REPORT OF 040419

last update on Mon Apr 19 15:45:02 GMT 2004

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

No unavailabilities during the reported period.

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:

Polarisation	Start Time
V	20040418 201116
H	20040418 200956

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

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4.2 - Cyclic statistics

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.580371	0.005378	0.020419
7	P1	-3.300817	0.010432	0.007083
11	P1	-4.634821	0.021123	0.012436
15	P1	-4.987067	0.038375	0.017564
19	P1	-3.344833	0.006641	-0.037675
22	P1	-4.518729	0.014756	0.018813
24	P1	-5.036097	0.015134	0.053689
28	P1	-4.587413	0.013550	-0.037983

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.395657	0.079753	-0.015887
7	P2	-22.876678	0.123402	-0.021928
11	P2	-15.924160	0.154009	0.112956
15	P2	-7.161374	0.088672	0.026802
19	P2	-9.511480	0.166033	0.033185
22	P2	-17.659698	0.099358	0.048186
24	P2	-21.001566	0.113575	0.024967
28	P2	-16.604219	0.081638	-0.020073

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.129664	0.003024	-0.015450
7	P3	-8.129657	0.003025	-0.015527
11	P3	-8.129652	0.003025	-0.015567
15	P3	-8.129658	0.003025	-0.015536
19	P3	-8.129671	0.003024	-0.015447
22	P3	-8.129687	0.003024	-0.015347
24	P3	-8.129687	0.003025	-0.015323

28	P3	-8.129686	0.003018	-0.014930

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	0.000478489
	stdev	2.37394e-07
MEAN Q	mean	0.000483671
	stdev	2.69827e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127770
	stdev	0.00118687
STDEV Q	mean	0.128025
	stdev	0.00120052

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

6.1 - Unbiased Doppler Error

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

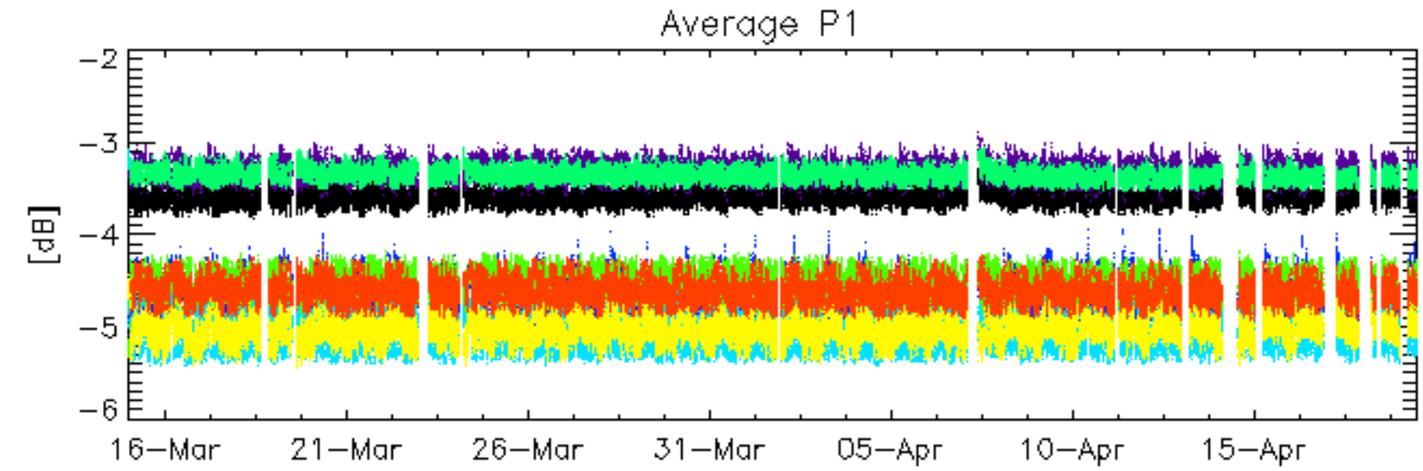
6.2 - Absolute Doppler

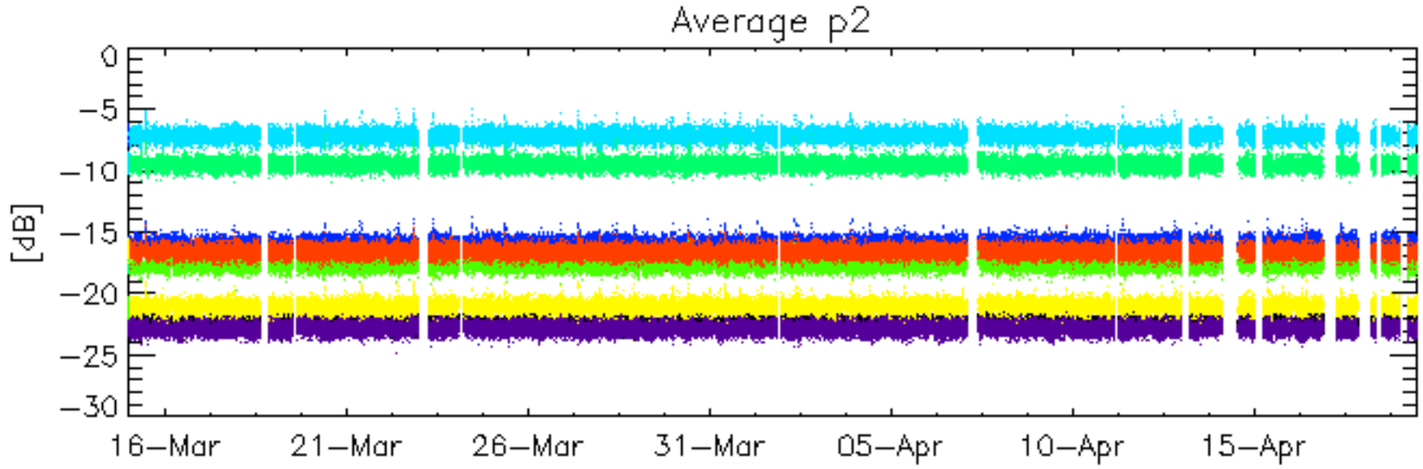
Evolution of Absolute Doppler
Acsending
Descending

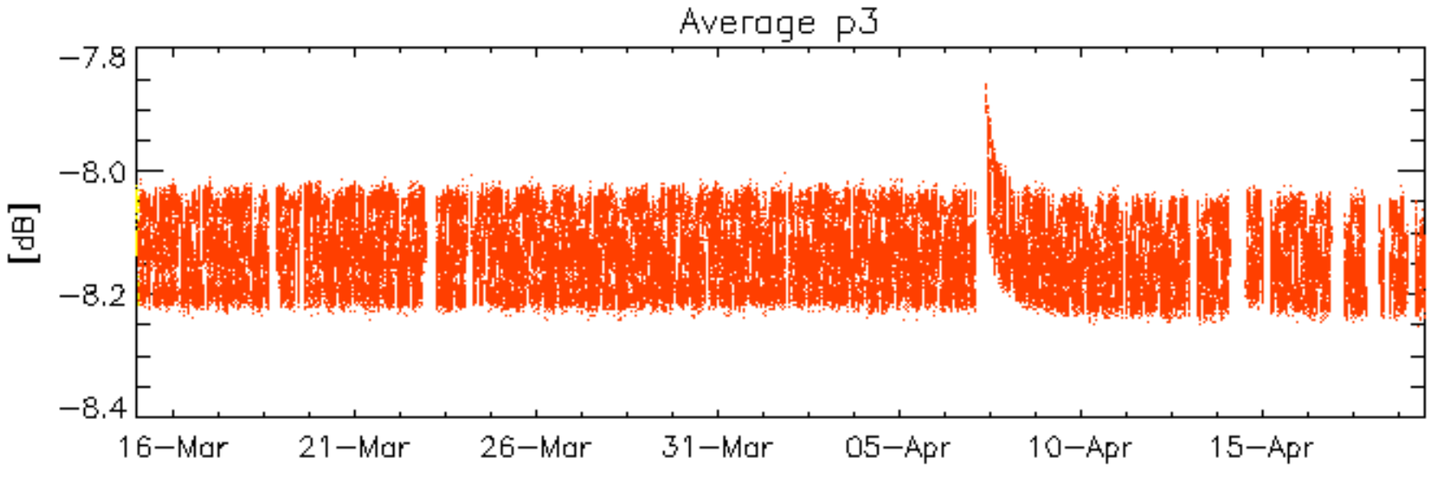
6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX
☒

