

PRELIMINARY REPORT OF 070317

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Mon Mar 19 14:27:27 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization

From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization

From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization

From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-03-18 00:00:00 to 2007-03-19 14:27:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	40	63	8	3	19
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	40	63	8	3	19
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	40	63	8	3	19
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	63	8	3	19

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	48	51	71	9	26
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	48	51	71	9	26
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	48	51	71	9	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	48	51	71	9	26

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	20070319 084149

H 20070319 015926

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)
3	P1a	-15.125969	0.119233	-0.078016
7	P1a	-17.464457	0.108972	-0.147739
11	P1a	-17.268351	0.320765	0.126240
15	P1a	-12.895912	0.079937	-0.088718
19	P1a	-15.155799	0.074707	-0.033172
22	P1a	-15.337796	0.836629	0.232953
26	P1a	-14.954049	1.002669	0.447647
30	P1a	-17.310518	0.419903	0.163084

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.745584	0.010257	-0.060483
7	P1	-3.135780	0.008236	-0.018211
11	P1	-4.161917	0.015034	-0.030336
15	P1	-6.383909	0.015518	-0.022437
19	P1	-3.775873	0.008254	-0.050387
22	P1	-4.630670	0.119761	0.122408
26	P1	-3.892376	0.093317	0.183399
30	P1	-5.851372	0.192447	0.232141

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.660139	0.091905	0.036421
7	P2	-21.614586	0.080980	0.016180

11	P2	-15.533574	0.097750	0.062576
15	P2	-7.075700	0.092447	-0.055289
19	P2	-9.107993	0.083259	-0.012438
22	P2	-18.100838	0.073189	0.037369
26	P2	-16.550287	0.084202	-0.062995
30	P2	-19.344810	0.077930	0.044751

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.238624	0.006399	-0.007909
7	P3	-8.238624	0.006399	-0.007909
11	P3	-8.238624	0.006399	-0.007909
15	P3	-8.238624	0.006399	-0.007909
19	P3	-8.238624	0.006399	-0.007909
22	P3	-8.238624	0.006399	-0.007909
26	P3	-8.238624	0.006399	-0.007909
30	P3	-8.238624	0.006399	-0.007909

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.081939	0.056858	-0.068672
7	P1a	-10.071062	0.173078	-0.024811
11	P1a	-10.681888	0.072880	-0.110727
15	P1a	-10.958977	0.142521	0.034272
19	P1a	-15.696246	0.073037	-0.166021
22	P1a	-20.841671	1.642981	0.797734
26	P1a	-15.223911	0.311550	0.266563
30	P1a	-18.339960	0.906798	0.723986

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.405393	0.051549	-0.059644
7	P1	-2.425994	0.033044	-0.019195
11	P1	-2.924407	0.022657	-0.006160
15	P1	-3.848598	0.045157	-0.037854
19	P1	-3.557710	0.011214	-0.048073
22	P1	-5.032728	0.038238	0.134075
26	P1	-5.935502	0.065663	0.167404
30	P1	-5.263848	0.033650	0.078313

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.102013	0.035527	-0.043105
7	P2	-21.952002	0.058659	-0.025572
11	P2	-10.638330	0.032017	0.022722
15	P2	-4.824775	0.029638	0.007250
19	P2	-6.810949	0.031756	-0.008467
22	P2	-8.076585	0.035776	0.011034
26	P2	-24.291779	0.040510	0.055178
30	P2	-21.725430	0.041561	0.063259

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.059412	0.003842	0.006763
7	P3	-8.059321	0.003828	0.006746
11	P3	-8.059321	0.003826	0.007164
15	P3	-8.059460	0.003837	0.007715
19	P3	-8.059424	0.003842	0.008335
22	P3	-8.059392	0.003834	0.006766
26	P3	-8.059136	0.003812	0.008218
30	P3	-8.059292	0.003833	0.006633

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	0.000687401
	stdev	3.06388e-07
MEAN Q	mean	0.000254277
	stdev	2.81403e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0823781
	stdev	0.00197991
STDEV Q	mean	0.0820890
	stdev	0.00203074



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007031[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_IMM_1PNPDE20070316_210538_000000342056_00258_26364_4589.N1	1	0
ASA_IMM_1PNPDK20070315_133248_000000812056_00239_26345_1572.N1	0	2
ASA_IMM_1PNPDK20070316_092324_000000372056_00251_26357_2261.N1	0	1
ASA_GM1_1PNPDK20070316_142640_000002772056_00254_26360_3264.N1	0	7
ASA_WSM_1PNPDE20070316_141502_000000852056_00254_26360_4383.N1	0	15
ASA_WSM_1PNPDE20070317_153552_000003002056_00269_26375_5553.N1	0	111
ASA_WSM_1PNPDK20070315_094718_000000862056_00237_26343_1332.N1	0	29
ASA_WSM_1PNPDK20070316_070403_000002452056_00249_26355_2248.N1	0	3
ASA_APM_1PNPDE20070315_070600_000002082056_00235_26341_2835.N1	12	0
ASA_APM_1PNPDK20070316_093722_000000432056_00251_26357_2257.N1	0	1





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

<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"/>

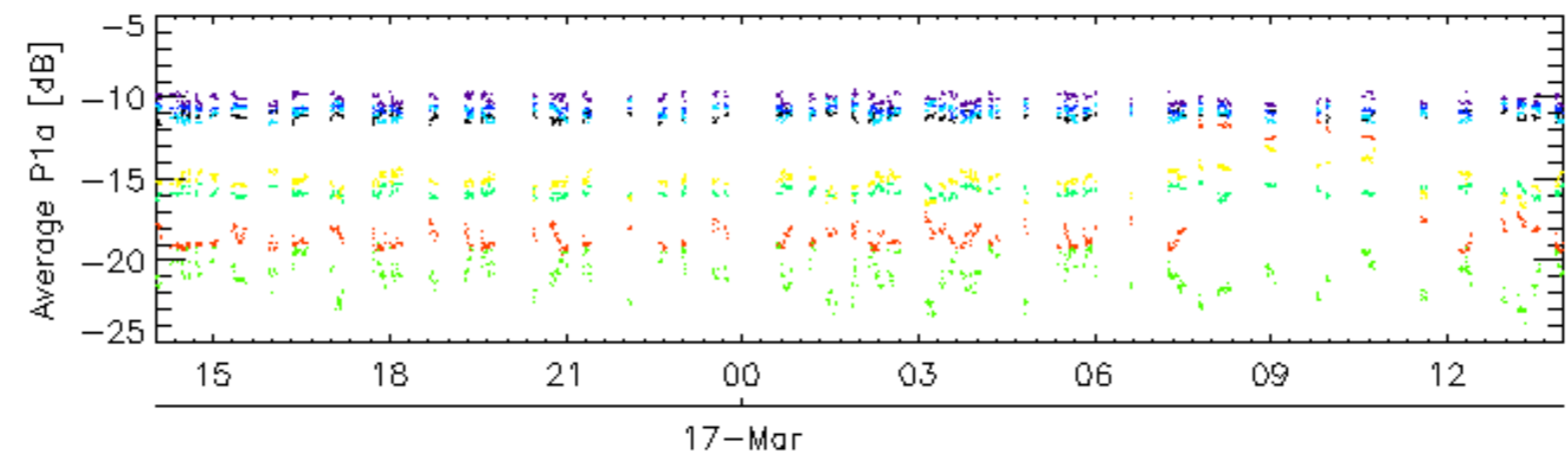
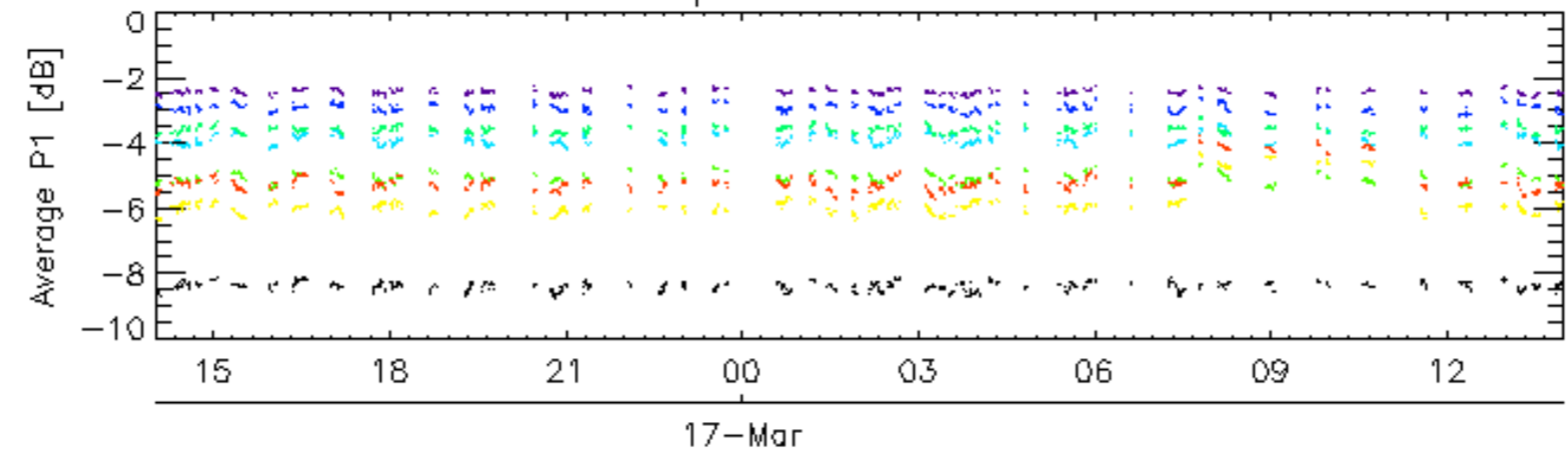
Descending

7.6 - Doppler evolution versus ANX for GM1

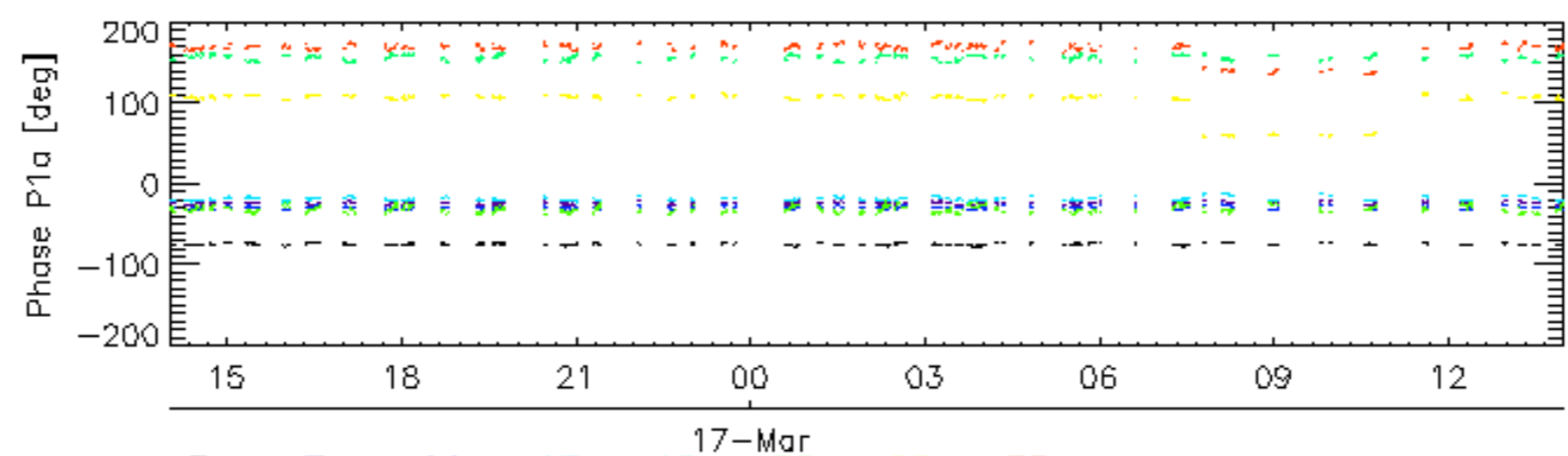
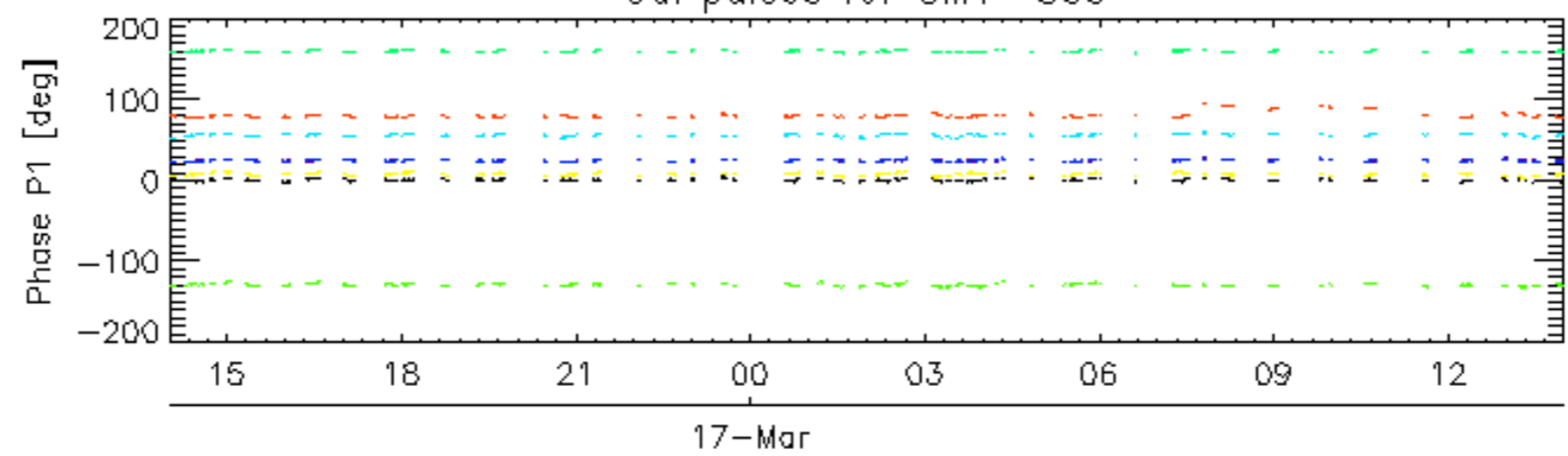
Evolution Doppler error versus ANX

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Cal pulses for GM1 SS3

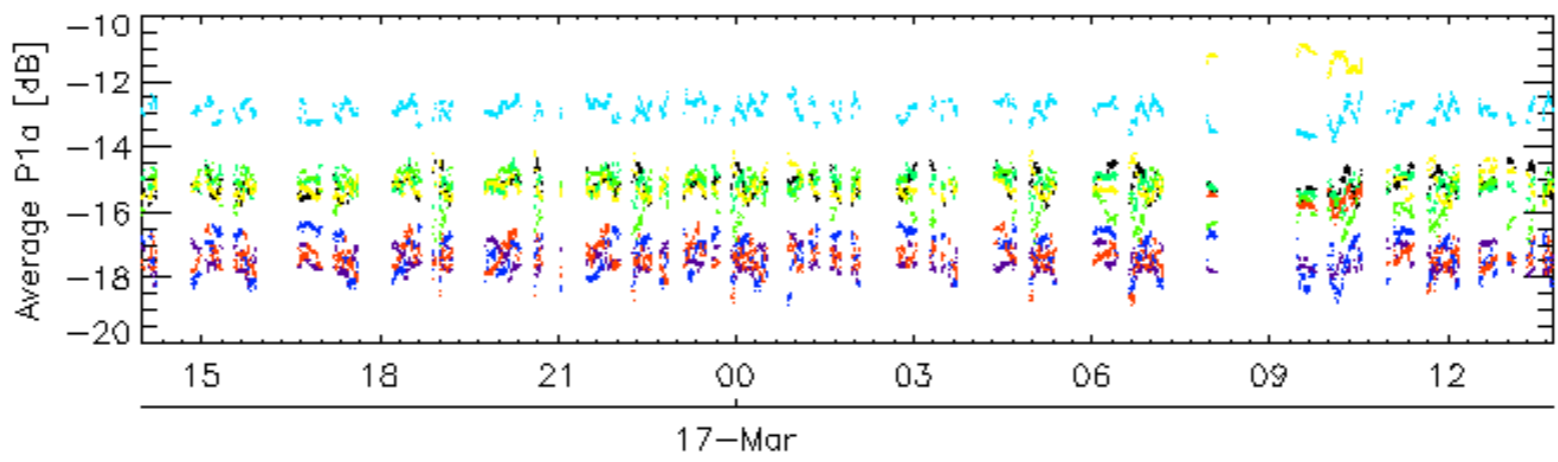
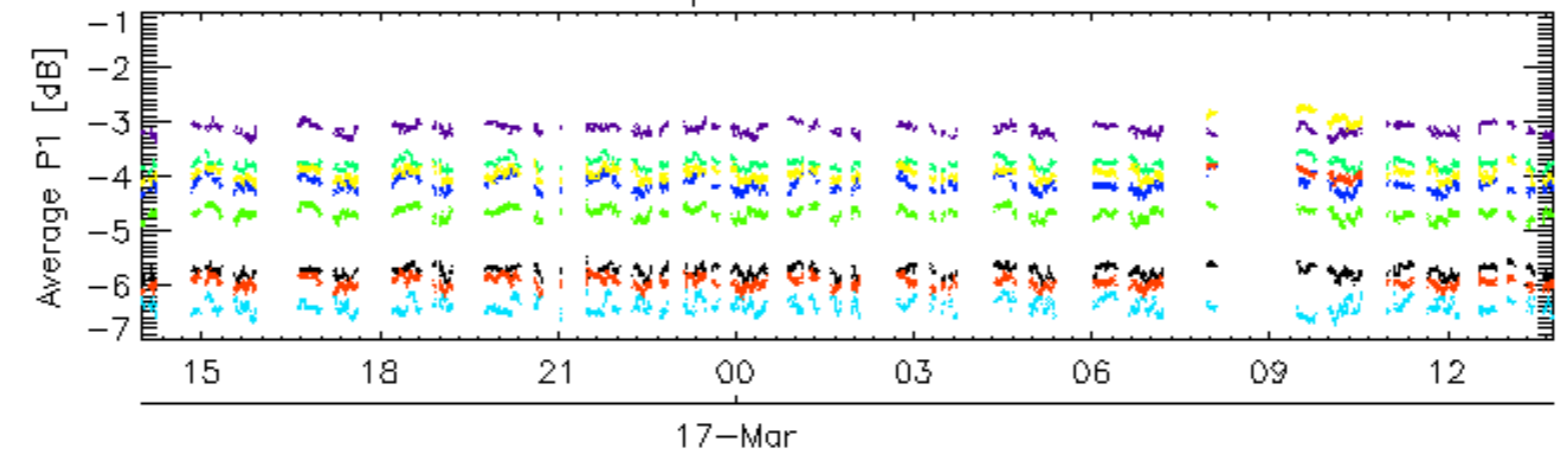


Cal pulses for GM1 SS3

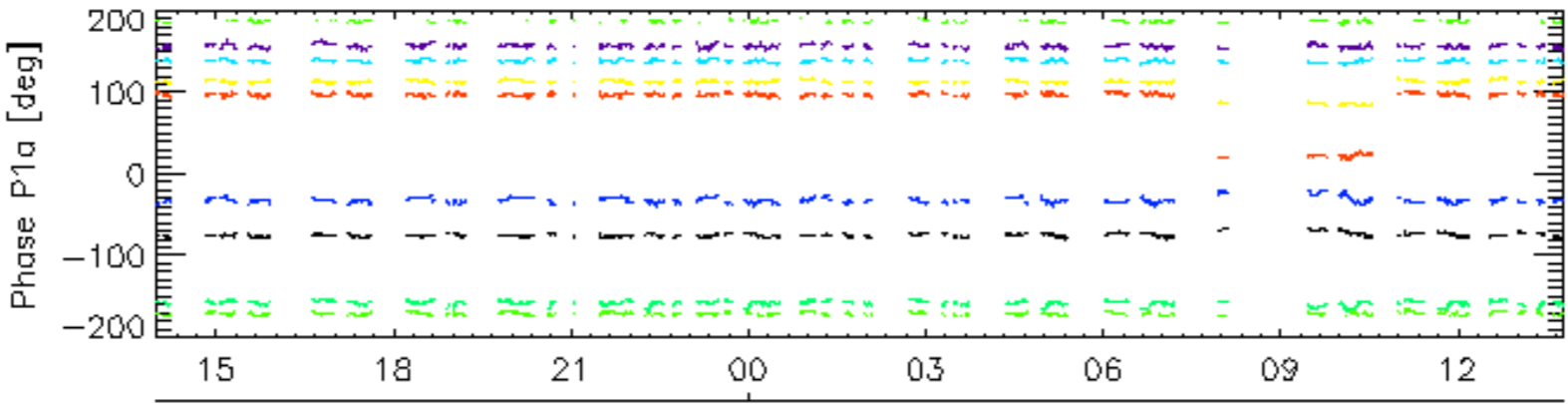
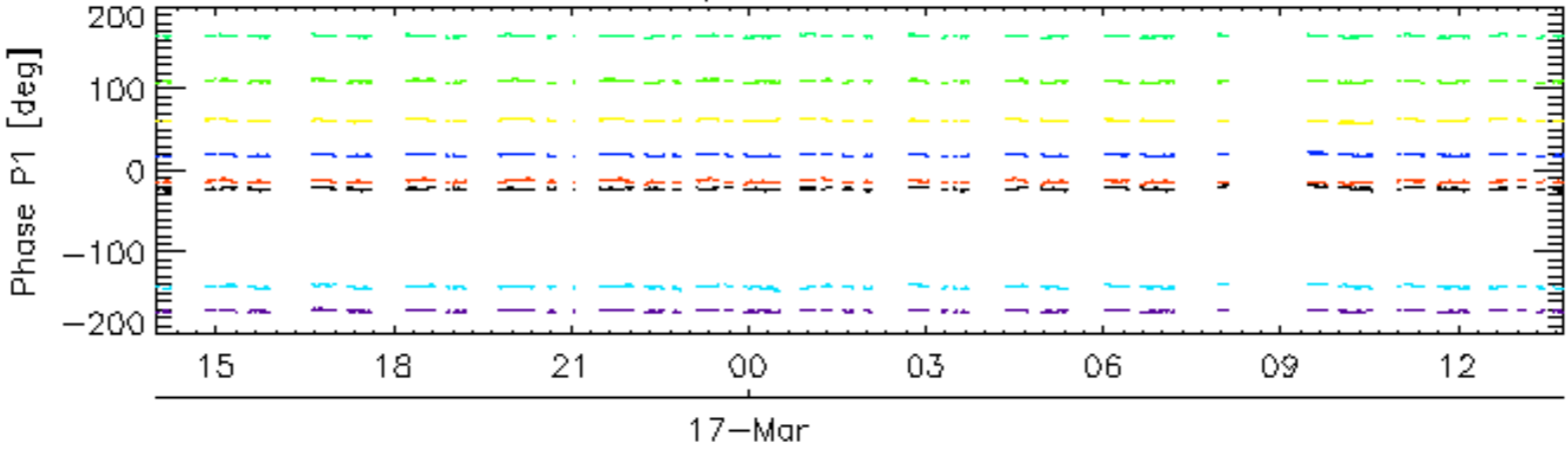


