REPORT OF 040301

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 from browse visual inspection.

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 any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.

No anomalies observed on last available MS products:
- ASA_MS__0PNPDK20040229_190935_000000152024_00385_10459_0241.N1
- ASA_MS__0PNPDK20040229_191055_000000152024_00385_10459_0242.N1

Polarisation	Start Time
V	20040229 191055
H	20040229 190935

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	-3.62486	-22.3913	-8.13664
	stdev	0.00545351	0.0747962	0.00288235
24	mean	-5.08470	-21.0490	-8.13664
	stdev	0.0131346	0.0687625	0.00288235

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.64179	-22.3994	-8.13256
	stdev	0.00649921	0.0781261	0.00304772
24	mean	-5.10554	-21.0696	-8.13256
	stdev	0.0145400	0.0750252	0.00304772

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	0.000447736
	stdev	2.61062e-07
MEAN Q	mean	0.000428021
	stdev	3.00028e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B

STDEV I	mean	0.122955
	stdev	0.00124214
STDEV Q	mean	0.123181
	stdev	0.00125555

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

6.1 - Unbiased Doppler Error

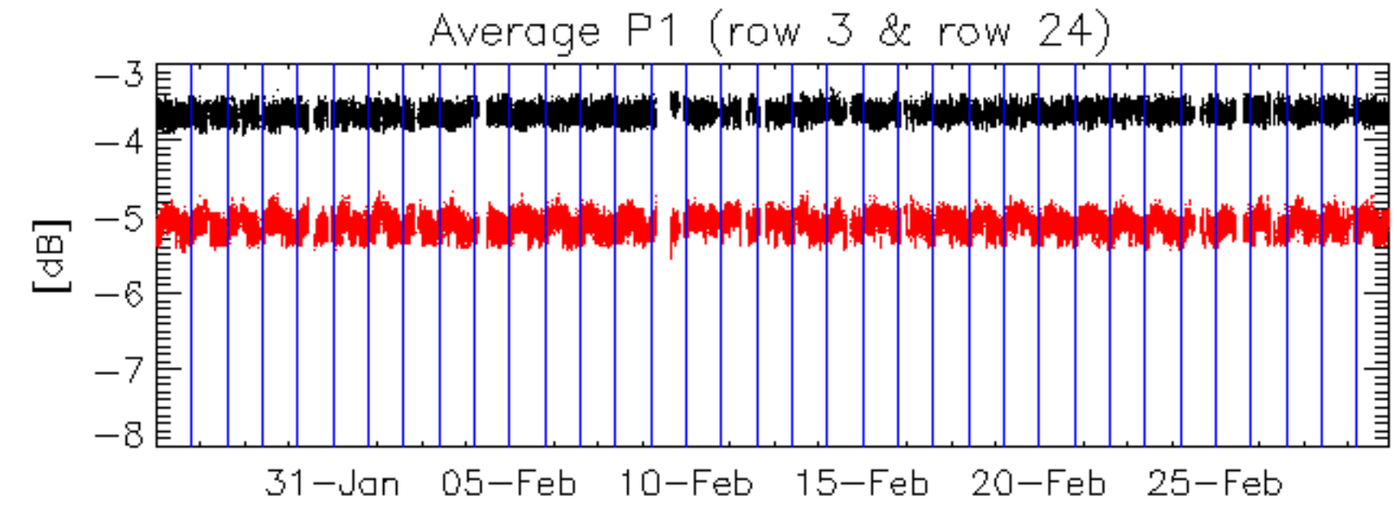
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

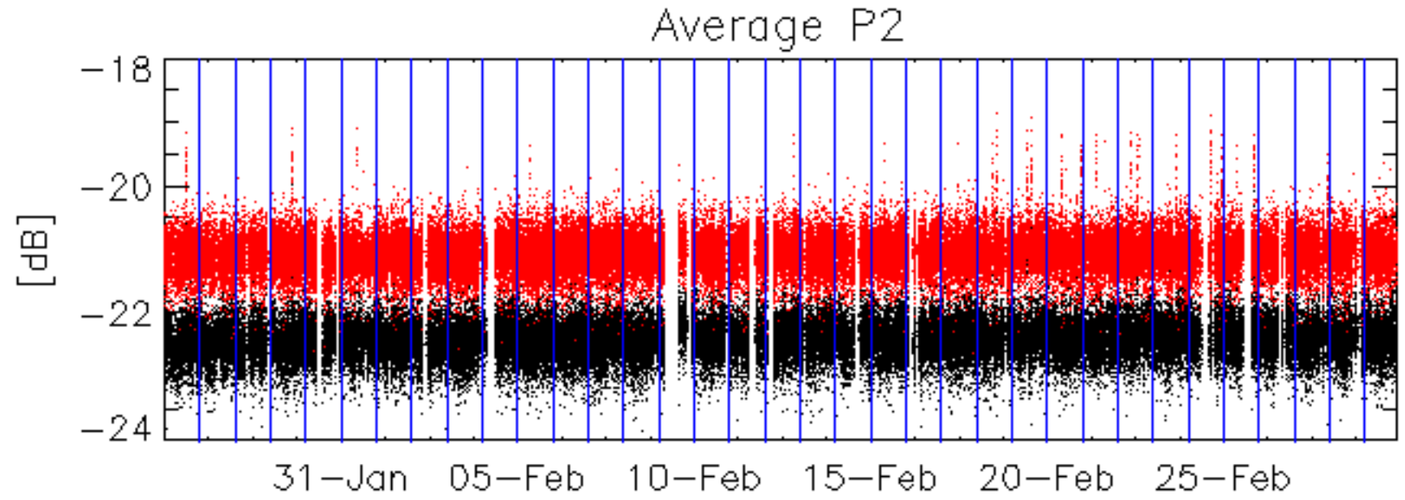
6.2 - Absolute Doppler

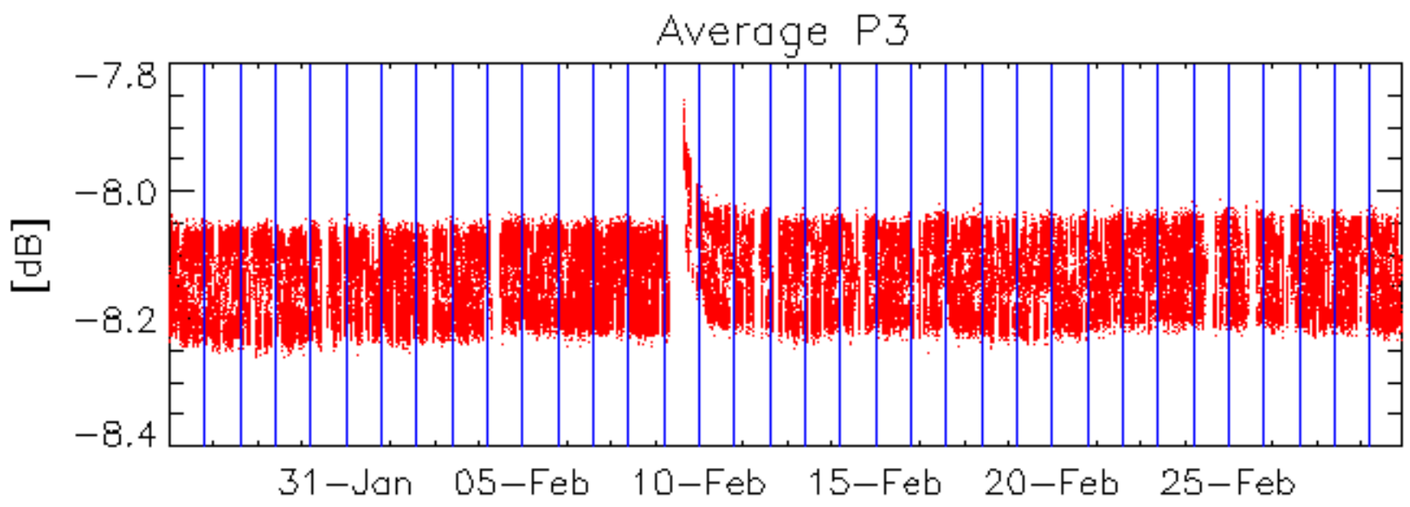
Evolution of Absolute Doppler
Acsending
Descending

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−Jan
05−Feb
10−Feb
15−Feb
20−Feb
25−Feb

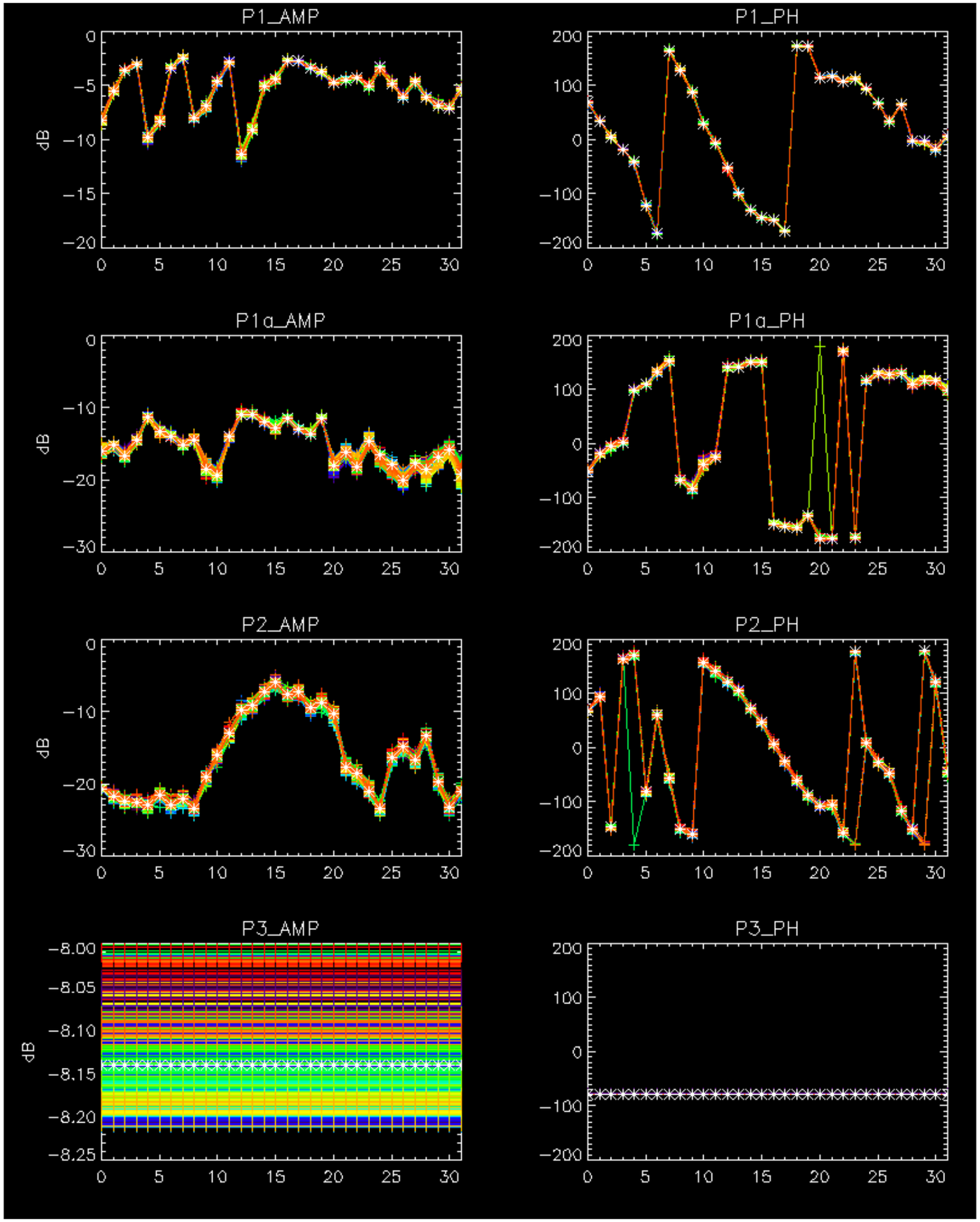

Average P2
[dB]
−18
−20
−22
−24
31−Jan
05−Feb
10−Feb
15−Feb
20−Feb
25−Feb


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

Average P1 (row 3 & row 24)
[dB]
−2
−4
−6
−8
−10
03
06
09
12
15
18
21
29−Feb
Average P2
[dB]
−18
−20
−22
−24
03
06
09
12
15
18
21
29−Feb
Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
03
06
09
12
15
18
21
29−Feb

