PRELIMINARY REPORT OF 070326

last update on Mon Mar 26 17:52:14 GMT 2007

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 2007-03-25 00:00:00 to 2007-03-26 17:52:14

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	35	63	0	4	11
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	35	63	0	4	11
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	35	63	0	4	11
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	35	63	0	4	11

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	45	60	11	7	22
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	45	60	11	7	22
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	45	60	11	7	22
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	60	11	7	22

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20070325 053207
H	20070326 050029

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

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	-15.115415	0.121072	0.015520
7	P1a	-17.481049	0.104654	-0.108763
11	P1a	-17.269464	0.352222	-0.002507
15	P1a	-12.886766	0.090277	0.010434
19	P1a	-15.165294	0.077343	-0.064669
22	P1a	-15.486556	0.575601	-0.380670
26	P1a	-15.079309	0.486265	-0.169911
30	P1a	-17.404490	0.314725	-0.247743

P1\t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.743851	0.010415	-0.023175
7	P1	-3.134812	0.008632	-0.006522
11	P1	-4.167715	0.015383	-0.037756
15	P1	-6.375243	0.016496	0.020865
19	P1	-3.774505	0.007584	-0.019277
22	P1	-4.676972	0.051656	-0.094967
26	P1	-3.924571	0.043096	-0.023267
30	P1	-5.917178	0.078926	-0.109176

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.642328	0.093122	0.058840
7	P2	-21.603441	0.081824	0.043007
11	P2	-15.502274	0.100485	0.150399
15	P2	-7.077514	0.094034	-0.029858
19	P2	-9.106380	0.083382	-0.003885
22	P2	-18.090969	0.077704	0.051202
26	P2	-16.557932	0.085975	-0.050402
30	P2	-19.320883	0.080579	0.099054

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.233170	0.006576	0.011847
7	P3	-8.233170	0.006576	0.011847
11	P3	-8.233170	0.006576	0.011847
15	P3	-8.233170	0.006576	0.011847
19	P3	-8.233170	0.006576	0.011847
22	P3	-8.233170	0.006576	0.011847
26	P3	-8.233152	0.006576	0.011868
30	P3	-8.233152	0.006576	0.011868

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	-11.095863	0.053366	-0.093000
7	P1a	-10.072712	0.139241	-0.023575
11	P1a	-10.681841	0.064689	-0.039735
15	P1a	-10.942204	0.141972	0.087992
19	P1a	-15.712880	0.072213	-0.135478
22	P1a	-20.884027	1.512162	0.019601
26	P1a	-15.243081	0.311744	-0.005862
30	P1a	-18.377079	0.725624	0.029832

P1\t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.413492	0.041632	-0.064327
7	P1	-2.426270	0.024014	-0.007809
11	P1	-2.921974	0.019651	0.009453
15	P1	-3.849987	0.040046	-0.021034
19	P1	-3.562263	0.011128	-0.038447
22	P1	-5.031486	0.032932	0.047384

26	P1	-5.951938	0.054204	-0.032592
30	P1	-5.273384	0.031389	-0.020408

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.103777	0.037311	-0.023820
7	P2	-21.952333	0.060504	-0.003520
11	P2	-10.635264	0.033708	0.032453
15	P2	-4.829573	0.031037	-0.022292
19	P2	-6.812025	0.033724	-0.008265
22	P2	-8.077211	0.034602	0.004020
26	P2	-24.288576	0.041636	0.032355
30	P2	-21.718067	0.043349	0.054110

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.060875	0.003984	-0.005995
7	P3	-8.060787	0.003983	-0.006190
11	P3	-8.060863	0.003978	-0.006336
15	P3	-8.060983	0.003983	-0.006016
19	P3	-8.060888	0.003997	-0.005613
22	P3	-8.060931	0.003988	-0.006438
26	P3	-8.060726	0.003965	-0.006147
30	P3	-8.060881	0.003976	-0.006596

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	
	stdev	
MEAN Q	mean	
	stdev	

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	
	stdev	
STDEV Q	mean	
	stdev	

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2007032[456]
The assumptions 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_GM1_1PNPDK20070324_102703_000002052056_00366_26472_1624.N1	0	7
ASA_WSM_1PNPDE20070325_143215_000000852056_00383_26489_6157.N1	0	16
ASA_WSM_1PNPDE20070325_233836_000001842056_00388_26494_6666.N1	0	62
ASA_WSM_1PNPDK20070324_103147_000002192056_00366_26472_1616.N1	0	3
ASA_WSM_1PNPDK20070324_151903_000001282056_00369_26475_1989.N1	10	436

ASA_APM_1PNPDE20070325_161458_000000402056_00384_26490_6131.N1	11	0

7 - Doppler Analysis

Preliminary report.The data is not yet controled

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

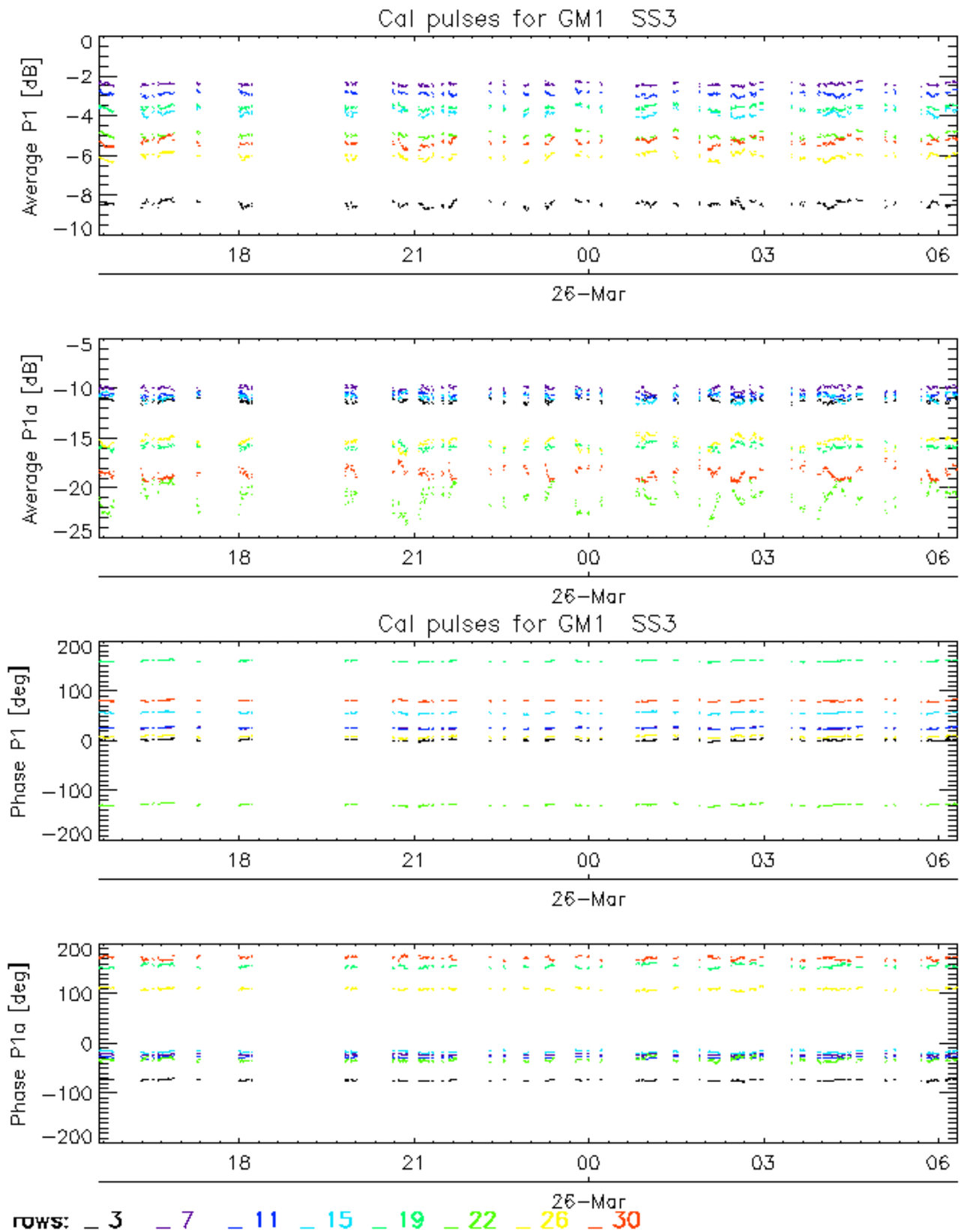
7.4 - Unbiased Doppler Error for GM1

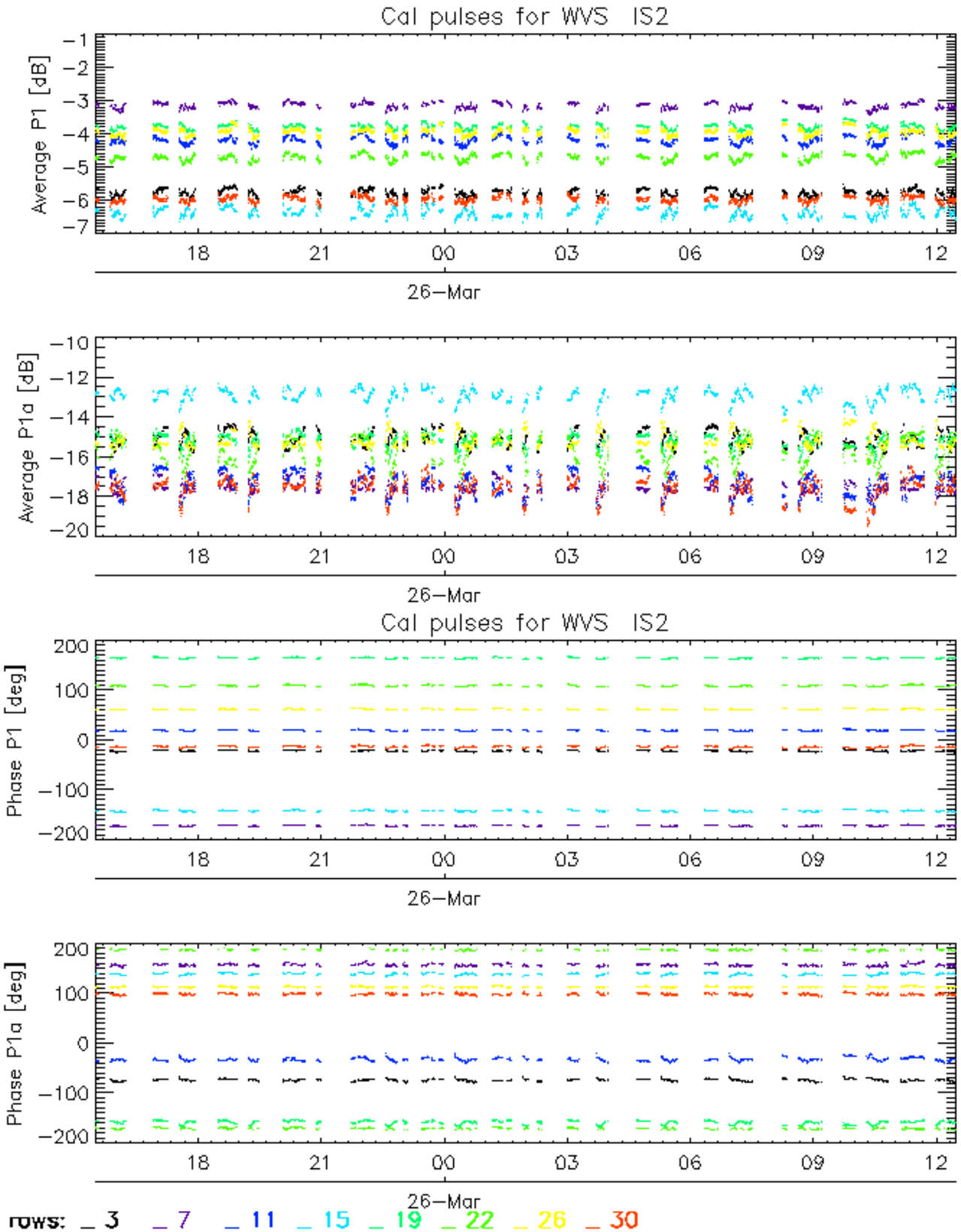
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