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

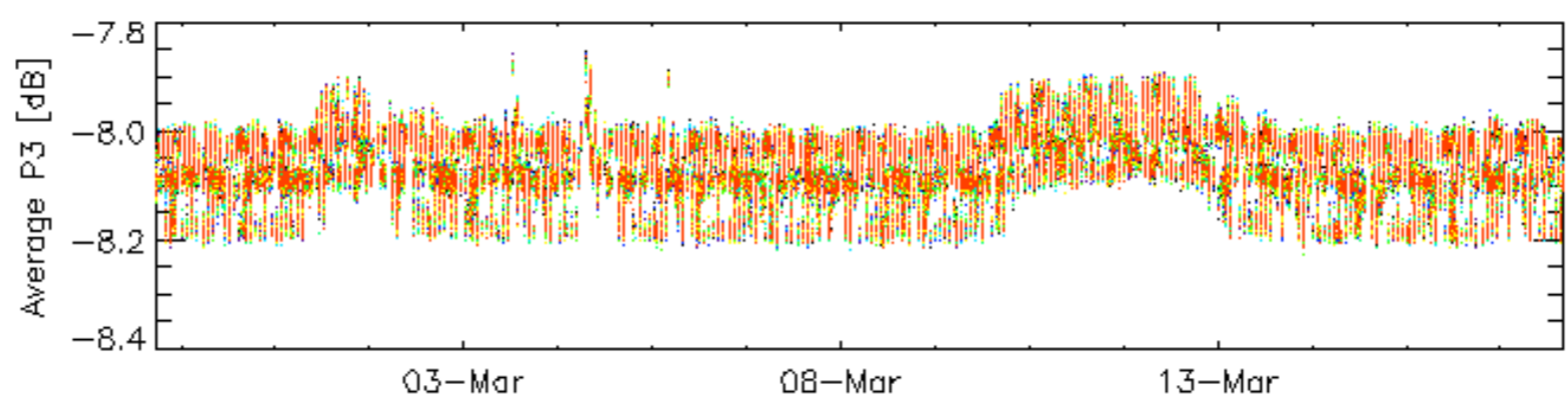
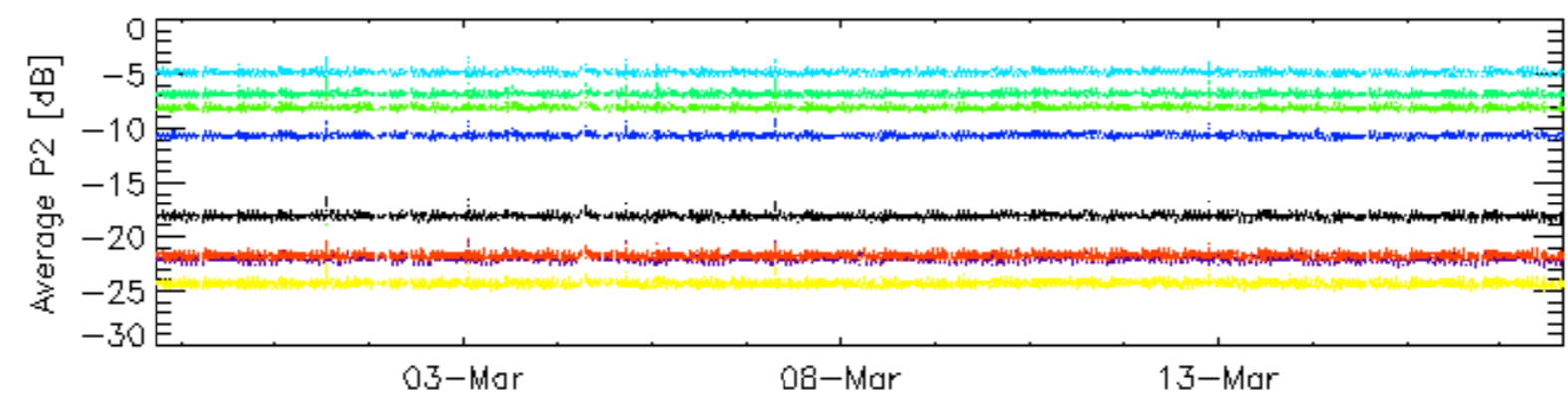
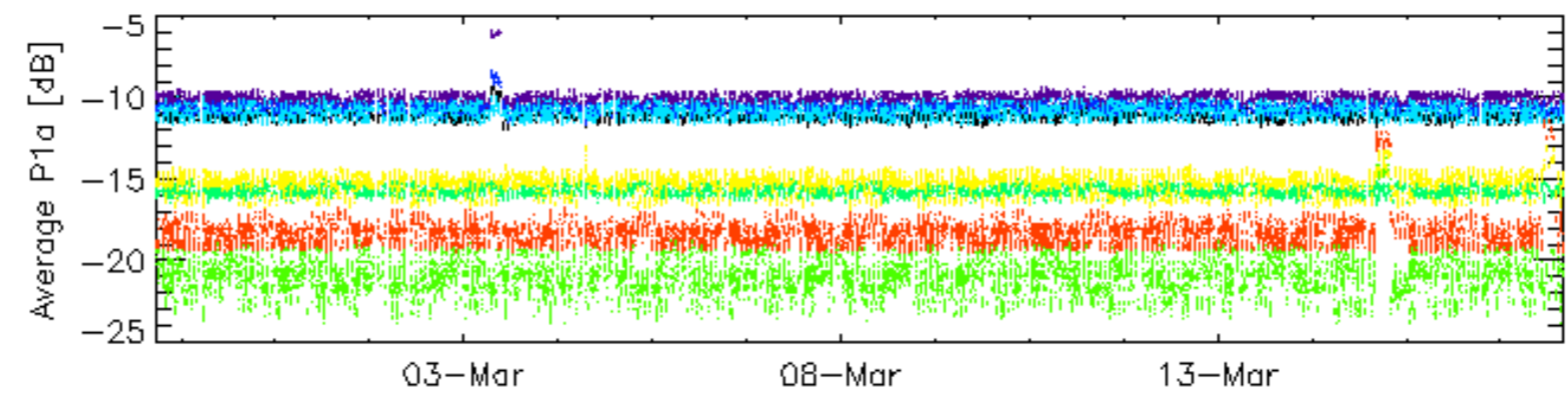
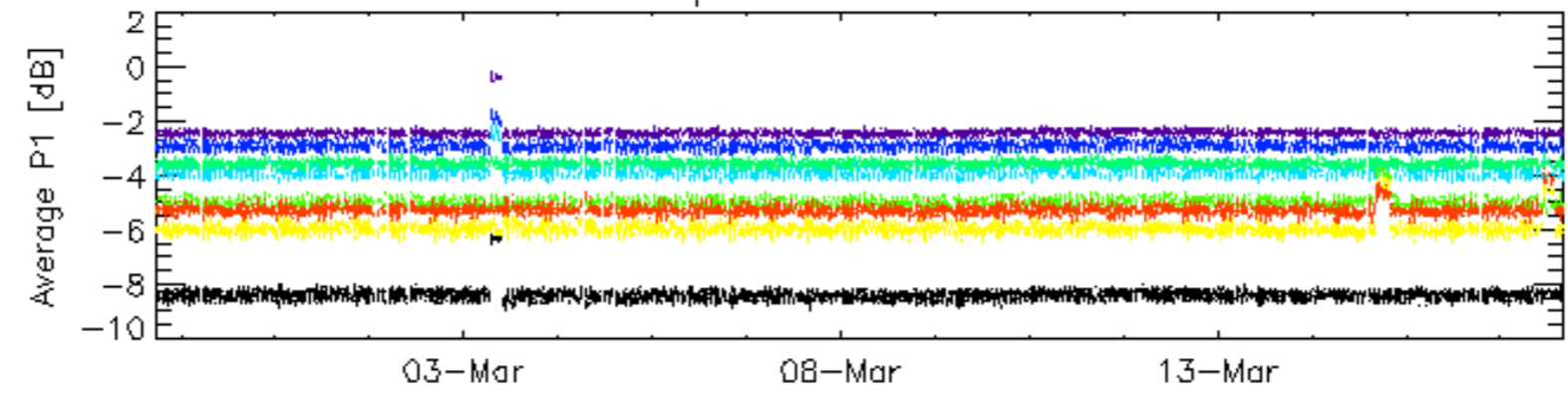


Cal pulses for WVS IS2



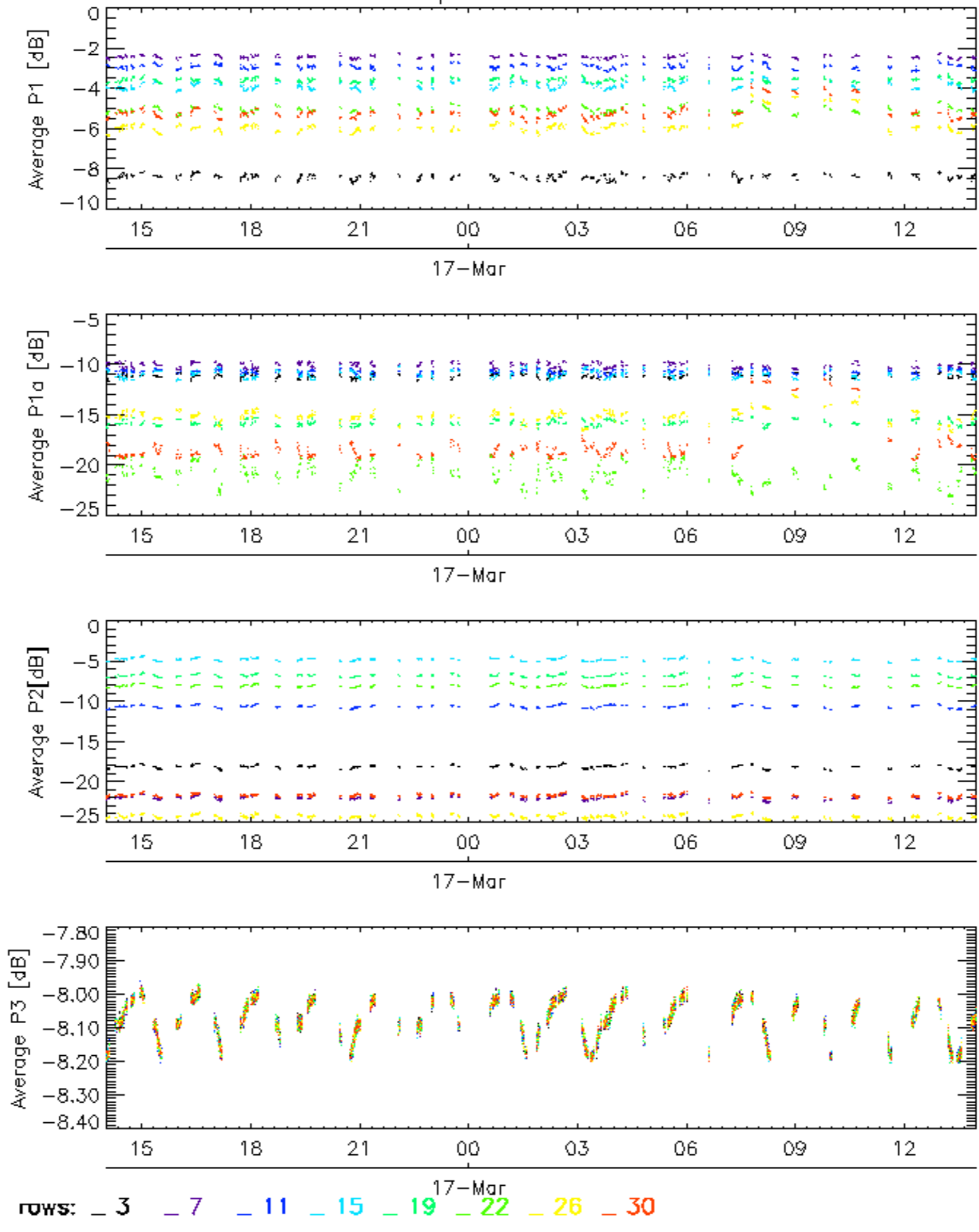
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

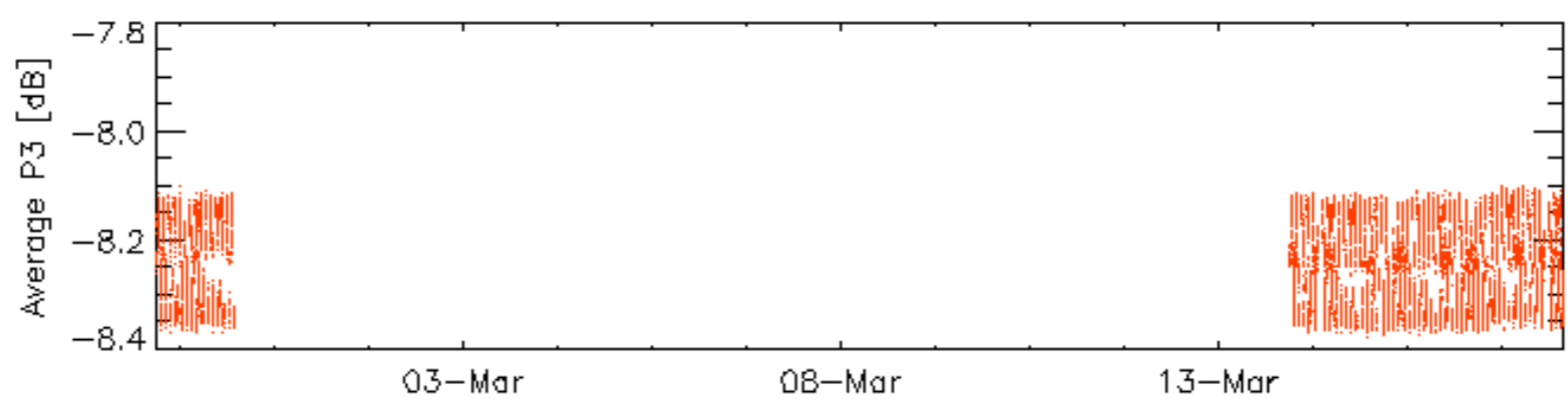
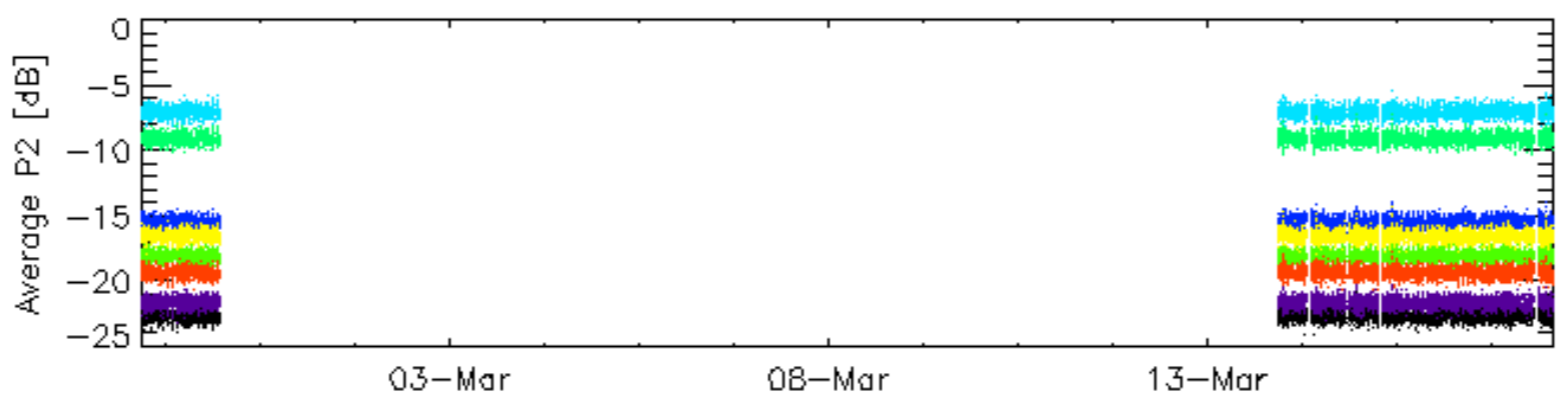
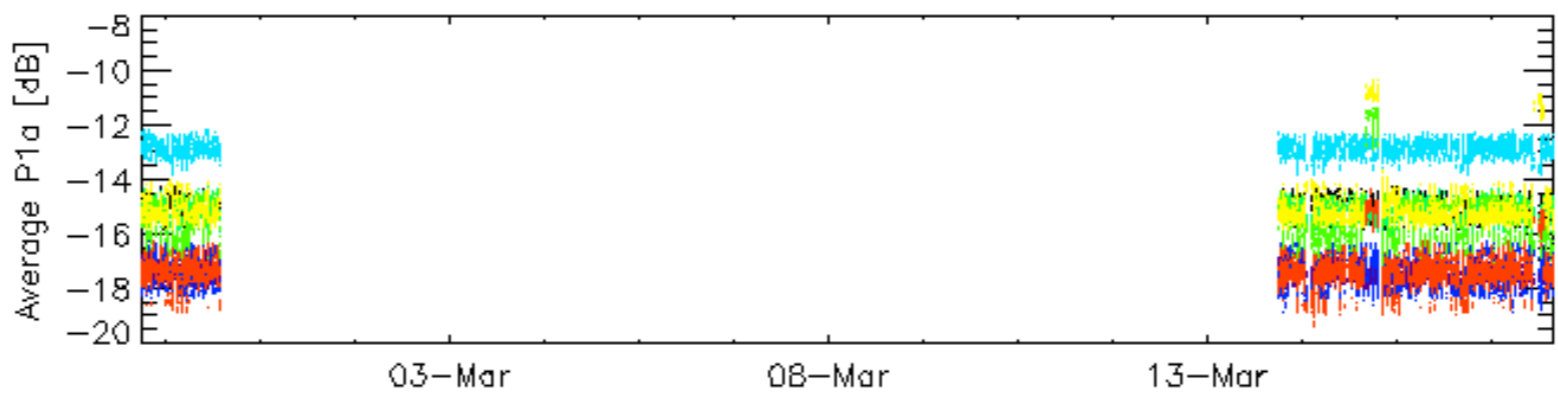
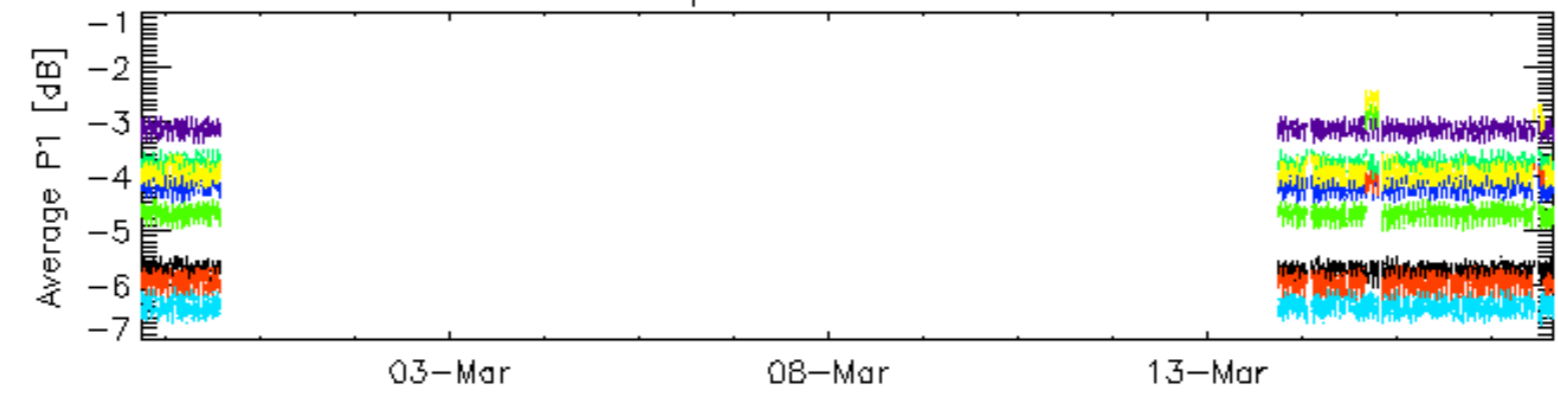


