

PRELIMINARY REPORT OF 070218

last update on Sun Feb 18 16:23:25 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 2007-02-17 00:00:00 to 2007-02-18 16:23:25

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000	41	73	14	3	16
ASA_CON_AXVIEC20070215_184018_20070204_165113_20071231_000000	41	73	14	3	16
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	73	14	3	16
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	41	73	14	3	16

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000	44	47	63	17	28
ASA_CON_AXVIEC20070215_184018_20070204_165113_20071231_000000	44	47	63	17	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	47	63	17	28
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	44	47	63	17	28

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	20070218 053208
H	20070217 060345

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
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☒	☒
☒	☒
☒	☒

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

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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	-15.172637	0.266627	2.021954
7	P1a	-17.399742	0.108634	-0.225688
11	P1a	-17.329998	0.354180	0.005923
15	P1a	-12.842482	0.112793	-0.249637
19	P1a	-15.097053	0.095952	-0.113202
22	P1a	-15.514194	0.487943	-0.329489
26	P1a	-14.994337	0.228630	-0.102507
30	P1a	-17.315615	0.372861	-0.454547

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.590424	0.192602	-2.125680
7	P1	-3.103132	0.009300	-0.040902
11	P1	-4.128318	0.019587	-0.059072
15	P1	-6.324498	0.015900	-0.064682
19	P1	-3.706102	0.008849	0.006163
22	P1	-4.673879	0.014458	0.001929
26	P1	-3.925586	0.013709	0.024675
30	P1	-5.915089	0.012023	-0.010947

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.519245	0.311362	-2.367070
7	P2	-21.601105	0.084532	0.134059
11	P2	-15.475593	0.101363	0.090343
15	P2	-7.009917	0.098549	-0.005071
19	P2	-9.076388	0.087382	0.007223
22	P2	-18.099920	0.082212	-0.056302

26	P2	-16.500982	0.096676	-0.029427
30	P2	-19.329784	0.077887	0.013574

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.196517	0.007861	0.036822
7	P3	-8.196517	0.007861	0.036822
11	P3	-8.196517	0.007861	0.036822
15	P3	-8.196517	0.007861	0.036822
19	P3	-8.196517	0.007861	0.036822
22	P3	-8.196517	0.007861	0.036822
26	P3	-8.196517	0.007861	0.036822
30	P3	-8.196517	0.007861	0.036822

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)
3	P1a	-11.342682	0.147395	1.273951
7	P1a	-10.033644	0.060696	-0.052572
11	P1a	-10.575067	0.060072	-0.276665
15	P1a	-10.846755	0.131630	-0.071279
19	P1a	-15.745063	0.063844	0.003901
22	P1a	-20.878990	1.291599	0.386320
26	P1a	-15.443361	0.260800	0.228166
30	P1a	-18.331240	0.365089	-0.069246

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-6.692058	4.099353	-8.046125
7	P1	-2.437112	0.005891	0.022874

11	P1	-2.882258	0.016411	-0.109607
15	P1	-3.796754	0.033431	-0.096759
19	P1	-3.551170	0.012865	-0.010129
22	P1	-5.024375	0.022812	-0.000960
26	P1	-5.992883	0.023053	0.029577
30	P1	-5.288528	0.023091	0.011501

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.356607	0.831923	-3.499053
7	P2	-22.004616	0.051432	0.138769
11	P2	-10.677377	0.031260	0.085744
15	P2	-4.829324	0.026982	0.063903
19	P2	-6.827314	0.028313	0.071822
22	P2	-8.135389	0.029895	0.075128
26	P2	-24.250084	0.032122	0.031239
30	P2	-21.783485	0.034818	0.084882

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.046968	0.003116	0.047435
7	P3	-8.046972	0.003131	0.046840
11	P3	-8.046979	0.003120	0.047235
15	P3	-8.046931	0.003125	0.047594
19	P3	-8.046963	0.003107	0.047173
22	P3	-8.047006	0.003118	0.047331
26	P3	-8.046885	0.003111	0.047387
30	P3	-8.046900	0.003126	0.047464

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	0.000631158
	stdev	2.48679e-07
MEAN Q	mean	0.000367738
	stdev	2.53420e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0979012
	stdev	0.00255326
STDEV Q	mean	0.0978555
	stdev	0.00260295



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007021[678]

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_1PNPDE20070216_012024_000000352055_00346_25951_9272.N1	1	0
ASA_IMM_1PNPDE20070216_153339_000000502055_00355_25960_9911.N1	0	19



ASA_IMM_1PNPDE20070217_182645_000000352055_00371_25976_1526.N1	0	16
ASA_IMM_1PNPDE20070217_233319_000000502055_00374_25979_1791.N1	15	1310
ASA_IMM_1PNPDE20070218_003602_000000622055_00374_25979_1850.N1	2	14
ASA_IMM_1PNPDE20070218_003903_000000962055_00374_25979_1947.N1	0	80
ASA_IMM_1PNPDE20070218_004118_000001582055_00374_25979_1945.N1	0	62
ASA_GM1_1PNPDK20070216_072909_000004652055_00350_25955_7551.N1	0	14
ASA_GM1_1PNPDK20070216_134100_000003682055_00353_25958_8012.N1	0	28
ASA_GM1_1PNPDK20070216_141331_000001322055_00354_25959_8019.N1	0	8
ASA_WSM_1PNPDK20070216_191117_000001472055_00357_25962_8514.N1	0	2





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"/>

Acsending

<input type="checkbox"/>

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

<input type="checkbox"/>

Acsending

<input type="checkbox"/>

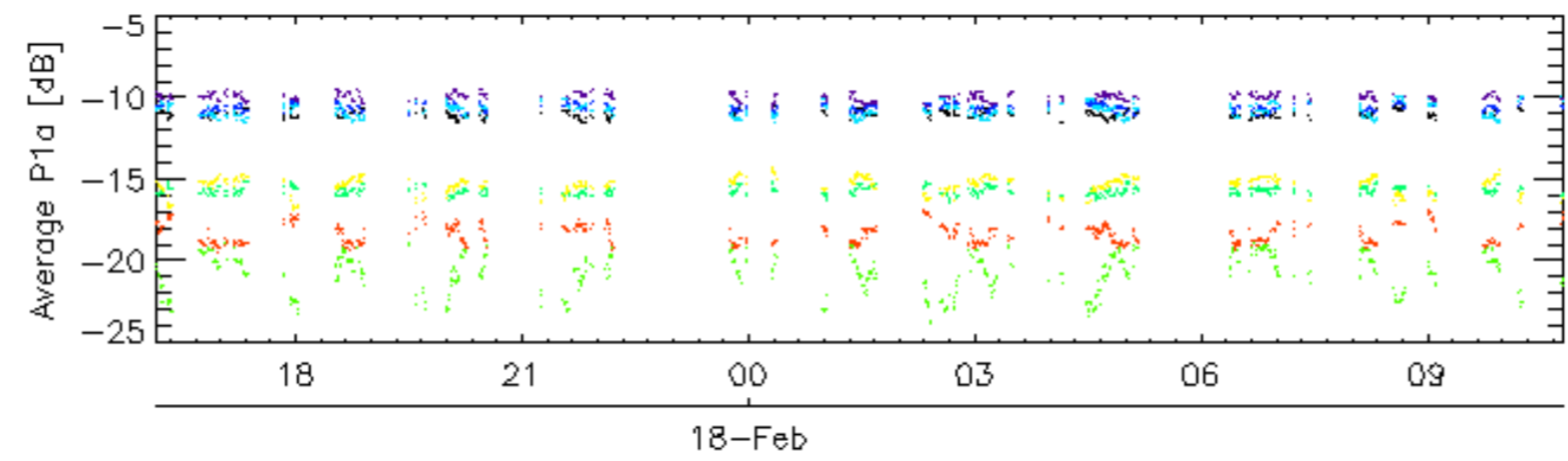
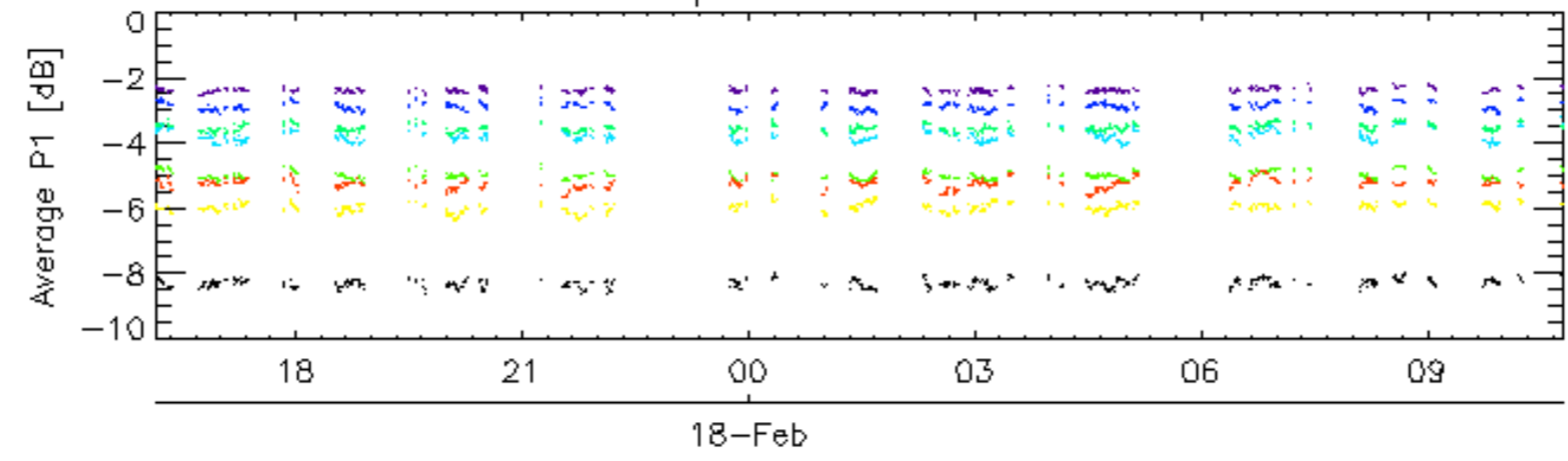
Descending

7.6 - Doppler evolution versus ANX for GM1

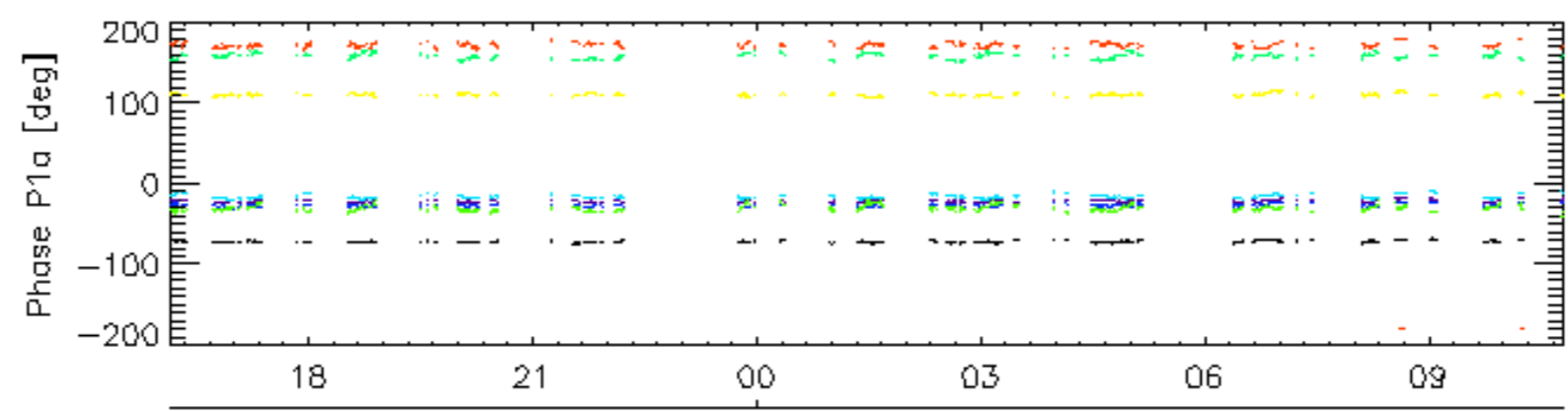
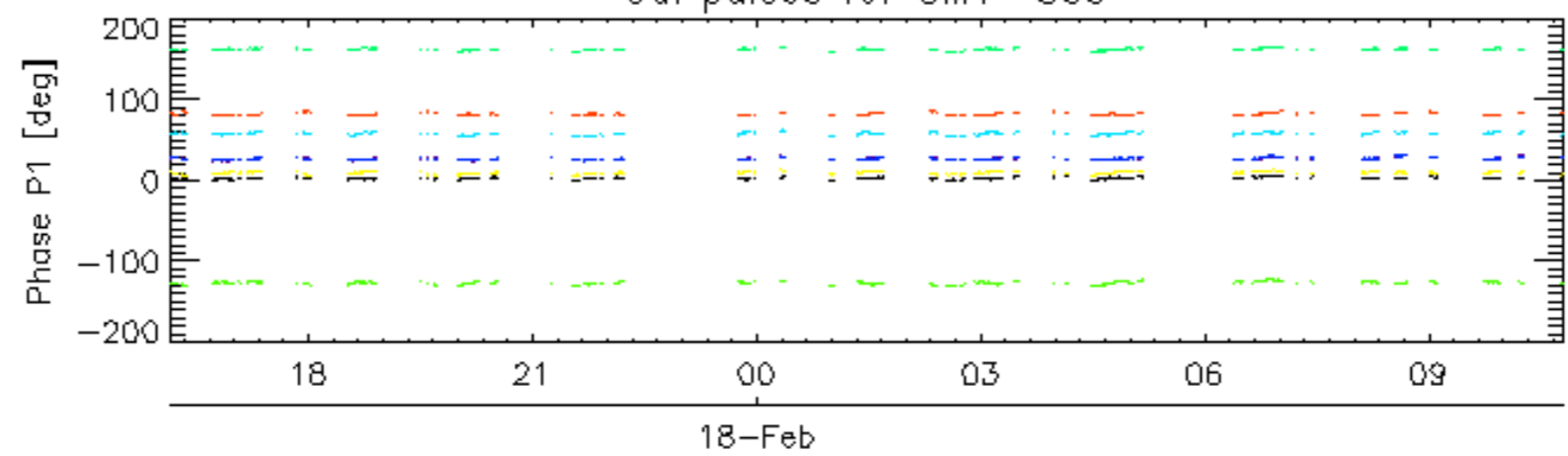
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

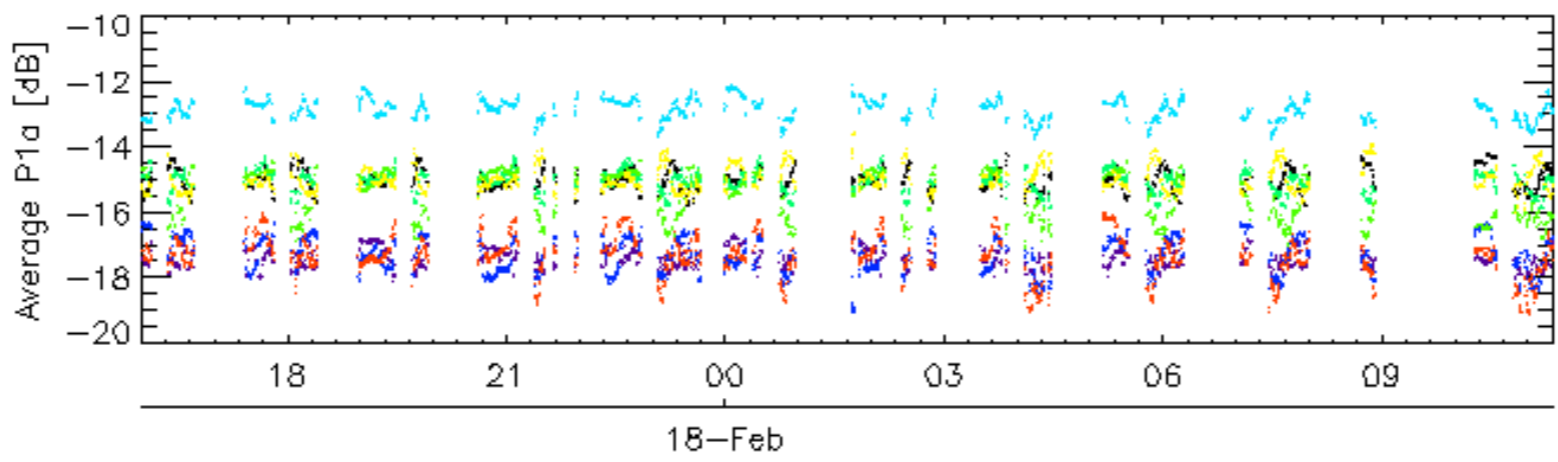
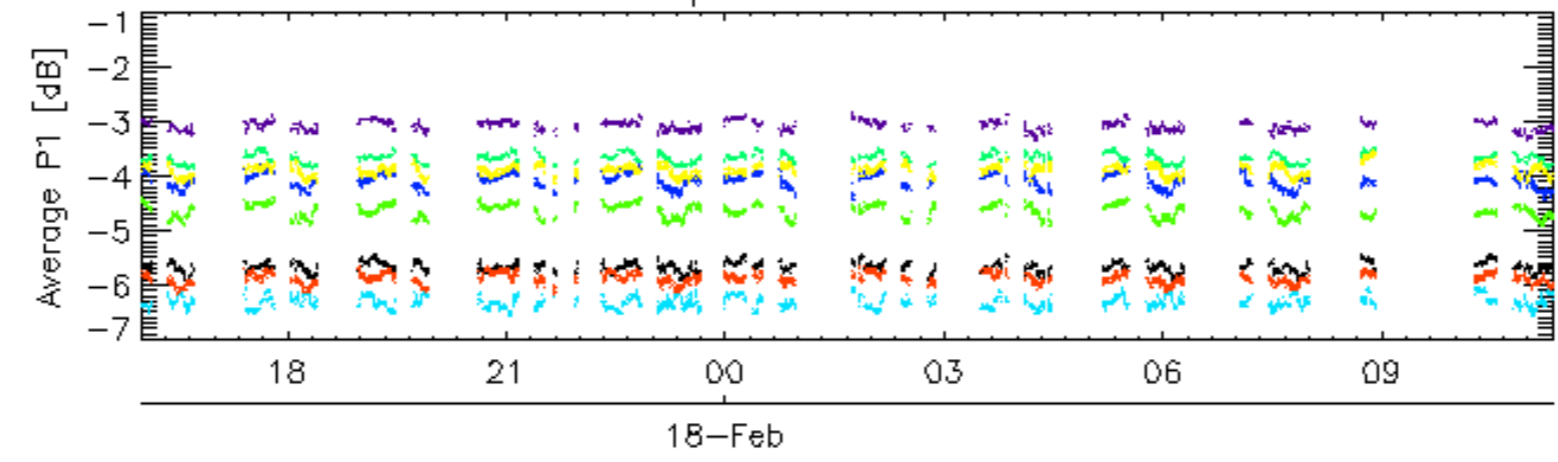


