

PRELIMINARY REPORT OF 070209

last update on Fri Feb 9 16:38:00 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 2007-02-08 00:00:00 to 2007-02-09 16:38:00

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	42	72	5	2	27
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	42	72	5	2	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	72	5	2	27
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	42	72	5	2	27

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	43	59	44	12	71
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	43	59	44	12	71
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	59	44	12	71
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	43	59	44	12	71

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	20070209 033417
H	20070208 040554

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	-15.443552	0.621948	3.738168
7	P1a	-17.370598	0.116532	-0.545571
11	P1a	-17.305595	0.356330	-0.011649
15	P1a	-12.806106	0.109897	-0.391427
19	P1a	-15.072889	0.094207	-0.160522
22	P1a	-15.456342	0.458558	-0.572750
26	P1a	-14.996839	0.220290	-0.162018
30	P1a	-17.228052	0.332458	-0.559154

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.286707	0.576600	-3.983498
7	P1	-3.099349	0.008949	-0.146909
11	P1	-4.116467	0.021429	-0.180734
15	P1	-6.311034	0.017103	-0.102341
19	P1	-3.708900	0.008534	-0.039205
22	P1	-4.670408	0.014399	-0.018048
26	P1	-3.931579	0.012751	-0.008378
30	P1	-5.914368	0.012038	-0.093286

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.169579	0.775043	-4.368713
7	P2	-21.626602	0.089276	0.021562
11	P2	-15.490999	0.105170	0.033038
15	P2	-7.014090	0.105397	-0.156575
19	P2	-9.079249	0.091766	-0.129510
22	P2	-18.093855	0.088055	-0.166224

26	P2	-16.499020	0.103984	-0.212903
30	P2	-19.341053	0.083623	-0.127584

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.205577	0.007194	-0.046369
7	P3	-8.205577	0.007194	-0.046369
11	P3	-8.205577	0.007194	-0.046369
15	P3	-8.205577	0.007194	-0.046369
19	P3	-8.205577	0.007194	-0.046369
22	P3	-8.205577	0.007194	-0.046369
26	P3	-8.205577	0.007194	-0.046369
30	P3	-8.205577	0.007194	-0.046369

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	-11.496928	0.147226	1.934284
7	P1a	-10.024456	0.051537	-0.076539
11	P1a	-10.540086	0.062882	-0.433852
15	P1a	-10.836931	0.134835	-0.124756
19	P1a	-15.745636	0.062688	0.008677
22	P1a	-20.930777	1.338297	0.509778
26	P1a	-15.476953	0.258476	0.253412
30	P1a	-18.325724	0.366485	-0.136725

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.696078	3.844425	-12.043652
7	P1	-2.440632	0.006026	-0.001686

11	P1	-2.866673	0.017426	-0.154162
15	P1	-3.782218	0.033490	-0.119548
19	P1	-3.549903	0.013553	-0.019664
22	P1	-5.023404	0.024061	-0.003901
26	P1	-6.000956	0.022011	-0.016790
30	P1	-5.290783	0.023269	-0.005543

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.913301	0.776306	-5.081237
7	P2	-22.029839	0.047717	0.056826
11	P2	-10.690032	0.030066	0.080001
15	P2	-4.841740	0.026231	0.008479
19	P2	-6.840503	0.026583	0.025320
22	P2	-8.149419	0.029196	0.020085
26	P2	-24.254360	0.031187	0.017099
30	P2	-21.798336	0.033852	0.026274

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.054996	0.002540	0.011694
7	P3	-8.054907	0.002542	0.010474
11	P3	-8.054931	0.002530	0.011592
15	P3	-8.054935	0.002522	0.011547
19	P3	-8.054905	0.002530	0.011200
22	P3	-8.054979	0.002526	0.012008
26	P3	-8.054833	0.002530	0.012295
30	P3	-8.054935	0.002536	0.011367

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	0.000680162
	stdev	2.80497e-07
MEAN Q	mean	0.000282839
	stdev	2.46465e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0728606
	stdev	0.00181369
STDEV Q	mean	0.0725453
	stdev	0.00184901



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007020[789]

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_1PNPDE20070208_015344_000001402055_00232_25837_9161.N1	7	101
ASA_IMM_1PNPDE20070209_044539_000001392055_00248_25853_0947.N1	15	1731

ASA_IMM_1PNPDE20070209_044539_000001392055_00248_25853_0987.N1	15	1731
ASA_IMM_1PNPDE20070209_044539_000001392055_00248_25853_1132.N1	15	1731
ASA_IMM_1PNPDE20070209_044842_000000212055_00248_25853_0817.N1	15	1557
ASA_GM1_1PNPDK20070208_131157_000009672055_00239_25844_8717.N1	0	30
ASA_WSM_1PNPDE20070208_012926_000000862055_00232_25837_9154.N1	17	4430
ASA_WSM_1PNPDE20070208_013746_000001222055_00232_25837_9217.N1	0	56
ASA_WSM_1PNPDE20070208_013853_000000552055_00232_25837_9136.N1	0	44
ASA_WSM_1PNPDE20070208_022638_000000672055_00232_25837_9174.N1	40	13228
ASA_WSM_1PNPDE20070208_022638_000000672055_00232_25837_9789.N1	40	13228
ASA_WSM_1PNPDE20070208_022846_000001162055_00232_25837_9196.N1	8	1599
ASA_WSM_1PNPDE20070208_022846_000001162055_00232_25837_9825.N1	8	1599
ASA_WSM_1PNPDE20070209_052422_000002262055_00248_25853_1134.N1	3	480
ASA_WSM_1PNPDE20070209_065803_000001832055_00249_25854_1157.N1	0	69
ASA_WSM_1PNPDE20070209_070208_000000782055_00249_25854_1158.N1	11	1663
ASA_WSM_1PNPDK20070208_094718_000000852055_00237_25842_8500.N1	0	32
ASA_APM_1PNPDE20070207_153229_000000682055_00226_25831_8504.N1	0	81

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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

<input type="checkbox"/>
Ascending
<input type="checkbox"/>
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

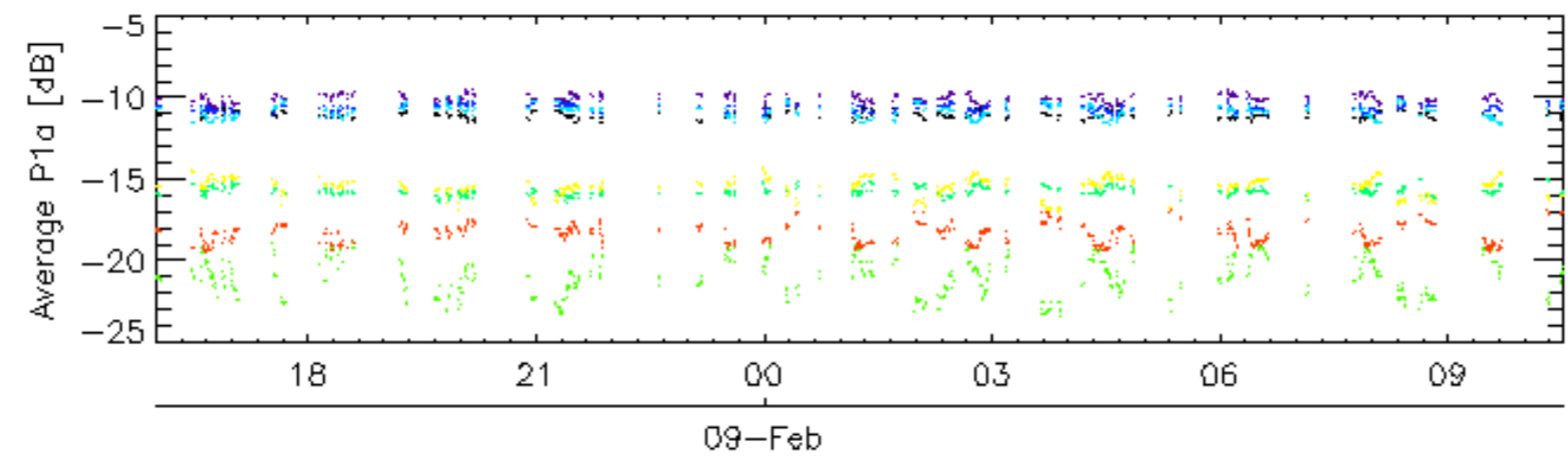
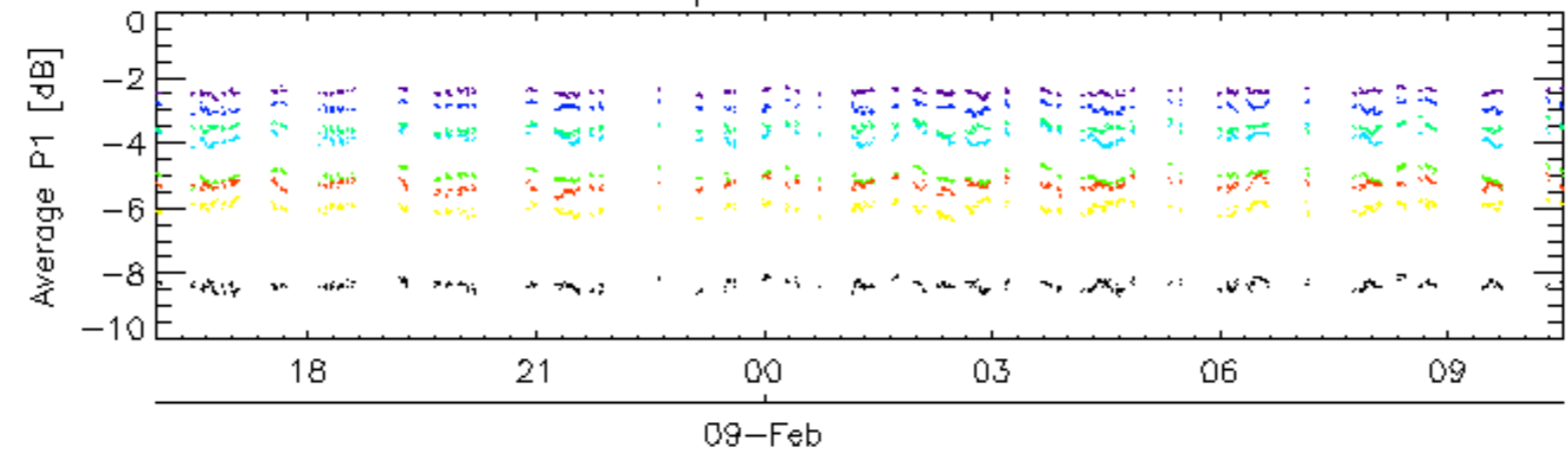
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

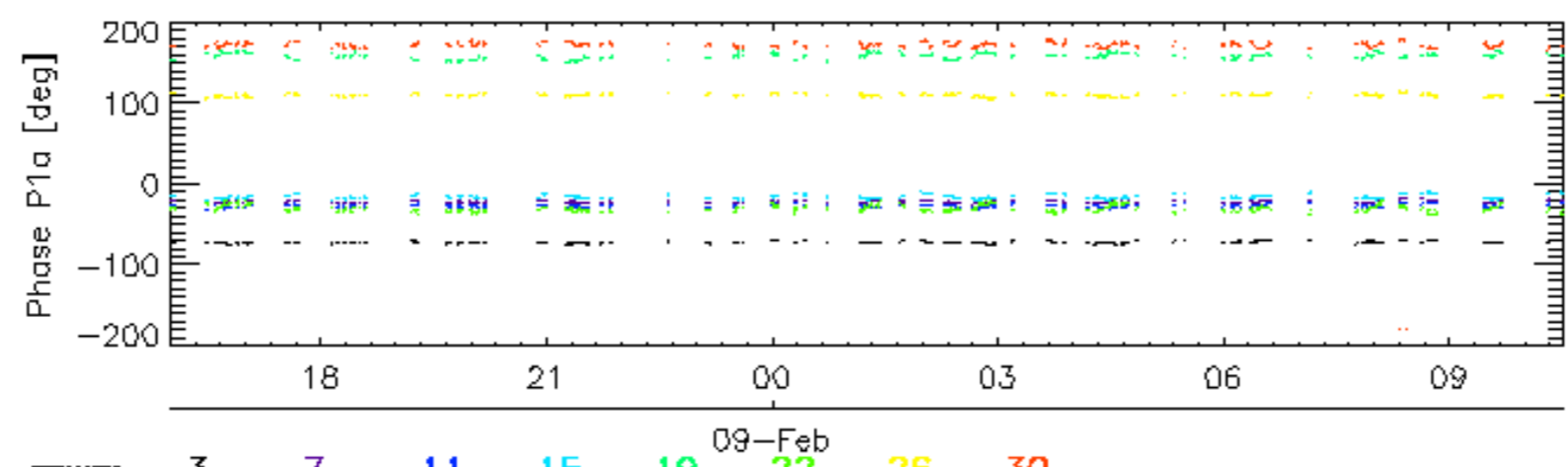
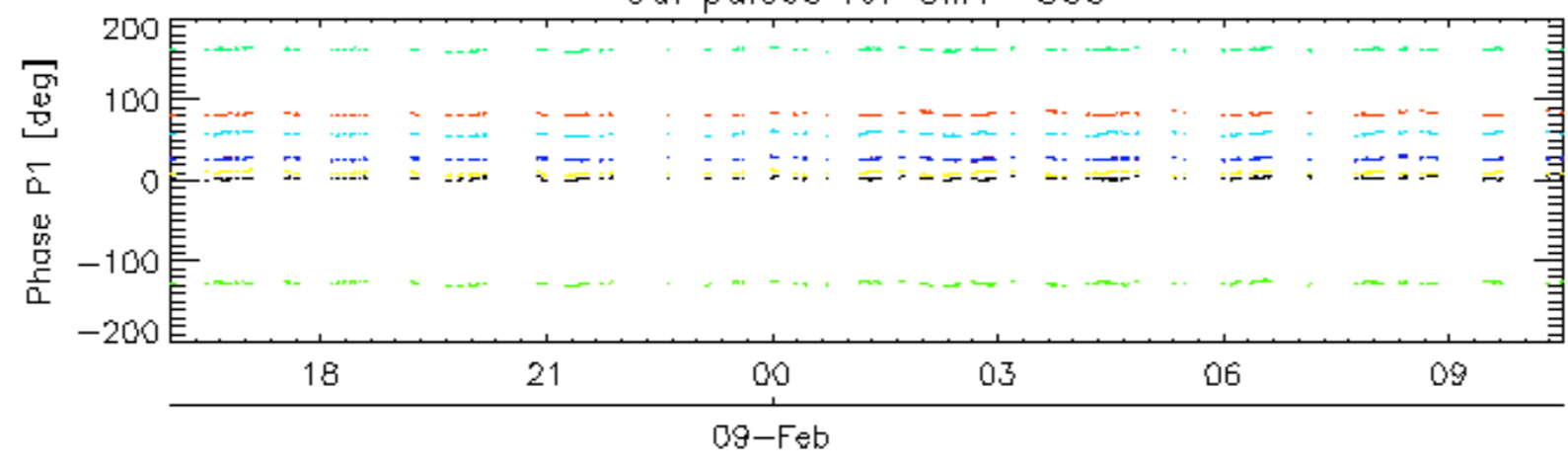
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

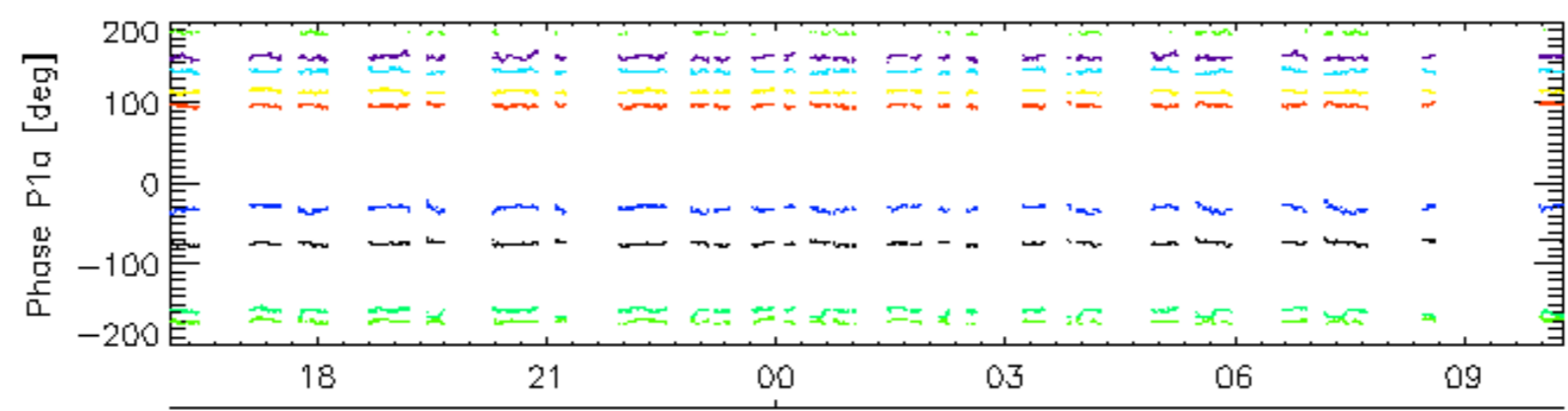
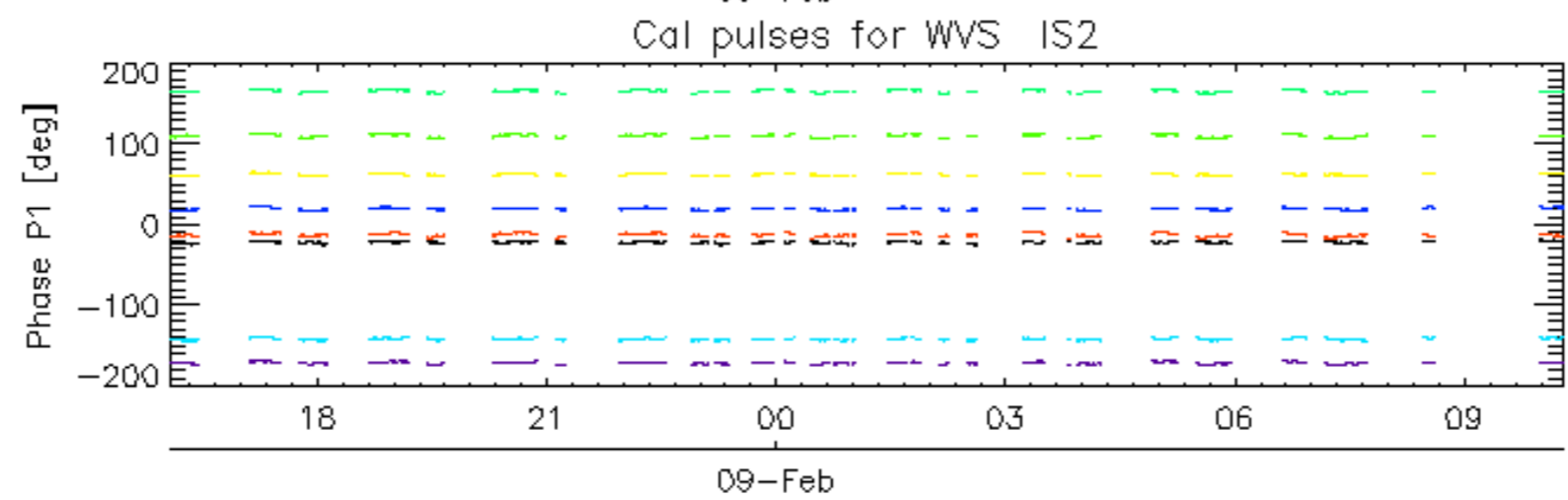
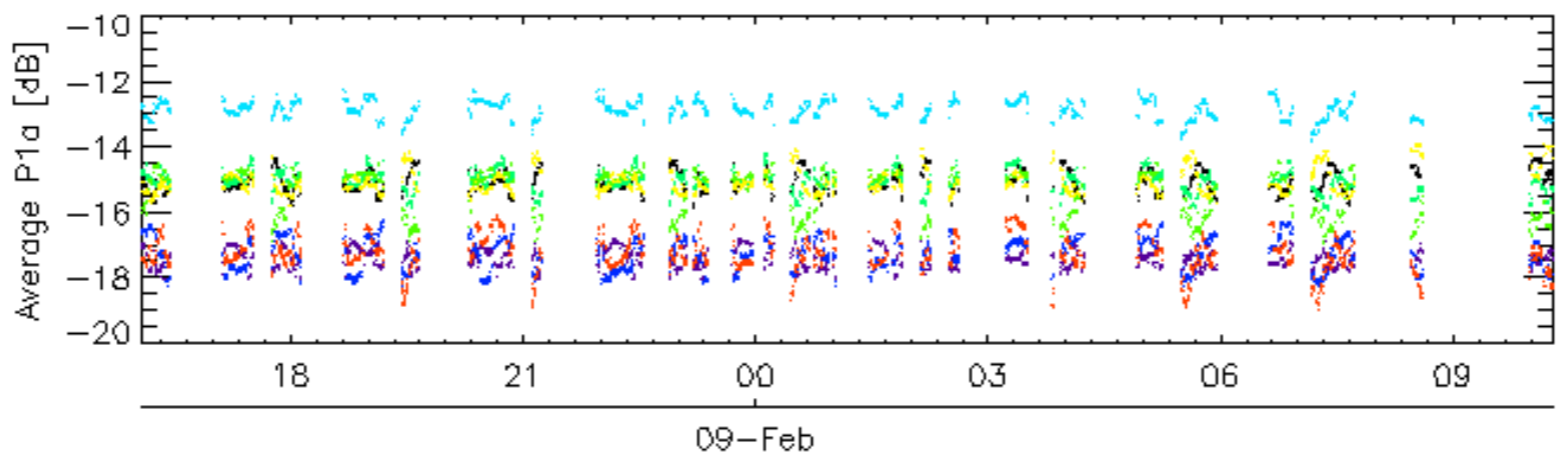
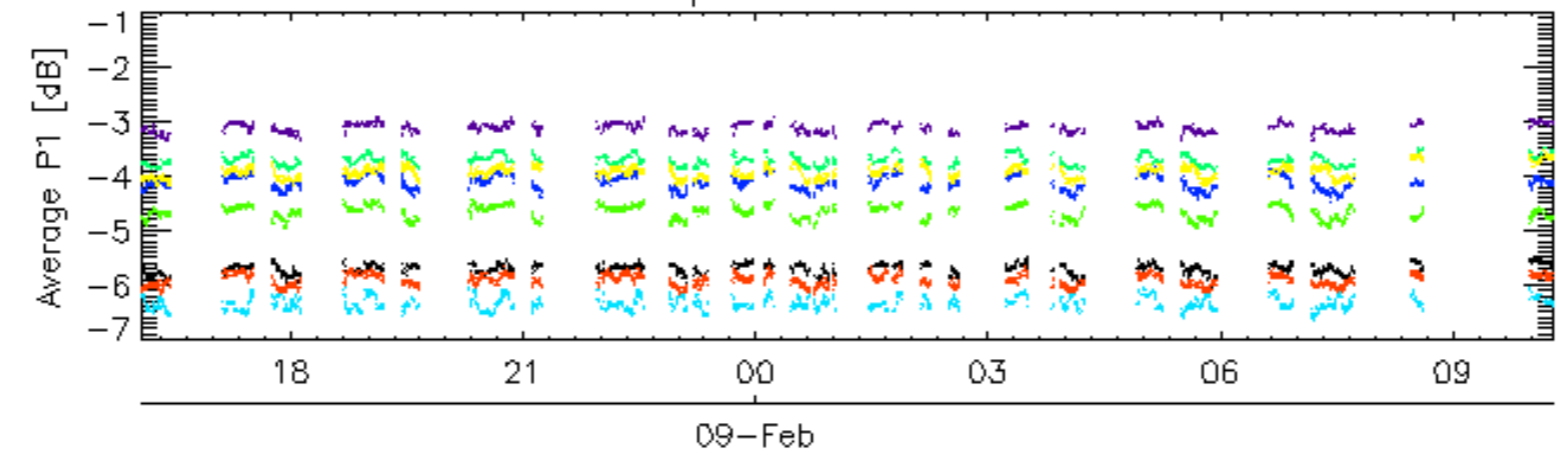


