REPORT OF 031013

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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 unavailabilies during the reported period.

Sub-system	Start	Stop	Planned
ASAR	YYYY-MM-DD hh:mm:ss	YYYY-MM-DD hh:mm:ss	---

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

No anomalies observed on available MS products:

Polarisation	Start Time
V	20031012 192257
H	20031012 192117

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	-3.79298	-22.5826	-8.14742
	stdev	0.00513495	0.0602740	0.00251144
10	mean	-6.88989	-19.3210	-8.14742
	stdev	0.0264663	0.0599225	0.00251144

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.79864	-22.5337	-8.13081
	stdev	0.00553427	0.0628792	0.00254138
10	mean	-6.89469	-19.3171	-8.13081
	stdev	0.0271186	0.0607855	0.00254138

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	0.000363143
	stdev	3.61256e-07
MEAN Q	mean	0.000297970
	stdev	3.25438e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.115147
	stdev	0.00142984
STDEV Q	mean	0.115388
	stdev	0.00144772

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

No anomalies observed Doppler evolution.
Doppler analysis performed over the last 60 days

6.1 - Unbiased Doppler Error

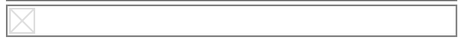
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

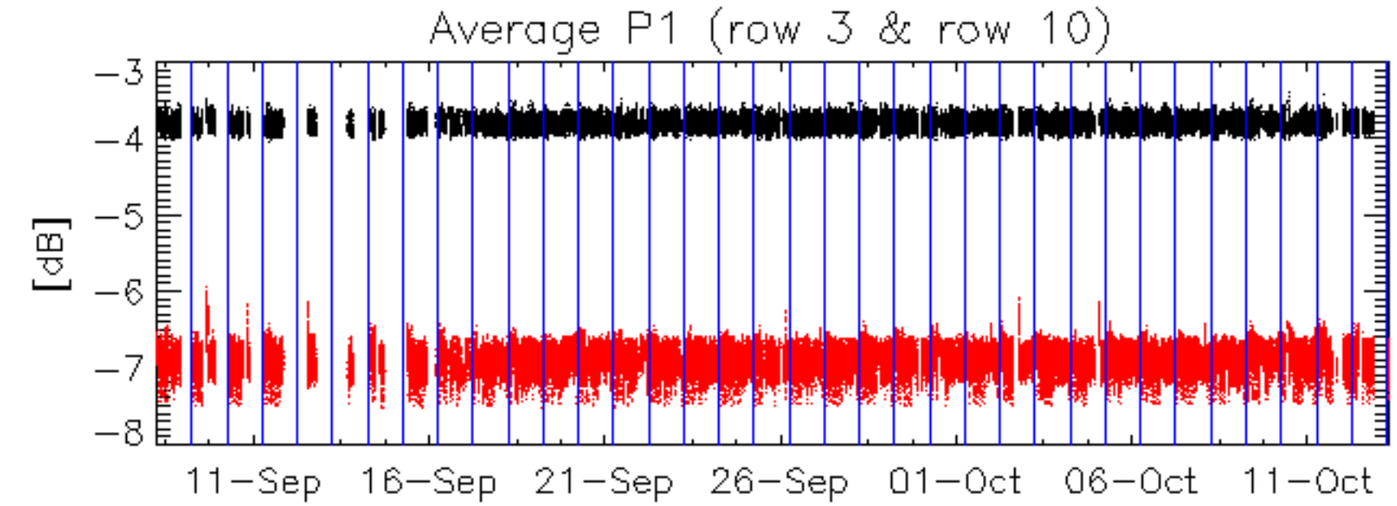
6.2 - Absolute Doppler

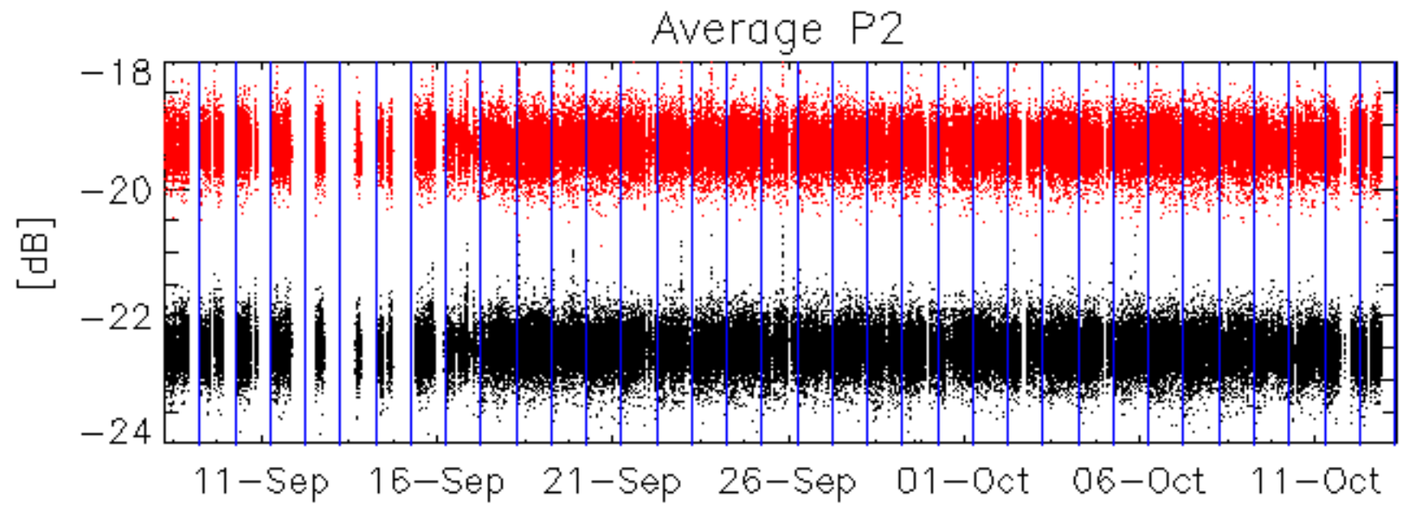
Evolution of Absolute Doppler
Acsending
Descending

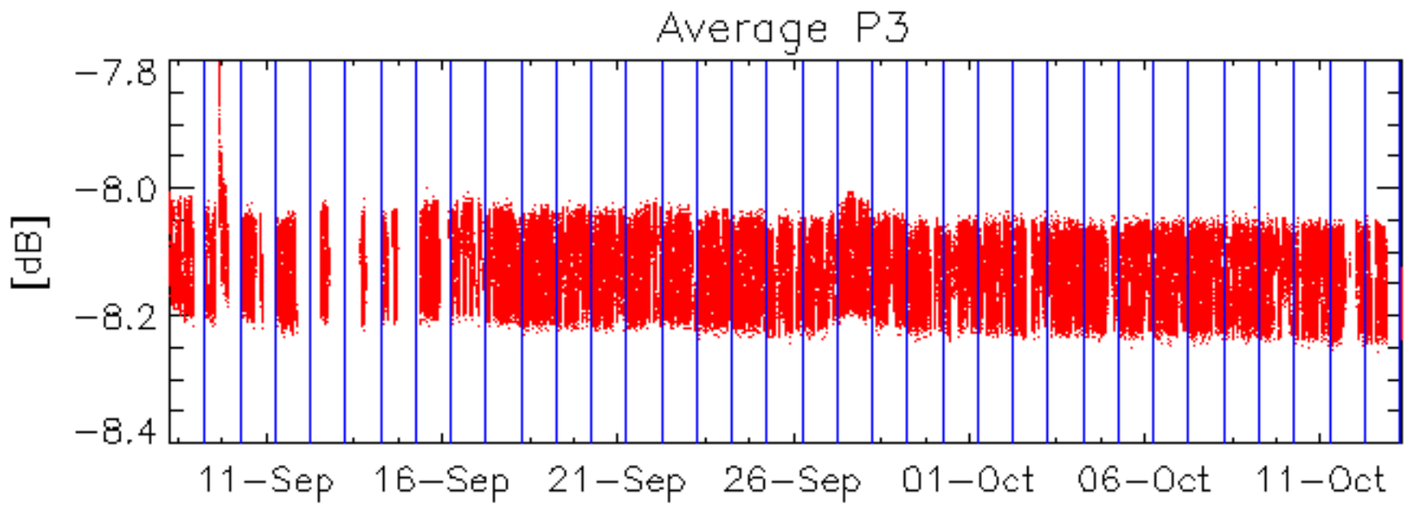
6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX

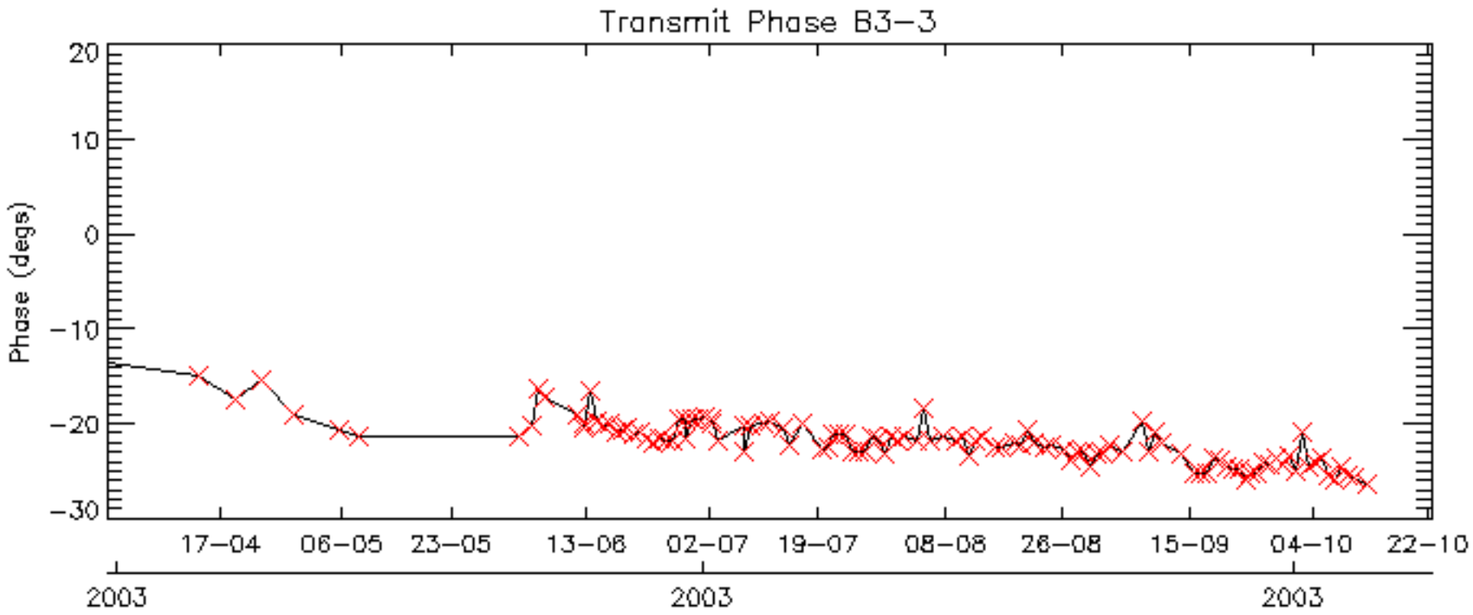



Average P1 (row 3 & row 10)
[dB]
−3
−4
−5
−6
−7
−8
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct


Average P2
[dB]
−18
−20
−22
−24
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct

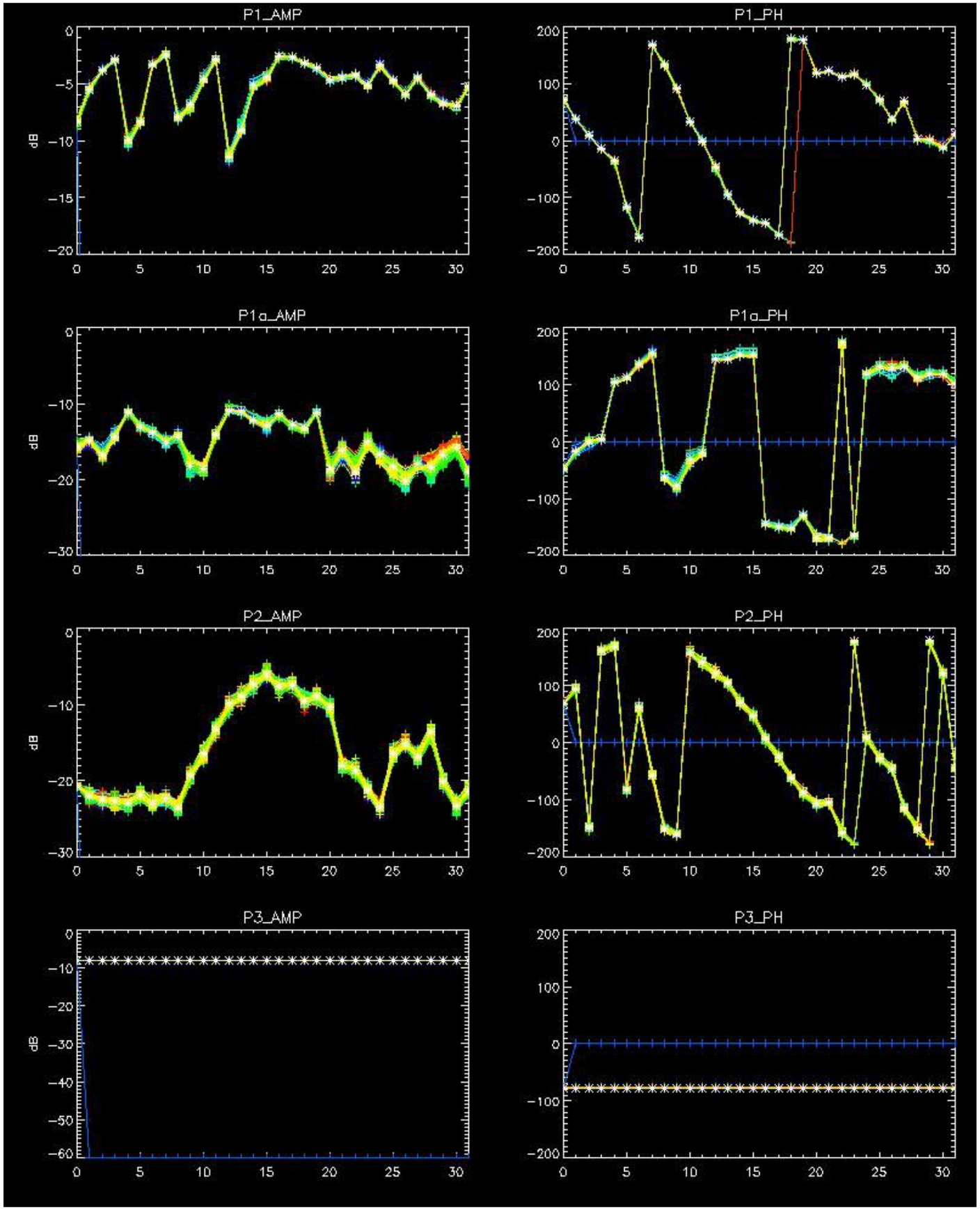

Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct

Average P1 (row 3 & row 10)
[dB]
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
06
13−Oct
Average P2
[dB]
−18
−20
−22
−24
03
06
09
12
15
18
21
00
03
06
13−Oct
Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
03
06
09
12
15
18
21
00
03
06
13−Oct


Transmit Phase B3–3
Phase (degs)
20
10
0
−10
−20
−30
17–04
06–05
23–05
13–06
02–07
19–07
08–08
26–08
15–09
04–10
22–10
2003
2003
2003

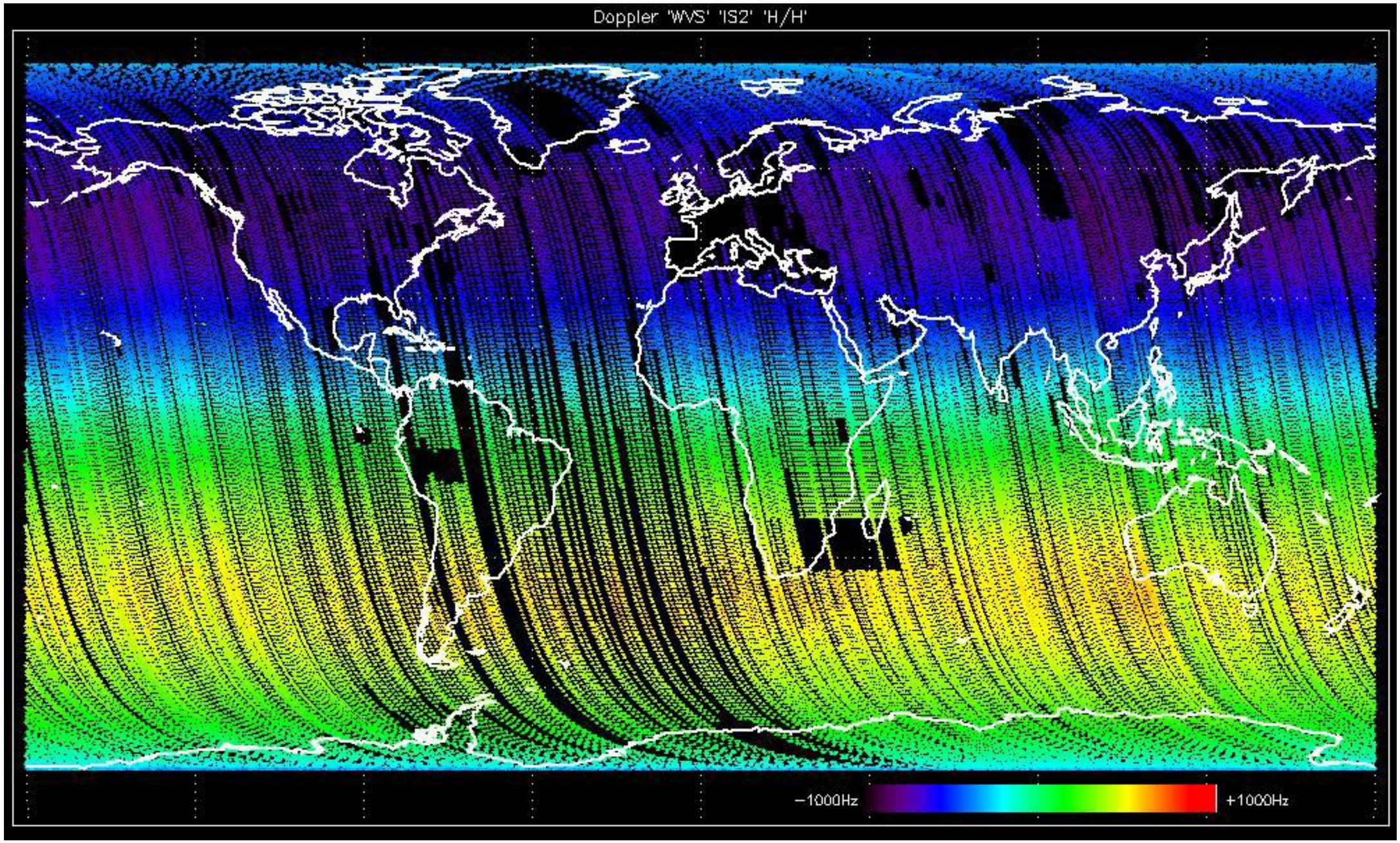
No anomalies observed on available browse products

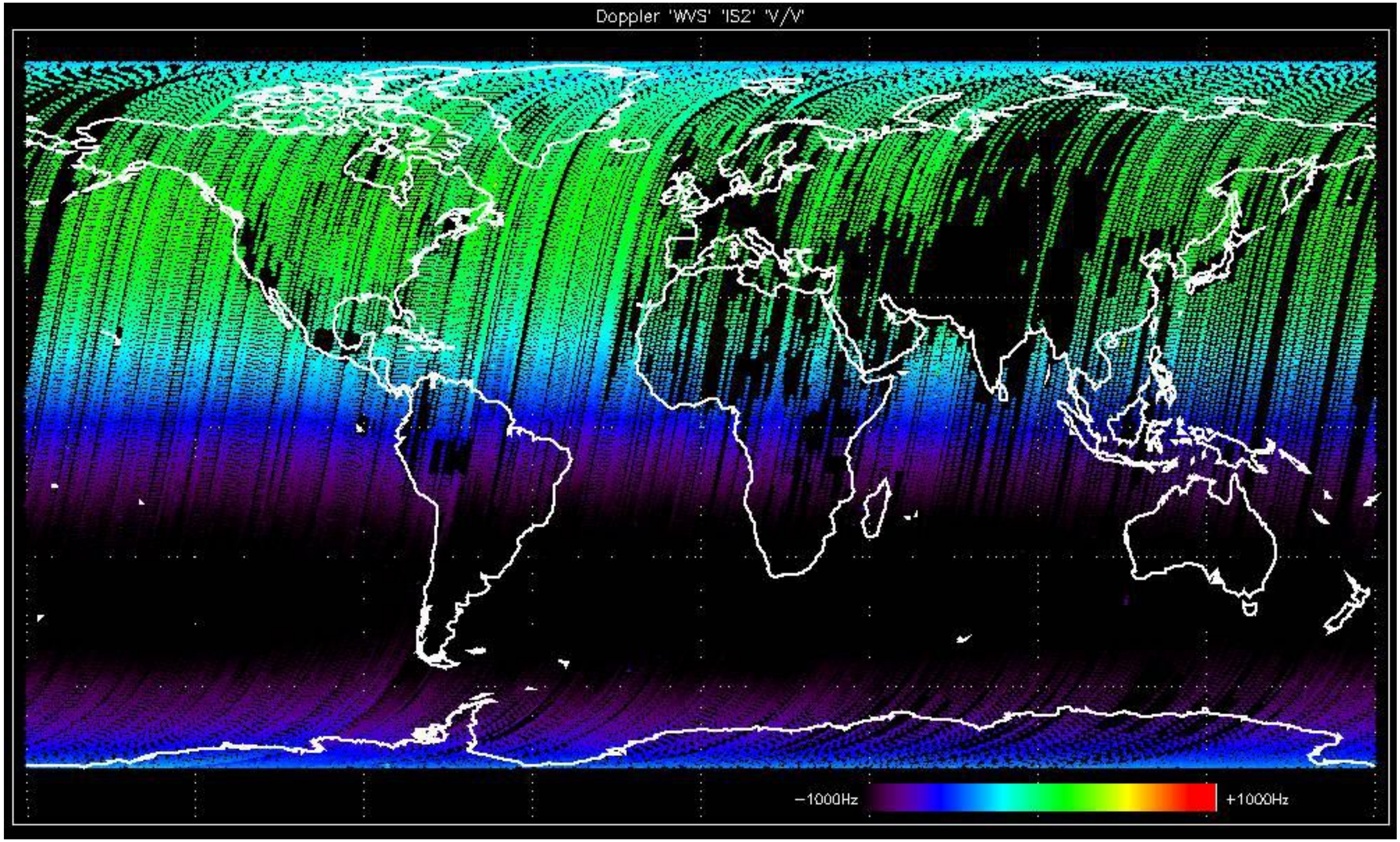
No anomalies observed.

