SUMMARY

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:
- ASA_MS__0PNPDK20030901_190951_000000152019_00299_07868_0037.N1
- ASA_MS__0PNPDK20030901_191131_000000152019_00299_07868_0038.N1

The drift in phase for TR module 3 on Tile B3 has decreased to a stable configuration as shown in the figure below.

Polarisation	Start Time
V	20030901 191131
H	20030901 190951

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	-3.80435	-22.5462	-8.10886
	stdev	0.00496898	0.0597727	0.00222094
10	mean	-6.88992	-19.3212	-8.10886
	stdev	0.0253292	0.0589543	0.00222094

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.80793	-22.5402	-8.10715
	stdev	0.00573120	0.0608709	0.00231836
10	mean	-6.89942	-19.3307	-8.10715
	stdev	0.0238360	0.0599362	0.00231836

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	0.000423916
	stdev	3.25172e-07
MEAN Q	mean	0.000291026

stdev	3.22999e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.114564
	stdev	0.00150263
STDEV Q	mean	0.114746
	stdev	0.00152483

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

No anomalies observed Doppler evolution.
Doppler analysis performed over the last 60 days.
Empty area over South-Africa/Madagascar is due to MS acquisitions.

6.1 - Unbiased Doppler Error

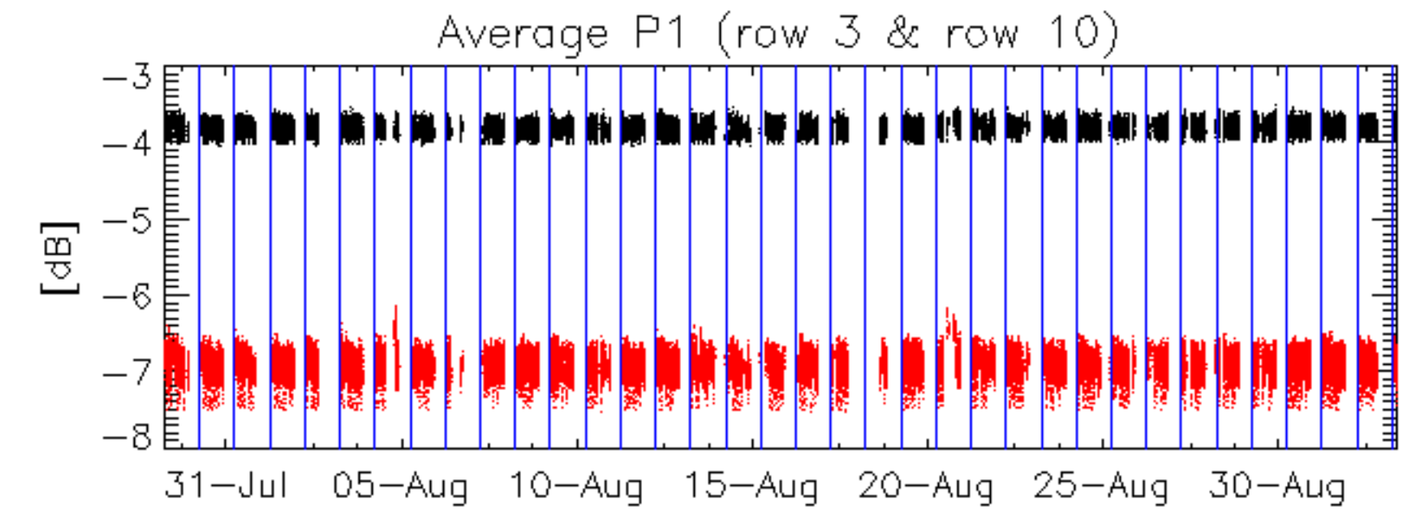
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

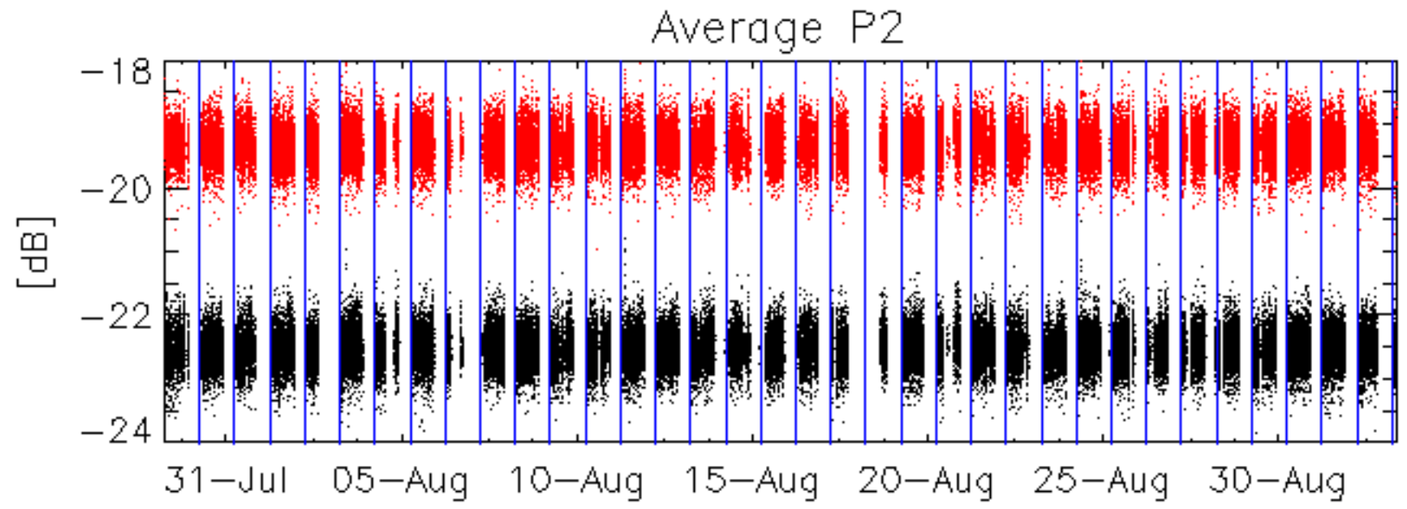
6.2 - Absolute Doppler

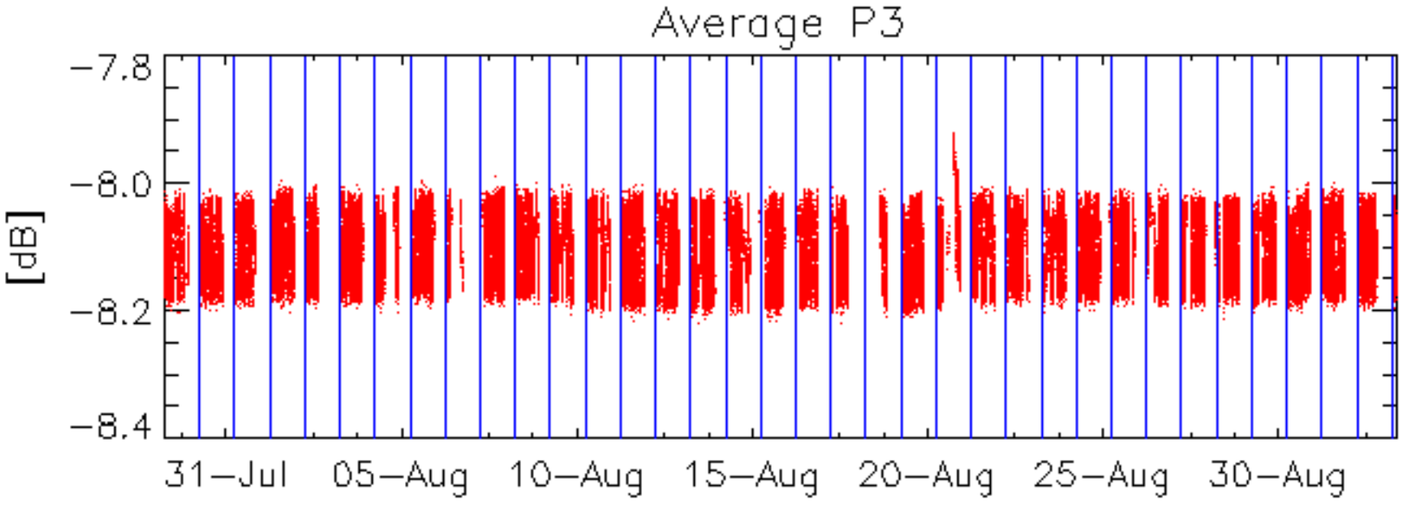
Evolution of Absolute Doppler
Acsending
Descending

6.3 - Doppler evolution versus ANX

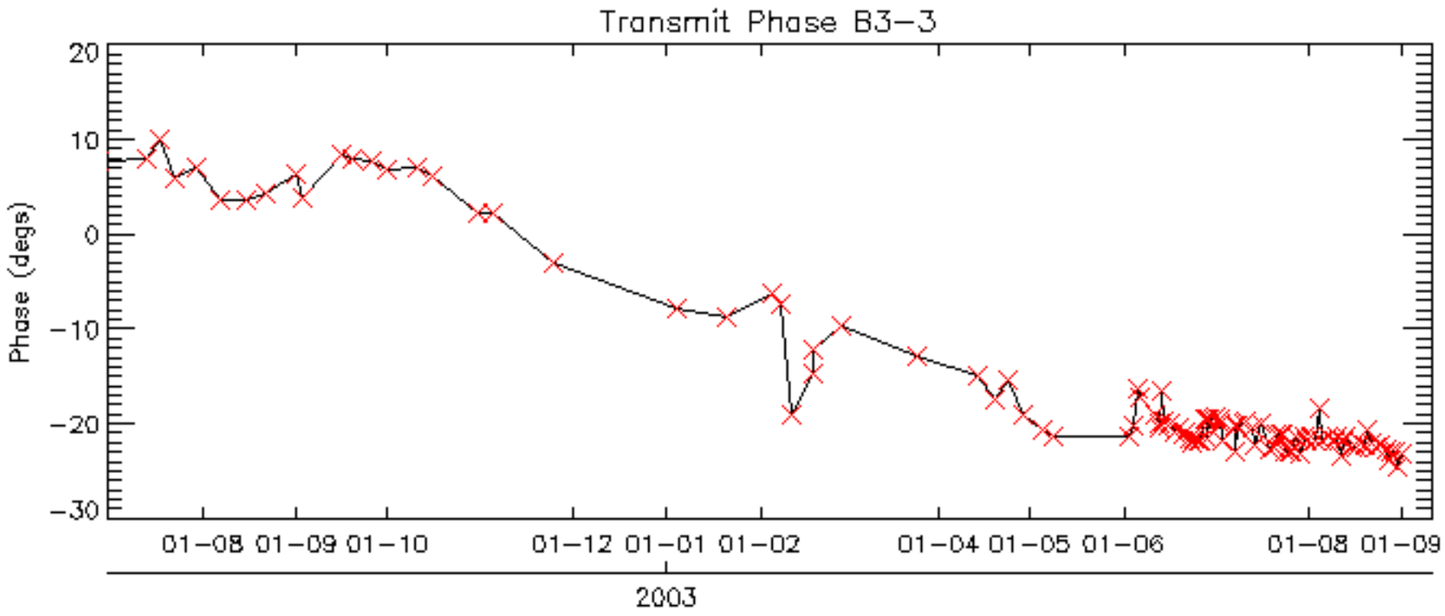
Evolution Doppler error versus ANX



Average P1 (row 3 & row 10)
[dB]
−3
−4
−5
−6
−7
−8
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


Average P2
[dB]
−18
−20
−22
−24
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug