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

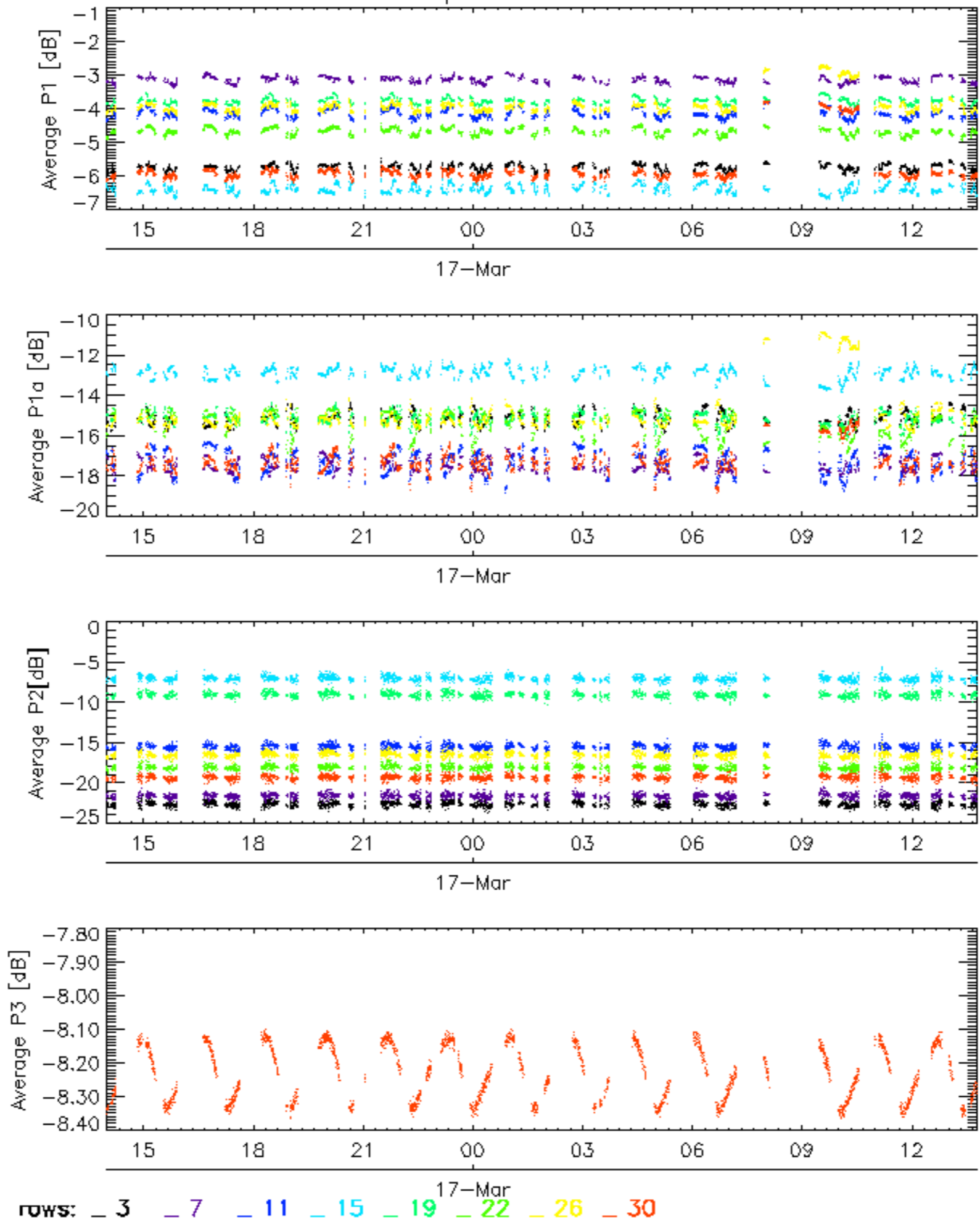


Cal pulses for WVS IS2

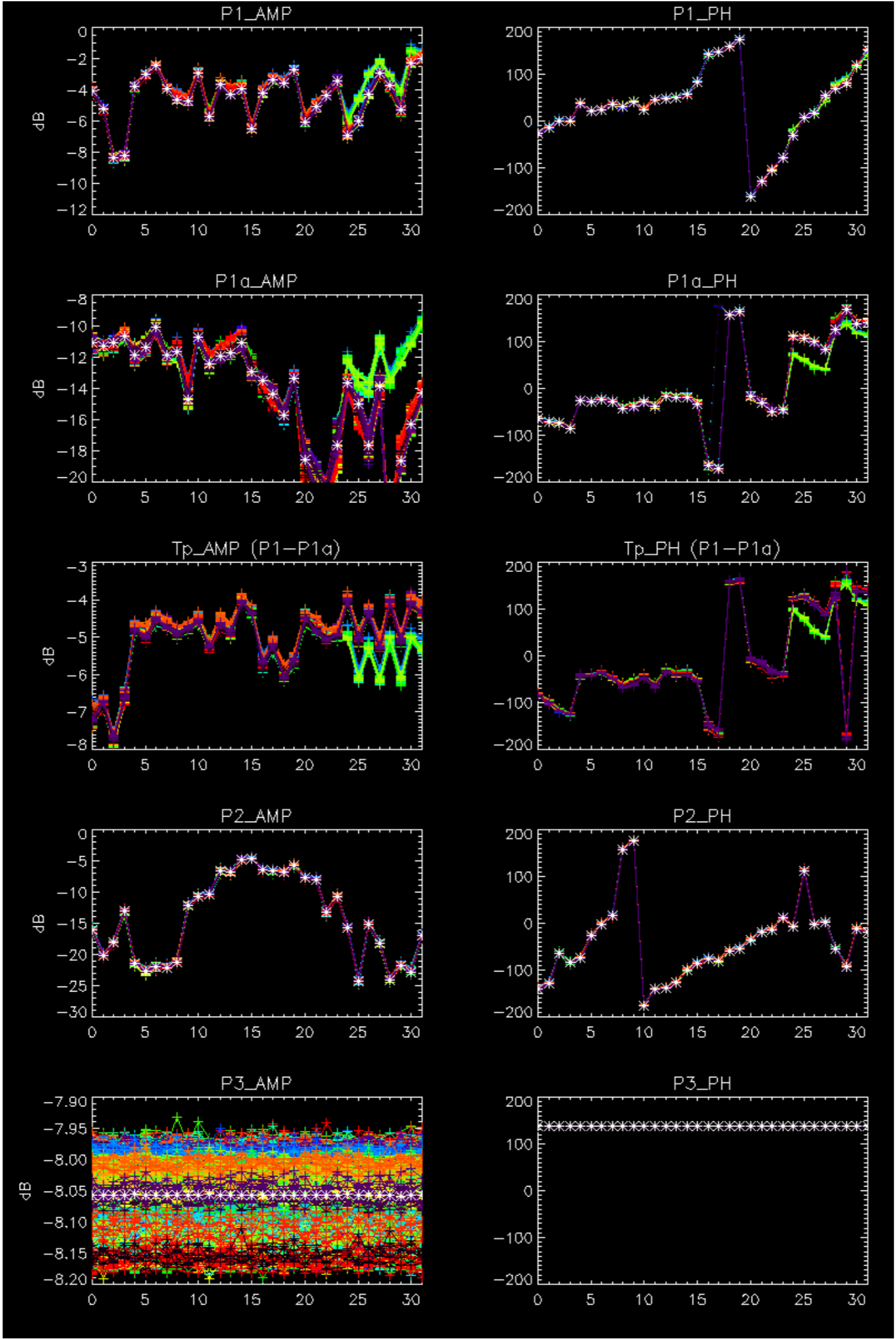


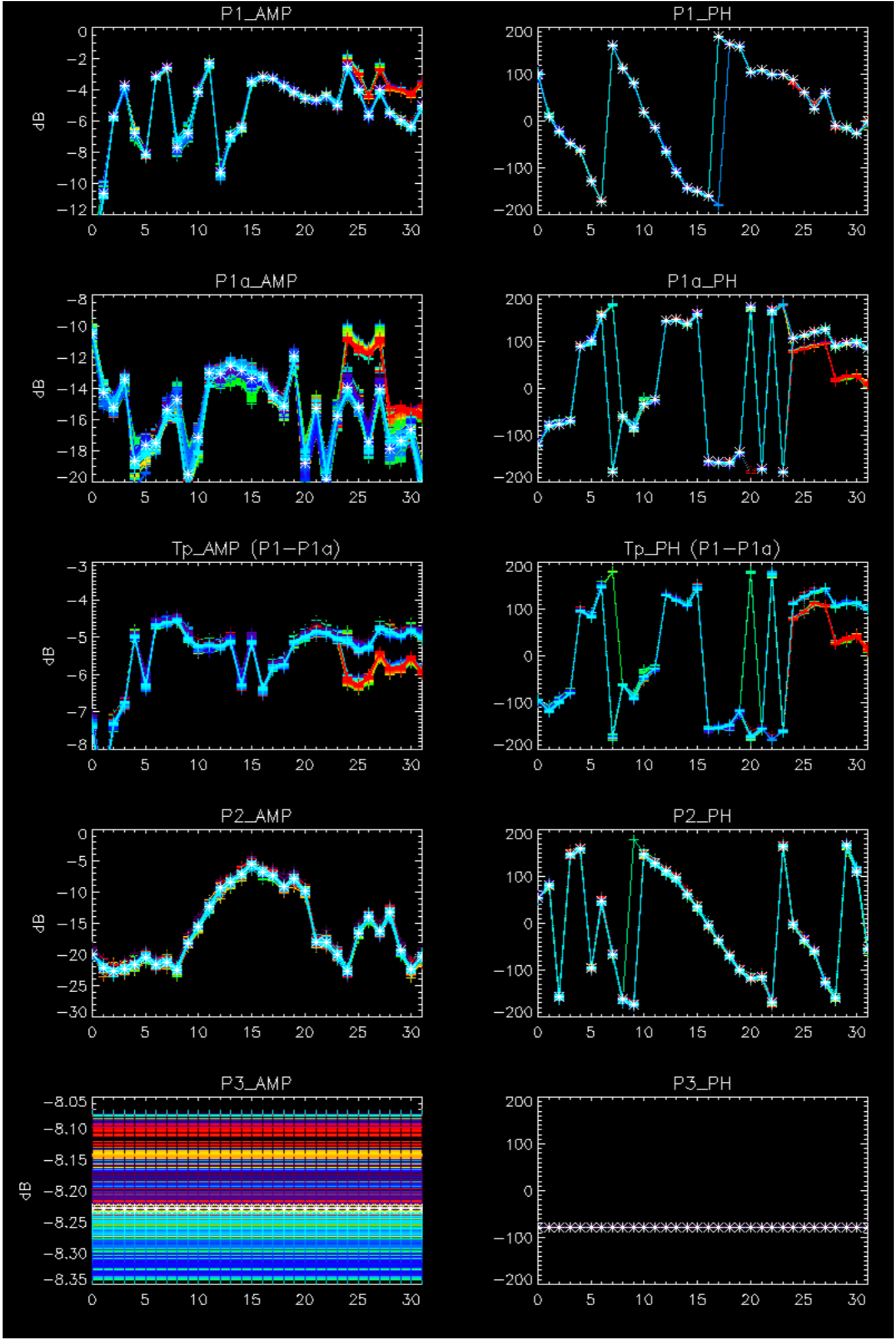
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



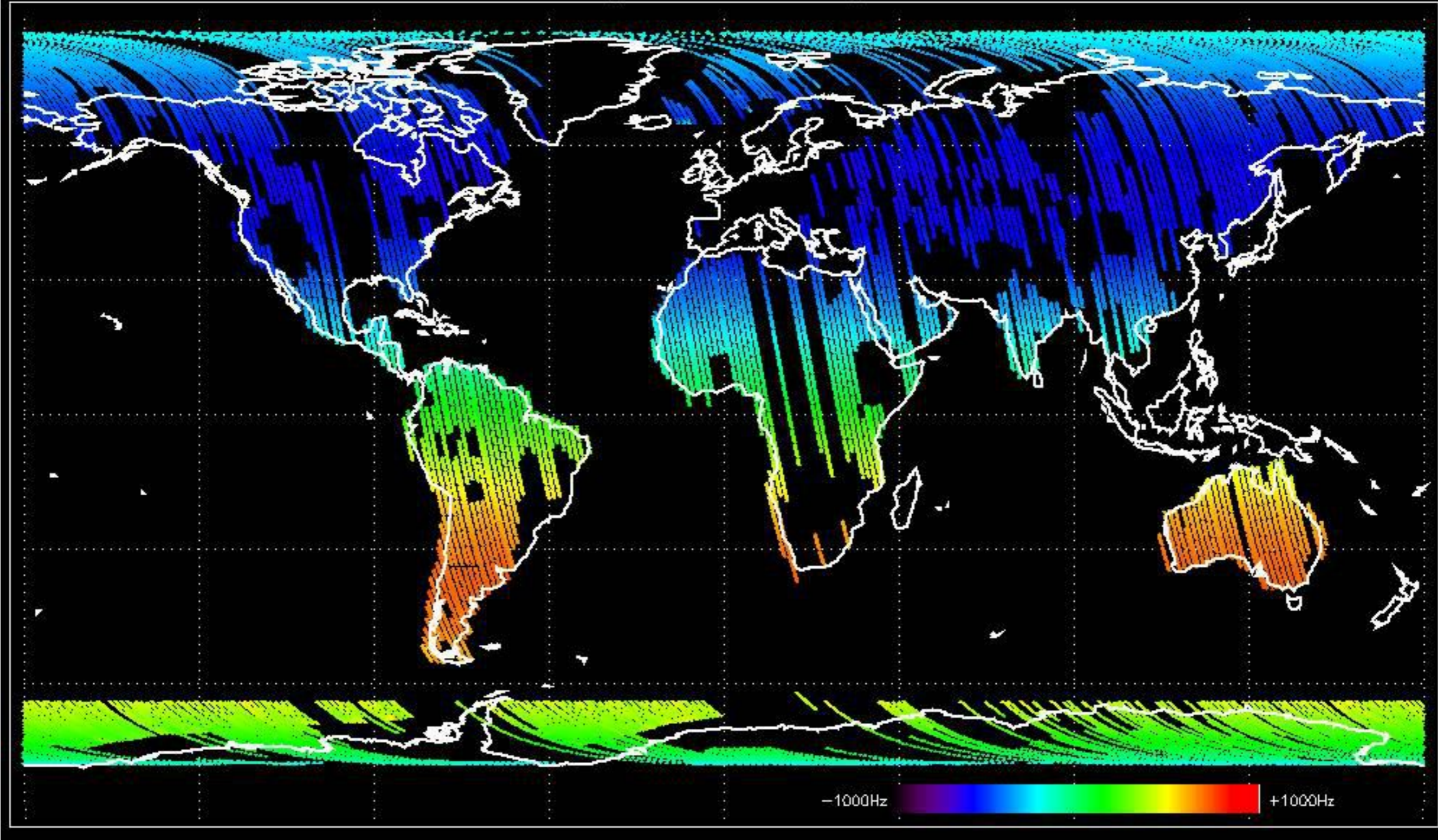
No anomalies observed.



