PRELIMINARY REPORT OF 040505

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Wed May 5 12:40:01 GMT 2004

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

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 to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

Polarisation	Start Time
V	20040502 193101
H	20040502 192941

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

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	-3.603542	0.082522	-0.154513
7	P1	-3.326235	0.061015	-0.108099
11	P1	-4.620420	0.026171	0.074348
15	P1	-4.963453	0.040459	0.093709
19	P1	-3.360557	0.005575	-0.031910
22	P1	-4.515965	0.014209	0.018046
24	P1	-5.008044	0.014972	0.099604
28	P1	-4.594985	0.013641	0.018128

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.401875	0.080875	-0.028623
7	P2	-22.873112	0.114754	-0.024921
11	P2	-15.855920	0.130477	0.177371

15	P2	-7.158790	0.089671	-0.018362
19	P2	-9.517032	0.134821	0.011728
22	P2	-17.642538	0.094340	0.057165
24	P2	-20.970467	0.100461	0.056840
28	P2	-16.603790	0.082419	-0.001114

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.132648	0.003140	-0.008573
7	P3	-8.132647	0.003140	-0.008586
11	P3	-8.132644	0.003141	-0.008627
15	P3	-8.132644	0.003141	-0.008632
19	P3	-8.132647	0.003141	-0.008627
22	P3	-8.132650	0.003140	-0.008616
24	P3	-8.132660	0.003140	-0.008576
28	P3	-8.132633	0.003138	-0.007771

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1


P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.255659	0.328351	-0.185988
7	P1	-2.887231	0.278786	-0.225504
11	P1	-3.816352	0.021364	0.005724
15	P1	-4.029964	0.352329	0.111030
19	P1	-3.251138	0.062146	-0.088511
22	P1	-5.804946	0.043070	0.068067
24	P1	-4.051419	0.089383	0.008157
28	P1	-2.861715	0.069577	-0.117143

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.109980	0.040060	-0.060249
7	P2	-22.993340	0.027249	0.032261
11	P2	-11.055033	0.188282	-0.084469
15	P2	-4.921939	0.027776	-0.089378
19	P2	-6.826771	0.030055	-0.095603
22	P2	-7.701434	0.028089	-0.011273
24	P2	-11.013614	0.053268	-0.079353
28	P2	-19.022182	0.027583	-0.041738

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.968405	0.003553	-0.013236
7	P3	-7.968425	0.003549	-0.012733
11	P3	-7.968325	0.003550	-0.012957
15	P3	-7.968299	0.003565	-0.013084
19	P3	-7.968345	0.003553	-0.013304
22	P3	-7.968543	0.003543	-0.013174
24	P3	-7.968237	0.003572	-0.012887
28	P3	-7.968259	0.003567	-0.012915

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	0.000482907

	stdev	2.32581e-07
MEAN Q	mean	0.000496318
	stdev	2.65856e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127928
	stdev	0.00113016
STDEV Q	mean	0.128175
	stdev	0.00114316

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

Preliminary report.The data is not yet controled

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

6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

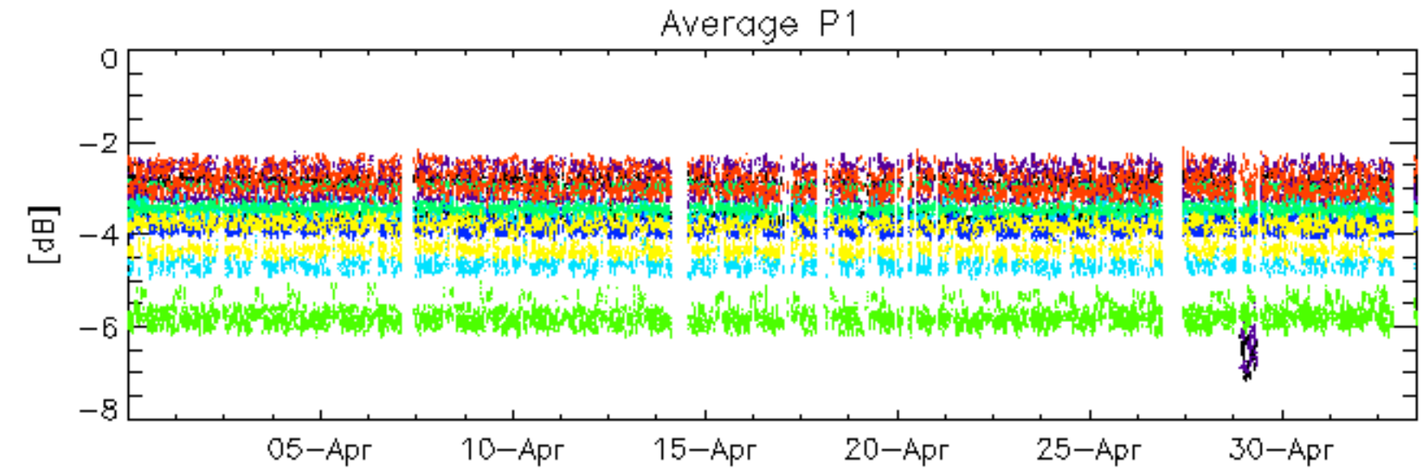
6.5 - Absolute Doppler for GM1

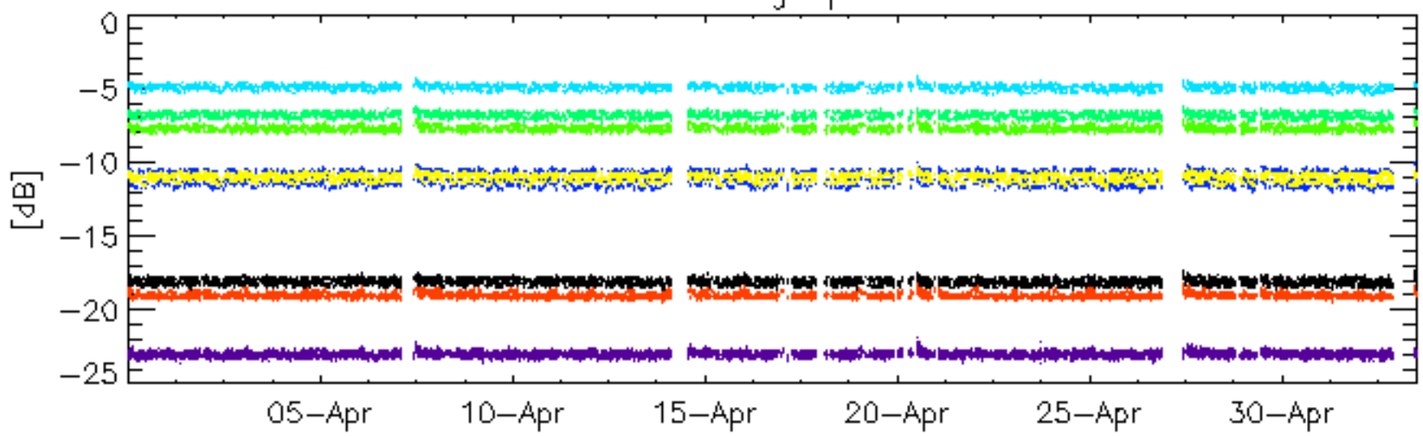
Evolution of Absolute Doppler

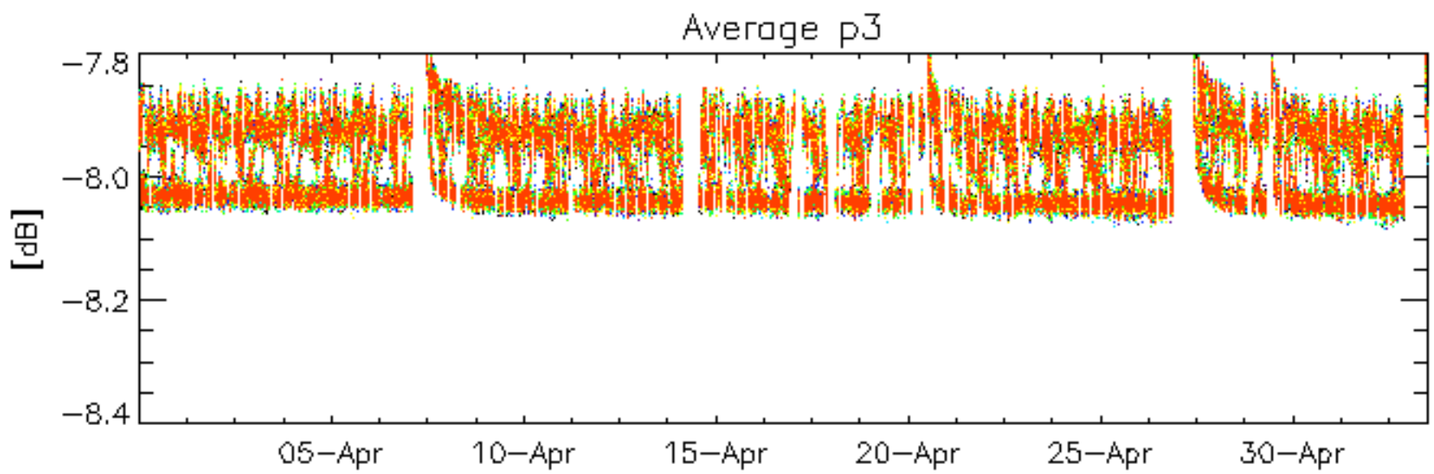
Acsending

Descending

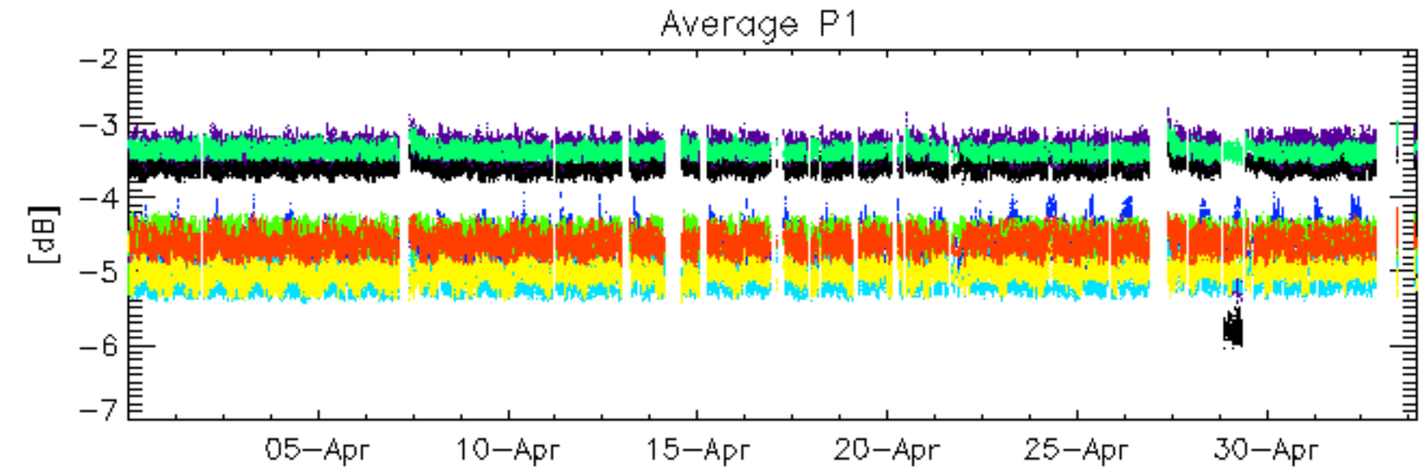
6.6 - Doppler evolution versus ANX for GM1

