PRELIMINARY REPORT OF 051205

last update on Mon Dec 5 16:32:37 GMT 2005

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 2005-12-04 00:00:00 to 2005-12-05 16:32:37

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	46	0	12	0	22
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	46	0	12	0	22
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	46	0	12	0	22
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	46	0	12	0	22

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	33	35	30	9	45
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	33	35	30	9	45
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	35	30	9	45
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	33	35	30	9	45

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	20051124 100809
H	20051127 183652

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	-3.590577	0.119502	-0.073937
7	P1	-2.885893	0.076498	0.537651
11	P1	-4.141450	0.017525	-0.011673
15	P1	-5.662411	0.959657	2.250304
19	P1	-3.125937	0.035170	0.374364
22	P1	-4.471213	0.017931	0.140031
26	P1	-4.303230	0.038702	-0.389789
30	P1	-5.713256	0.021690	0.232865
3	P1	-15.426425	1.338113	-0.113968
7	P1	-15.969254	1.511122	2.712935
11	P1	-16.467546	0.405825	0.563721
15	P1	-13.202550	0.607047	1.544567
19	P1	-13.626310	0.212928	0.870348
22	P1	-16.232199	0.517862	0.759431
26	P1	-15.542346	0.748357	1.665924
30	P1	-16.207920	1.507458	2.497301

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.875324	0.100534	-0.037682
7	P2	-22.572584	0.099932	0.072487
11	P2	-16.588640	0.111543	-0.039912
15	P2	-7.270357	0.099531	-0.044624
19	P2	-9.228425	0.096376	0.013349
22	P2	-17.877148	0.103095	0.053931
26	P2	-16.271057	0.116083	-0.367176
30	P2	-19.720530	0.103040	-0.283646

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.231050	0.007233	-0.017532

7	P3	-8.231050	0.007233	-0.017532
11	P3	-8.231050	0.007233	-0.017532
15	P3	-8.231050	0.007233	-0.017532
19	P3	-8.231050	0.007233	-0.017532
22	P3	-8.231050	0.007233	-0.017532
26	P3	-8.231050	0.007233	-0.017532
30	P3	-8.231050	0.007233	-0.017532

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	-3.689154	0.007849	-0.035477
7	P1	-2.784254	0.010830	-0.001182
11	P1	-2.871707	0.013391	-0.029108
15	P1	-3.392060	0.021595	-0.066292
19	P1	-3.375981	0.013039	-0.034417
22	P1	-5.112929	0.019570	-0.047237
26	P1	-5.818888	0.015927	-0.055605
30	P1	-5.262086	0.031774	-0.055652
3	P1	-11.465069	0.041393	-0.024960
7	P1	-9.965782	0.045091	-0.016927
11	P1	-10.044518	0.060432	-0.040983
15	P1	-10.558821	0.083894	-0.125089
19	P1	-15.502741	0.072807	-0.006244
22	P1	-20.905712	0.966379	-0.070811
26	P1	-17.226406	0.301568	0.162490
30	P1	-18.347939	0.313515	-0.022920

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.662060	0.030532	0.102614
7	P2	-23.069263	0.062741	0.096125
11	P2	-11.689560	0.023173	0.125087
15	P2	-4.973168	0.021340	-0.021998
19	P2	-6.952414	0.021546	-0.024132
22	P2	-8.169064	0.023697	-0.060522
26	P2	-24.026011	0.032291	-0.082763
30	P2	-22.111296	0.020773	-0.007527

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.070712	0.002492	-0.015693
7	P3	-8.070744	0.002494	-0.015956
11	P3	-8.070611	0.002489	-0.015993
15	P3	-8.070683	0.002497	-0.015565
19	P3	-8.070868	0.002499	-0.015557
22	P3	-8.070733	0.002491	-0.015775
26	P3	-8.070630	0.002480	-0.016033
30	P3	-8.070612	0.002491	-0.015072

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	0.000512684
	stdev	1.97883e-07
MEAN Q	mean	0.000514569
	stdev	2.30330e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.133218
	stdev	0.00111403
STDEV Q	mean	0.133535
	stdev	0.00112889

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2005120[345]
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_IMM_1PNPDE20051203_005043_000002002043_00059_19652_2944.N1	1	0
ASA_WSM_1PNPDE20051203_014241_000002262043_00060_19653_2578.N1	0	76
ASA_WSM_1PNPDE20051203_042101_000002022043_00062_19655_2596.N1	0	34

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

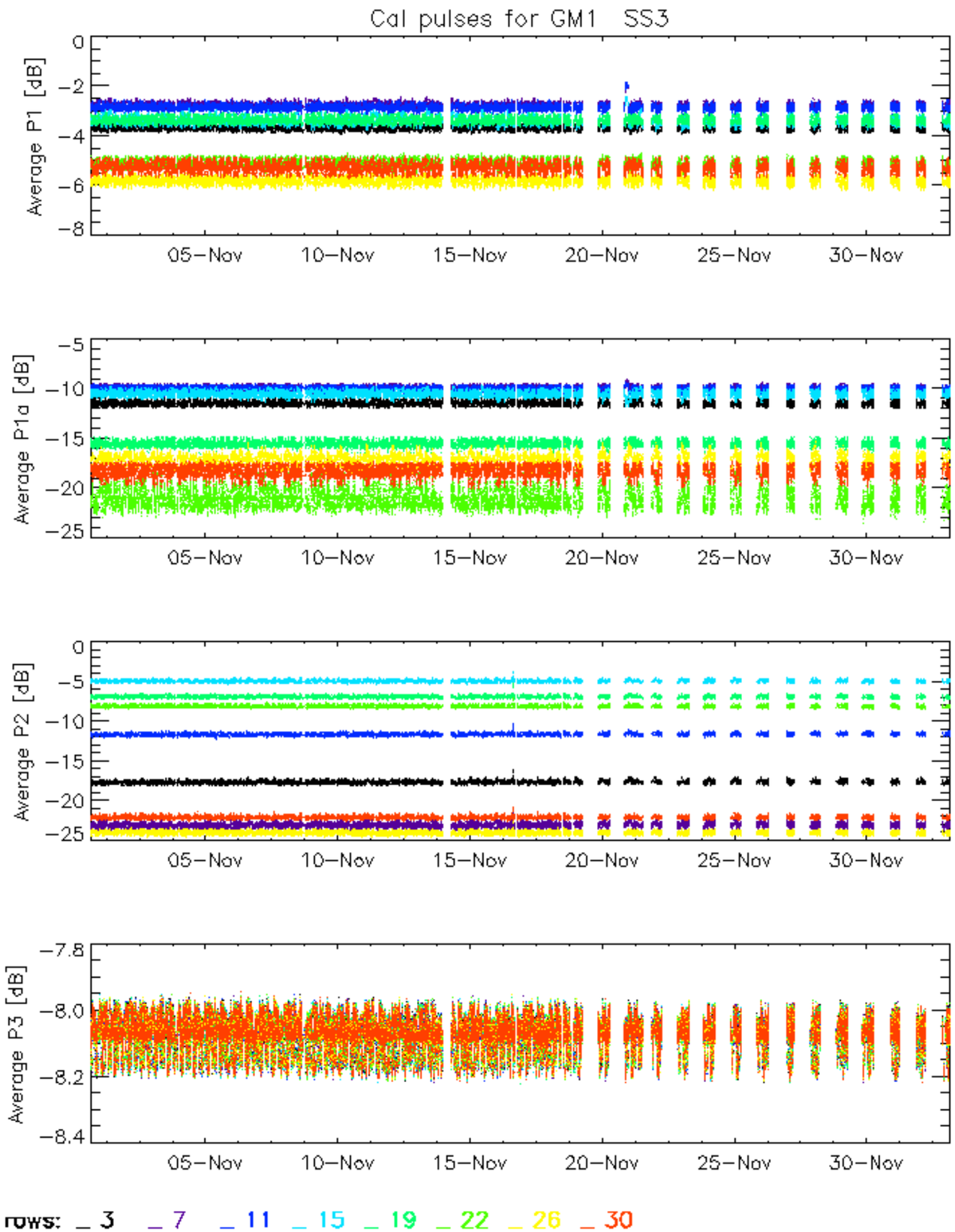
7.4 - Unbiased Doppler Error for GM1

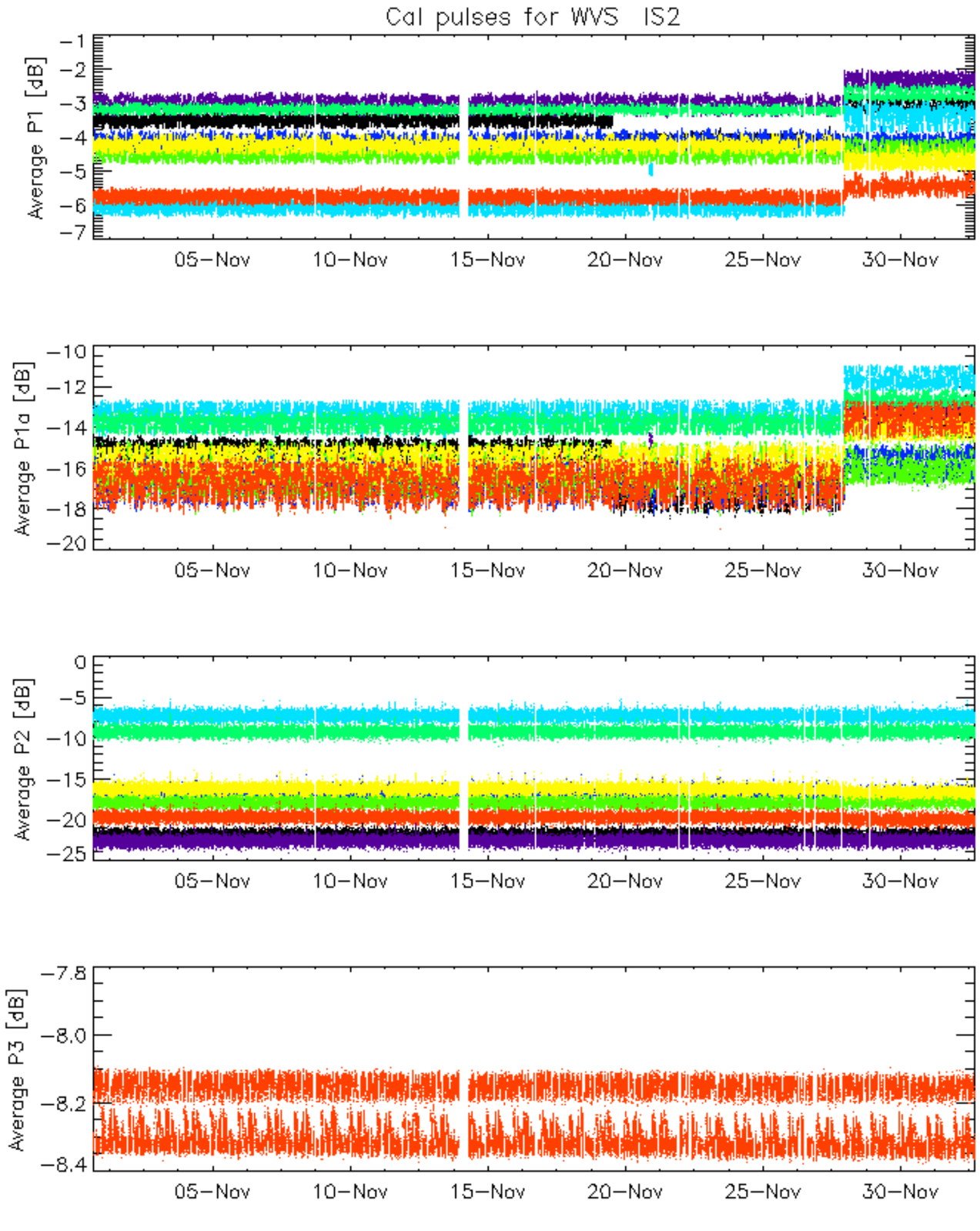
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

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
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
30−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 26 30

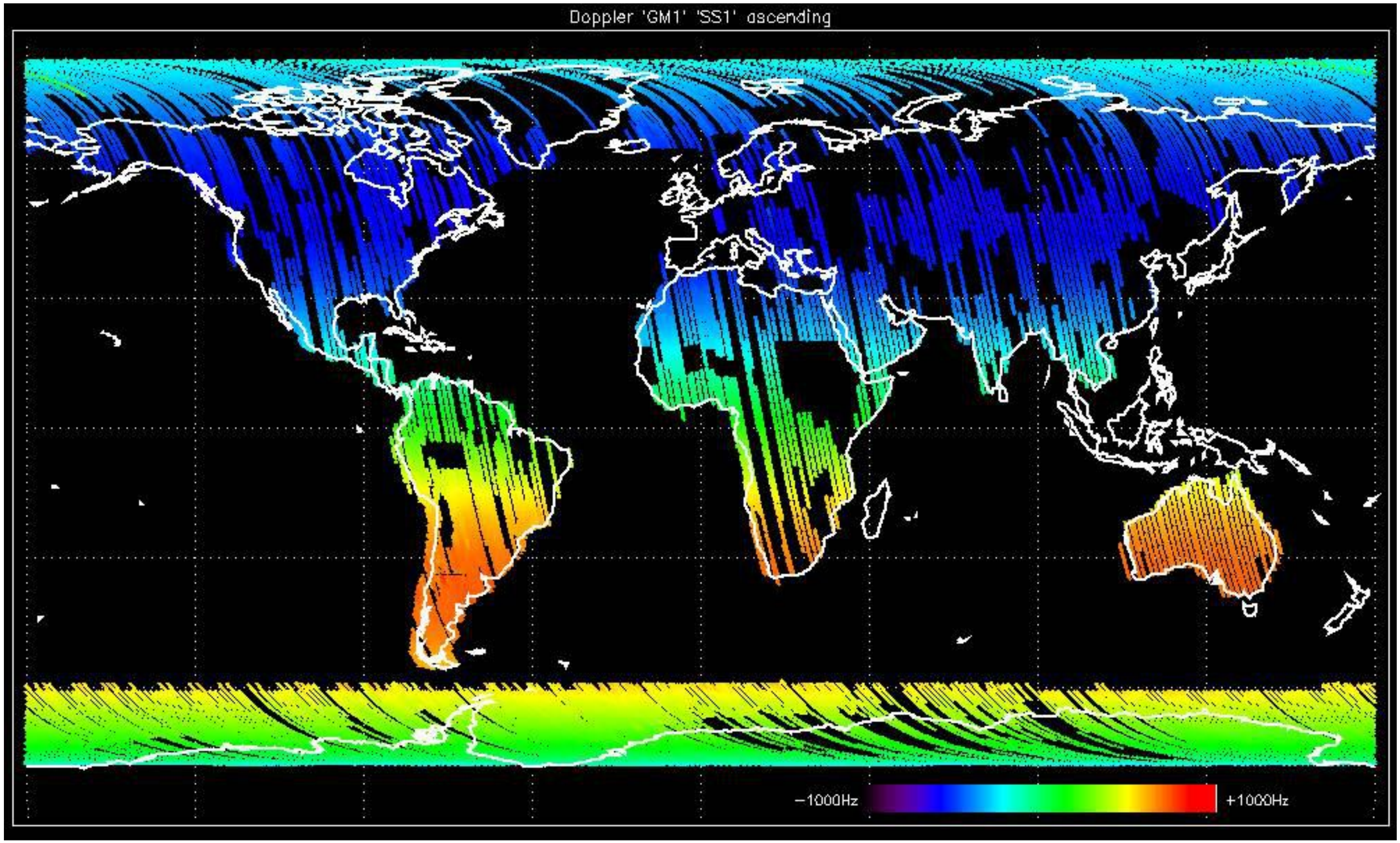

Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
30−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

