

PRELIMINARY REPORT OF 070308

last update on Thu Mar 8 23:59:16 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 2007-03-07 00:00:00 to 2007-03-08 23:59:16

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	54	95	11	7	36
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	54	95	11	7	37
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	0	0	0	0	1
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	54	95	11	7	37
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	54	95	11	7	37

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	25	40	40	13	71
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	41	61	45	16	84
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	16	21	5	3	13
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	41	61	45	16	84
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	61	45	16	84

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	20070308 074714
H	20070307 081851

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
<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



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-10.671024	0.274421	-0.701234
7	P1a	-10.151775	0.238348	0.305906
11	P1a	-10.829879	0.121454	0.266170
15	P1a	-11.840045	1.612830	1.988328
19	P1a	-14.980213	1.132404	-1.715816
22	P1a	-19.173496	7.755877	-4.111866
26	P1a	-15.532868	0.494632	0.449515
30	P1a	-20.402748	7.161980	4.167123

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.348882	0.259802	-0.605751
7	P1	-2.610746	0.056361	0.136139
11	P1	-3.304719	0.157268	0.589484
15	P1	-4.775196	1.448338	1.888780
19	P1	-3.405830	0.097201	-0.518699
22	P1	-5.388567	0.159046	0.577666
26	P1	-5.317160	0.750959	-1.415131
30	P1	-5.461646	0.068355	0.302779

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.058975	0.123603	-0.078779
7	P2	-21.839903	0.126932	-0.302339

11	P2	-10.786695	0.136461	-0.459590
15	P2	-5.097005	0.083319	-0.121621
19	P2	-7.224585	0.082225	-0.072066
22	P2	-8.359209	0.081956	0.085726
26	P2	-24.151012	0.128565	-0.486233
30	P2	-21.652439	0.068200	0.050246

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.228274	0.008071	-0.044943
7	P3	-8.228274	0.008071	-0.044943
11	P3	-8.228274	0.008071	-0.044943
15	P3	-8.228274	0.008071	-0.044943
19	P3	-8.228274	0.008071	-0.044943
22	P3	-8.228274	0.008071	-0.044943
26	P3	-8.228274	0.008071	-0.044943
30	P3	-8.228274	0.008071	-0.044943

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	-11.075485	0.050471	-0.021472
7	P1a	-10.059513	0.136189	-0.029143
11	P1a	-10.652237	0.064925	-0.051952
15	P1a	-10.908524	0.134142	-0.175396
19	P1a	-15.715264	0.069325	0.081469
22	P1a	-20.845749	1.173625	-0.133724
26	P1a	-15.328160	0.267441	0.230979
30	P1a	-18.383728	0.345017	-0.137202

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.380863	0.039844	-0.048537
7	P1	-2.431544	0.022008	0.015185
11	P1	-2.916236	0.019173	-0.030498
15	P1	-3.832741	0.039623	-0.054241
19	P1	-3.553312	0.011717	-0.009883
22	P1	-5.038466	0.023260	-0.041825
26	P1	-5.971872	0.026057	0.044168
30	P1	-5.278711	0.021721	0.017874

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.096714	0.032760	0.006852
7	P2	-21.961361	0.055413	0.042643
11	P2	-10.650755	0.030985	0.008990
15	P2	-4.818795	0.027599	-0.015340
19	P2	-6.810175	0.029743	-0.003047
22	P2	-8.101277	0.034330	0.058979
26	P2	-24.265207	0.036316	-0.106940
30	P2	-21.749781	0.037724	0.055578

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.047623	0.003671	-0.037656
7	P3	-8.047661	0.003678	-0.037402
11	P3	-8.047777	0.003676	-0.037891
15	P3	-8.047636	0.003688	-0.037965
19	P3	-8.047742	0.003675	-0.038043
22	P3	-8.047752	0.003675	-0.037833
26	P3	-8.047566	0.003672	-0.037881
30	P3	-8.047719	0.003687	-0.037671

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	0.000626979
	stdev	2.42824e-07
MEAN Q	mean	0.000381116
	stdev	2.63357e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.109955
	stdev	0.00245900
STDEV Q	mean	0.109994
	stdev	0.00251388



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007030[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_1PNPDE20070306_231002_000001182056_00116_26222_3547.N1	0	64
ASA_IMM_1PNPDE20070308_014959_000000802056_00132_26238_4901.N1	1	0
ASA_WVS_1PNPDK20070306_153323_000000152056_00111_26217_8526.N1	0	8
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_2390.N1	47	7122
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_2498.N1	47	7122
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_2650.N1	47	7122
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_4291.N1	47	7122
ASA_WSM_1PNPDE20070306_142925_000000852056_00111_26217_3012.N1	0	16
ASA_WSM_1PNPDE20070306_231712_000000922056_00116_26222_3567.N1	0	68
ASA_WSM_1PNPDE20070306_232132_000001842056_00116_26222_3574.N1	0	67
ASA_WSM_1PNPDE20070307_055614_000000672056_00120_26226_4215.N1	5	157
ASA_WSM_1PNPDE20070307_111810_000000852056_00123_26229_4255.N1	0	72
ASA_WSM_1PNPDE20070307_171620_000002262056_00127_26233_4397.N1	0	63
ASA_WSM_1PNPDK20070307_135748_000000852056_00125_26231_9424.N1	0	15





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



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)

☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

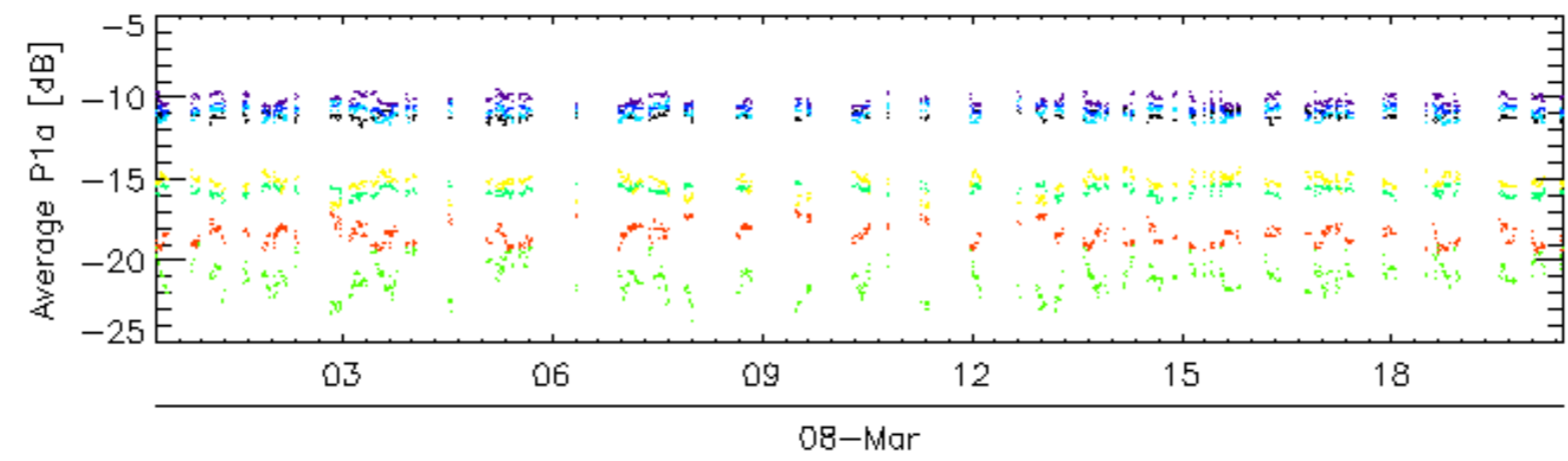
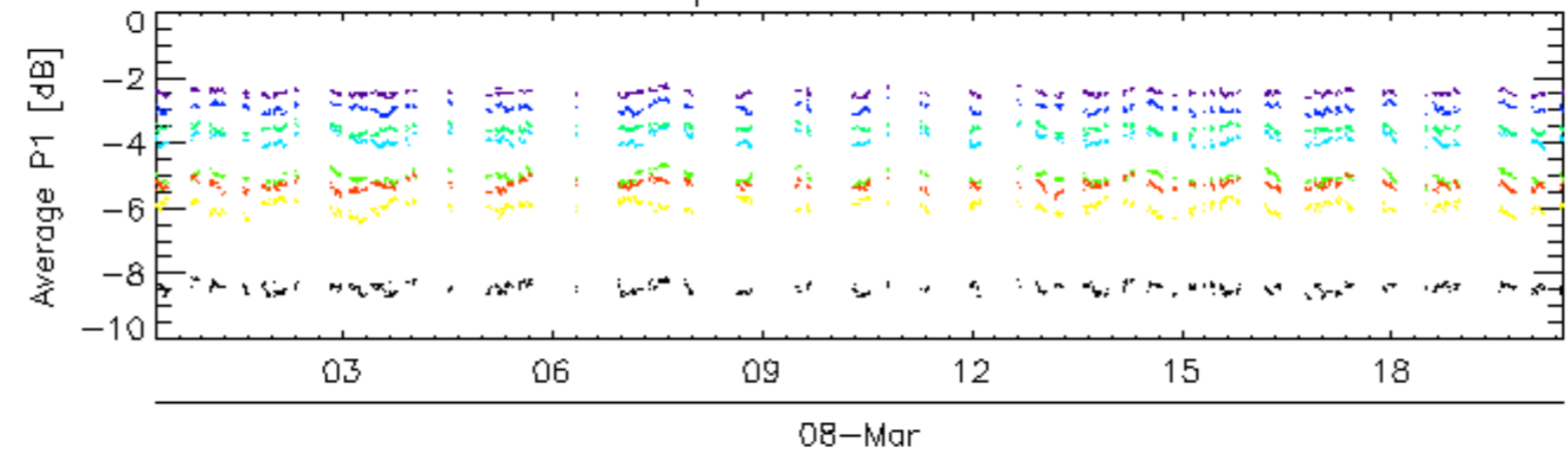
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

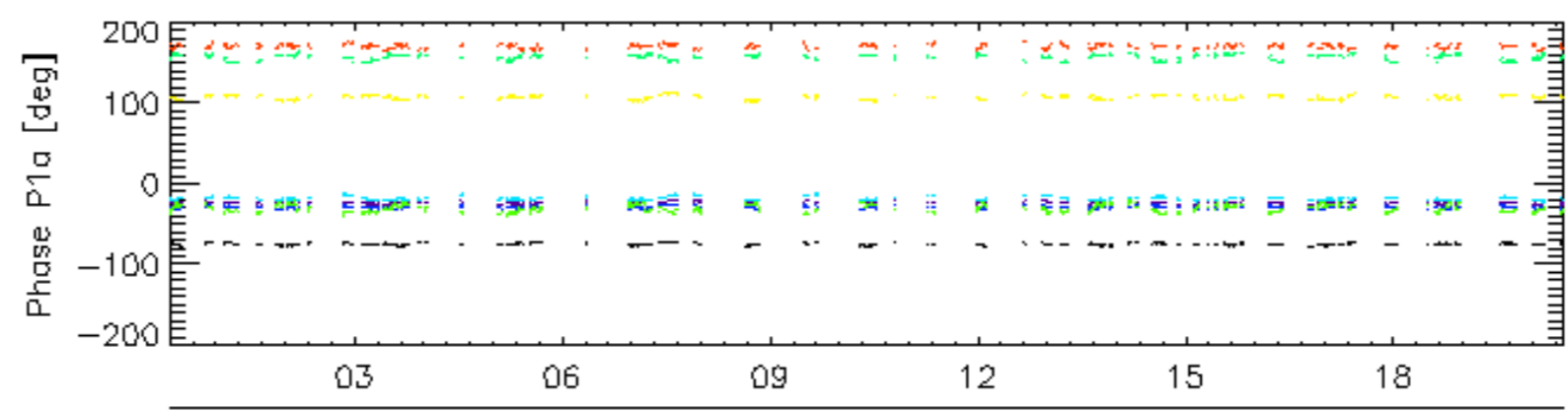
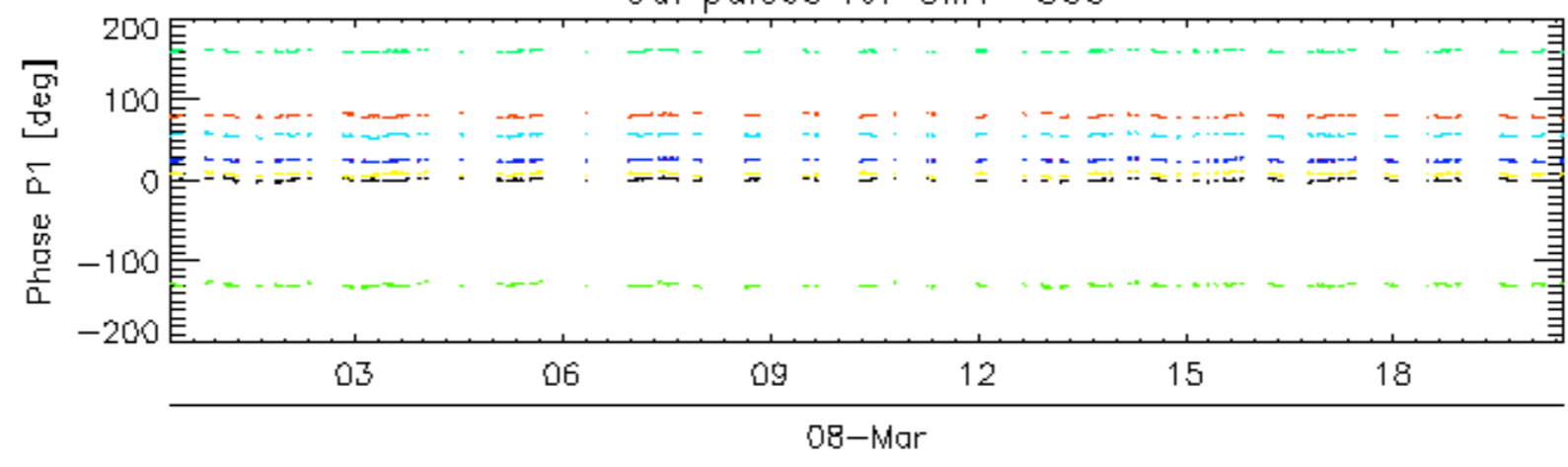
Evolution Doppler error versus ANX