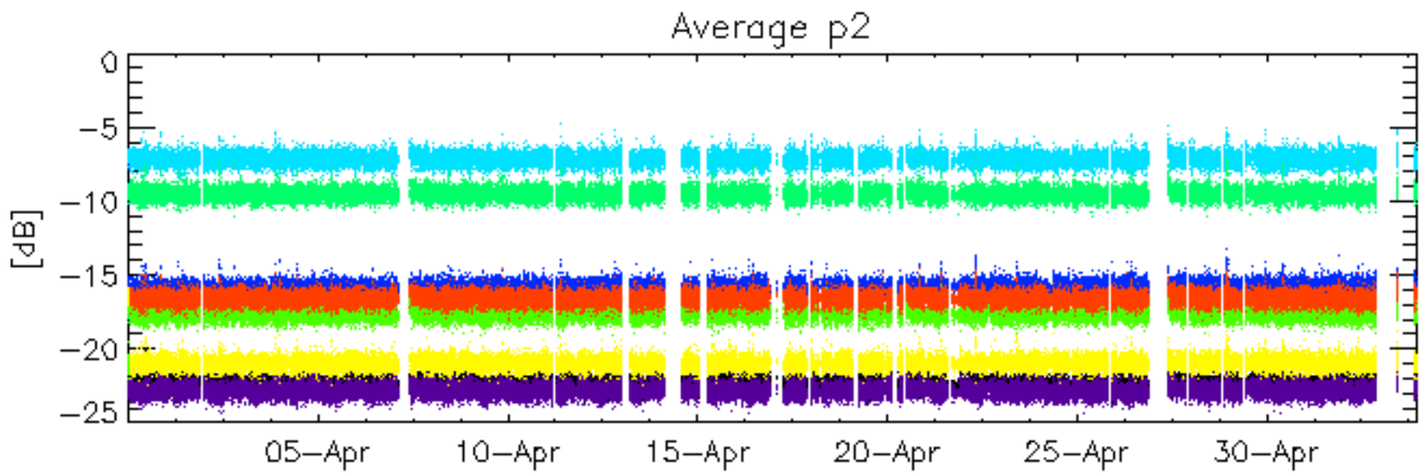


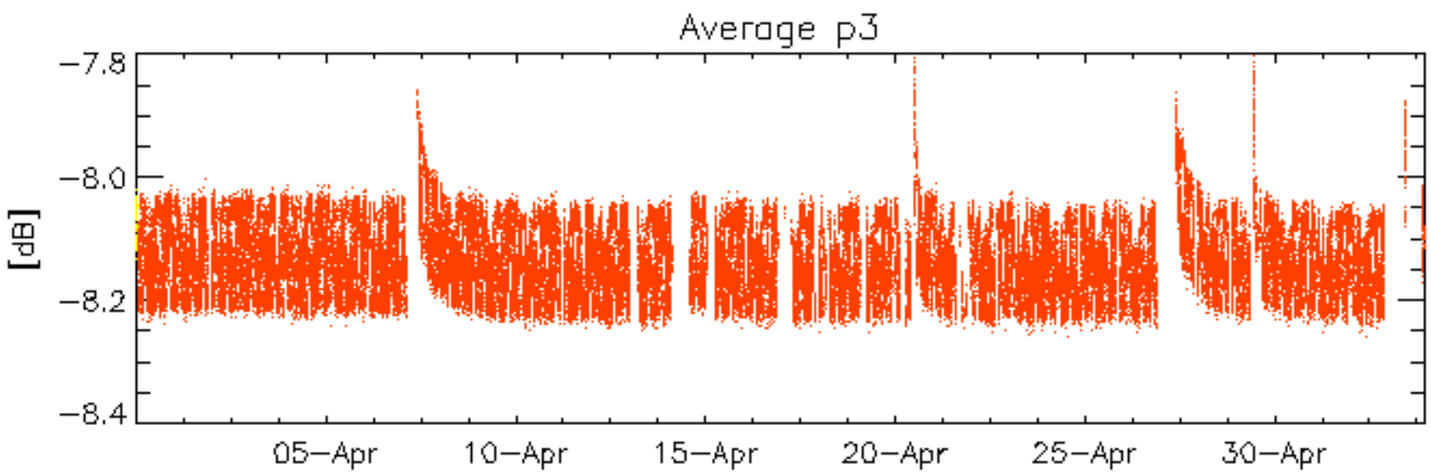




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28





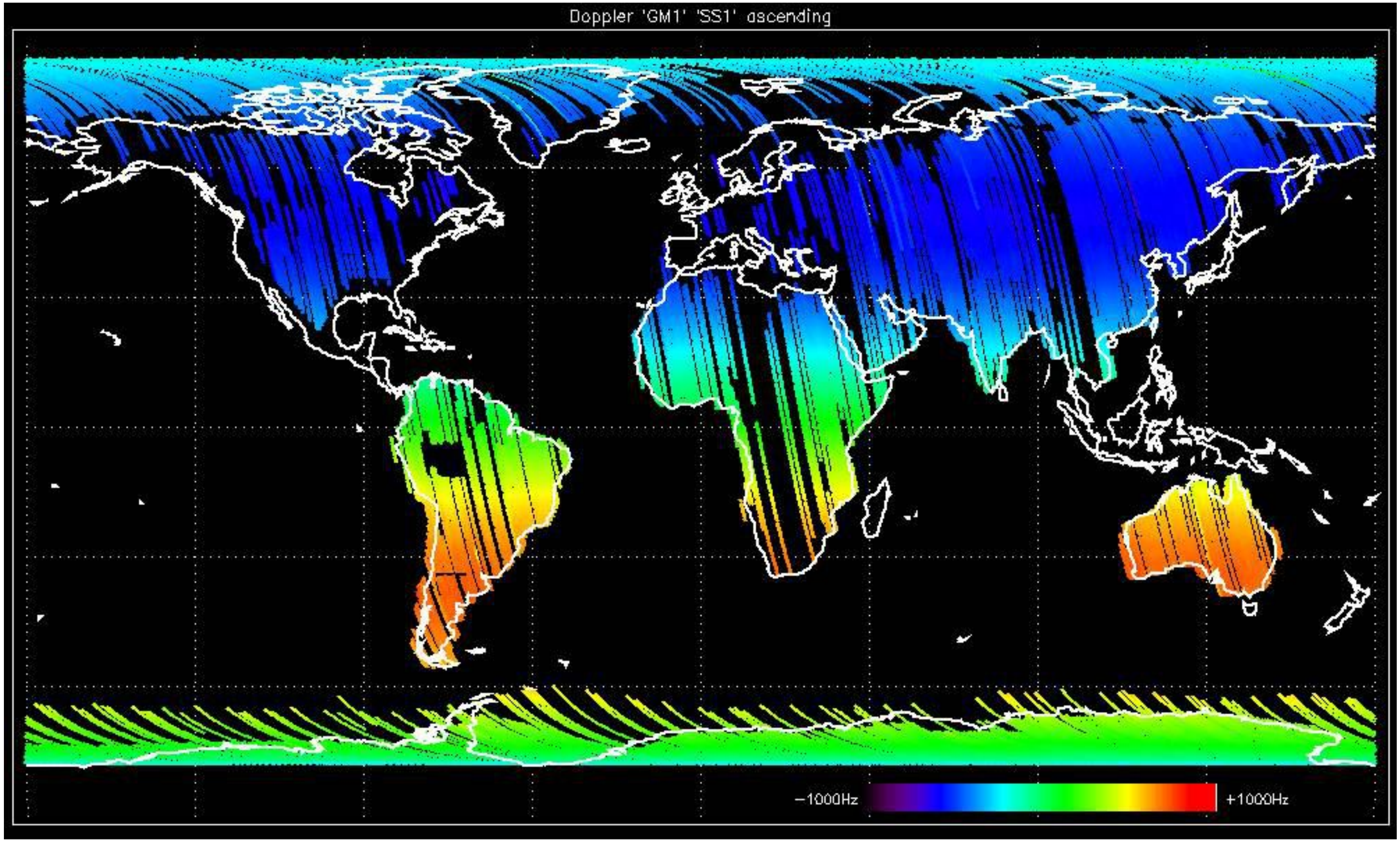


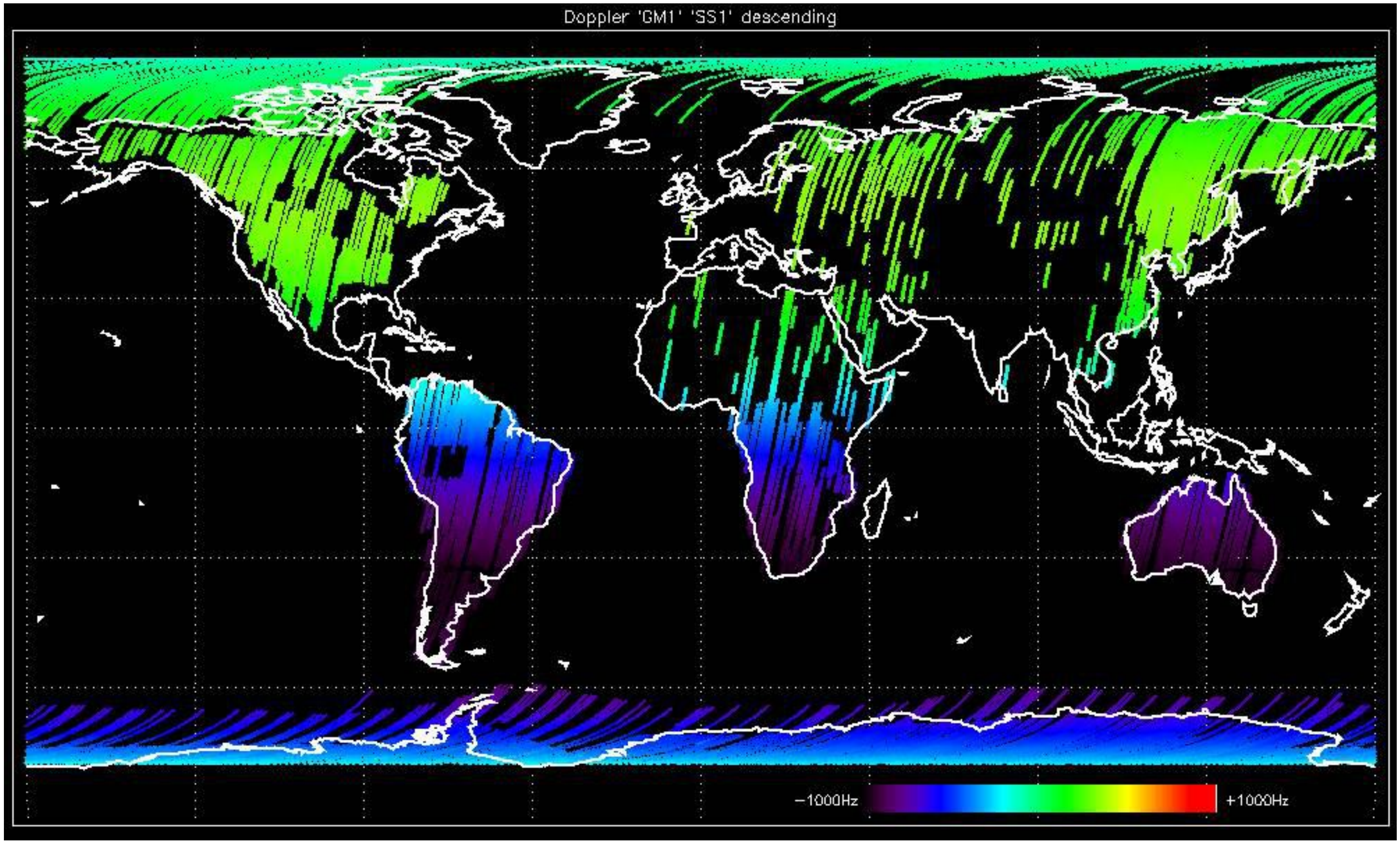
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28

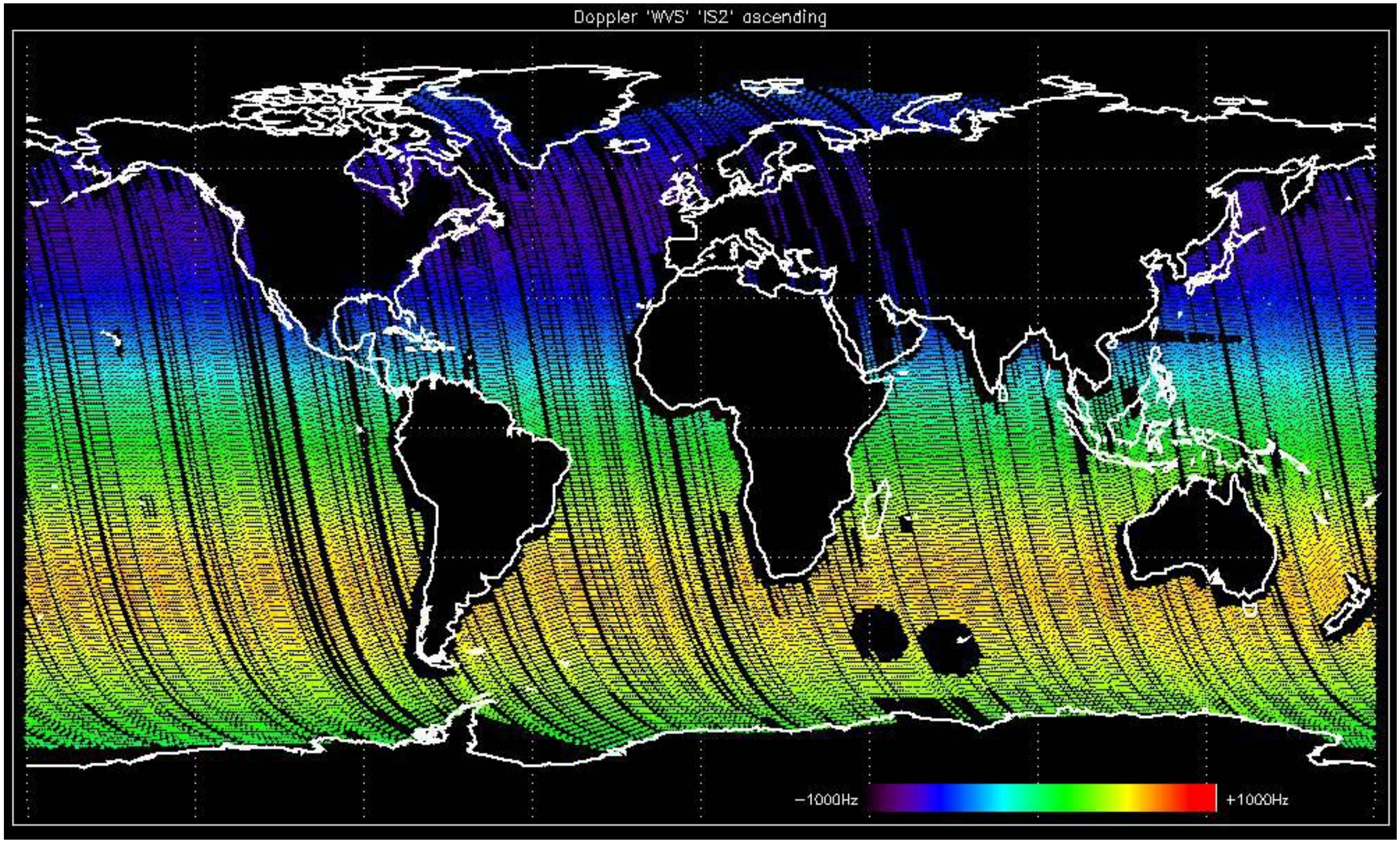
No anomalies observed.