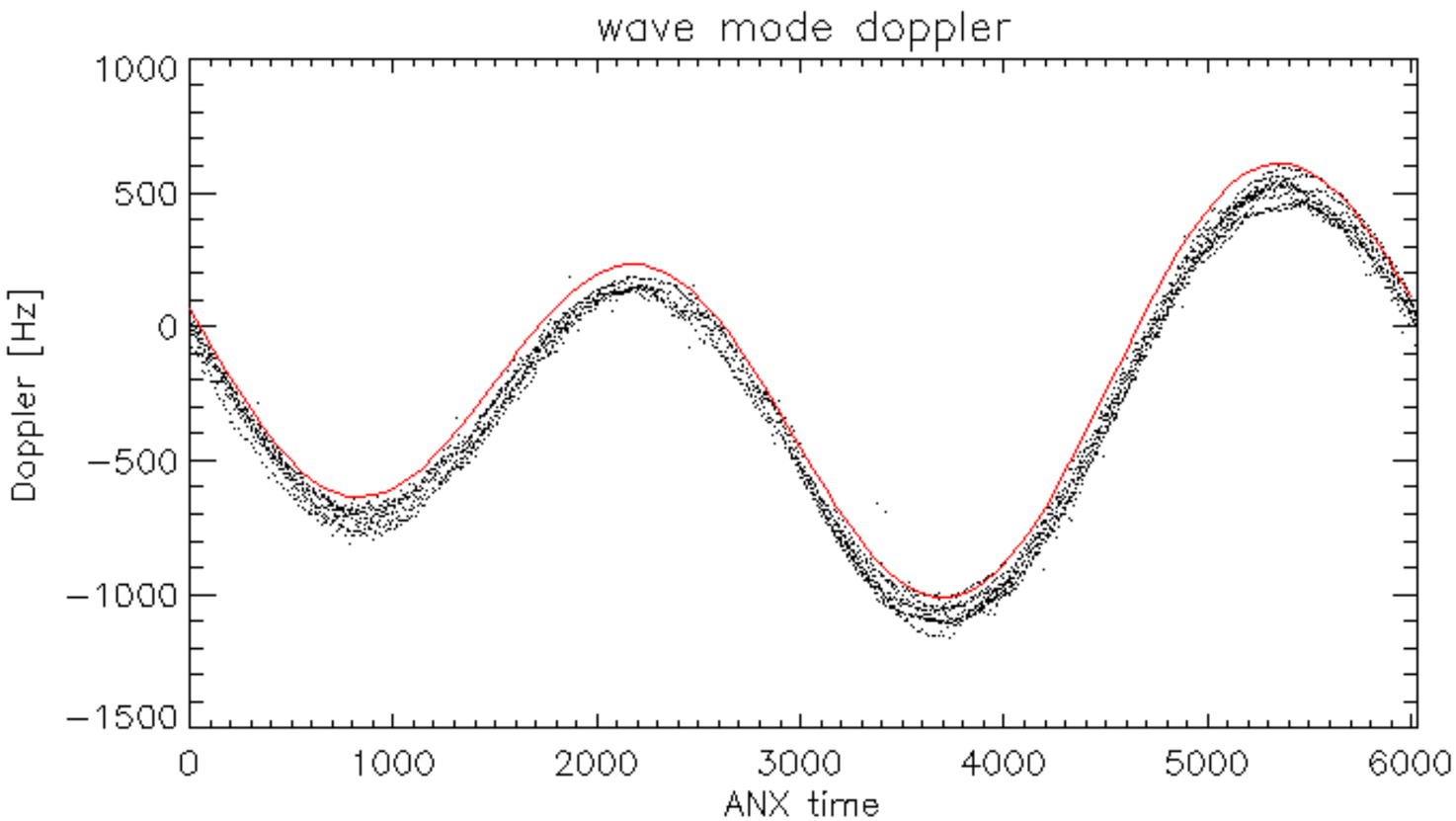

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

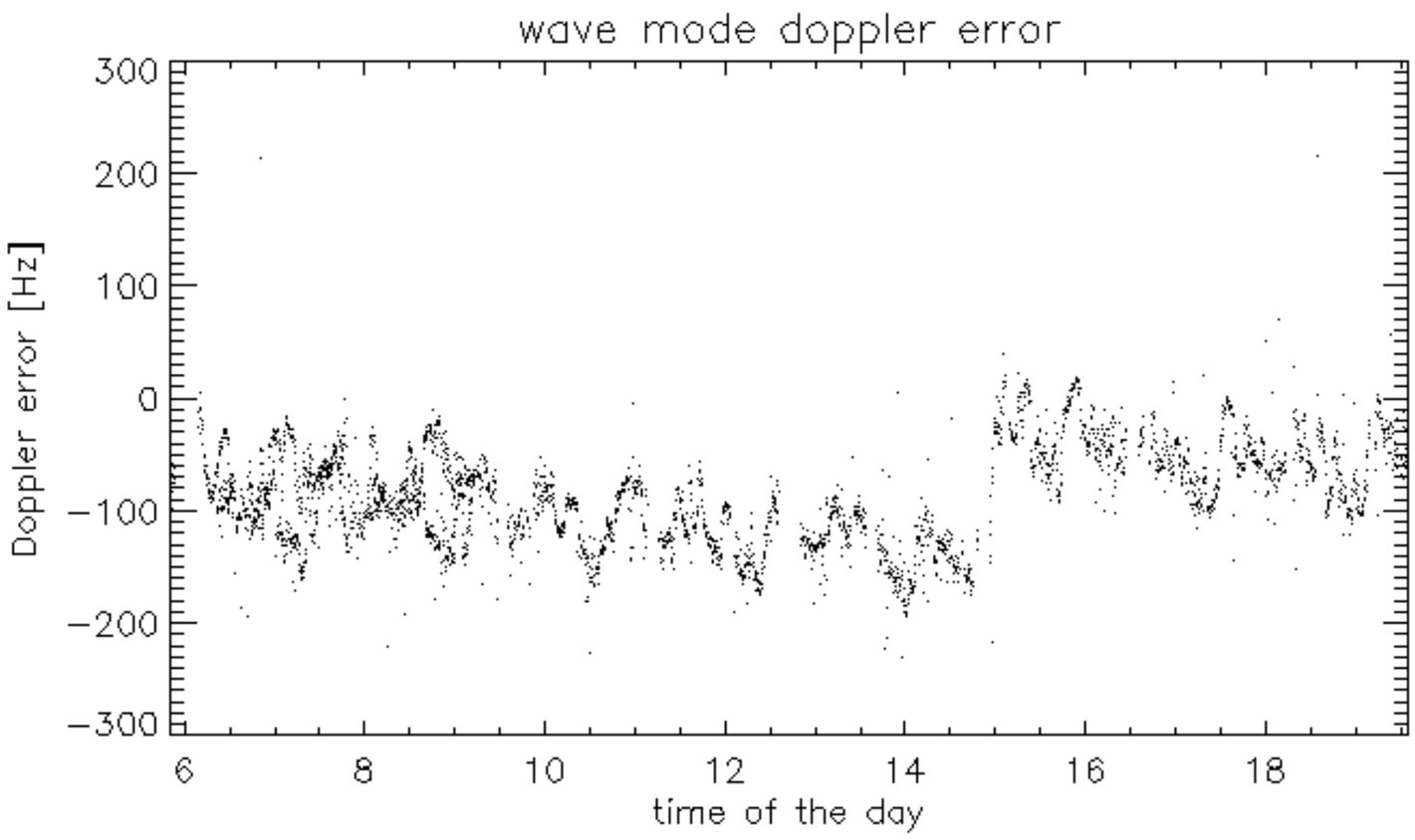
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

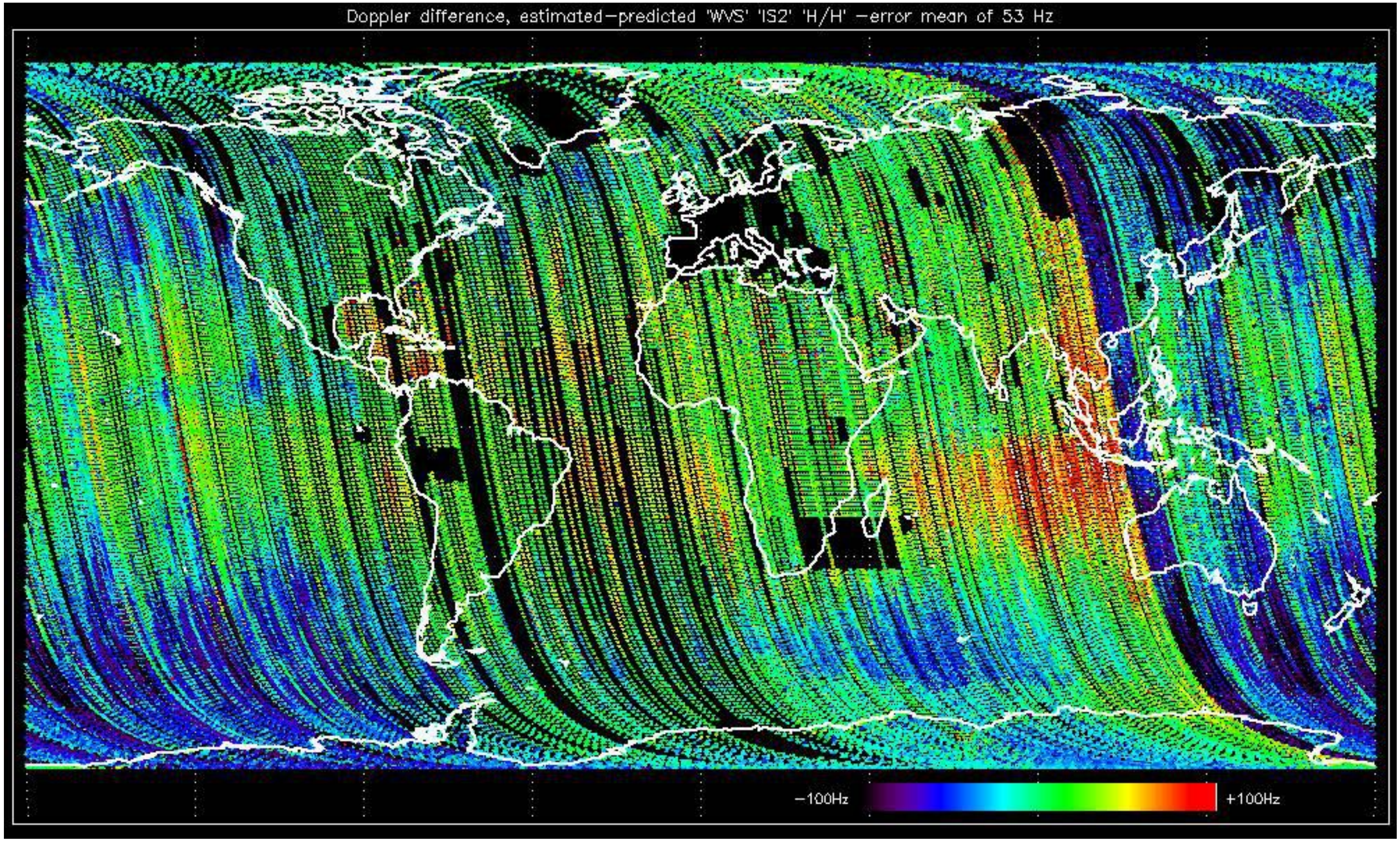
No anomalies observed Doppler evolution.
Doppler analysis performed over the last 60 days

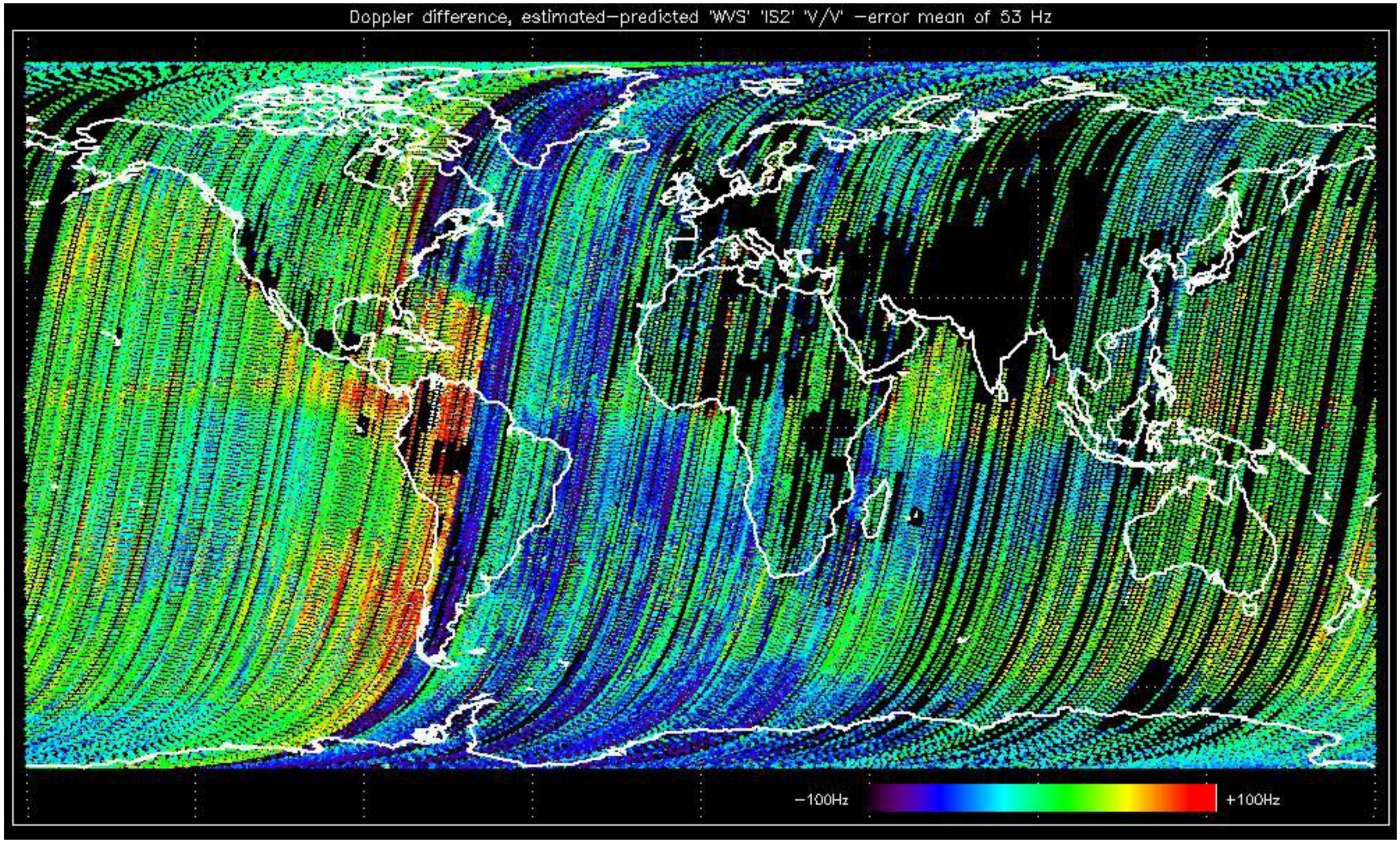

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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


