PRELIMINARY REPORT OF 040427

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

last update on Tue Apr 27 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

Instrument unavailability from 26-APR-2004 21:32:03 to 27-APR-2004 09:41:43 due to all 4 PSUs on tile D3 reported.off

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 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	20040426 191932
H	20040426 191812

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	-3.575797	0.005399	0.014556
7	P1	-3.299161	0.010343	0.002214
11	P1	-4.627629	0.023559	0.040041
15	P1	-4.977630	0.038909	0.051122
19	P1	-3.353768	0.005942	-0.045054
22	P1	-4.514688	0.014108	0.002352
24	P1	-5.020608	0.015080	0.068282
28	P1	-4.592267	0.013689	-0.012672

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.402159	0.079642	-0.023275
7	P2	-22.877907	0.118706	-0.041370
11	P2	-15.889381	0.143293	0.129500
15	P2	-7.161774	0.088488	-0.006878
19	P2	-9.516472	0.153765	0.010632
22	P2	-17.653147	0.096070	0.050458
24	P2	-20.988012	0.104125	0.031693
28	P2	-16.608015	0.080680	-0.020690

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.132810	0.003017	-0.019030
7	P3	-8.132818	0.003016	-0.018978
11	P3	-8.132822	0.003016	-0.018931
15	P3	-8.132832	0.003016	-0.018878
19	P3	-8.132834	0.003017	-0.018853
22	P3	-8.132830	0.003017	-0.018860
24	P3	-8.132828	0.003016	-0.018882
28	P3	-8.132886	0.003015	-0.019637

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	-4.189102	0.098217	-0.075926
7	P1	-3.408648	0.346604	-0.100408
11	P1	-4.652078	0.075199	0.037054
15	P1	-3.612410	0.508679	-0.145176
19	P1	-2.880434	0.080501	-0.084689
22	P1	-4.693635	0.101034	0.000349
24	P1	-7.070757	0.040653	0.024585
28	P1	-6.635701	0.117193	-0.027625

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.609451	0.239146	-0.014781
7	P2	-13.449561	0.186256	-0.012857
11	P2	-12.063813	0.147658	0.054455
15	P2	-5.734701	0.024820	-0.062145
19	P2	-6.561614	0.051938	-0.115628
22	P2	-15.016193	0.545504	-0.045389
24	P2	-19.703873	0.043076	0.027591
28	P2	-17.114998	0.060755	-0.072515

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.027073	0.003279	-0.021473
7	P3	-8.027134	0.003282	-0.021514
11	P3	-8.027014	0.003276	-0.021305
15	P3	-8.027040	0.003284	-0.021590
19	P3	-8.027061	0.003285	-0.021502
22	P3	-8.027121	0.003270	-0.021664
24	P3	-8.027084	0.003305	-0.021484
28	P3	-8.027074	0.003307	-0.021551

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	0.000481807
	stdev	2.36169e-07
MEAN Q	mean	0.000486472
	stdev	2.70834e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127700
	stdev	0.00117987
STDEV Q	mean	0.127954
	stdev	0.00119341

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

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

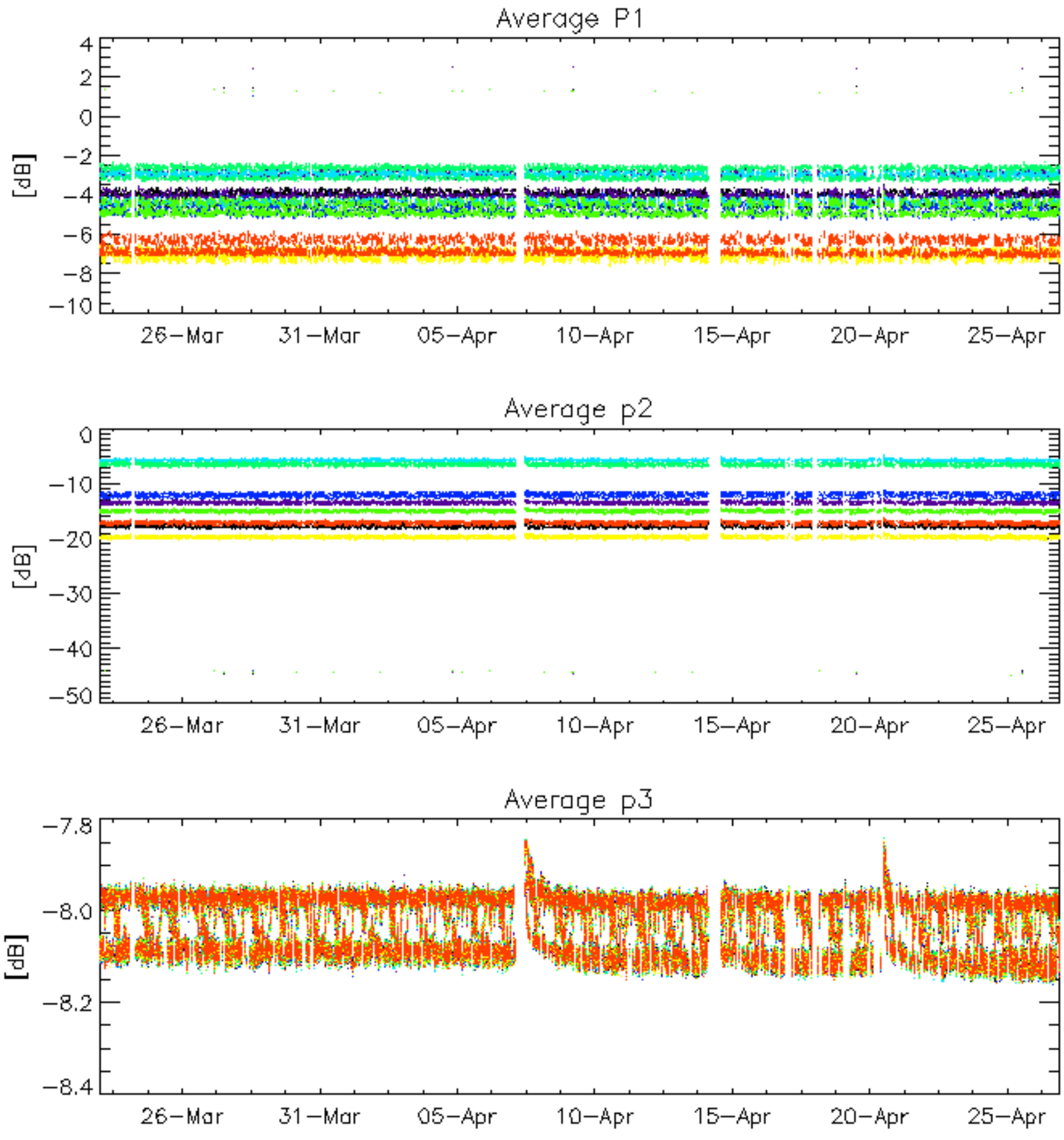
Evolution of Absolute Doppler

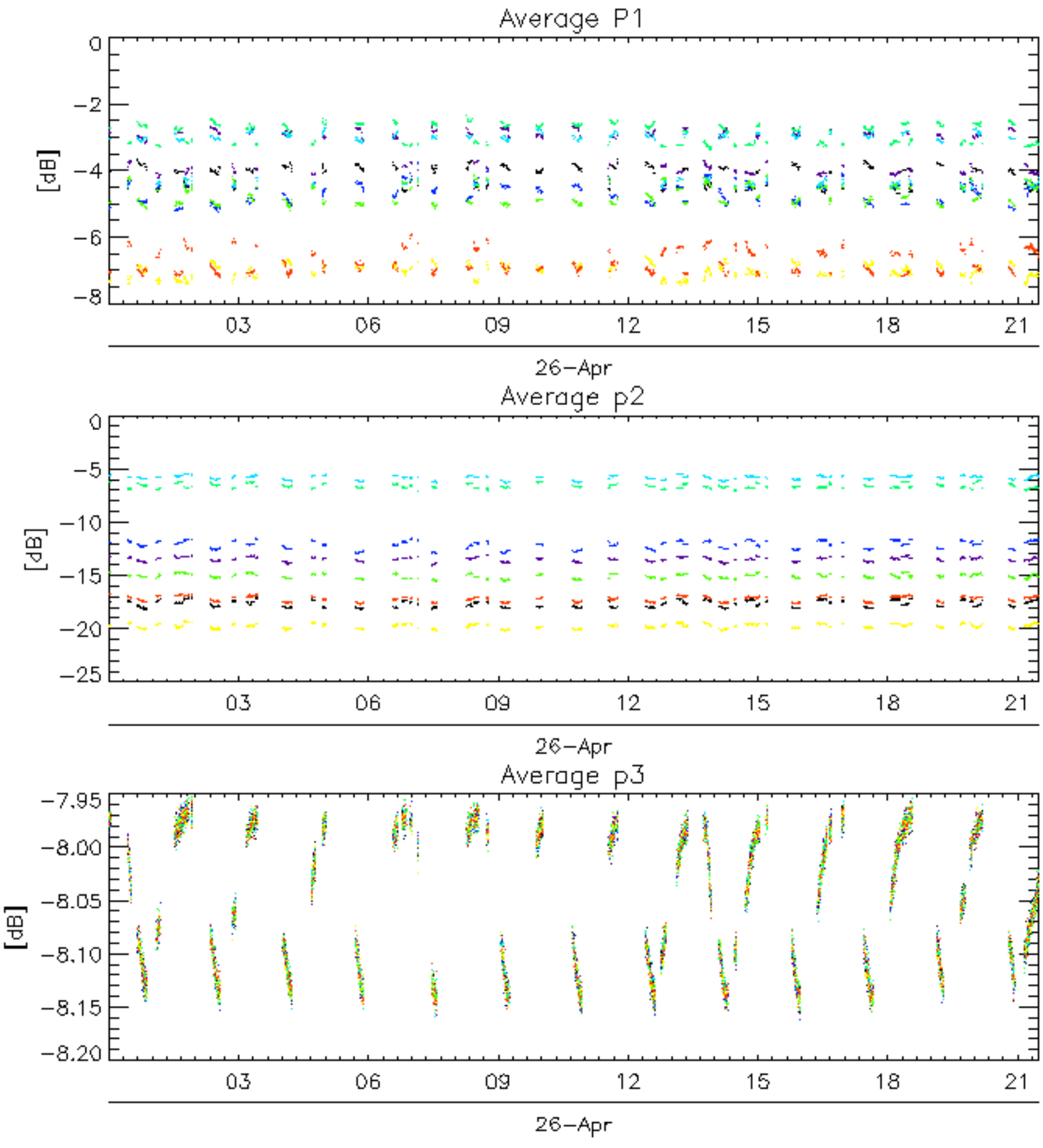
Acsending

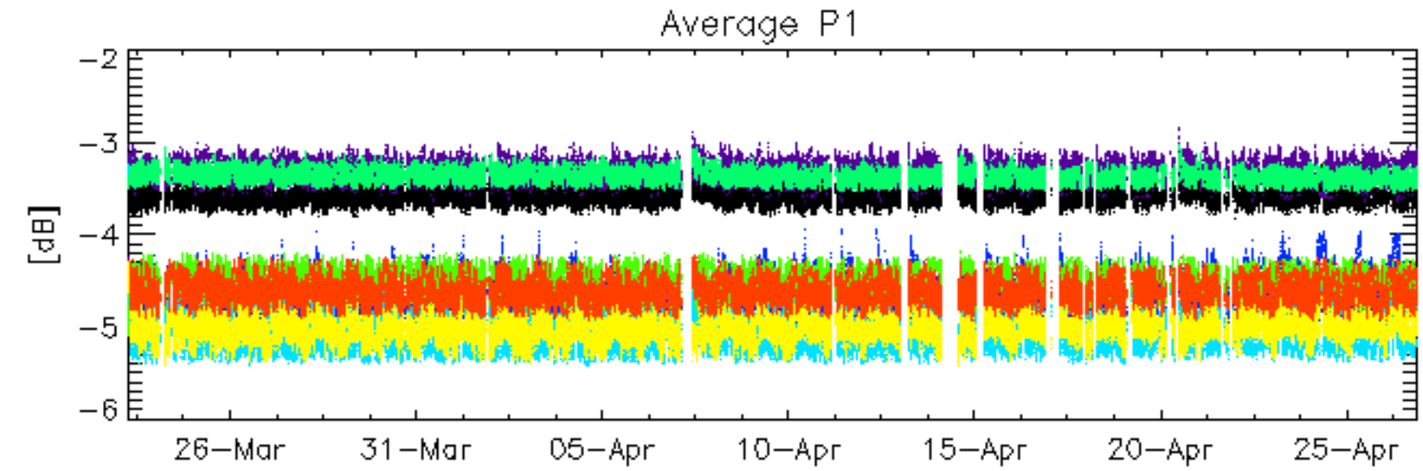
Descending

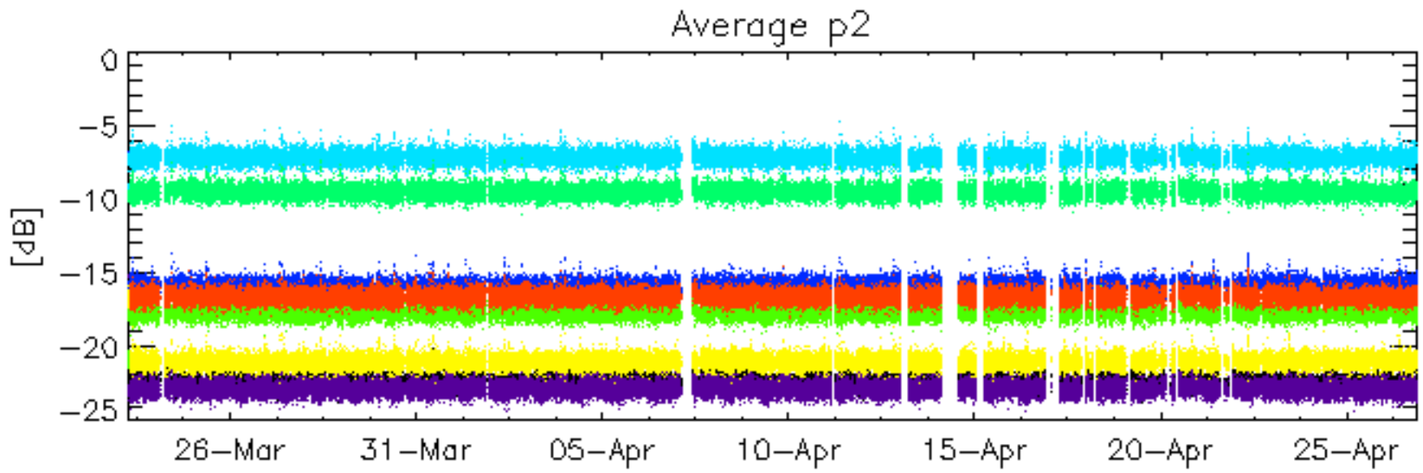
6.6 - Doppler evolution versus ANX for GM1

