PRELIMINARY REPORT OF 040508

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

last update on Sat May 8 12:40:00 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	20040505 194126
H	20040506 190849

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.

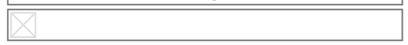
4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

4.1.2 - Evolution for GM1

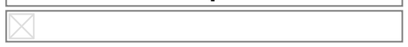
Evolution of cal pulses for GM1



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	-3.599470	0.081892	-0.075614
7	P1	-3.326107	0.060696	-0.072892
11	P1	-4.609966	0.029196	0.095248
15	P1	-4.949124	0.042543	0.119361
19	P1	-3.364919	0.005957	-0.031800
22	P1	-4.518826	0.014115	-0.005208
24	P1	-4.996383	0.015255	0.106154
28	P1	-4.593227	0.013768	0.015239

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.406237	0.081285	-0.045624

7	P2	-22.876949	0.117934	-0.040351
11	P2	-15.836621	0.134563	0.154709
15	P2	-7.165047	0.091568	-0.040996
19	P2	-9.523286	0.141739	0.000838
22	P2	-17.639917	0.098251	0.045345
24	P2	-20.960819	0.104779	0.055136
28	P2	-16.604675	0.083189	-0.002036

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.134189	0.003179	-0.010248
7	P3	-8.134188	0.003179	-0.010259
11	P3	-8.134185	0.003179	-0.010268
15	P3	-8.134179	0.003180	-0.010308
19	P3	-8.134177	0.003181	-0.010321
22	P3	-8.134177	0.003181	-0.010325
24	P3	-8.134176	0.003181	-0.010326
28	P3	-8.134158	0.003177	-0.009410

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	-3.247135	0.317236	-0.038498
7	P1	-2.880473	0.268189	-0.138297
11	P1	-3.813452	0.021731	0.041736
15	P1	-4.016292	0.352443	0.207791
19	P1	-3.260596	0.060844	-0.116562
22	P1	-5.795414	0.043325	0.114178
24	P1	-4.051980	0.086272	0.049112
28	P1	-2.875732	0.068854	-0.098763

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.119095	0.041006	-0.081020
7	P2	-22.990093	0.027466	0.014908
11	P2	-11.065561	0.193185	-0.154270
15	P2	-4.932736	0.030599	-0.113327
19	P2	-6.838156	0.031724	-0.097559
22	P2	-7.704702	0.028839	-0.028181
24	P2	-11.023852	0.057421	-0.112506
28	P2	-19.026752	0.027595	-0.056421

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.970093	0.003654	-0.017494
7	P3	-7.970128	0.003651	-0.017016
11	P3	-7.970014	0.003648	-0.017241
15	P3	-7.969991	0.003662	-0.017460
19	P3	-7.970087	0.003648	-0.017524
22	P3	-7.970248	0.003635	-0.017398
24	P3	-7.969925	0.003668	-0.017252
28	P3	-7.969961	0.003668	-0.017562

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	0.000489519
	stdev	2.26882e-07
MEAN Q	mean	0.000507434
	stdev	2.61116e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128423
	stdev	0.00110923
STDEV Q	mean	0.128668
	stdev	0.00112237

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

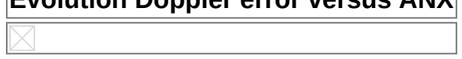
Evolution of Absolute Doppler

Acsending

Descending

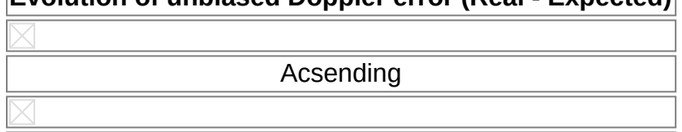
6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

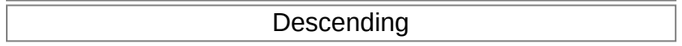


6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)



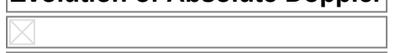
Acsending



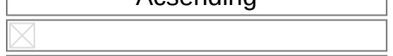
Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler



