

PRELIMINARY REPORT OF 061207

last update on Thu Dec 7 16:46:32 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 2006-12-06 00:00:00 to 2006-12-07 16:46:32

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	17	22	4	1	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	17	22	4	1	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	17	22	4	1	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	17	22	4	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	46	65	33	21	63
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	46	65	33	21	63
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	65	33	21	63
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	65	33	21	63

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	20061206 073841
H	20061207 070704

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
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒
☒

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	-3.959437	0.008412	-0.012968
7	P1	-3.152156	0.024178	-0.008820
11	P1	-4.130306	0.025201	0.000857
15	P1	-6.304568	0.015071	-0.051071
19	P1	-3.622297	0.006436	-0.063910
22	P1	-4.650744	0.012967	-0.022682
26	P1	-3.950184	0.010512	-0.010293
30	P1	-5.874853	0.009631	-0.053643
3	P1	-16.515980	0.238573	-0.008126
7	P1	-17.291824	0.182922	-0.061438
11	P1	-17.194351	0.457661	-0.067029
15	P1	-13.066818	0.137363	-0.036124
19	P1	-14.938132	0.092423	-0.150138
22	P1	-15.858047	0.529909	-0.014834
26	P1	-15.053508	0.197263	-0.031503
30	P1	-17.498768	0.475704	-0.127250

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.829163	0.092870	0.054044
7	P2	-21.732178	0.095603	-0.004803
11	P2	-15.629451	0.104403	0.108462
15	P2	-7.120630	0.108417	-0.009714
19	P2	-9.190382	0.106835	-0.013270
22	P2	-18.234304	0.099107	-0.022077
26	P2	-16.562468	0.114187	-0.069858
30	P2	-19.466711	0.089665	0.017149

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.242354	0.008825	-0.023474
7	P3	-8.242354	0.008825	-0.023474
11	P3	-8.242354	0.008825	-0.023474
15	P3	-8.242354	0.008825	-0.023474
19	P3	-8.242354	0.008825	-0.023474
22	P3	-8.242354	0.008825	-0.023474
26	P3	-8.242304	0.008835	-0.023915
30	P3	-8.242304	0.008835	-0.023915

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	-3.910907	0.024648	-0.011450
7	P1	-2.498116	0.116703	0.065214
11	P1	-2.855294	0.027120	0.022968
15	P1	-3.681822	0.040232	0.016106
19	P1	-3.528647	0.017665	-0.037736
22	P1	-5.033389	0.022626	0.038453
26	P1	-6.007531	0.028444	-0.063724
30	P1	-5.326327	0.039479	-0.068915
3	P1	-11.727370	0.090446	-0.037977
7	P1	-10.058679	0.195864	0.008202
11	P1	-10.328415	0.129691	0.009533
15	P1	-10.729919	0.156074	0.119935
19	P1	-15.701697	0.105597	-0.091574
22	P1	-21.502029	1.436142	-0.392937
26	P1	-16.060621	0.326328	-0.099567
30	P1	-17.893698	0.384948	0.080620

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.463703	0.105422	-0.037874
7	P2	-22.228903	0.269252	-0.050023
11	P2	-10.926366	0.121280	0.062025
15	P2	-4.974457	0.212485	-0.053383
19	P2	-6.955056	0.240881	-0.014023
22	P2	-8.254374	0.170711	0.004854
26	P2	-24.322340	0.187991	0.009842
30	P2	-21.953098	0.149188	-0.003417

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.088720	0.003900	-0.016075
7	P3	-8.088672	0.003889	-0.016112
11	P3	-8.088781	0.003894	-0.015950
15	P3	-8.088659	0.003890	-0.016203
19	P3	-8.088748	0.003896	-0.015914
22	P3	-8.088662	0.003885	-0.016328
26	P3	-8.088687	0.003897	-0.016157
30	P3	-8.088684	0.003905	-0.015509

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	0.000547616
	stdev	1.78103e-07
MEAN Q	mean	0.000514103
	stdev	2.19903e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137211
	stdev	0.00116358
STDEV Q	mean	0.137584
	stdev	0.00118215



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006120[567]

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_1PNPDE20061205_143228_000004462053_00311_24914_0242.N1	0	28
ASA_WSM_1PNPDE20061206_003703_000002612053_00317_24920_0976.N1	0	34
ASA_WSM_1PNPDE20061207_000625_000003242053_00331_24934_2346.N1	0	37







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)


Ascending


Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

✕

Ascending

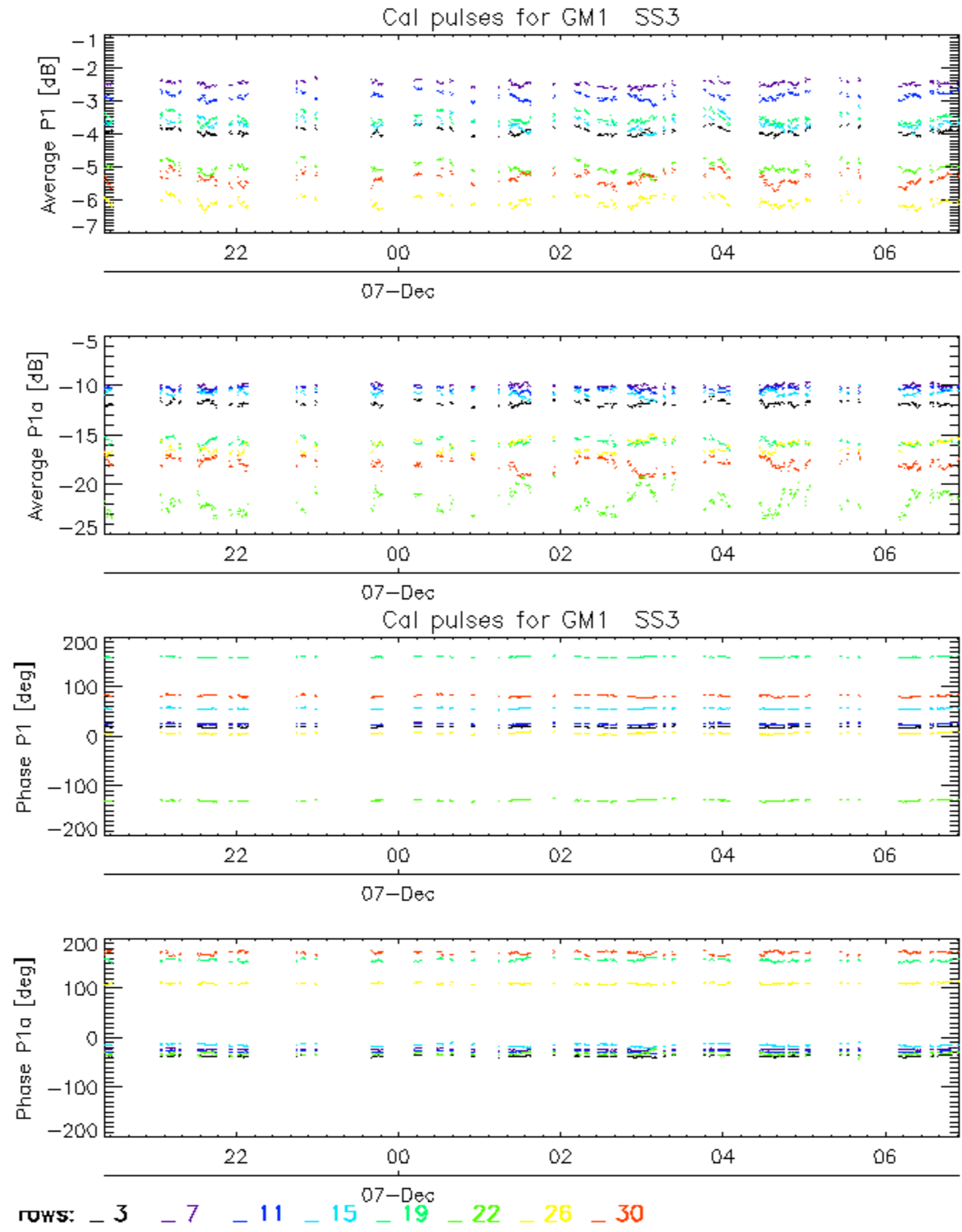
✕

Descending

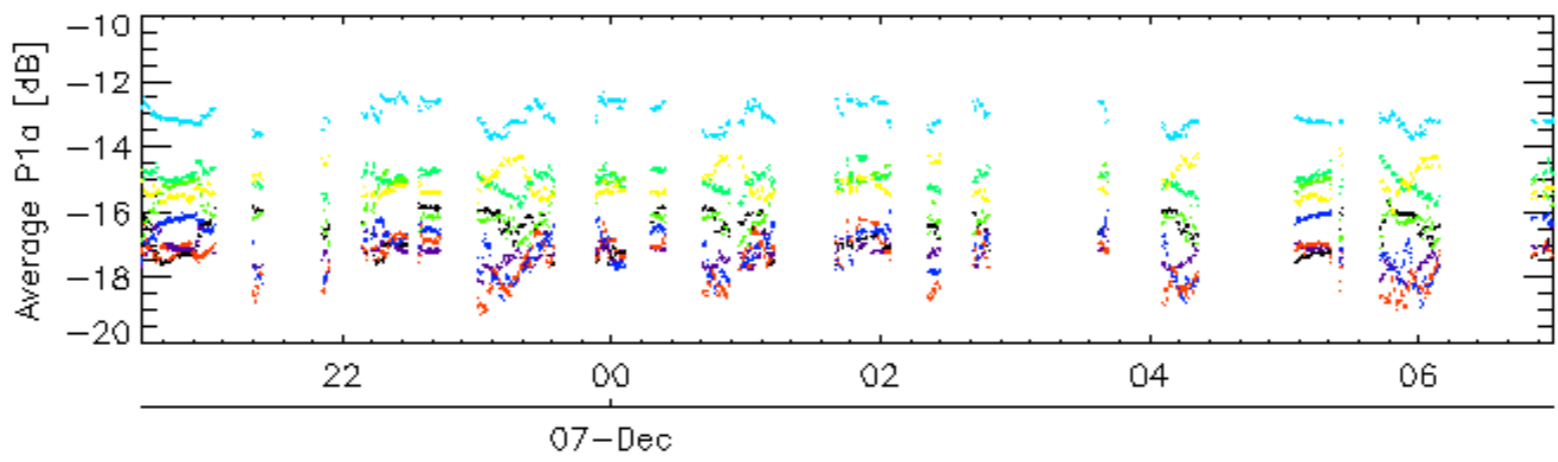
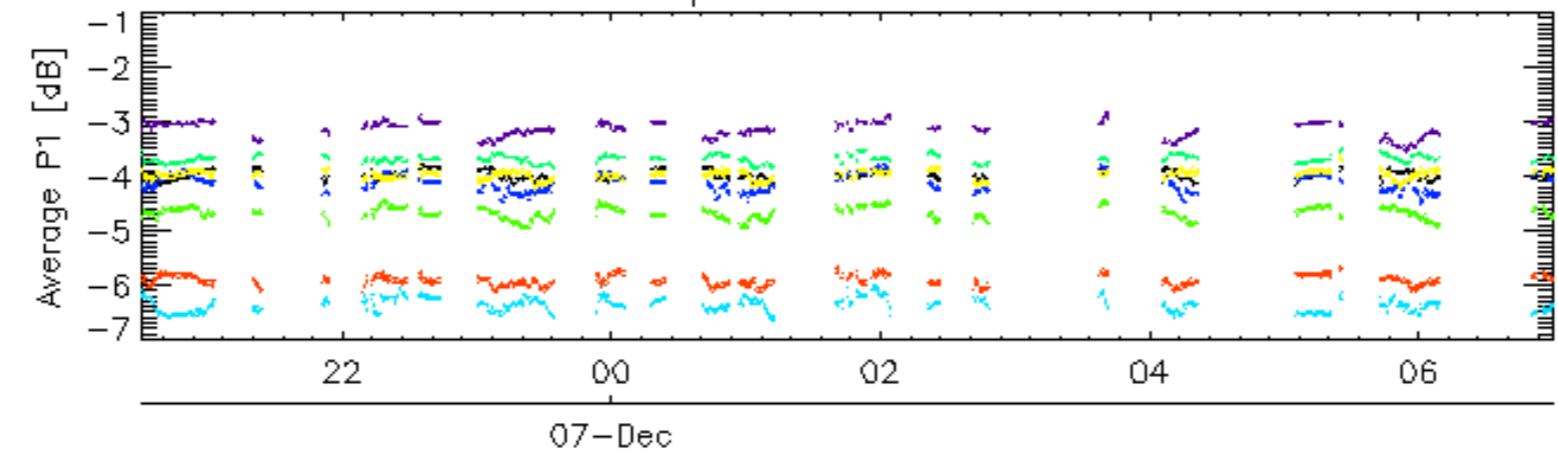
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

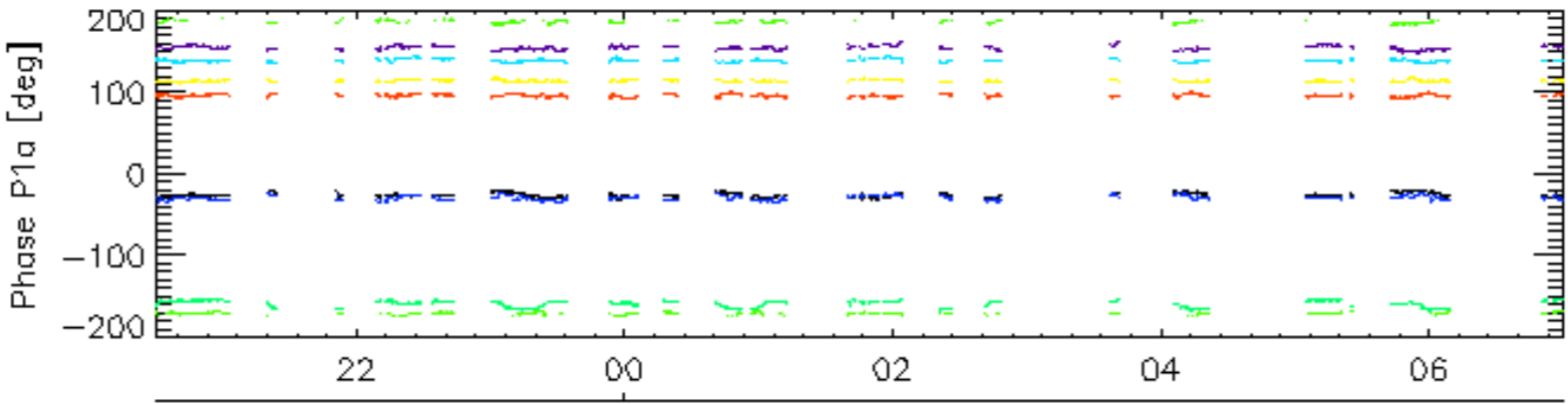
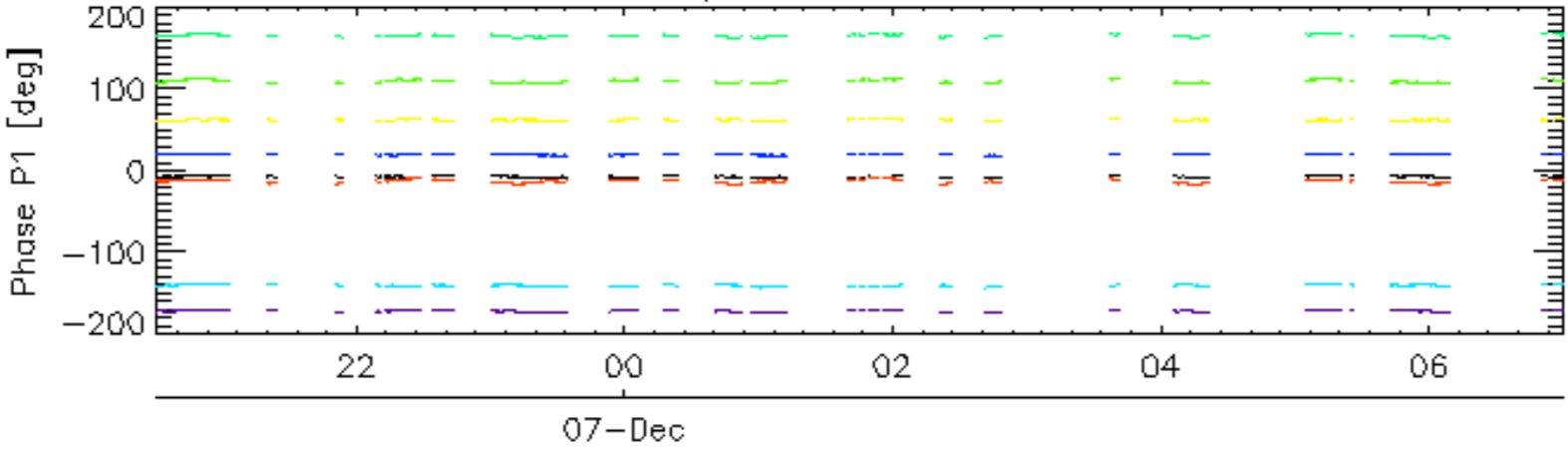
✕



