

PRELIMINARY REPORT OF 060905

last update on Tue Sep 5 16:43:13 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 2006-09-04 00:00:00 to 2006-09-05 16:43:14

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	86	11	5	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	42	86	11	5	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	86	11	5	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	86	11	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	30	54	33	20	106
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	30	54	33	20	106
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	30	54	33	20	106
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	30	54	33	20	106

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	20060904 180514
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
☒	☒
☒	☒
☒	☒
☒	☒

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	-3.942042	0.009845	0.002826
7	P1	-3.074823	0.051500	0.102977
11	P1	-4.080177	0.065235	0.097218
15	P1	-6.202564	0.095174	0.081008
19	P1	-3.490665	0.045404	-0.144382
22	P1	-4.563715	0.024585	0.004949
26	P1	-3.931498	0.020573	-0.024314
30	P1	-5.781402	0.130778	-0.099621
3	P1	-16.558966	0.264355	-0.088263
7	P1	-16.843260	0.638359	0.095942
11	P1	-16.817913	0.313163	0.109318
15	P1	-12.948330	0.146151	0.069673
19	P1	-14.572601	0.399070	-0.308102
22	P1	-15.796630	0.554185	0.335240
26	P1	-15.183104	0.209470	-0.096737
30	P1	-16.974888	0.404296	0.221240

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.854500	0.084256	0.097593
7	P2	-21.859993	0.098882	-0.010430
11	P2	-15.750088	0.112321	0.025743
15	P2	-7.098205	0.098163	0.022037
19	P2	-9.113883	0.091601	0.005836
22	P2	-18.129955	0.085820	0.033577
26	P2	-16.398602	0.092803	-0.006275
30	P2	-19.475620	0.090451	0.025085

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.174313	0.003936	-0.009302
7	P3	-8.174313	0.003936	-0.009302
11	P3	-8.174313	0.003936	-0.009302
15	P3	-8.174313	0.003936	-0.009302
19	P3	-8.174313	0.003936	-0.009302
22	P3	-8.174313	0.003936	-0.009302
26	P3	-8.174365	0.003936	-0.009210
30	P3	-8.174365	0.003936	-0.009210

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.835814	0.021464	-0.023042
7	P1	-2.496888	0.283057	0.196948
11	P1	-2.901798	0.141721	0.112452
15	P1	-3.663178	0.145563	0.075524
19	P1	-3.449689	0.074206	-0.123067
22	P1	-5.086244	0.034379	-0.006422
26	P1	-5.868579	0.027987	-0.007160
30	P1	-5.196259	0.079370	-0.053421
3	P1	-11.629450	0.067276	-0.022852
7	P1	-9.920692	0.188676	0.056227
11	P1	-10.313838	0.084211	-0.050250
15	P1	-10.837986	0.176315	-0.071486
19	P1	-15.657295	3.240993	-0.708914
22	P1	-20.856640	1.734645	0.261803

26	P1	-16.053349	0.414863	0.288426
30	P1	-17.997454	0.786973	-0.024761

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.449619	0.081314	0.106247
7	P2	-22.236792	0.194862	0.103504
11	P2	-10.928321	0.056036	0.096472
15	P2	-4.872898	0.041845	0.028275
19	P2	-6.853148	0.040806	0.022510
22	P2	-8.173976	0.061911	0.037372
26	P2	-24.166481	0.127351	0.011301
30	P2	-21.964399	0.077688	0.019012

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.016528	0.003685	-0.014341
7	P3	-8.016421	0.003685	-0.014170
11	P3	-8.016462	0.003689	-0.013758
15	P3	-8.016460	0.003695	-0.013672
19	P3	-8.016499	0.003704	-0.014253
22	P3	-8.016644	0.003673	-0.014170
26	P3	-8.016464	0.003684	-0.014358
30	P3	-8.016452	0.003686	-0.014173

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	0.000550906
	stdev	1.77351e-07
MEAN Q	mean	0.000529499
	stdev	2.16323e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136276
	stdev	0.00108318
STDEV Q	mean	0.136621
	stdev	0.00109960



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006090[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_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_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)

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

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

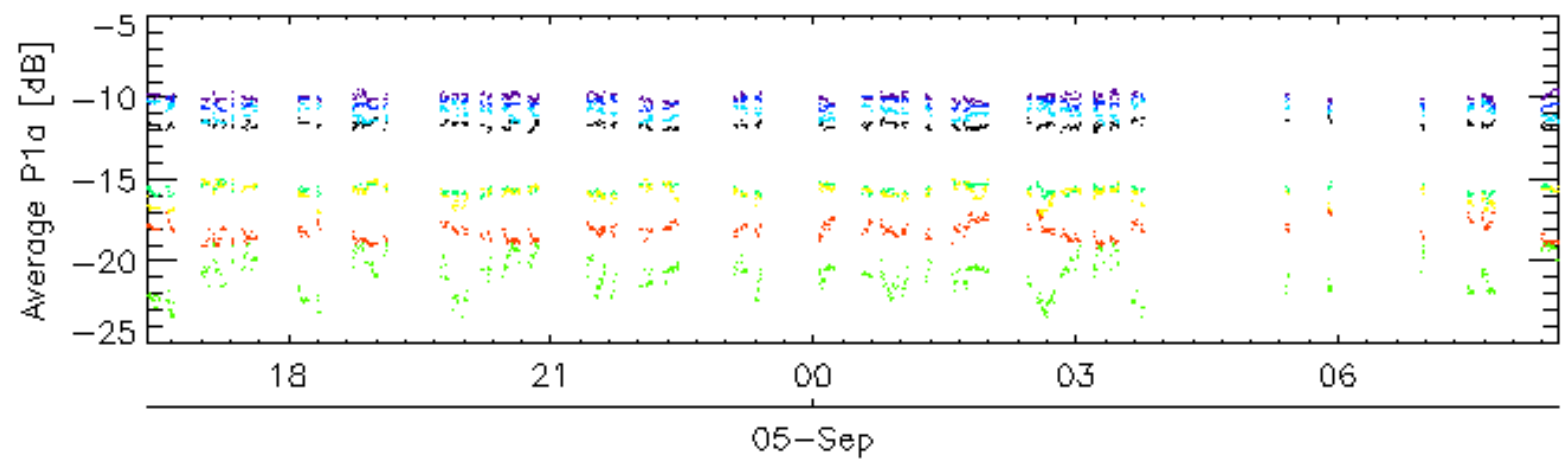
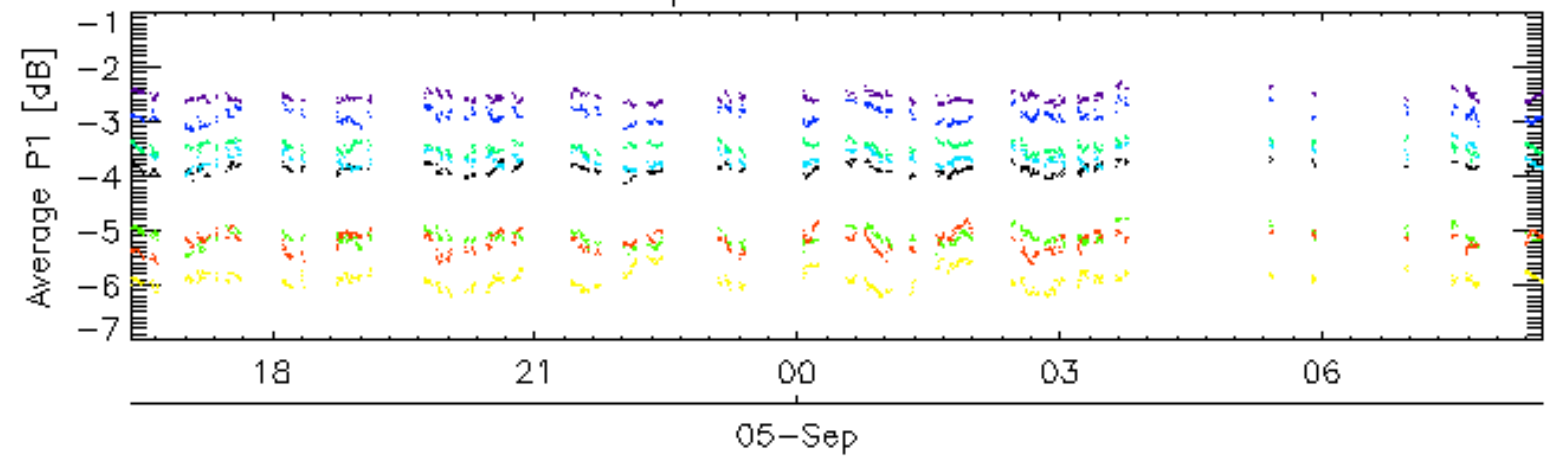
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

7.6 - Doppler evolution versus ANX for GM1

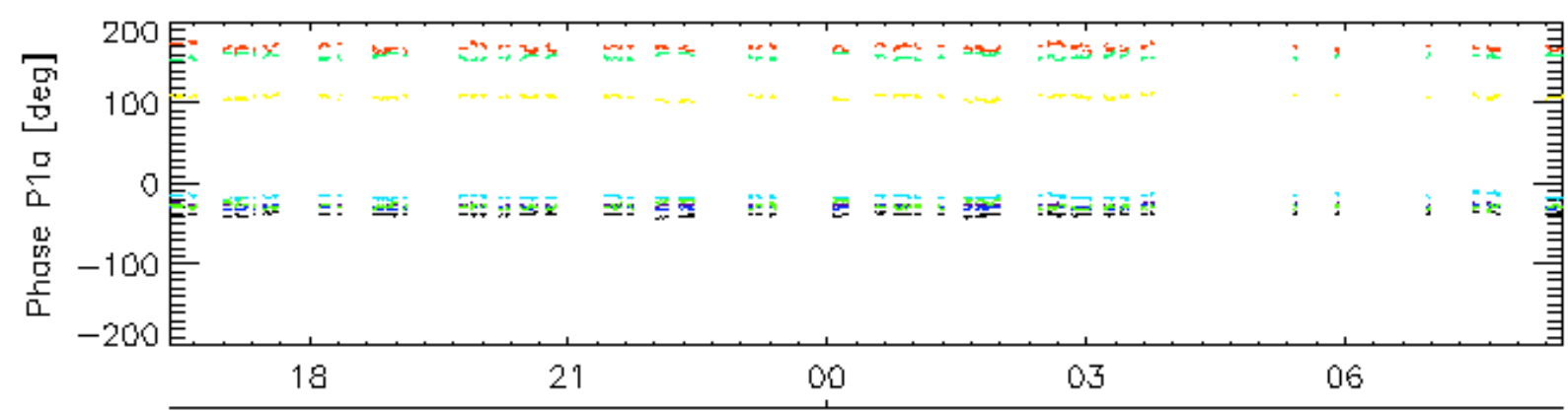
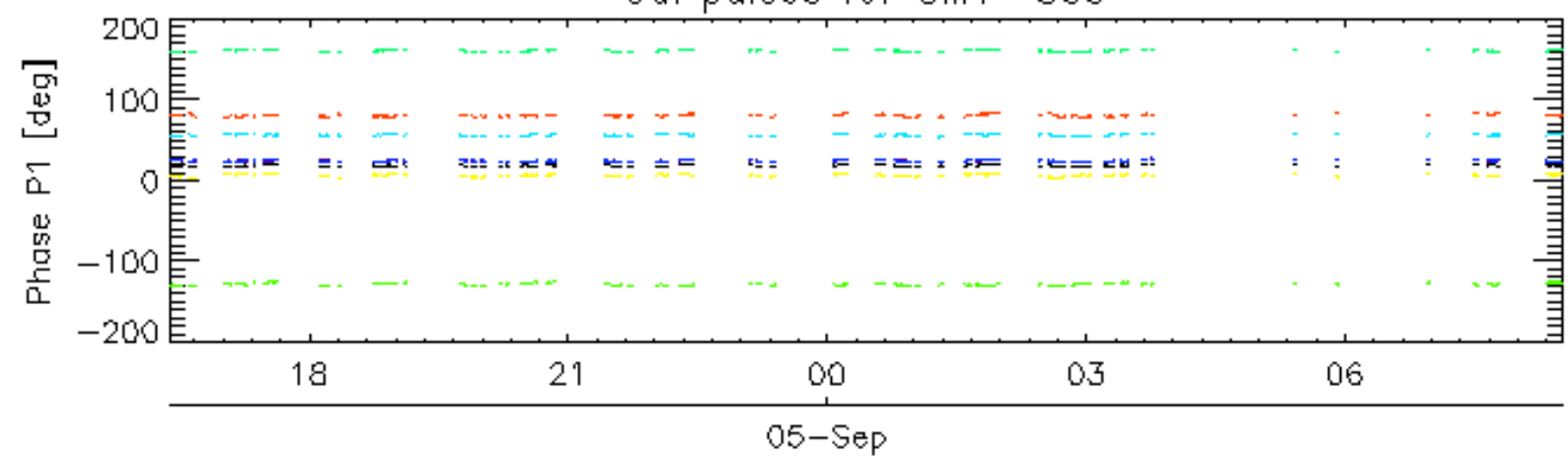
Evolution Doppler error versus ANX

<input type="checkbox"/>	
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Cal pulses for GM1 SS3

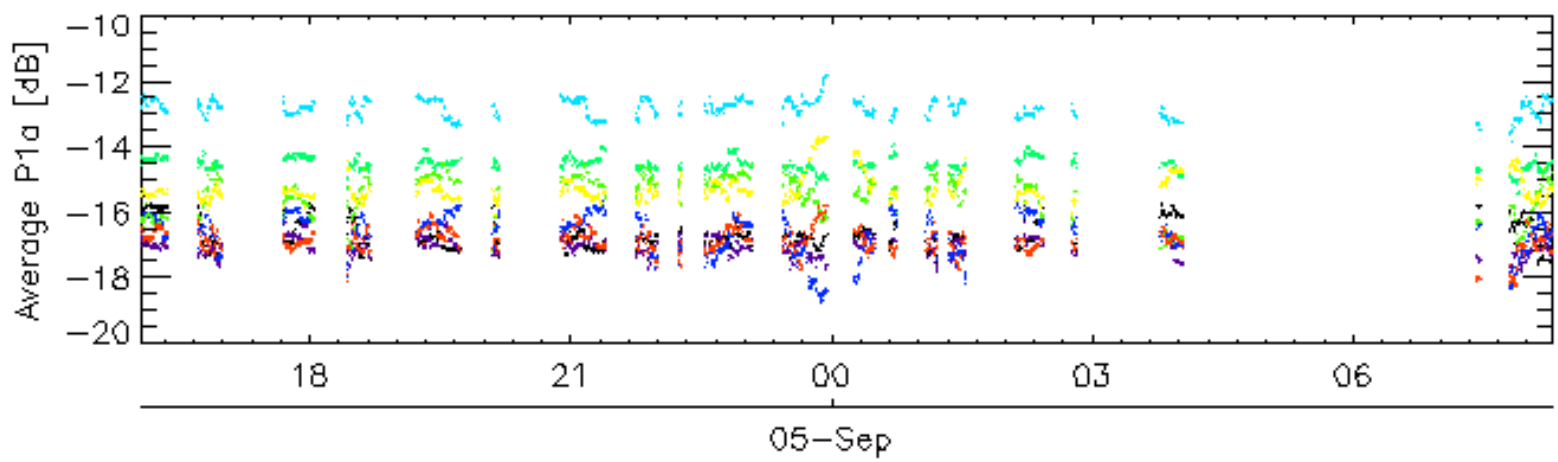
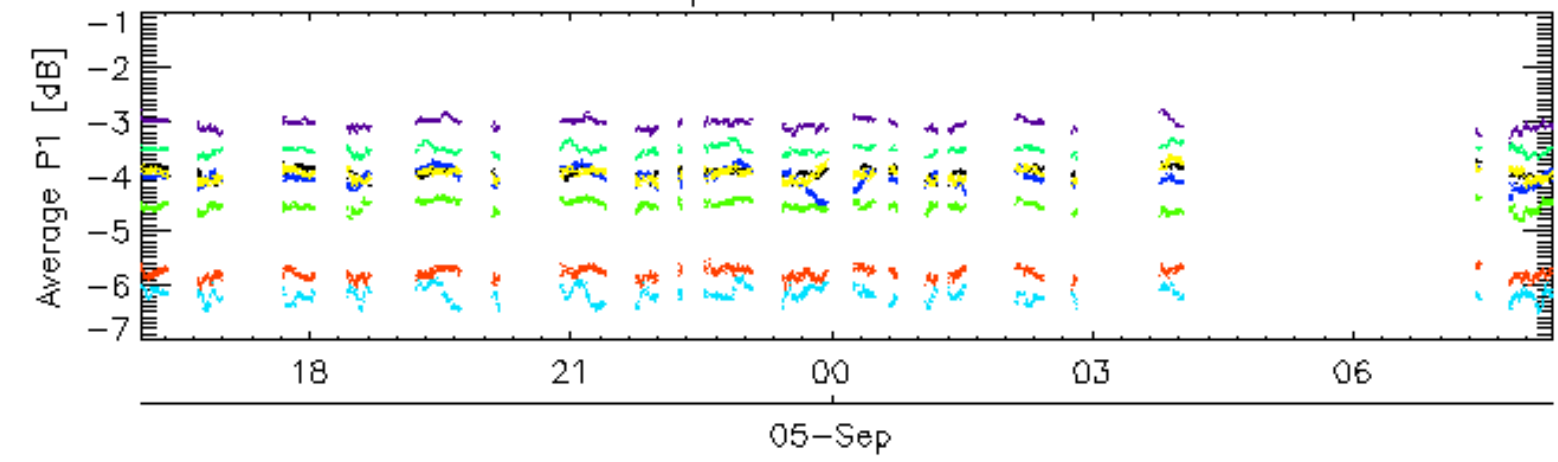