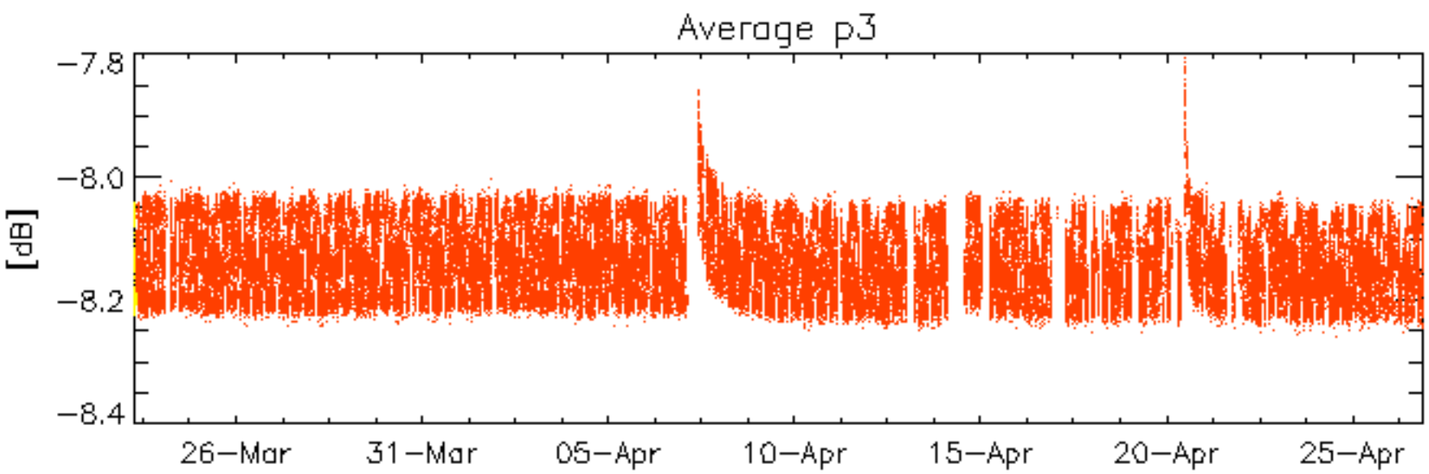
Evolution Doppler error versus ANX



Average P1
[dB]
4
2
0
−2
−4
−6
−8
−10
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
Average p2
[dB]
0
−10
−20
−30
−40
−50
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
Average p3
[dB]
−7.8
−8.0
−8.2
−8.4
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28

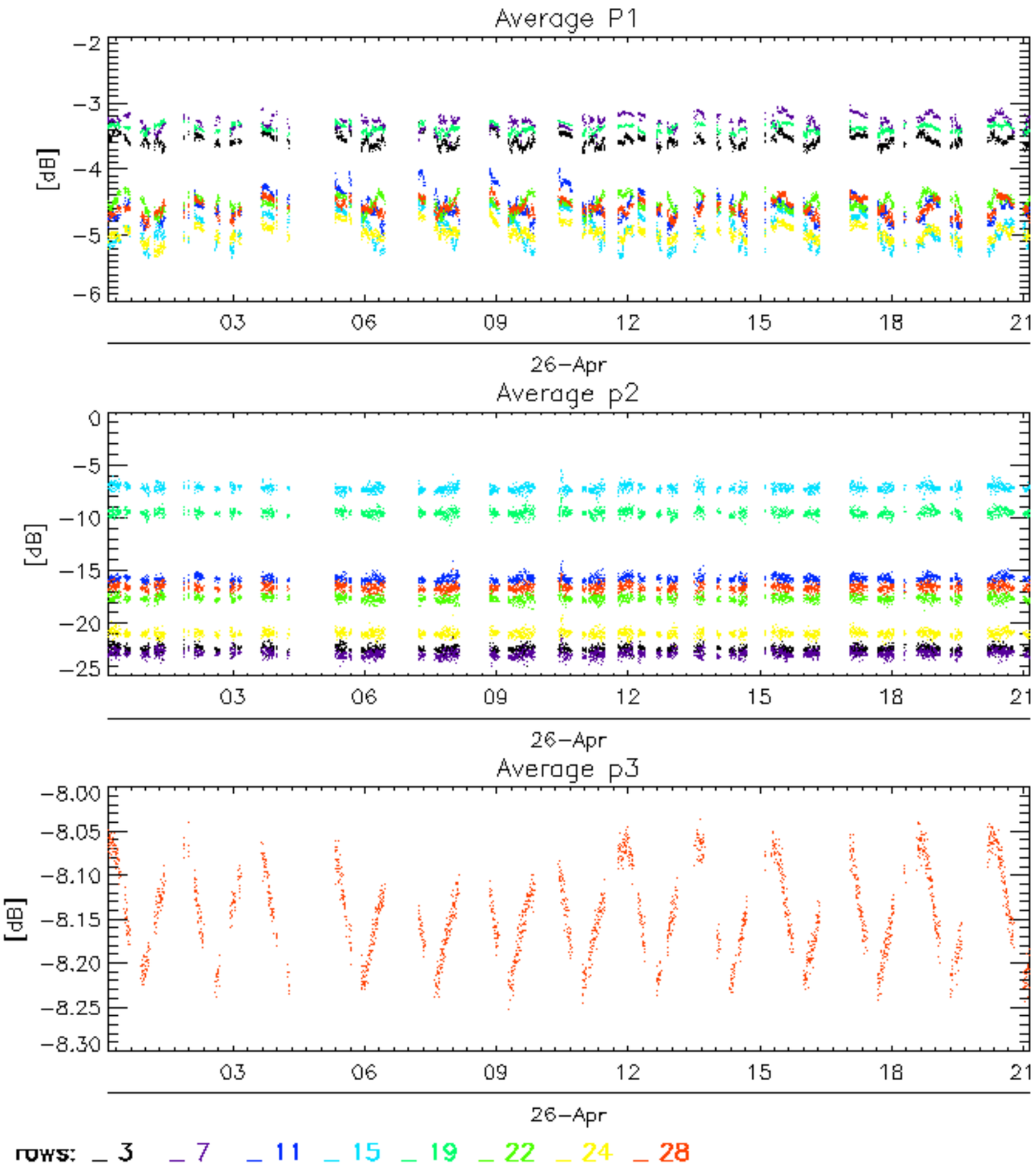

Average P1
[dB]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
26−Apr
Average p2
[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
26−Apr
Average p3
[dB]
−7.95
−8.00
−8.05
−8.10
−8.15
−8.20
03
06
09
12
15
18
21
26−Apr
rows: 3 7 11 15 19 22 24 28







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

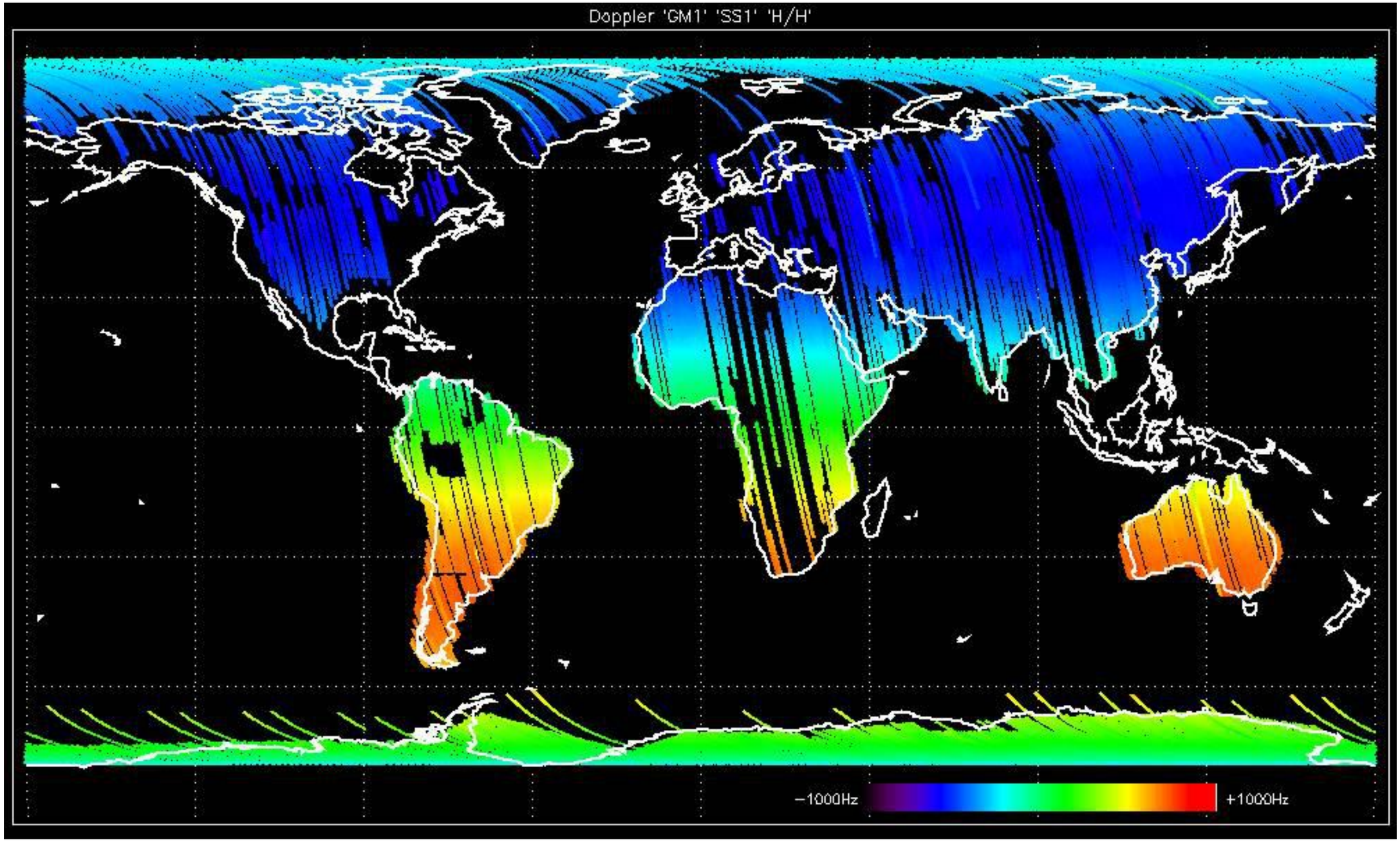

Average P1
[dB]
−2
−3
−4
−5
−6
03
06
09
12
15
18
21
26−Apr
Average p2
[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
26−Apr
Average p3
[dB]
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
03
06
09
12
15
18
21
26−Apr
rows: 3 7 11 15 19 22 24 28

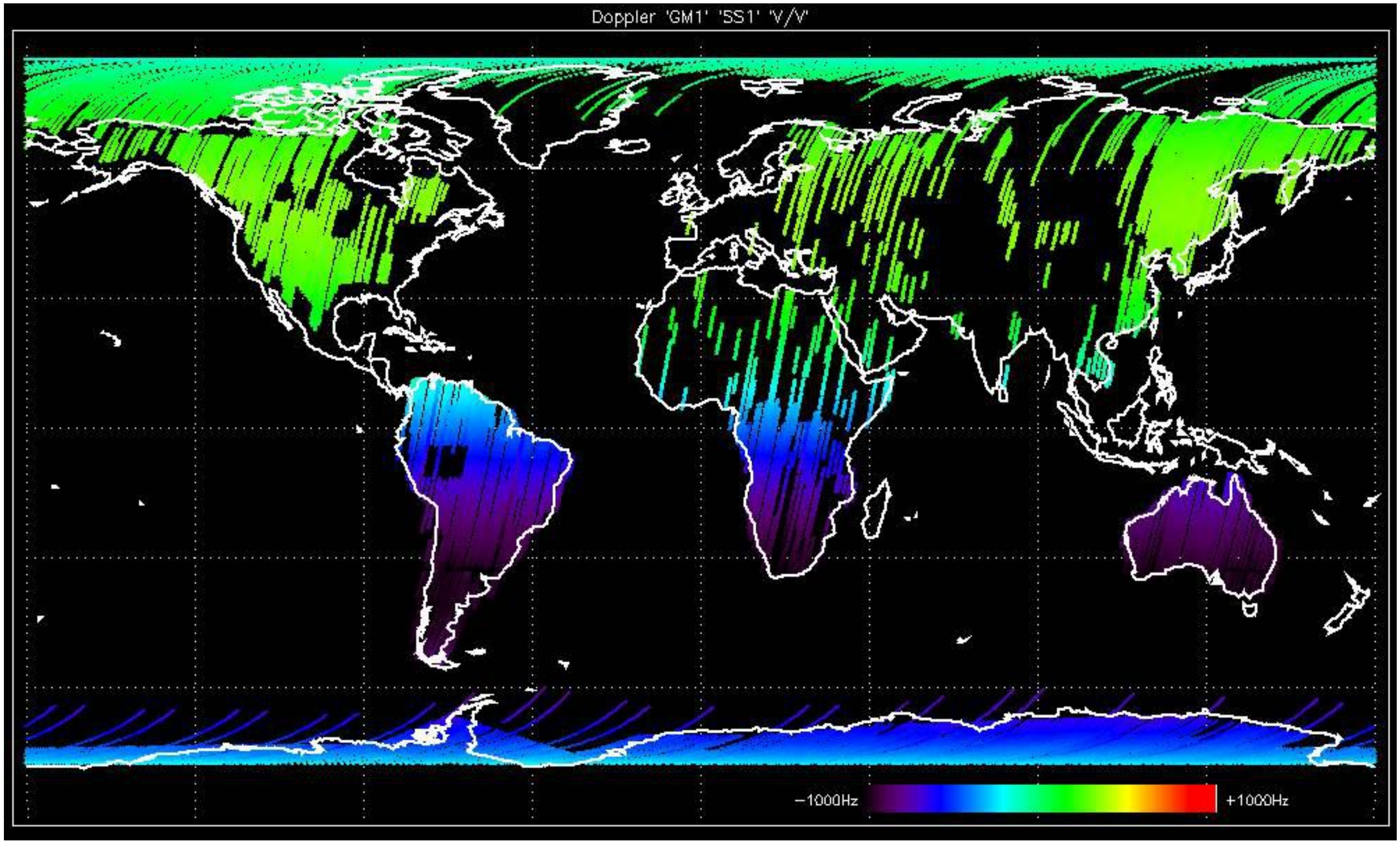
No anomalies observed on available browse products.