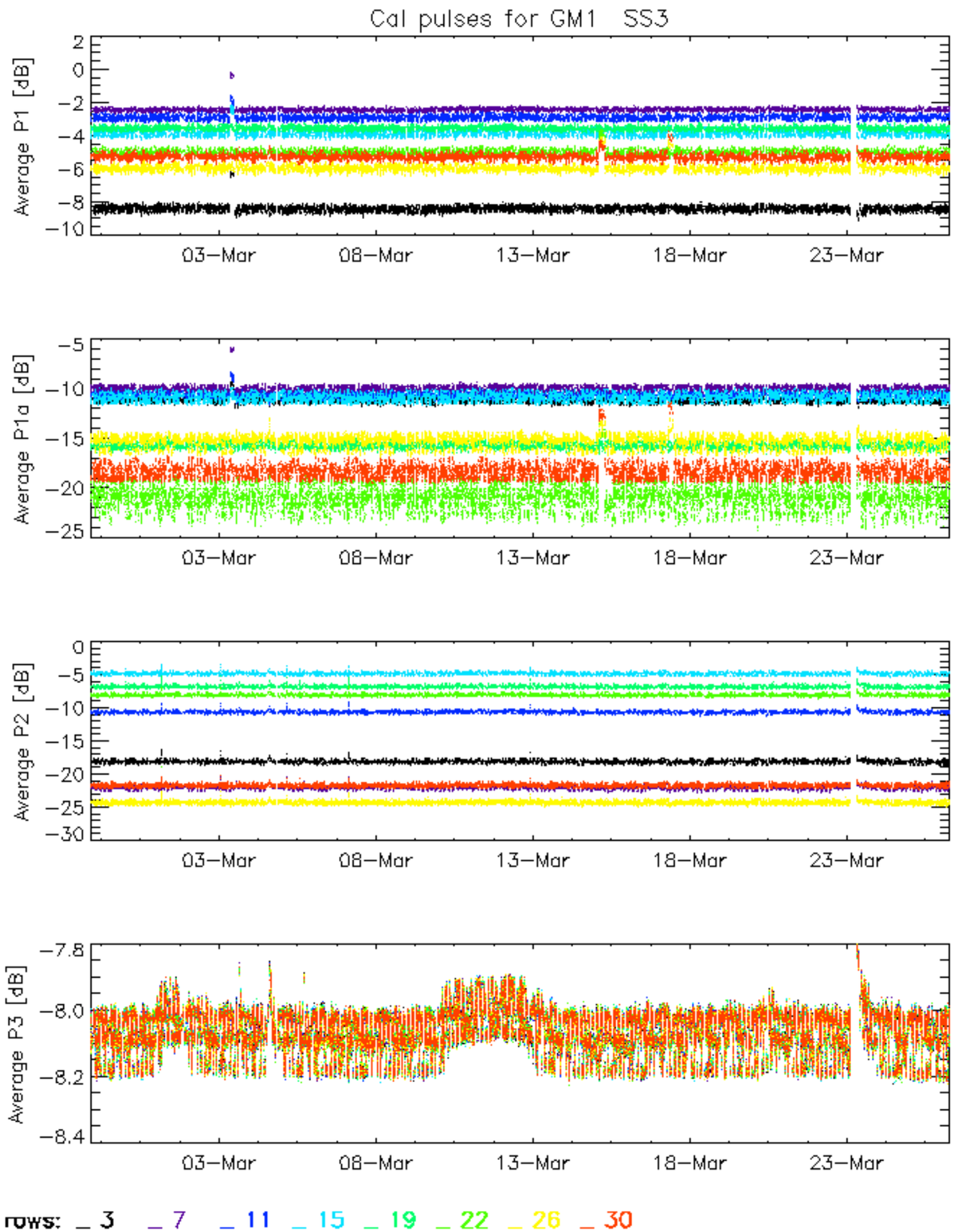
7.5 - Absolute Doppler for GM1

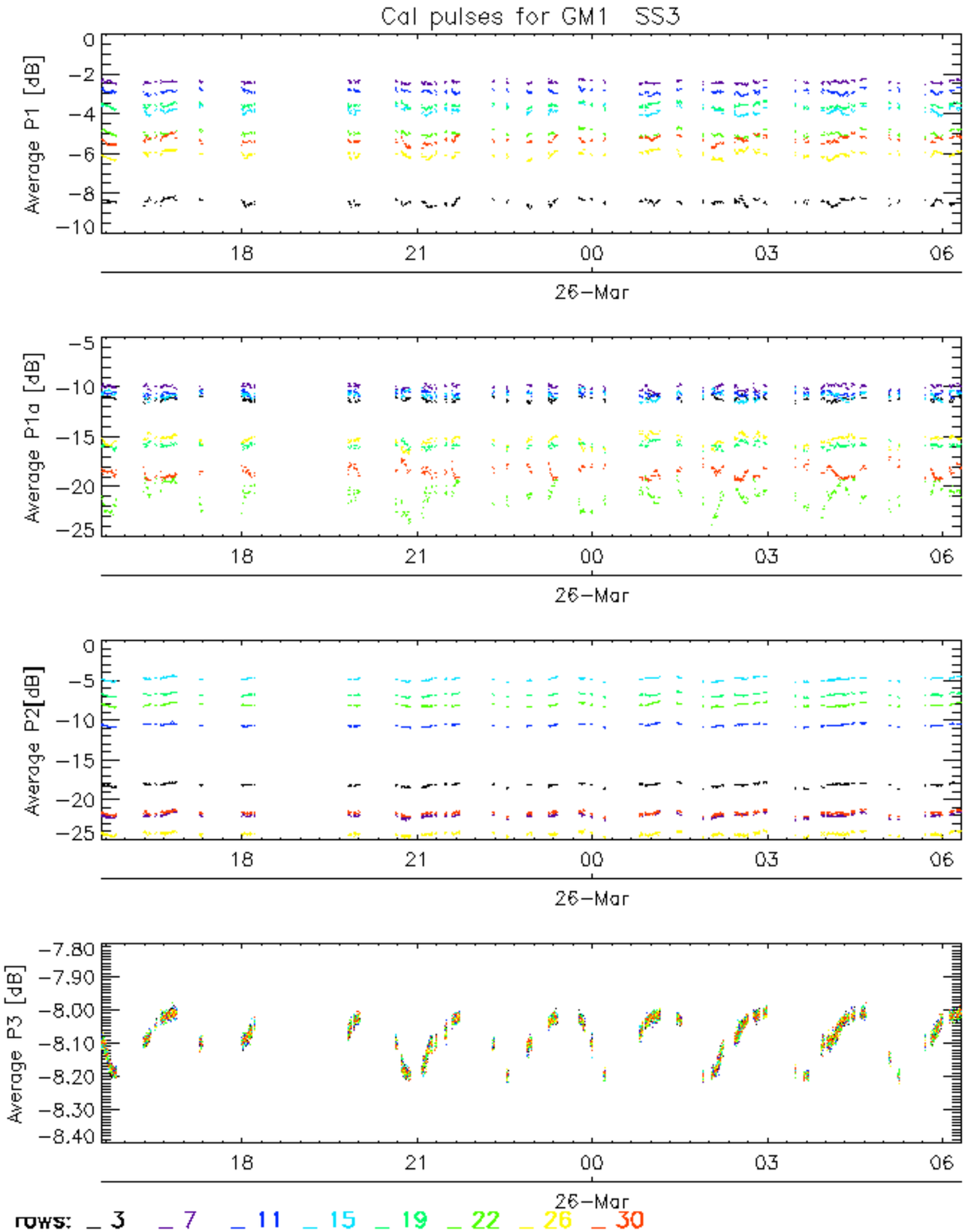
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

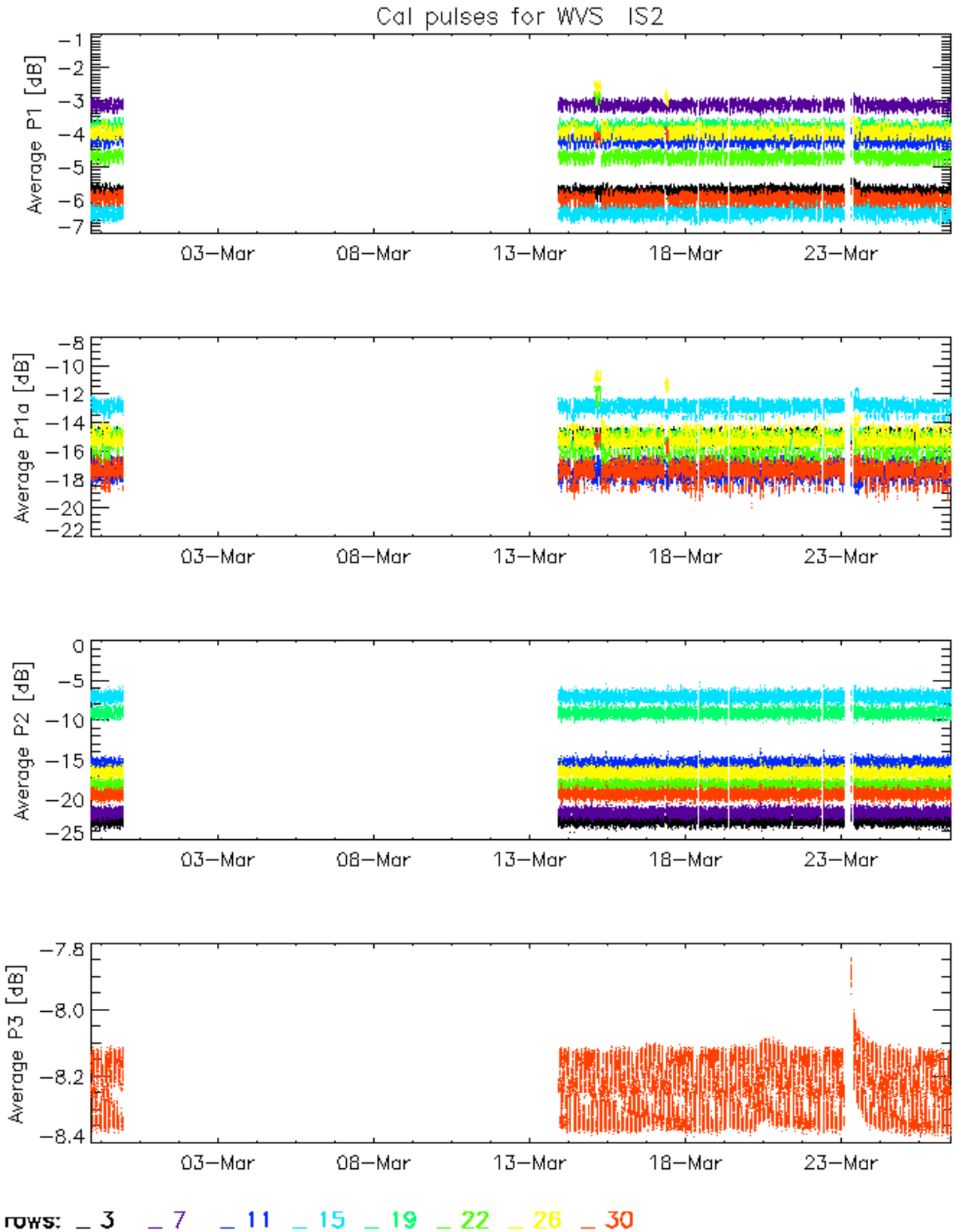
7.6 - Doppler evolution versus ANX for GM1

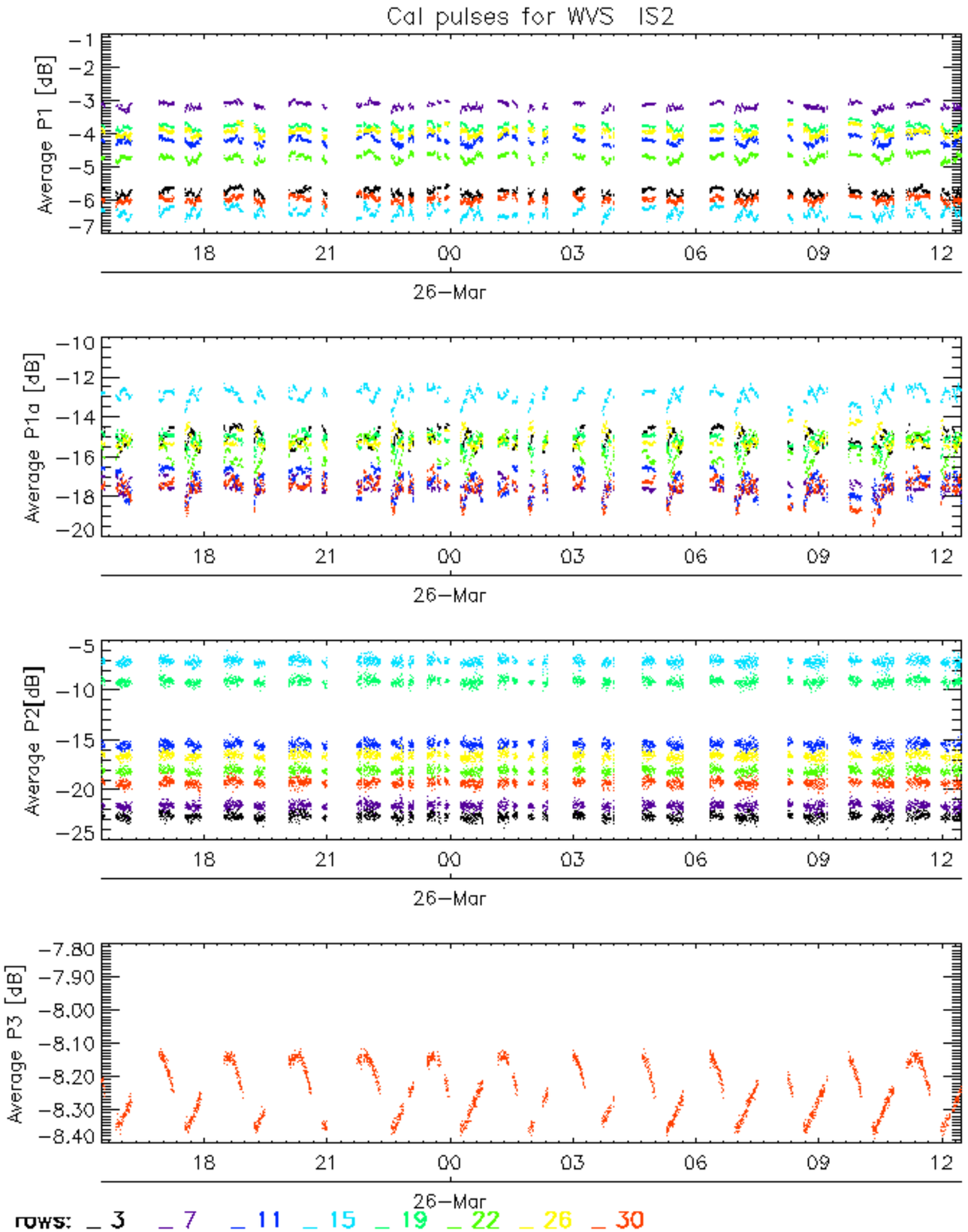

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
18
21
00
03
06
26−Mar
Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
06
26−Mar
Cal pulses for GM1 SS3
Phase P1 [deg]
200
100
0
−100
−200
18
21
00
03
06
26−Mar
Phase P1a [deg]
200
100
0
−100
−200
18
21
00
03
06
26−Mar
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
18
21
00
03
06
09
12
26−Mar
Average P1a [dB]
−10
−12
−14
−16
−18
−20
18
21
00
03
06
09
12
26−Mar
Cal pulses for WVS IS2
Phase P1 [deg]
200
100
0
−100
−200
18
21
00
03
06
09
12
26−Mar
Phase P1a [deg]
200
100
0
−100
−200
18
21
00
03
06
09
12
26−Mar
rows: 3 7 11 15 19 22 26 30


Cal pulses for GM1 SS3
Average P1 [dB]
2
0
−2
−4
−6
−8
−10
03−Mar
08−Mar
13−Mar
18−Mar
23−Mar
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
0
−5
−10
−15
−20
−25
−30
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

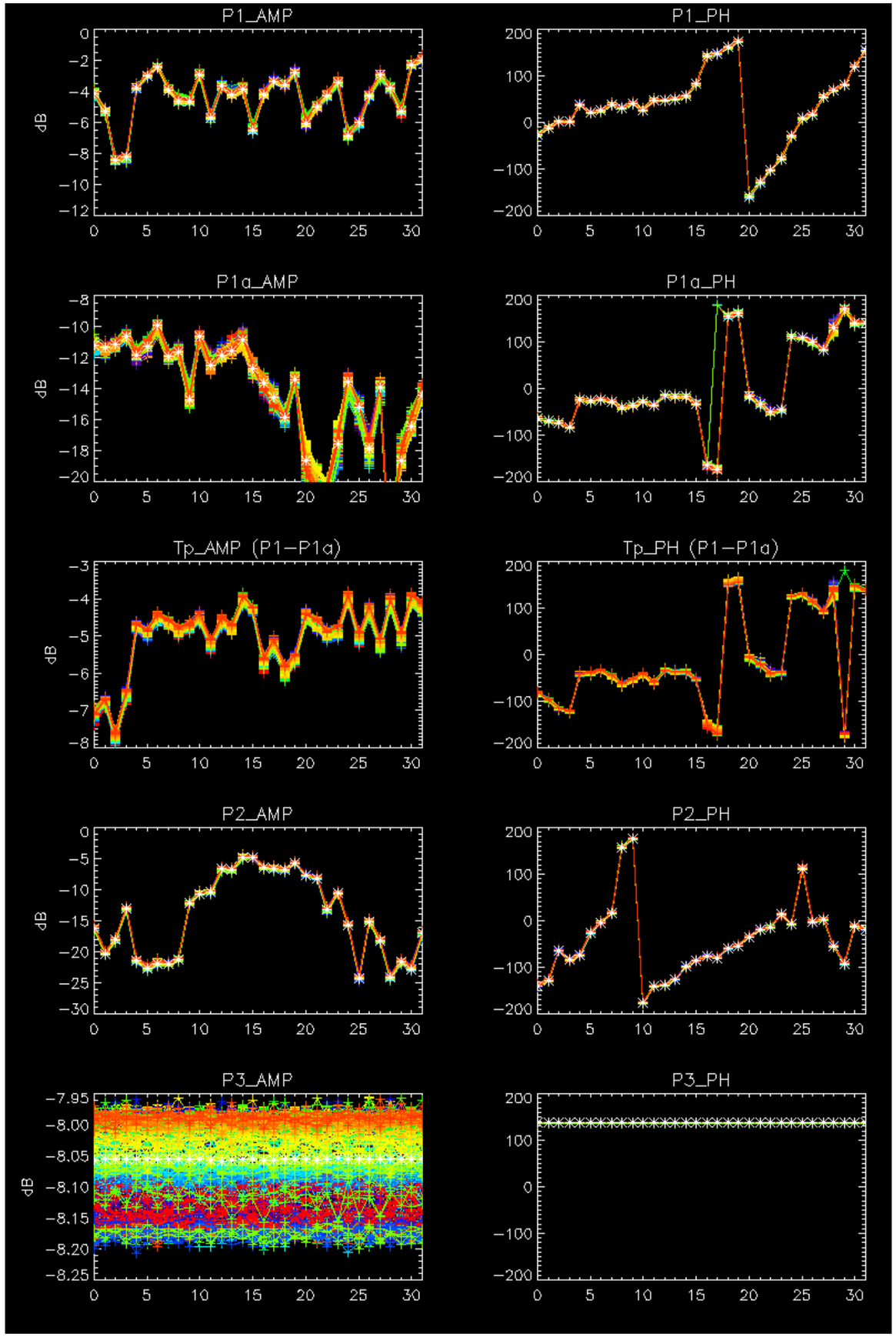

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
18
21
00
03
06
26−Mar
Average P1a [dB]
−5
−10
−15
−20
−25
18
21
00
03
06
26−Mar
Average P2[dB]
0
−5
−10
−15
−20
−25
18
21
00
03
06
26−Mar
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
06
26−Mar
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