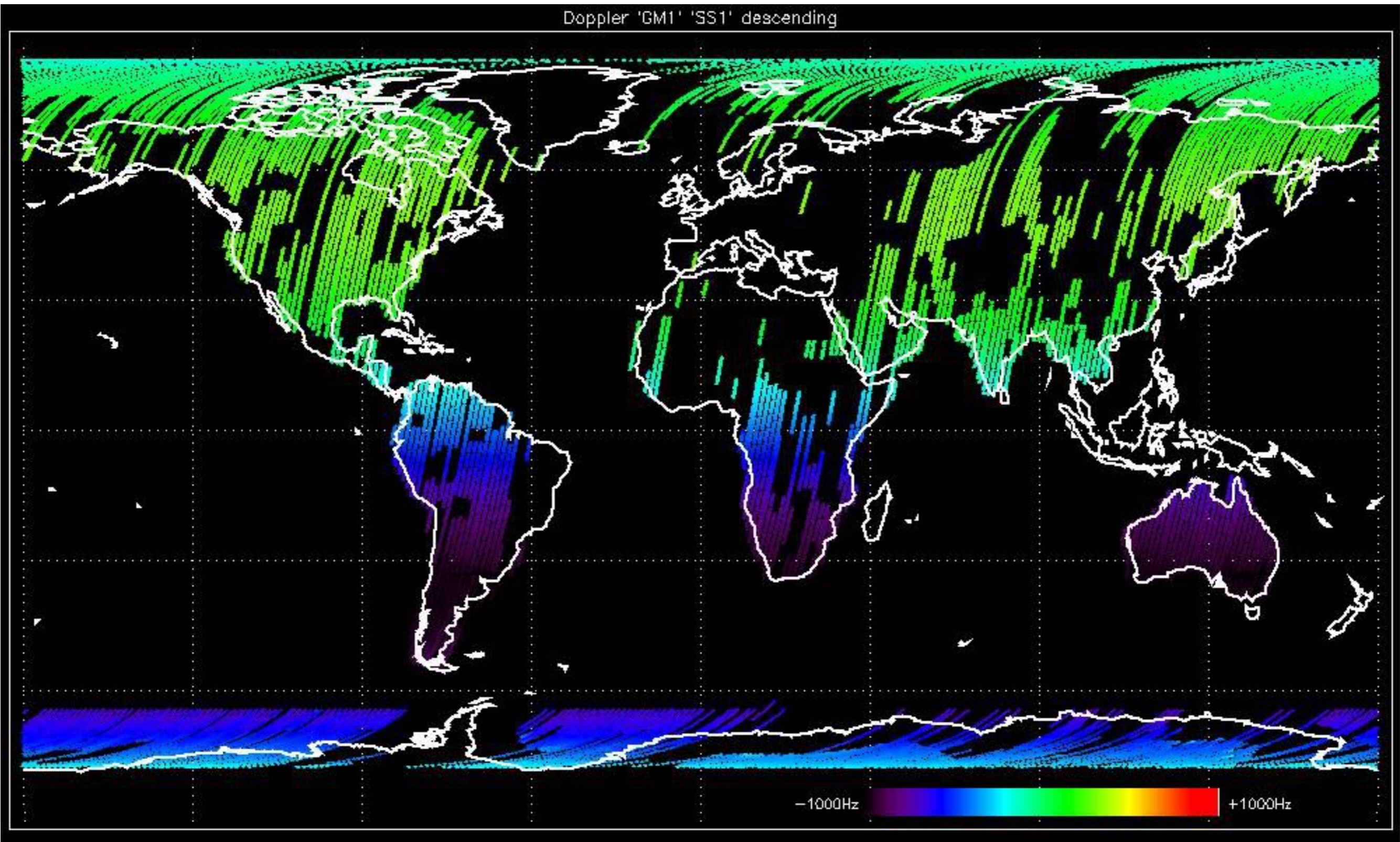


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

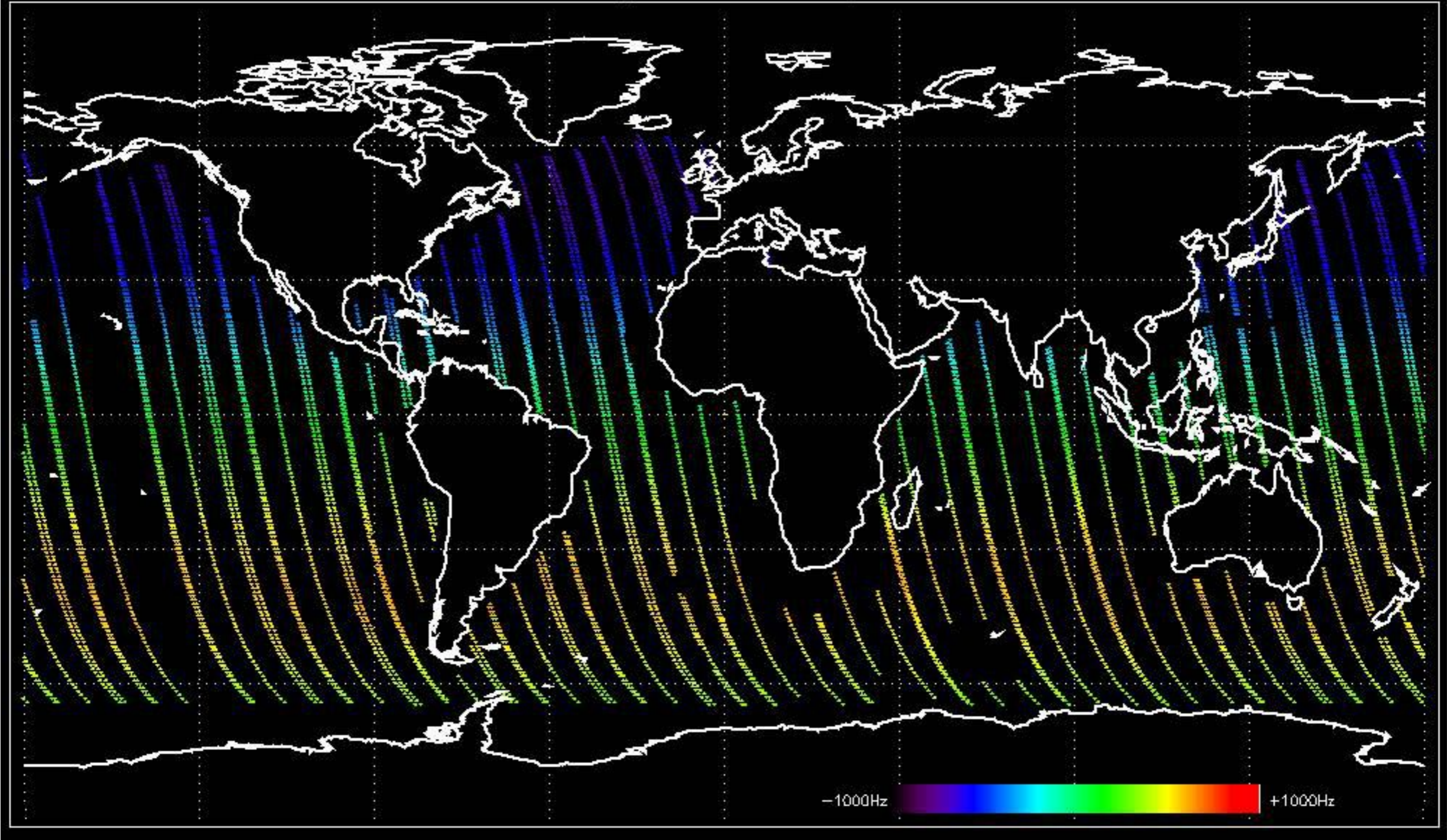
Doppler 'GM1' 'SS1' ascending



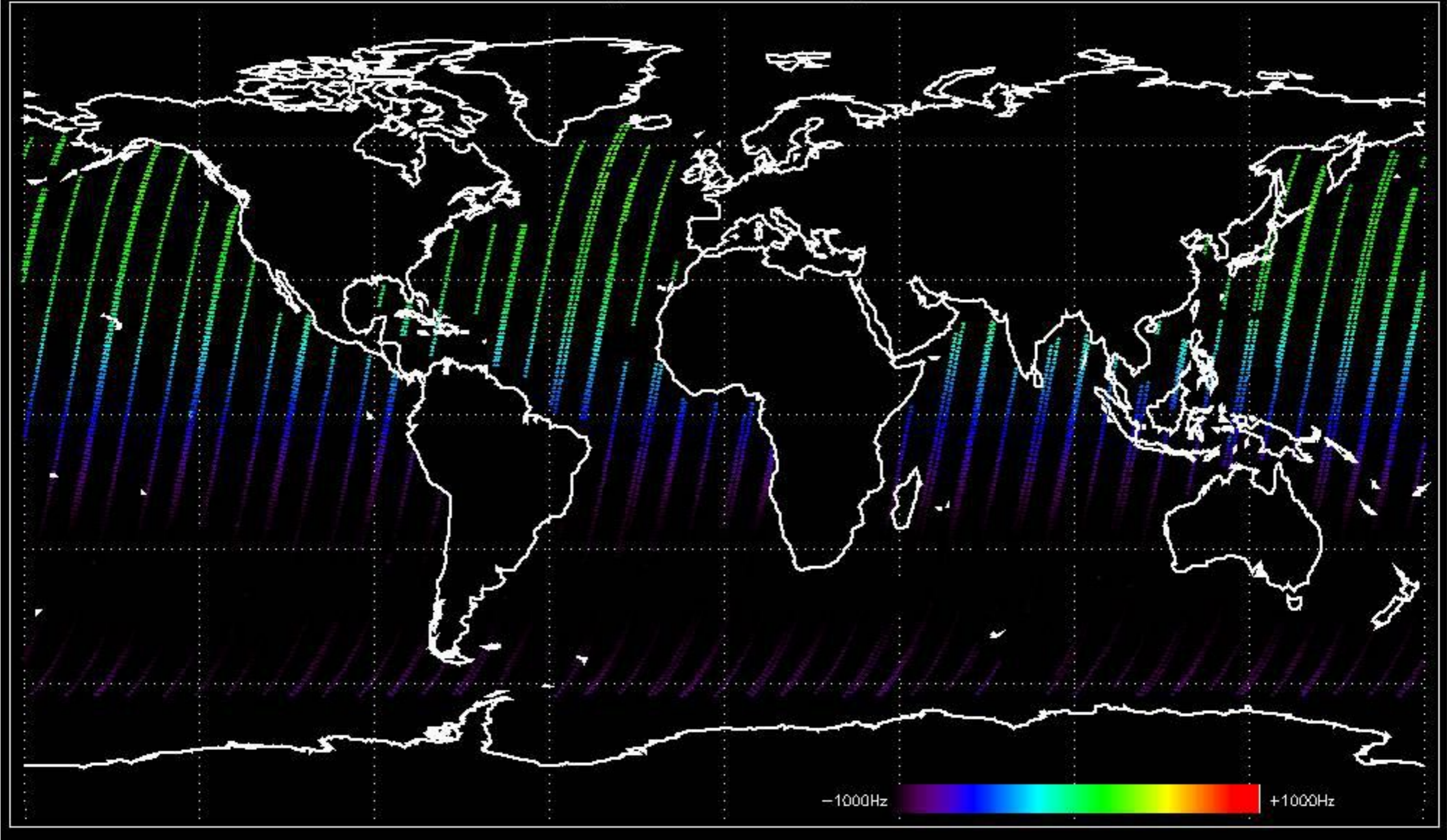
Doppler 'GM1' 'SS1' descending



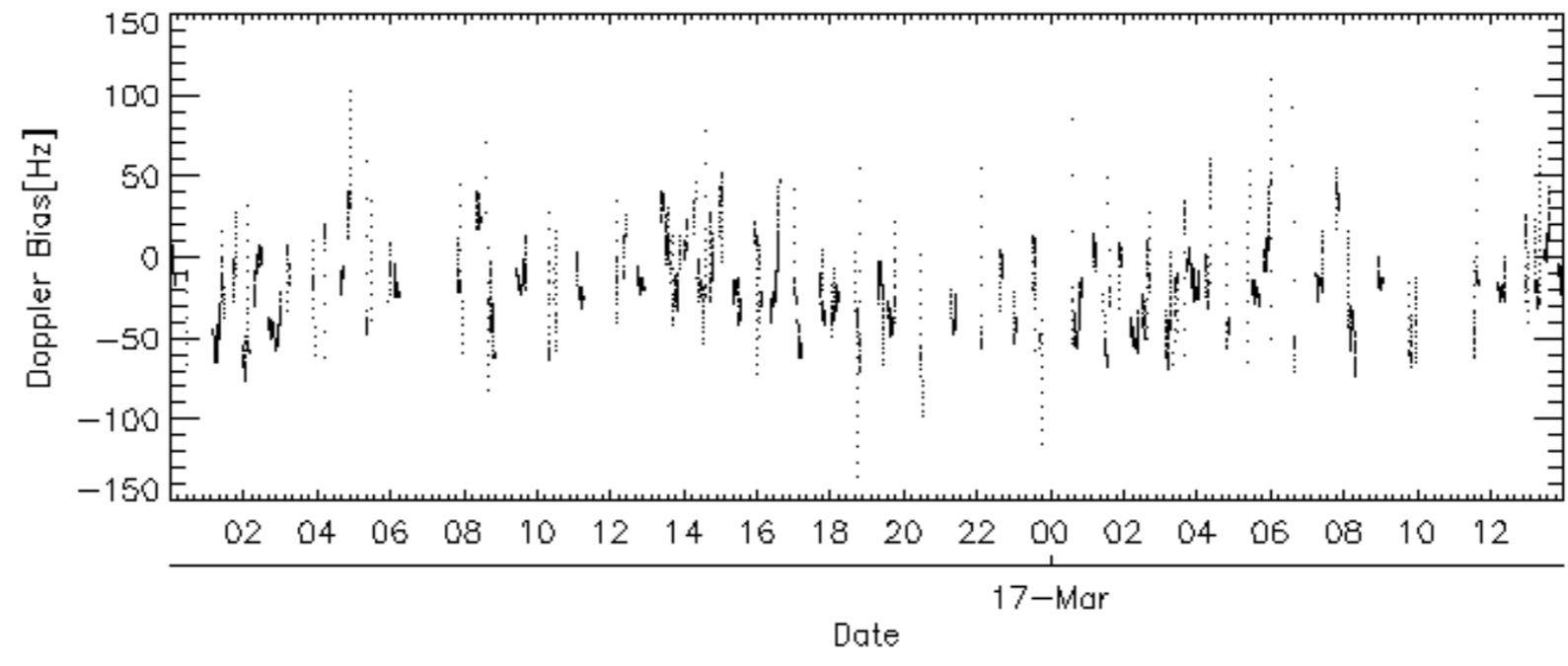
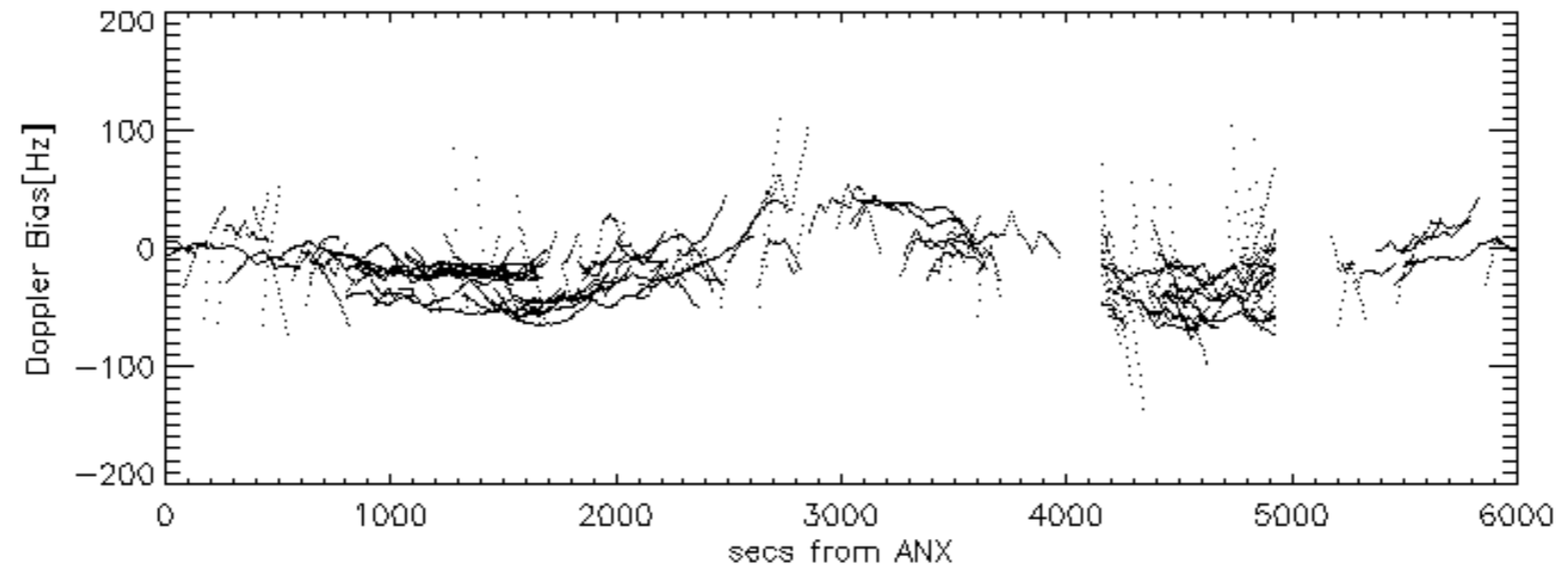
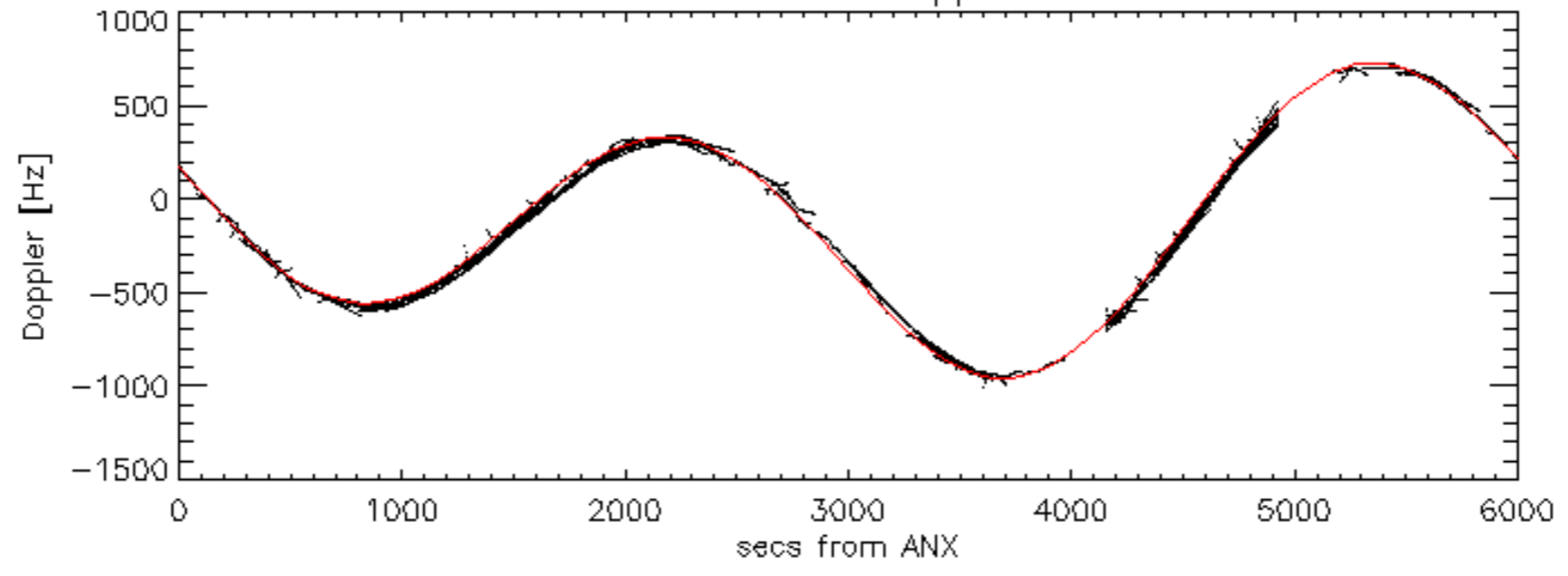
Doppler 'WVS' 'IS2' ascending

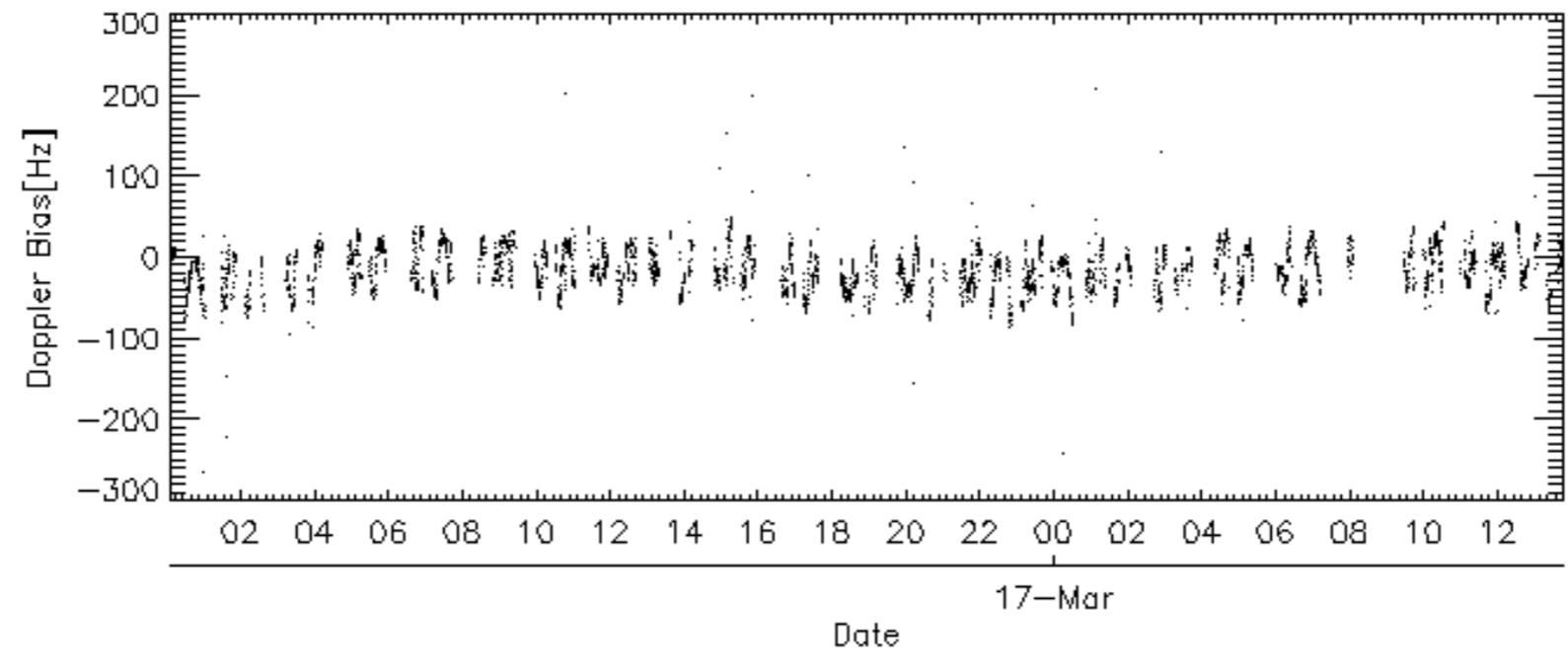
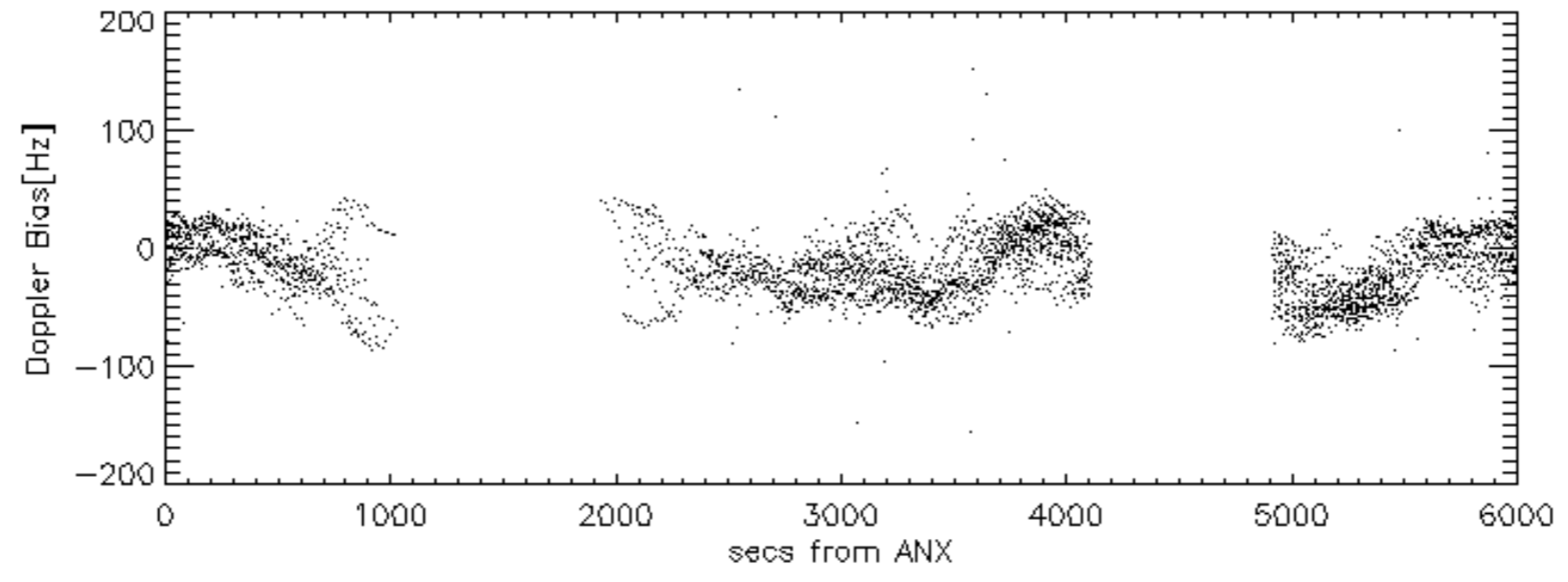
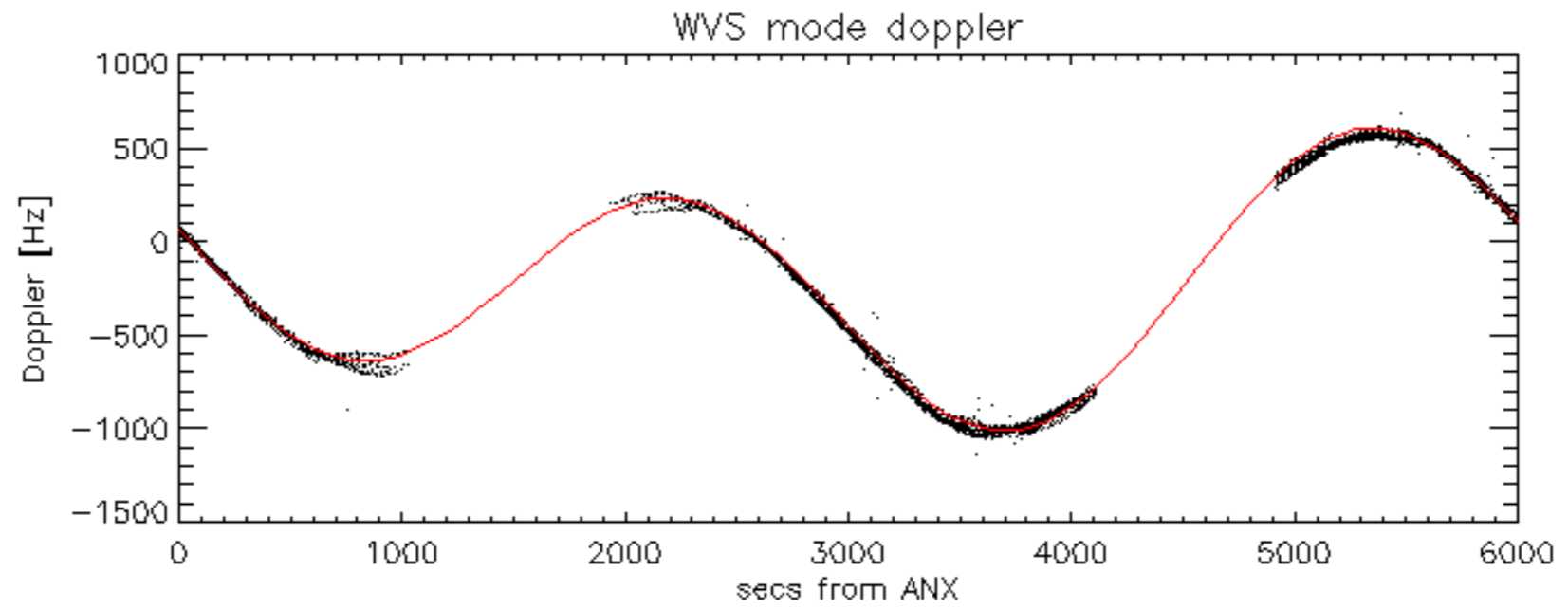


