PRELIMINARY REPORT OF 061130

last update on Thu Nov 30 16:38:27 GMT 2006

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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 2006-11-29 00:00:00 to 2006-11-30 16:38:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	4	2	0	0	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	4	2	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	4	2	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	4	2	0	0	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**

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	20061127 054051
H	20061128 050914

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)

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.960288	0.008332	-0.028630
7	P1	-3.154024	0.023631	-0.007885
11	P1	-4.130998	0.024834	0.004172
15	P1	-6.300100	0.014412	-0.048865
19	P1	-3.611954	0.006342	-0.057001
22	P1	-4.646652	0.012829	-0.020781
26	P1	-3.949790	0.010652	0.005437
30	P1	-5.866252	0.009442	-0.048645
3	P1	-16.515120	0.235302	-0.103592
7	P1	-17.284155	0.176284	-0.028342
11	P1	-17.174625	0.457238	-0.163875
15	P1	-13.072303	0.133089	-0.021386
19	P1	-14.910703	0.090596	-0.164816
22	P1	-15.859437	0.511811	0.142071
26	P1	-15.054547	0.196493	0.069698
30	P1	-17.481148	0.473601	-0.065189

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.842665	0.091310	0.030648
7	P2	-21.732138	0.093996	-0.007099
11	P2	-15.650357	0.101991	0.036061
15	P2	-7.124382	0.106284	-0.002725
19	P2	-9.192190	0.104375	0.006213
22	P2	-18.236486	0.096252	-0.031654
26	P2	-16.554598	0.110753	-0.044551
30	P2	-19.476603	0.087803	0.001362

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.241972	0.008442	-0.029914
7	P3	-8.241972	0.008442	-0.029914
11	P3	-8.241972	0.008442	-0.029914
15	P3	-8.241972	0.008442	-0.029914
19	P3	-8.241972	0.008442	-0.029914
22	P3	-8.241972	0.008442	-0.029914

26	P3	-8.241982	0.008457	-0.030180
30	P3	-8.241982	0.008457	-0.030180

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.909370	0.034313	-0.005332
7	P1	-2.509099	0.183563	0.076743
11	P1	-2.857172	0.033676	0.032112
15	P1	-3.682626	0.045987	-0.002804
19	P1	-3.523956	0.018065	-0.036123
22	P1	-5.036048	0.022609	0.034146
26	P1	-6.001857	0.028509	-0.052535
30	P1	-5.320793	0.039377	-0.049856
3	P1	-11.722595	0.099615	-0.031697
7	P1	-10.051435	0.269208	0.035732
11	P1	-10.320866	0.130471	0.011747
15	P1	-10.744163	0.175468	0.094134
19	P1	-15.693846	0.116276	-0.089913
22	P1	-21.467213	1.445780	-0.379048
26	P1	-16.068323	0.319094	-0.001567
30	P1	-17.889936	0.396414	0.066903

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.462969	0.109614	-0.019547
7	P2	-22.227627	0.321752	-0.055552

11	P2	-10.940884	0.121234	-0.004911
15	P2	-4.971675	0.187629	-0.054110
19	P2	-6.954138	0.221944	-0.023039
22	P2	-8.259330	0.176934	-0.004780
26	P2	-24.326885	0.220619	-0.048962
30	P2	-21.949554	0.165275	0.003452

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.088461	0.003304	-0.030927
7	P3	-8.088537	0.003288	-0.030733
11	P3	-8.088590	0.003300	-0.030925
15	P3	-8.088419	0.003297	-0.031022
19	P3	-8.088505	0.003302	-0.030895
22	P3	-8.088472	0.003302	-0.030906
26	P3	-8.088608	0.003298	-0.031203
30	P3	-8.088618	0.003300	-0.030638

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	0.000544315
	stdev	1.79200e-07
MEAN Q	mean	0.000522105
	stdev	2.20867e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136025
	stdev	0.00111440
STDEV Q	mean	0.136383
	stdev	0.00113143

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006112[890]
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_WSM_1PNPDE20061120_140442_000002022053_00096_24699_0001.N1	0	34
ASA_WSM_1PNPDE20061120_182348_000001652053_00099_24702_0001.N1	0	18

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

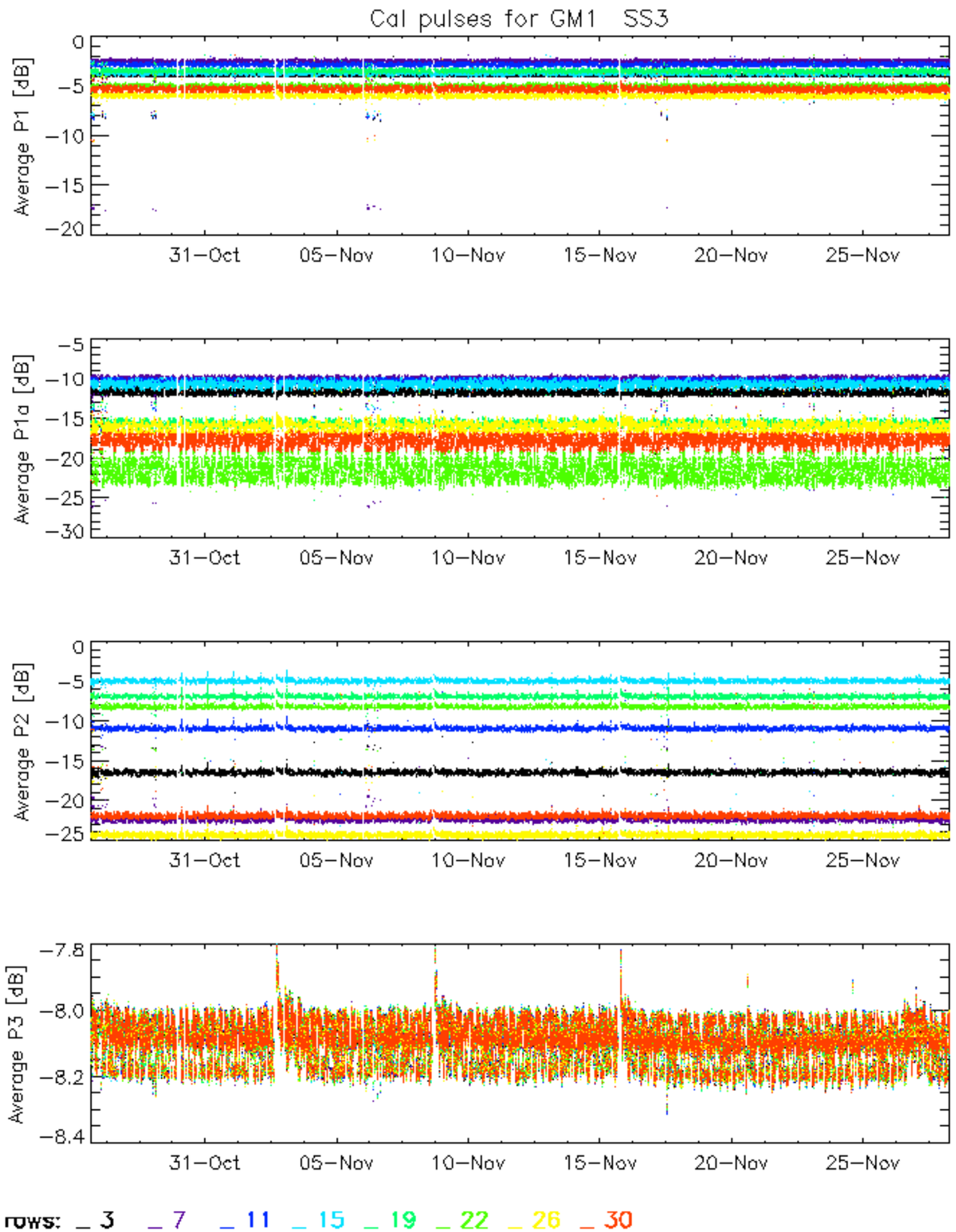
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

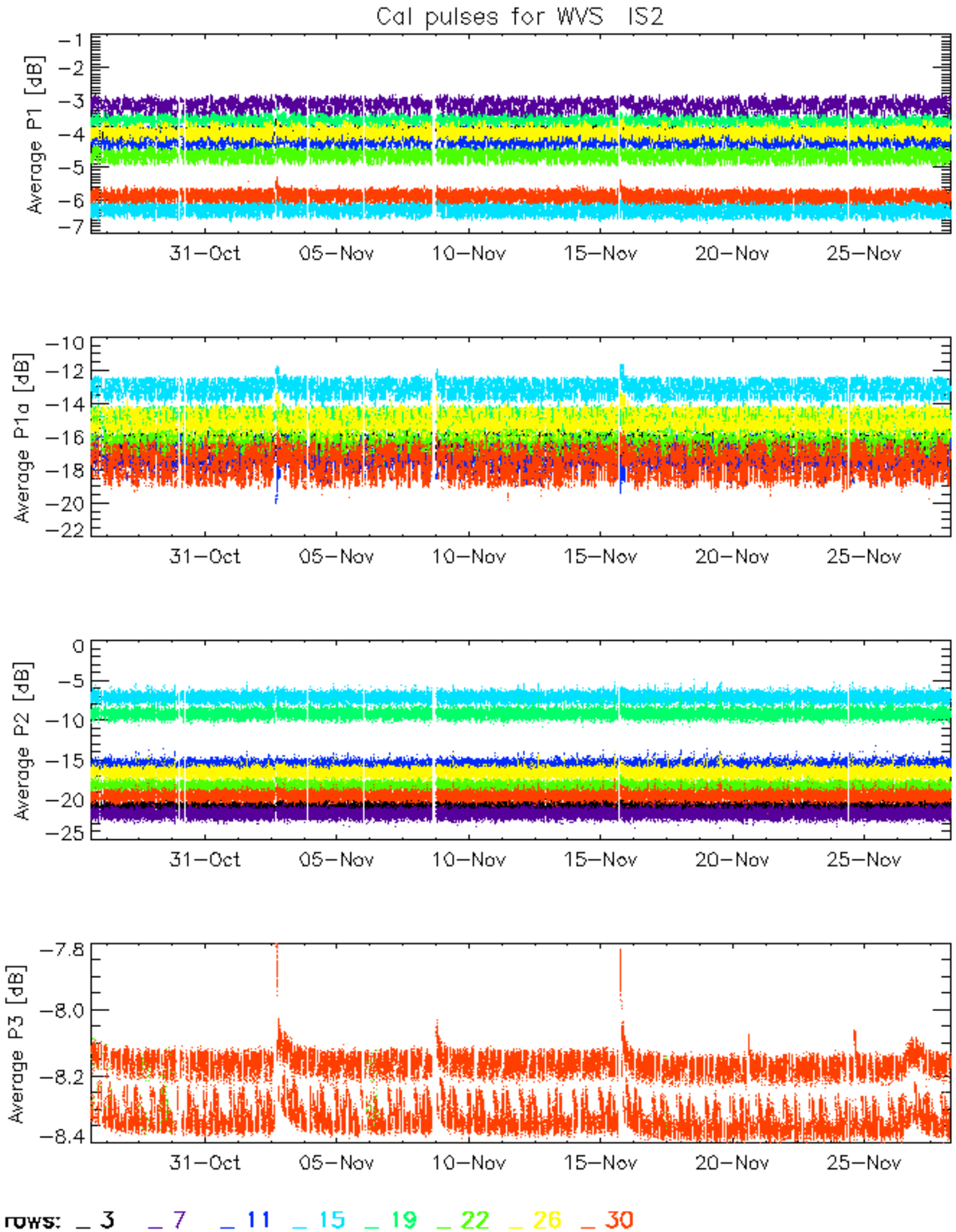
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒

Descending

7.6 - Doppler evolution versus ANX for GM1


Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

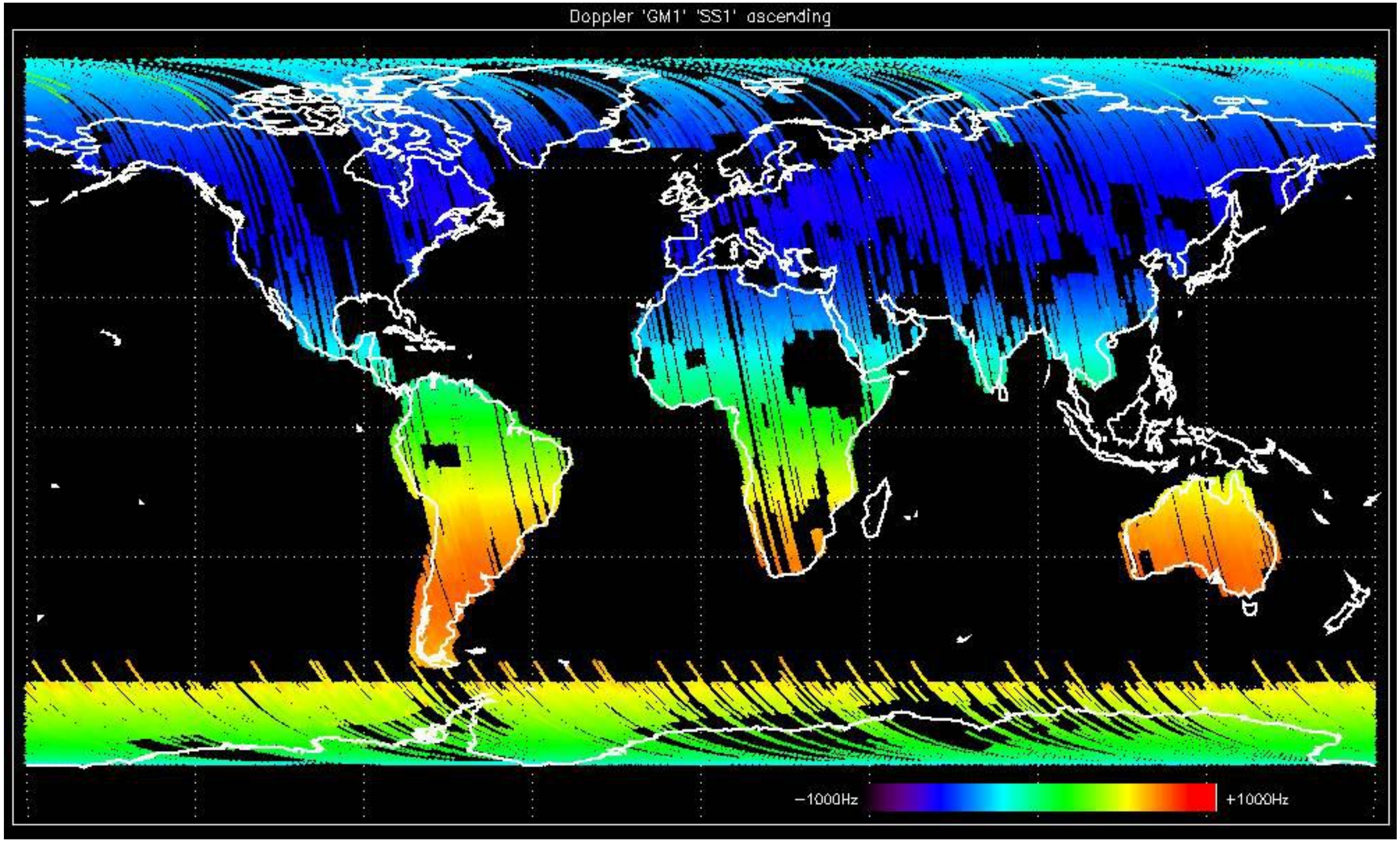

Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

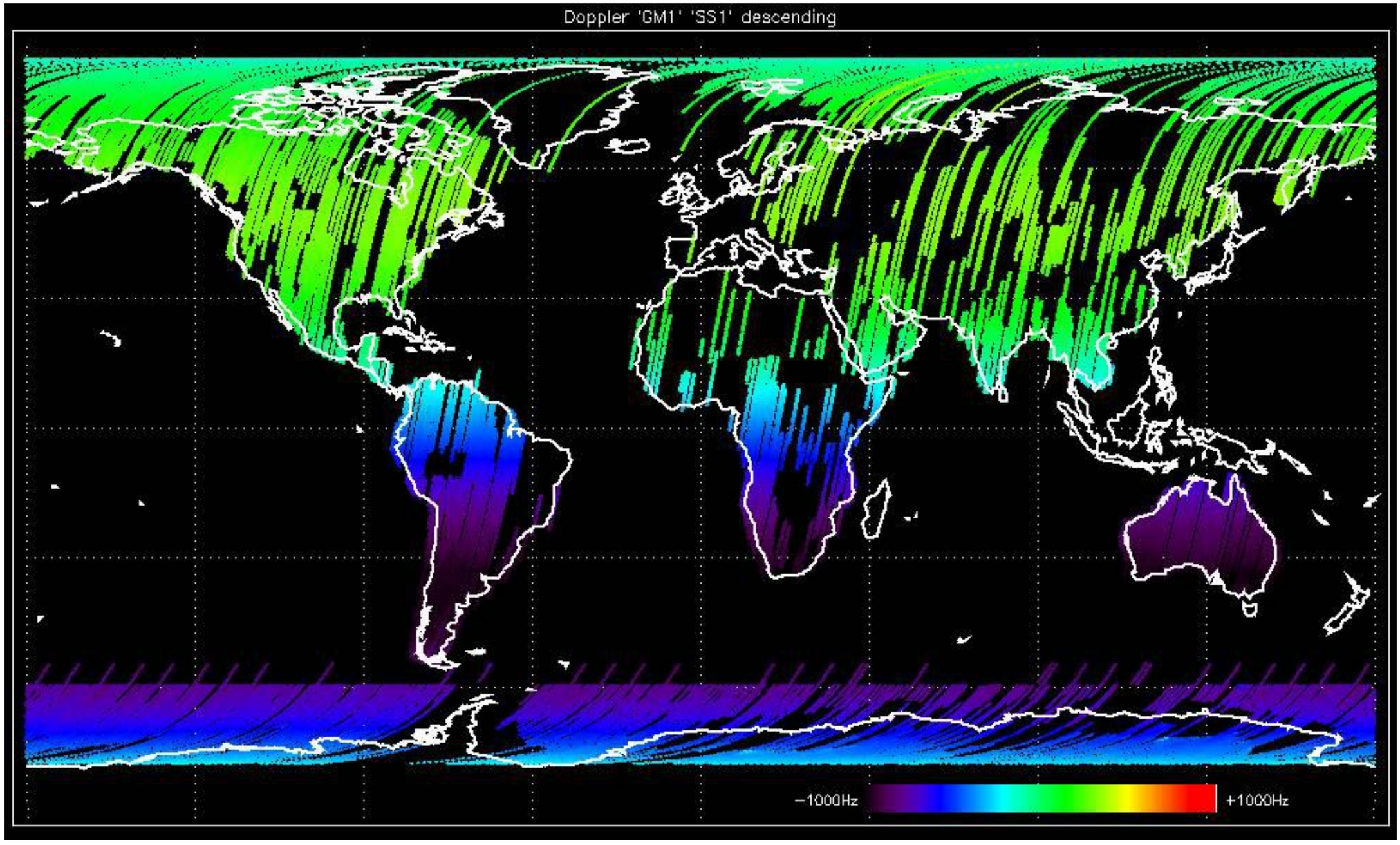
No anomalies observed on available browse products

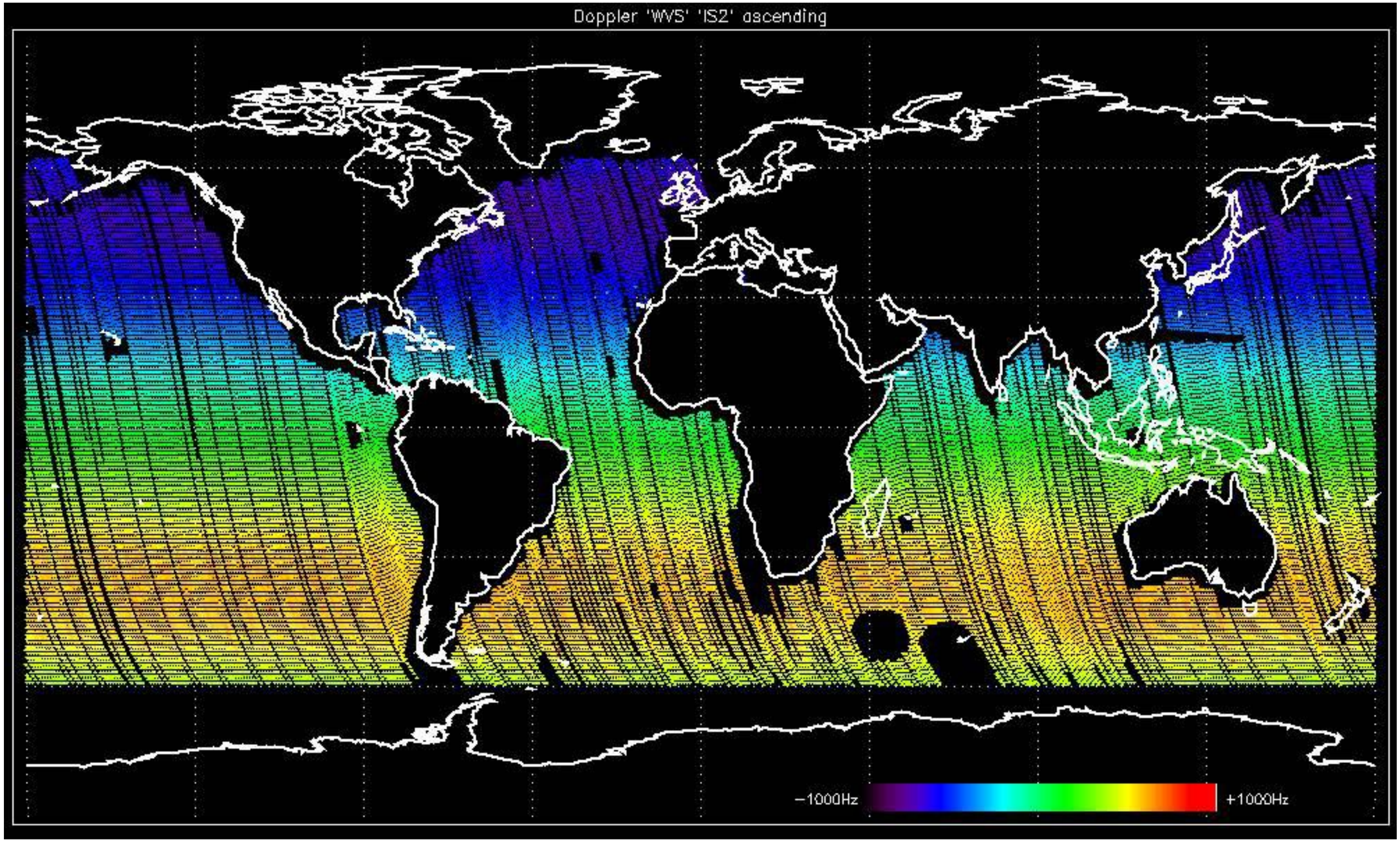
No anomalies observed.

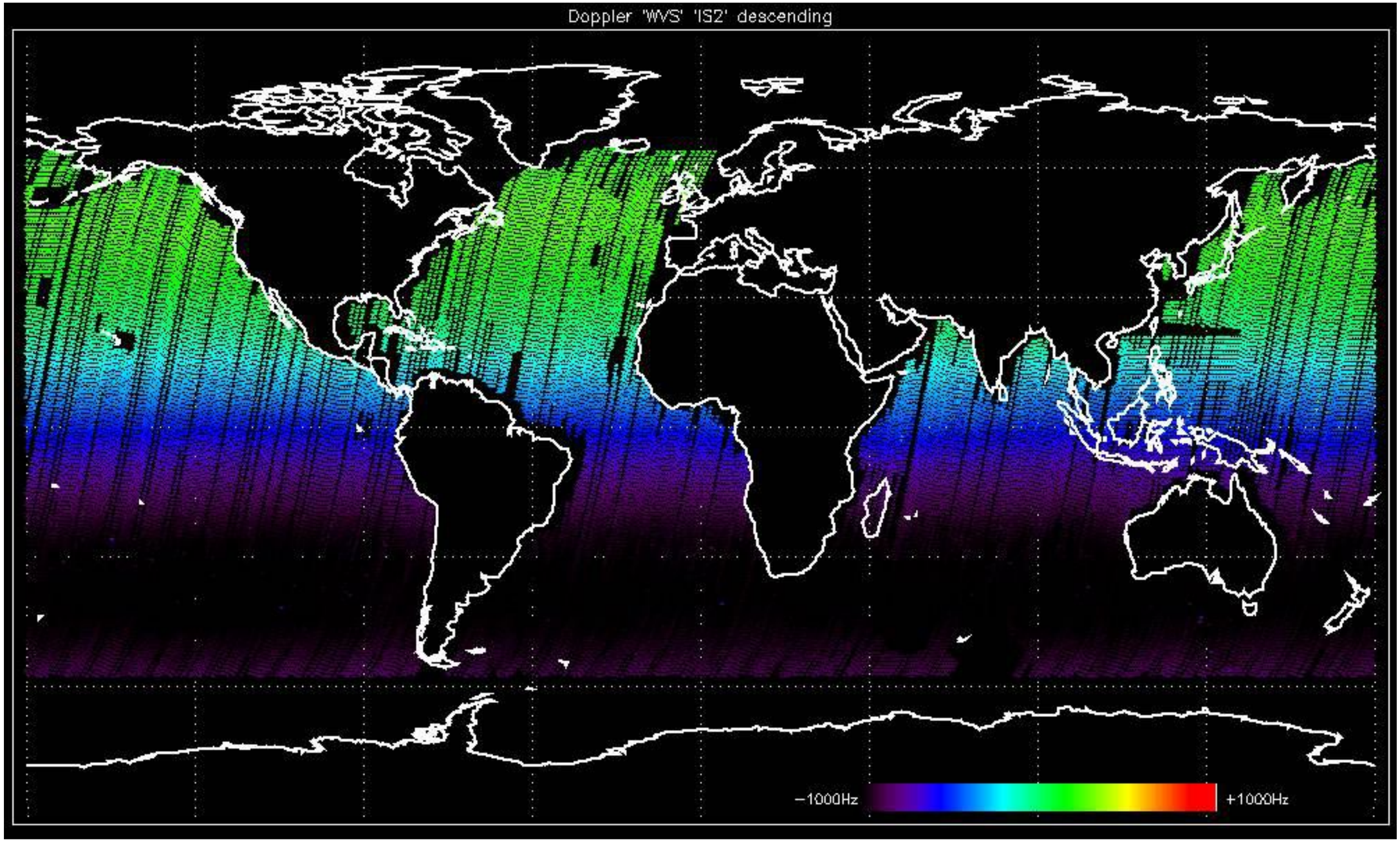
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

