

PRELIMINARY REPORT OF 070113

last update on Sat Jan 13 11:00:01 GMT 2007

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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 2007-01-12 00:00:00 to 2007-01-13 11:00:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	31	54	13	0	1
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	31	54	13	0	1
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	31	54	13	0	1
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	31	54	13	0	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	39	41	41	8	38
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	39	41	41	8	38
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	41	41	8	38
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	39	41	41	8	38

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	20070112 063522
H	20070113 060345

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
<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	-3.964464	0.007570	-0.010095
7	P1	-3.143818	0.049406	0.034088
11	P1	-4.120185	0.025225	0.013955
15	P1	-6.333819	0.016186	-0.001162
19	P1	-3.680869	0.005945	-0.041968
22	P1	-4.676467	0.015859	-0.033640
26	P1	-3.955714	0.009984	0.008202
30	P1	-5.915989	0.008719	-0.022697
3	P1	-16.521544	0.258741	-0.020090
7	P1	-17.281836	0.190038	0.134392
11	P1	-17.267673	0.456719	-0.056813
15	P1	-13.046415	0.129026	0.075112
19	P1	-15.073174	0.109725	-0.096492
22	P1	-15.829814	0.556704	0.174871
26	P1	-15.030770	0.188278	0.013352
30	P1	-17.549417	0.495805	0.081214

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.795652	0.090415	0.028741
7	P2	-21.679285	0.089202	0.062773
11	P2	-15.540116	0.099903	0.018944
15	P2	-7.100466	0.104725	0.039664
19	P2	-9.182423	0.098557	0.055249
22	P2	-18.231306	0.091681	0.029126
26	P2	-16.600395	0.103663	0.034245
30	P2	-19.441759	0.085753	0.036220

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.239756	0.008576	0.001092
7	P3	-8.239756	0.008576	0.001092
11	P3	-8.239756	0.008576	0.001092
15	P3	-8.239756	0.008576	0.001092
19	P3	-8.239756	0.008576	0.001092
22	P3	-8.239756	0.008576	0.001092
26	P3	-8.239778	0.008575	0.001137
30	P3	-8.239778	0.008575	0.001137

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	-3.920420	0.014150	0.009986
7	P1	-2.476945	0.076451	0.015026
11	P1	-2.830927	0.016391	0.056723
15	P1	-3.705838	0.031980	-0.011776
19	P1	-3.550100	0.019050	-0.001285
22	P1	-5.005204	0.022837	0.055915
26	P1	-6.041659	0.025969	-0.014937
30	P1	-5.350667	0.037148	-0.021511
3	P1	-11.724316	0.086652	0.043085
7	P1	-10.042736	0.095174	0.091676
11	P1	-10.357076	0.094430	0.019427
15	P1	-10.732169	0.153716	0.008481
19	P1	-15.743988	0.111551	-0.049548
22	P1	-21.564169	1.426843	0.085832
26	P1	-15.994822	0.314163	0.123257
30	P1	-17.906633	0.361333	-0.072027

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.436792	0.101881	0.070485
7	P2	-22.193092	0.239797	0.044573
11	P2	-10.841863	0.110107	0.042110
15	P2	-4.965982	0.218548	0.041079
19	P2	-6.949839	0.220786	0.046997
22	P2	-8.235385	0.115642	0.033621
26	P2	-24.344227	0.177469	-0.025284
30	P2	-21.909966	0.144354	0.084063

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.089056	0.003405	-0.003542
7	P3	-8.088770	0.003388	-0.003097
11	P3	-8.088956	0.003406	-0.003237
15	P3	-8.088833	0.003399	-0.004091
19	P3	-8.088878	0.003408	-0.003455
22	P3	-8.088720	0.003412	-0.003847
26	P3	-8.089095	0.003407	-0.003344
30	P3	-8.088871	0.003390	-0.002838

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	0.000568209
	stdev	1.64603e-07
MEAN Q	mean	0.000504209
	stdev	2.12980e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140411
	stdev	0.00120561
STDEV Q	mean	0.140813
	stdev	0.00122626



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007011[123]

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_1PNPDE20070113_024624_000001482054_00361_25465_5301.N1	1	1
ASA_GM1_1PNPDK20070111_093819_000005432054_00337_25441_2629.N1	0	6
ASA_GM1_1PNPDK20070112_072909_000005072054_00350_25454_3551.N1	0	24
ASA_WSM_1PNPDE20070111_042351_000000672054_00334_25438_2884.N1	0	45
ASA_WSM_1PNPDE20070111_042351_000001842054_00334_25438_3099.N1	0	45
ASA_WSM_1PNPDE20070111_133030_000000852054_00339_25443_3444.N1	0	76
ASA_WSM_1PNPDE20070112_143842_000003232054_00354_25458_4789.N1	0	8
ASA_WSM_1PNPDE20070112_171324_000002322054_00356_25460_4821.N1	0	4



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

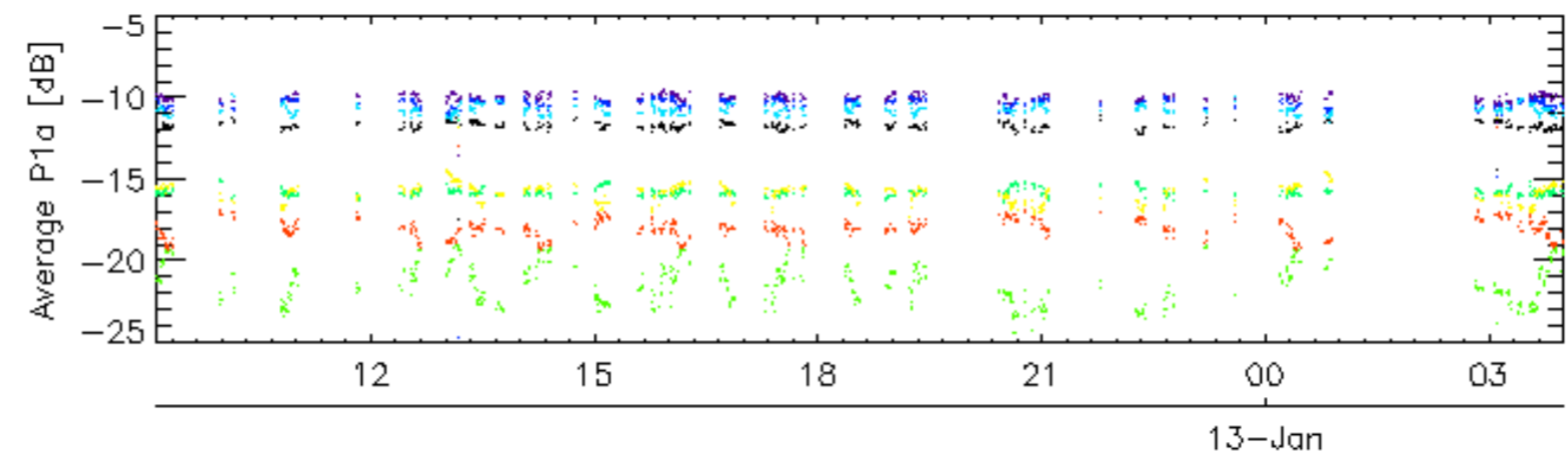
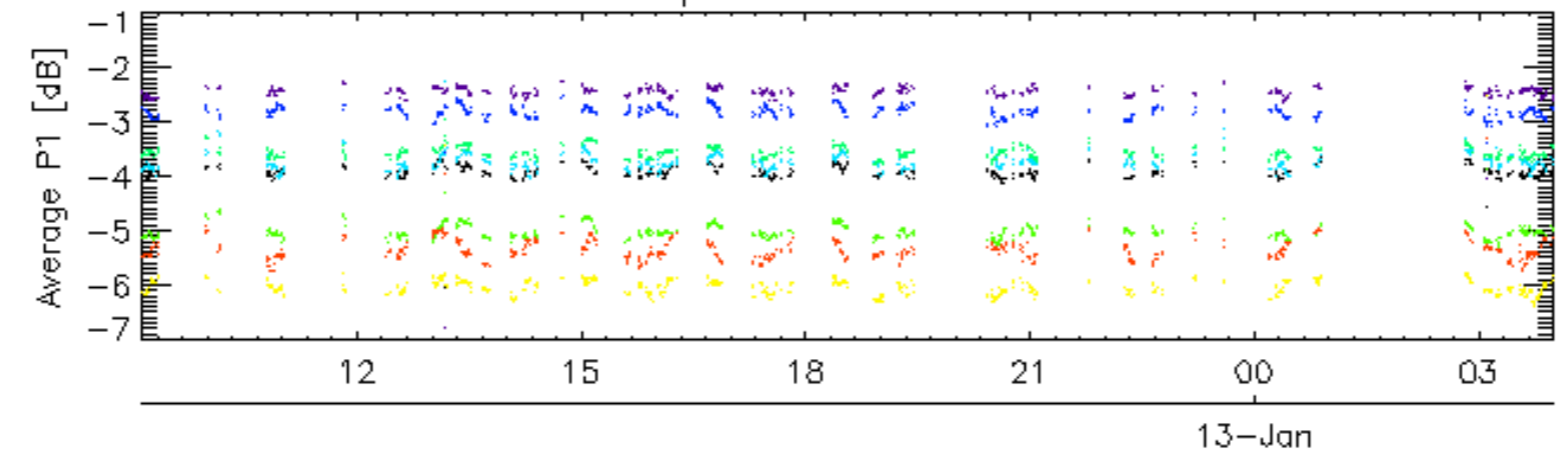
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

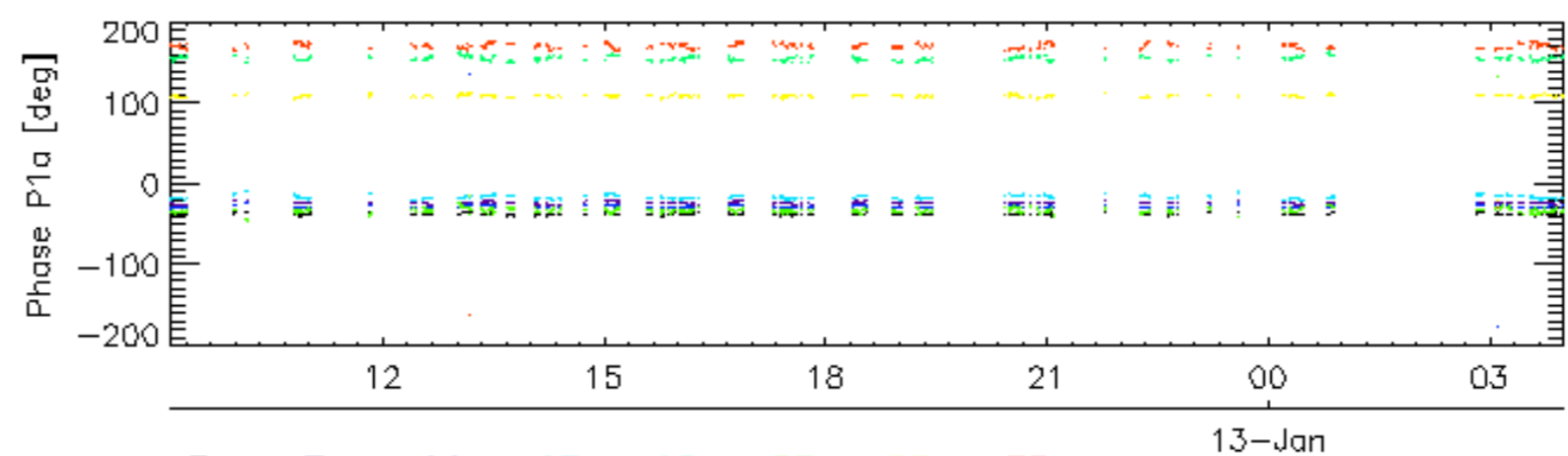
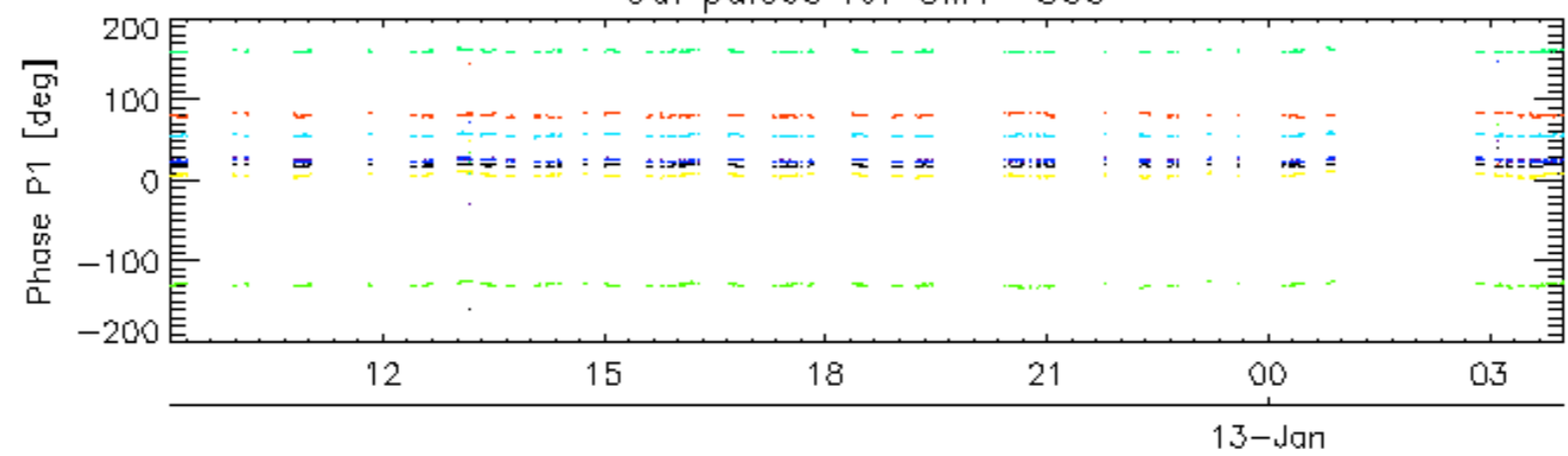
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

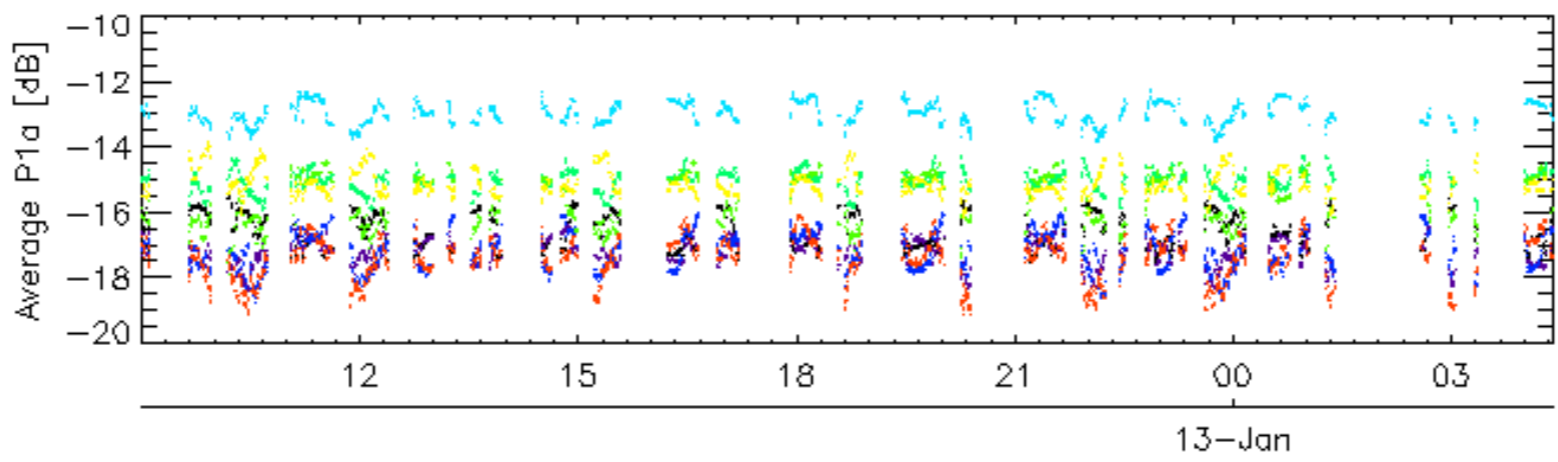
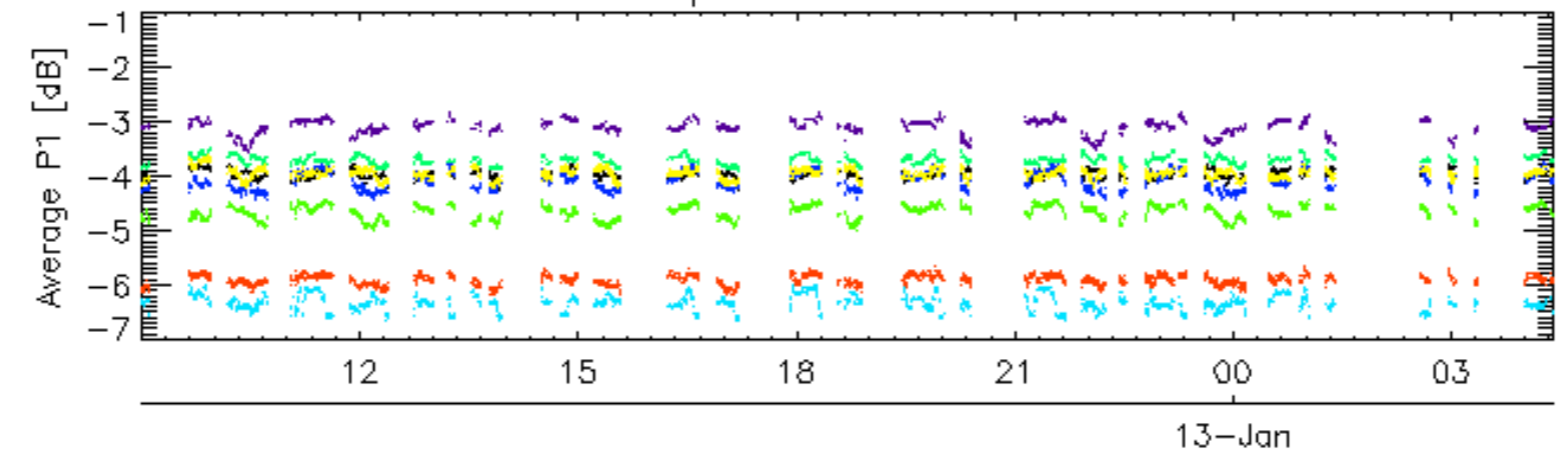


