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 unavailabilities 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 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

Two MS products available for analysis on 27-Jul-2003 (H and V polarization):
ASA_MS__0PNPDK20030727_194125_000000152018_00285_07353_0043.N1
ASA_MS__0PNPDK20030727_194305_000000152018_00285_07353_0044.N1

No anomalies observed.
The drift in phase for TR module 3 on tile B3 has decreased to a stable level as shown in the figure below.

Polarisation	Start Time
V	20030727 194305
H	20030727 194125

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.
Stable evolution of the calibration pulses.

4.1 - Daily statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.82530	-22.5923	-8.10899
	stdev	0.00498572	0.0604456	0.00204750
10	mean	-6.87411	-19.3223	-8.10899
	stdev	0.0273947	0.0591277	0.00204750

4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.87057	-22.5680	-8.09903
	stdev	0.0850687	0.0629950	0.00304406
10	mean	-6.97282	-19.3234	-8.09903
	stdev	0.408052	0.0616439	0.00304406

4.3 - cal pulses monitoring (all rows)

5 - RAW data statistics

No anomalies observed.
Nominal values of I and Q level0 statistics.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000480058
	stdev	3.01607e-07
MEAN Q	mean	0.000314017

stdev	3.15024e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.114794
	stdev	0.00160800
STDEV Q	mean	0.114901
	stdev	0.00163973

5.3 - Gain imbalance I/Q

6 - Wave Doppler Analysis

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

6.1 - Unbiased Doppler Error

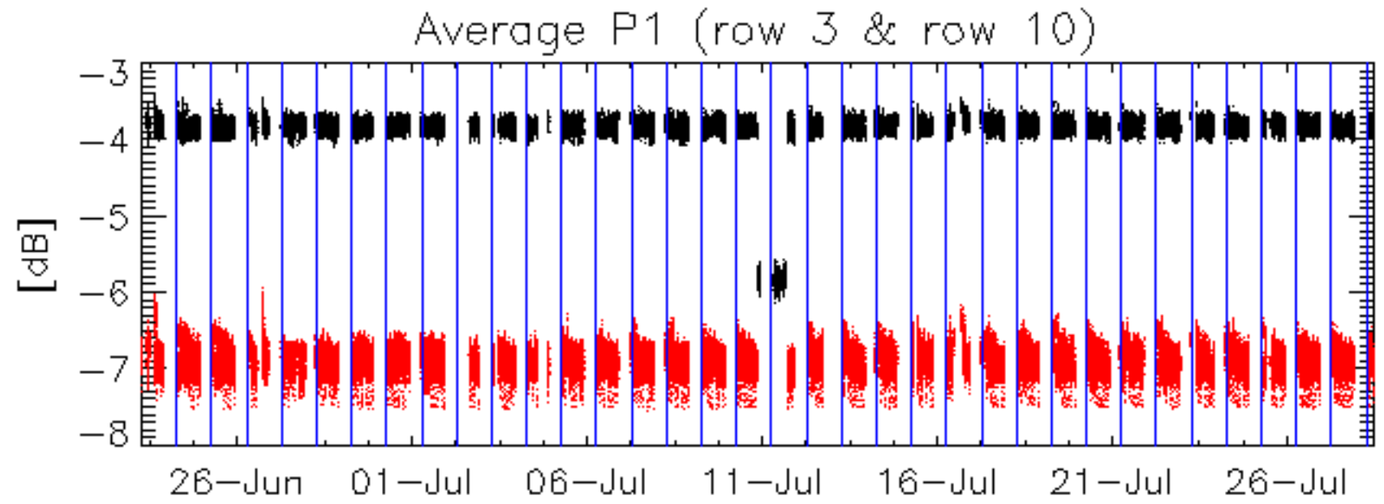
Evolution of unbiased Doppler error (Real - Expected)
Acsending
Descending

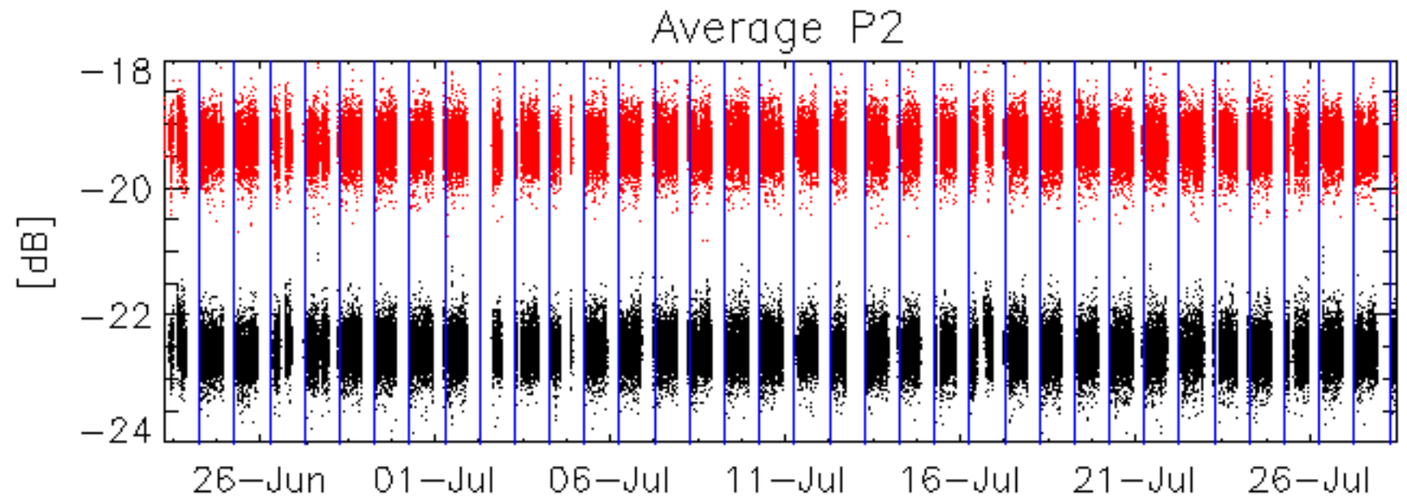
6.2 - Absolute Doppler

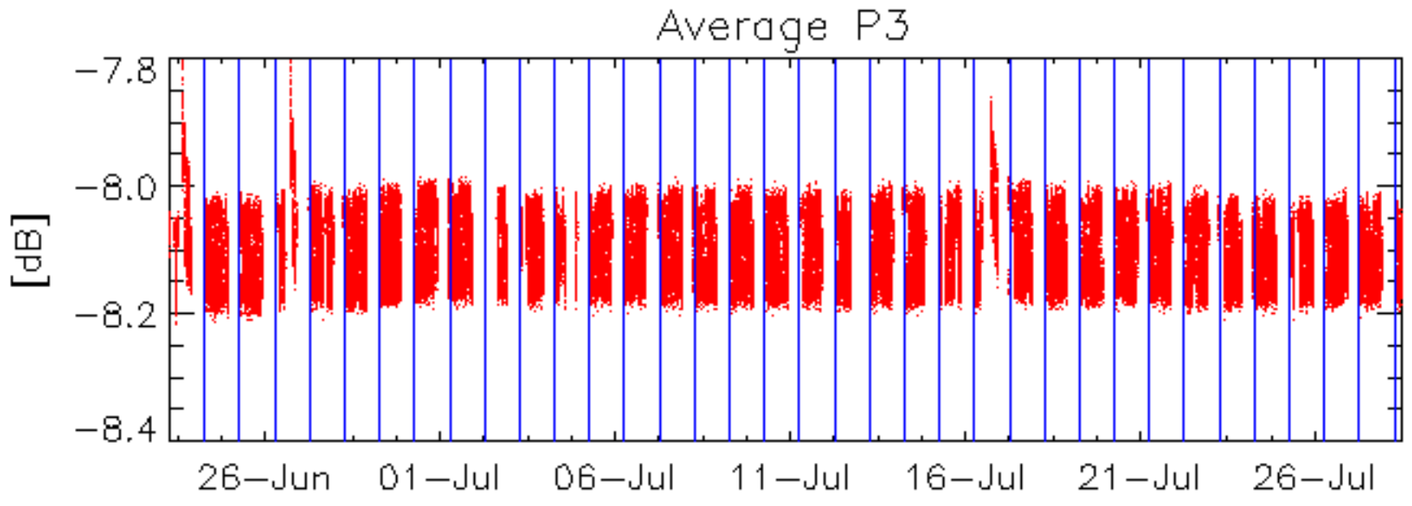
Evolution of Absolute Doppler
Acsending
Descending

6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX


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

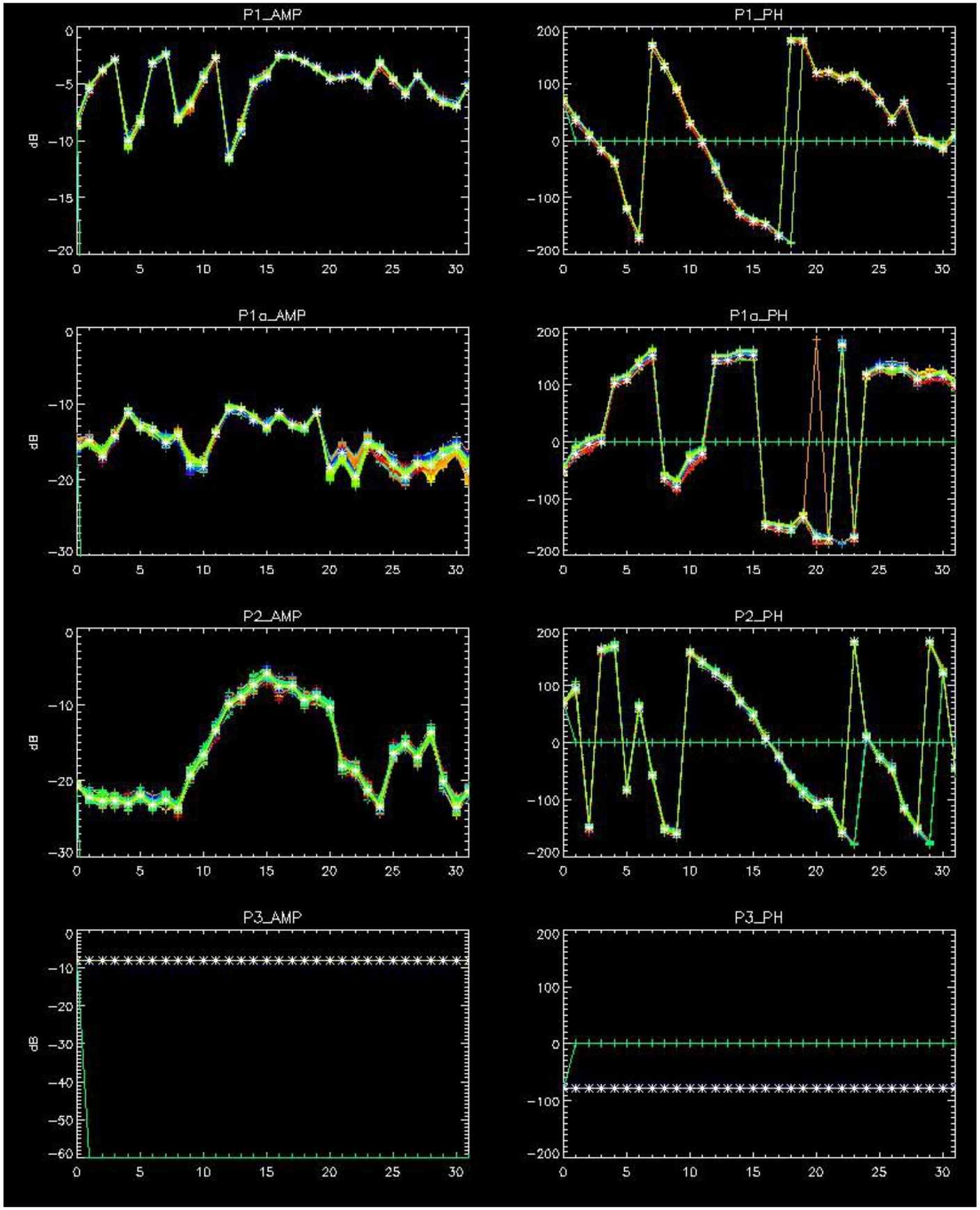

Average P2
[dB]
−18
−20
−22
−24
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul