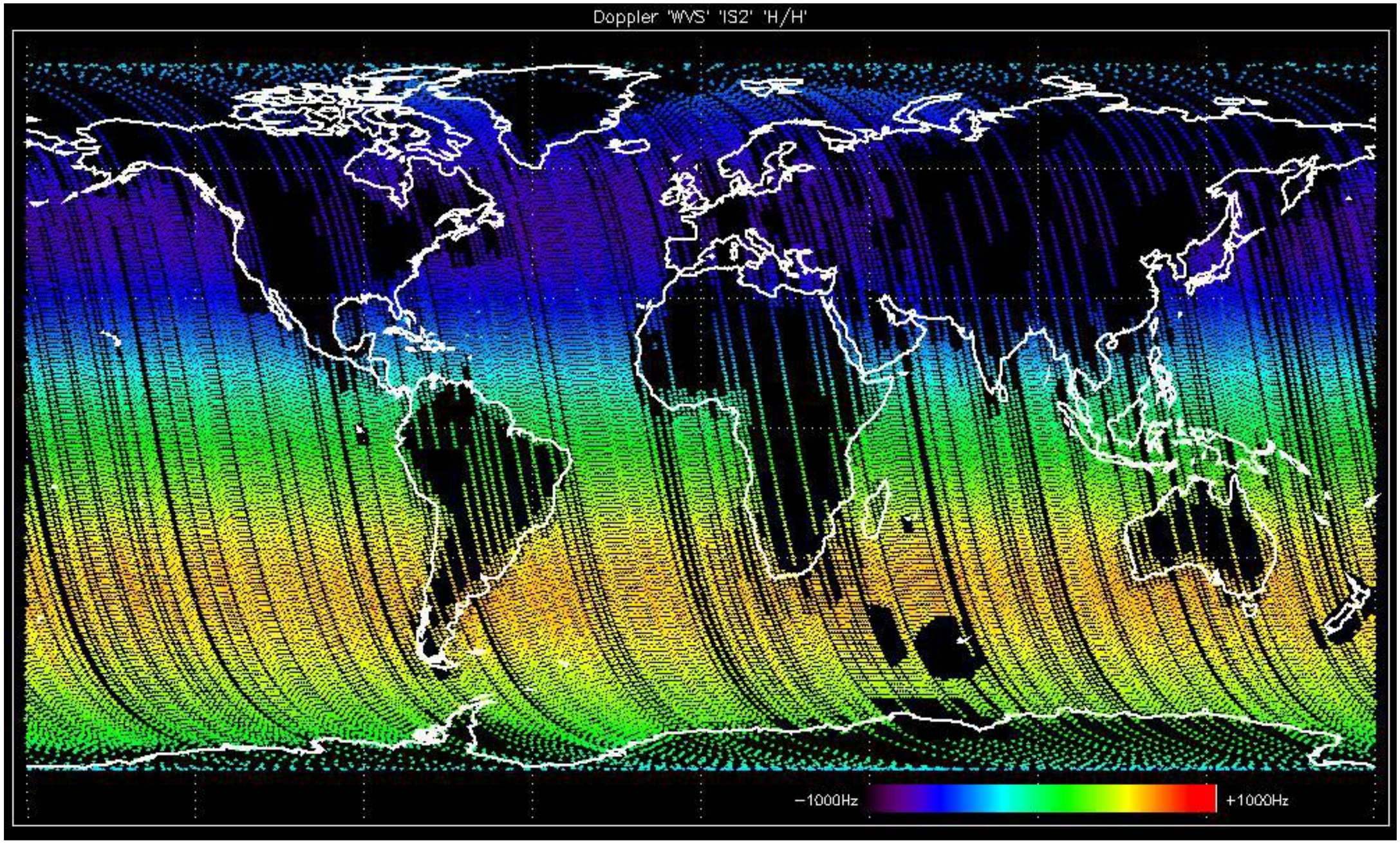
No anomalies observed from browse visual inspection.

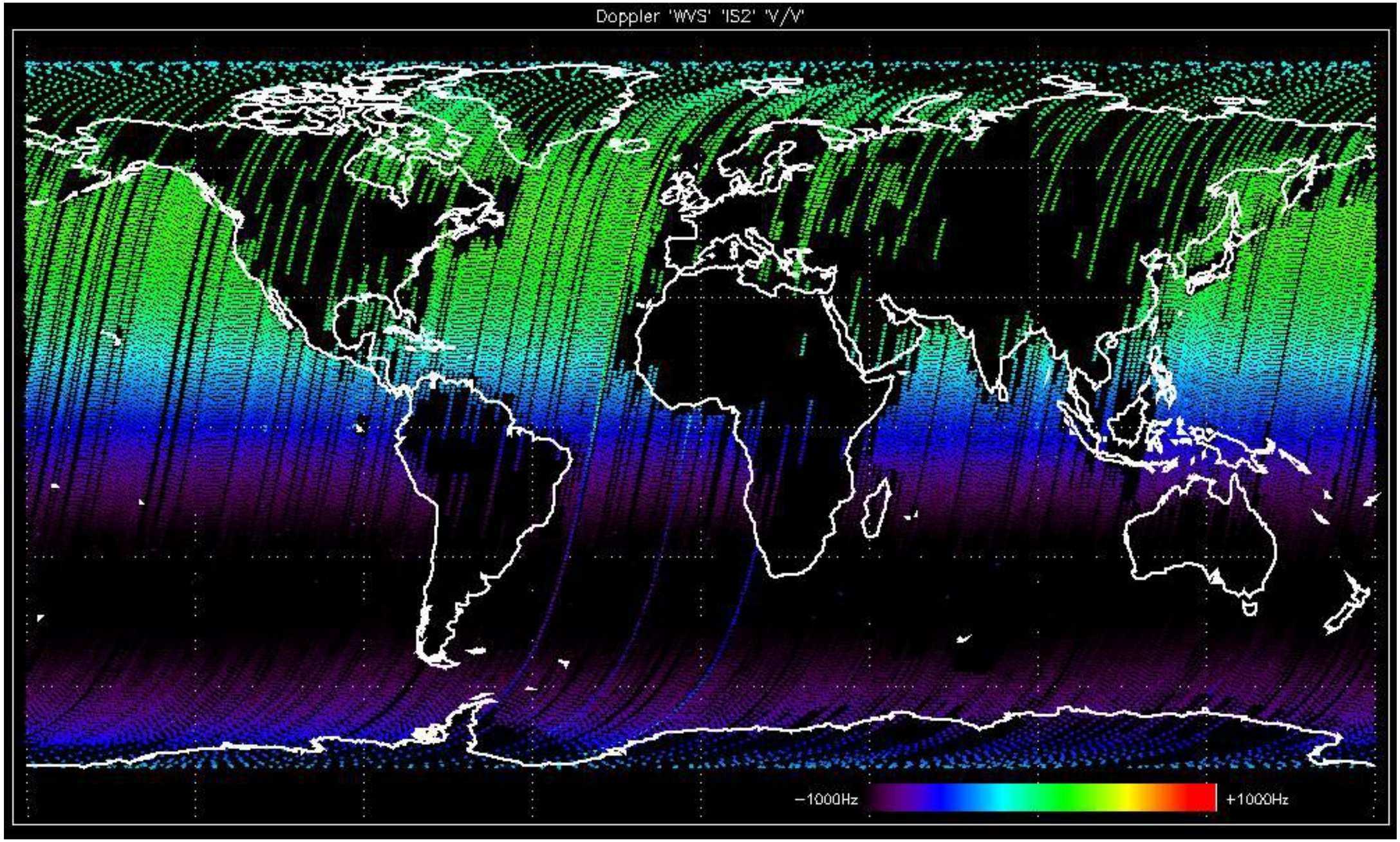
No anomalies observed.