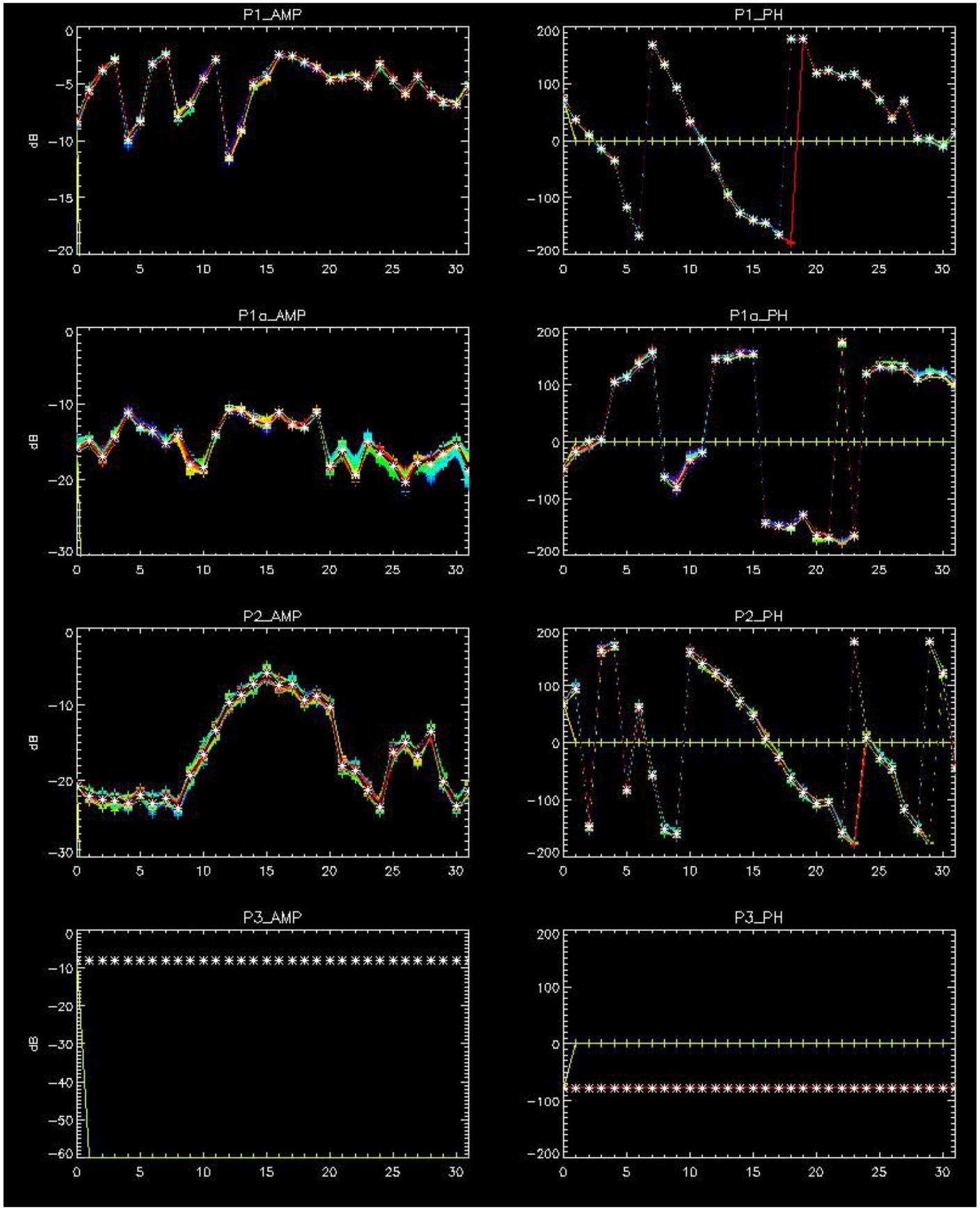

Average P3
[dB]
−7.8
−8.0
−8.2
−8.4
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug

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


Transmit Phase B3–3
Phase (degs)
20
10
0
−10
−20
−30
01–08 01–09 01–10
01–12 01–01 01–02
01–04 01–05 01–06
01–08 01–09
2003

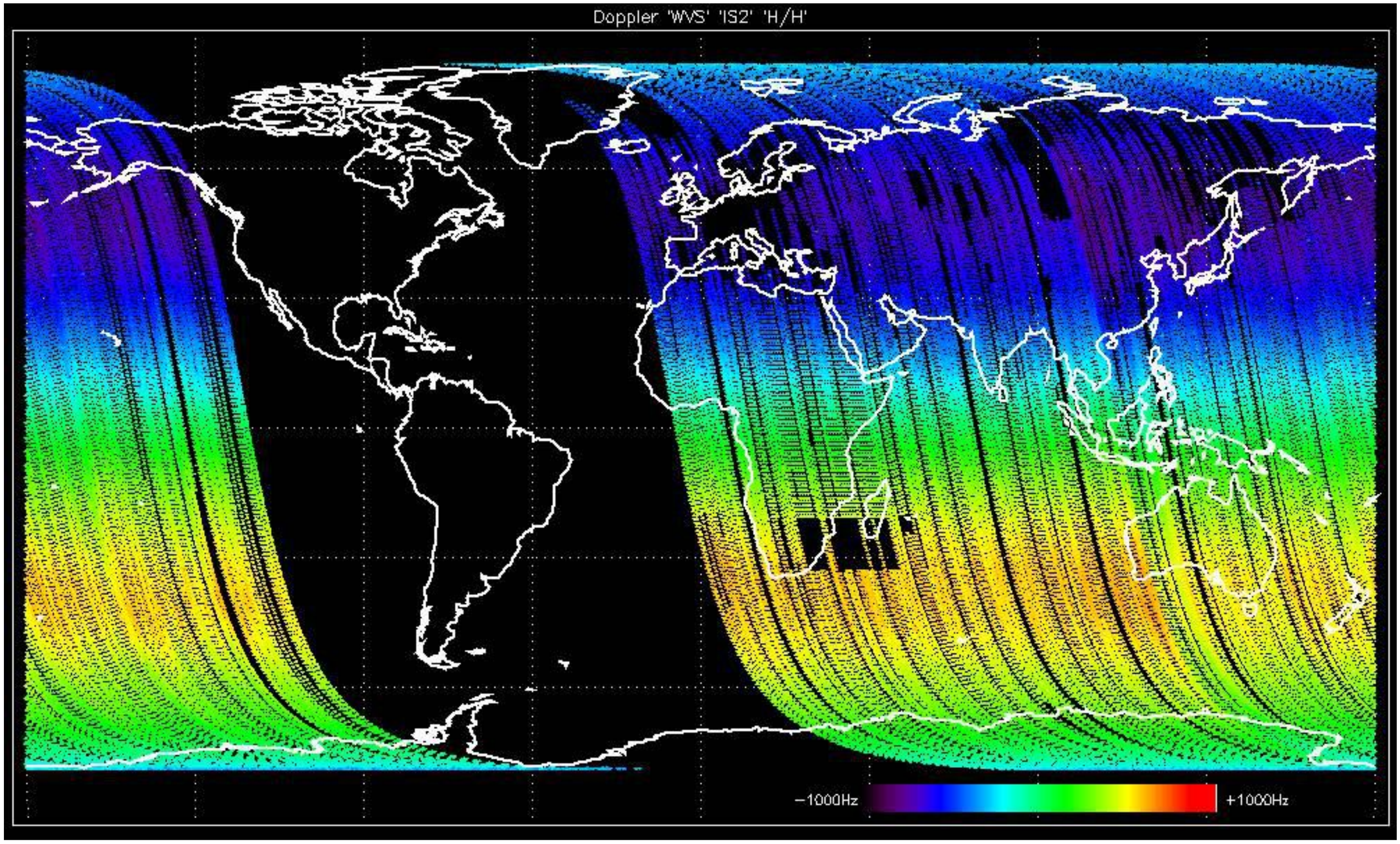
No anomalies observed on available browse products

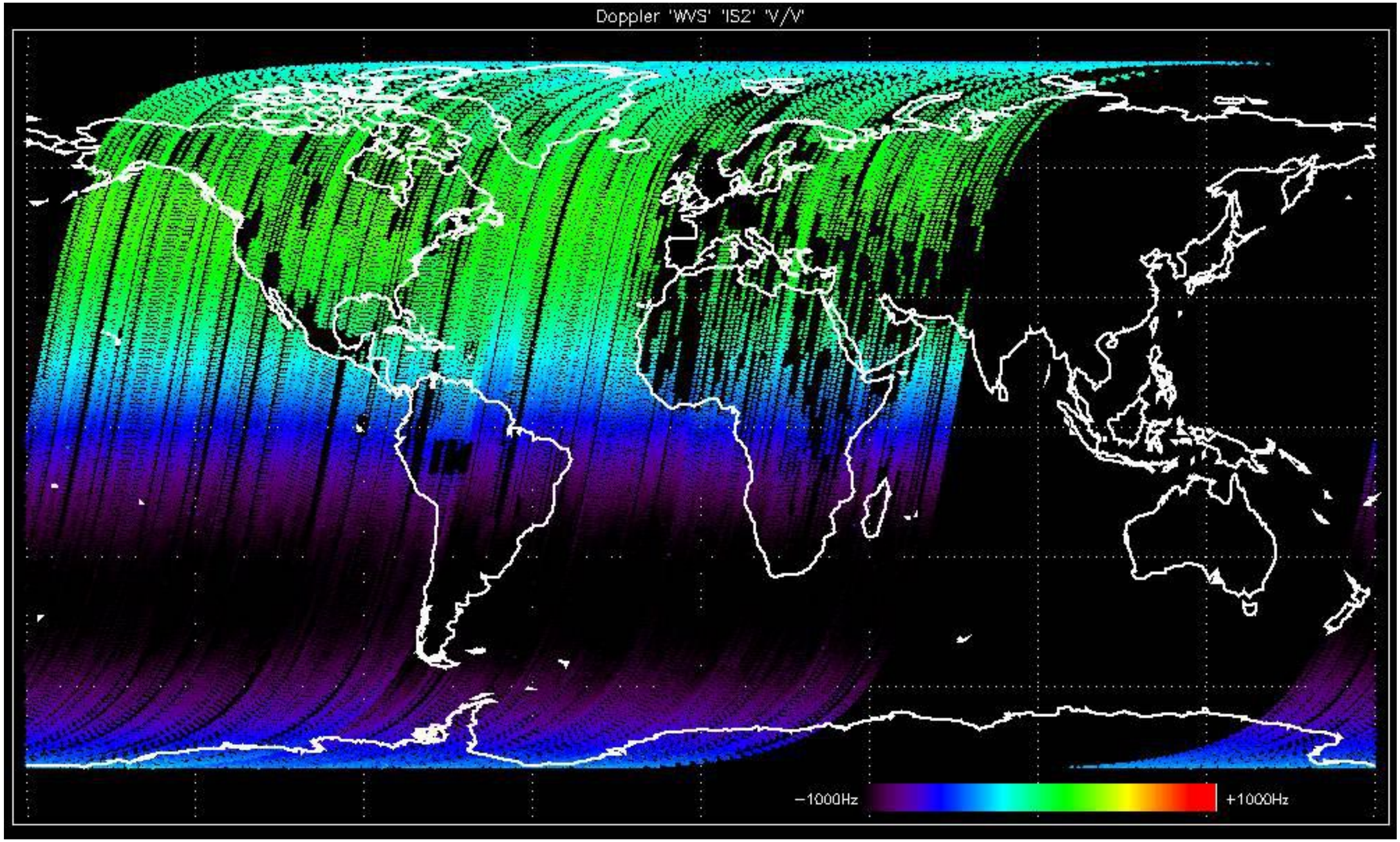
No anomalies observed.

