REPORT OF 040317

last update on Wed Mar 17 13:35:07 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	20040316 204841
H	20040316 204721

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	-3.617719	0.006031	0.044193
7	P1	-3.330837	0.012545	0.076018
11	P1	-4.796906	0.265891	0.339900
15	P1	-4.994811	0.047925	-0.085682
19	P1	-3.345808	0.073407	-0.094184
22	P1	-4.542870	0.071250	-0.084465
24	P1	-5.108017	0.091252	-0.051402
28	P1	-4.572802	0.077334	-0.118649

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.381977	0.081850	-0.016450
7	P2	-22.904329	0.131492	-0.010901
11	P2	-16.038973	0.154927	0.044636
15	P2	-7.180529	0.090604	0.026052
19	P2	-9.476083	0.170737	0.009213
22	P2	-17.683825	0.102911	0.054955
24	P2	-21.039202	0.109578	-0.027337
28	P2	-16.597063	0.087342	0.007533

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.128589	0.003001	0.005816
7	P3	-8.128586	0.003001	0.005829
11	P3	-8.128586	0.003001	0.005833
15	P3	-8.128586	0.003001	0.005809
19	P3	-8.128579	0.003000	0.005775
22	P3	-8.128572	0.003000	0.005743
24	P3	-8.128570	0.003000	0.005714

28	P3	-8.128511	0.002997	0.005607

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	0.000470033
	stdev	2.35463e-07
MEAN Q	mean	0.000494074
	stdev	2.60254e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127292
	stdev	0.00111306
STDEV Q	mean	0.127522
	stdev	0.00112571

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

6.1 - Unbiased Doppler Error

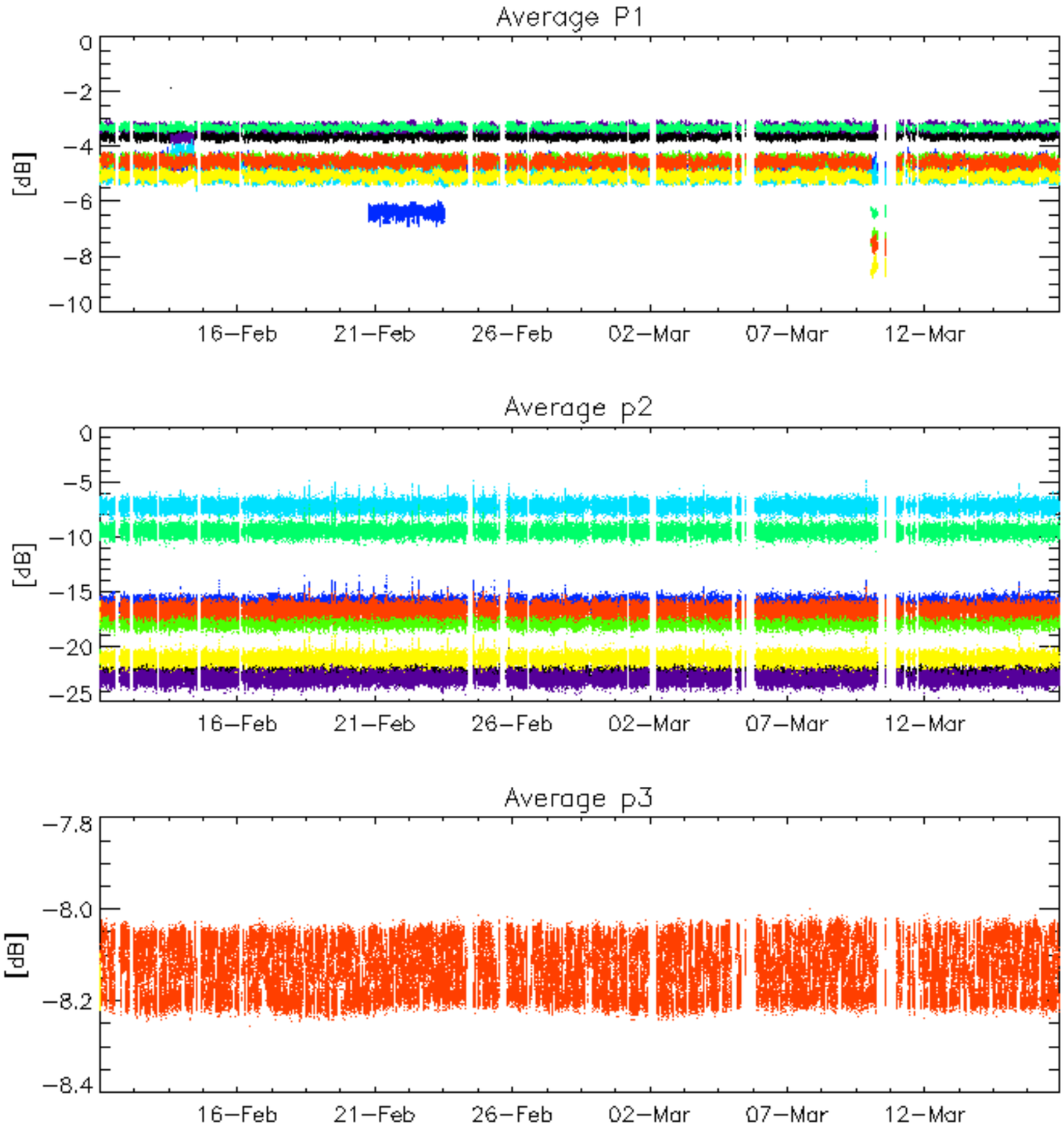
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

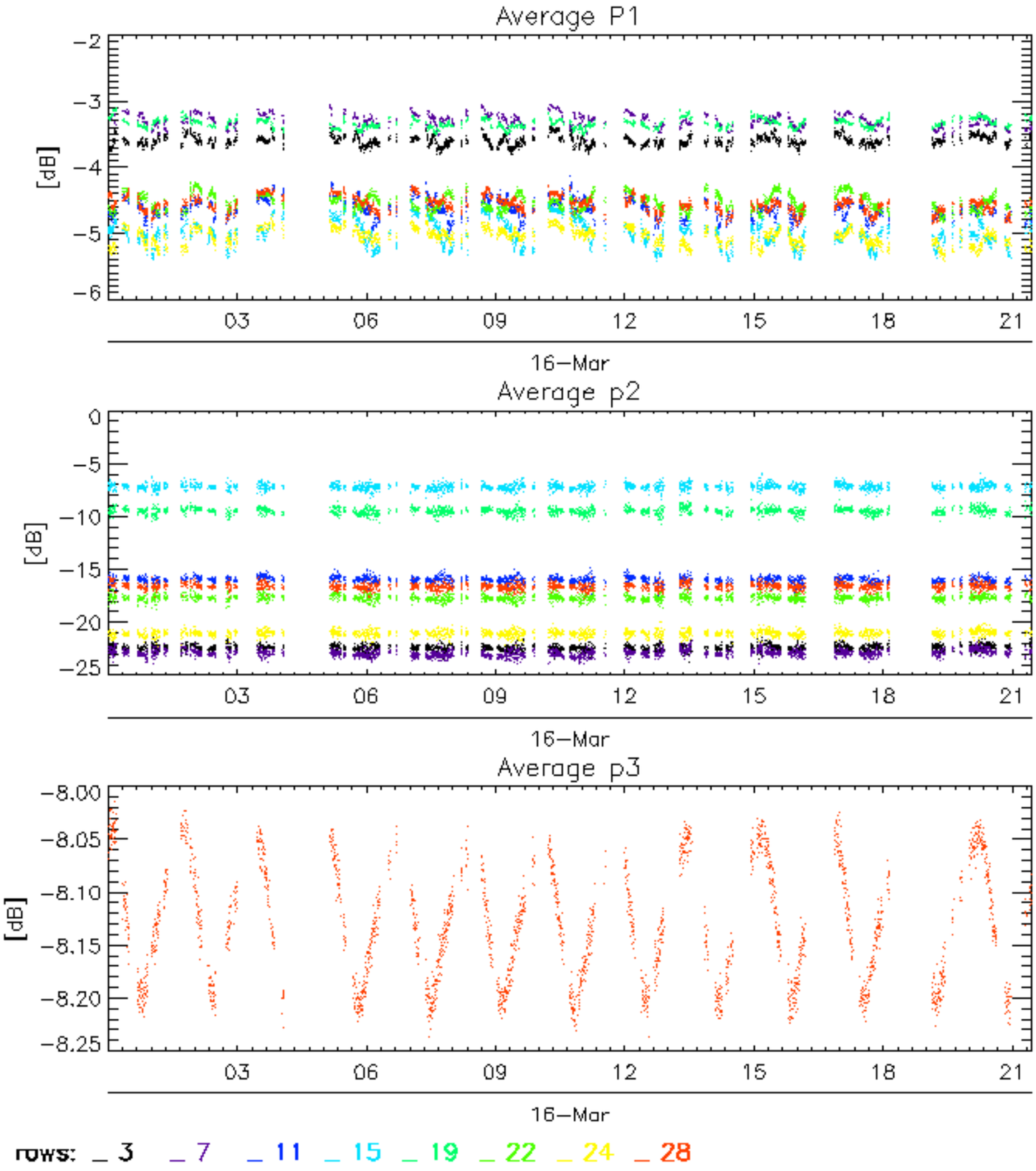
6.2 - Absolute Doppler

Evolution of Absolute Doppler
Acsending
Descending

6.3 - Doppler evolution versus ANX

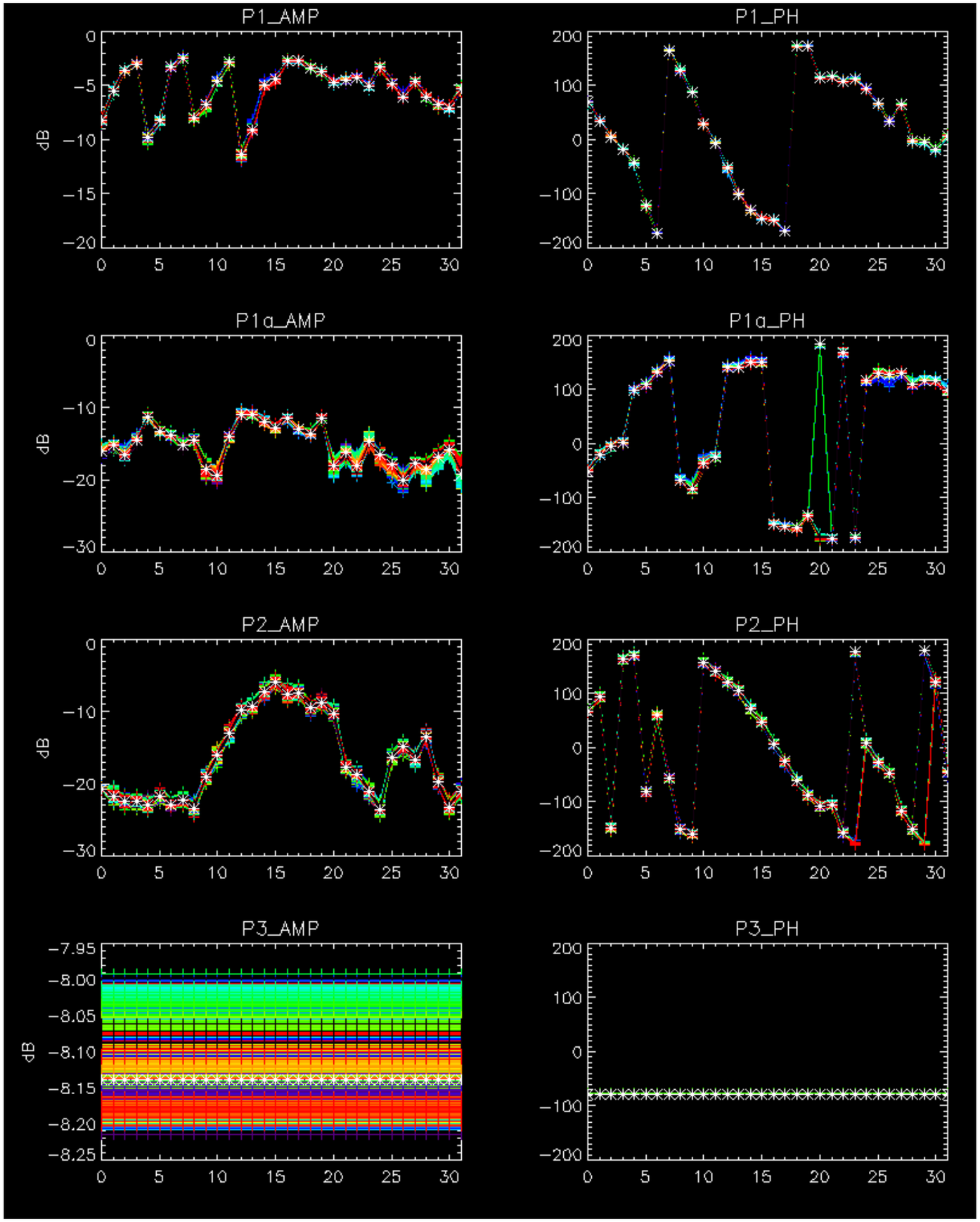
Evolution Doppler error versus ANX
⊠


Average P1
[dB]
0
−2
−4
−6
−8
−10
16−Feb
21−Feb
26−Feb
02−Mar
07−Mar
12−Mar
Average p2
[dB]
0
−5
−10
−15
−20
−25
16−Feb
21−Feb
26−Feb
02−Mar
07−Mar
12−Mar
Average p3
[dB]
−7.8
−8.0
−8.2
−8.4
16−Feb
21−Feb
26−Feb
02−Mar
07−Mar
12−Mar
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28