Doppler 'WVS' 'IS2' descending

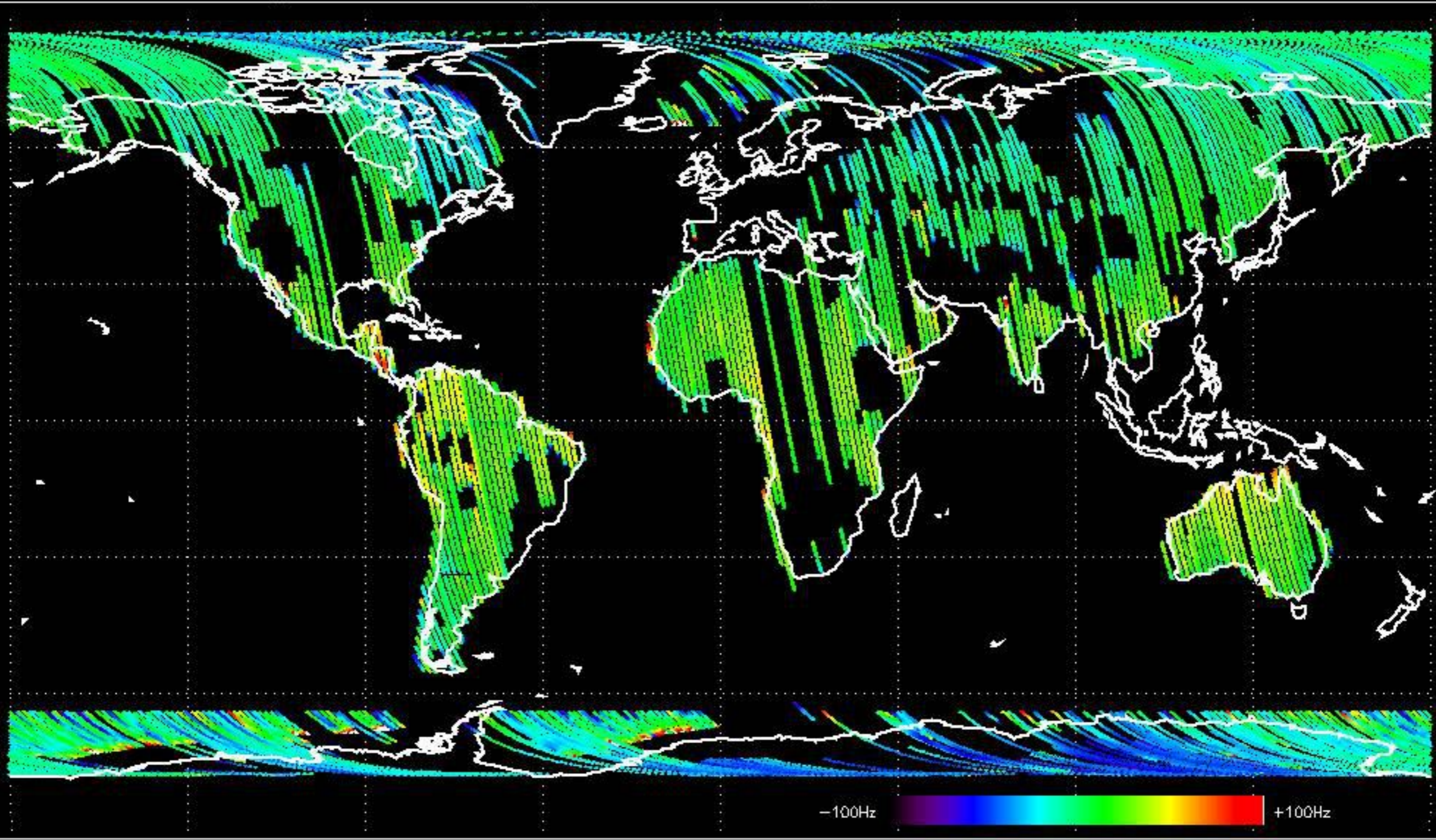


GM1 mode doppler



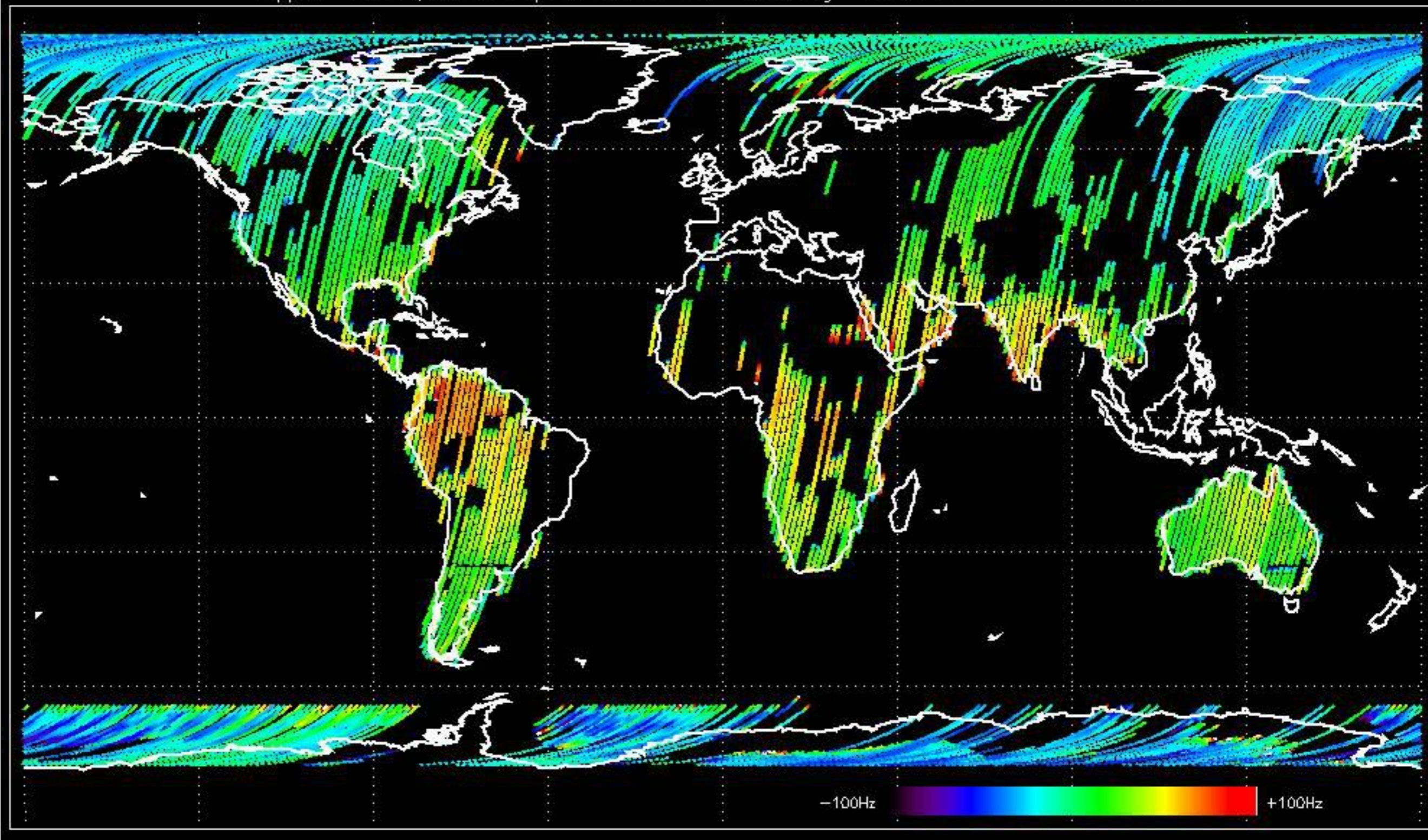


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.243840 Hz

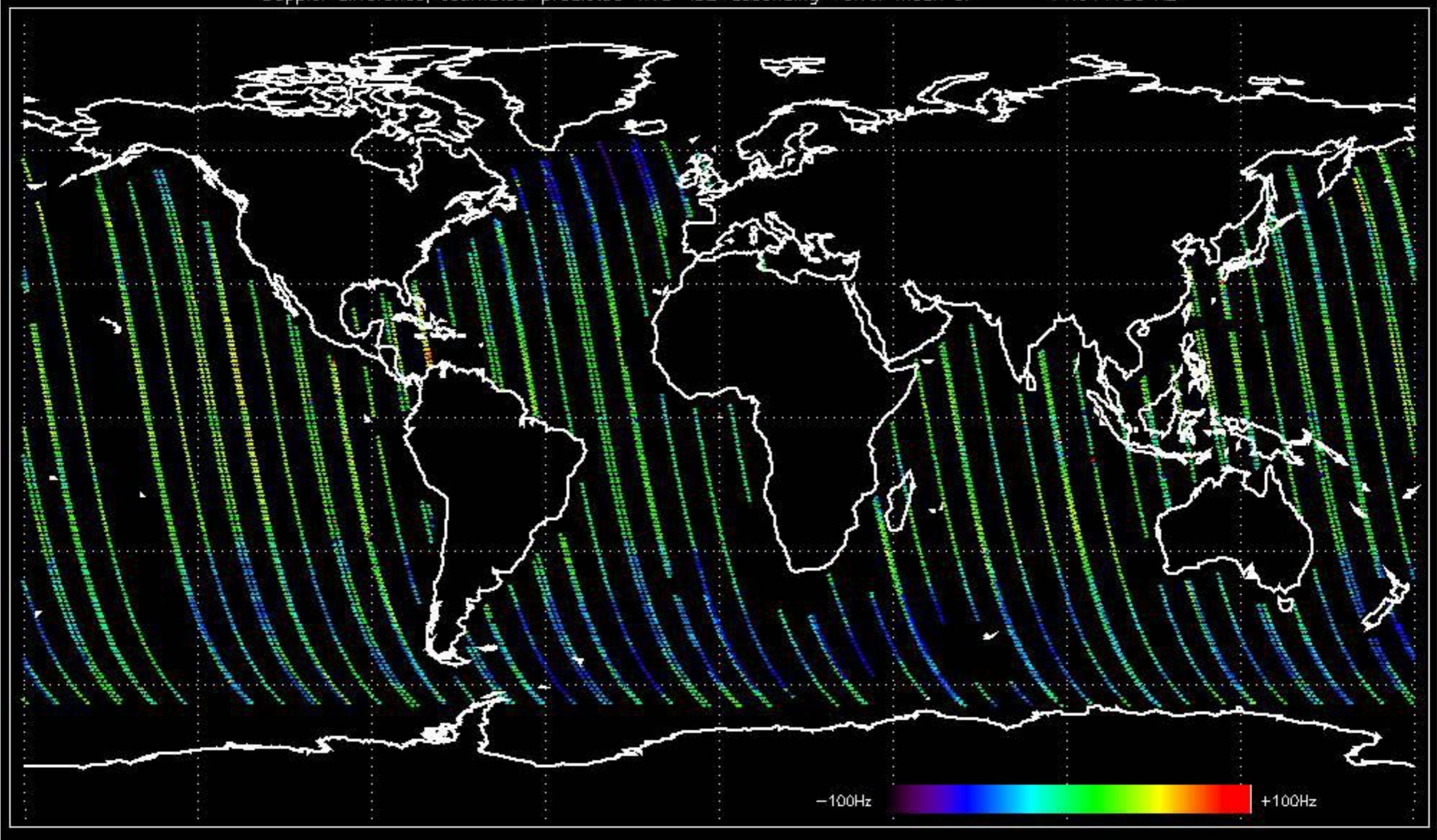


-100Hz +100Hz

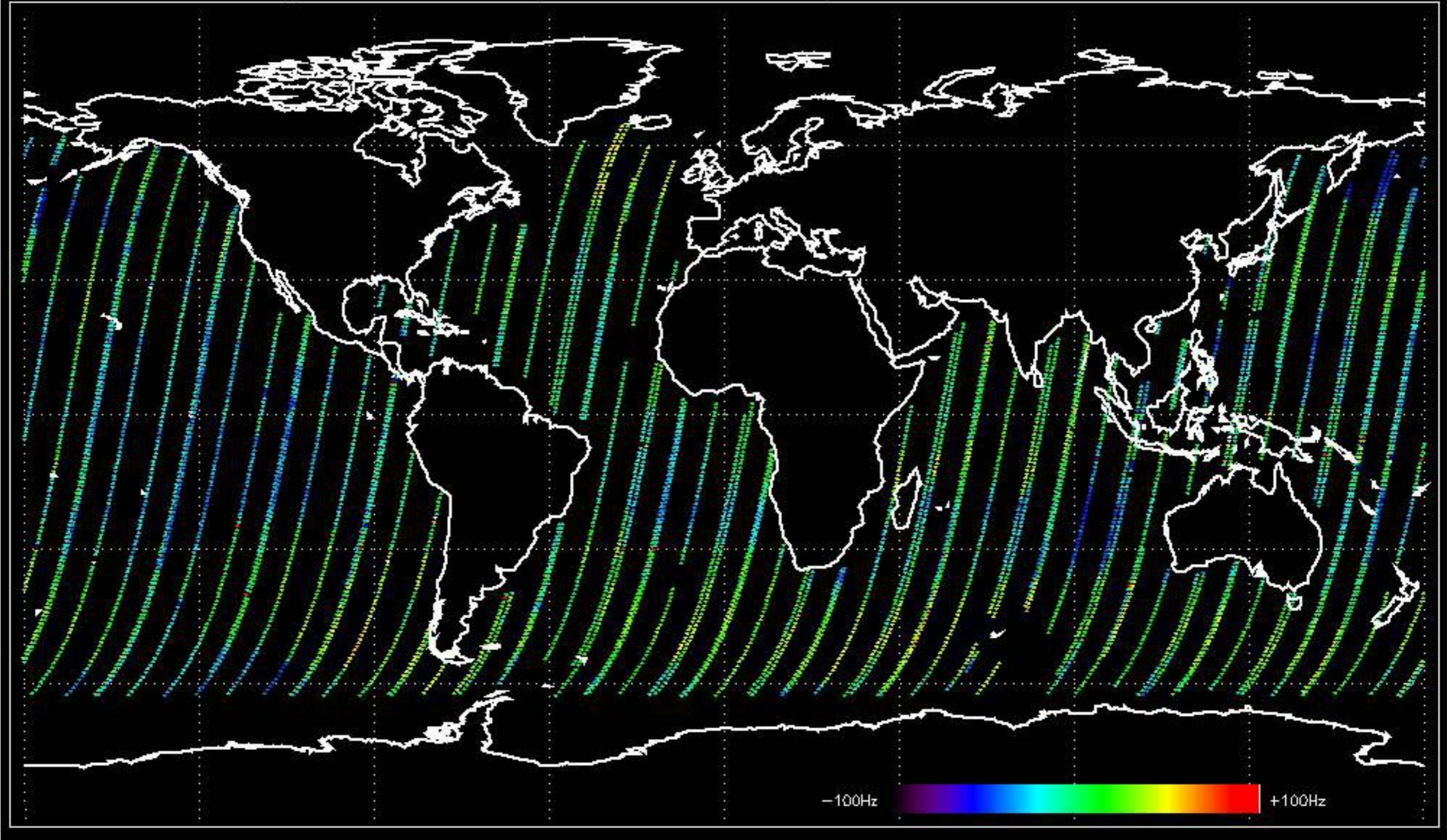
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.436133 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.644190 Hz

