REPORT OF 031217

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

Preliminary report. Instrument unavailabilities are not yet reported

2.2 - Browse Visual Inspection

No anomalies detected from browse visual inspection.

2.3 - Data Analysis

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 available MS products:
- ASA_MS__0PNPDK20031216_200704_000000152022_00314_09386_0076.N1
- ASA_MS__0PNPDK20031216_200824_000000152022_00314_09386_0077.N1

Polarisation	Start Time
V	20031216 200824
H	20031216 200704

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	-3.72332	-22.5668	-8.16622
	stdev	0.00726400	0.0822361	0.00414866

24	mean	-5.07053	-21.1938	-8.16622
	stdev	0.00895304	0.0690501	0.00414866

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.76929	-22.5589	-8.14692
	stdev	0.0789101	0.0717021	0.00527088
24	mean	-5.09864	-21.2250	-8.14692
	stdev	0.0136464	0.0646589	0.00527088

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	0.000339256
	stdev	1.12256e-05
MEAN Q	mean	0.000188950
	stdev	1.12322e-05

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.115229
	stdev	0.00154100

STDEV Q	mean	0.115479
	stdev	0.00155667

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

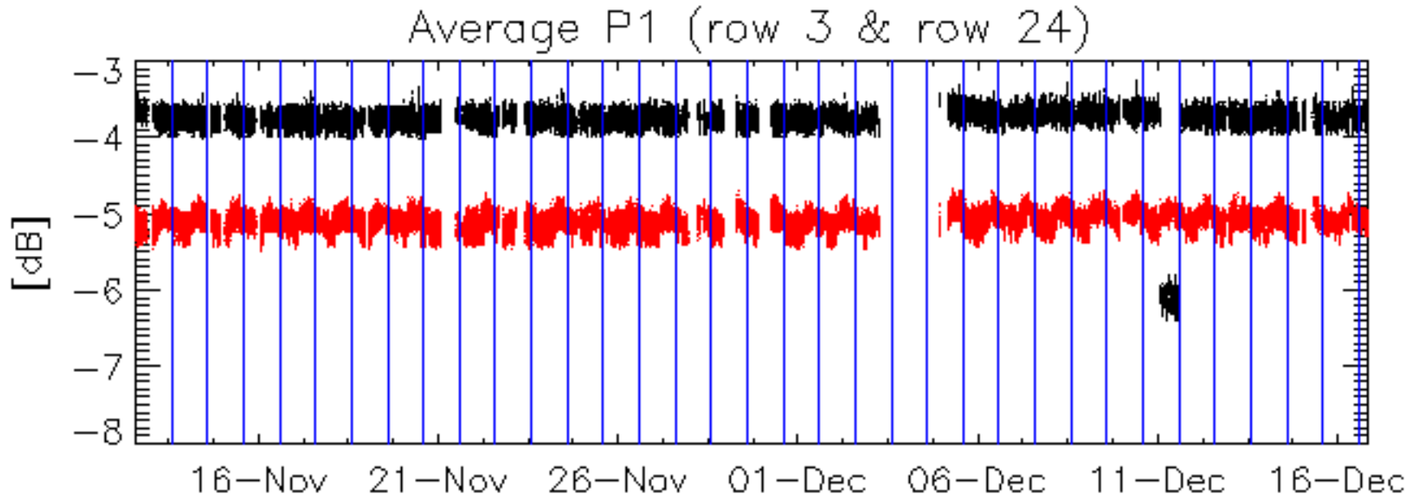
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

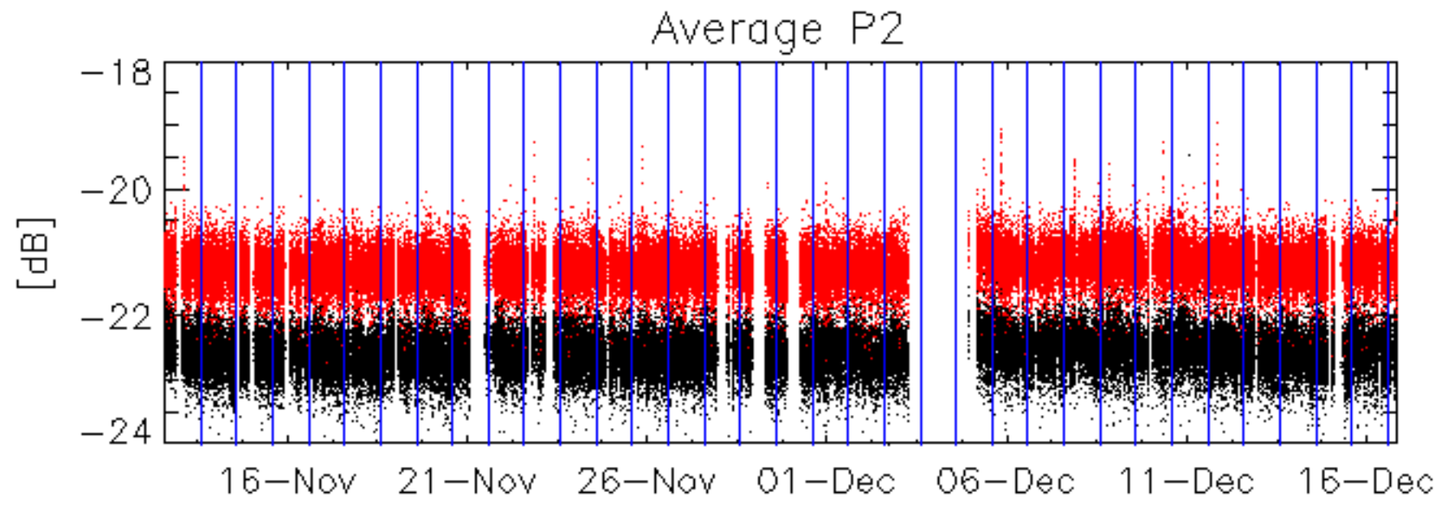
6.2 - Absolute Doppler

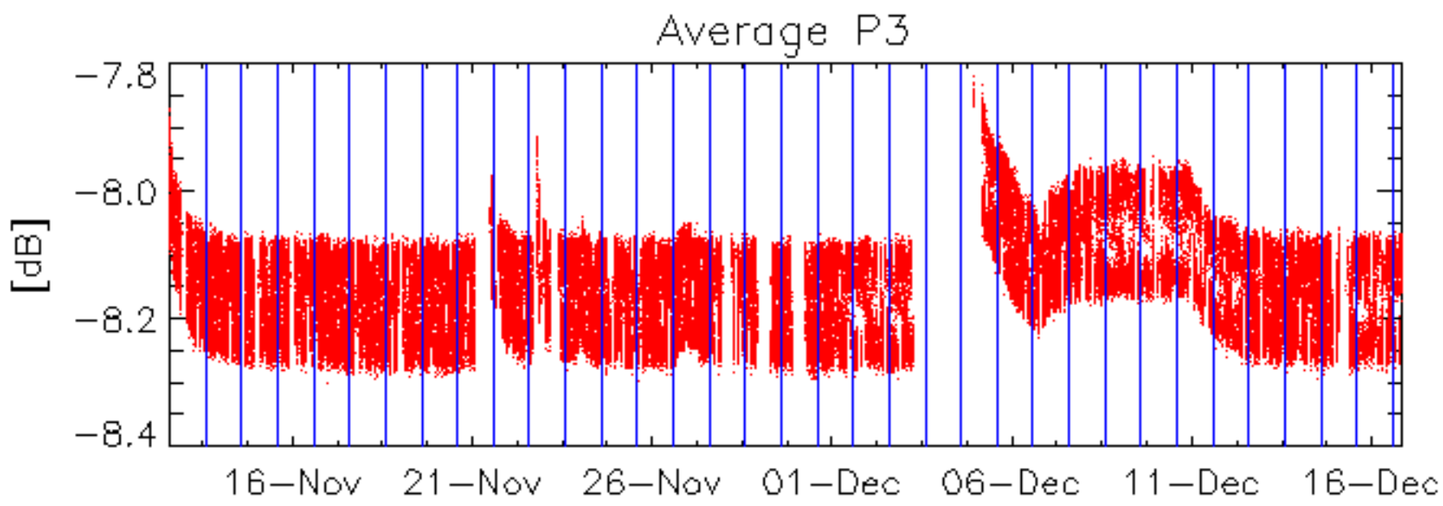
Evolution of Absolute Doppler
Acsending
Descending

6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX



Average P1 (row 3 & row 24)
[dB]
−3
−4
−5
−6
−7
−8
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

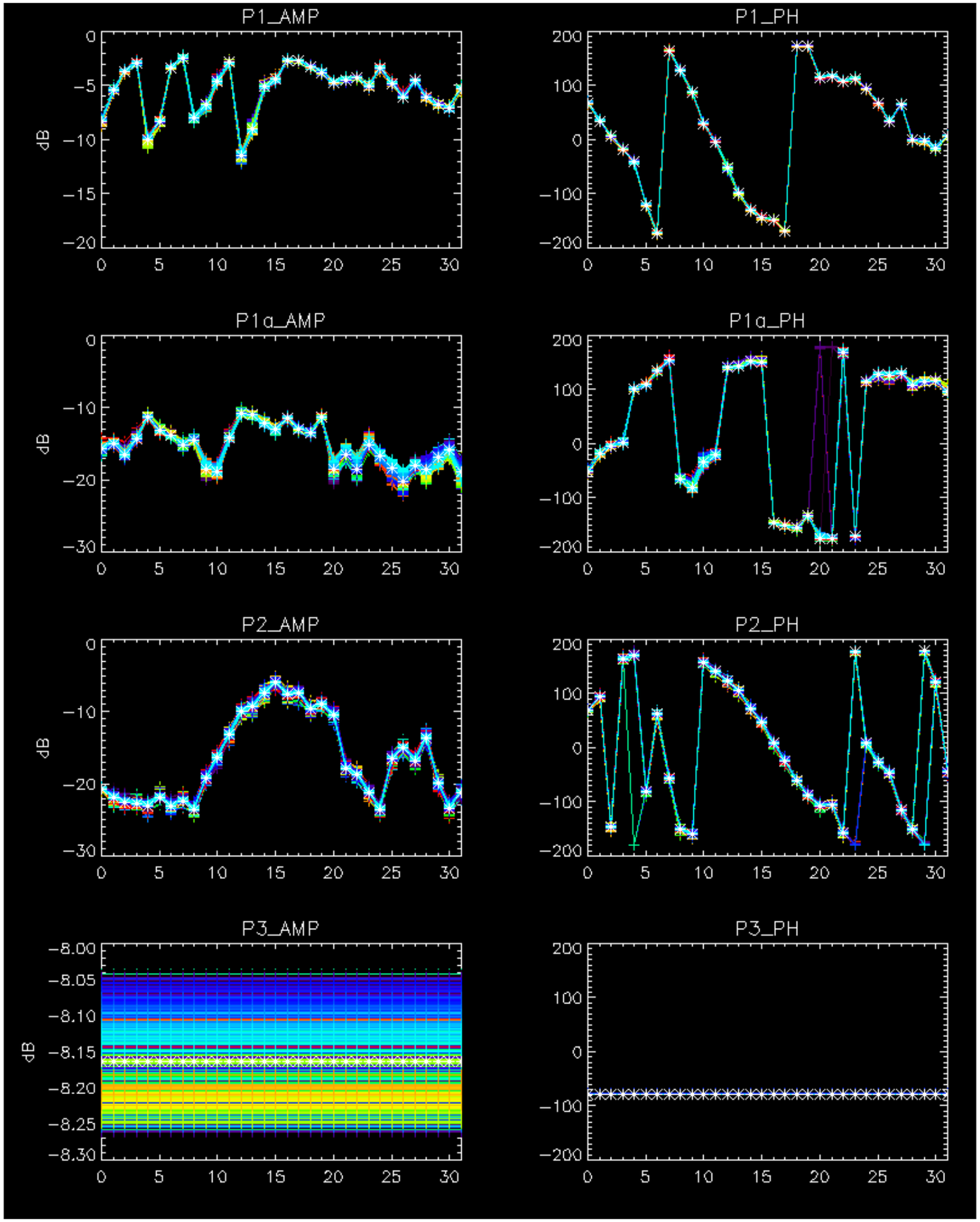

Average P2
[dB]
−18
−20
−22
−24
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec


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

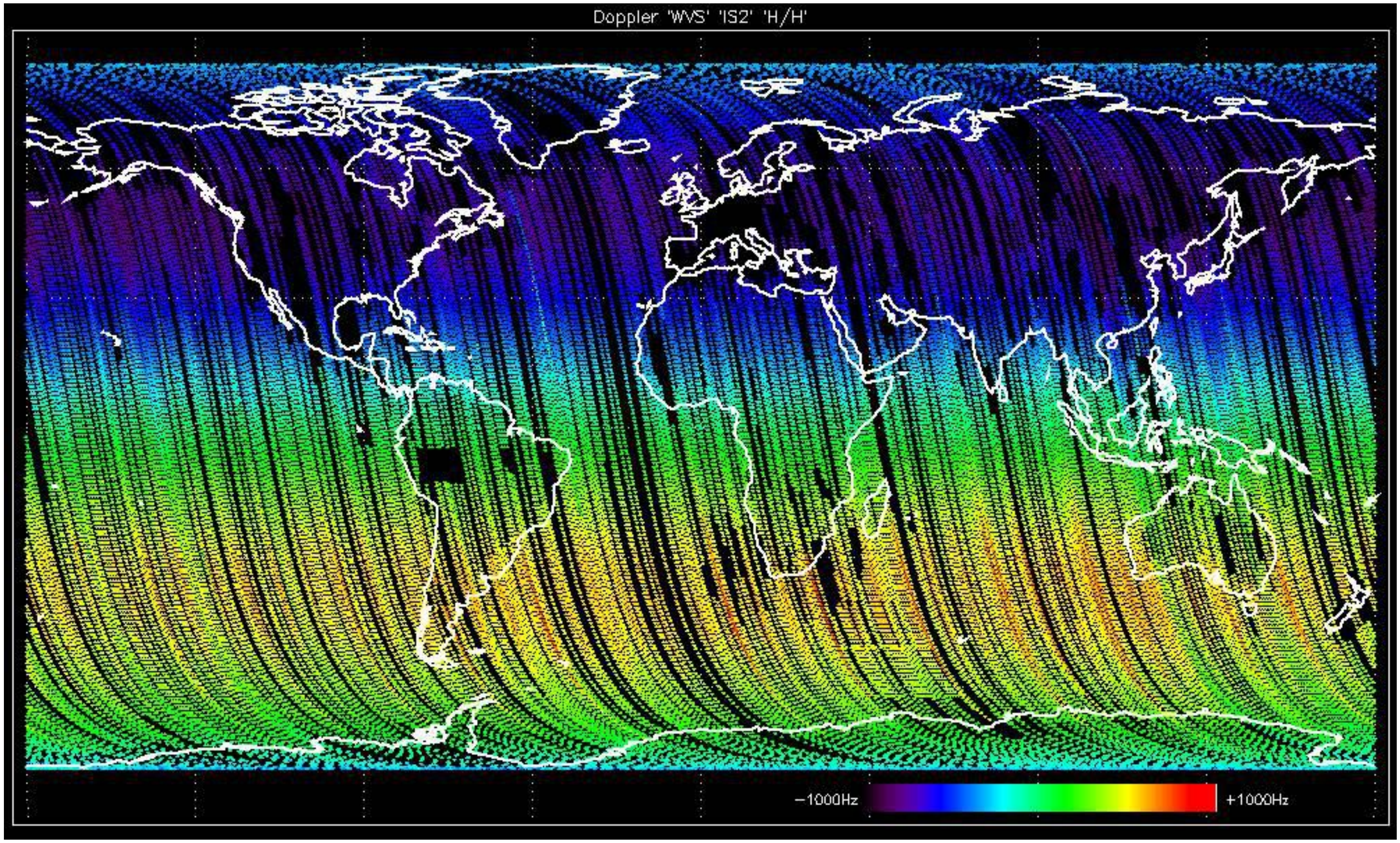
Average P1 (row 3 & row 24)
[dB]
−2
−4
−6
−8
−10
03
06
09
12
15
18
16−Dec
Average P2
[dB]
−18
−20
−22
−24
03
06
09
12
15
18
16−Dec
Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
03
06
09
12
15
18
16−Dec

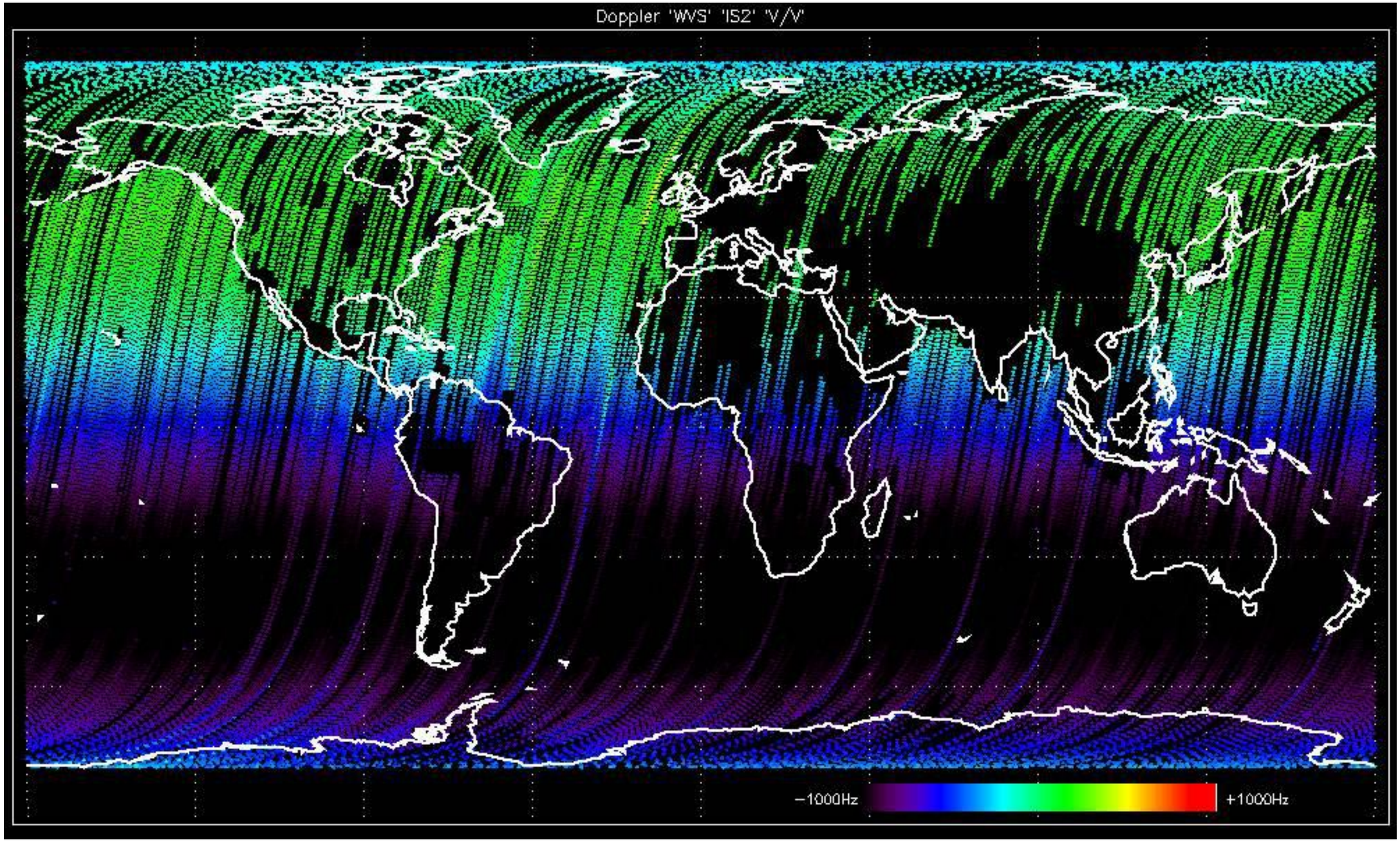
No anomalies detected from browse visual inspection.

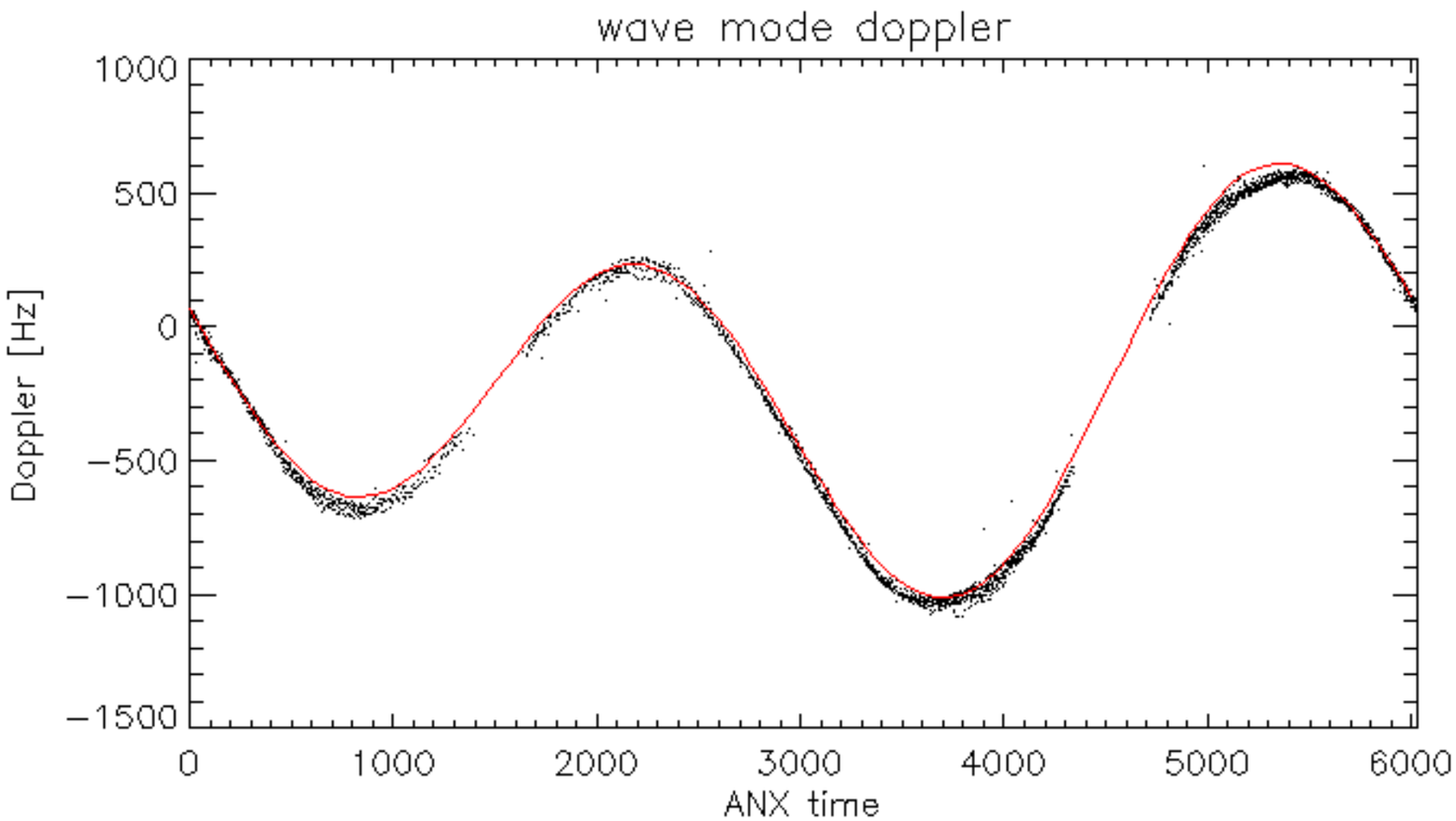
No anomalies observed.