Average P1
[dB]
−2
−3
−4
−5
−6
03
06
09
12
15
18
21
16−Mar
Average p2
[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
16−Mar
Average p3
[dB]
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
03
06
09
12
15
18
21
16−Mar
rows: 3 7 11 15 19 22 24 28

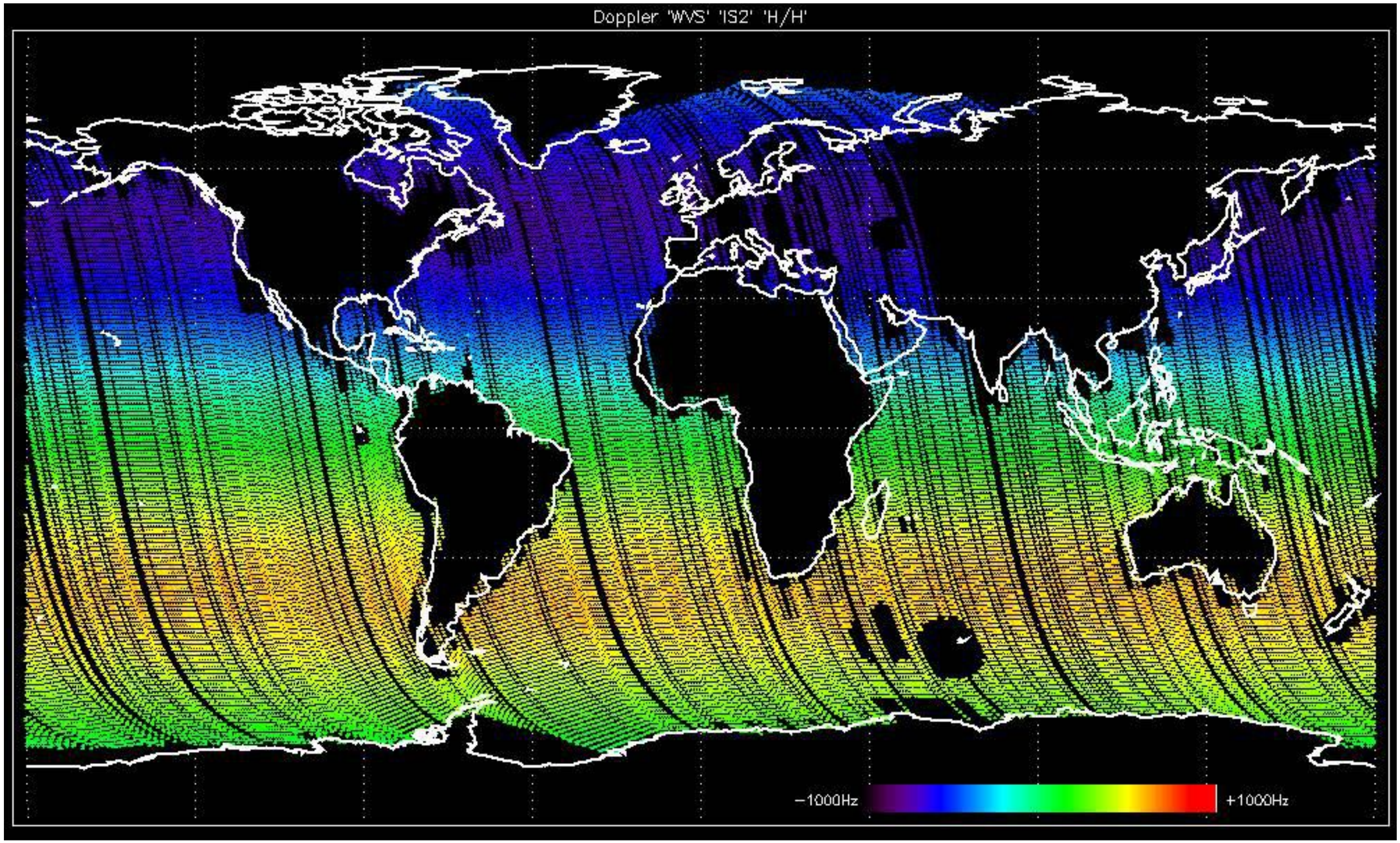
No anomalies observed on available browse products

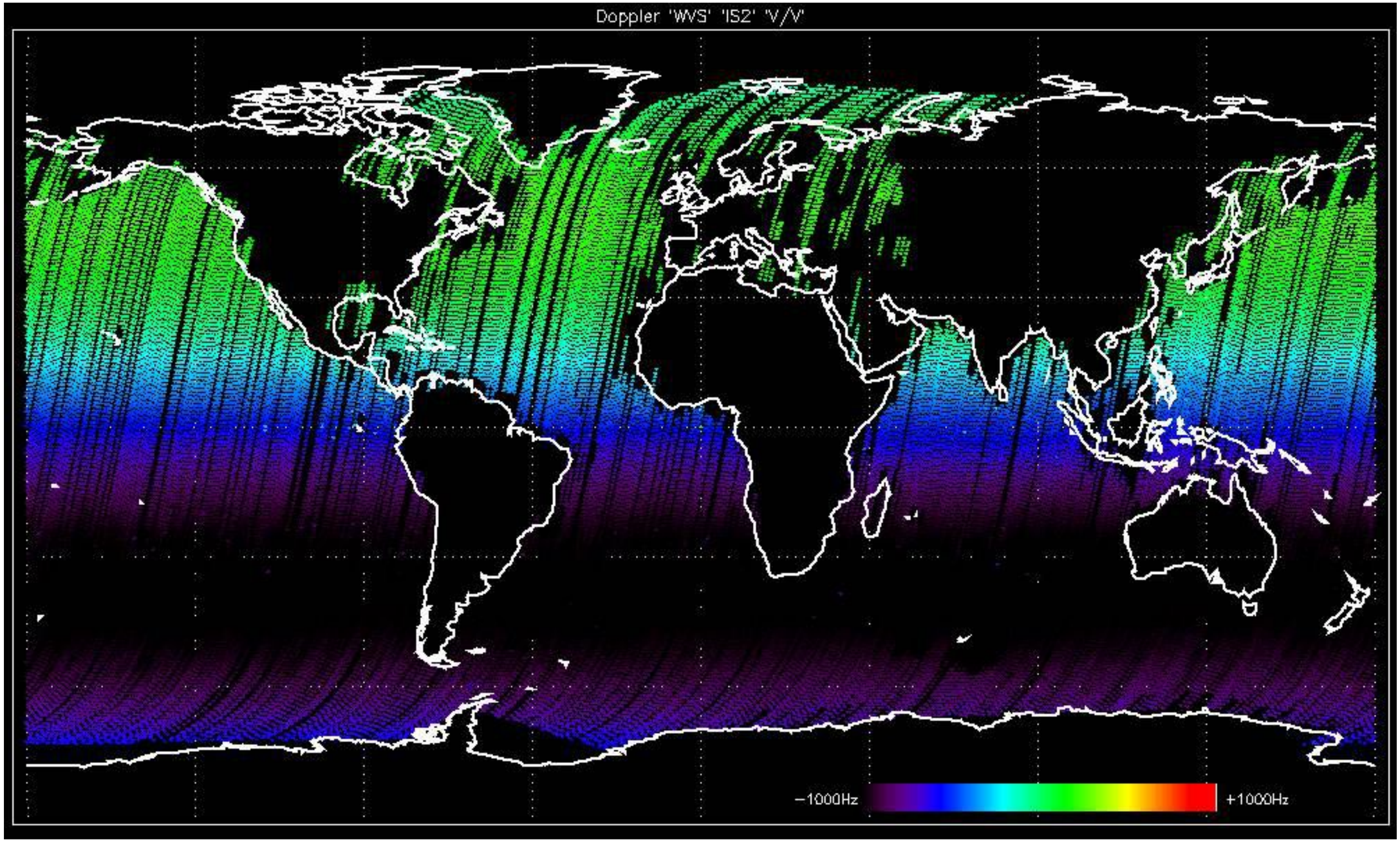
No anomalies observed.

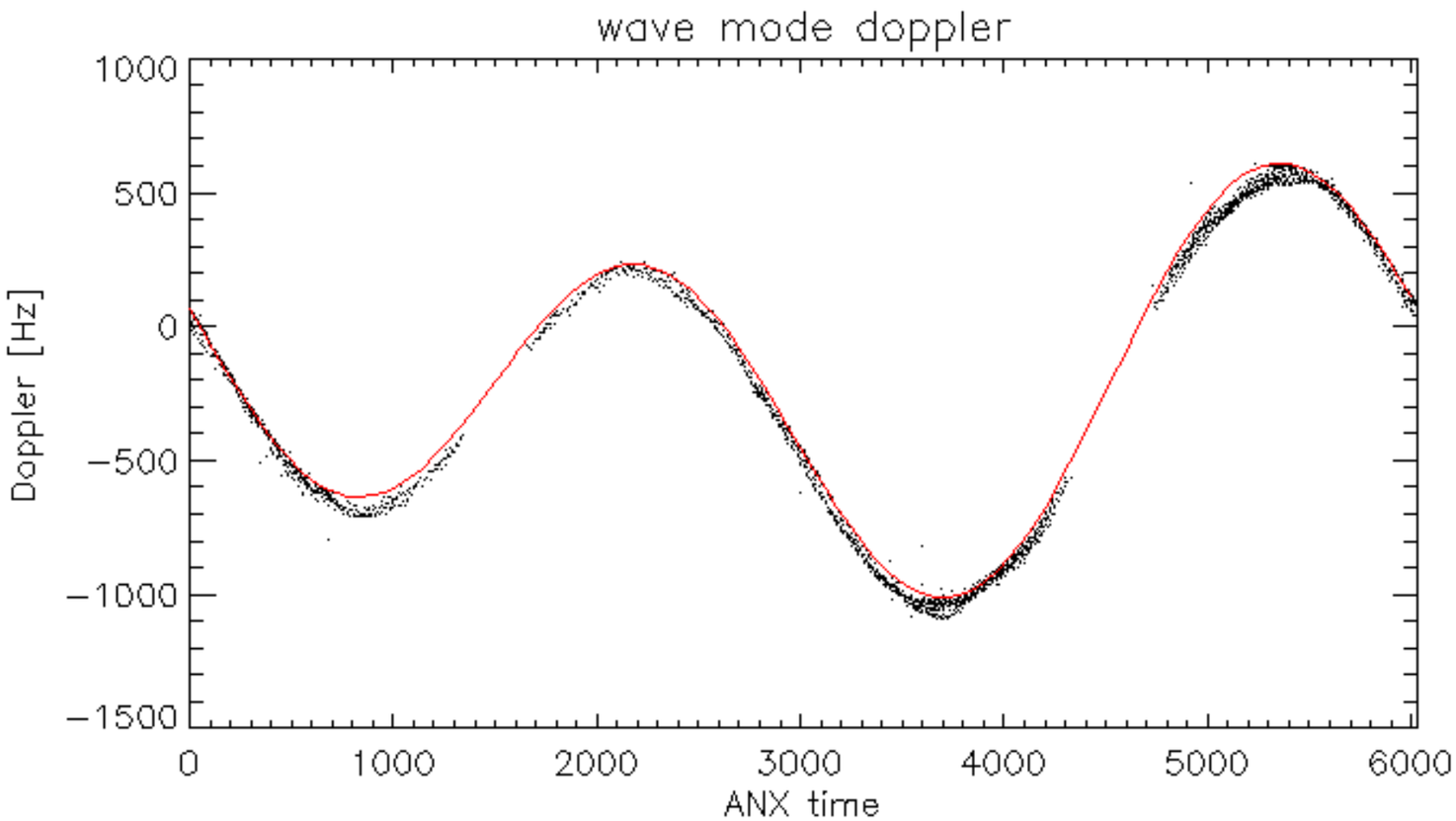

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.95
−8.00
−8.05
−8.10
−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

