

PRELIMINARY REPORT OF 070217

last update on Sat Feb 17 16:19:54 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 2007-02-16 00:00:00 to 2007-02-17 16:19:54

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000	43	76	8	0	25
ASA_CON_AXVIEC20070215_184018_20070204_165113_20071231_000000	43	76	8	0	25
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	76	8	0	25
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	43	76	8	0	25

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_XCA_AXVIEC20070215_184638_20070204_165113_20071231_000000	45	51	44	13	40
ASA_CON_AXVIEC20070215_184018_20070204_165113_20071231_000000	45	51	44	13	40
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	51	44	13	40
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	45	51	44	13	40

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	20070216 063522
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

⊗
⊗

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	-15.188667	0.279148	2.183198
7	P1a	-17.401545	0.108703	-0.266800
11	P1a	-17.330275	0.358638	0.003317
15	P1a	-12.840626	0.114874	-0.269294
19	P1a	-15.097445	0.095758	-0.131939
22	P1a	-15.513106	0.483985	-0.361076
26	P1a	-14.995240	0.236437	-0.125654
30	P1a	-17.309175	0.372898	-0.469180

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.582876	0.210323	-2.367542
7	P1	-3.105959	0.009319	-0.067677
11	P1	-4.131883	0.019701	-0.094373
15	P1	-6.325305	0.016248	-0.080598
19	P1	-3.709171	0.008925	-0.017000
22	P1	-4.676408	0.014335	-0.016914
26	P1	-3.928715	0.013872	0.003304
30	P1	-5.918501	0.012160	-0.038569

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.510546	0.333336	-2.635924
7	P2	-21.610291	0.084402	0.081789
11	P2	-15.482494	0.101979	0.048775
15	P2	-7.015694	0.099275	-0.048754
19	P2	-9.083304	0.087153	-0.043767
22	P2	-18.103014	0.082946	-0.087736

26	P2	-16.506613	0.097381	-0.075110
30	P2	-19.334822	0.078756	-0.024114

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.201432	0.007819	0.004507
7	P3	-8.201432	0.007819	0.004507
11	P3	-8.201432	0.007819	0.004507
15	P3	-8.201432	0.007819	0.004507
19	P3	-8.201432	0.007819	0.004507
22	P3	-8.201432	0.007819	0.004507
26	P3	-8.201432	0.007819	0.004507
30	P3	-8.201432	0.007819	0.004507

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	-11.357065	0.148514	1.337129
7	P1a	-10.036368	0.060694	-0.080736
11	P1a	-10.573537	0.060394	-0.302686
15	P1a	-10.849075	0.130732	-0.098902
19	P1a	-15.745543	0.063850	0.000332
22	P1a	-20.887465	1.285559	0.373739
26	P1a	-15.445902	0.261200	0.239026
30	P1a	-18.331749	0.364832	-0.081892

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-6.611578	4.166201	-8.527252
7	P1	-2.439663	0.005840	0.006267

11	P1	-2.882891	0.016591	-0.129452
15	P1	-3.797669	0.033533	-0.117099
19	P1	-3.551964	0.012929	-0.017768
22	P1	-5.026221	0.023054	-0.015299
26	P1	-5.993351	0.023329	0.029660
30	P1	-5.290150	0.023073	0.000405

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.322128	0.846444	-3.712567
7	P2	-22.008745	0.051157	0.125373
11	P2	-10.680184	0.031306	0.075327
15	P2	-4.831806	0.026909	0.053152
19	P2	-6.830585	0.028204	0.056023
22	P2	-8.137852	0.030110	0.066124
26	P2	-24.253019	0.031955	0.012491
30	P2	-21.787254	0.034295	0.067254

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.049975	0.002932	0.030630
7	P3	-8.049988	0.002947	0.029863
11	P3	-8.050006	0.002934	0.030284
15	P3	-8.049976	0.002938	0.030458
19	P3	-8.049949	0.002927	0.030474
22	P3	-8.050000	0.002936	0.030562
26	P3	-8.049874	0.002930	0.030607
30	P3	-8.049931	0.002939	0.030384

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	0.000635157
	stdev	2.50849e-07
MEAN Q	mean	0.000362037
	stdev	2.52978e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0959488
	stdev	0.00253797
STDEV Q	mean	0.0958815
	stdev	0.00258733



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007021[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_1PNPDE20070215_081235_000003682055_00336_25941_8530.N1	15	2459
ASA_IMM_1PNPDE20070216_012024_000000352055_00346_25951_9272.N1	1	0

ASA_IMM_1PNPDE20070216_153339_000000502055_00355_25960_9911.N1	0	19
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)


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)

Ascending

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

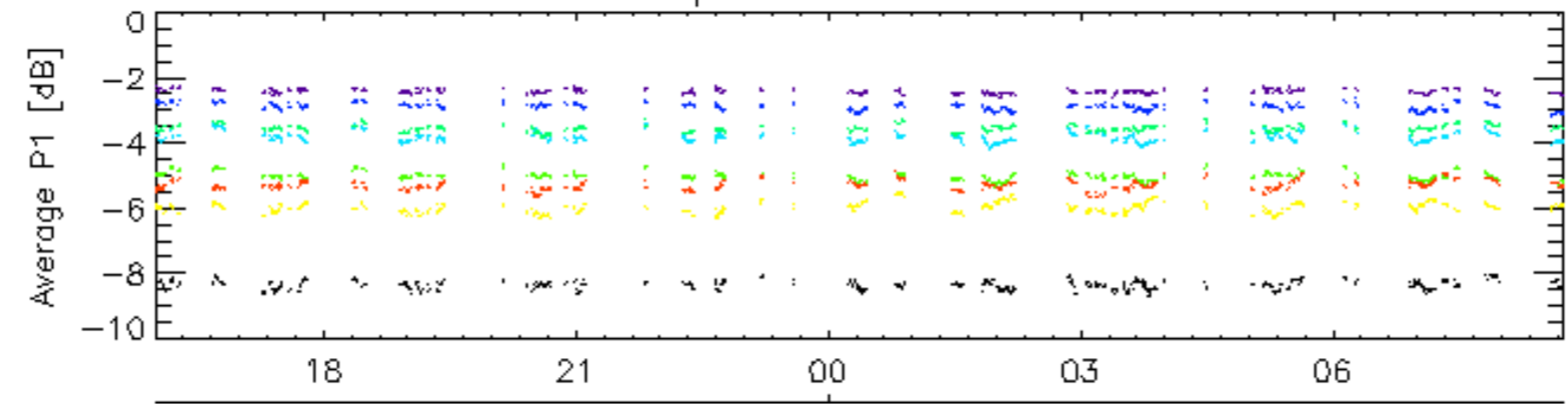
Ascending

Descending

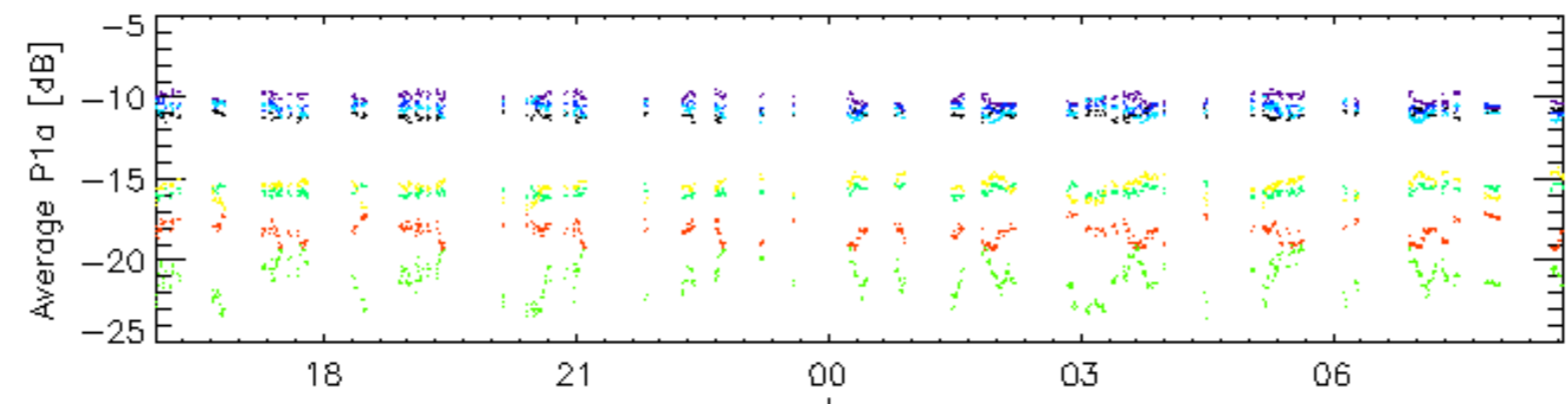
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

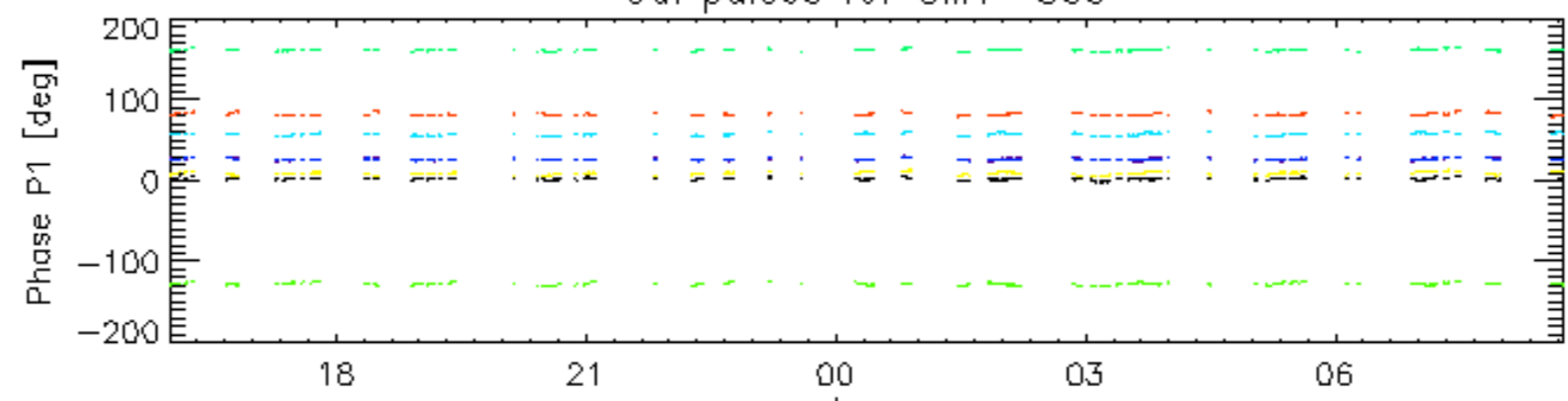


17-Feb

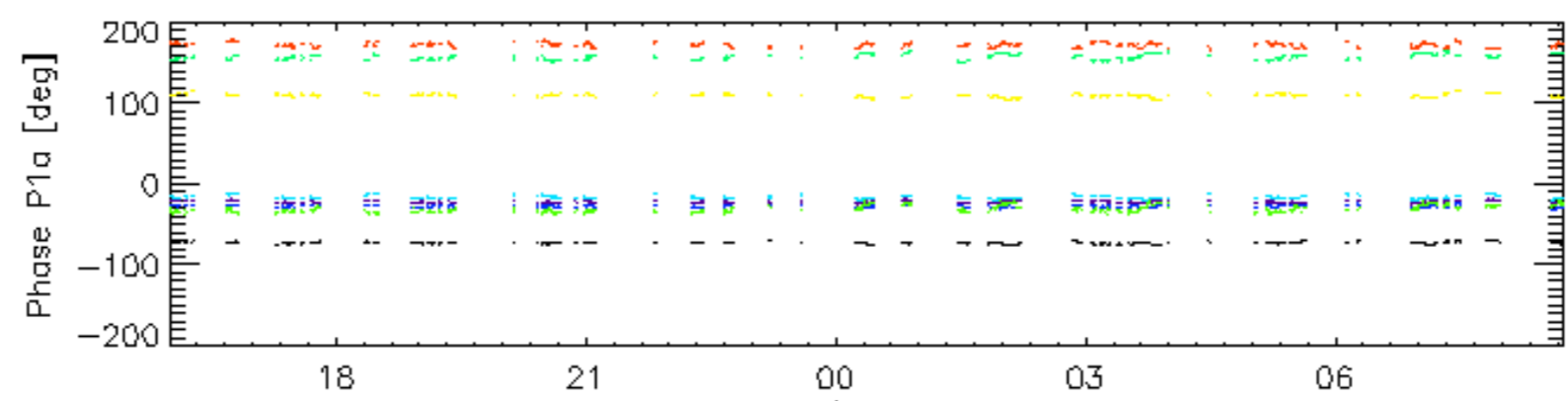


17-Feb

Cal pulses for GM1 SS3



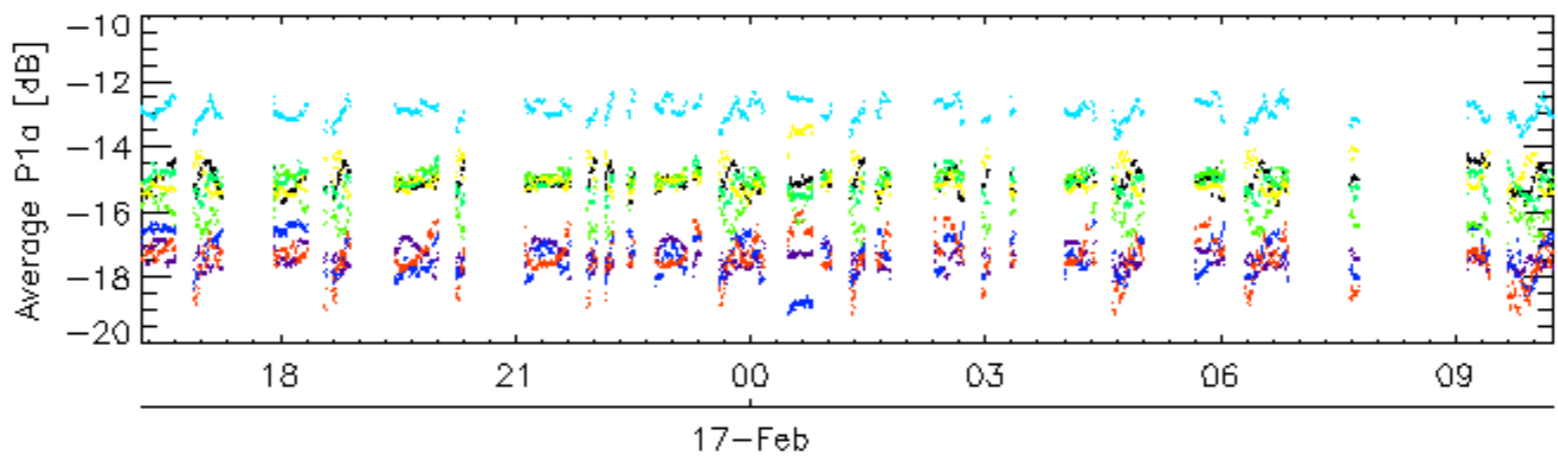
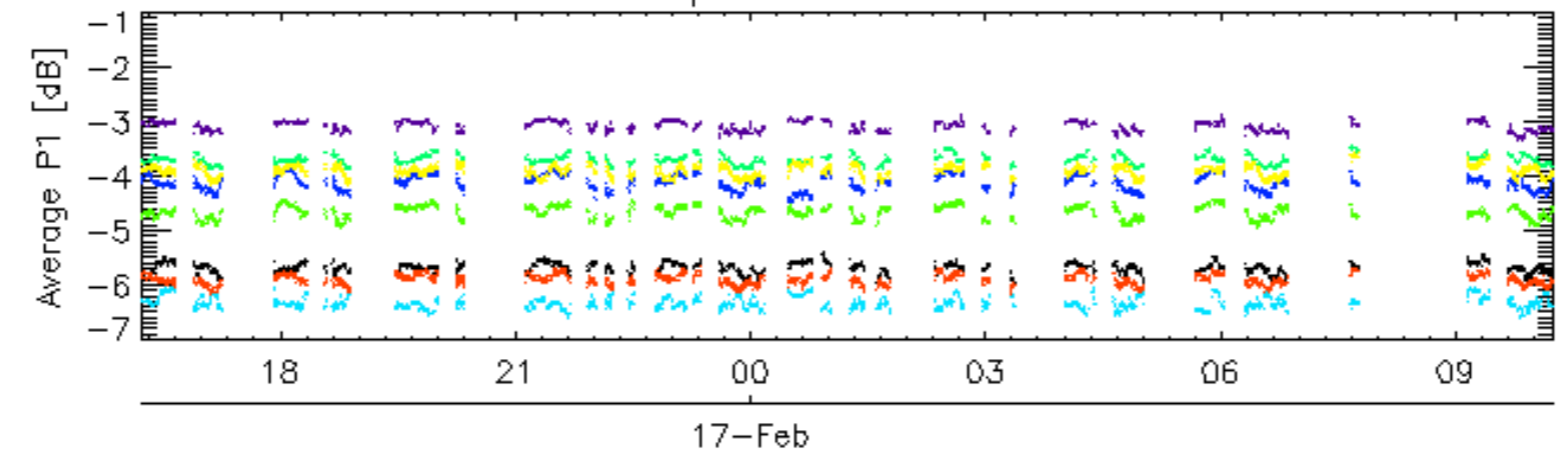
17-Feb



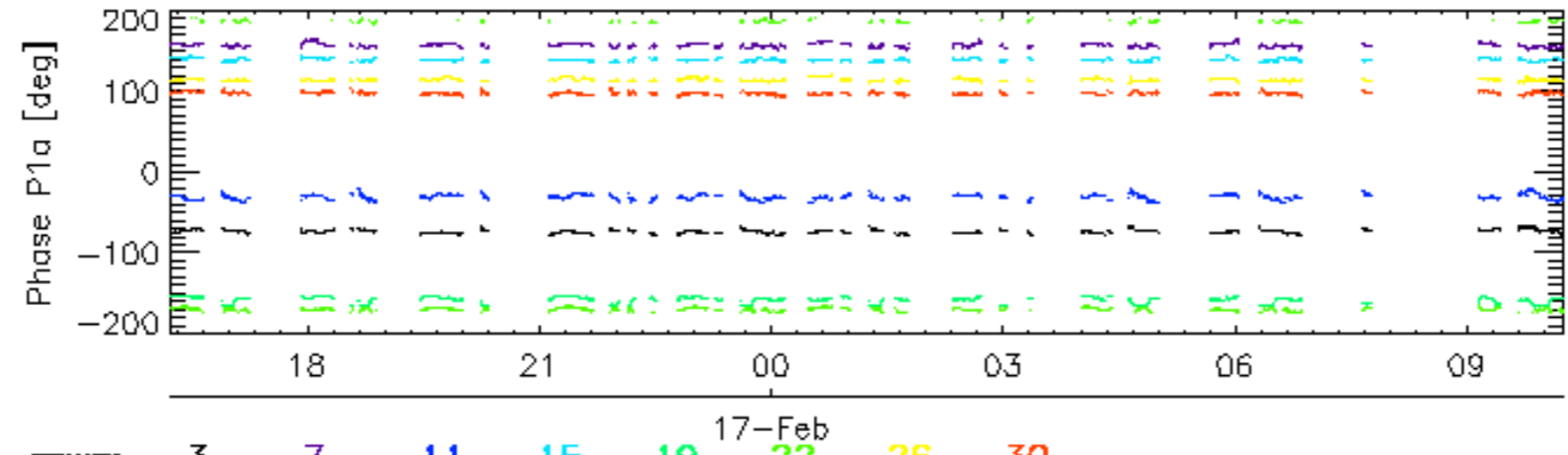
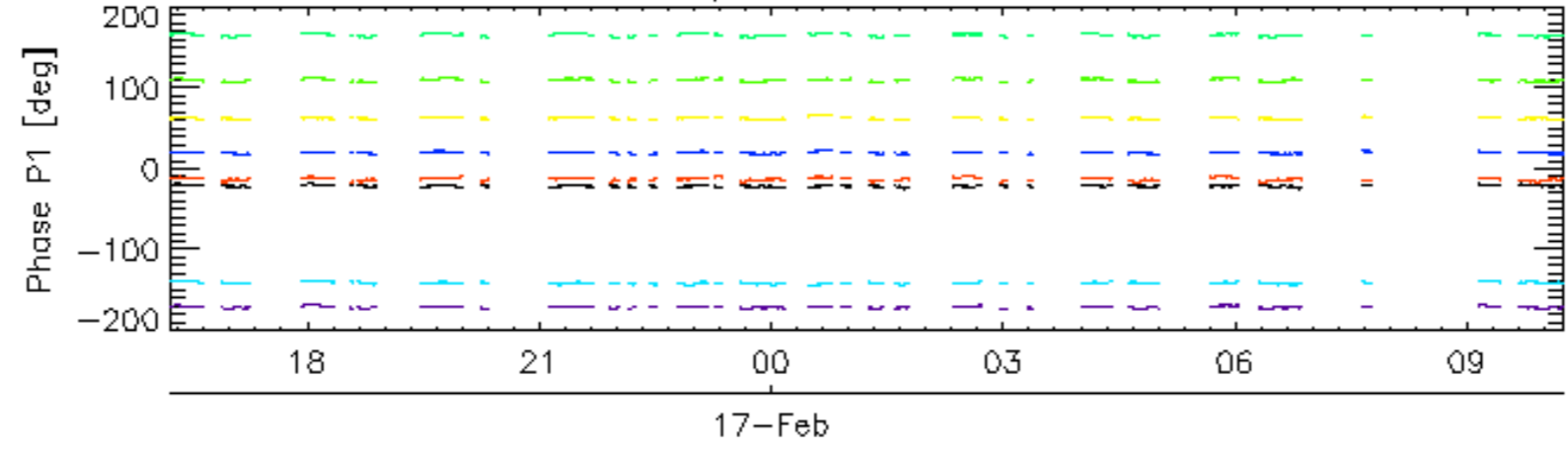
17-Feb