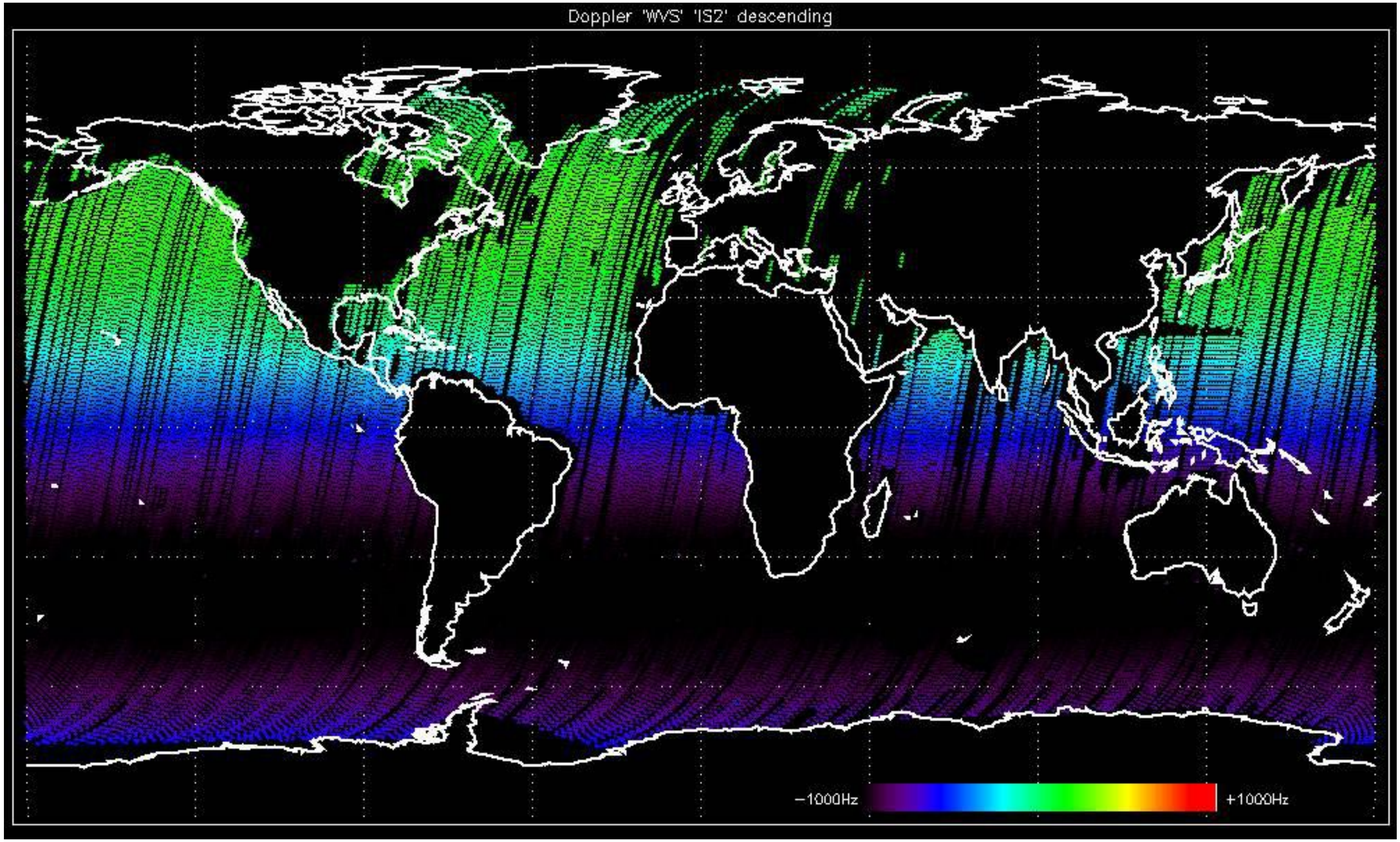
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

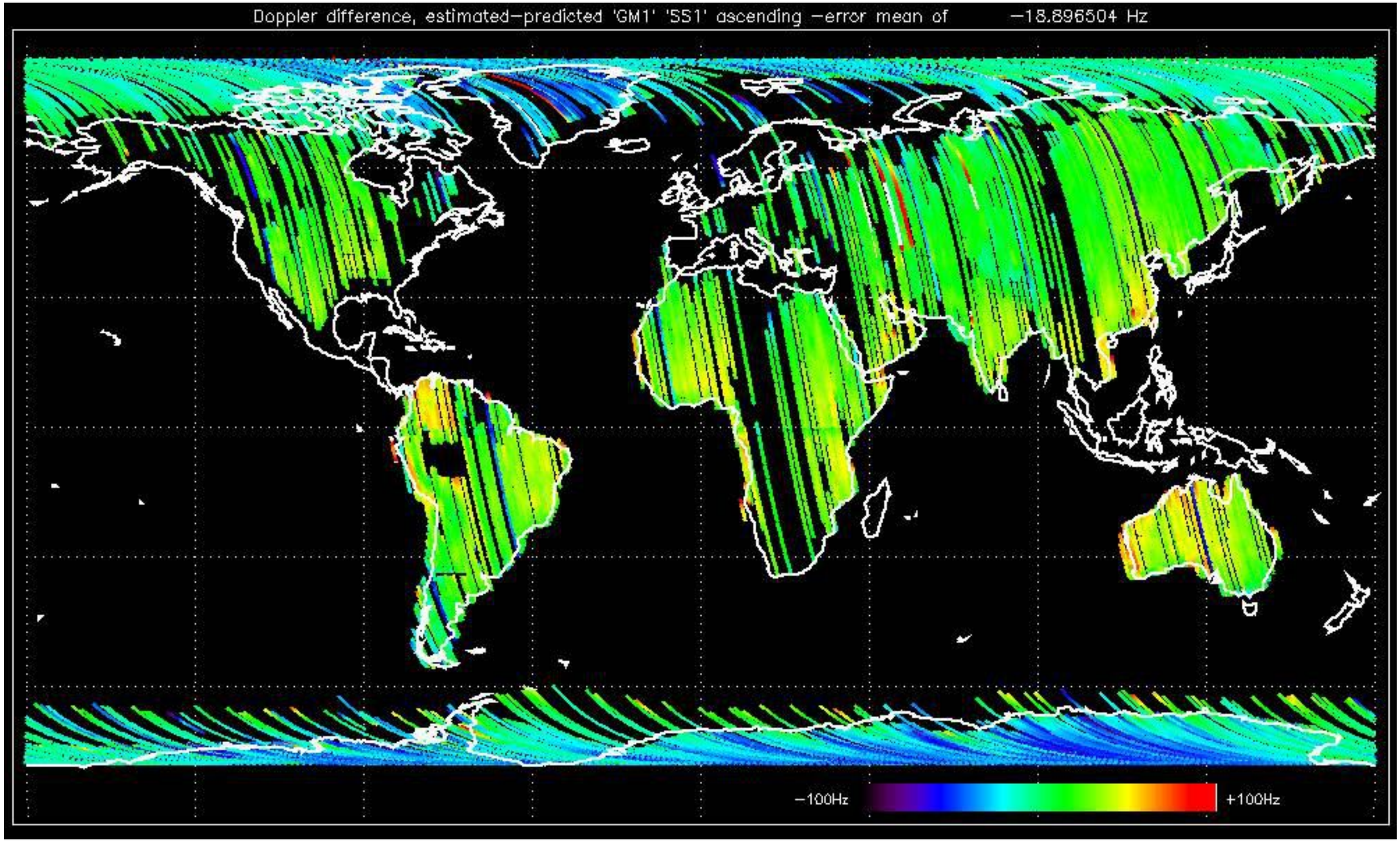
Preliminary report.The data is not yet controled