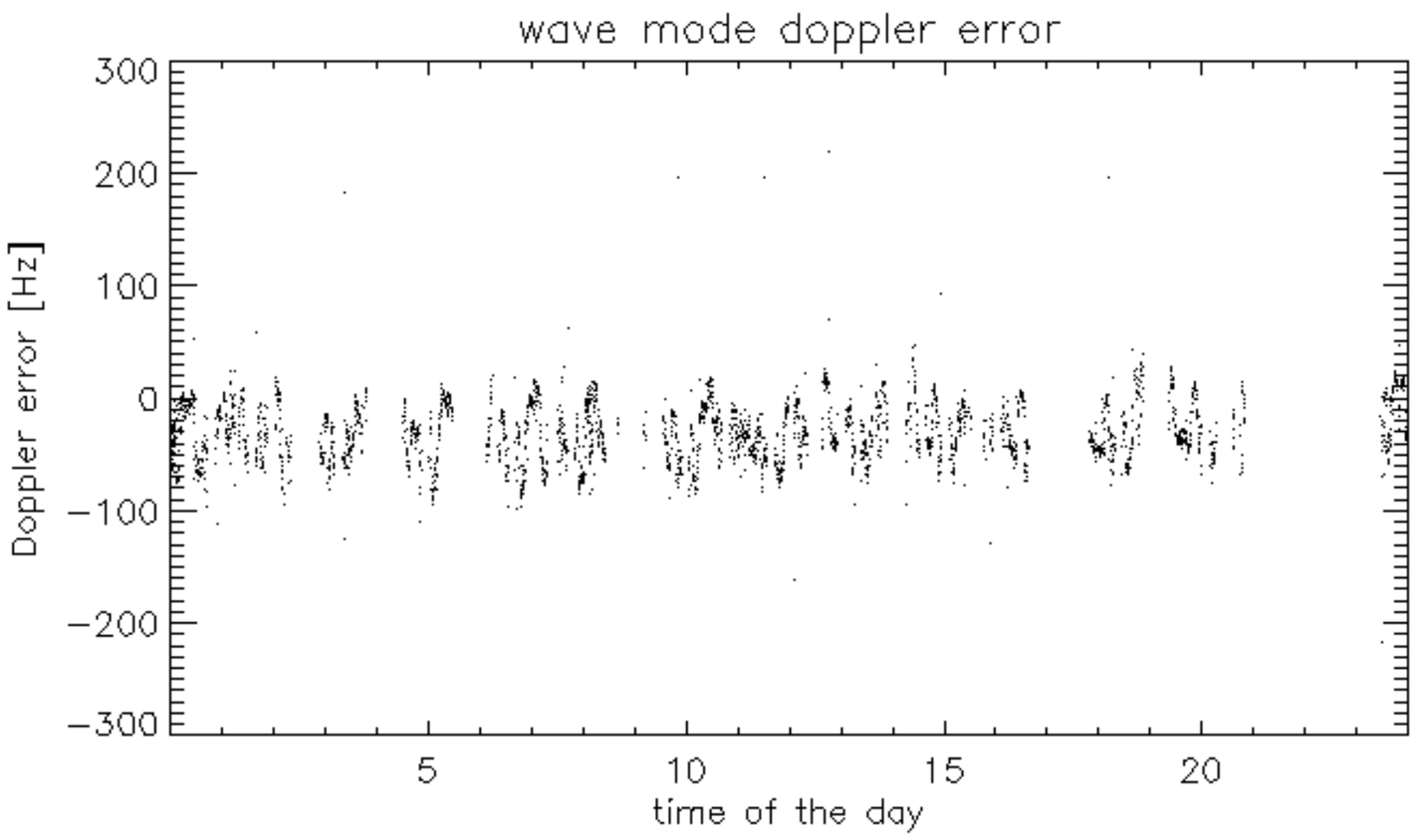

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

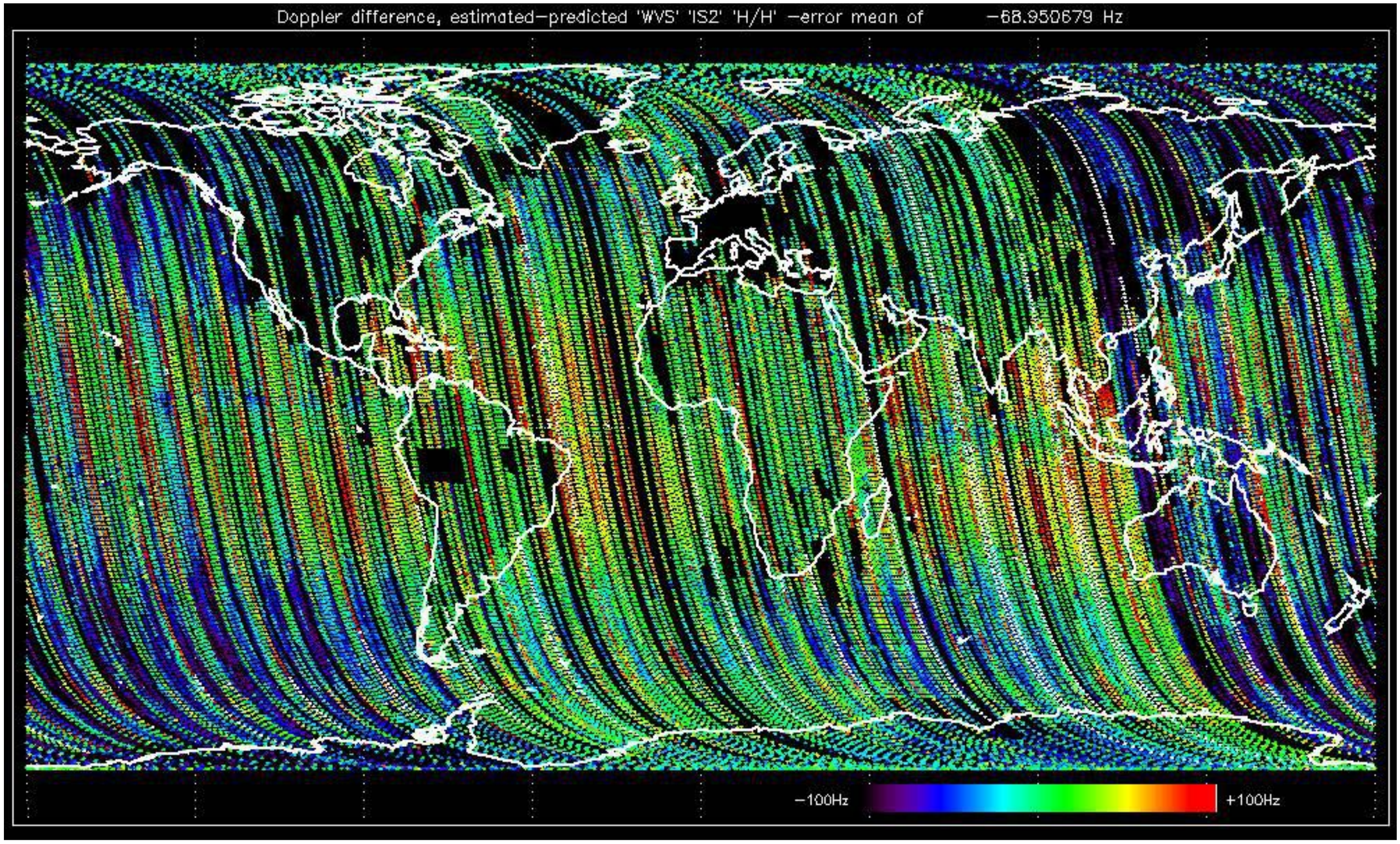
No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

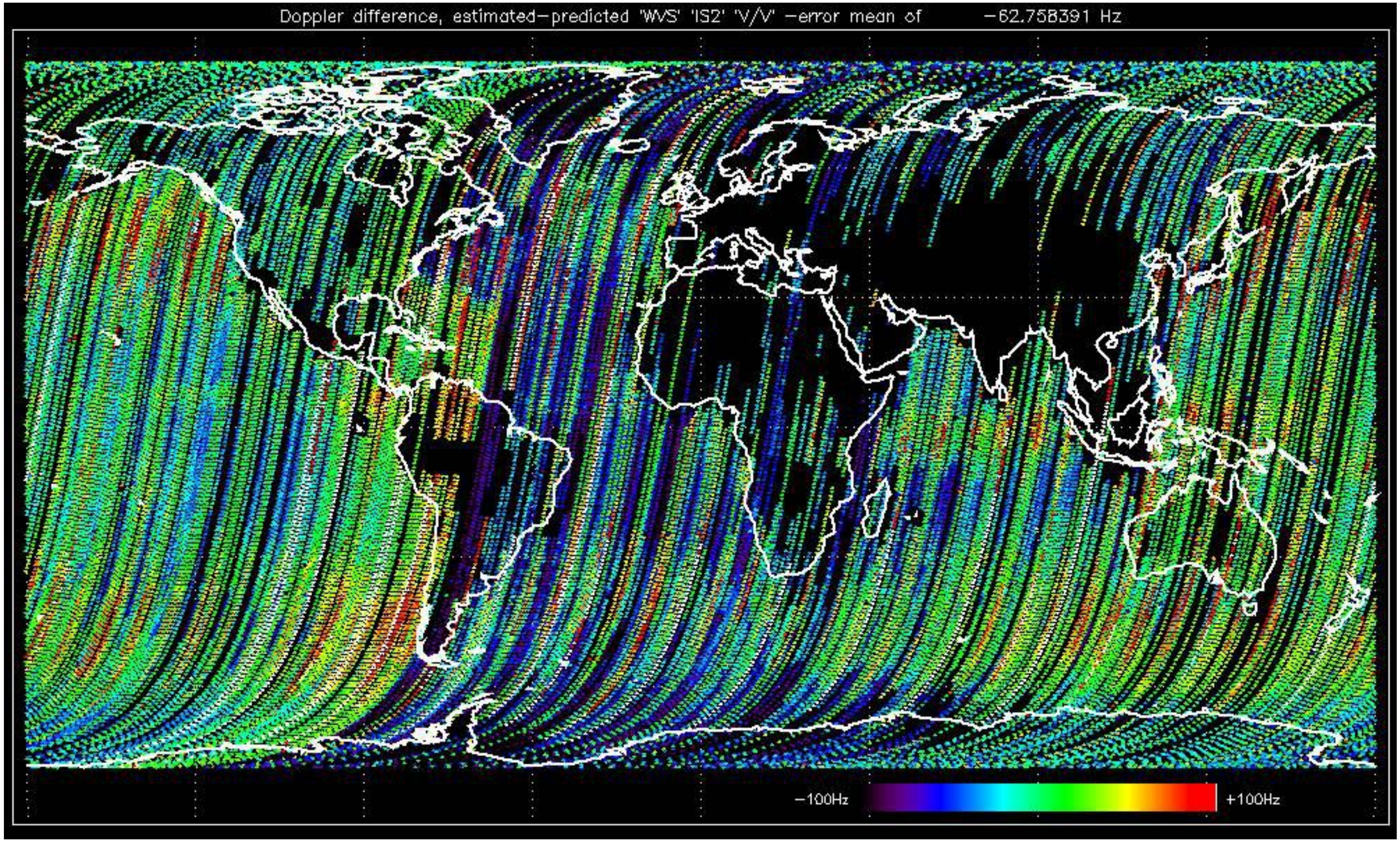

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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


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


wave mode doppler error
Doppler error [Hz]
300
200
100
0
−100
−200
−300
5
10
15
20
time of the day

