REPORT OF 040525

last update on Tue May 25 14:45:55 GMT 2004

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the 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 any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

- ASA_MS__0PNPDK20040524_194423_000000152027_00099_11676_0132.N1

Polarisation	Start Time
V	20040523 201600
H	20040524 194423

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.
GM analysis not available at the moment.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.583724	0.092262	0.203046
7	P1	-3.341957	0.065152	0.110050
11	P1	-4.565437	0.035844	0.145107
15	P1	-5.371837	0.201874	-1.102633
19	P1	-3.394380	0.005204	-0.070366
22	P1	-4.551534	0.012418	-0.037720
24	P1	-4.949187	0.014889	0.135905
28	P1	-4.599174	0.013409	0.027821

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.340431	0.872412	0.920040
7	P2	-13.952528	0.096319	-0.124066

11	P2	-19.699226	0.280607	-0.312484
15	P2	-11.836086	0.047040	0.156308
19	P2	-13.743942	0.034644	-0.118914
22	P2	-16.527020	0.416242	-0.454832
24	P2	-14.674868	0.308589	-0.172913
28	P2	-17.855659	0.178870	-0.058220

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-22.430984	0.081209	-0.087826
7	P3	-22.882639	0.115162	-0.109883
11	P3	-15.746825	0.127891	0.131030
15	P3	-7.194584	0.093023	-0.087179
19	P3	-9.553978	0.131684	-0.050365
22	P3	-17.614336	0.094525	0.035024
24	P3	-20.923677	0.099807	0.019024
28	P3	-16.599886	0.081849	-0.038607

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS

4.3.2 - Evolution for GM1

5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000462188
	stdev	2.27914e-07
MEAN Q	mean	0.000517418
	stdev	2.48519e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126291
	stdev	0.000991613
STDEV Q	mean	0.126507
	stdev	0.00100152

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

No anomalies observed.
Analysis performed over the last 35 days.
GM analysis not available at the moment.

6.1 - Unbiased Doppler Error for WVS

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

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX
☒

6.4 - Unbiased Doppler Error for GM1

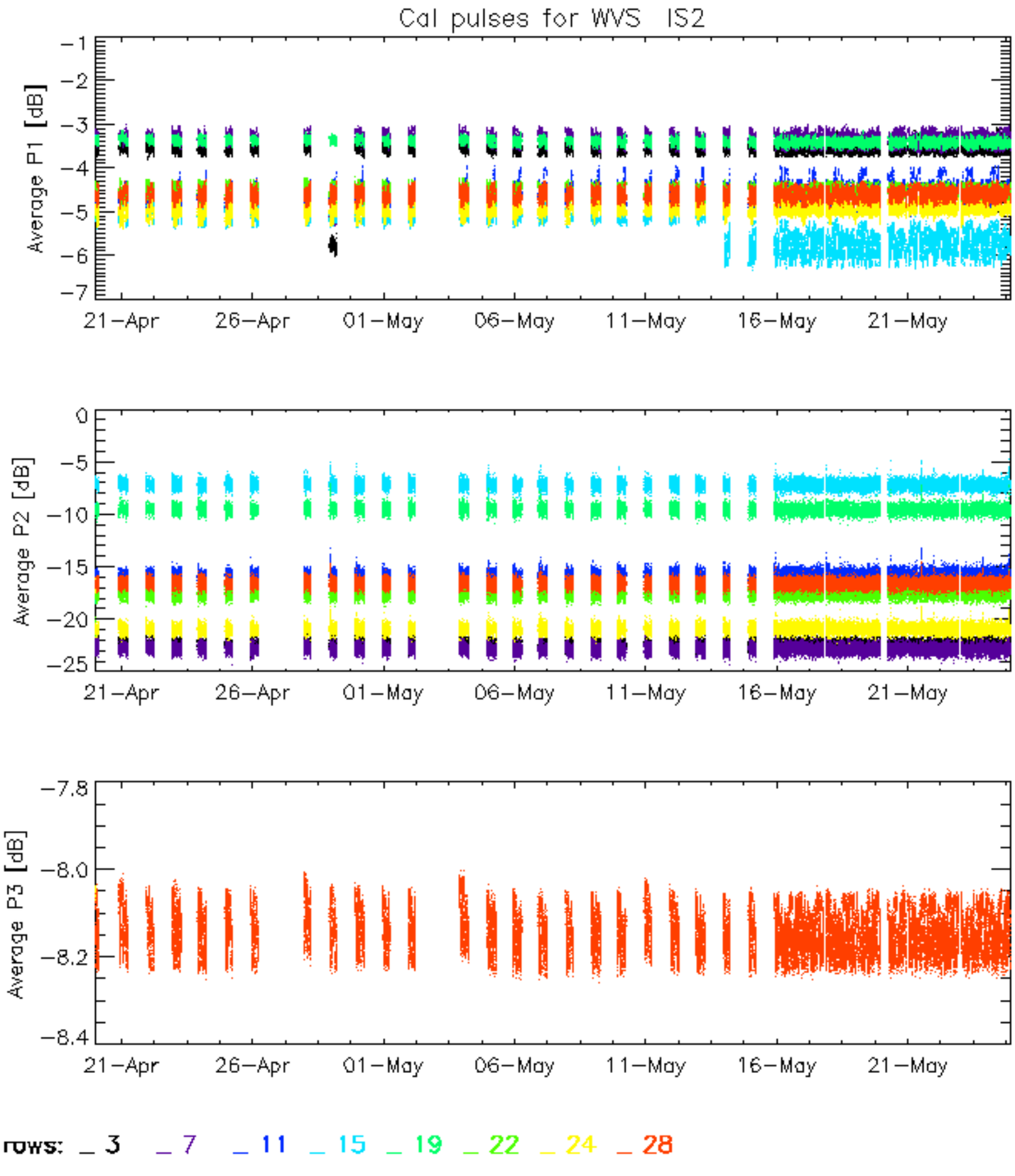
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒

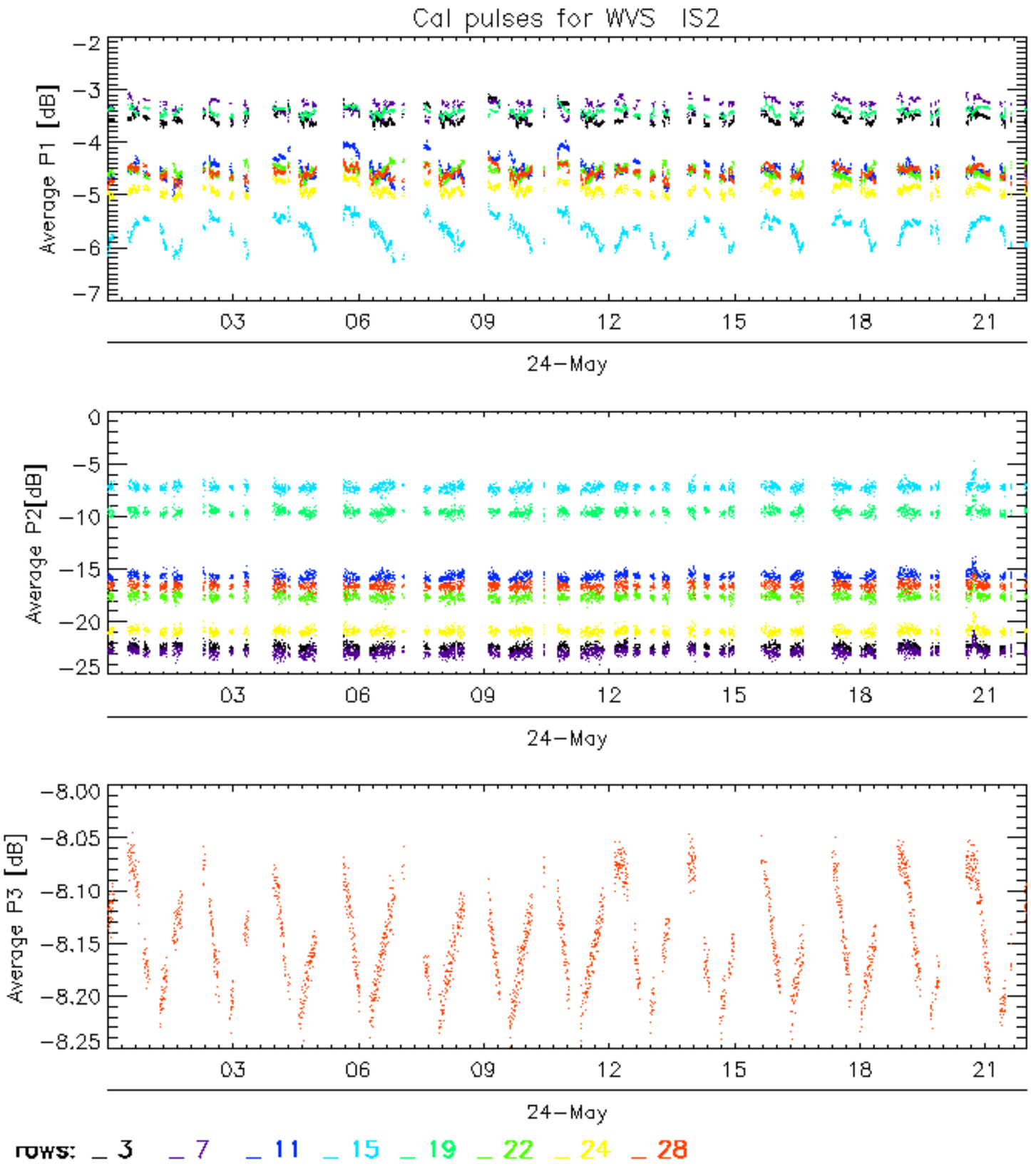
Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

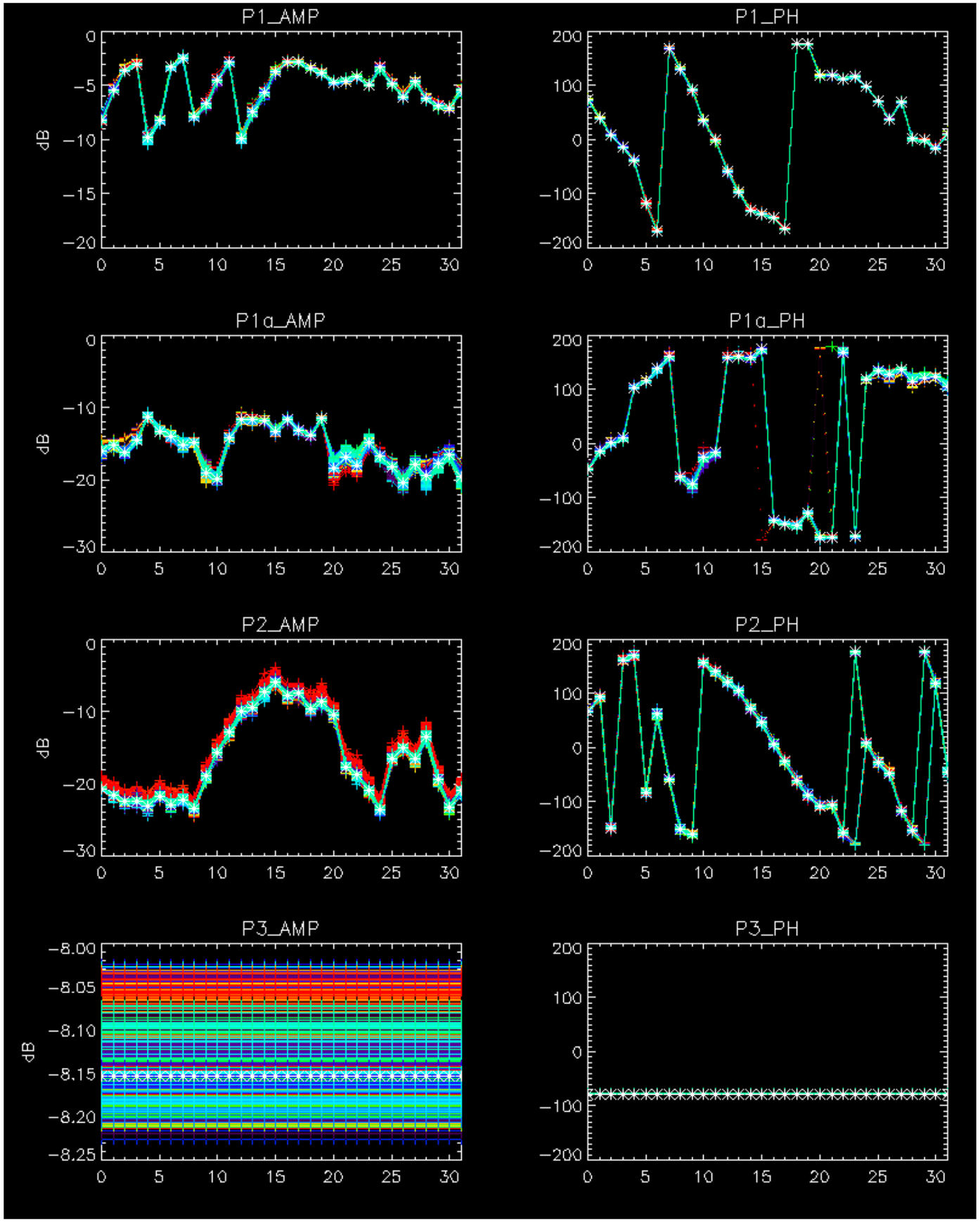
6.6 - Doppler evolution versus ANX for GM1


Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
21−Apr
26−Apr
01−May
06−May
11−May
16−May
21−May
Average P2 [dB]
0
−5
−10
−15
−20
−25
21−Apr
26−Apr
01−May
06−May
11−May
16−May
21−May
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
21−Apr
26−Apr
01−May
06−May
11−May
16−May
21−May
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
24−May
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
24−May
Average P3 [dB]
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
03
06
09
12
15
18
21
24−May
rows: 3 7 11 15 19 22 24 28

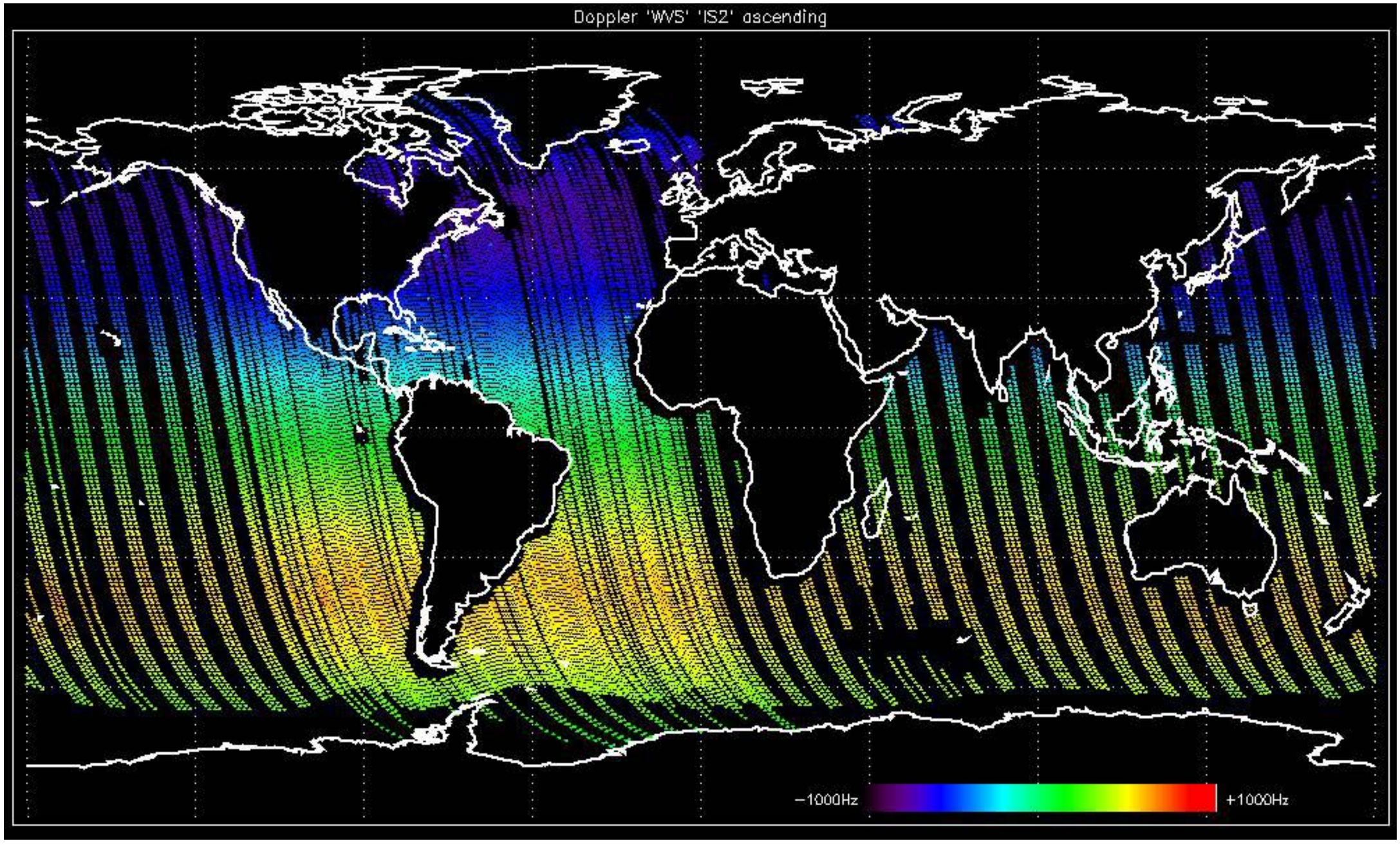
No anomalies observed on available browse products.

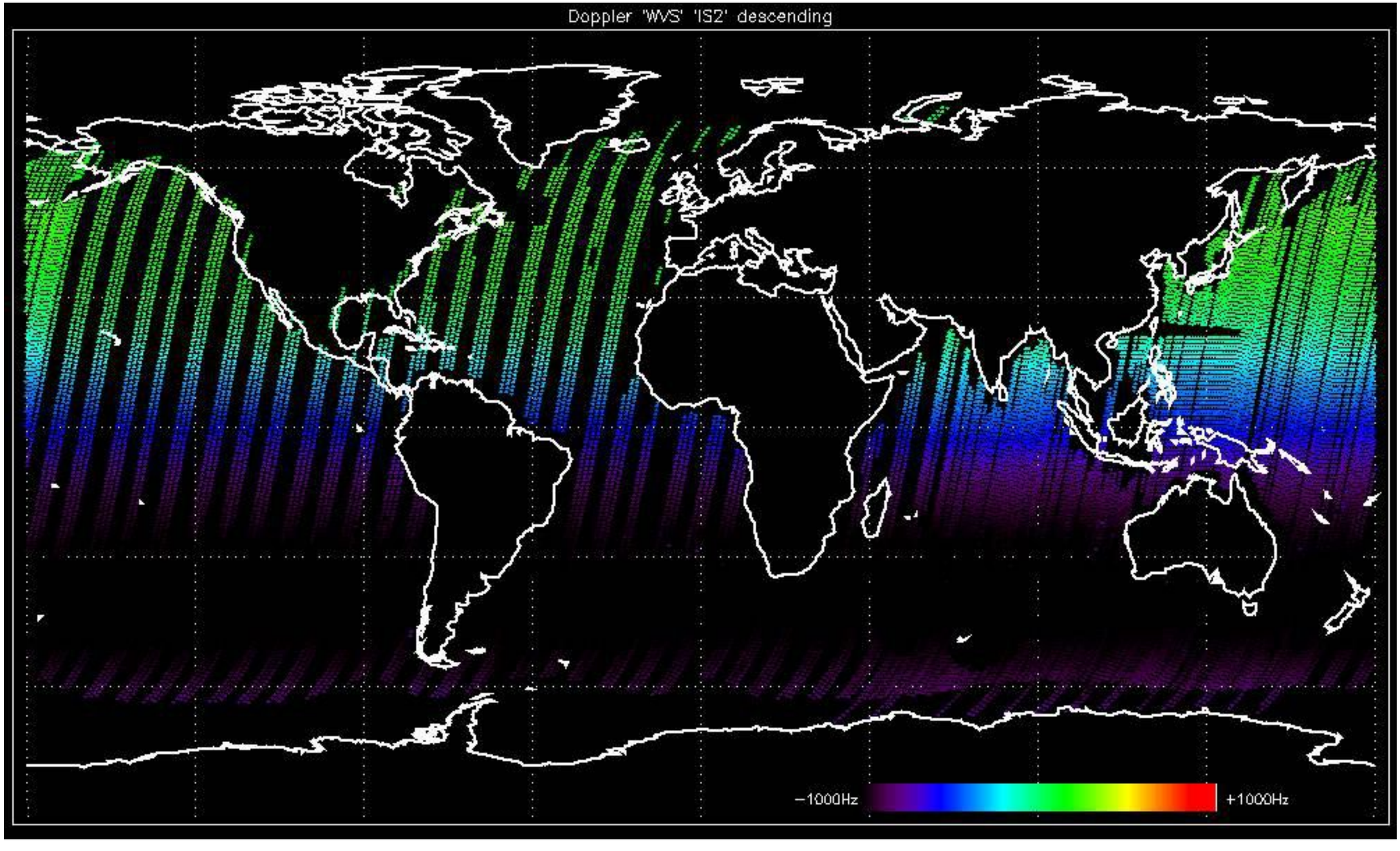
No anomalies observed.
GM analysis not available at the moment.