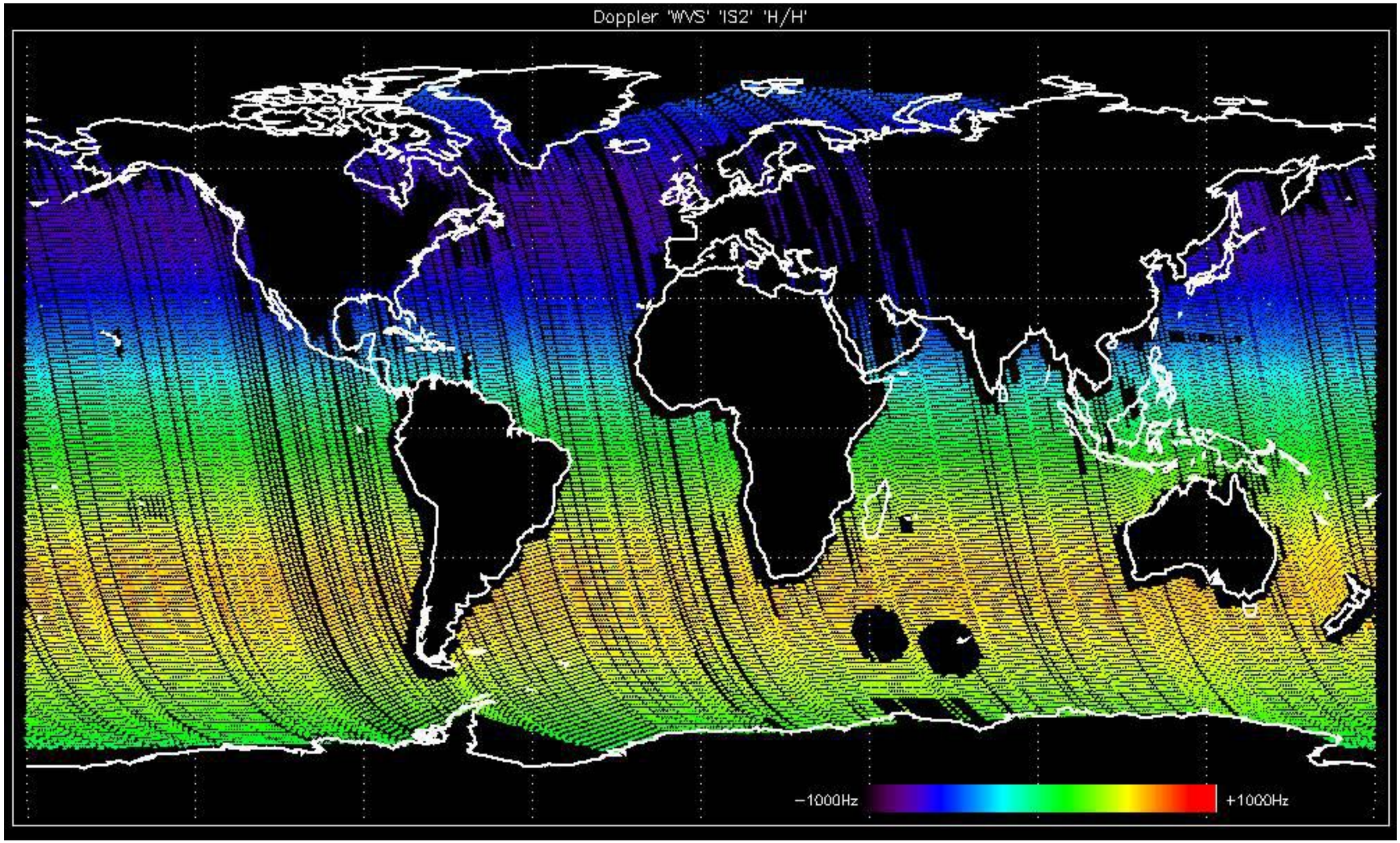
No anomalies observed.

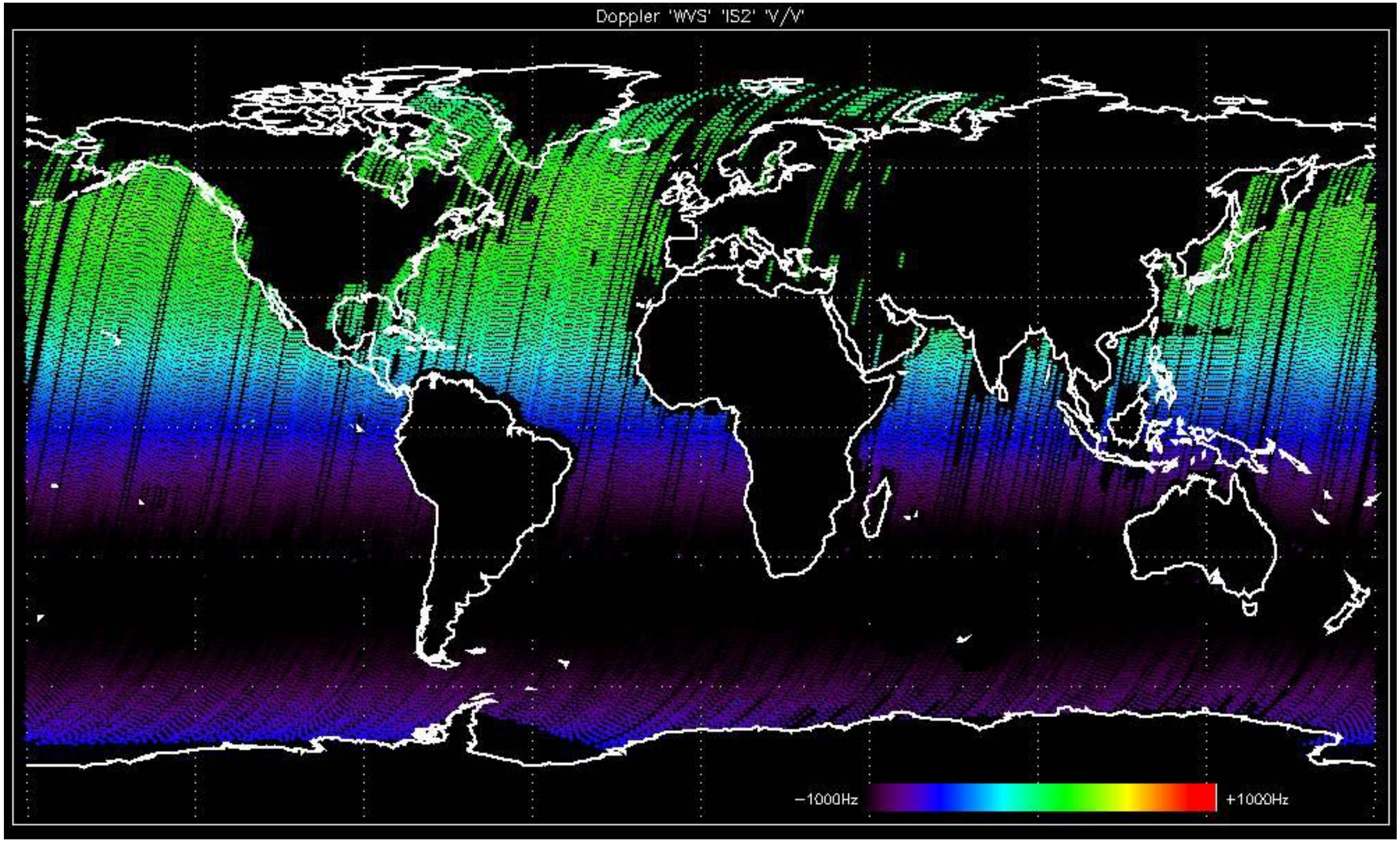
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

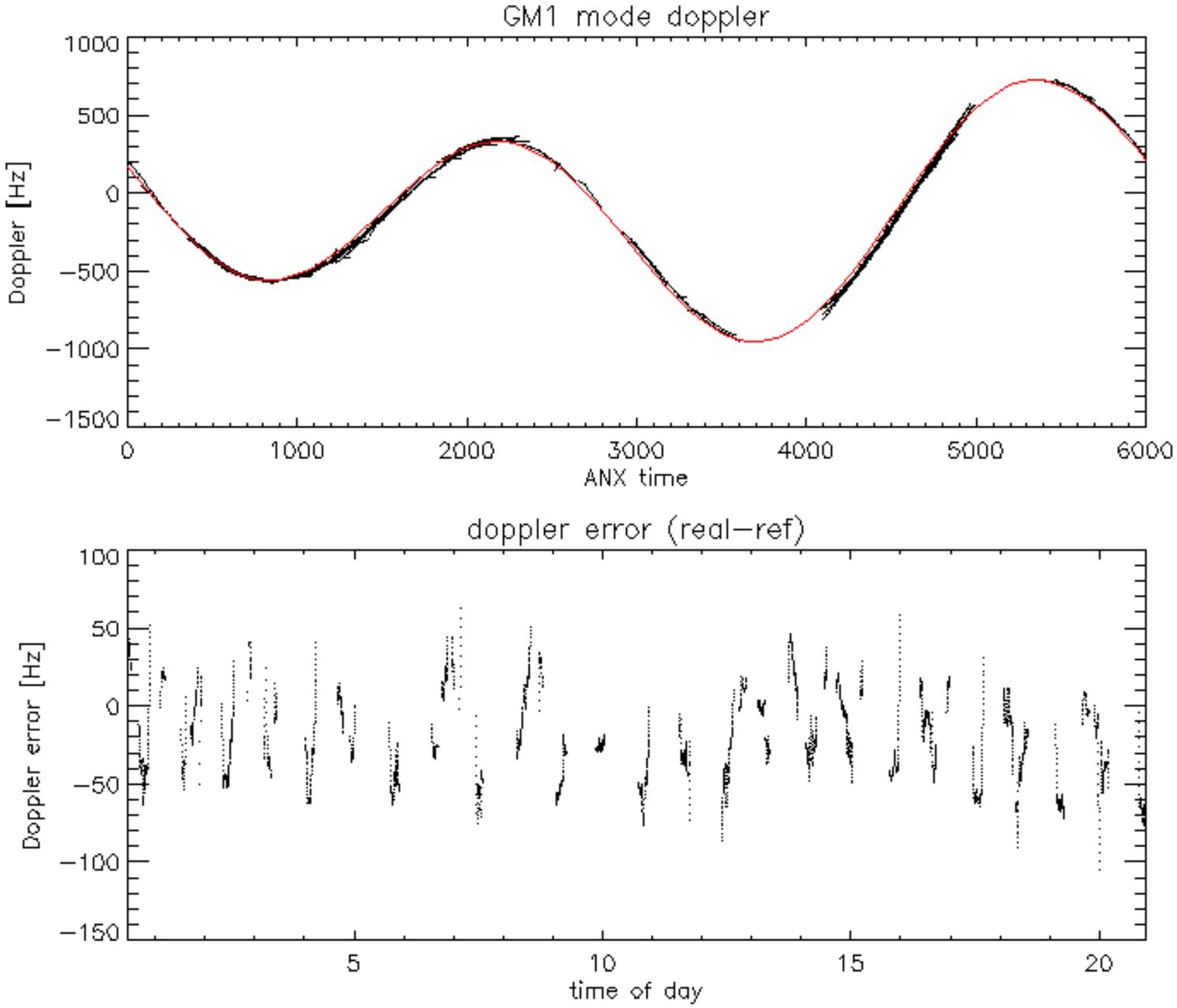
Preliminary report.The data is not yet controled