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

Cal pulses for WVS IS2

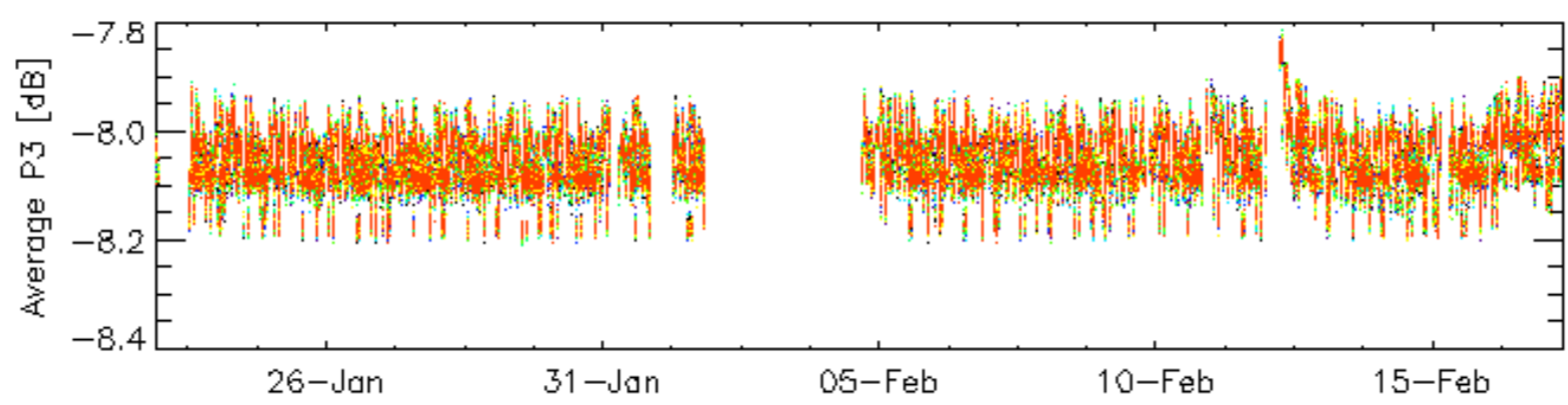
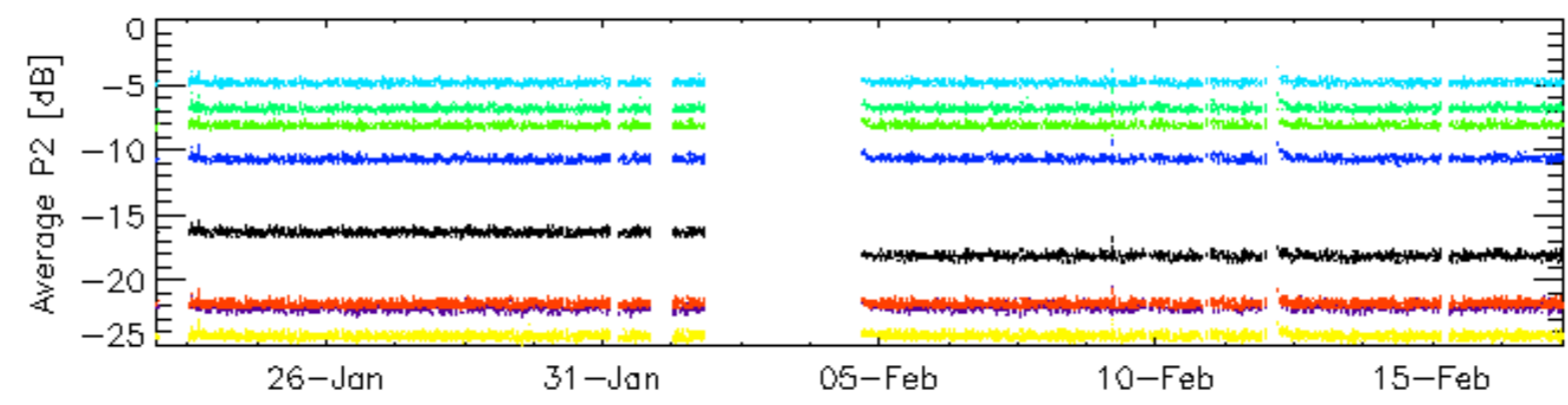
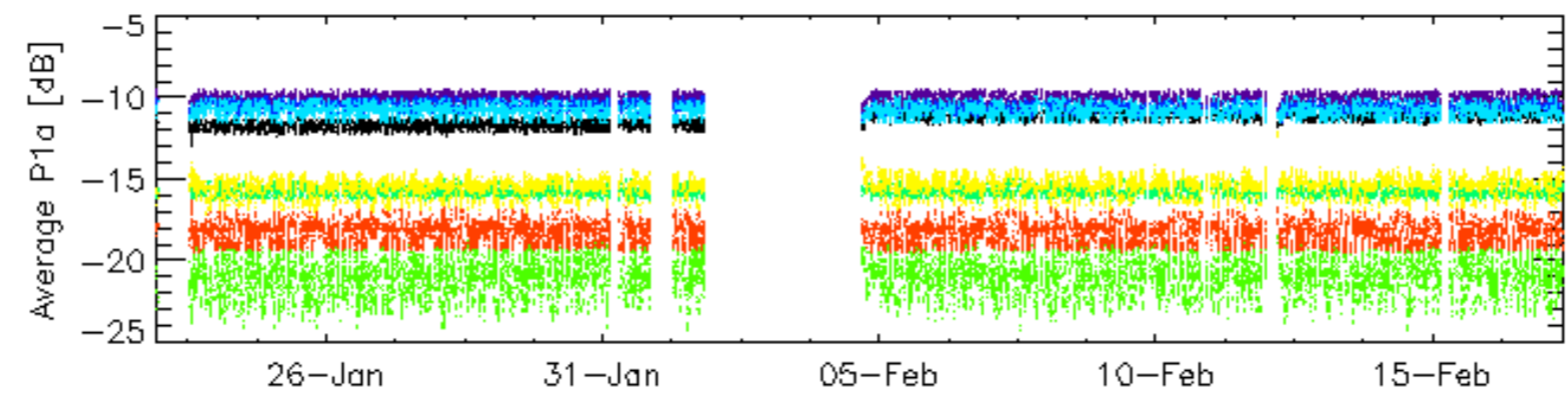
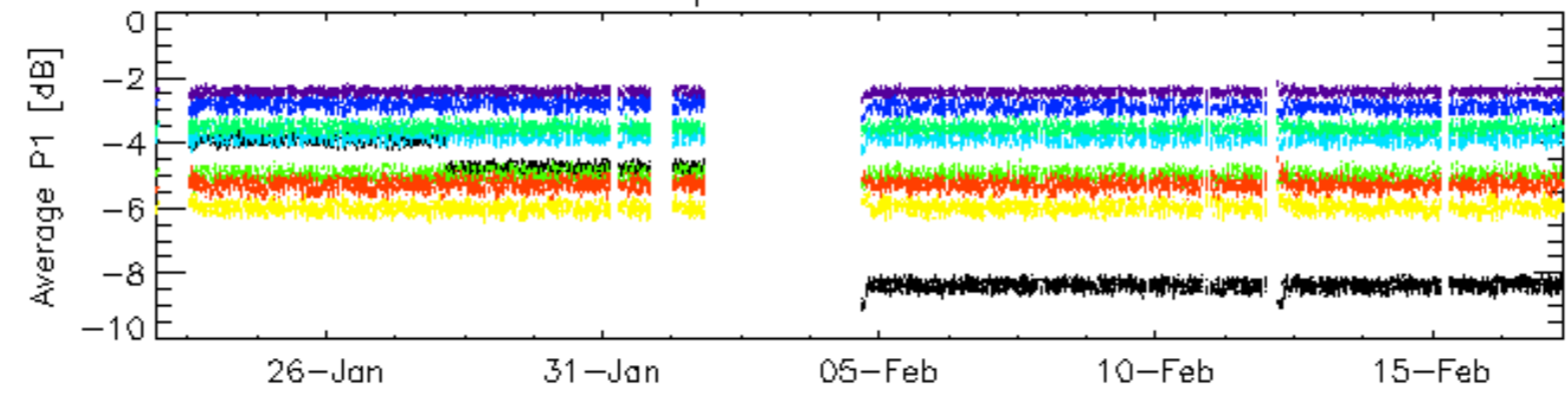


Cal pulses for WVS IS2



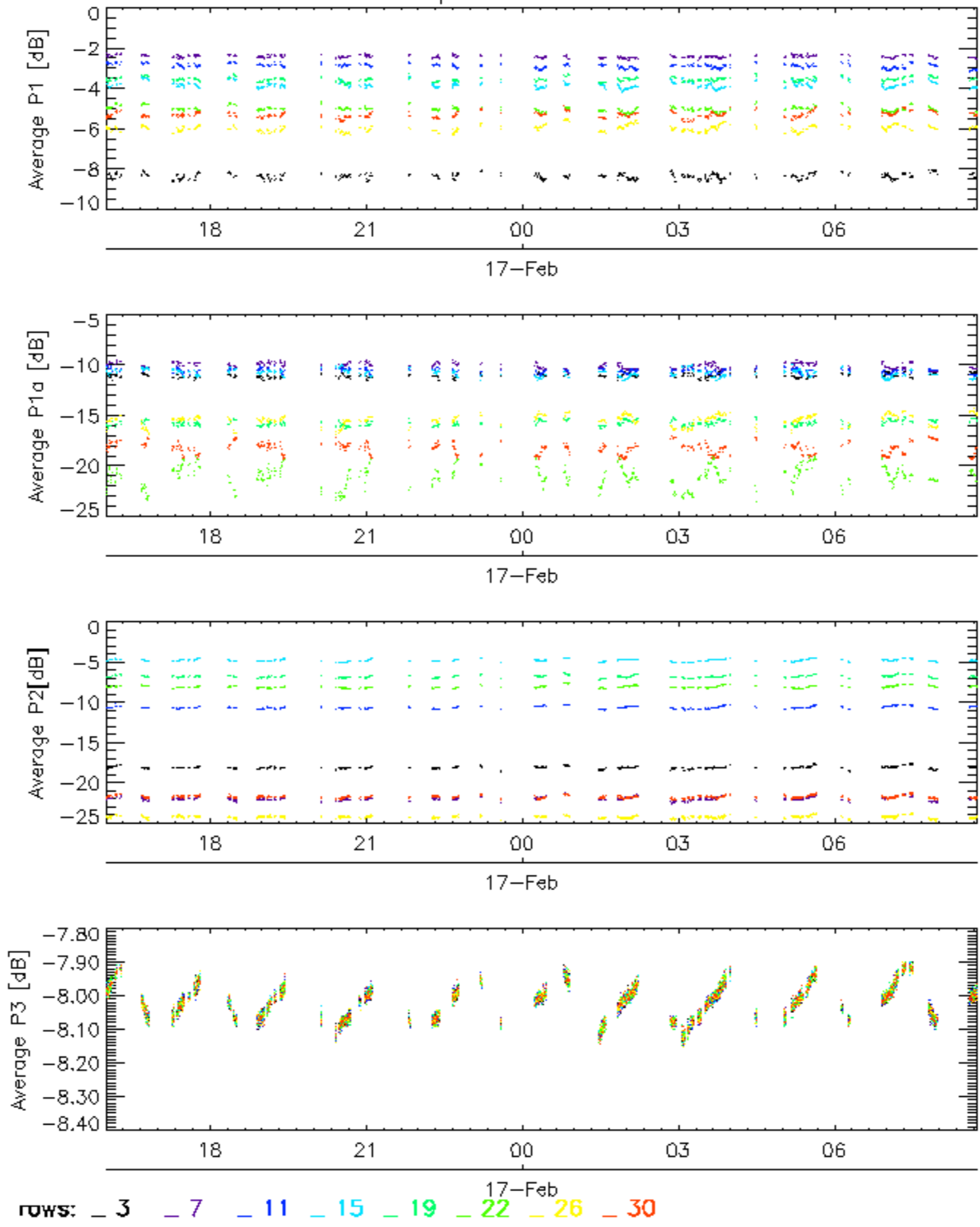
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

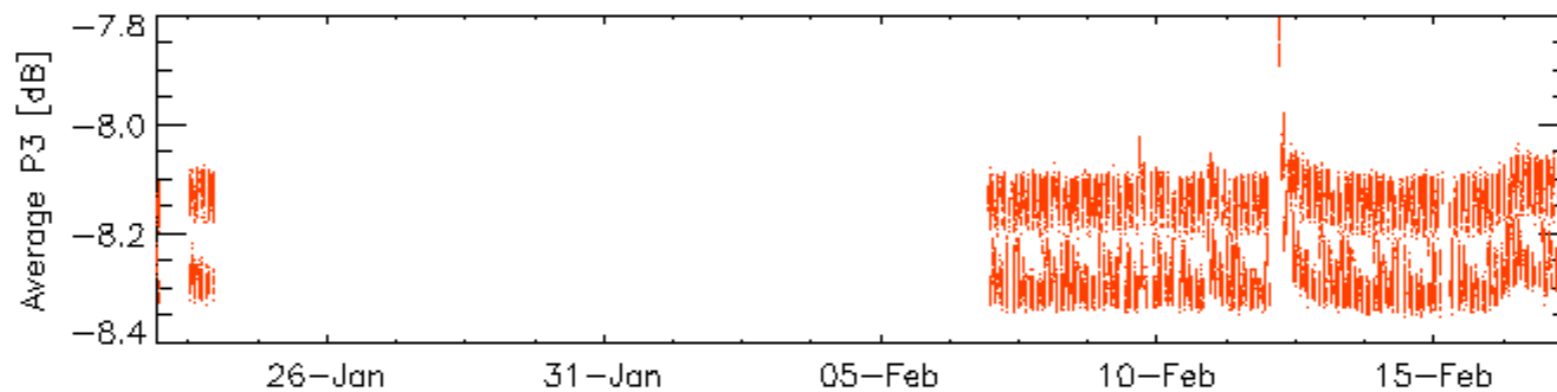
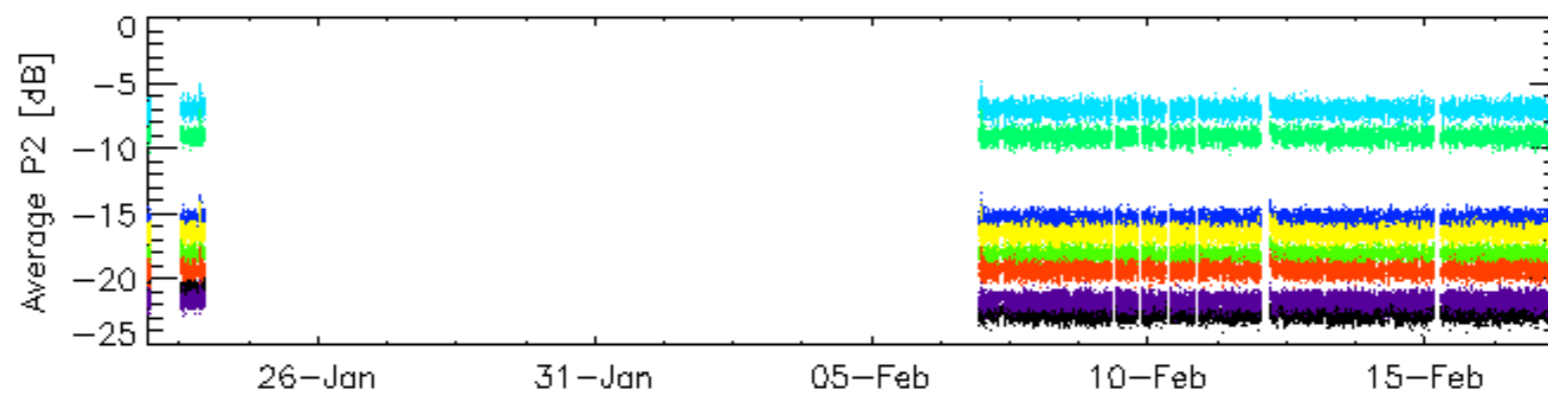
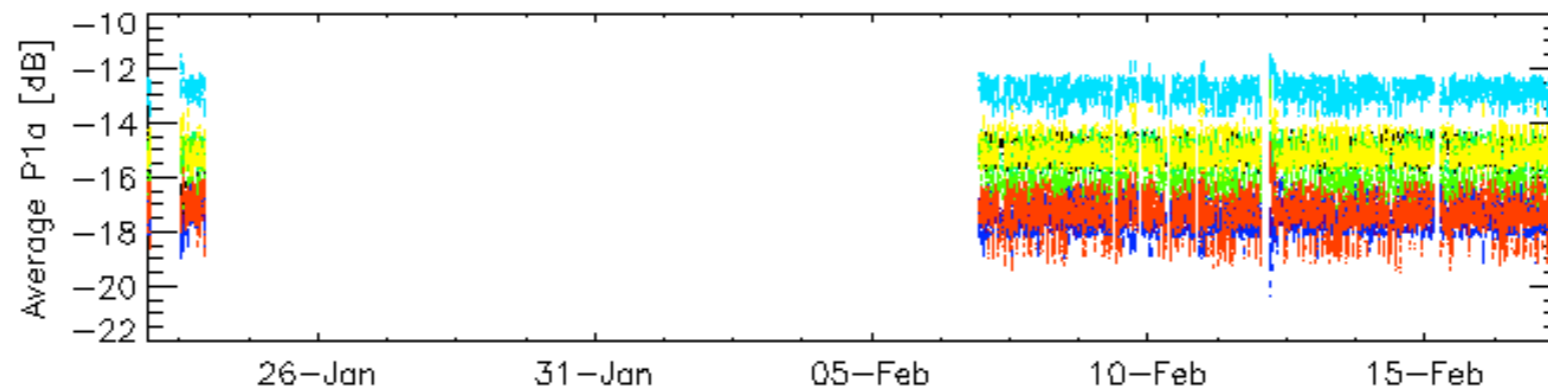
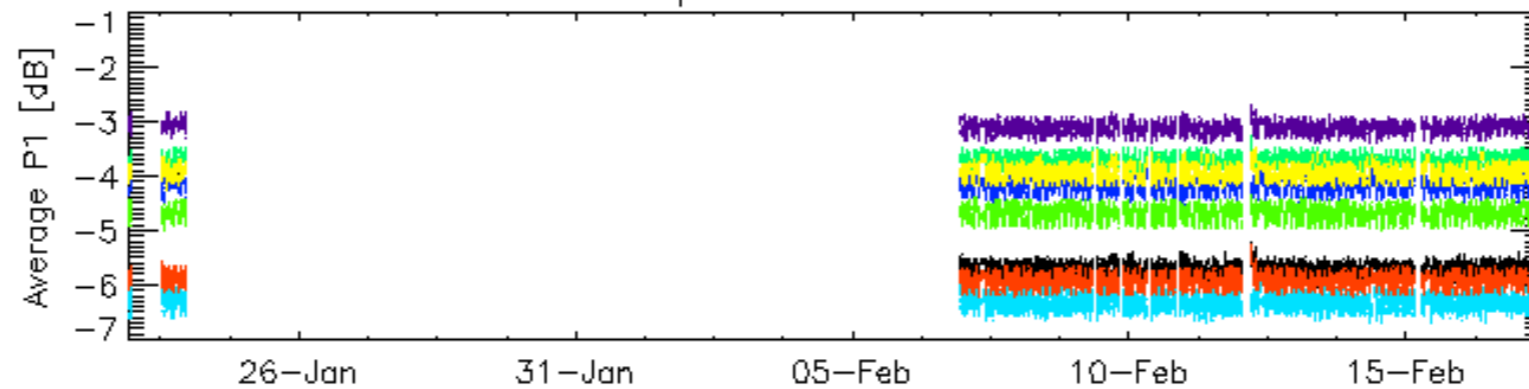


