

PRELIMINARY REPORT OF 060915

last update on Fri Sep 15 11:00:01 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 2006-09-14 00:00:00 to 2006-09-15 11:00:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	30	53	6	3	1
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	30	53	6	3	1
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	30	53	6	3	1
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	30	53	6	3	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	40	24	13	57
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	33	40	24	13	57
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	33	40	24	13	57
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	33	40	24	13	57

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	20060914 130250
H	20060907 062647

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

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	-3.939363	0.009649	0.015999
7	P1	-3.048251	0.011470	-0.033608
11	P1	-4.056217	0.017246	0.018879
15	P1	-6.178658	0.015173	0.015188
19	P1	-3.507863	0.049590	-0.108253
22	P1	-4.566150	0.026730	-0.001173
26	P1	-3.939384	0.019989	-0.047694
30	P1	-5.787379	0.148345	-0.101630
3	P1	-16.577156	0.256433	-0.160479
7	P1	-16.788242	0.663810	-0.865242
11	P1	-16.803492	0.334026	0.062755
15	P1	-12.927632	0.106299	0.231726
19	P1	-14.604067	0.446167	-0.224813
22	P1	-15.734882	0.563246	0.378200
26	P1	-15.199495	0.209253	-0.089415
30	P1	-16.945290	0.405868	0.219538

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.831985	0.082807	0.107307
7	P2	-21.862278	0.096580	0.006182
11	P2	-15.744872	0.108071	-0.016070
15	P2	-7.091383	0.097417	0.029602
19	P2	-9.111931	0.090704	0.001347
22	P2	-18.120304	0.085257	0.052412
26	P2	-16.400139	0.092040	-0.006456
30	P2	-19.469240	0.089644	0.022648

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.174195	0.004360	0.002651
7	P3	-8.174195	0.004360	0.002651
11	P3	-8.174195	0.004360	0.002651
15	P3	-8.174195	0.004360	0.002651
19	P3	-8.174195	0.004360	0.002651
22	P3	-8.174195	0.004360	0.002651
26	P3	-8.174254	0.004359	0.002957
30	P3	-8.174254	0.004359	0.002957

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	-3.843055	0.023644	-0.017422
7	P1	-2.446122	0.175354	-0.288852
11	P1	-2.878839	0.034126	-0.026157
15	P1	-3.648409	0.036454	-0.043558
19	P1	-3.457348	0.081994	-0.075627
22	P1	-5.095713	0.037387	-0.060630
26	P1	-5.866187	0.030831	0.052511
30	P1	-5.195500	0.086155	-0.033885
3	P1	-11.632238	0.074315	-0.008889
7	P1	-9.914728	0.198296	-0.255243
11	P1	-10.331313	0.084074	-0.096896
15	P1	-10.862194	0.181176	0.007940
19	P1	-15.674392	3.665640	-0.435253
22	P1	-20.814606	1.723583	0.248409

26	P1	-15.976115	0.411832	0.361988
30	P1	-18.027637	0.836798	-0.272972

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.421000	0.076601	0.115540
7	P2	-22.200109	0.202019	0.099662
11	P2	-10.901204	0.059356	0.081278
15	P2	-4.862904	0.040117	0.079596
19	P2	-6.847218	0.041496	0.054726
22	P2	-8.161646	0.066406	0.097341
26	P2	-24.157528	0.134373	0.023096
30	P2	-21.958181	0.080848	0.017255

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018481	0.003695	0.001454
7	P3	-8.018375	0.003697	0.001794
11	P3	-8.018255	0.003709	0.001566
15	P3	-8.018358	0.003719	0.001968
19	P3	-8.018420	0.003725	0.002106
22	P3	-8.018531	0.003689	0.001848
26	P3	-8.018431	0.003707	0.001483
30	P3	-8.018355	0.003702	0.001394

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	0.000548013
	stdev	1.79088e-07
MEAN Q	mean	0.000525462
	stdev	2.17696e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135927
	stdev	0.00111138
STDEV Q	mean	0.136271
	stdev	0.00112809



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006091[345]

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_WSM_1PNPDE20060914_004533_000002072051_00131_23732_1899.N1	0	34
ASA_WSM_1PNPDE20060915_015531_000001282051_00146_23747_2075.N1	0	39
ASA_WSM_1PNPDE20060915_021350_000000672051_00146_23747_2061.N1	4	196
ASA_WSM_1PNPDK20060913_135730_000001472051_00125_23726_5289.N1	0	18





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

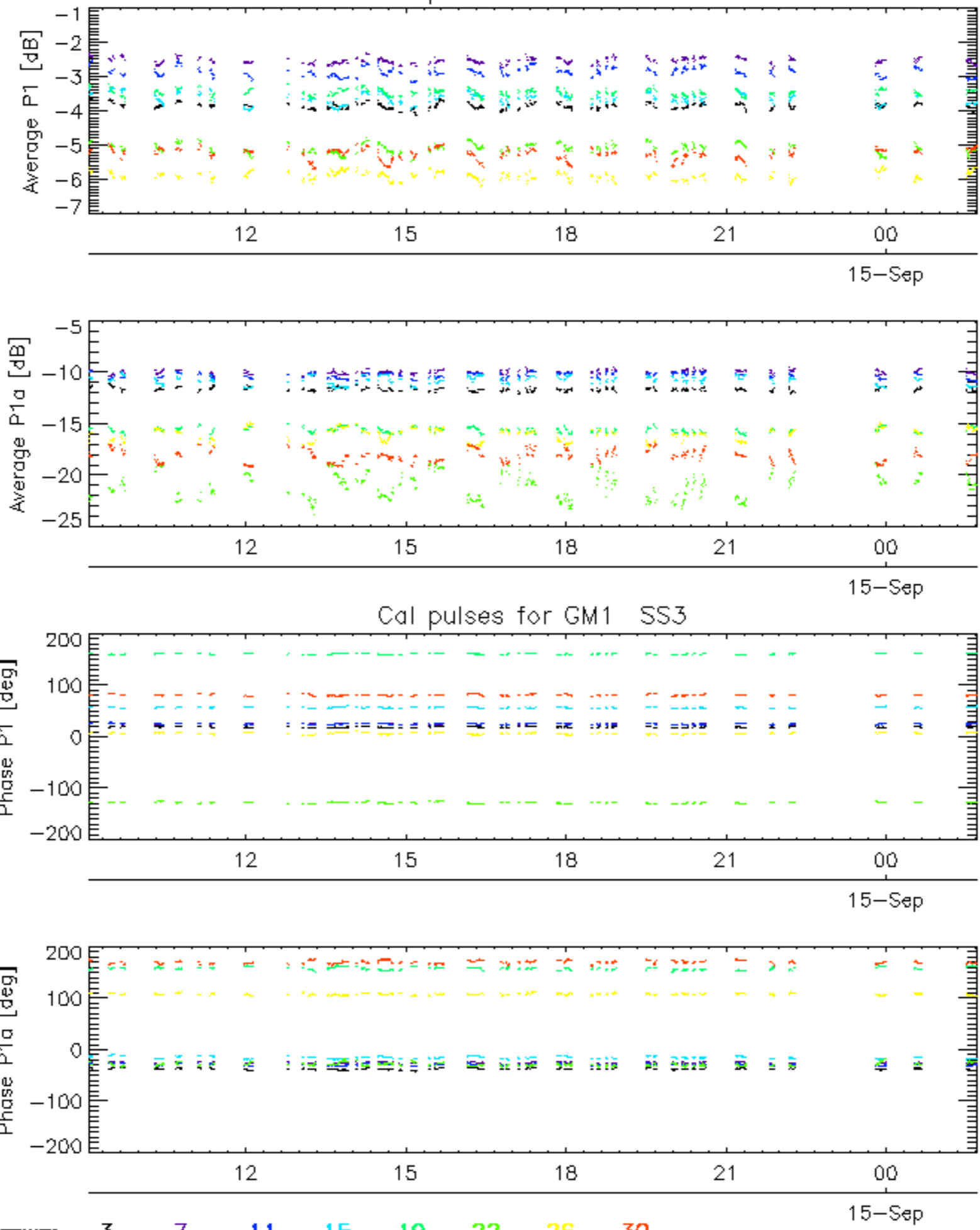
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

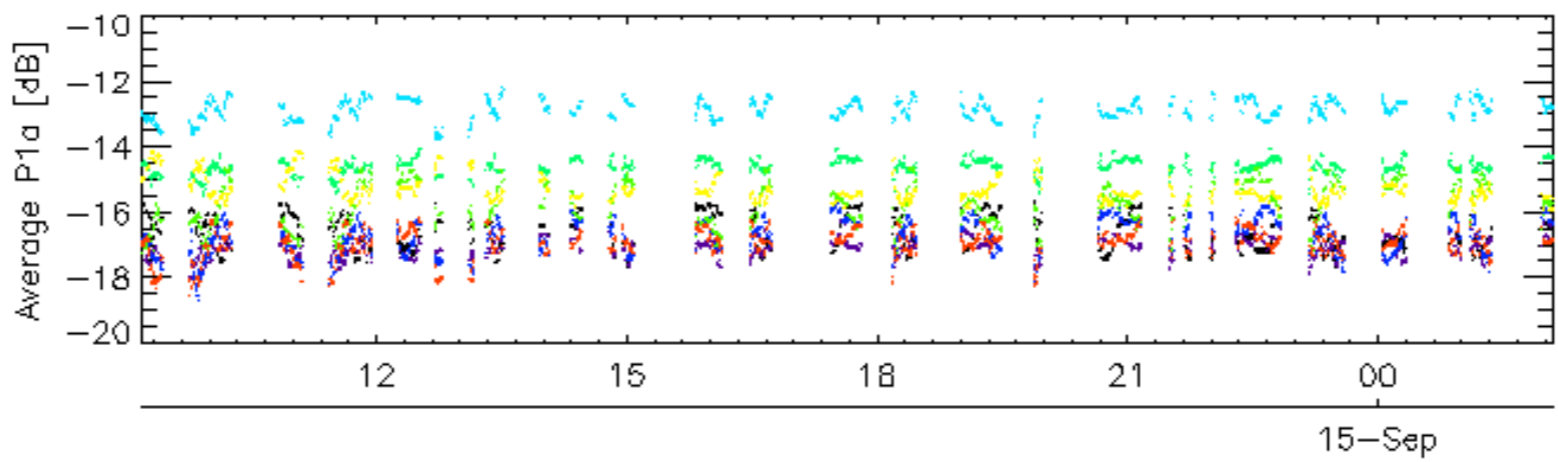
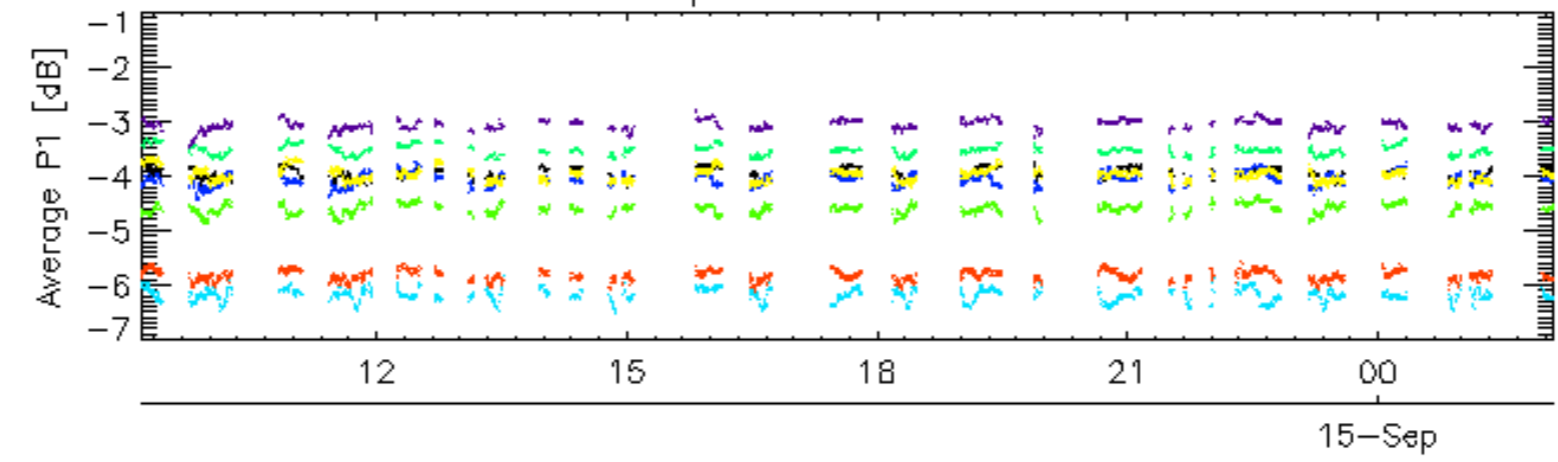
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

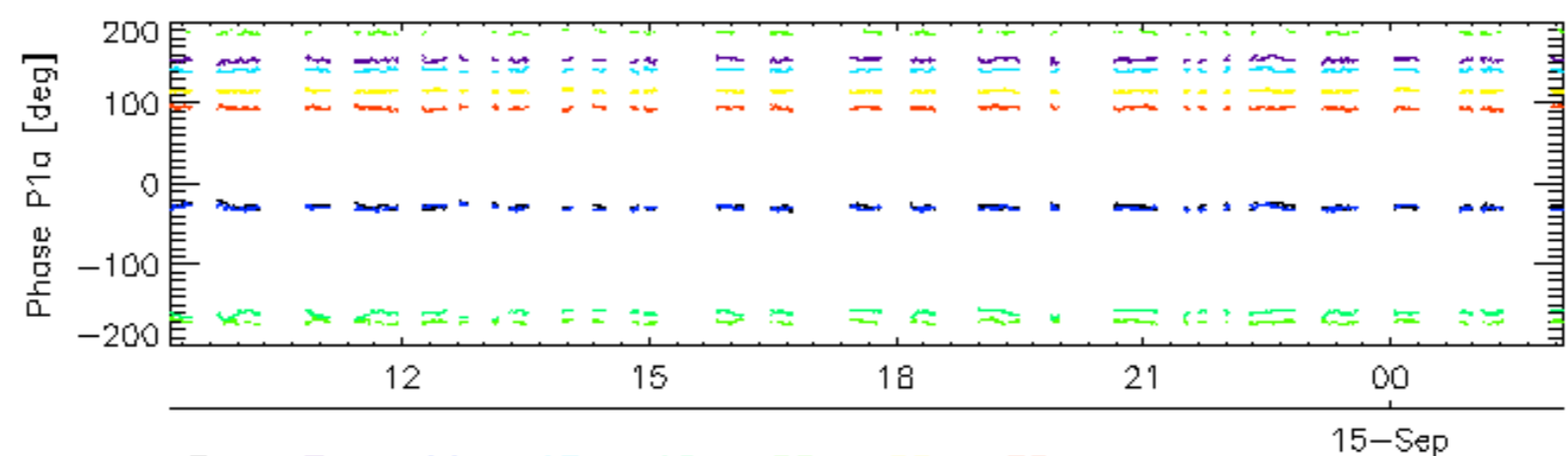
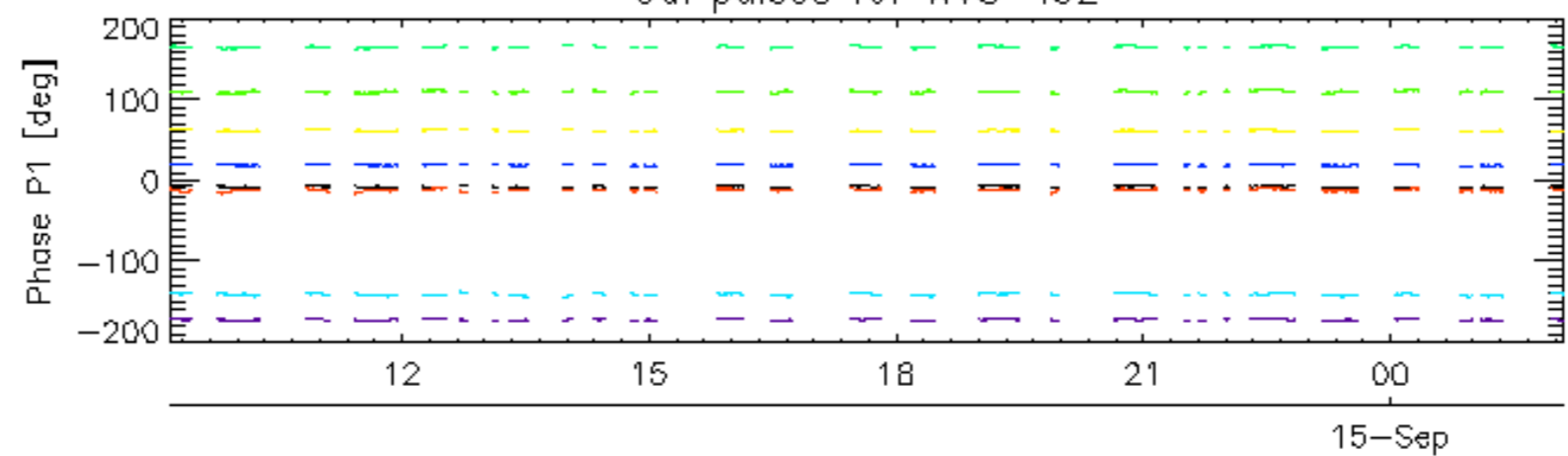
Cal pulses for GM1 SS3