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

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

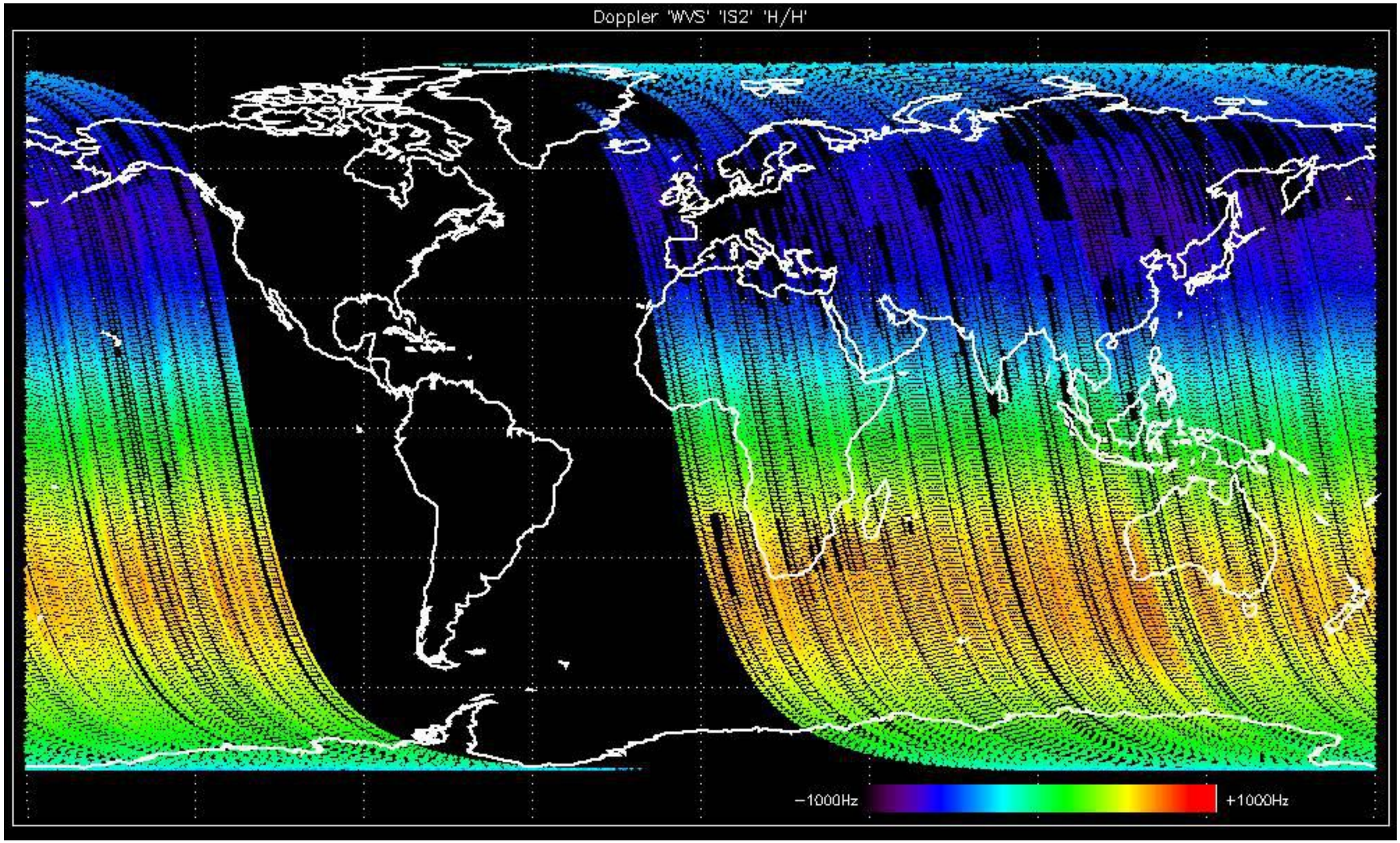
No anomalies observed on browse products.

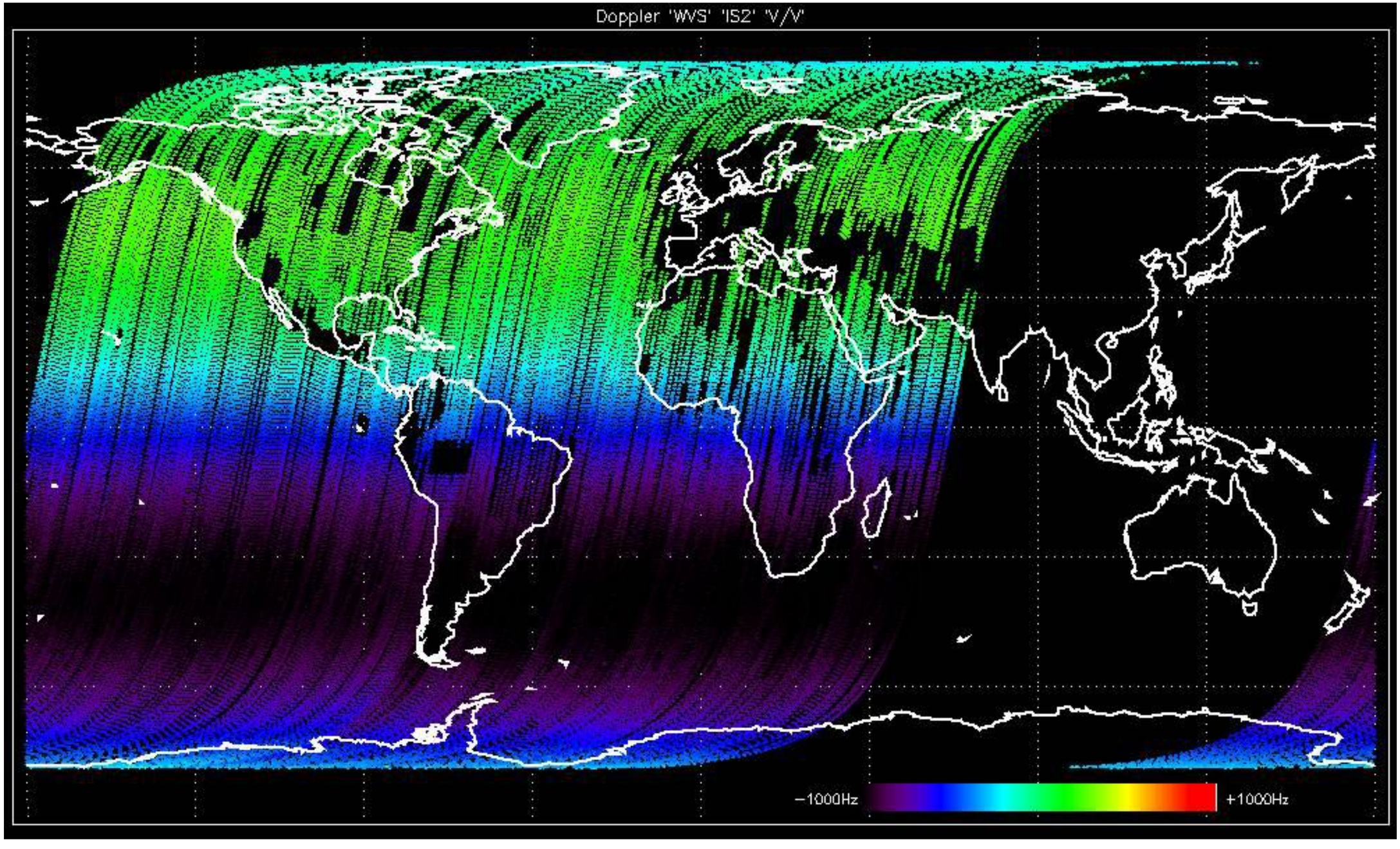
No anomalies observed.
Stable evolution of the calibration pulses.