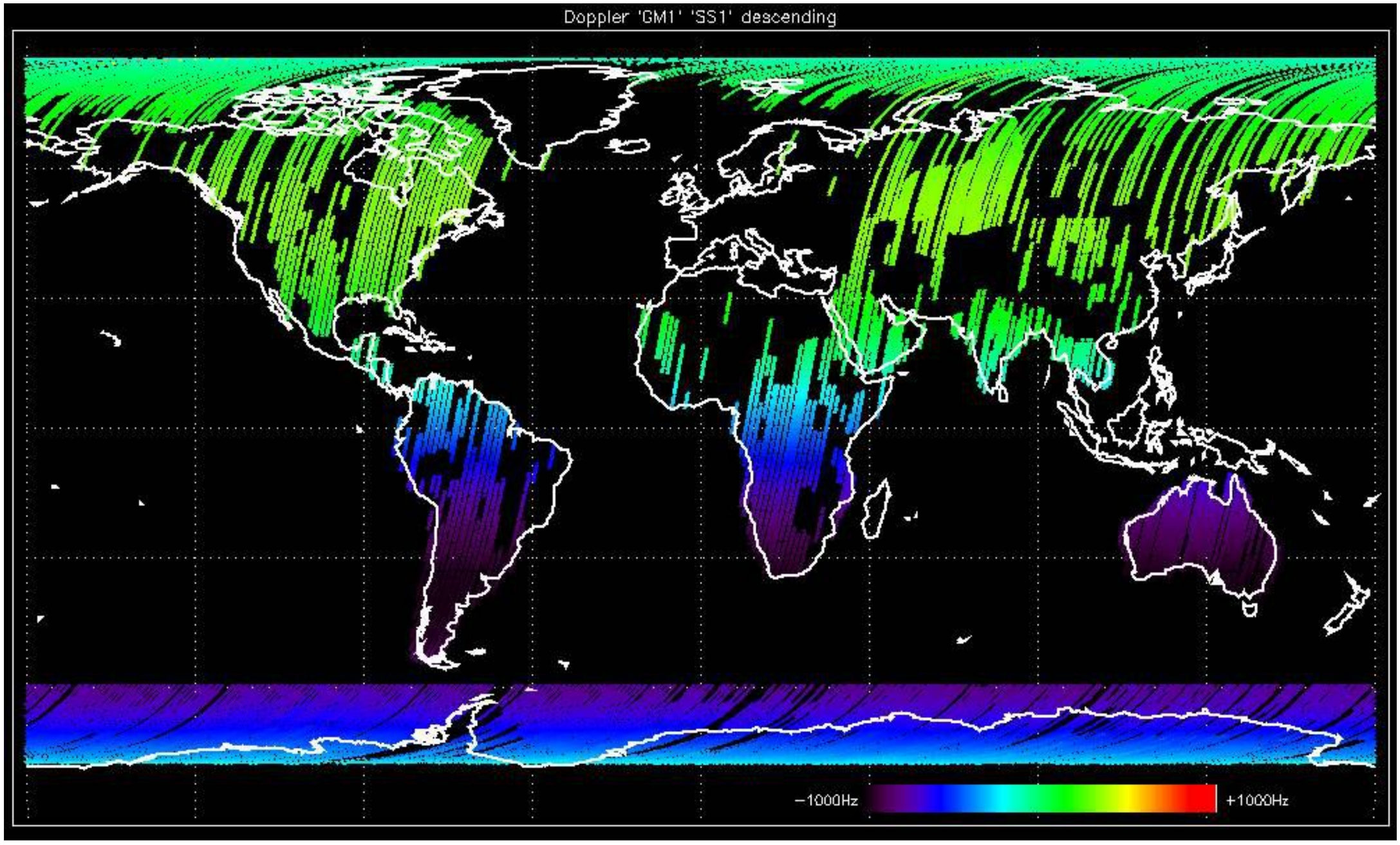
No anomalies observed on available browse products

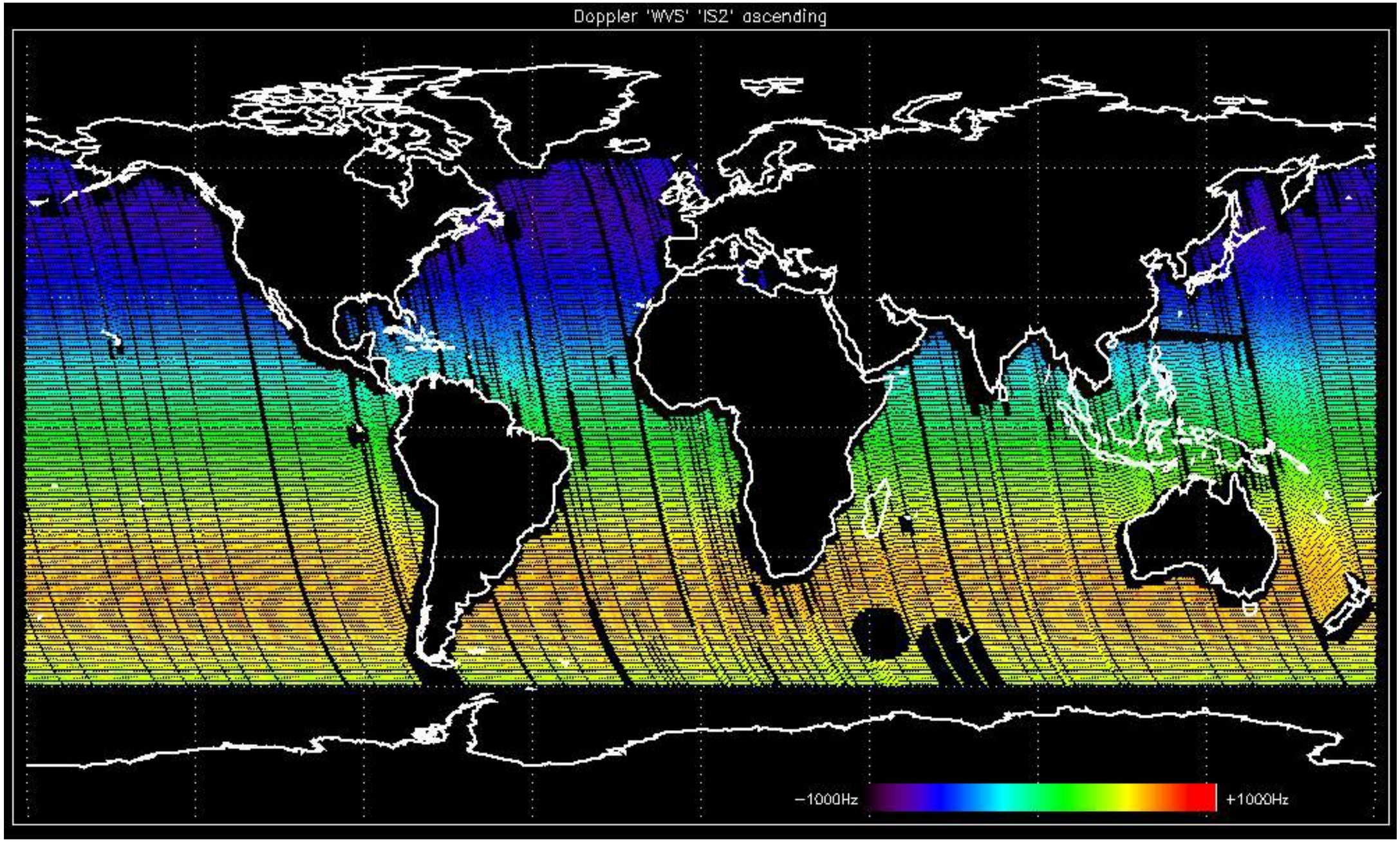
No anomalies observed.

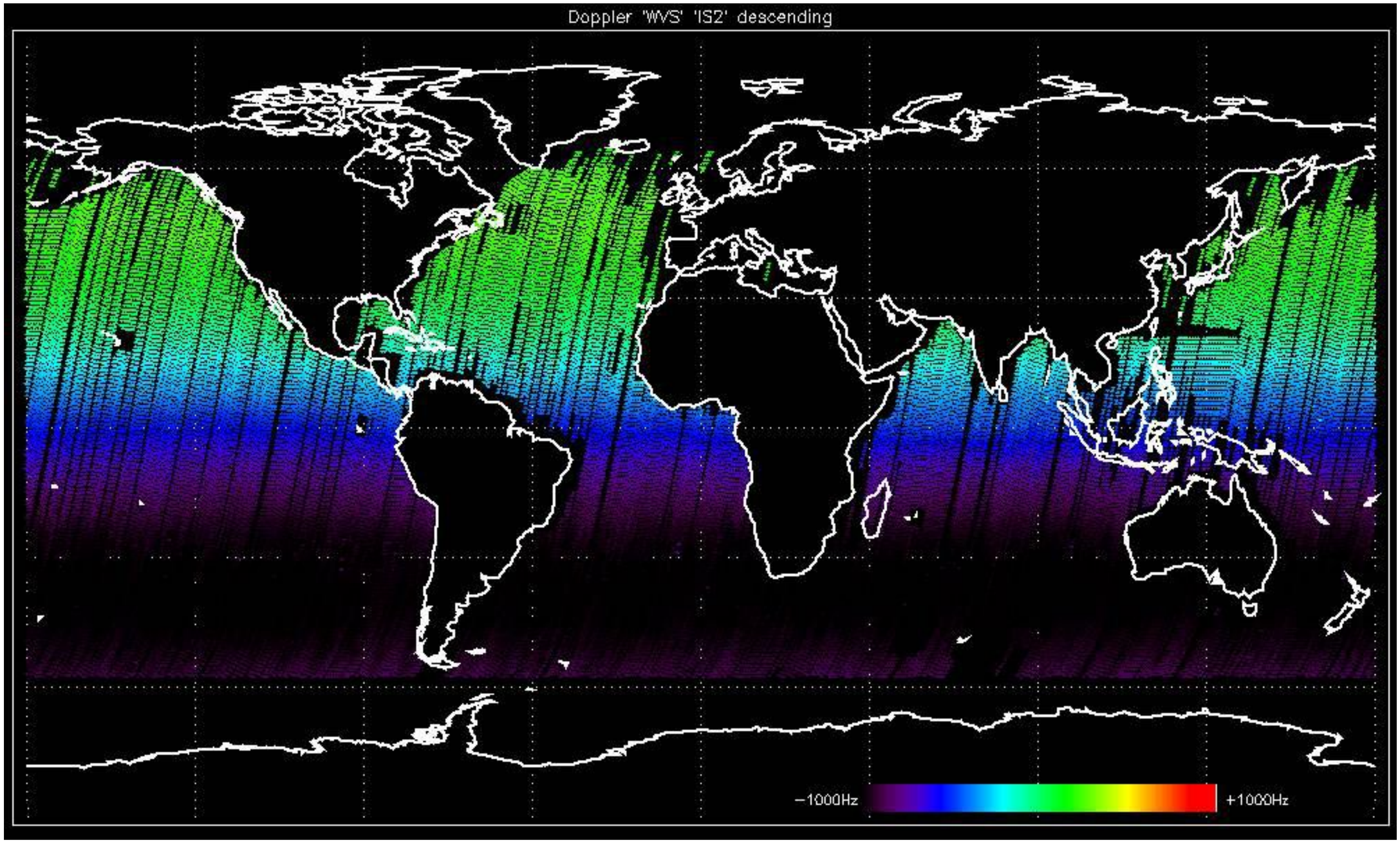
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

