

PRELIMINARY REPORT OF 070215

last update on Thu Feb 15 16:20:44 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 2007-02-14 00:00:00 to 2007-02-15 16:20:45

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	39	74	11	2	28
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	39	74	11	2	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	74	11	2	28
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	39	74	11	2	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	39	47	31	22	50
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	39	47	31	22	50
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	47	31	22	50
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	39	47	31	22	50

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	20070214 073836
H	20070215 070659

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	-15.214161	0.313707	2.576635
7	P1a	-17.408802	0.109571	-0.393006
11	P1a	-17.341824	0.361803	-0.074940
15	P1a	-12.836531	0.121048	-0.305738
19	P1a	-15.096401	0.095949	-0.154552
22	P1a	-15.516039	0.488041	-0.465326
26	P1a	-14.989269	0.241071	-0.122036
30	P1a	-17.302021	0.383297	-0.532364

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.558039	0.249650	-2.823484
7	P1	-3.108289	0.009467	-0.105134
11	P1	-4.133160	0.019819	-0.130362
15	P1	-6.325678	0.016753	-0.106049
19	P1	-3.708823	0.009011	-0.021247
22	P1	-4.677542	0.014321	-0.030381
26	P1	-3.929531	0.013946	-0.005508
30	P1	-5.919373	0.012406	-0.057800

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.482979	0.382049	-3.143779
7	P2	-21.615419	0.084858	0.060812
11	P2	-15.484098	0.102849	0.045201
15	P2	-7.019533	0.100689	-0.093218
19	P2	-9.086189	0.088822	-0.079304
22	P2	-18.102995	0.084929	-0.111527

26	P2	-16.510088	0.099231	-0.122939
30	P2	-19.336811	0.079968	-0.048717

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.204414	0.007967	-0.019140
7	P3	-8.204414	0.007967	-0.019140
11	P3	-8.204414	0.007967	-0.019140
15	P3	-8.204414	0.007967	-0.019140
19	P3	-8.204414	0.007967	-0.019140
22	P3	-8.204414	0.007967	-0.019140
26	P3	-8.204414	0.007967	-0.019140
30	P3	-8.204414	0.007967	-0.019140

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.384219	0.150543	1.471915
7	P1a	-10.035383	0.059203	-0.093133
11	P1a	-10.569393	0.061194	-0.352174
15	P1a	-10.849220	0.131287	-0.127042
19	P1a	-15.746454	0.063982	-0.008652
22	P1a	-20.893995	1.290725	0.426040
26	P1a	-15.451209	0.260313	0.258471
30	P1a	-18.331854	0.366369	-0.107842

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-6.442992	4.240866	-9.437010
7	P1	-2.440711	0.005946	-0.001375

11	P1	-2.881226	0.016944	-0.151097
15	P1	-3.795912	0.034057	-0.133940
19	P1	-3.552408	0.013010	-0.026744
22	P1	-5.026756	0.023437	-0.023643
26	P1	-5.994864	0.022993	0.023981
30	P1	-5.290765	0.023205	-0.004953

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.248446	0.863417	-4.105769
7	P2	-22.014246	0.050563	0.111788
11	P2	-10.683230	0.031800	0.069281
15	P2	-4.834588	0.026995	0.043643
19	P2	-6.833607	0.028532	0.045428
22	P2	-8.141238	0.030155	0.054119
26	P2	-24.254833	0.032267	0.000159
30	P2	-21.791540	0.034305	0.048865

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.051758	0.002903	0.022828
7	P3	-8.051754	0.002916	0.021991
11	P3	-8.051768	0.002907	0.022570
15	P3	-8.051800	0.002906	0.022432
19	P3	-8.051708	0.002899	0.022703
22	P3	-8.051802	0.002908	0.022737
26	P3	-8.051654	0.002903	0.022822
30	P3	-8.051698	0.002910	0.022697

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	0.000645301
	stdev	2.53947e-07
MEAN Q	mean	0.000348575
	stdev	2.52385e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0922073
	stdev	0.00251910
STDEV Q	mean	0.0920991
	stdev	0.00256860



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007021[345]

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_1PNPDE20070213_153643_00000802055_00312_25917_6362.N1	0	558
ASA_IMM_1PNPDE20070215_081235_000003682055_00336_25941_8530.N1	15	2459



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)

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Acsending
<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

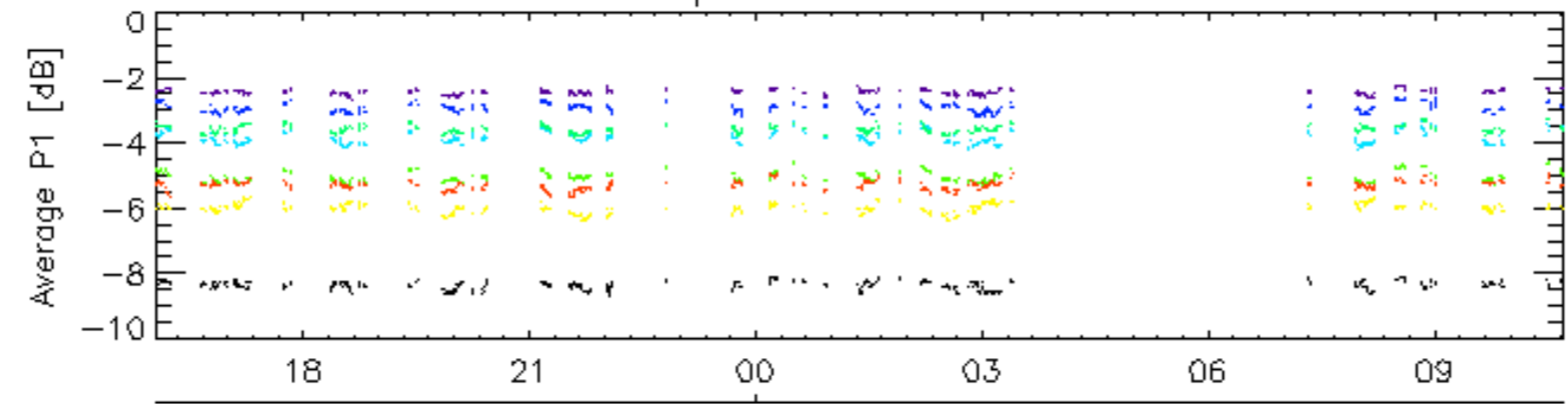
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

7.6 - Doppler evolution versus ANX for GM1

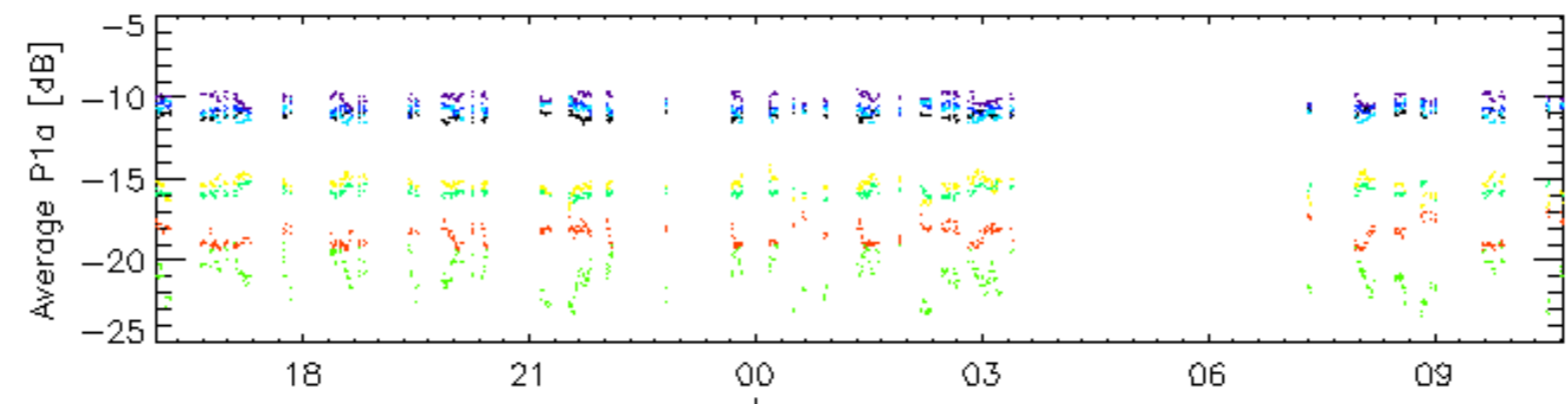
Evolution Doppler error versus ANX

<input type="checkbox"/>	
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Cal pulses for GM1 SS3

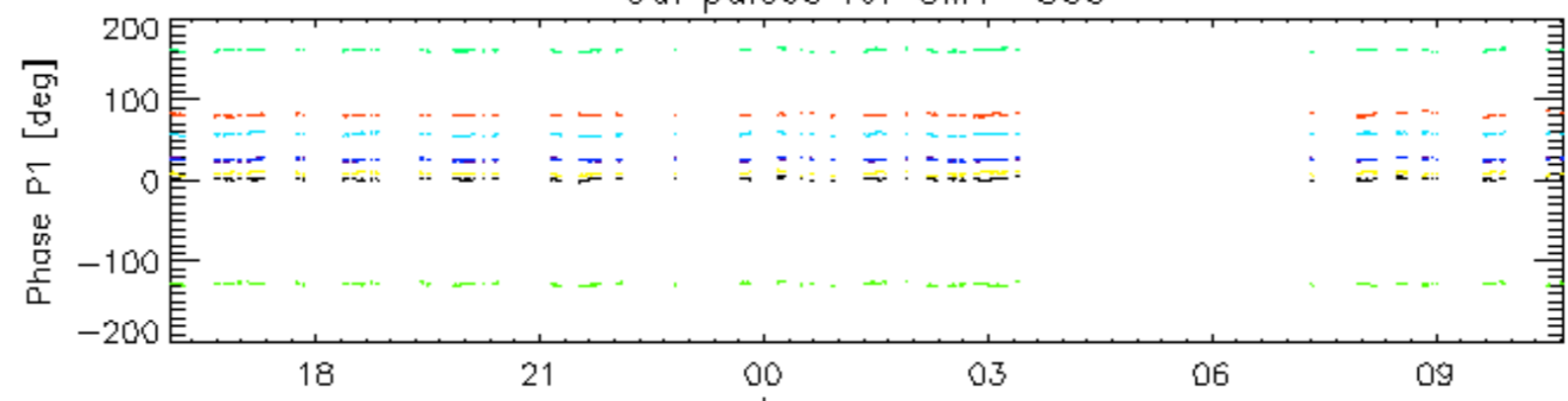


15-Feb

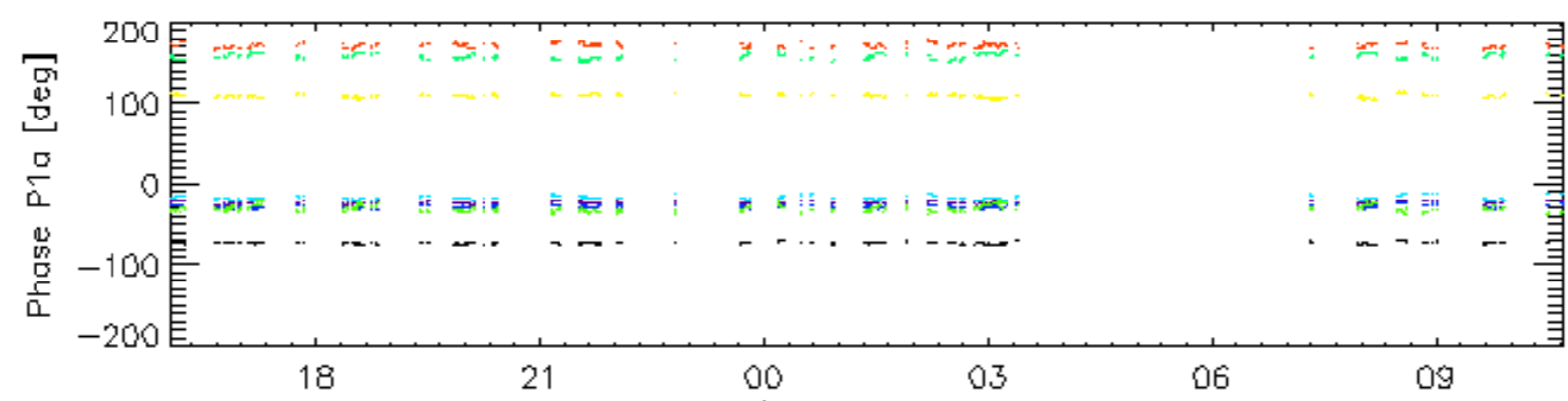


15-Feb

Cal pulses for GM1 SS3

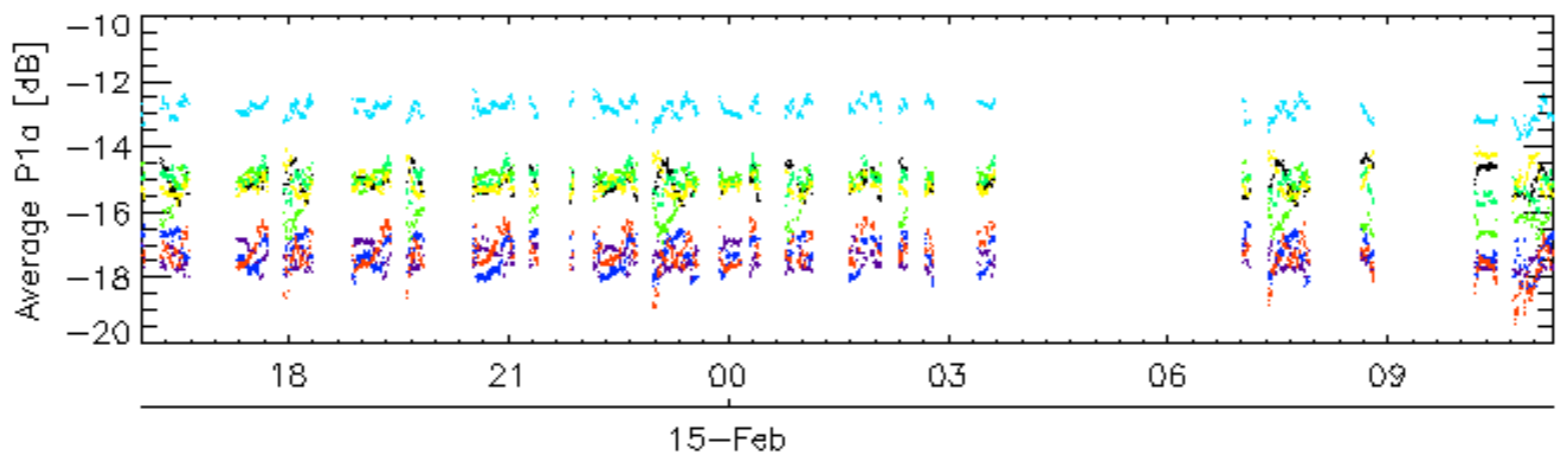
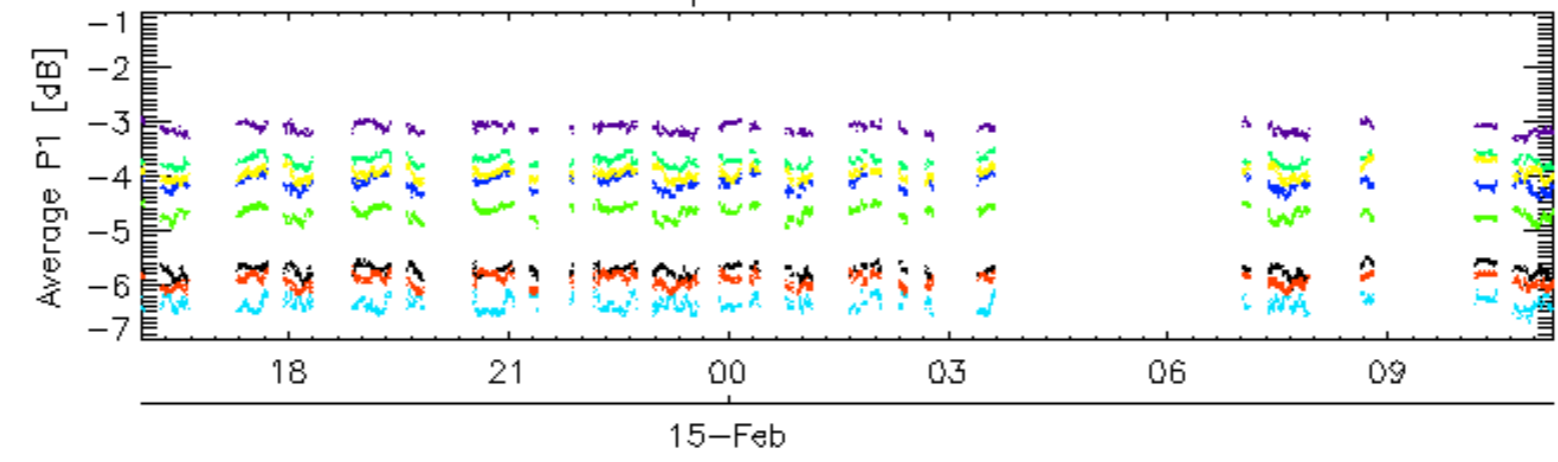


15-Feb

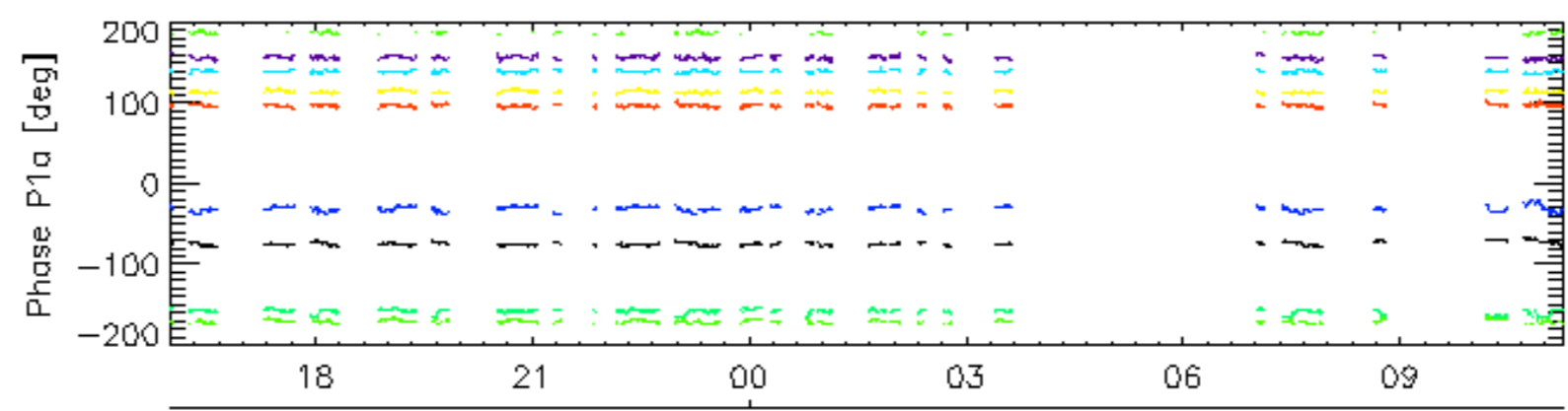
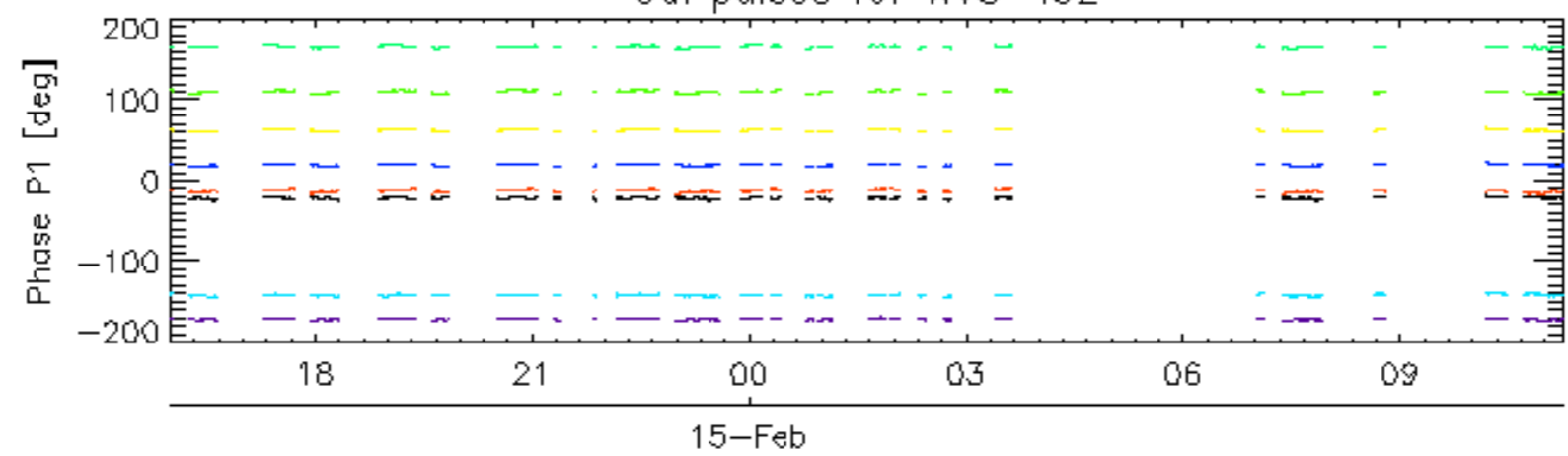