Cal pulses for GM1 SS3

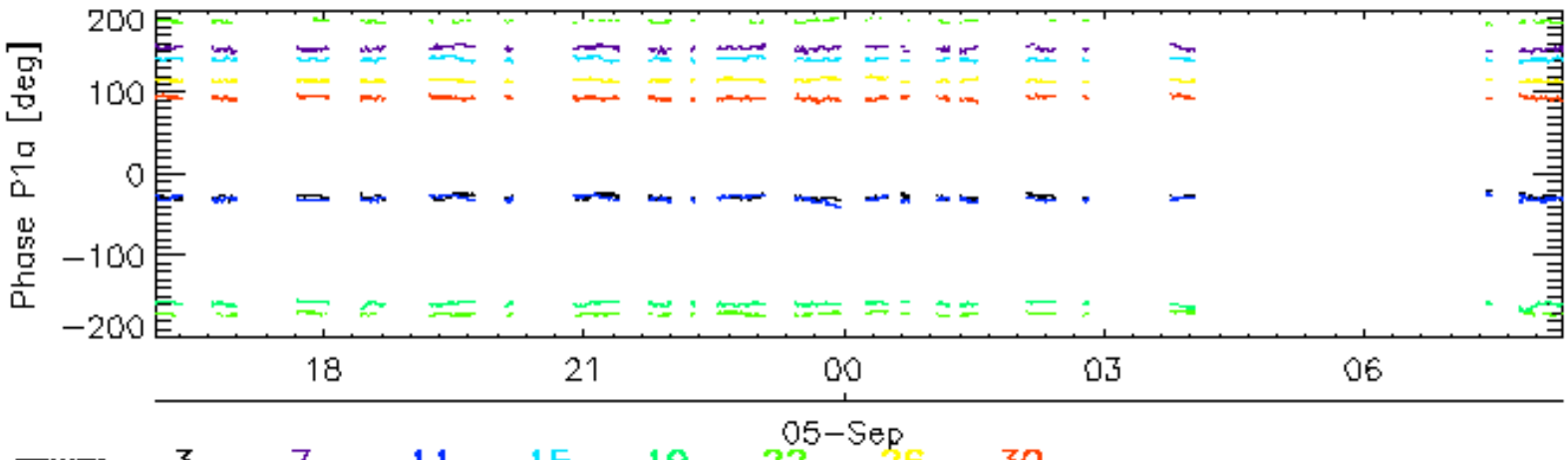
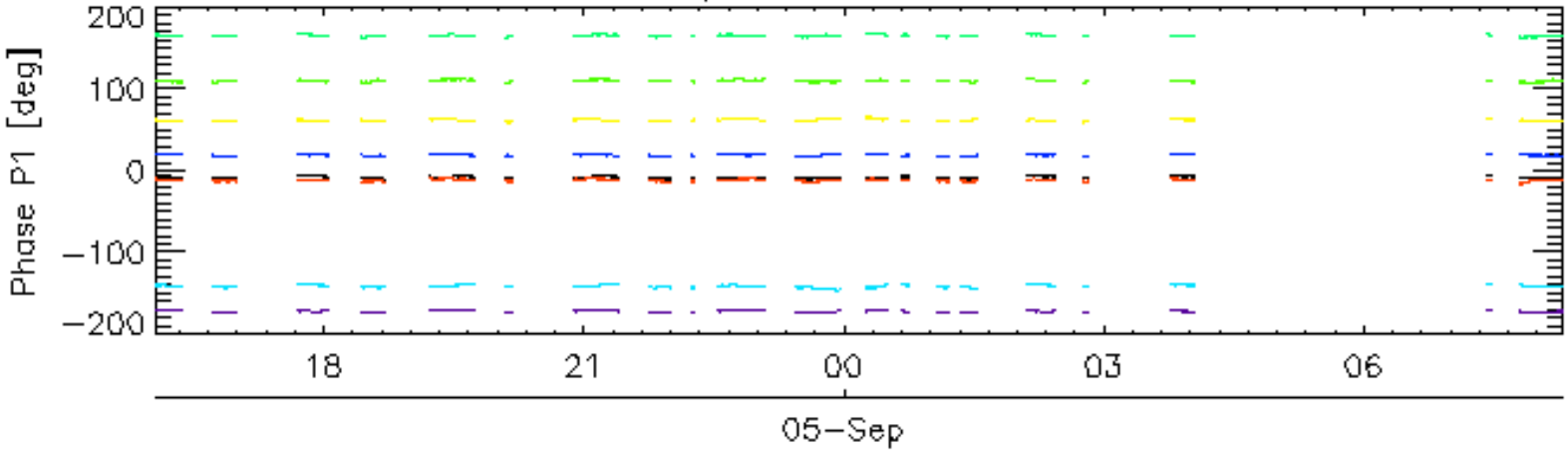


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

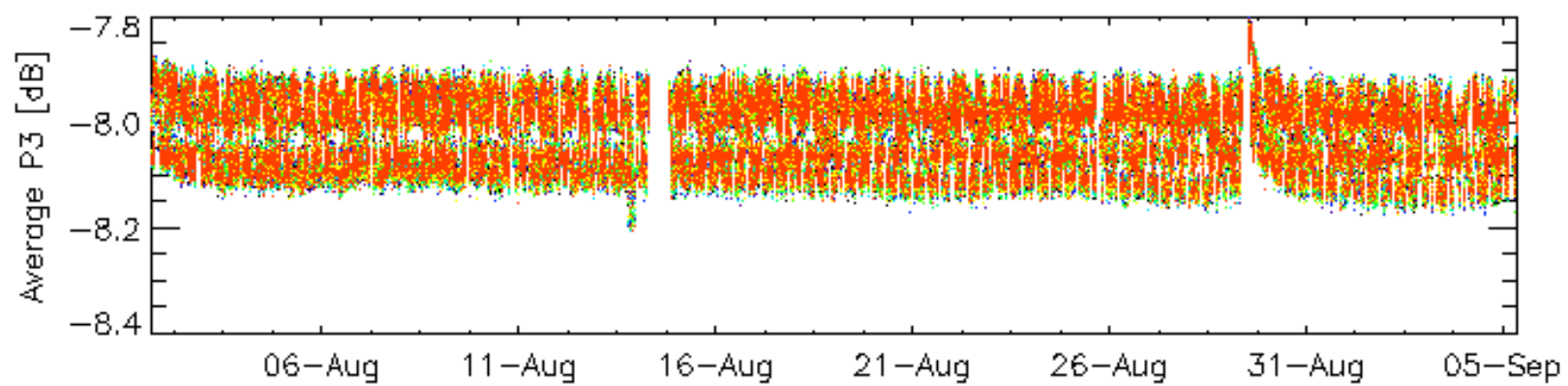
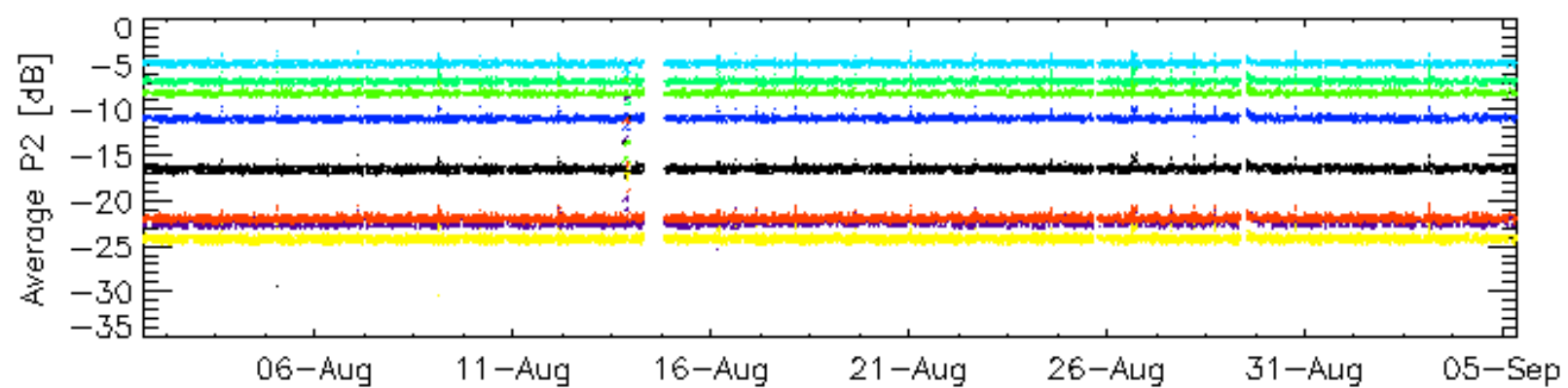
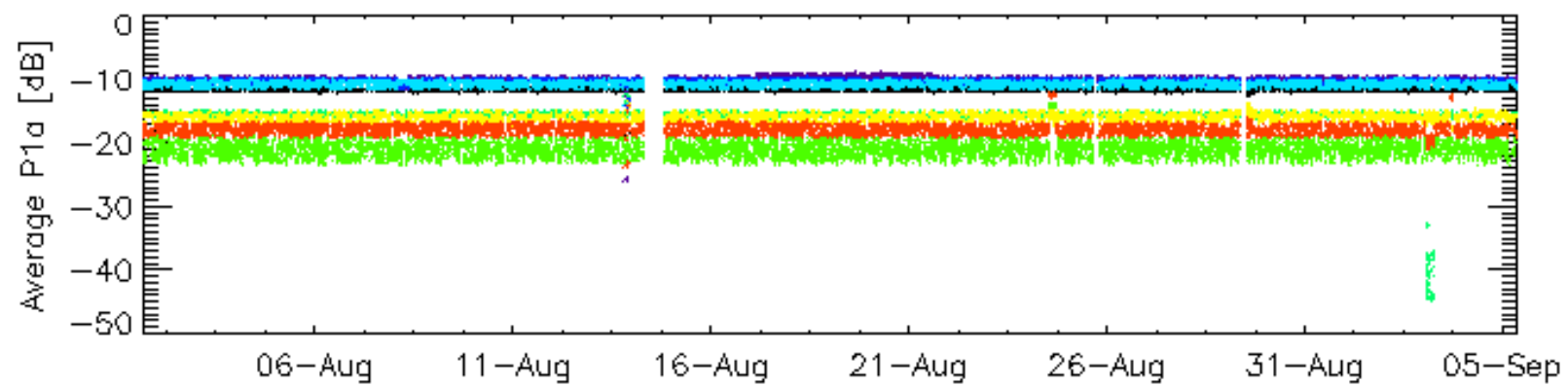
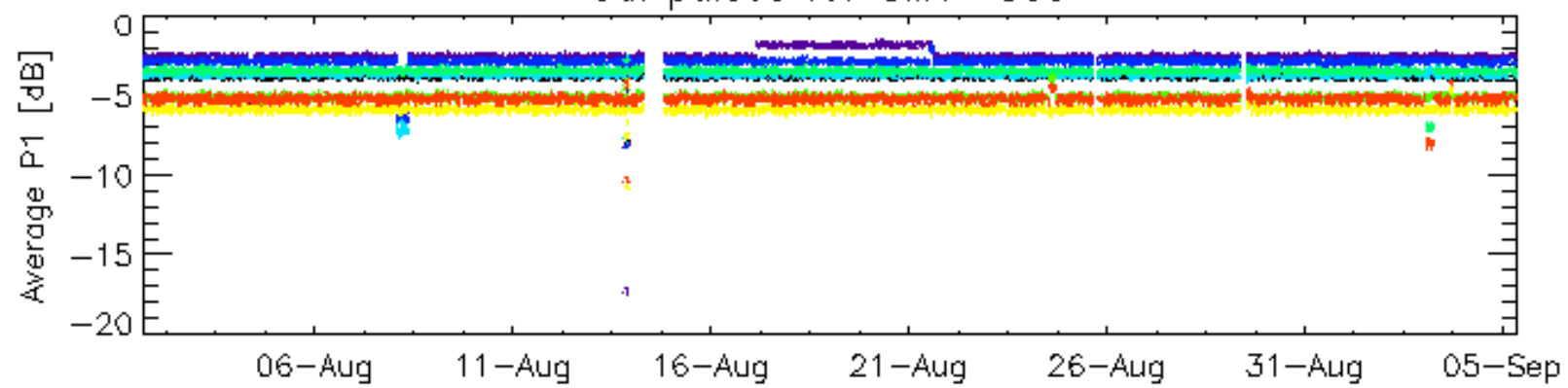


Cal pulses for WVS IS2



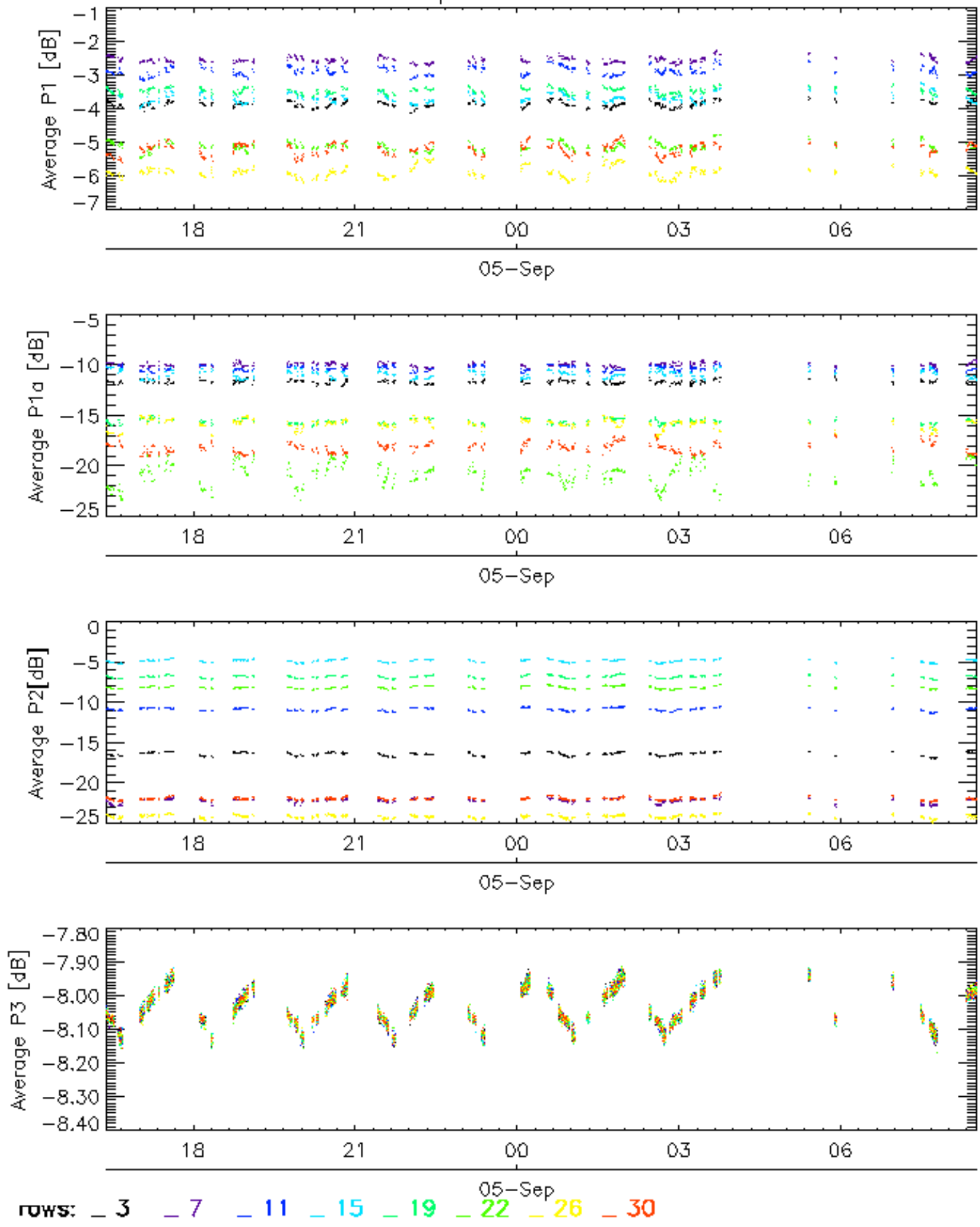
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

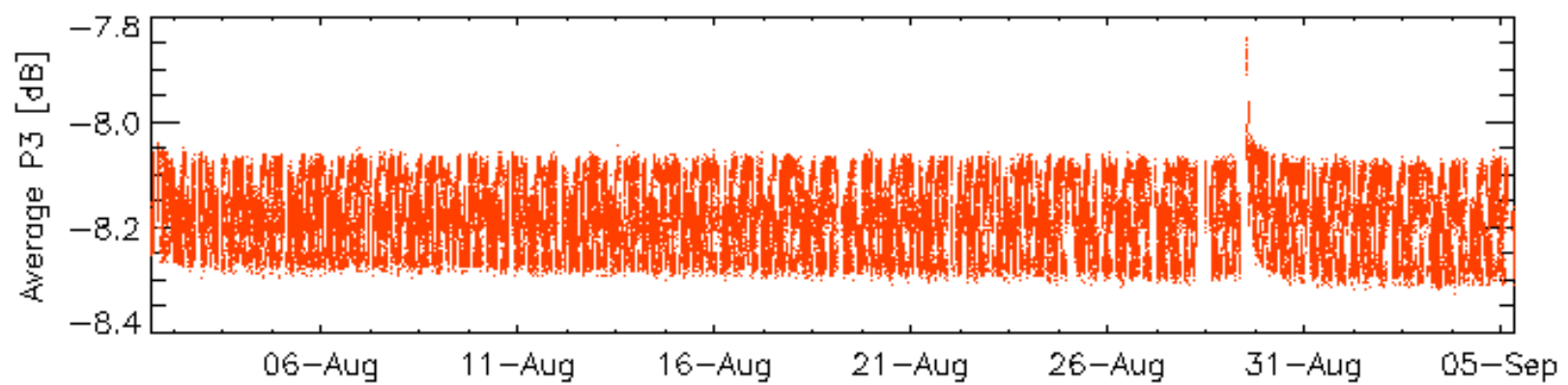
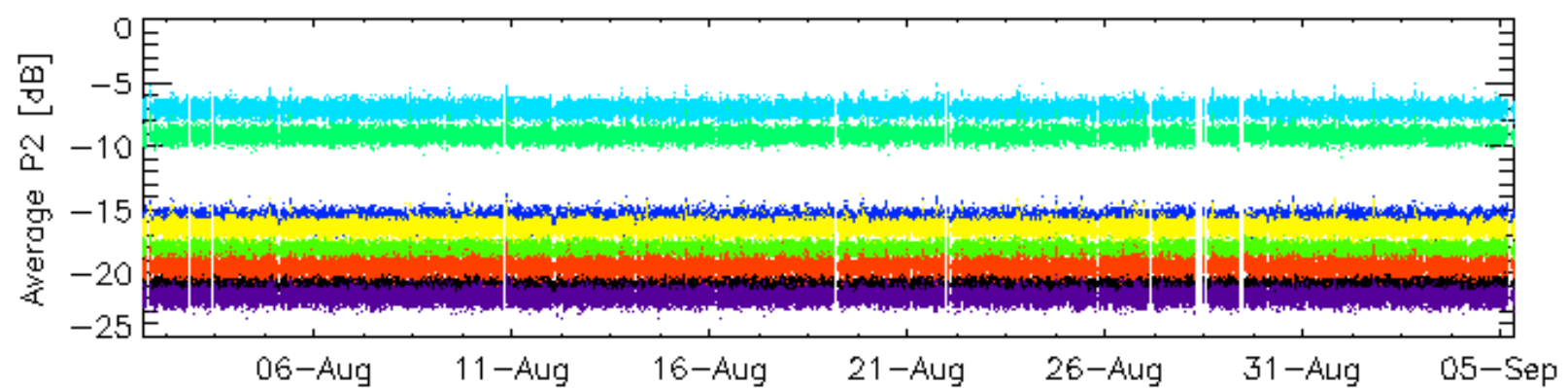
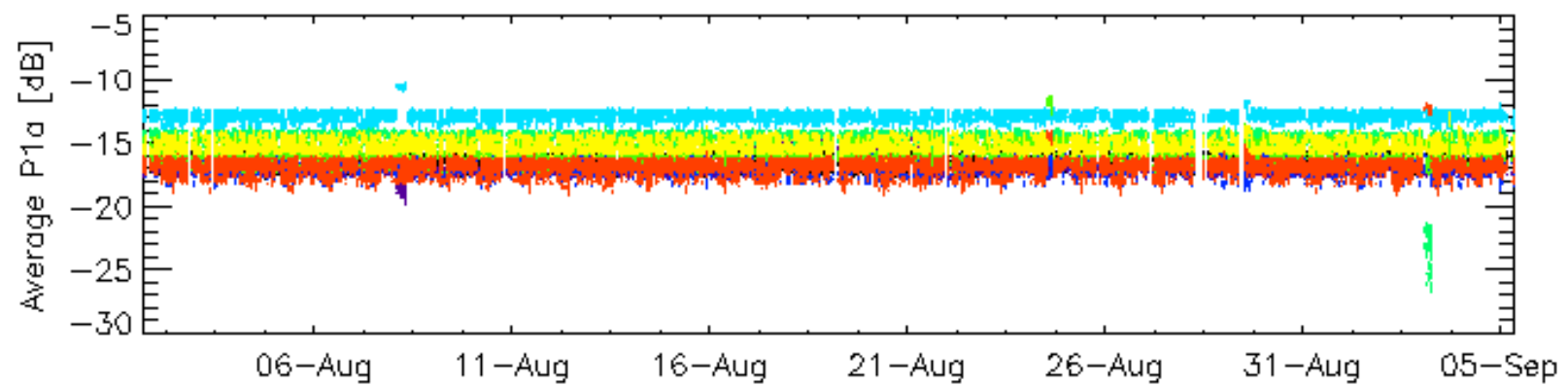
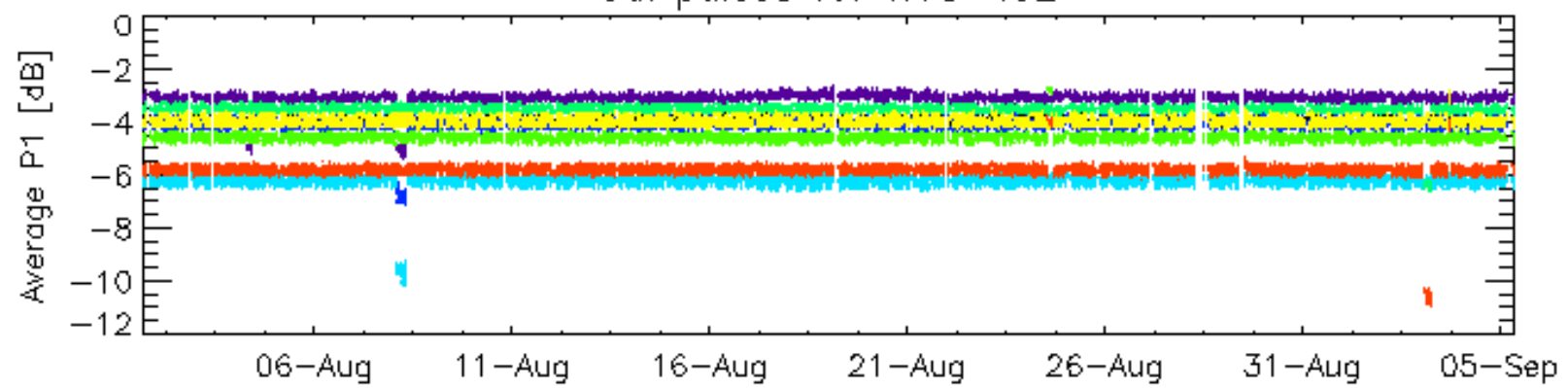


