092050_00474_23574_0618.N1	0	2
ASA_WSM_1PNPDE20060903_062830_000000852050_00478_23578_0648.N1	0	2
ASA_WSM_1PNPDE20060903_113116_000002082050_00481_23581_0666.N1	0	6



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



7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

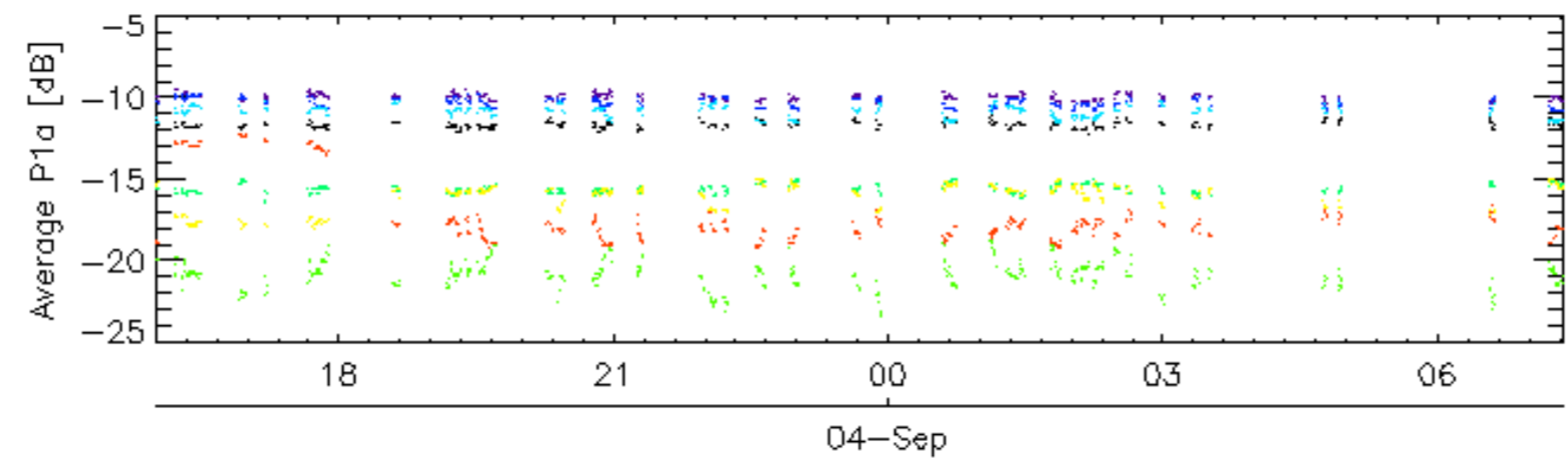
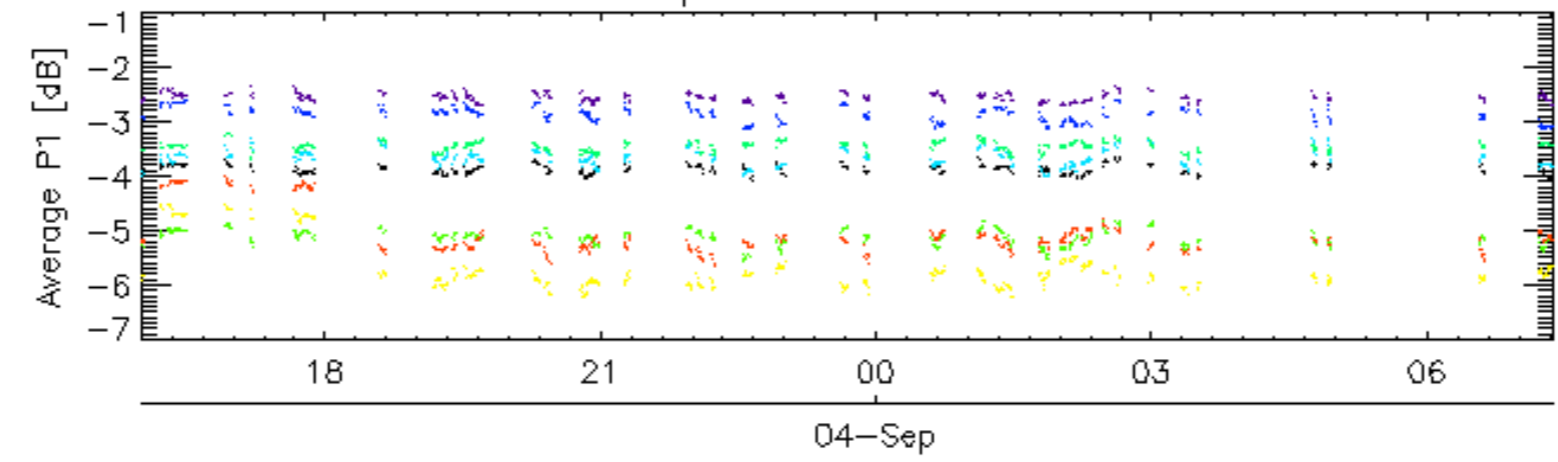
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

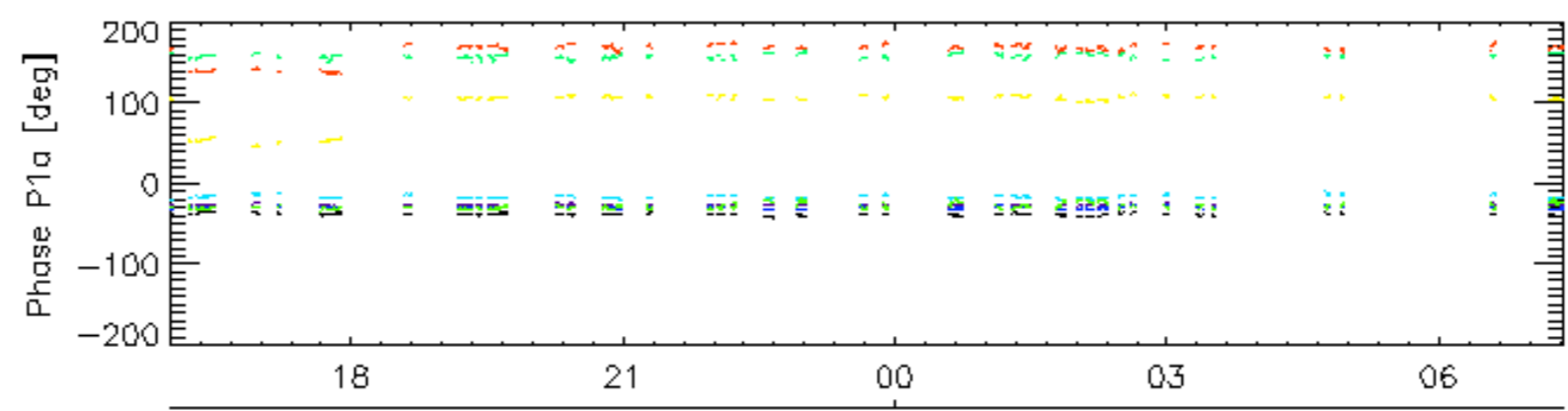
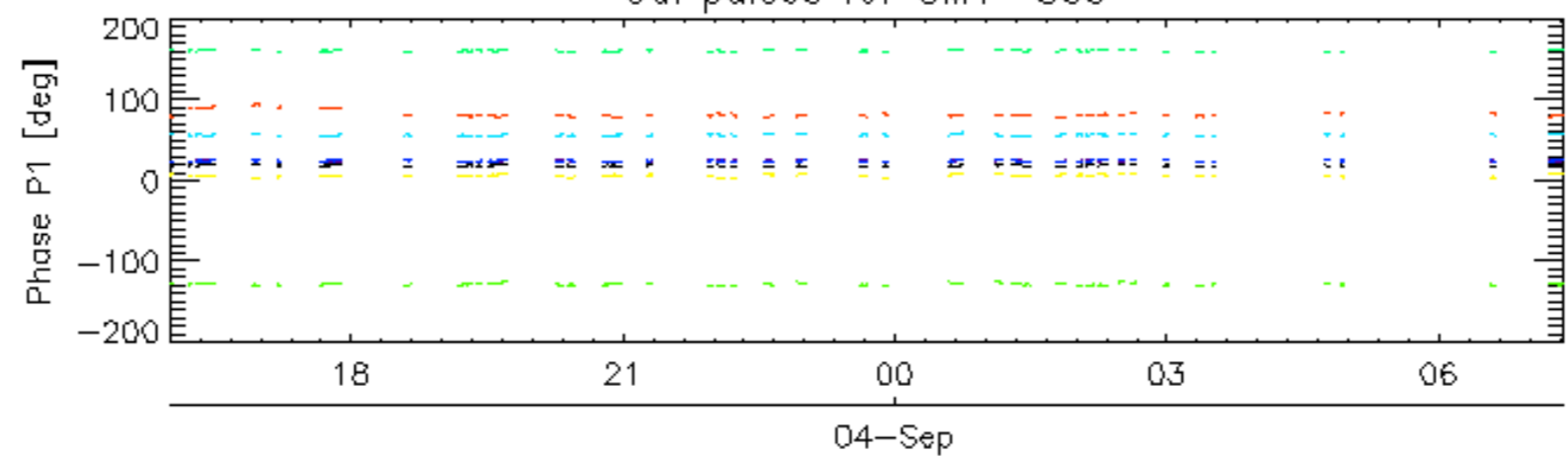
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

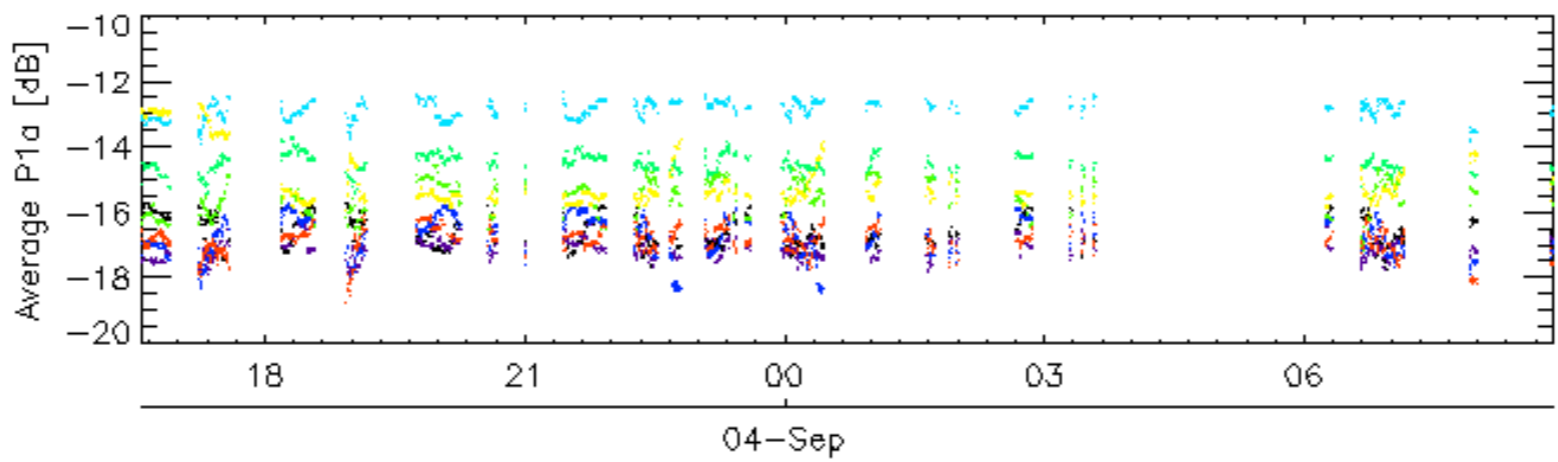
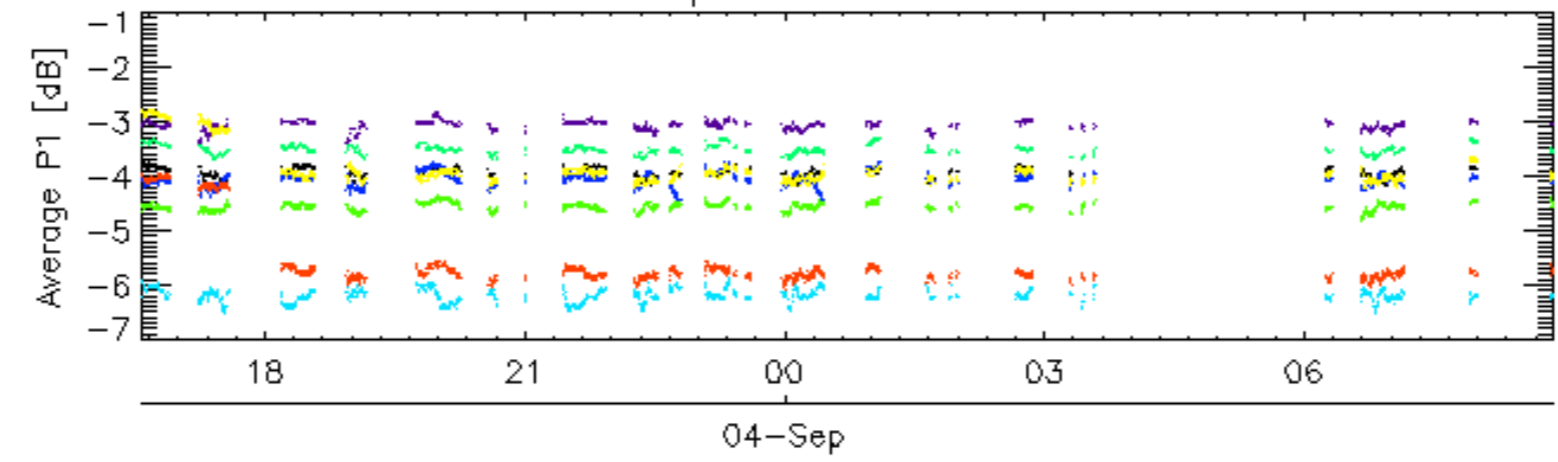


Cal pulses for GM1 SS3

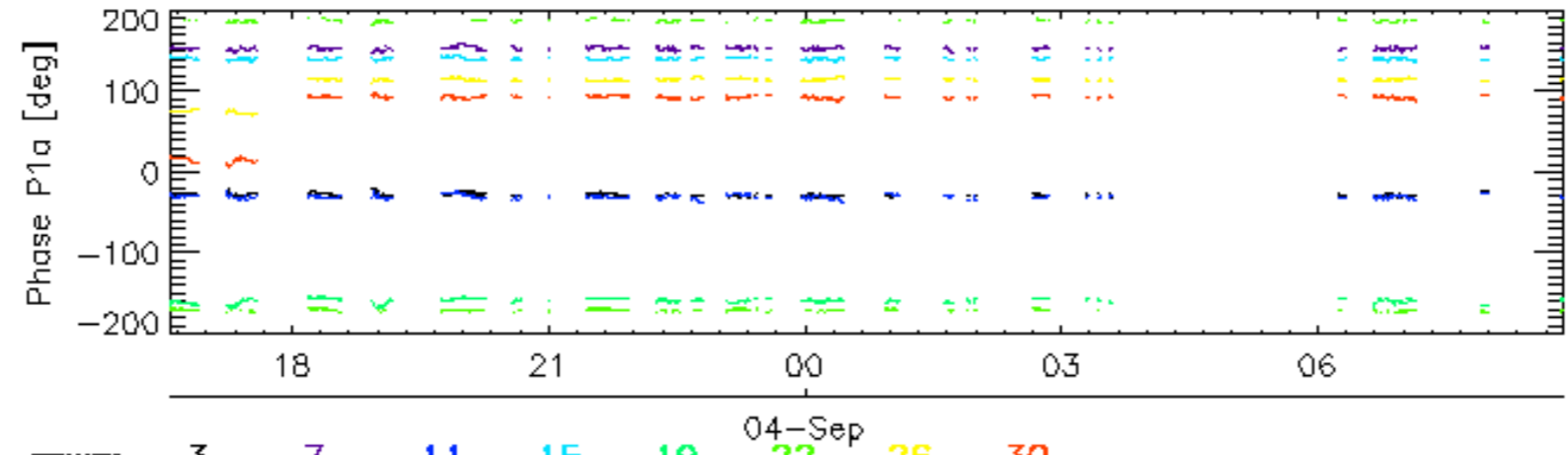
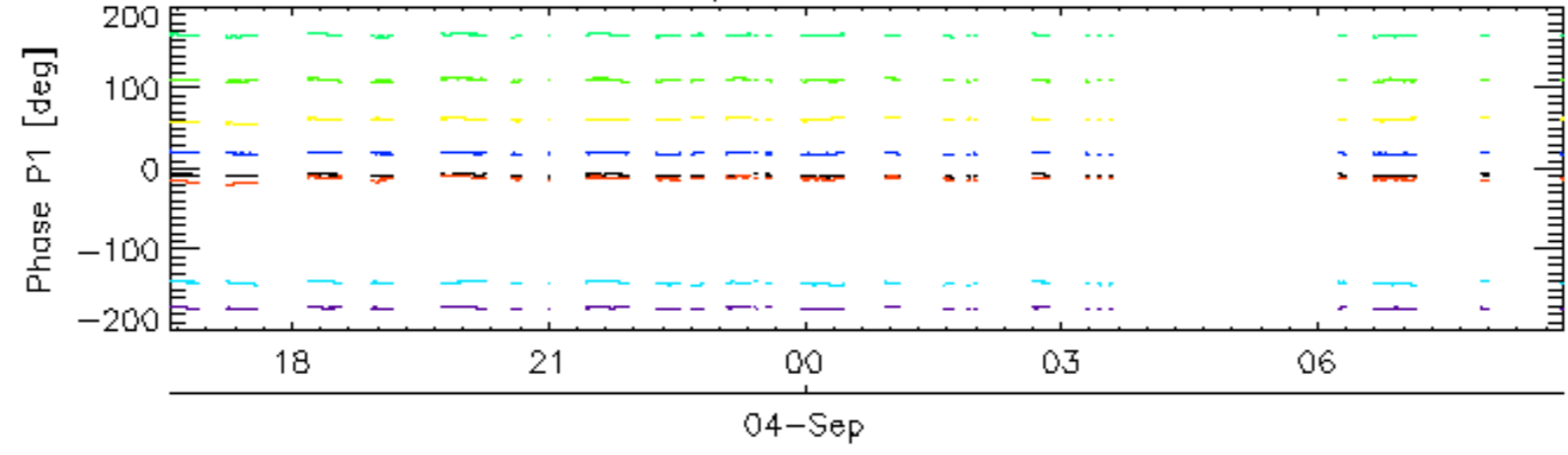