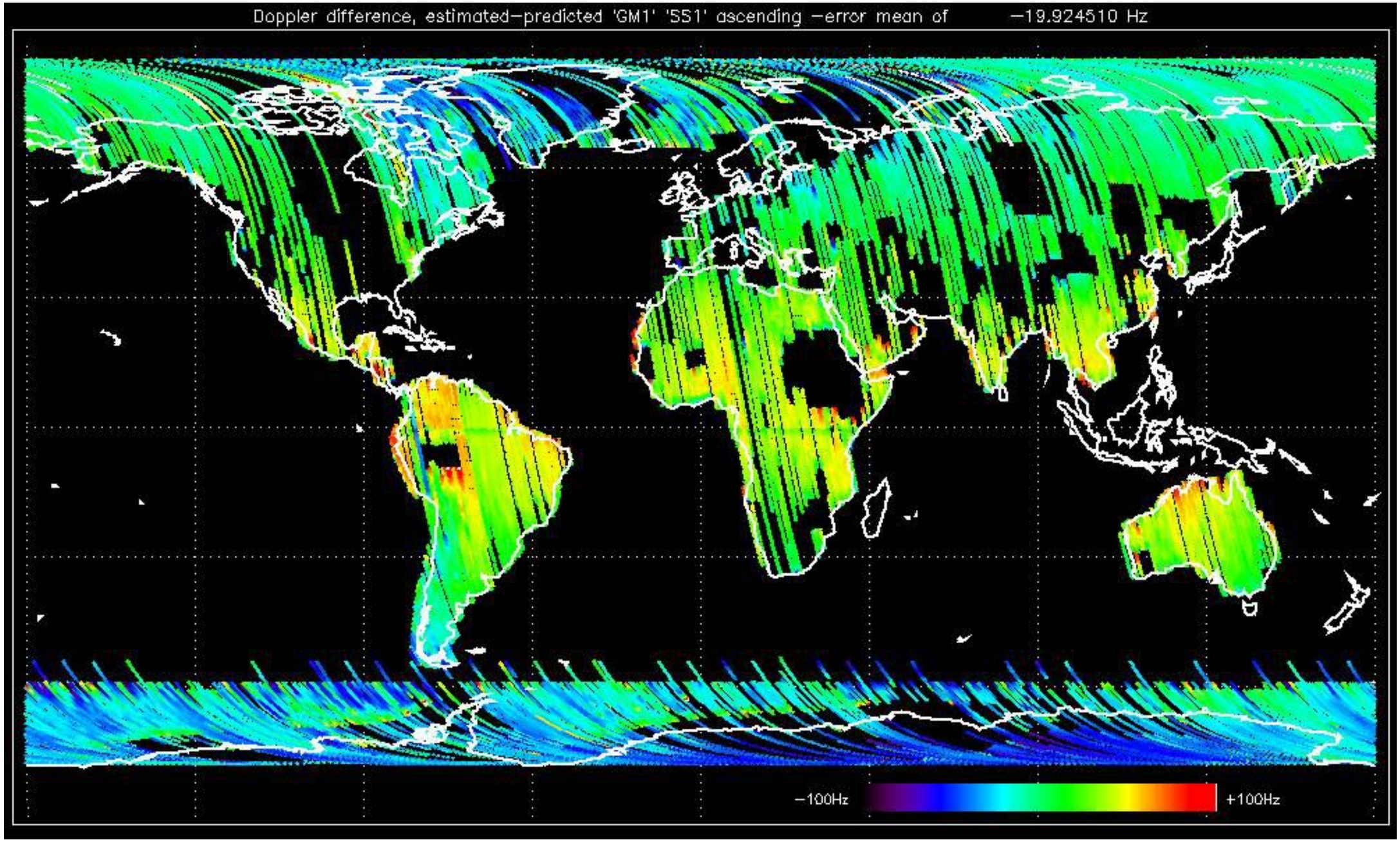
Preliminary report.The data is not yet controled