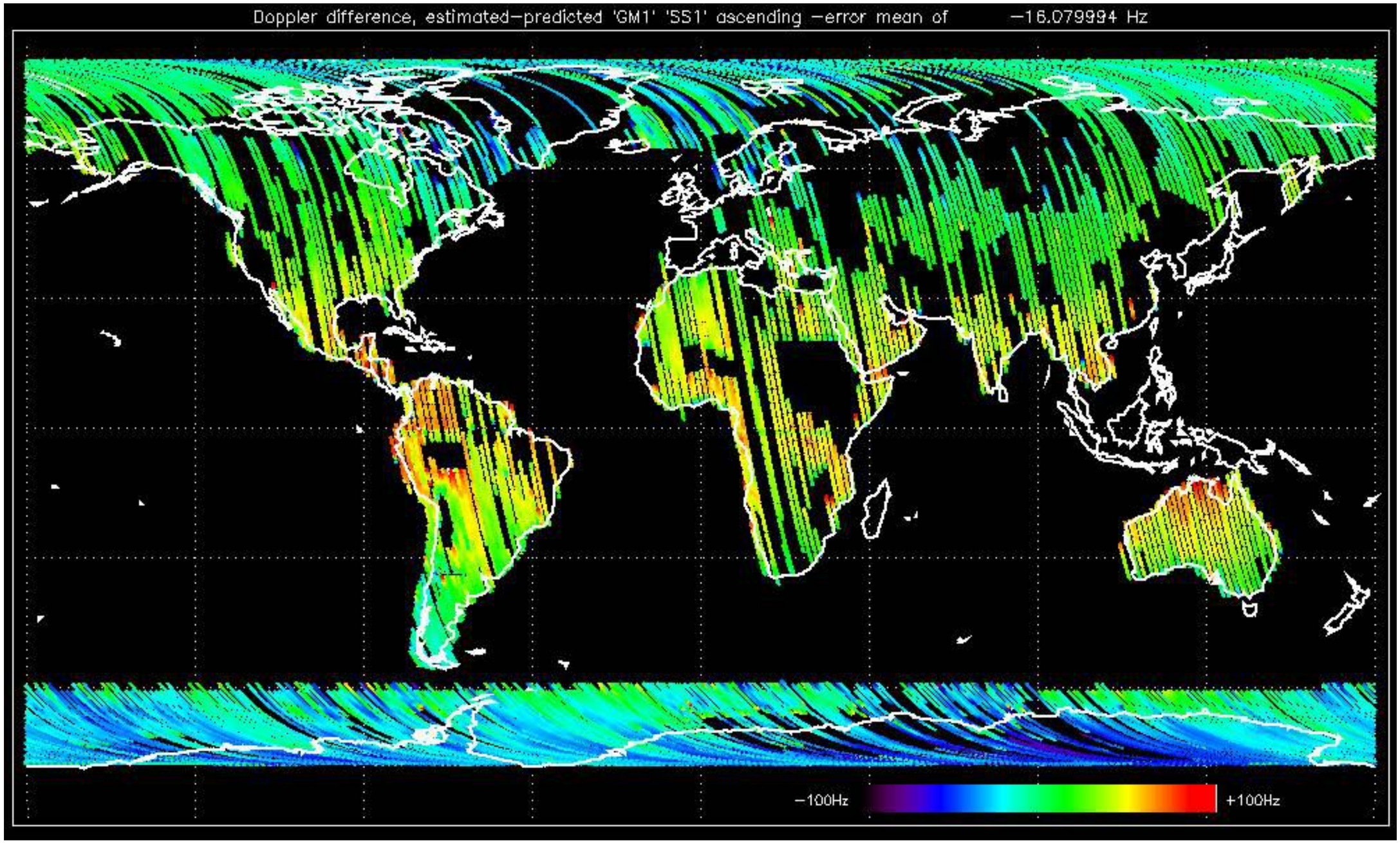
Preliminary report.The data is not yet controled