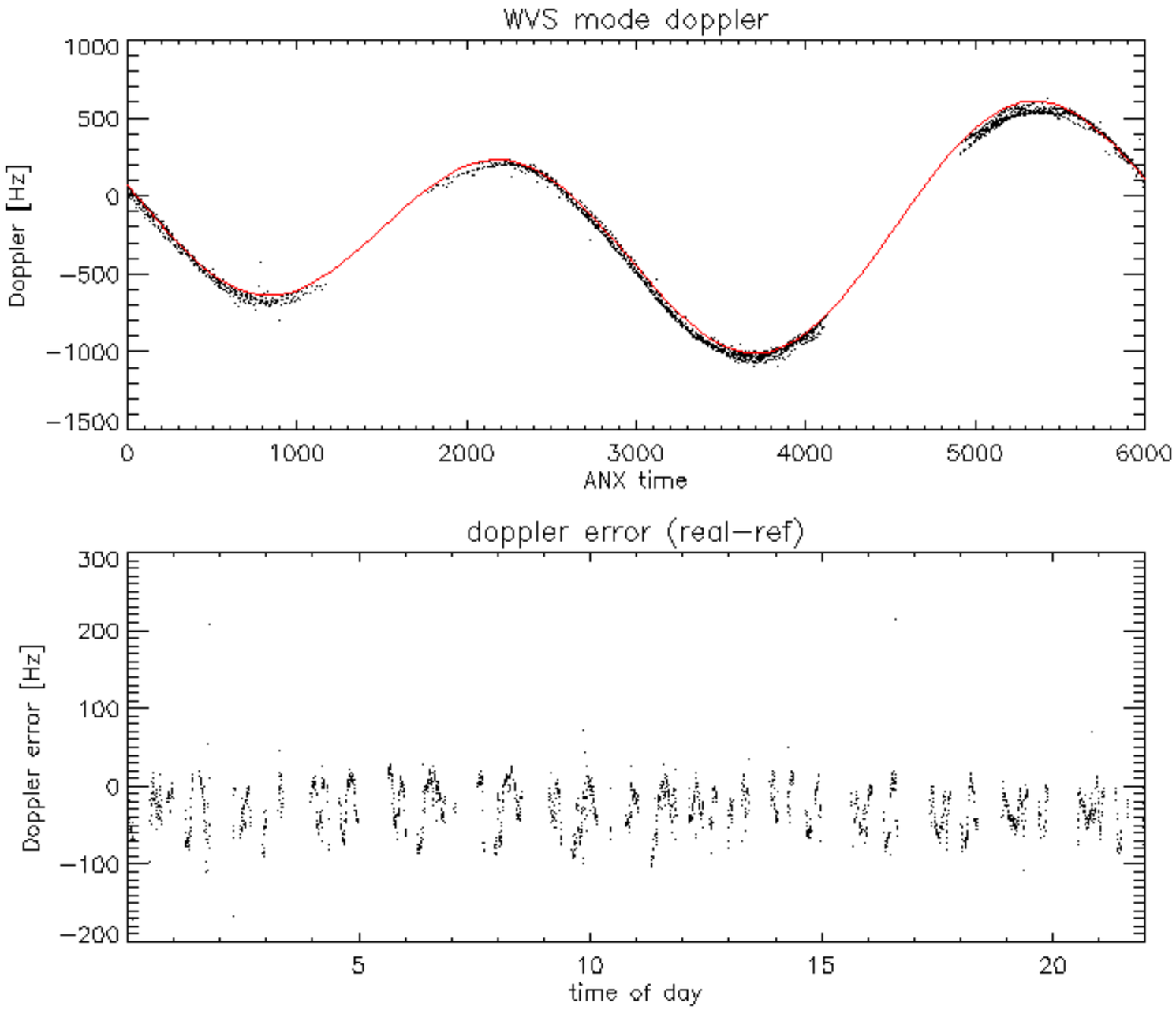

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

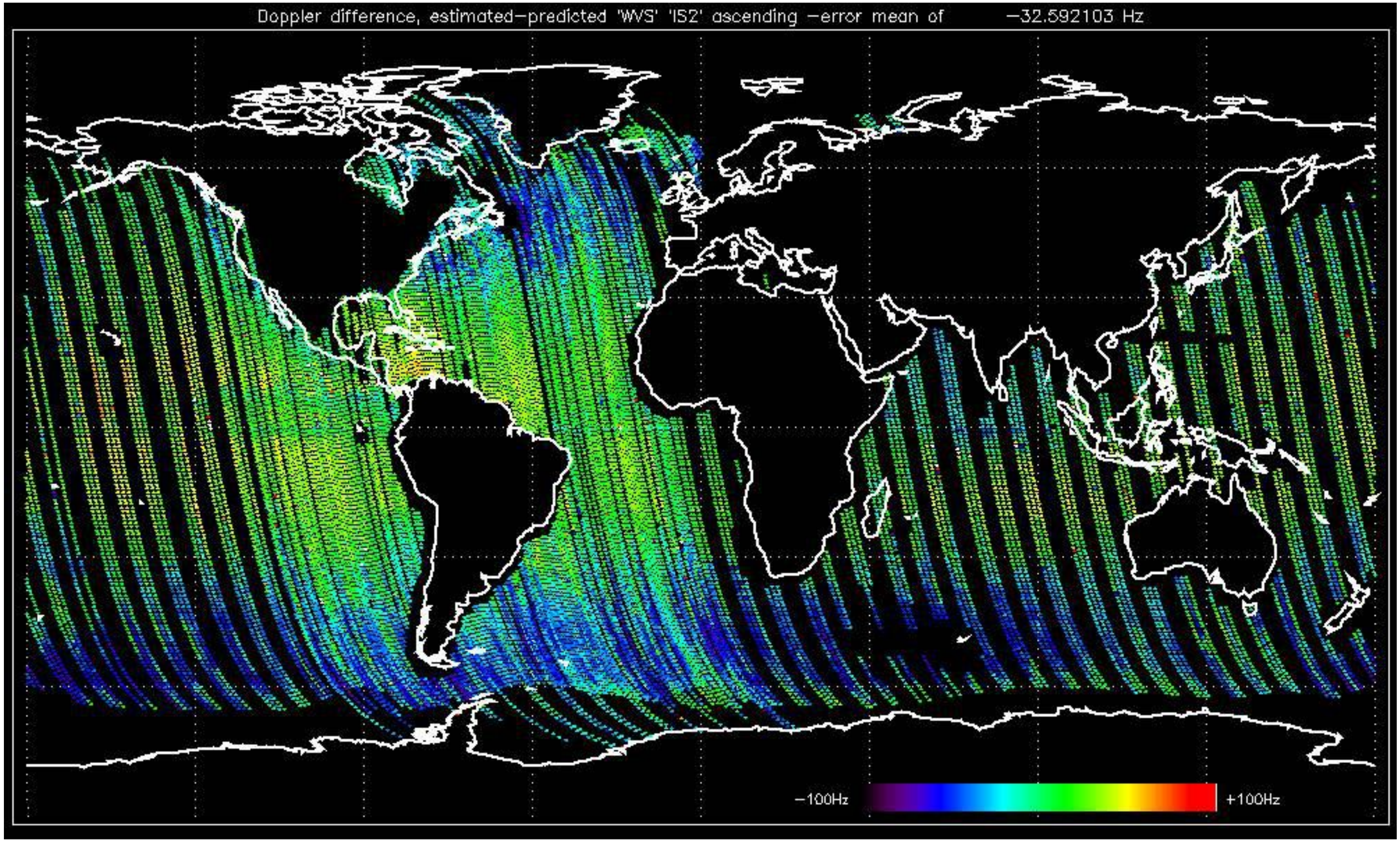
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

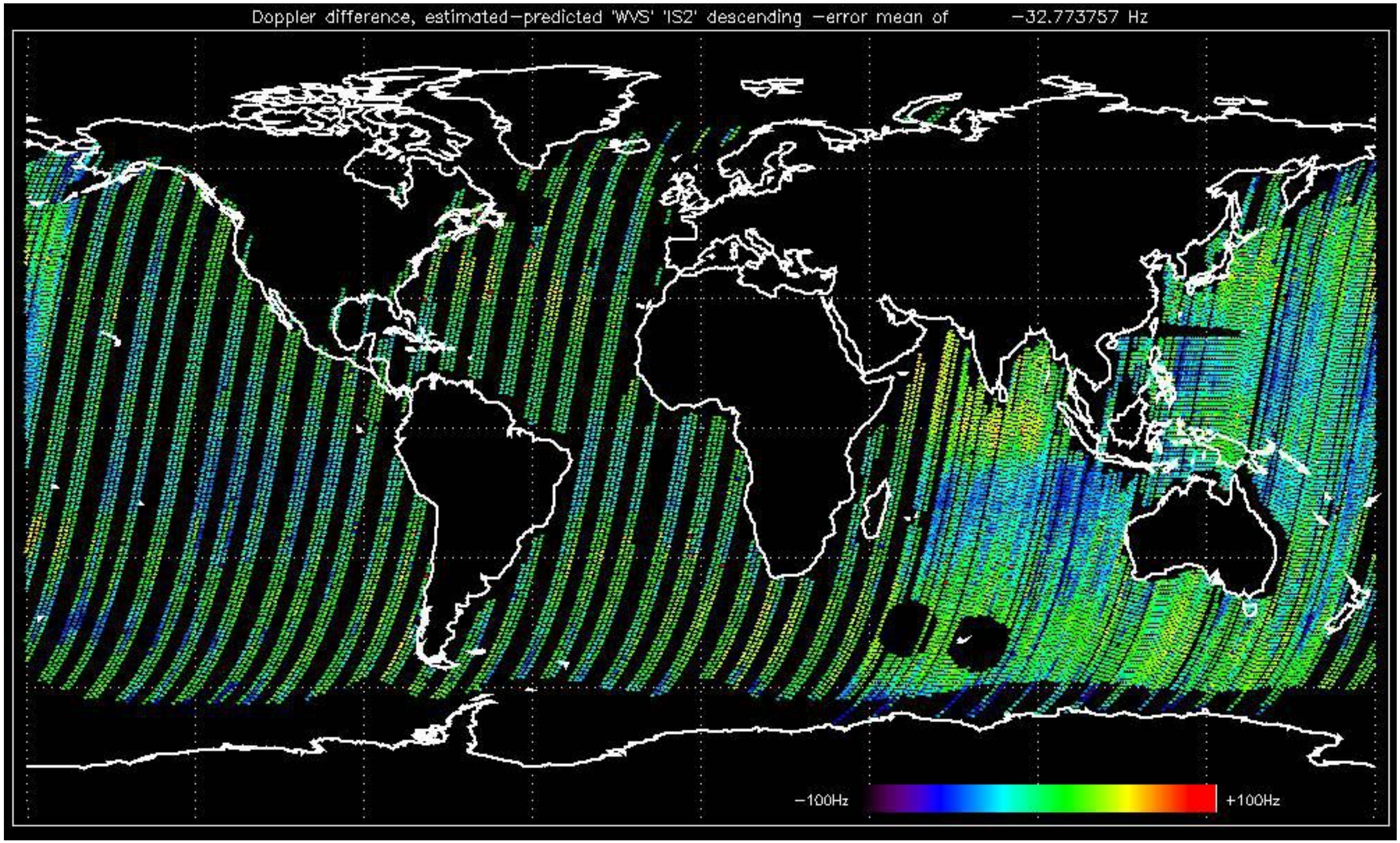
No anomalies observed.
Analysis performed over the last 35 days.
GM analysis not available at the moment.


Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz


WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
300
200
100
0
−100
−200
5
10
15
20
time of day

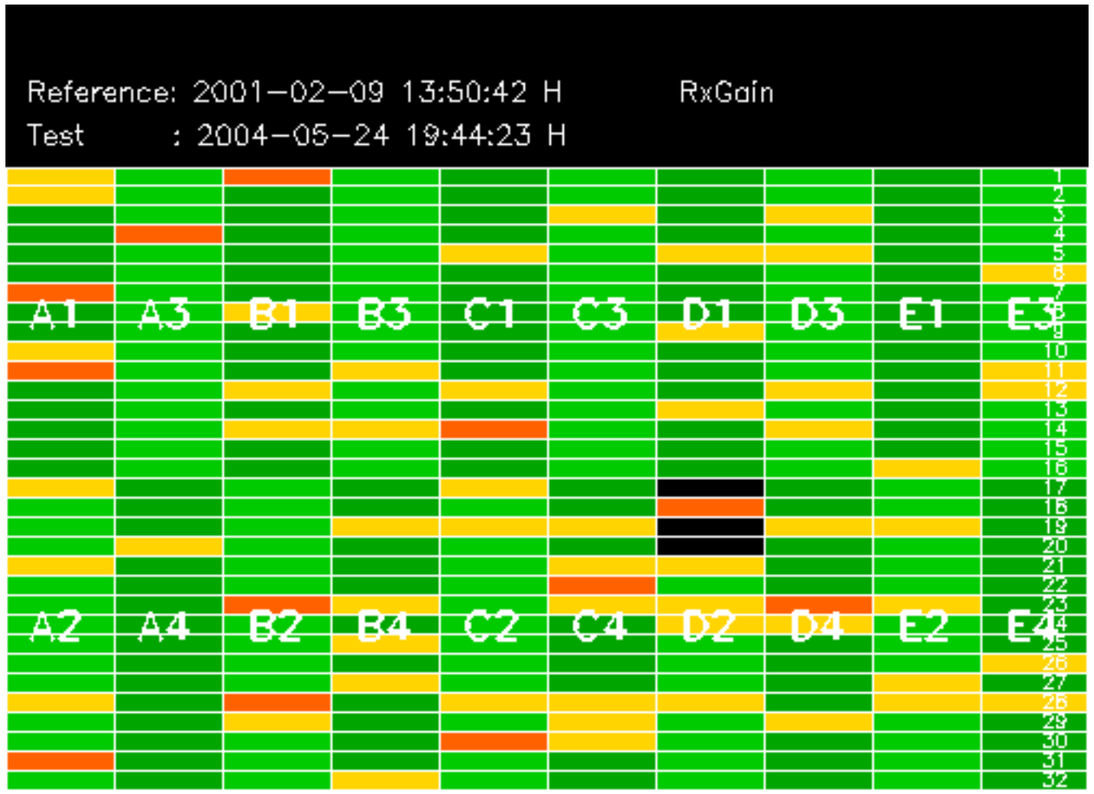

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.592103 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −32.773757 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__0PNPDK20040524_194423_000000152027_00099_11676_0132.N1