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

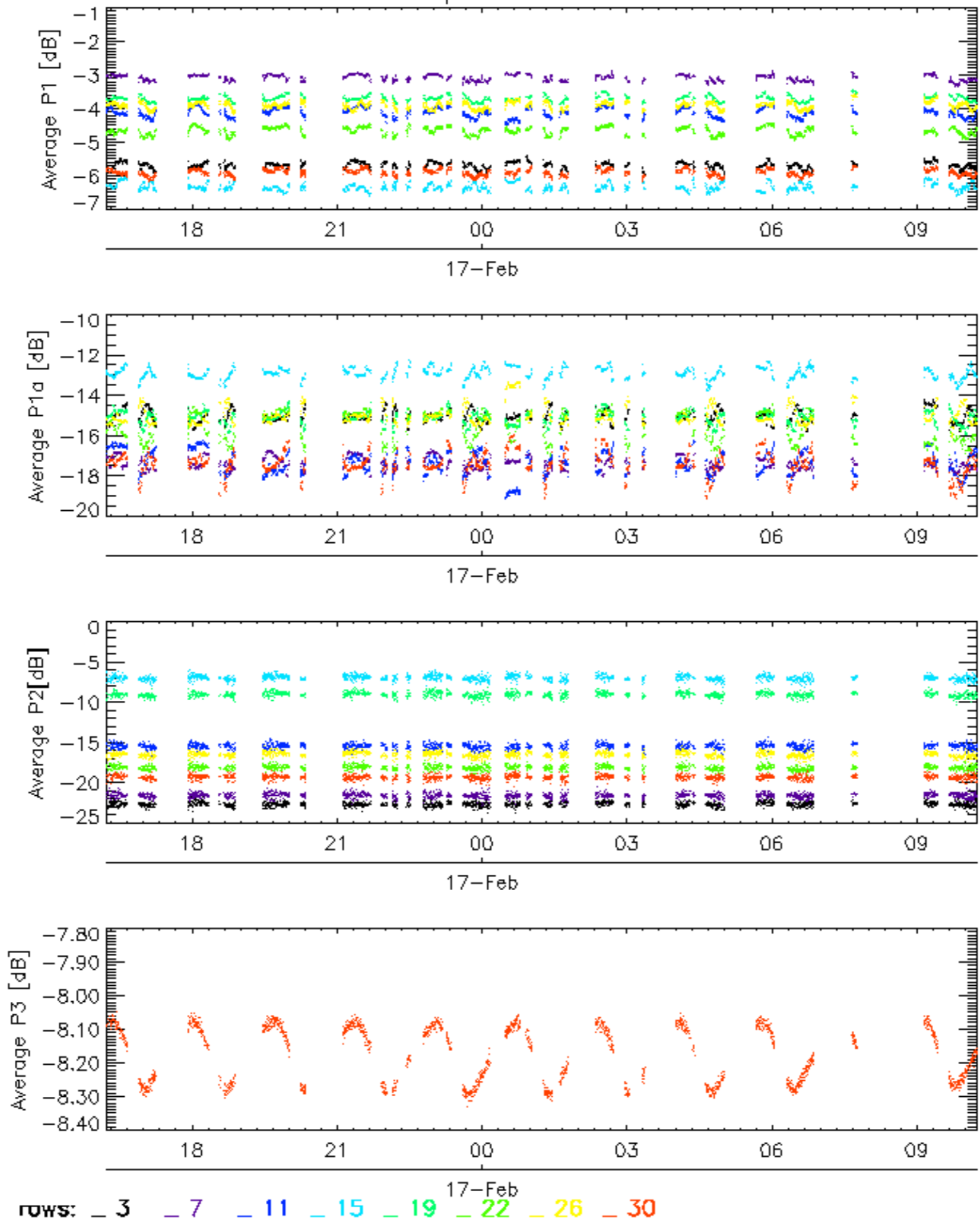


Cal pulses for WVS IS2

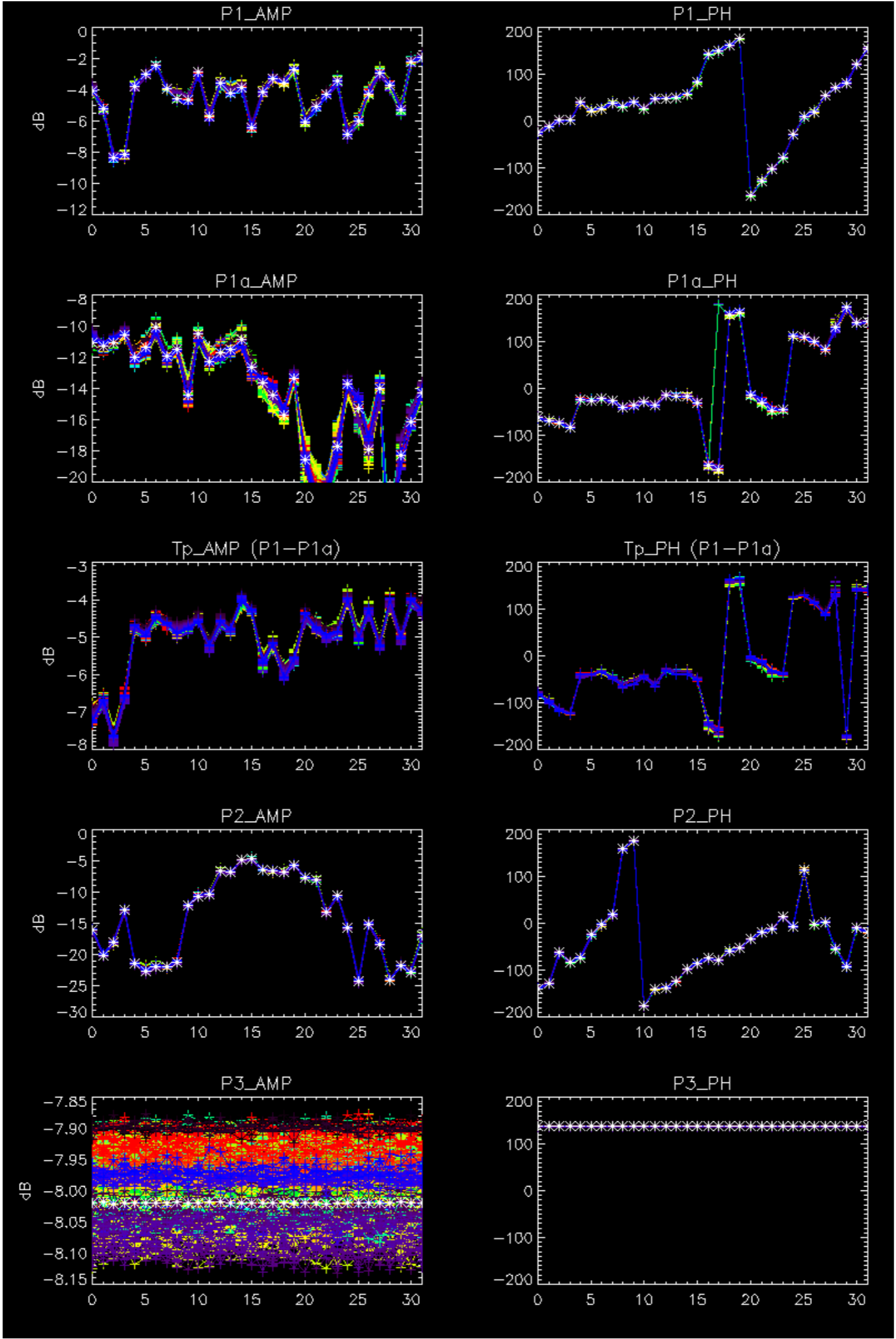


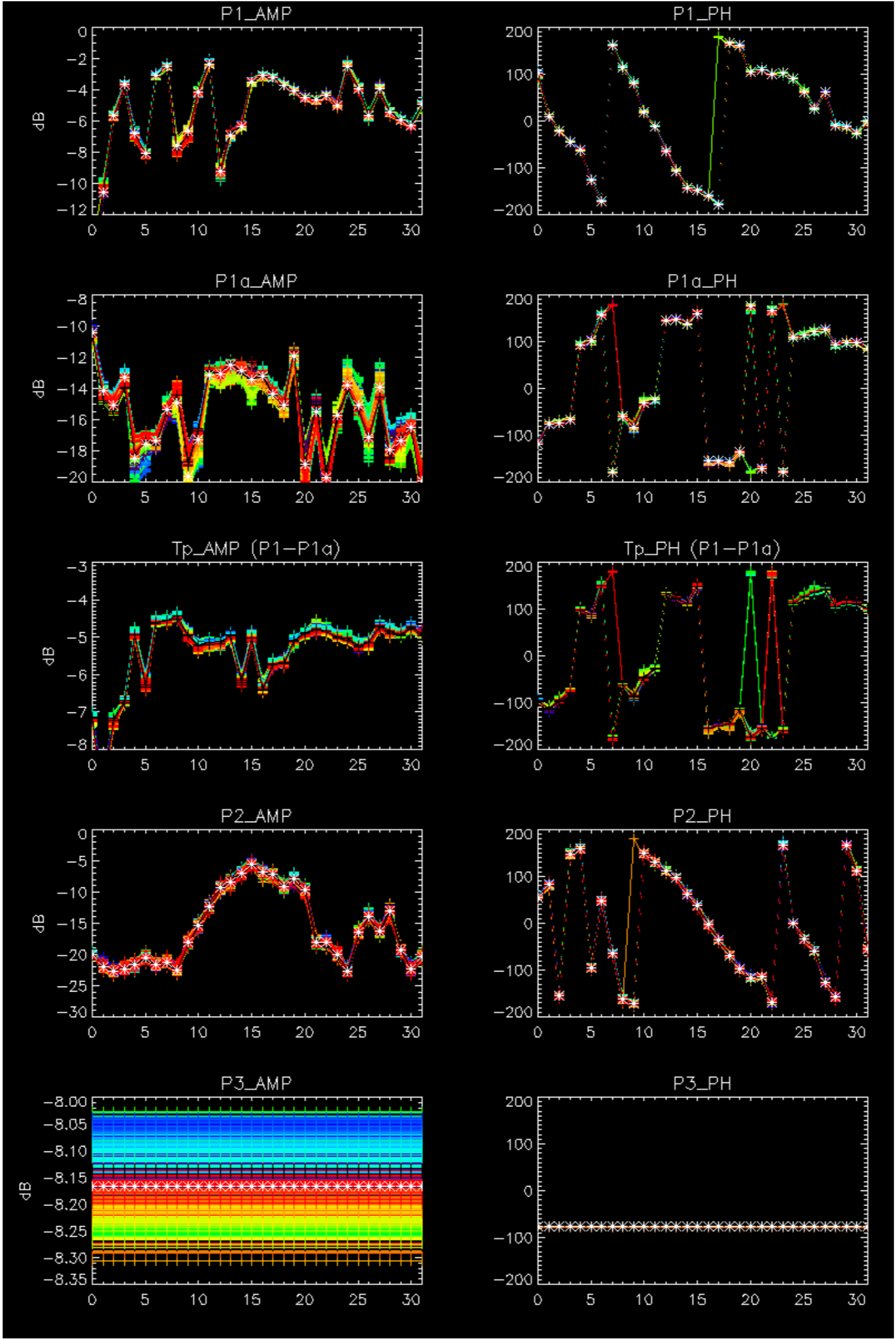
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



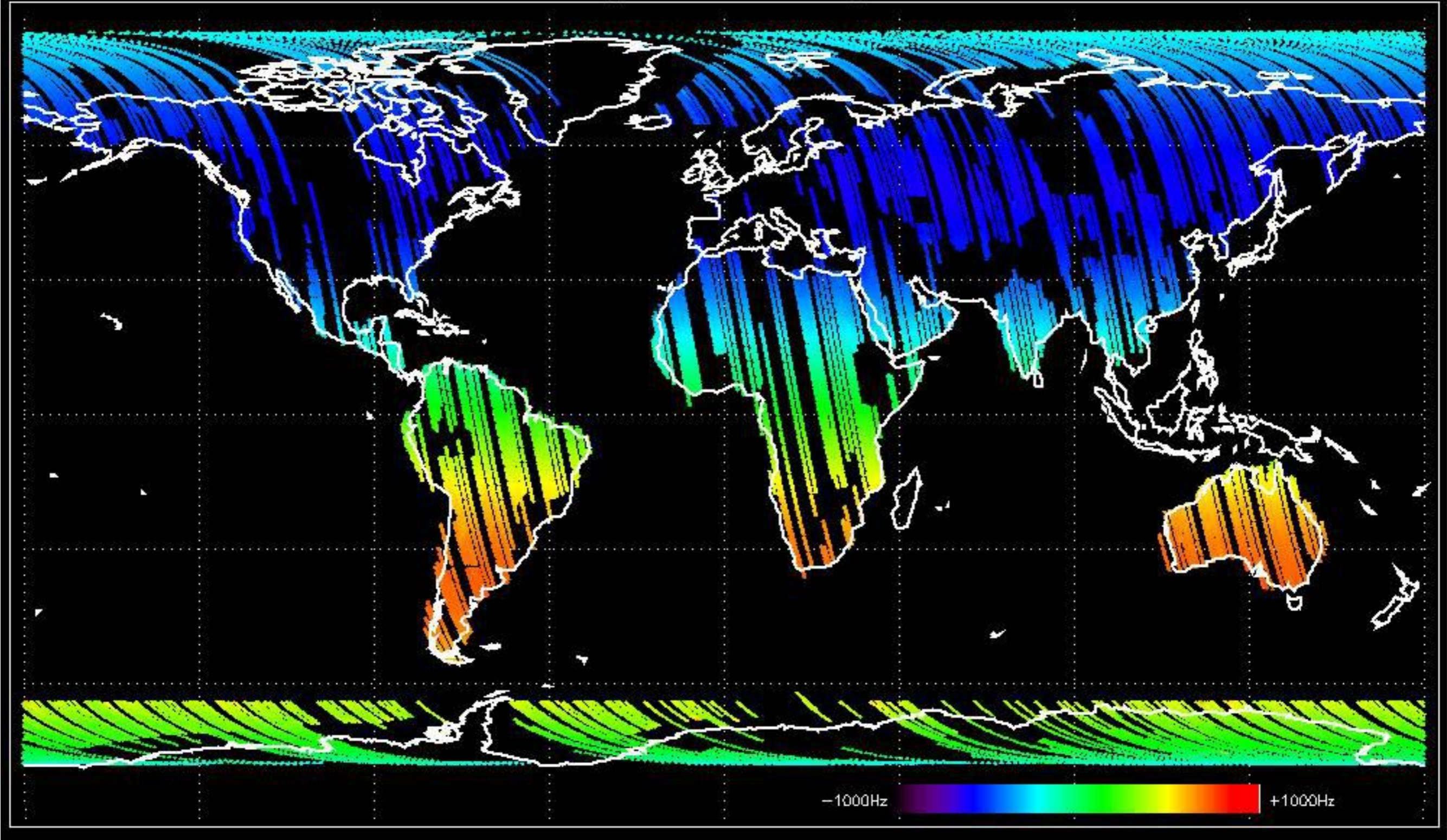
No anomalies observed.