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

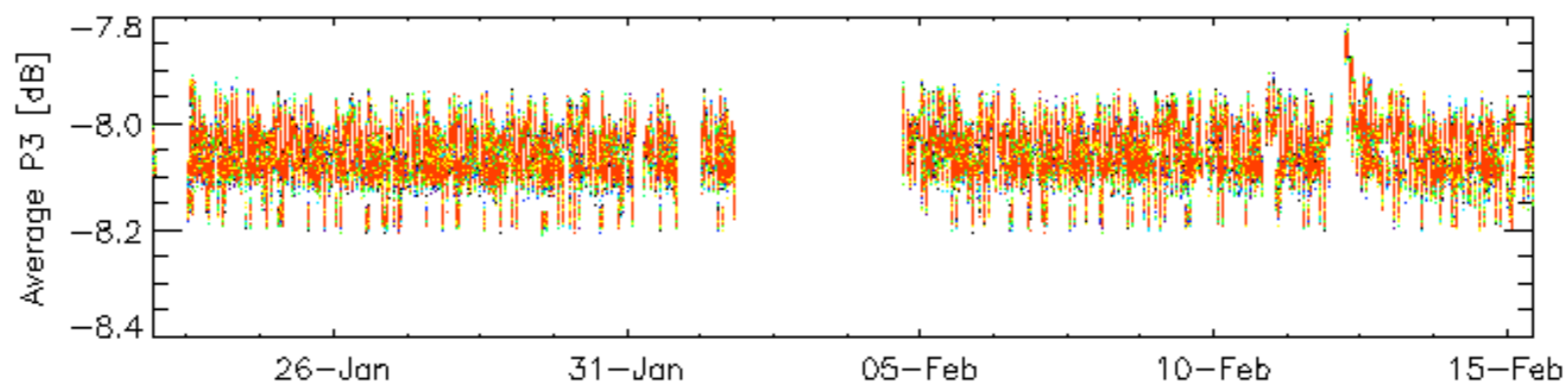
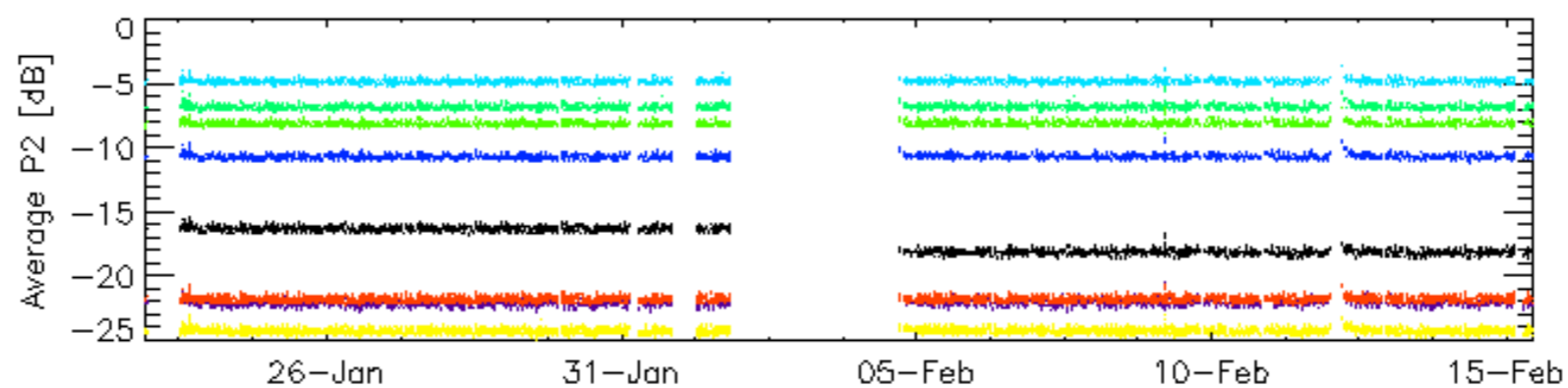
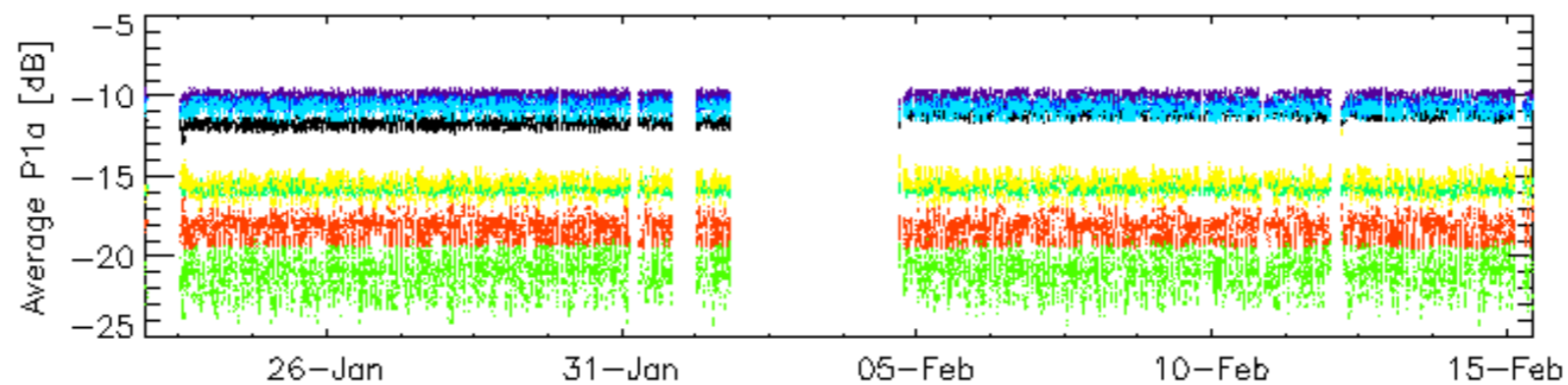
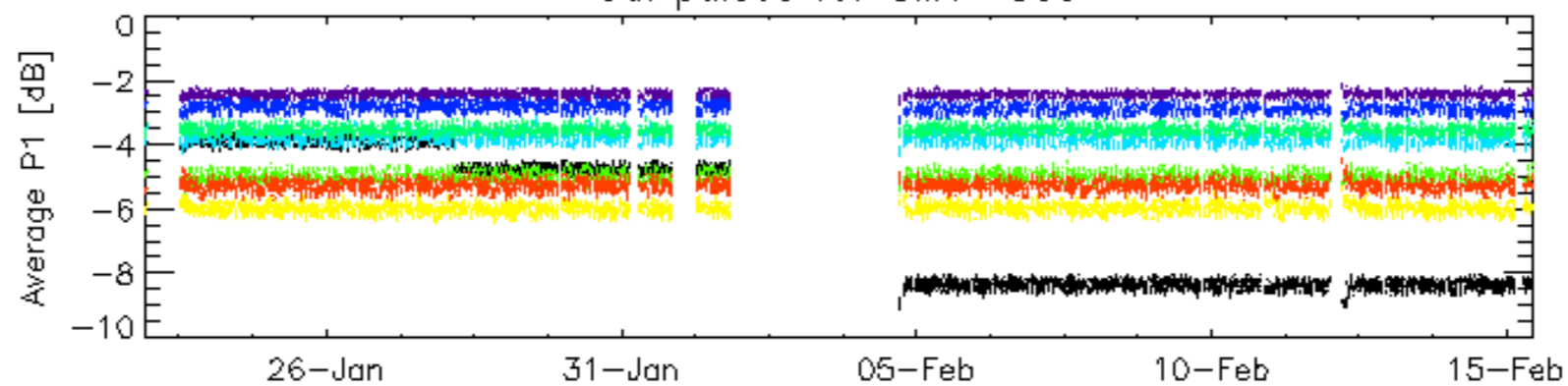


Cal pulses for WVS IS2



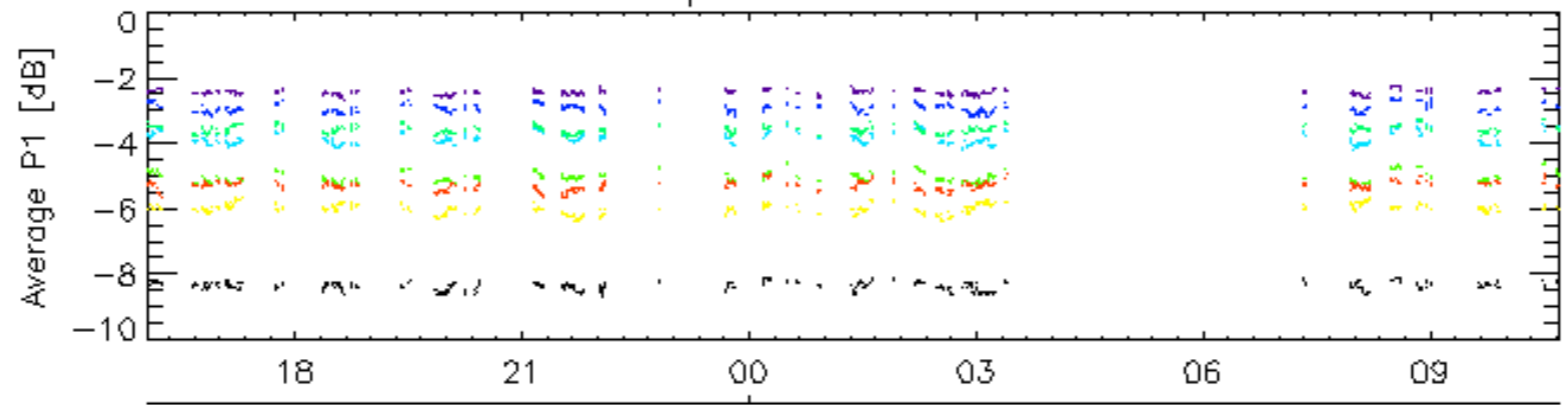
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

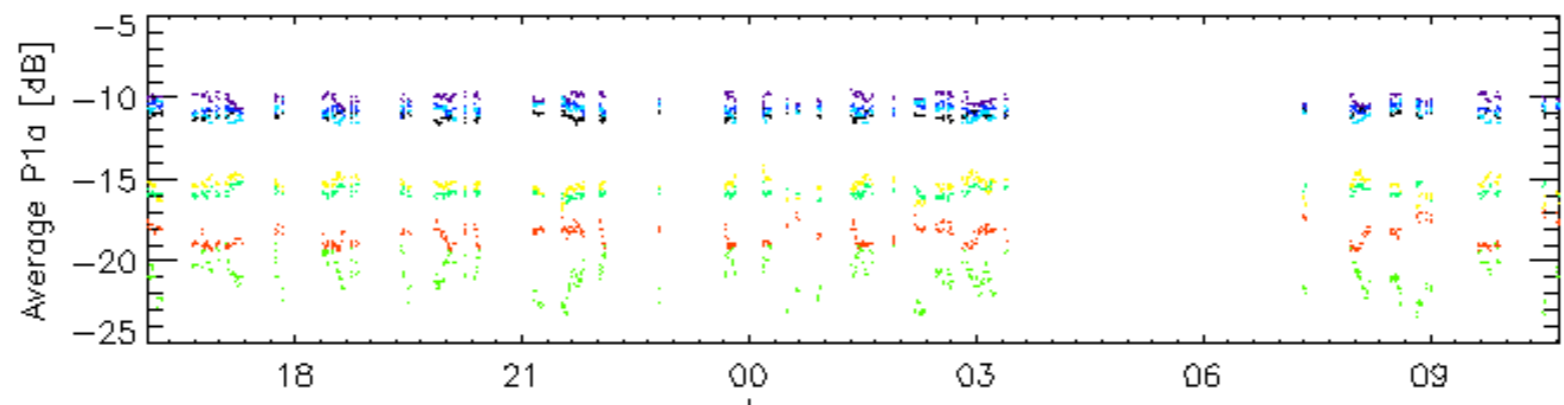


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

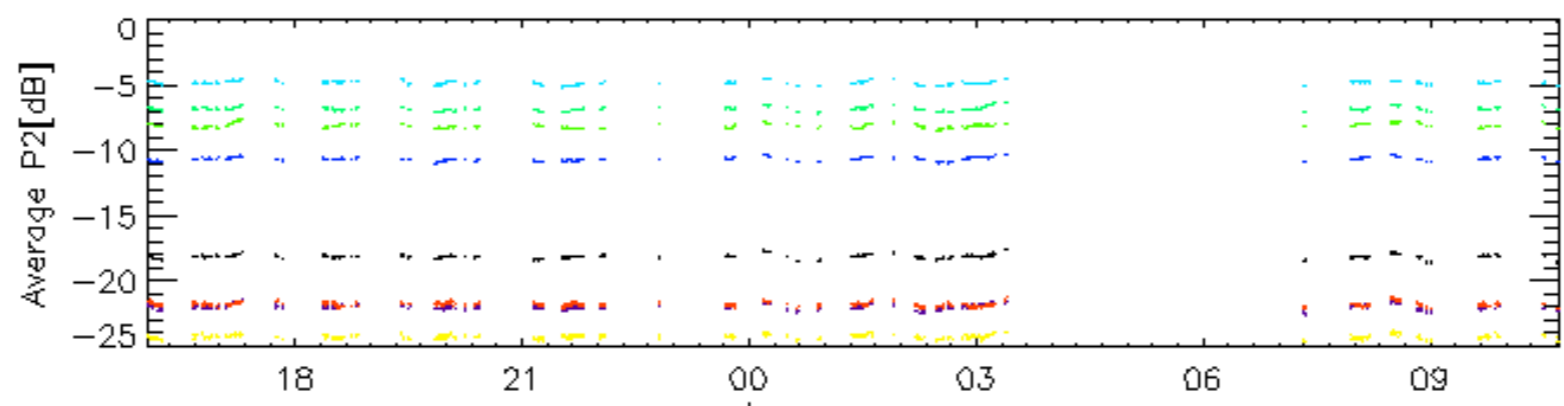
Cal pulses for GM1 SS3



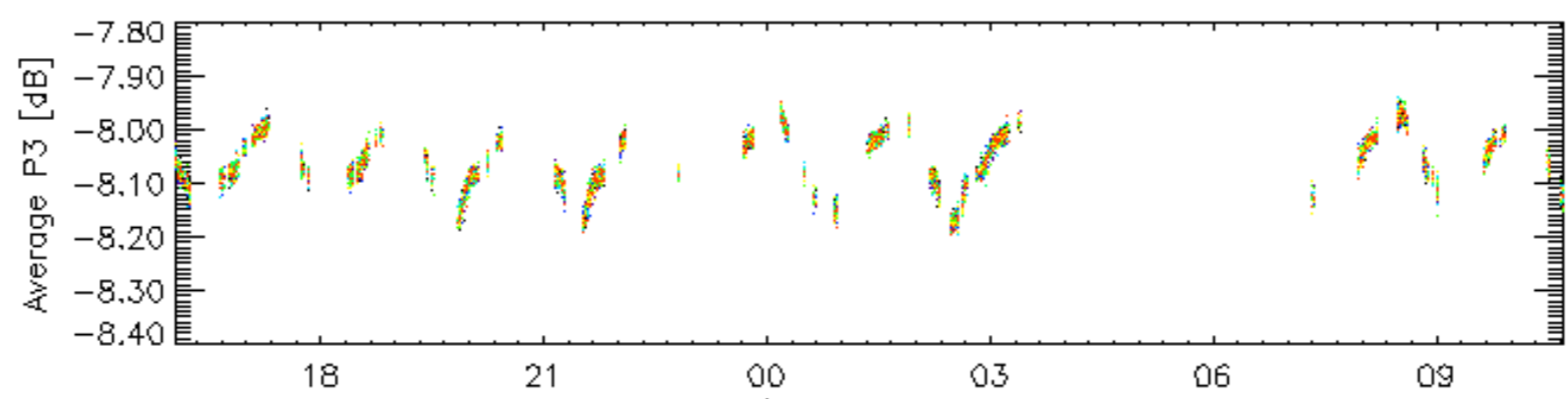
15-Feb



15-Feb



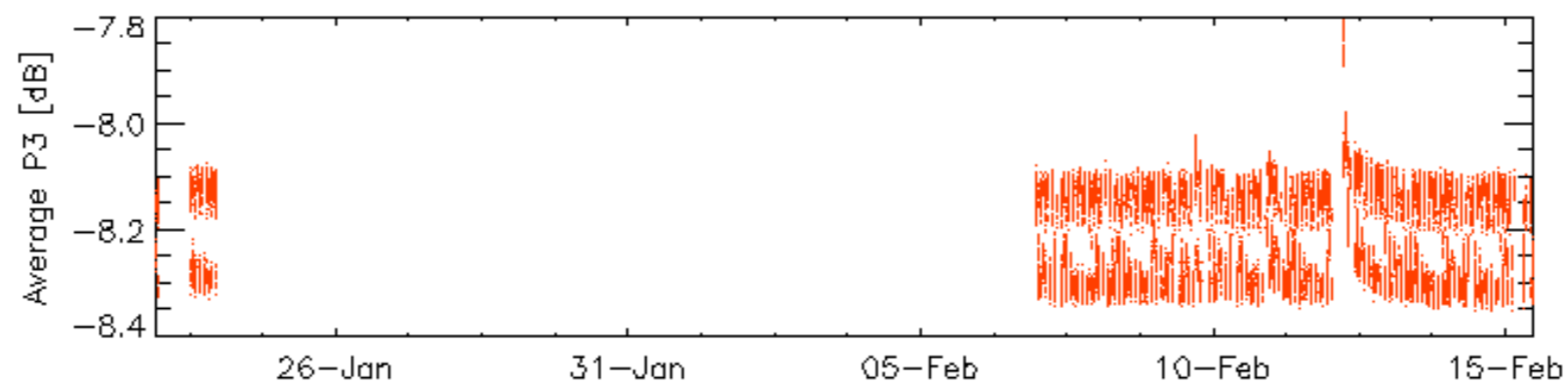
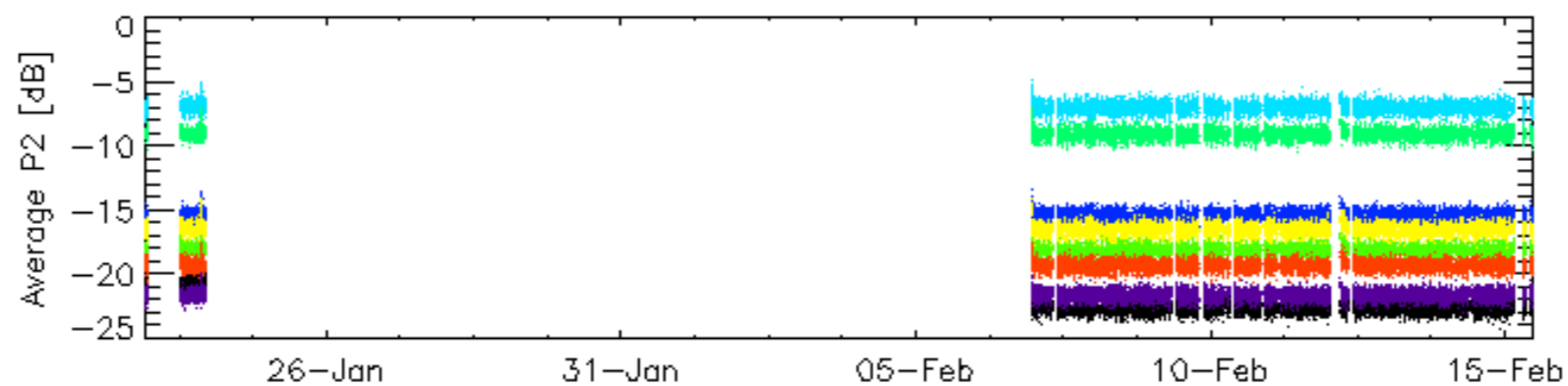
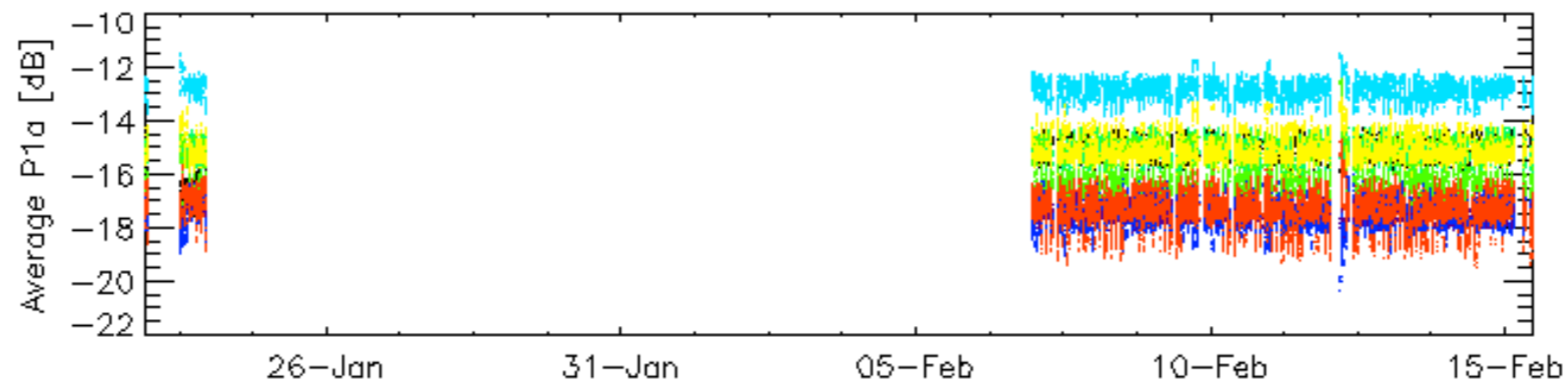
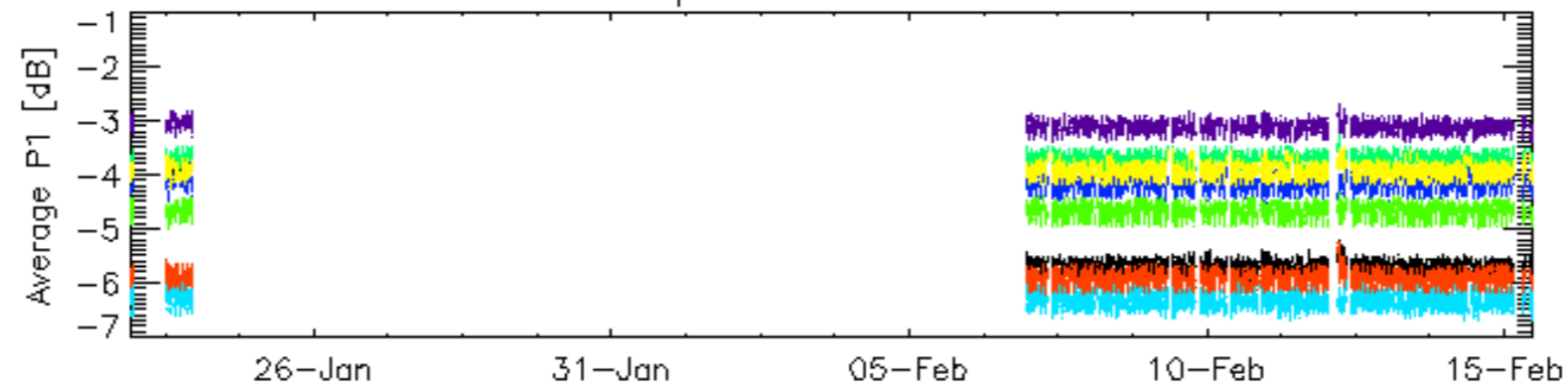
15-Feb



