REPORT OF 040130

1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P) products, which are the available few hours after the acquisition, on the high rate browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

ASAR unavailability from 2004-01-30 07:40:02 to 2004-01-30 10:41:43

2.2 - Browse Visual Inspection

No anomalies observed on available browse products

2.3 - Data Analysis

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

-Nominal Doppler behavior.

3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:
- ASA_MS__0PNPDK20040129_202418_000000152023_00443_10016_0176.N1
- ASA_MS__0PNPDK20040129_202538_000000152023_00443_10016_0177.N1

Polarisation	Start Time
V	20040129 202538
H	20040129 202418

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

row	stat	AveP1	AveP2	AveP3
3	mean	-3.66617	-22.4578	-8.15357

	stdev	0.00651976	0.0867977	0.00318029
24	mean	-5.08458	-21.0824	-8.15357
	stdev	0.0153328	0.0801113	0.00318029

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.69401	-22.5052	-8.15324
	stdev	0.00713323	0.0705525	0.00324507
24	mean	-5.23231	-21.1345	-8.15324
	stdev	0.569556	0.0649049	0.00324507

4.3 - cal pulses monitoring (all rows)

5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000424796
	stdev	2.95894e-07
MEAN Q	mean	0.000327485
	stdev	3.49348e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.116612

STDEV Q	stdev	0.00137508
	mean	0.116844
	stdev	0.00138939

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

Preliminary report.The data is not yet controled

6.1 - Unbiased Doppler Error

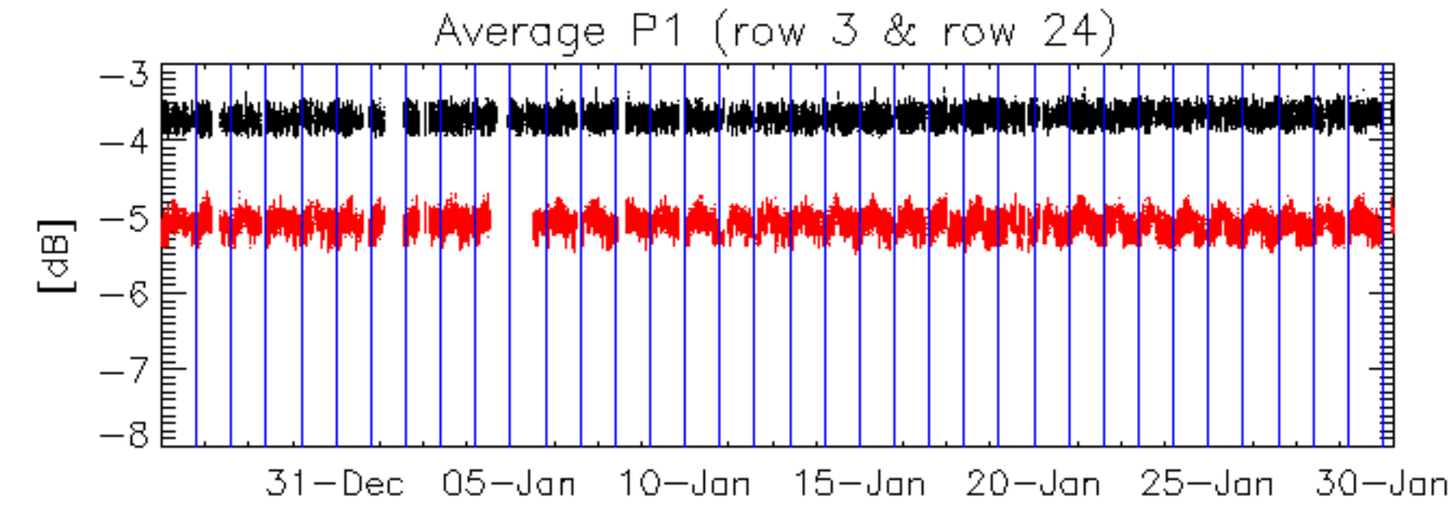
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

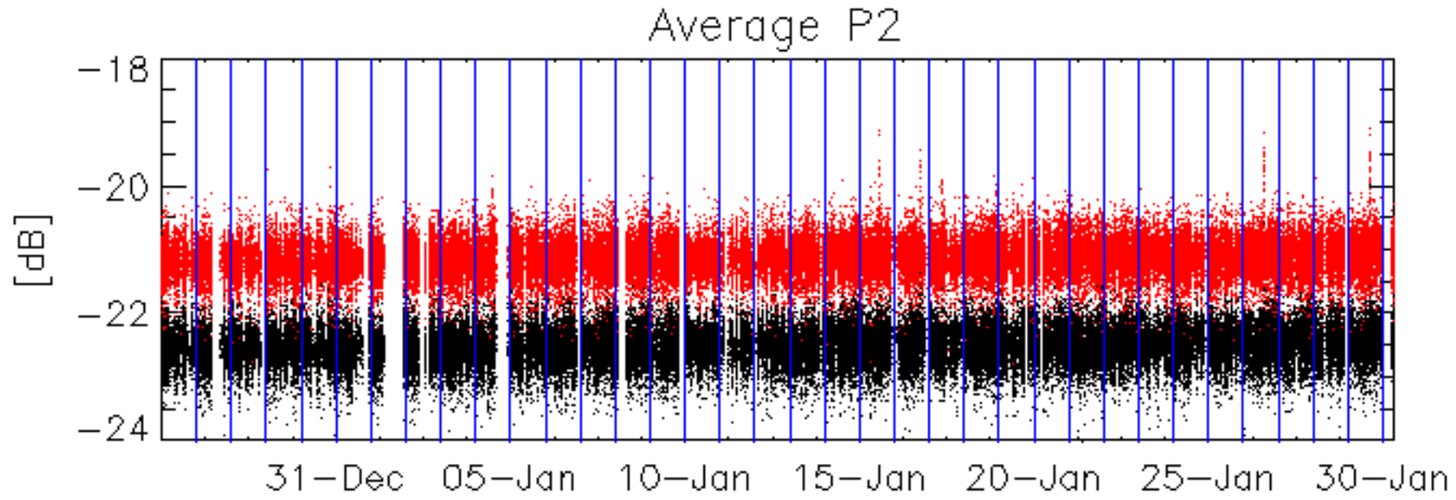
6.2 - Absolute Doppler

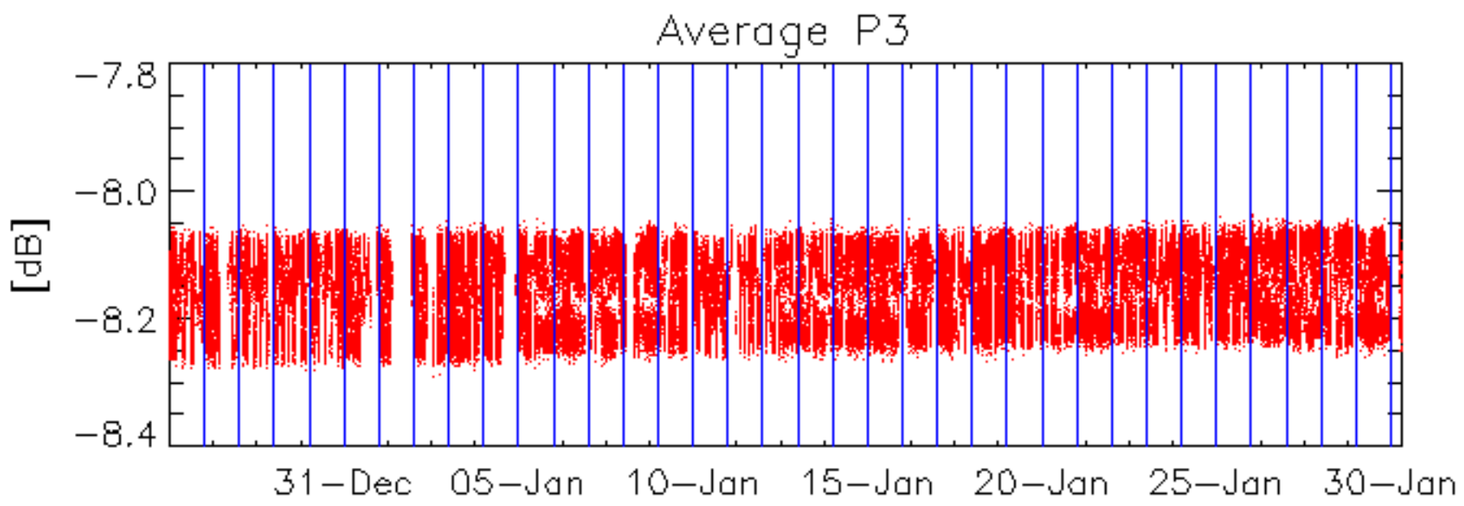
Evolution of Absolute Doppler
Acsending
Descending

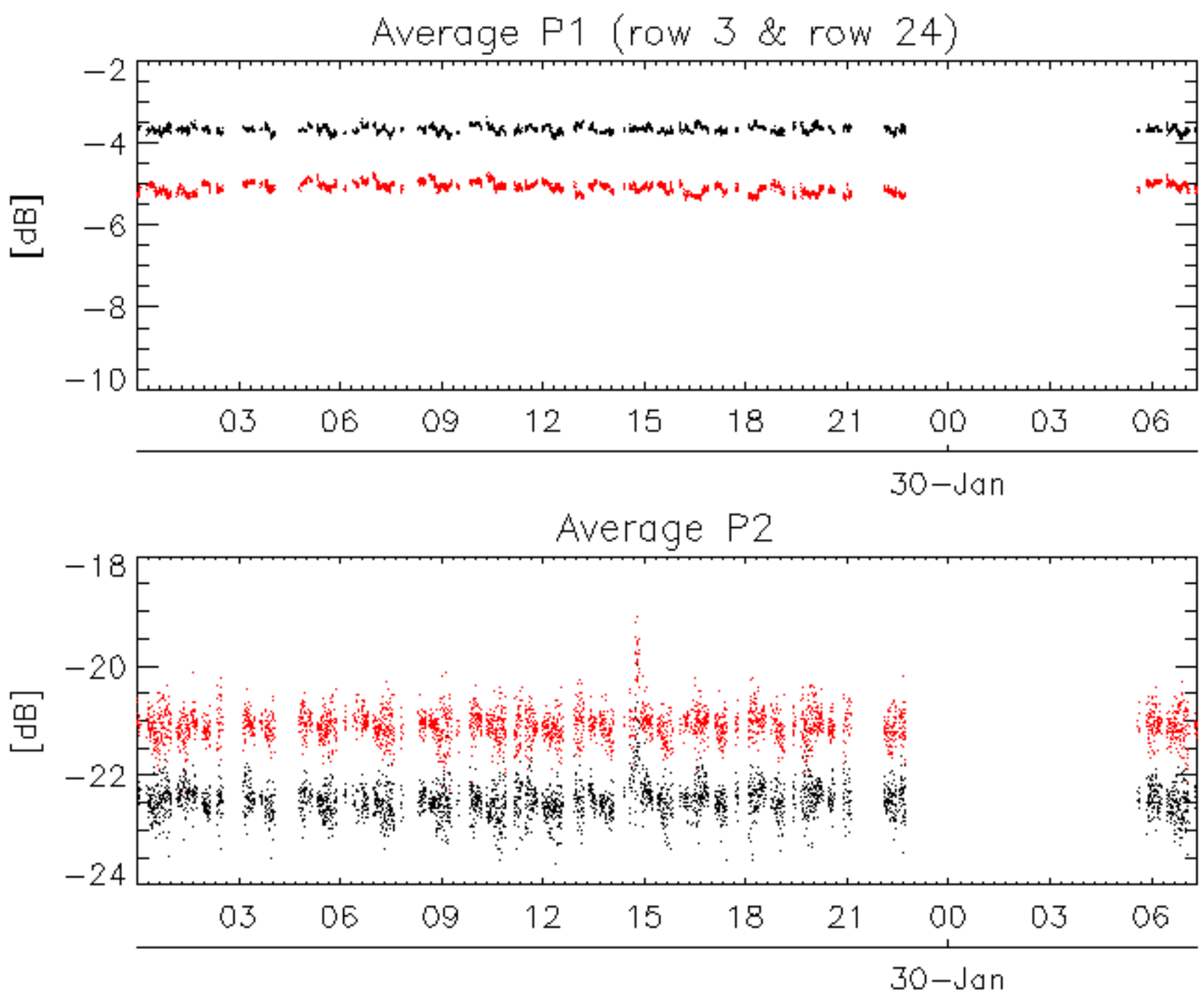
6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX

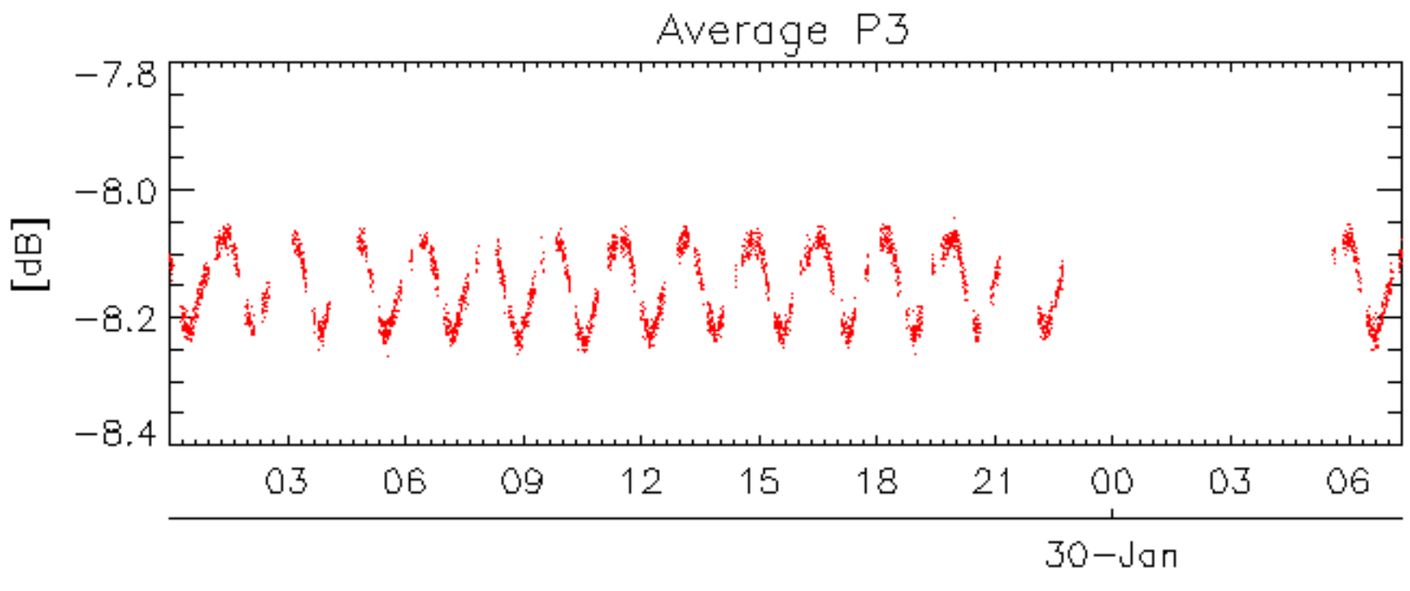


Average P1 (row 3 & row 24)
[dB]
−3
−4
−5
−6
−7
−8
31−Dec
05−Jan
10−Jan
15−Jan
20−Jan
25−Jan
30−Jan


Average P2
[dB]
−18
−20
−22
−24
31−Dec
05−Jan
10−Jan
15−Jan
20−Jan
25−Jan
30−Jan


Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
31−Dec
05−Jan
10−Jan
15−Jan
20−Jan
25−Jan
30−Jan

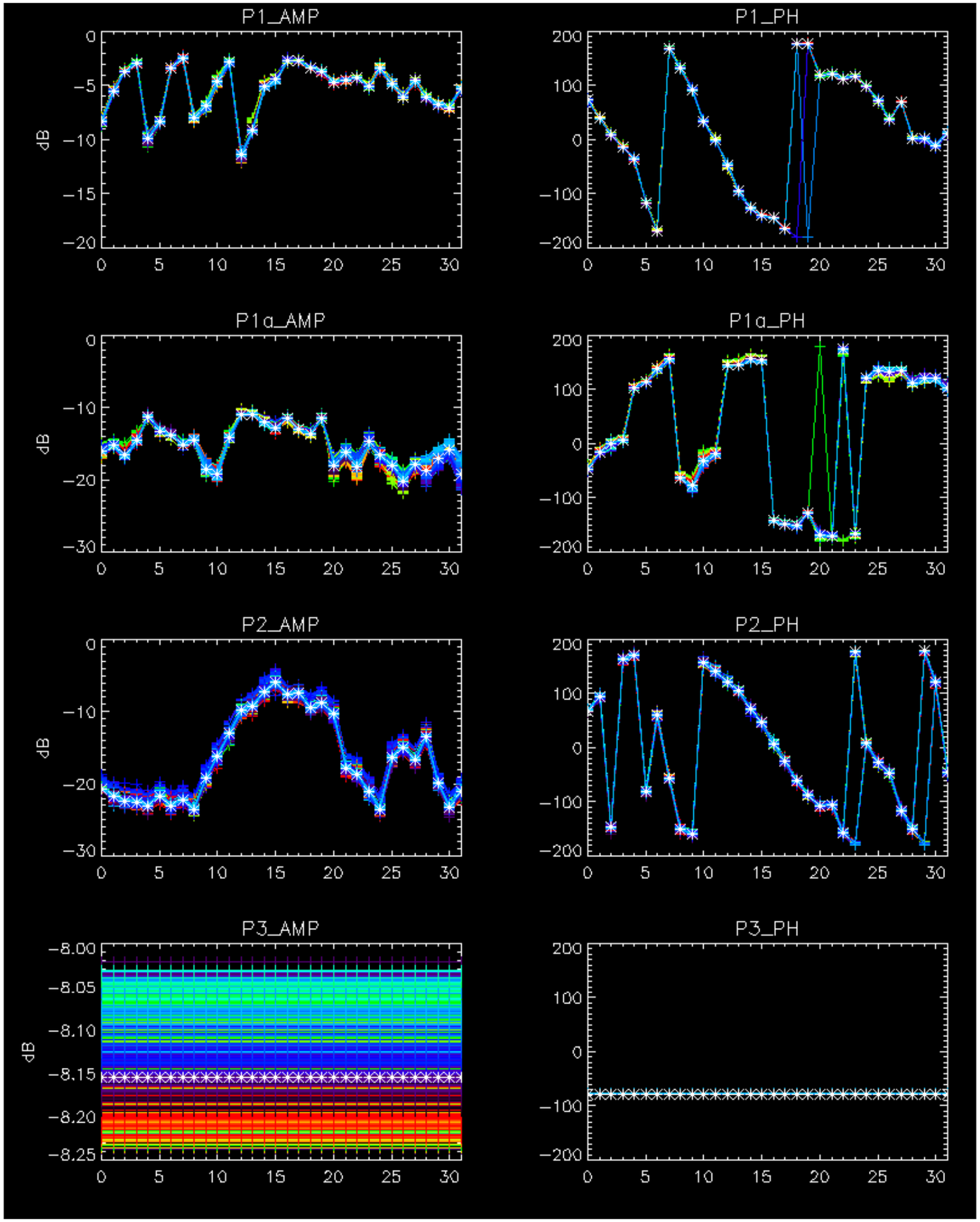

Average P1 (row 3 & row 24)
[dB]
−2
−4
−6
−8
−10
03
06
09
12
15
18
21
00
03
06
30−Jan