Cal pulses for WVS IS2

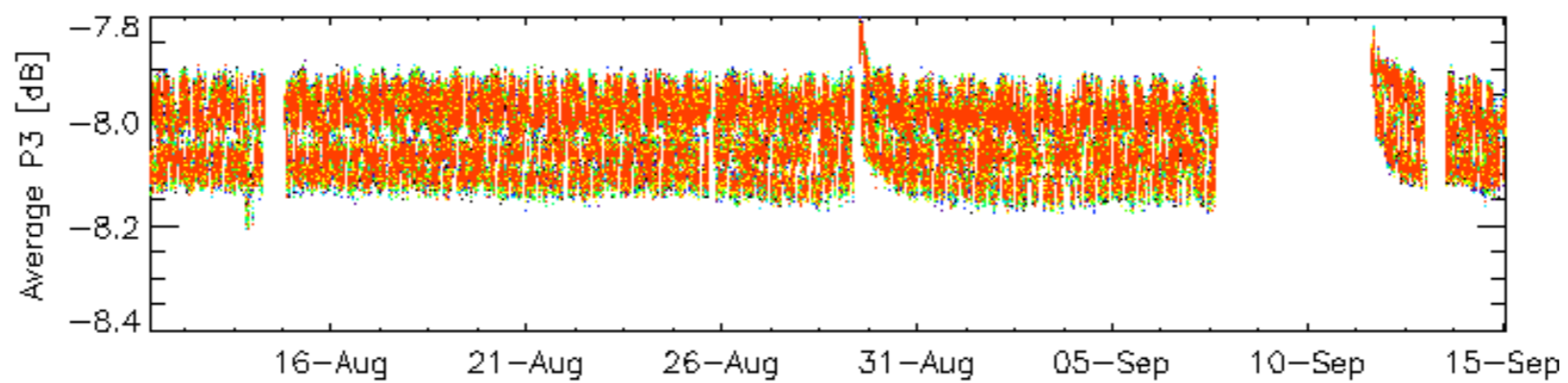
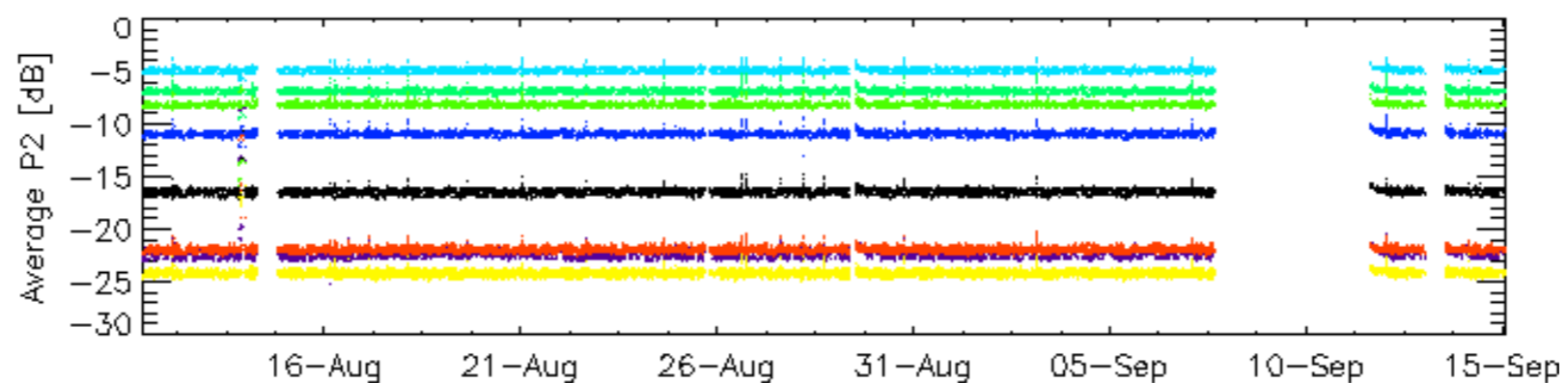
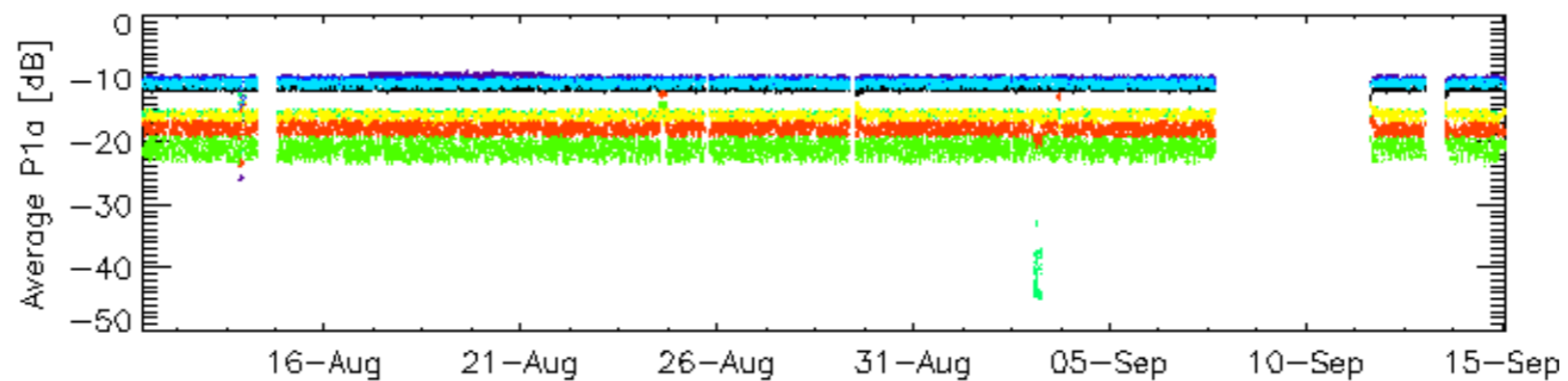
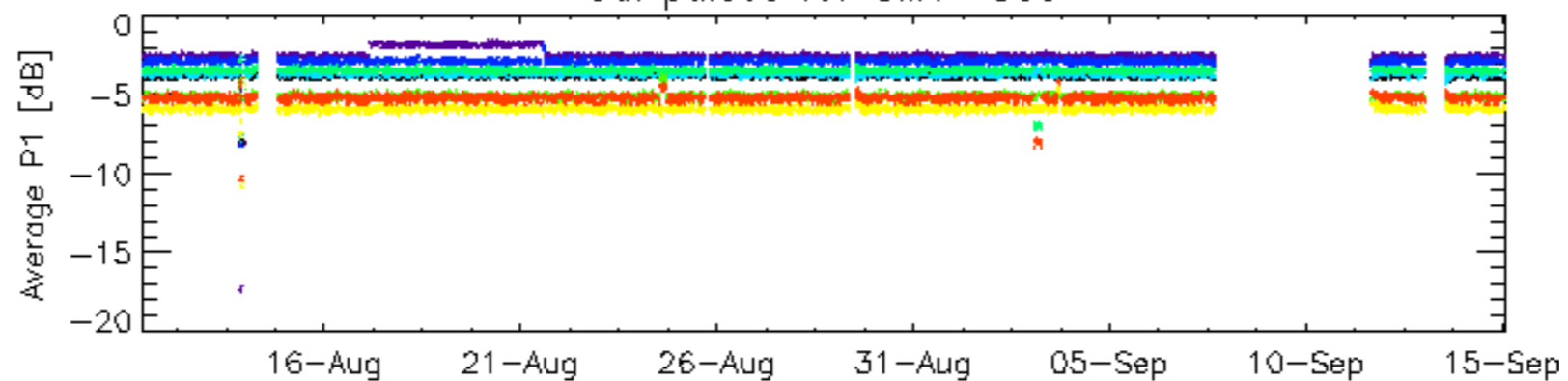


Cal pulses for WVS IS2



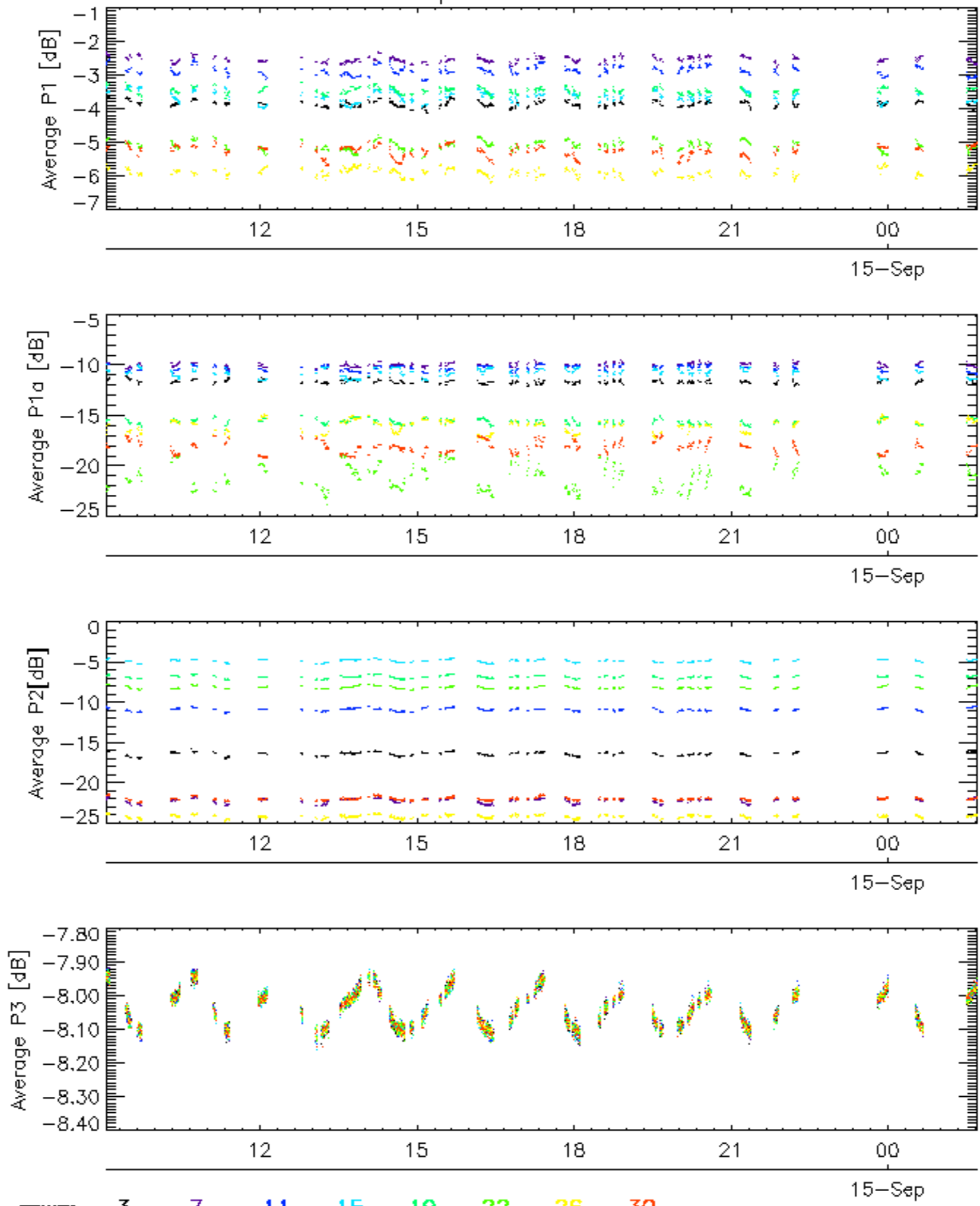
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

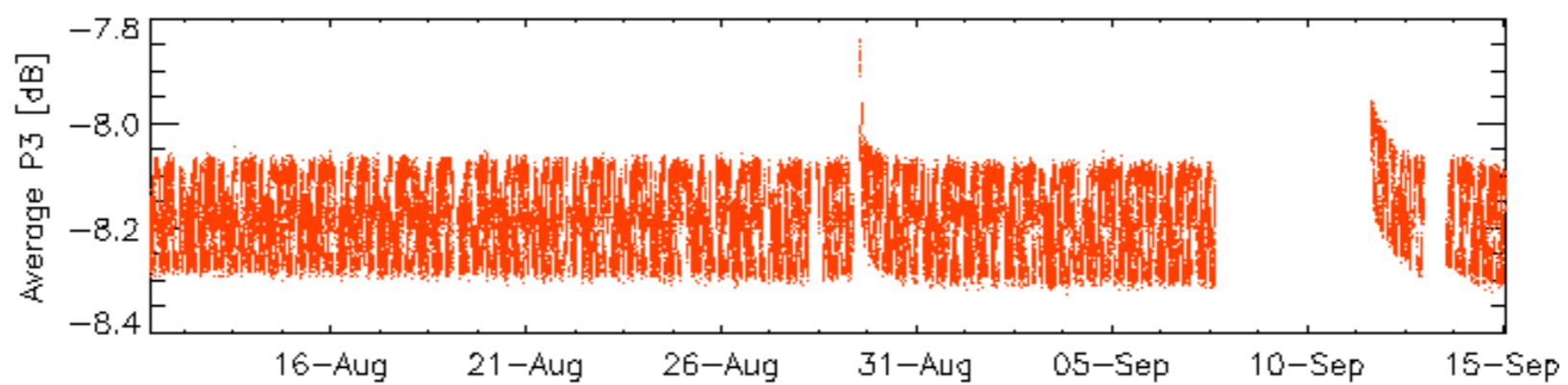
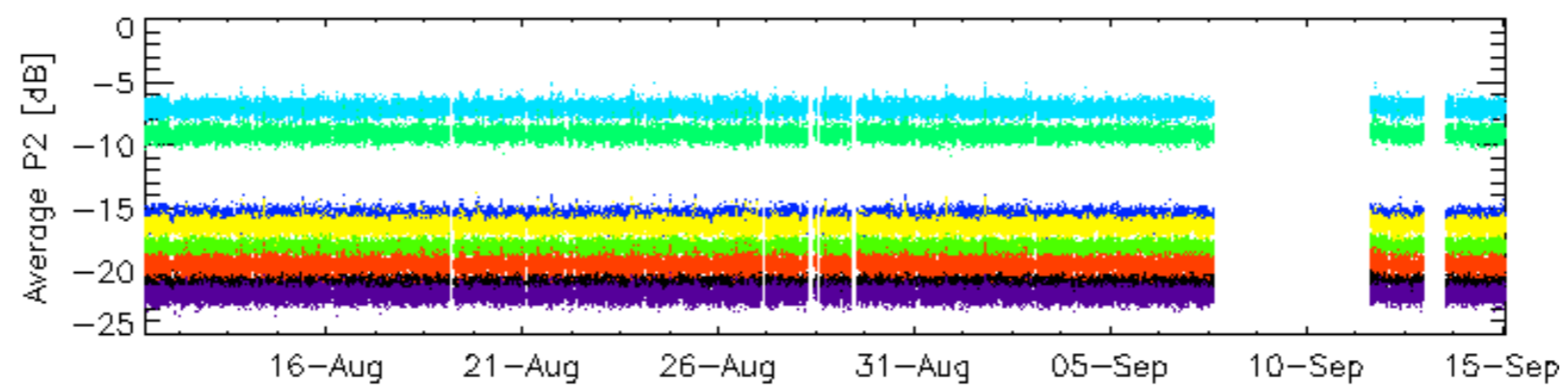
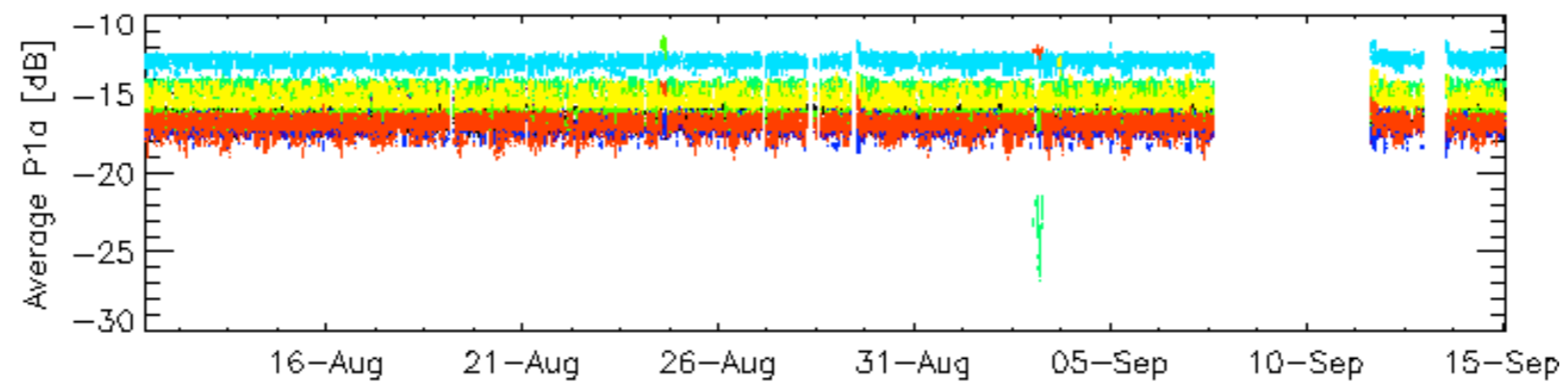
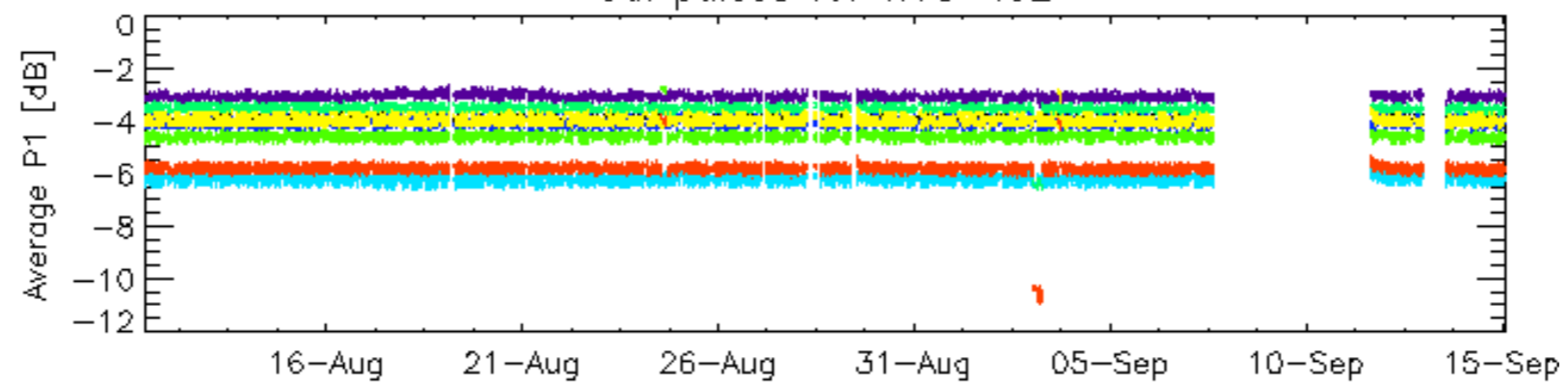