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

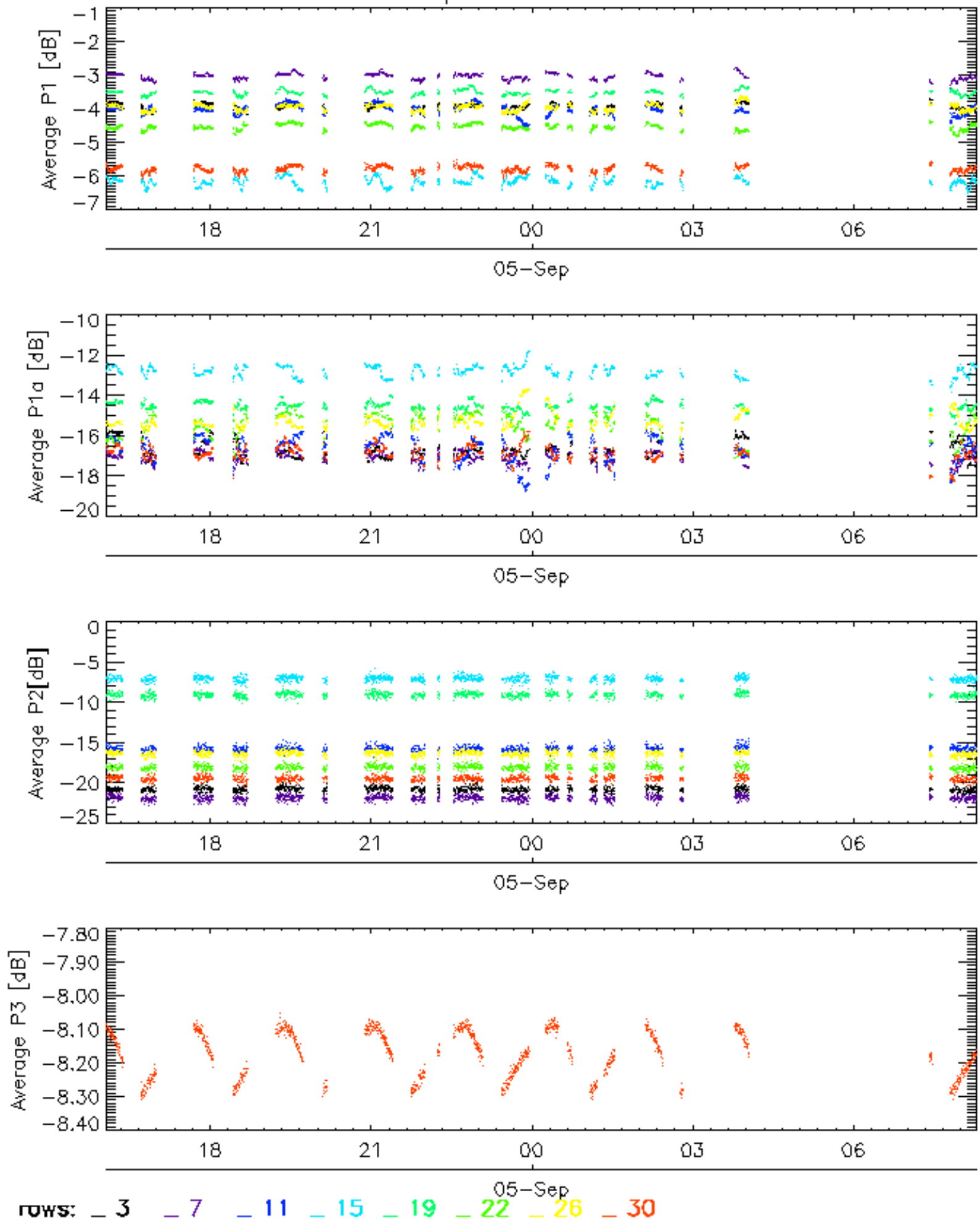


Cal pulses for WVS IS2



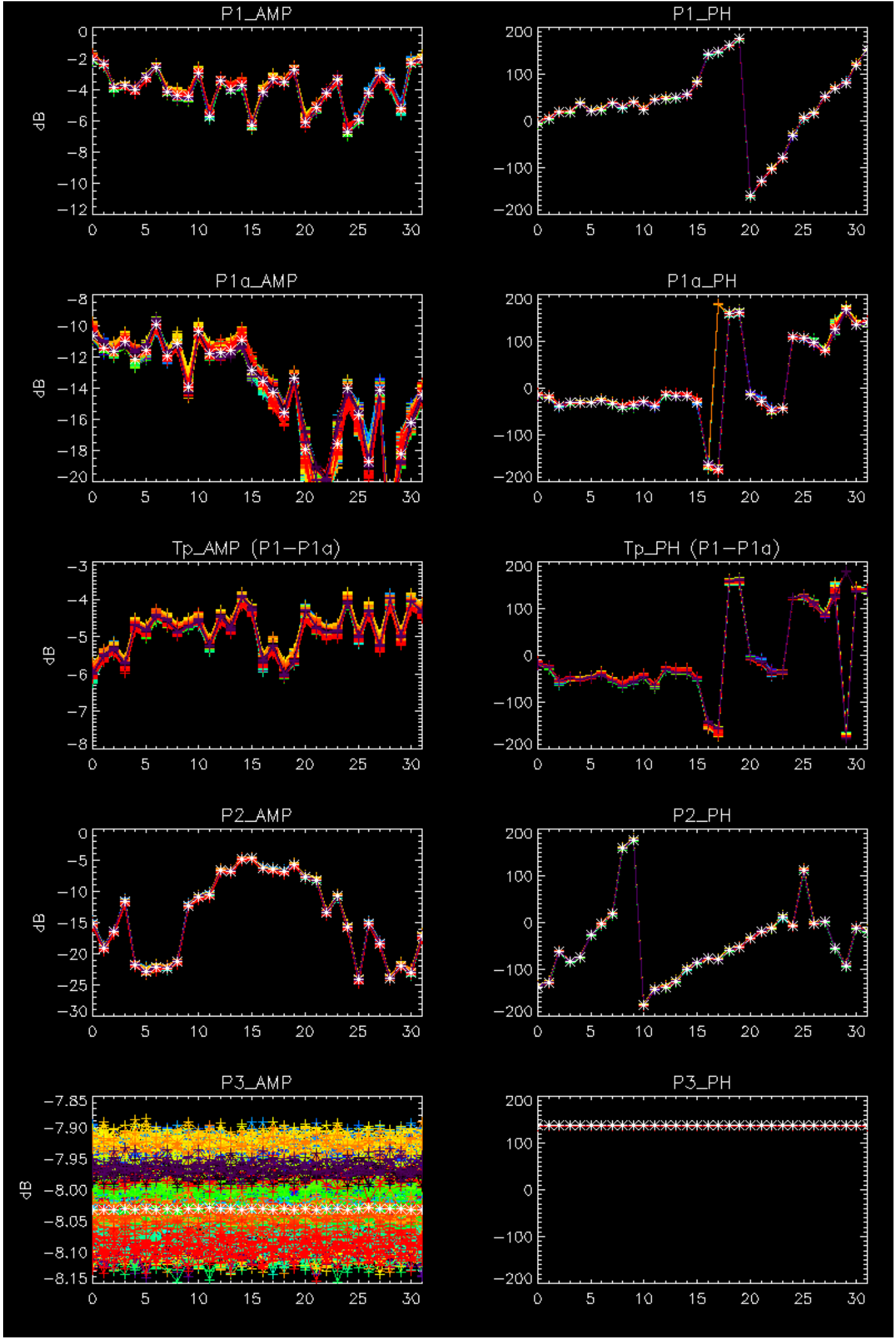
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

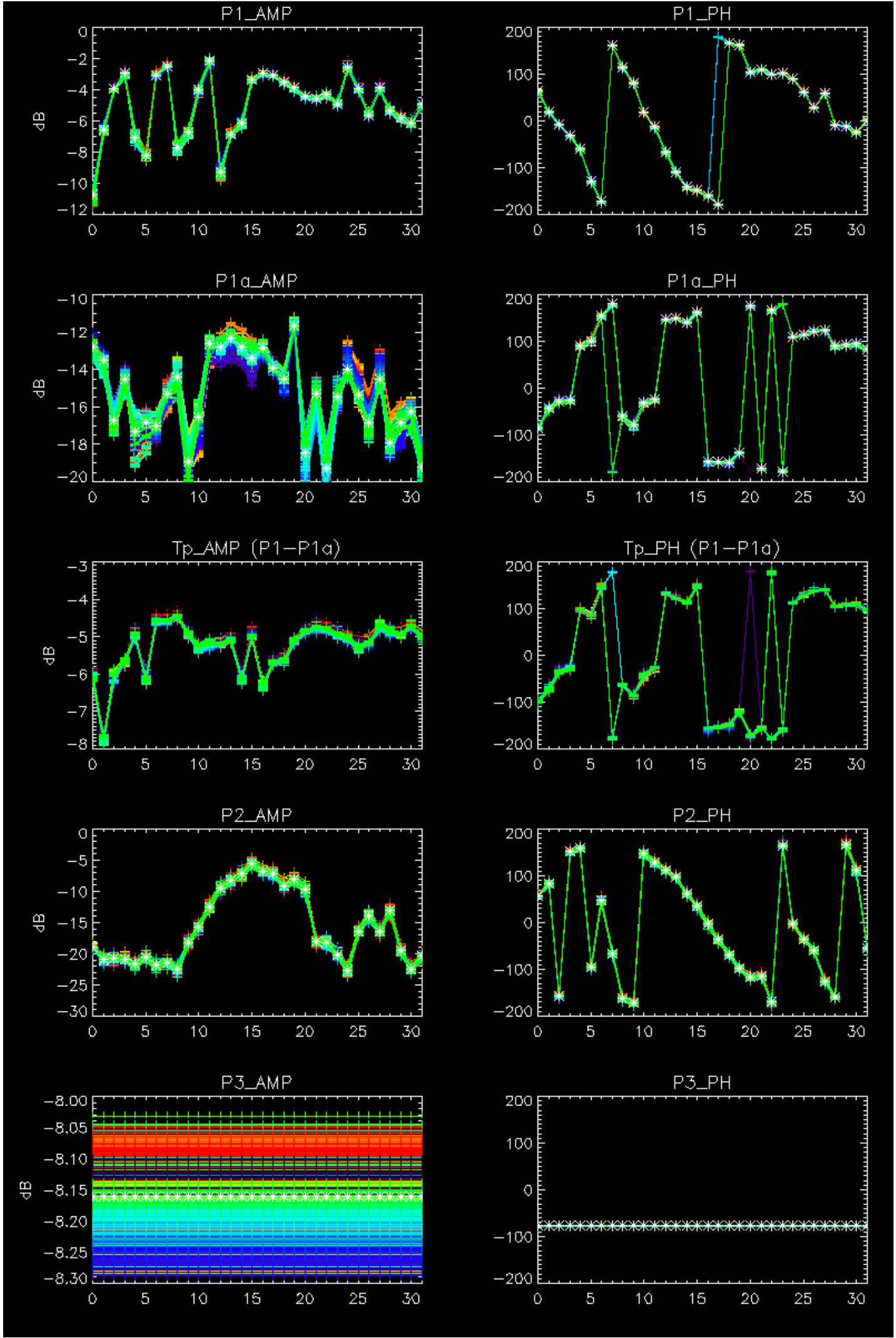
Cal pulses for WVS IS2



No anomalies observed on available browse products

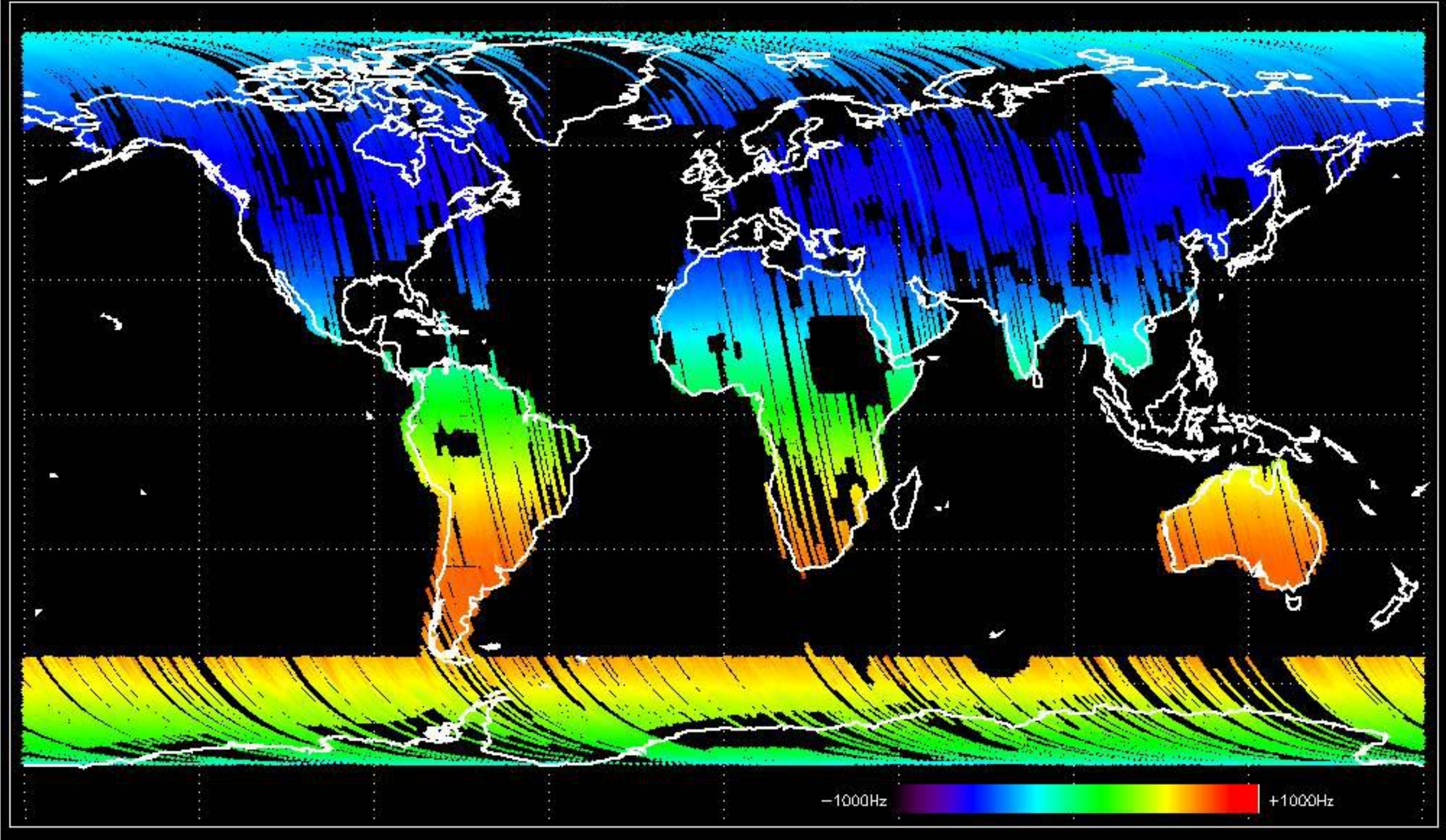
No anomalies observed.