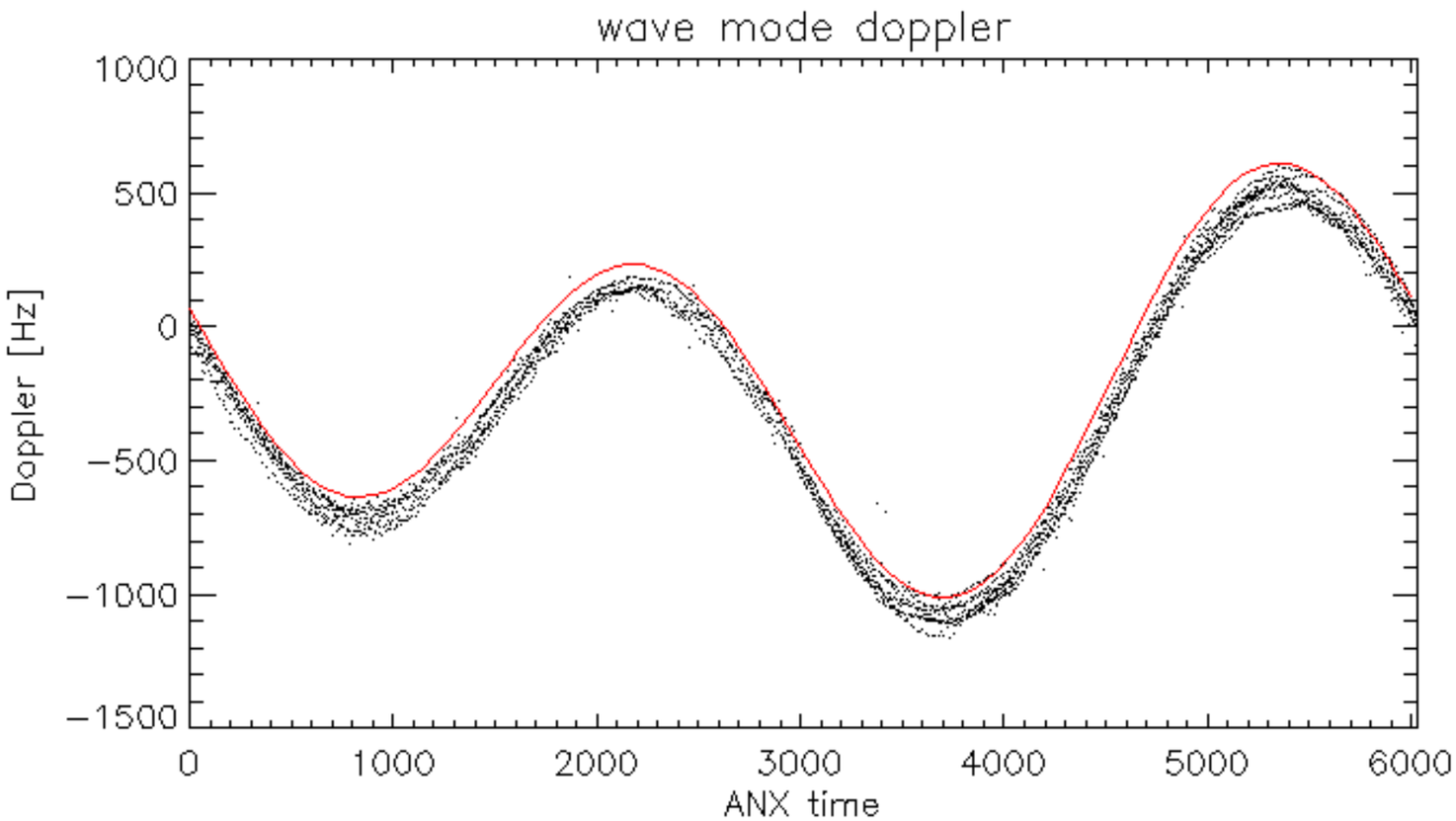

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

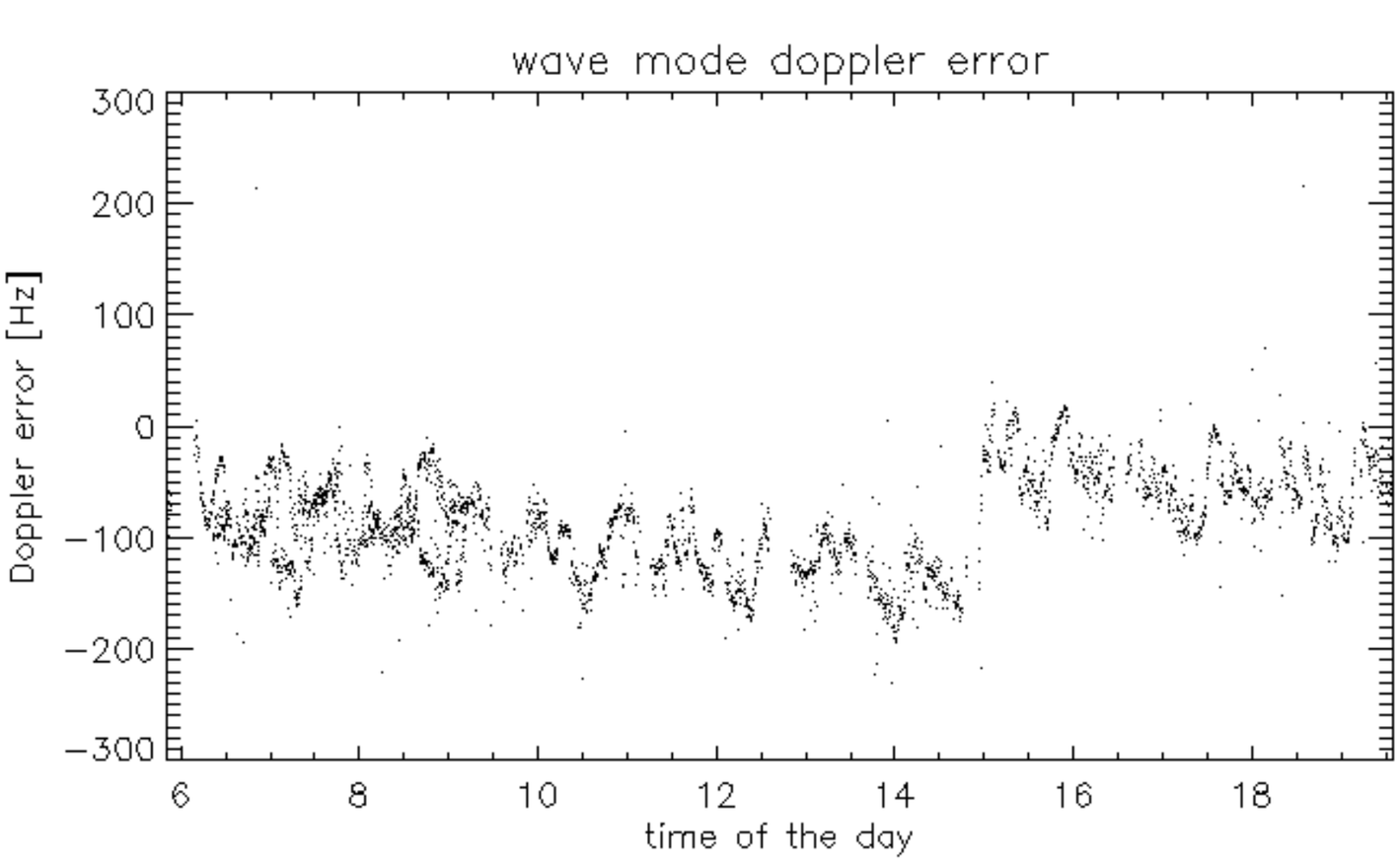
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

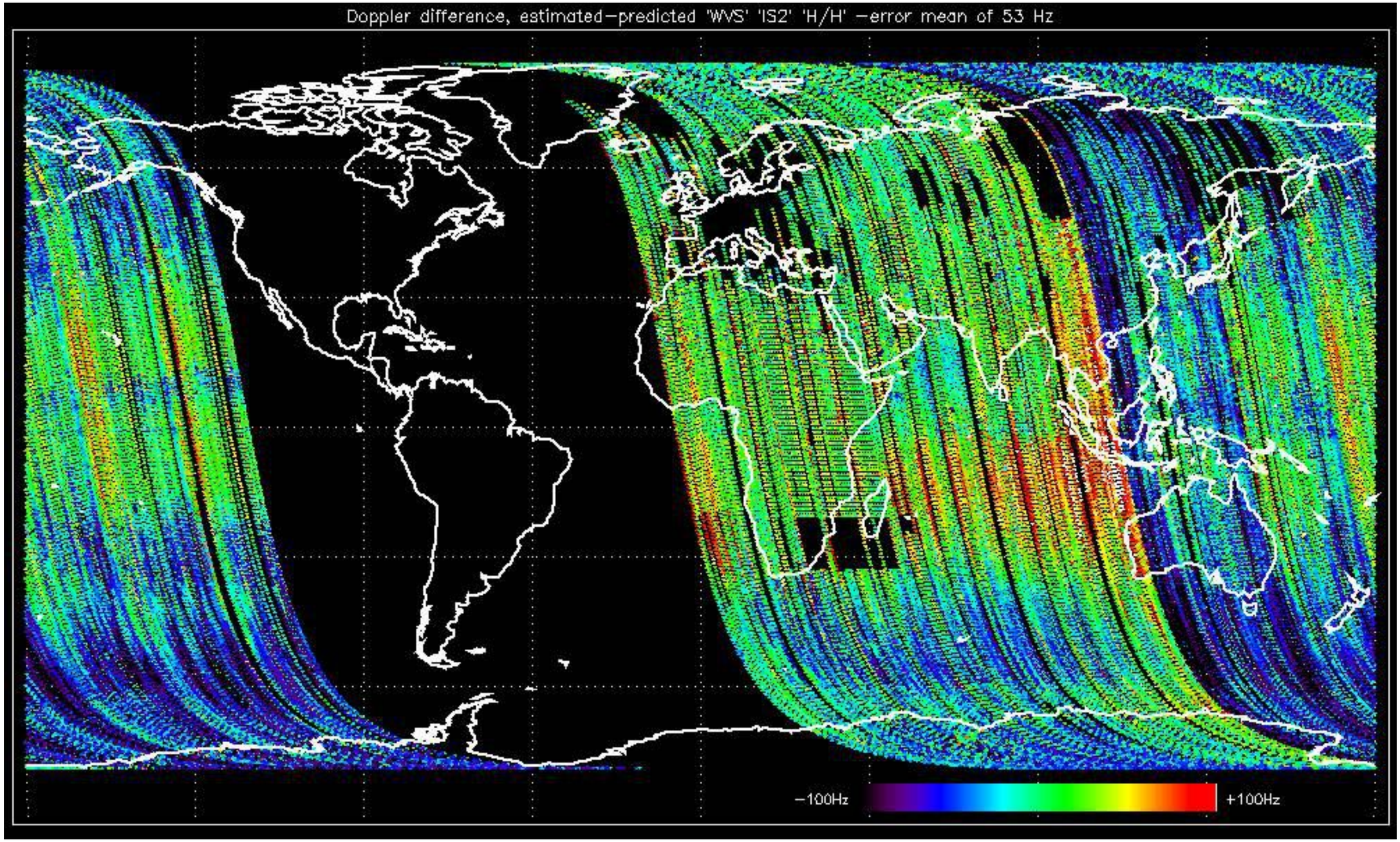
No anomalies observed Doppler evolution.
Doppler analysis performed over the last 60 days.
Empty area over South-Africa/Madagascar is due to MS acquisitions.

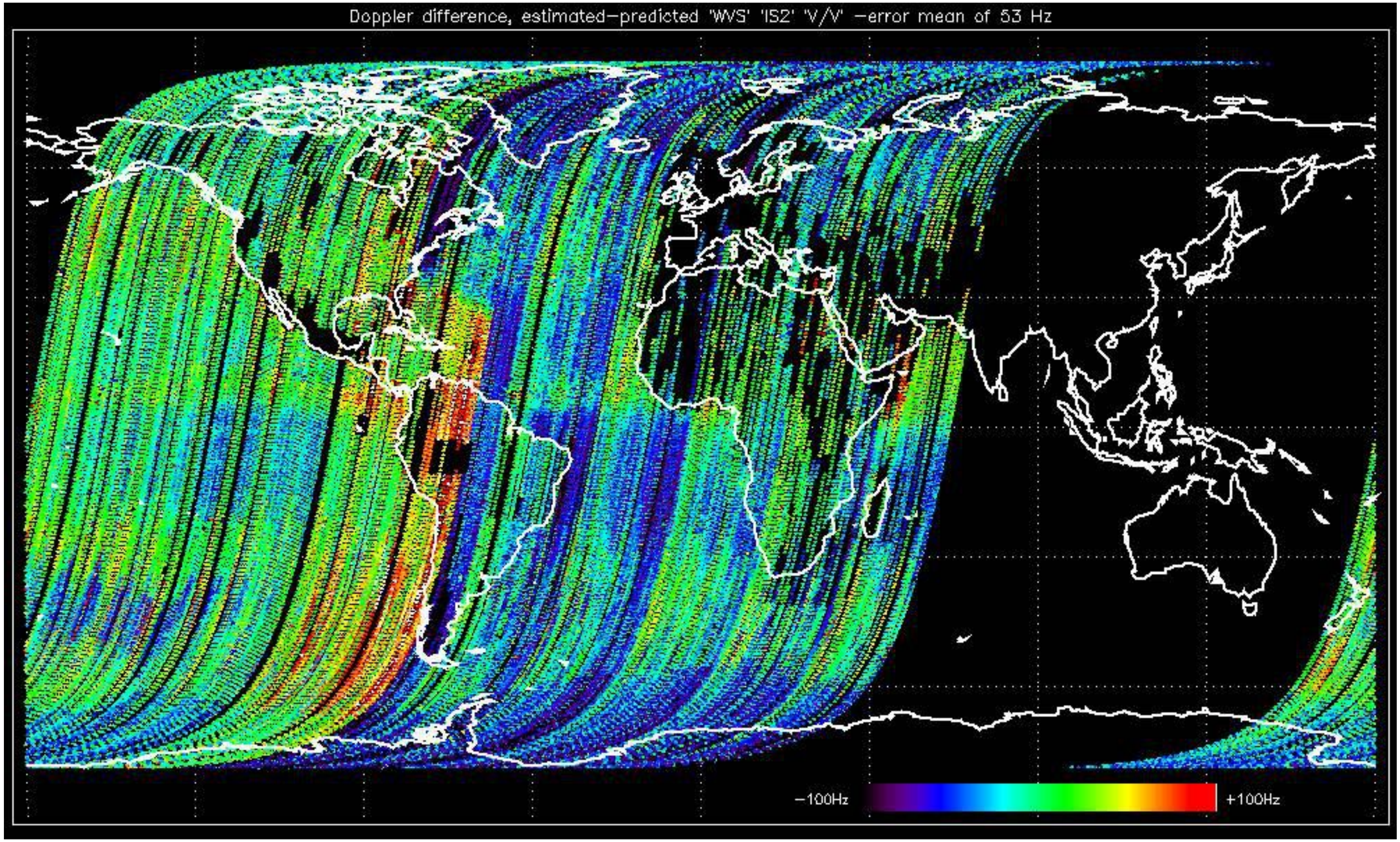

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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