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 04-Sep

Cal pulses for WVS IS2

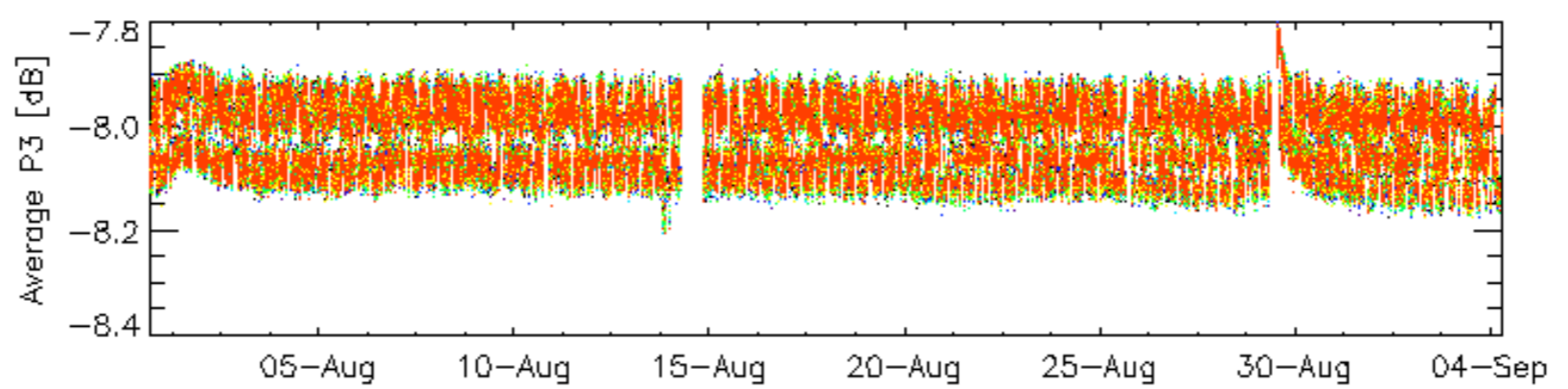
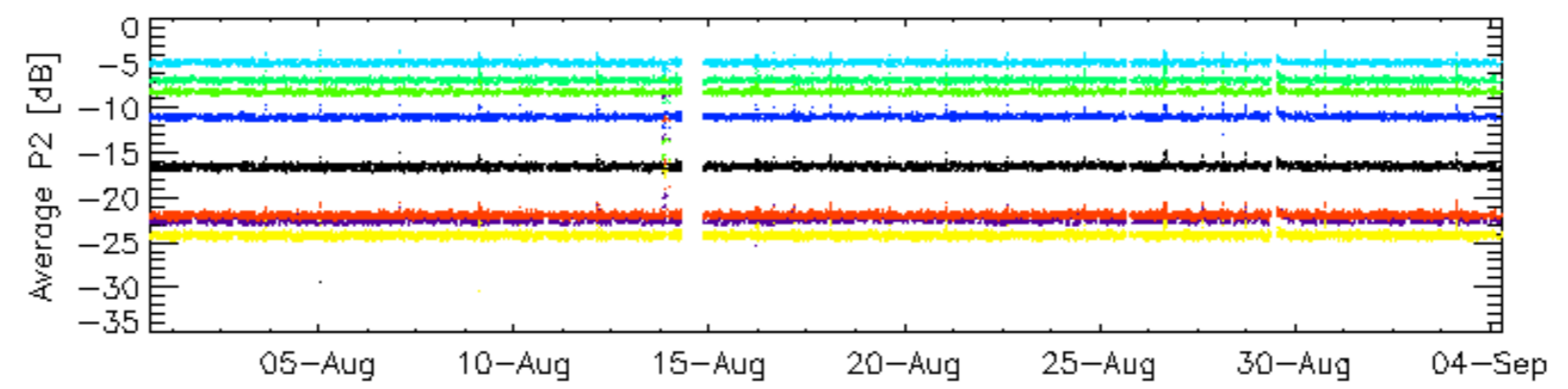
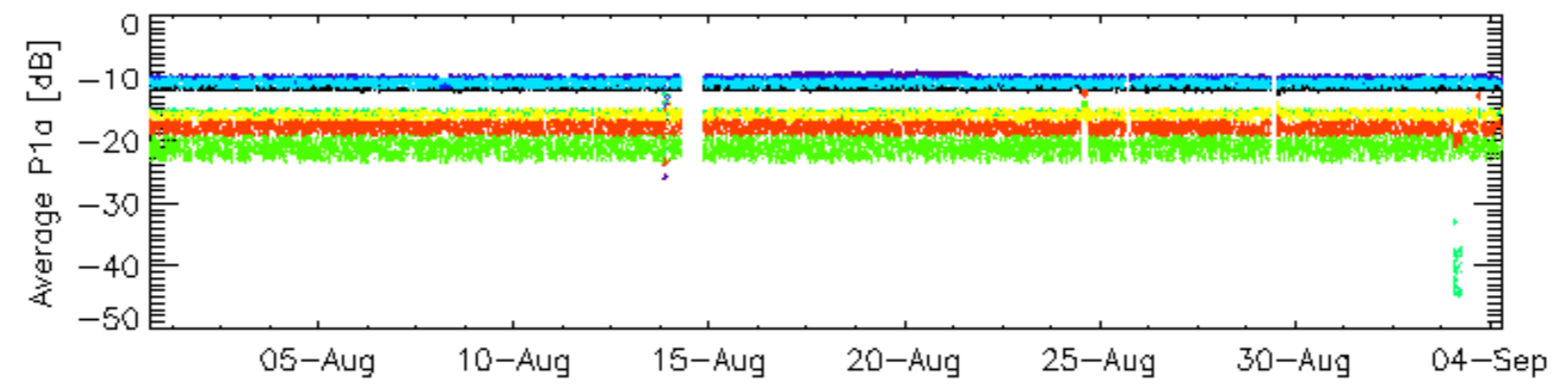
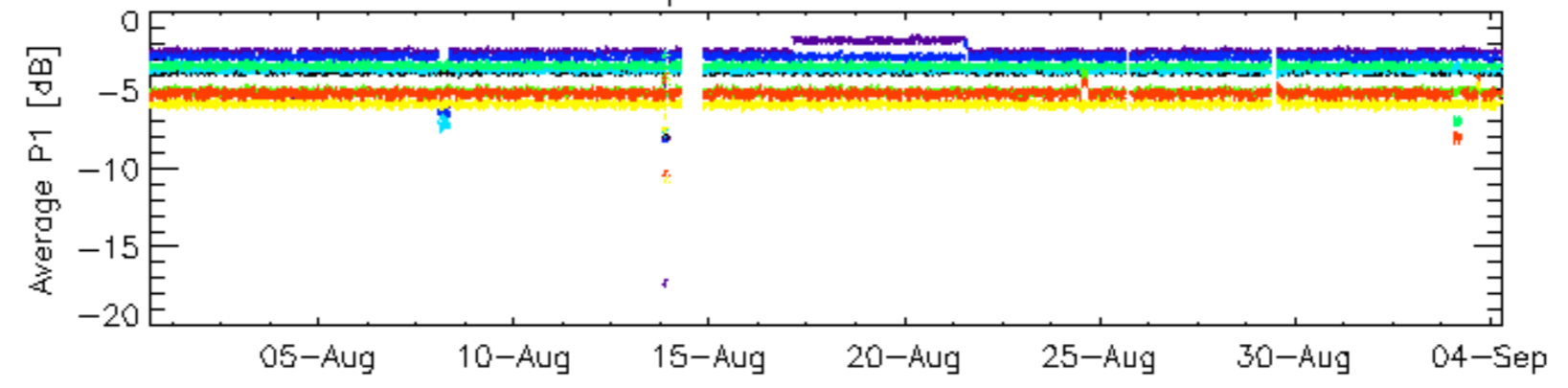


Cal pulses for WVS IS2



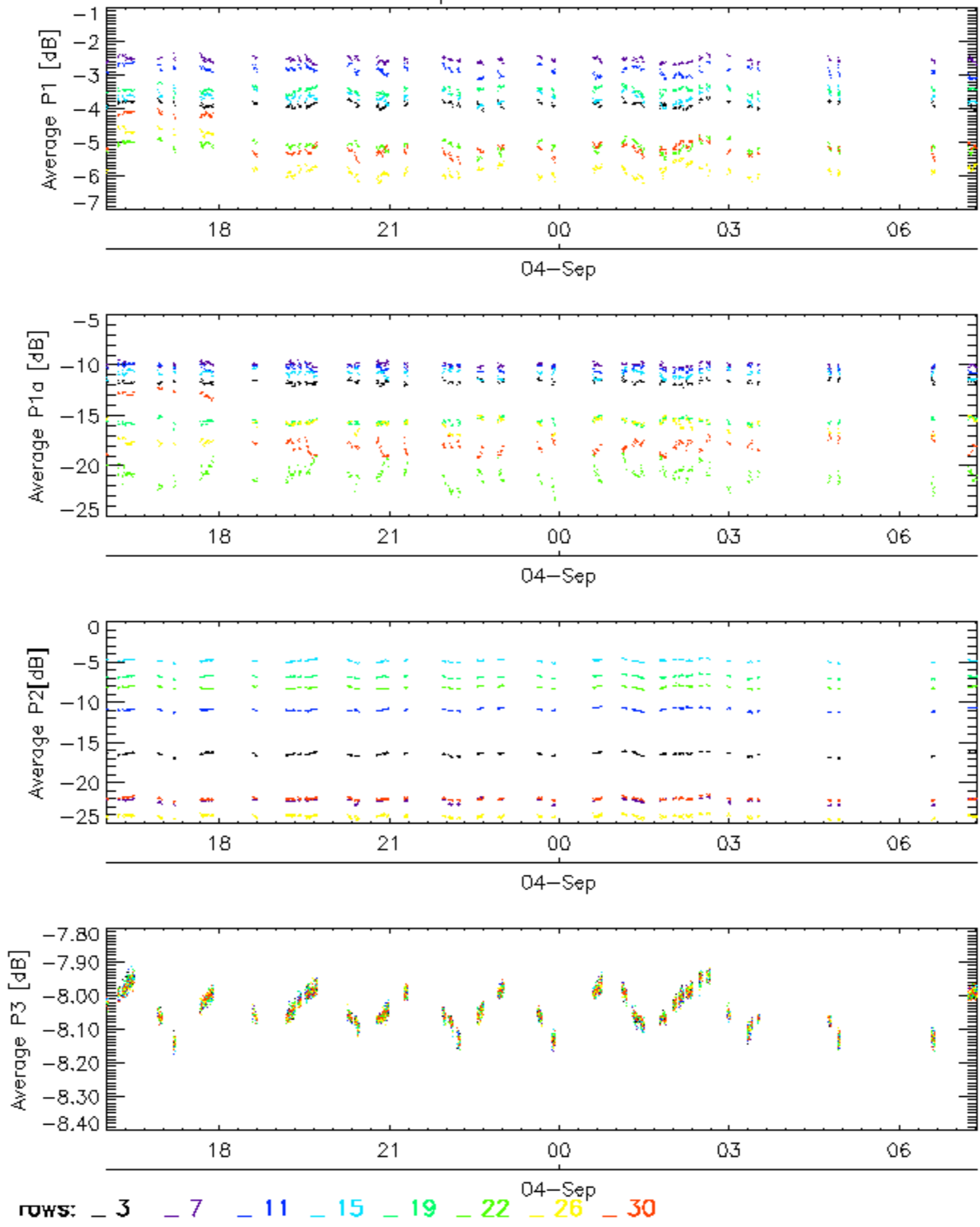
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Cal pulses for GM1 SS3

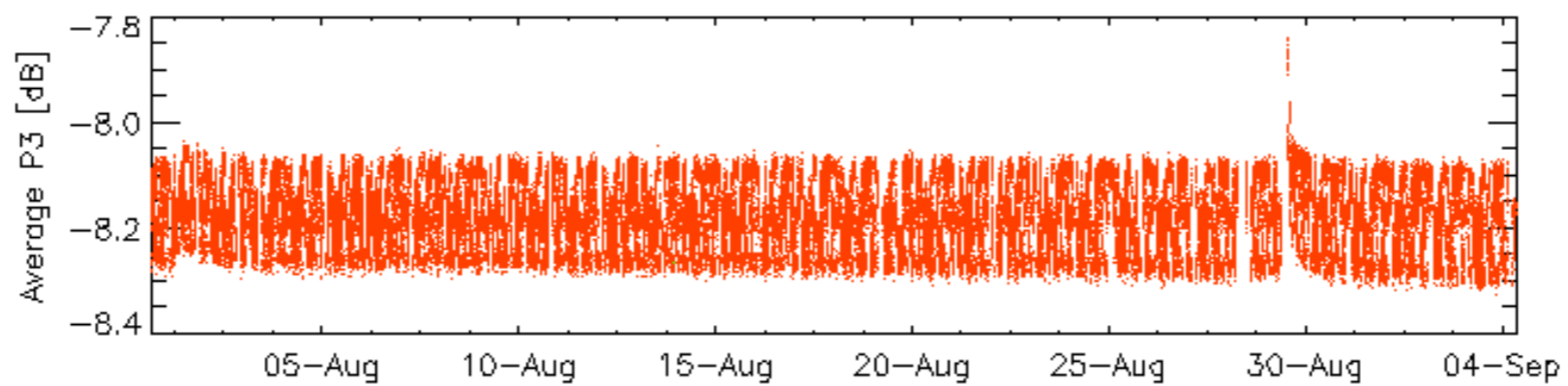
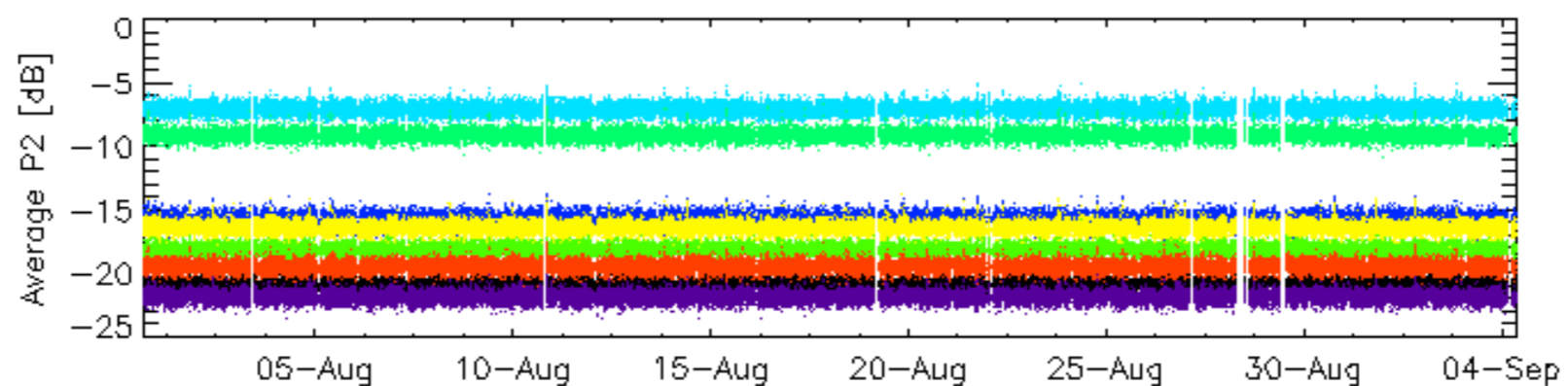
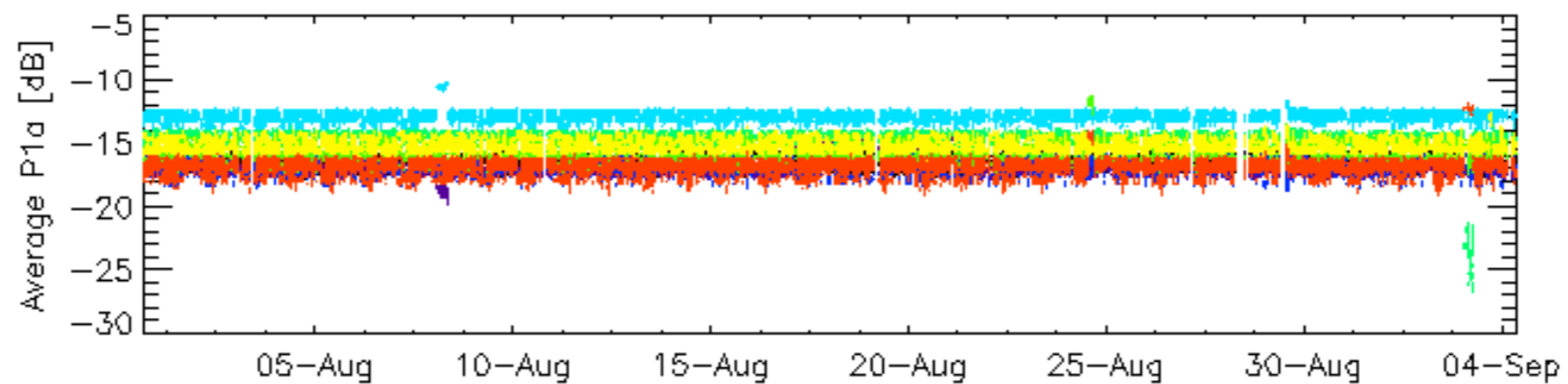
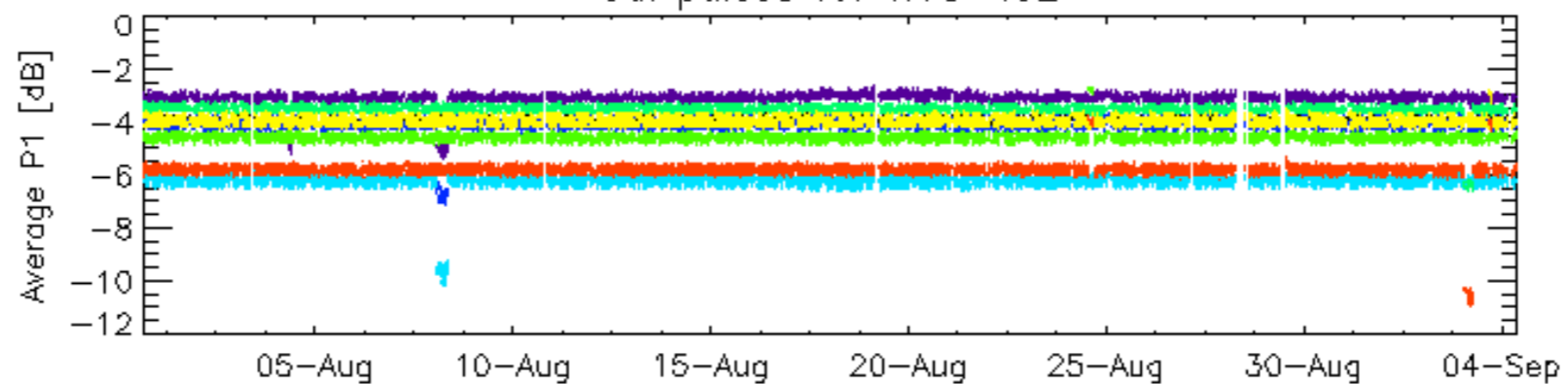