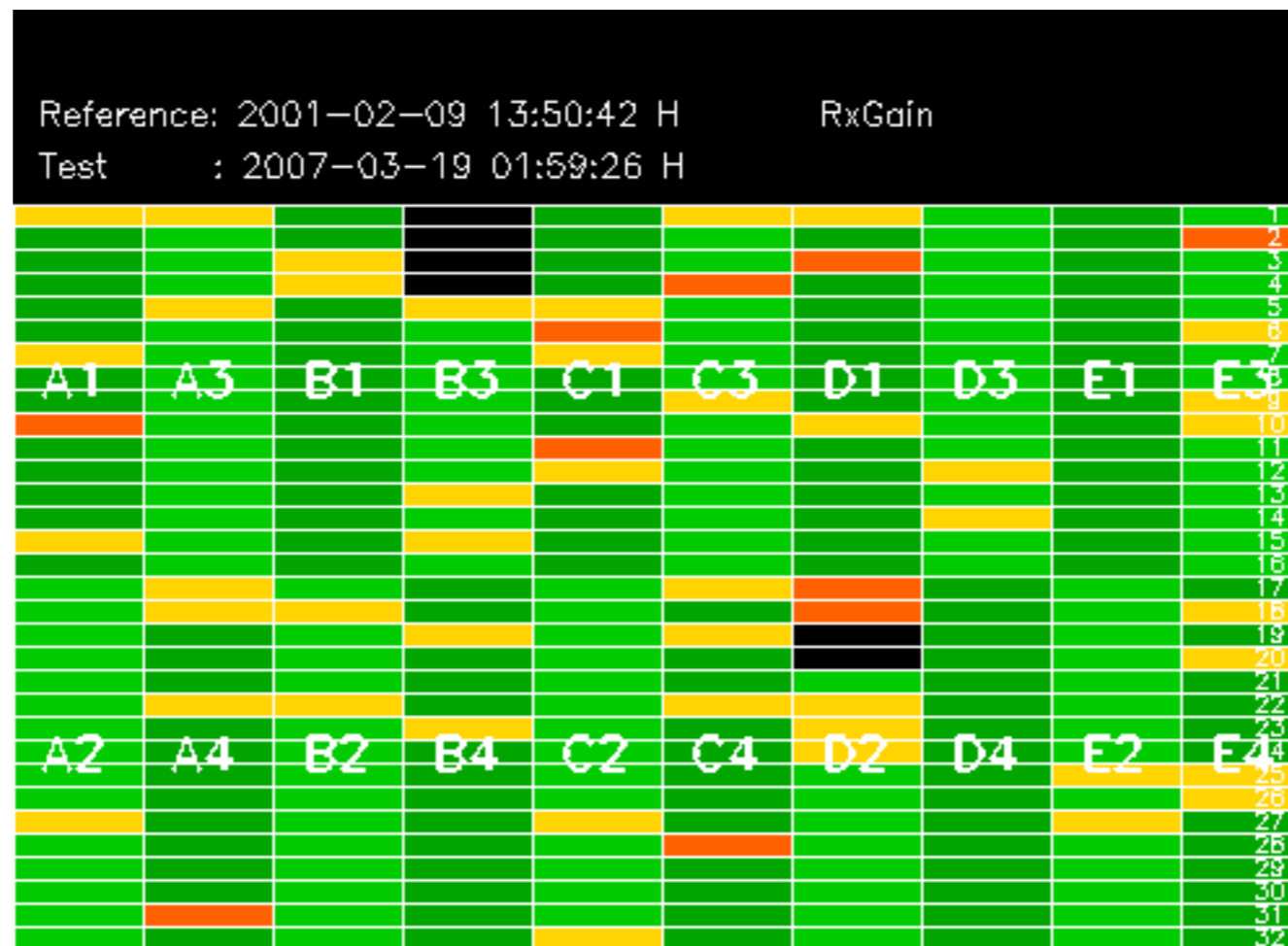


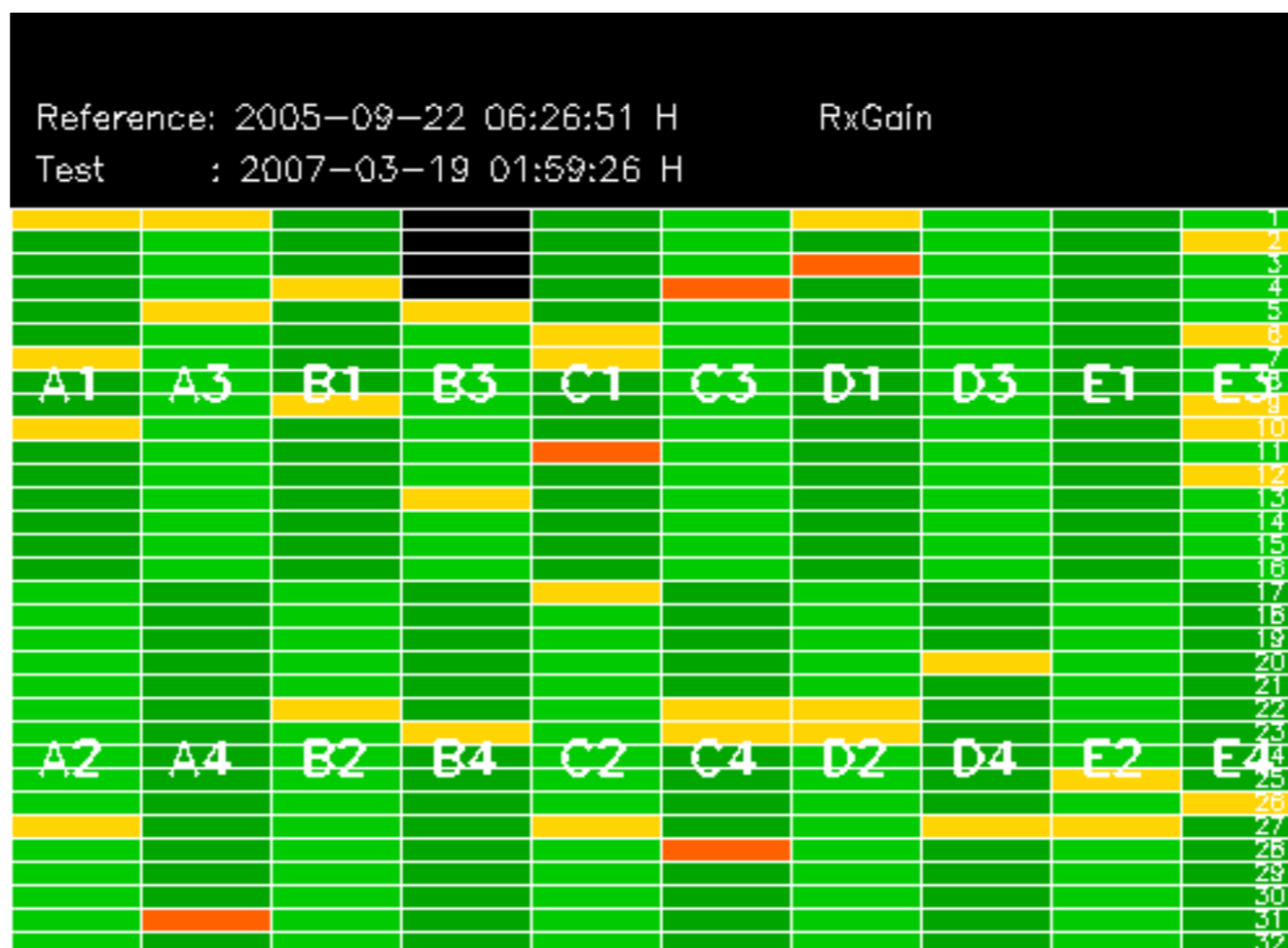
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.957304 Hz

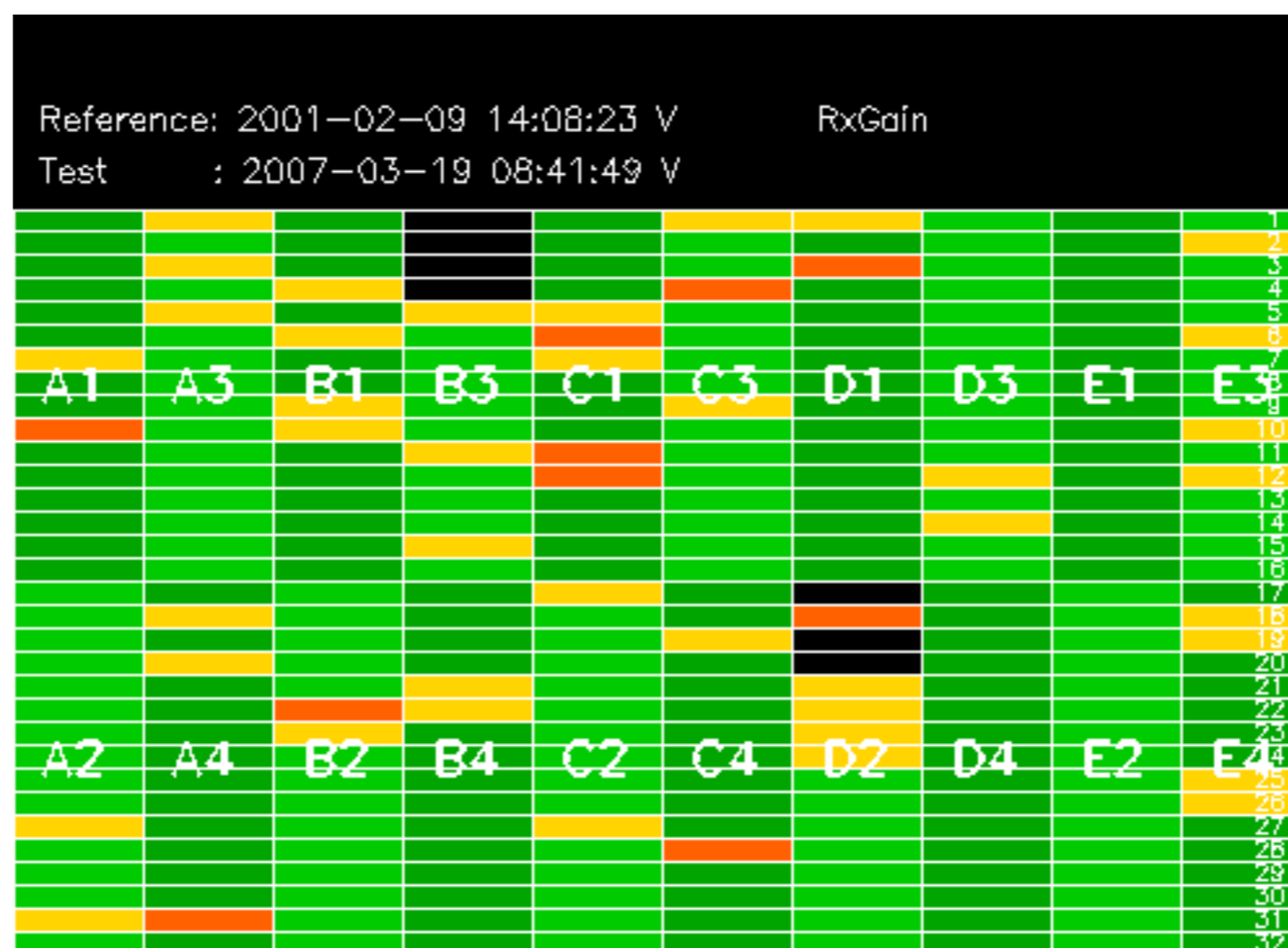


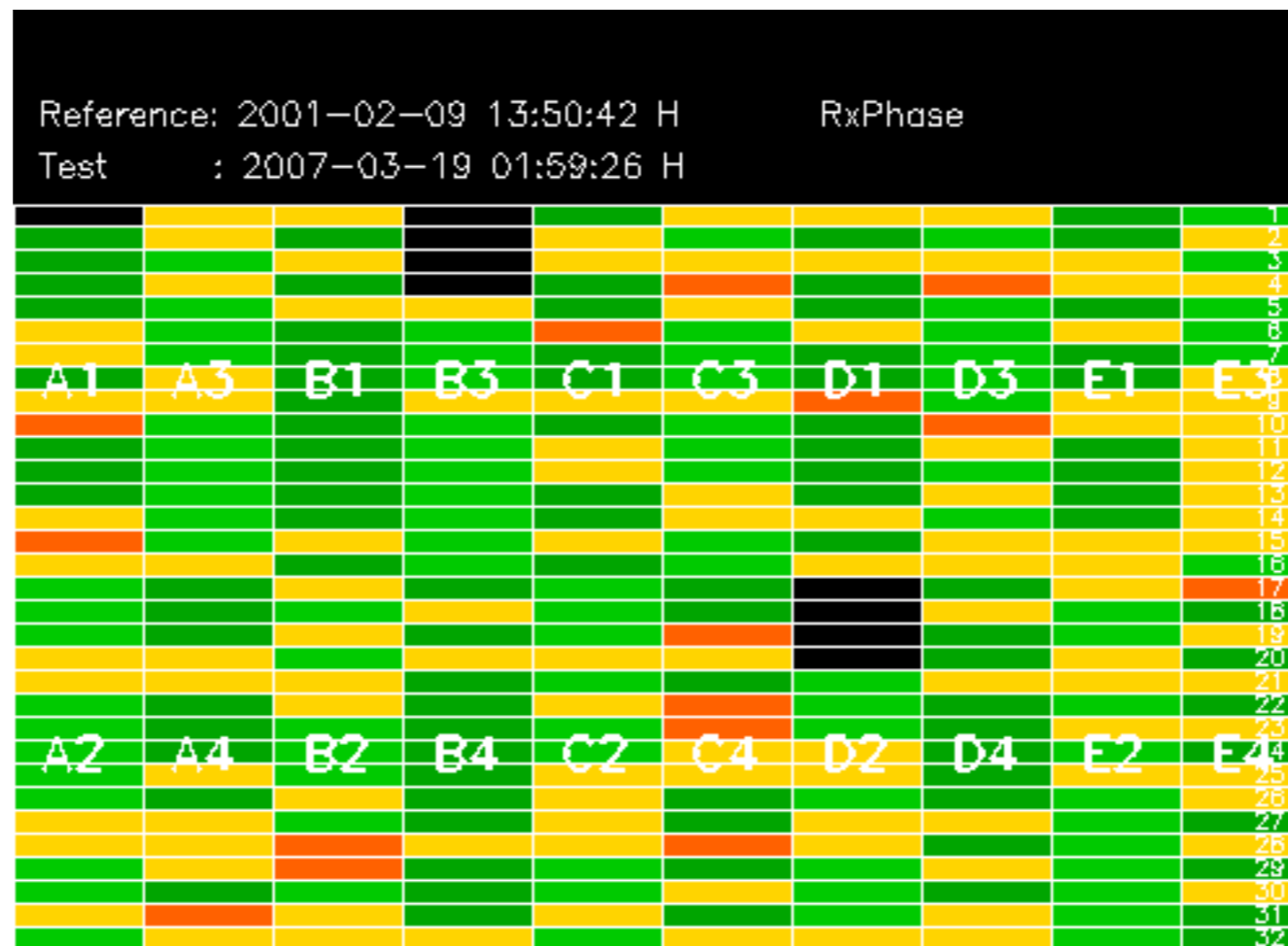
No anomalies observed on available MS products:

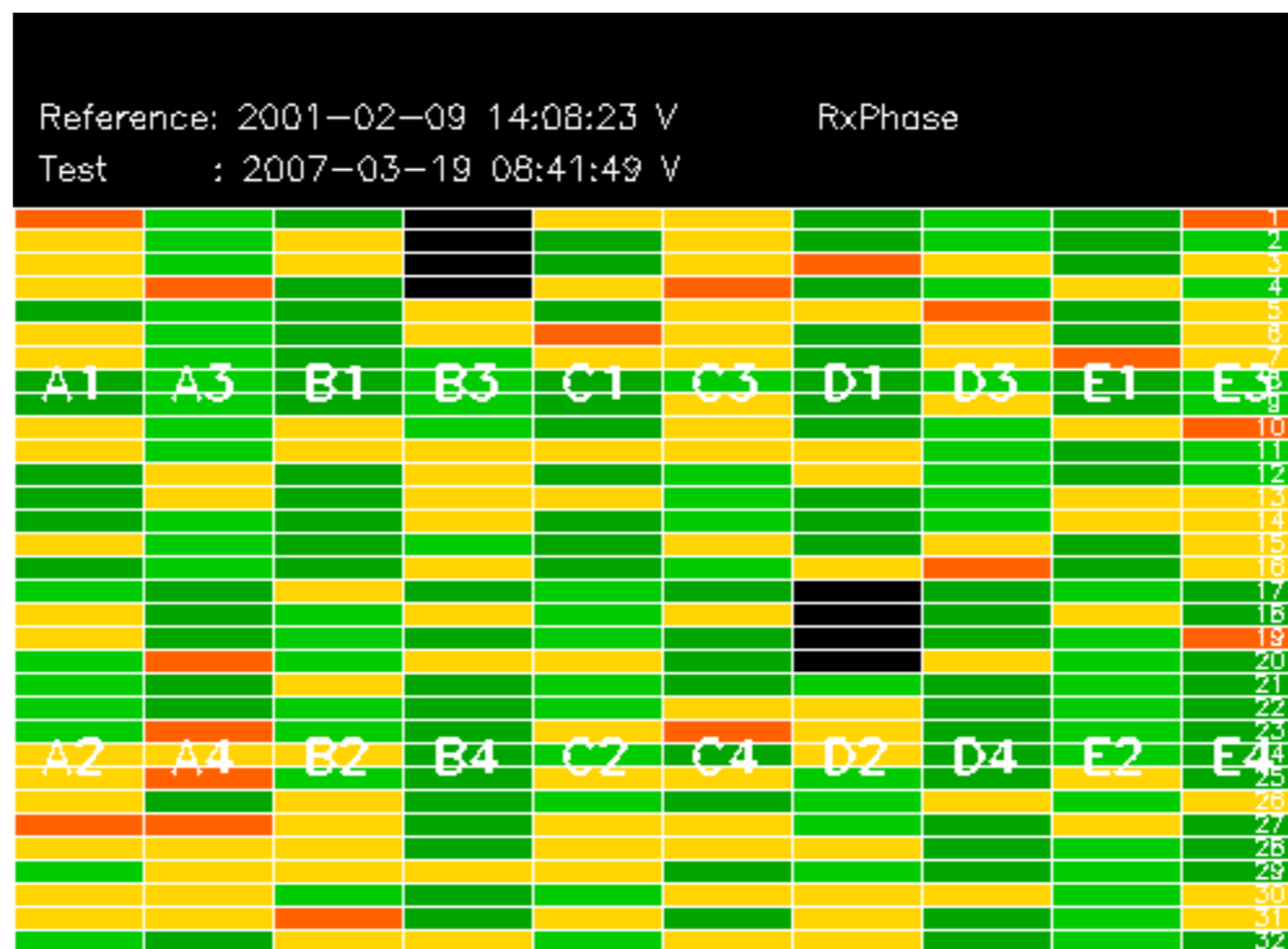
No anomalies observed.