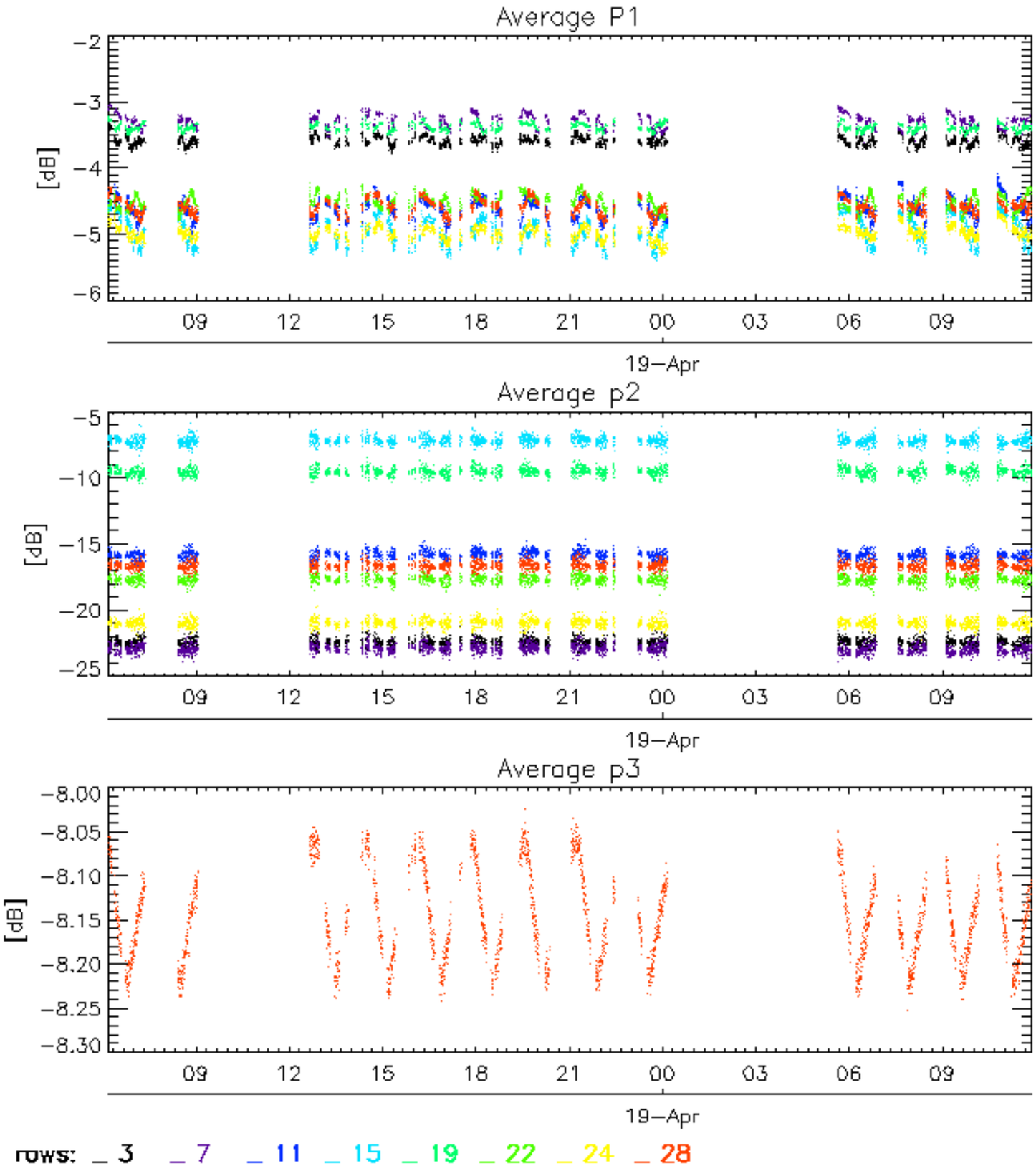
Evolution Doppler error versus ANX
☒





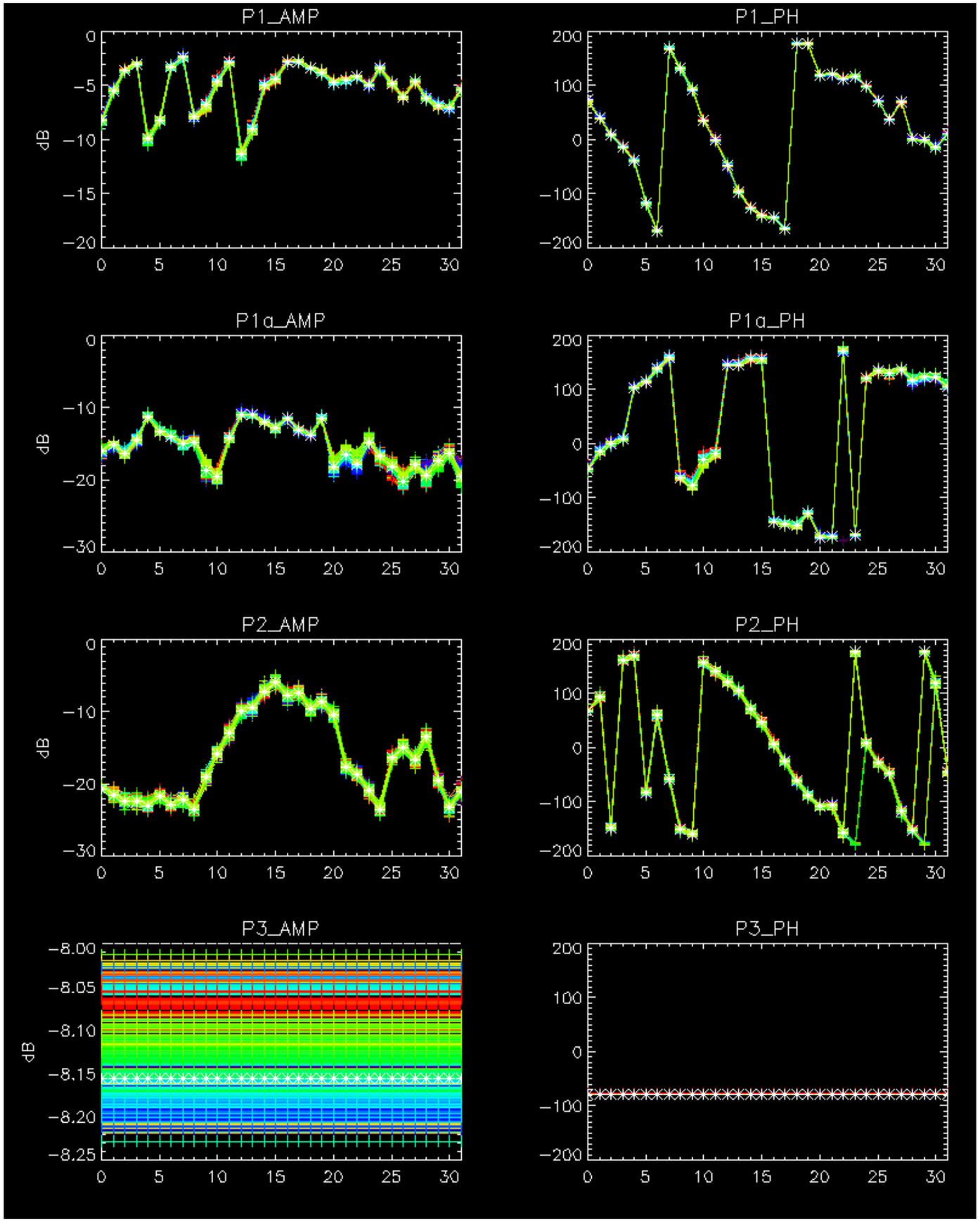


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28


Average P1
[dB]
−2
−3
−4
−5
−6
09
12
15
18
21
00
03
06
09
19−Apr
Average p2
[dB]
−5
−10
−15
−20
−25
09
12
15
18
21
00
03
06
09
19−Apr
Average p3
[dB]
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
09
12
15
18
21
00
03
06
09
19−Apr
rows: 3 7 11 15 19 22 24 28

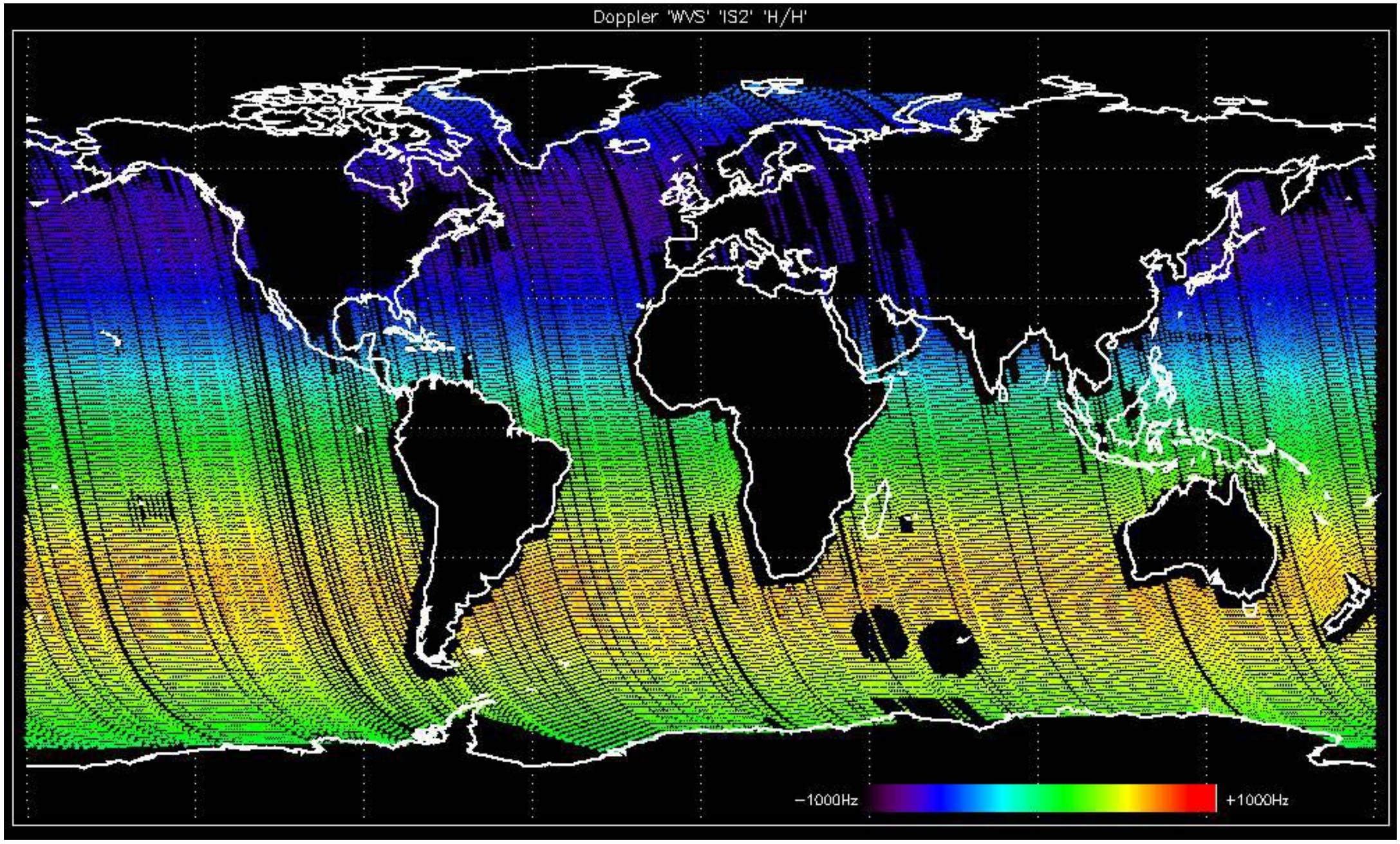
No anomalies observed on available browse products

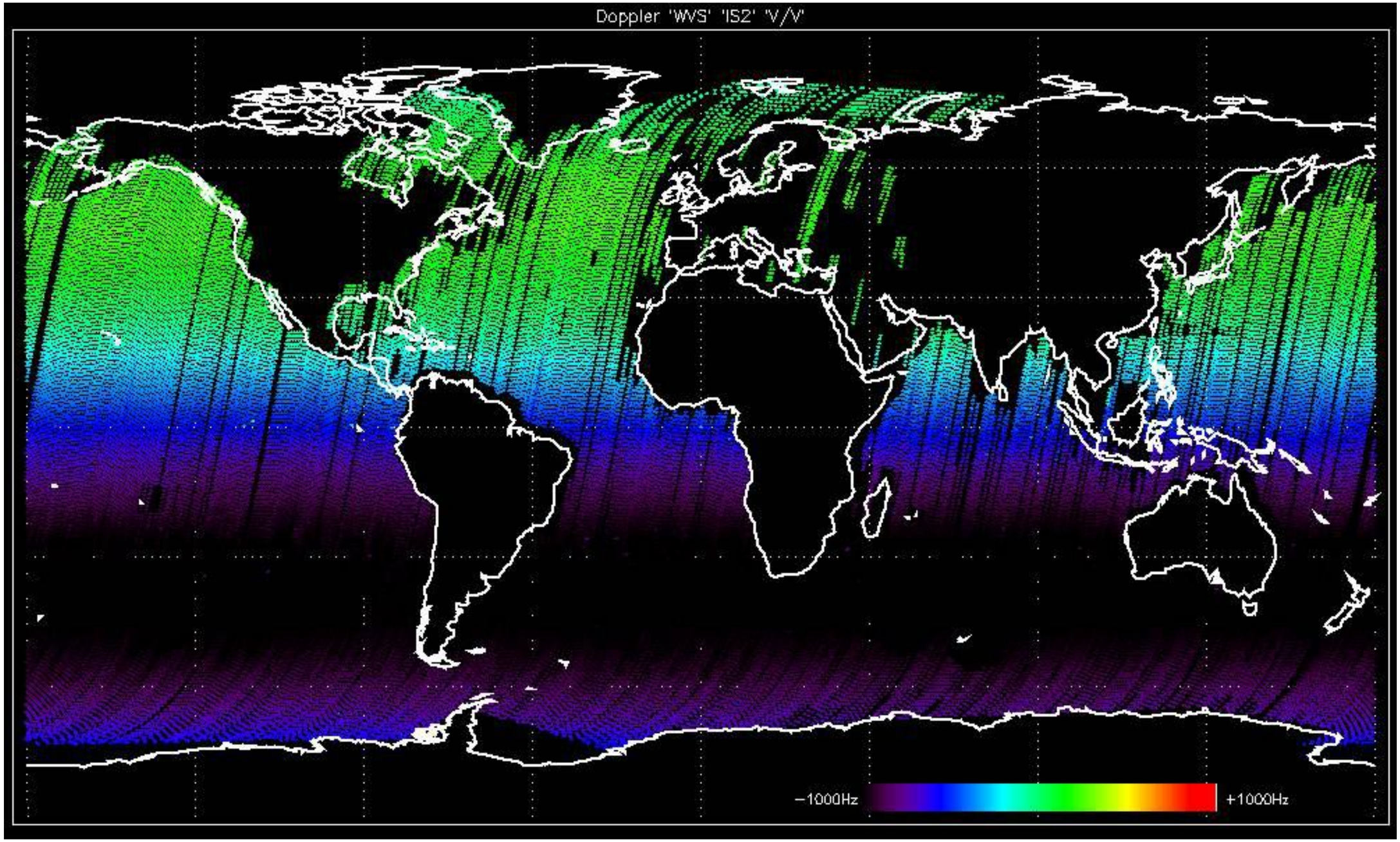
No anomalies observed.