Cal pulses for GM1 SS3

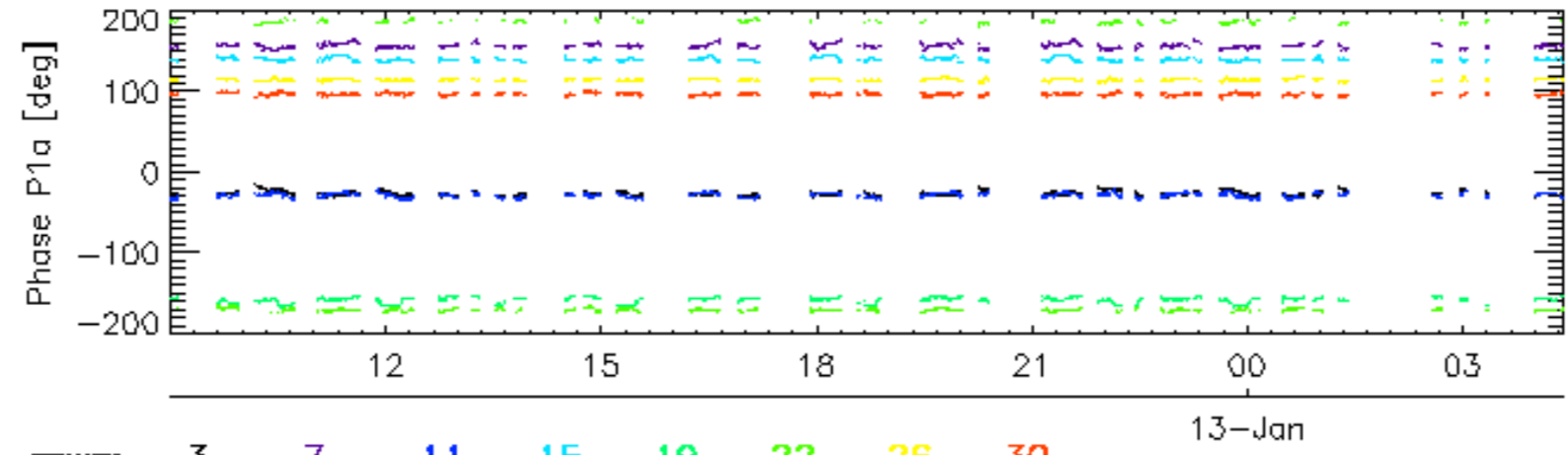
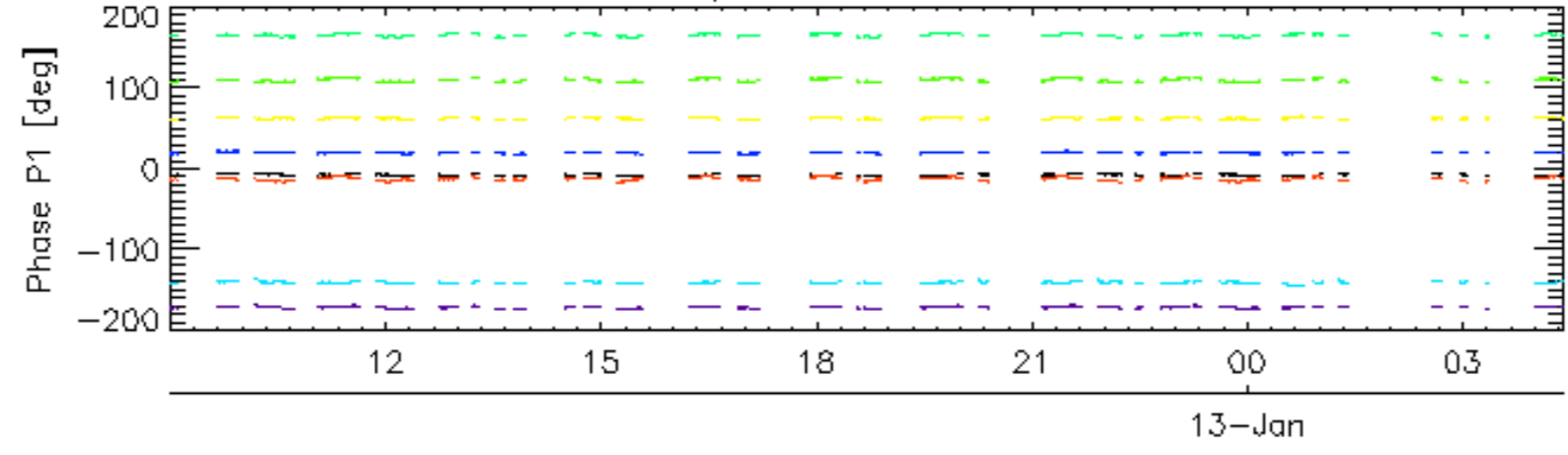


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

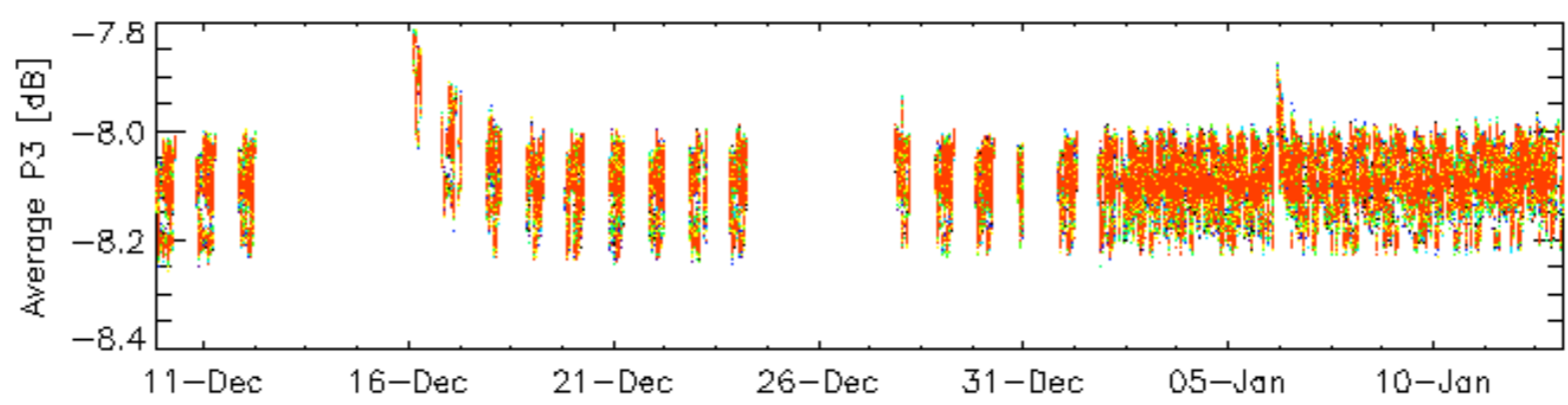
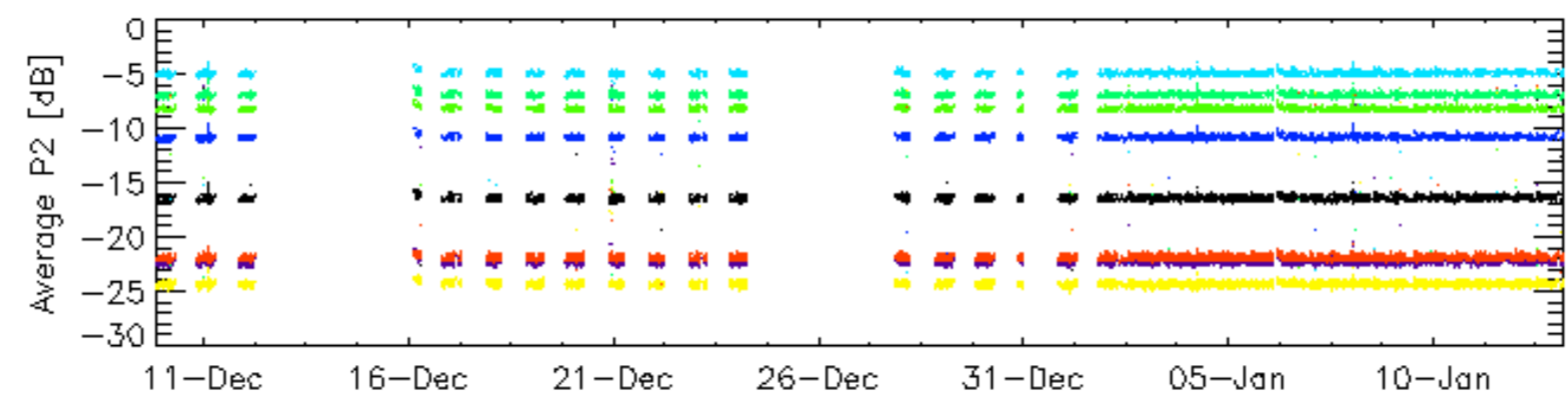
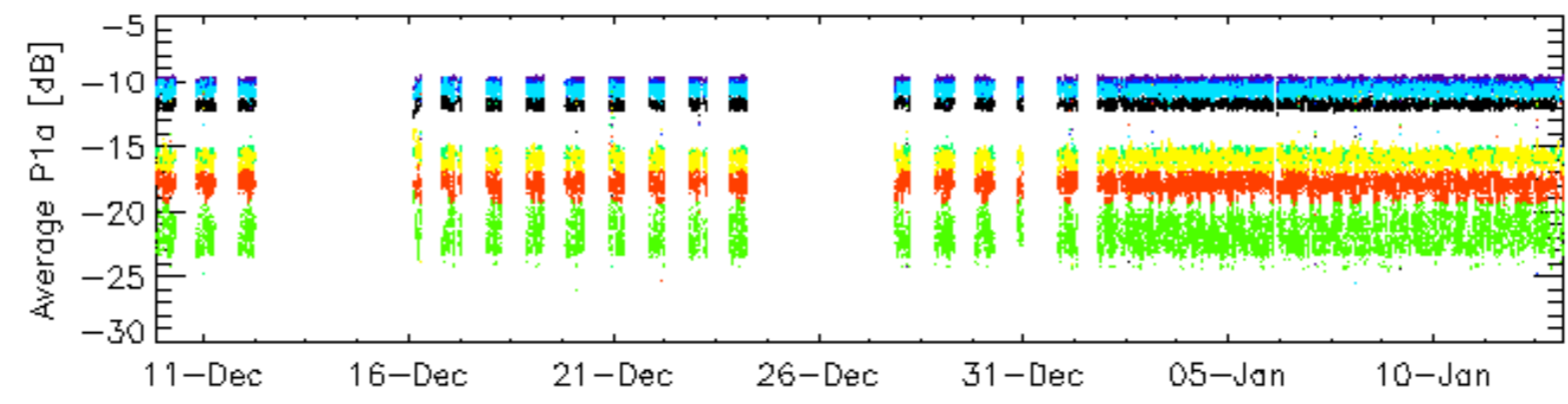
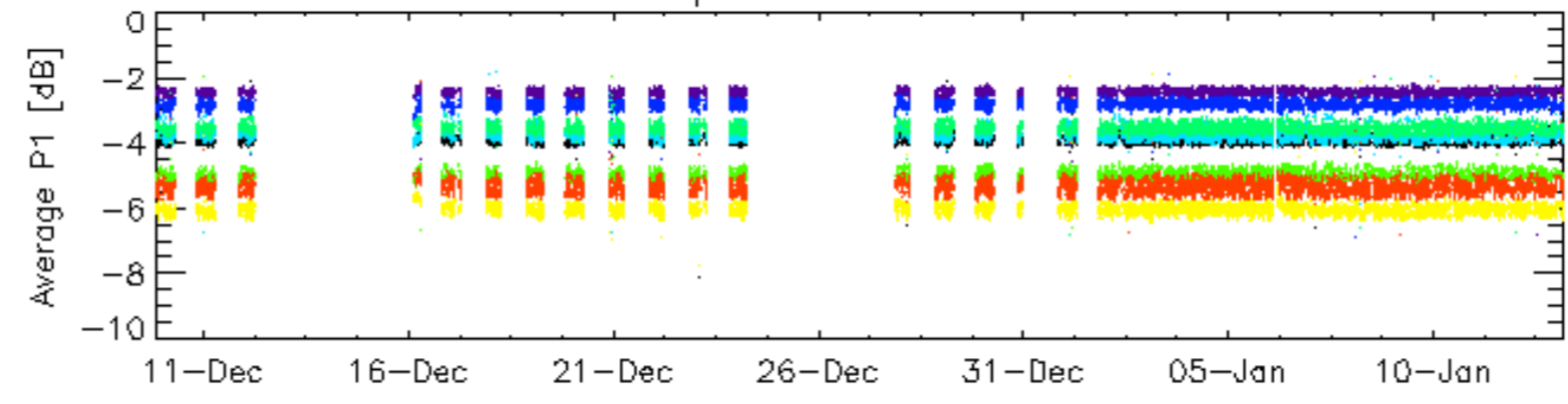


Cal pulses for WVS IS2



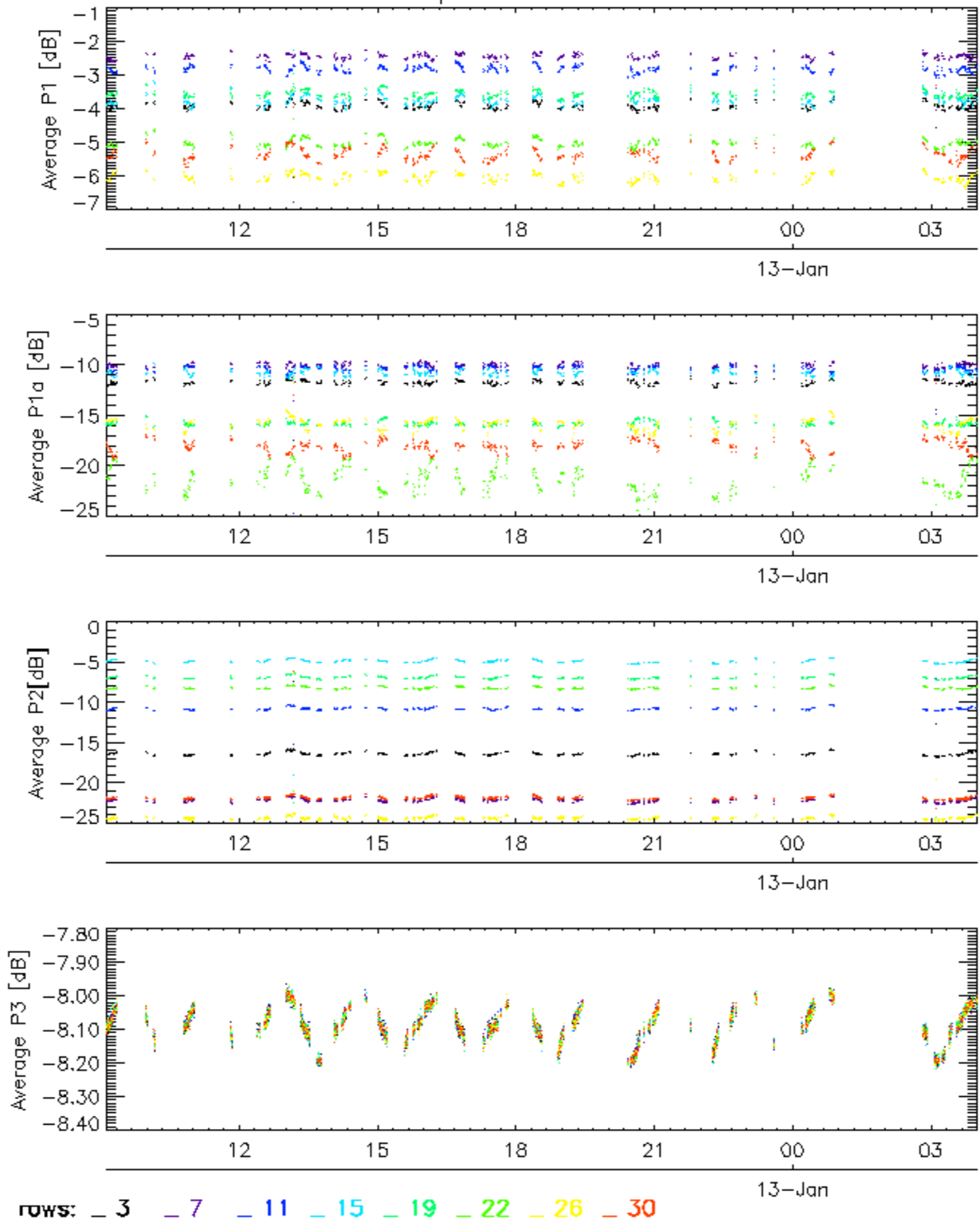
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