Cal pulses for GM1 SS3

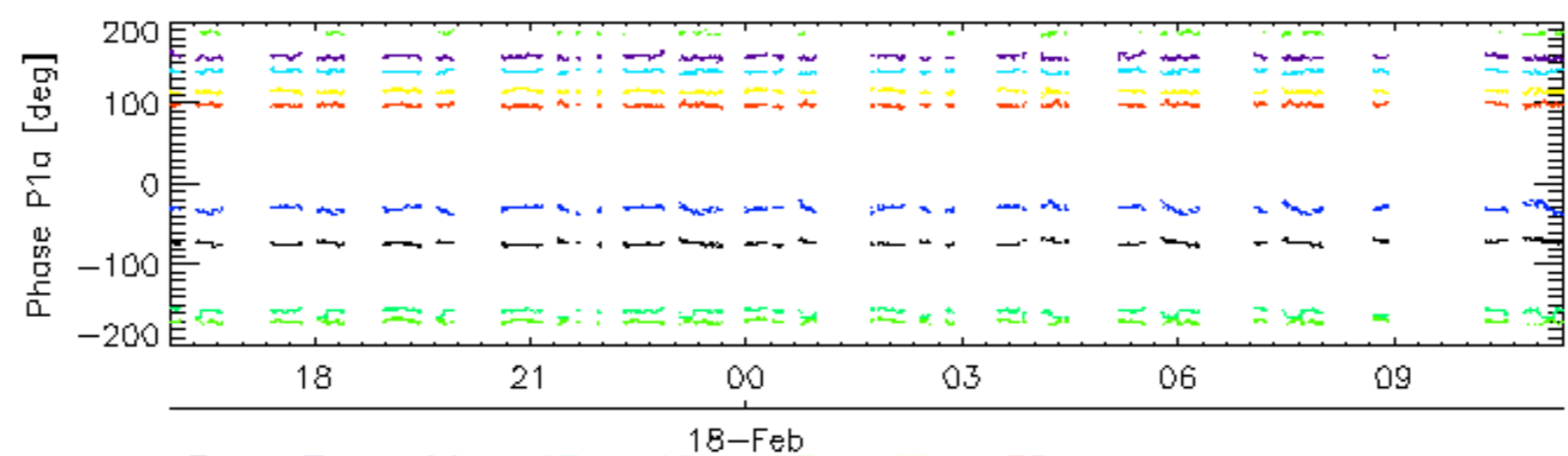
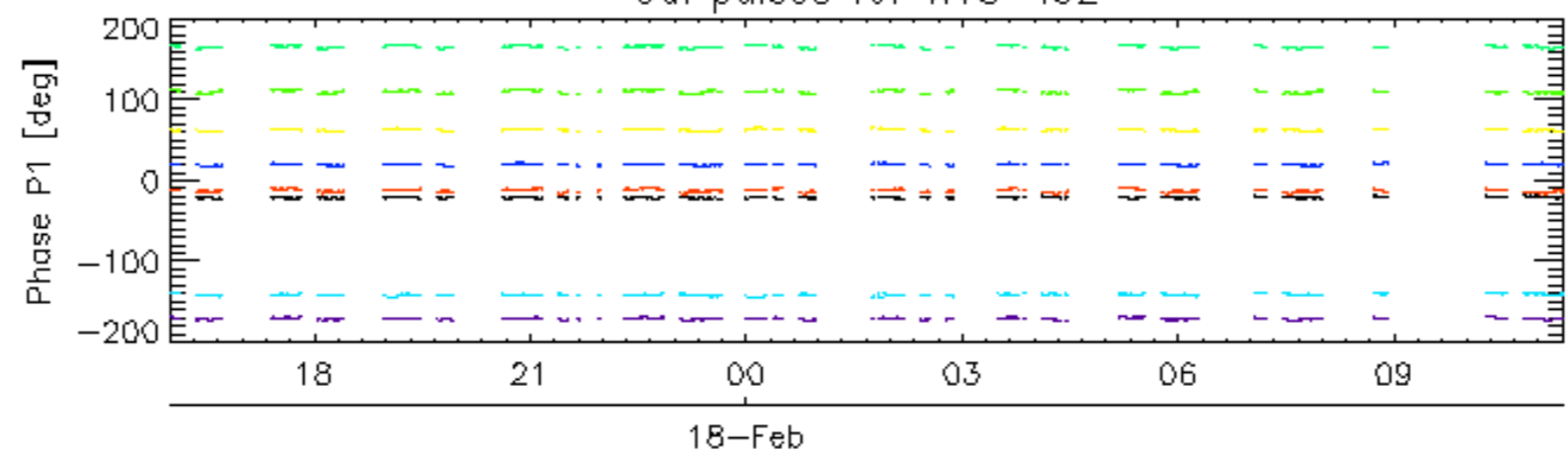


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

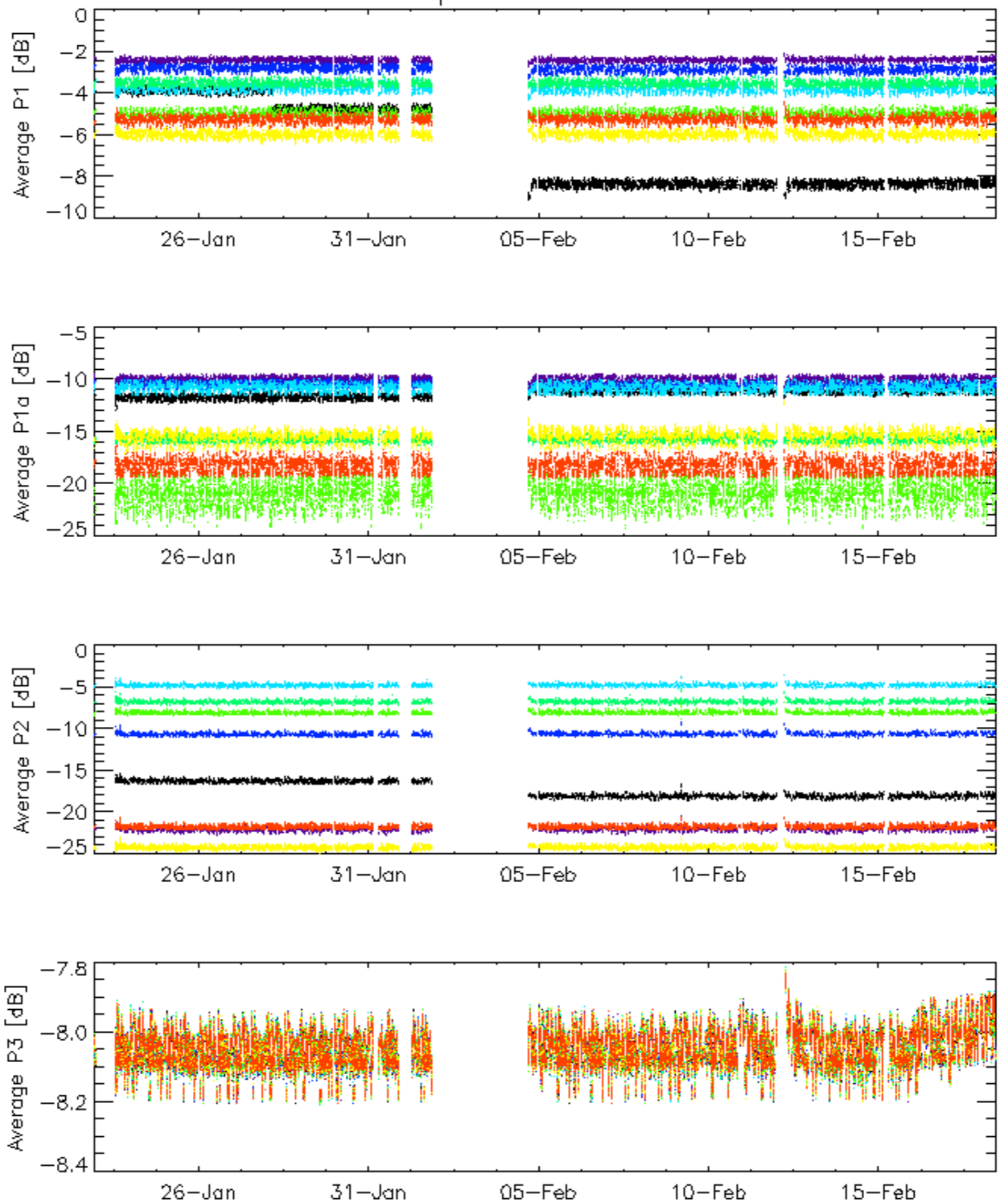


Cal pulses for WVS IS2



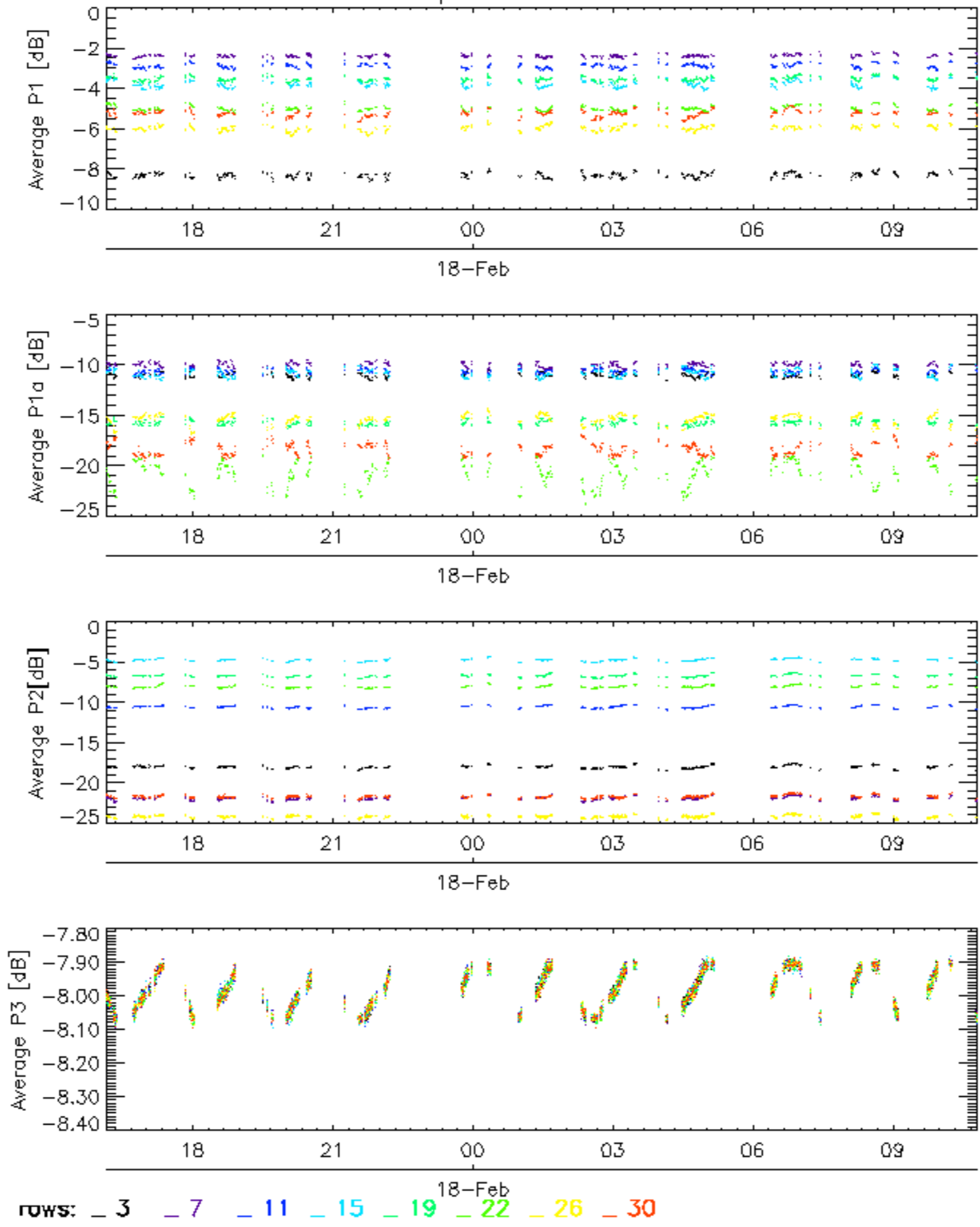
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

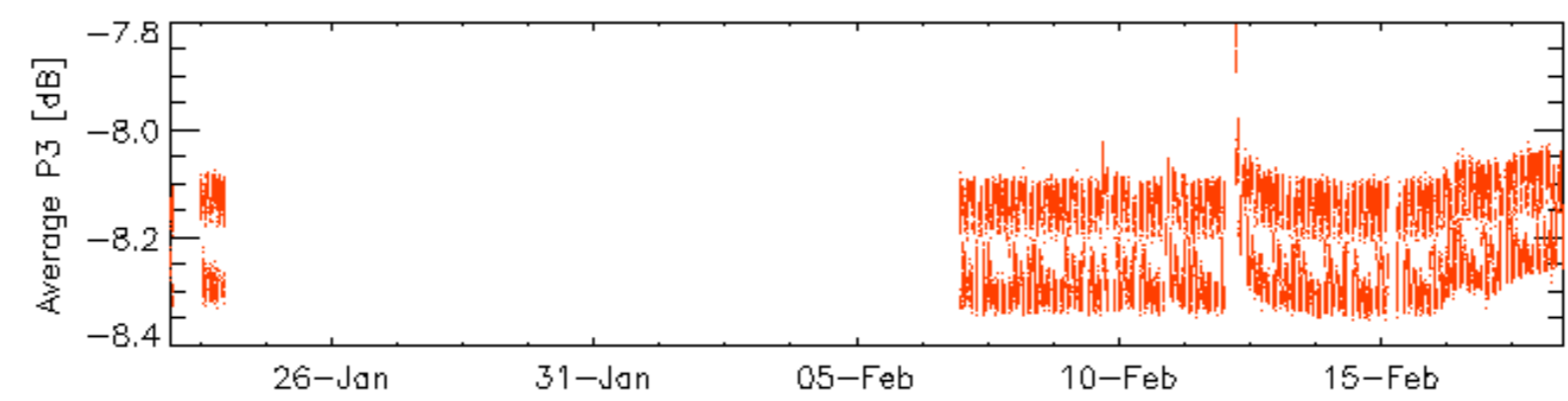
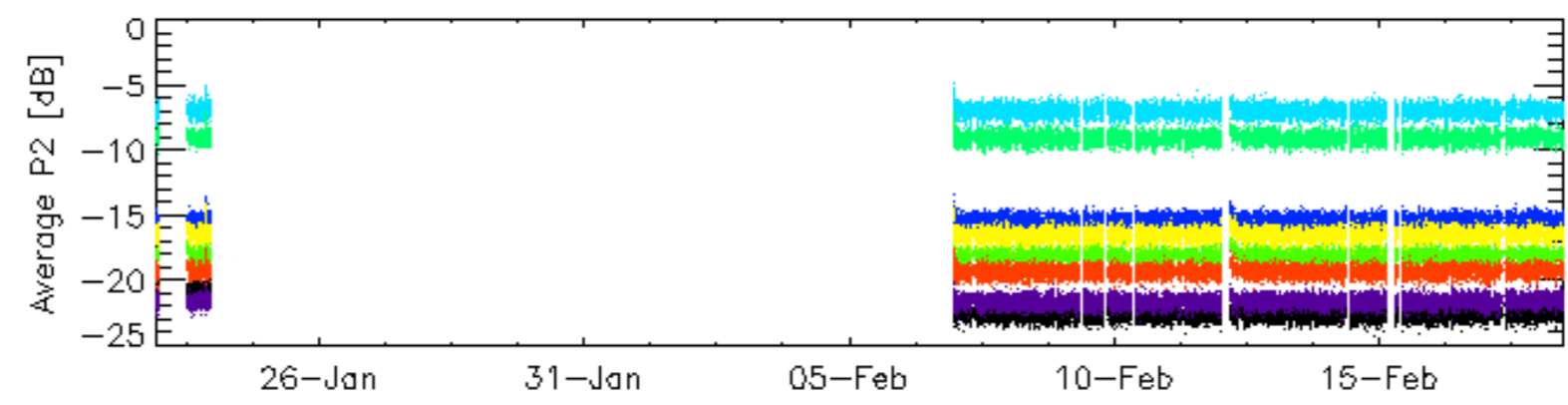
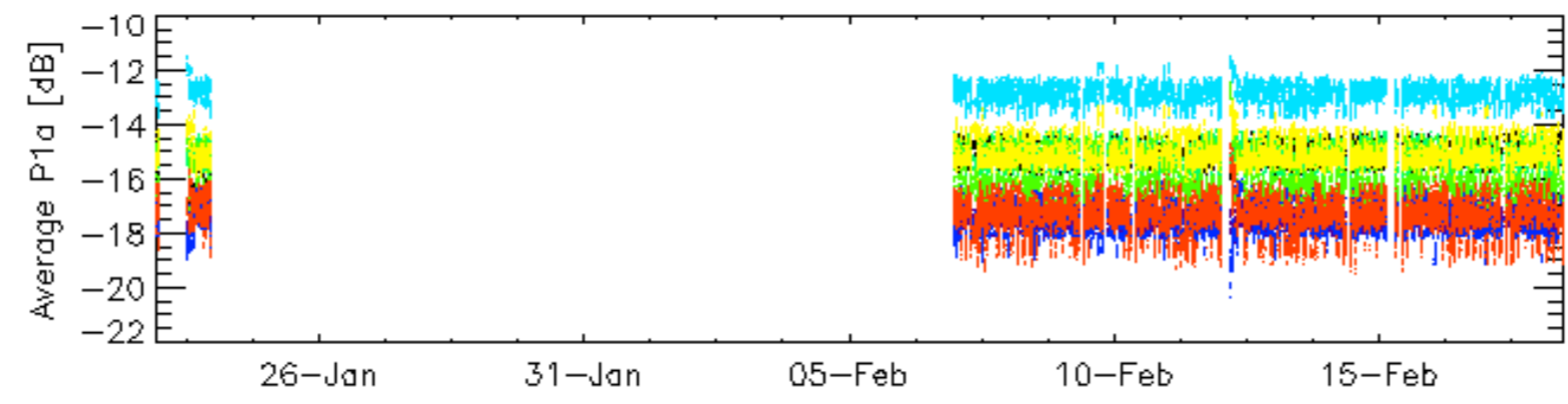
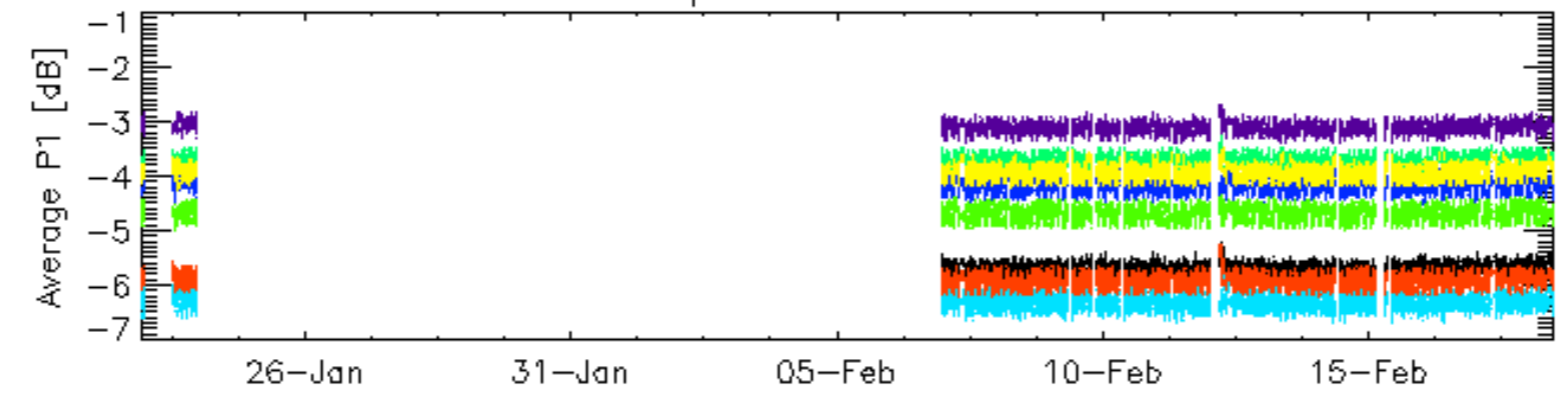