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

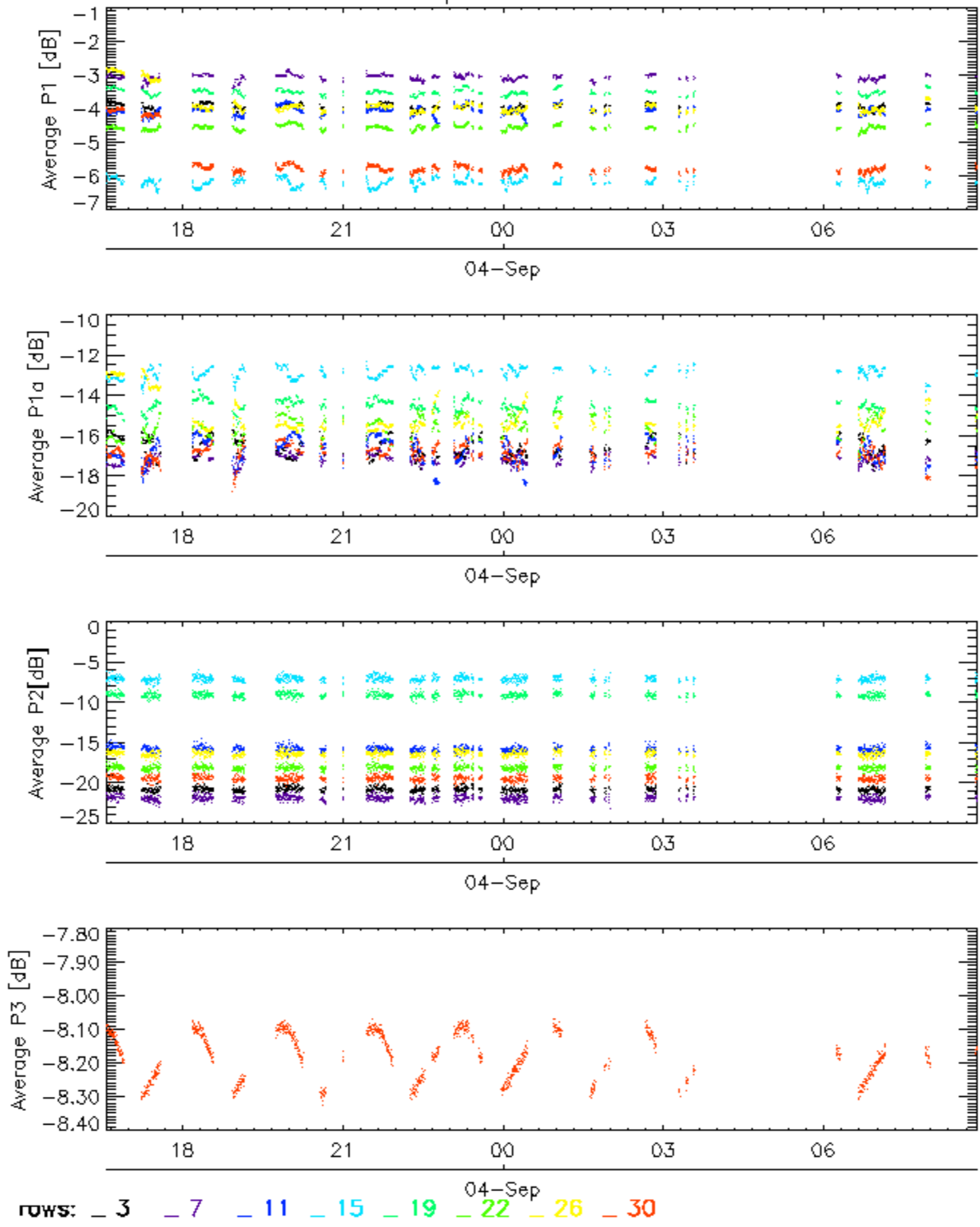


Cal pulses for WVS IS2

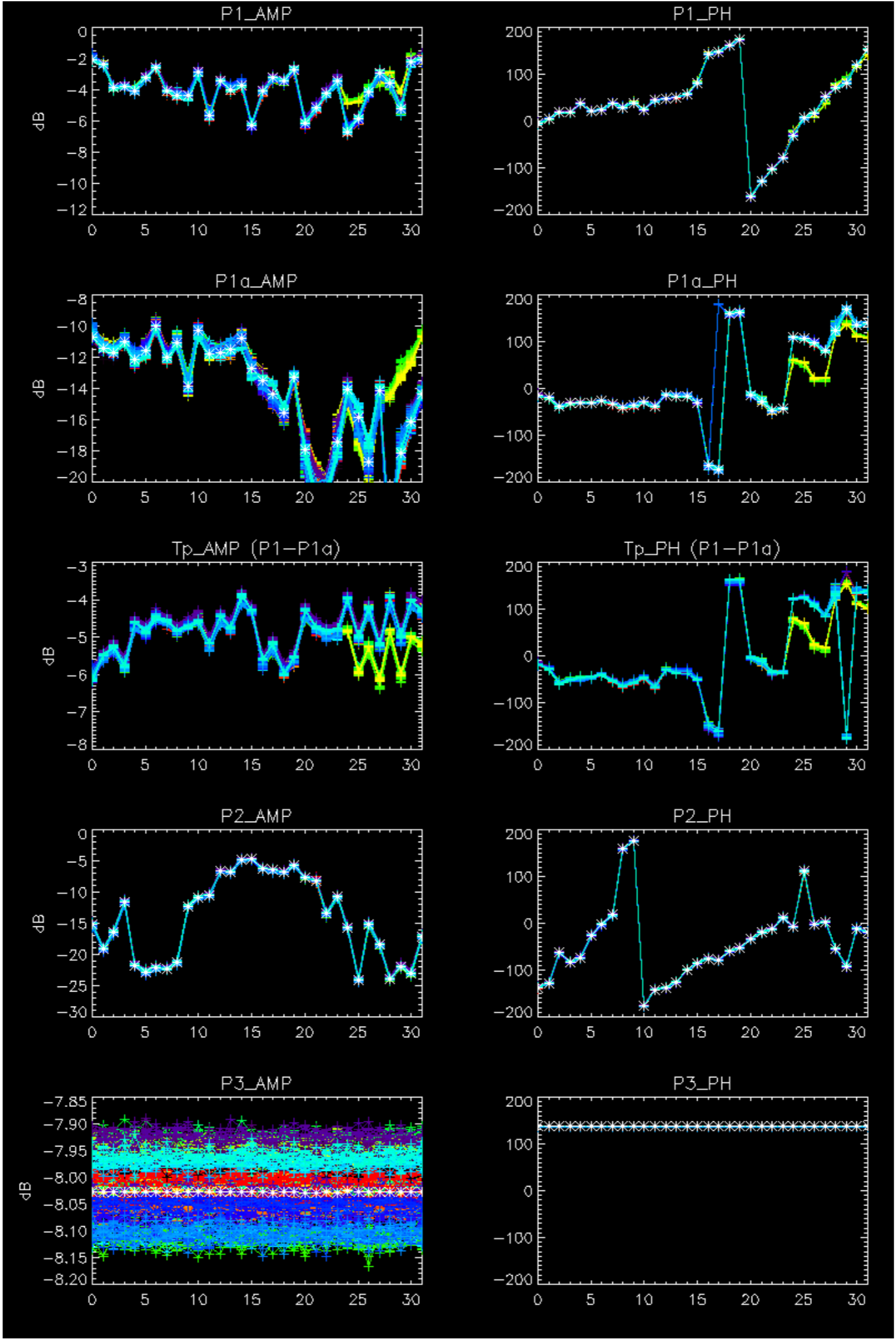


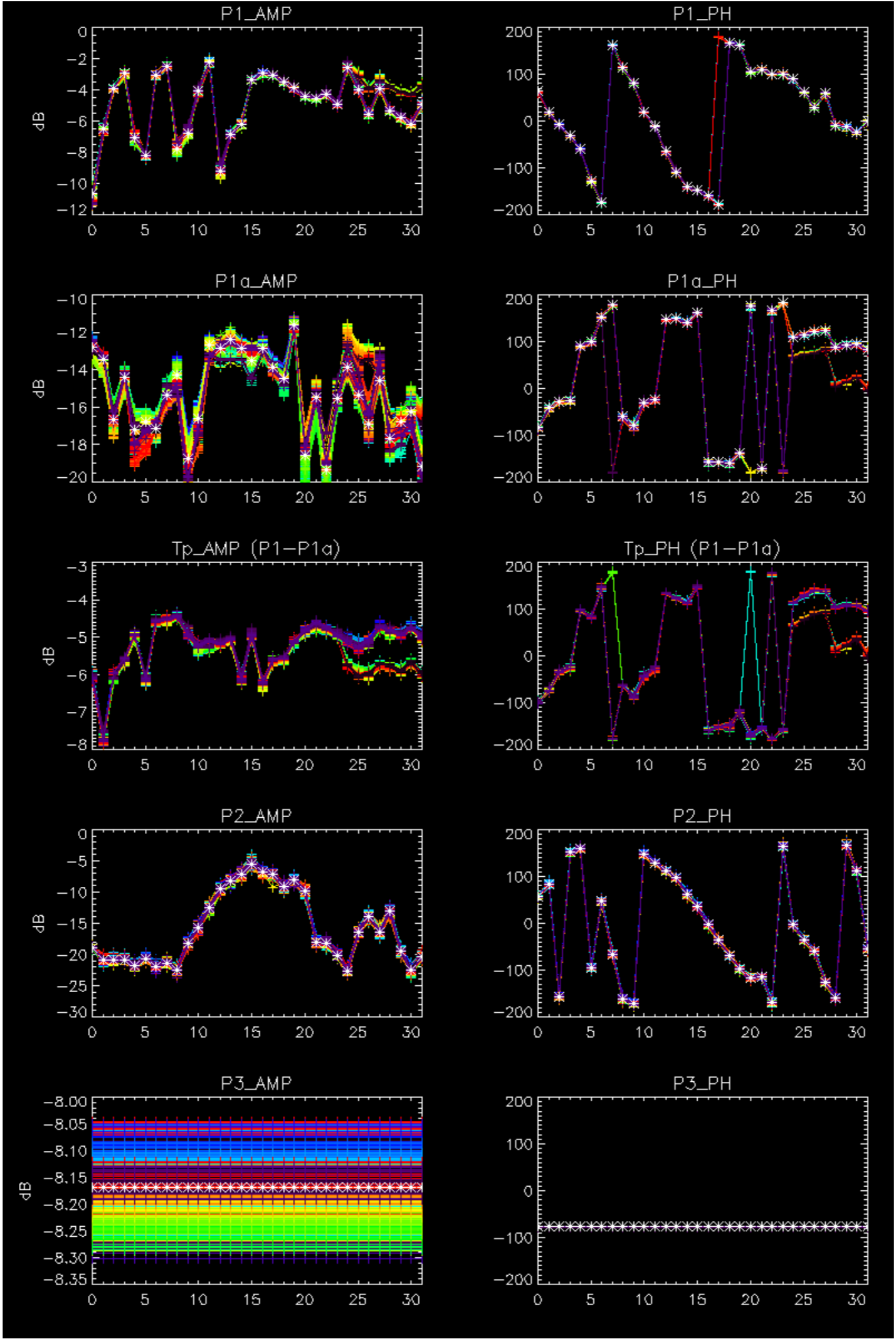
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



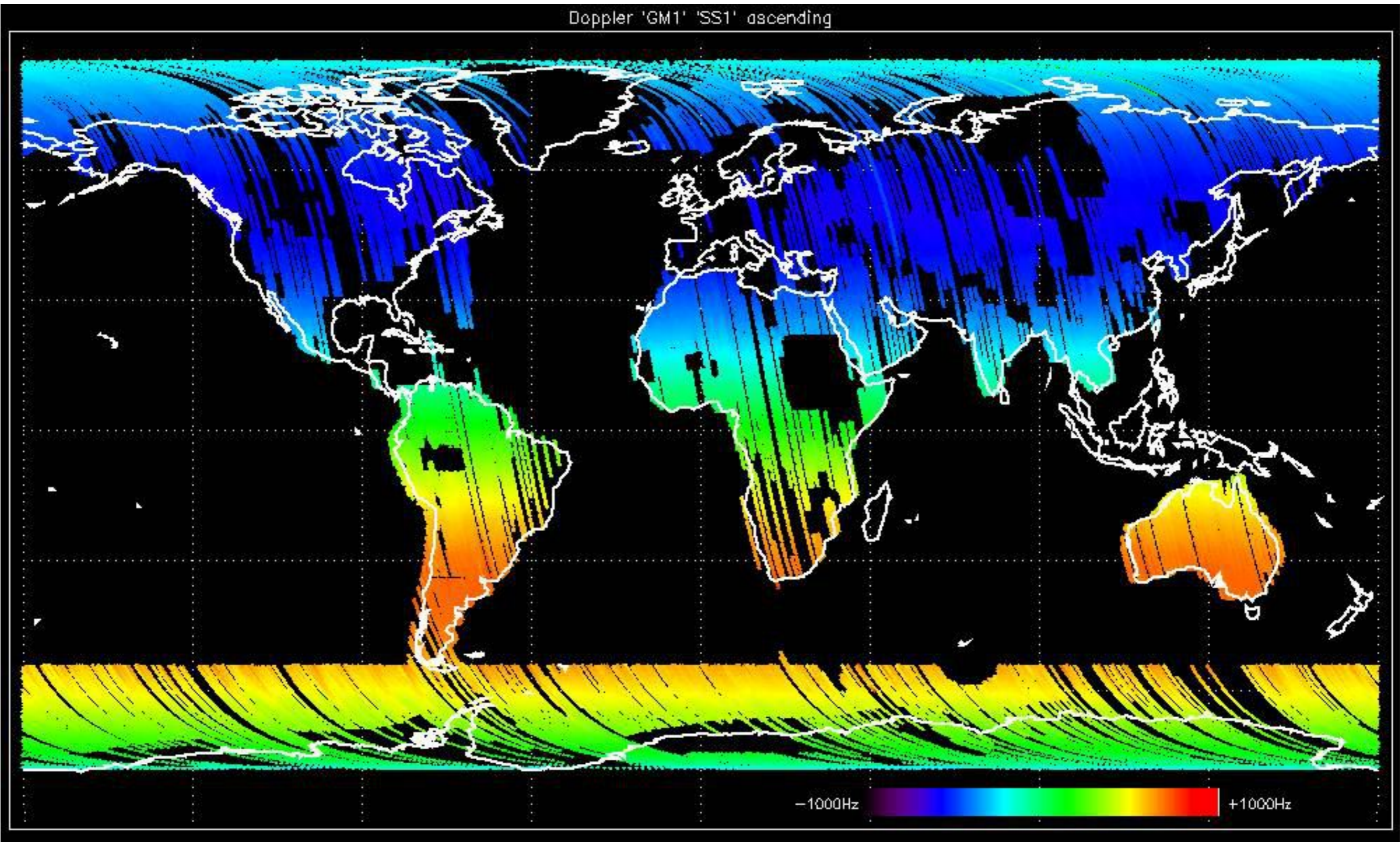
No anomalies observed.