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

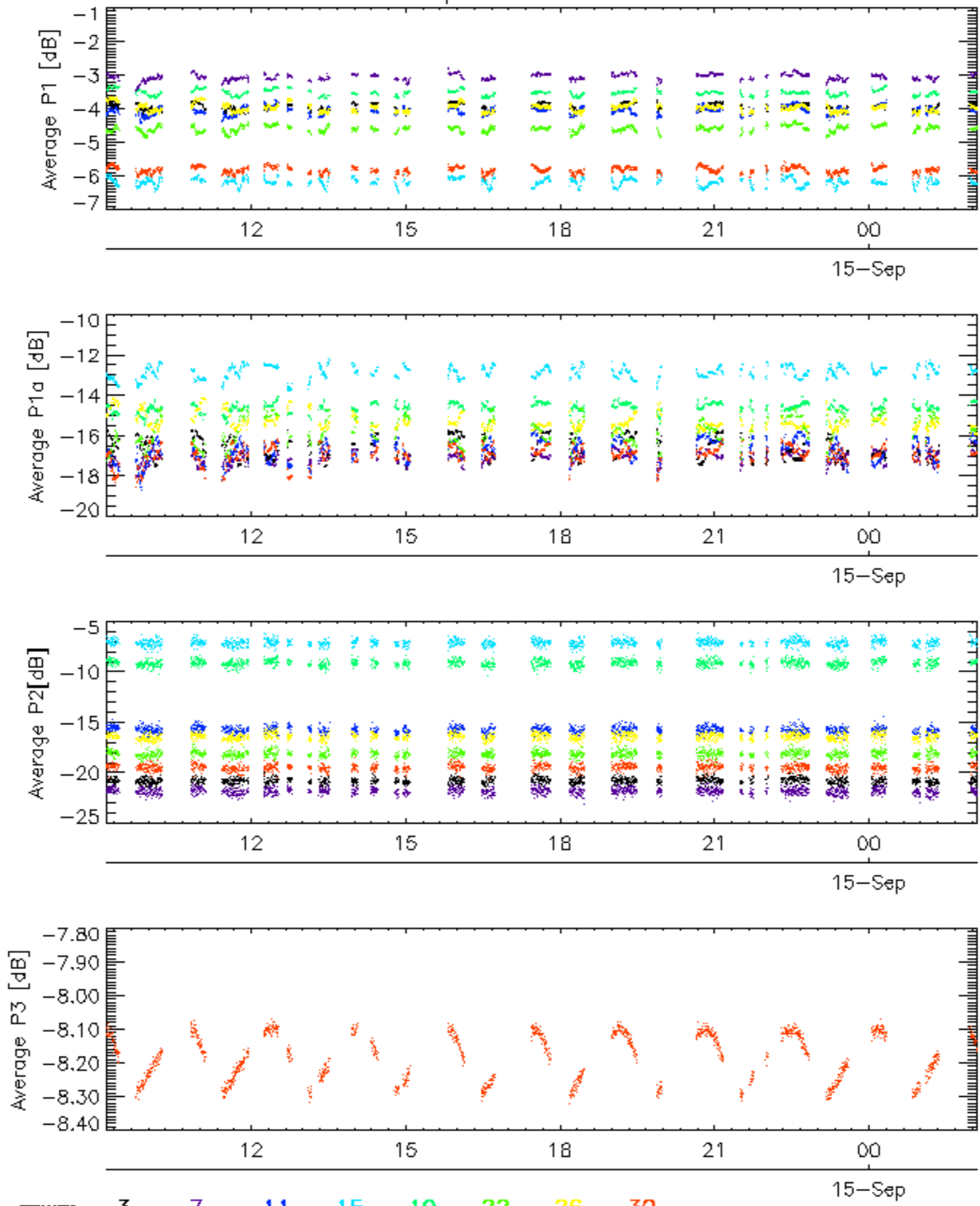


Cal pulses for WVS IS2



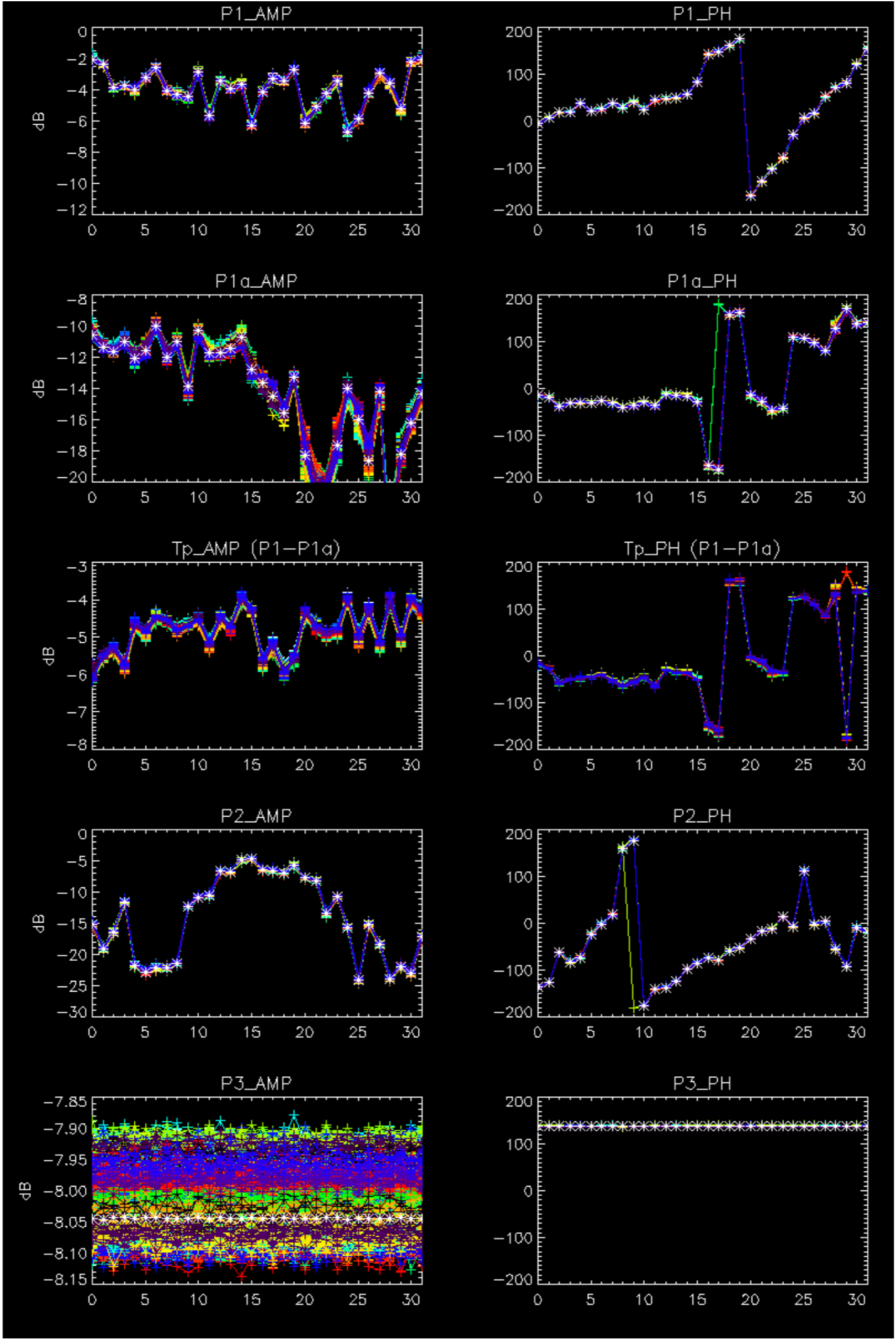
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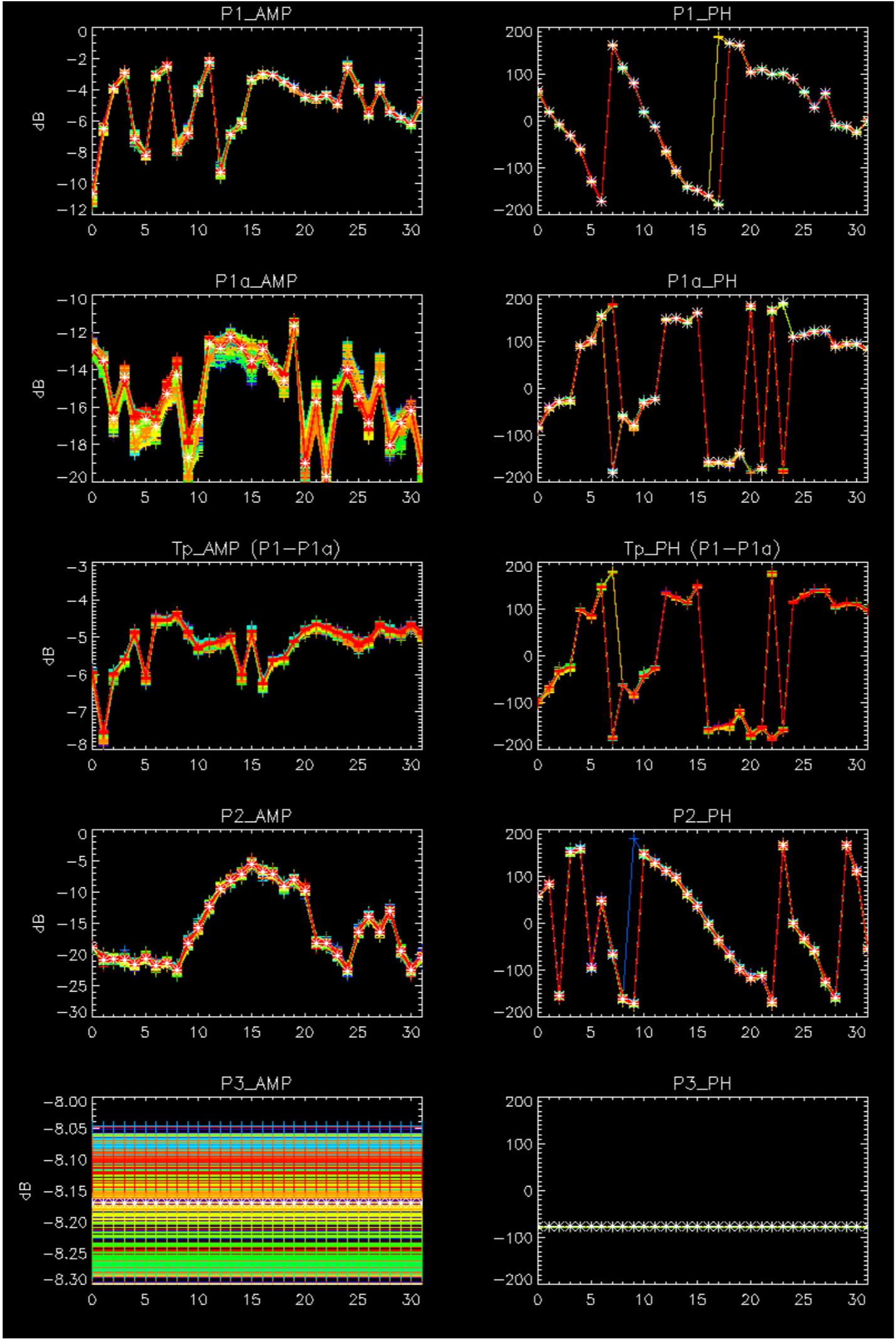
Cal pulses for WVS IS2



No anomalies observed on available browse products

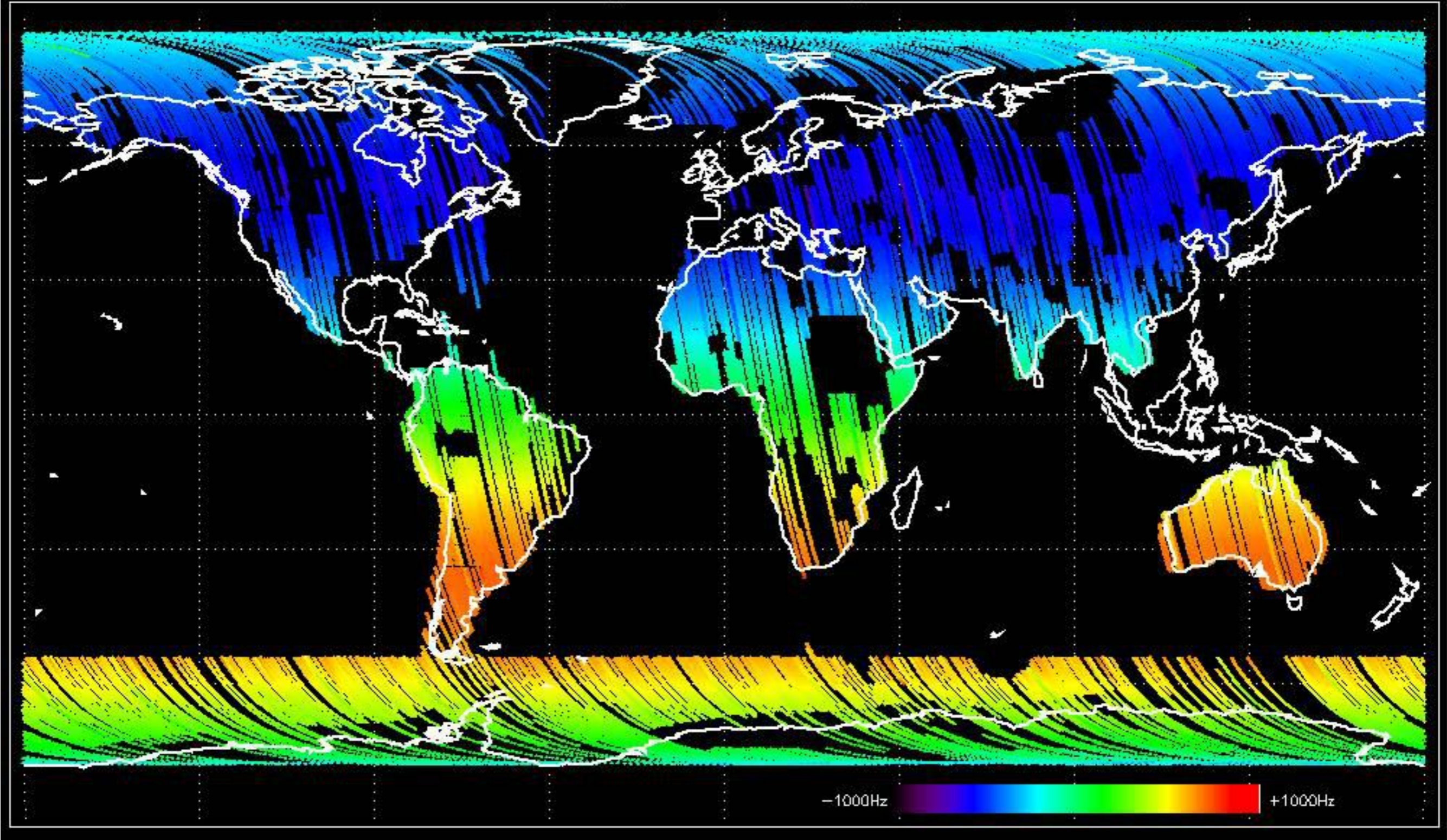
No anomalies observed.