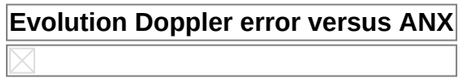
Acsending

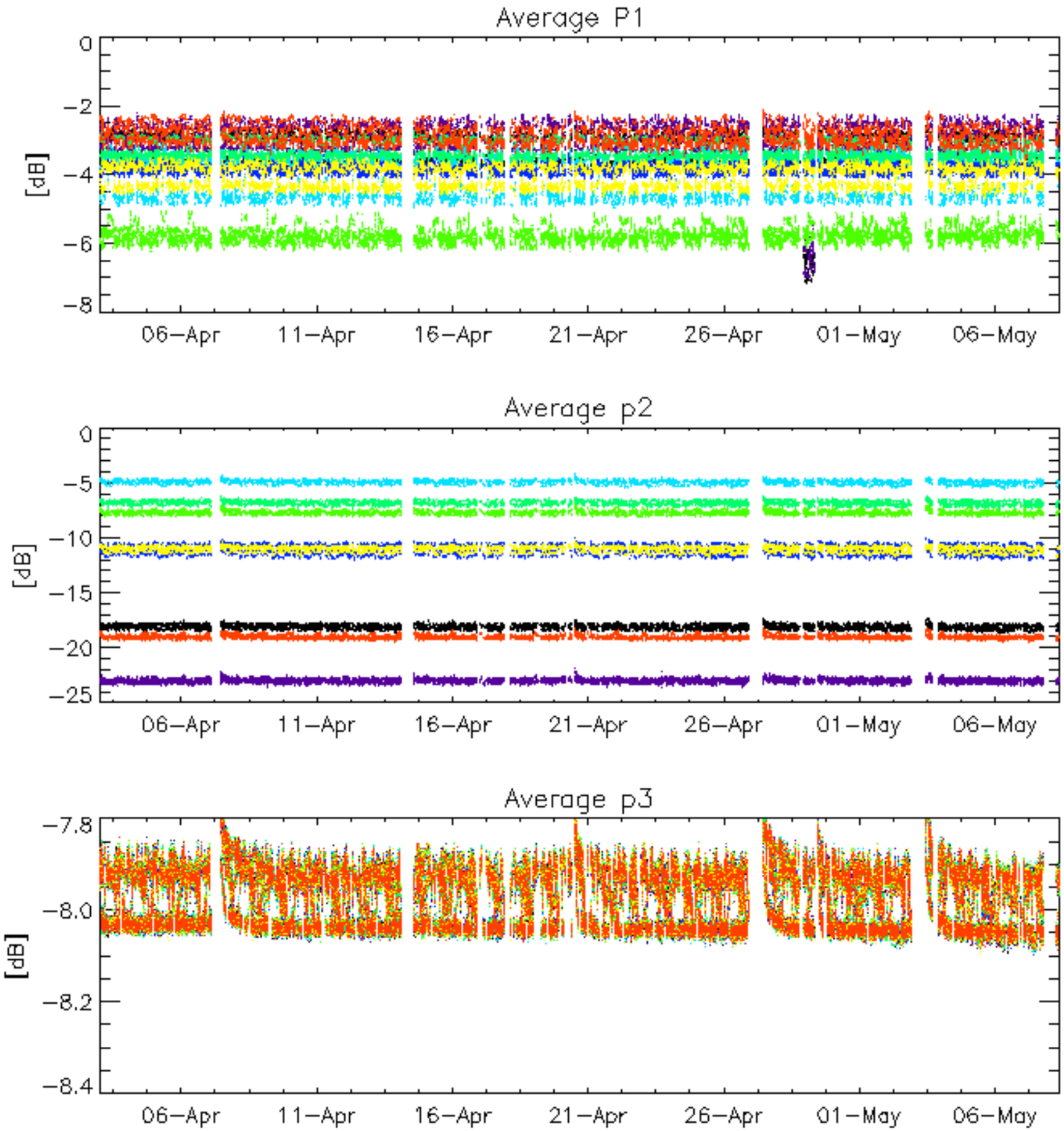


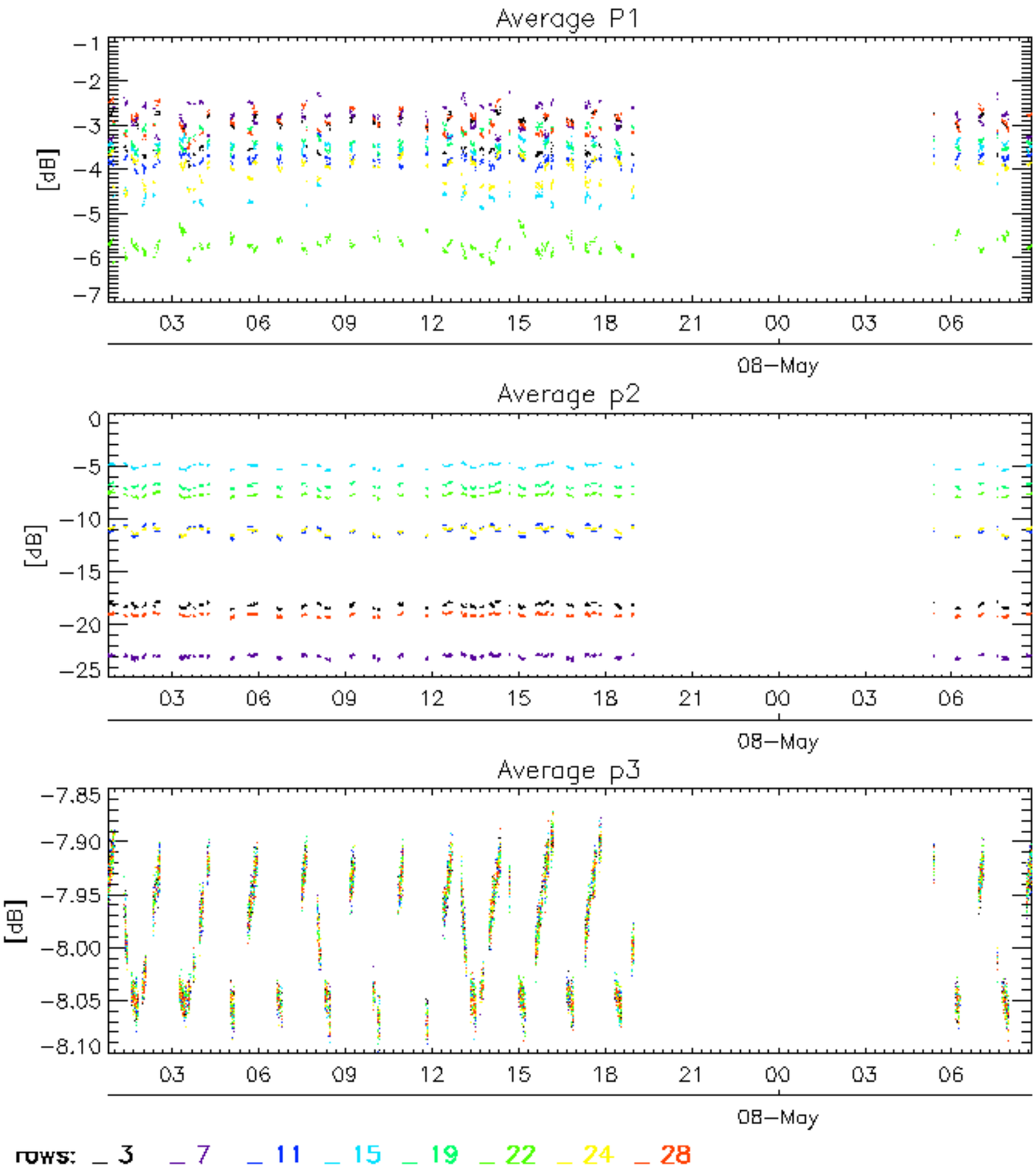
Descending

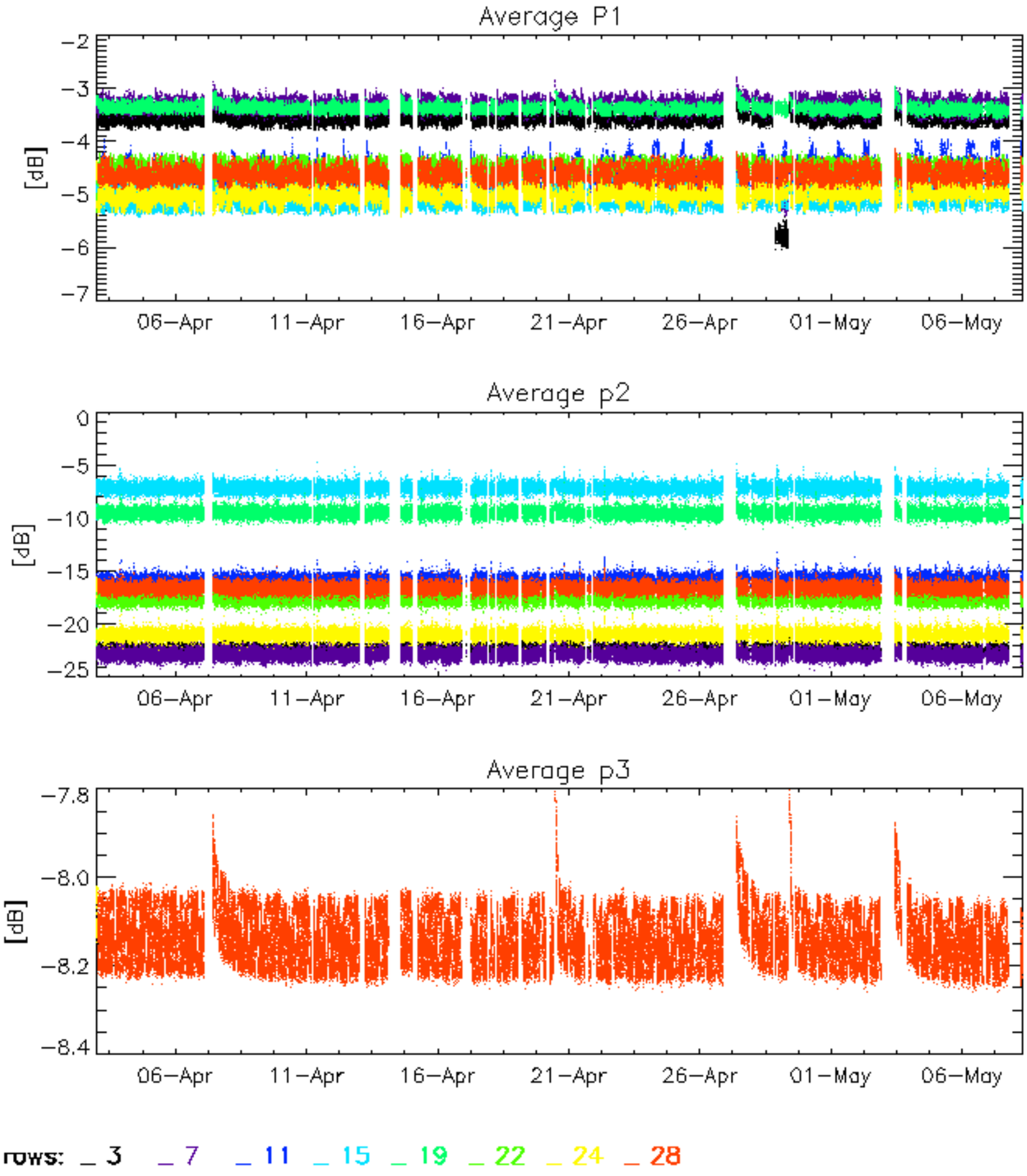
6.6 - Doppler evolution versus ANX for GM1

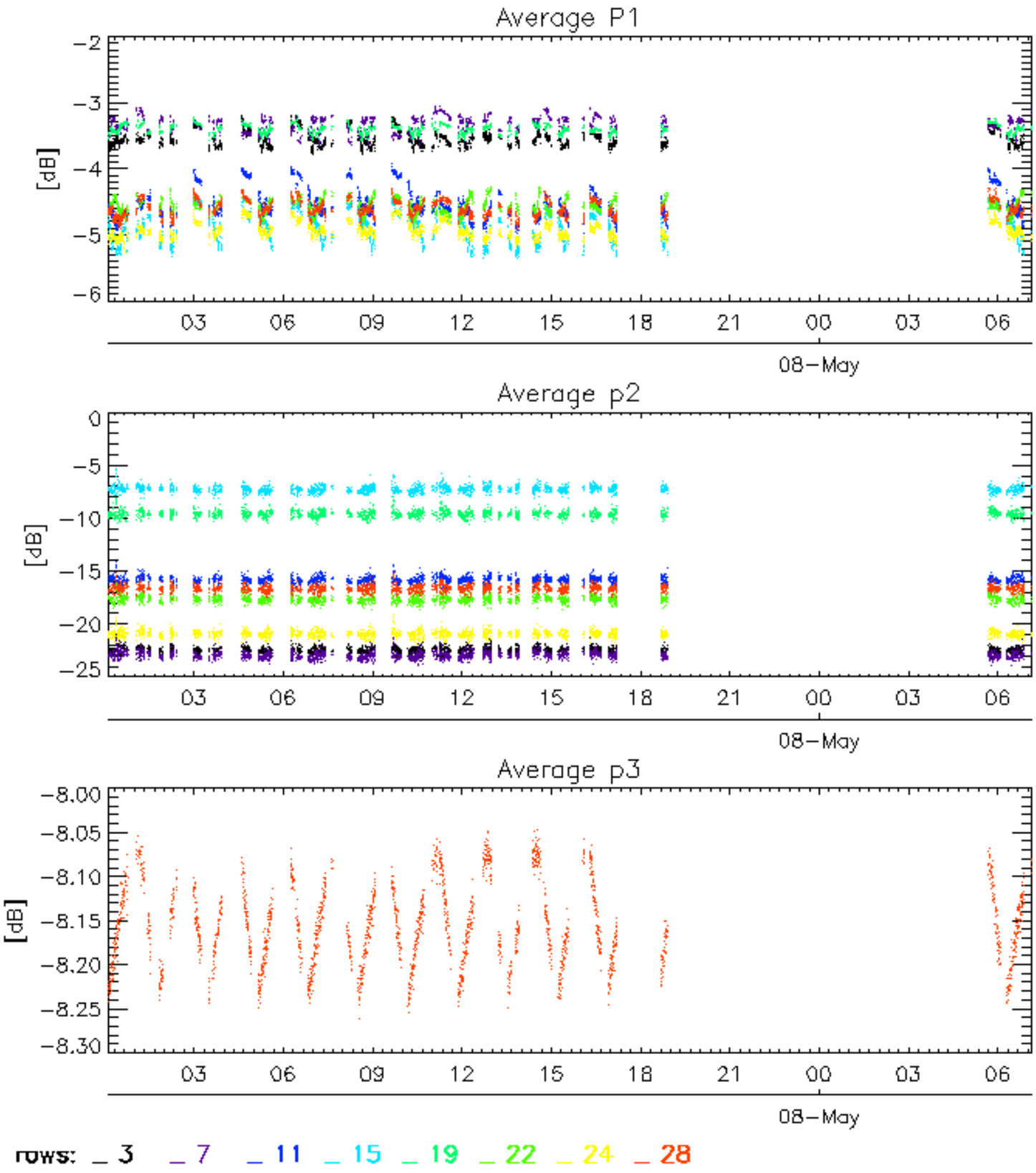
Evolution Doppler error versus ANX



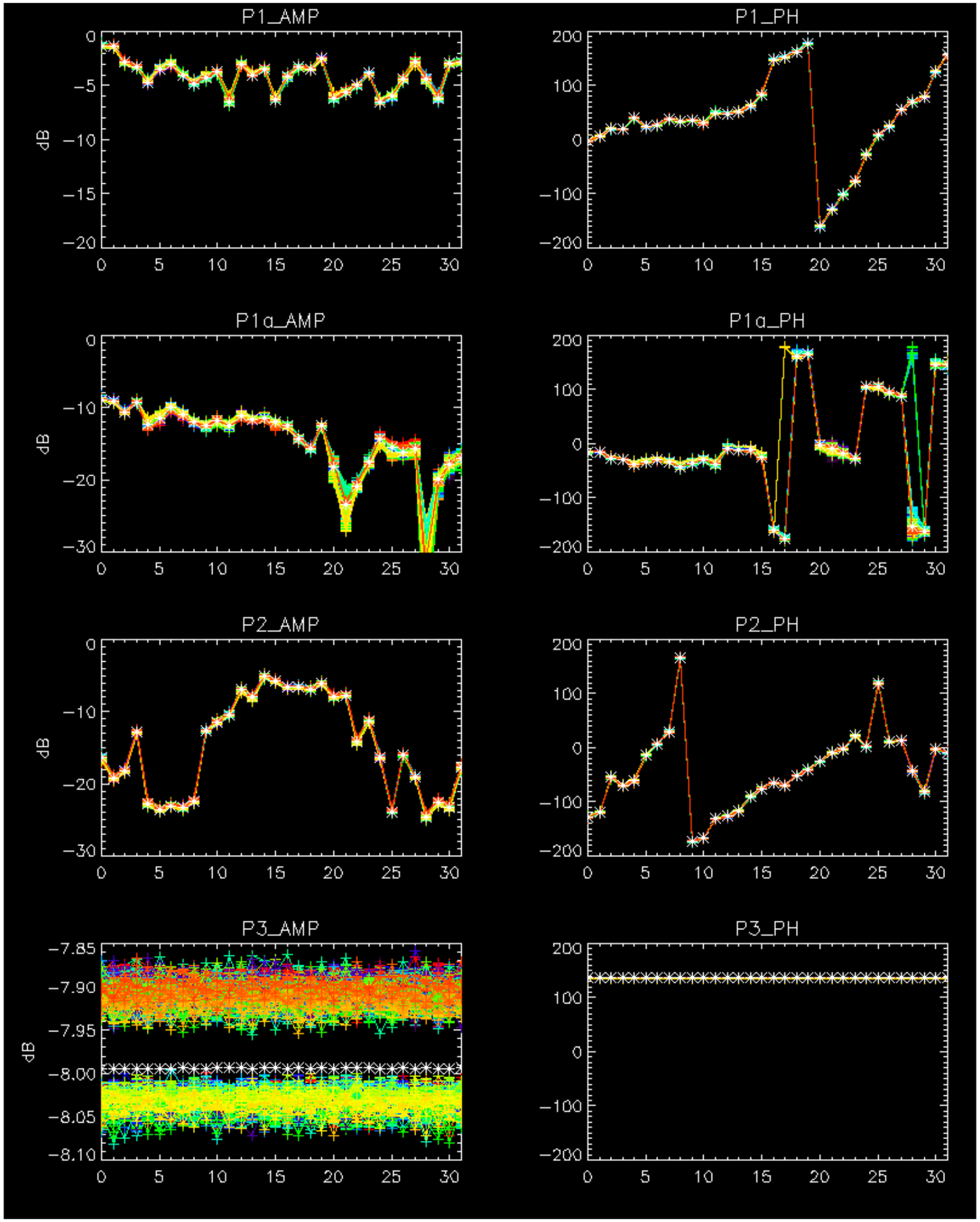

Average P1
0
−2
−4
−6
−8
[dB]
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average p2
0
−5
−10
−15
−20
−25
[dB]
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average p3
−7.8
−8.0
−8.2
−8.4
[dB]
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
rows: 3 7 11 15 19 22 24 28