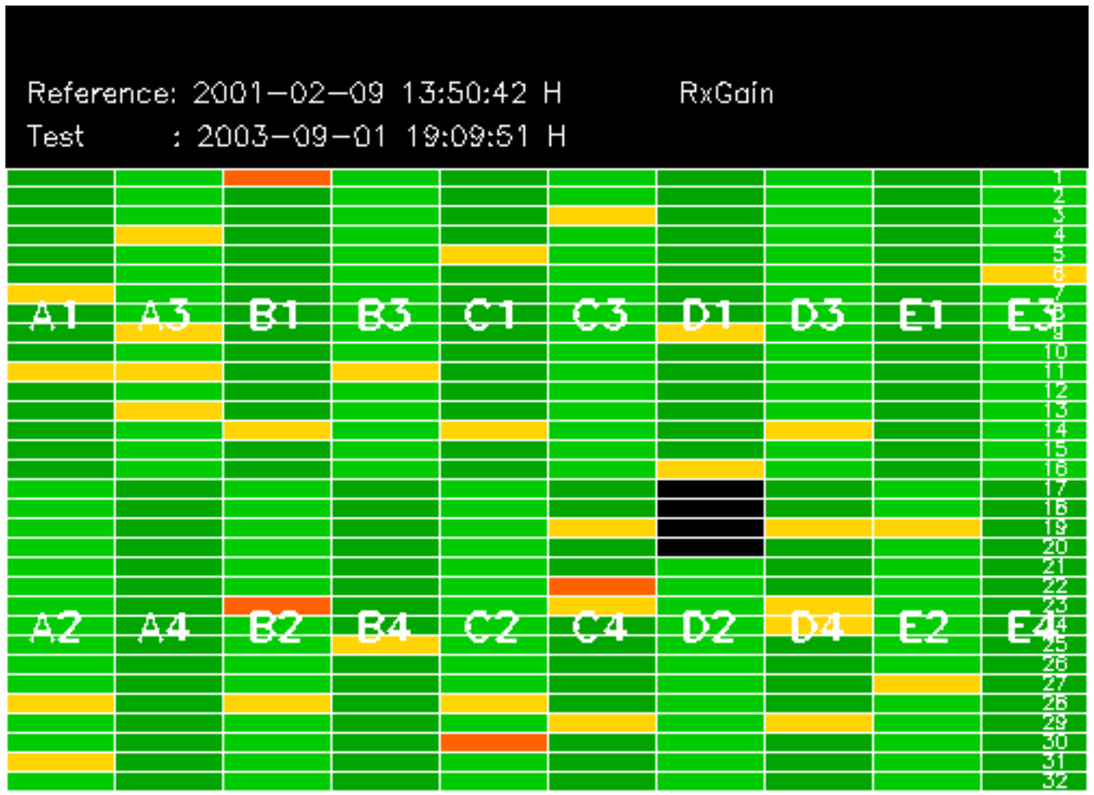

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of 53 Hz
−100Hz
+100Hz


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

No anomalies observed on available MS products:
- ASA_MS__0PNPDK20030901_190951_000000152019_00299_07868_0037.N1
- ASA_MS__0PNPDK20030901_191131_000000152019_00299_07868_0038.N1

The drift in phase for TR module 3 on Tile B3 has decreased to a stable configuration as shown in the figure below.