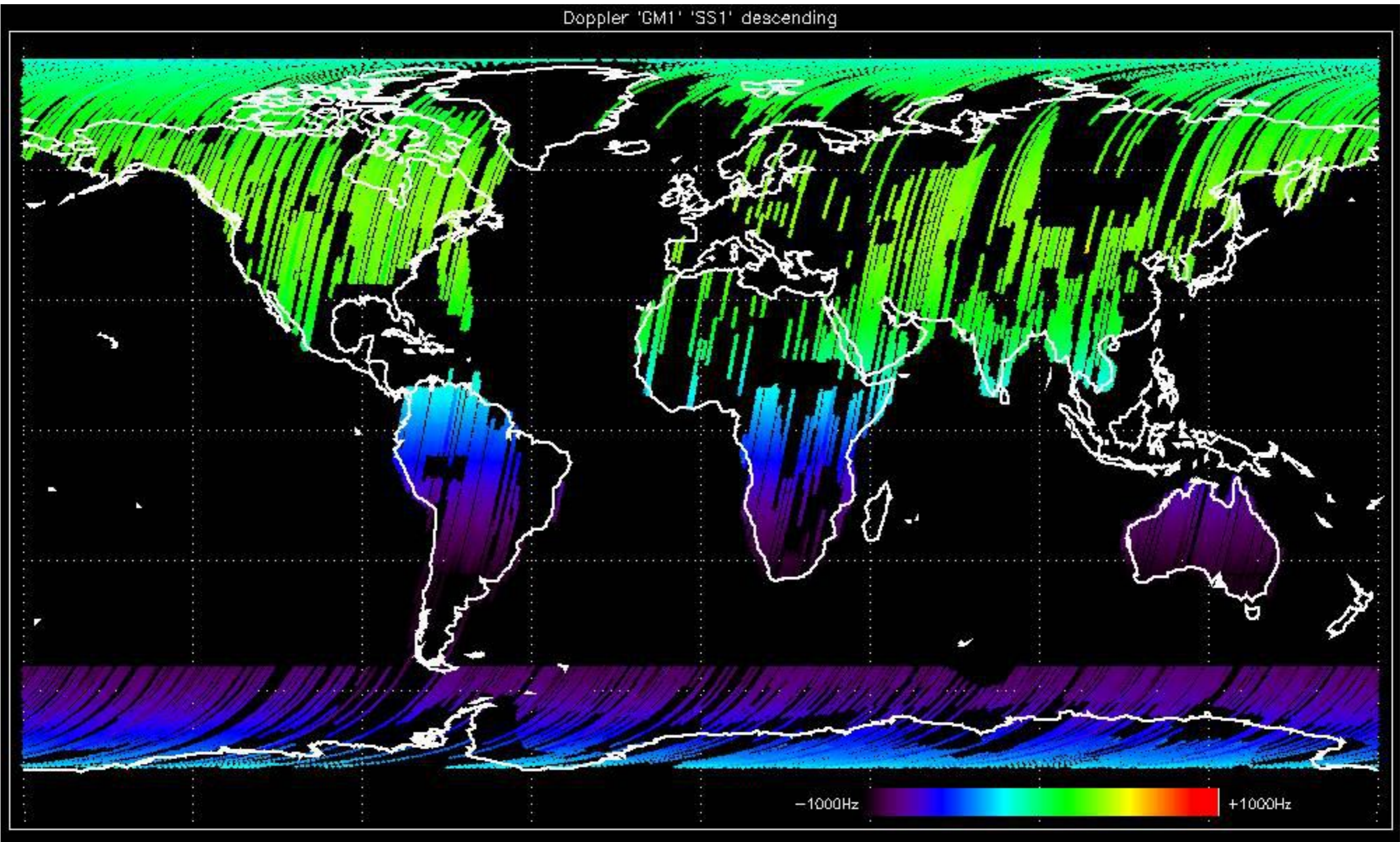


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

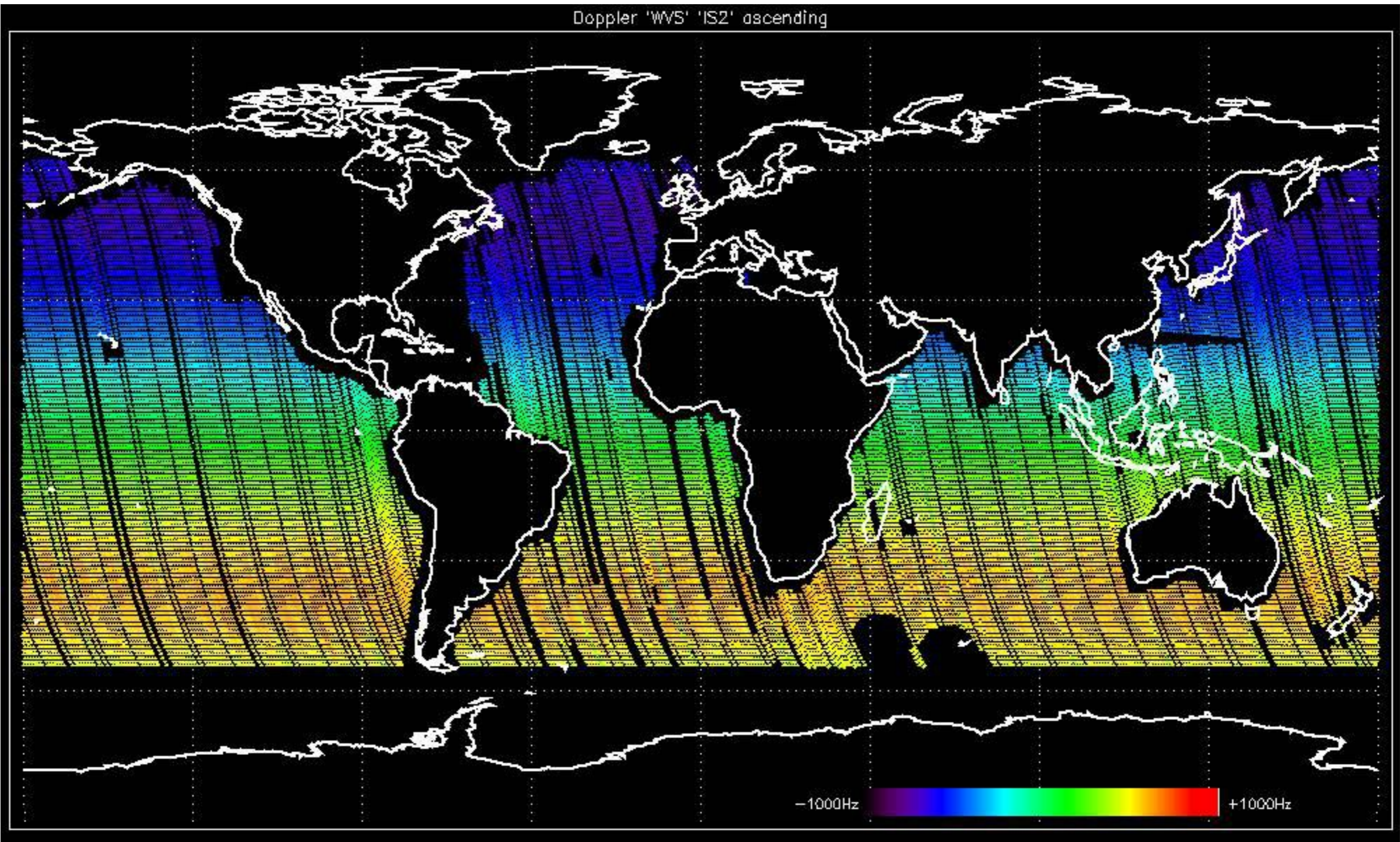
Doppler 'GM1' 'SS1' ascending



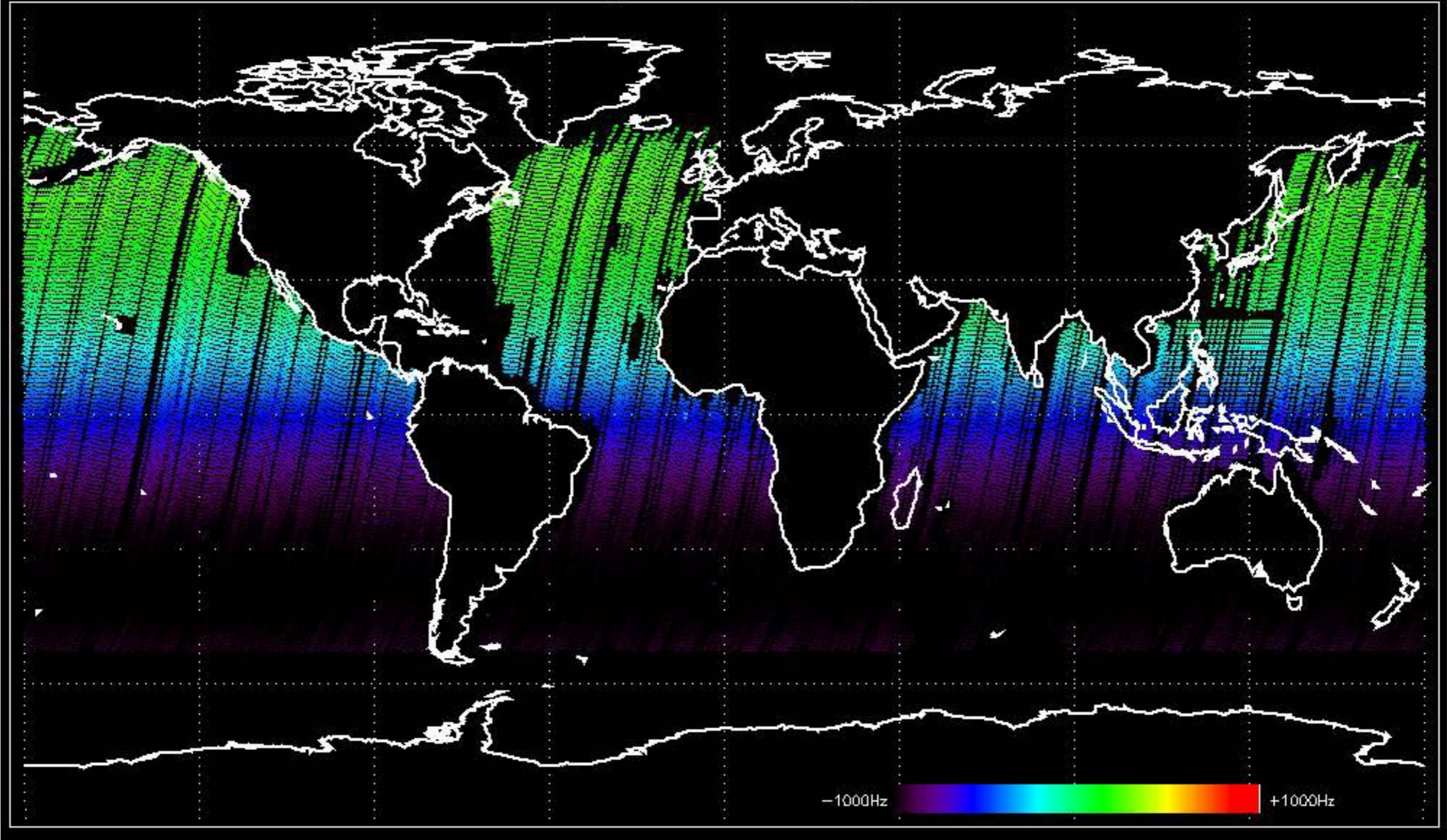
Doppler 'GM1' 'SS1' descending



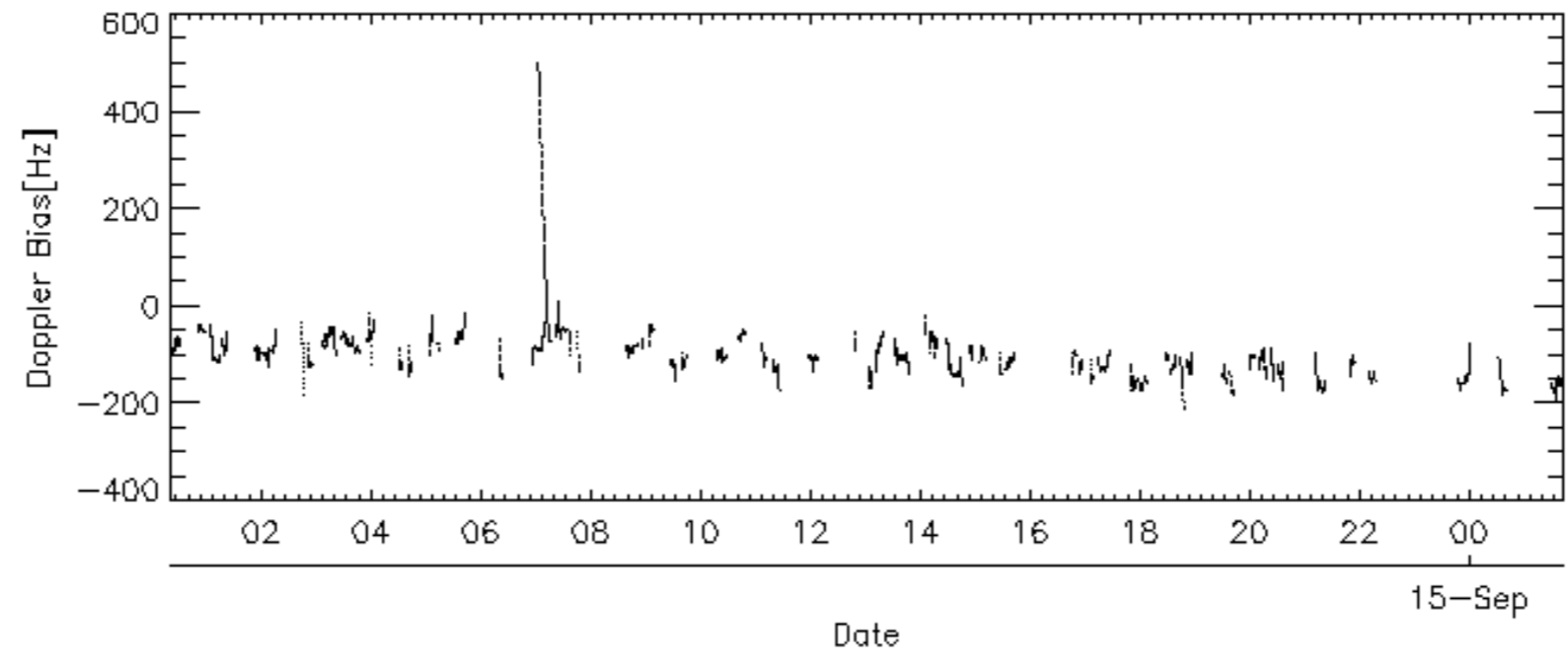
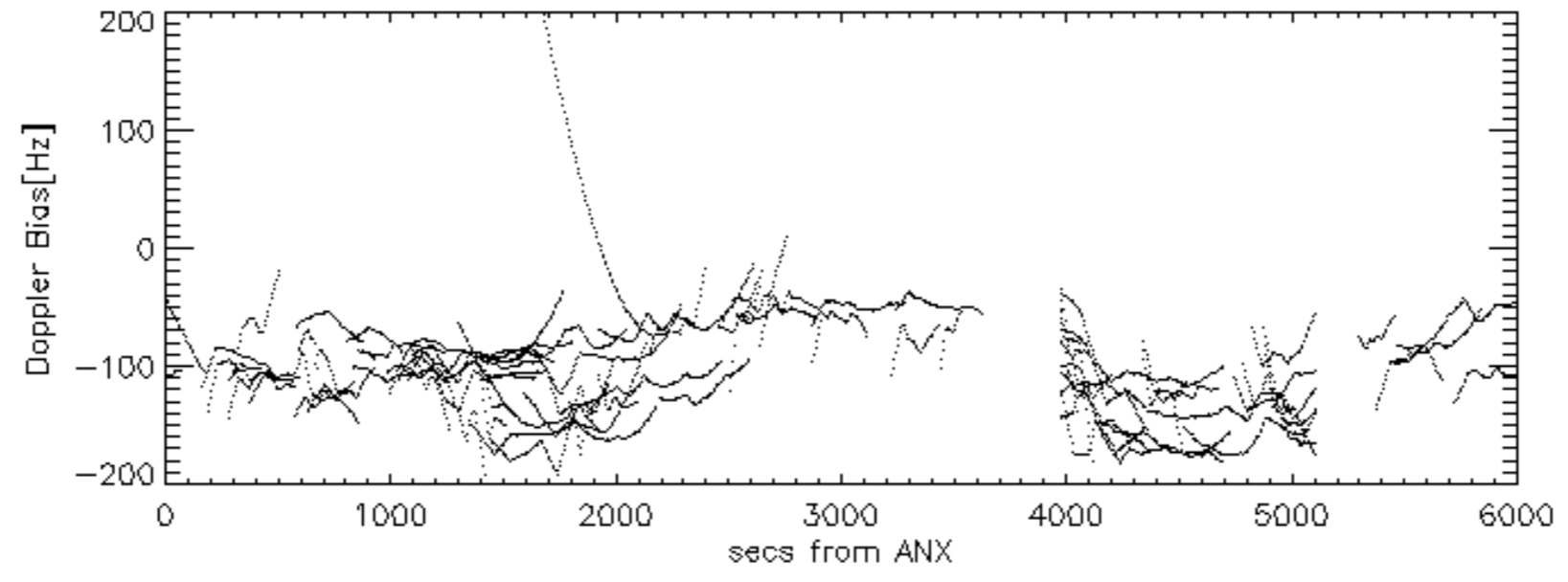
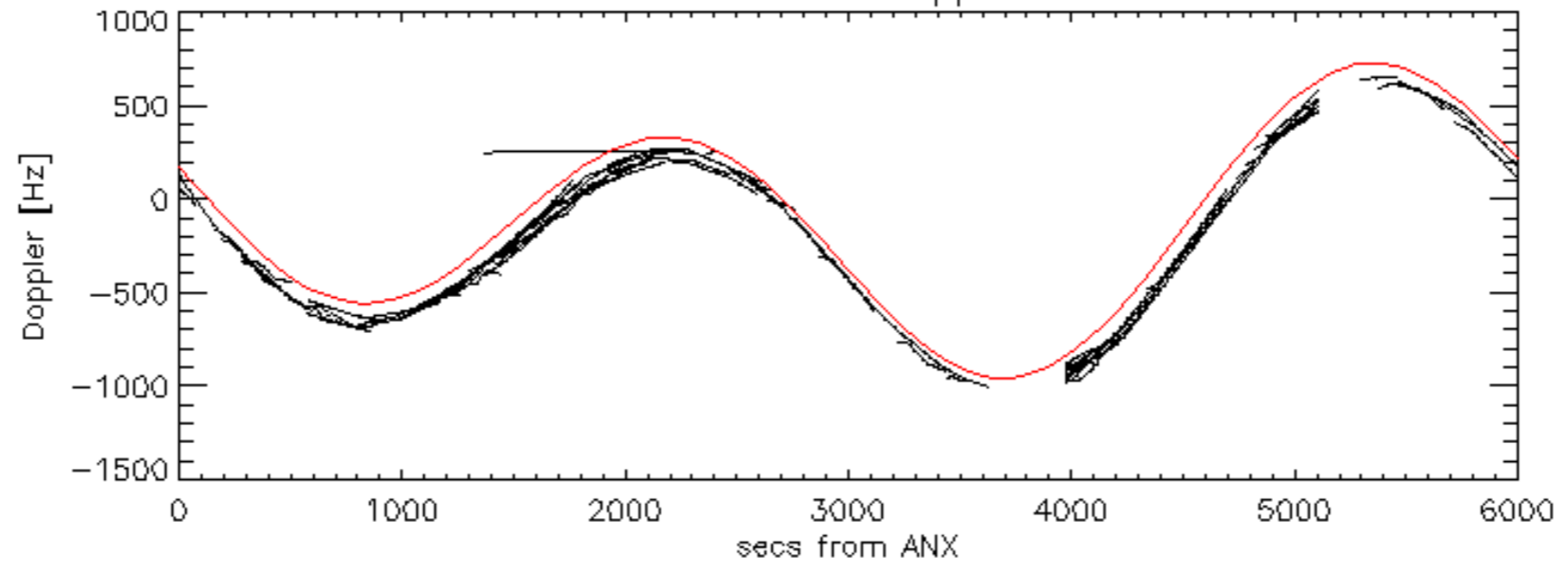
Doppler 'WVS' 'IS2' ascending

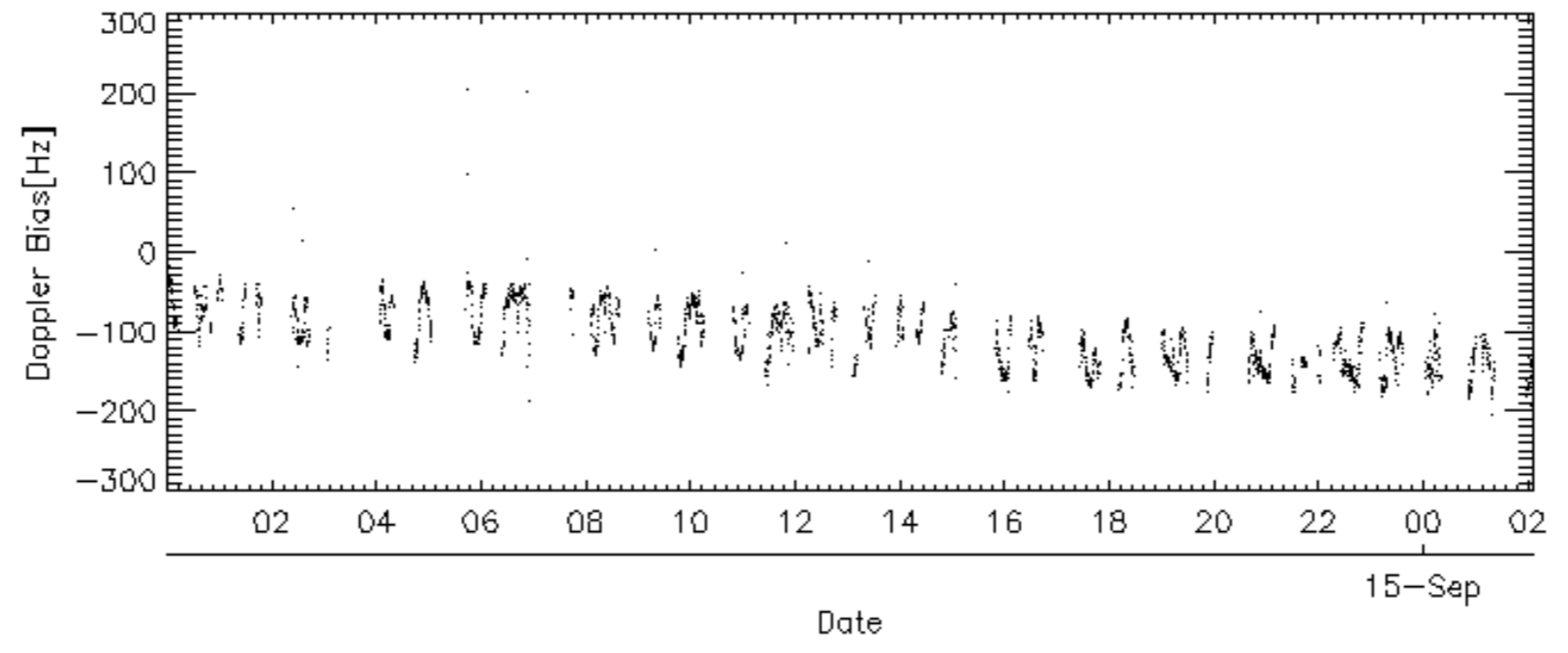
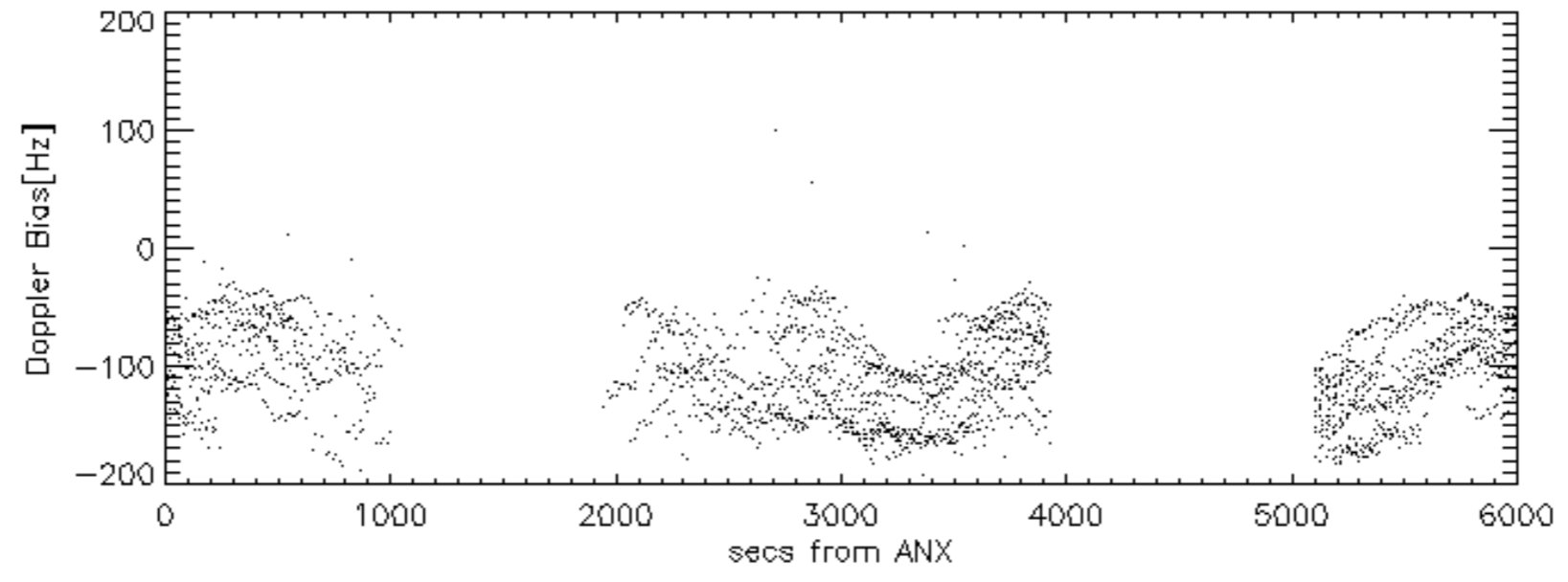
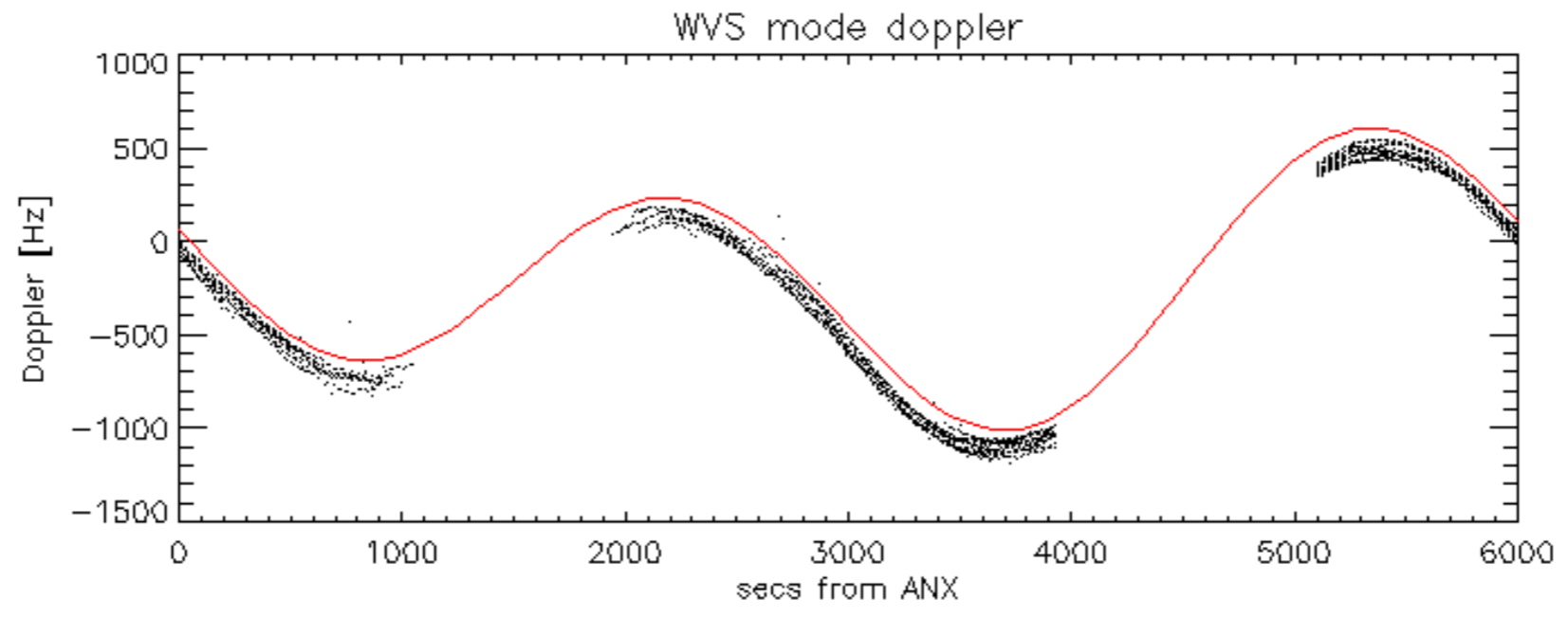