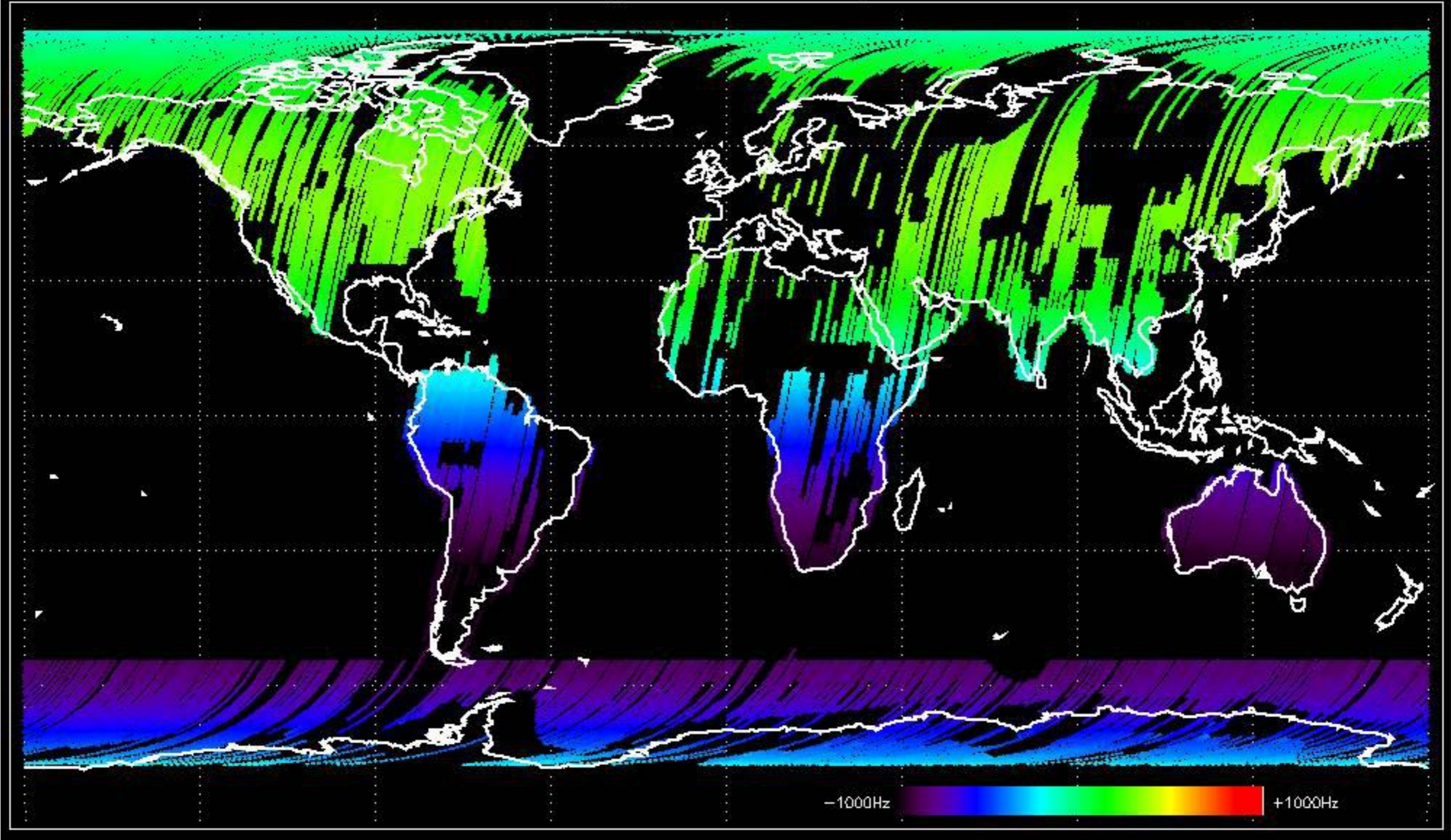


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

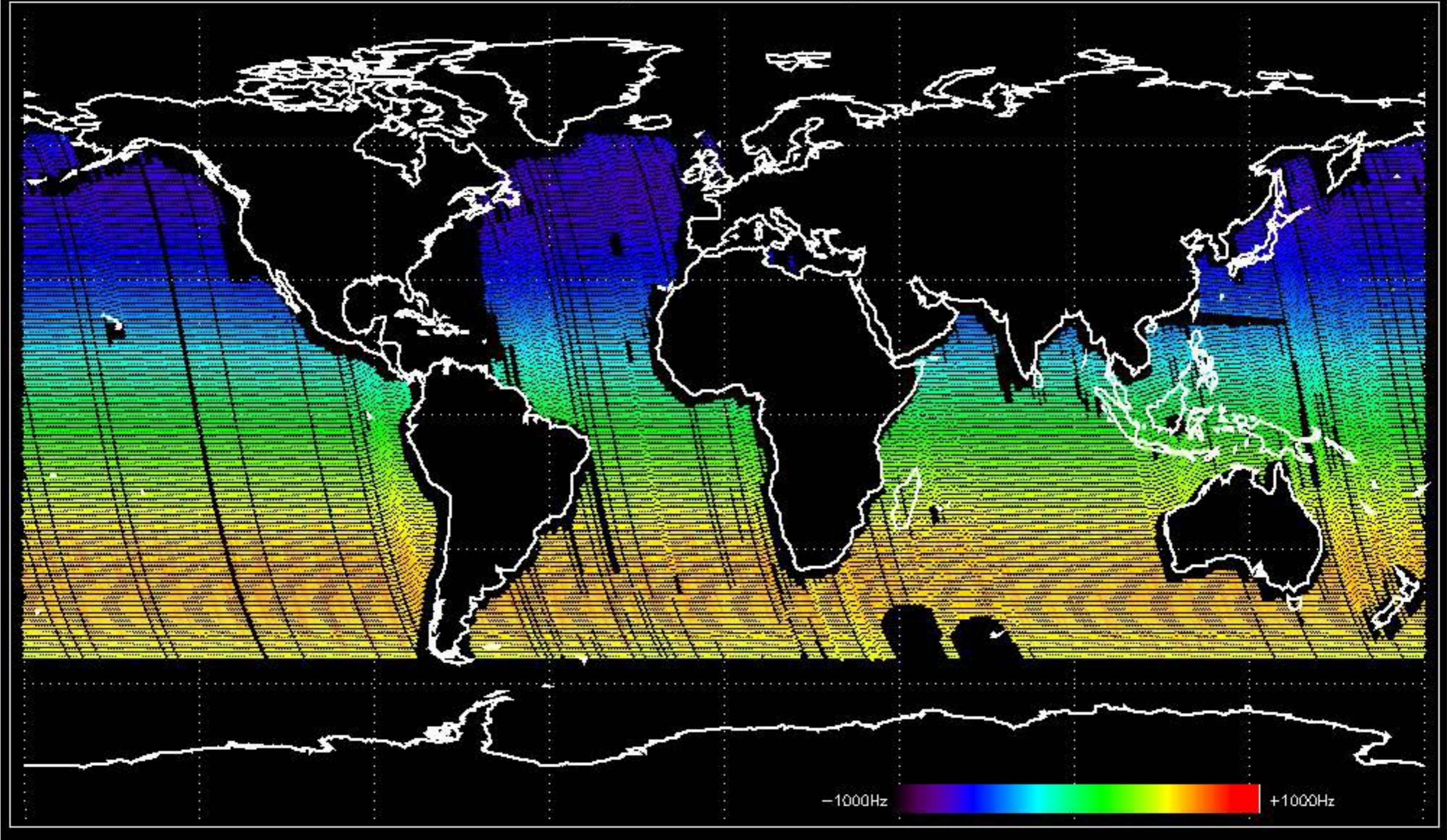
Doppler 'GM1' 'SS1' ascending



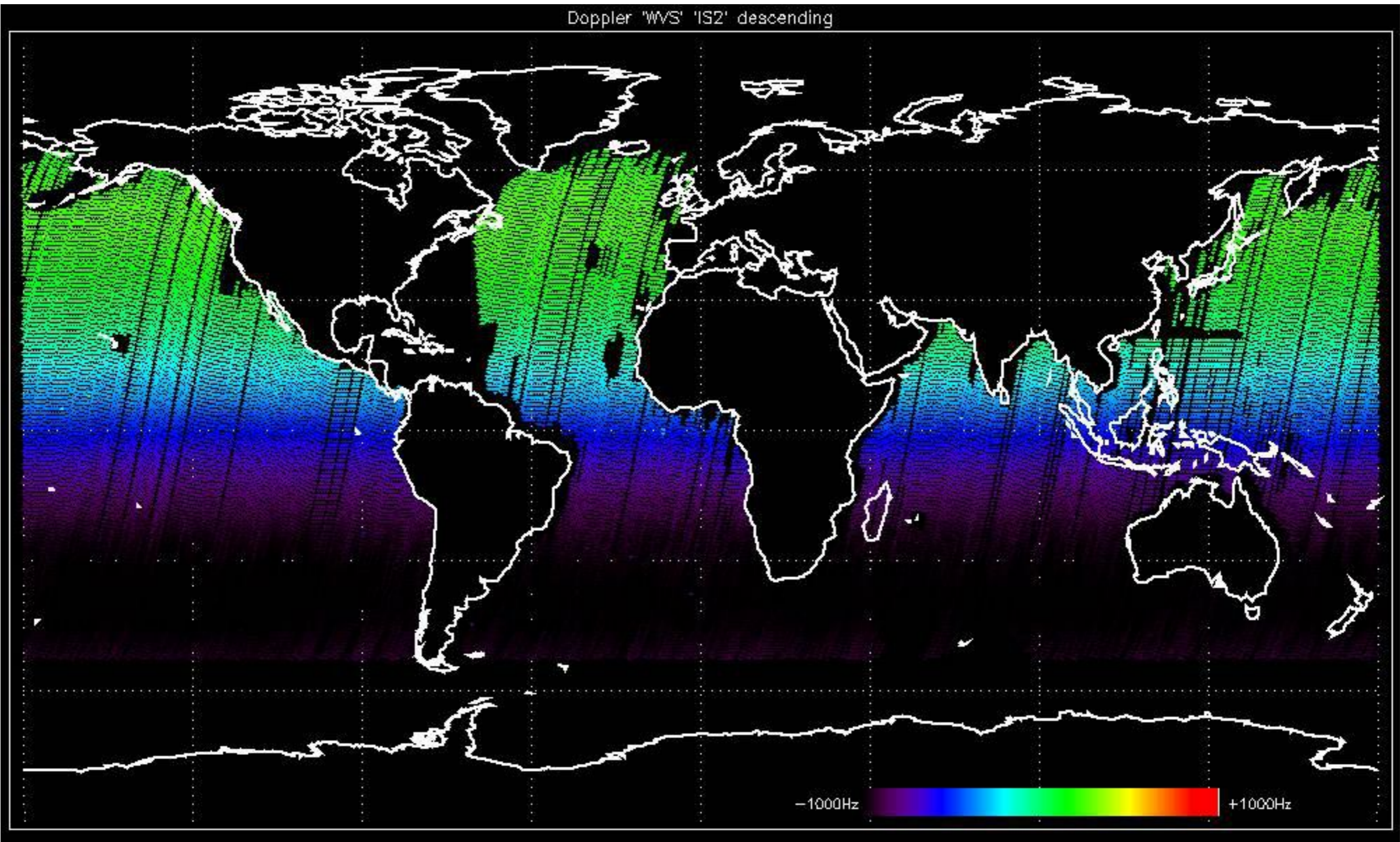
Doppler 'GM1' 'SS1' descending



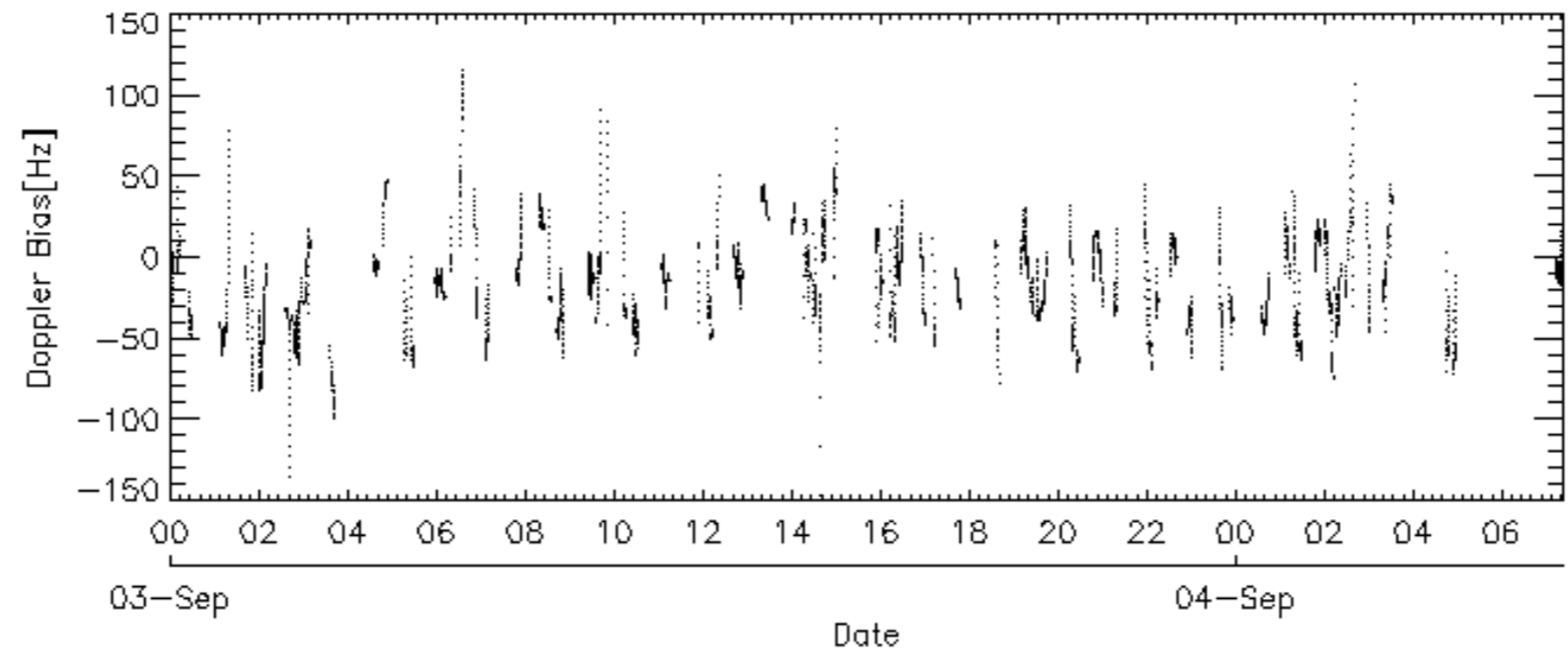
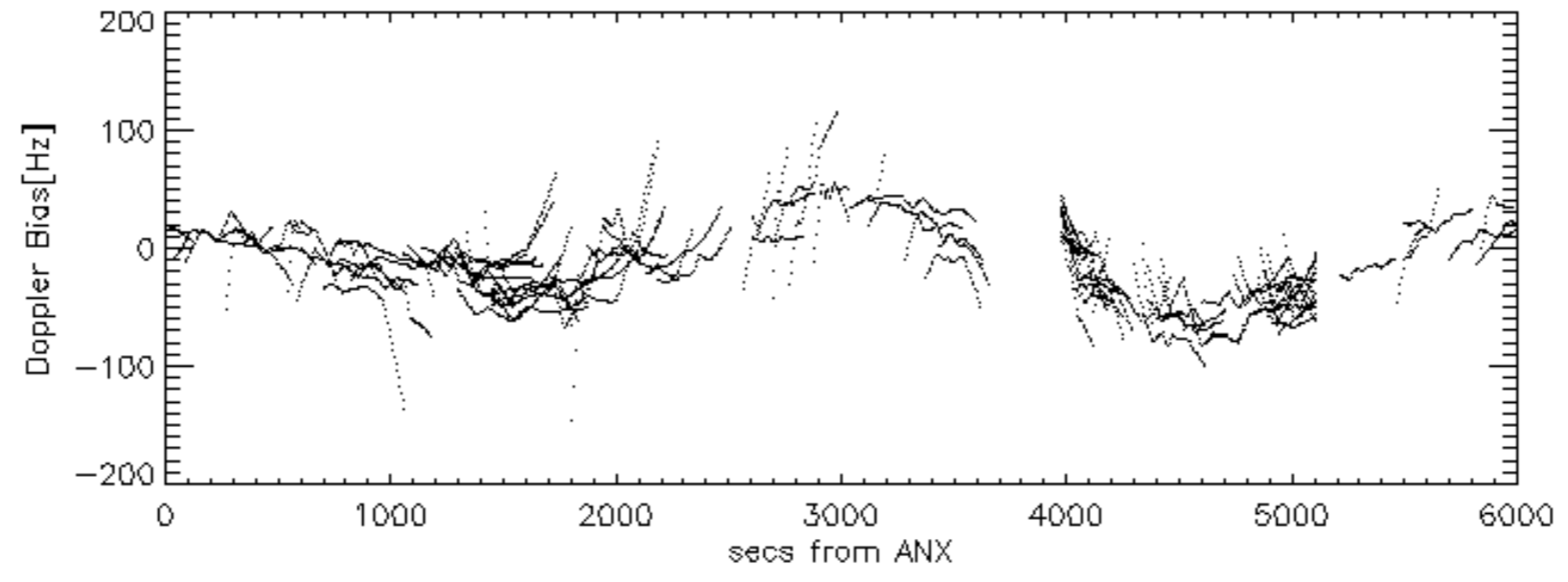
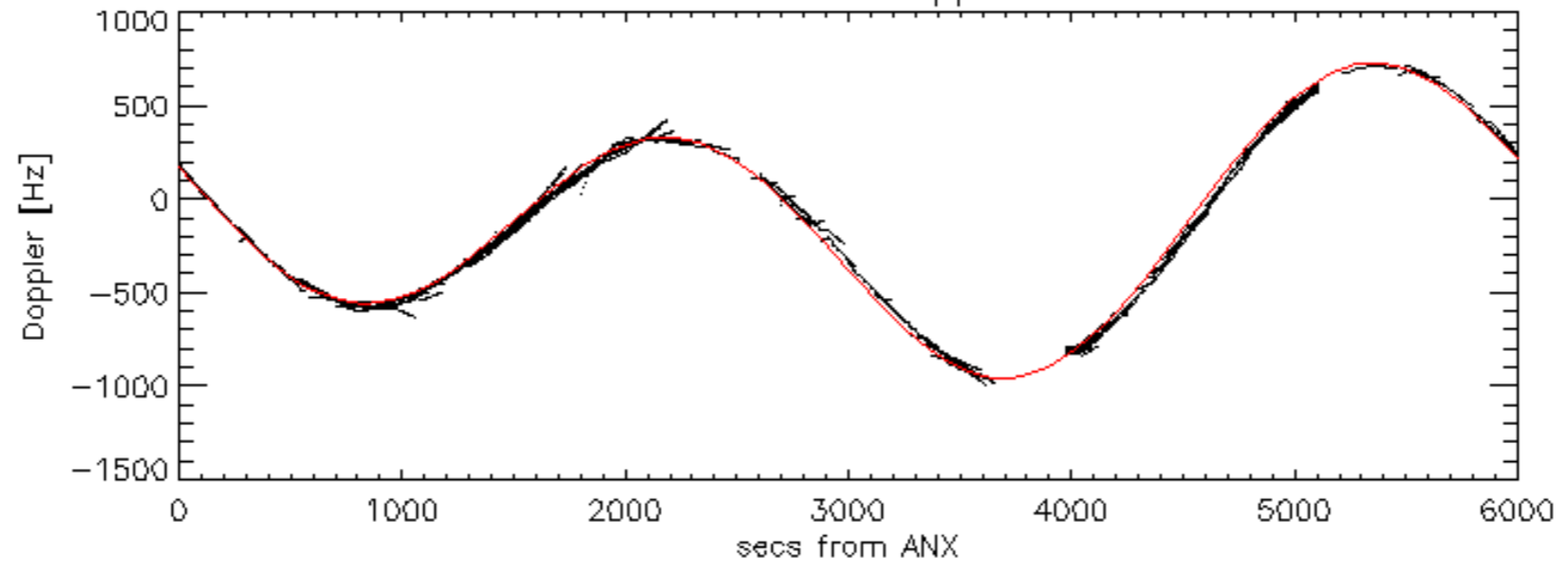
Doppler 'WVS' 'IS2' ascending

