

PRELIMINARY REPORT OF 070302

last update on Fri Mar 2 23:58:37 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 2007-03-01 00:00:00 to 2007-03-02 23:58:37

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	48	91	10	3	39
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	48	91	10	3	39
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	48	91	10	3	39
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	48	91	10	3	39

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	46	55	44	17	70
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	46	55	44	17	70
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	46	55	44	17	70
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	55	44	17	70

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	20070228 170158
H	20070301 062645

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	-11.122066	0.414328	0.525279
7	P1a	-10.130492	0.089582	0.080009
11	P1a	-10.728820	0.104104	-0.063558
15	P1a	-11.687213	1.565269	0.747528
19	P1a	-15.072269	1.070830	-0.629615
22	P1a	-19.574249	7.679734	-1.337060
26	P1a	-15.619824	0.475840	0.358476
30	P1a	-20.052956	7.110830	1.429431

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-6.361422	3.546323	-4.156004
7	P1	-2.599021	0.014067	0.045381
11	P1	-3.232418	0.139638	0.159270
15	P1	-4.602378	1.316956	0.636943
19	P1	-3.419802	0.091818	-0.183583
22	P1	-5.345045	0.145099	0.244614
26	P1	-5.402623	0.696871	-0.525499
30	P1	-5.441177	0.066767	0.108215

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.109945	0.896744	-1.848703
7	P2	-21.916582	0.145979	-0.021887
11	P2	-10.810659	0.136352	-0.159789
15	P2	-5.107785	0.087775	-0.006416
19	P2	-7.238626	0.080299	0.013721
22	P2	-8.369545	0.077869	0.073887

26	P2	-24.166452	0.129819	-0.148776
30	P2	-21.680771	0.069333	0.079829

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.220369	0.007830	-0.005021
7	P3	-8.220369	0.007830	-0.005021
11	P3	-8.220369	0.007830	-0.005021
15	P3	-8.220369	0.007830	-0.005021
19	P3	-8.220369	0.007830	-0.005021
22	P3	-8.220369	0.007830	-0.005021
26	P3	-8.220369	0.007830	-0.005021
30	P3	-8.220369	0.007830	-0.005021

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
✕

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.185799	0.099845	0.600529
7	P1a	-10.048883	0.068966	-0.099704
11	P1a	-10.618198	0.055313	-0.185266
15	P1a	-10.883698	0.134318	-0.141287
19	P1a	-15.732397	0.066014	0.072225
22	P1a	-20.832760	1.205181	0.025297
26	P1a	-15.375396	0.263420	0.274675
30	P1a	-18.367966	0.354858	-0.129931

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-7.691172	2.183148	-3.730603
7	P1	-2.435782	0.005782	-0.002297

11	P1	-2.899647	0.015778	-0.091052
15	P1	-3.819042	0.033130	-0.097358
19	P1	-3.552401	0.011961	-0.002446
22	P1	-5.030981	0.023033	-0.039771
26	P1	-5.983075	0.024263	0.058851
30	P1	-5.281508	0.021992	0.023435

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.770109	0.508236	-1.718921
7	P2	-21.981270	0.053646	0.118983
11	P2	-10.664026	0.030180	0.065643
15	P2	-4.821839	0.026914	0.034079
19	P2	-6.817905	0.027646	0.045390
22	P2	-8.118030	0.033521	0.088644
26	P2	-24.259247	0.033637	-0.027979
30	P2	-21.760300	0.036667	0.087286

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.045393	0.003380	0.006330
7	P3	-8.045405	0.003393	0.006653
11	P3	-8.045464	0.003388	0.005950
15	P3	-8.045409	0.003401	0.006106
19	P3	-8.045481	0.003381	0.005903
22	P3	-8.045502	0.003389	0.006180
26	P3	-8.045395	0.003388	0.006177
30	P3	-8.045440	0.003398	0.006193

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	0.000621362
	stdev	2.32580e-07
MEAN Q	mean	0.000395355
	stdev	2.51406e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.108552
	stdev	0.00255995
STDEV Q	mean	0.108605
	stdev	0.00261163



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007030[812]

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_WSM_1PNPDE20070301_152552_000001832056_00040_26146_6817.N1	0	26
ASA_WSM_1PNPDE20070301_153707_000002392056_00040_26146_6781.N1	0	93

ASA_WSM_1PNPDE20070301_184853_000000852056_00042_26148_6897.N1	0	7
ASA_WSM_1PNPDE20070302_003405_000002632056_00045_26151_7324.N1	0	32
ASA_WSM_1PNPDE20070302_145414_000000852056_00054_26160_8003.N1	0	31
ASA_WSM_1PNPDE20070302_181712_000000852056_00056_26162_8077.N1	0	27



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

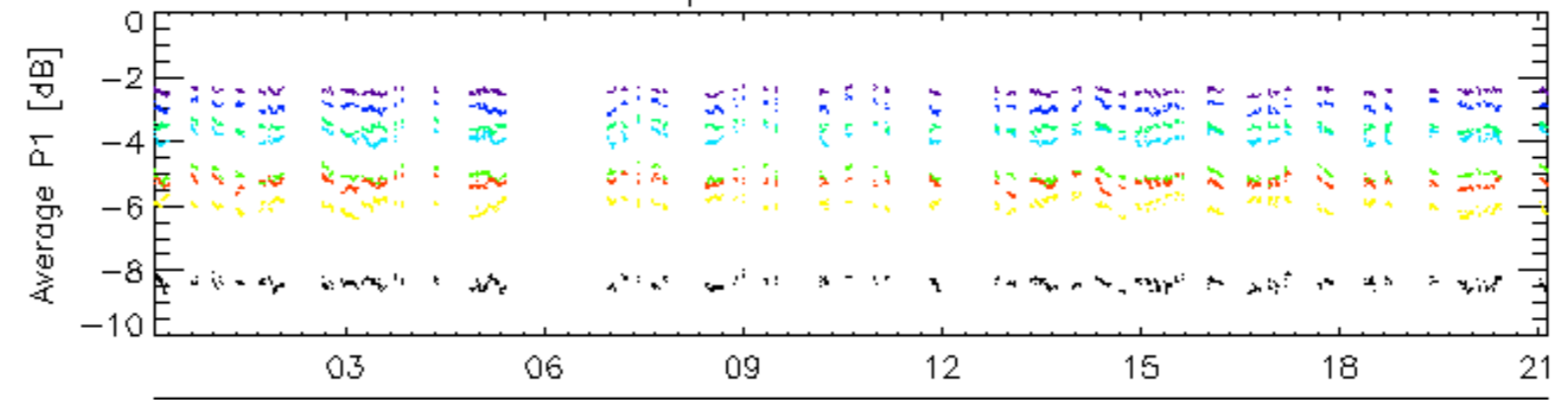
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

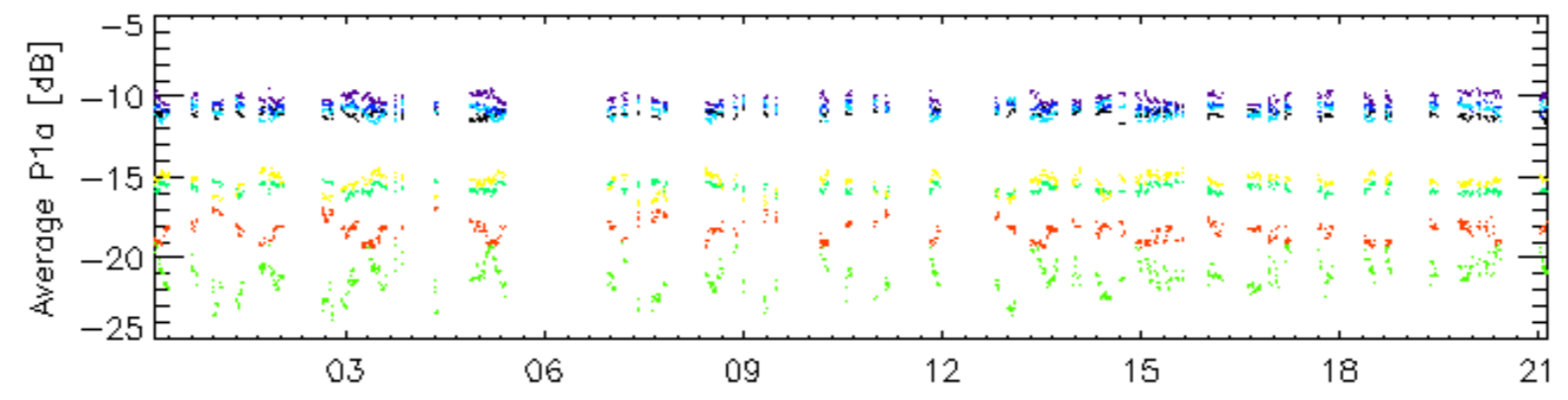
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

Cal pulses for GM1 SS3

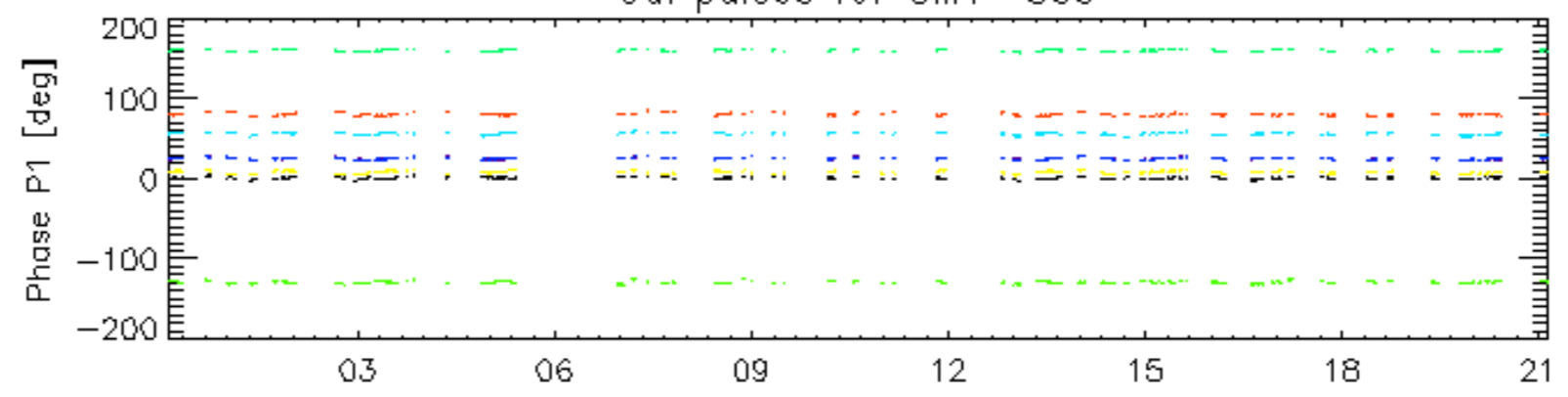


02-Mar

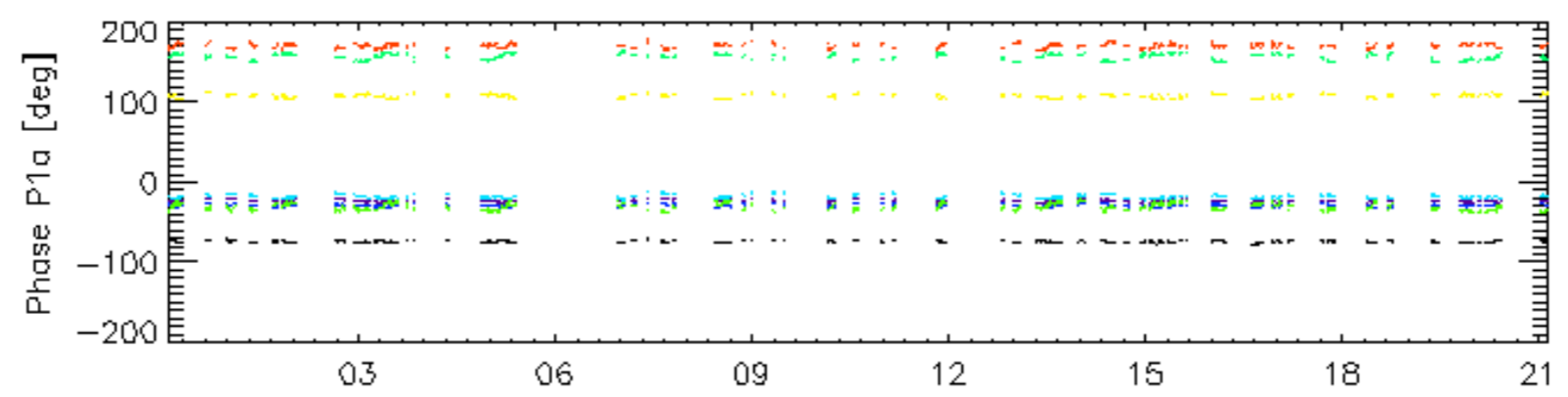


02-Mar

Cal pulses for GM1 SS3

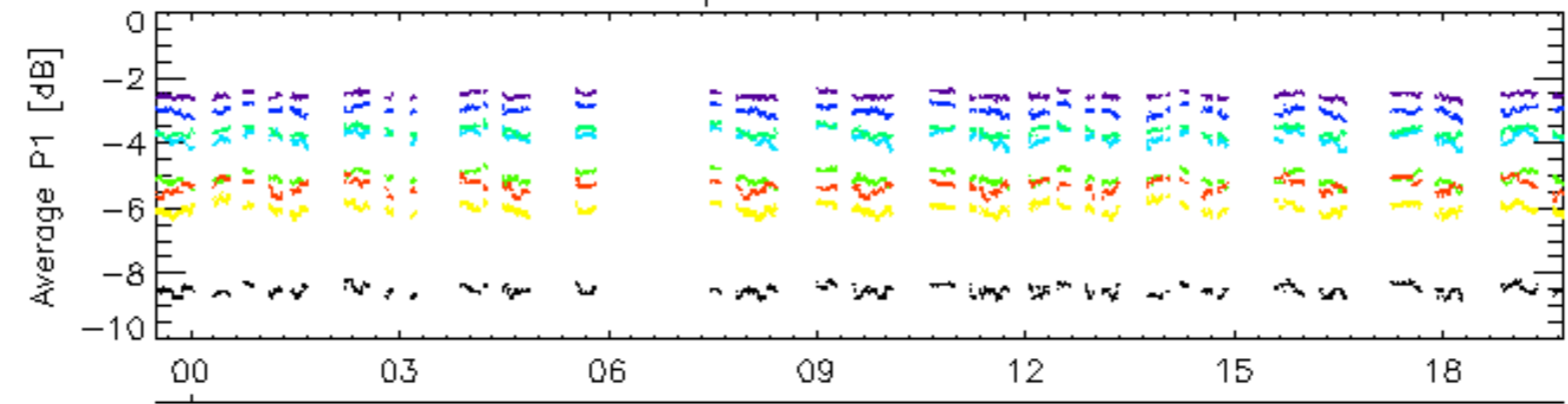


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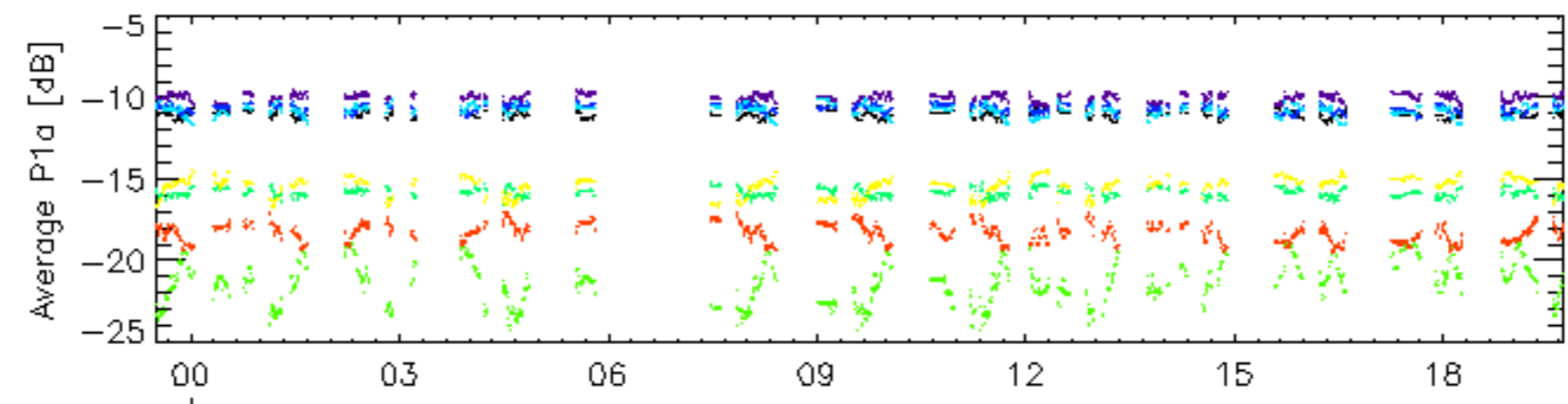


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS4

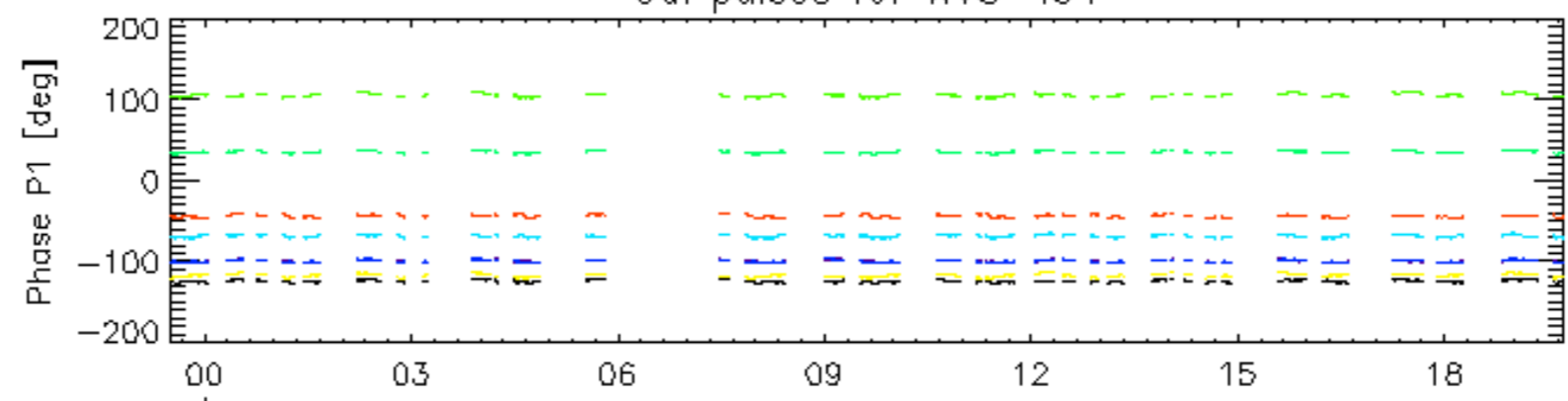


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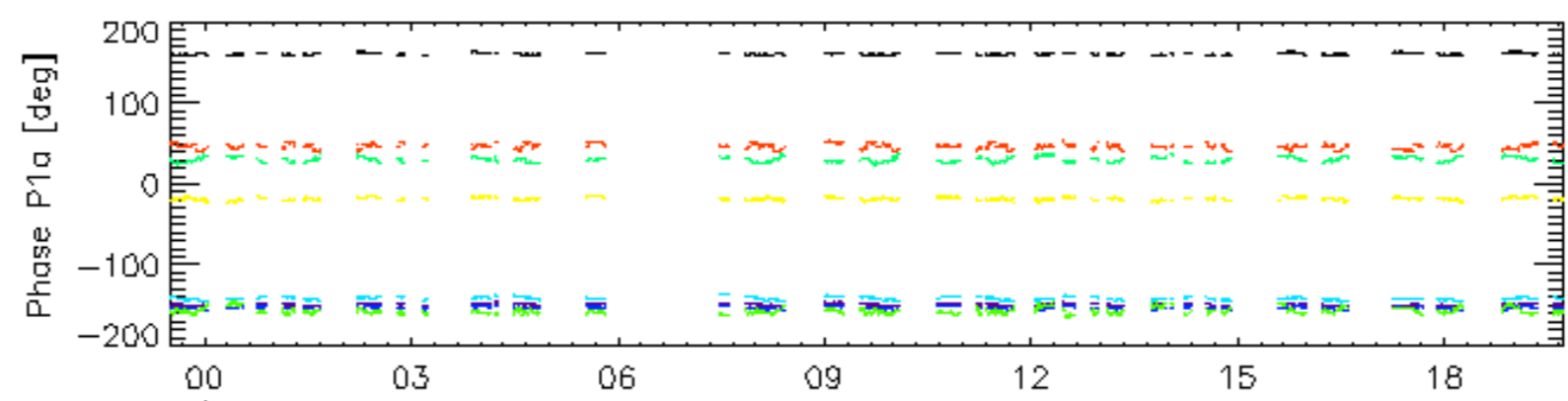