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-05-24 19:44:23 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
15
16
17
18
19
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21
22
23
24
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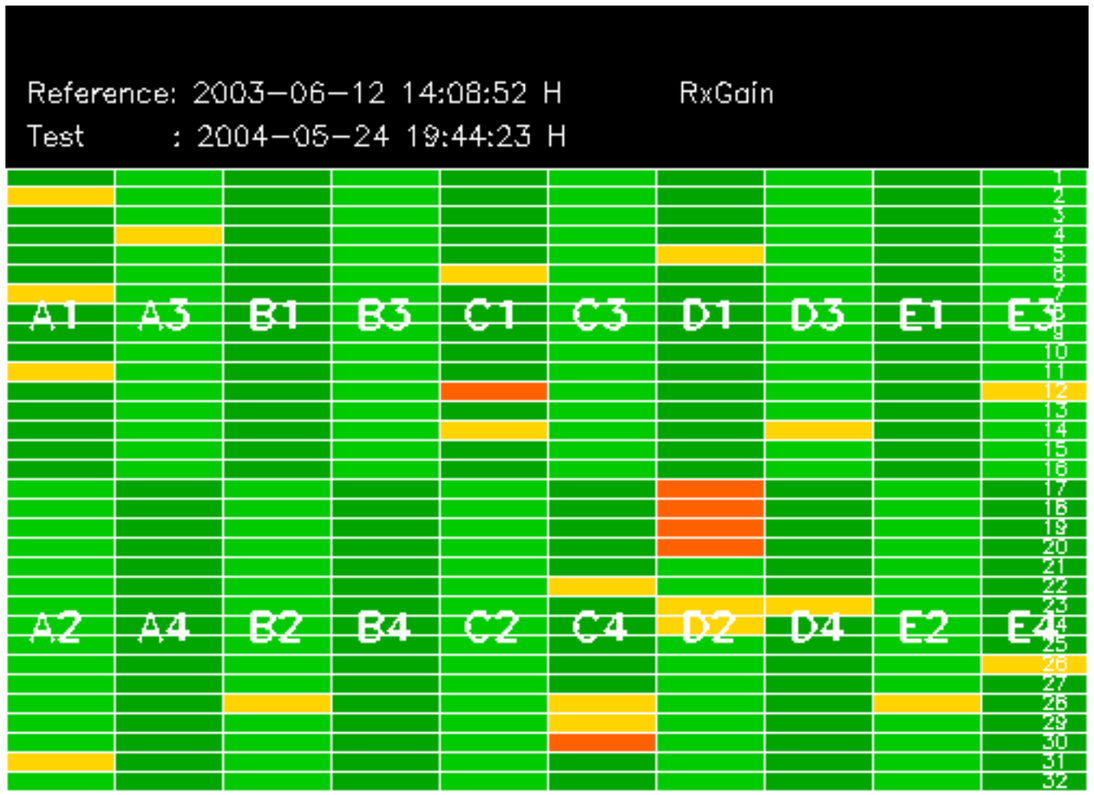
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-05-24 19:44:23 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
5
6
7
8
9
10
11
12
13
14
15
16
17
18
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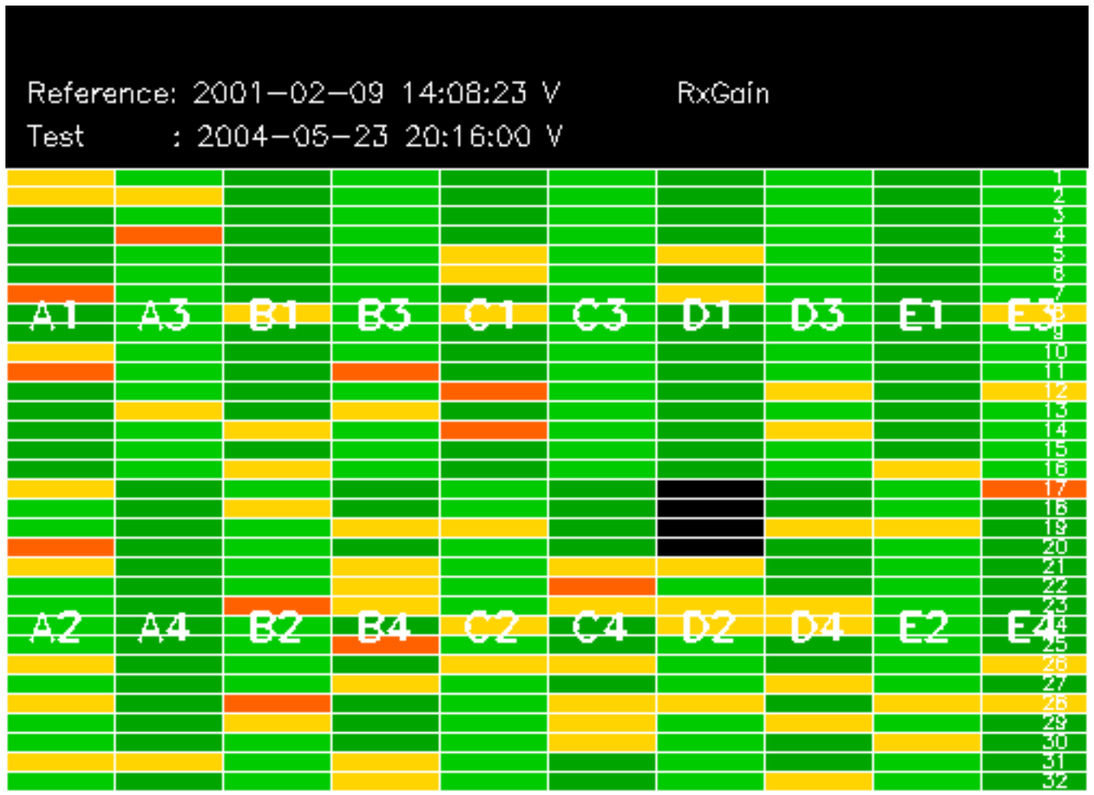
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2004-05-23 20:16:00 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
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8
9
10
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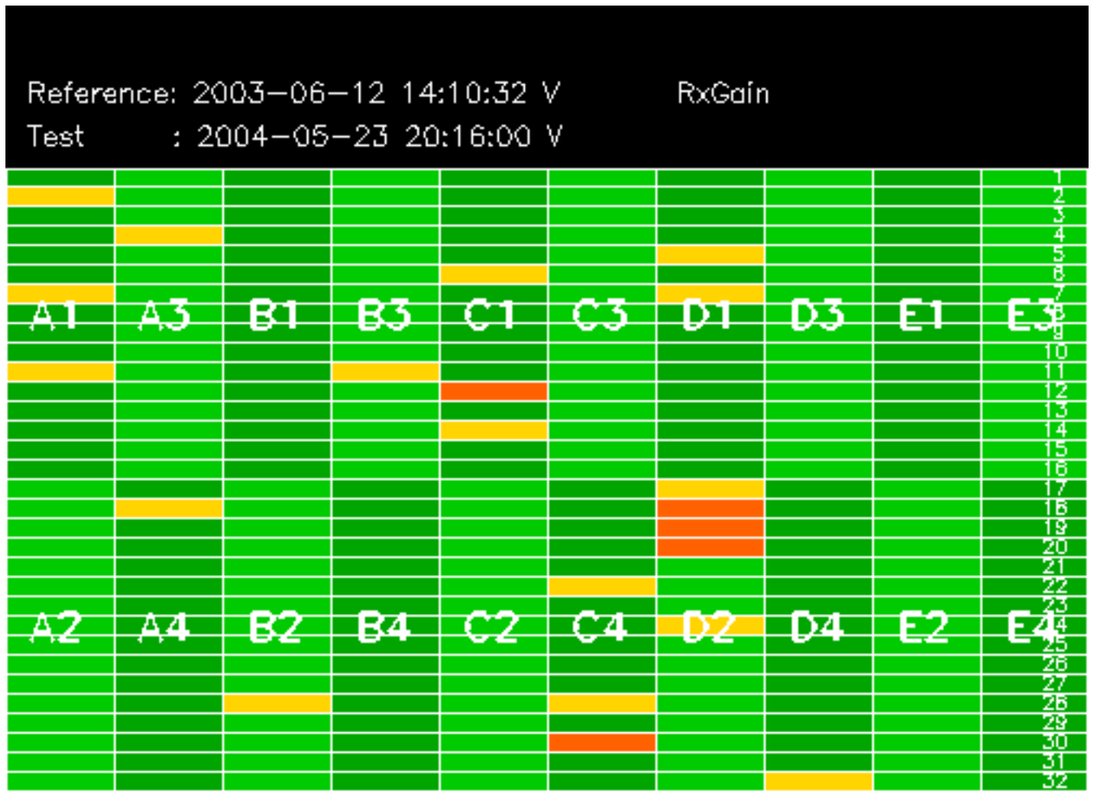
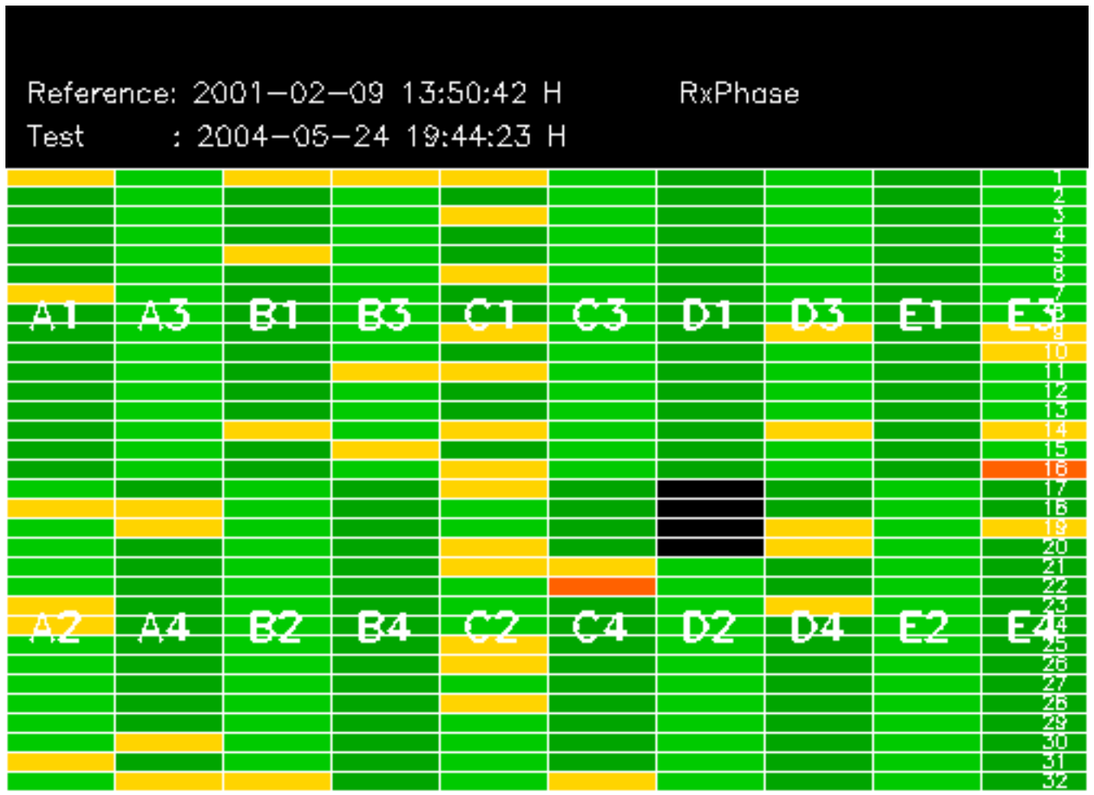
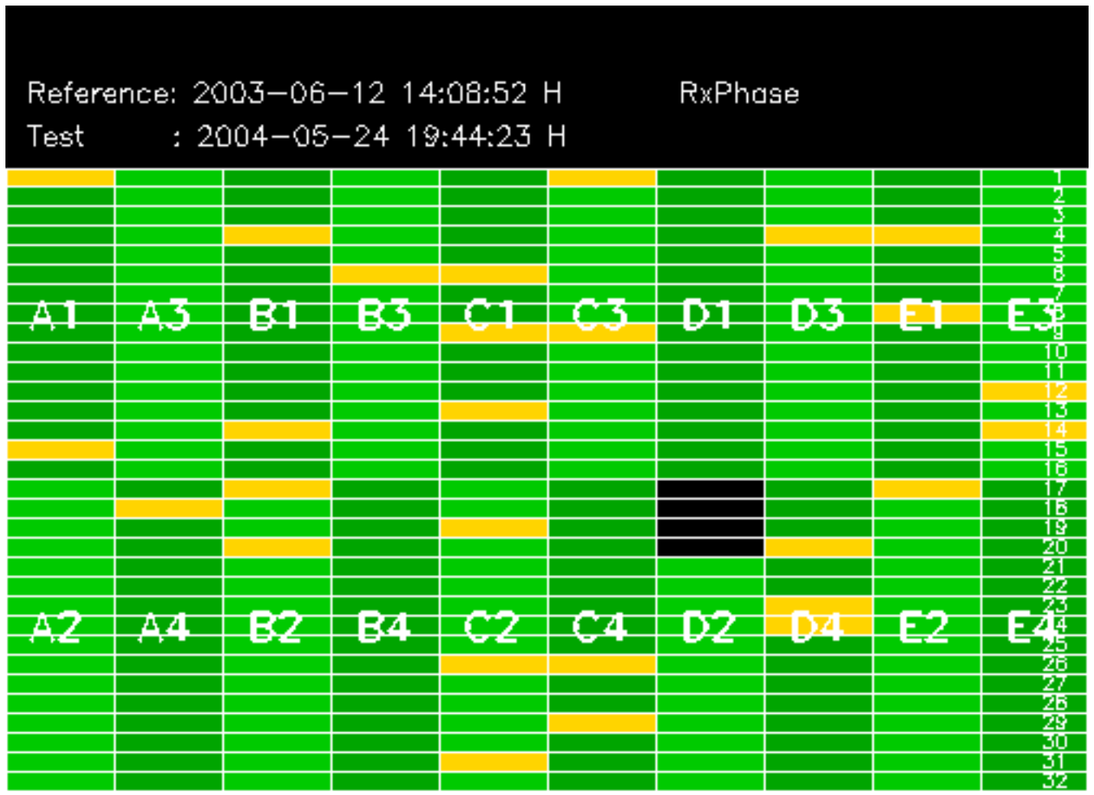
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2004-05-23 20:16:00 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-05-24 19:44:23 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
RxPhase
Test : 2004-05-24 19:44:23 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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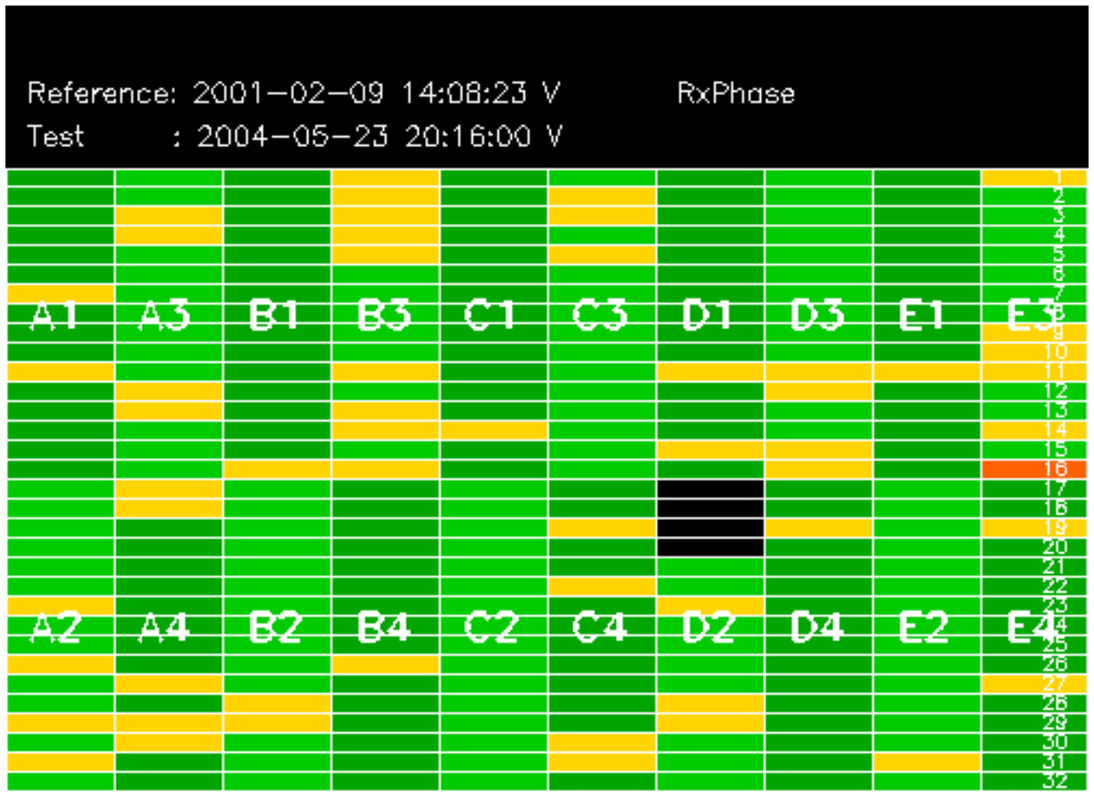
32