☒

Cal pulses for GM1 SS3

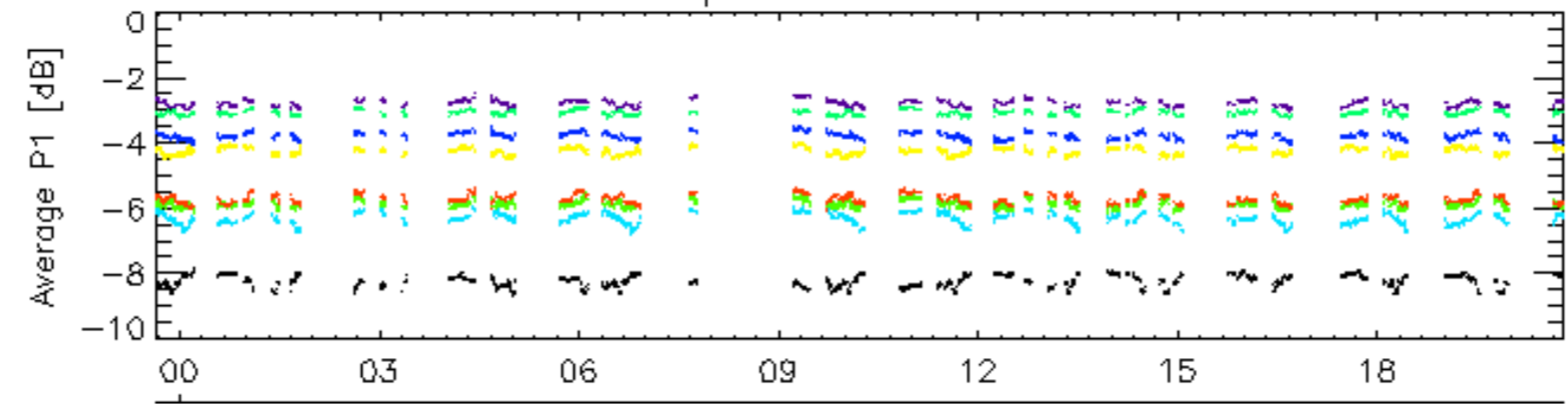


Cal pulses for GM1 SS3

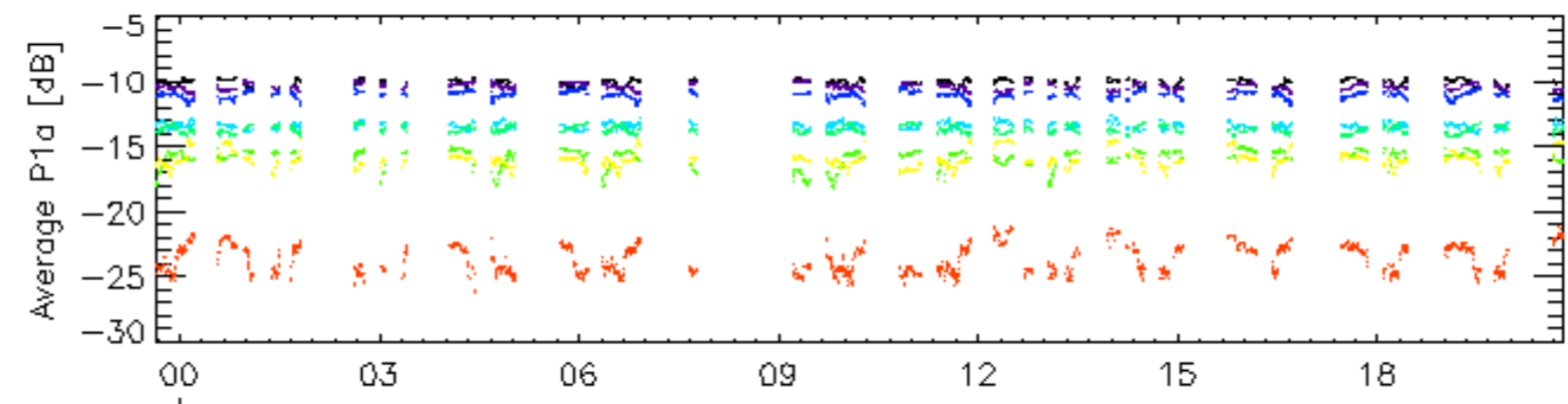


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS4

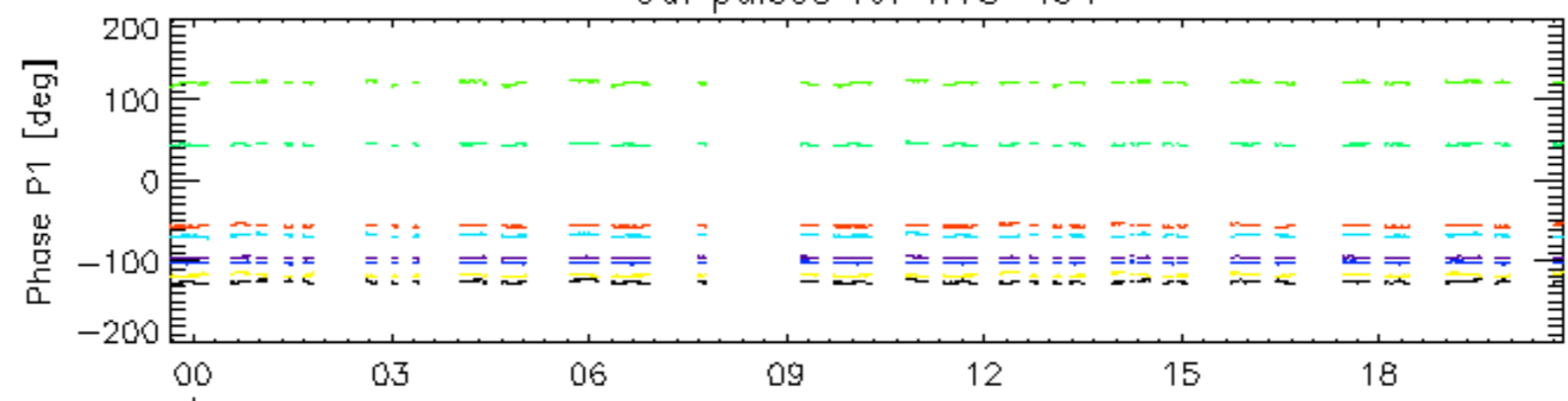


08-Mar

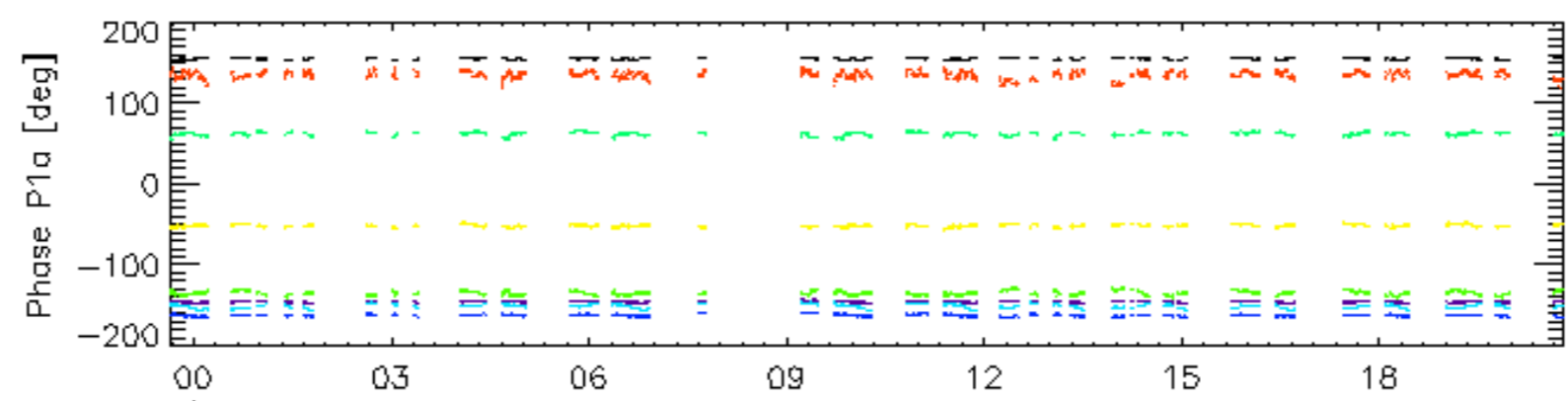


08-Mar

Cal pulses for WVS IS4



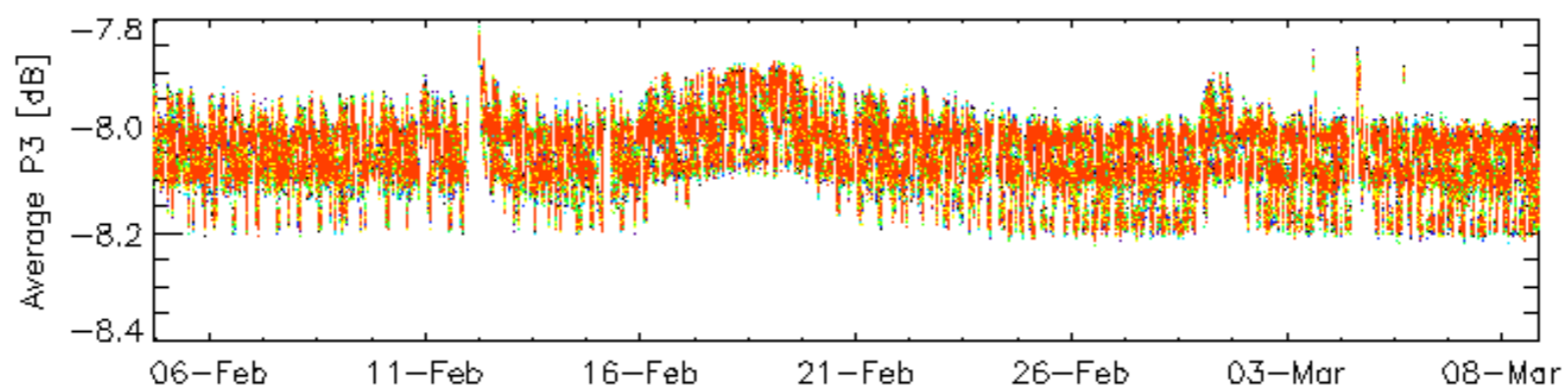
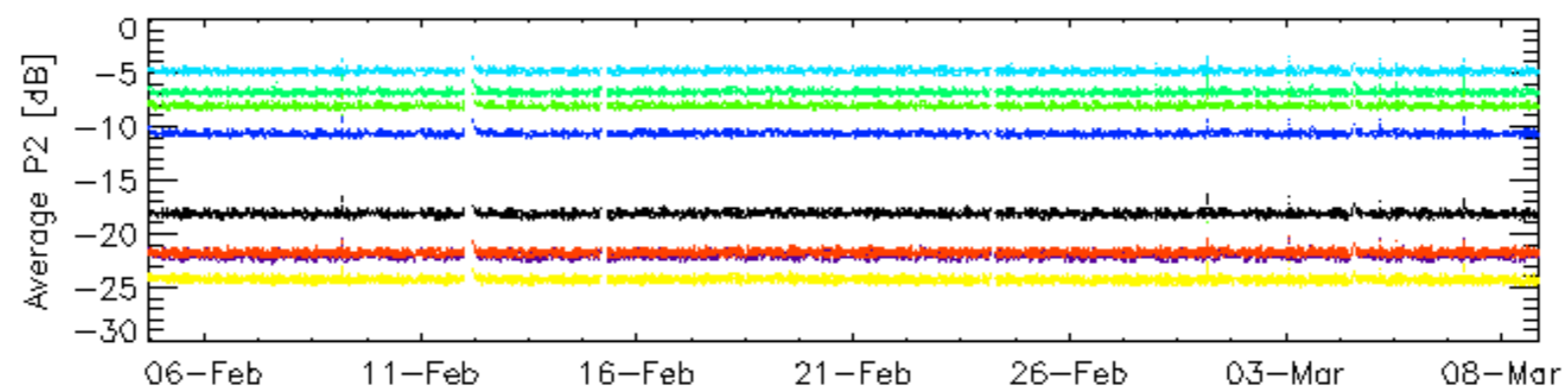
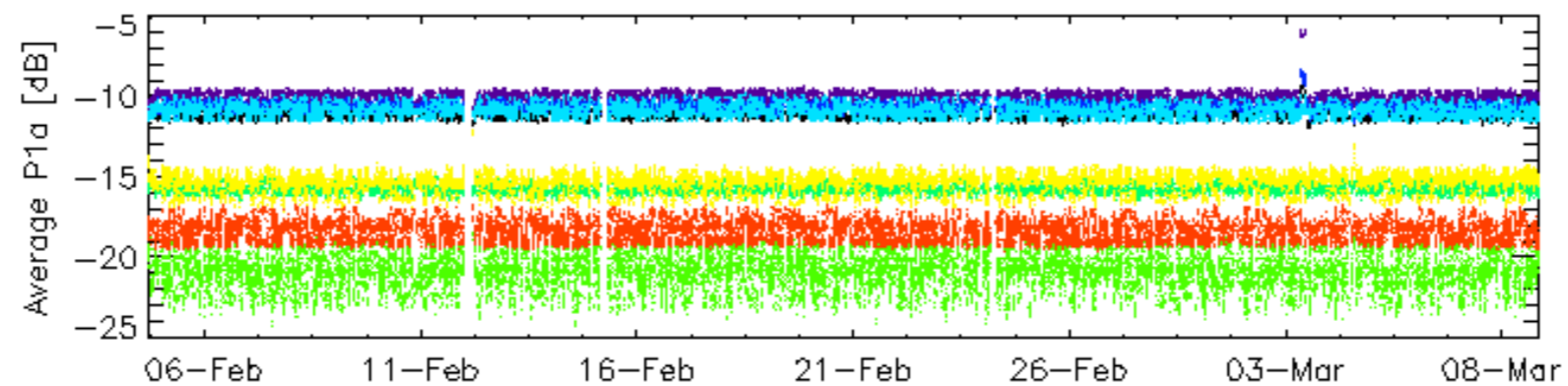
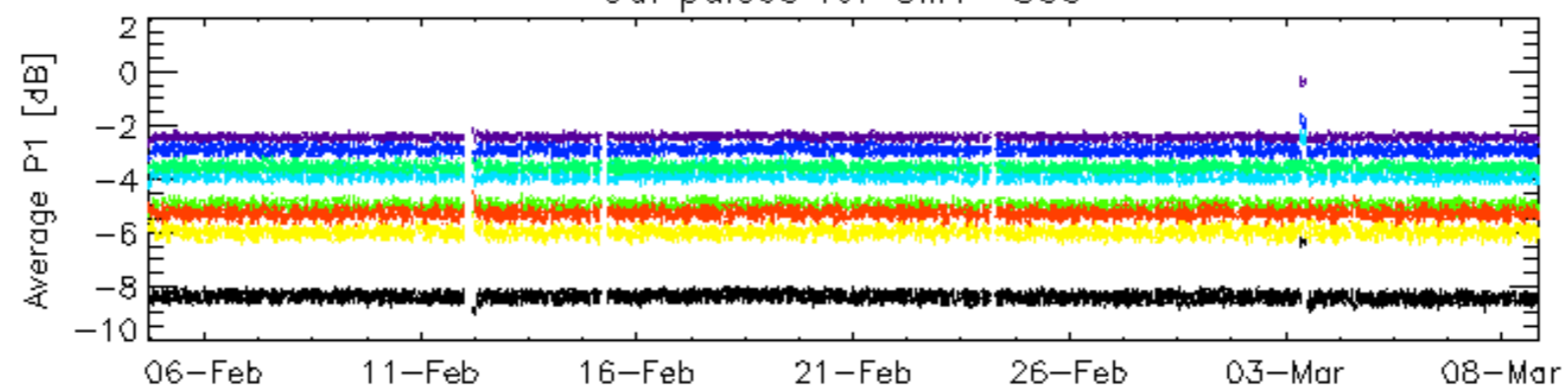
08-Mar



08-Mar

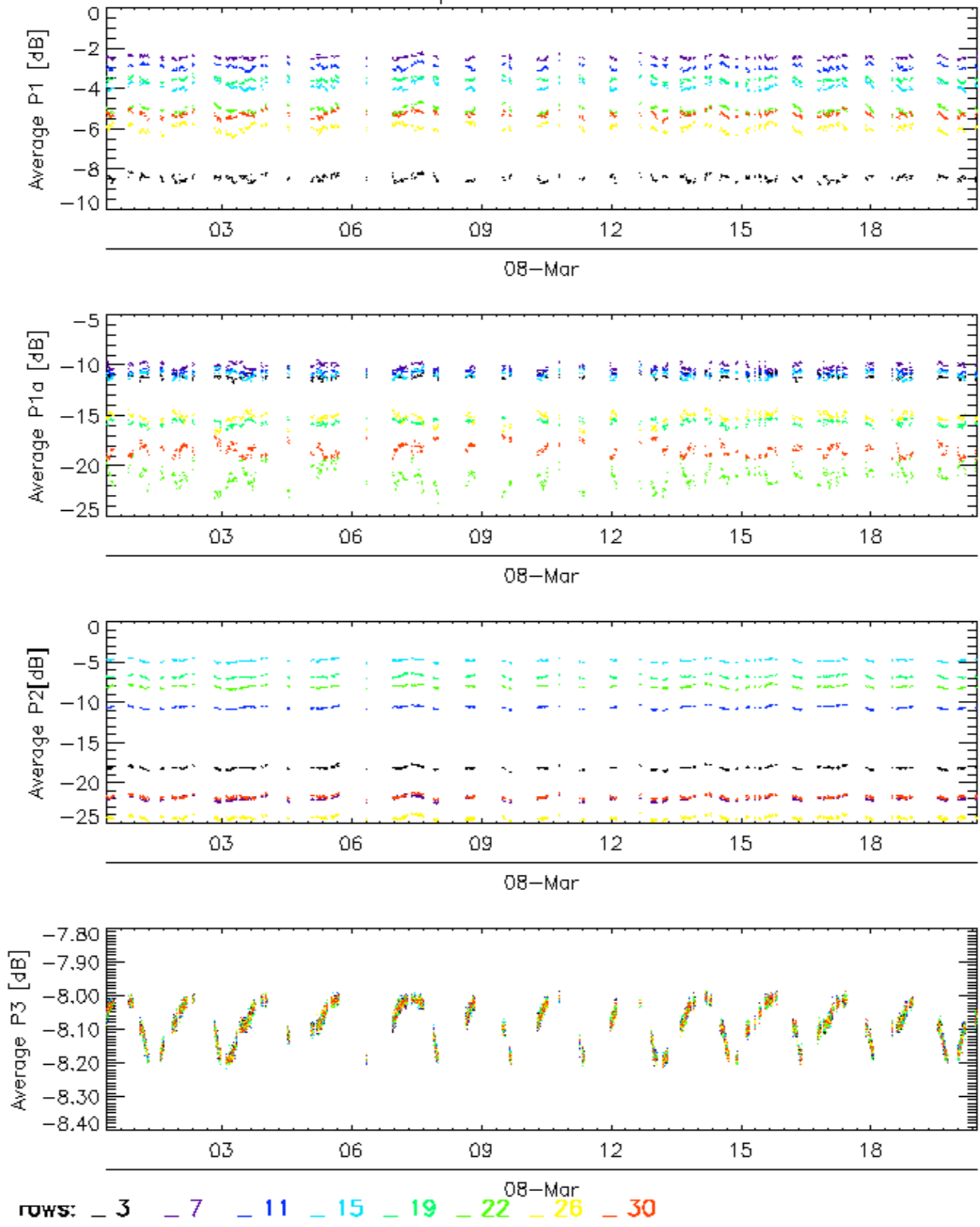
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3



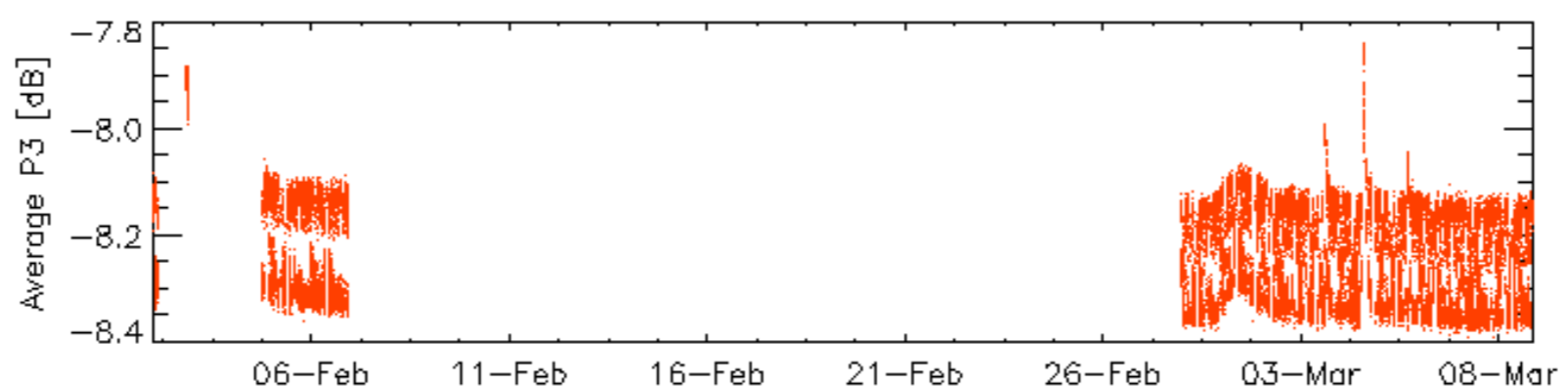
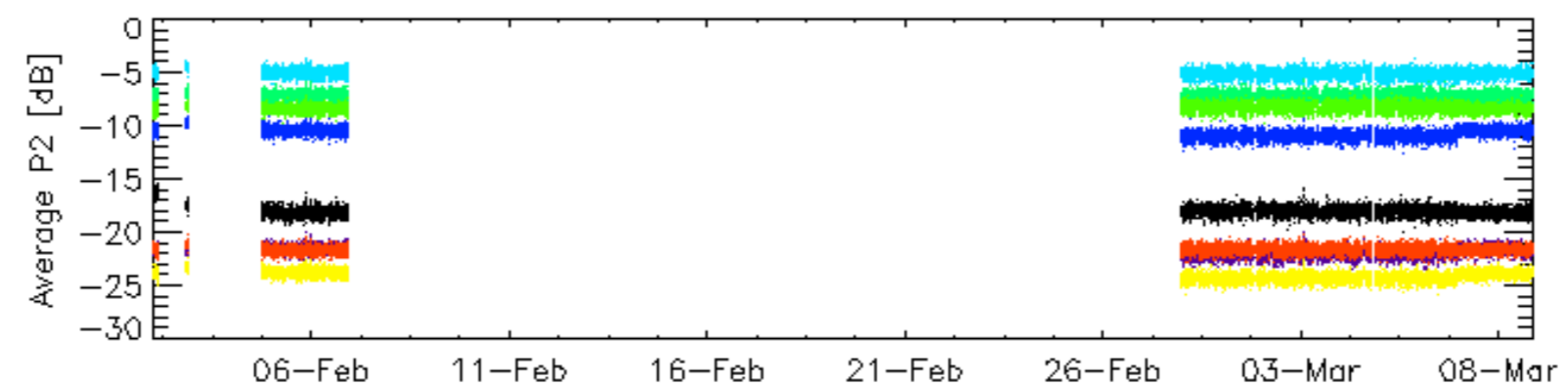
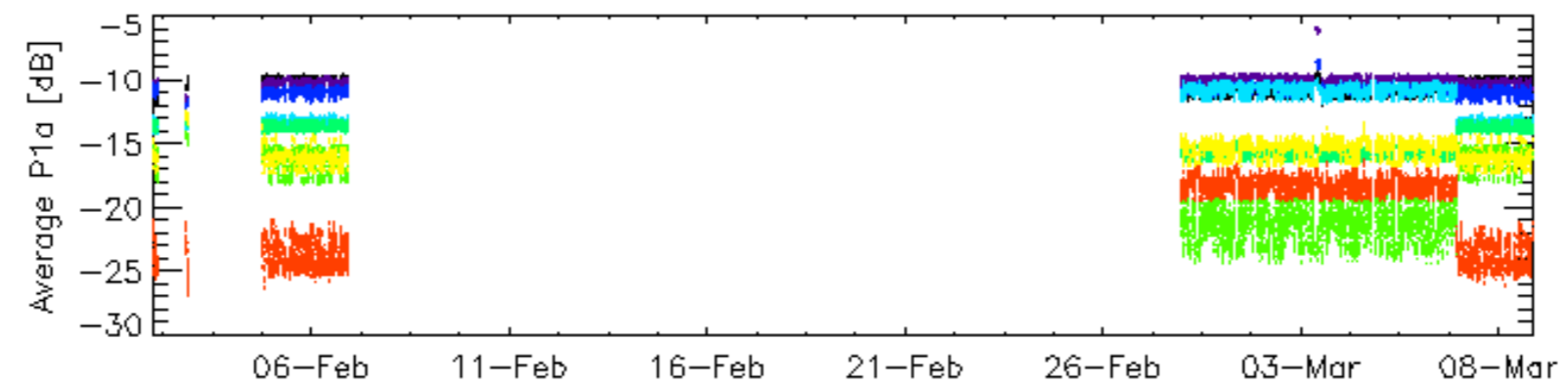
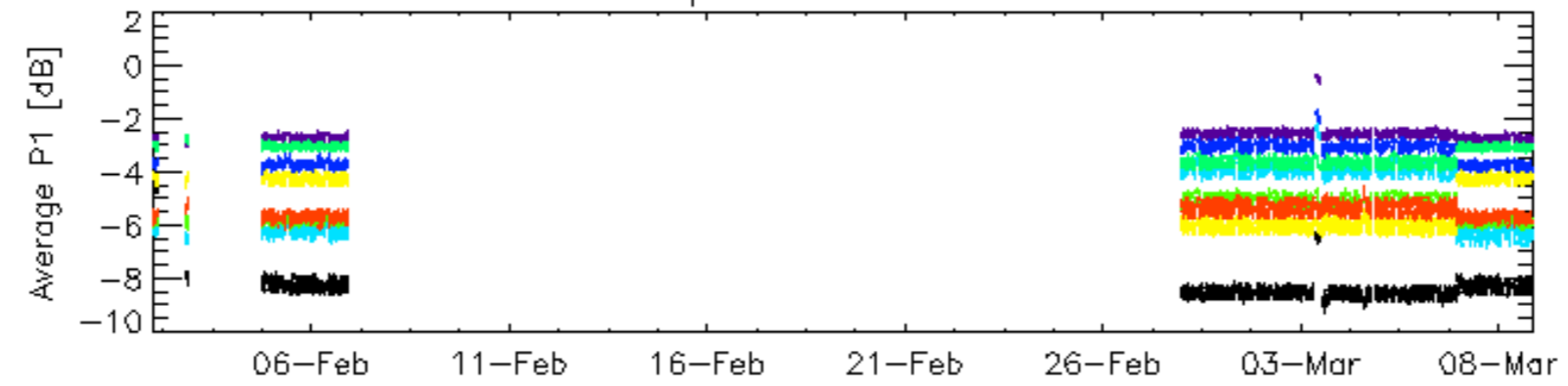
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Cal pulses for GM1 SS3