Average P2
[dB]
−18
−20
−22
−24
03
06
09
12
15
18
21
00
03
06
30−Jan


Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
03
06
09
12
15
18
21
00
03
06
30−Jan

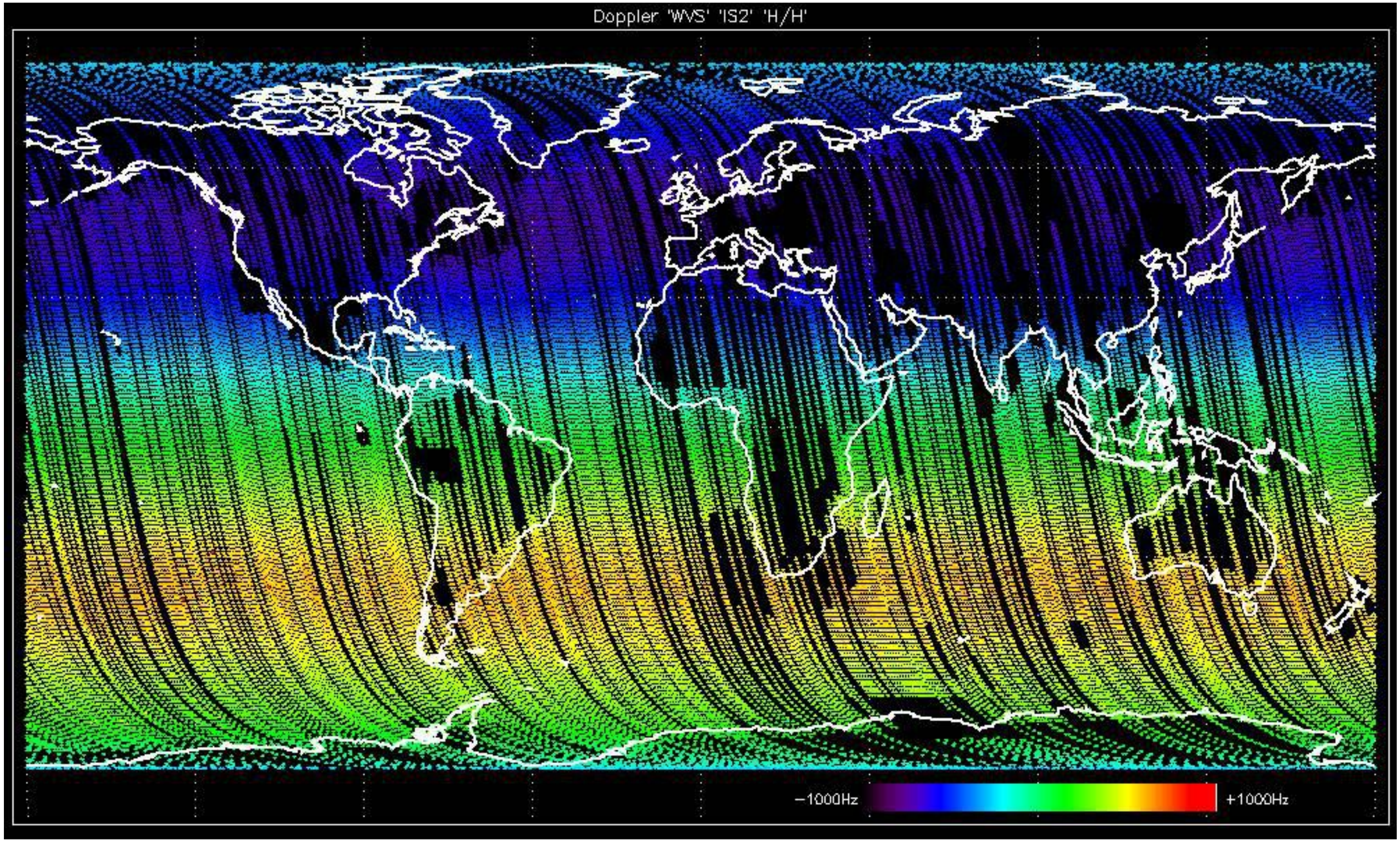
No anomalies observed on available browse products

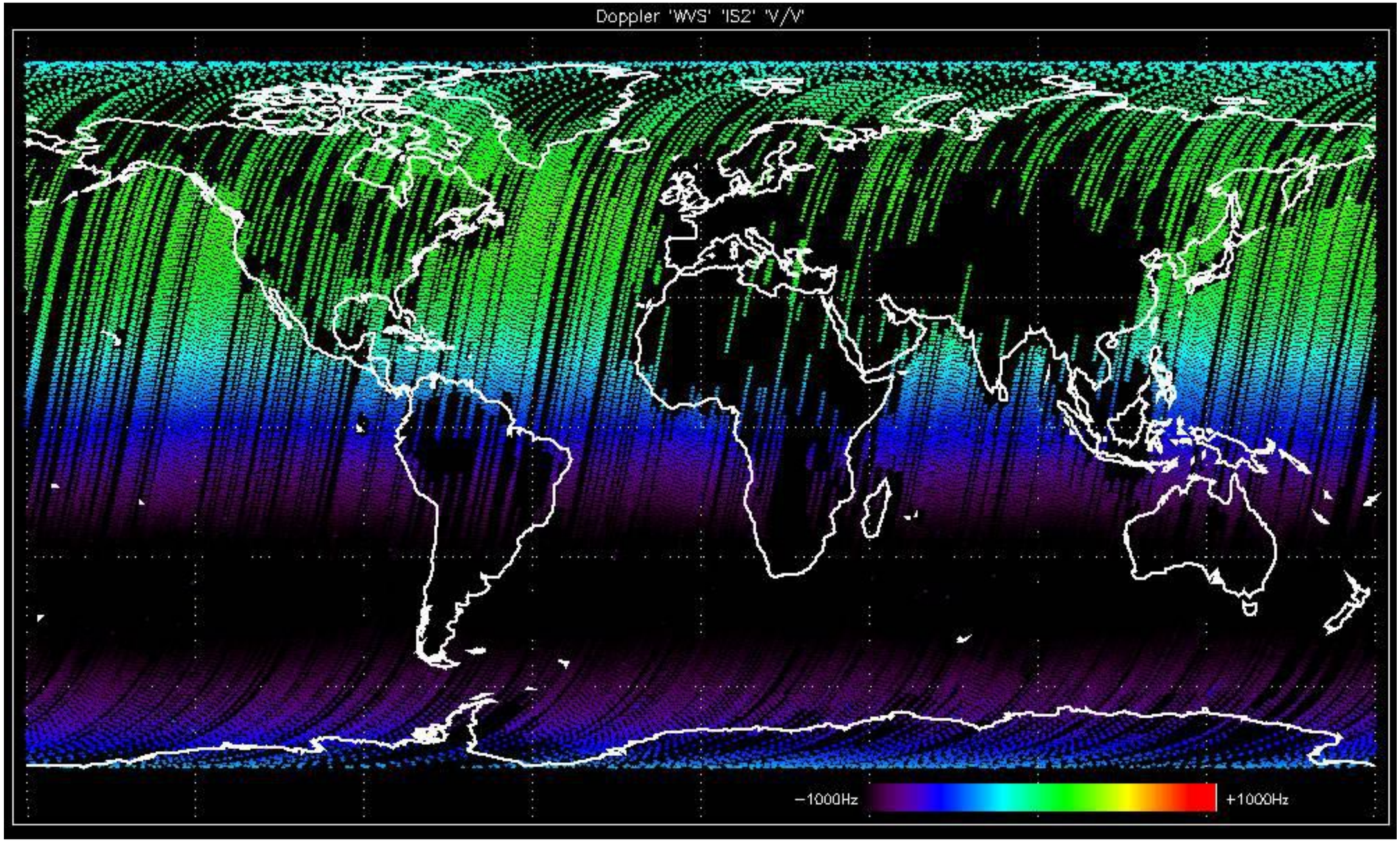
No anomalies observed.

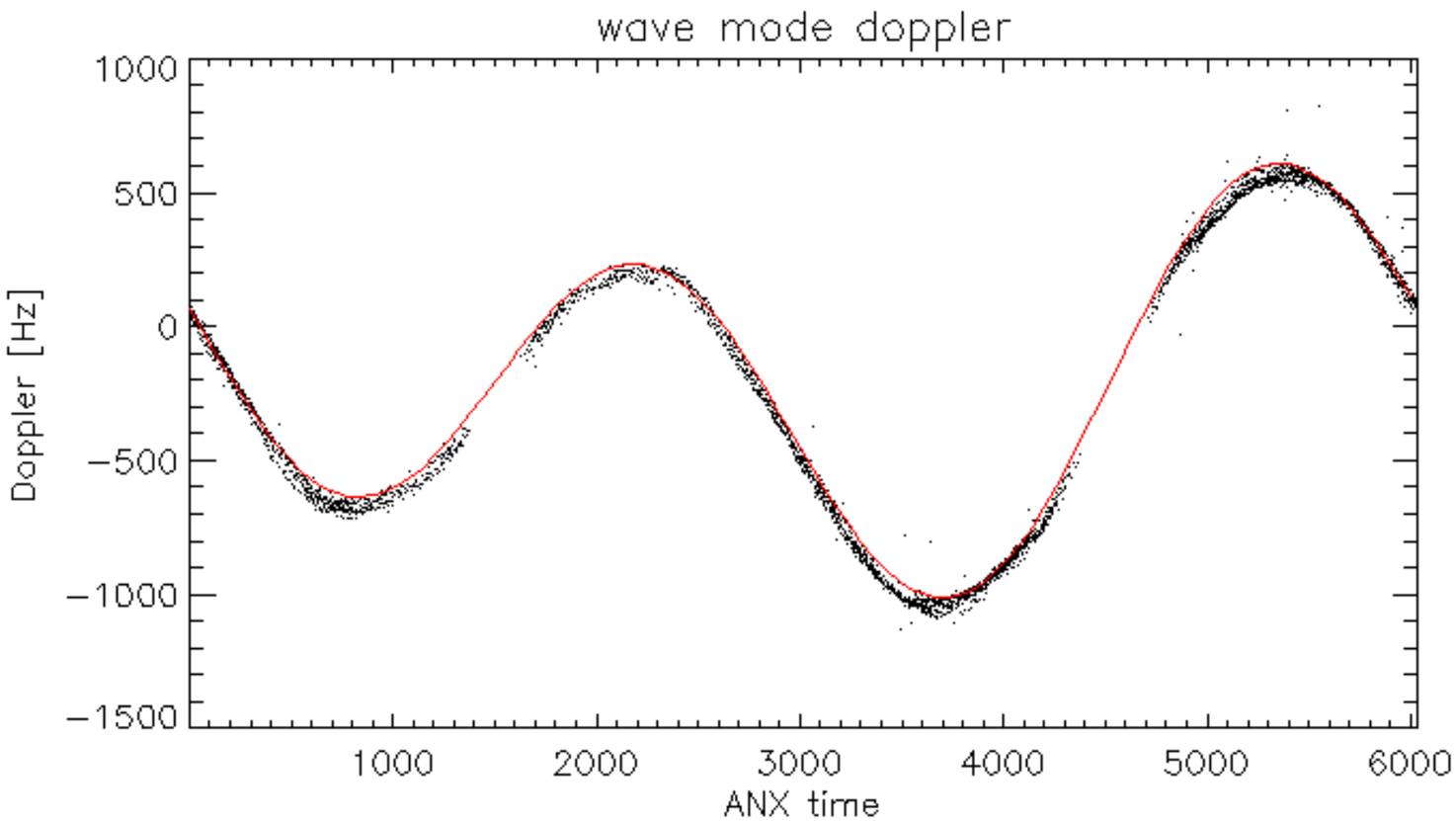

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

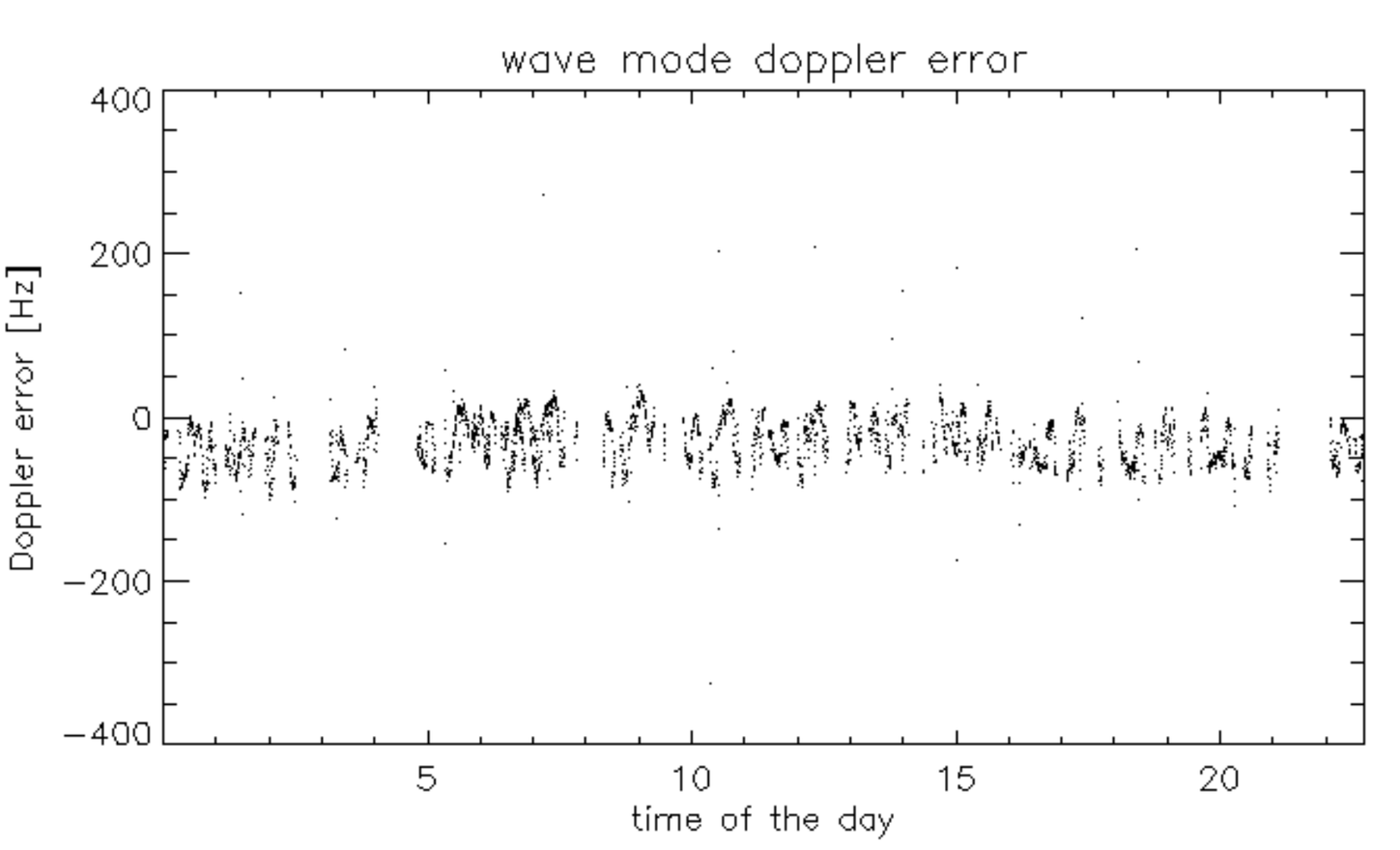
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

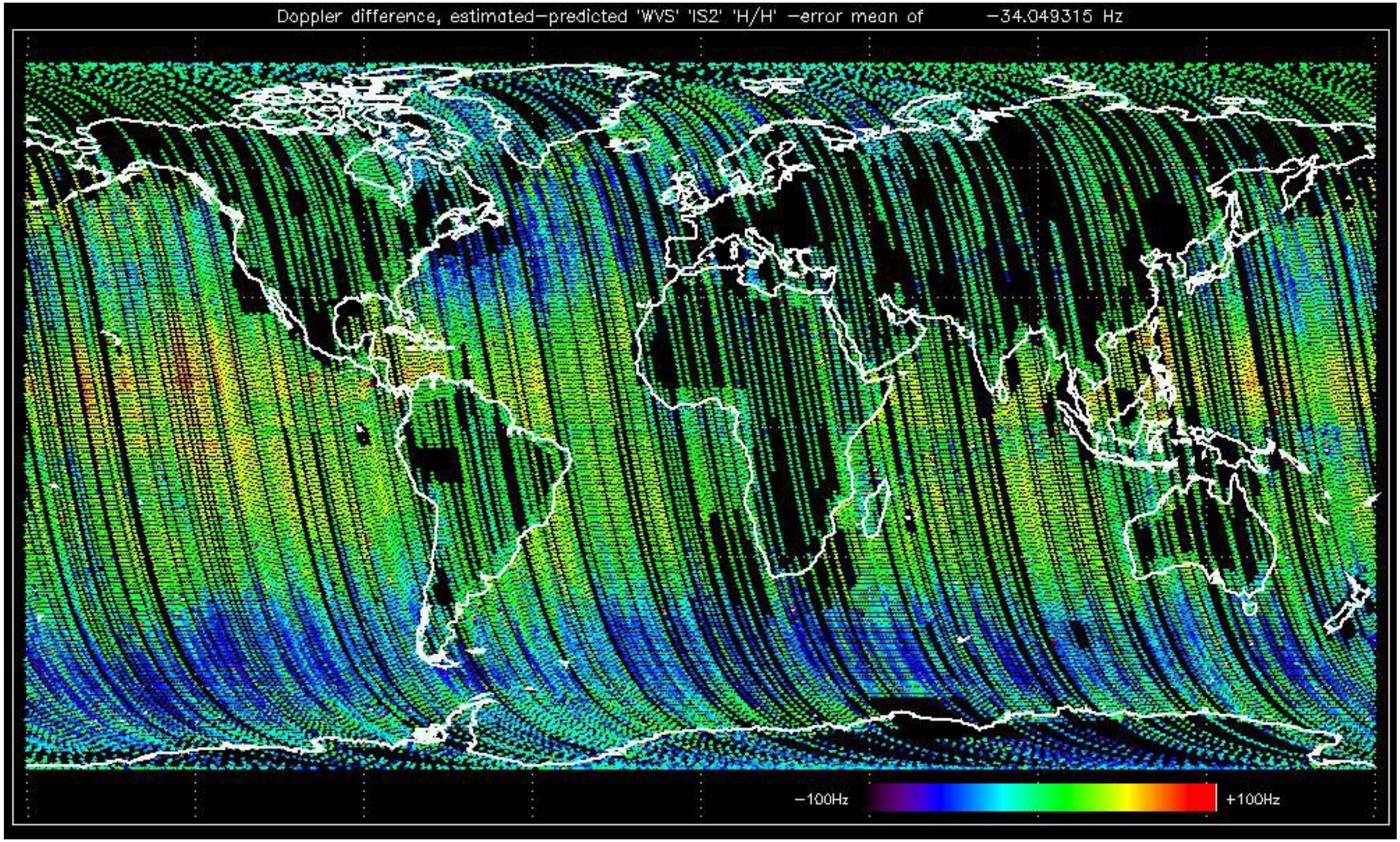
Preliminary report.The data is not yet controled