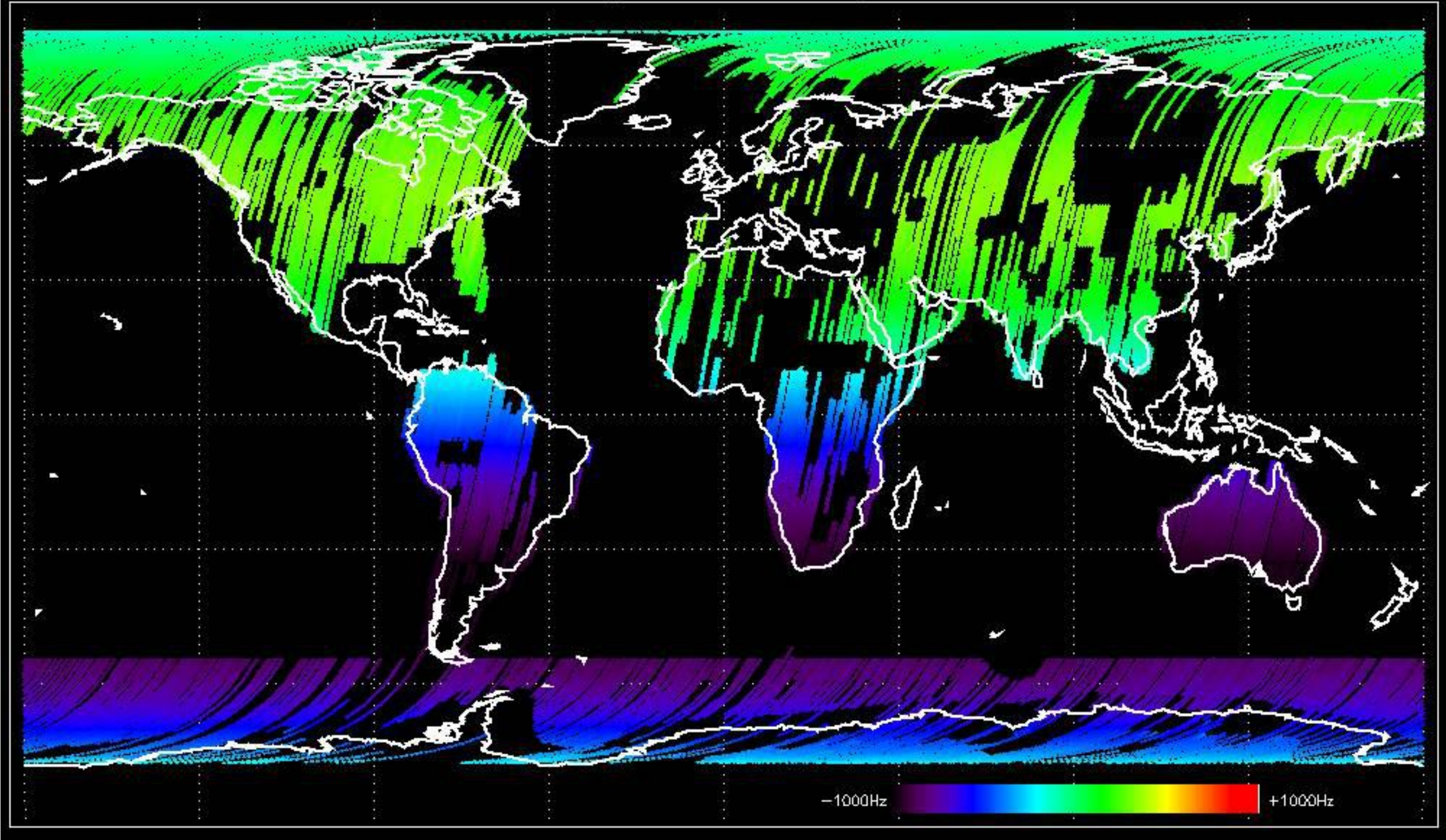


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

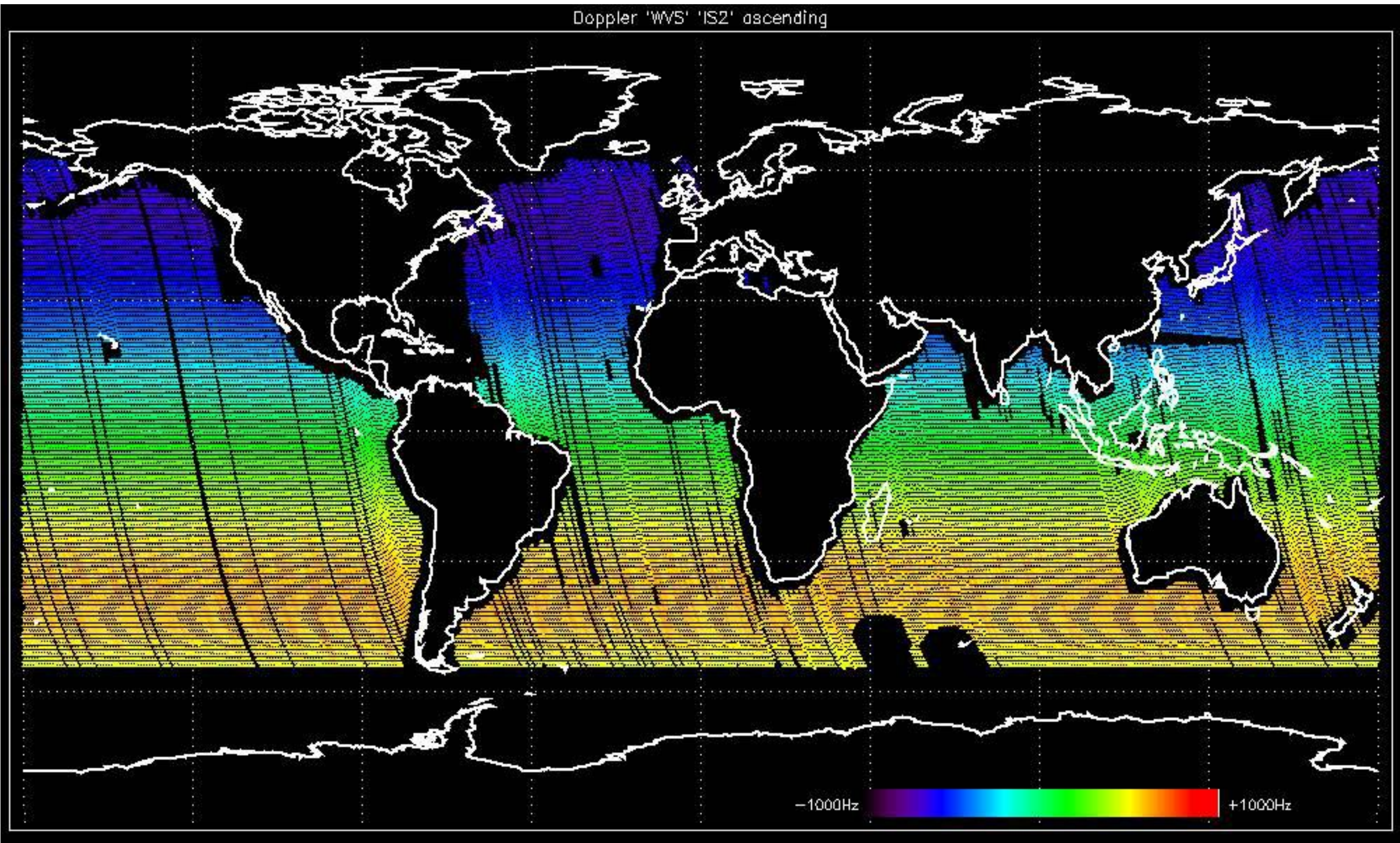
Doppler 'GM1' 'SS1' ascending



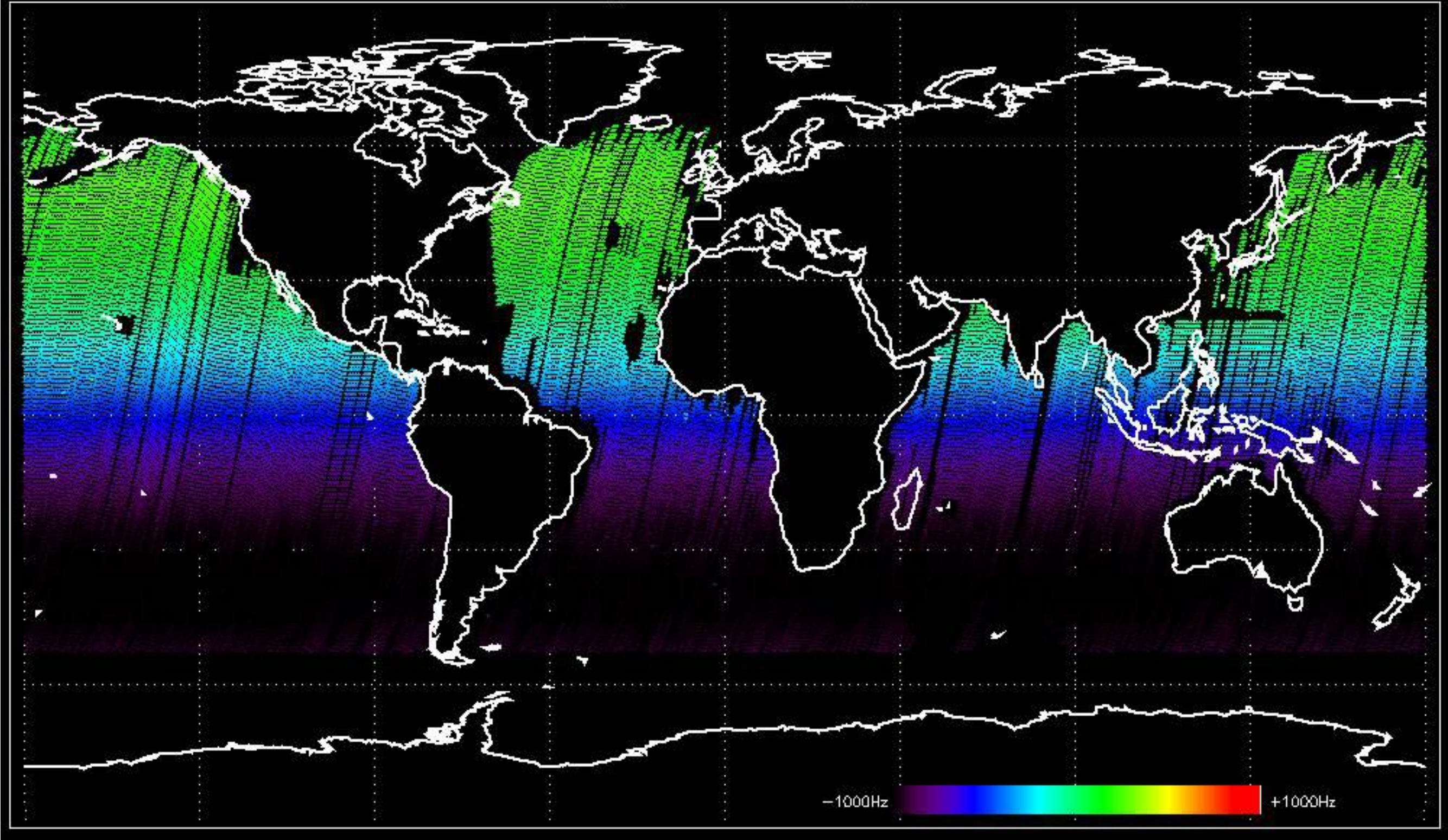
Doppler 'GM1' 'SS1' descending



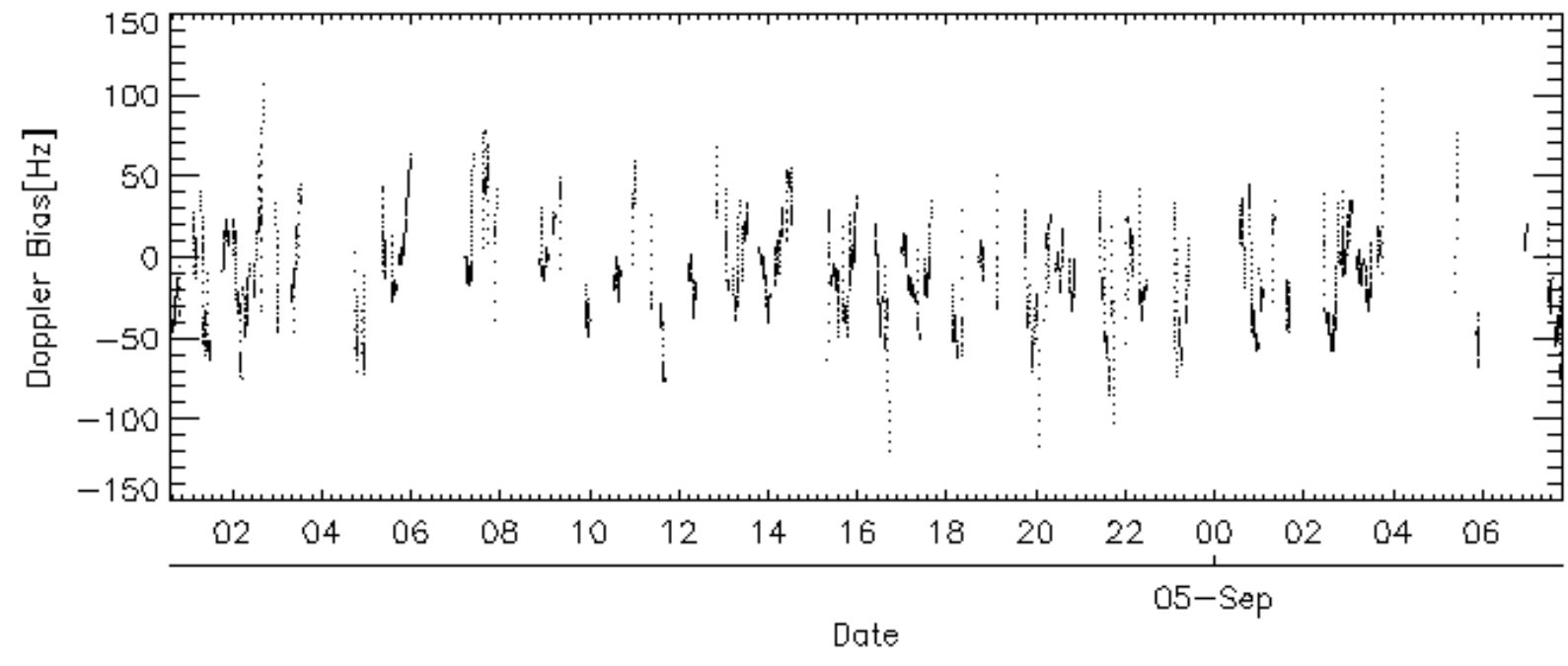
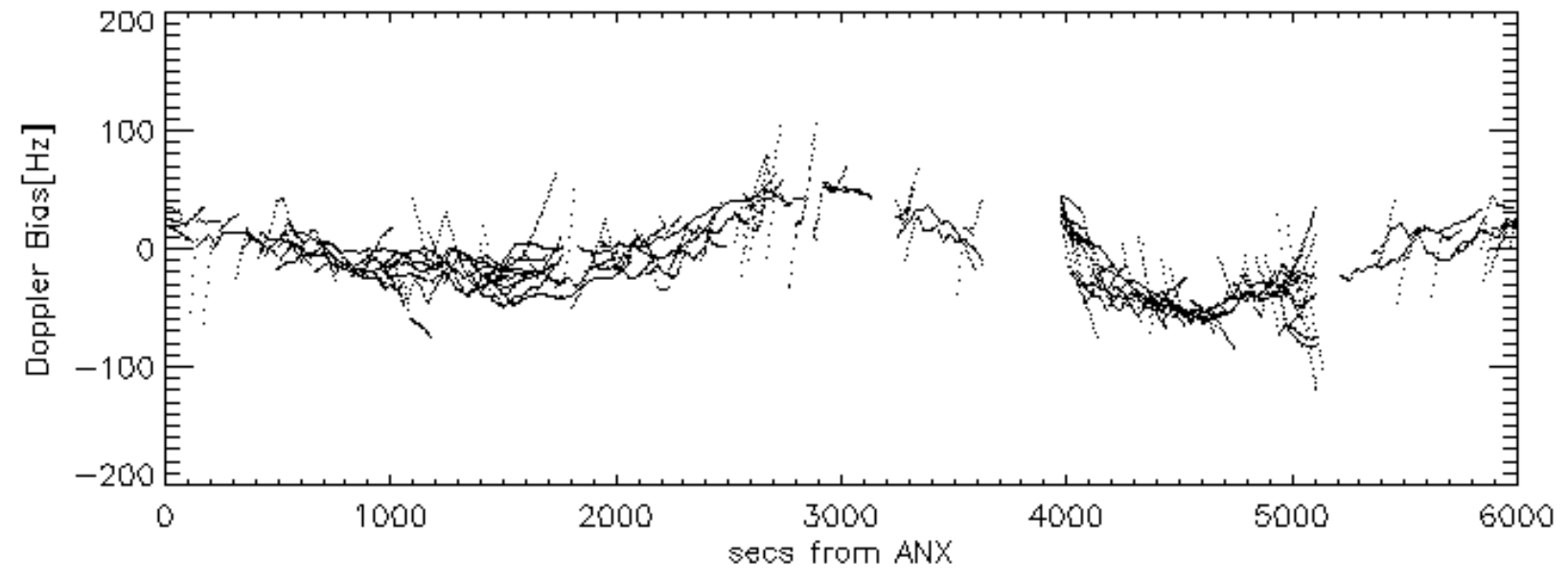
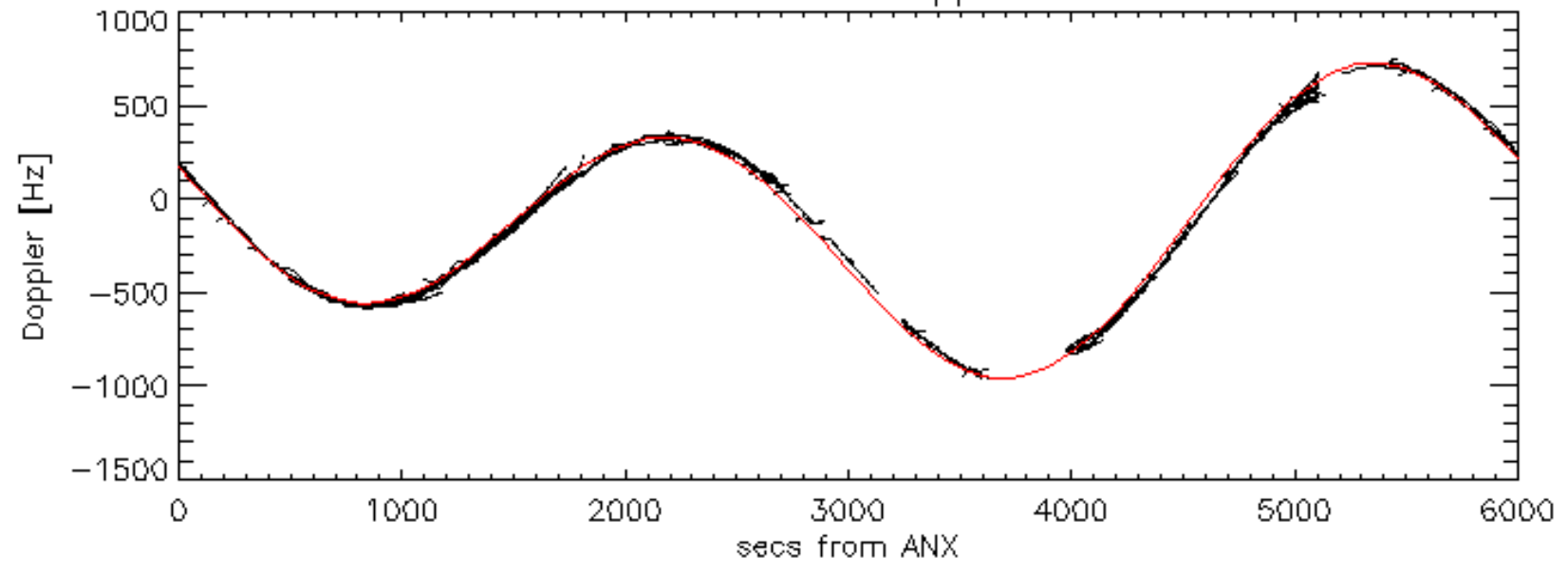
Doppler 'WVS' 'IS2' ascending