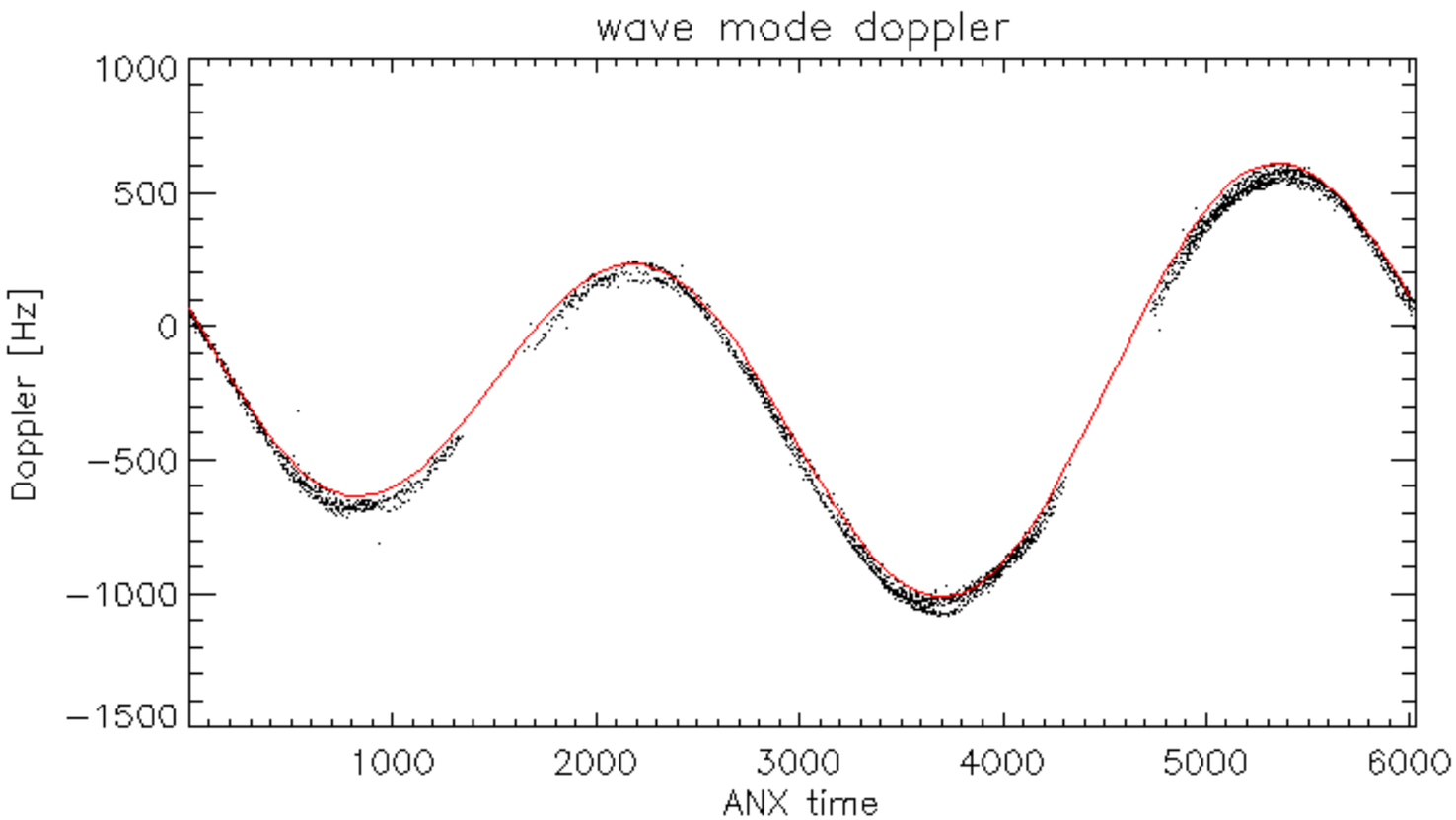

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

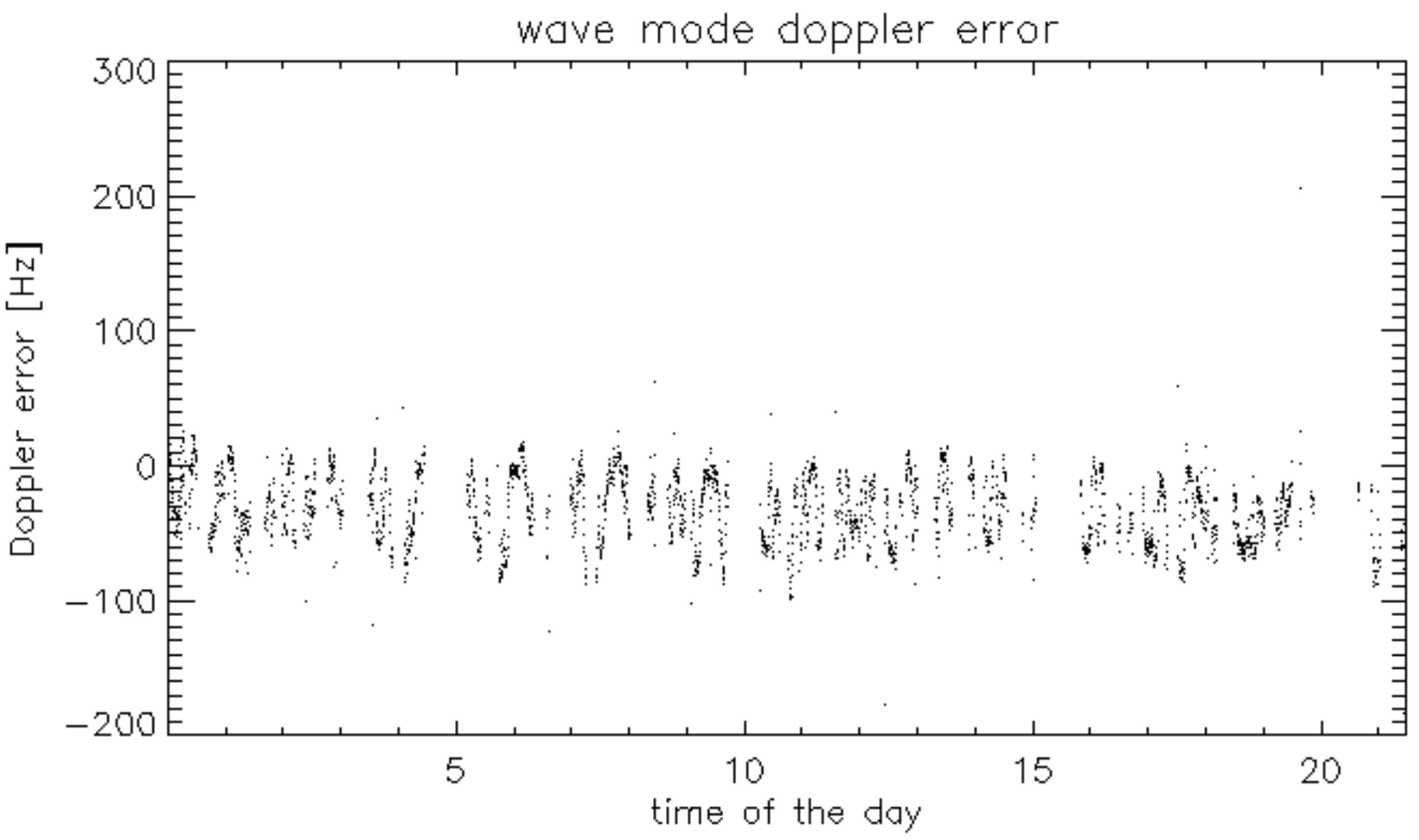
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

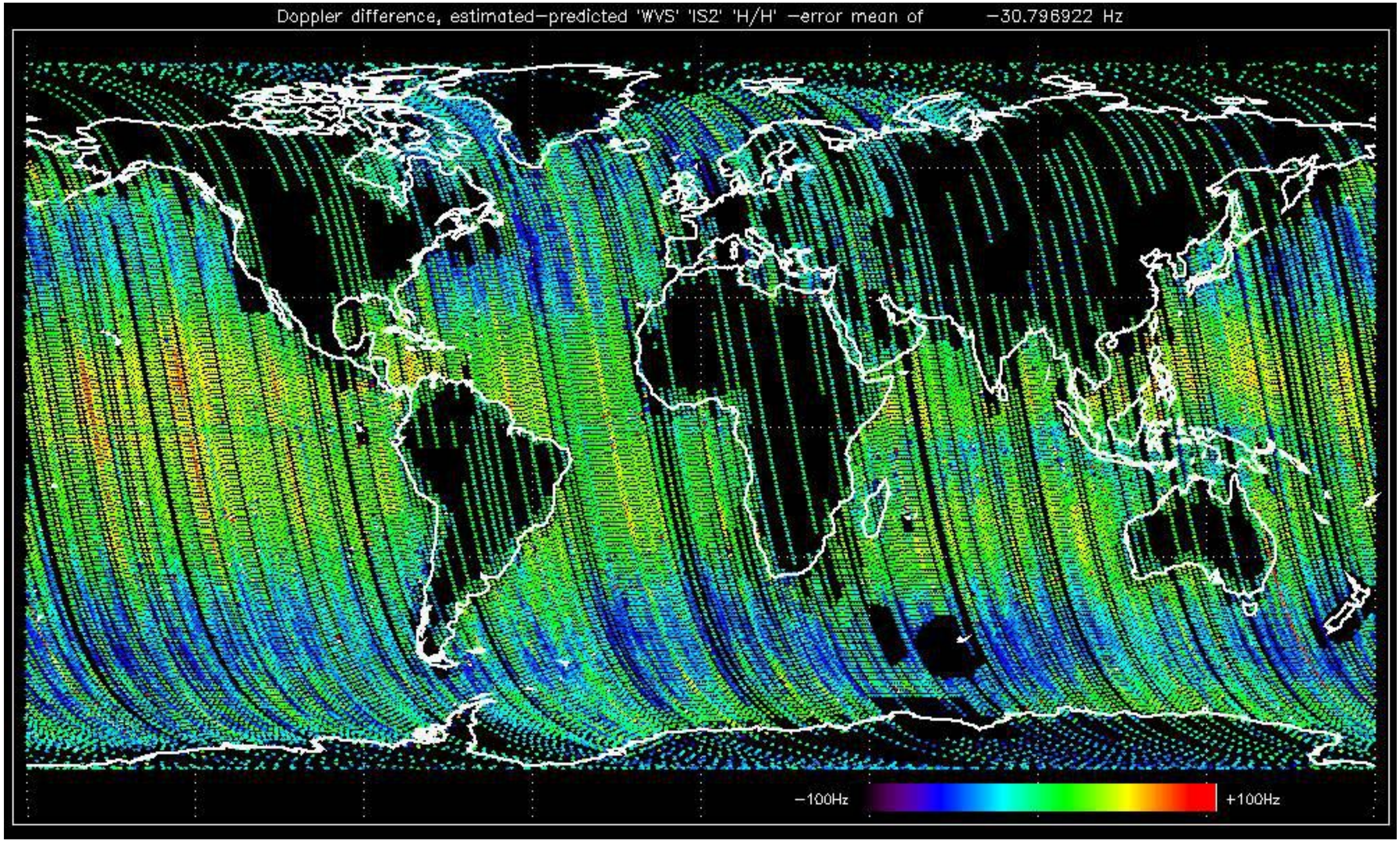
No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

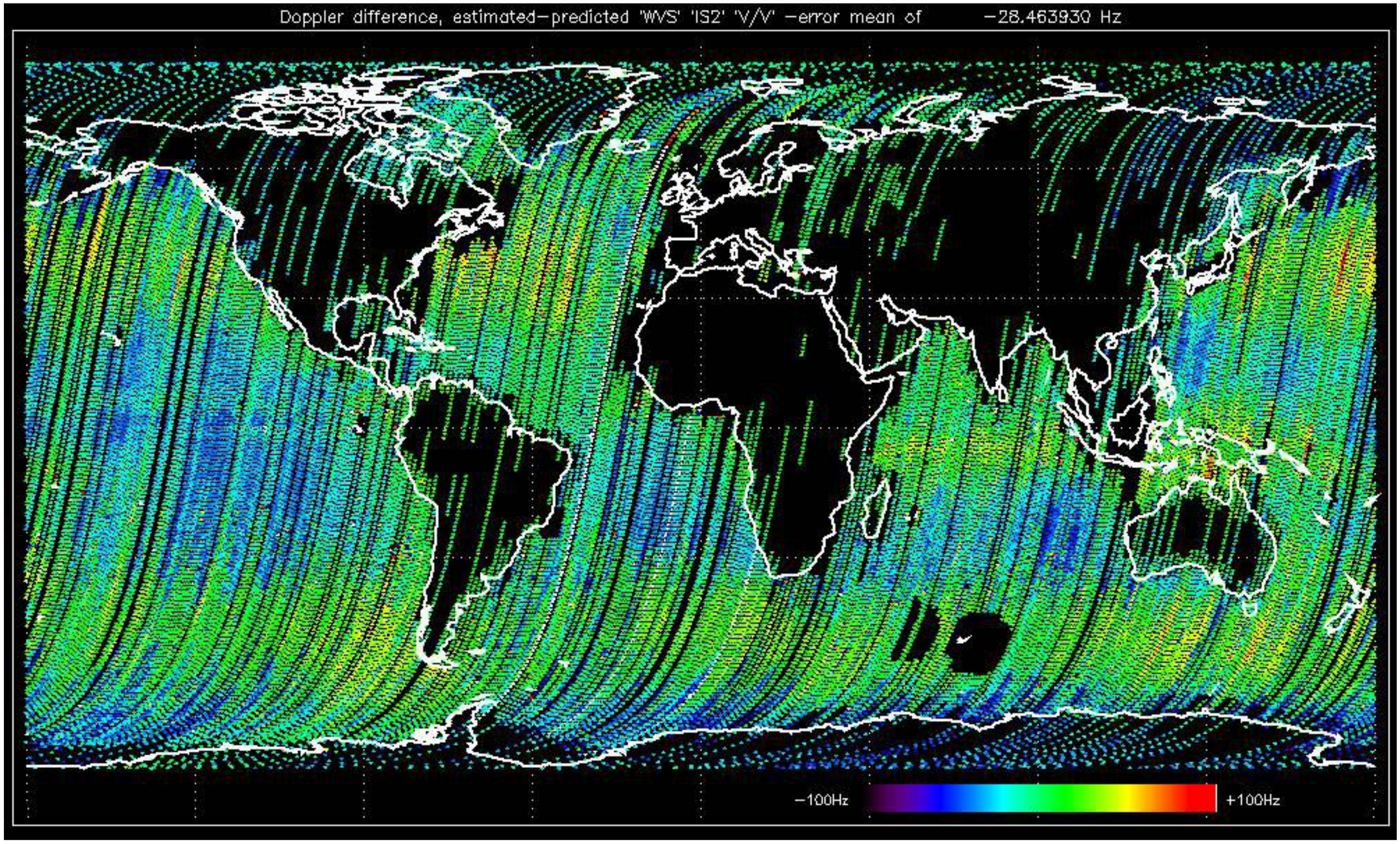

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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]
300
200
100
0
−100
−200
5
10
15
20
time of the day