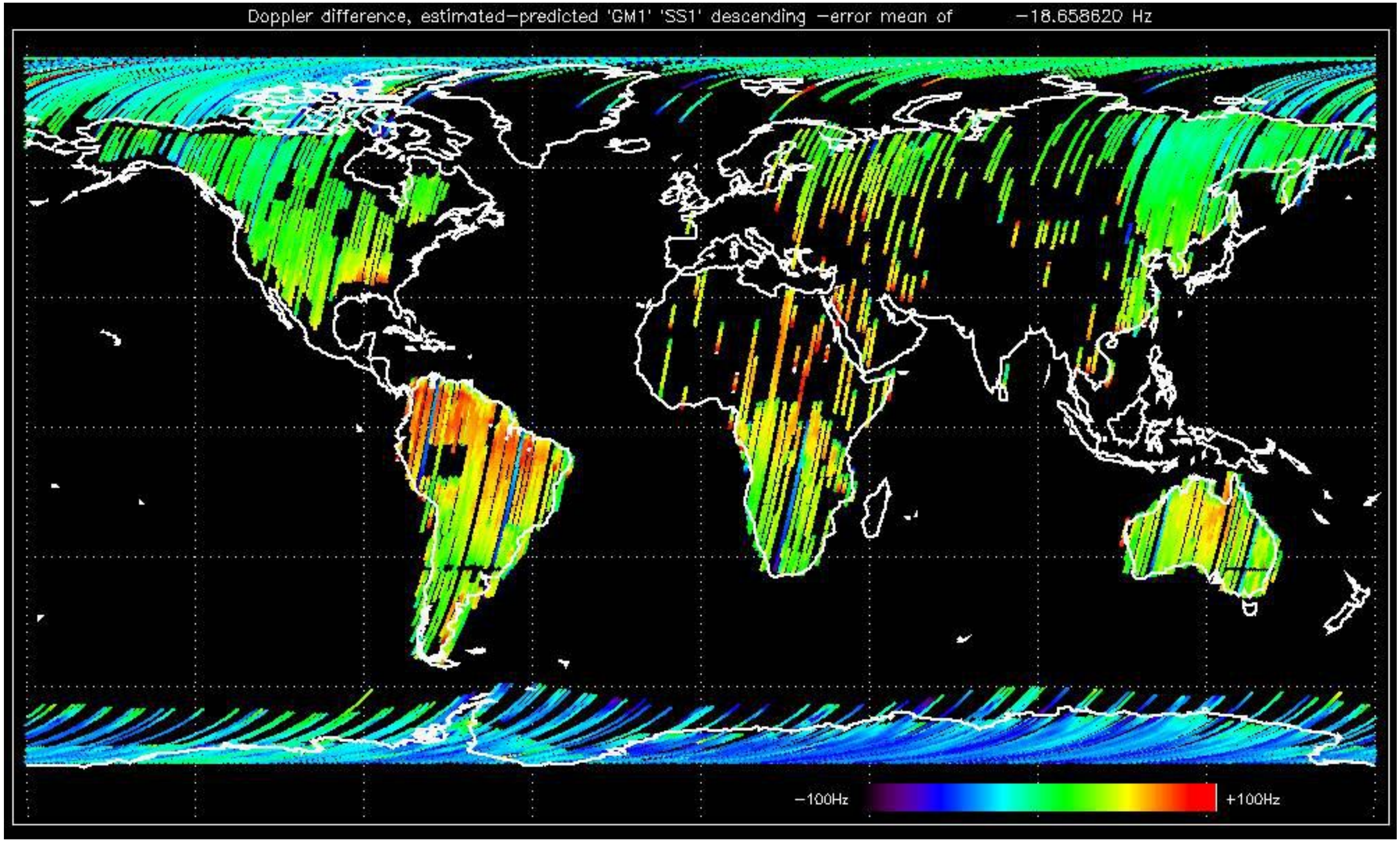

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

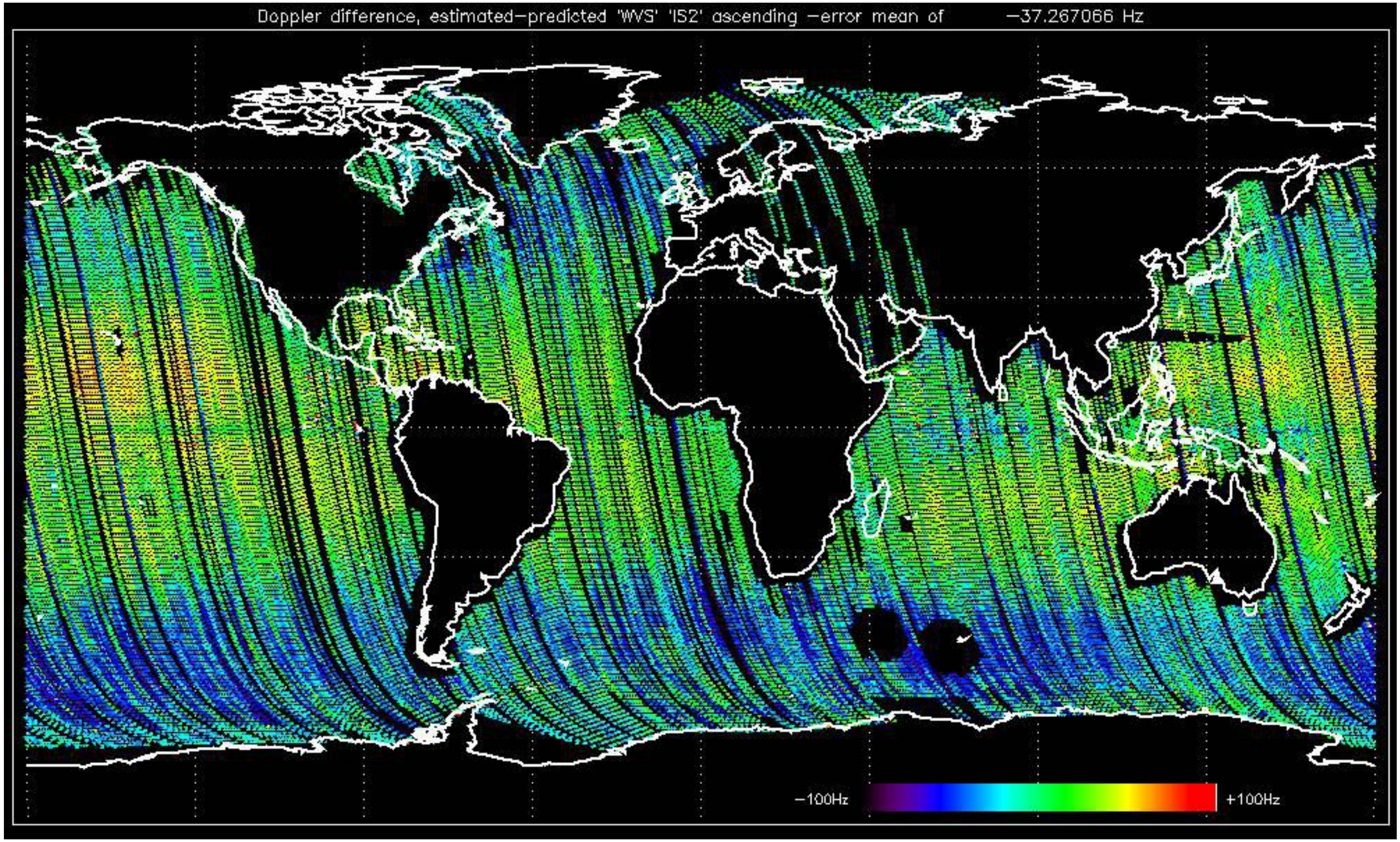

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

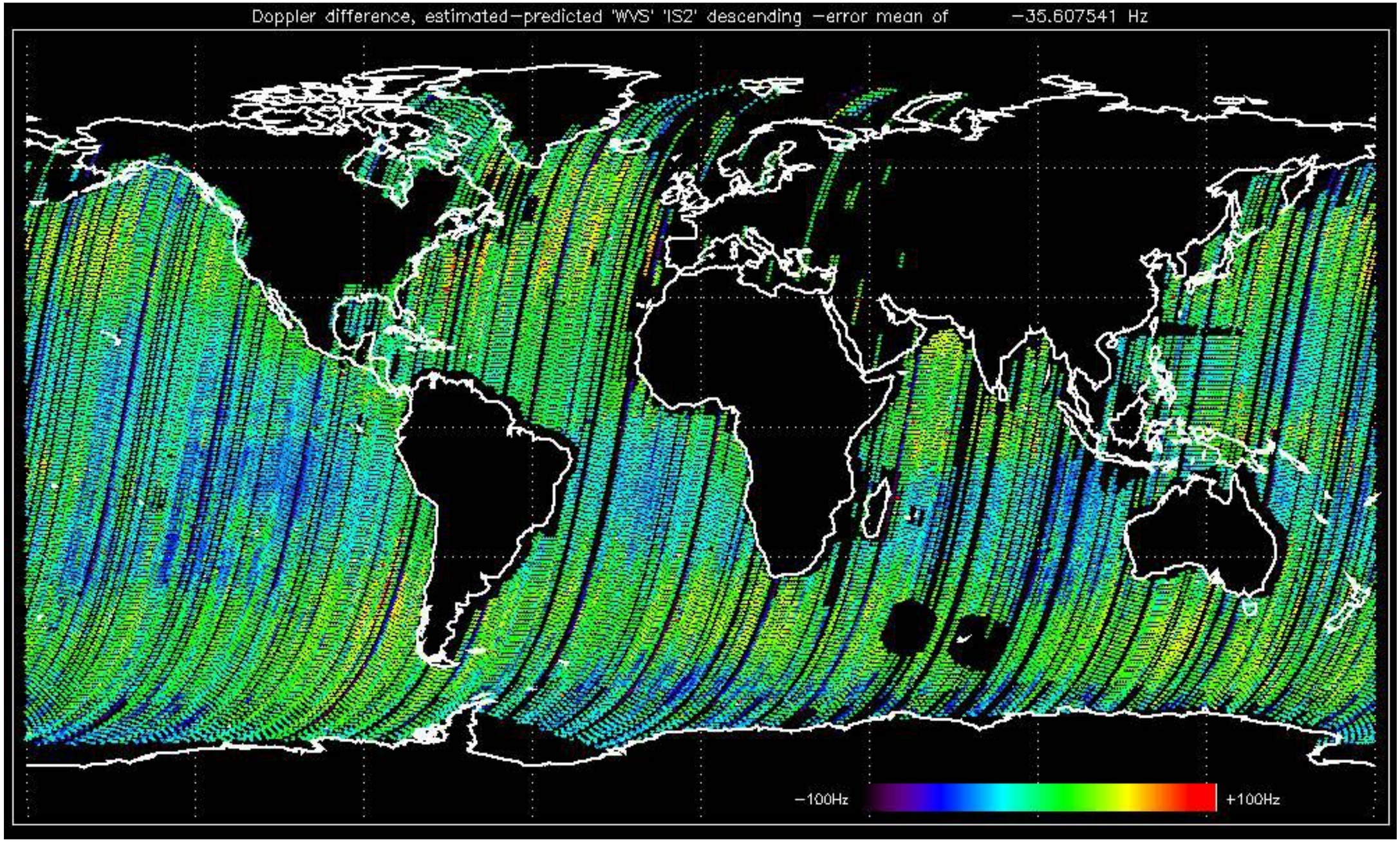

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −18.896504 Hz
−100Hz
+100Hz

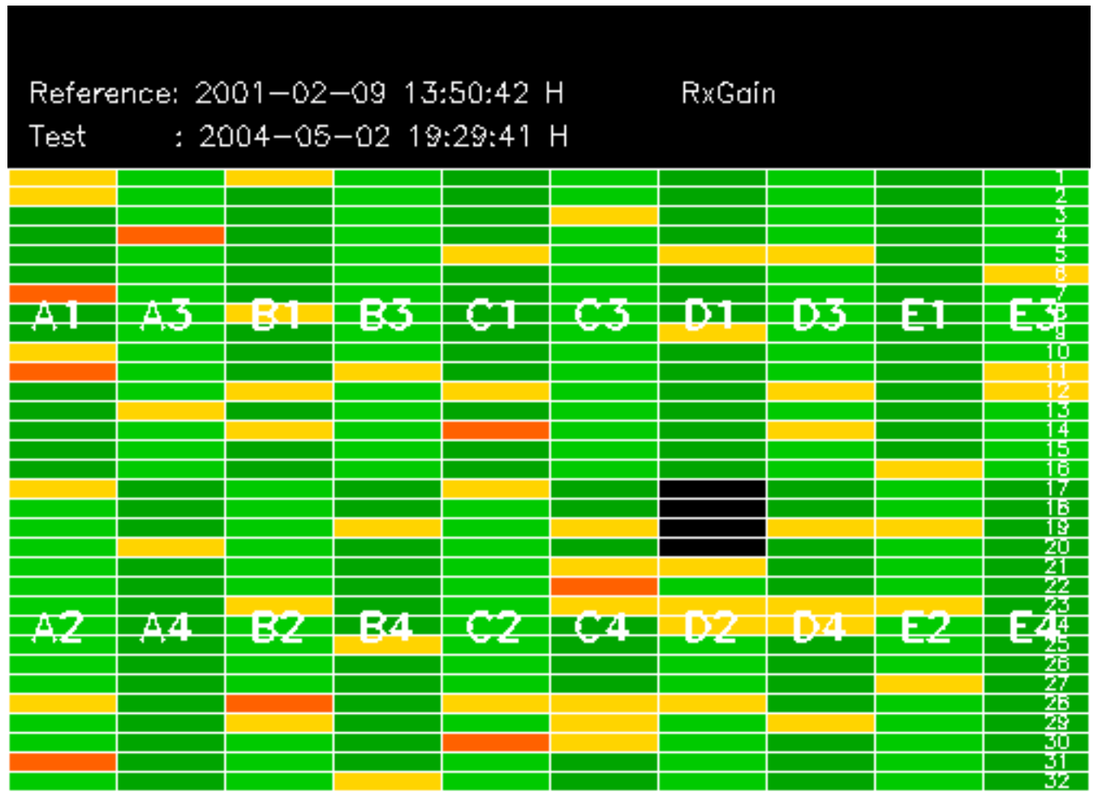

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −18.658620 Hz
−100Hz
+100Hz

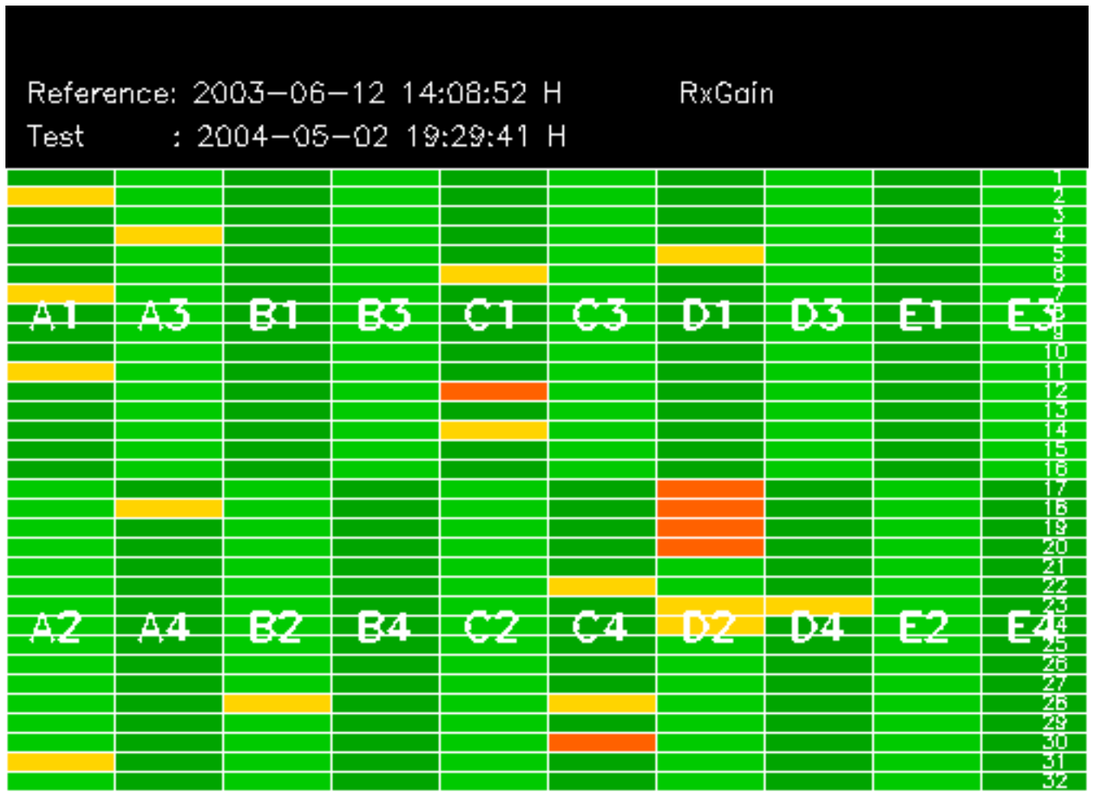

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −37.267066 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −35.607541 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-05-02 19:29:41 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 : 2004-05-02 19:29:41 H