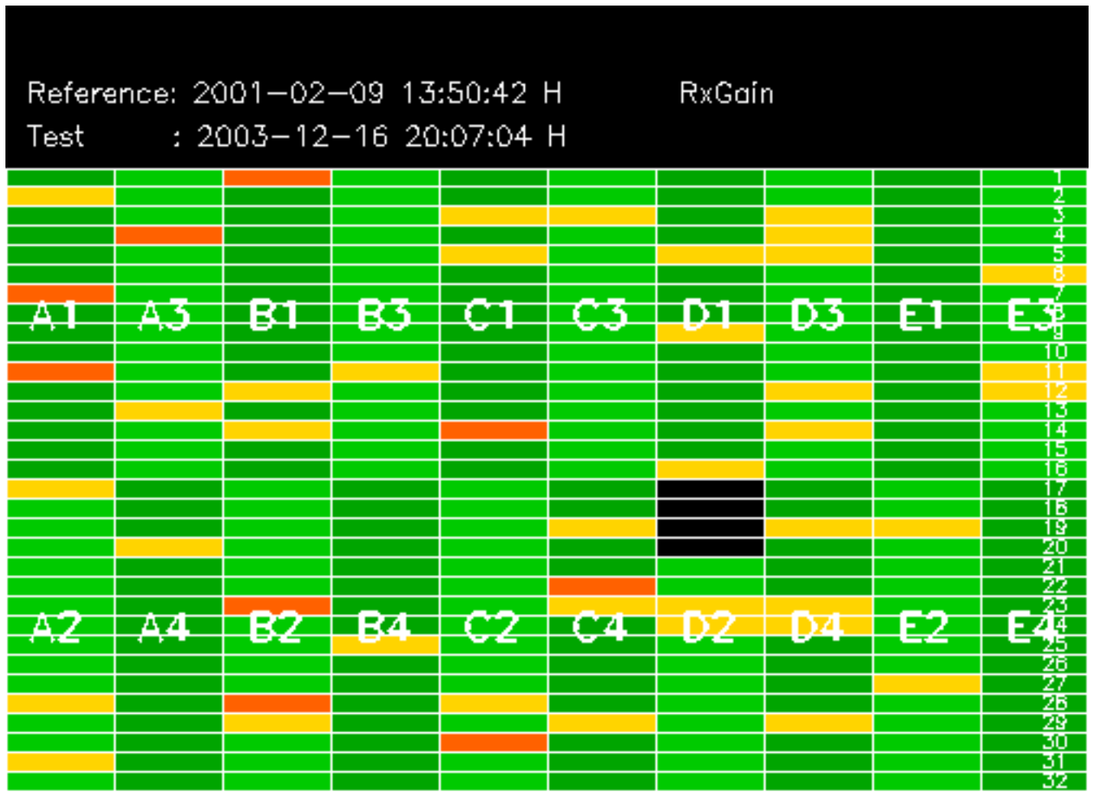

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of −68.950679 Hz
−100Hz
+100Hz

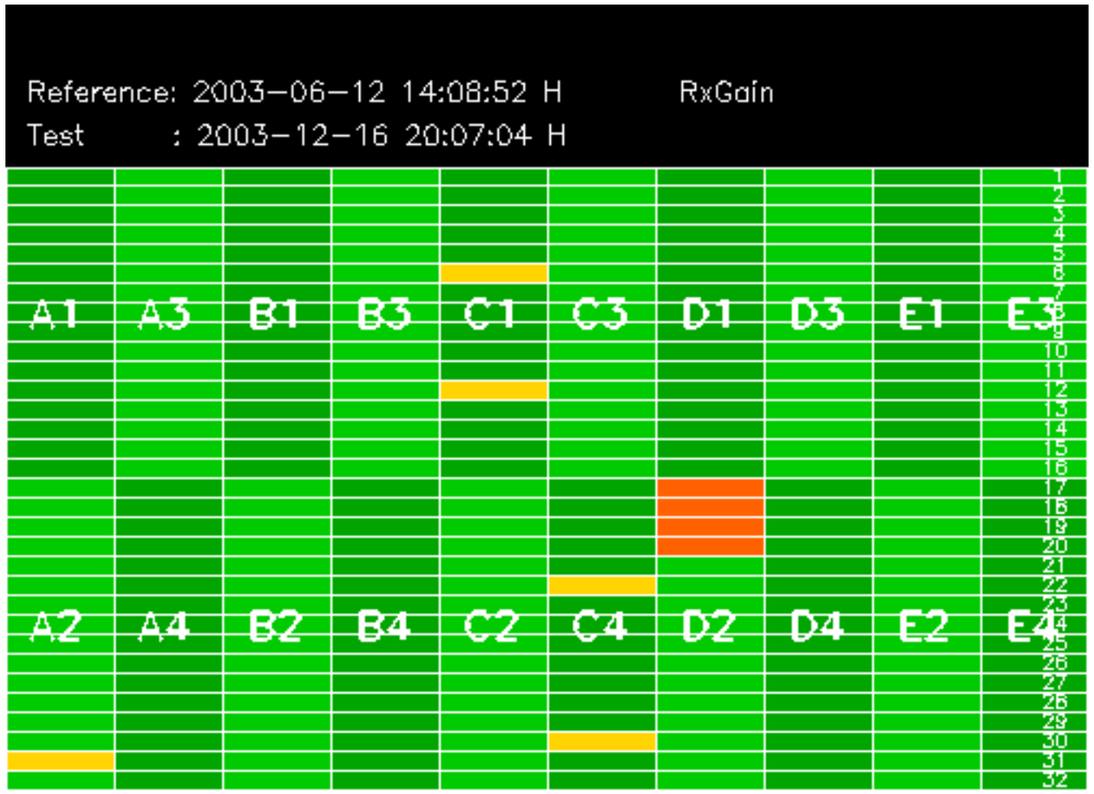

Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of −62.758391 Hz
−100Hz
+100Hz

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 available MS products:
- ASA_MS__0PNPDK20031216_200704_000000152022_00314_09386_0076.N1
- ASA_MS__0PNPDK20031216_200824_000000152022_00314_09386_0077.N1