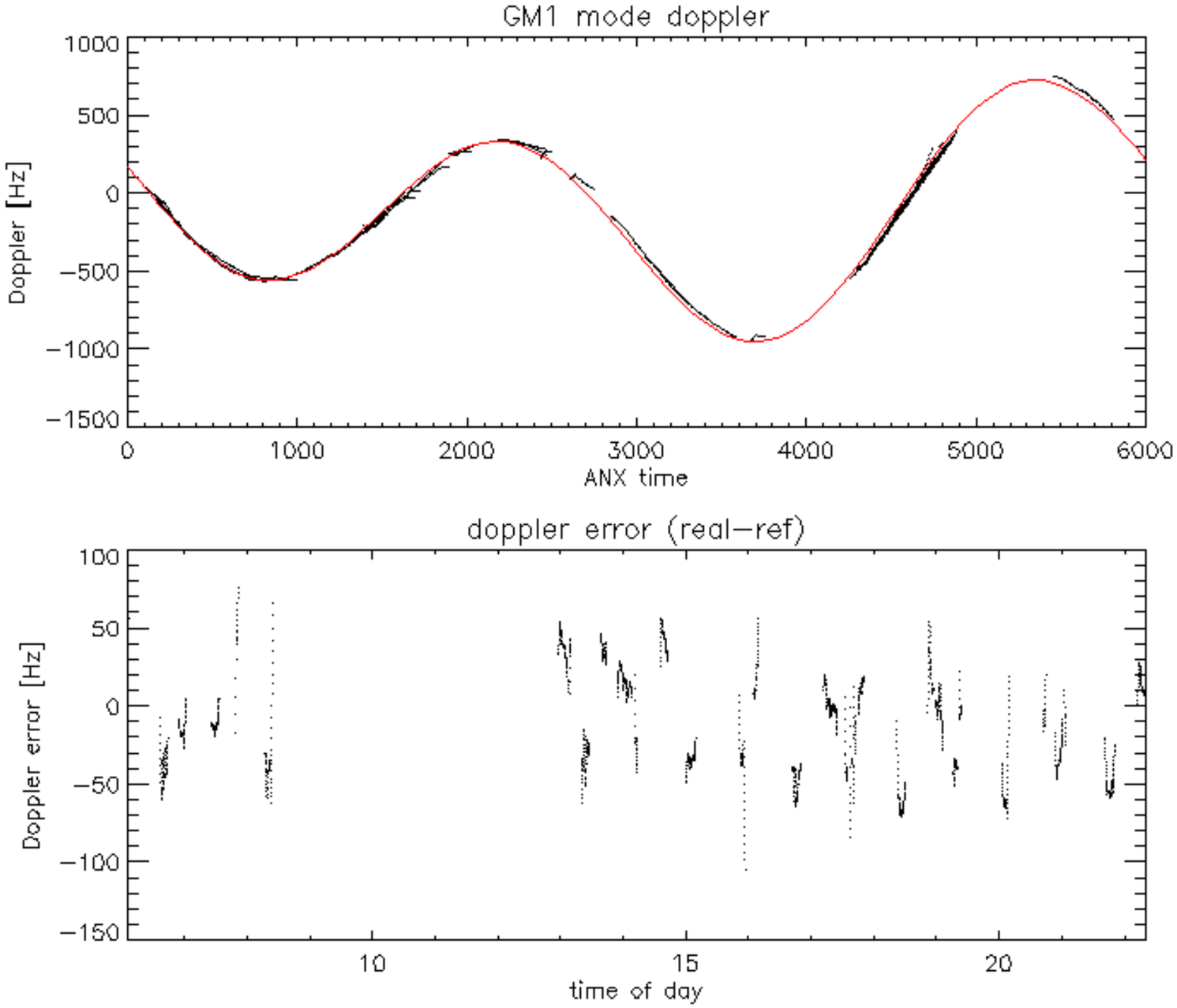

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

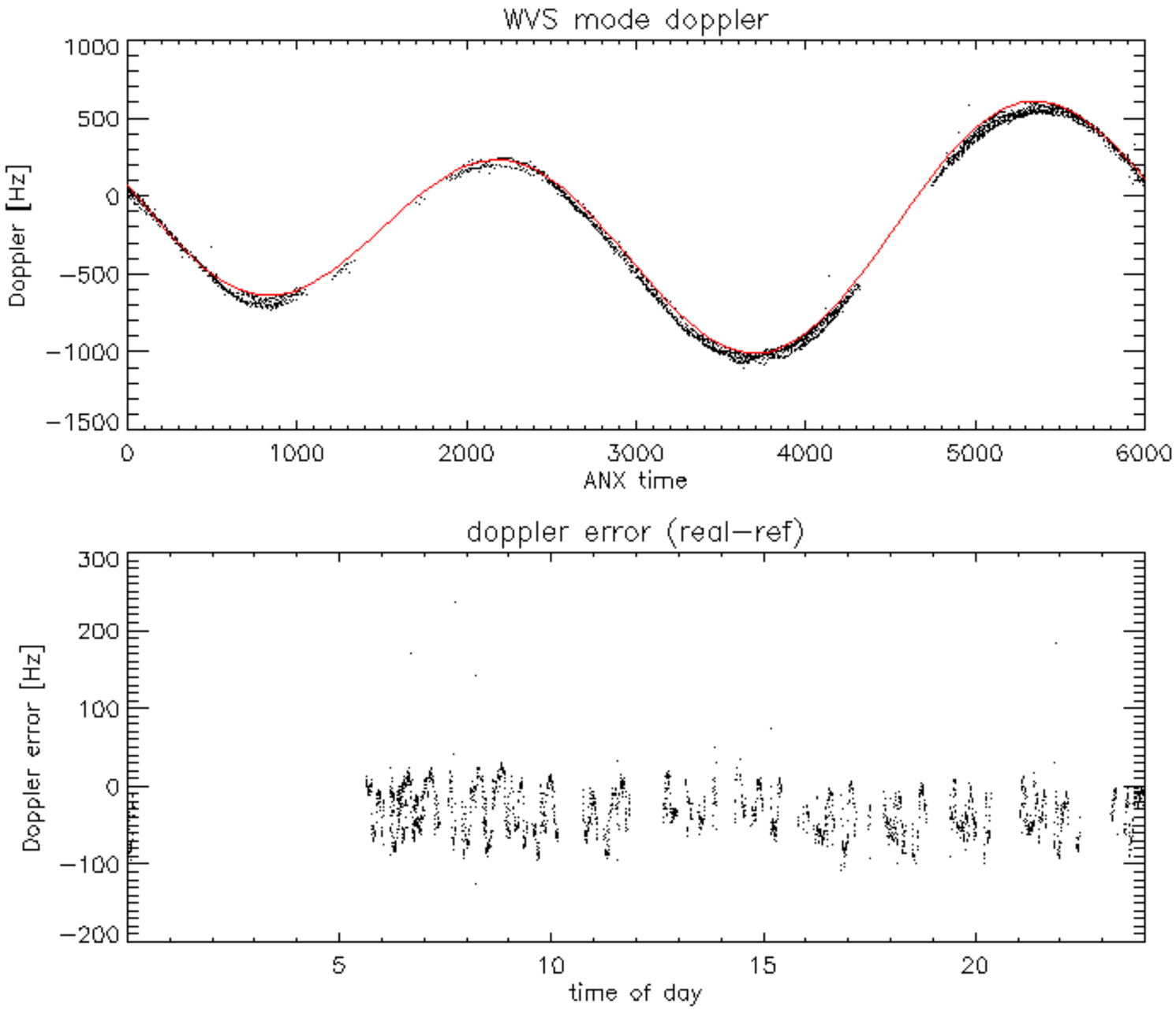
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

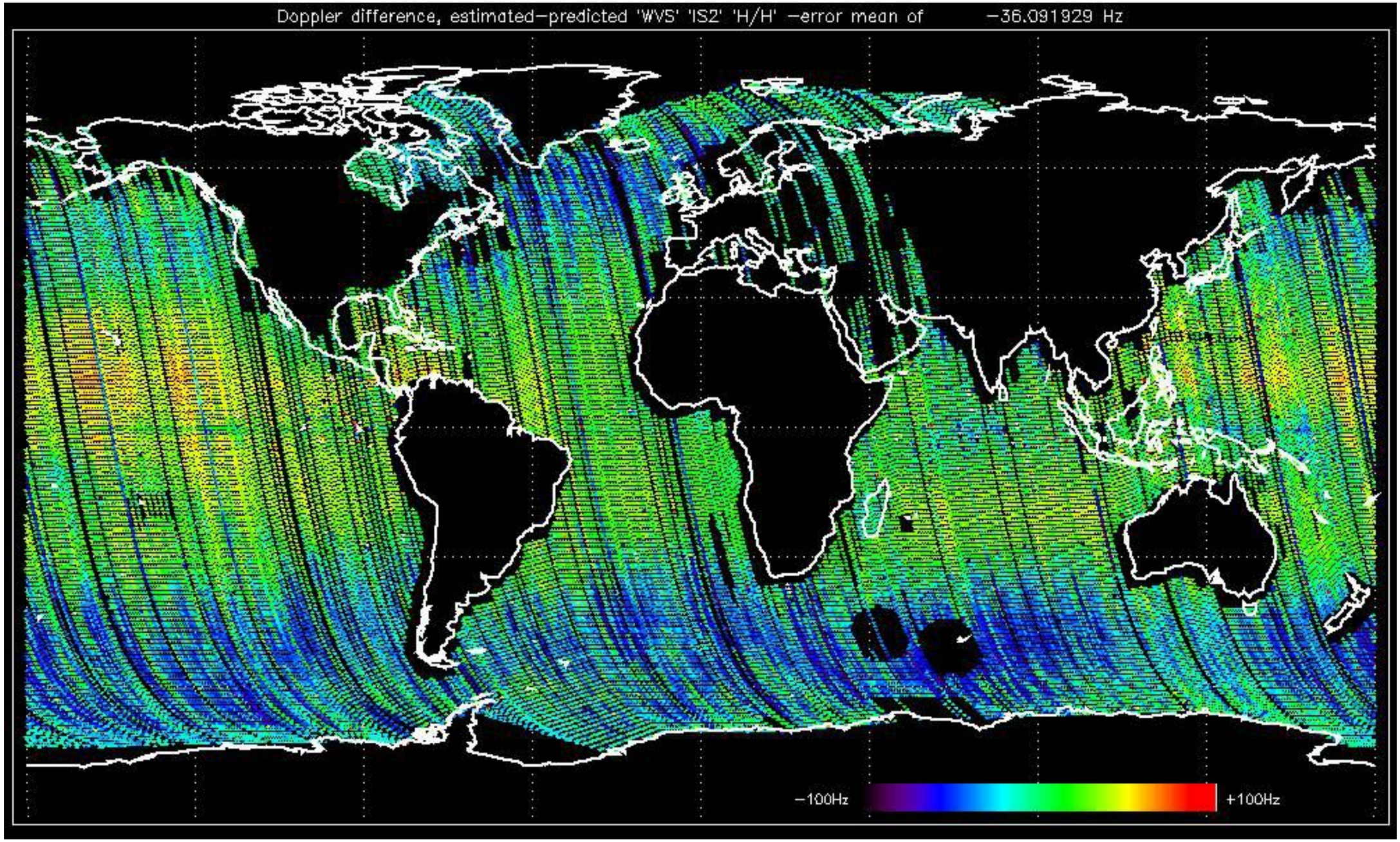
Preliminary report.The data is not yet controled

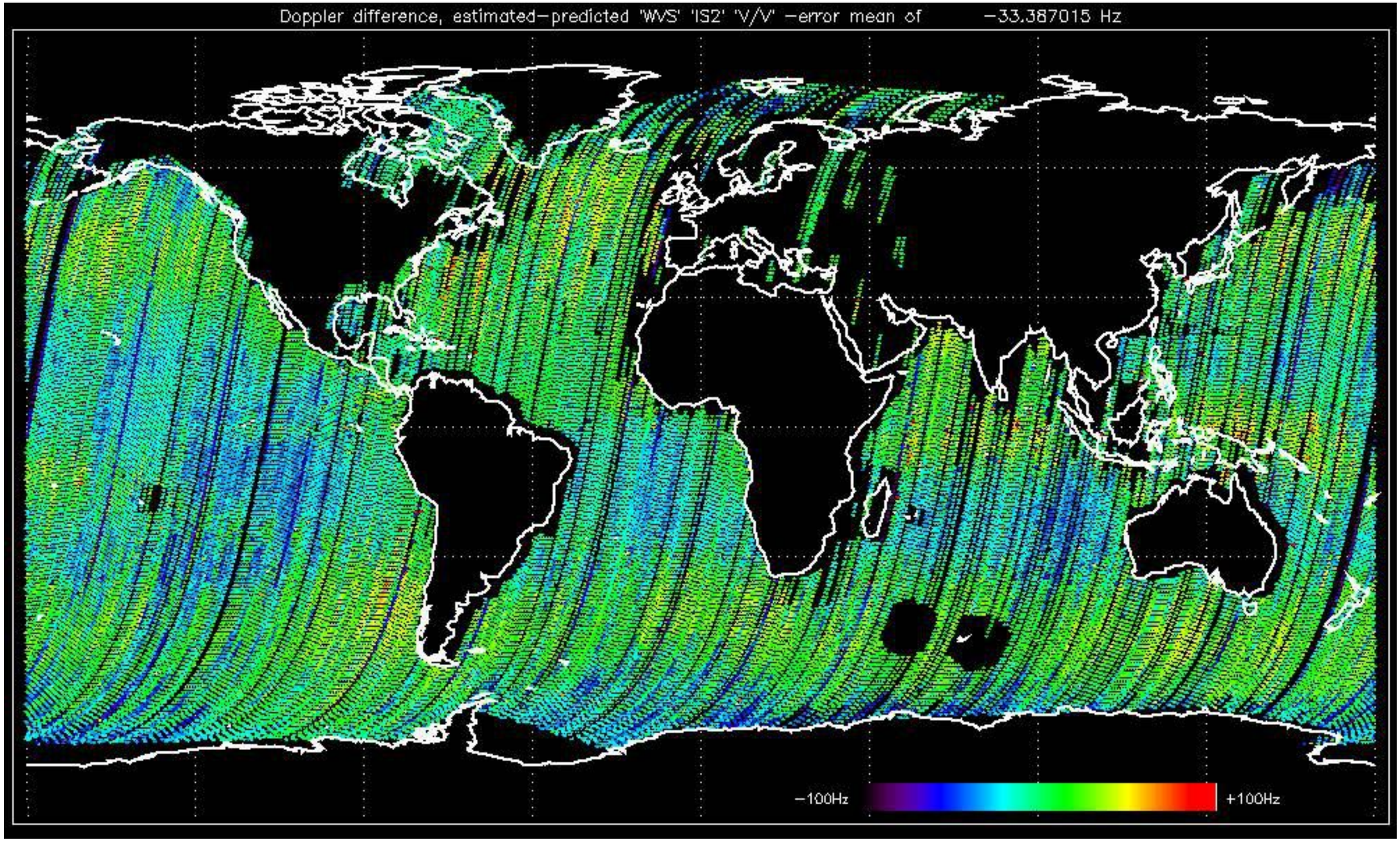

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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


GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
100
50
0
−50
−100
−150
10
15
20
time of day

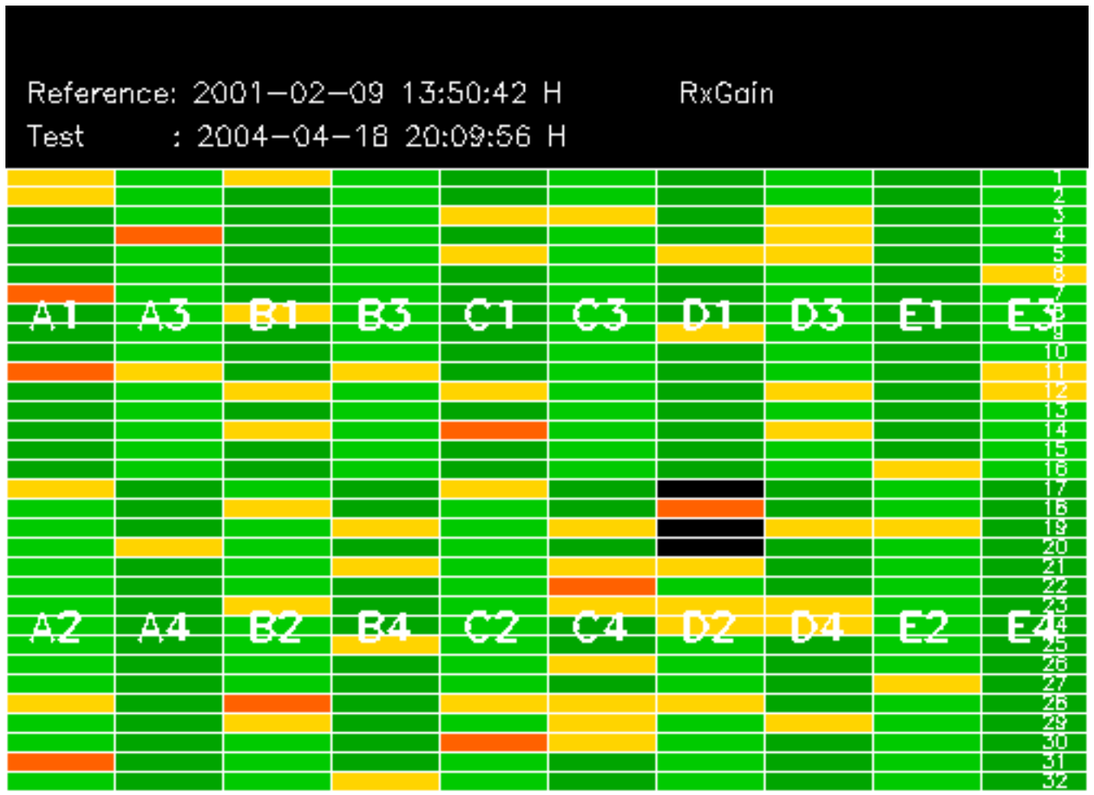

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
300
200
100
0
−100
−200
5
10
15
20
time of day


Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of −36.091929 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of −33.387015 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:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-04-18 20:09:56 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
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8
9
10
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31
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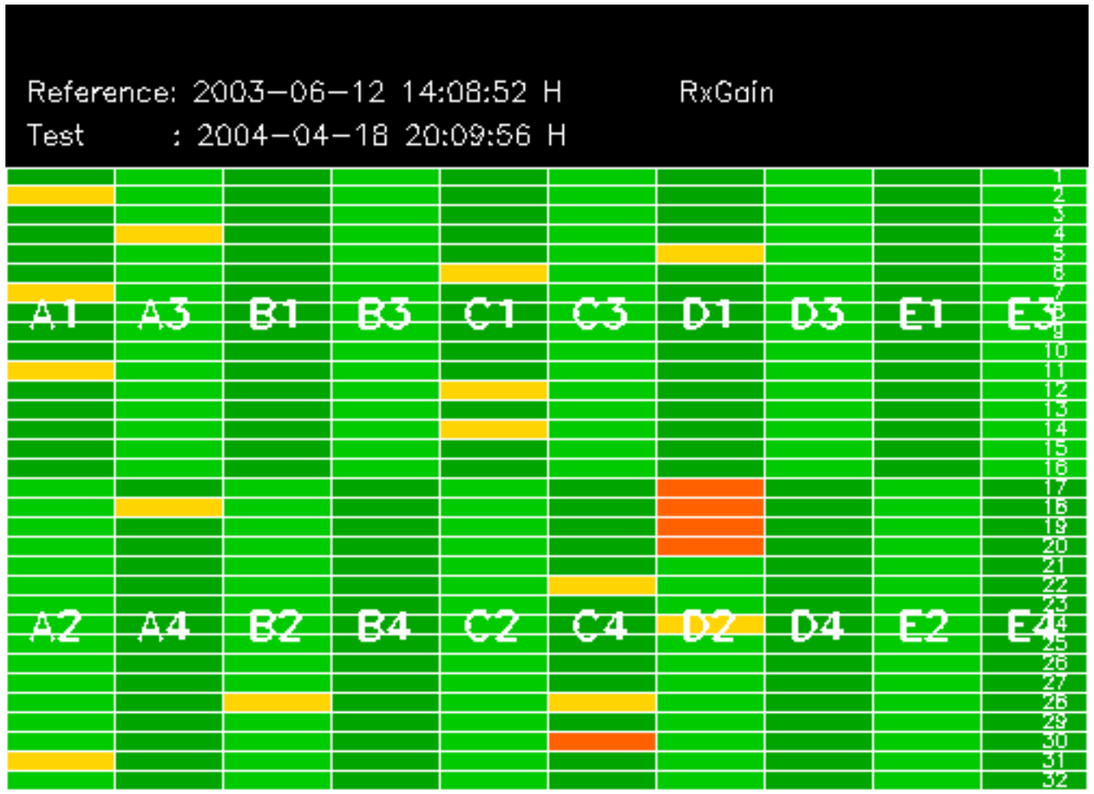
Reference: 2003-06-12 14:08:52 H
RxGain
Test : 2004-04-18 20:09:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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9
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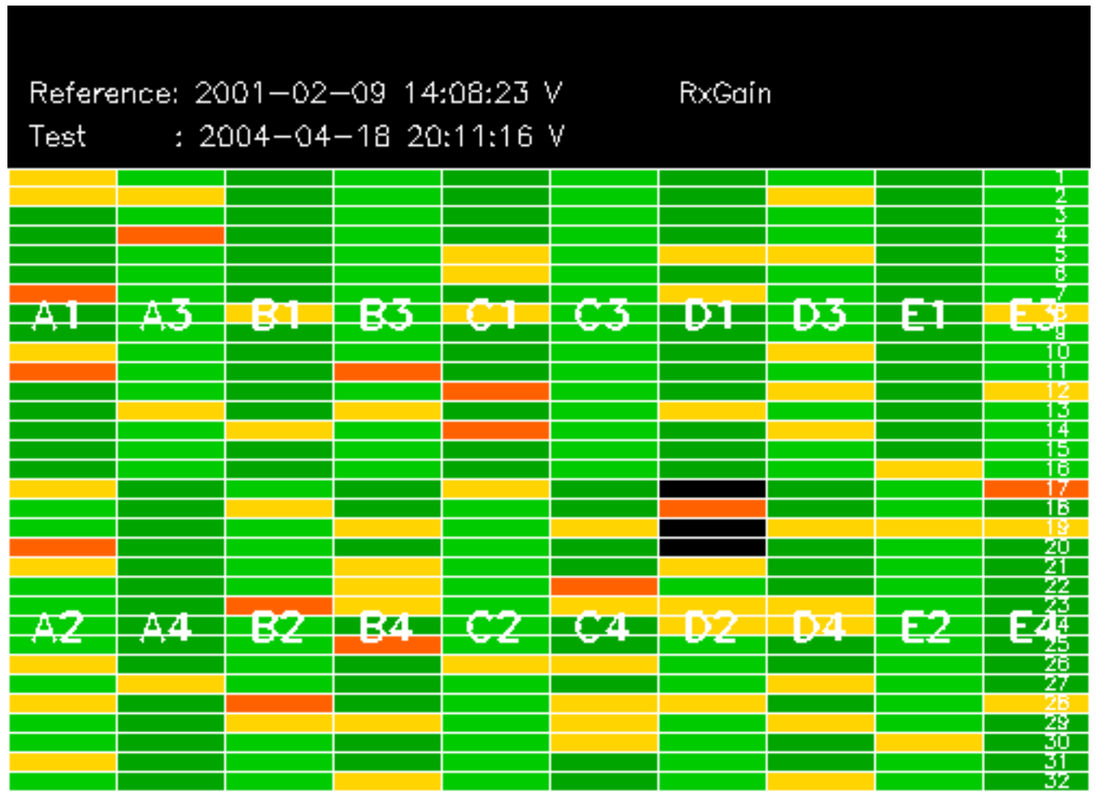
Reference: 2001-02-09 14:08:23 V
Test : 2004-04-18 20:11:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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3
4
5
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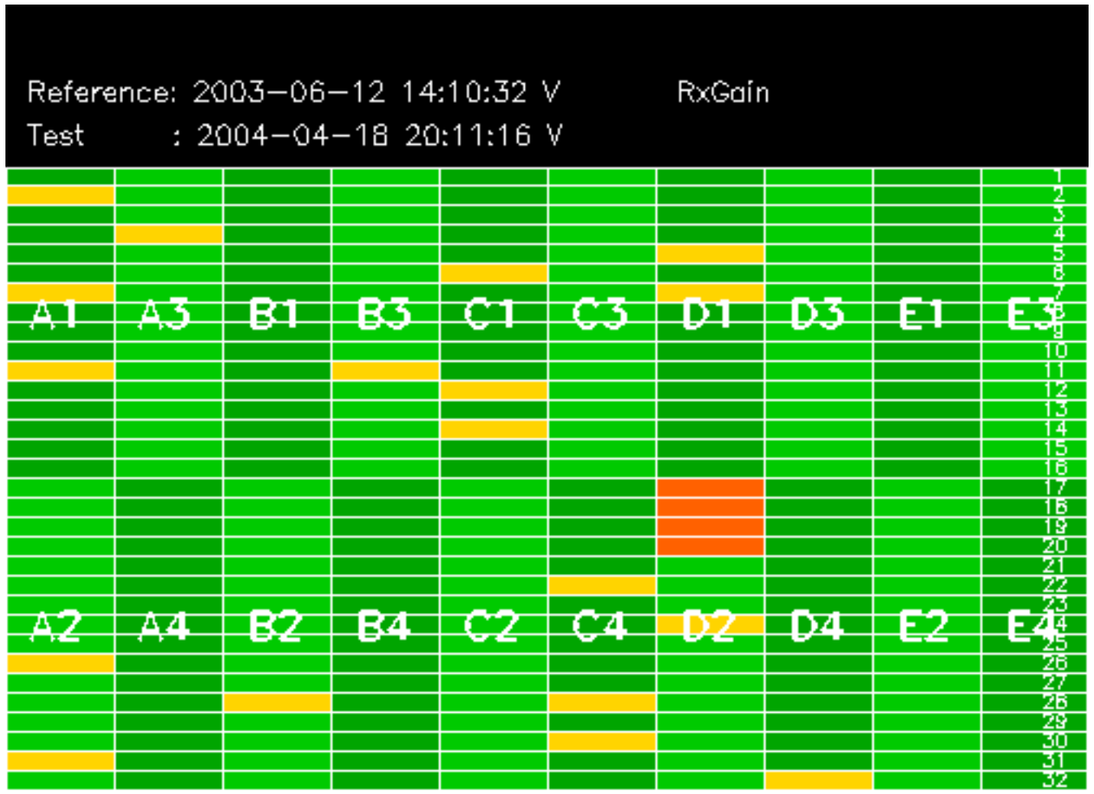
32