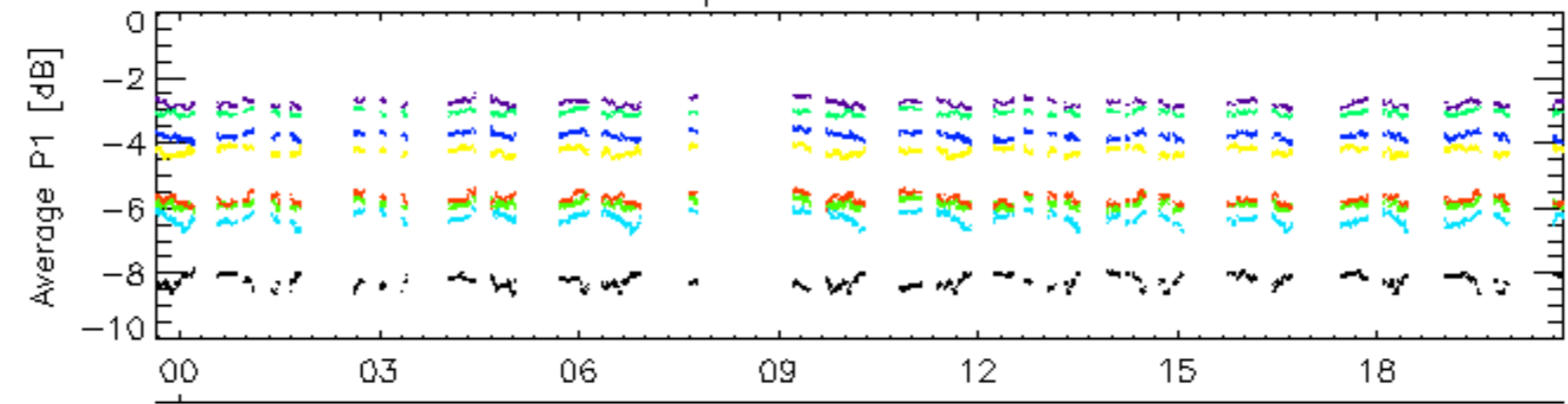
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Cal pulses for WVS IS4

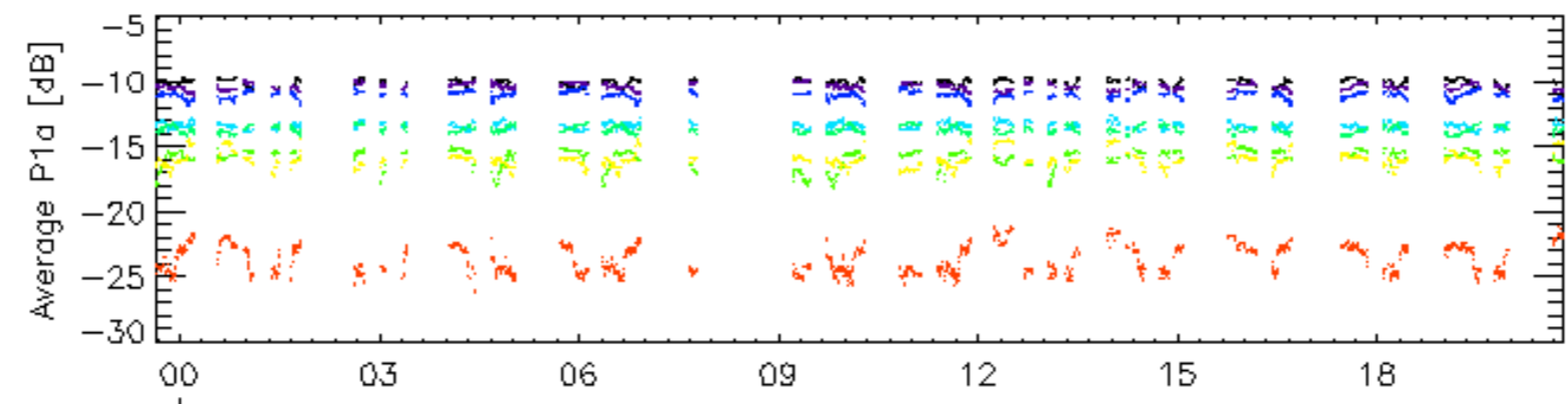


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

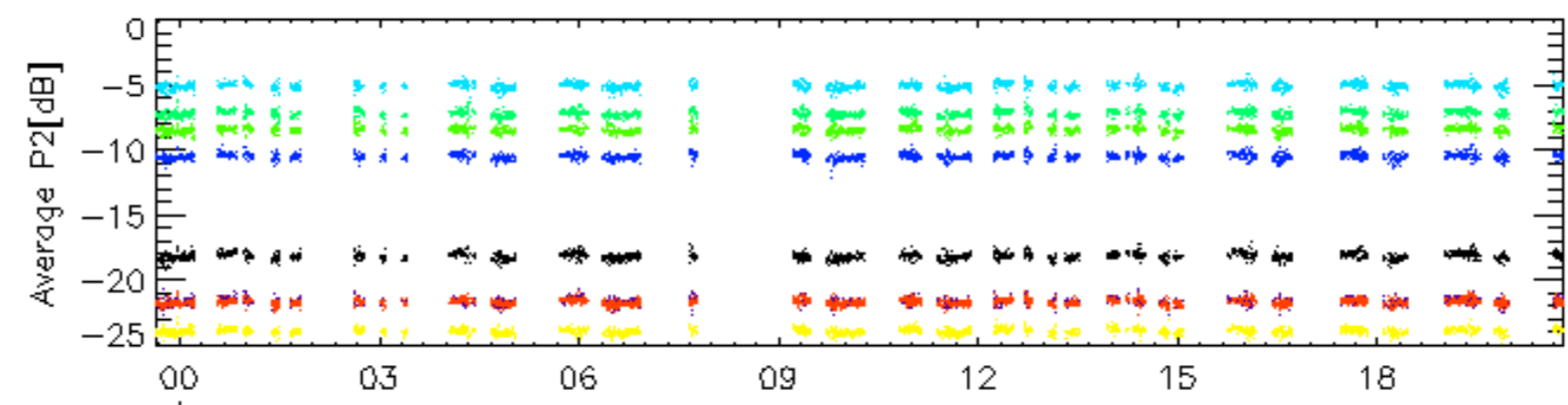
Cal pulses for WVS IS4



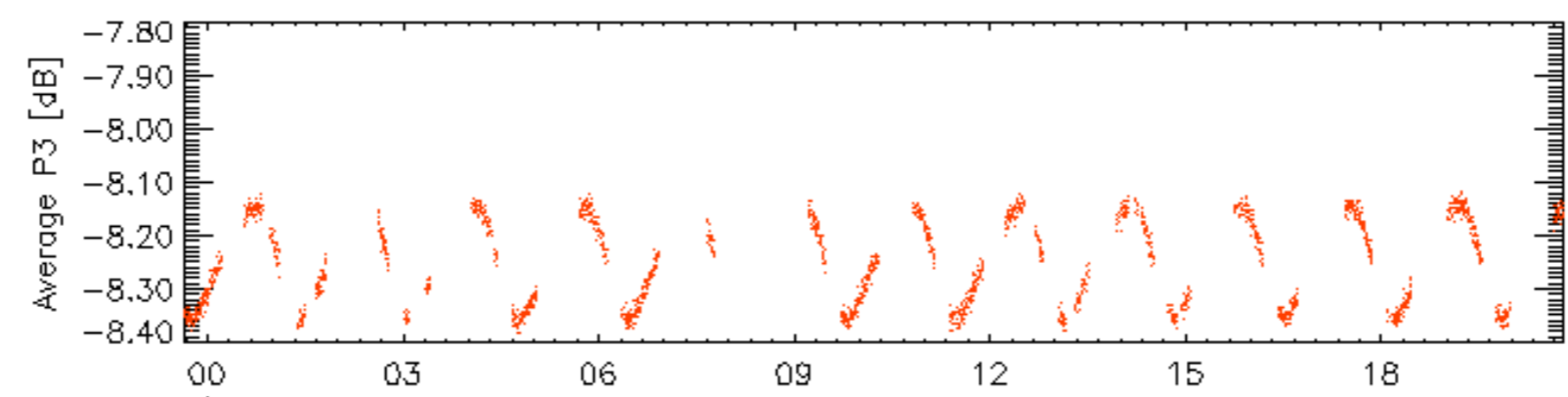
08-Mar



08-Mar



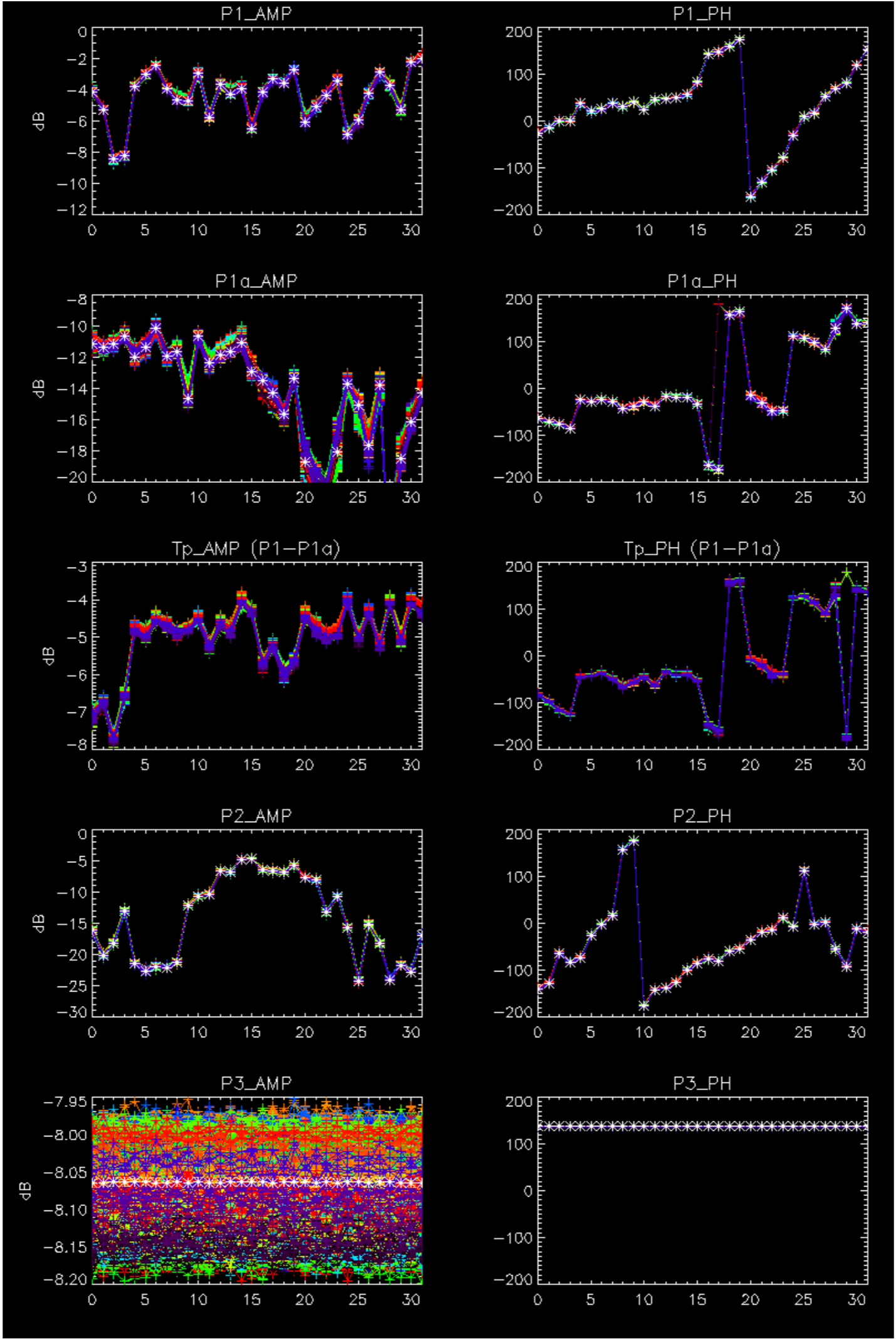
08-Mar

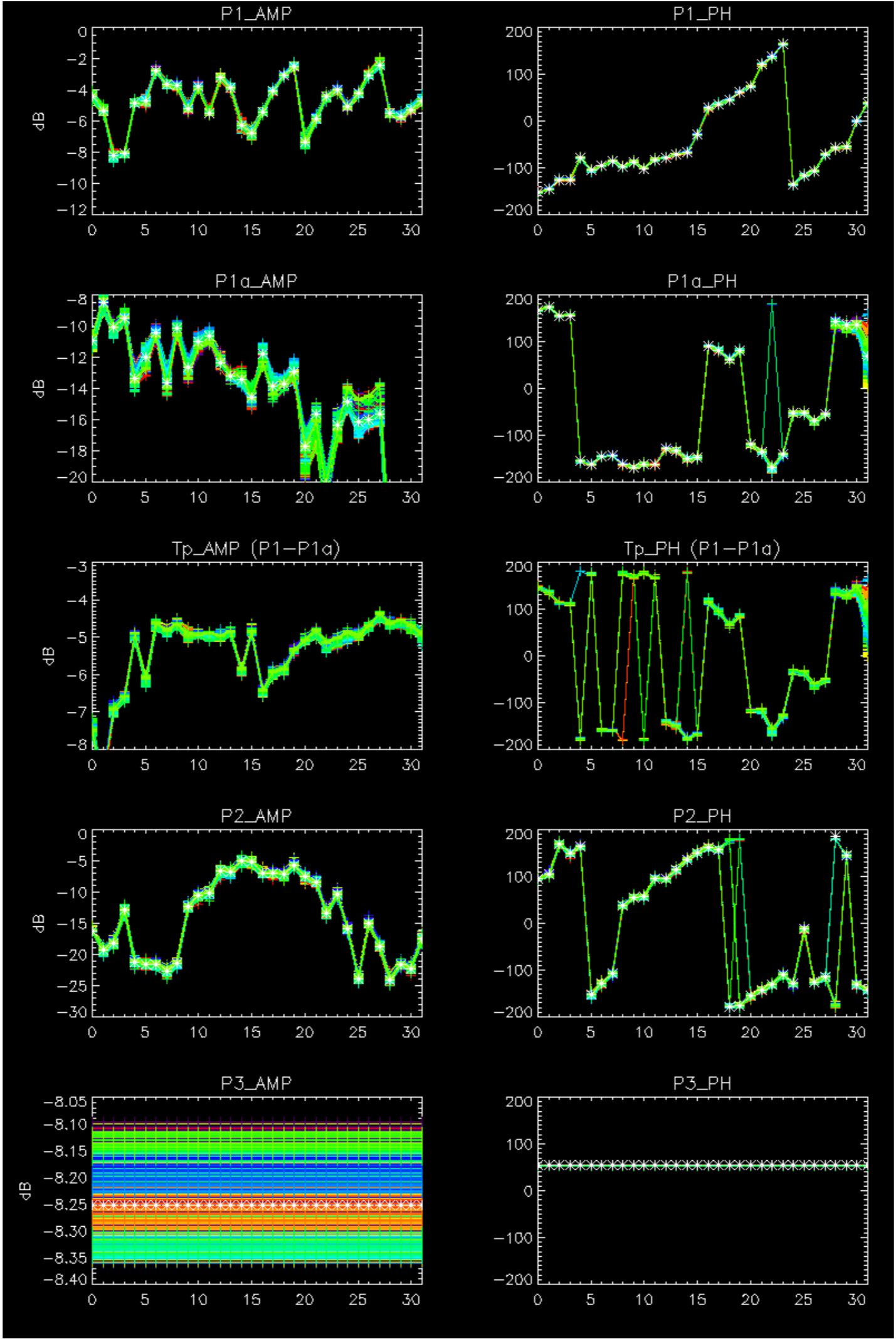


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rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

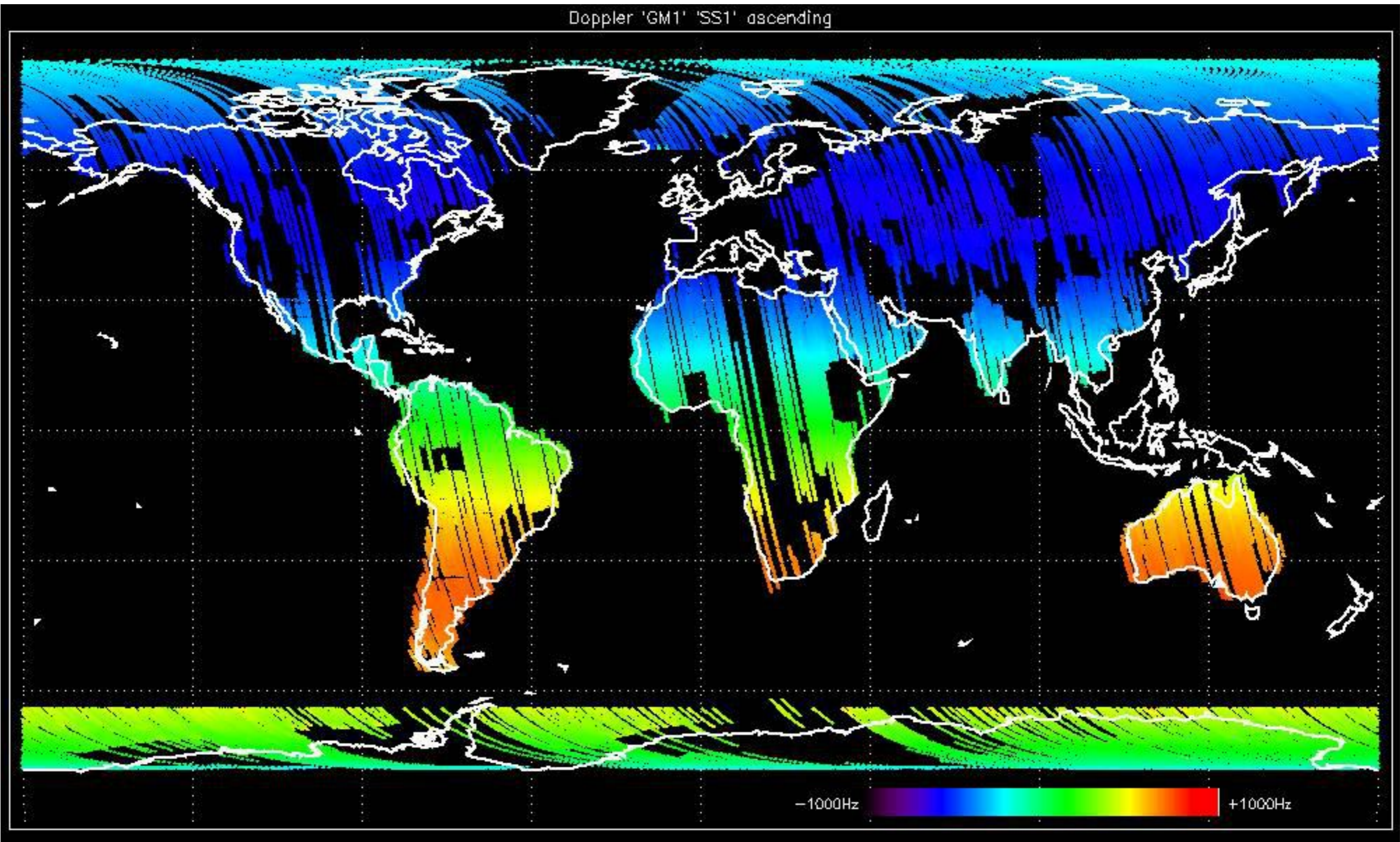
No anomalies observed.