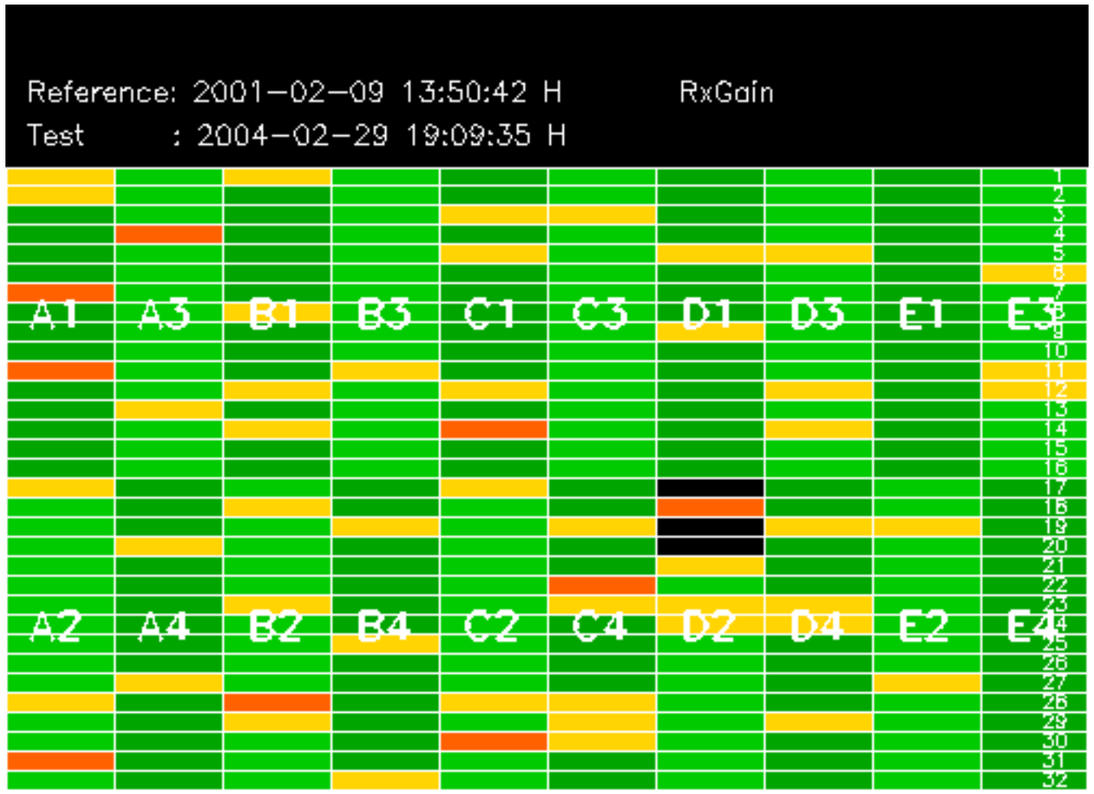

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of −30.796922 Hz
−100Hz
+100Hz

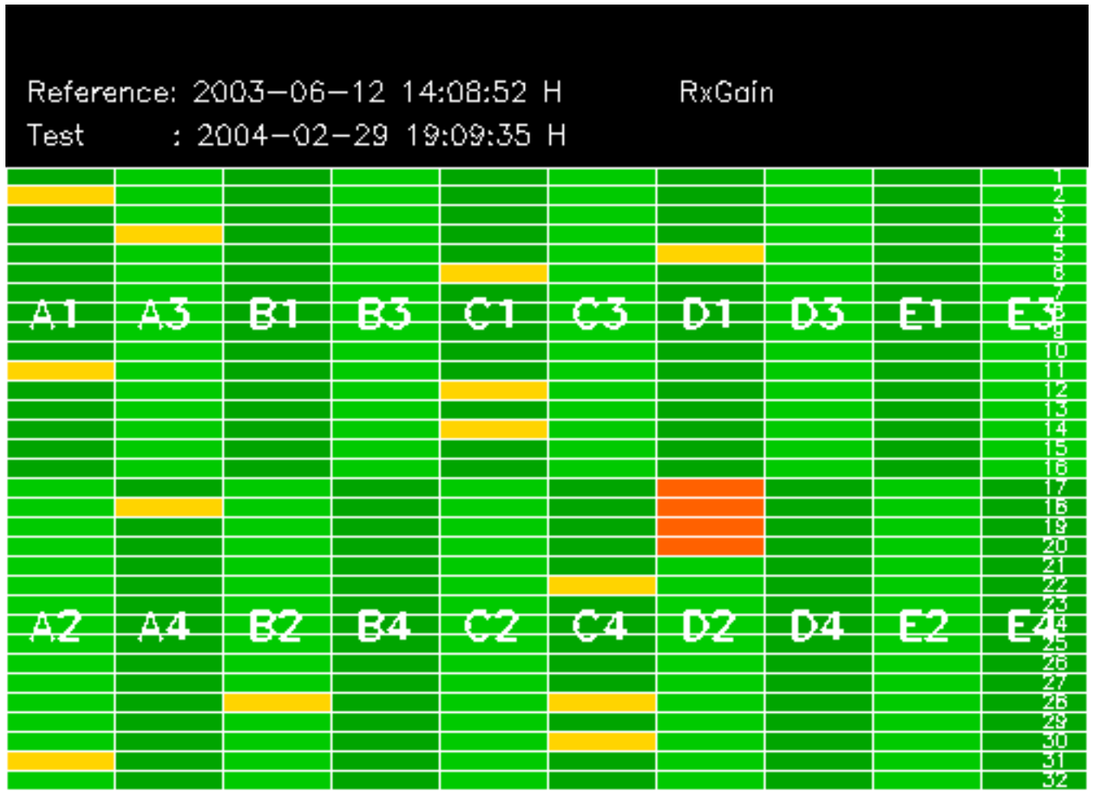

Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of −28.463930 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.

No anomalies observed on last available MS products:
- ASA_MS__0PNPDK20040229_190935_000000152024_00385_10459_0241.N1
- ASA_MS__0PNPDK20040229_191055_000000152024_00385_10459_0242.N1