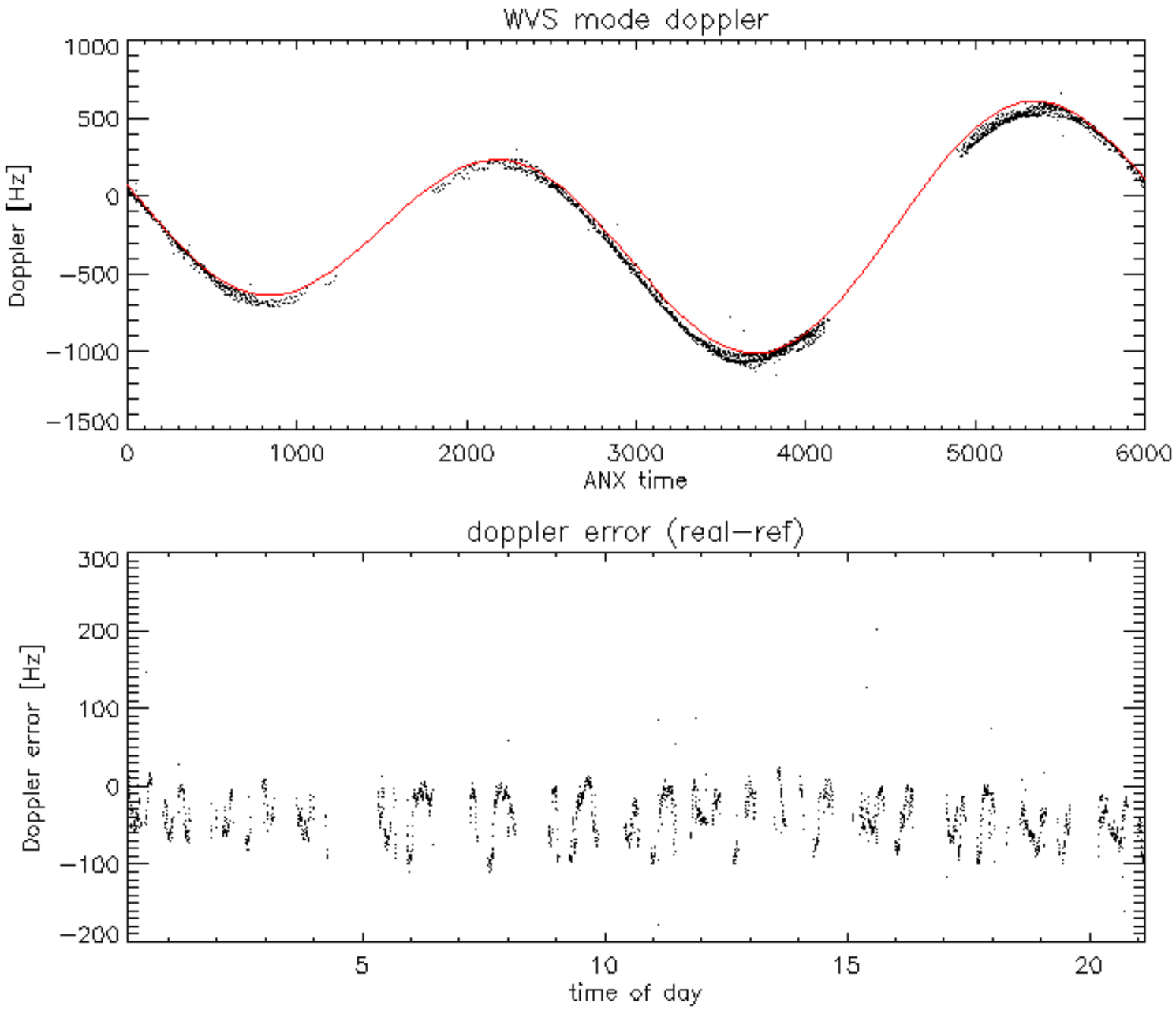

Doppler 'GM1' 'SS1' 'H/H'
−1000Hz
+1000Hz

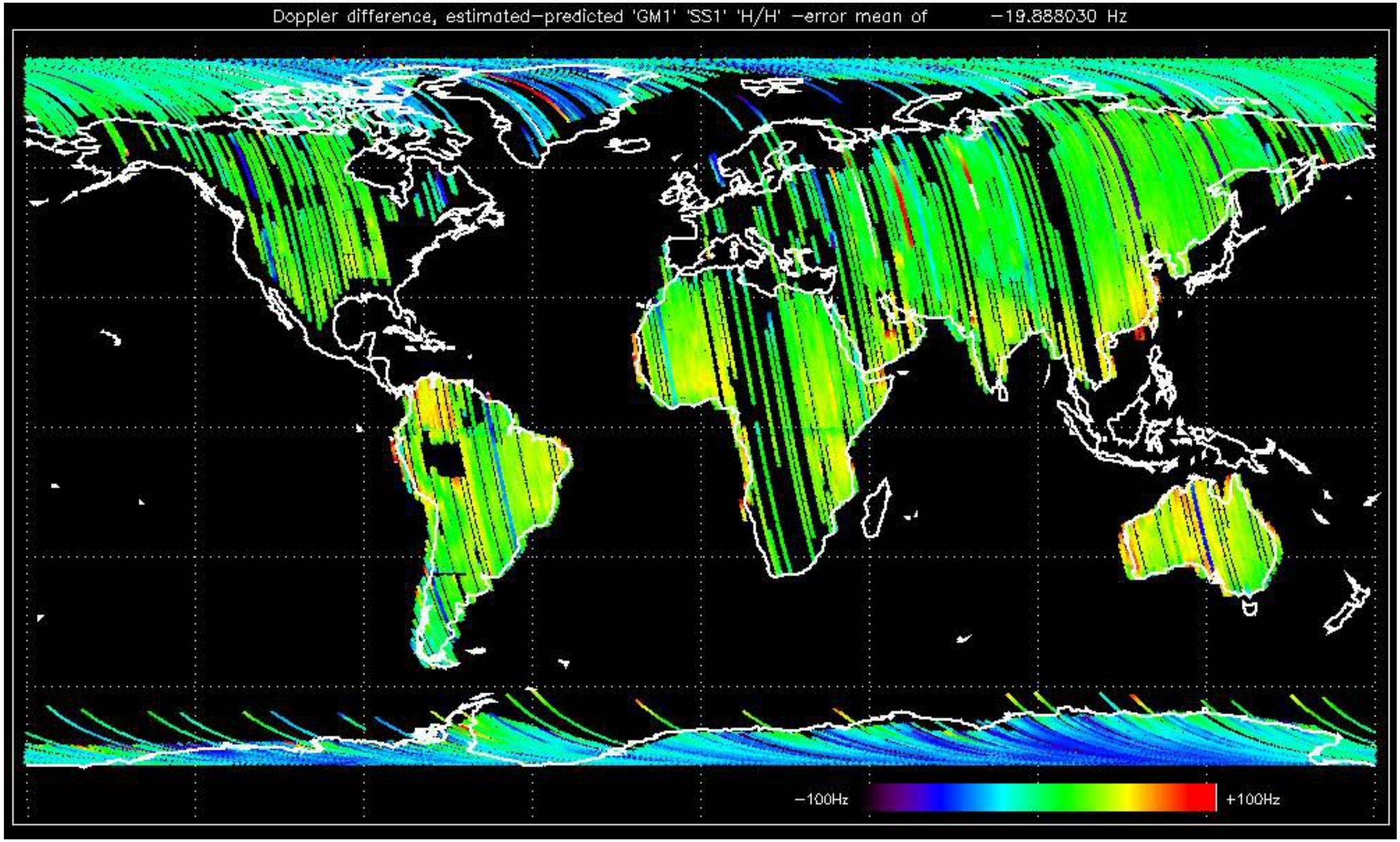

Doppler 'GM1' 'SS1' 'V/V'
−1000Hz
+1000Hz

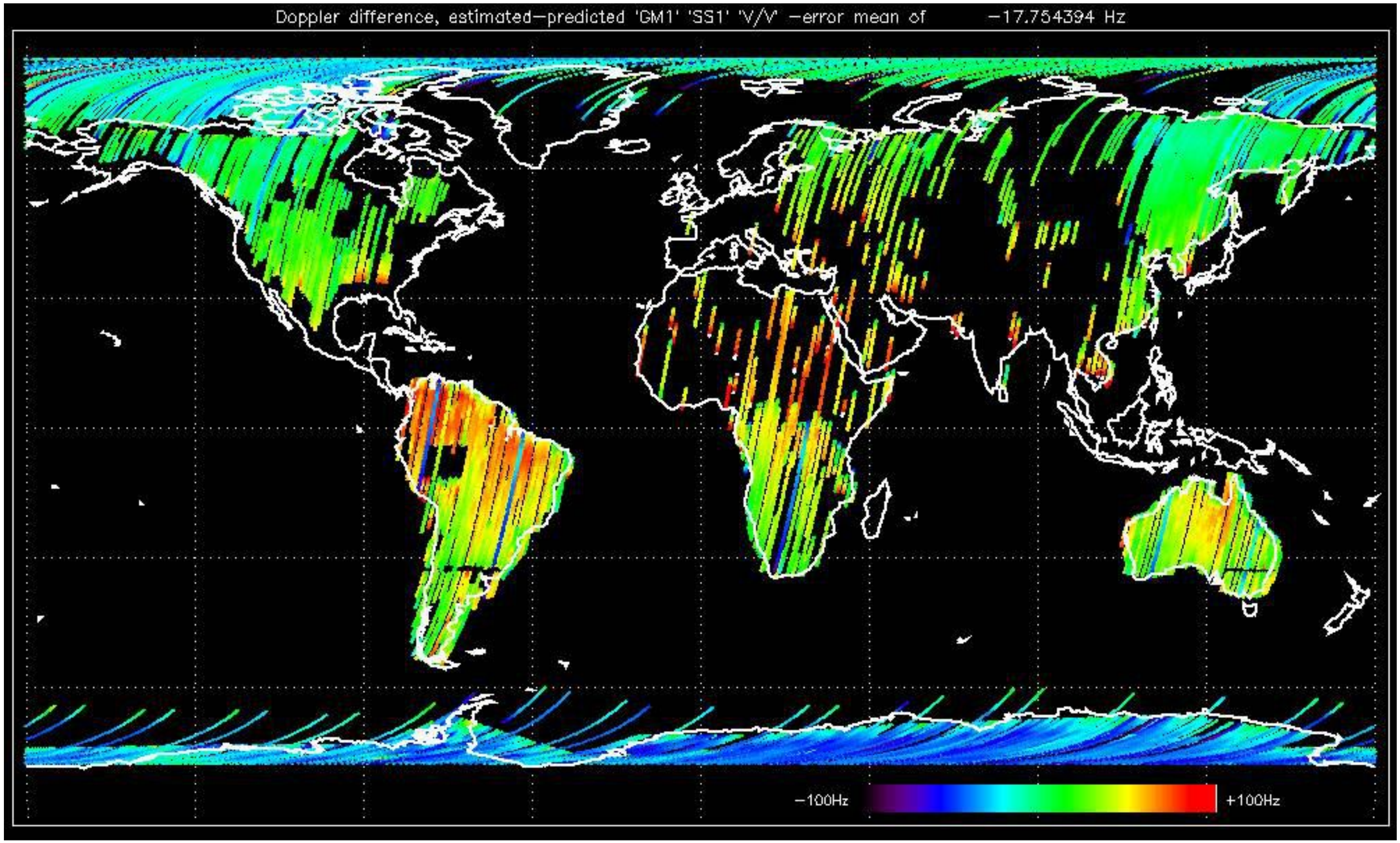

Doppler 'WVS' 'IS2' 'H/H'
−1000Hz
+1000Hz

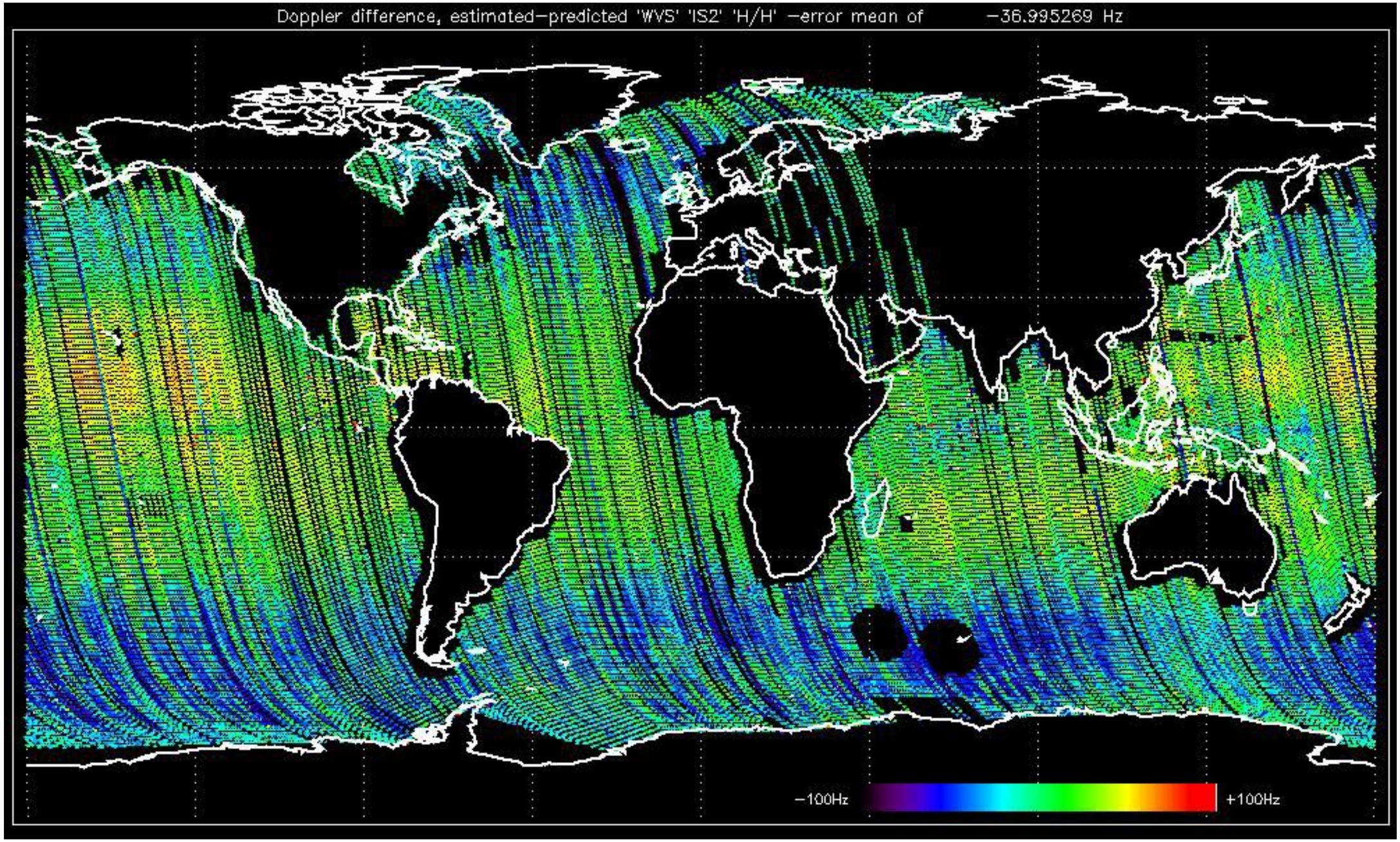

Doppler 'WVS' 'IS2' 'V/V'
−1000Hz
+1000Hz

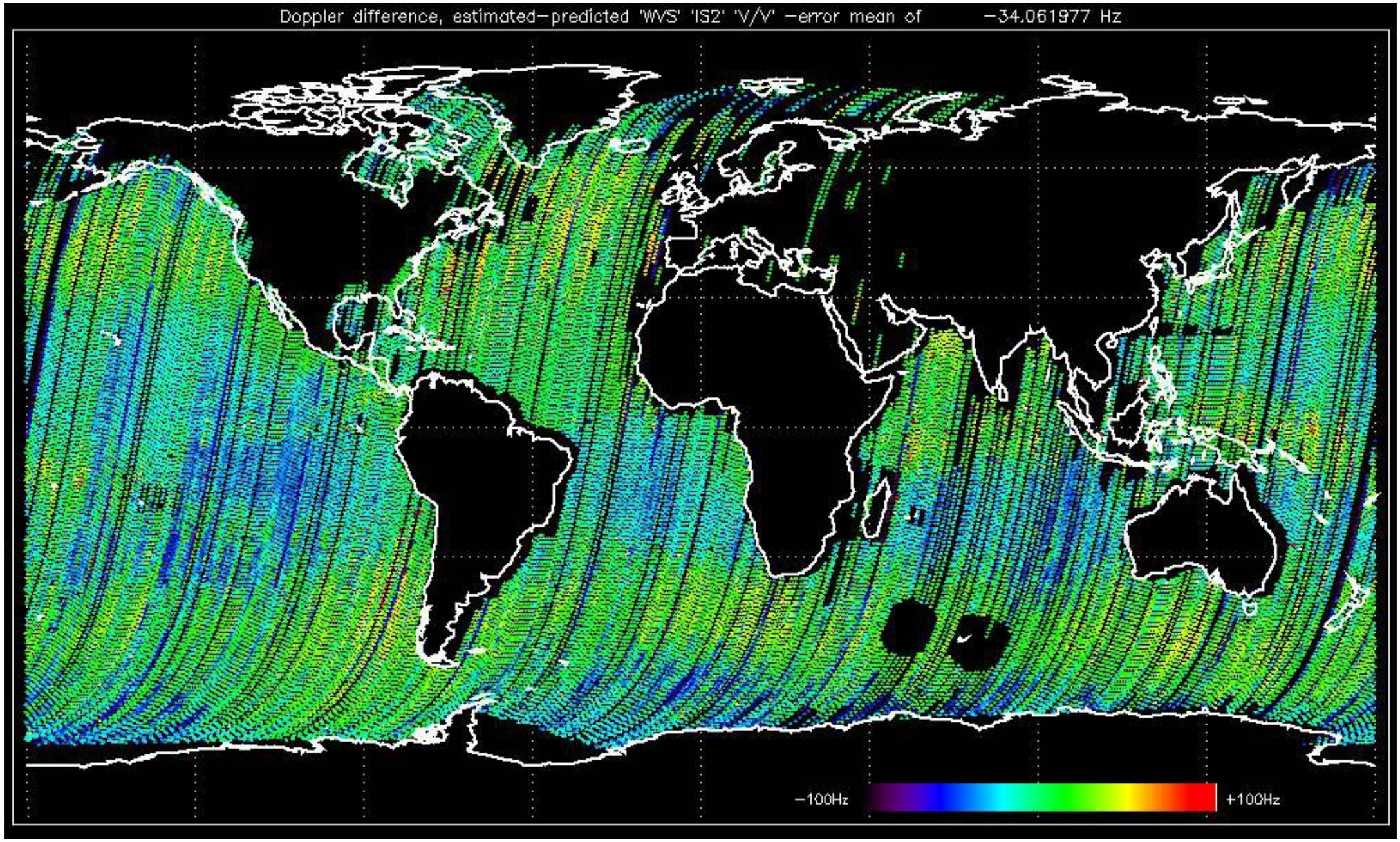

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
100
50
0
−50
−100
−150
5
10
15
20
time of day