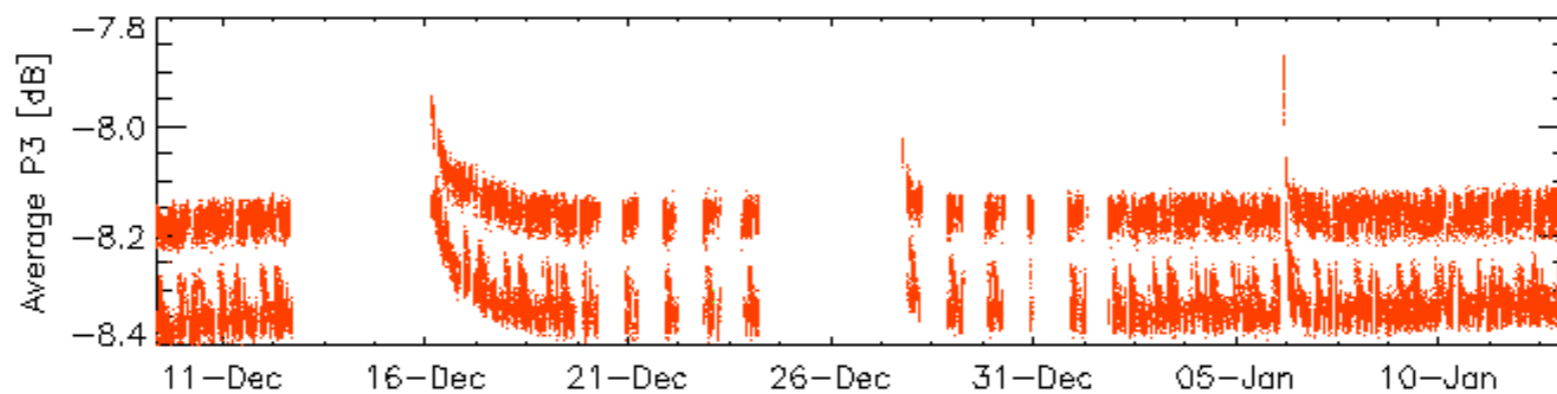
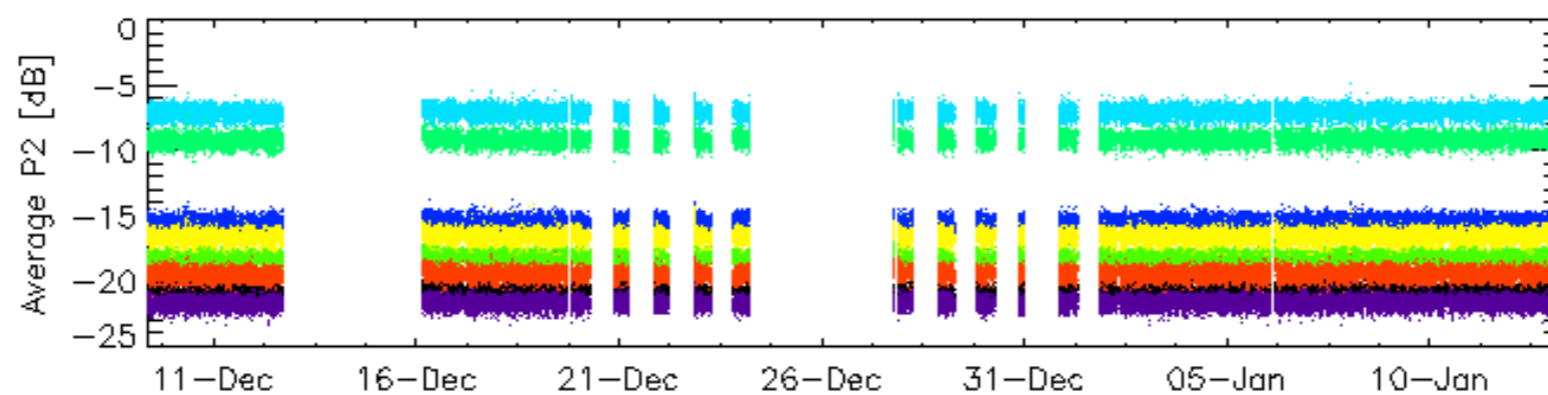
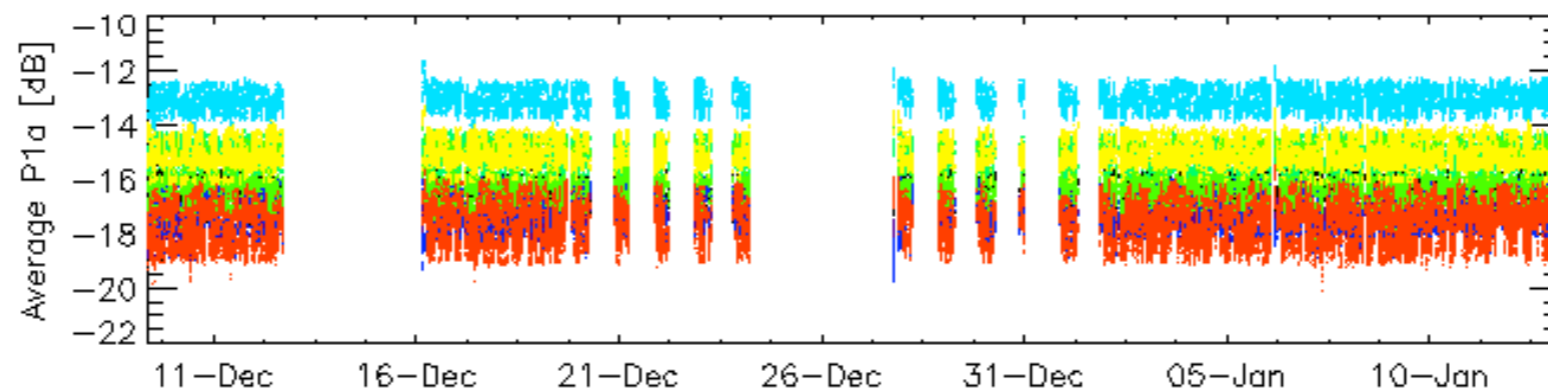
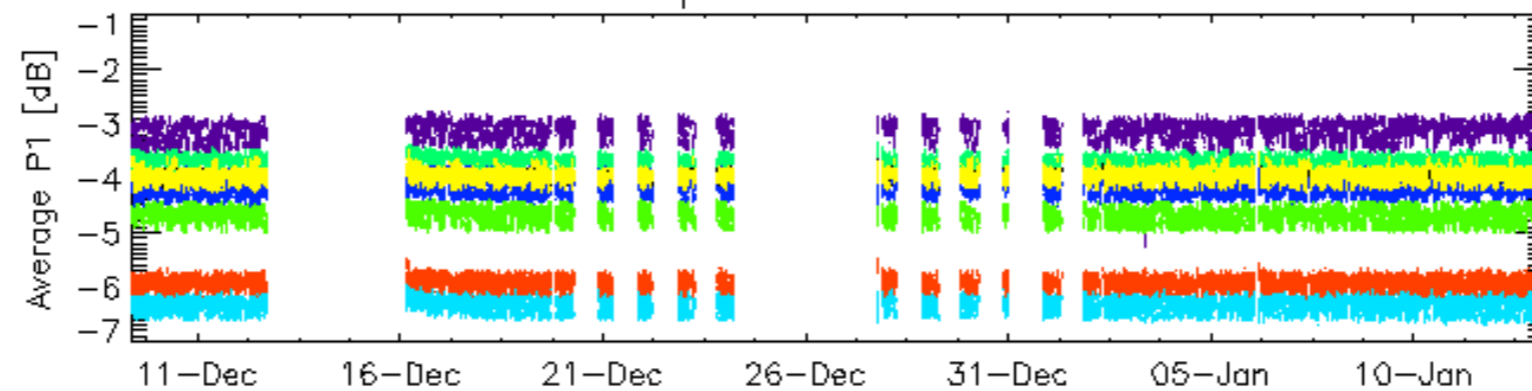


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

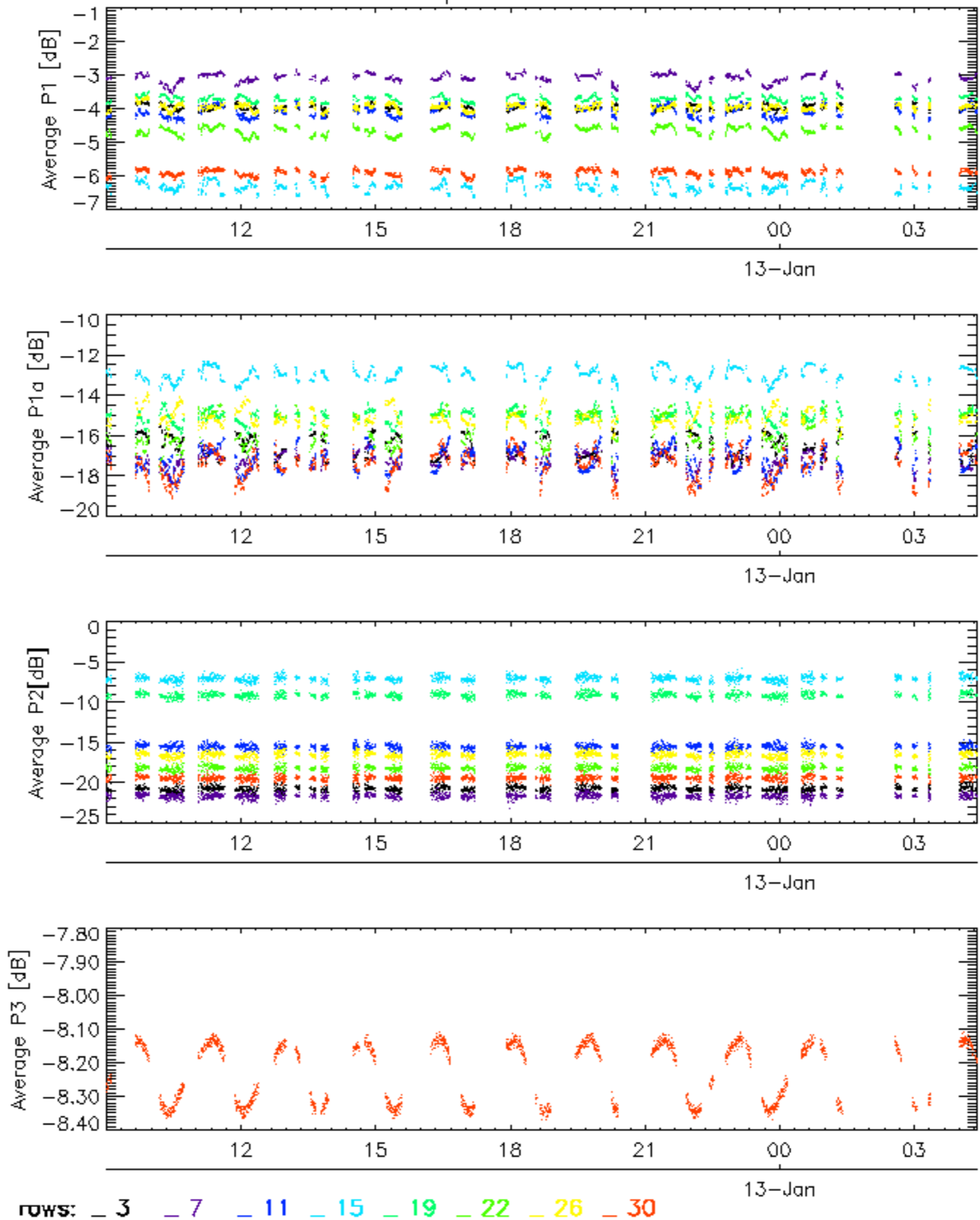


Cal pulses for WVS IS2

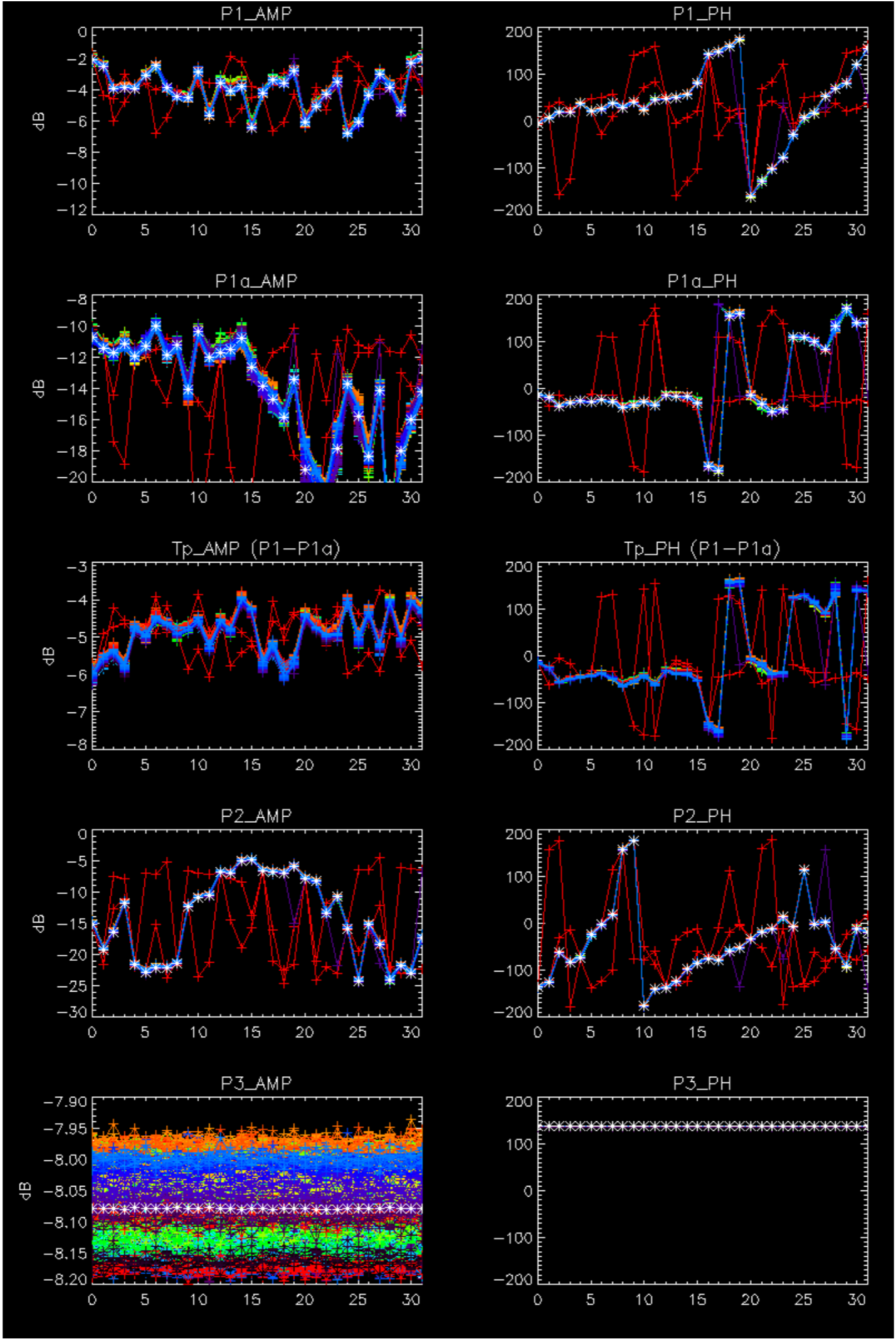


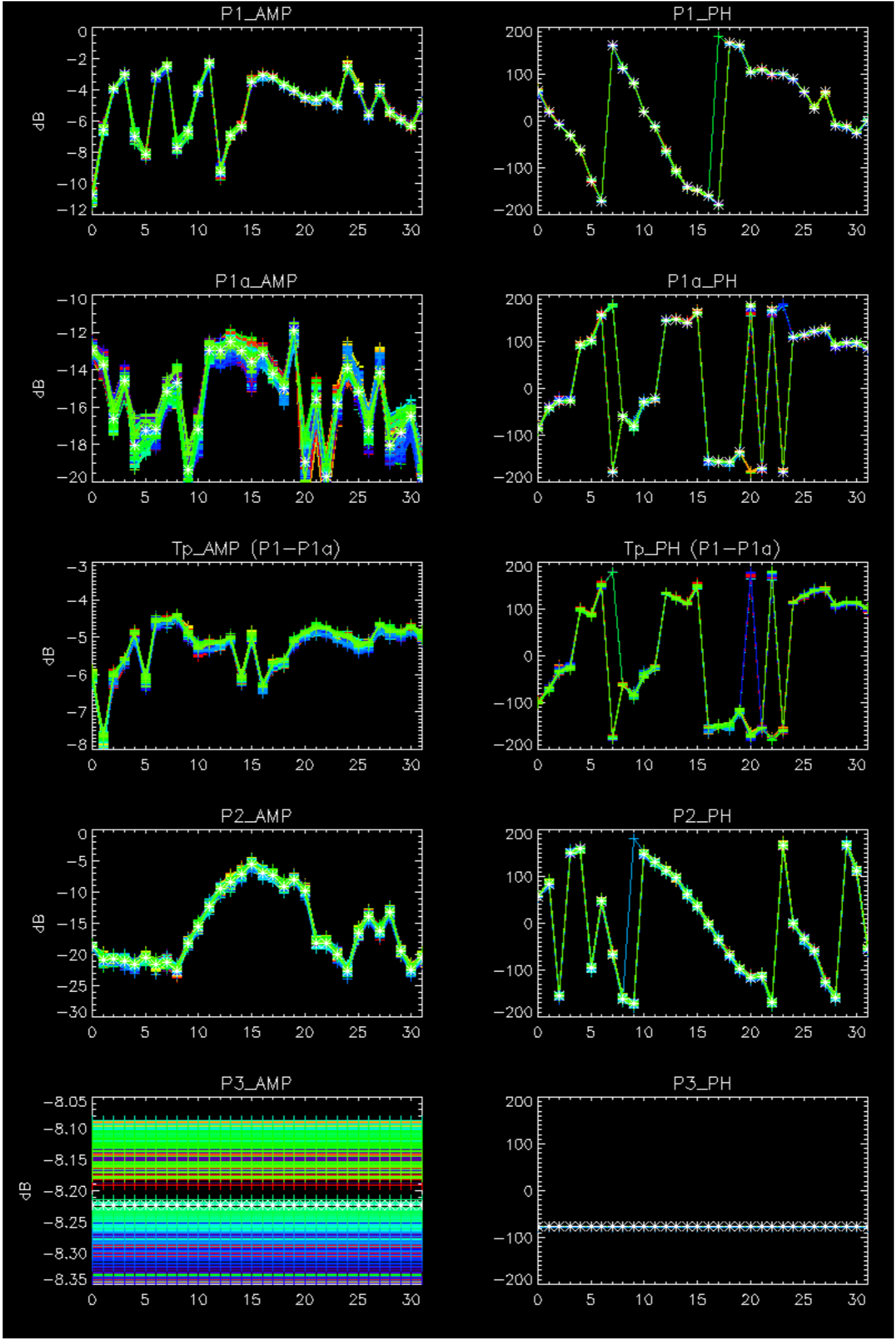
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



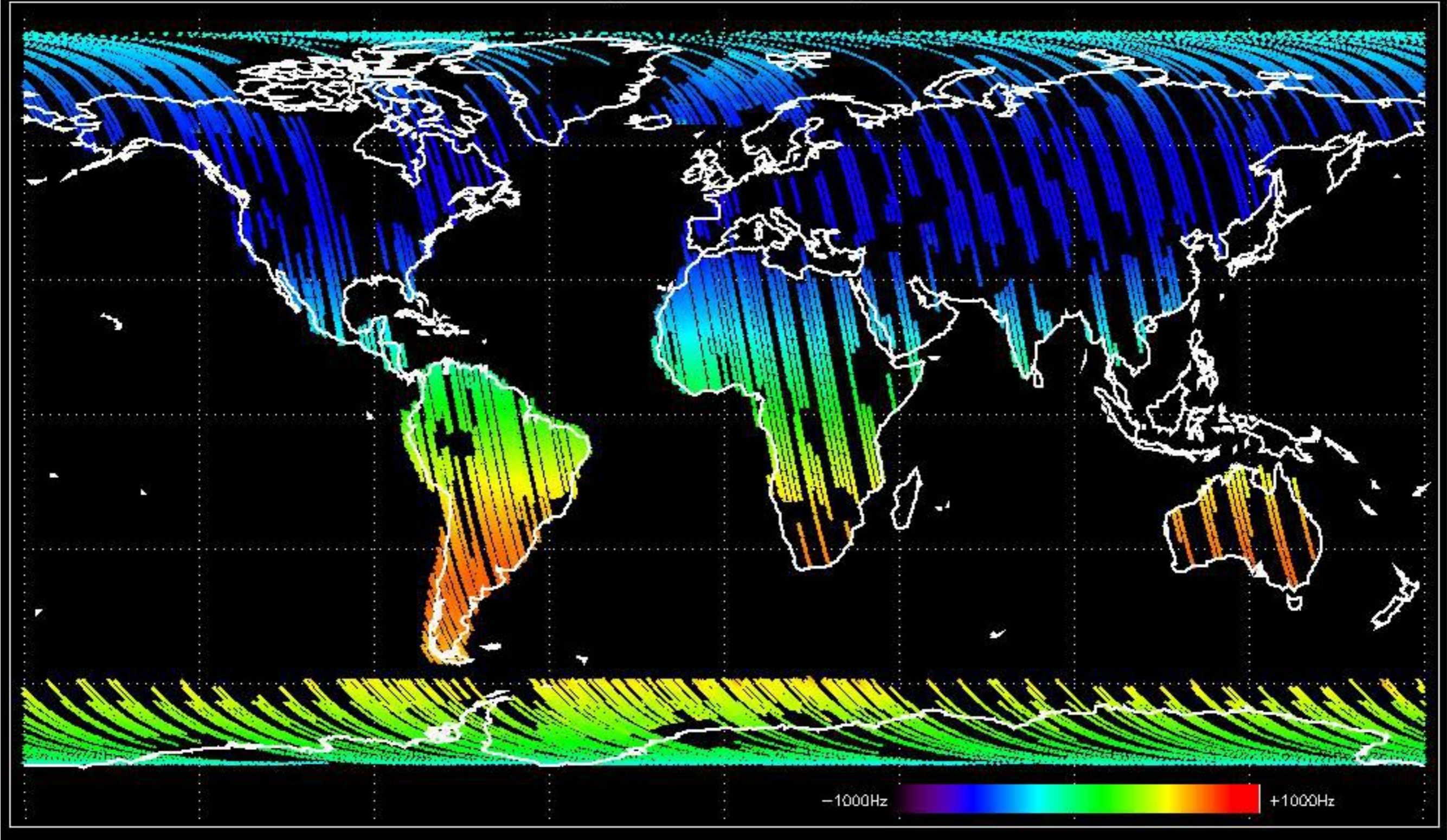
No anomalies observed.