Reference: 2001-02-09 14:08:23 V
Test : 2004-05-23 20:16:00 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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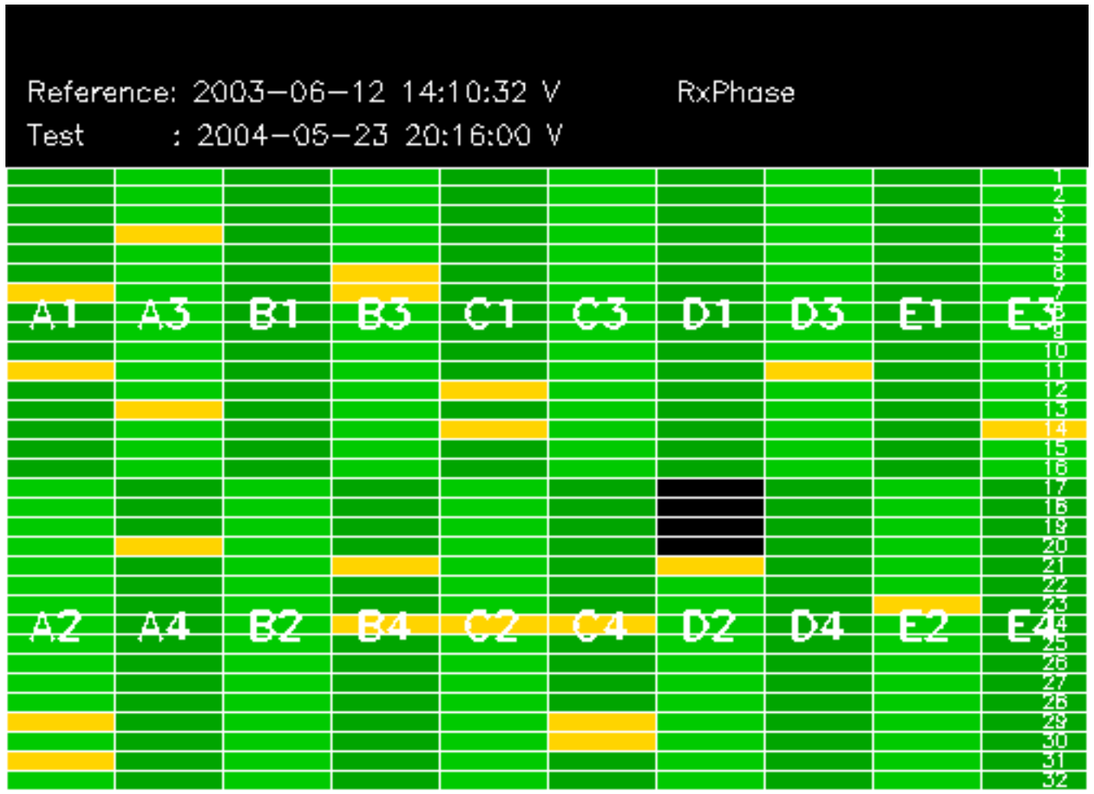
Reference: 2003-06-12 14:10:32 V
Test : 2004-05-23 20:16:00 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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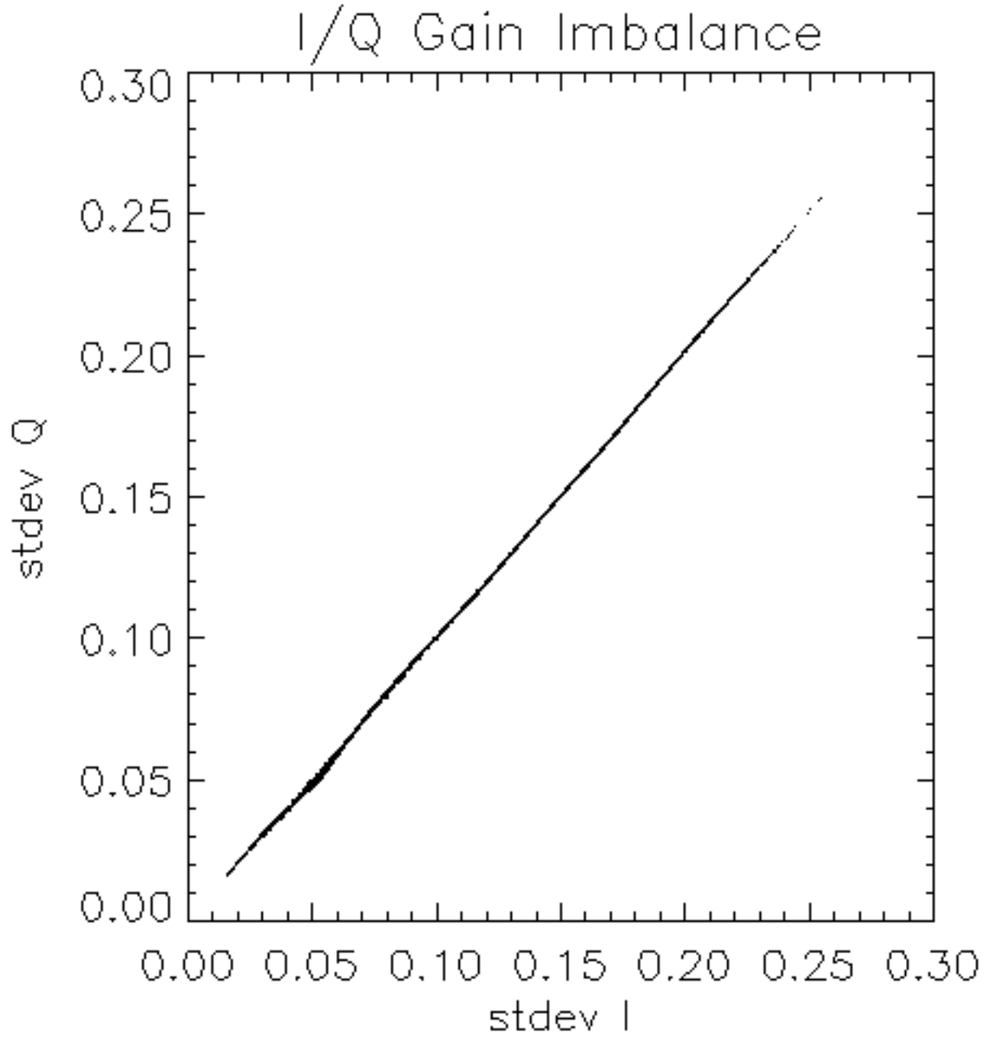
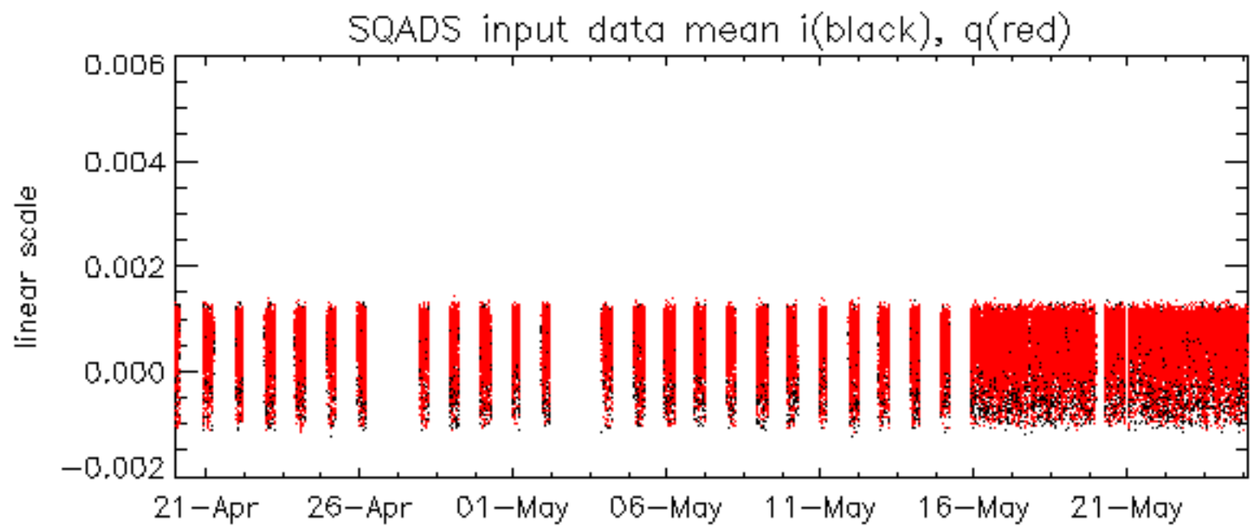
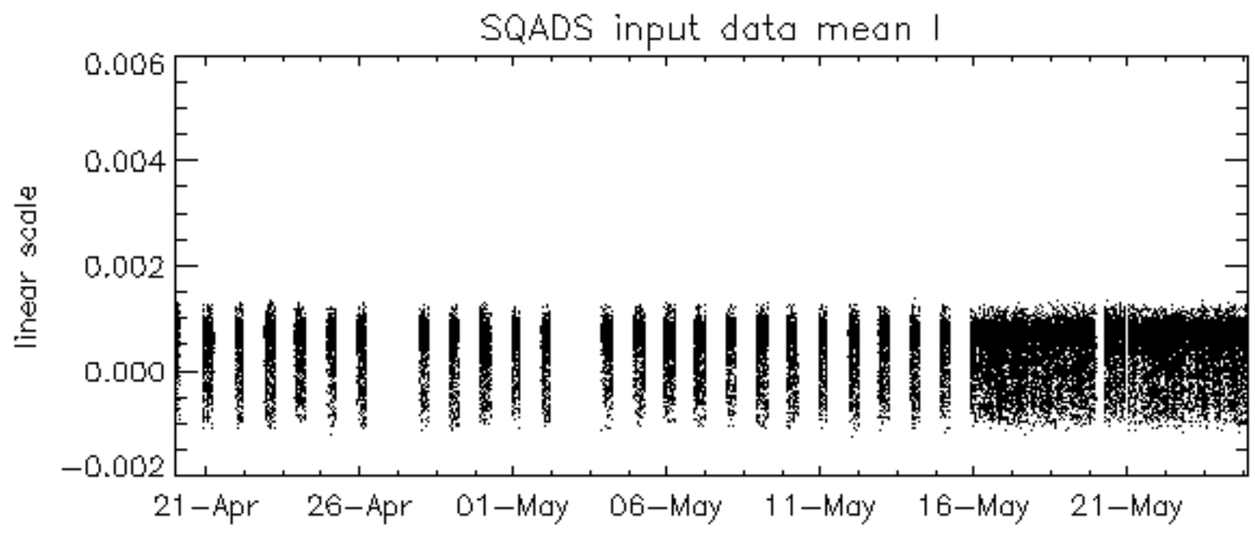
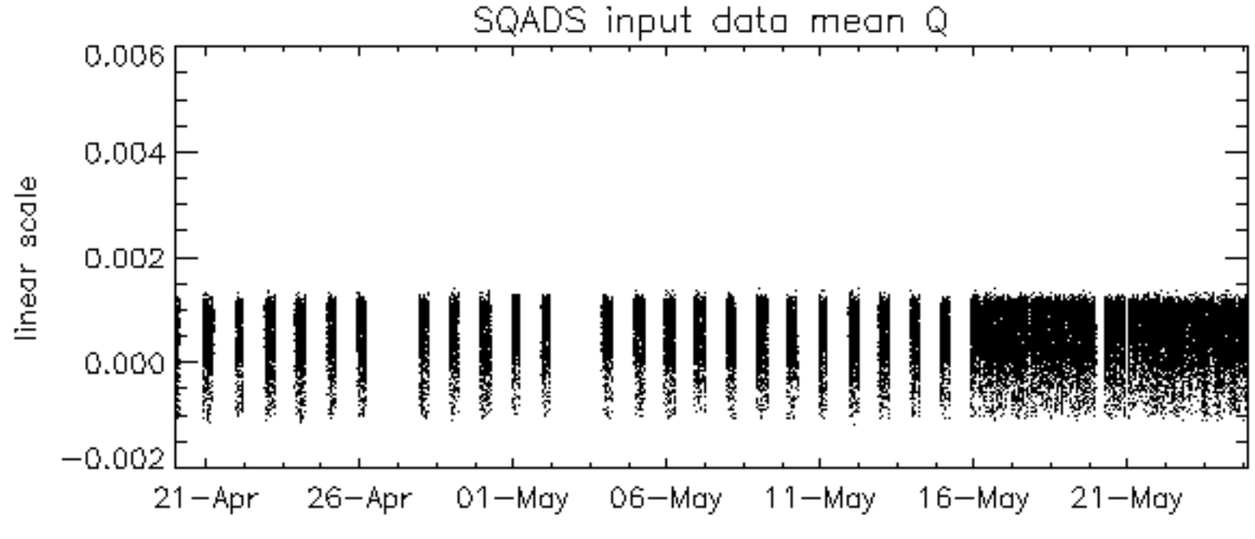
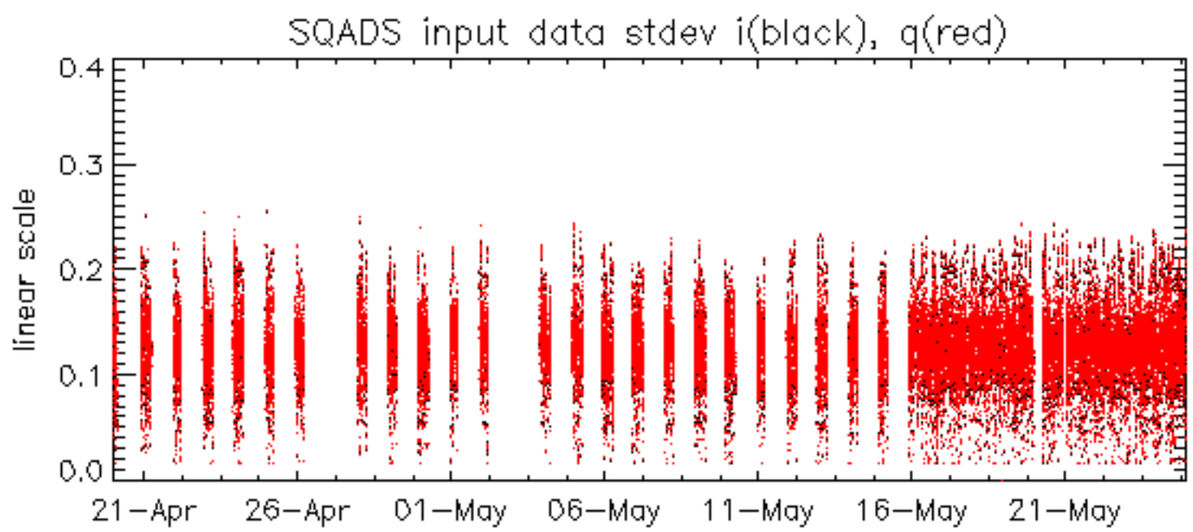
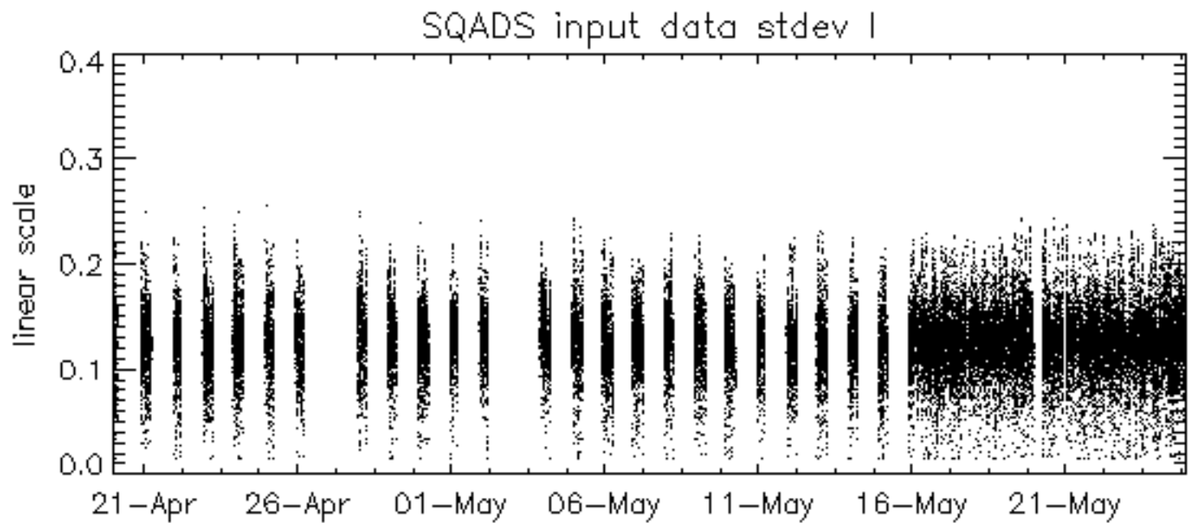