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-02-29 19:09:35 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 : 2004-02-29 19:09:35 H
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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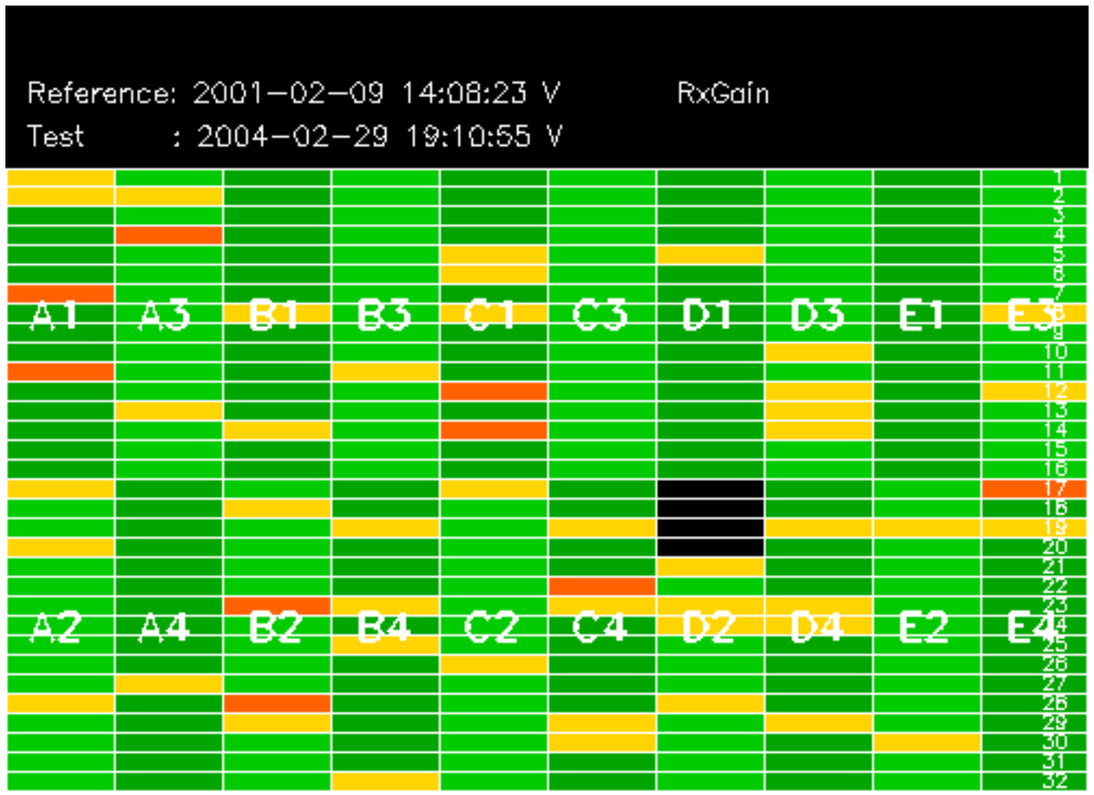
Reference: 2001-02-09 14:08:23 V
Test : 2004-02-29 19:10:55 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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8
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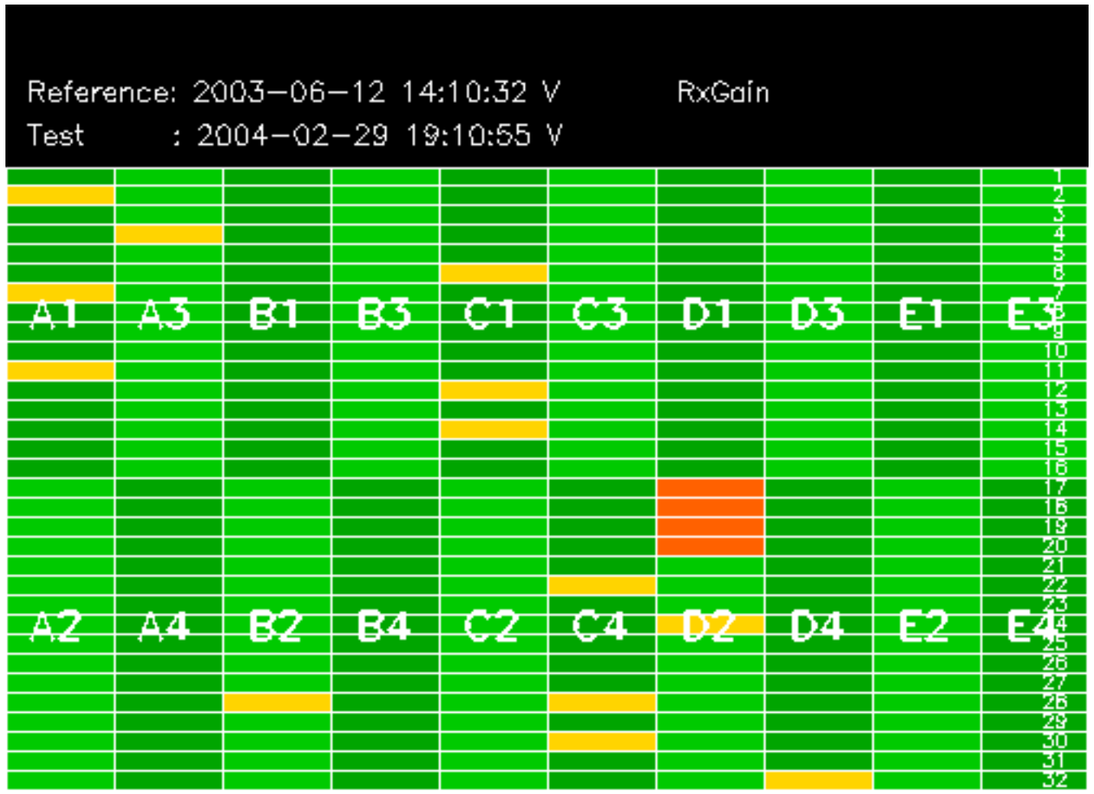
Reference: 2003-06-12 14:10:32 V
Test : 2004-02-29 19:10:55 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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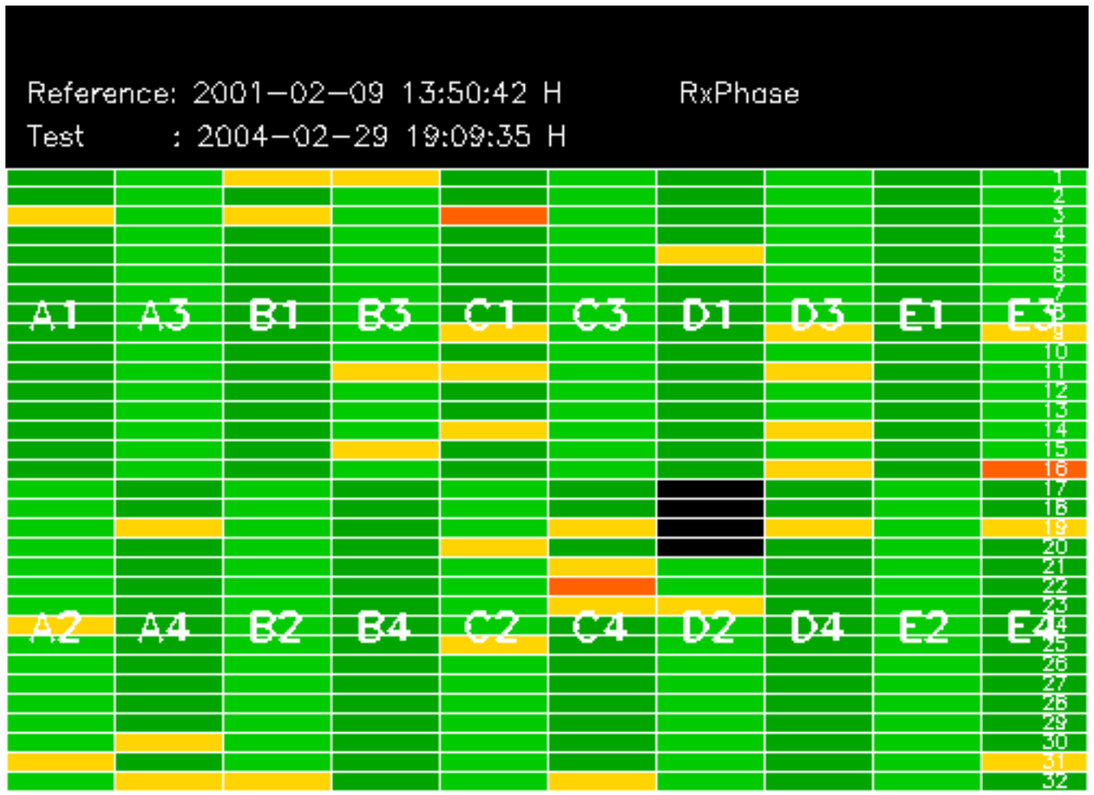
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-02-29 19:09:35 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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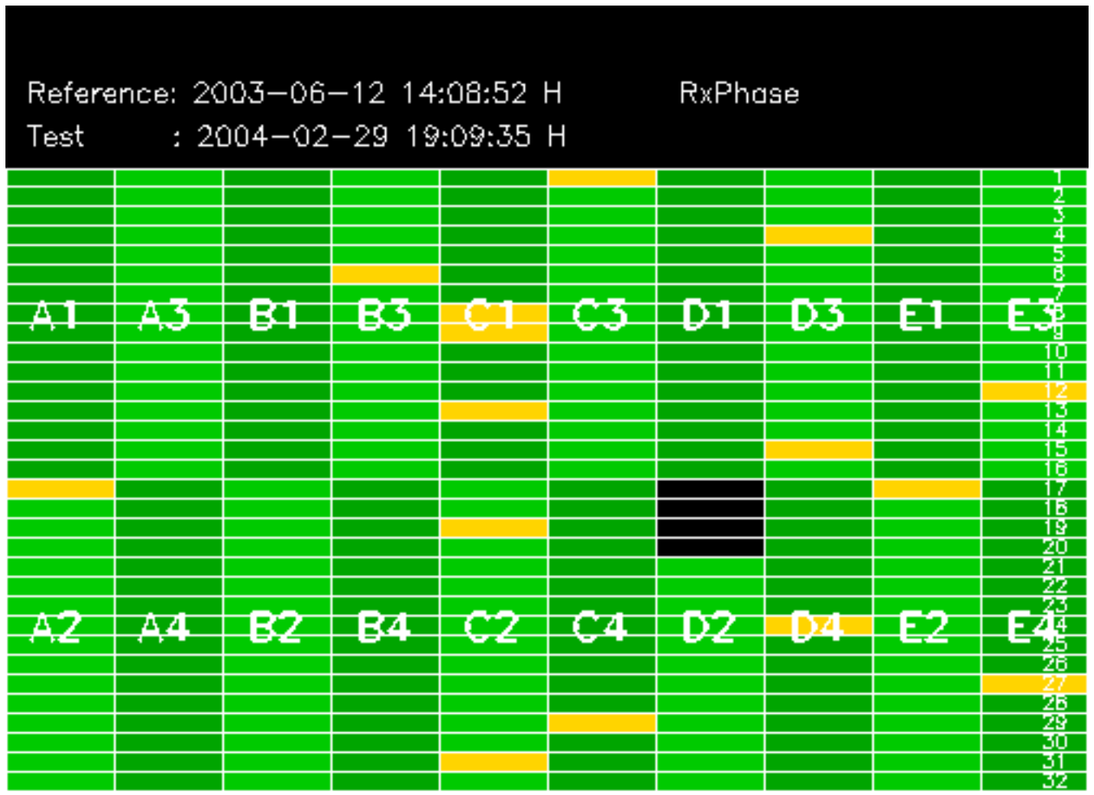
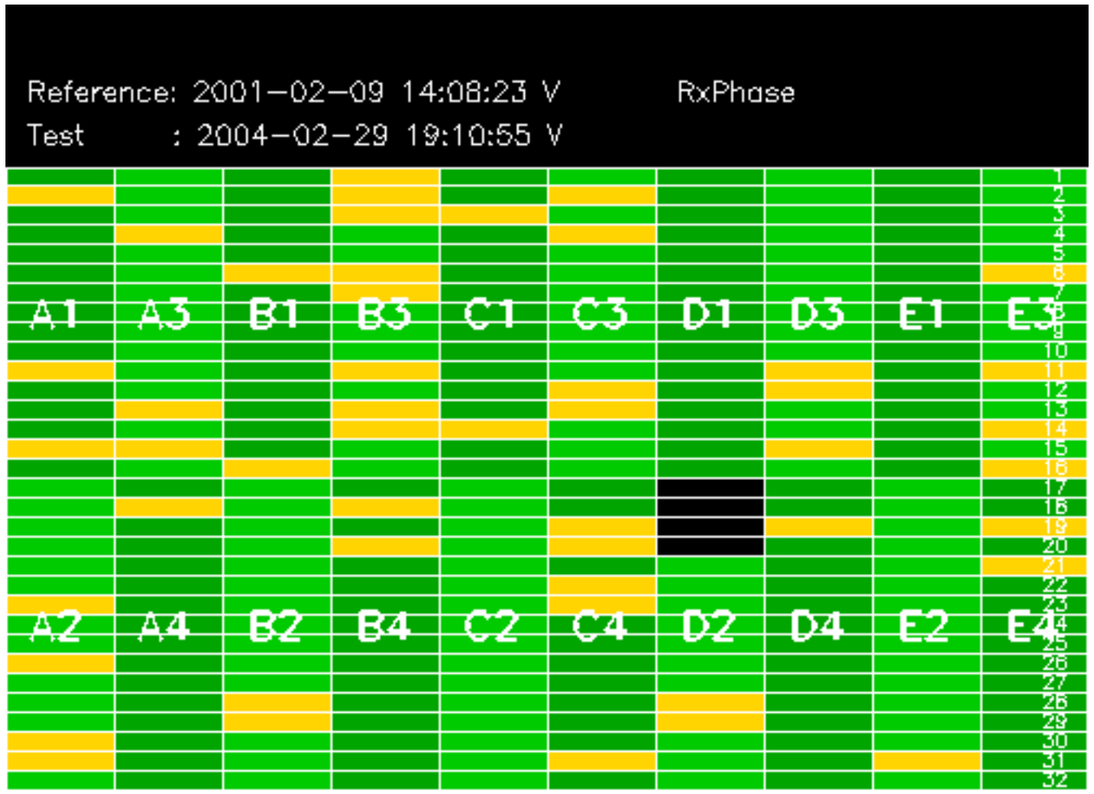
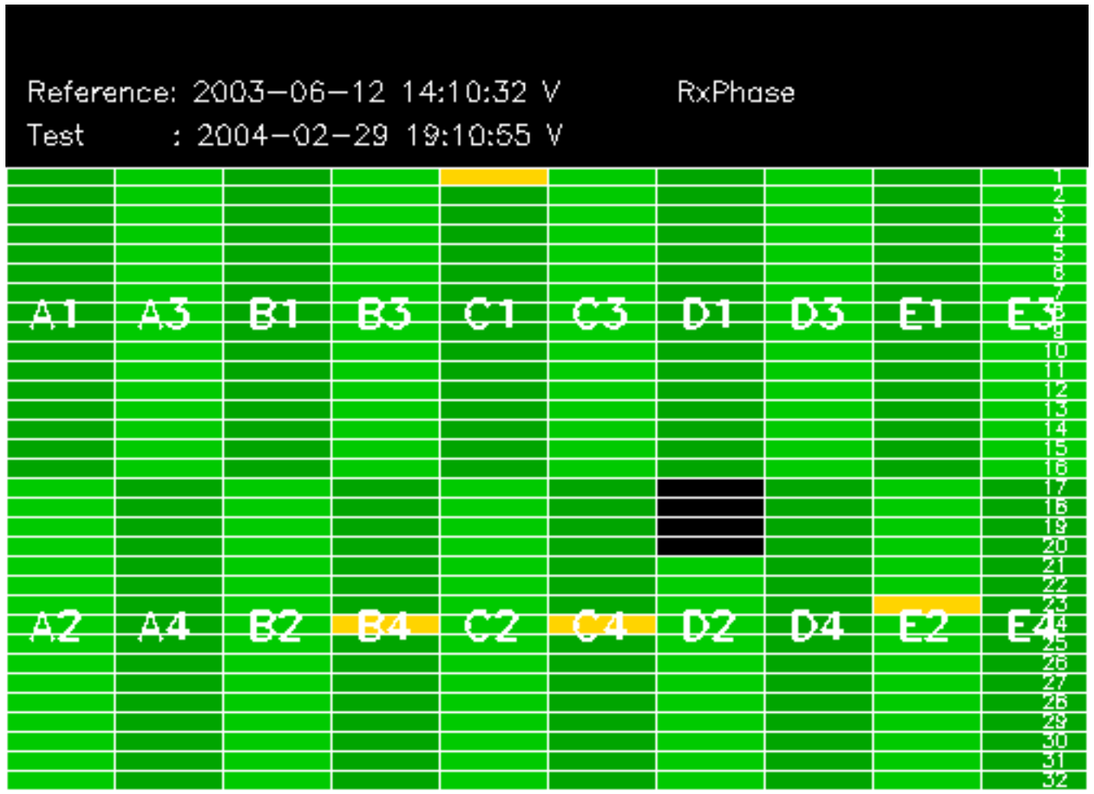