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

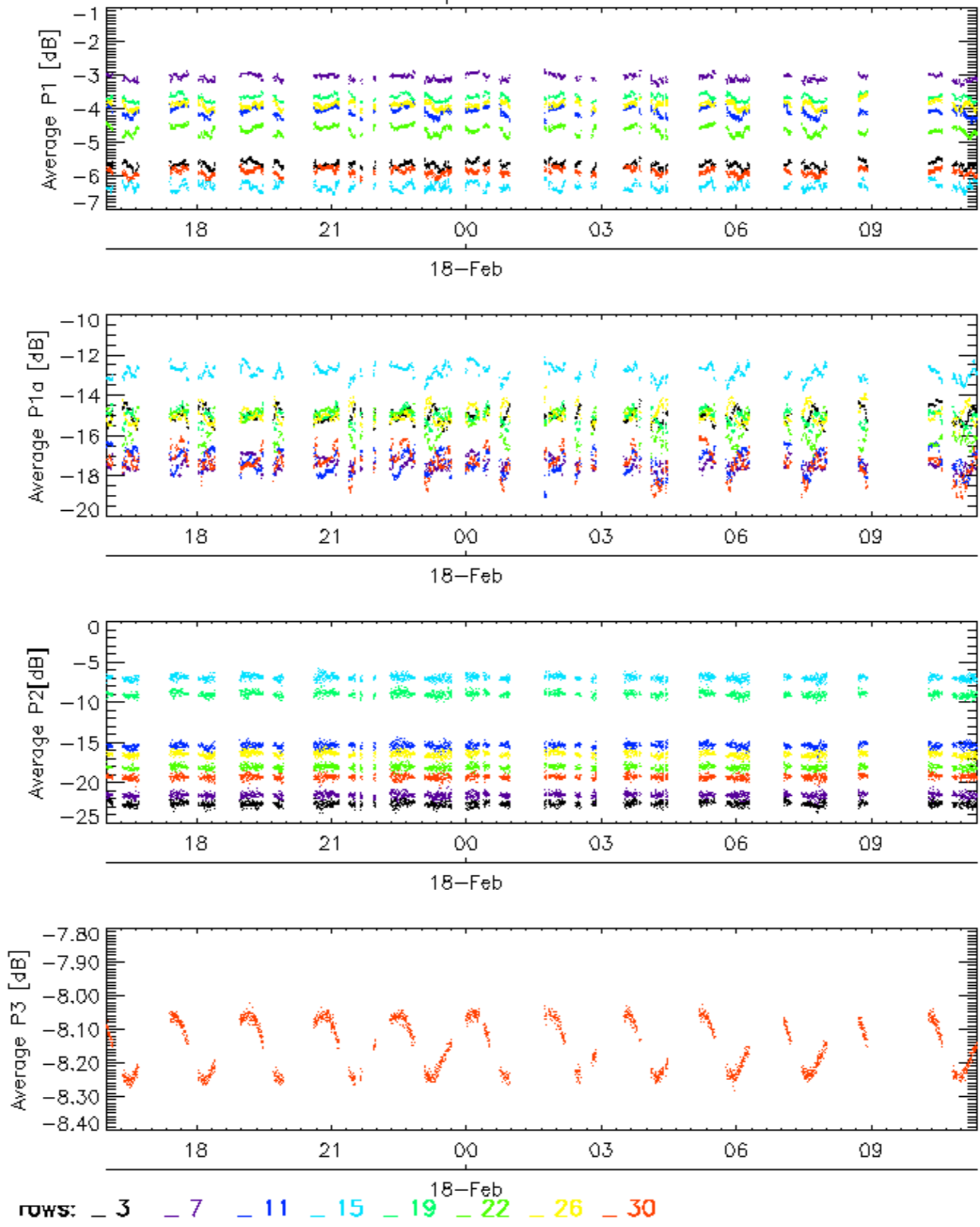


Cal pulses for WVS IS2

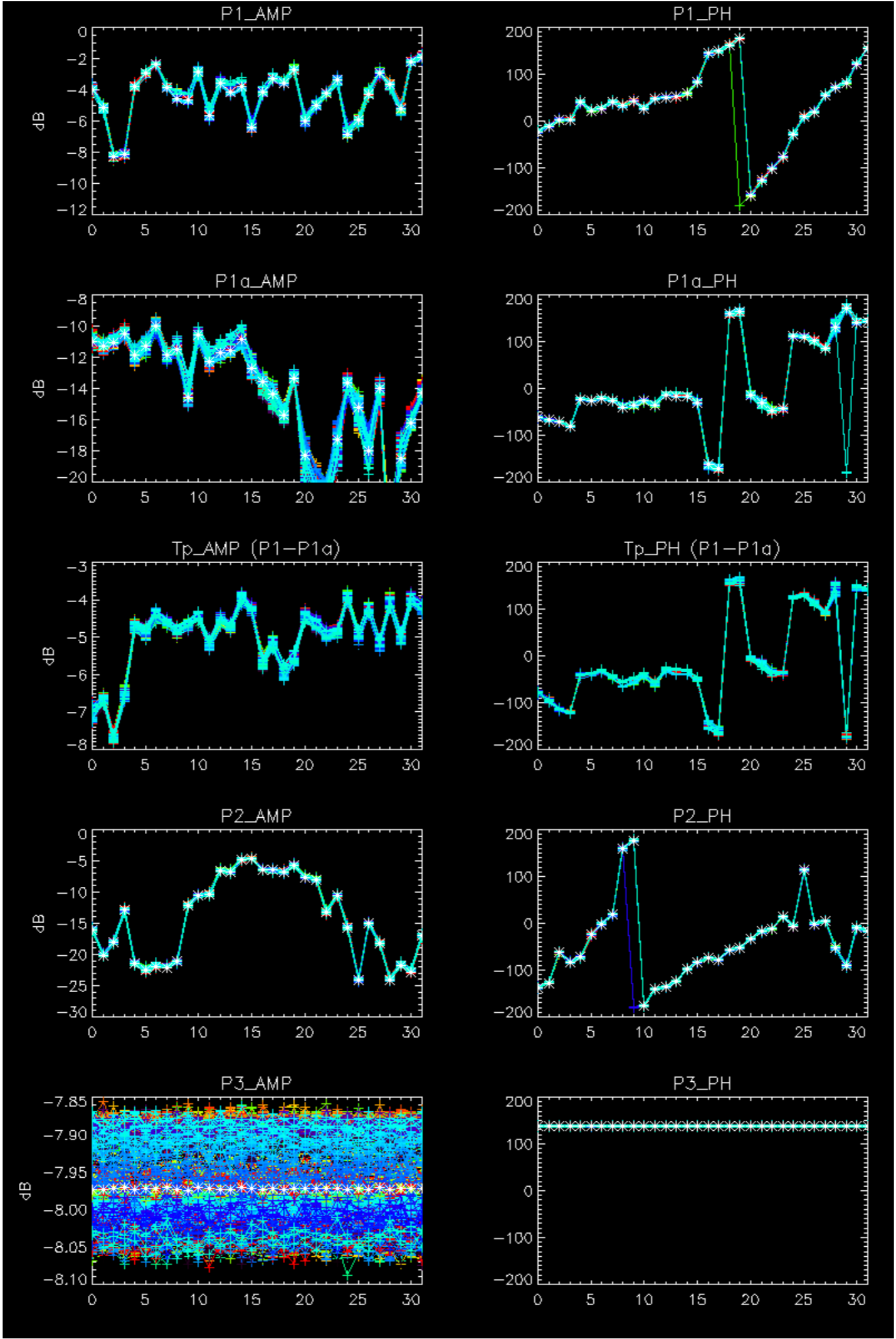


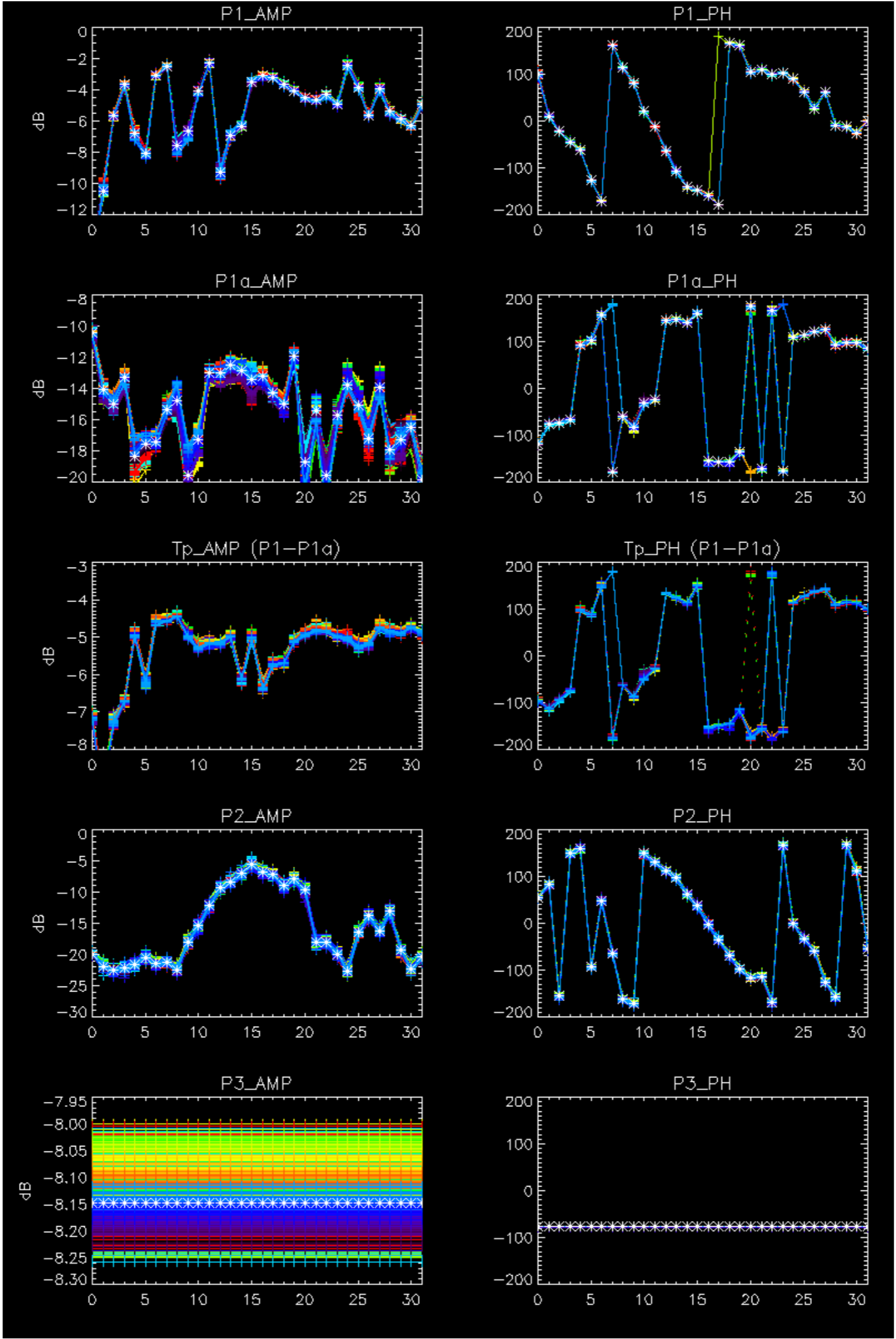
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



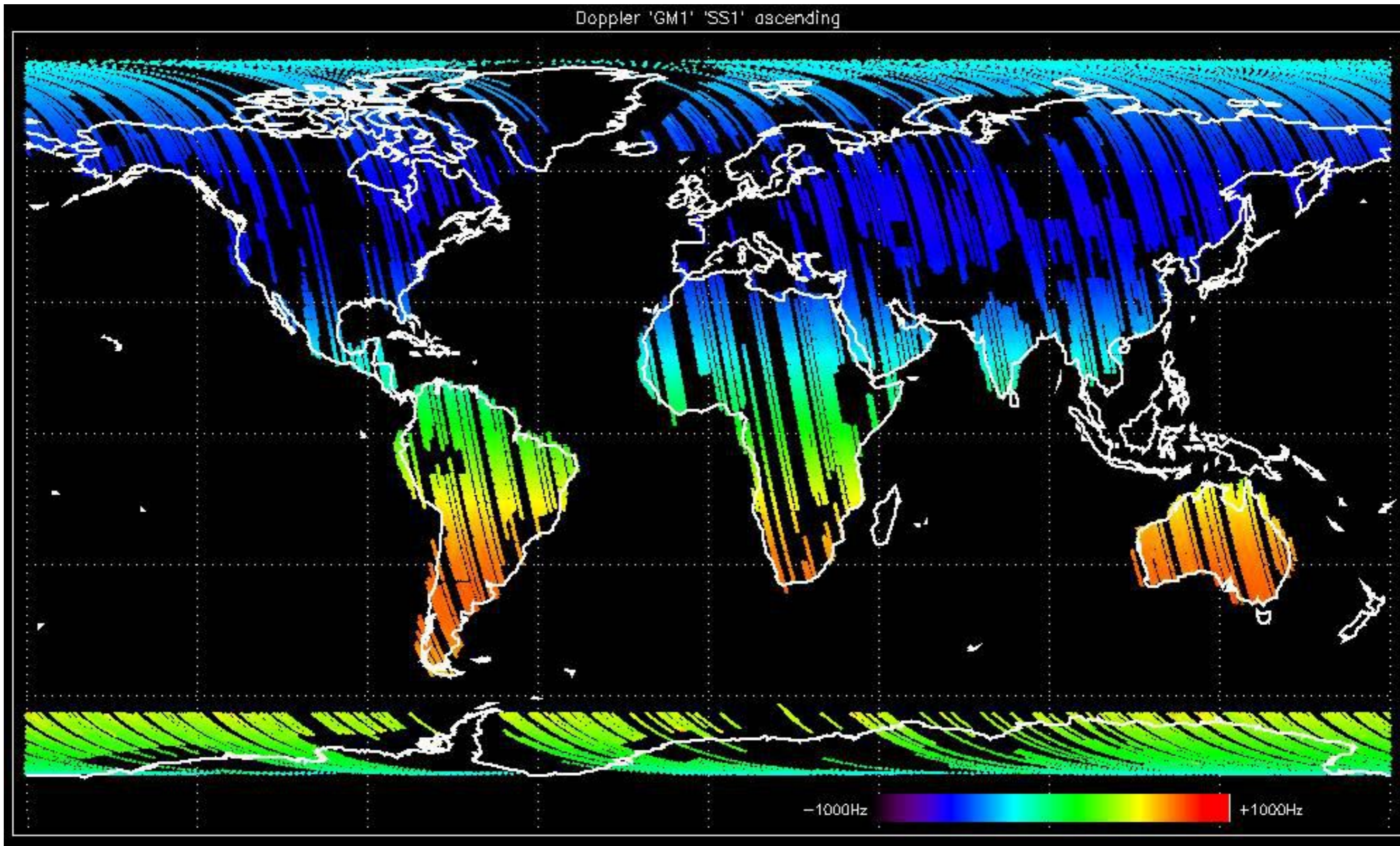
No anomalies observed.