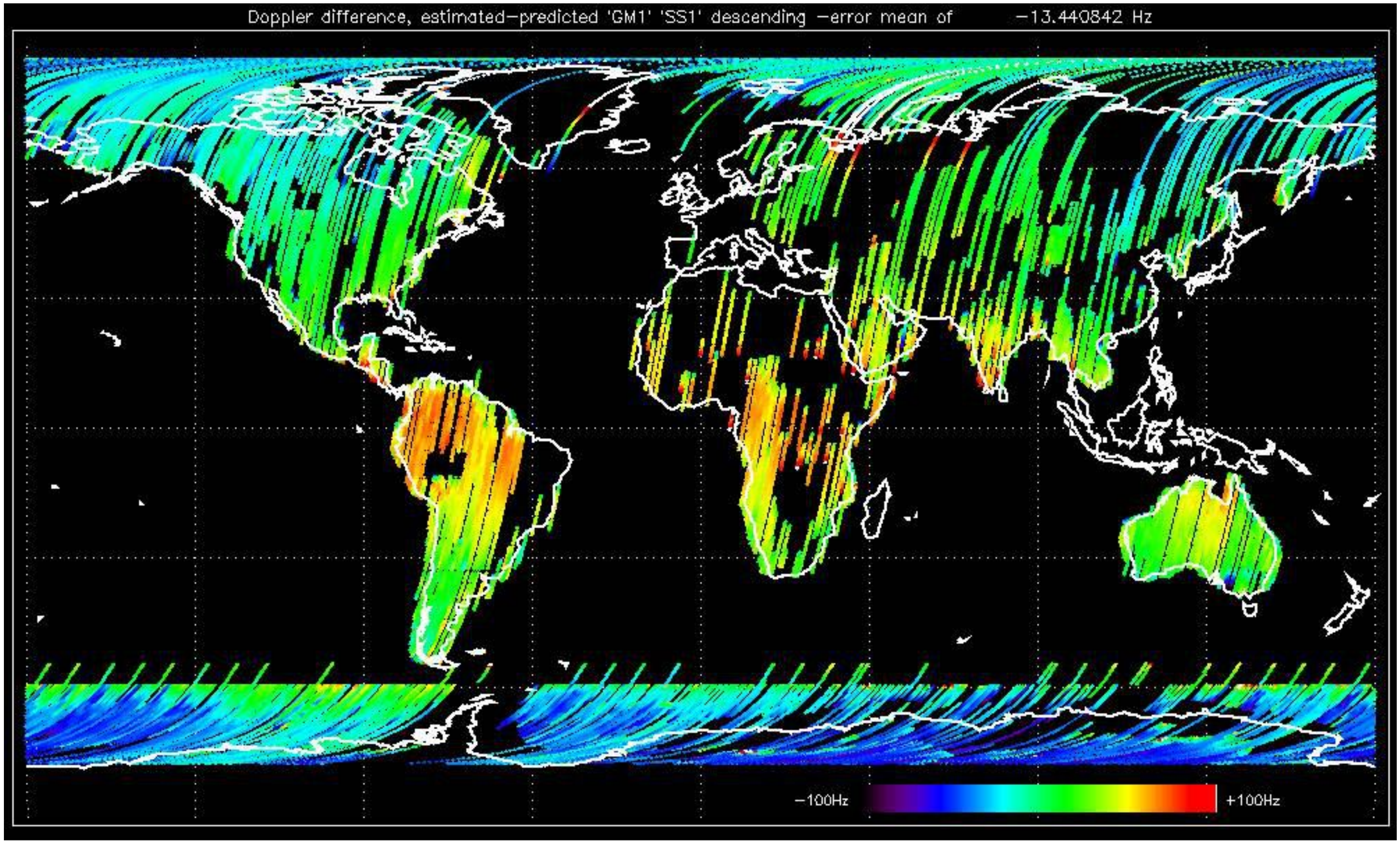

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

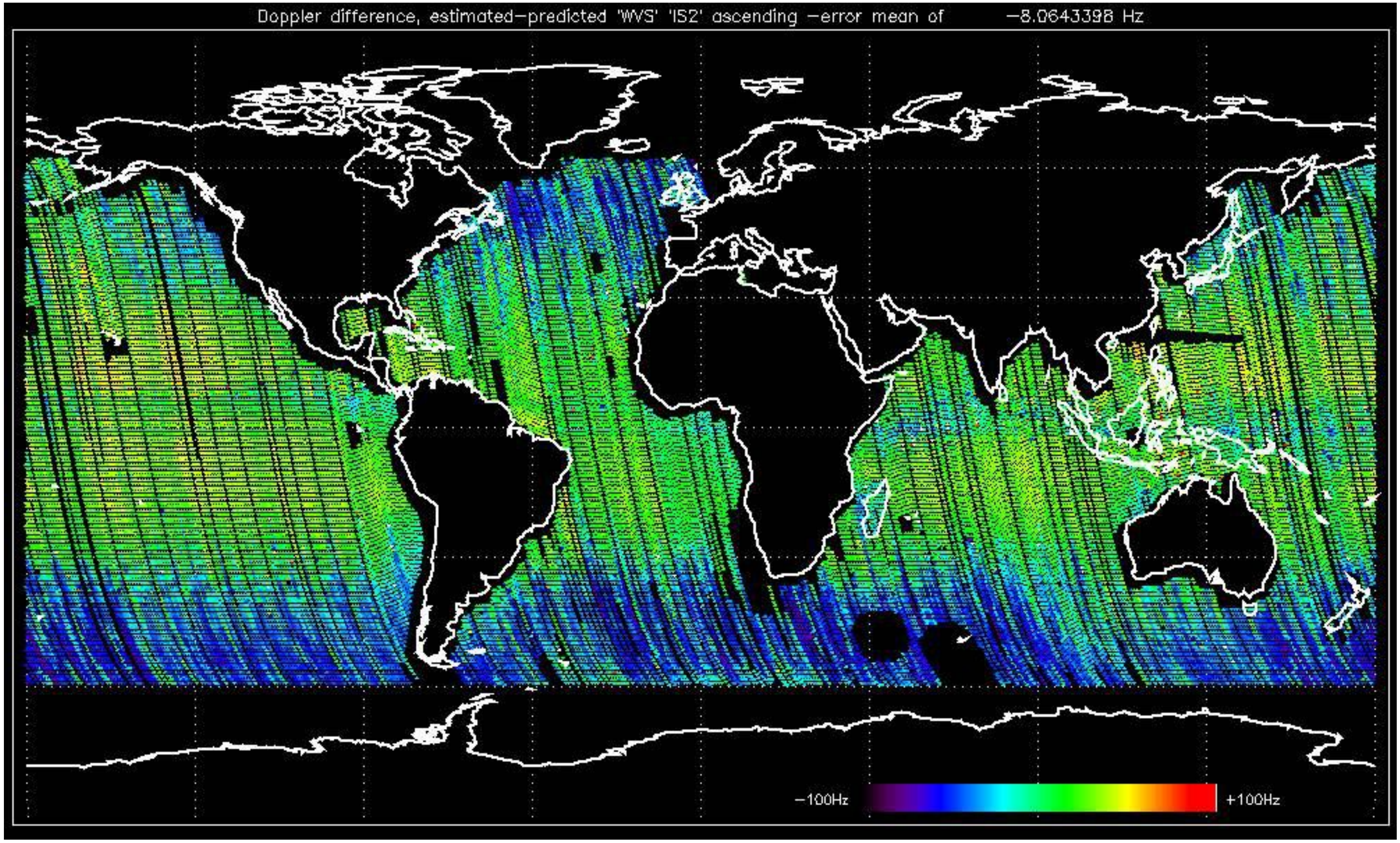

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

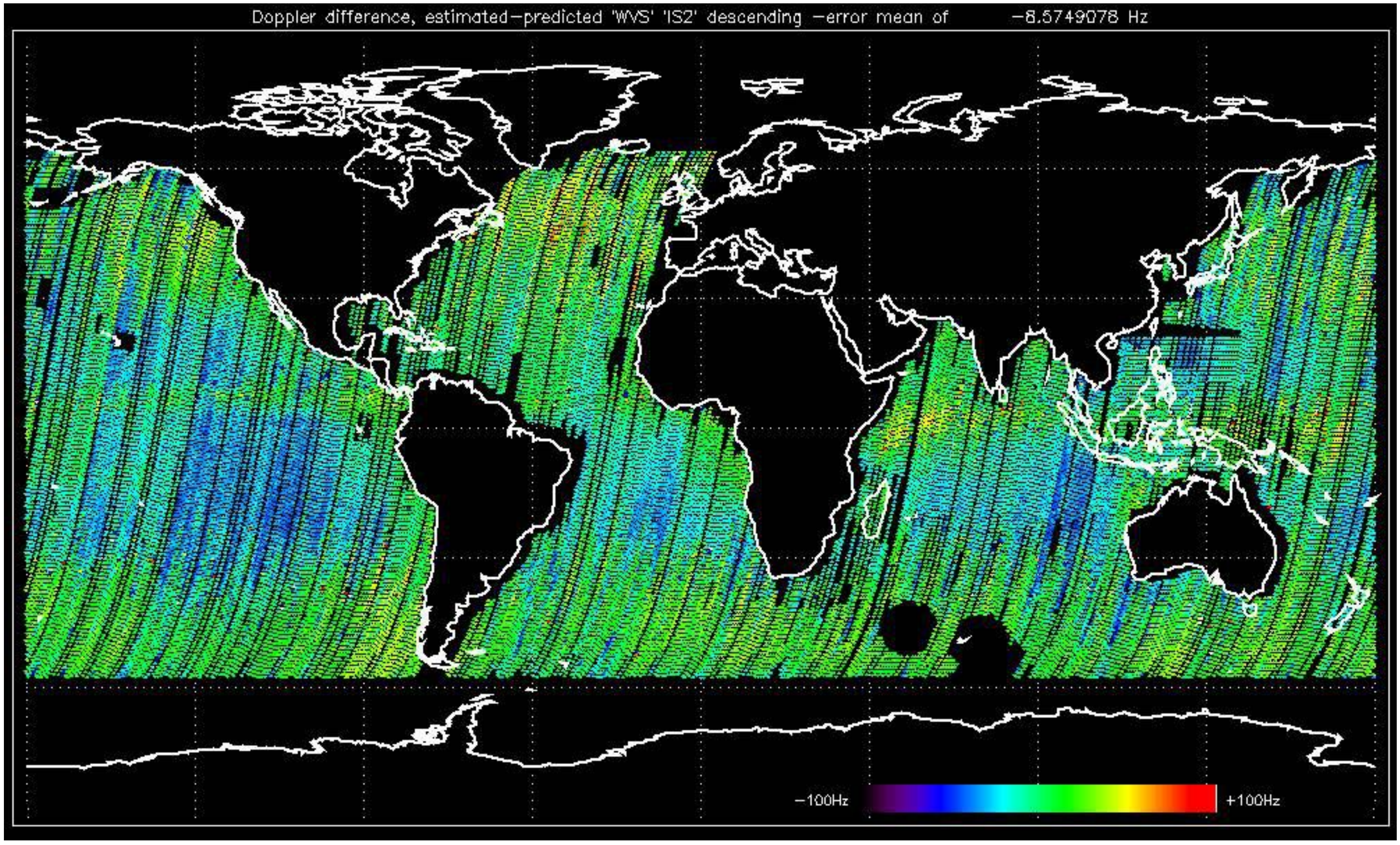

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −19.924510 Hz
−100Hz
+100Hz

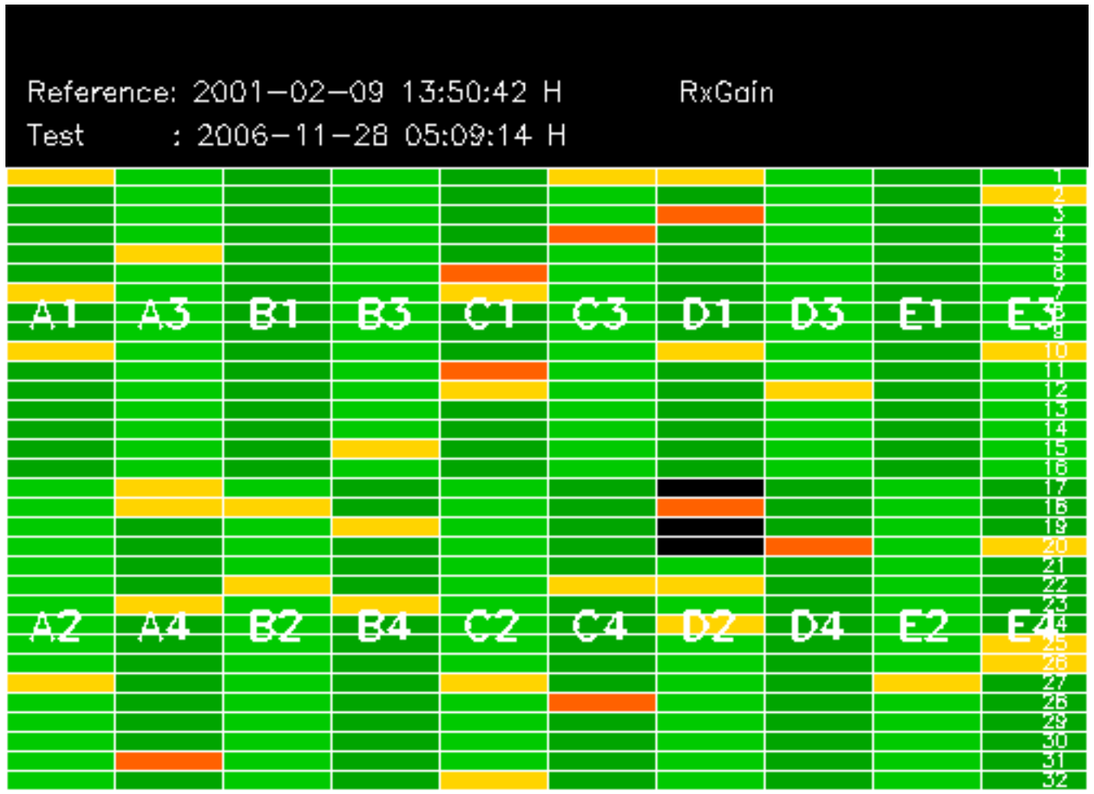

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −13.440842 Hz
−100Hz
+100Hz

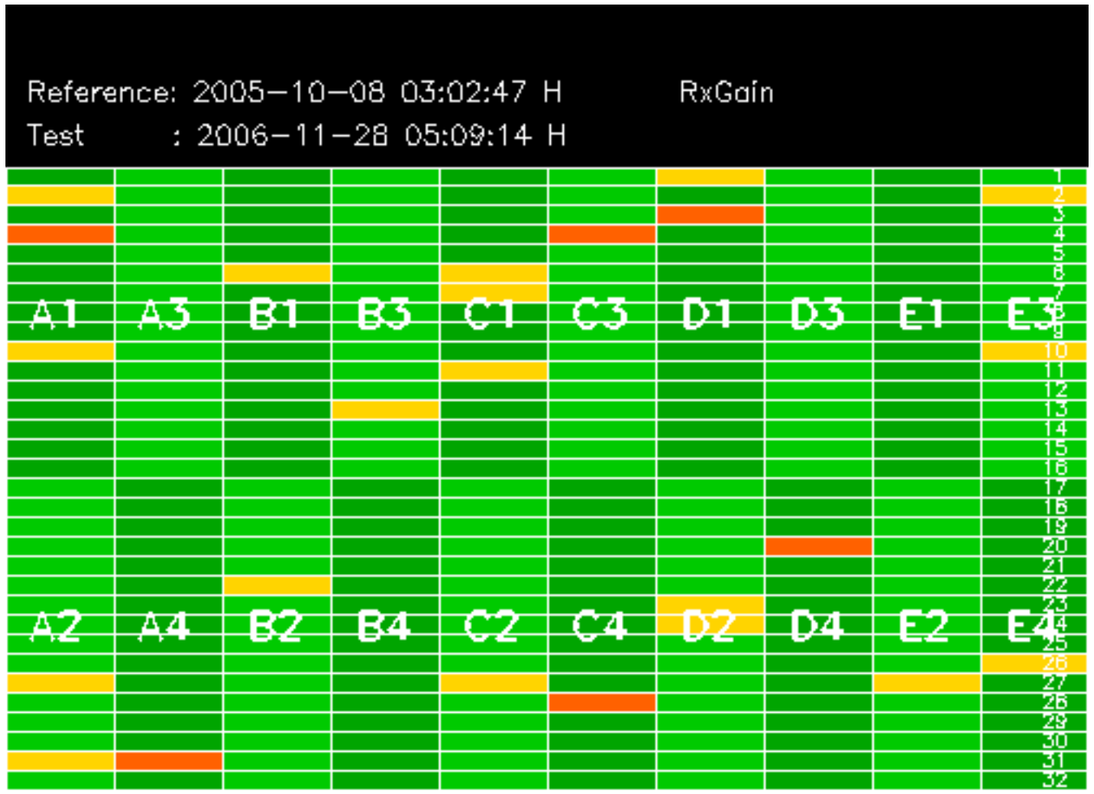

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −8.0643398 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −8.5749078 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2006-11-28 05:09:14 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-10-08 03:02:47 H
Test : 2006-11-28 05:09:14 H
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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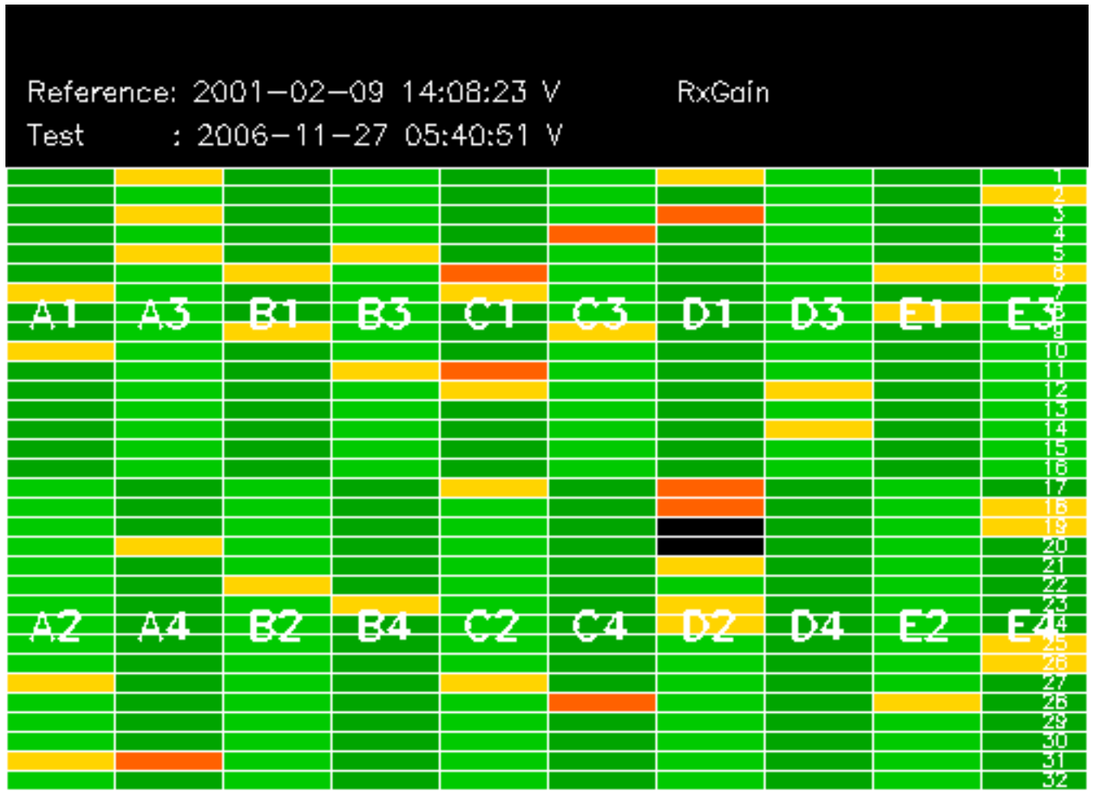
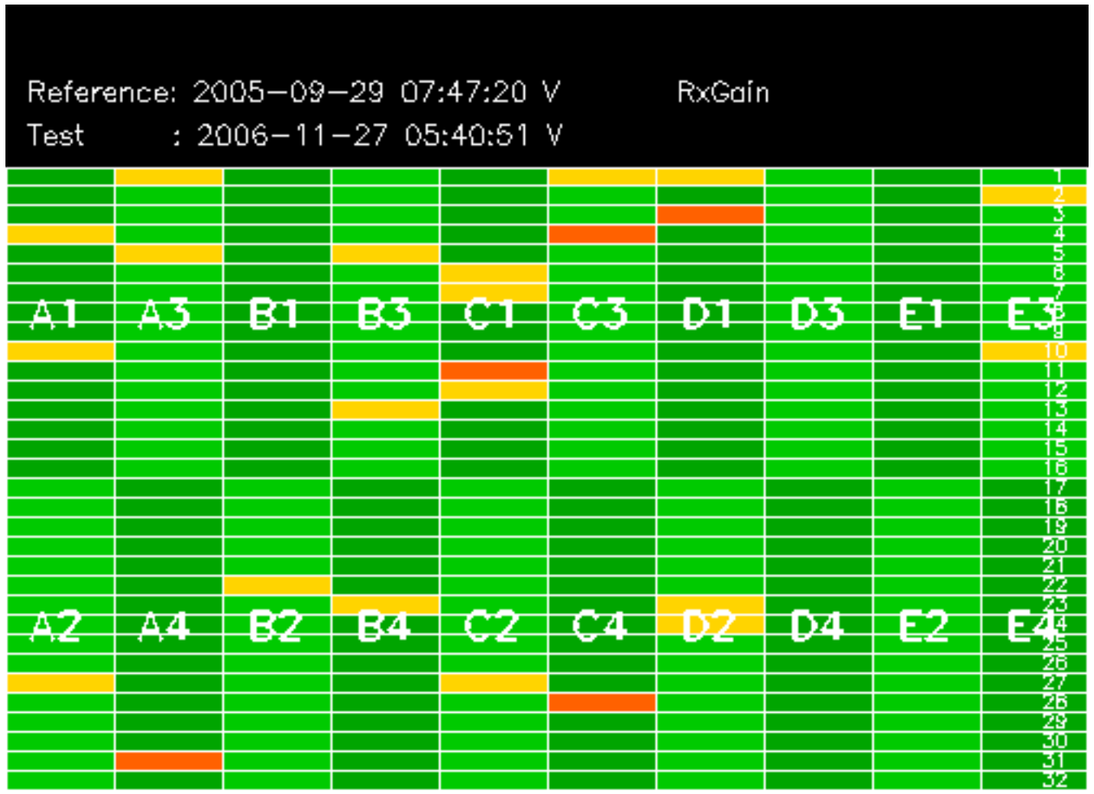