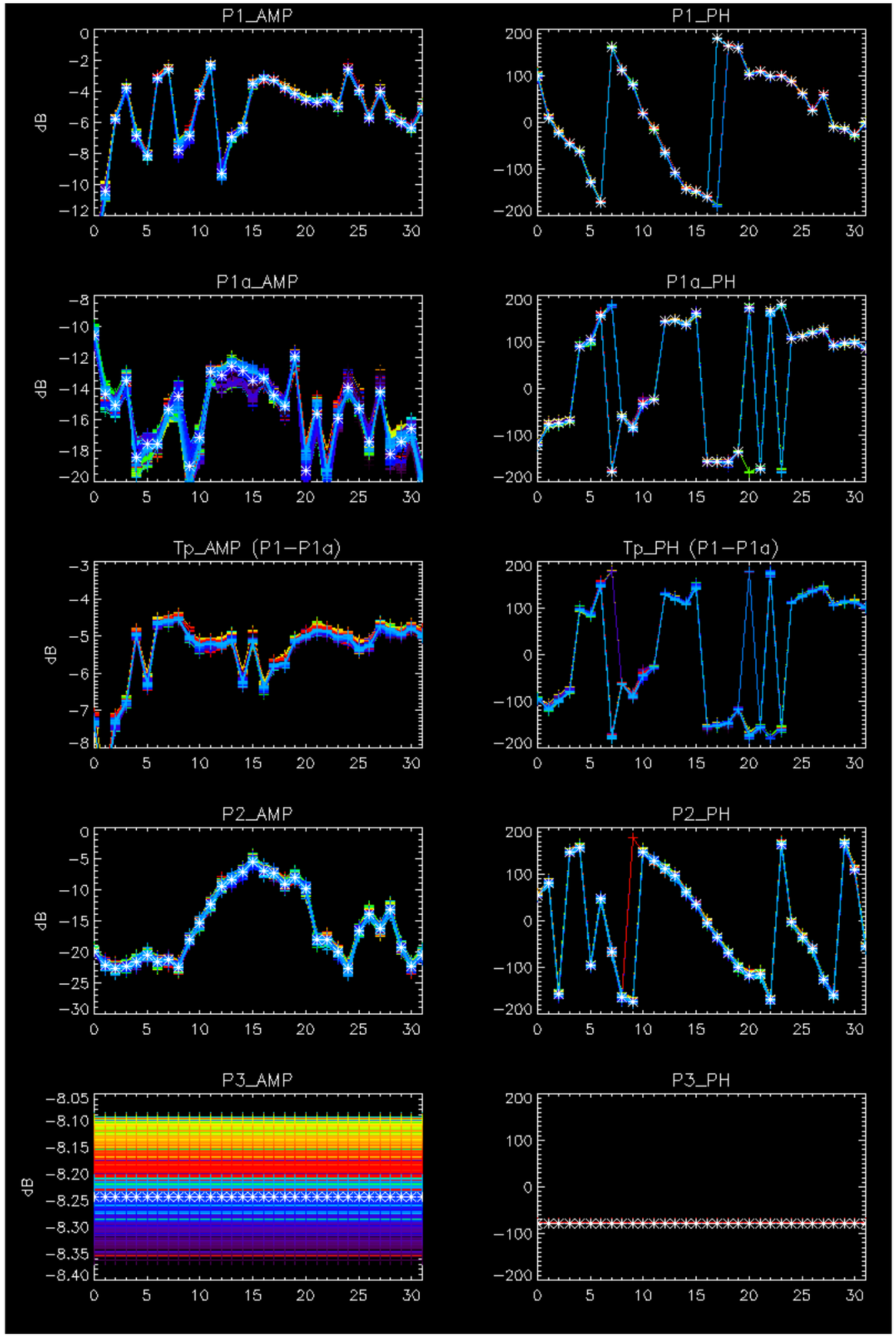

Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03−Mar
08−Mar
13−Mar
18−Mar
23−Mar
Average P1a [dB]
−8
−10
−12
−14
−16
−18
−20
−22
03−Mar
08−Mar
13−Mar
18−Mar
23−Mar
Average P2 [dB]
0
−5
−10
−15
−20
−25
03−Mar
08−Mar
13−Mar
18−Mar
23−Mar
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
03−Mar
08−Mar
13−Mar
18−Mar
23−Mar
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
18
21
00
03
06
09
12
26−Mar
Average P1a [dB]
−10
−12
−14
−16
−18
−20
18
21
00
03
06
09
12
26−Mar
Average P2[dB]
−5
−10
−15
−20
−25
18
21
00
03
06
09
12
26−Mar
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
18
21
00
03
06
09
12
26−Mar
rows: 3 7 11 15 19 22 26 30

No anomalies observed on available browse products

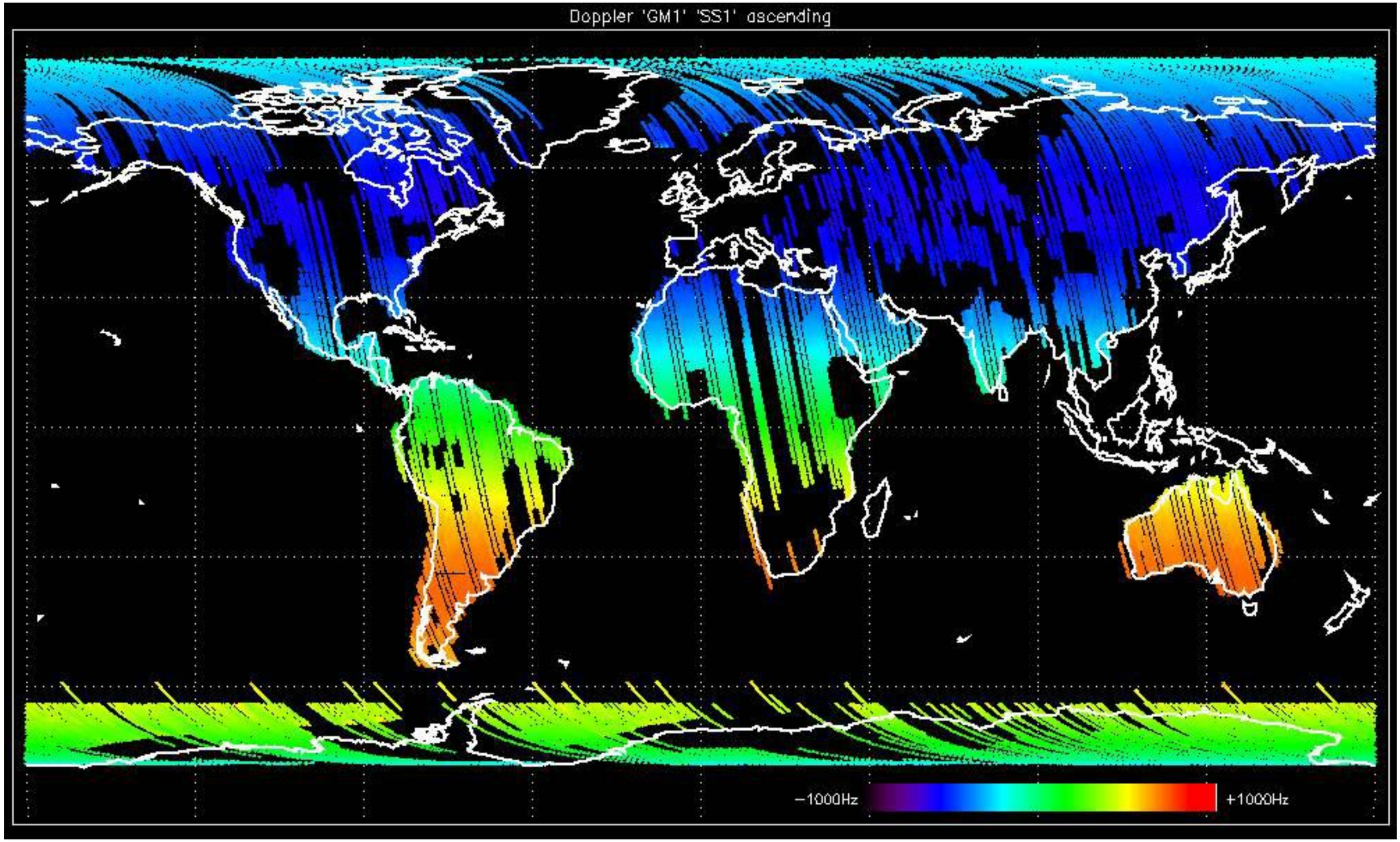
No anomalies observed.

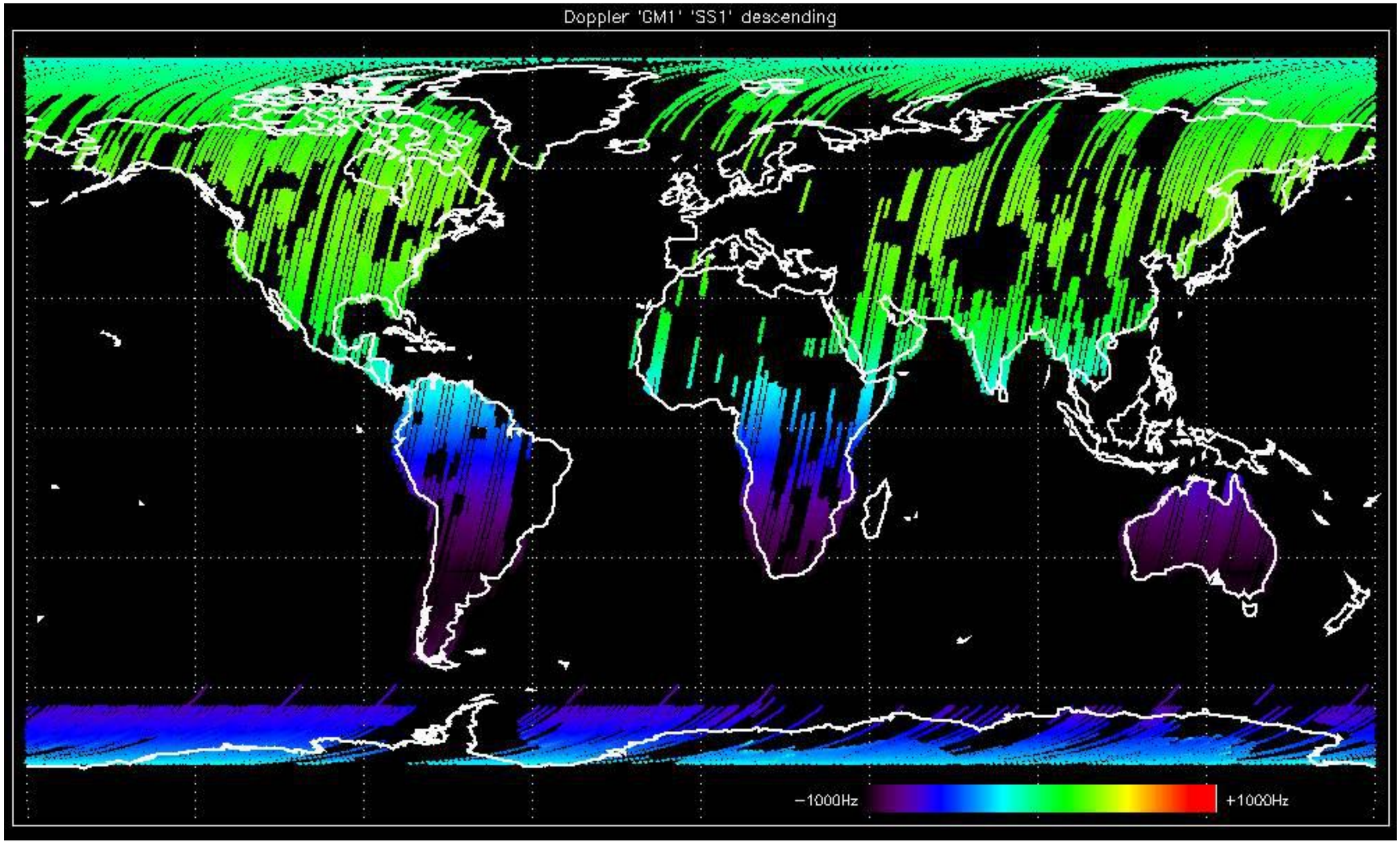

P1_AMP
dB
P1_PH
P1a_AMP
dB
P1a_PH
Tp_AMP (P1−P1a)
dB
Tp_PH (P1−P1a)
P2_AMP
dB
P2_PH
P3_AMP
dB
P3_PH

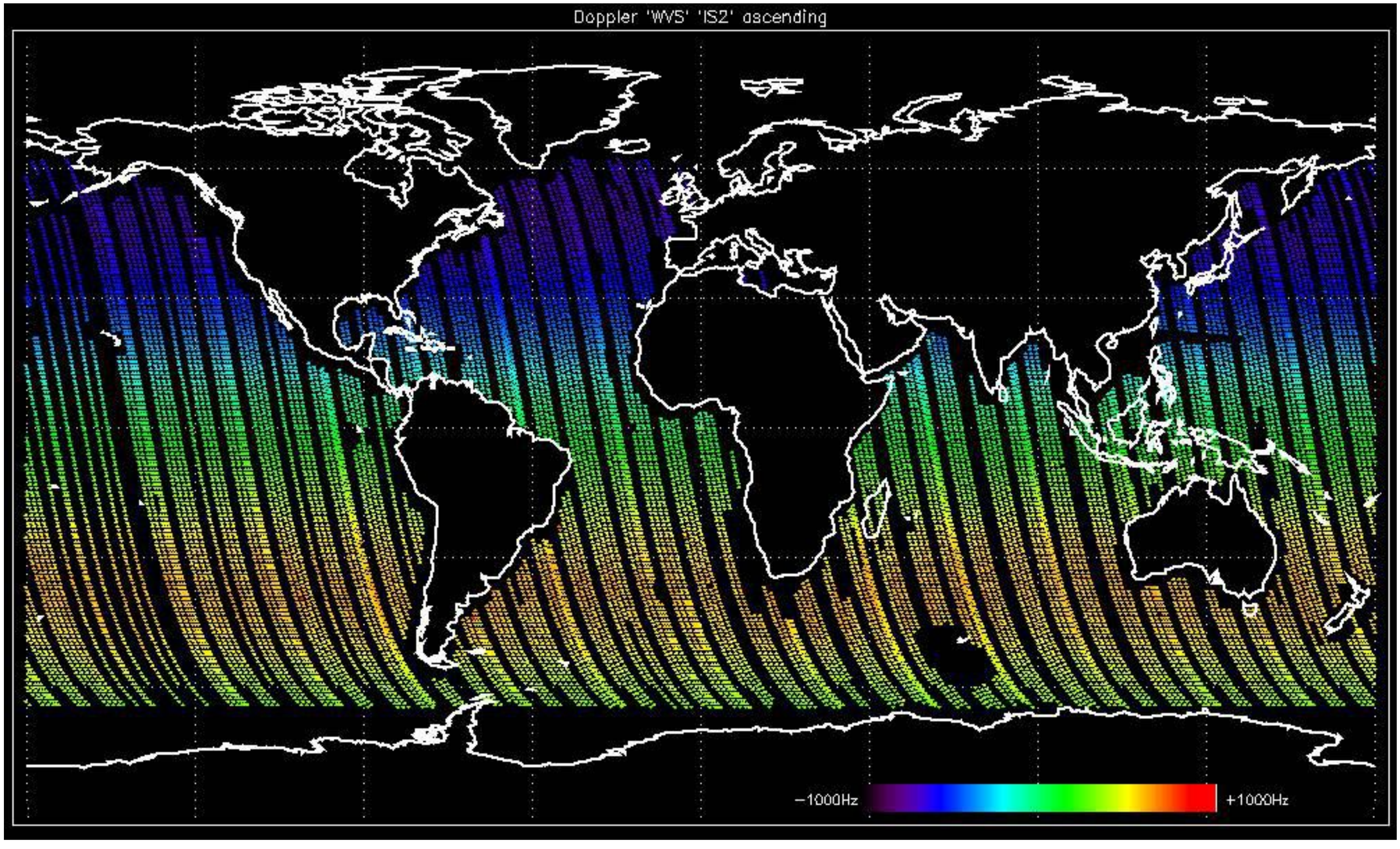

P1_AMP
P1_PH
P1a_AMP
P1a_PH
Tp_AMP (P1−P1a)
Tp_PH (P1−P1a)
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