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

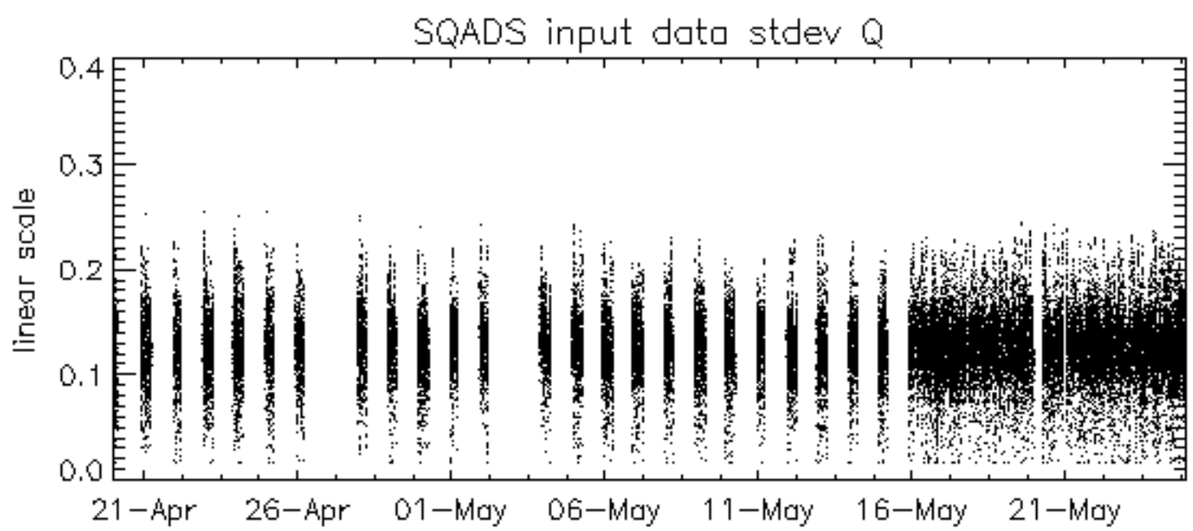

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Apr
26−Apr
01−May
06−May
11−May
16−May
21−May