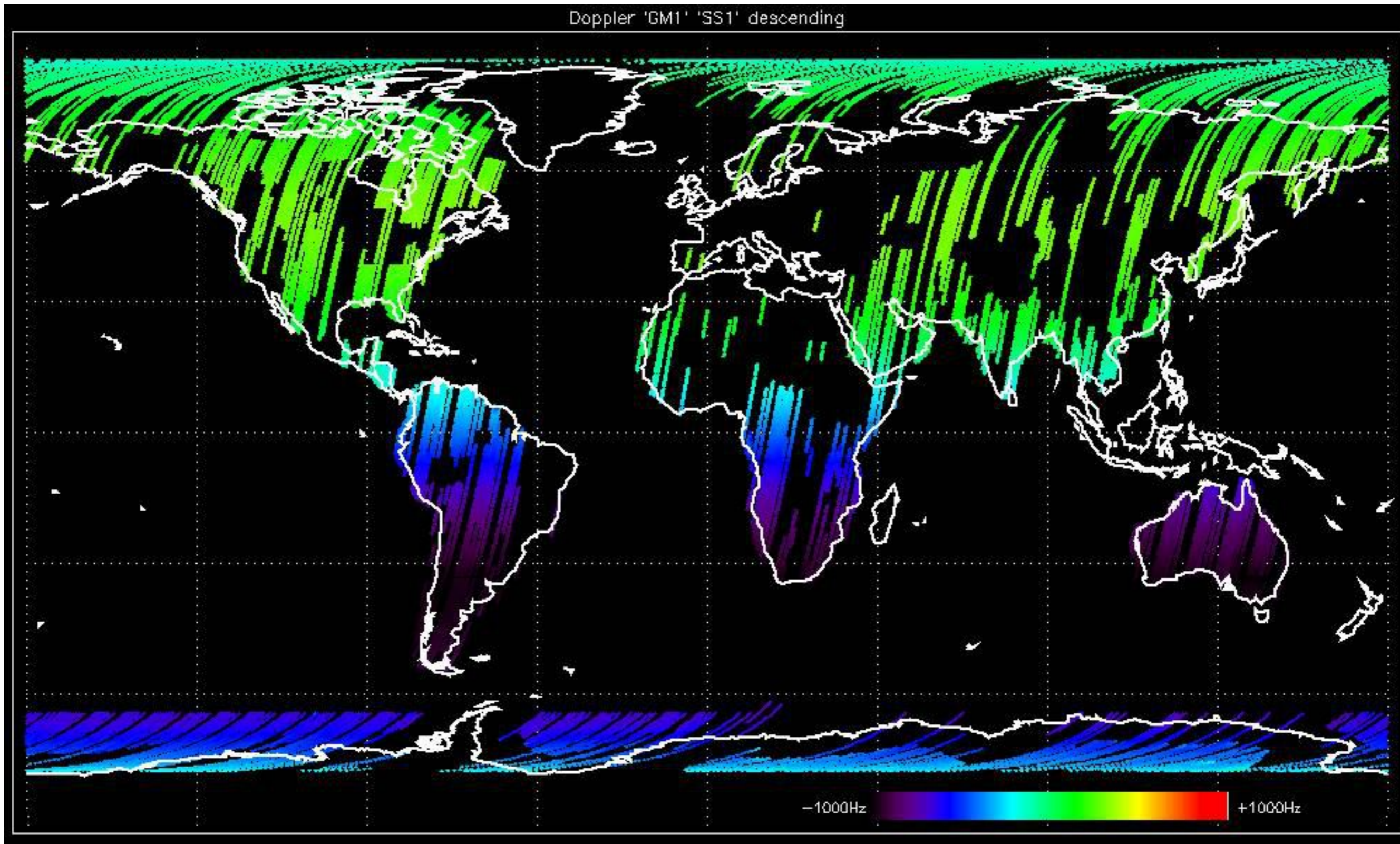


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

Doppler 'GM1' 'SS1' ascending

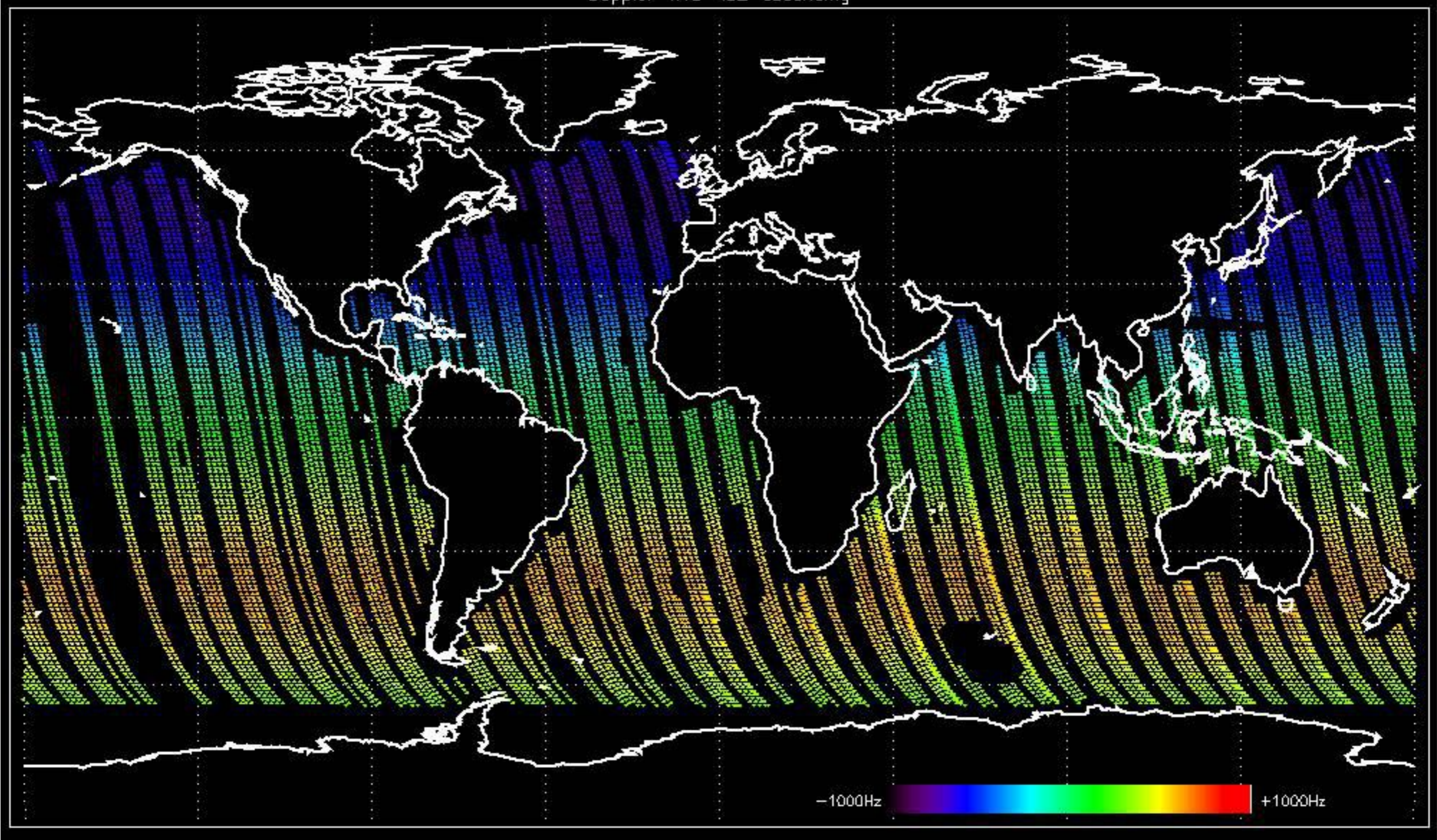


Doppler 'GM1' 'SS1' descending

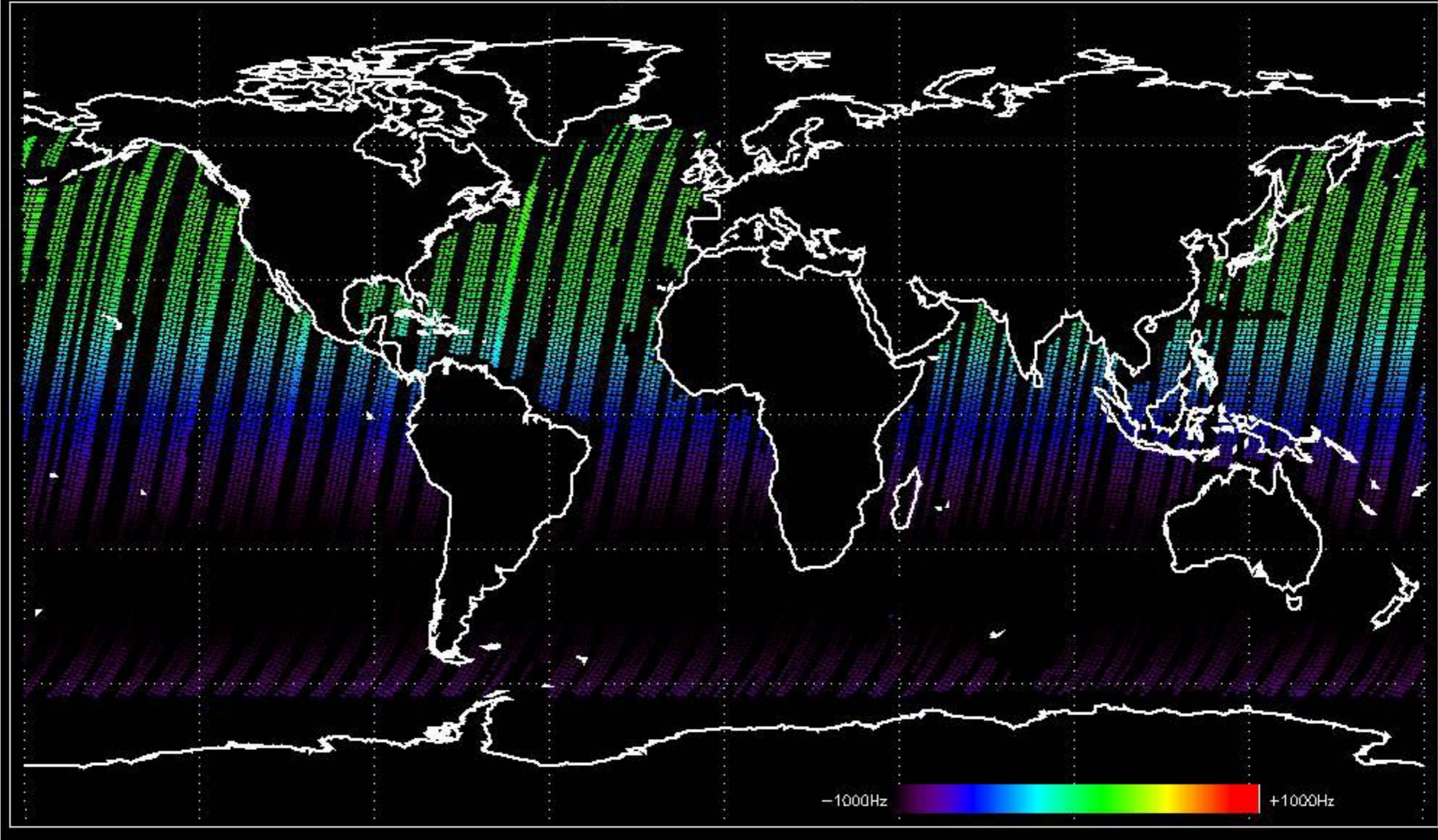


-1000Hz +1000Hz

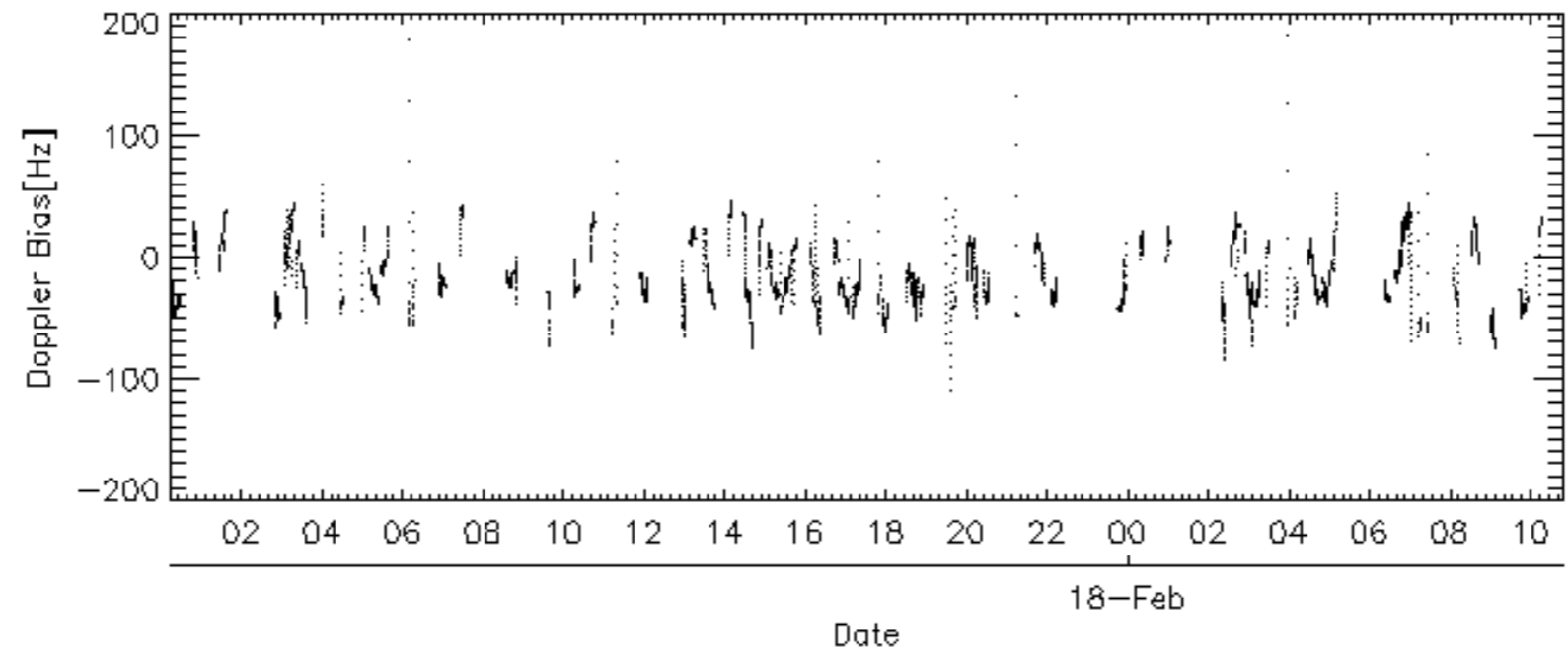
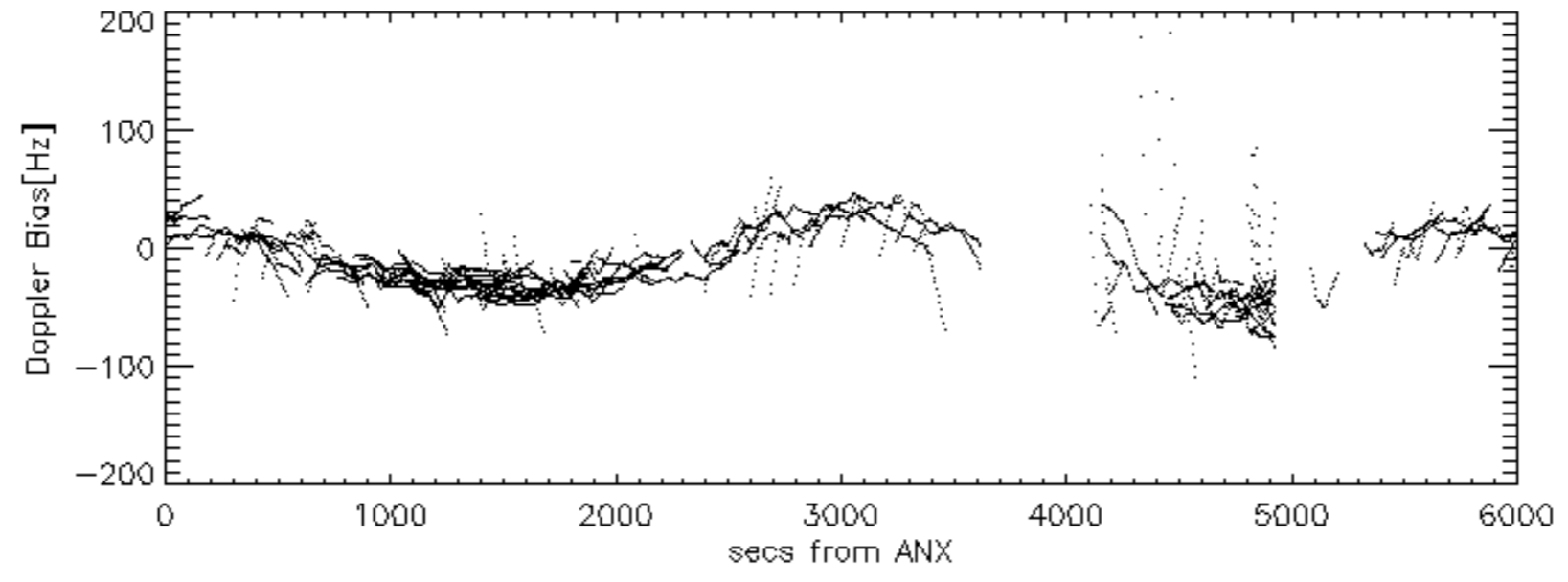
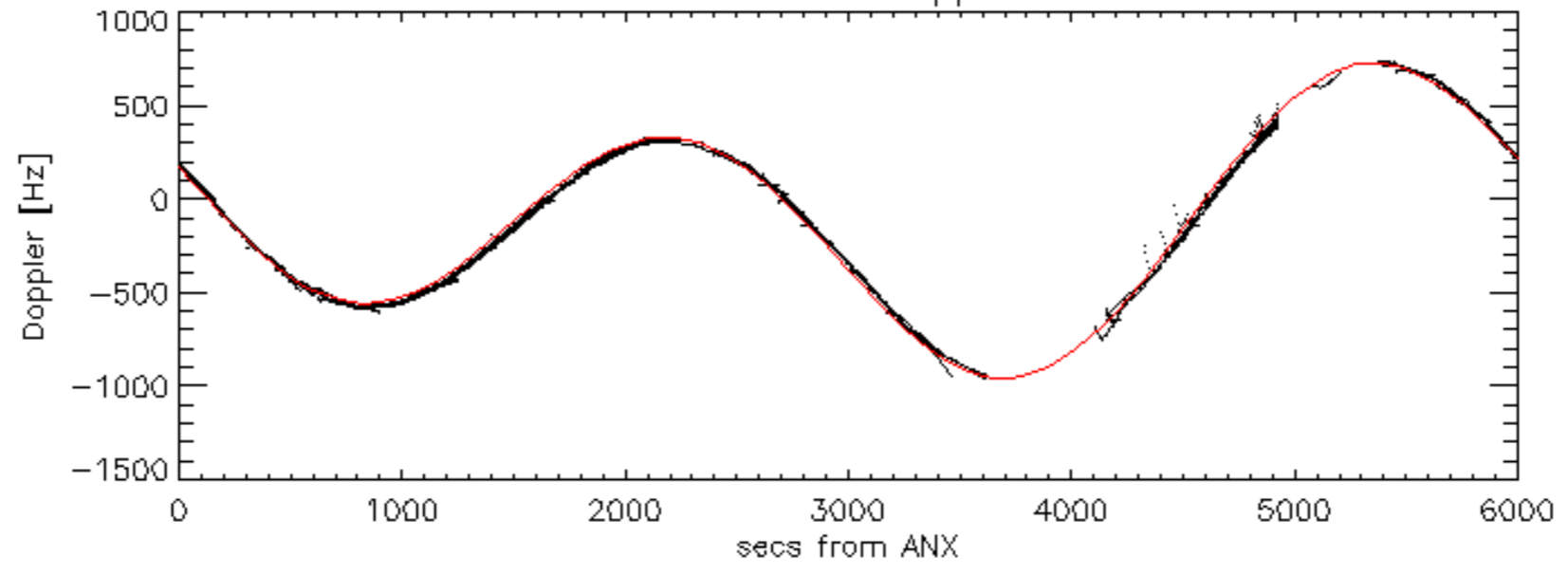
Doppler 'WVS' 'IS2' ascending

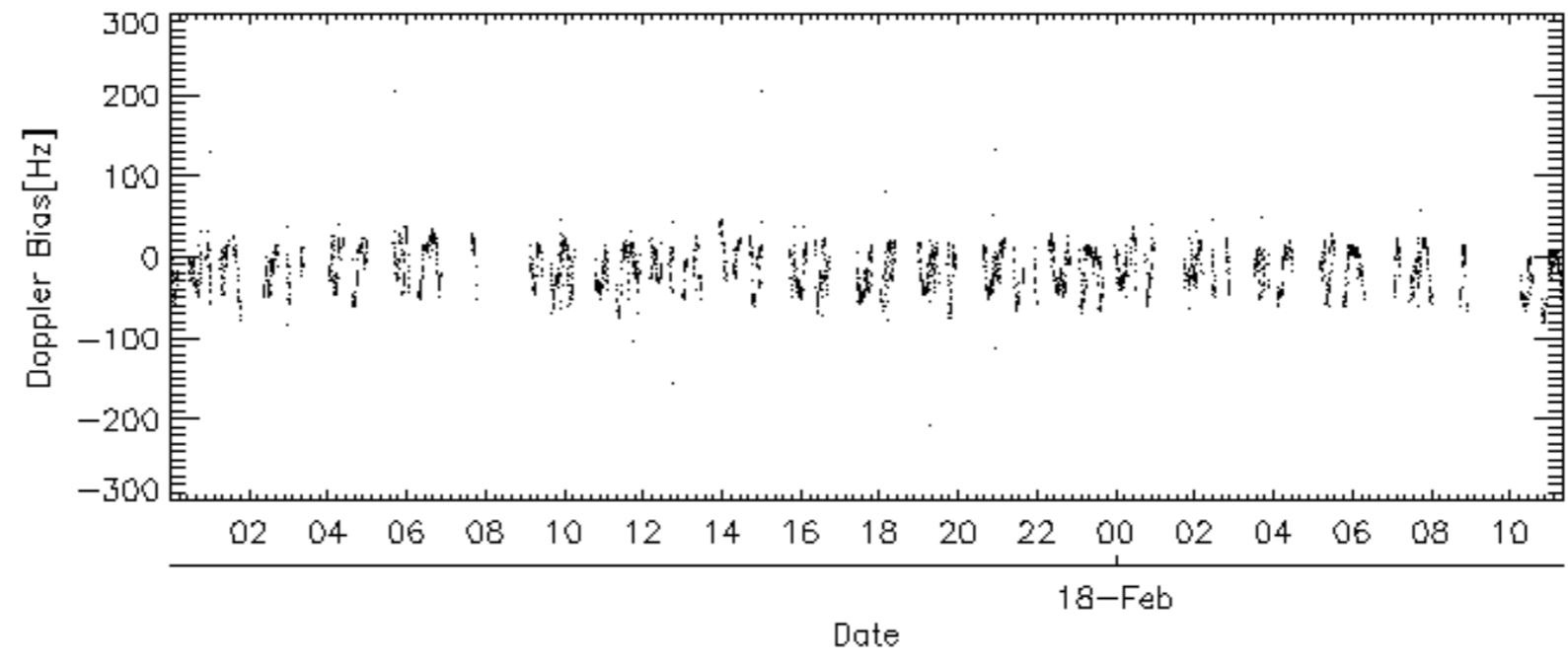
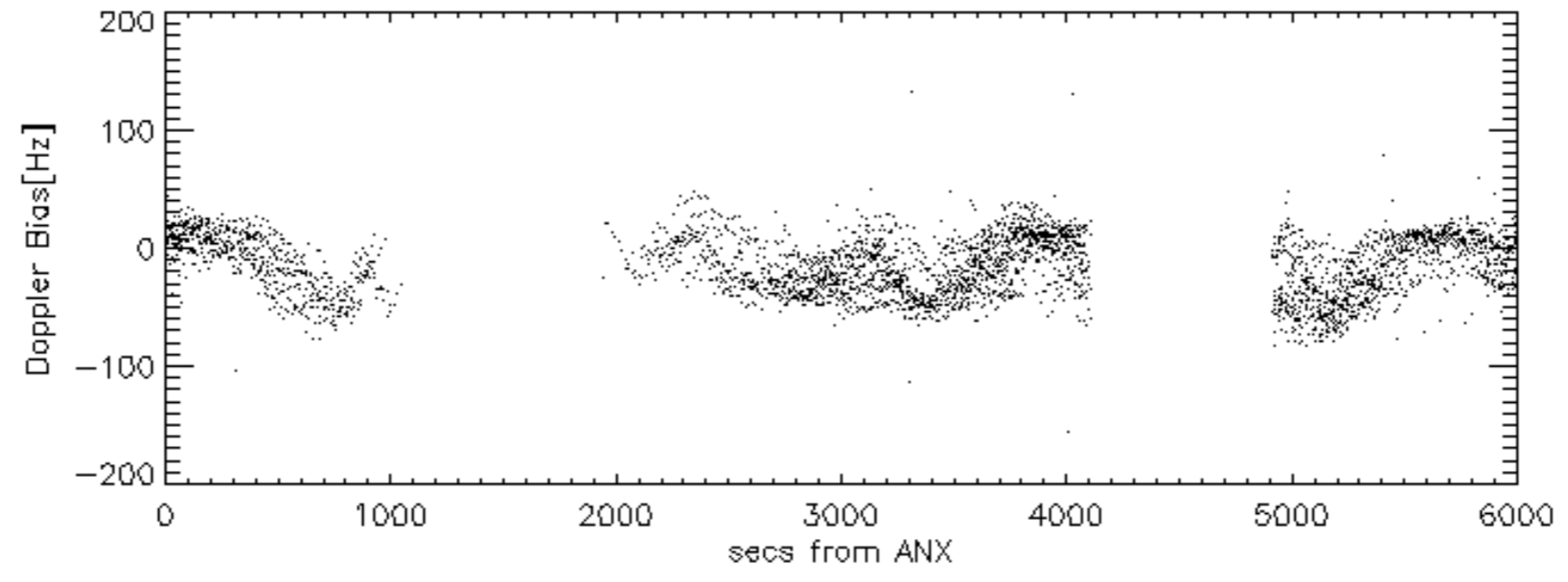
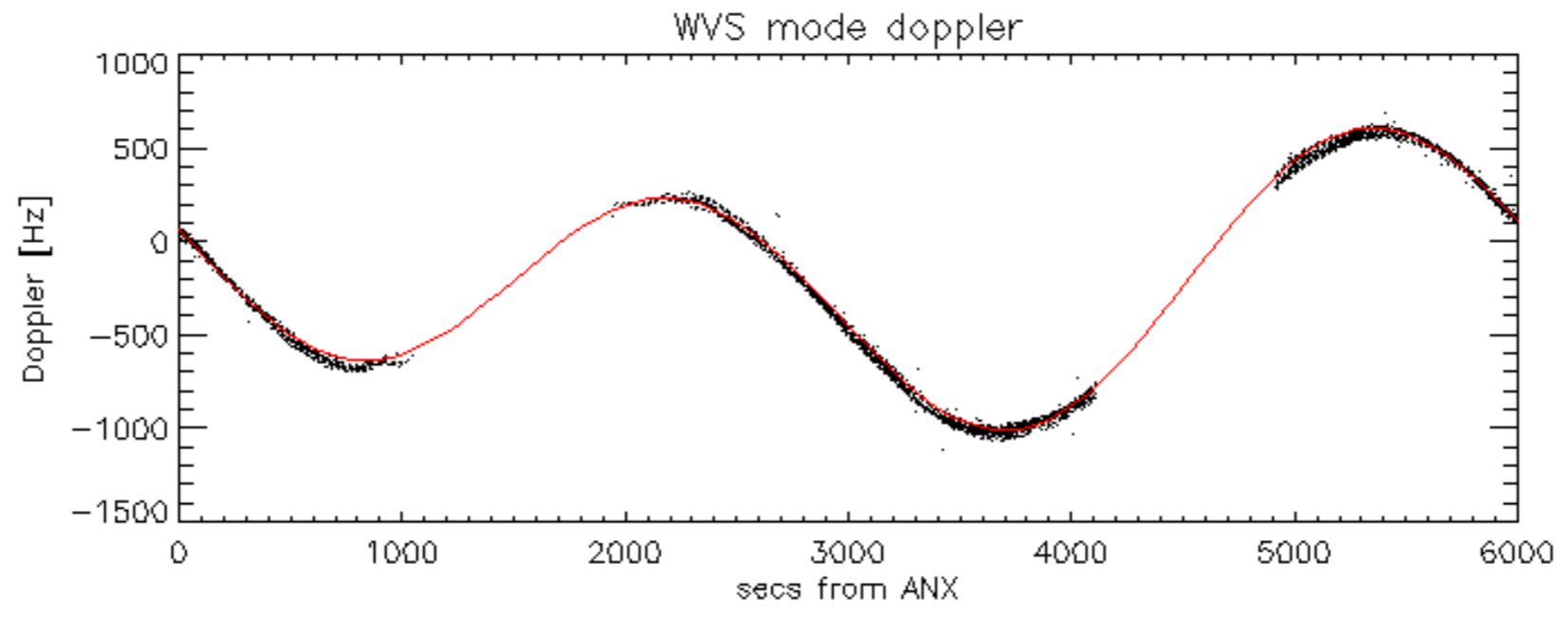