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2003-09-01 19:09:51 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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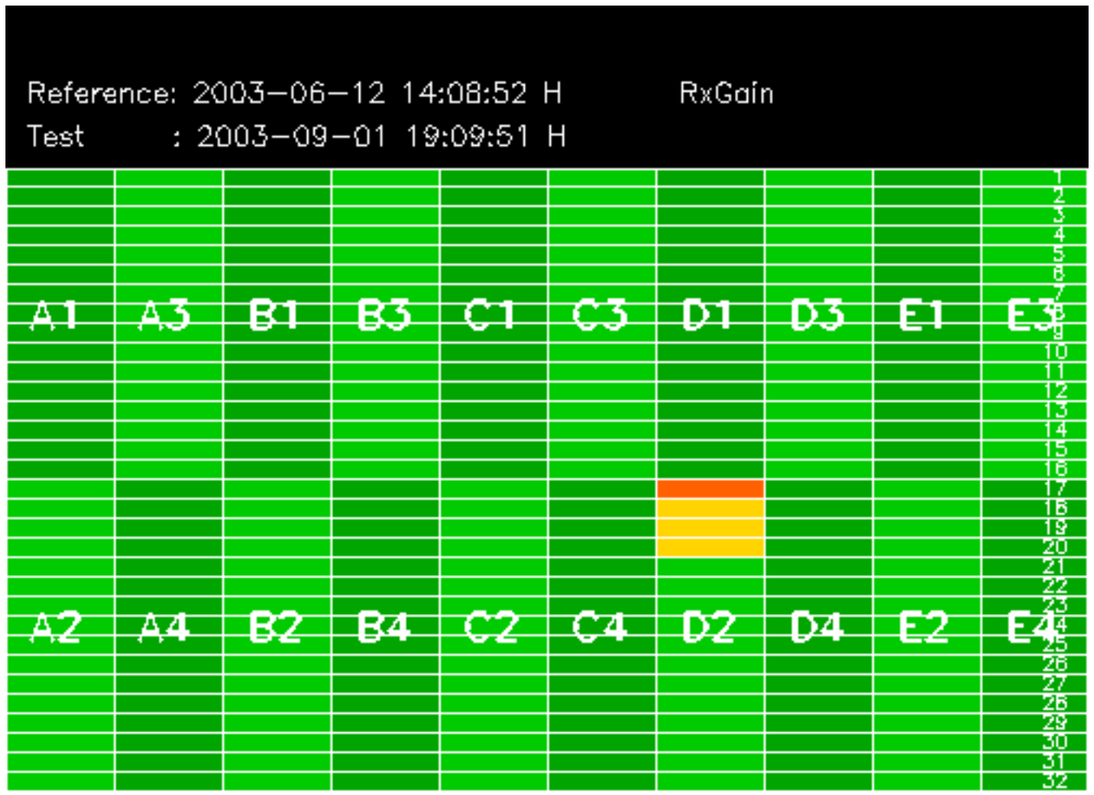
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2003-09-01 19:09:51 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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8
9
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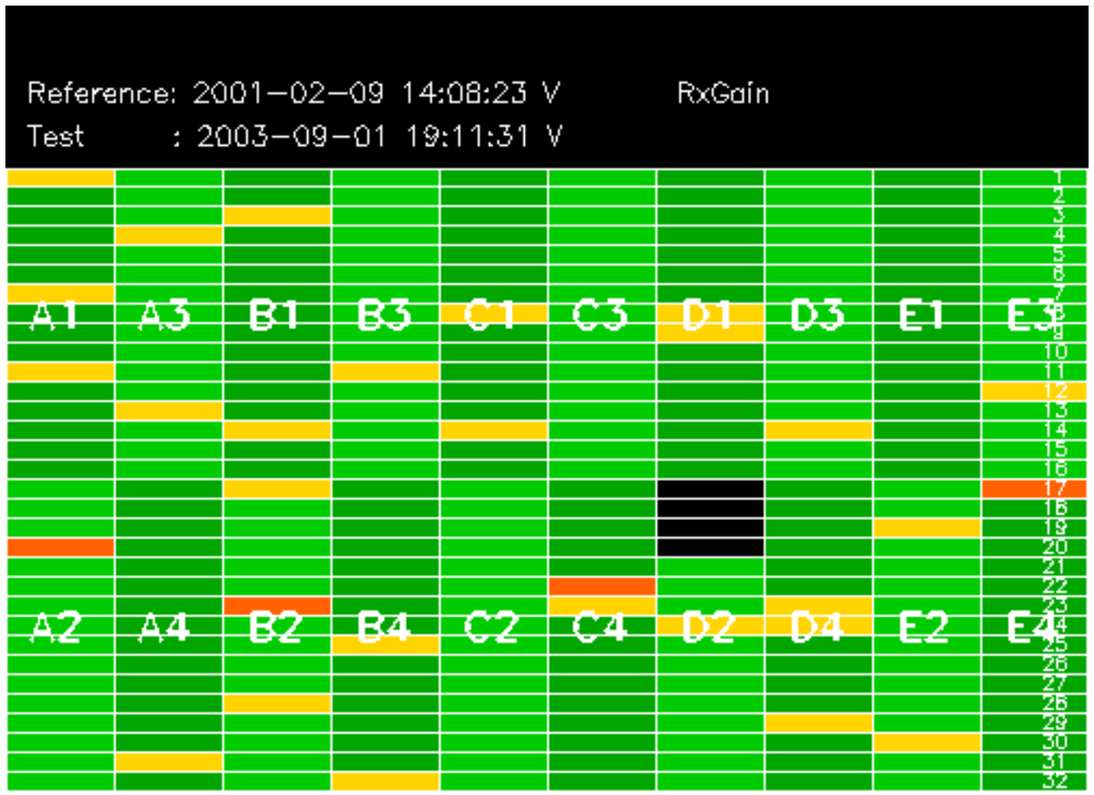
Reference: 2001-02-09 14:08:23 V
Test : 2003-09-01 19:11:31 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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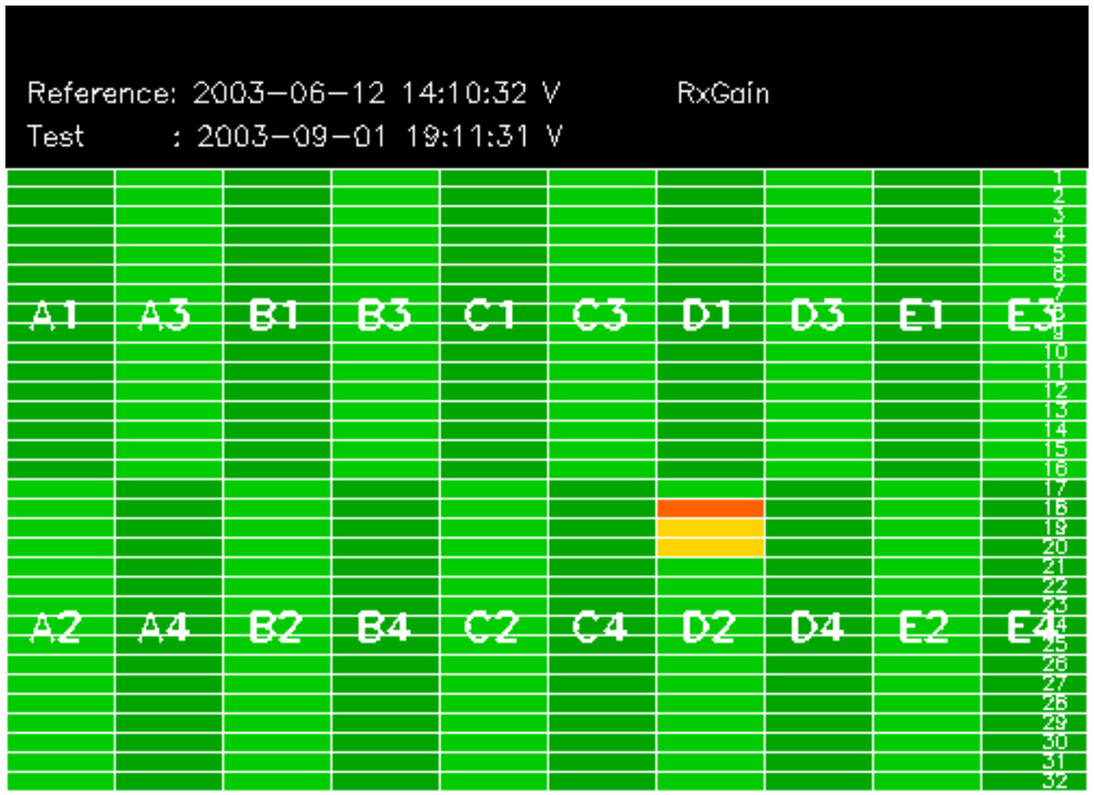
Reference: 2003-06-12 14:10:32 V
Test : 2003-09-01 19:11:31 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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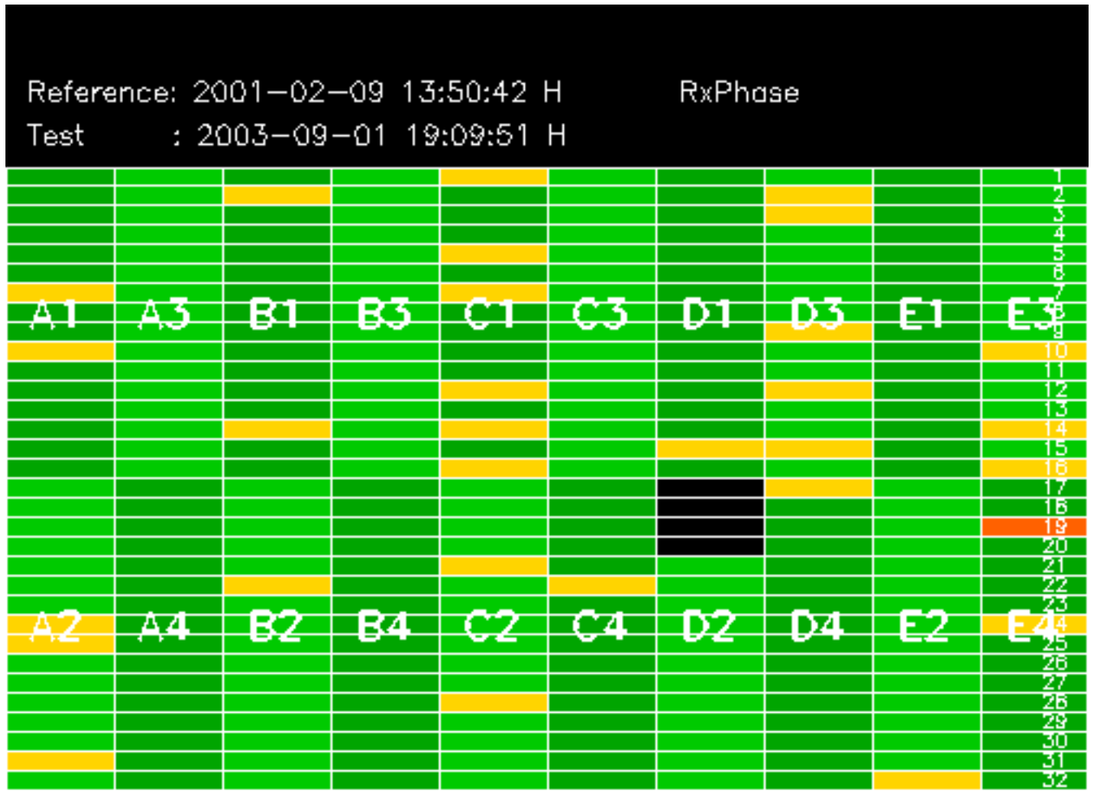