Reference: 2003-06-12 14:10:32 V
Test : 2004-04-18 20:11:16 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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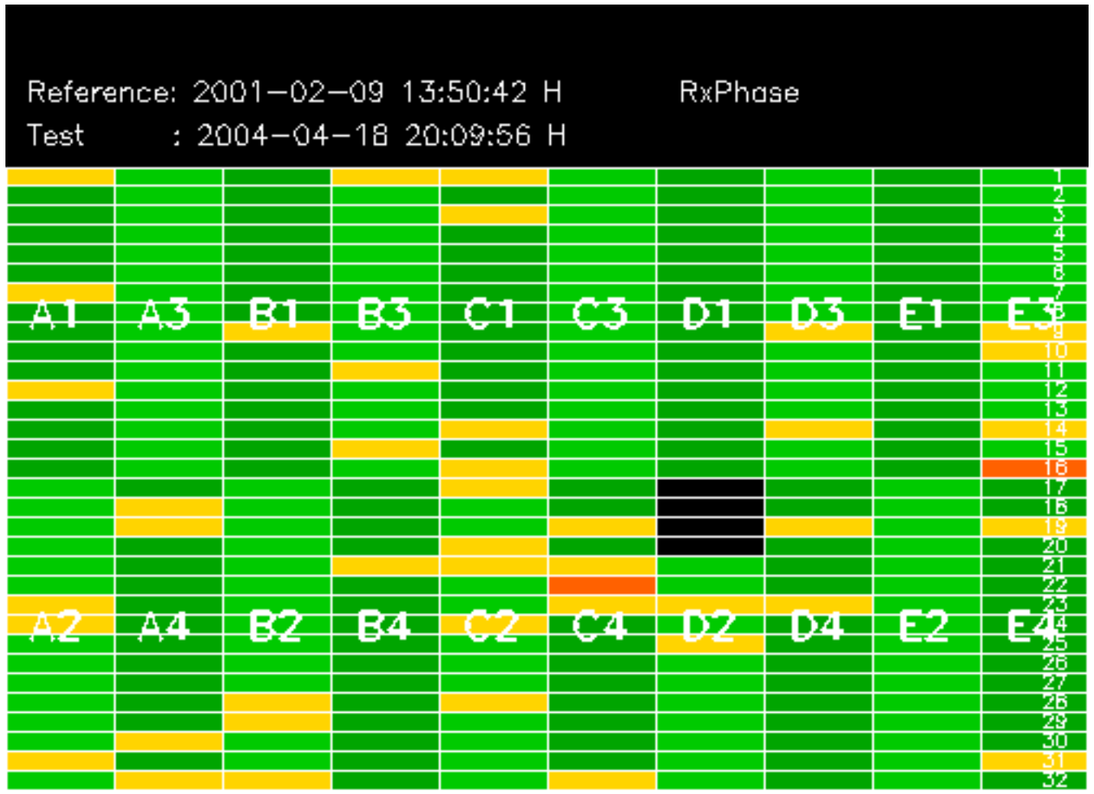
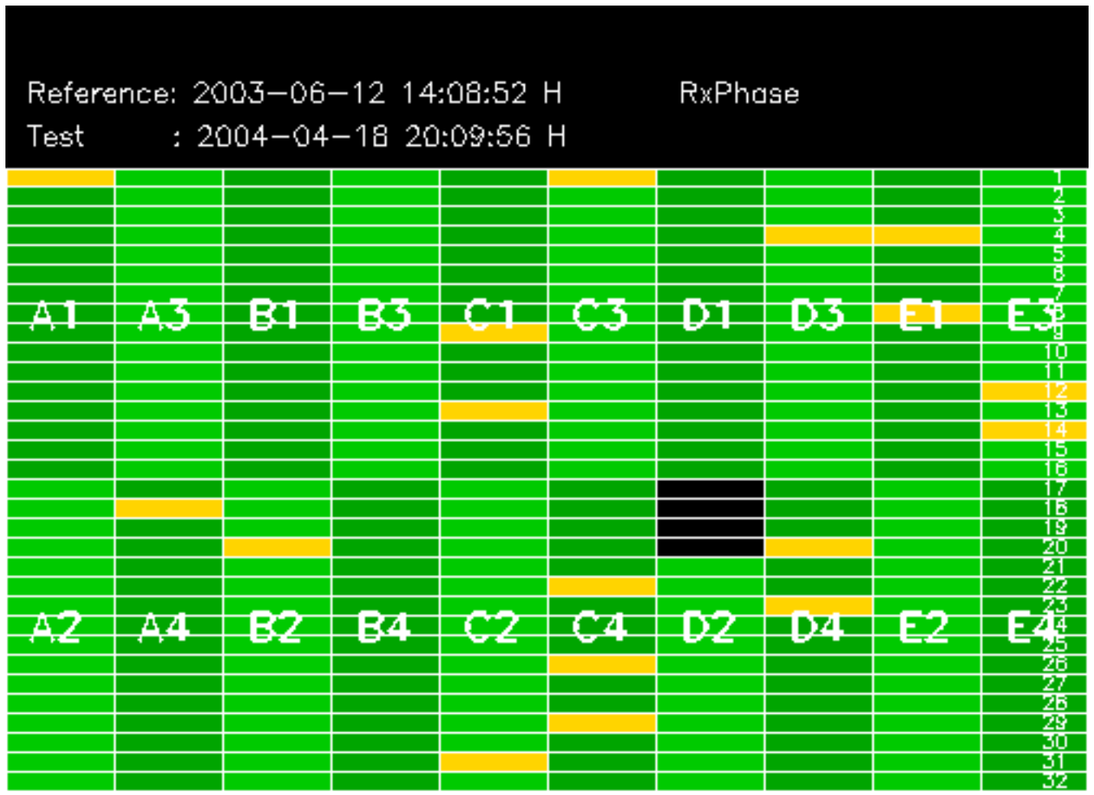

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-04-18 20:09:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-04-18 20:09:56 H
RxPhase
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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3
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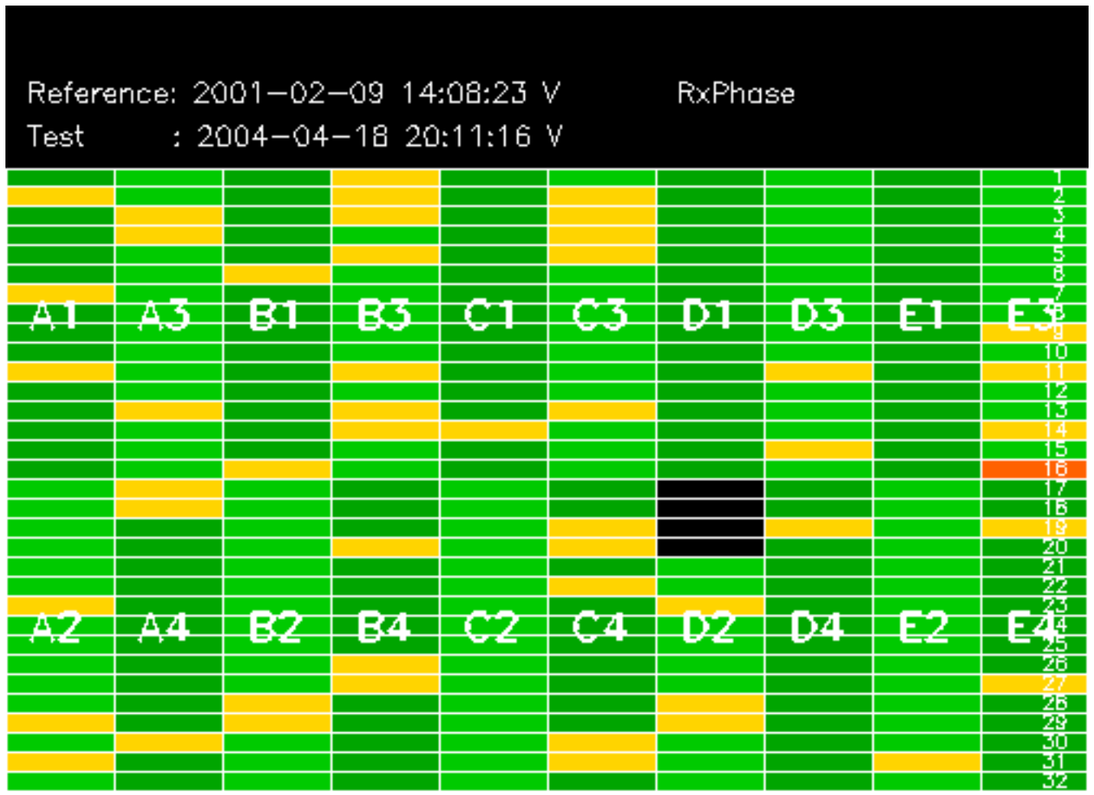
31
32


Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2004-04-18 20:11:16 V
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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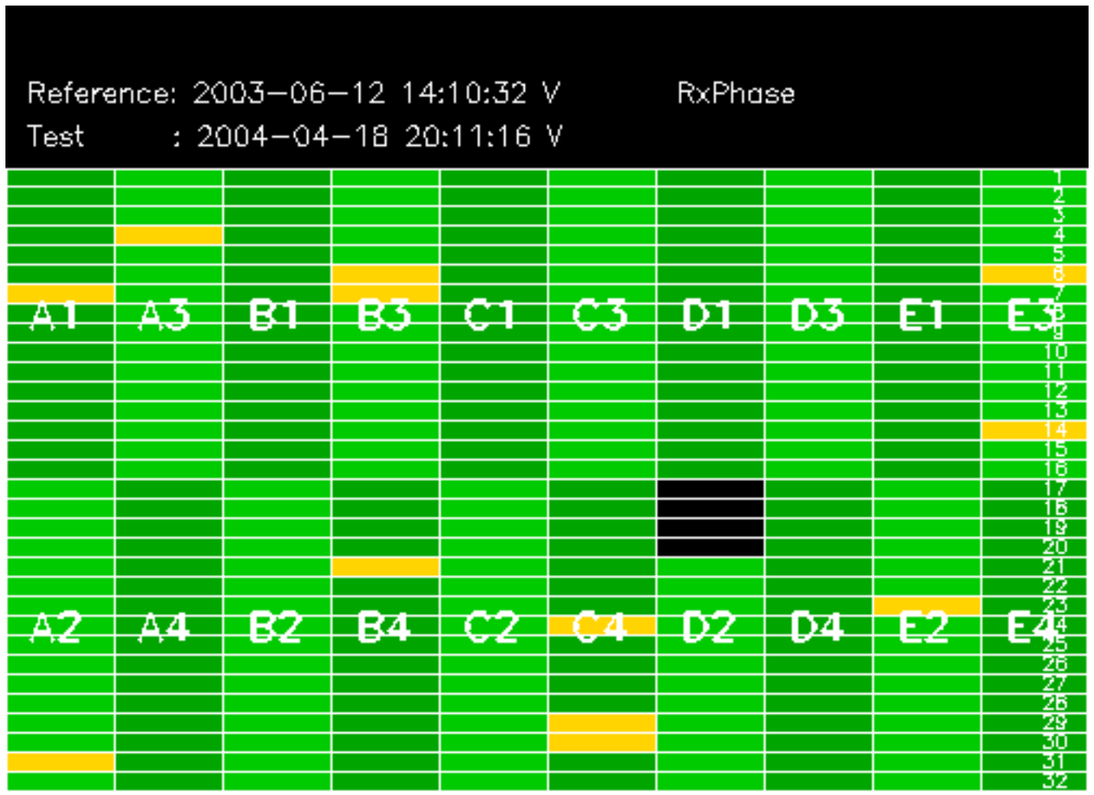
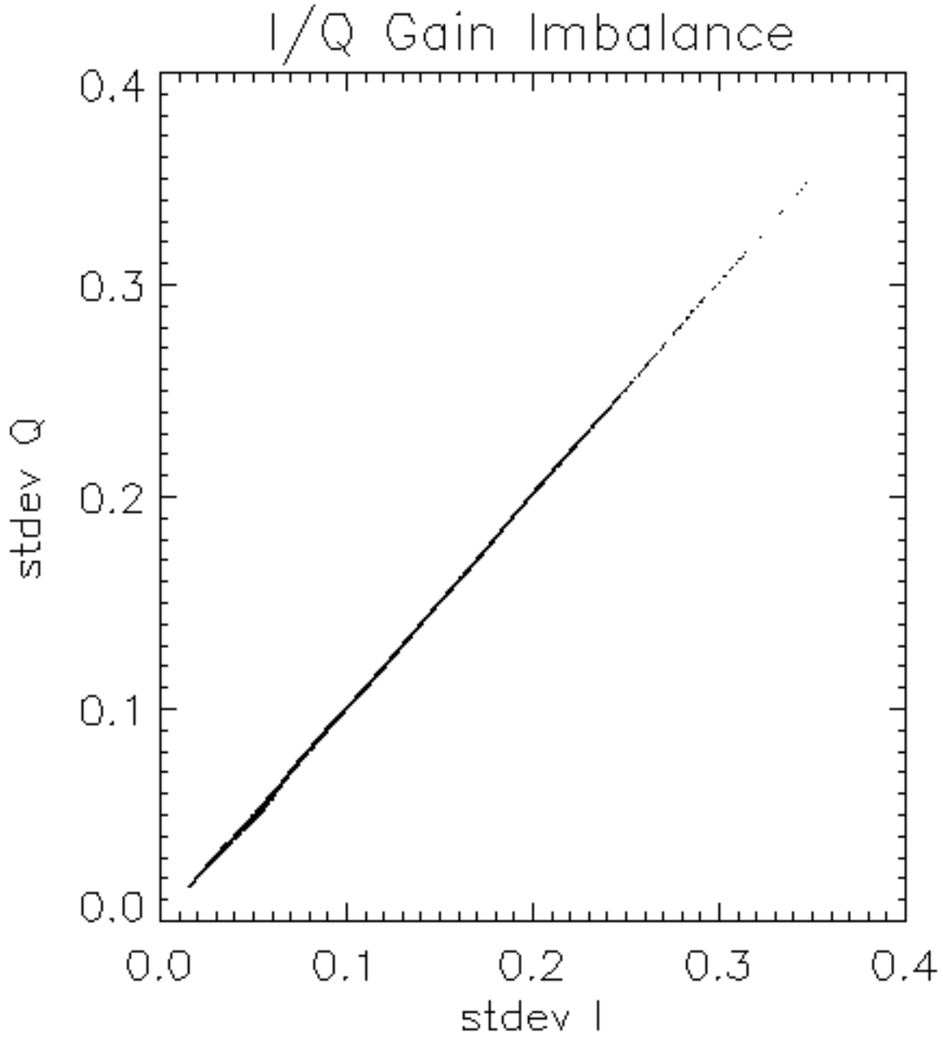
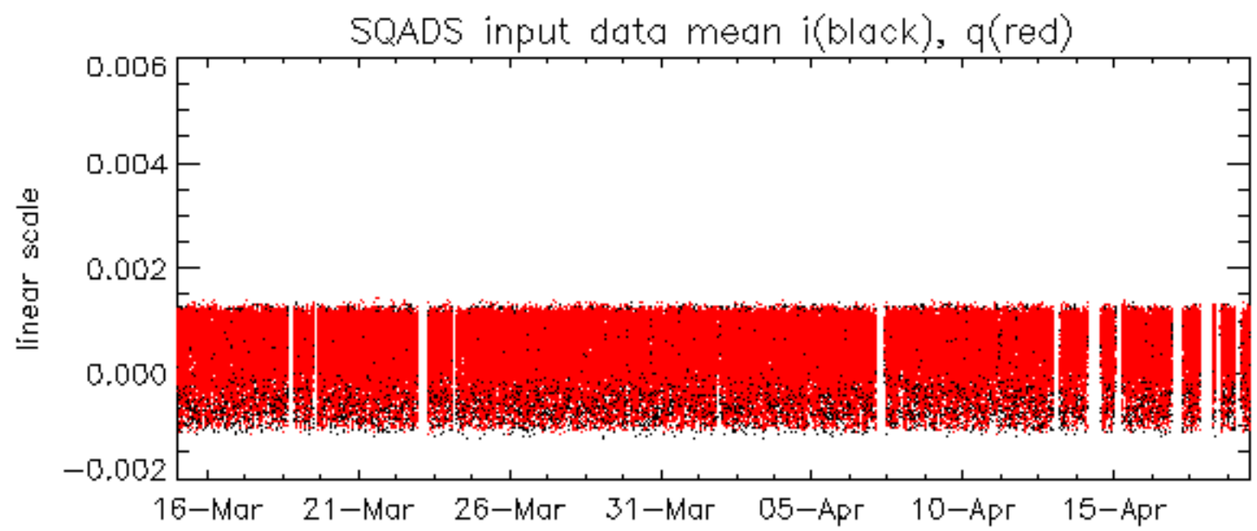
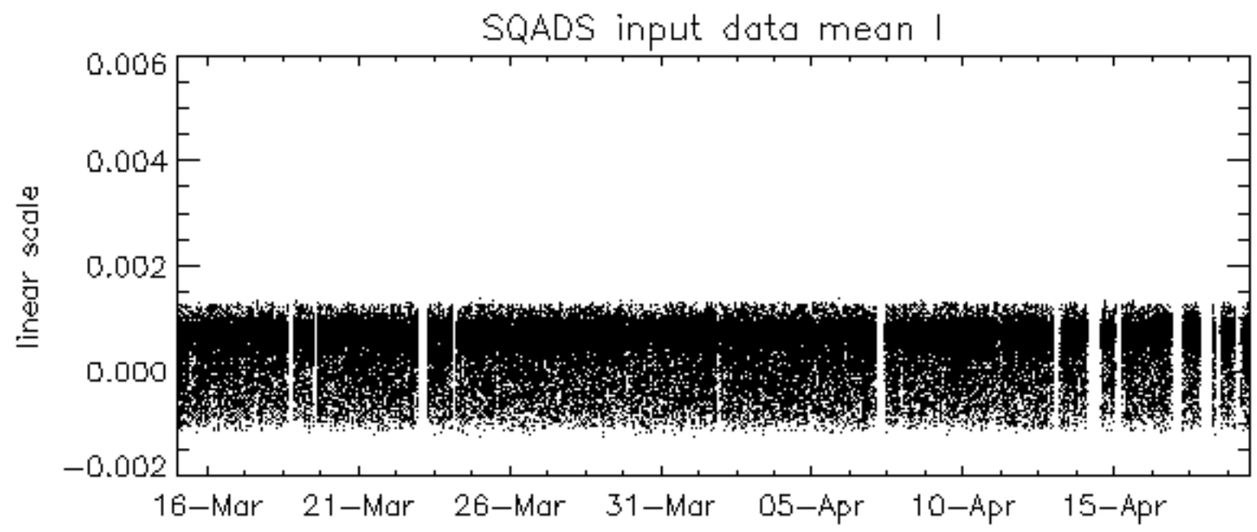
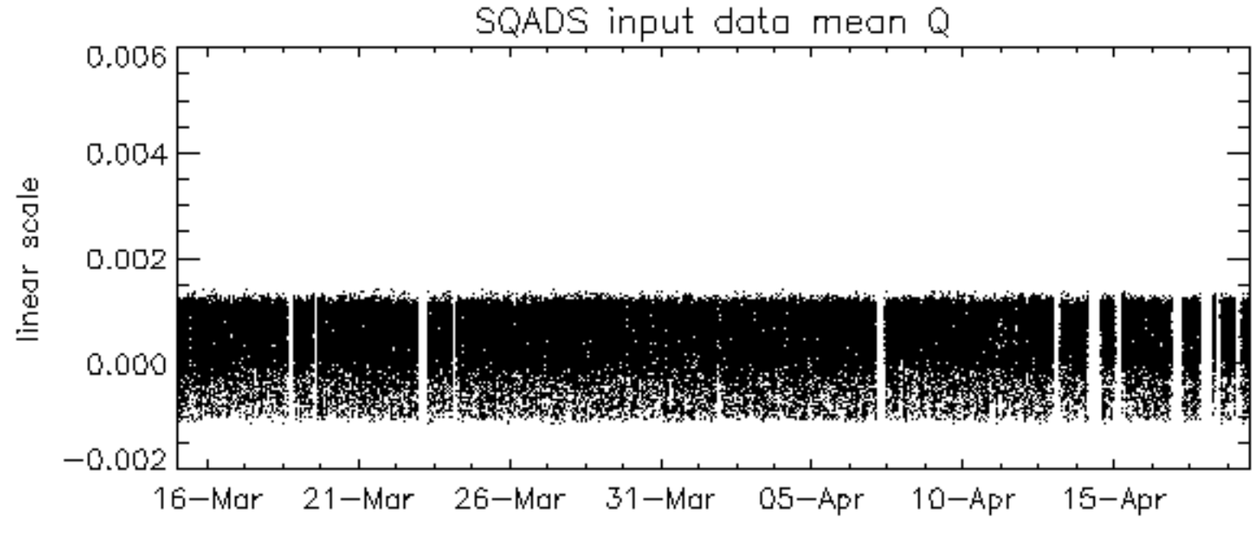
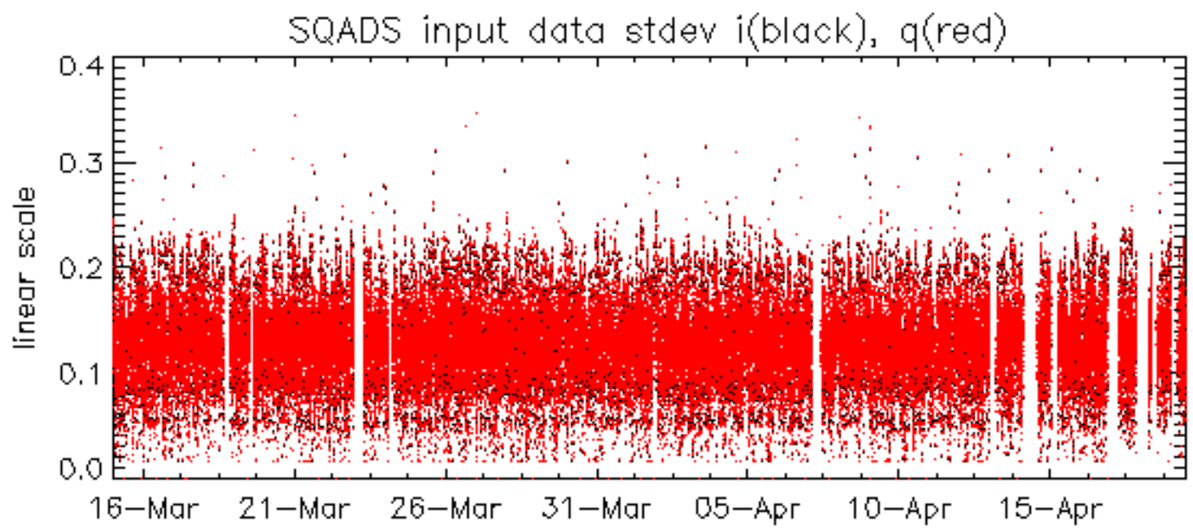

Reference: 2003-06-12 14:10:32 V
Test : 2004-04-18 20:11:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