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

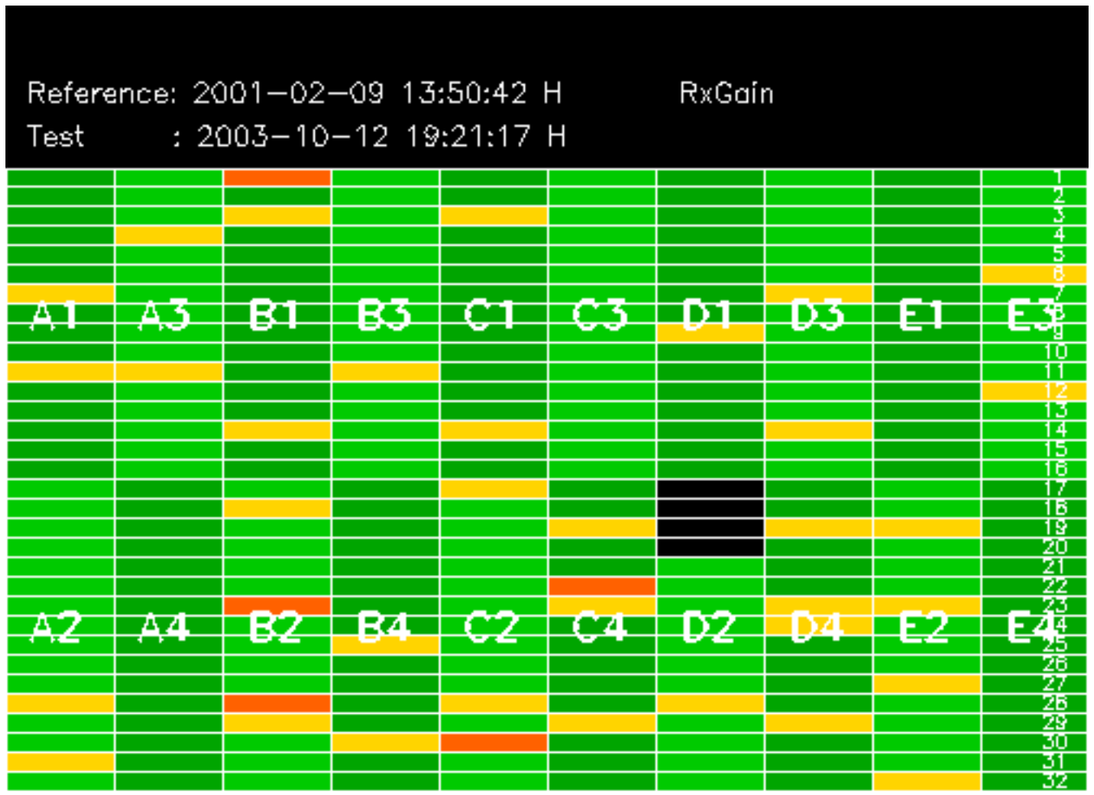

wave mode doppler error
Doppler error [Hz]
300
200
100
0
−100
−200
−300
6
8
10
12
14
16
18
time of the day

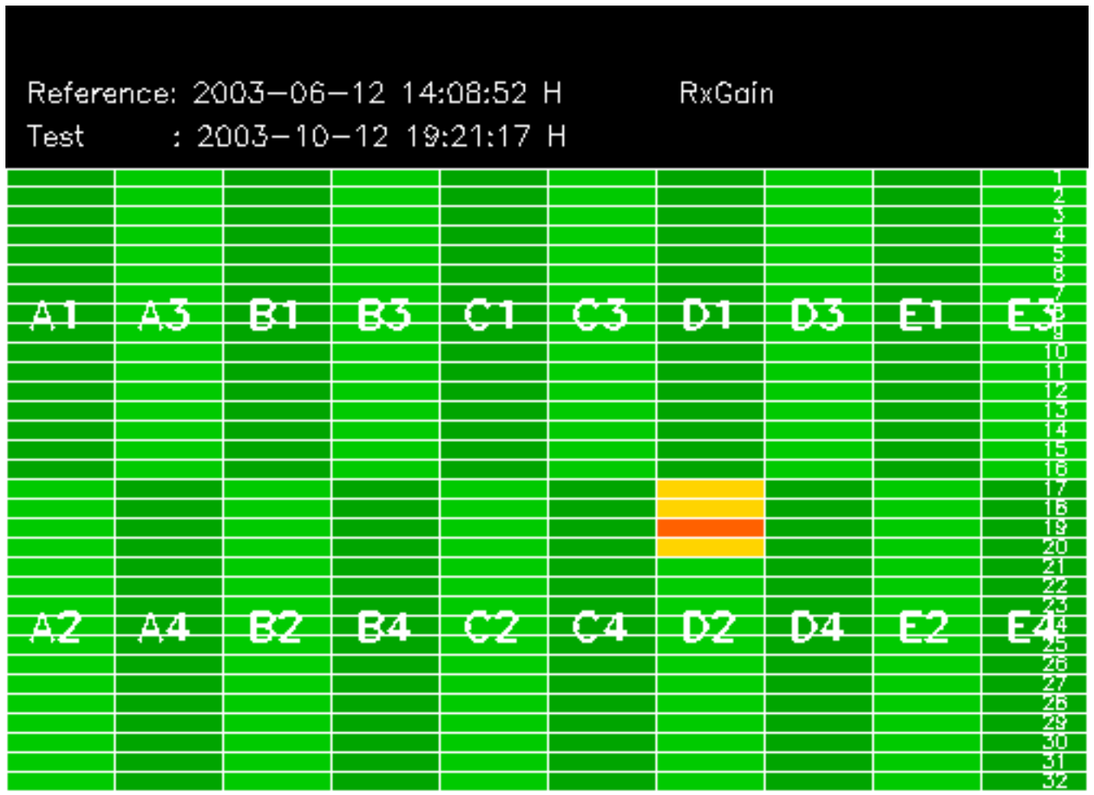

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of 53 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of 53 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2003-10-12 19:21:17 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 : 2003-10-12 19:21:17 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
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8
9
10
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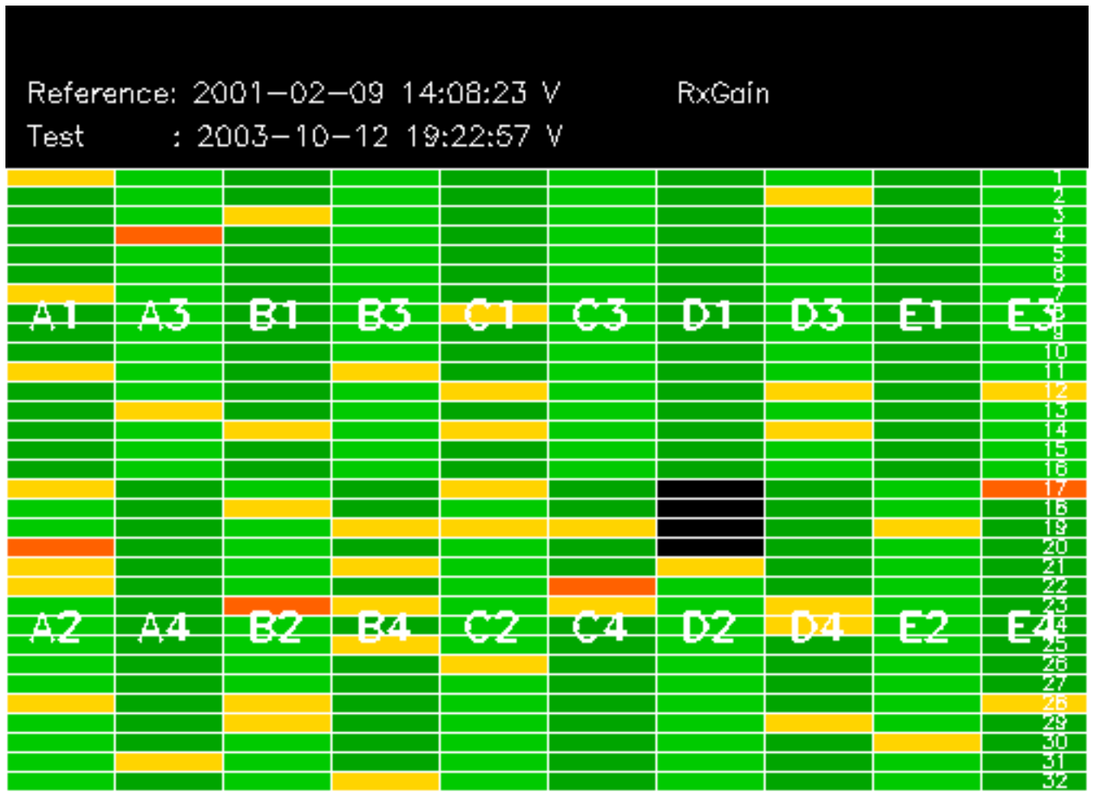
Reference: 2001-02-09 14:08:23 V
Test : 2003-10-12 19:22:57 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
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8
9
10
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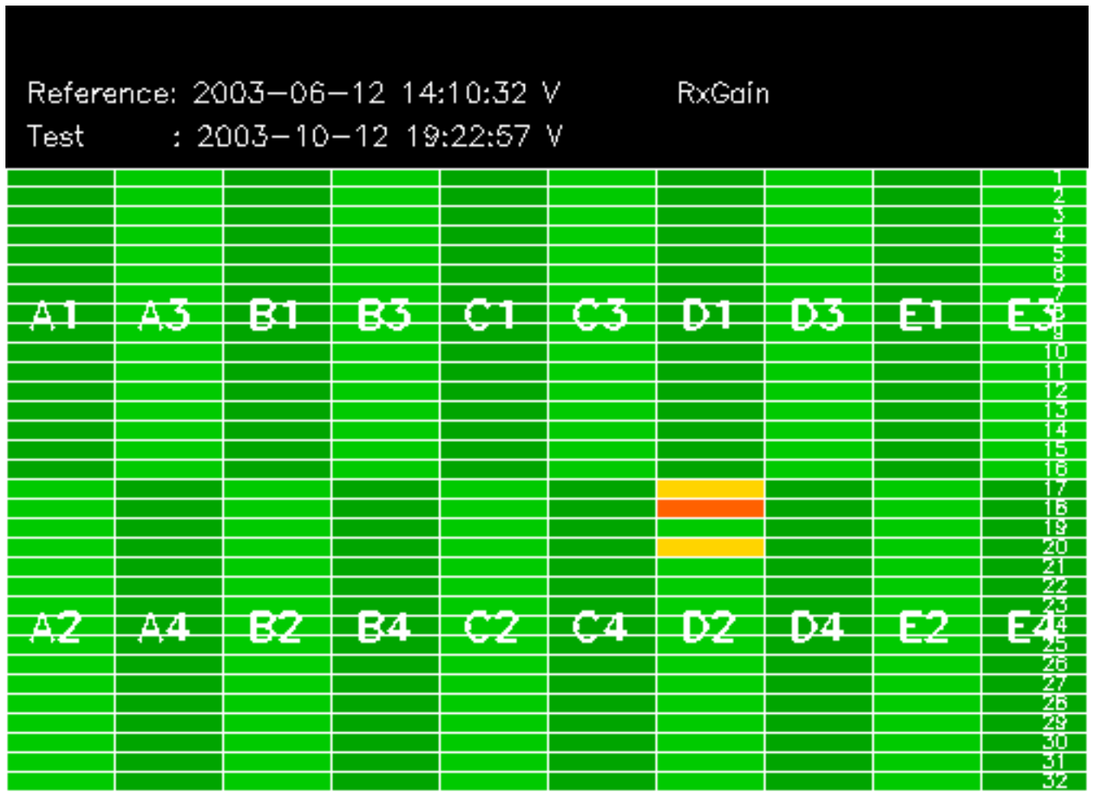
Reference: 2003-06-12 14:10:32 V
Test : 2003-10-12 19:22:57 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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5
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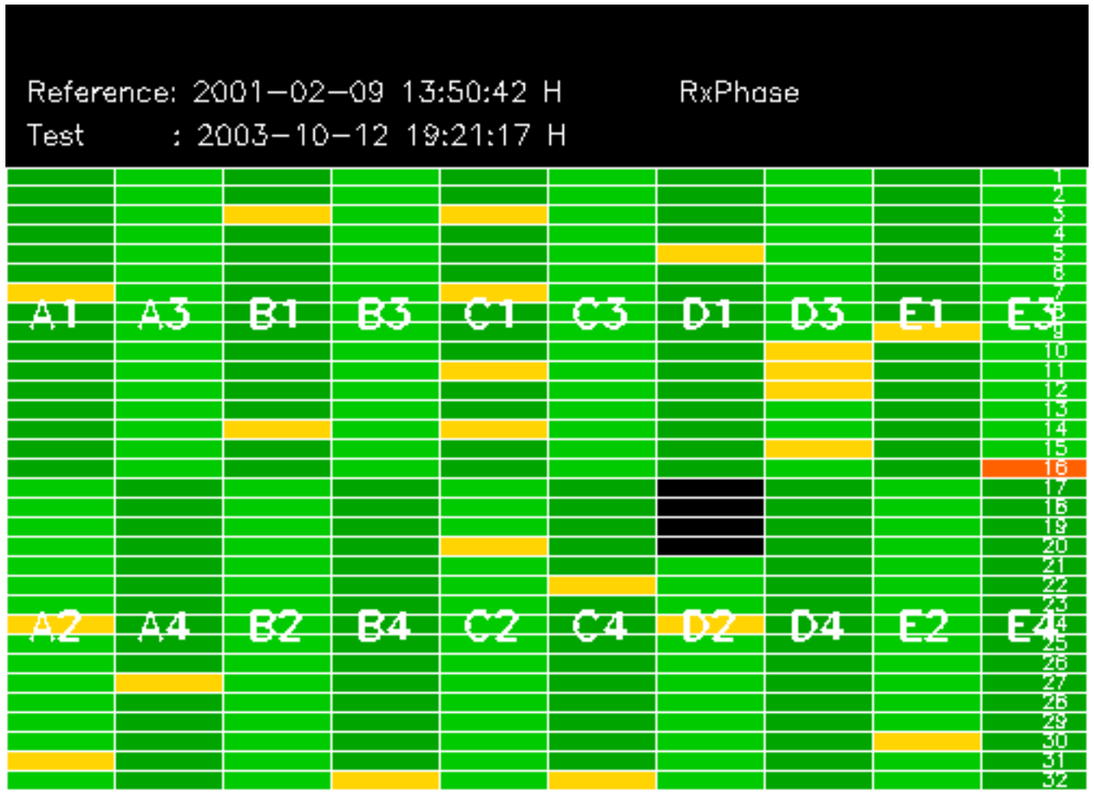
30
31
32