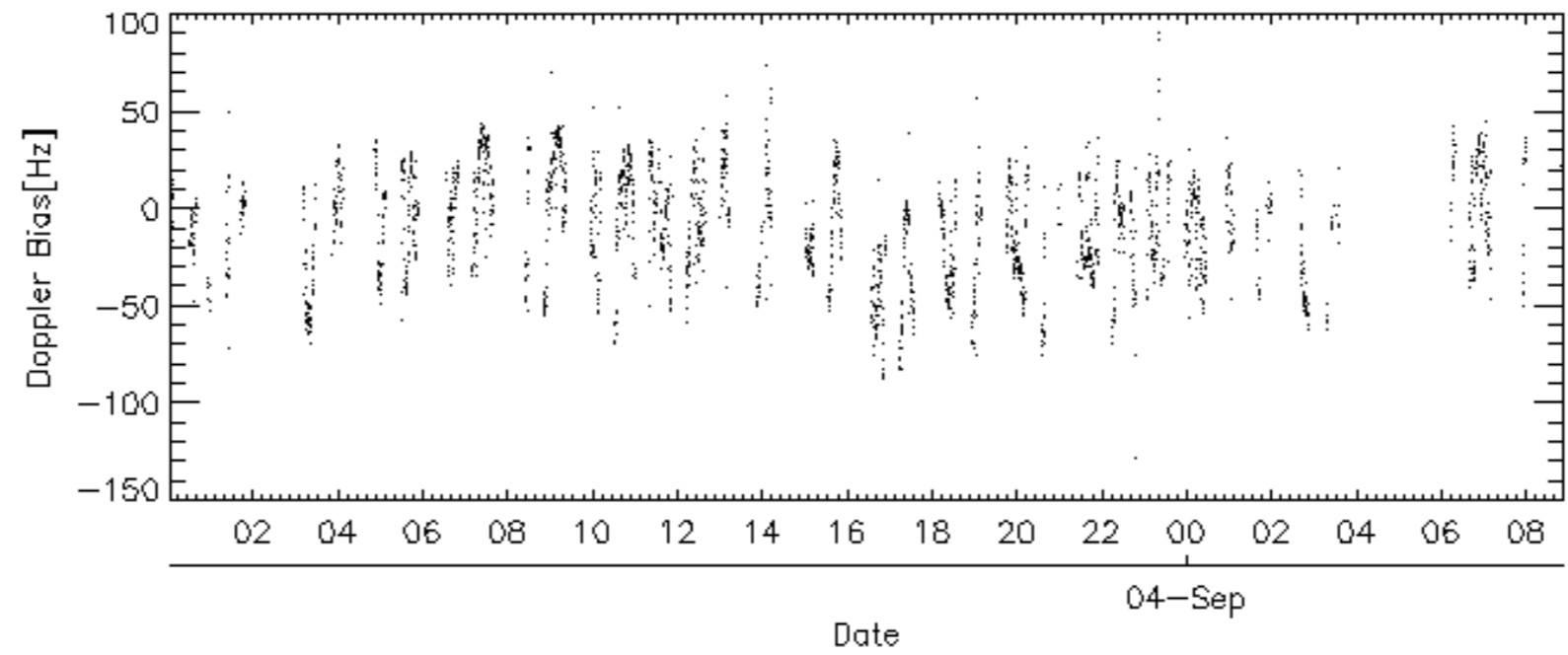
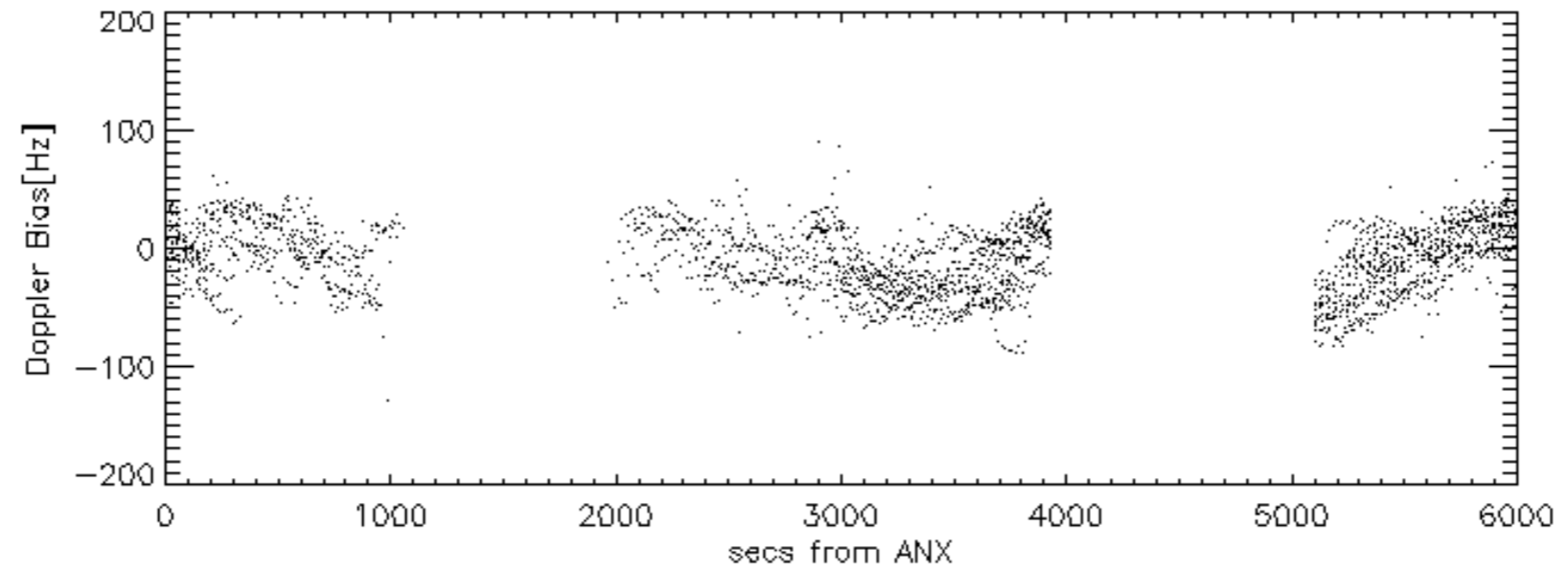
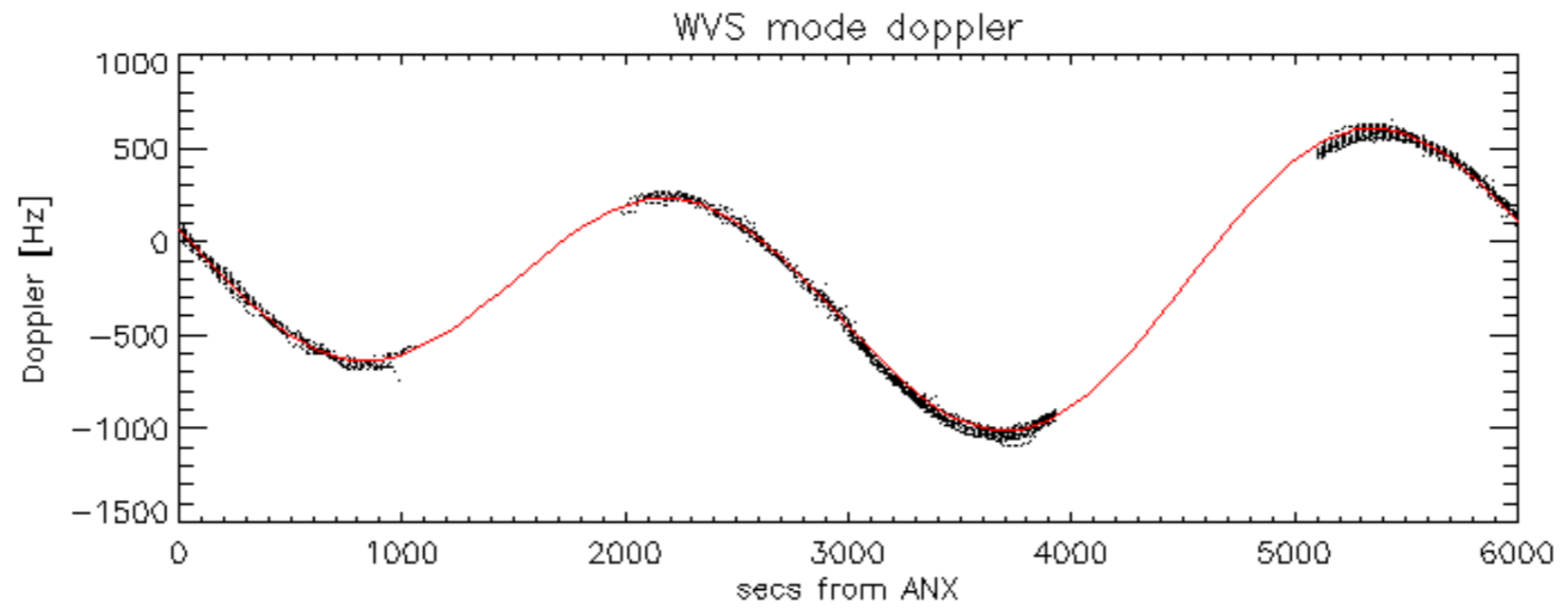


Doppler 'WVS' 'IS2' descending

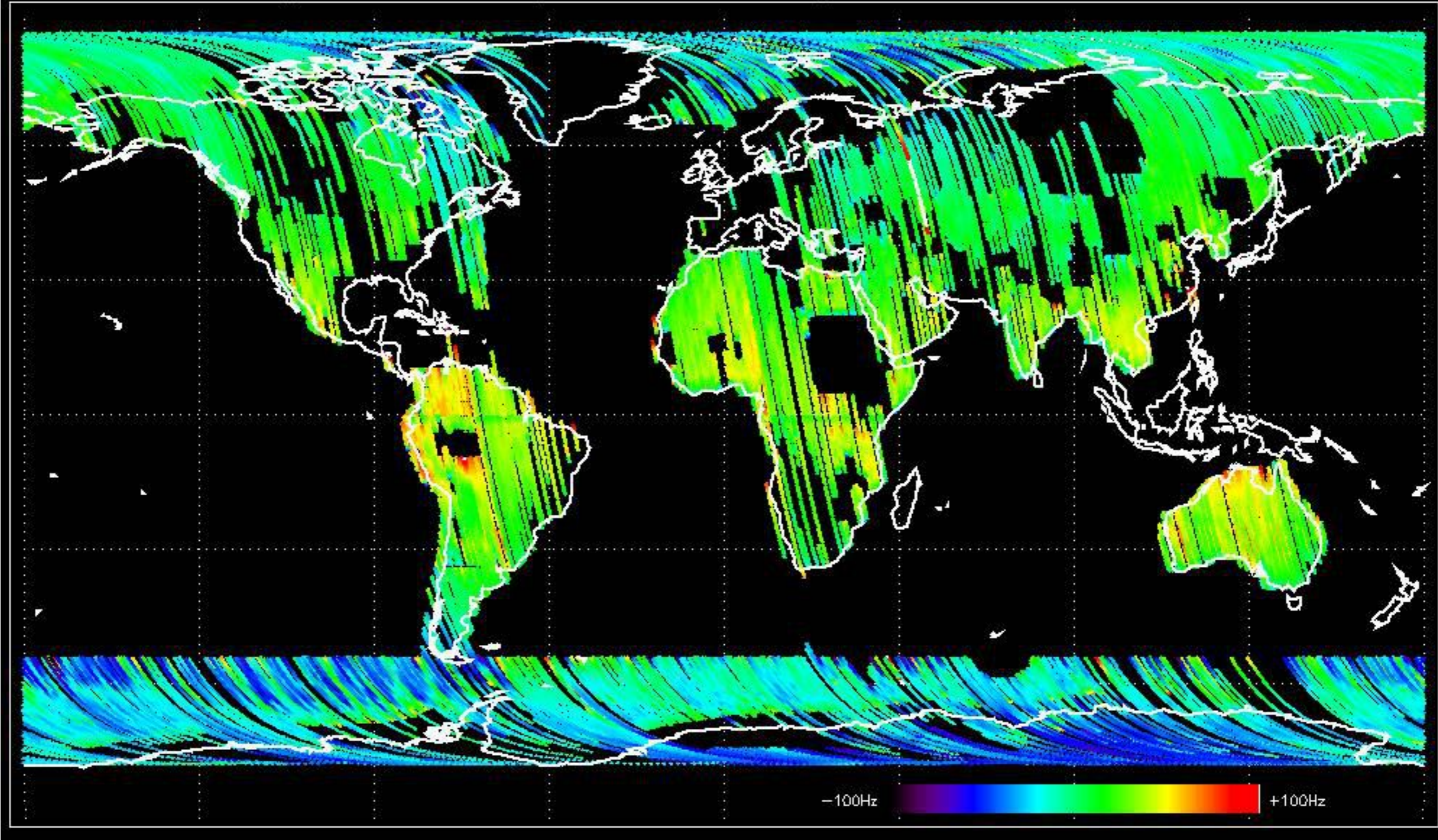


GM1 mode doppler

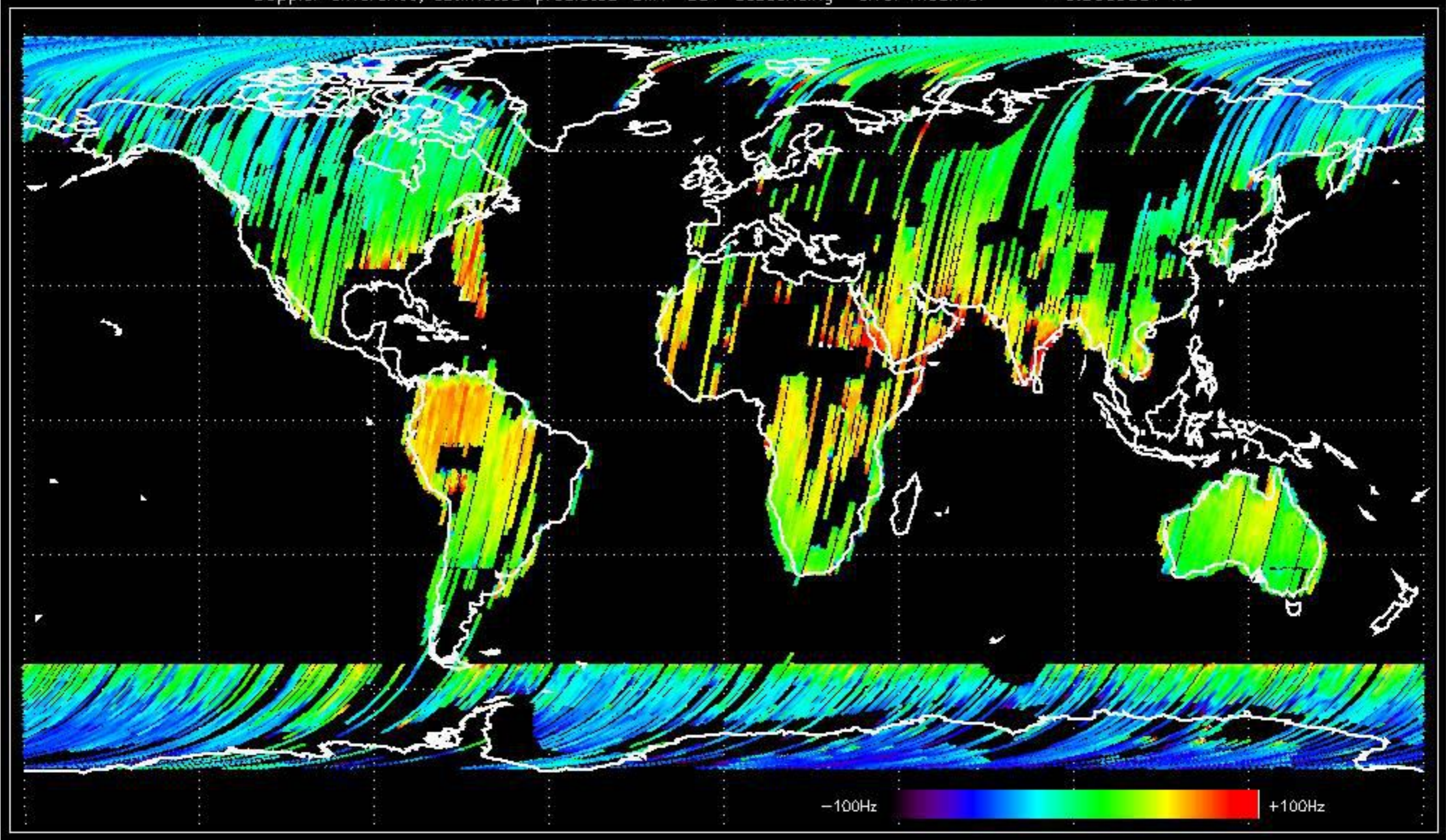




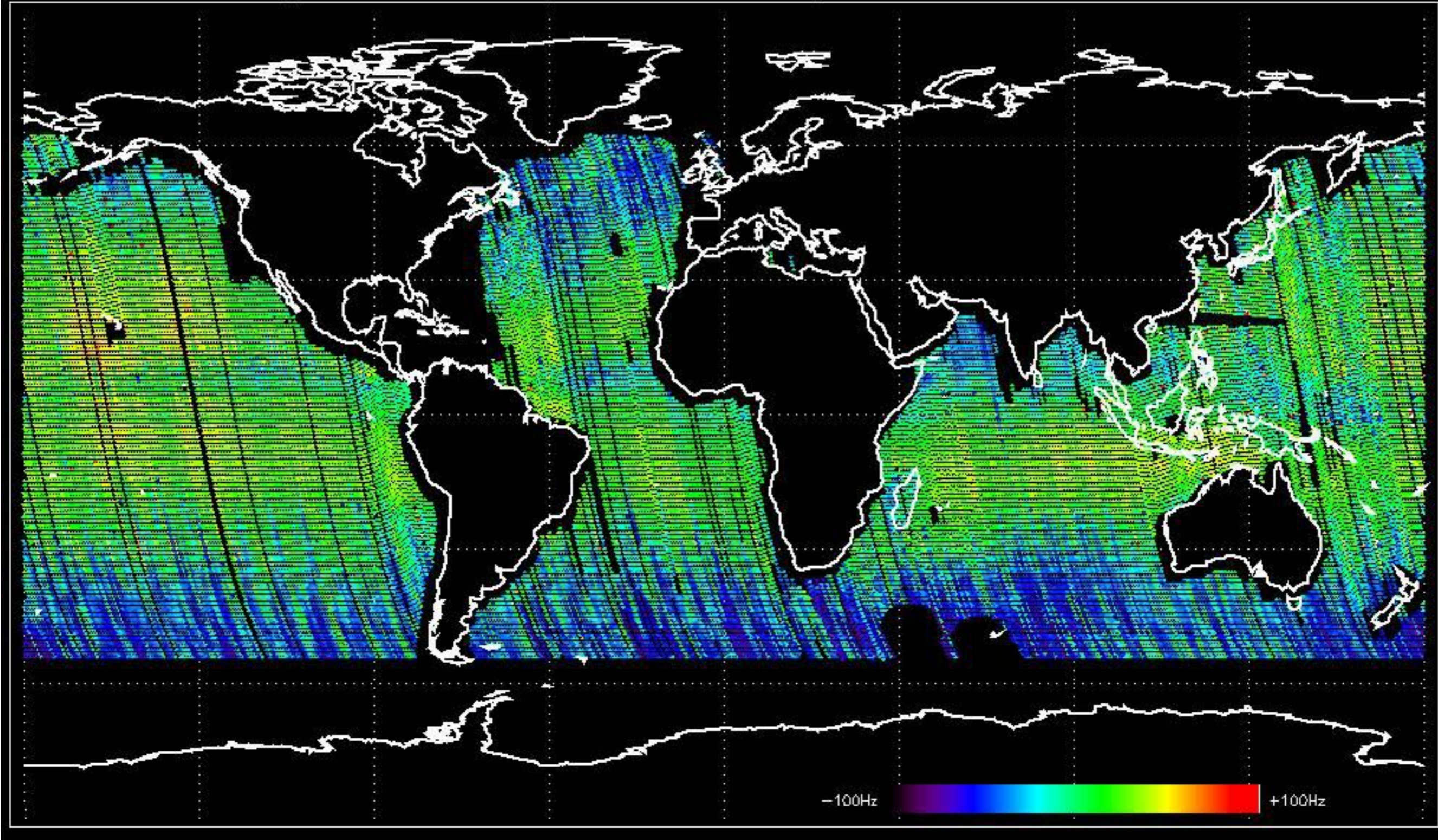
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.780143 Hz