Cal pulses for GM1 SS3



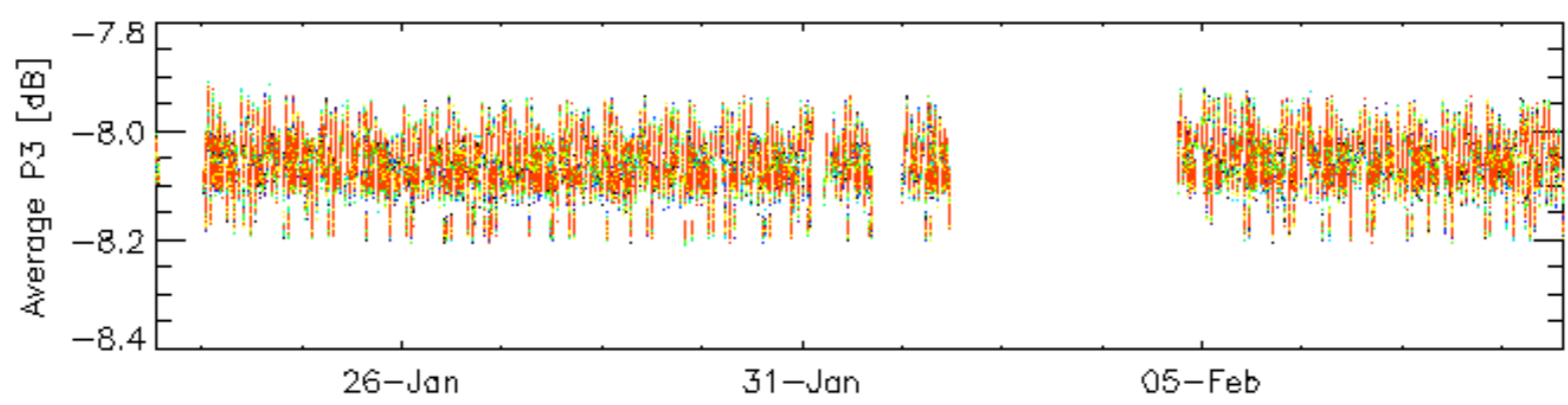
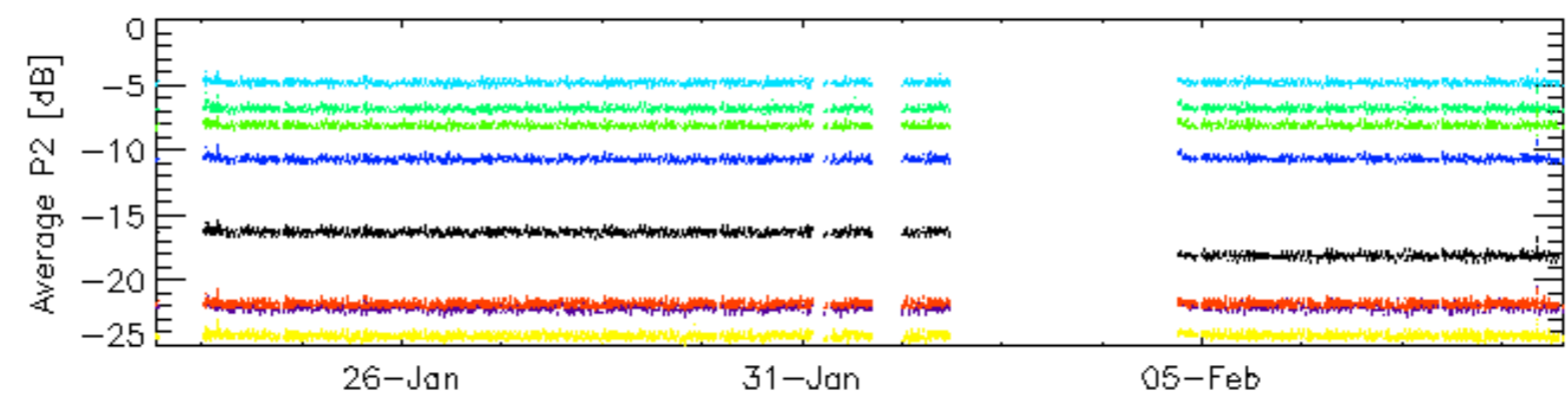
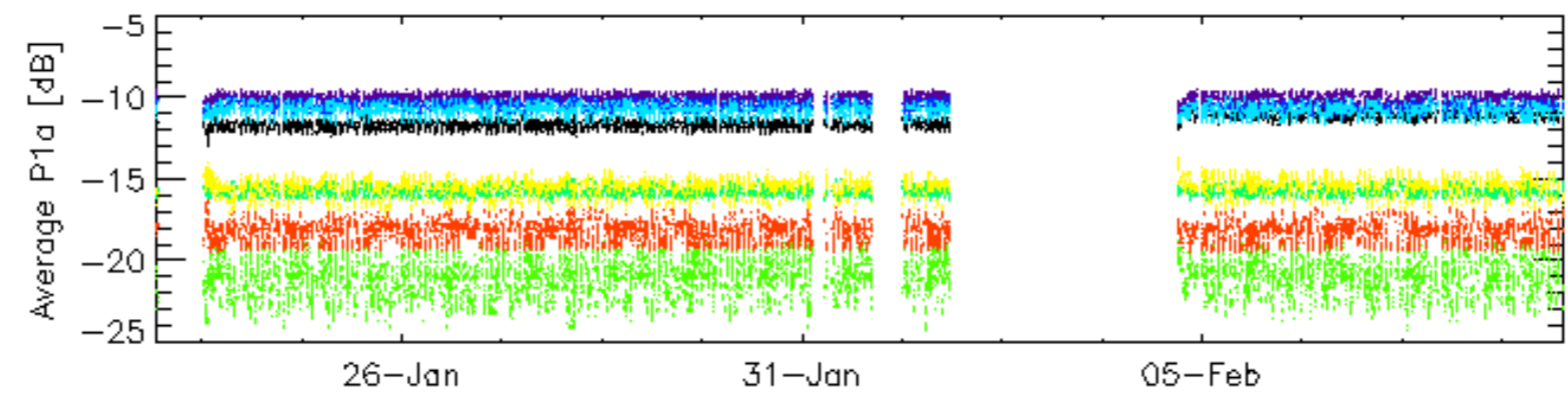
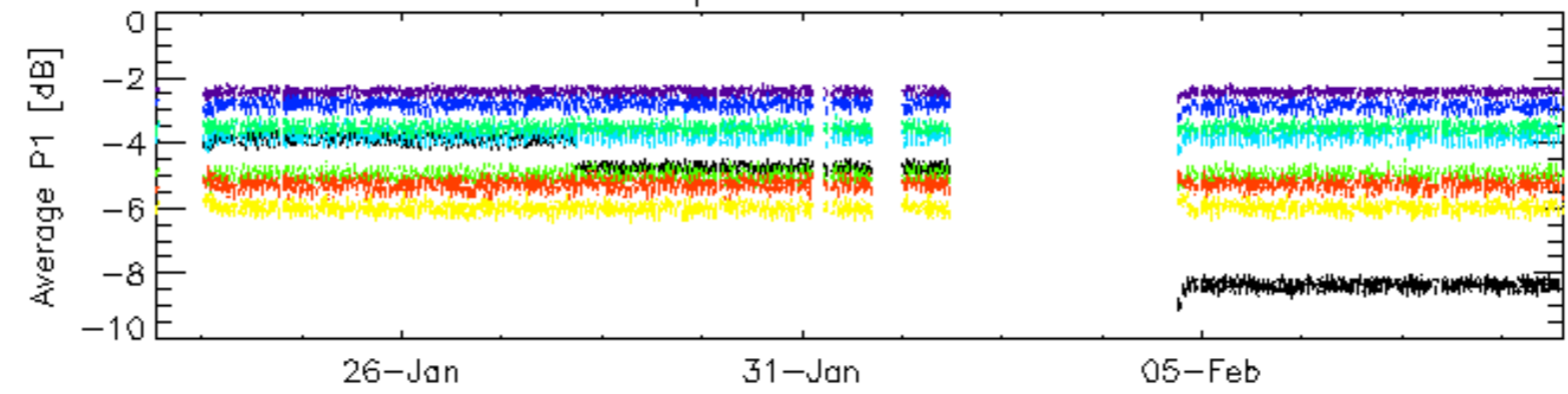
rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2



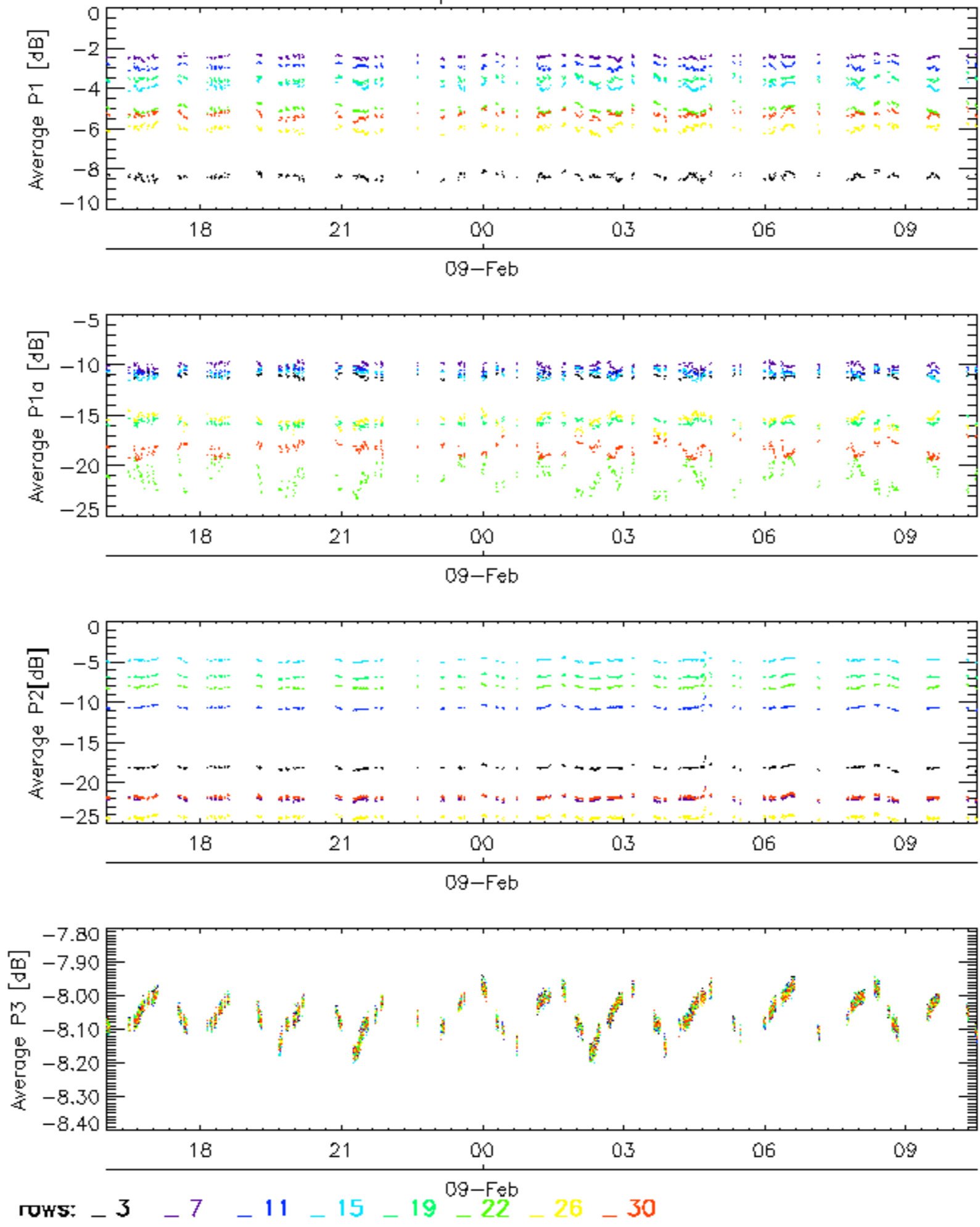
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