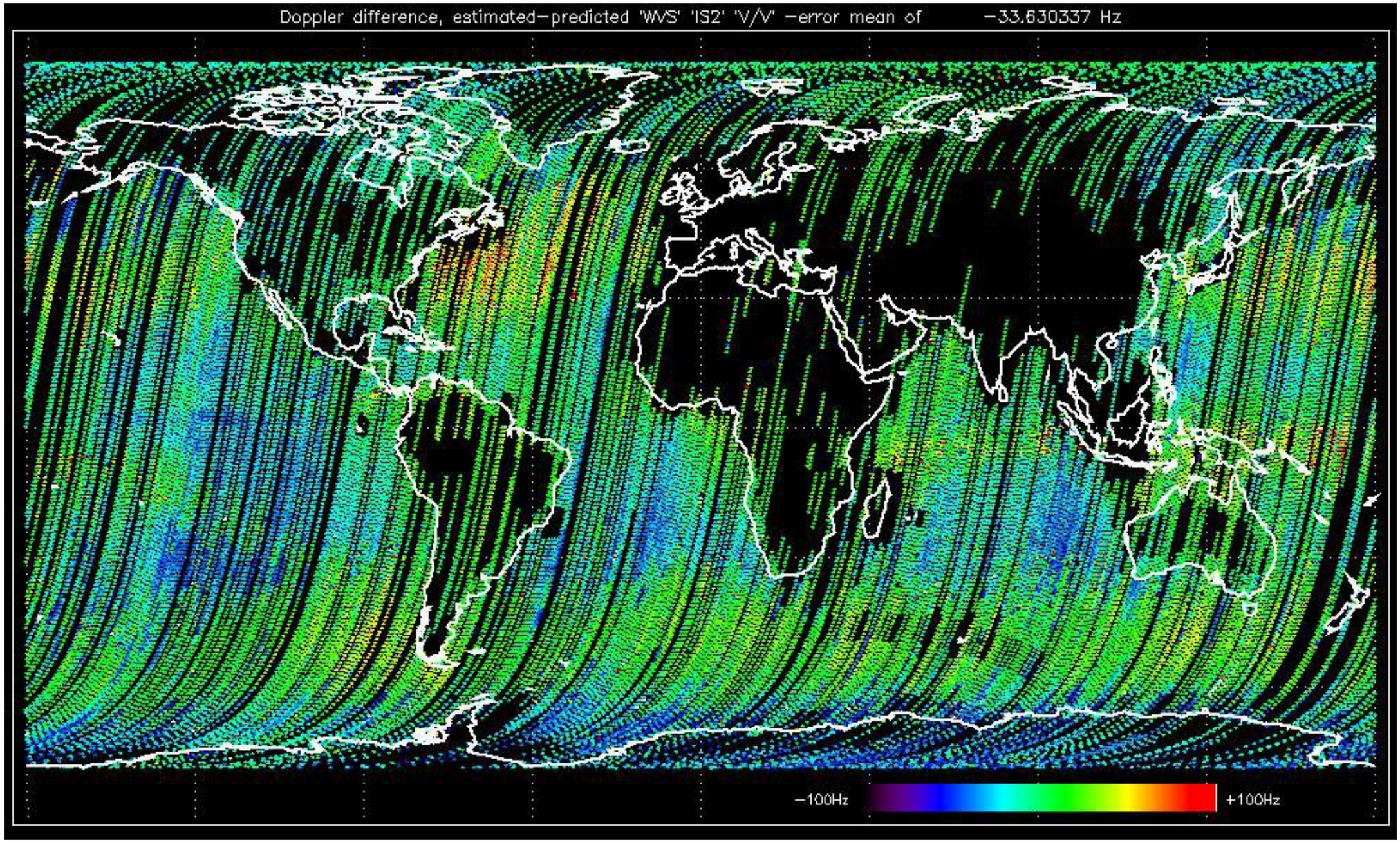

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


Doppler 'WVS' 'IS2' 'V/V'
−1000Hz
+1000Hz


wave mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
1000
2000
3000
4000
5000
6000
ANX time

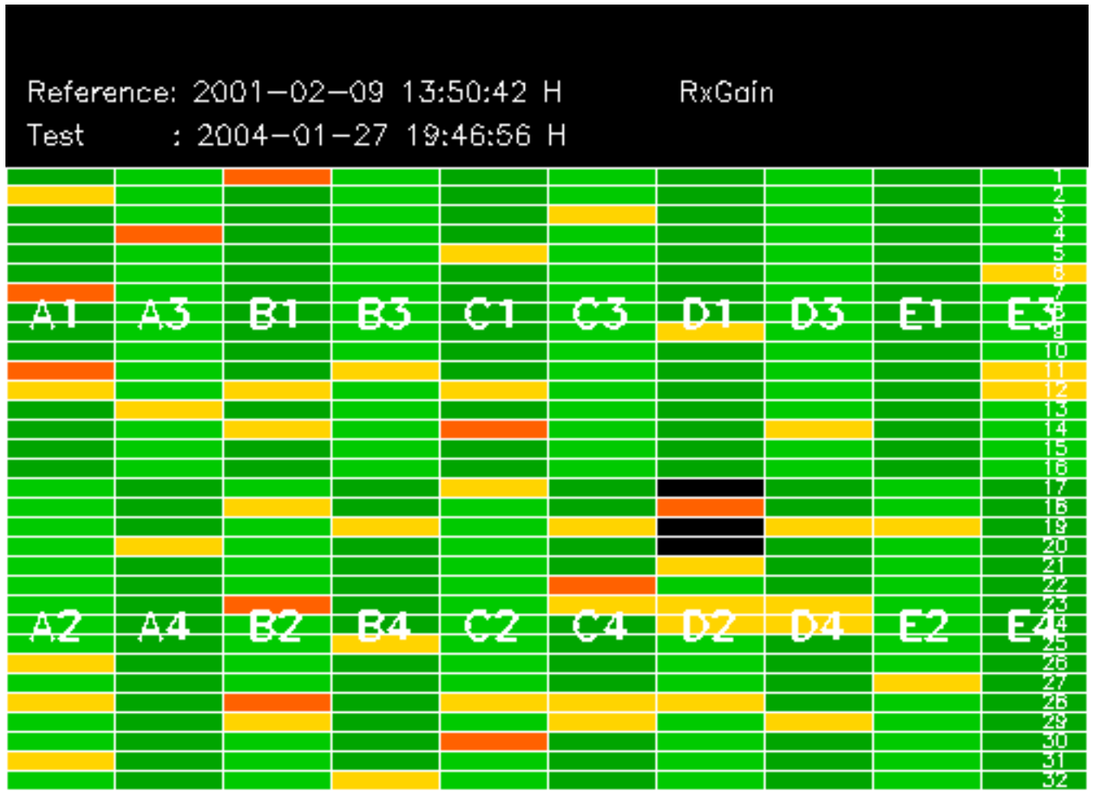

wave mode doppler error
Doppler error [Hz]
400
200
0
−200
−400
5
10
15
20
time of the day

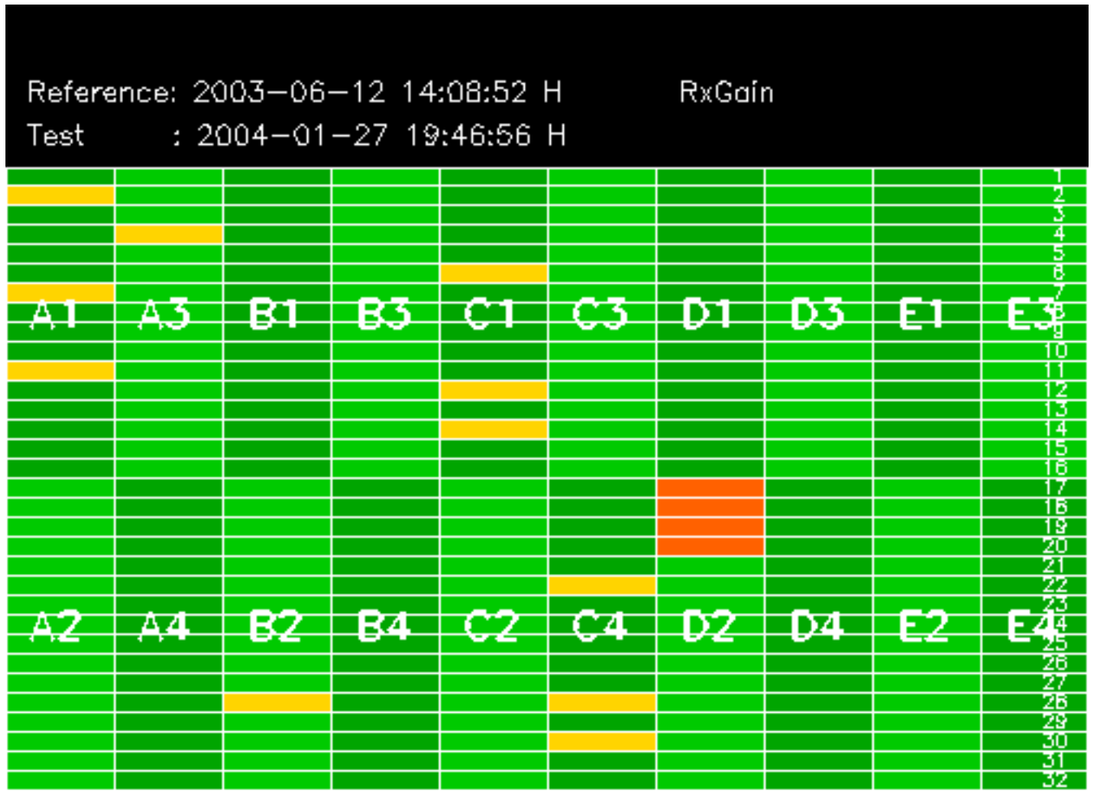

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of −34.049315 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of −33.630337 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:
- ASA_MS__0PNPDK20040129_202418_000000152023_00443_10016_0176.N1
- ASA_MS__0PNPDK20040129_202538_000000152023_00443_10016_0177.N1