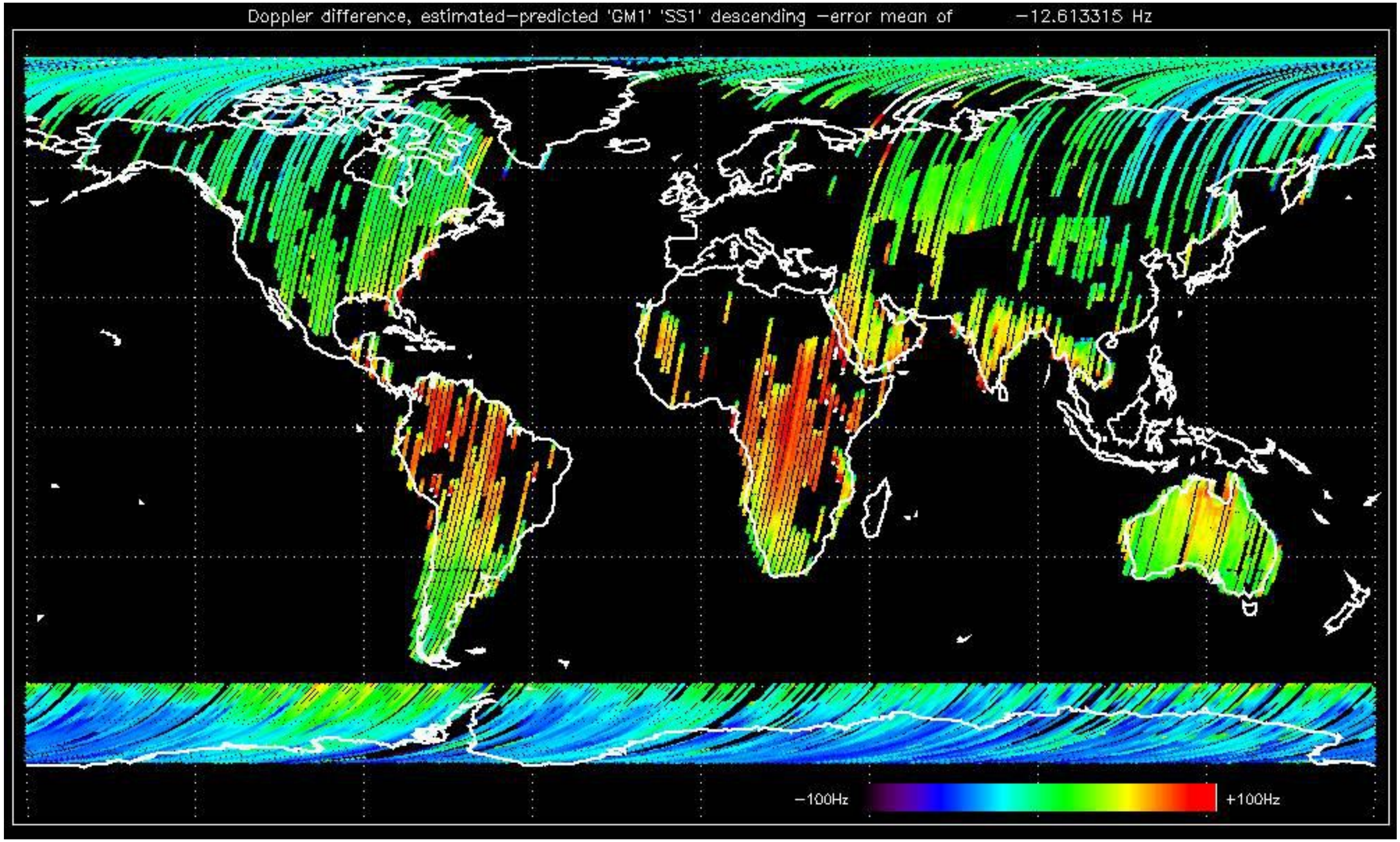

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

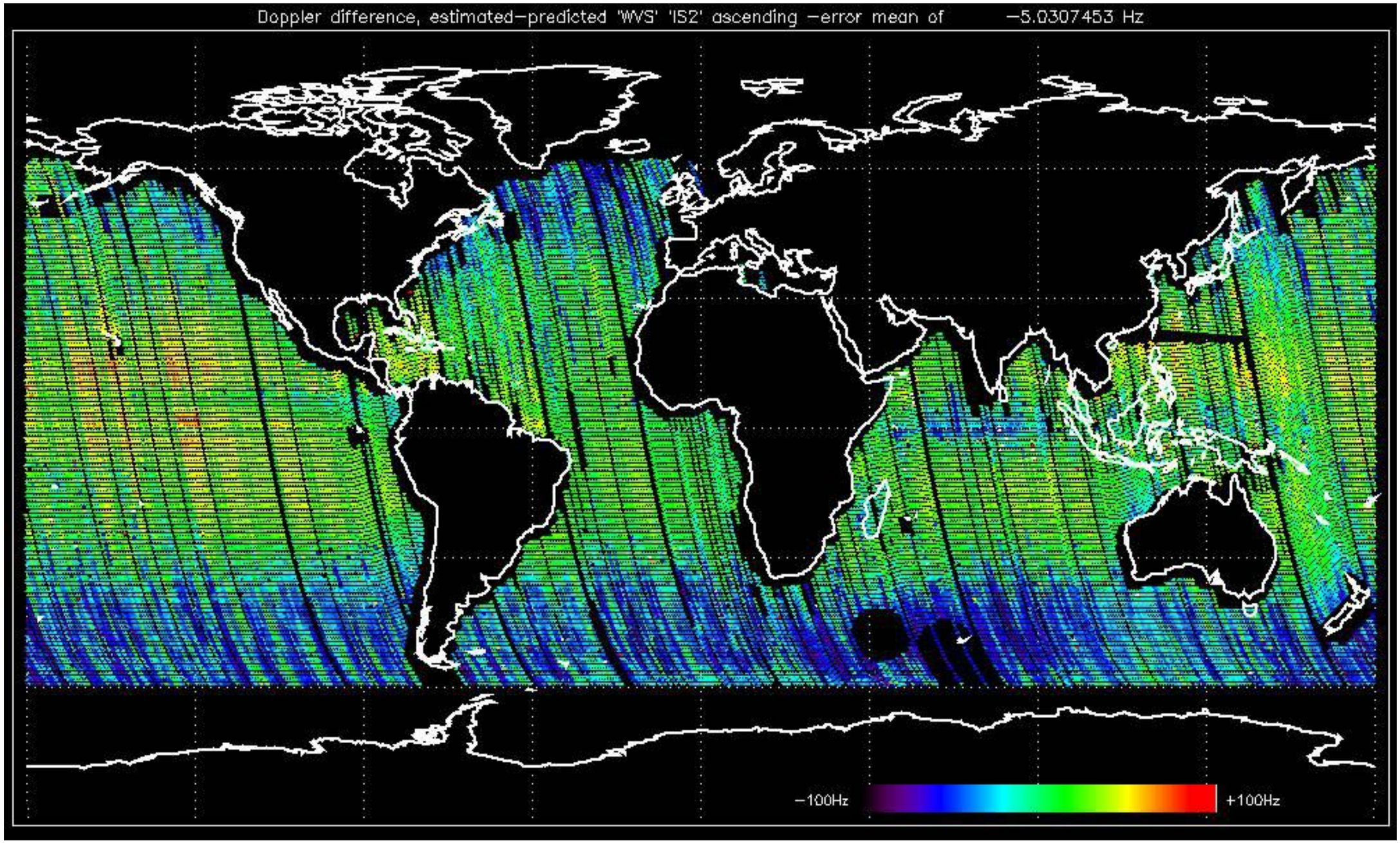

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

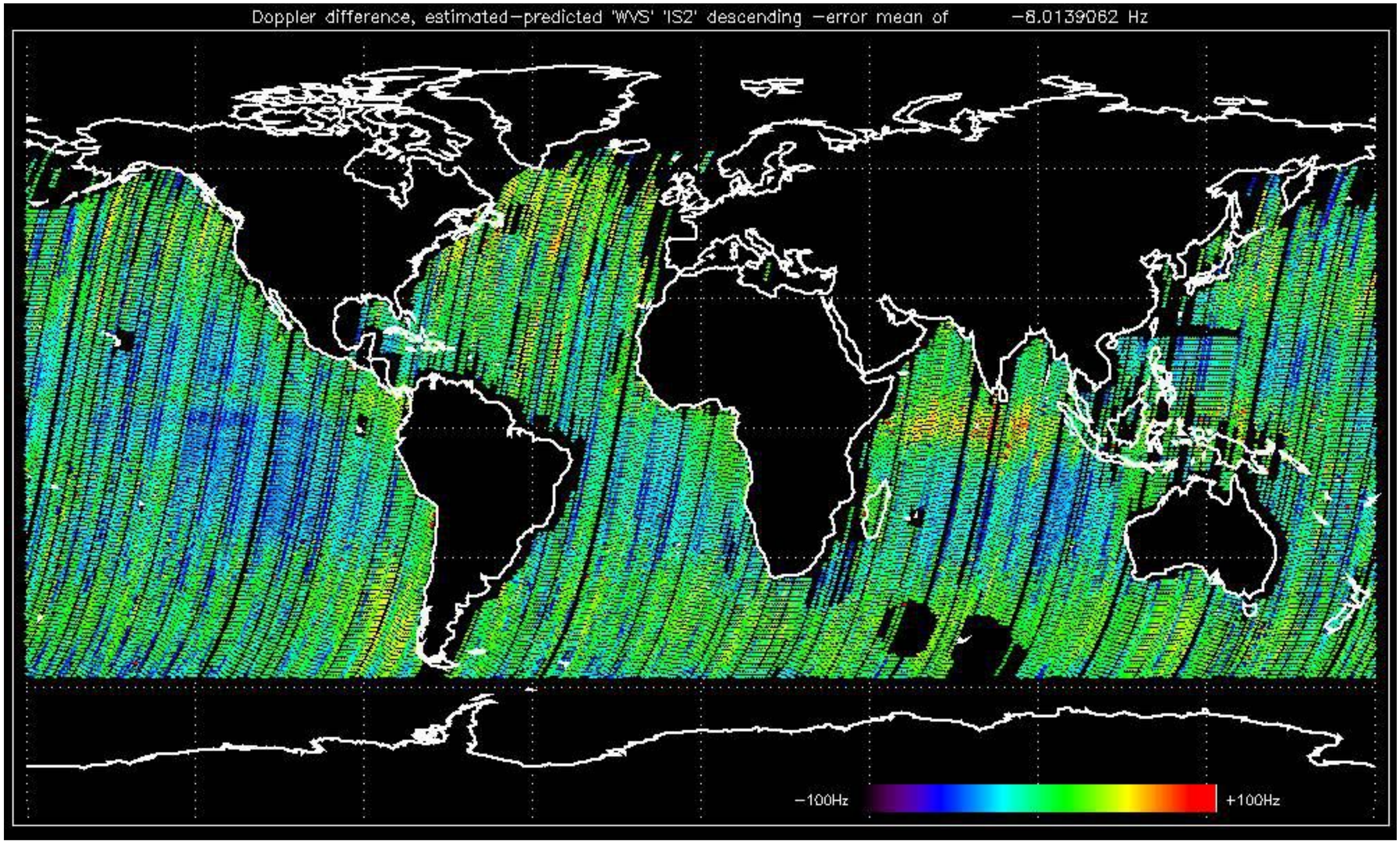

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −16.079994 Hz
−100Hz
+100Hz

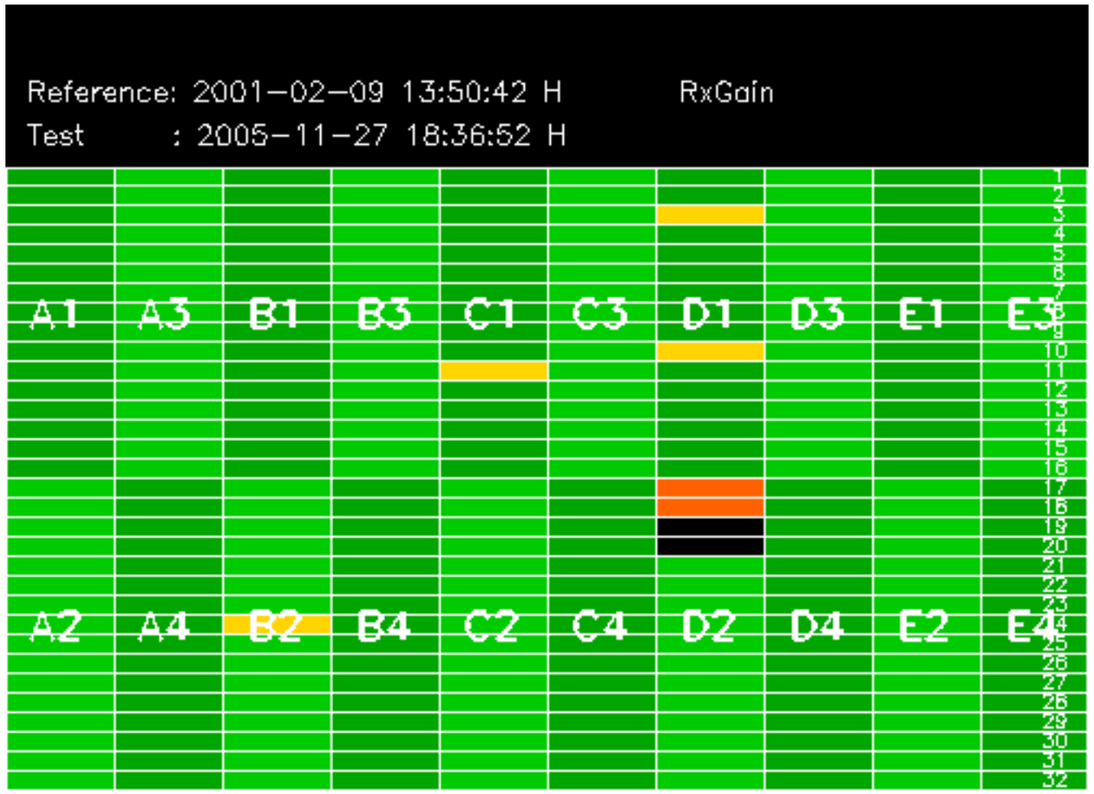

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −12.613315 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −5.0307453 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −8.0139062 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2005-11-27 18:36:52 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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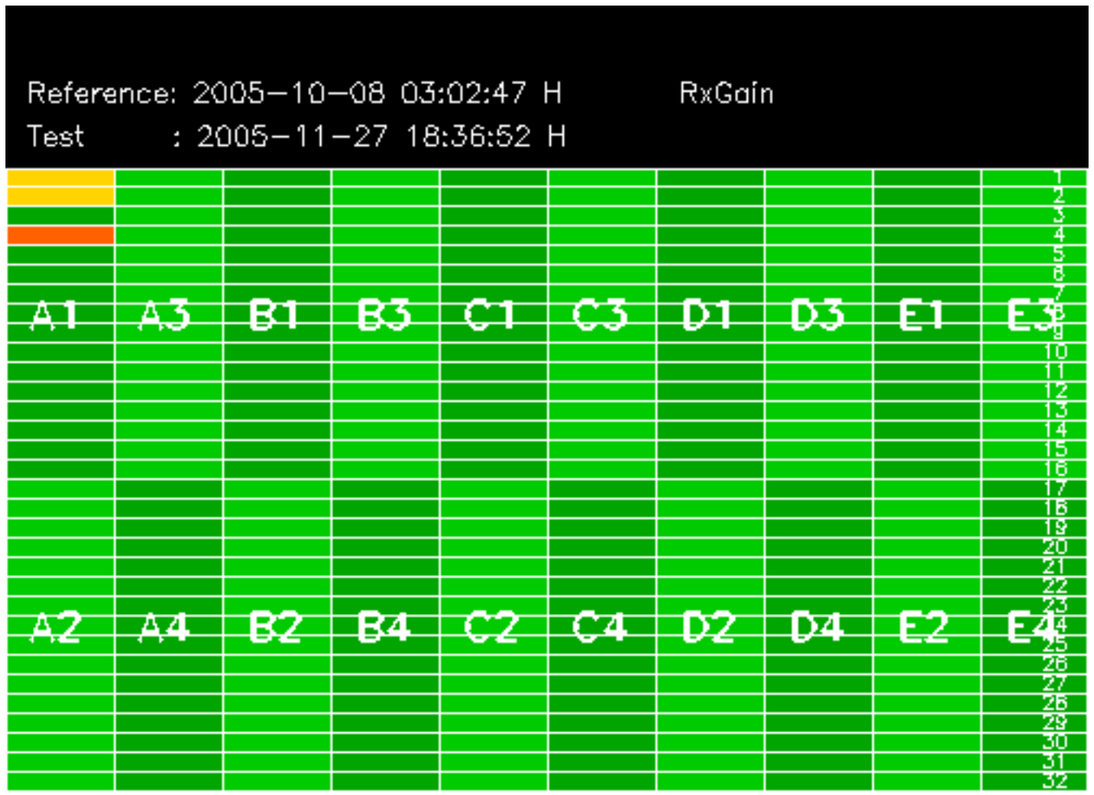
Reference: 2005-10-08 03:02:47 H
RxGain
Test : 2005-11-27 18:36:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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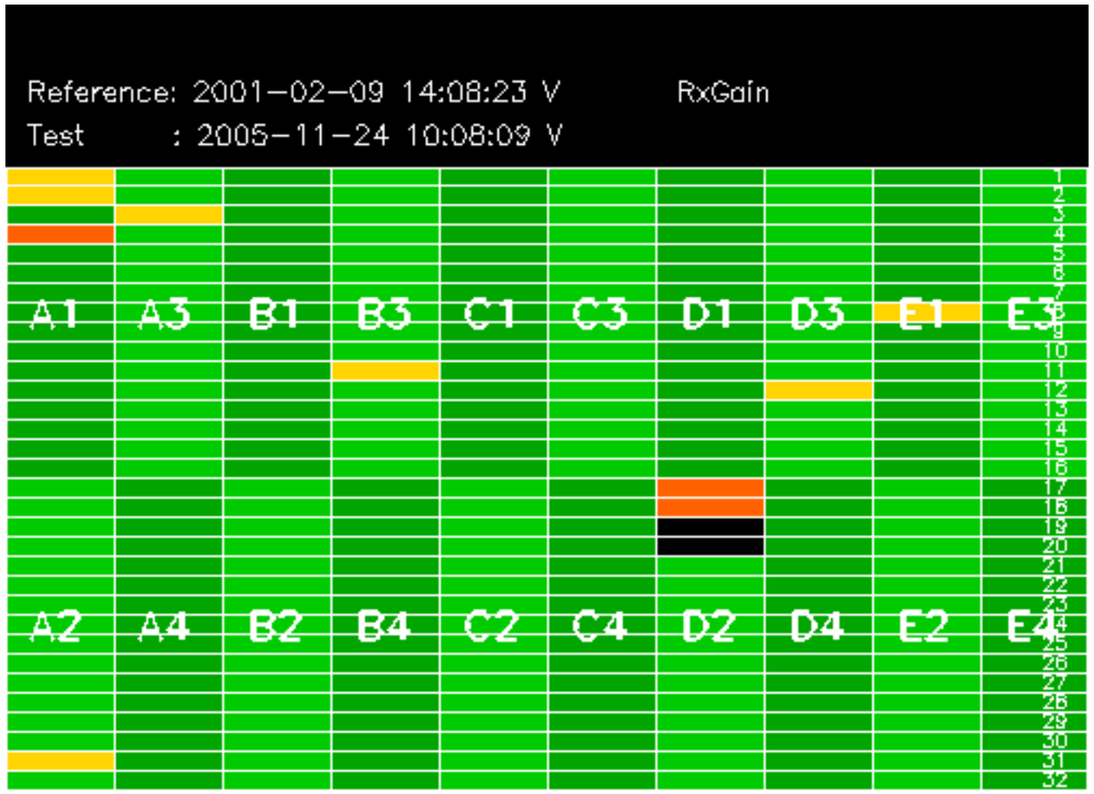
Reference: 2001-02-09 14:08:23 V
Test : 2005-11-24 10:08:09 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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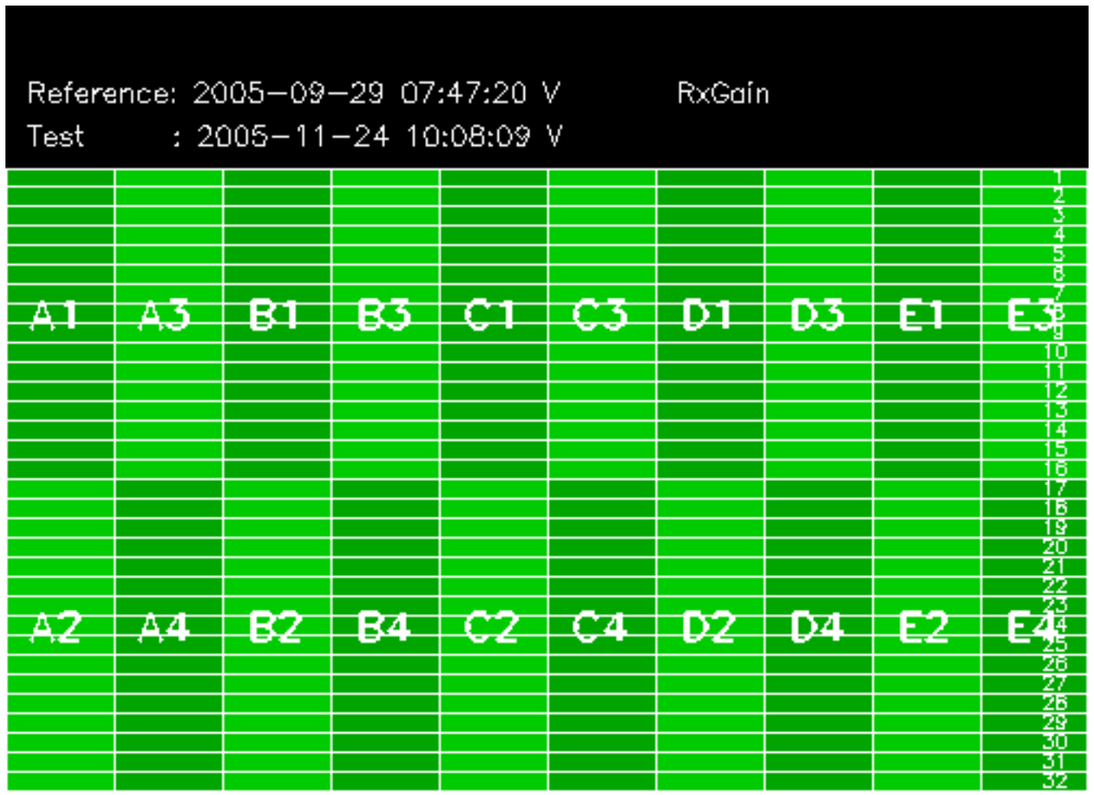
Reference: 2005-09-29 07:47:20 V
Test : 2005-11-24 10:08:09 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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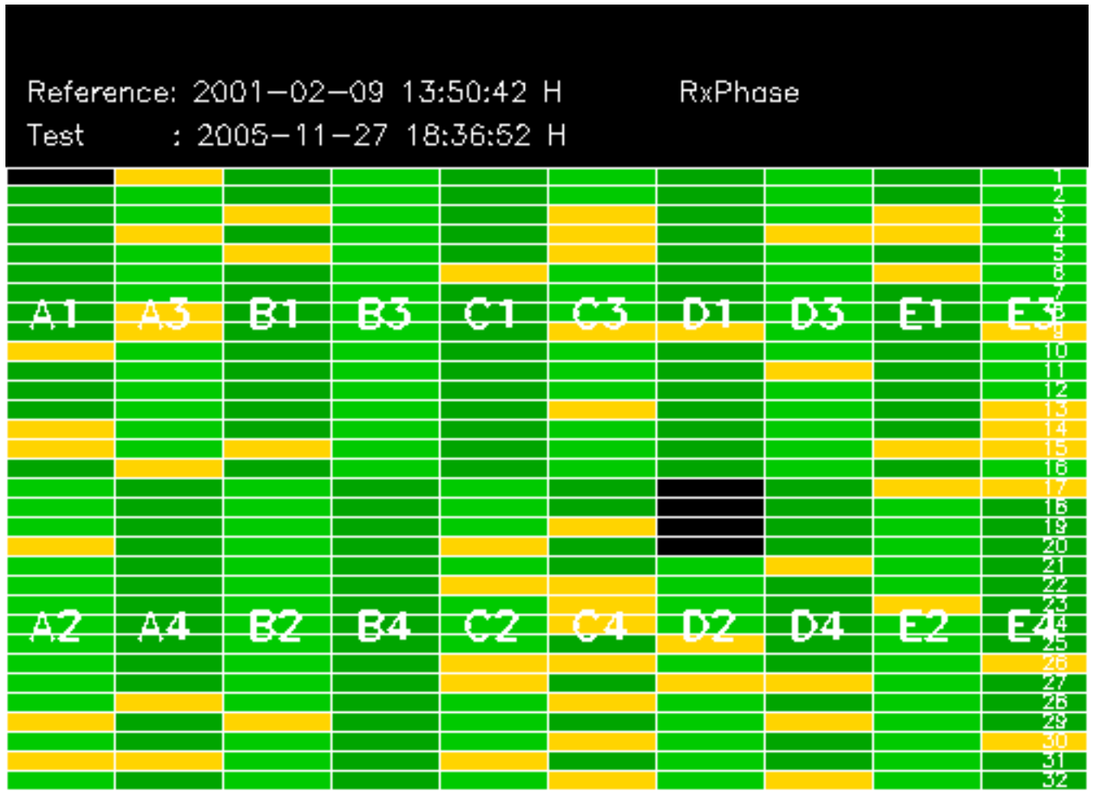
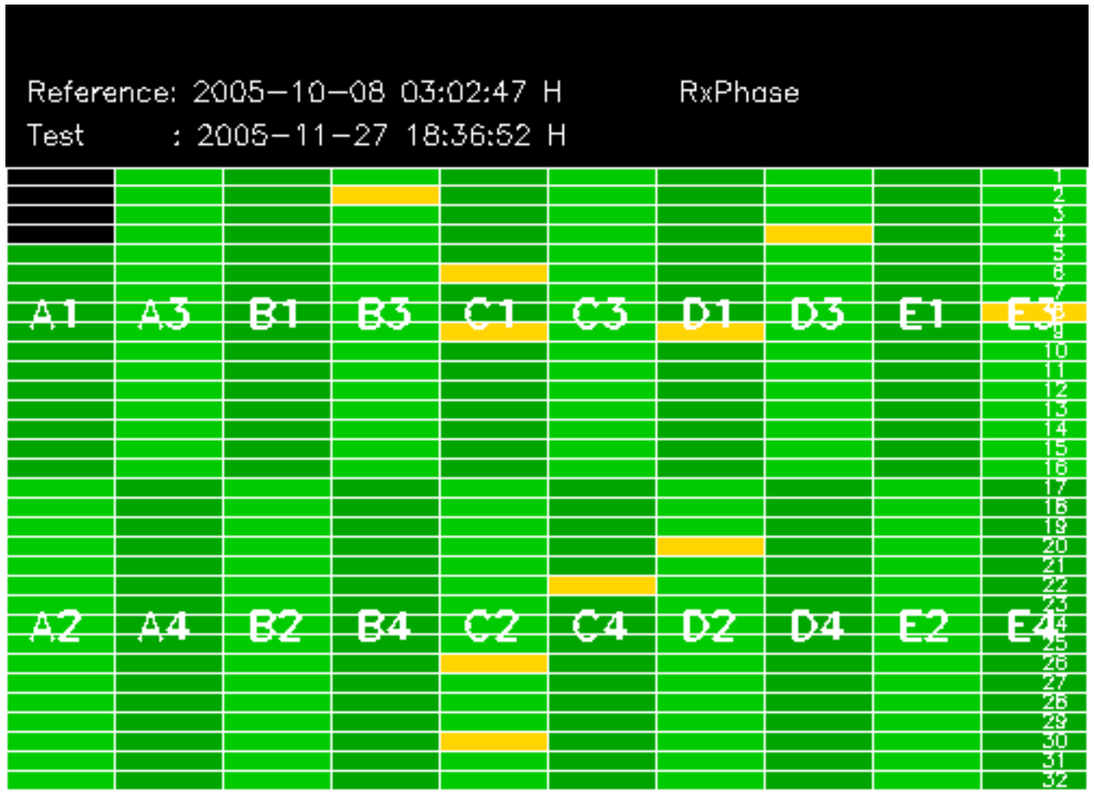