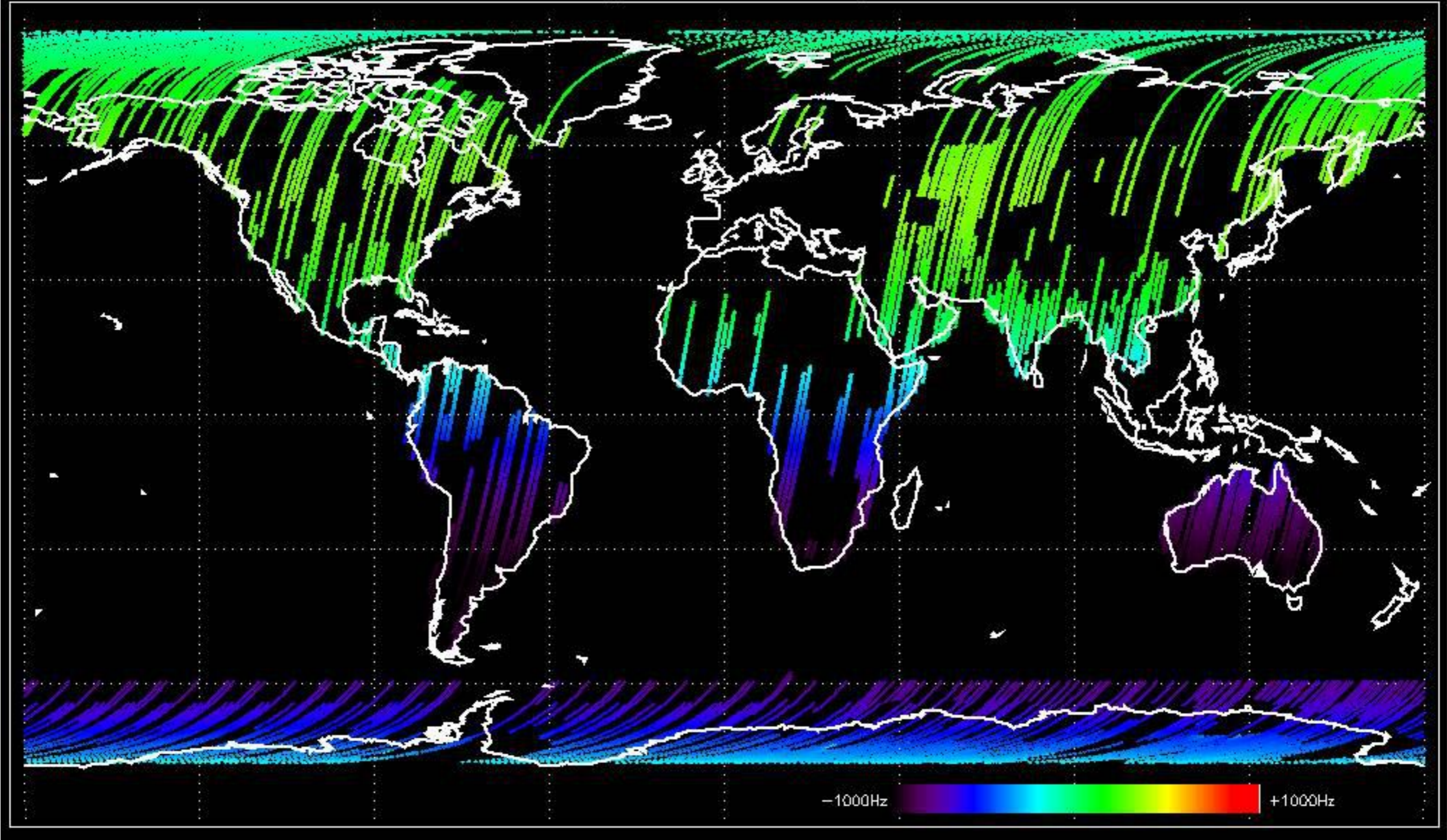


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

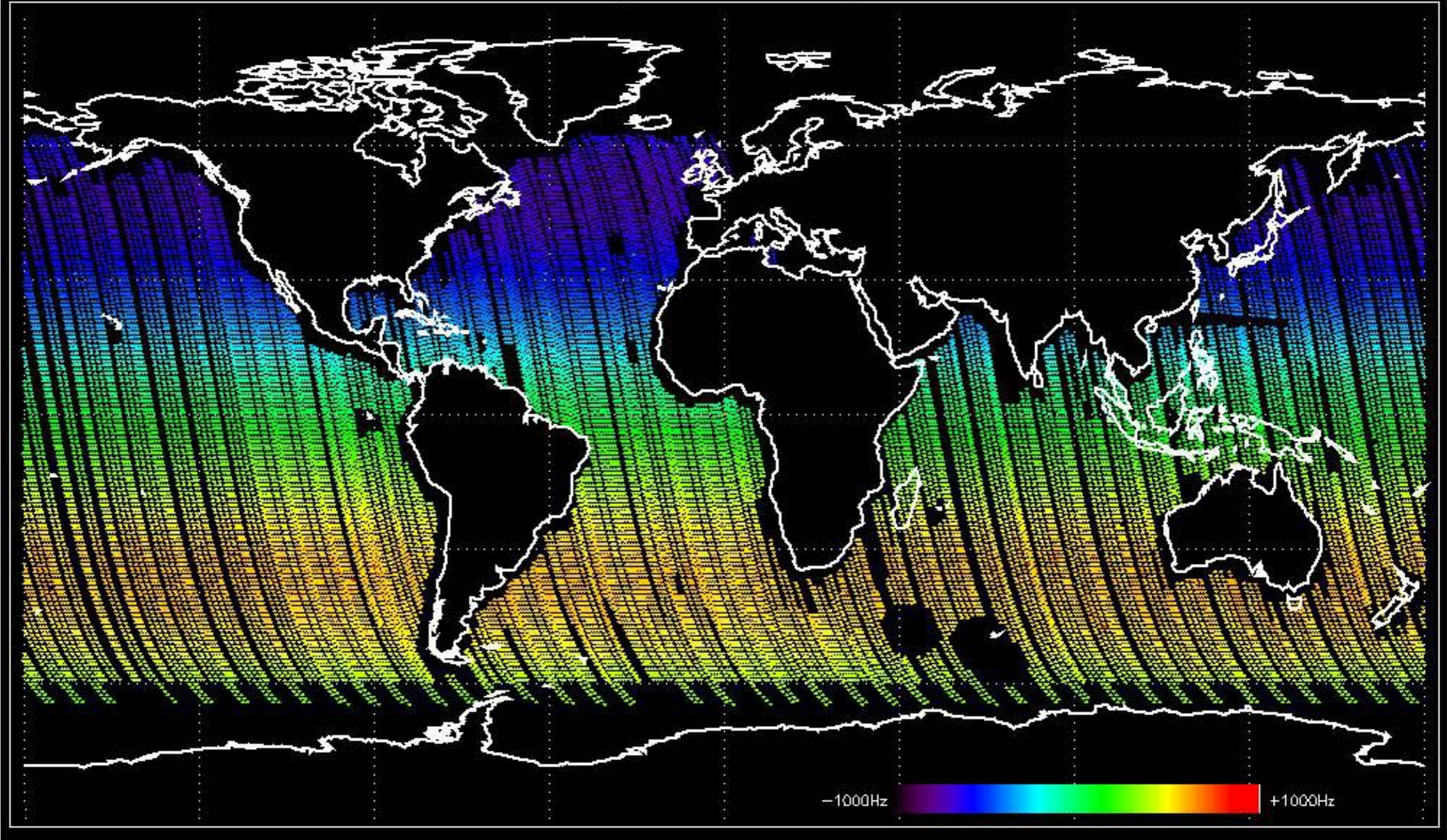
Doppler 'GM1' 'SS1' ascending



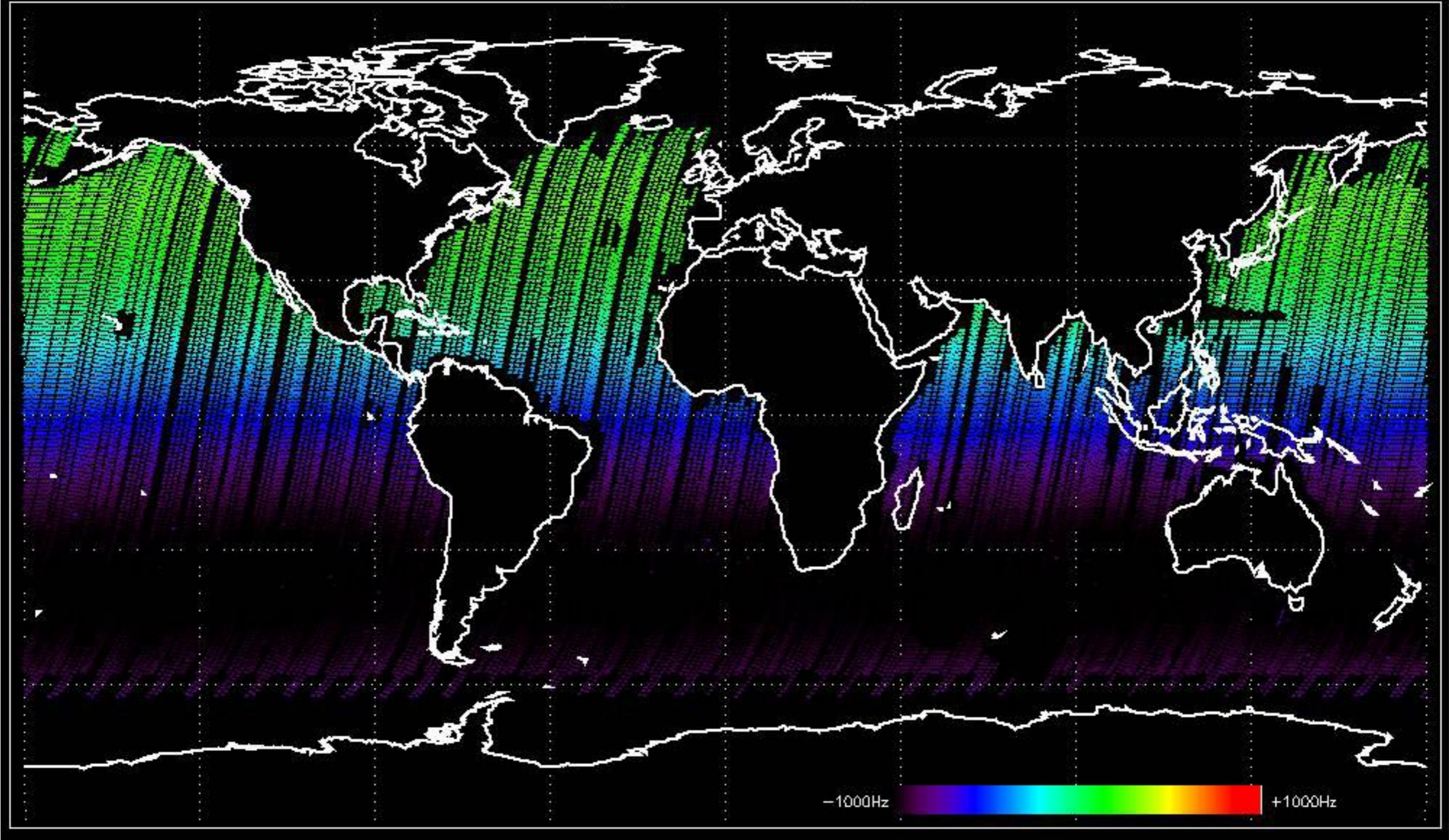
Doppler 'GM1' 'SS1' descending



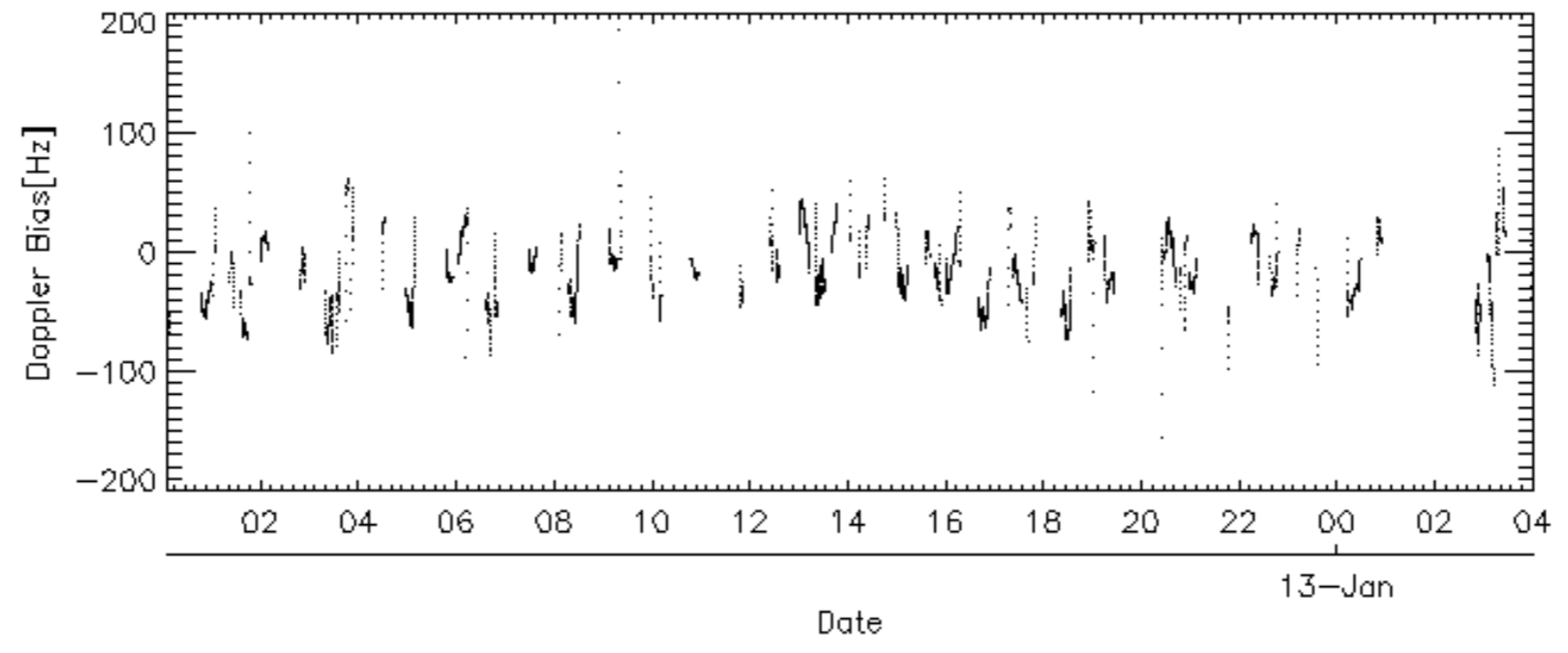
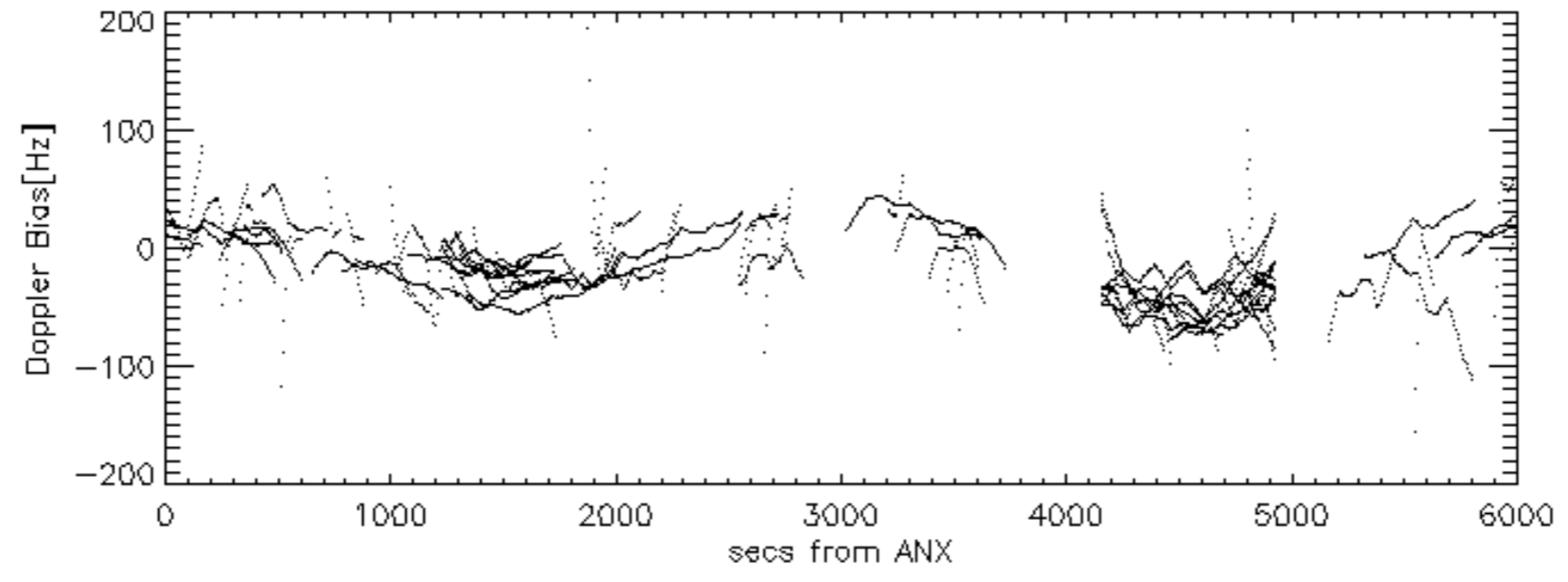
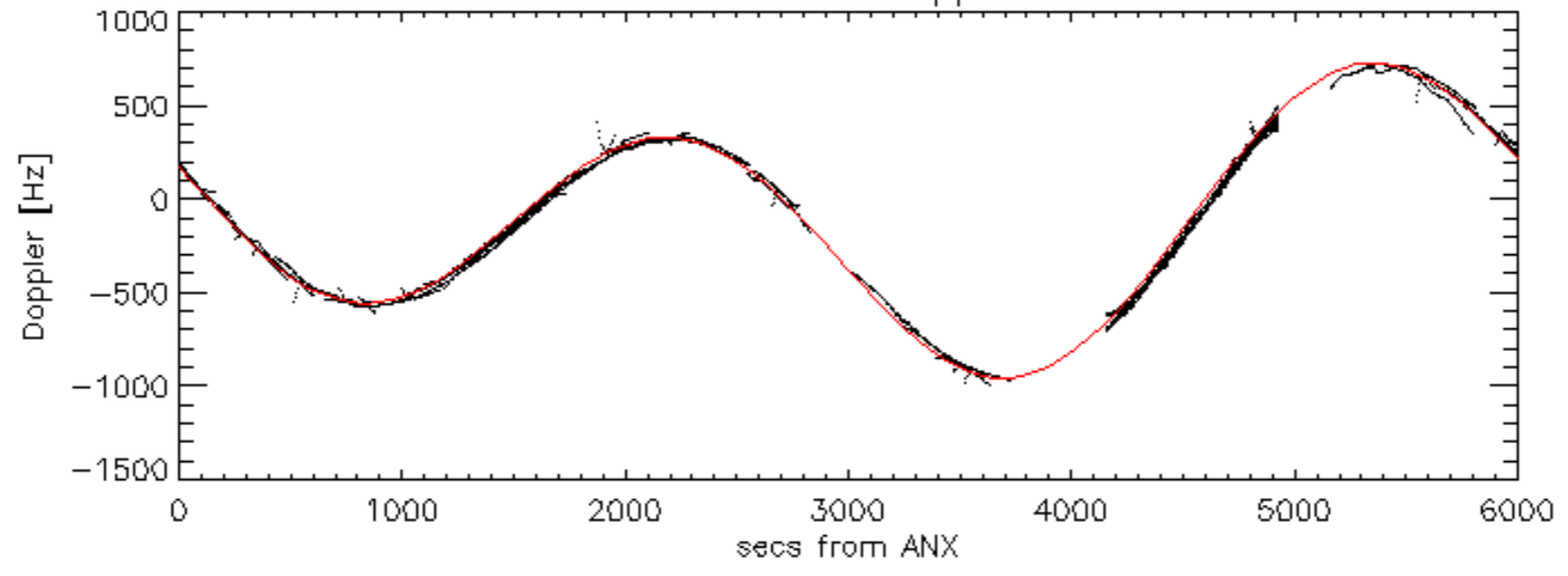
Doppler 'WVS' 'IS2' ascending