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-01-27 19:46:56 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-27 19:46:56 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
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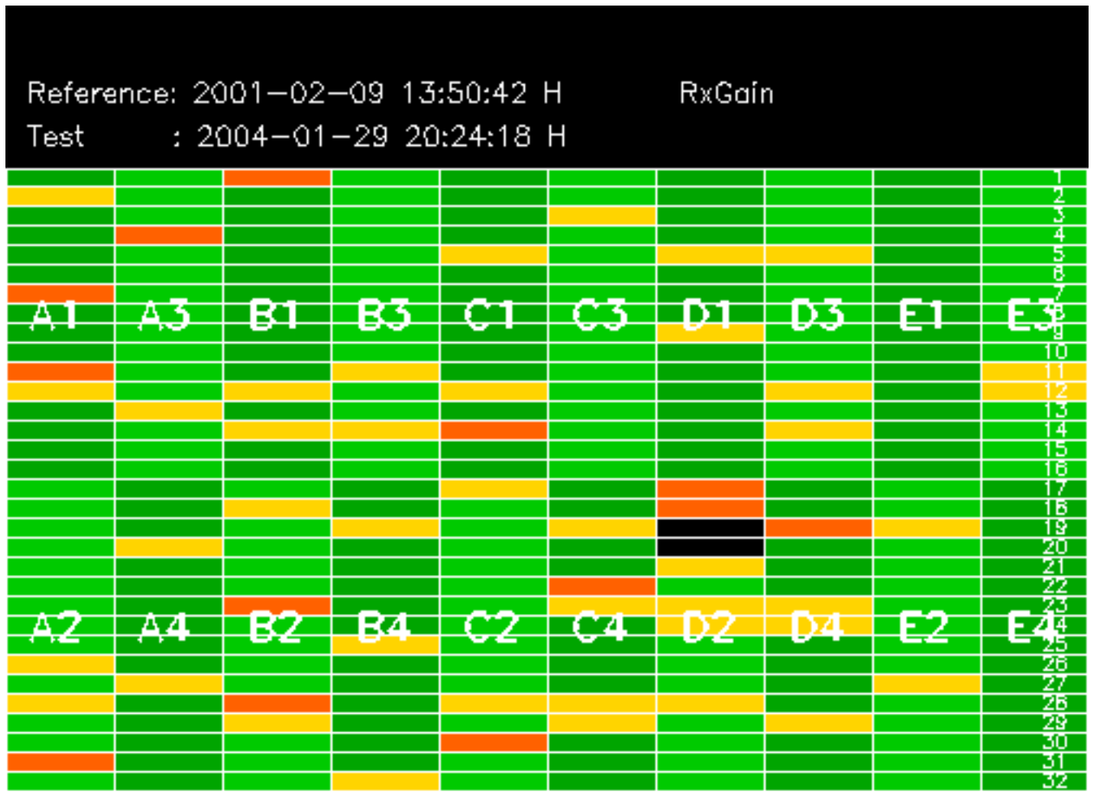
Reference: 2001-02-09 13:50:42 H
Test : 2004-01-29 20:24:18 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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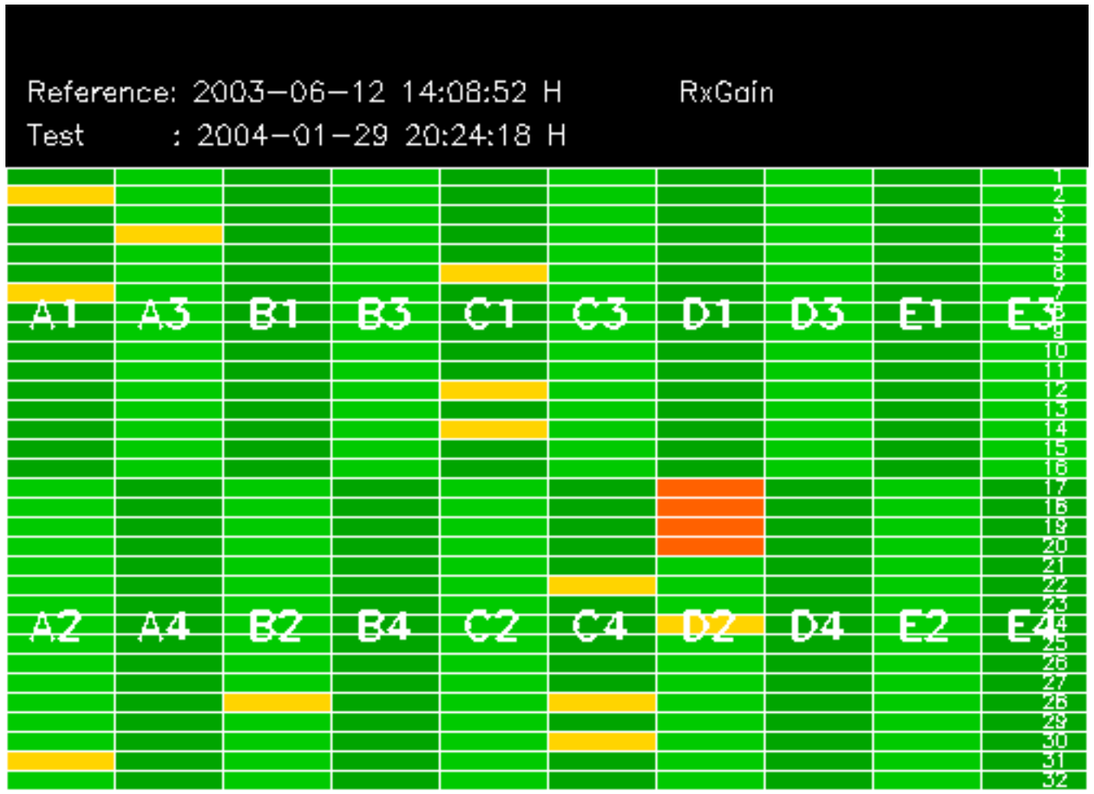
Reference: 2003-06-12 14:08:52 H
Test : 2004-01-29 20:24:18 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
C2
C4
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D4
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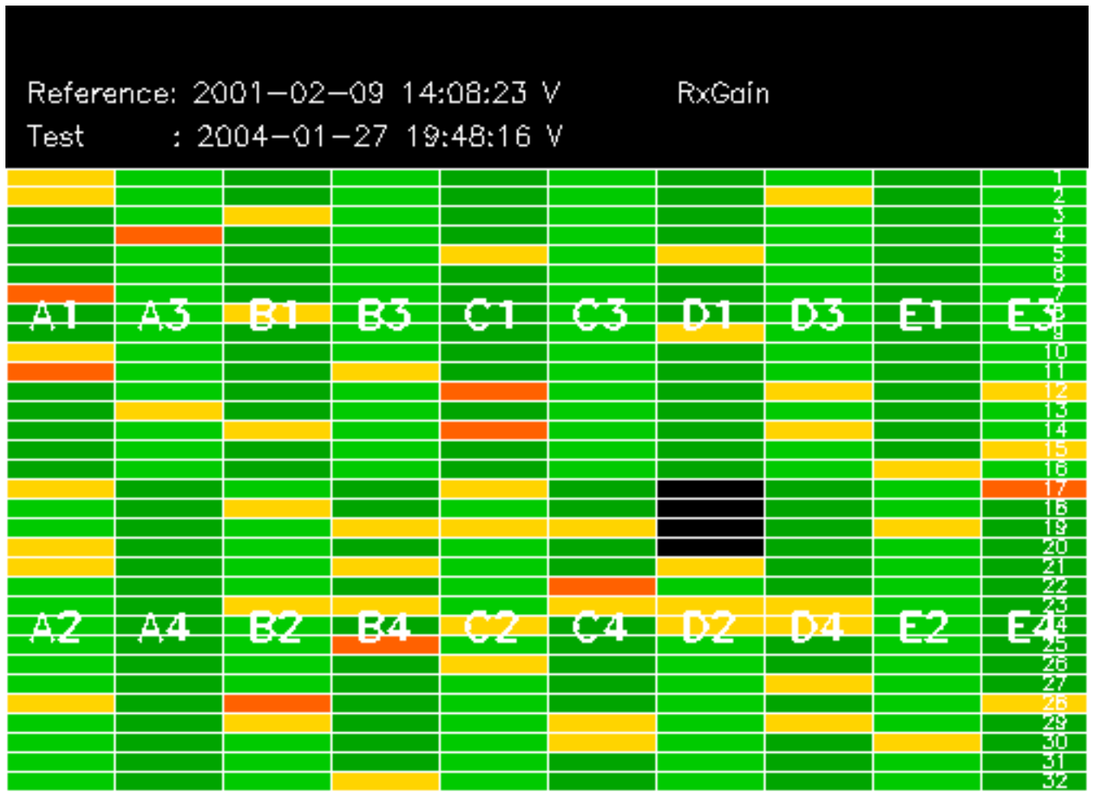
Reference: 2001-02-09 14:08:23 V
Test : 2004-01-27 19:48:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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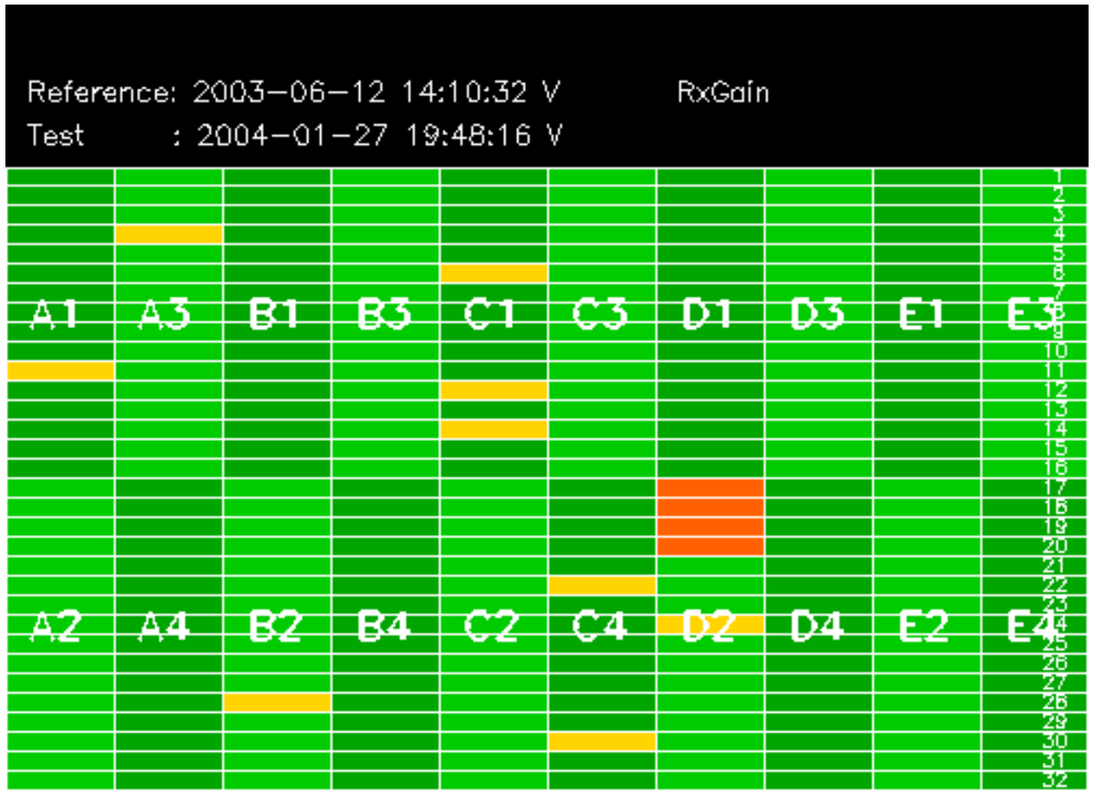
Reference: 2003-06-12 14:10:32 V
Test : 2004-01-27 19:48:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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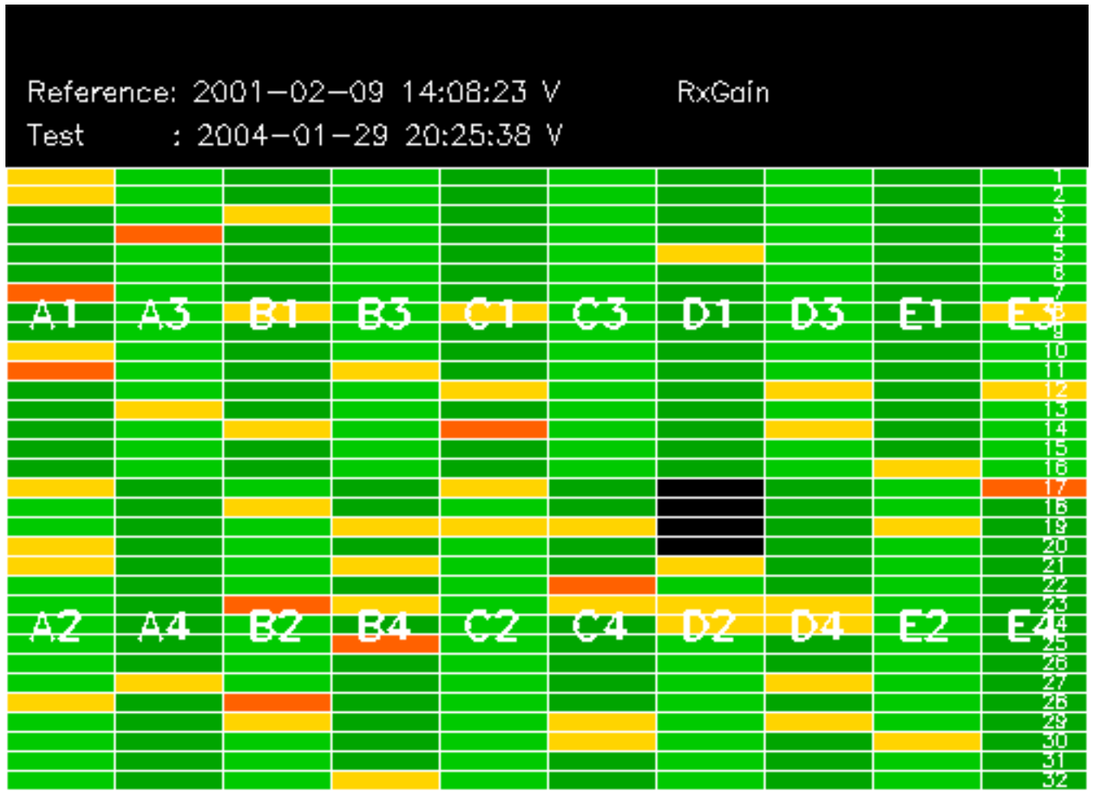
Reference: 2001-02-09 14:08:23 V
Test : 2004-01-29 20:25:38 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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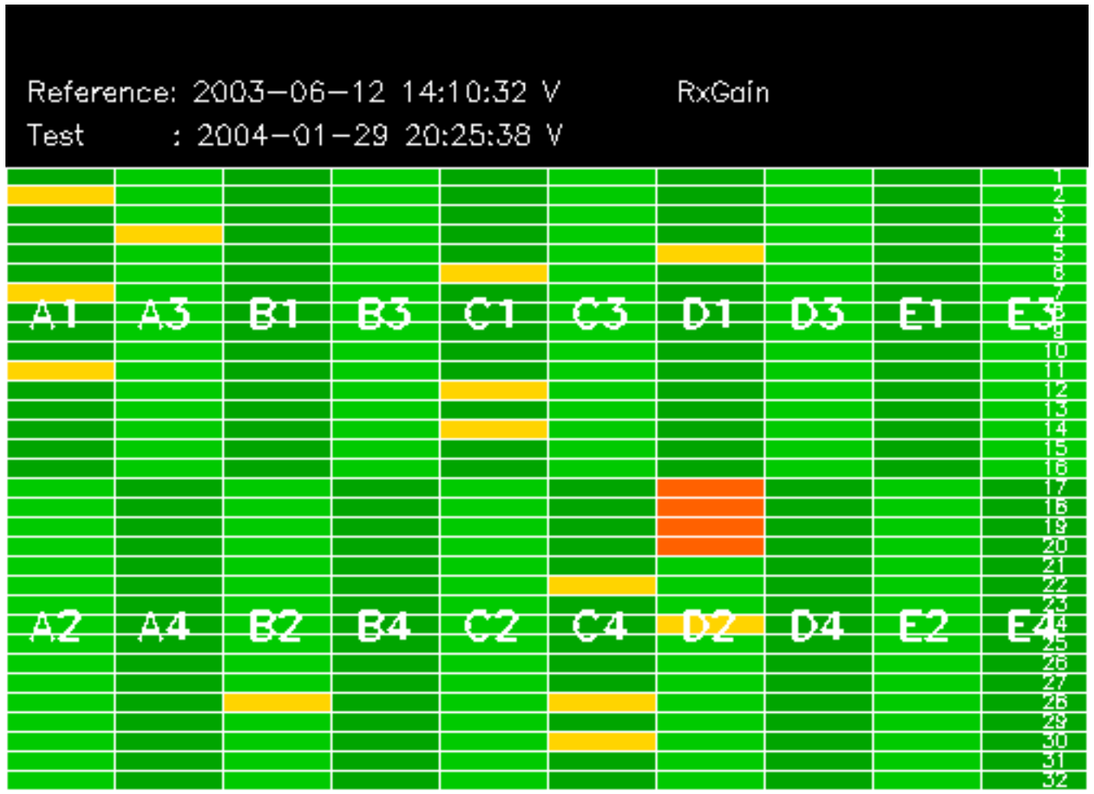
Reference: 2003-06-12 14:10:32 V
Test : 2004-01-29 20:25:38 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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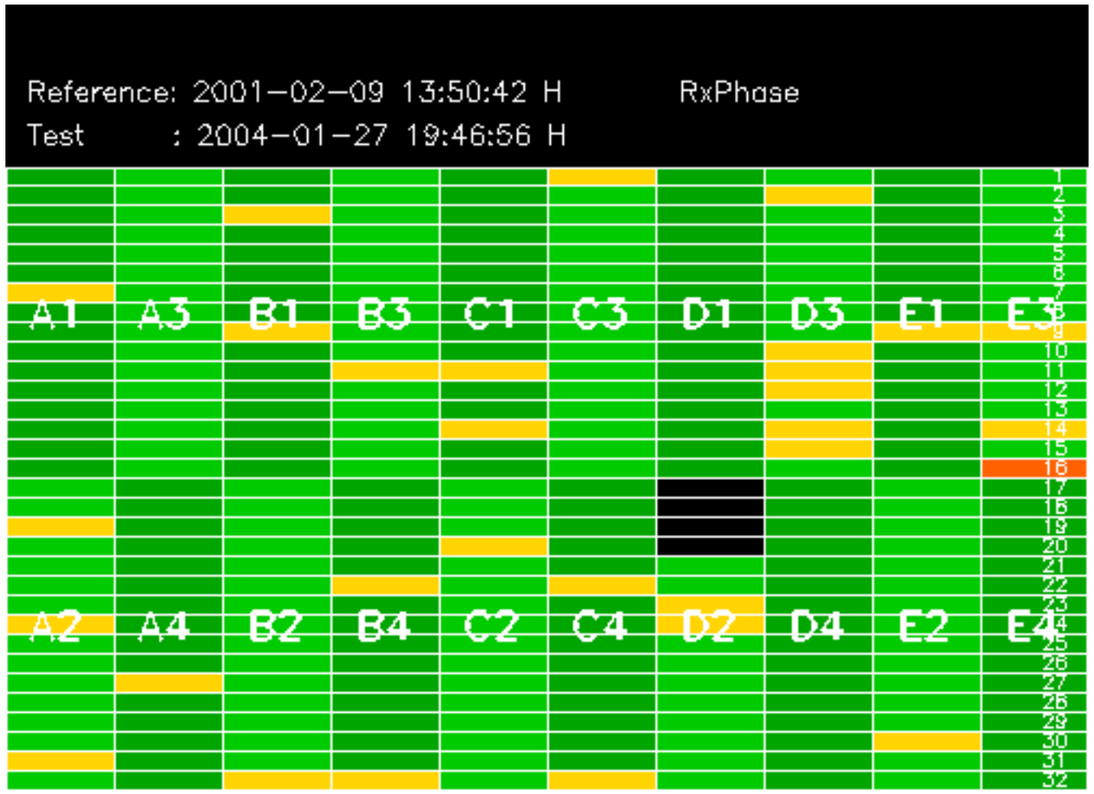
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-01-27 19:46:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-27 19:46:56 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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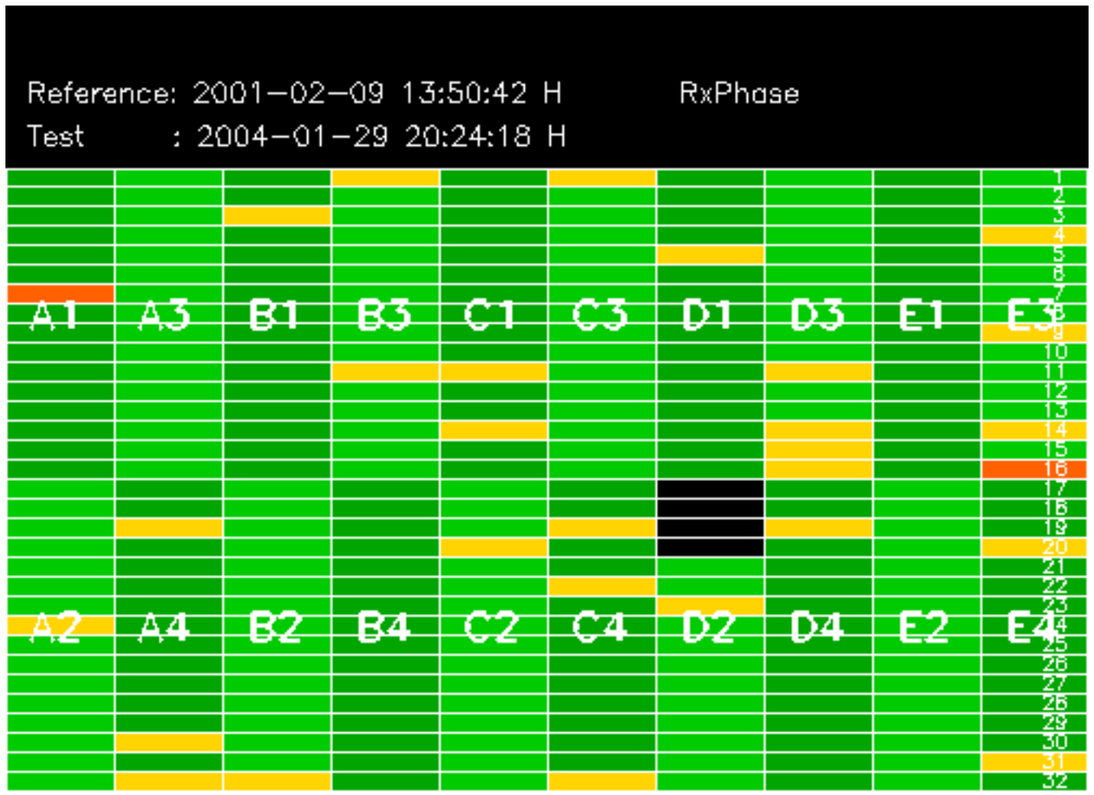
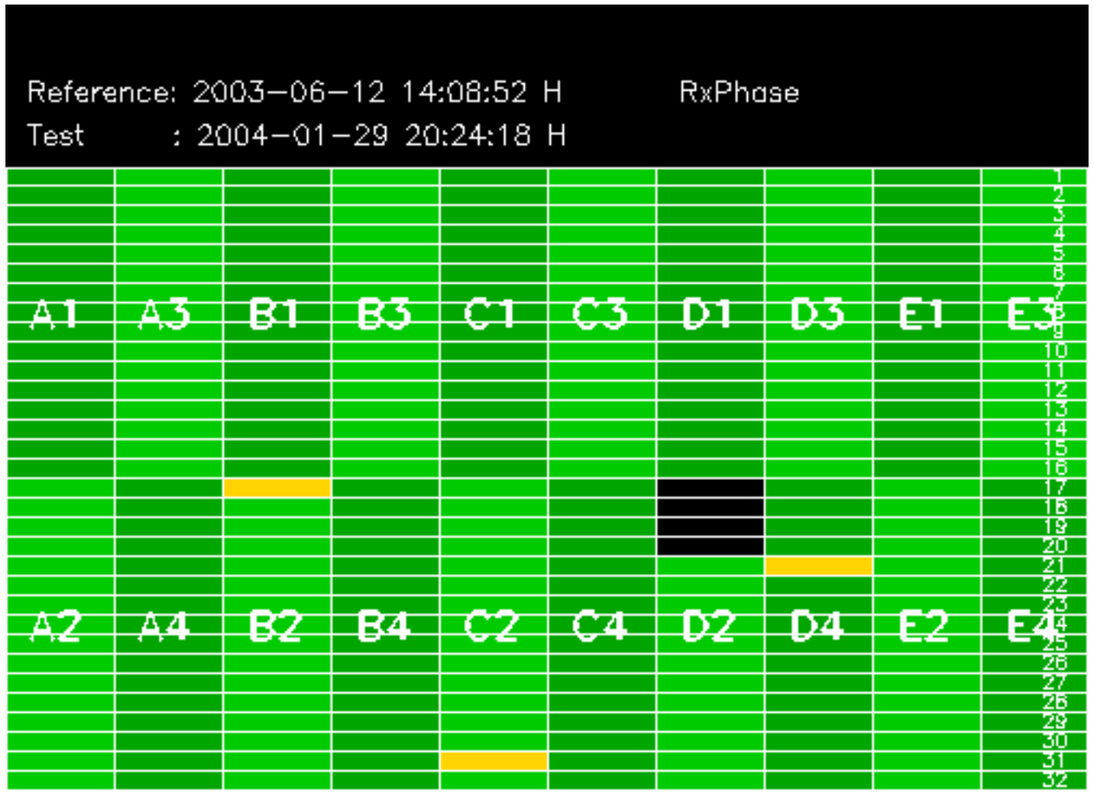