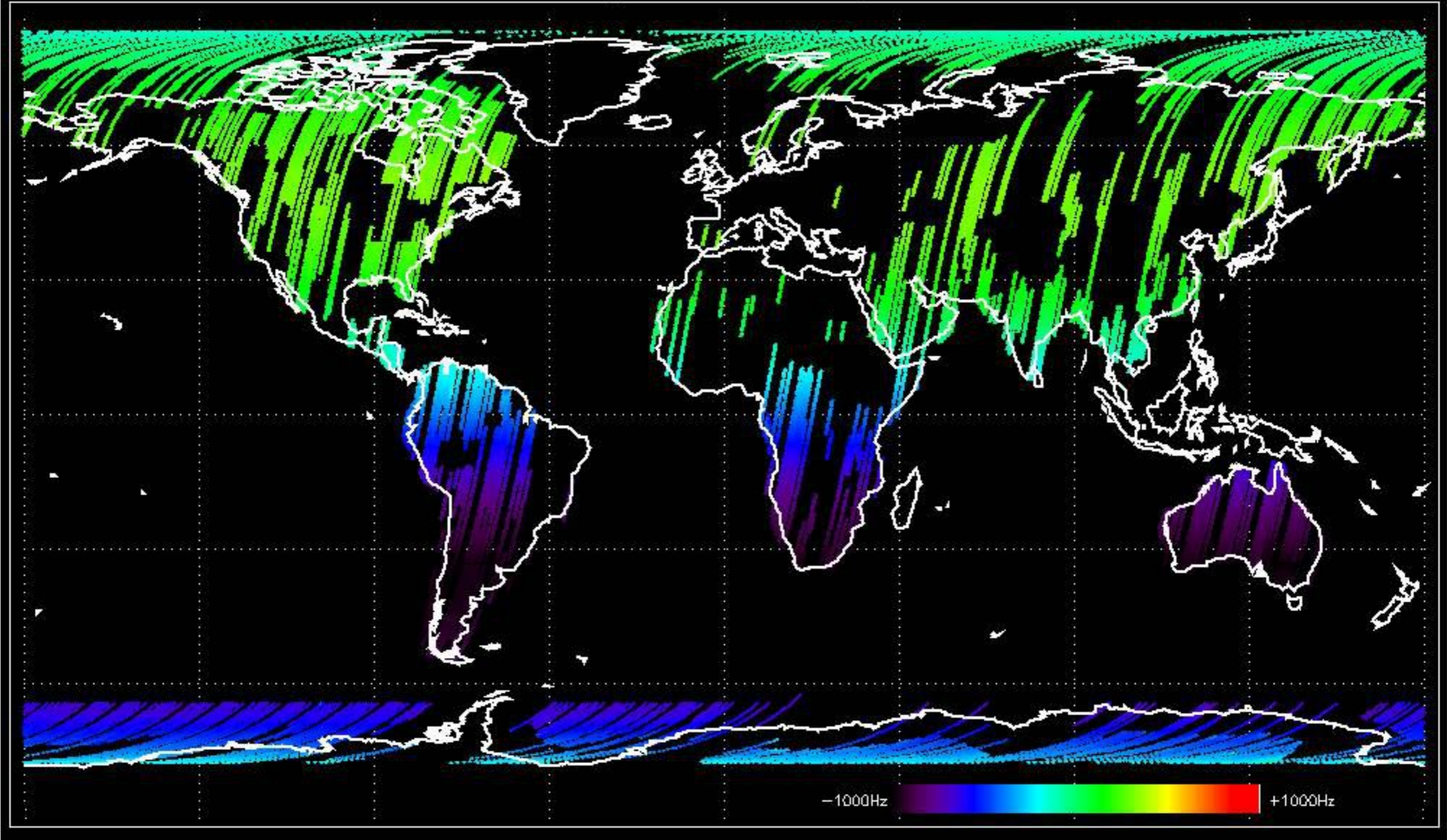


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

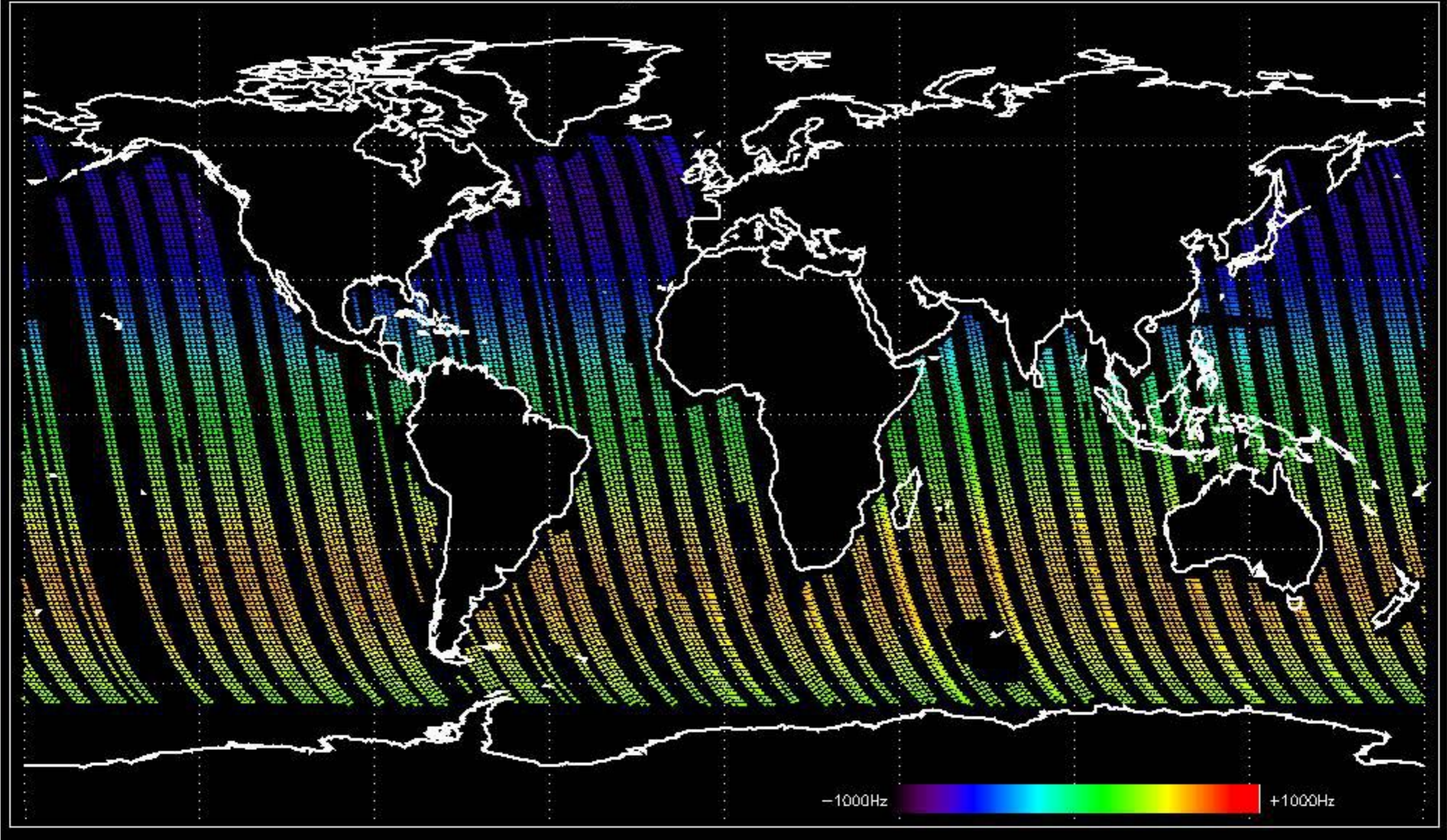
Doppler 'GM1' 'SS1' ascending



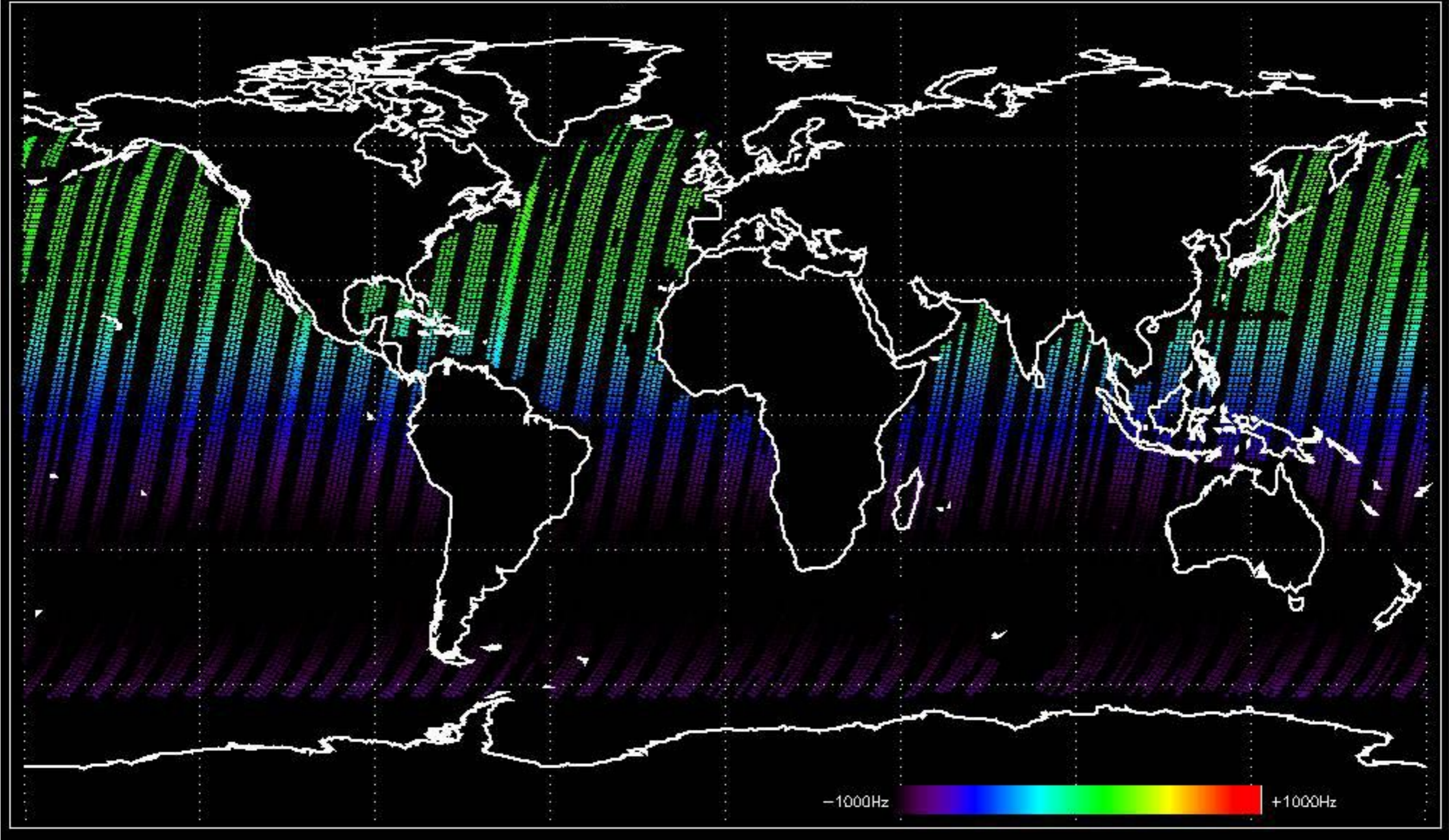
Doppler 'GM1' 'SS1' descending



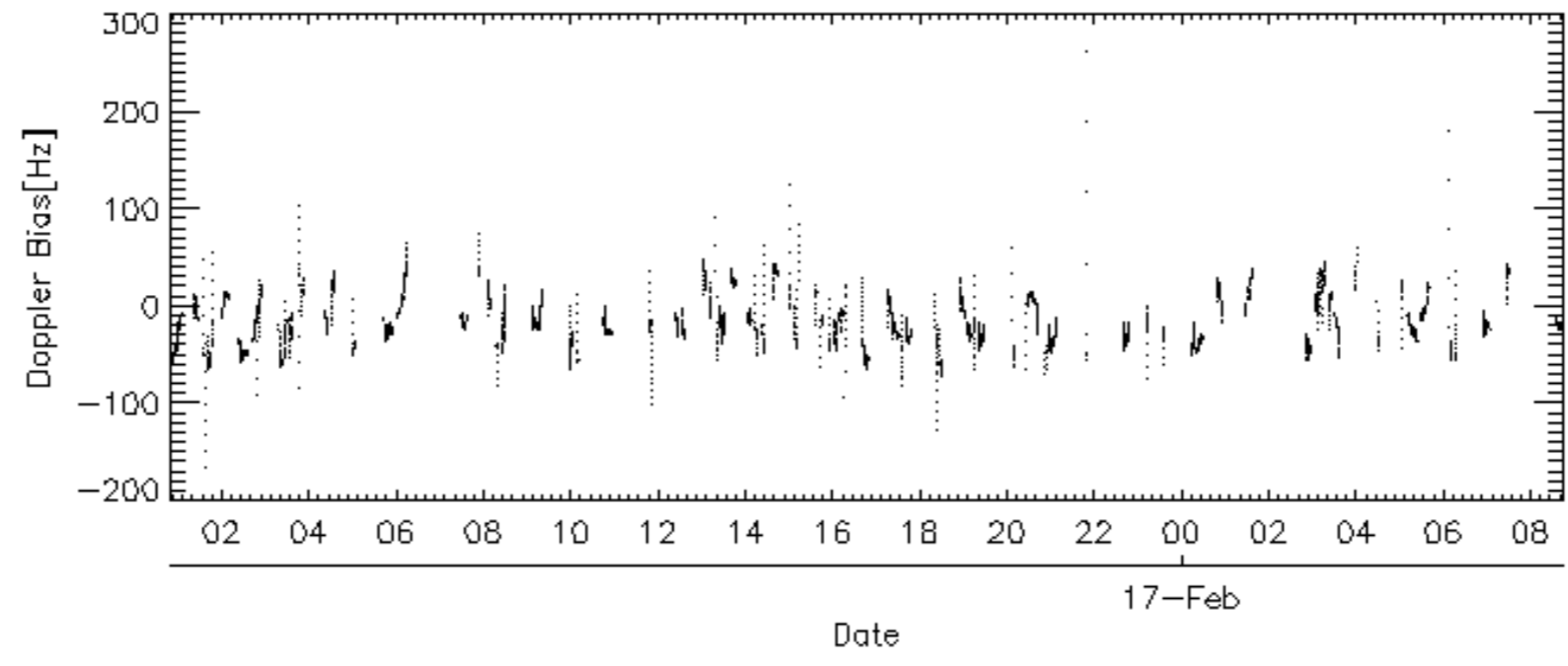
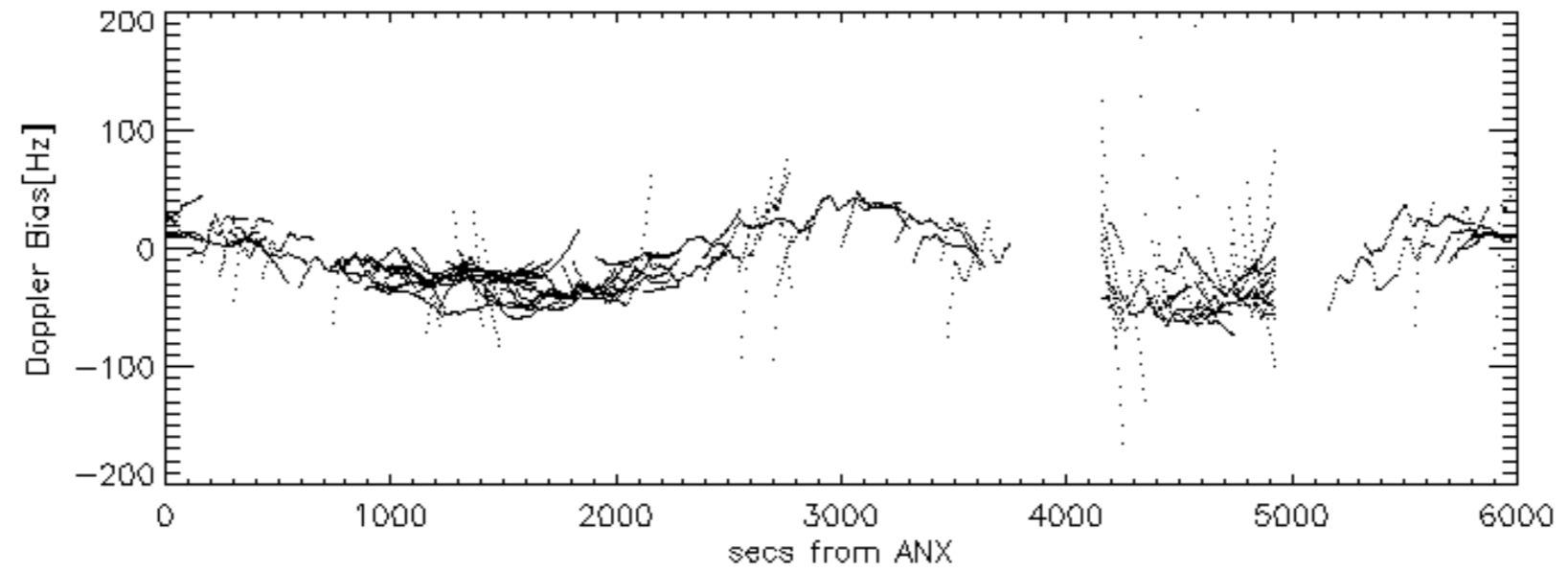
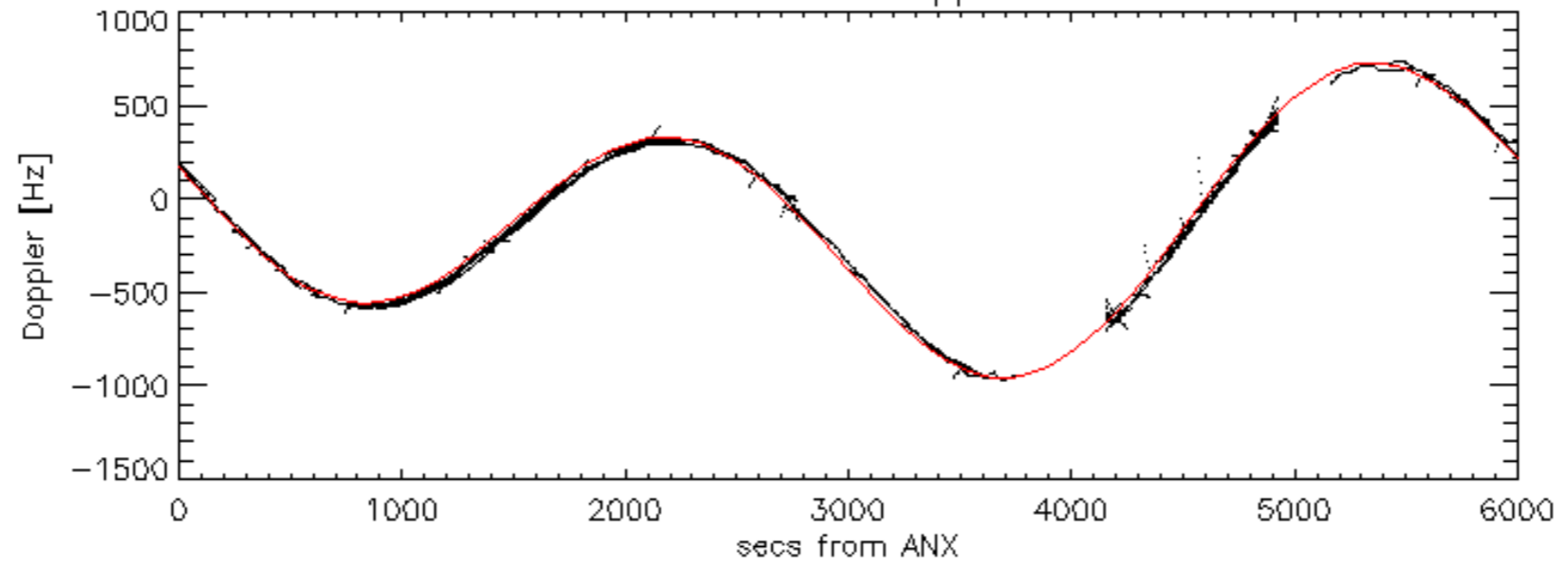
Doppler 'WVS' 'IS2' ascending

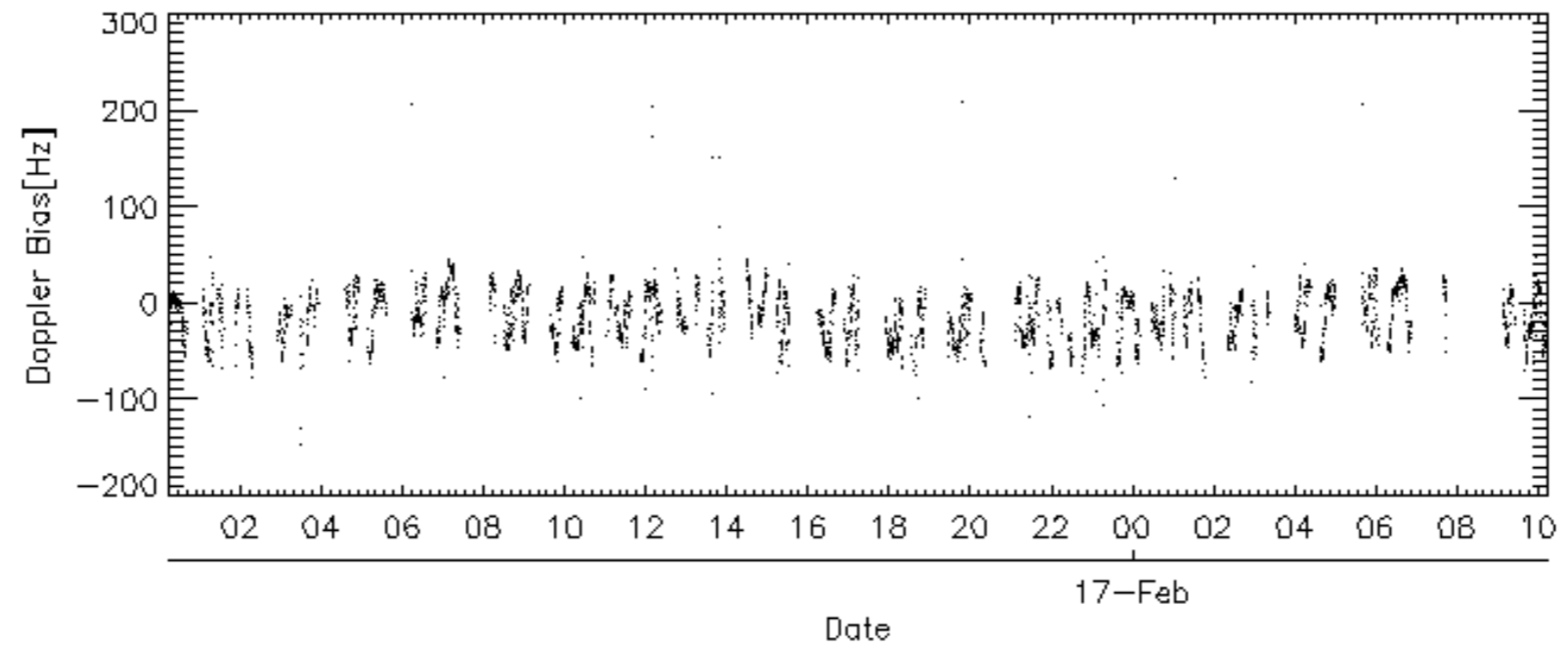
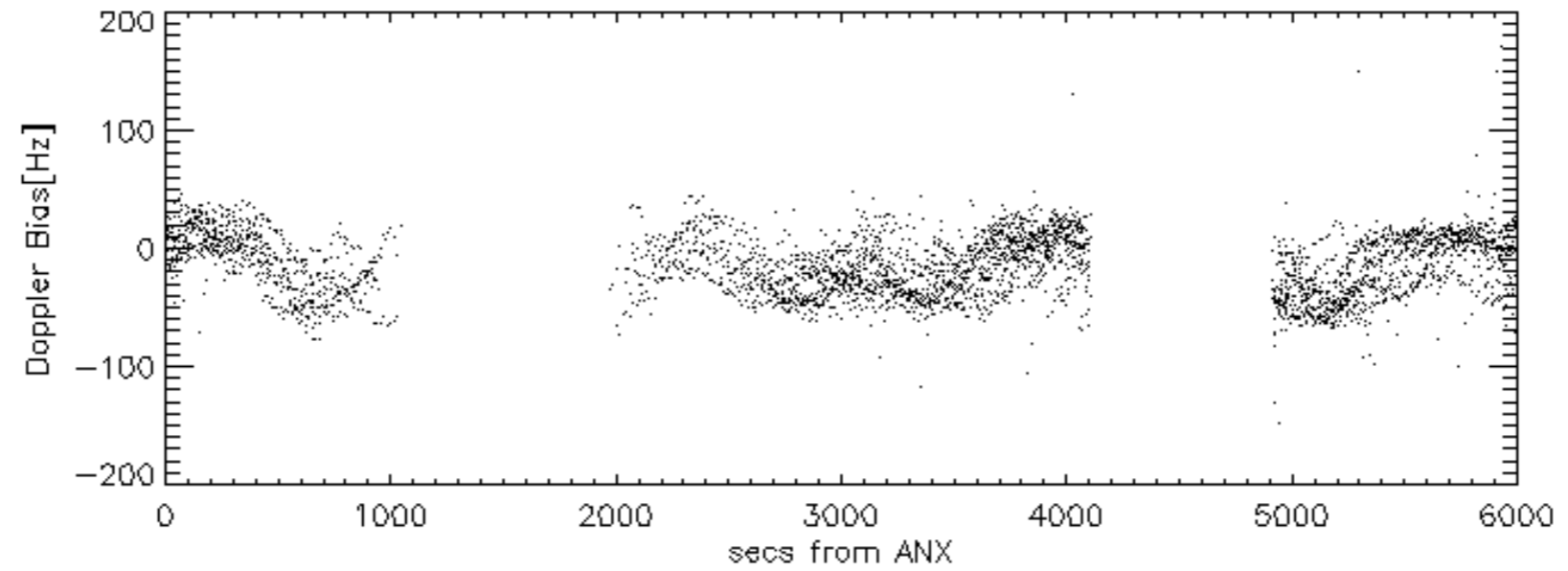
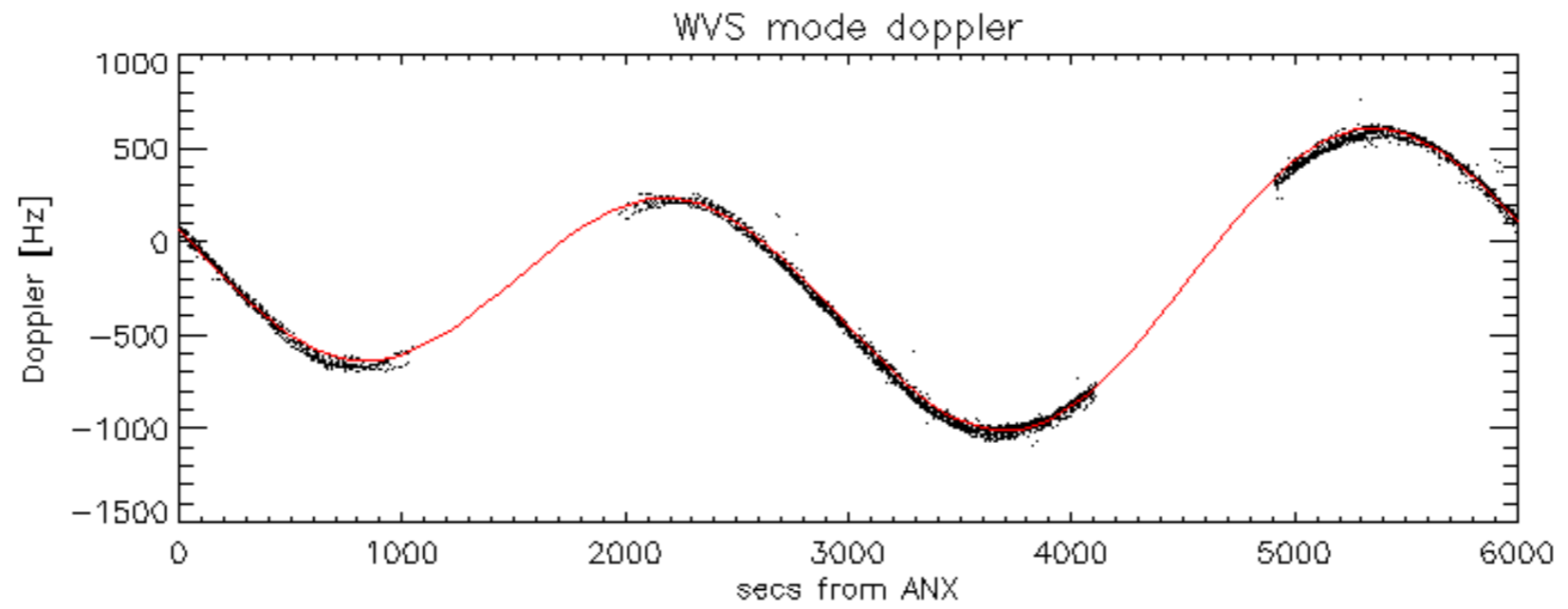