02-Mar

Cal pulses for WVS IS4



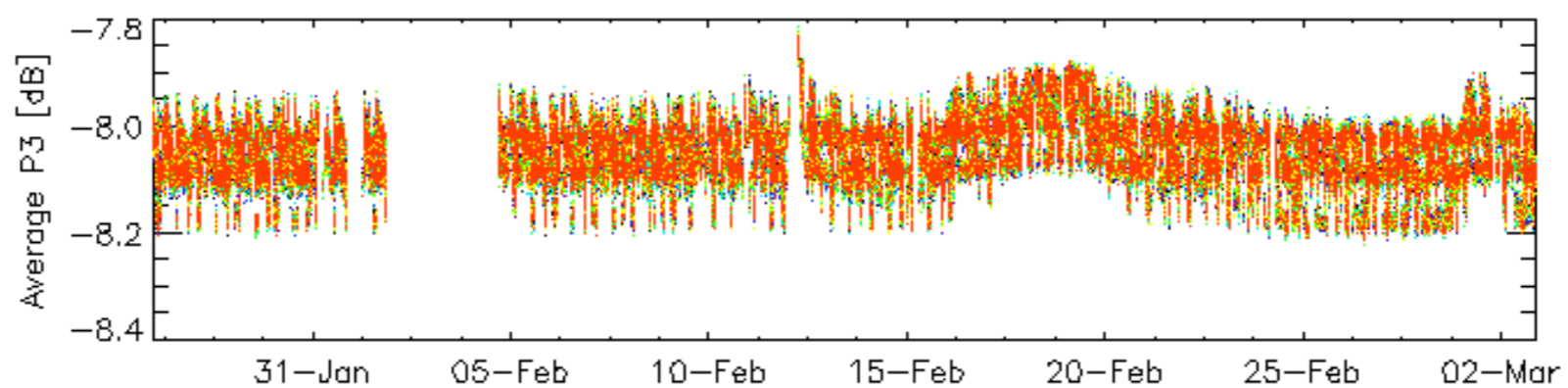
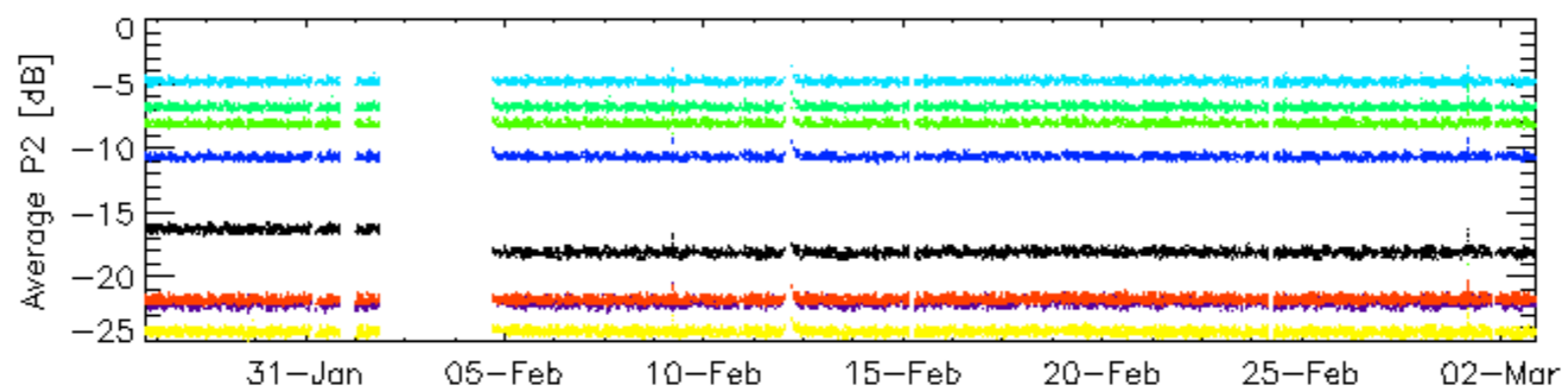
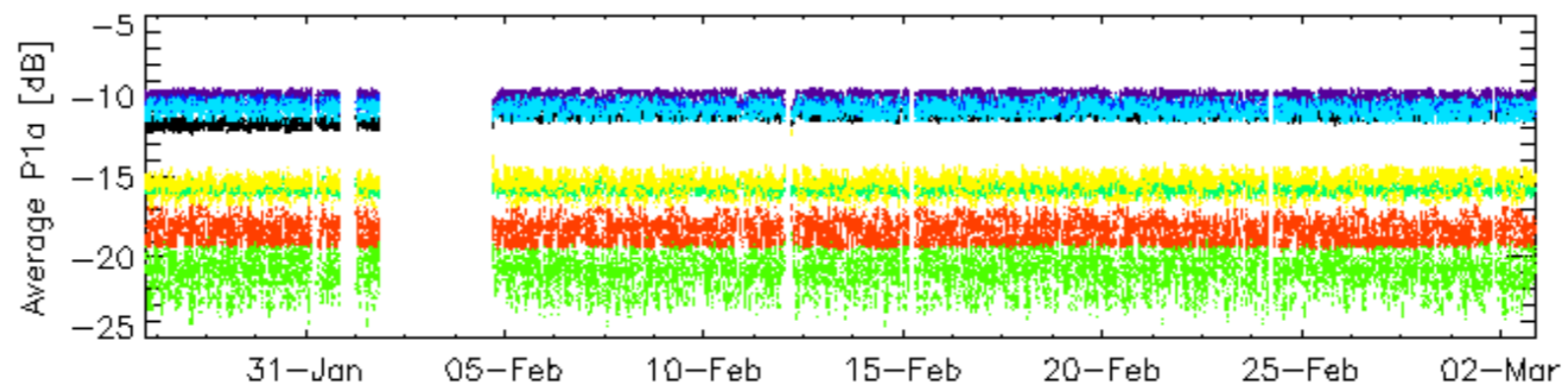
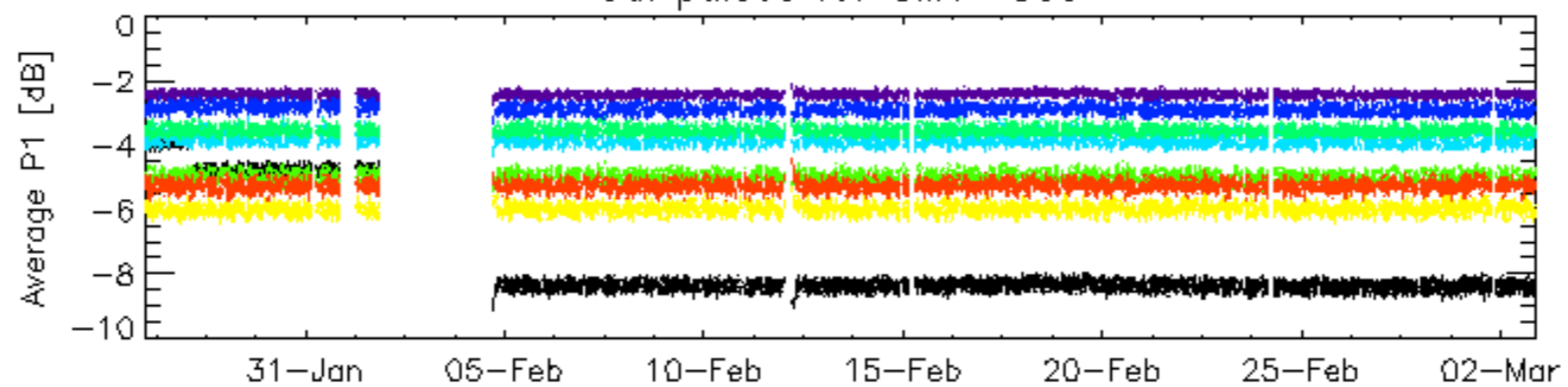
02-Mar



02-Mar

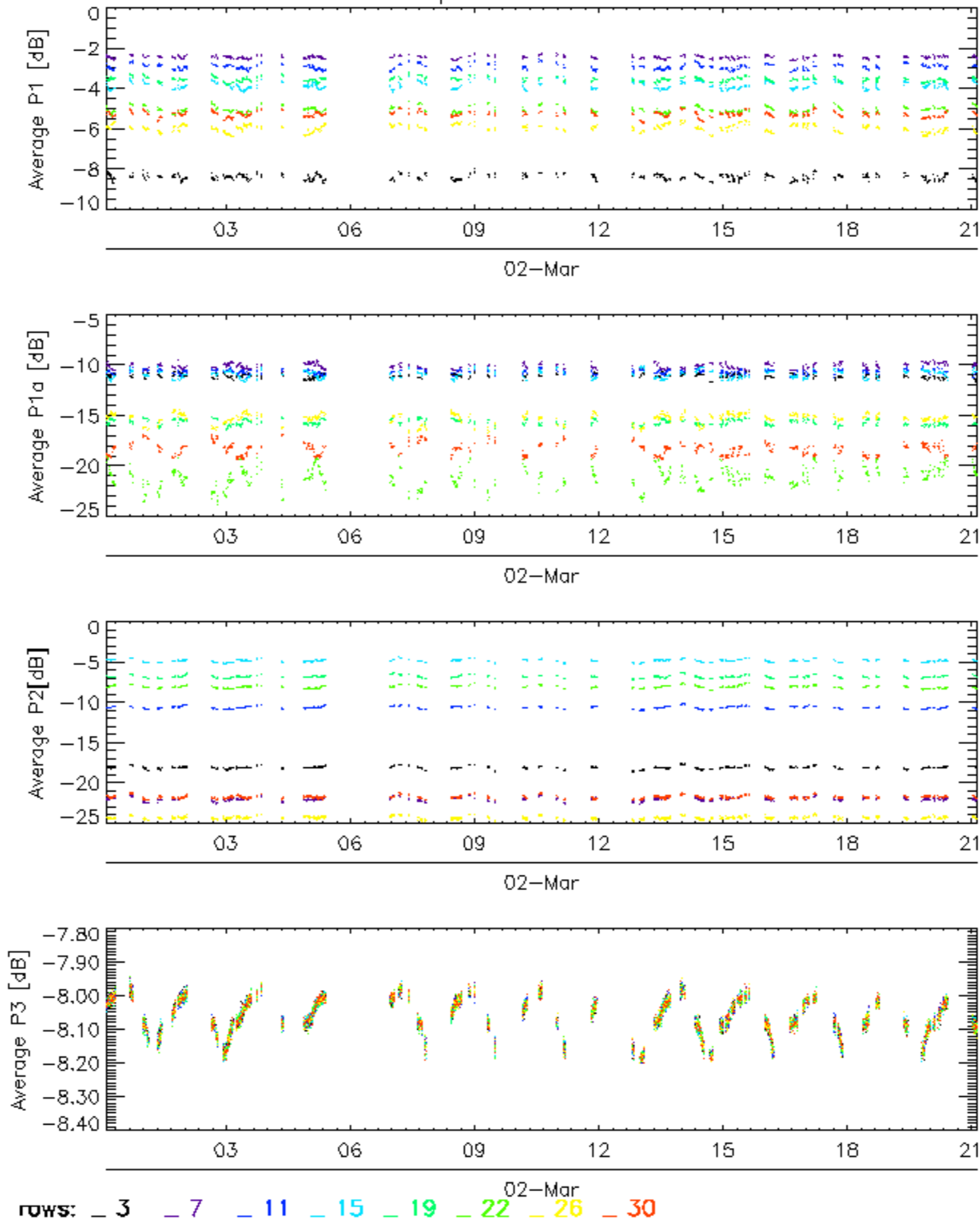
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3

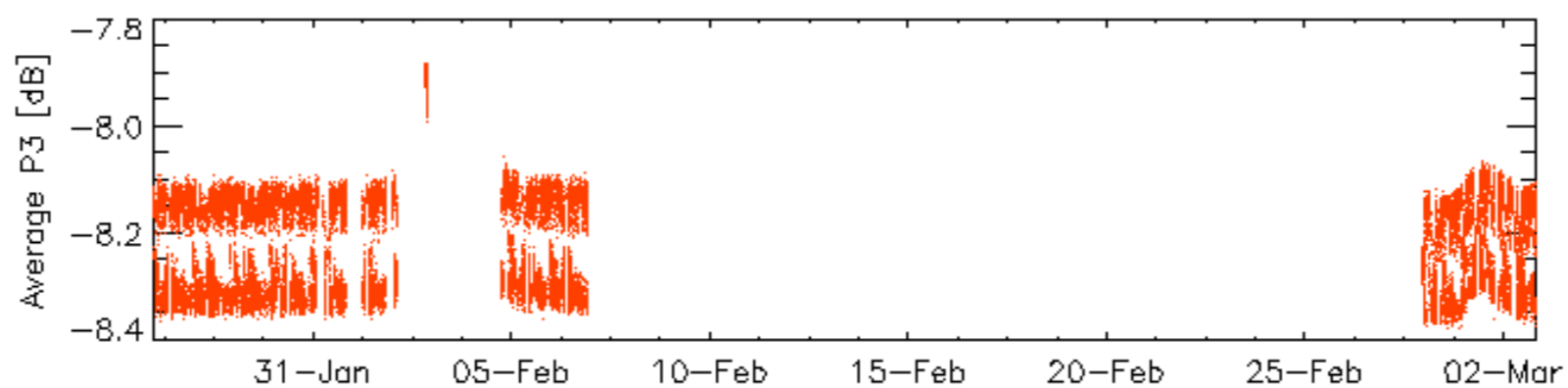
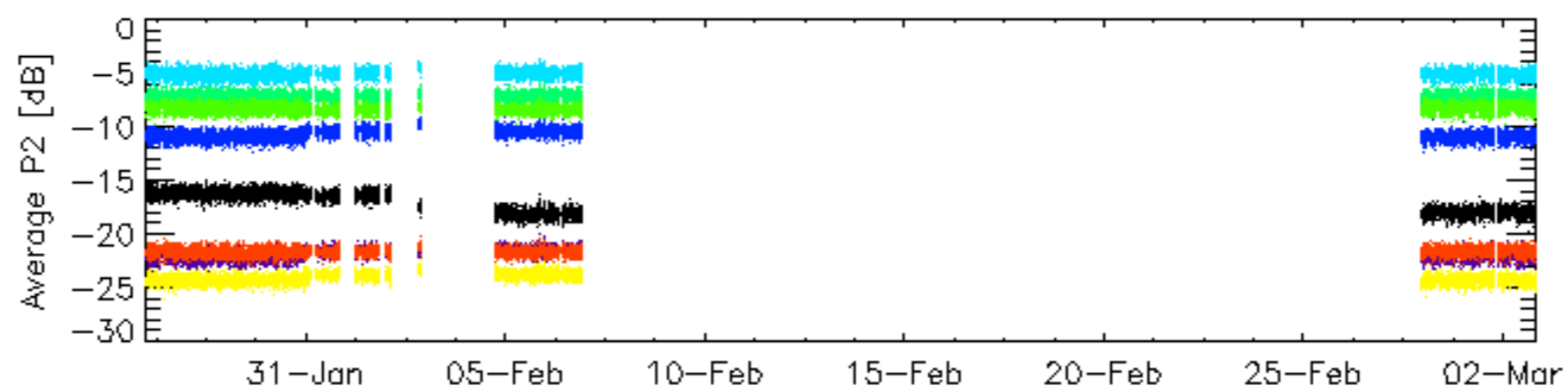
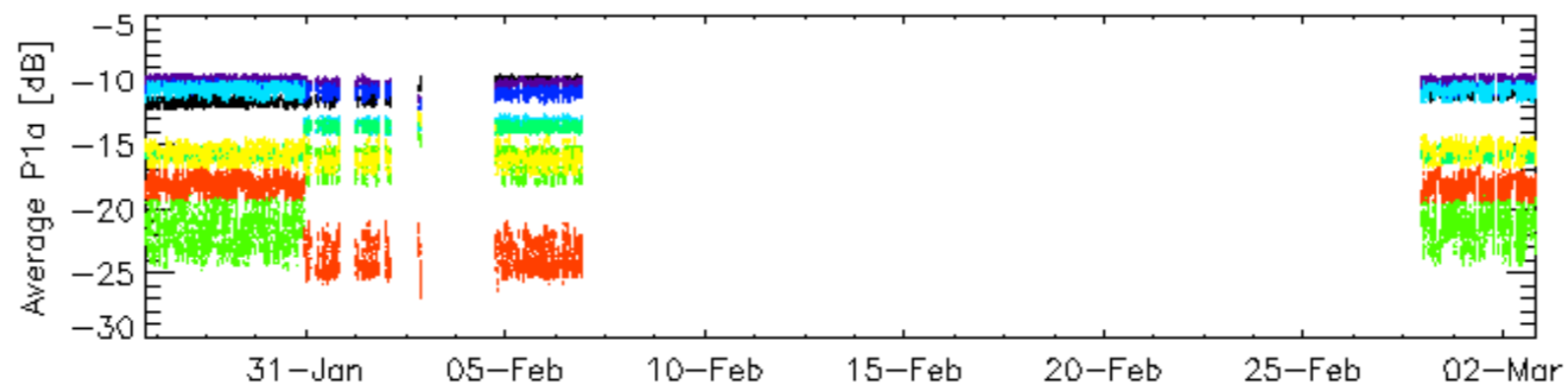
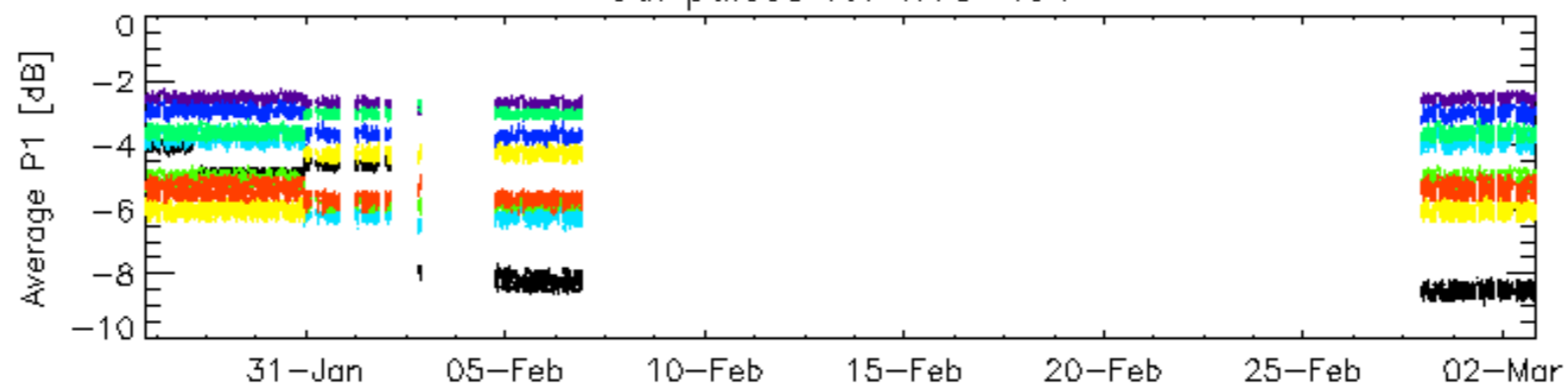