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 'GM1' 'SS1' 'H/H' −error mean of −19.888030 Hz
−100Hz
+100Hz

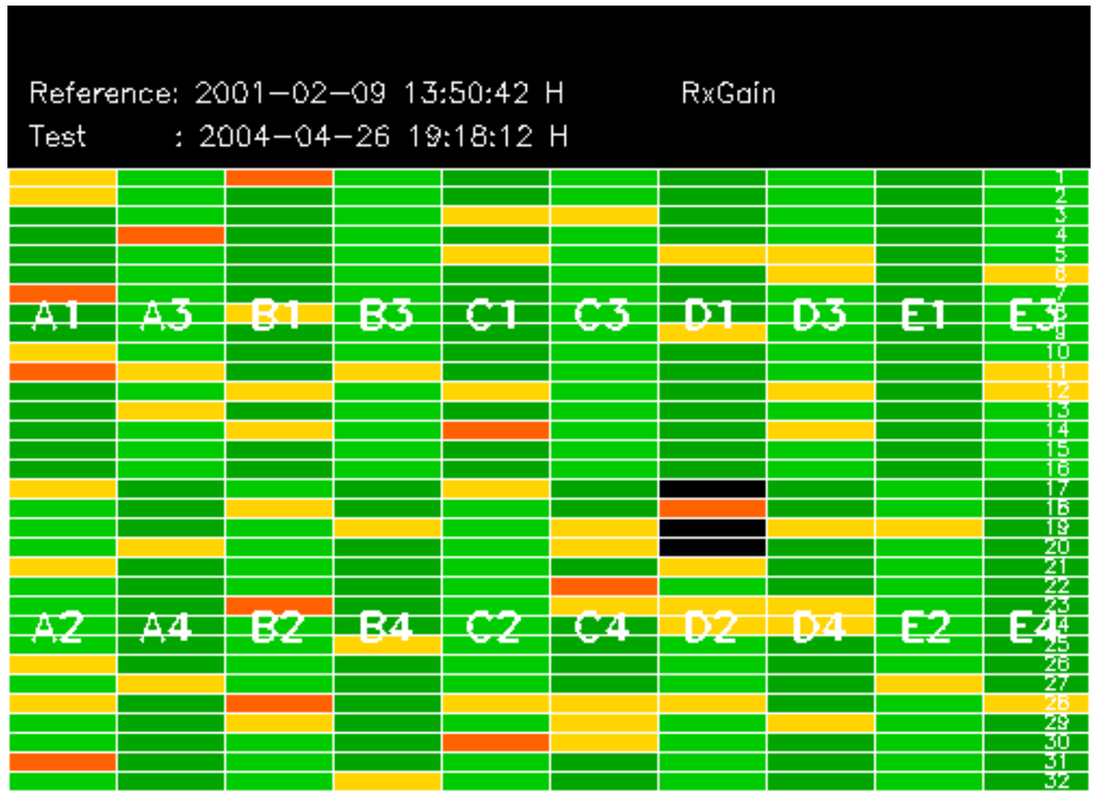

Doppler difference, estimated−predicted 'GM1' 'SS1' 'V/V' −error mean of −17.754394 Hz
−100Hz
+100Hz


Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of -36.995269 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' 'V/V' −error mean of −34.061977 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
RxGain
Test : 2004-04-26 19:18:12 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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9
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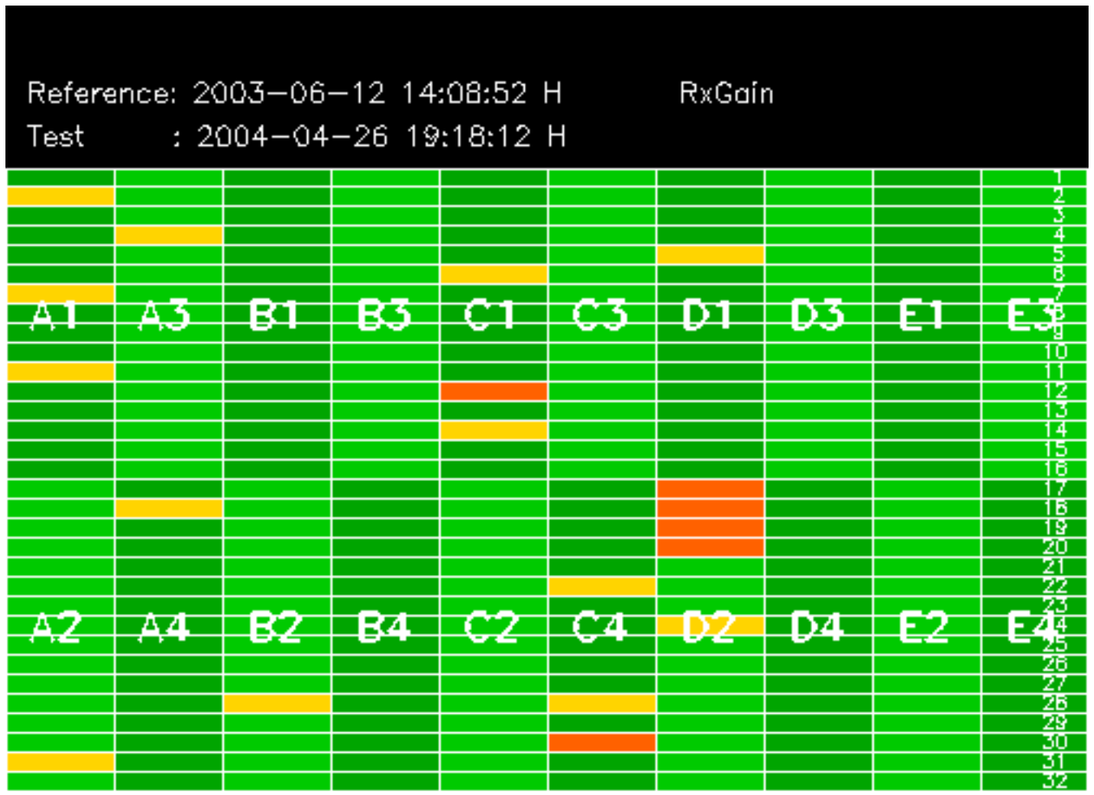
Reference: 2003-06-12 14:08:52 H
Test : 2004-04-26 19:18:12 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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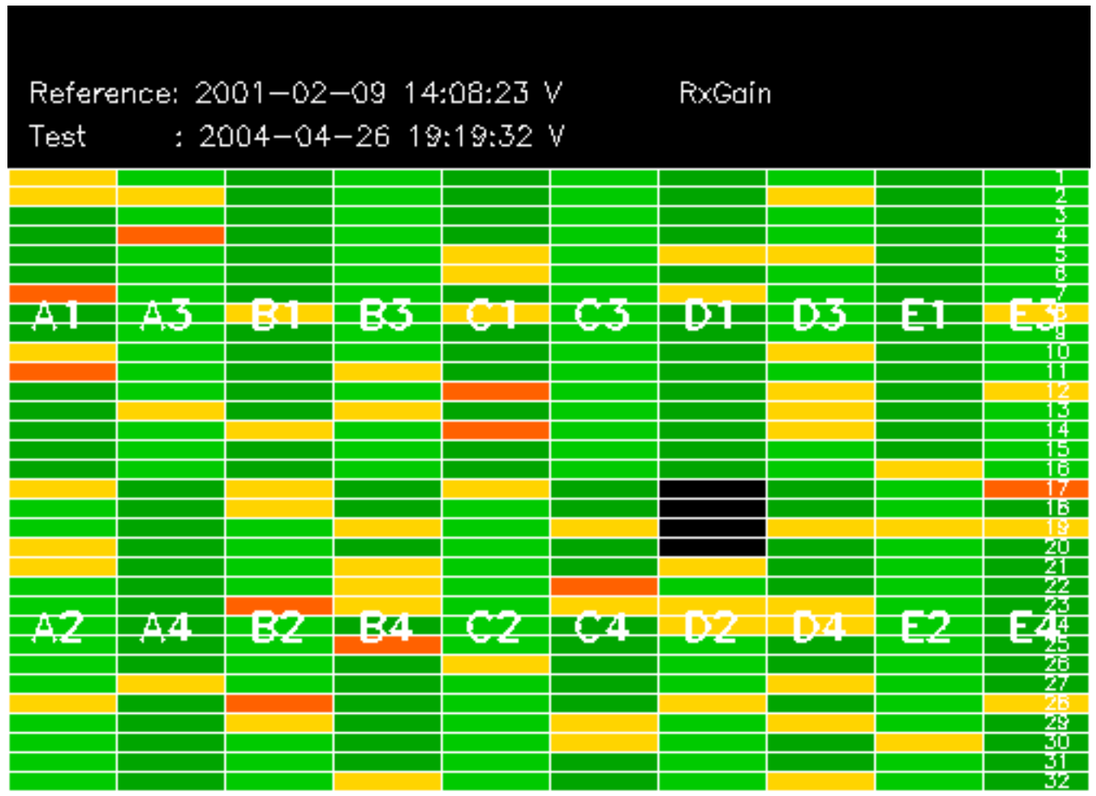
Reference: 2001-02-09 14:08:23 V
Test : 2004-04-26 19:19:32 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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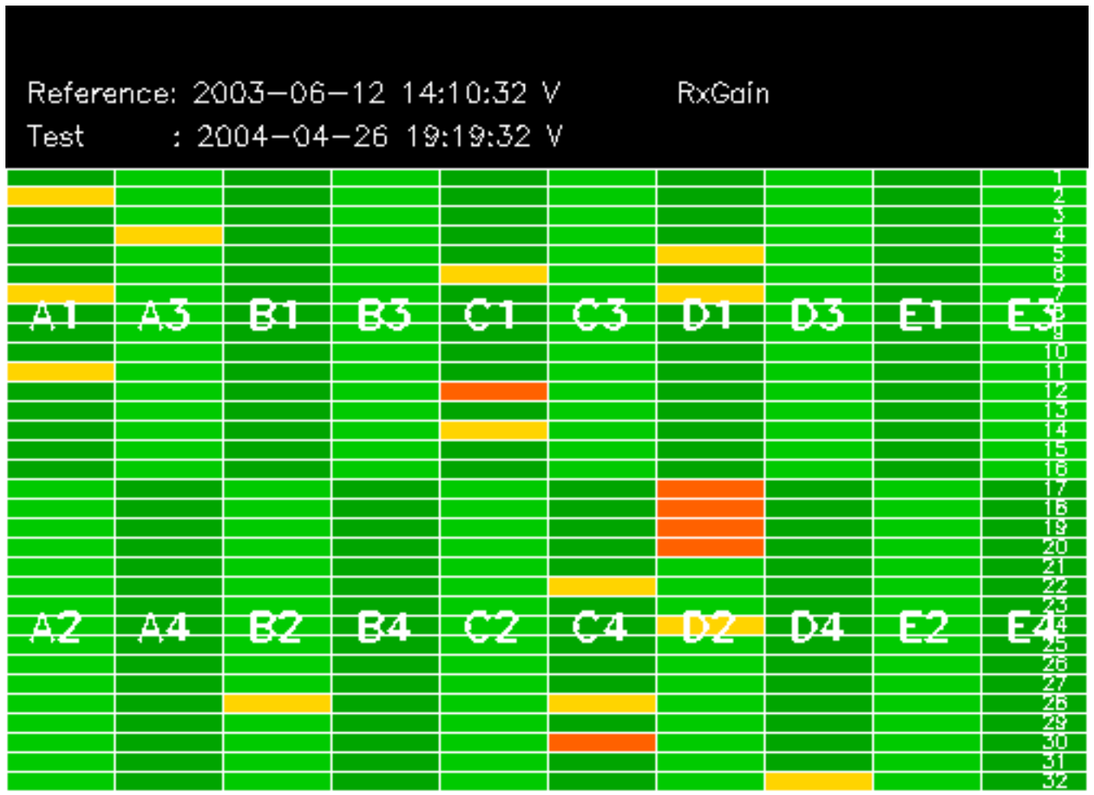
Reference: 2003-06-12 14:10:32 V
Test : 2004-04-26 19:19:32 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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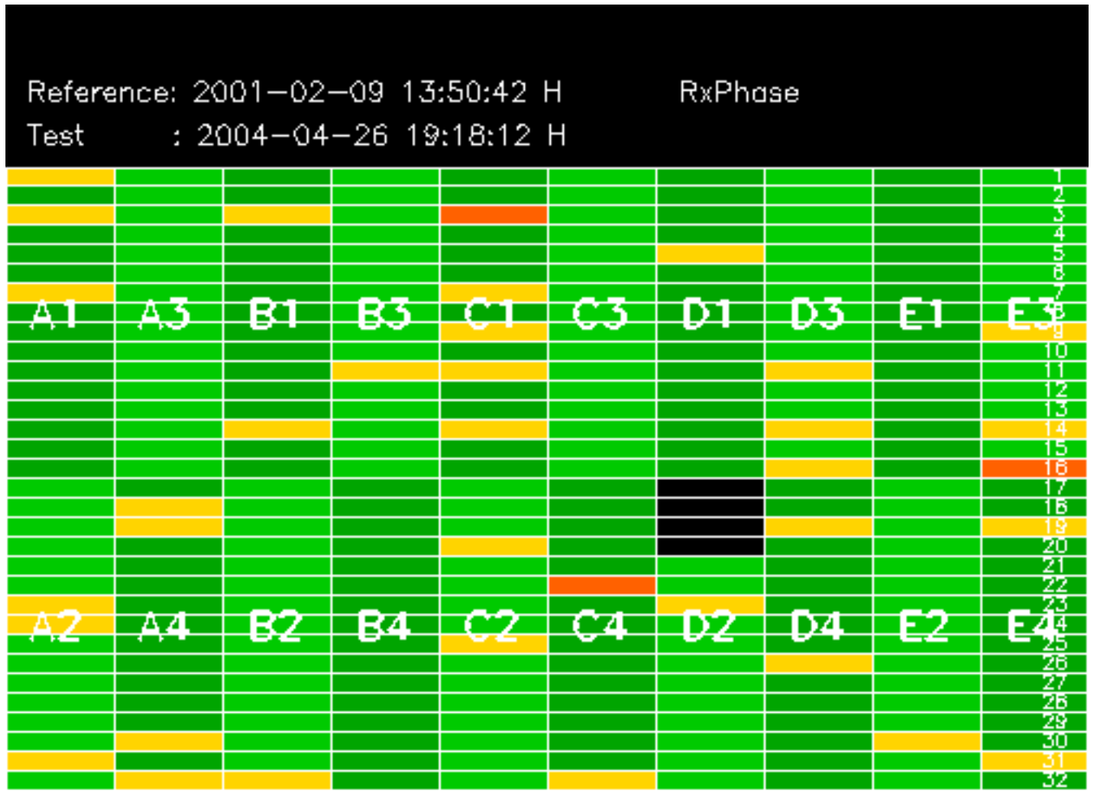
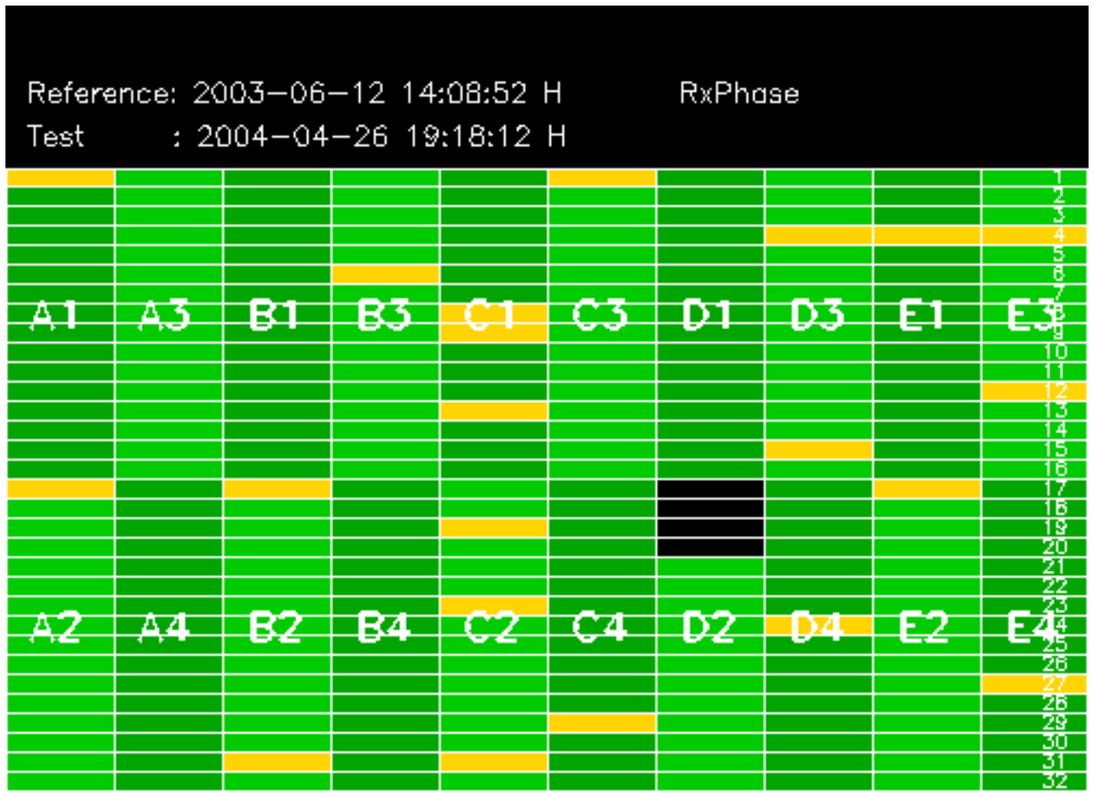
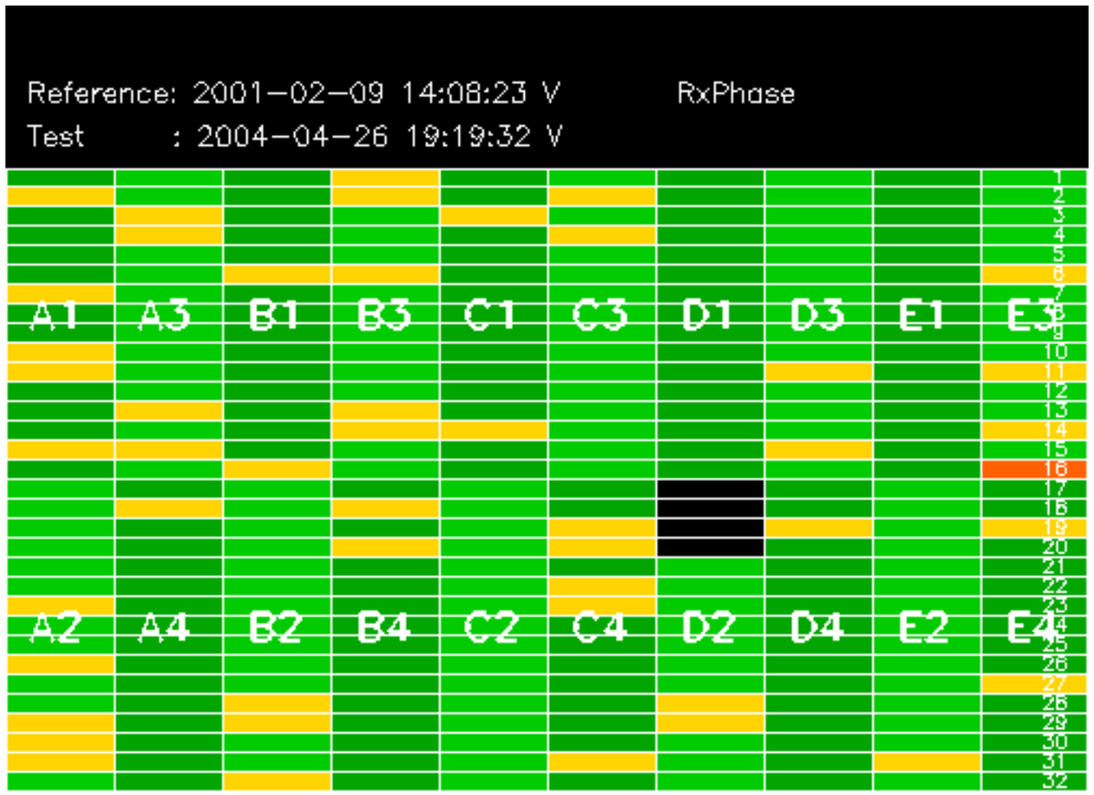