Reference: 2001-02-09 14:08:23 V
Test : 2006-11-27 05:40:51 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-11-27 05:40:51 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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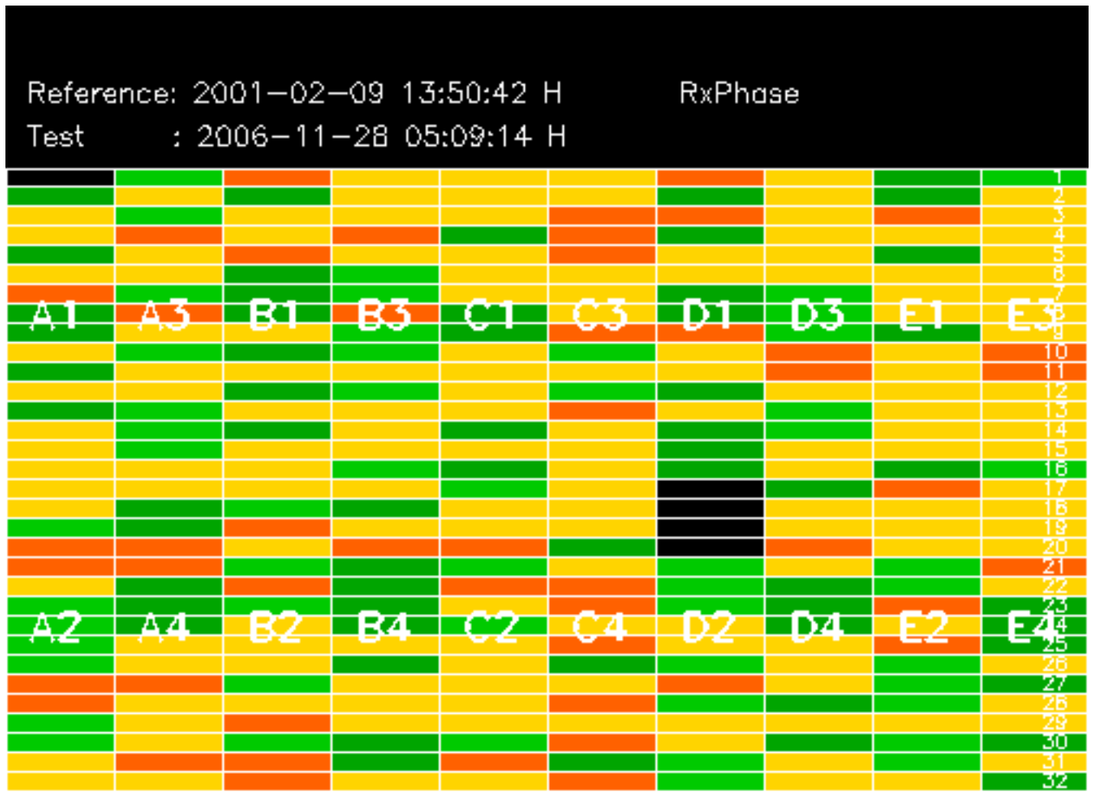
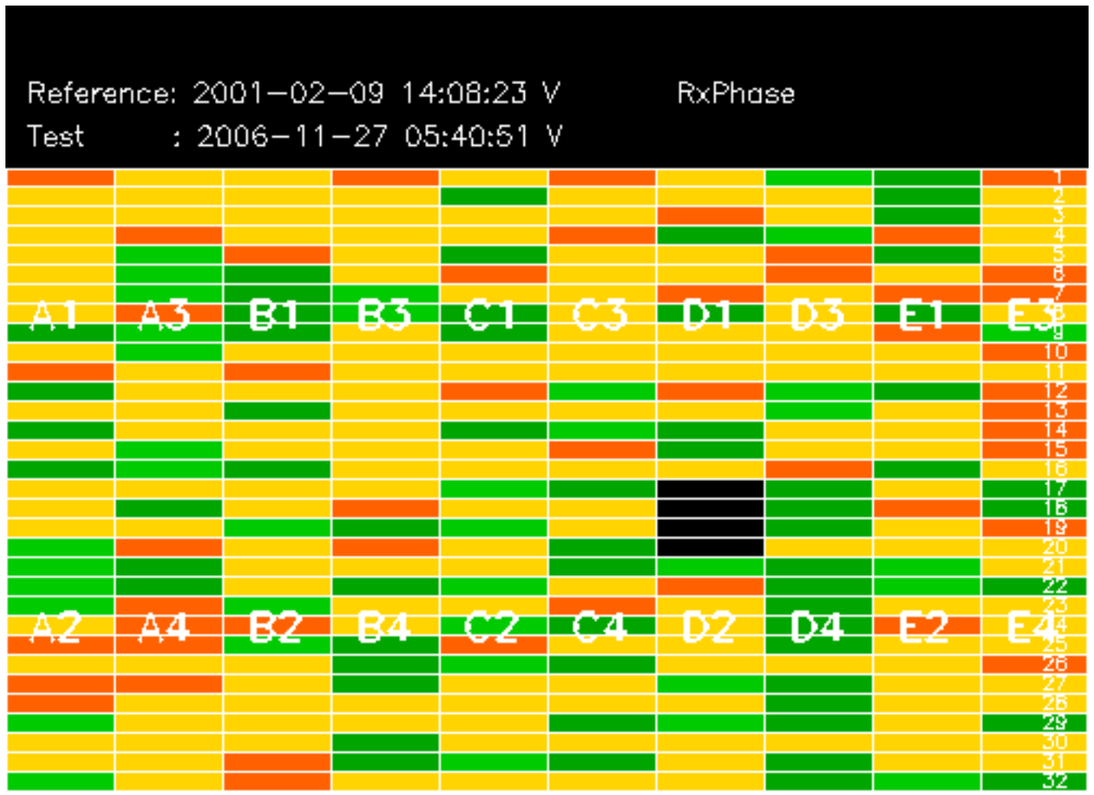
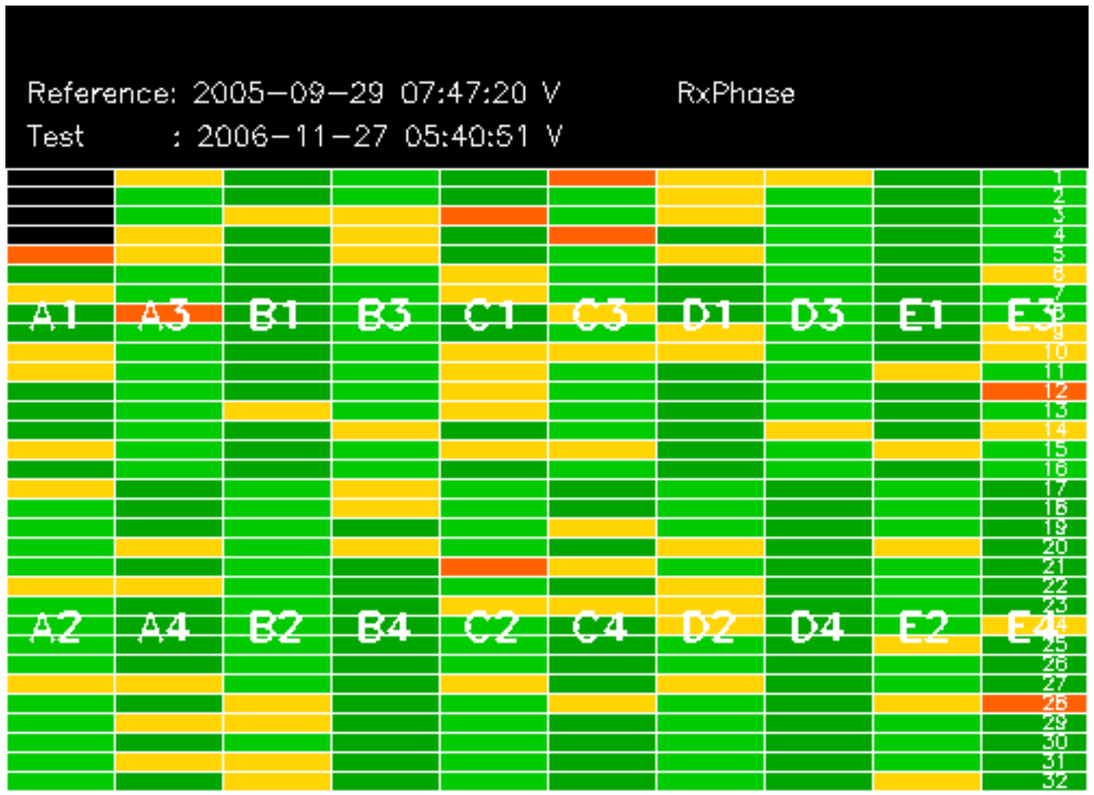

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2006-11-28 05:09:14 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

Reference: 2005-10-08 03:02:47 H
RxPhase
Test : 2006-11-28 05:09:14 H
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 : 2006-11-27 05:40:51 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-11-27 05:40:51 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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4
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9
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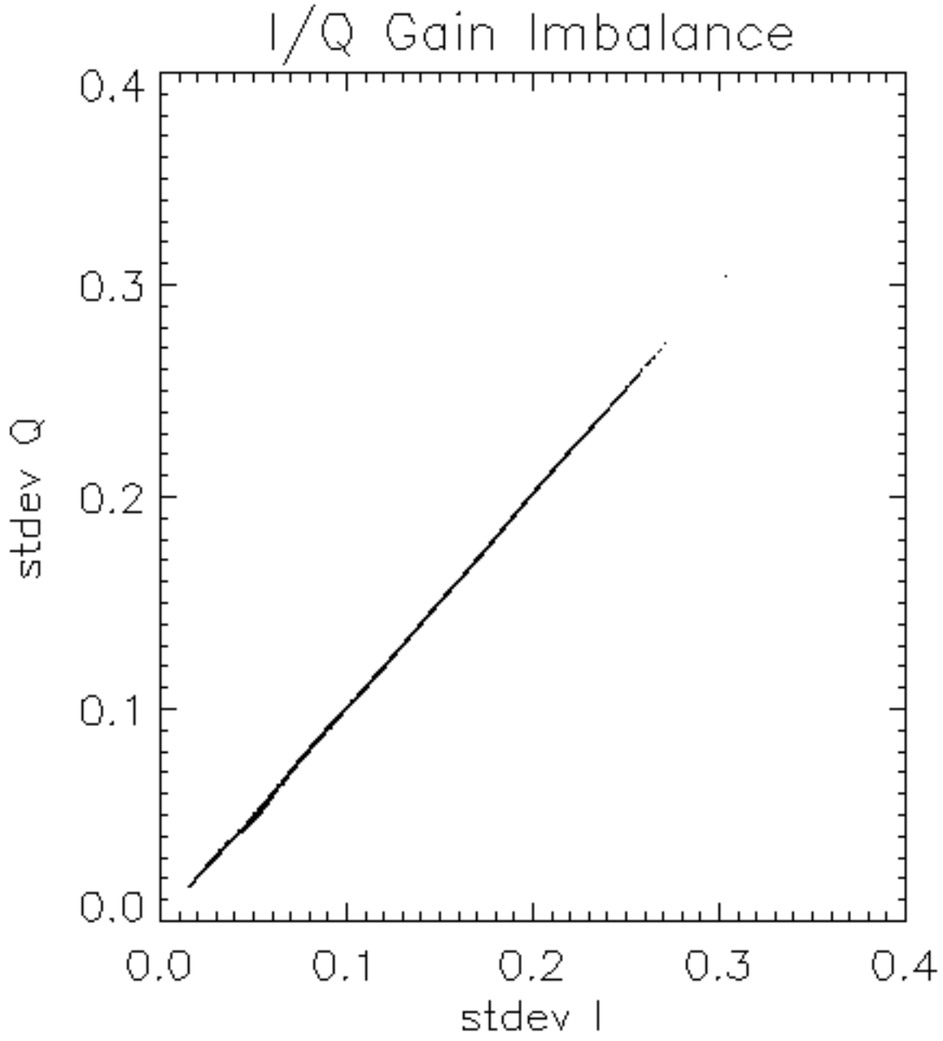
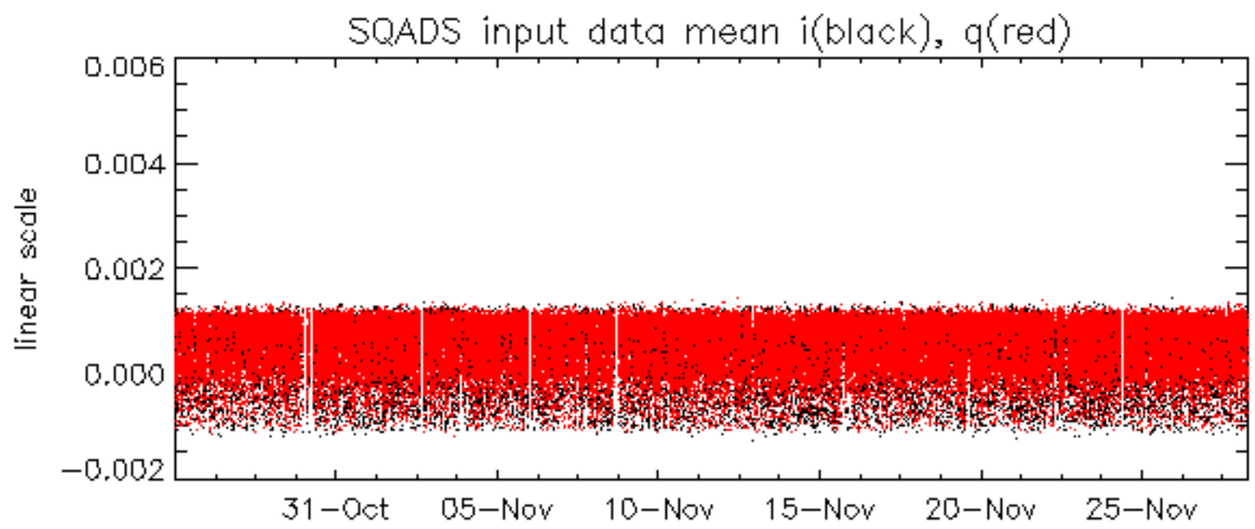
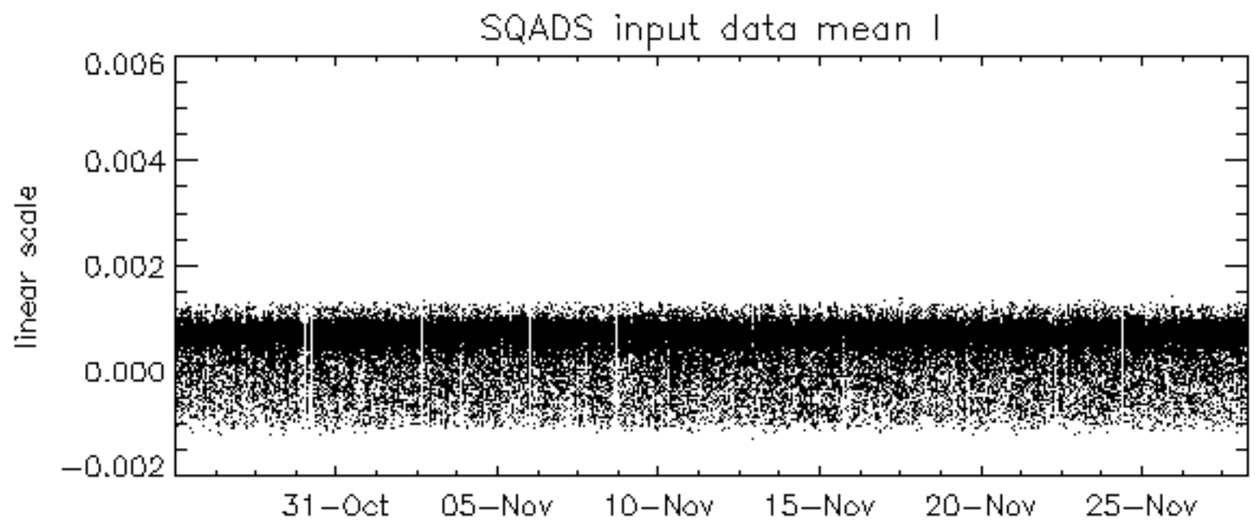
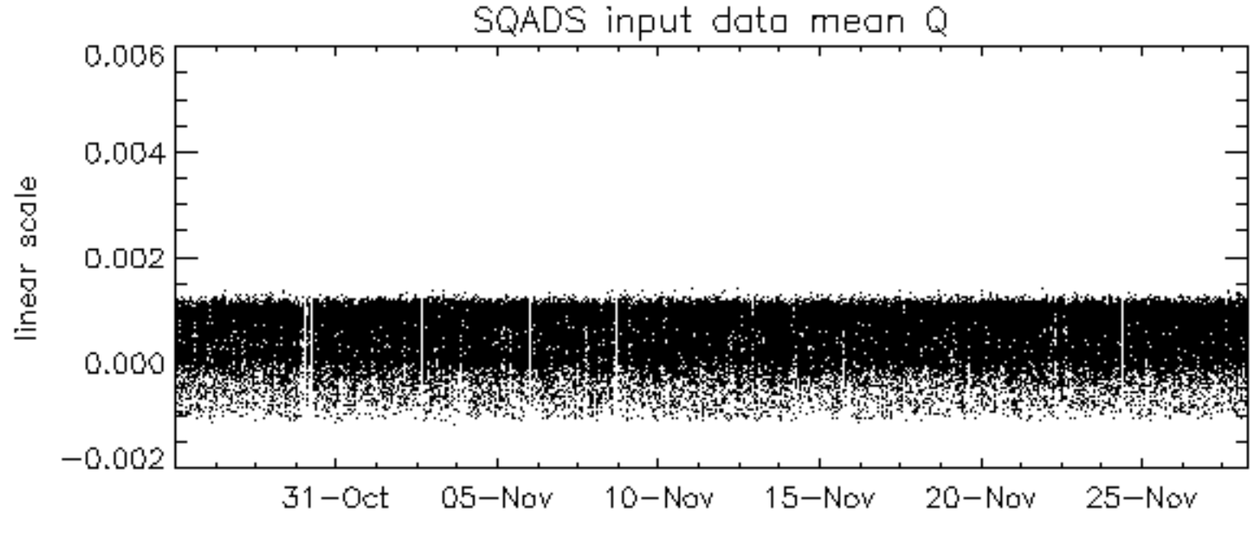
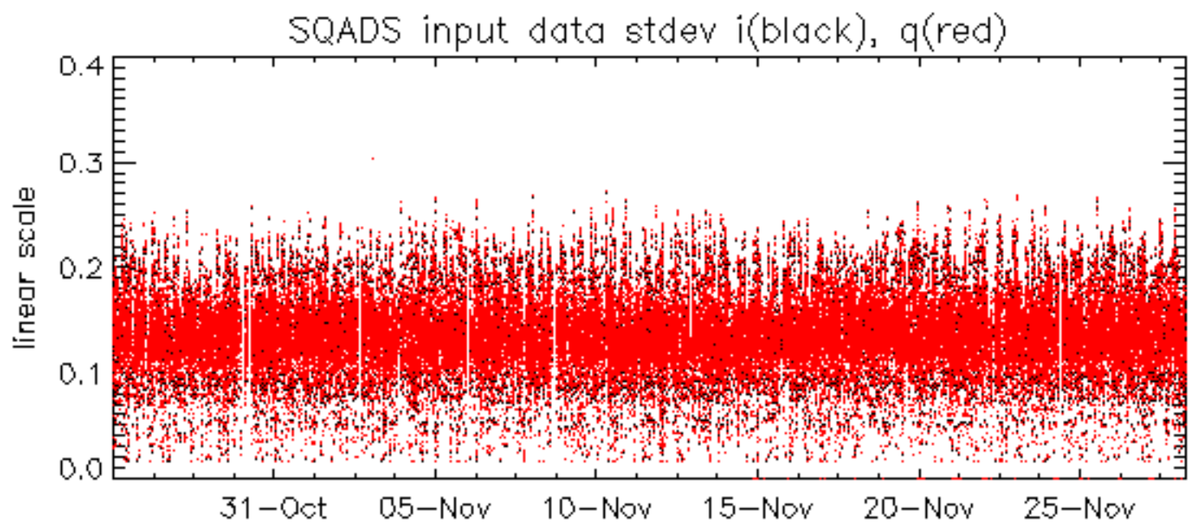
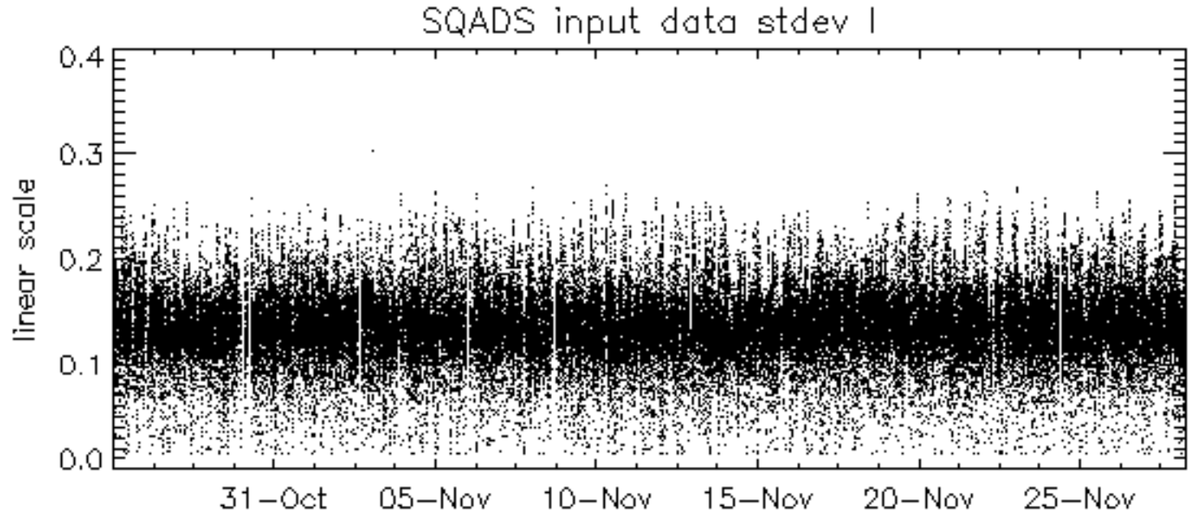