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

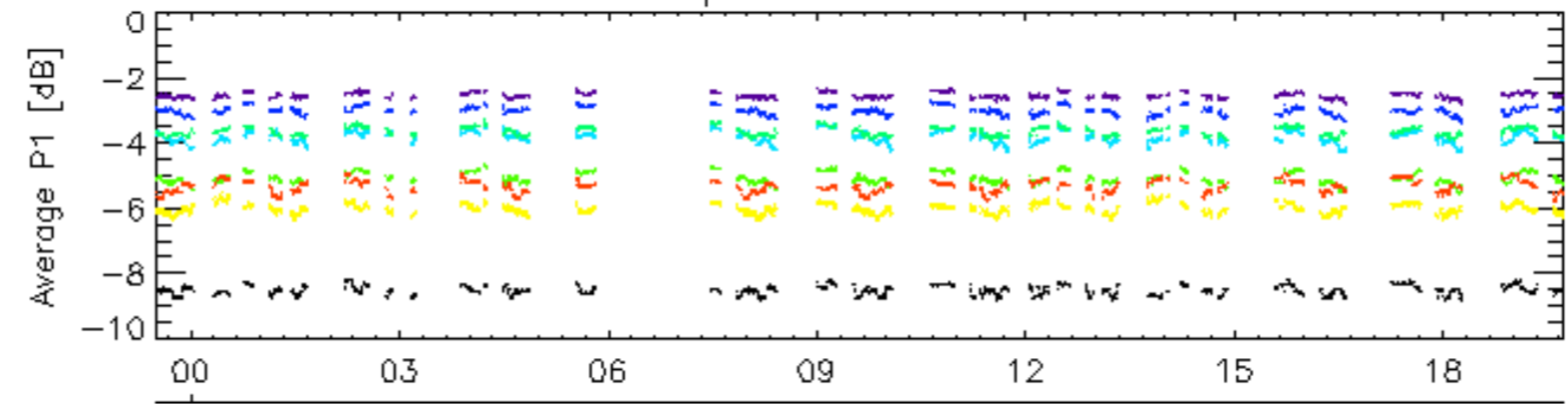


Cal pulses for WVS IS4

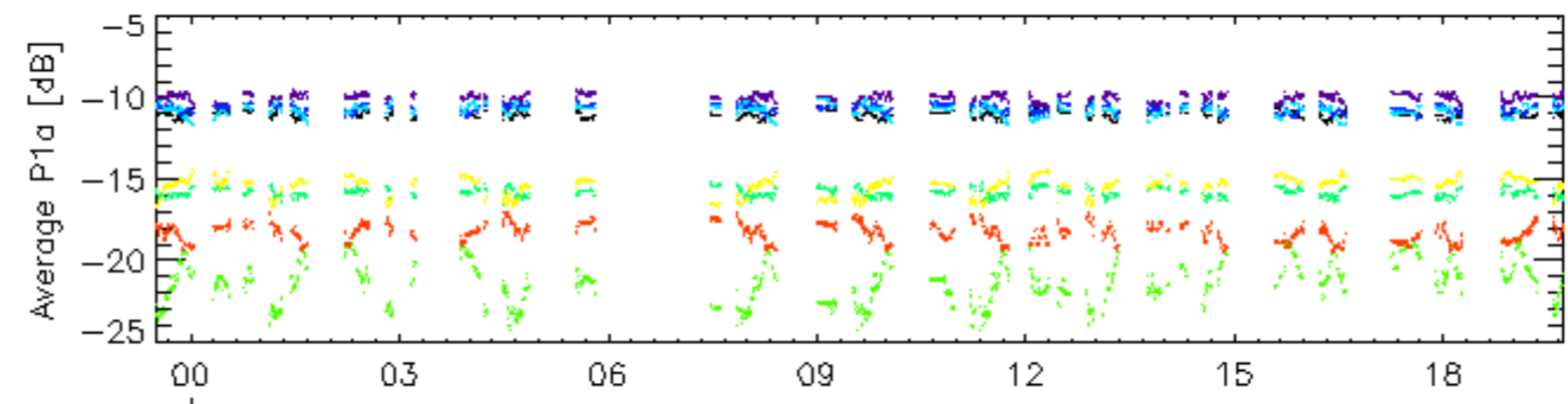


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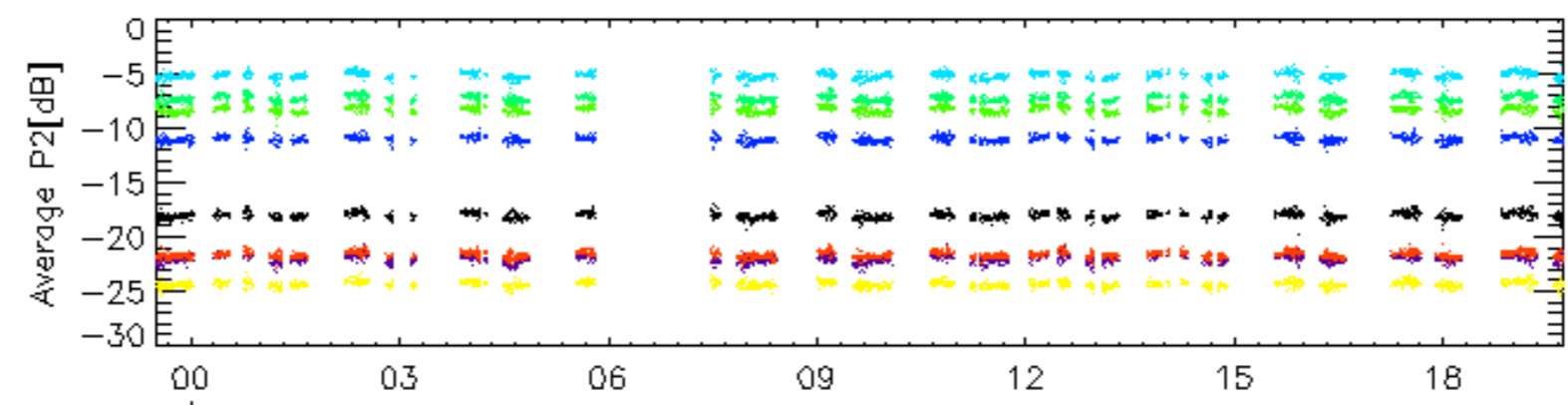
Cal pulses for WVS IS4



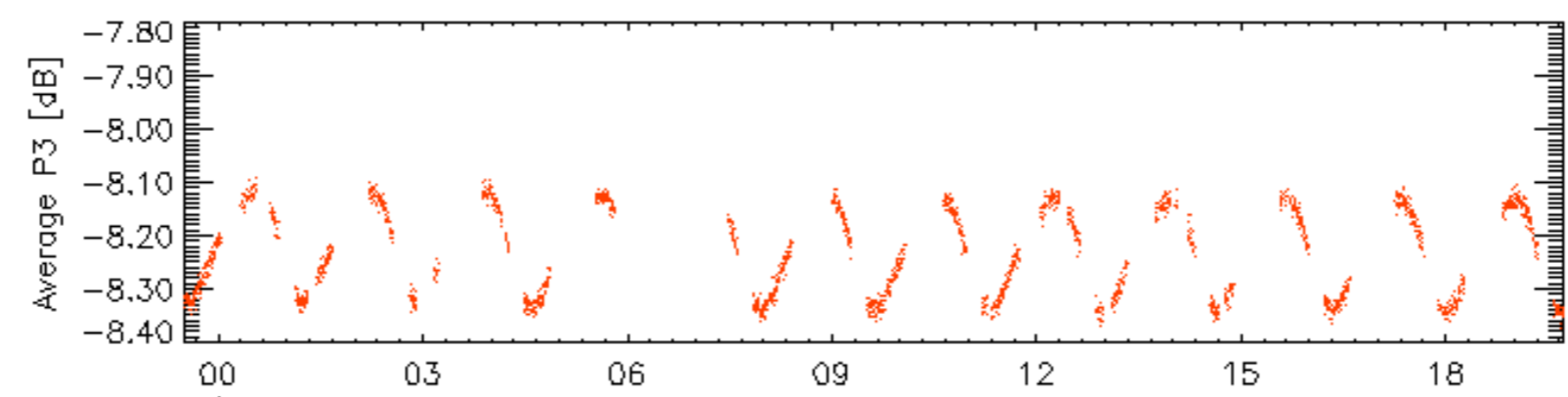
02-Mar



02-Mar



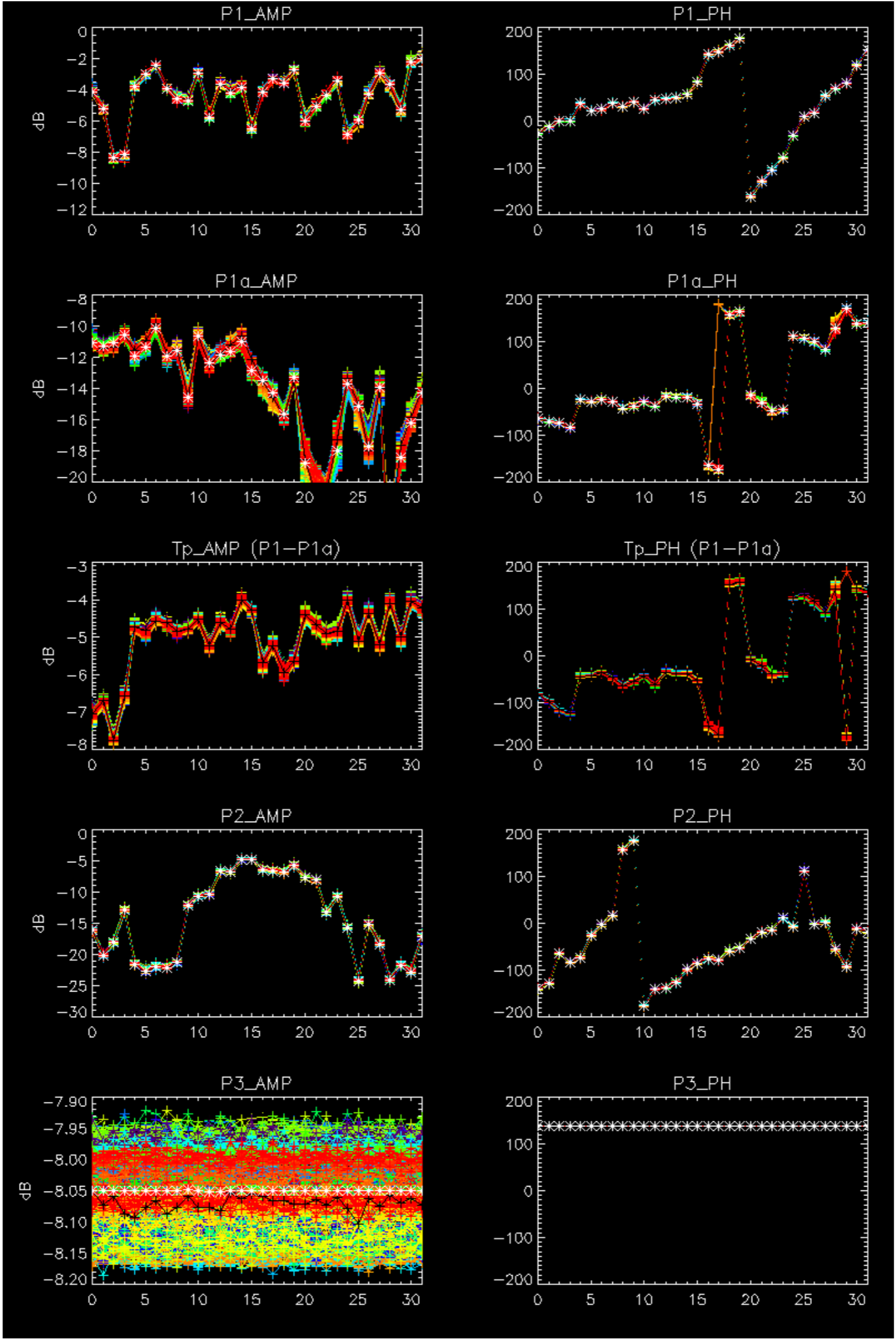
02-Mar

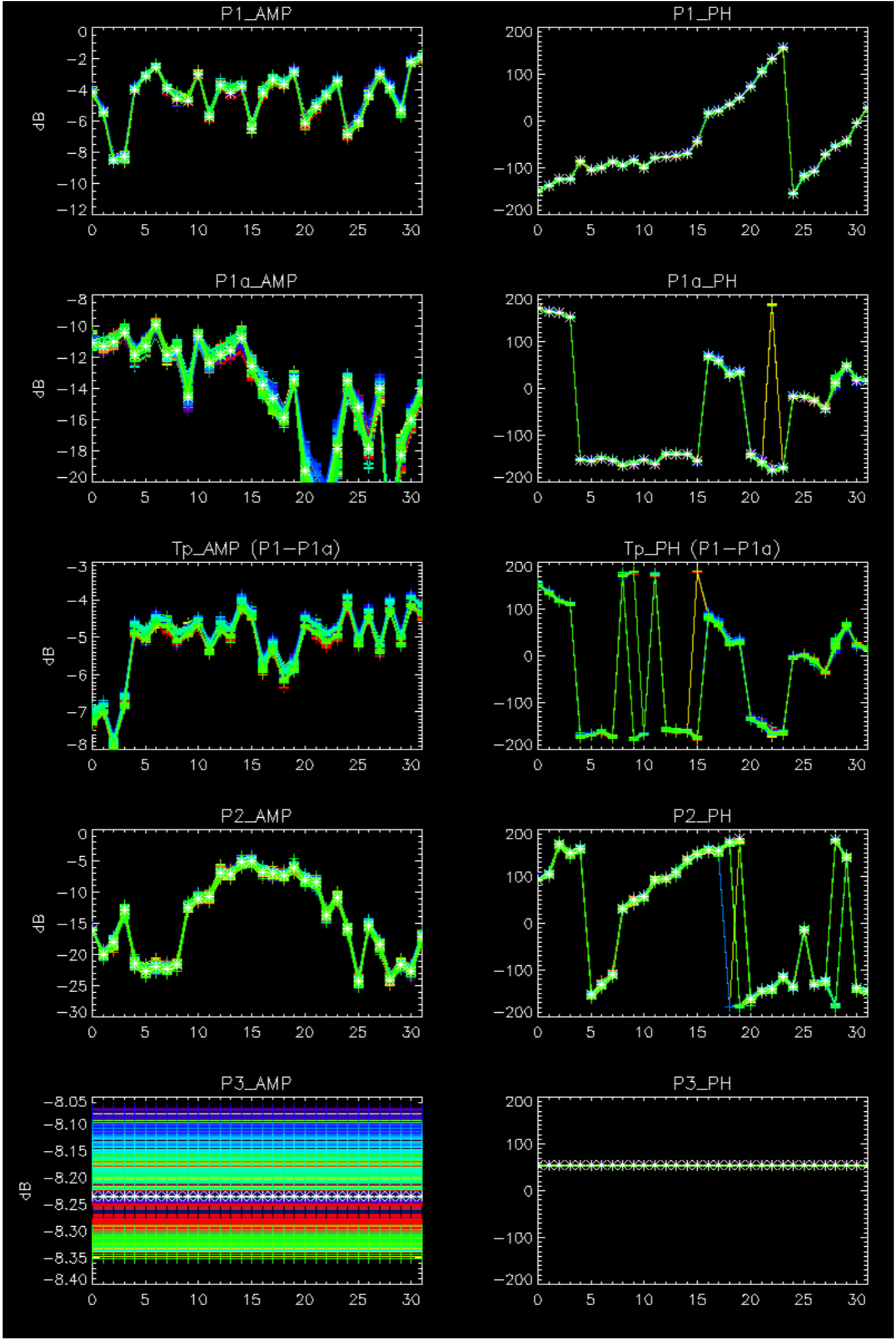


02-Mar

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

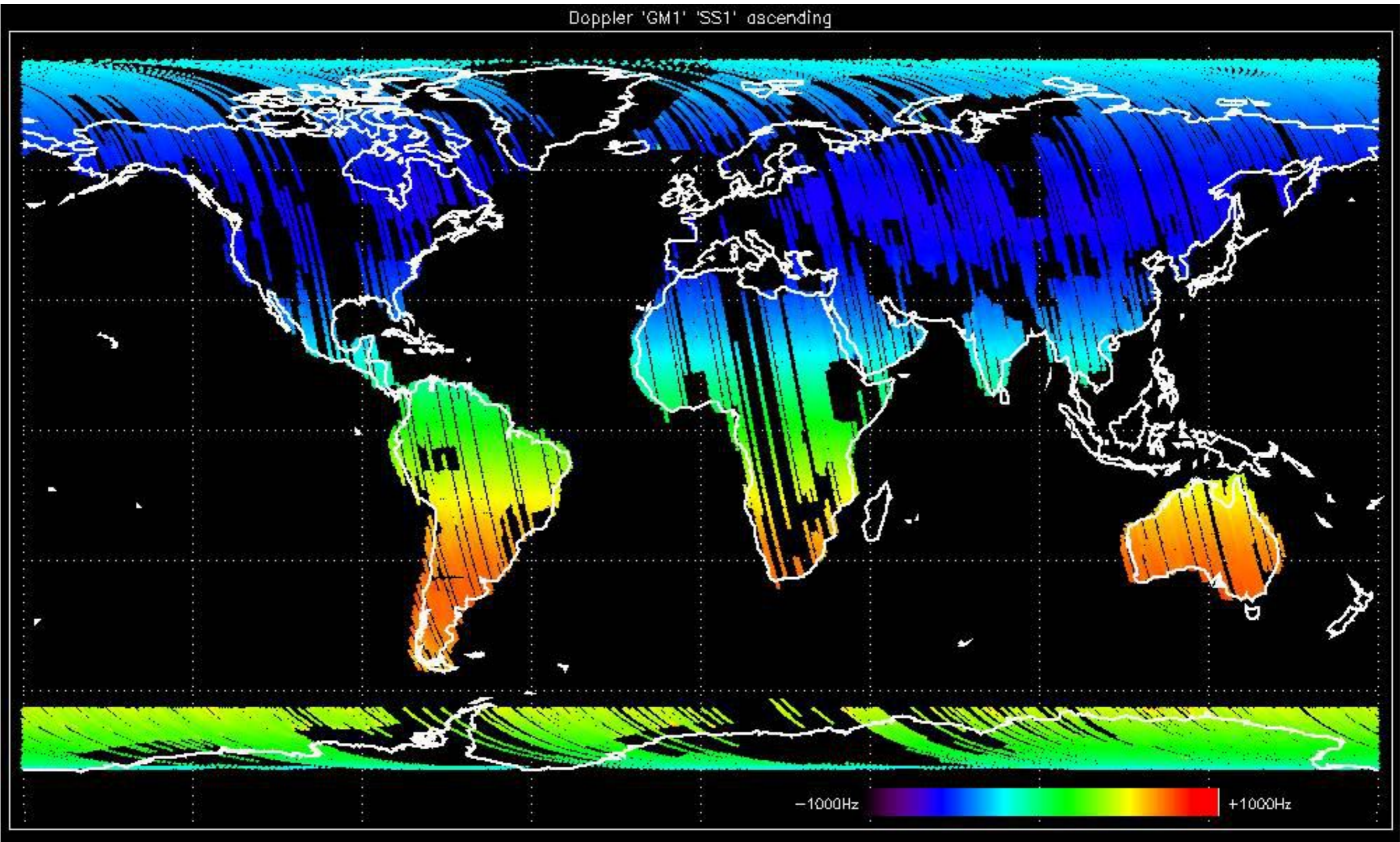
No anomalies observed.