Doppler 'WVS' 'IS2' descending

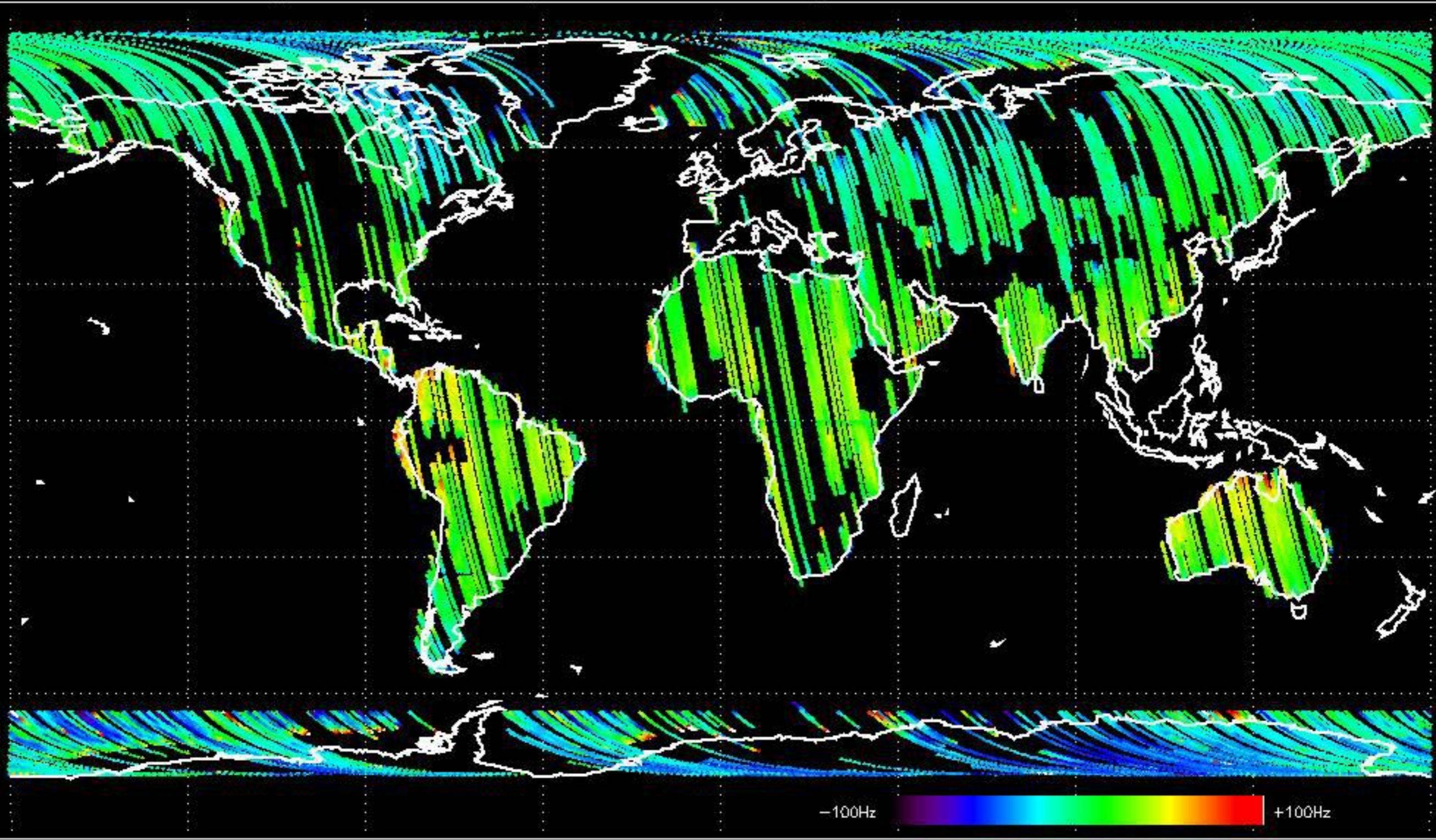


GM1 mode doppler

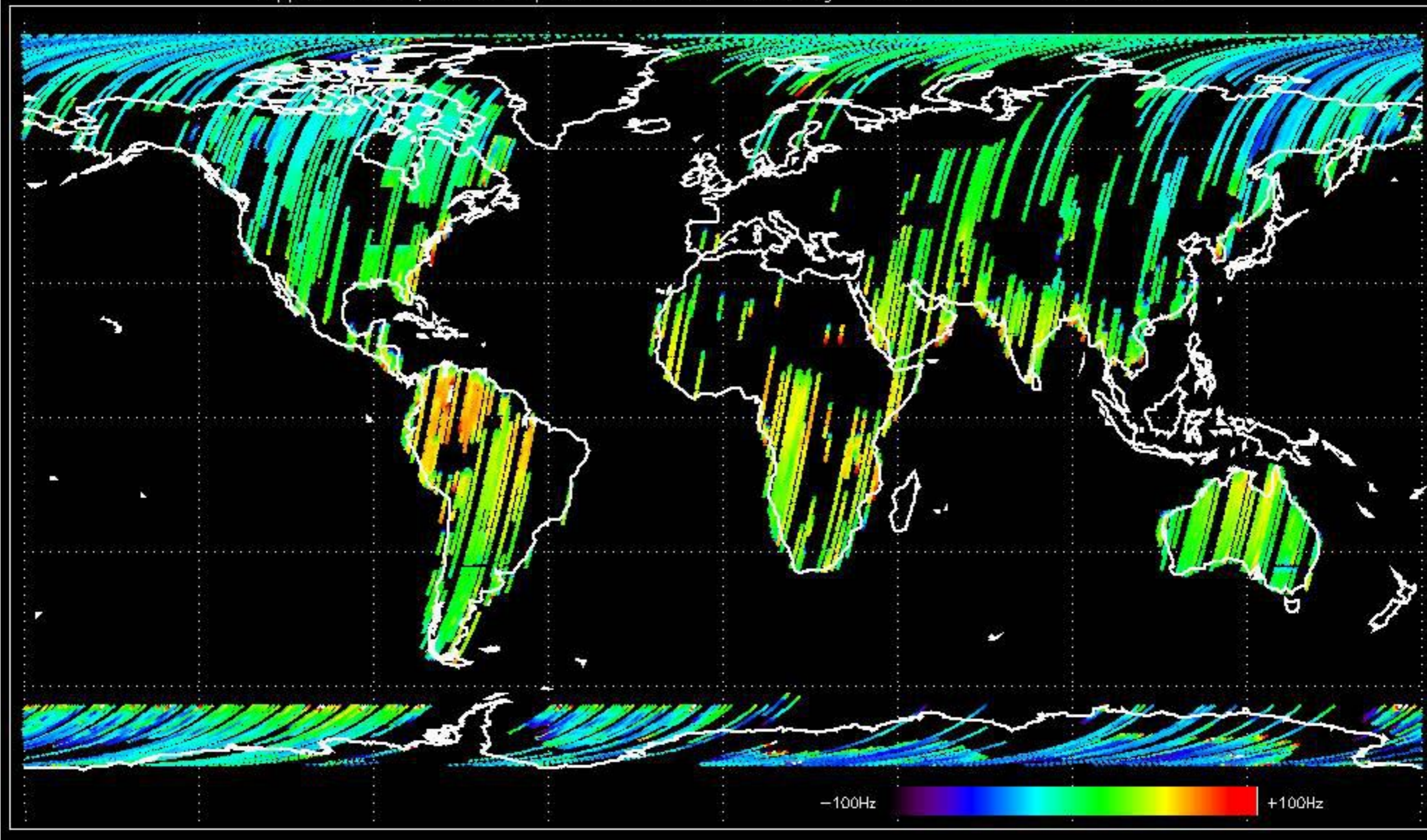




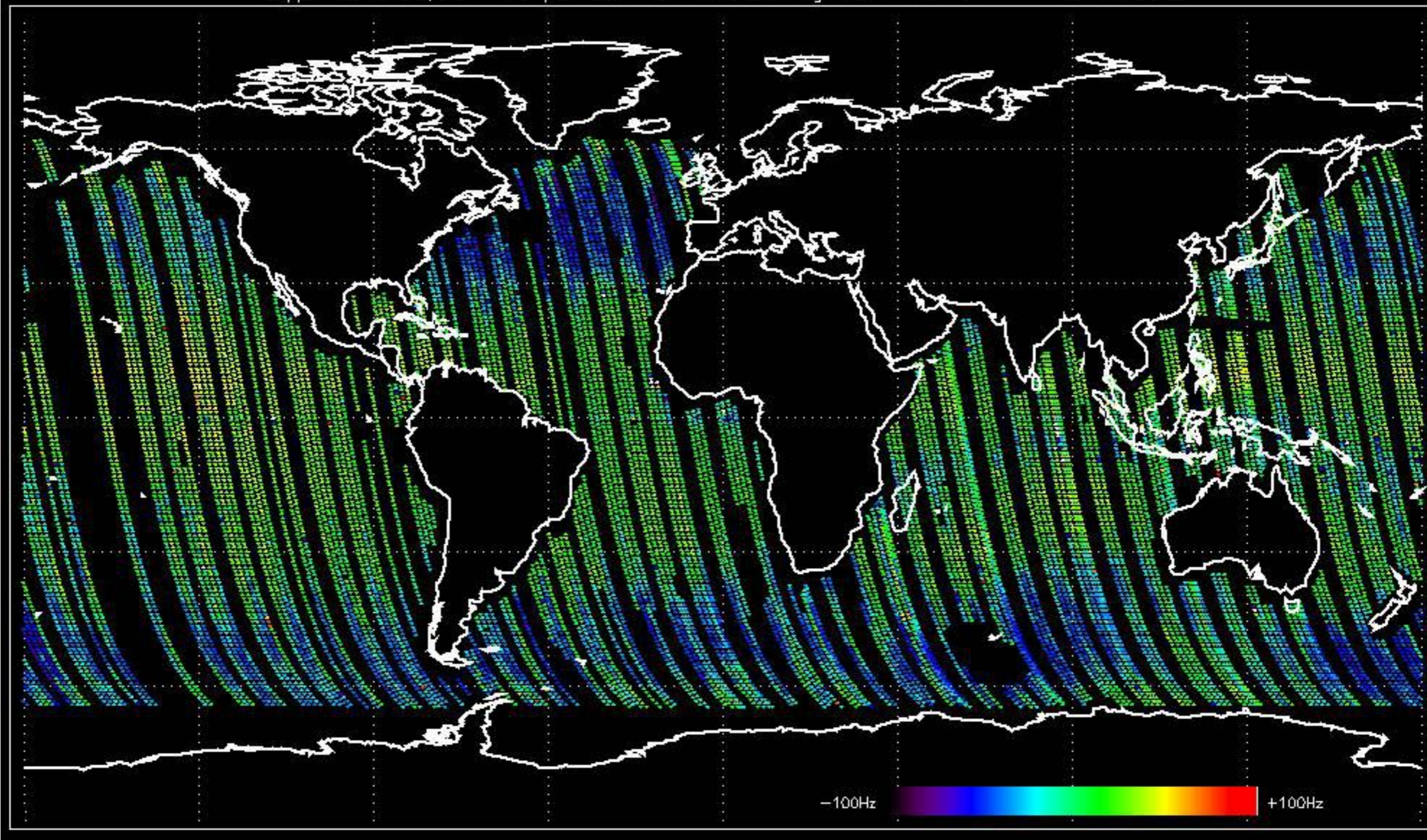
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.646663 Hz



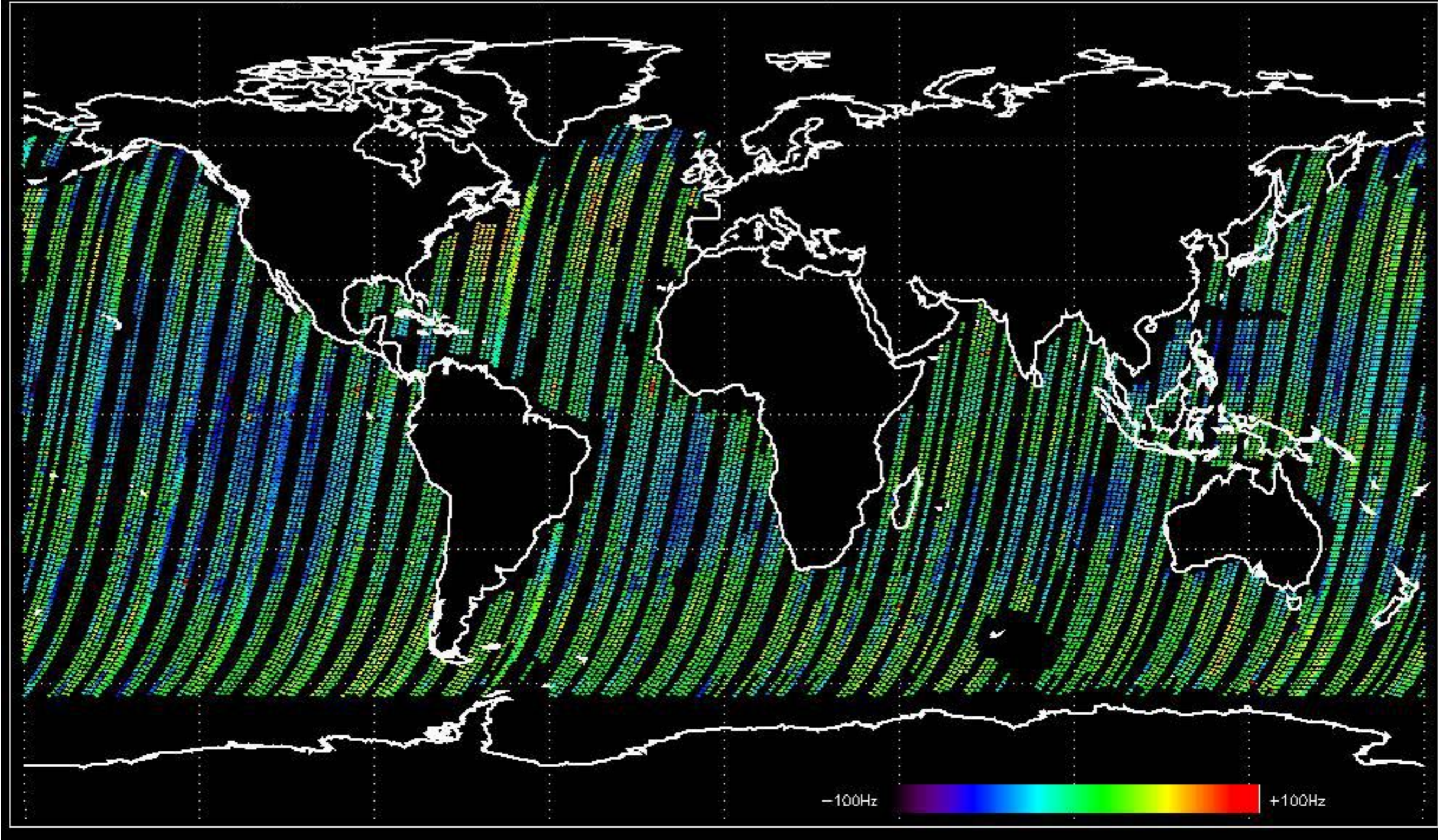
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.112588 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.645114 Hz