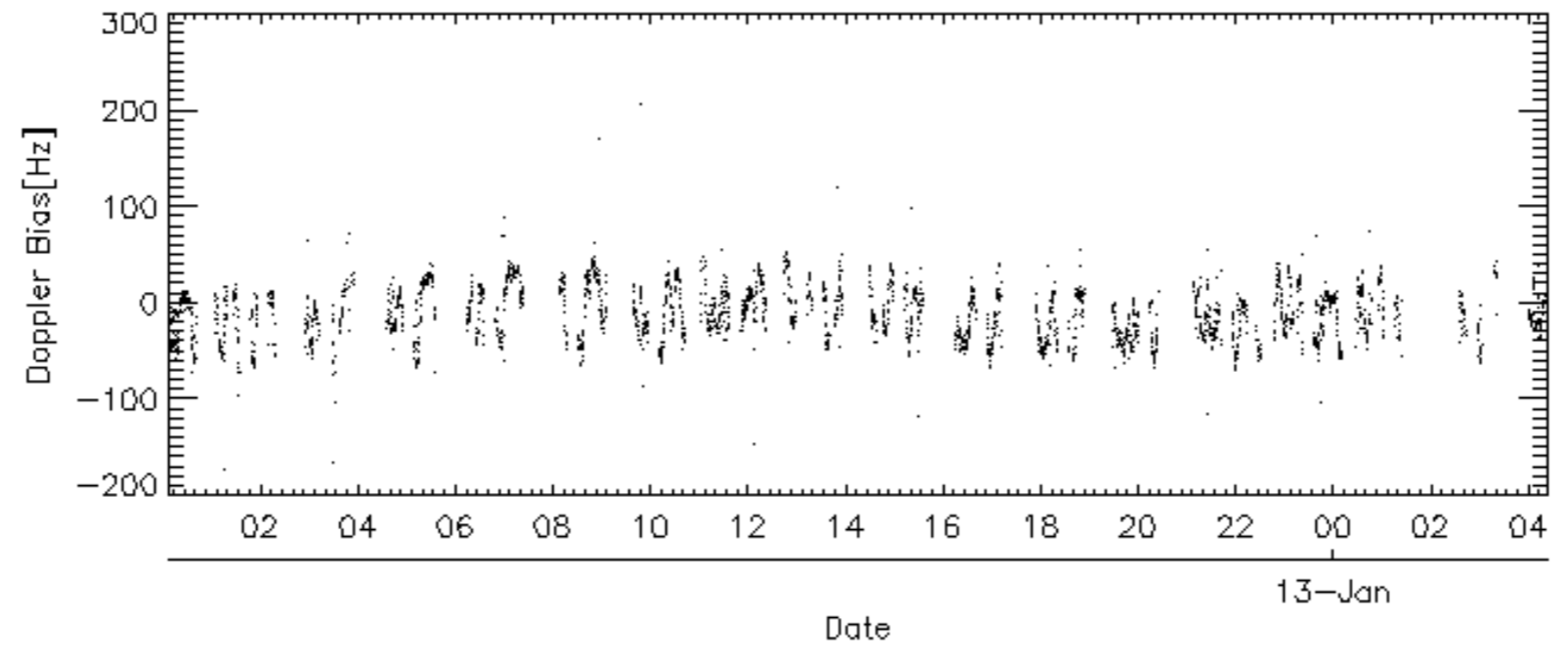
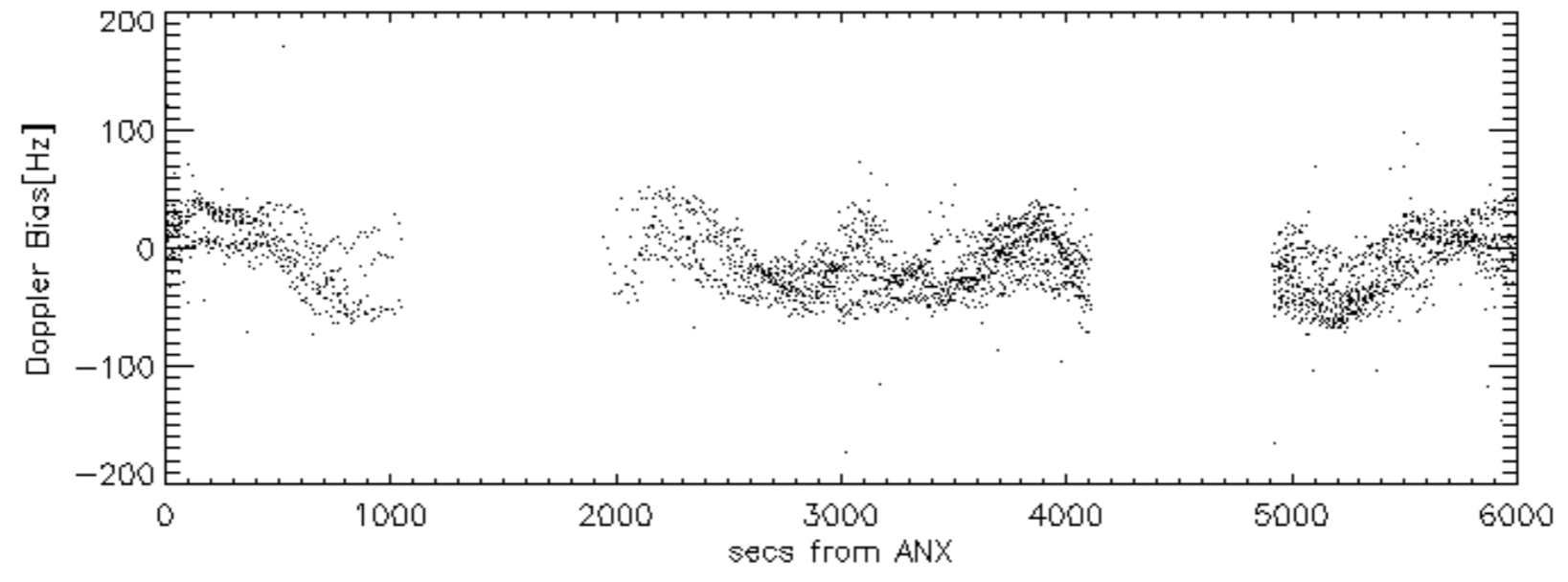
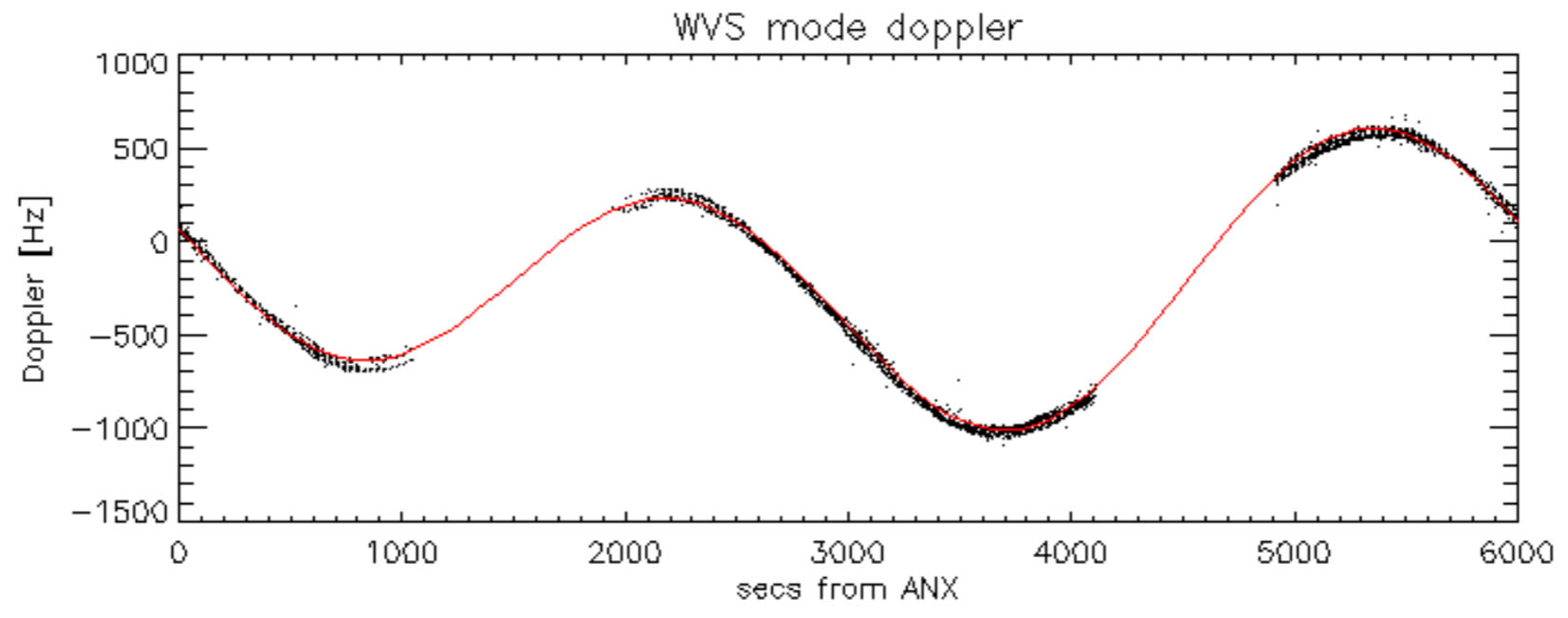