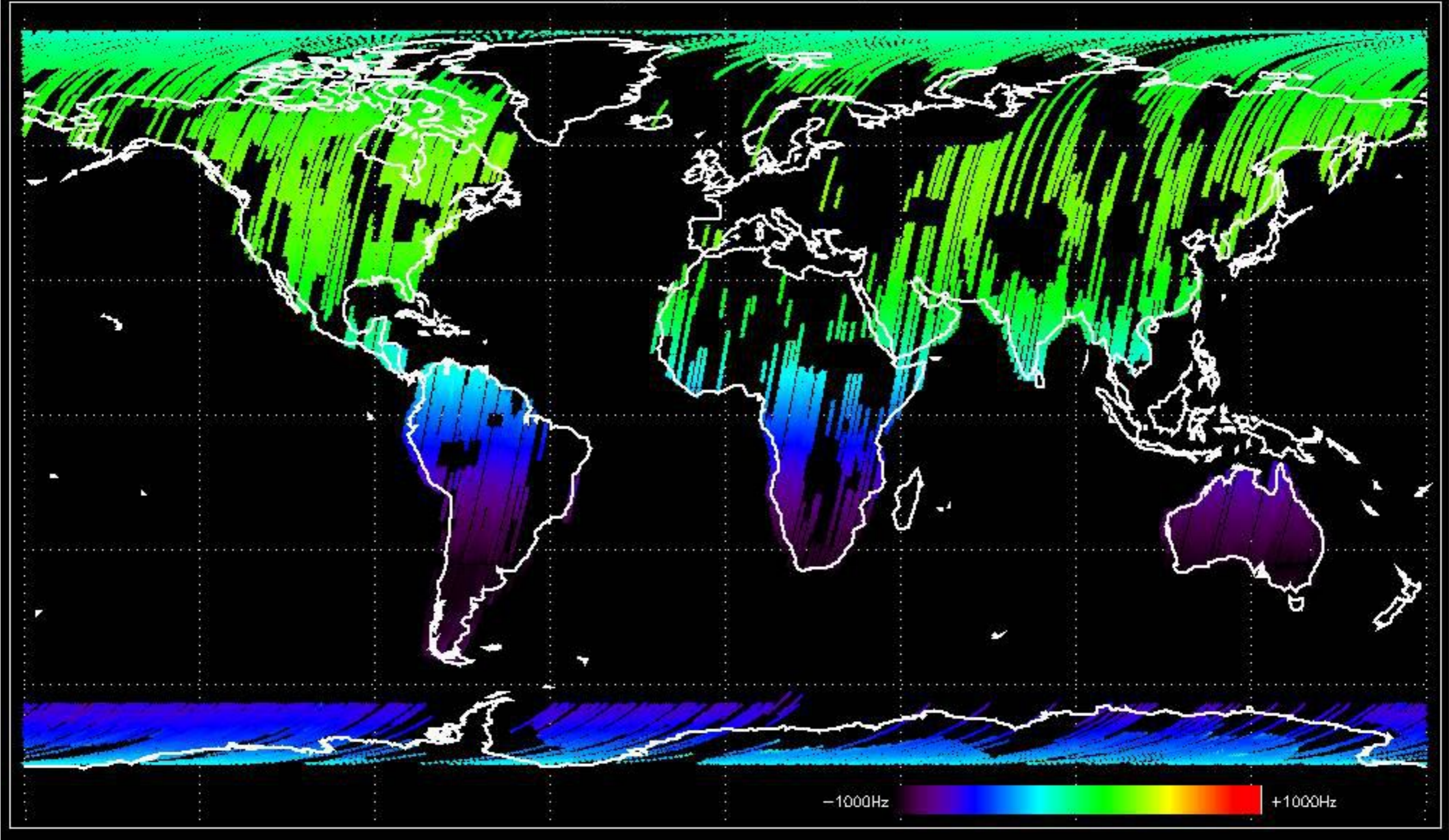


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

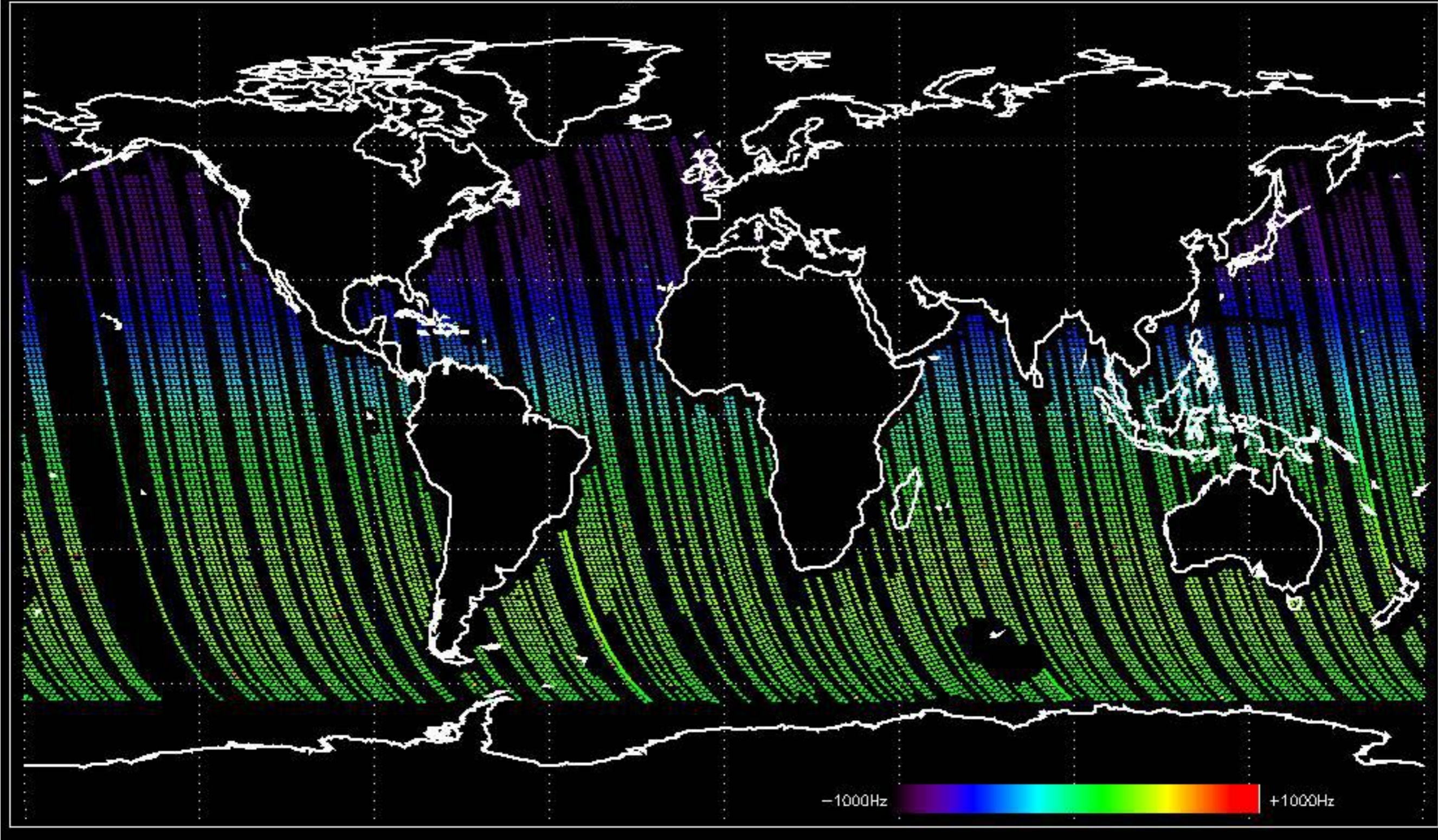
Doppler 'GM1' 'SS1' ascending



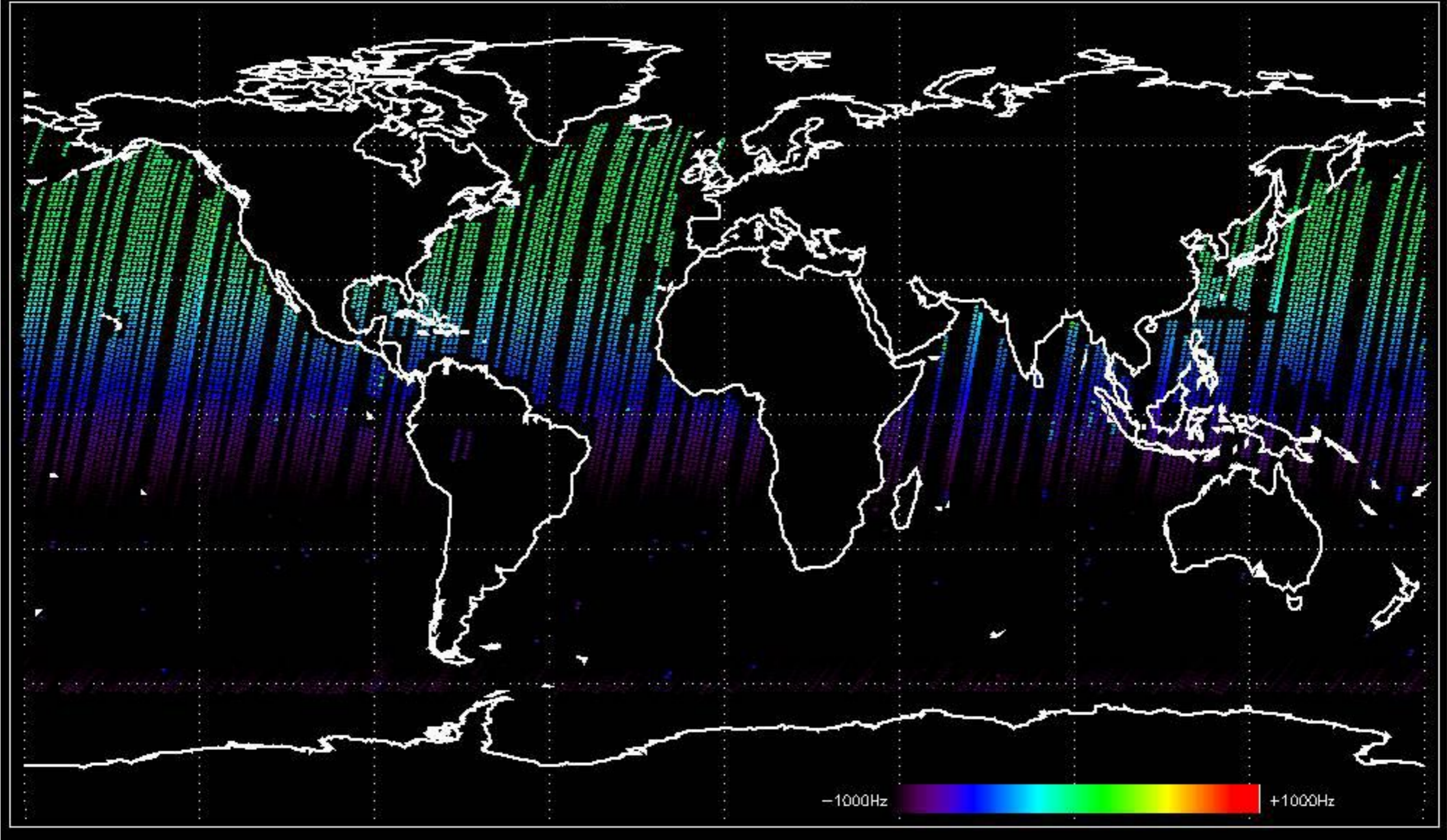
Doppler 'GM1' 'SS1' descending



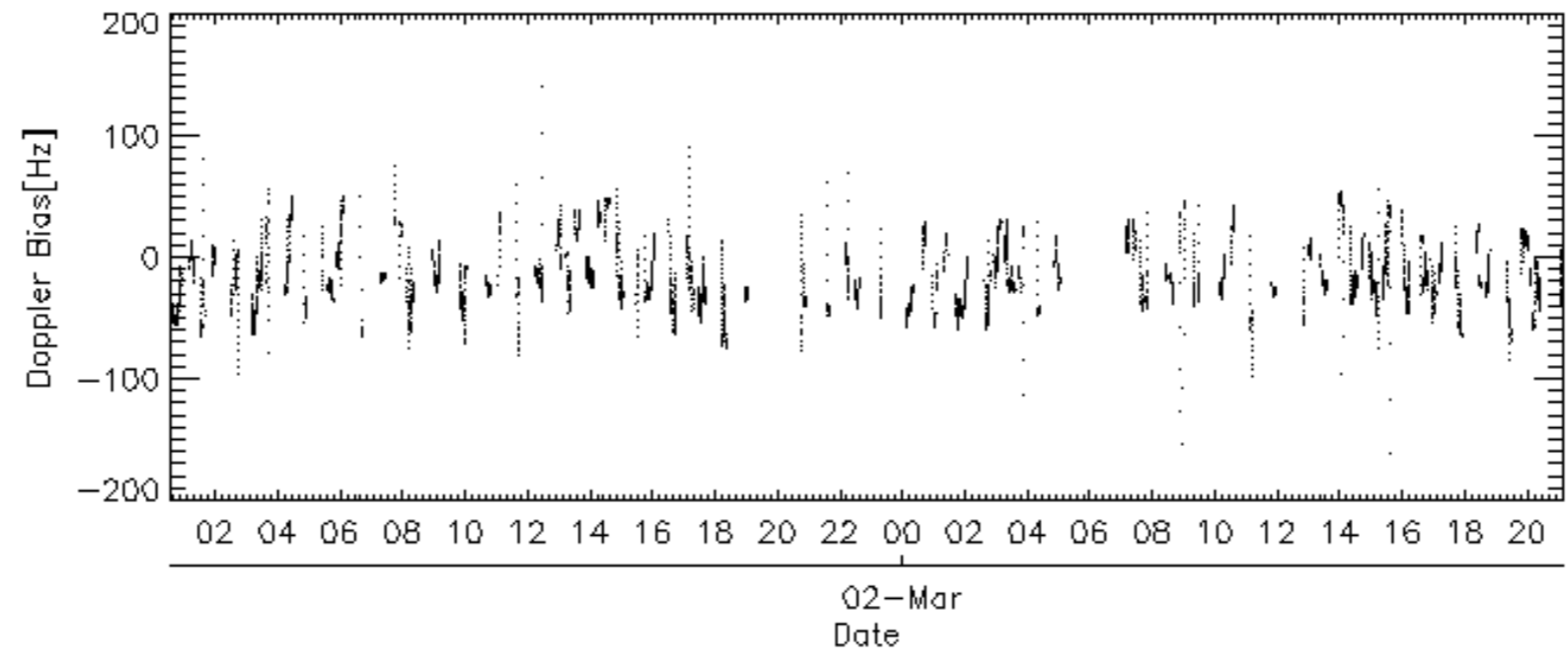
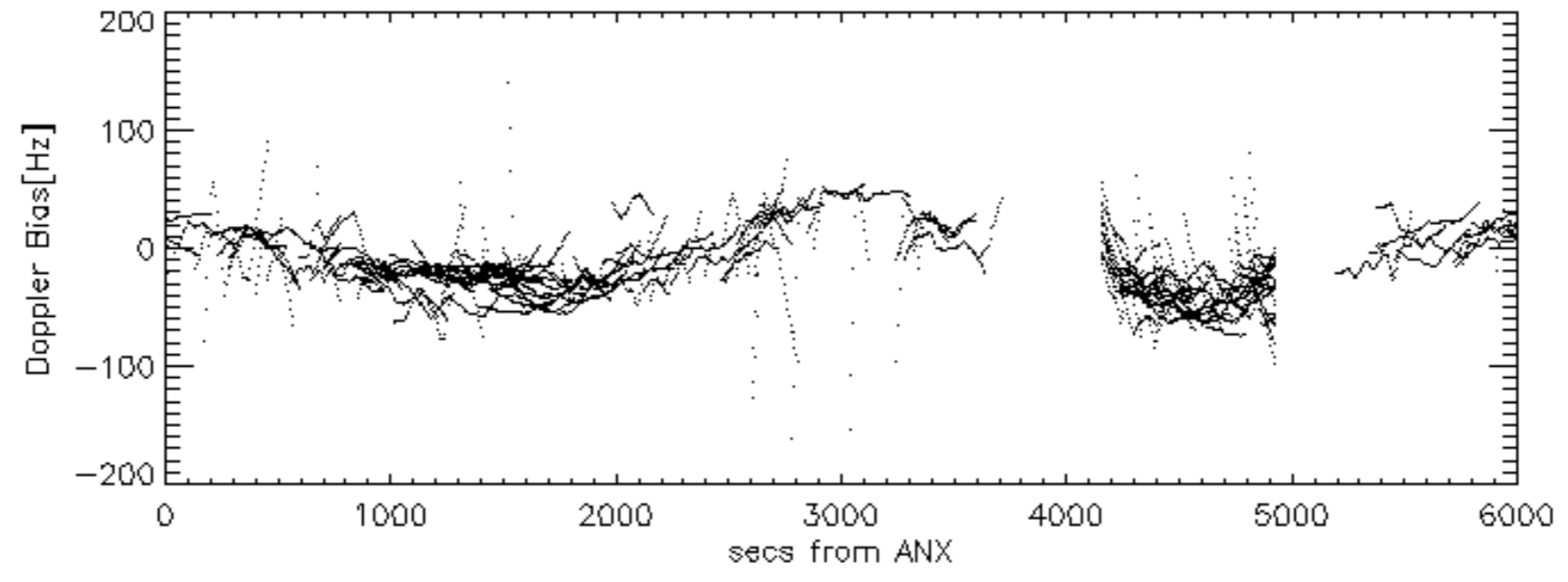
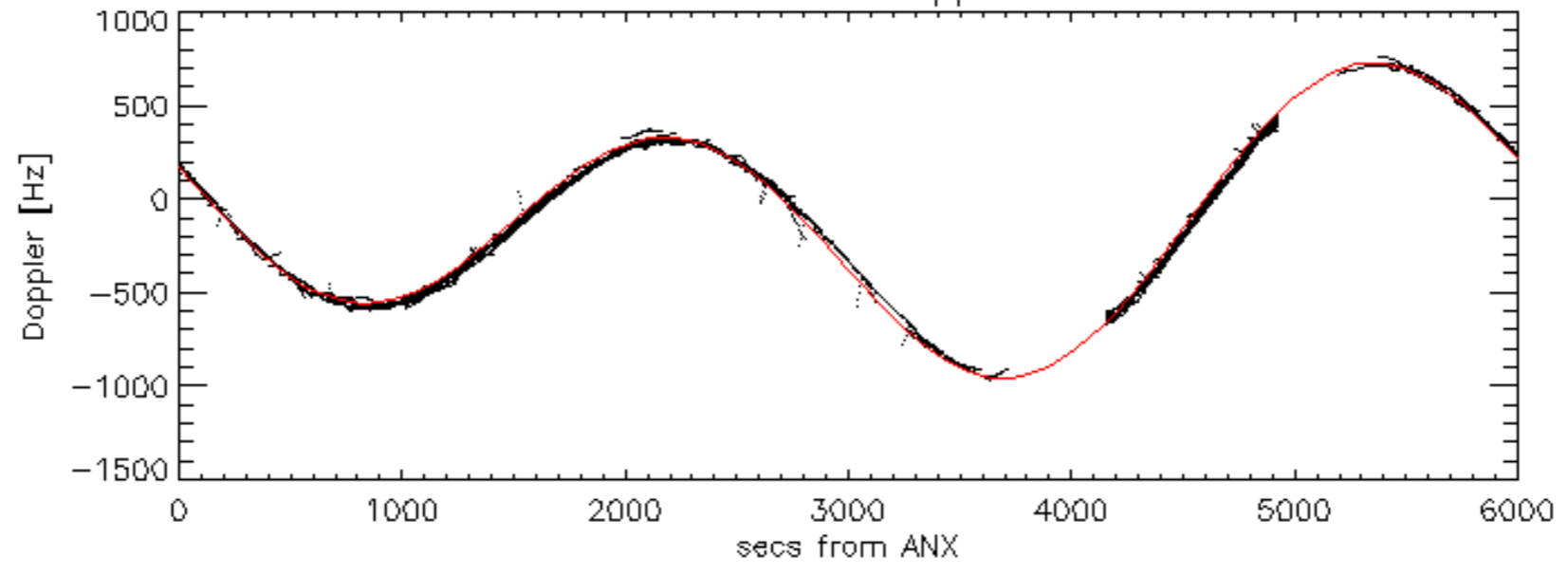
Doppler 'WVS' 'IS4' ascending