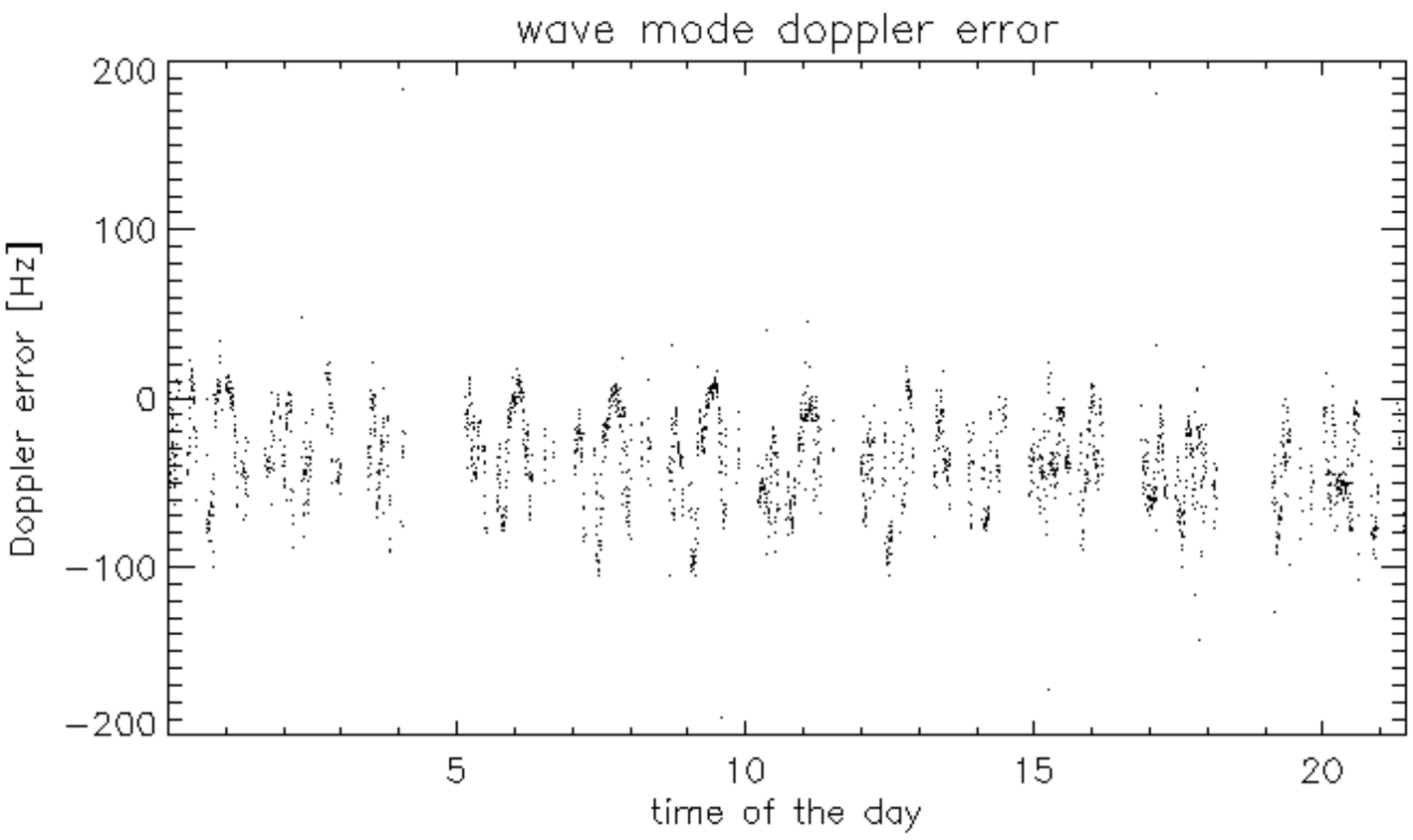
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

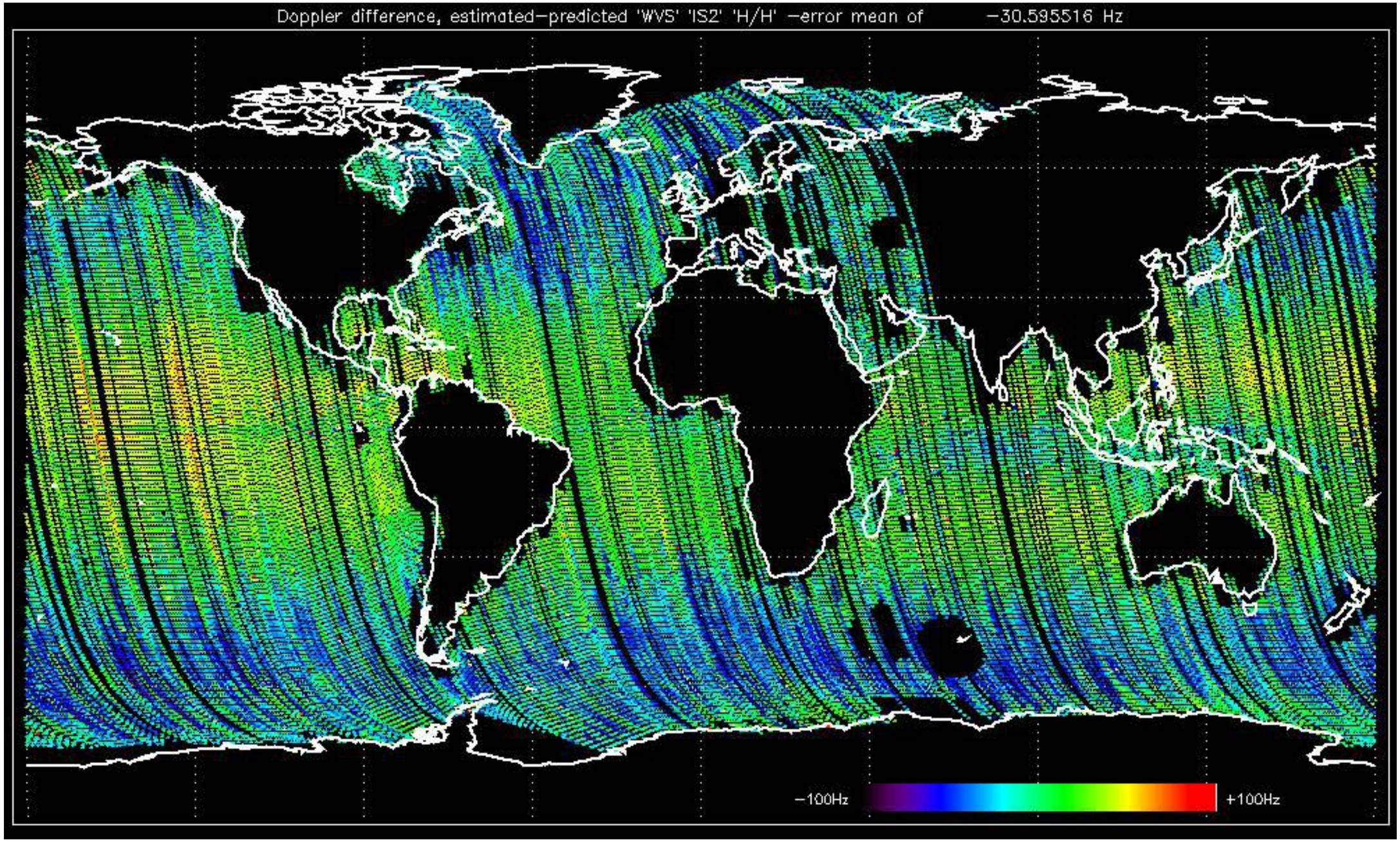
Preliminary report.The data is not yet controled

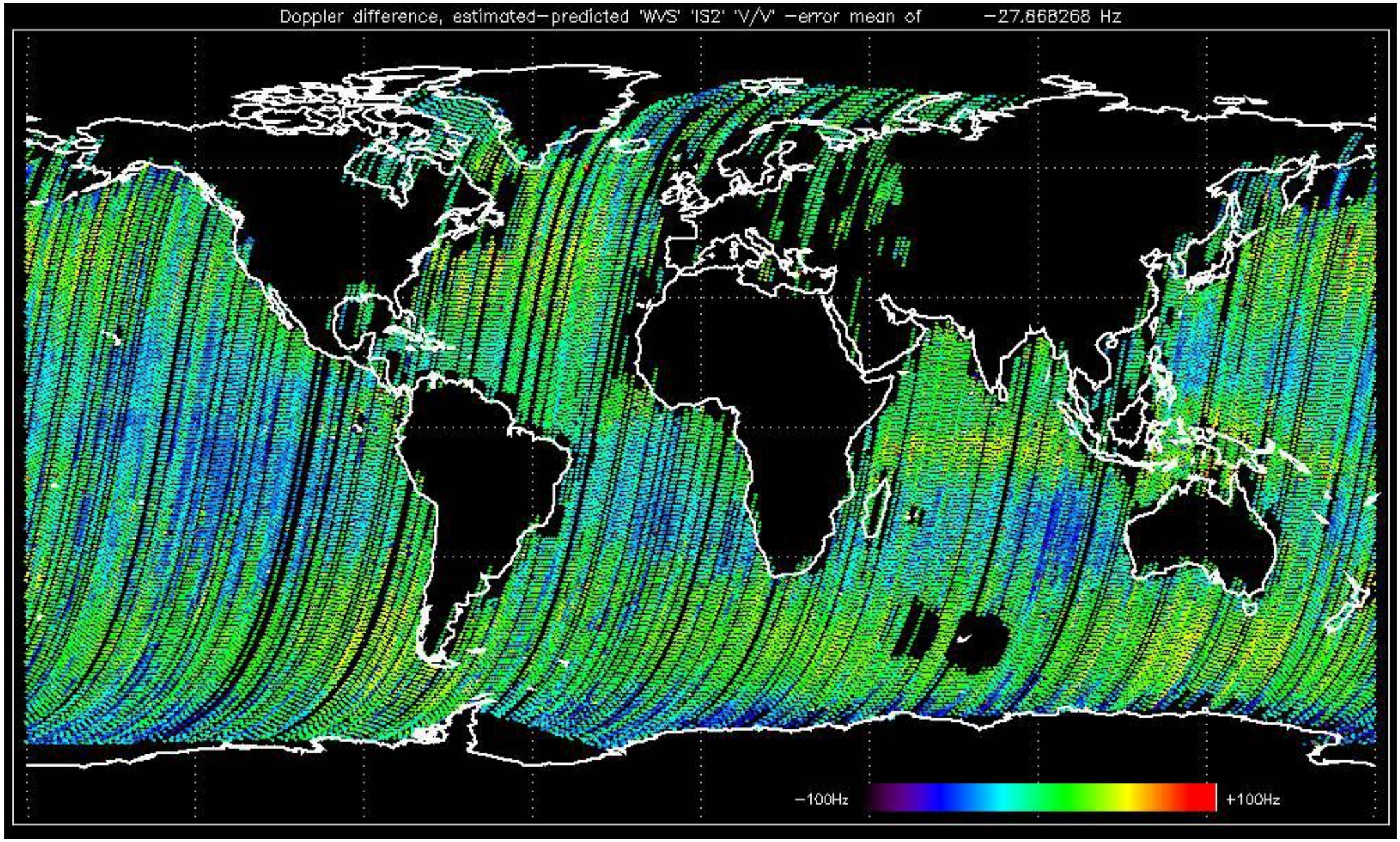

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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