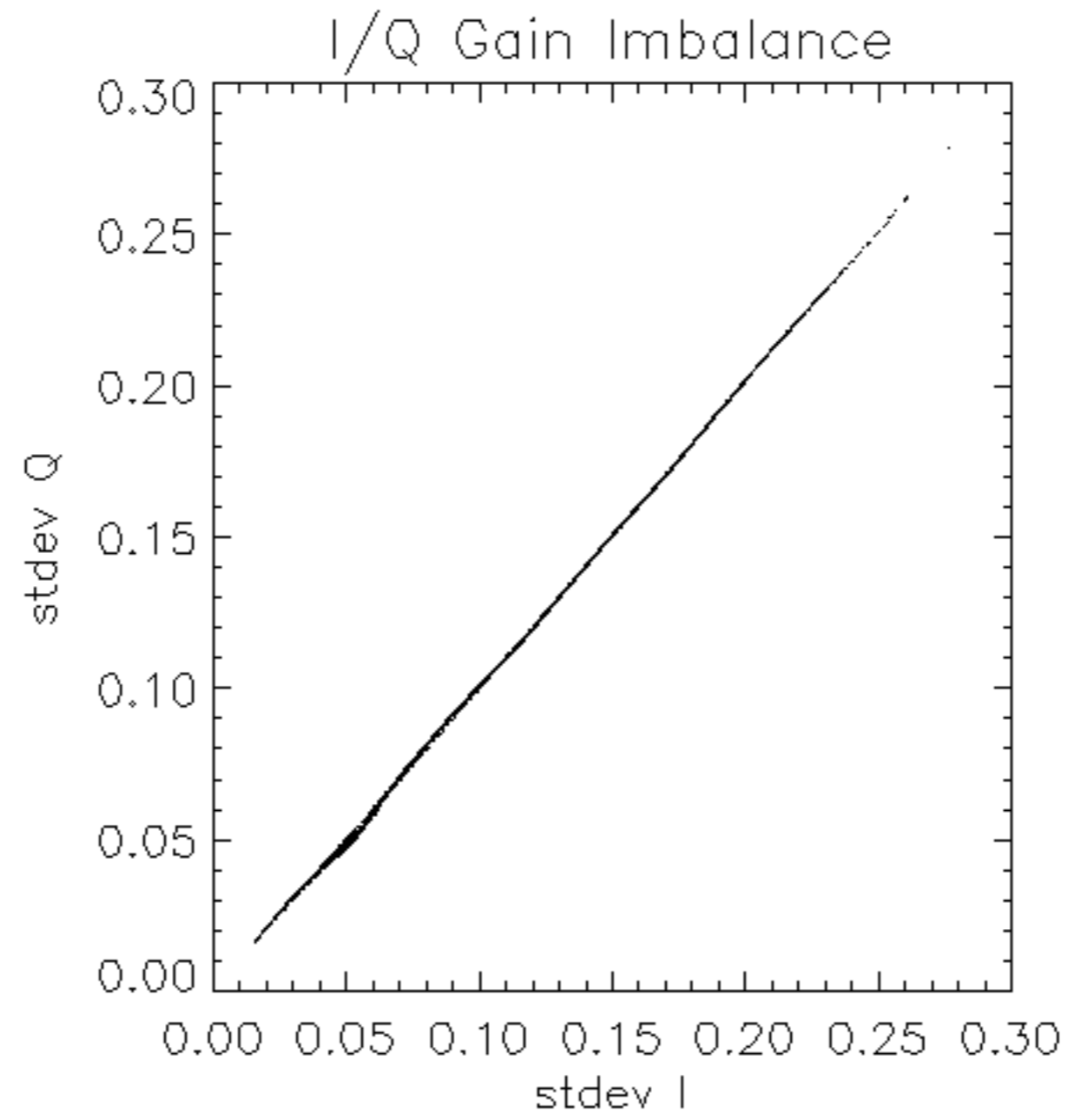


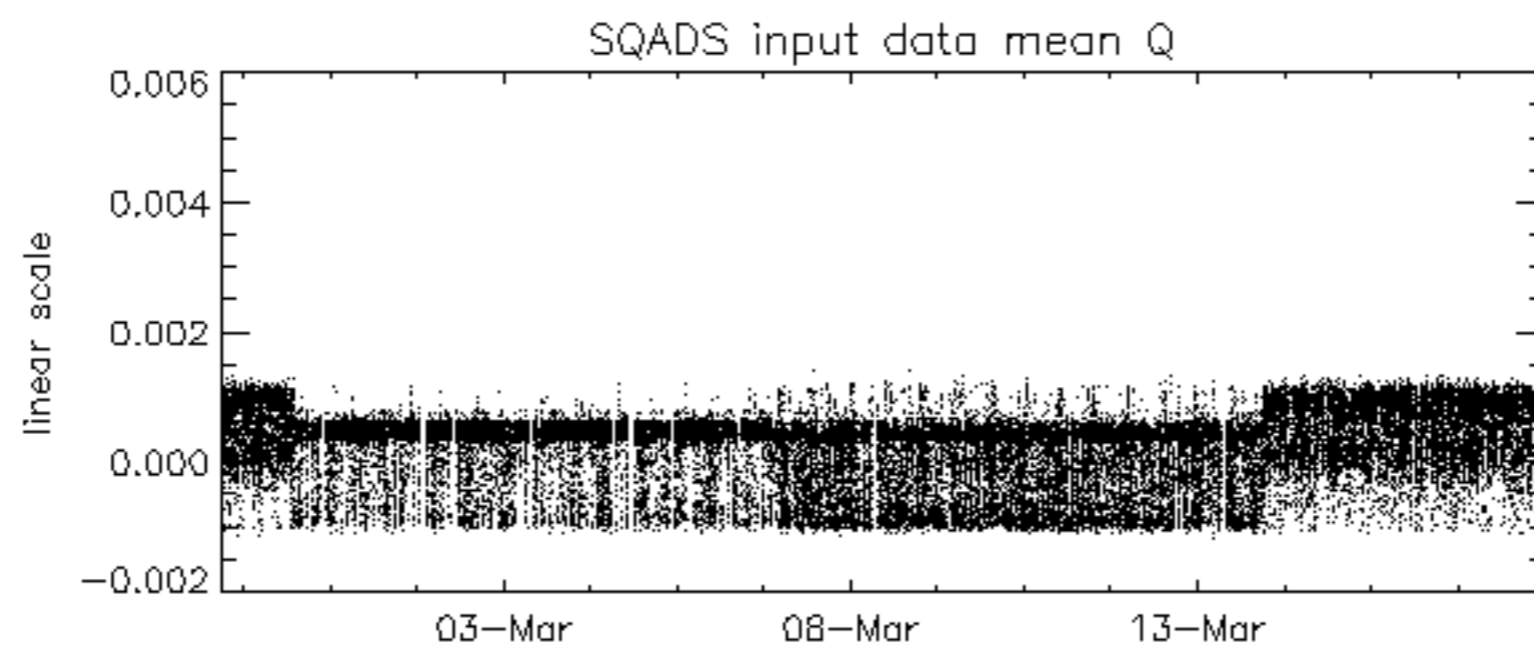
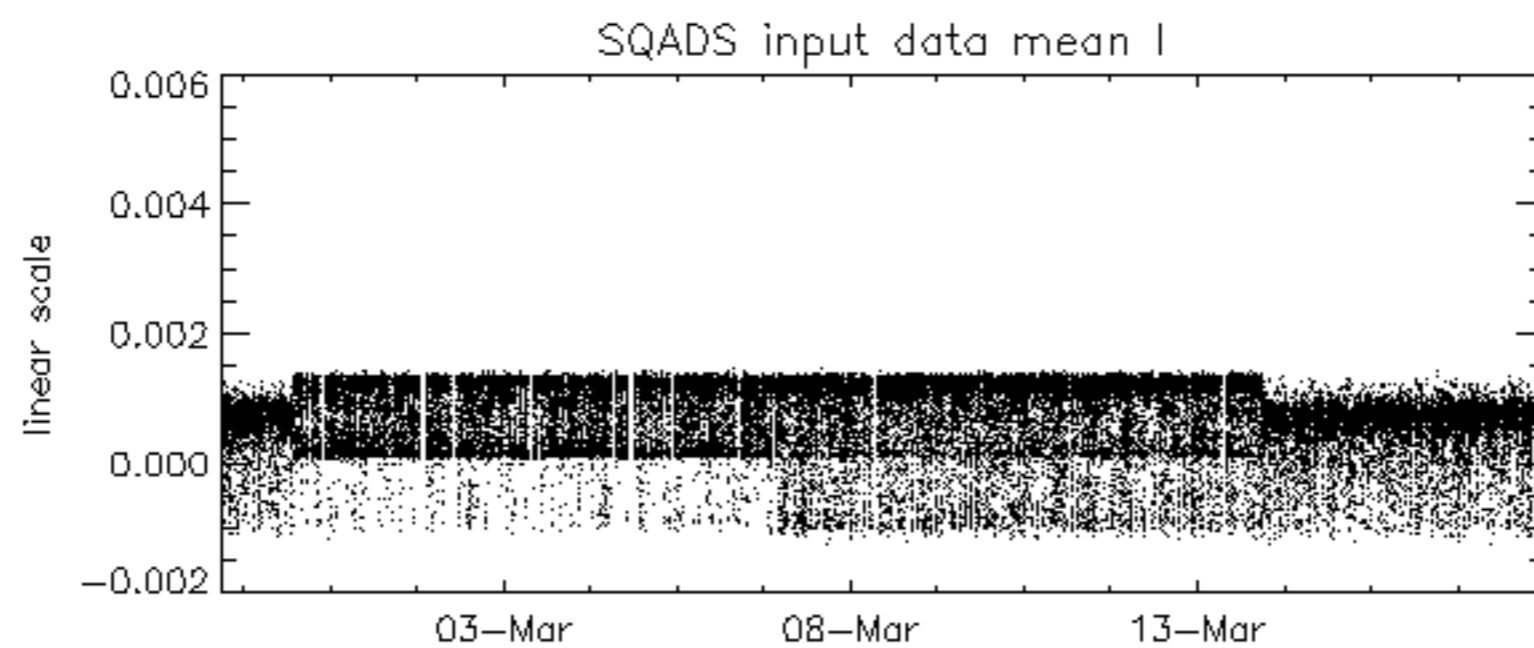
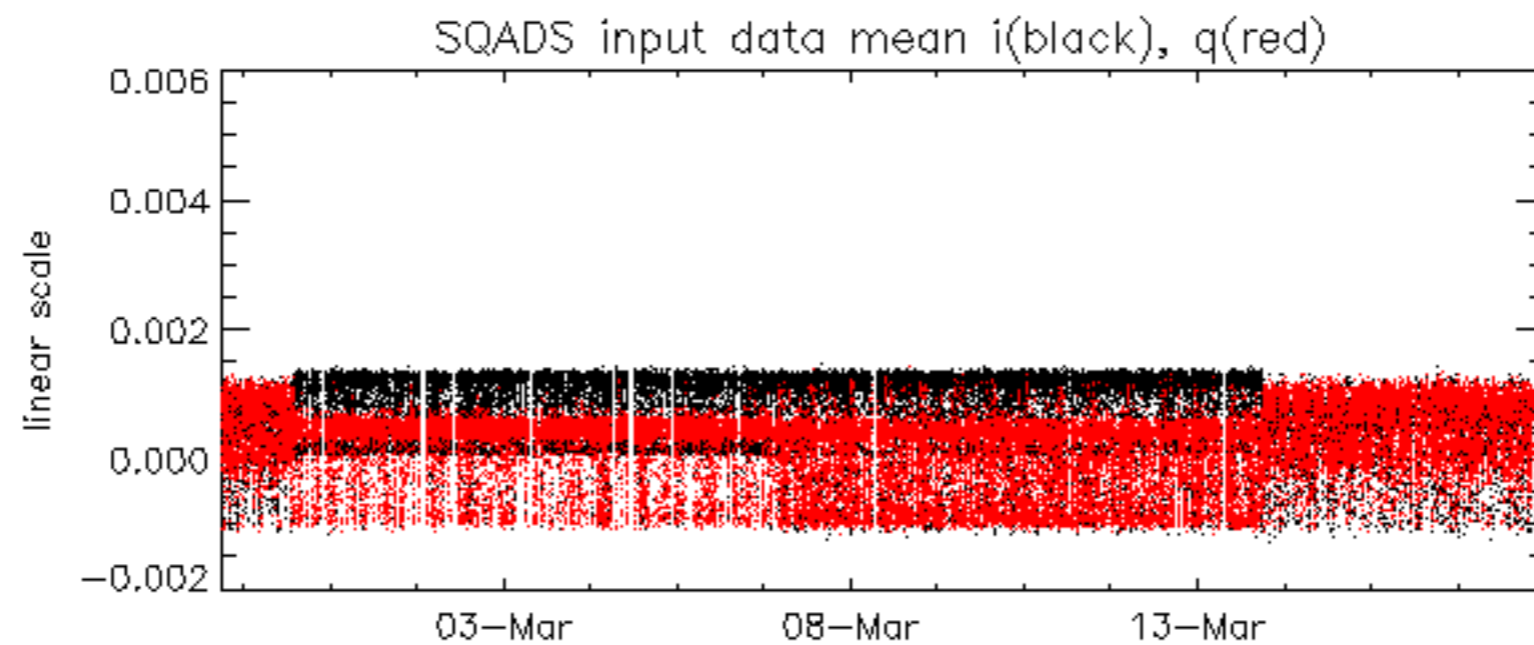


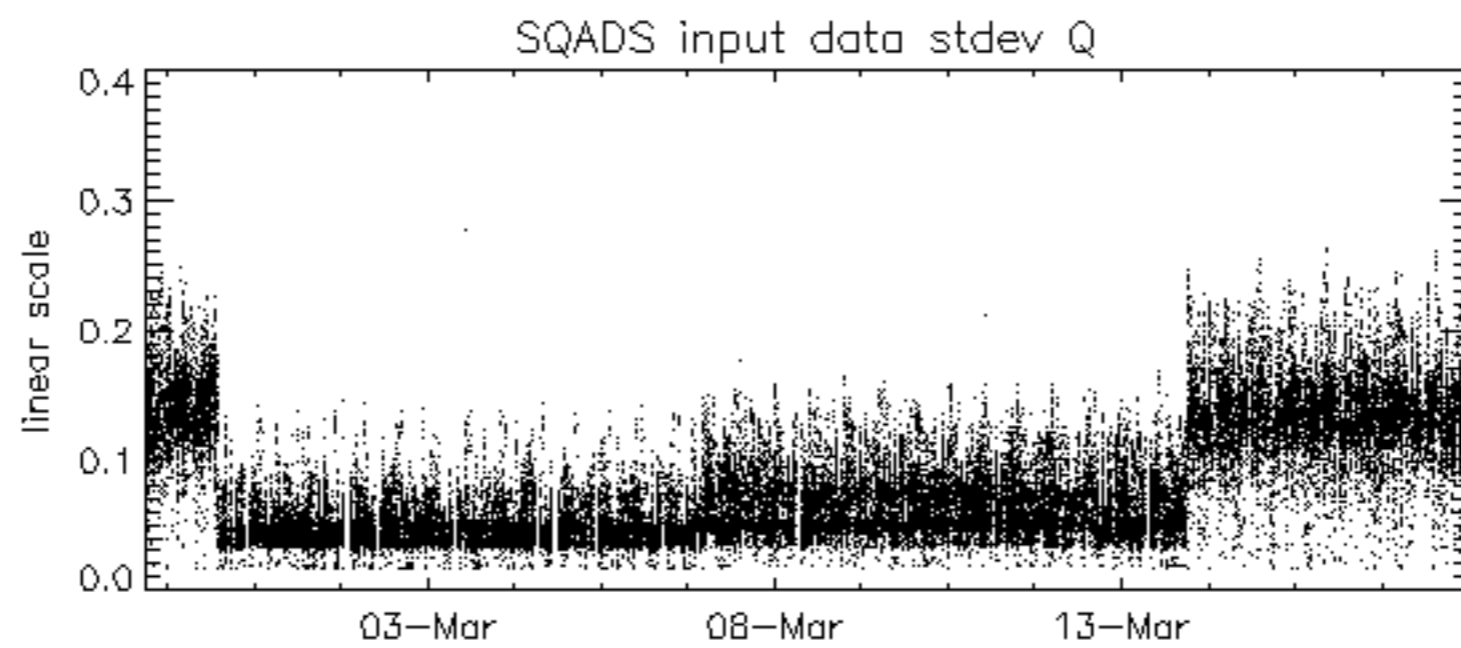
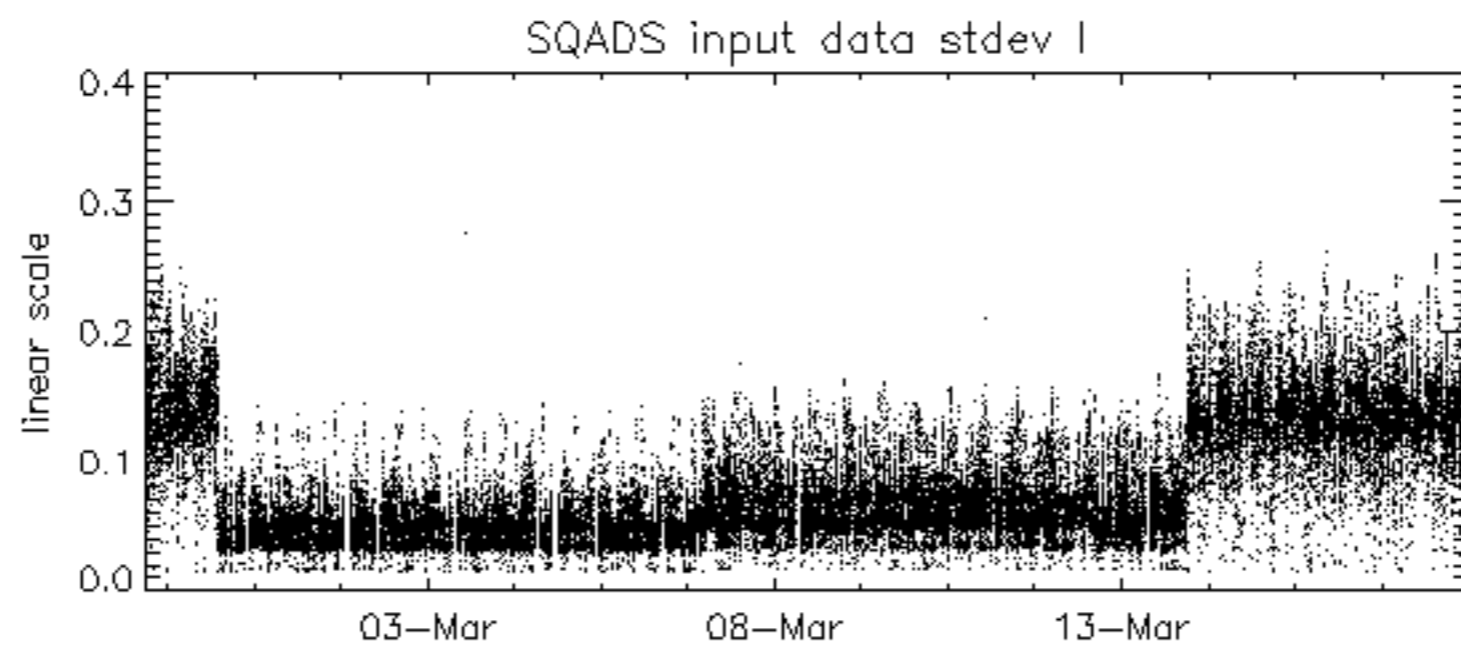
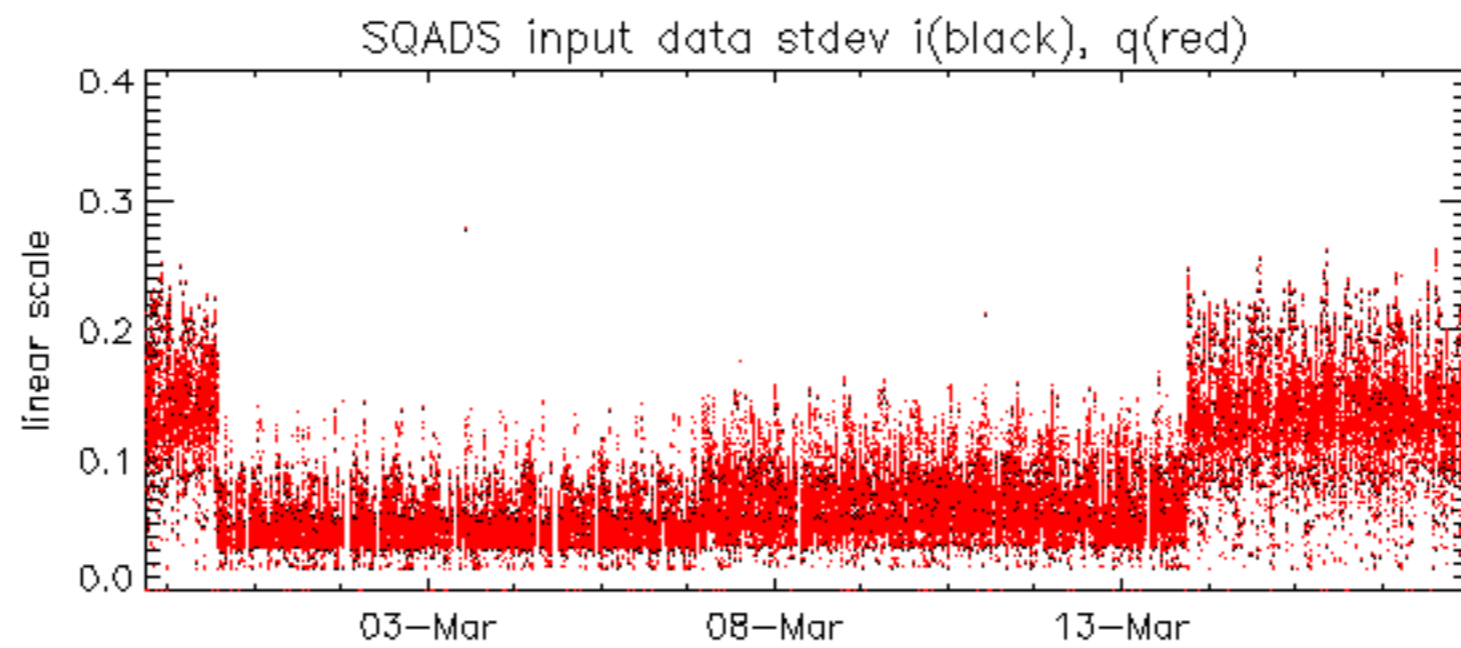




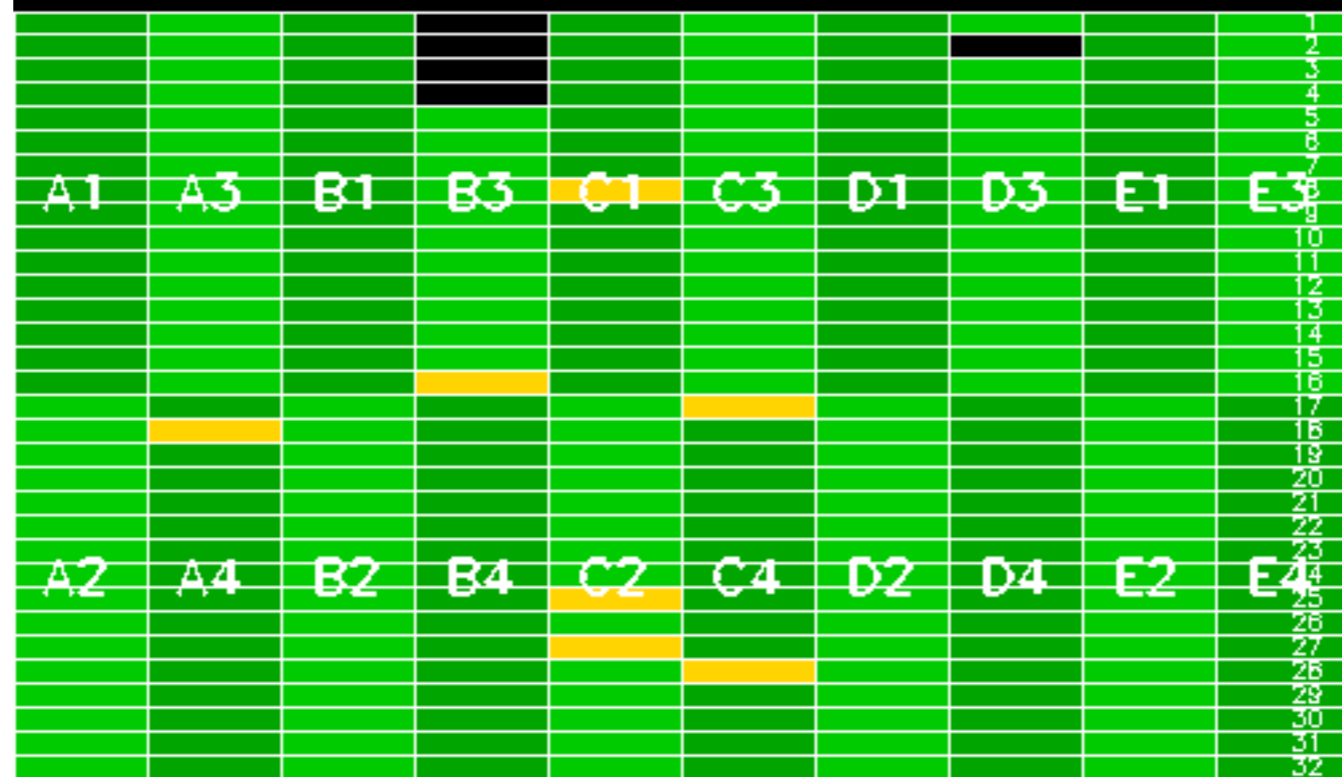








Reference: 2005-09-23 05:55:14 V TxGain
 Test : 2007-03-19 08:41:49 V

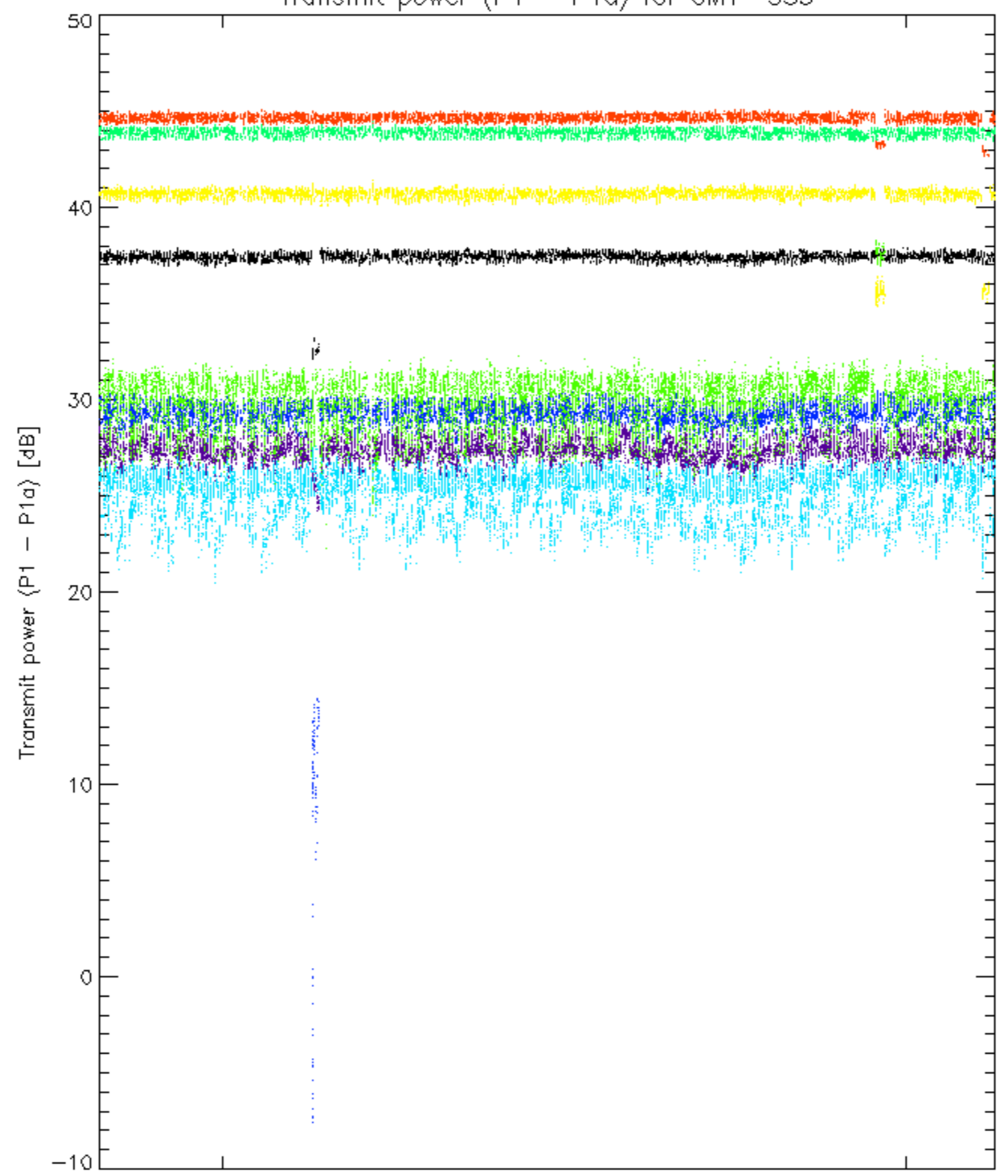


Summary of analysis for the last 3 days 2007031[567]