Cal pulses for WVS IS2

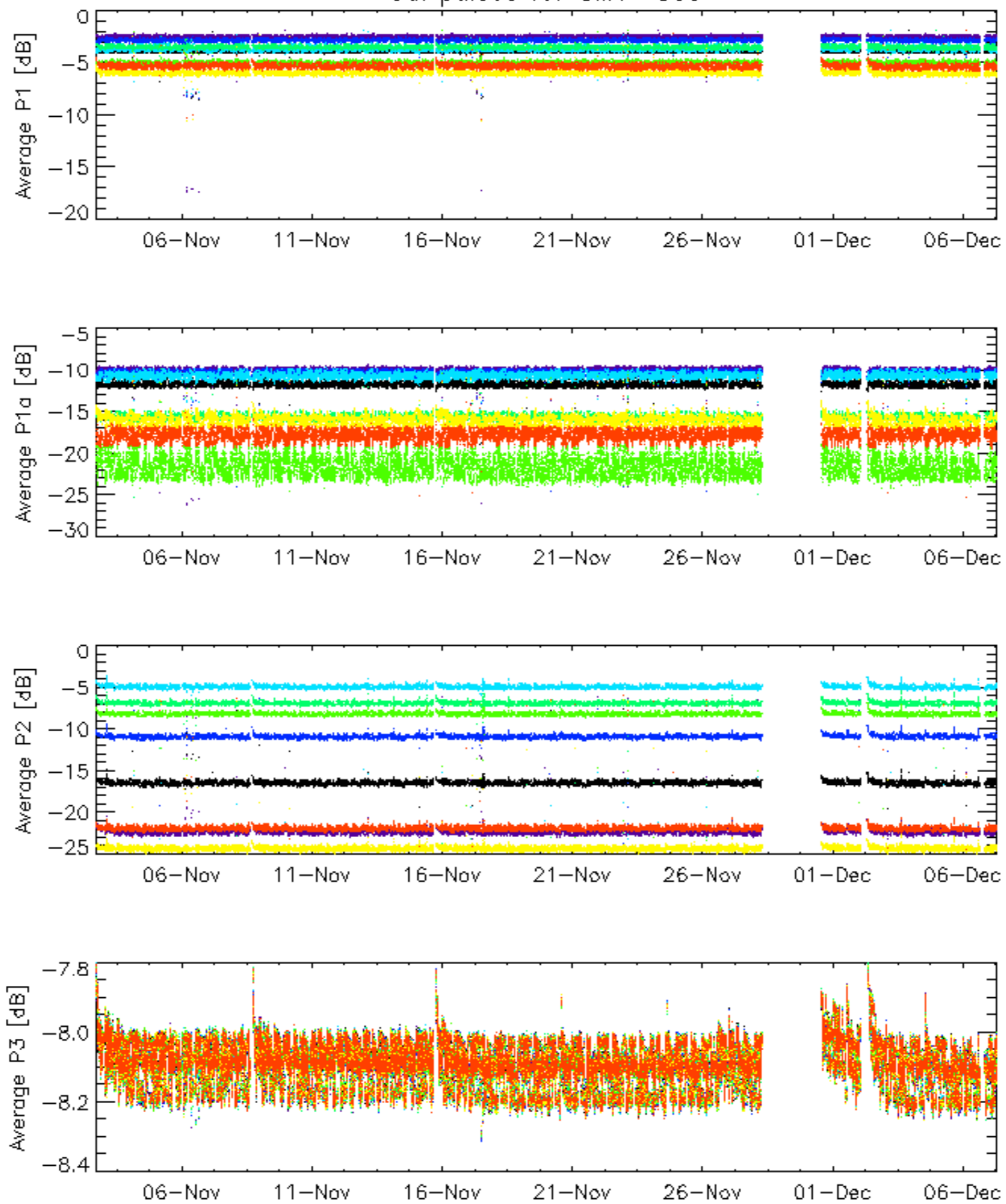


Cal pulses for WVS IS2



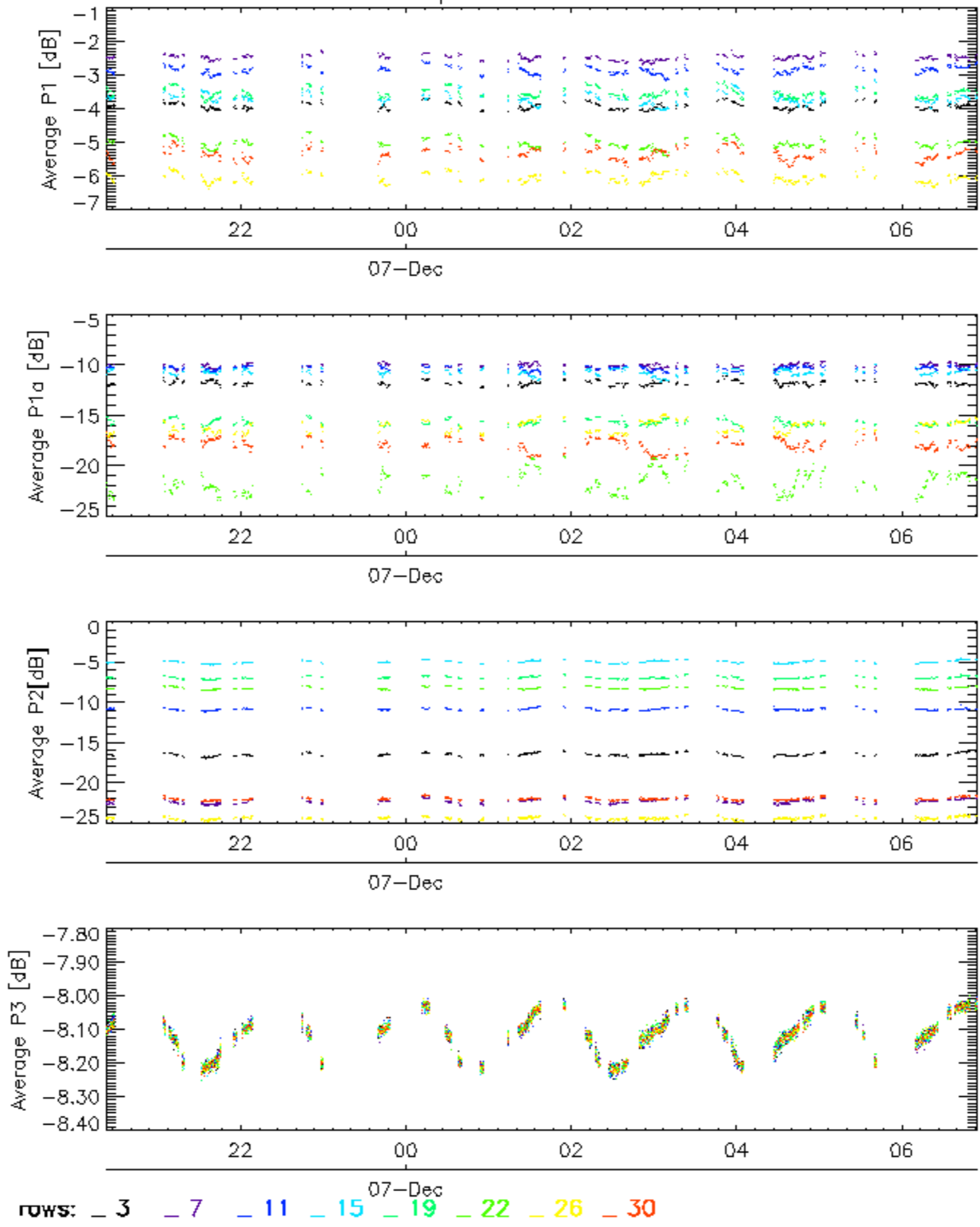
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

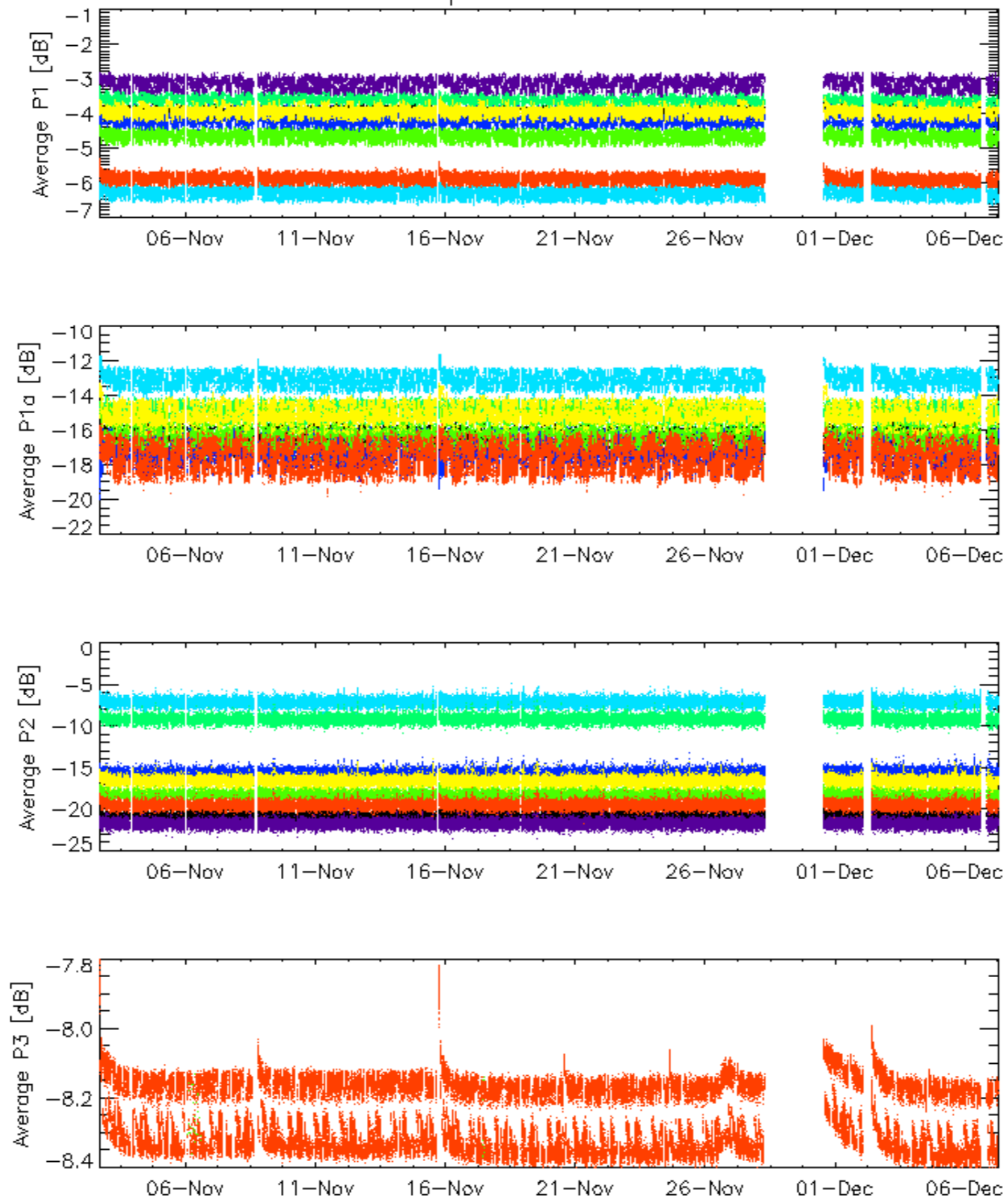


rows: [_ 3](#) [_ 7](#) [_ 11](#) [_ 15](#) [_ 19](#) [_ 22](#) [_ 26](#) [_ 30](#)