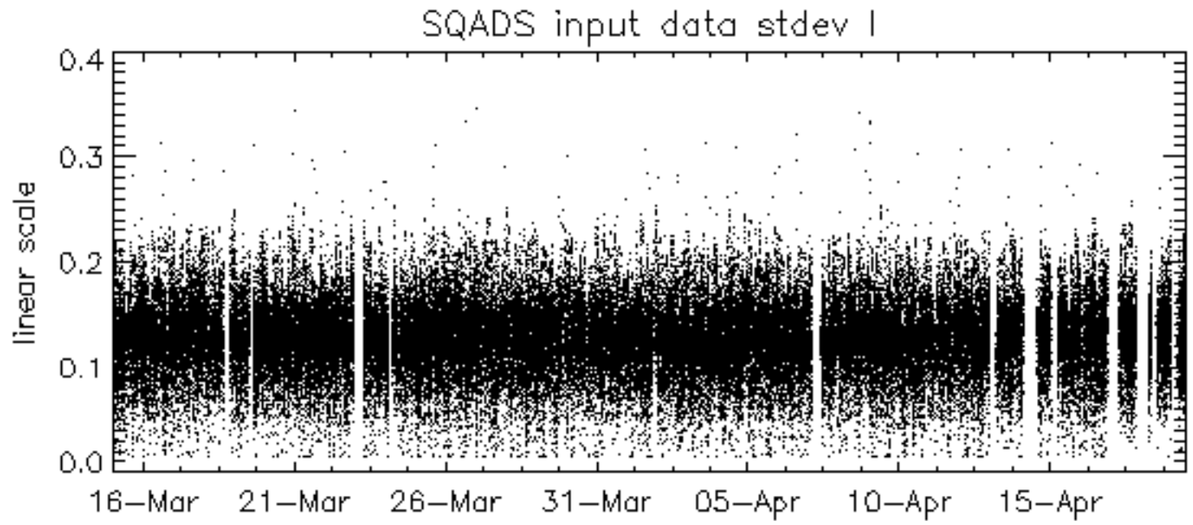

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

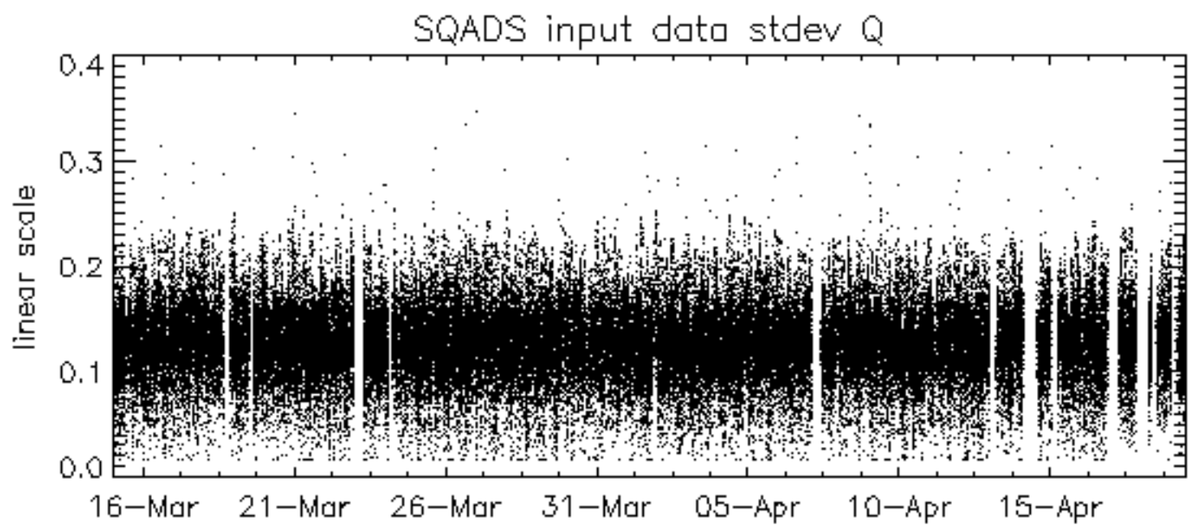

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Mar
21−Mar
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr

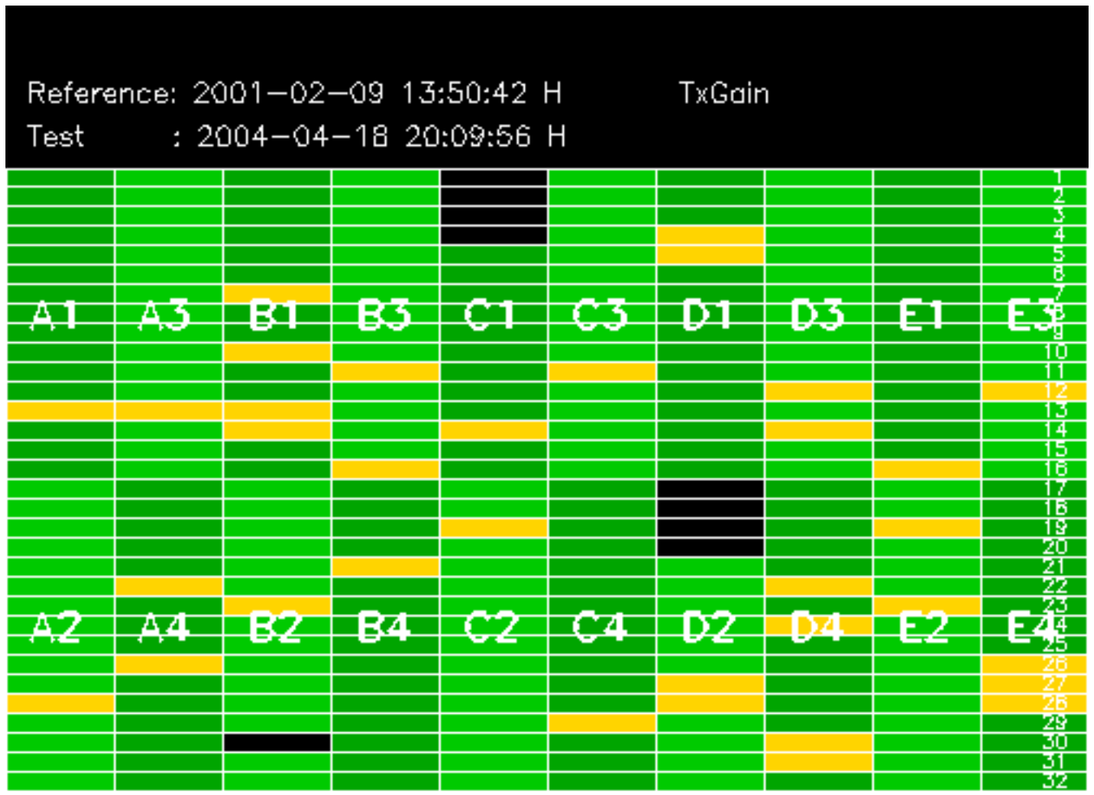

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Mar
21−Mar
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr

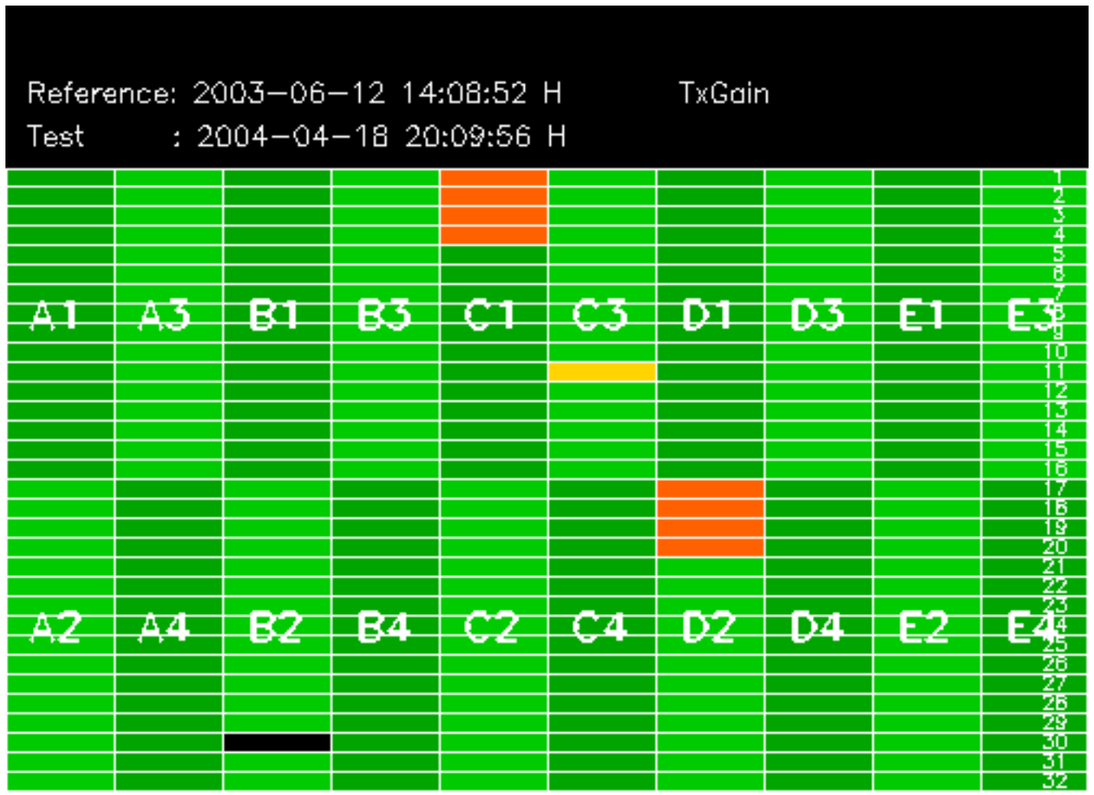

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Mar
21−Mar
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16−Mar
21−Mar
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16−Mar
21−Mar
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
16−Mar
21−Mar
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr


Reference: 2001-02-09 13:50:42 H
Test : 2004-04-18 20:09:56 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 : 2004-04-18 20:09:56 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
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8
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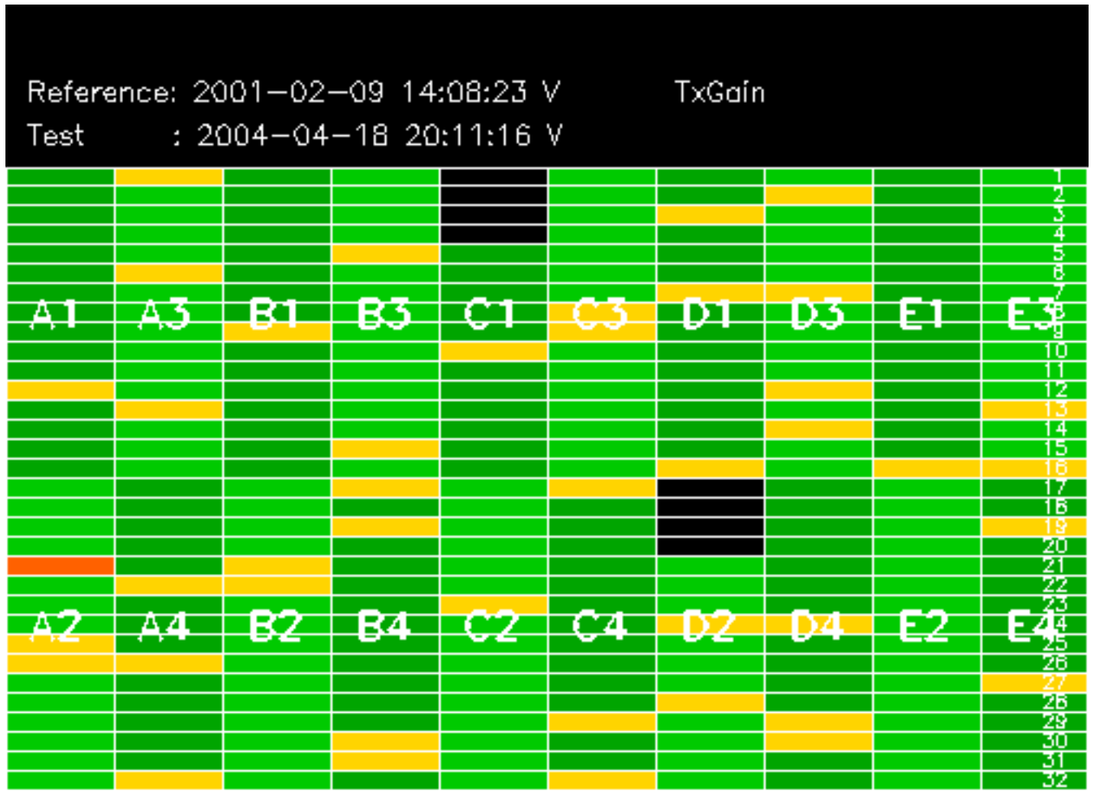
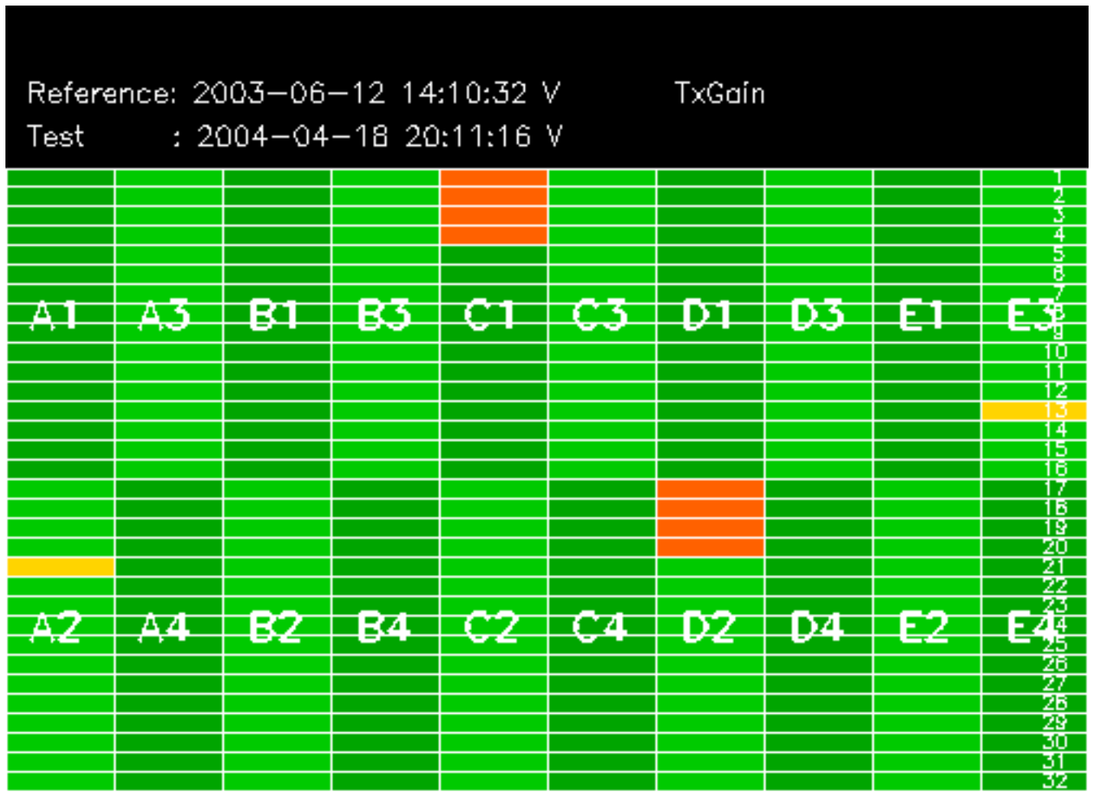