15-Feb

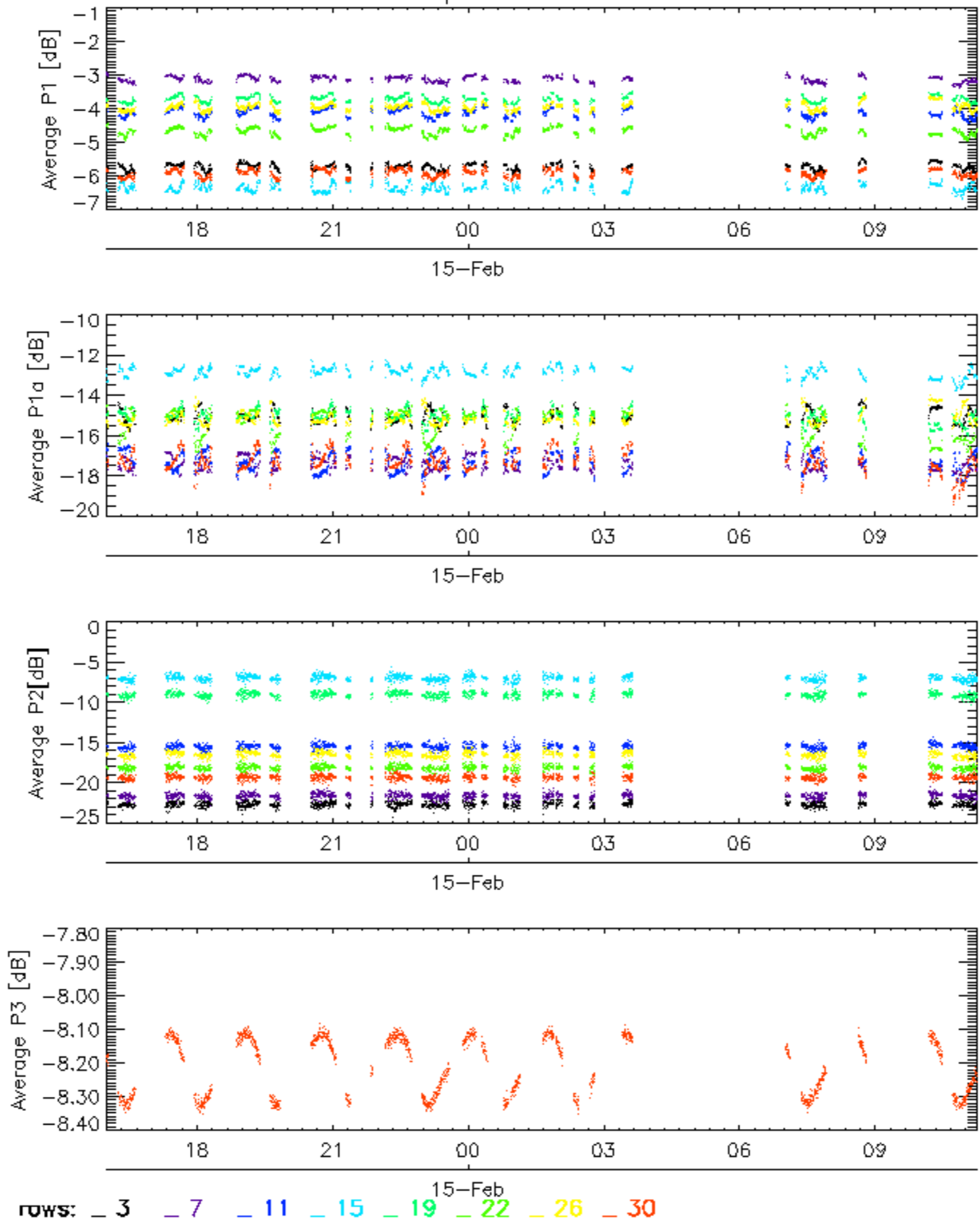
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

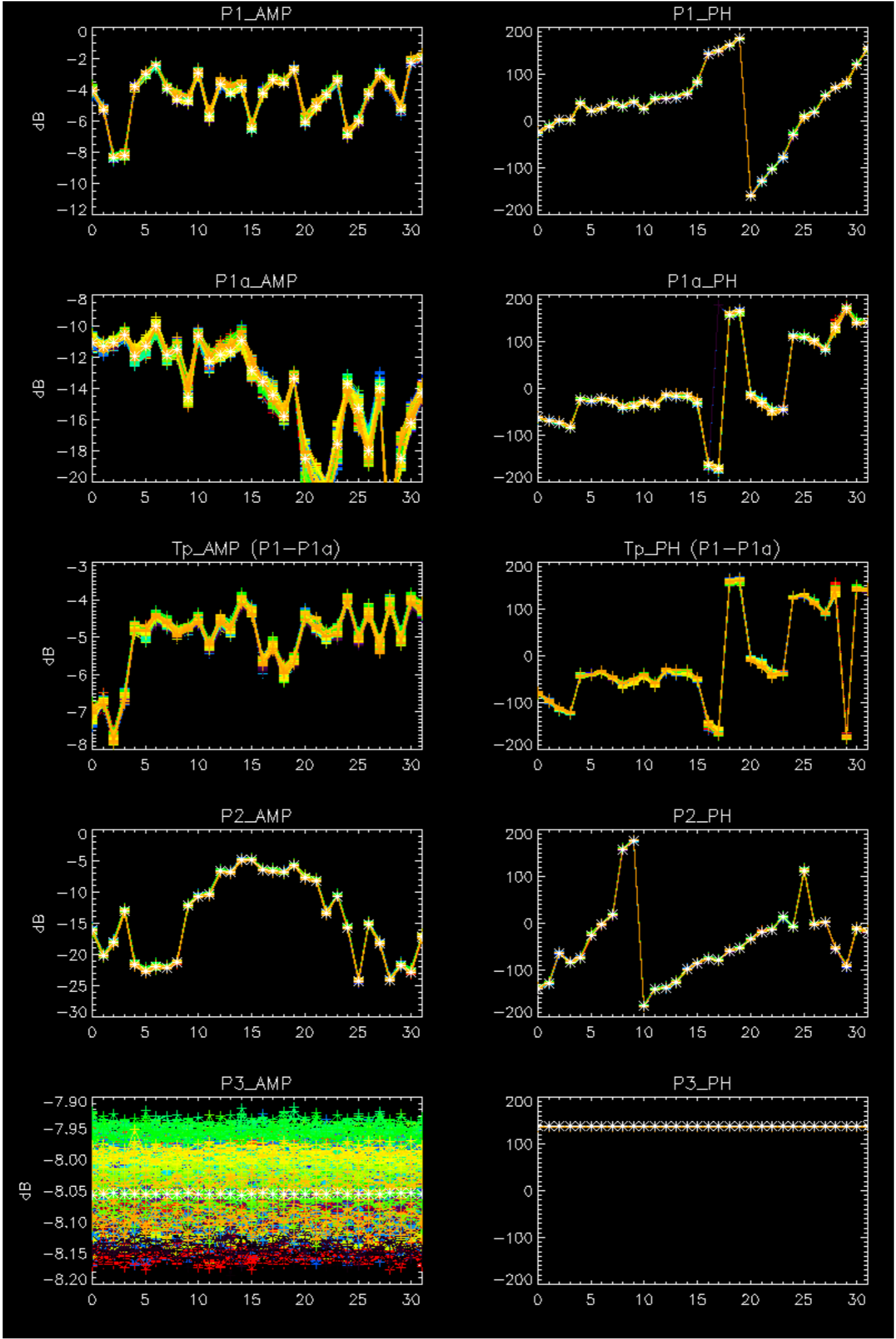


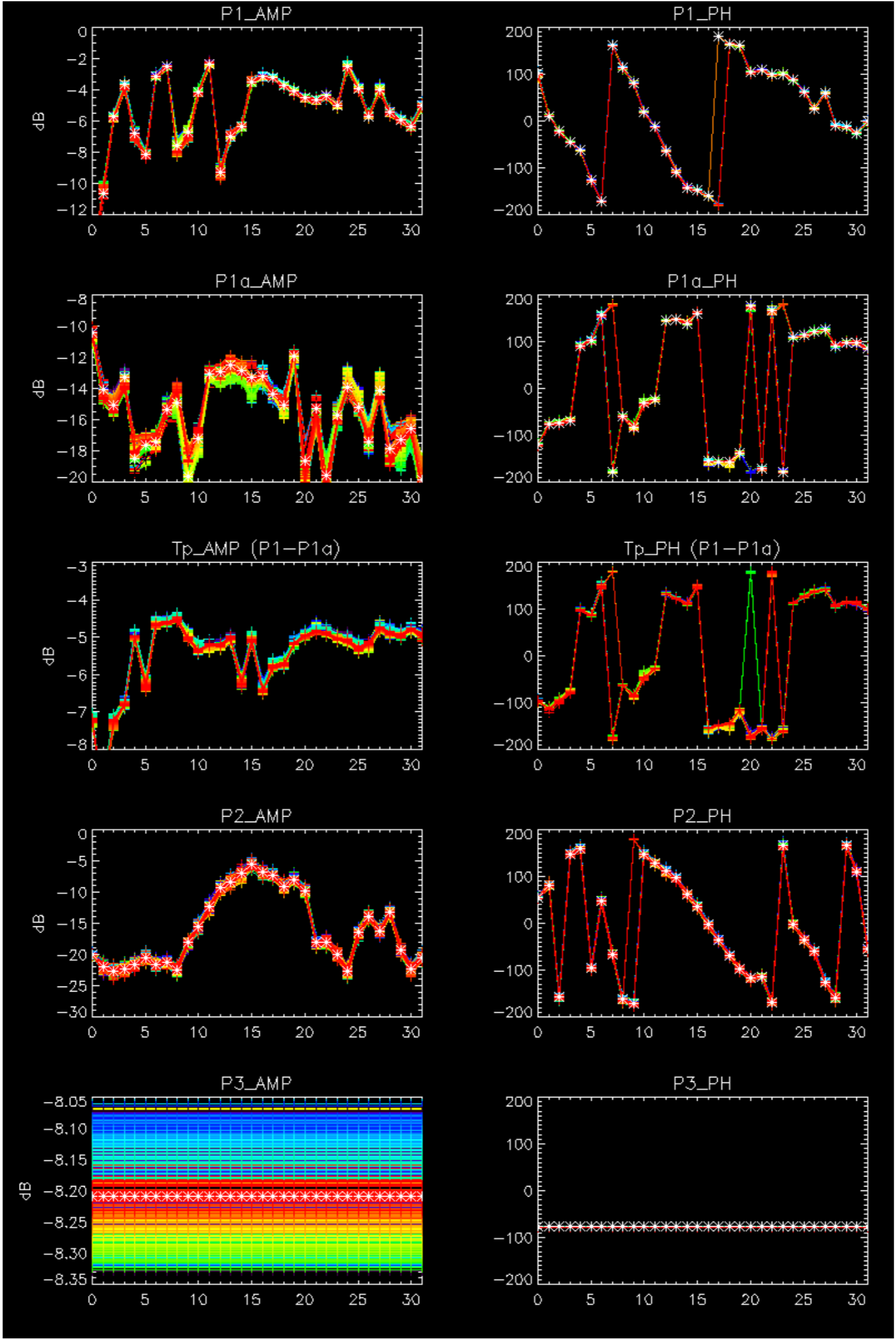
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



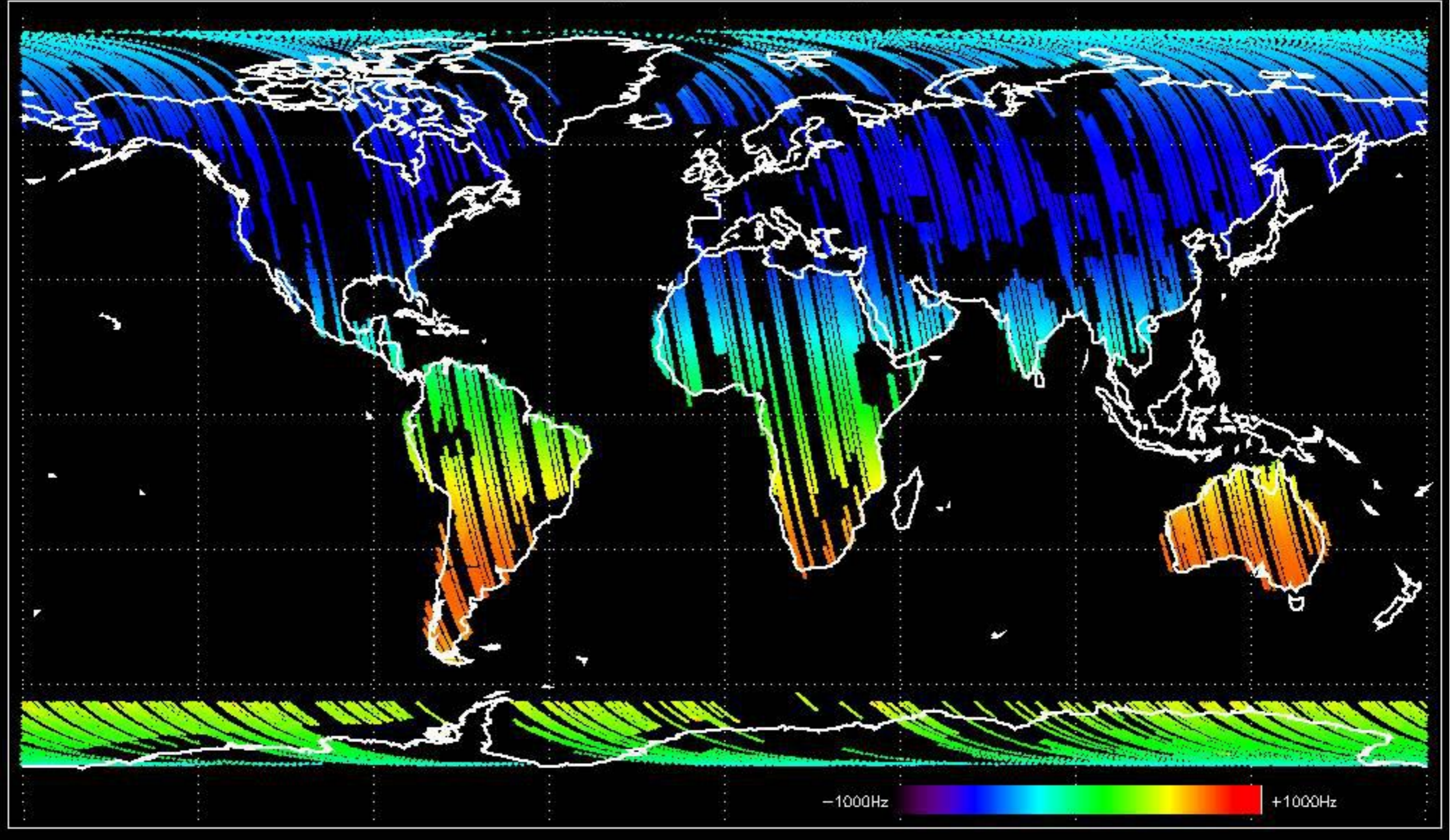
No anomalies observed.