Doppler 'WVS' 'IS2' descending

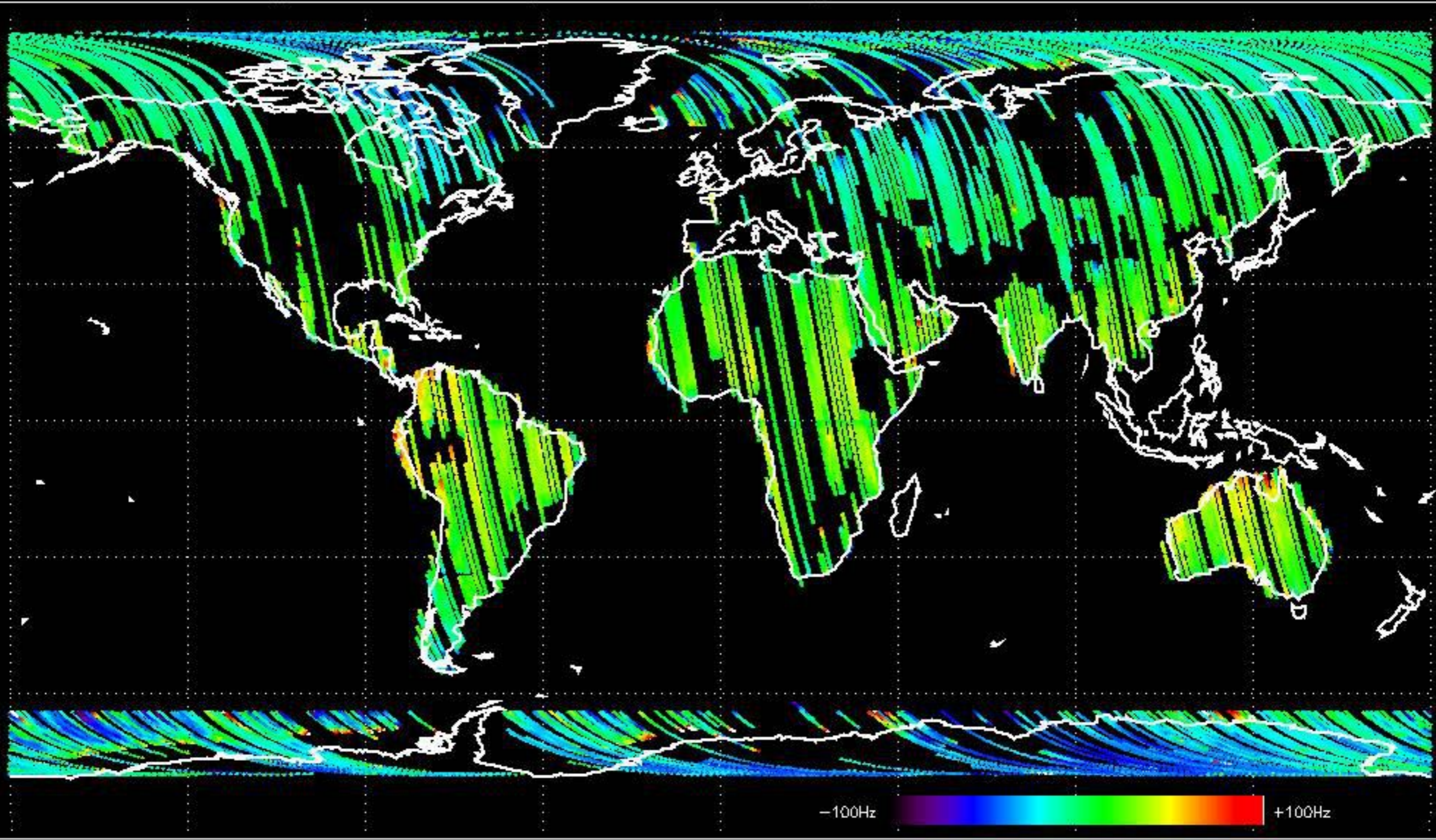


GM1 mode doppler

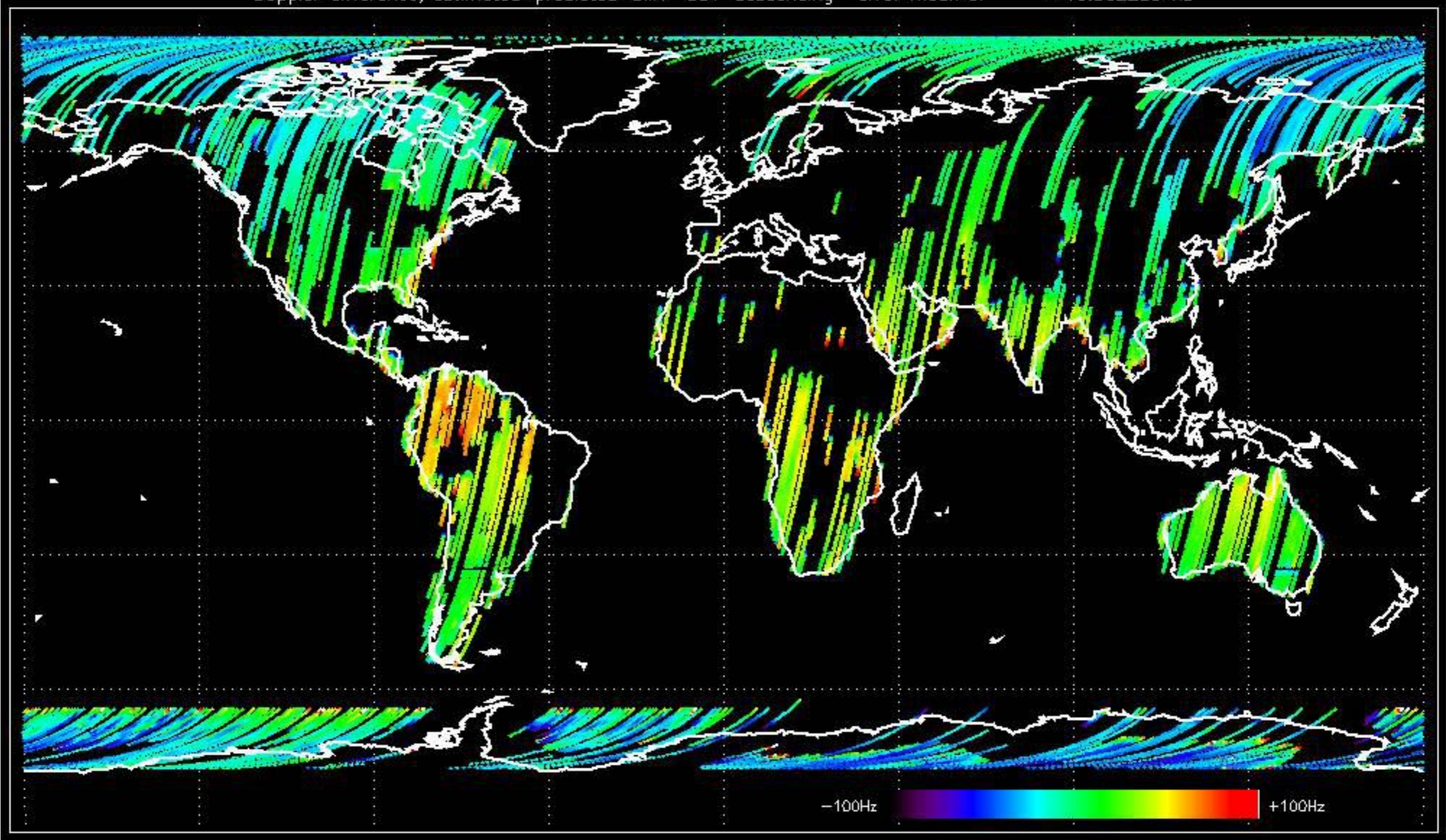




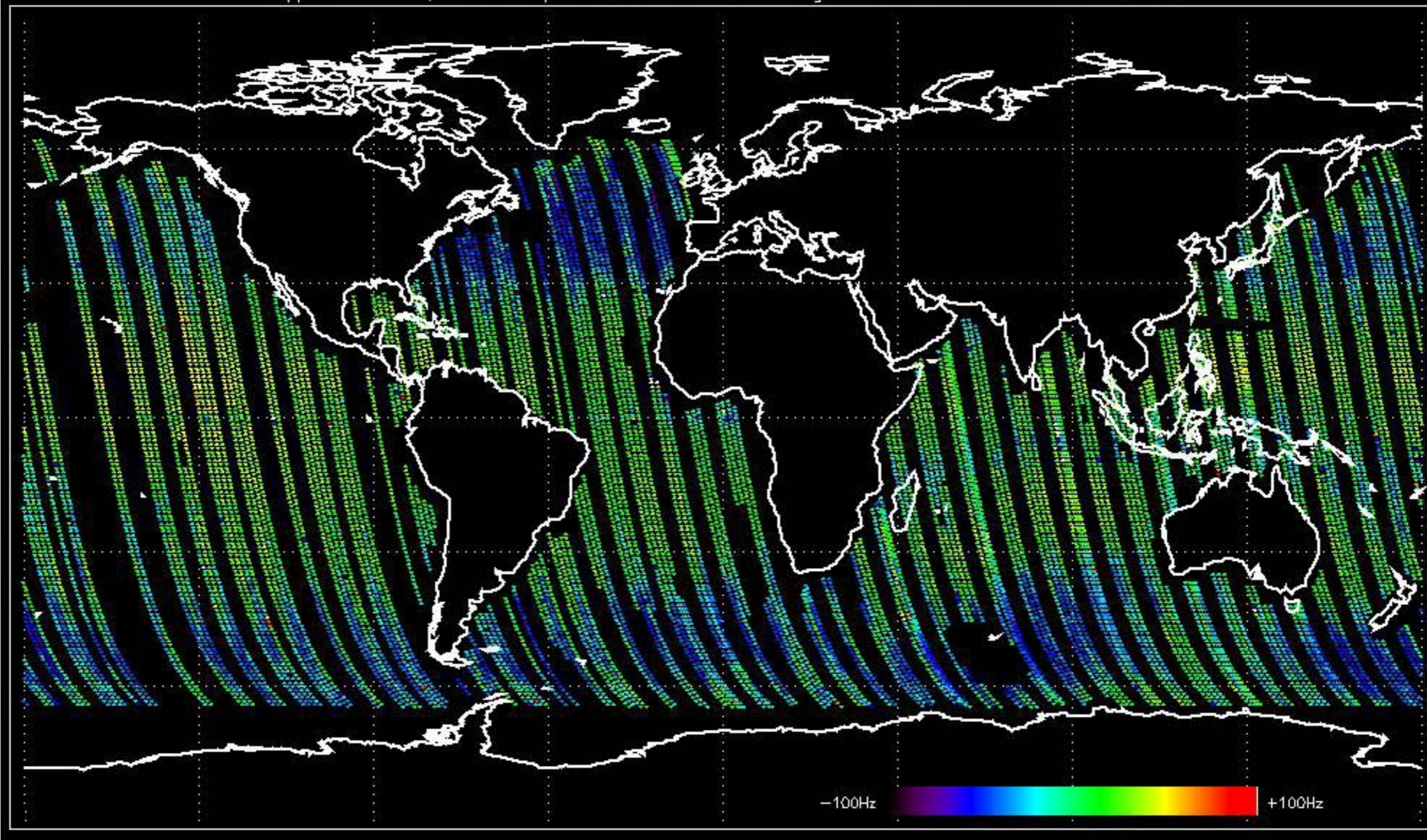
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.510687 Hz



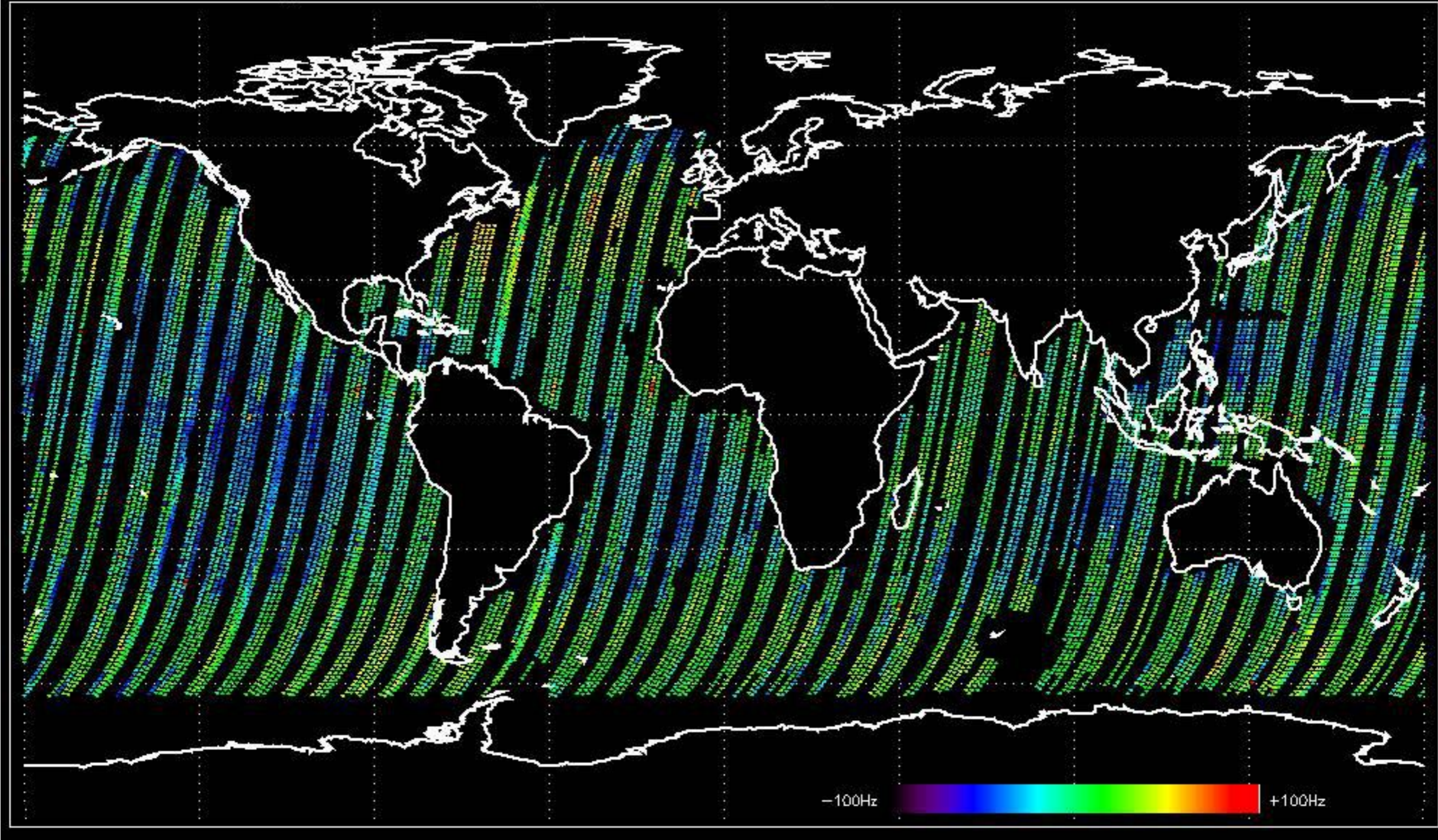
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.362230 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.457509 Hz