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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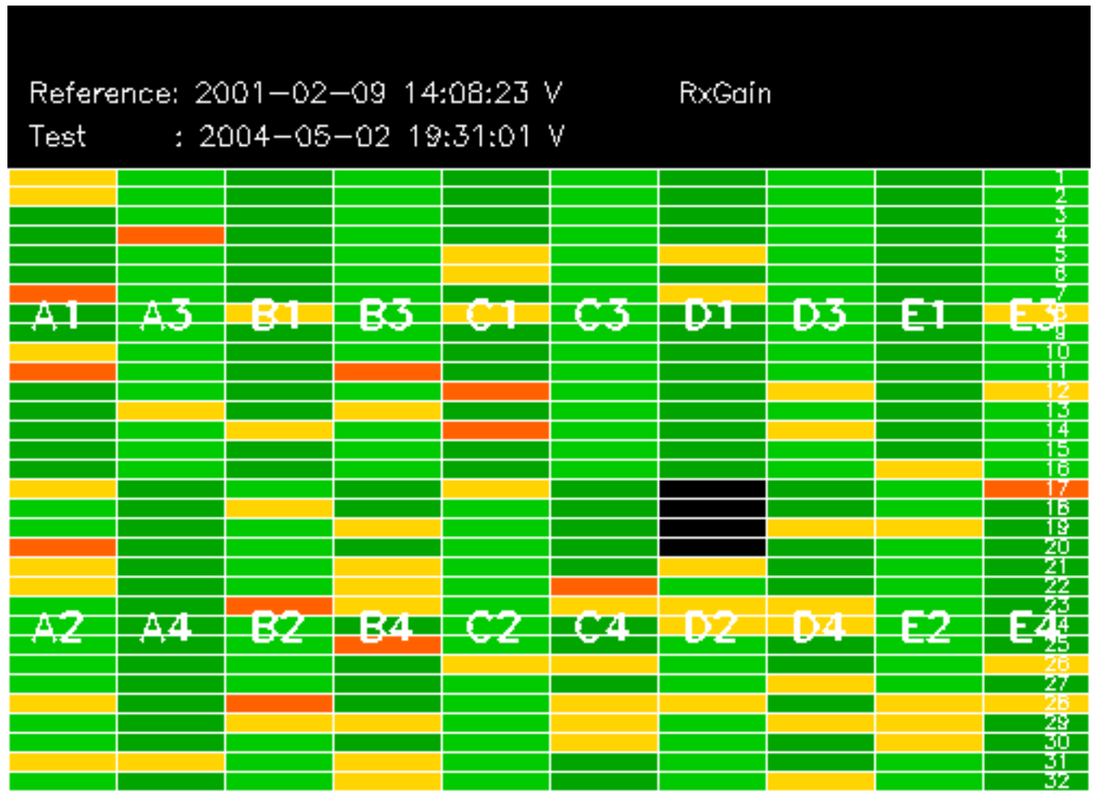
Reference: 2001-02-09 14:08:23 V
Test : 2004-05-02 19:31:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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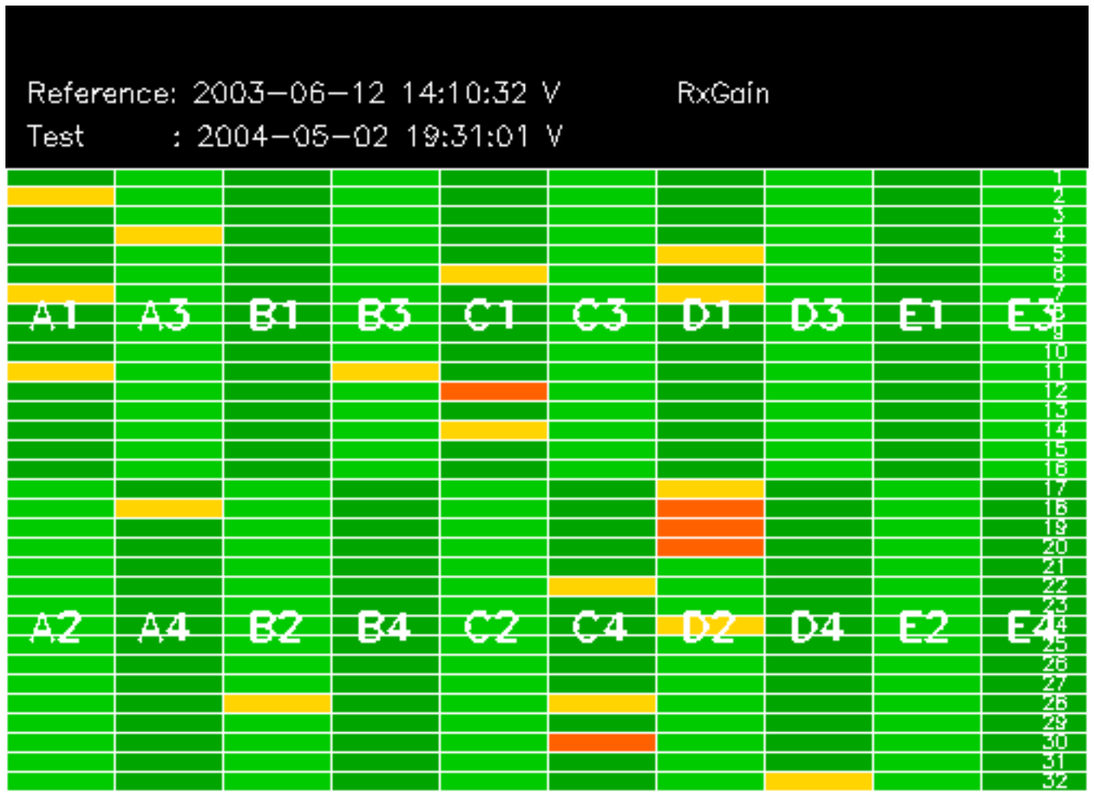
Reference: 2003-06-12 14:10:32 V
Test : 2004-05-02 19:31:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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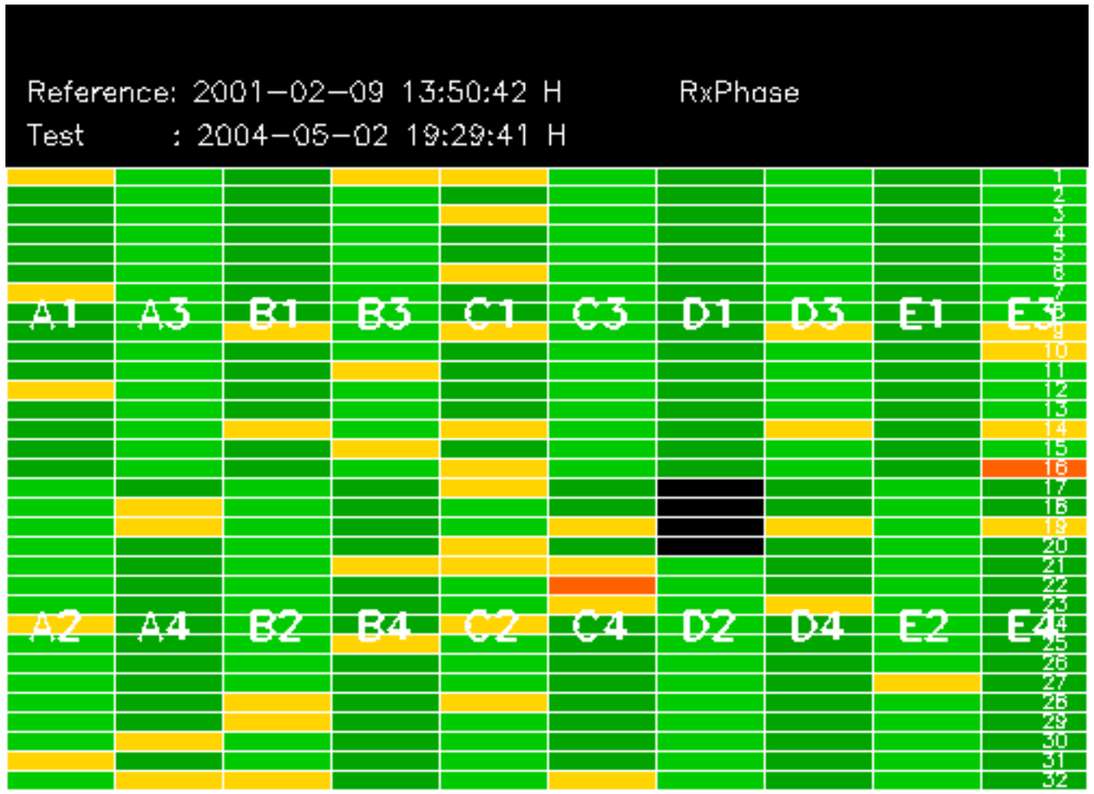
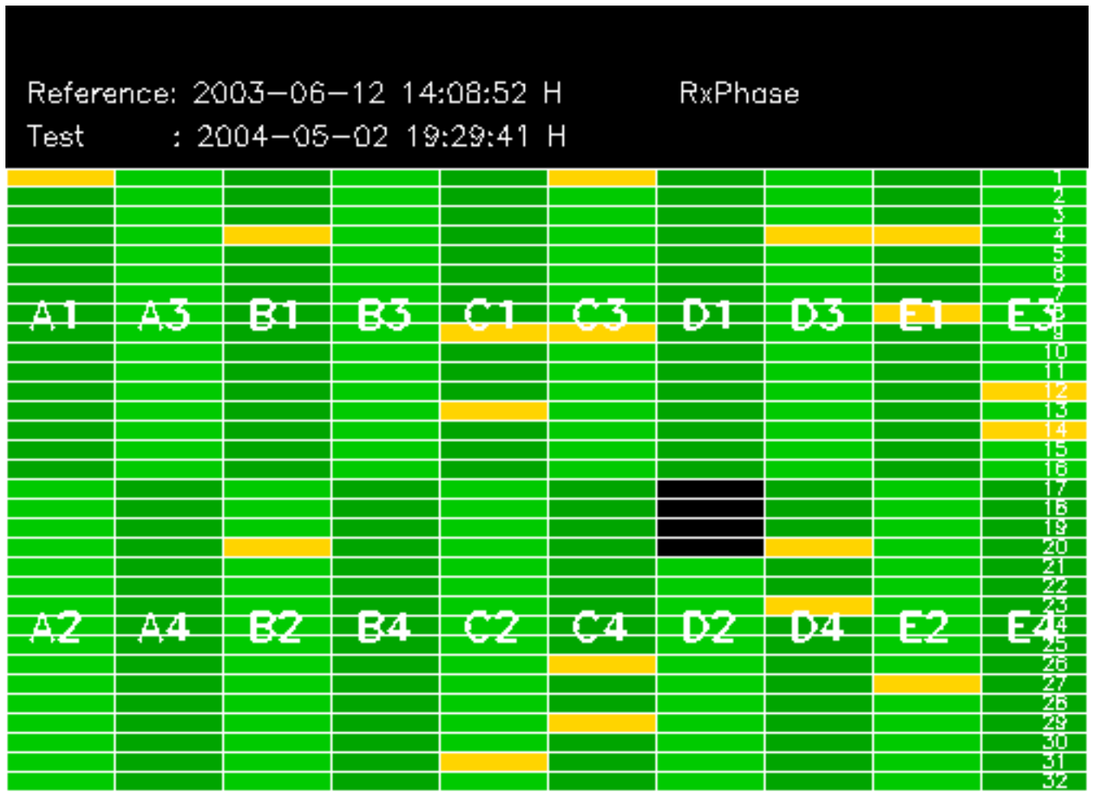