Doppler 'WVS' 'IS2' descending

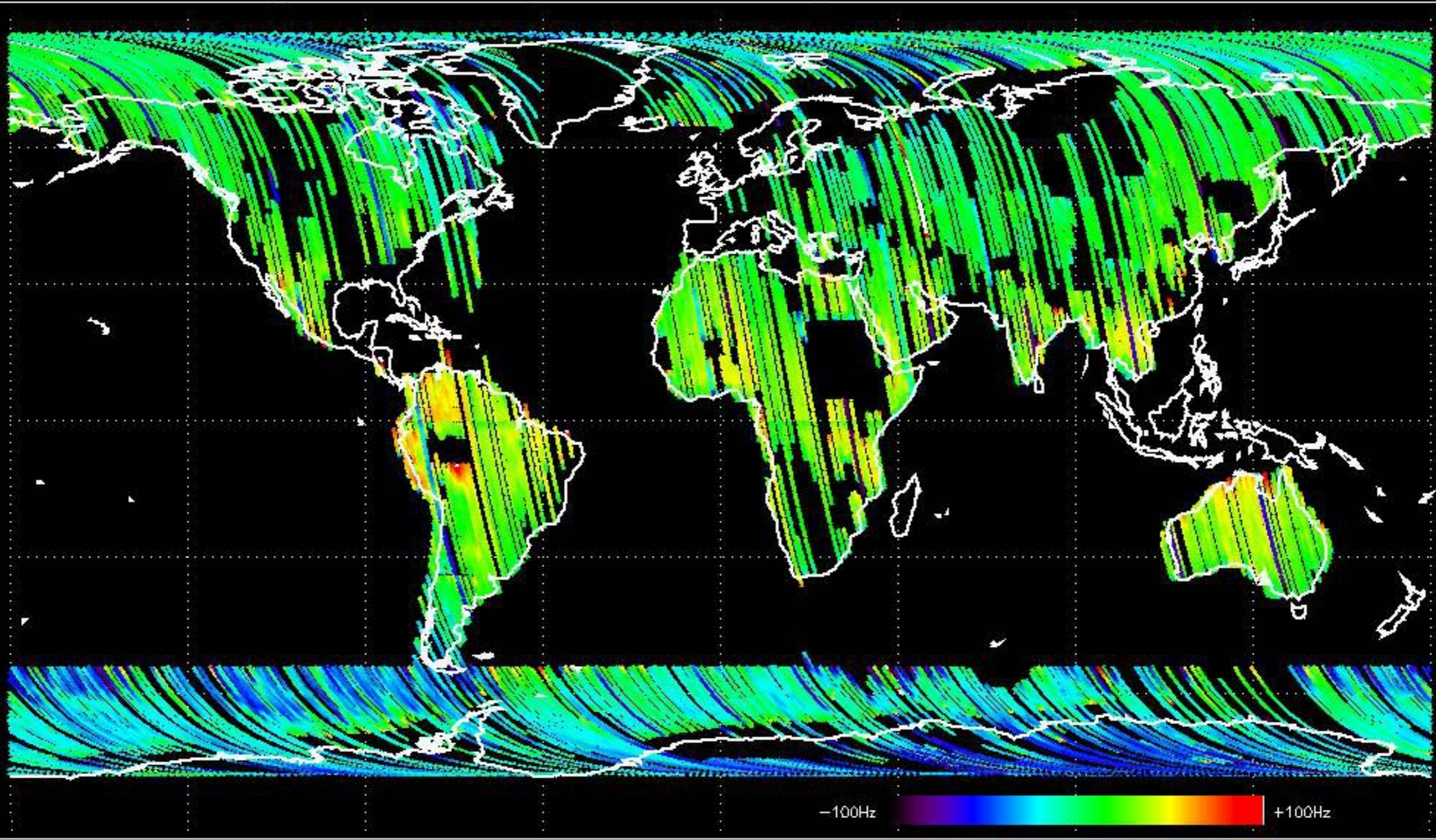


GM1 mode doppler

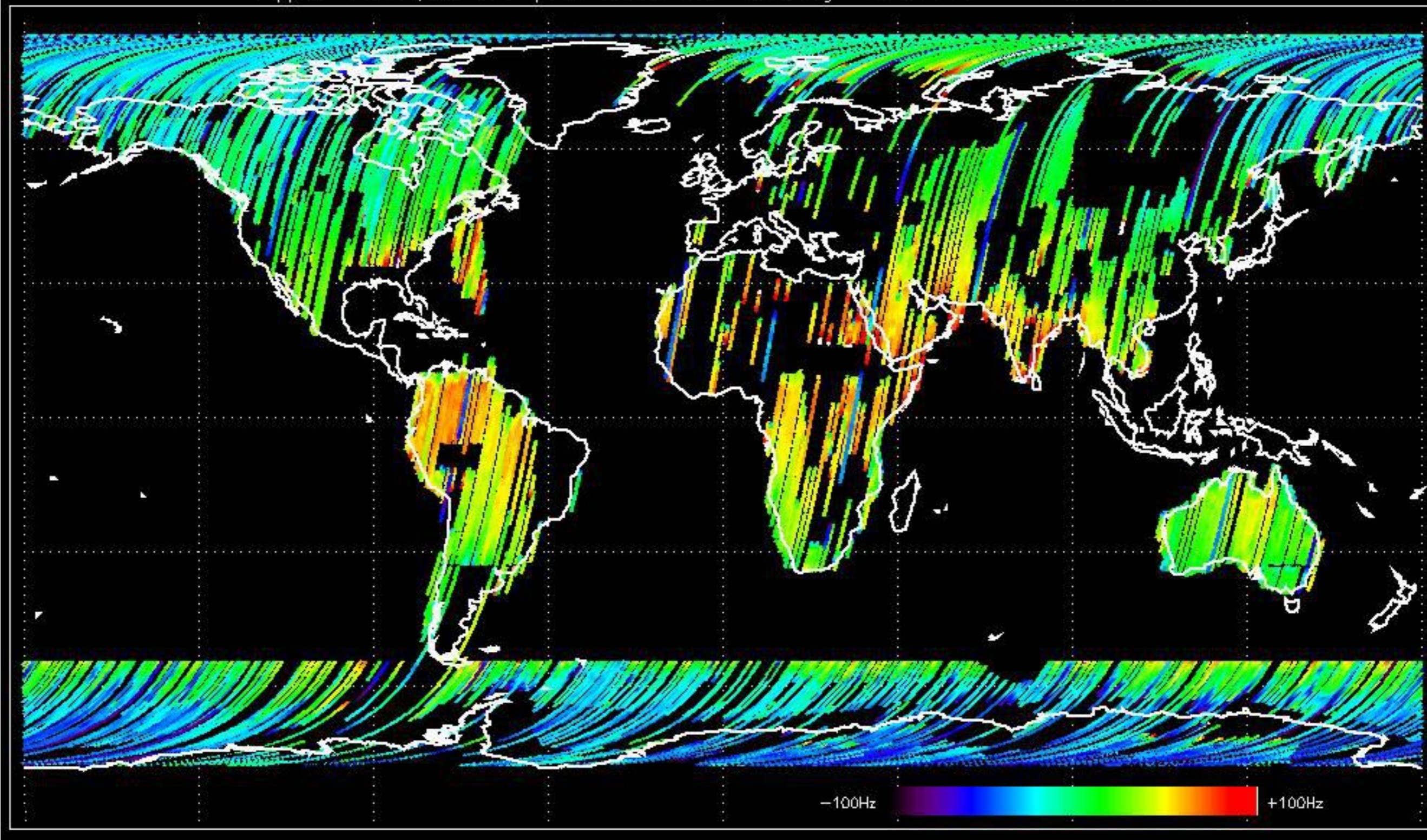




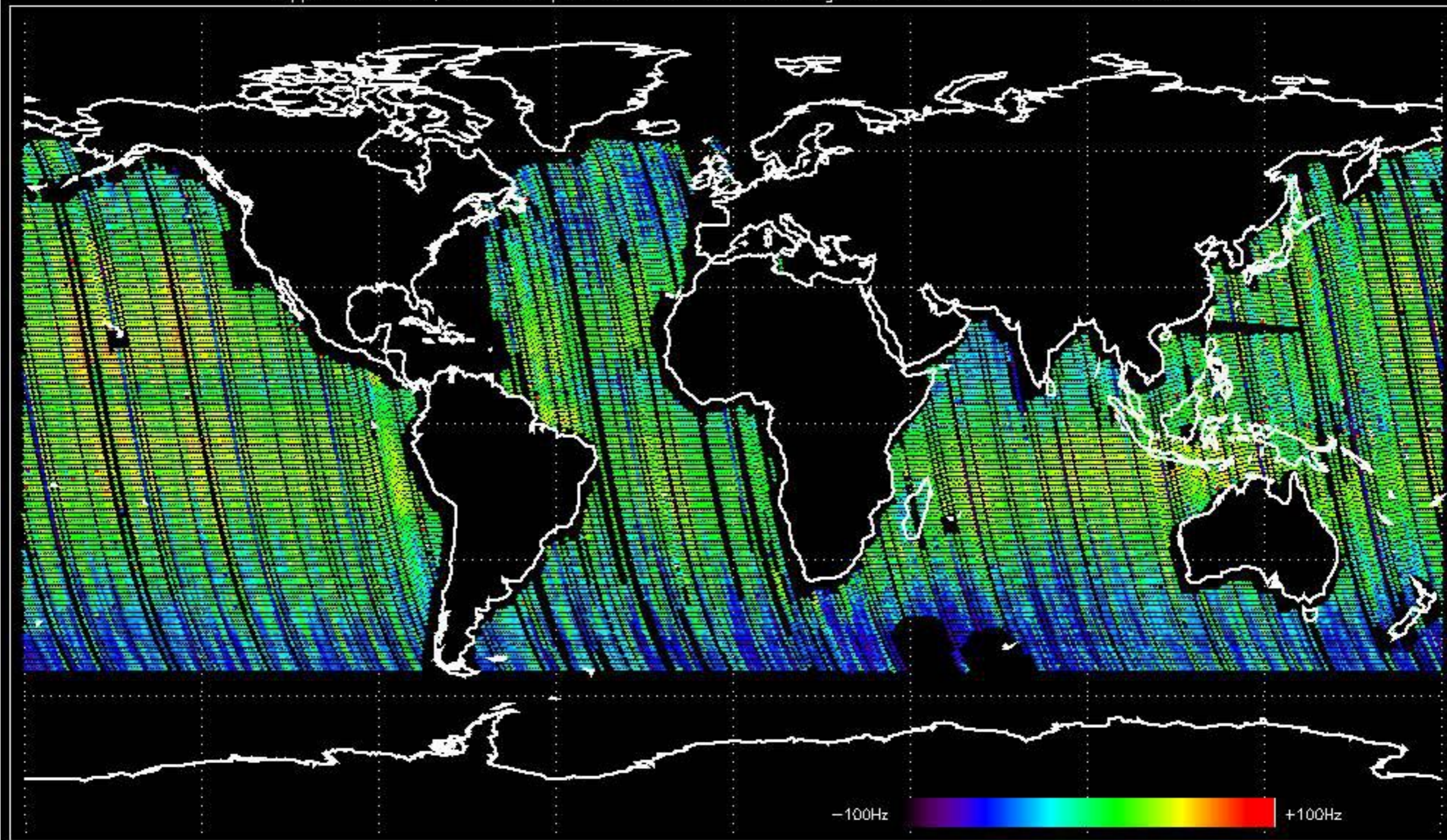
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.045438 Hz



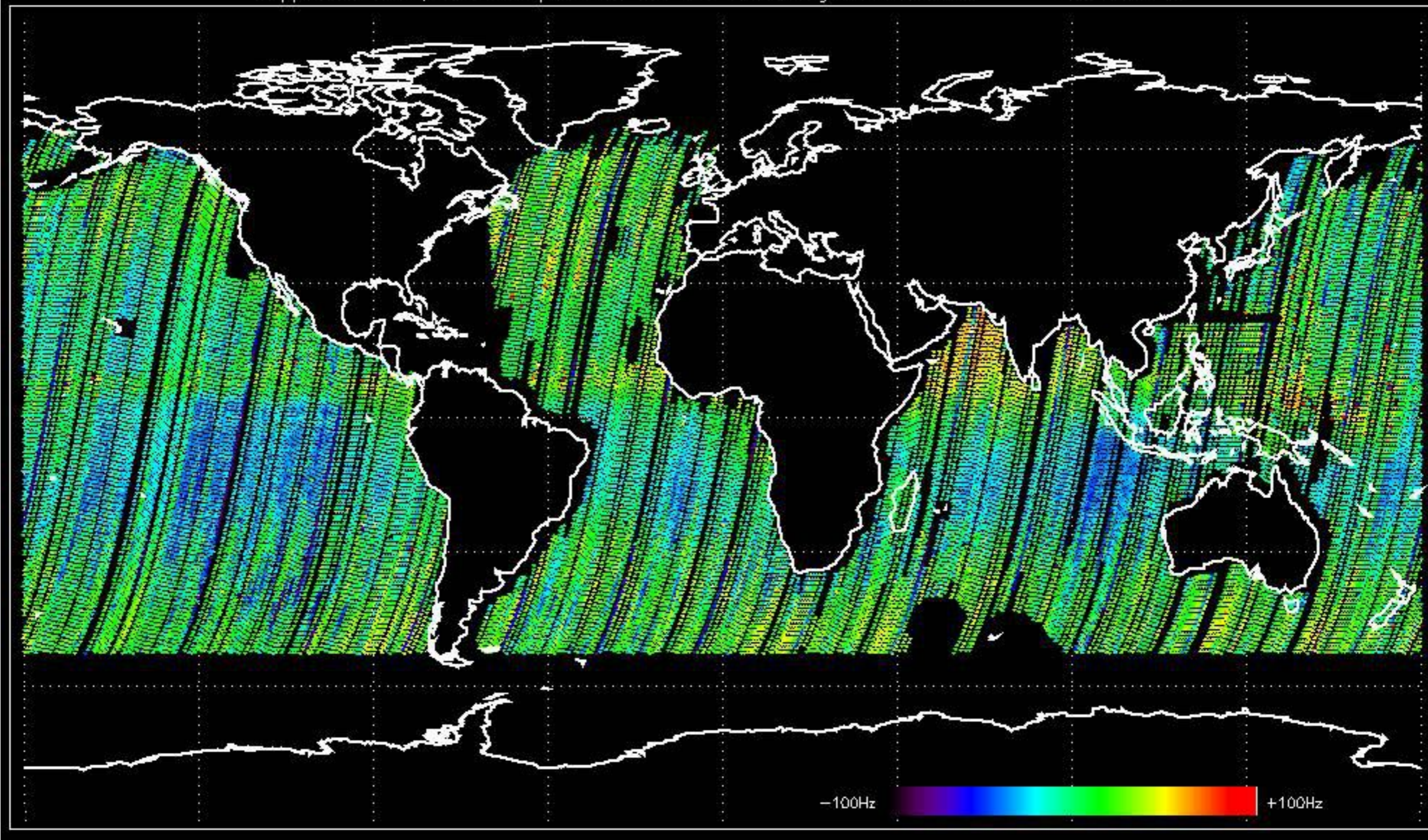
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.615272 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.719838 Hz