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-01-29 20:24:18 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-29 20:24:18 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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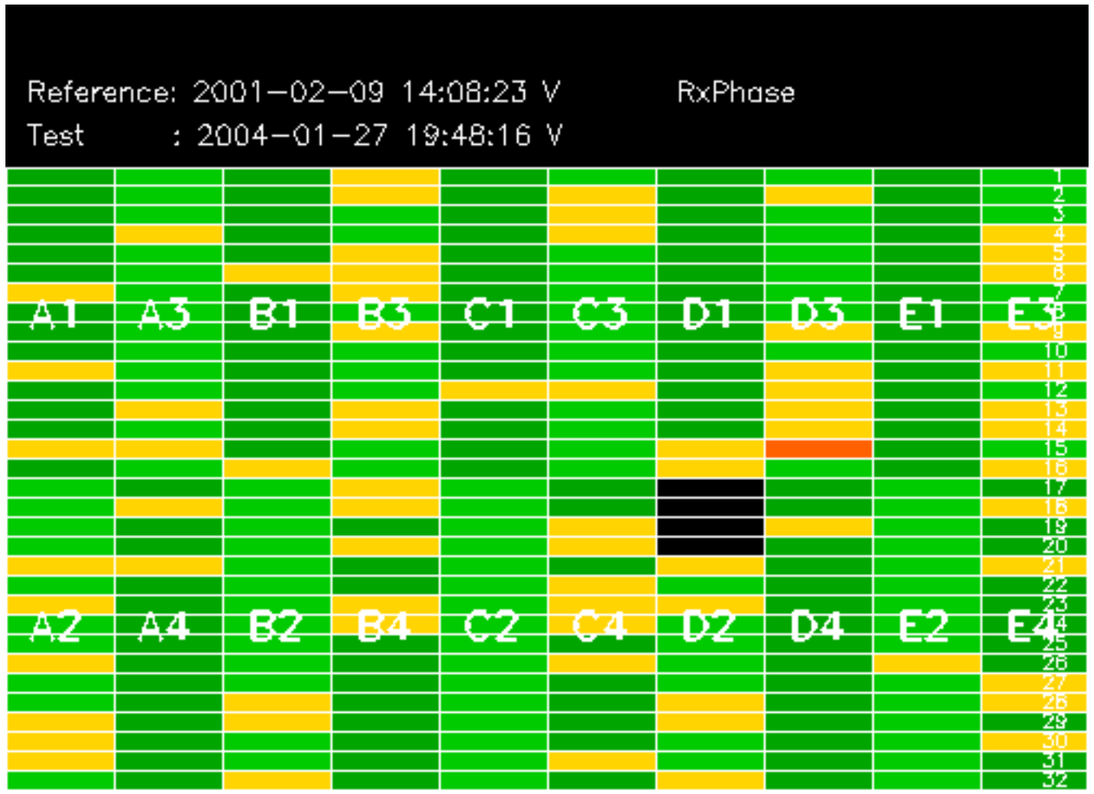
Reference: 2001-02-09 14:08:23 V
Test : 2004-01-27 19:48:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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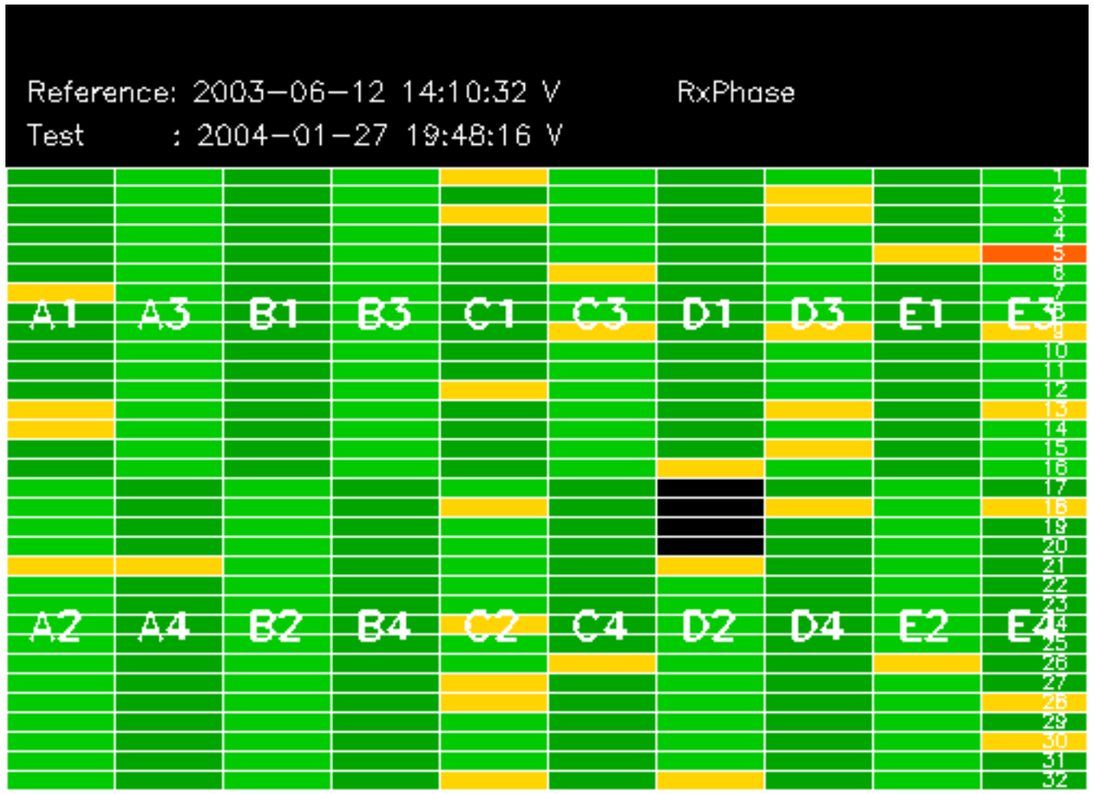
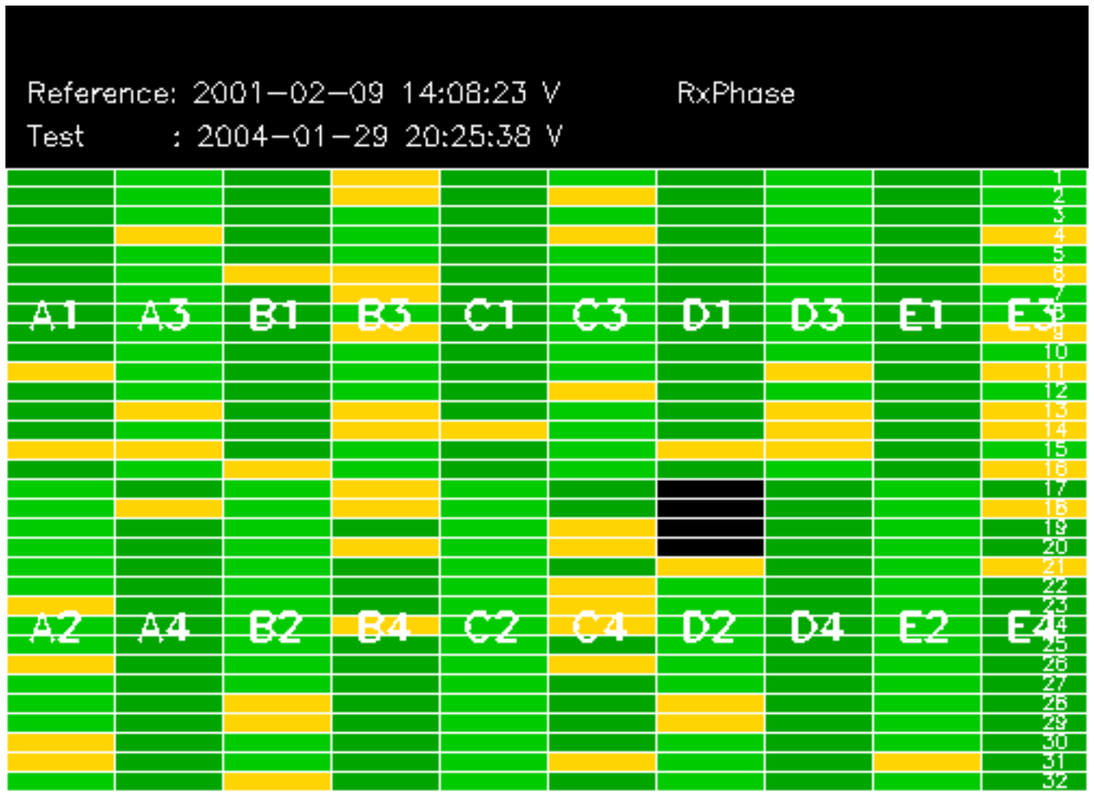
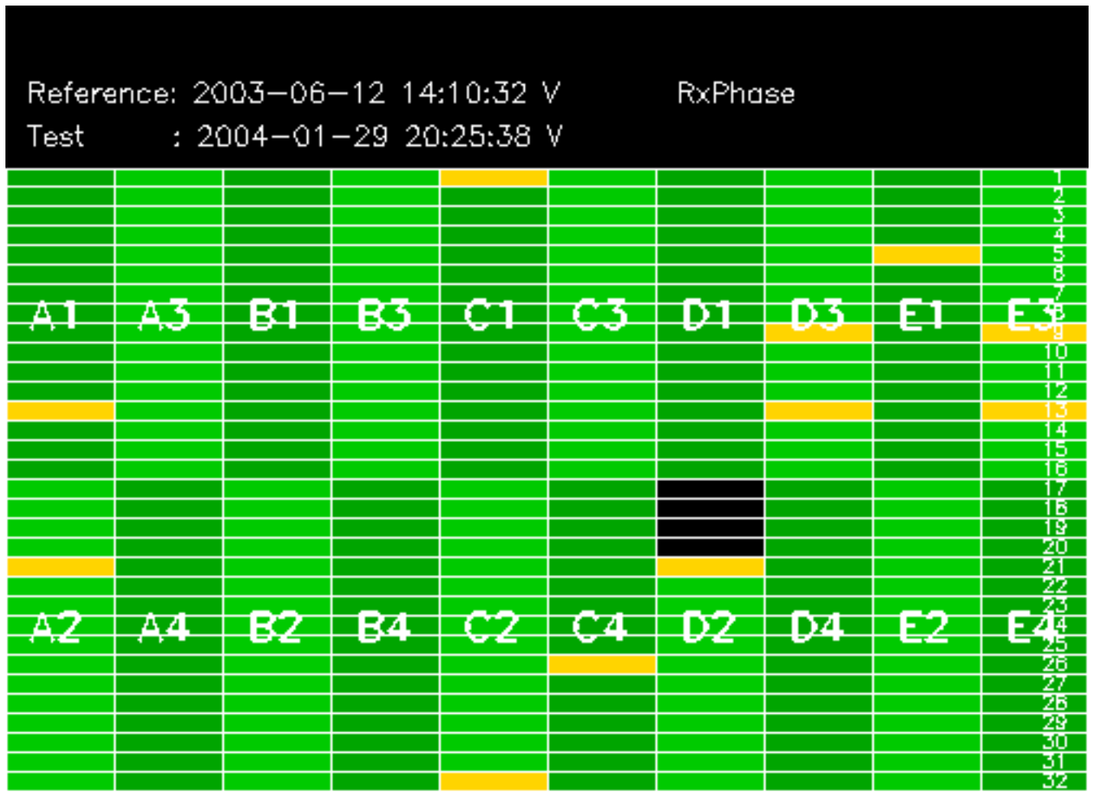
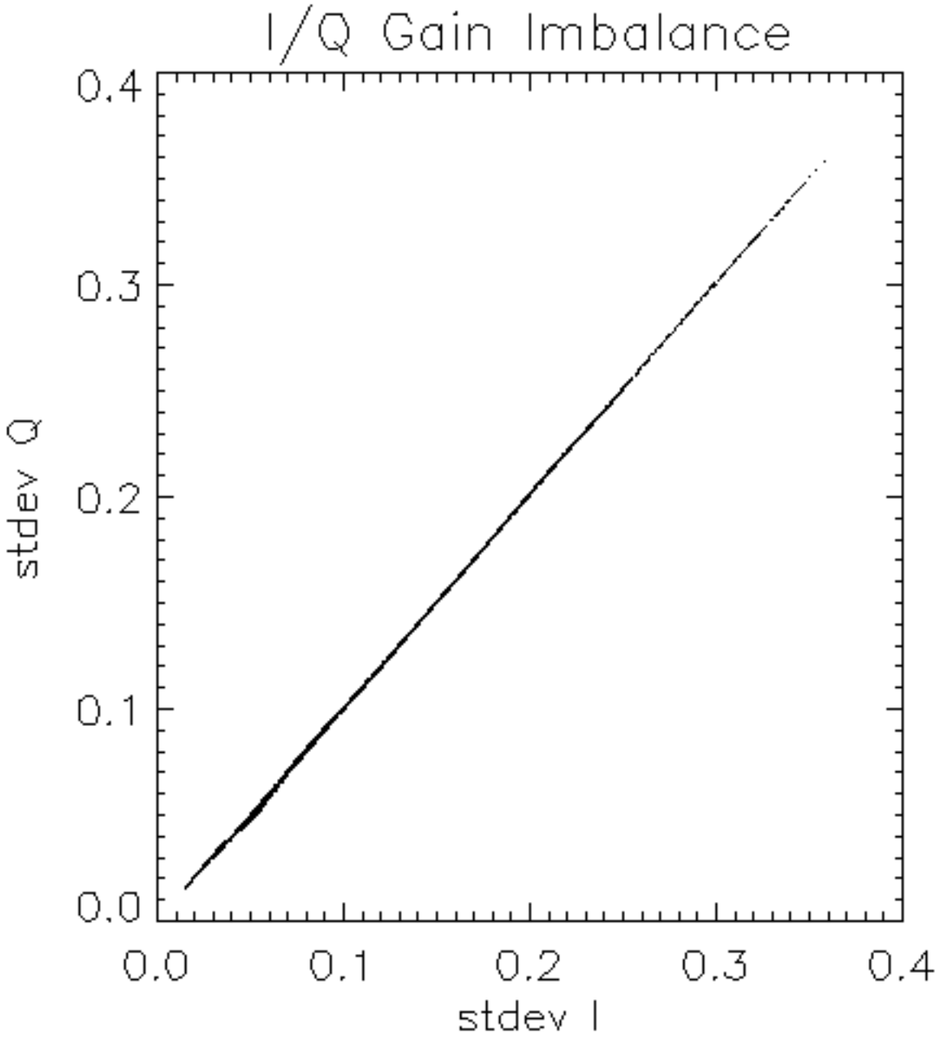
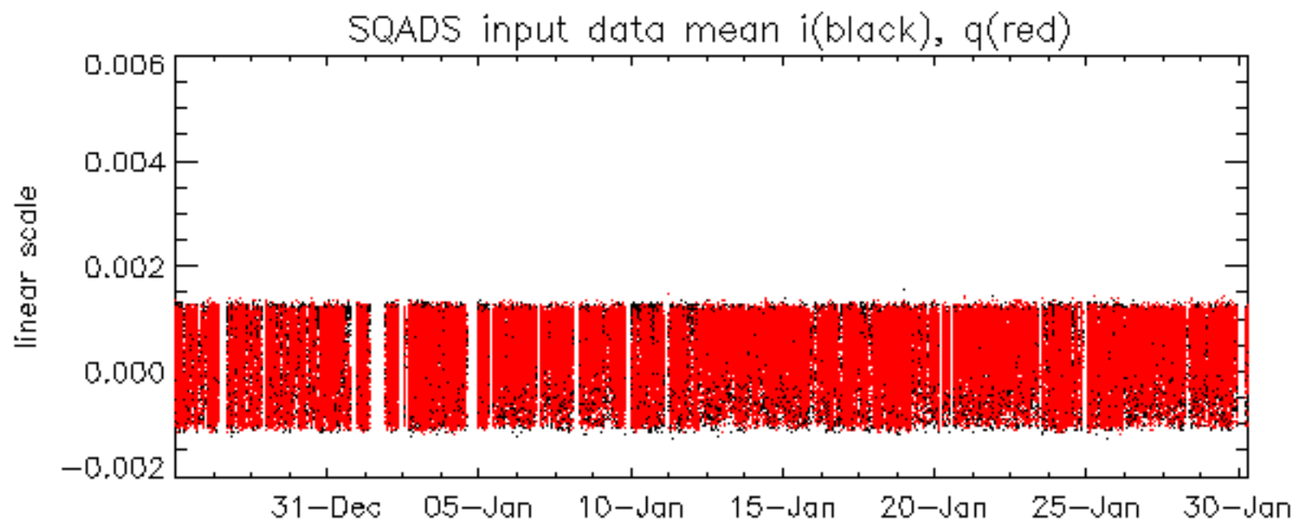
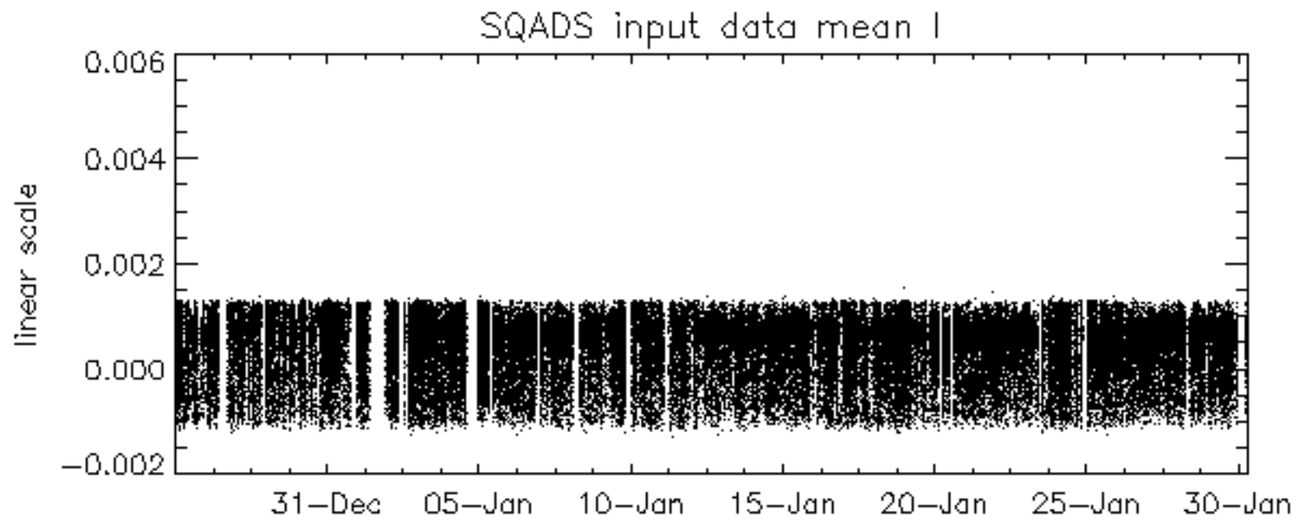