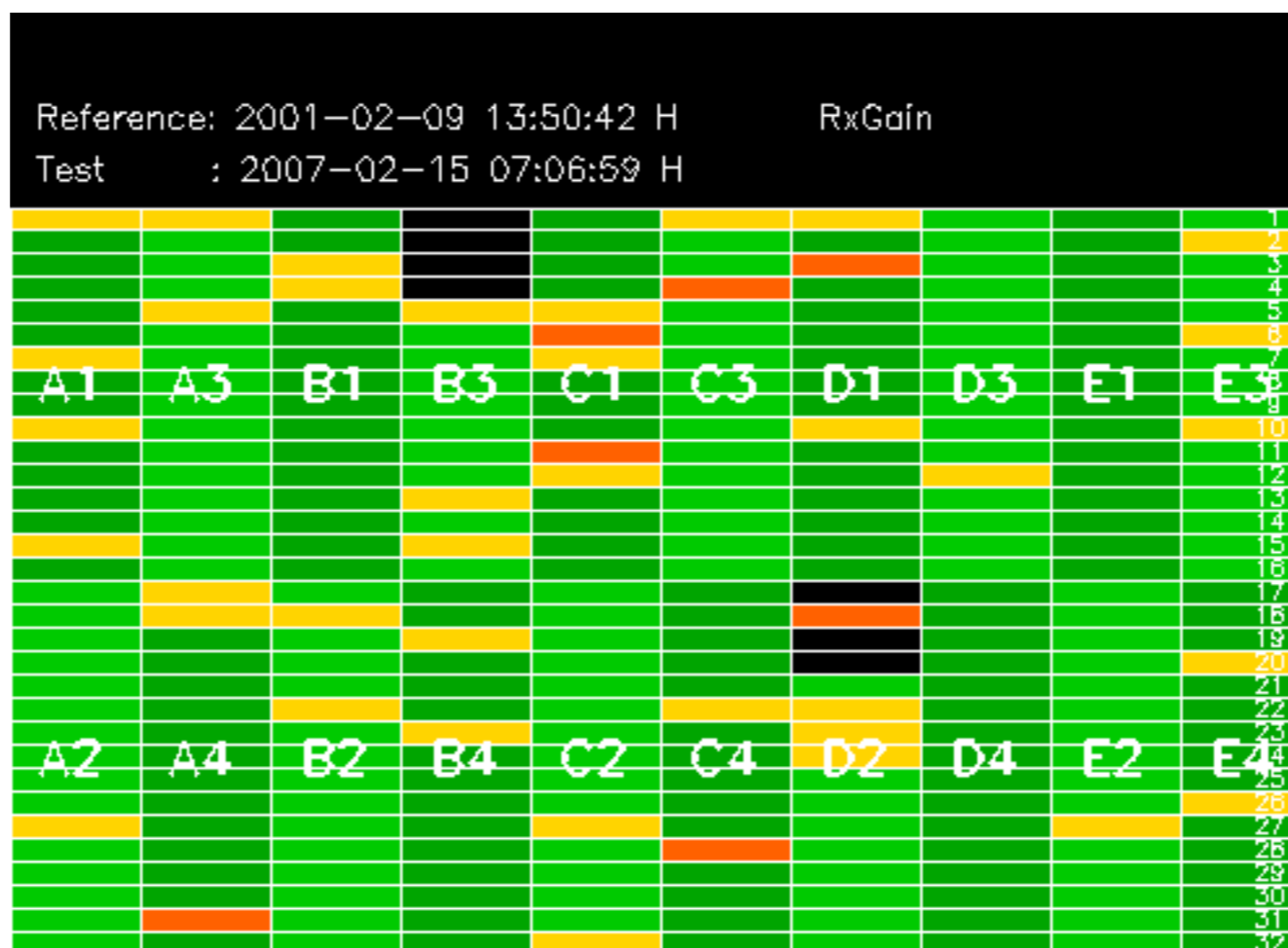


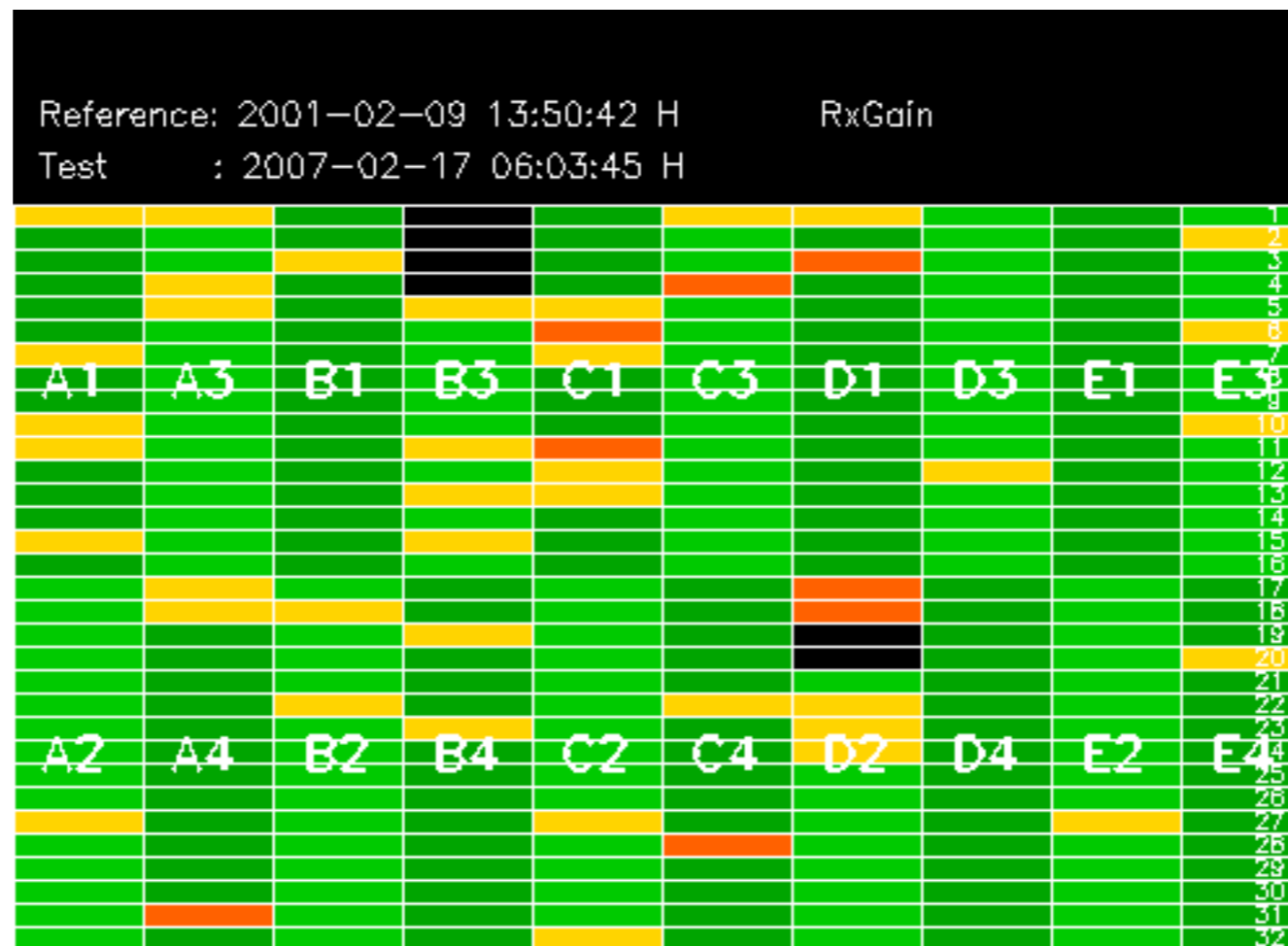
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.649093 Hz

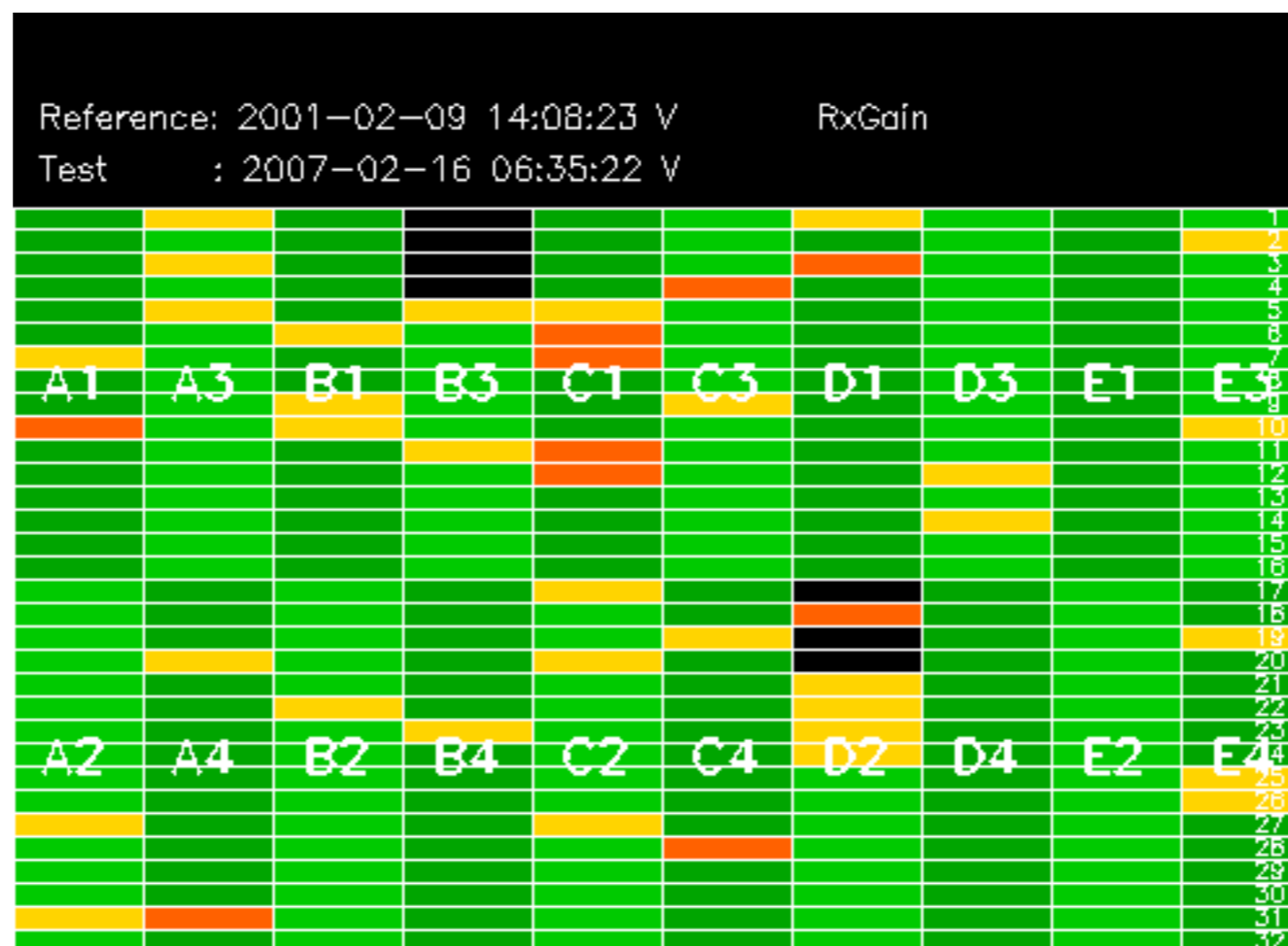


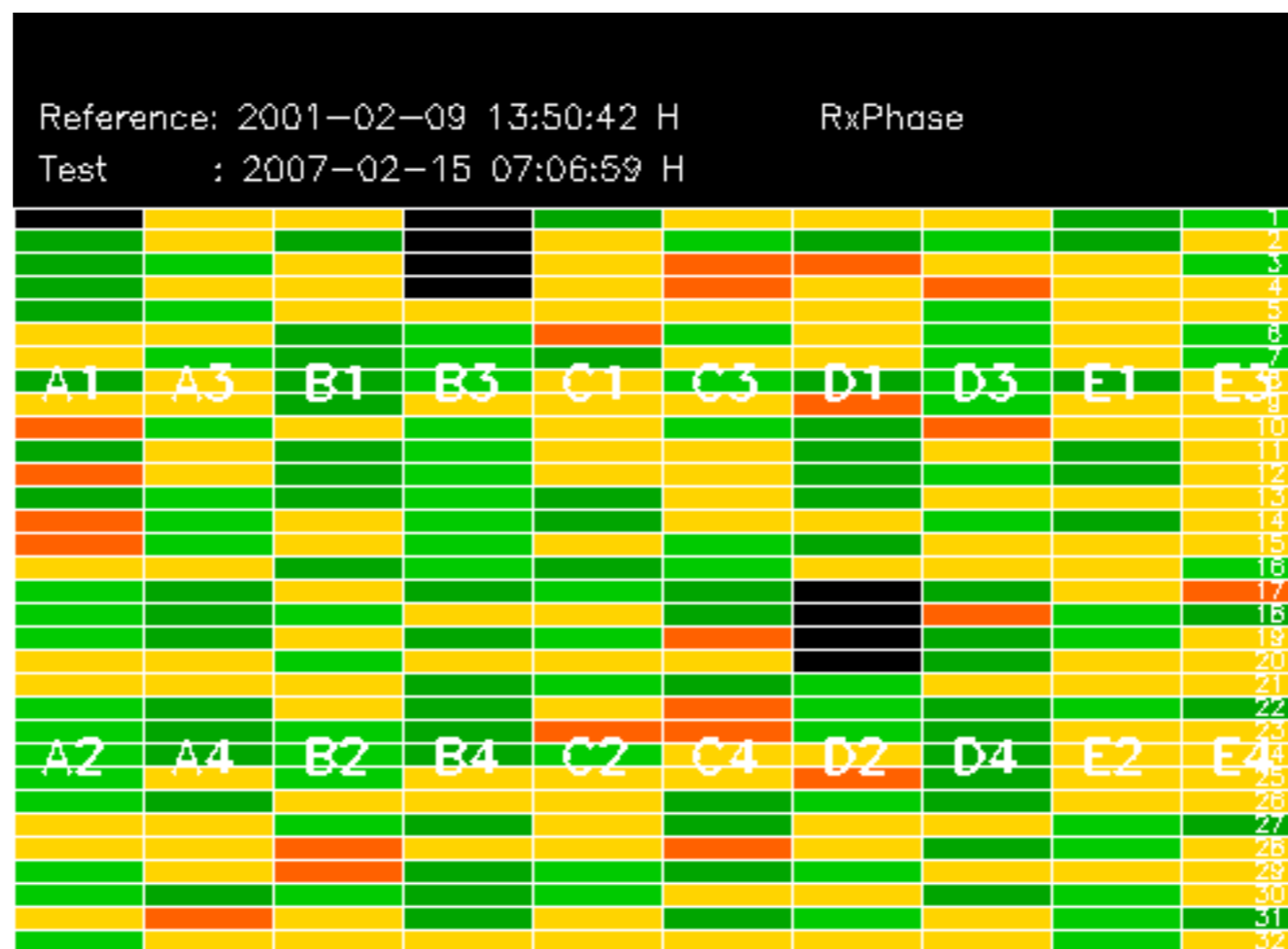
No anomalies observed on available MS products:

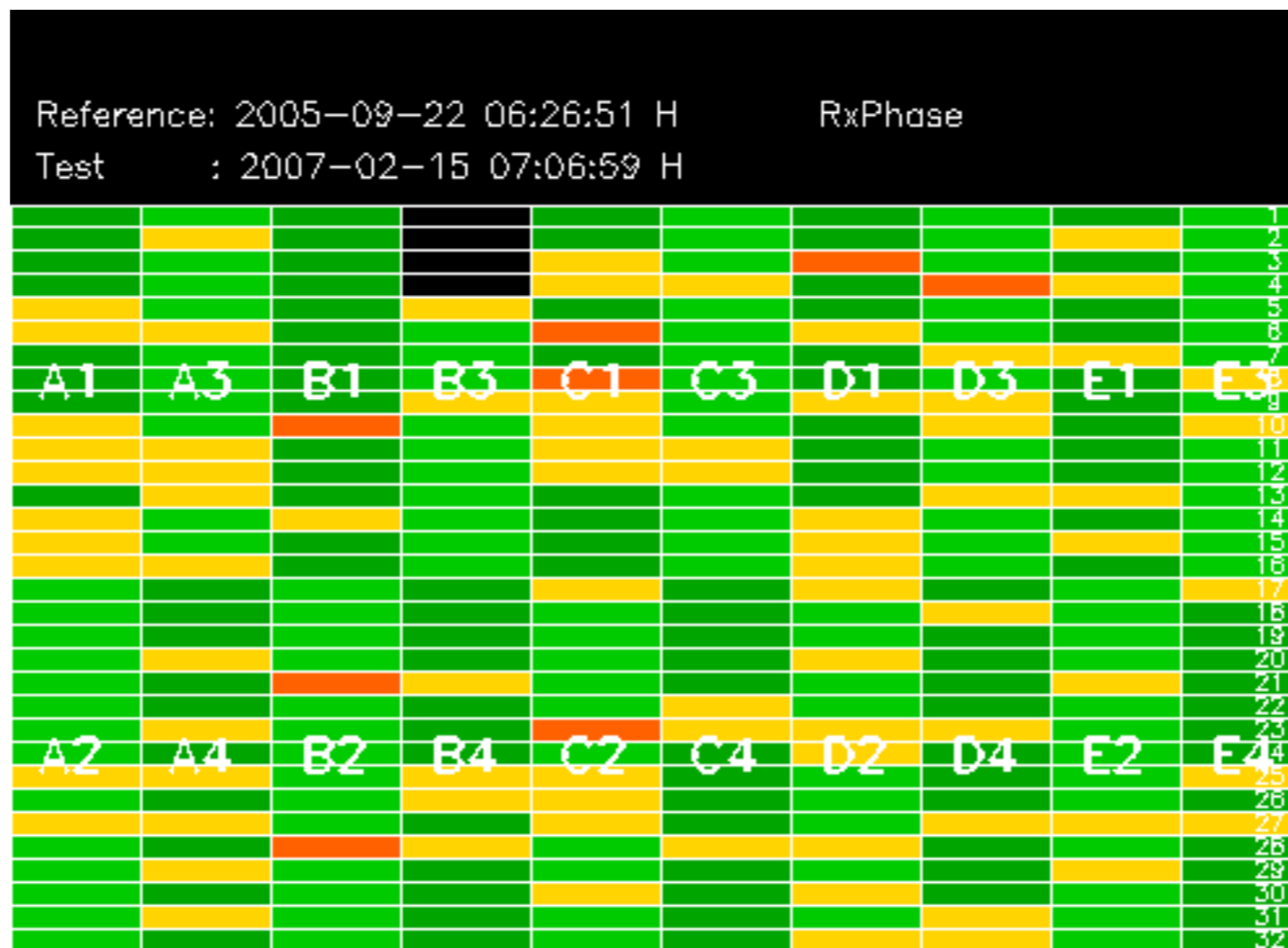
No anomalies observed.