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2003-10-12 19:21:17 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
11
12
13
14
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16
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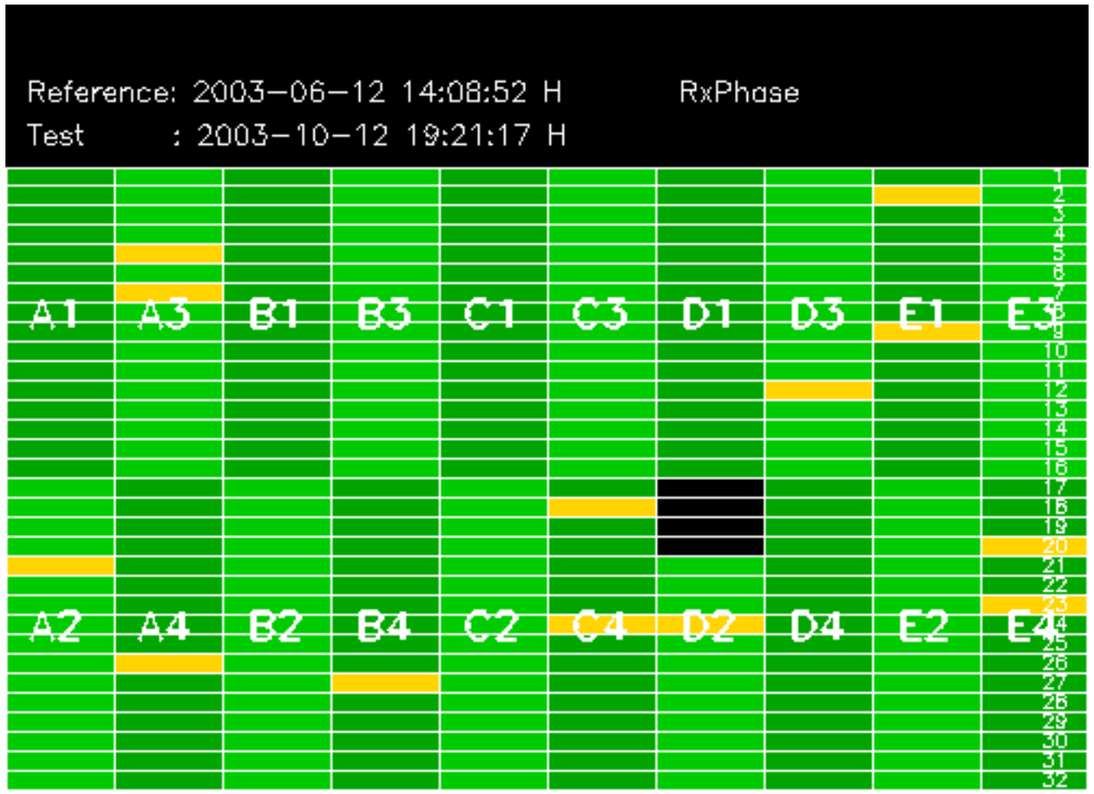
32