Doppler 'WVS' 'IS2' descending

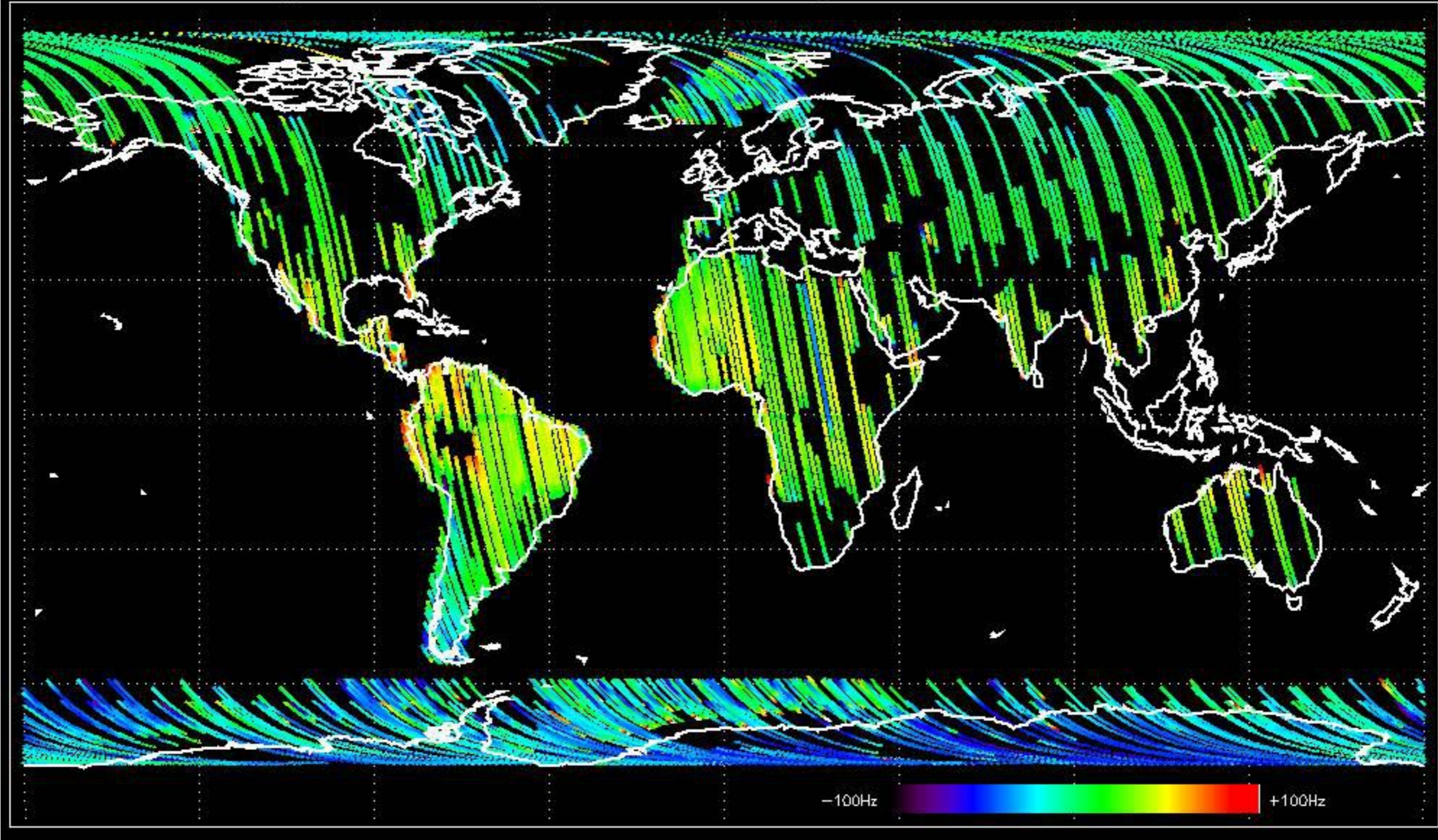


GM1 mode doppler

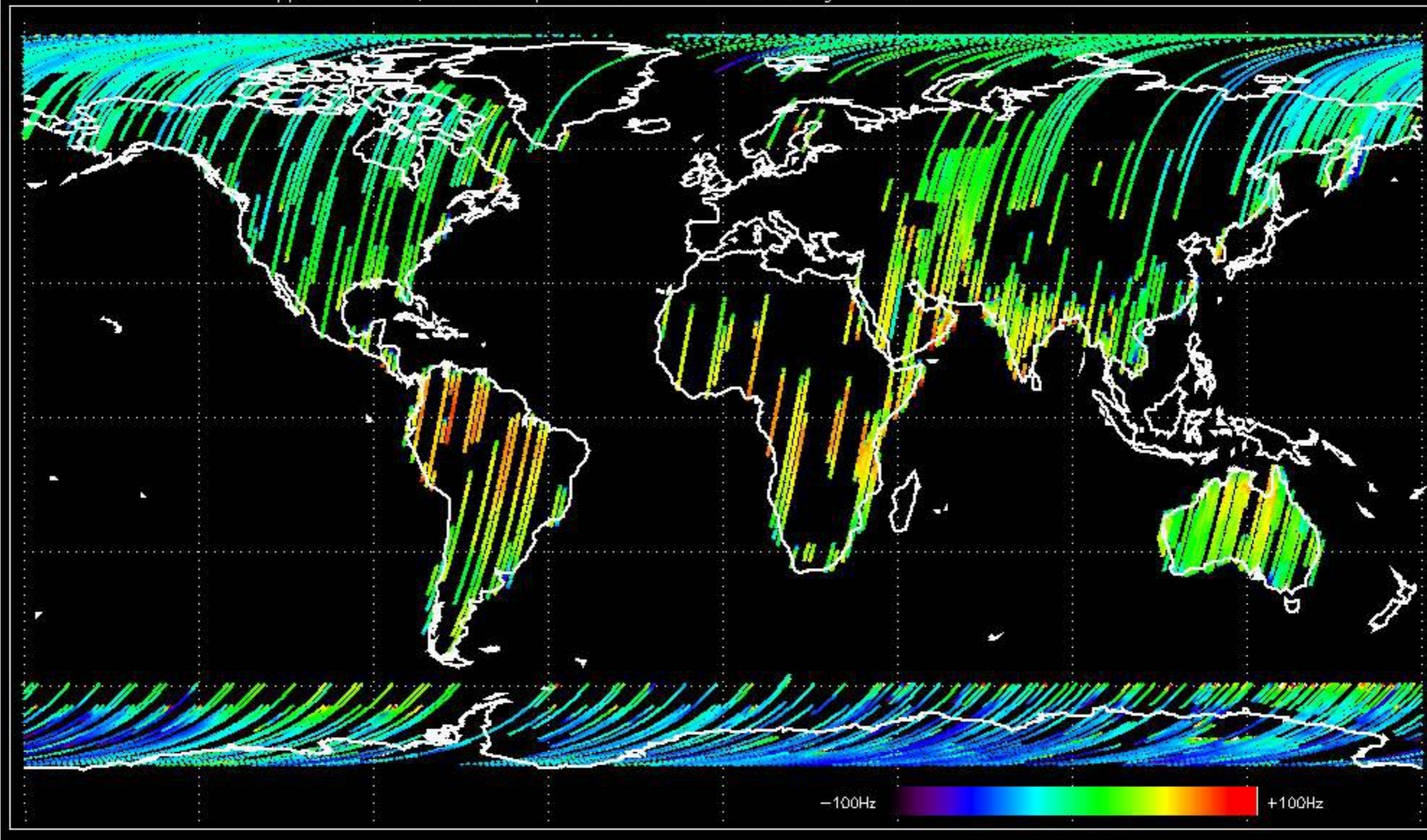




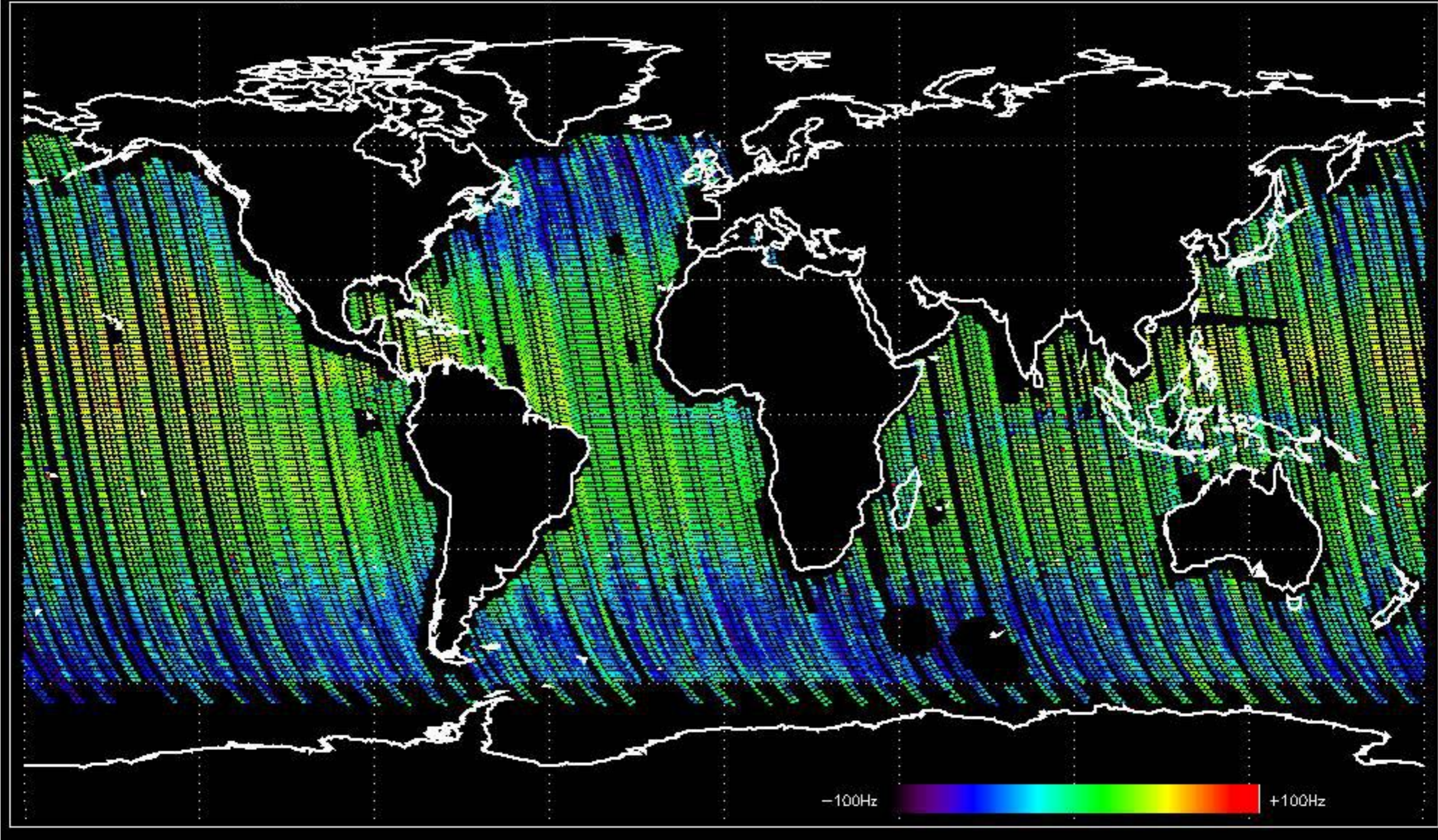
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.880027 Hz



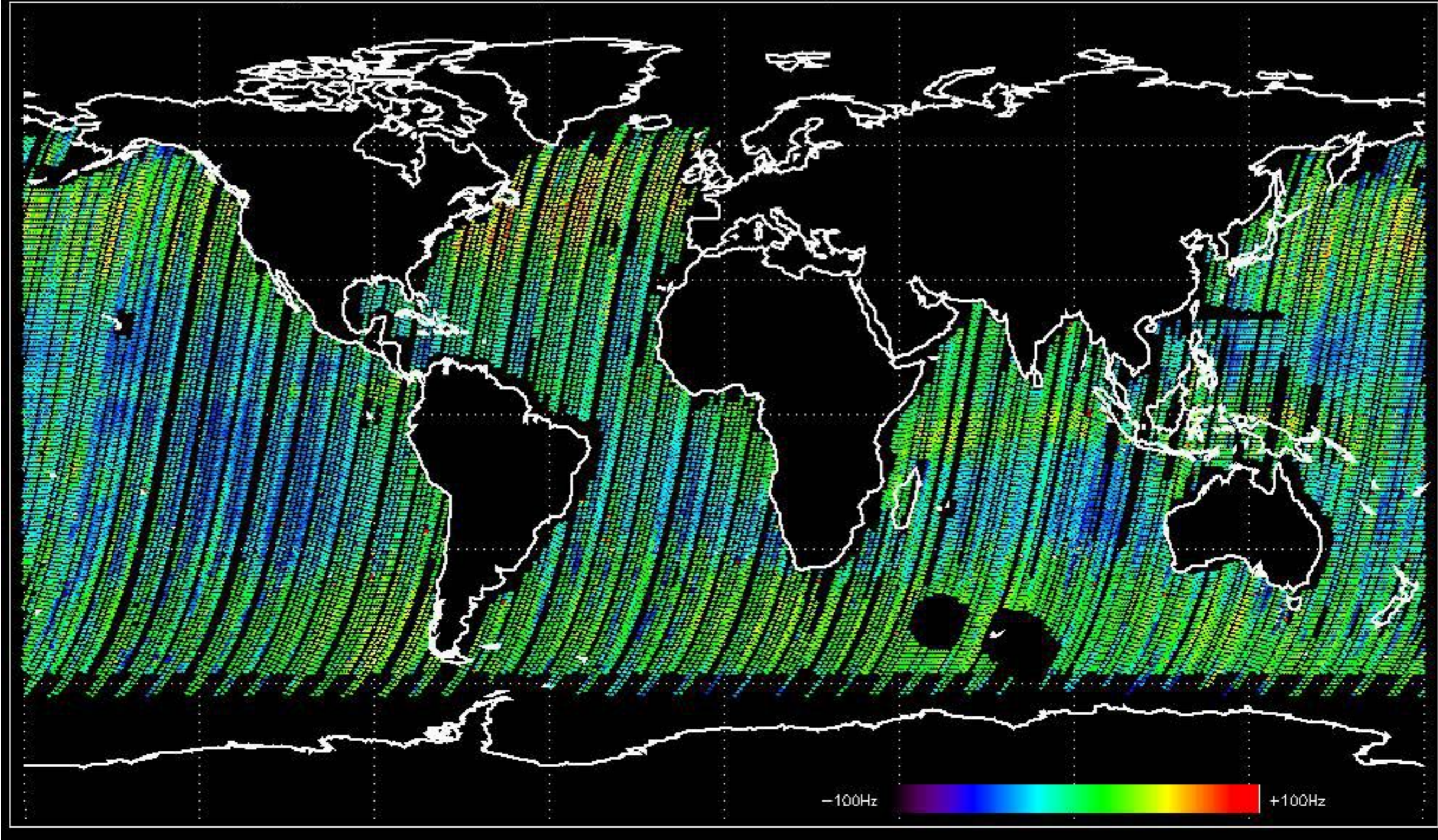
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.290275 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.715026 Hz

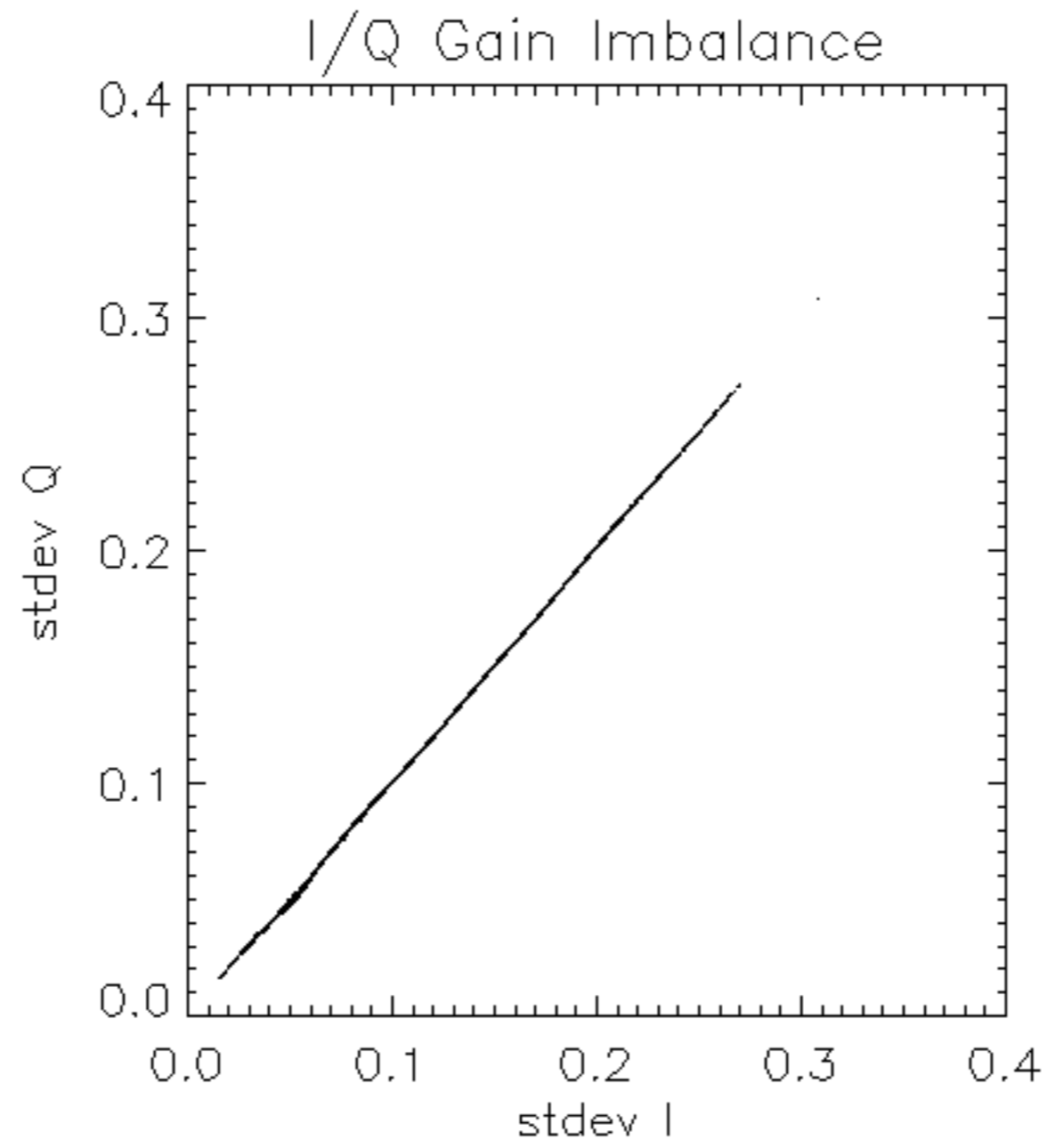


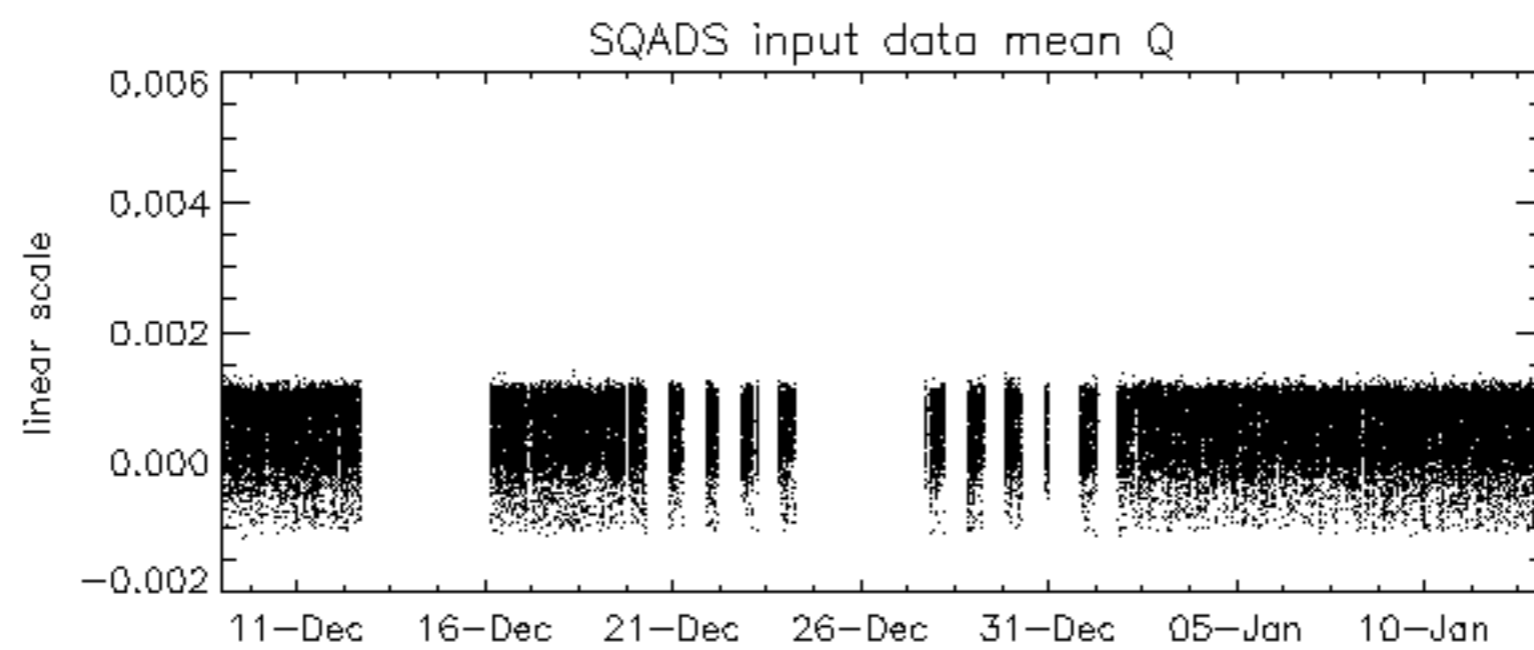
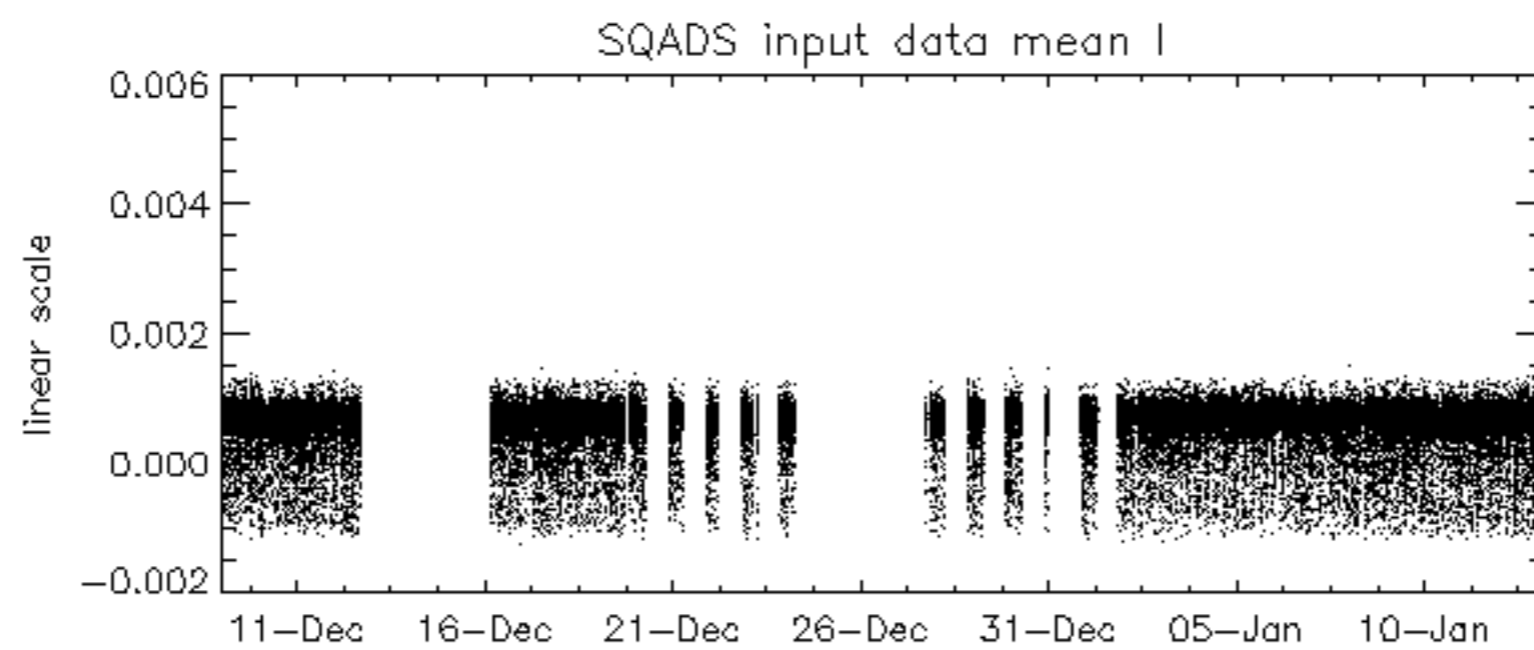
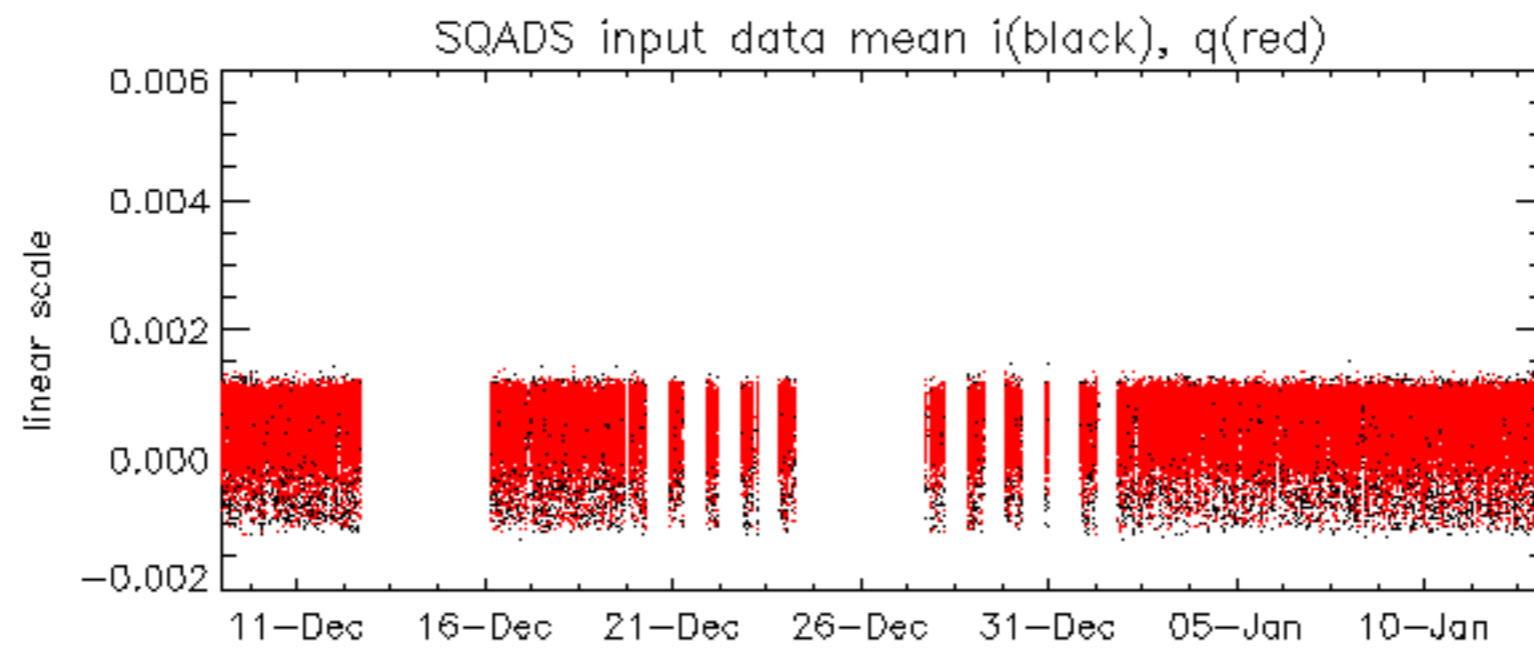
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.720687 Hz