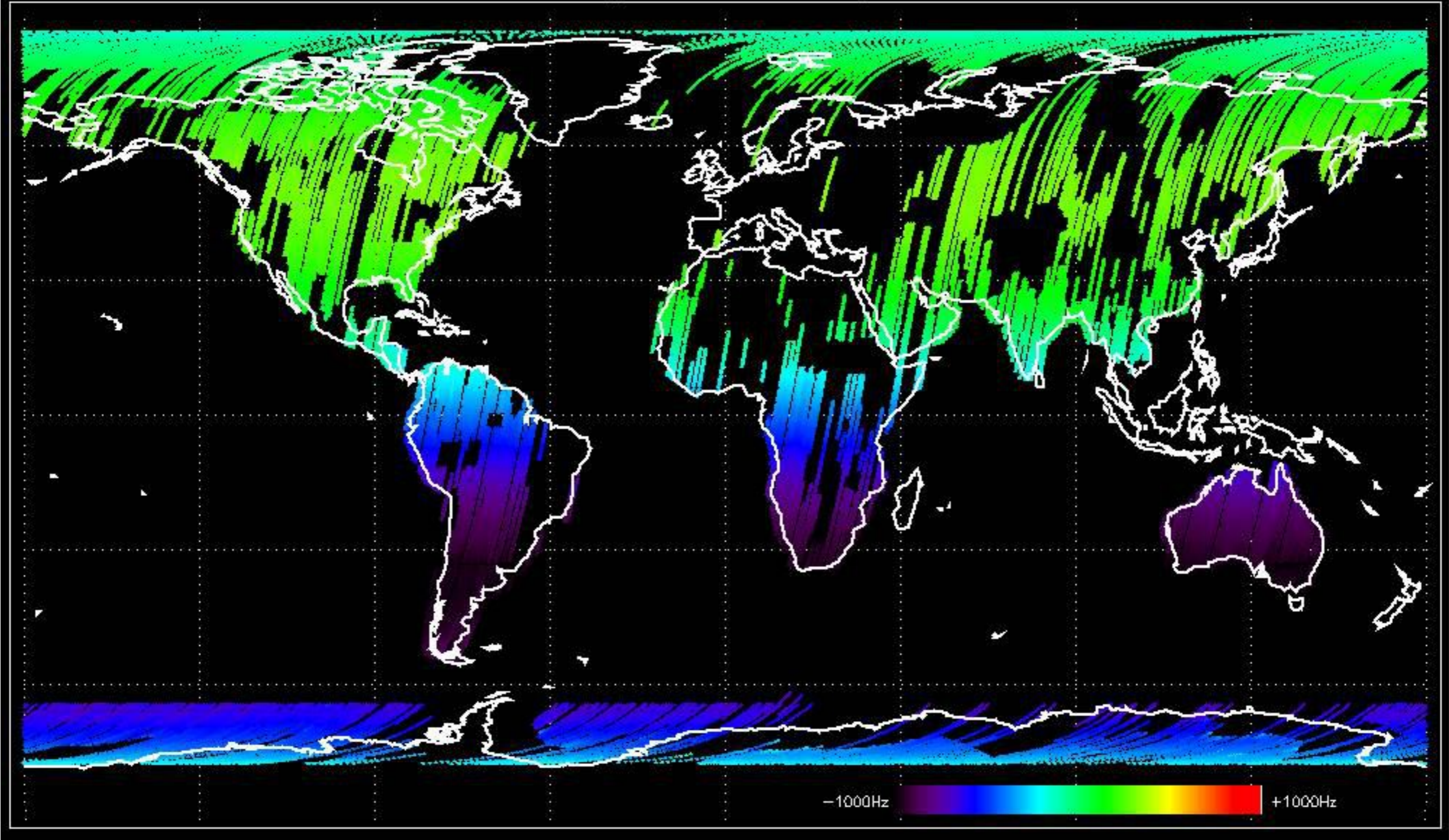


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

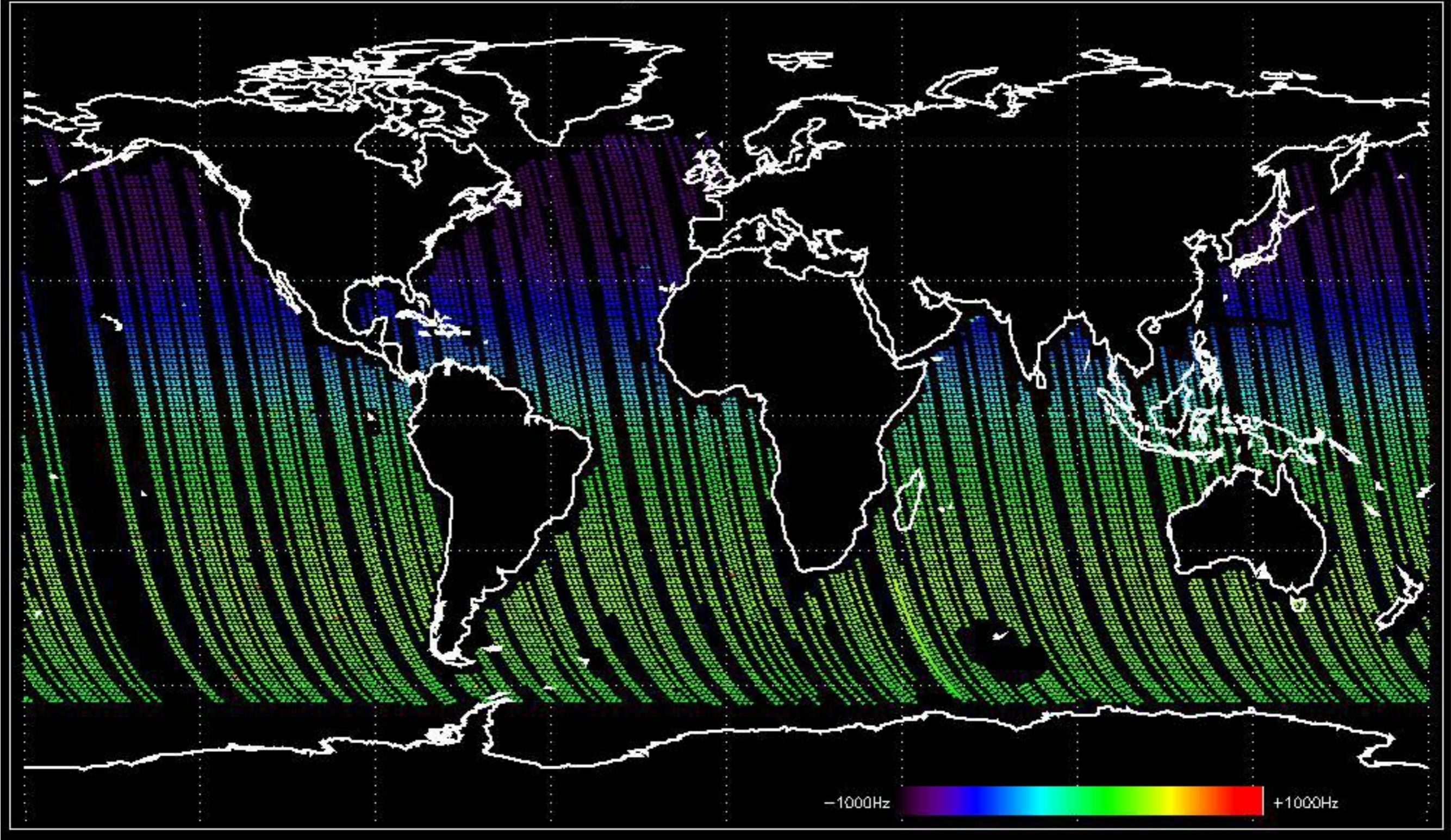
Doppler 'GM1' 'SS1' ascending



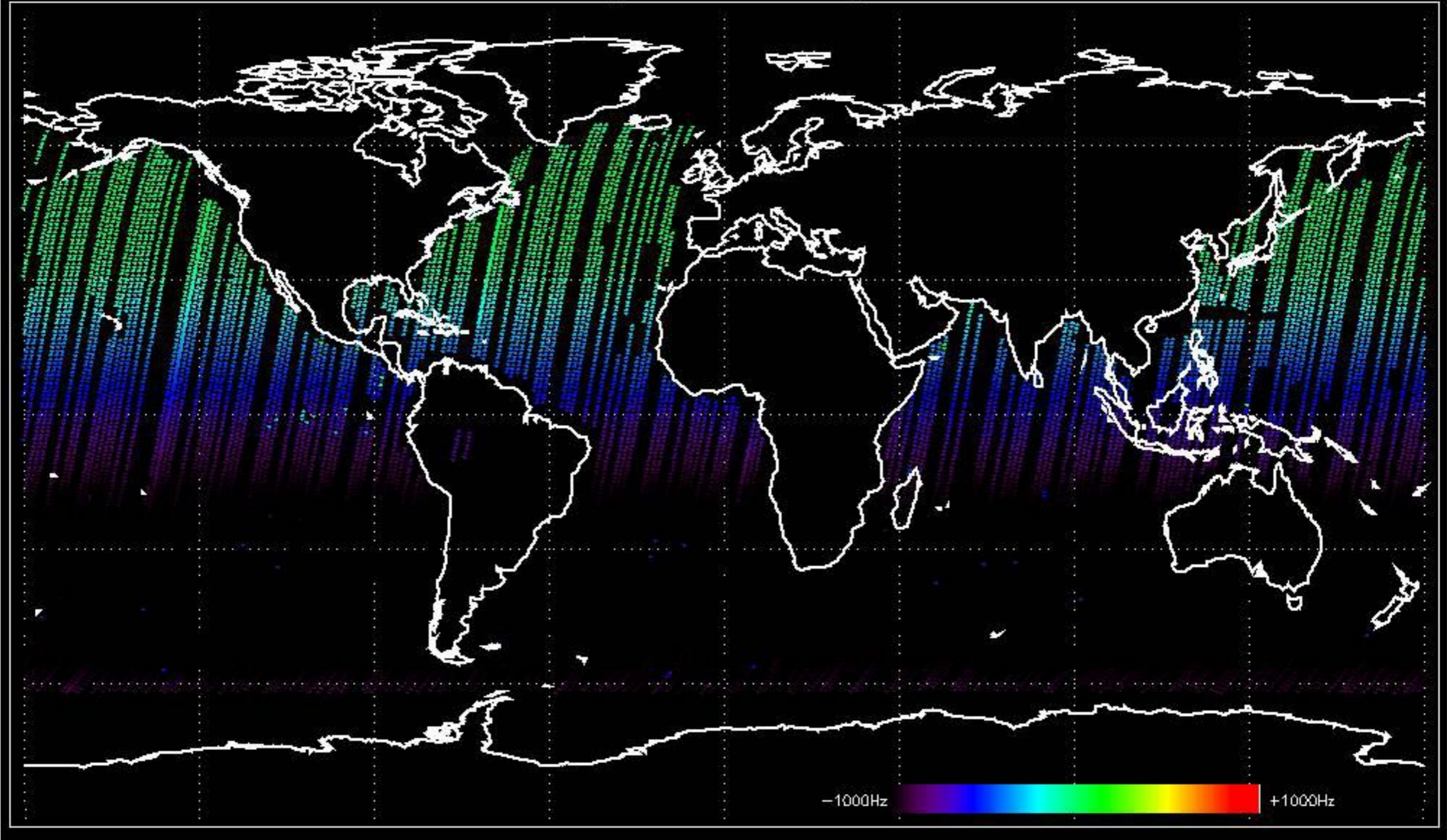
Doppler 'GM1' 'SS1' descending



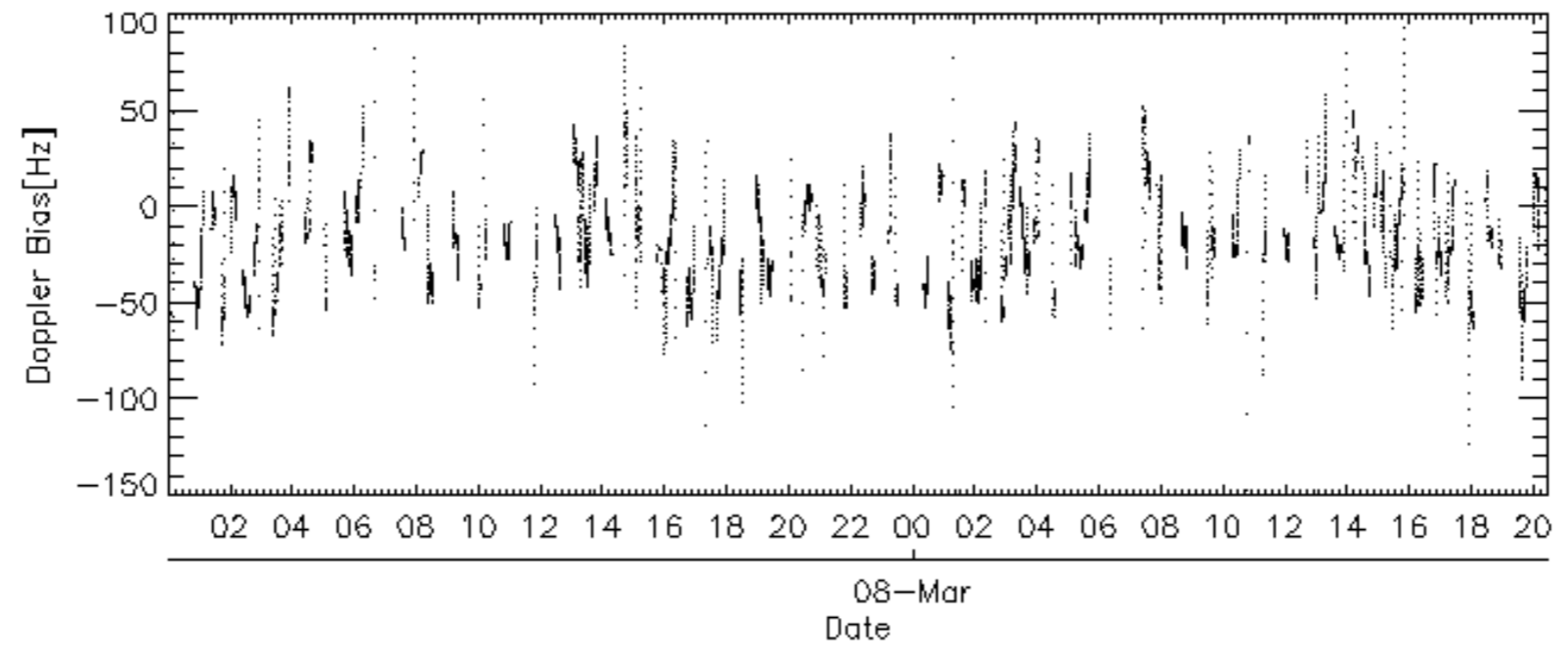
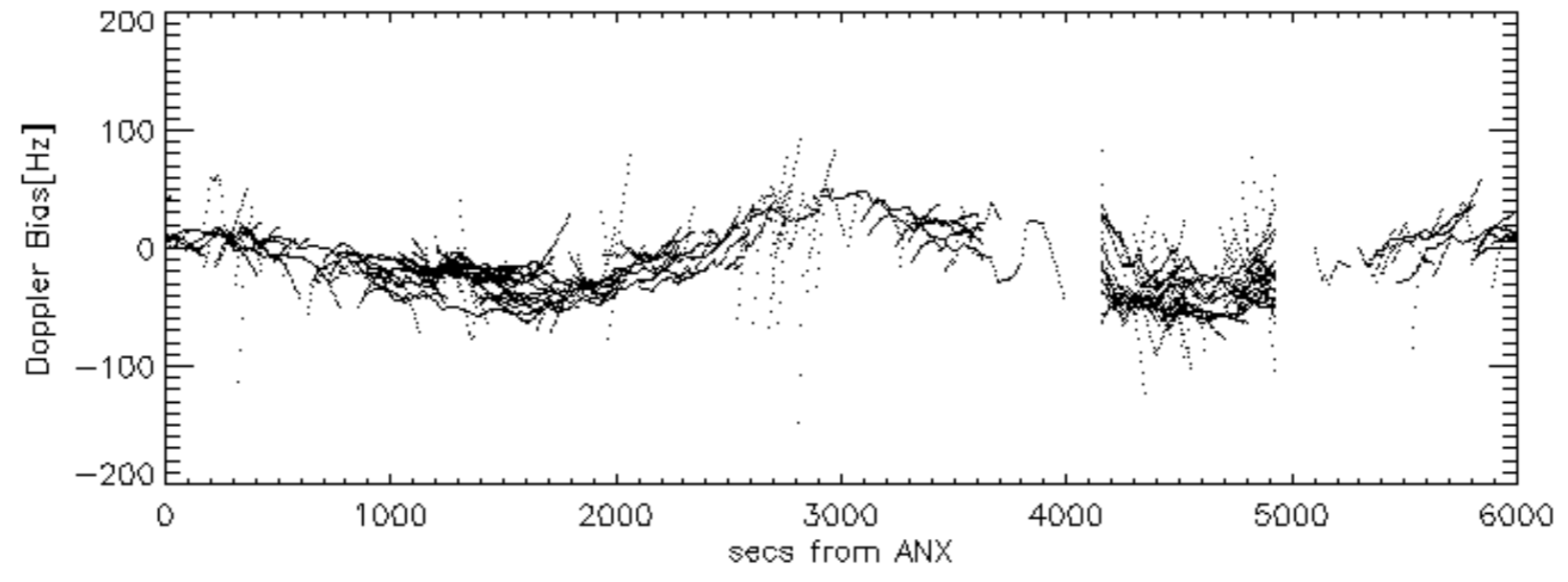
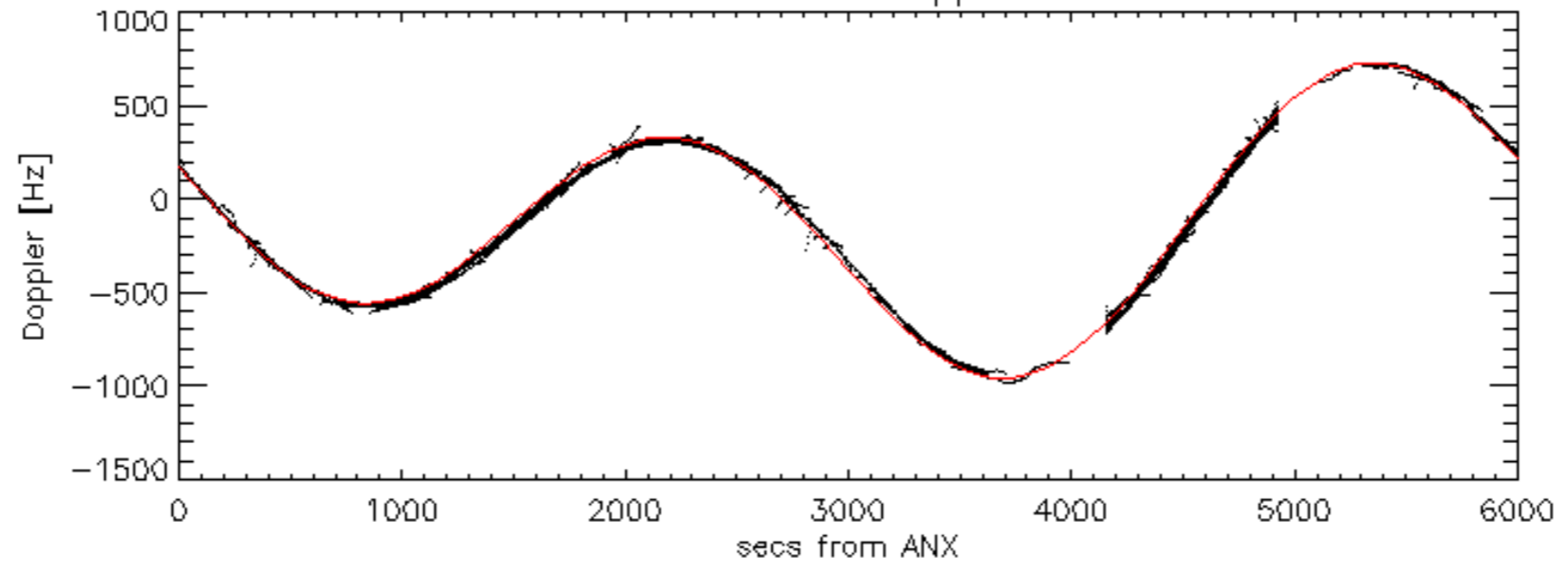
Doppler 'WVS' 'IS4' ascending