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-05-02 19:29:41 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-05-02 19:29:41 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
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C4
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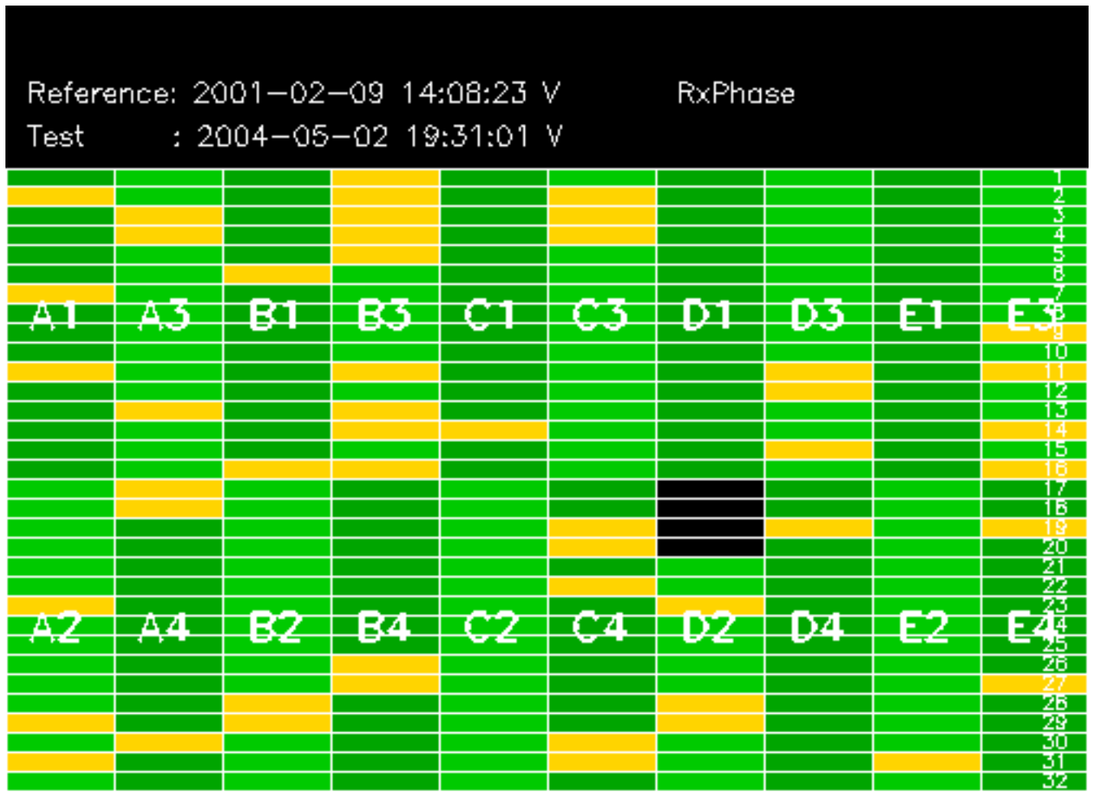
Reference: 2001-02-09 14:08:23 V
Test : 2004-05-02 19:31:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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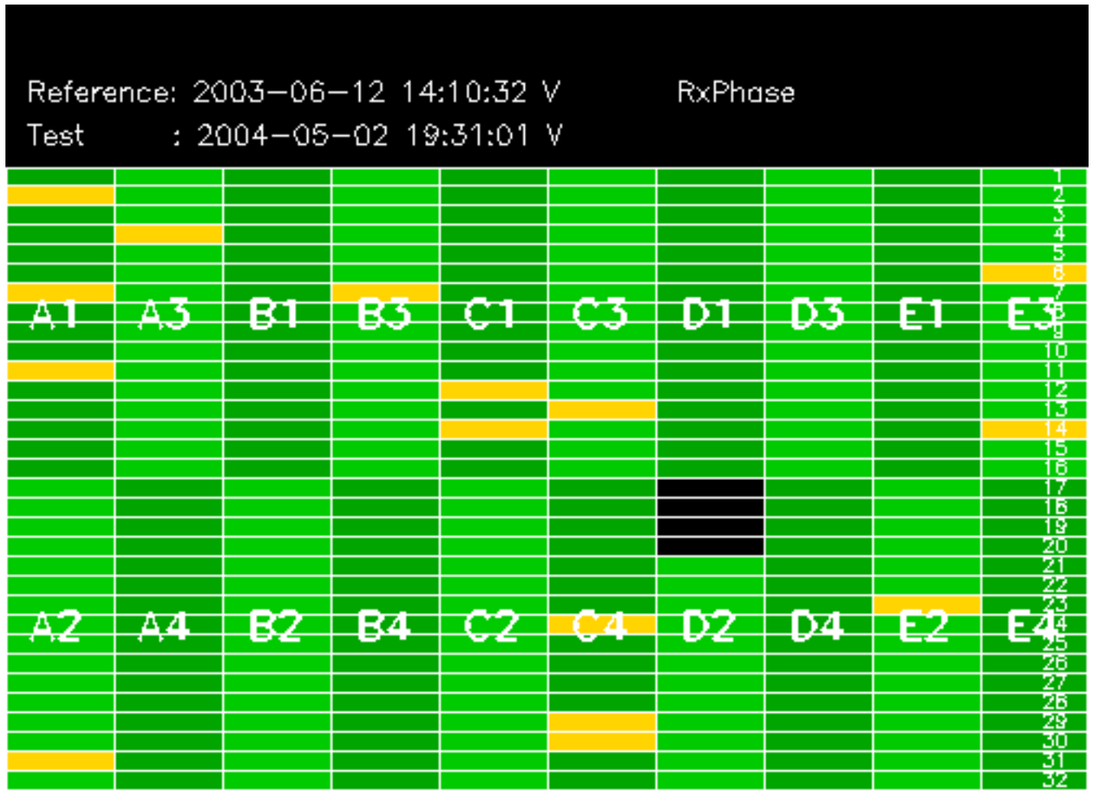
Reference: 2003-06-12 14:10:32 V
Test : 2004-05-02 19:31:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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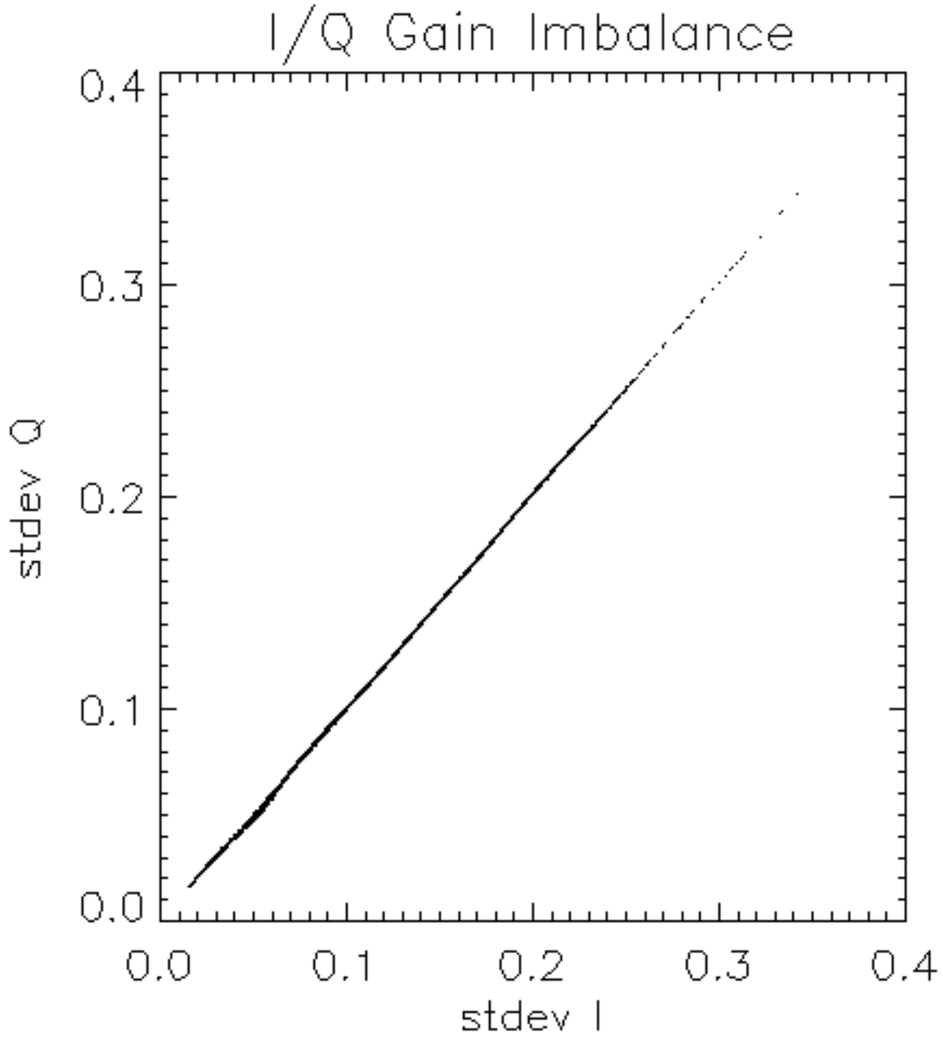
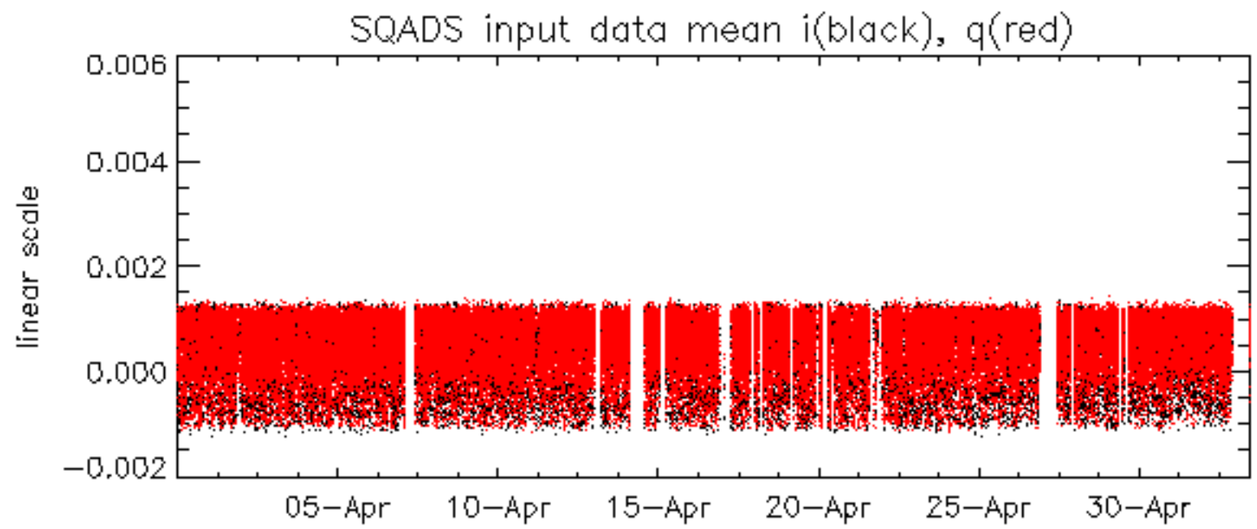
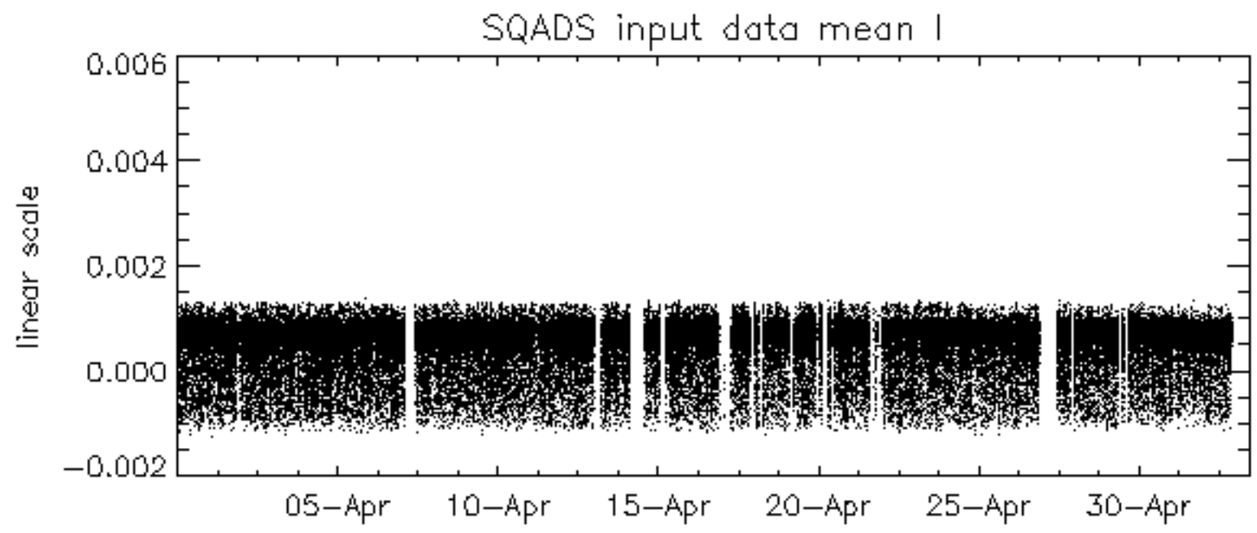
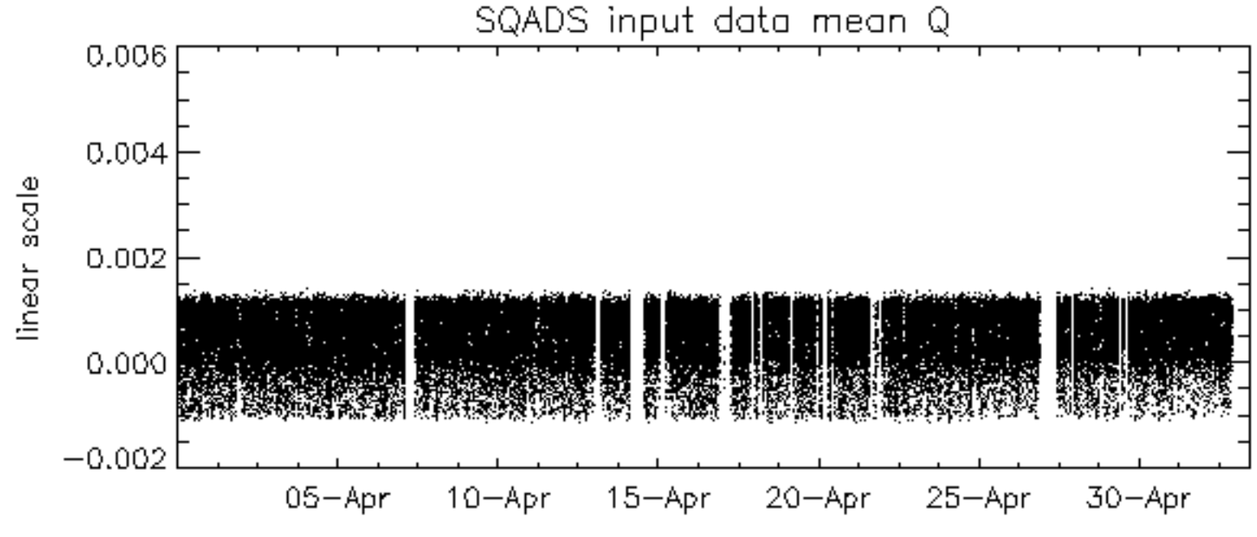
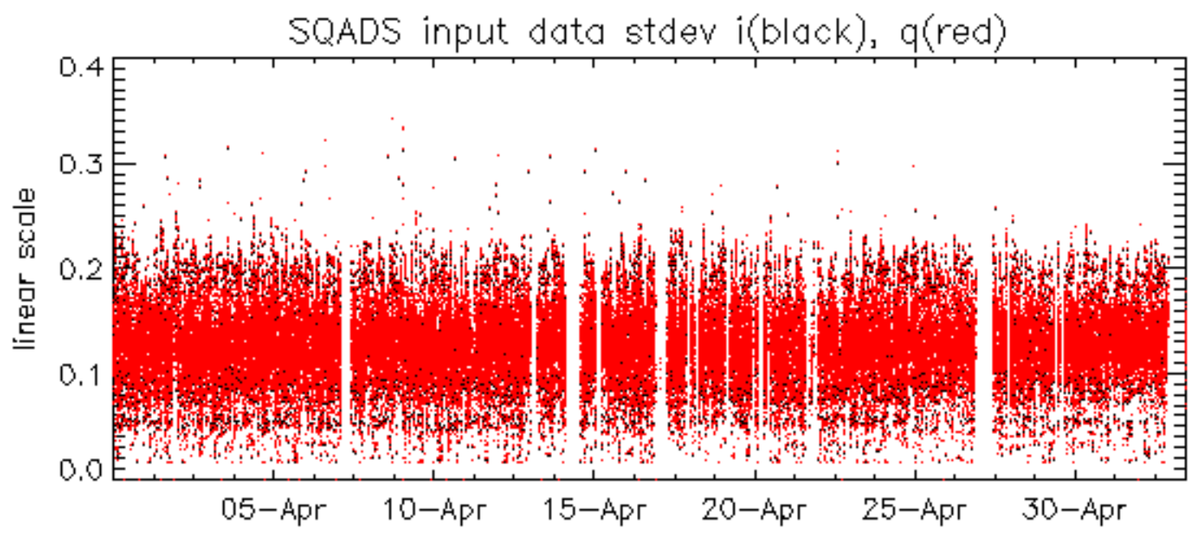
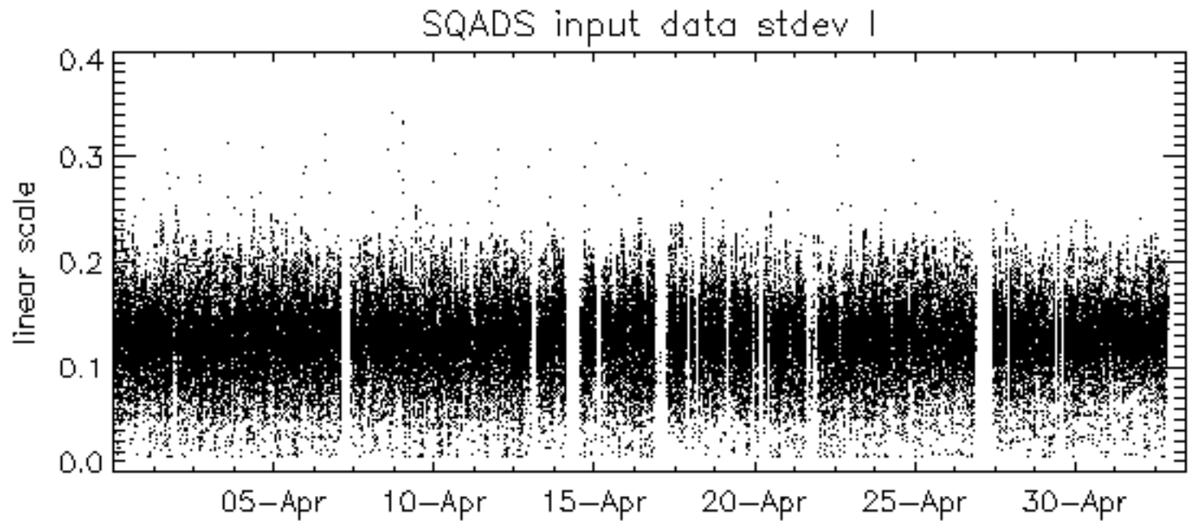