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

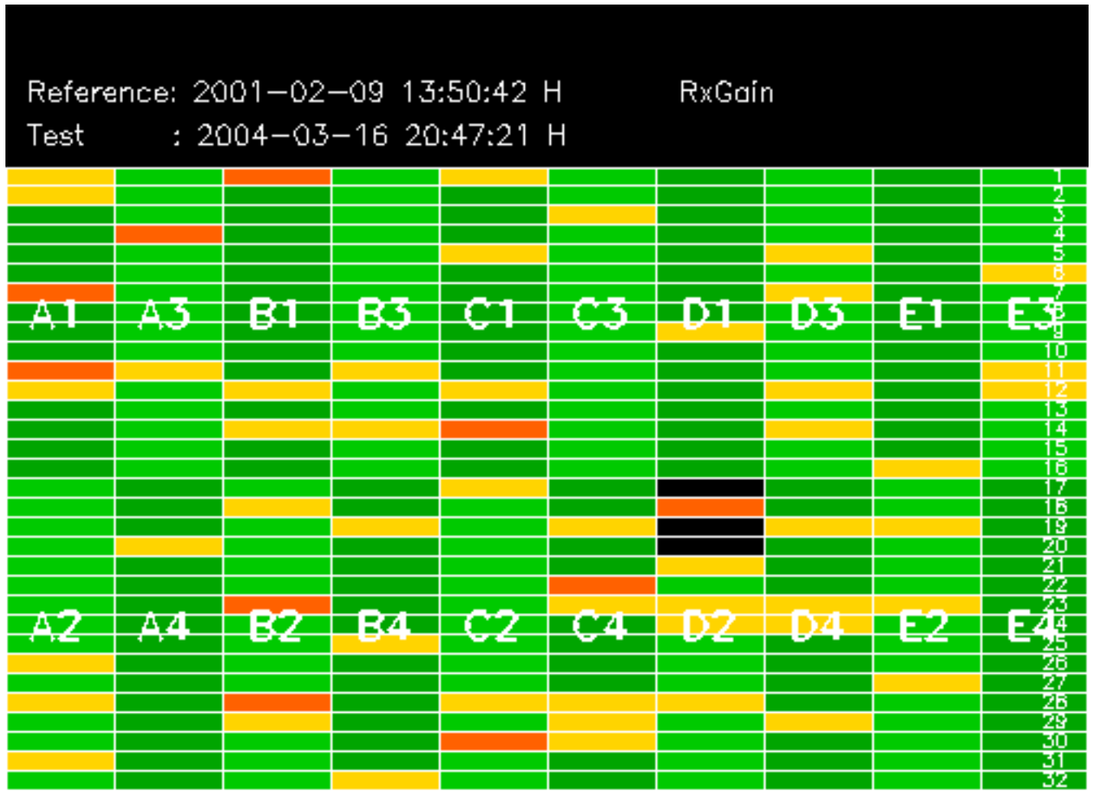

wave mode doppler error
Doppler error [Hz]
200
100
0
−100
−200
5
10
15
20
time of the day


Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of -30.595516 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of −27.868268 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 : 2004-03-16 20:47:21 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
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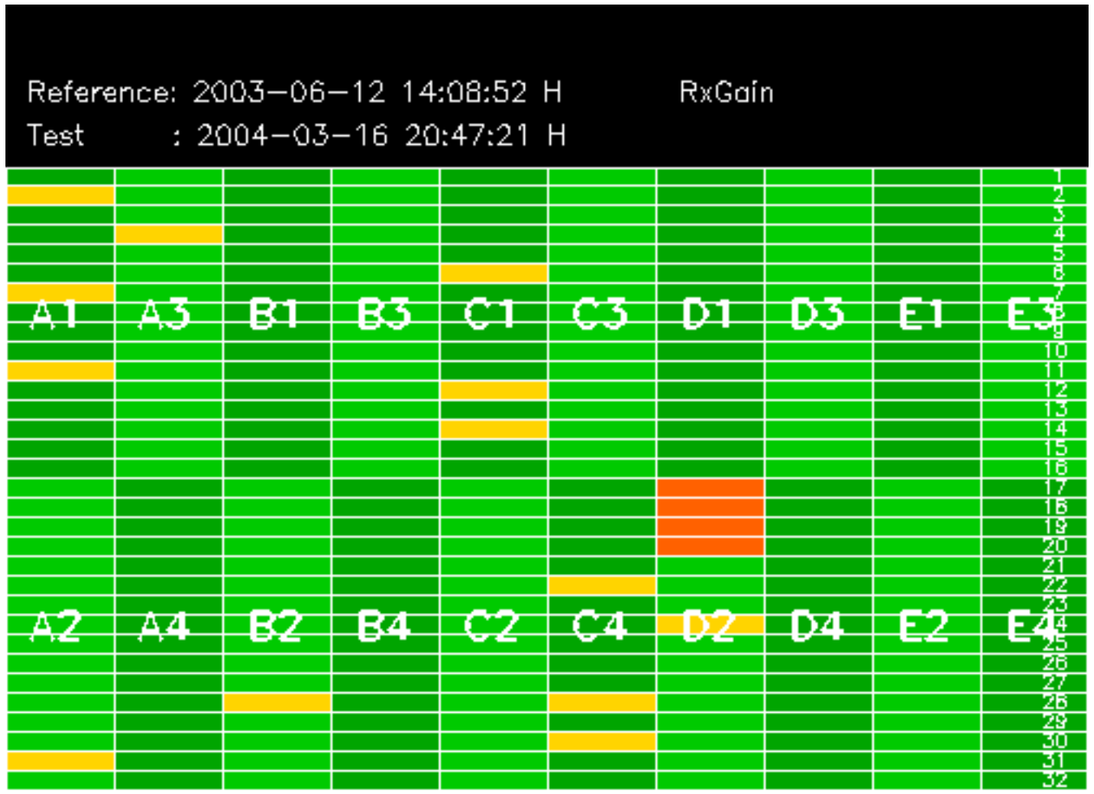
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-03-16 20:47:21 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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8
9
10
11
12
13
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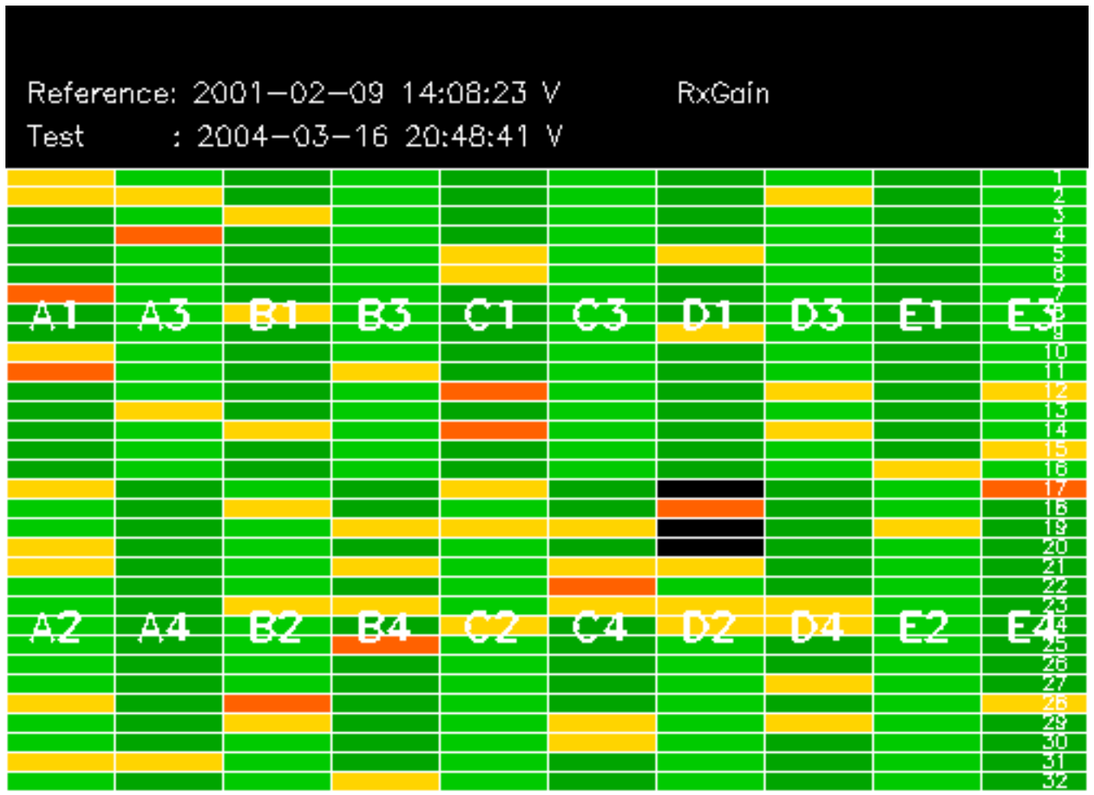
Reference: 2001-02-09 14:08:23 V
RxGain
Test : 2004-03-16 20:48:41 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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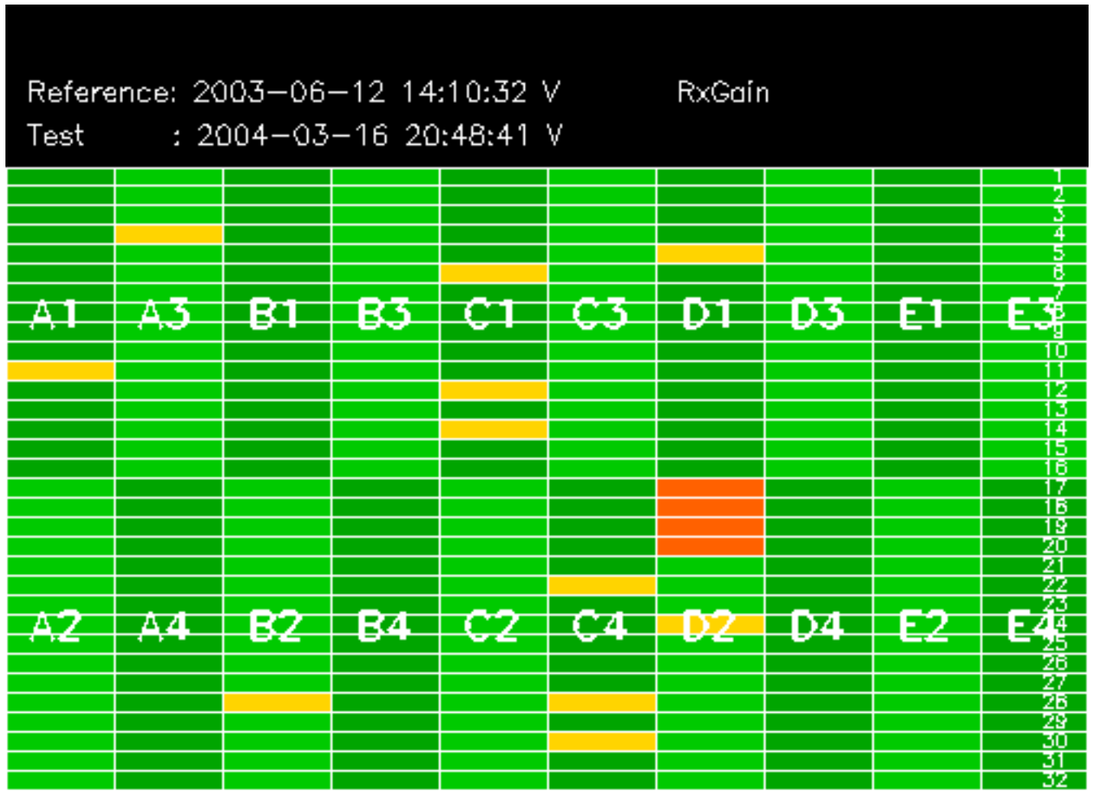
Reference: 2003-06-12 14:10:32 V
Test : 2004-03-16 20:48:41 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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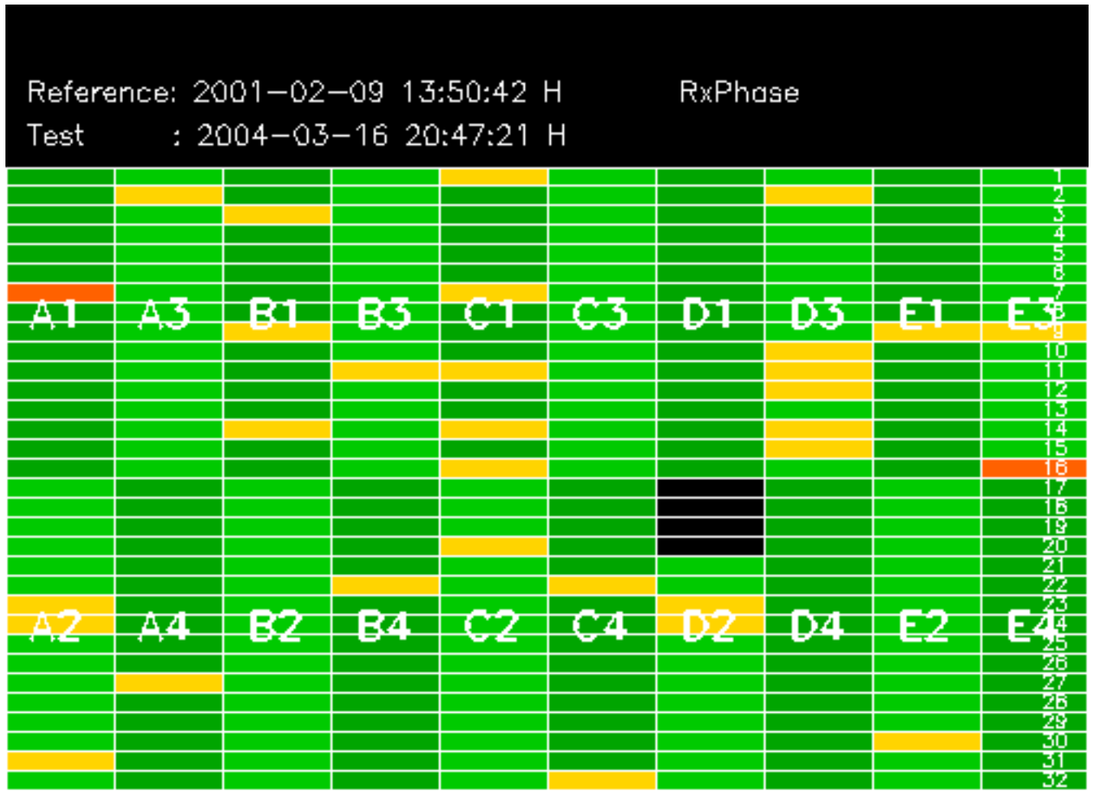
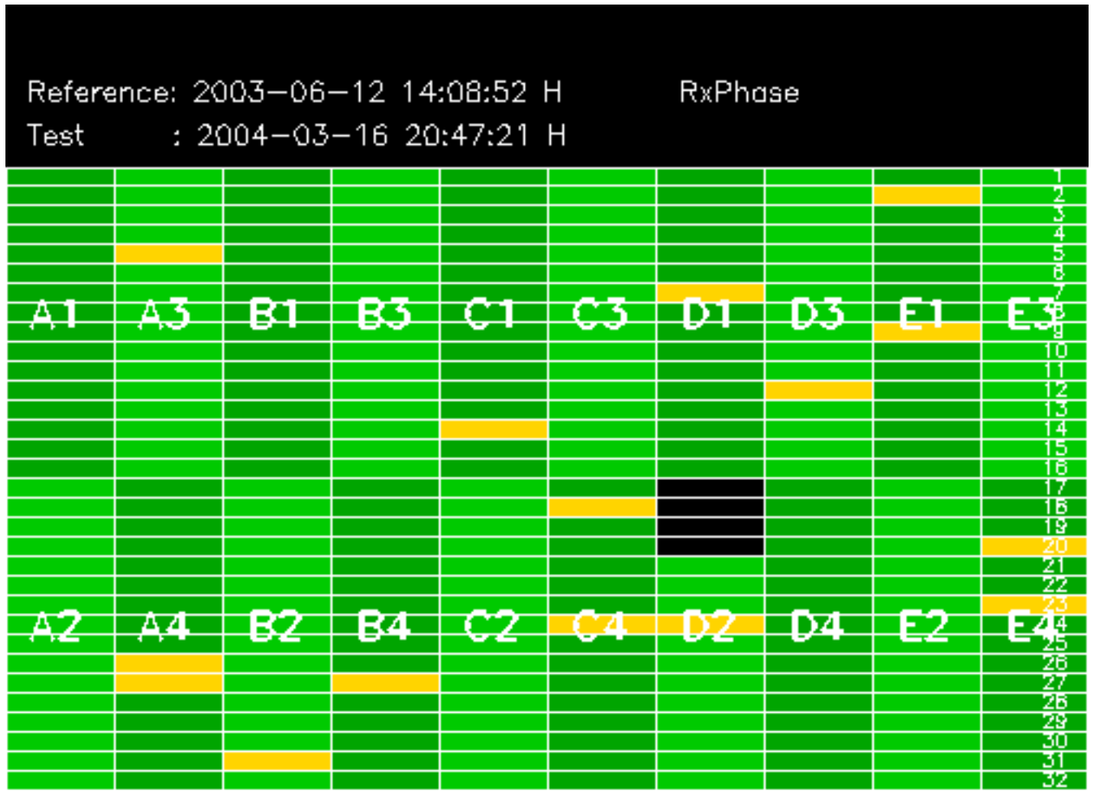