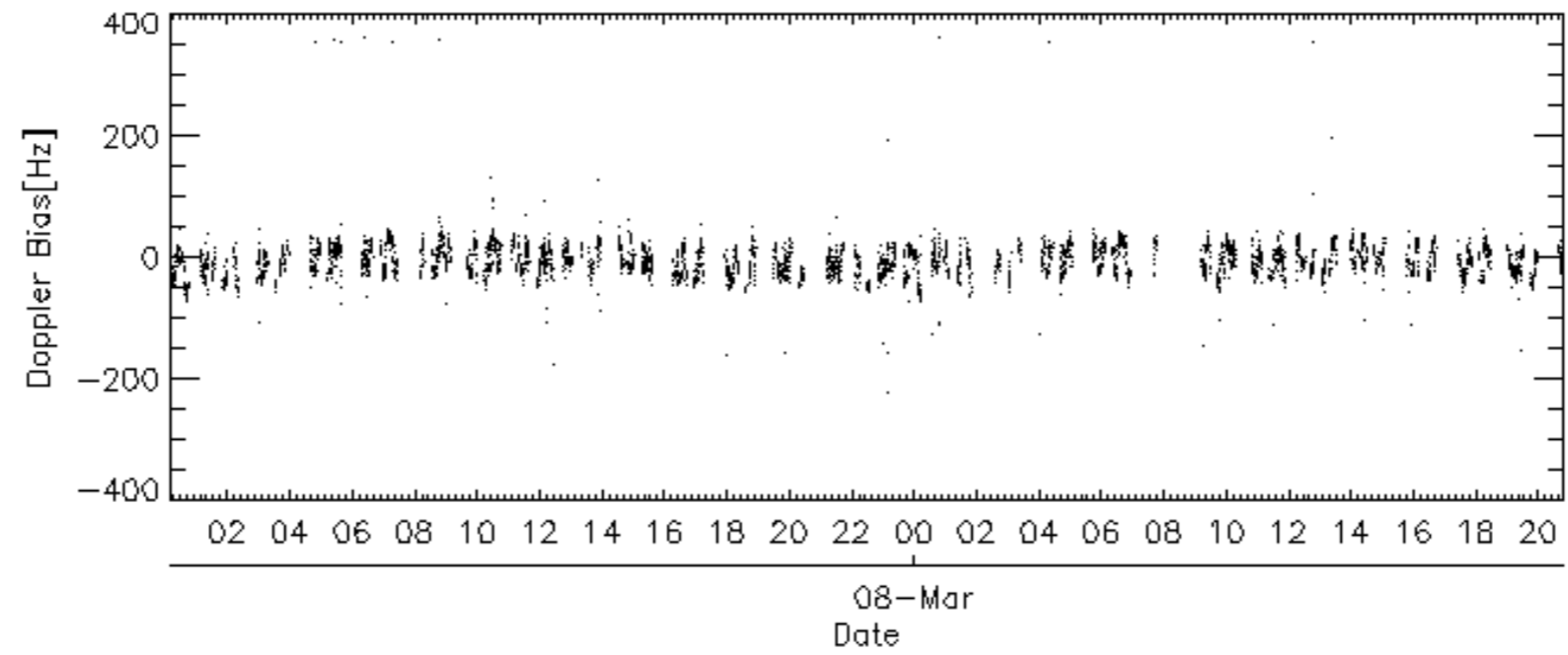
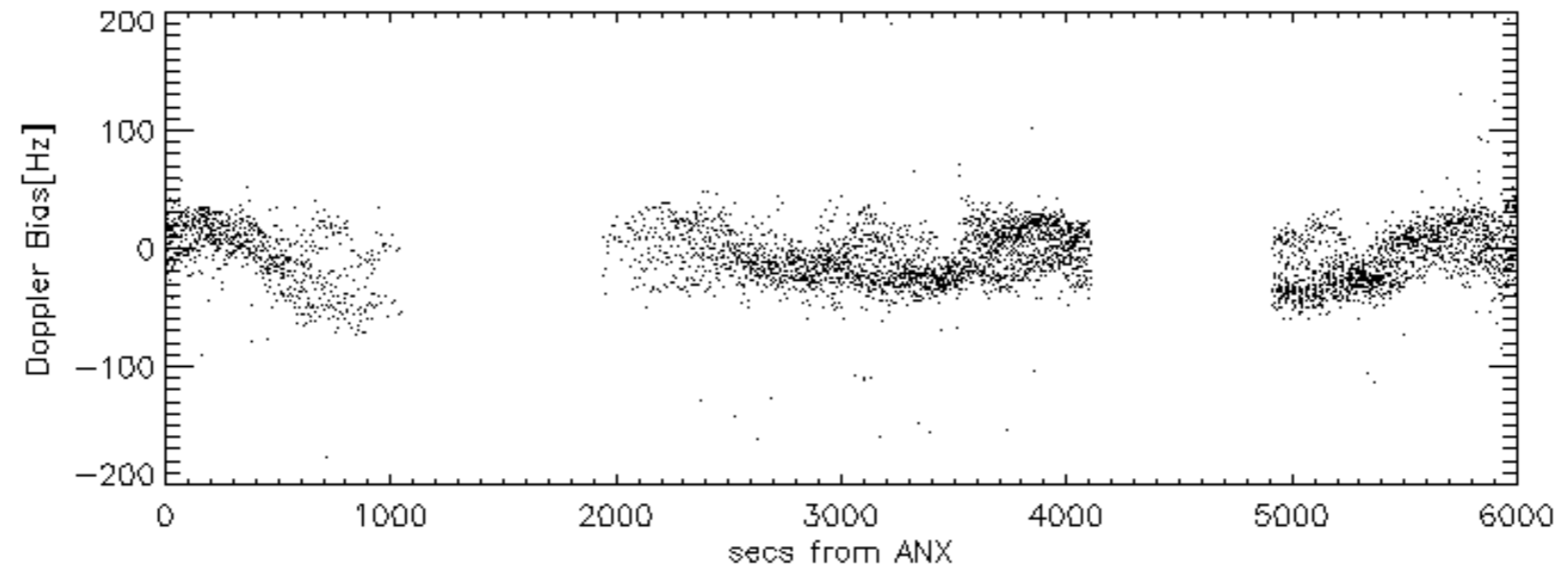
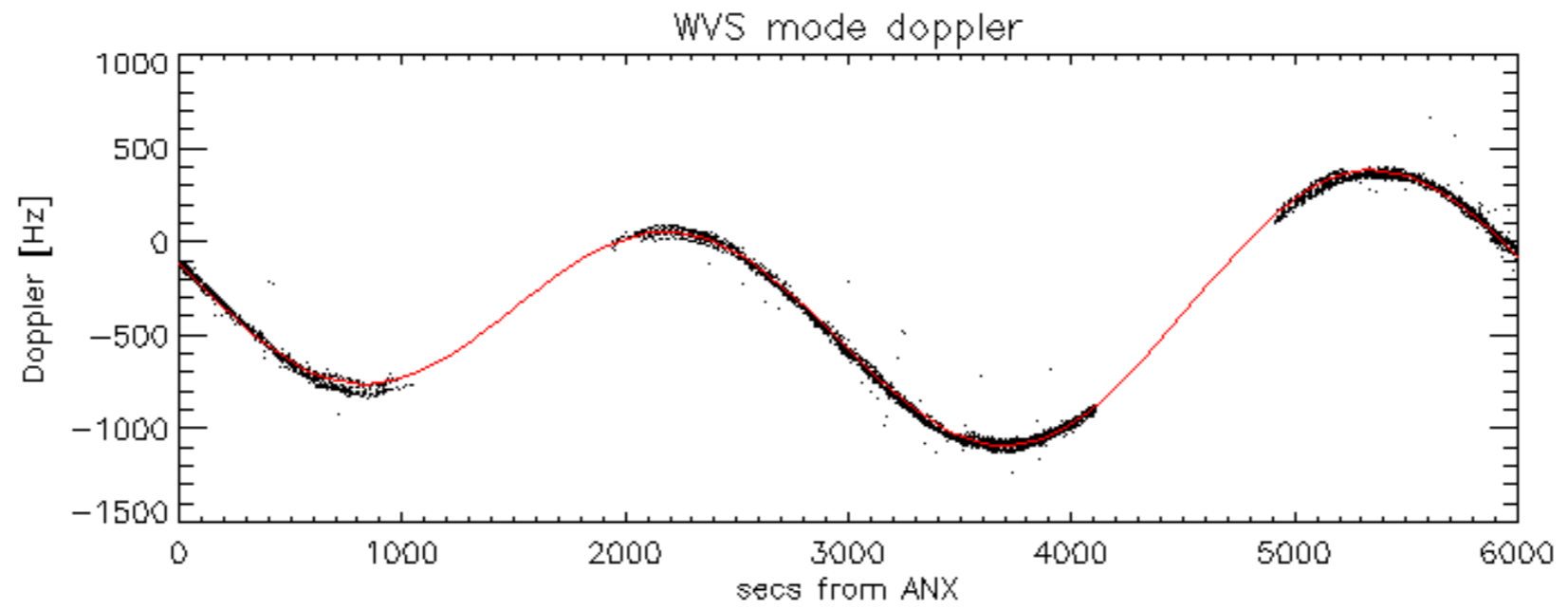


Doppler 'WVS' 'IS4' descending

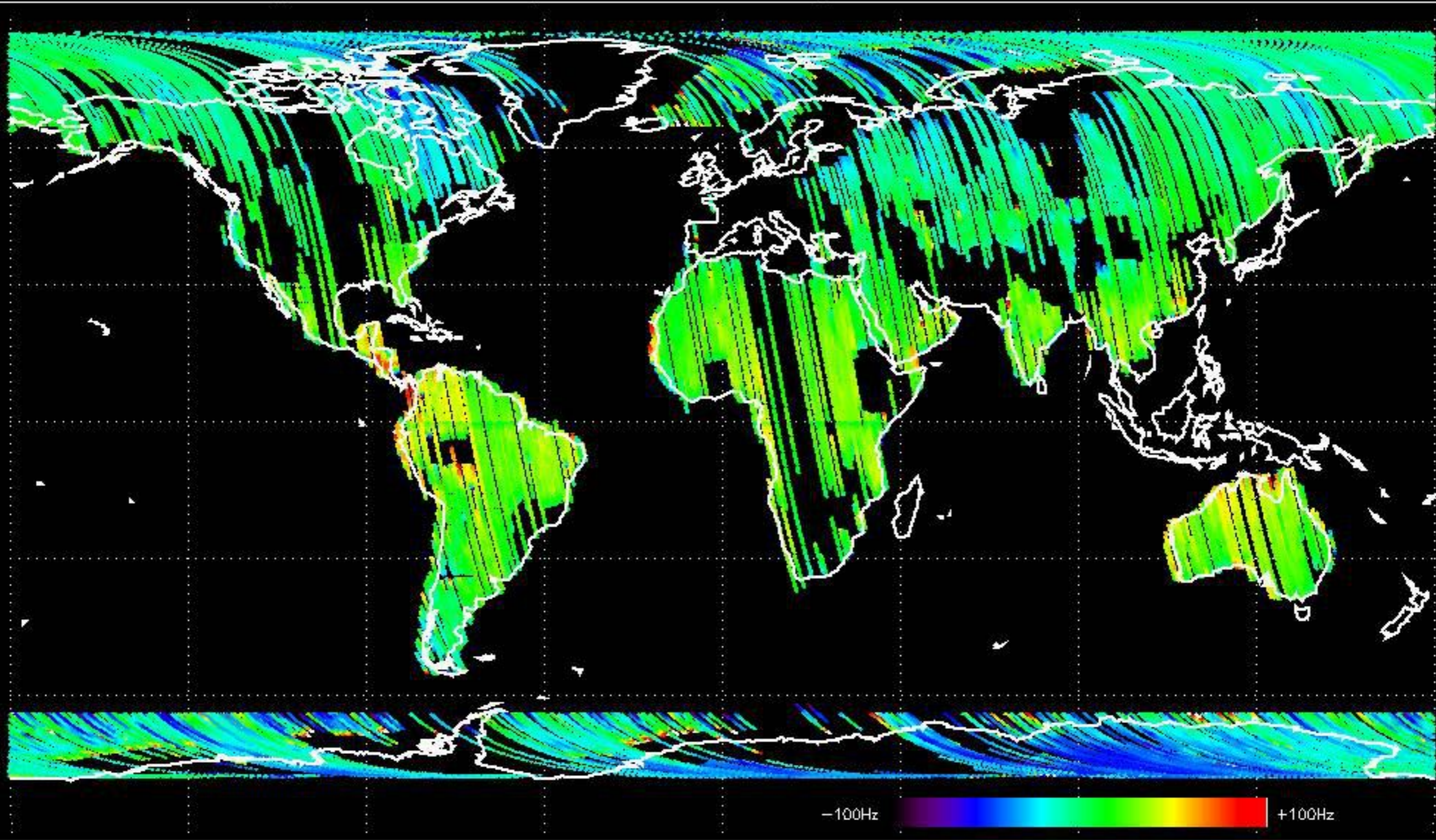


GM1 mode doppler

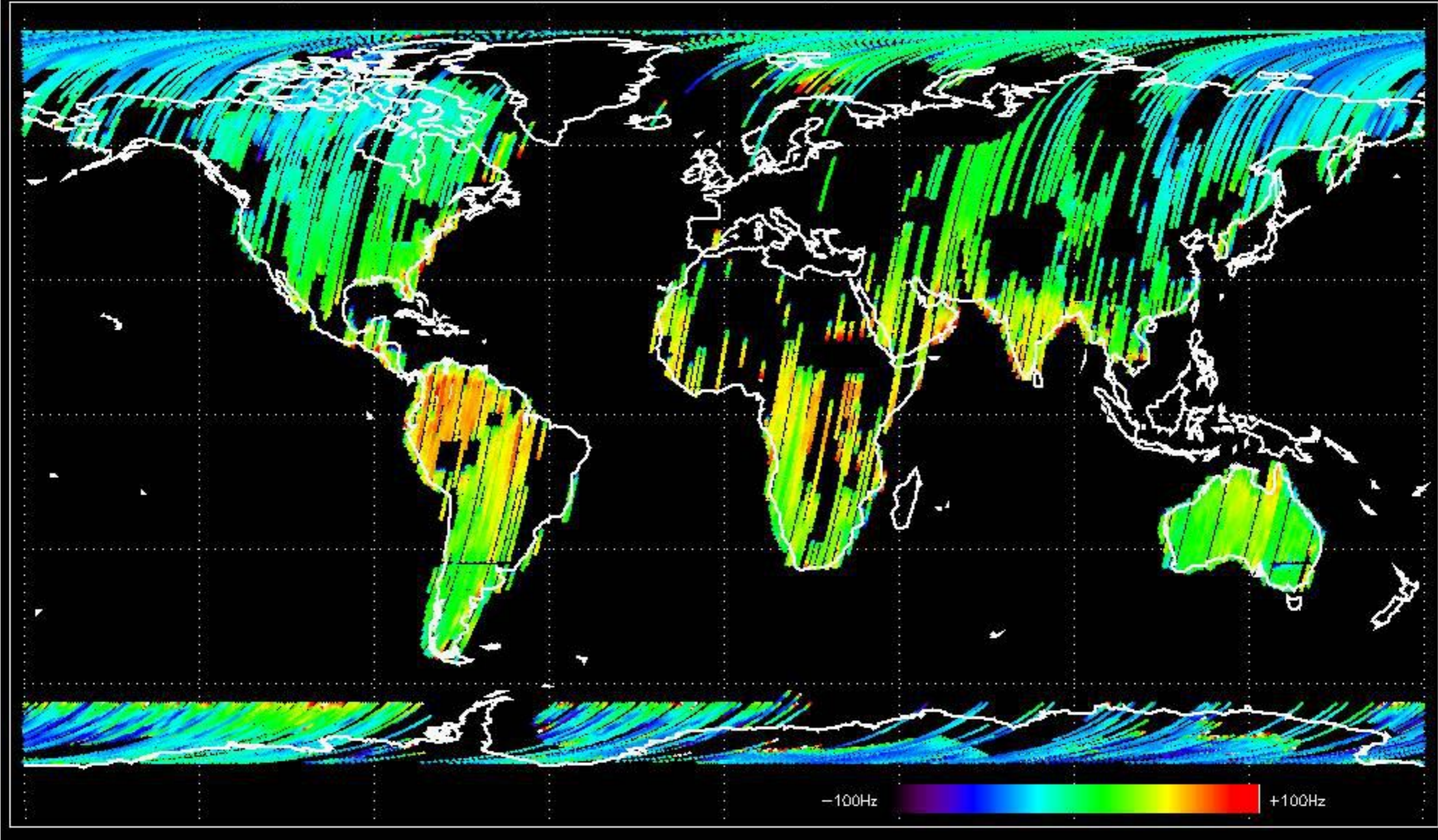




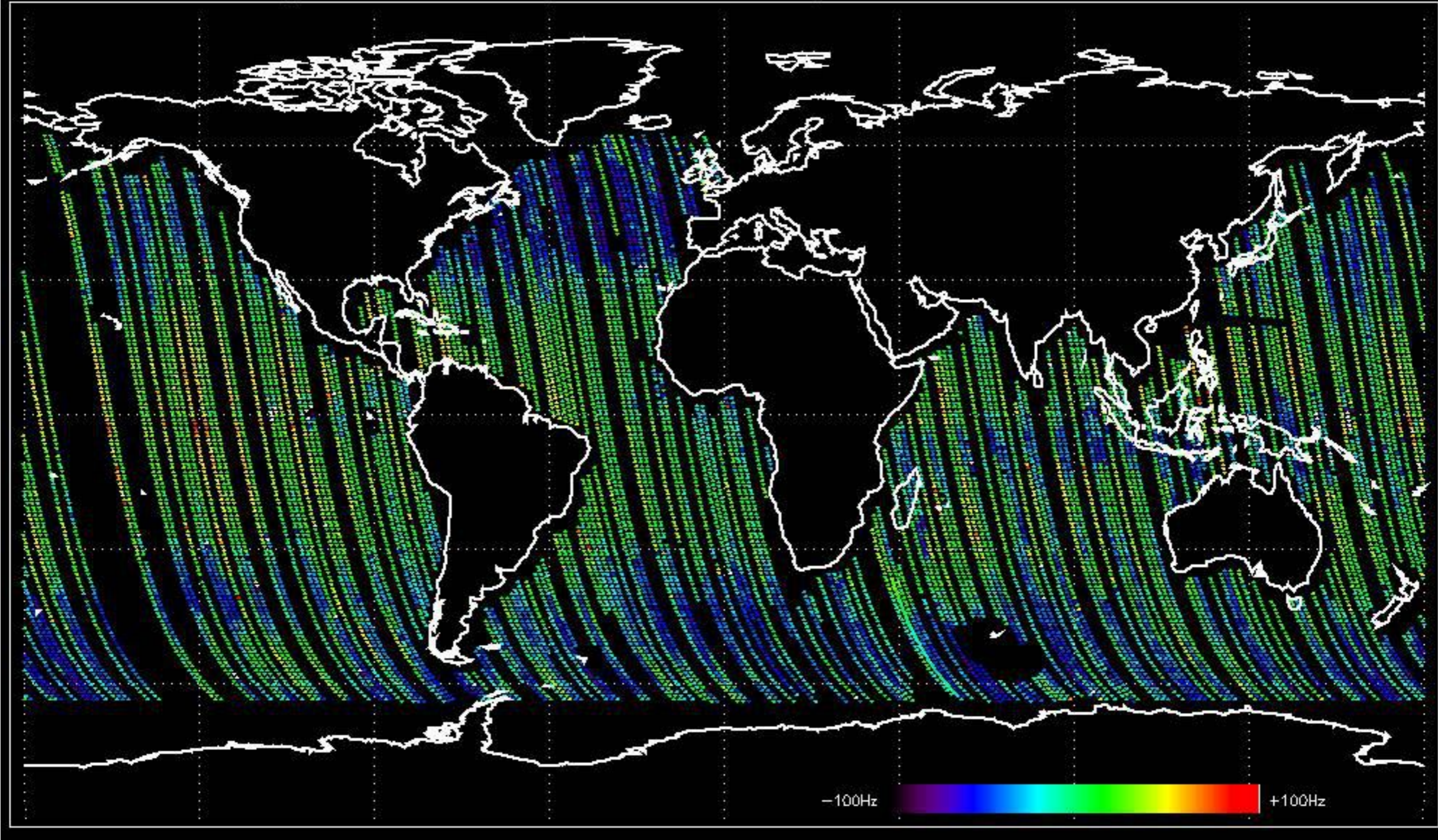
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.201247 Hz



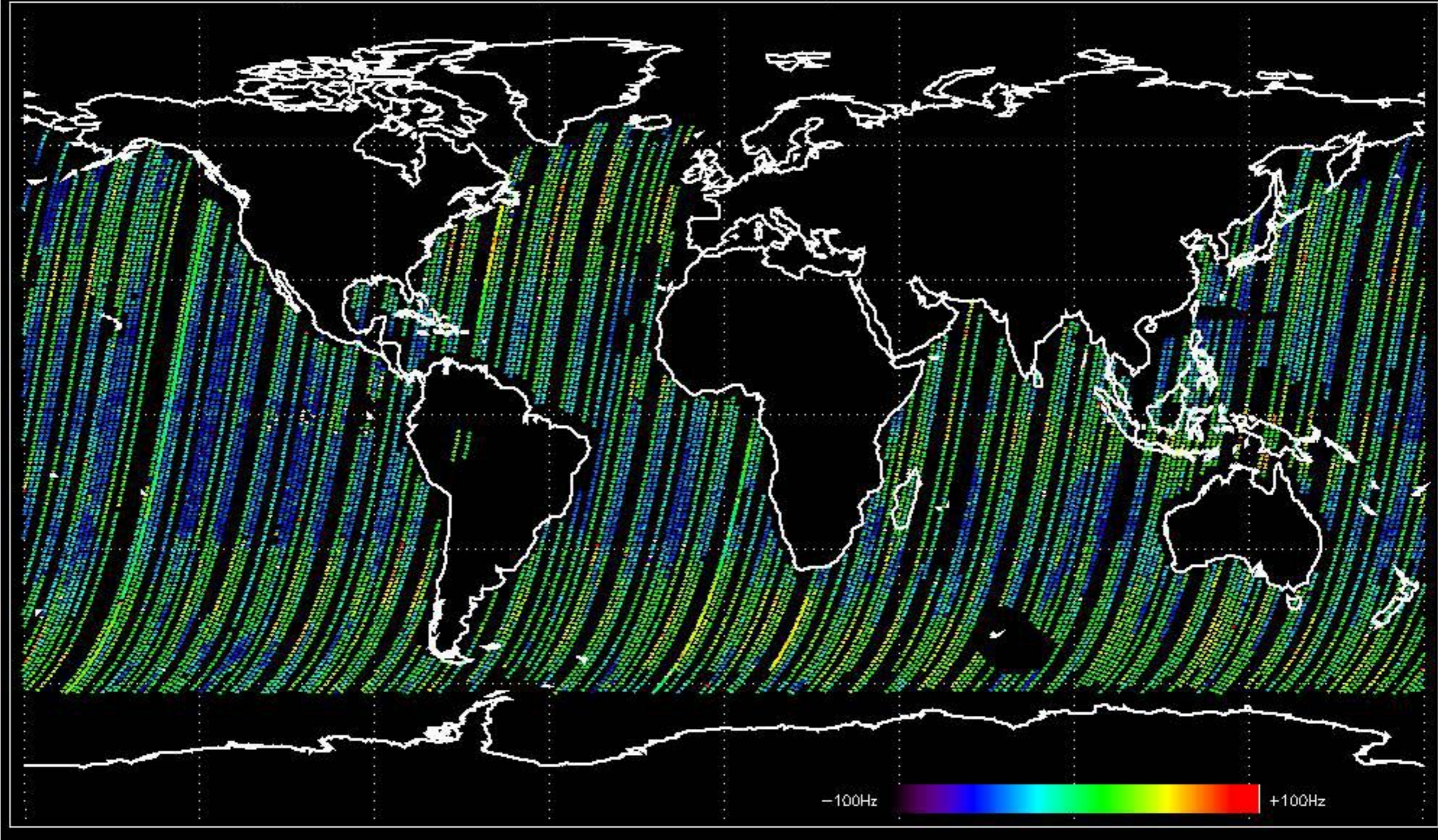
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.440848 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -22.948804 Hz