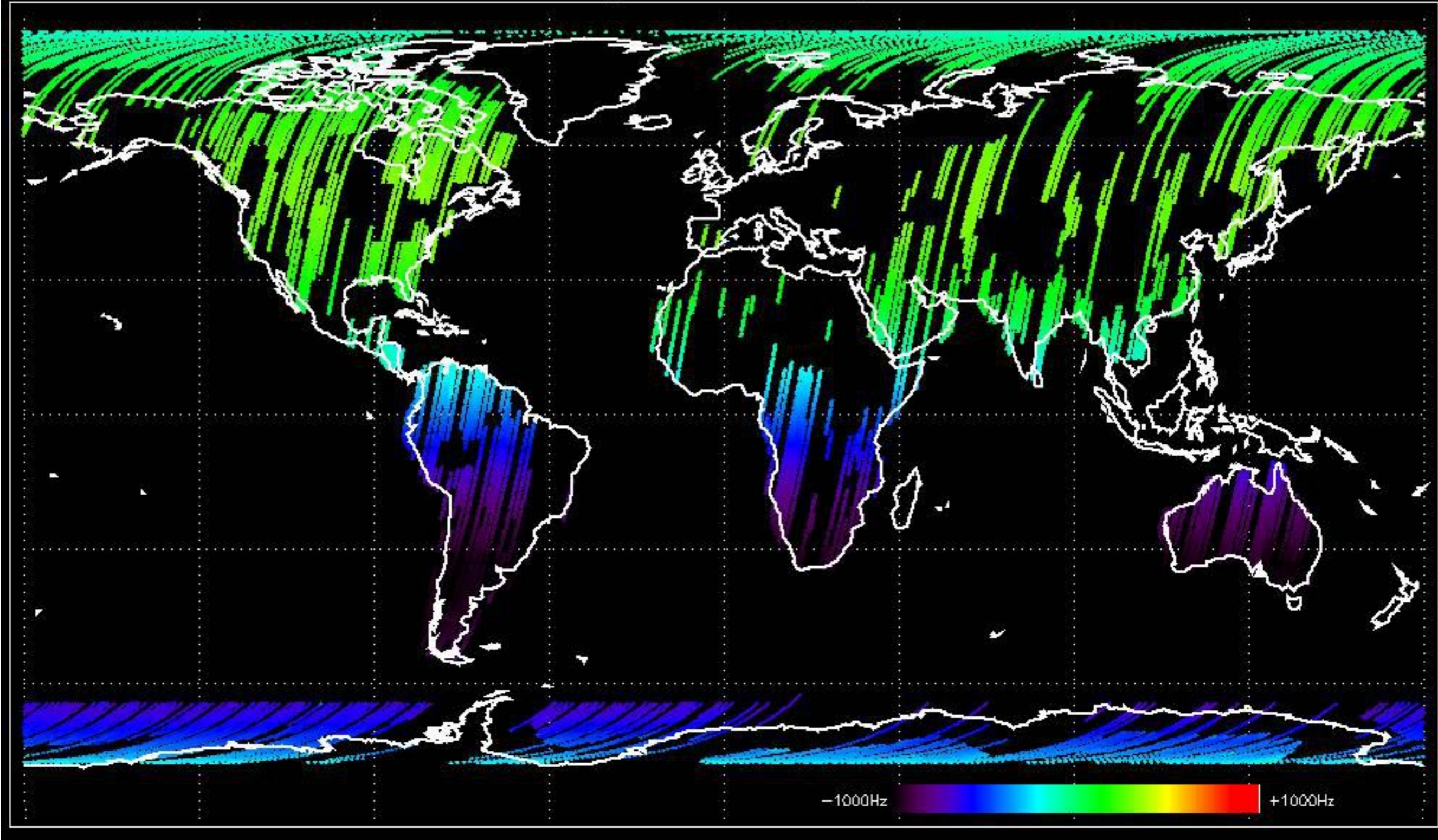


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

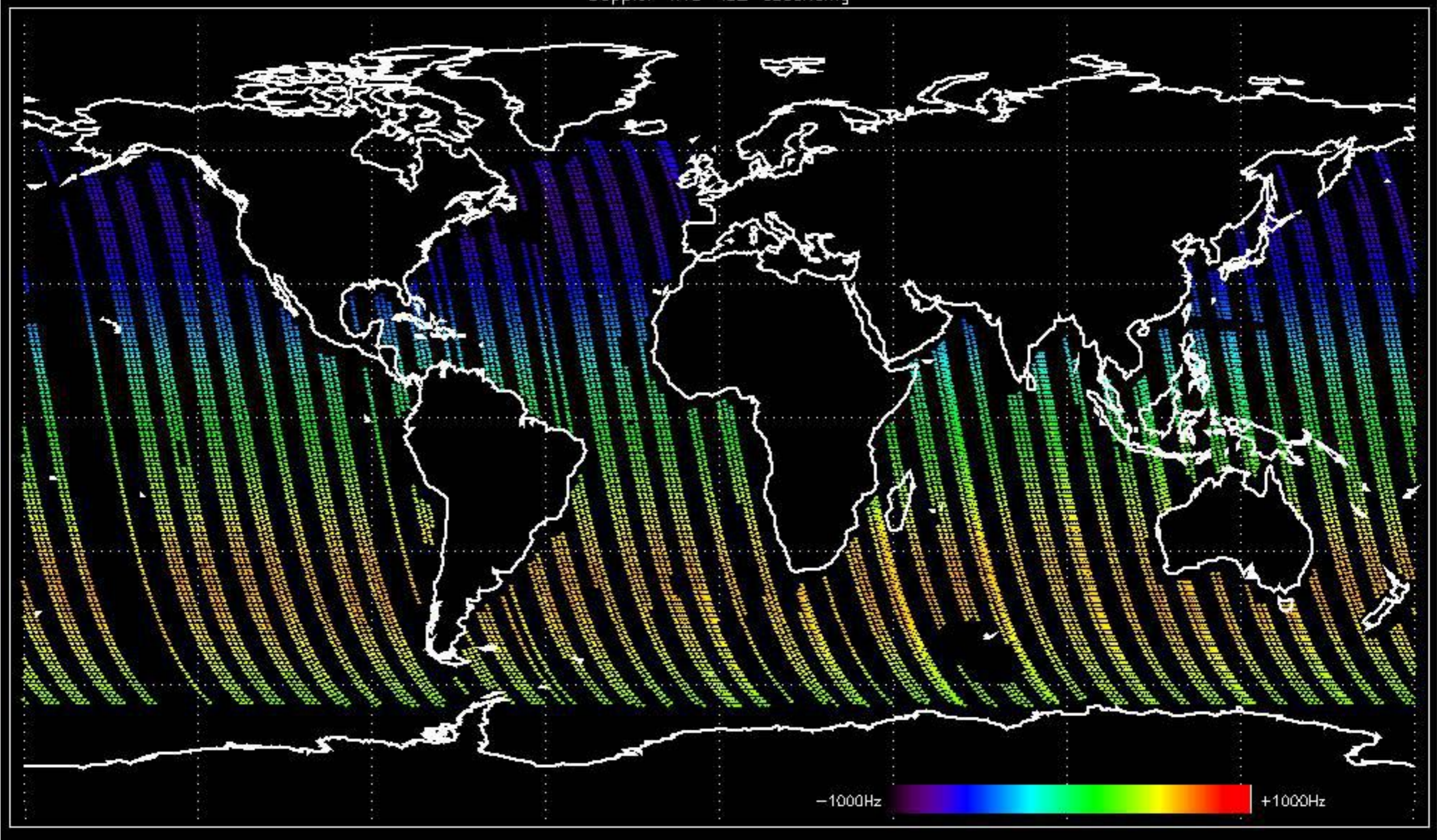
Doppler 'GM1' 'SS1' ascending



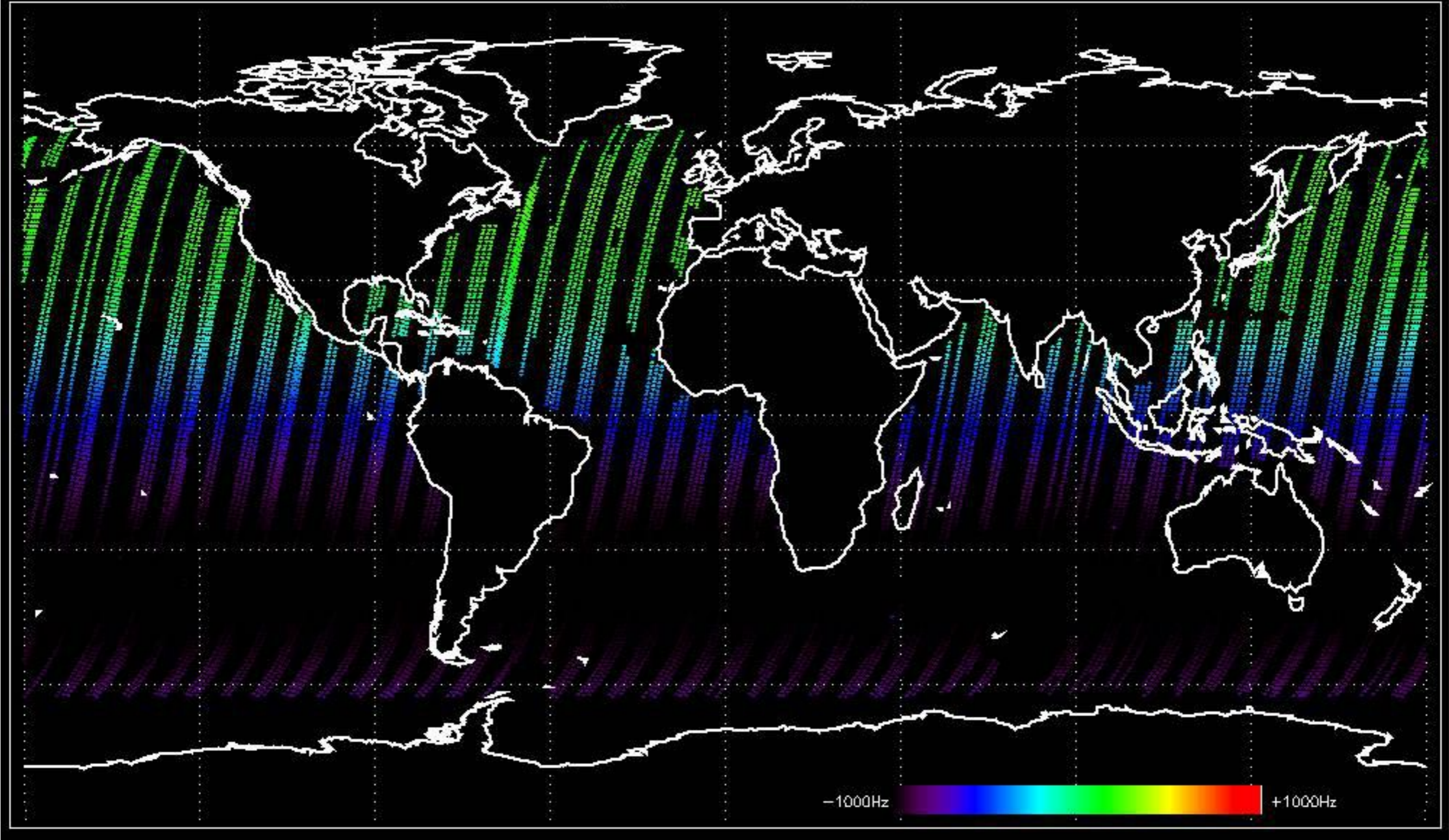
Doppler 'GM1' 'SS1' descending



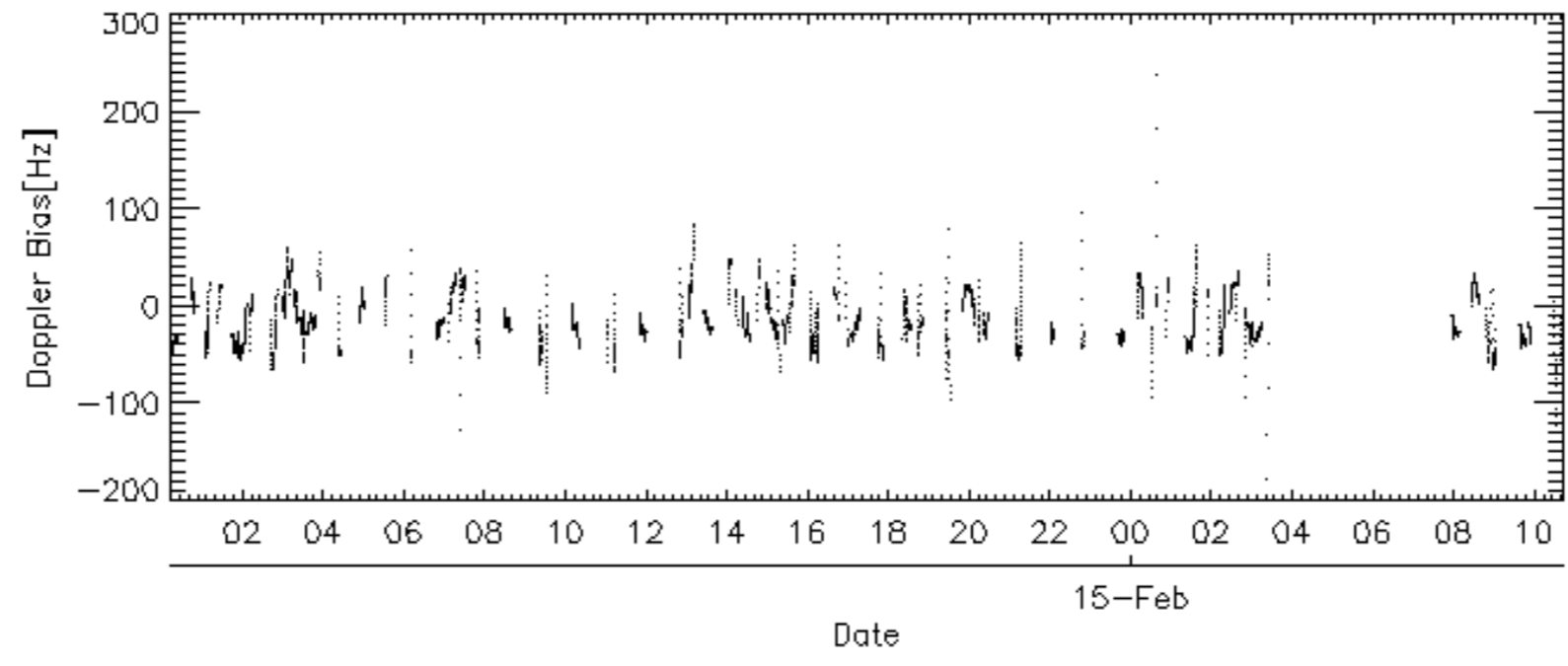
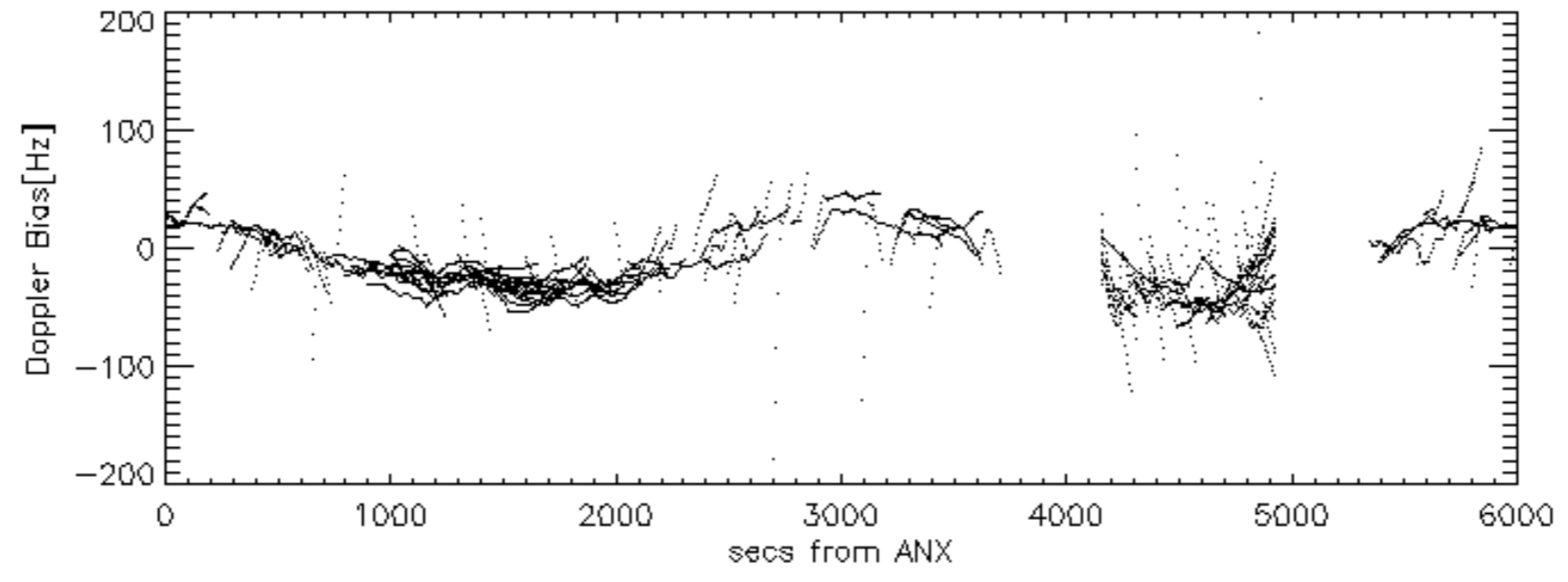
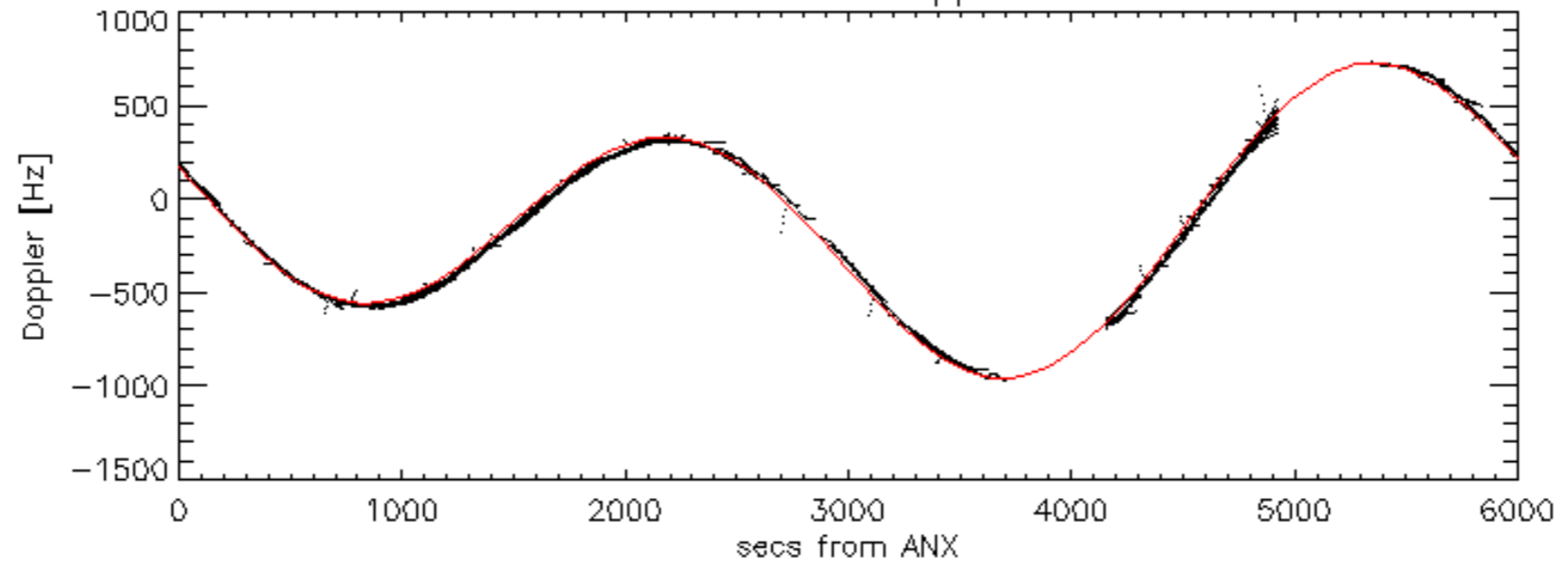
Doppler 'WVS' 'IS2' ascending