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-03-16 20:47:21 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-03-16 20:47:21 H
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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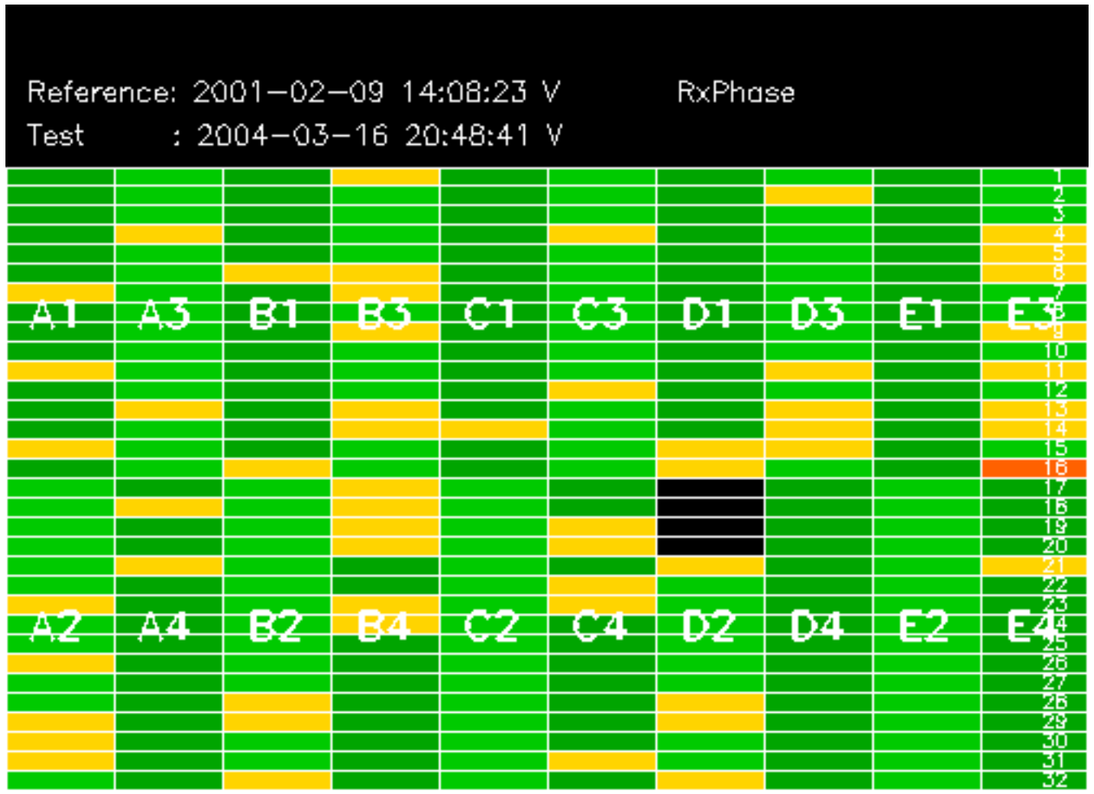
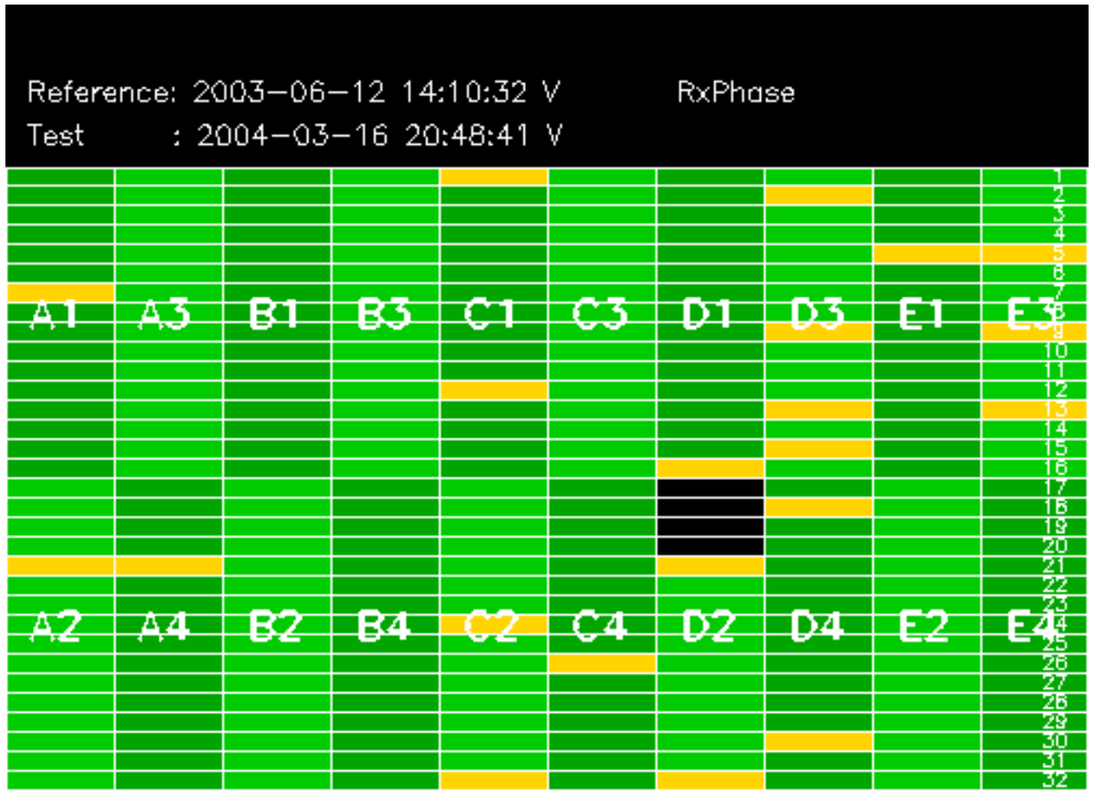