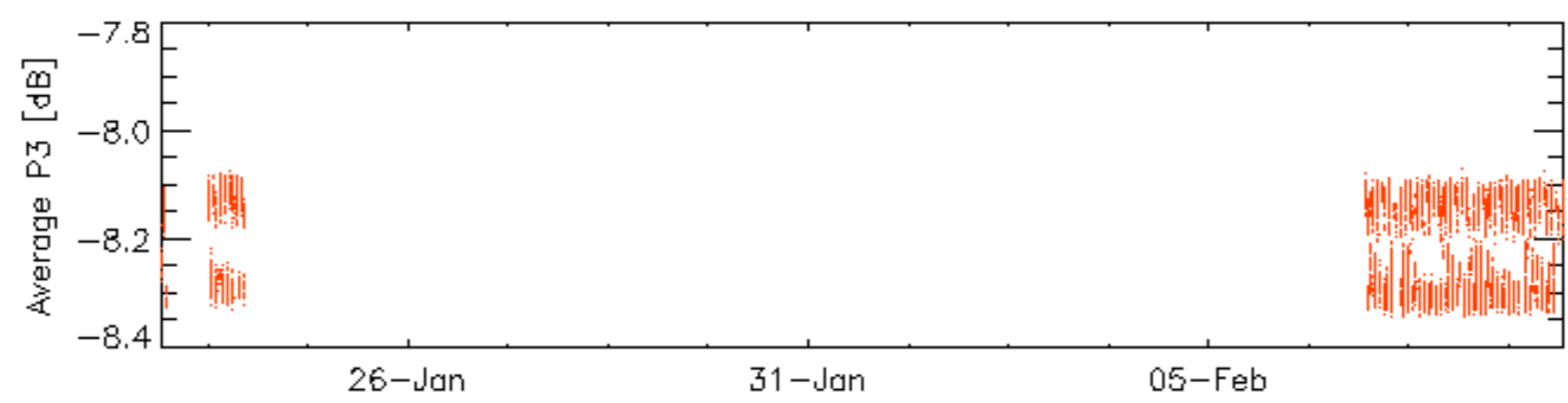
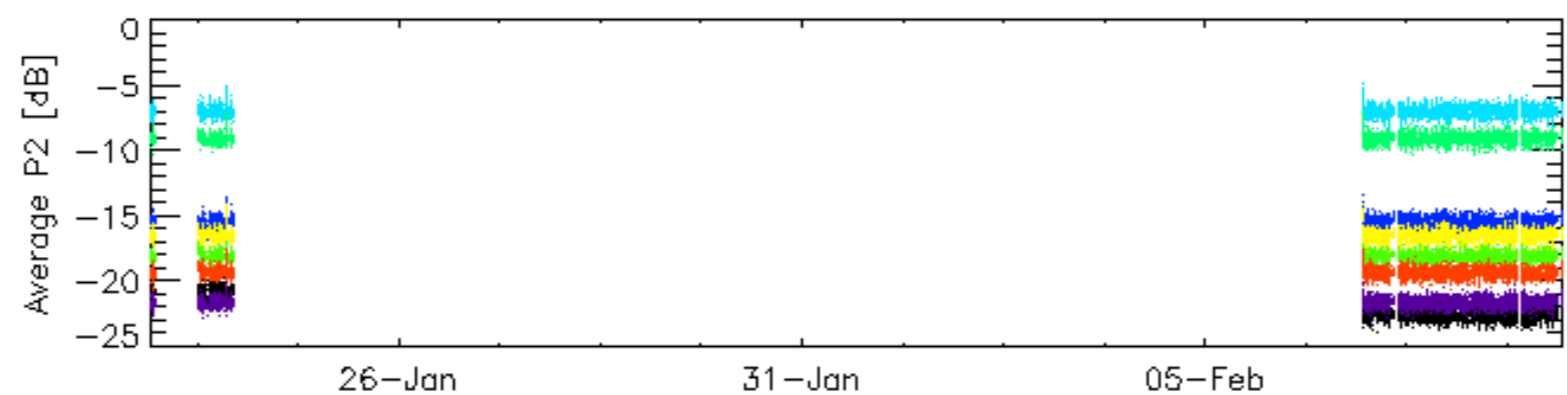
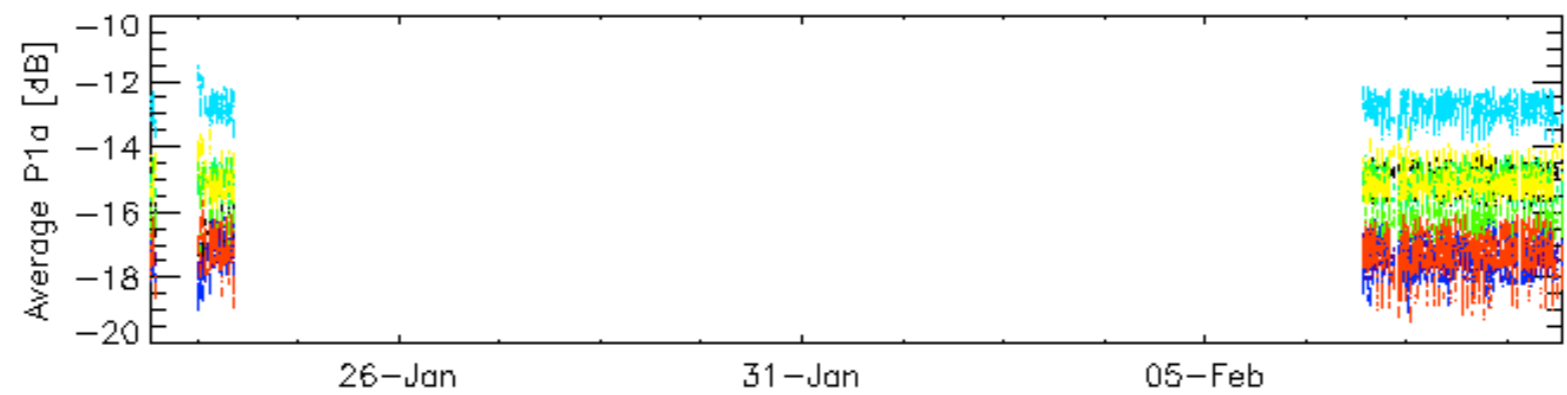
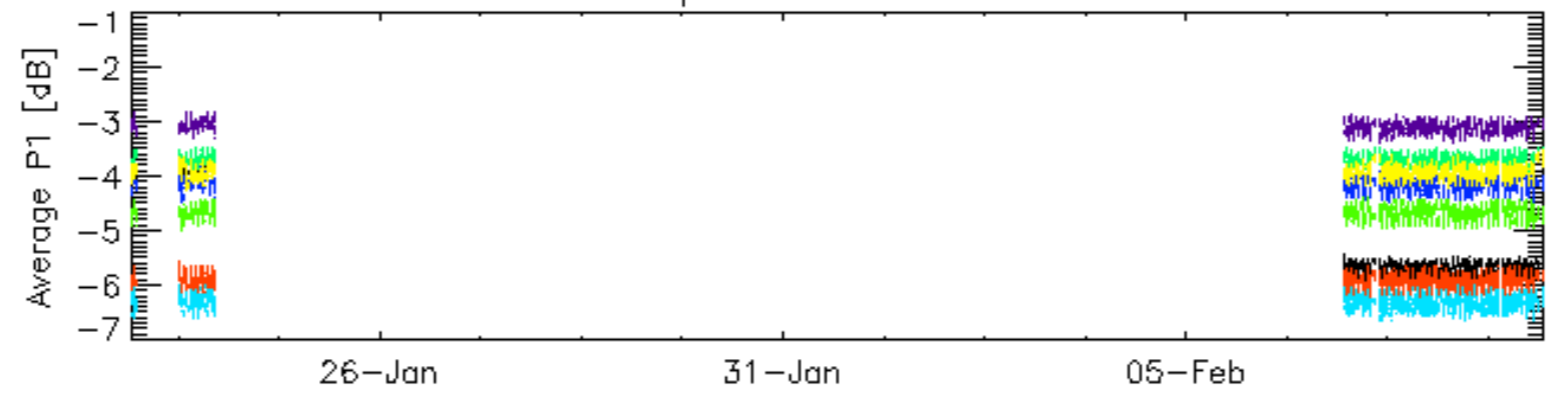


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

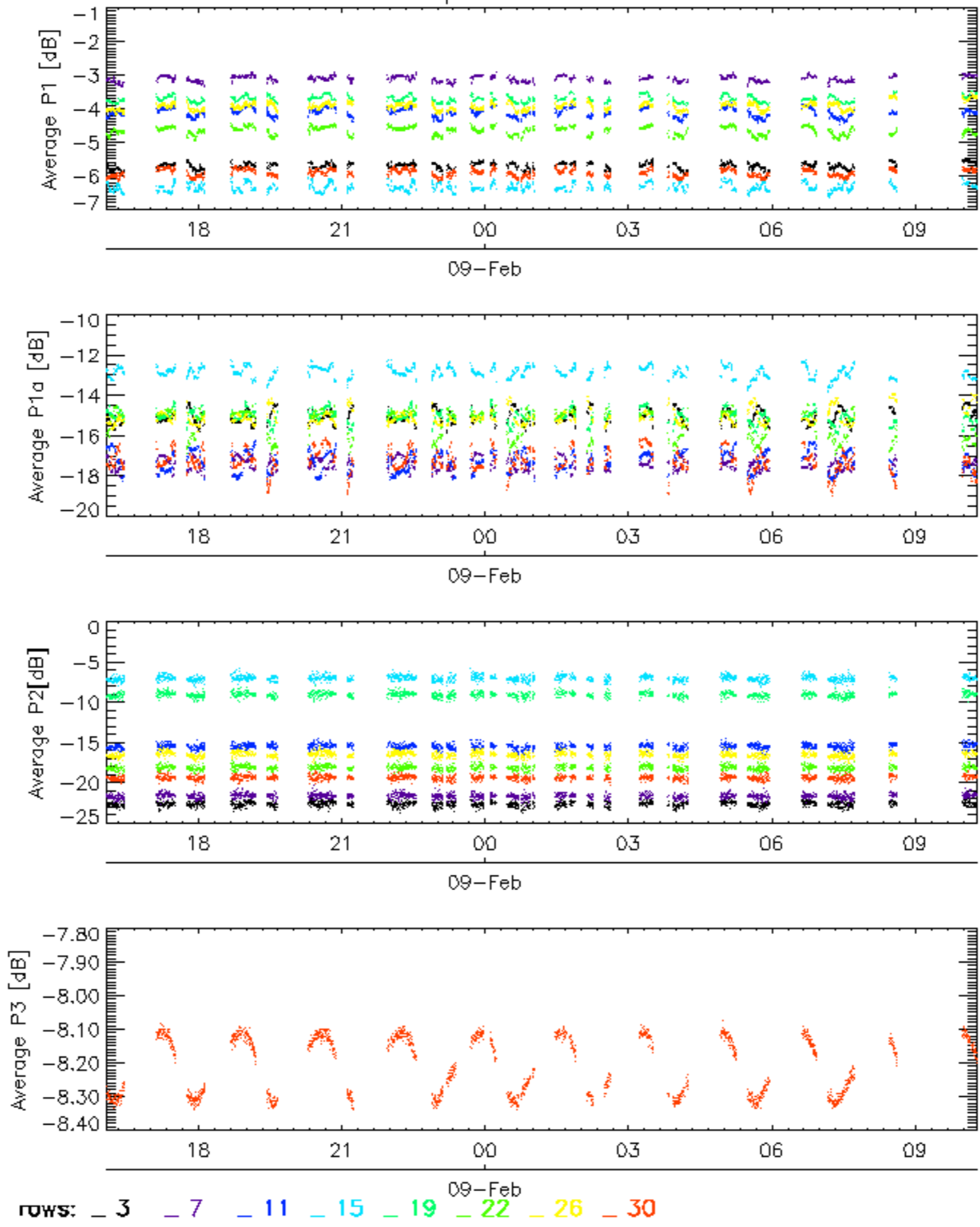


Cal pulses for WVS IS2

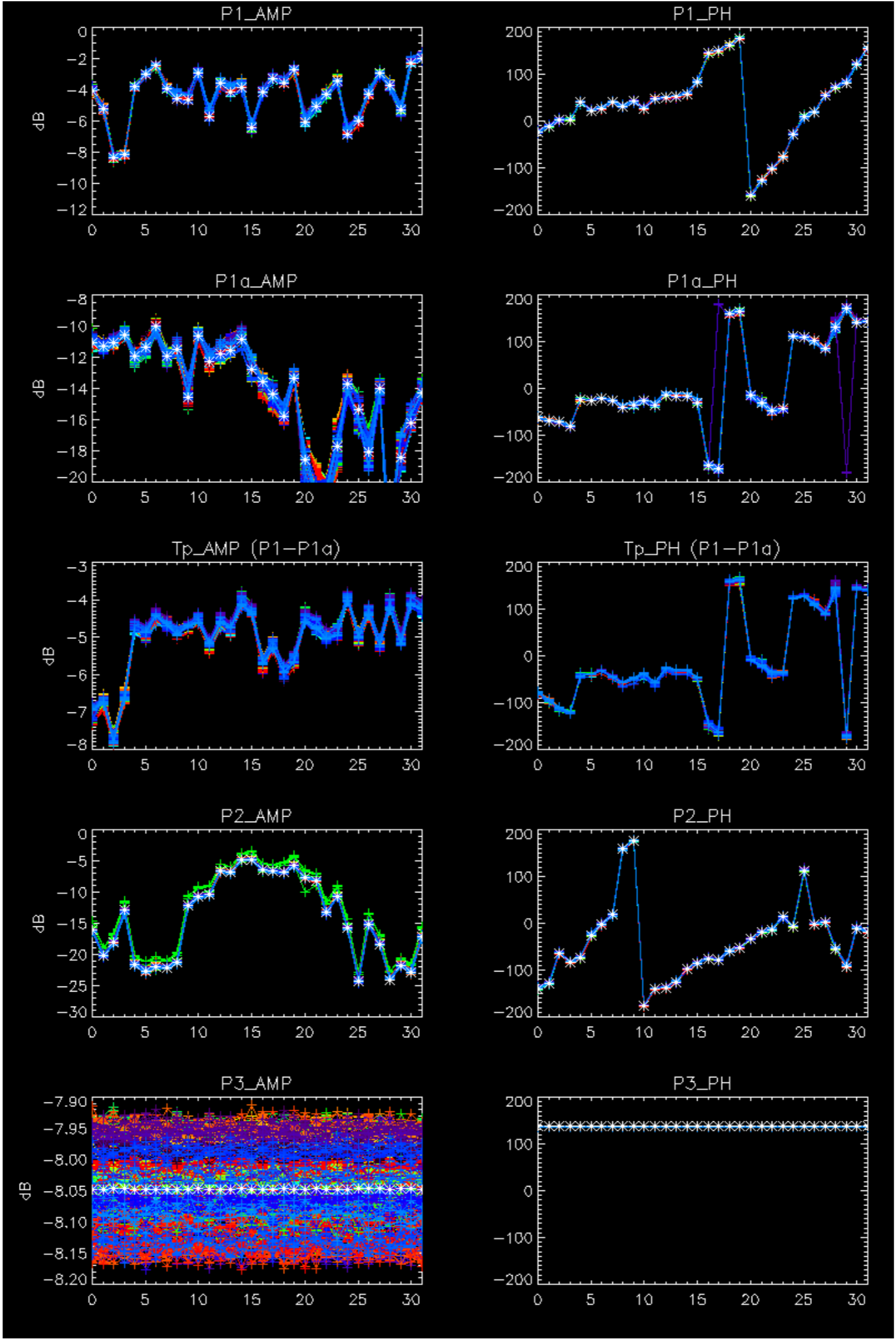


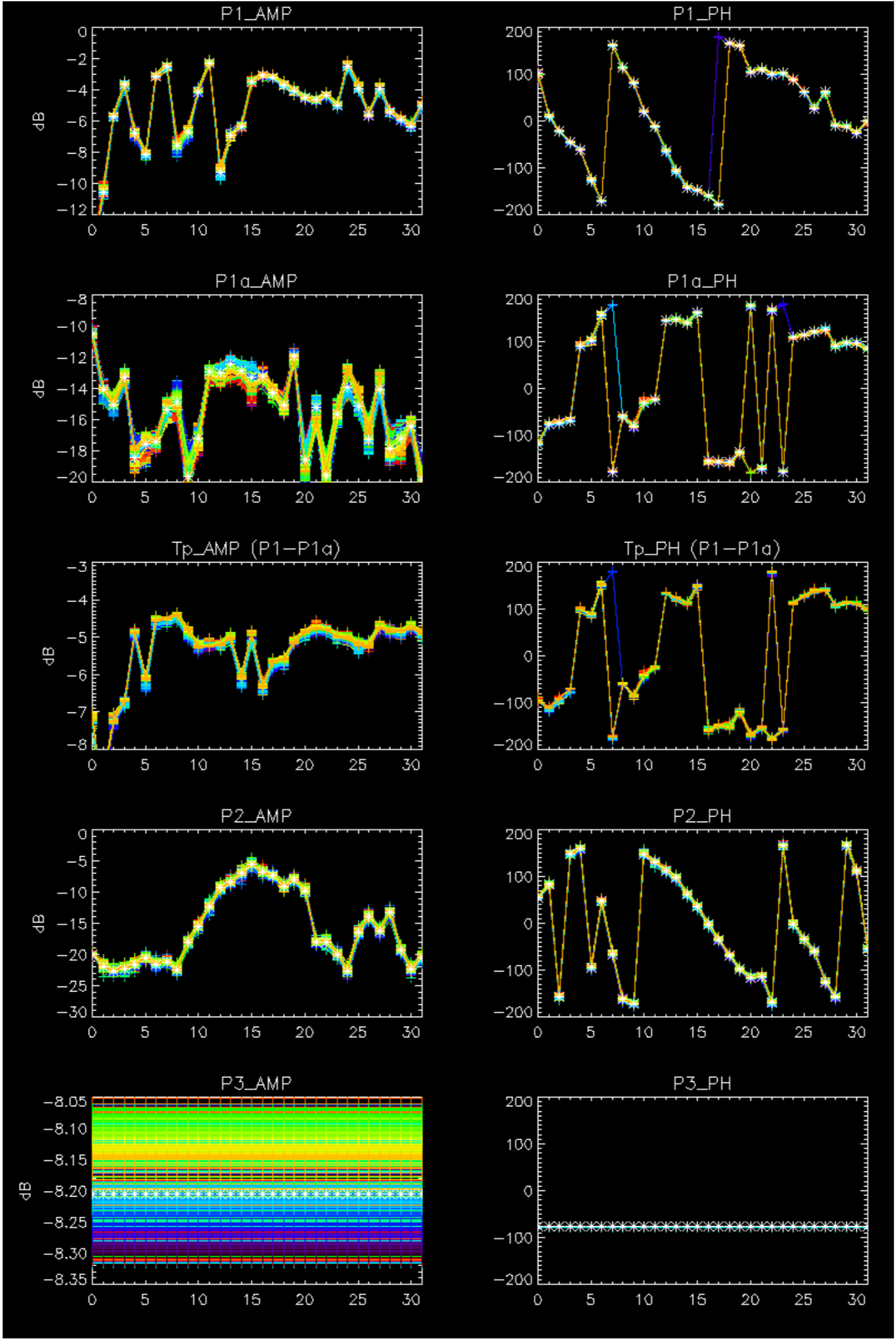
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



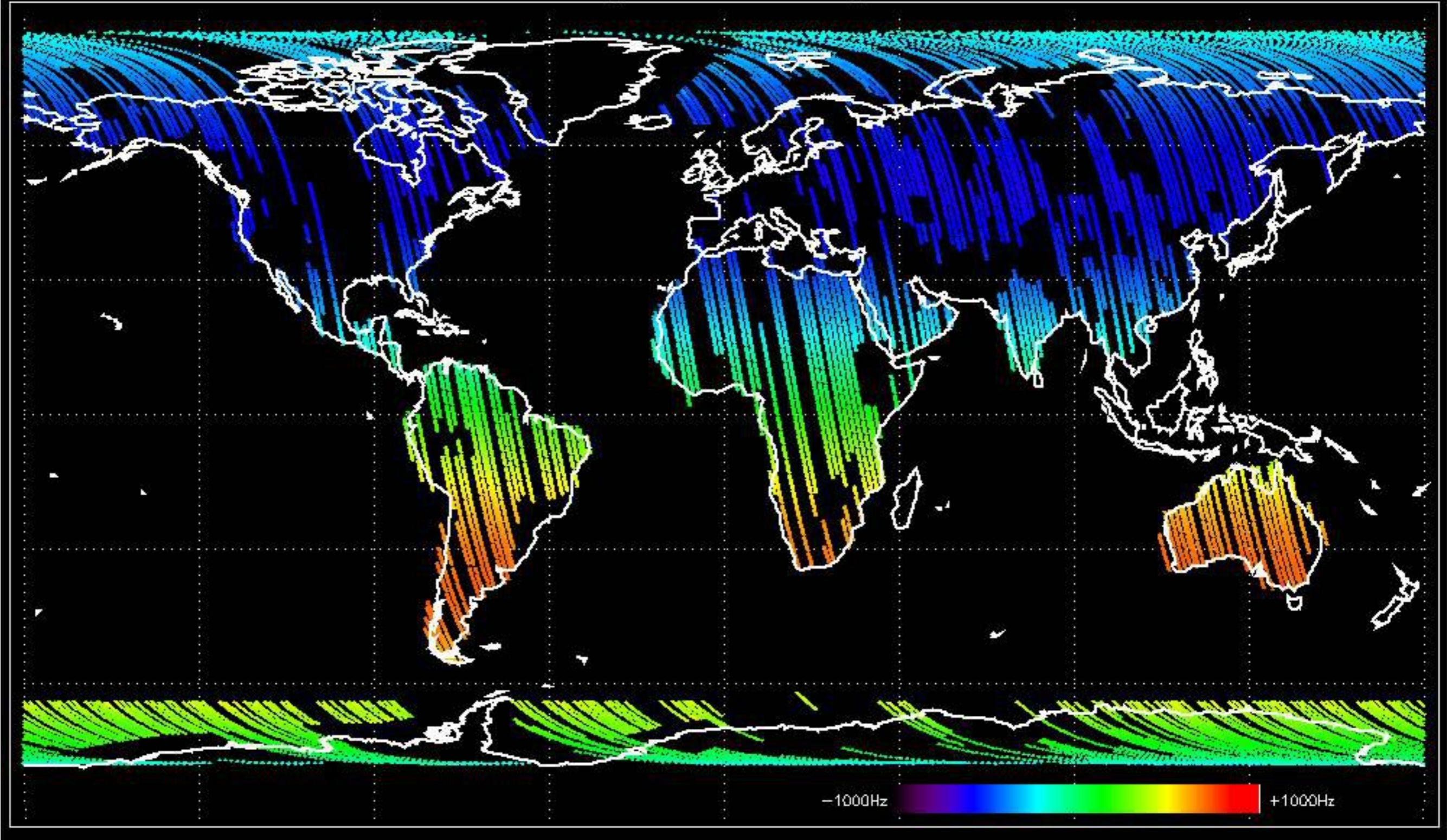
No anomalies observed.