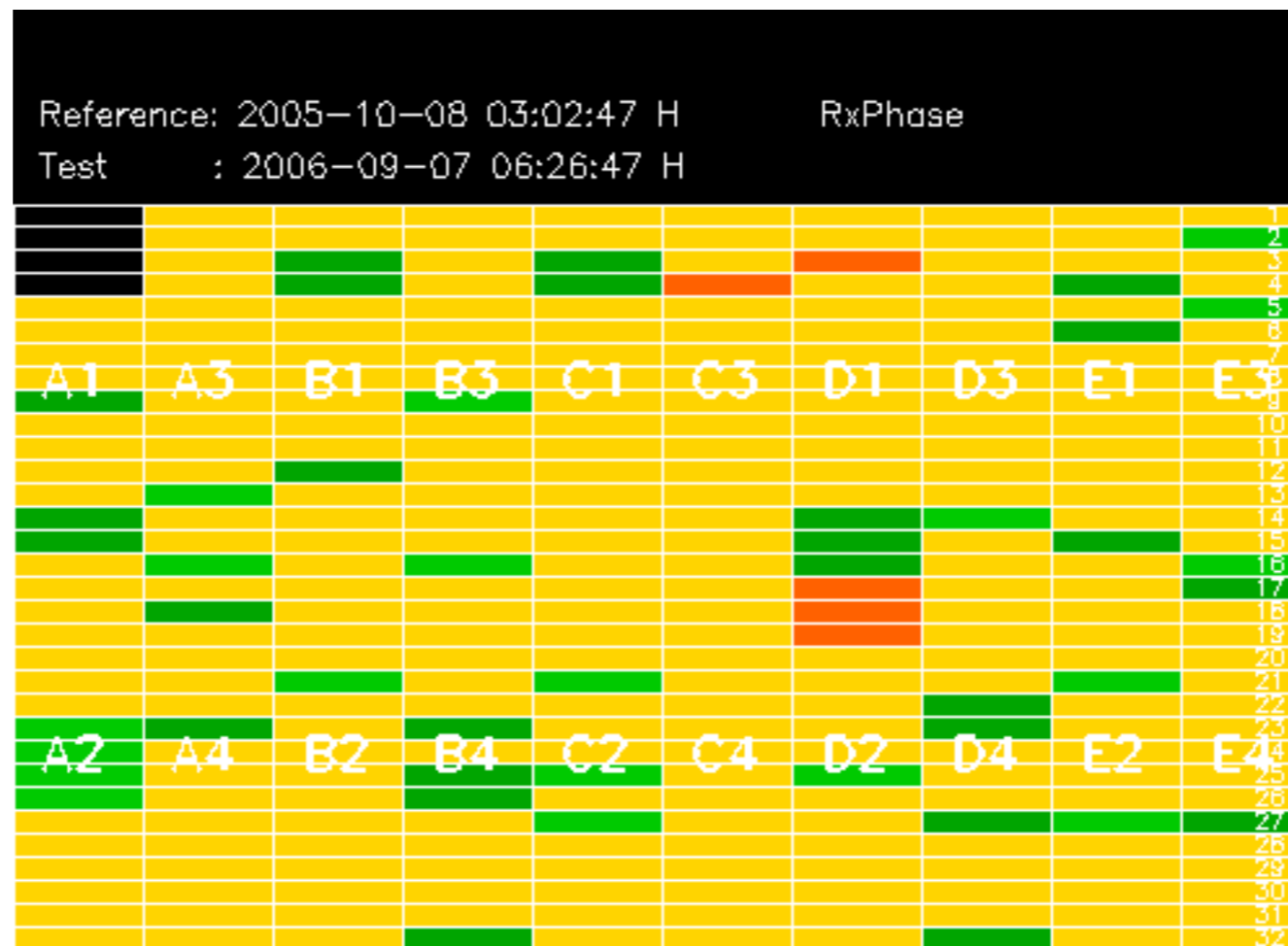


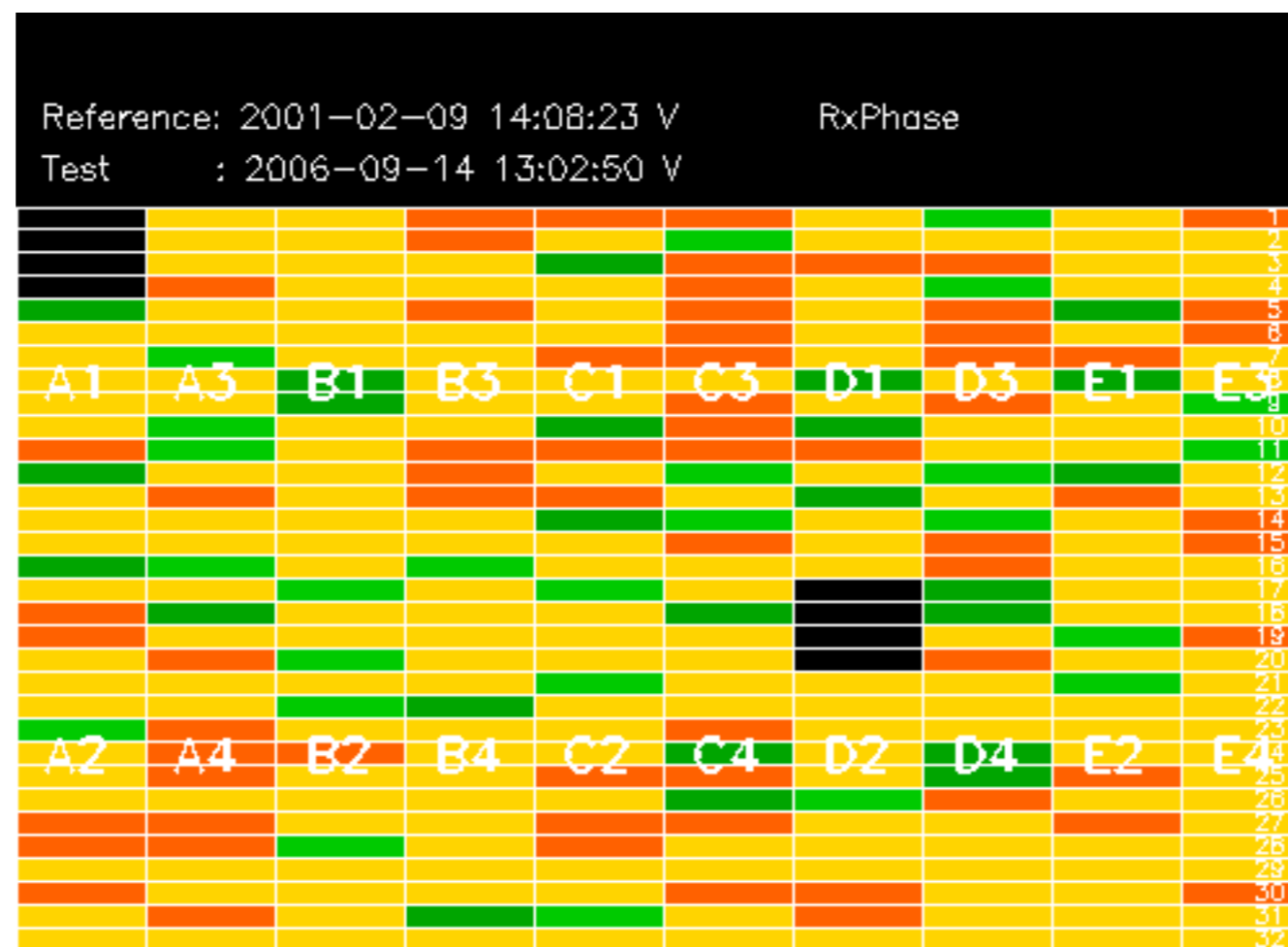
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -12.590173 Hz

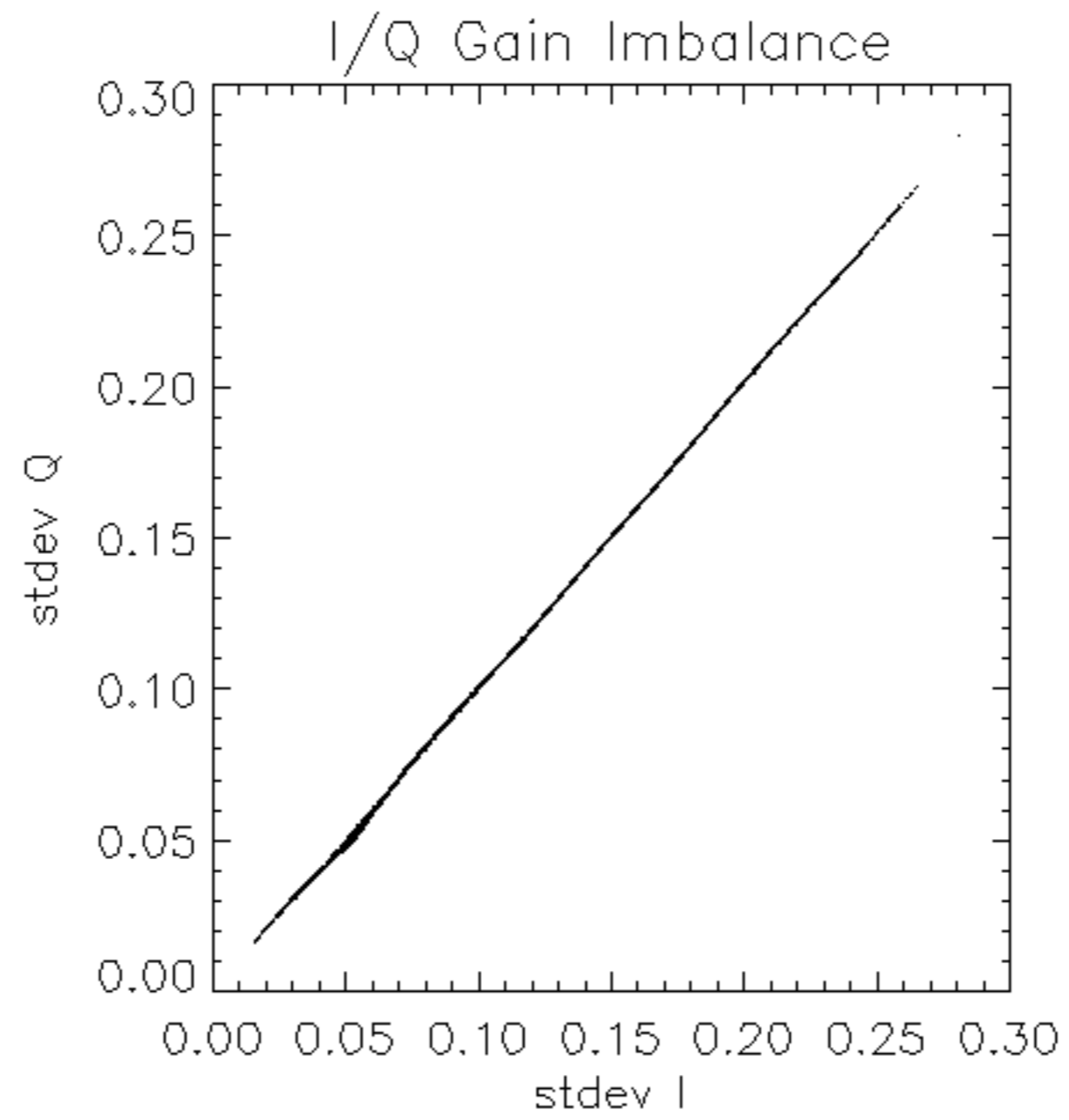


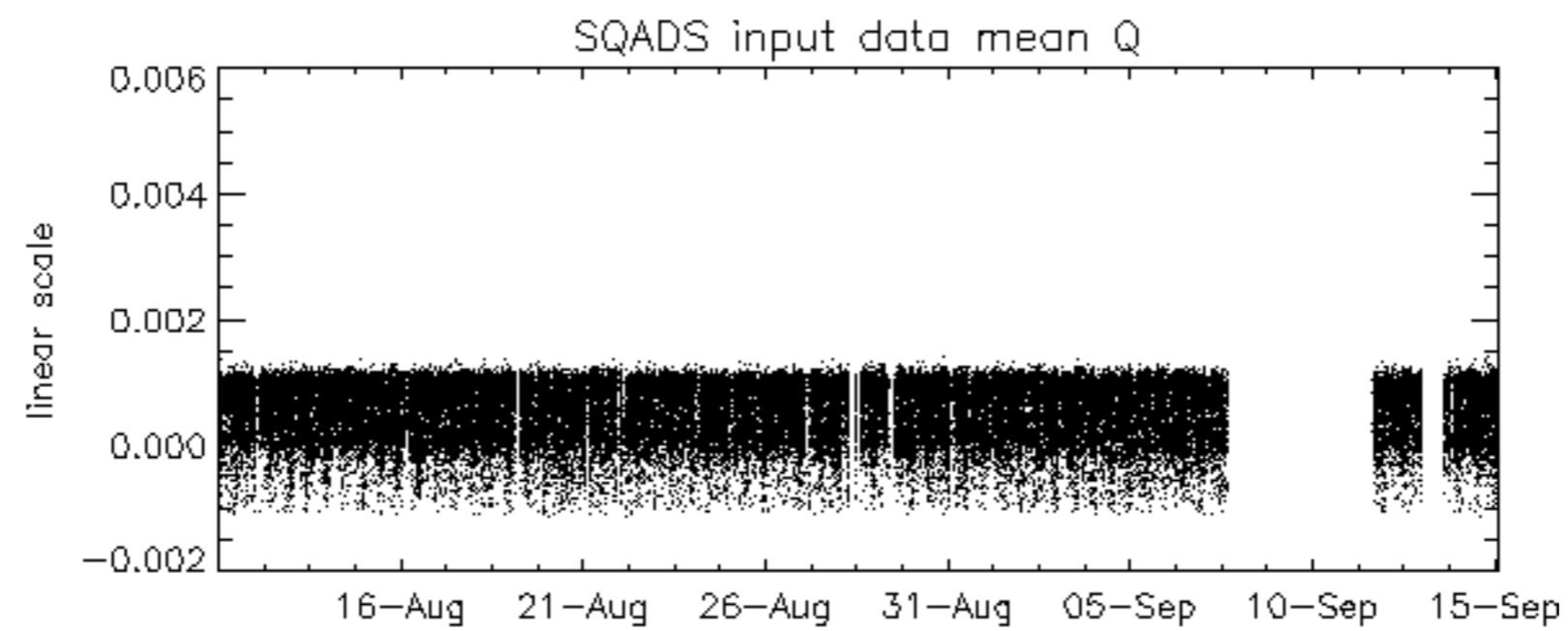
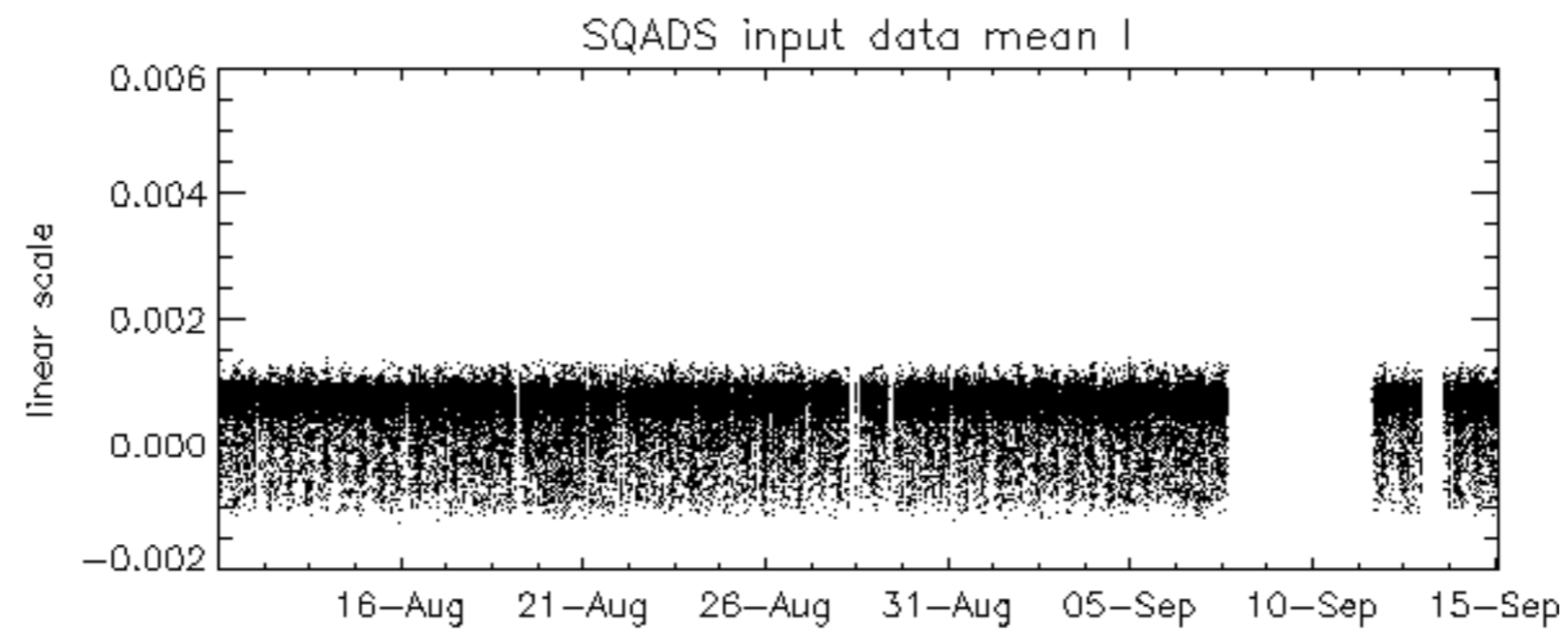
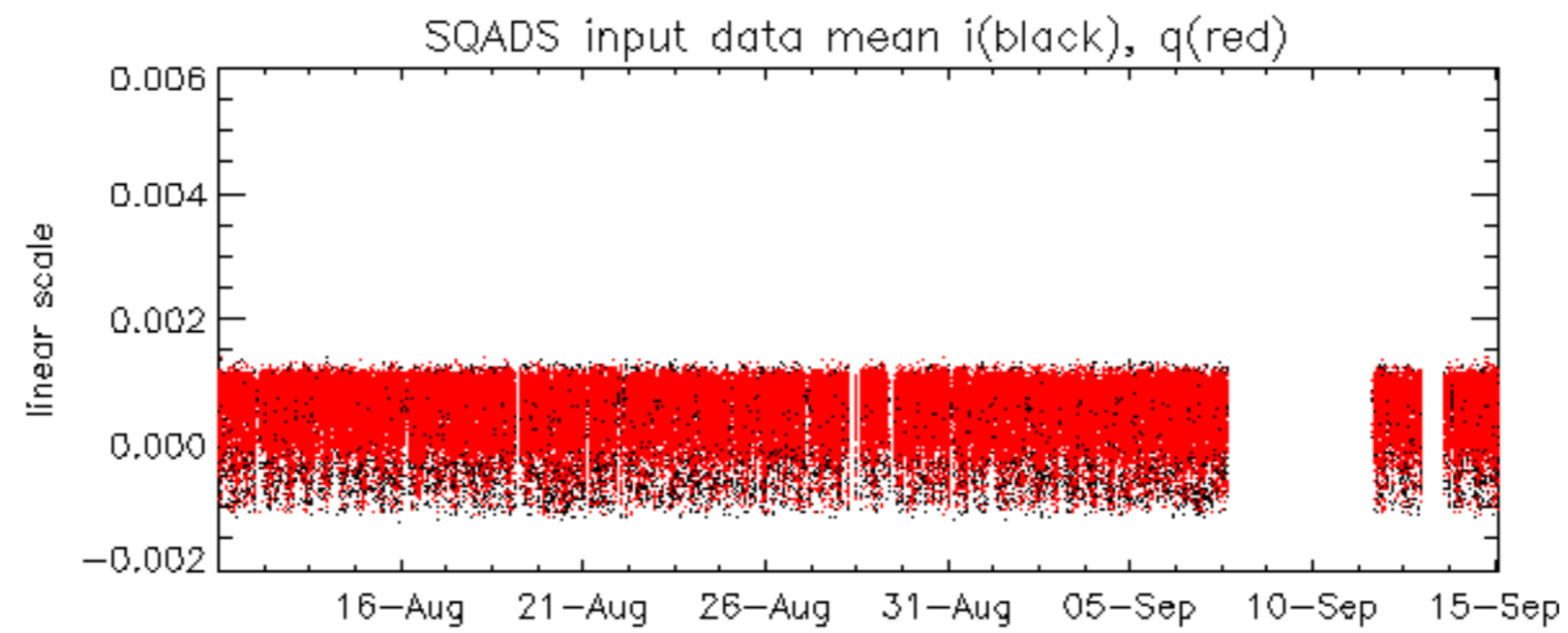
No anomalies observed on available MS products:

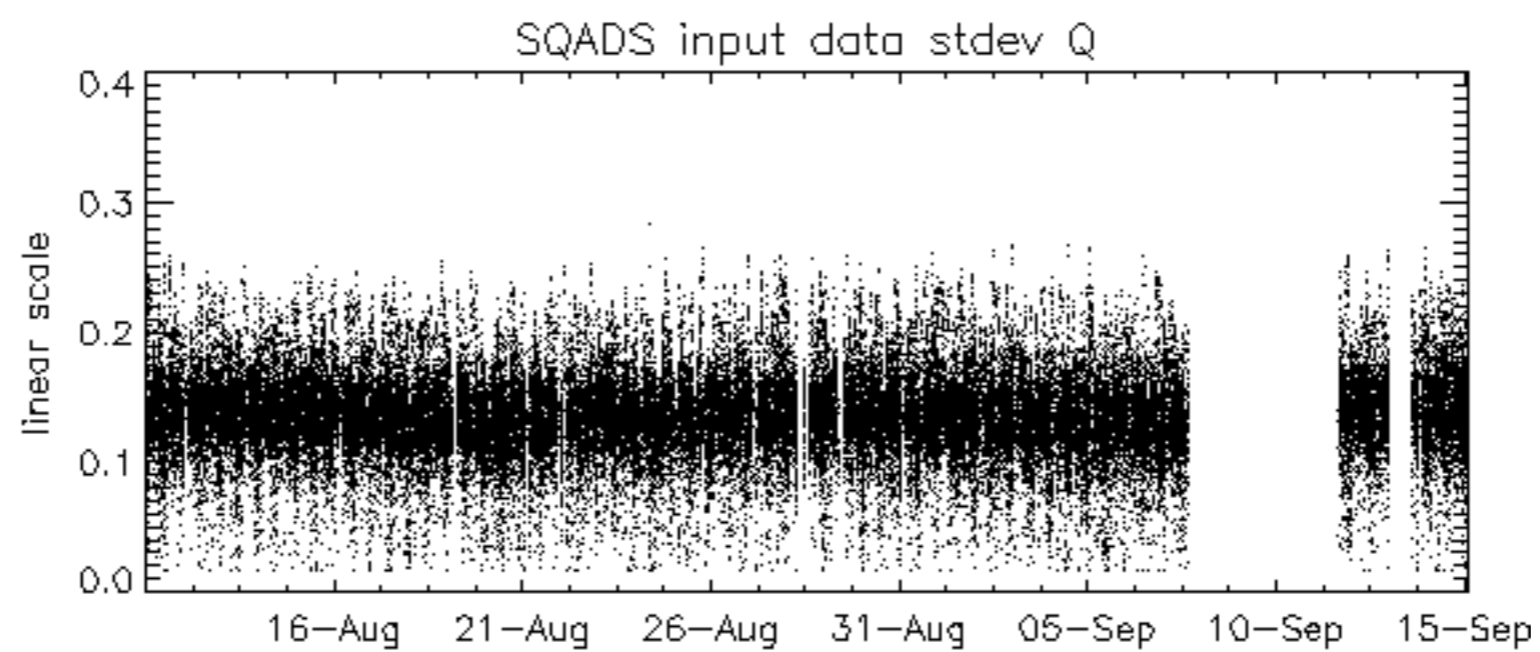
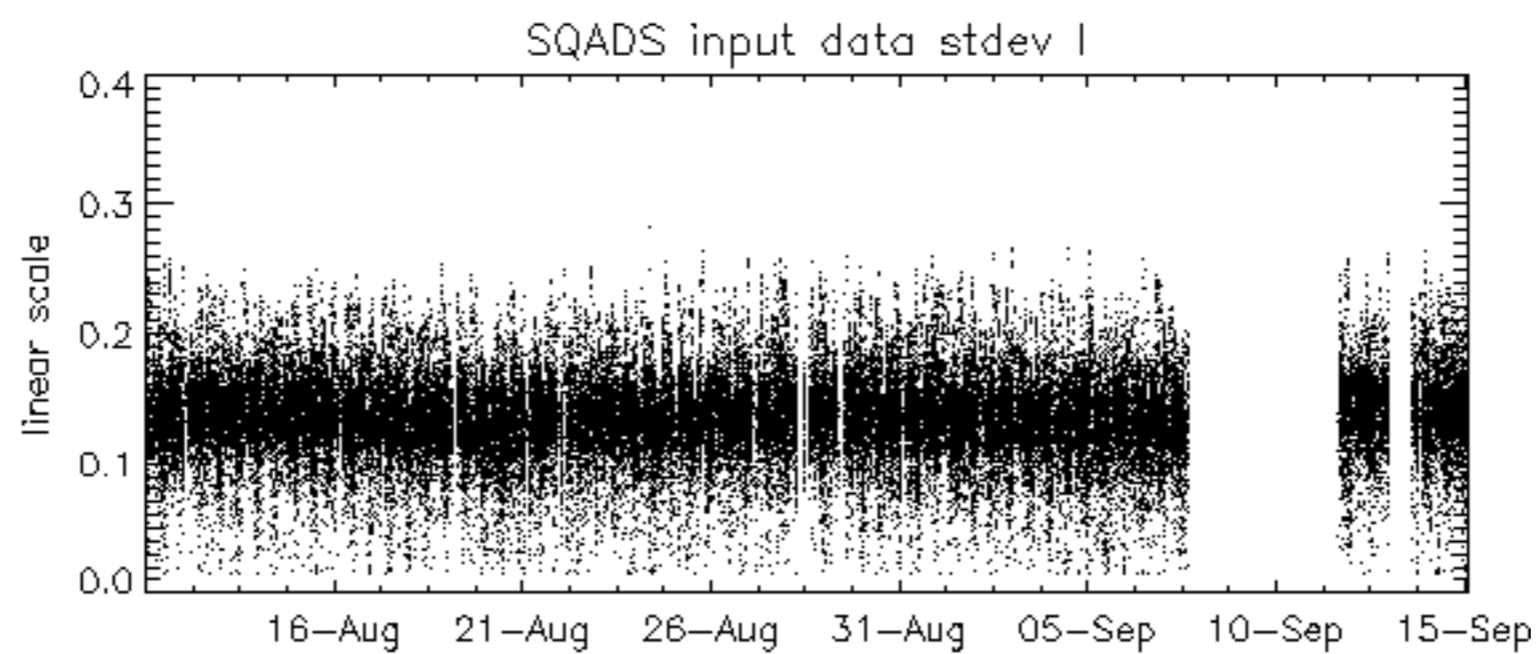
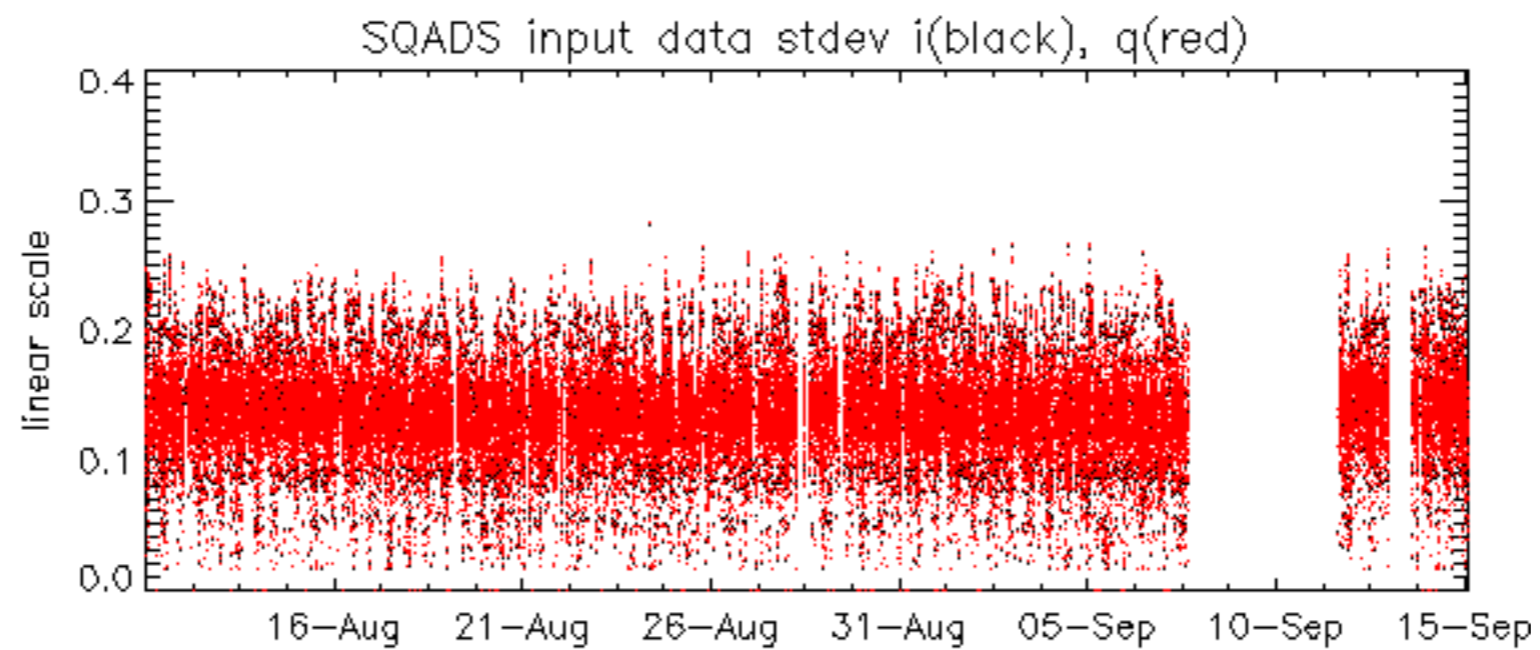
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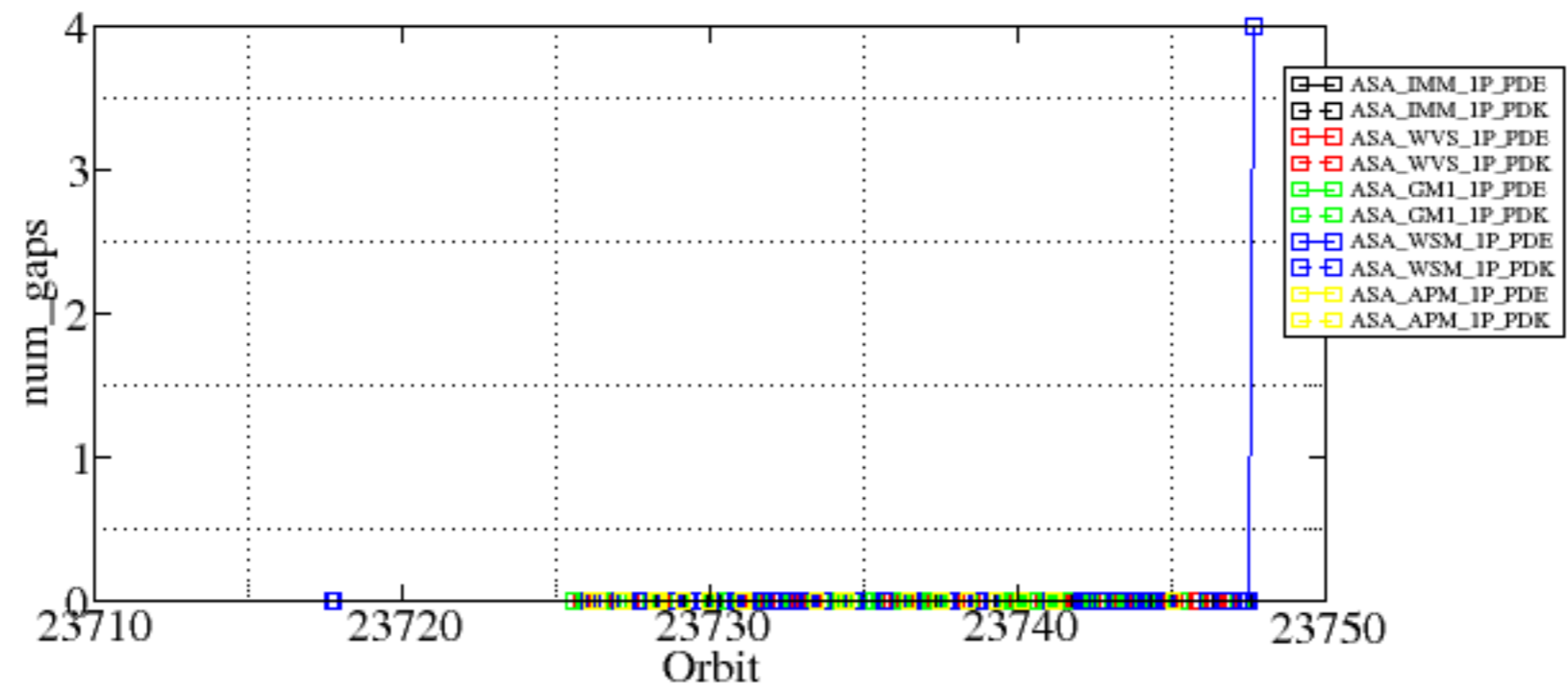


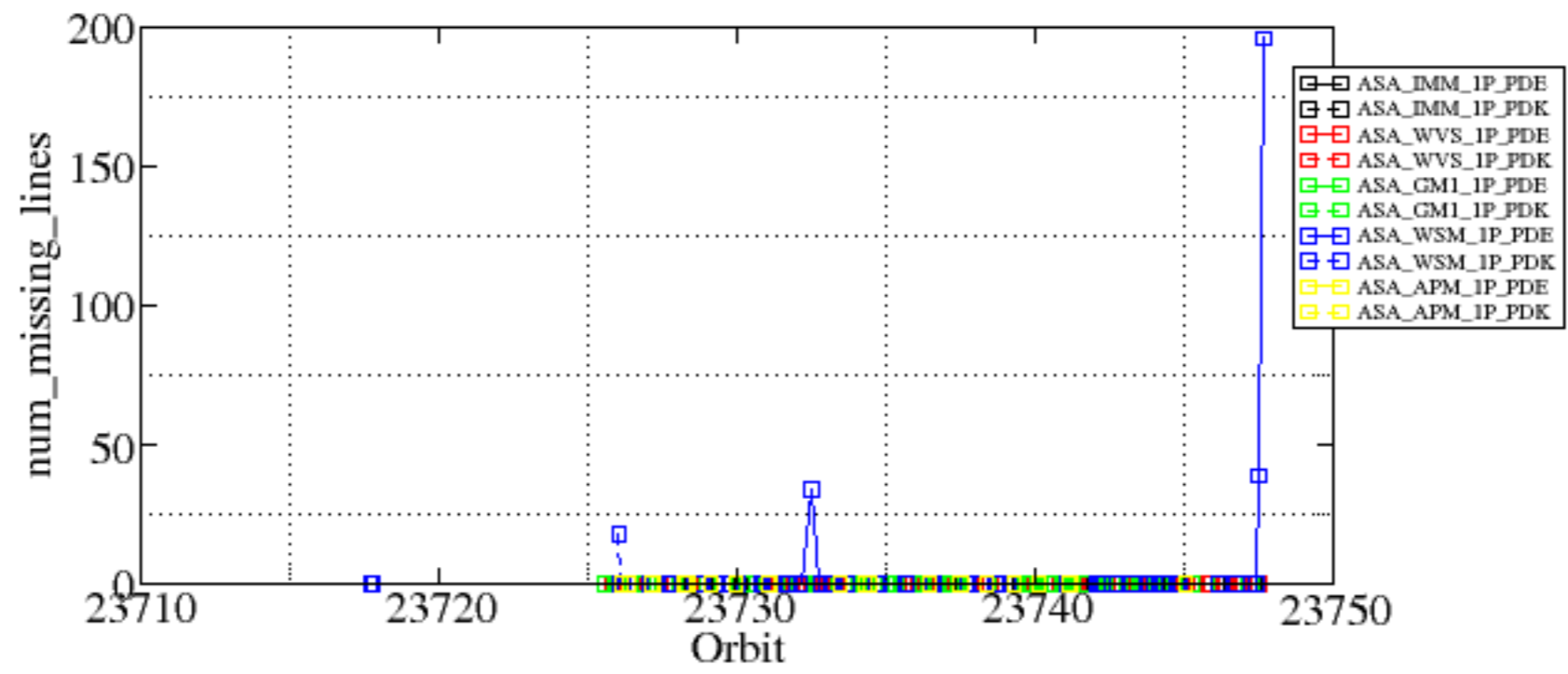


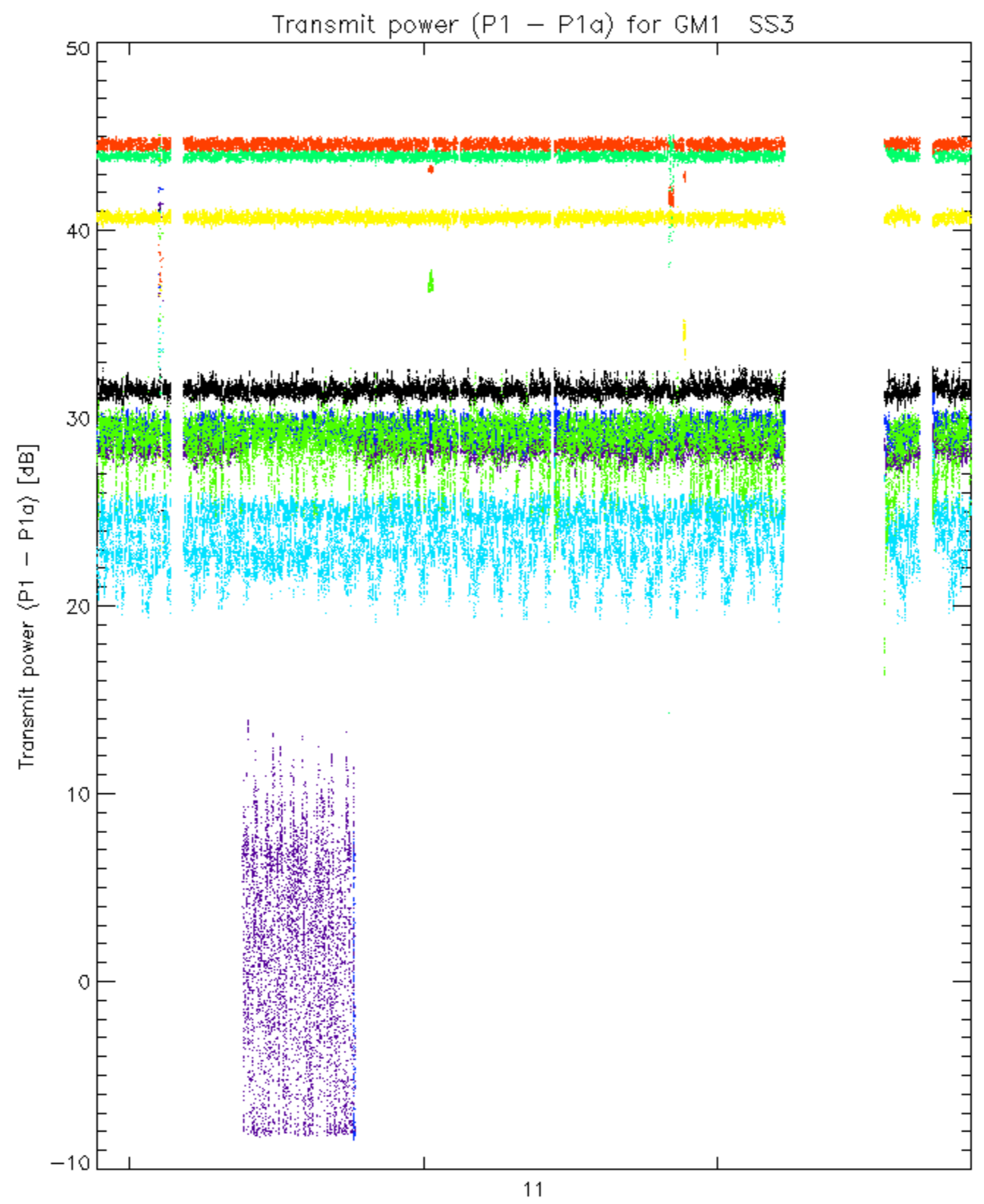
Summary of analysis for the last 3 days 2006091[345]