Reference: 2001-02-09 14:08:23 V
Test : 2004-03-16 20:48:41 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-03-16 20:48:41 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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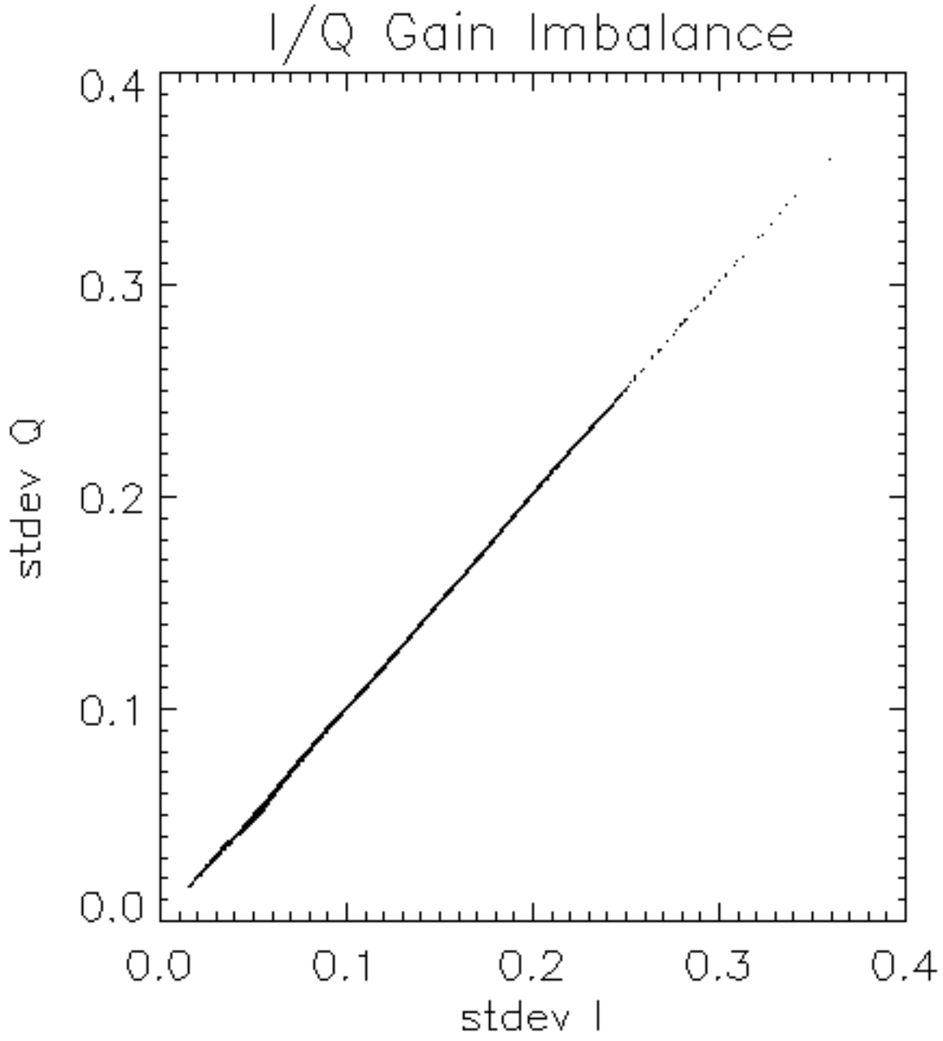
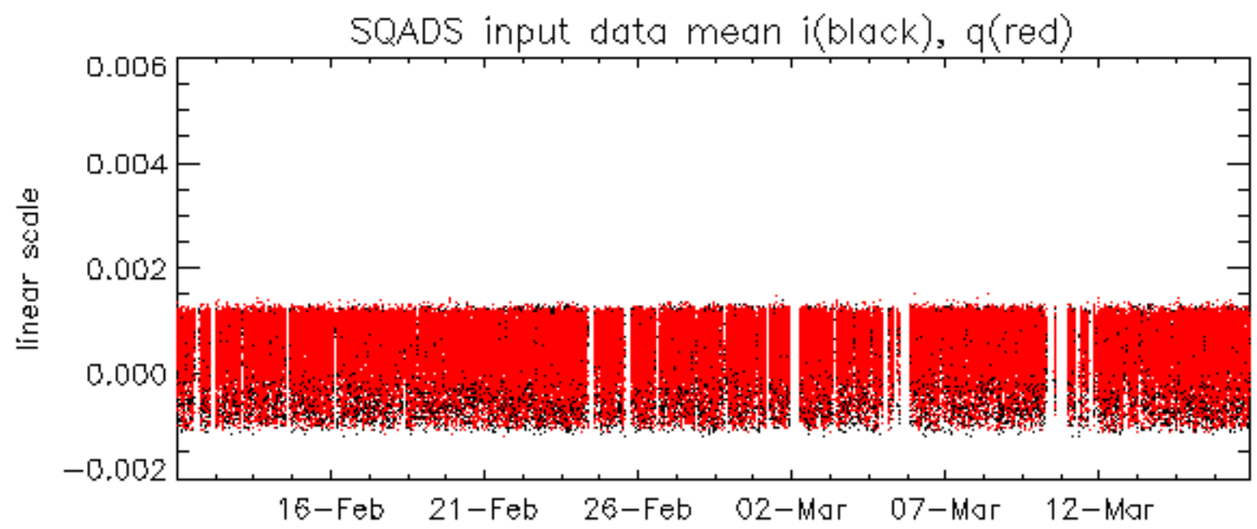
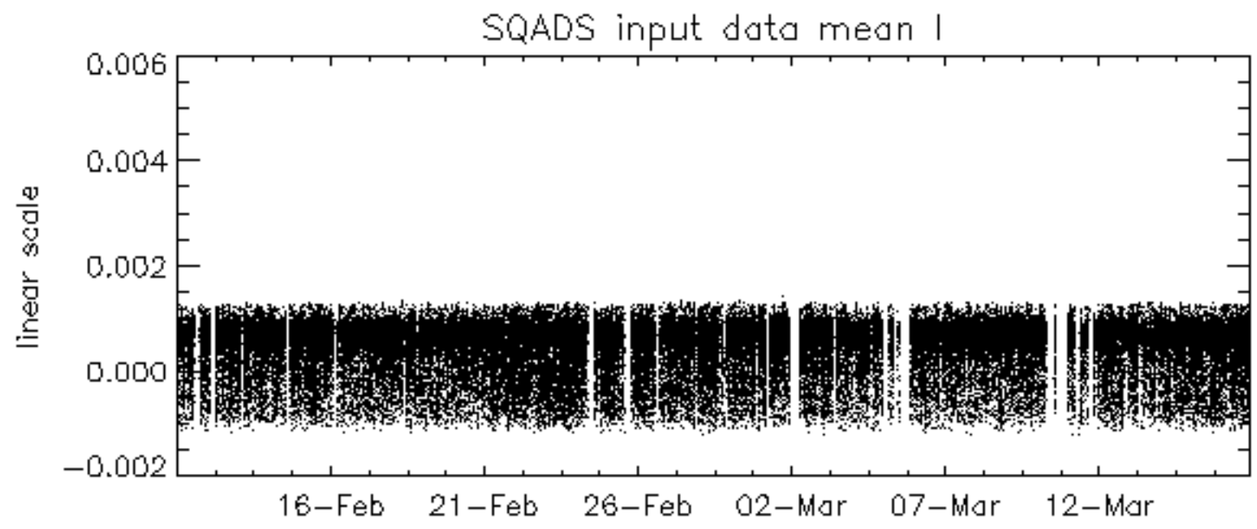
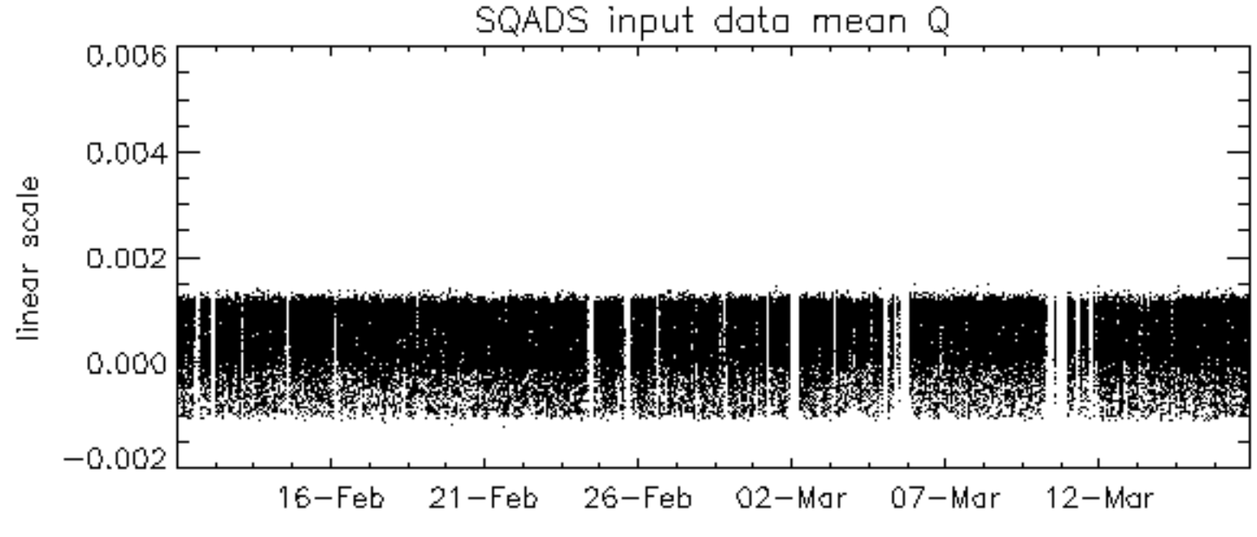
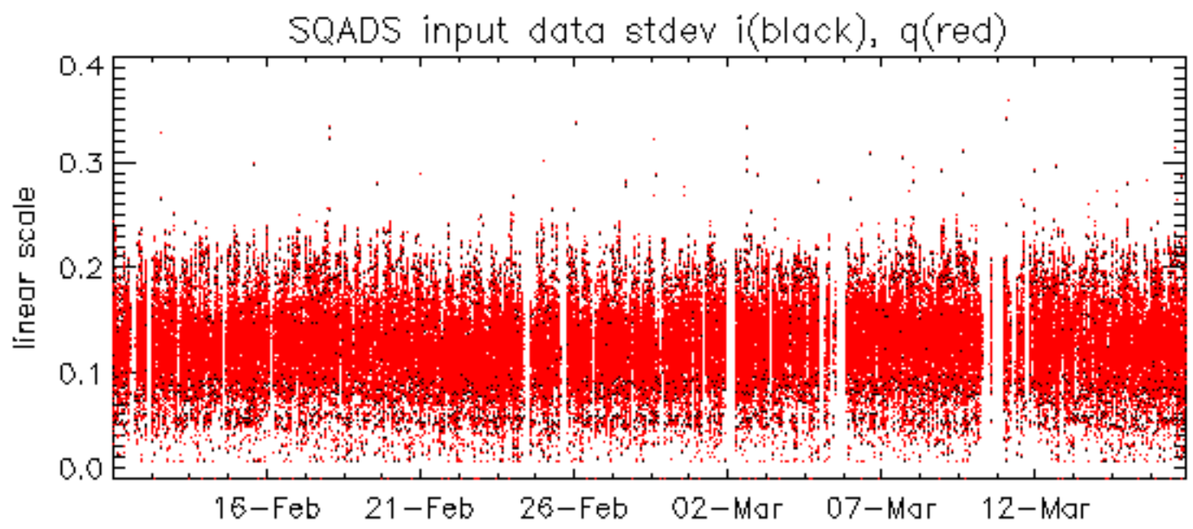
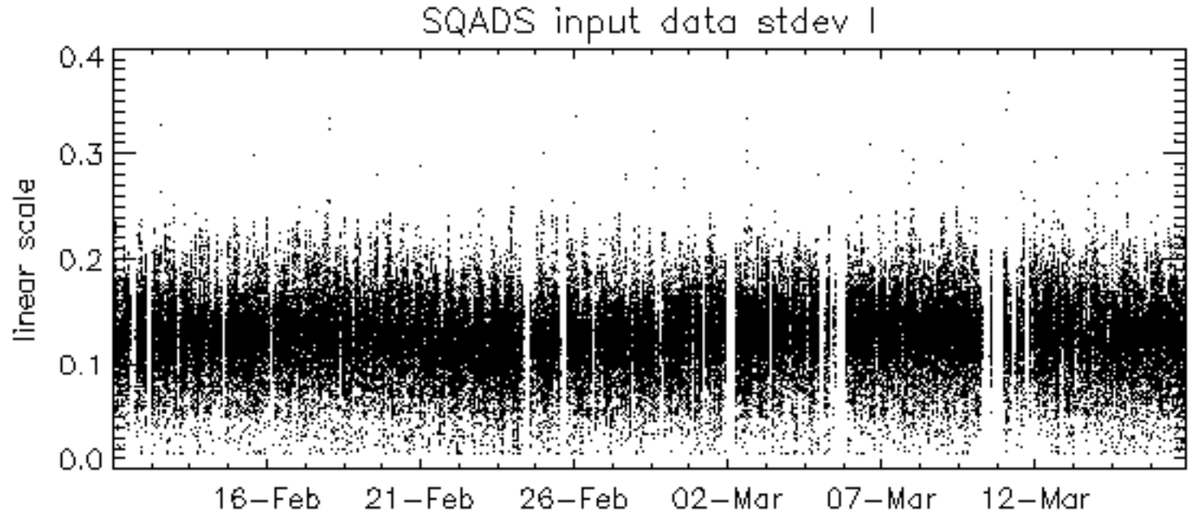