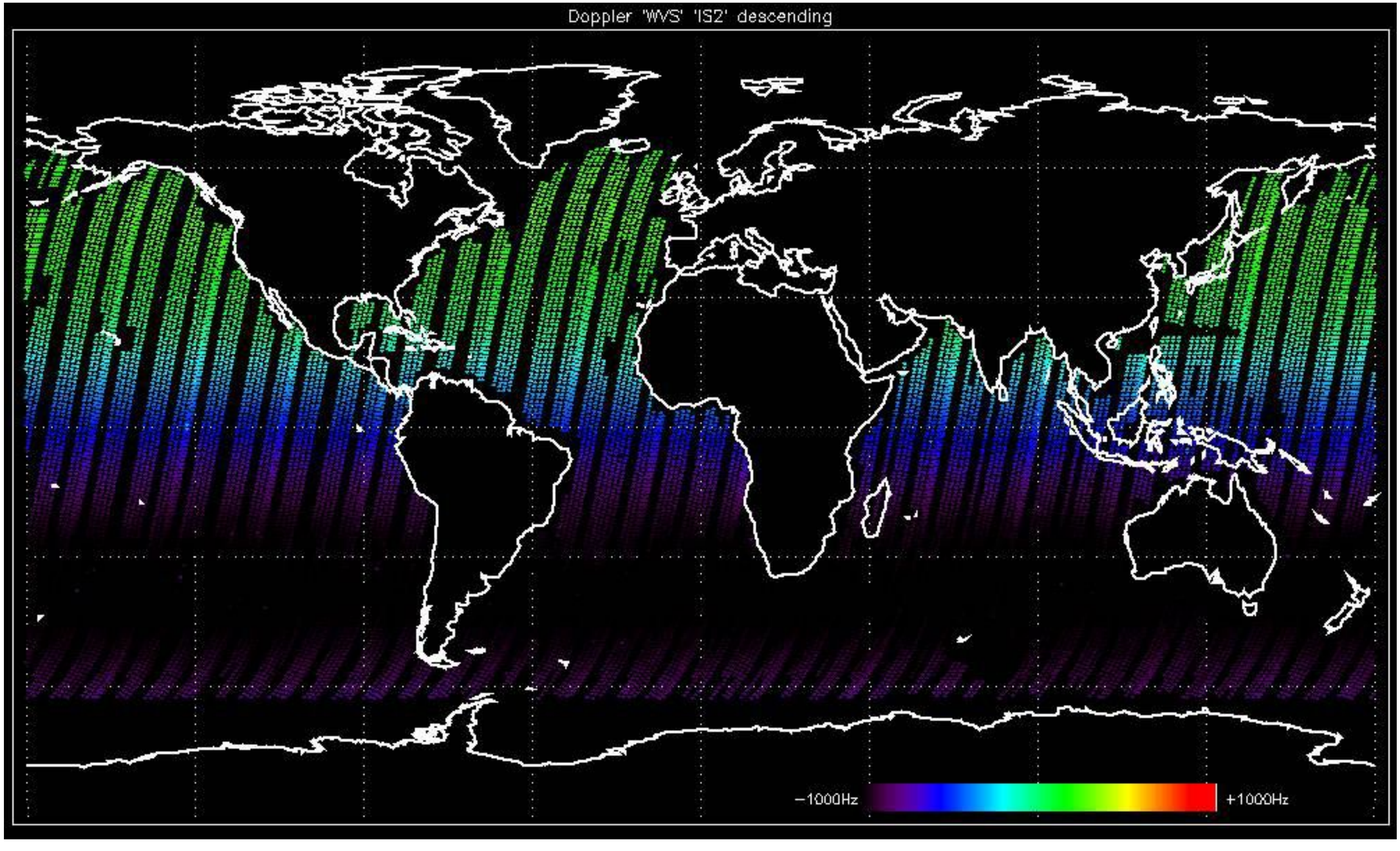
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

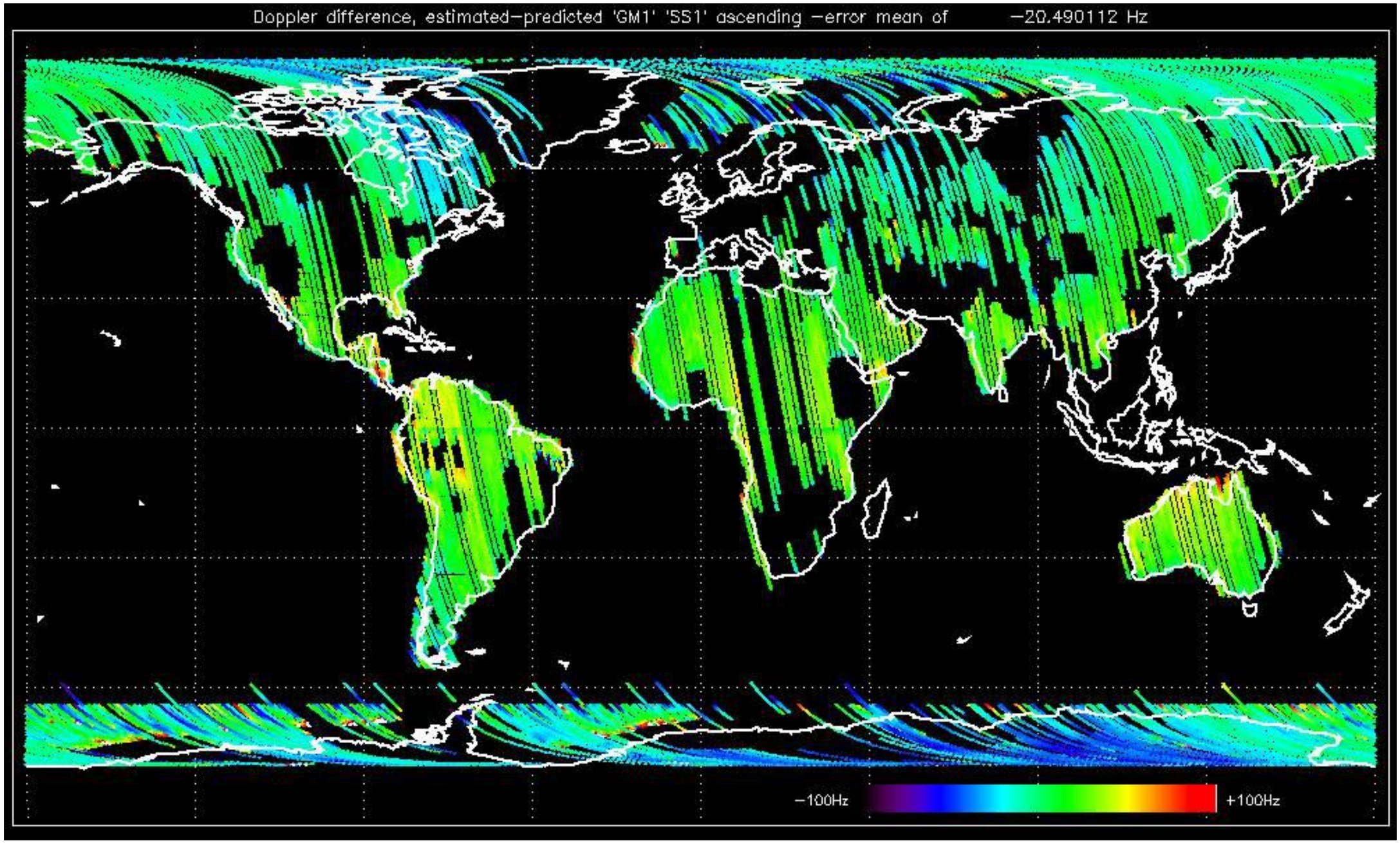
Preliminary report.The data is not yet controled