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

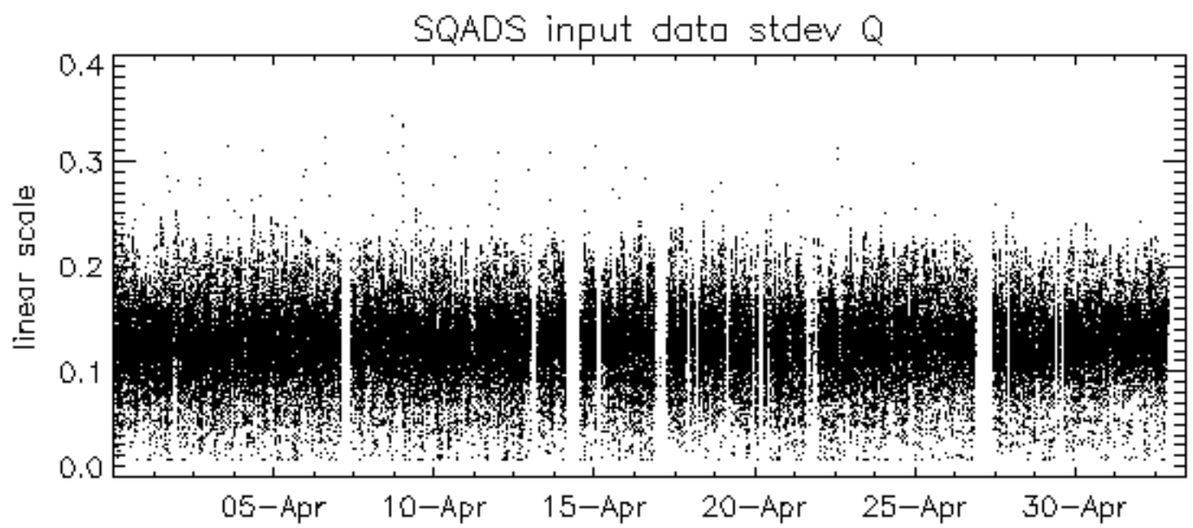

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
30−Apr

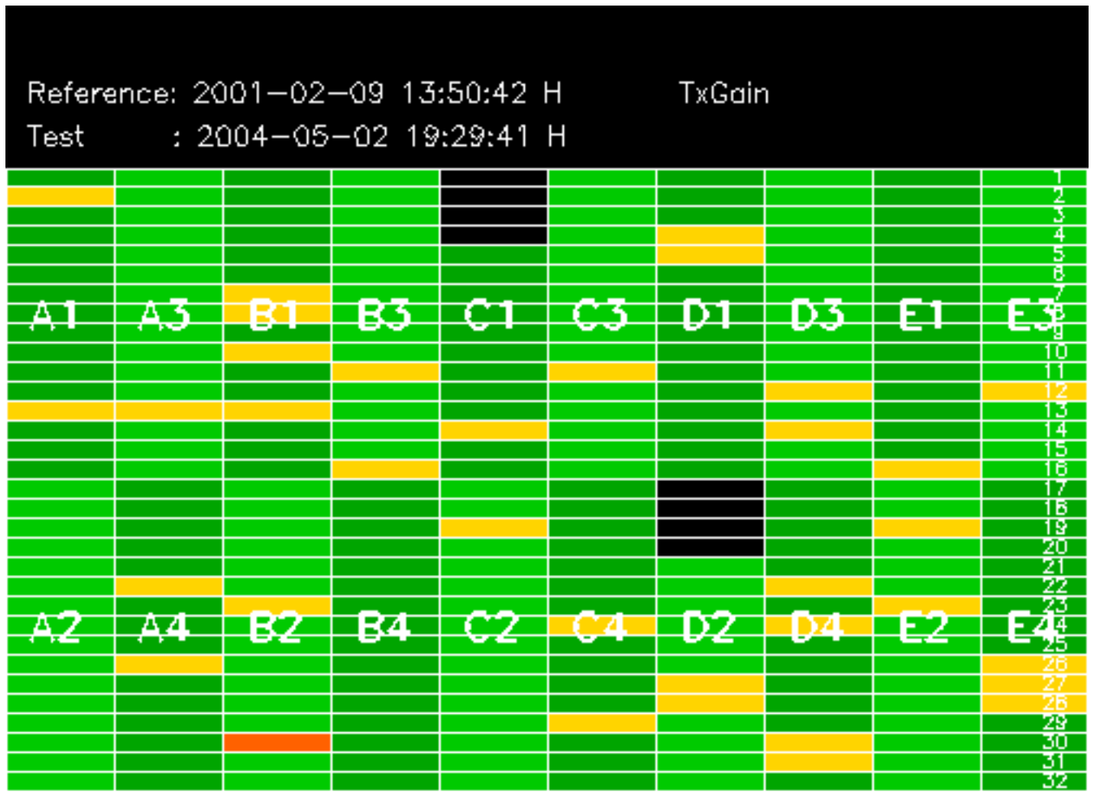

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
30−Apr

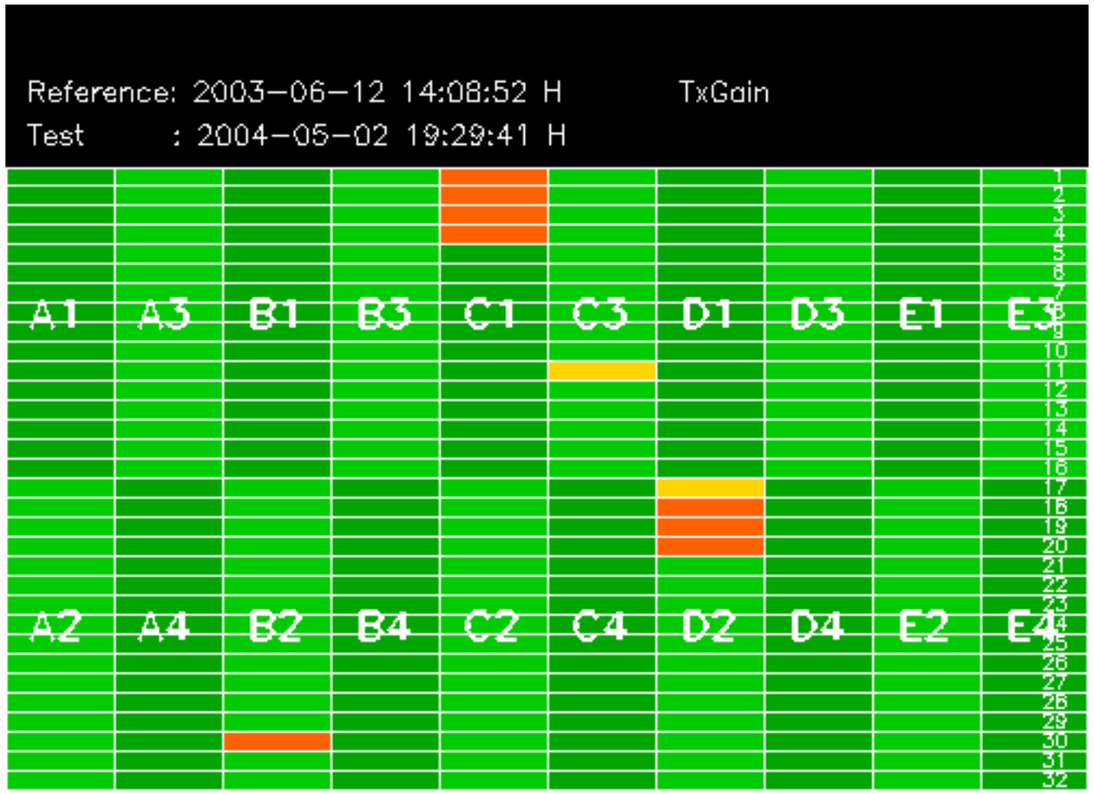

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
30−Apr


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-05-02 19:29:41 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 : 2004-05-02 19:29:41 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
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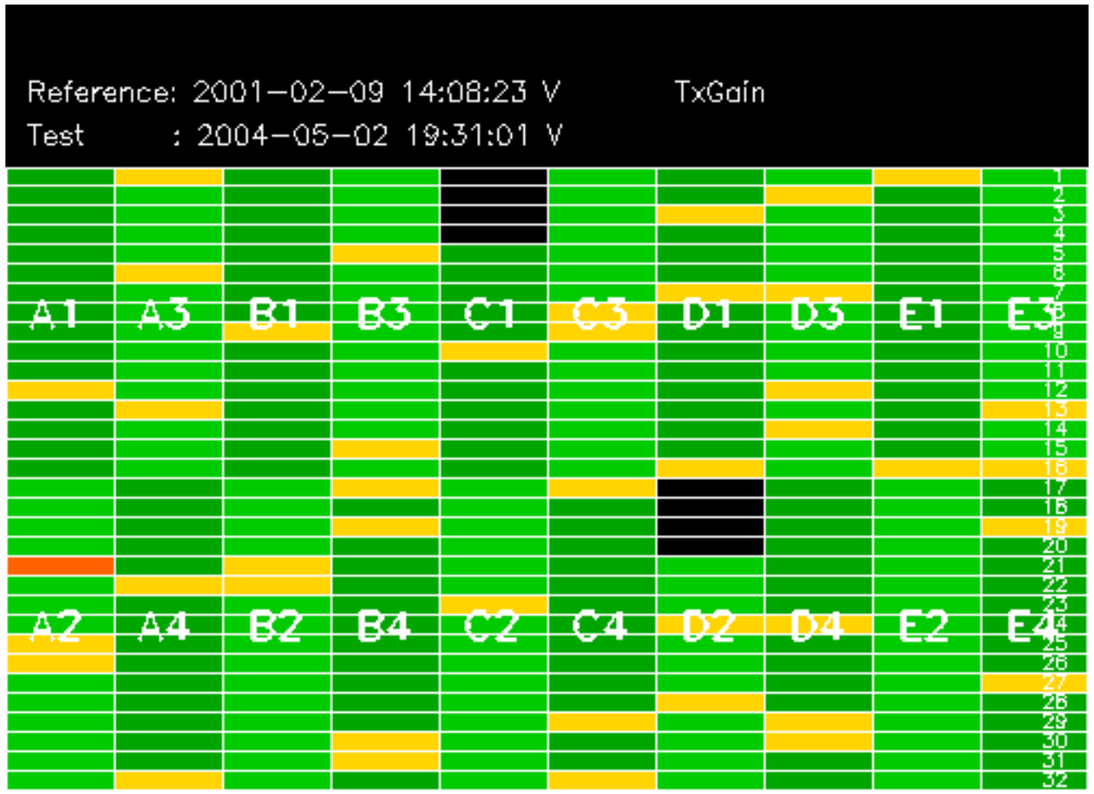
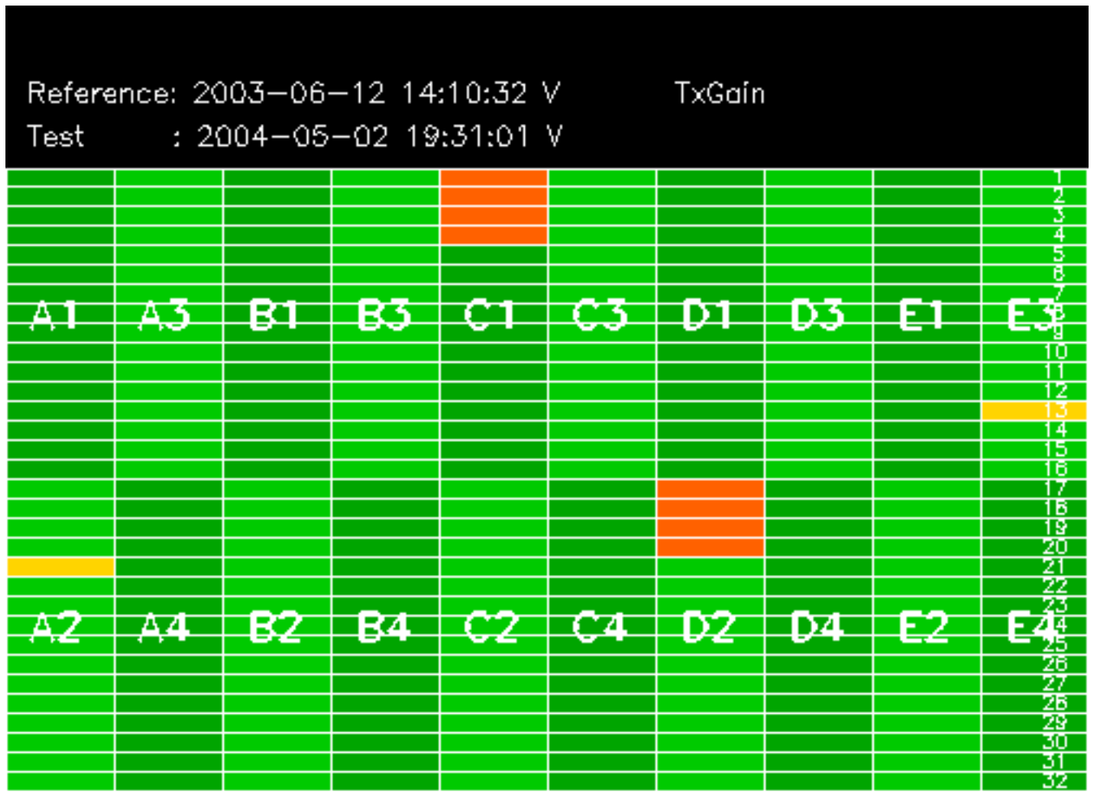