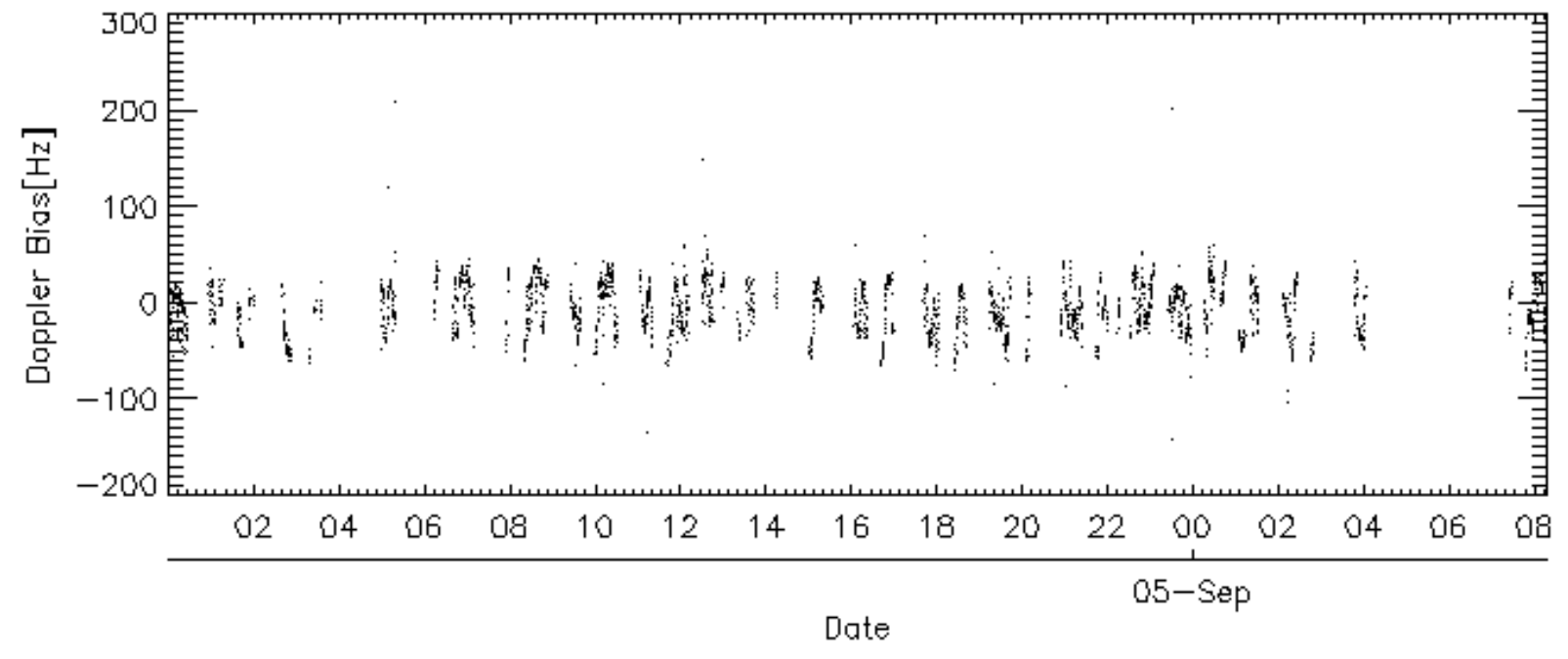
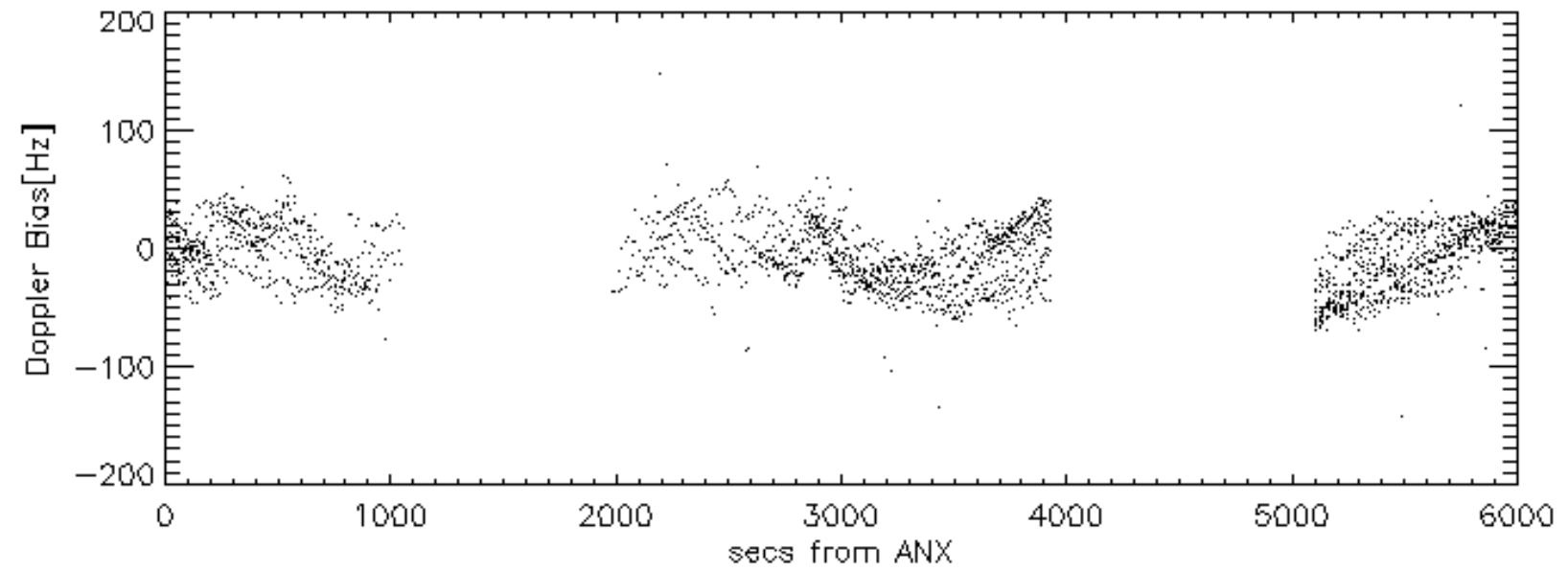
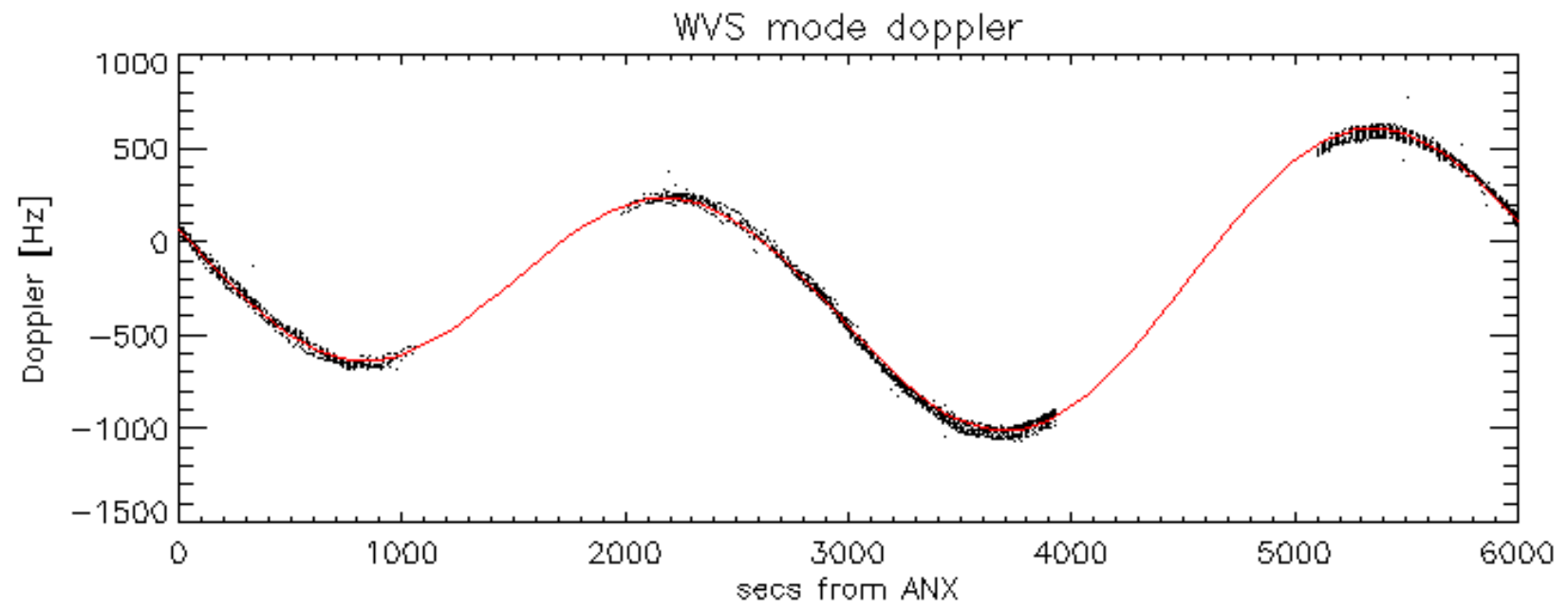