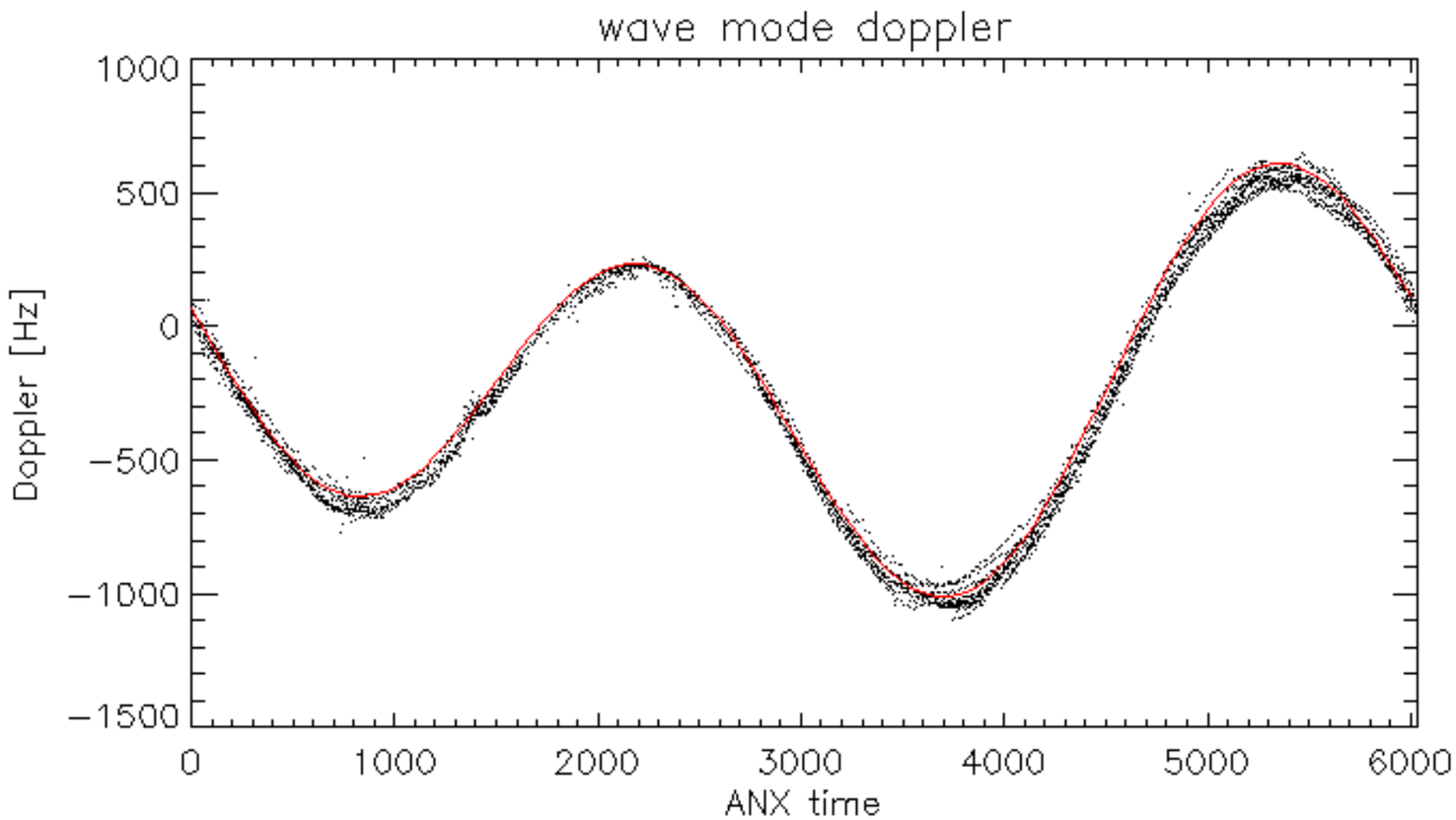

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

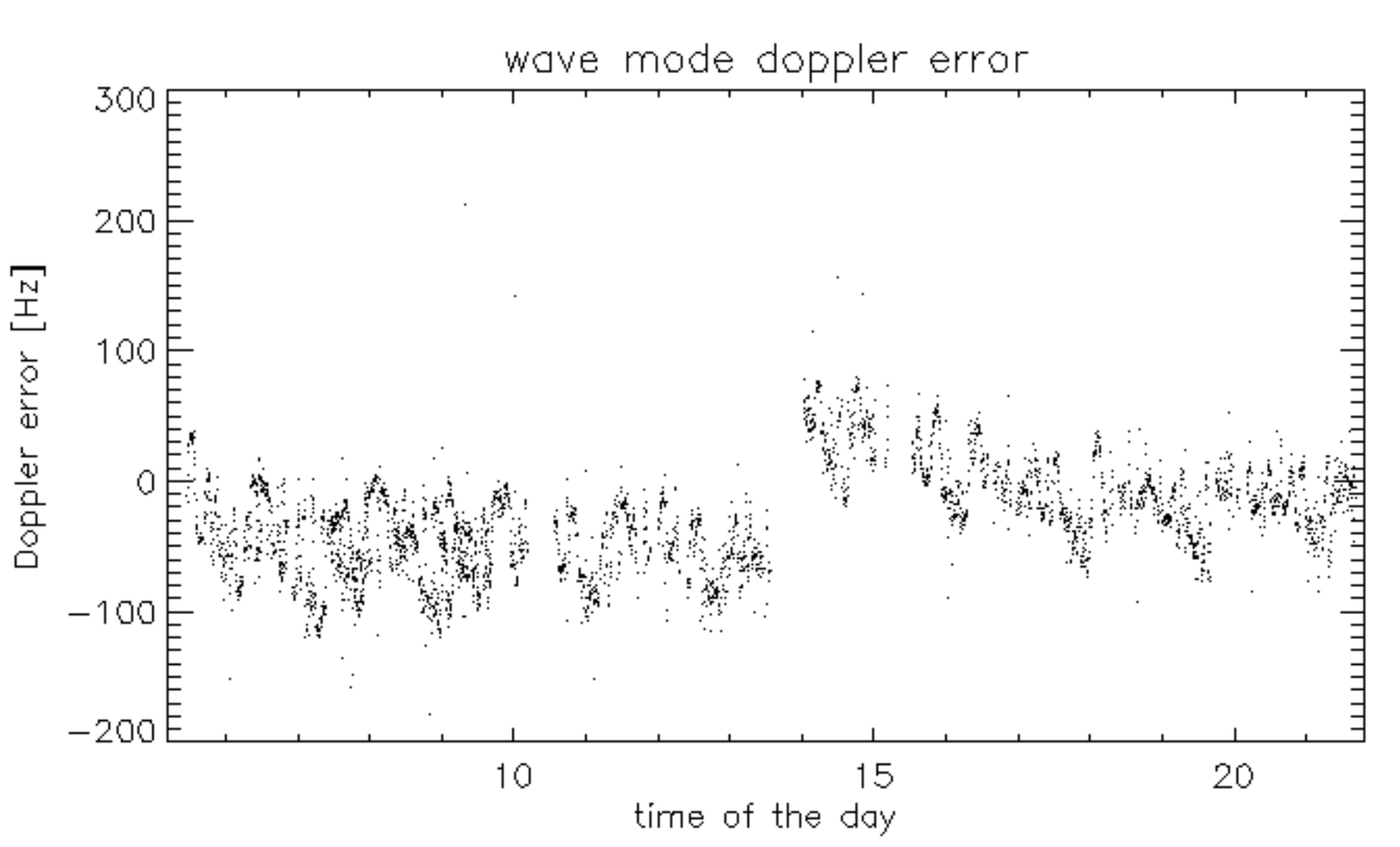
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

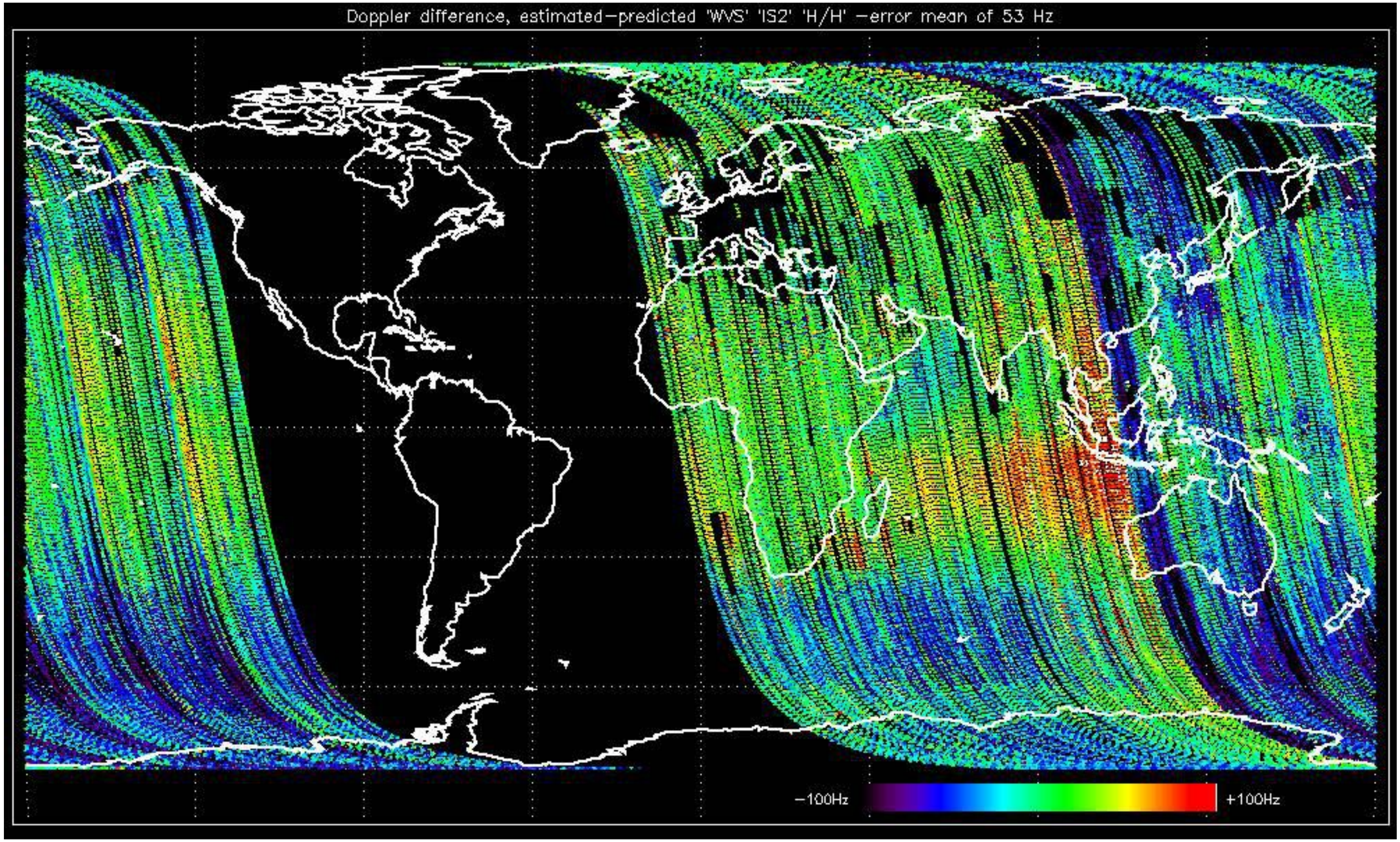
No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 60 days

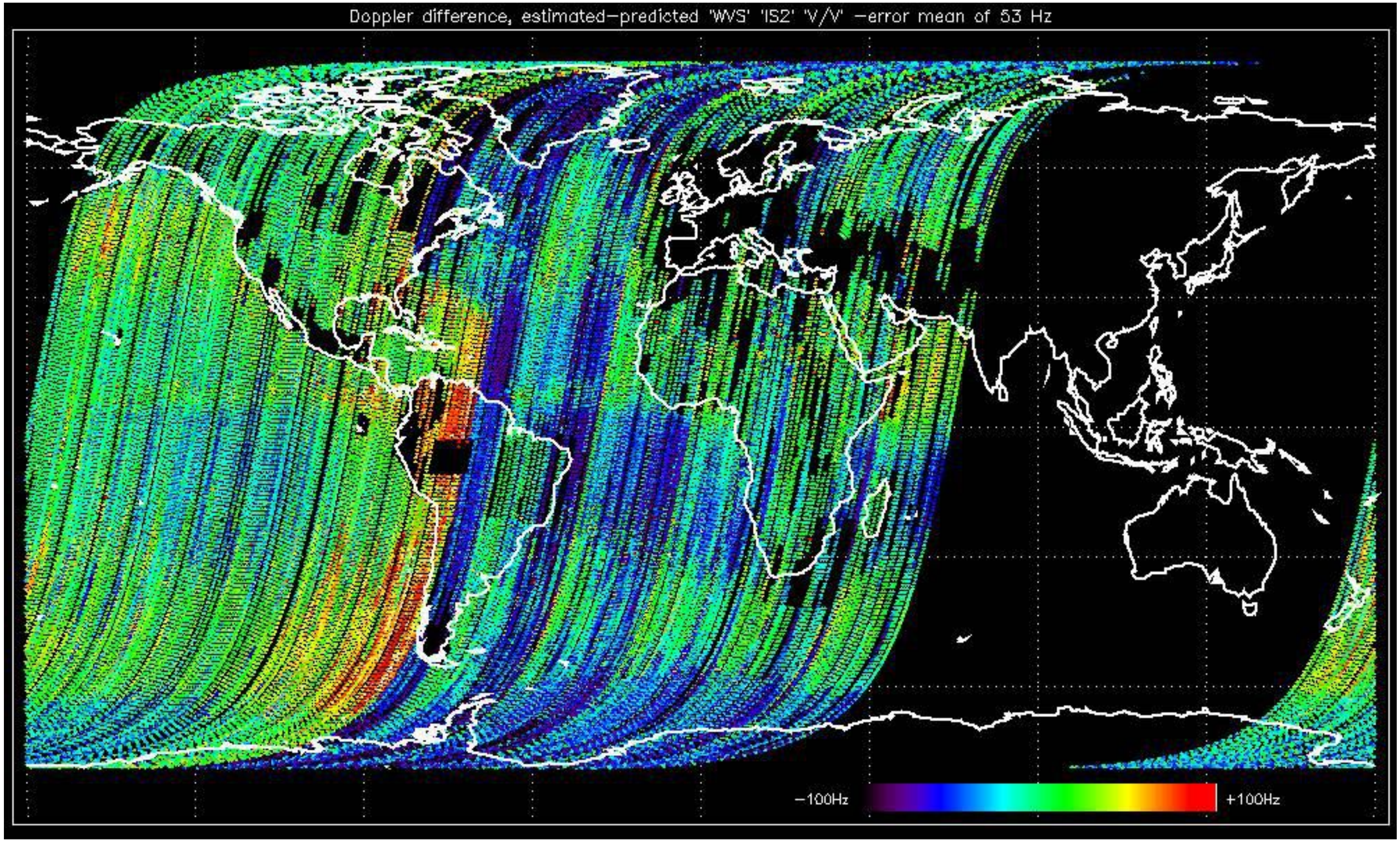

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz


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
10
15
20
time of the day

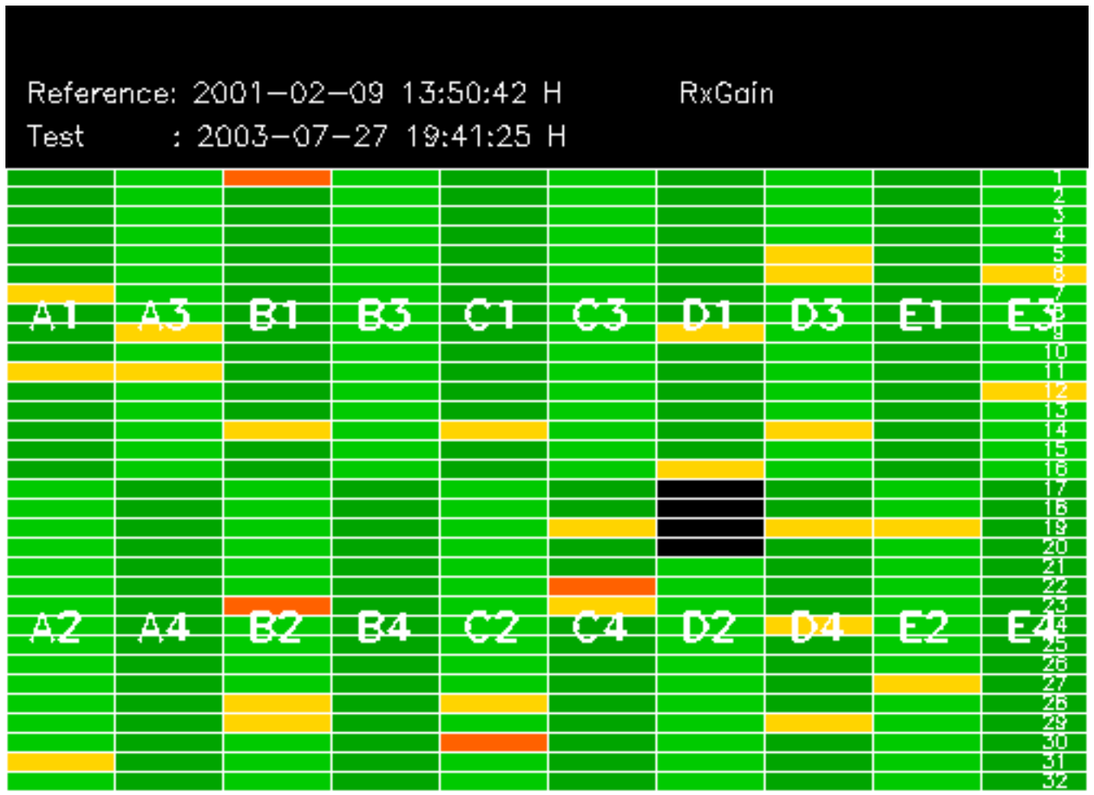

Doppler difference, estimated−predicted 'WVS' 'IS2' 'H/H' −error mean of 53 Hz
−100Hz
+100Hz