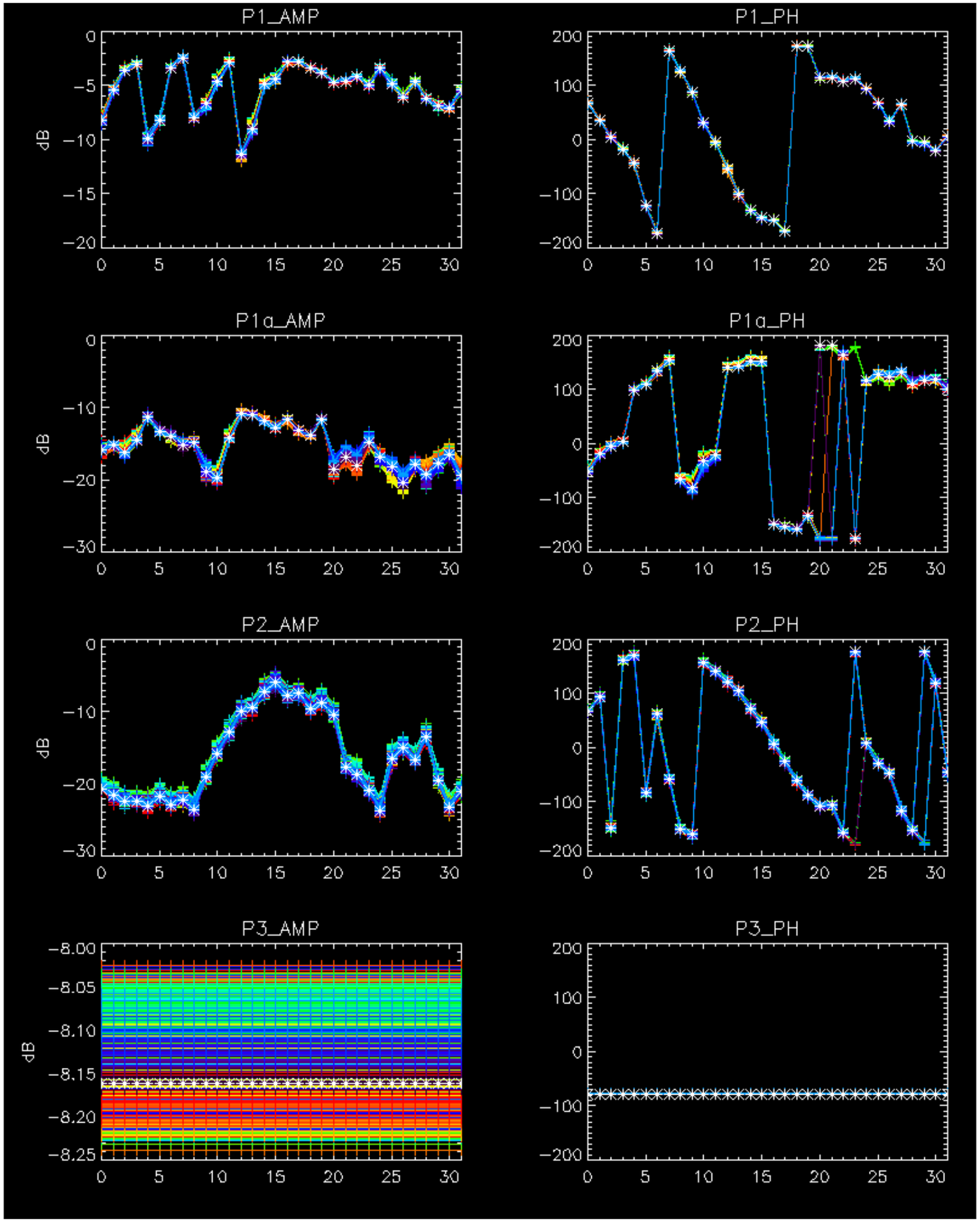

Average P1
[dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
06
08−May
Average p2
[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
06
08−May
Average p3
[dB]
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
03
06
09
12
15
18
21
00
03
06
08−May
rows: 3 7 11 15 19 22 24 28


Average P1
[dB]
−2
−3
−4
−5
−6
−7
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average p2
[dB]
0
−5
−10
−15
−20
−25
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average p3
[dB]
−7.8
−8.0
−8.2
−8.4
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28


Average P1
[dB]
−2
−3
−4
−5
−6
03
06
09
12
15
18
21
00
03
06
08−May
Average p2
[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
06
08−May
Average p3
[dB]
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
03
06
09
12
15
18
21
00
03
06
08−May
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28

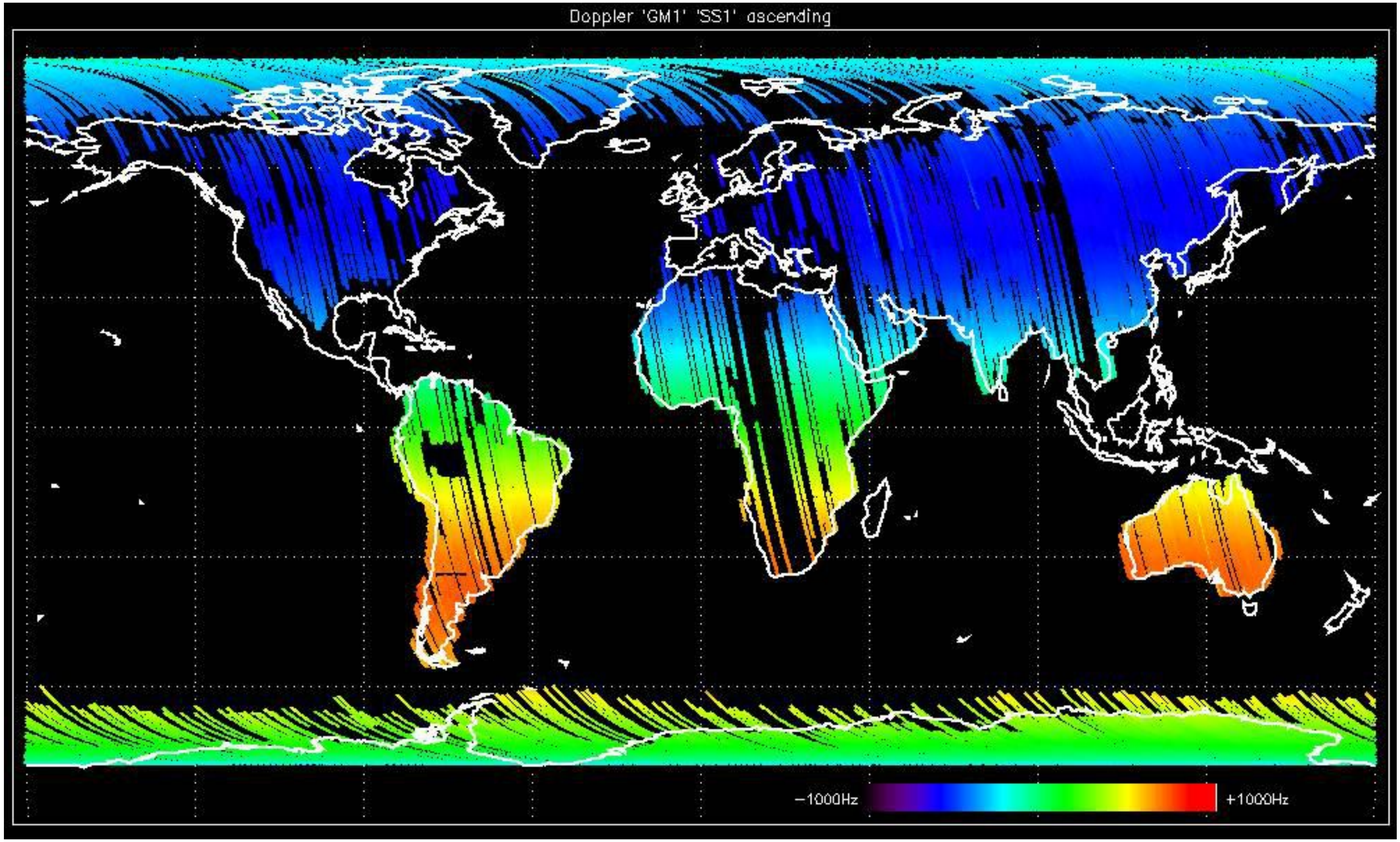
No anomalies observed.