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

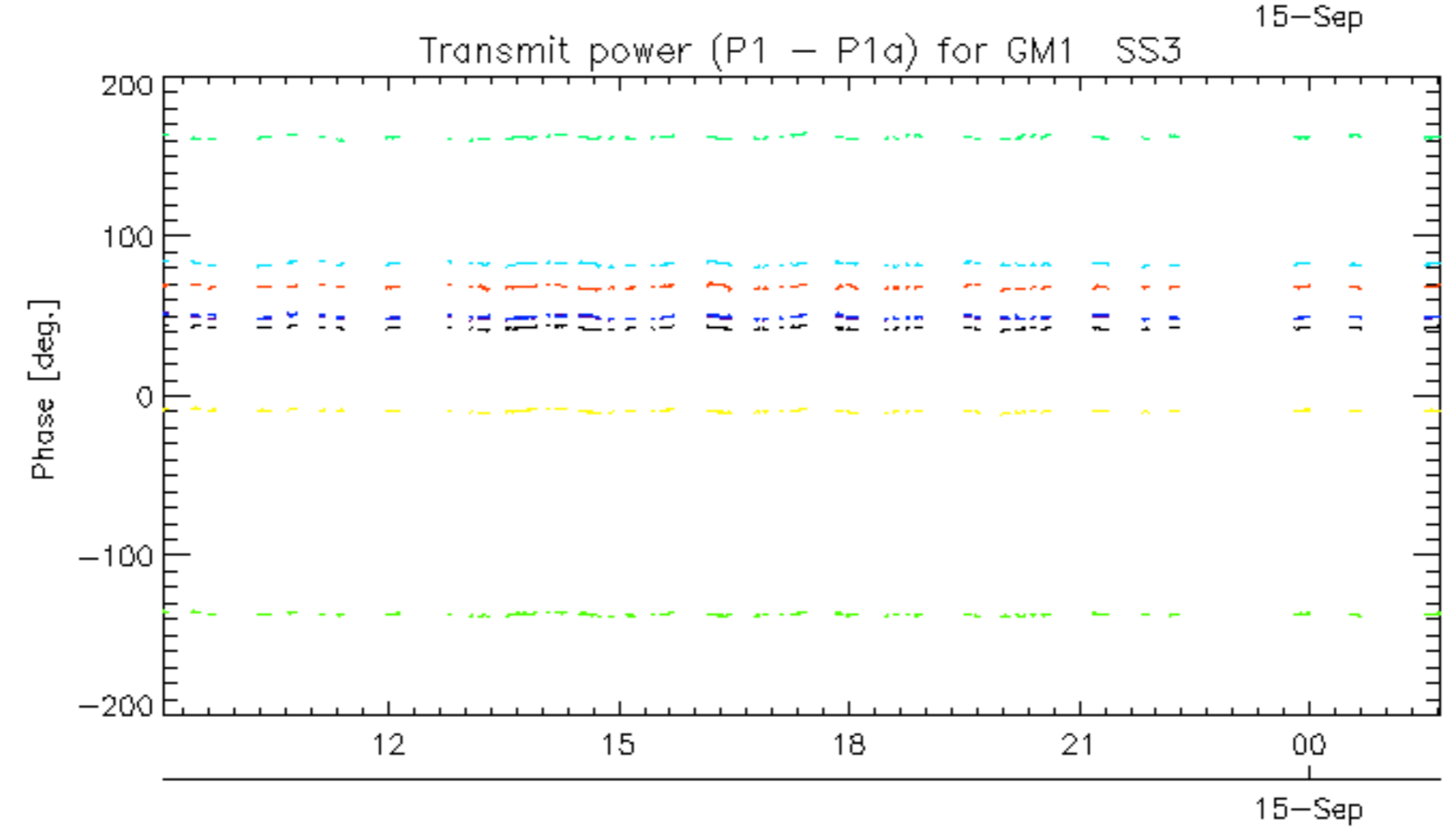
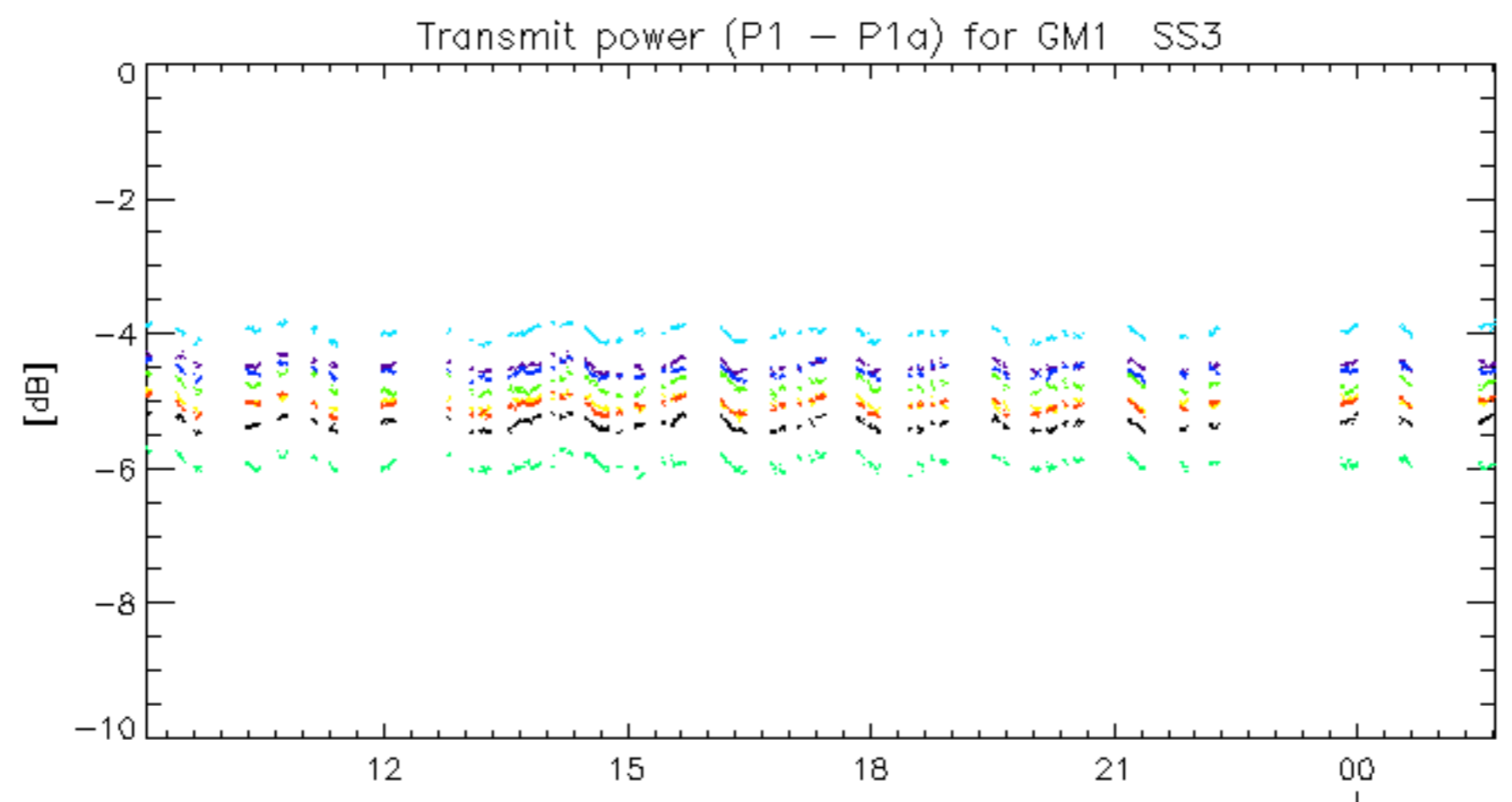
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20060914_004533_000002072051_00131_23732_1899.N1	0	34
ASA_WSM_1PNPDE20060915_015531_000001282051_00146_23747_2075.N1	0	39
ASA_WSM_1PNPDE20060915_021350_000000672051_00146_23747_2061.N1	4	196
ASA_WSM_1PNPDK20060913_135730_000001472051_00125_23726_5289.N1	0	18



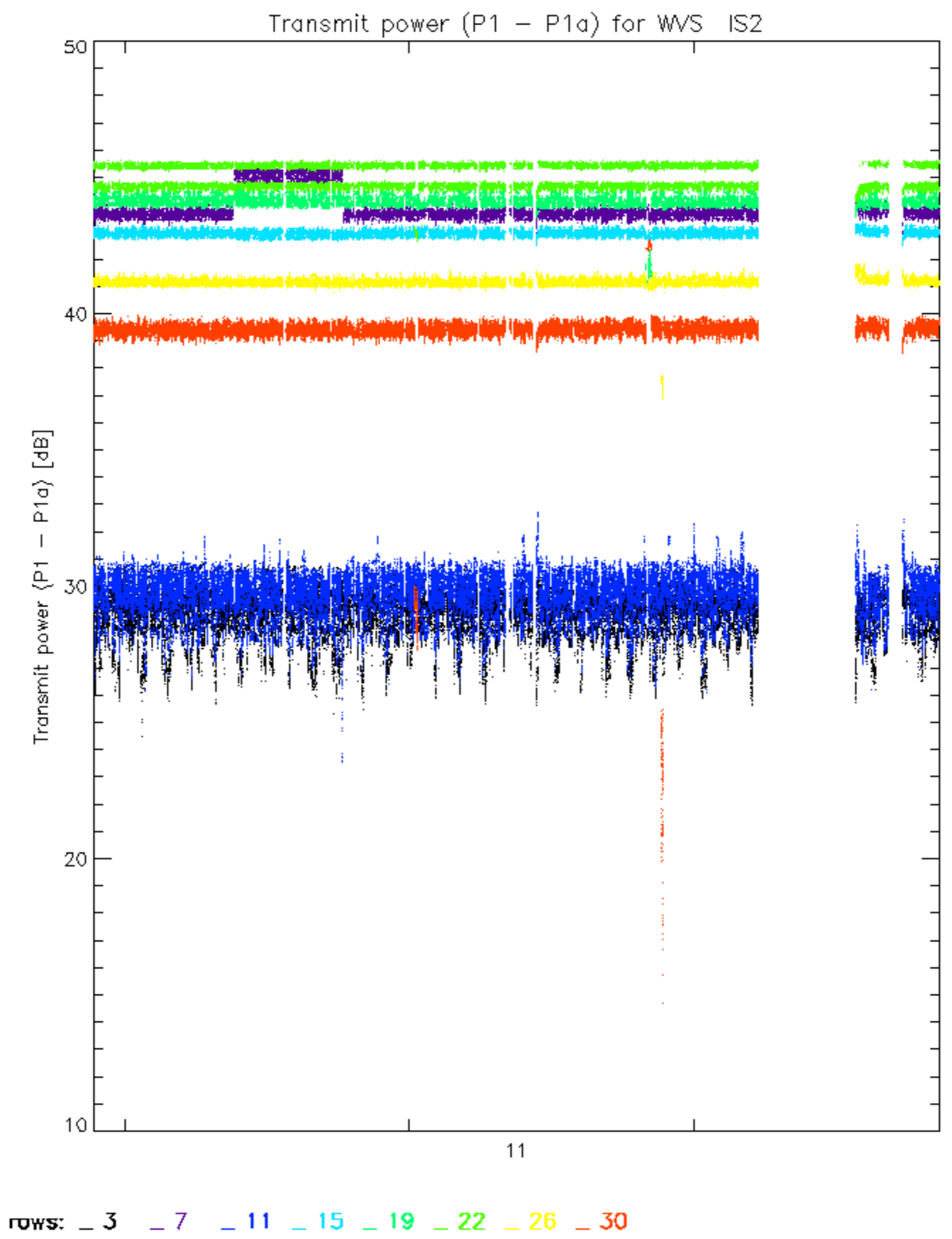


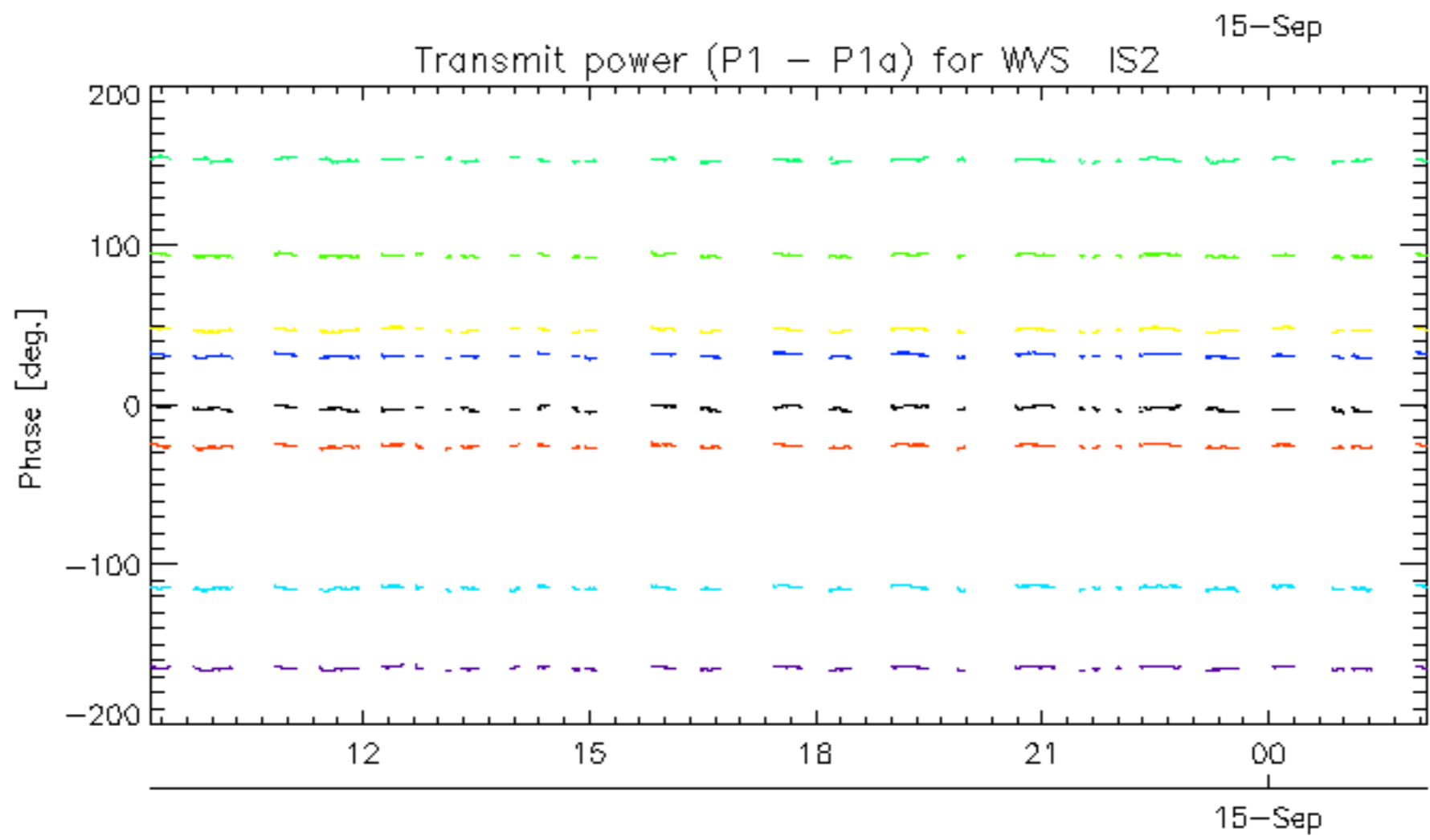
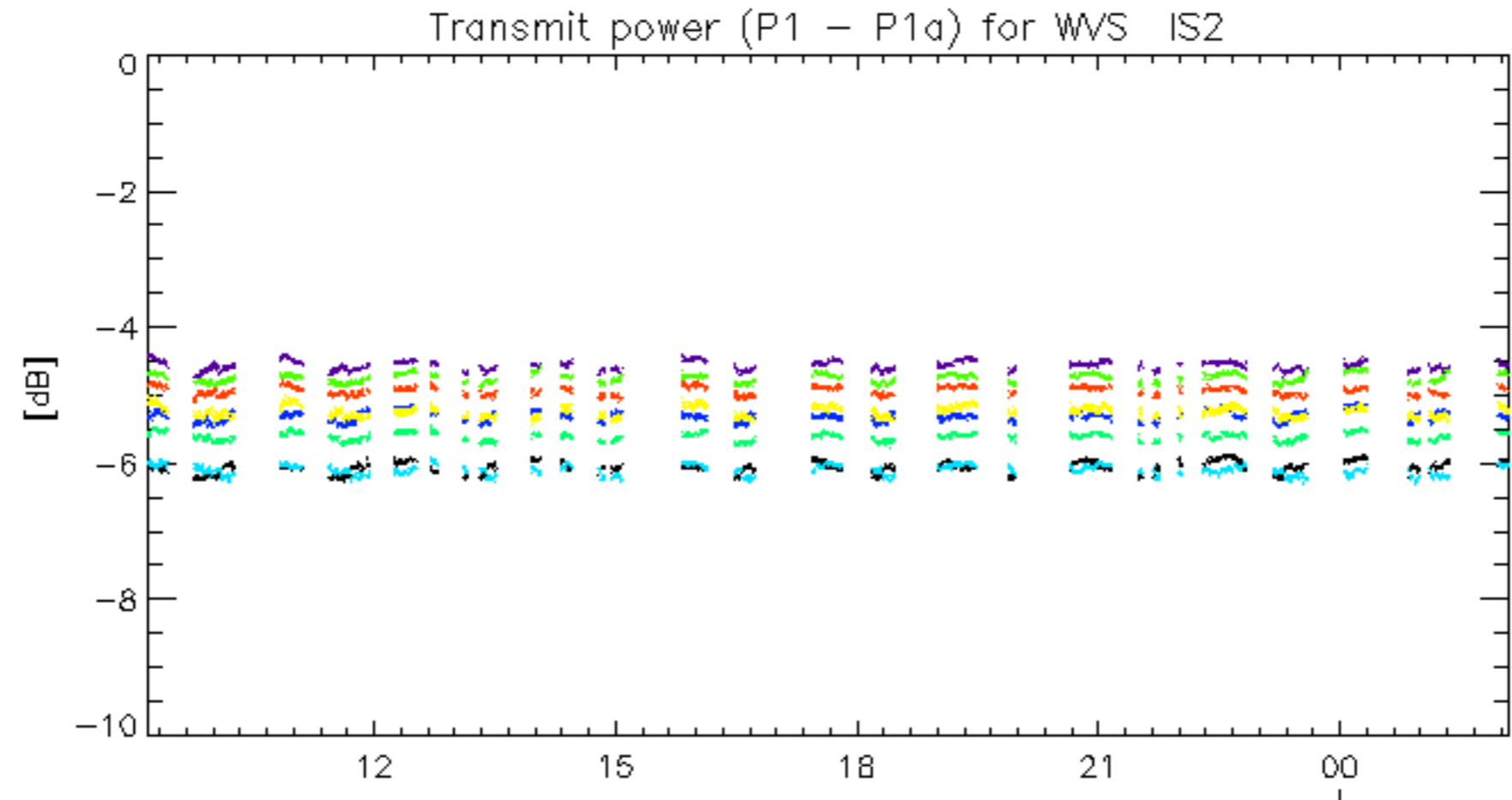


11



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





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

No unavailabilities during the reported period.