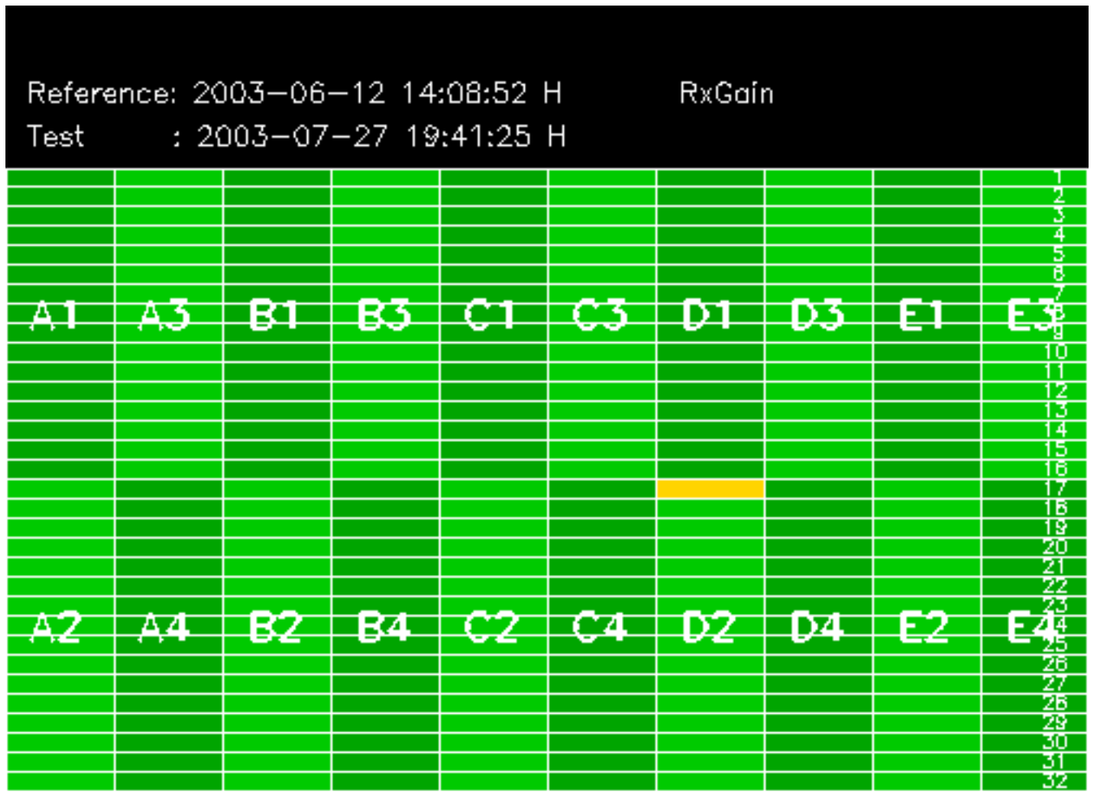

Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of 53 Hz
−100Hz
+100Hz

Two MS products available for analysis on 27-Jul-2003 (H and V polarization):
 ASA_MS__0PNPDK20030727_194125_000000152018_00285_07353_0043.N1
 ASA_MS__0PNPDK20030727_194305_000000152018_00285_07353_0044.N1

No anomalies observed.
The drift in phase for TR module 3 on tile B3 has decreased to a stable level as shown in the figure below.

No anomalies observed.
Nominal values of I and Q level0 statistics.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2003-07-27 19:41:25 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 : 2003-07-27 19:41:25 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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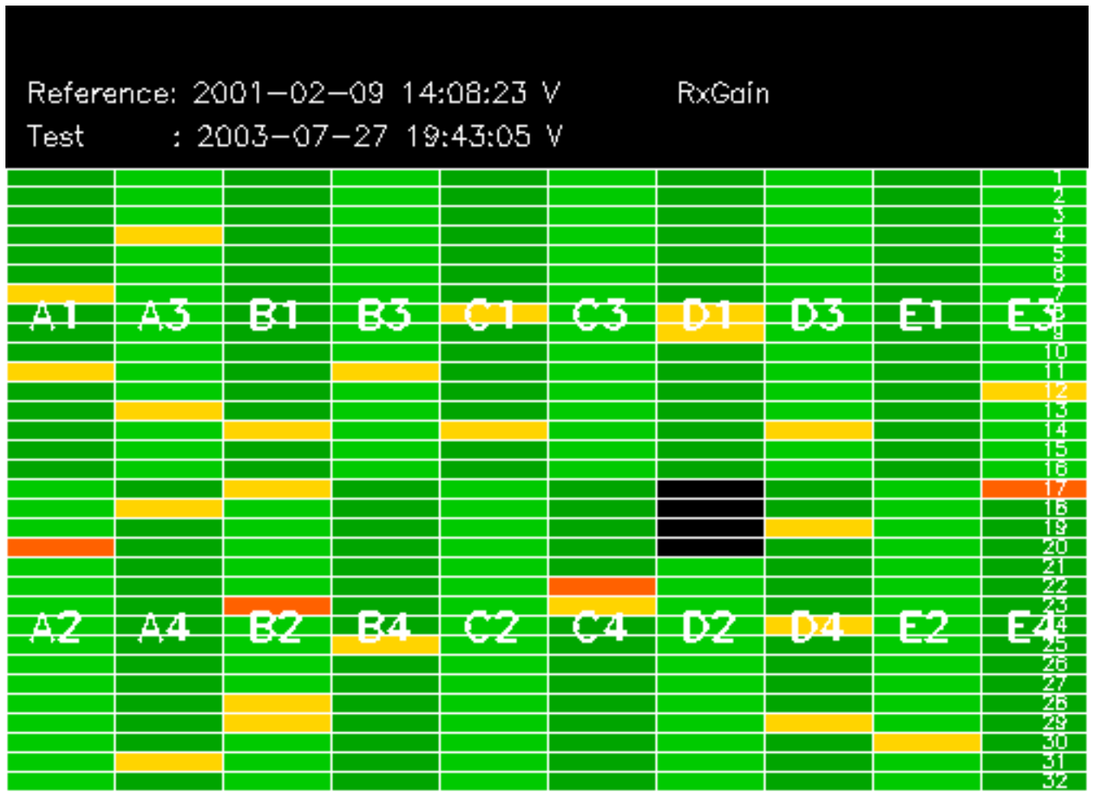
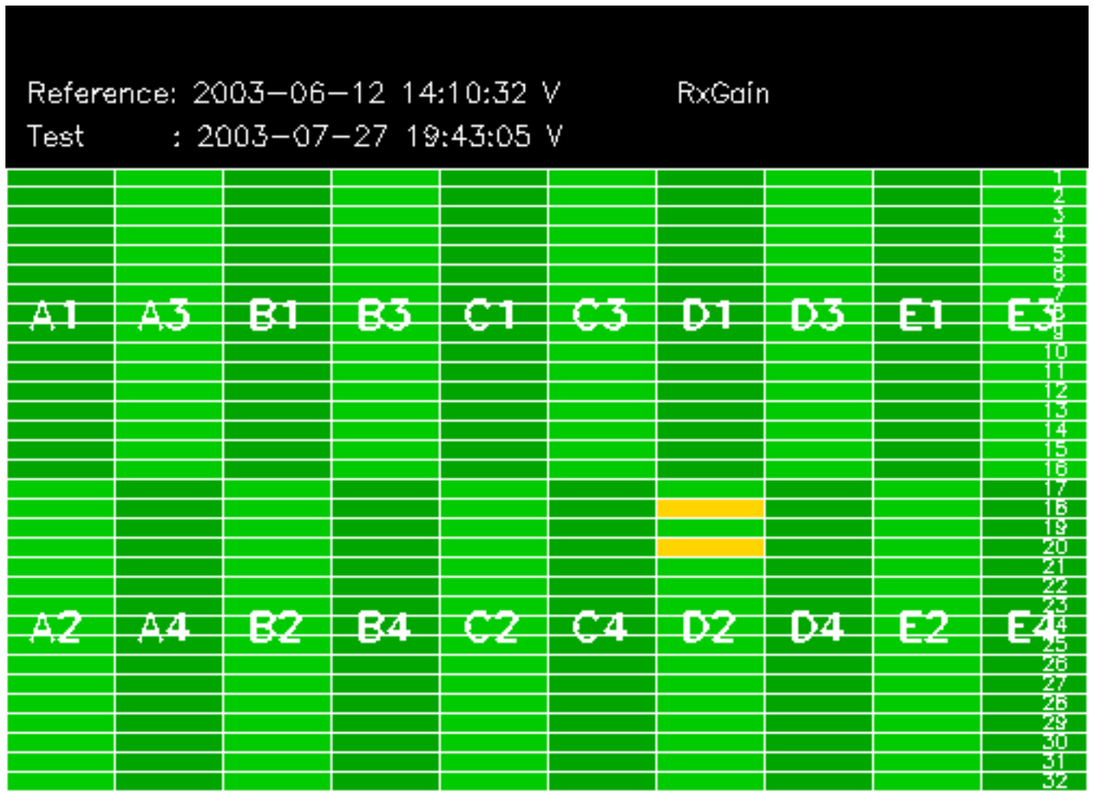