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2003-12-16 20:07:04 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 : 2003-12-16 20:07:04 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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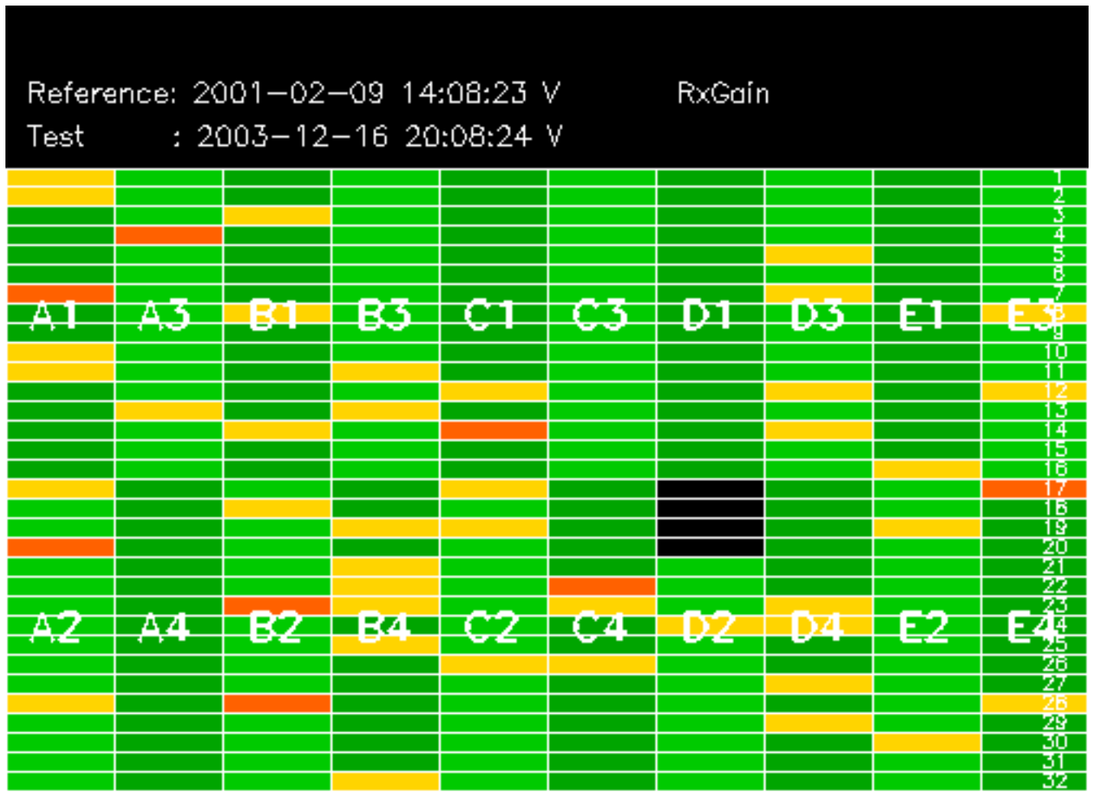
Reference: 2001-02-09 14:08:23 V
Test : 2003-12-16 20:08:24 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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3
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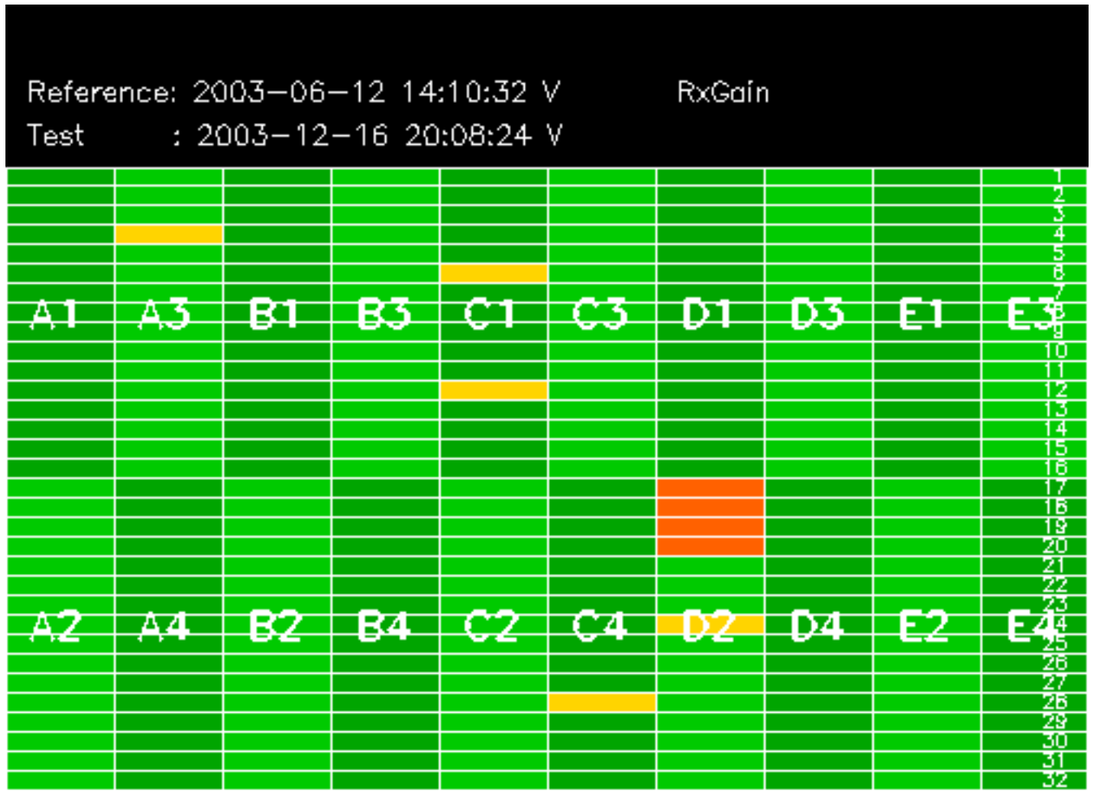
Reference: 2003-06-12 14:10:32 V
Test : 2003-12-16 20:08:24 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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3
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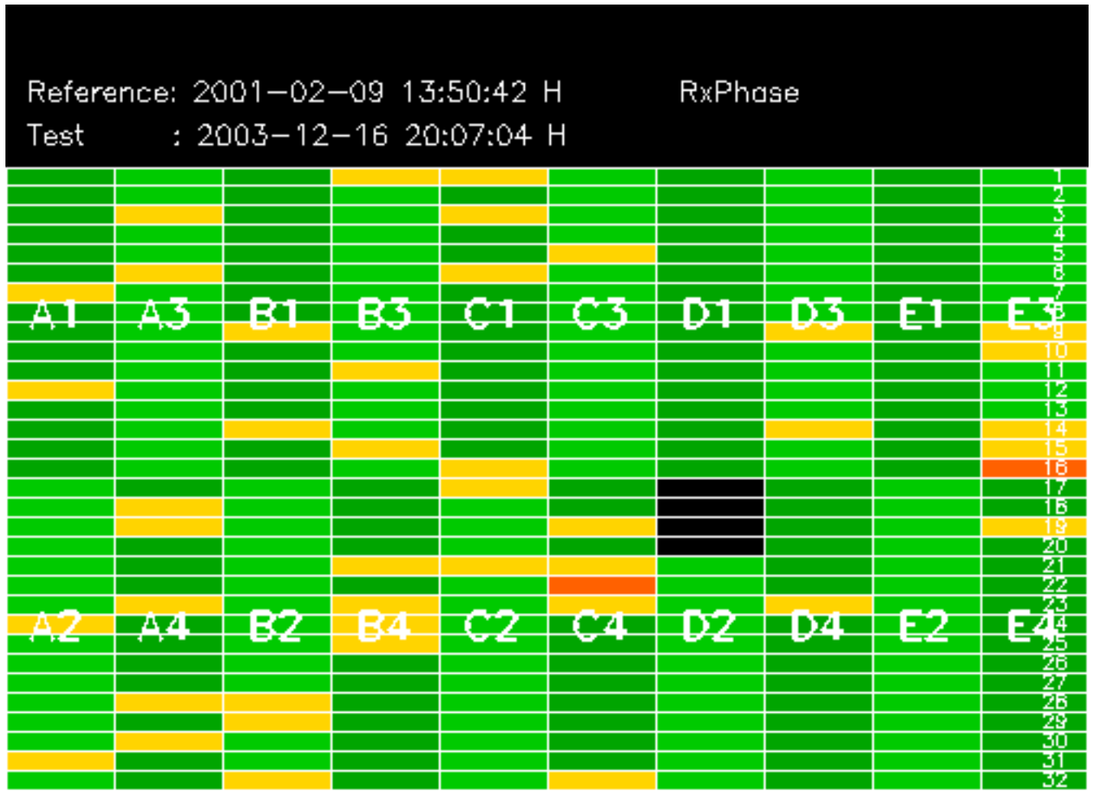
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2003-12-16 20:07:04 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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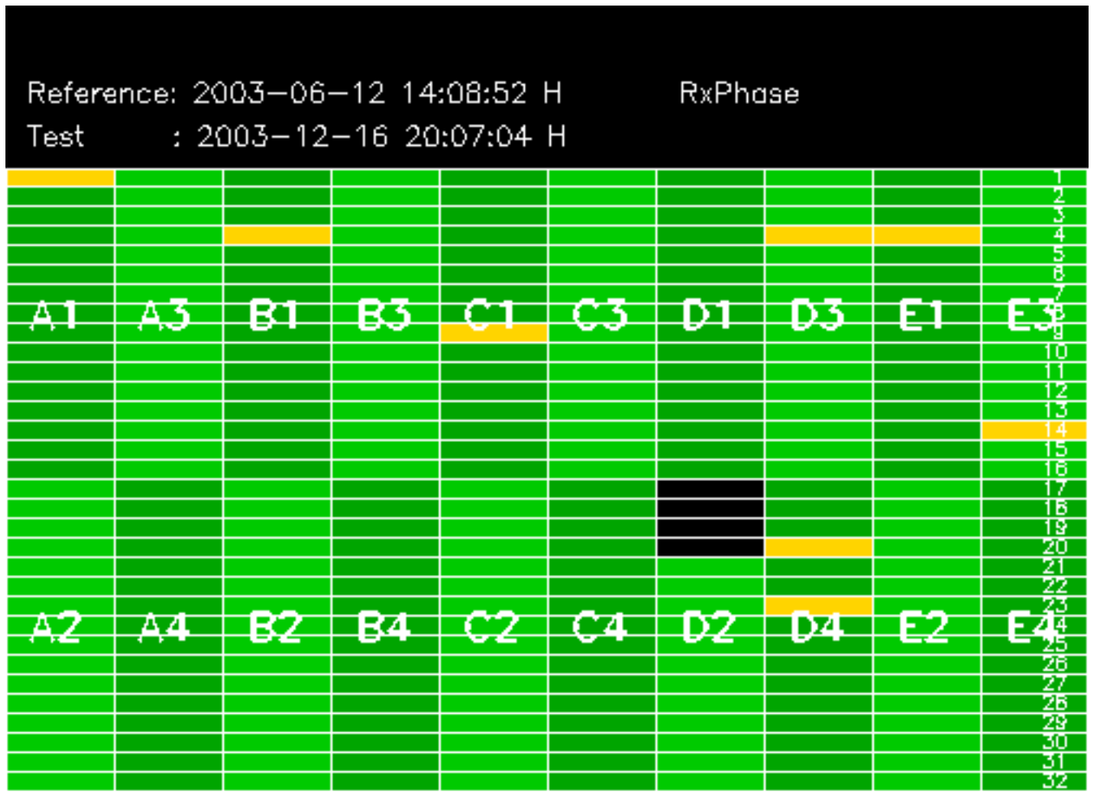
Reference: 2003-06-12 14:08:52 H
Test : 2003-12-16 20:07:04 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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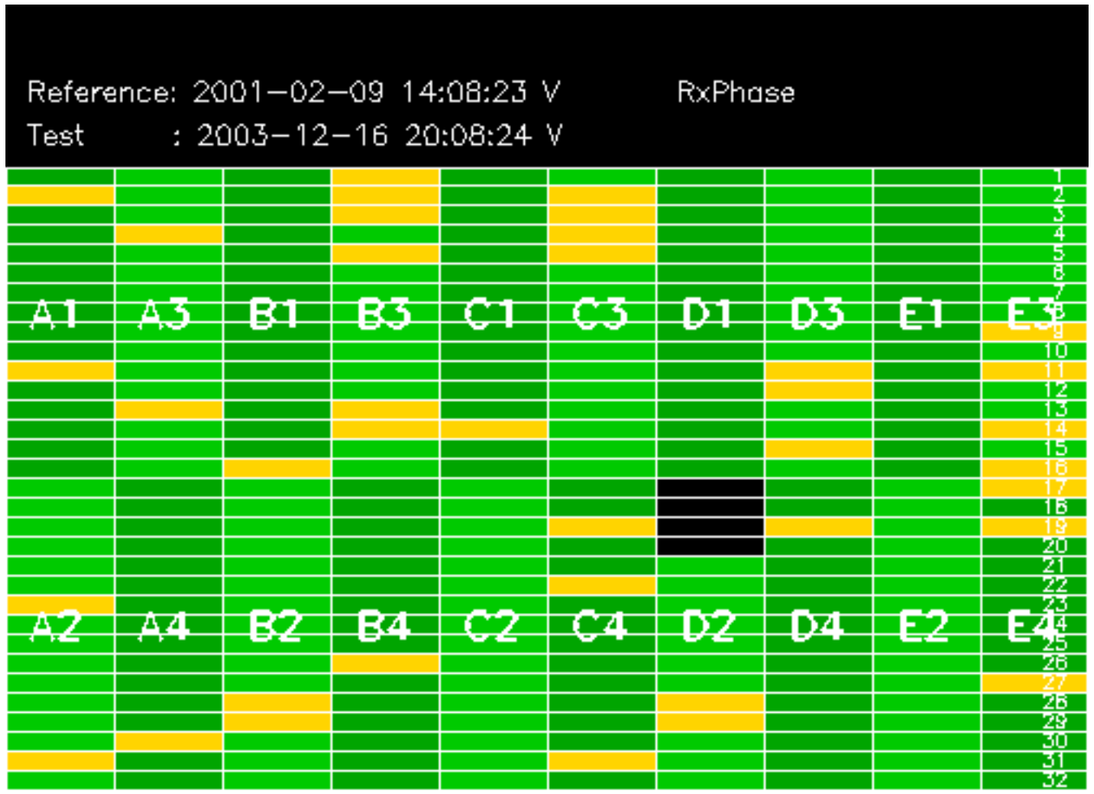
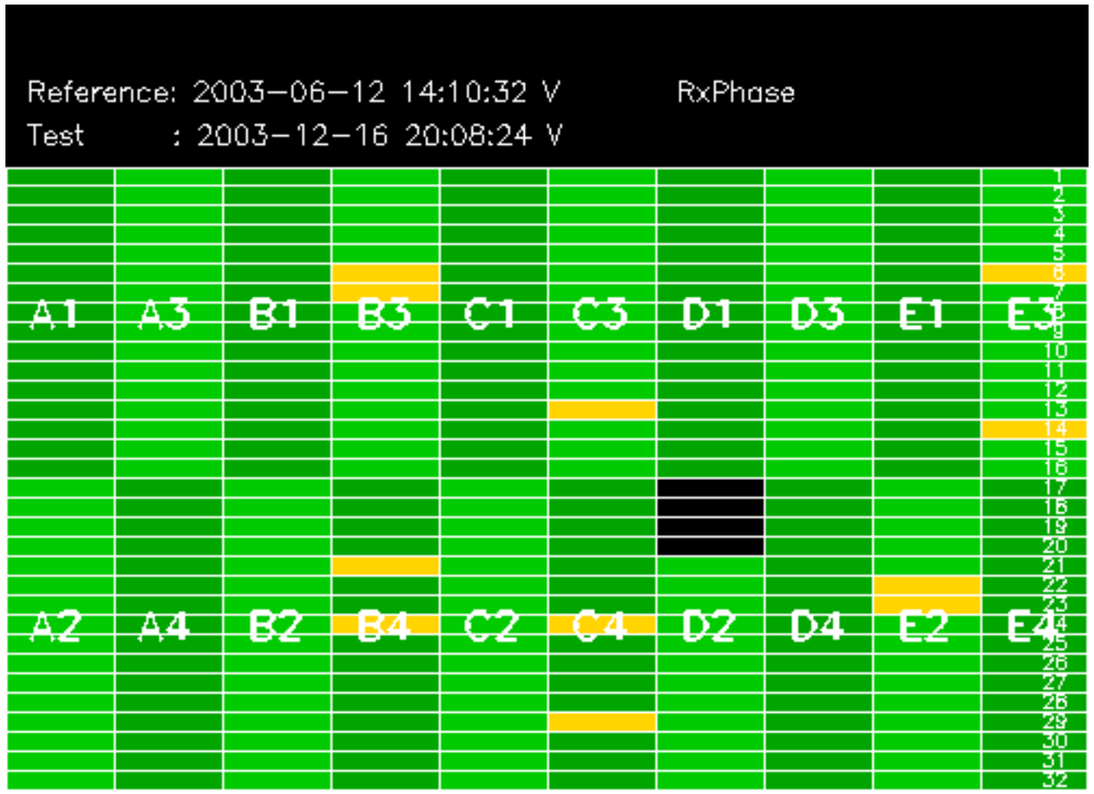