Cal pulses for GM1 SS3

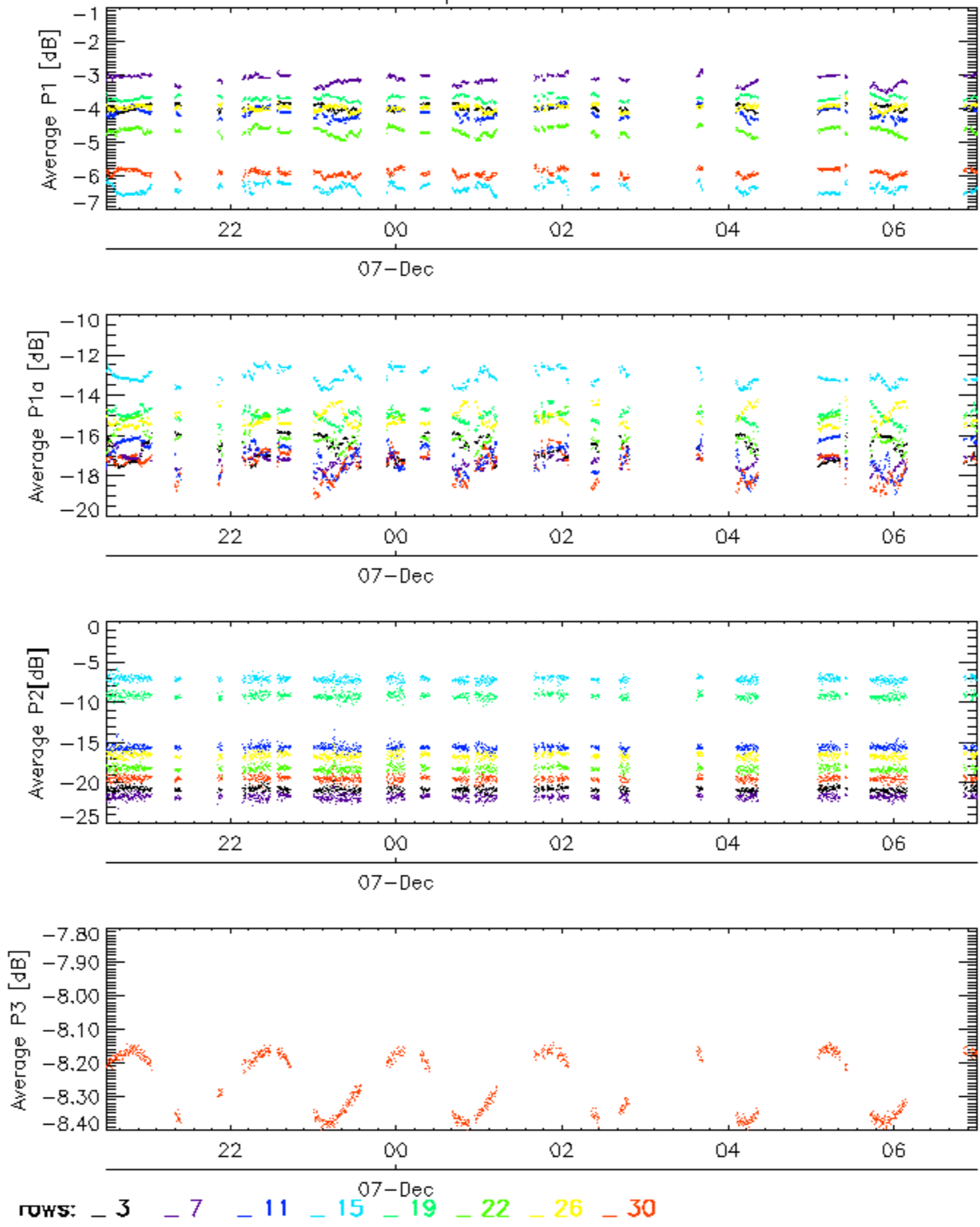


Cal pulses for WVS IS2

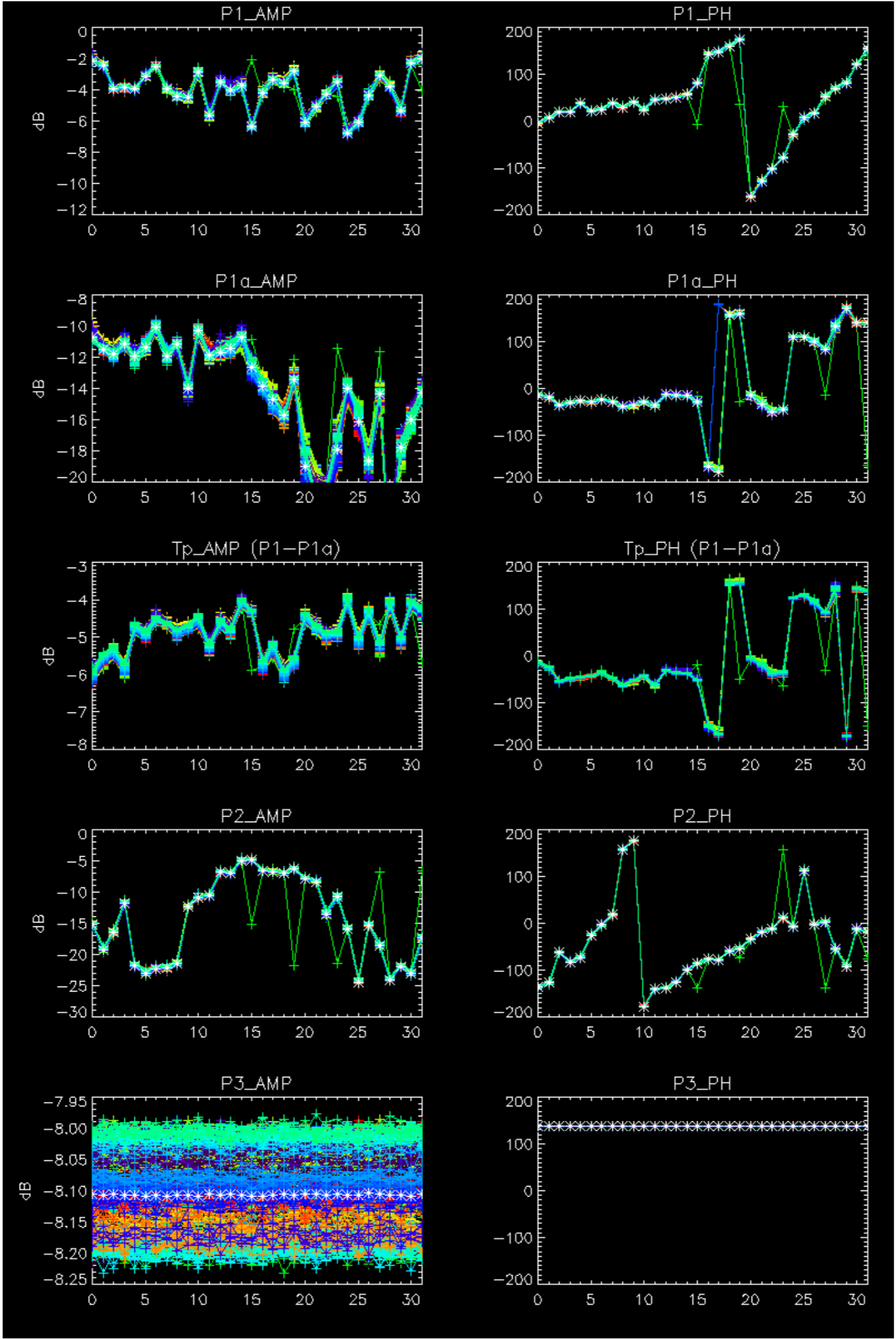


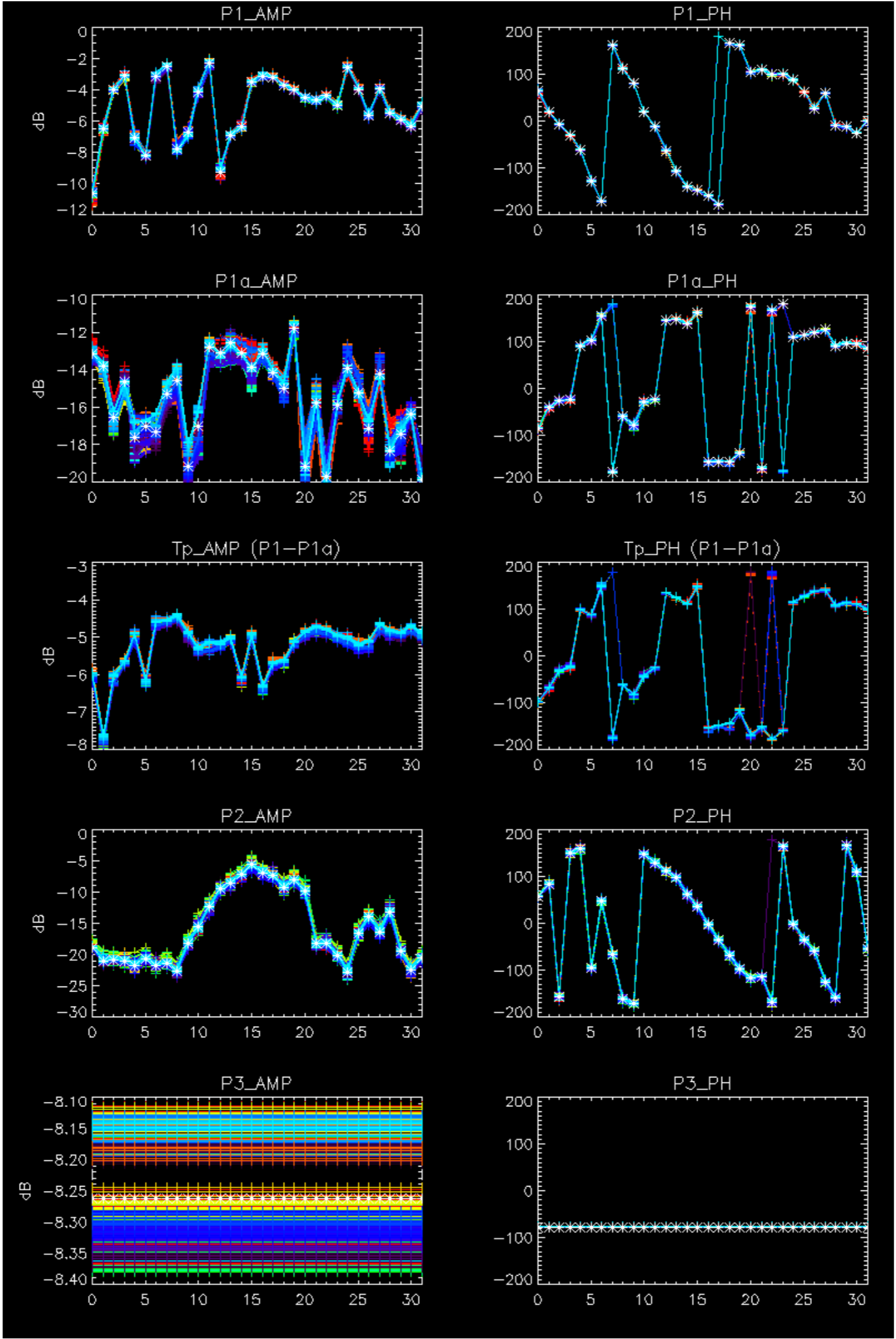
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



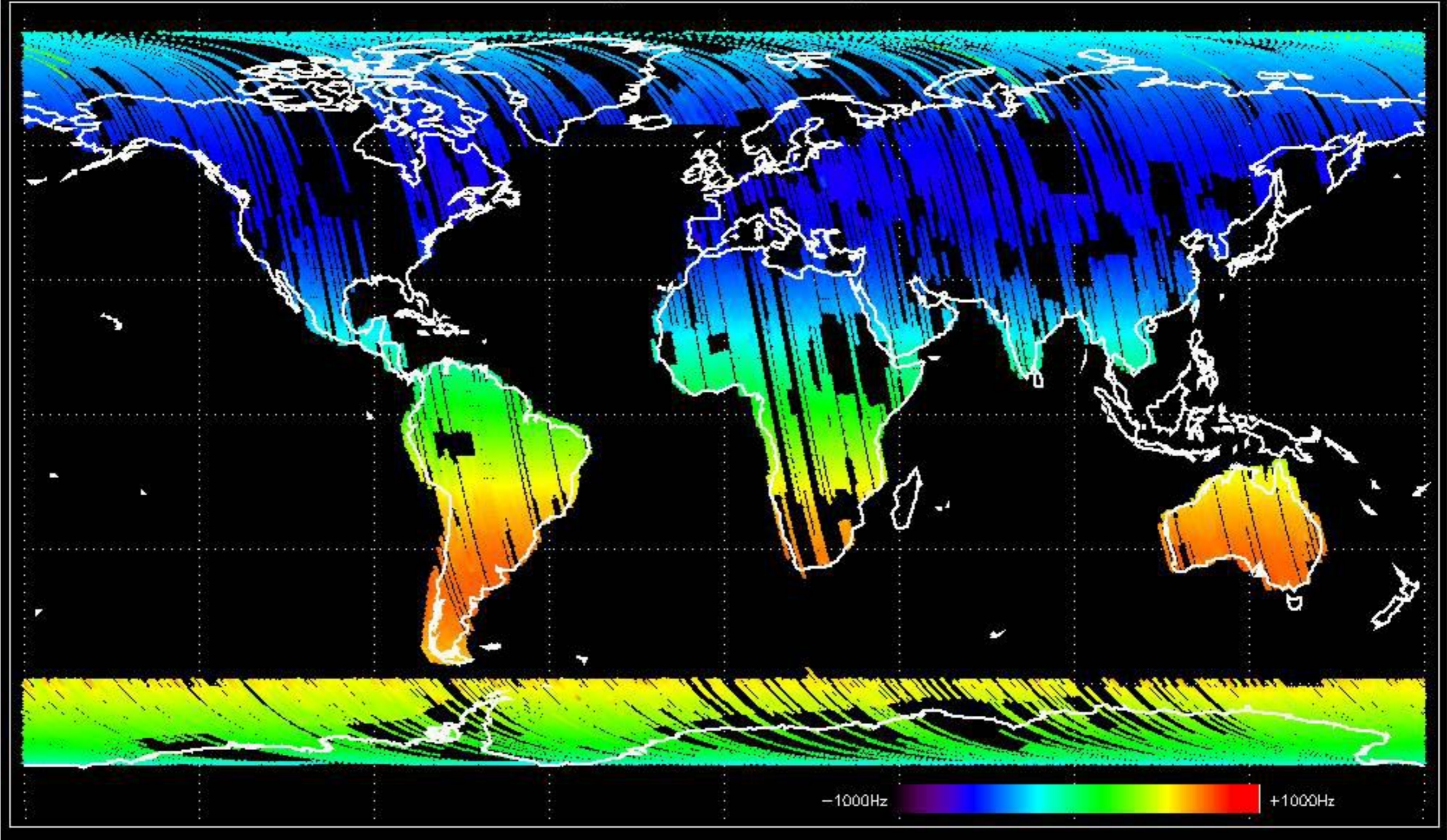
No anomalies observed.