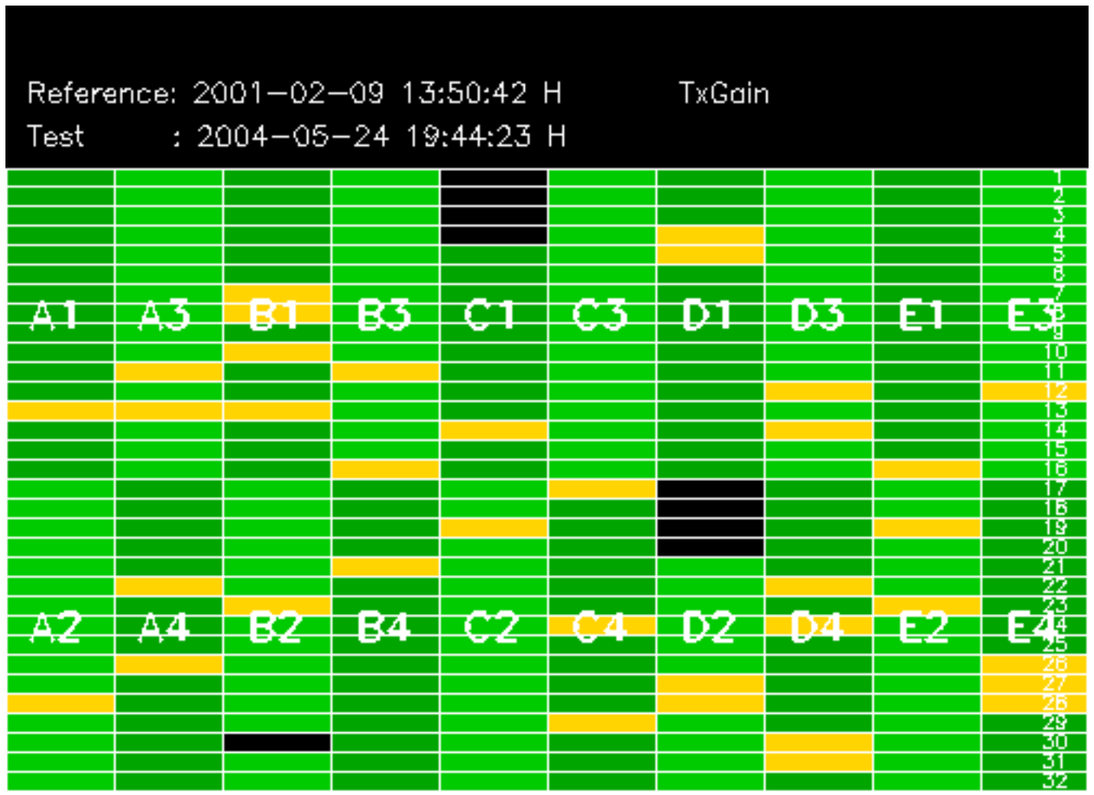

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Apr
26−Apr
01−May
06−May
11−May
16−May
21−May

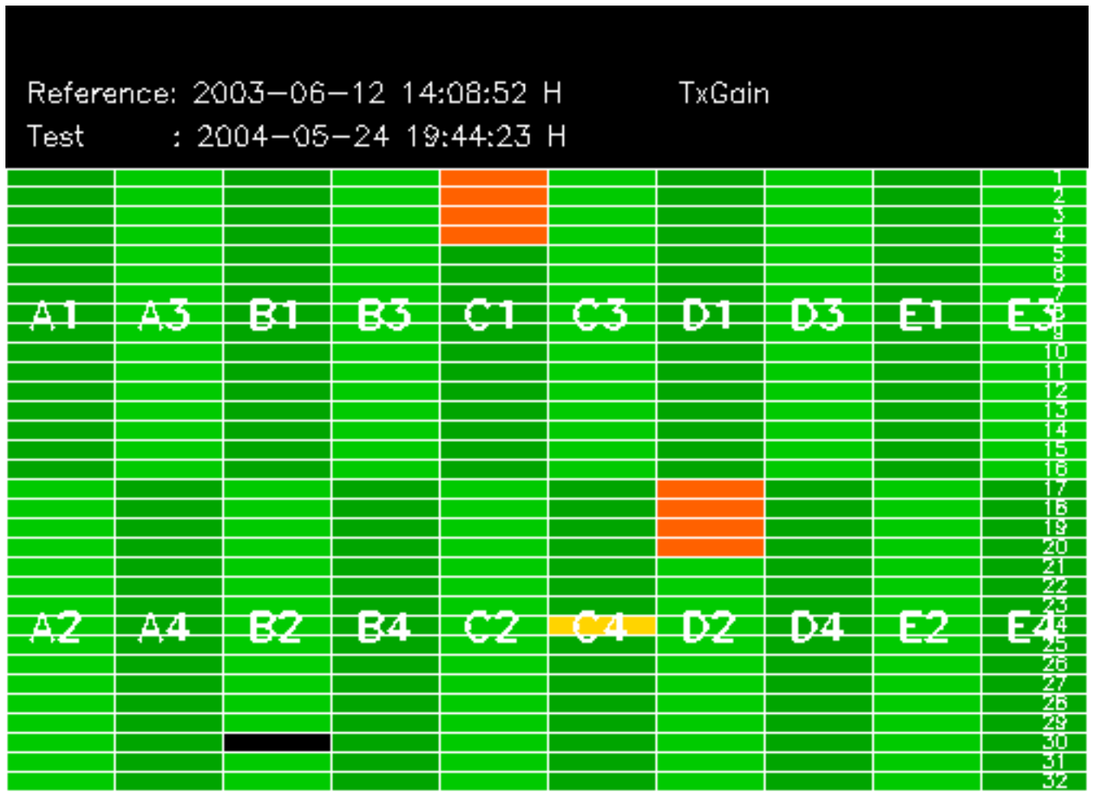

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Apr
26−Apr
01−May
06−May
11−May
16−May
21−May