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-04-26 19:18:12 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-04-26 19:18:12 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 : 2004-04-26 19:19:32 V
RxPhase
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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8
9
10
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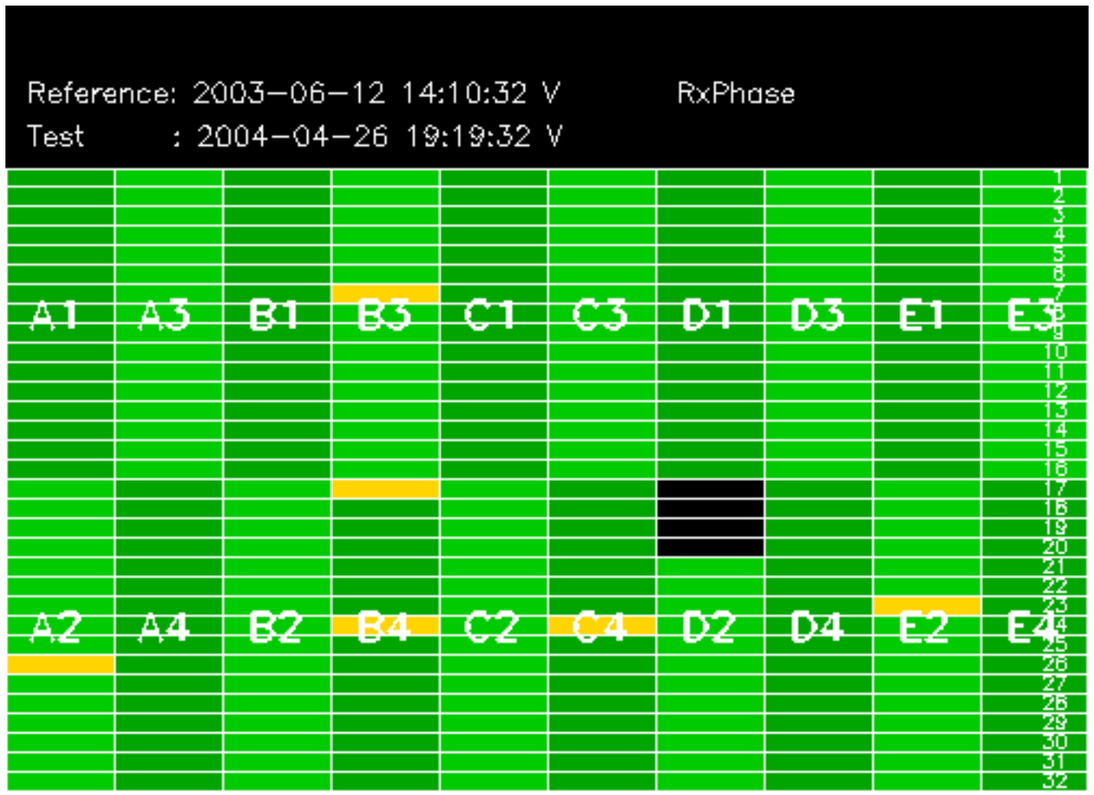
Reference: 2003-06-12 14:10:32 V
Test : 2004-04-26 19:19:32 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
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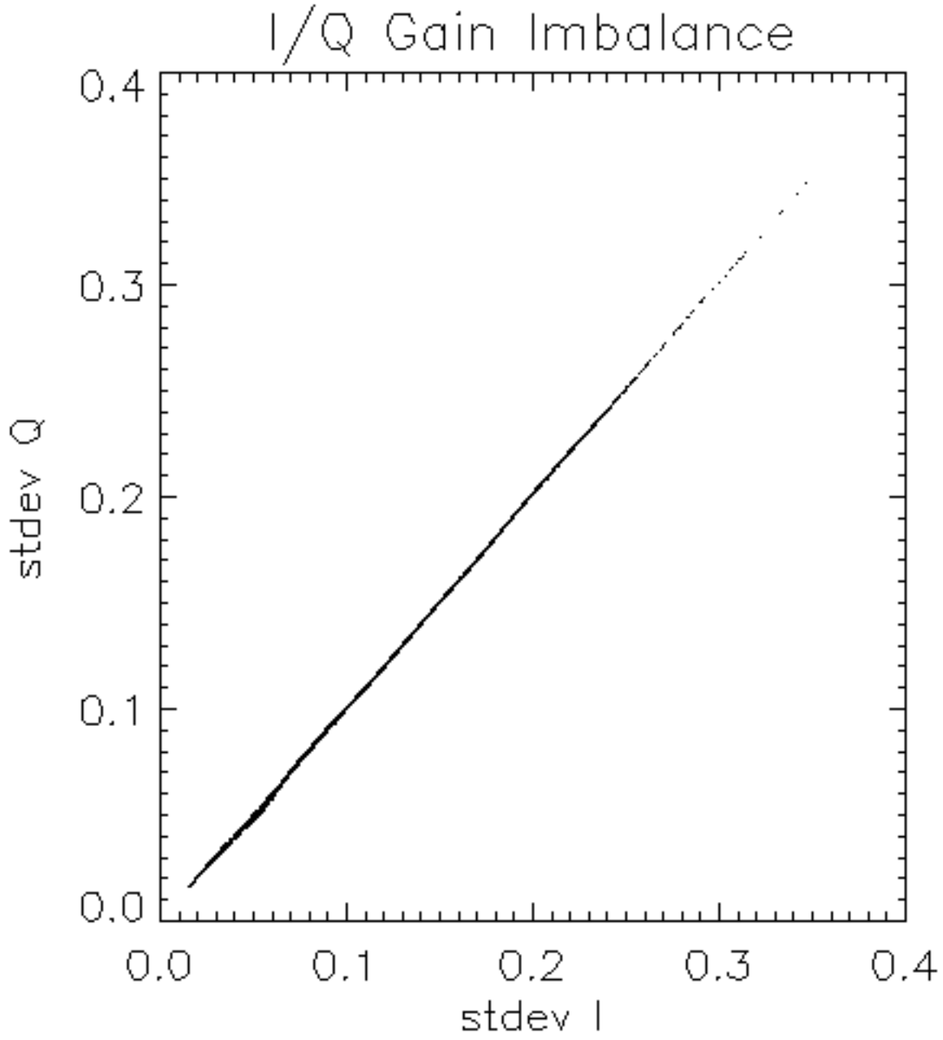
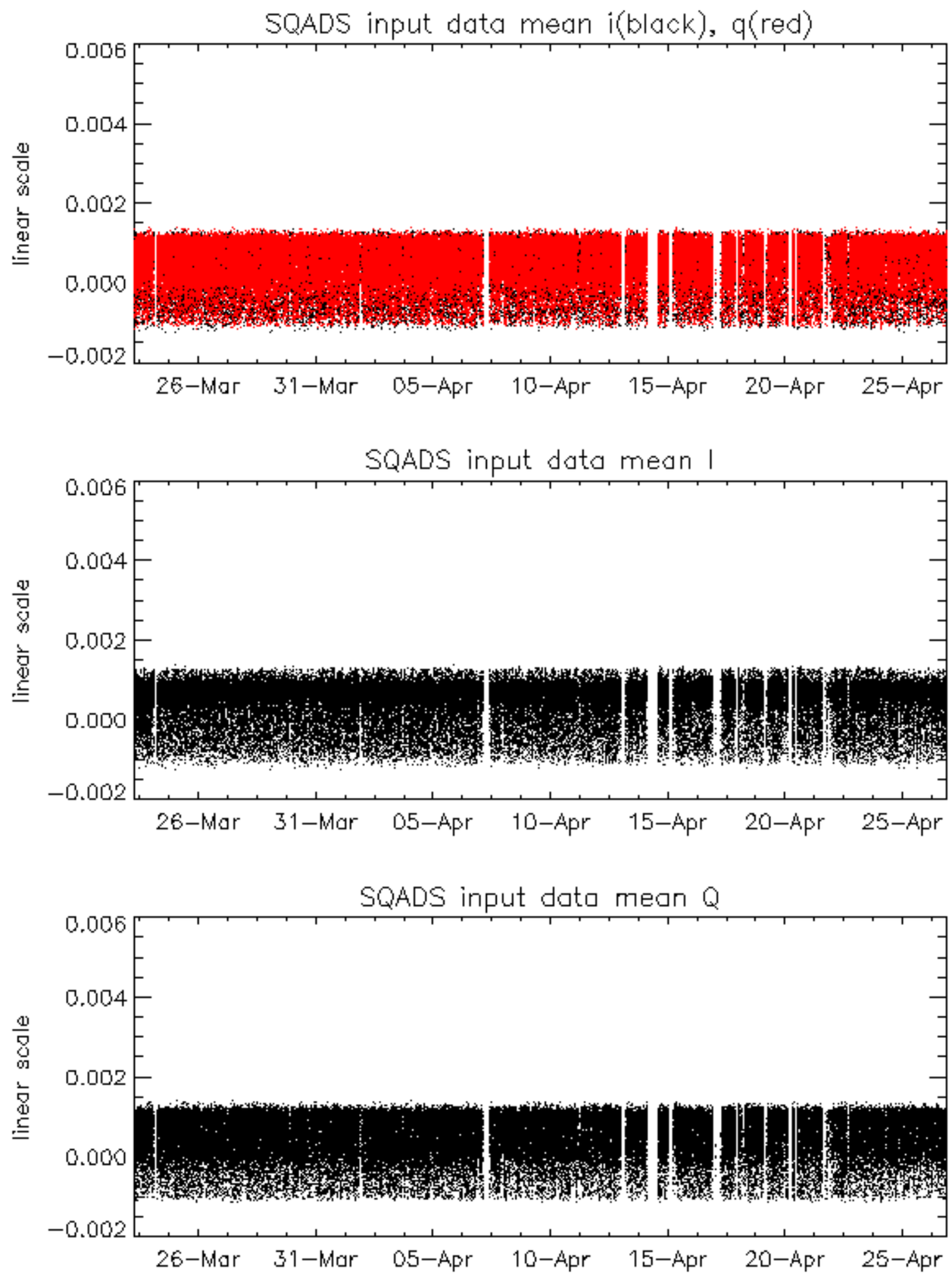
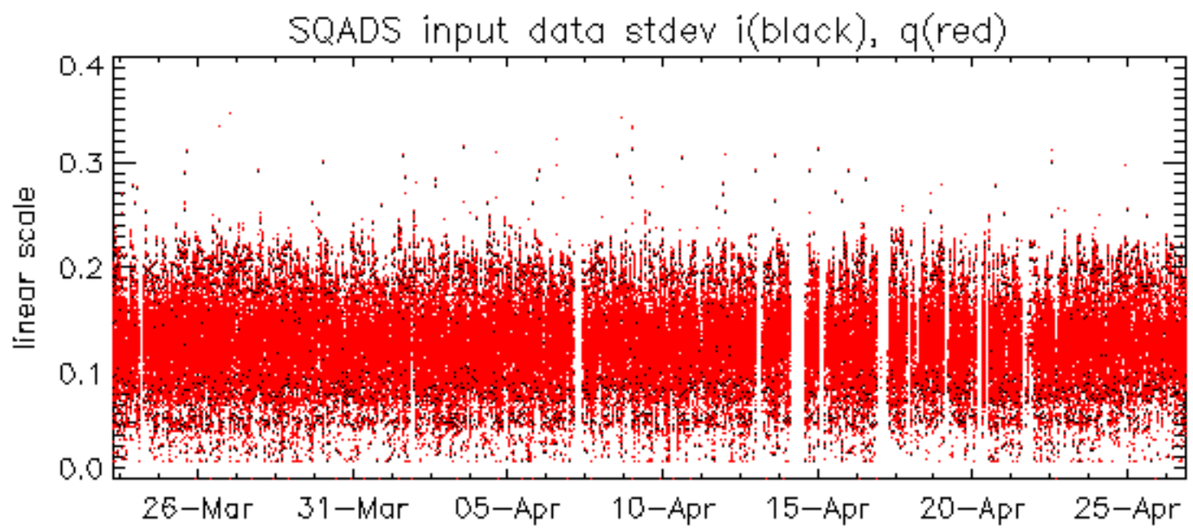
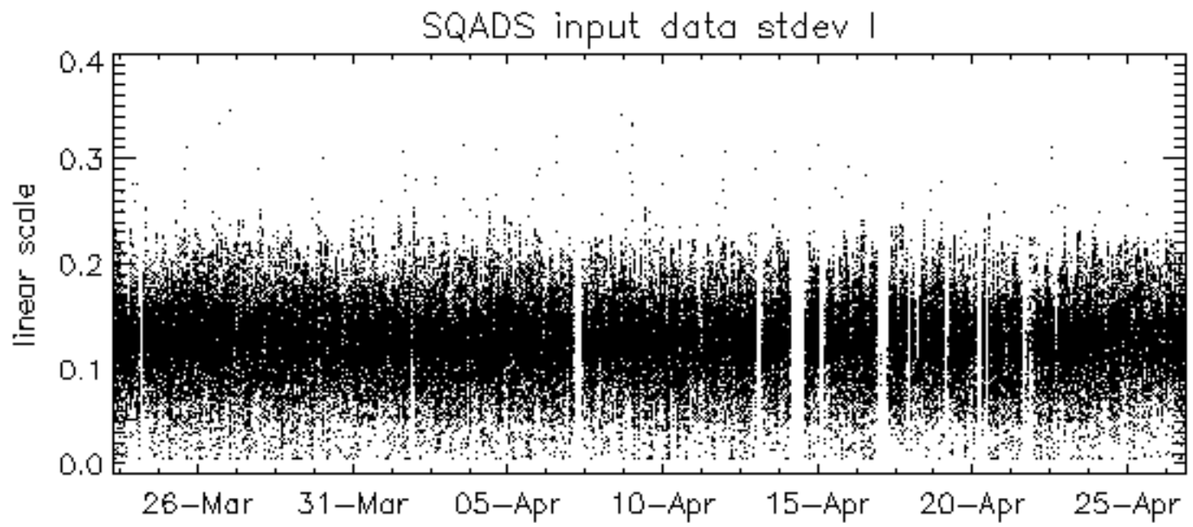
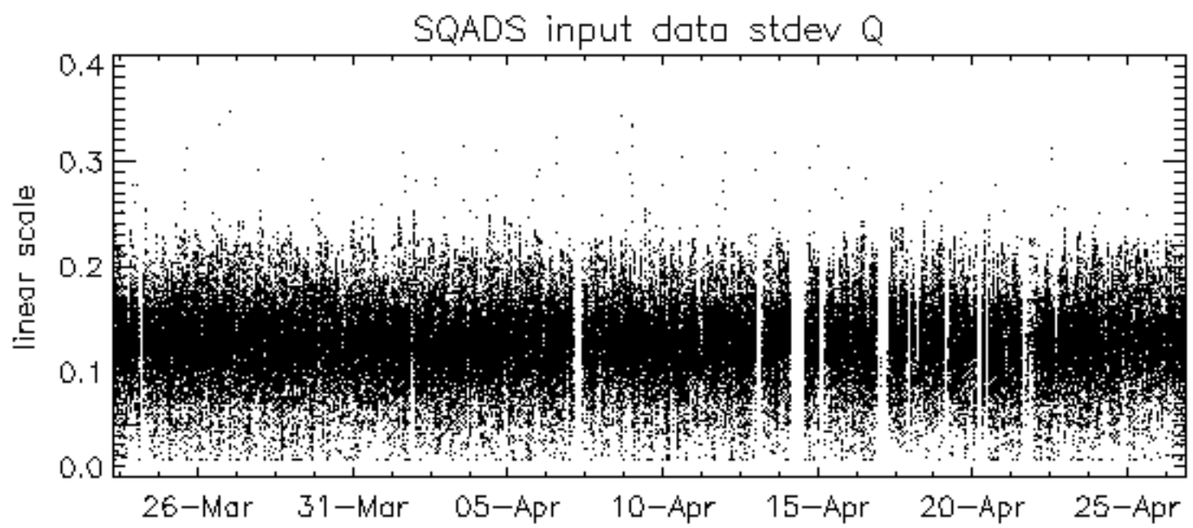
31
32