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

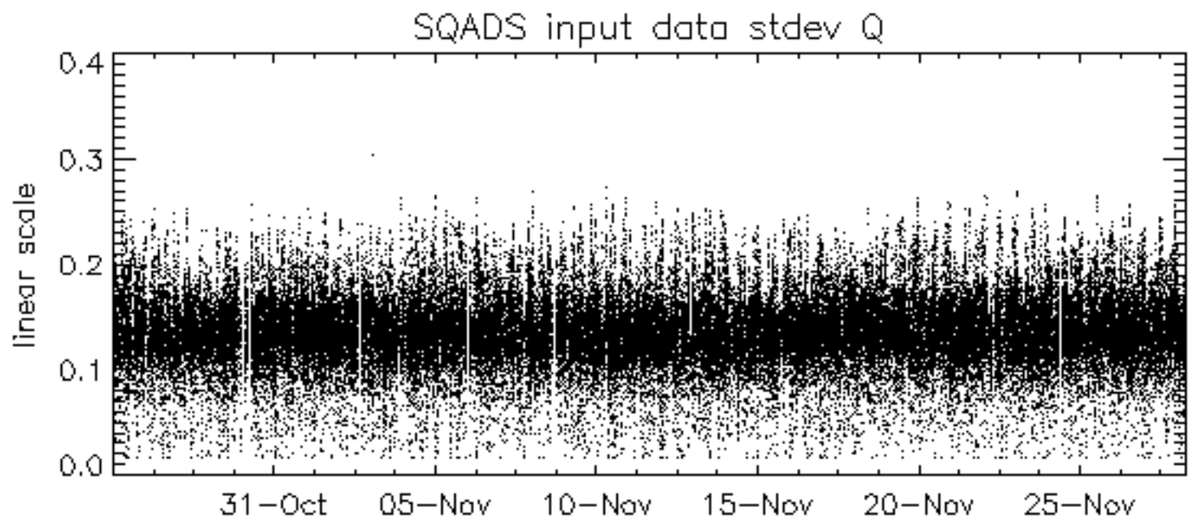

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov

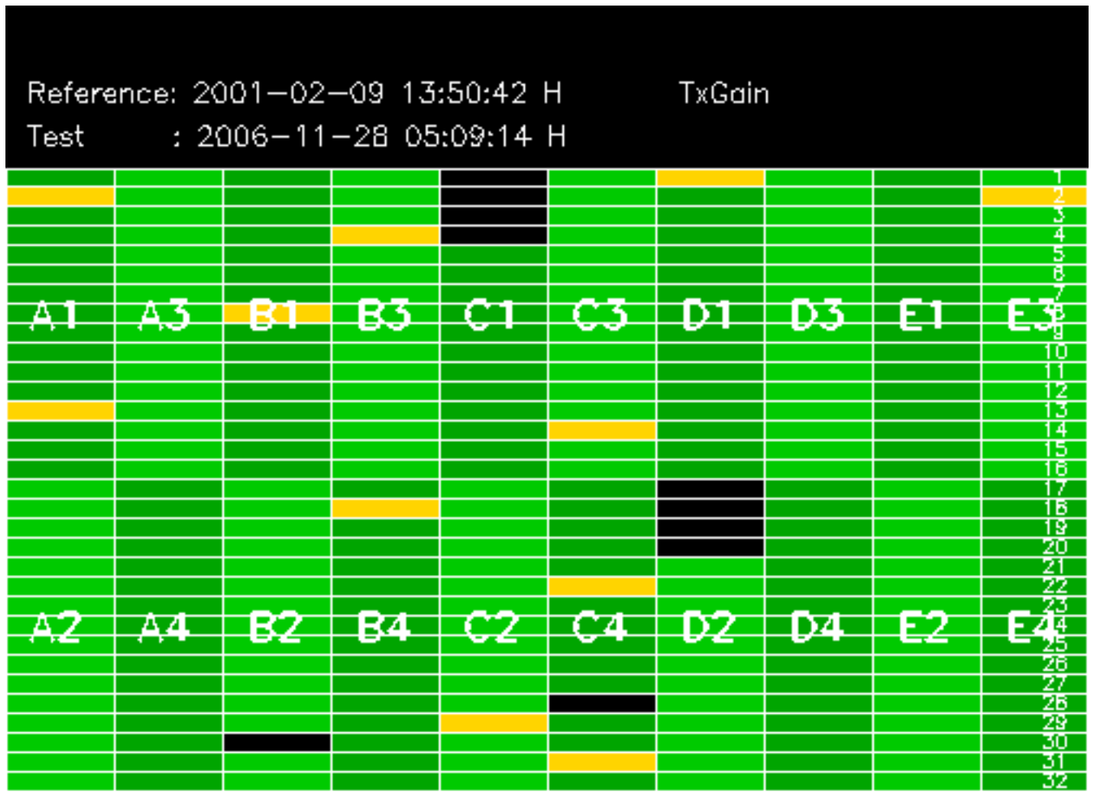

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov

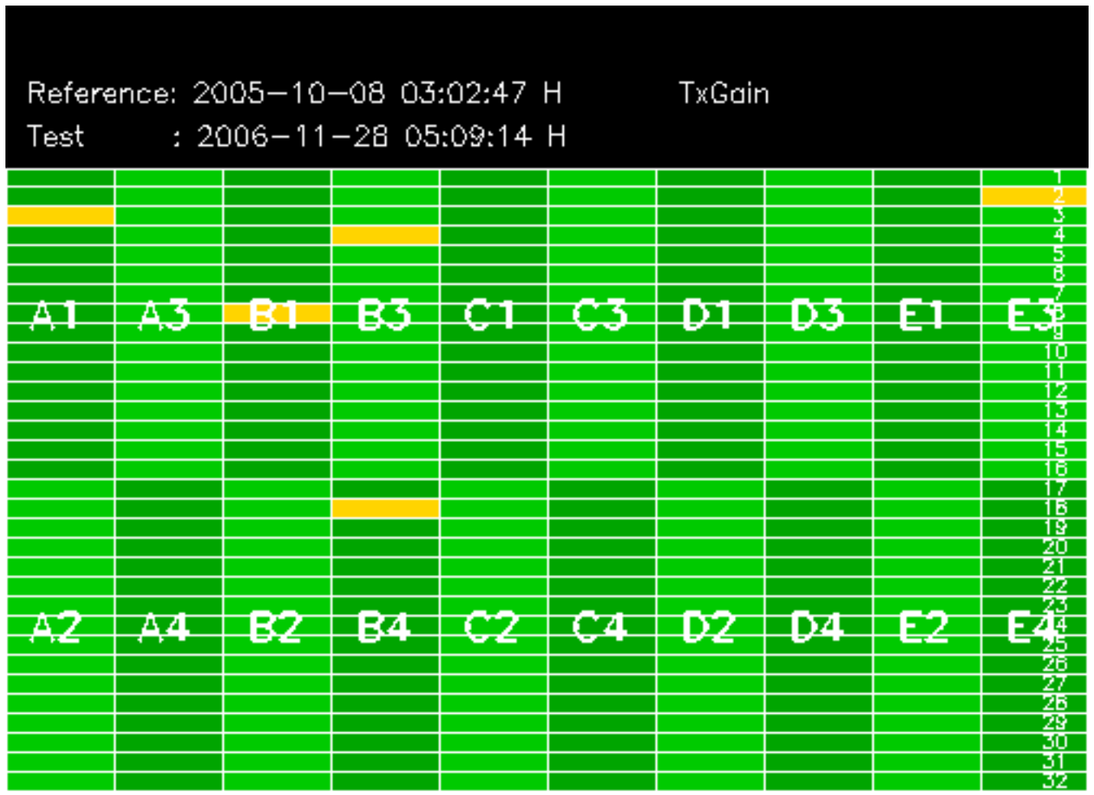

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov

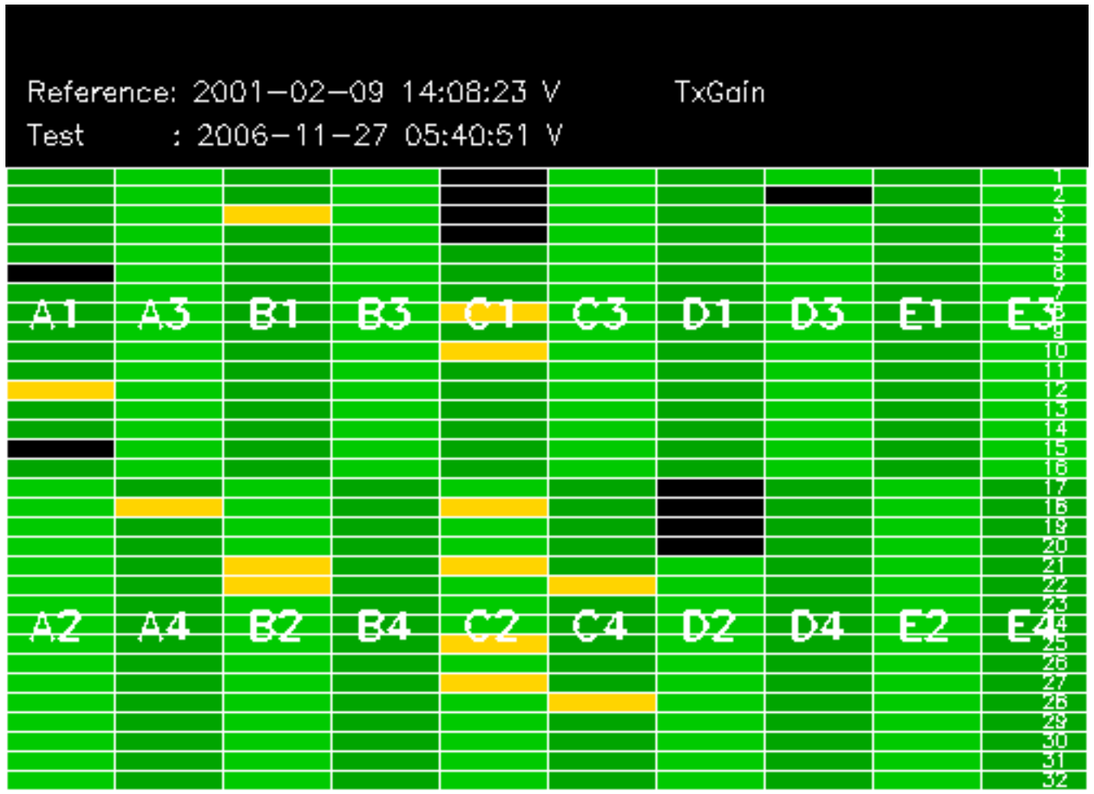

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov

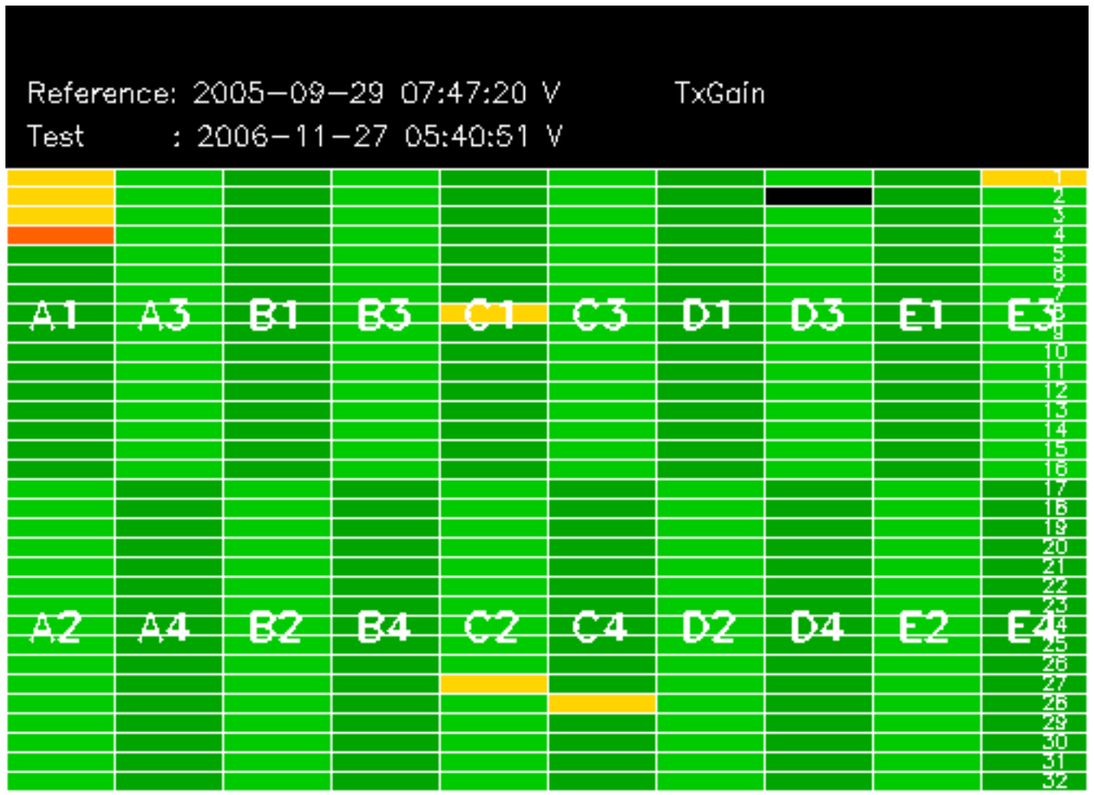

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov


Reference: 2001-02-09 13:50:42 H
Test : 2006-11-28 05:09:14 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2005-10-08 03:02:47 H
Test : 2006-11-28 05:09:14 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2006-11-27 05:40:51 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2005-09-29 07:47:20 V
Test : 2006-11-27 05:40:51 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
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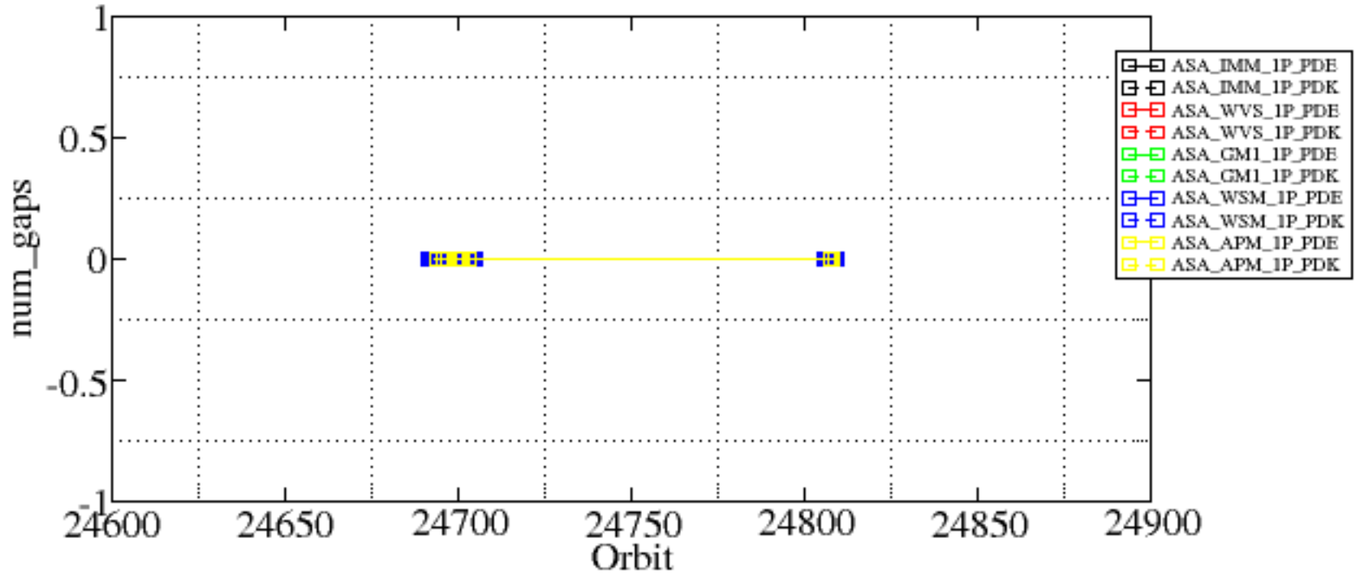