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-11-27 18:36:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-10-08 03:02:47 H
RxPhase
Test : 2005-11-27 18:36:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
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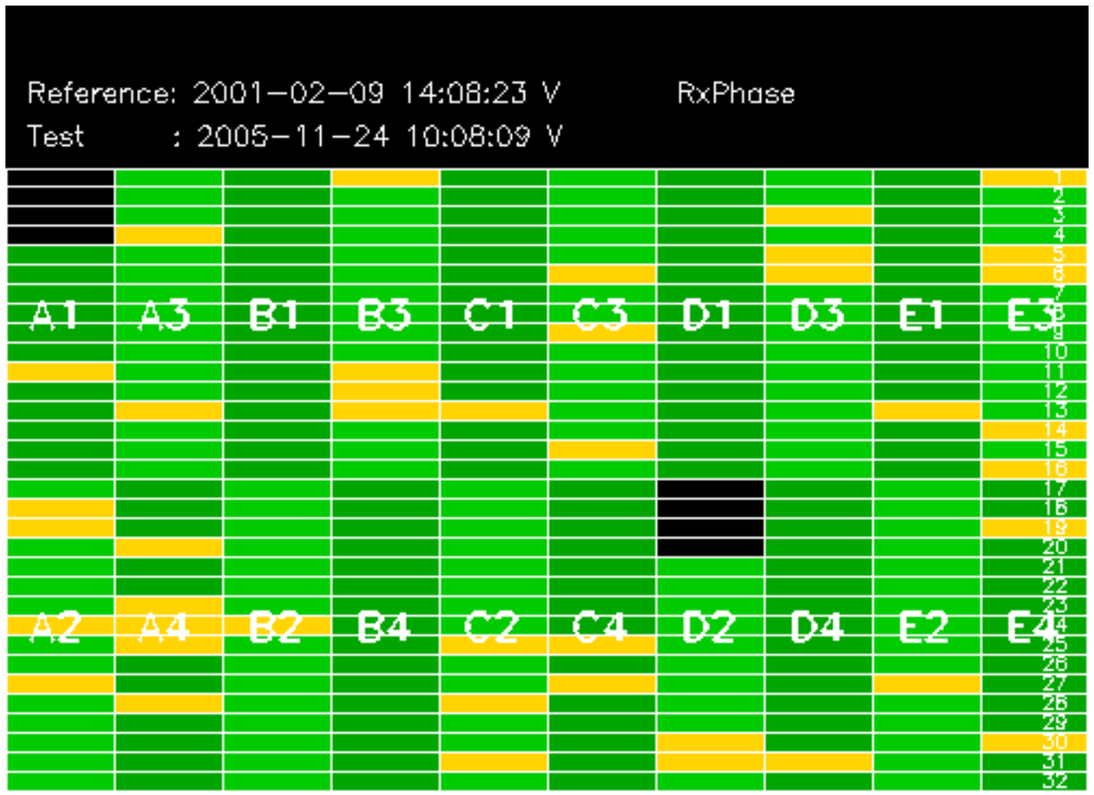
Reference: 2001-02-09 14:08:23 V
Test : 2005-11-24 10:08:09 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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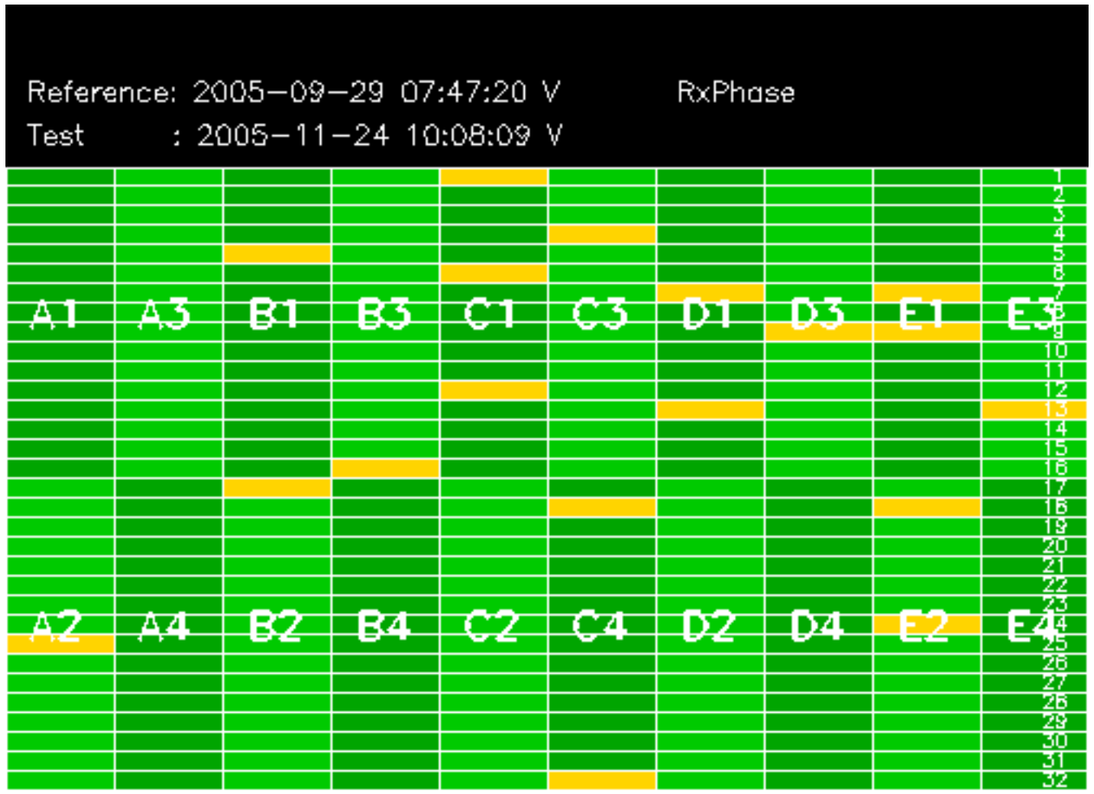
Reference: 2005-09-29 07:47:20 V
Test : 2005-11-24 10:08:09 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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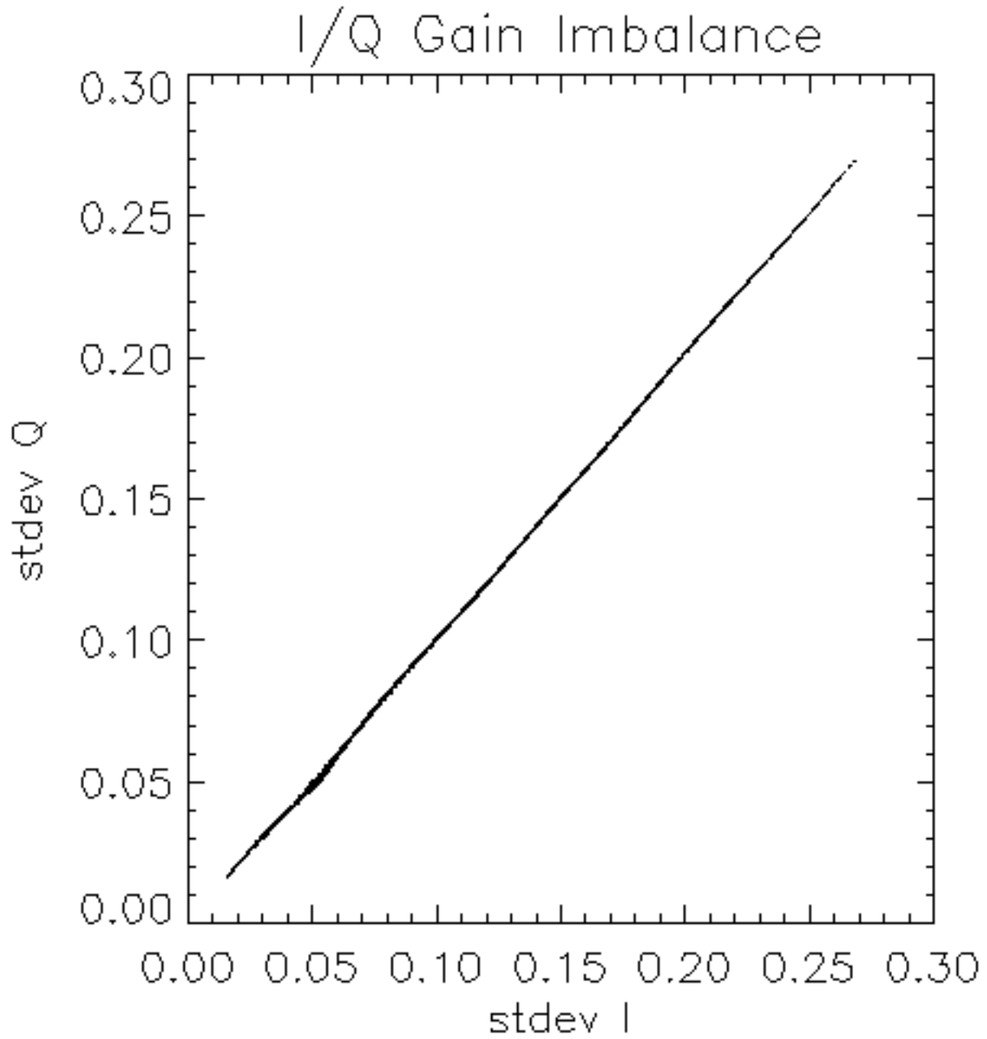
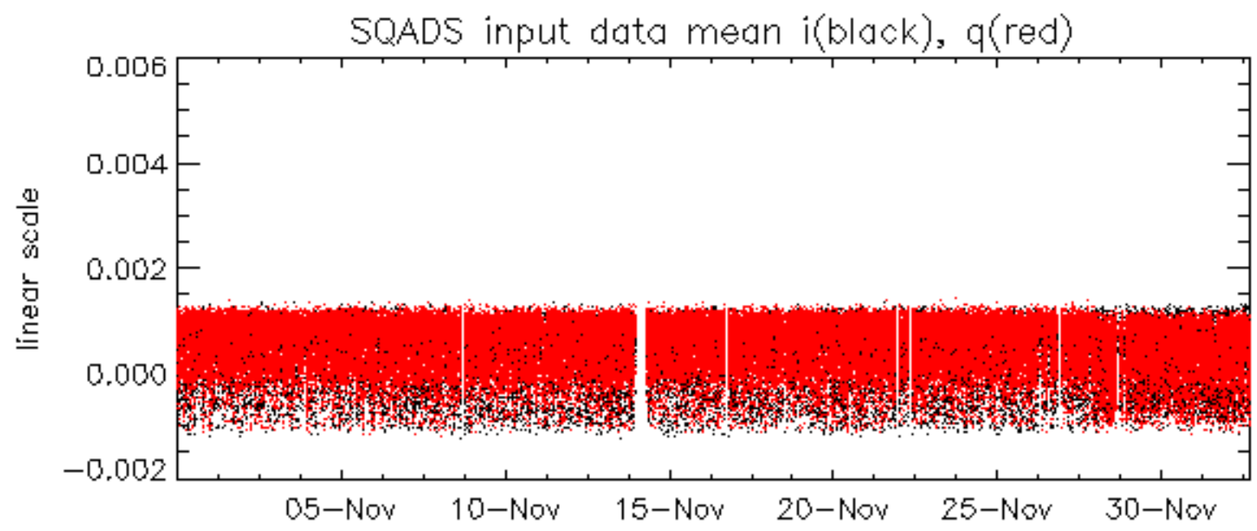
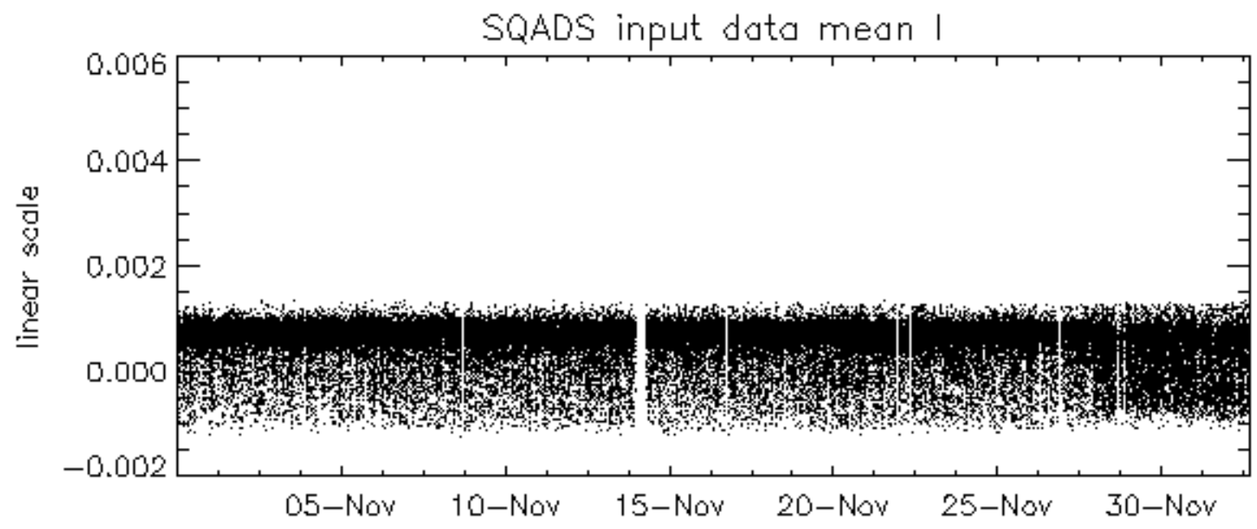
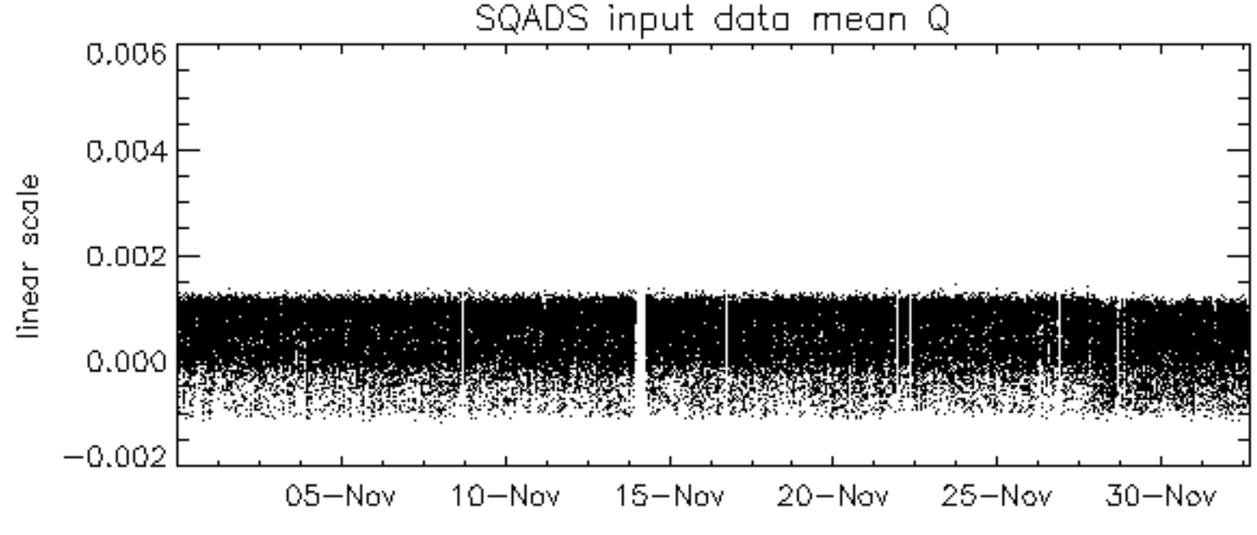
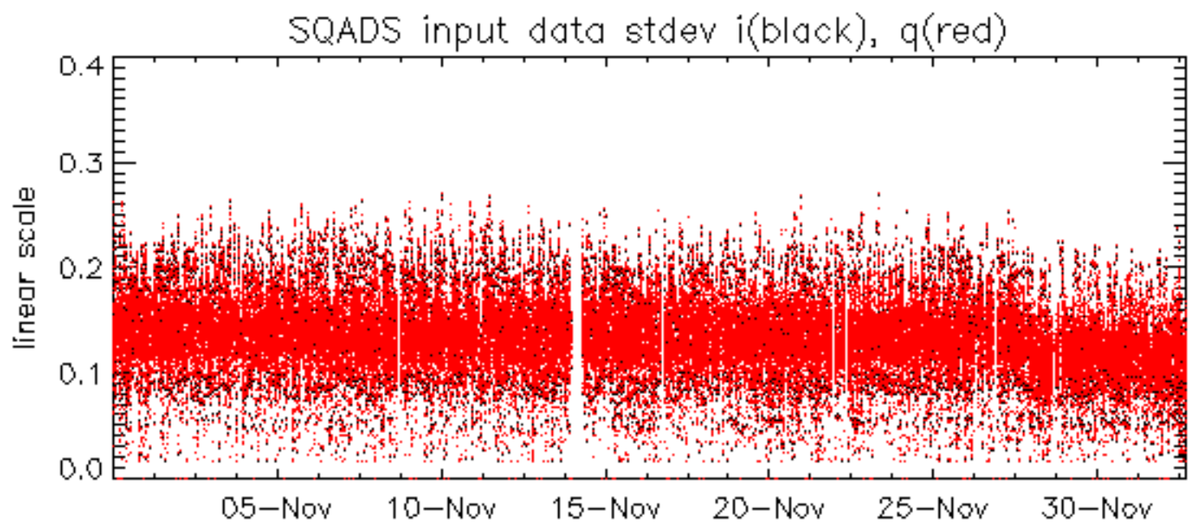
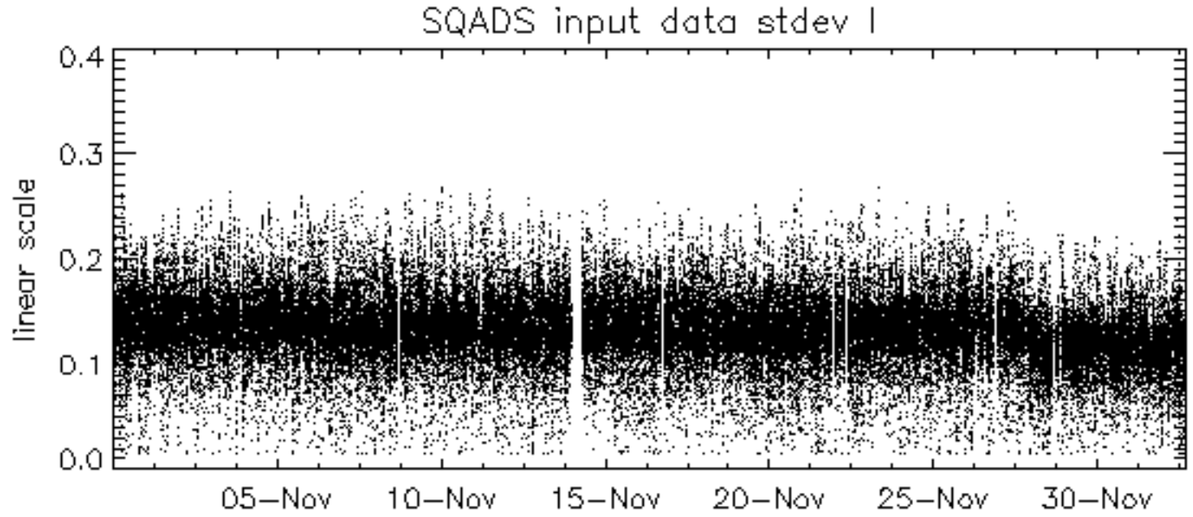