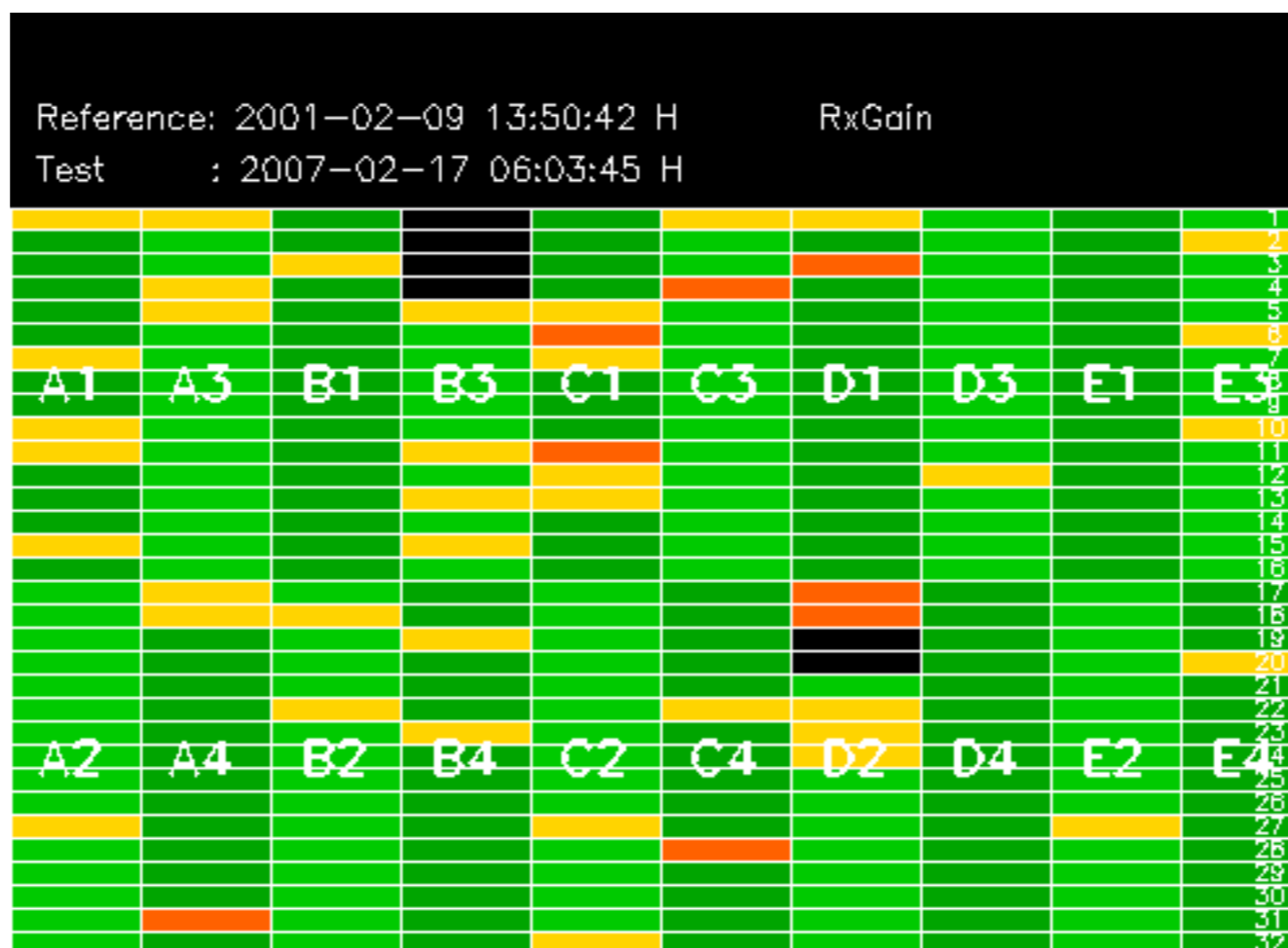


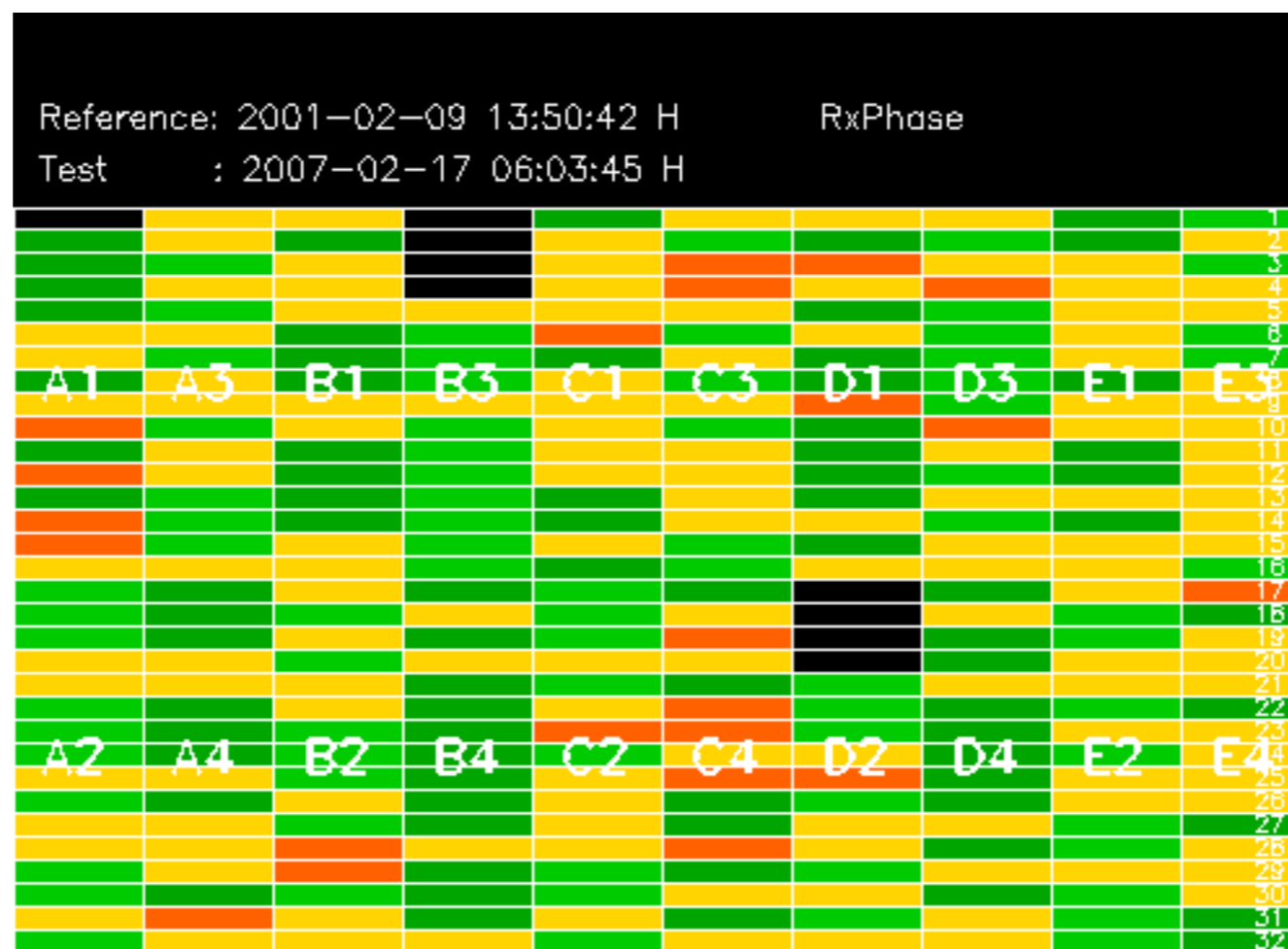
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.591092 Hz

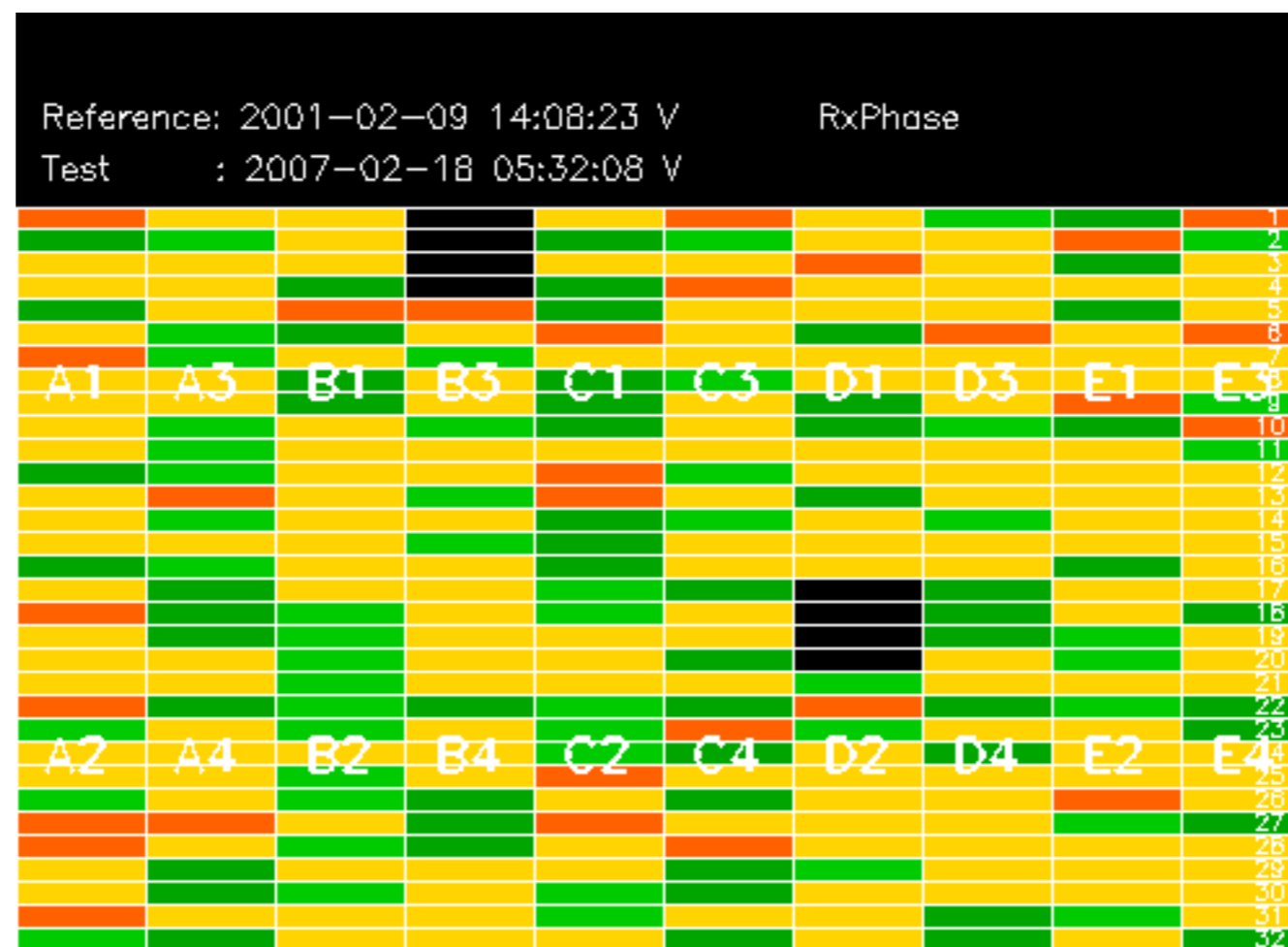


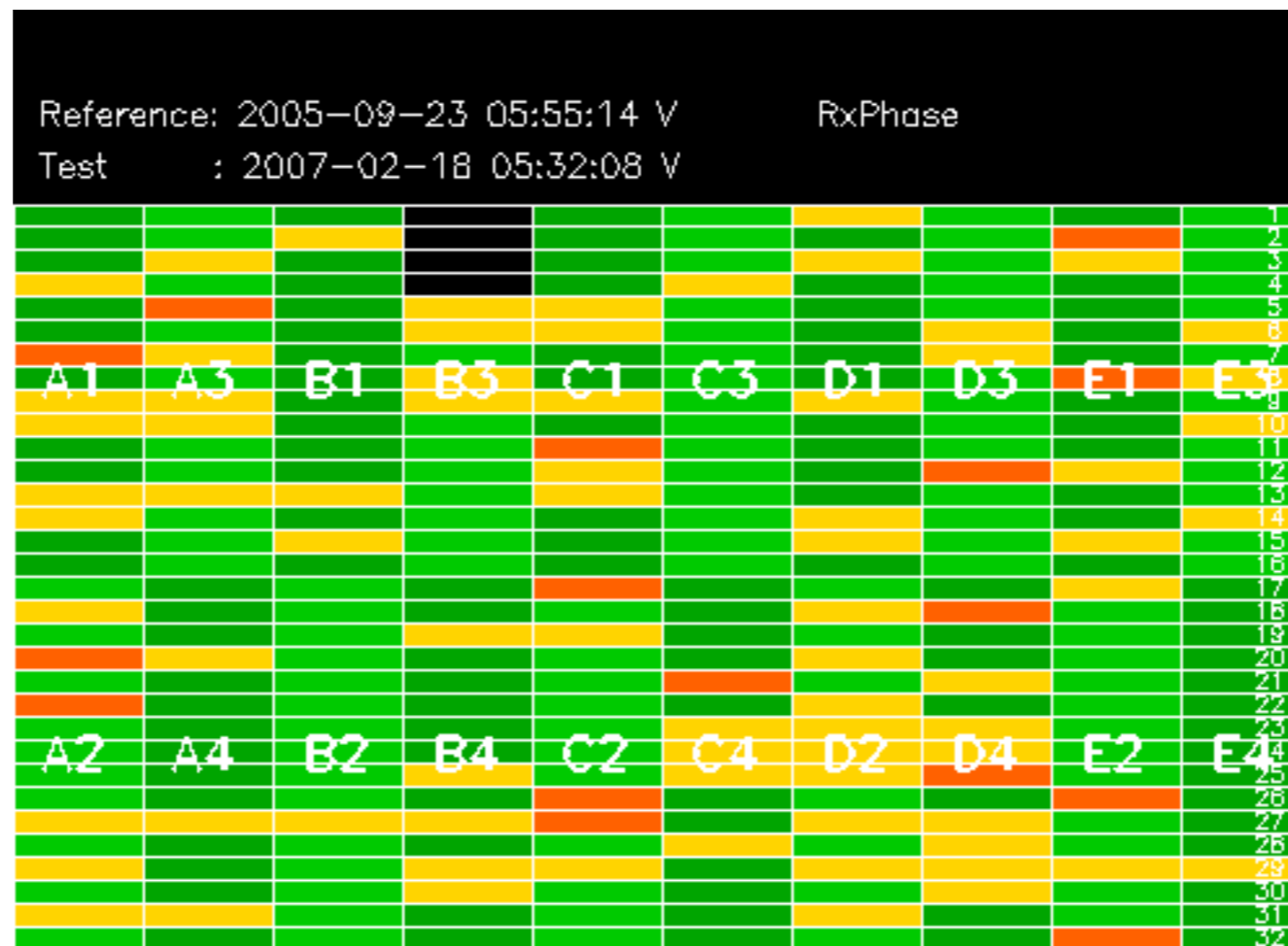
No anomalies observed on available MS products:

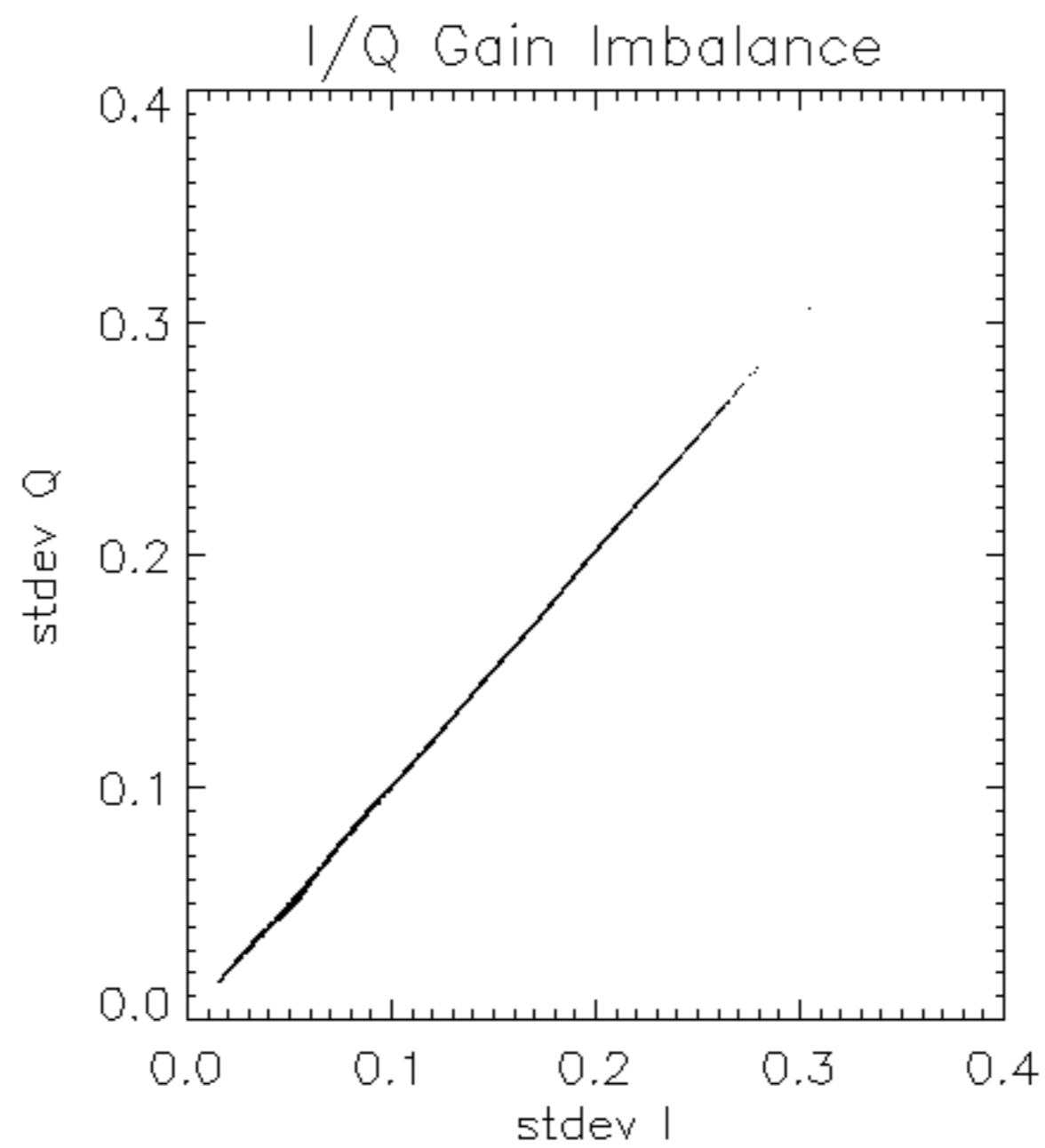
No anomalies observed.

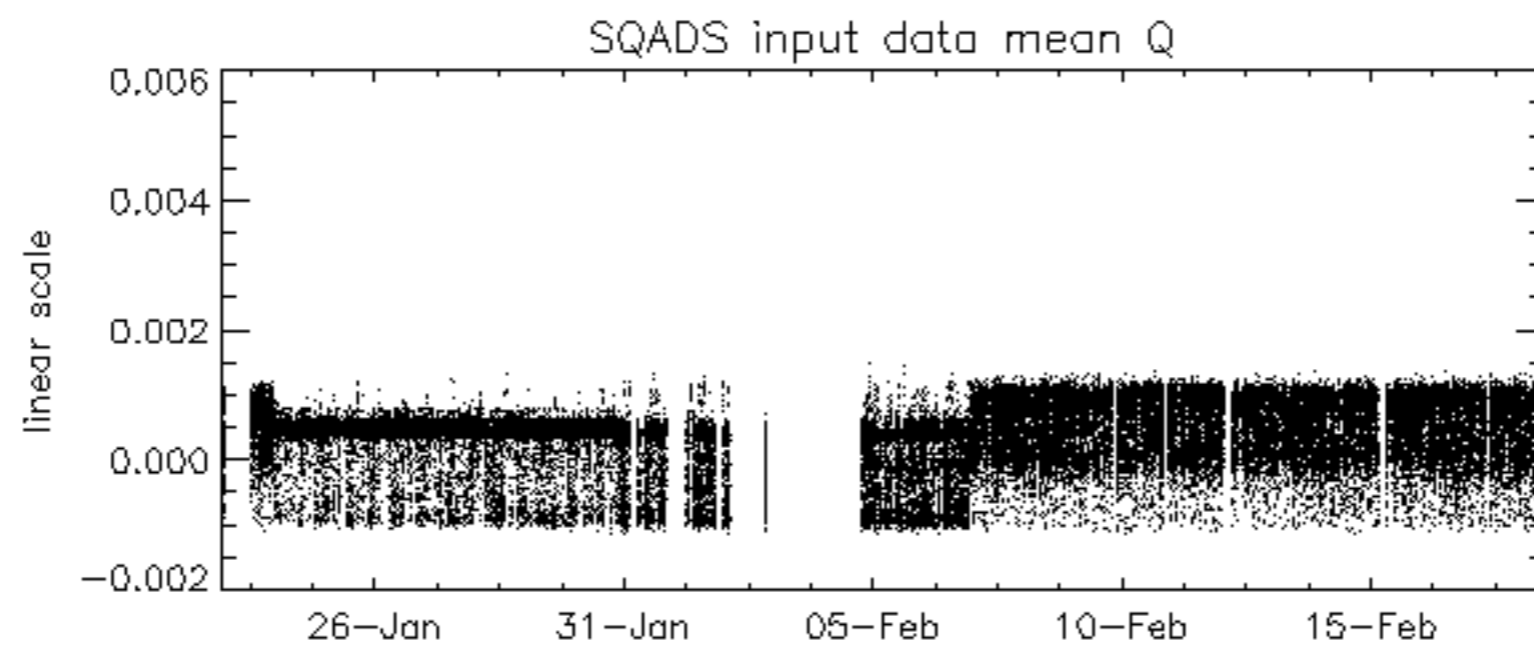
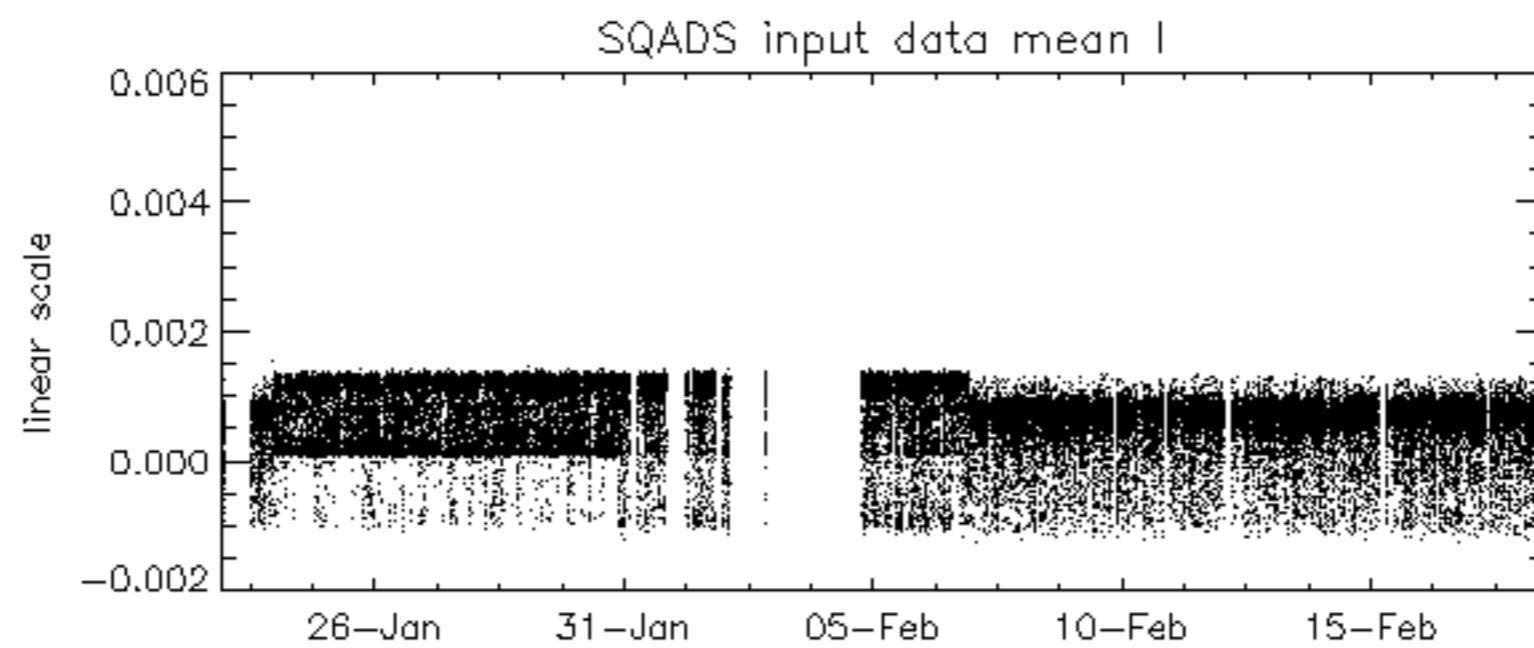
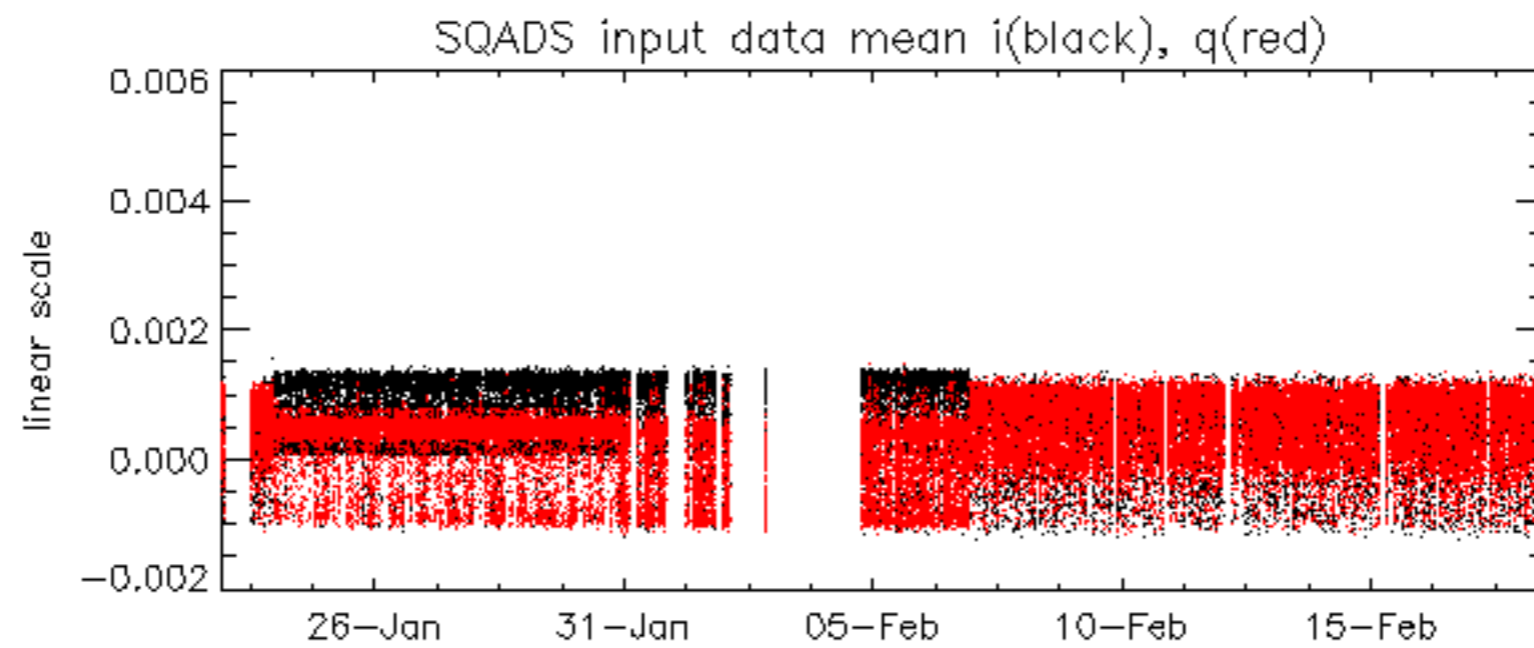