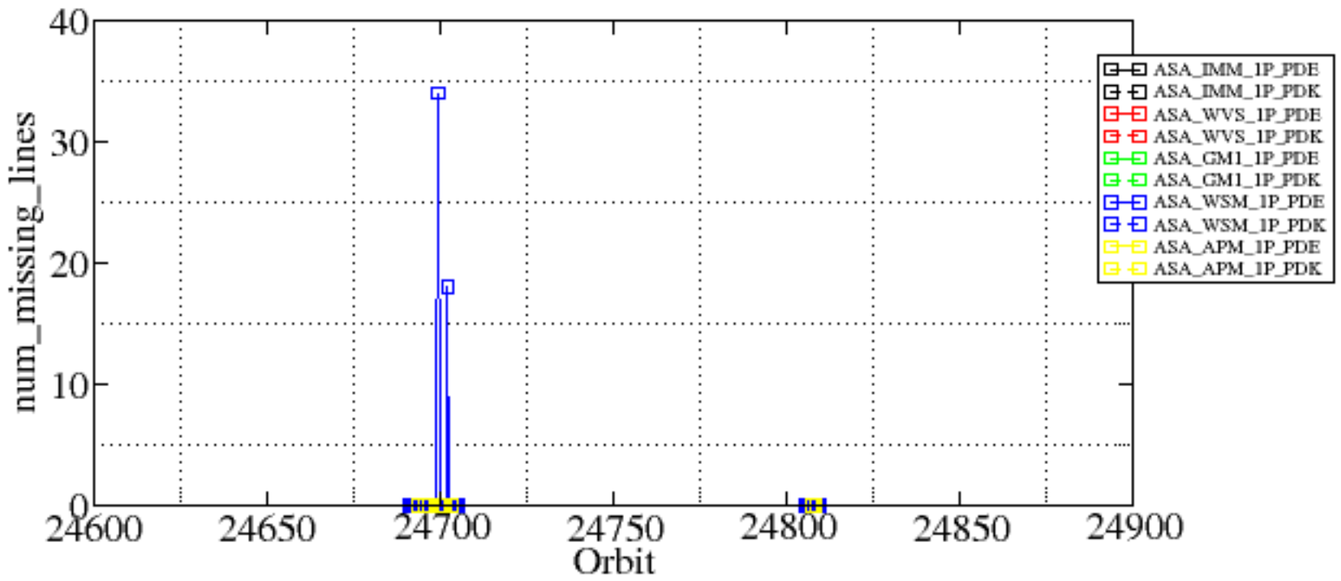
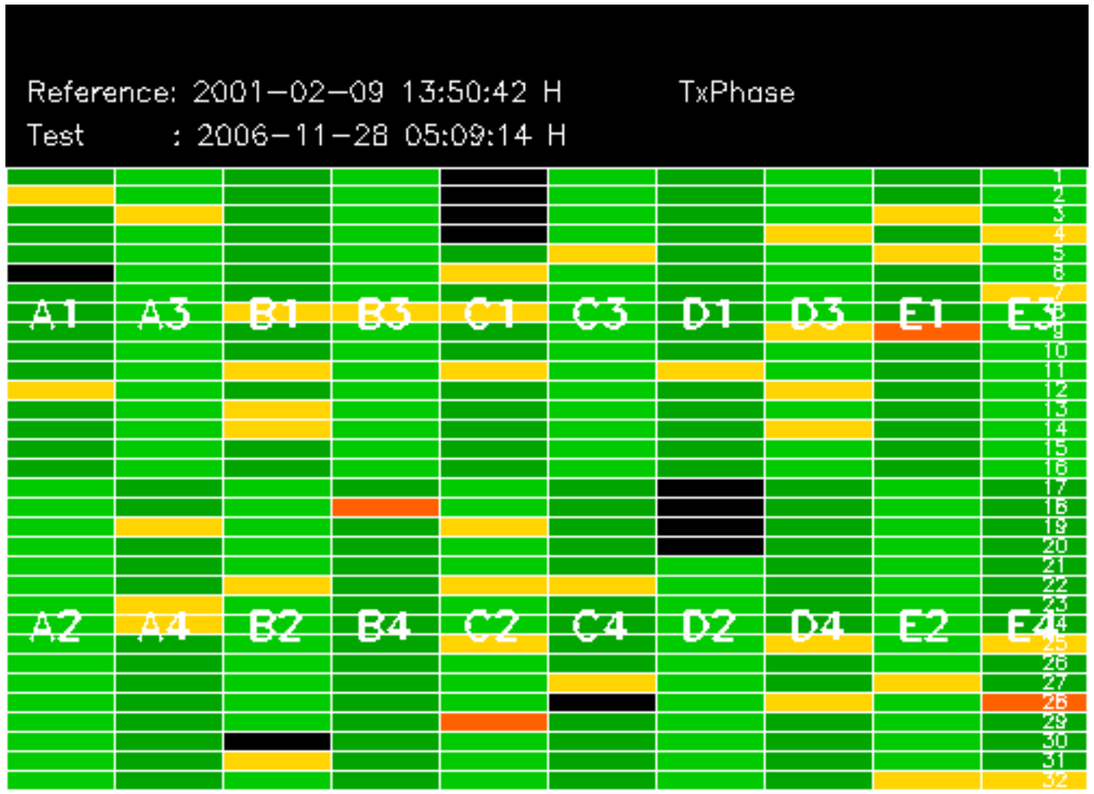
31
32

Summary of analysis for the last 3 days 2006112[890]
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_WSM_1PNPDE20061120_140442_000002022053_00096_24699_0001.N1 </td> <td>0 </td> <td>34 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061120_182348_000001652053_00099_24702_0001.N1 </td> <td>0 </td> <td>18 </td></tr>
</table>


num_gaps
1
0.5
0
-0.5
-1
24600
24650
24700
24750
24800
24850
24900
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


num_missing_lines
Orbit
40
30
20
10
0
24600
24650
24700
24750
24800
24850
24900
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


Reference: 2001-02-09 13:50:42 H
Test : 2006-11-28 05:09:14 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
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9
10
11
12
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14
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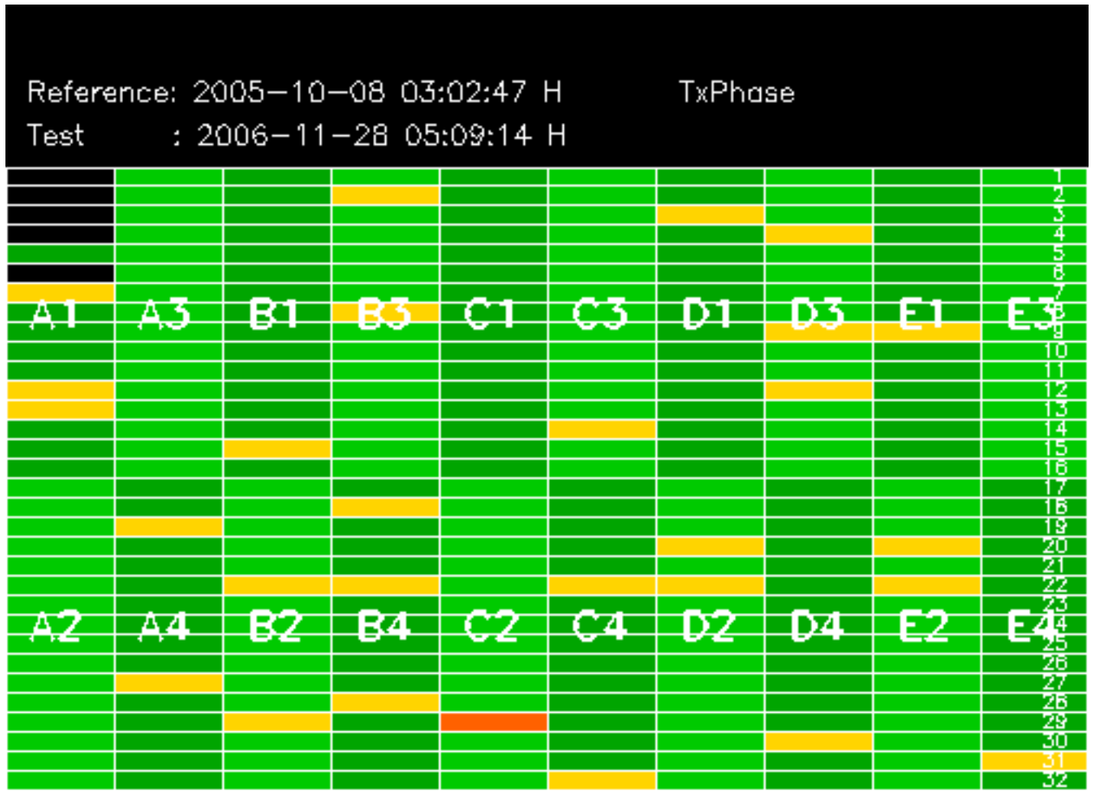
30
31
32