Reference: 2001-02-09 14:08:23 V
Test : 2003-07-27 19:43:05 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-07-27 19:43:05 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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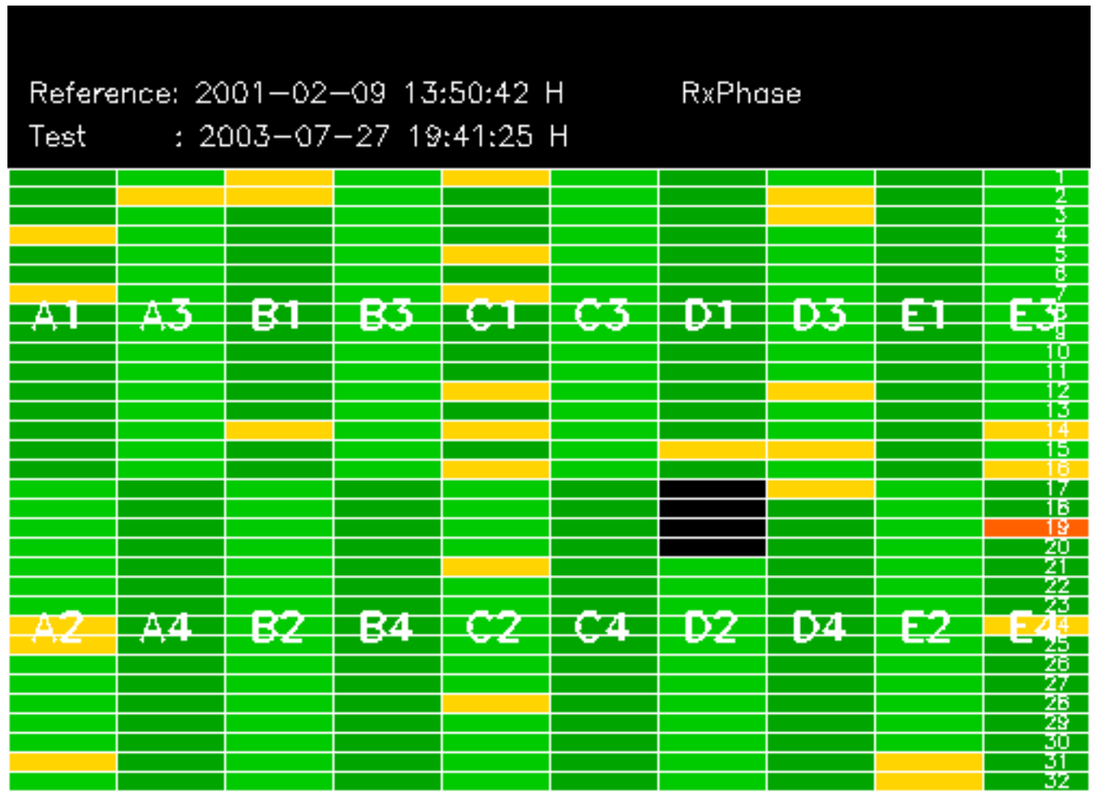
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2003-07-27 19:41:25 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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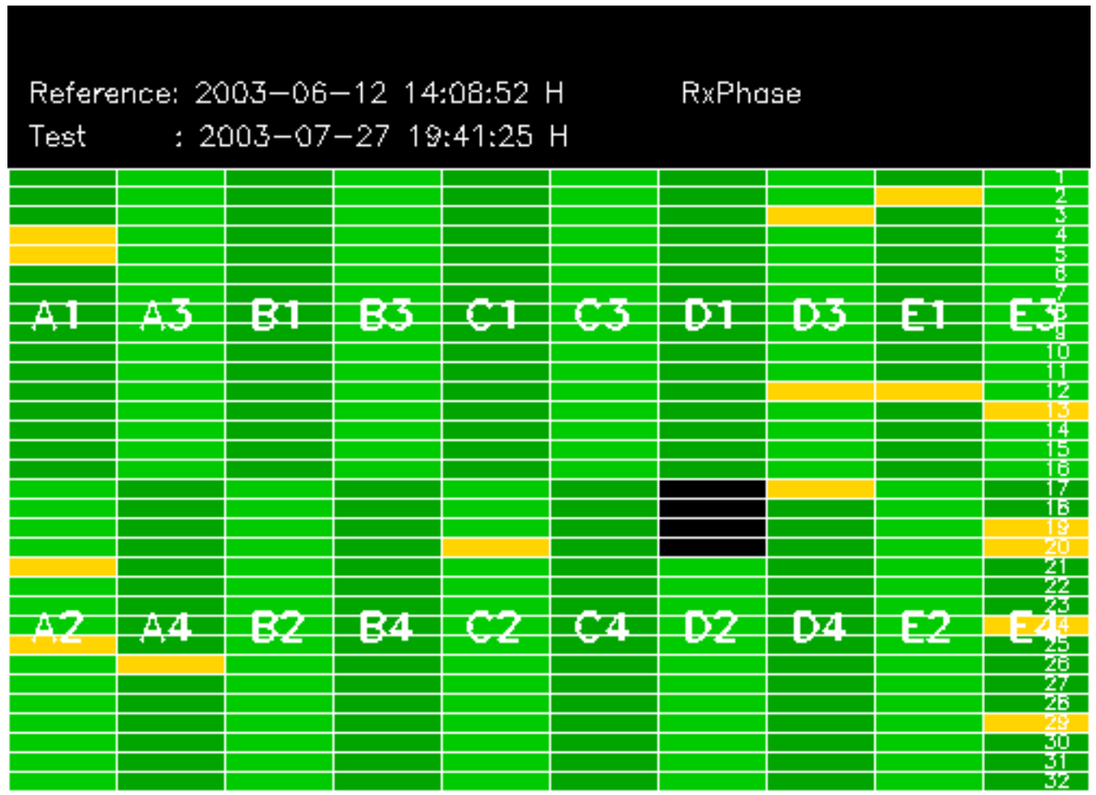
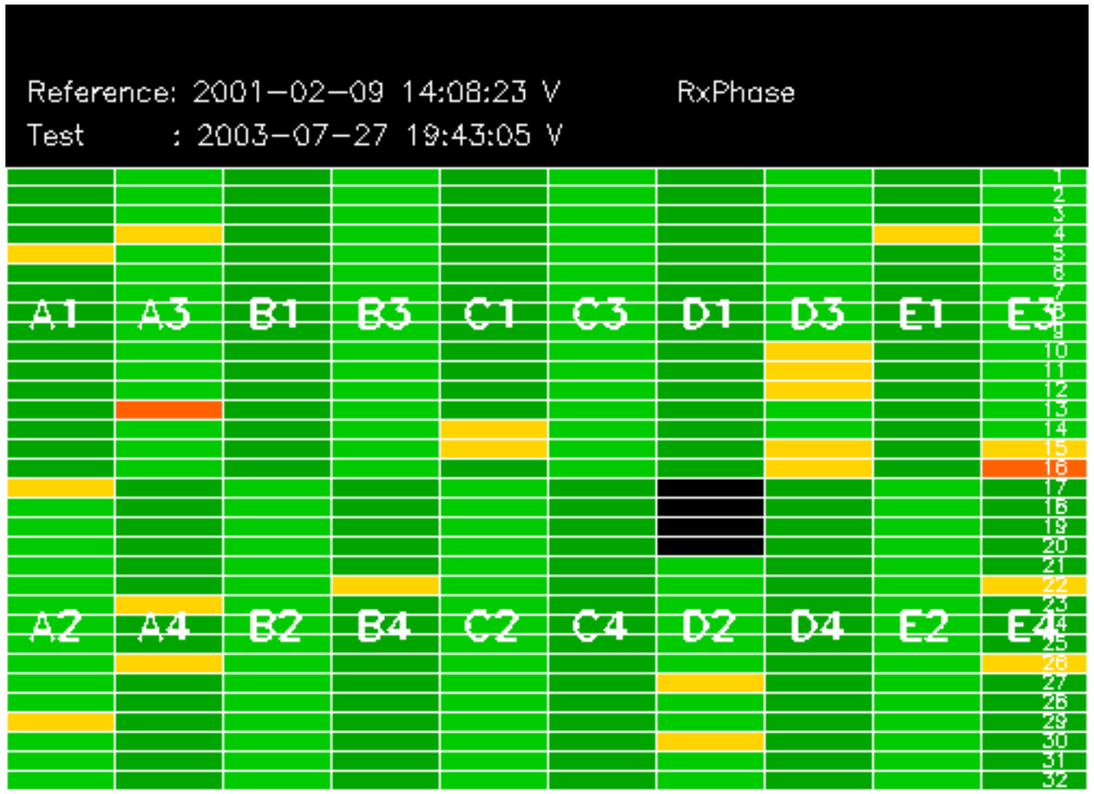