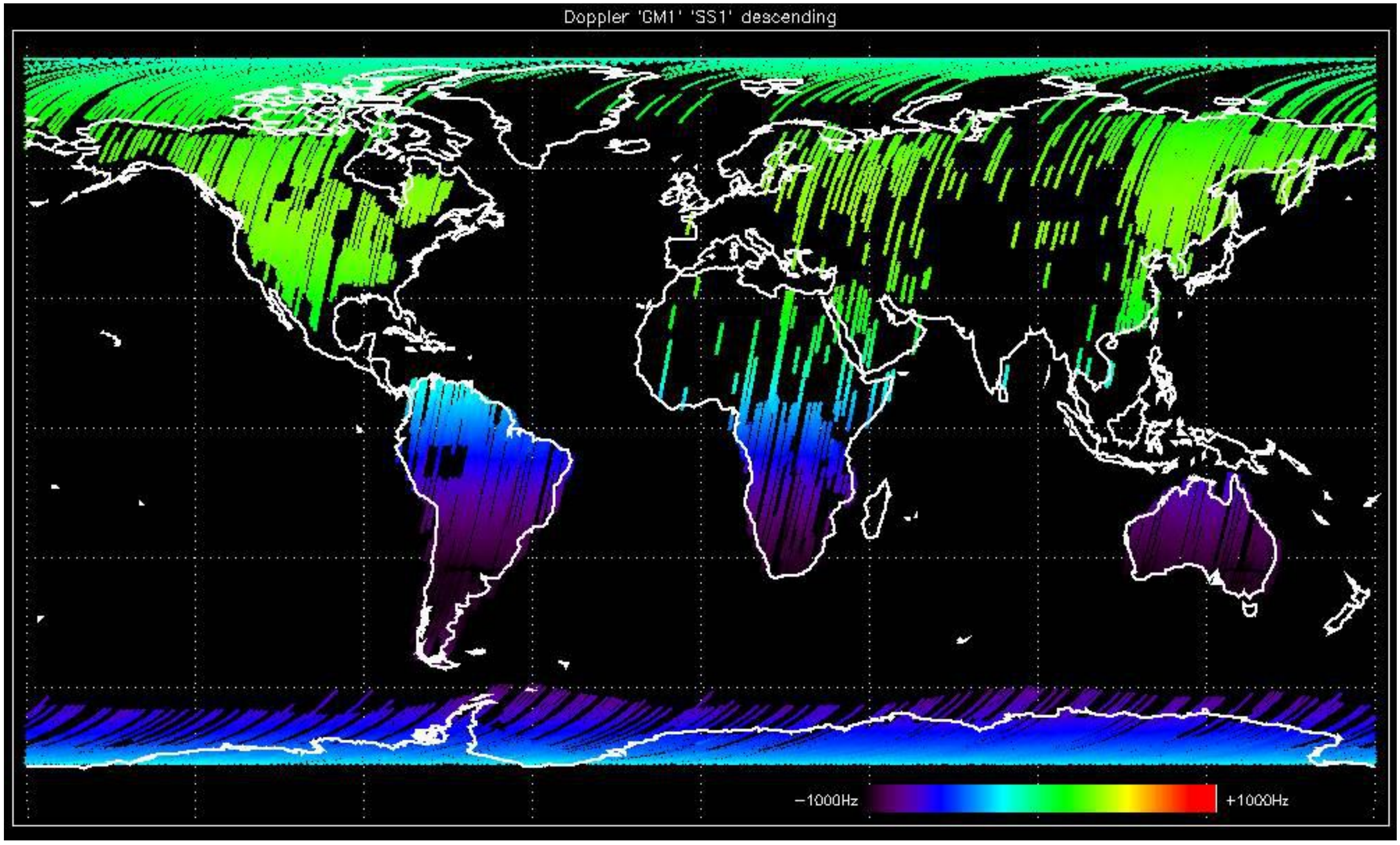

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

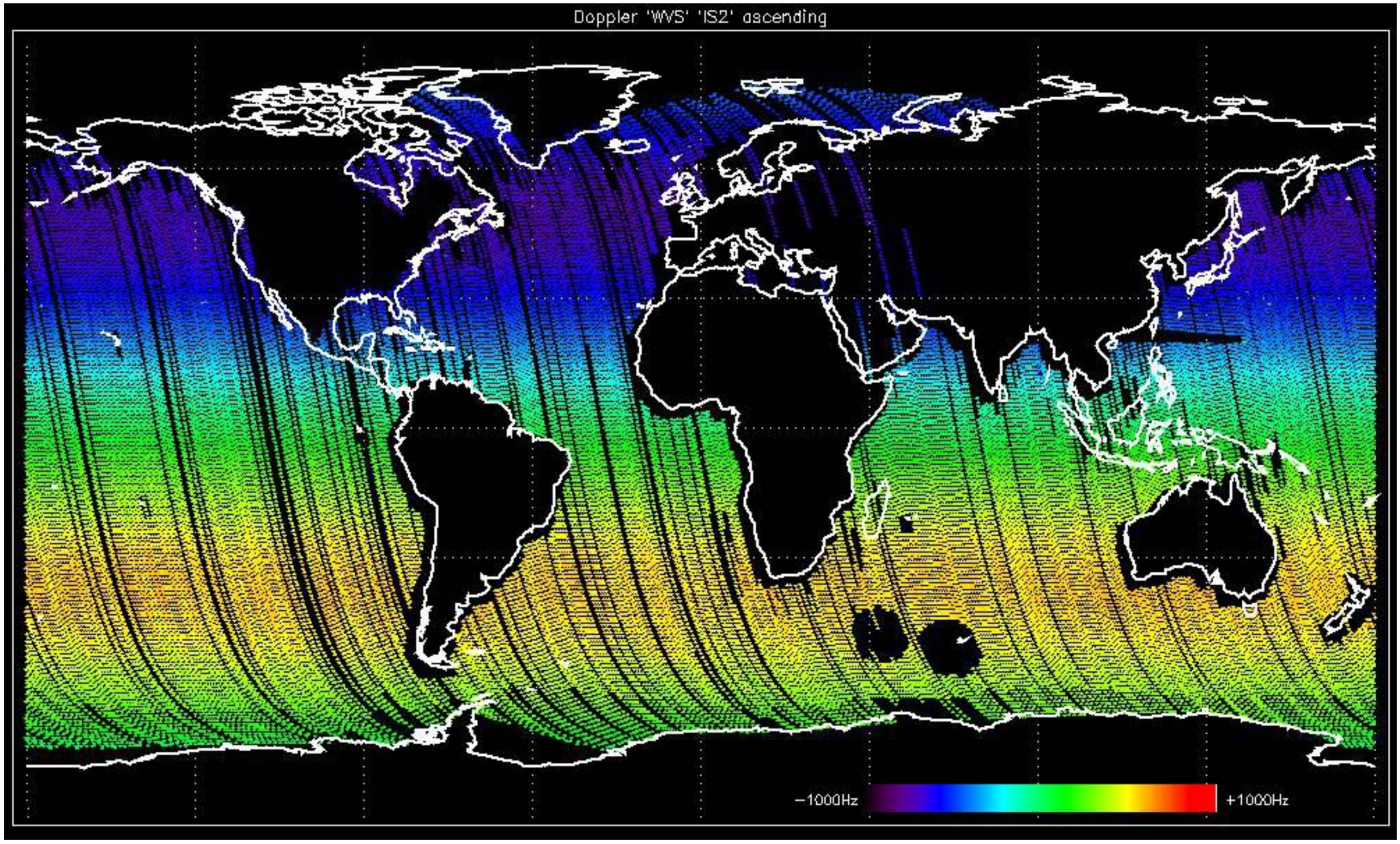

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

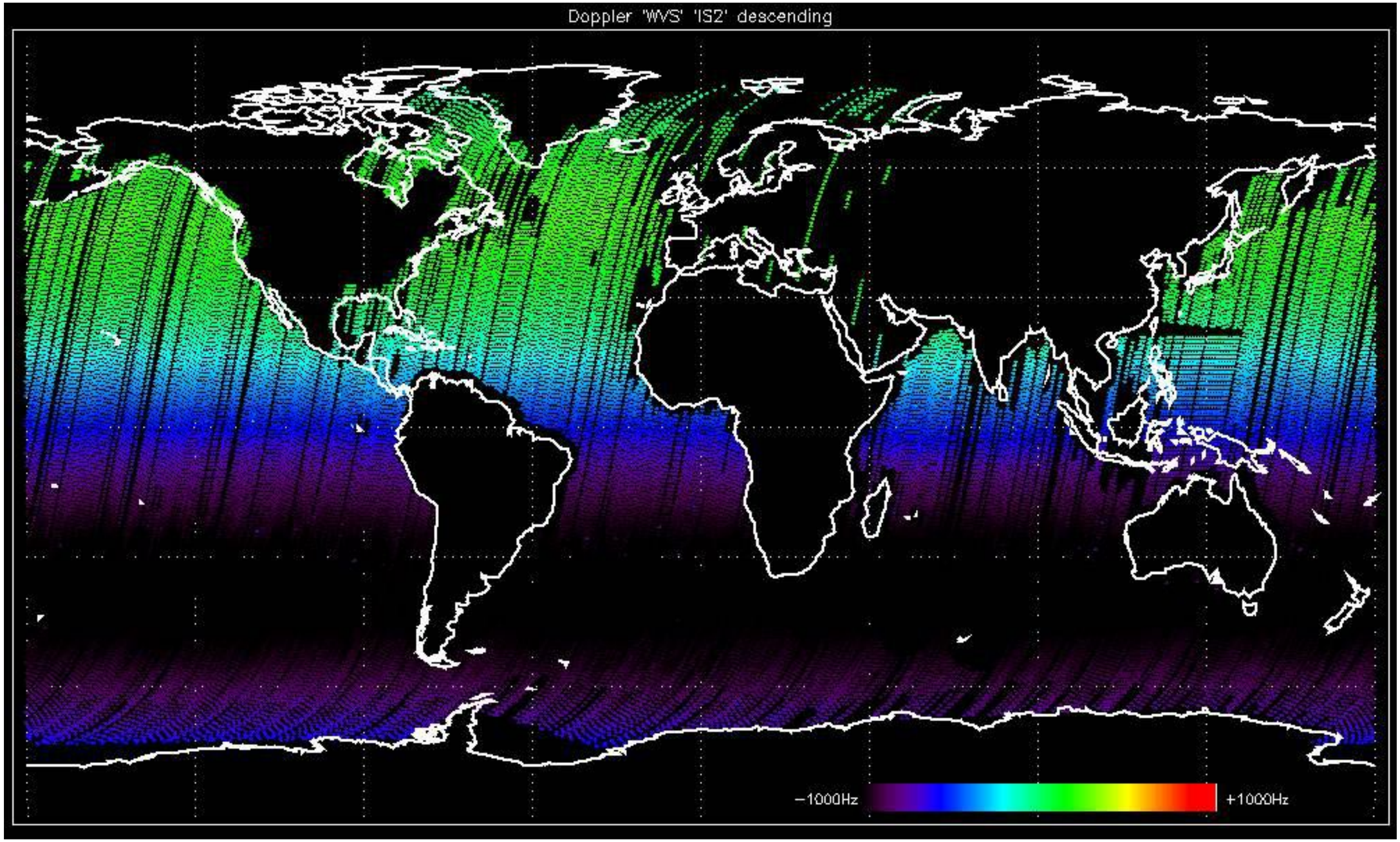
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

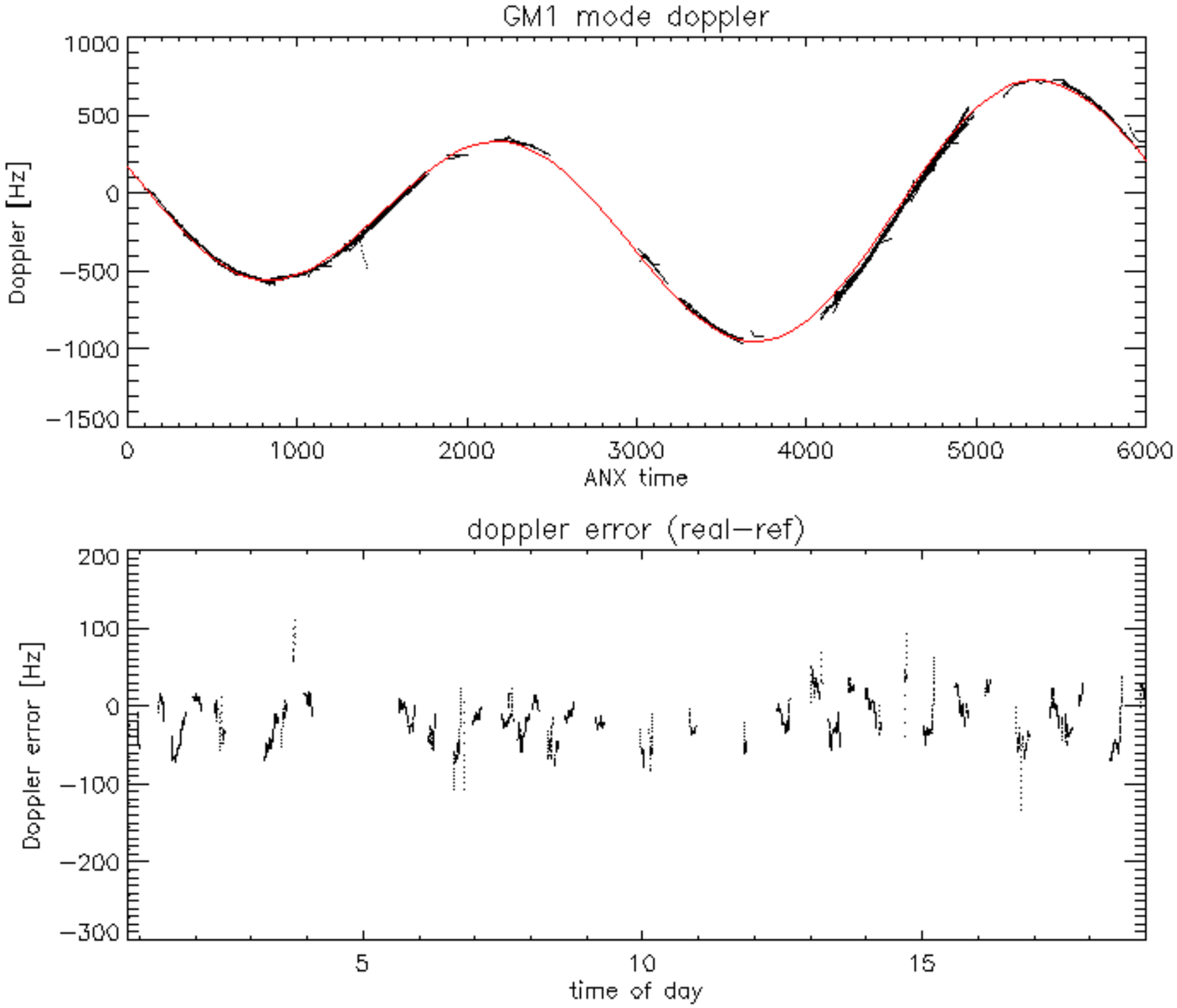
Preliminary report.The data is not yet controled