Doppler 'WVS' 'IS2' descending

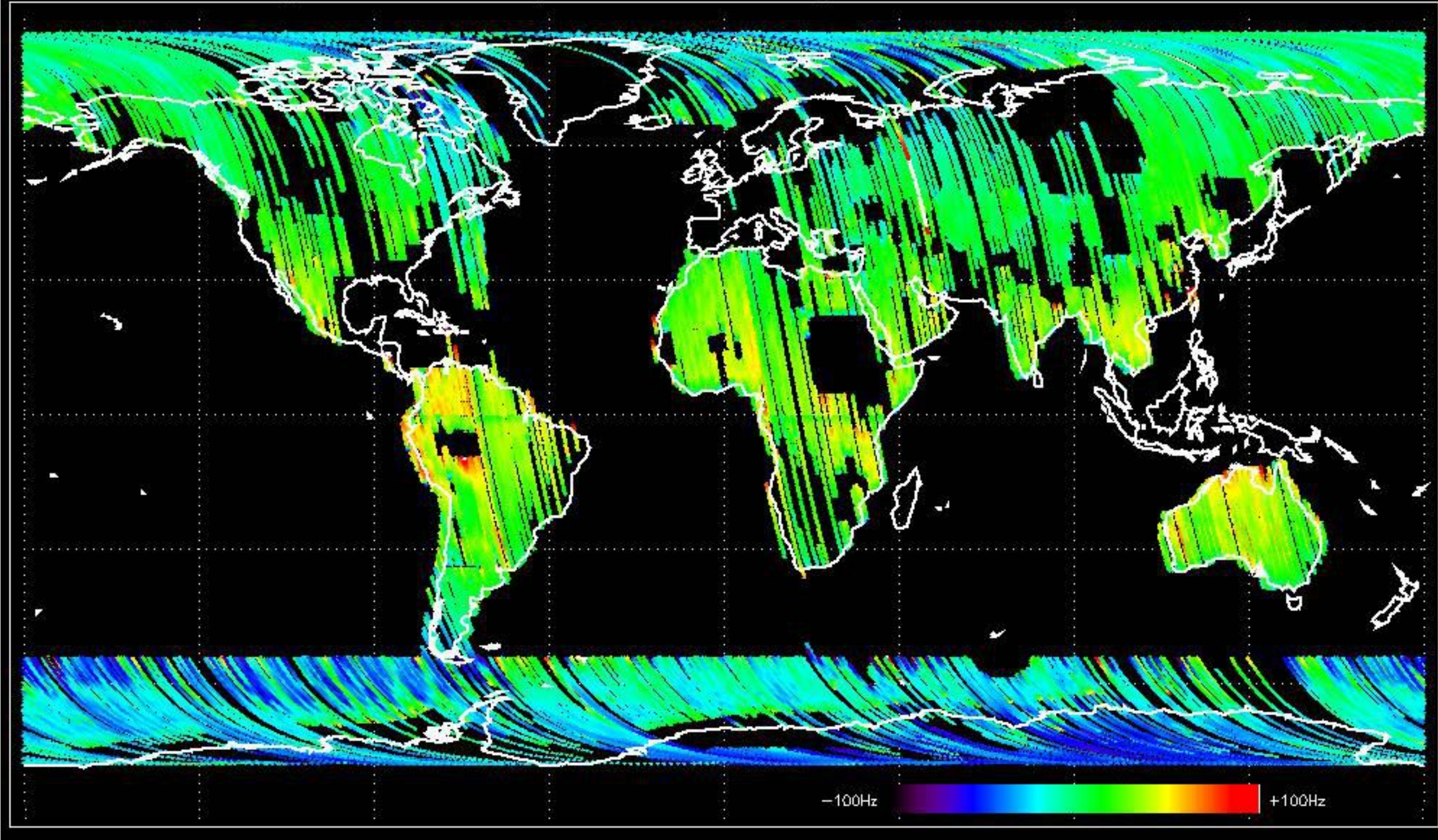


GM1 mode doppler

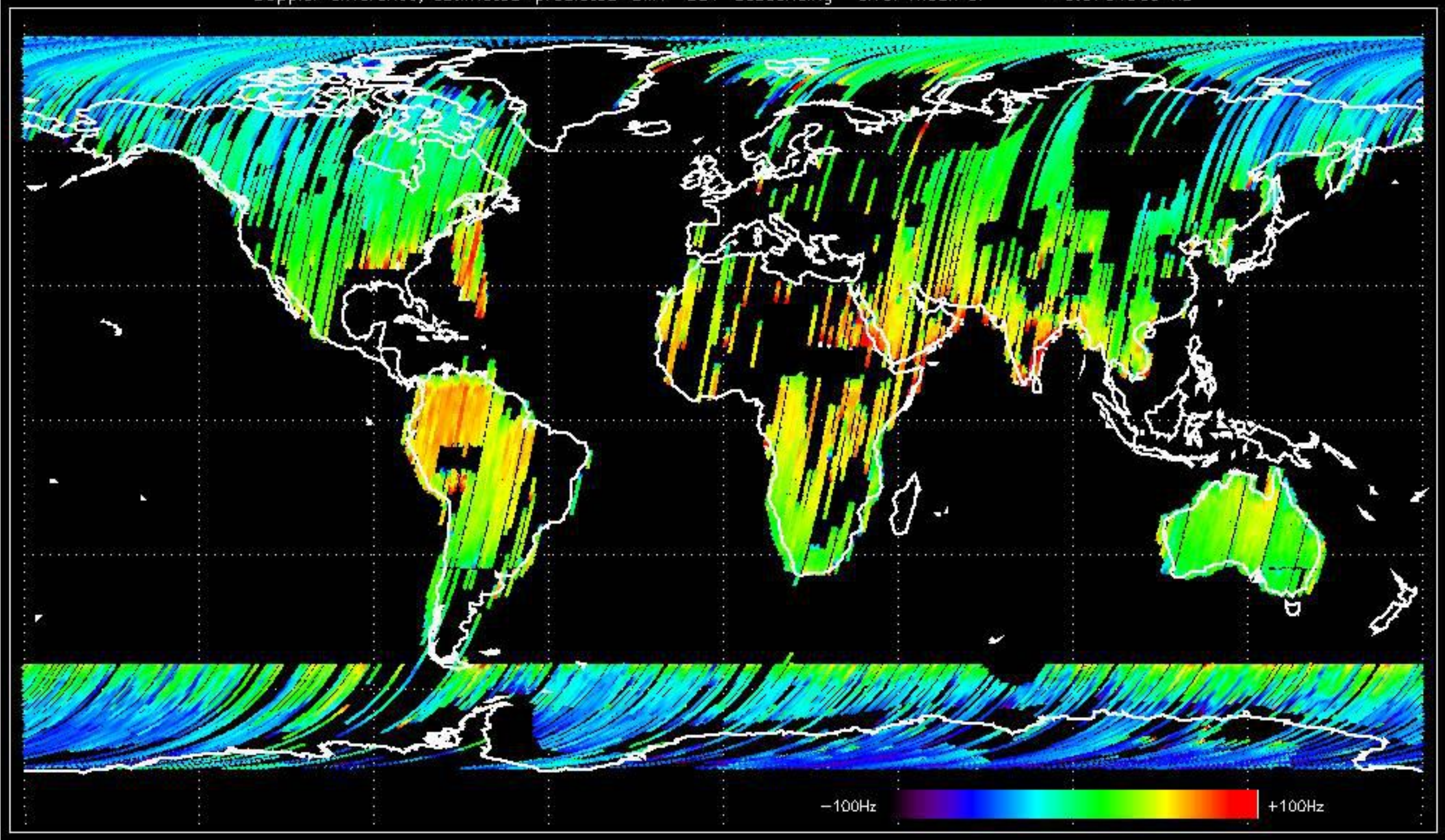




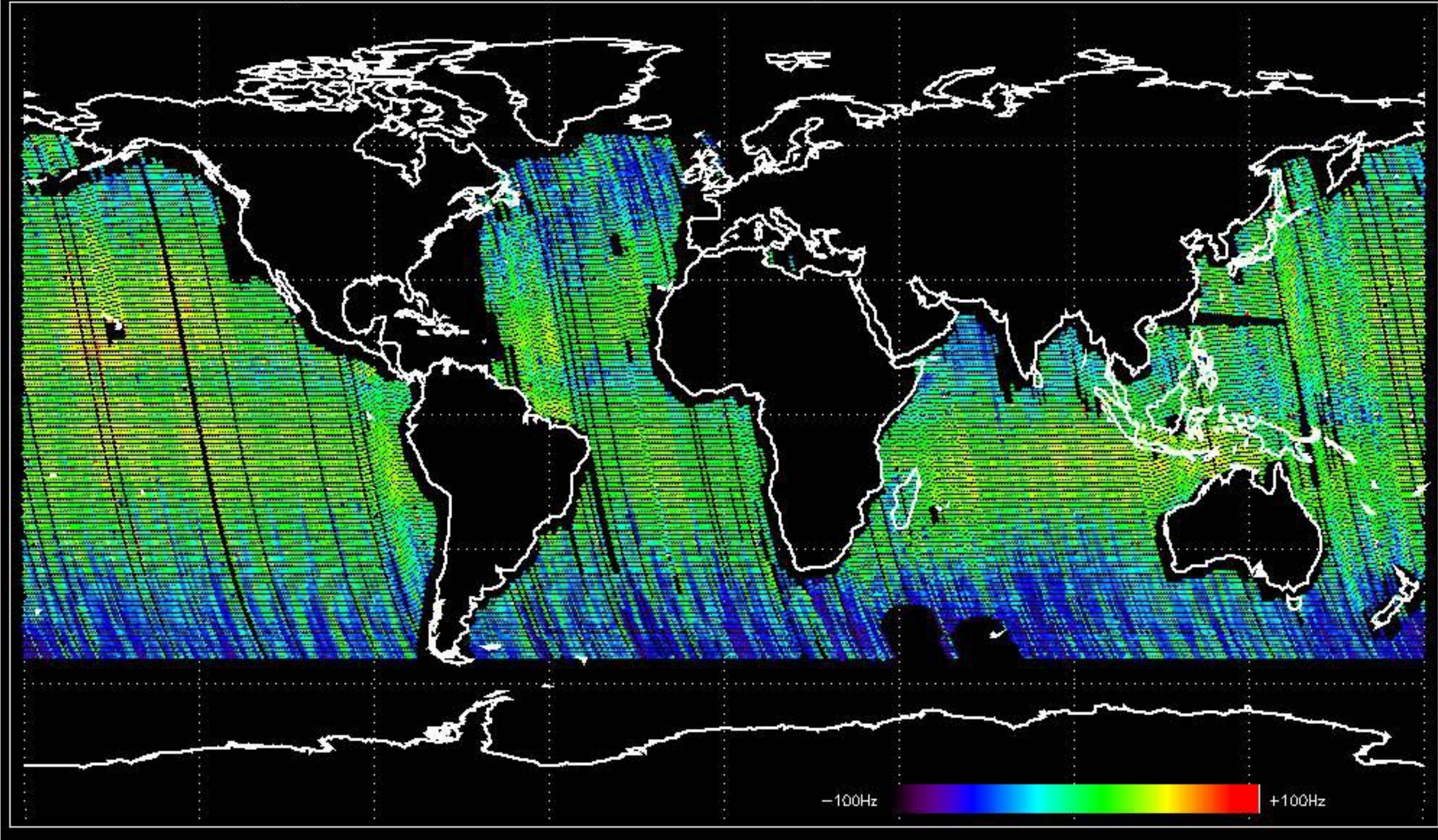
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.699956 Hz



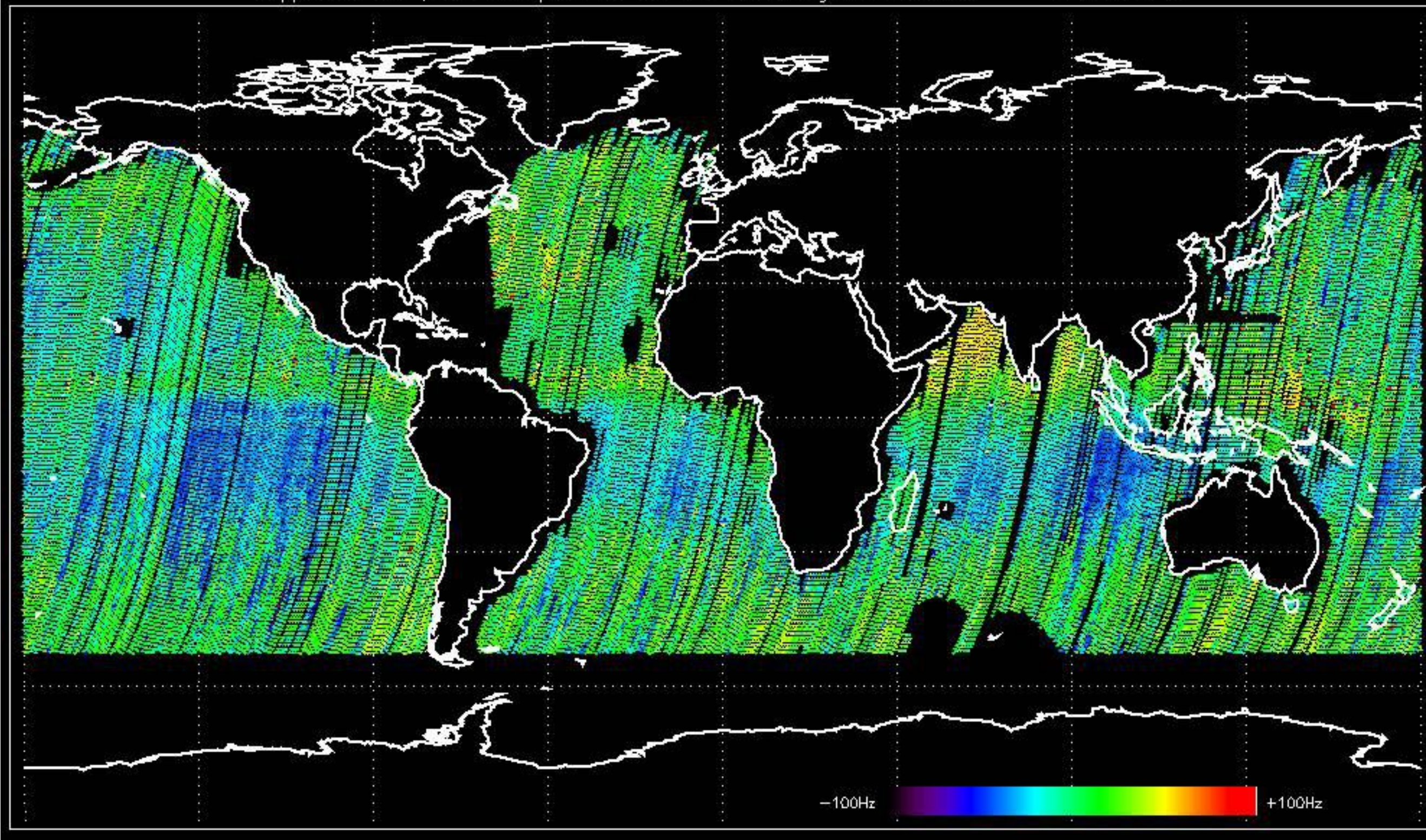
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.6764963 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -5.1073026 Hz

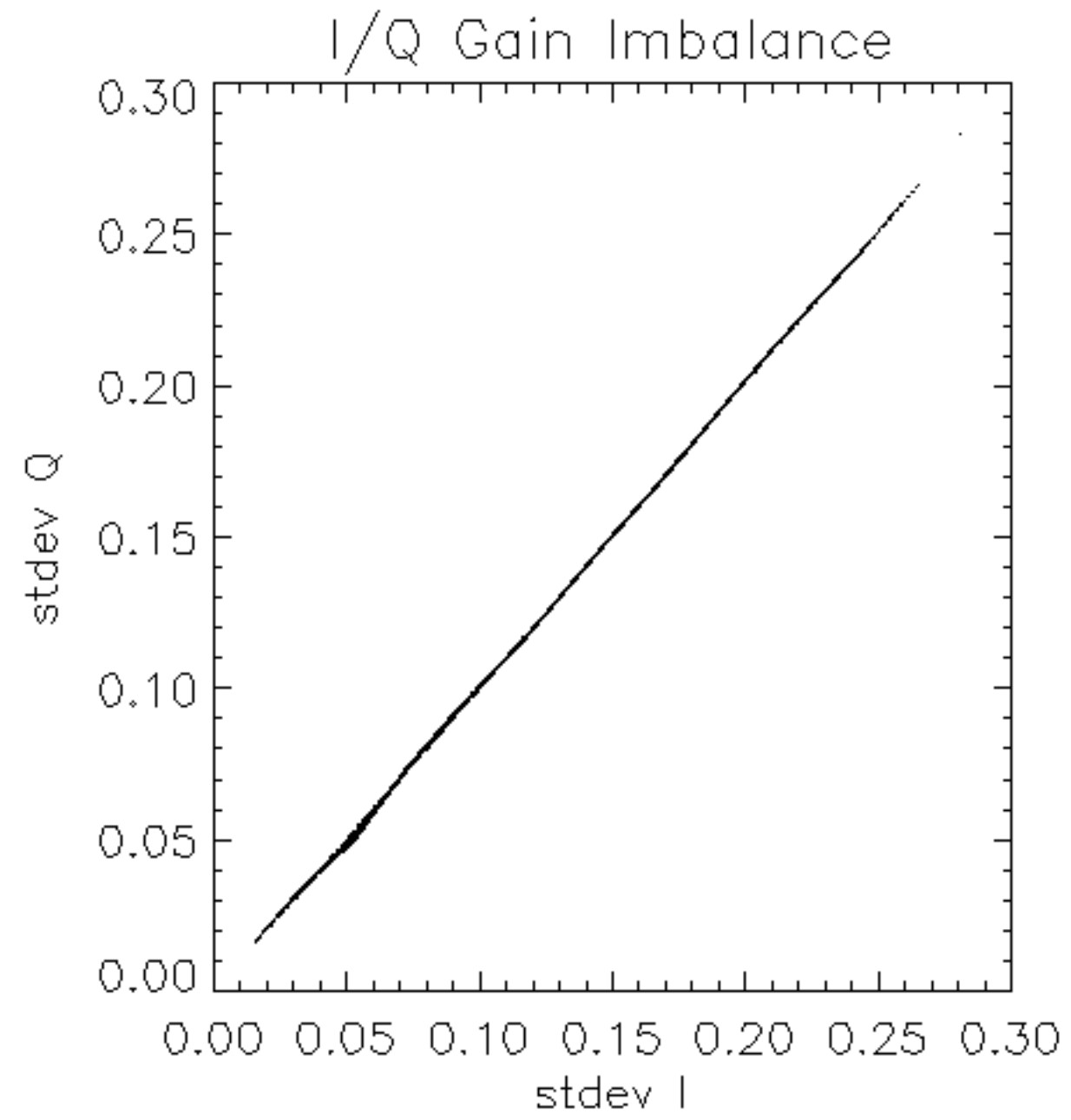


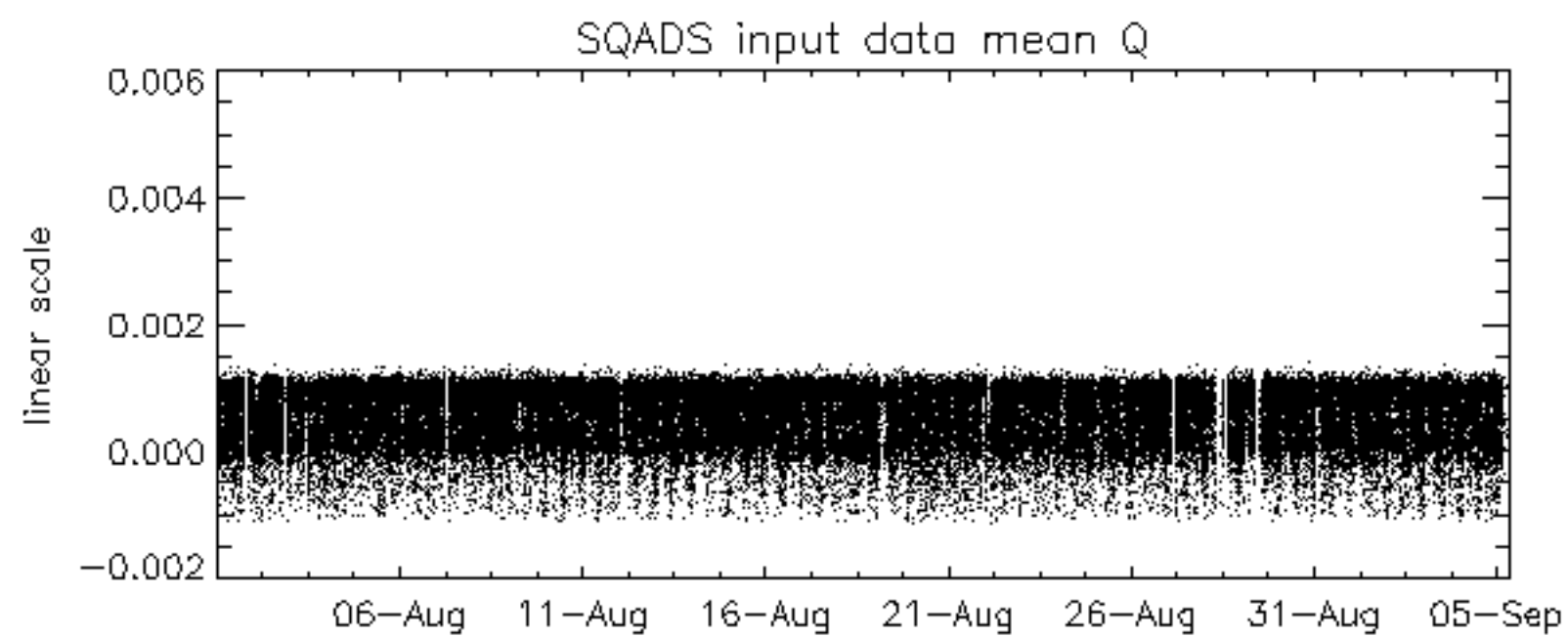
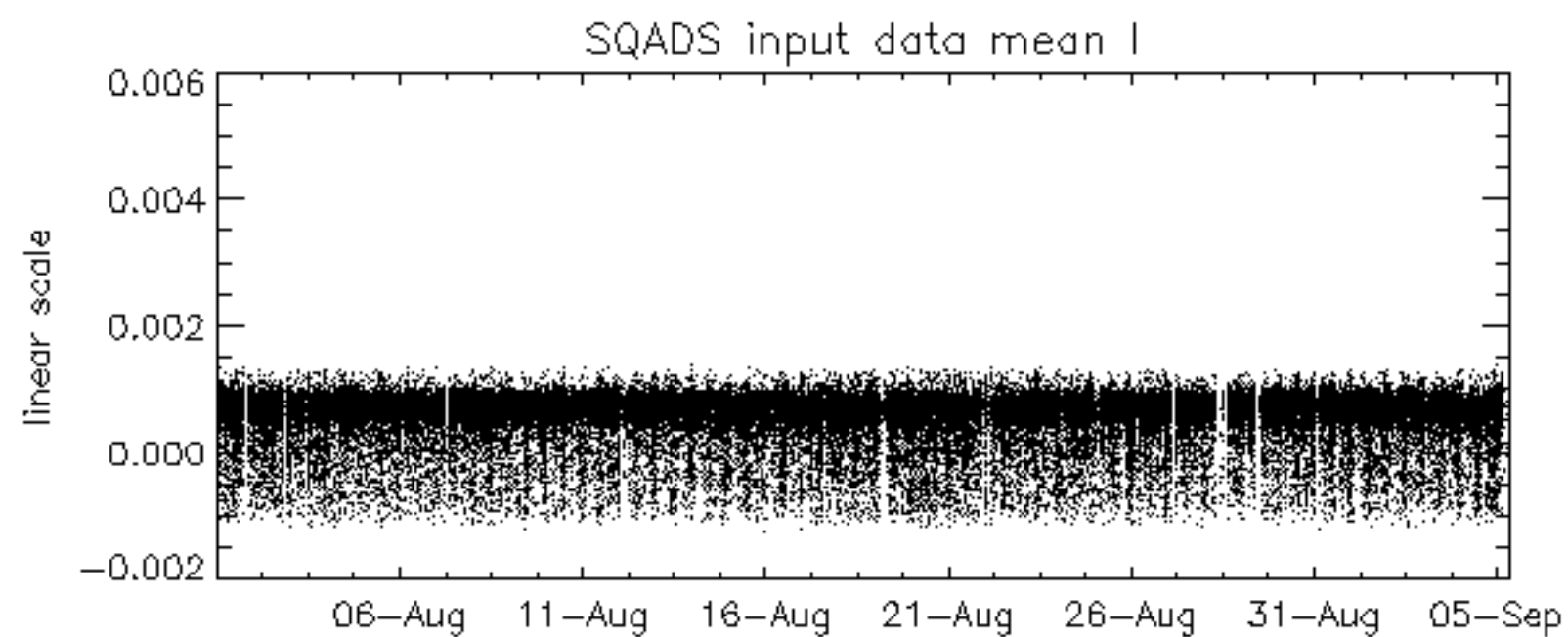
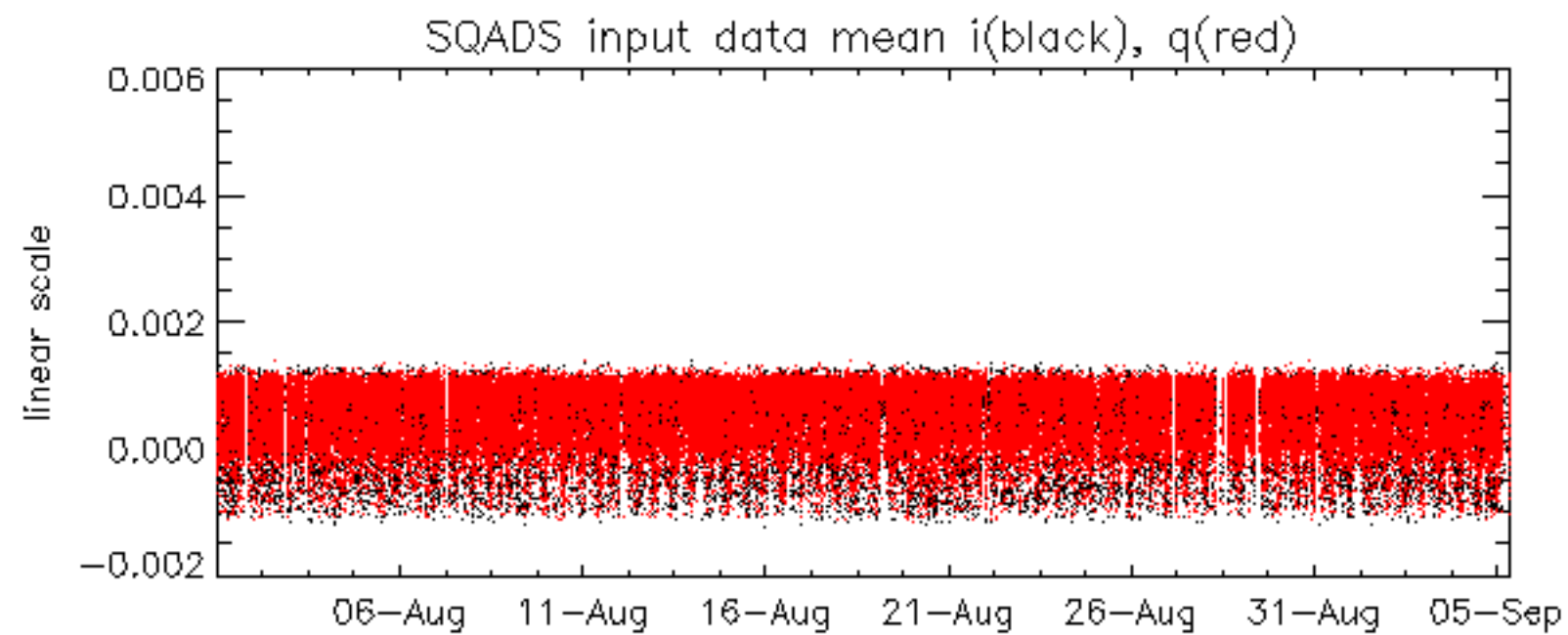
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.6041809 Hz