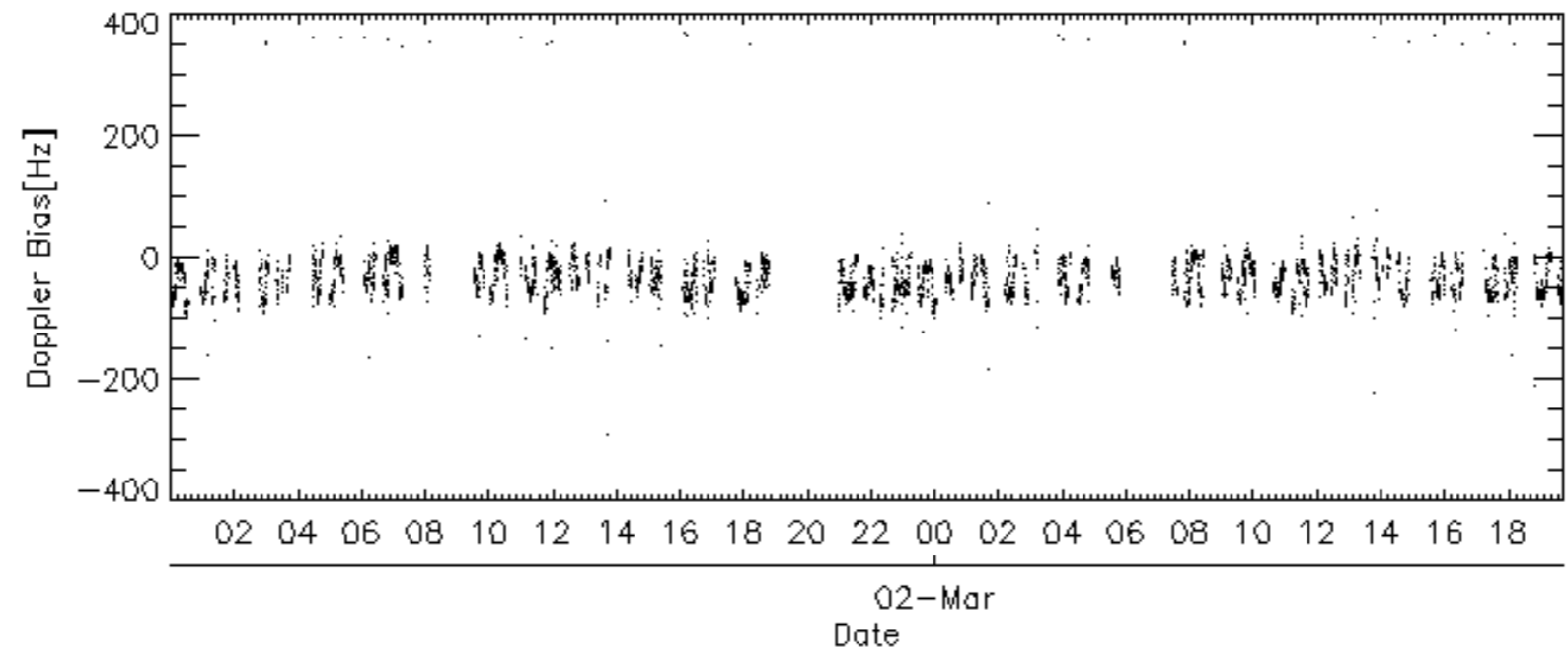
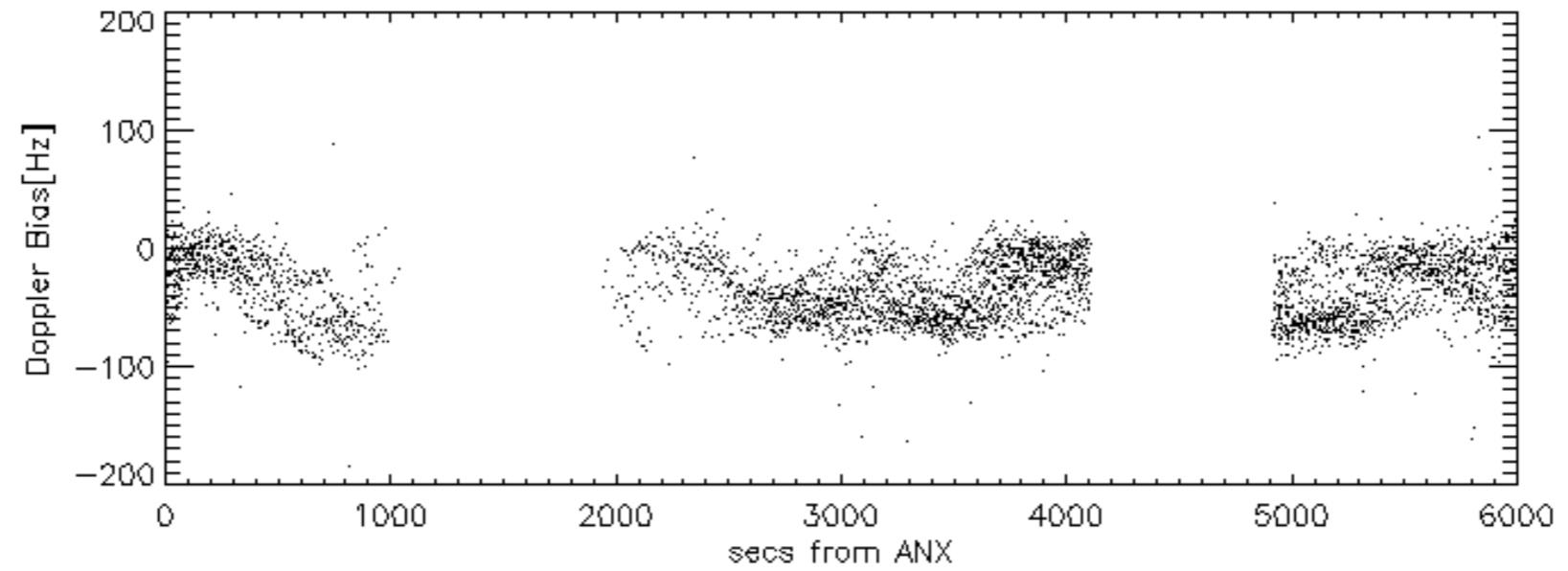
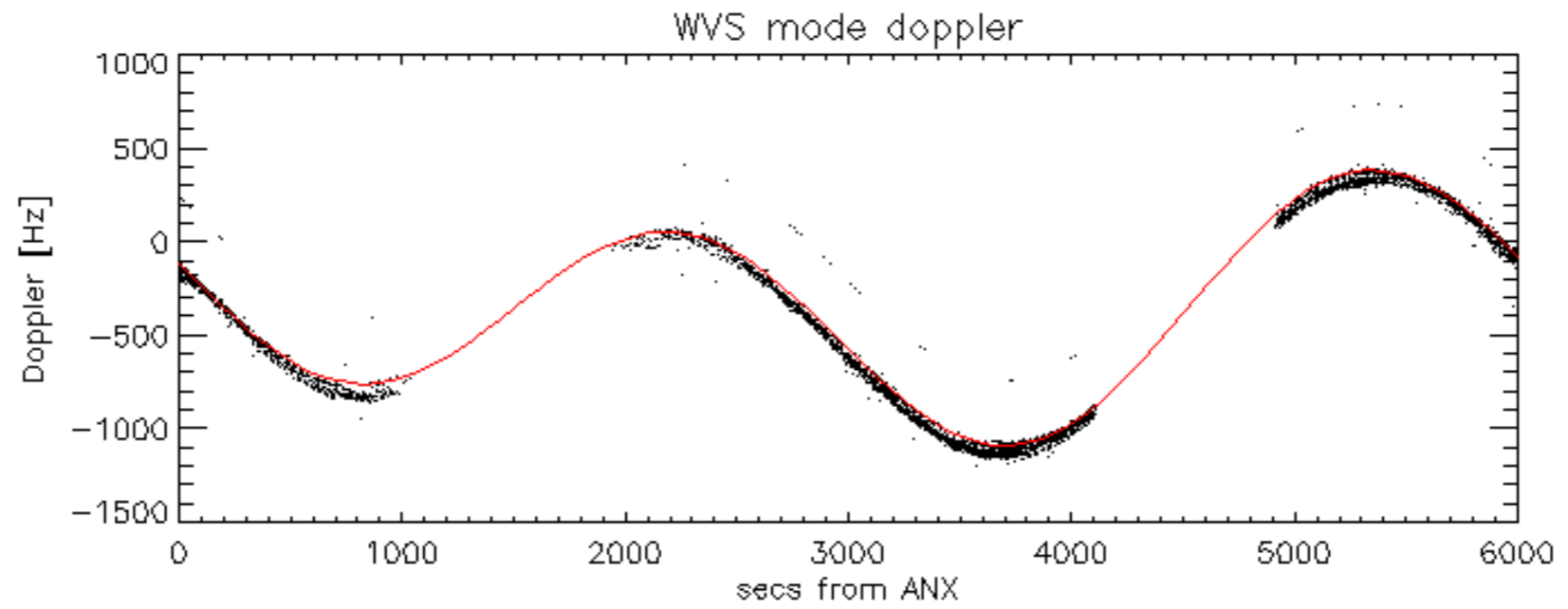


Doppler 'WVS' 'IS4' descending

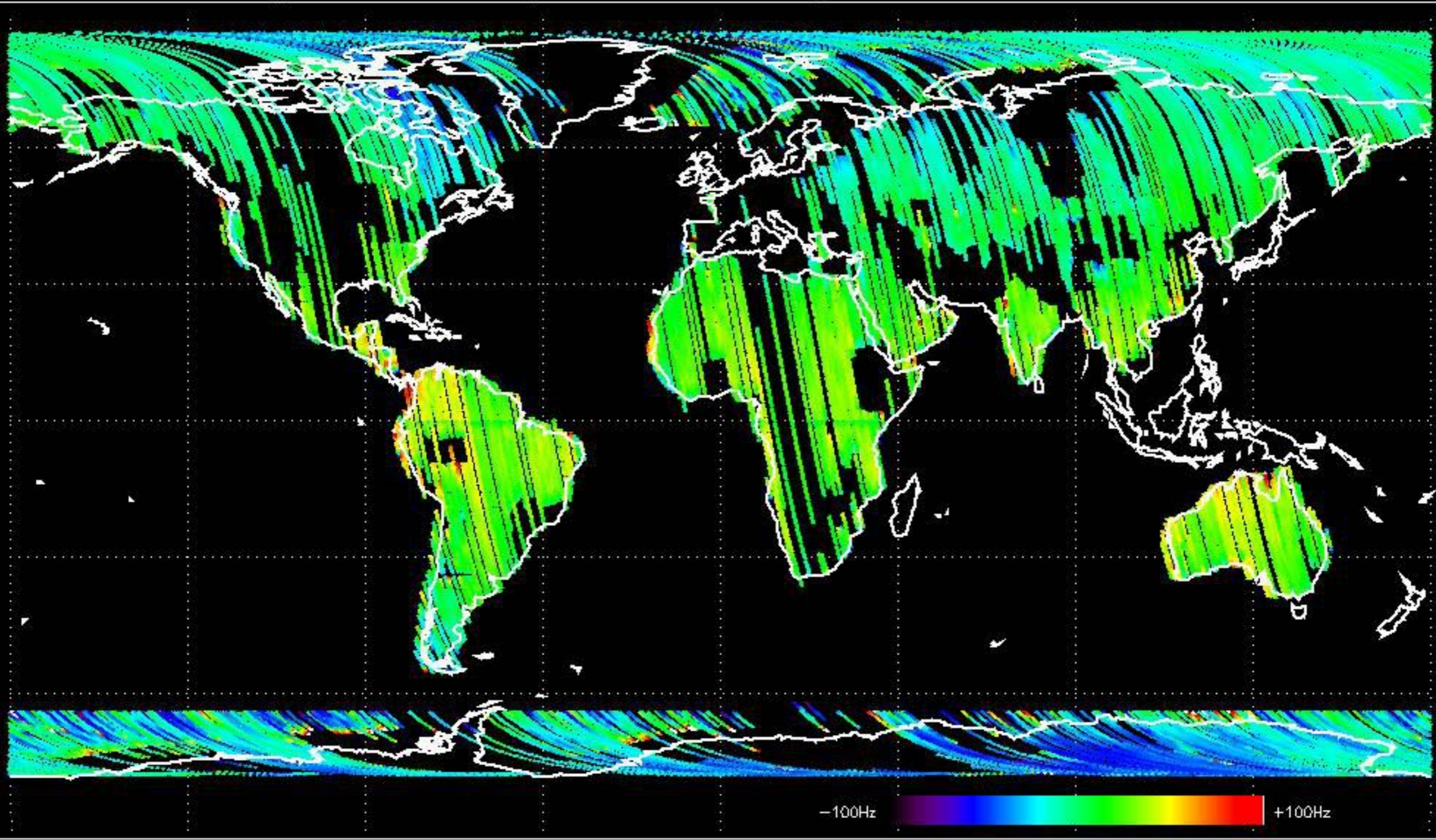


GM1 mode doppler

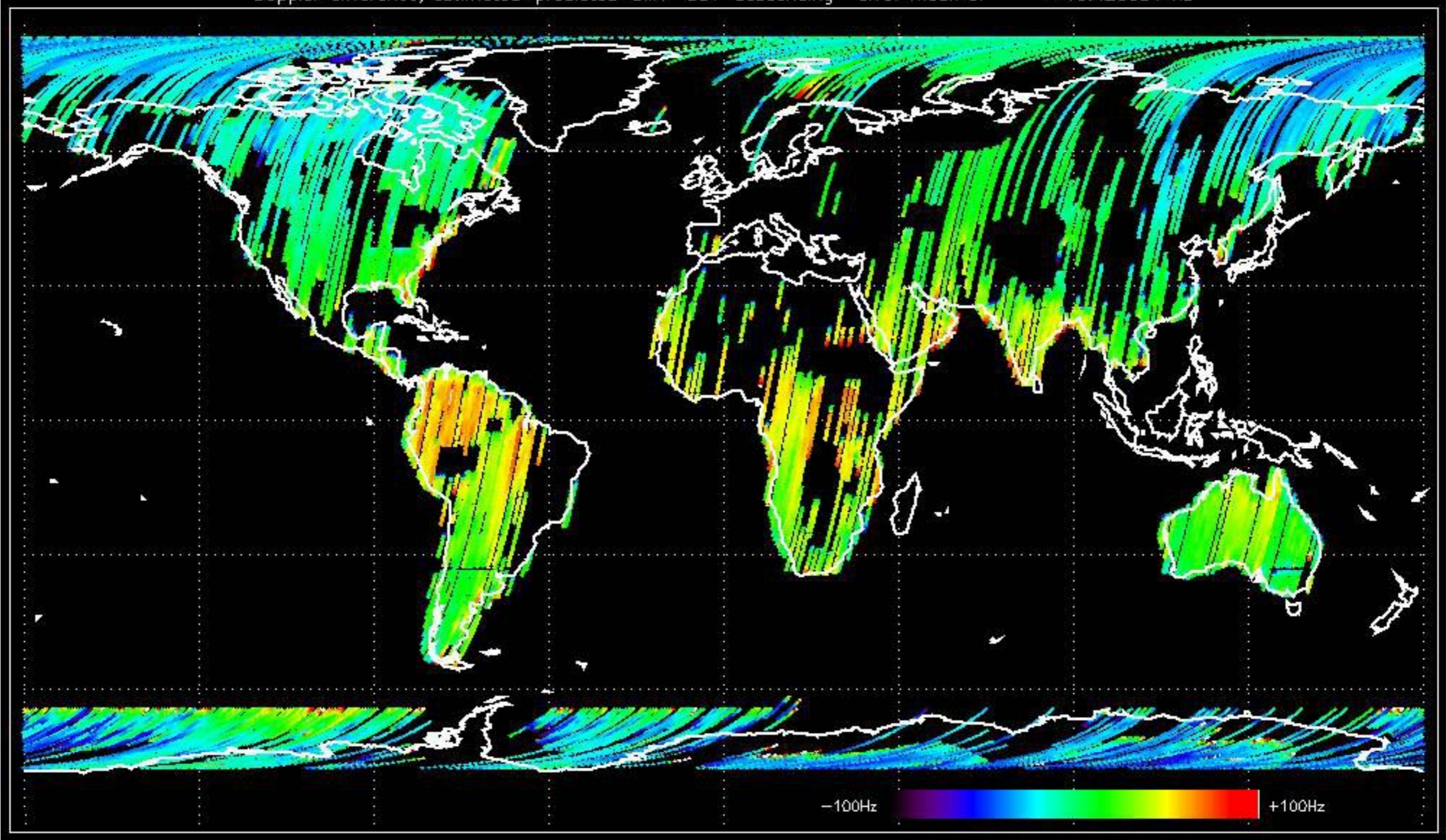




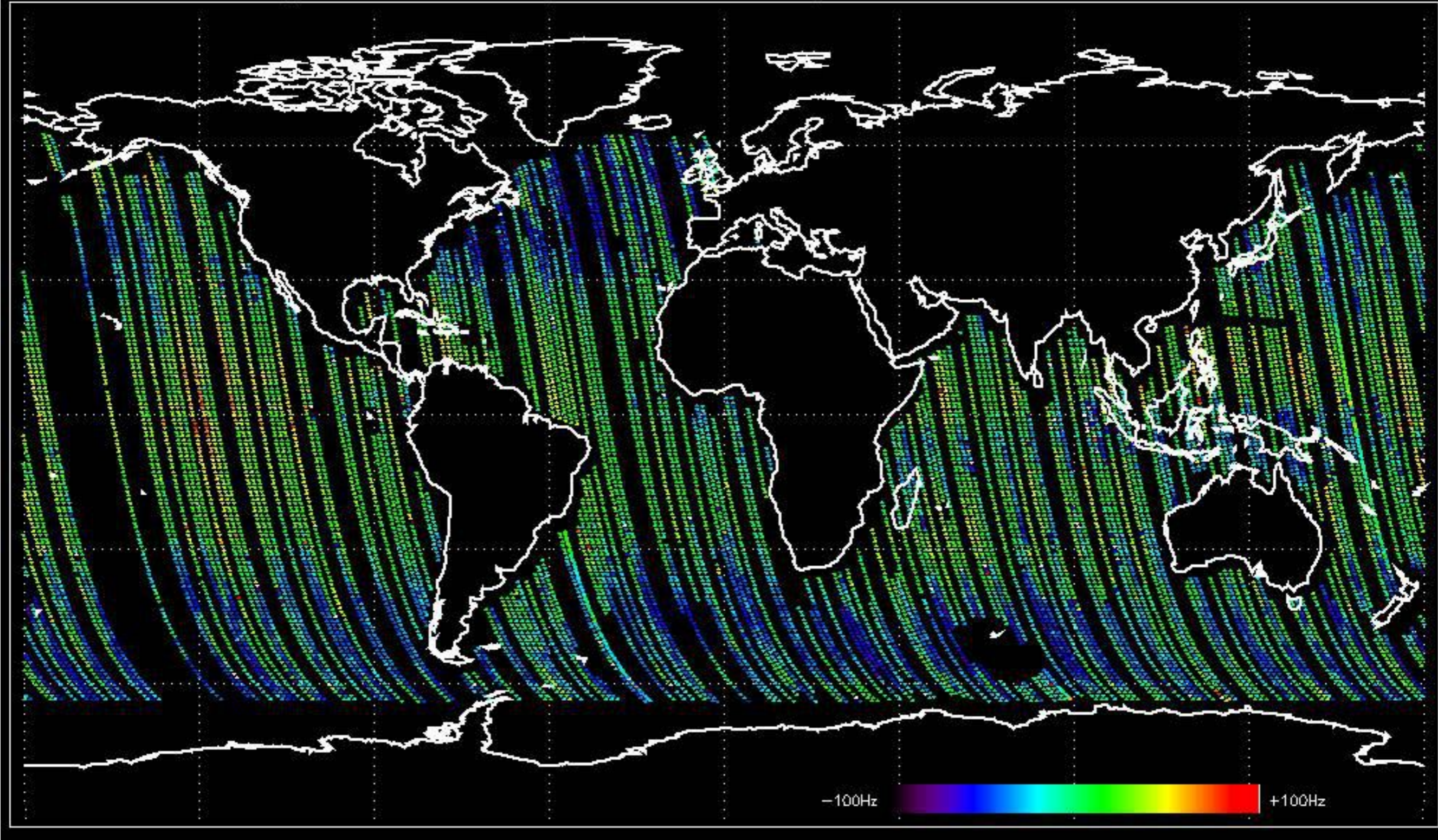
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.395404 Hz



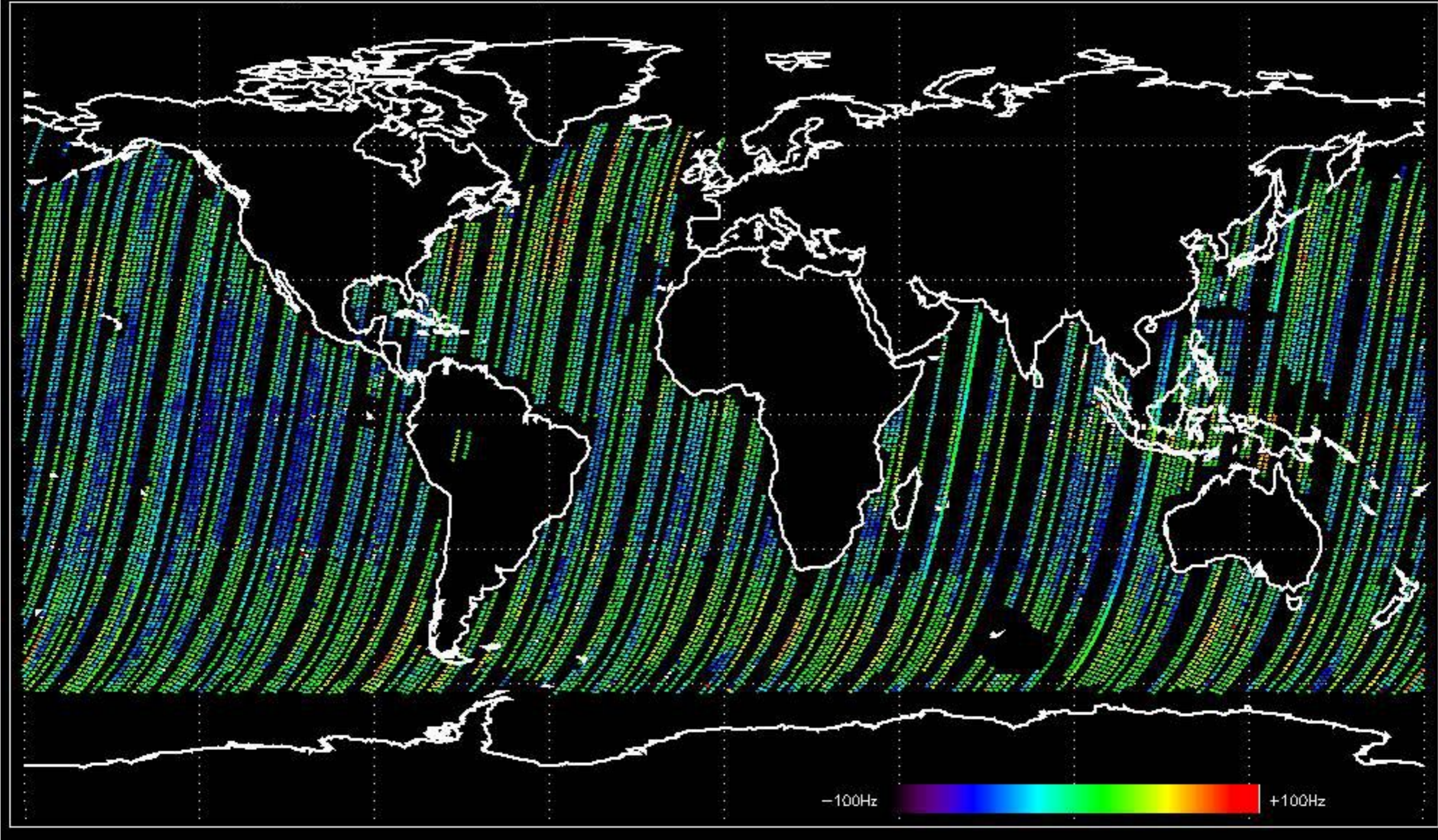
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.420634 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -23.016640 Hz