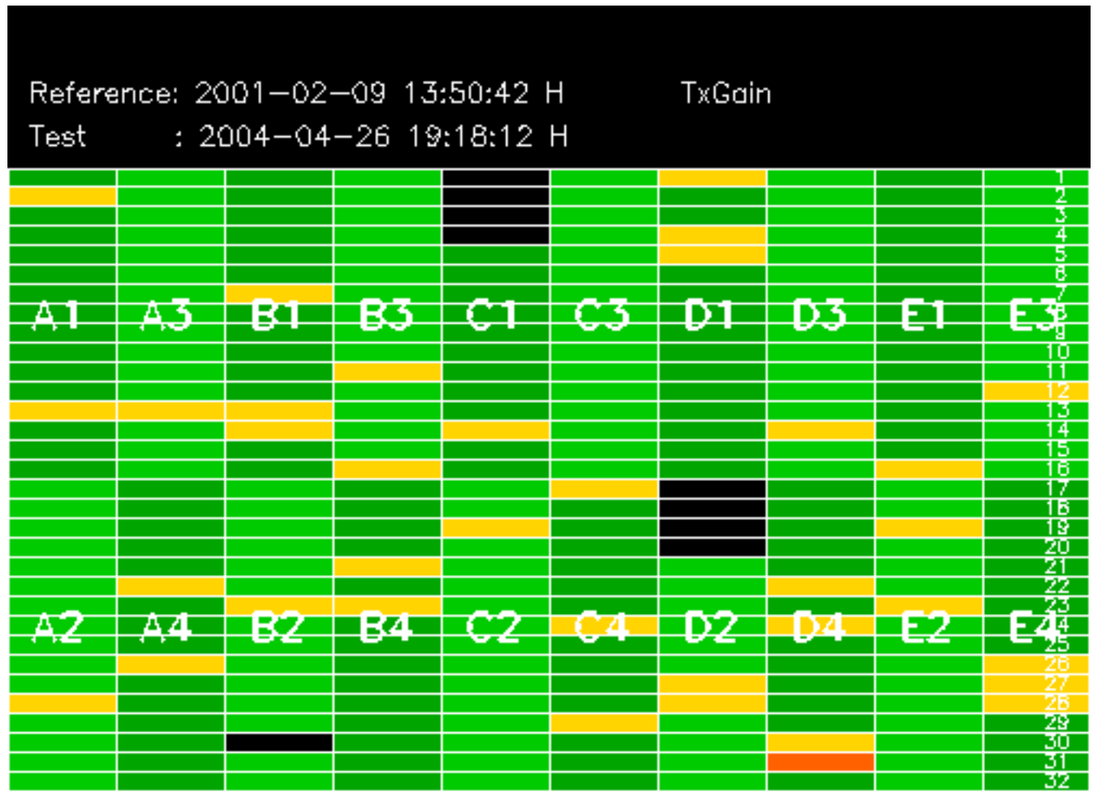

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

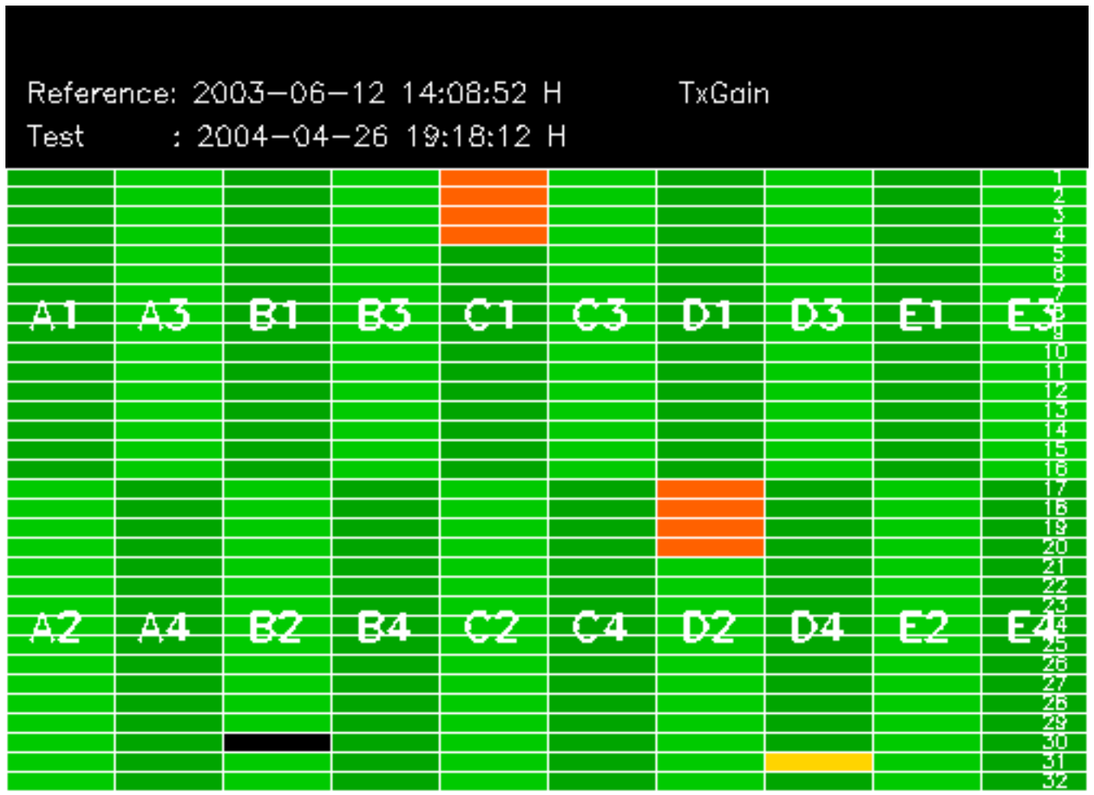

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Mar
31−Mar
05−Apr
10−Apr
15−Apr
20−Apr
25−Apr
SQADS input data mean Q
linear scale
0.006
0.004
0.002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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-04-26 19:18:12 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 : 2004-04-26 19:18:12 H
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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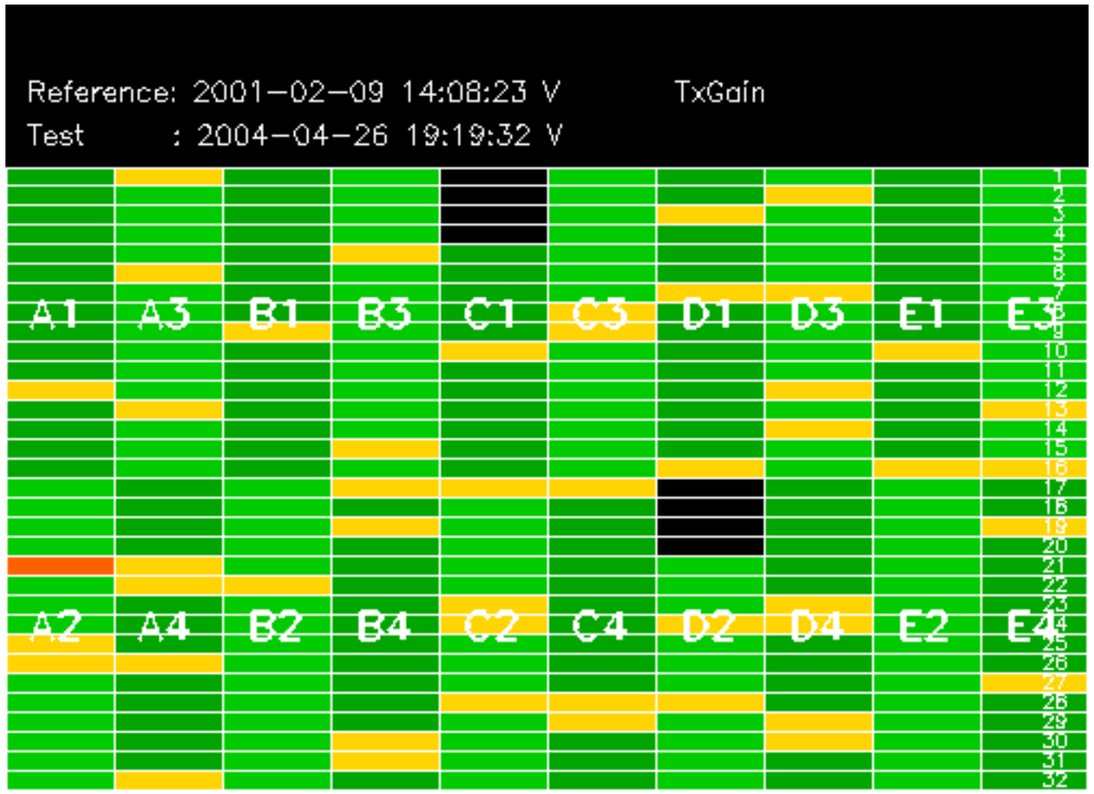
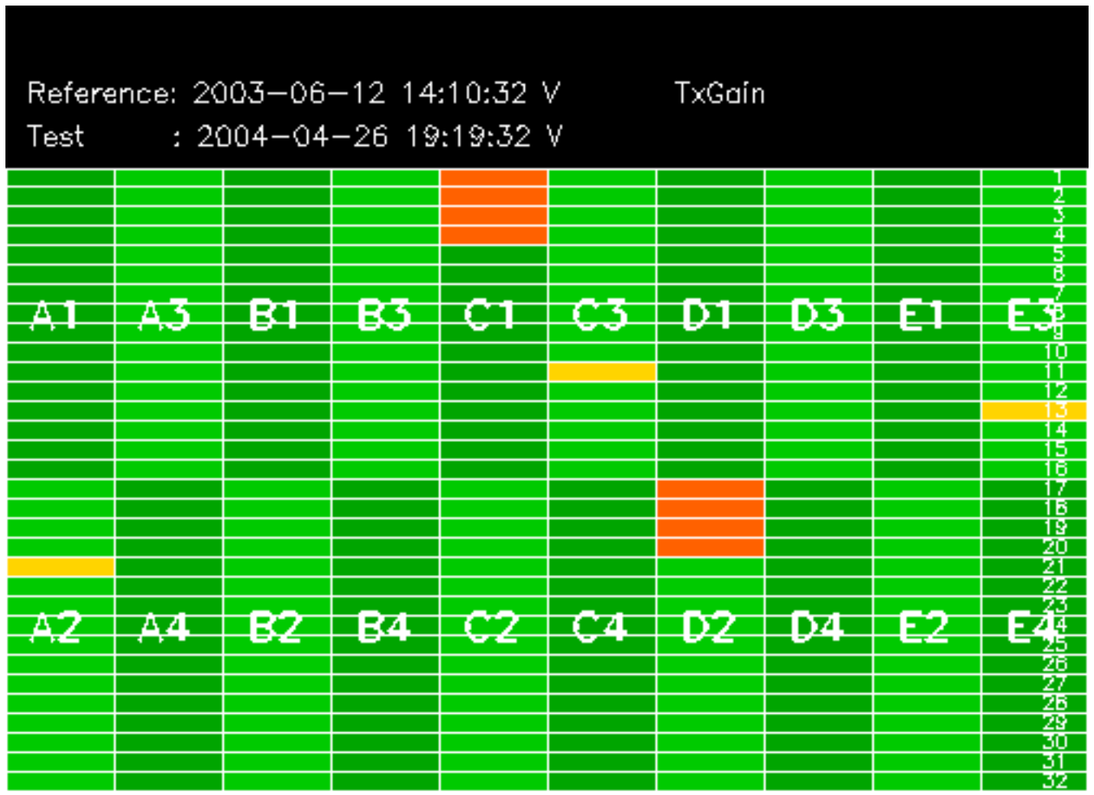

Reference: 2001-02-09 14:08:23 V
Test : 2004-04-26 19:19:32 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-04-26 19:19:32 V