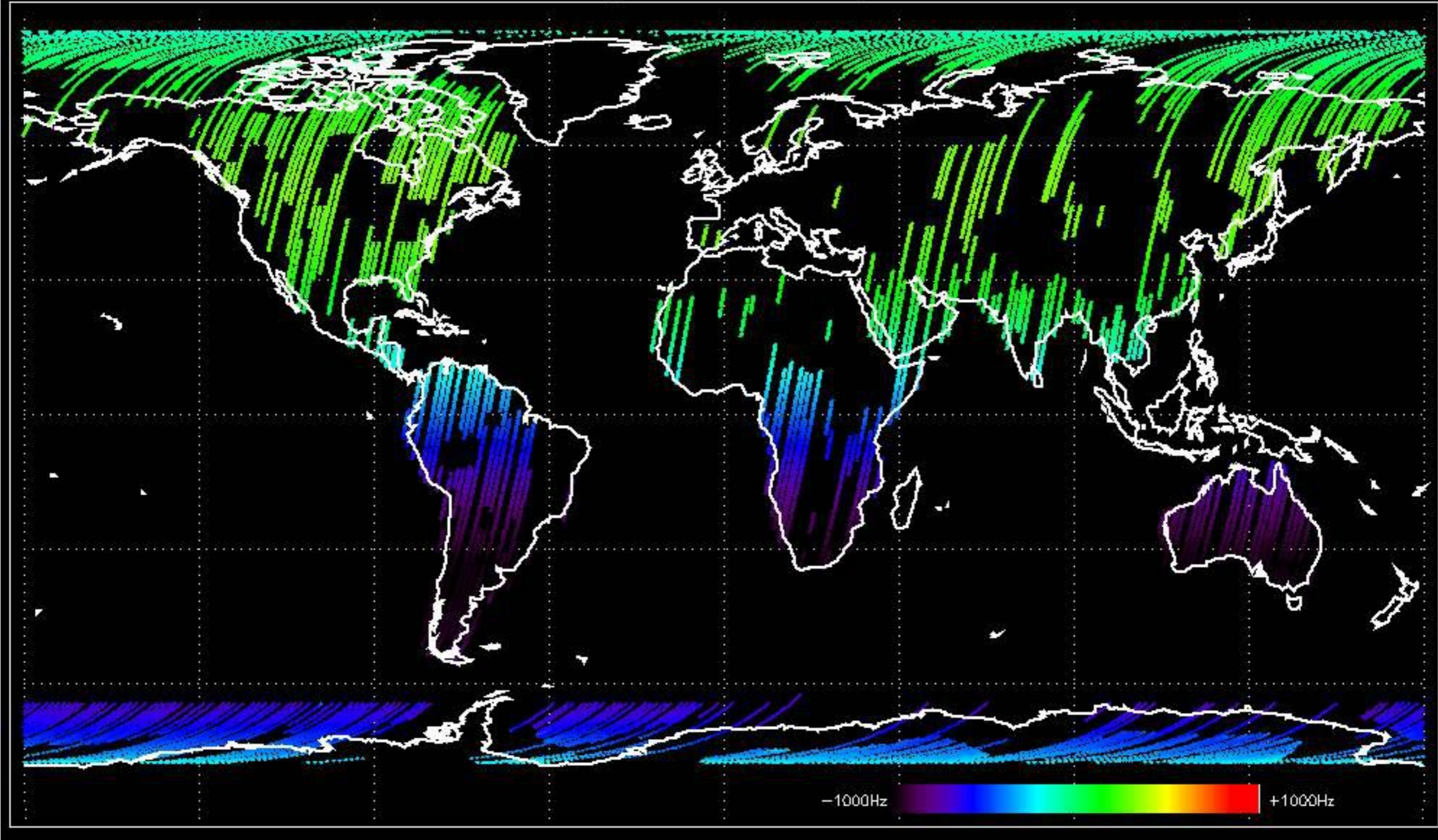


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

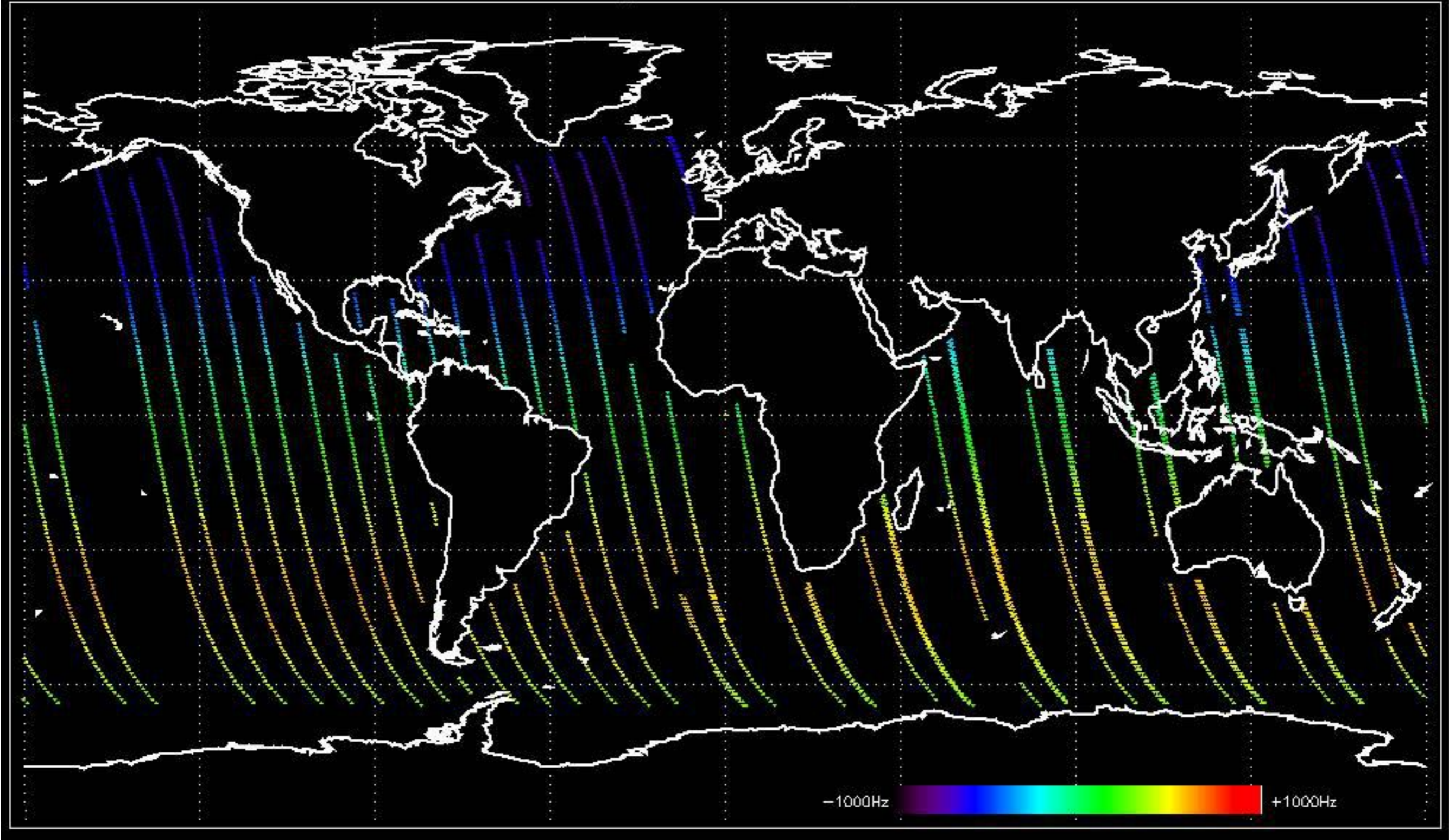
Doppler 'GM1' 'SS1' ascending



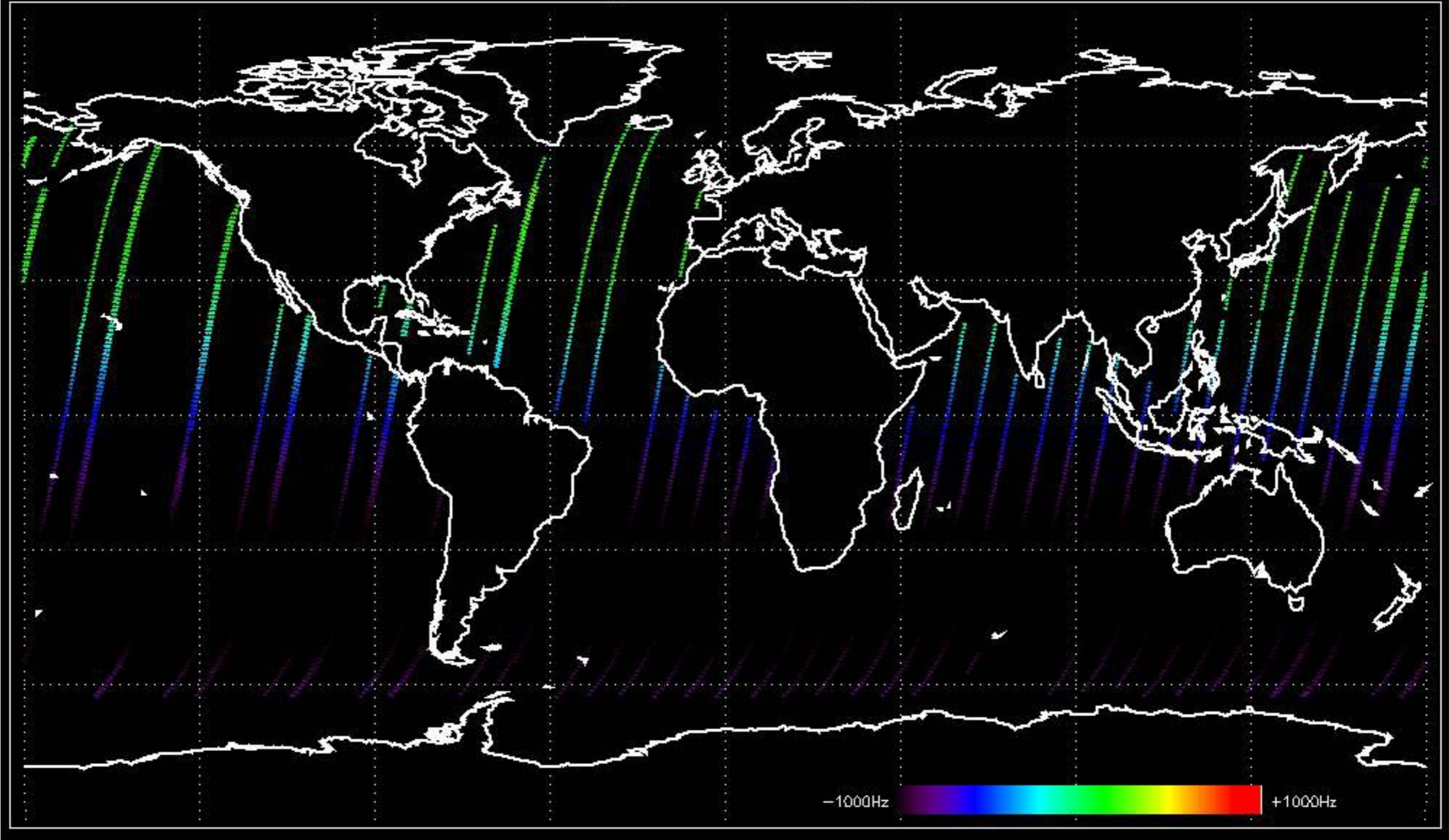
Doppler 'GM1' 'SS1' descending



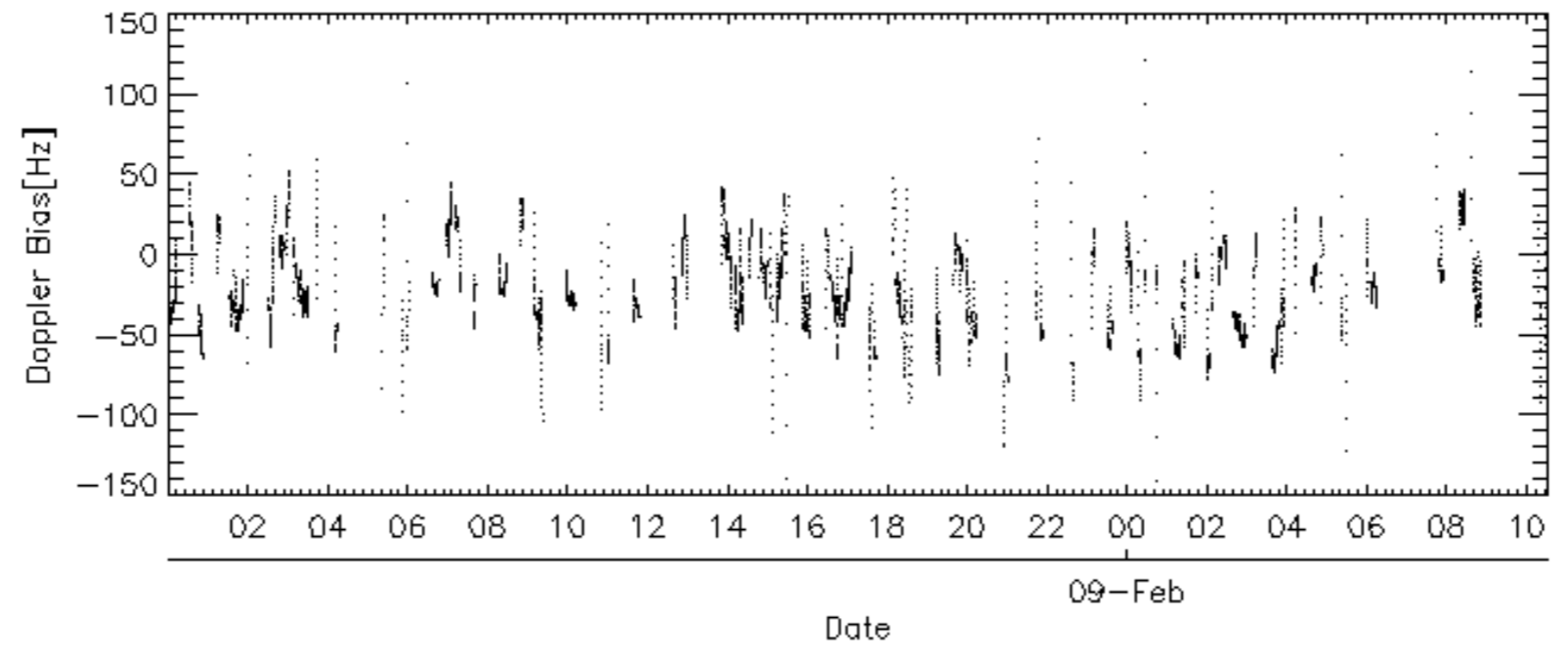
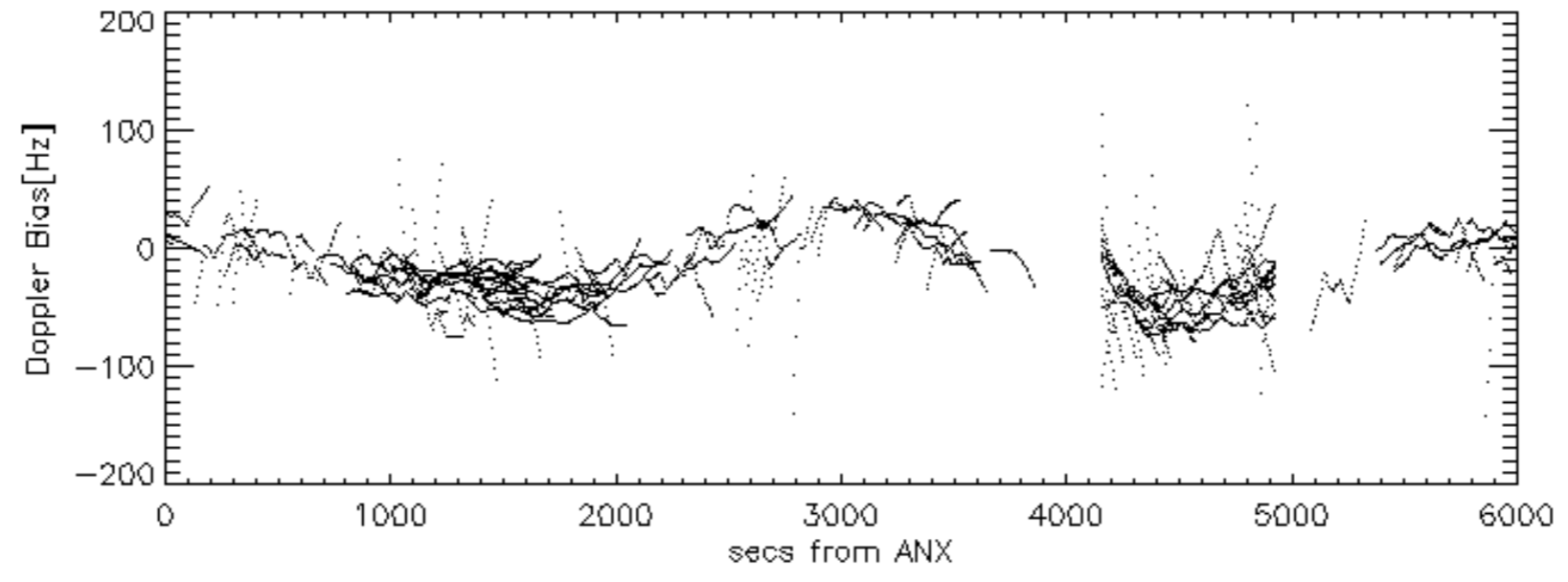
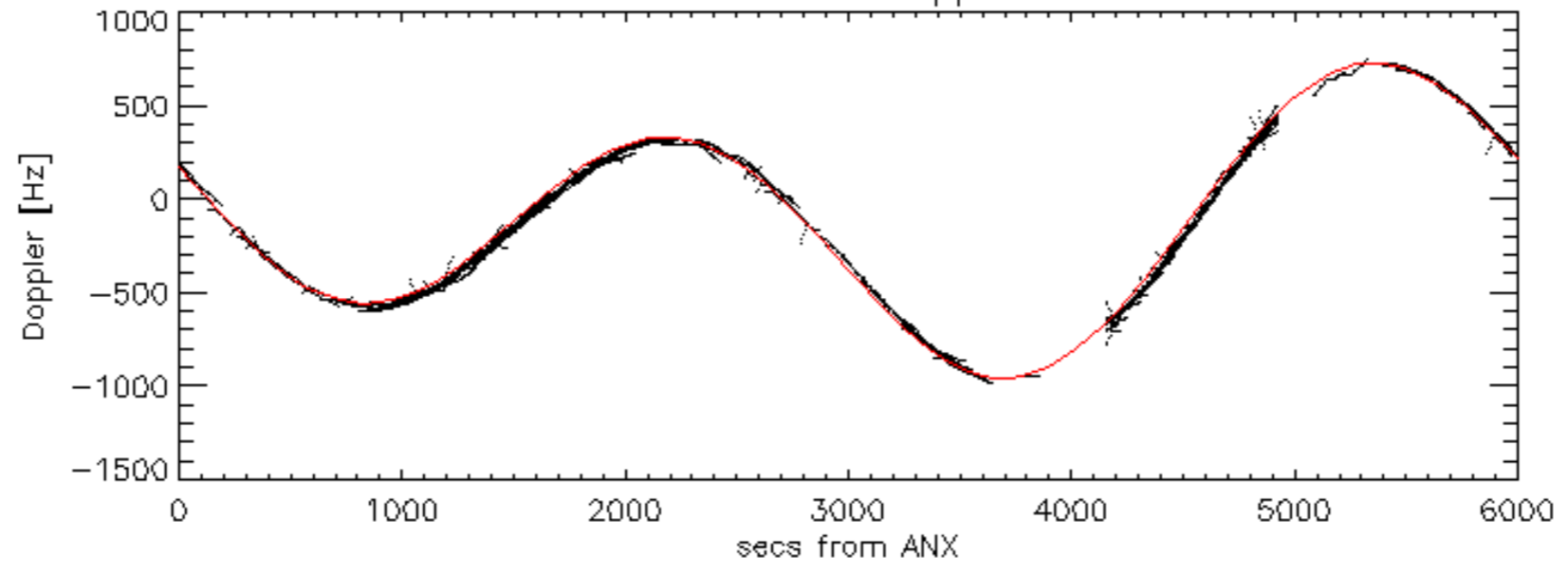
Doppler 'WVS' 'IS2' ascending