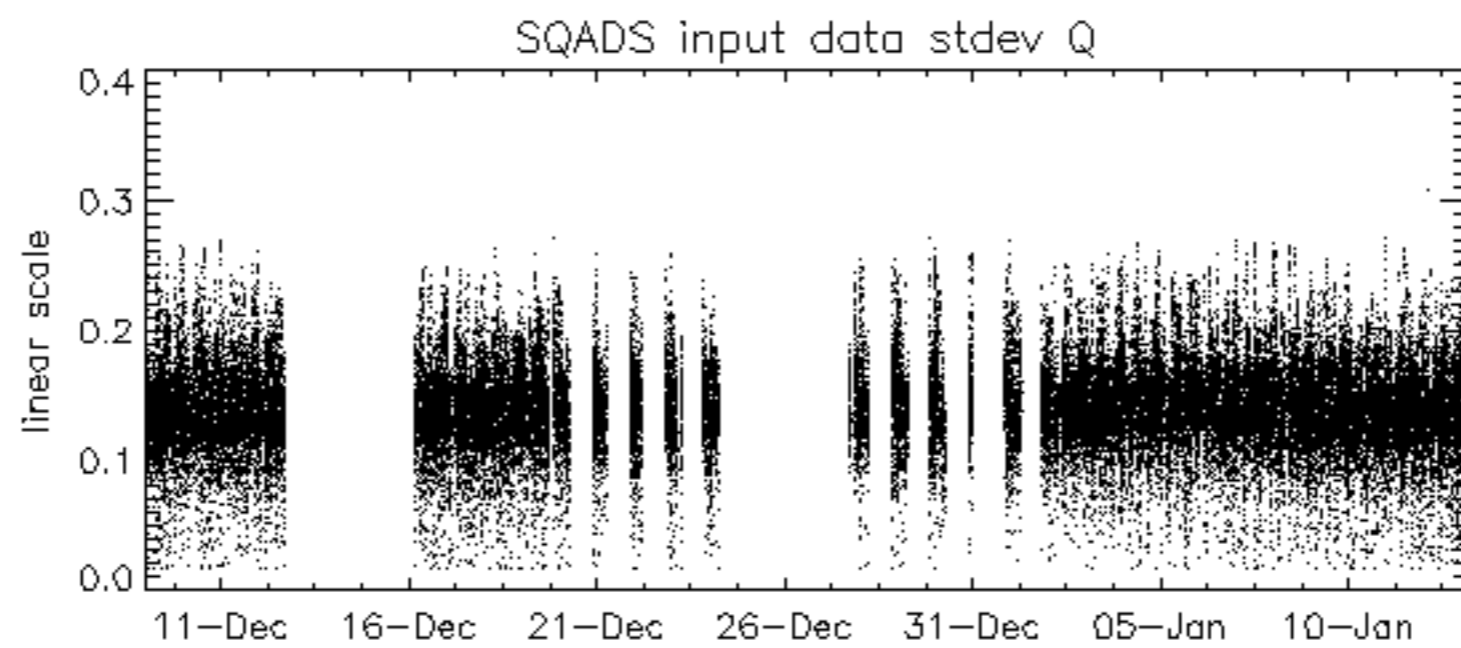
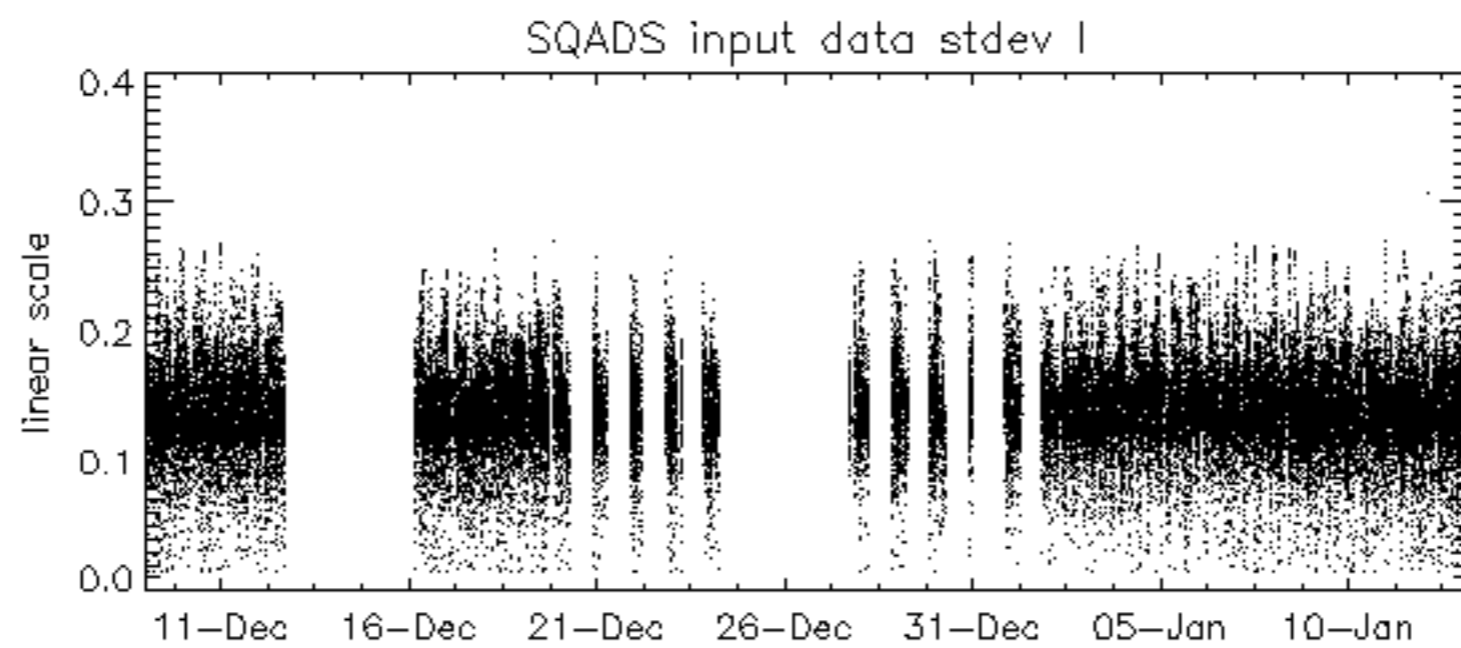
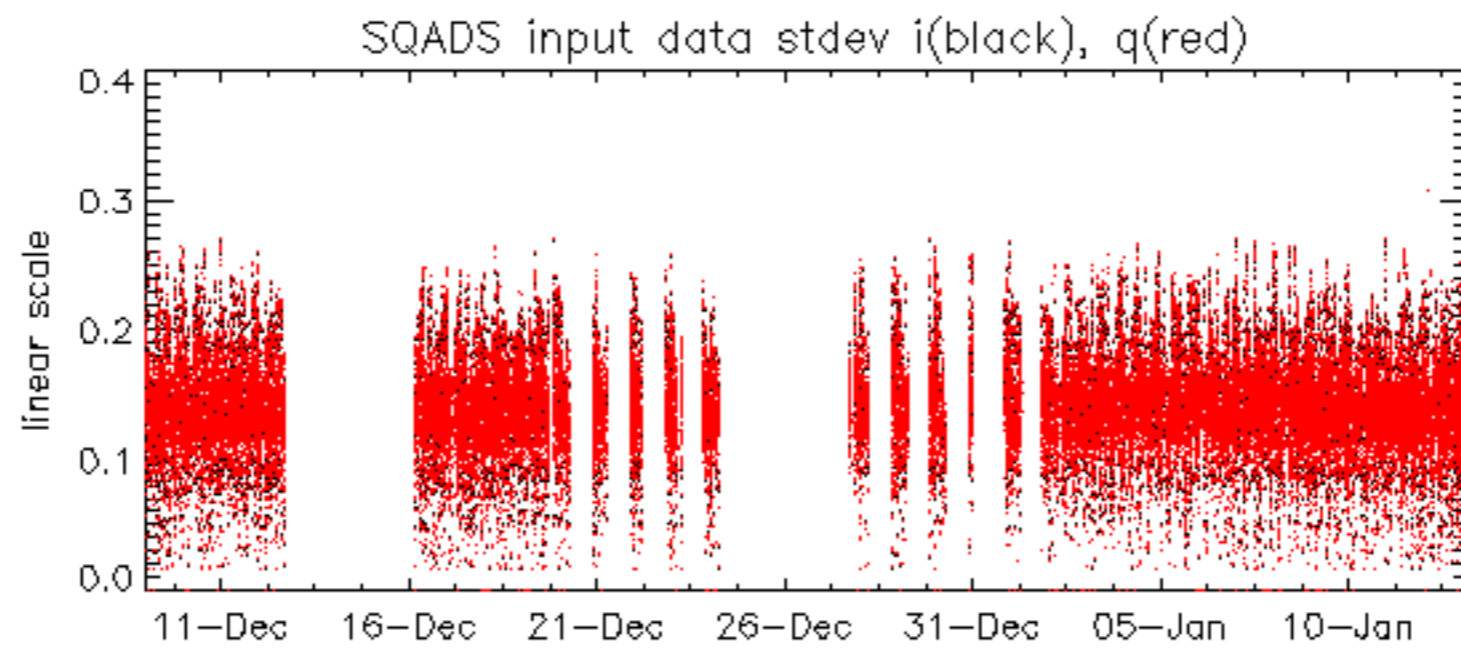


No anomalies observed on available MS products:

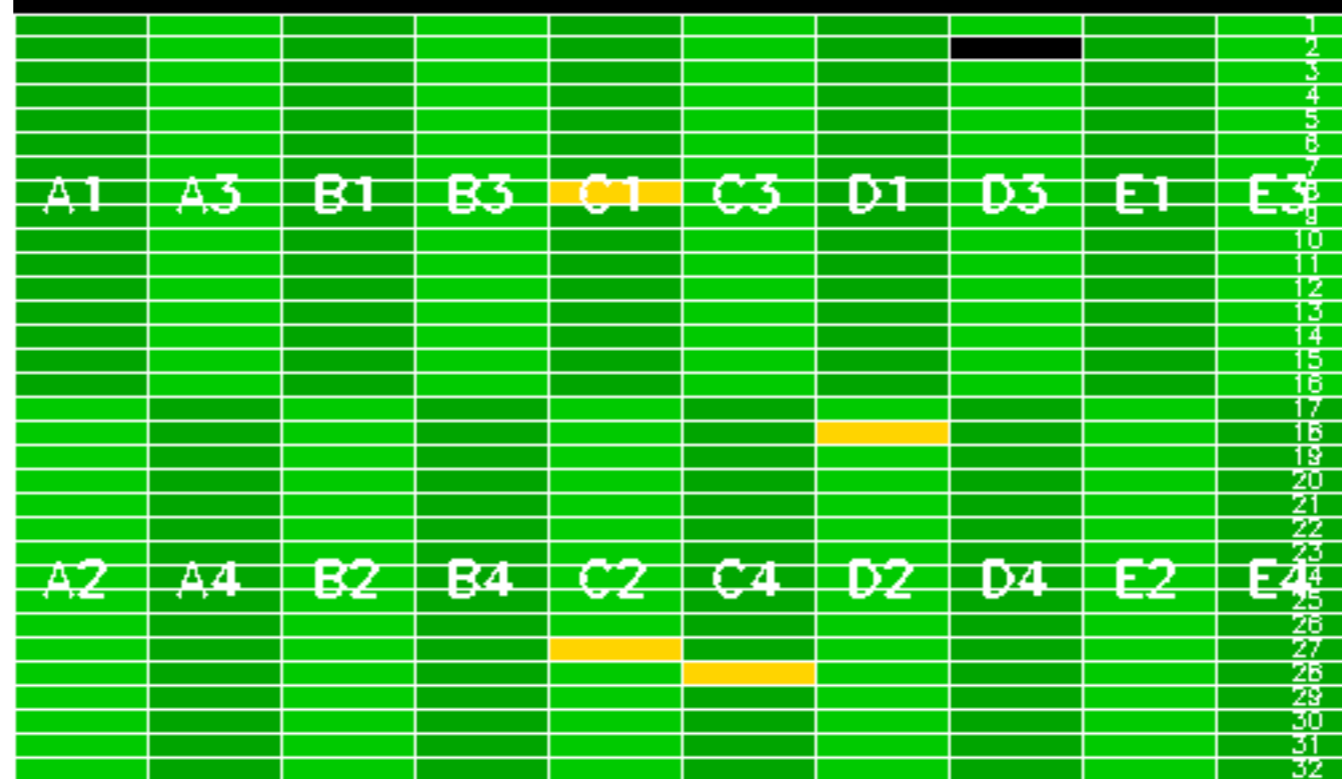
No anomalies observed.







Reference: 2005-09-23 05:55:14 V TxGain
 Test : 2007-01-12 06:35:22 V

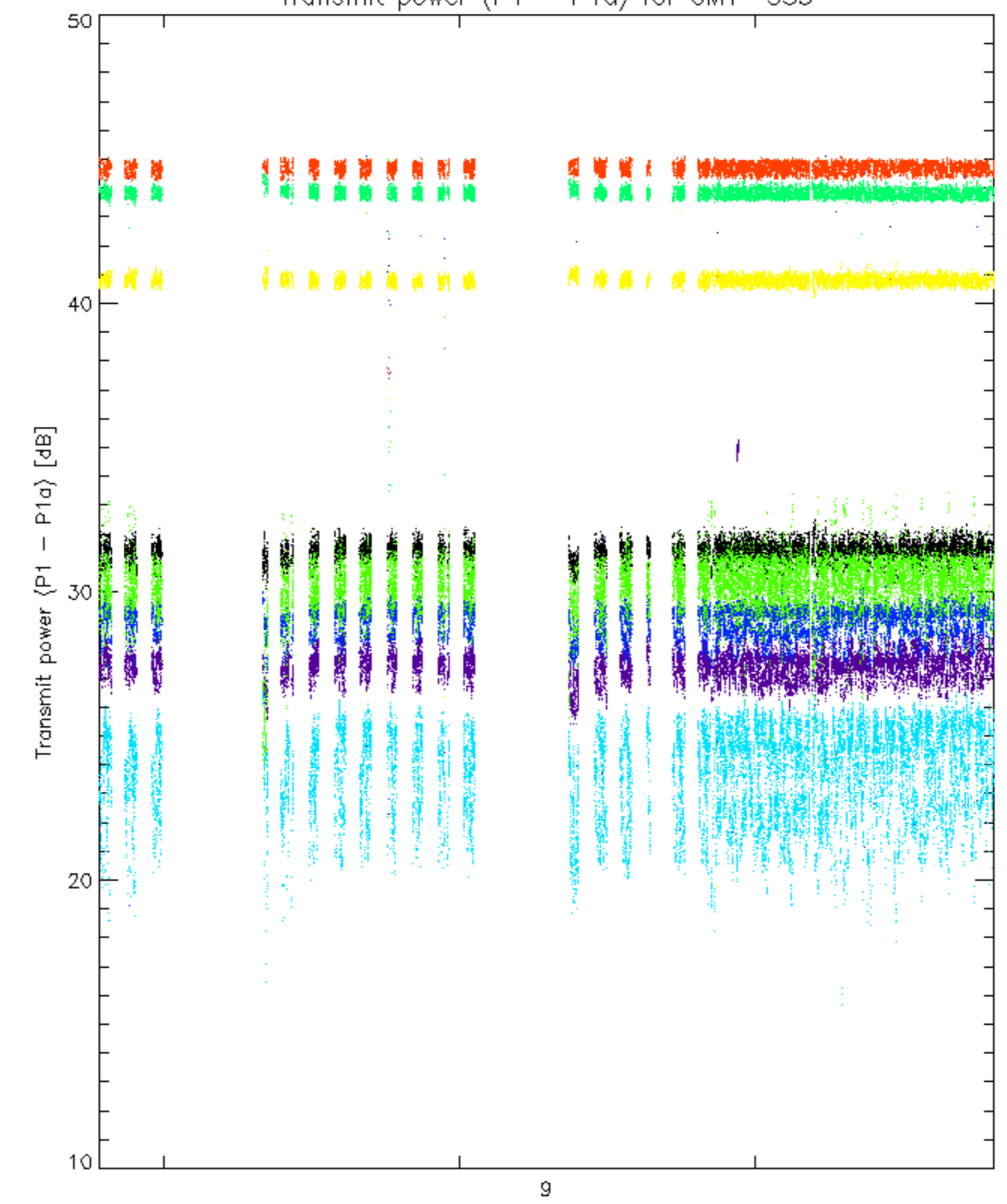


Summary of analysis for the last 3 days 2007011[123]