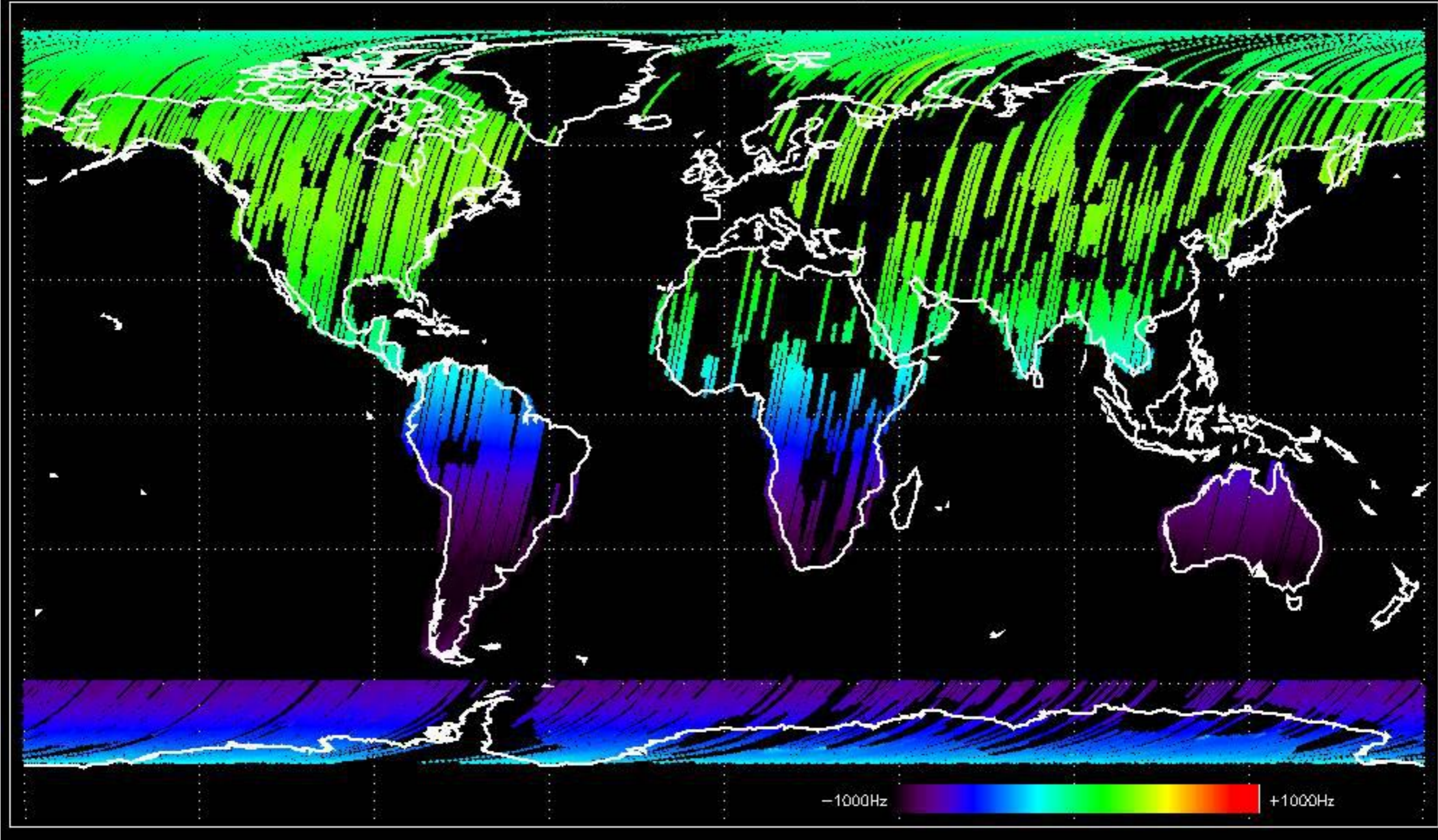


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

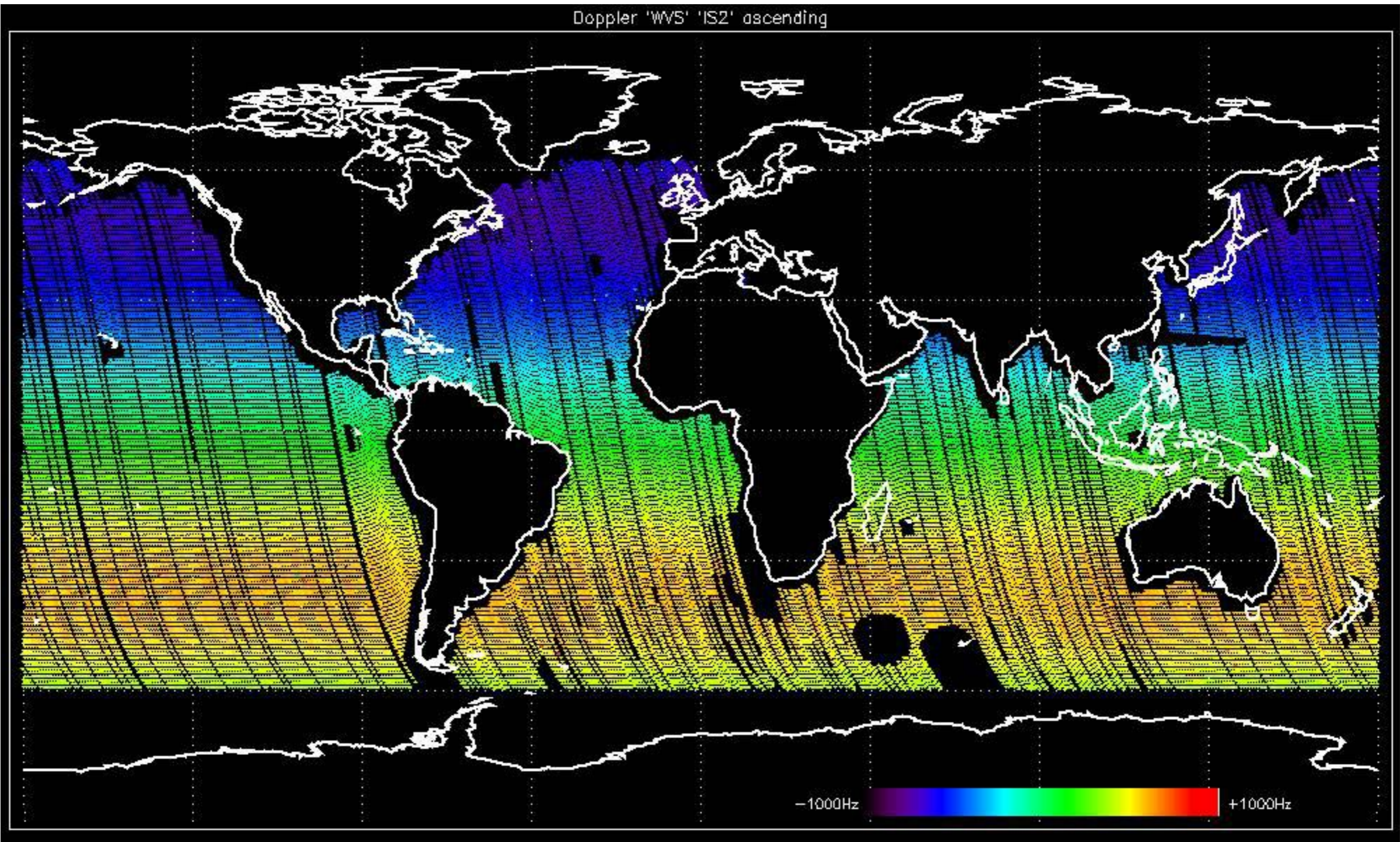
Doppler 'GM1' 'SS1' ascending



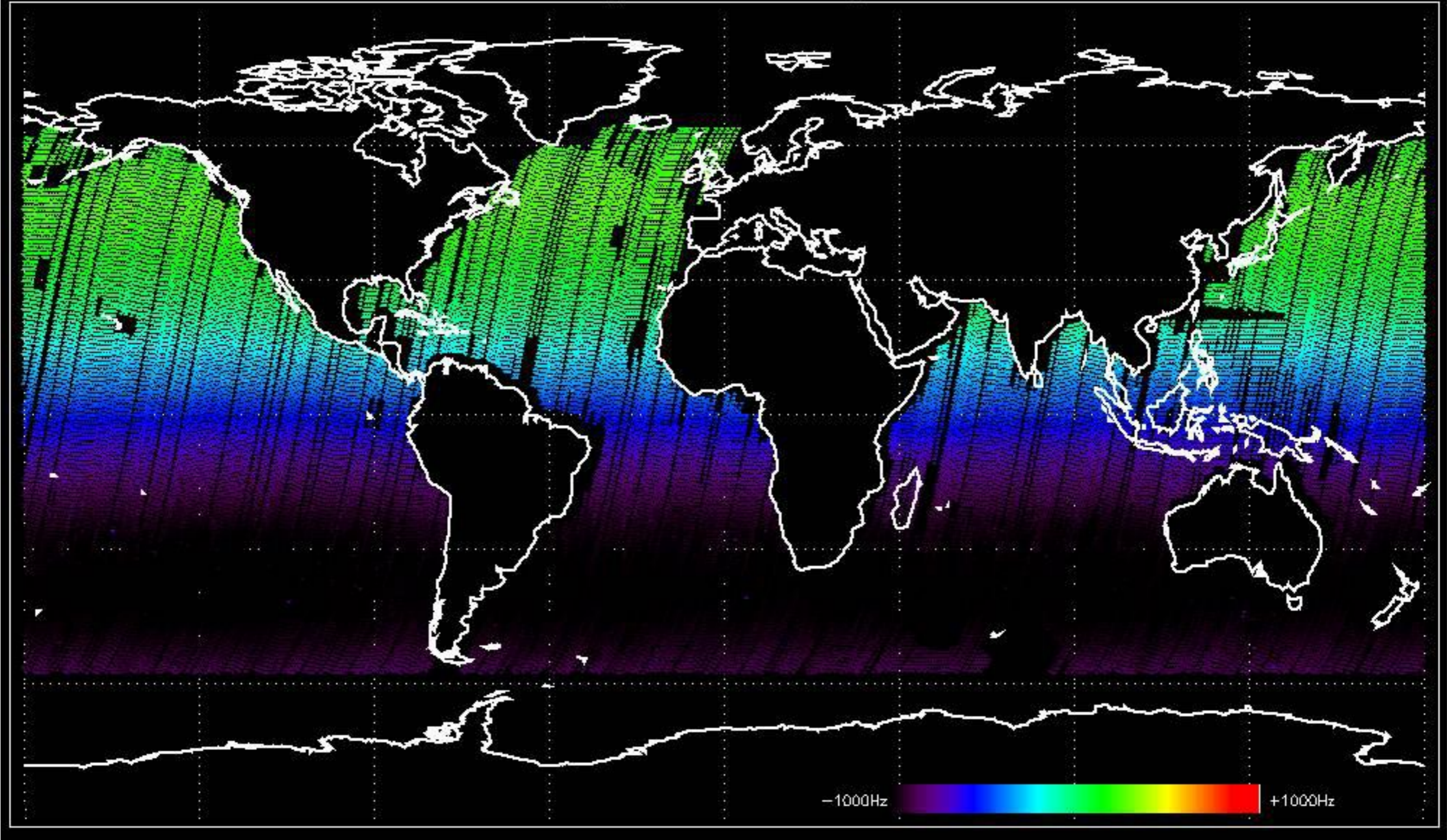
Doppler 'GM1' 'SS1' descending



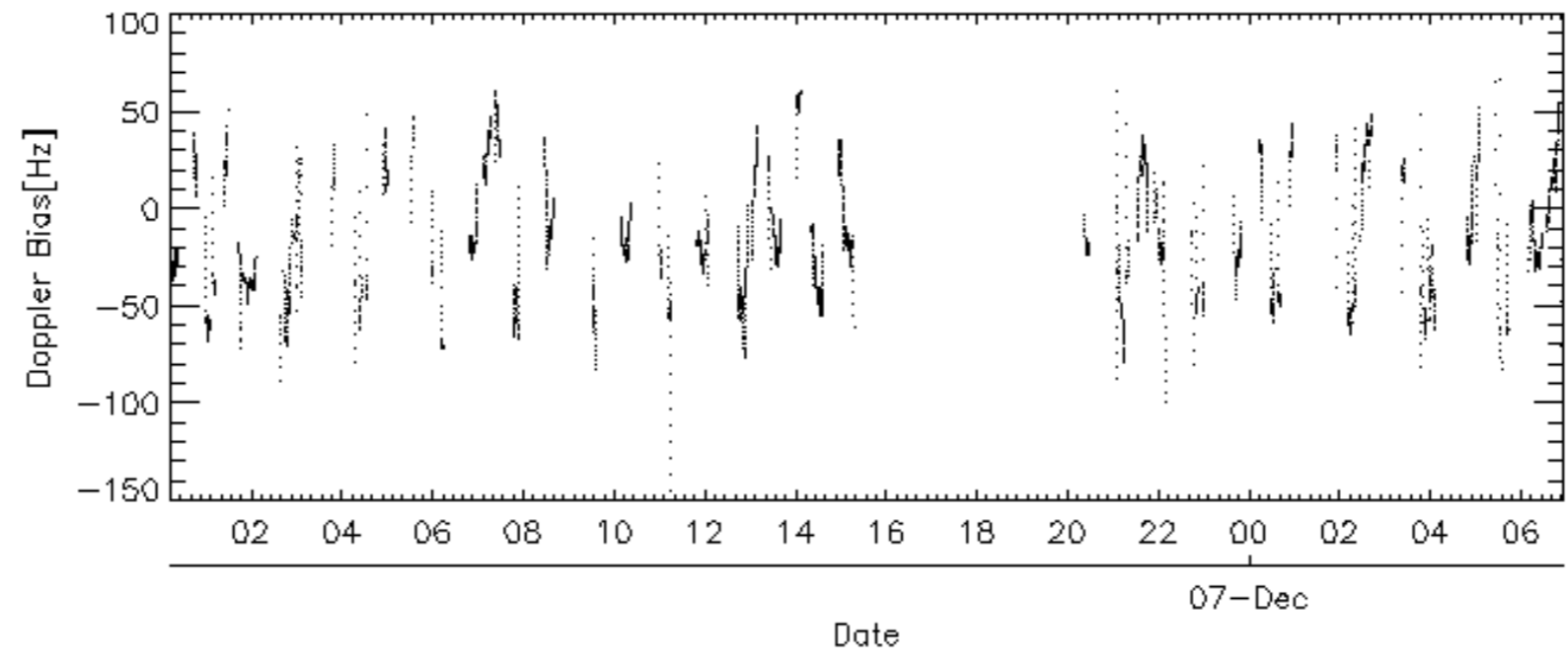
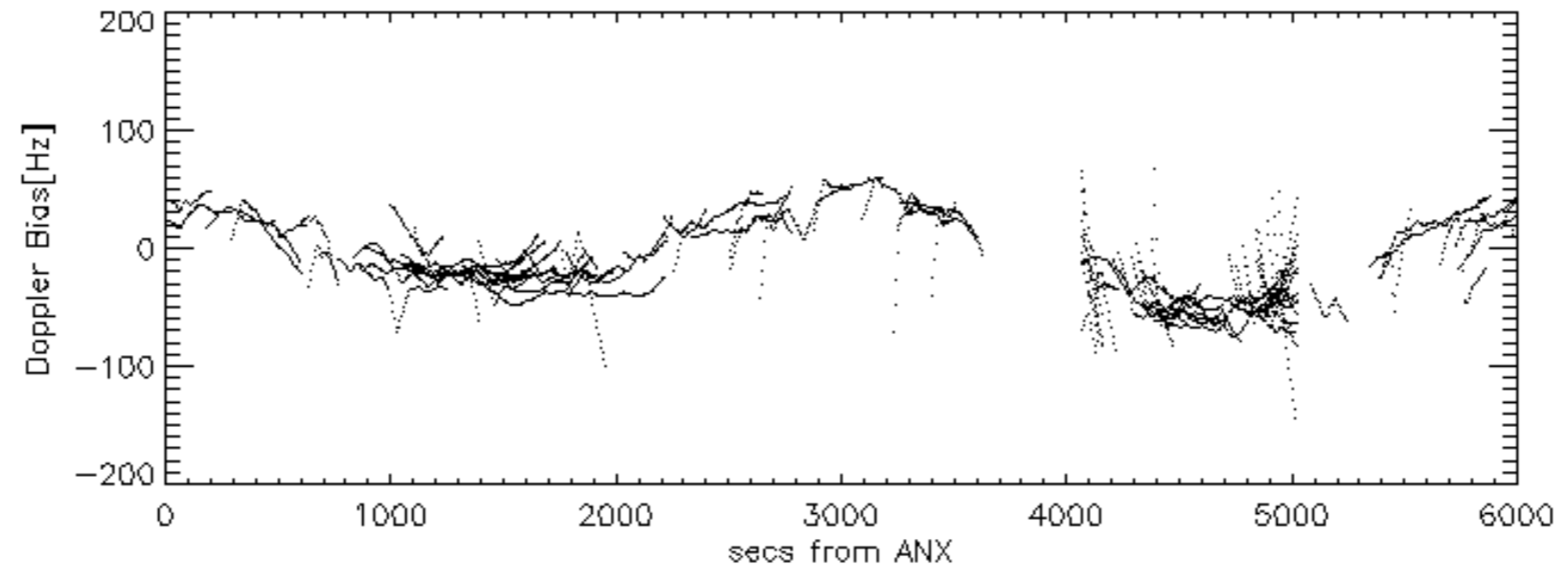
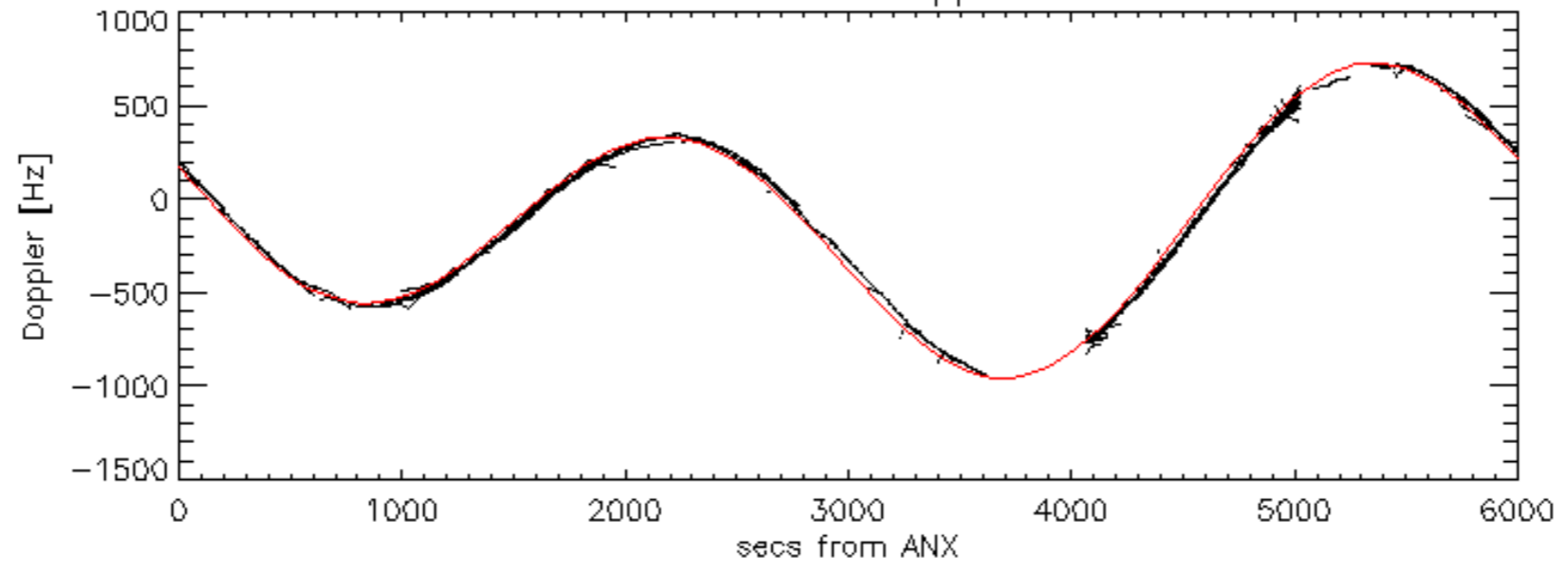
Doppler 'WVS' 'IS2' ascending

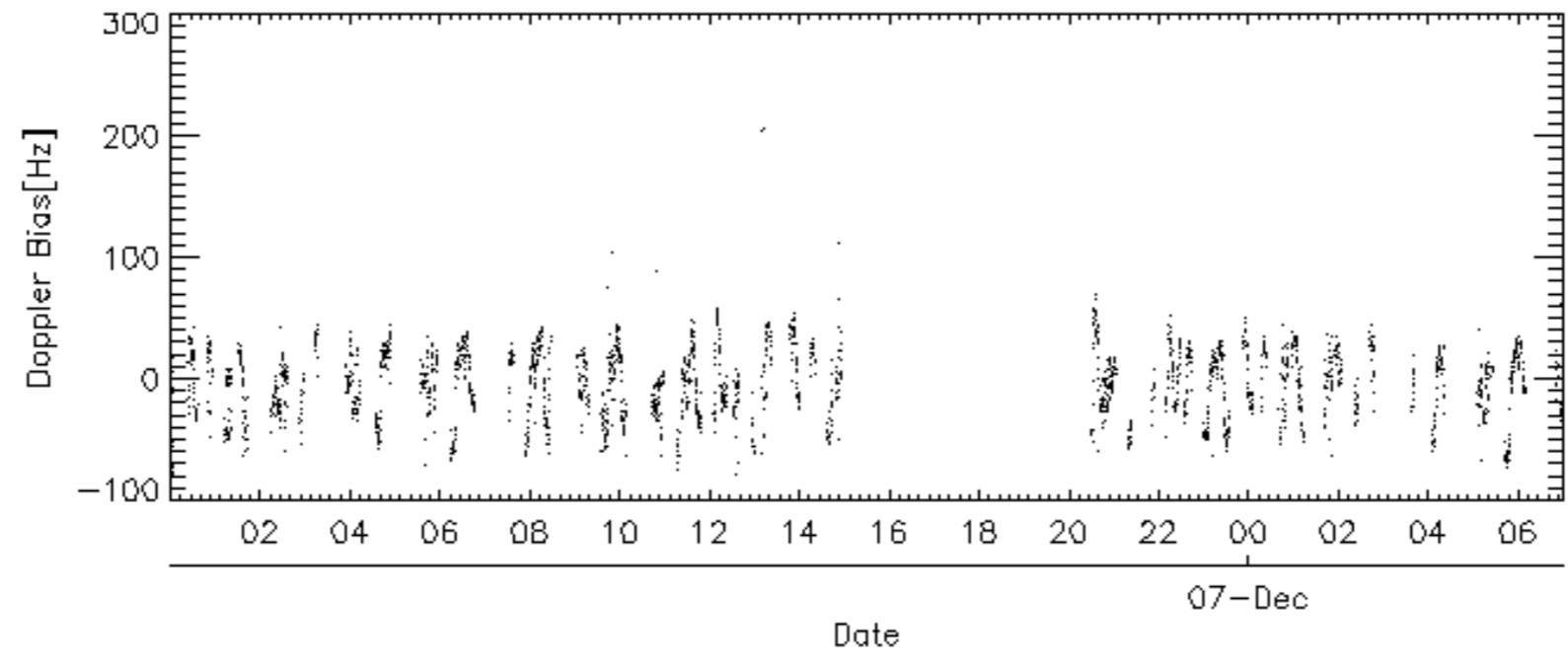
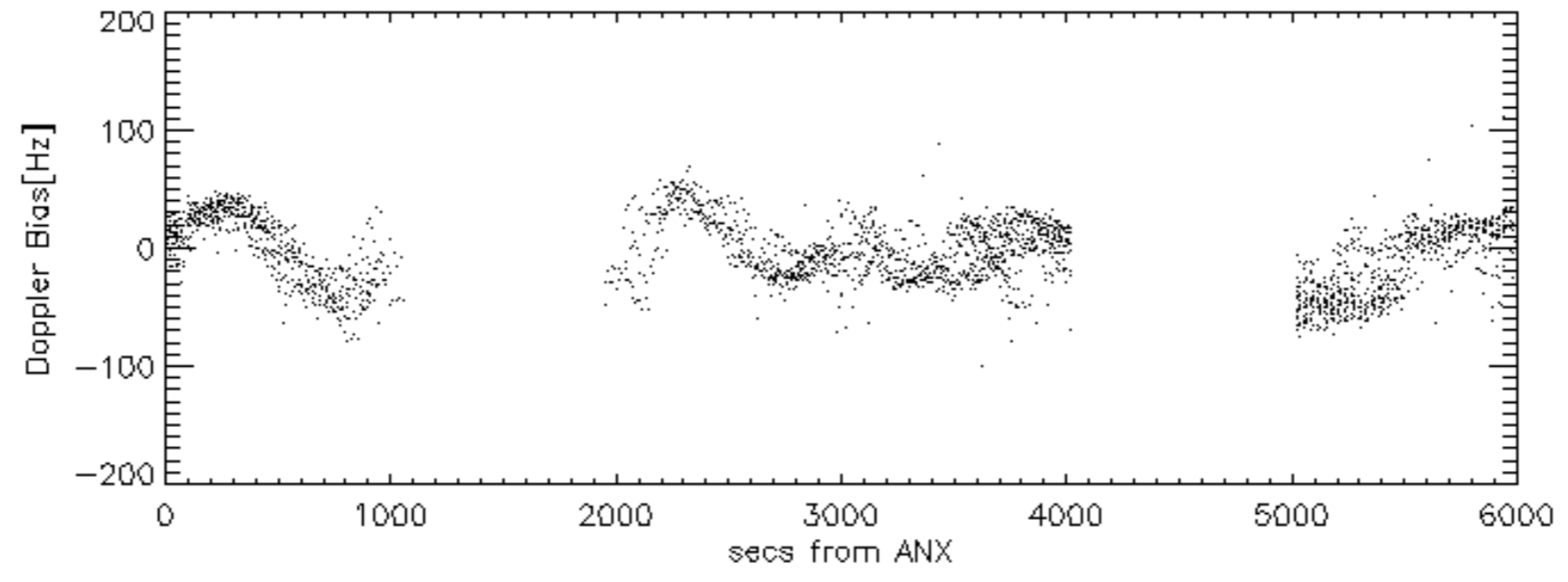
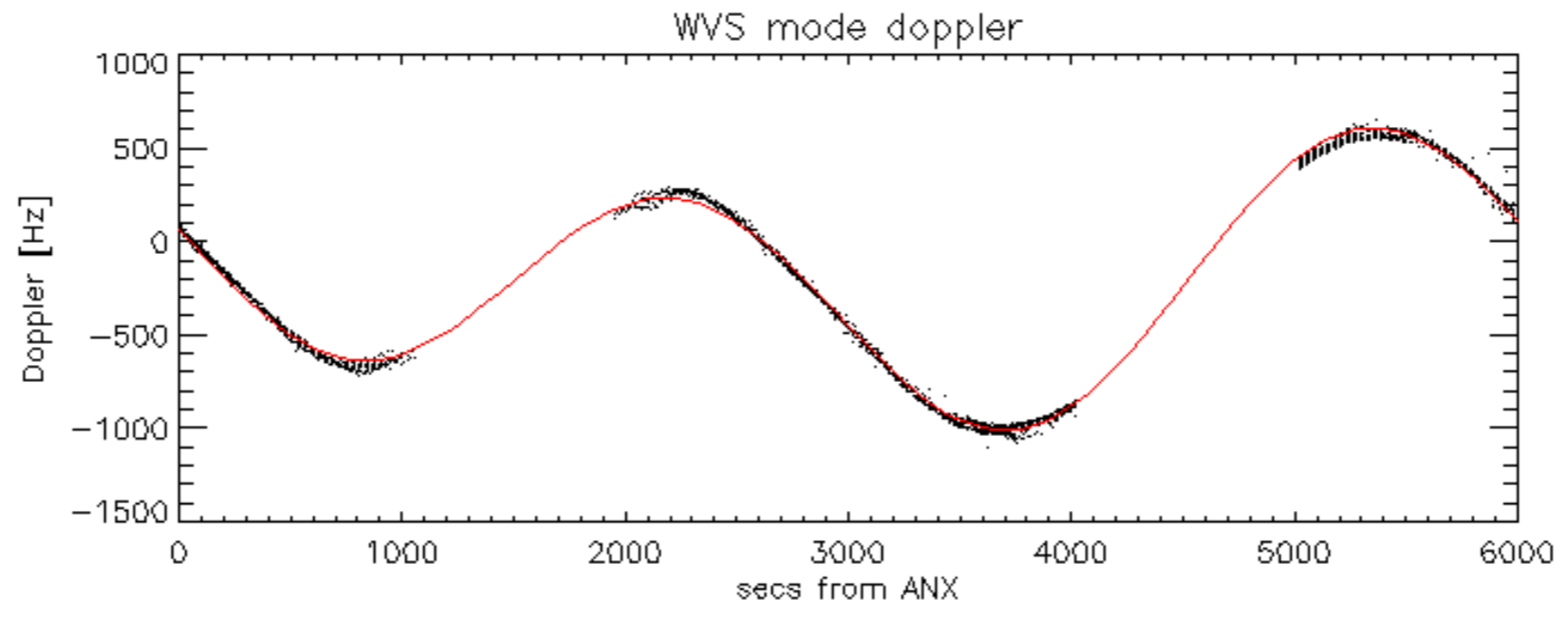