Reference: 2003-06-12 14:08:52 H
Test : 2003-07-27 19:41:25 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2003-07-27 19:43:05 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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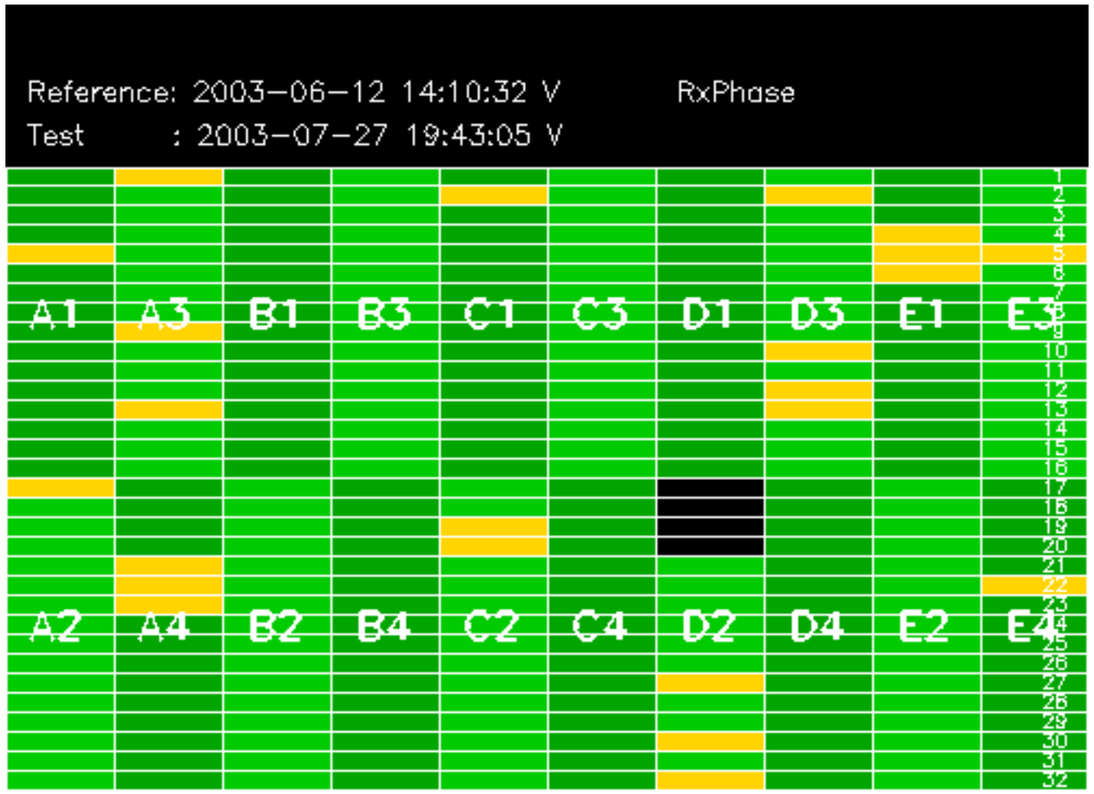
Reference: 2003-06-12 14:10:32 V
Test : 2003-07-27 19:43:05 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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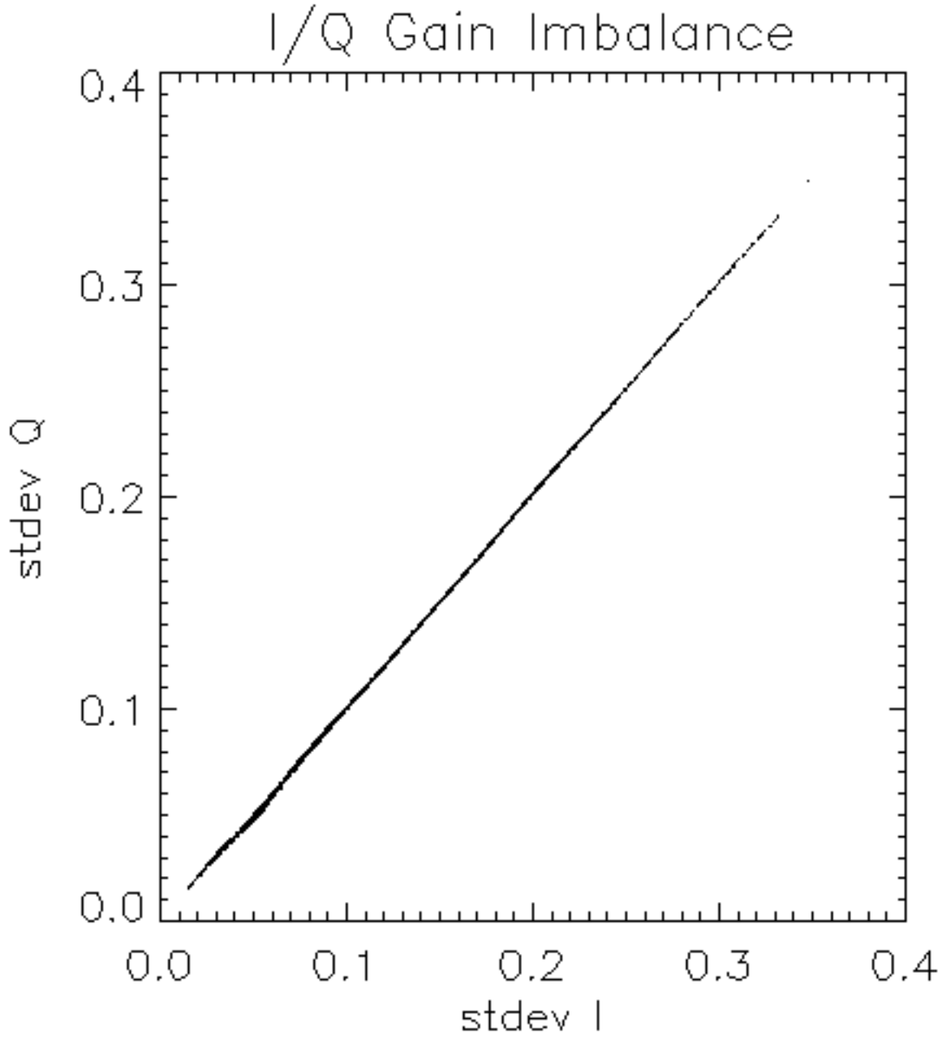
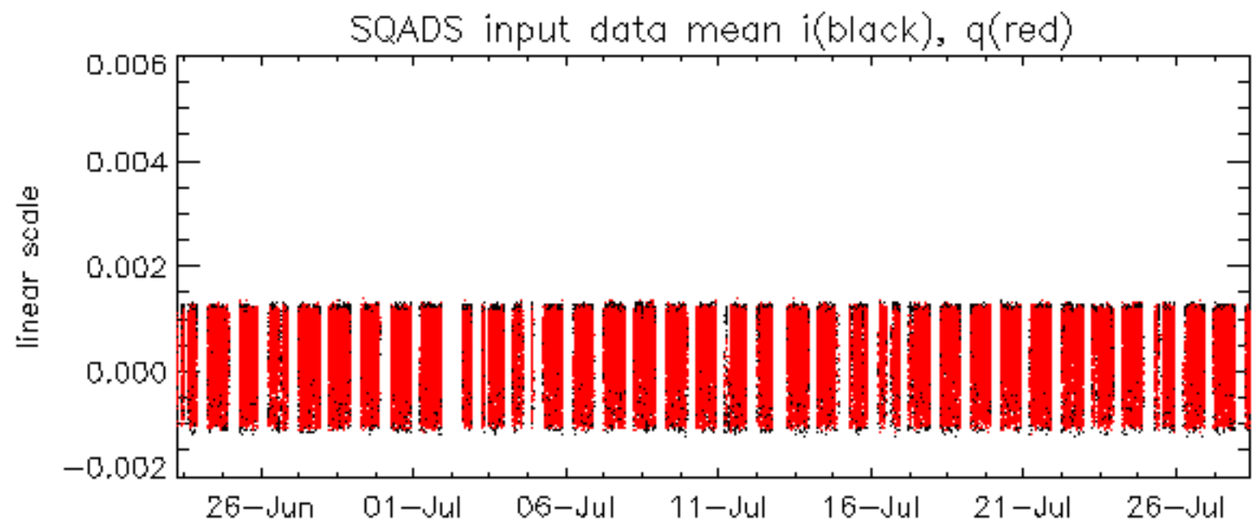
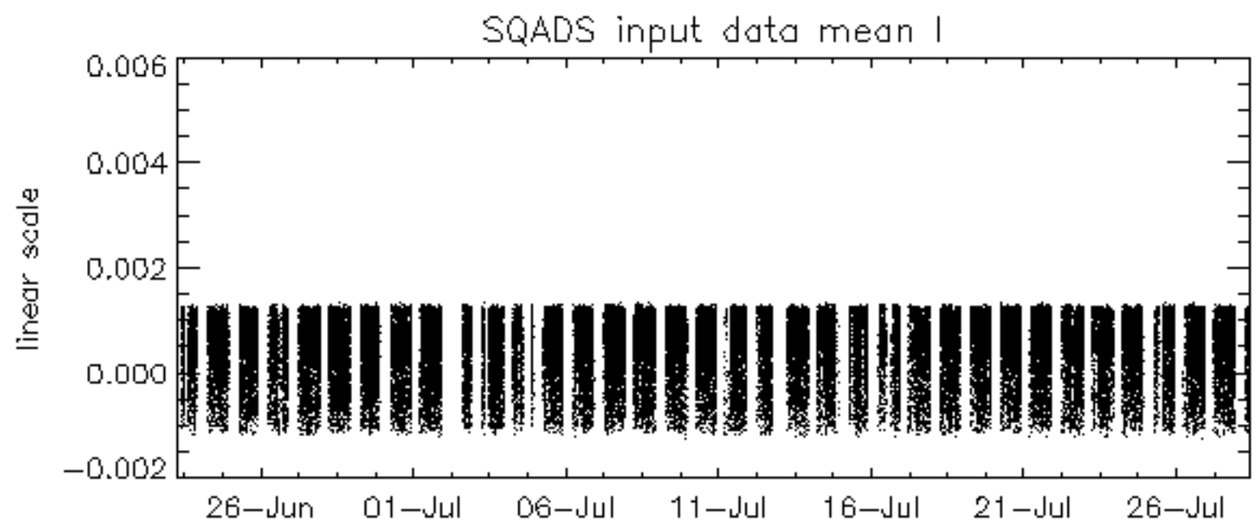
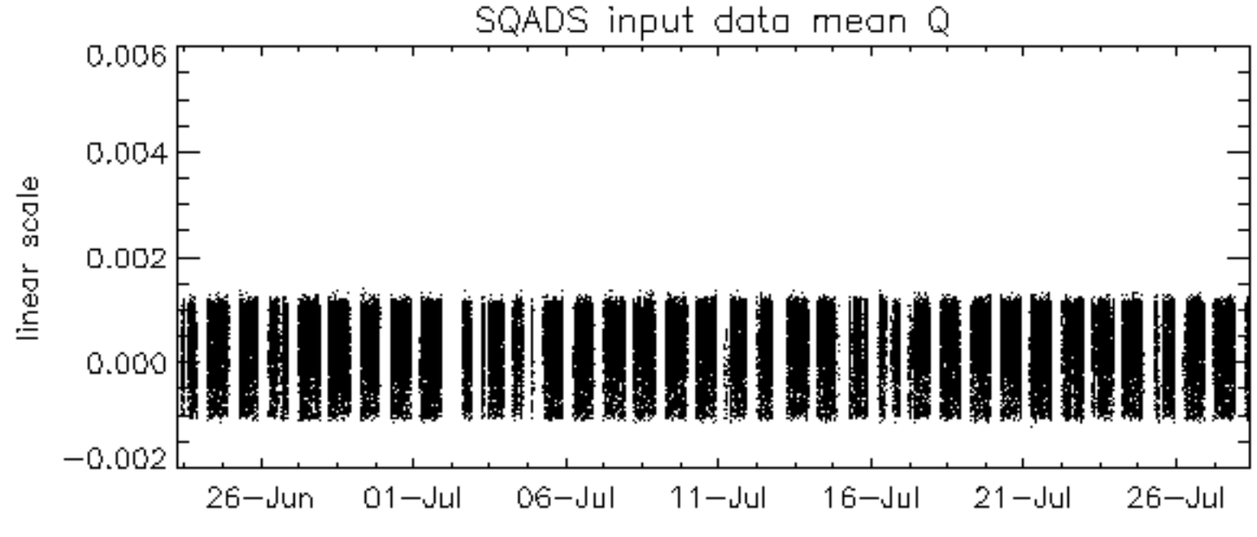
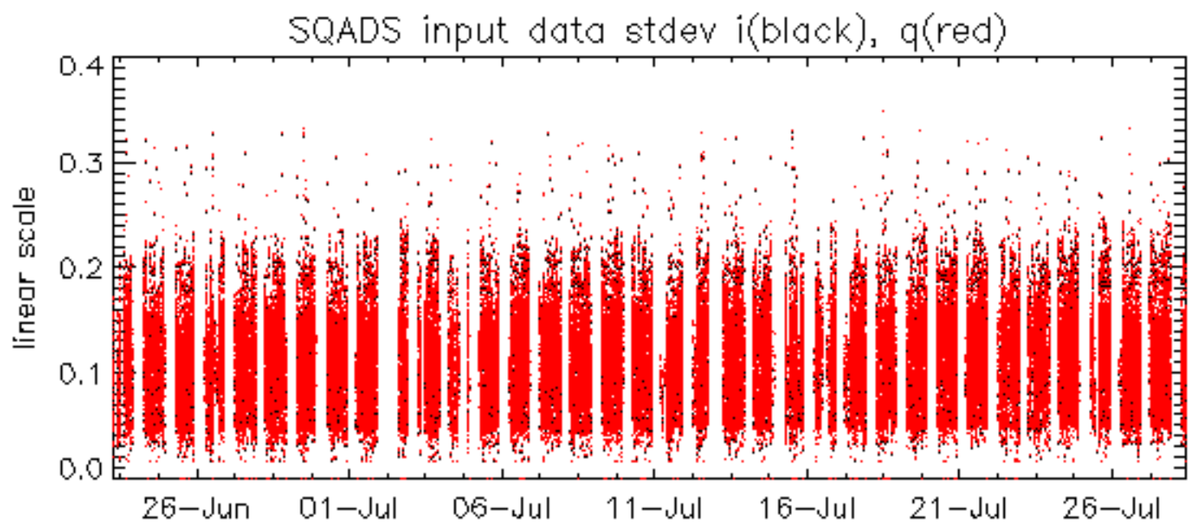
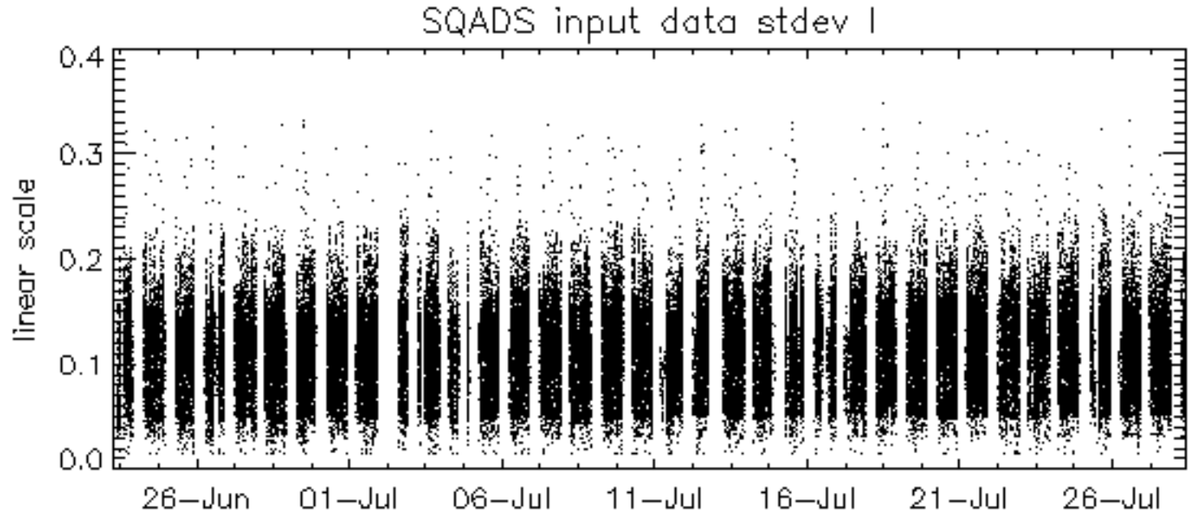