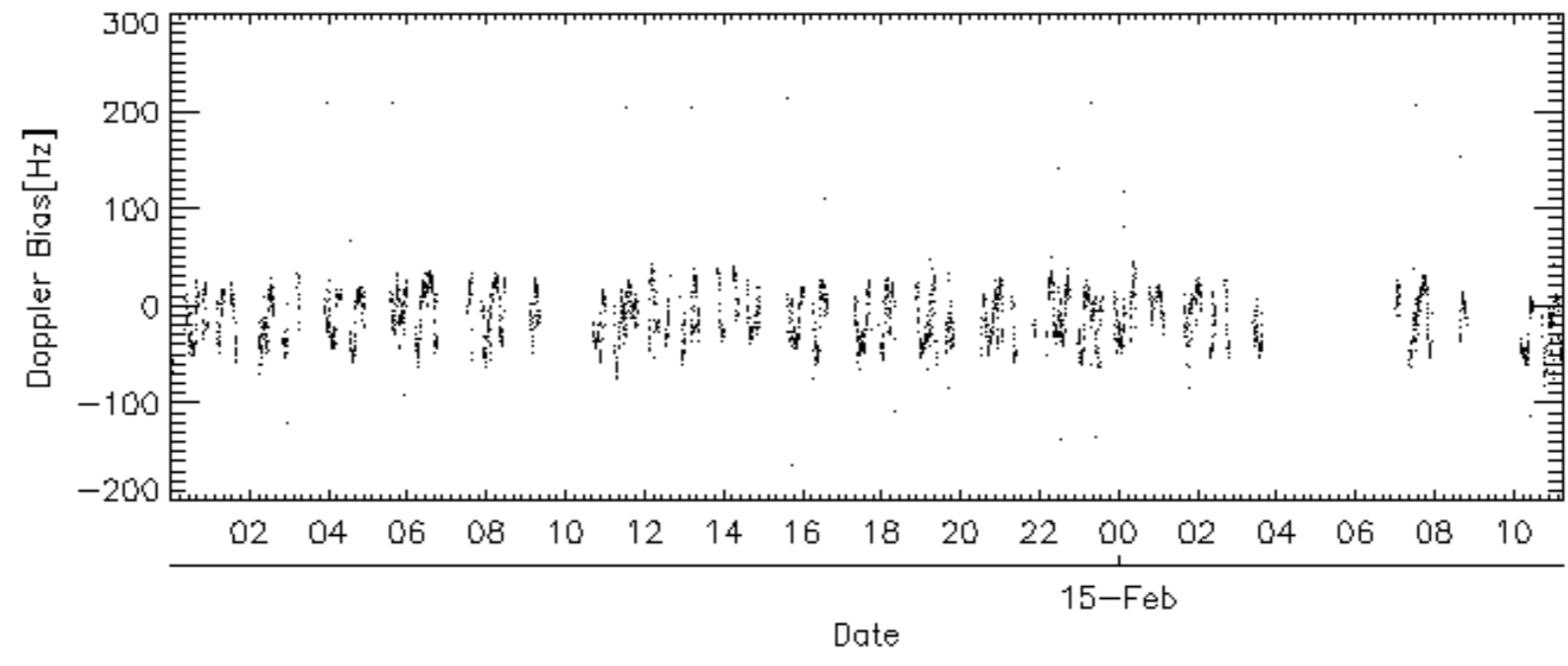
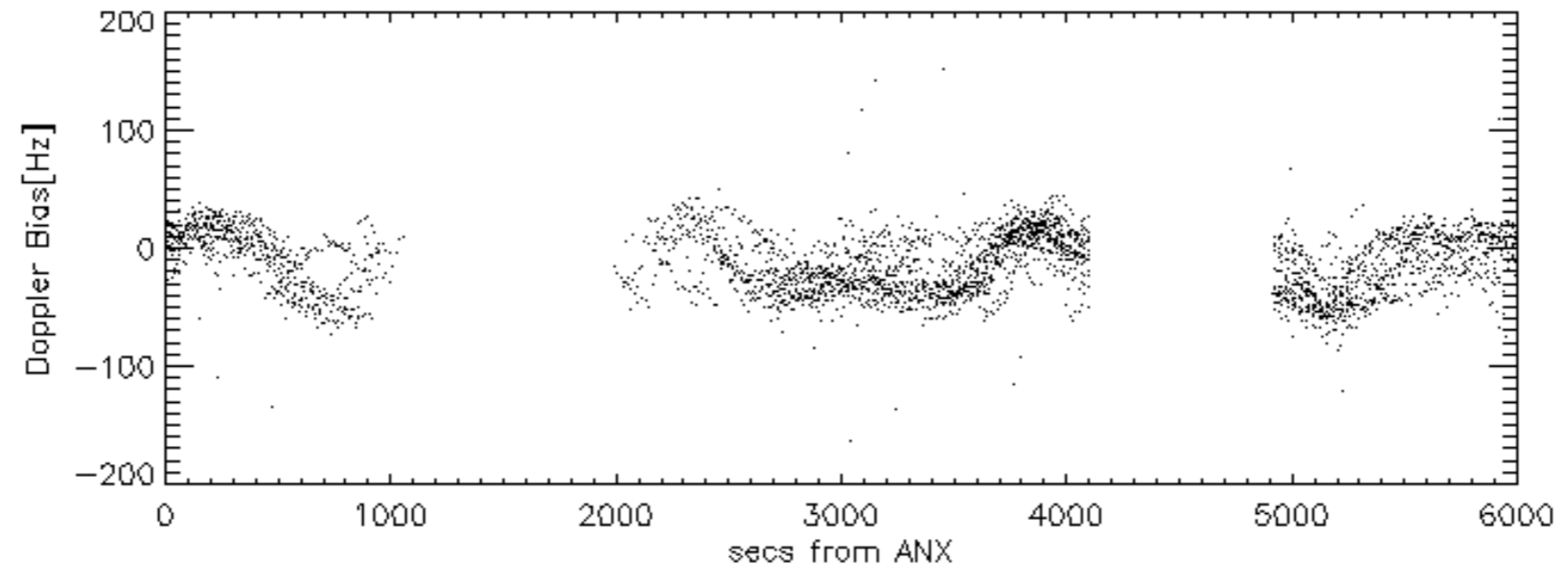
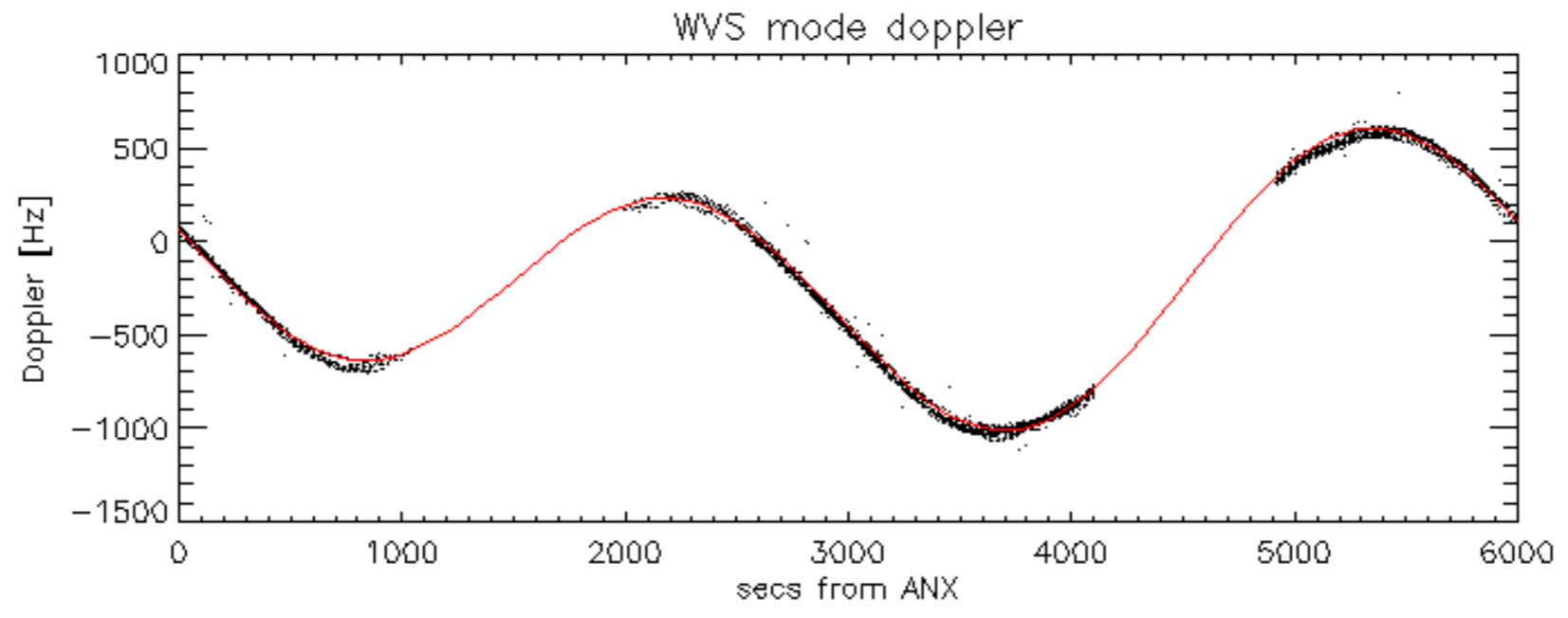


Doppler 'WVS' 'IS2' descending

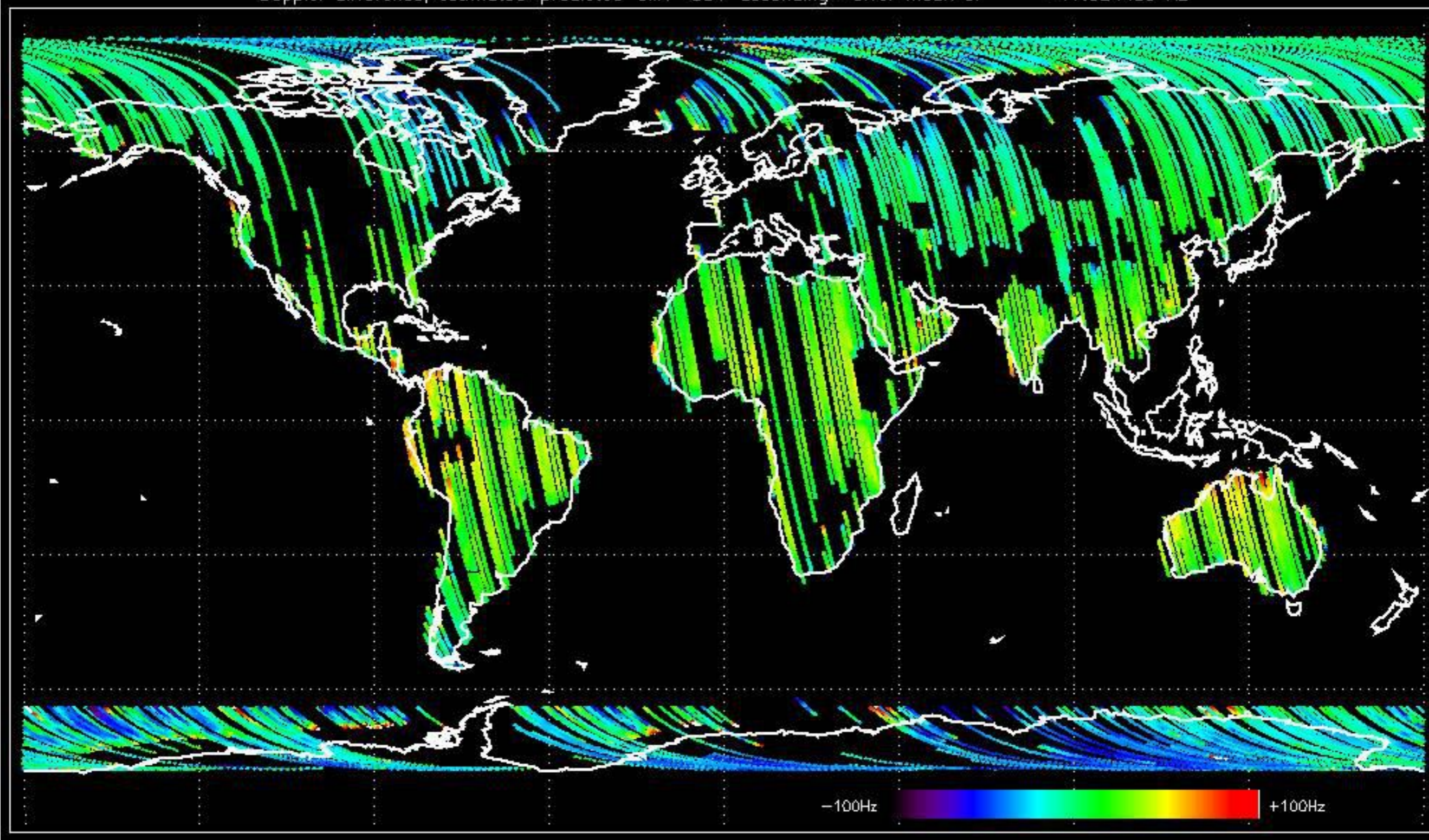


GM1 mode doppler

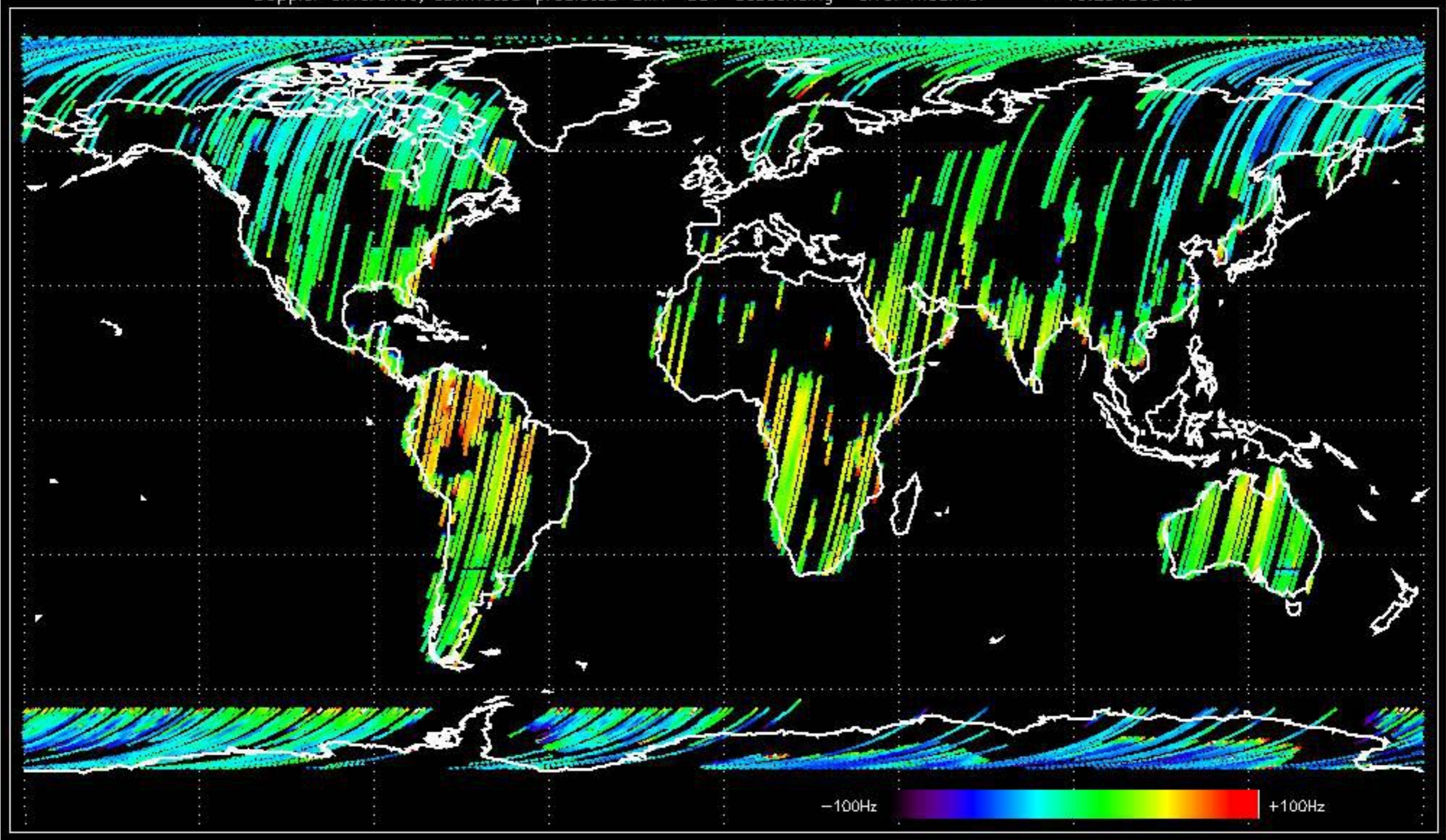




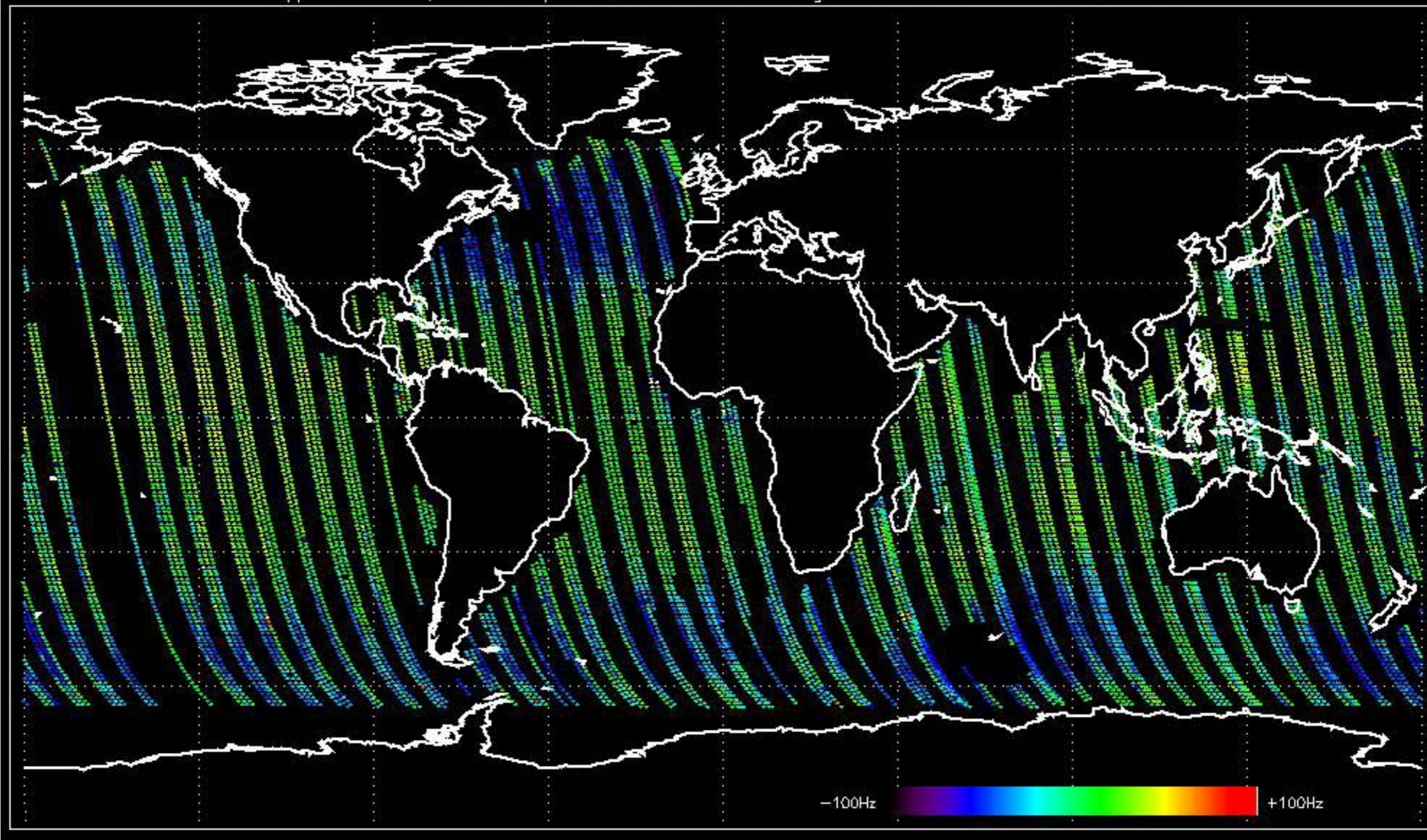
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.324499 Hz



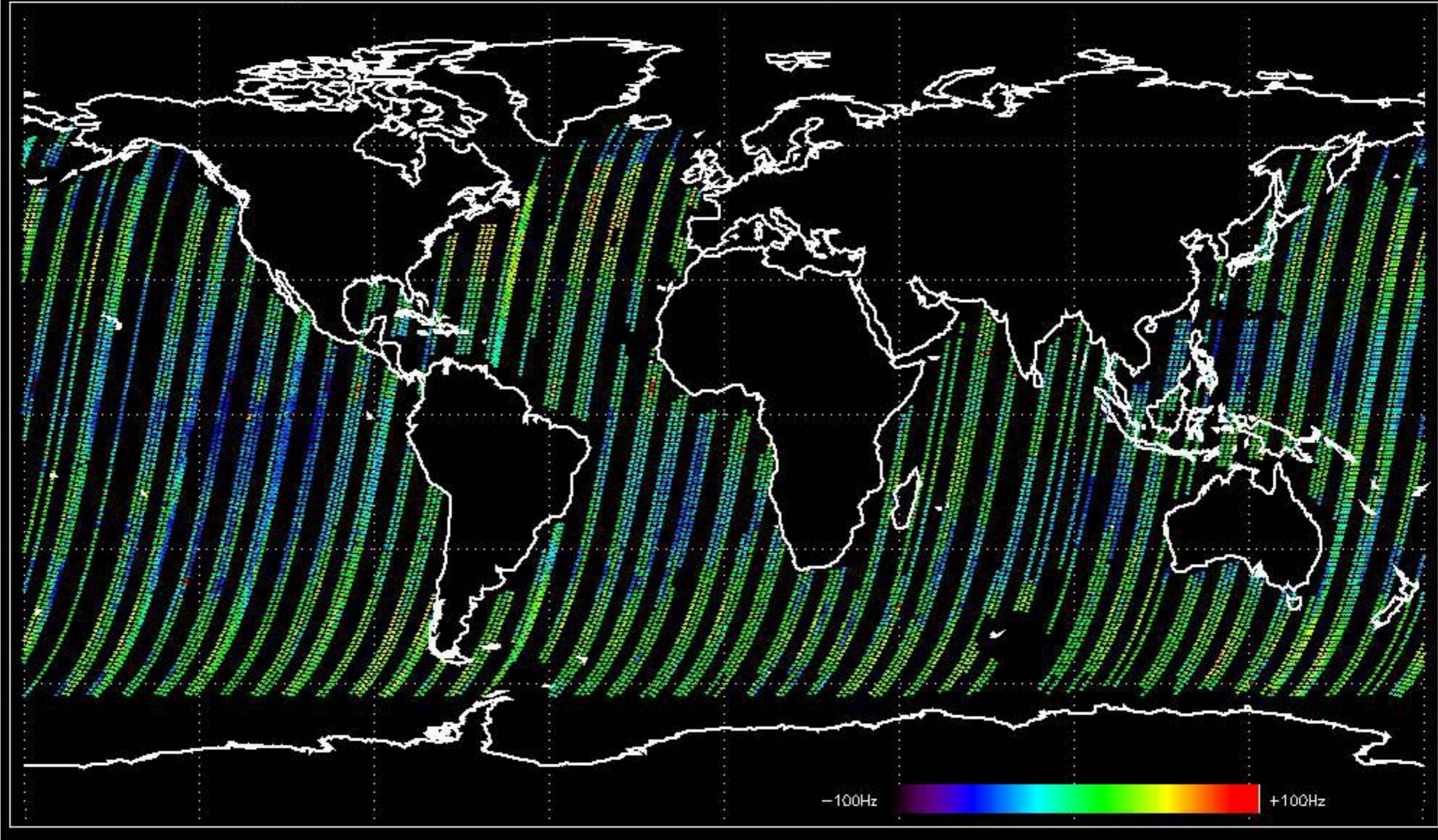
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.291399 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.436357 Hz