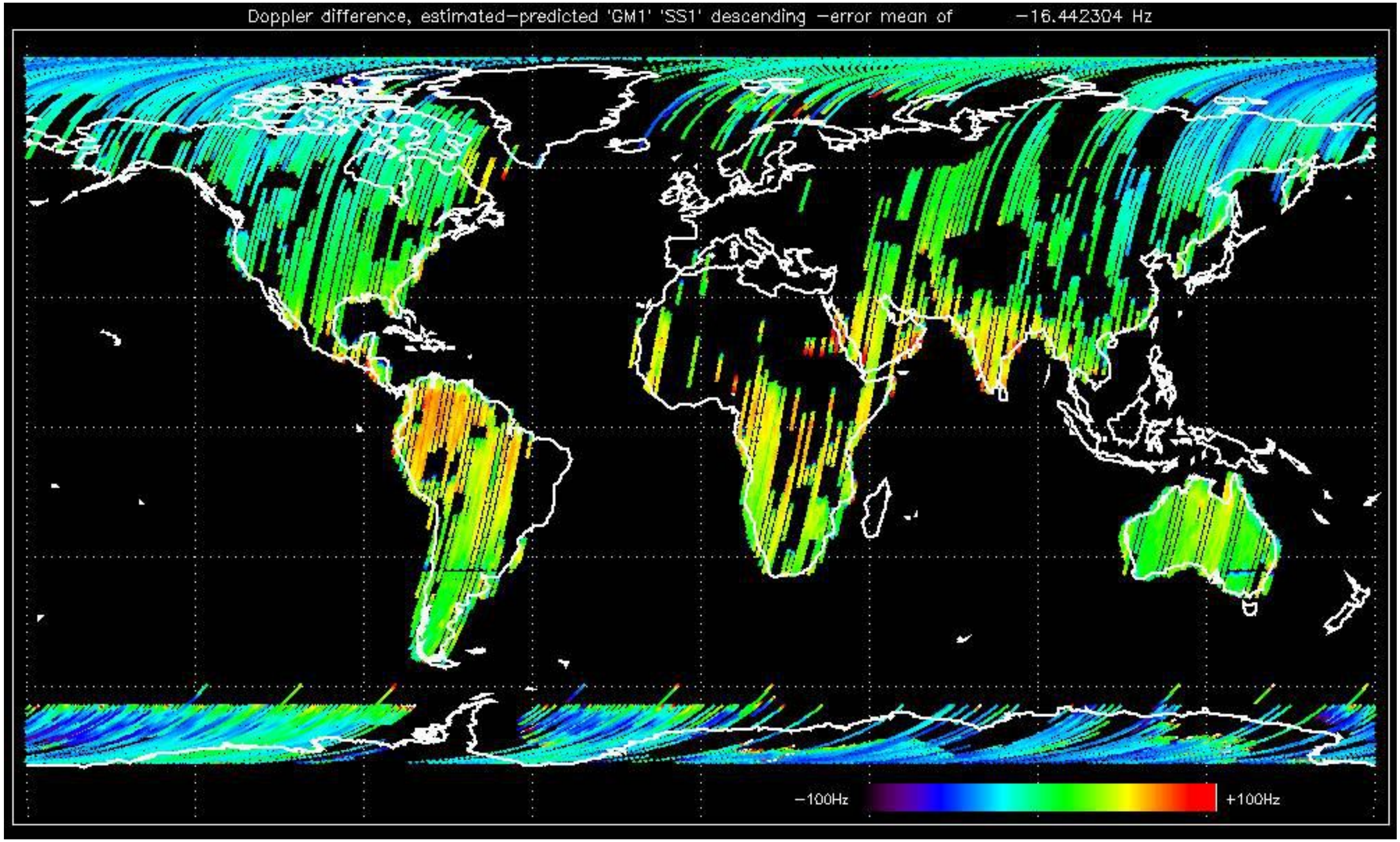

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

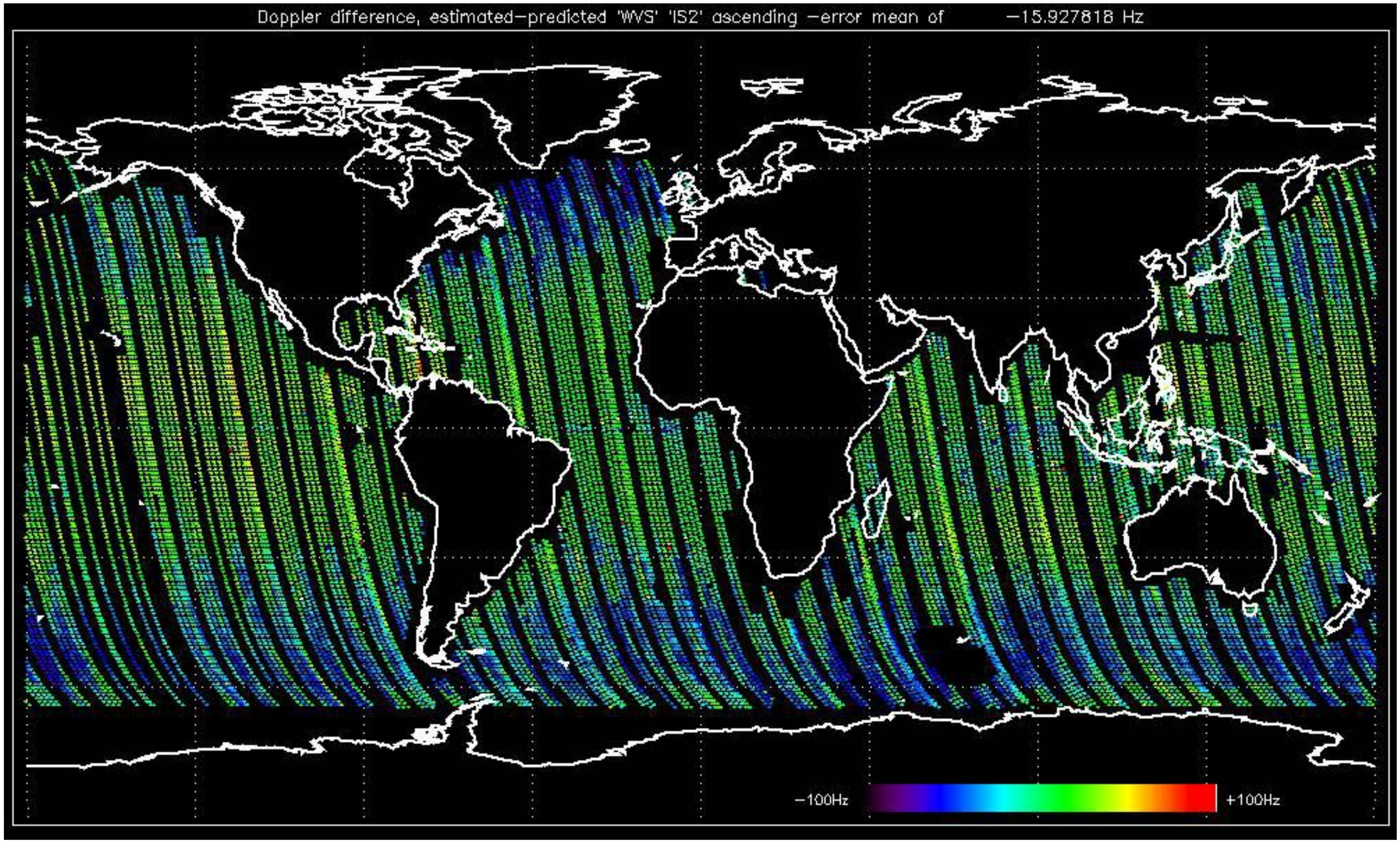

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

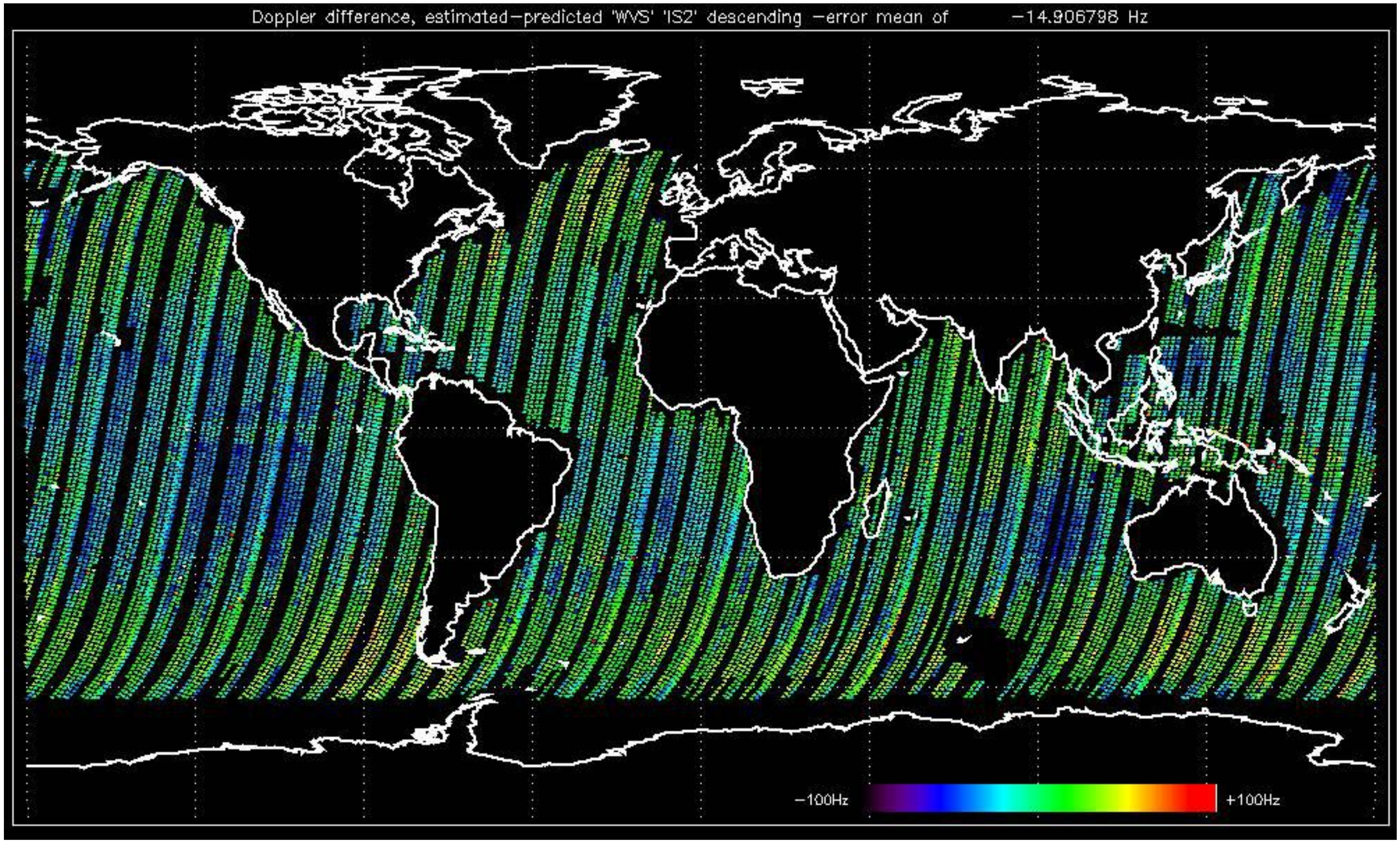

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −20.490112 Hz
−100Hz
+100Hz

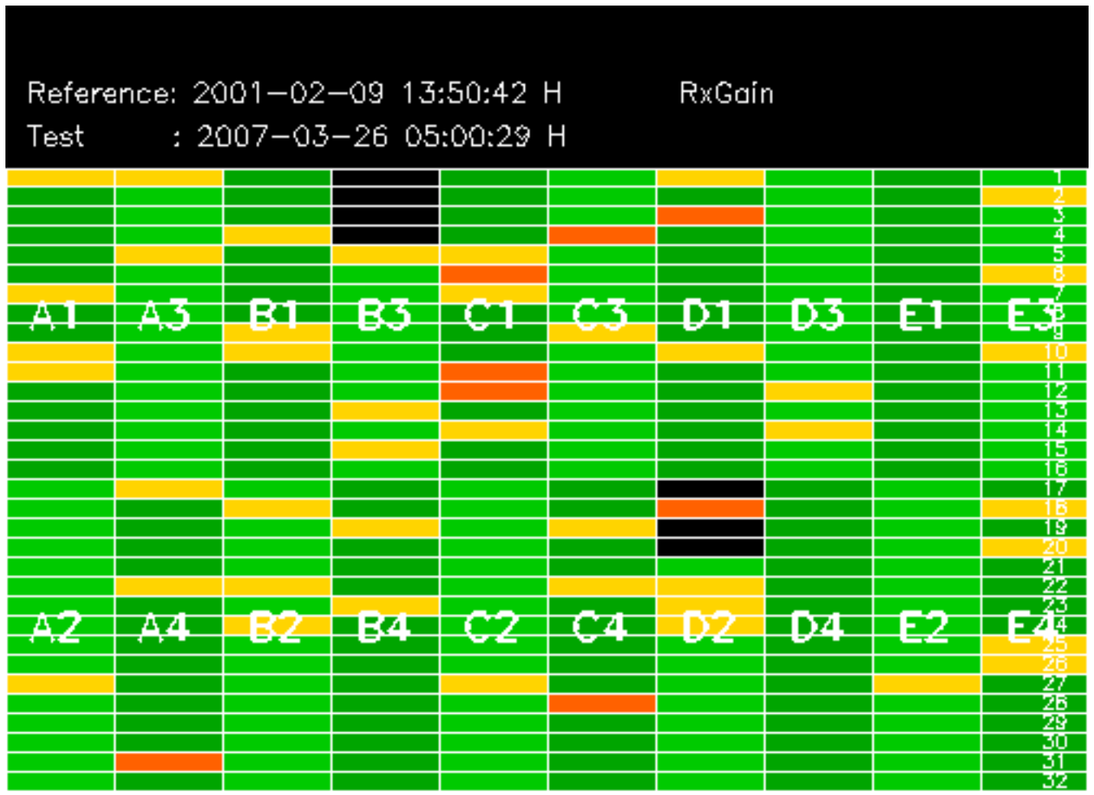

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.442304 Hz
-100Hz
+100Hz

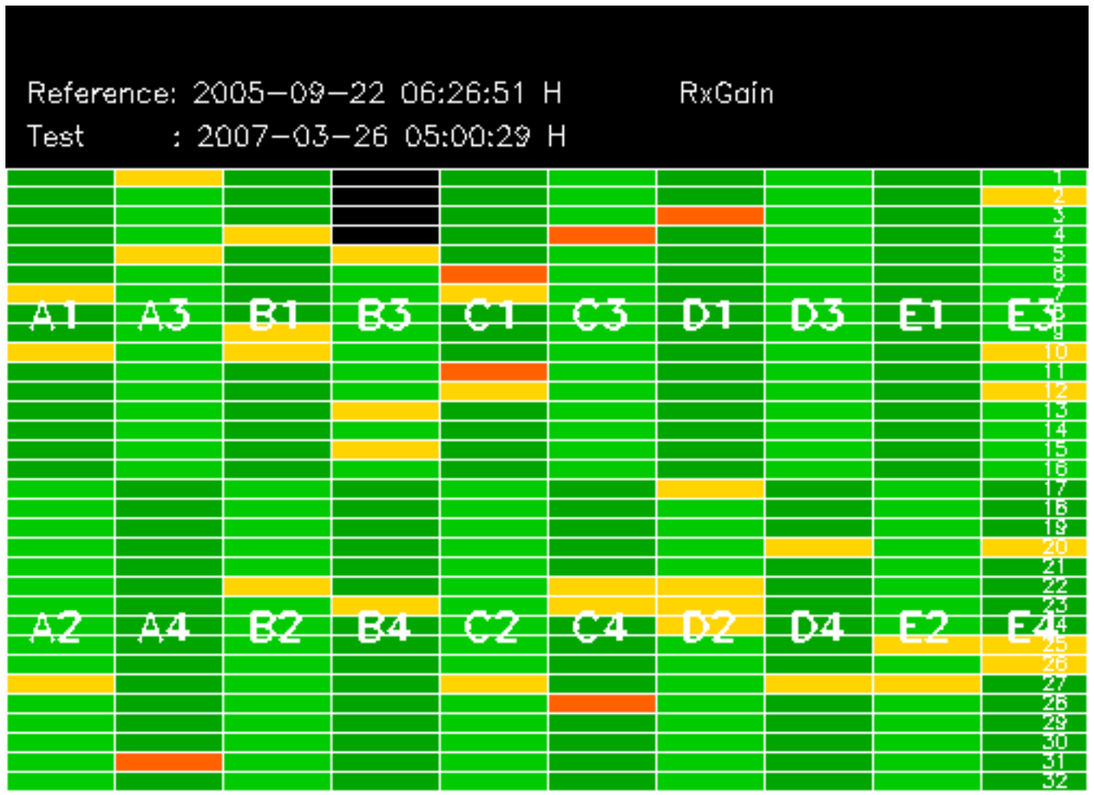

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −15.927818 Hz
−100Hz
+100Hz

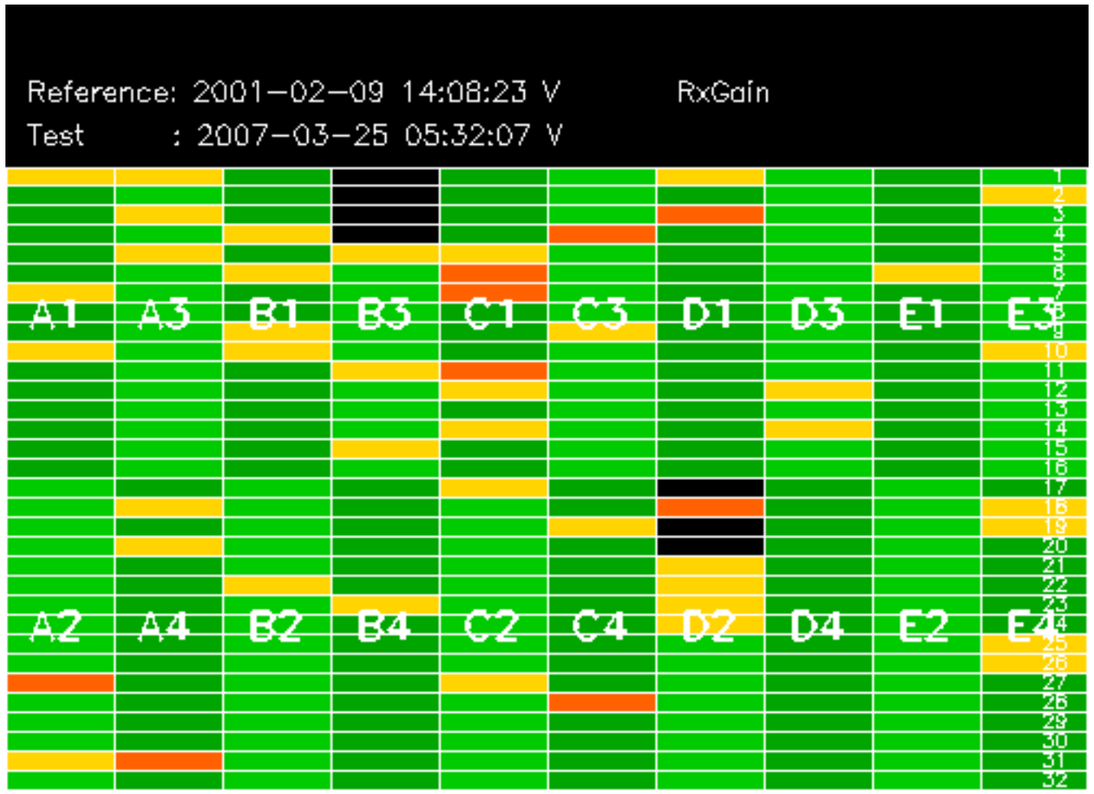

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −14.906798 Hz
−100Hz
+100Hz

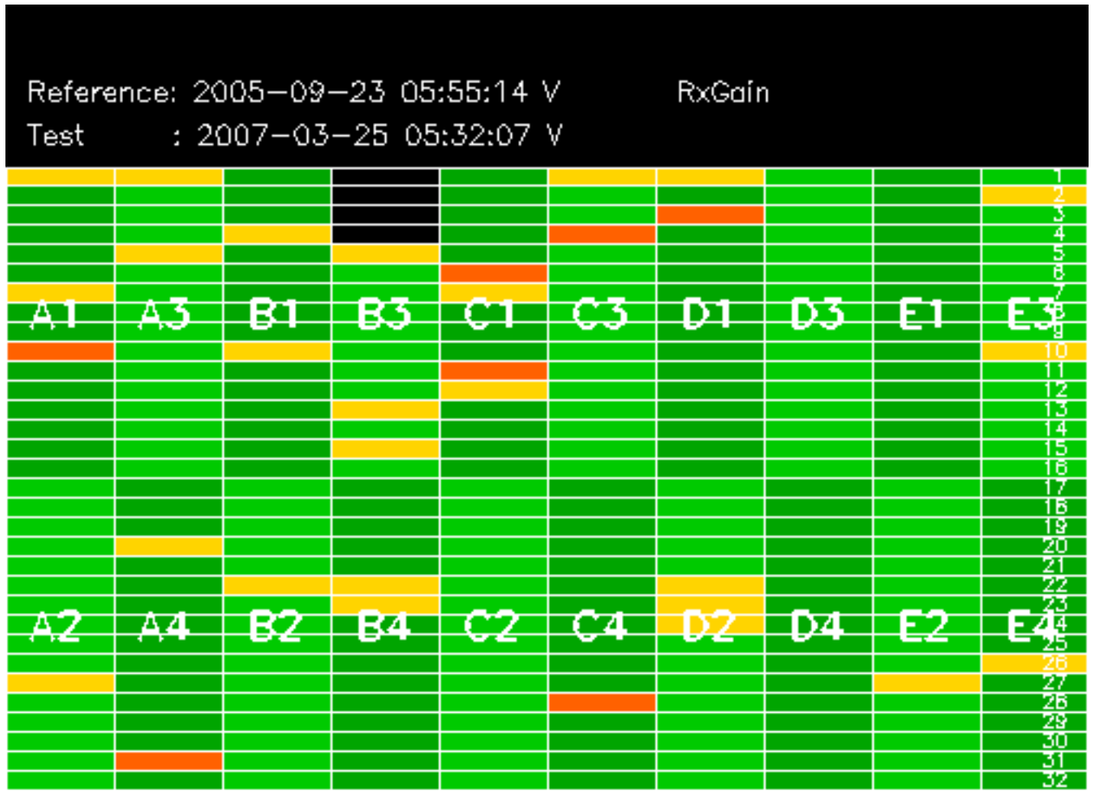
No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2007-03-26 05:00:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-22 06:26:51 H