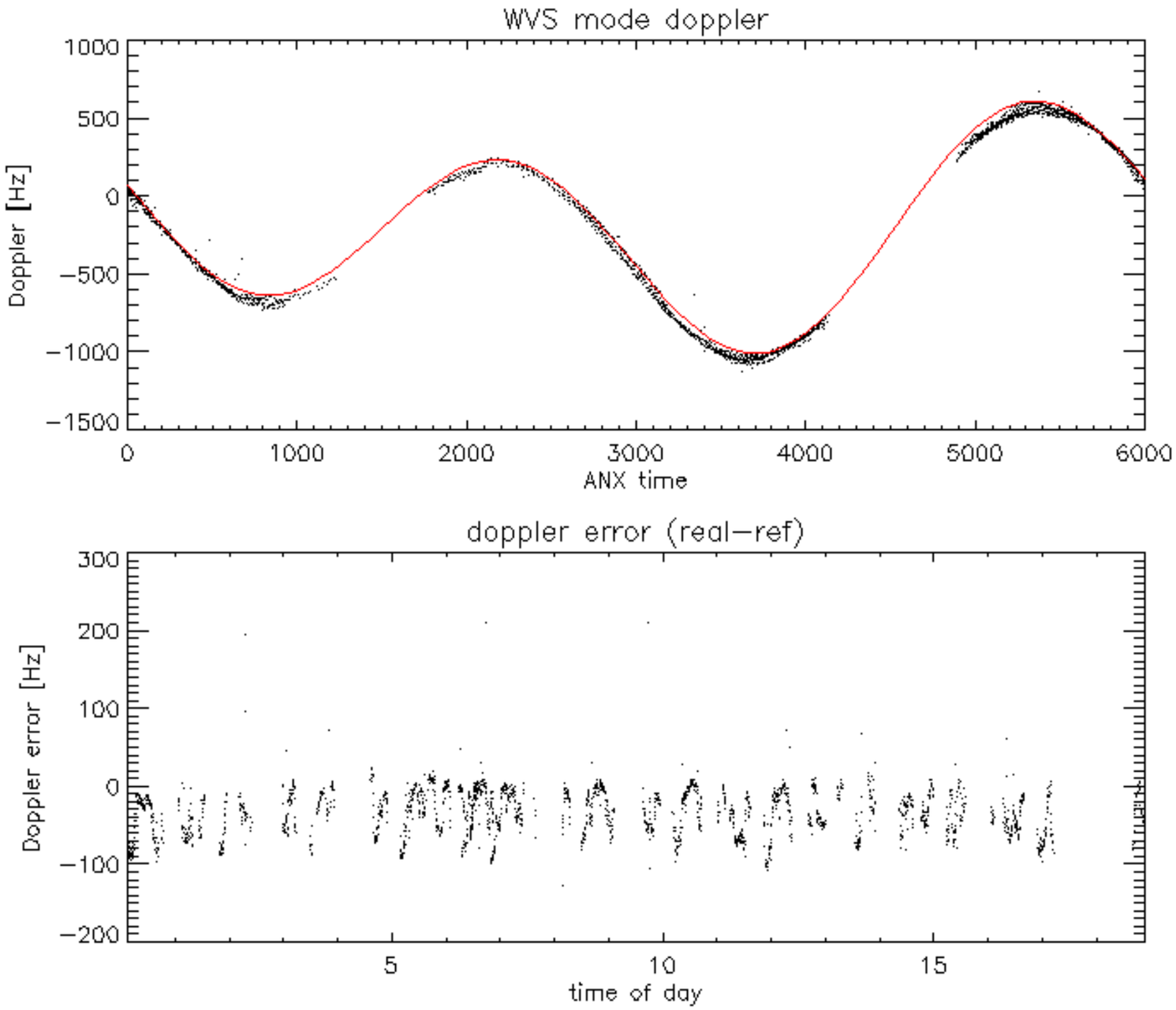

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

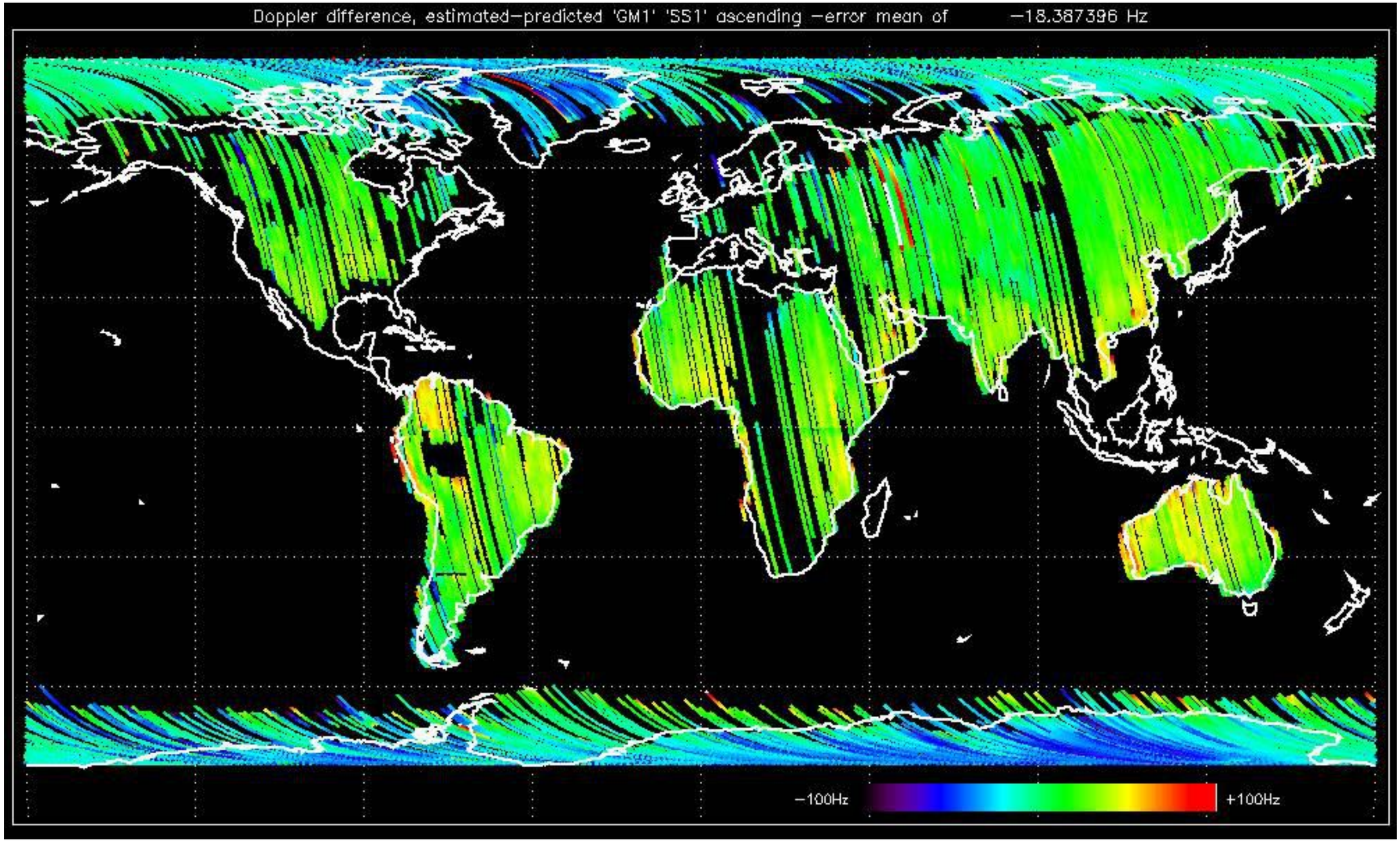

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

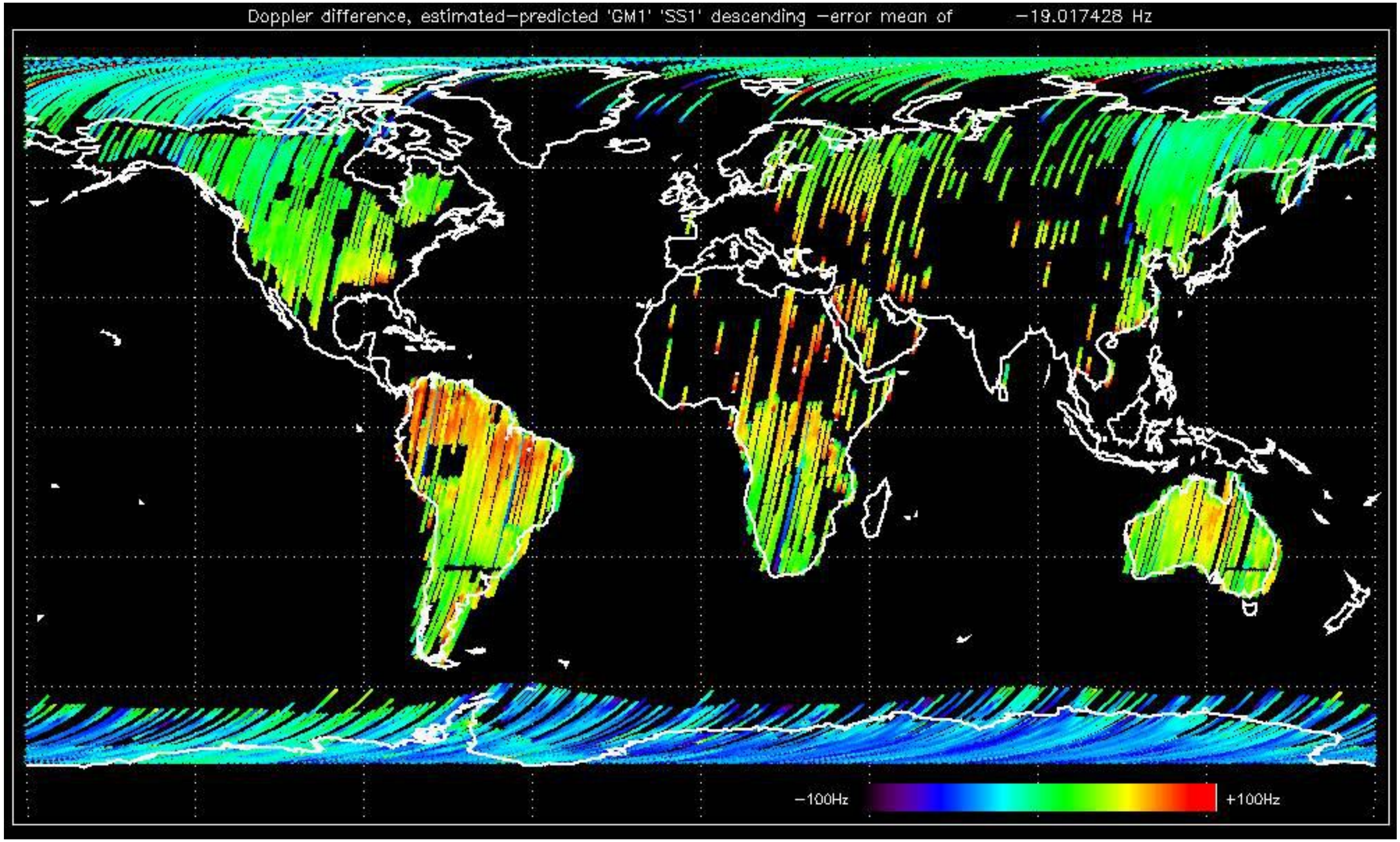

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

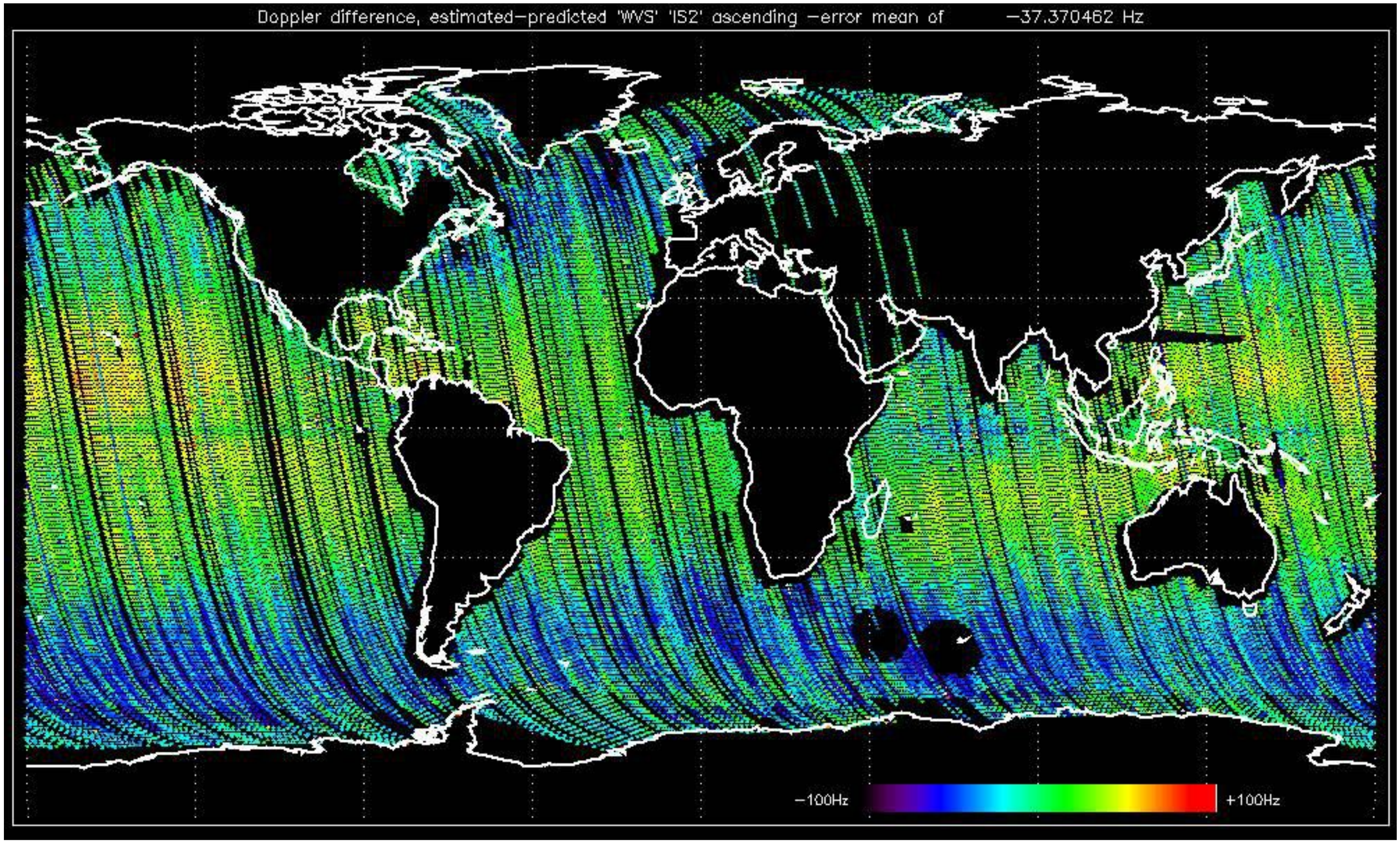

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

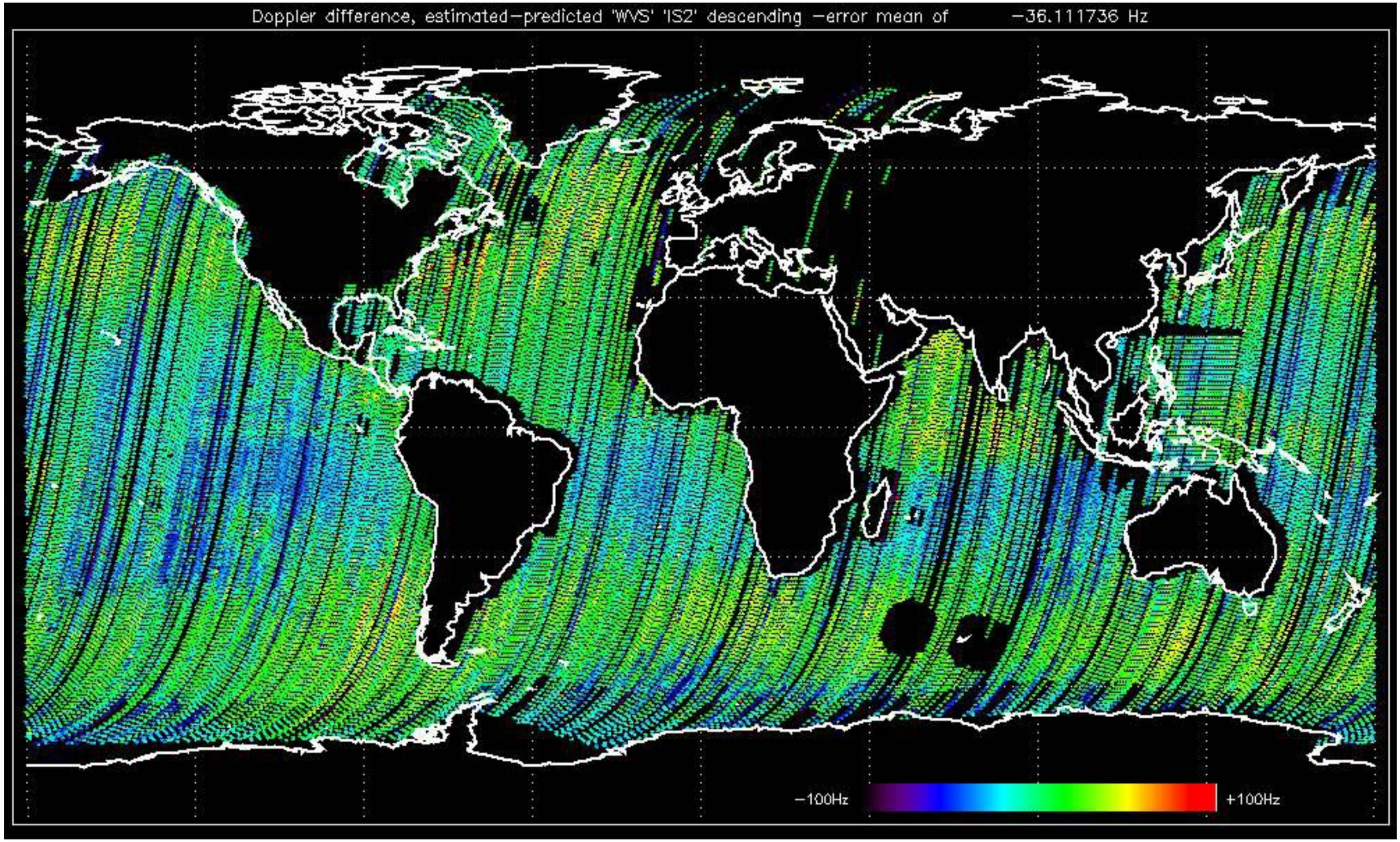

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
200
100
0
−100
−200
−300
5
10
15
time of day


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