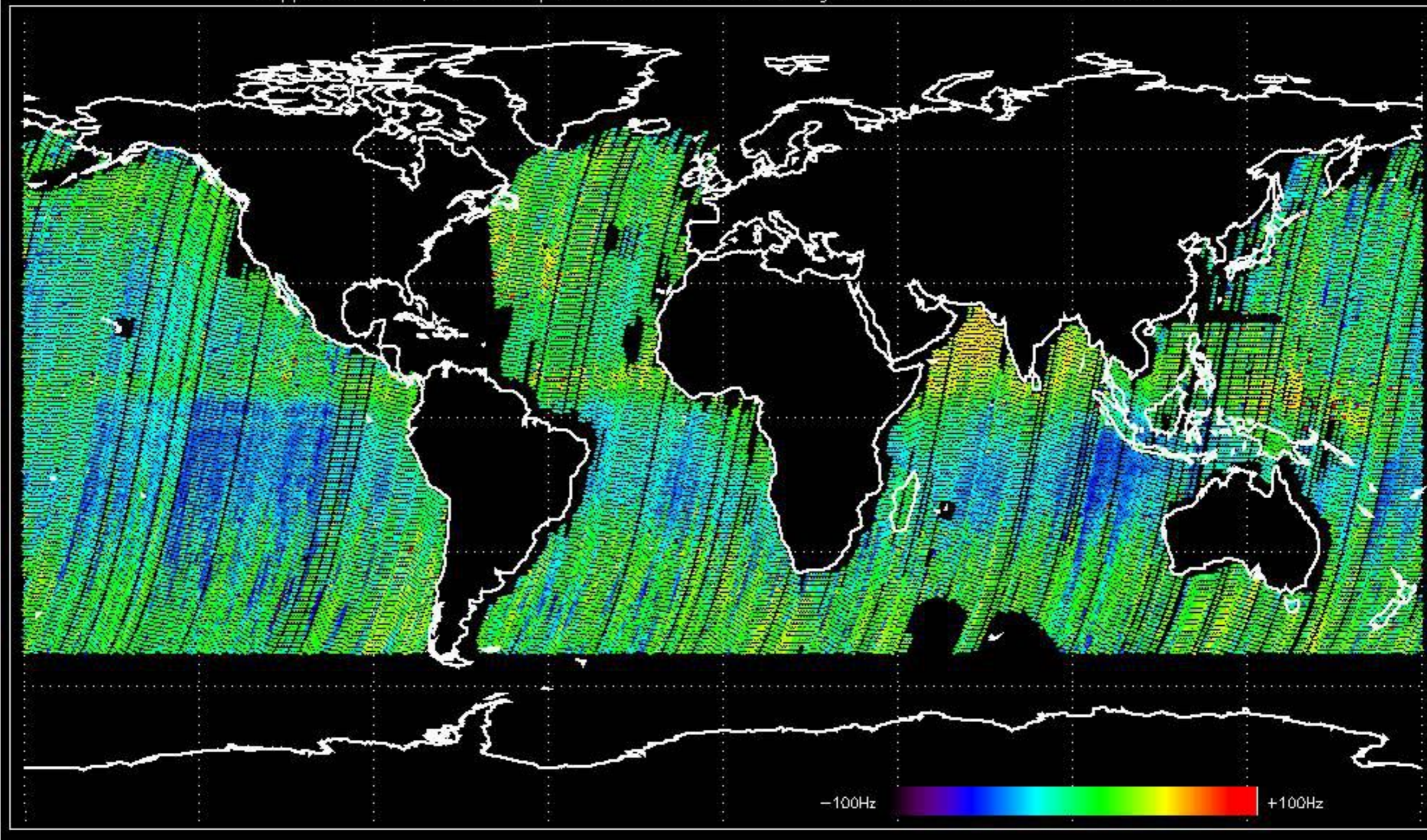
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.8609831 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.8245234 Hz

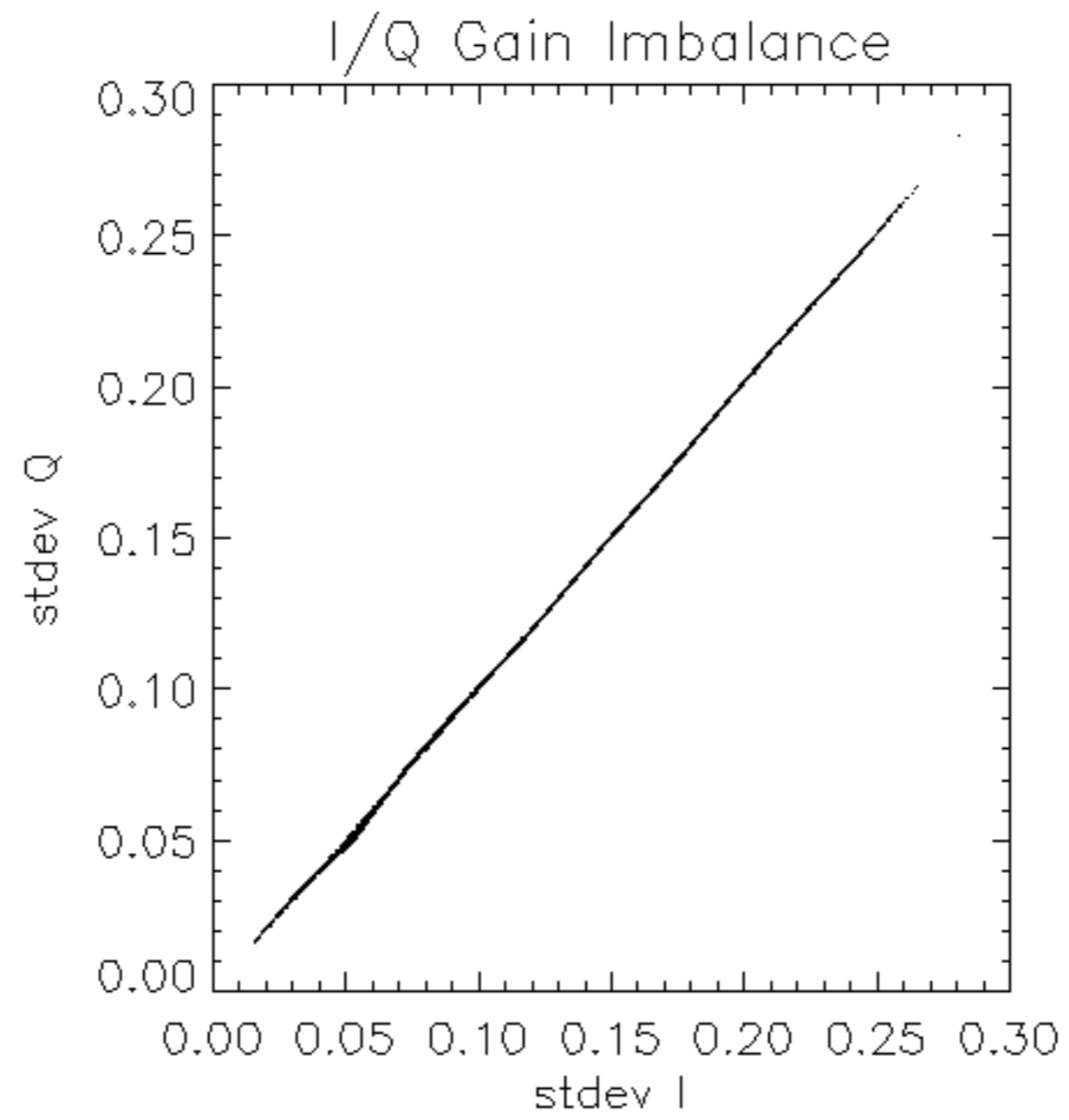


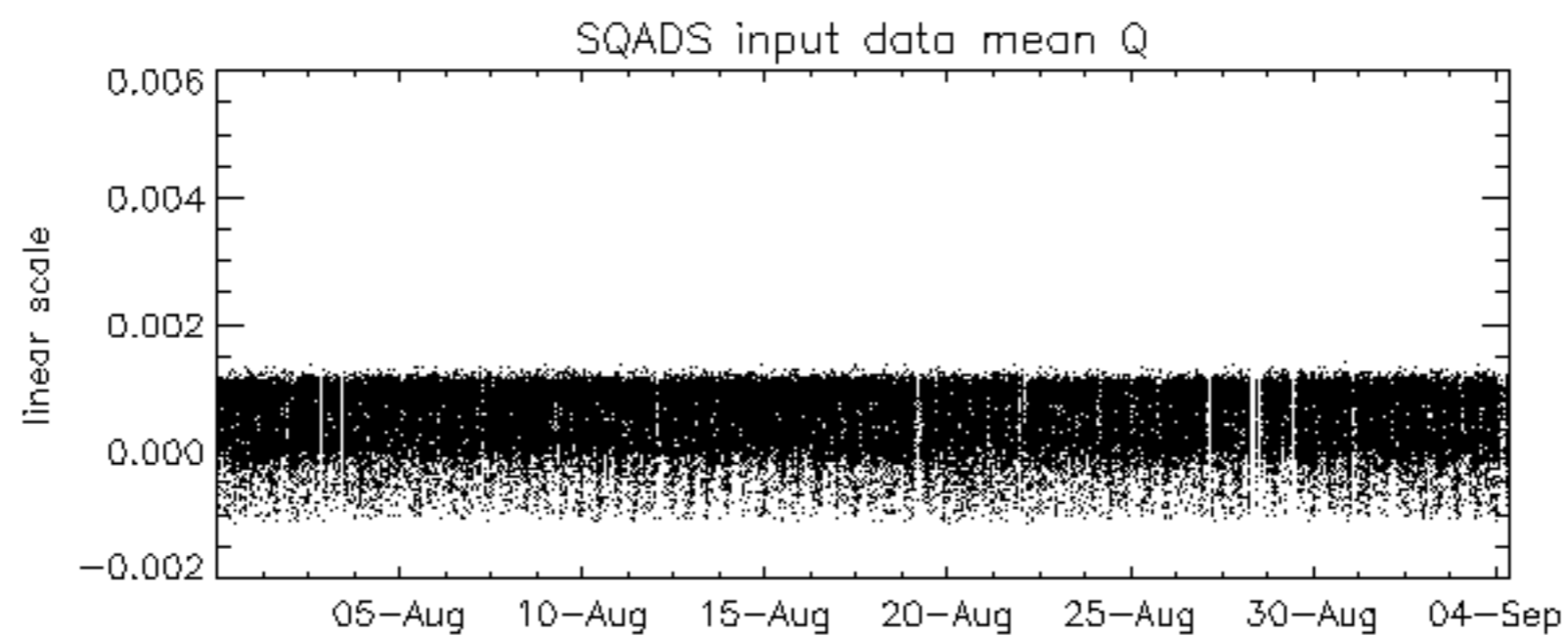
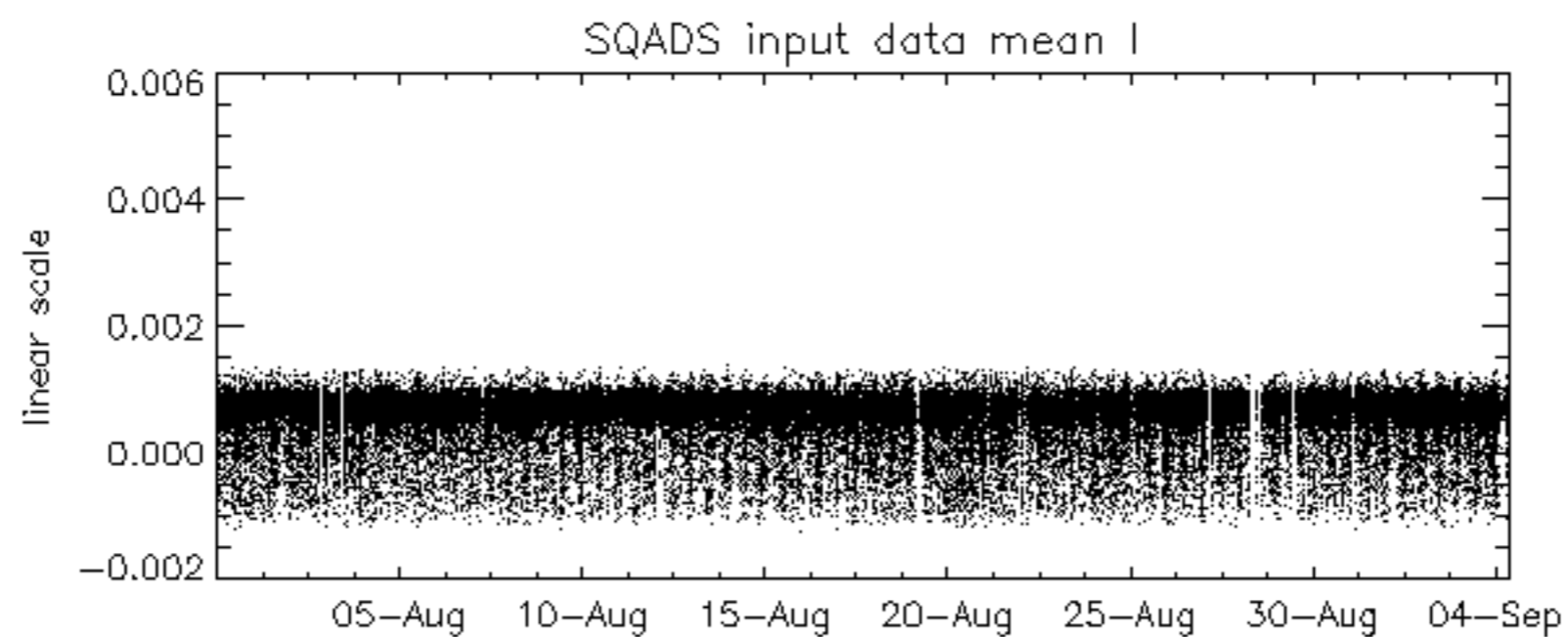
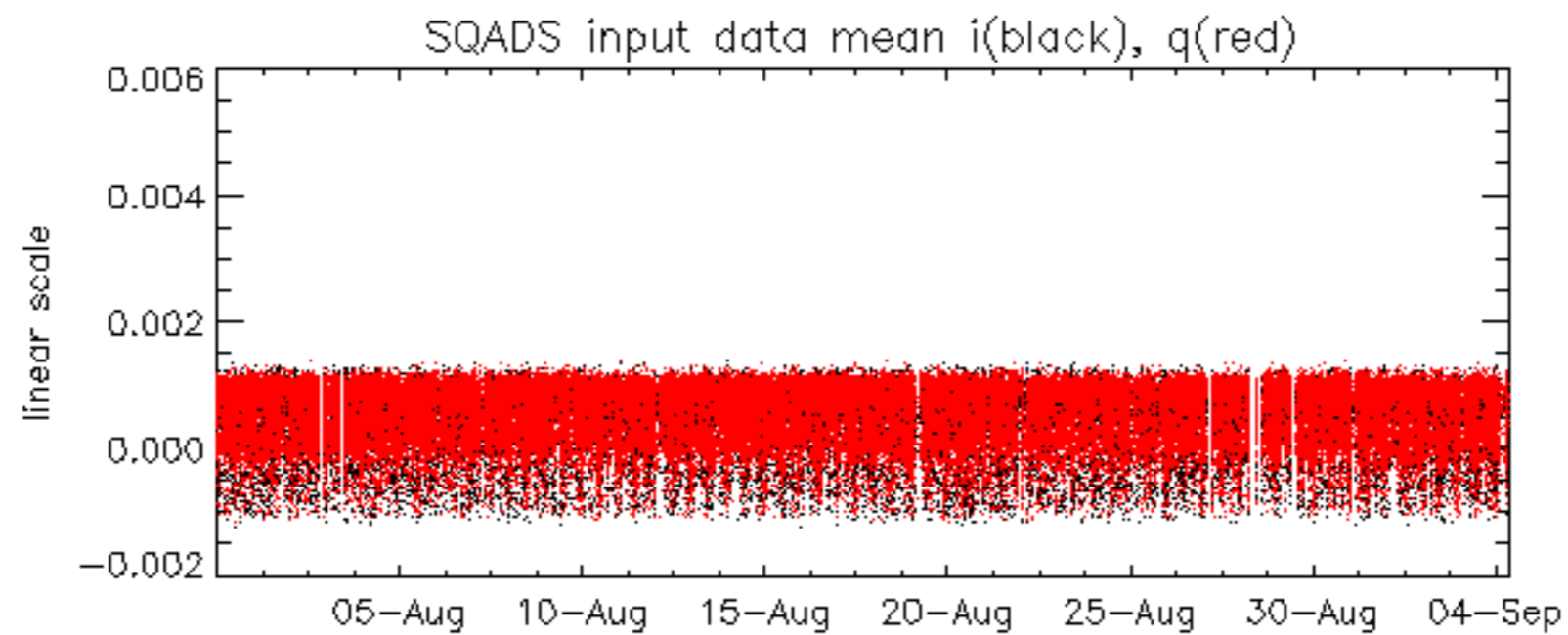
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.6294135 Hz