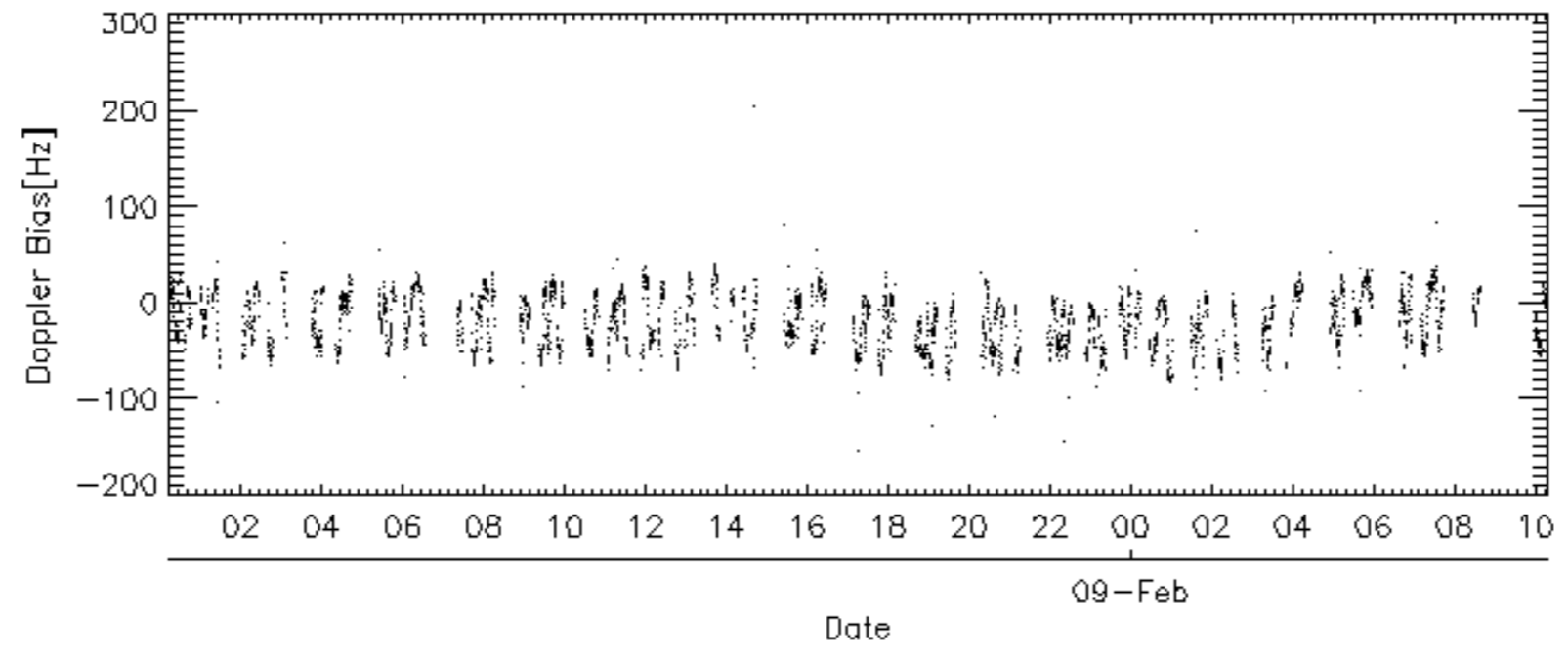
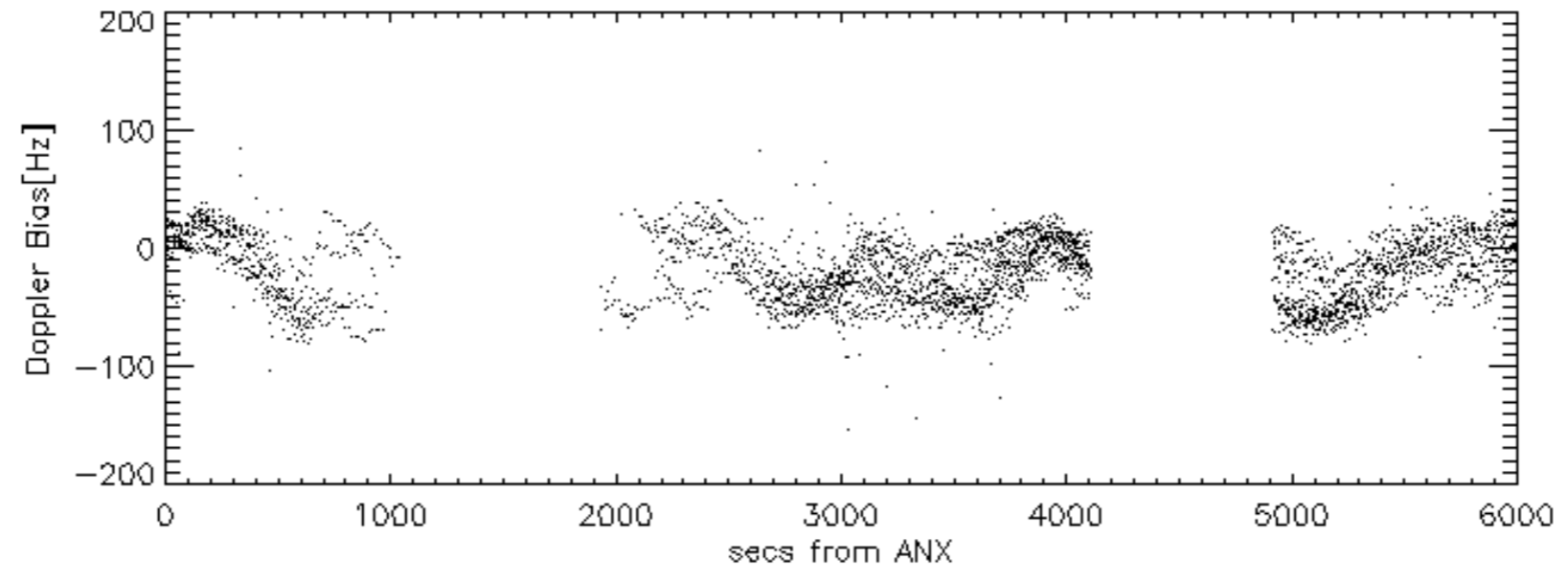
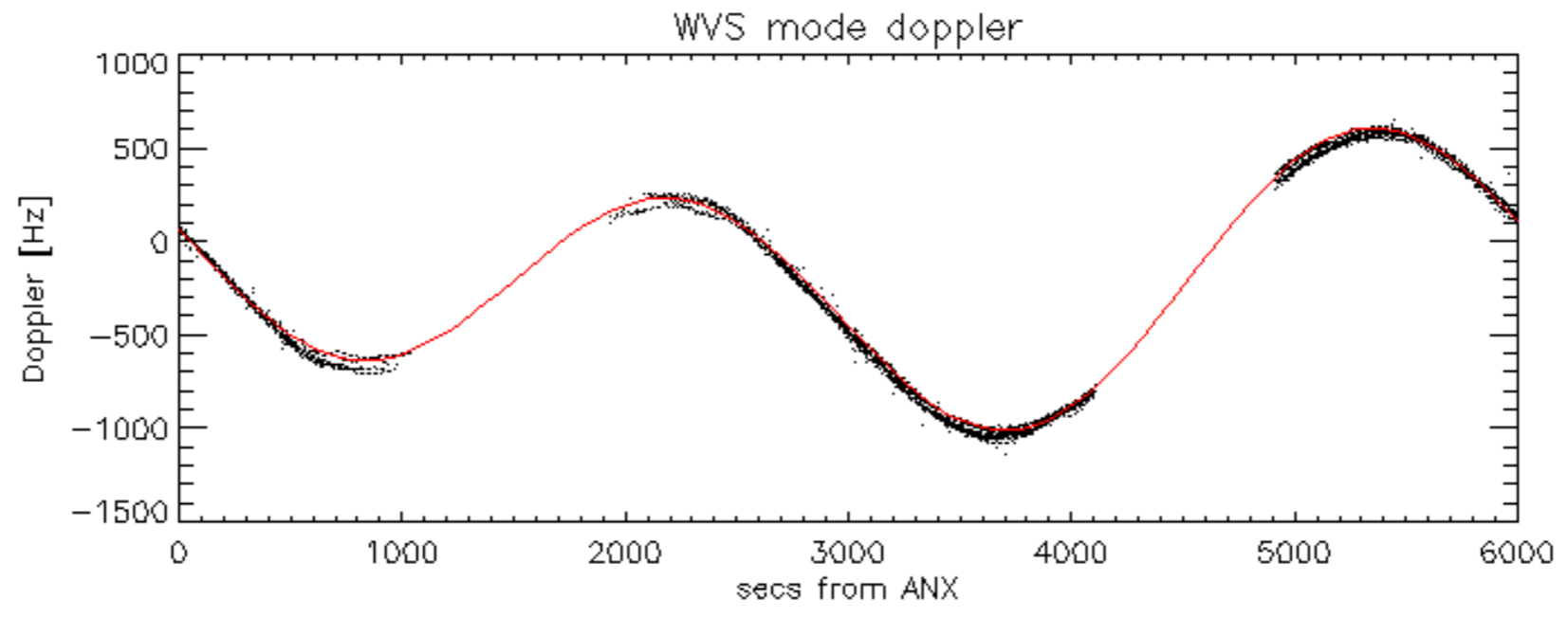


Doppler 'WVS' 'IS2' descending

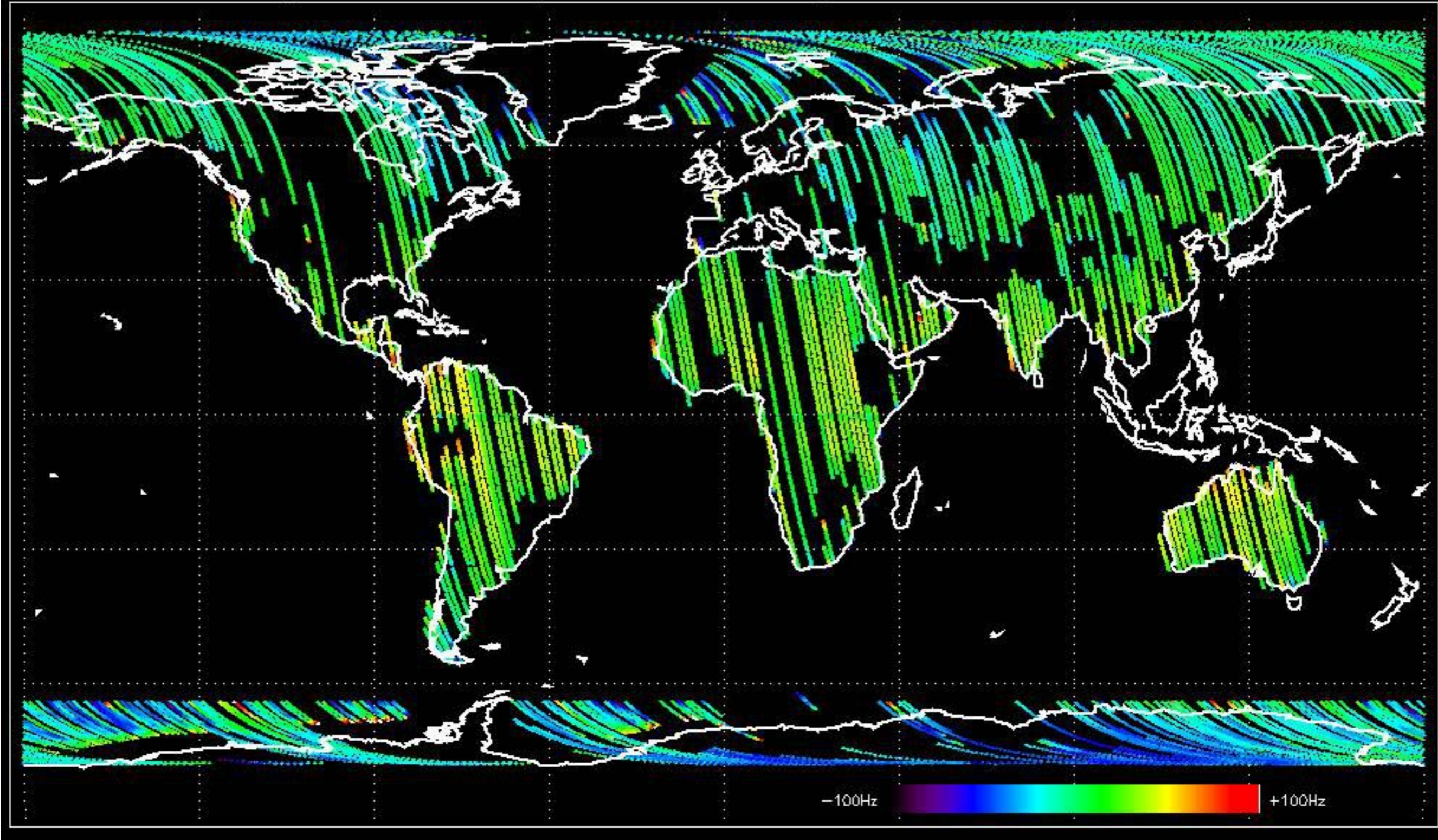


GM1 mode doppler

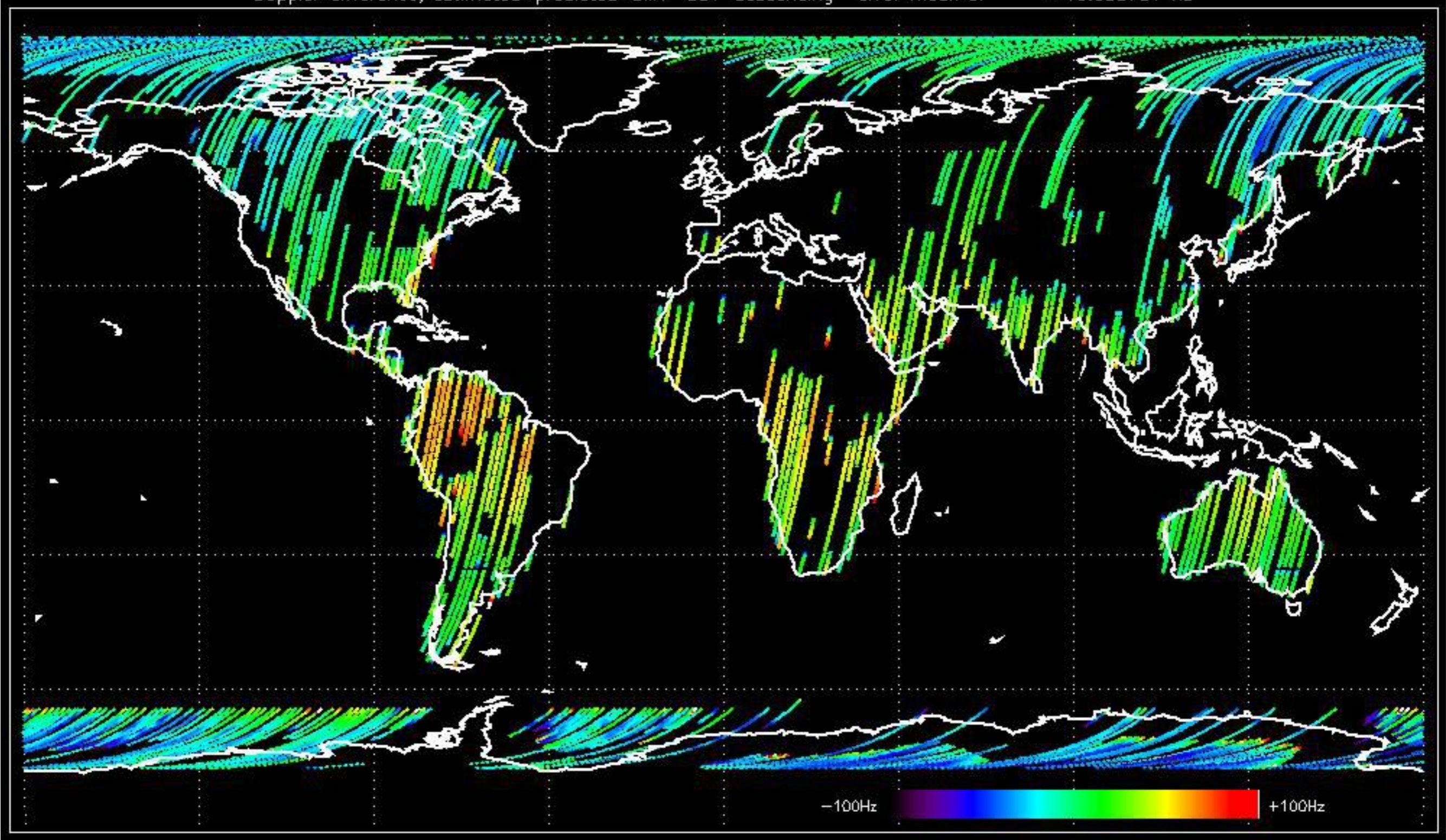




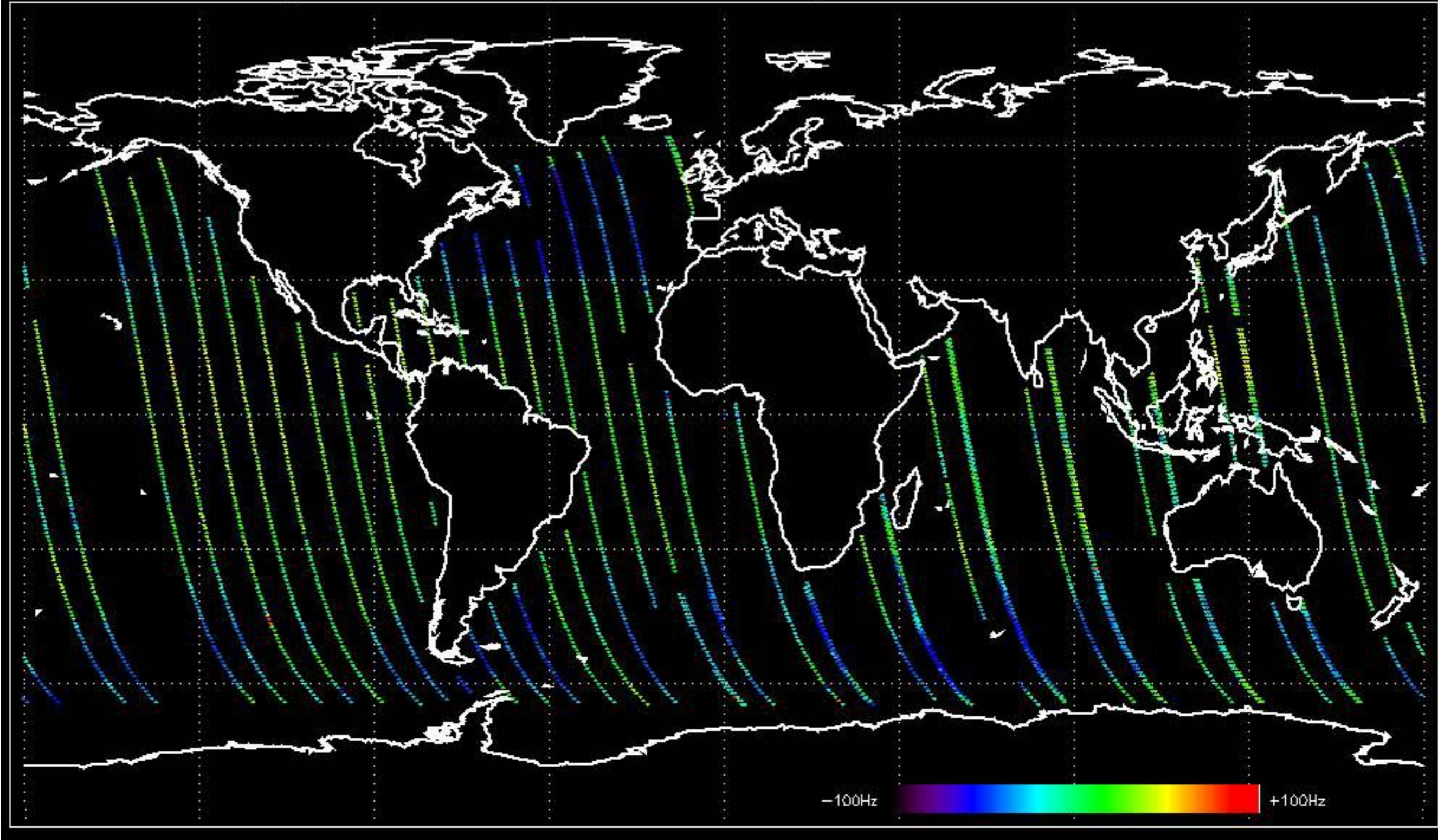
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.574695 Hz