Reference: 2001-02-09 14:08:23 V
Test : 2004-05-02 19:31:01 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-05-02 19:31:01 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
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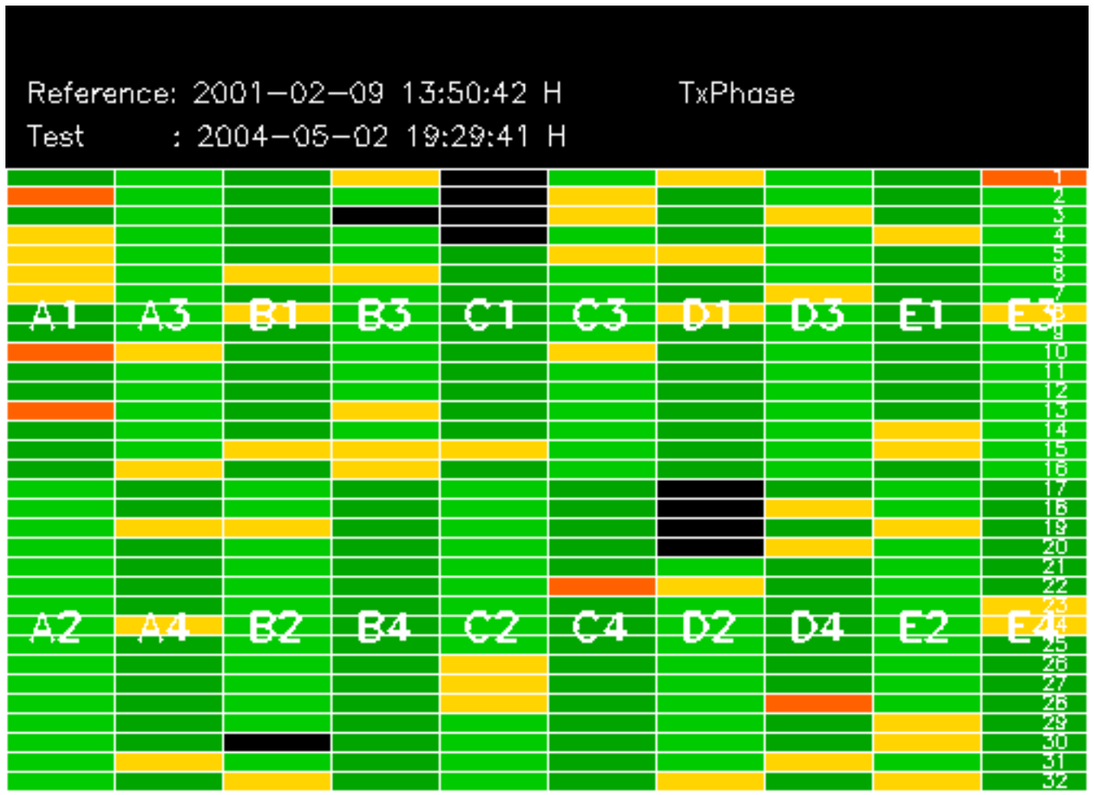
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-05-02 19:29:41 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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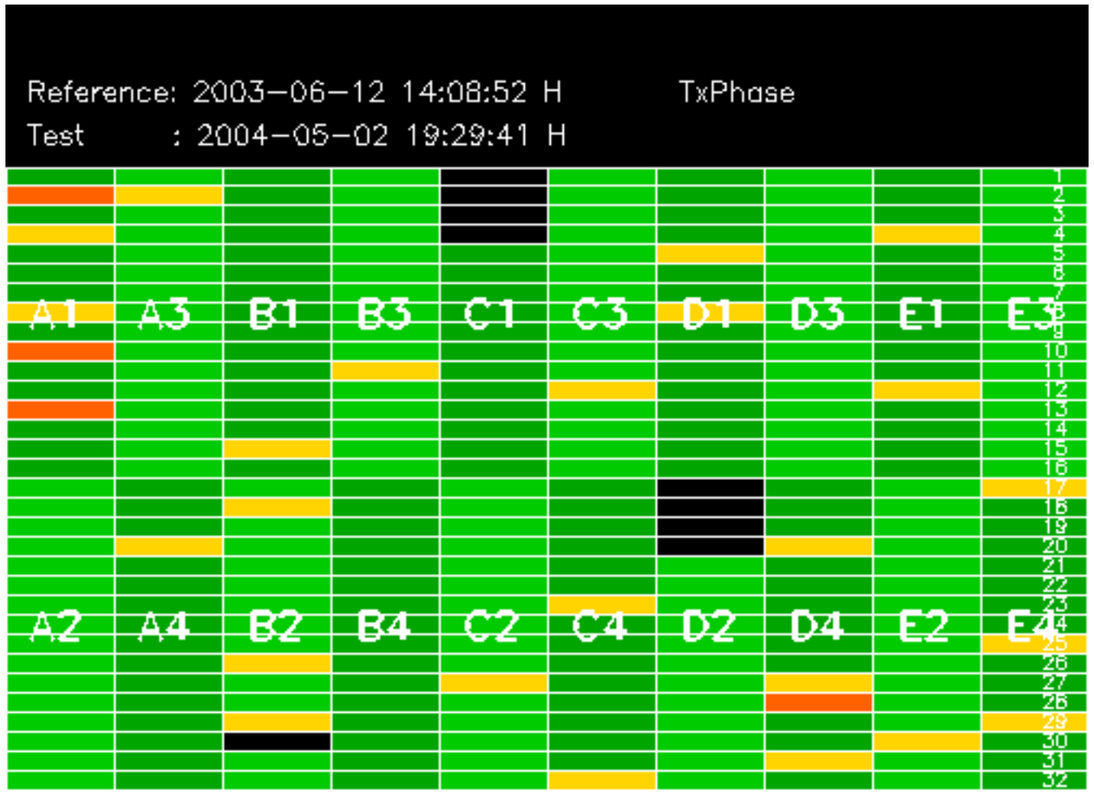
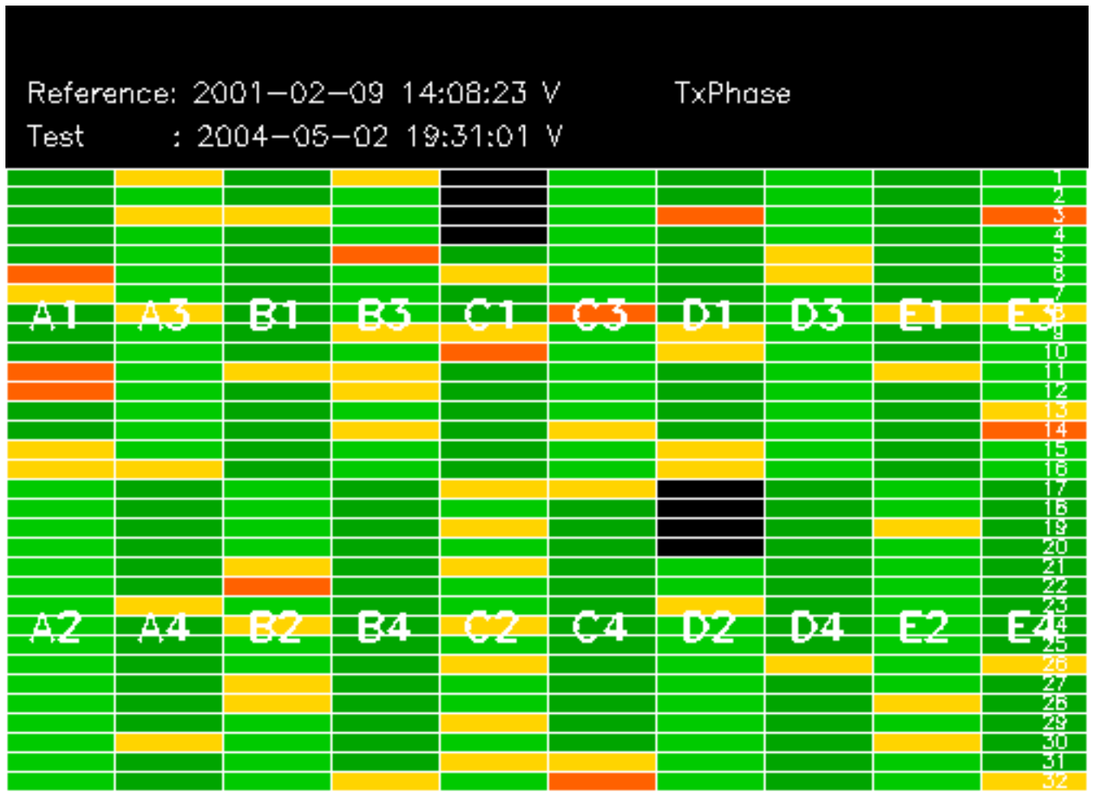
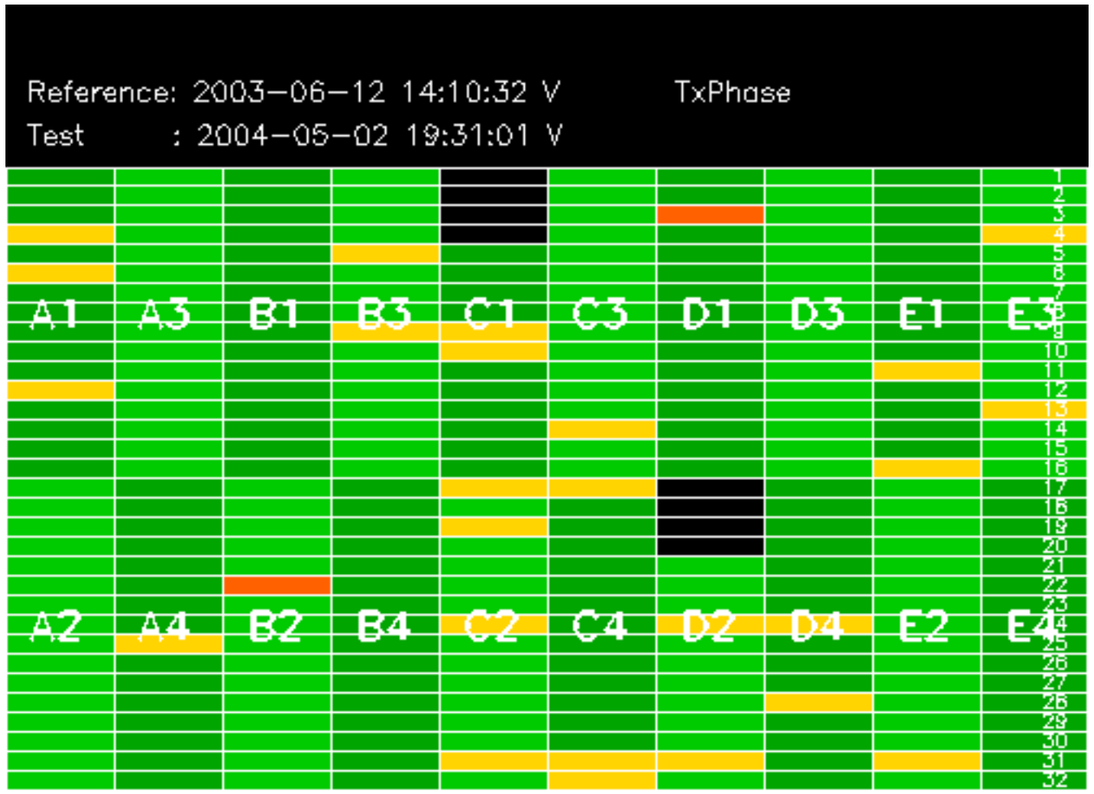

Reference: 2003-06-12 14:08:52 H
Test : 2004-05-02 19:29:41 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-05-02 19:31:01 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 : 2004-05-02 19:31:01 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.