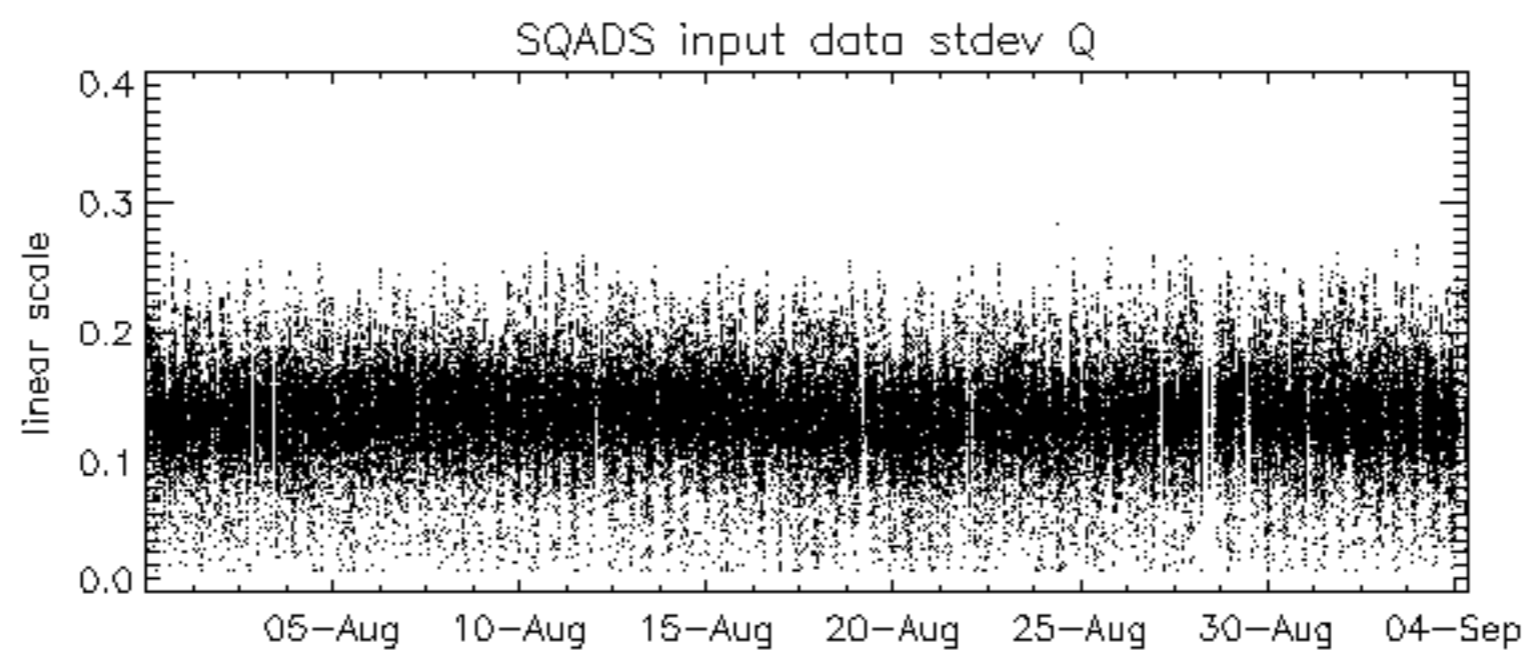
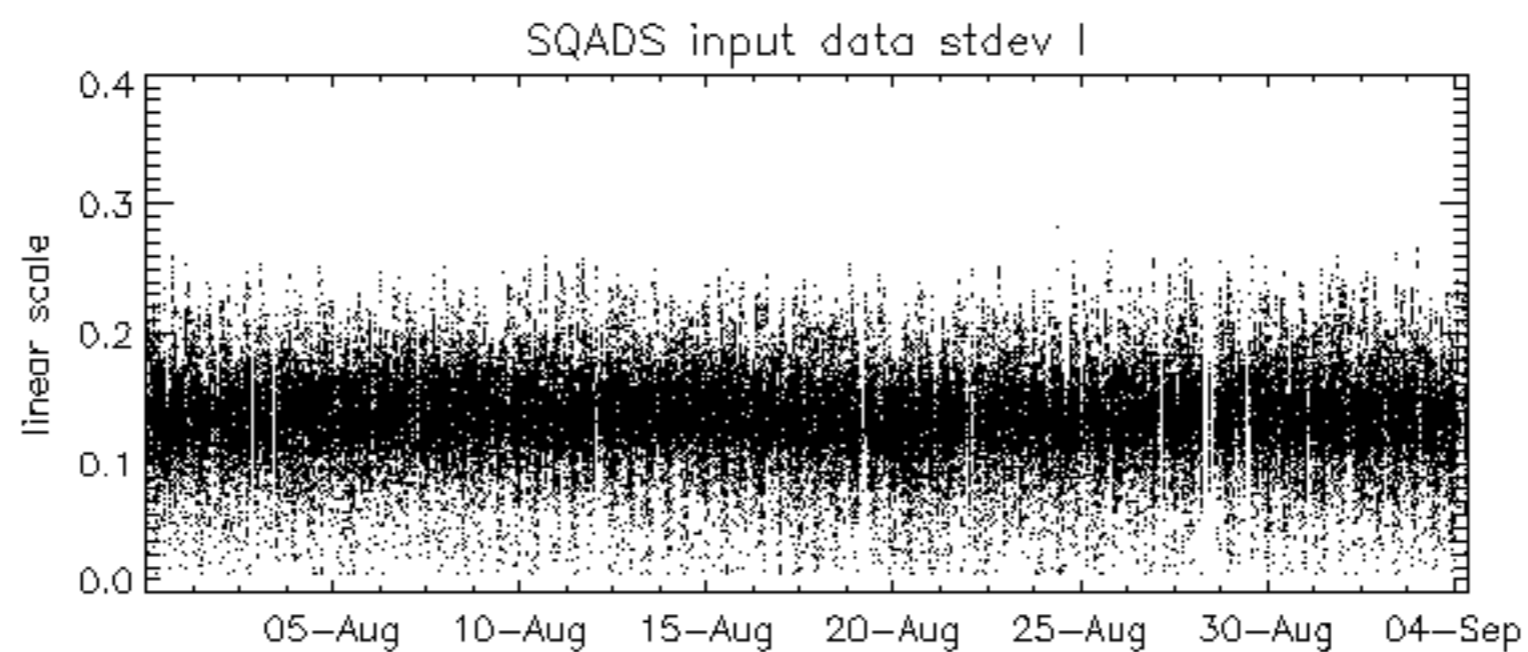
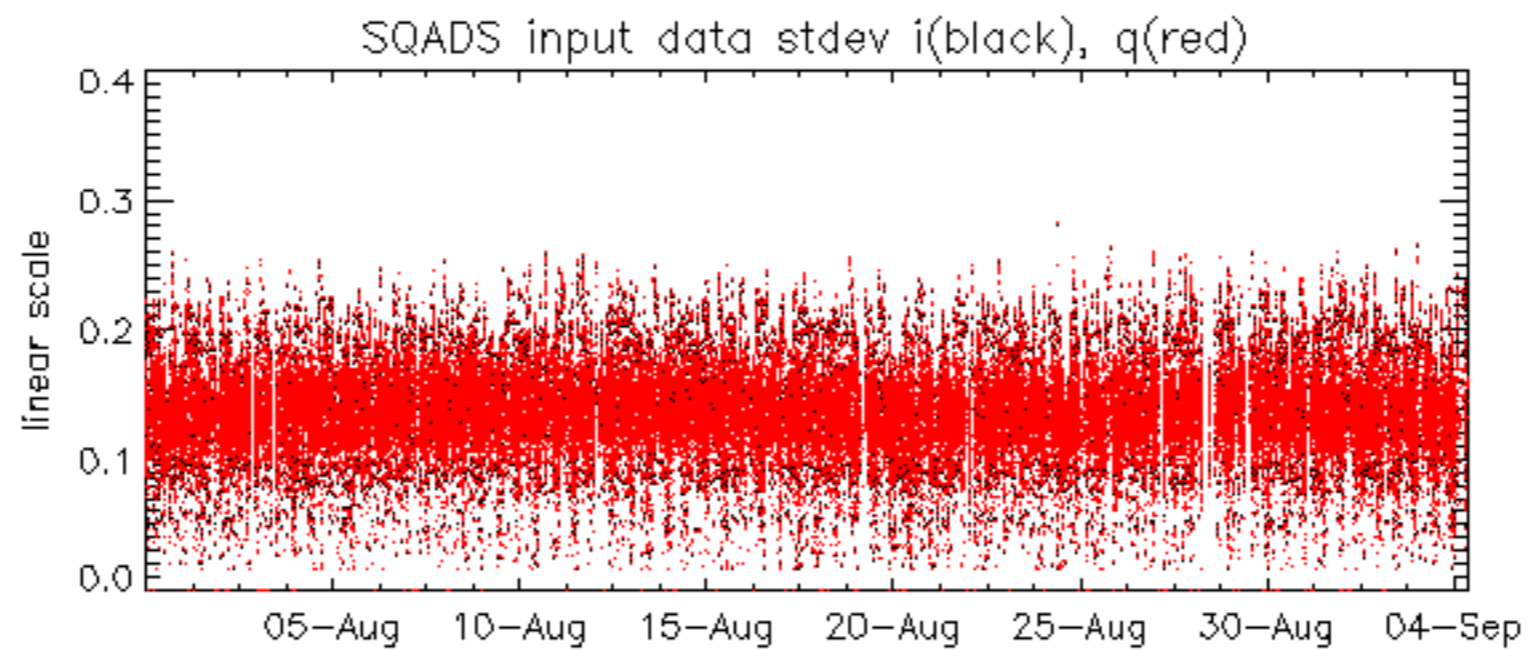


No anomalies observed on available MS products:

No anomalies observed.



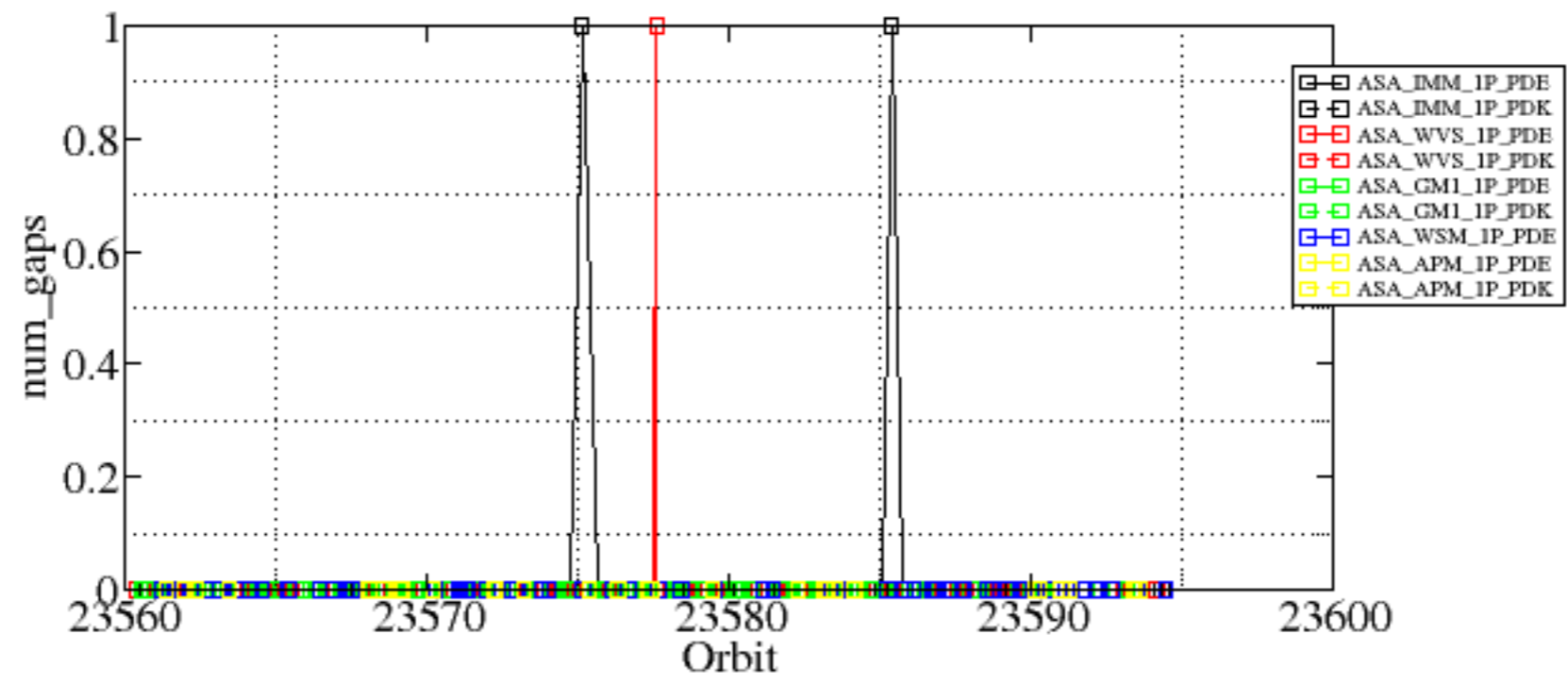


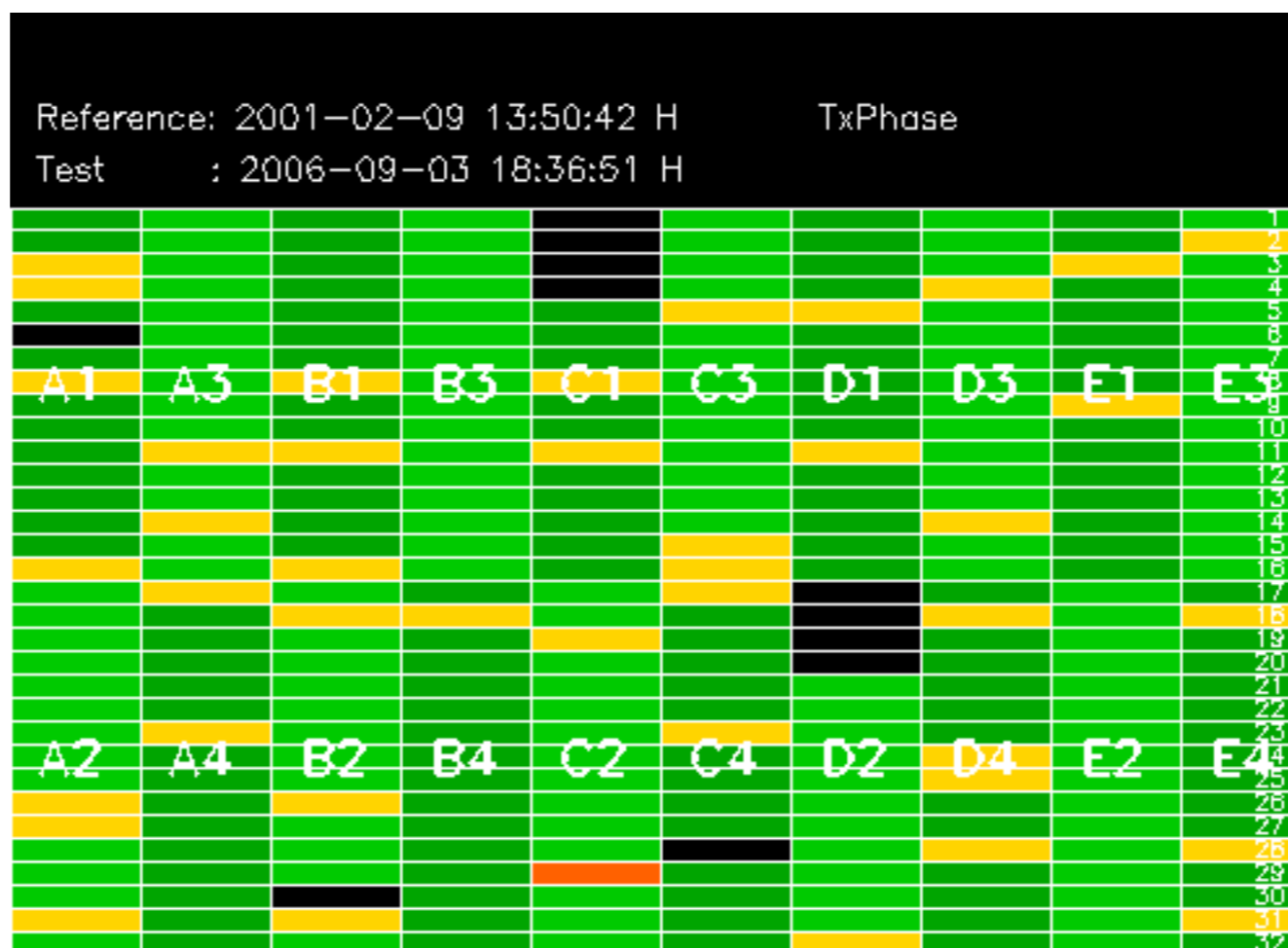


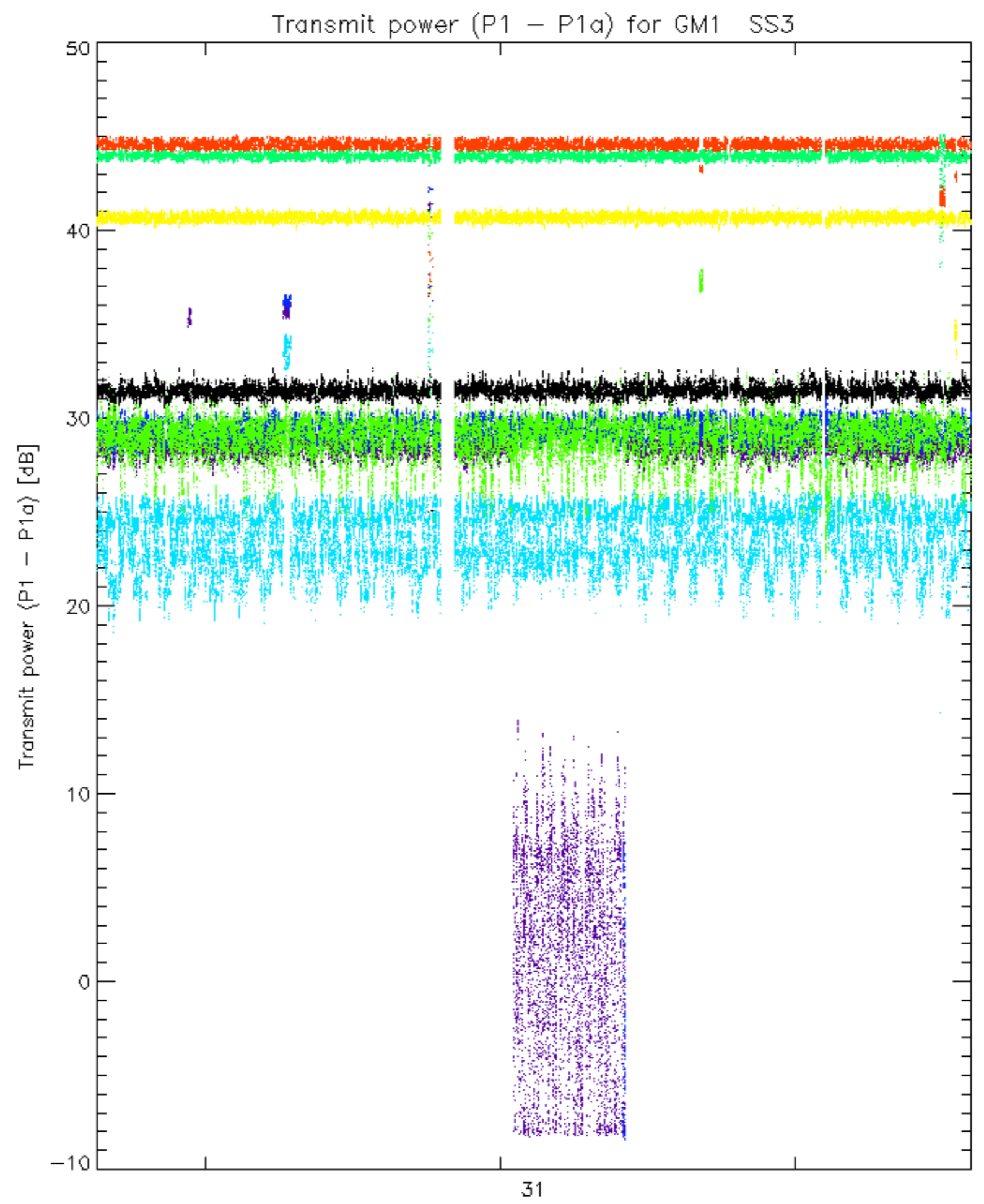
Summary of analysis for the last 3 days 2006090[234]