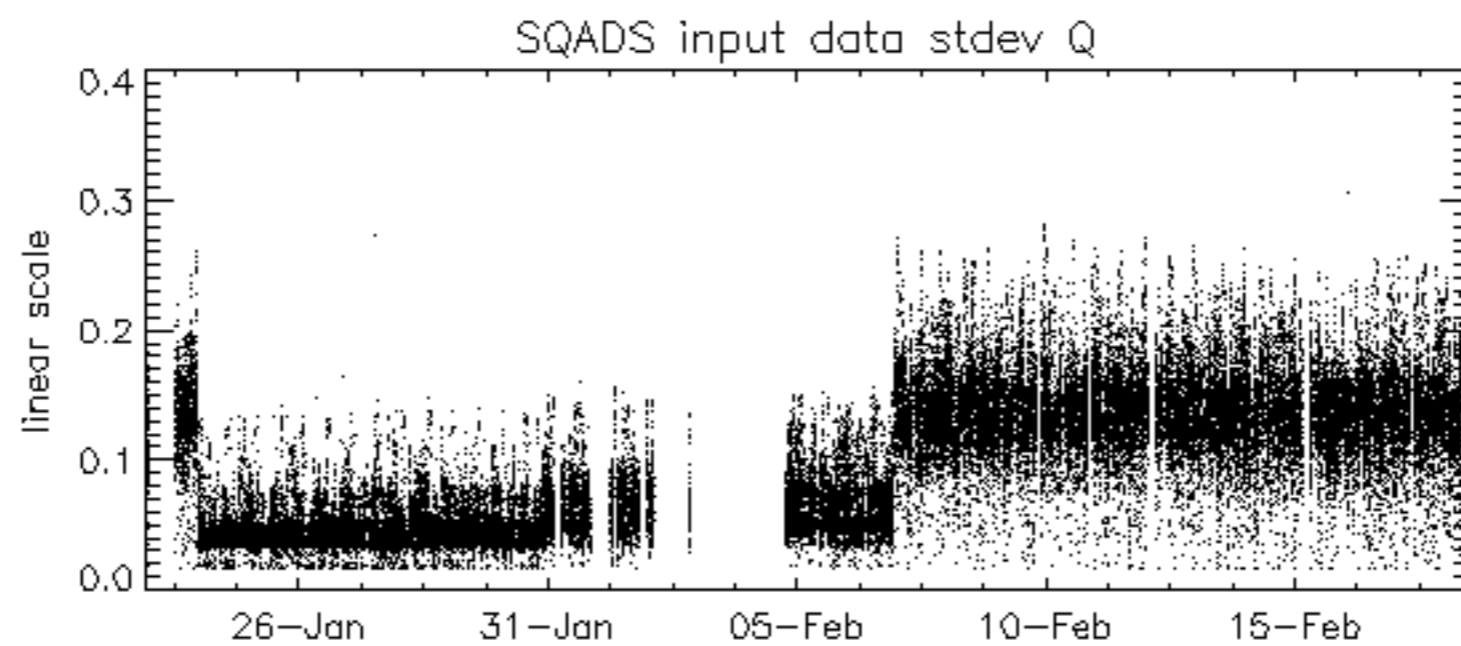
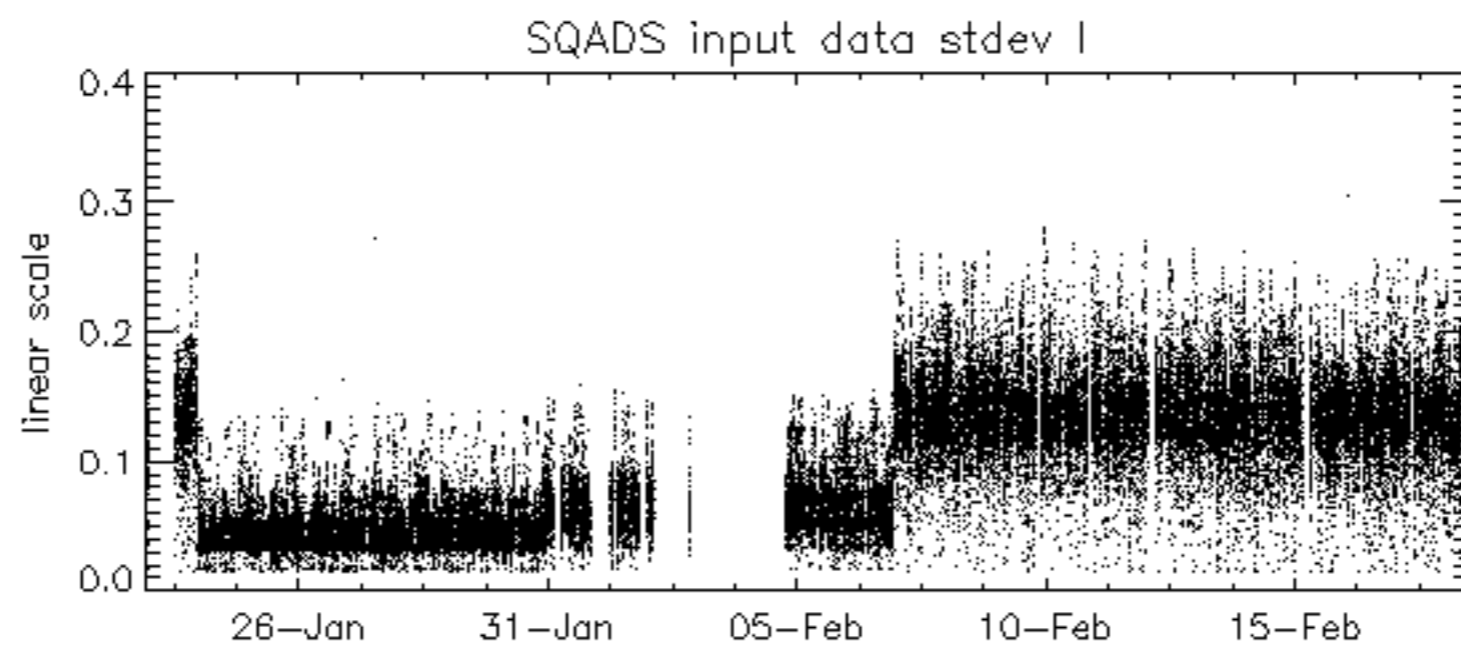
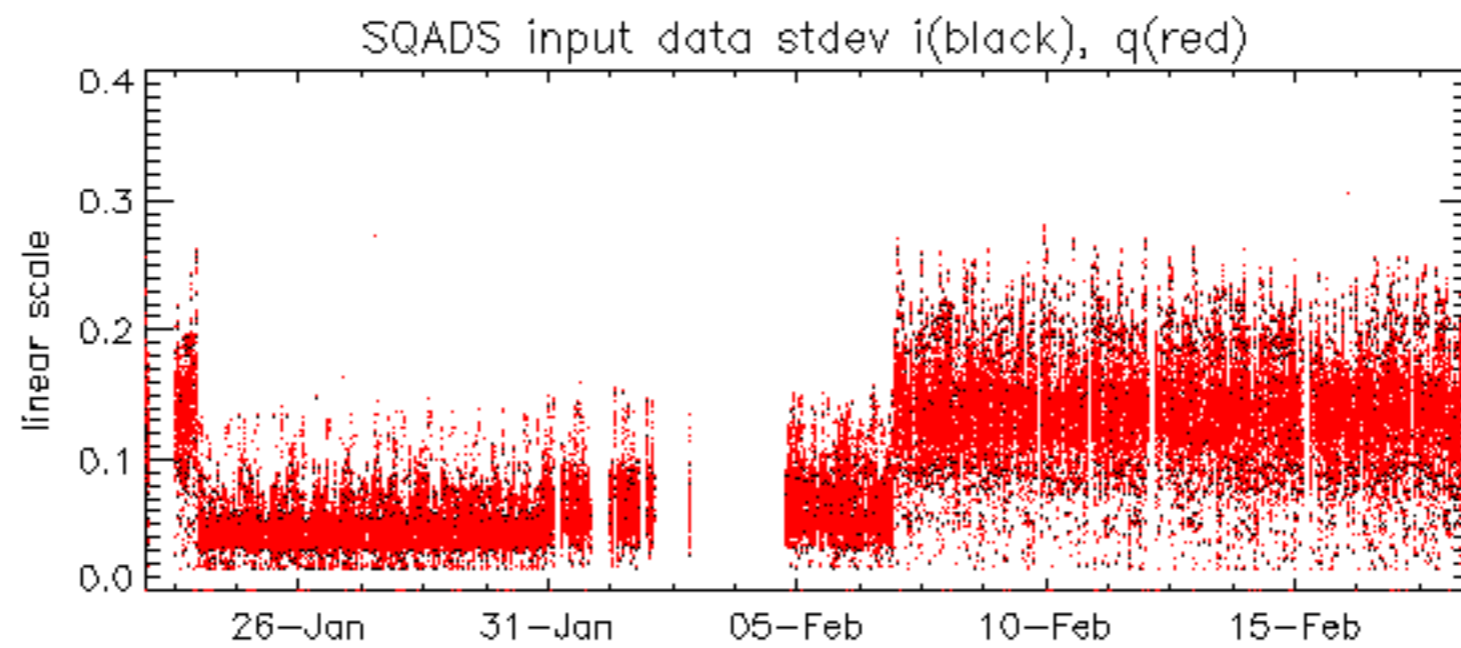








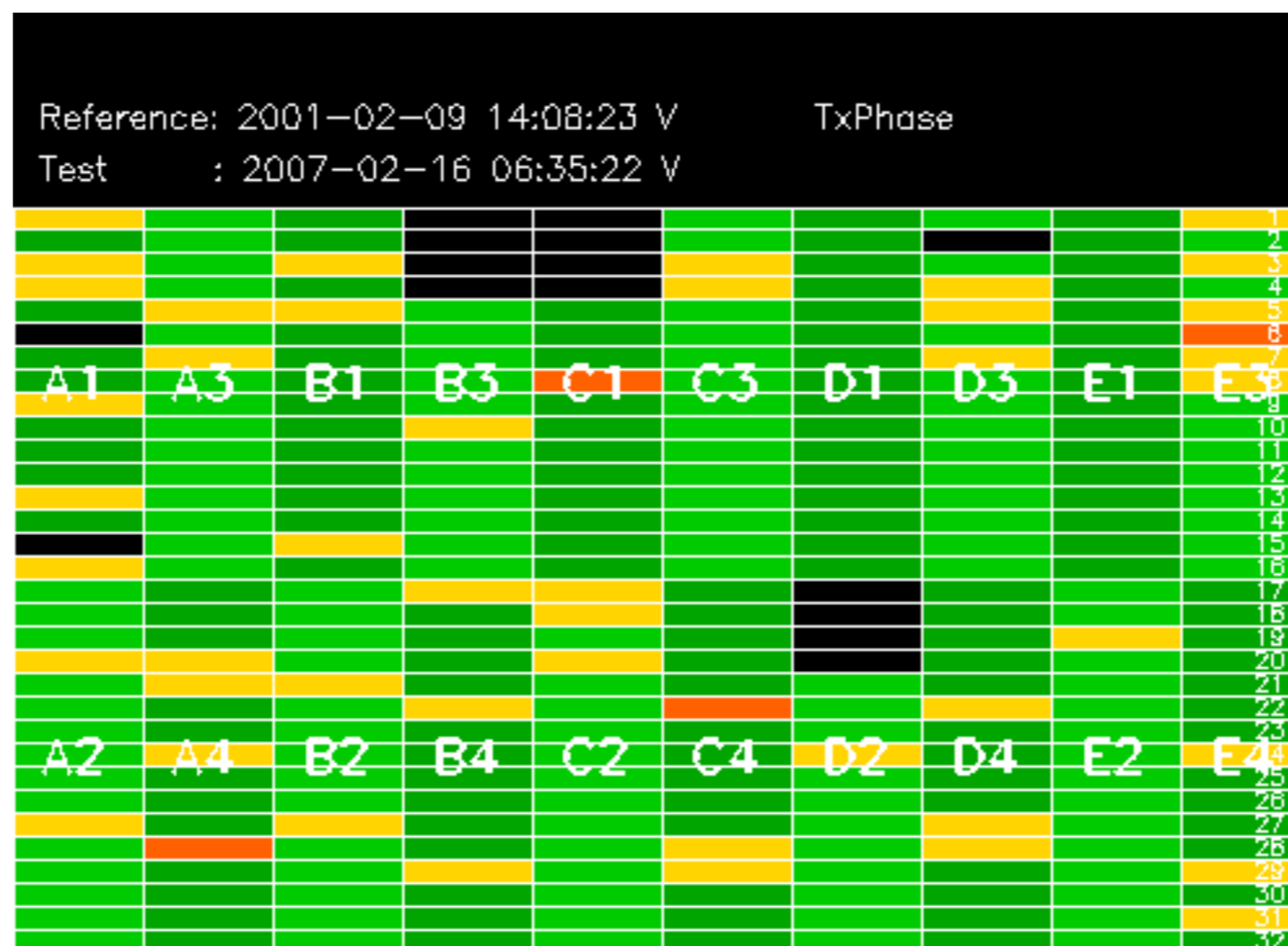


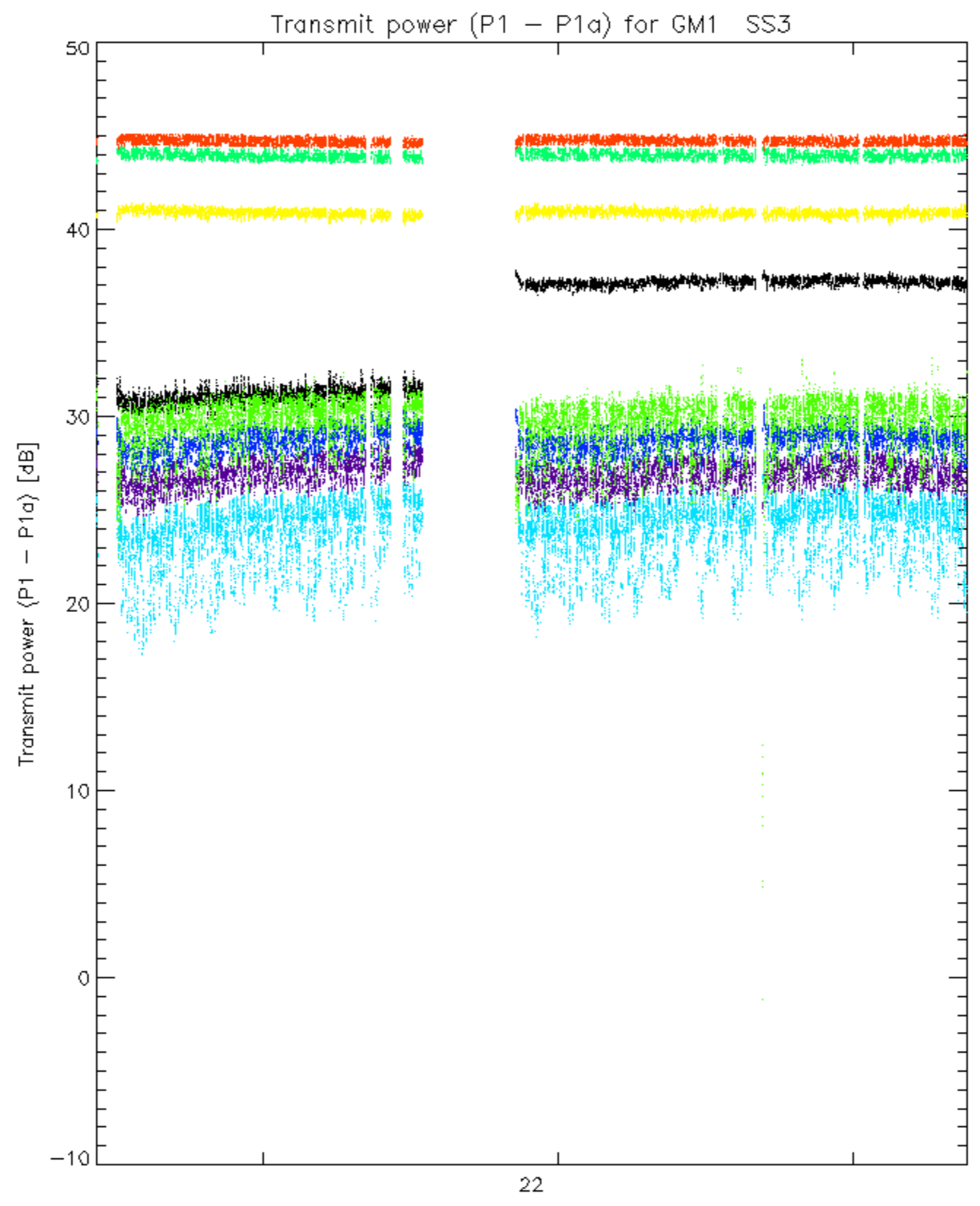


Summary of analysis for the last 3 days 2007021[678]