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

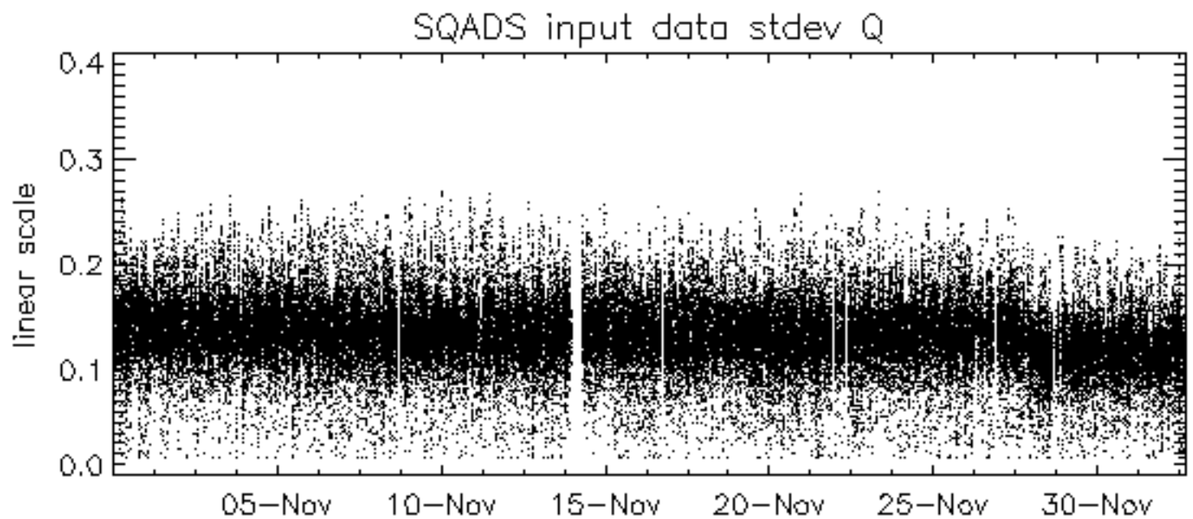

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
30−Nov

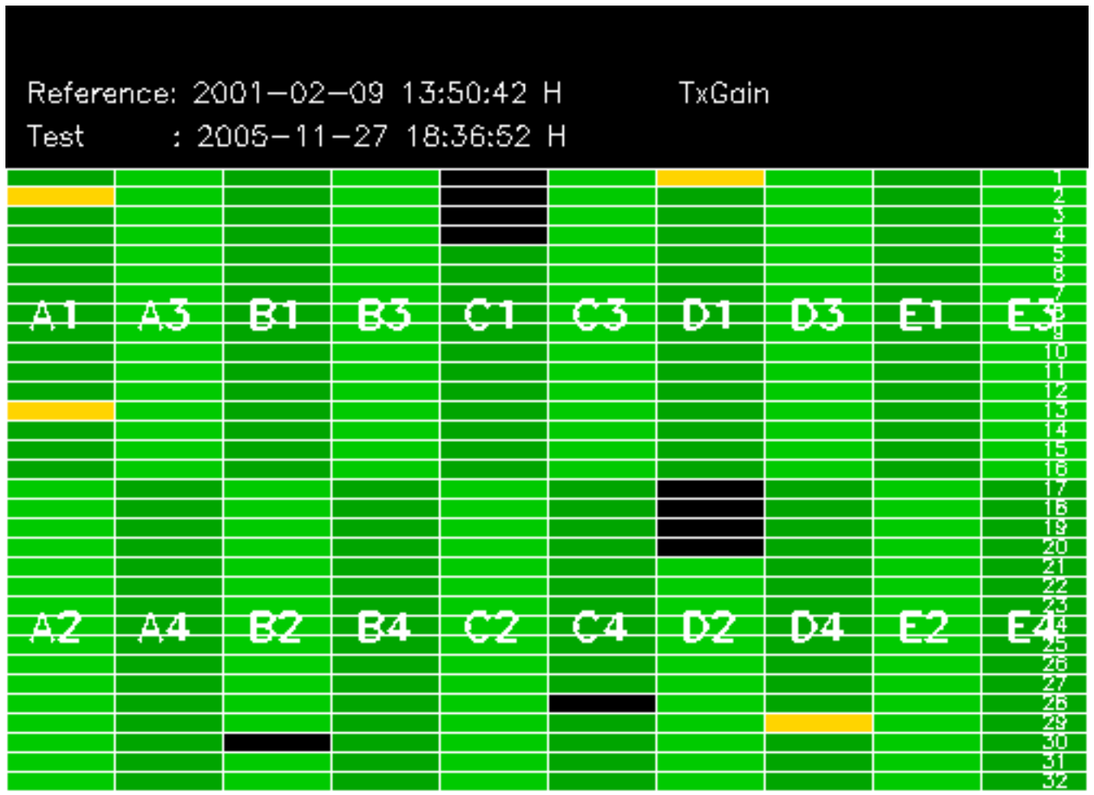

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
30−Nov

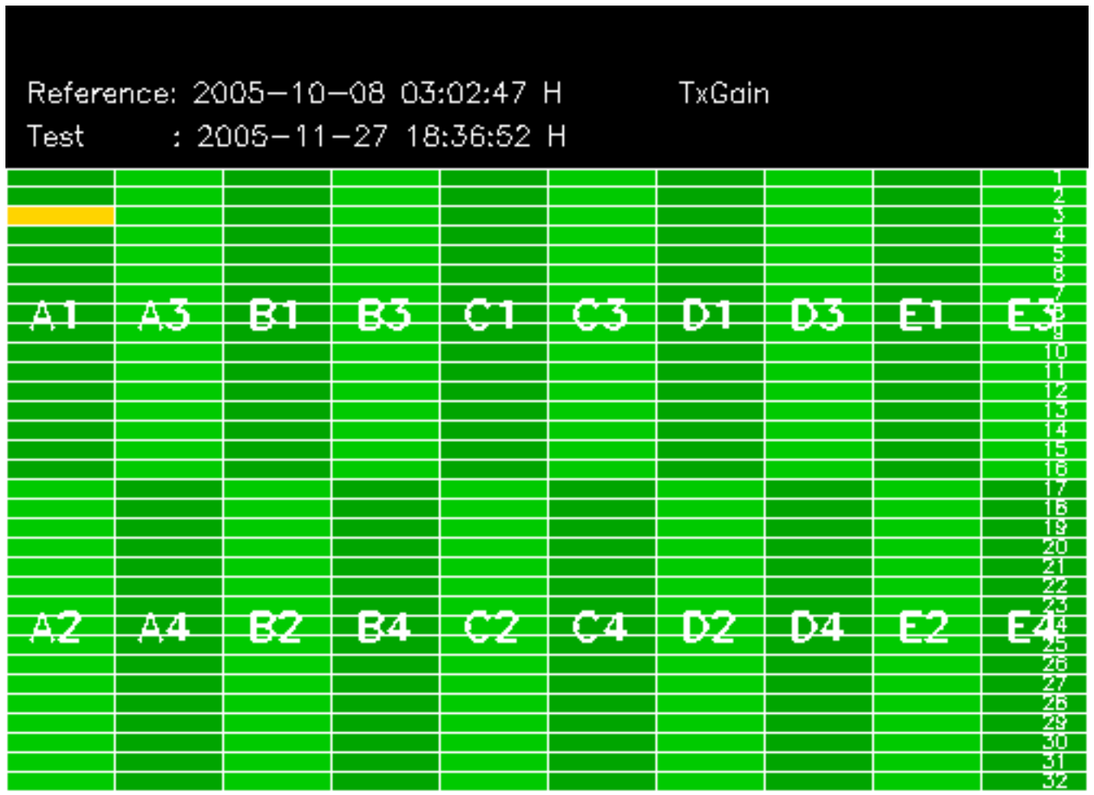

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Nov
10−Nov
15−Nov
20−Nov
25−Nov
30−Nov