Reference: 2001-02-09 14:08:23 V
Test : 2004-04-18 20:11:16 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-04-18 20:11:16 V
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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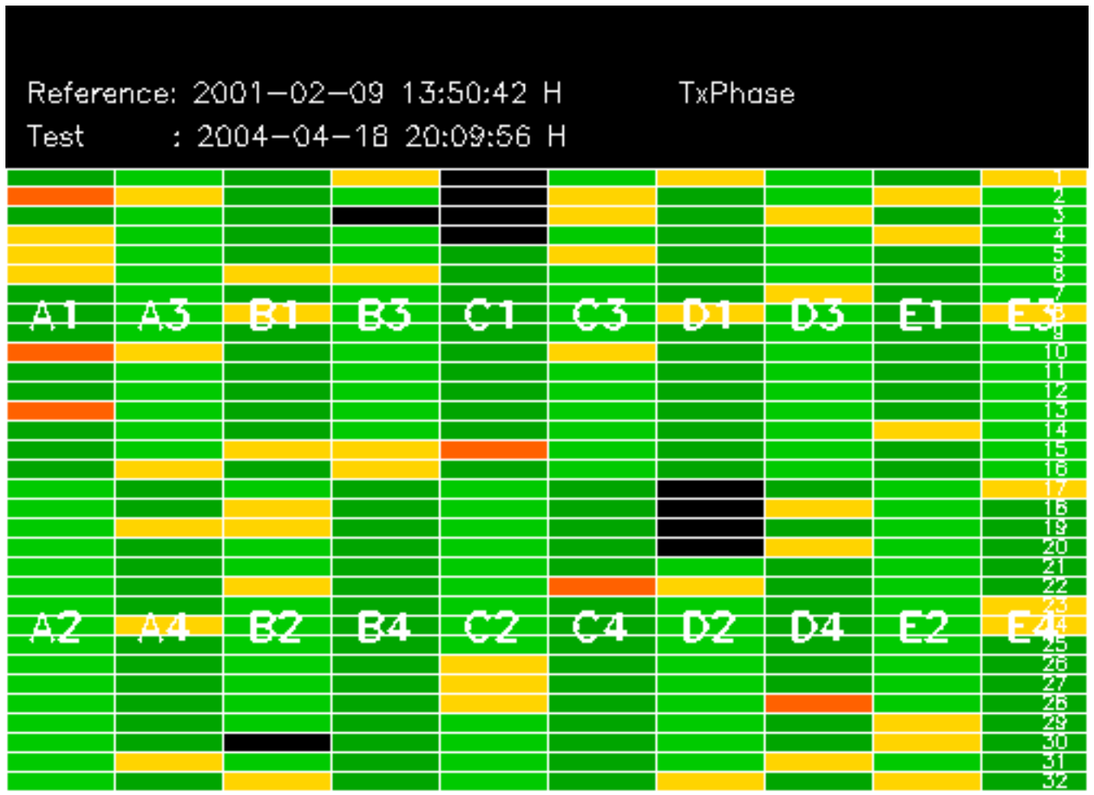
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-04-18 20:09:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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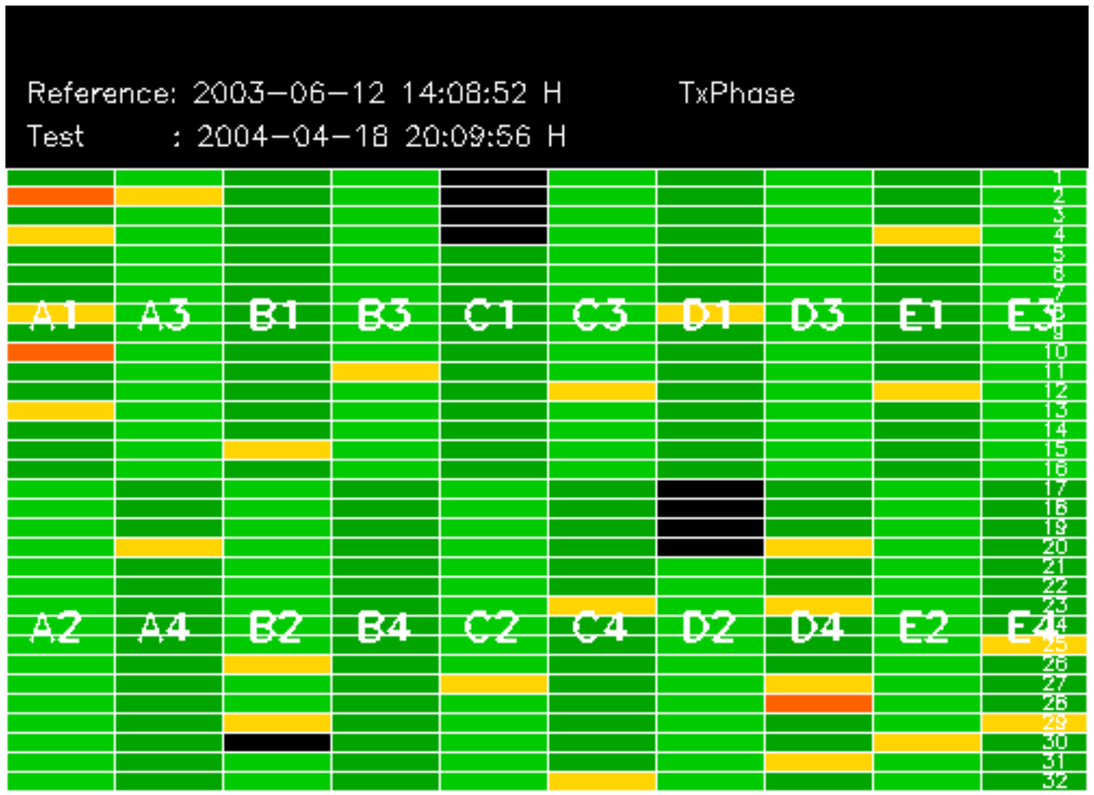
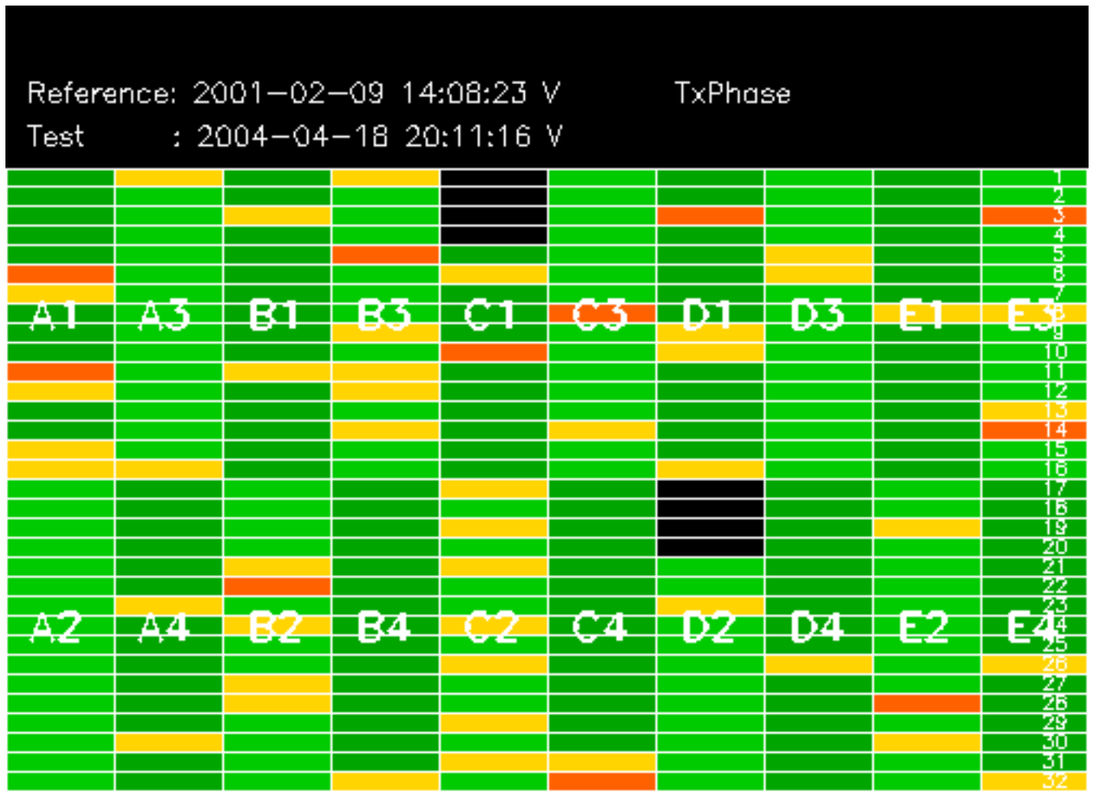
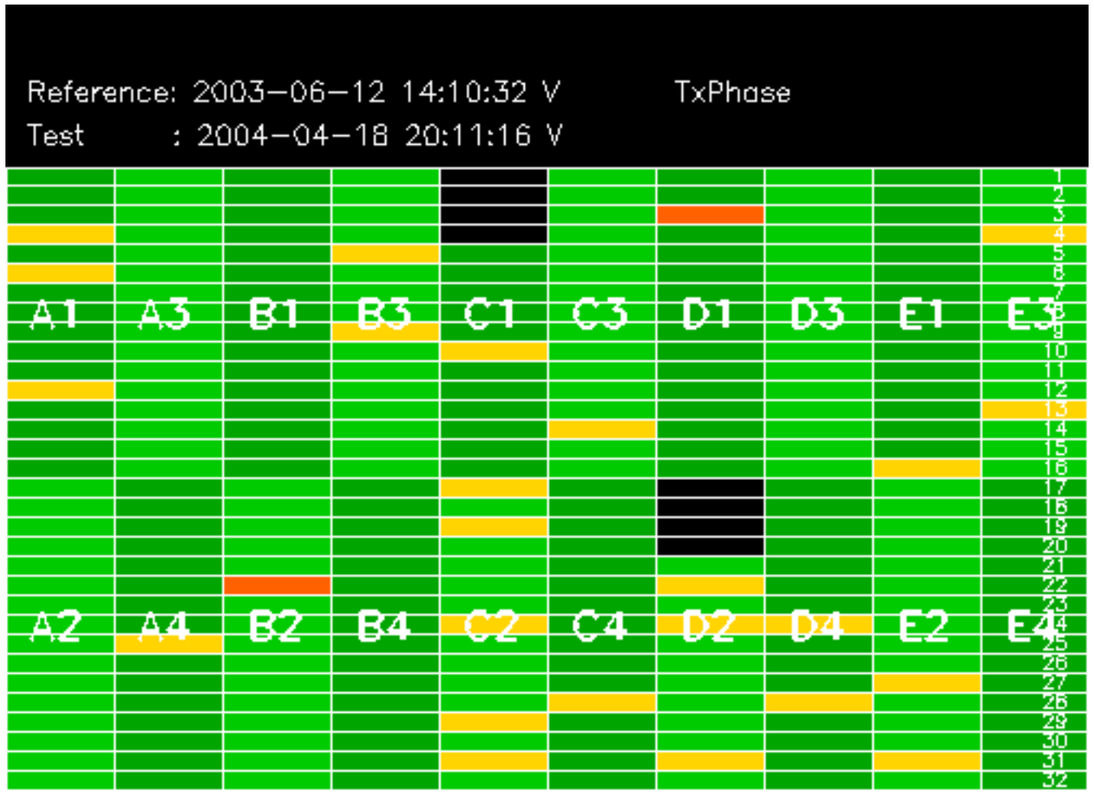

Reference: 2003-06-12 14:08:52 H
Test : 2004-04-18 20:09:56 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-04-18 20:11:16 V
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 14:10:32 V
Test : 2004-04-18 20:11:16 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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No unavailabilities during the reported period.