Reference: 2003-06-12 14:10:32 V
Test : 2004-01-27 19:48:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

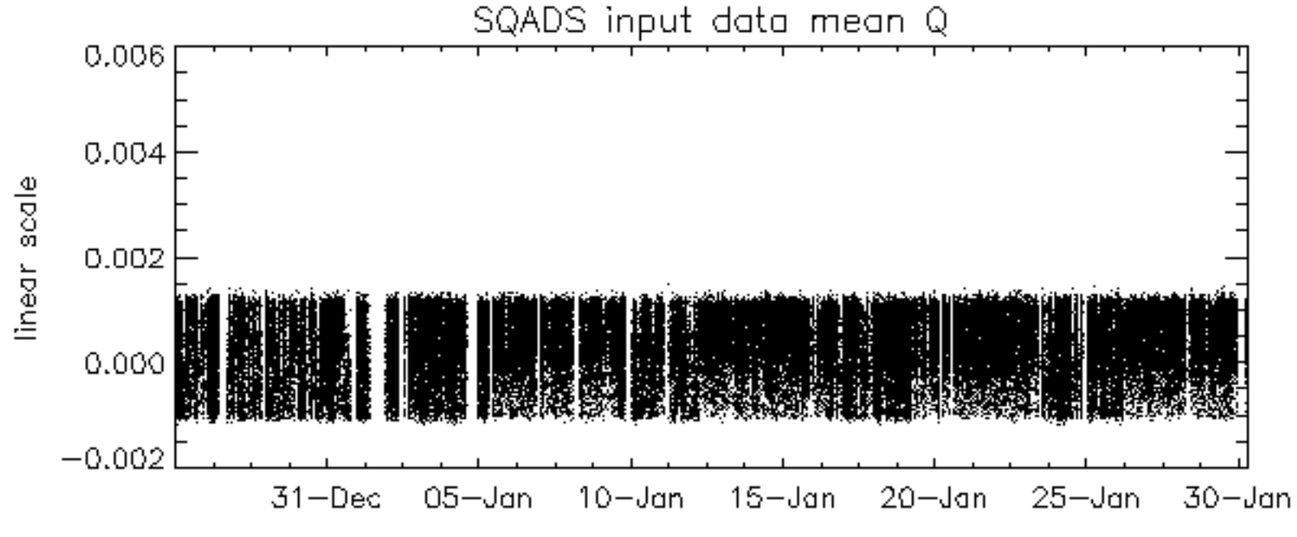

Reference: 2001-02-09 14:08:23 V
Test : 2004-01-29 20:25:38 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

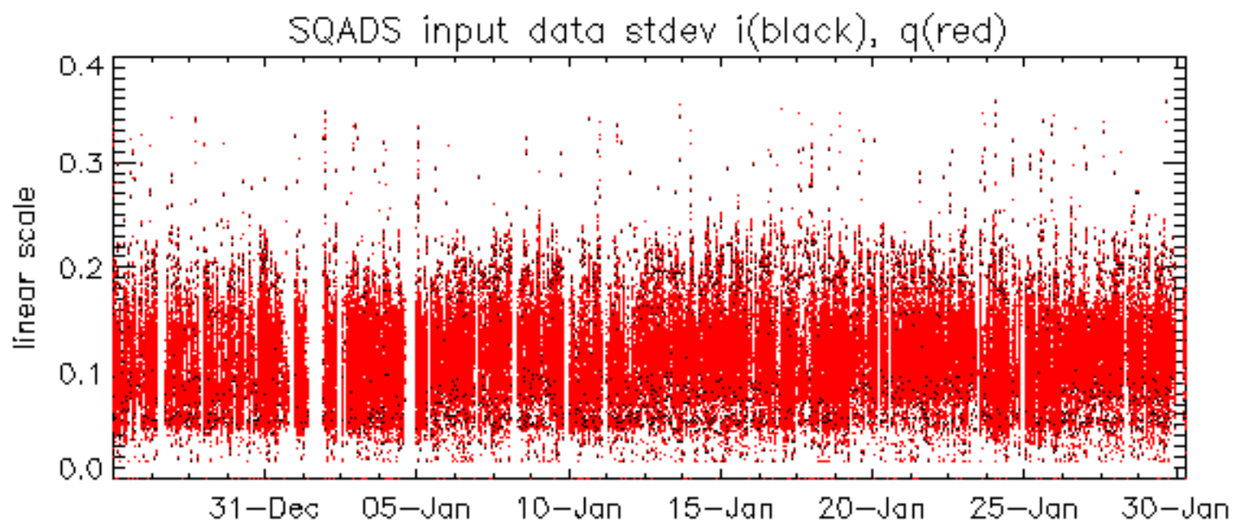

Reference: 2003-06-12 14:10:32 V
Test : 2004-01-29 20:25:38 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

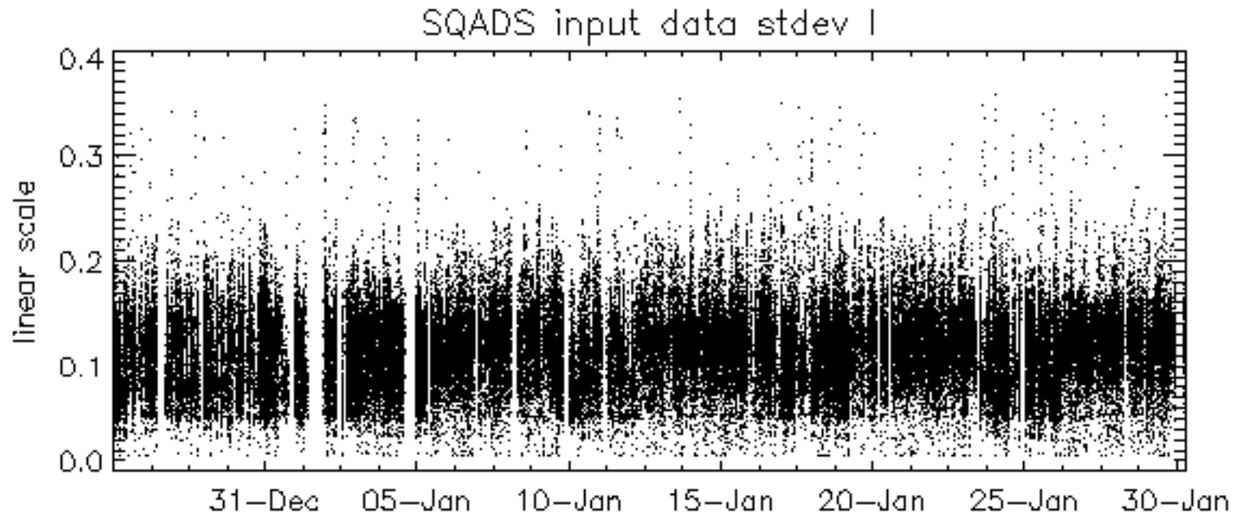

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

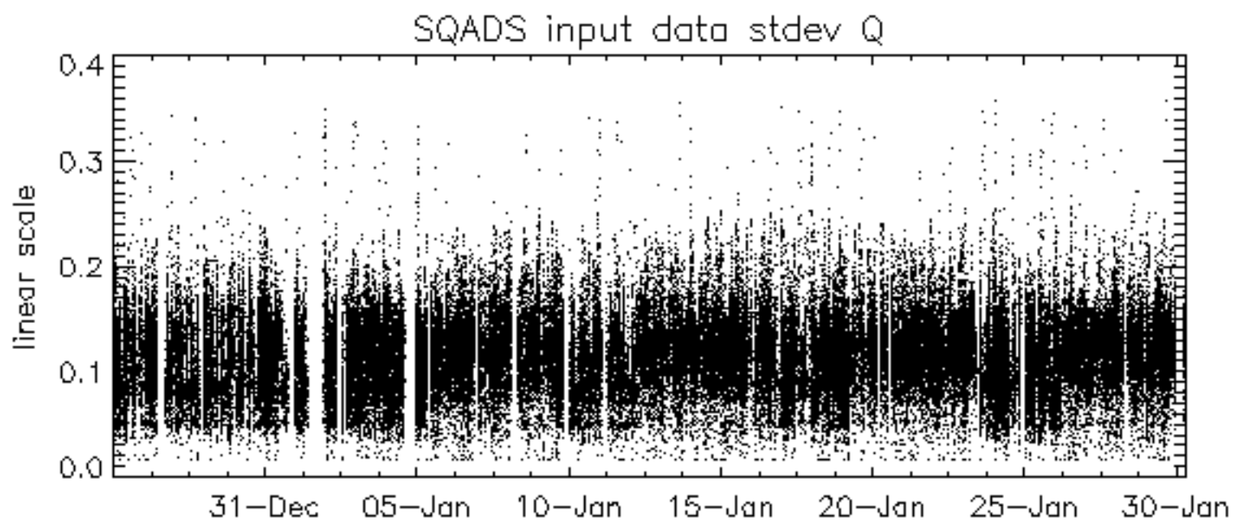

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Dec
05−Jan
10−Jan
15−Jan
20−Jan
25−Jan
30−Jan

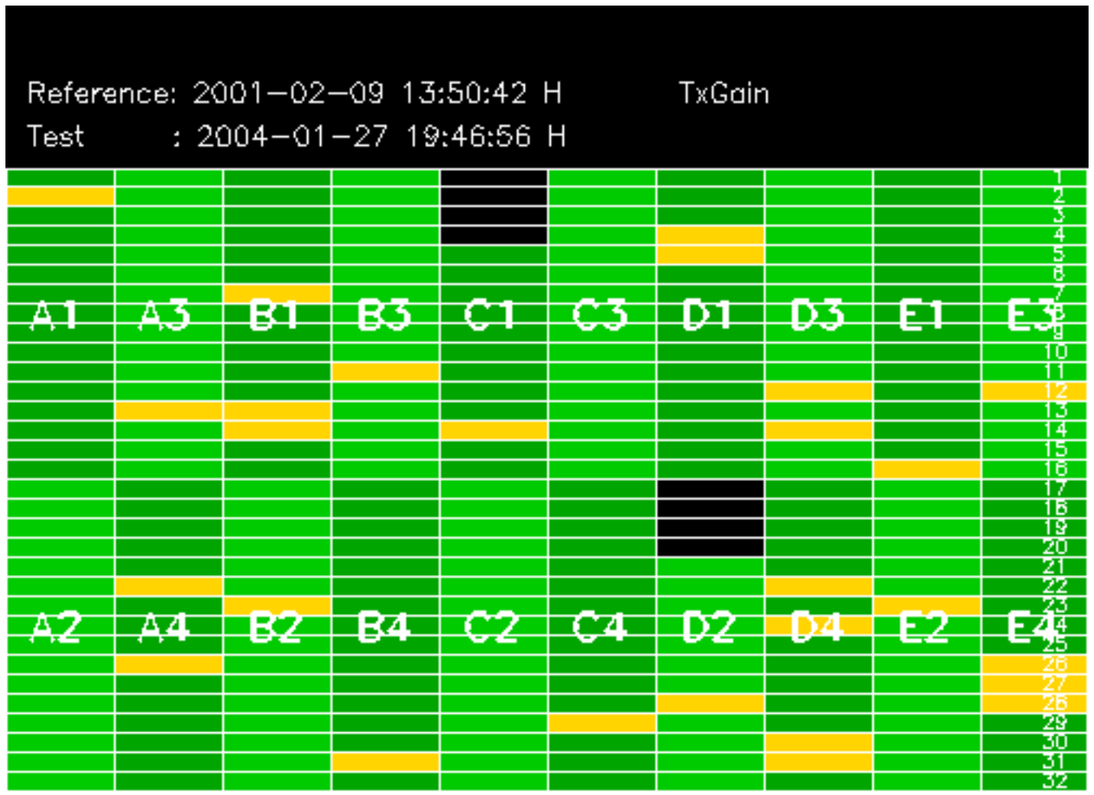

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Dec
05−Jan
10−Jan
15−Jan
20−Jan
25−Jan
30−Jan

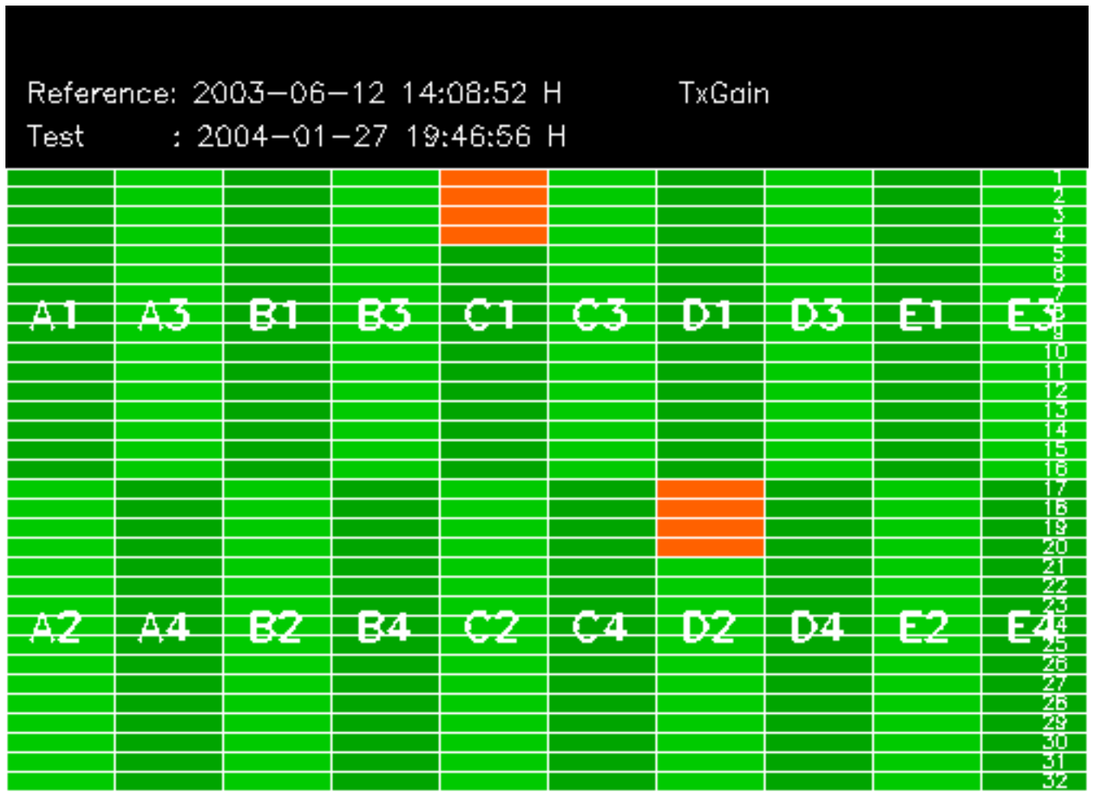

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Dec
05−Jan
10−Jan
15−Jan
20−Jan
25−Jan
30−Jan


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-01-27 19:46:56 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-27 19:46:56 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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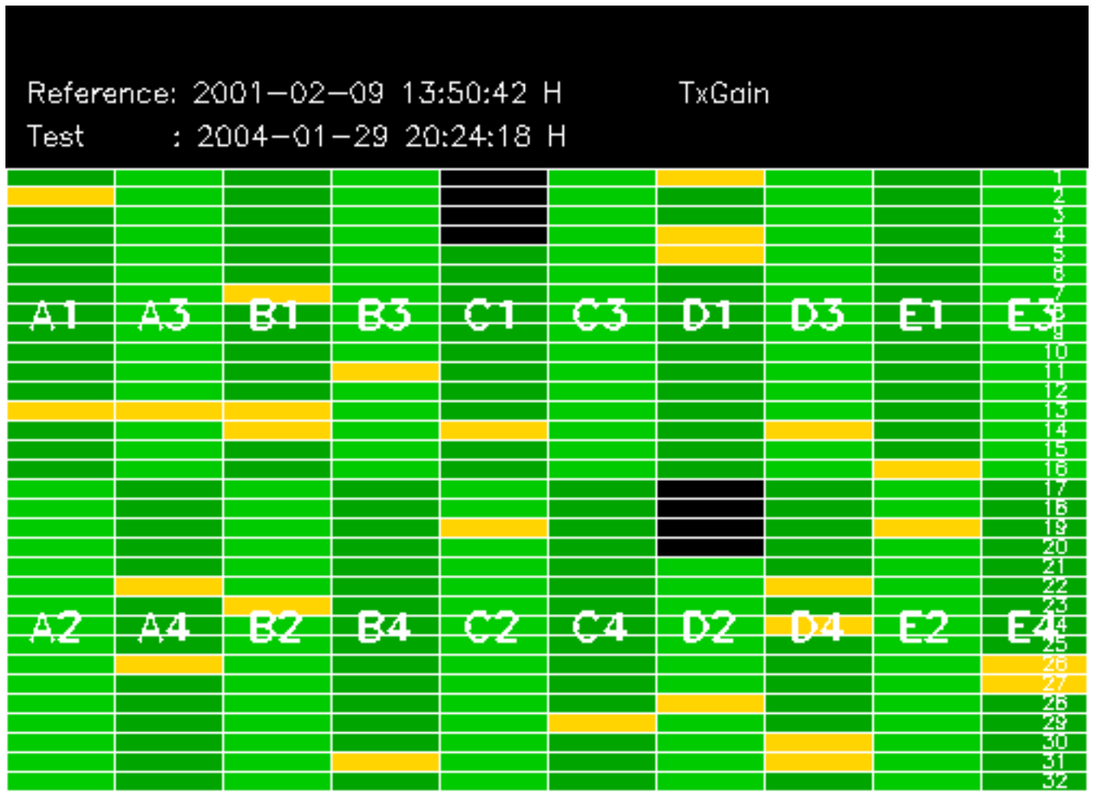
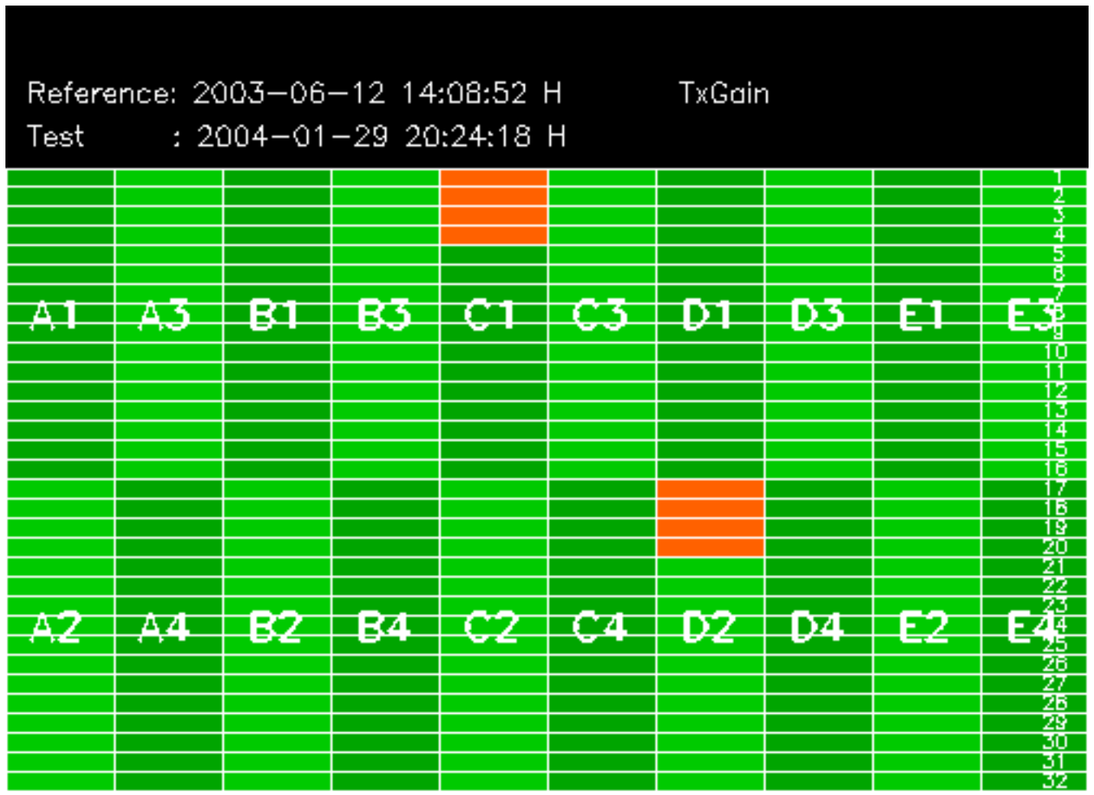