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

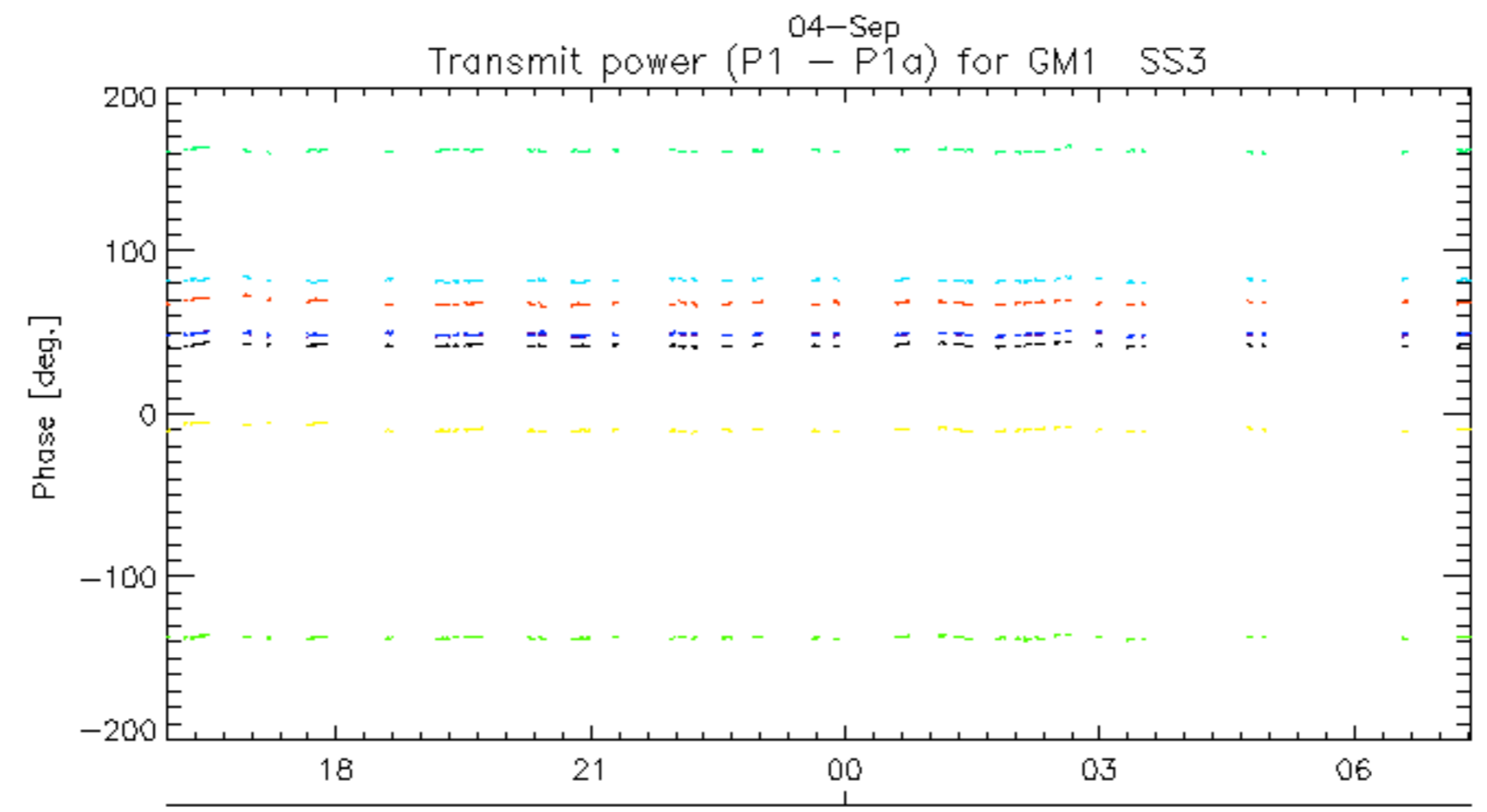
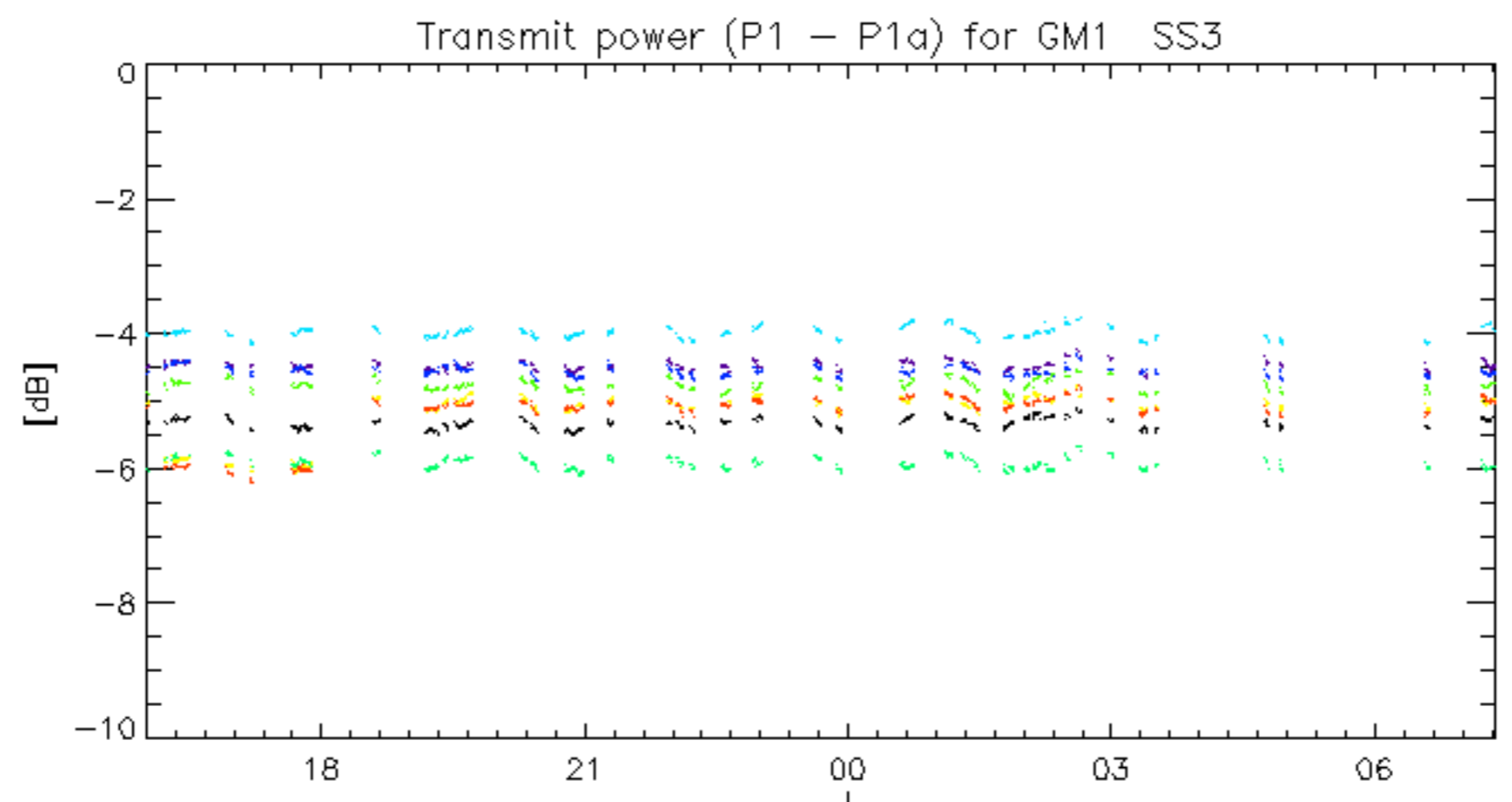
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060903_005612_000000342050_00475_23575_5292.N1	1	0
ASA_IMM_1PNPDE20060903_180745_000001852050_00485_23585_5391.N1	1	0
ASA_WVS_1PNPDE20060903_050530_000000002050_00477_23577_1939.N1	1	0
ASA_WSM_1PNPDE20060902_020157_000000862050_00461_23561_0501.N1	0	34
ASA_WSM_1PNPDE20060902_180620_000001292050_00471_23571_0584.N1	0	67
ASA_WSM_1PNPDE20060902_230551_000001092050_00474_23574_0618.N1	0	2
ASA_WSM_1PNPDE20060903_062830_000000852050_00478_23578_0648.N1	0	2
ASA_WSM_1PNPDE20060903_113116_000002082050_00481_23581_0666.N1	0	6



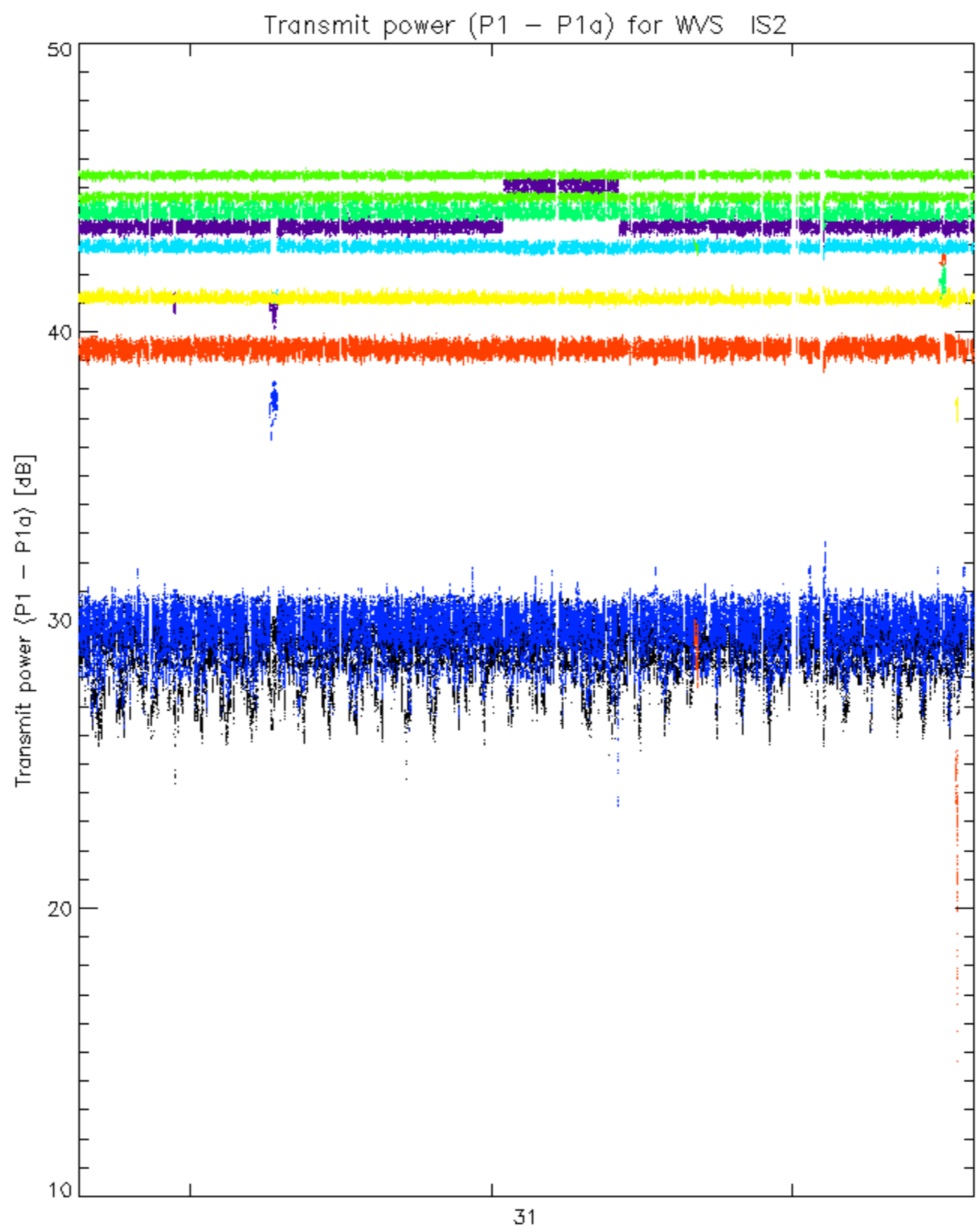


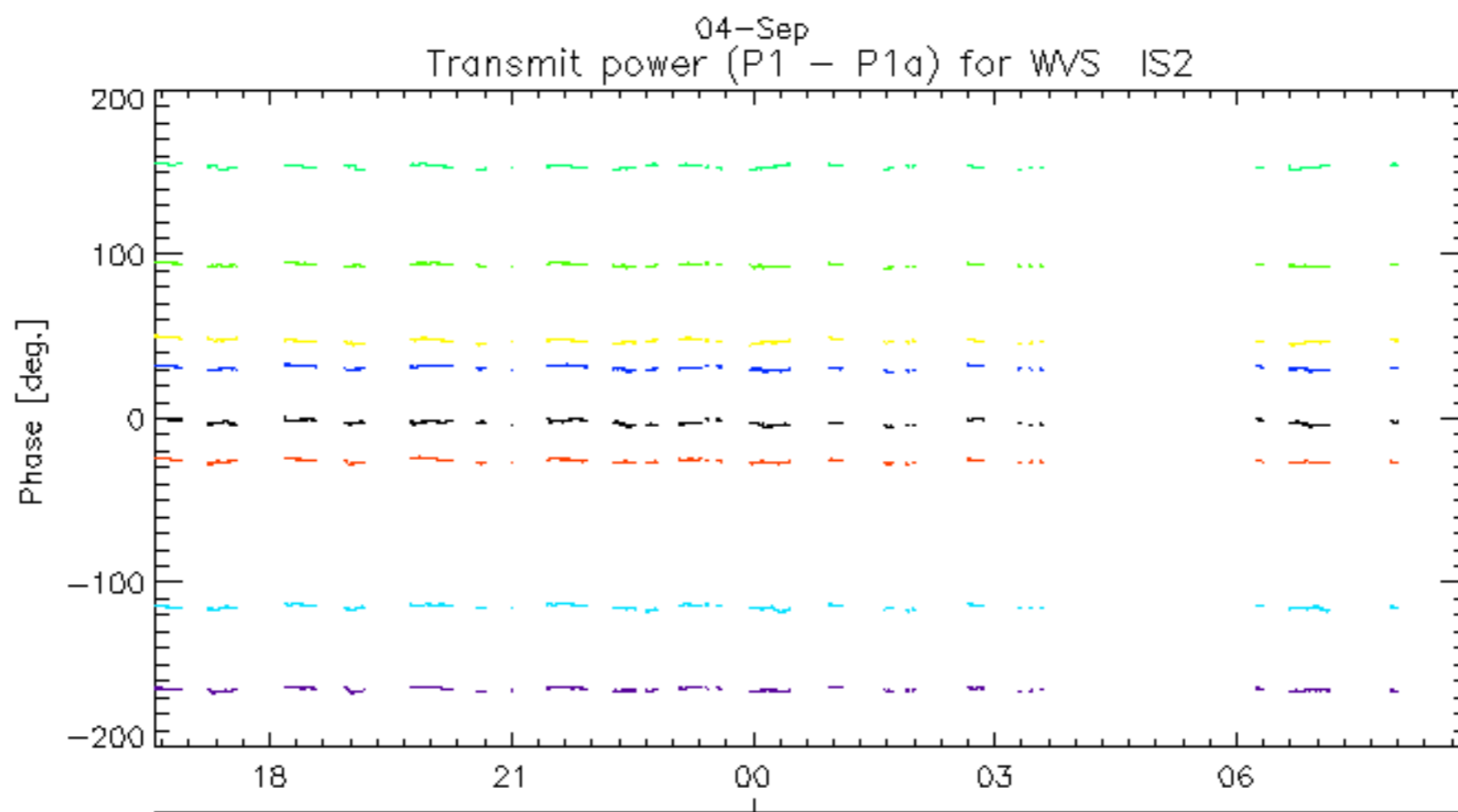
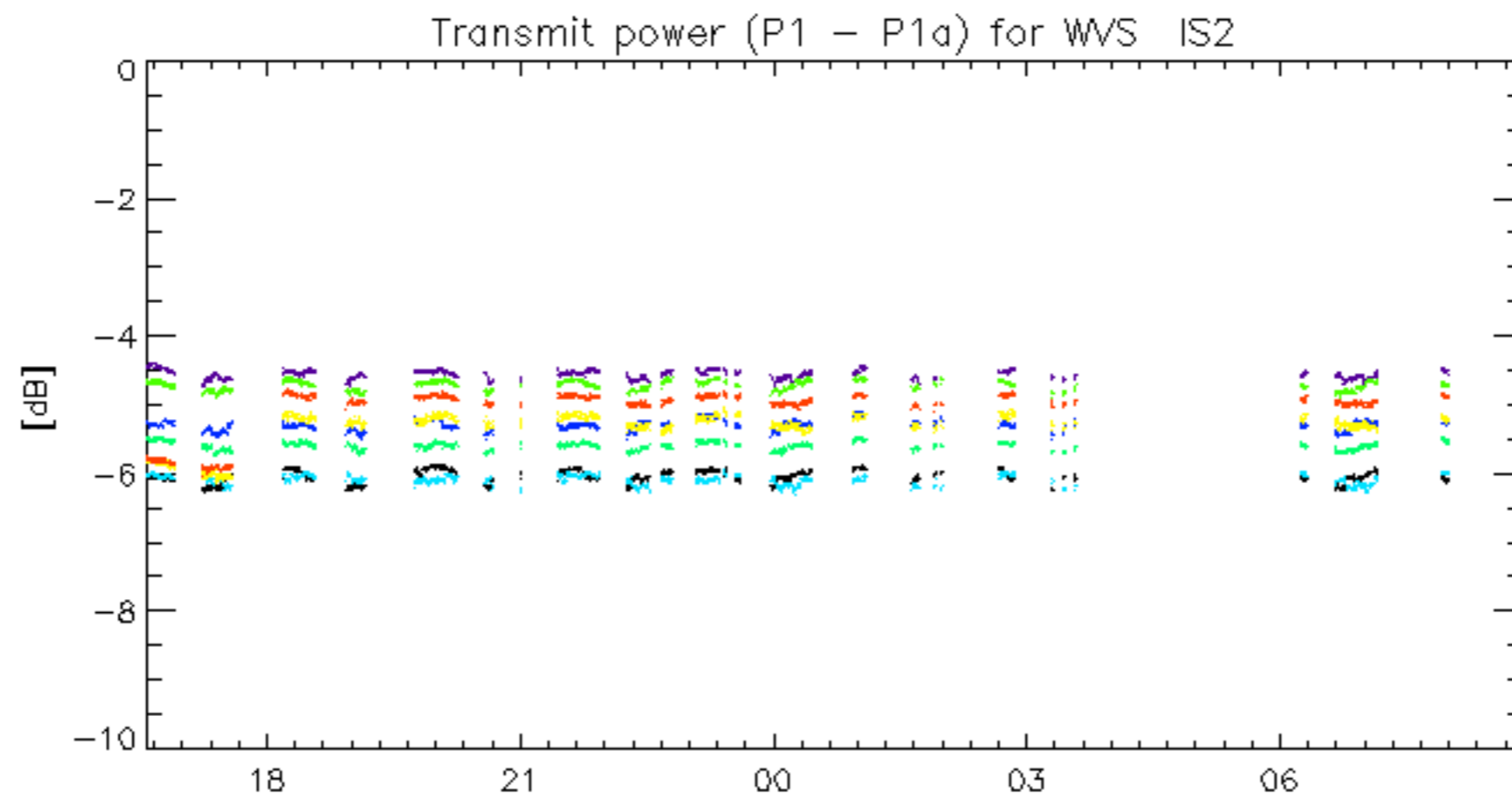


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.