time of day


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −18.387396 Hz
−100Hz
+100Hz

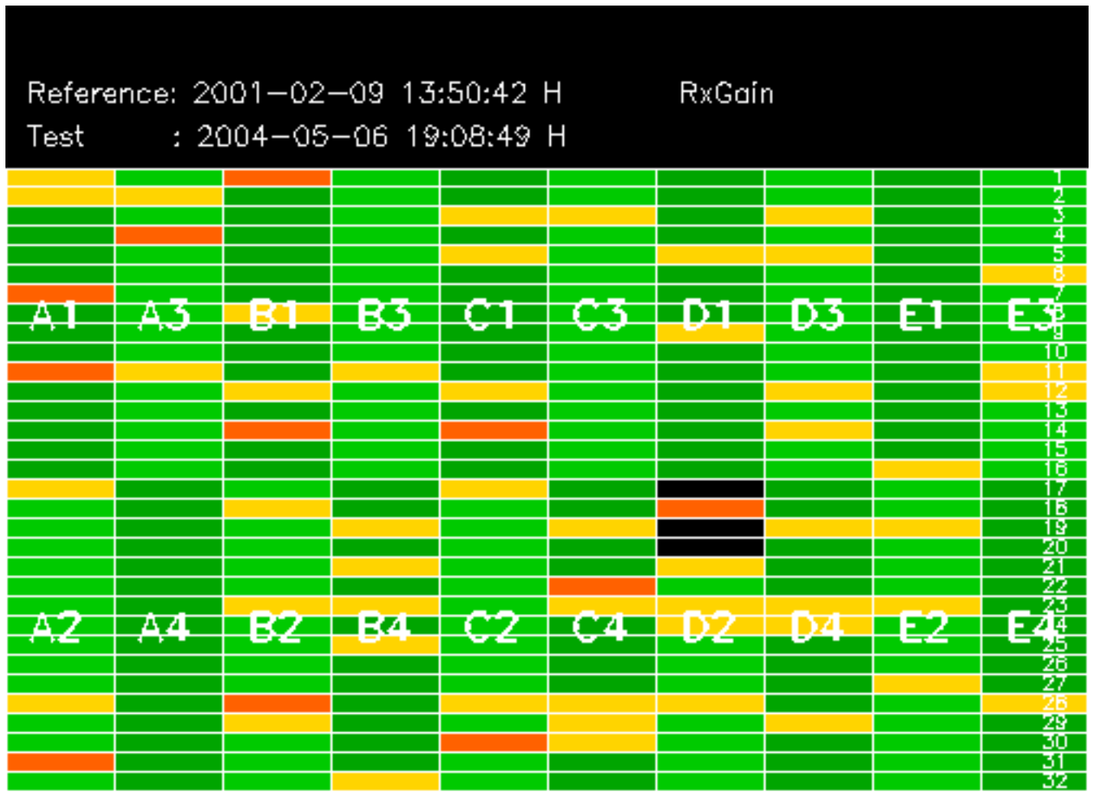

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −19.017428 Hz
−100Hz
+100Hz

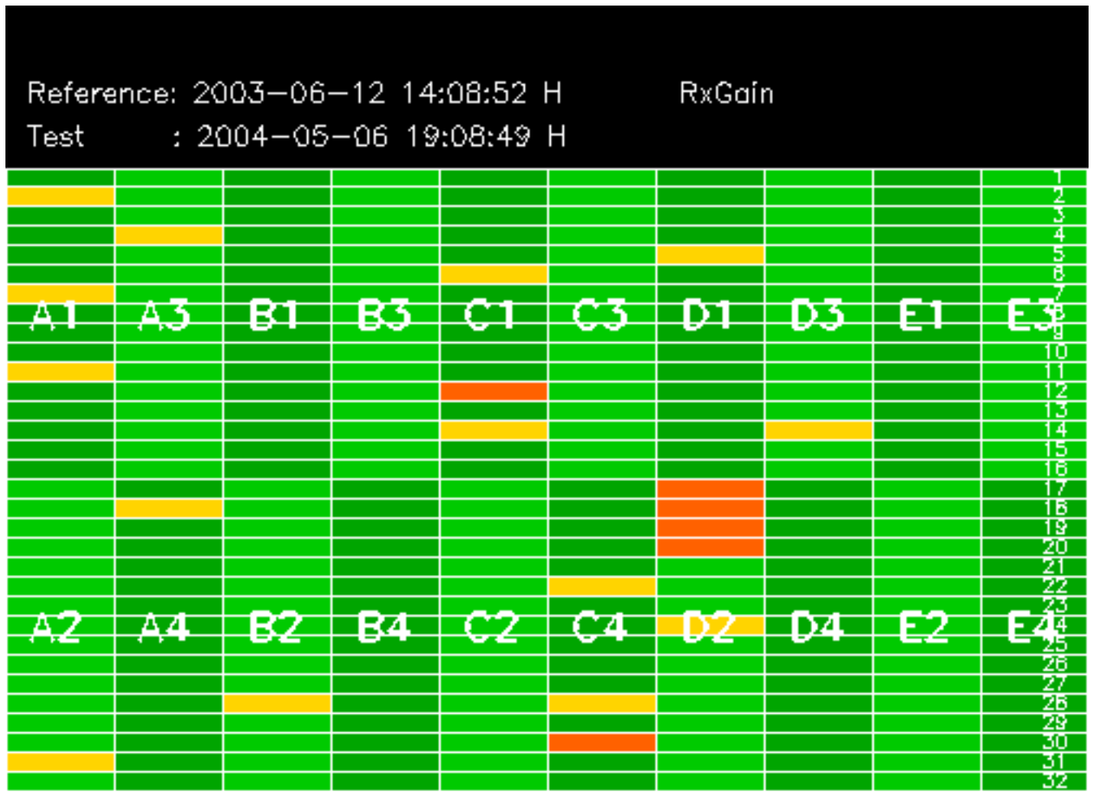

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −37.370462 Hz
−100Hz
+100Hz

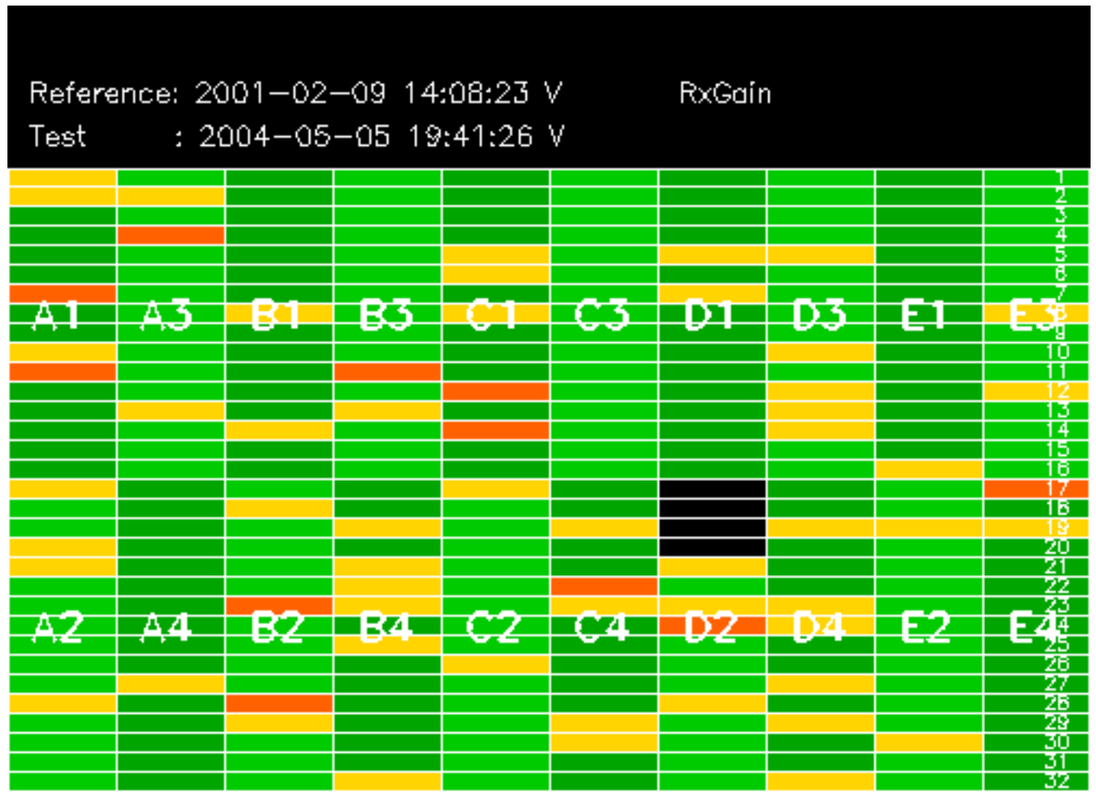

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.111736 Hz
−100Hz
+100Hz

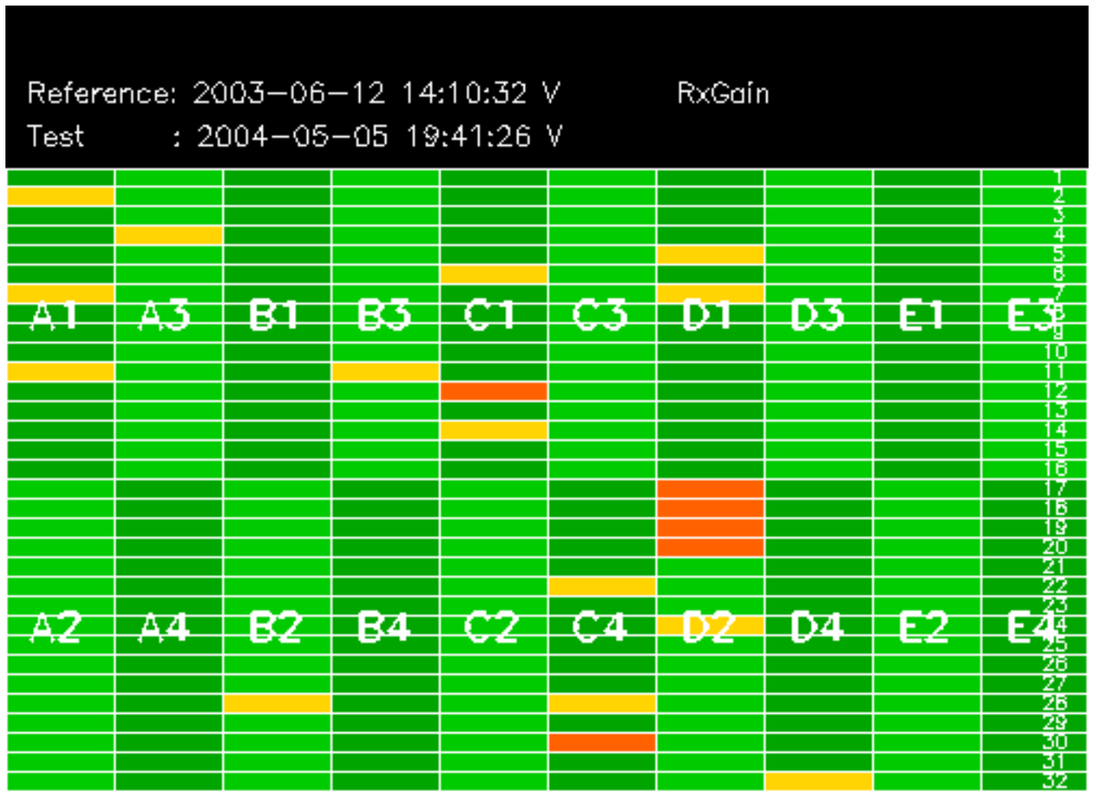
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