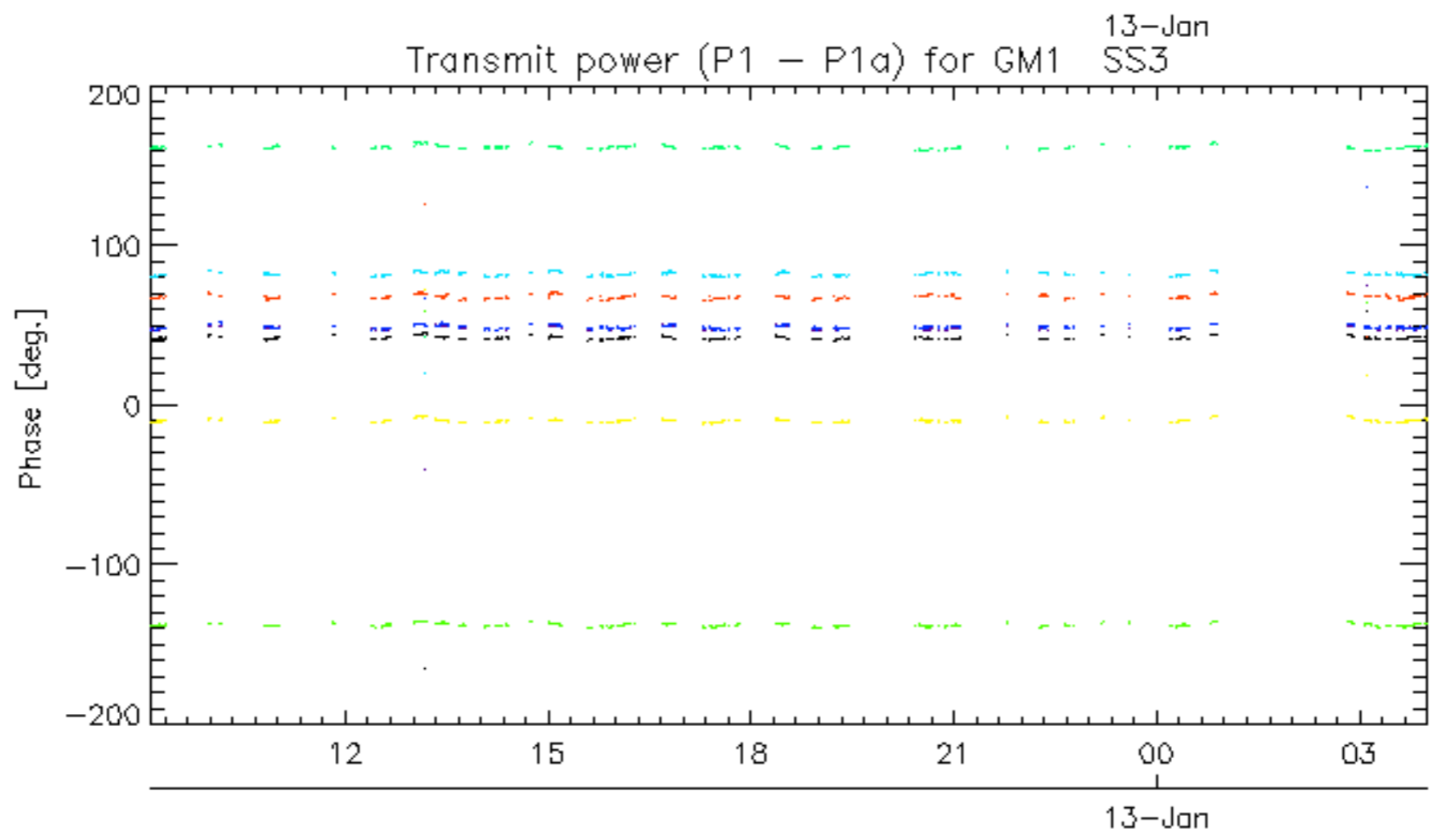
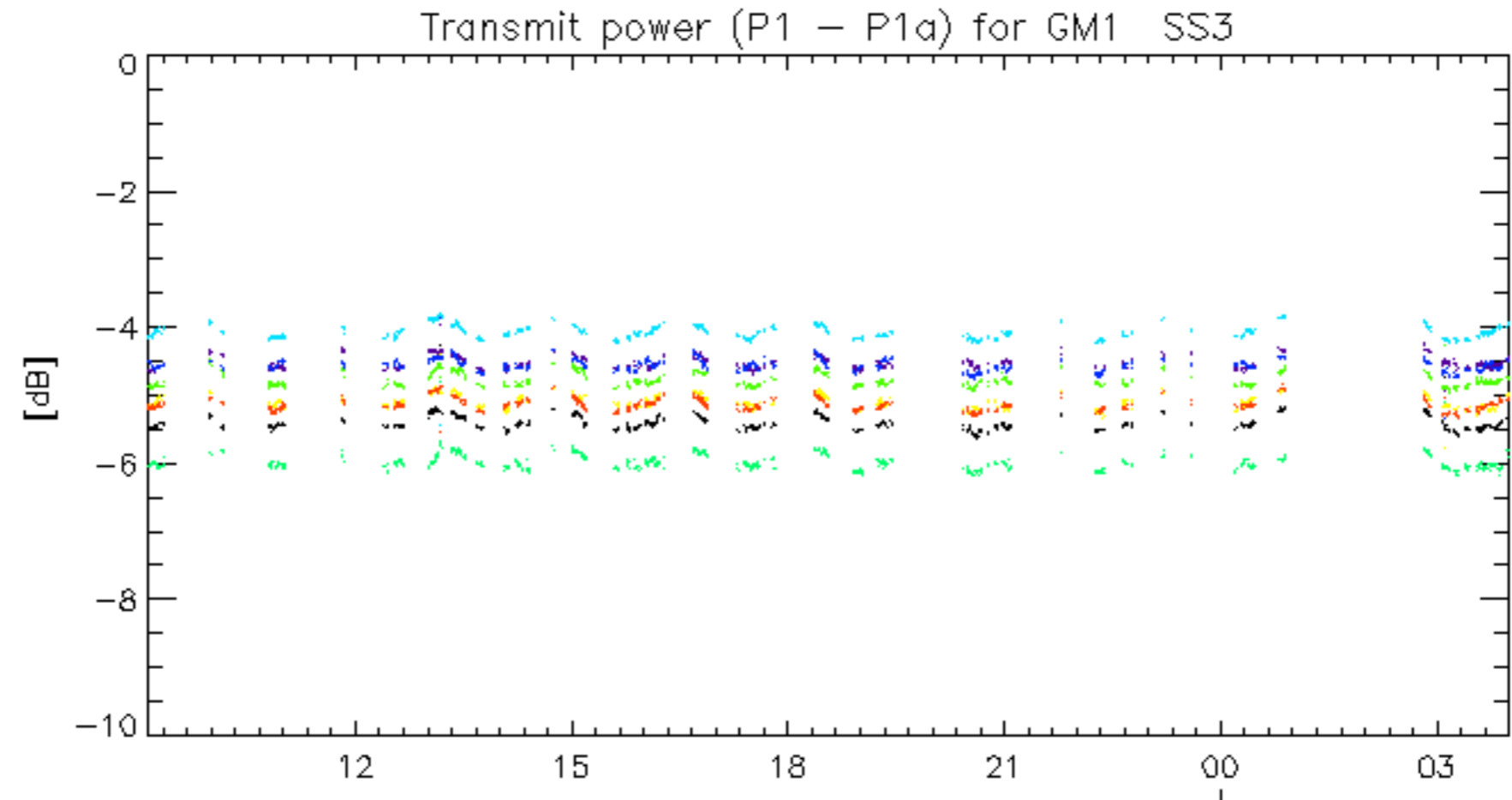
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070113_024624_000001482054_00361_25465_5301.N1	1	1
ASA_GM1_1PNPDK20070111_093819_000005432054_00337_25441_2629.N1	0	6
ASA_GM1_1PNPDK20070112_072909_000005072054_00350_25454_3551.N1	0	24
ASA_WSM_1PNPDE20070111_042351_000000672054_00334_25438_2884.N1	0	45
ASA_WSM_1PNPDE20070111_042351_000001842054_00334_25438_3099.N1	0	45
ASA_WSM_1PNPDE20070111_133030_000000852054_00339_25443_3444.N1	0	76
ASA_WSM_1PNPDE20070112_143842_000003232054_00354_25458_4789.N1	0	8
ASA_WSM_1PNPDE20070112_171324_000002322054_00356_25460_4821.N1	0	4

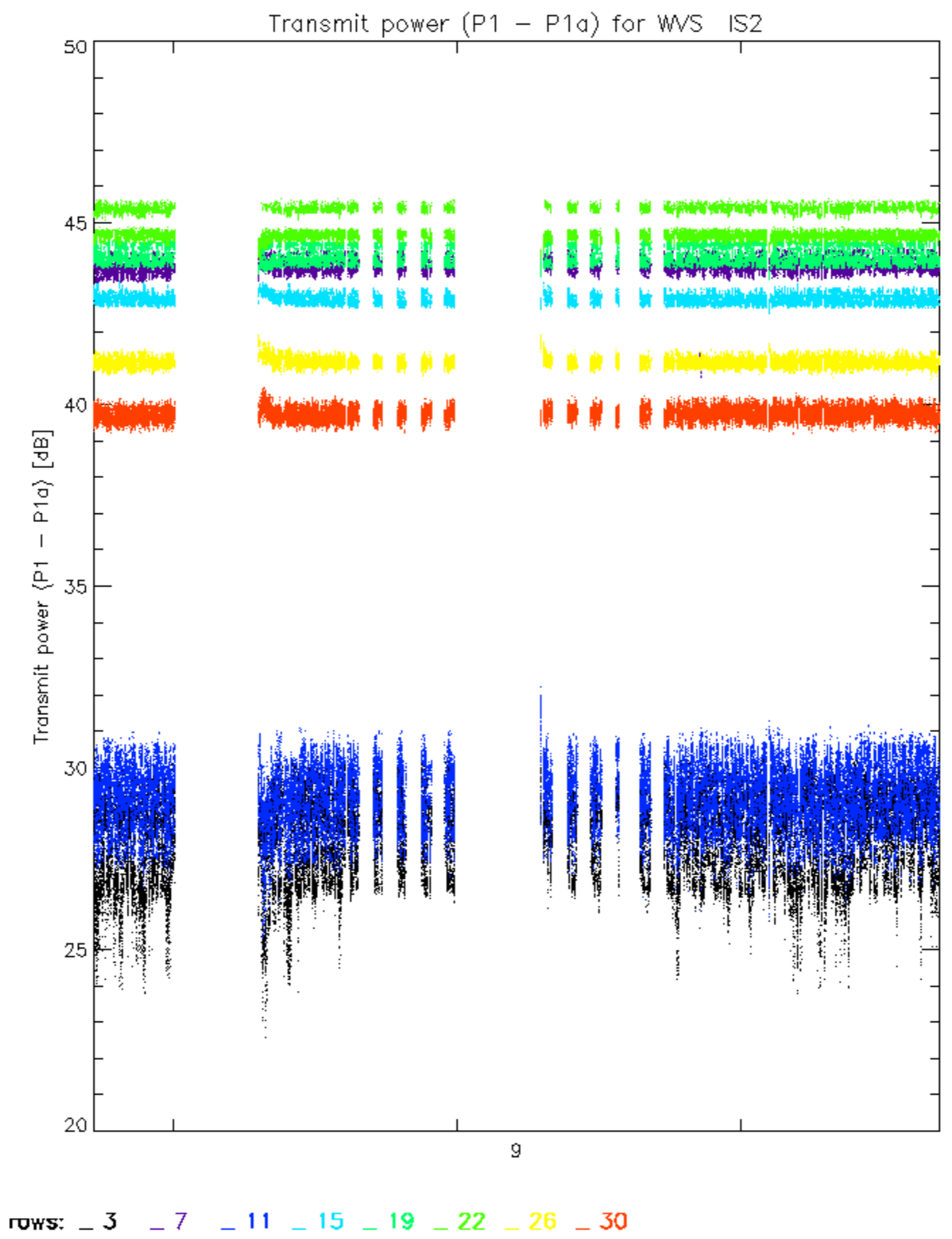
Transmit power (P1 - P1a) for GM1 SS3

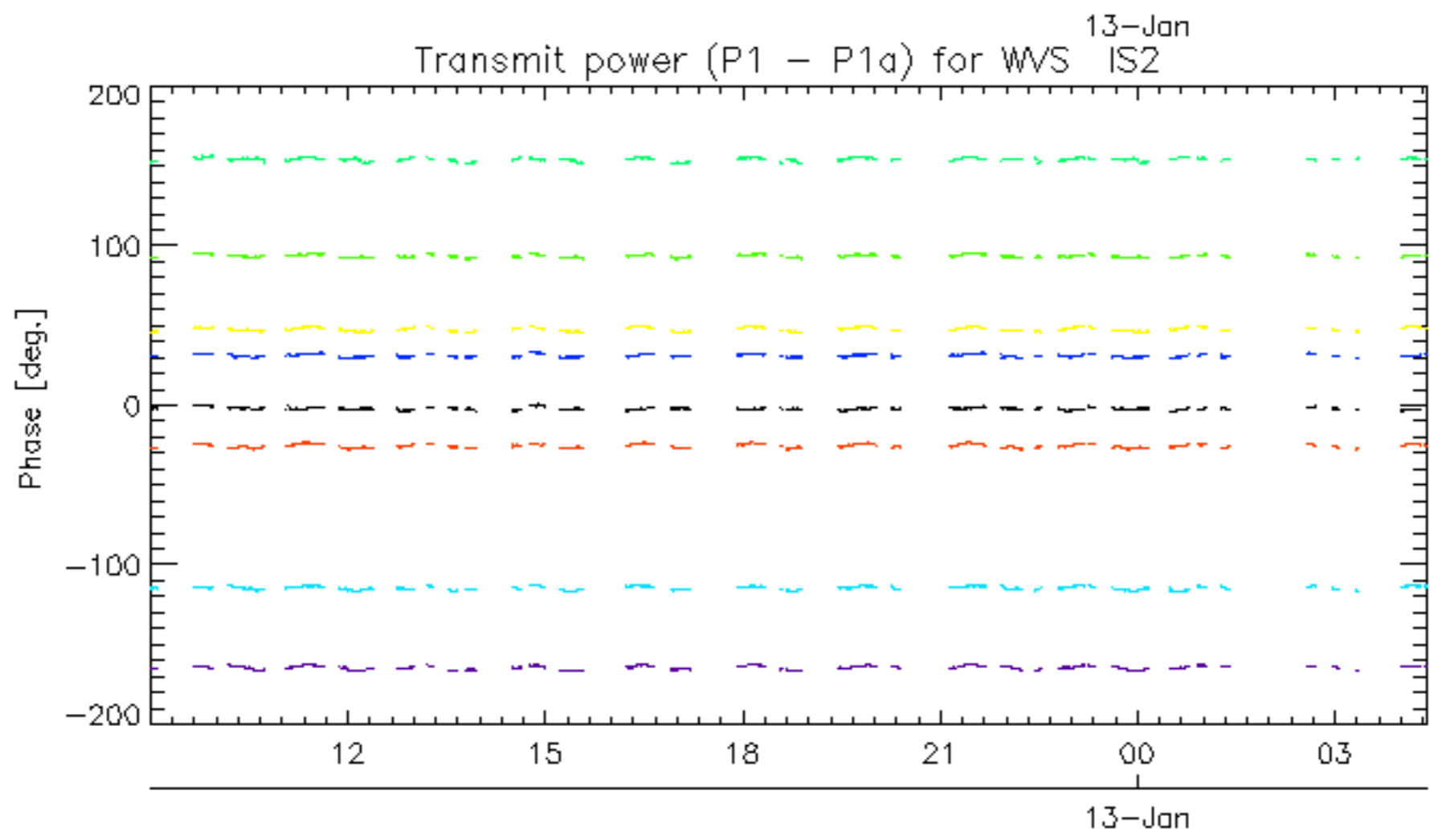
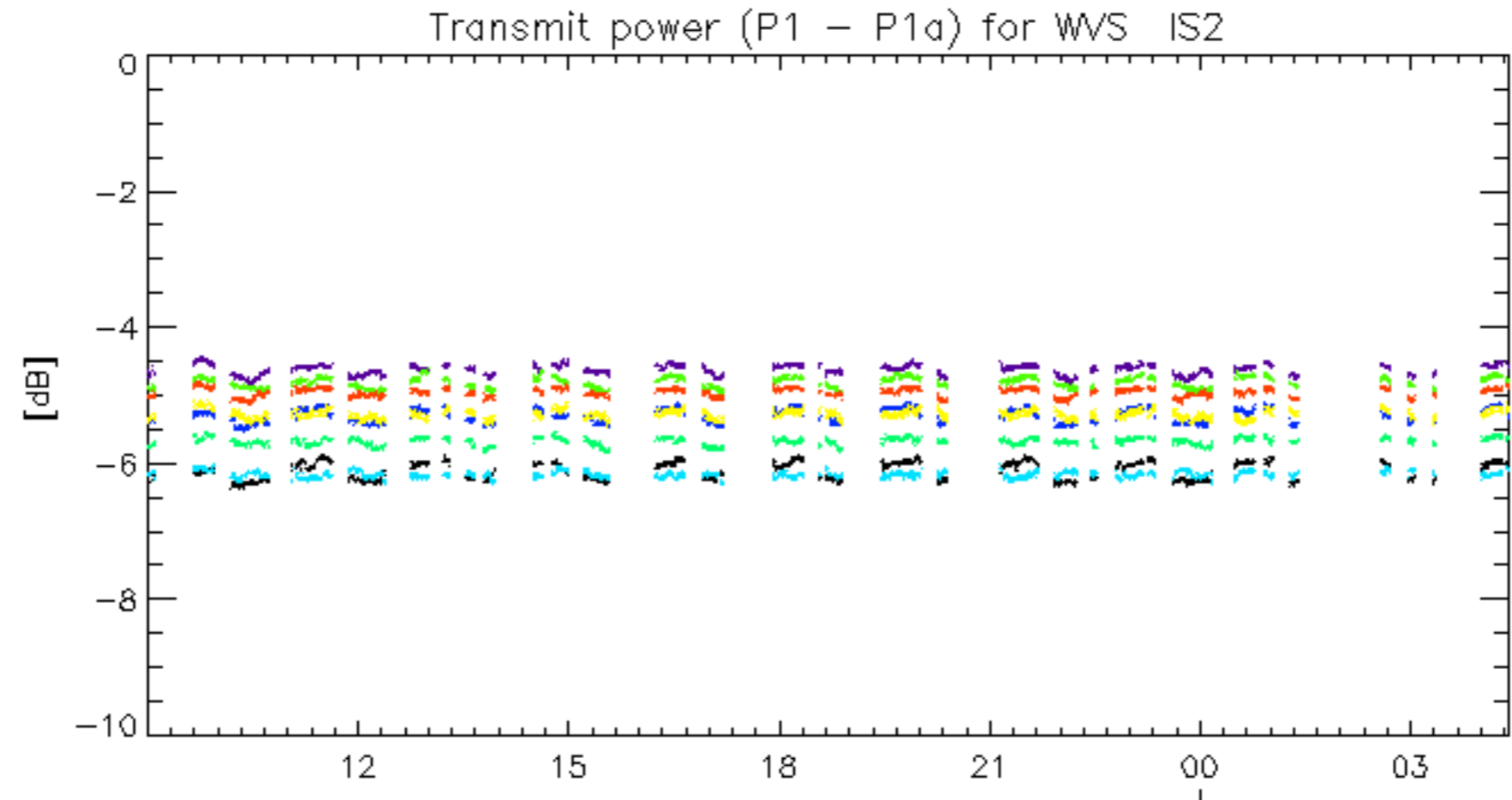


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No unavailabilities during the reported period.