Reference: 2003-06-12 14:08:52 H
Test : 2003-10-12 19:21:17 H
RxPhase
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
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17
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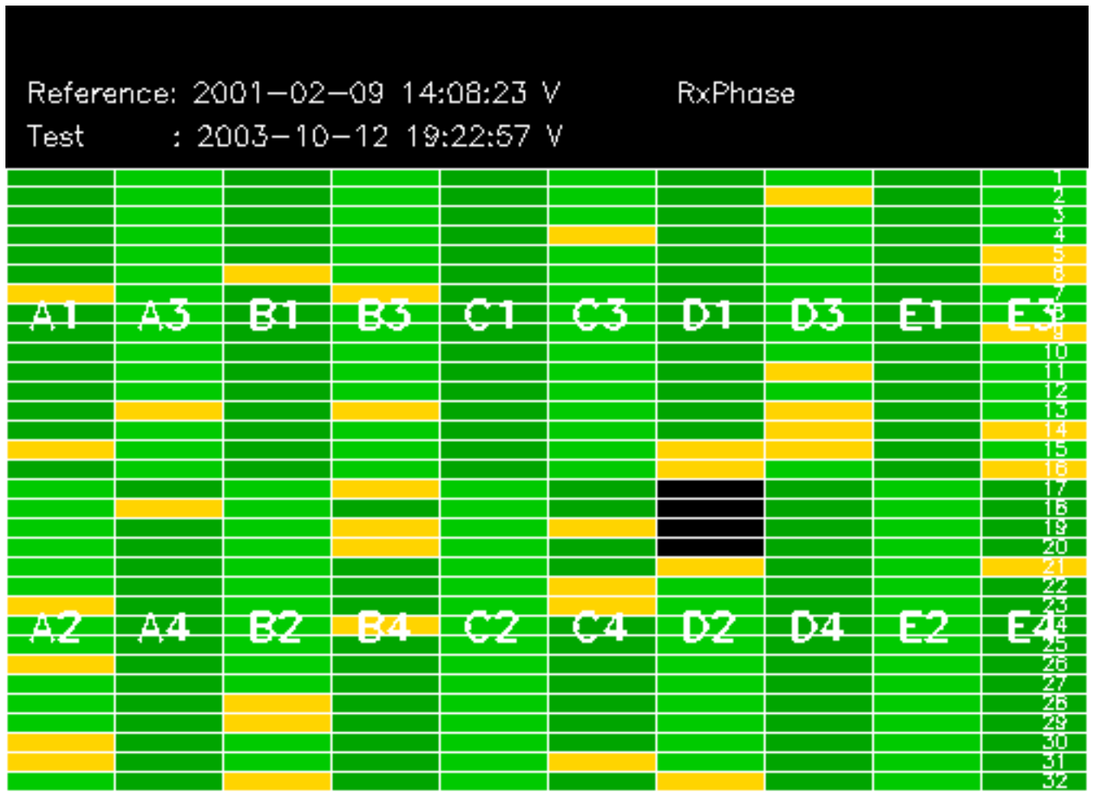
28
29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2003-10-12 19:22:57 V
RxPhase
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
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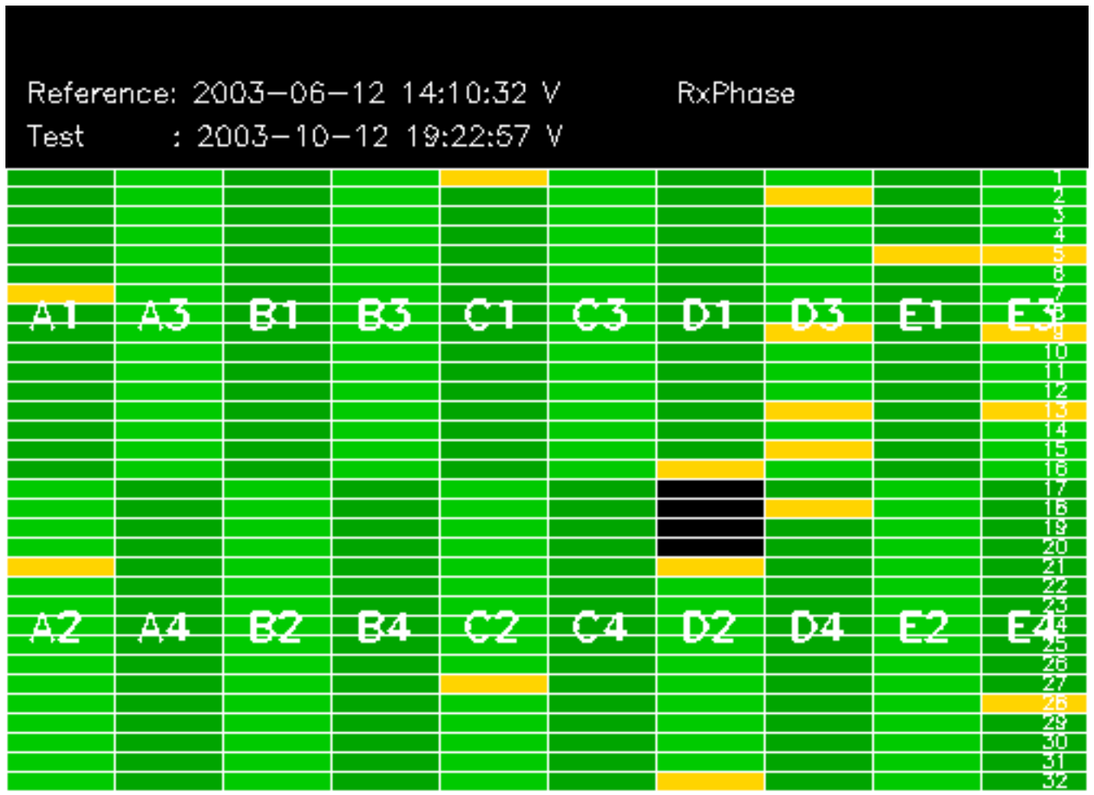
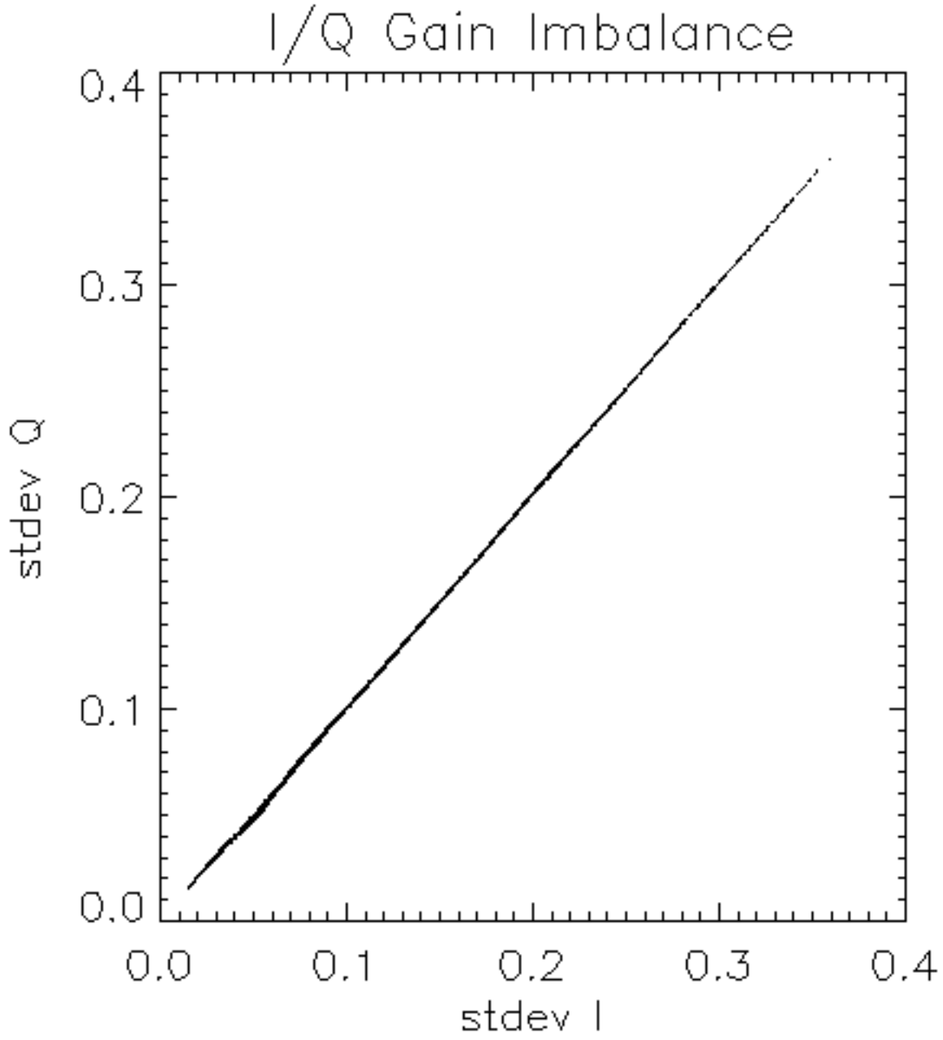
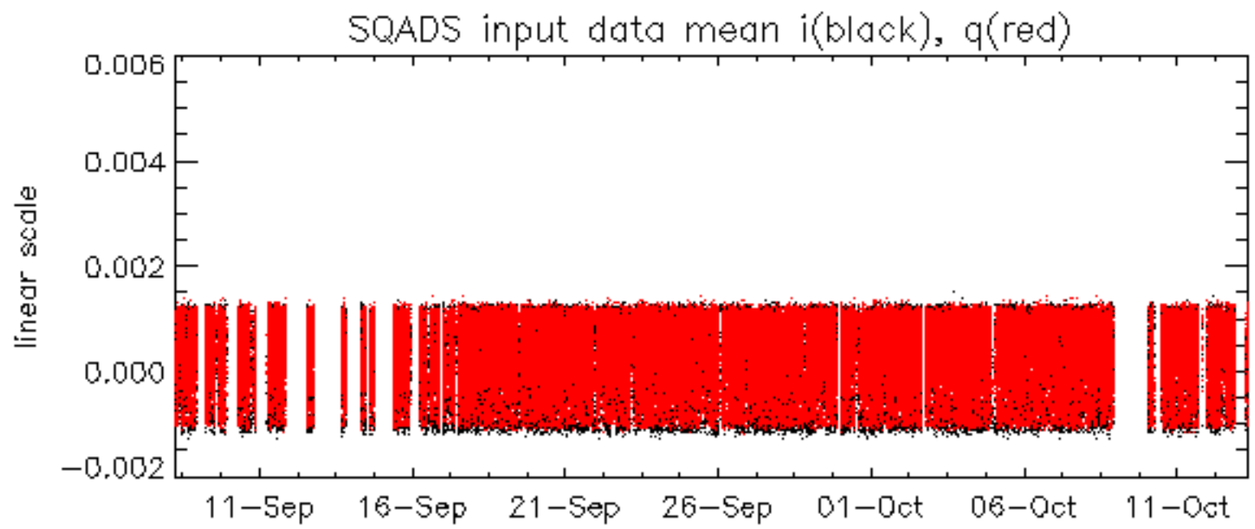
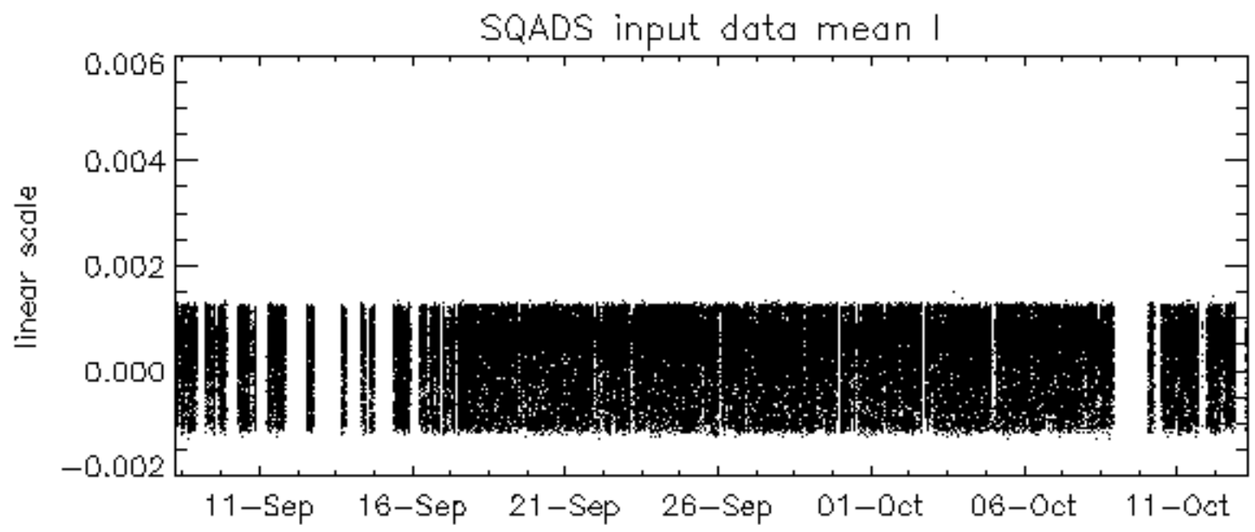
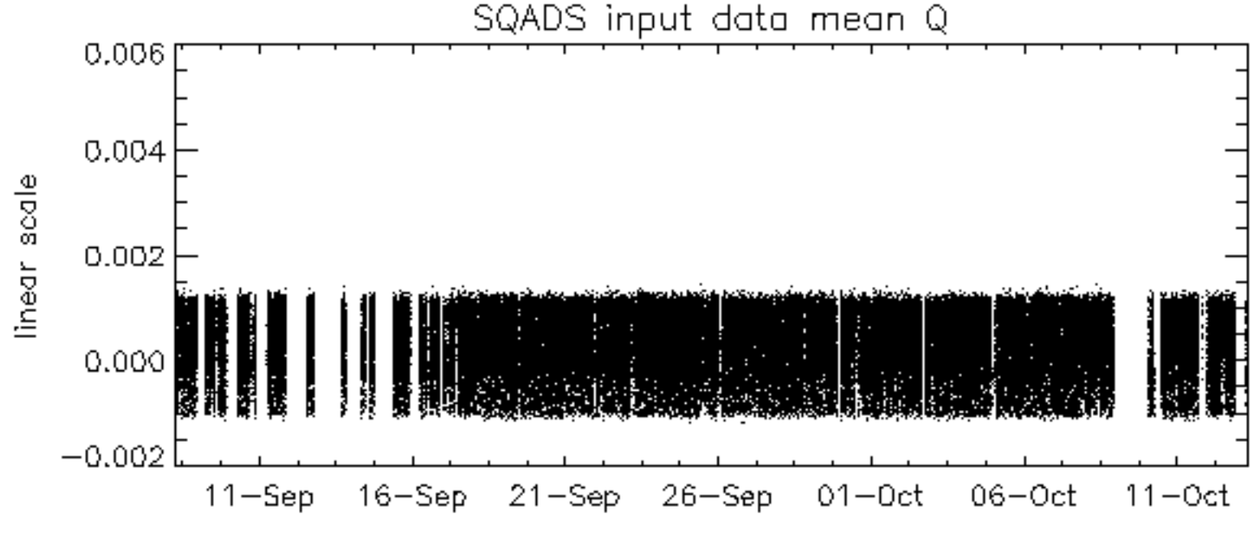
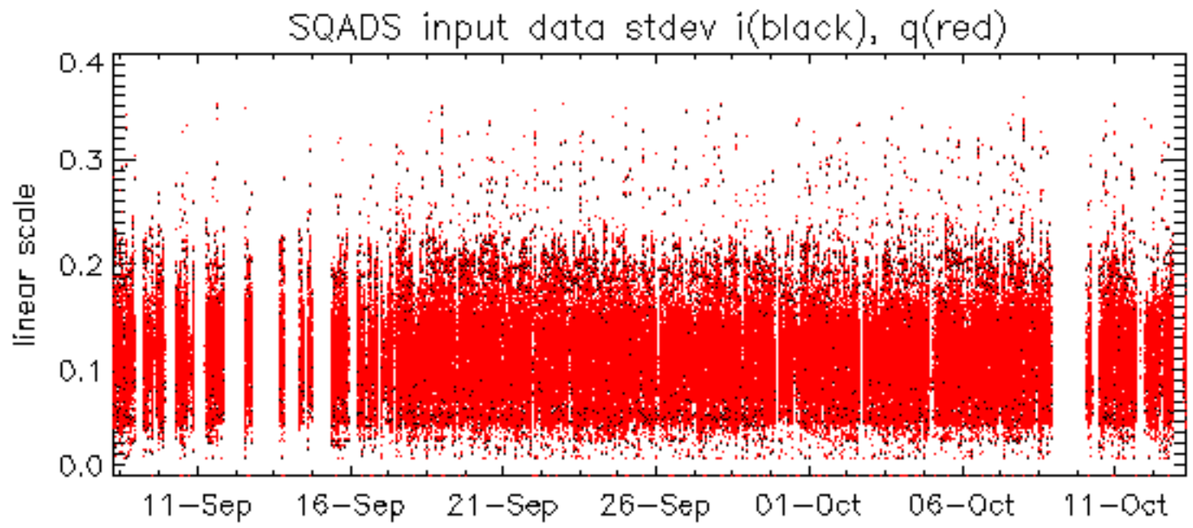

Reference: 2003-06-12 14:10:32 V
Test : 2003-10-12 19:22:57 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