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

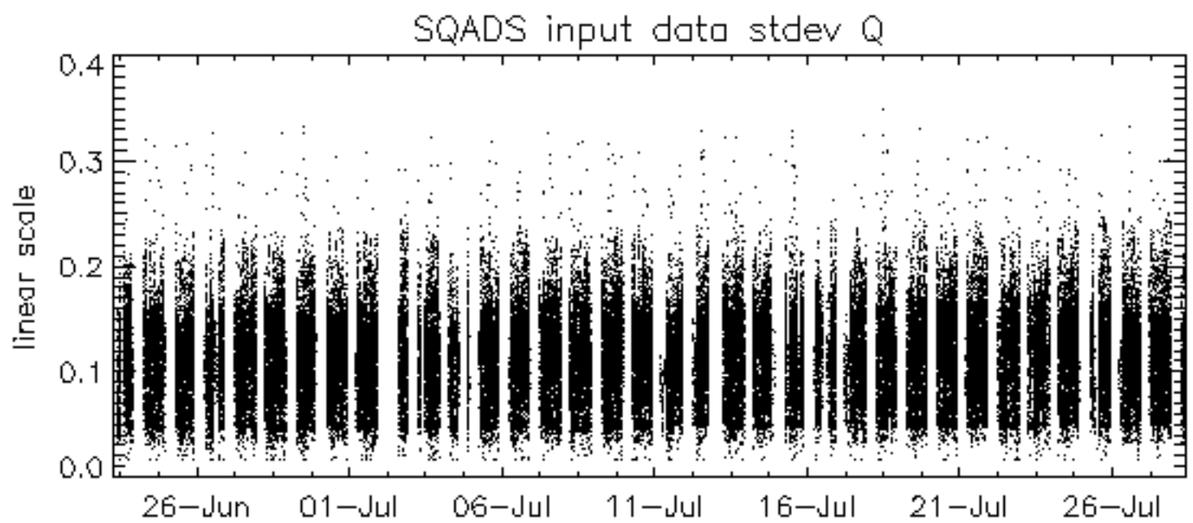

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul

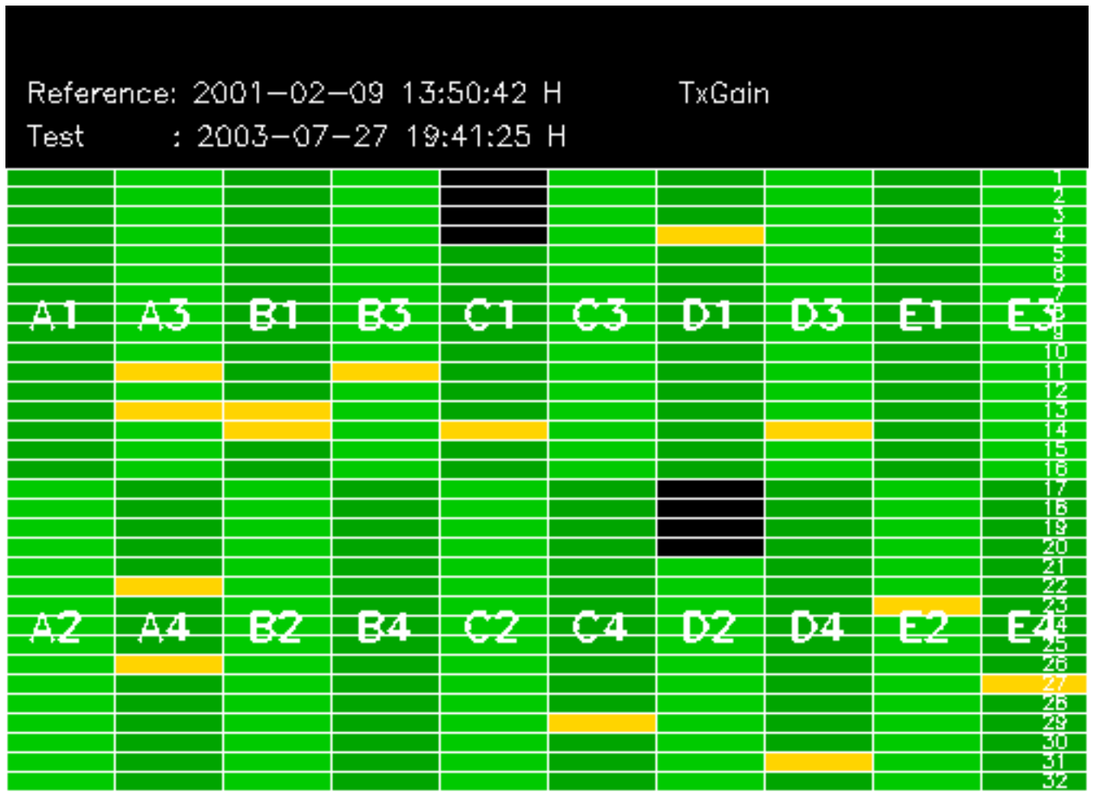

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul


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


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul


Reference: 2001-02-09 13:50:42 H
Test : 2003-07-27 19:41:25 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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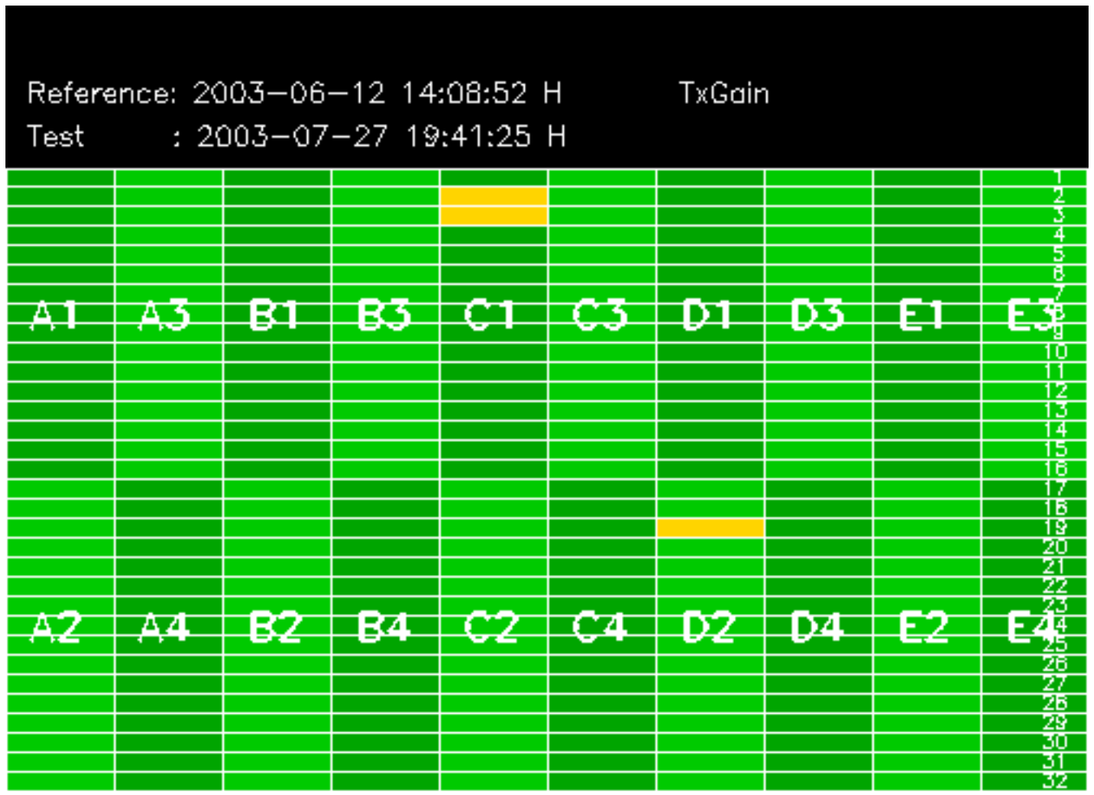
Reference: 2003-06-12 14:08:52 H
Test : 2003-07-27 19:41:25 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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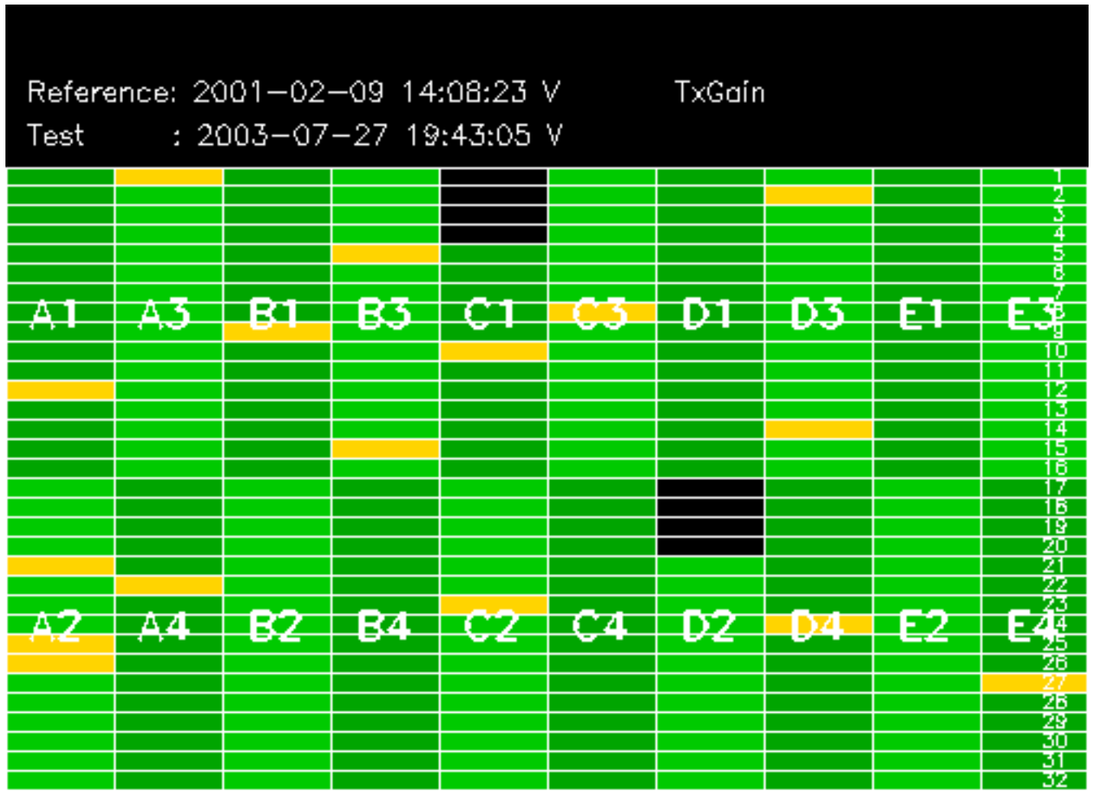
Reference: 2001-02-09 14:08:23 V
Test : 2003-07-27 19:43:05 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
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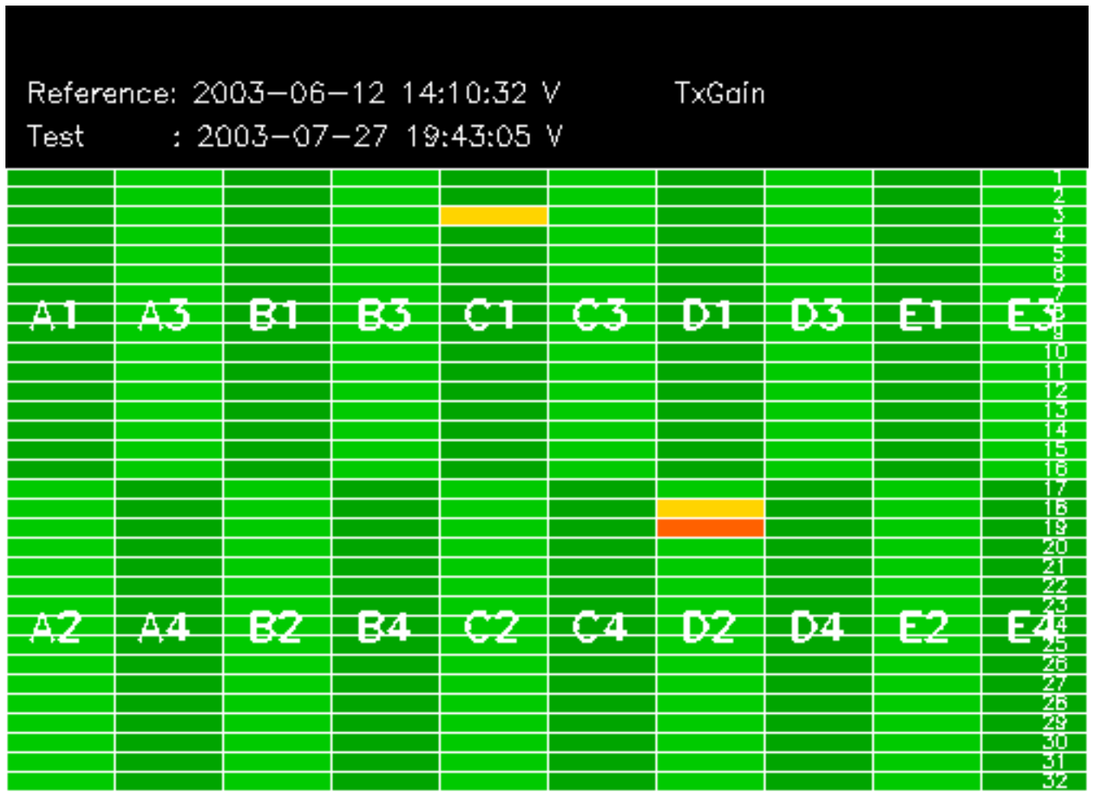
32