Reference: 2003-06-12 14:08:52 H
Test : 2004-02-29 19:09:35 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-02-29 19:10:55 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 : 2004-02-29 19:10:55 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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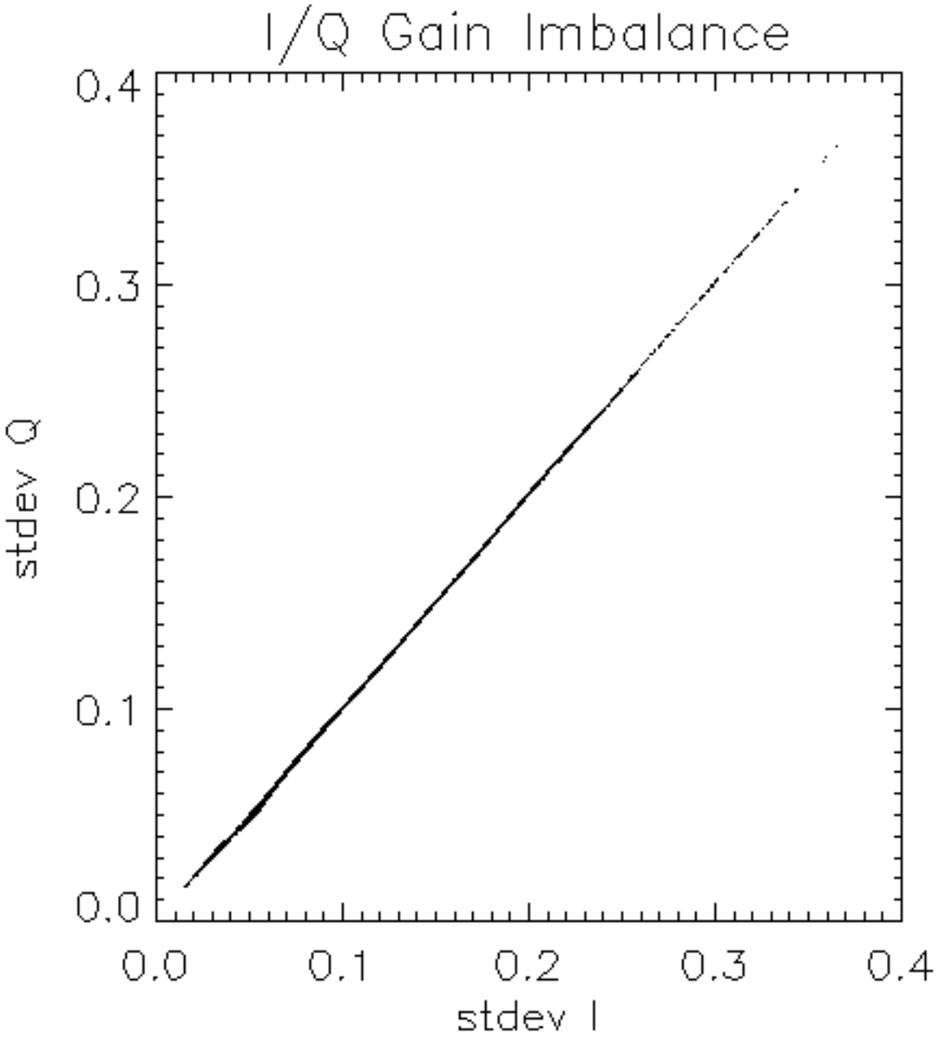
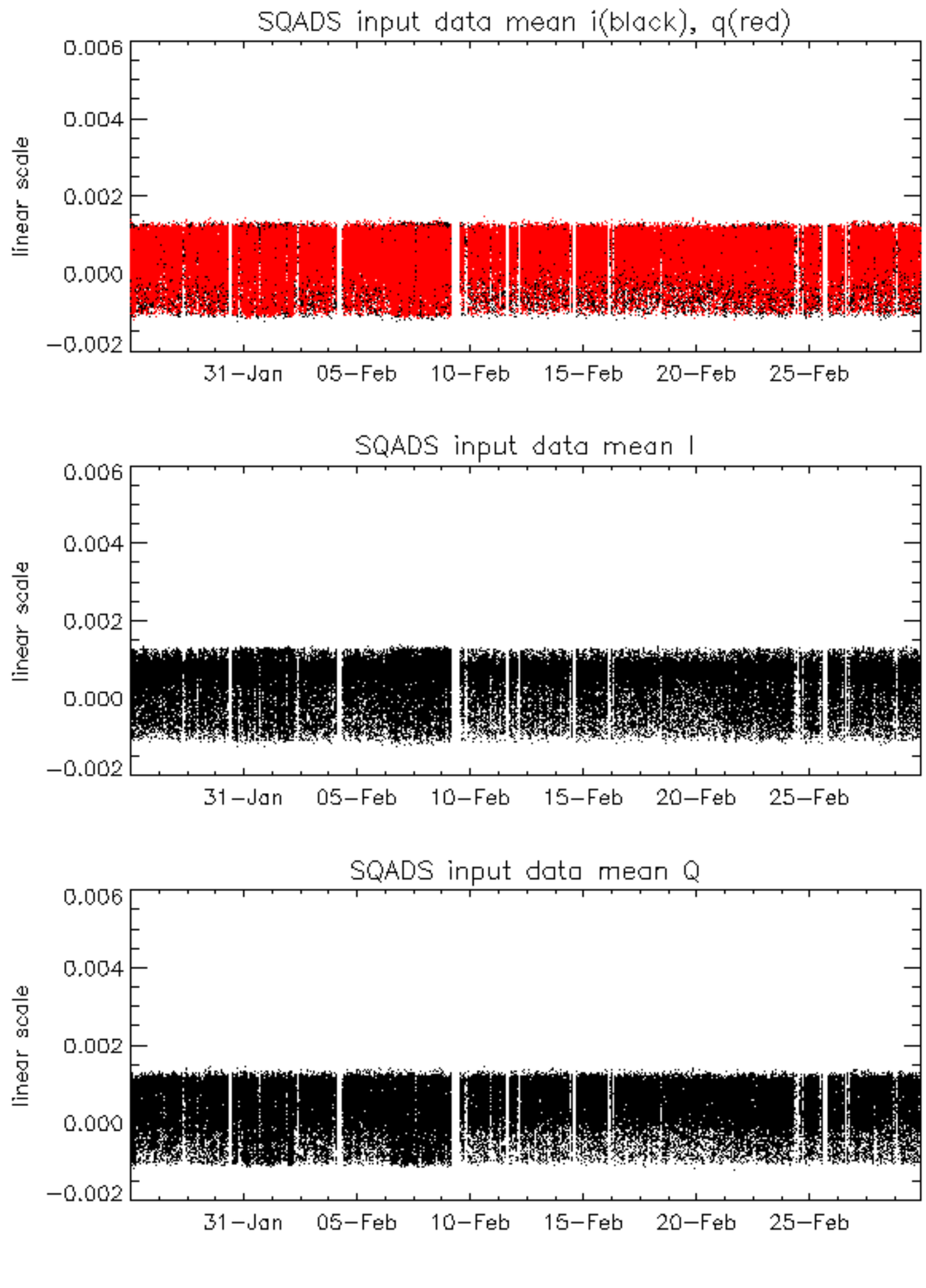
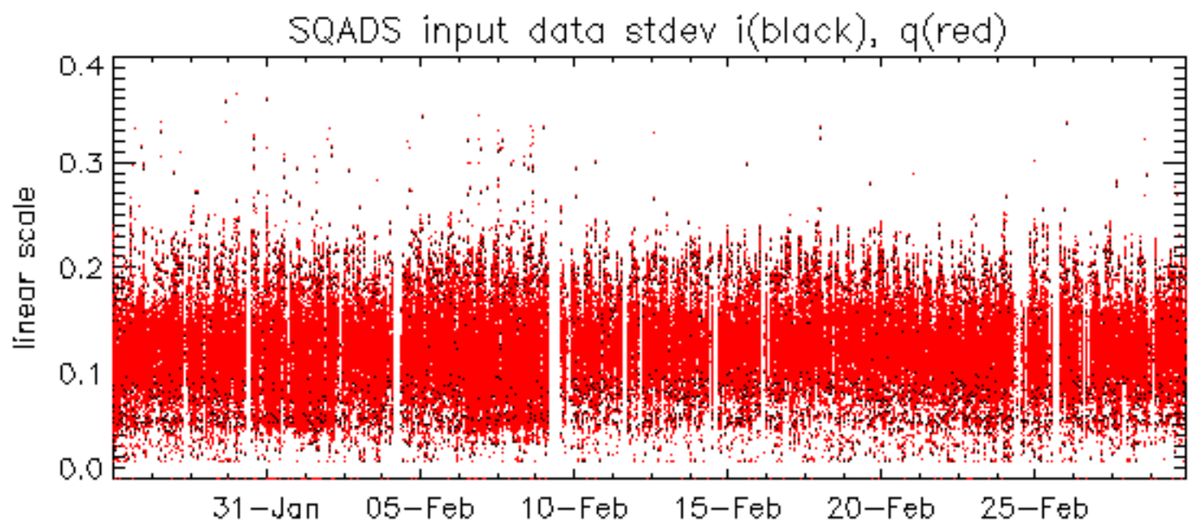
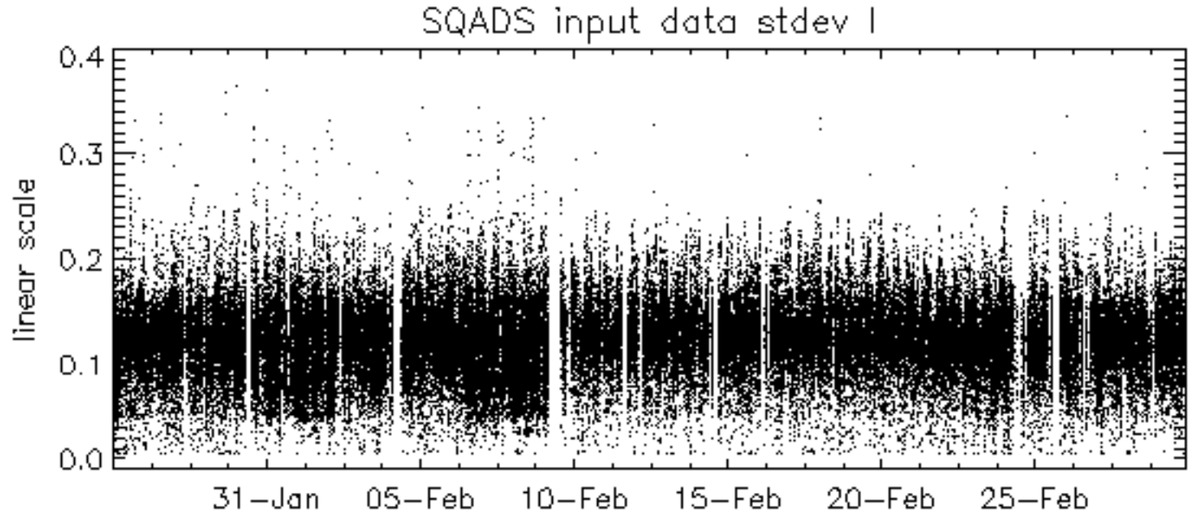
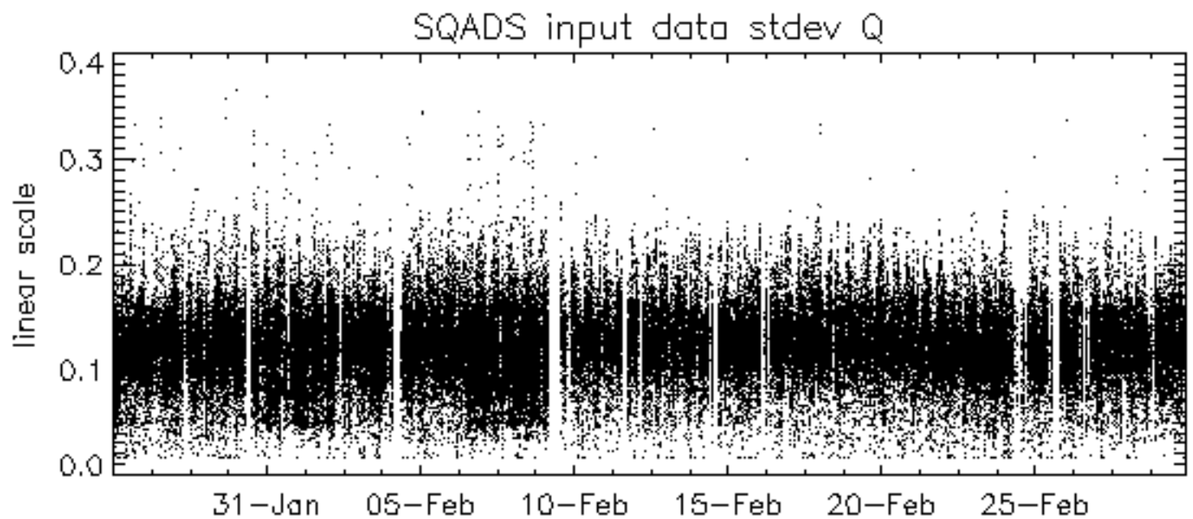
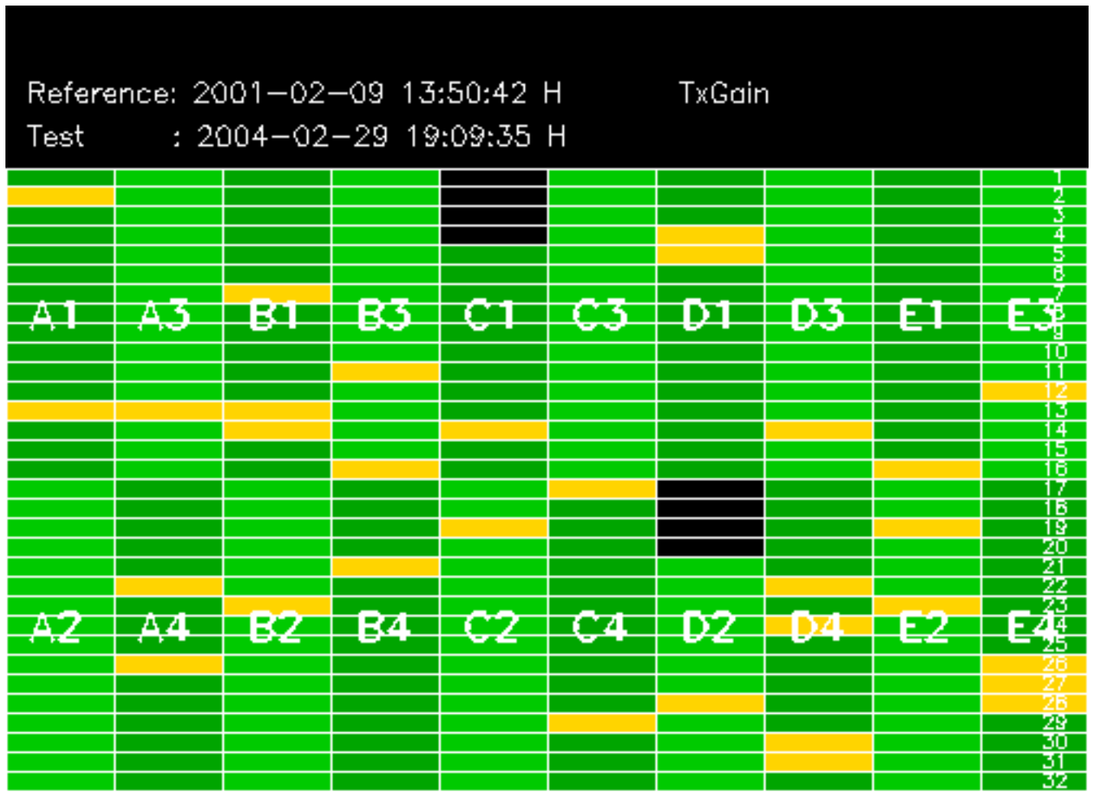