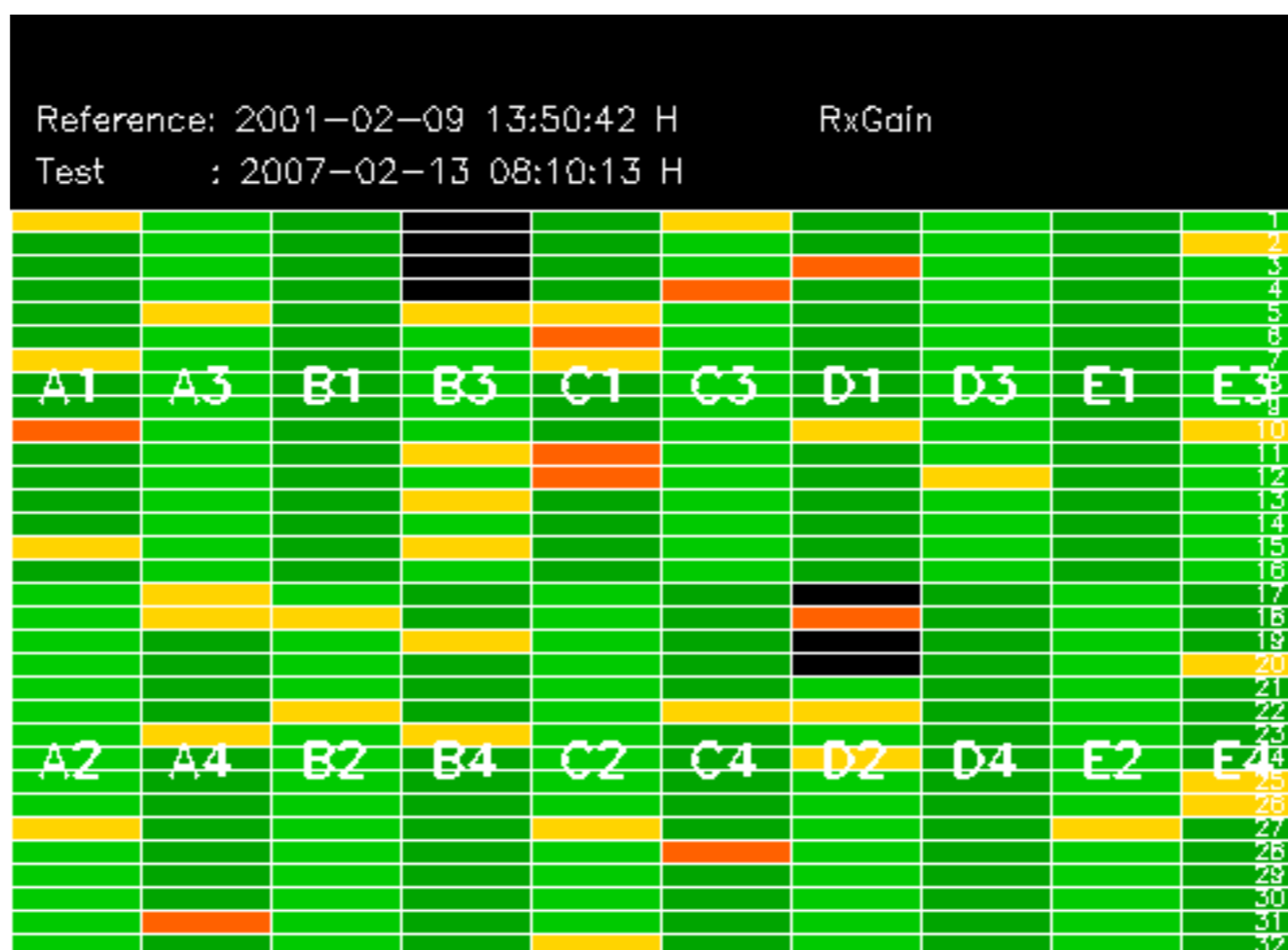


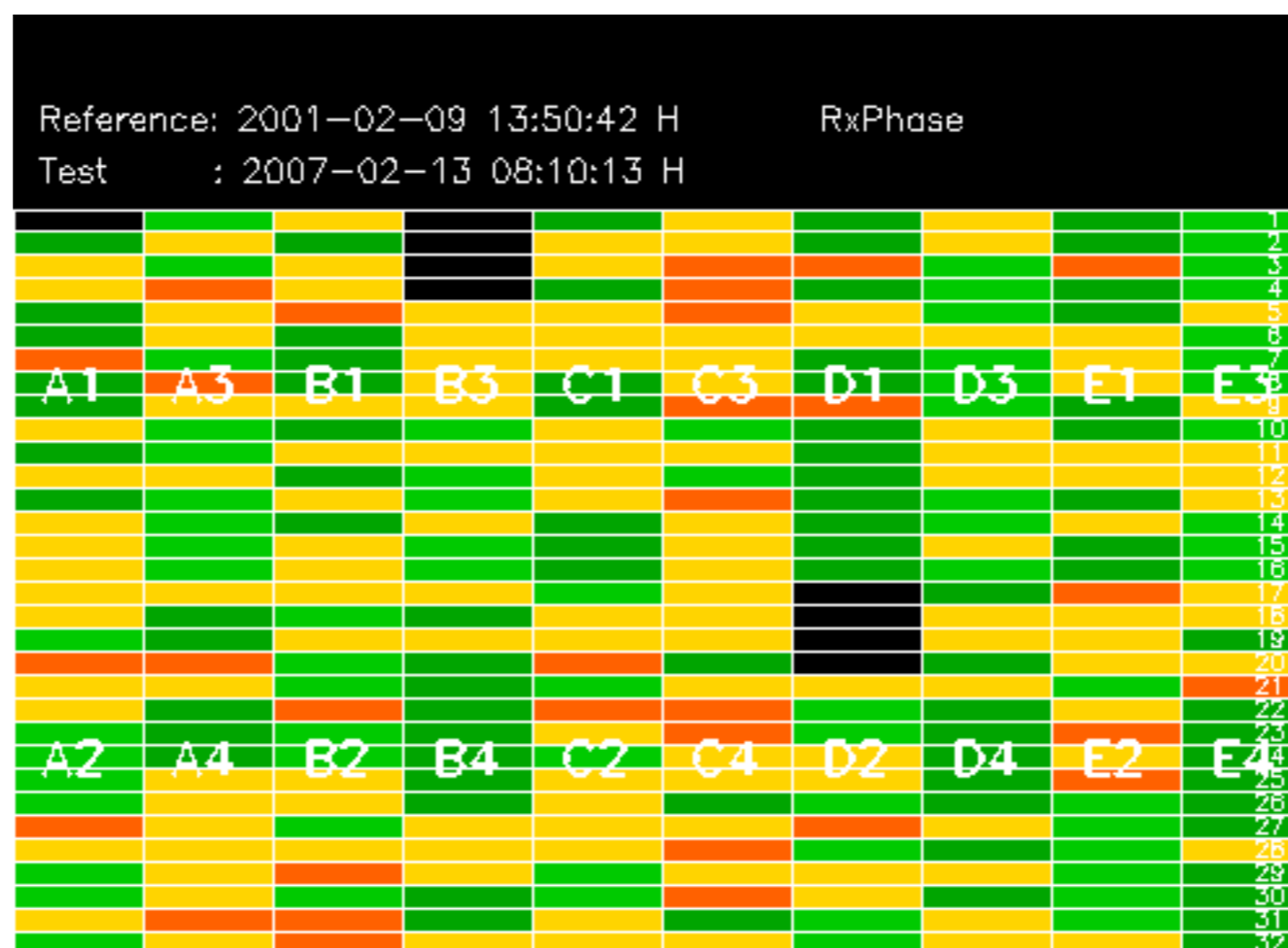
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.680042 Hz

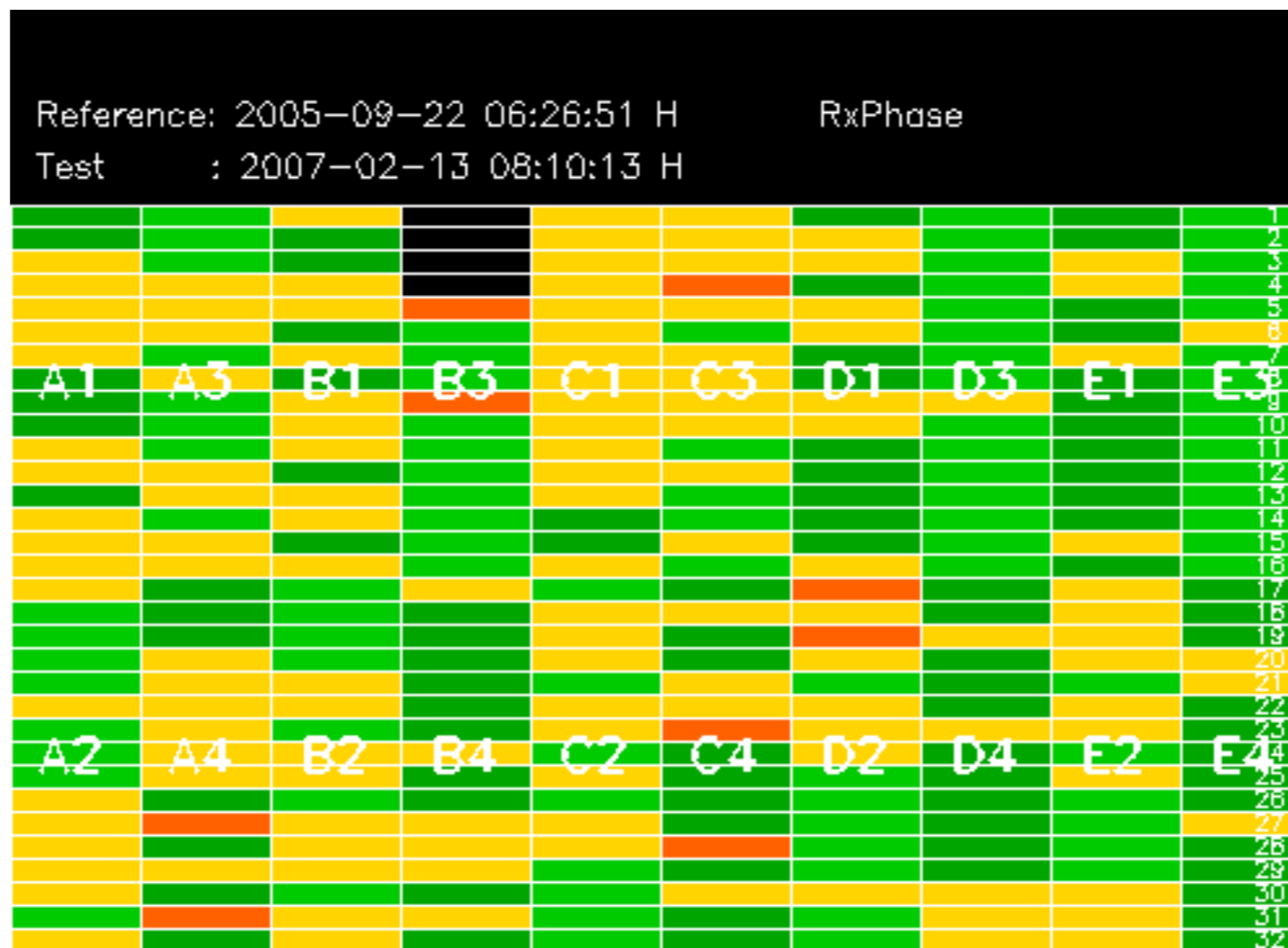


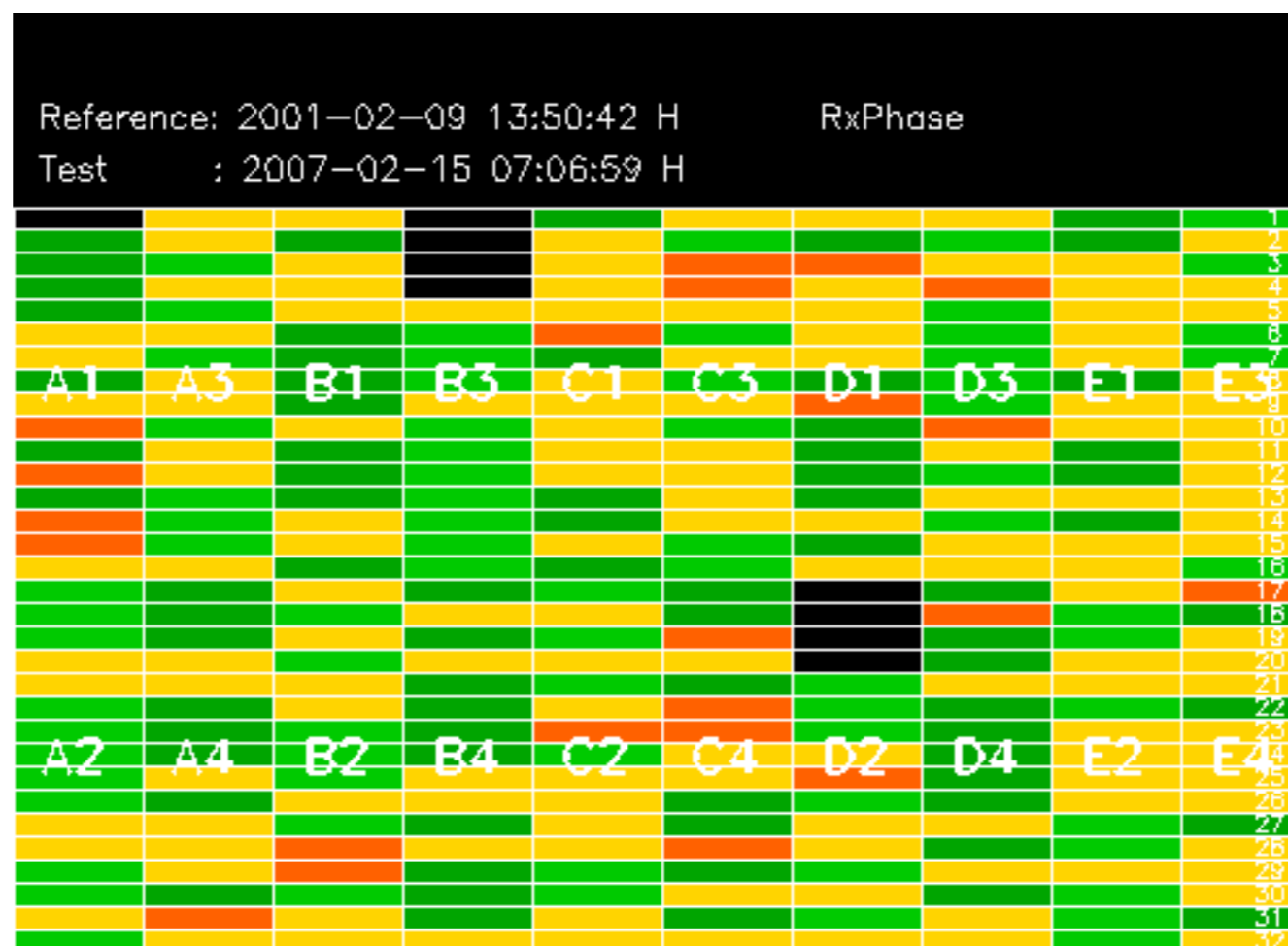
No anomalies observed on available MS products:

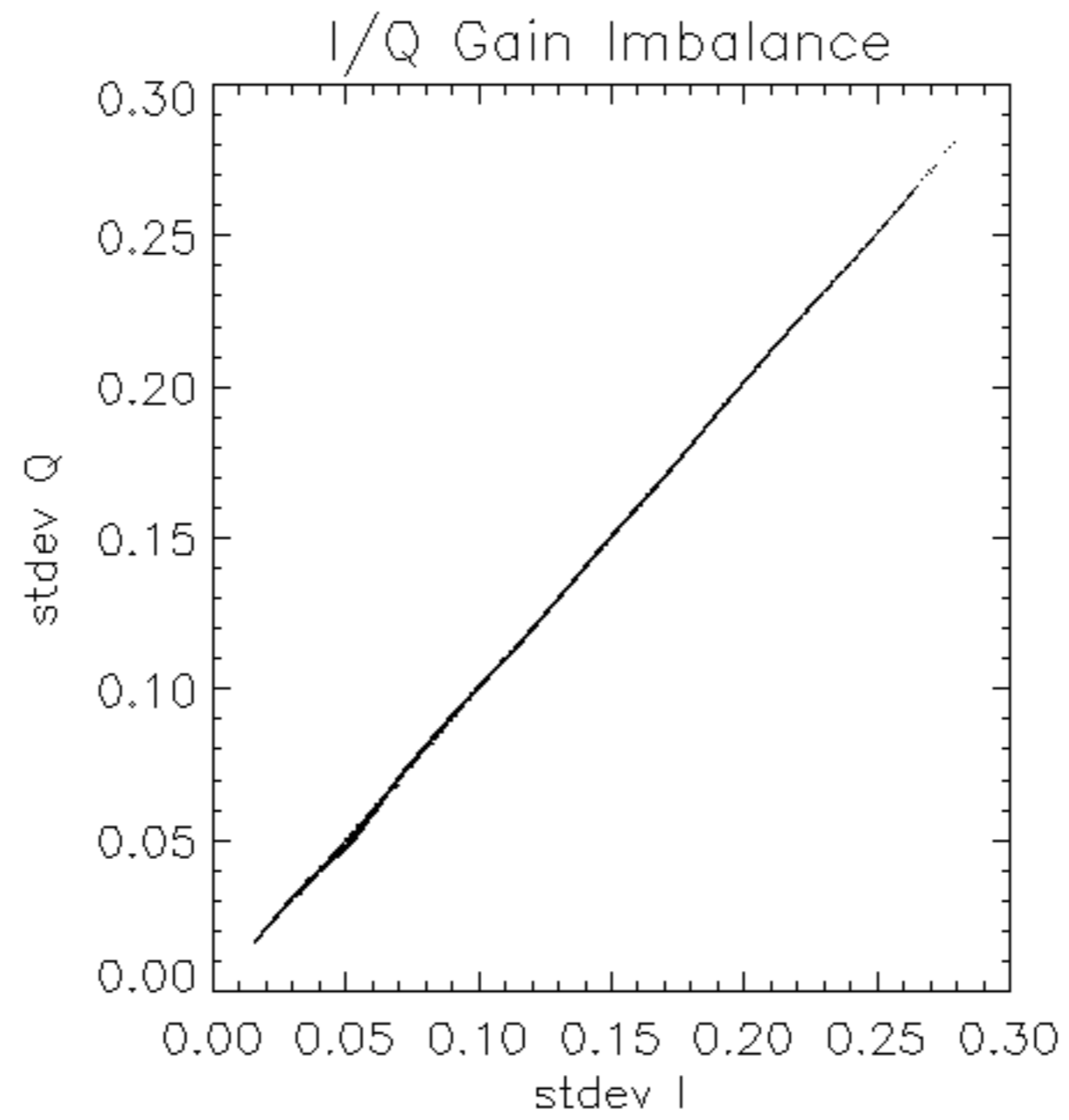
No anomalies observed.