Test : 2007-03-26 05:00:29 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2007-03-25 05:32:07 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-23 05:55:14 V
Test : 2007-03-25 05:32:07 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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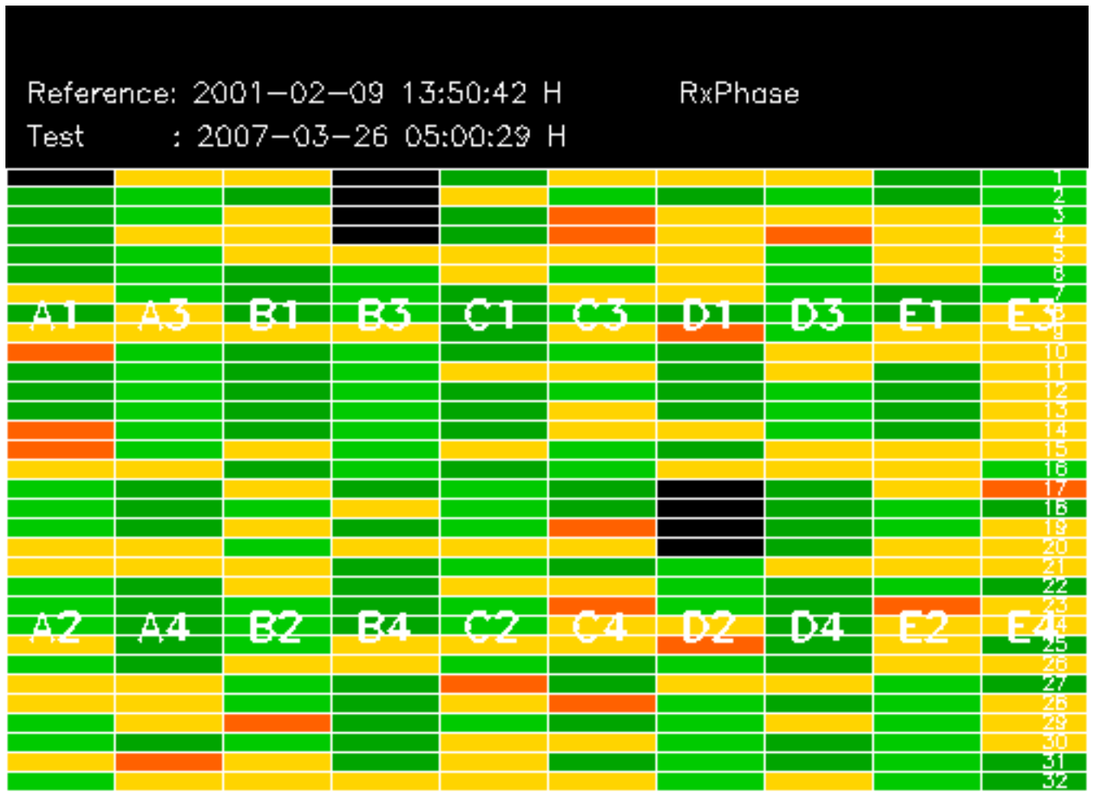
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2007-03-26 05:00:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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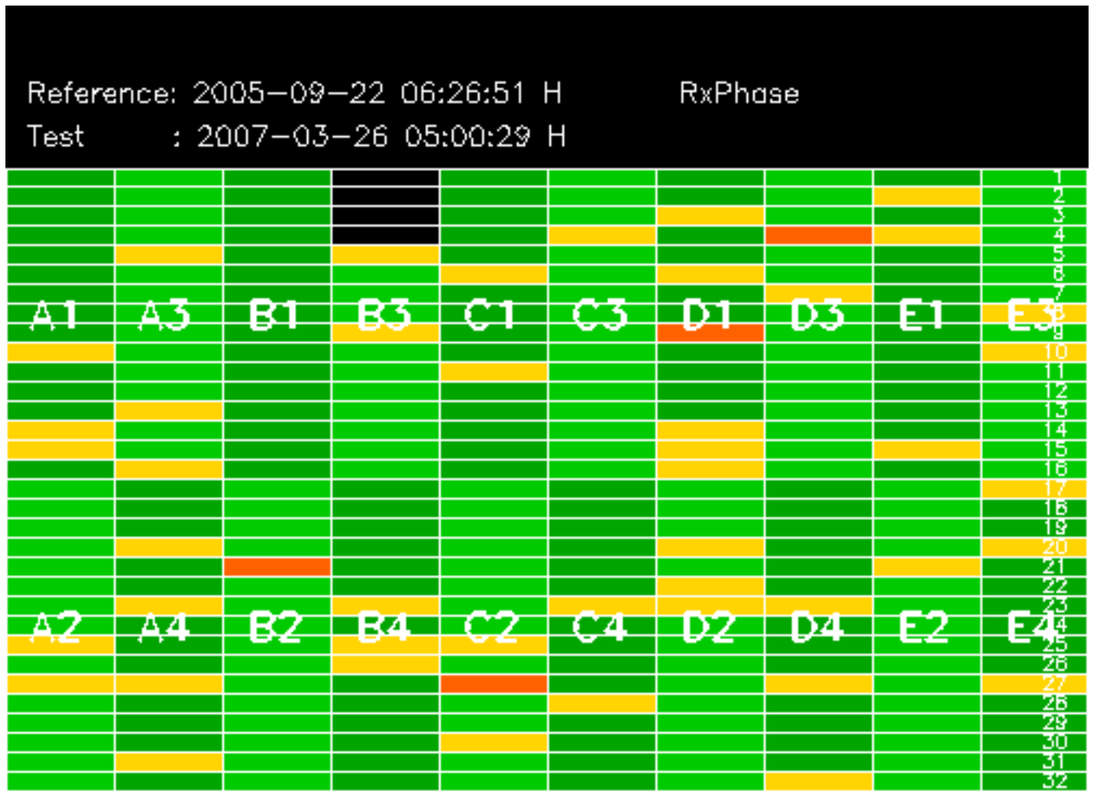
Reference: 2005-09-22 06:26:51 H
RxPhase
Test : 2007-03-26 05:00:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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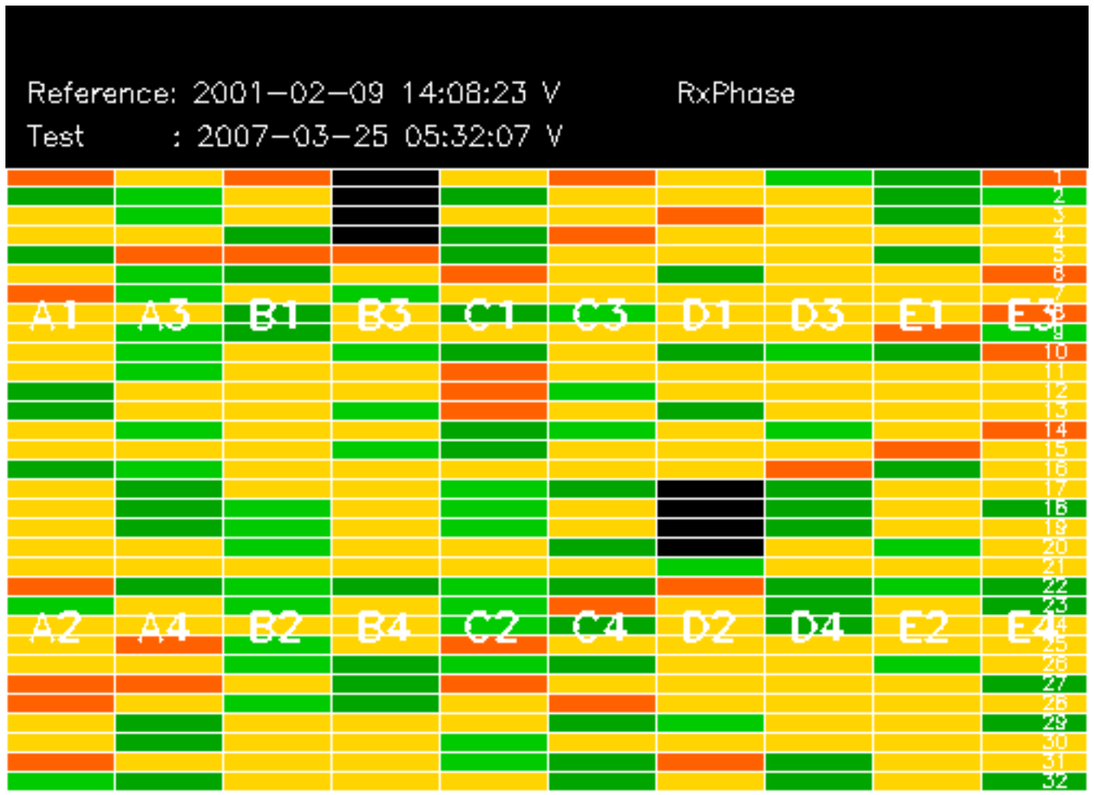
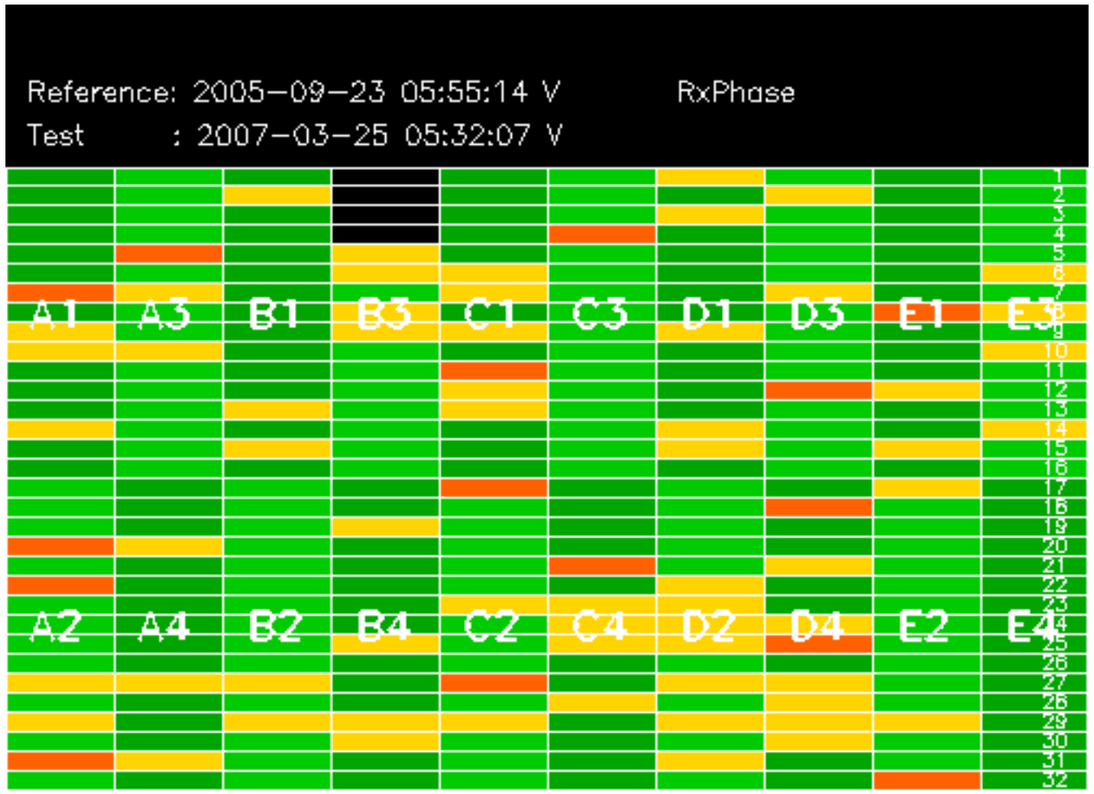