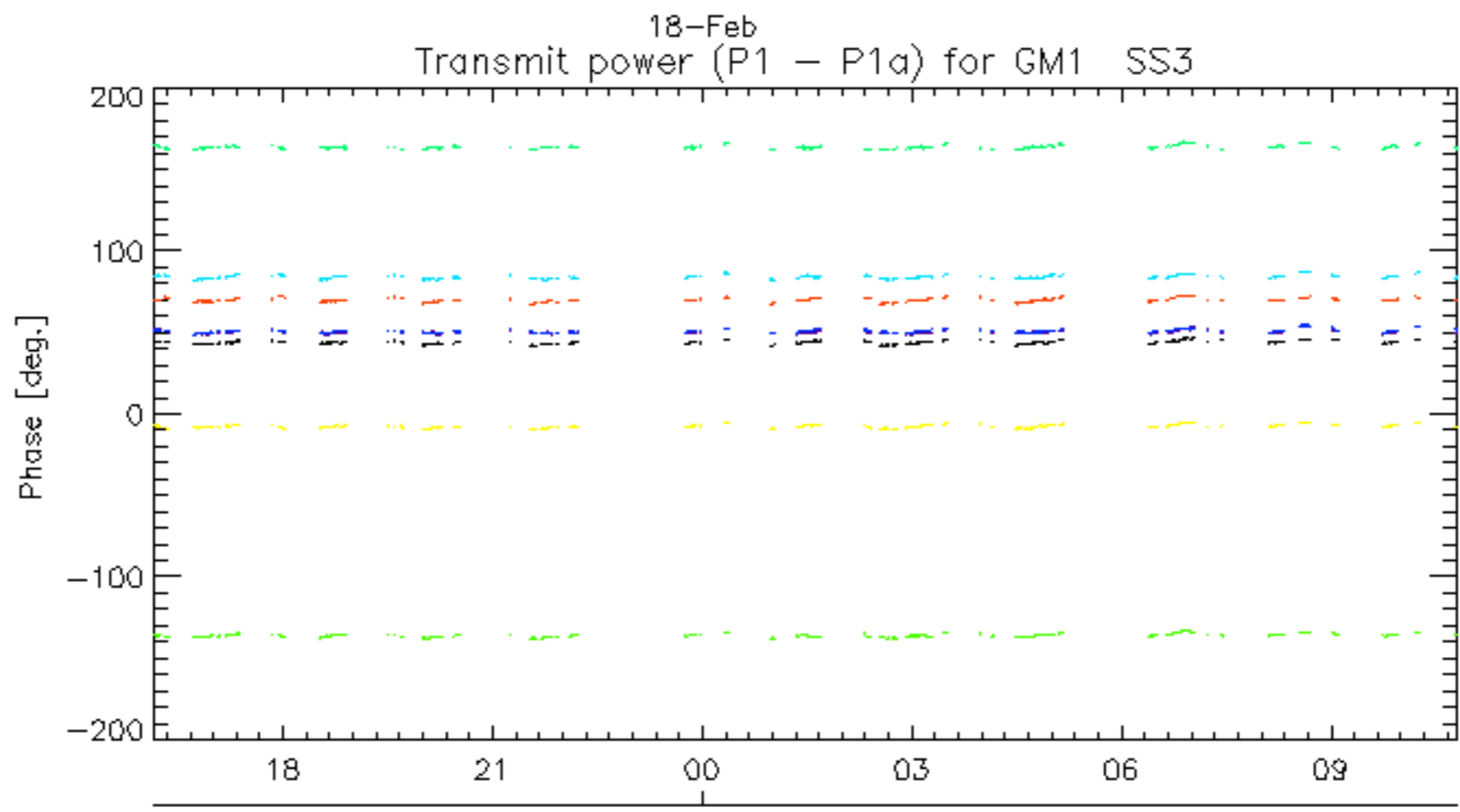
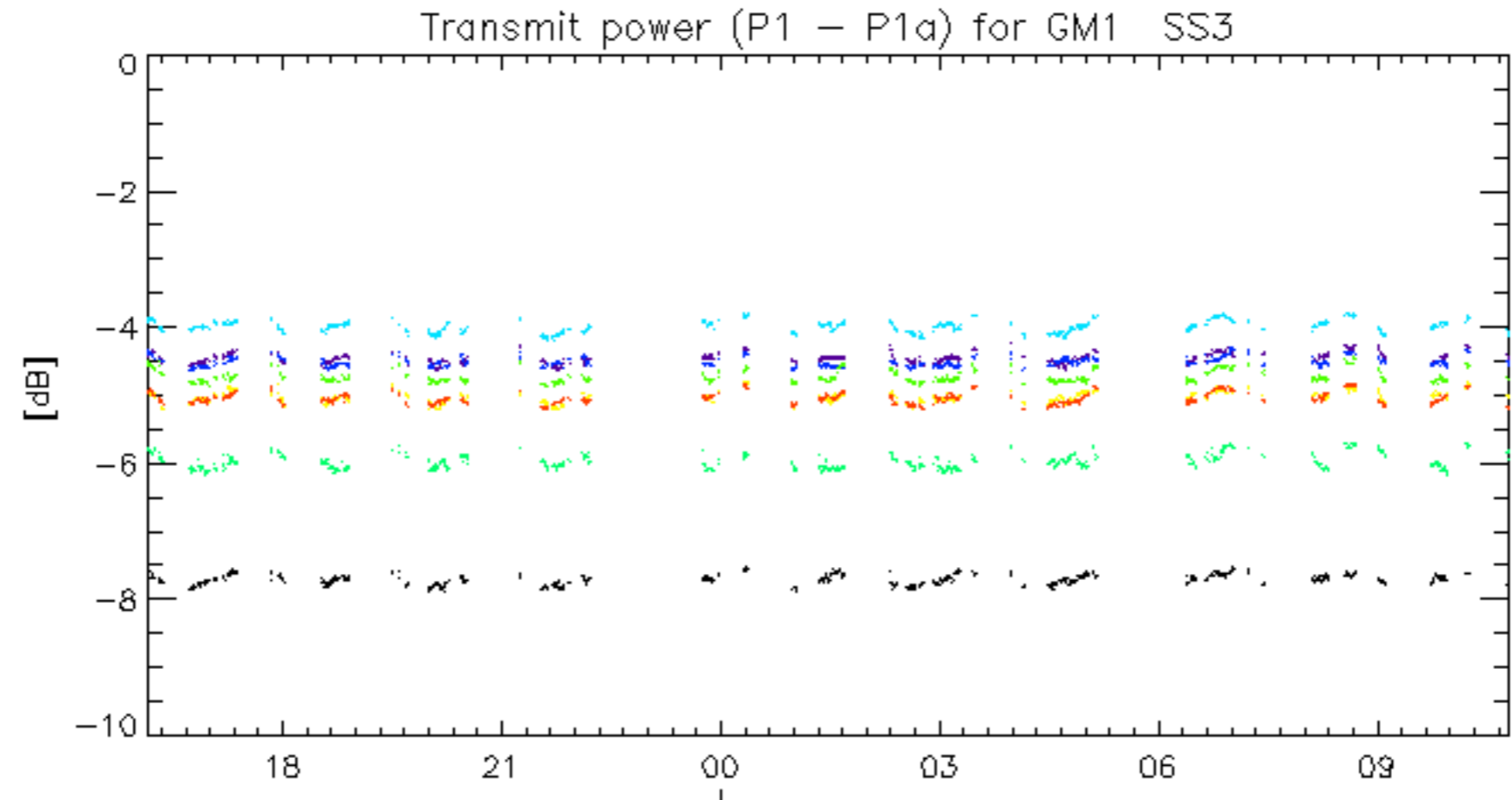
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070216_012024_000000352055_00346_25951_9272.N1	1	0
ASA_IMM_1PNPDE20070216_153339_000000502055_00355_25960_9911.N1	0	19
ASA_IMM_1PNPDE20070217_182645_000000352055_00371_25976_1526.N1	0	16
ASA_IMM_1PNPDE20070217_233319_000000502055_00374_25979_1791.N1	15	1310
ASA_IMM_1PNPDE20070218_003602_000000622055_00374_25979_1850.N1	2	14
ASA_IMM_1PNPDE20070218_003903_000000962055_00374_25979_1947.N1	0	80
ASA_IMM_1PNPDE20070218_004118_000001582055_00374_25979_1945.N1	0	62
ASA_GM1_1PNPDK20070216_072909_000004652055_00350_25955_7551.N1	0	14
ASA_GM1_1PNPDK20070216_134100_000003682055_00353_25958_8012.N1	0	28
ASA_GM1_1PNPDK20070216_141331_000001322055_00354_25959_8019.N1	0	8
ASA_WSM_1PNPDK20070216_191117_000001472055_00357_25962_8514.N1	0	2

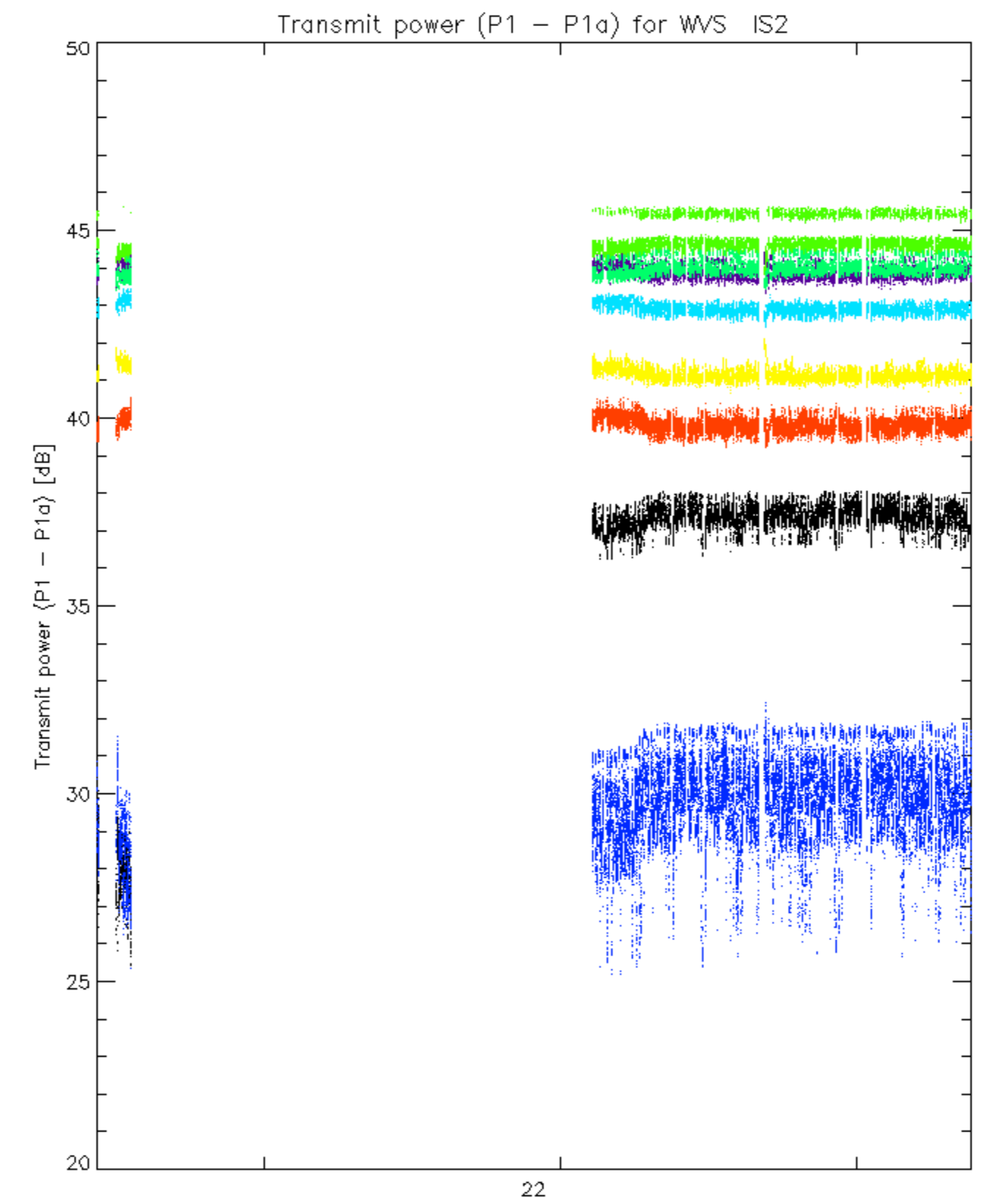




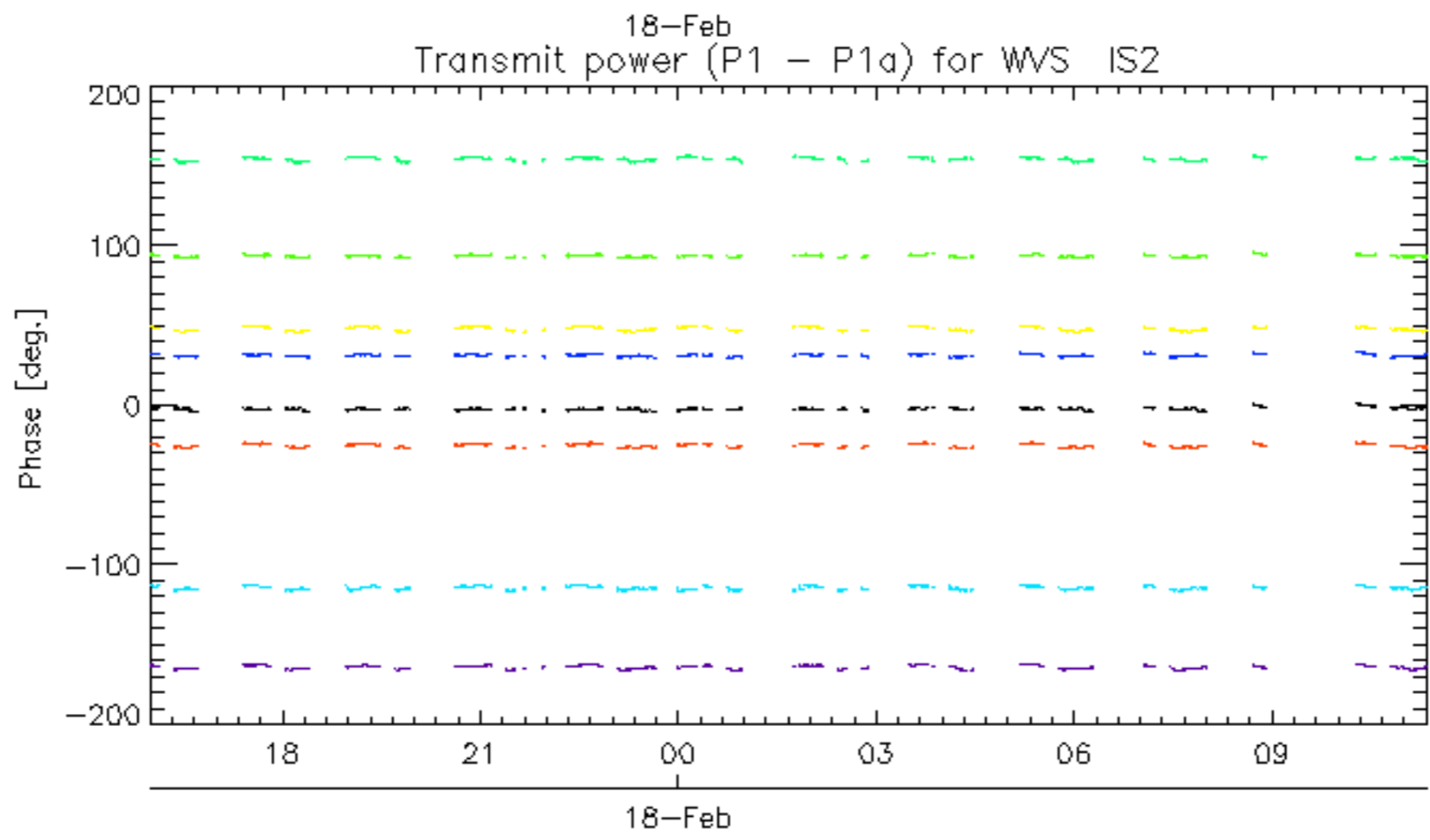
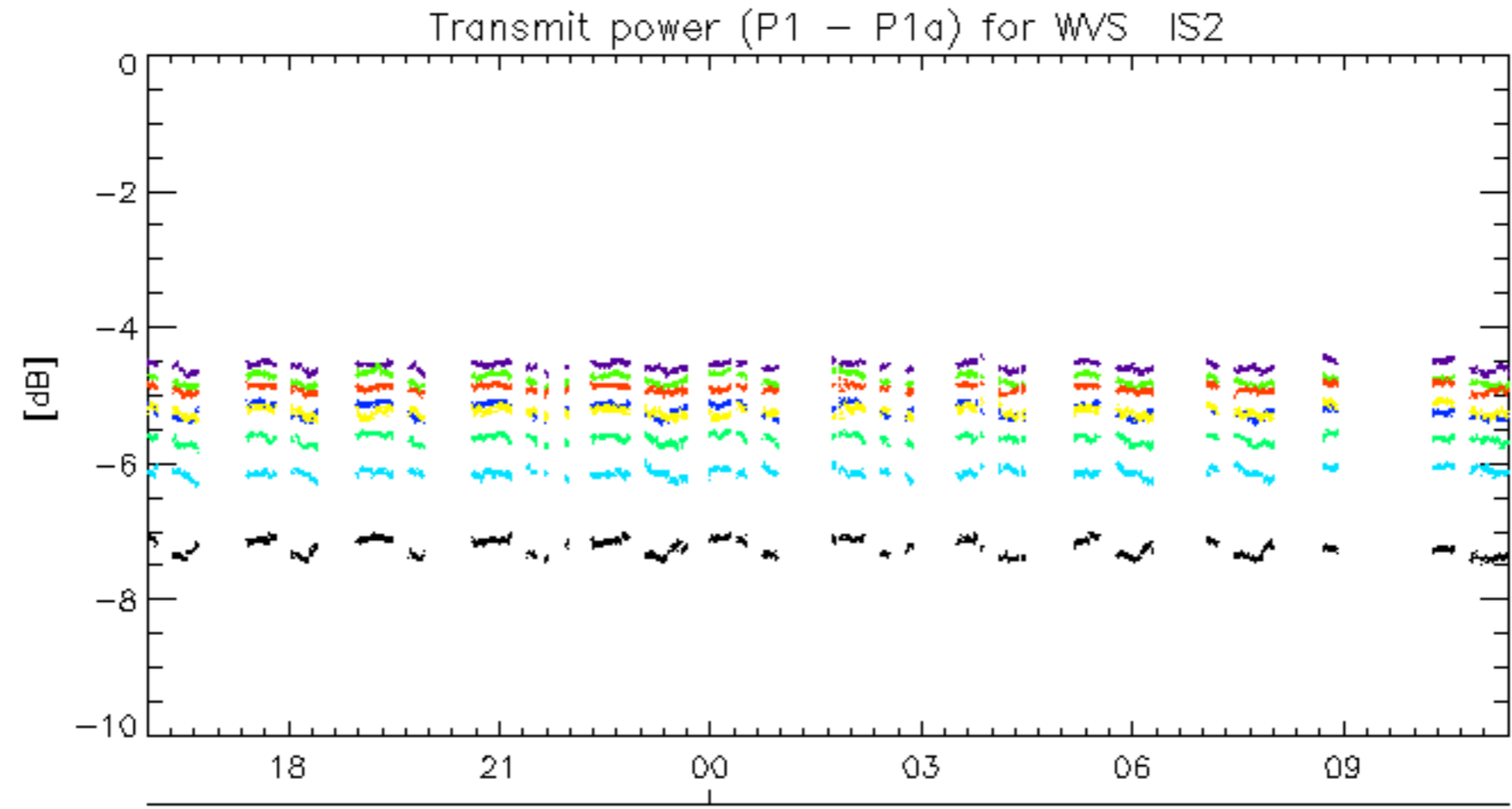
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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No unavailabilities during the reported period.