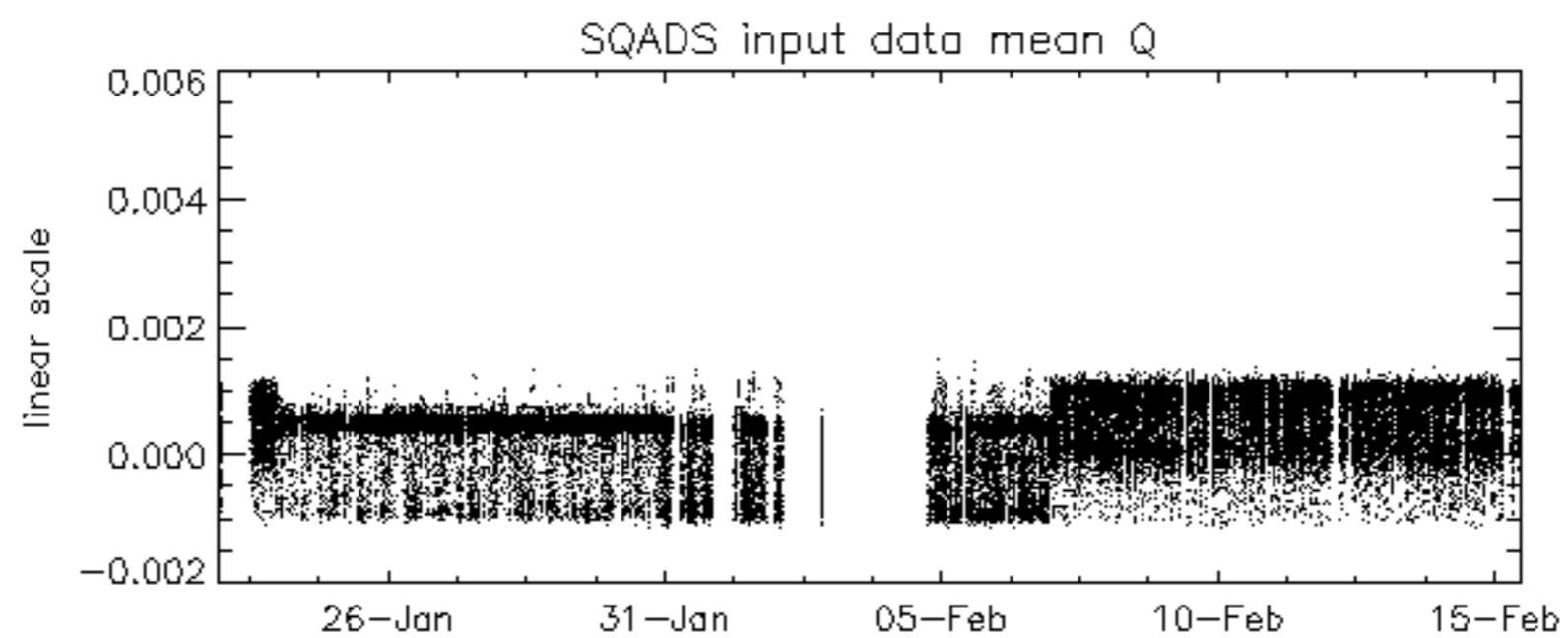
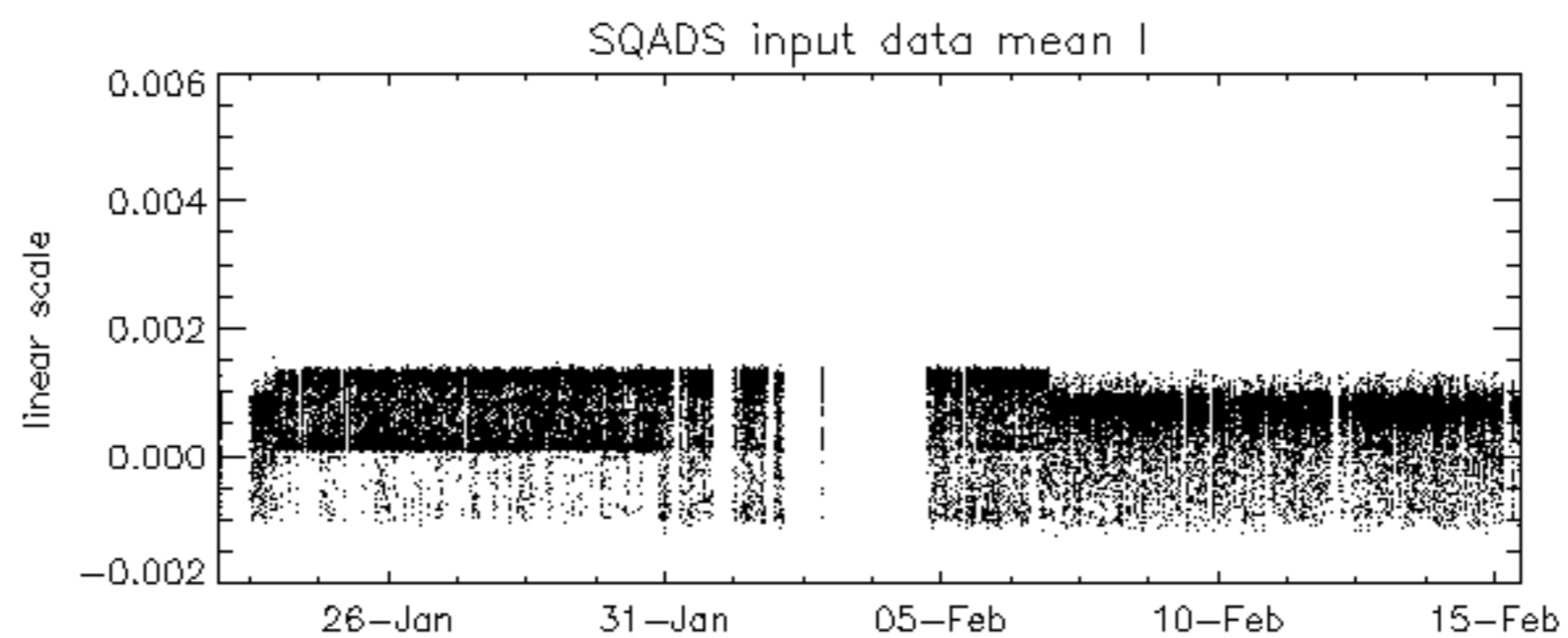
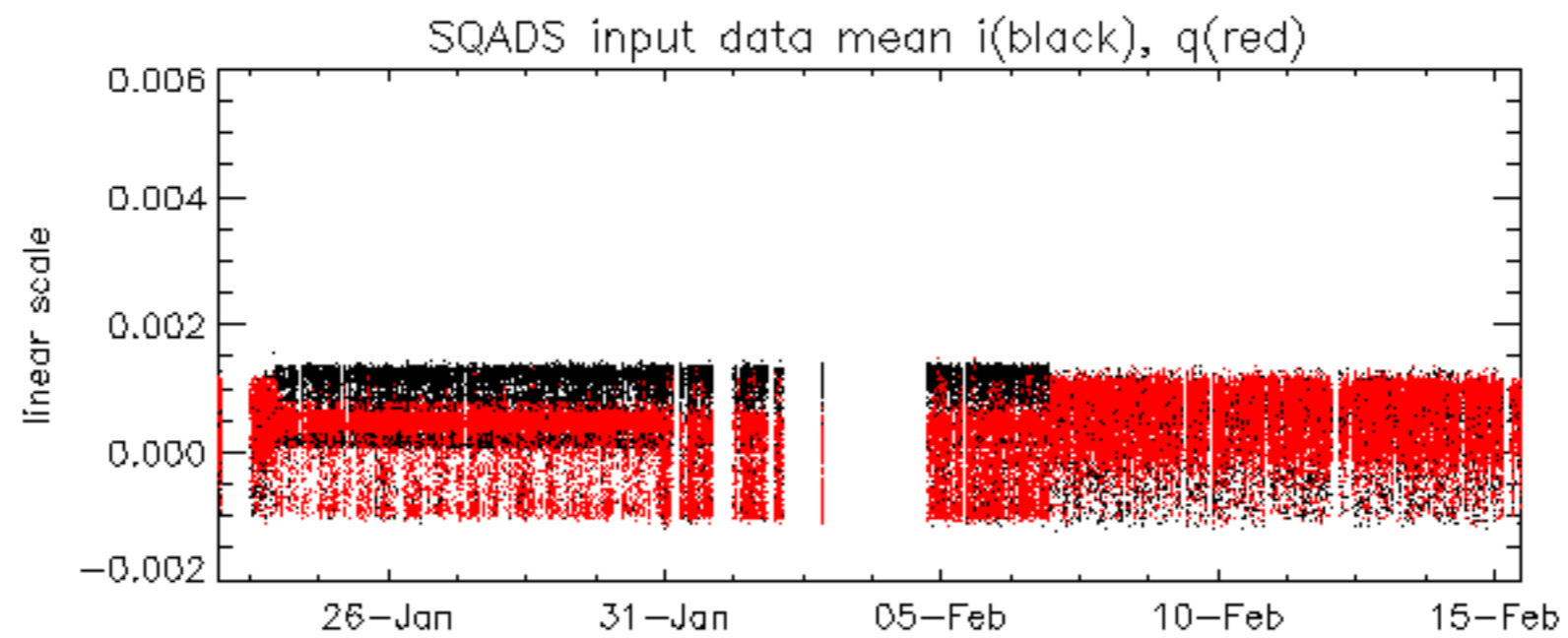


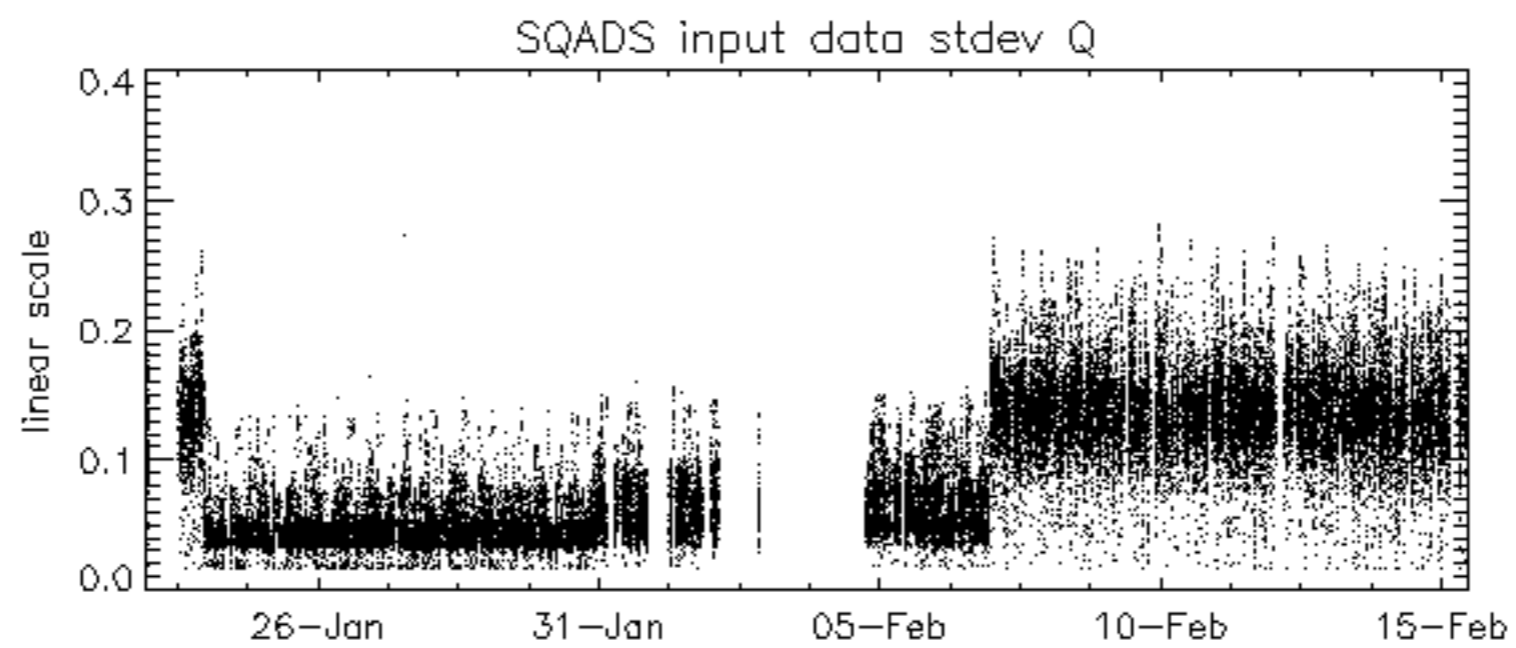
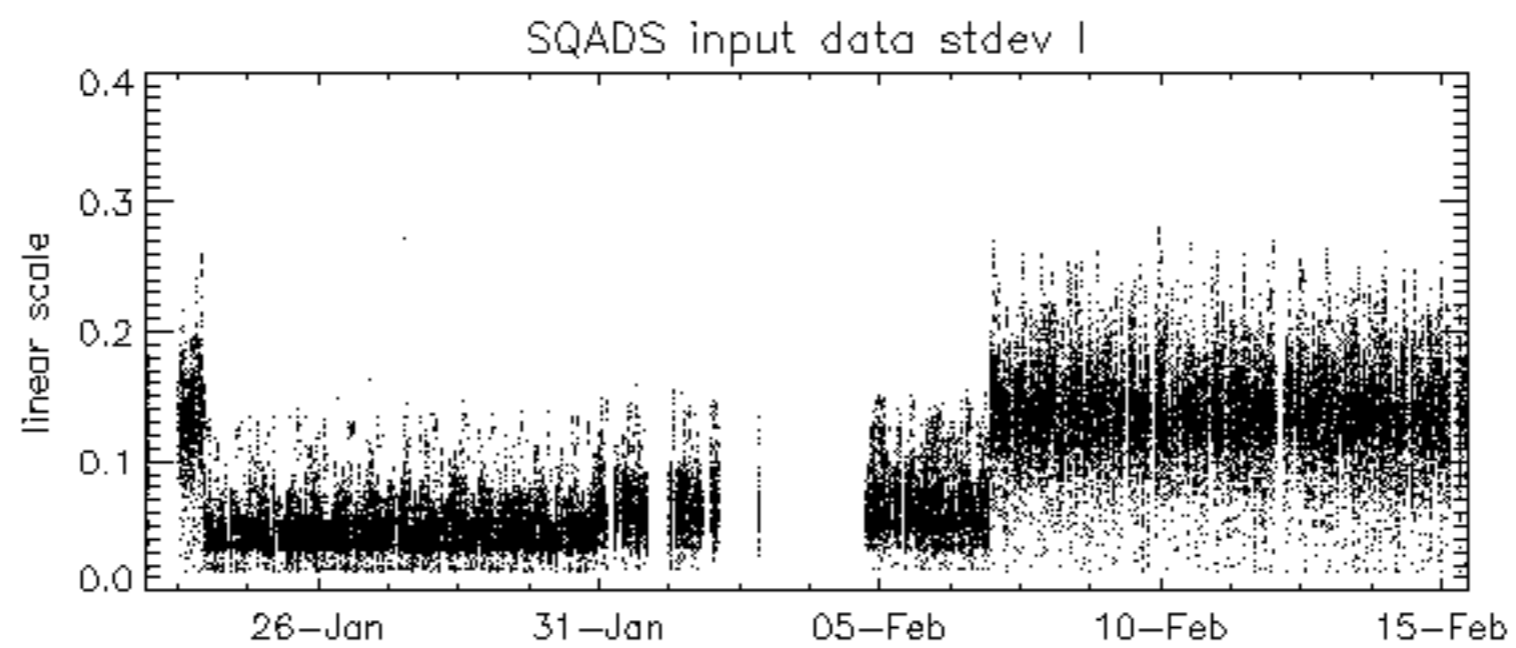
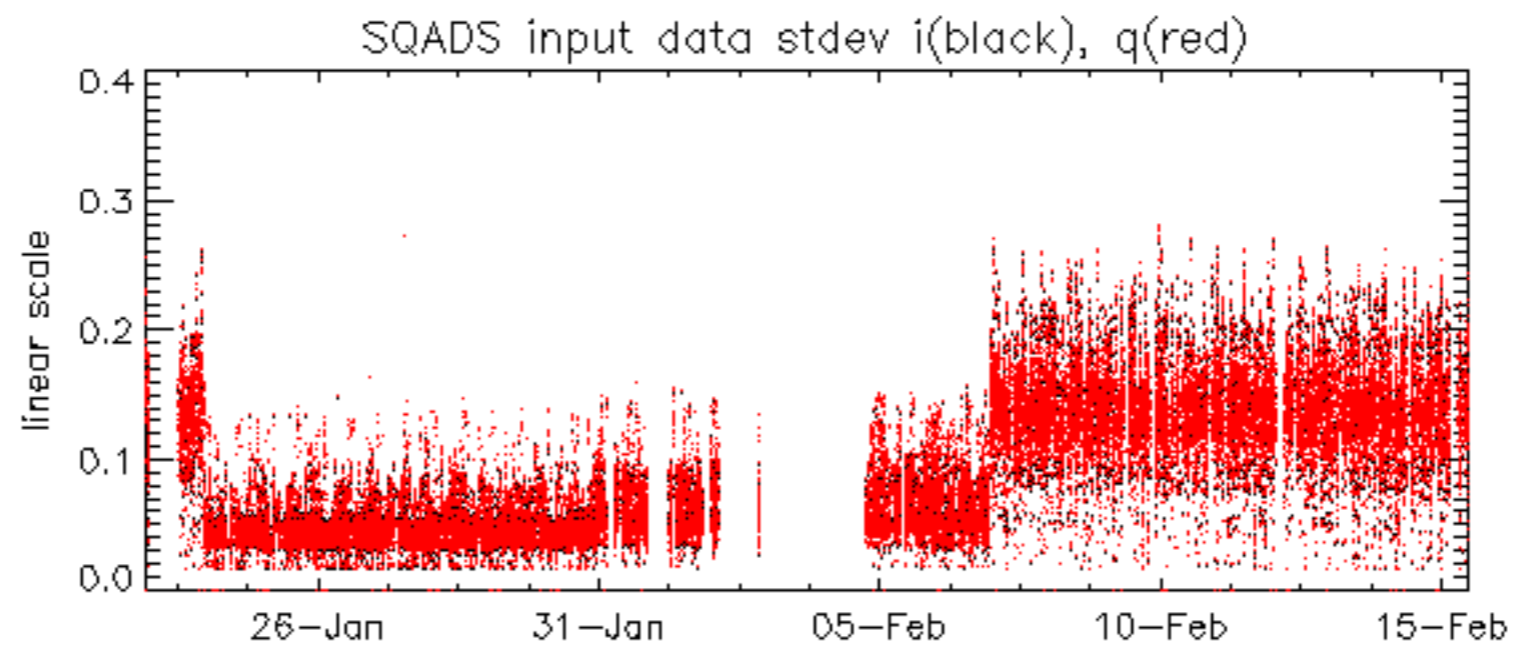








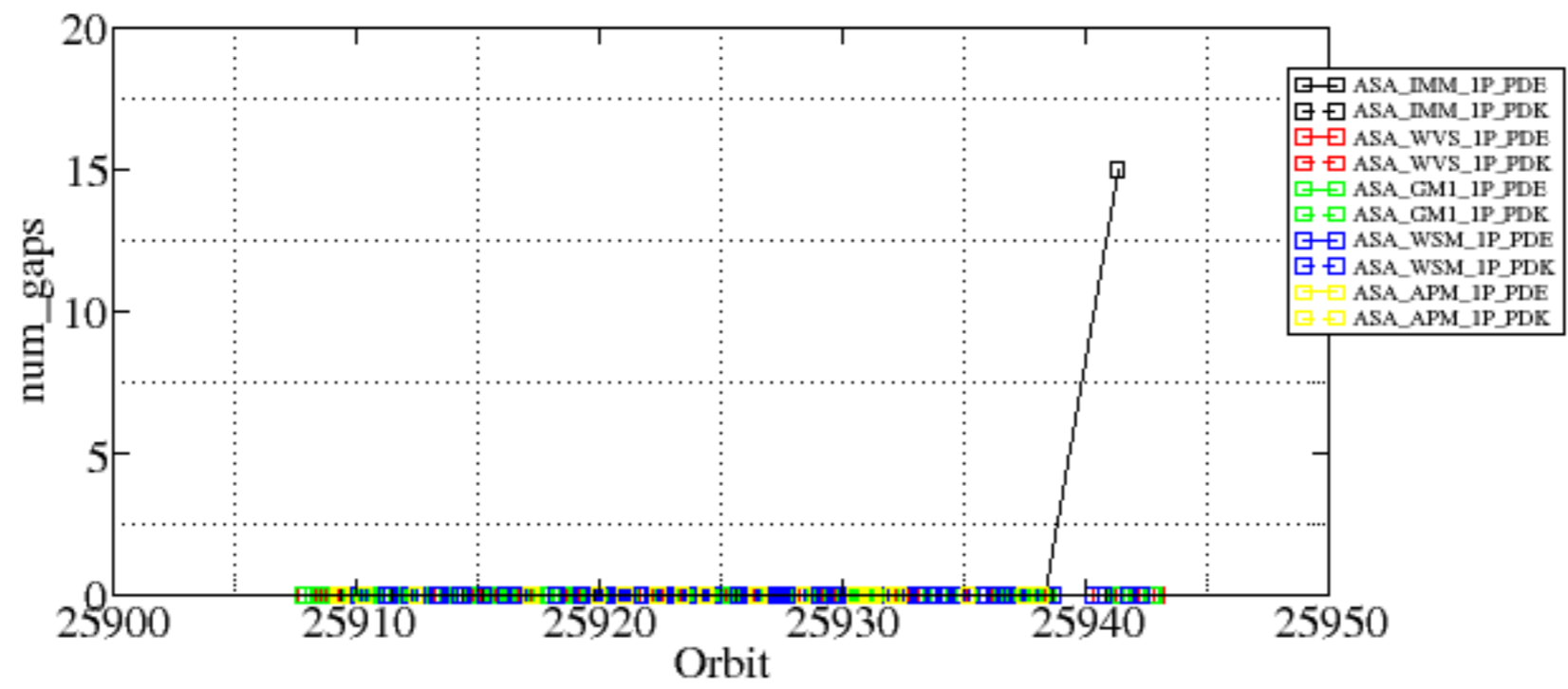




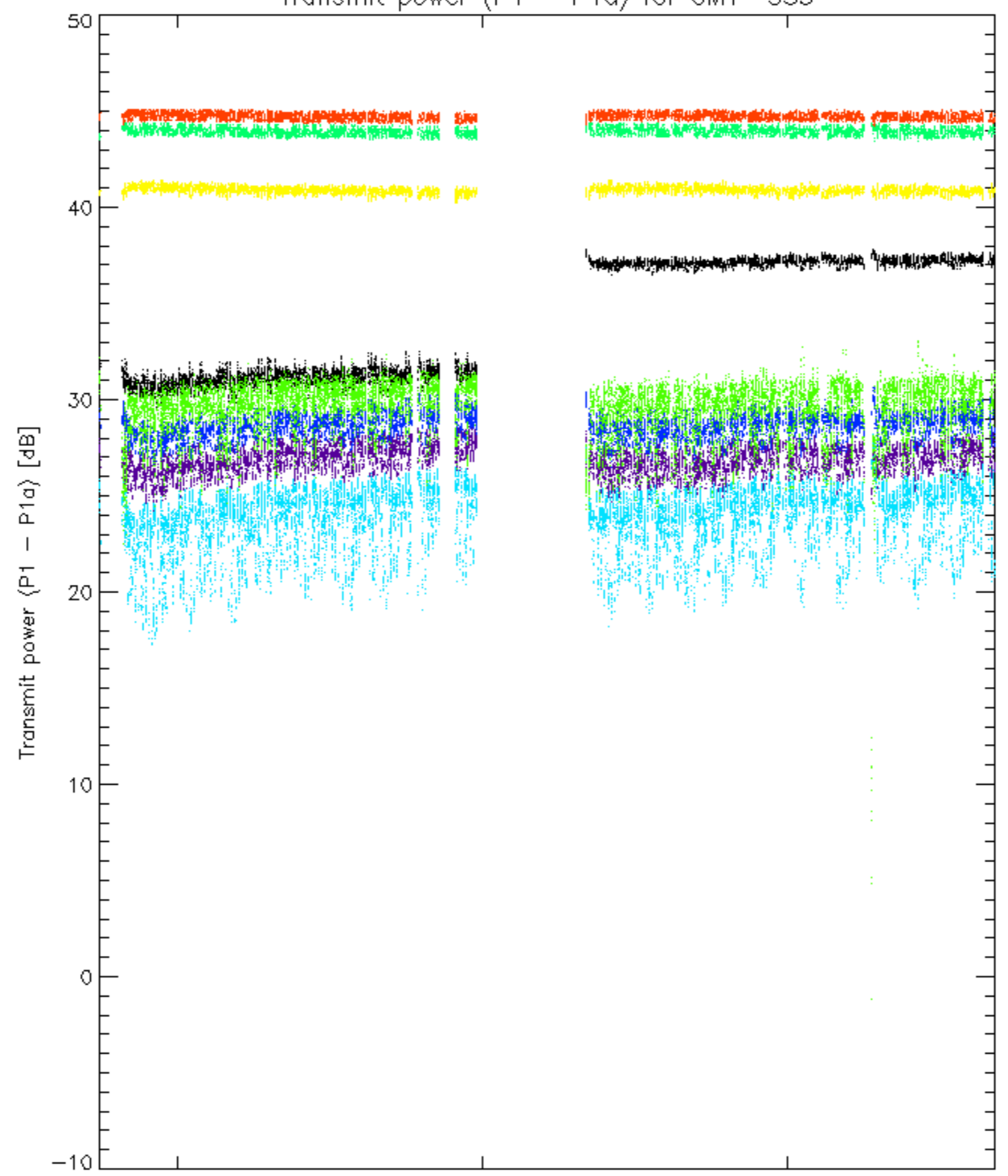
Summary of analysis for the last 3 days 2007021[345]