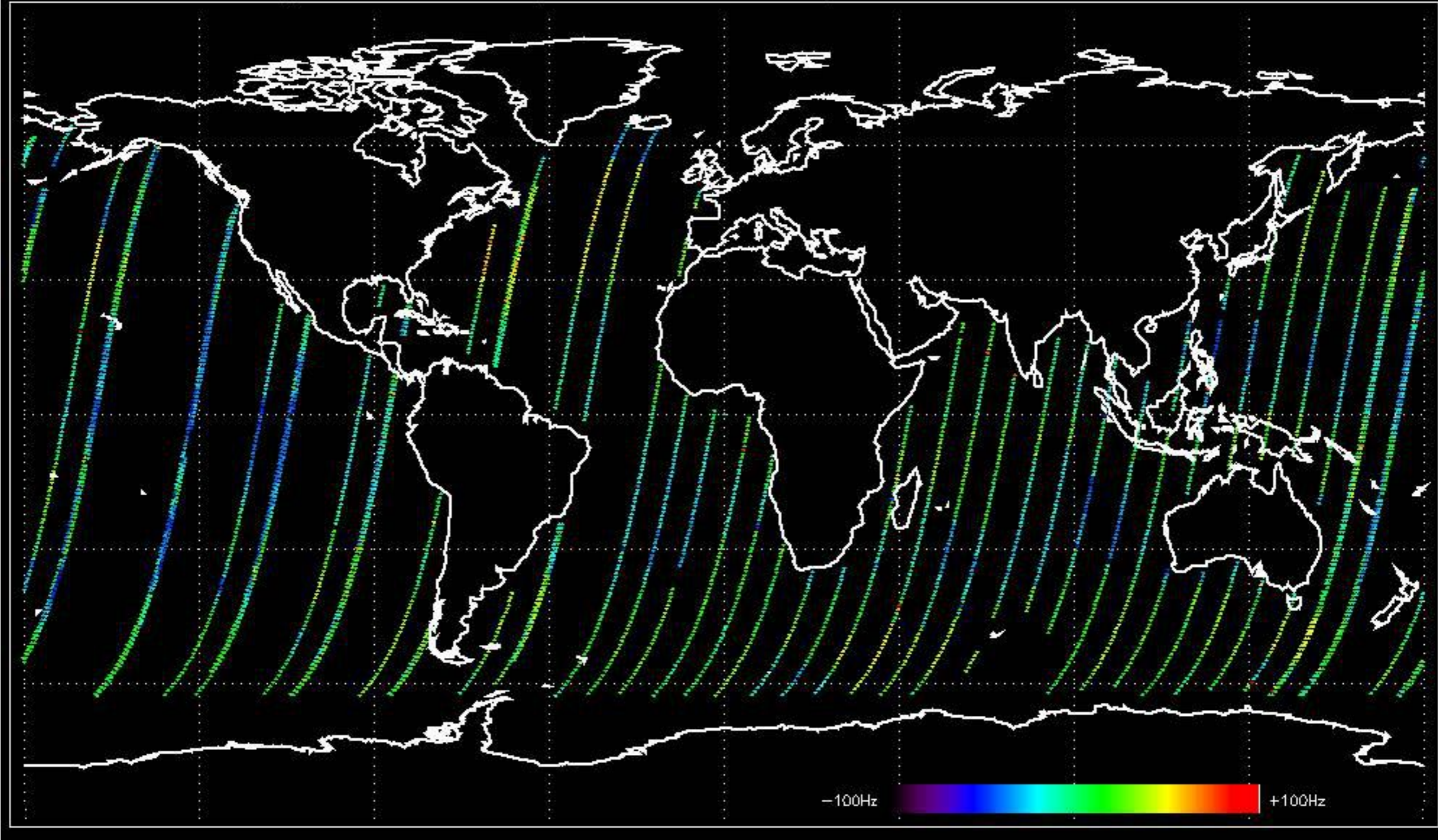
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -19.058781 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -17.836526 Hz

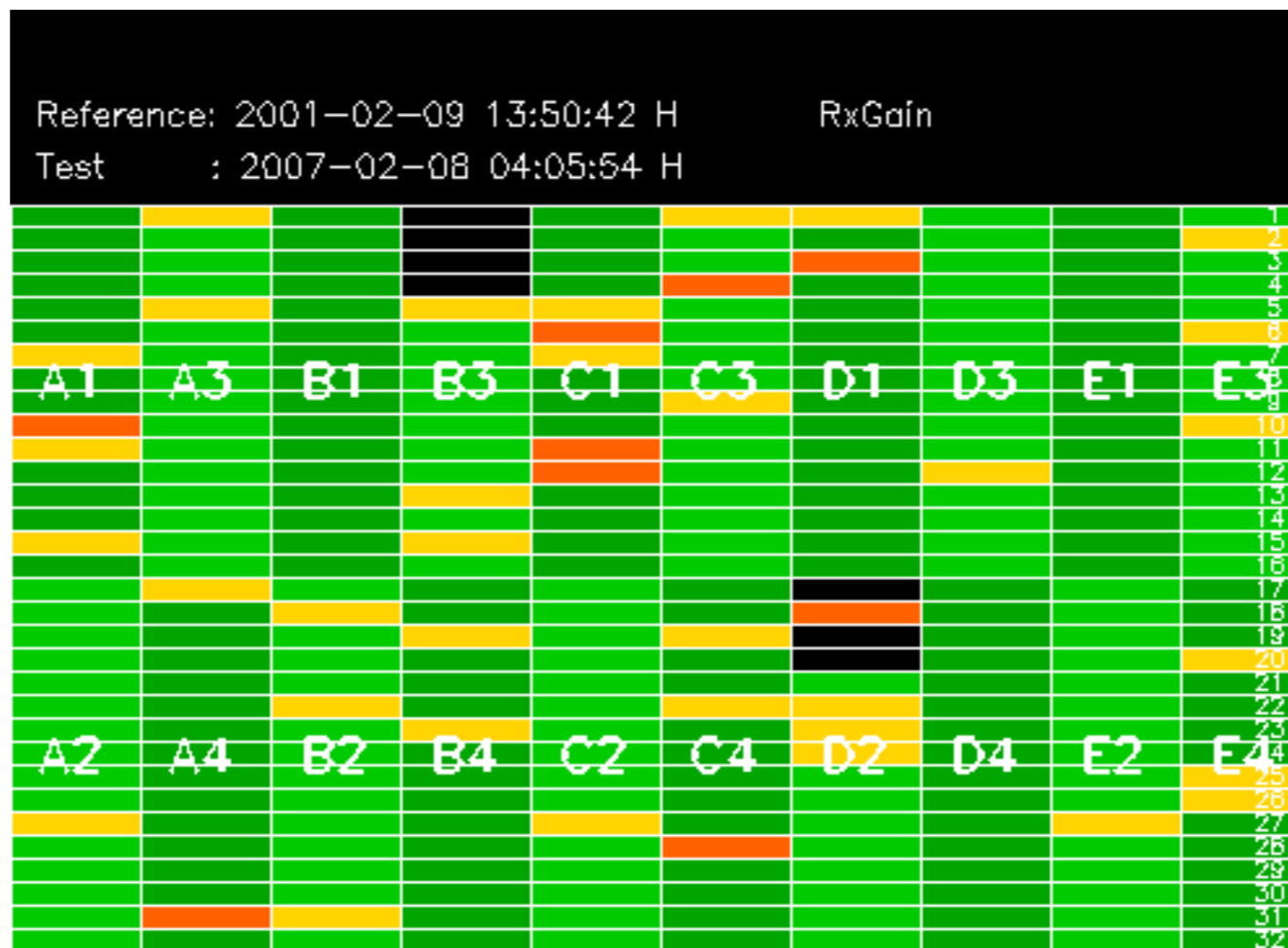


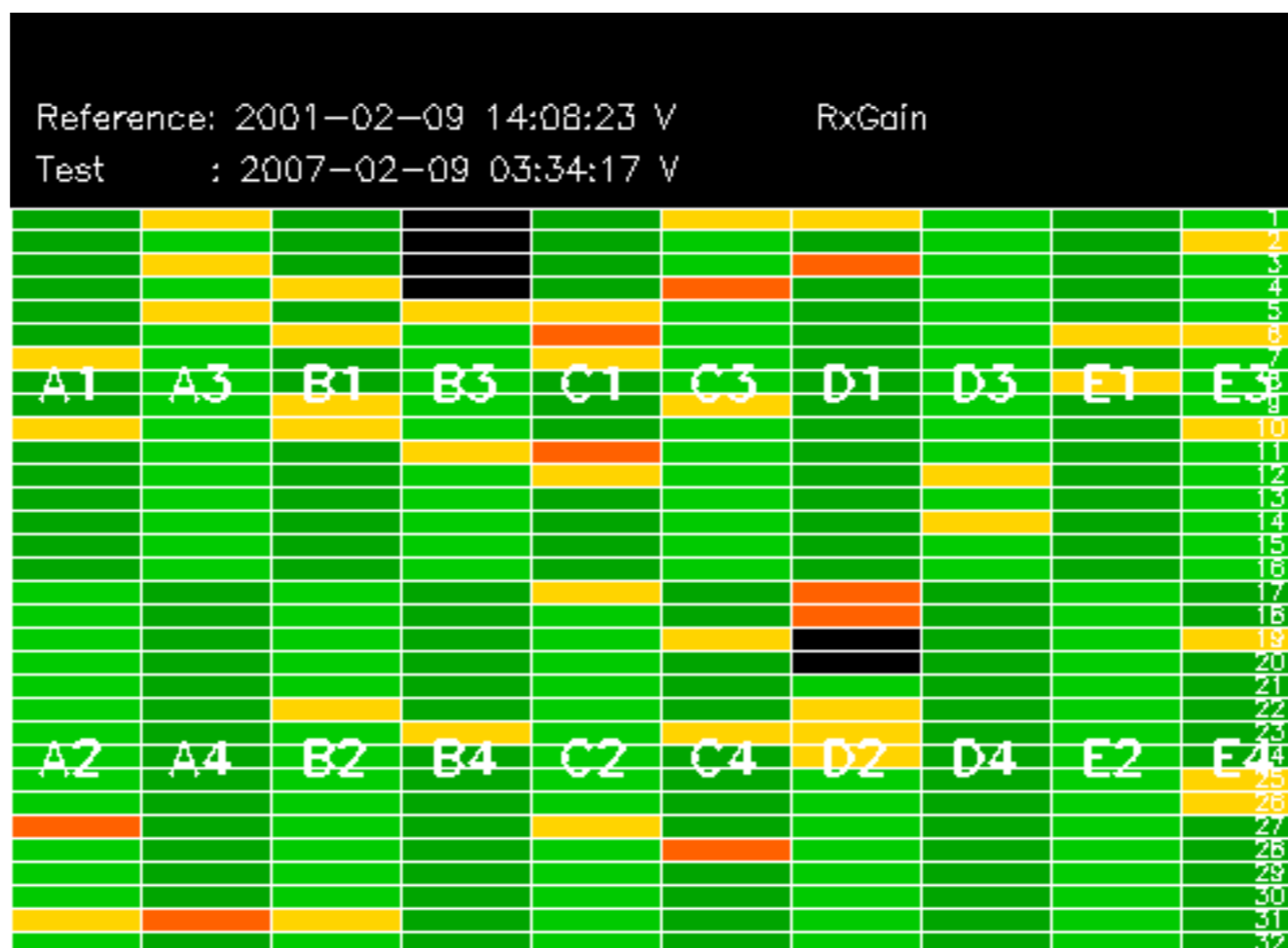
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -20.223623 Hz