Doppler 'WVS' 'IS2' descending

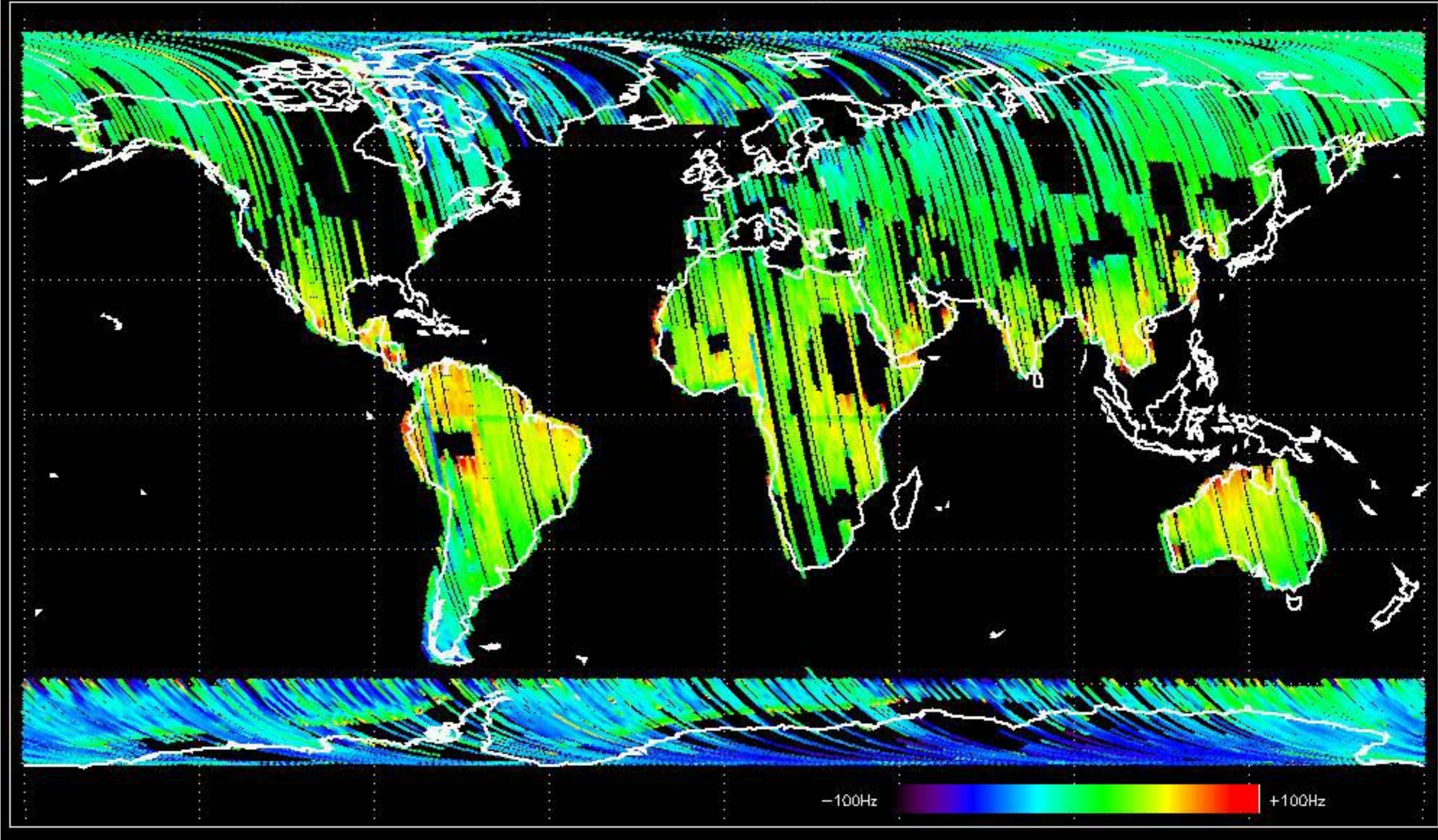


GM1 mode doppler

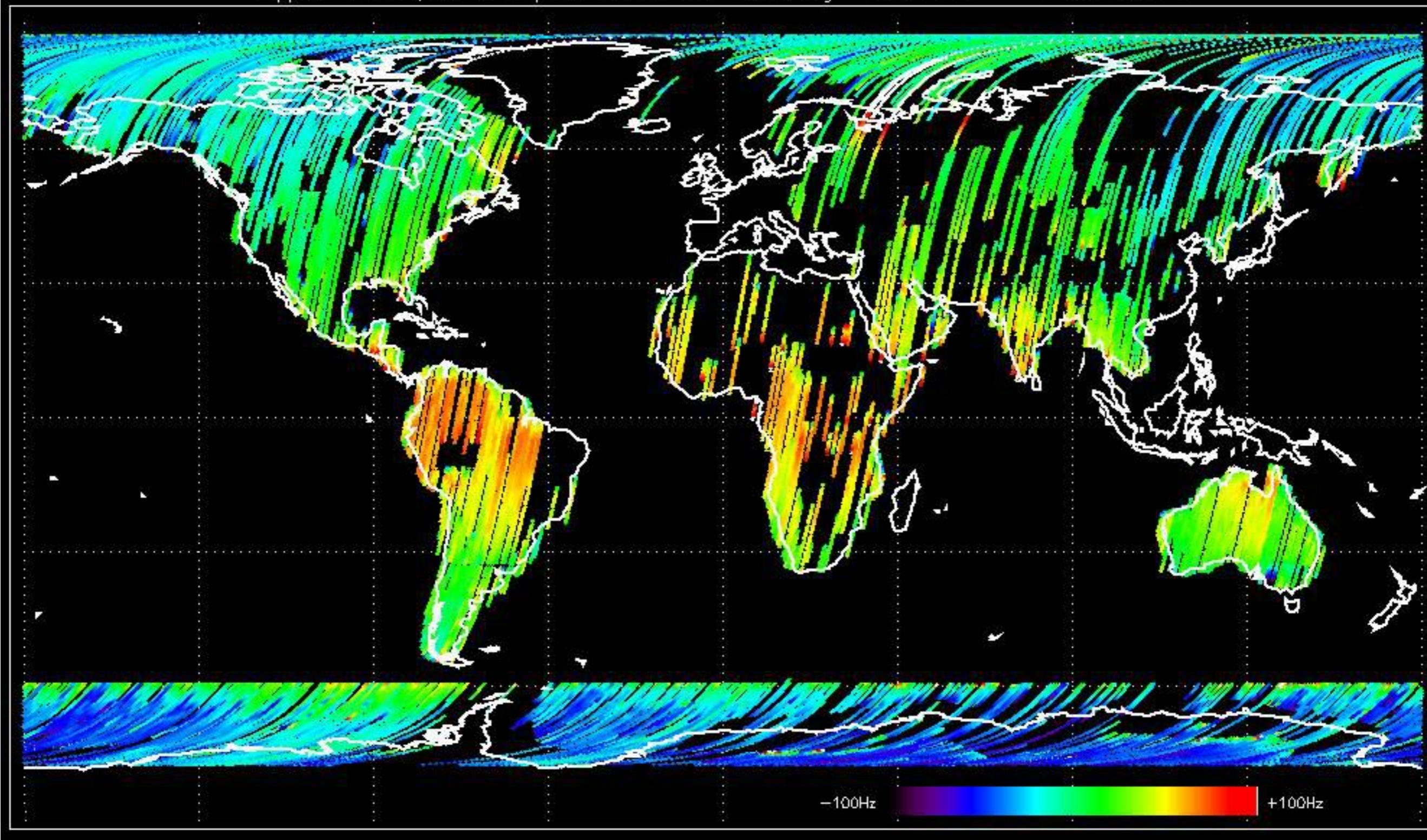




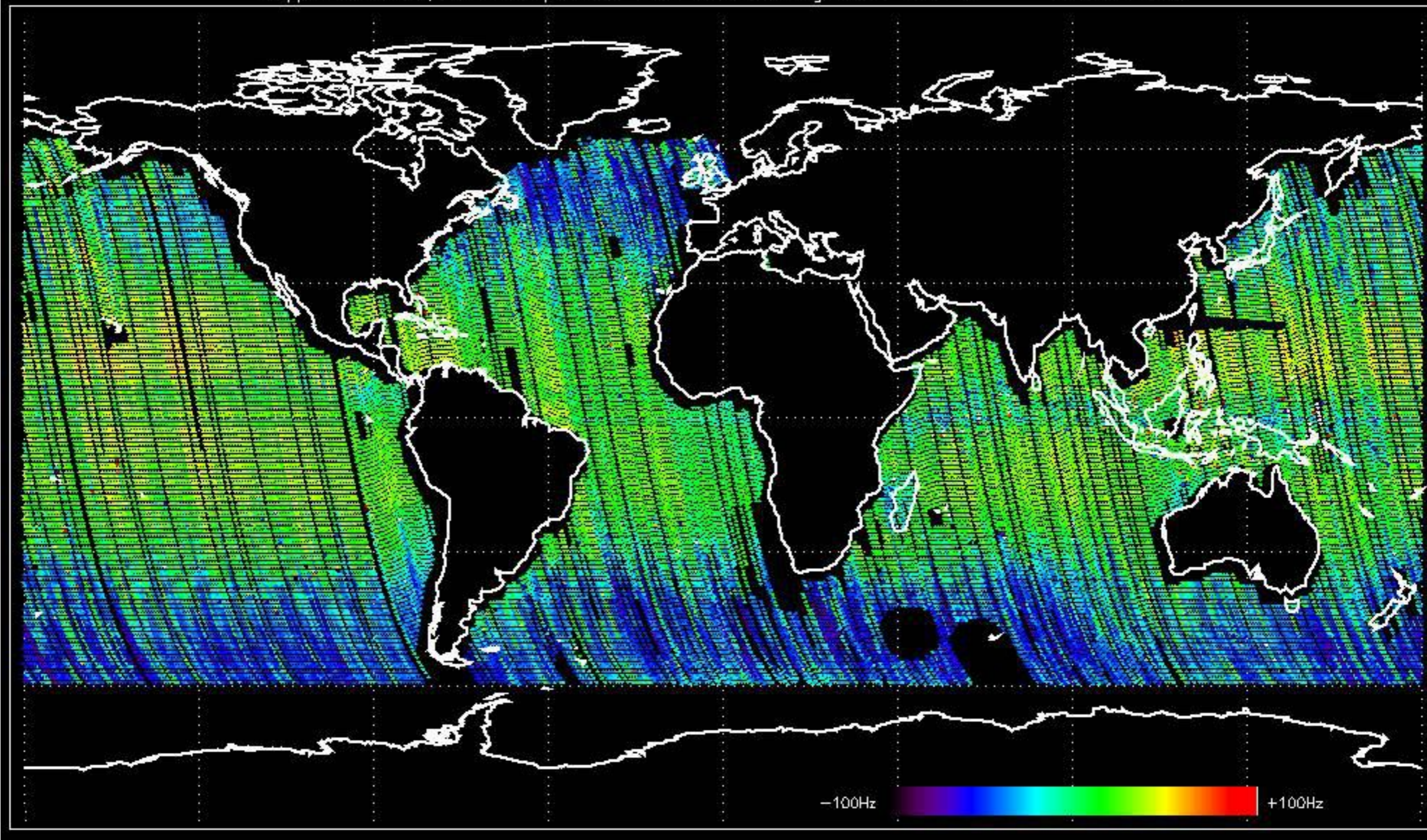
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.611191 Hz



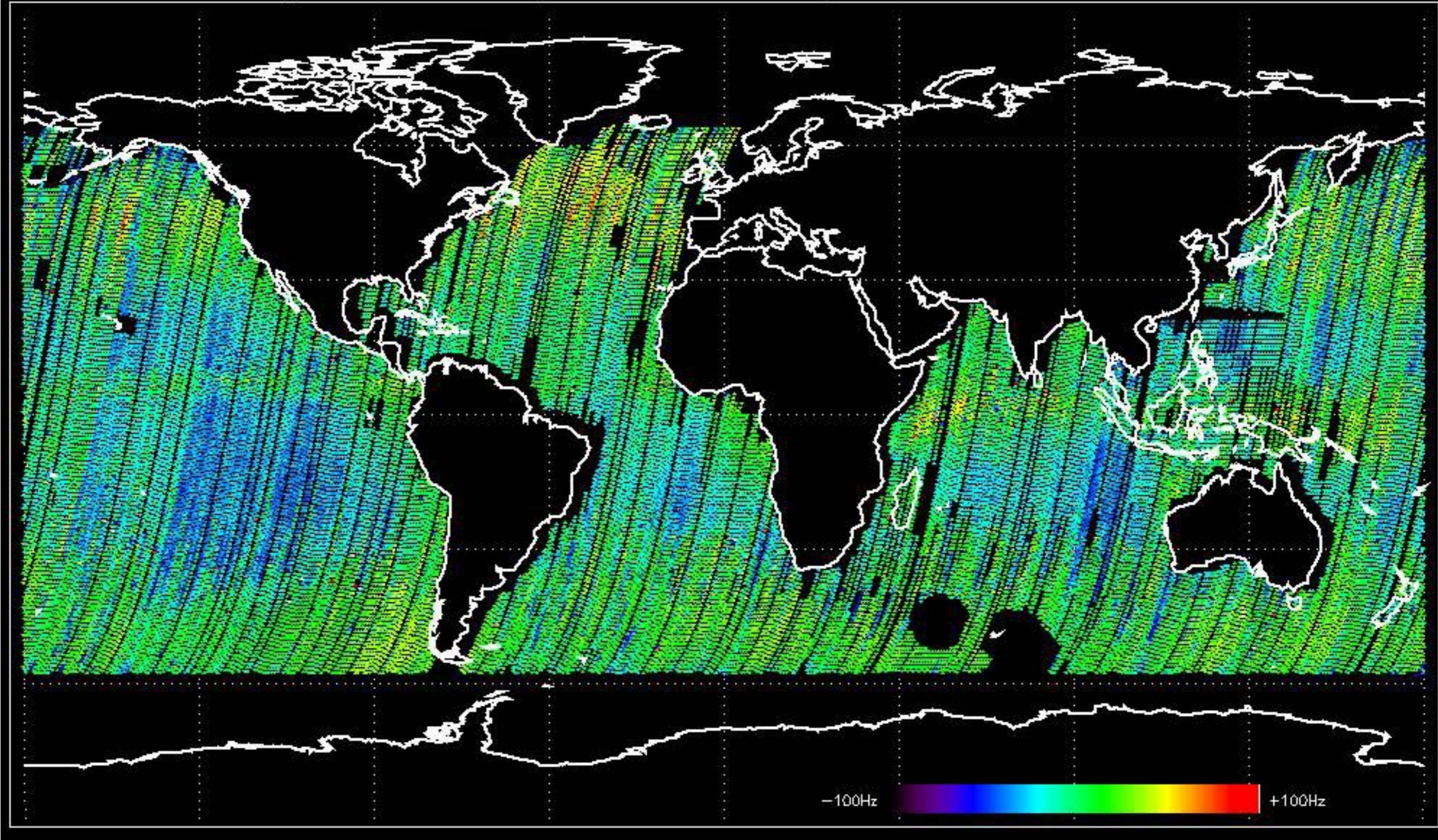
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.023264 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.8963470 Hz