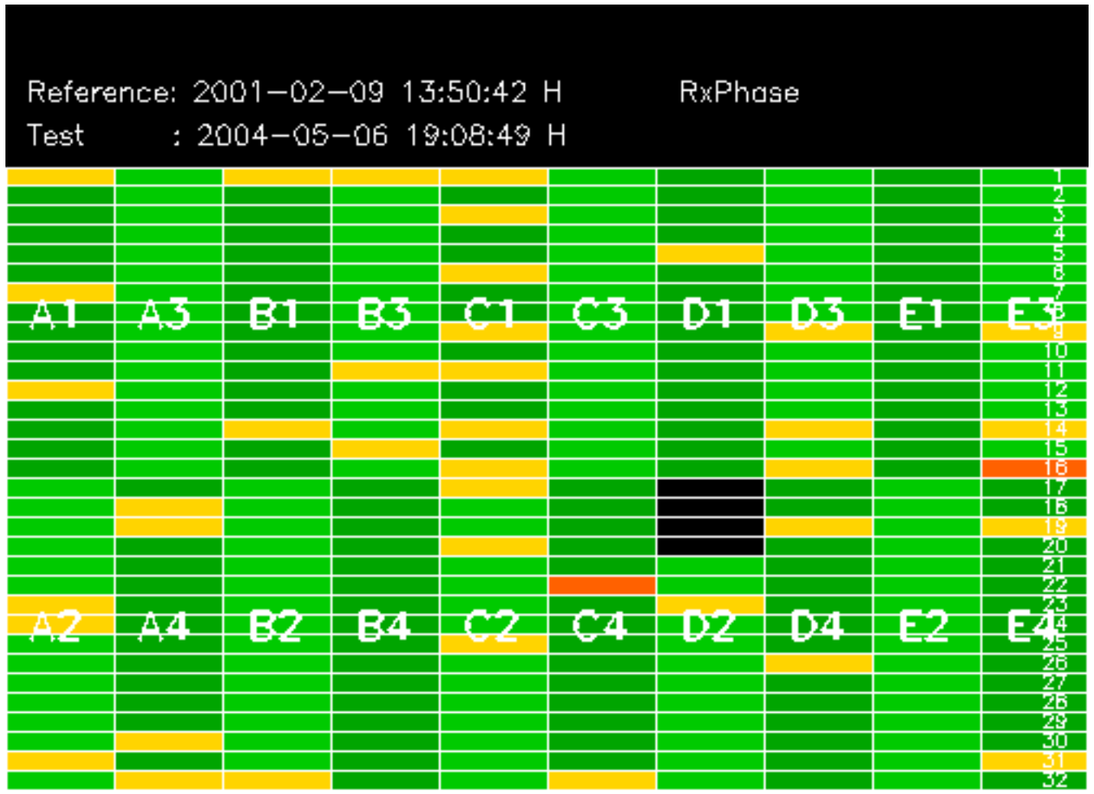
No anomalies observed.

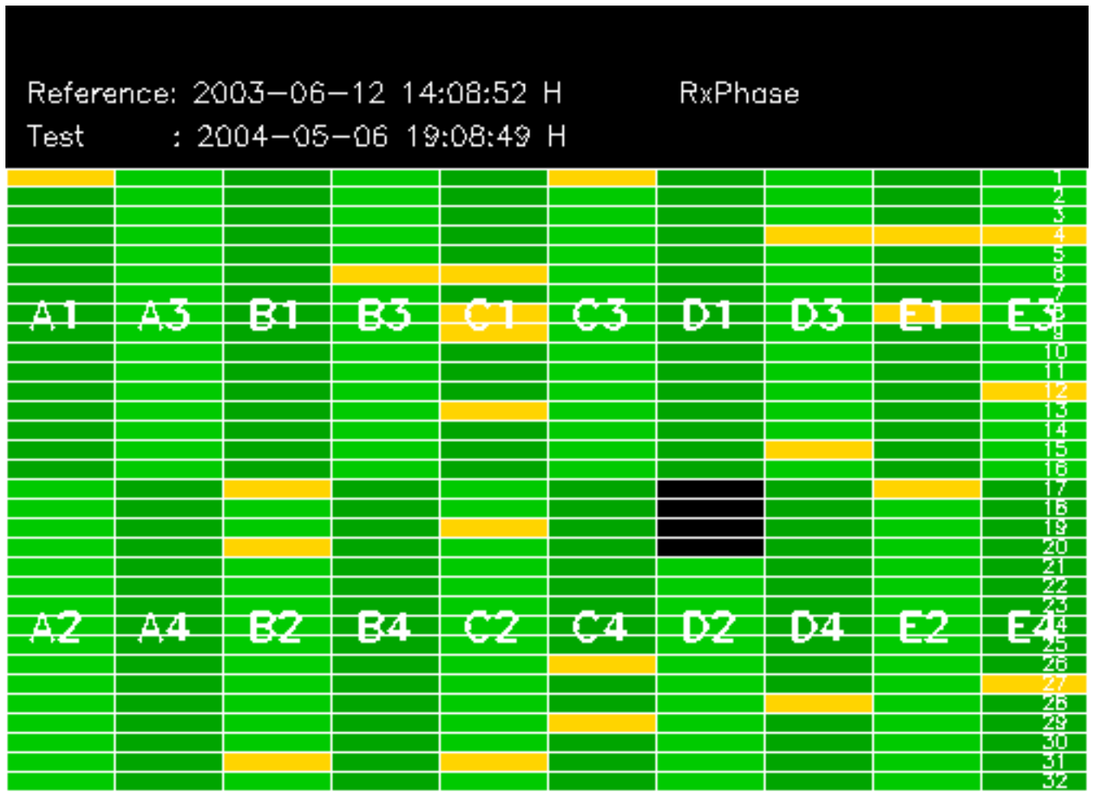

Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-05-06 19:08:49 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

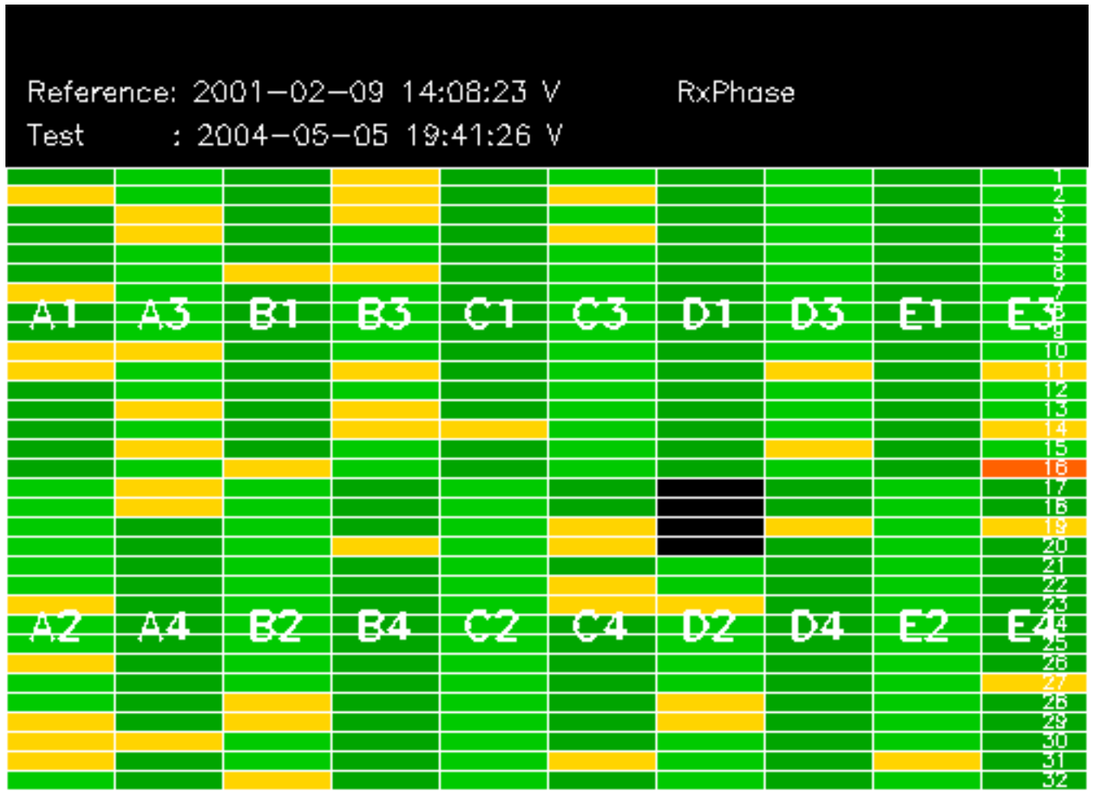

Reference: 2003-06-12 14:08:52 H
Test : 2004-05-06 19:08:49 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

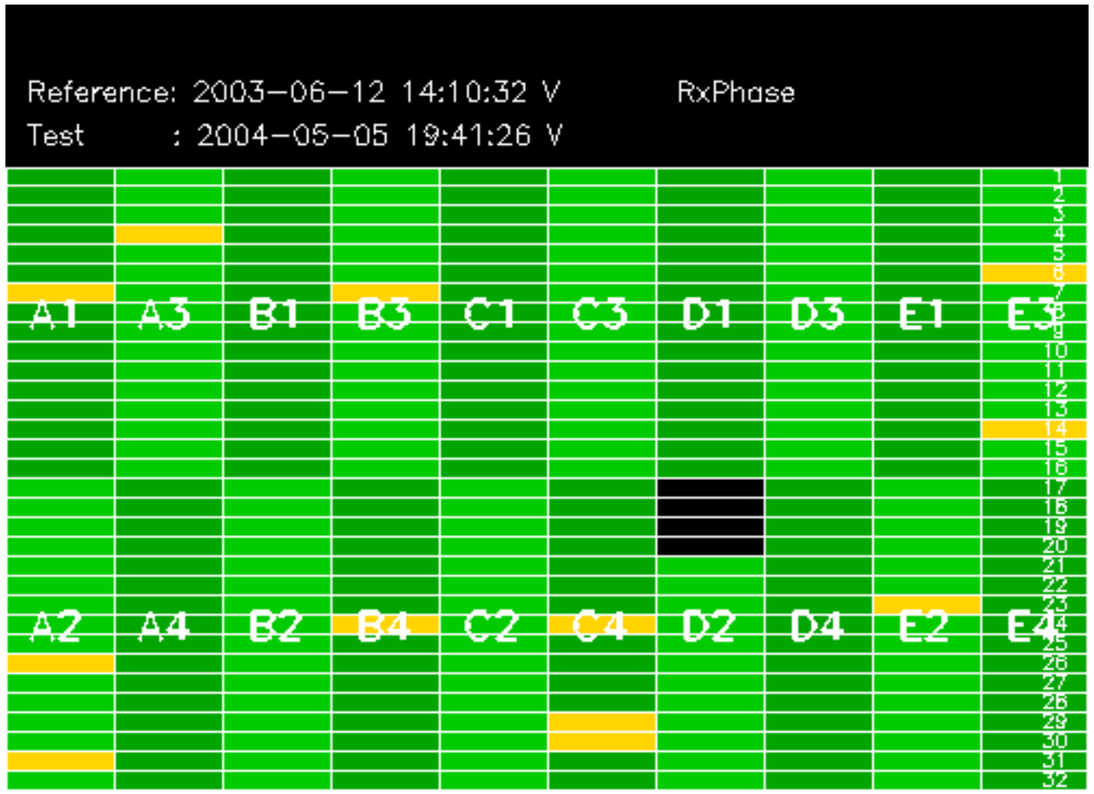

Reference: 2001-02-09 14:08:23 V
Test : 2004-05-05 19:41:26 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