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-05-24 19:44:23 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 : 2004-05-24 19:44:23 H
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
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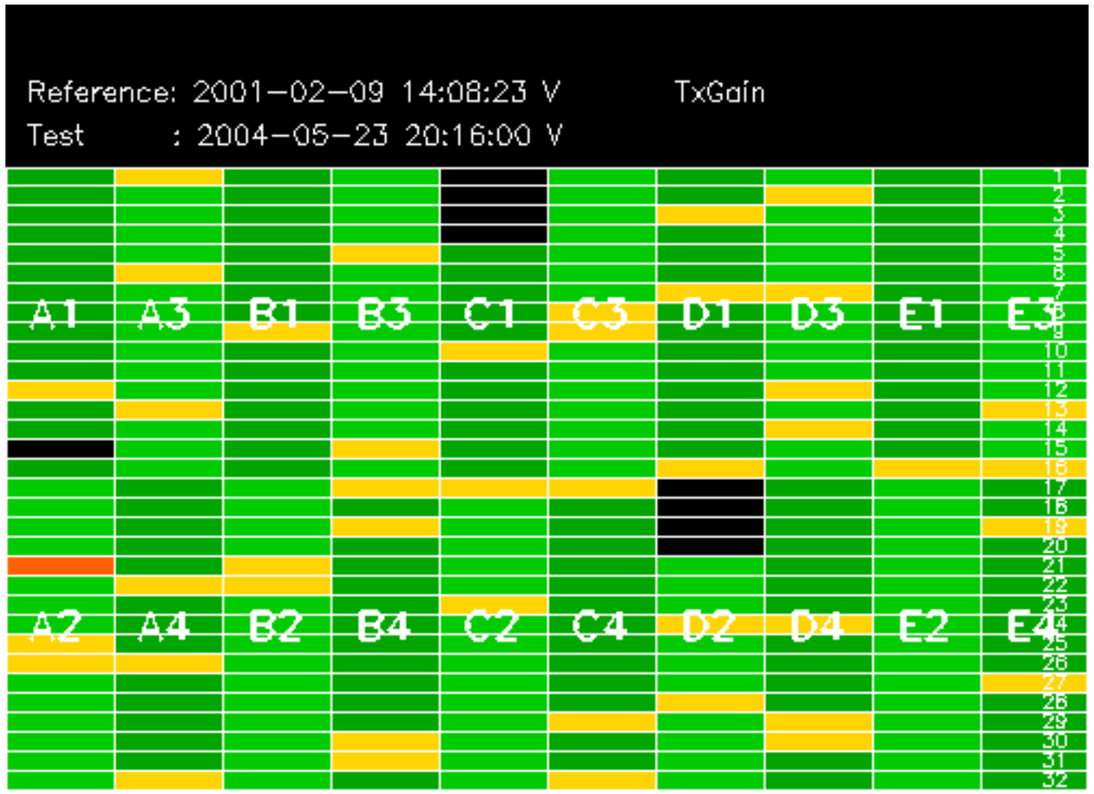
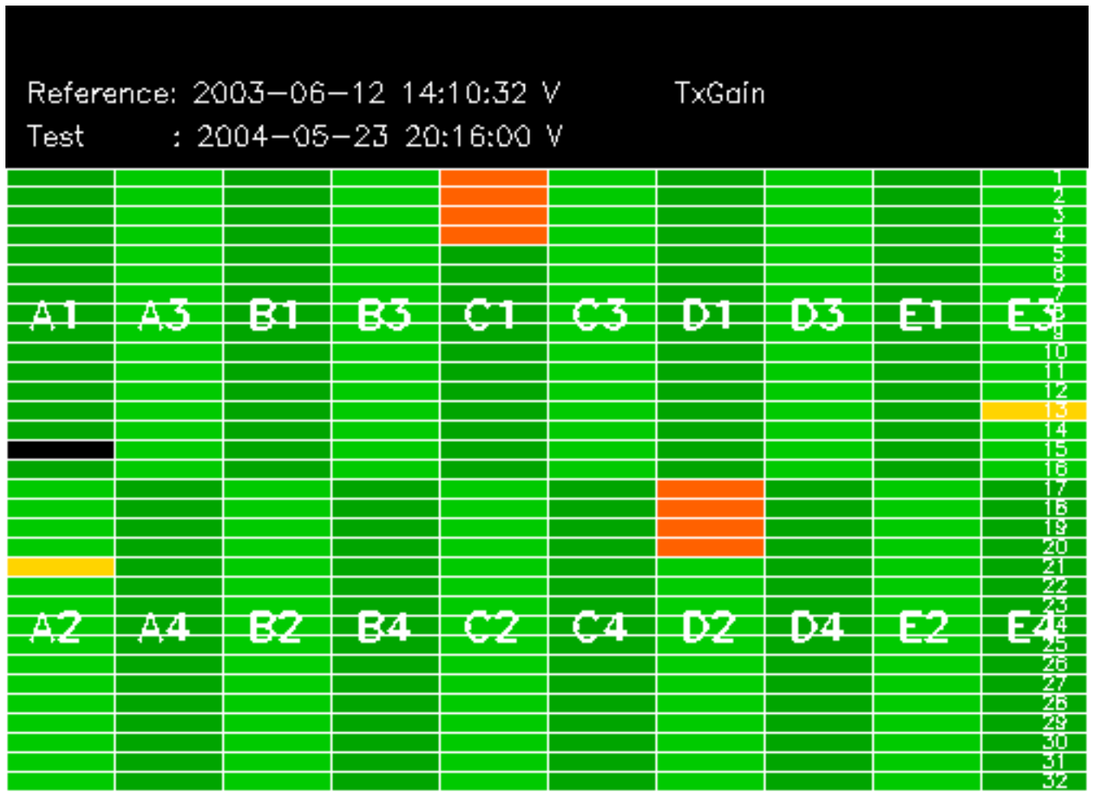
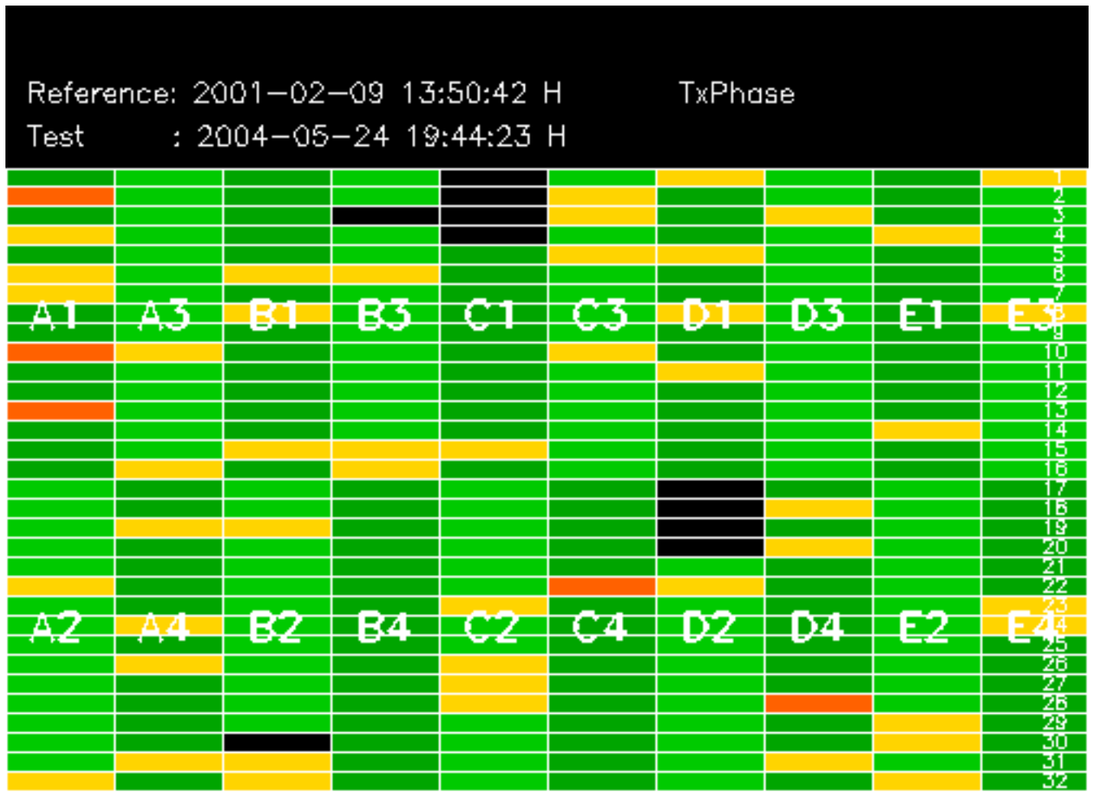
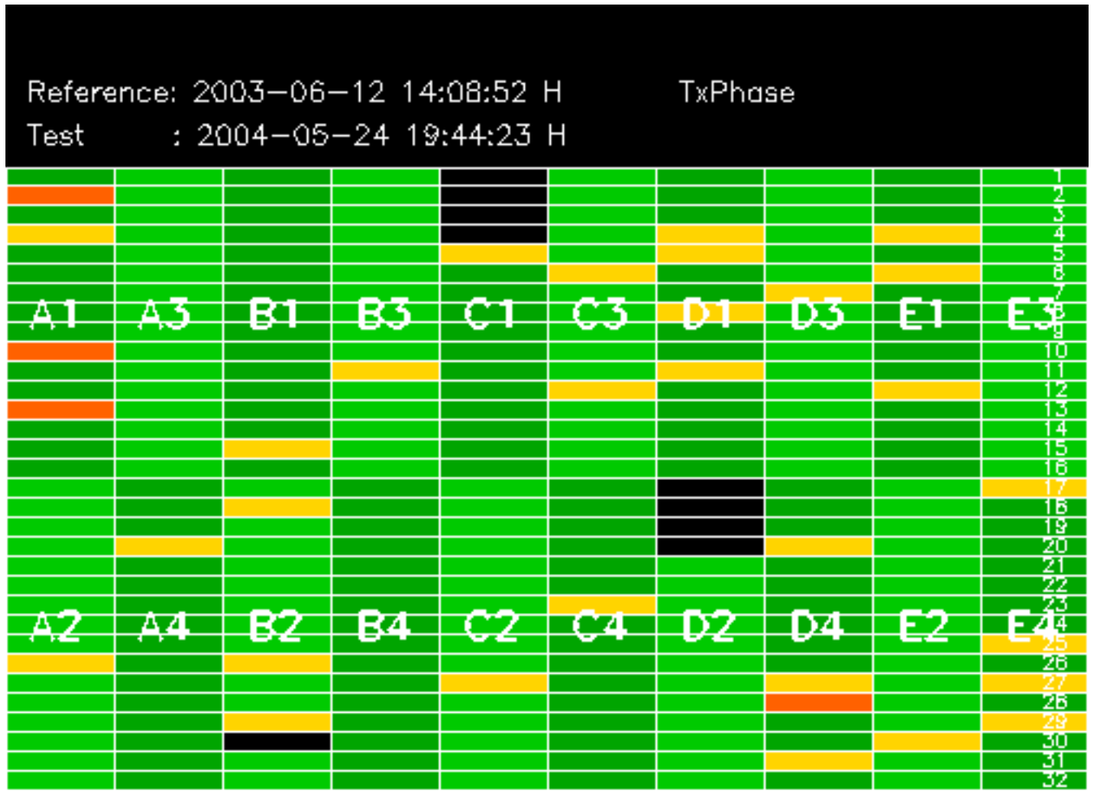

Reference: 2001-02-09 14:08:23 V
Test : 2004-05-23 20:16:00 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-05-23 20:16:00 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-05-24 19:44:23 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 : 2004-05-24 19:44:23 H
TxPhase
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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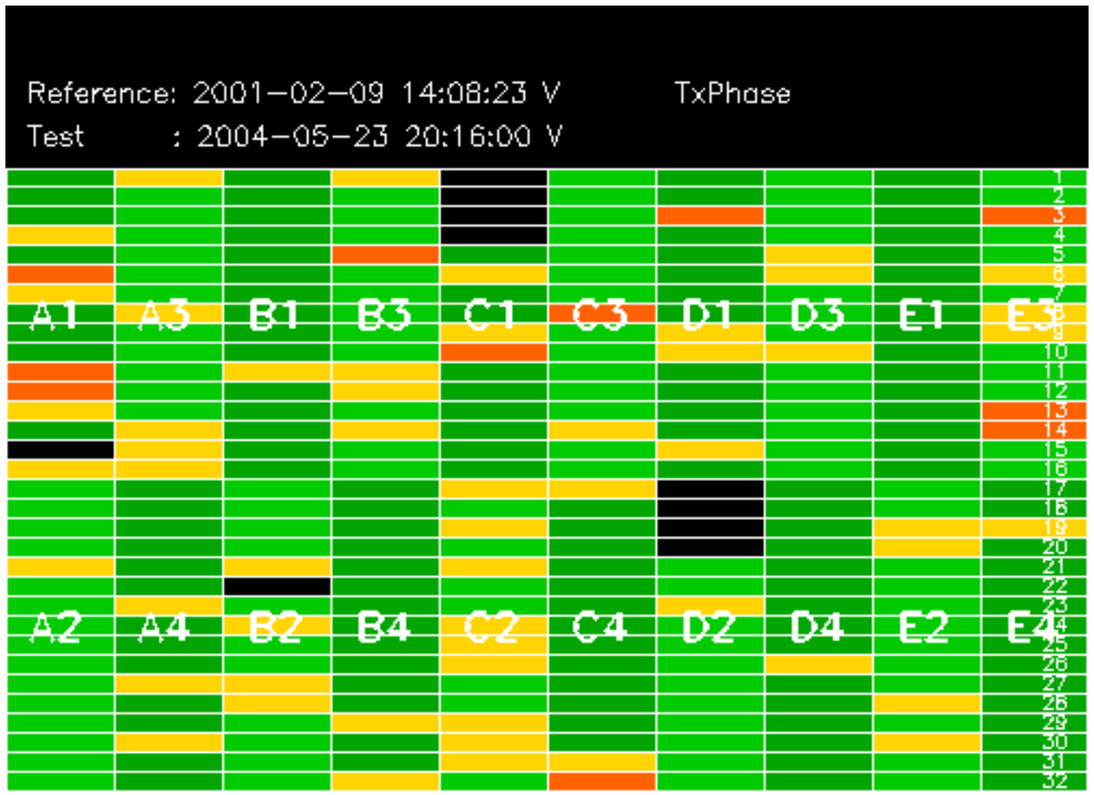
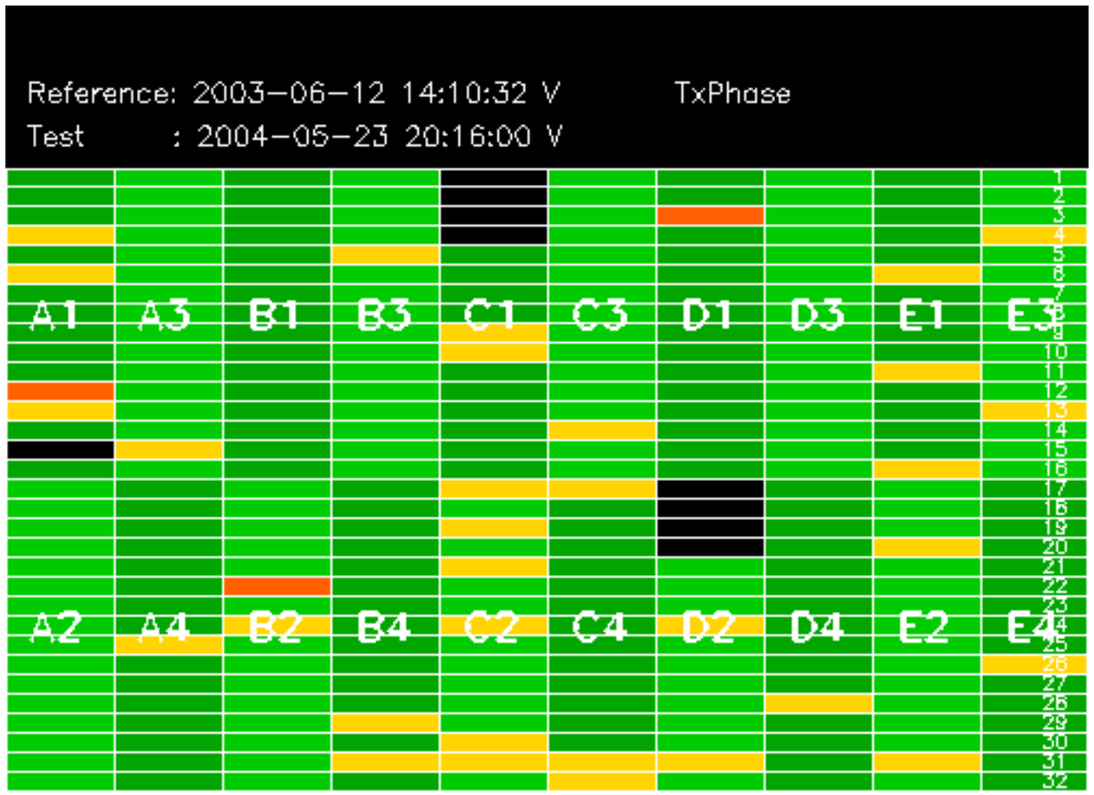

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-05-23 20:16:00 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-05-23 20:16:00 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.