Reference: 2001-02-09 14:08:23 V
Test : 2007-03-25 05:32:07 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-23 05:55:14 V
RxPhase
Test : 2007-03-25 05:32:07 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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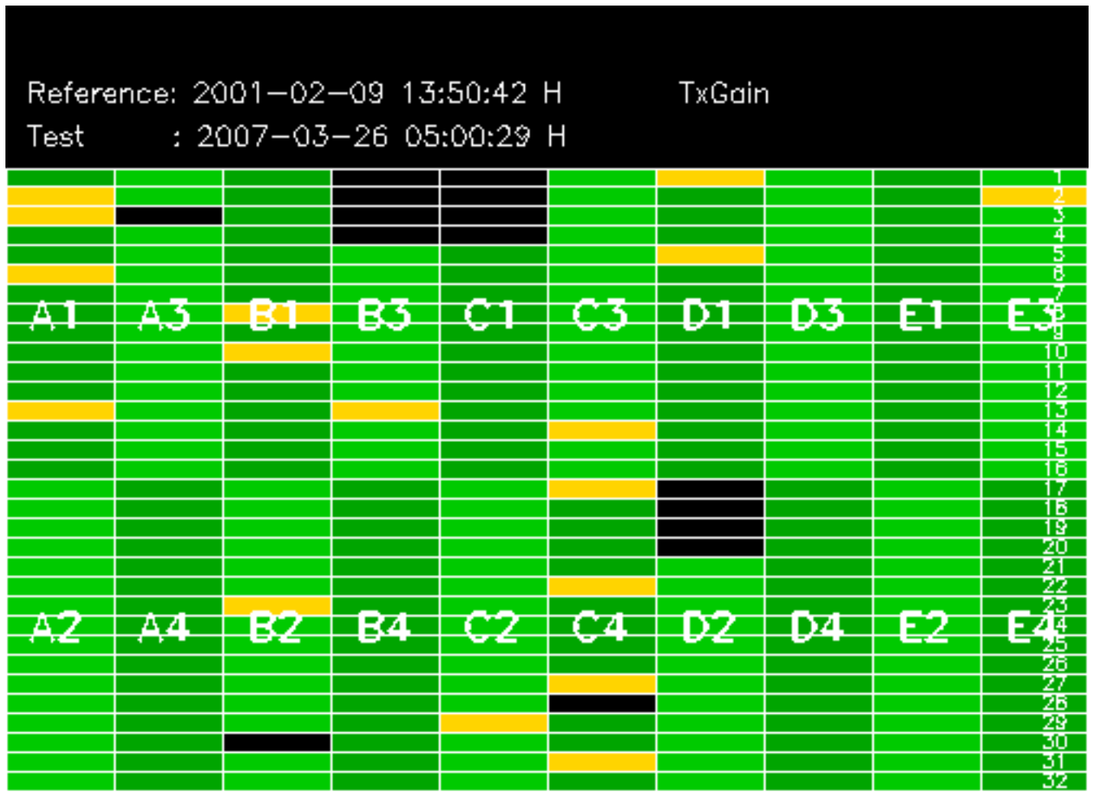
Reference: 2001-02-09 13:50:42 H
Test : 2007-03-26 05:00:29 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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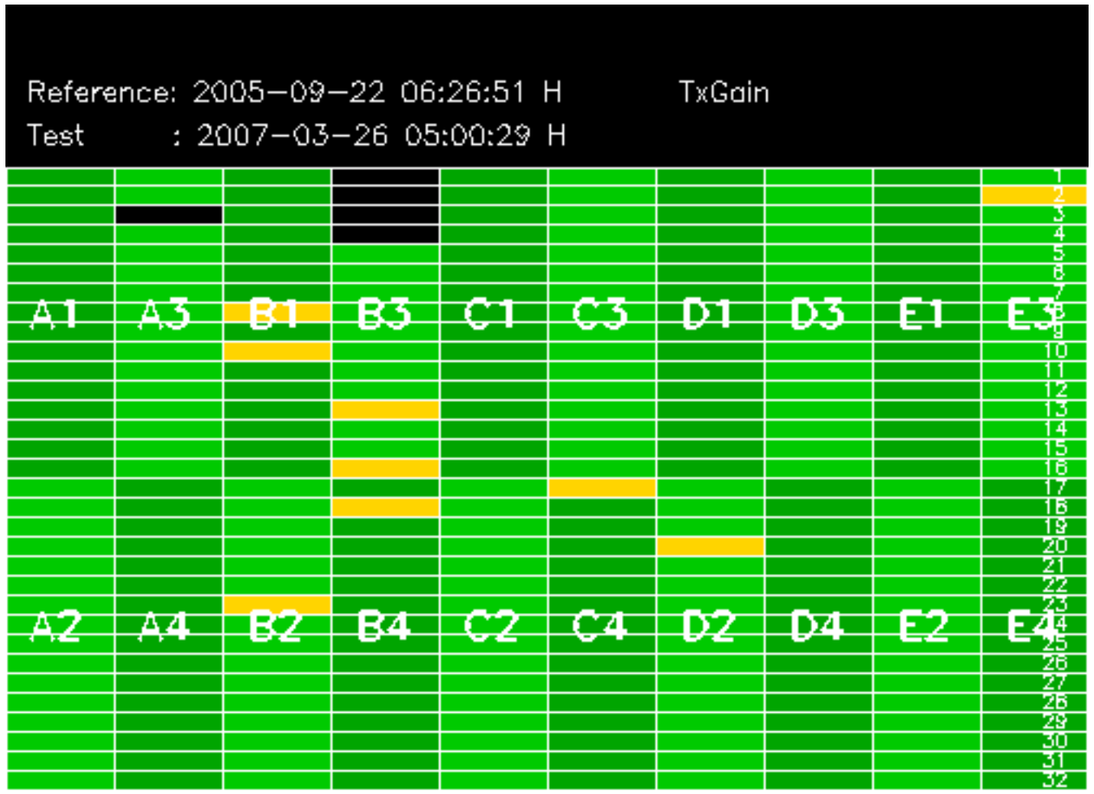
Reference: 2005-09-22 06:26:51 H
Test : 2007-03-26 05:00:29 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
C2
C4
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D4
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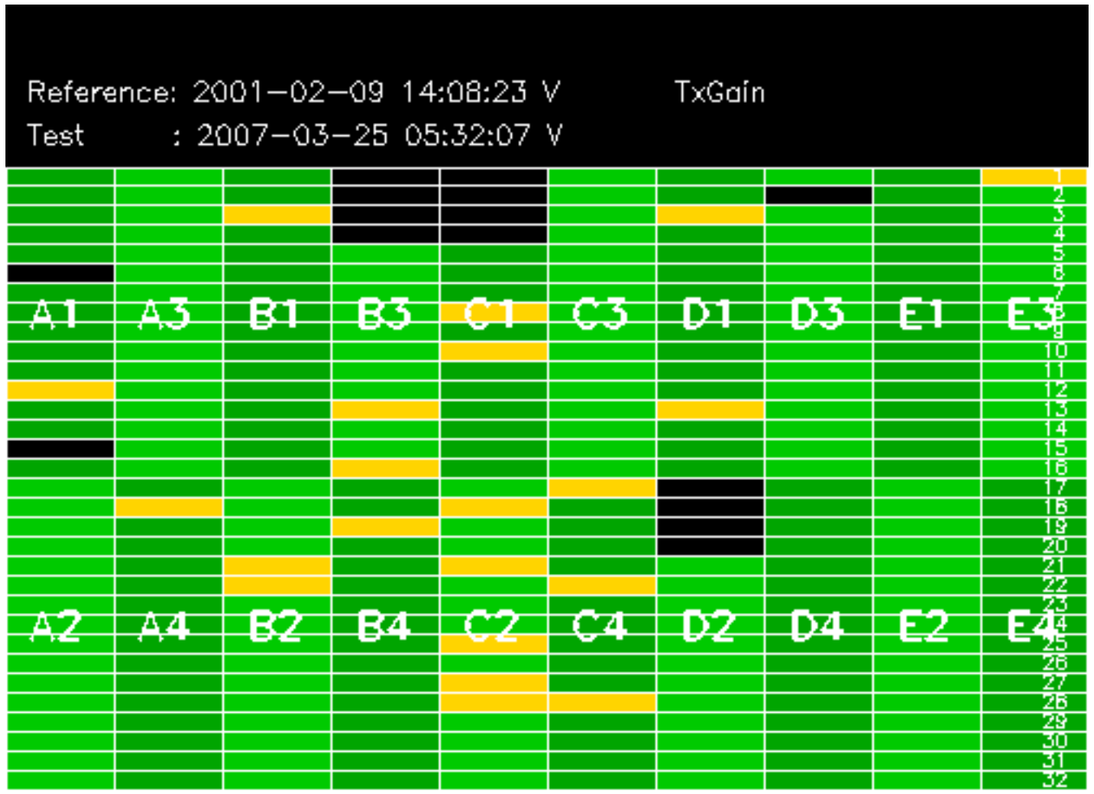
Reference: 2001-02-09 14:08:23 V
Test : 2007-03-25 05:32:07 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
C2
C4
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D4
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E4
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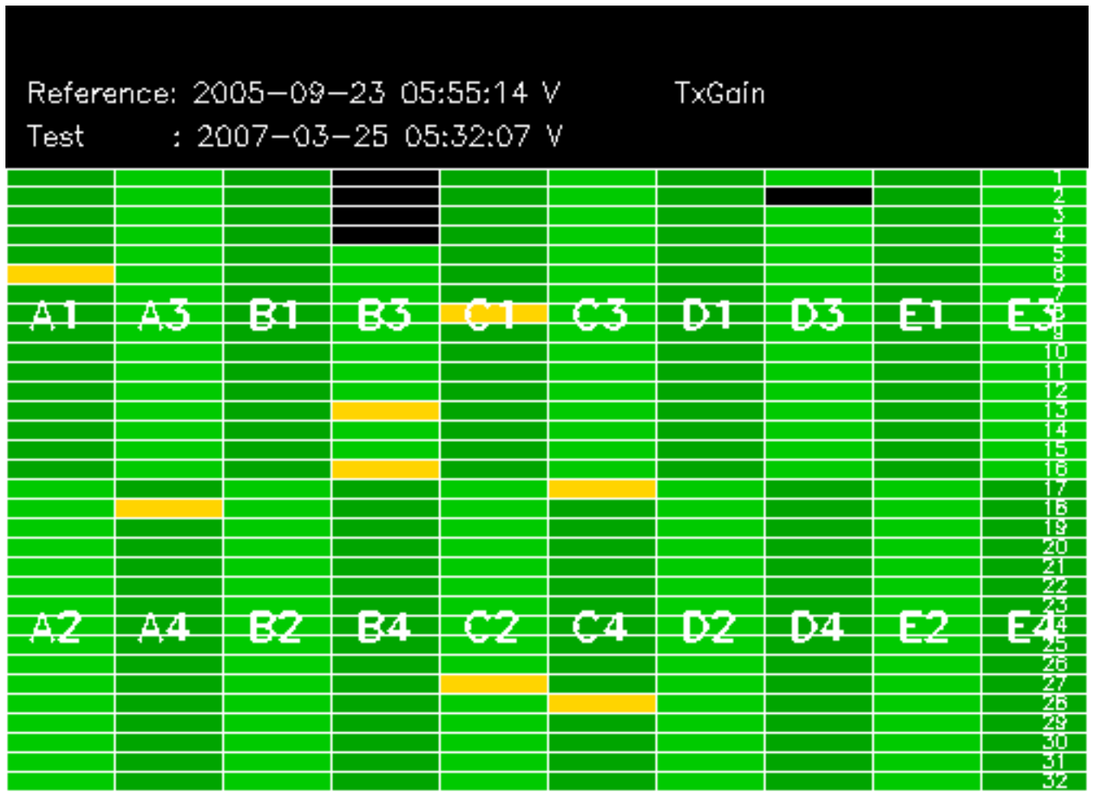
Reference: 2005-09-23 05:55:14 V
Test : 2007-03-25 05:32:07 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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Summary of analysis for the last 3 days 2007032[456]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
<tr> <td>ASA_GM1_1PNPDK20070324_102703_000002052056_00366_26472_1624.N1 </td> <td>0 </td> <td>7 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20070325_143215_000000852056_00383_26489_6157.N1 </td> <td>0 </td> <td>16 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20070325_233836_000001842056_00388_26494_6666.N1 </td> <td>0 </td> <td>62 </td></tr>
<tr> <td>ASA_WSM_1PNPDK20070324_103147_000002192056_00366_26472_1616.N1 </td> <td>0 </td> <td>3 </td></tr>
<tr> <td>ASA_WSM_1PNPDK20070324_151903_000001282056_00369_26475_1989.N1 </td> <td>10 </td> <td>436 </td></tr>
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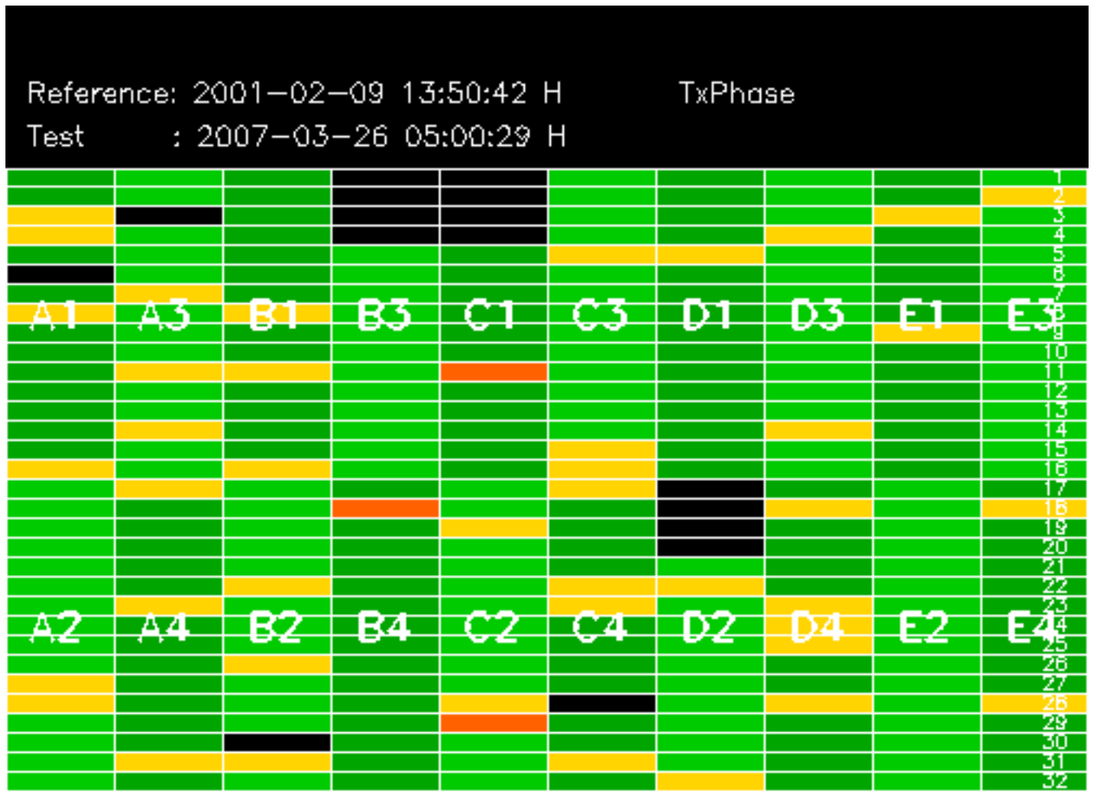
</table>