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2003-09-01 19:09:51 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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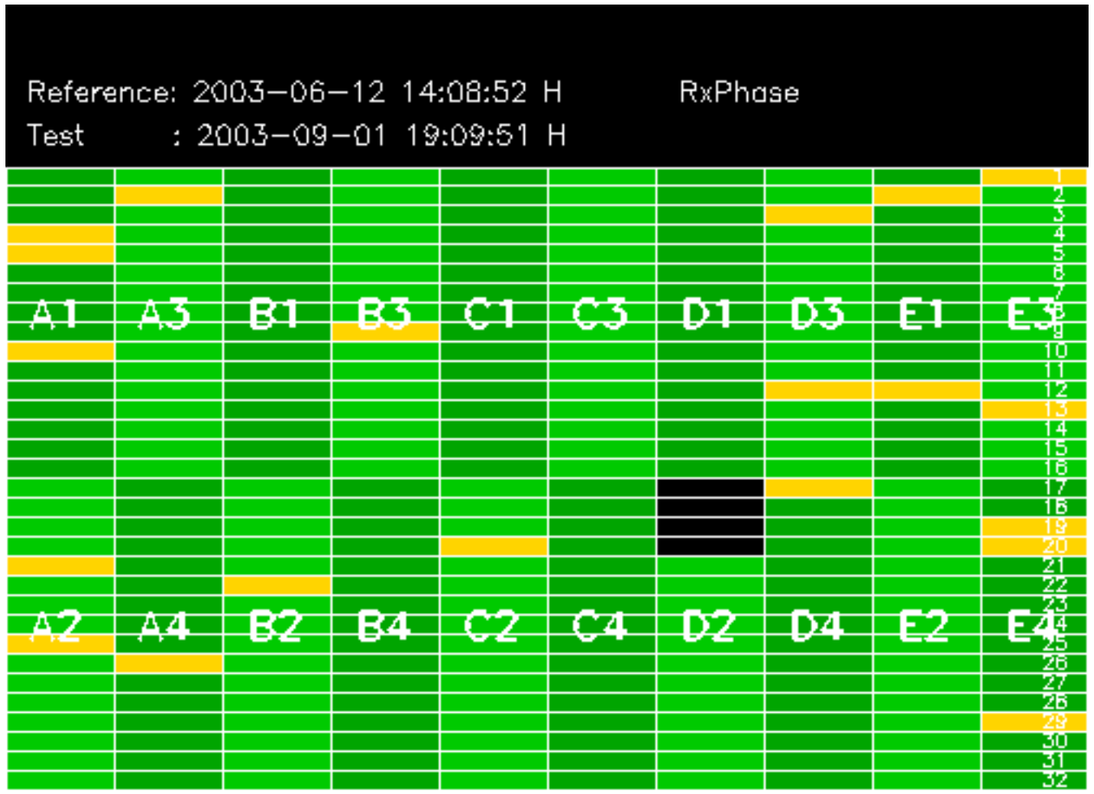
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2003-09-01 19:09:51 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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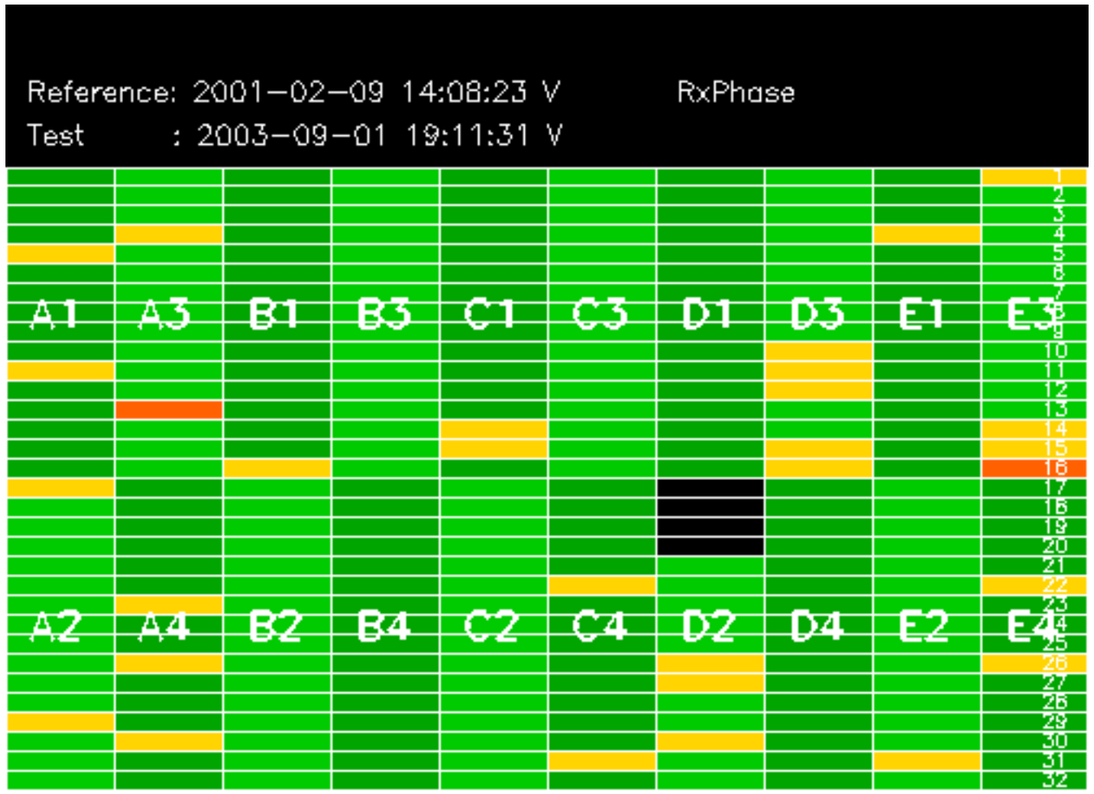
Reference: 2001-02-09 14:08:23 V
Test : 2003-09-01 19:11:31 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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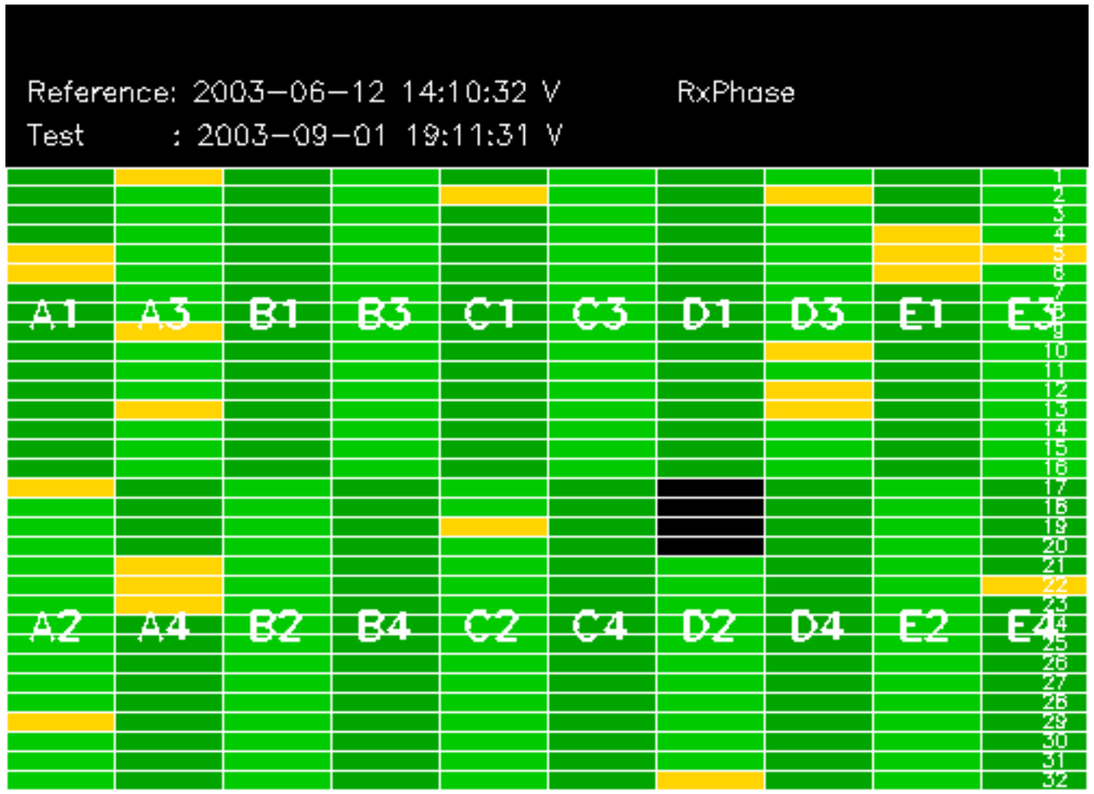
Reference: 2003-06-12 14:10:32 V
Test : 2003-09-01 19:11:31 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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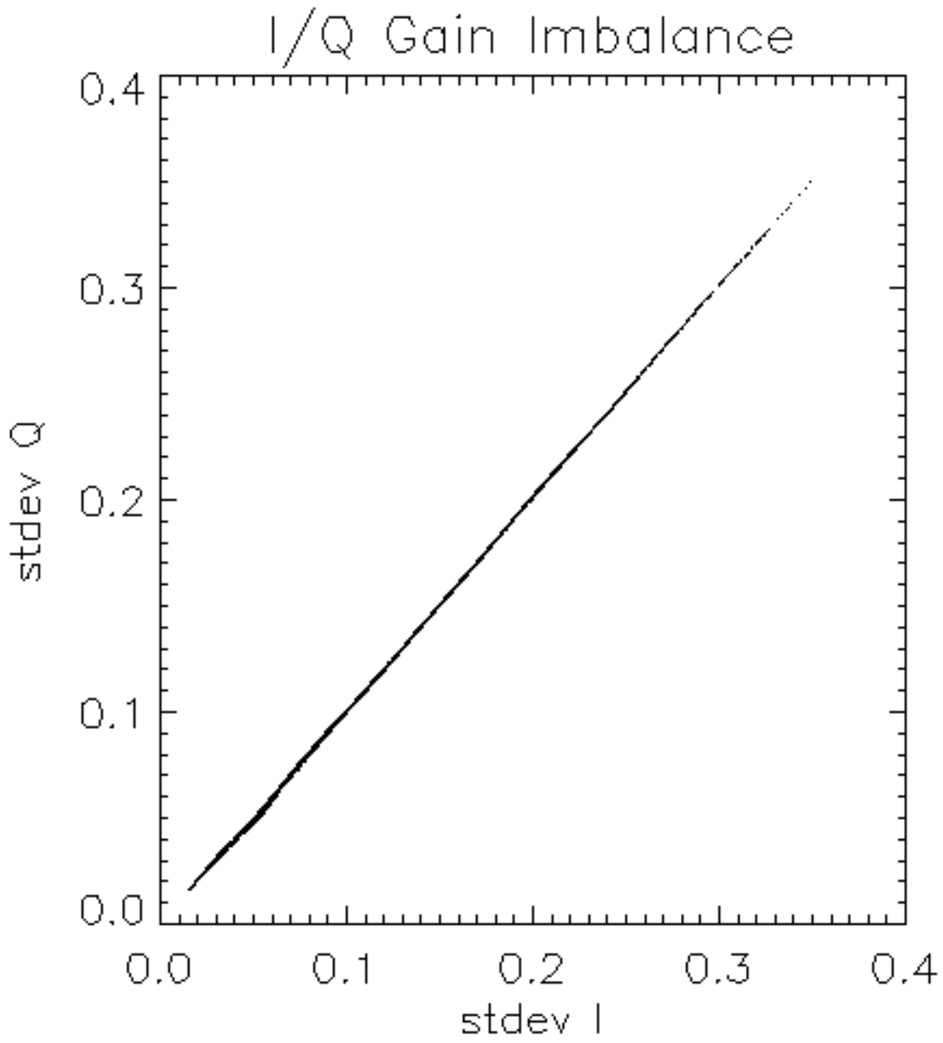
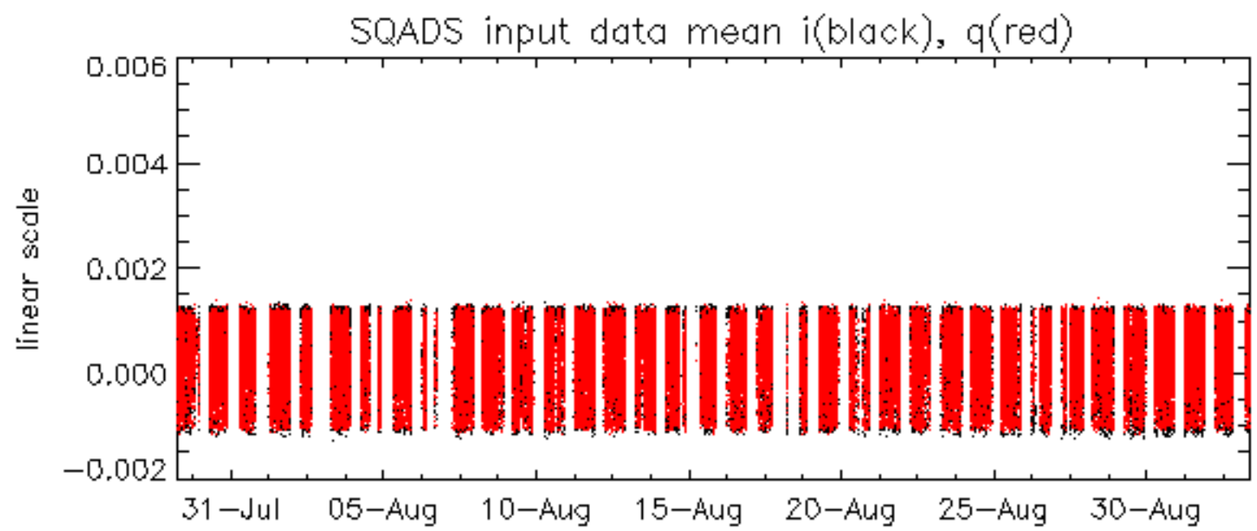
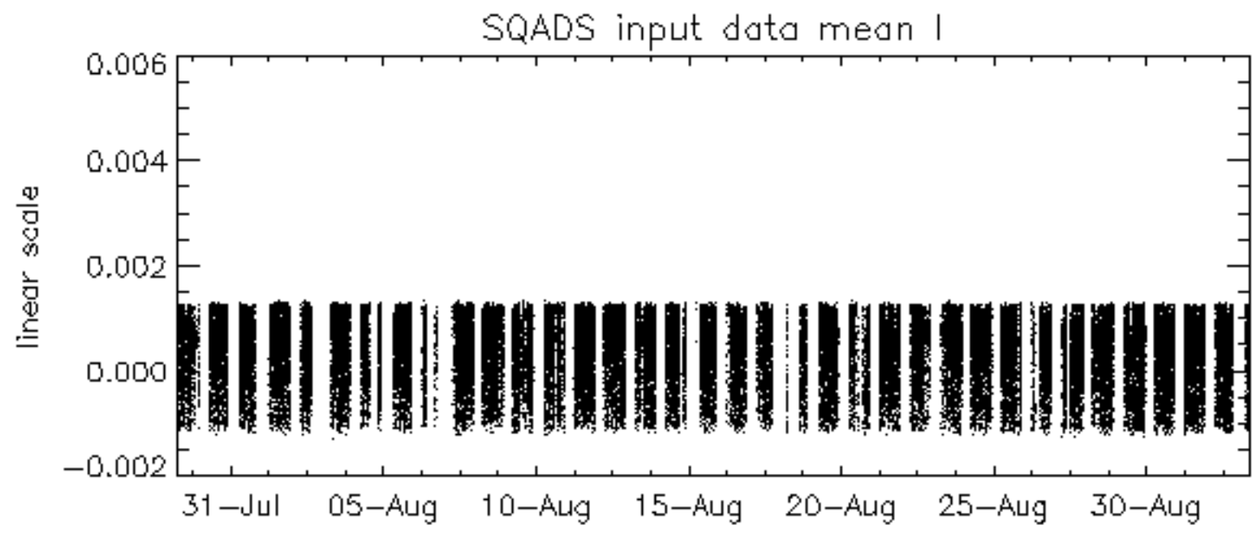
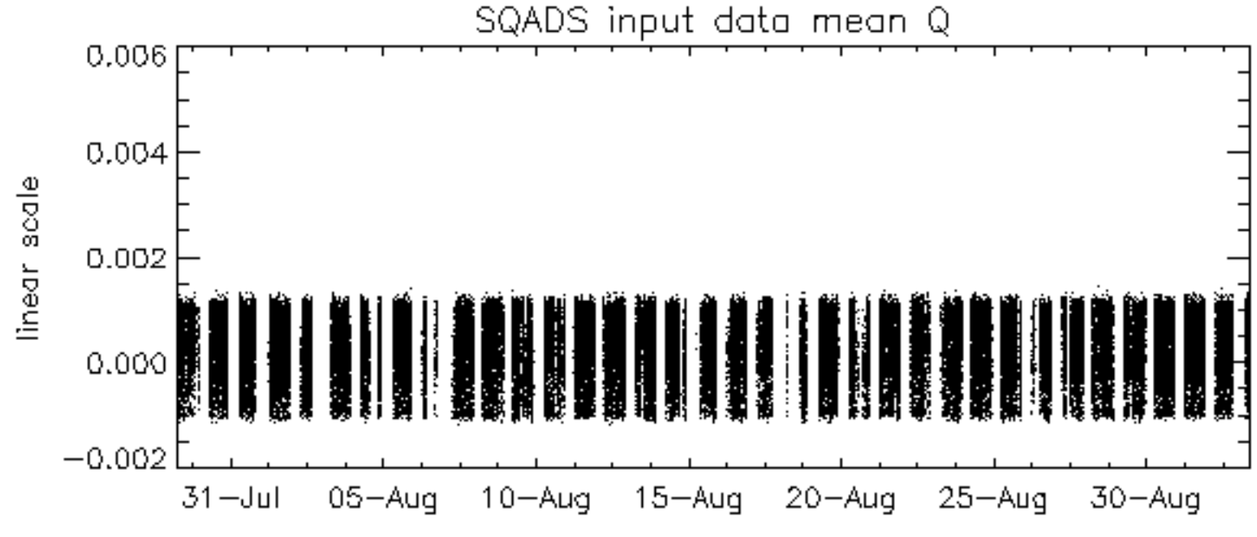
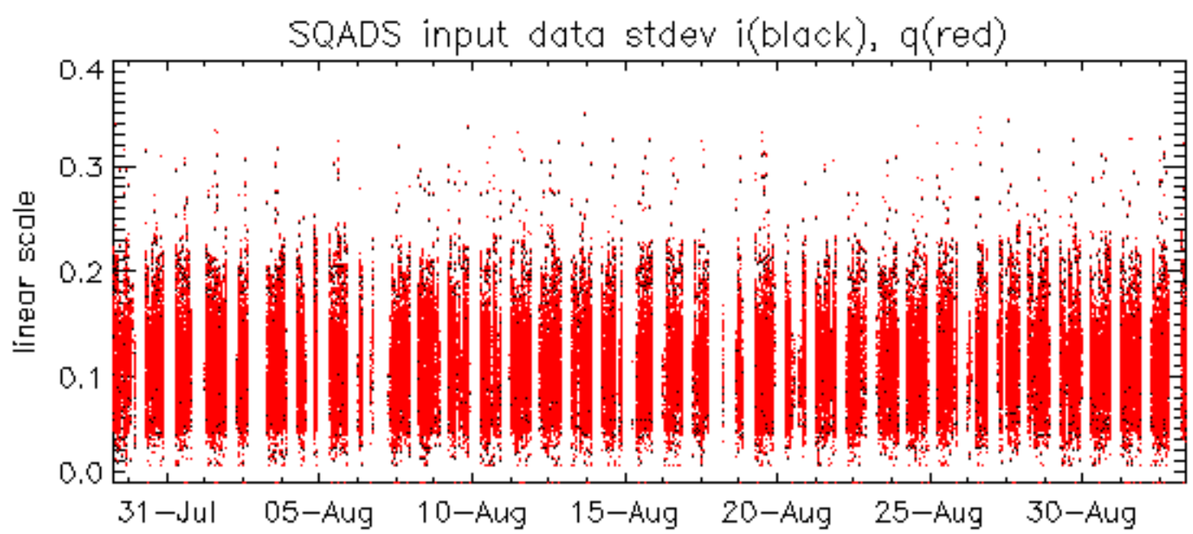
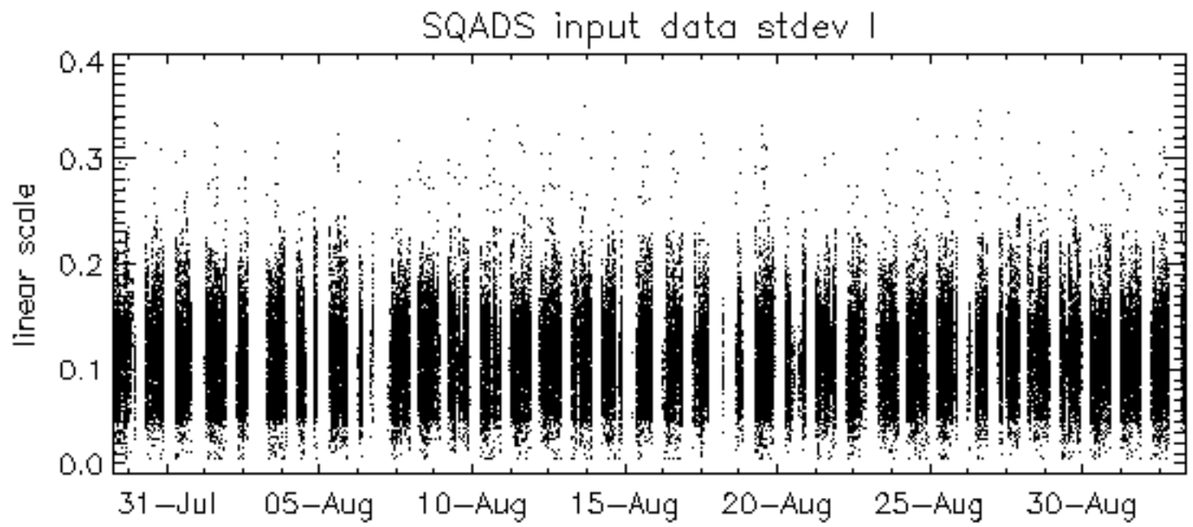