I/Q Gain Imbalance
stdev Q
stdev I
0.0
0.1
0.2
0.3
0.4

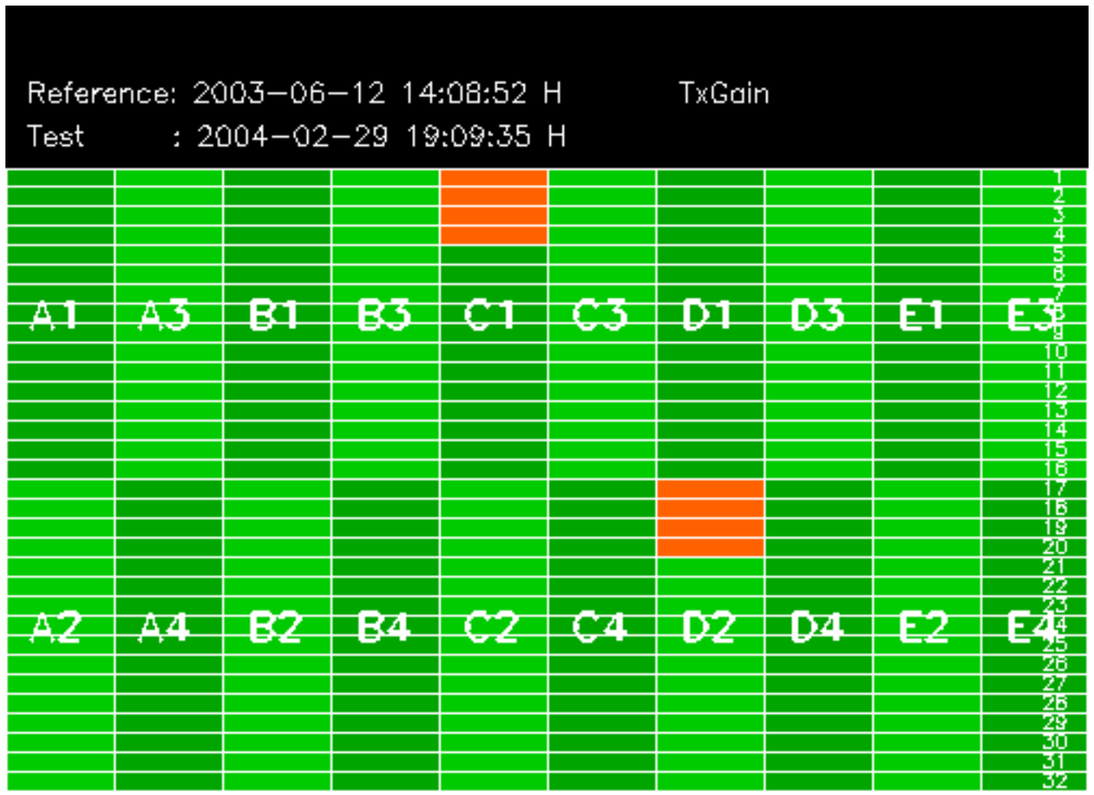

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jan
05−Feb
10−Feb
15−Feb
20−Feb
25−Feb
SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jan
05−Feb
10−Feb
15−Feb
20−Feb
25−Feb
SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002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


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
31-Jan
05-Feb
10-Feb
15-Feb
20-Feb
25-Feb


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
31-Jan
05-Feb
10-Feb
15-Feb
20-Feb
25-Feb