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2005-11-27 18:36:52 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 : 2005-11-27 18:36:52 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
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26
27
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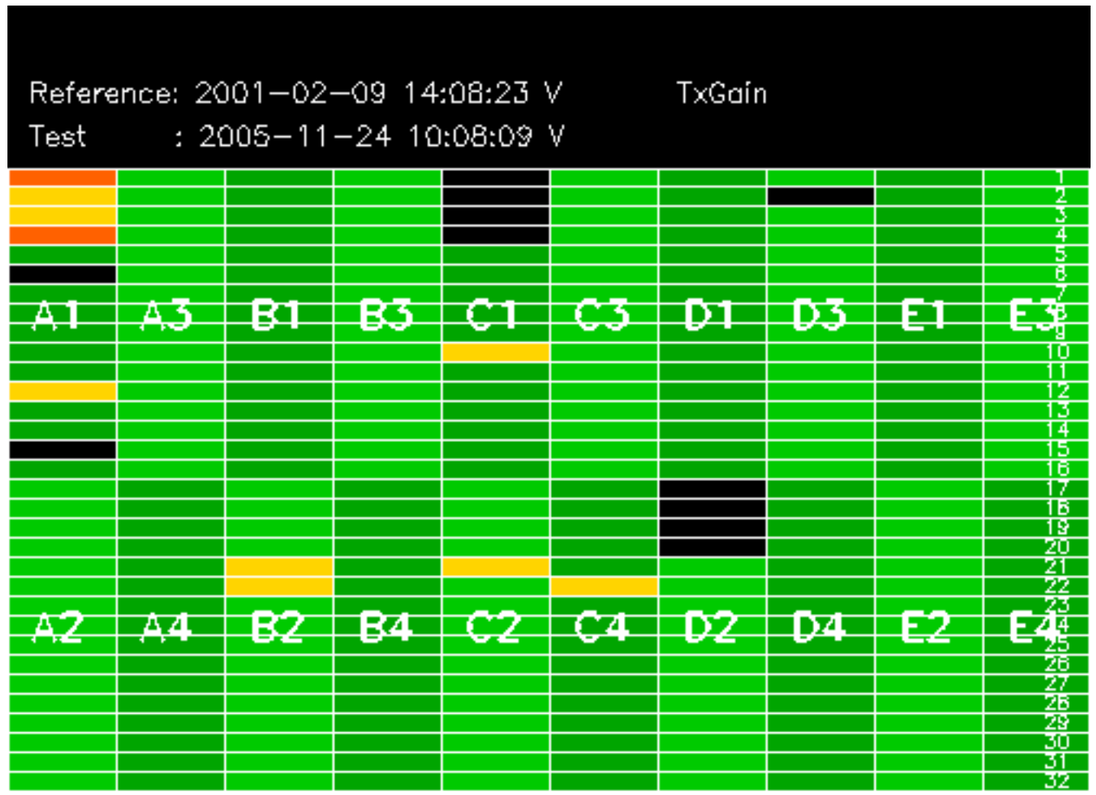
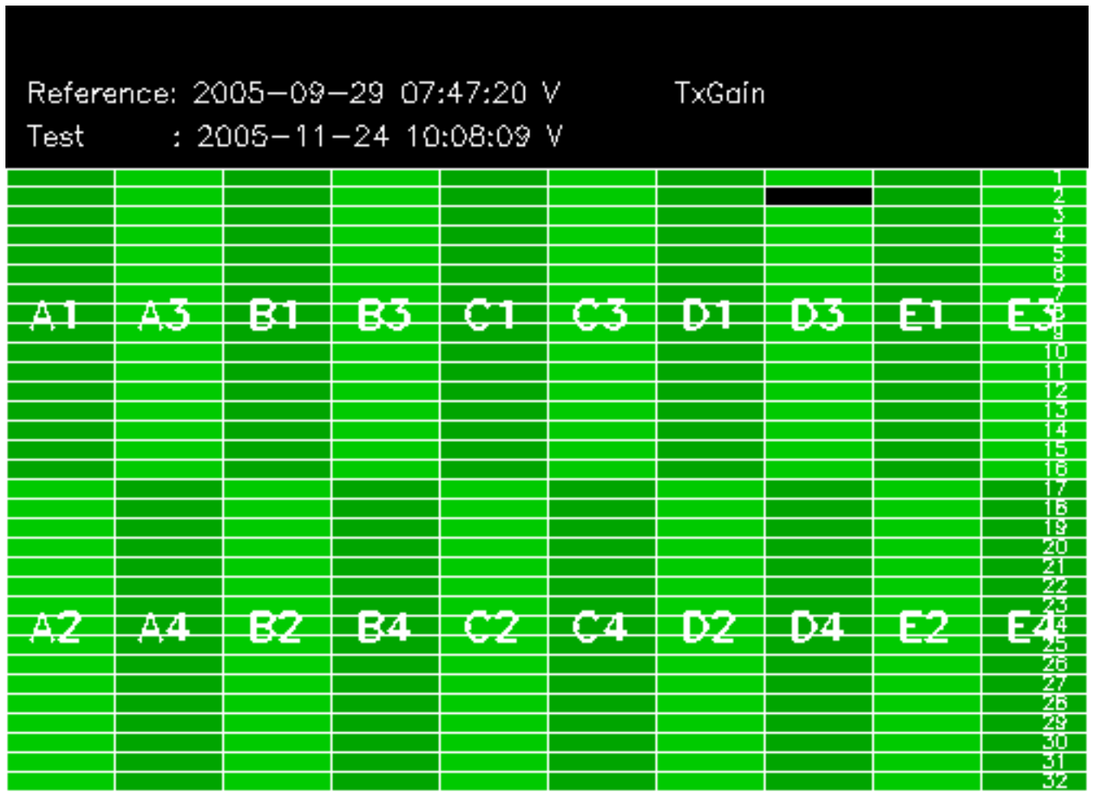
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2005-11-24 10:08:09 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 : 2005-11-24 10:08:09 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
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8
9
10
11
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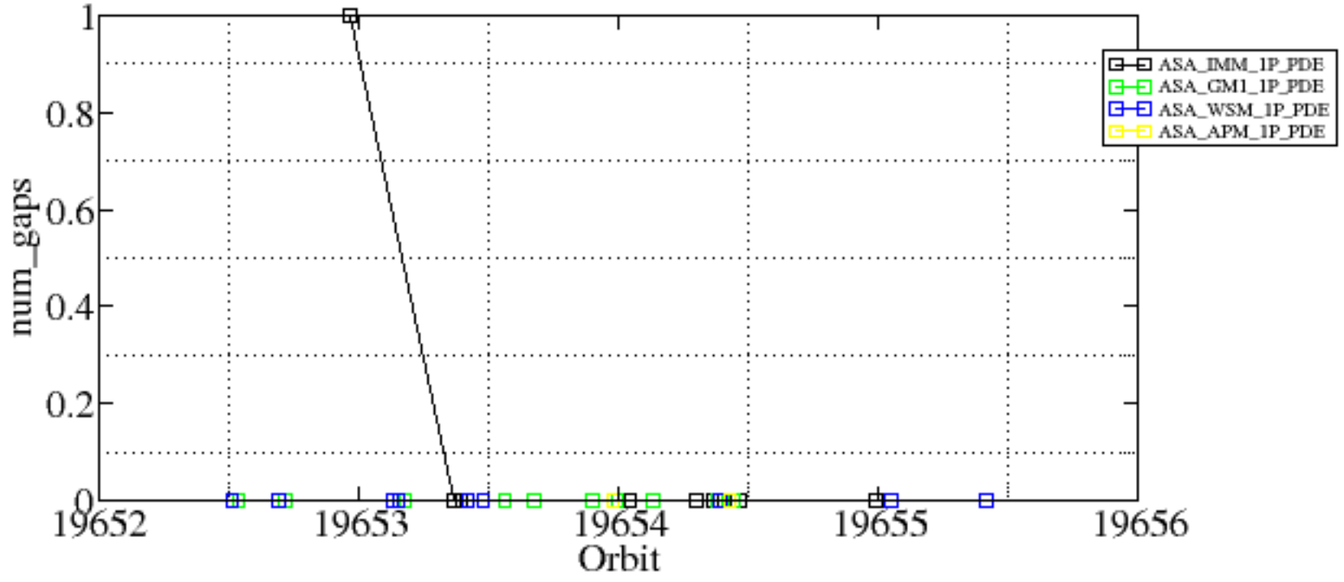
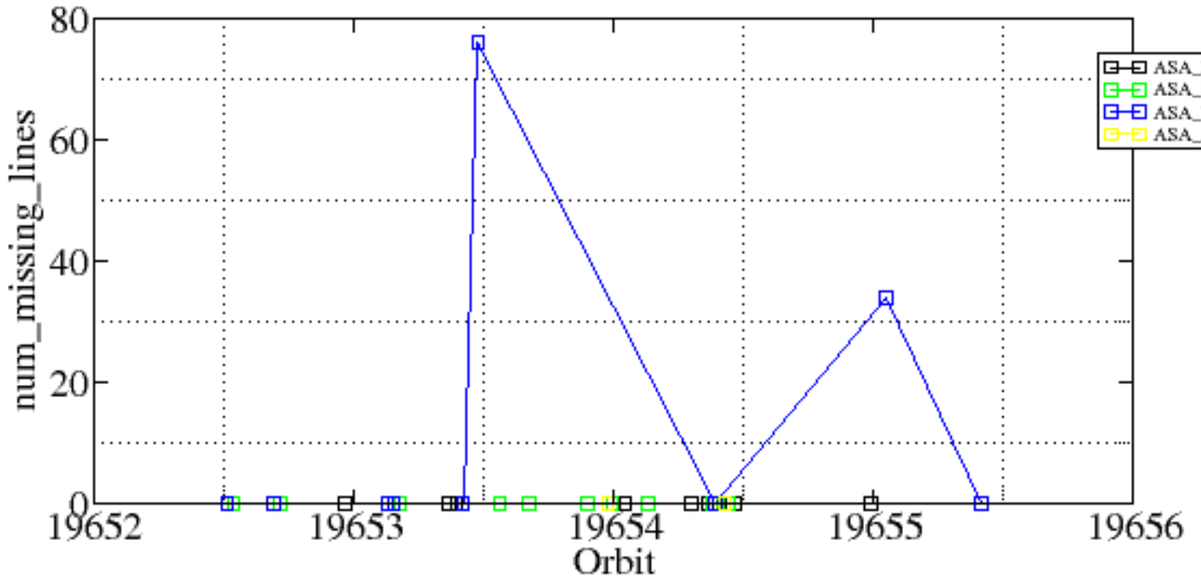
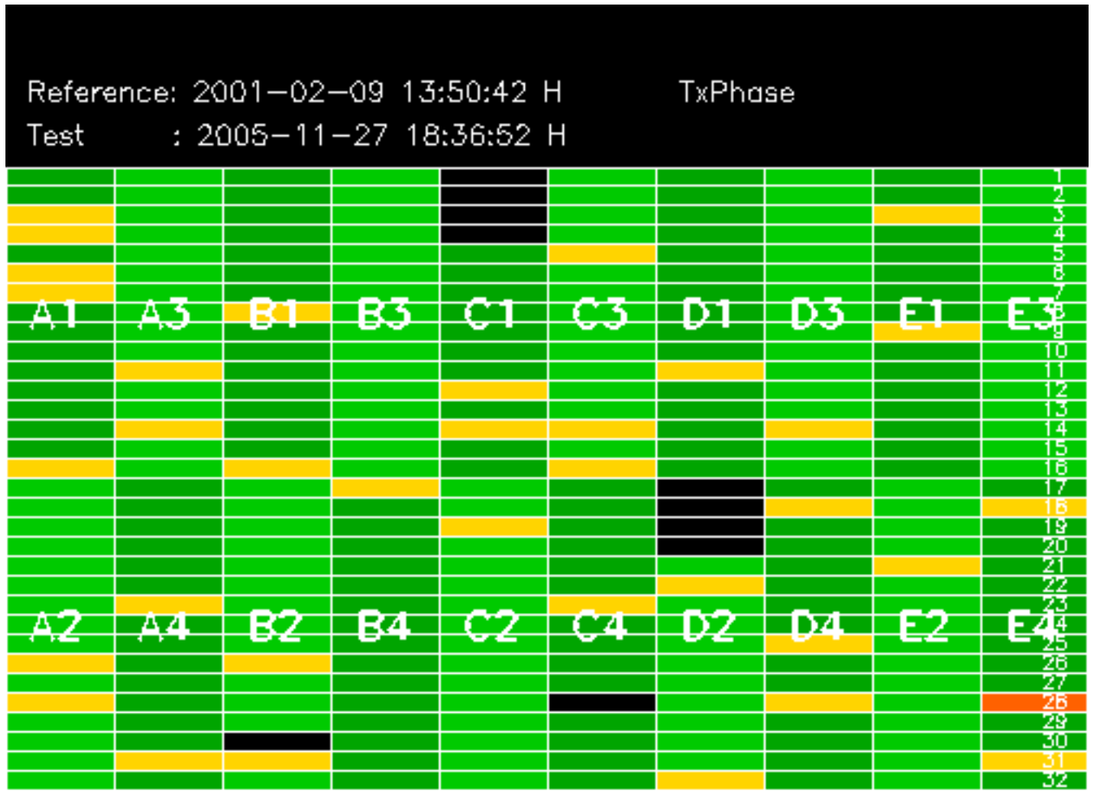
Summary of analysis for the last 3 days 2005120[345]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
<tr> <td>ASA_IMM_1PNPDE20051203_005043_000002002043_00059_19652_2944.N1 </td> <td>1 </td> <td>0 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20051203_014241_000002262043_00060_19653_2578.N1 </td> <td>0 </td> <td>76 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20051203_042101_000002022043_00062_19655_2596.N1 </td> <td>0 </td> <td>34 </td></tr>
</table>


num_gaps
Orbit
1
0.8
0.6
0.4
0.2
0
19652
19653
19654
19655
19656
ASA_IMM_1P_PDE
ASA_GM1_1P_PDE
ASA_WSM_1P_PDE
ASA_APM_1P_PDE


num_missing_lines
80
60
40
20
0
19652
19653
19654
19655
19656
Orbit
ASA_IMM_1P_PDE
ASA_GM1_1P_PDE
ASA_WSM_1P_PDE
ASA_APM_1P_PDE