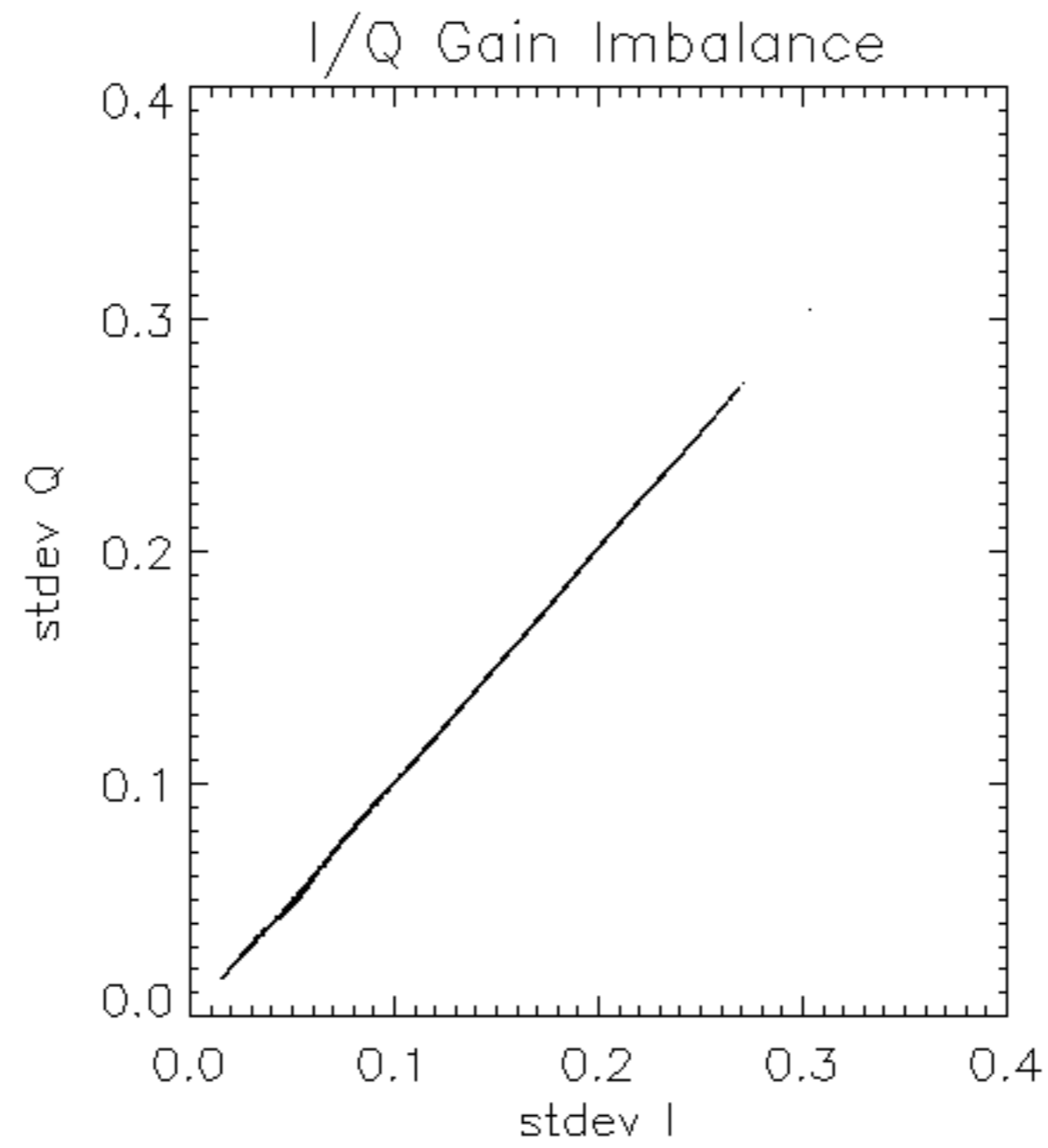


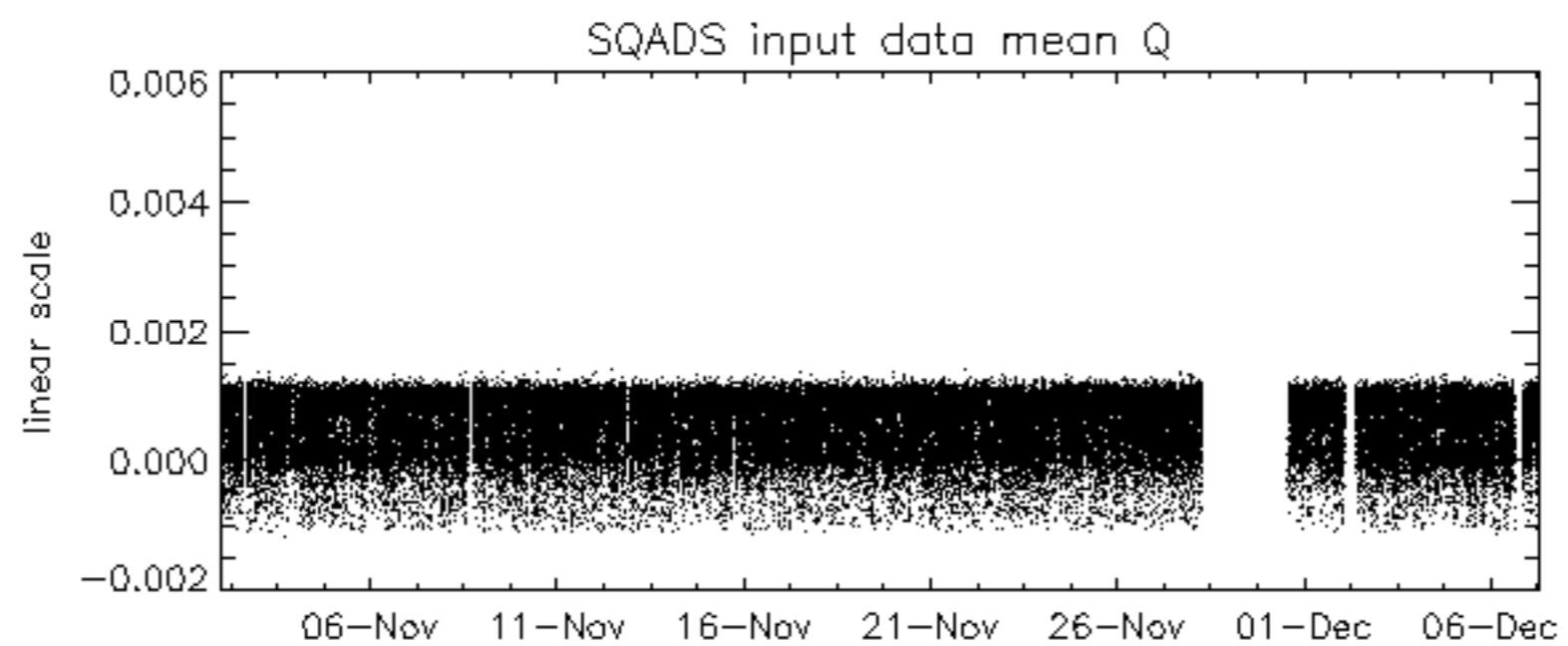
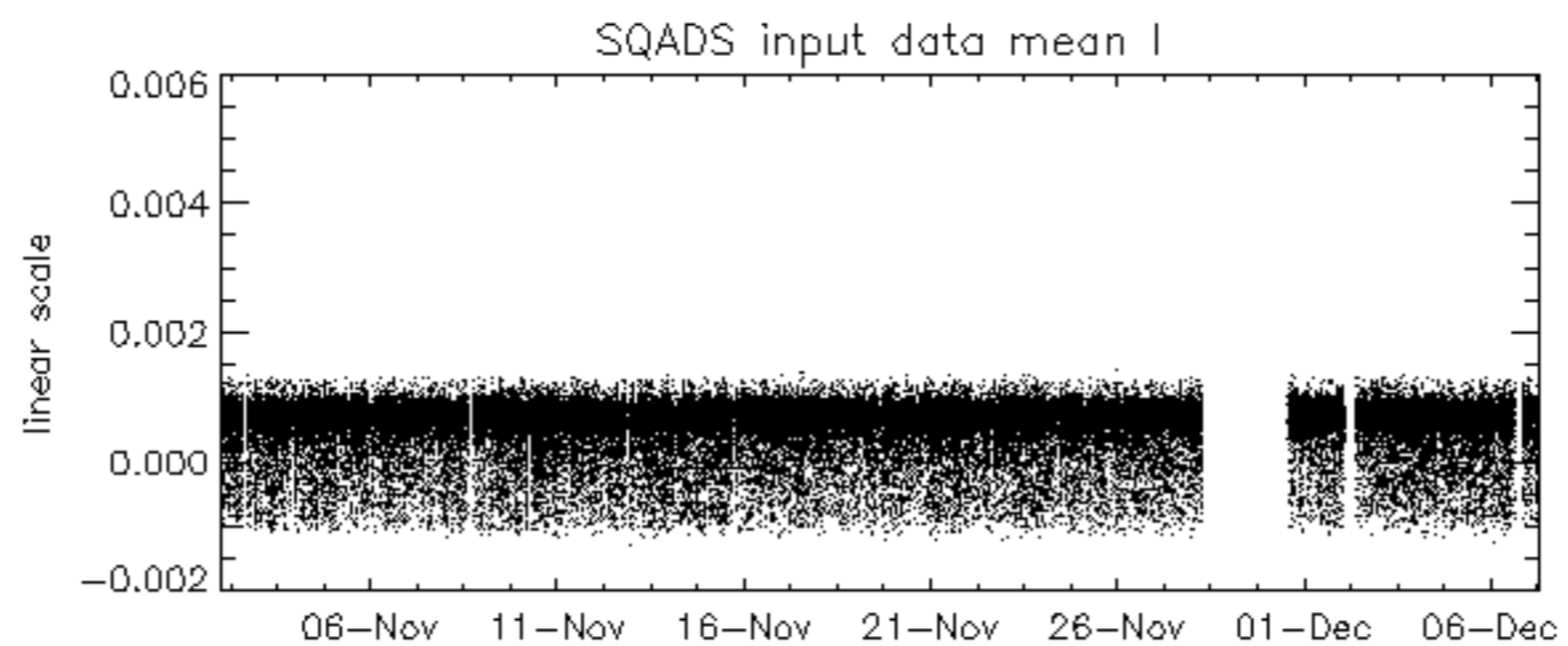
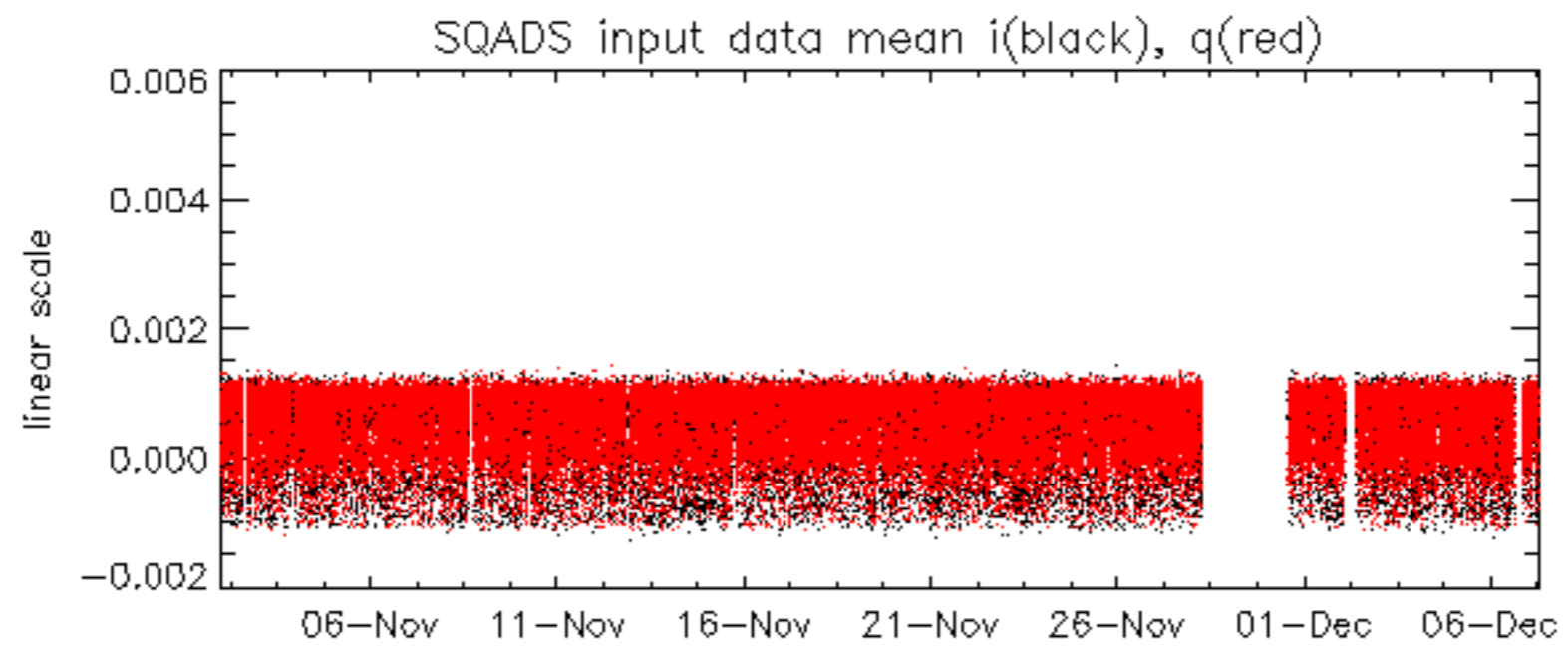
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.9073215 Hz