Reference: 2003-06-12 14:10:32 V
Test : 2003-07-27 19:43:05 V
TxGain
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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9
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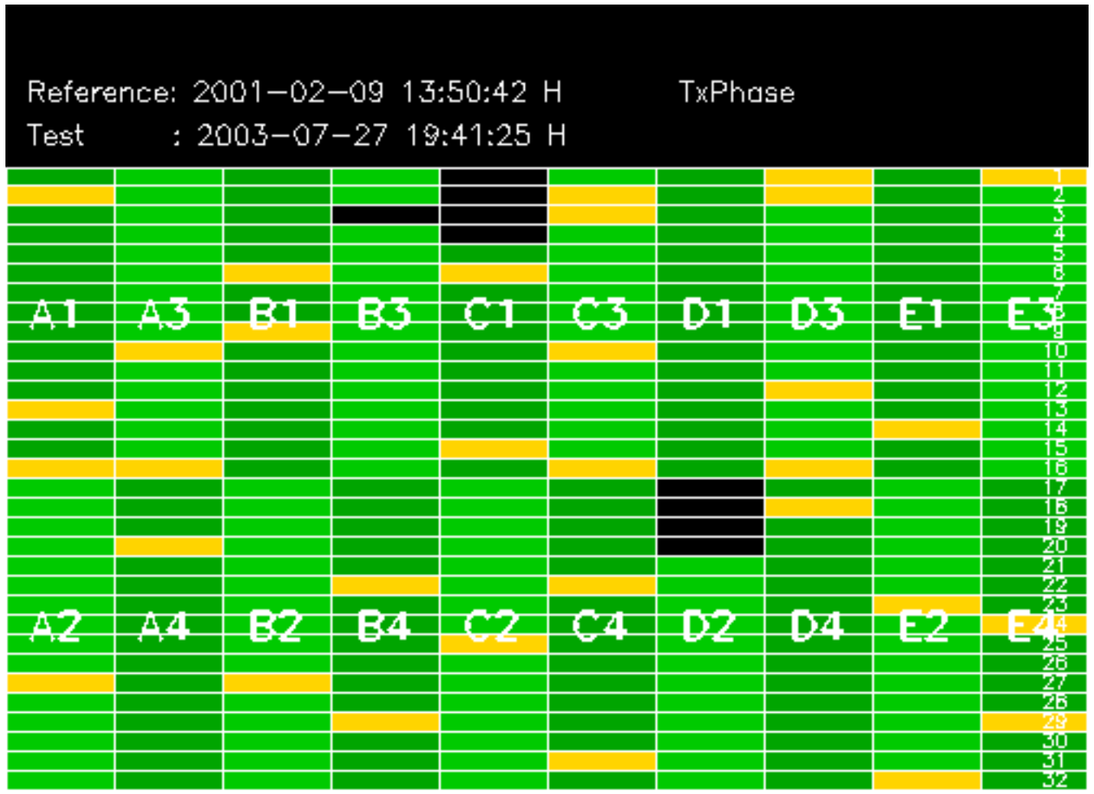
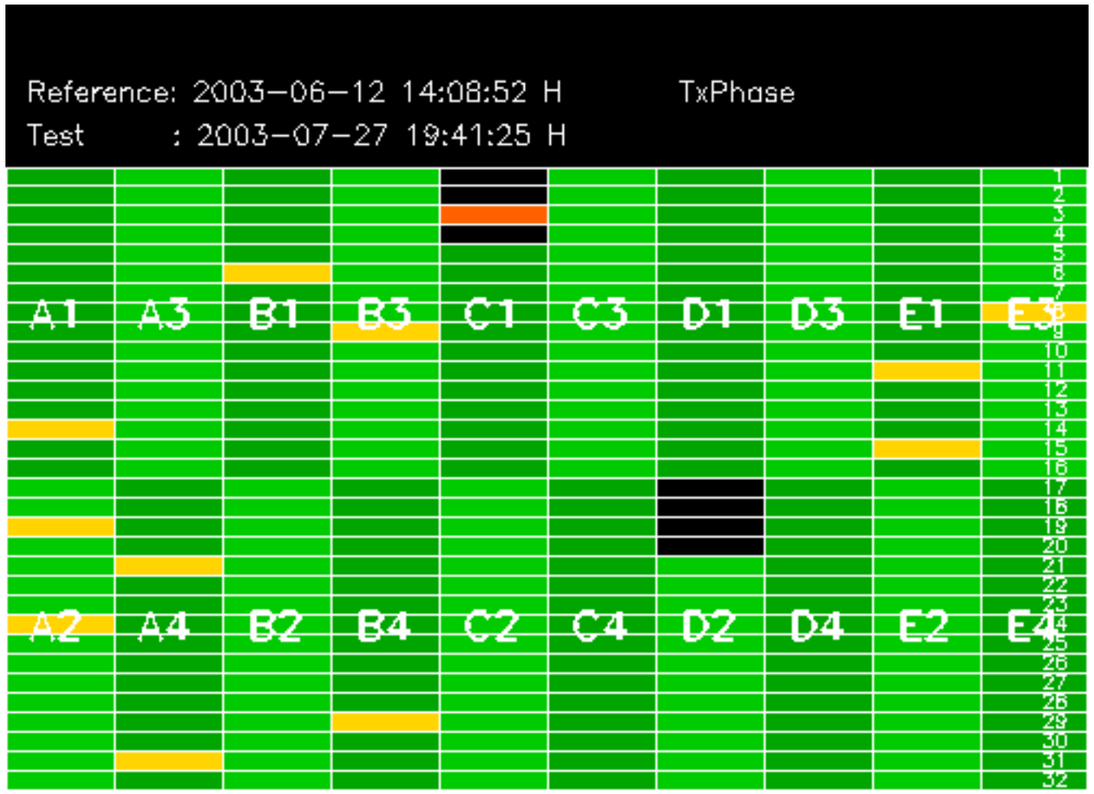

Reference: 2001-02-09 13:50:42 H
Test : 2003-07-27 19:41:25 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2003-07-27 19:41:25 H
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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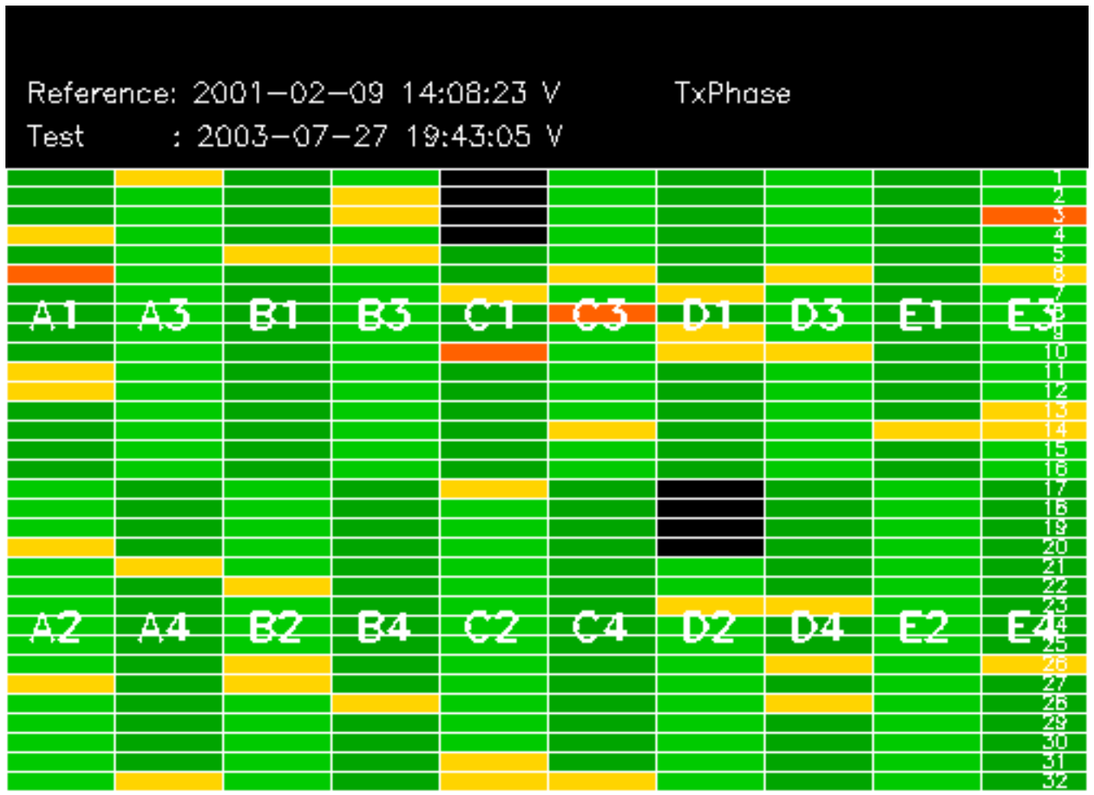
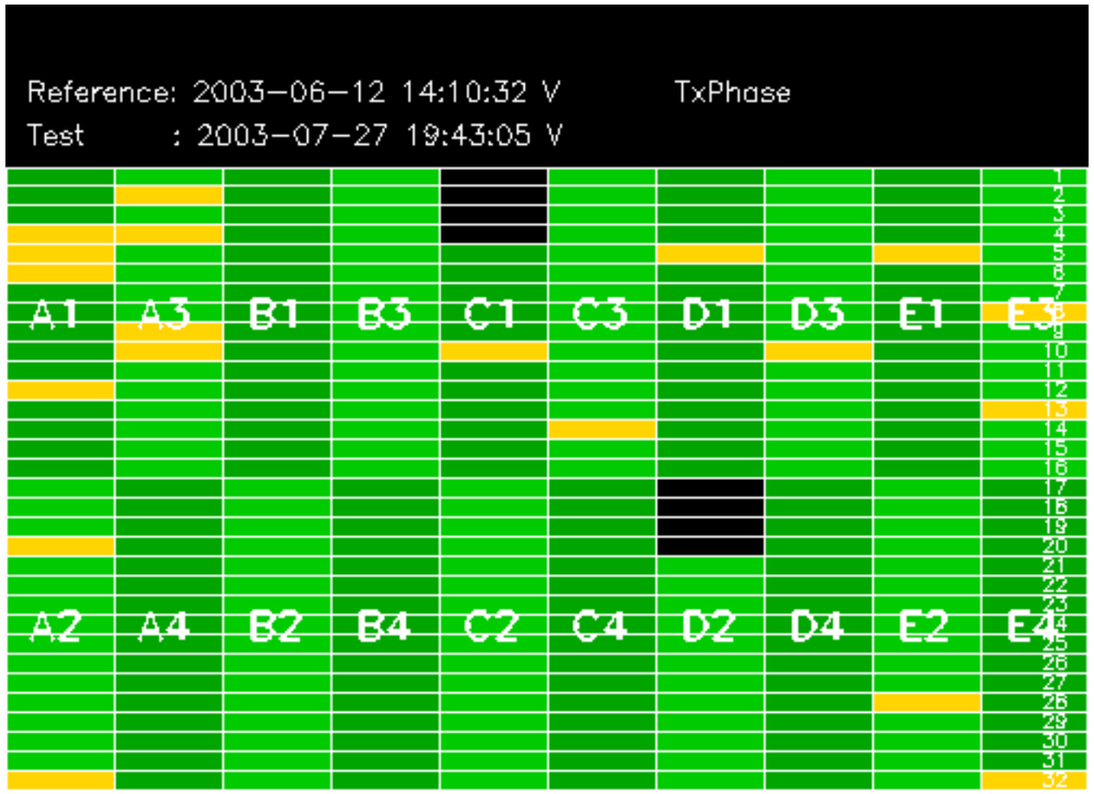

Reference: 2001-02-09 14:08:23 V
Test : 2003-07-27 19:43:05 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2003-07-27 19:43:05 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

No unavailabilities during the reported period.