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2005-11-27 18:36:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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8
9
10
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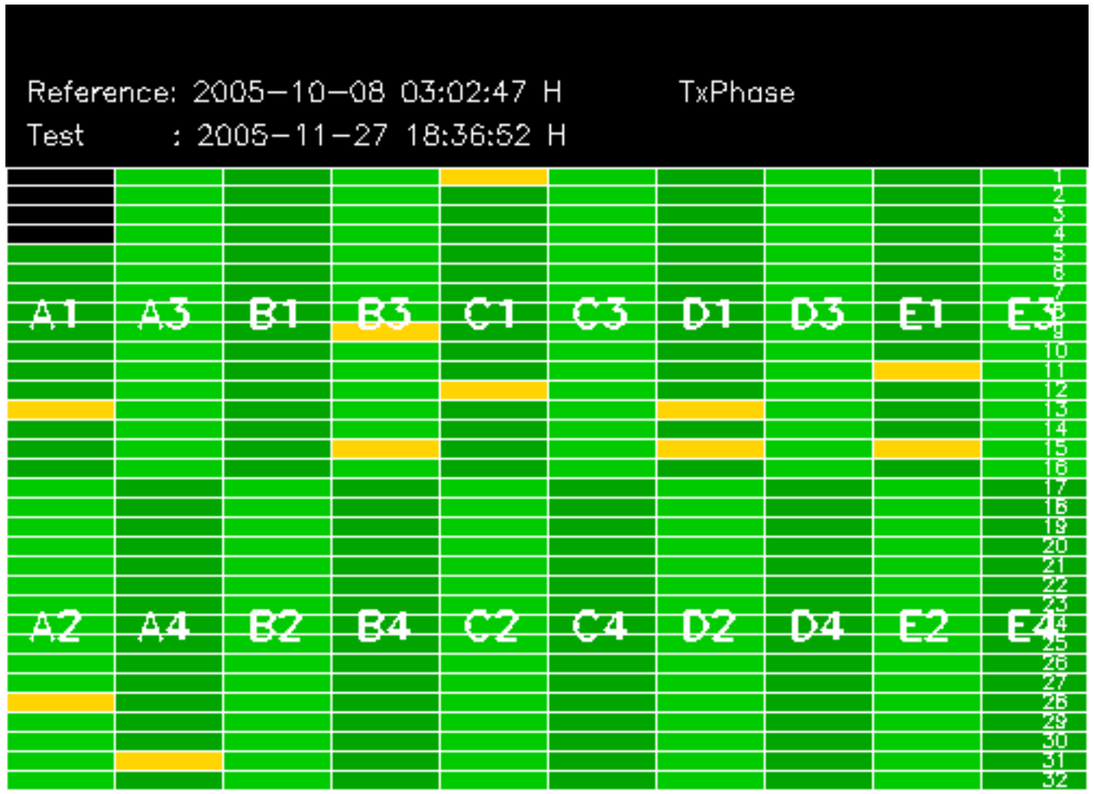
32


Reference: 2005-10-08 03:02:47 H
TxPhase
Test : 2005-11-27 18:36:52 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 : 2005-11-24 10:08:09 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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26
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28
29
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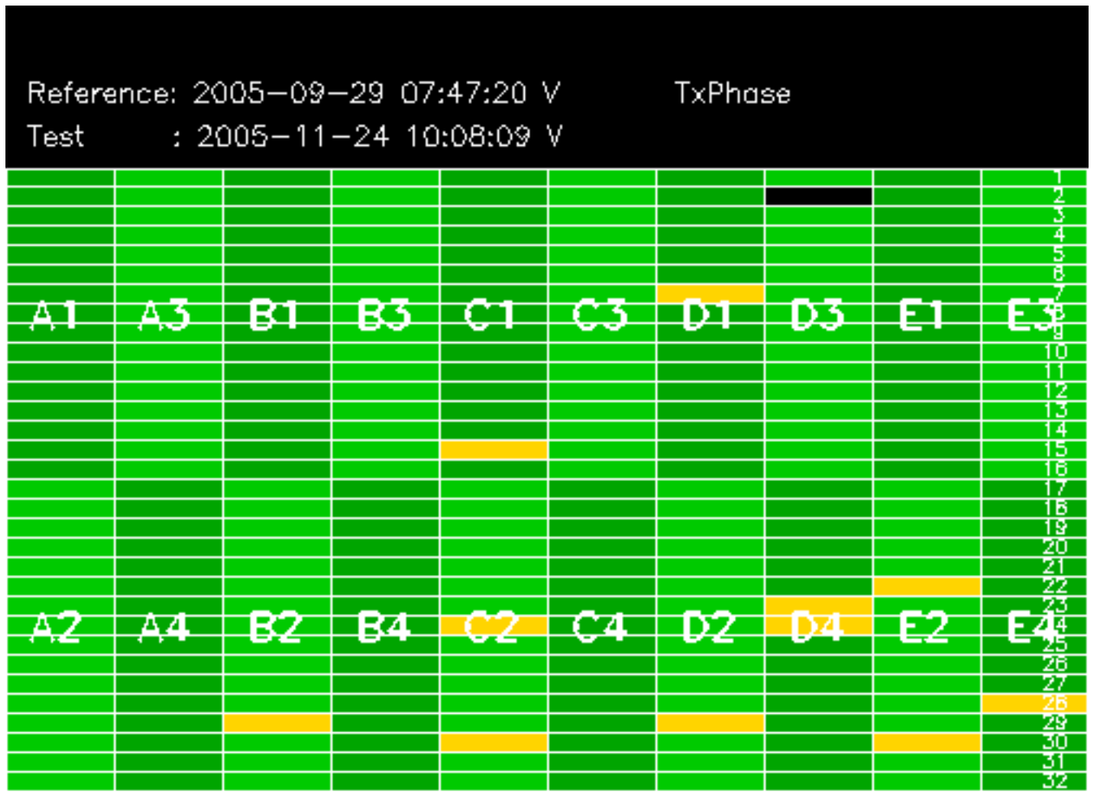
31
32


Reference: 2005-09-29 07:47:20 V
Test : 2005-11-24 10:08:09 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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4
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8
9
10
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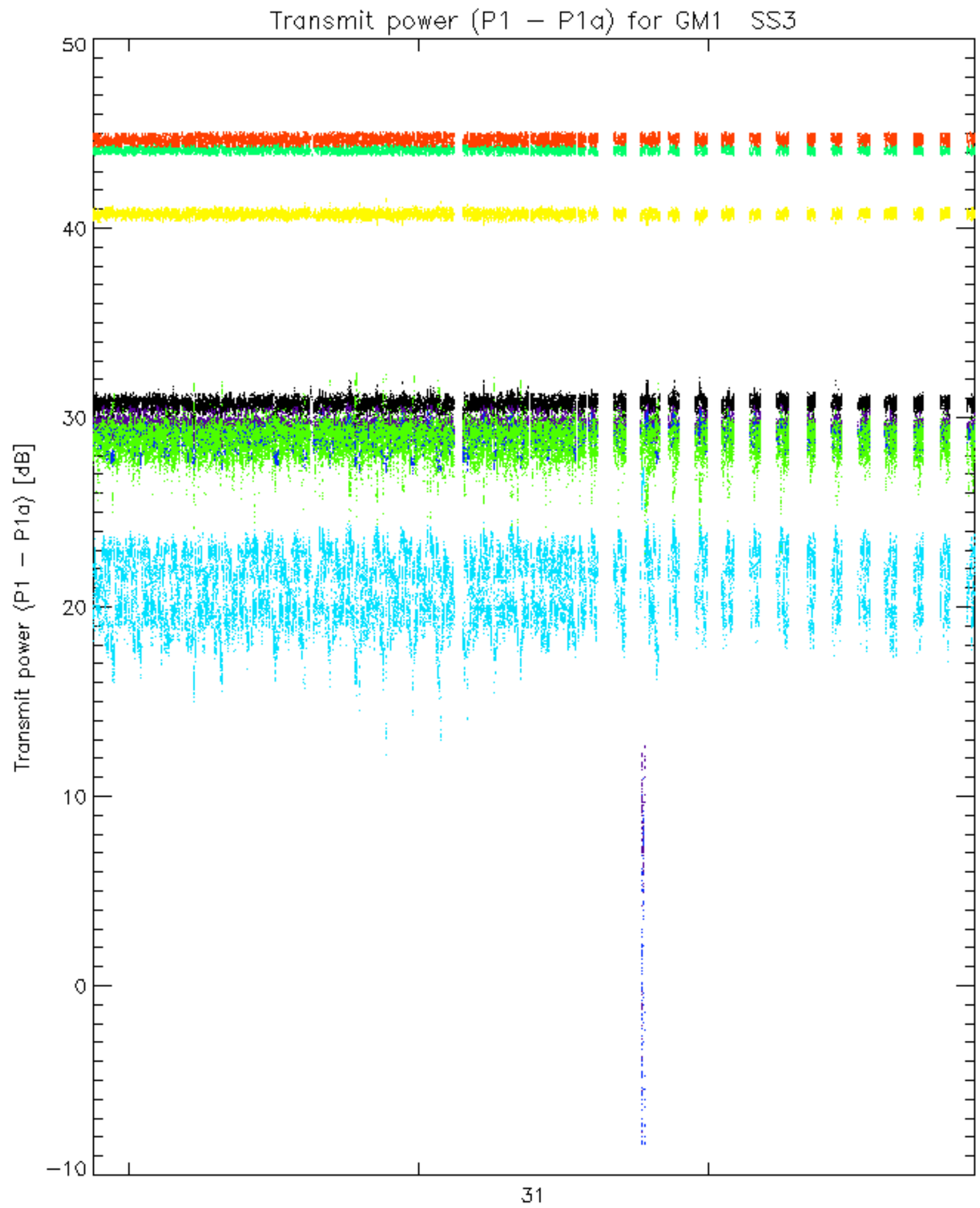
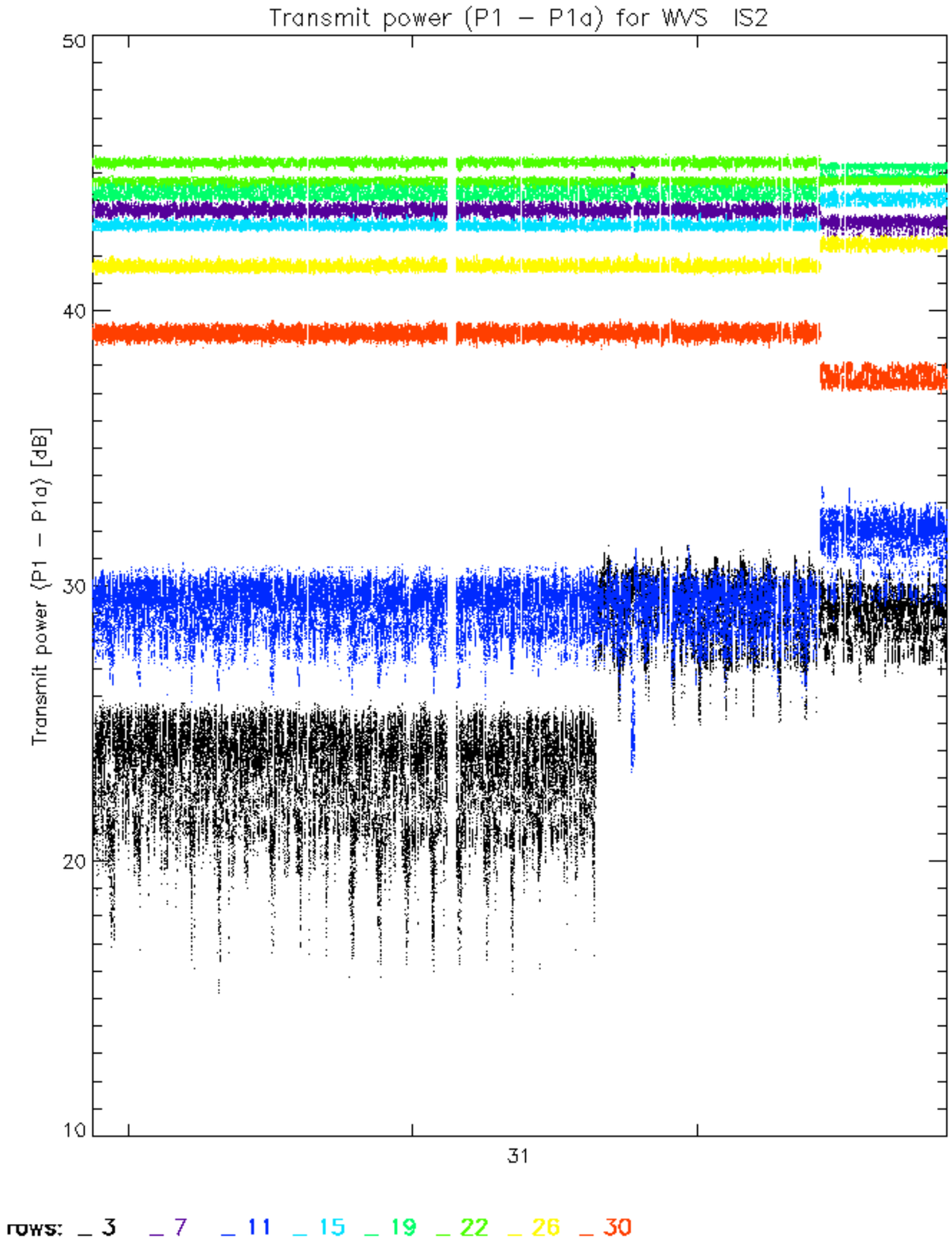

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
31
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
31
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.