Reference: 2001-02-09 13:50:42 H
Test : 2004-01-29 20:24:18 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-29 20:24:18 H
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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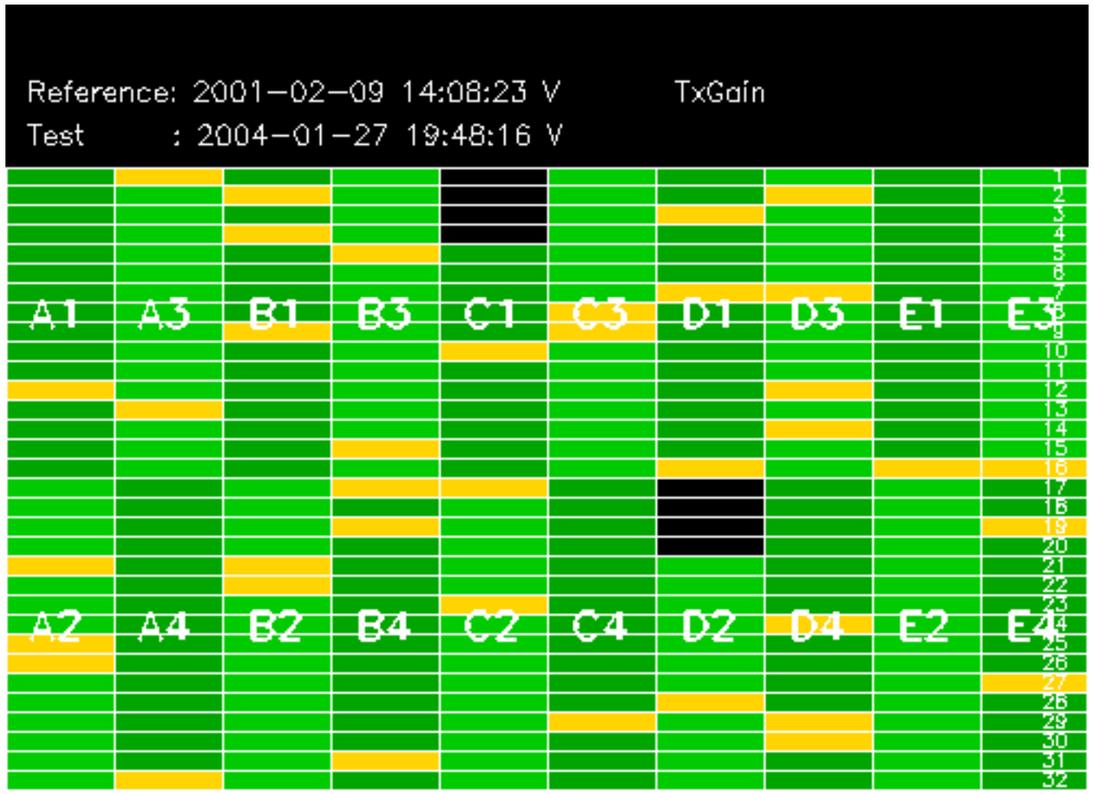
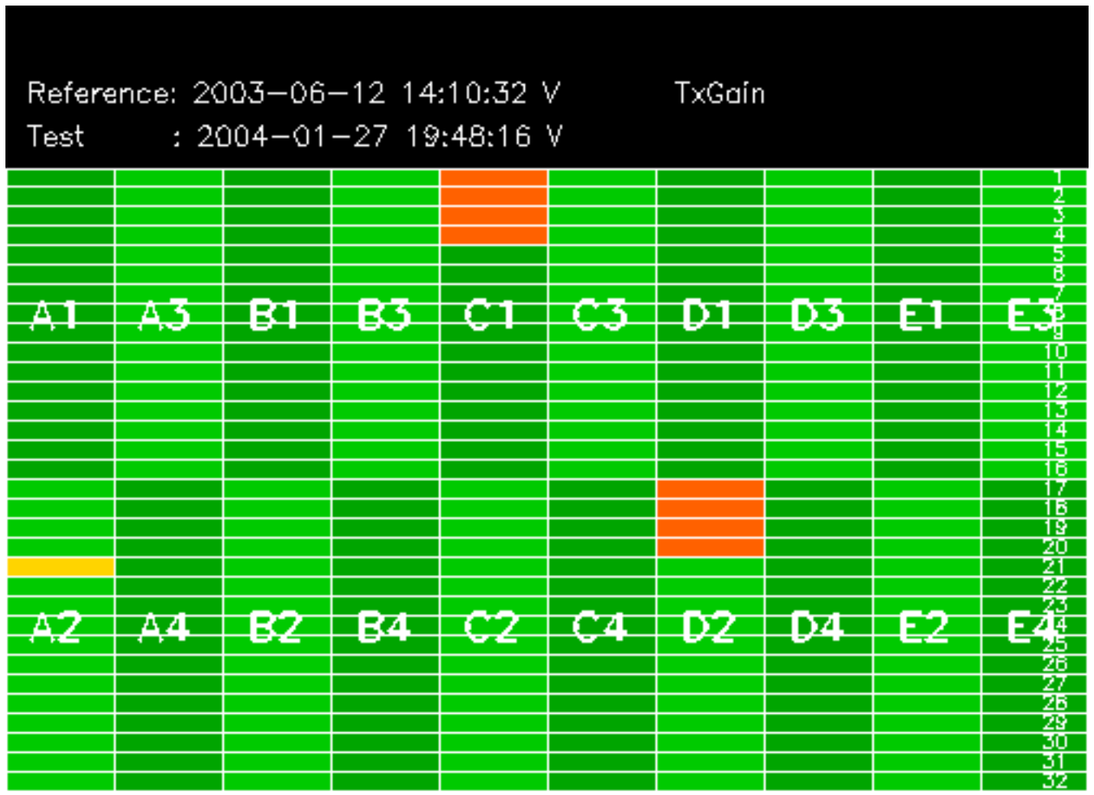

Reference: 2001-02-09 14:08:23 V
Test : 2004-01-27 19:48:16 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-01-27 19:48:16 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
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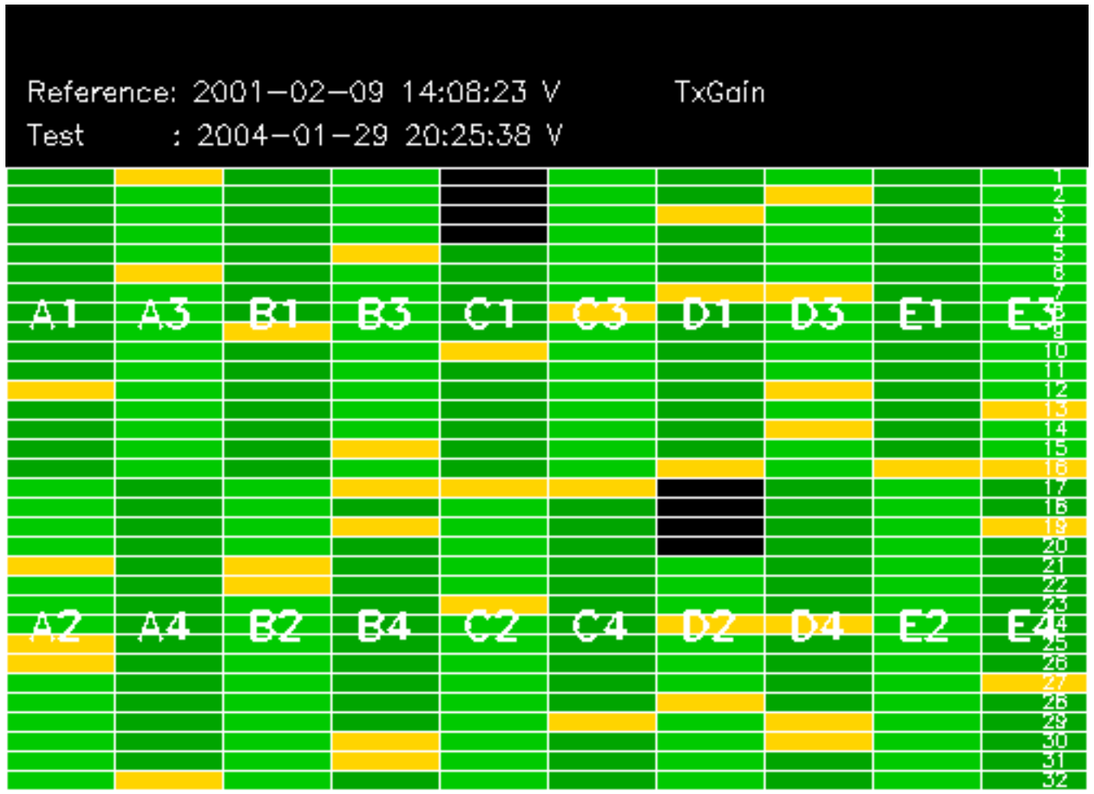
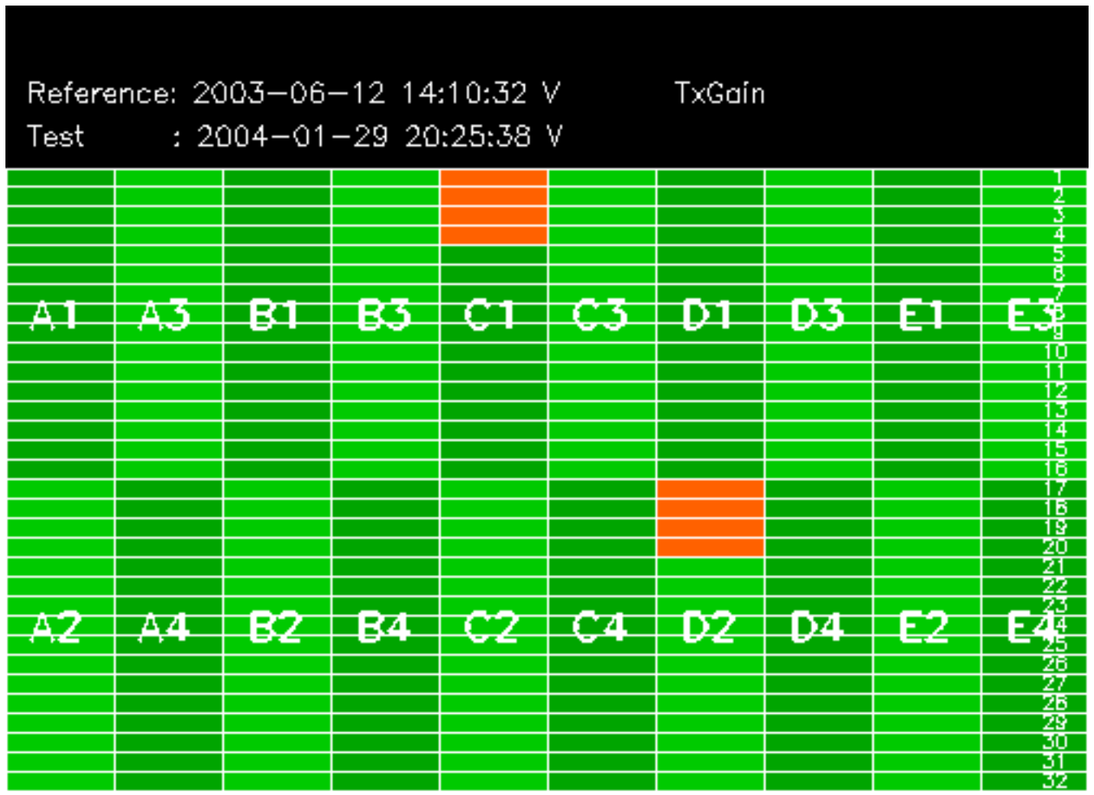

Reference: 2001-02-09 14:08:23 V
Test : 2004-01-29 20:25:38 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-01-29 20:25:38 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
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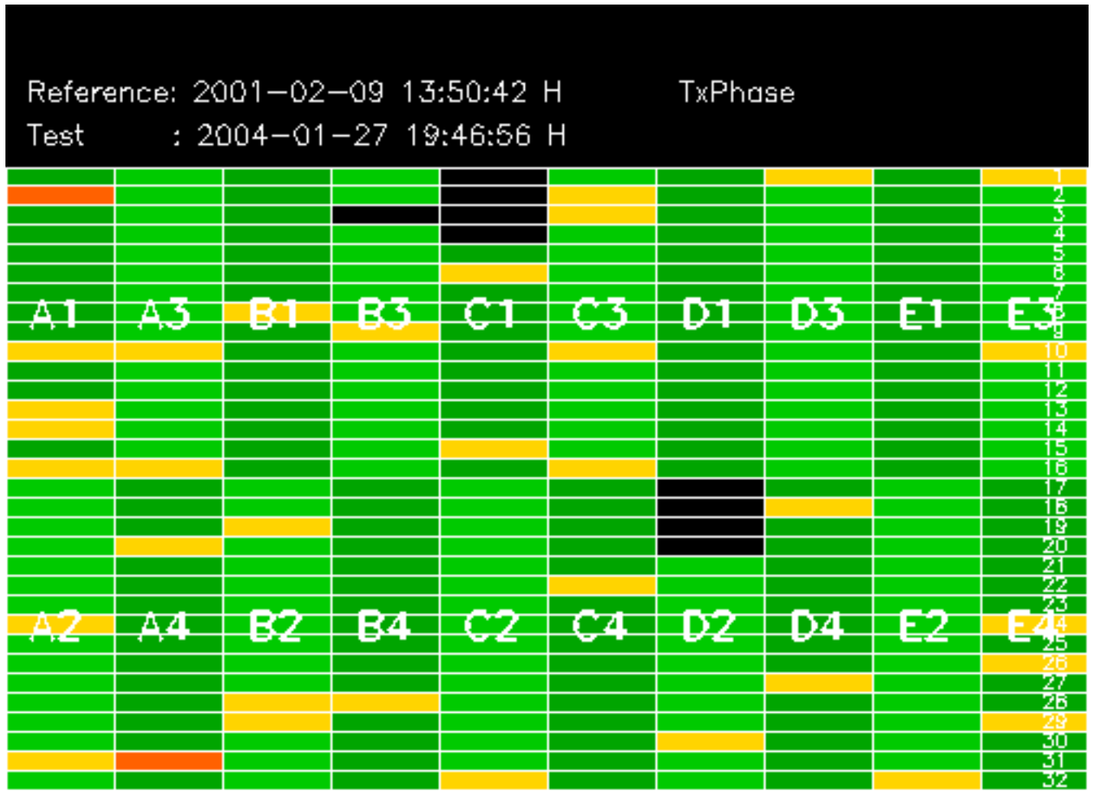
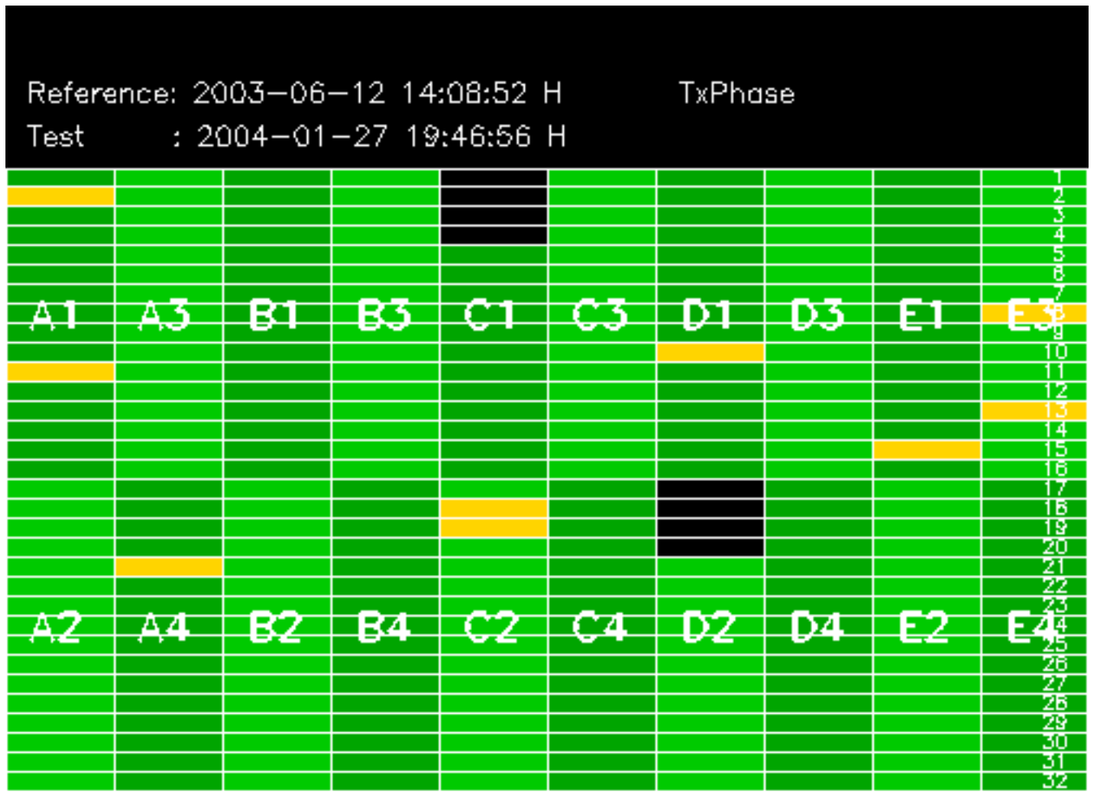
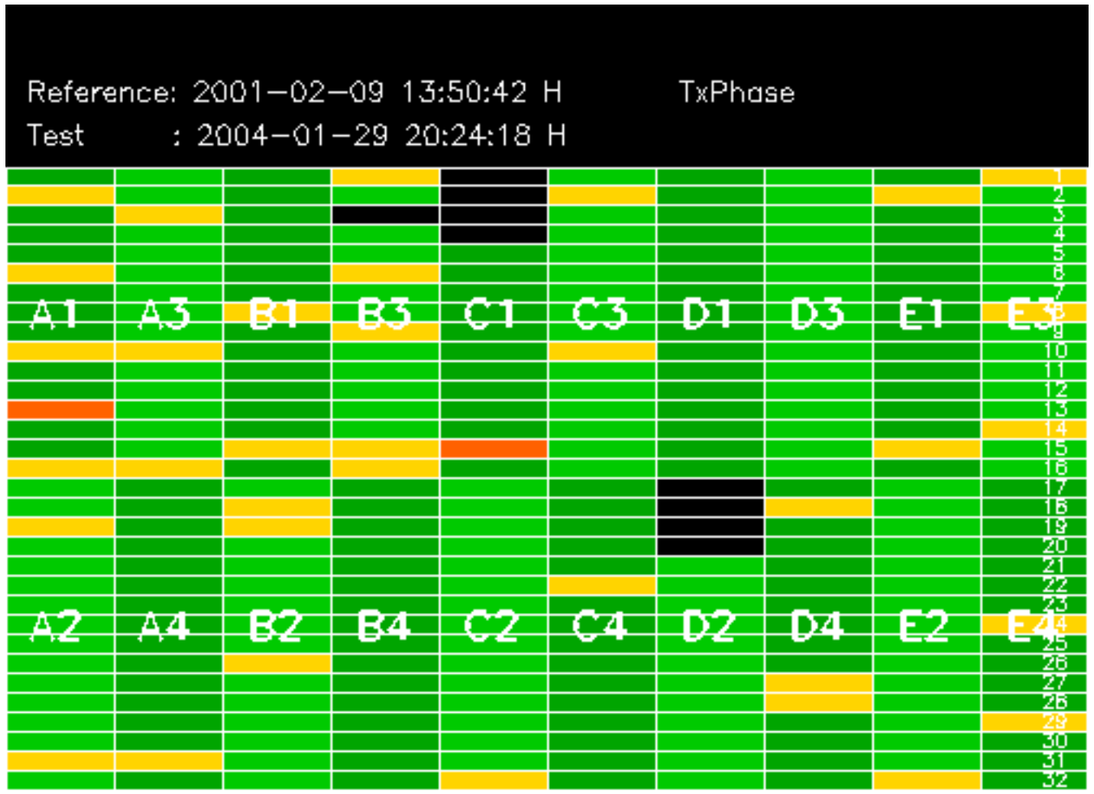