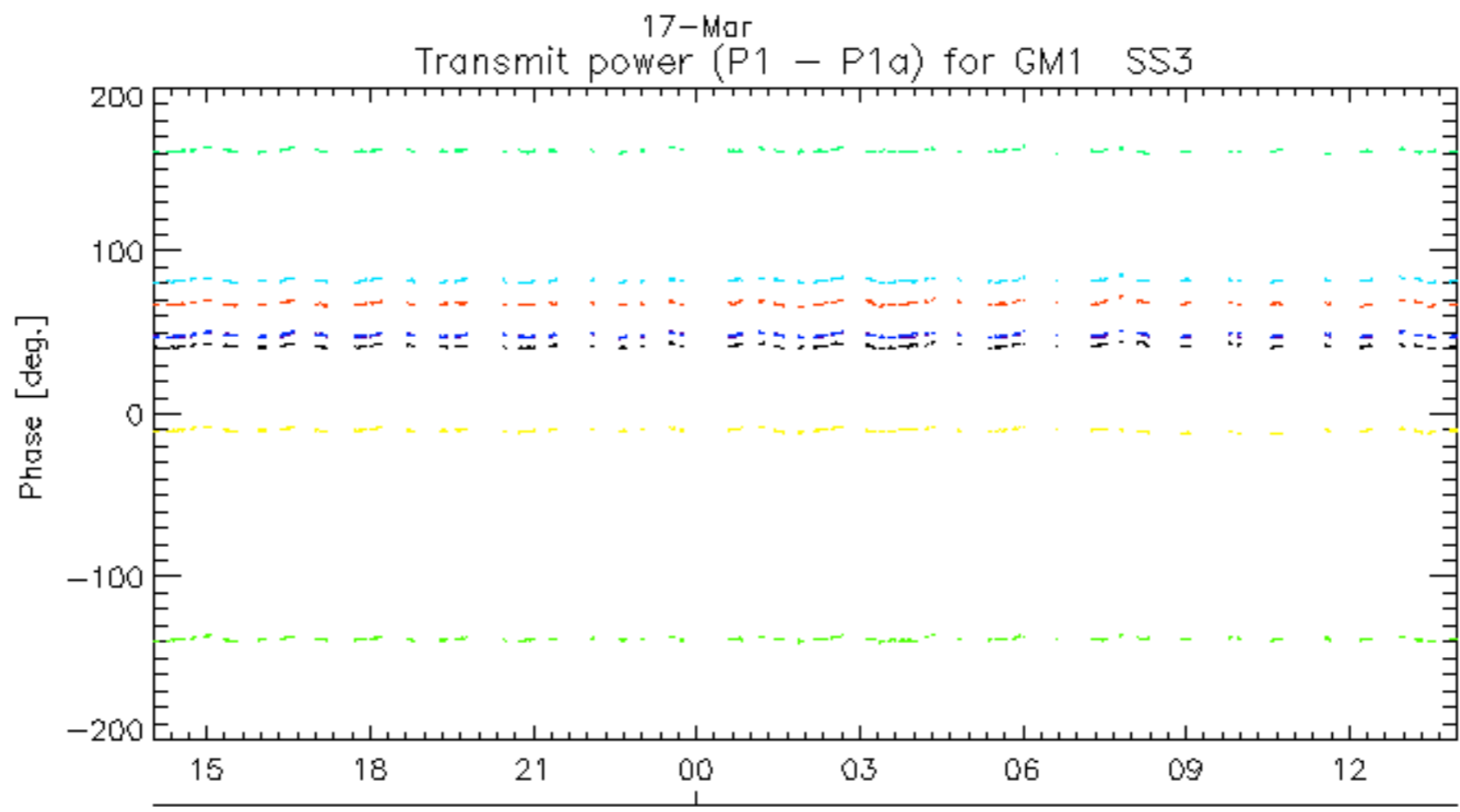
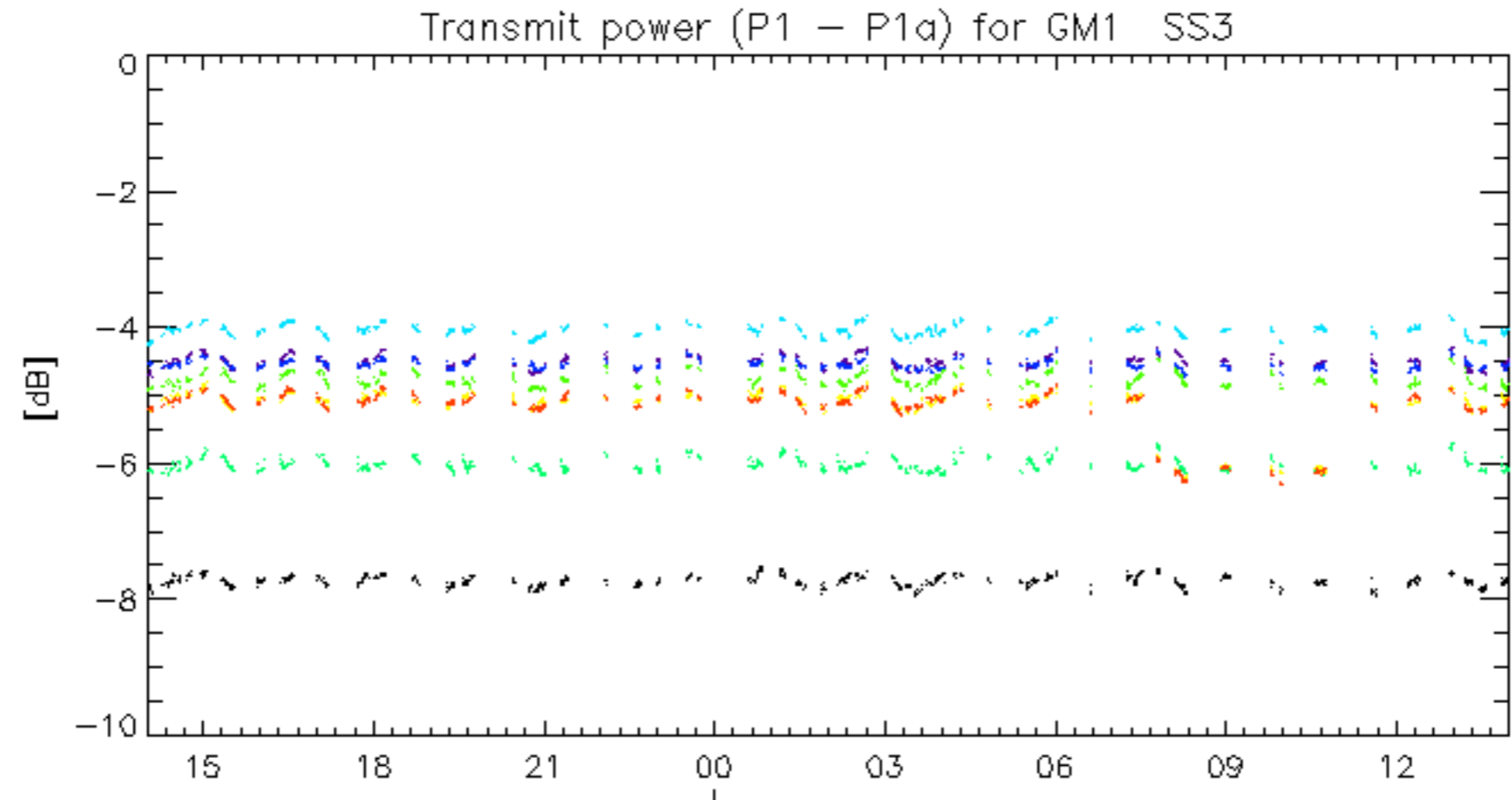
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070316_210538_000000342056_00258_26364_4589.N1	1	0
ASA_IMM_1PNPDK20070315_133248_000000812056_00239_26345_1572.N1	0	2
ASA_IMM_1PNPDK20070316_092324_000000372056_00251_26357_2261.N1	0	1
ASA_GM1_1PNPDK20070316_142640_000002772056_00254_26360_3264.N1	0	7
ASA_WSM_1PNPDE20070316_141502_000000852056_00254_26360_4383.N1	0	15
ASA_WSM_1PNPDE20070317_153552_000003002056_00269_26375_5553.N1	0	111
ASA_WSM_1PNPDK20070315_094718_000000862056_00237_26343_1332.N1	0	29
ASA_WSM_1PNPDK20070316_070403_000002452056_00249_26355_2248.N1	0	3
ASA_APM_1PNPDE20070315_070600_000002082056_00235_26341_2835.N1	12	0
ASA_APM_1PNPDK20070316_093722_000000432056_00251_26357_2257.N1	0	1

Transmit power (P1 - P1a) for GM1 SS3

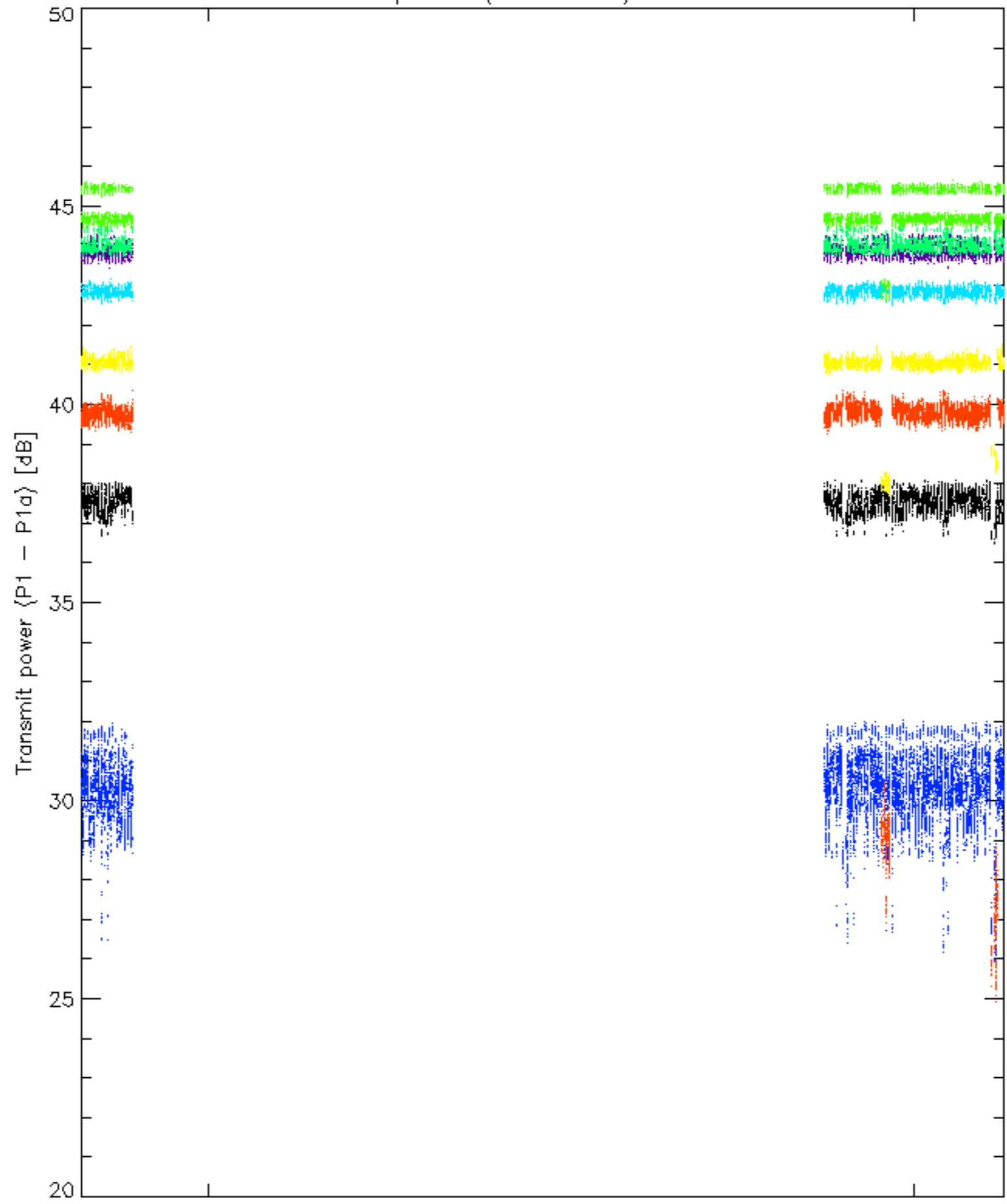


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

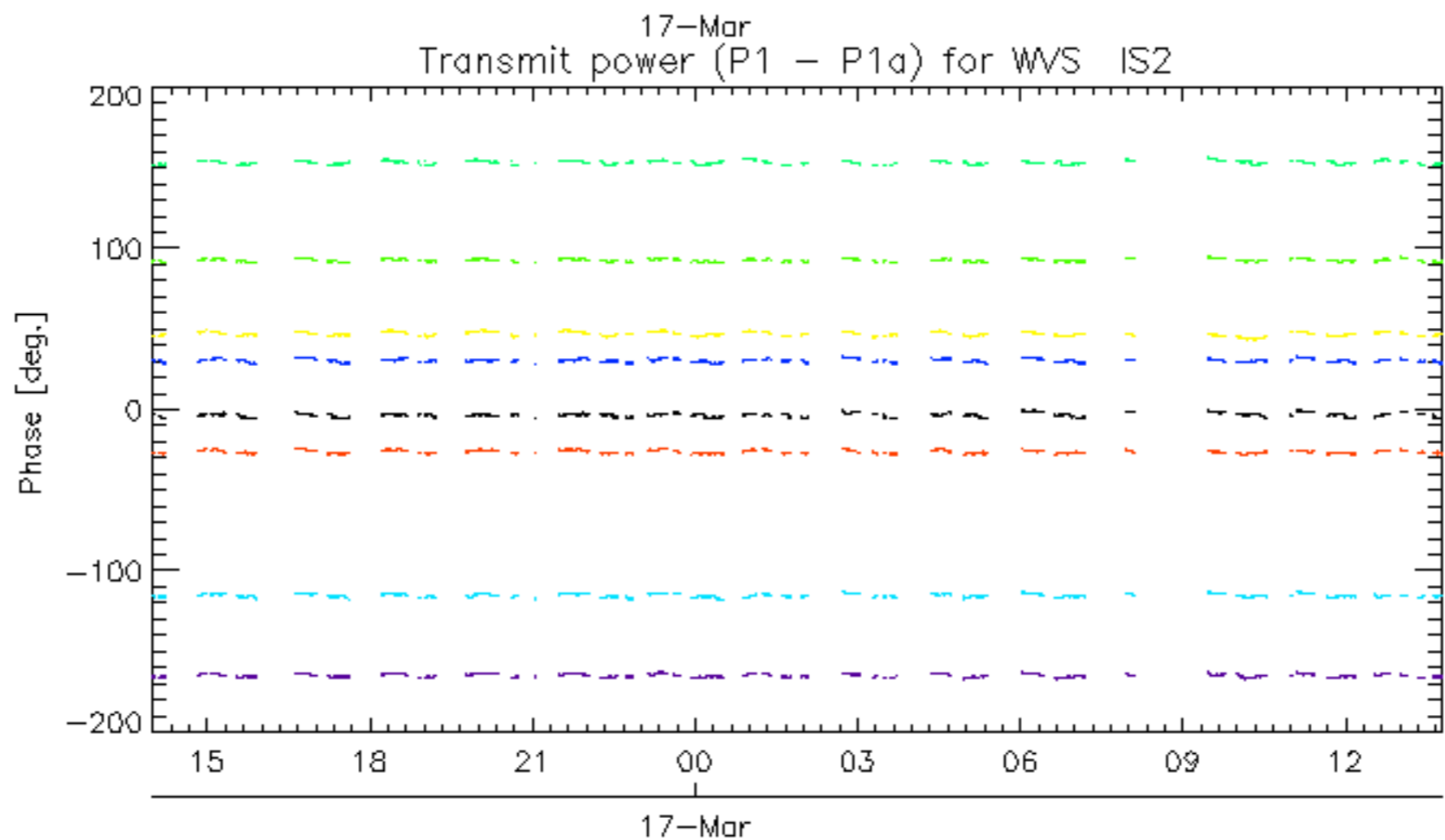
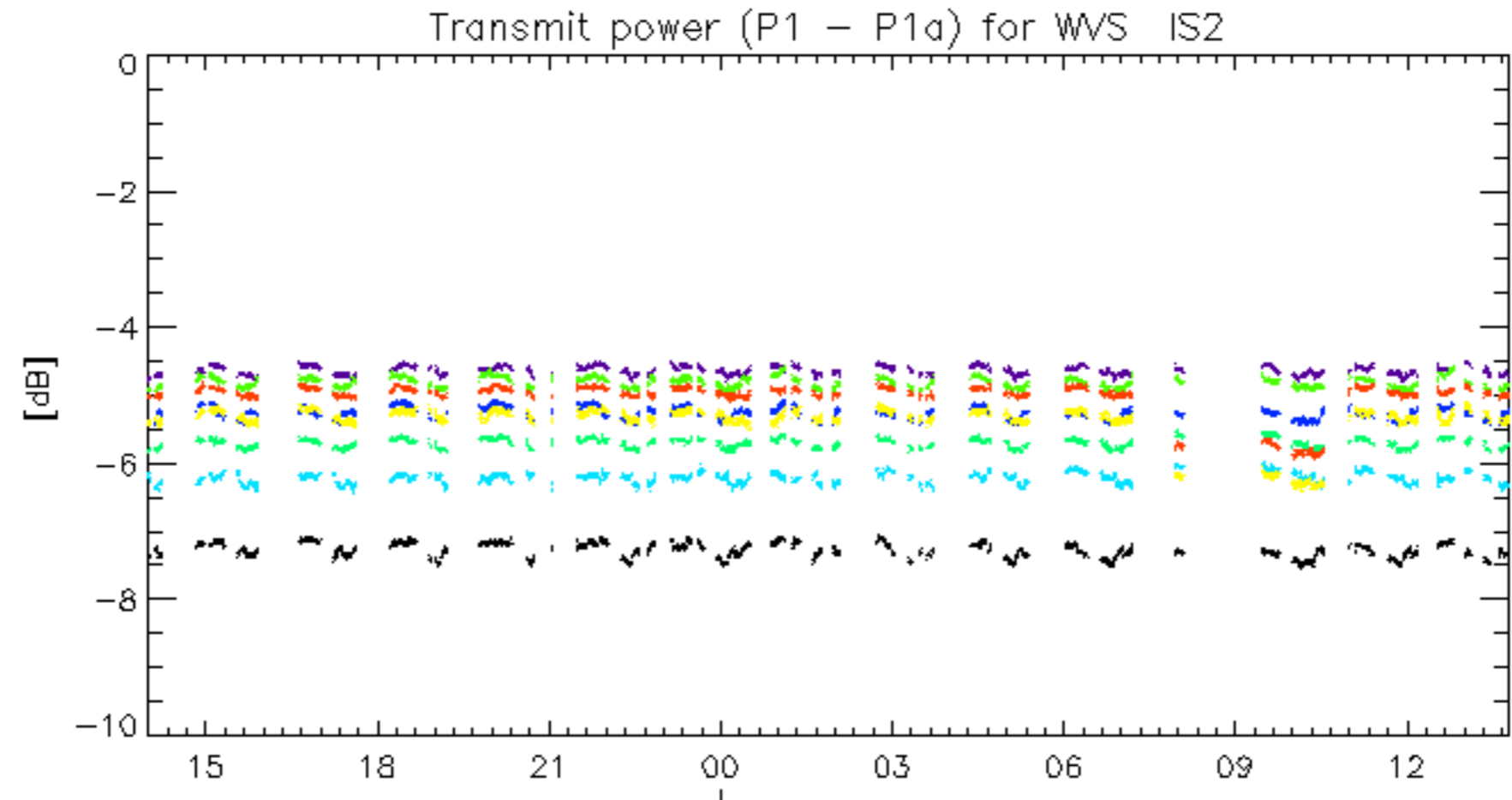


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.