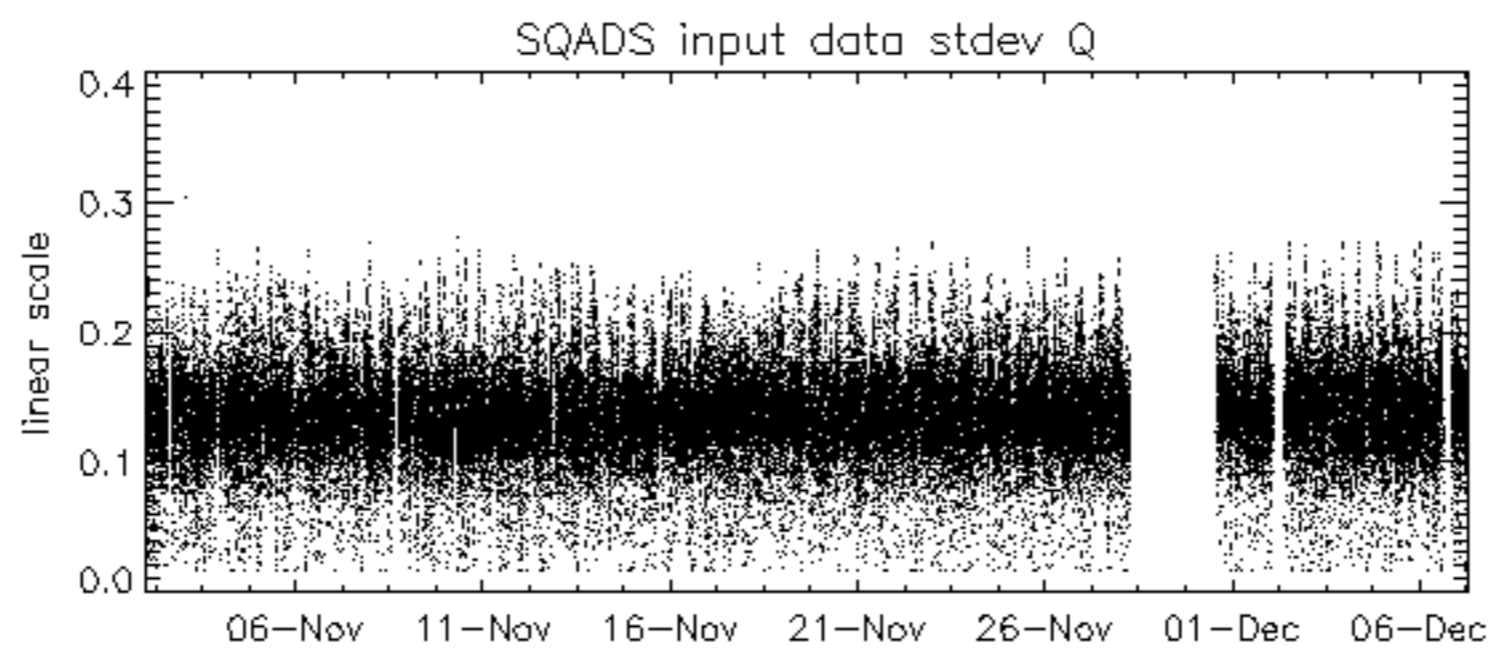
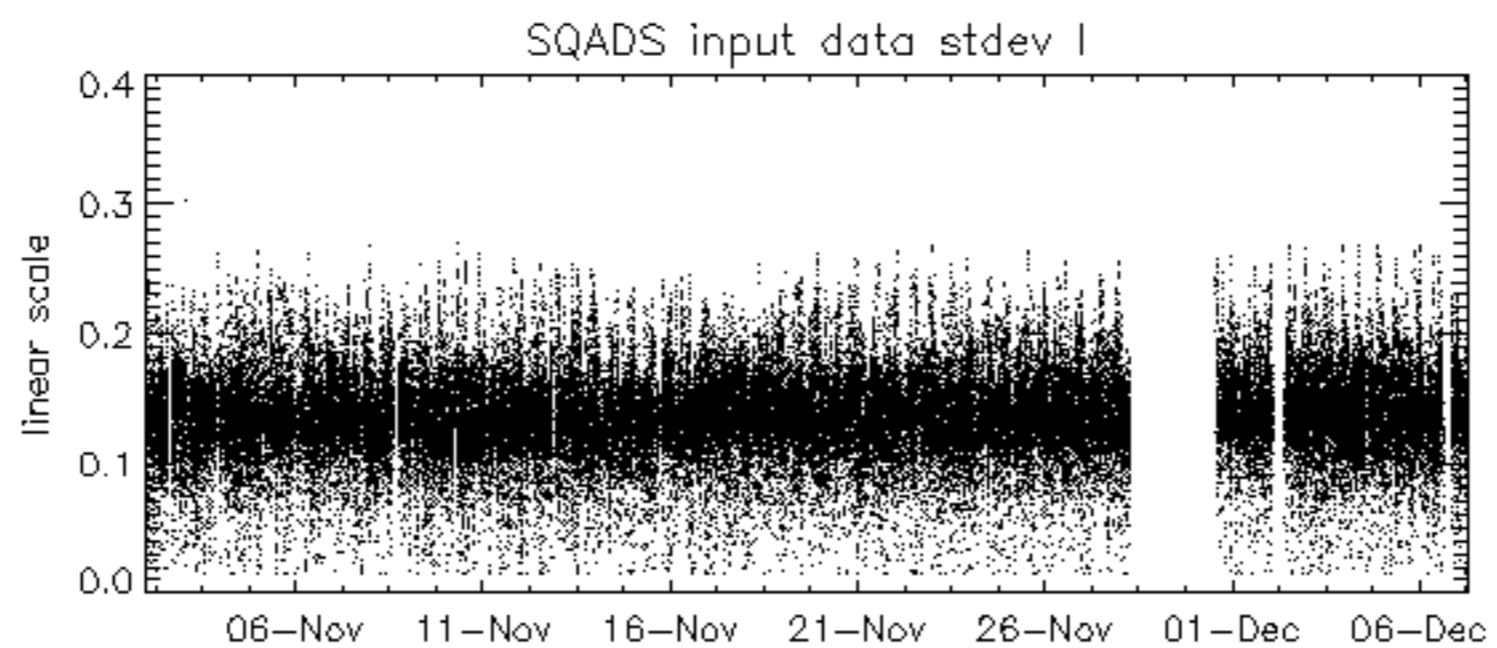
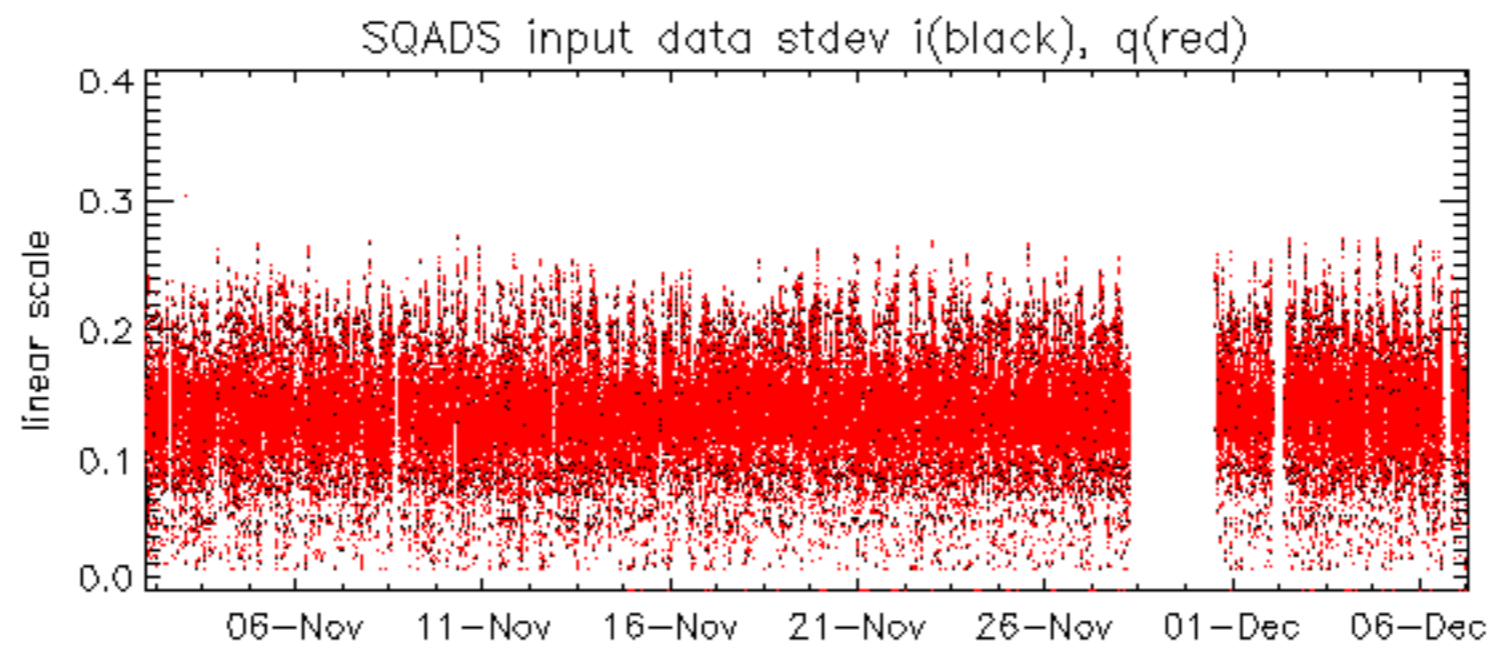


No anomalies observed on available MS products:

No anomalies observed.



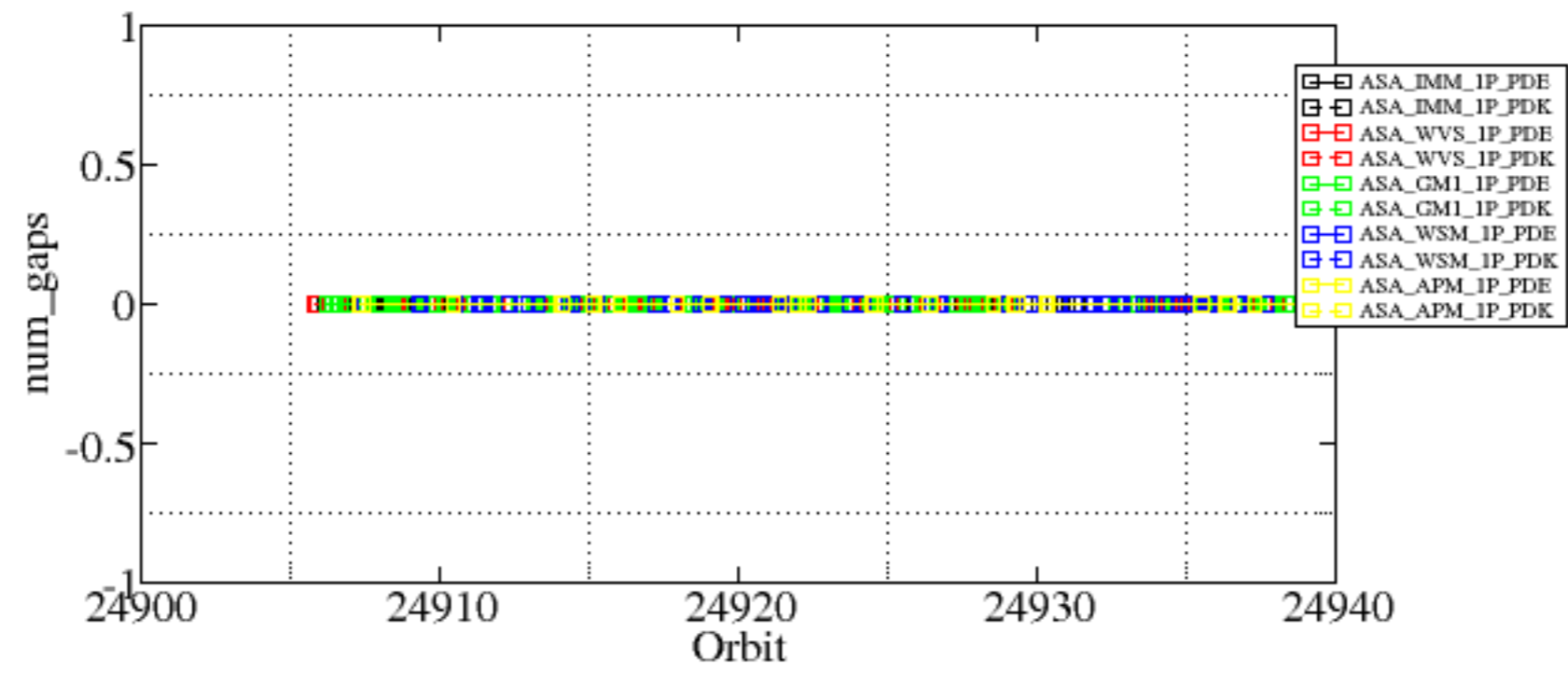


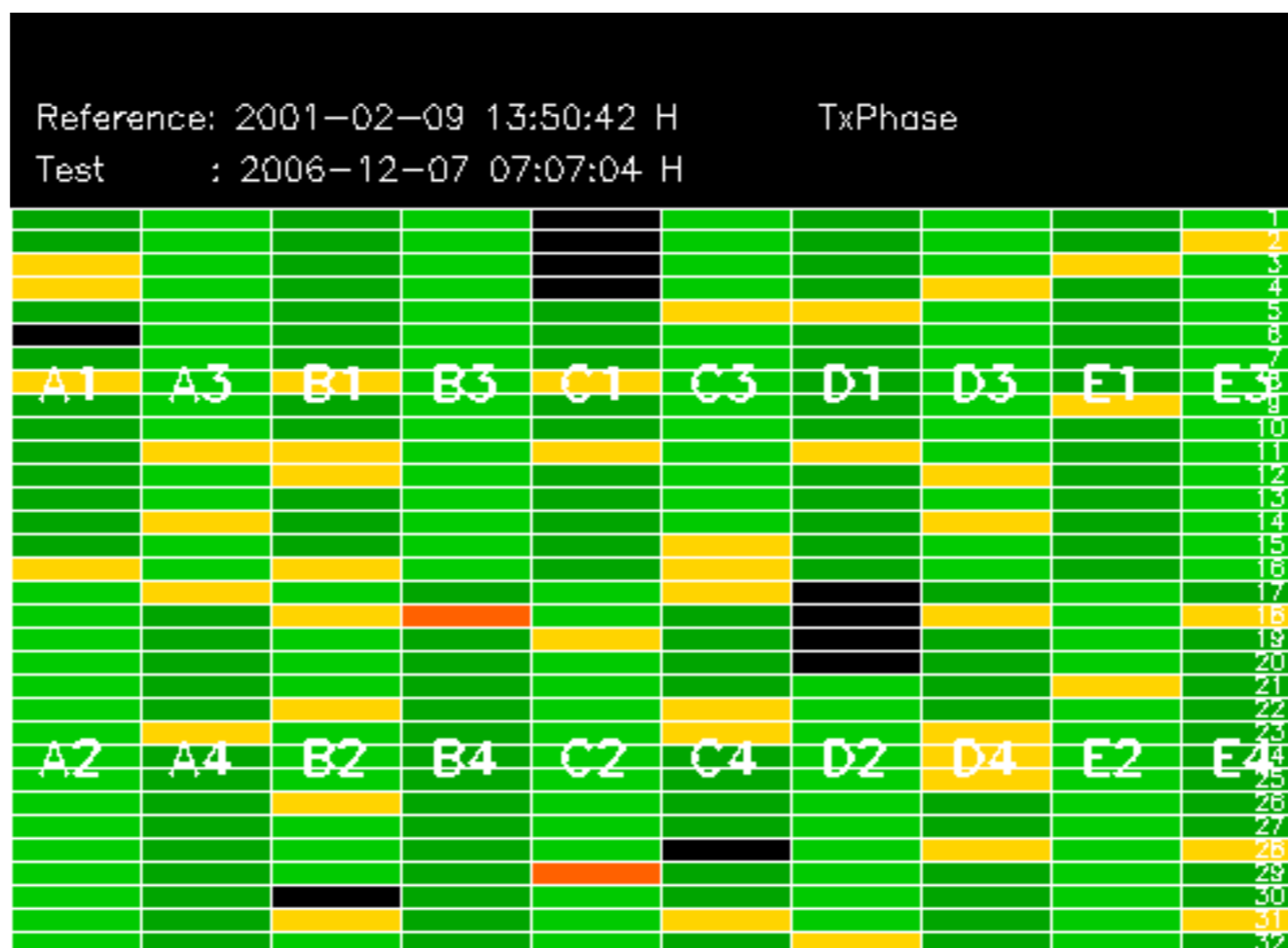


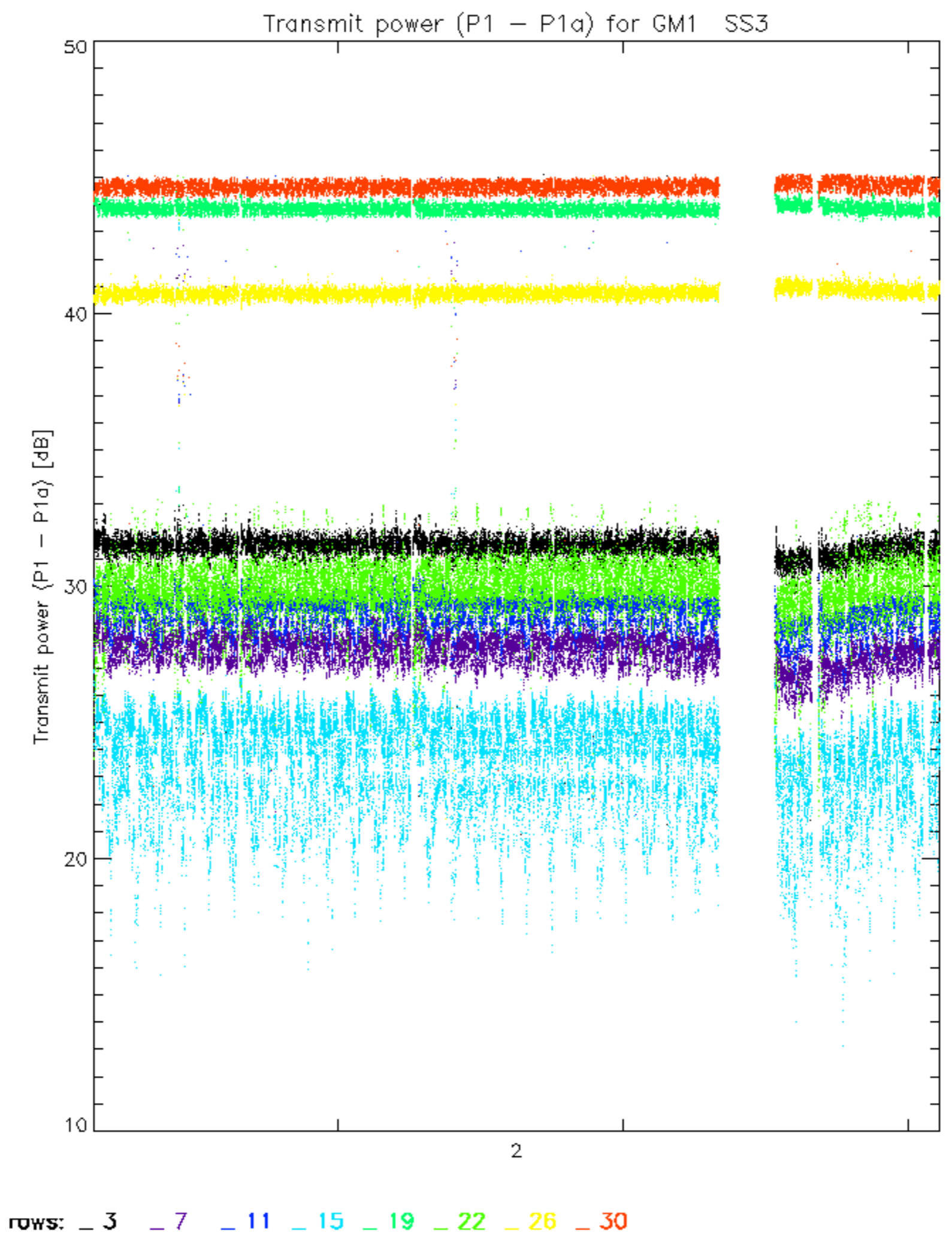
Summary of analysis for the last 3 days 2006120[567]