Reference: 2005-10-08 03:02:47 H
Test : 2006-11-28 05:09:14 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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4
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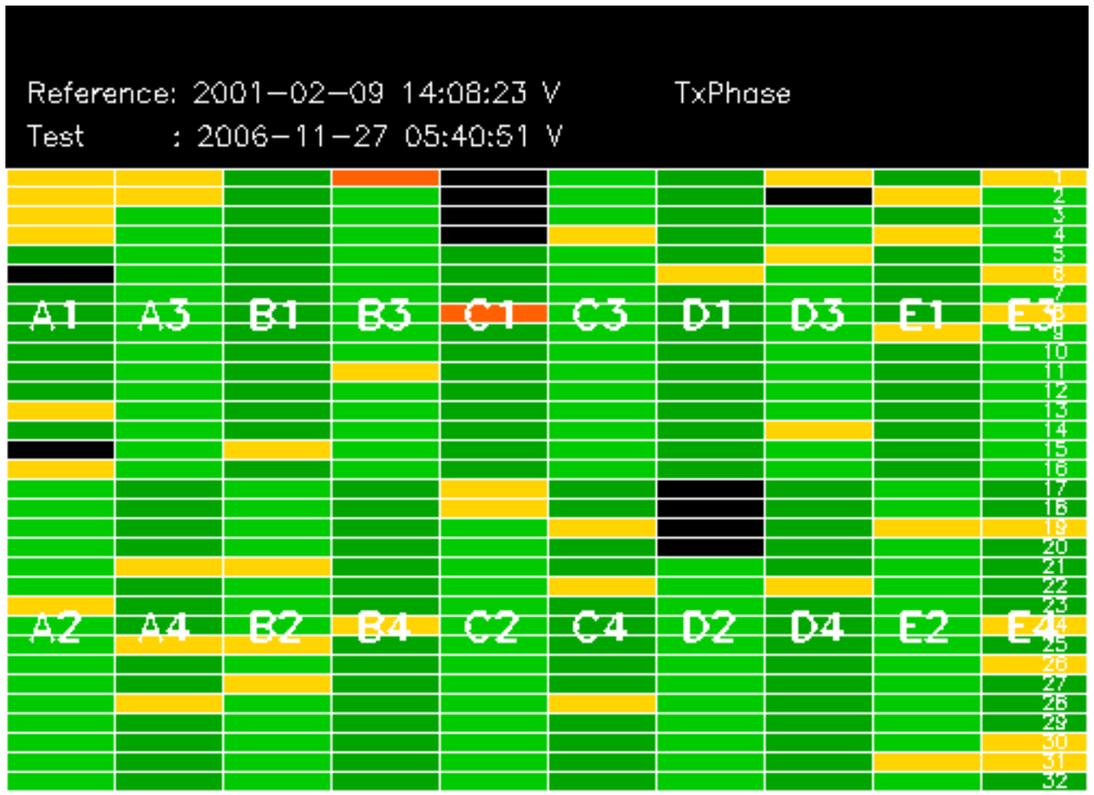
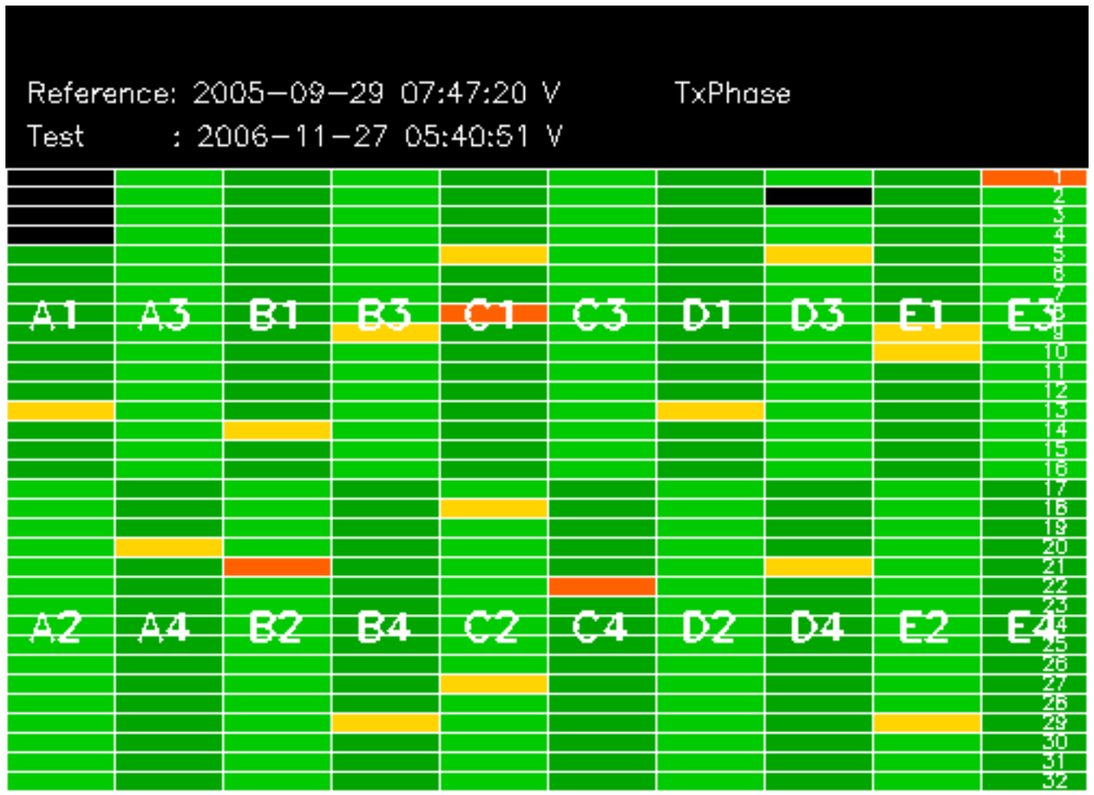
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2006-11-27 05:40:51 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-11-27 05:40:51 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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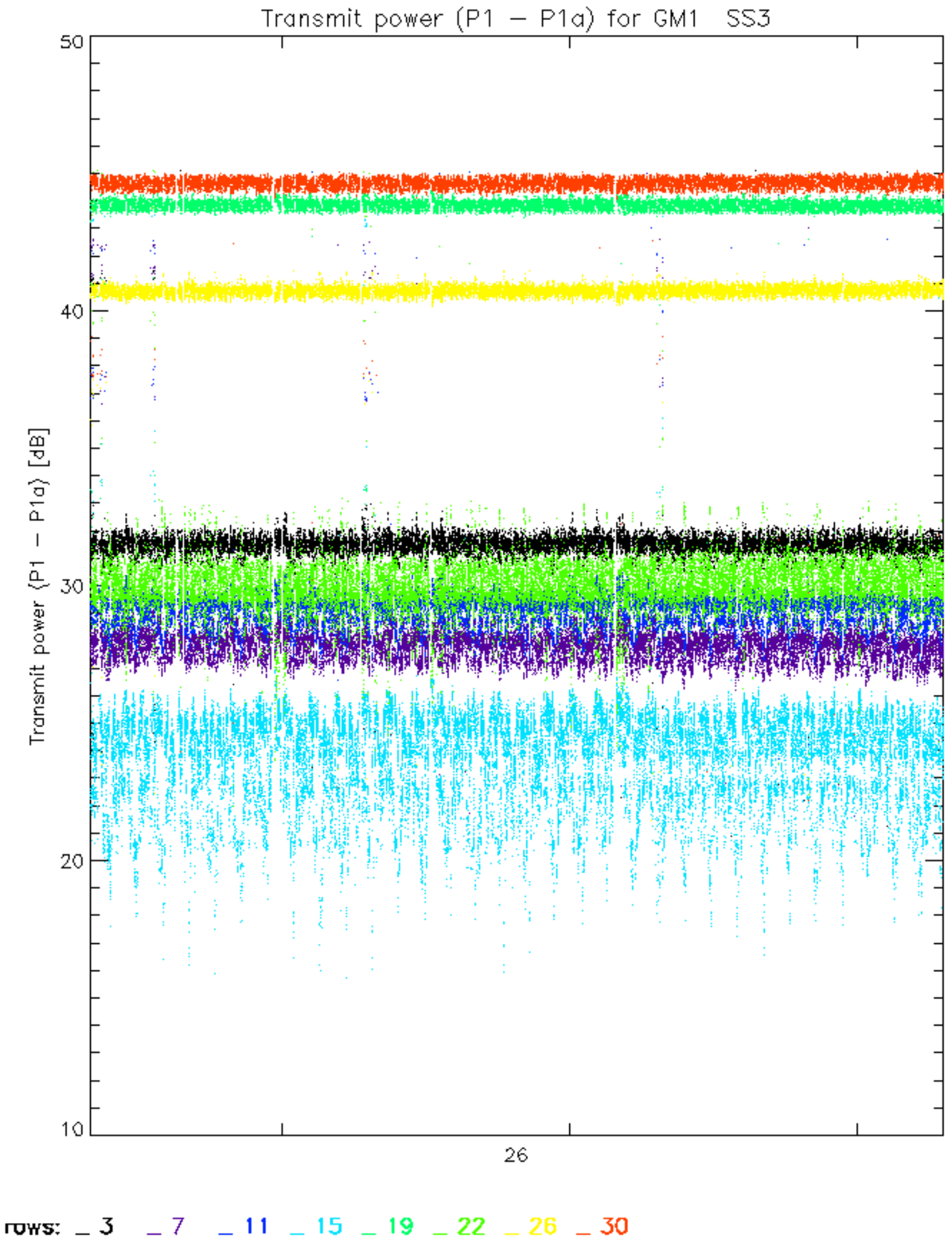
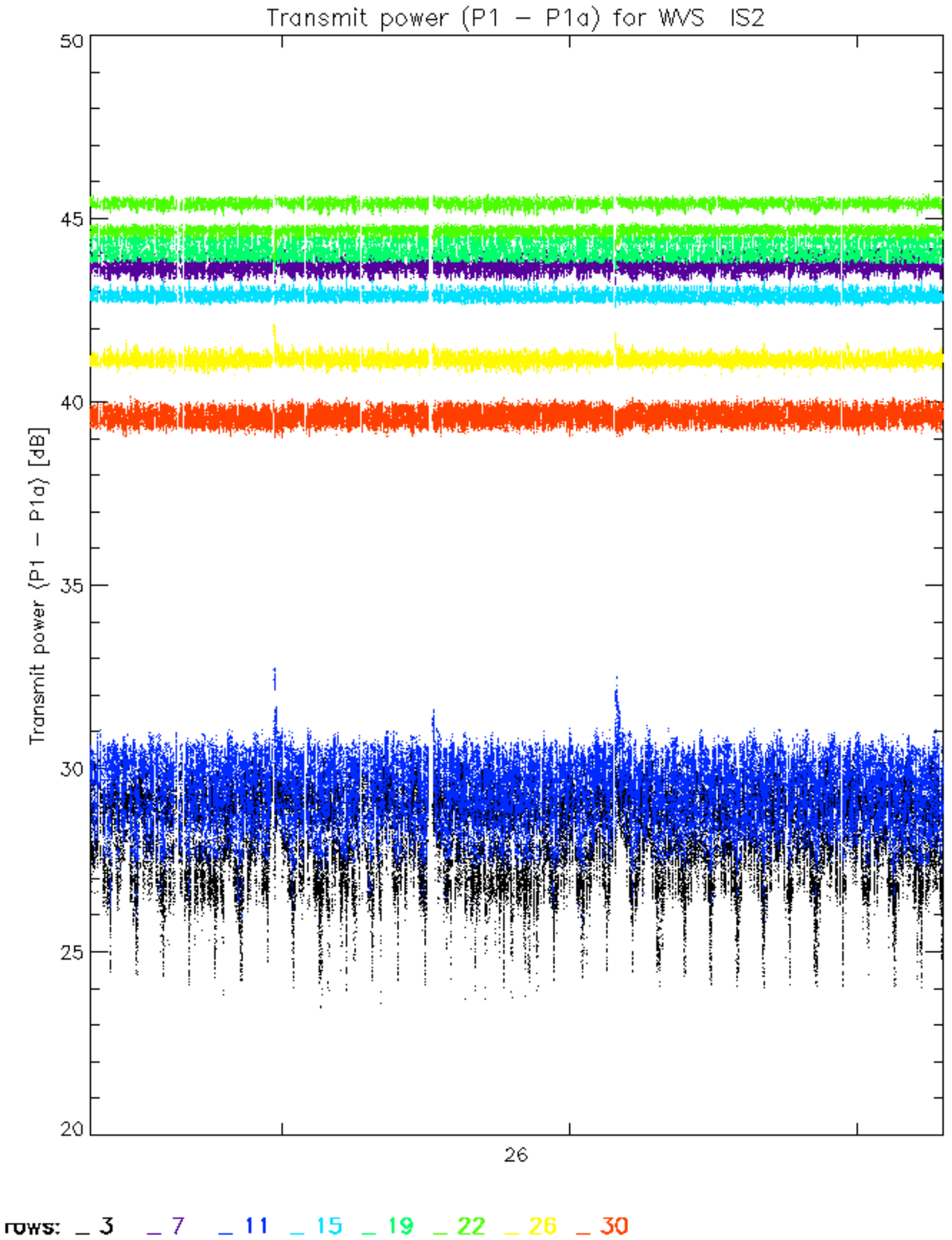

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
26
rows: 3 7 11 15 19 22 26 30


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

No unavailabilities during the reported period.