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2007-03-26 05:00:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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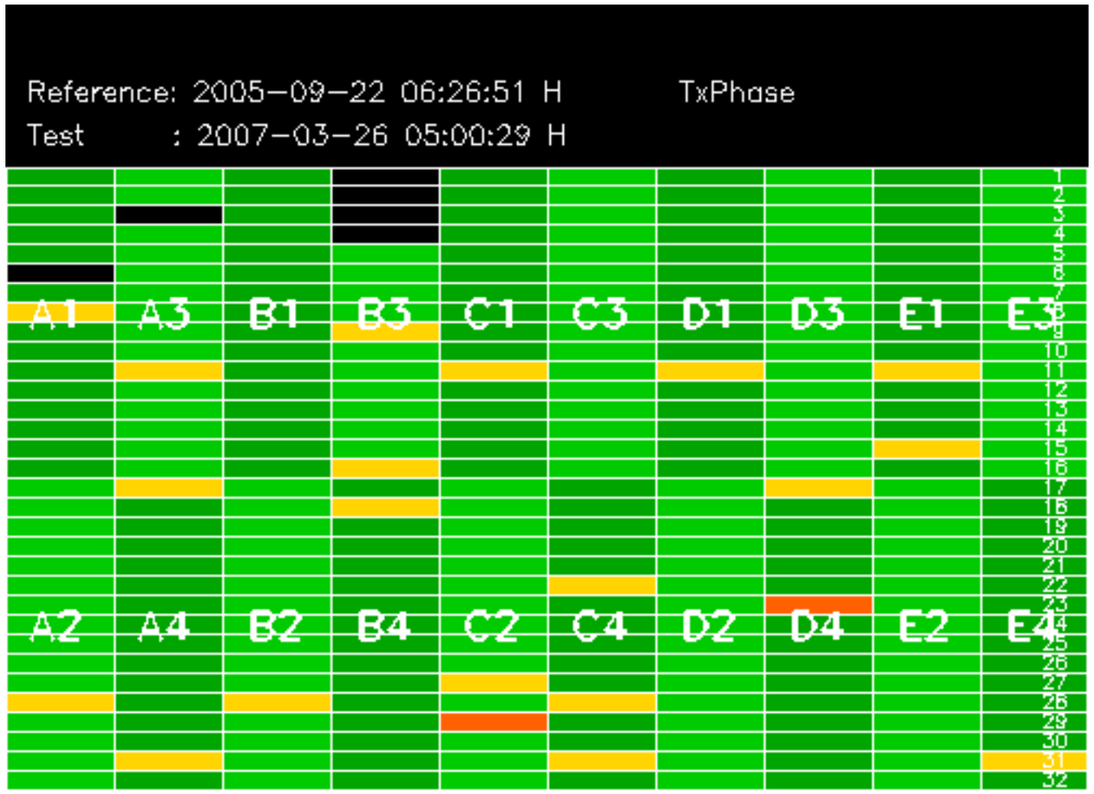
Reference: 2005-09-22 06:26:51 H
Test : 2007-03-26 05:00:29 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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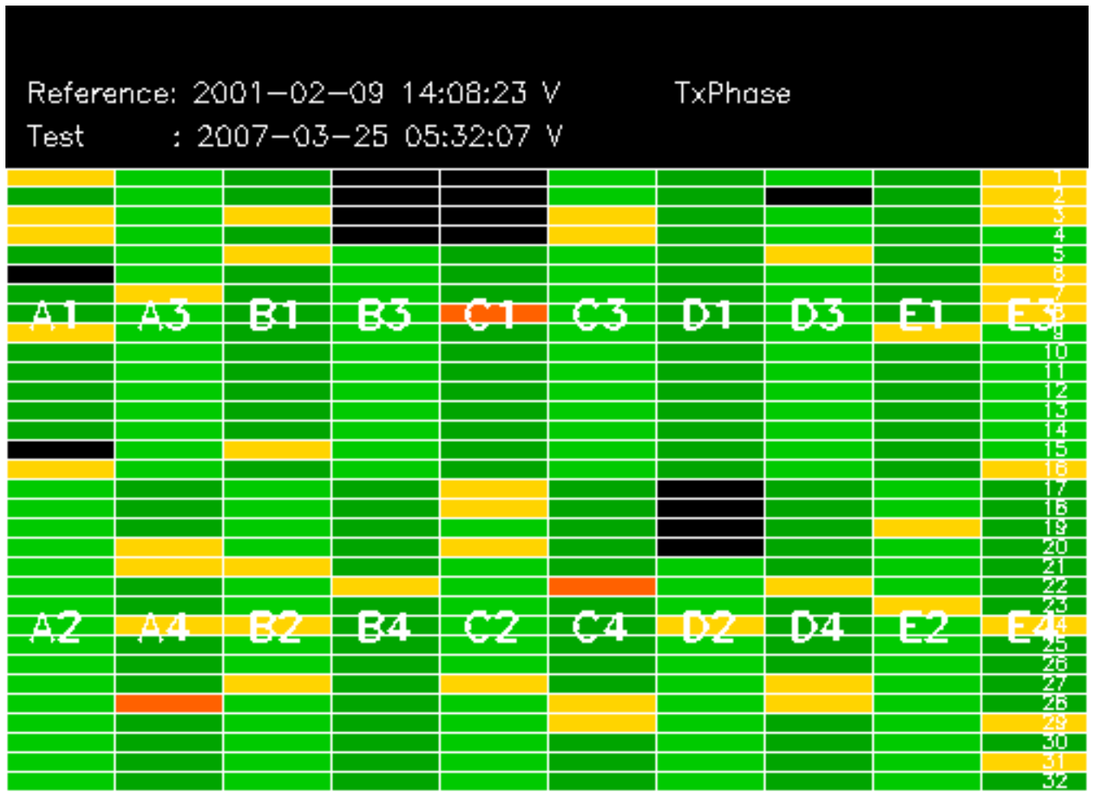
Reference: 2001-02-09 14:08:23 V
Test : 2007-03-25 05:32:07 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
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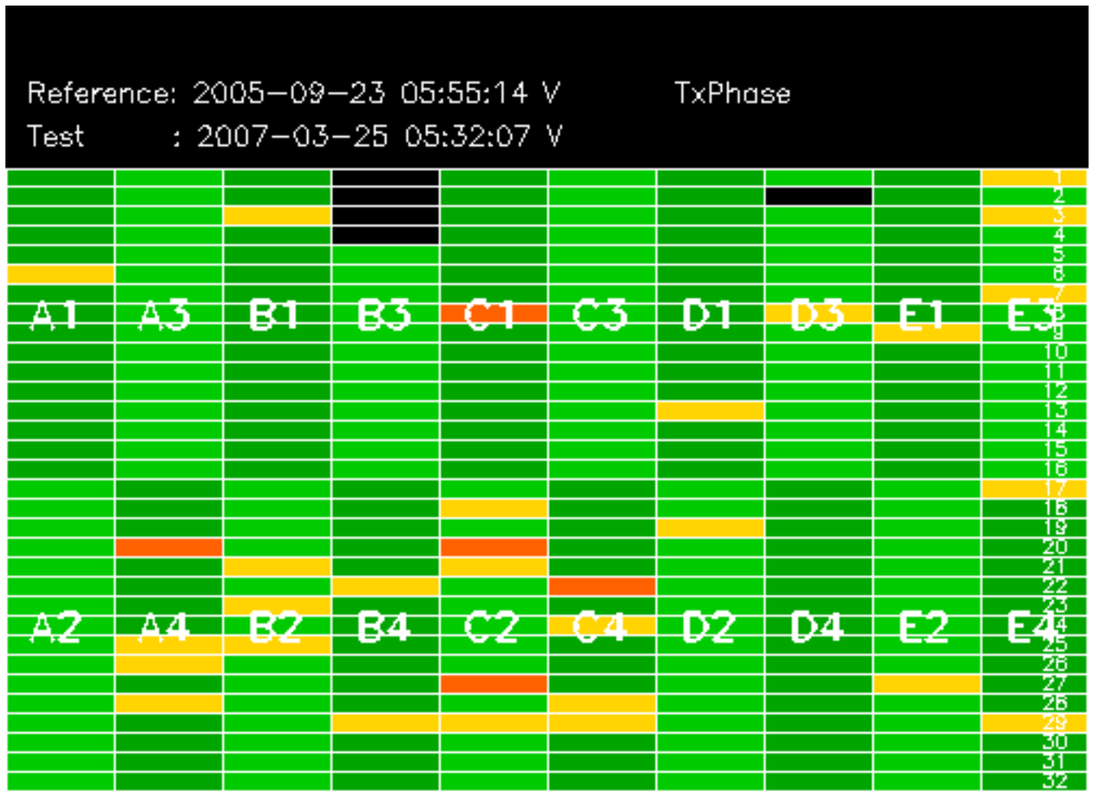
Reference: 2005-09-23 05:55:14 V
Test : 2007-03-25 05:32:07 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
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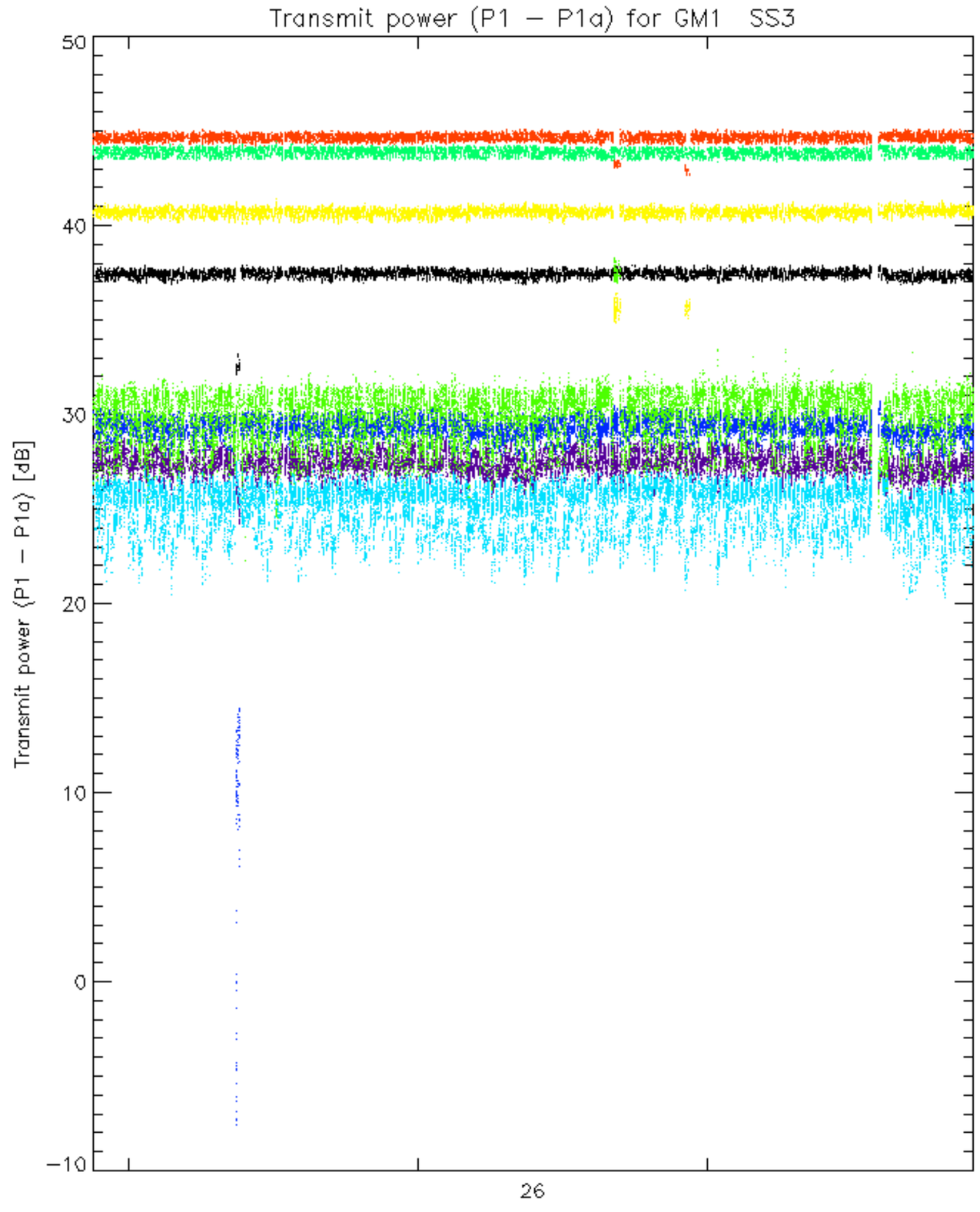
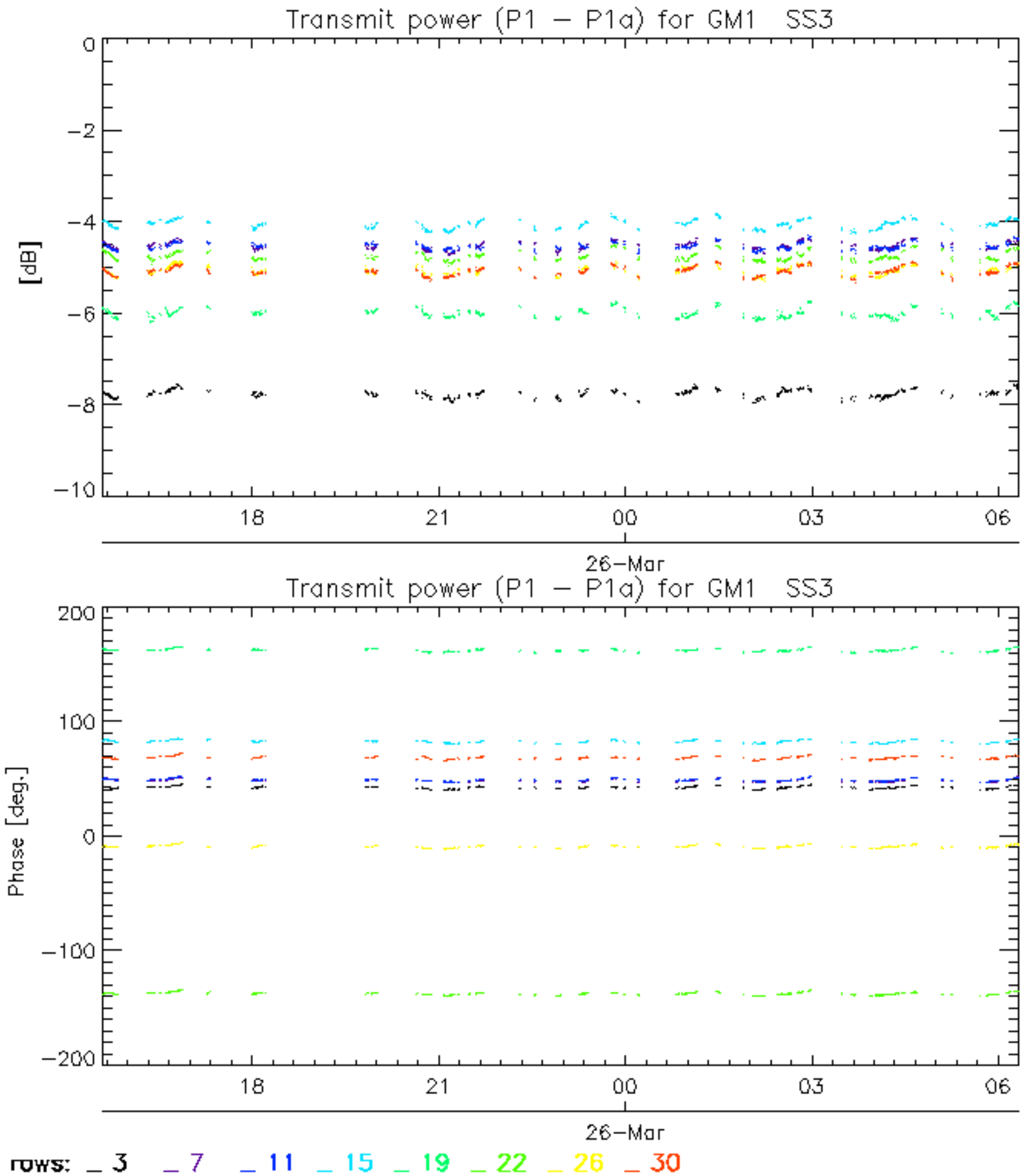
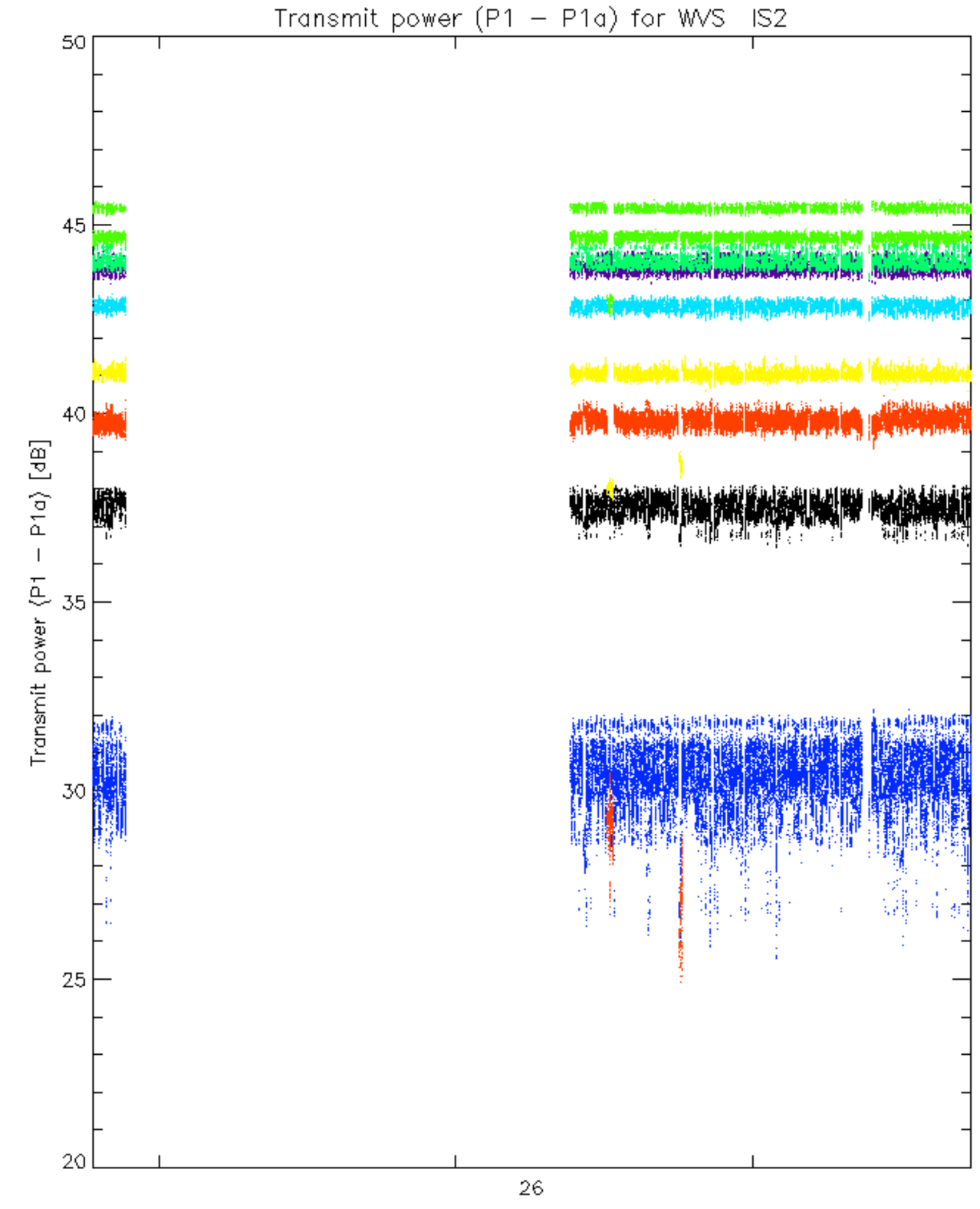
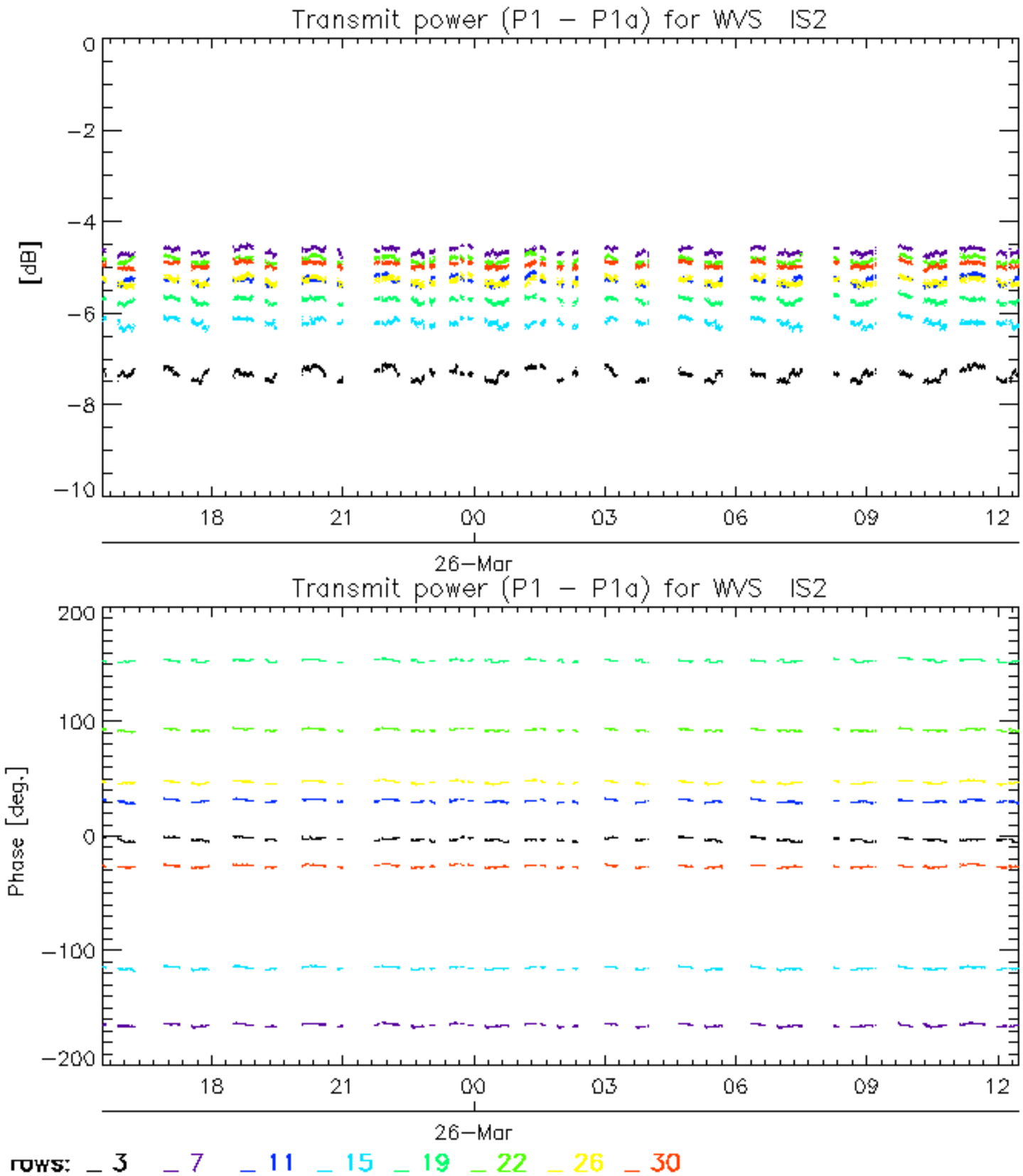

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
26
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
0
−2
−4
−6
−8
−10
[dB]
18
21
00
03
06
26–Mar
Transmit power (P1 – P1a) for GM1 SS3
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
26–Mar
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
45
40
35
30
25
20
26
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
0
−2
−4
−6
−8
−10
[dB]
18
21
00
03
06
09
12
26–Mar
Transmit power (P1 – P1a) for WVS IS2
200
100
0
−100
−200
Phase [deg.]
18
21
00
03
06
09
12
26–Mar
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.