Reference: 2001-02-09 14:08:23 V
Test : 2003-12-16 20:08:24 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-12-16 20:08:24 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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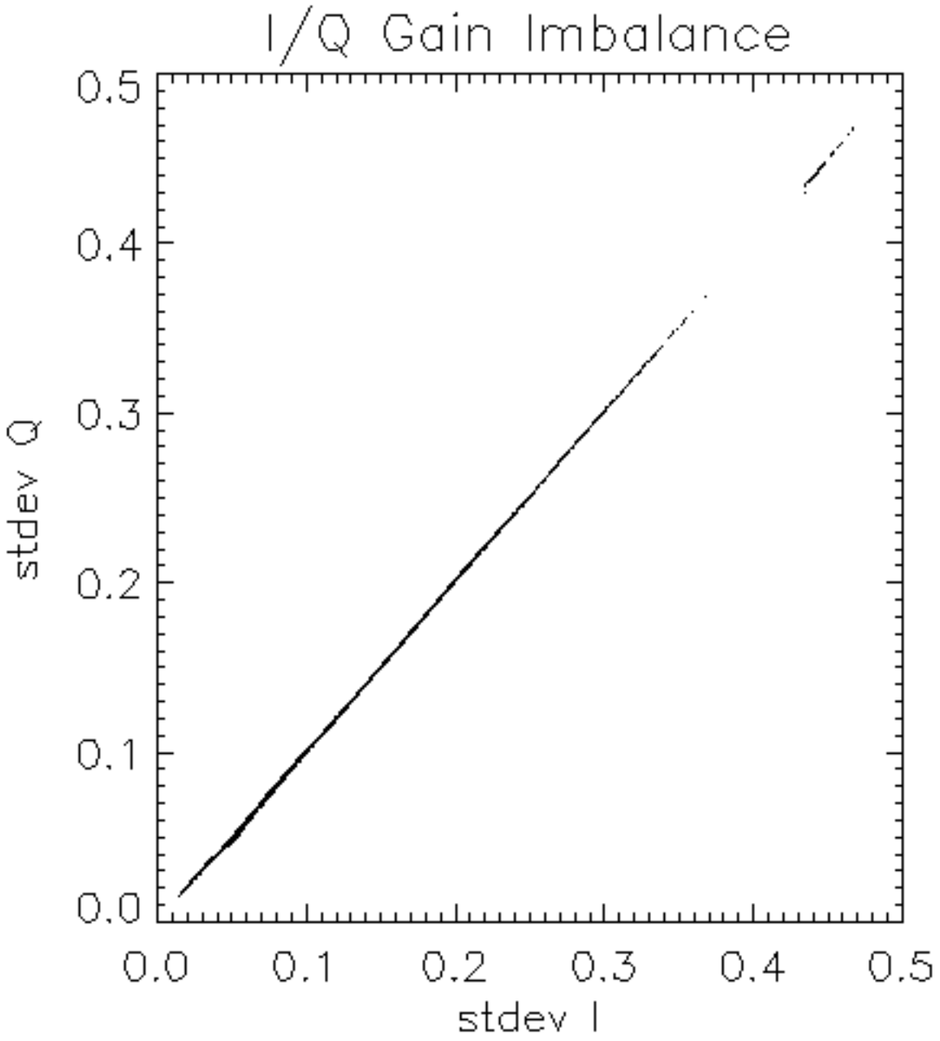
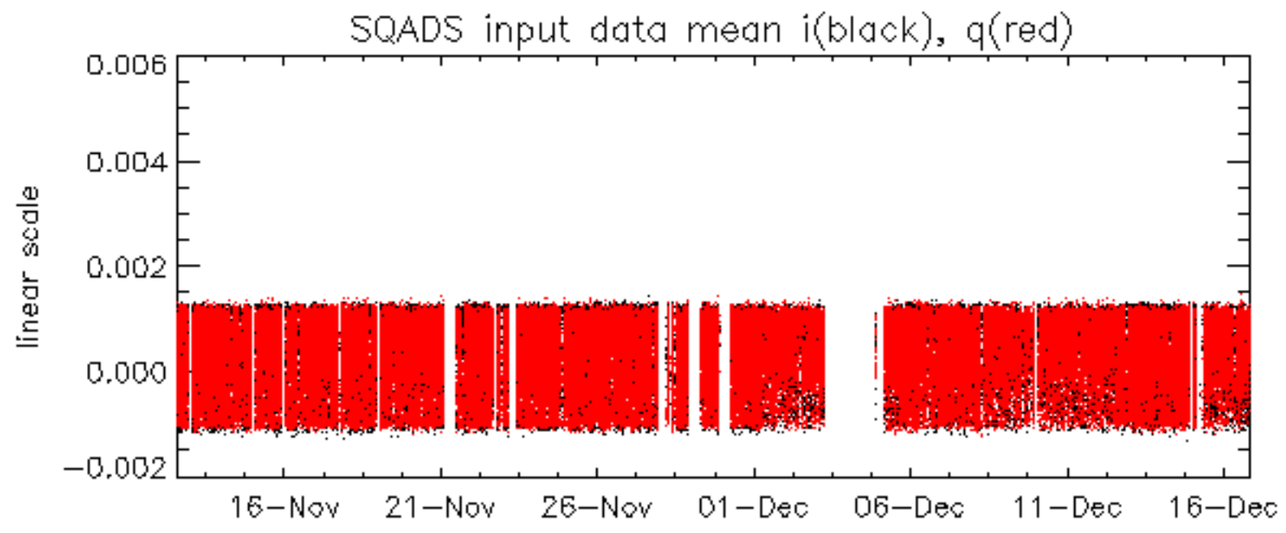
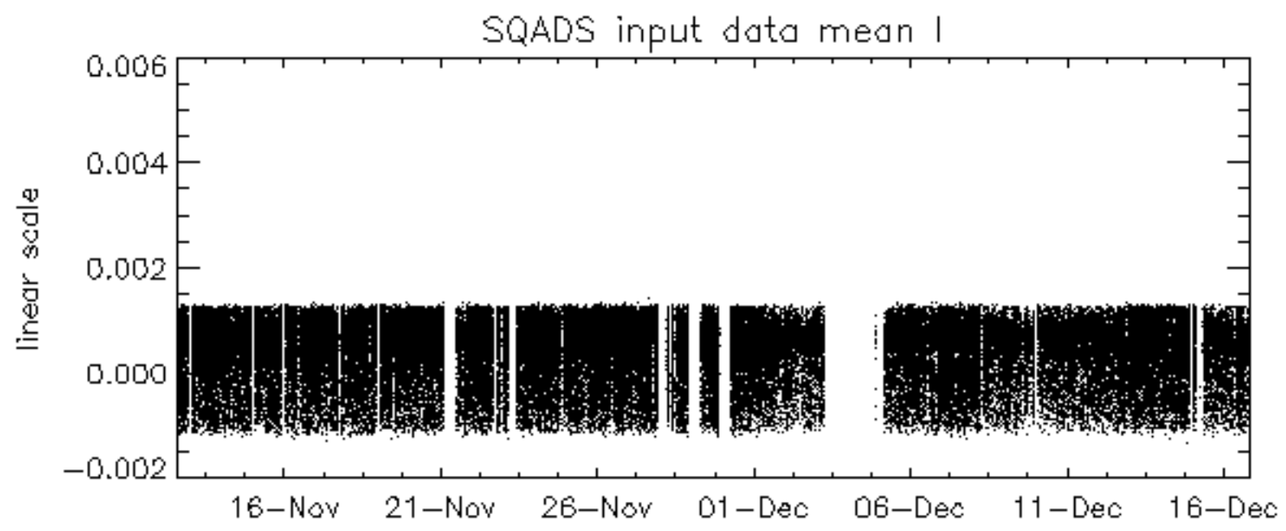
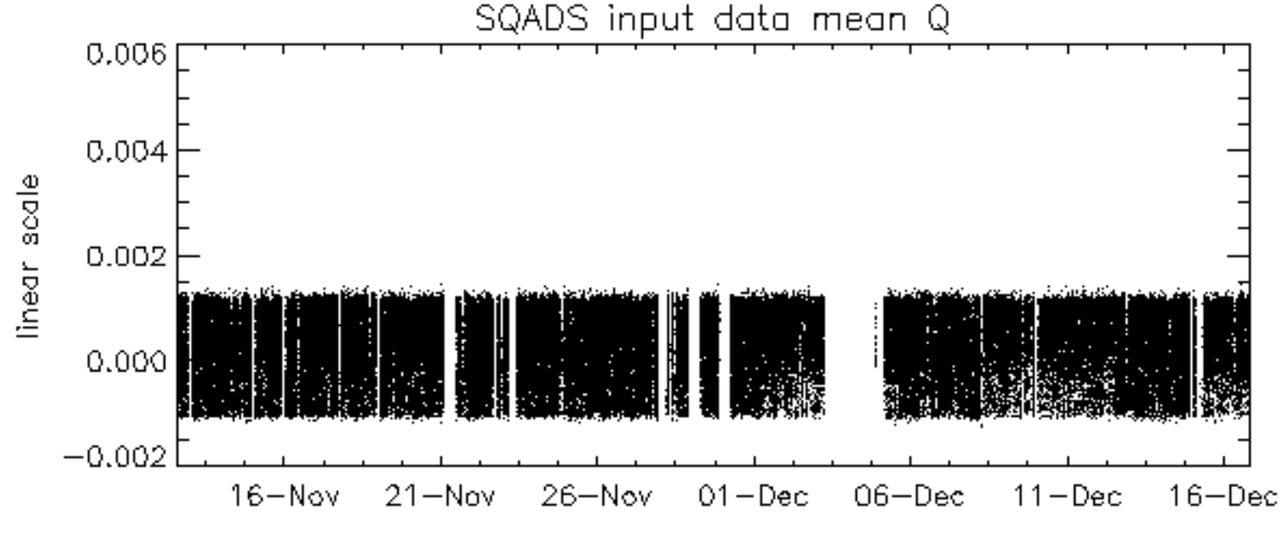
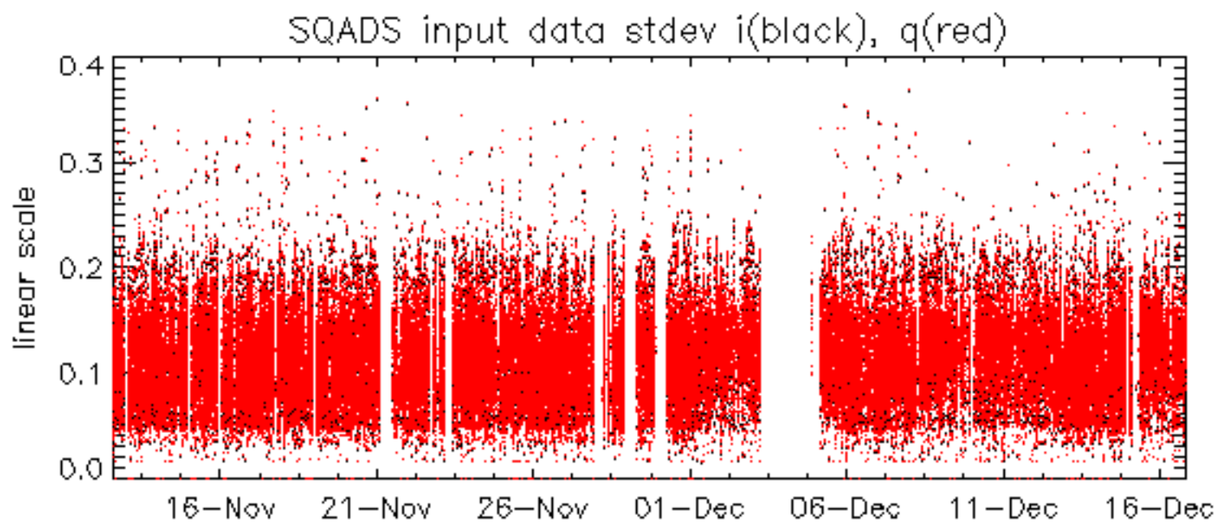
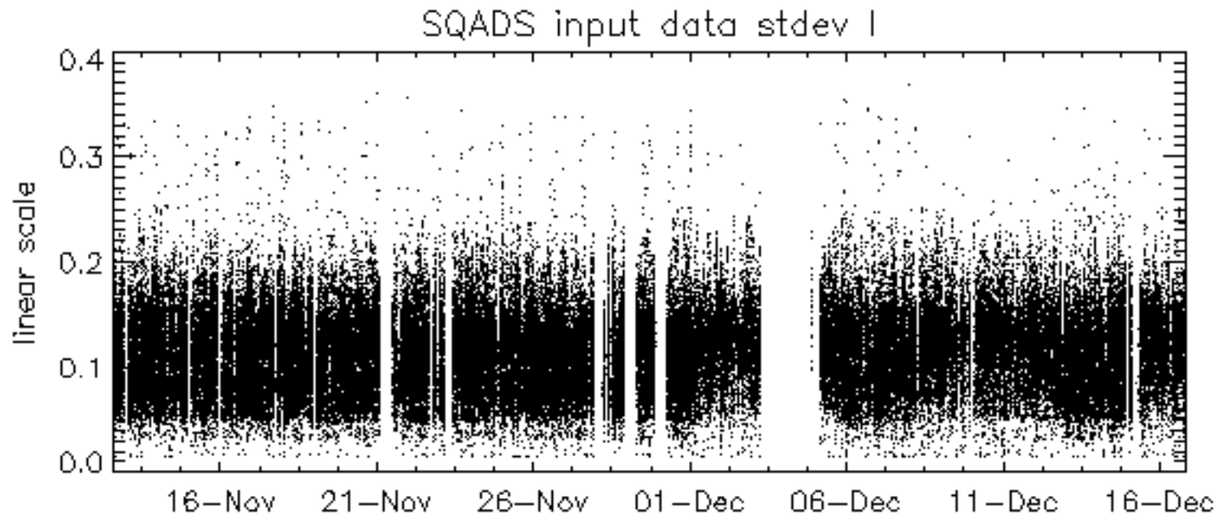