Reference: 2001-02-09 13:50:42 H
Test : 2004-01-27 19:46:56 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-27 19:46:56 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-01-29 20:24:18 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
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A2
A4
B2
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C4
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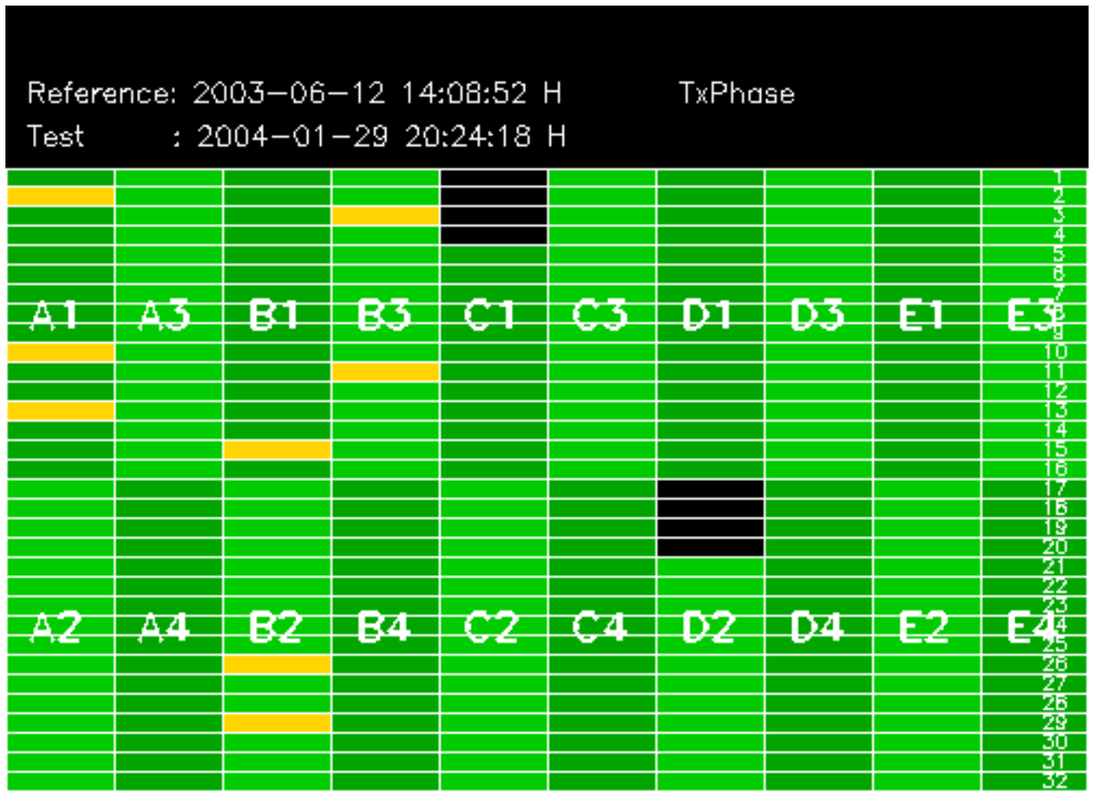
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-01-29 20:24:18 H
TxPhase
A1
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B1
B3
C1
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D3
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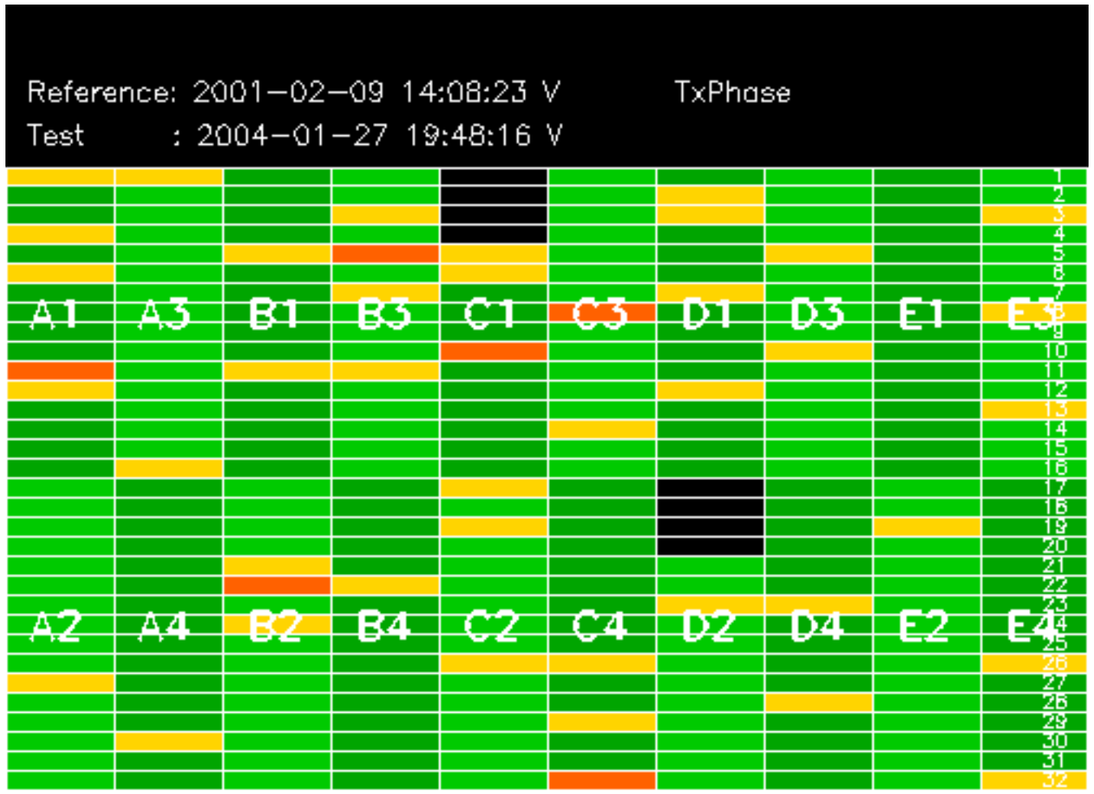
Reference: 2001-02-09 14:08:23 V
Test : 2004-01-27 19:48:16 V
TxPhase
A1
A3
B1
B3
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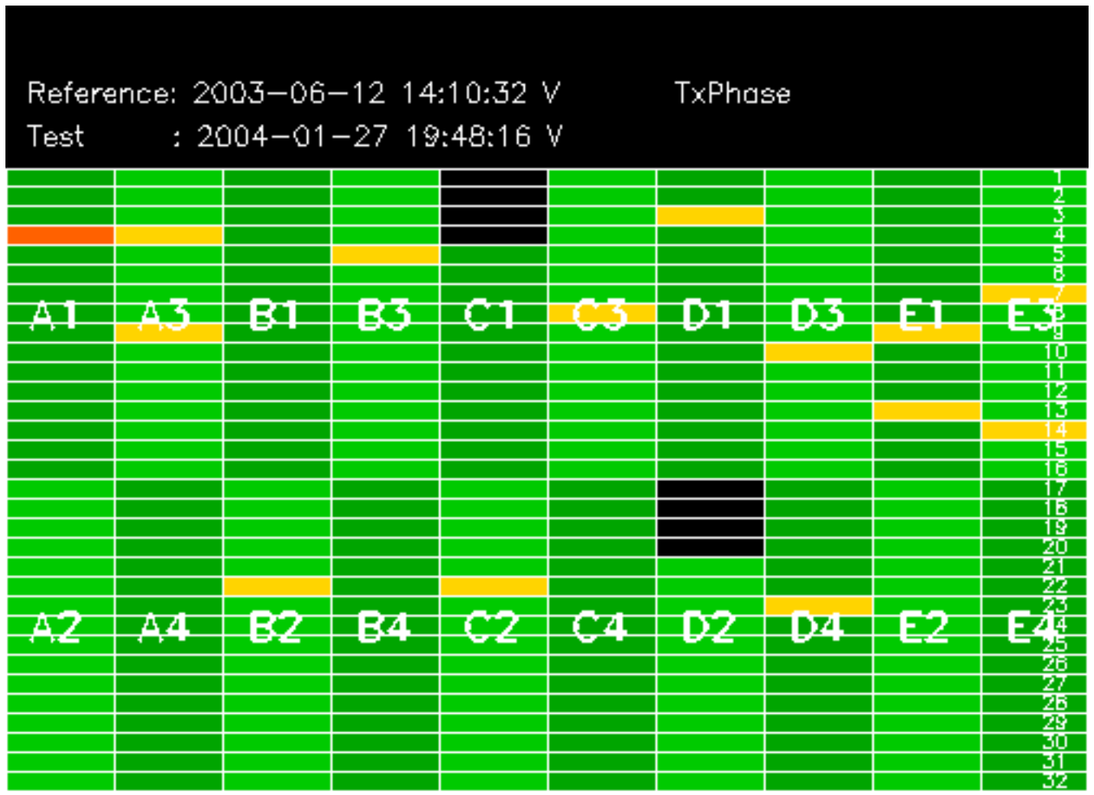
Reference: 2003-06-12 14:10:32 V
Test : 2004-01-27 19:48:16 V
TxPhase
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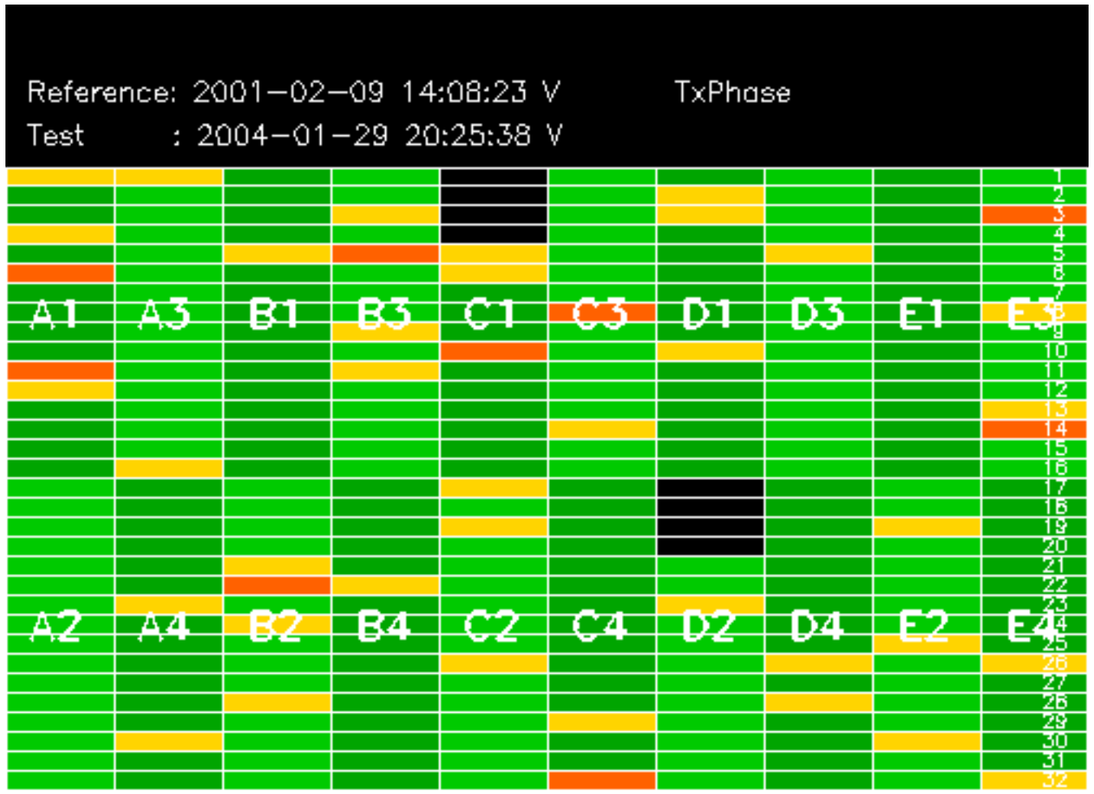
Reference: 2001-02-09 14:08:23 V
Test : 2004-01-29 20:25:38 V
TxPhase
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B1
B3
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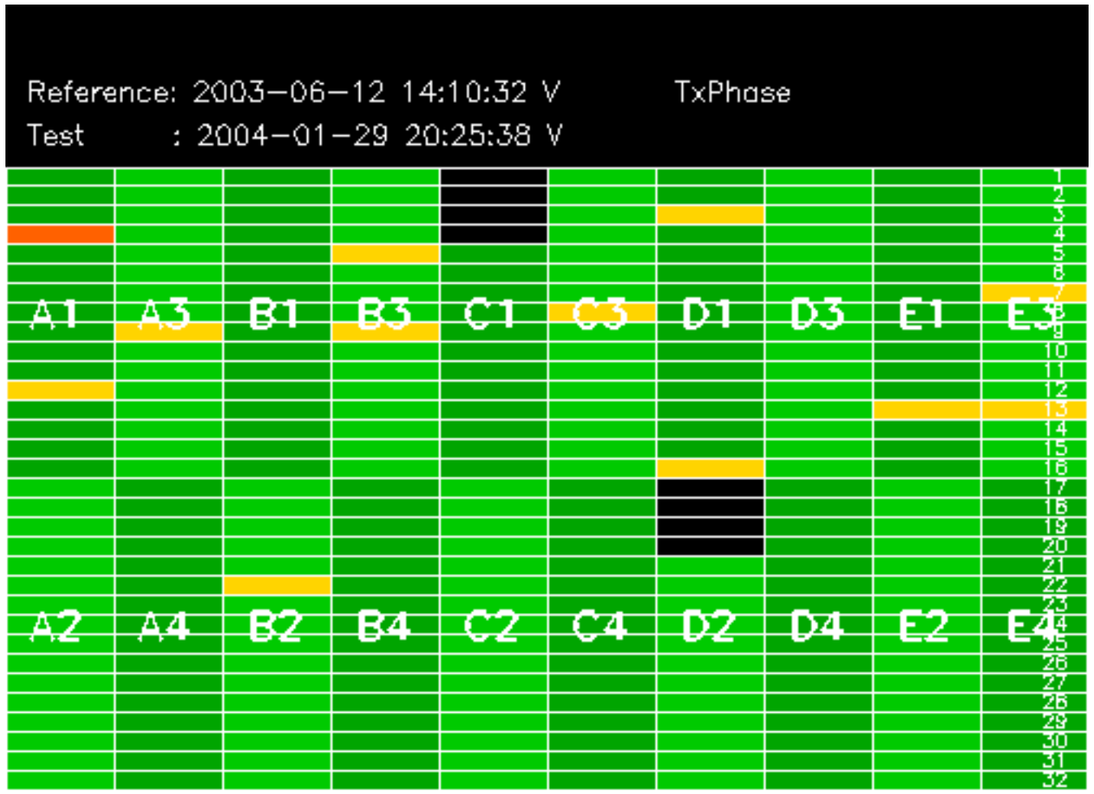
Reference: 2003-06-12 14:10:32 V
Test : 2004-01-29 20:25:38 V
TxPhase
A1
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B1
B3
C1
C3
D1
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ASAR unavailability from 2004-01-30 07:40:02 to 2004-01-30 10:41:43