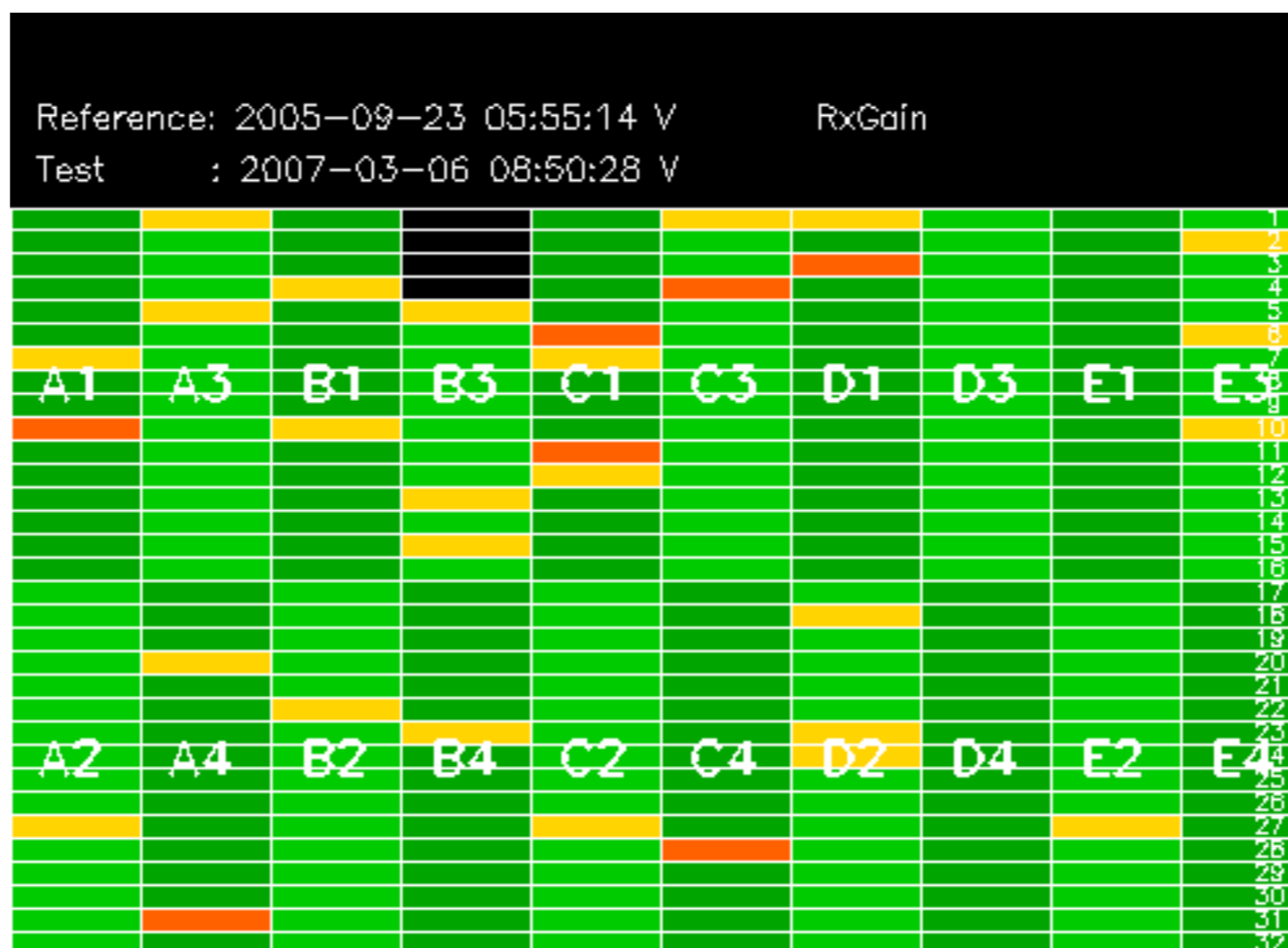


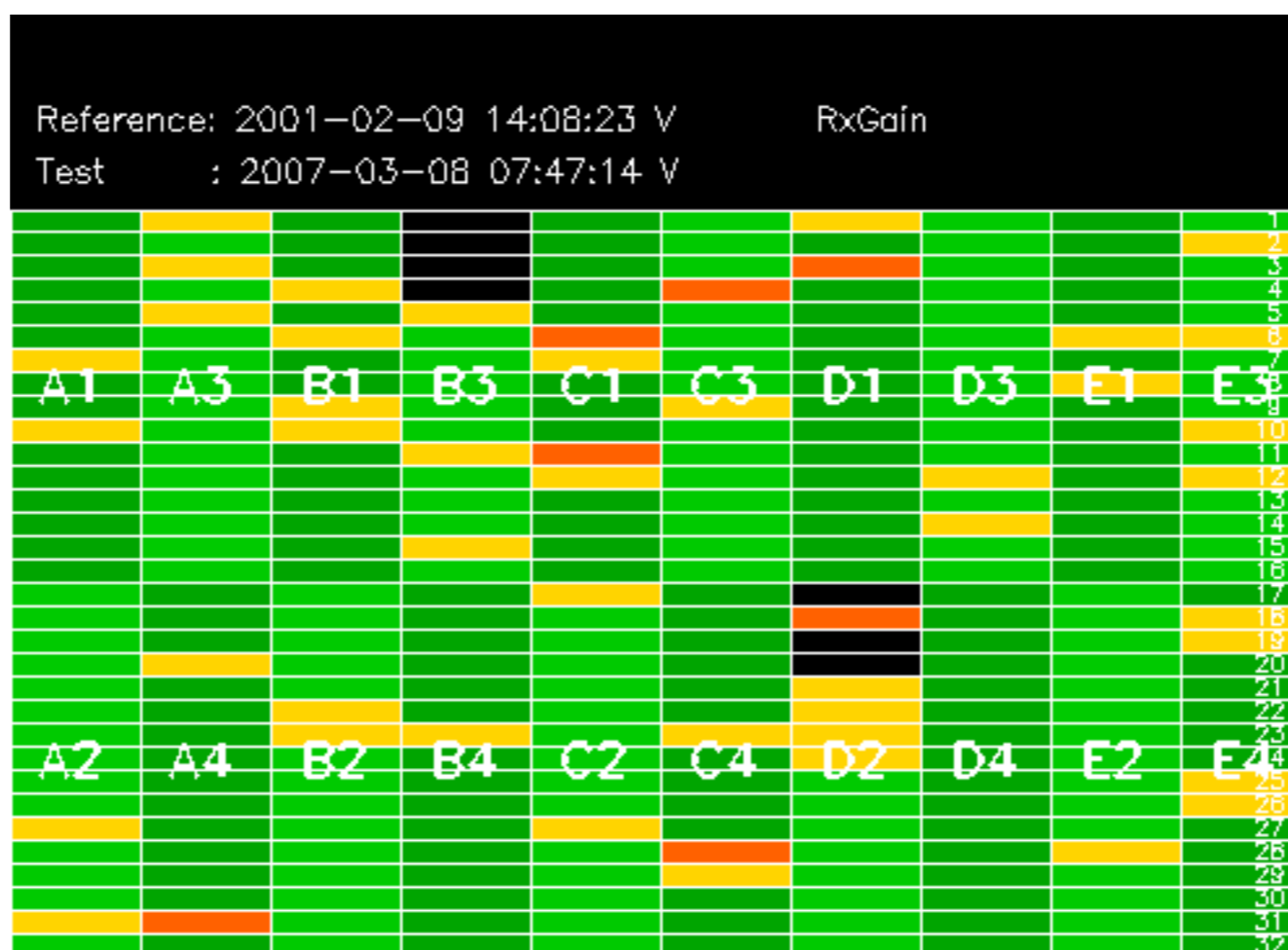
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -25.162117 Hz

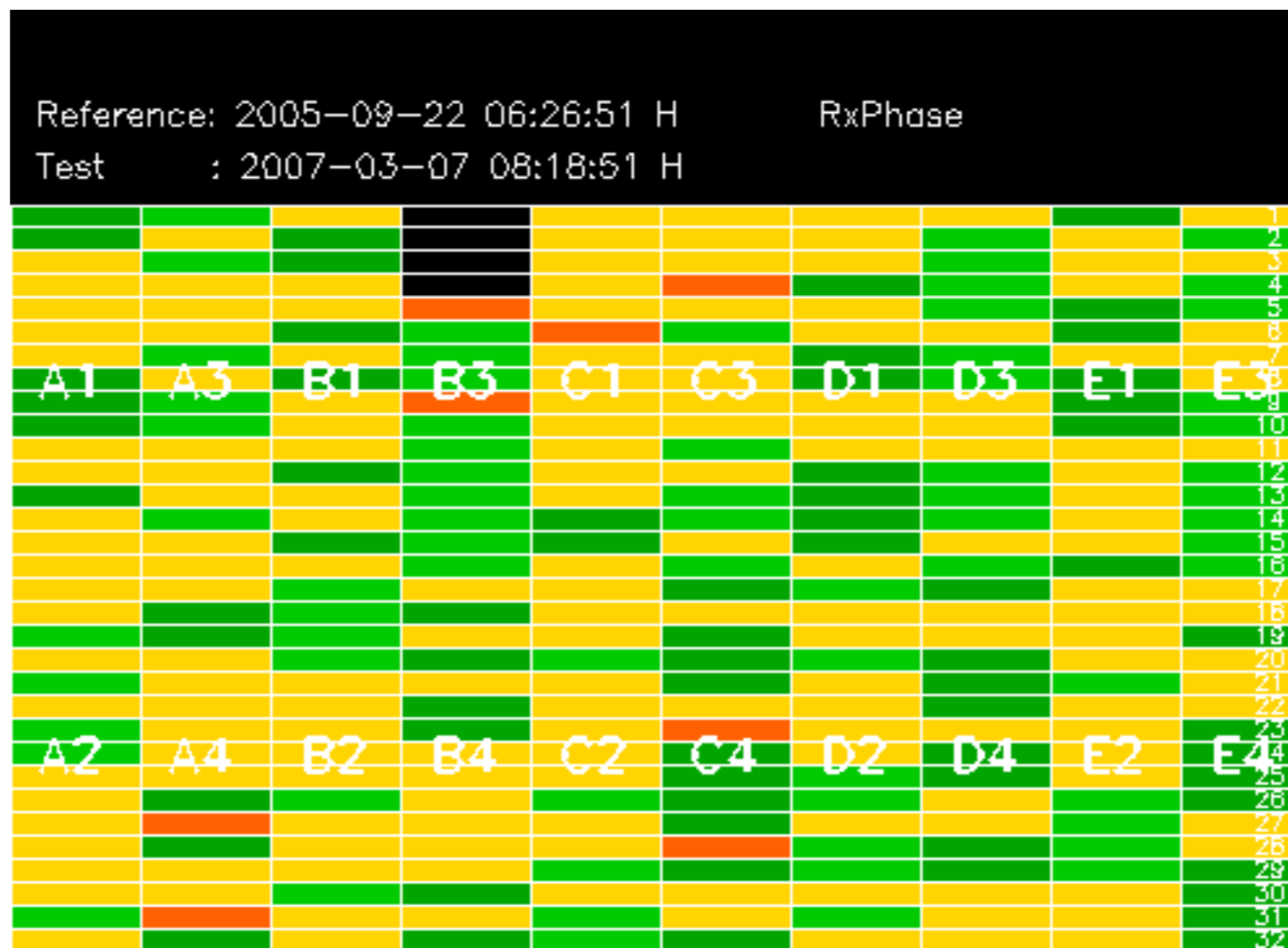


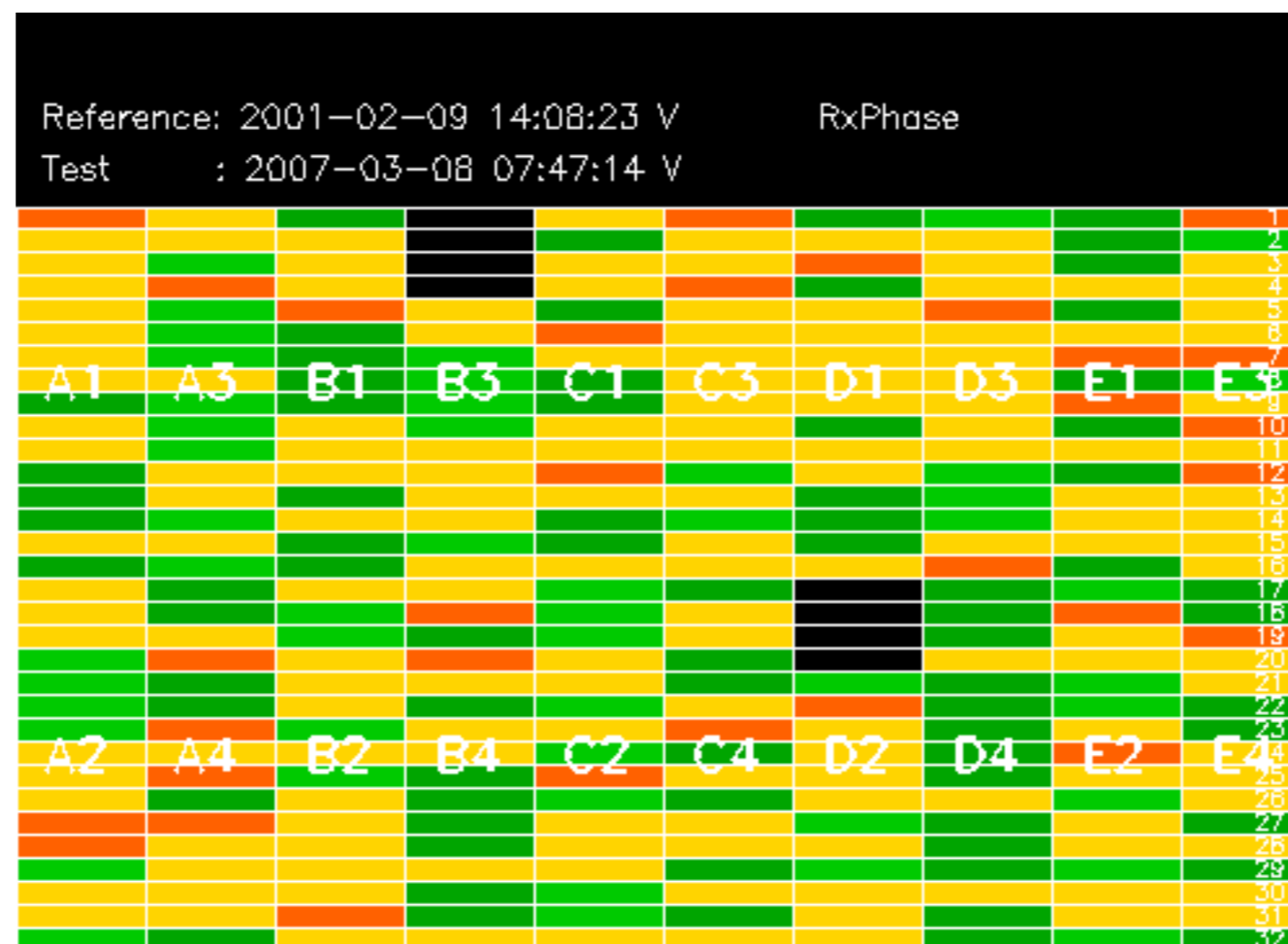
No anomalies observed on available MS products:

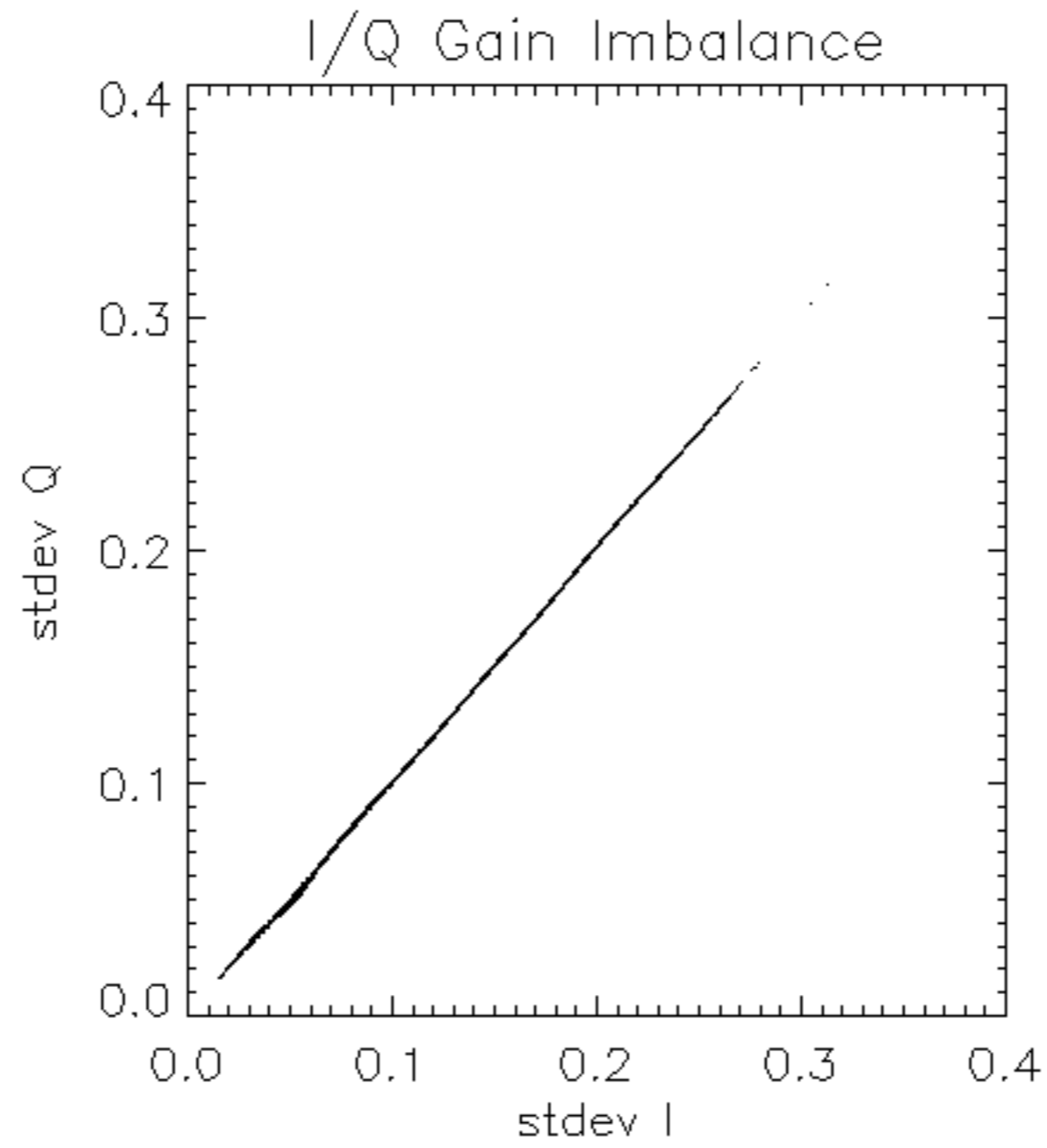
No anomalies observed.