I/Q Gain Imbalance
stdev Q
stdev I
0.0
0.1
0.2
0.3
0.4
0.5

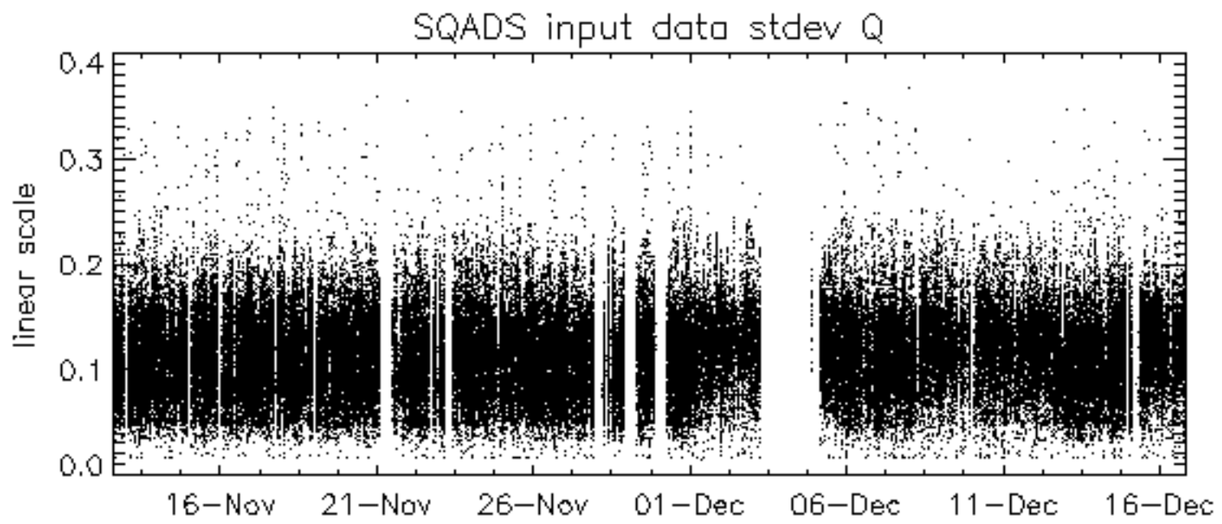

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

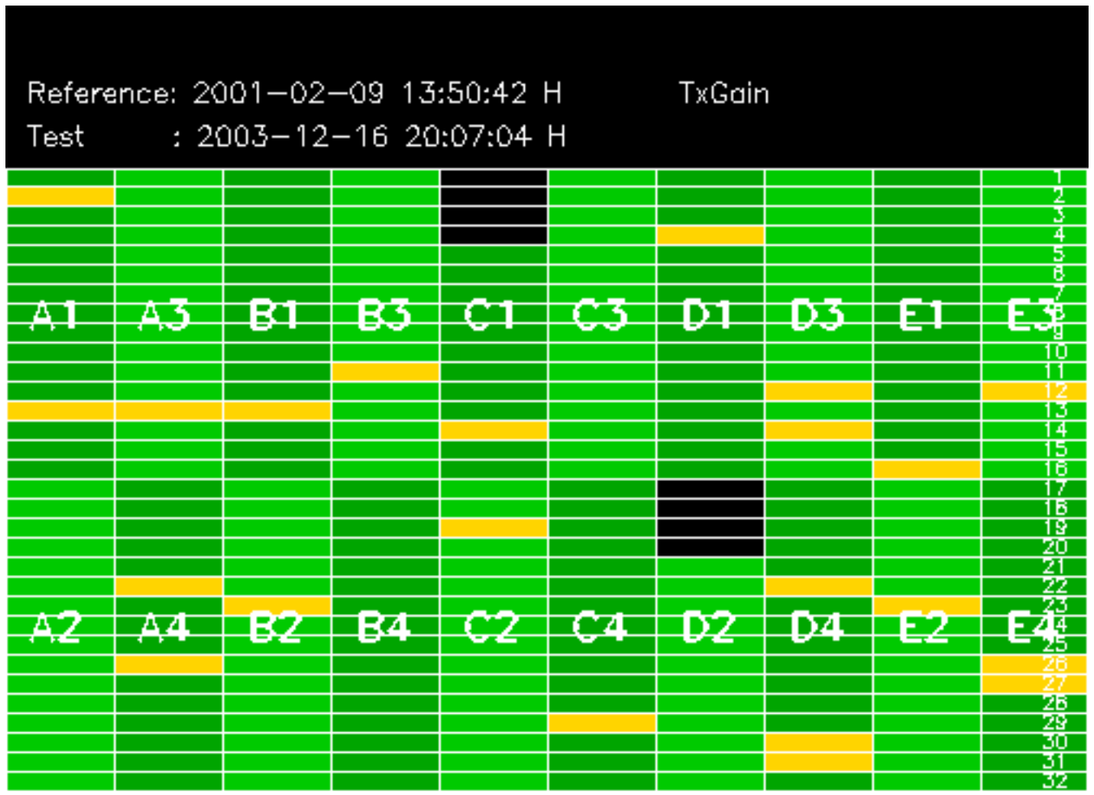

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

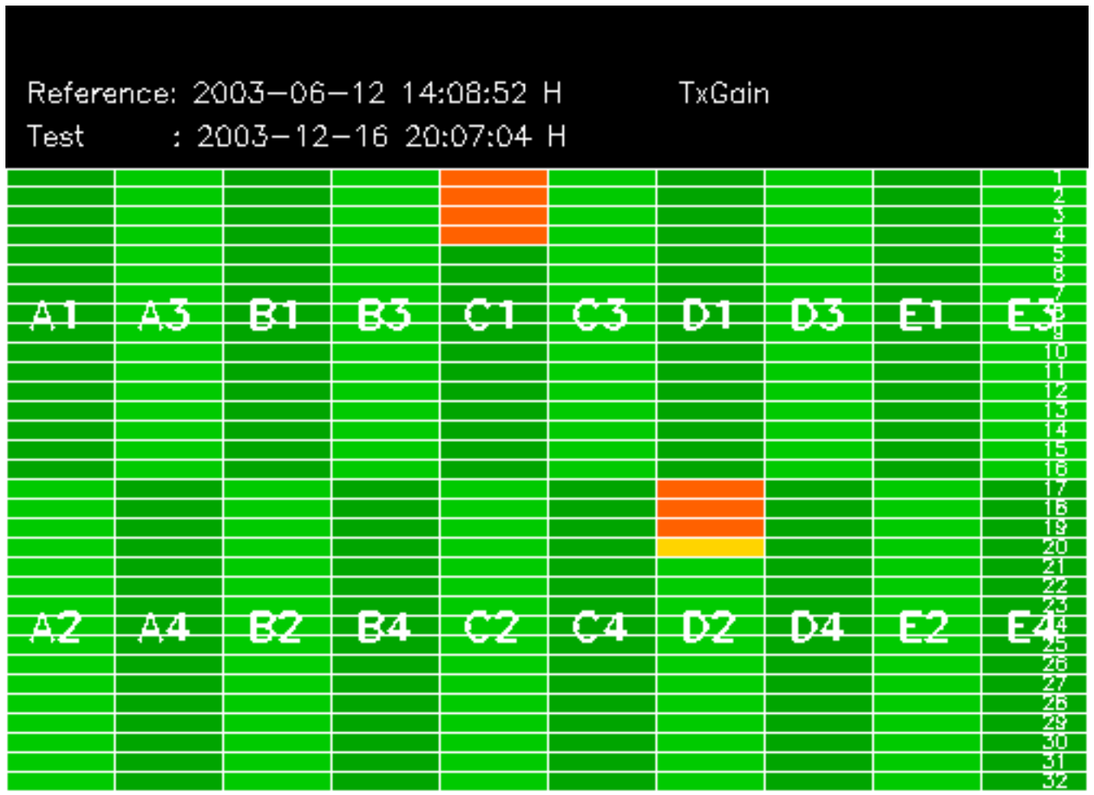

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2003-12-16 20:07:04 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 : 2003-12-16 20:07:04 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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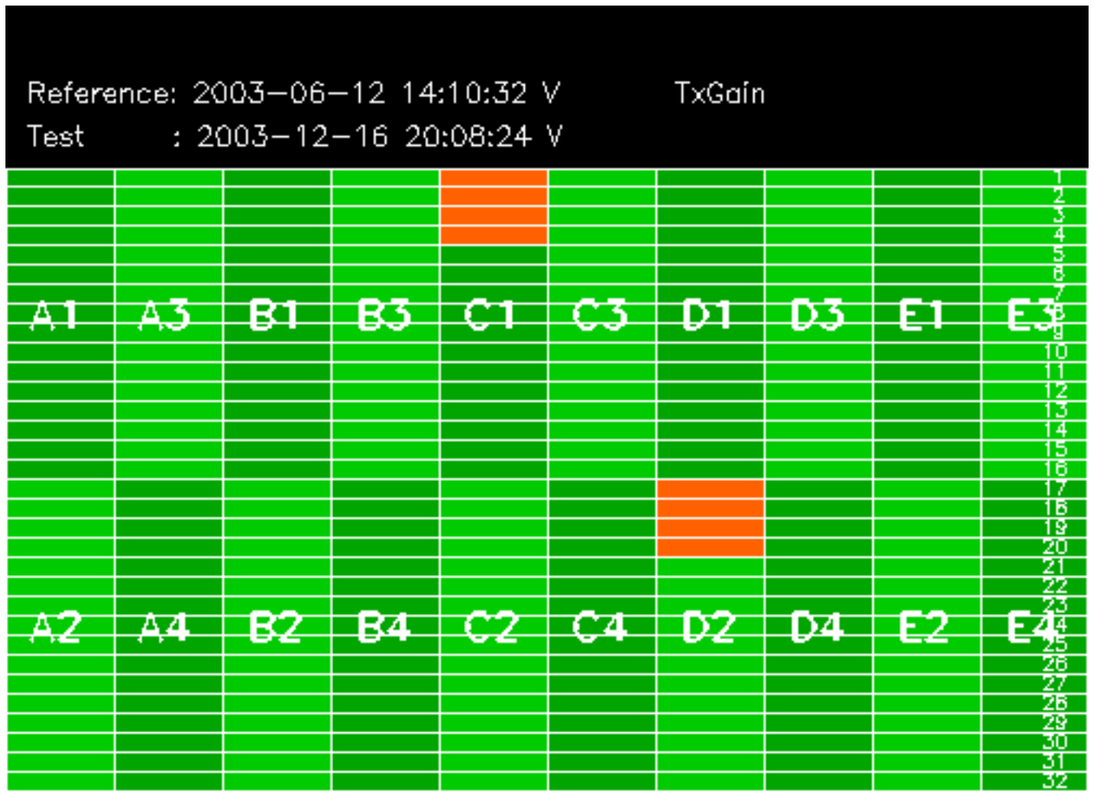
28
29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2003-12-16 20:08:24 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 : 2003-12-16 20:08:24 V
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