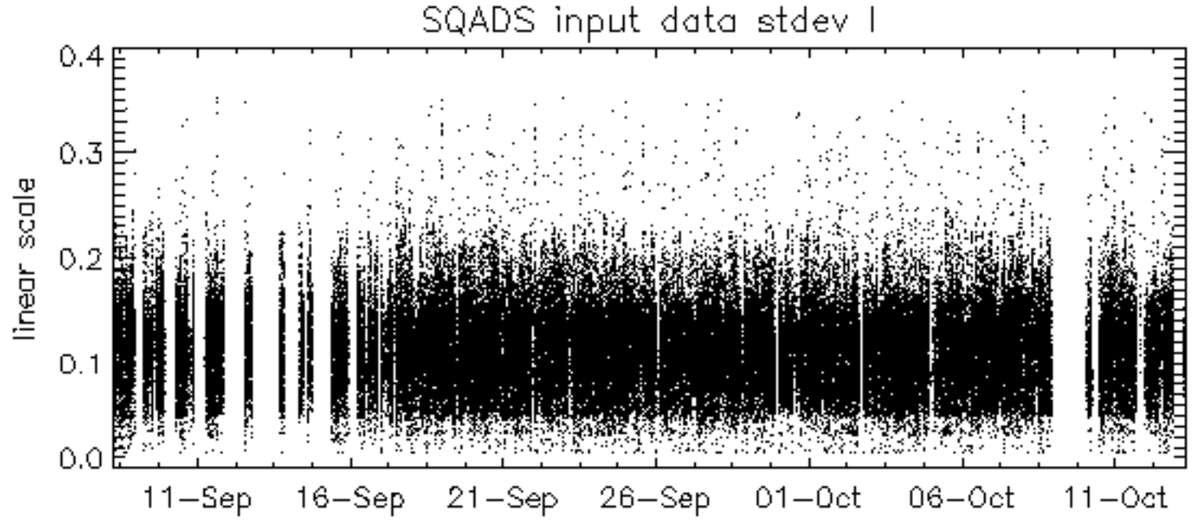

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

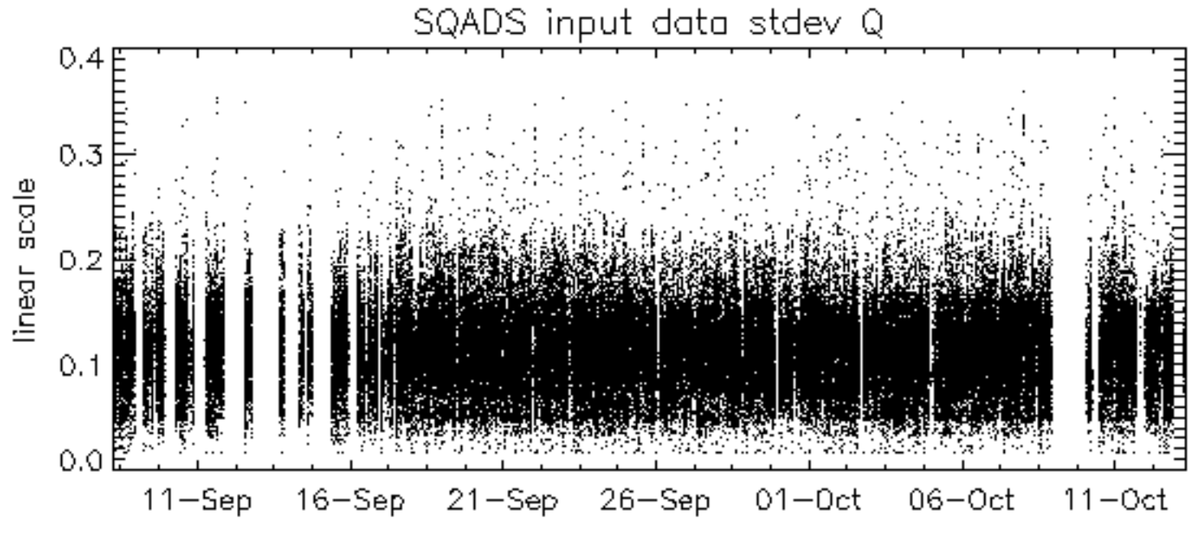

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct

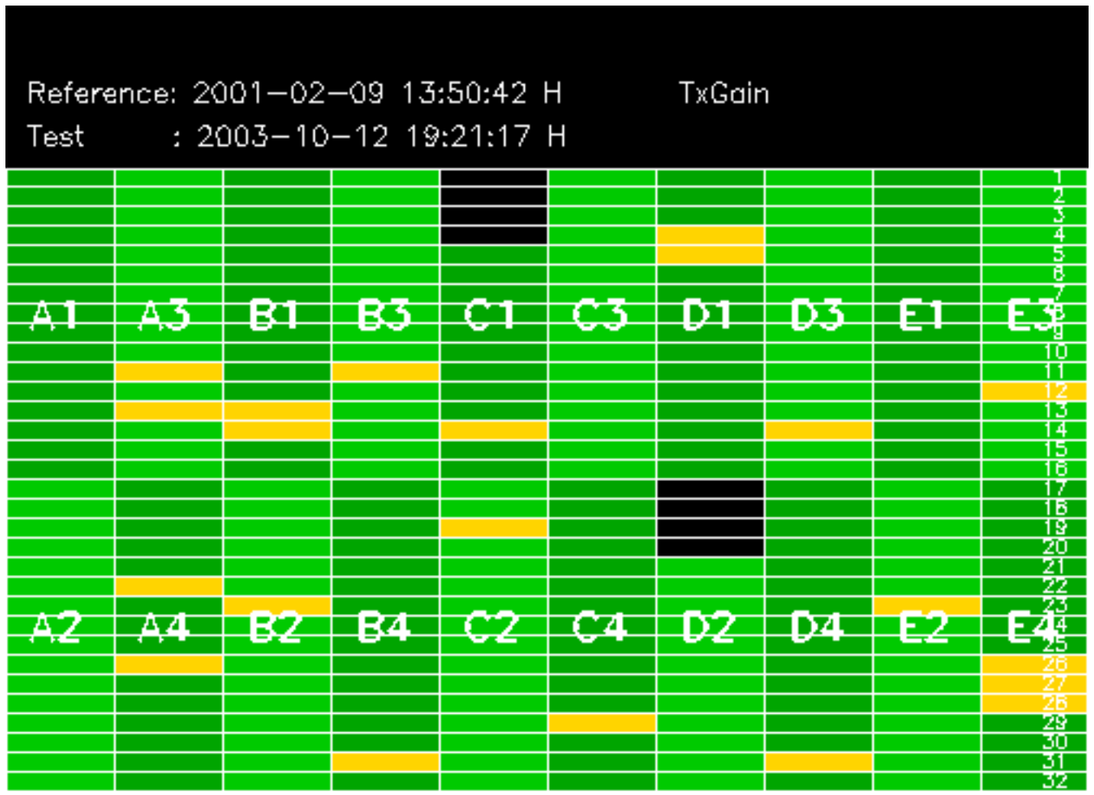

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct

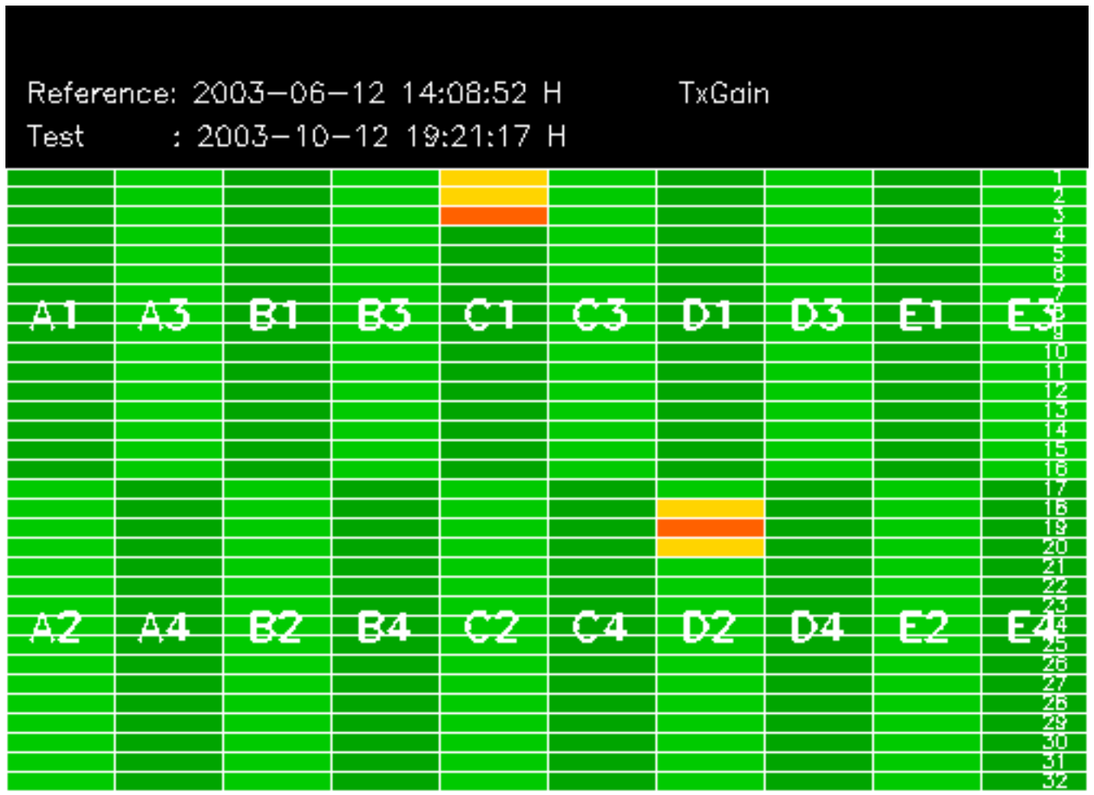

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Sep
16−Sep
21−Sep
26−Sep
01−Oct
06−Oct
11−Oct


Reference: 2001-02-09 13:50:42 H
Test : 2003-10-12 19:21:17 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 : 2003-10-12 19:21:17 H
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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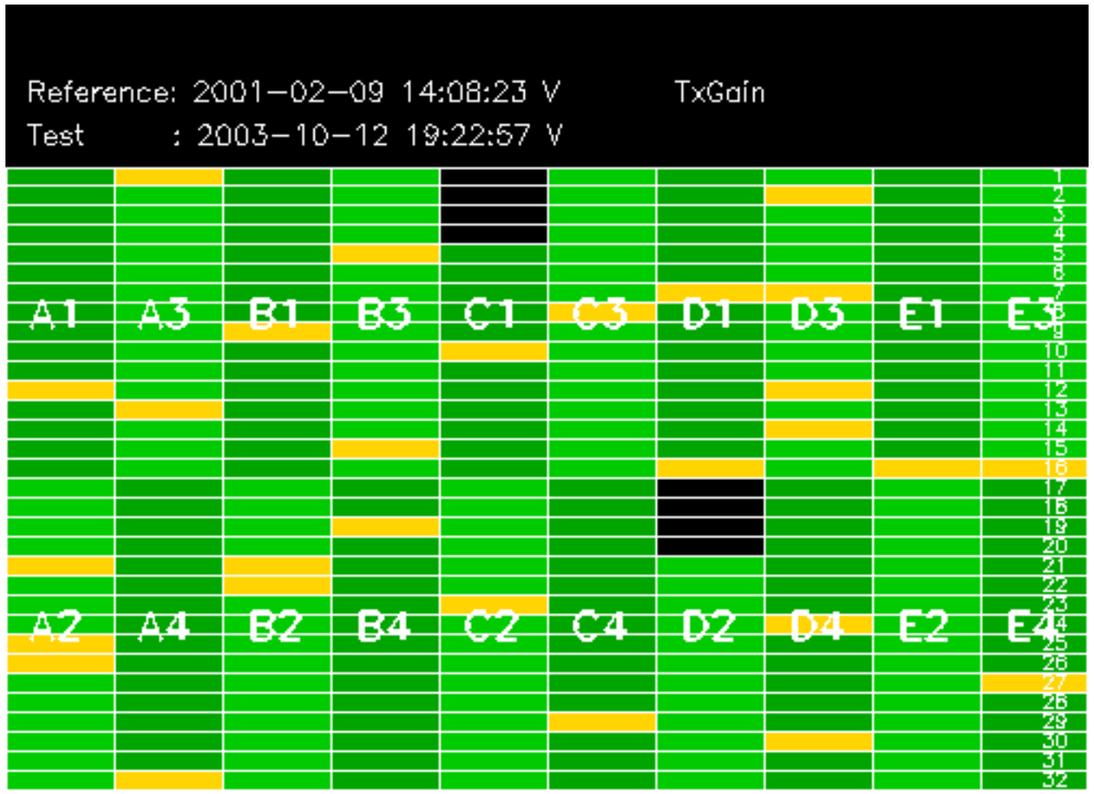
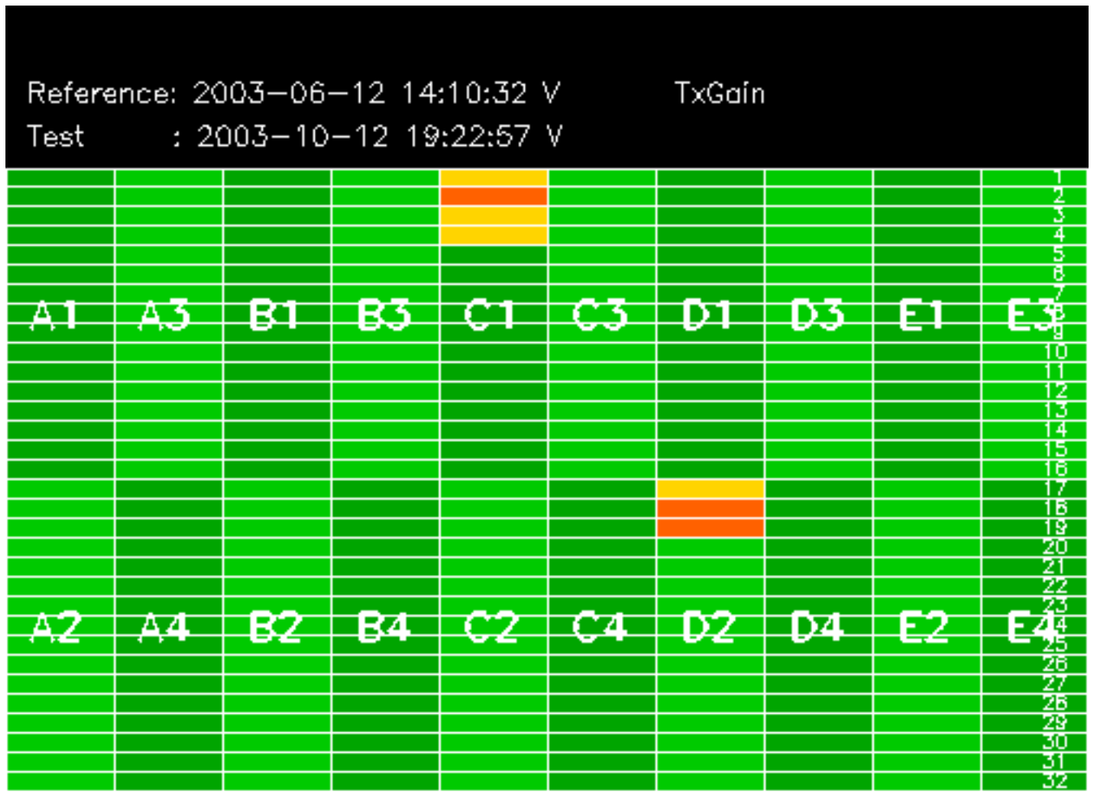