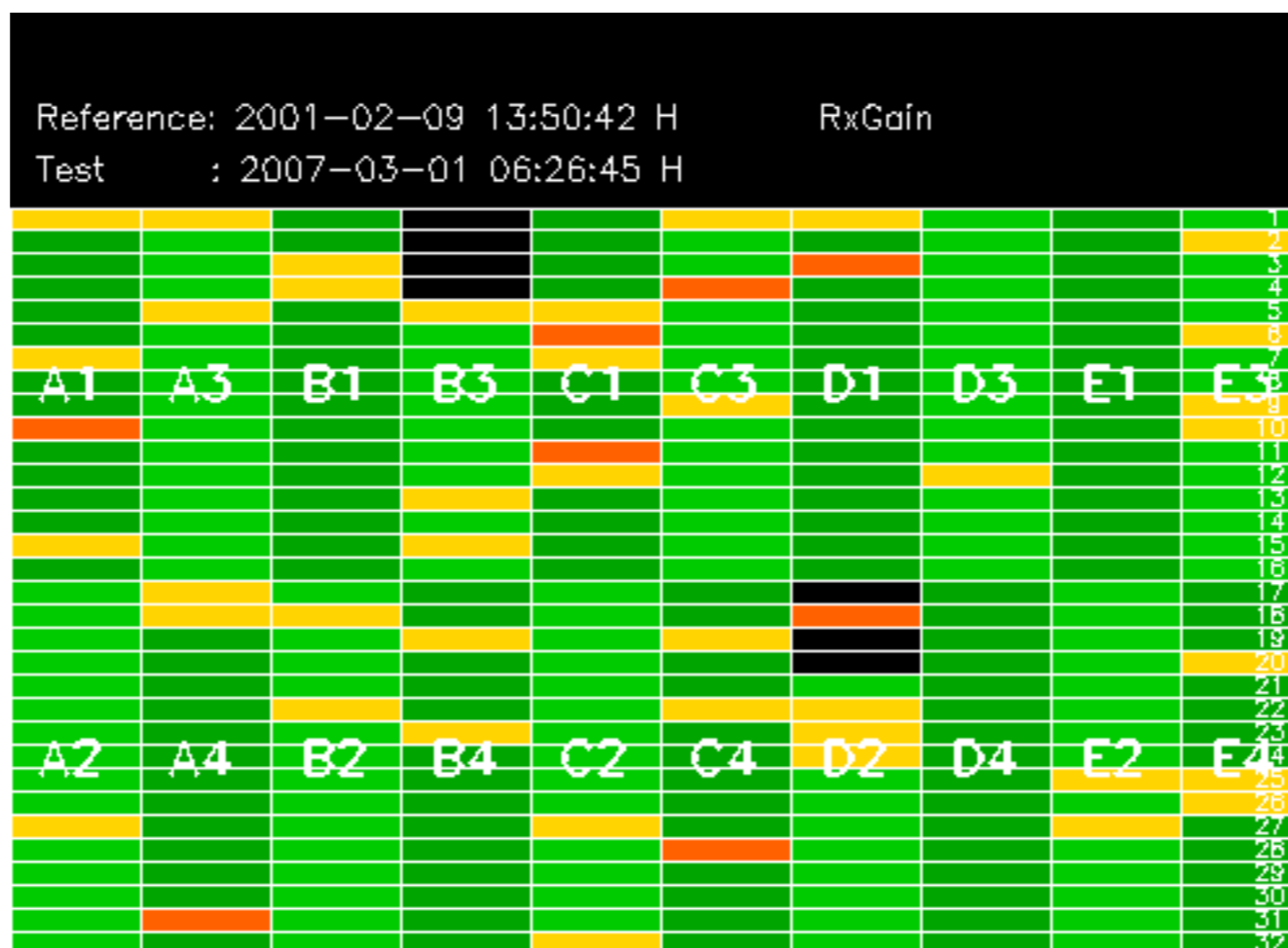


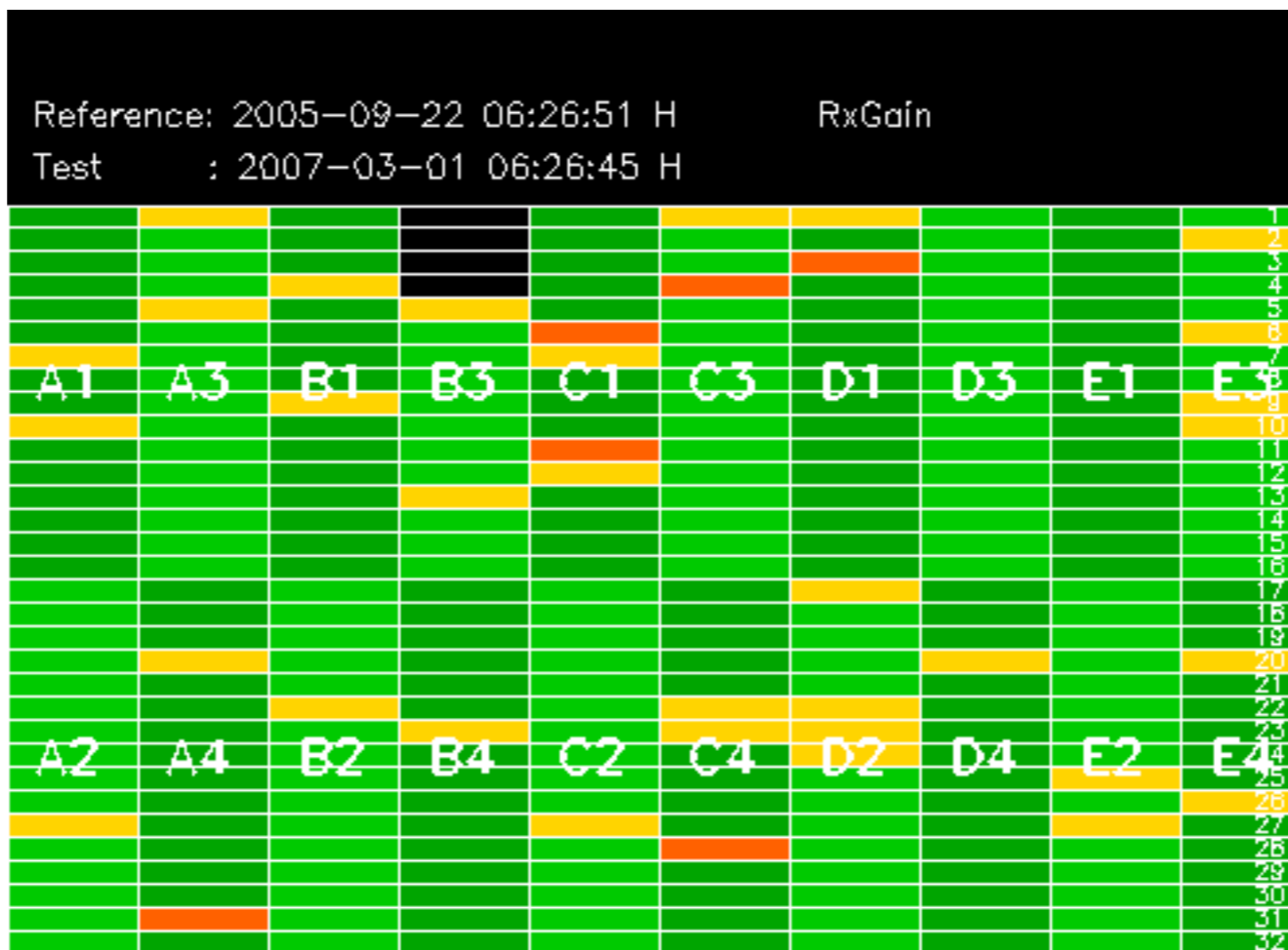
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -28.725660 Hz

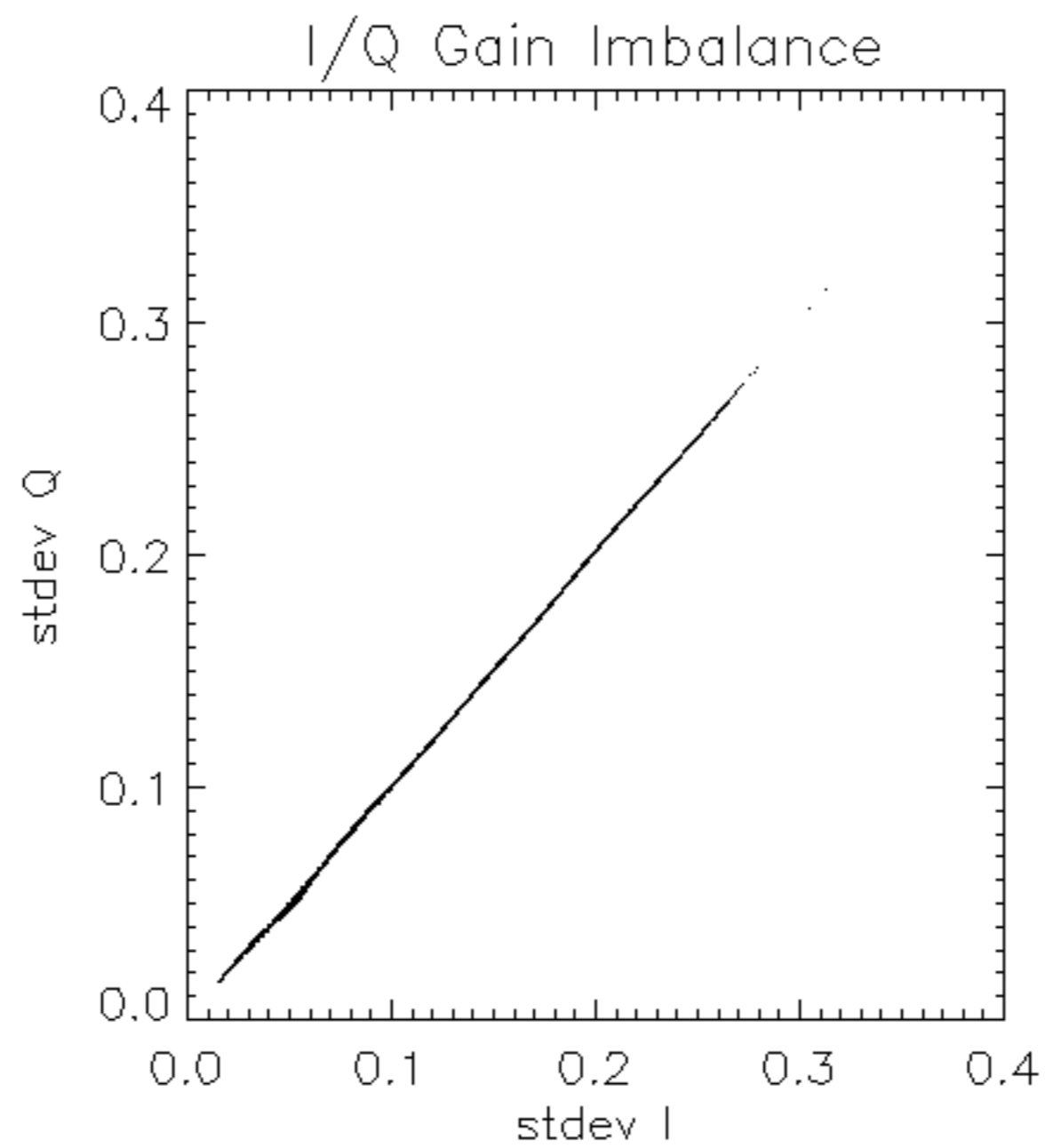


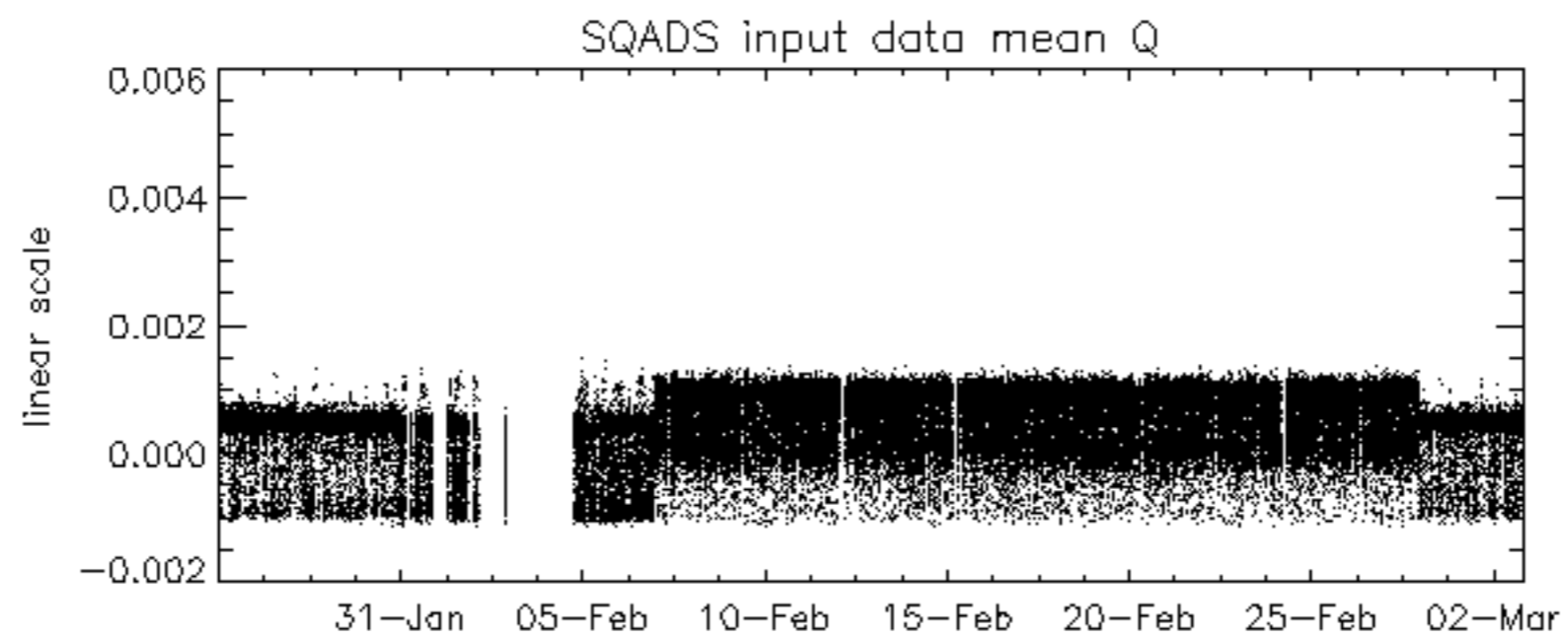
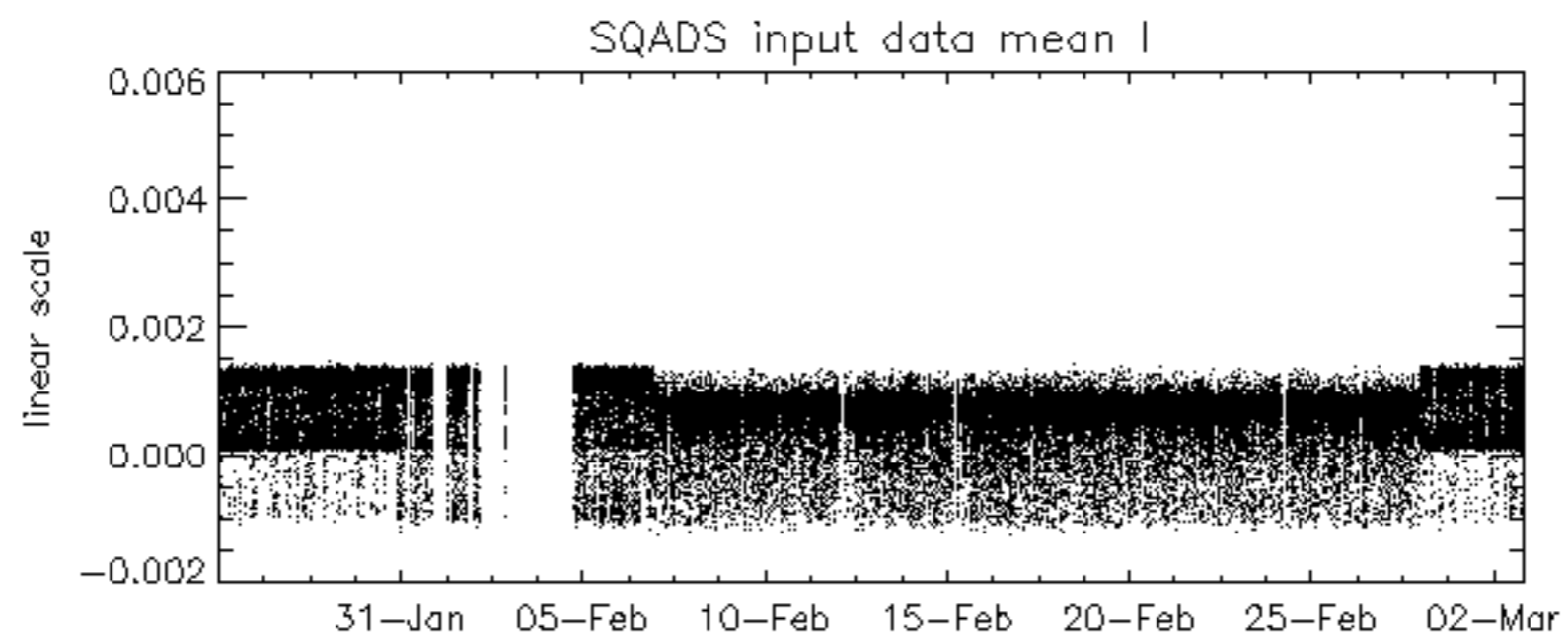
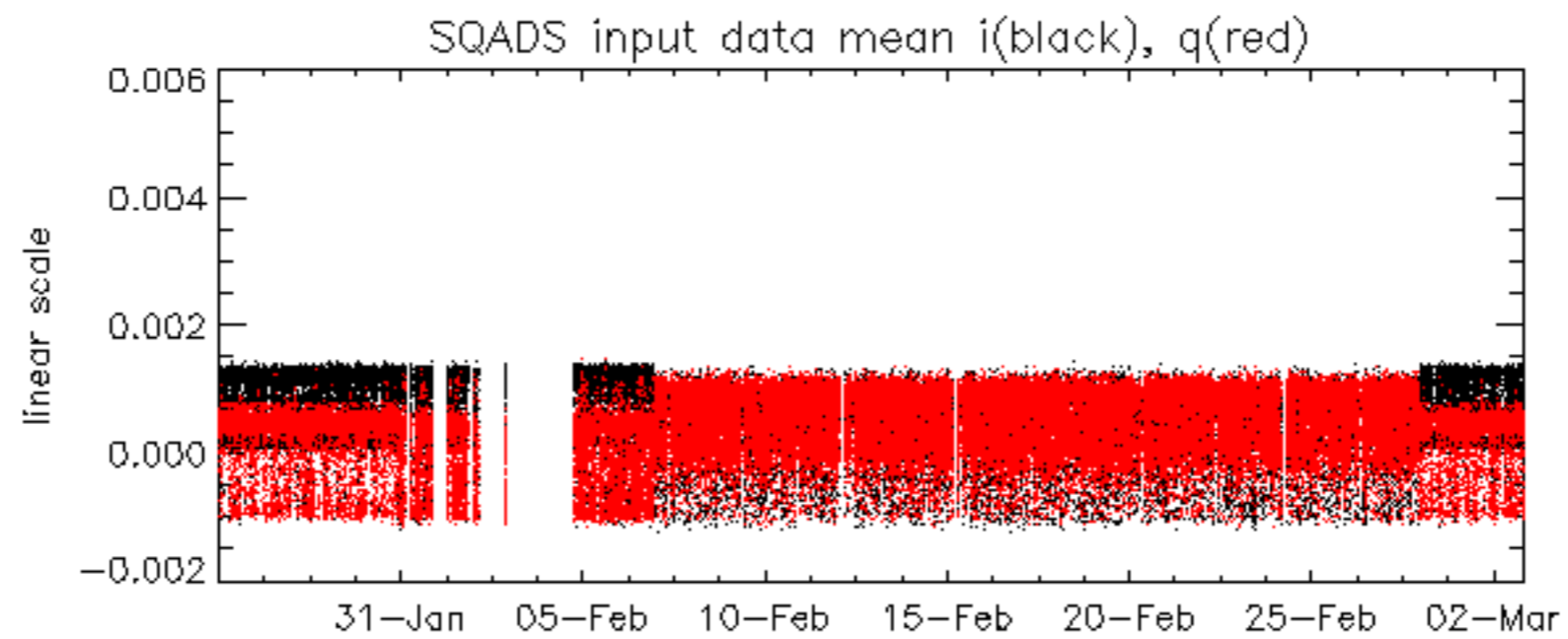
No anomalies observed on available MS products:

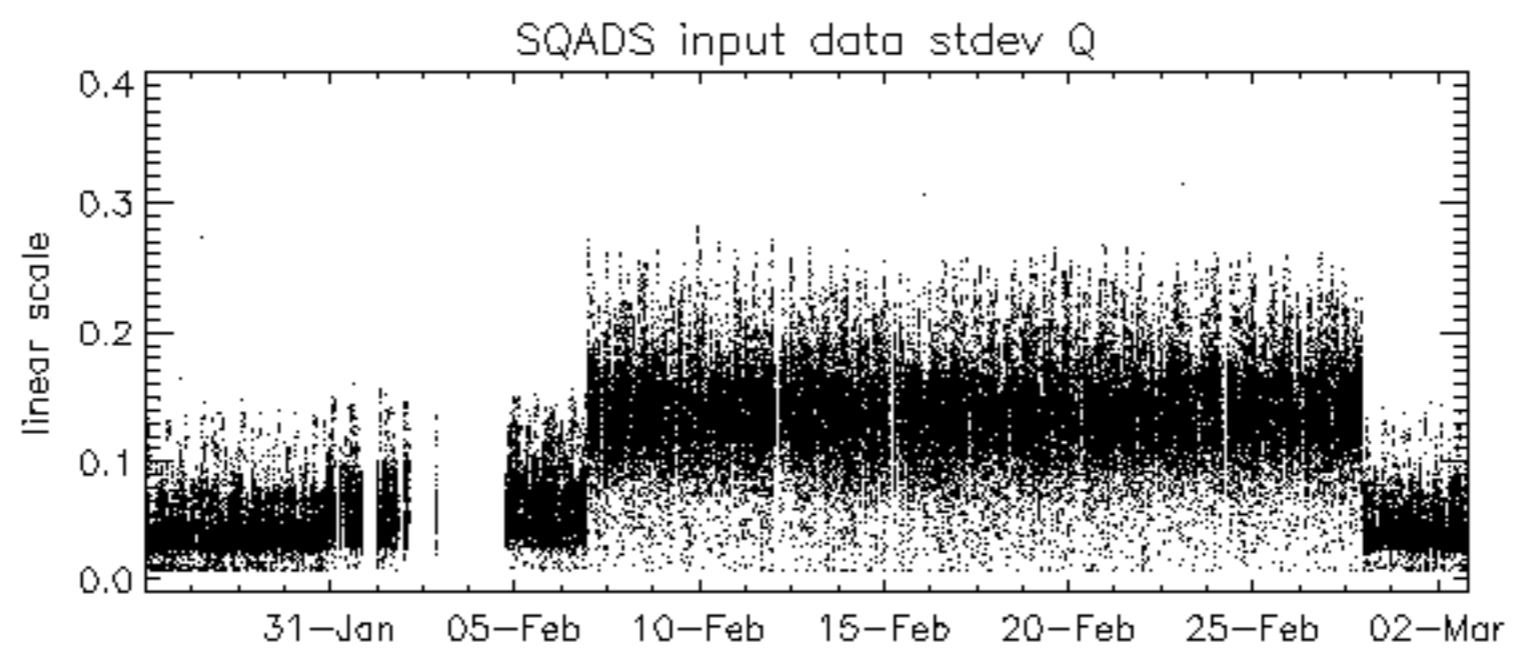
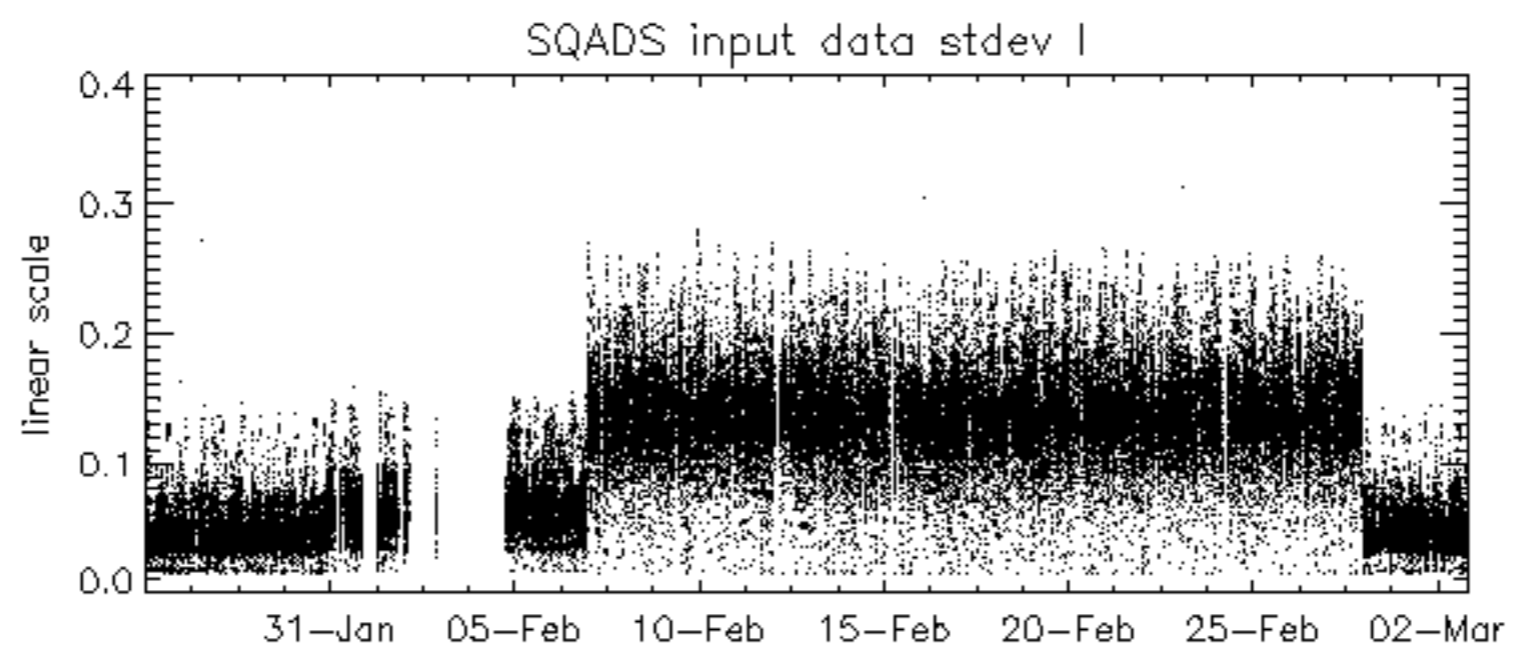
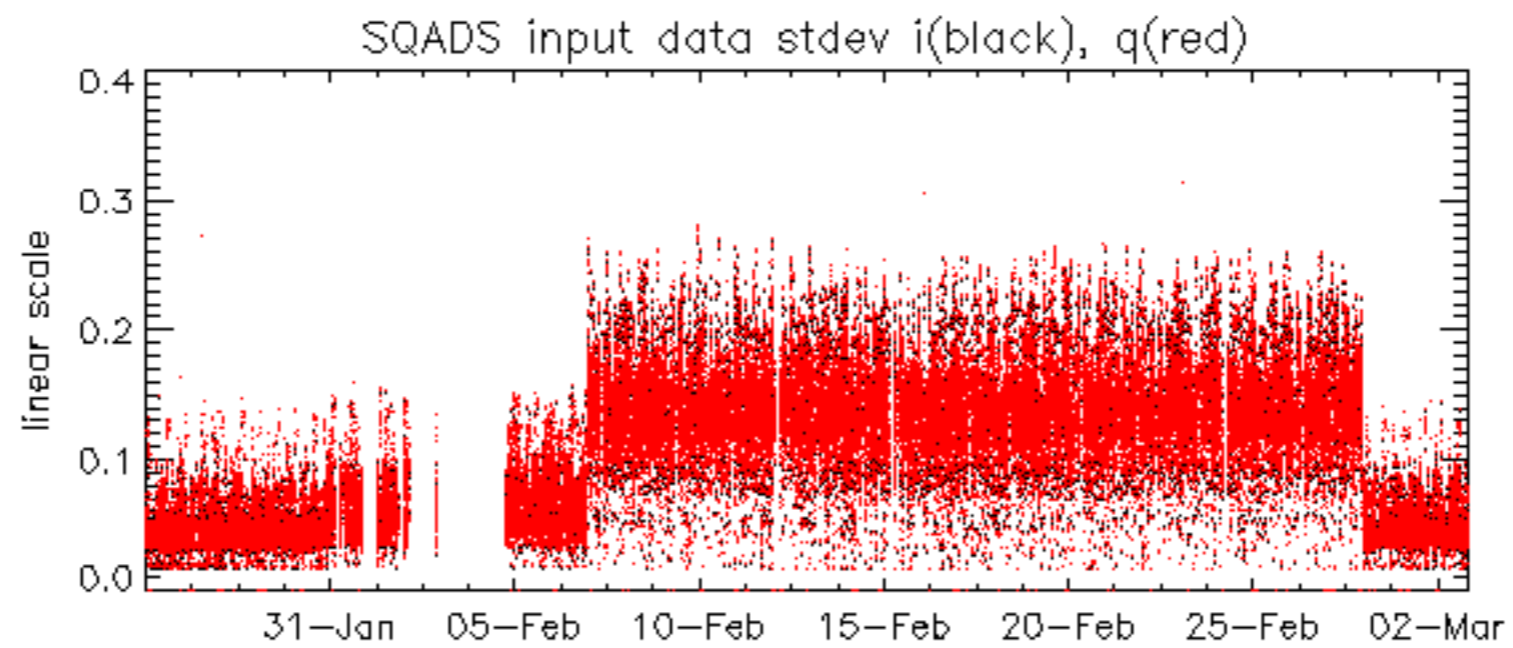
No anomalies observed.







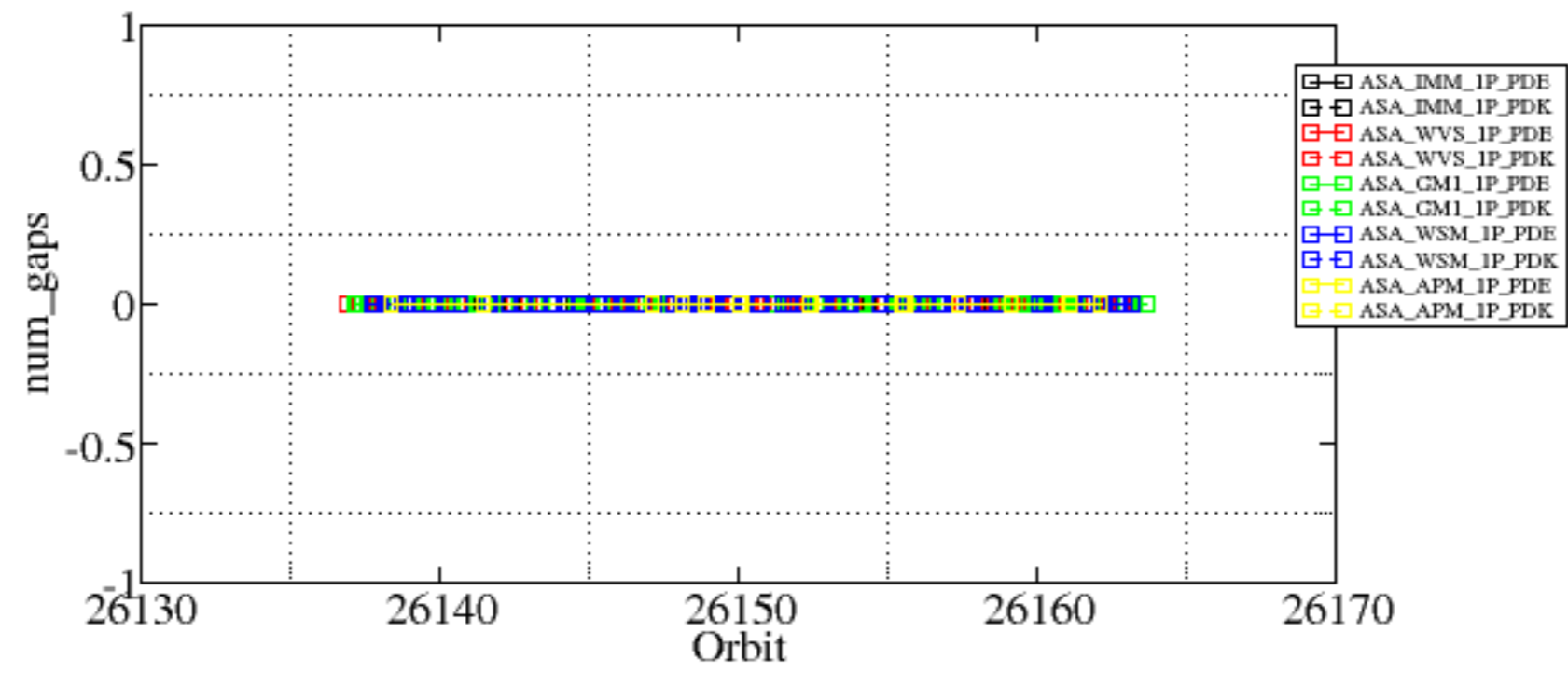


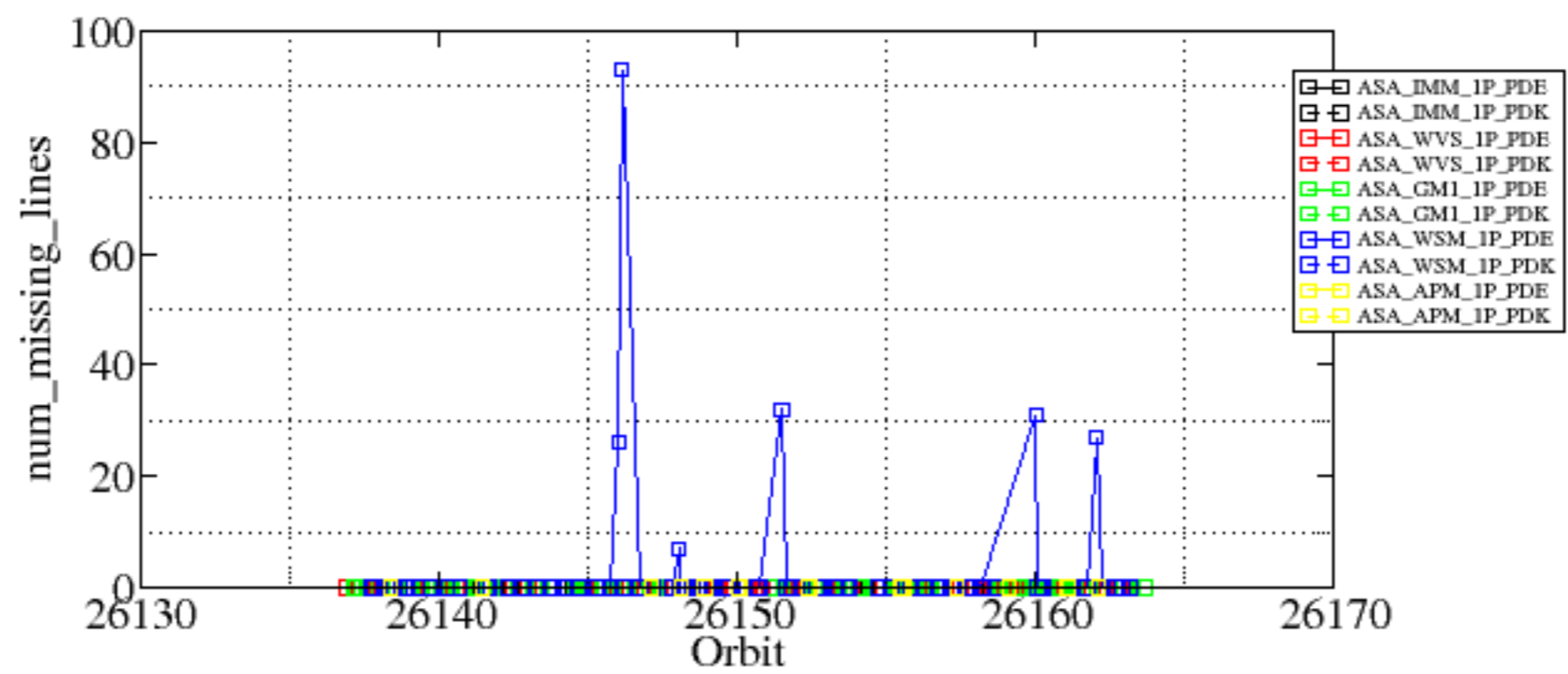


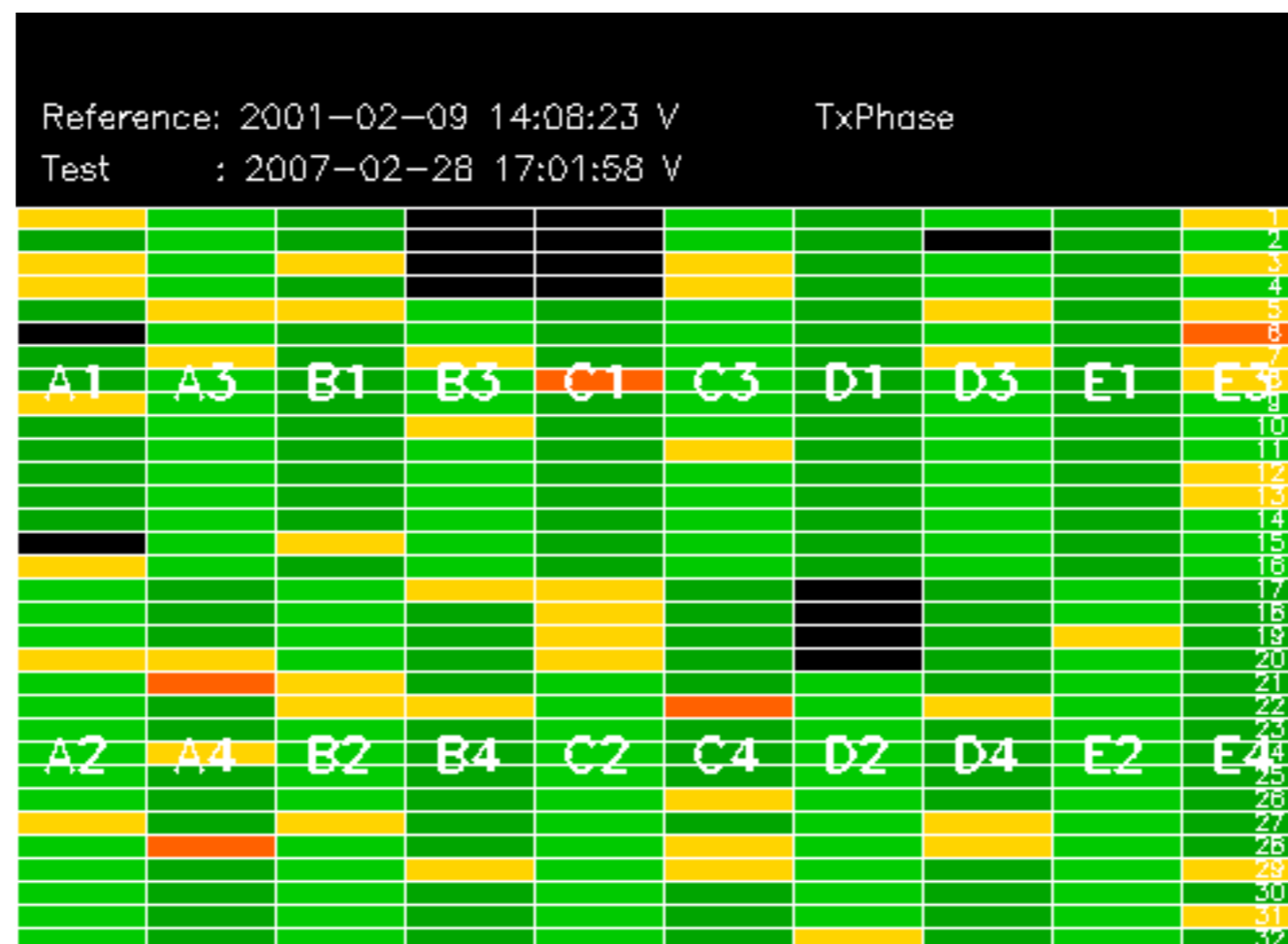
Summary of analysis for the last 3 days 2007030[812]