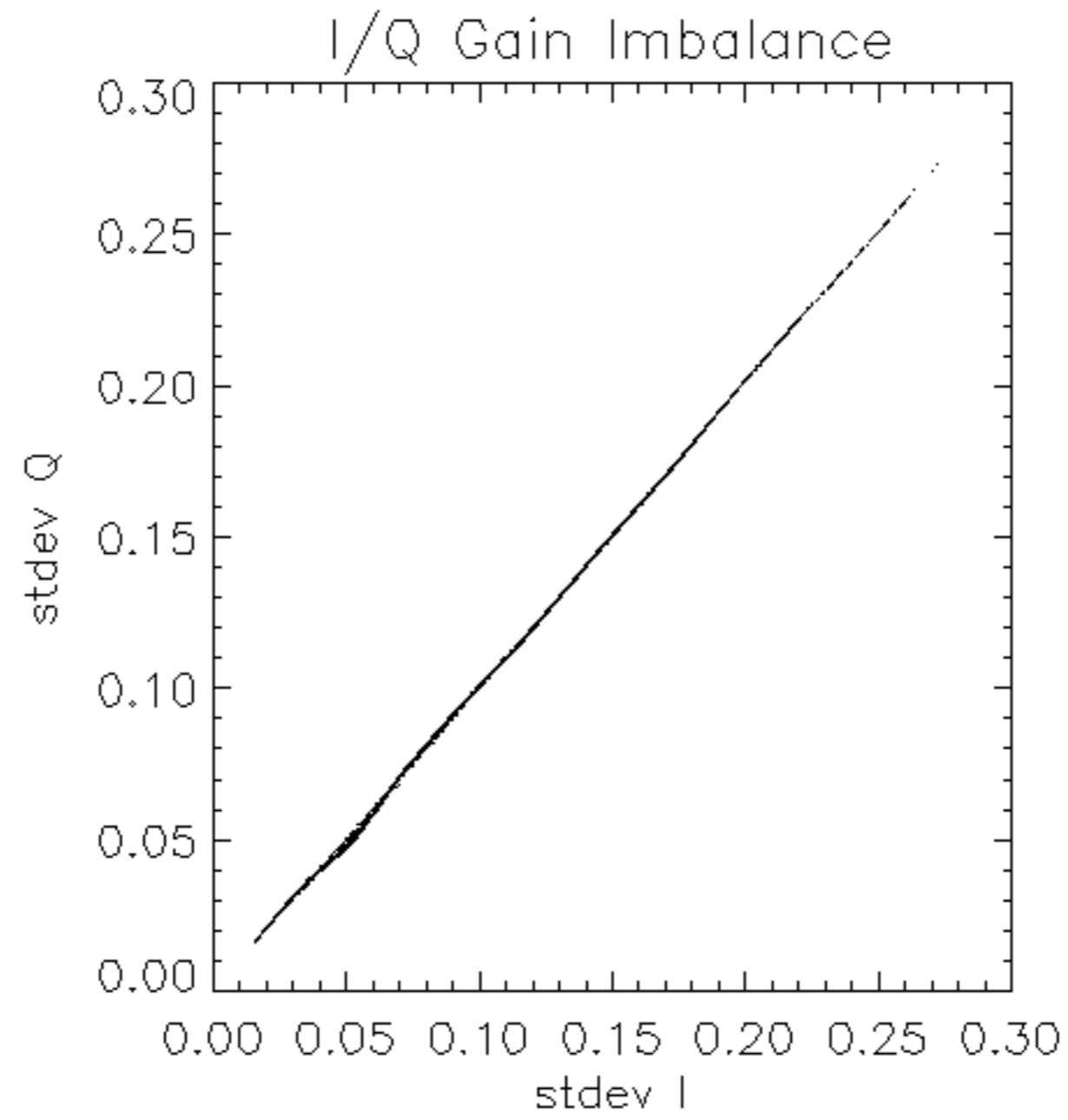


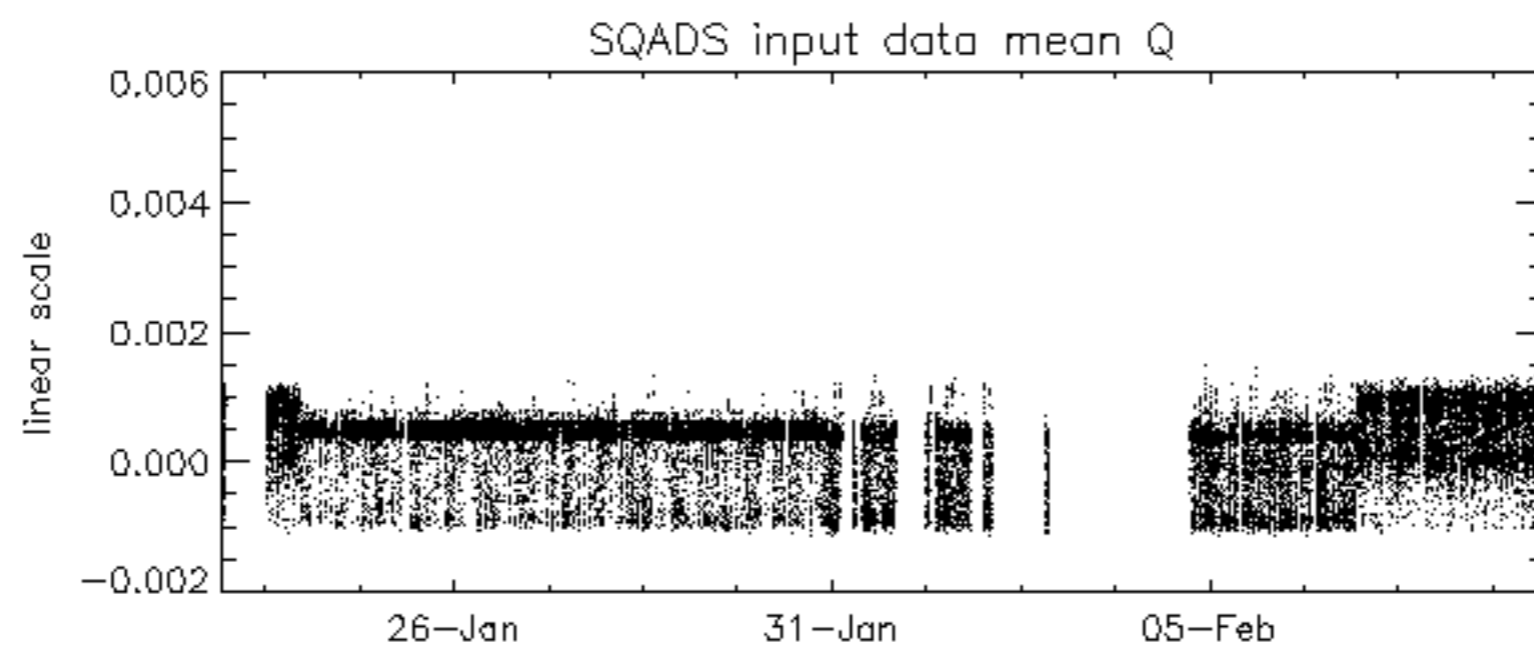
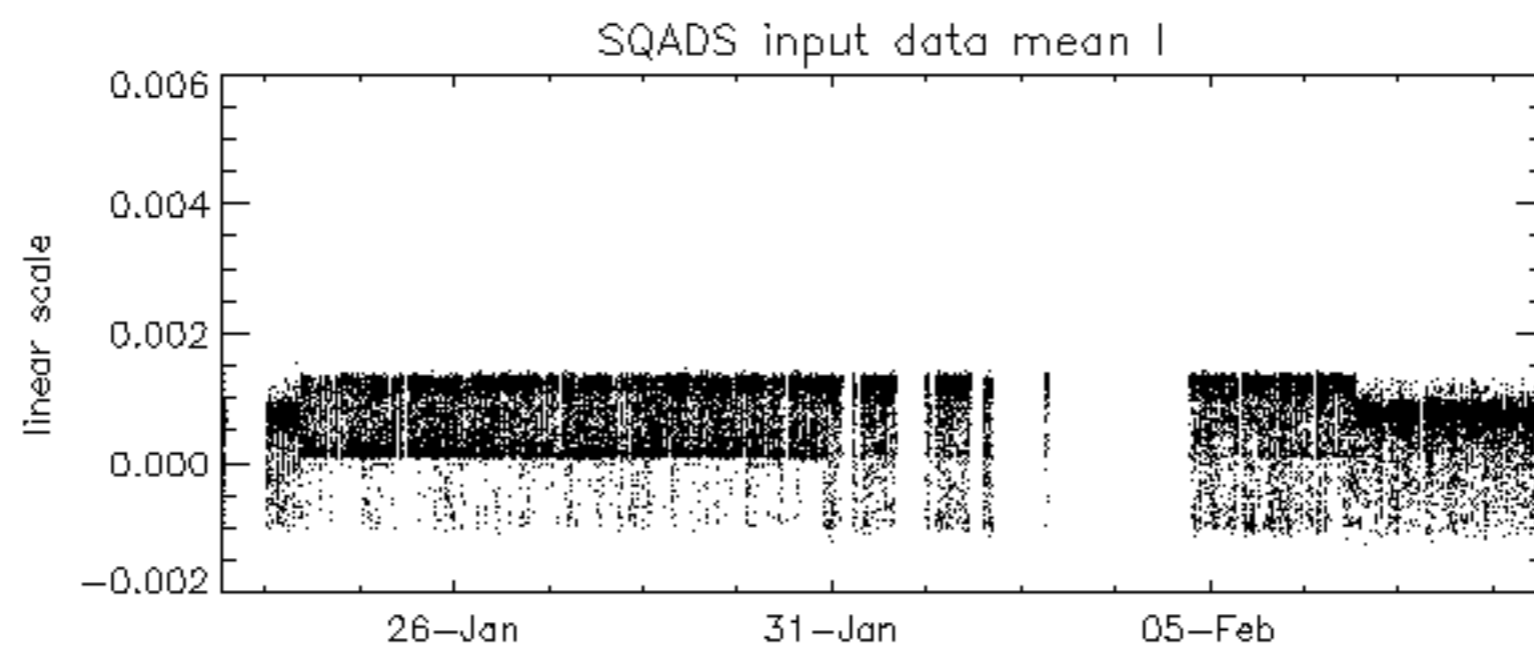
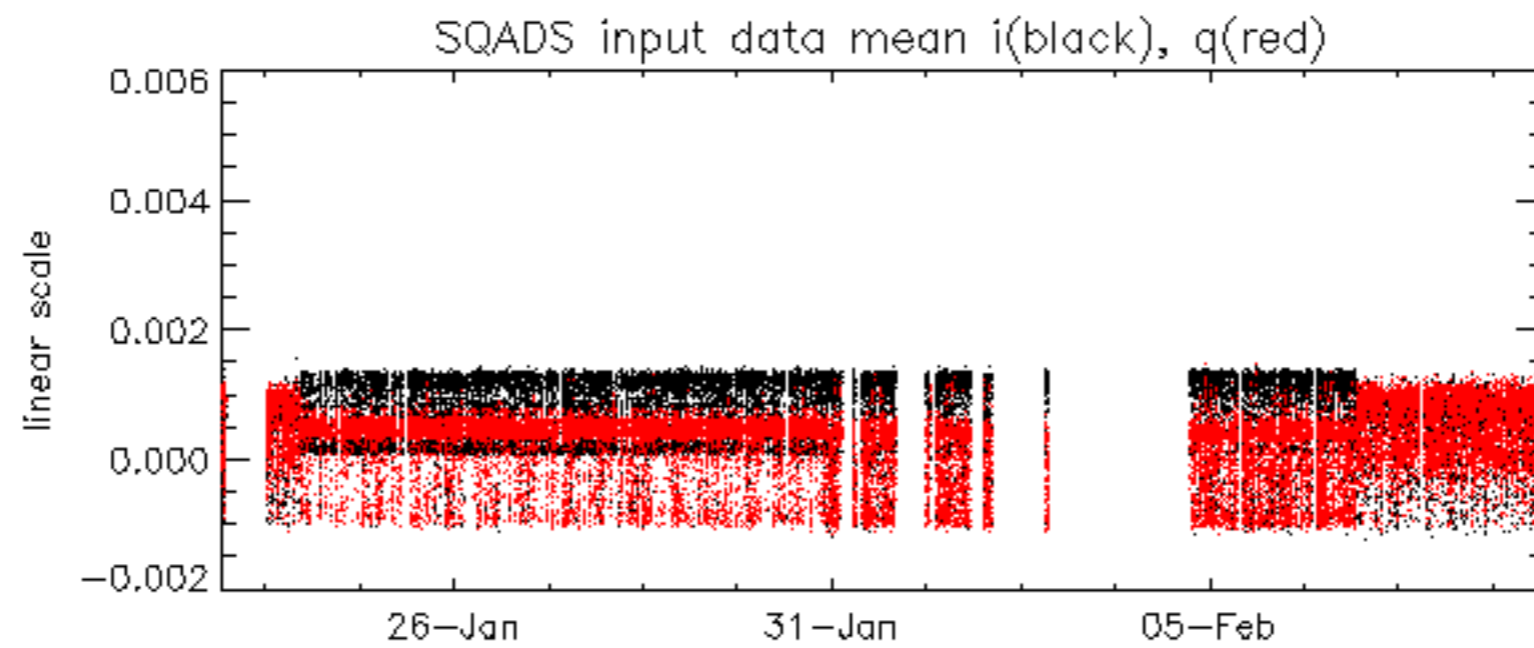
No anomalies observed on available MS products:

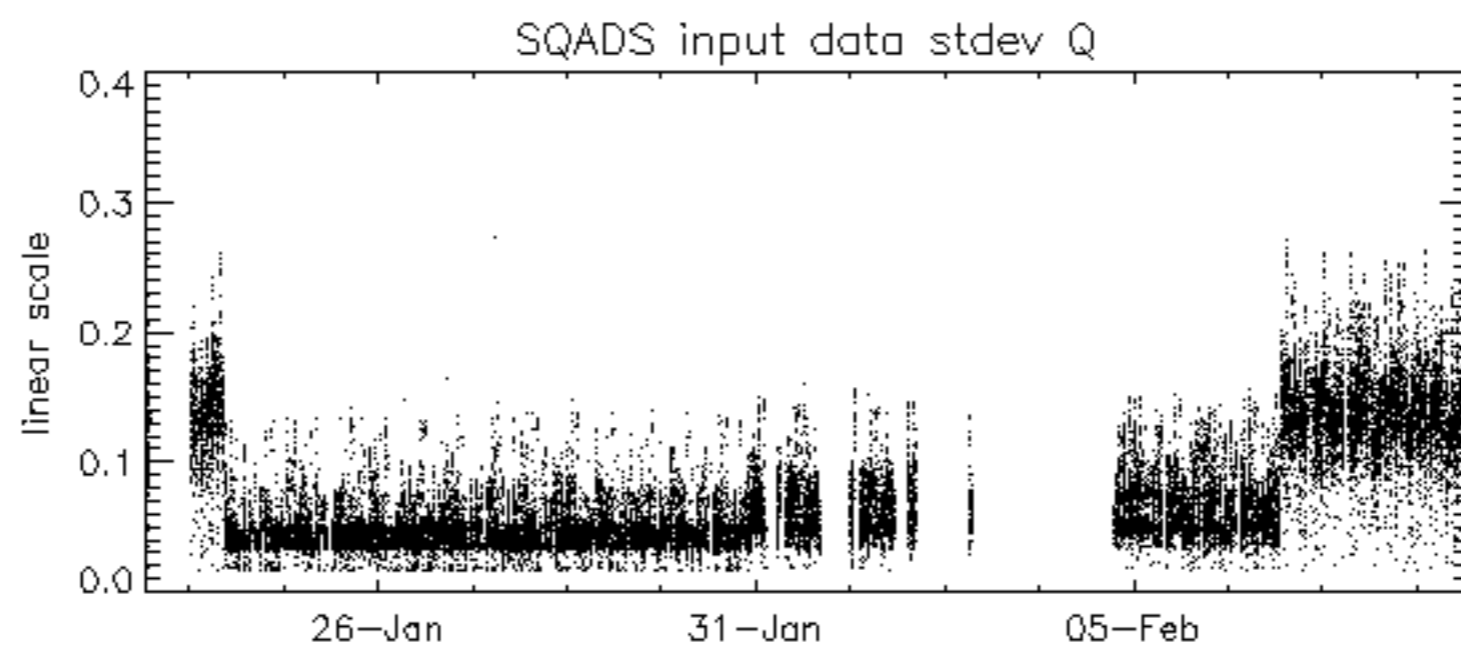
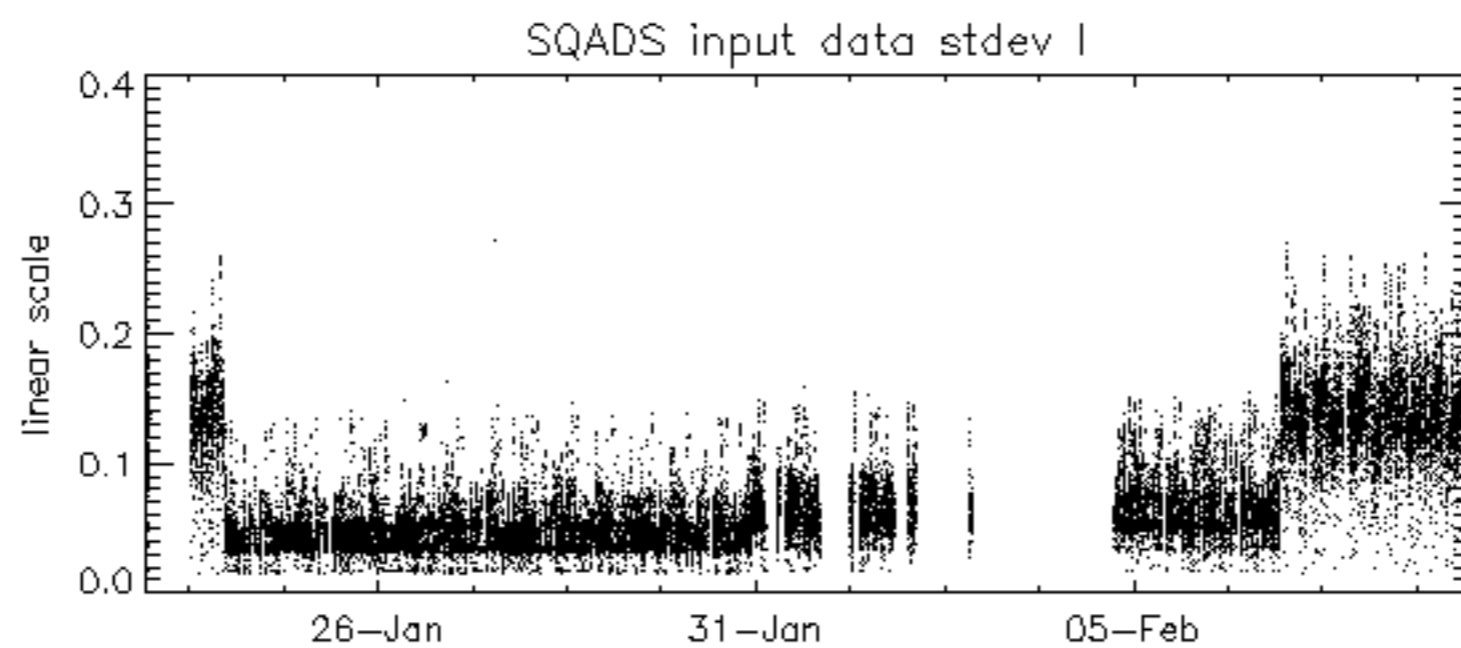
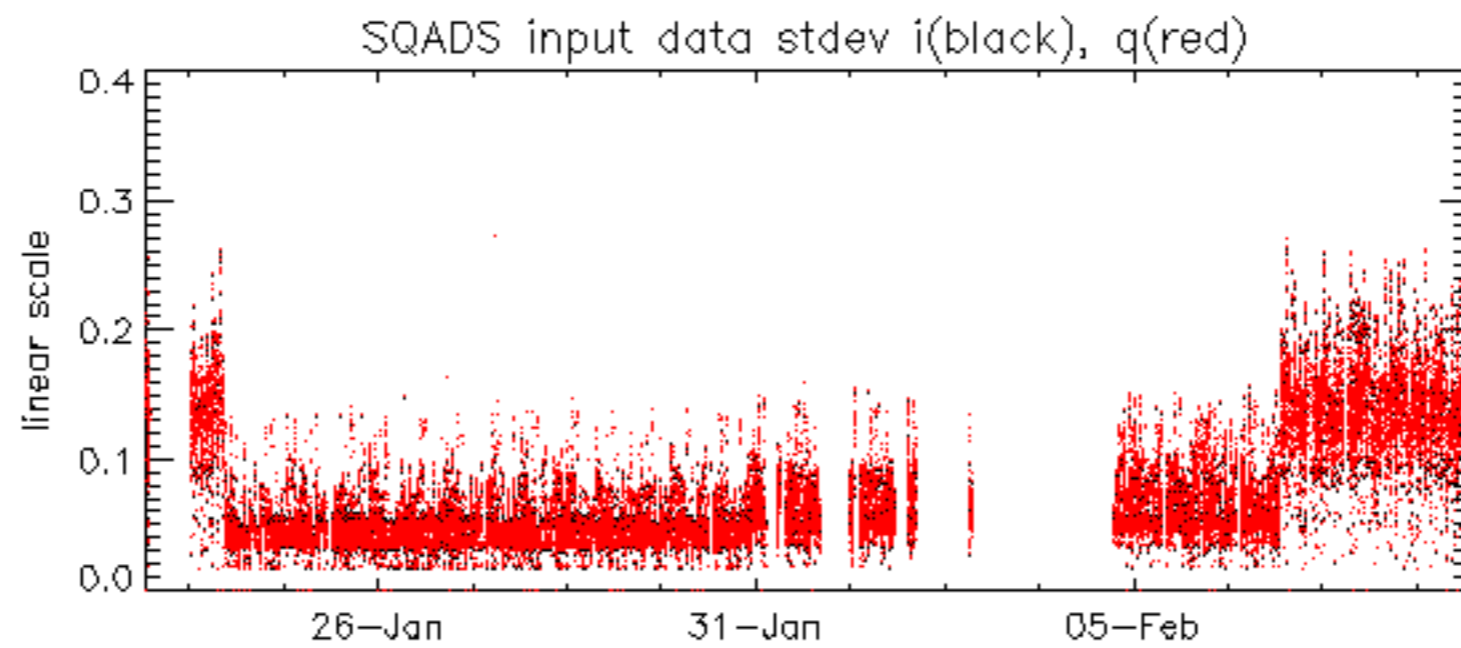
No anomalies observed.