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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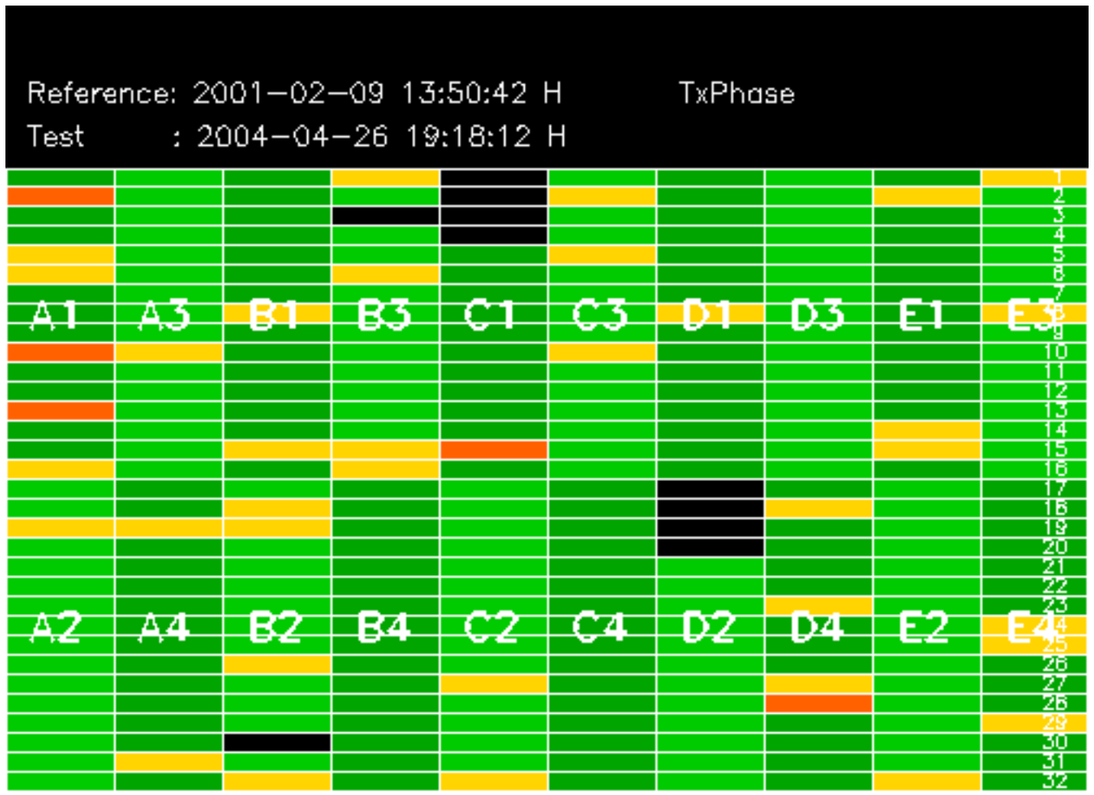
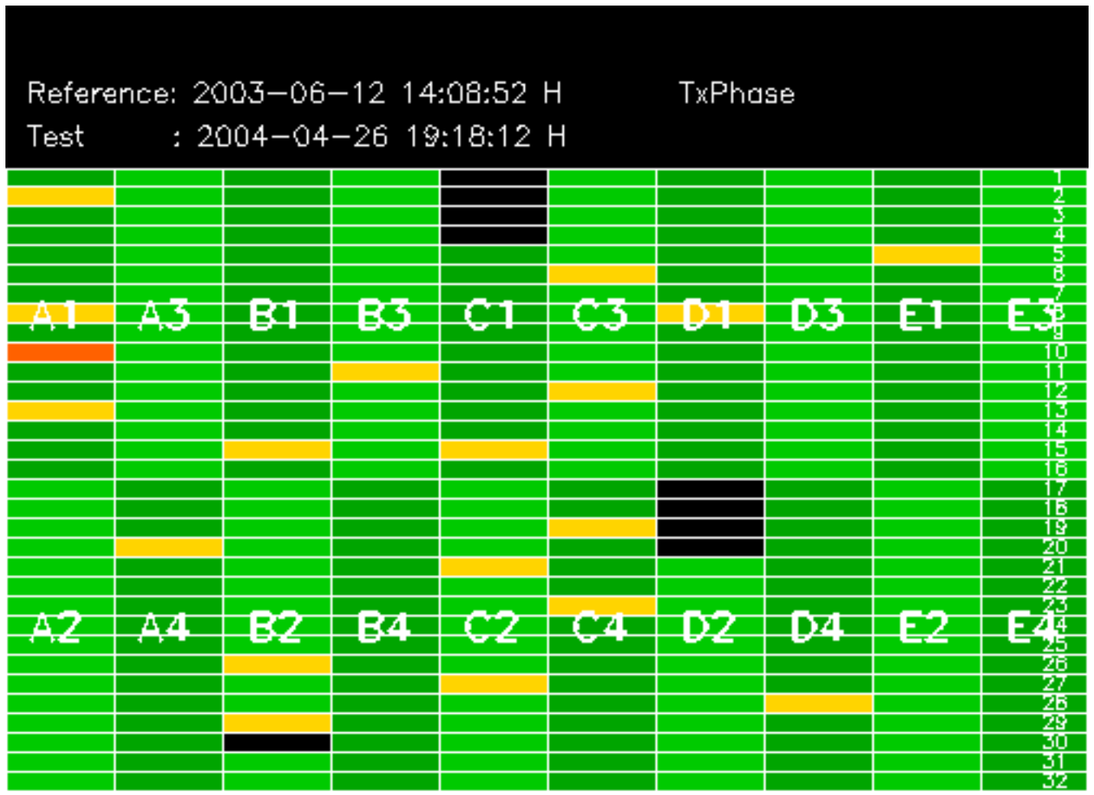

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-04-26 19:18:12 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-04-26 19:18:12 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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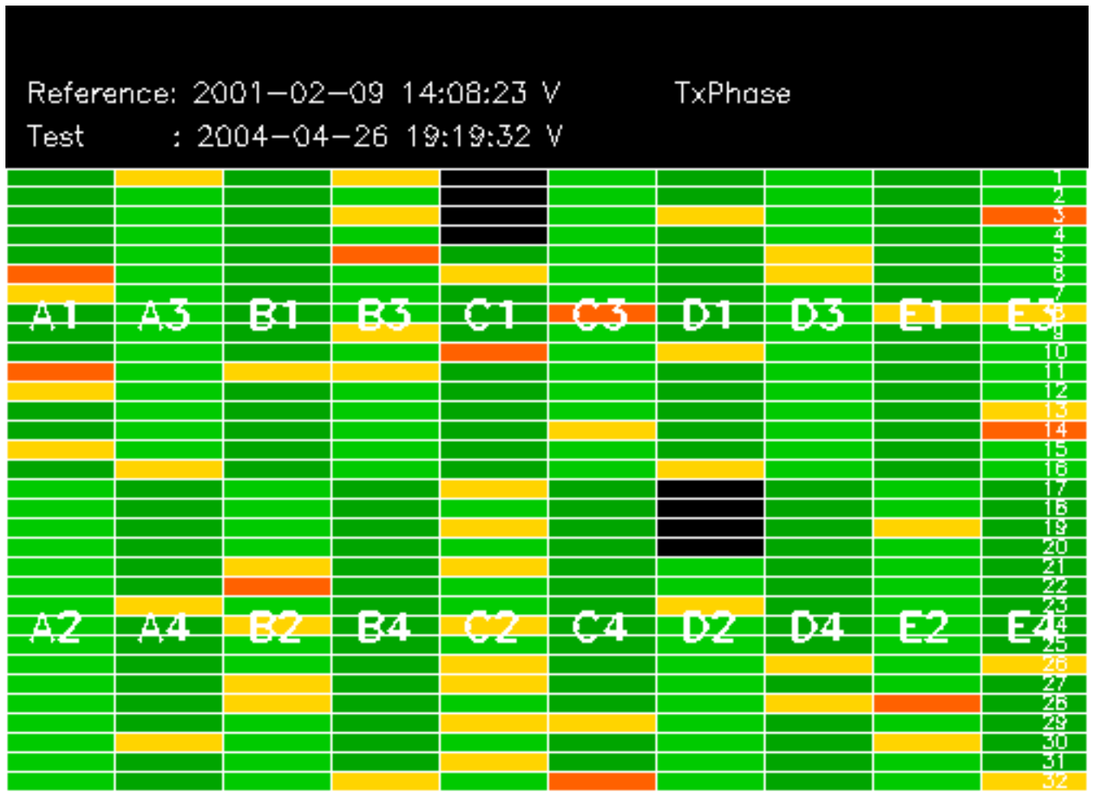
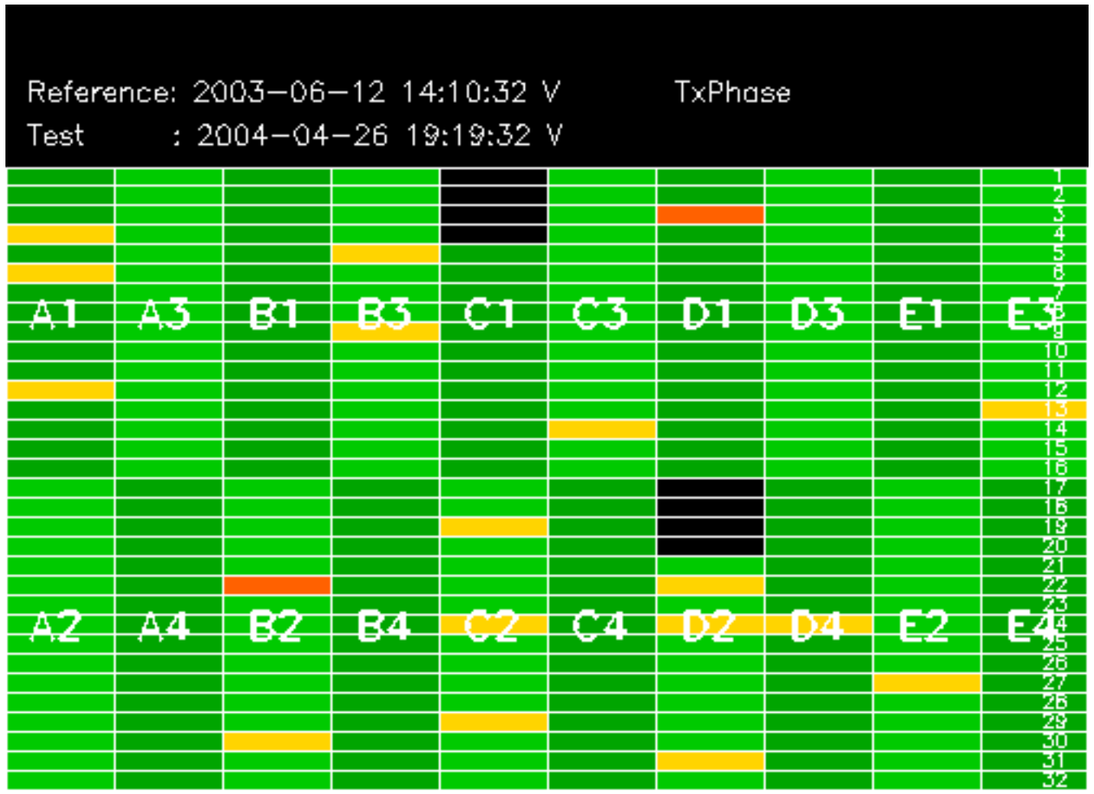

Reference: 2001-02-09 14:08:23 V
Test : 2004-04-26 19:19:32 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-04-26 19:19:32 V
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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Instrument unavailability from 26-APR-2004 21:32:03 to 27-APR-2004 09:41:43 due to all 4 PSUs on tile D3 reported.off