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

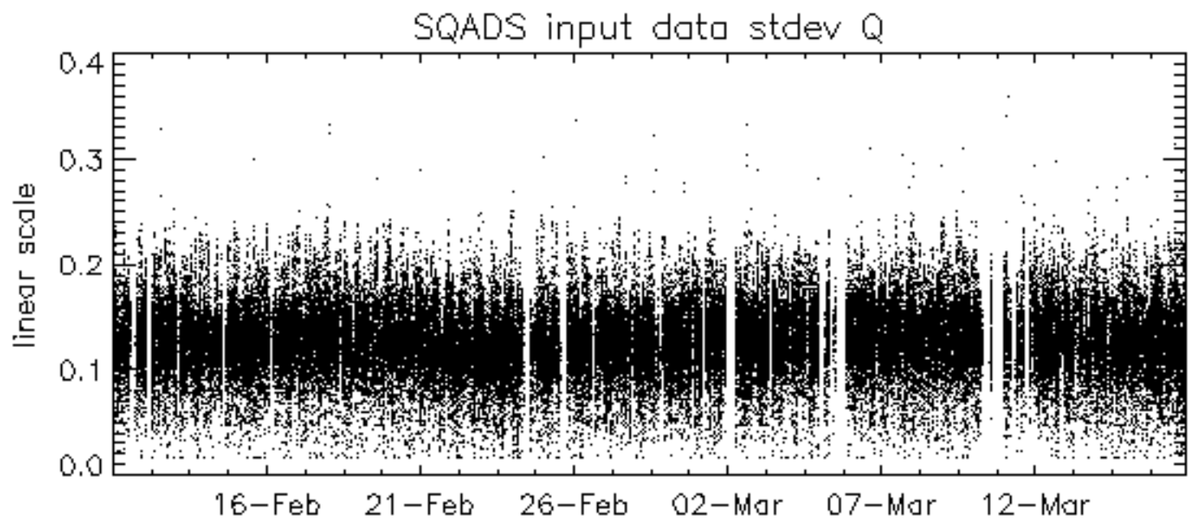

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Feb
21−Feb
26−Feb
02−Mar
07−Mar
12−Mar

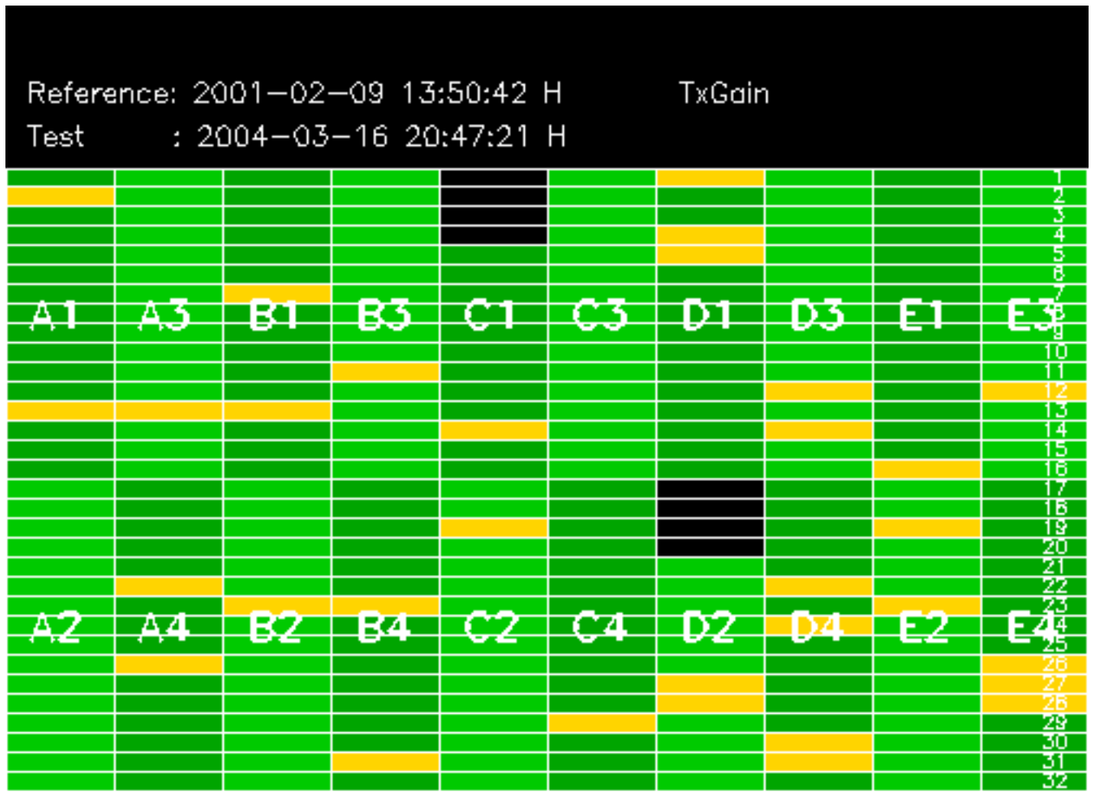

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Feb
21−Feb
26−Feb
02−Mar
07−Mar
12−Mar

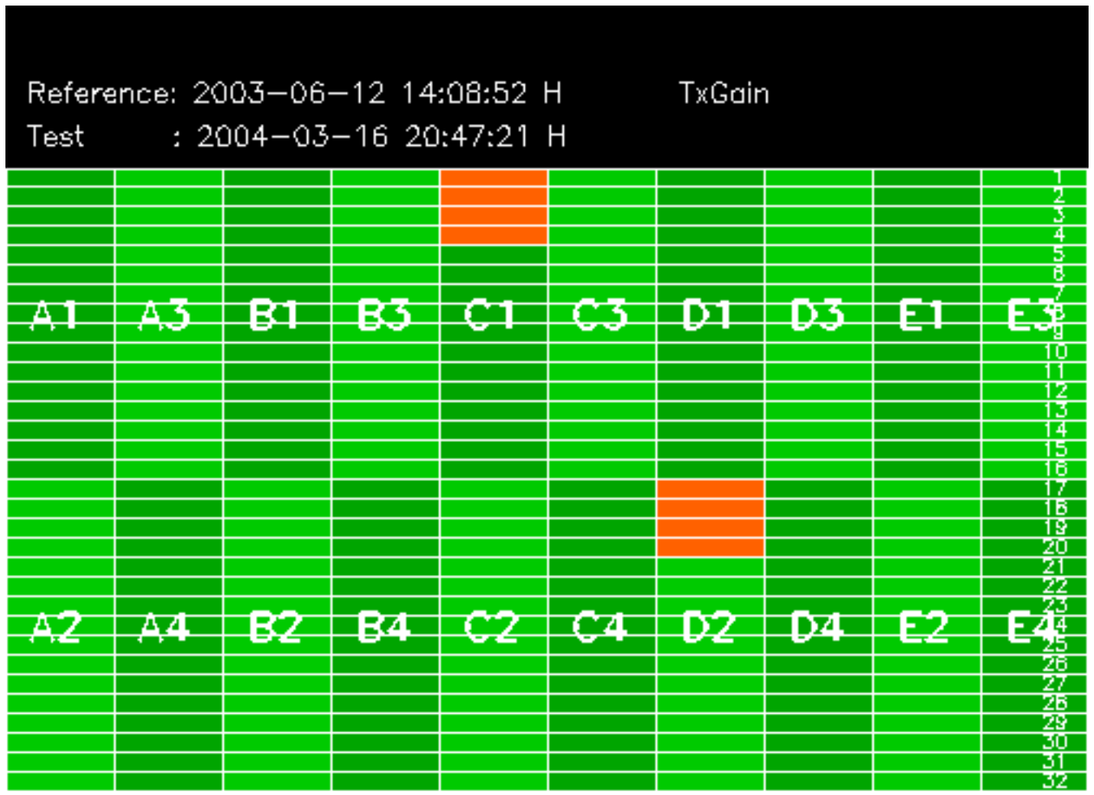

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Feb
21−Feb
26−Feb
02−Mar
07−Mar
12−Mar


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16-Feb
21-Feb
26-Feb
02-Mar
07-Mar
12-Mar


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16-Feb
21-Feb
26-Feb
02-Mar
07-Mar
12-Mar


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
16-Feb
21-Feb
26-Feb
02-Mar
07-Mar
12-Mar


Reference: 2001-02-09 13:50:42 H
Test : 2004-03-16 20:47:21 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 : 2004-03-16 20:47:21 H
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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9
10
11
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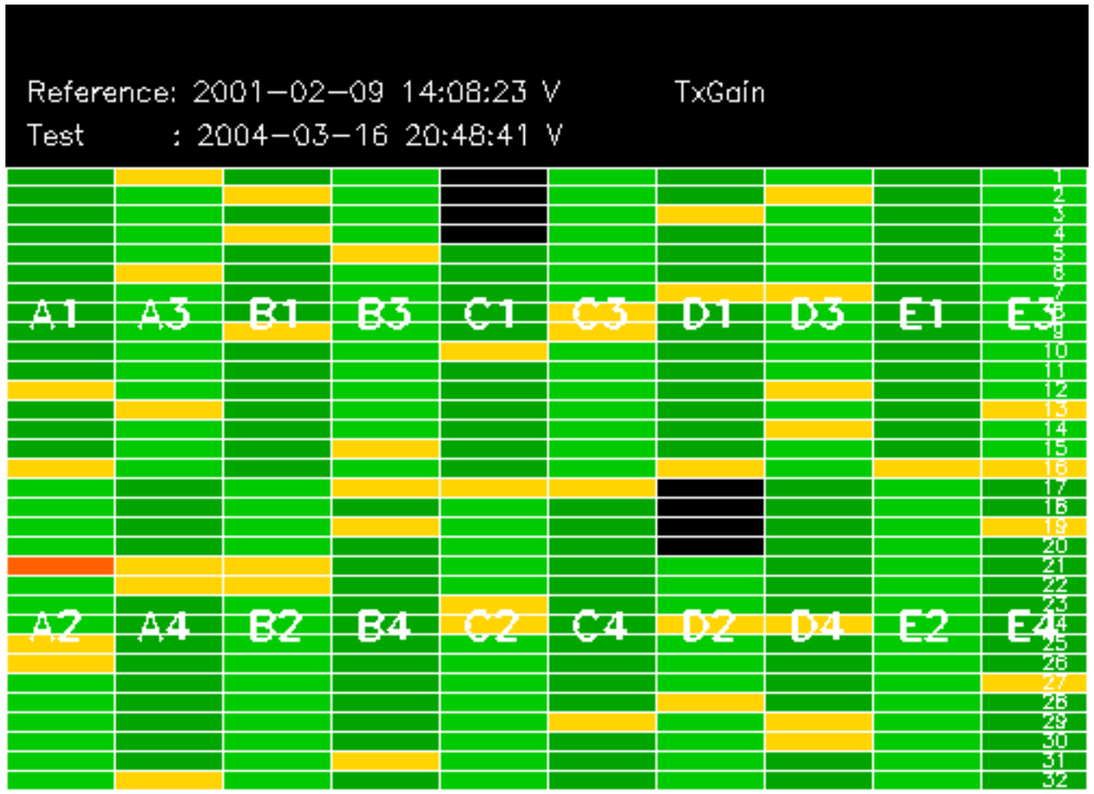
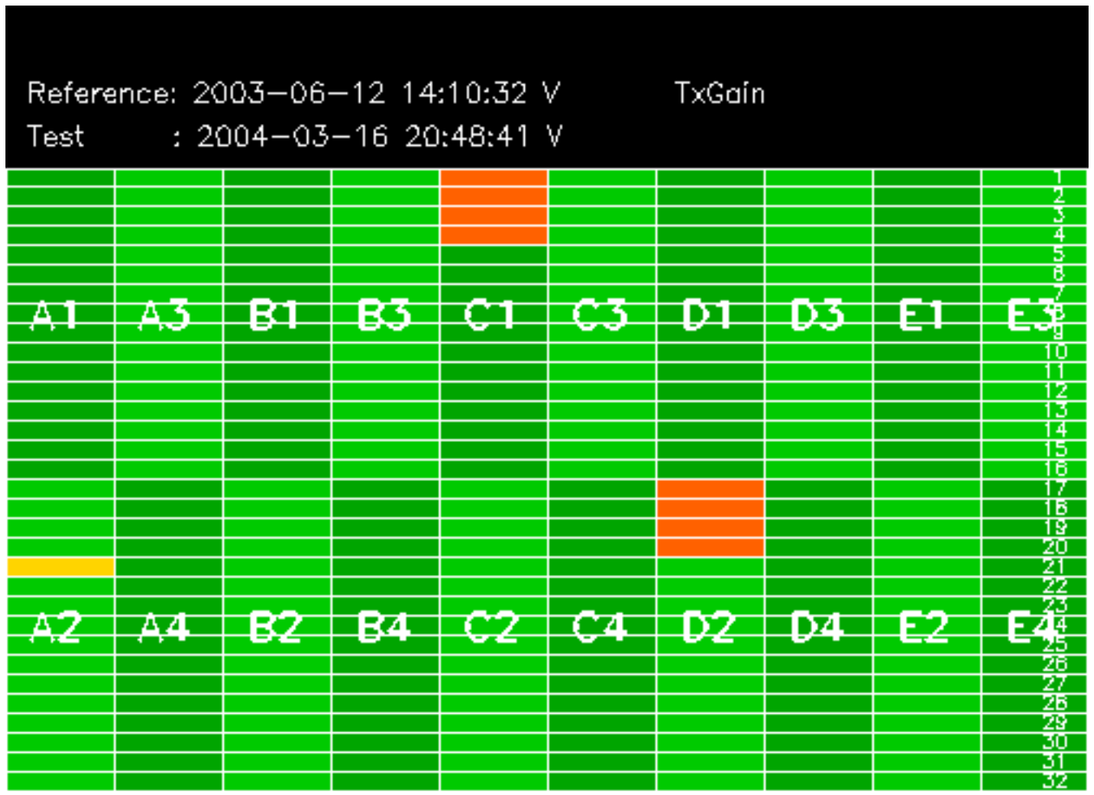