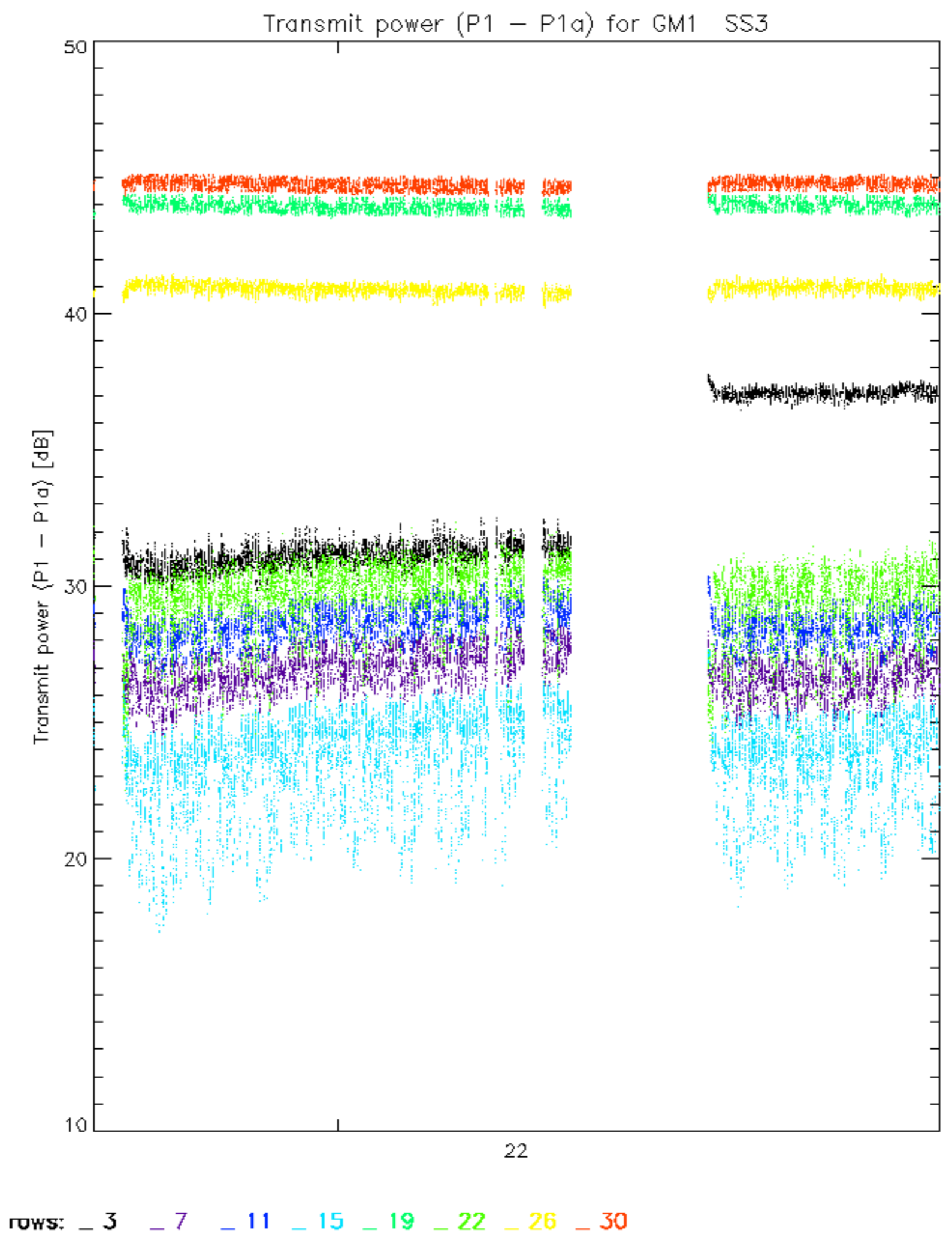


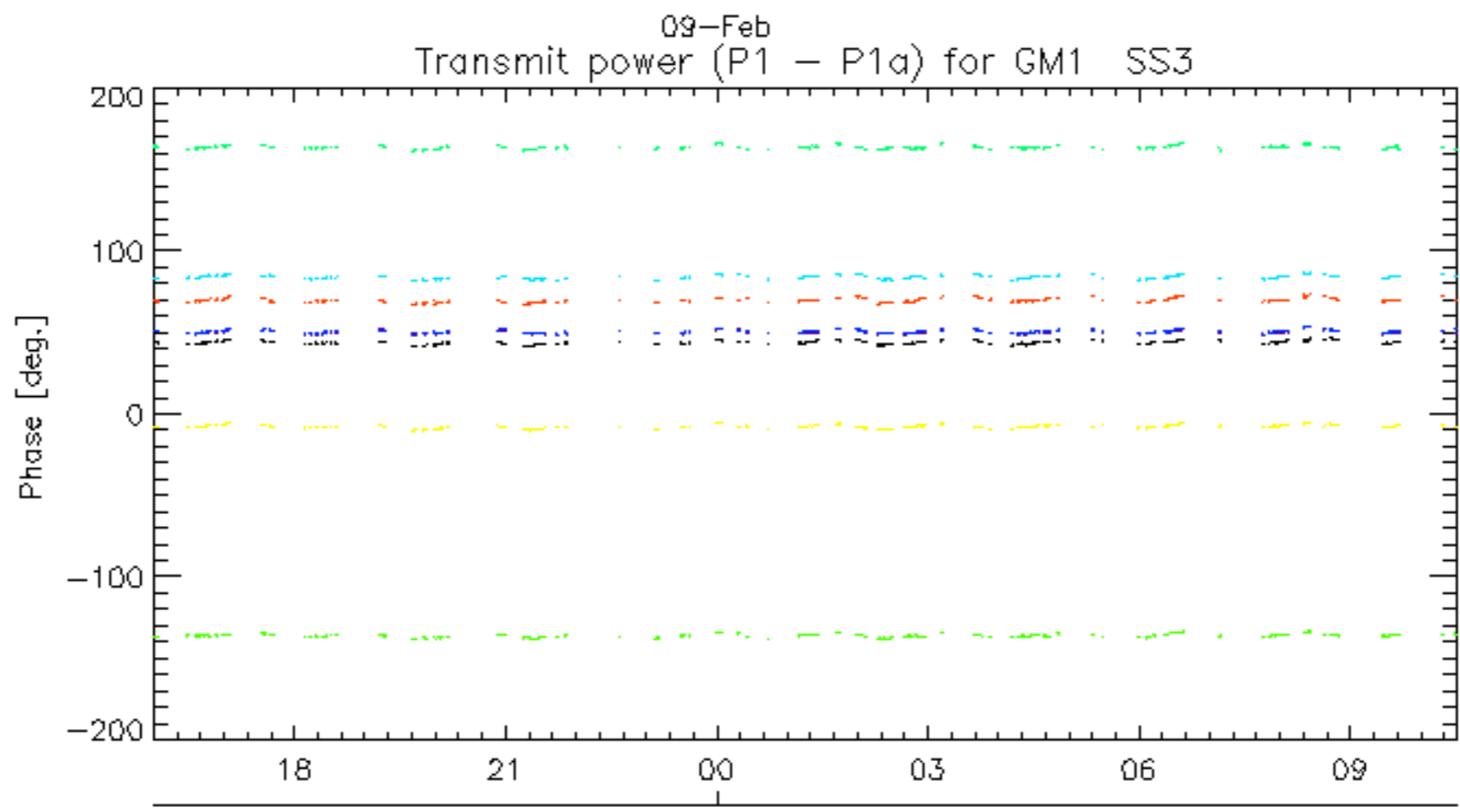
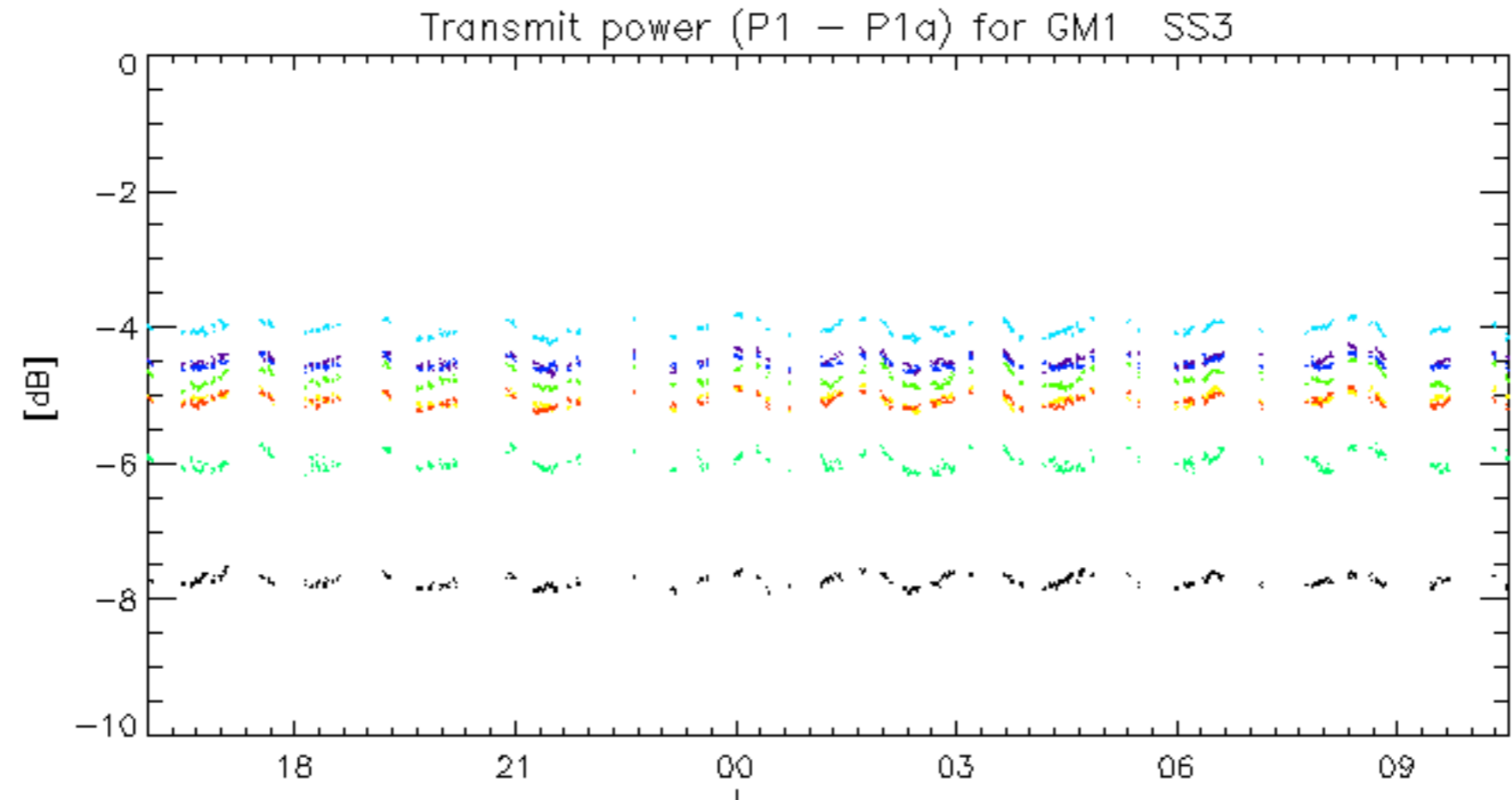


Summary of analysis for the last 3 days 2007020[789]

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

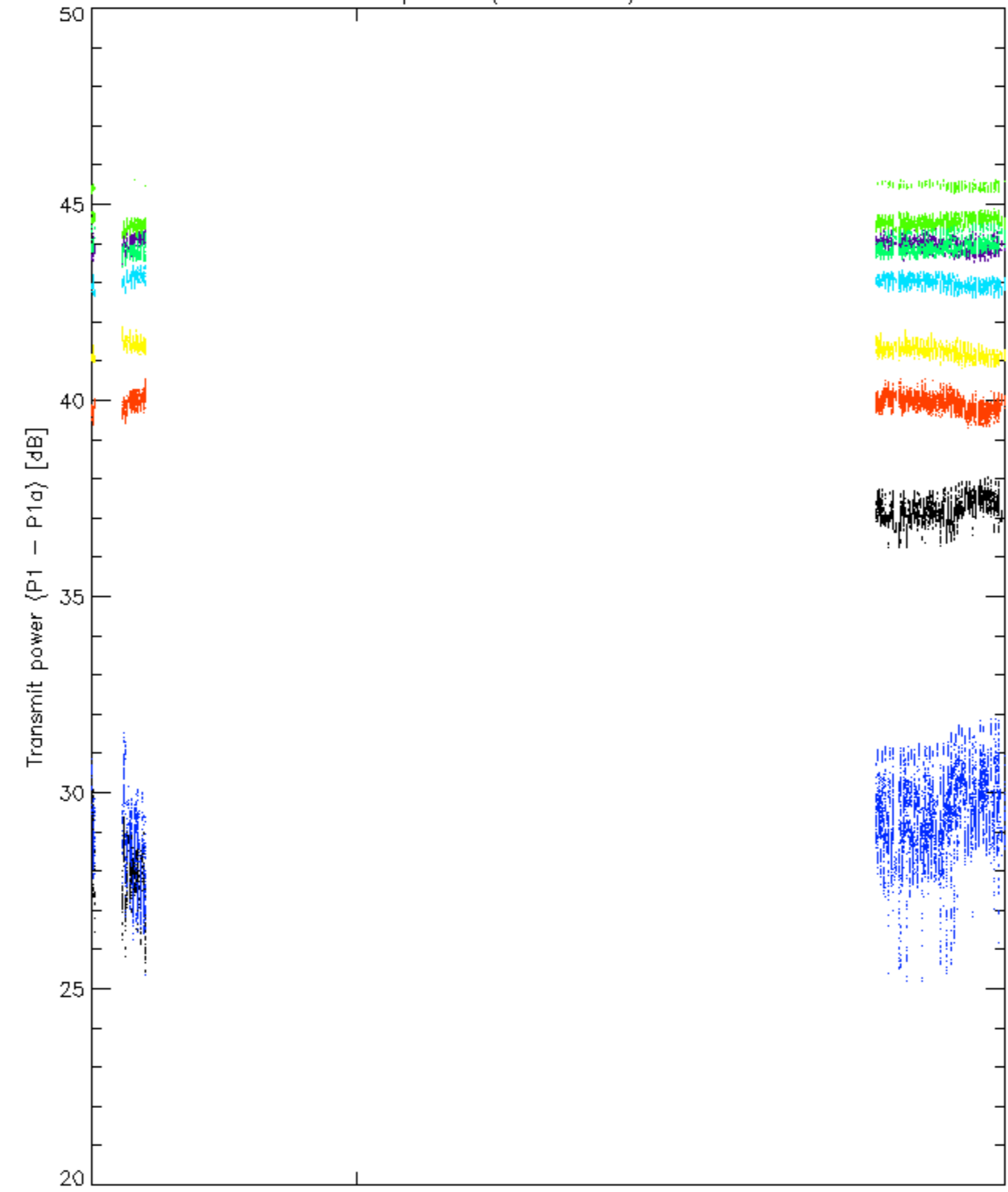
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070208_015344_000001402055_00232_25837_9161.N1	7	101
ASA_IMM_1PNPDE20070209_044539_000001392055_00248_25853_0947.N1	15	1731
ASA_IMM_1PNPDE20070209_044539_000001392055_00248_25853_0987.N1	15	1731
ASA_IMM_1PNPDE20070209_044539_000001392055_00248_25853_1132.N1	15	1731
ASA_IMM_1PNPDE20070209_044842_000000212055_00248_25853_0817.N1	15	1557
ASA_GM1_1PNPDK20070208_131157_000009672055_00239_25844_8717.N1	0	30
ASA_WSM_1PNPDE20070208_012926_000000862055_00232_25837_9154.N1	17	4430
ASA_WSM_1PNPDE20070208_013746_000001222055_00232_25837_9217.N1	0	56
ASA_WSM_1PNPDE20070208_013853_000000552055_00232_25837_9136.N1	0	44
ASA_WSM_1PNPDE20070208_022638_000000672055_00232_25837_9174.N1	40	13228
ASA_WSM_1PNPDE20070208_022638_000000672055_00232_25837_9789.N1	40	13228
ASA_WSM_1PNPDE20070208_022846_000001162055_00232_25837_9196.N1	8	1599
ASA_WSM_1PNPDE20070208_022846_000001162055_00232_25837_9825.N1	8	1599
ASA_WSM_1PNPDE20070209_052422_000002262055_00248_25853_1134.N1	3	480
ASA_WSM_1PNPDE20070209_065803_000001832055_00249_25854_1157.N1	0	69
ASA_WSM_1PNPDE20070209_070208_000000782055_00249_25854_1158.N1	11	1663
ASA_WSM_1PNPDK20070208_094718_000000852055_00237_25842_8500.N1	0	32
ASA_APM_1PNPDE20070207_153229_000000682055_00226_25831_8504.N1	0	81





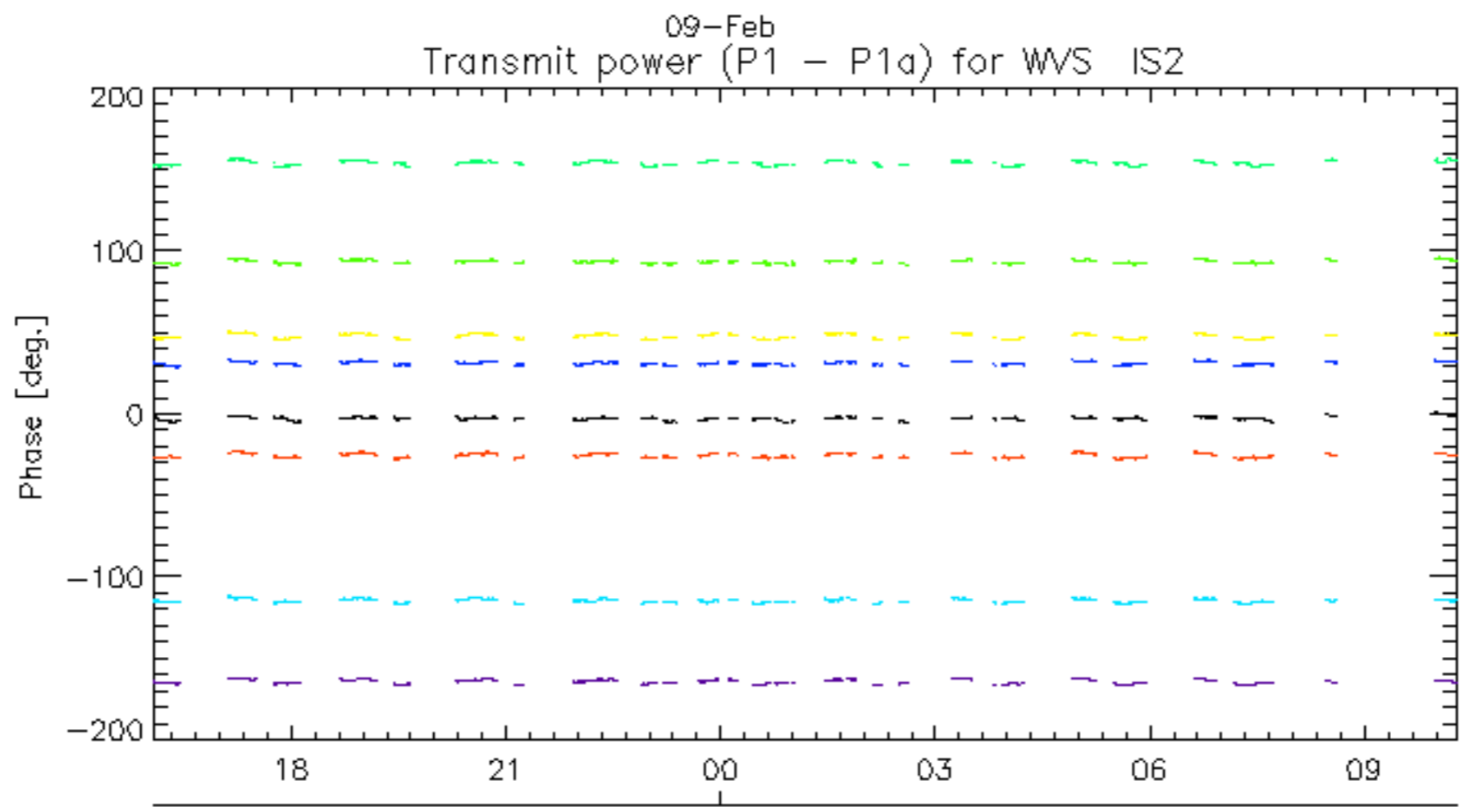
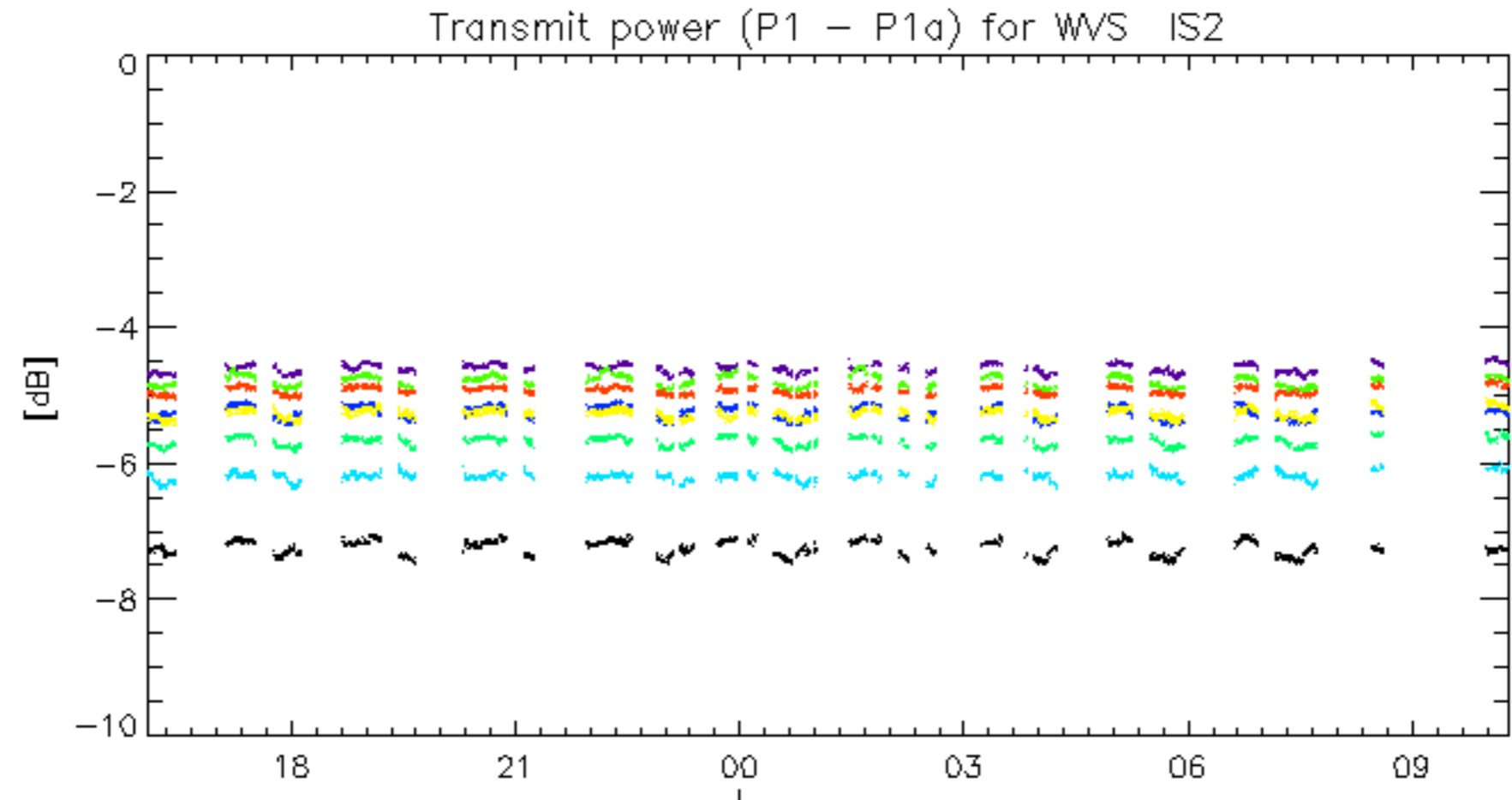
09-Feb
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



22

rows: 3 7 11 15 19 22 26 30



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

No unavailabilities during the reported period.