Reference: 2001-02-09 14:08:23 V
Test : 2003-10-12 19:22:57 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-10-12 19:22:57 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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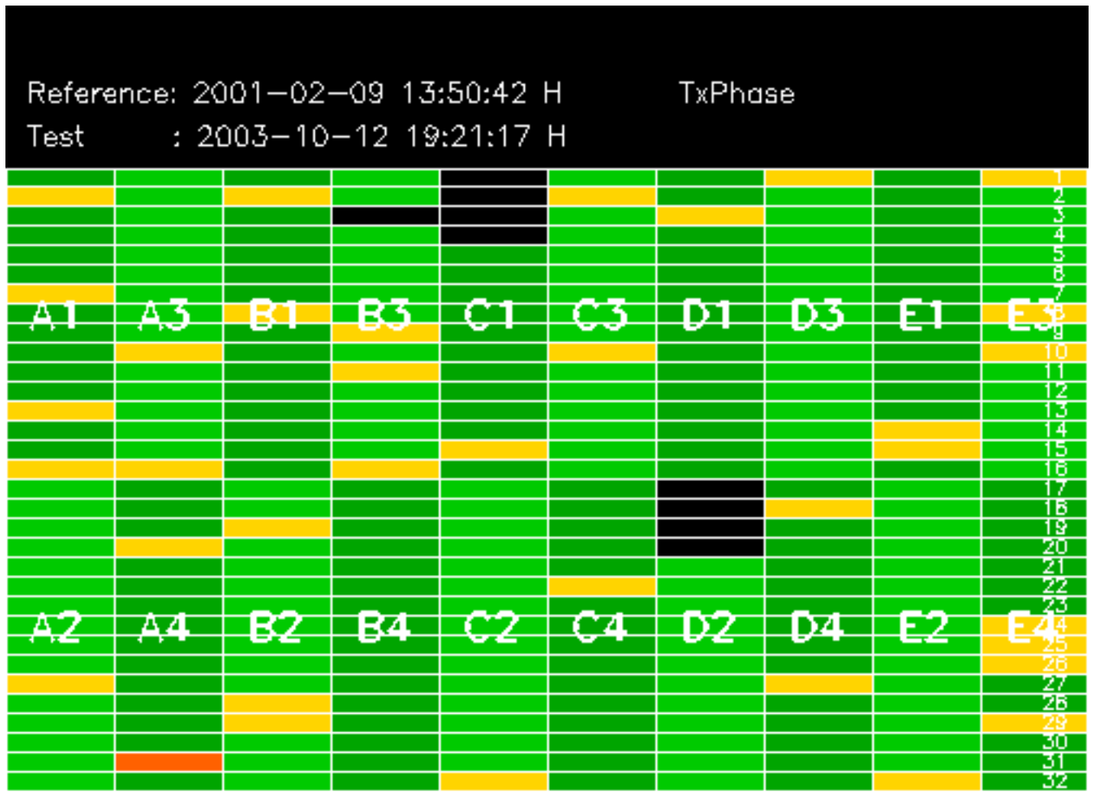
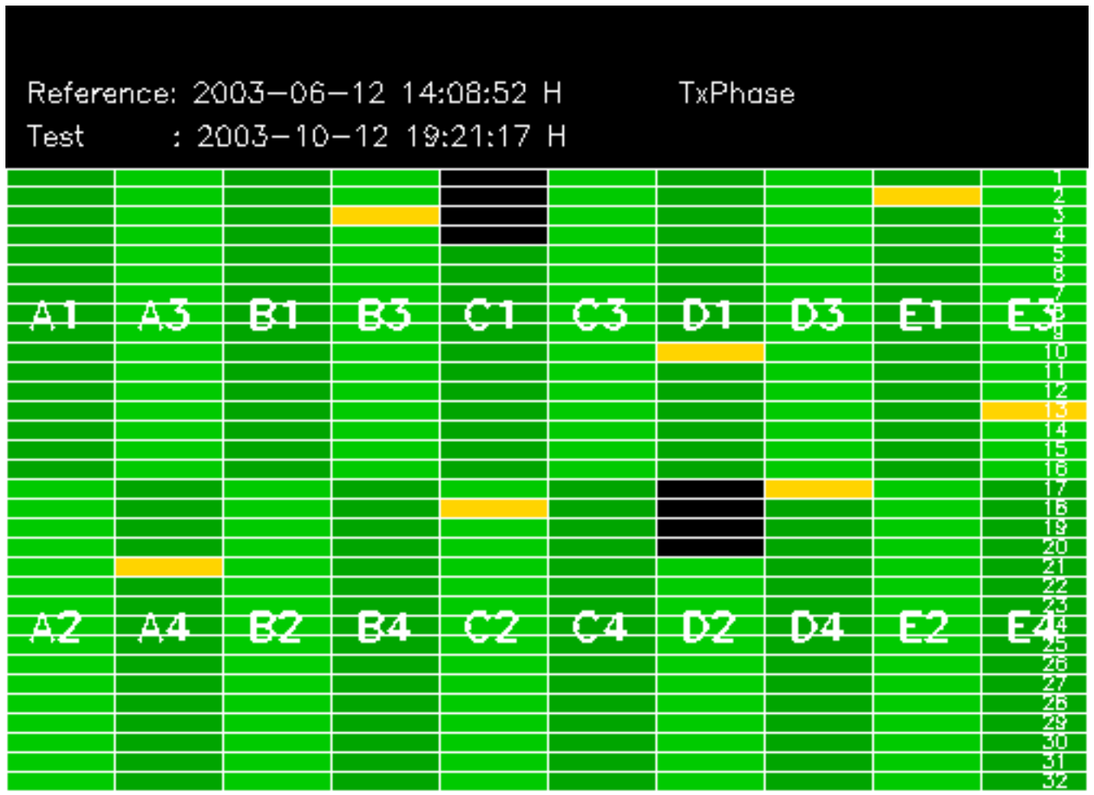

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2003-10-12 19:21:17 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2003-10-12 19:21:17 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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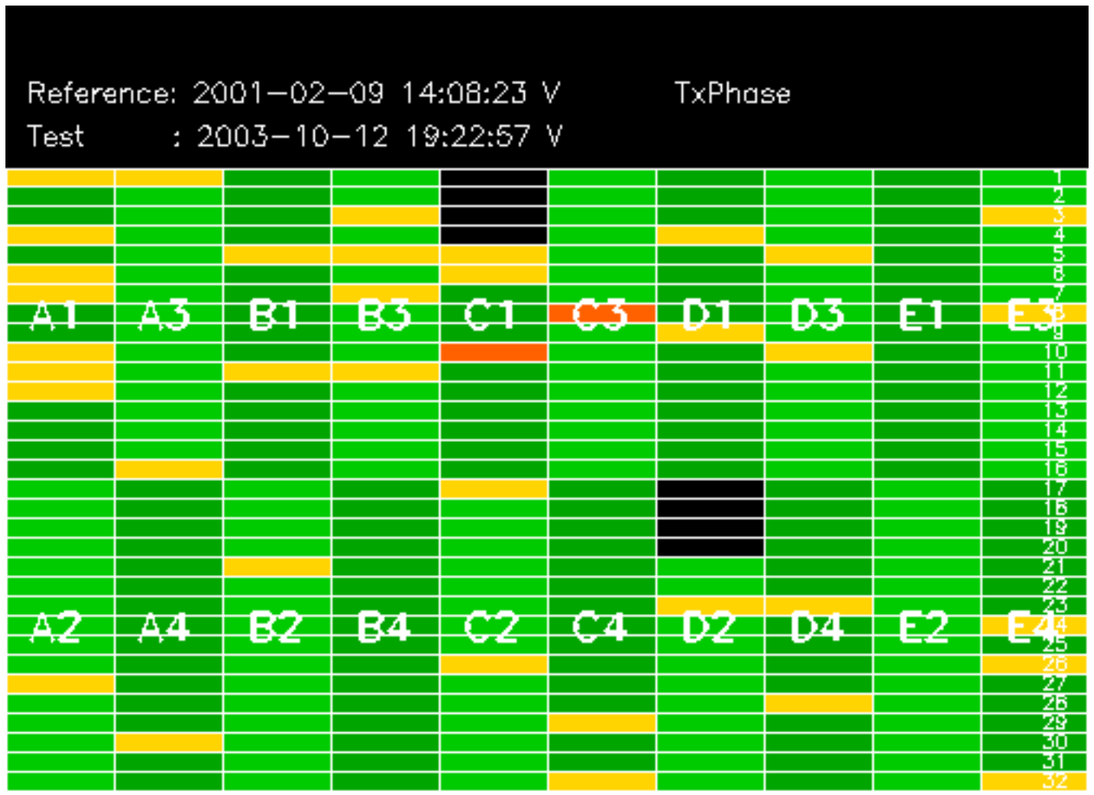
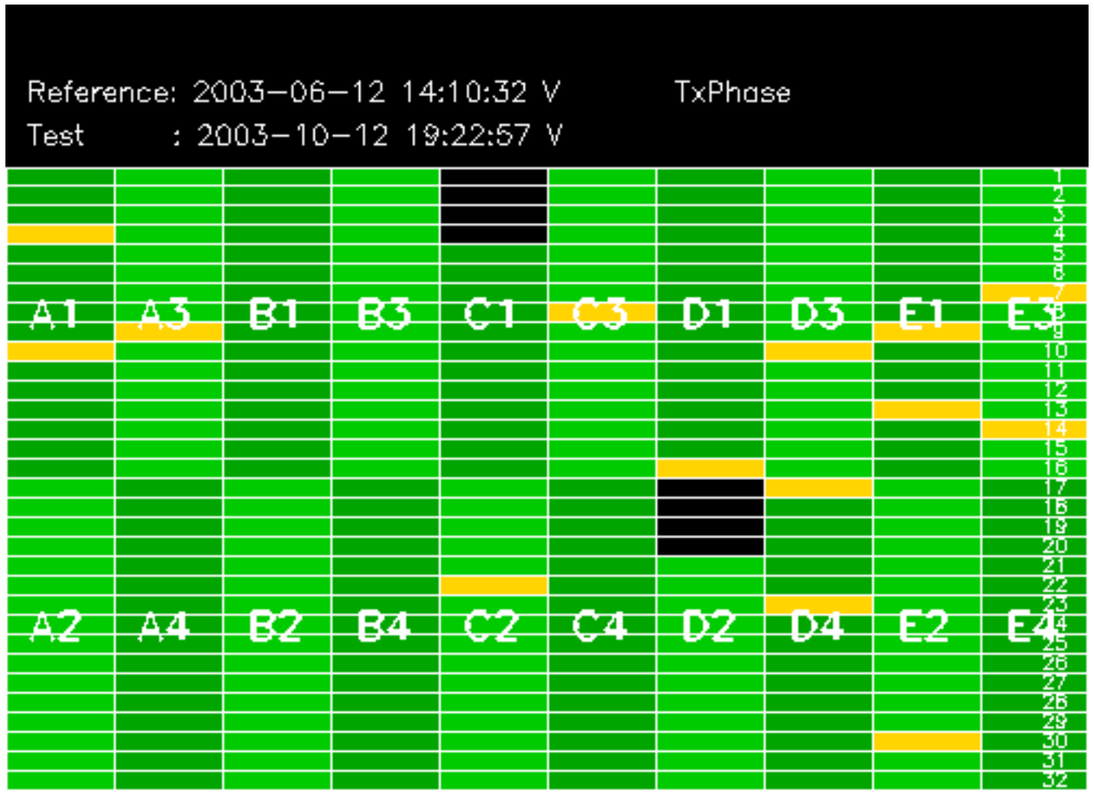

Reference: 2001-02-09 14:08:23 V
Test : 2003-10-12 19:22:57 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-10-12 19:22:57 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
C2
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No unavailabilies during the reported period.