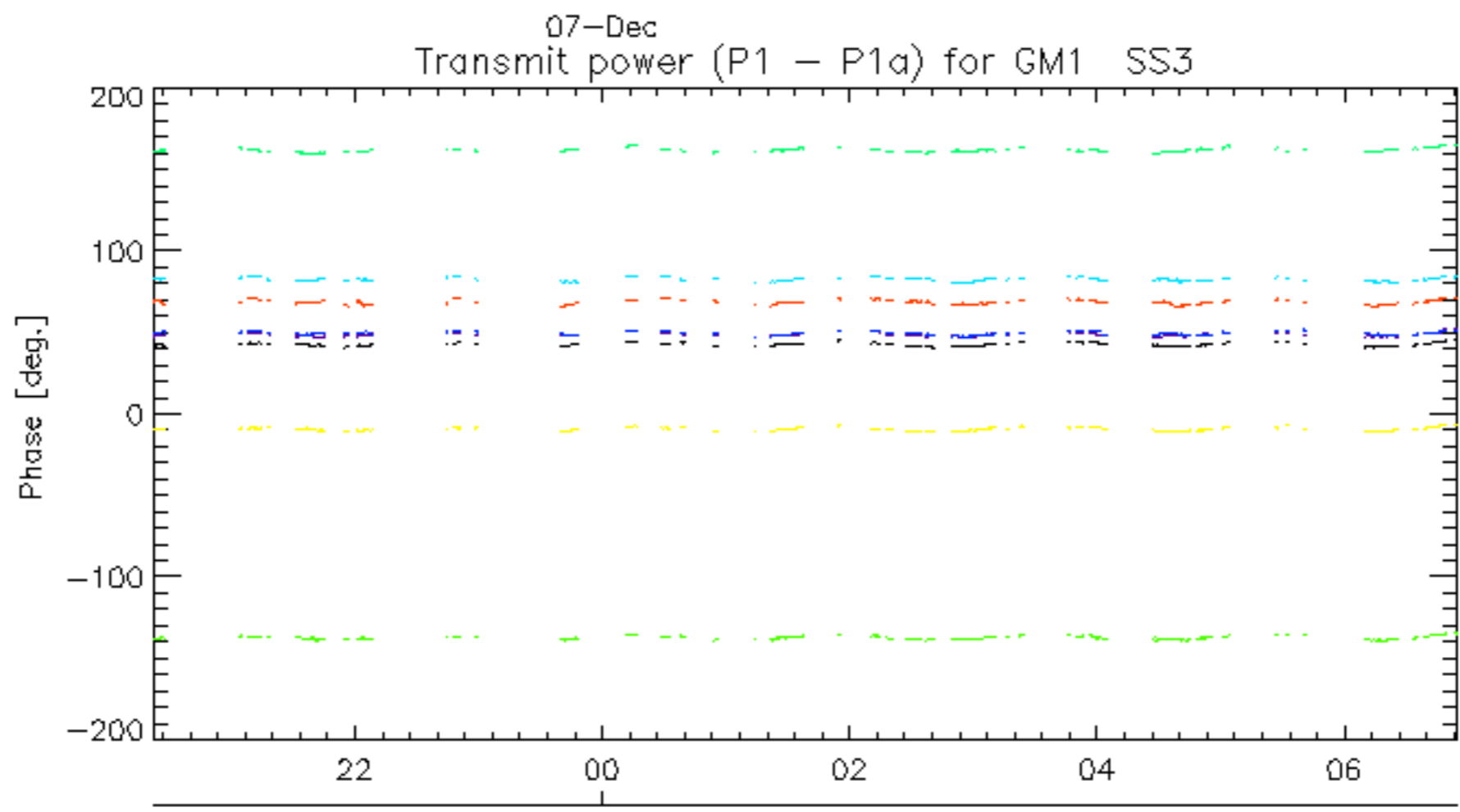
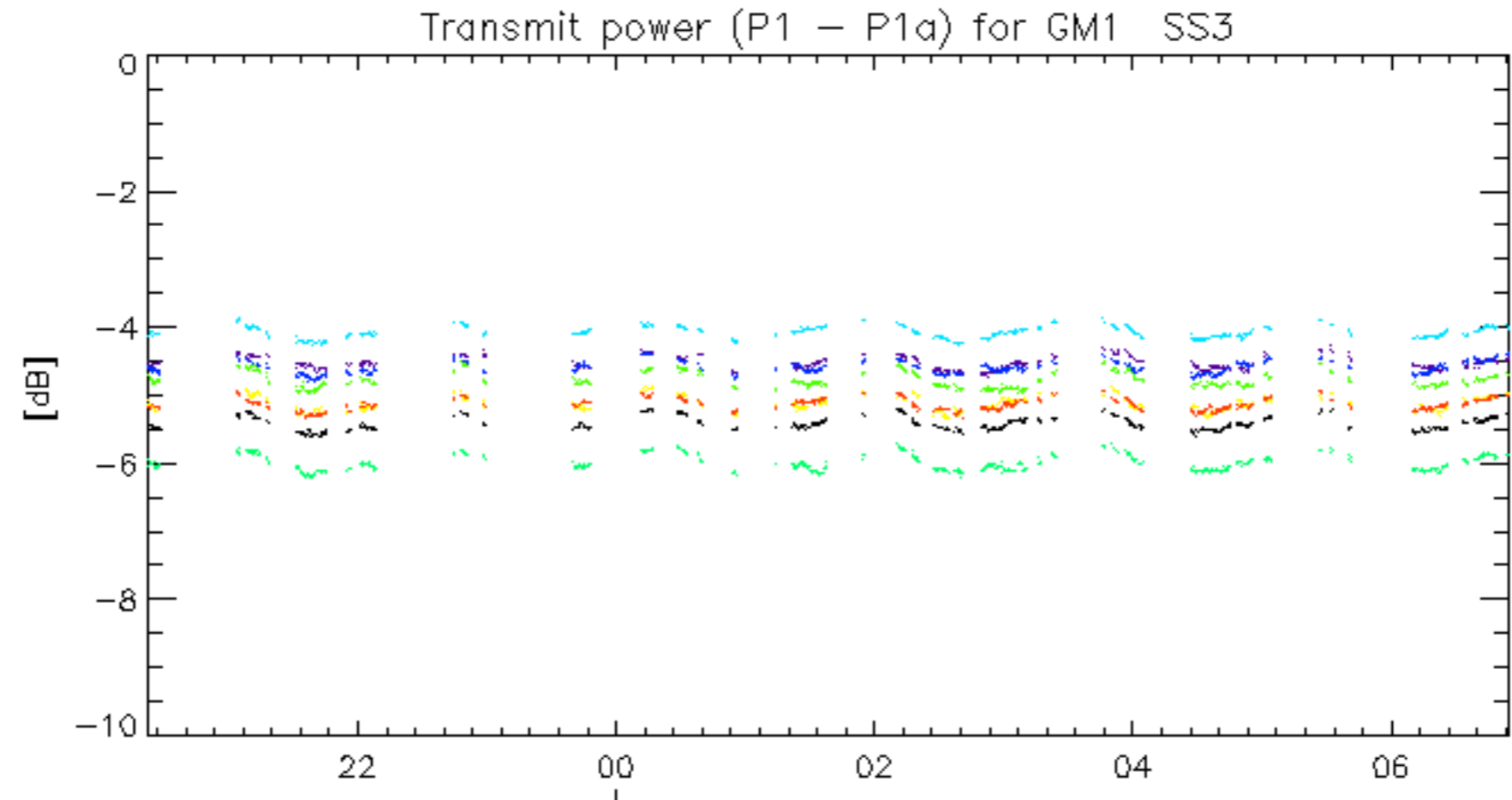
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20061205_143228_000004462053_00311_24914_0242.N1	0	28
ASA_WSM_1PNPDE20061206_003703_000002612053_00317_24920_0976.N1	0	34
ASA_WSM_1PNPDE20061207_000625_000003242053_00331_24934_2346.N1	0	37

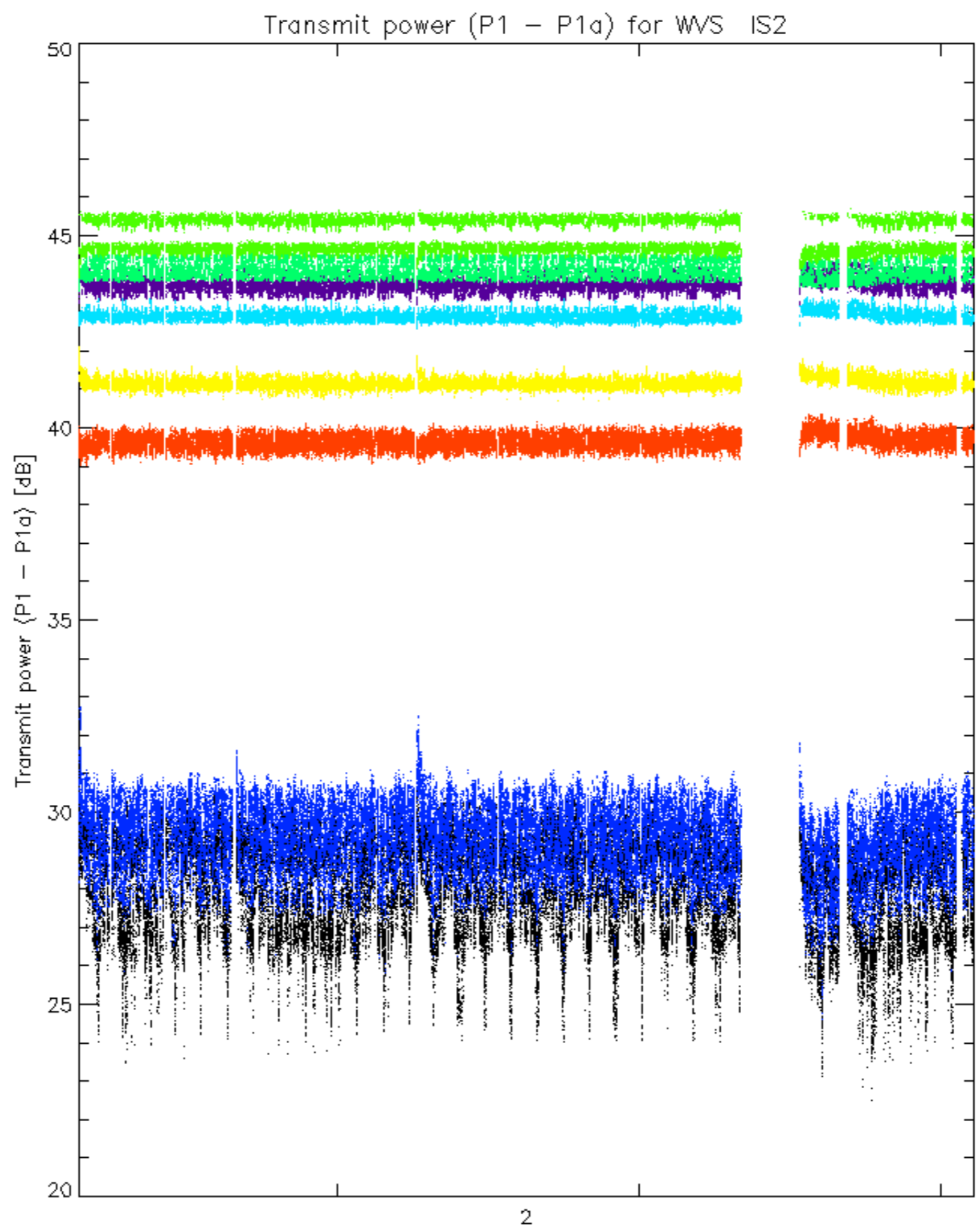




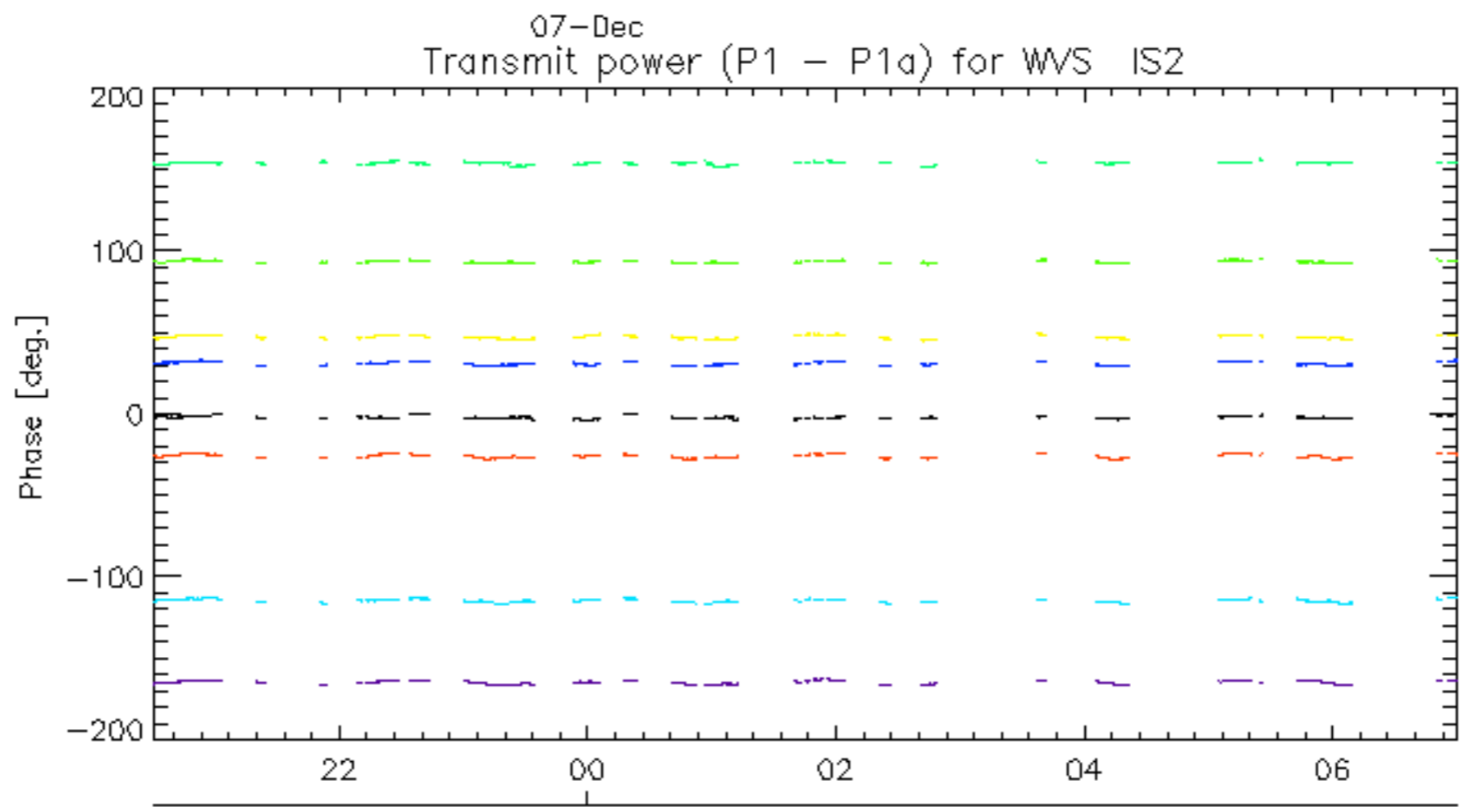
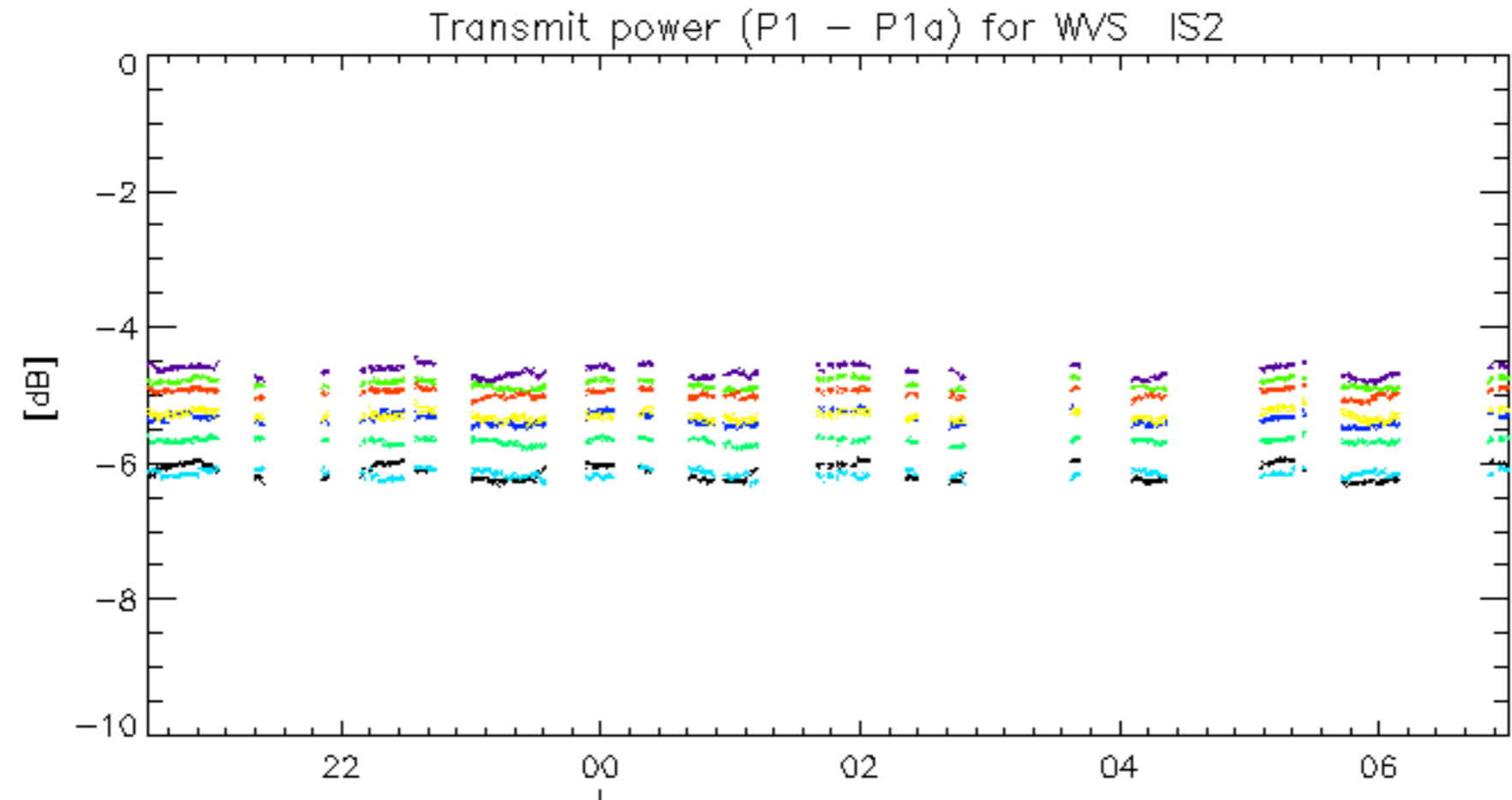




rows: 3 7 11 15 19 22 26 30



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



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

No unavailabilities during the reported period.