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

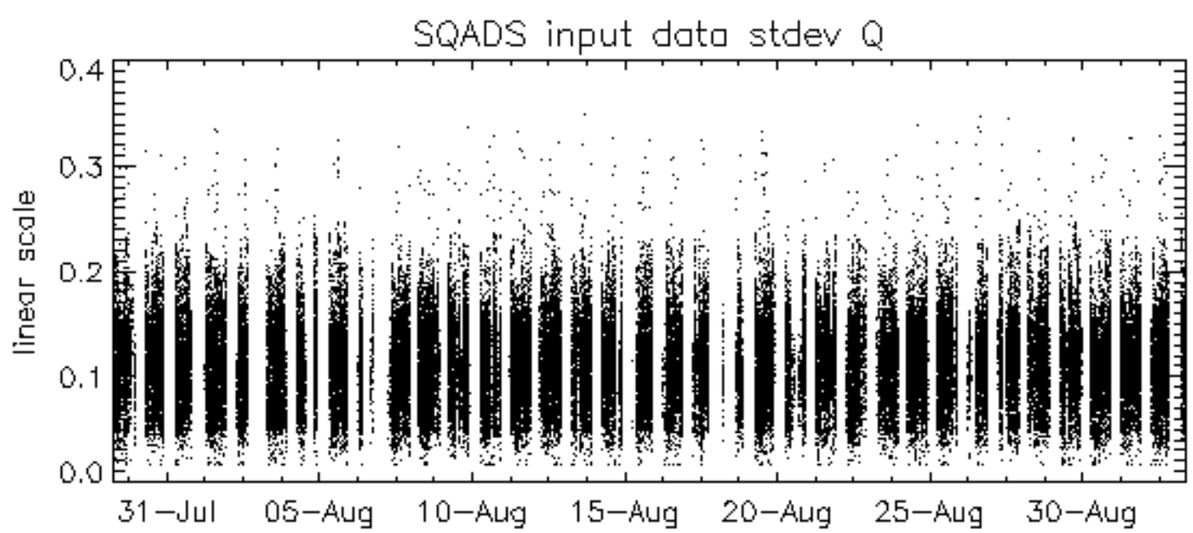

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug

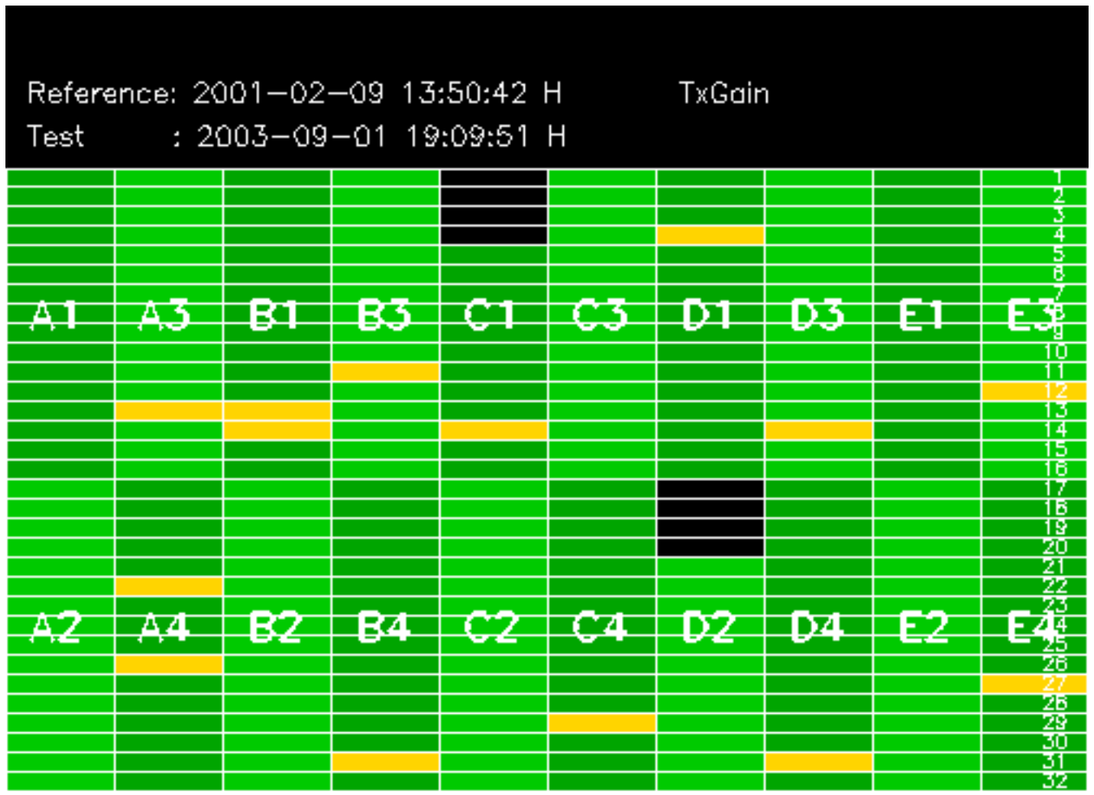

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug

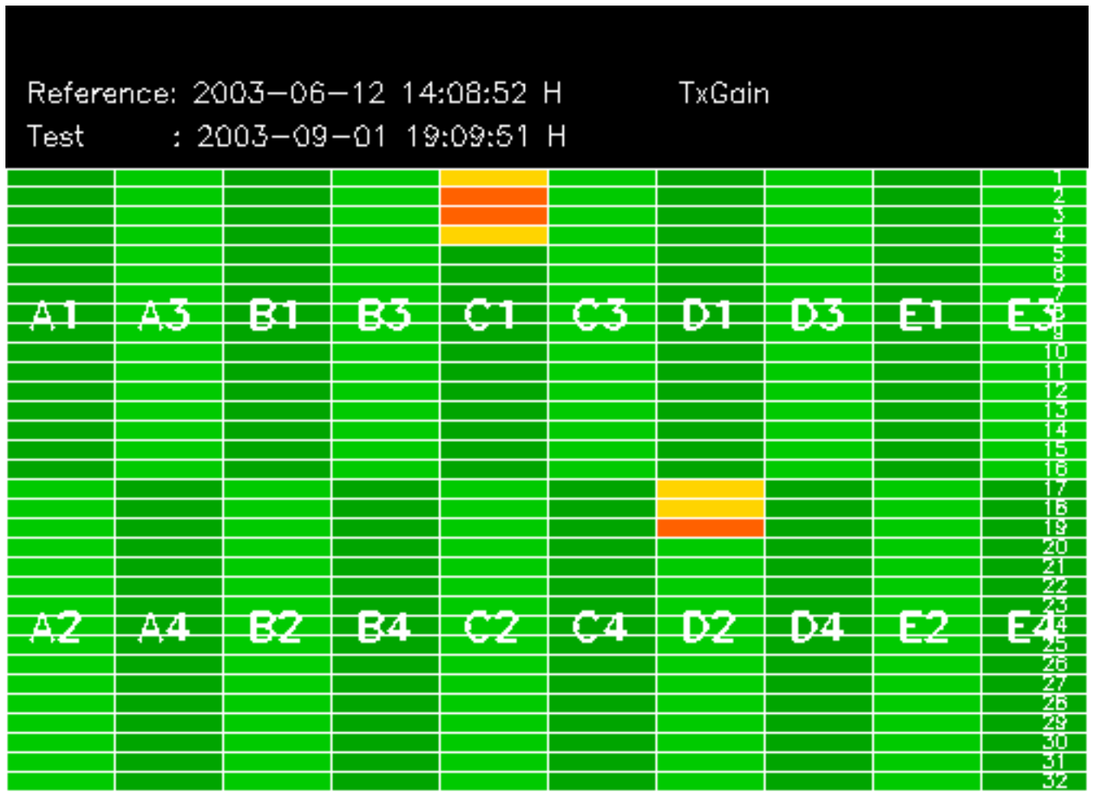

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


Reference: 2001-02-09 13:50:42 H
Test : 2003-09-01 19:09:51 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 : 2003-09-01 19:09:51 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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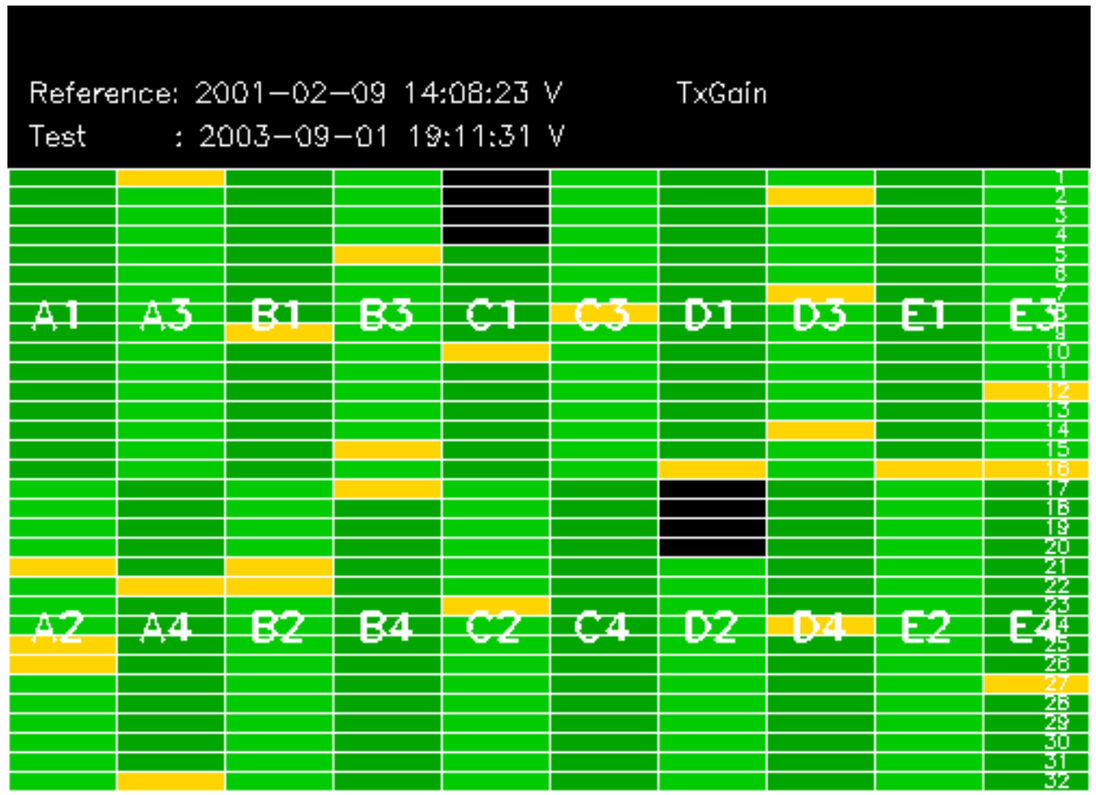
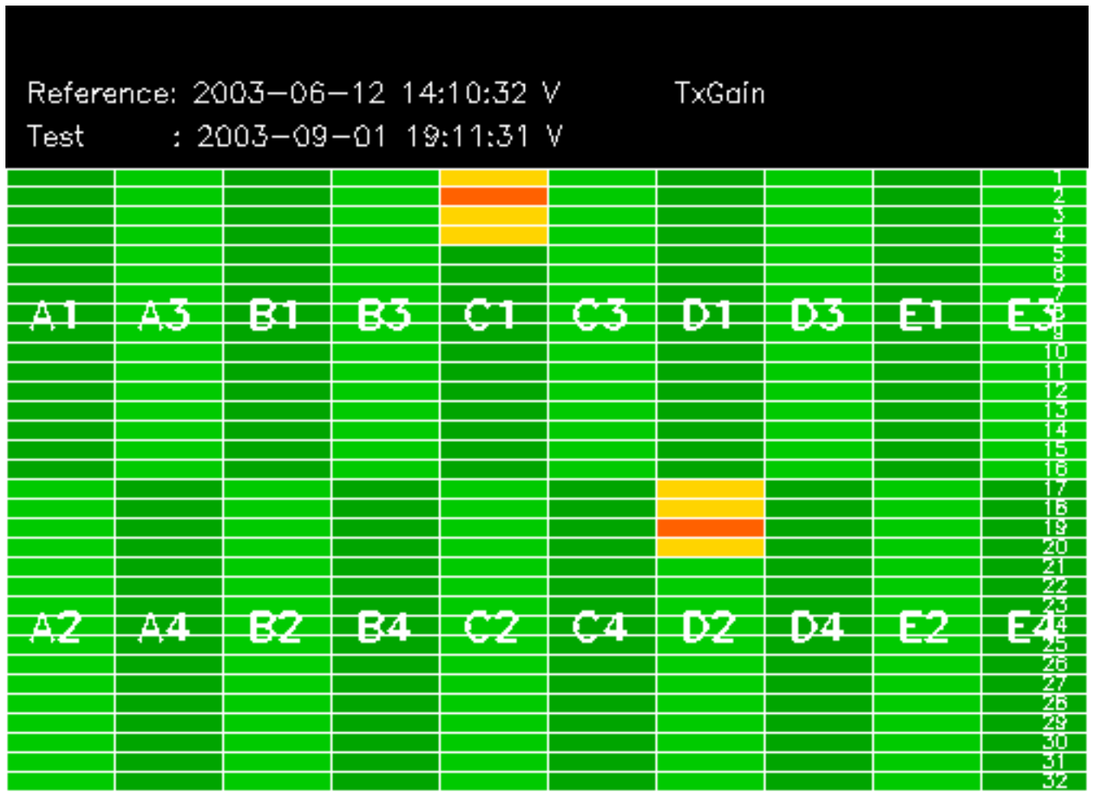