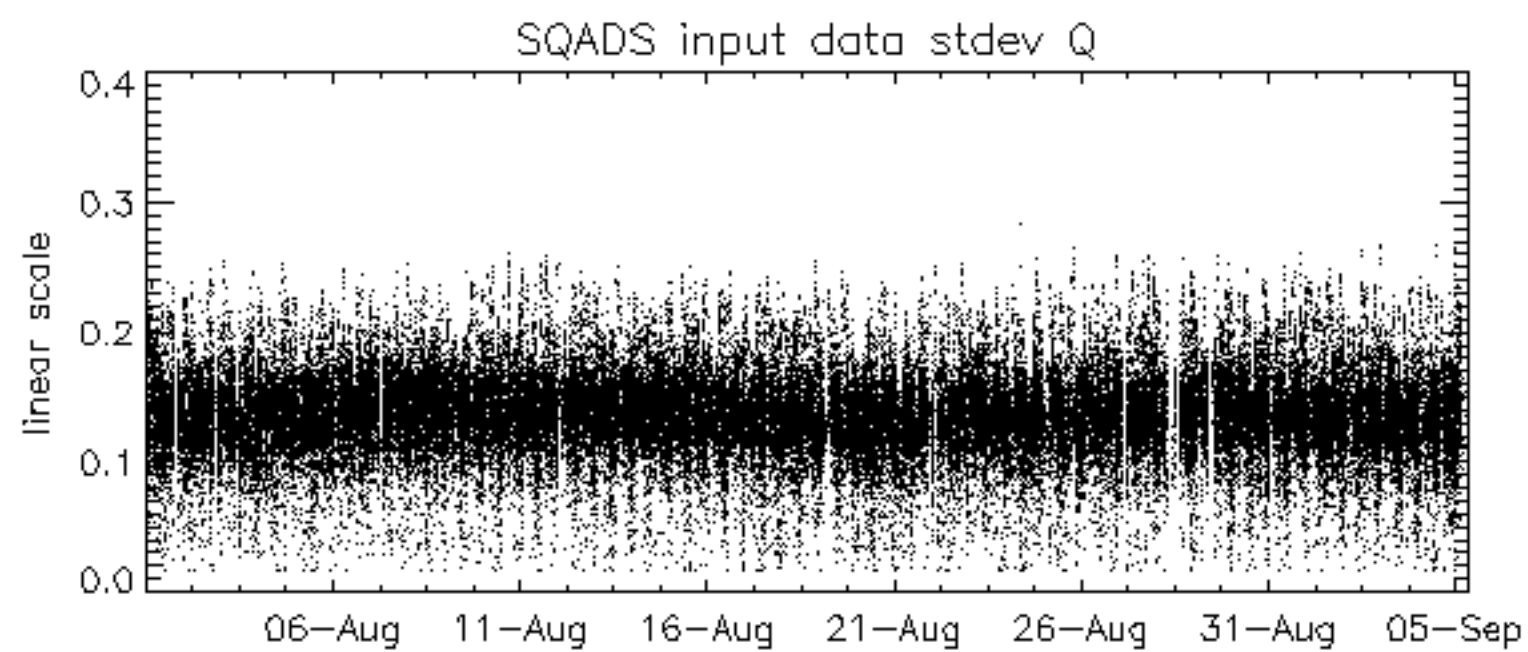
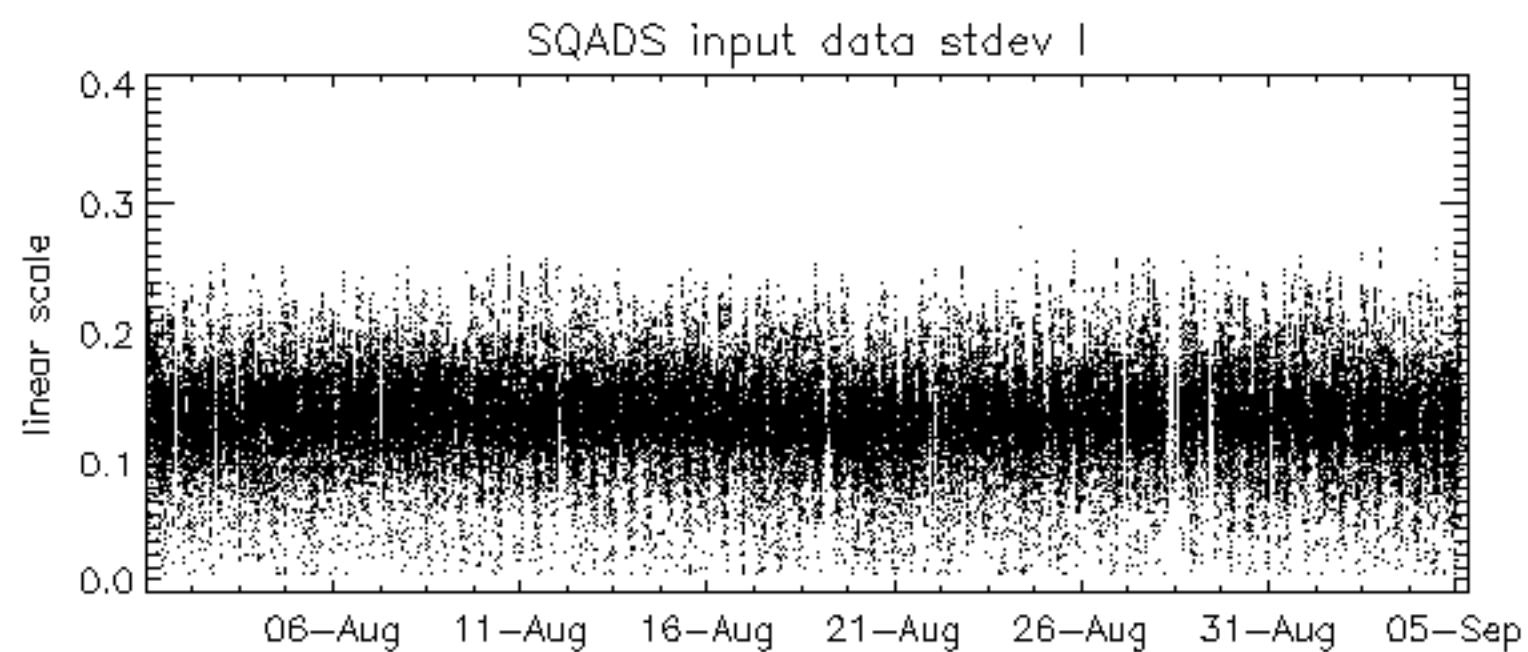
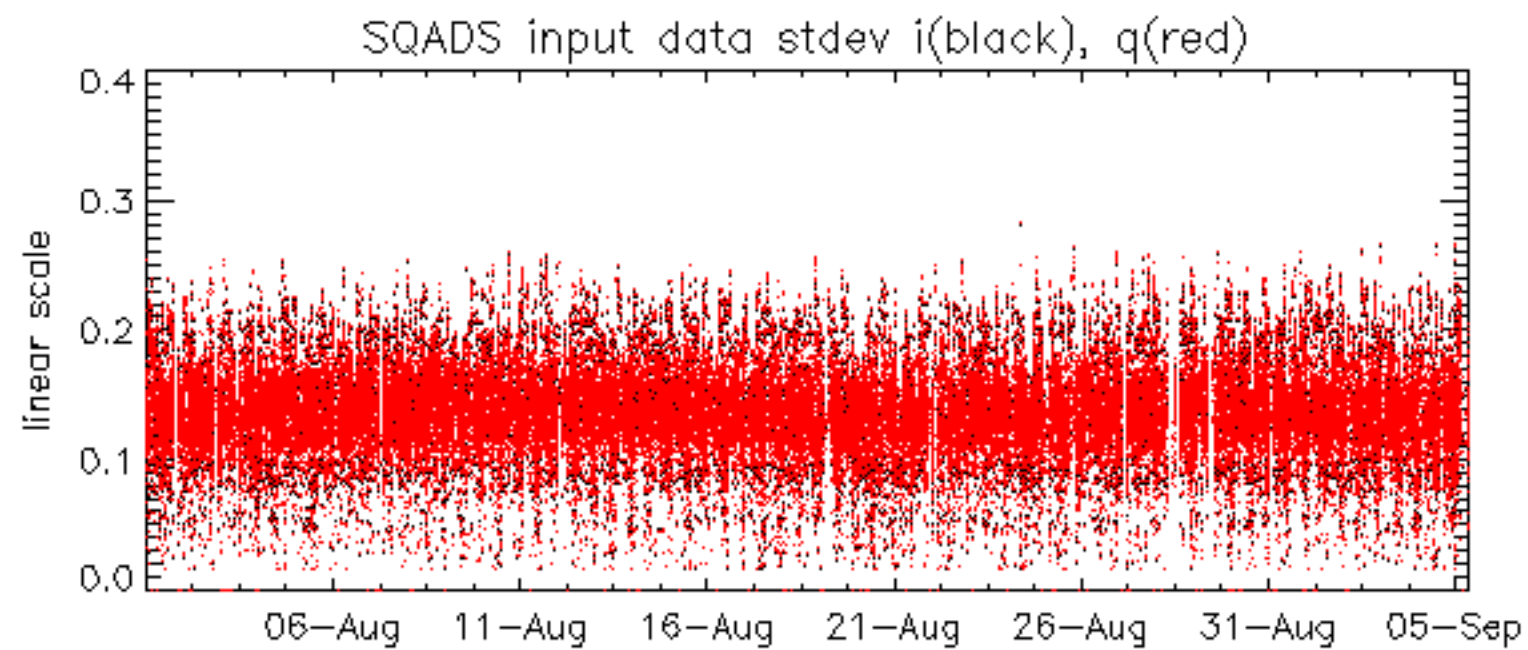


No anomalies observed on available MS products:

No anomalies observed.



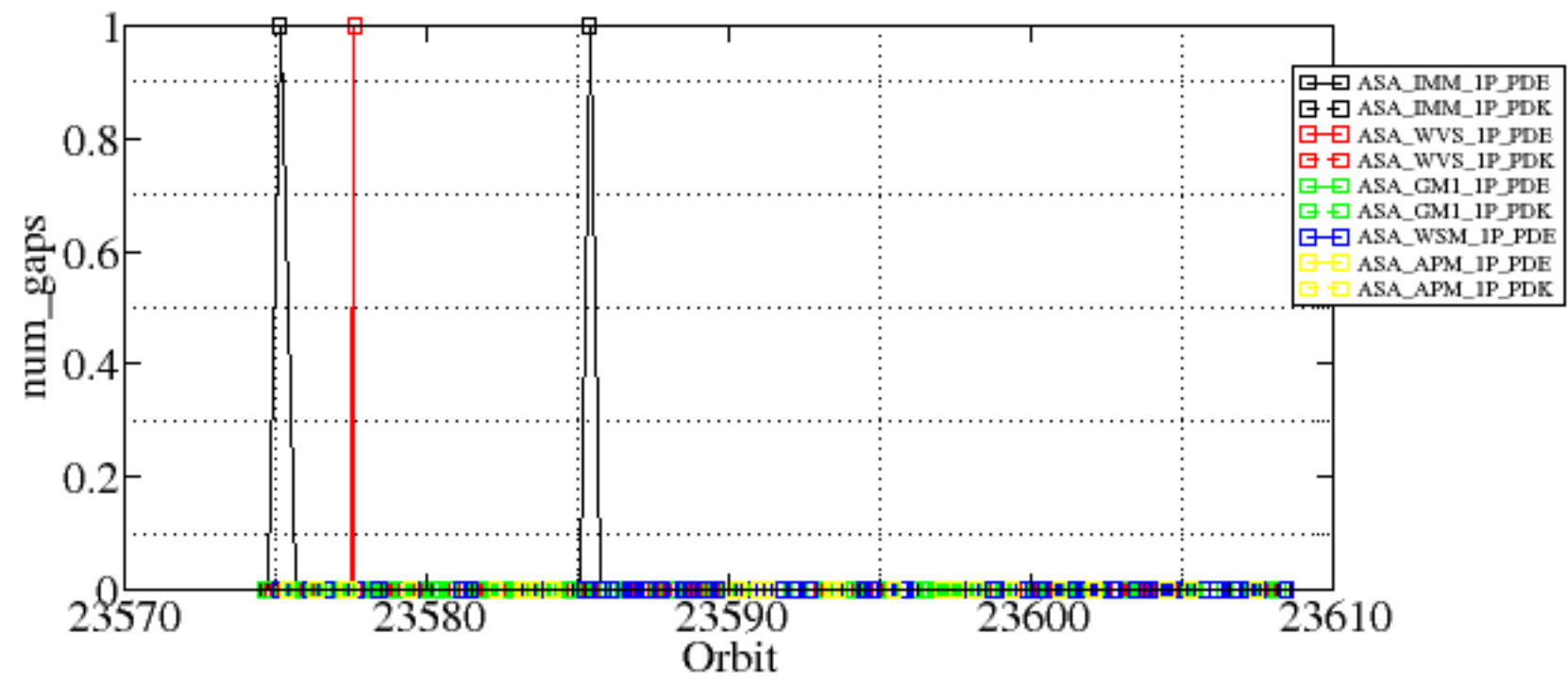


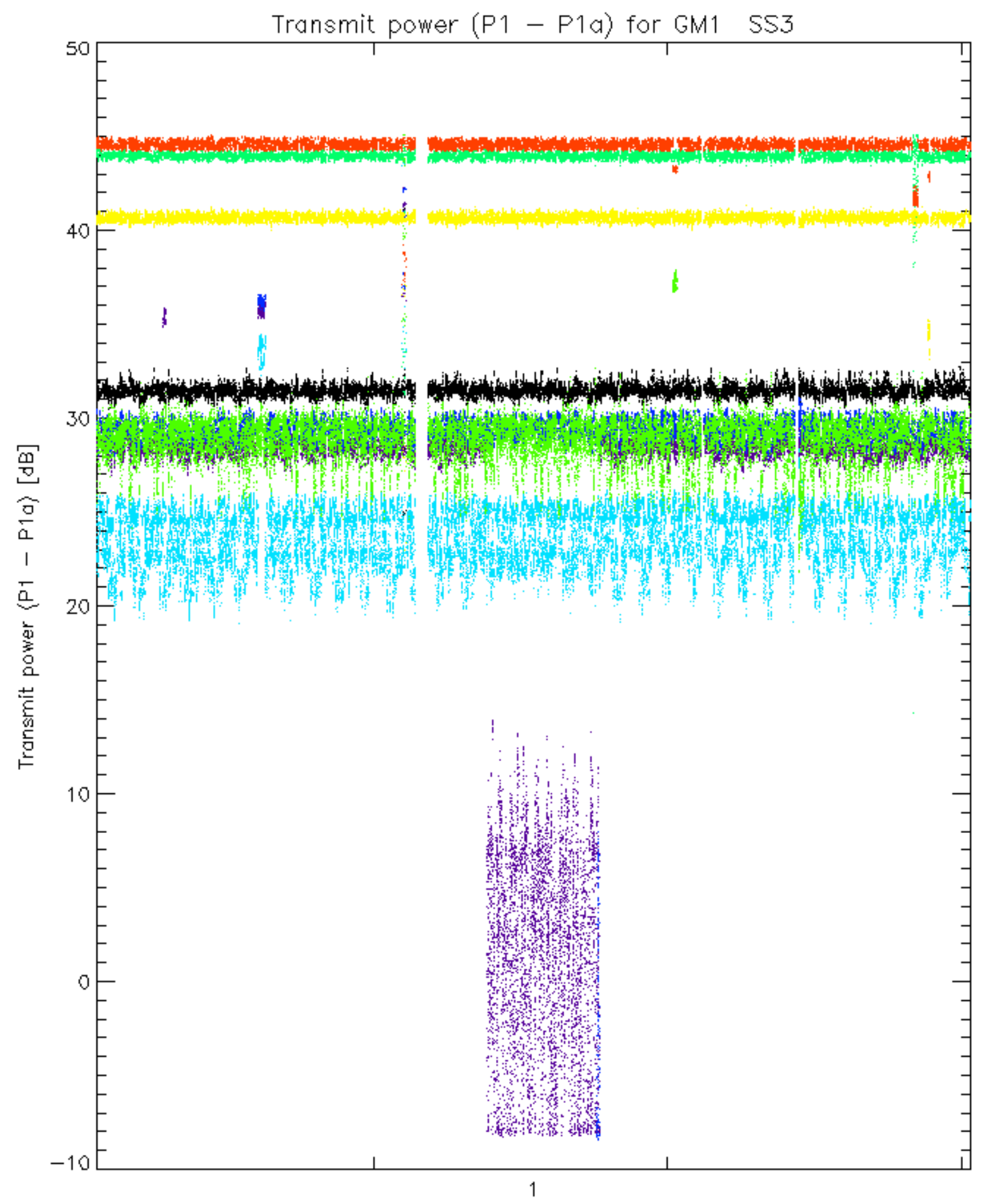


Summary of analysis for the last 3 days 2006090[345]