7
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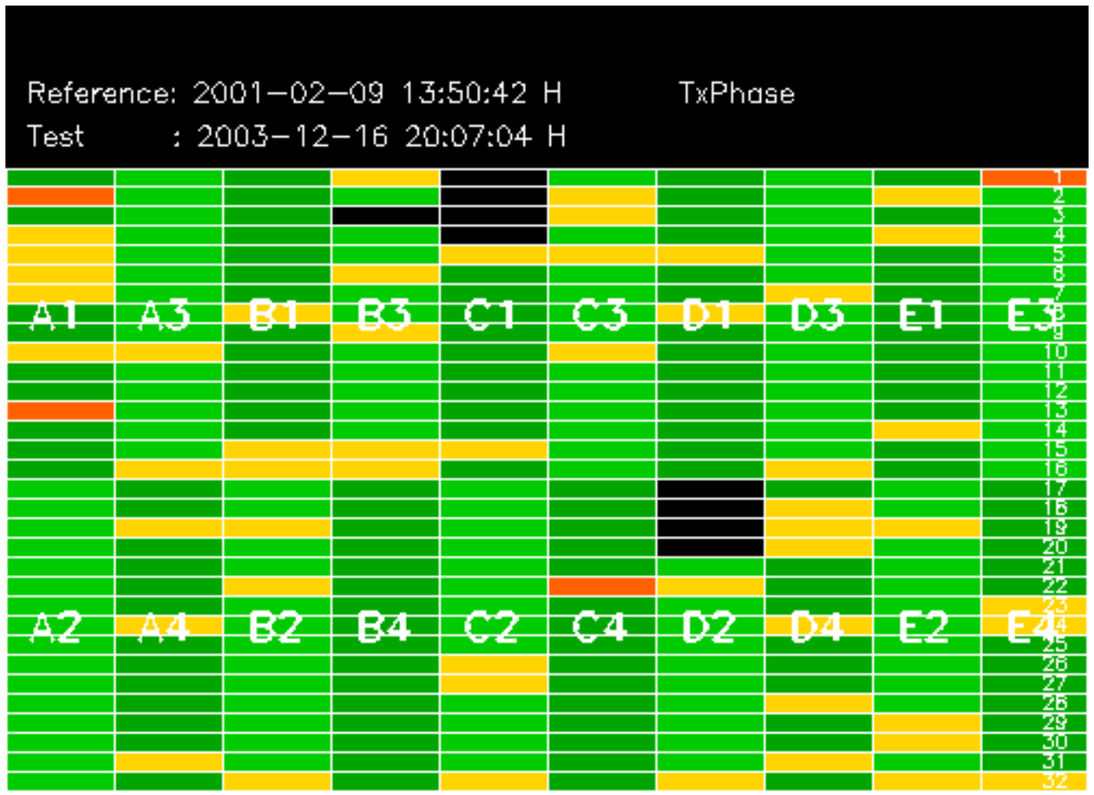
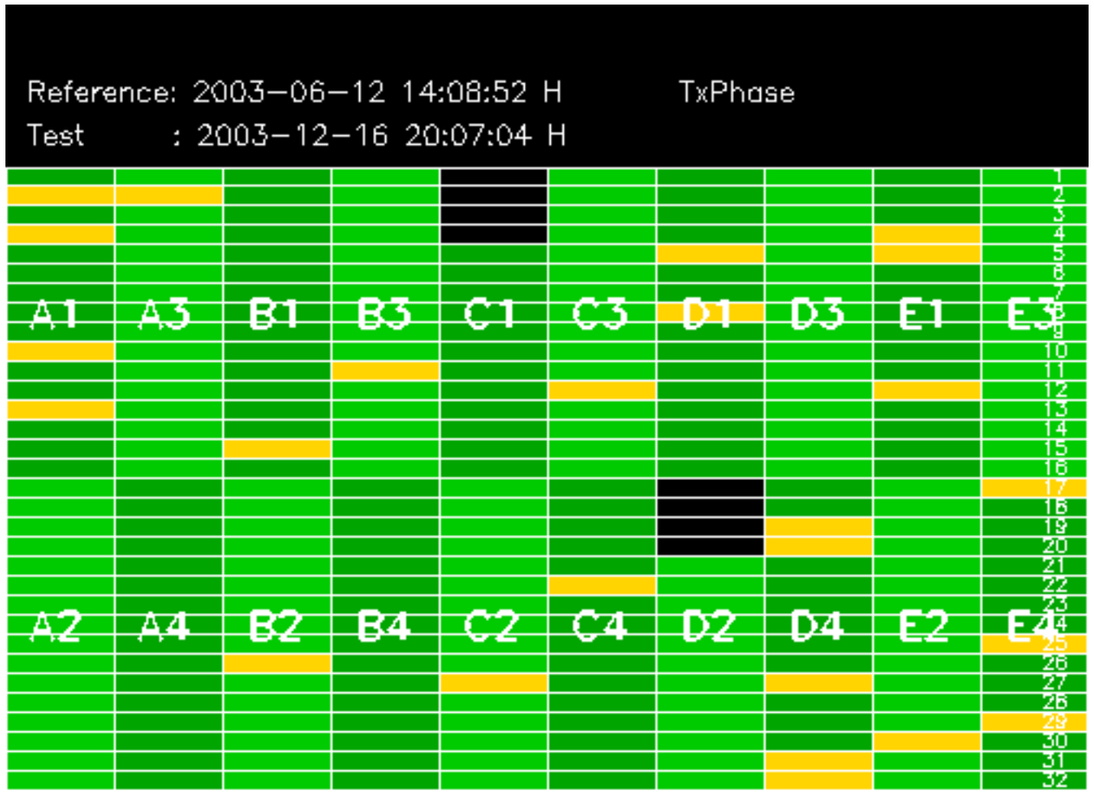

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2003-12-16 20:07:04 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2003-12-16 20:07:04 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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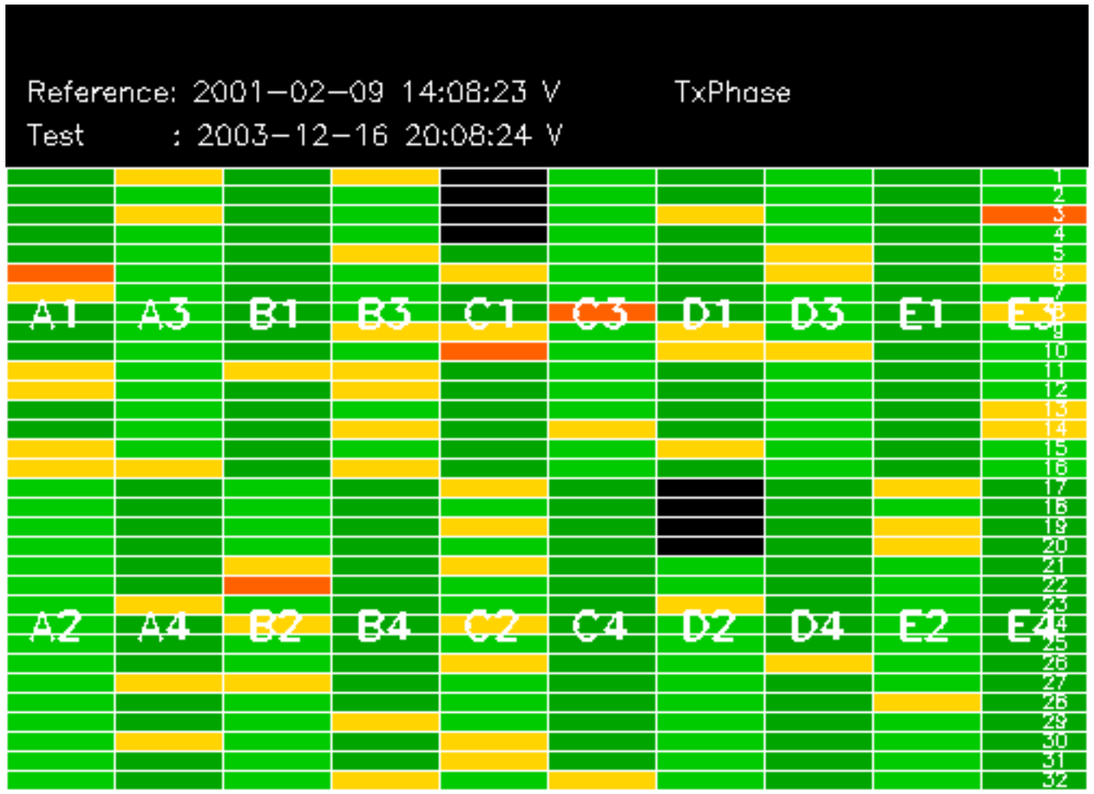
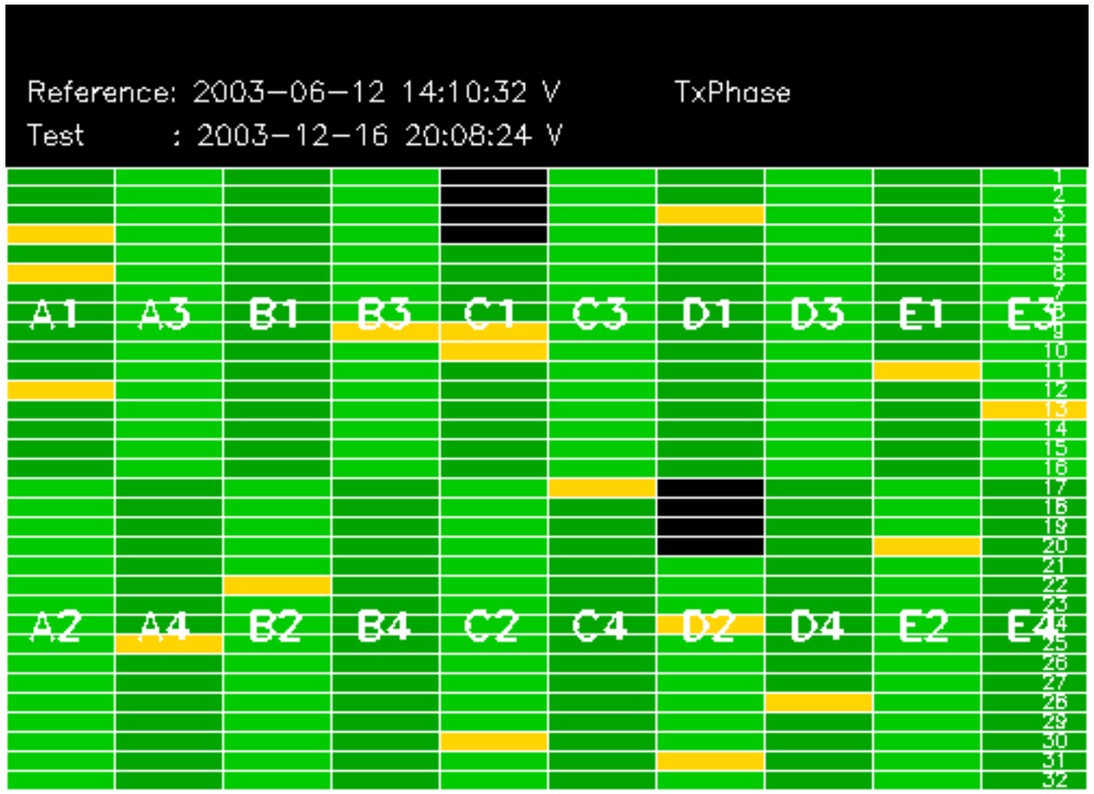

Reference: 2001-02-09 14:08:23 V
Test : 2003-12-16 20:08:24 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-12-16 20:08:24 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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Preliminary report. Instrument unavailabilities are not yet reported