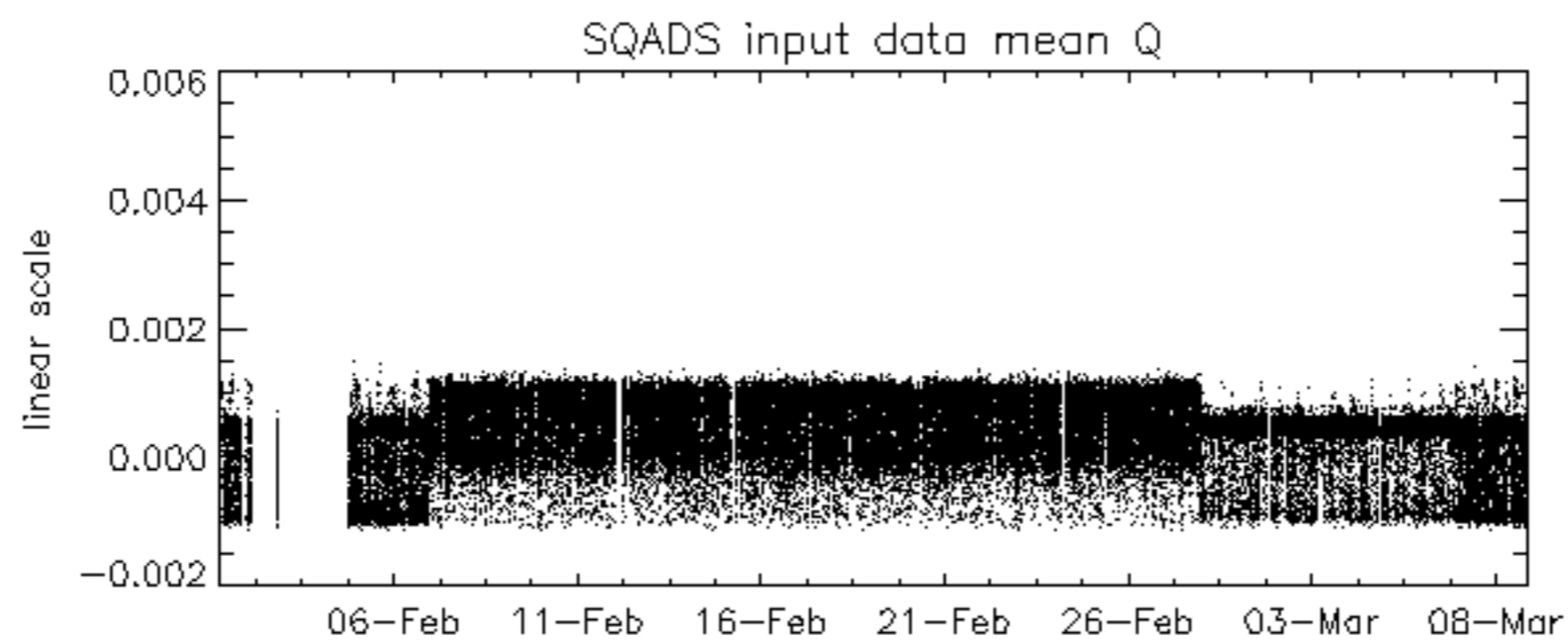
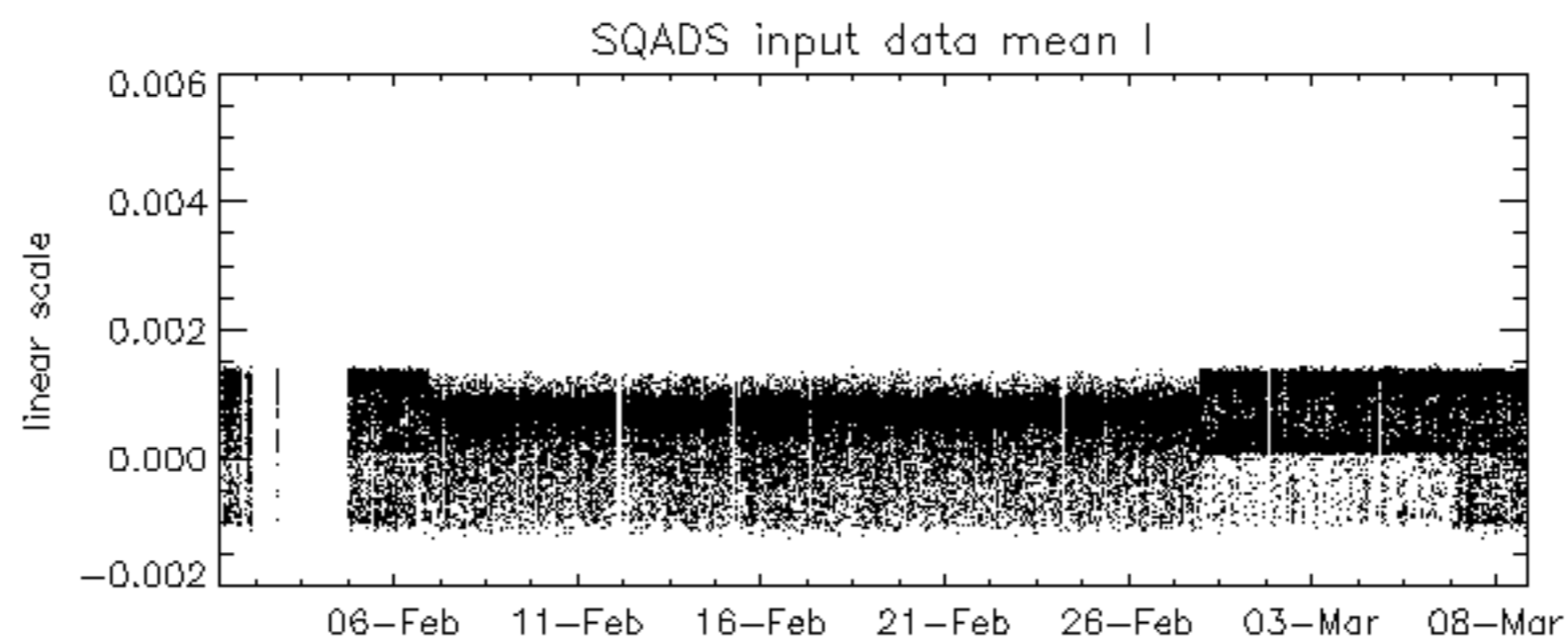
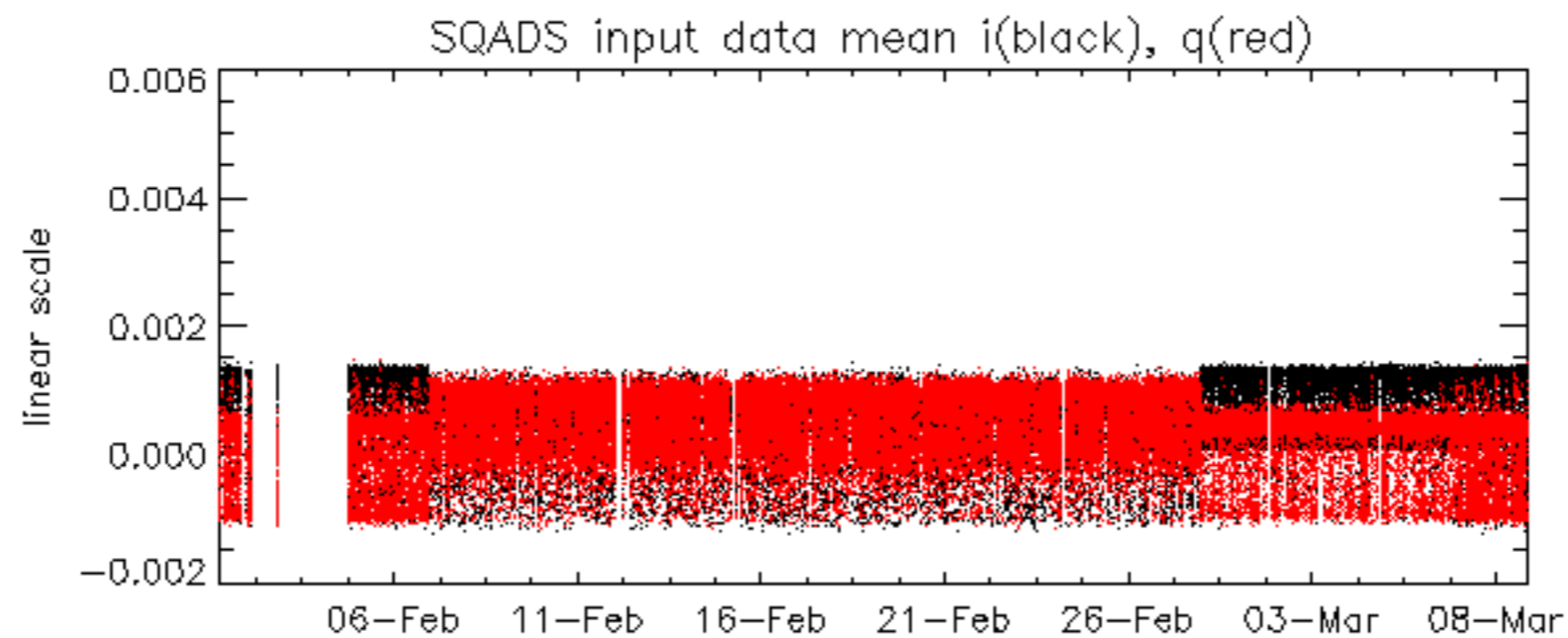


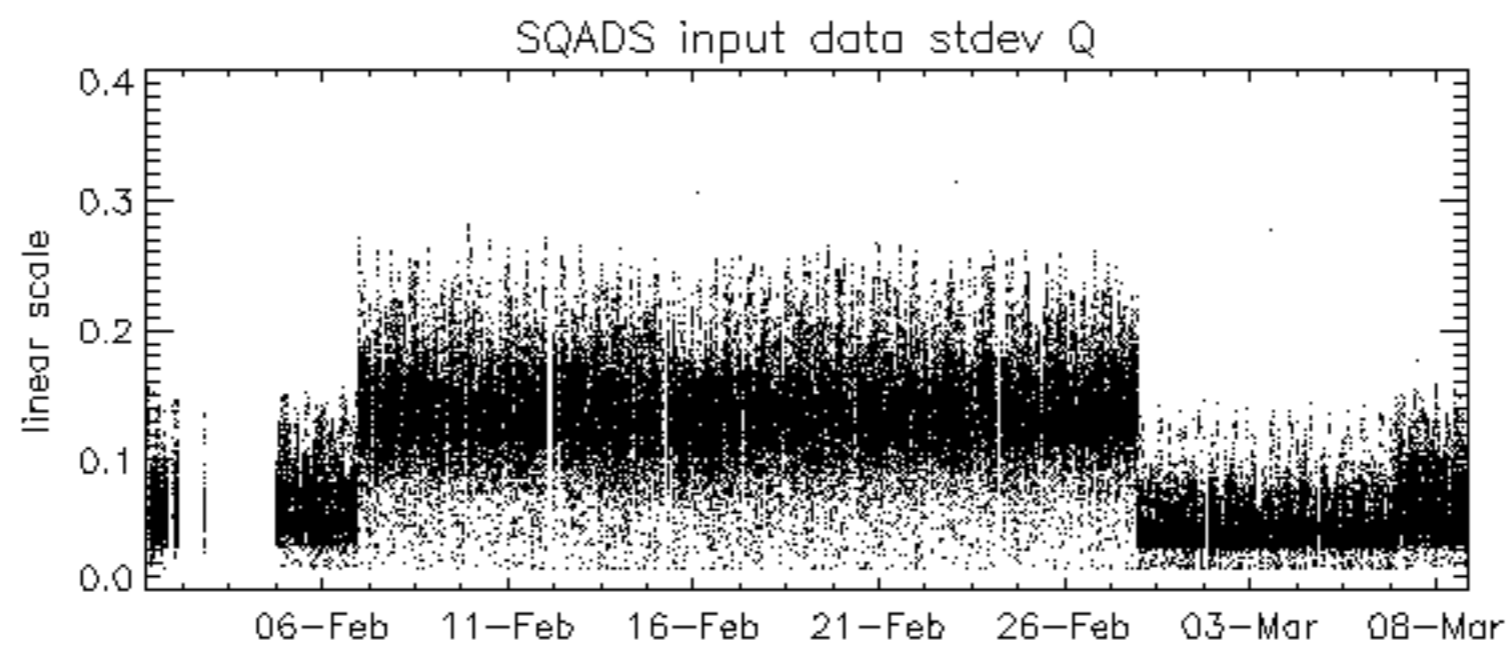
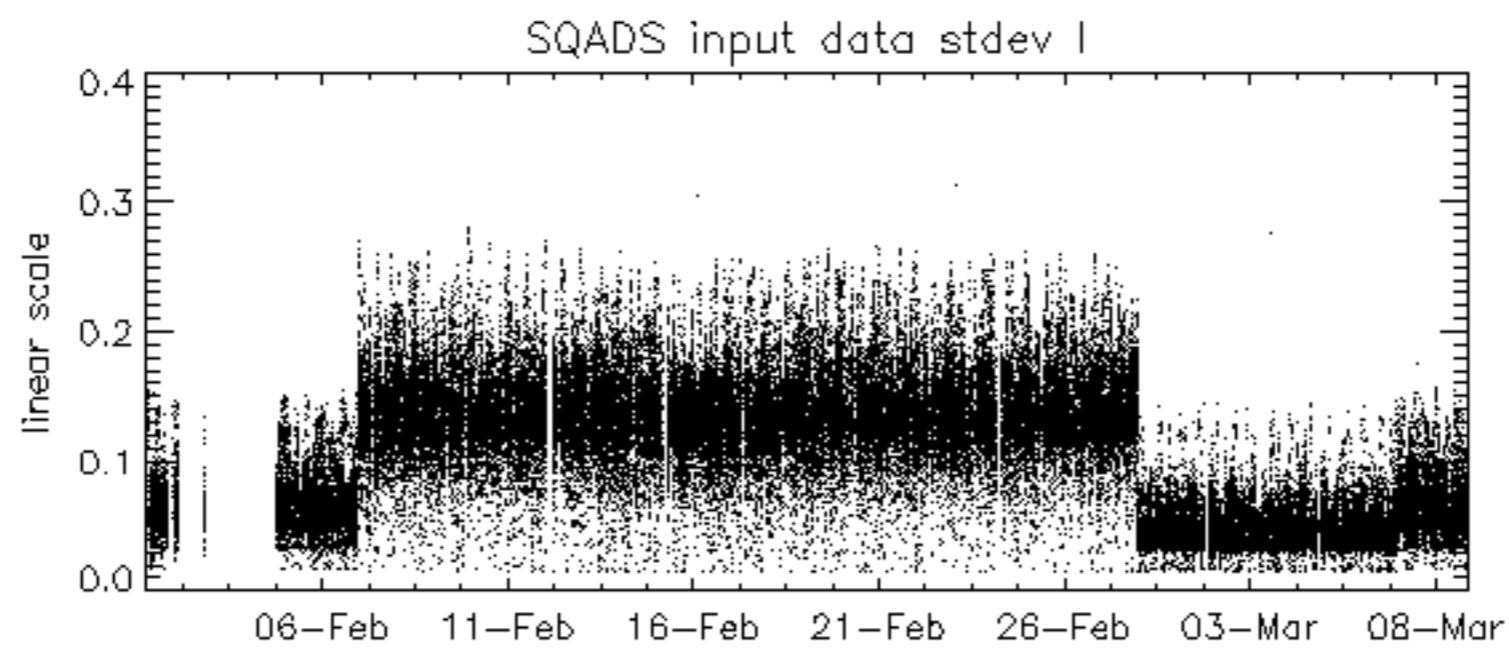
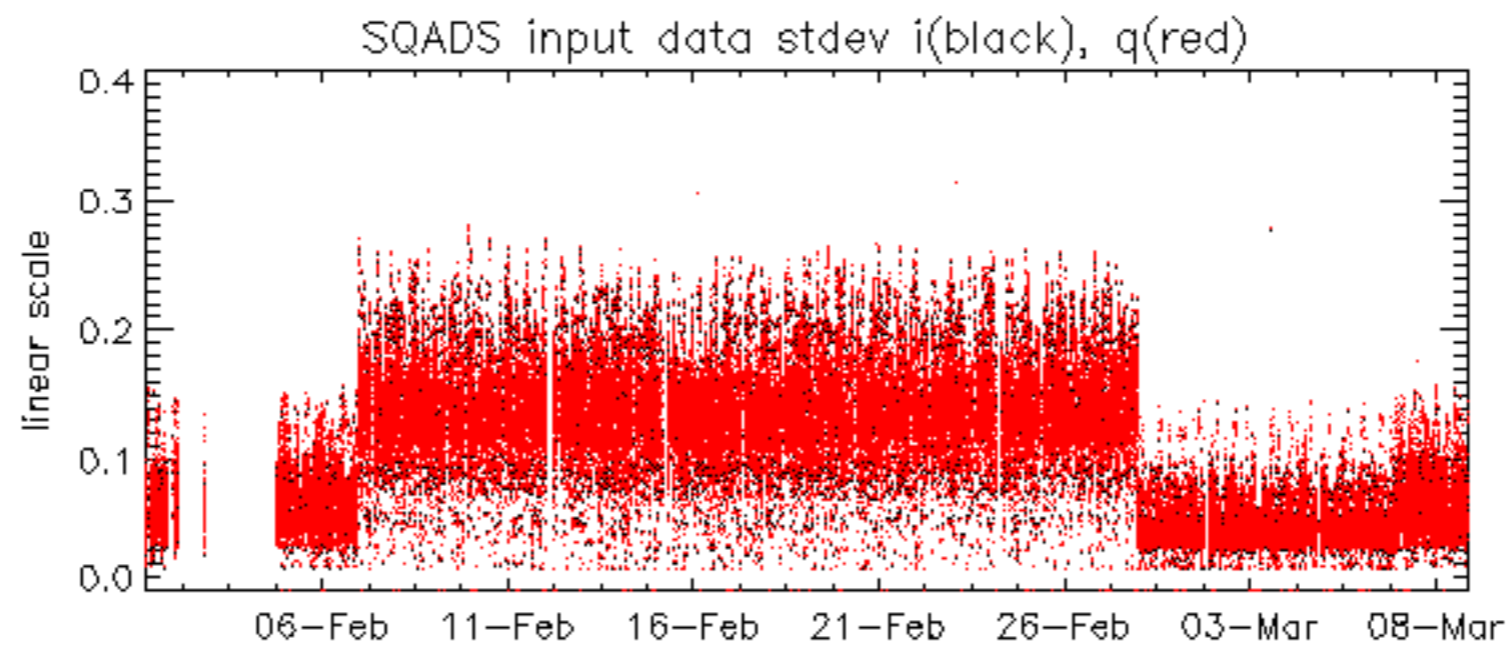