Reference: 2001-02-09 14:08:23 V
Test : 2004-03-16 20:48:41 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-03-16 20:48:41 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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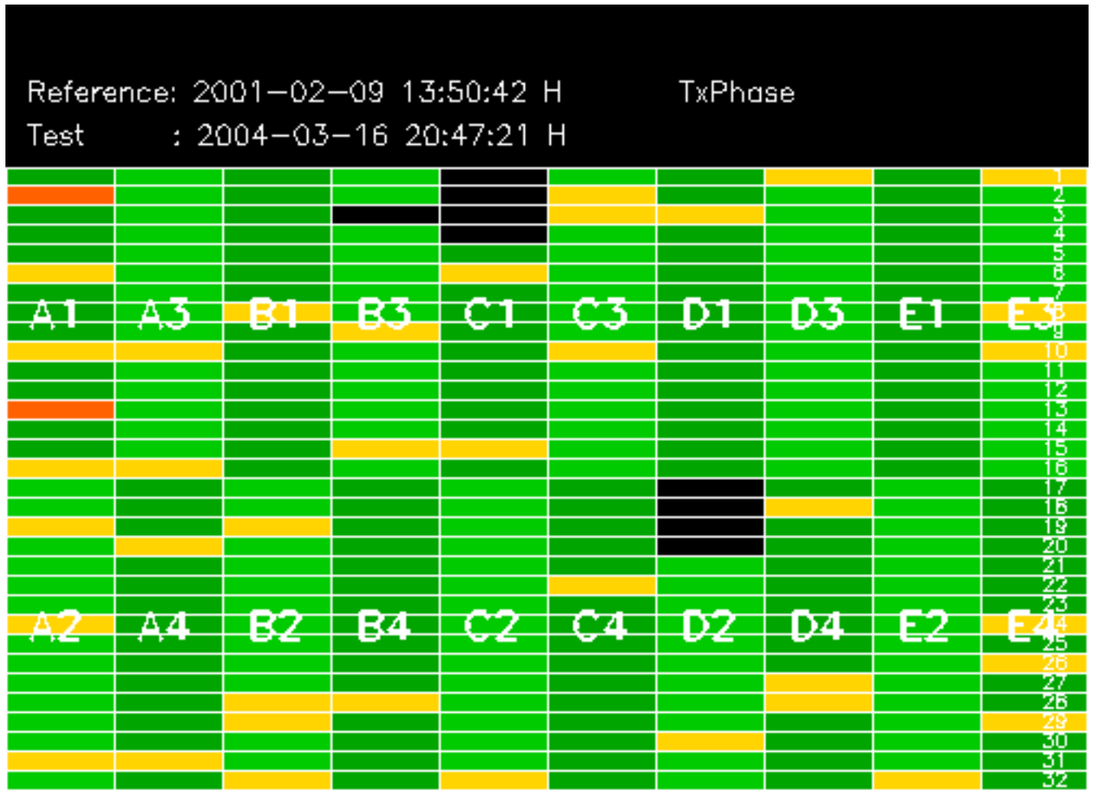
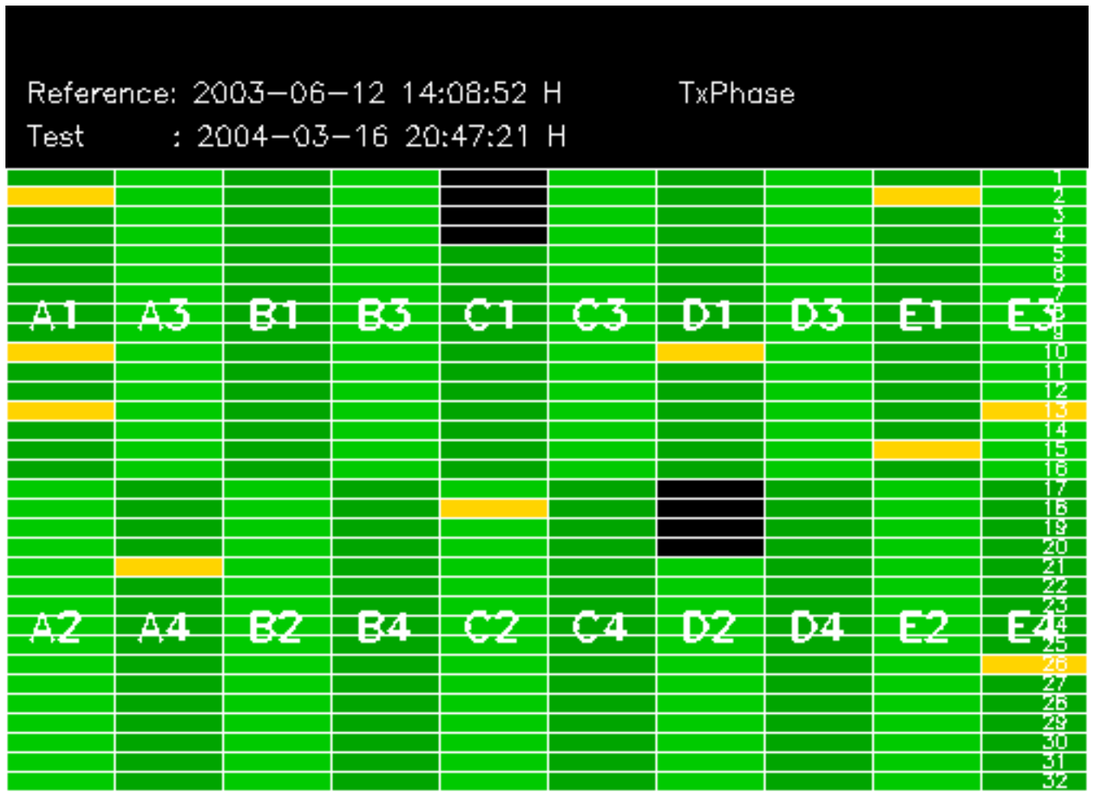
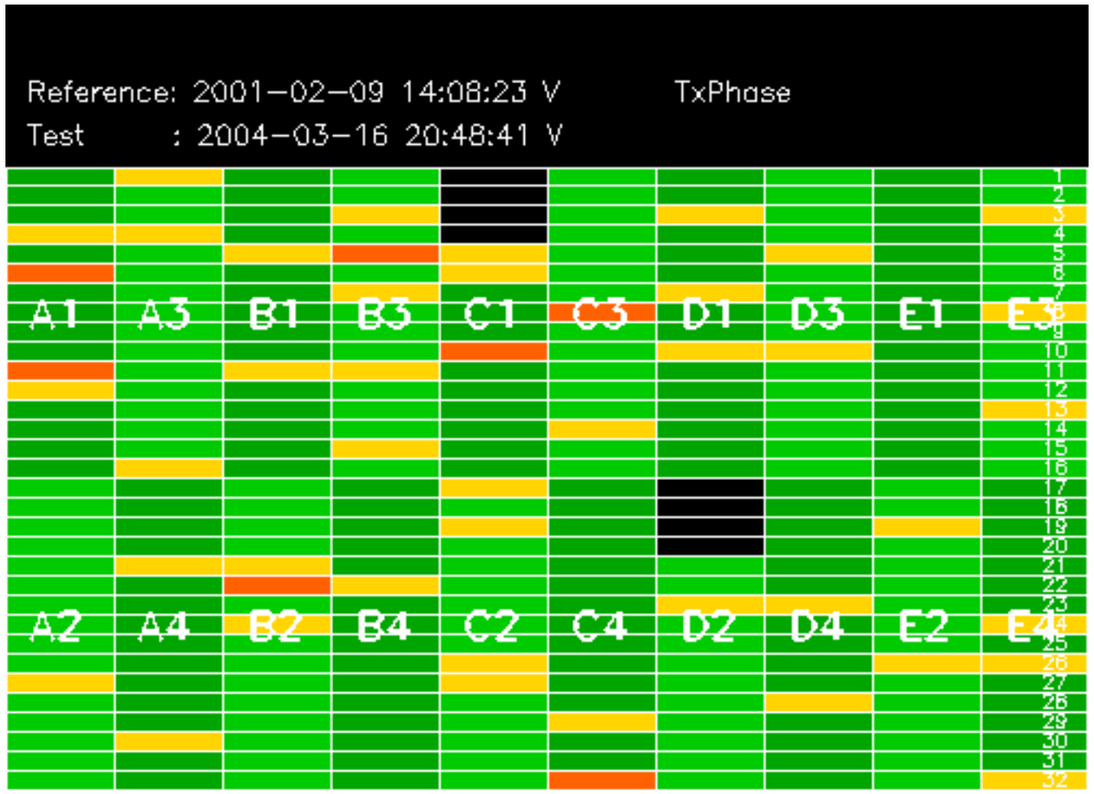
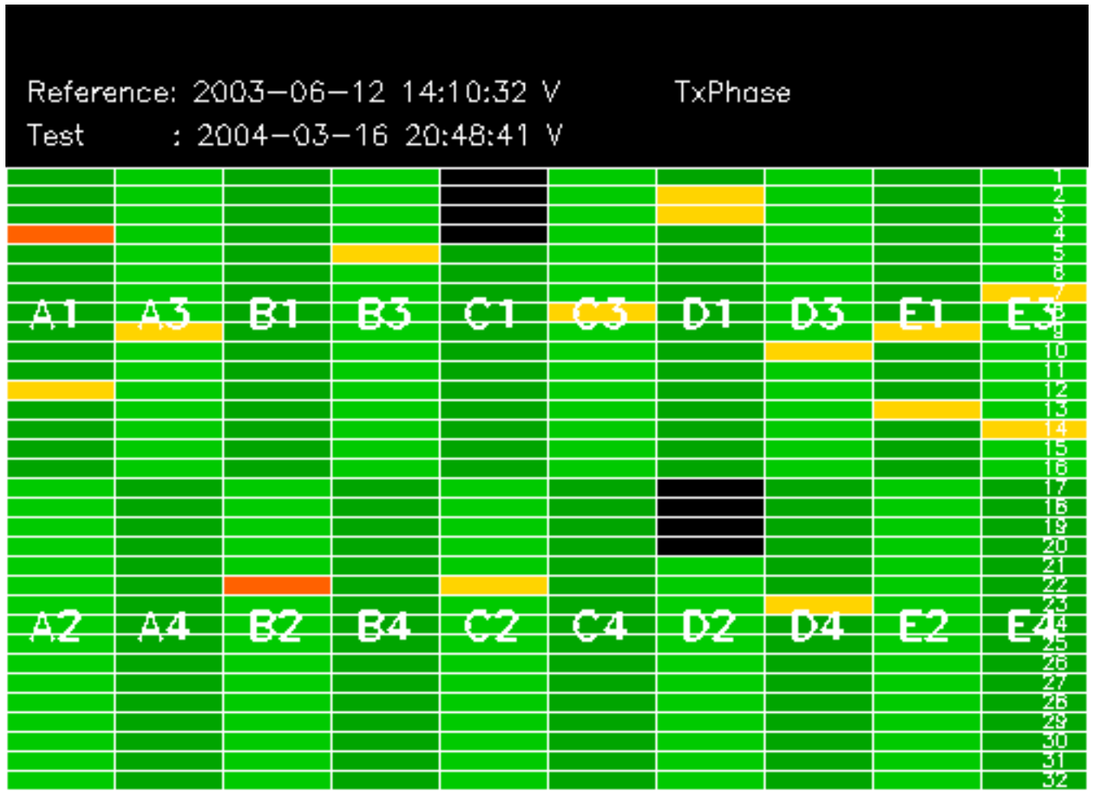

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-03-16 20:47:21 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-03-16 20:47:21 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
TxPhase
Test : 2004-03-16 20:48:41 V
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 : 2004-03-16 20:48:41 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.