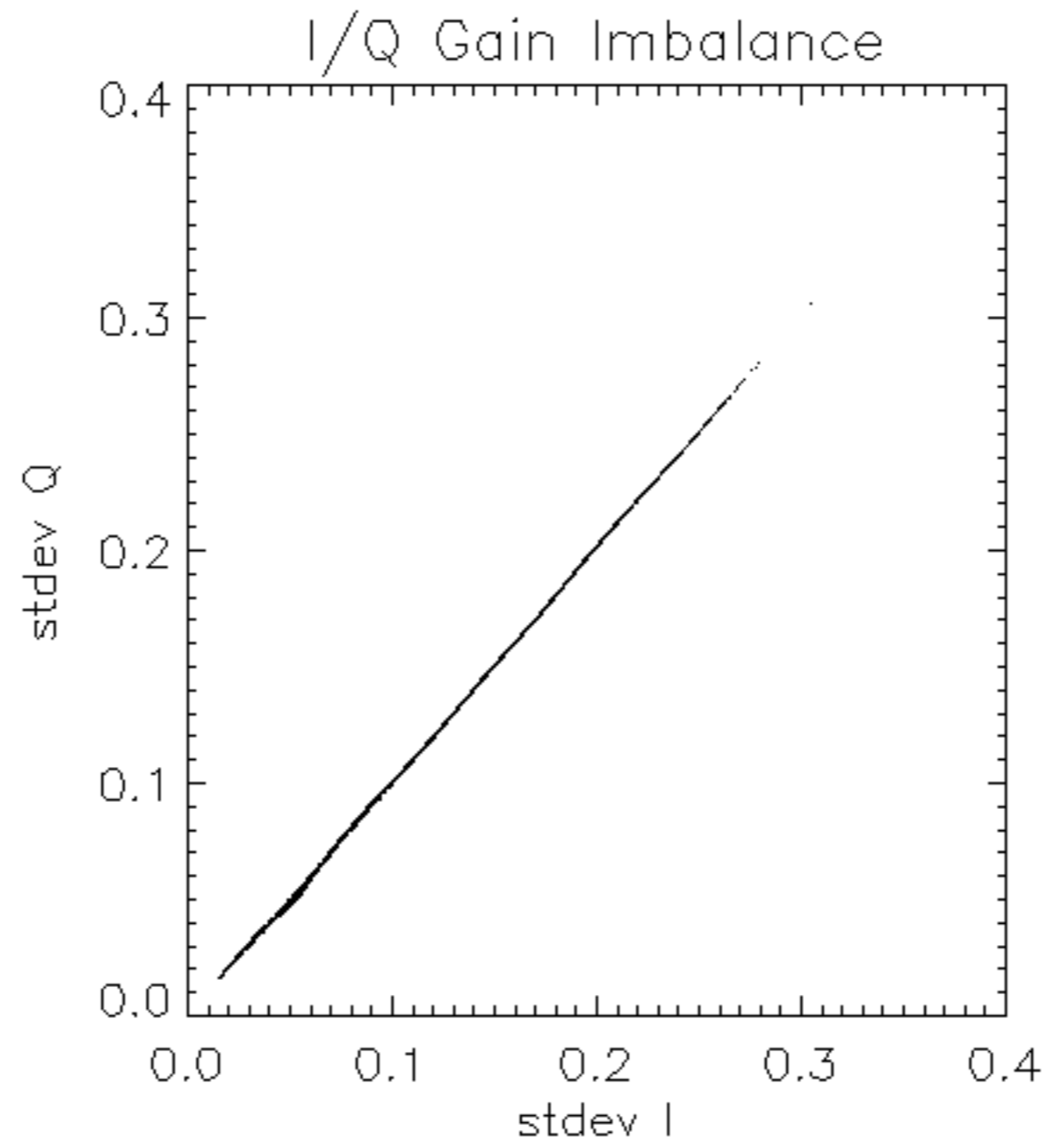


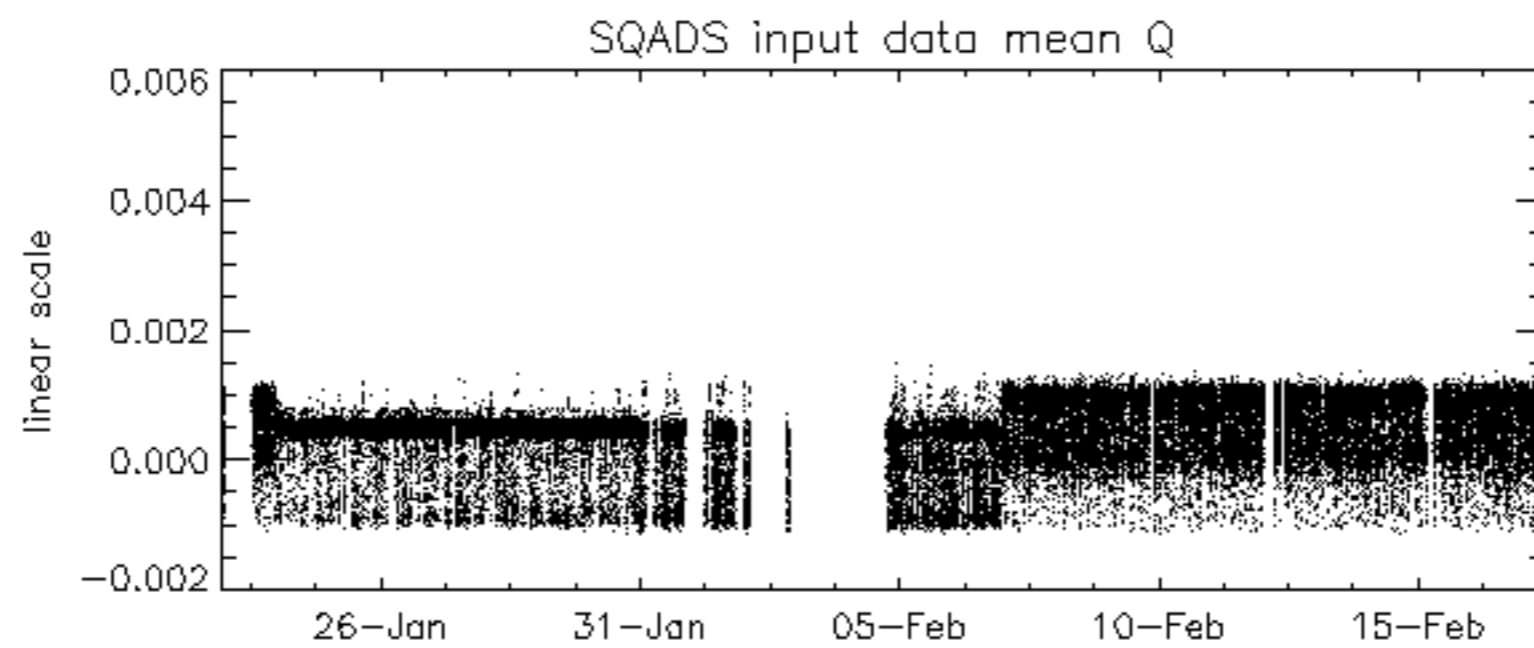
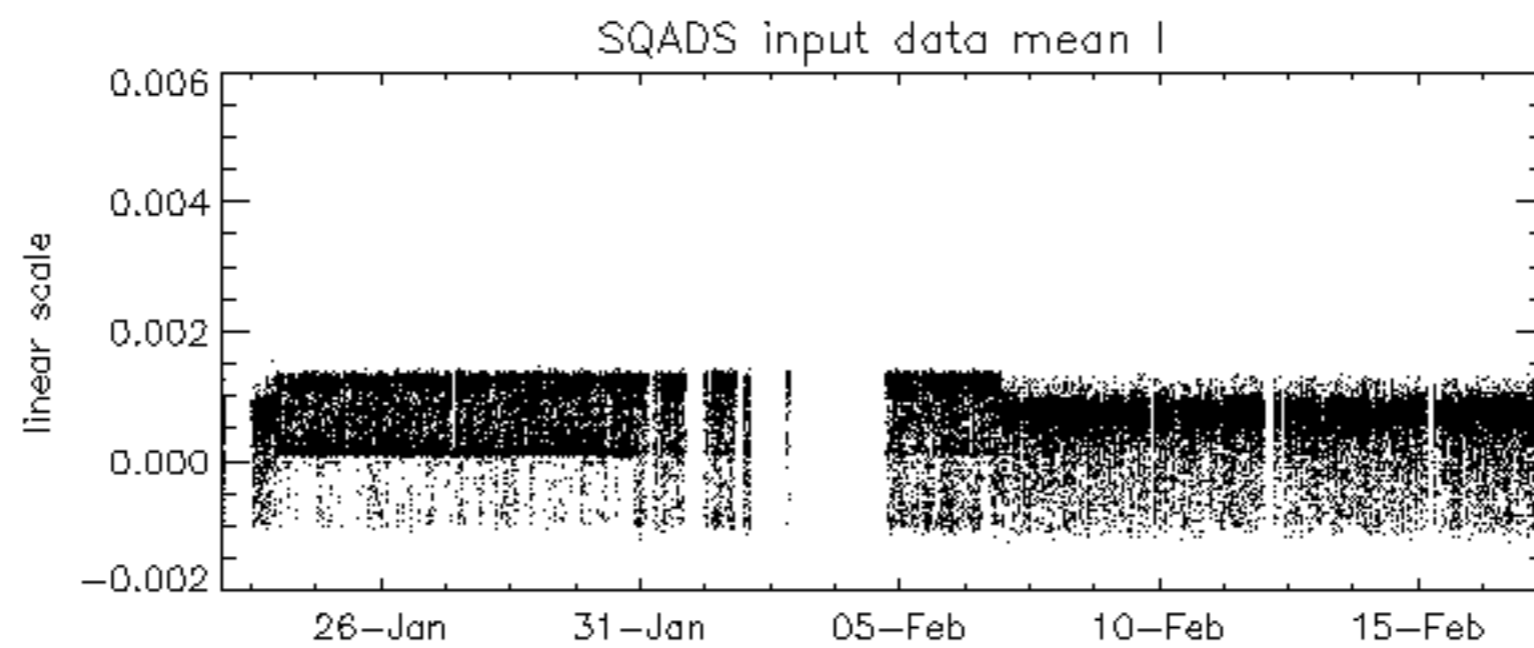
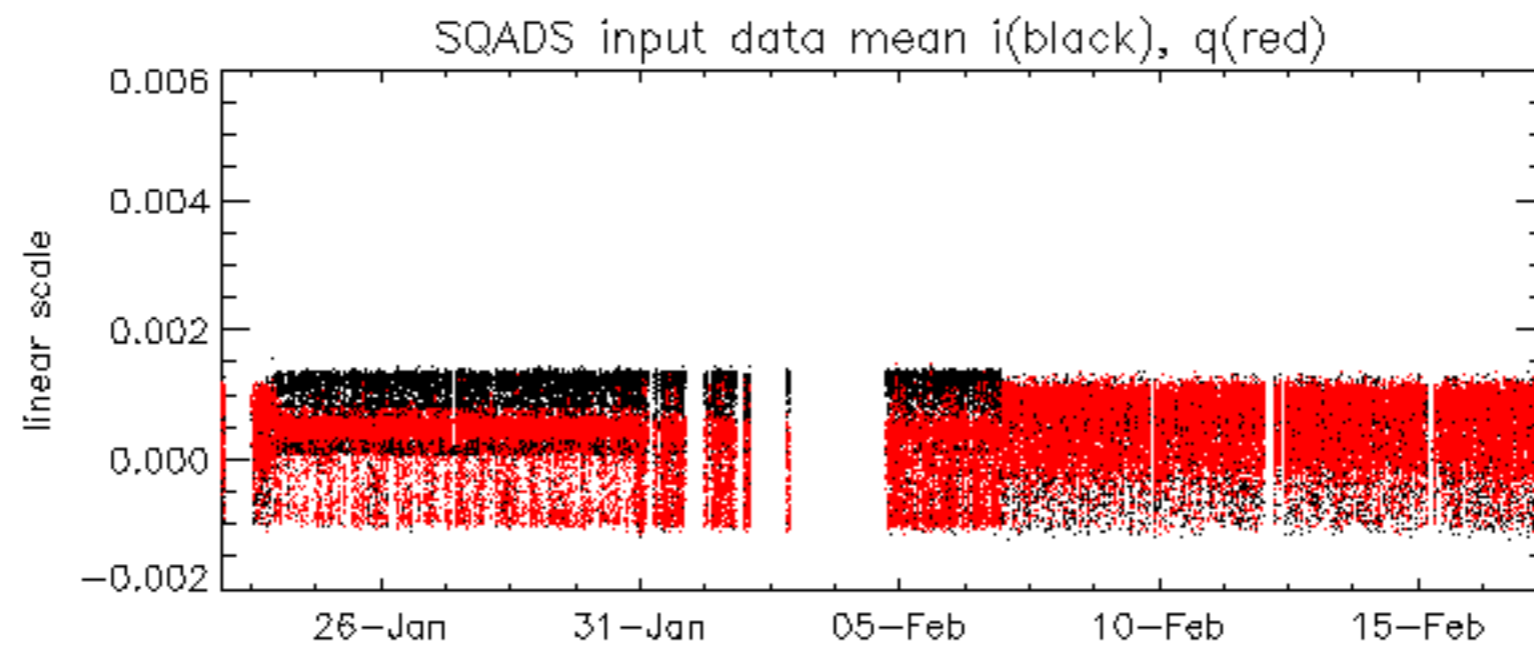


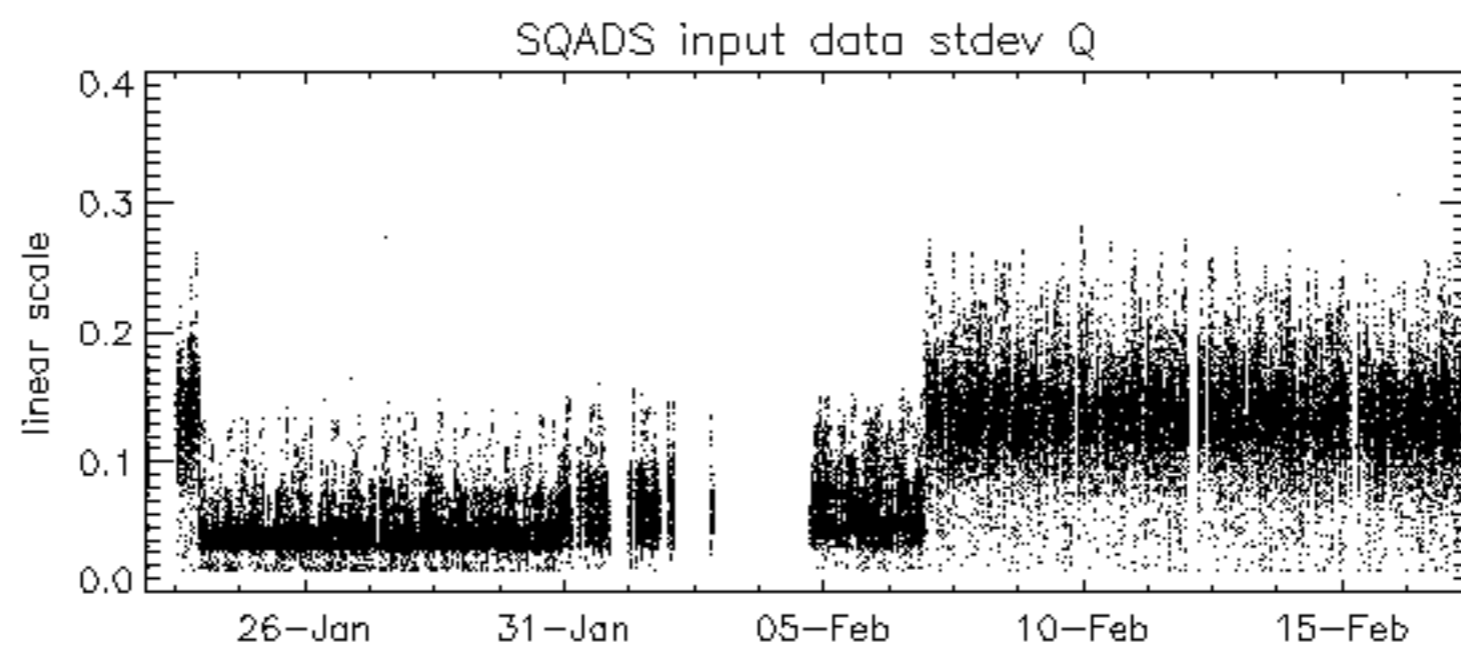
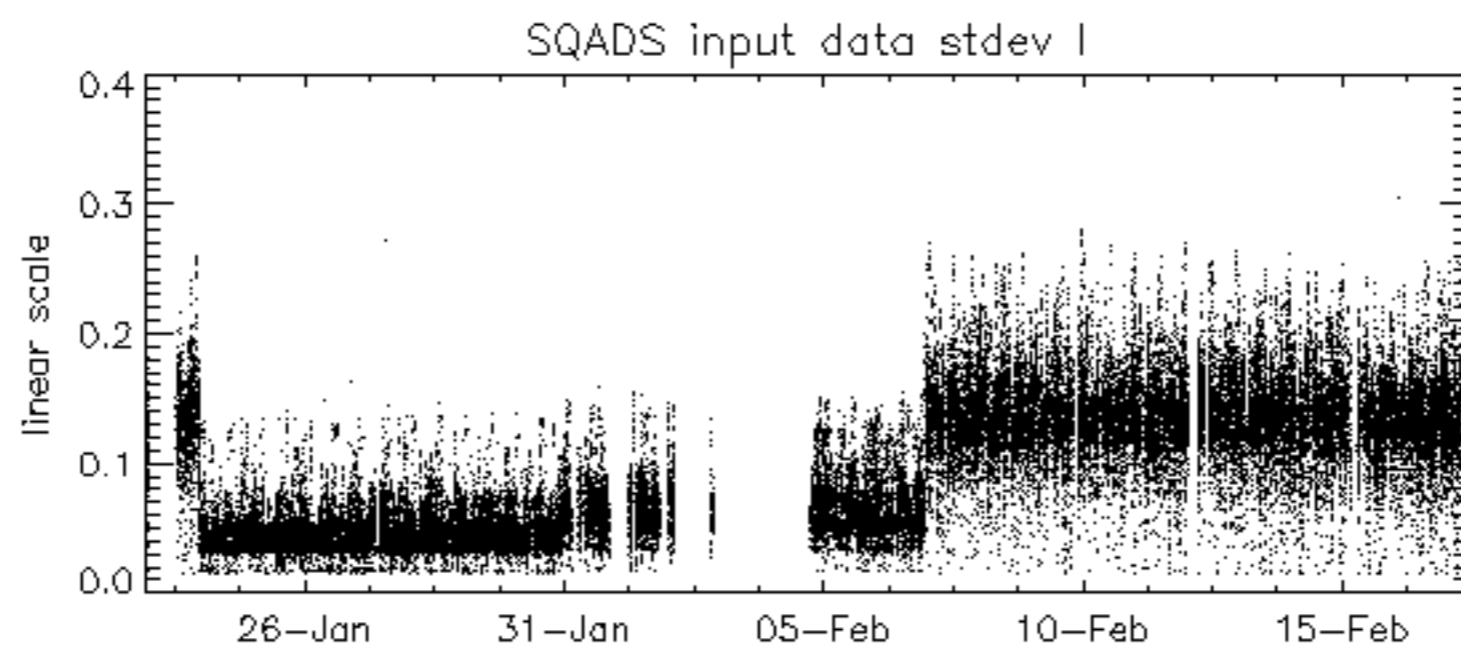
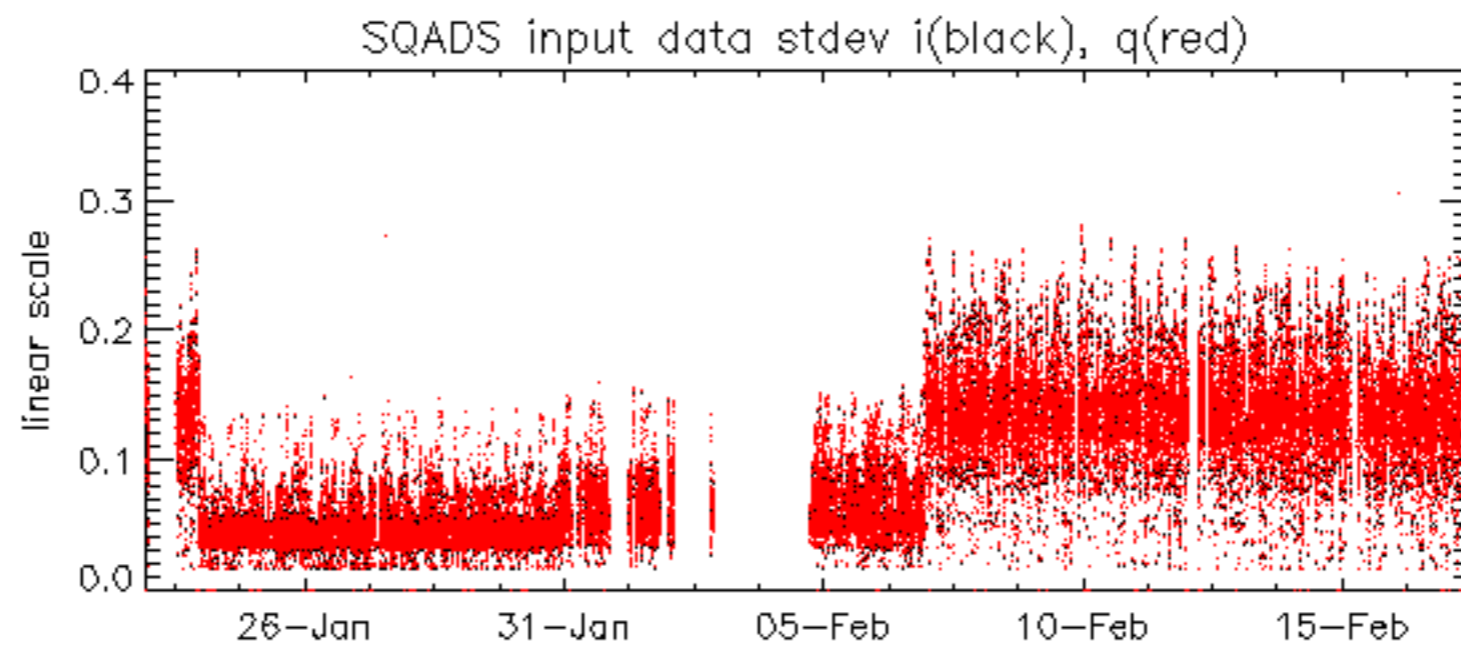










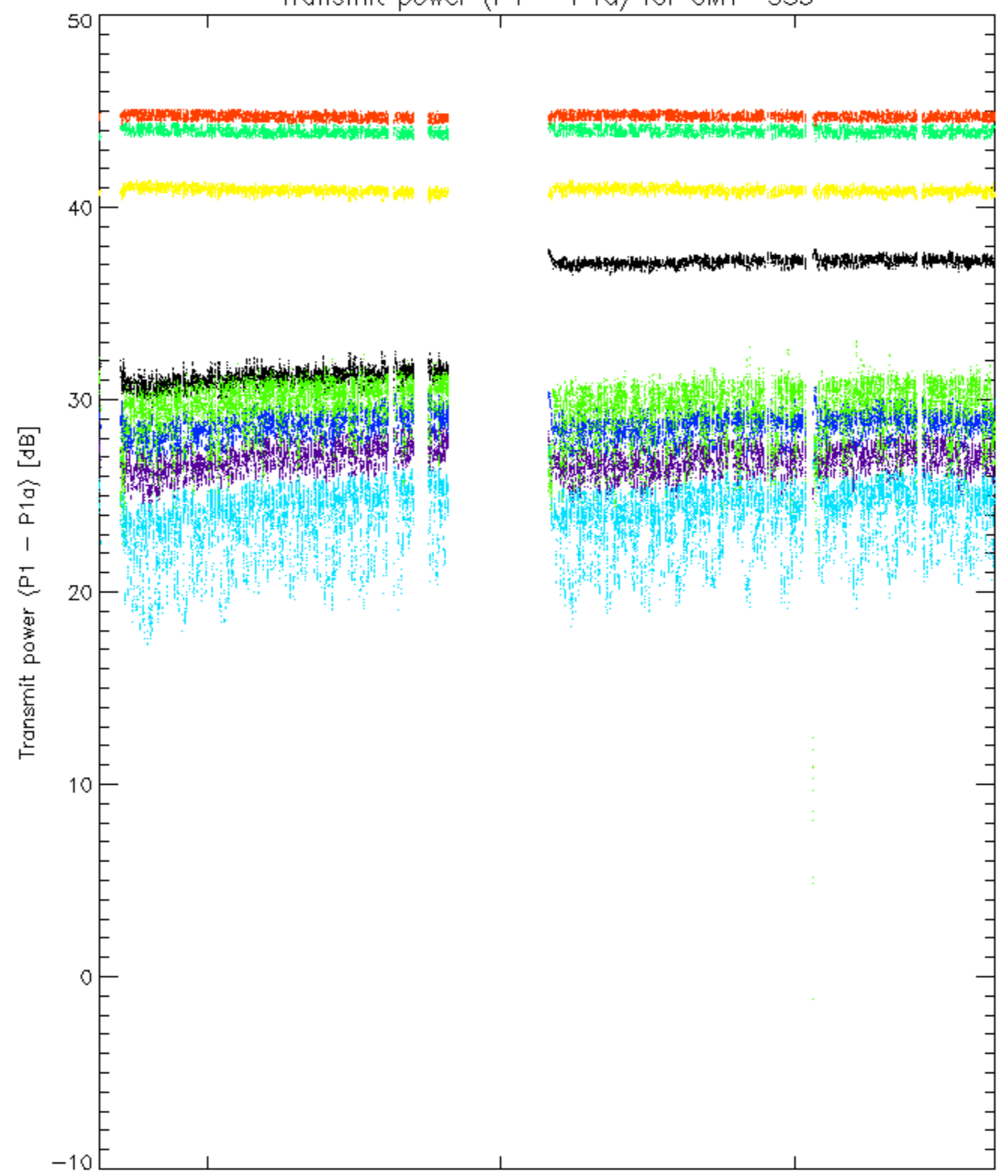


Summary of analysis for the last 3 days 2007021[567]