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

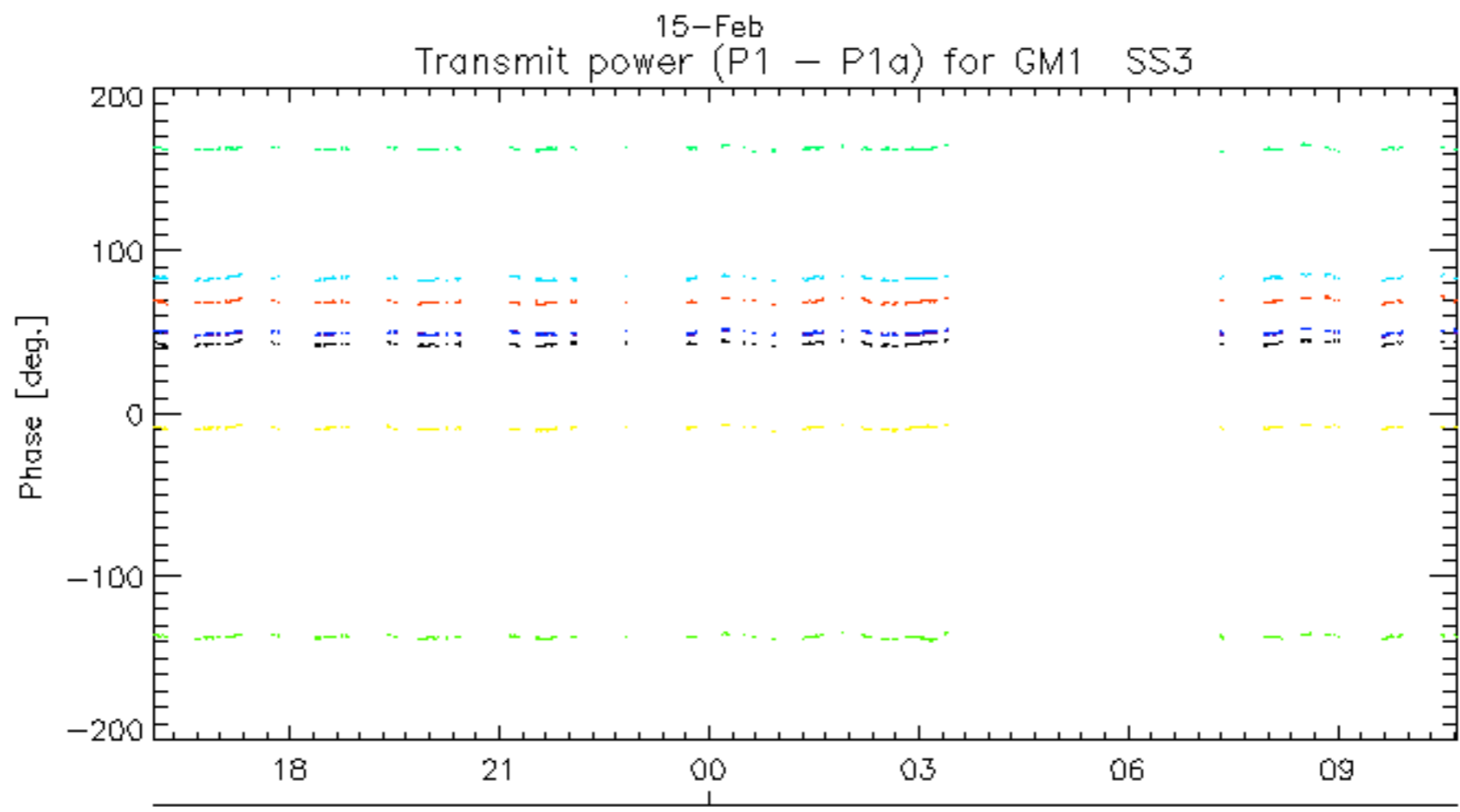
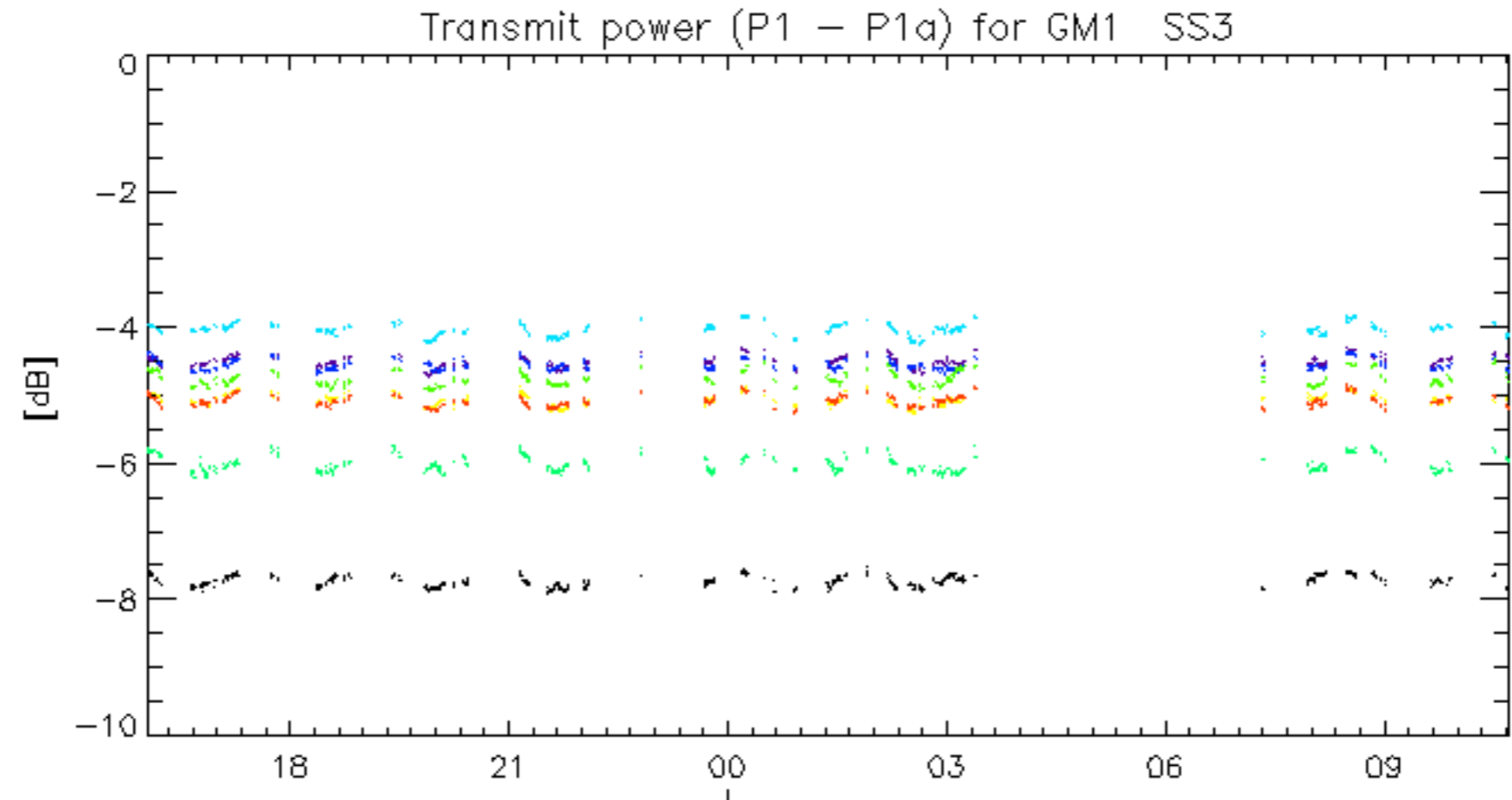
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070213_153643_00000802055_00312_25917_6362.N1	0	558
ASA_IMM_1PNPDE20070215_081235_000003682055_00336_25941_8530.N1	15	2459
ASA_GM1_1PNPDK20070214_130229_000004652055_00324_25929_5768.N1	0	9



Transmit power (P1 - P1a) for GM1 SS3

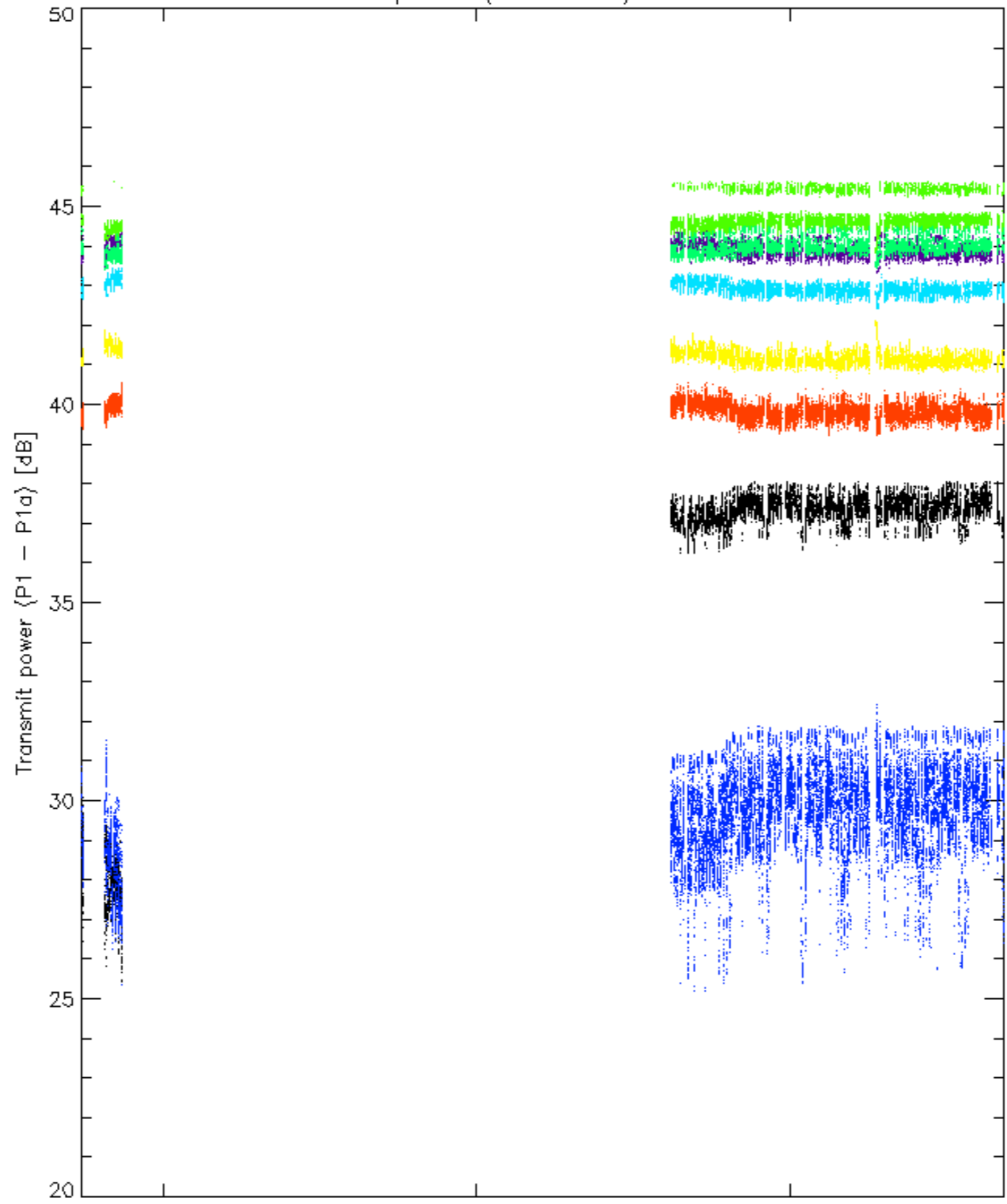


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

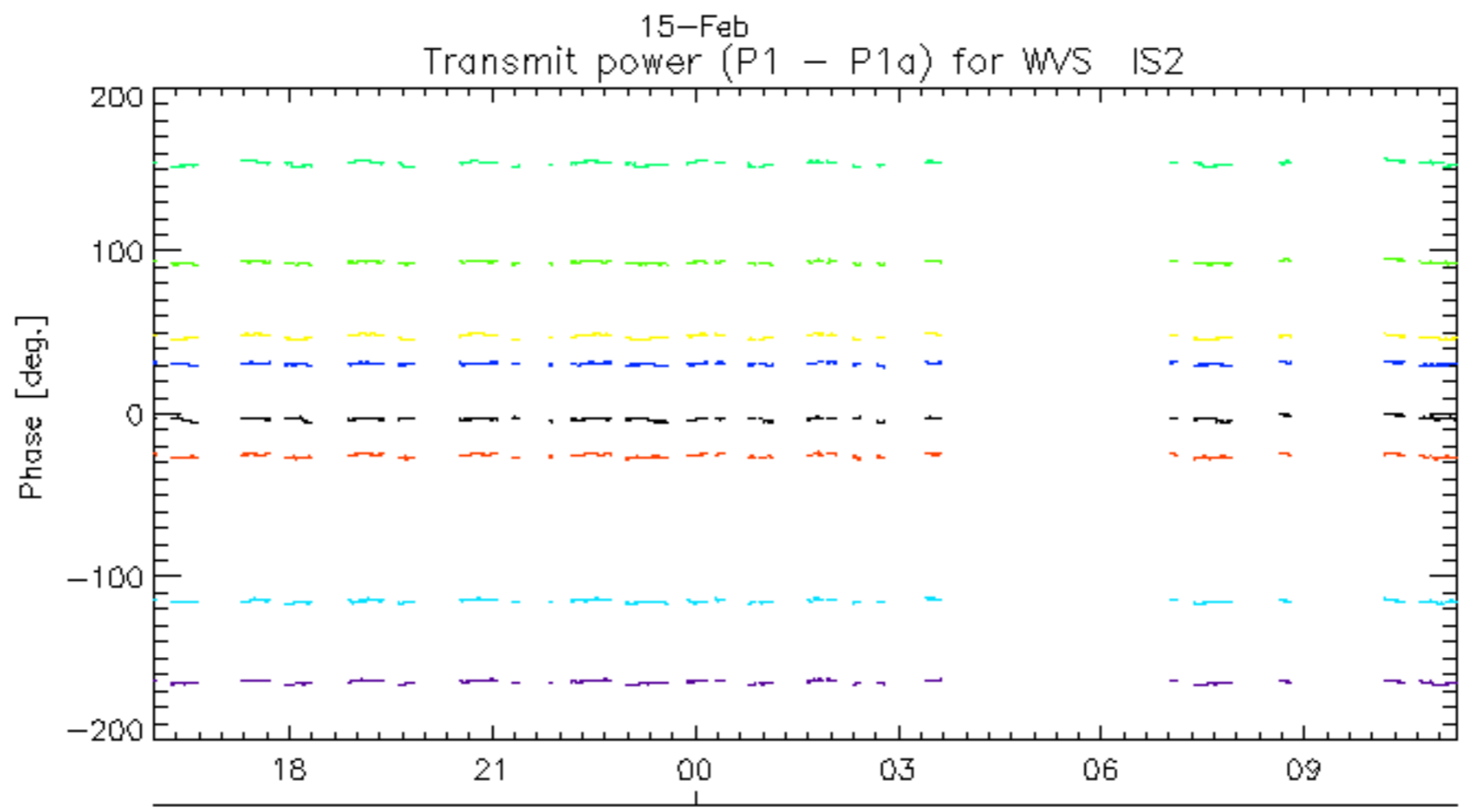
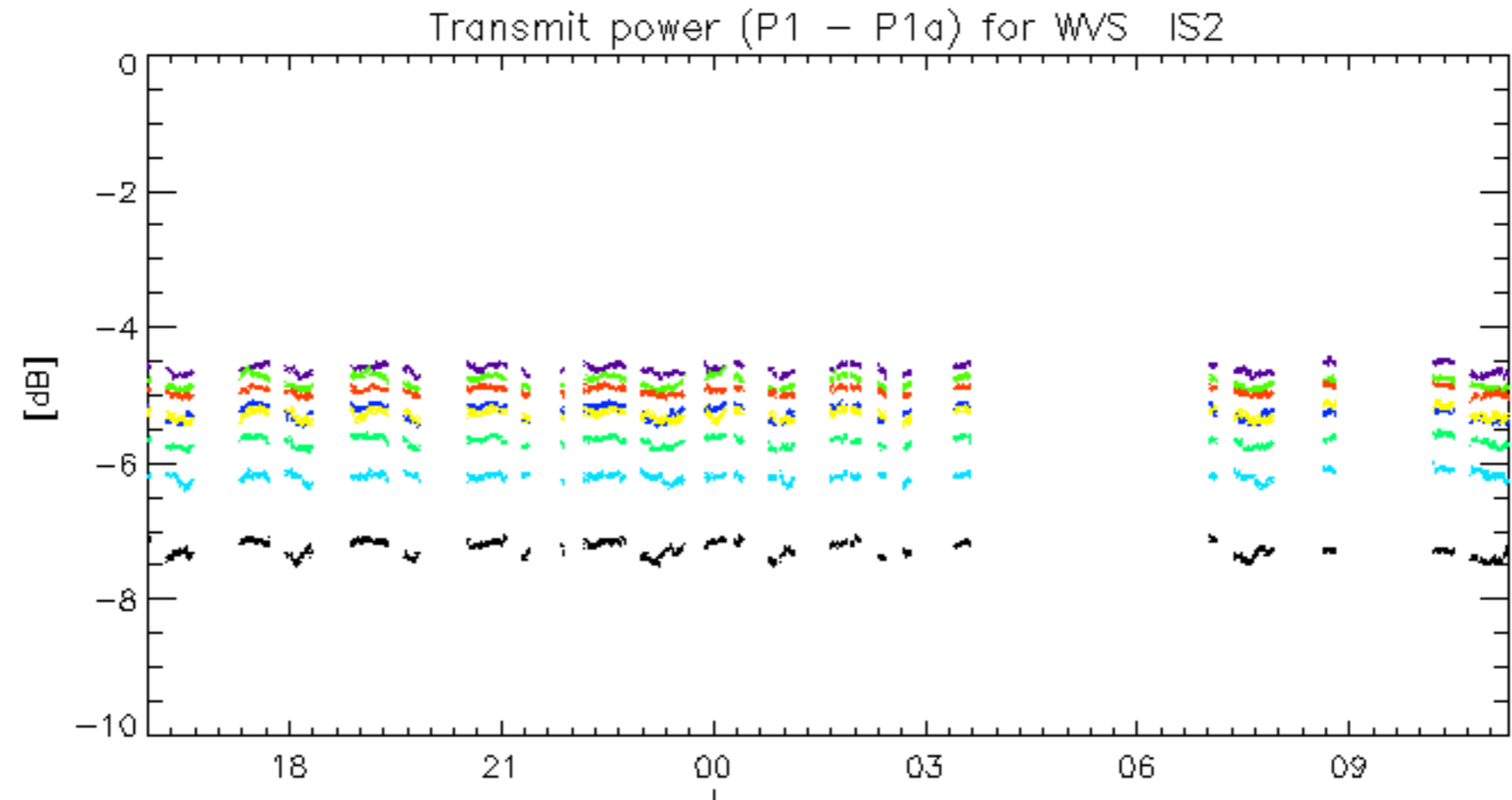


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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.