Reference: 2001-02-09 14:08:23 V
Test : 2003-09-01 19:11:31 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-09-01 19:11:31 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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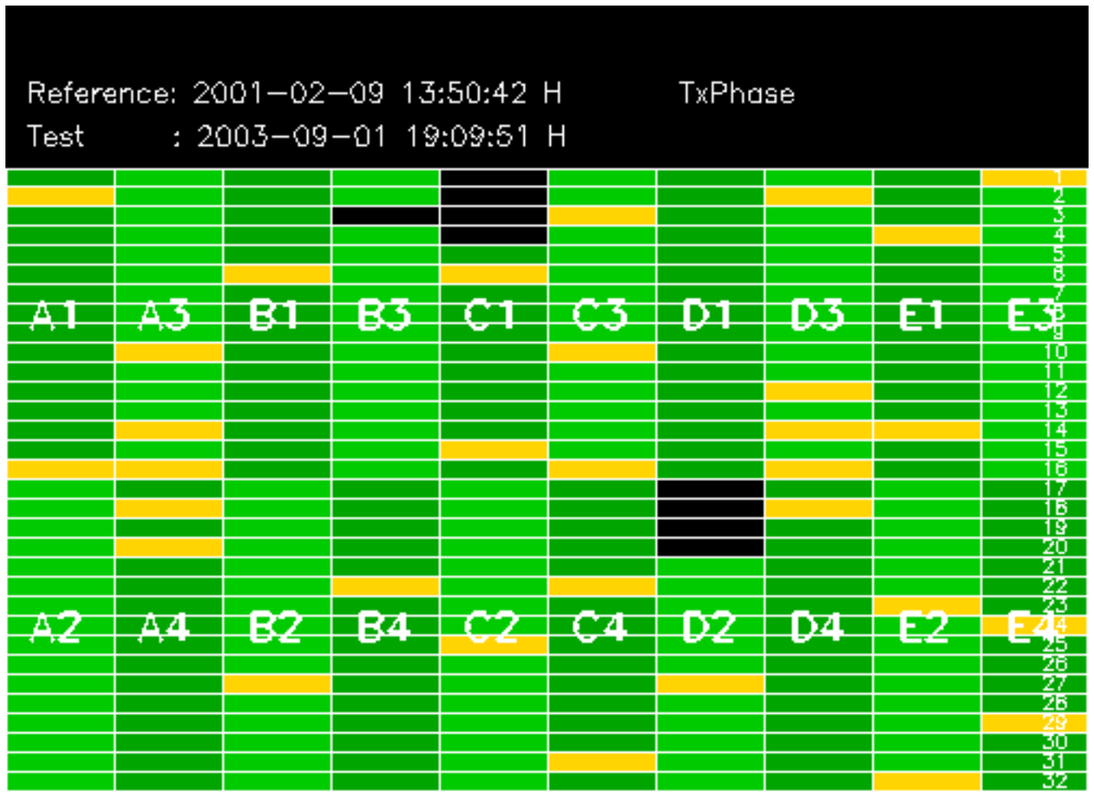
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2003-09-01 19:09:51 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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8
9
10
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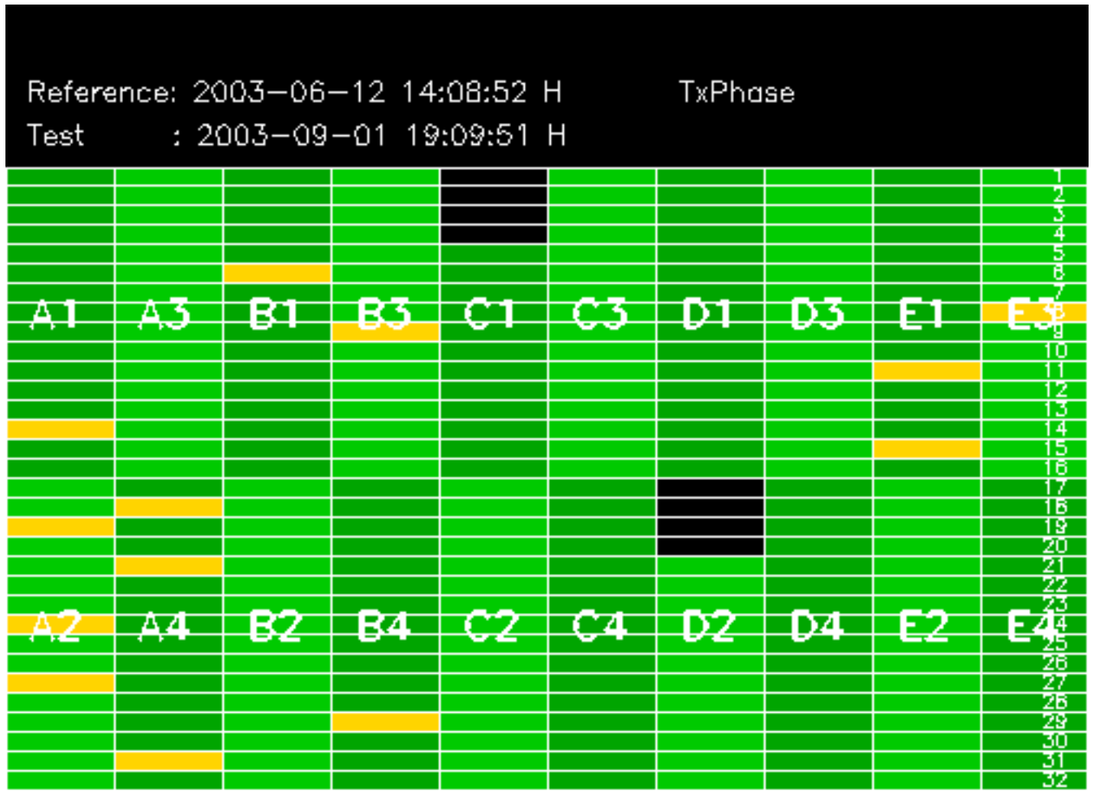
Reference: 2003-06-12 14:08:52 H
Test : 2003-09-01 19:09:51 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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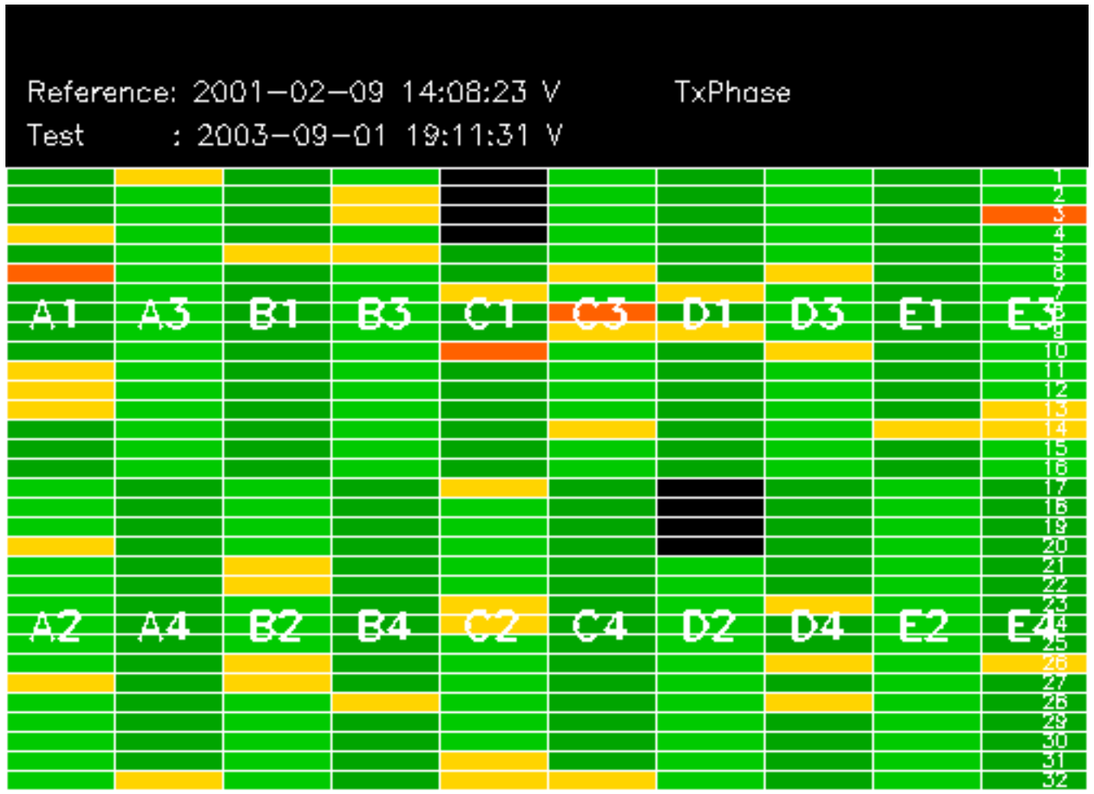
Reference: 2001-02-09 14:08:23 V
Test : 2003-09-01 19:11:31 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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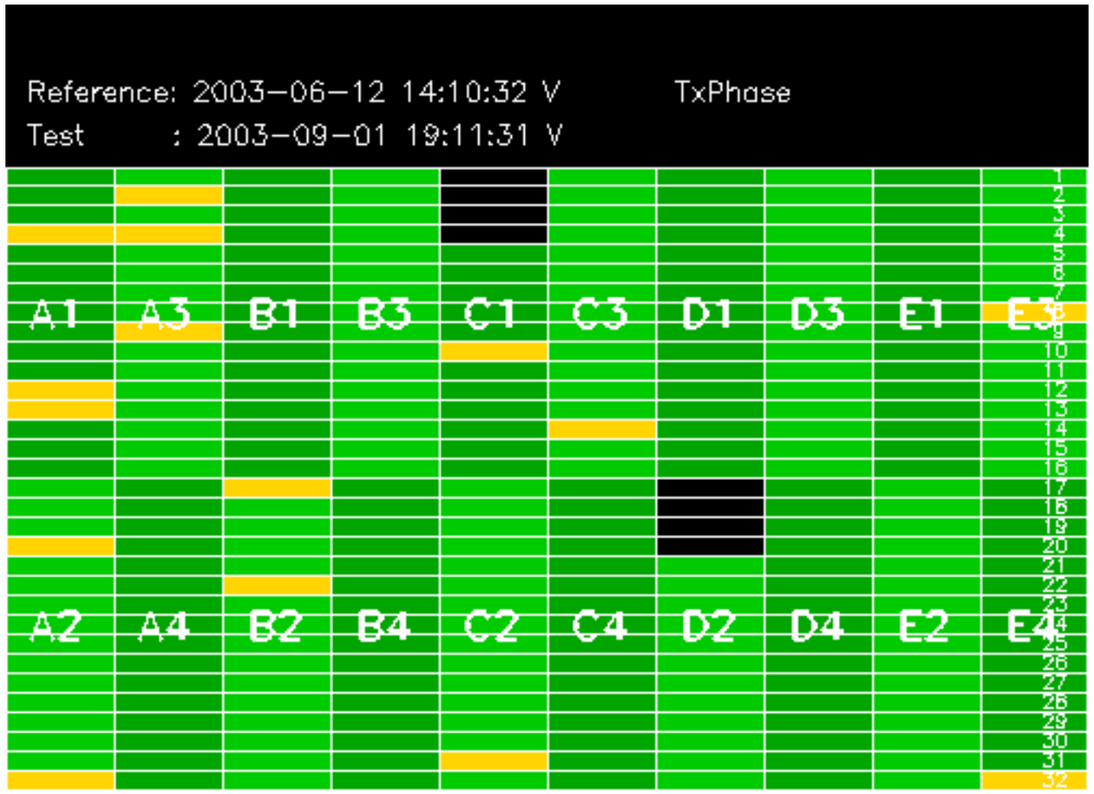
Reference: 2003-06-12 14:10:32 V
Test : 2003-09-01 19:11:31 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

No unavailabilies during the reported period.