Reference: 2001-02-09 13:50:42 H
Test : 2004-02-29 19:09:35 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 : 2004-02-29 19:09:35 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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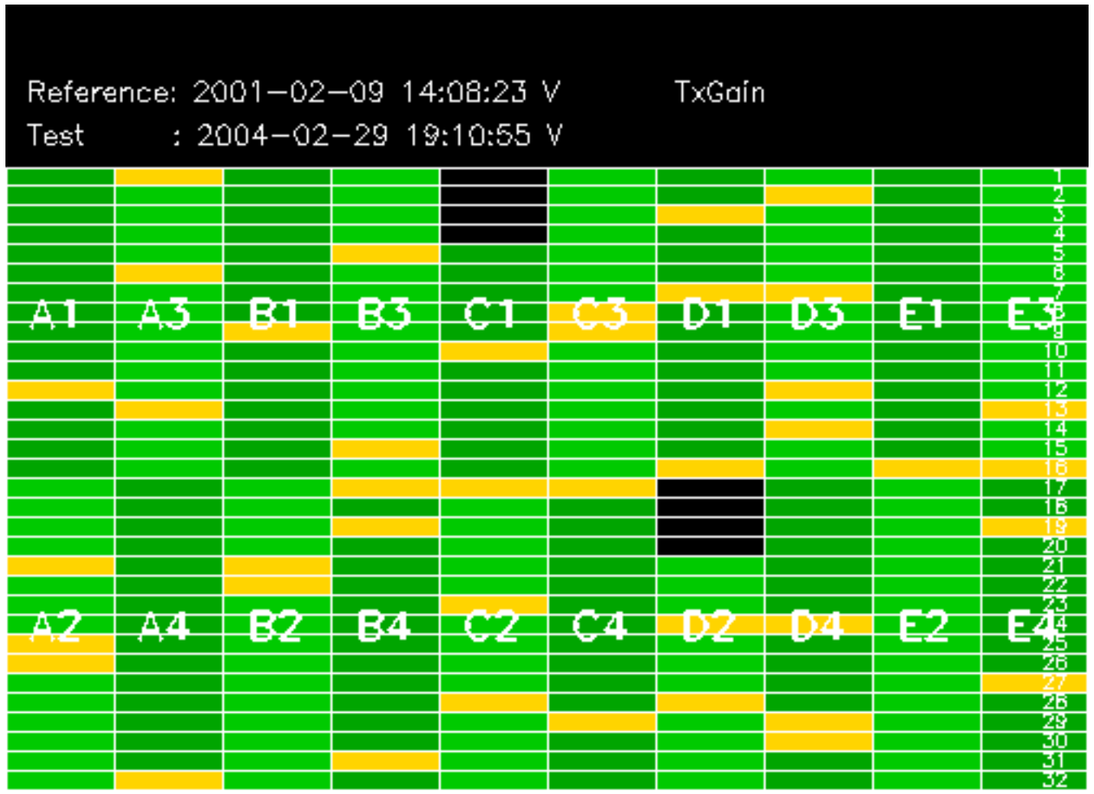
Reference: 2001-02-09 14:08:23 V
Test : 2004-02-29 19:10:55 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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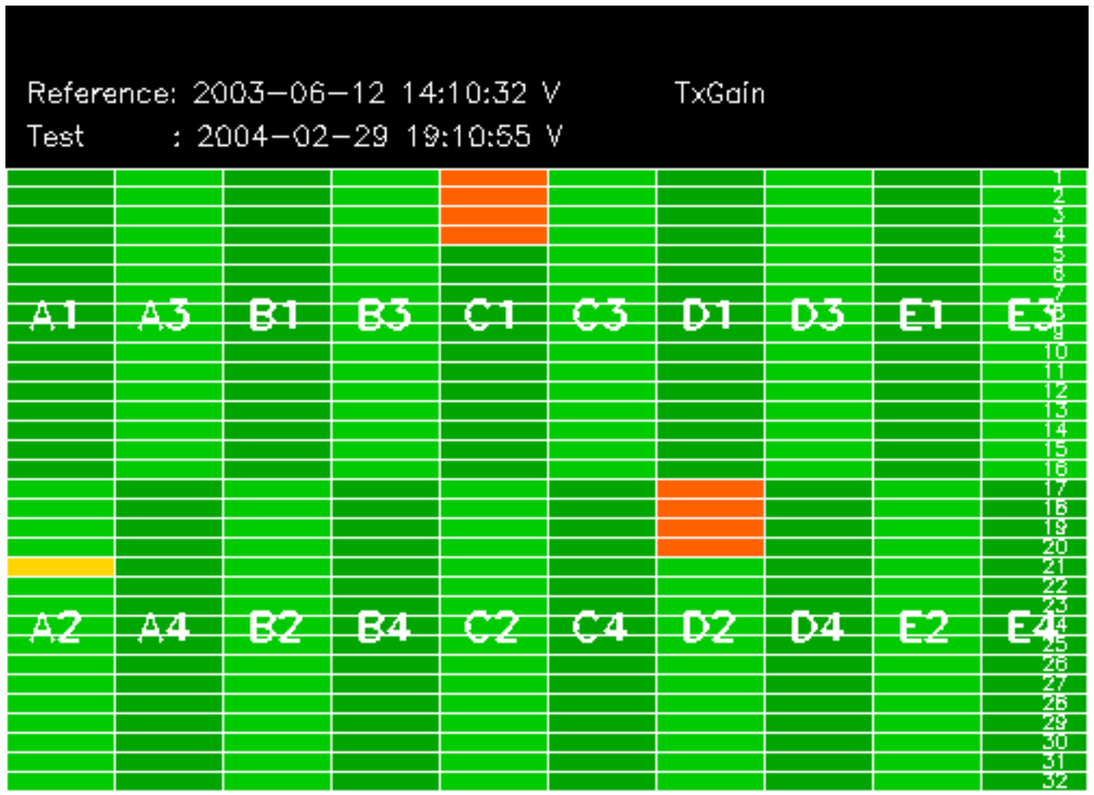
Reference: 2003-06-12 14:10:32 V
Test : 2004-02-29 19:10:55 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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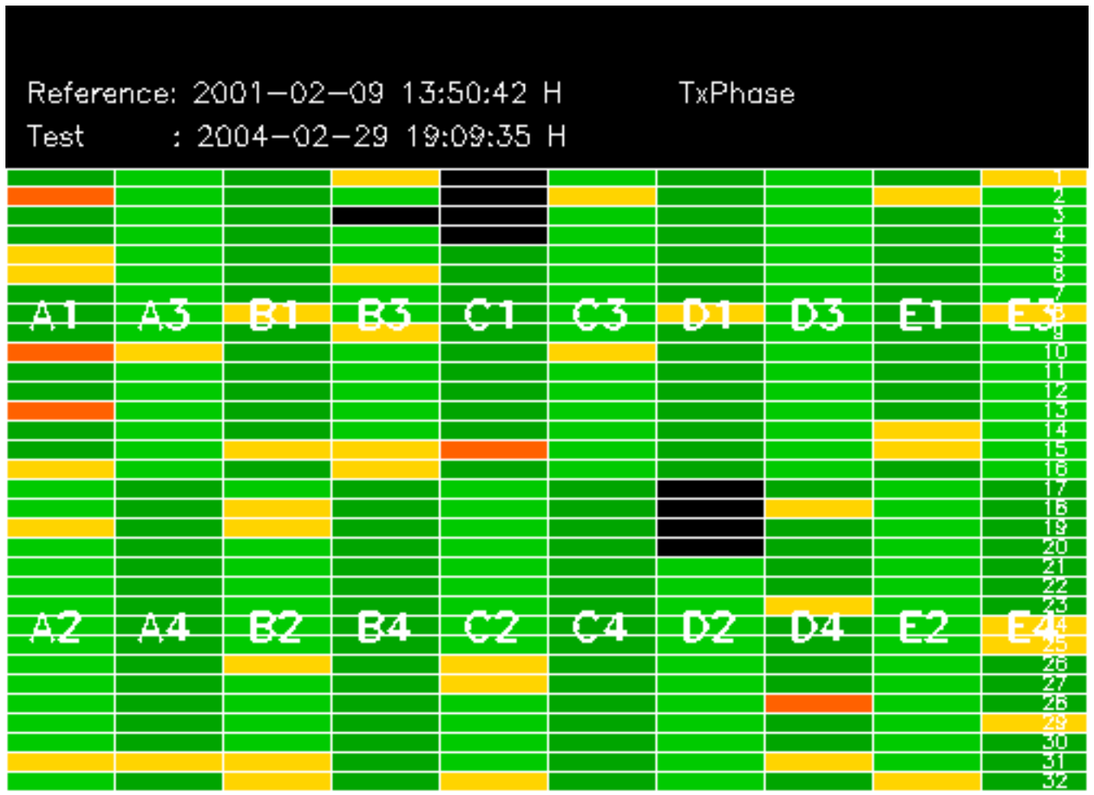
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-02-29 19:09:35 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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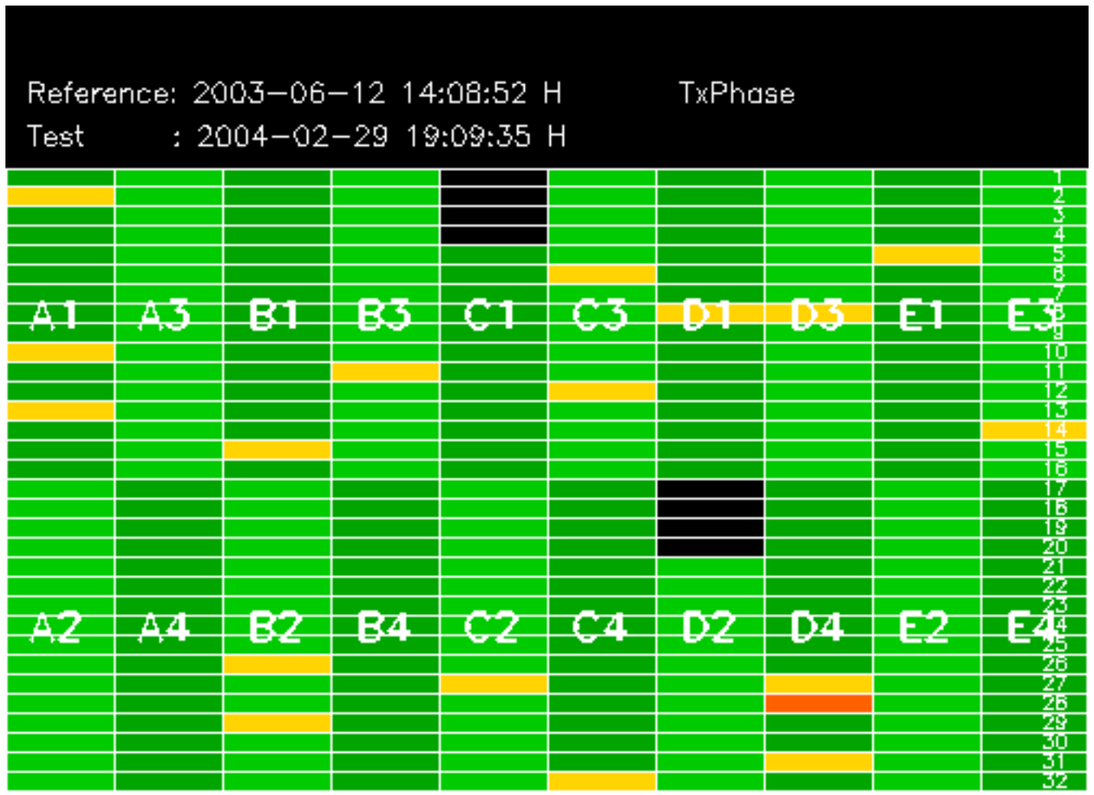
Reference: 2003-06-12 14:08:52 H
Test : 2004-02-29 19:09:35 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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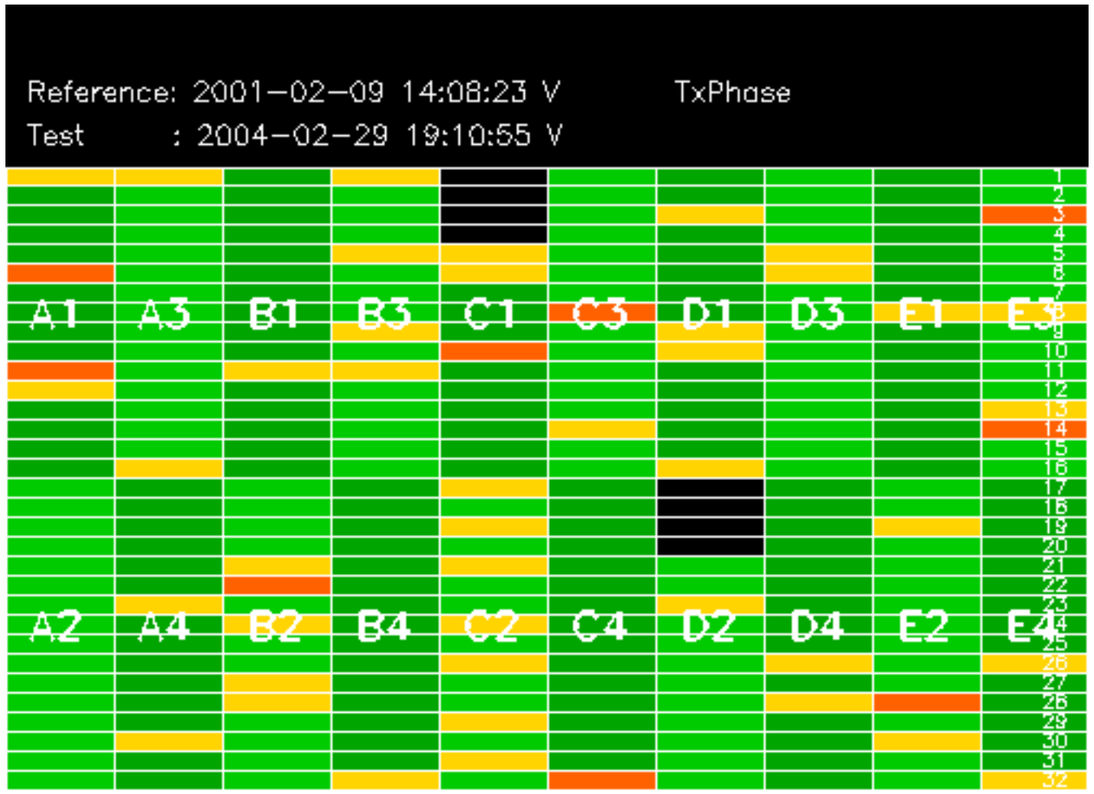
Reference: 2001-02-09 14:08:23 V
Test : 2004-02-29 19:10:55 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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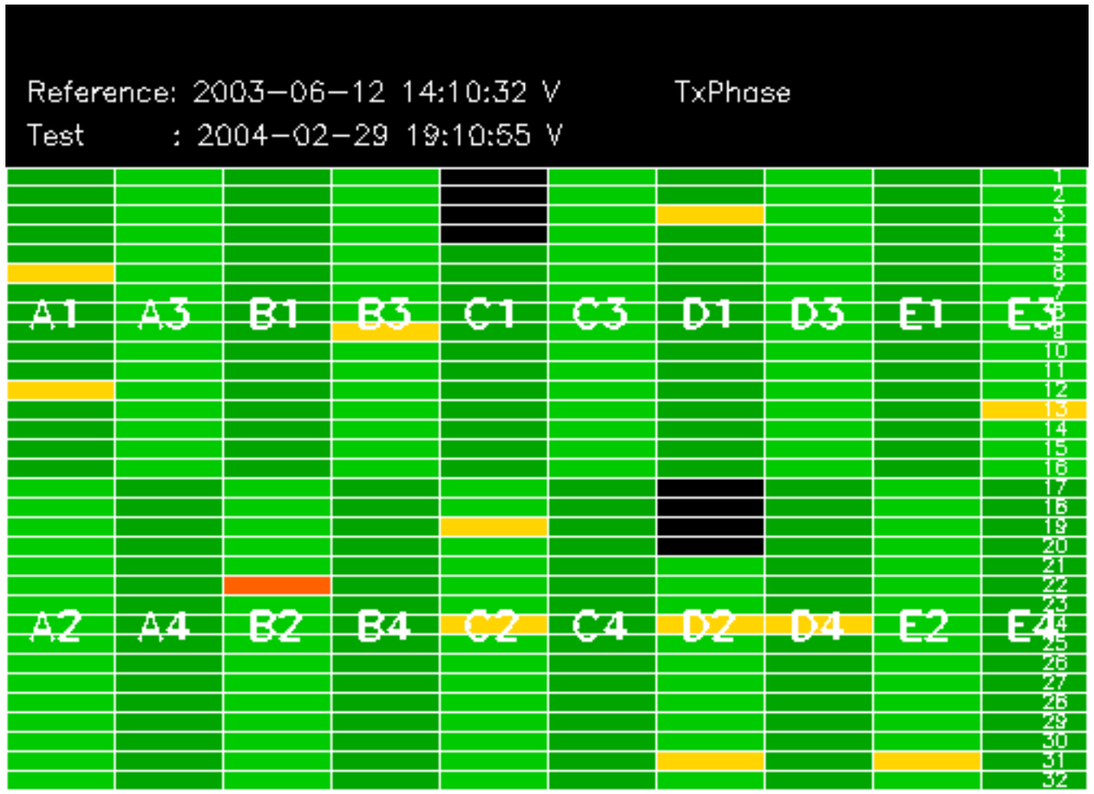
Reference: 2003-06-12 14:10:32 V
Test : 2004-02-29 19:10:55 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
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No unavailabilities during the reported period.