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

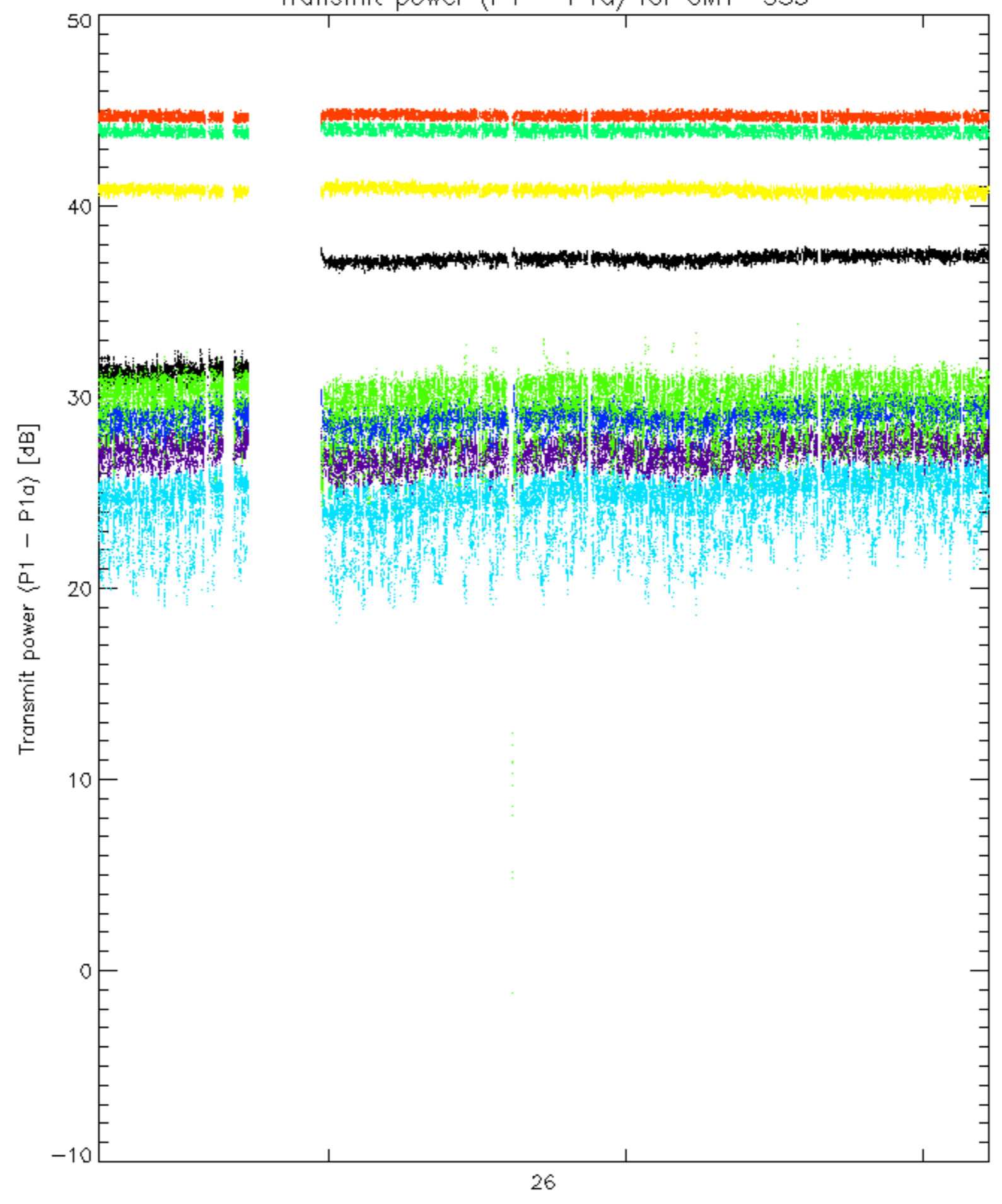
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070301_152552_000001832056_00040_26146_6817.N1	0	26
ASA_WSM_1PNPDE20070301_153707_000002392056_00040_26146_6781.N1	0	93
ASA_WSM_1PNPDE20070301_184853_000000852056_00042_26148_6897.N1	0	7
ASA_WSM_1PNPDE20070302_003405_000002632056_00045_26151_7324.N1	0	32
ASA_WSM_1PNPDE20070302_145414_000000852056_00054_26160_8003.N1	0	31
ASA_WSM_1PNPDE20070302_181712_000000852056_00056_26162_8077.N1	0	27



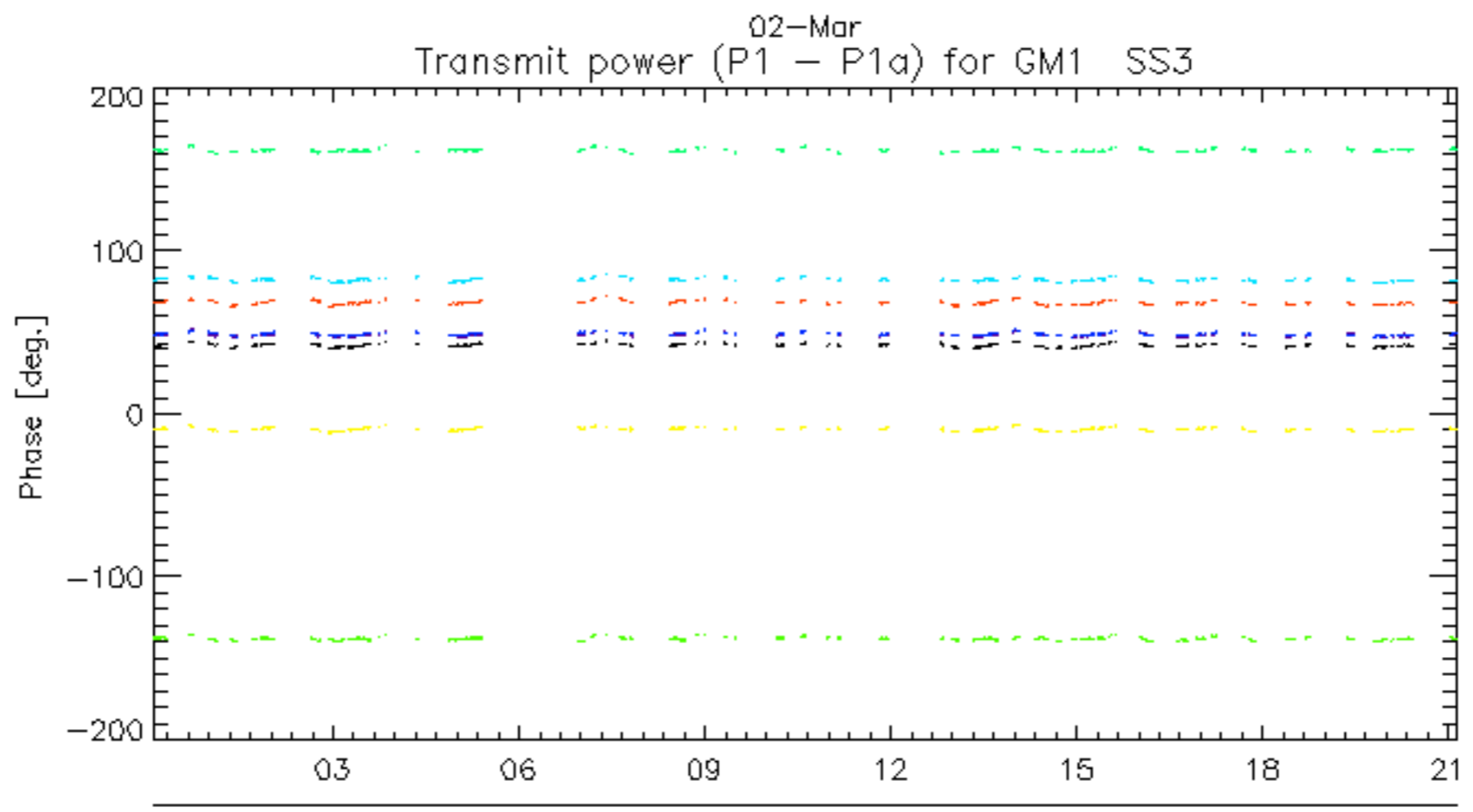
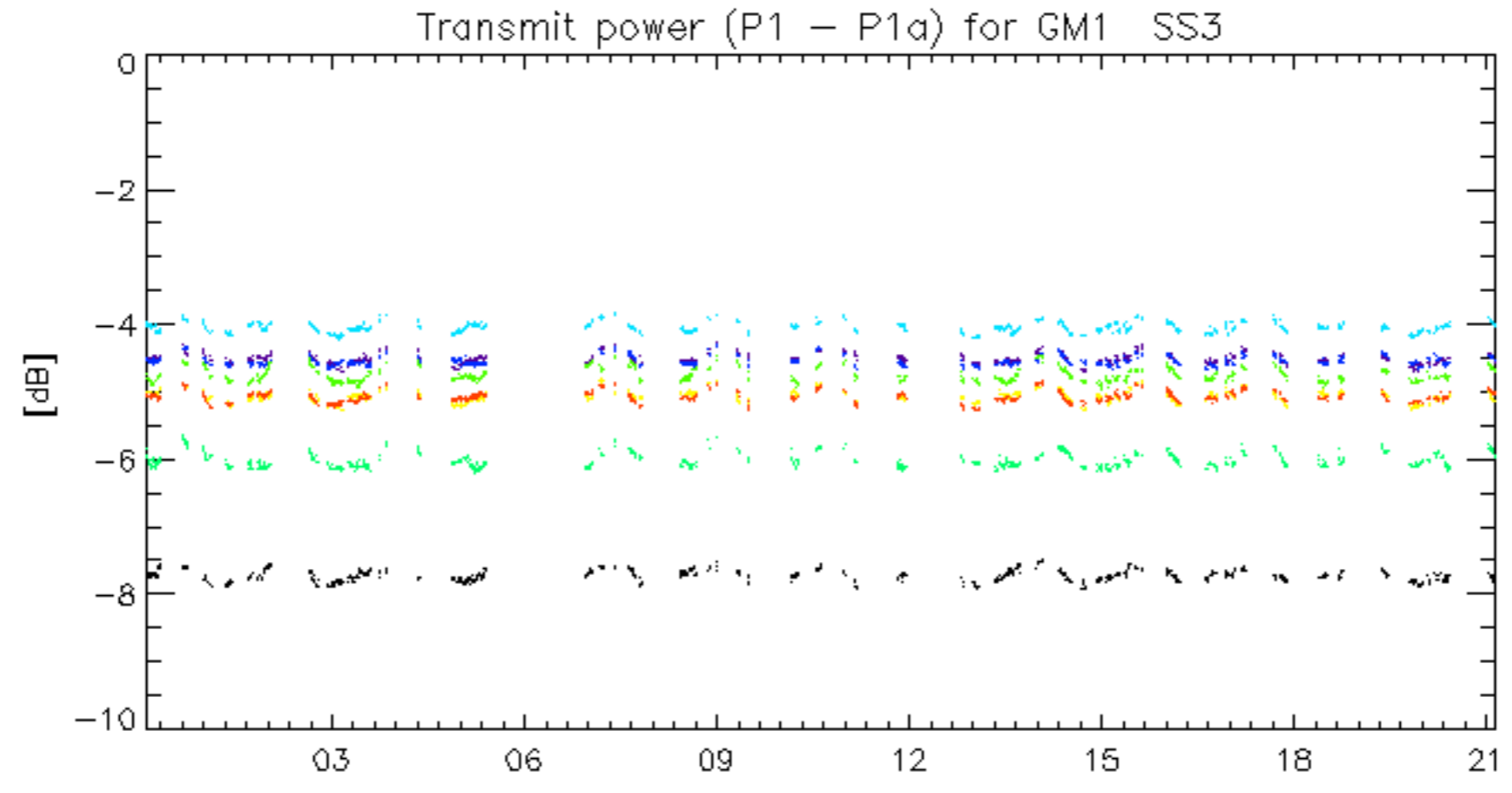




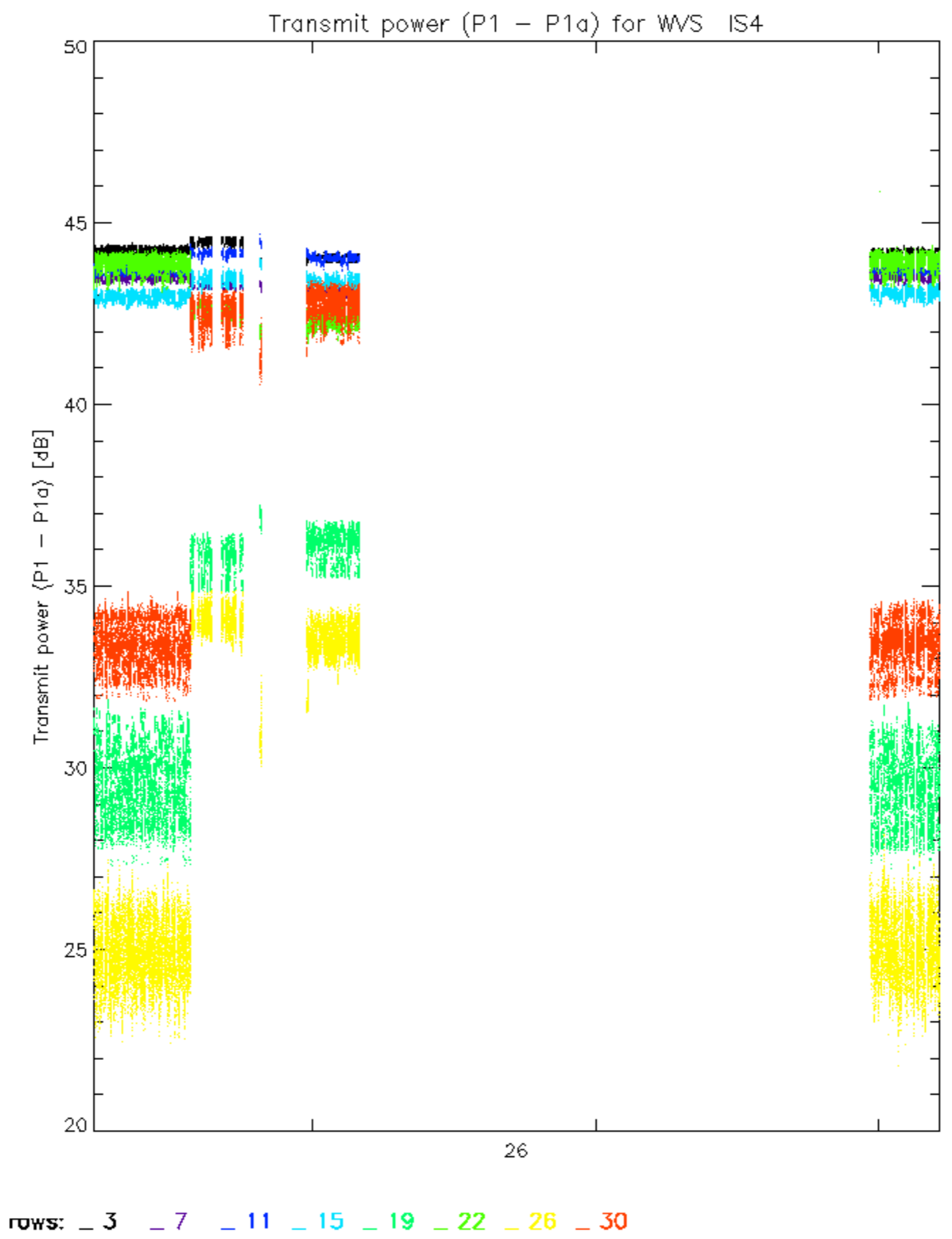
Transmit power (P1 - P1a) for GM1 SS3

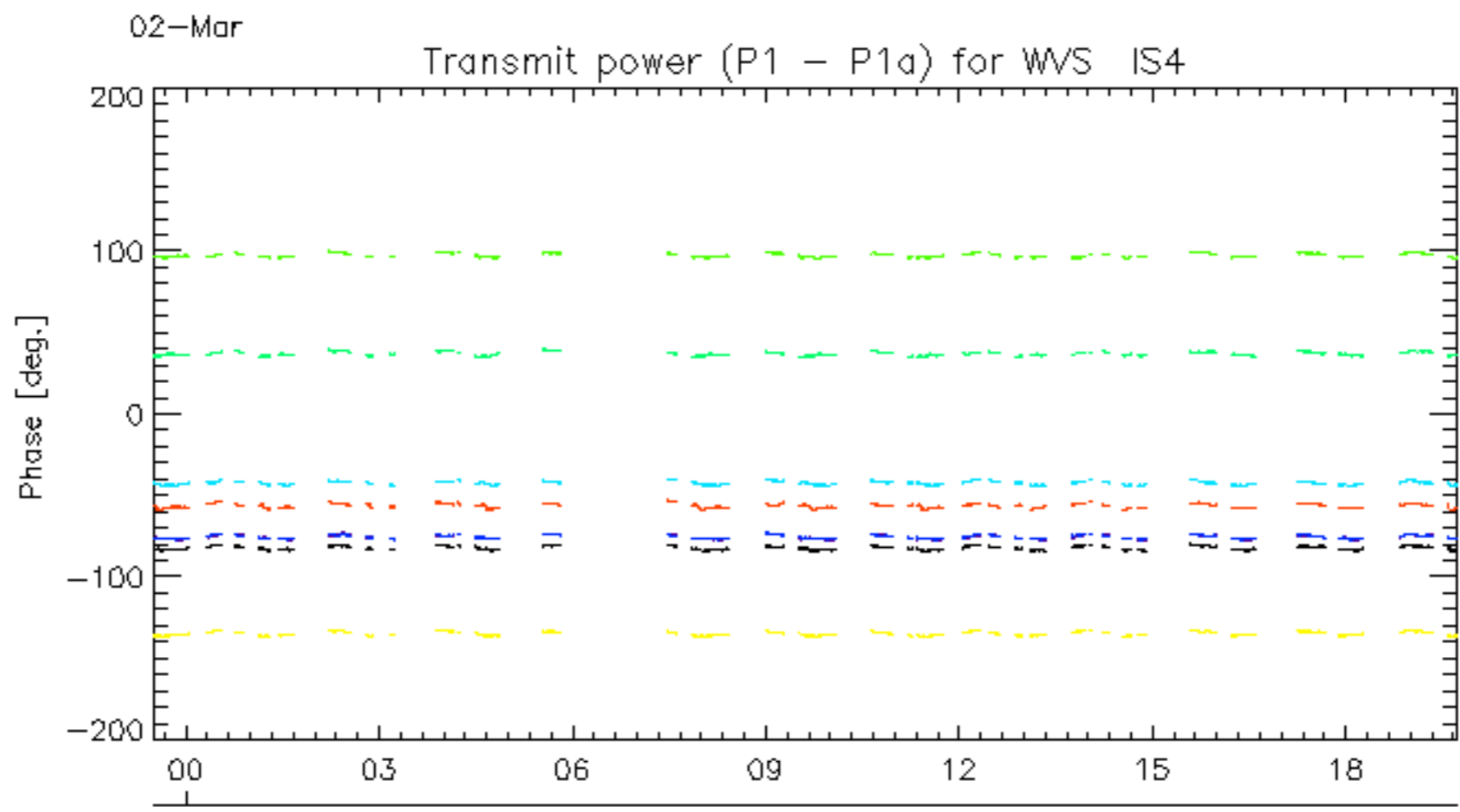
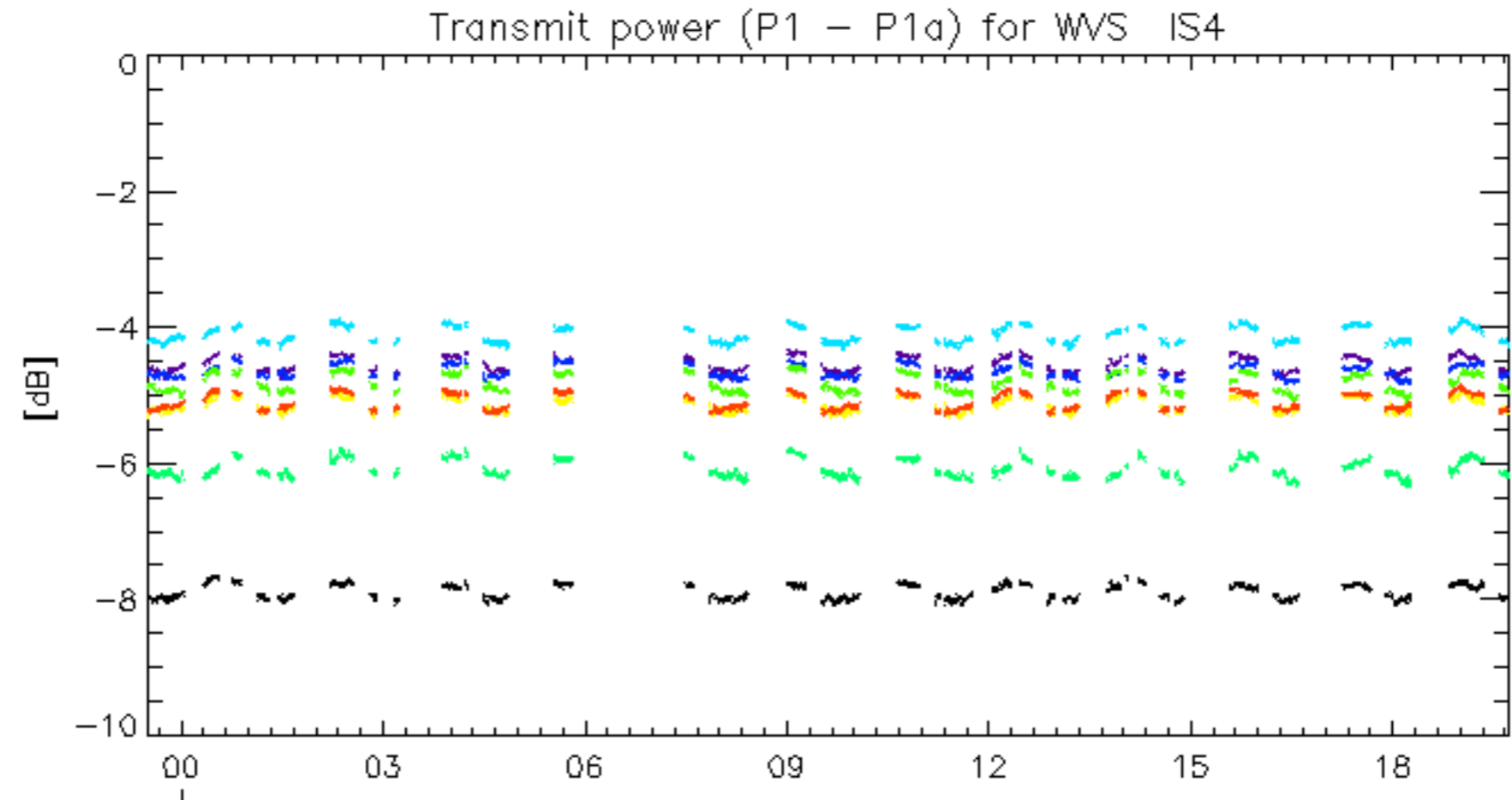


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: 3 7 11 15 19 22 26 30





02-Mar

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

No unavailabilities during the reported period.