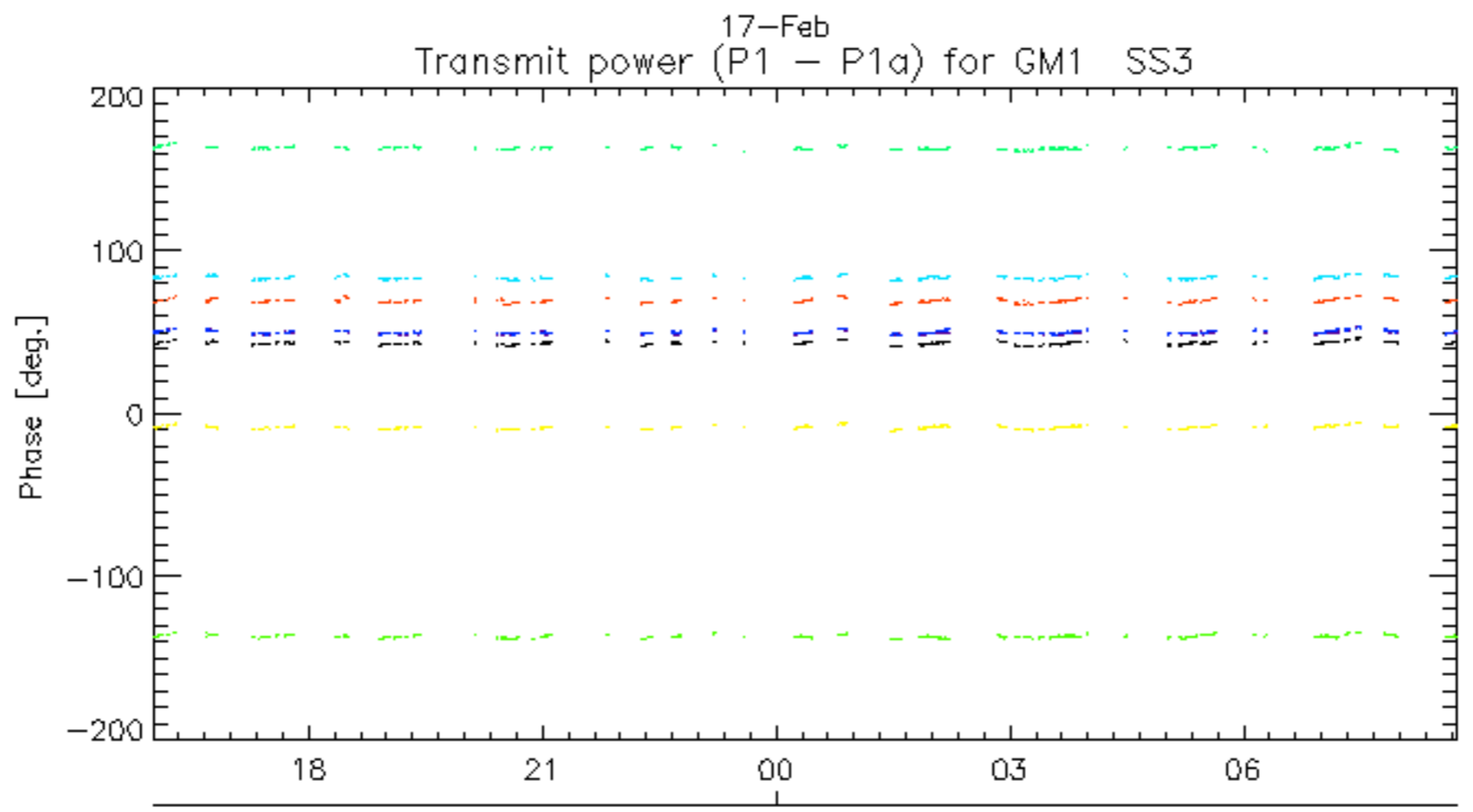
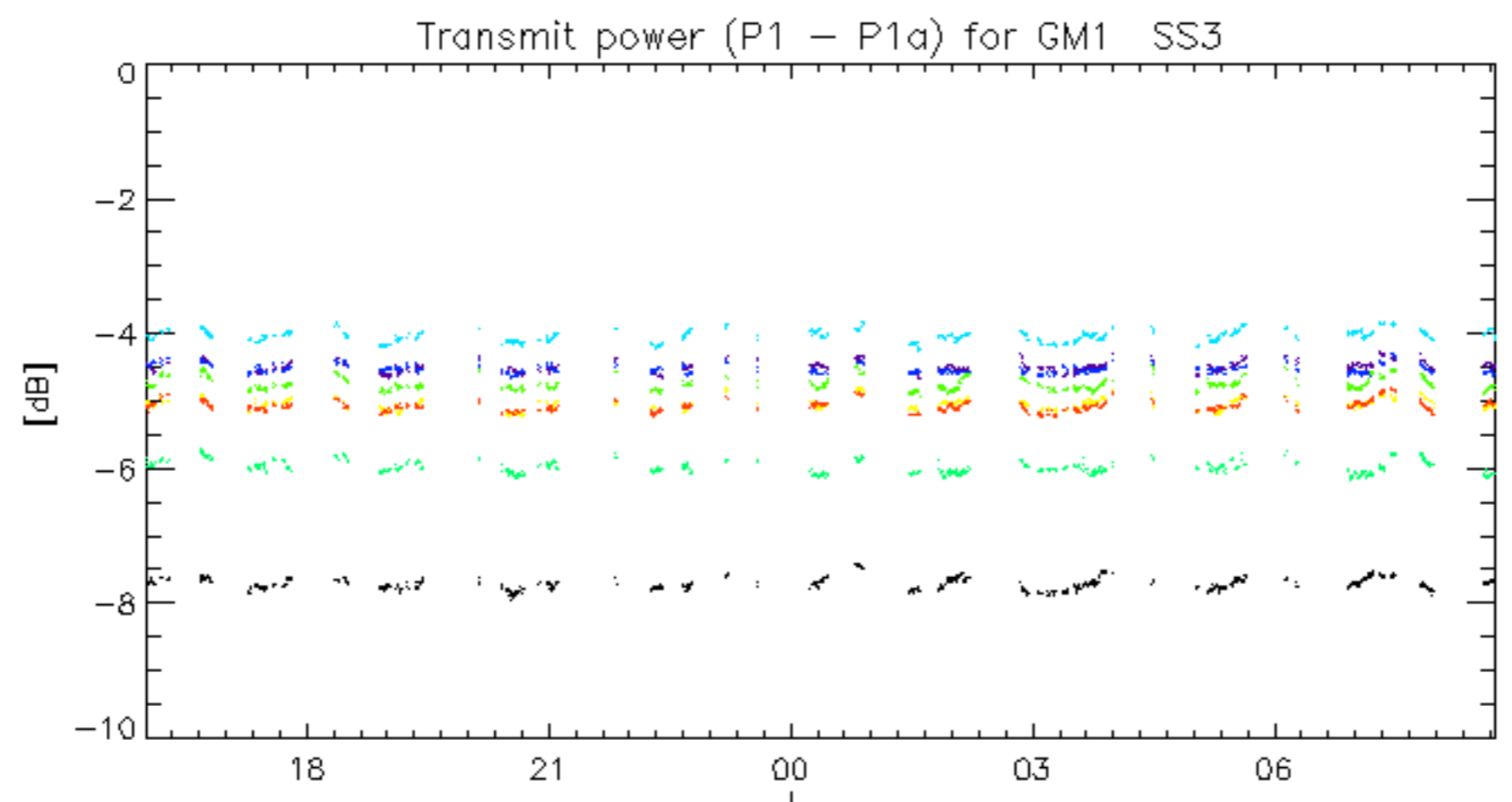
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070215_081235_000003682055_00336_25941_8530.N1	15	2459
ASA_IMM_1PNPDE20070216_012024_000000352055_00346_25951_9272.N1	1	0
ASA_IMM_1PNPDE20070216_153339_000000502055_00355_25960_9911.N1	0	19
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

Transmit power (P1 - P1a) for GM1 SS3

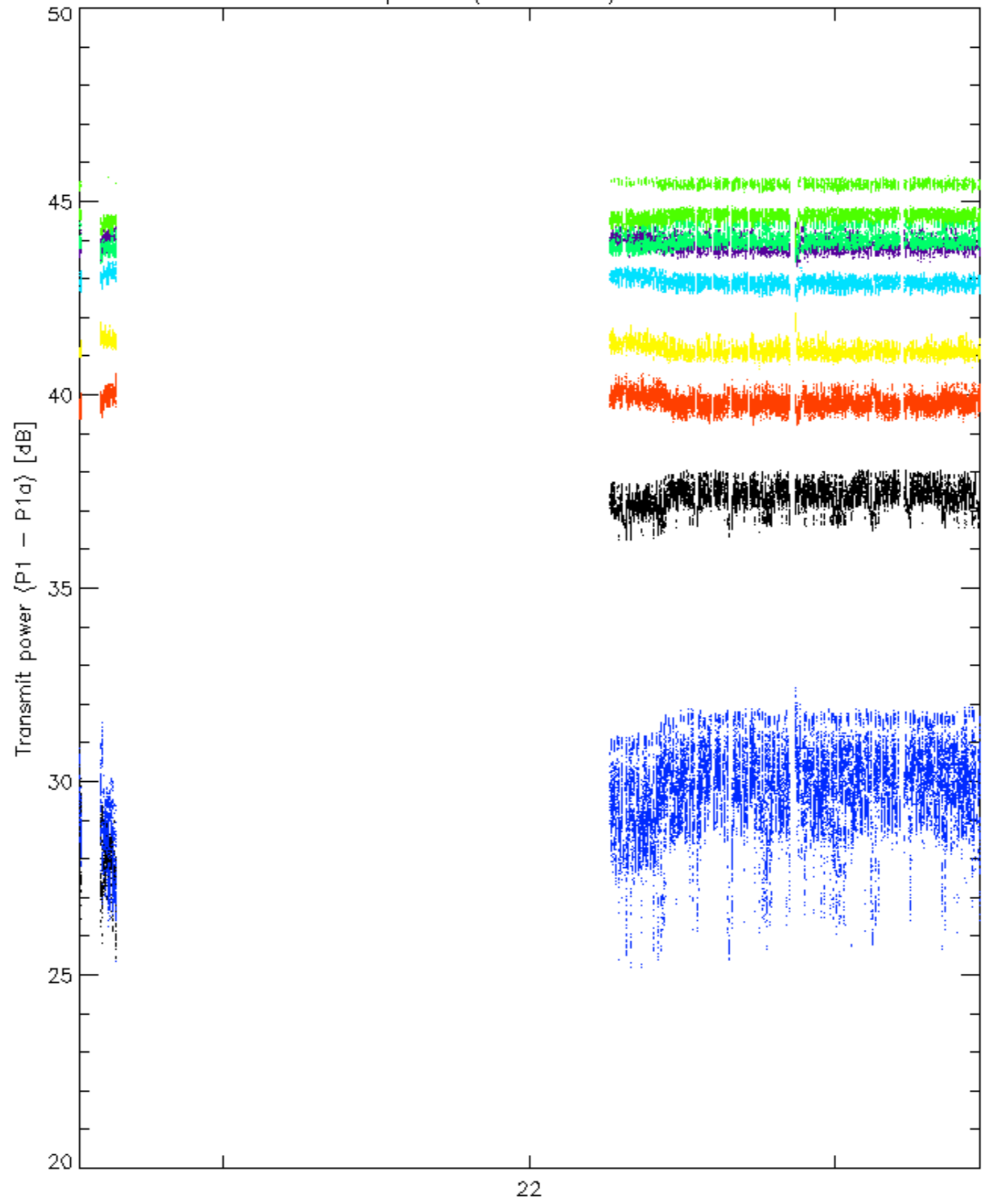


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

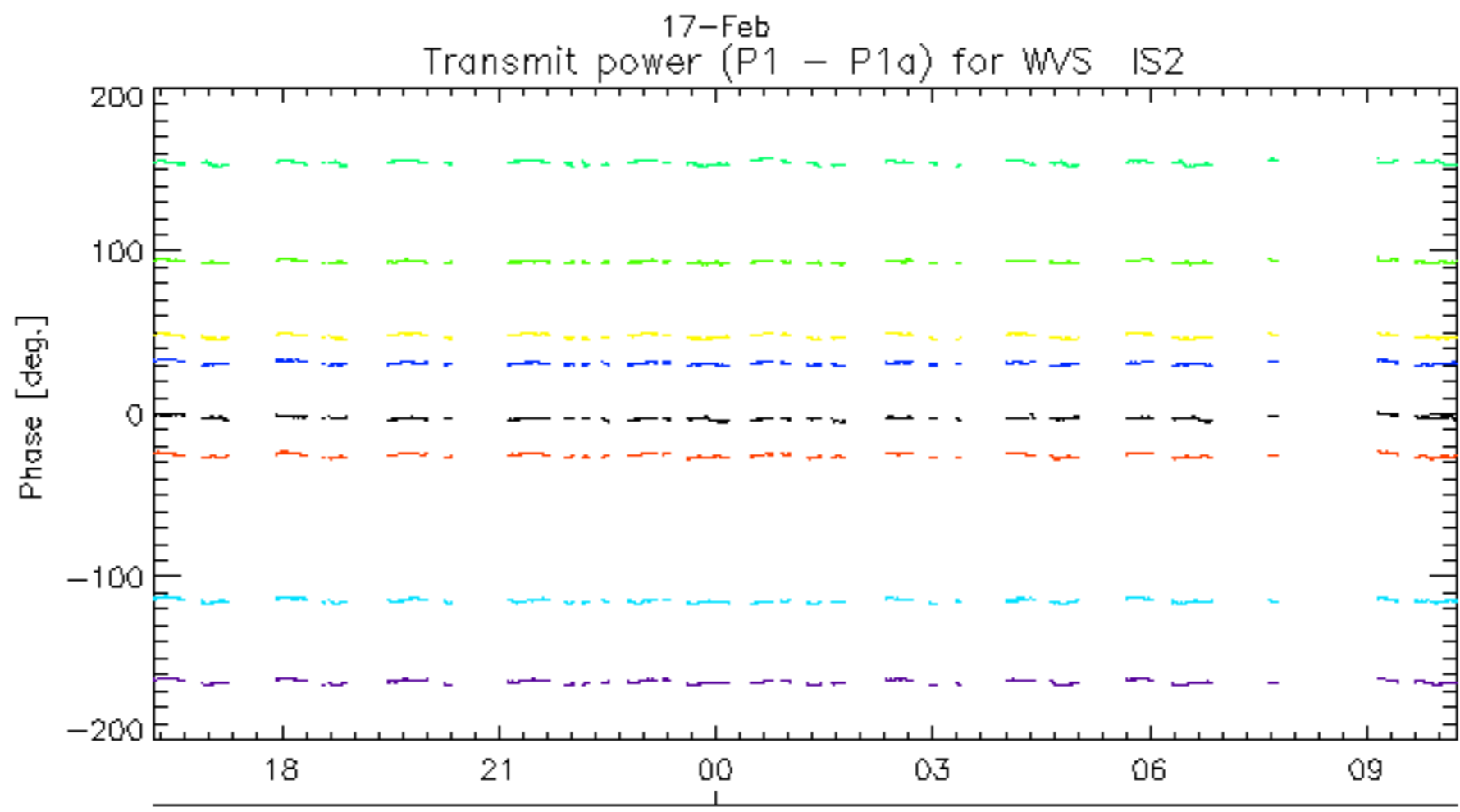
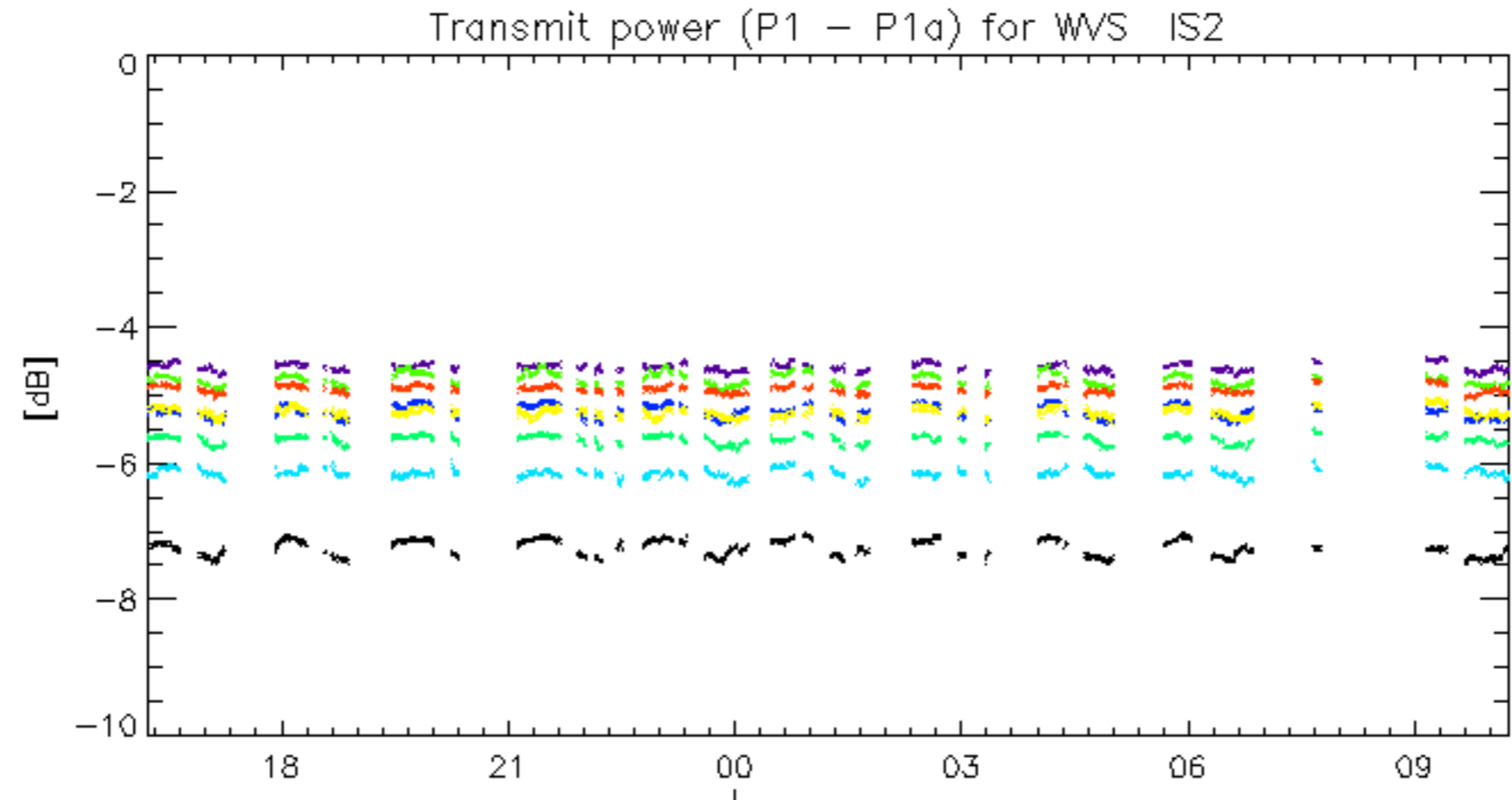


17-Feb
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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.