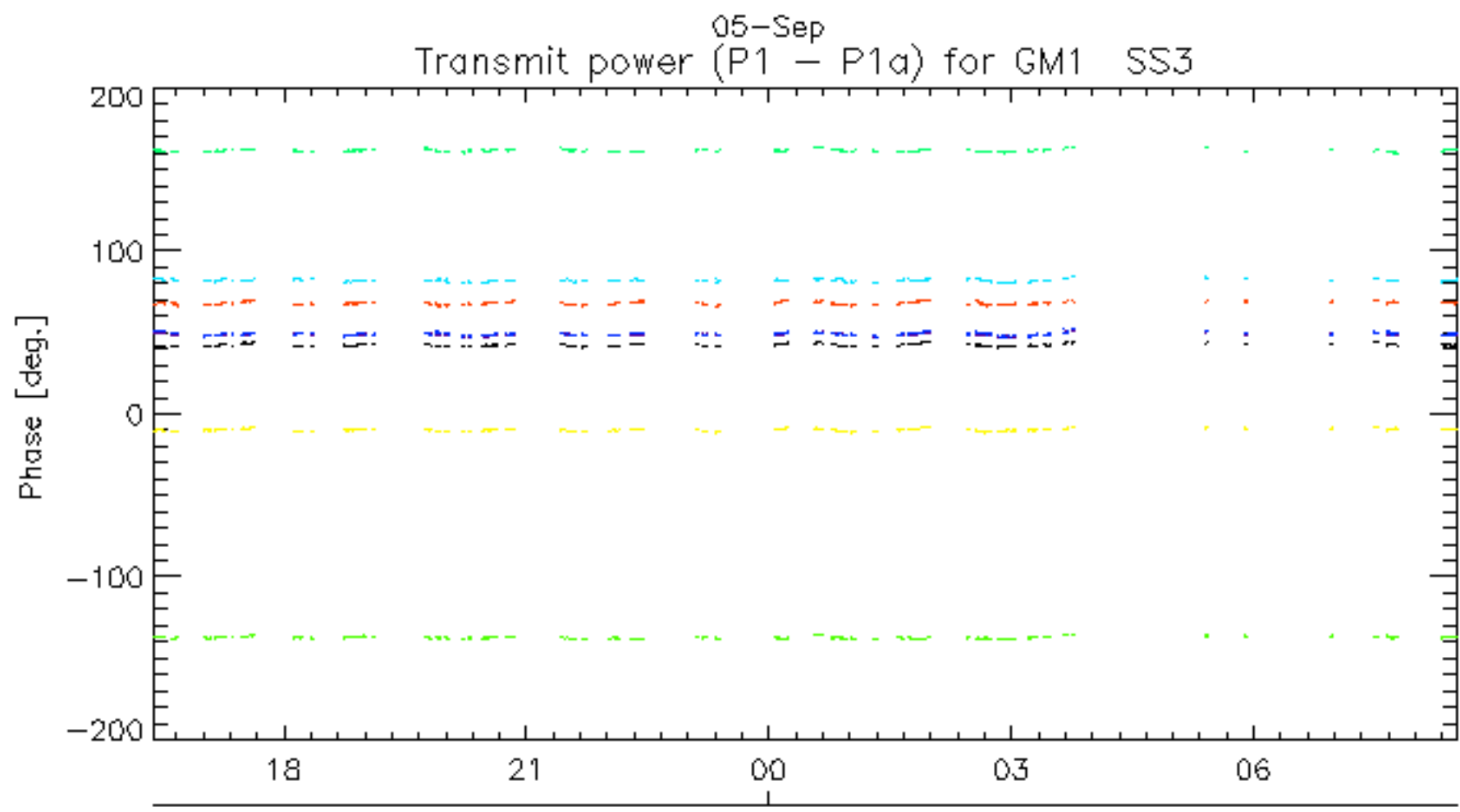
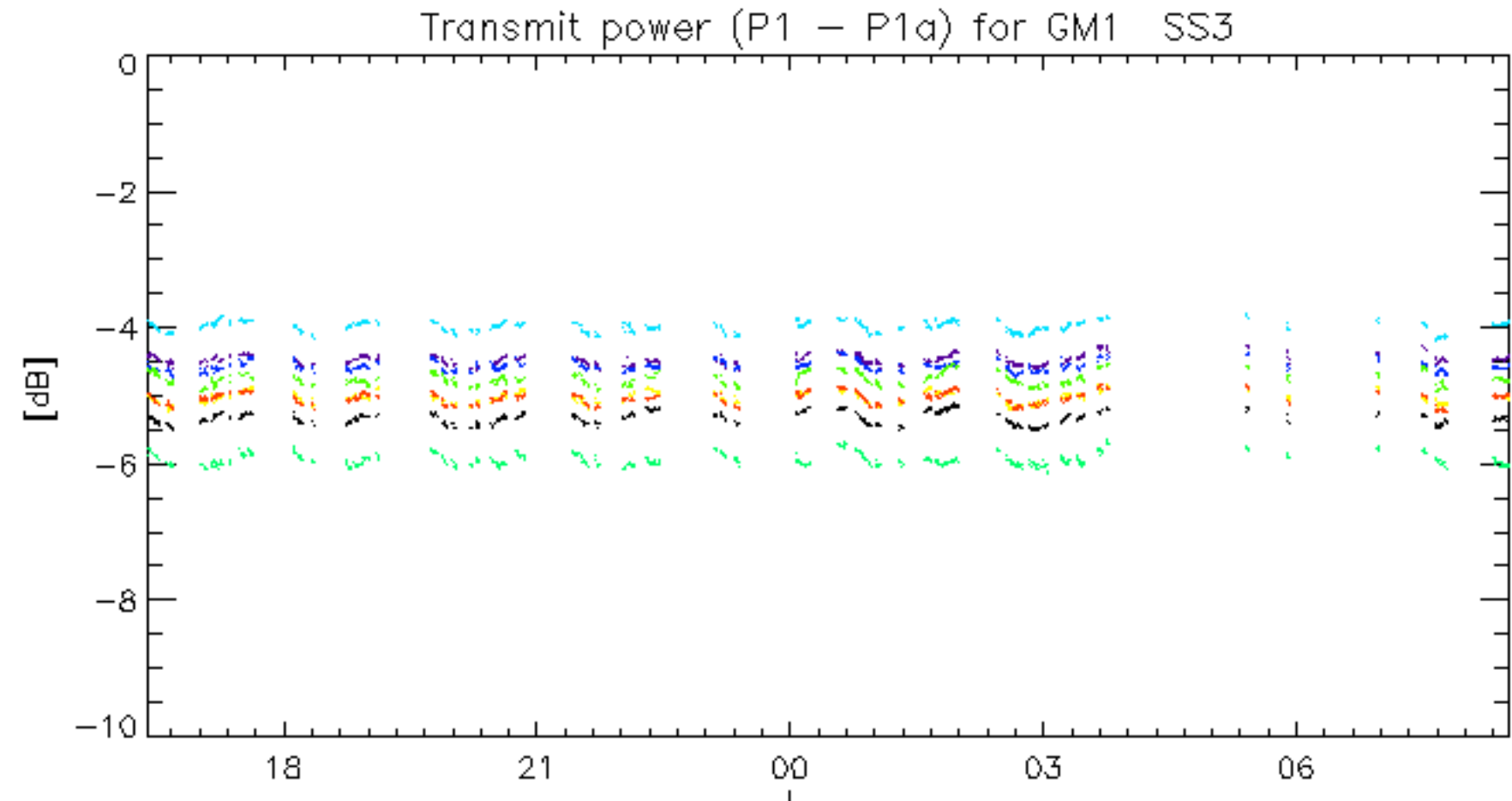
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

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_1PNPDE20060903_062830_000000852050_00478_23578_0648.N1	0	2
ASA_WSM_1PNPDE20060903_113116_000002082050_00481_23581_0666.N1	0	6
ASA_WSM_1PNPDE20060904_184217_000000852050_00500_23600_0914.N1	0	41

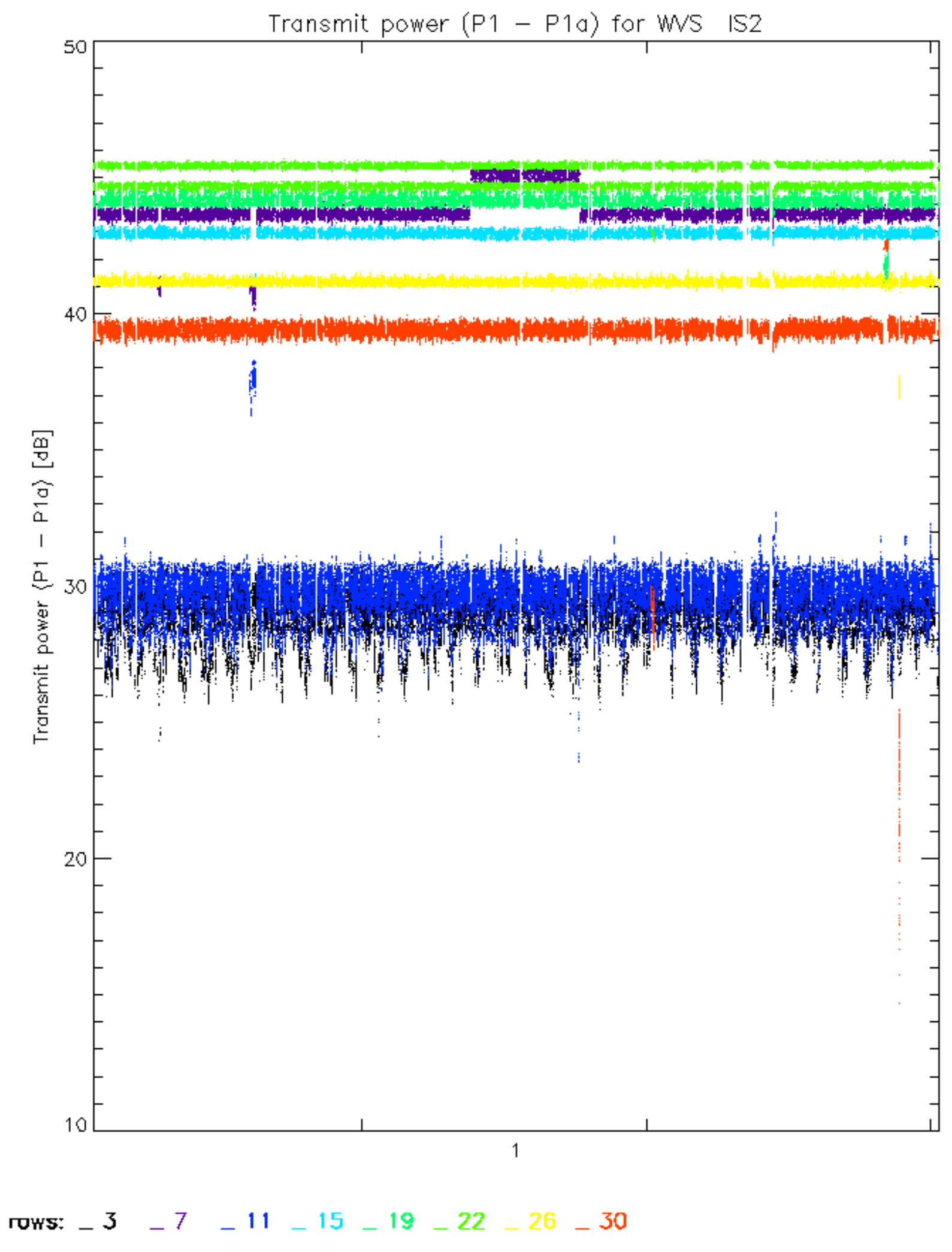


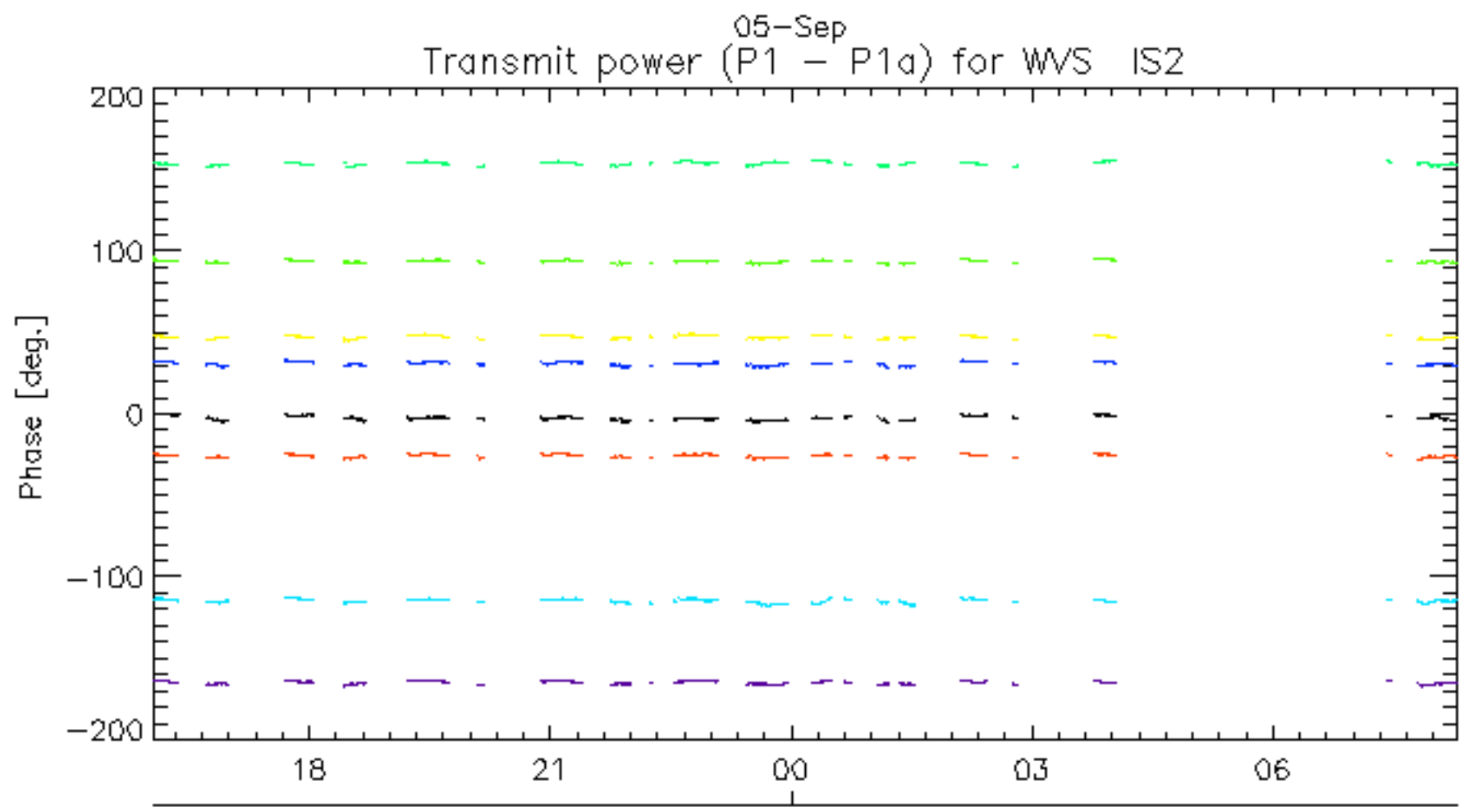
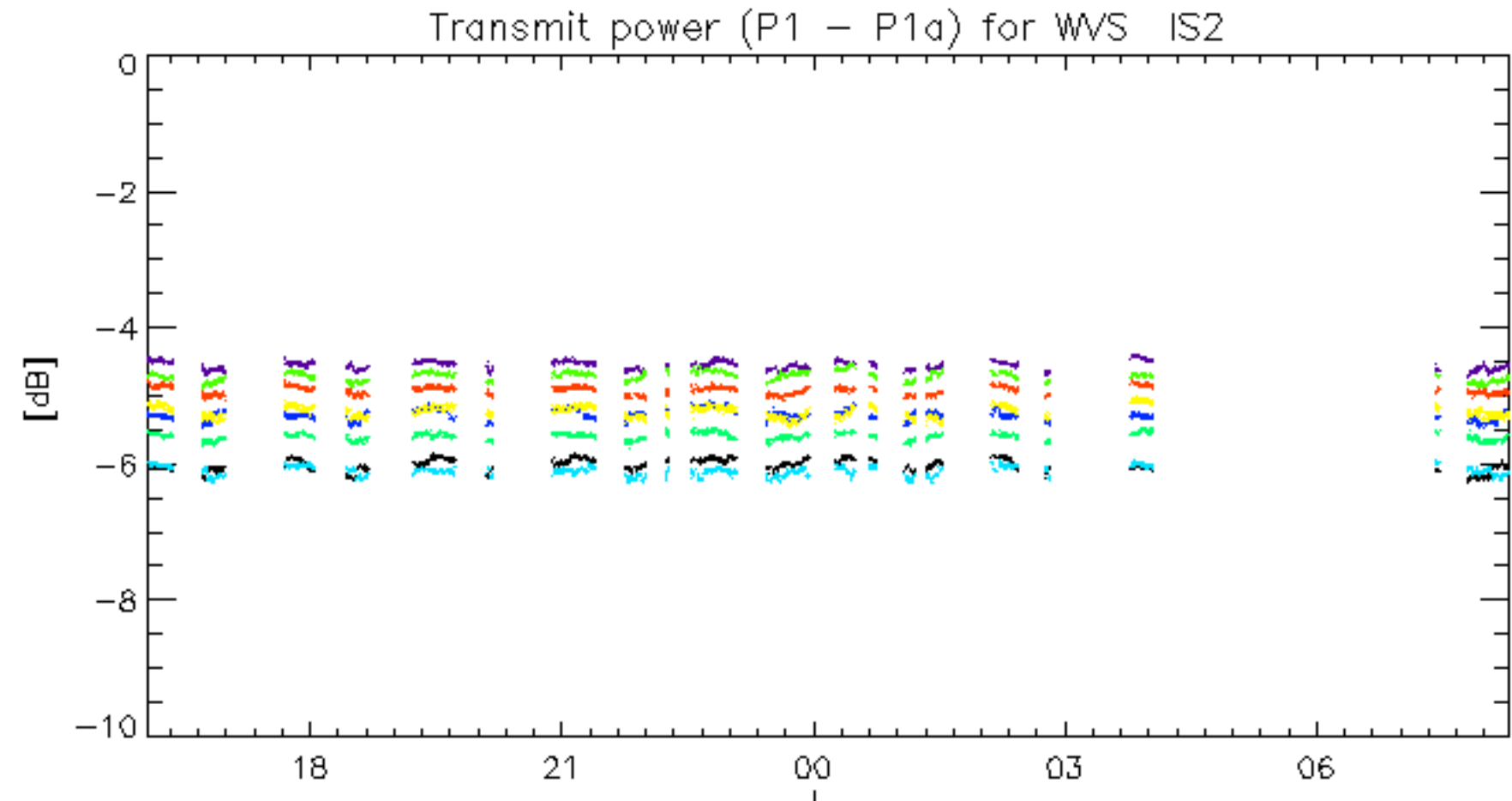


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No unavailabilities during the reported period.