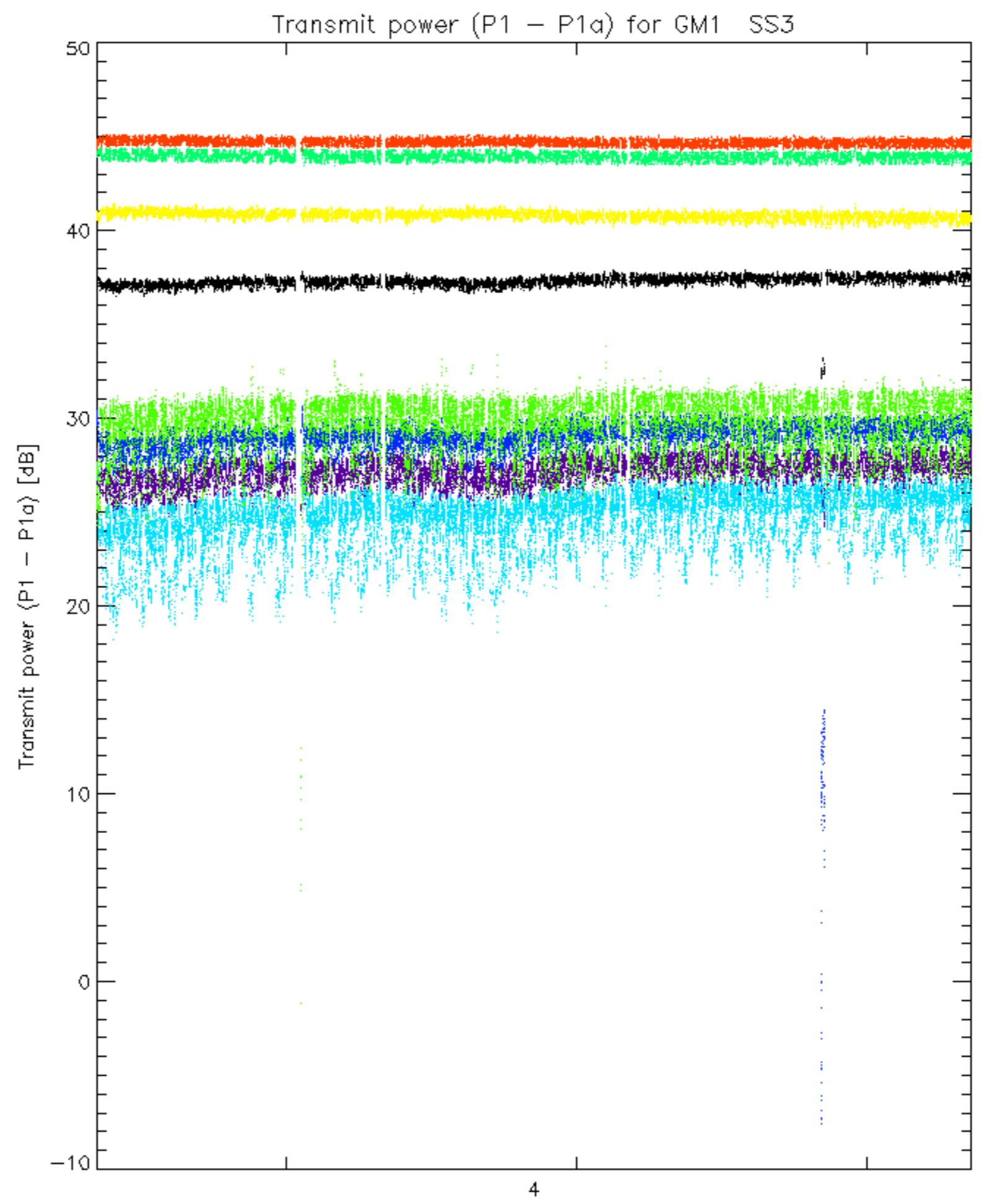




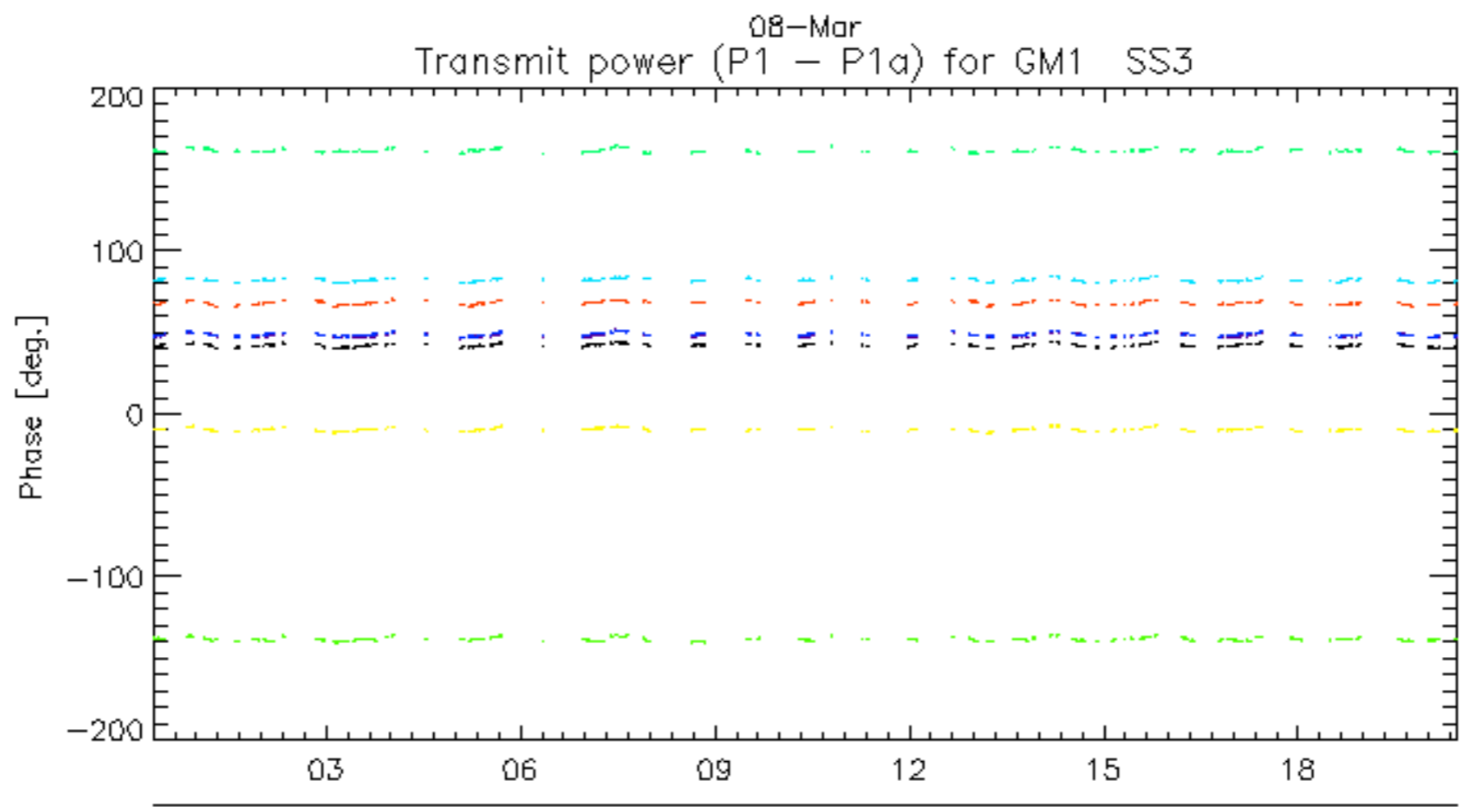
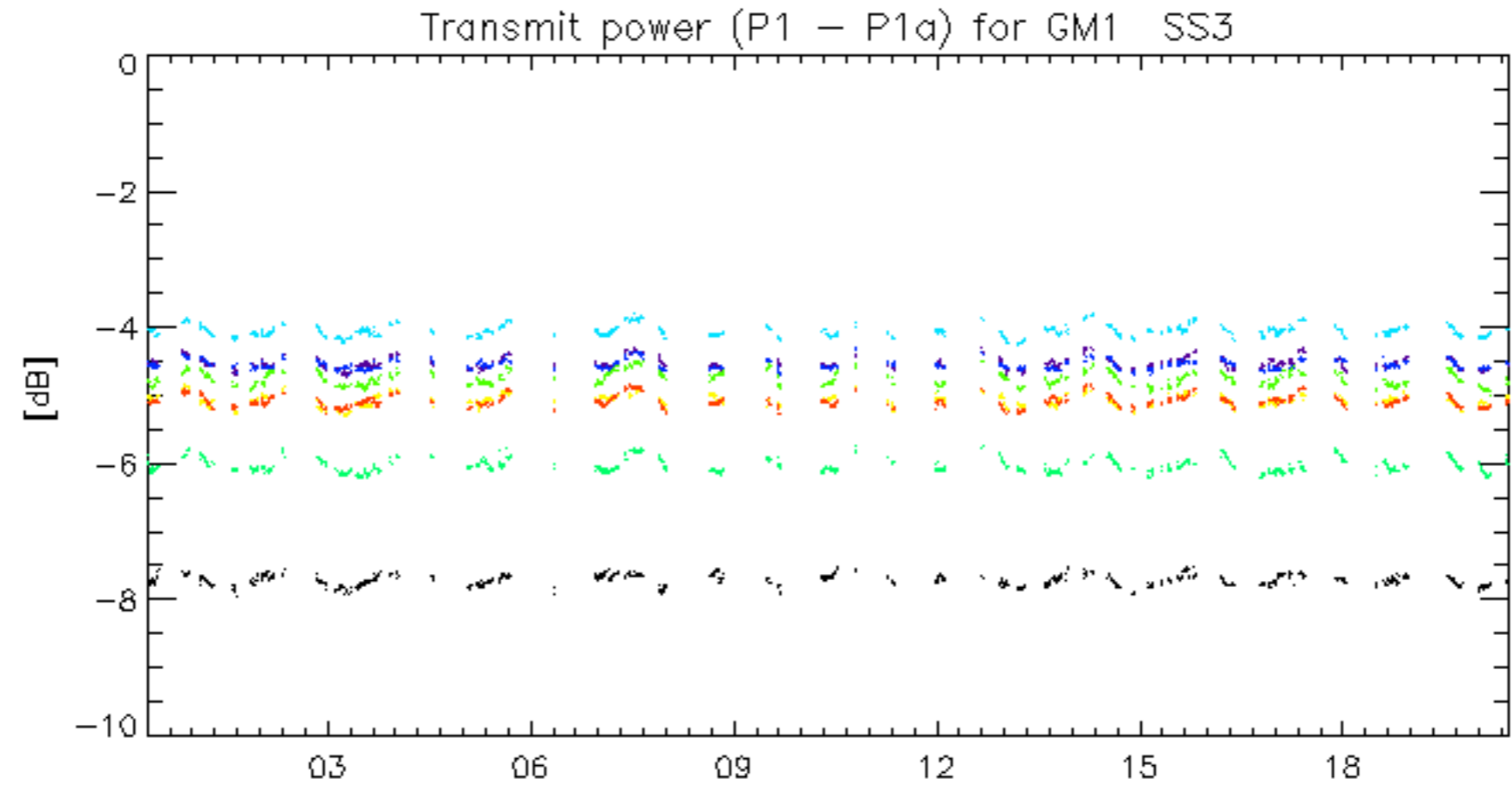
Summary of analysis for the last 3 days 2007030[678]

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_1PNPDE20070306_231002_000001182056_00116_26222_3547.N1	0	64
ASA_IMM_1PNPDE20070308_014959_000000802056_00132_26238_4901.N1	1	0
ASA_WVS_1PNPDK20070306_153323_000000152056_00111_26217_8526.N1	0	8
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_2390.N1	47	7122
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_2498.N1	47	7122
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_2650.N1	47	7122
ASA_WSM_1PNPDE20070306_031634_000000422056_00104_26210_4291.N1	47	7122
ASA_WSM_1PNPDE20070306_142925_000000852056_00111_26217_3012.N1	0	16
ASA_WSM_1PNPDE20070306_231712_000000922056_00116_26222_3567.N1	0	68
ASA_WSM_1PNPDE20070306_232132_000001842056_00116_26222_3574.N1	0	67
ASA_WSM_1PNPDE20070307_055614_000000672056_00120_26226_4215.N1	5	157
ASA_WSM_1PNPDE20070307_111810_000000852056_00123_26229_4255.N1	0	72
ASA_WSM_1PNPDE20070307_171620_000002262056_00127_26233_4397.N1	0	63
ASA_WSM_1PNPDK20070307_135748_000000852056_00125_26231_9424.N1	0	15

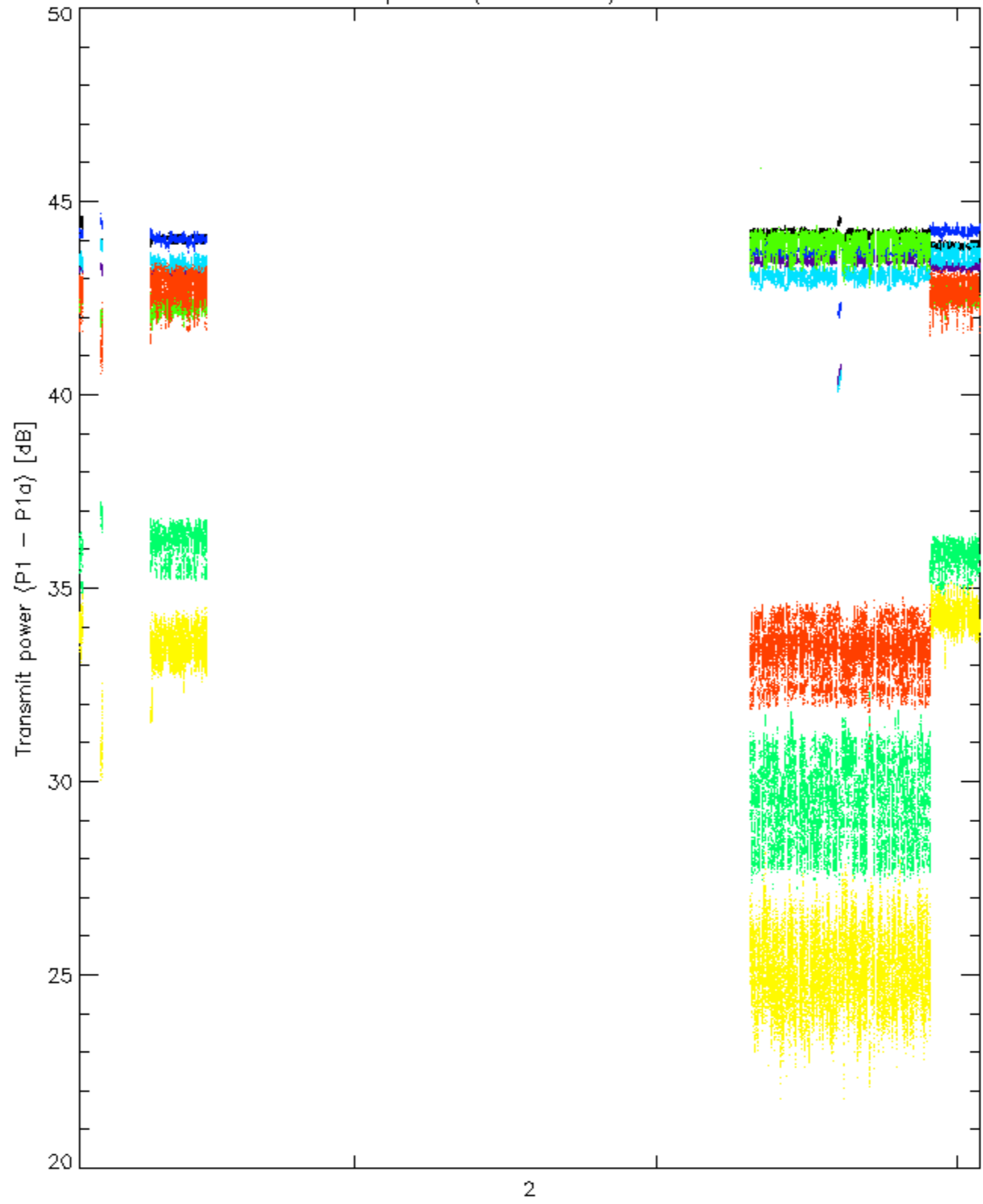


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

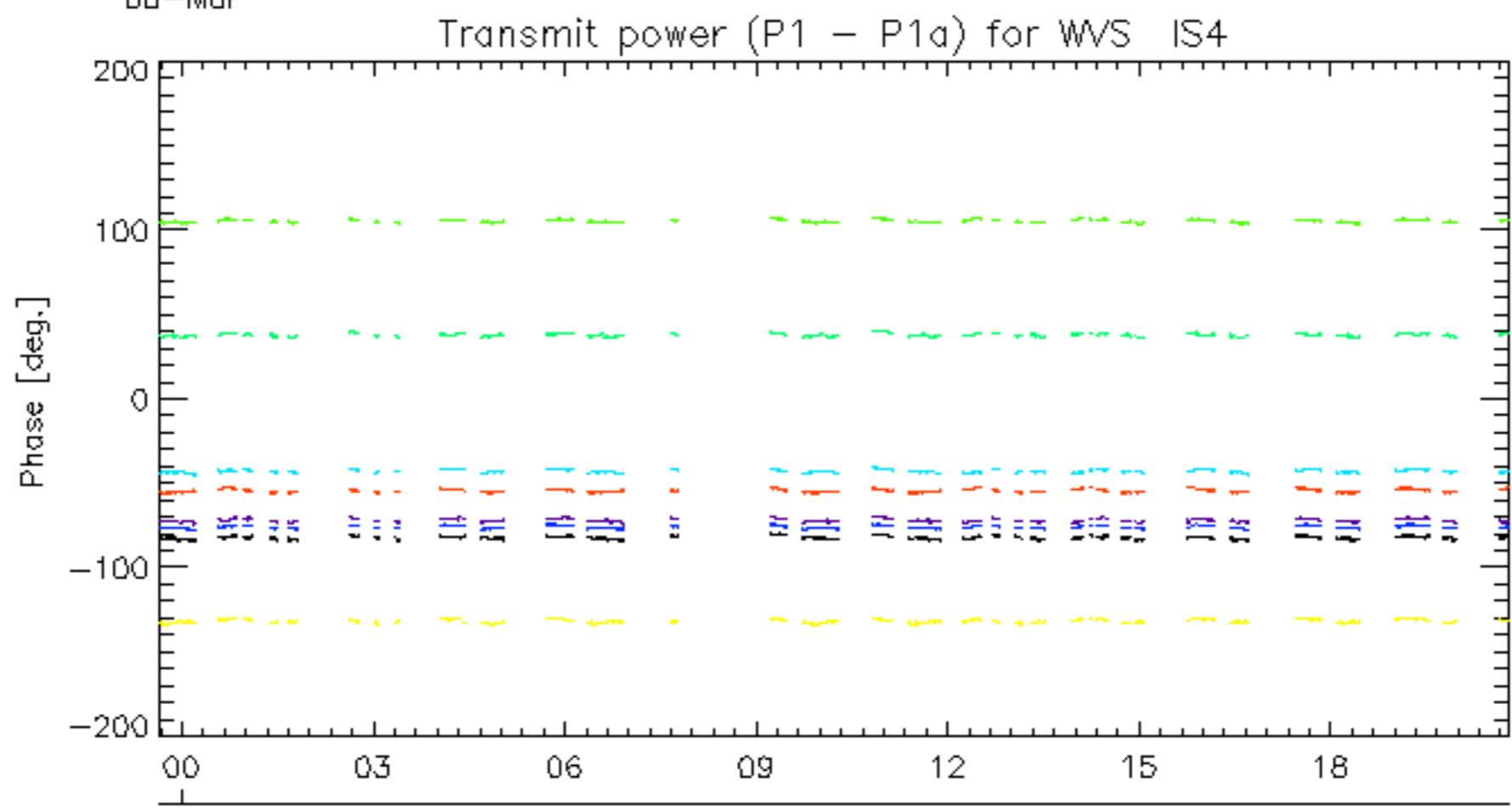
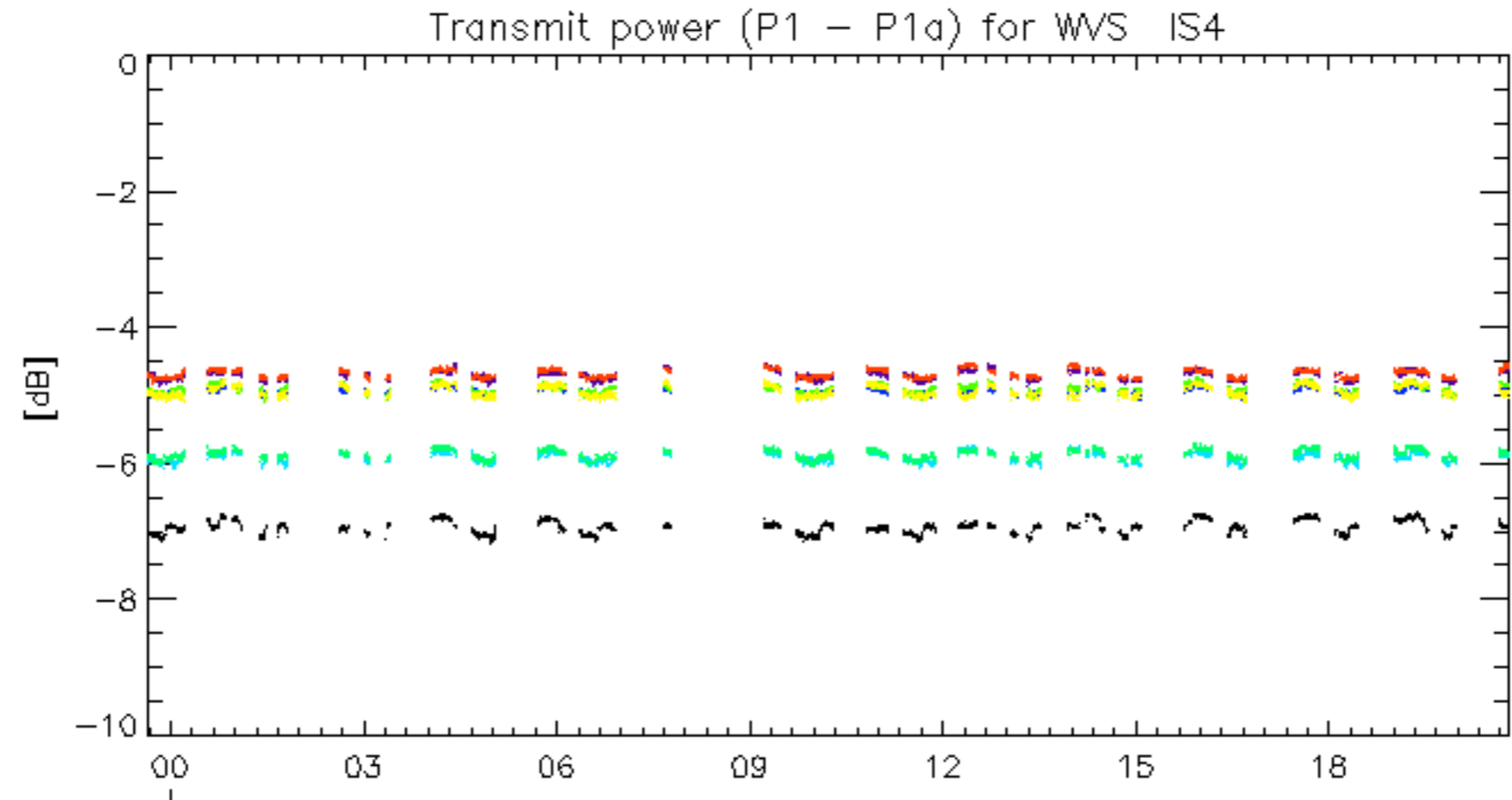


08-Mar
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS4



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



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

No unavailabilities during the reported period.