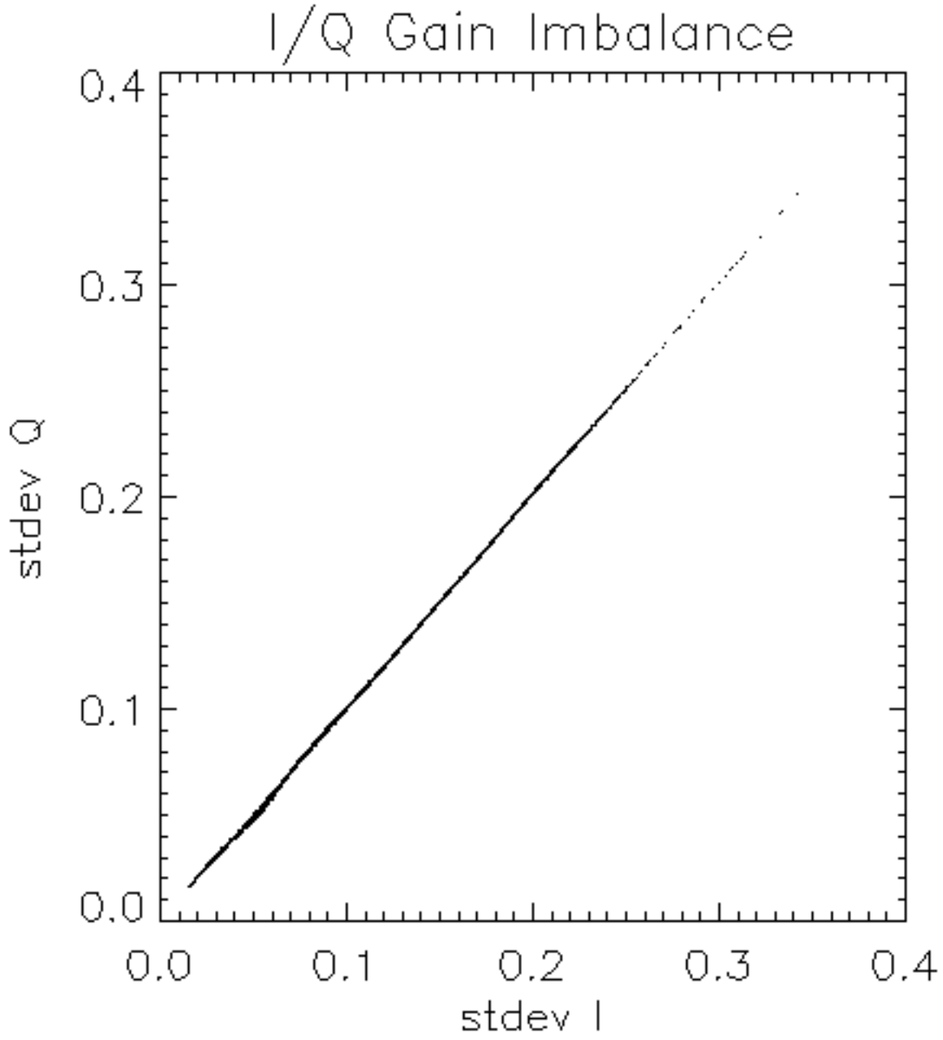

Reference: 2003-06-12 14:10:32 V
Test : 2004-05-05 19:41:26 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

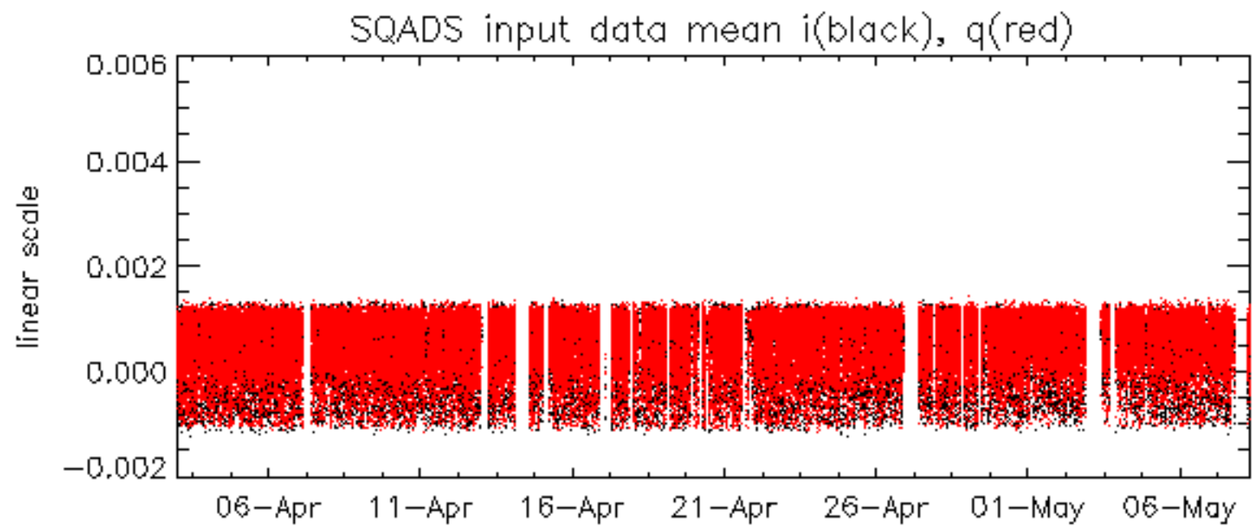

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-05-06 19:08:49 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

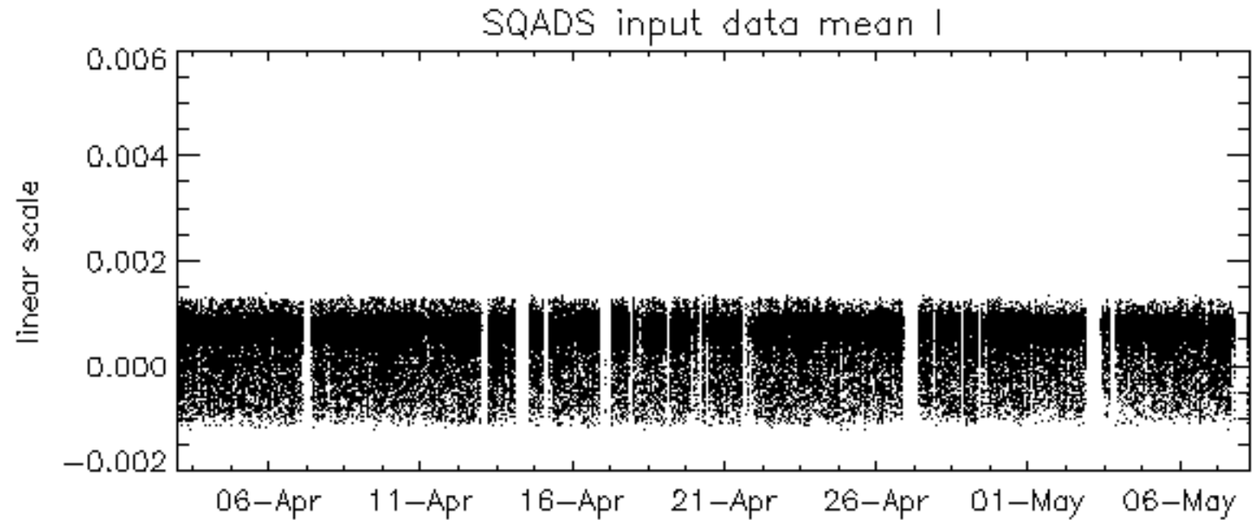

Reference: 2003-06-12 14:08:52 H
Test : 2004-05-06 19:08:49 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

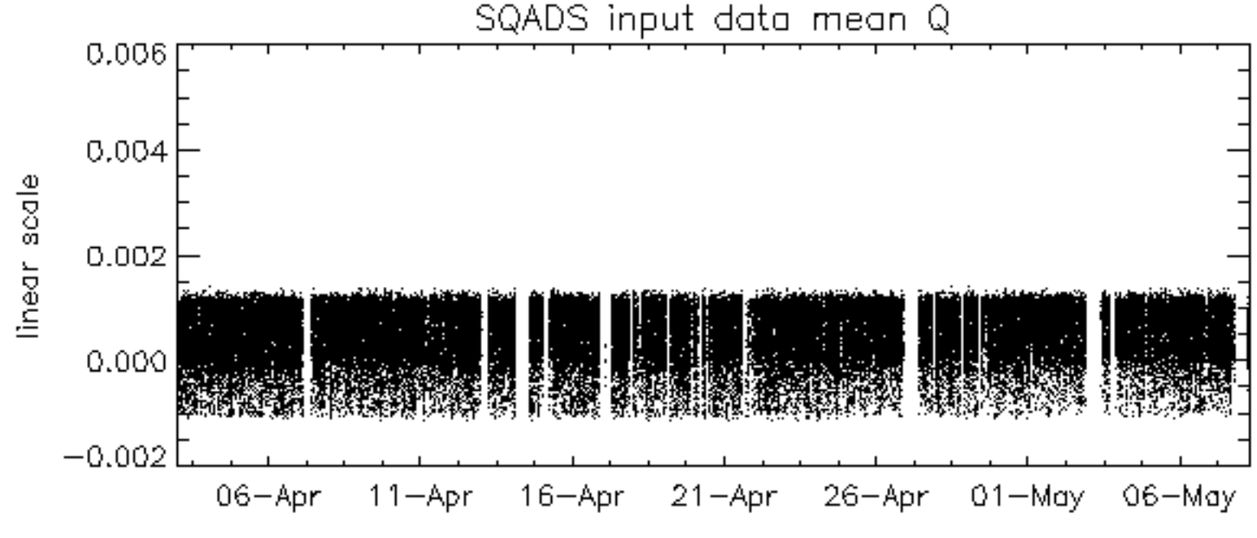

Reference: 2001-02-09 14:08:23 V
Test : 2004-05-05 19:41:26 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

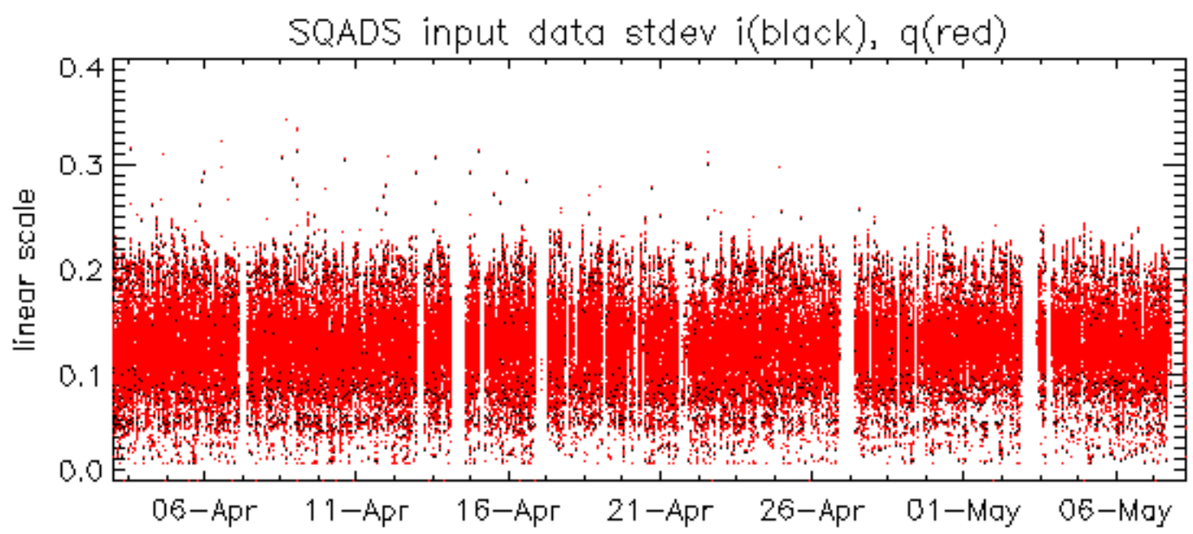

Reference: 2003-06-12 14:10:32 V
Test : 2004-05-05 19:41:26 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

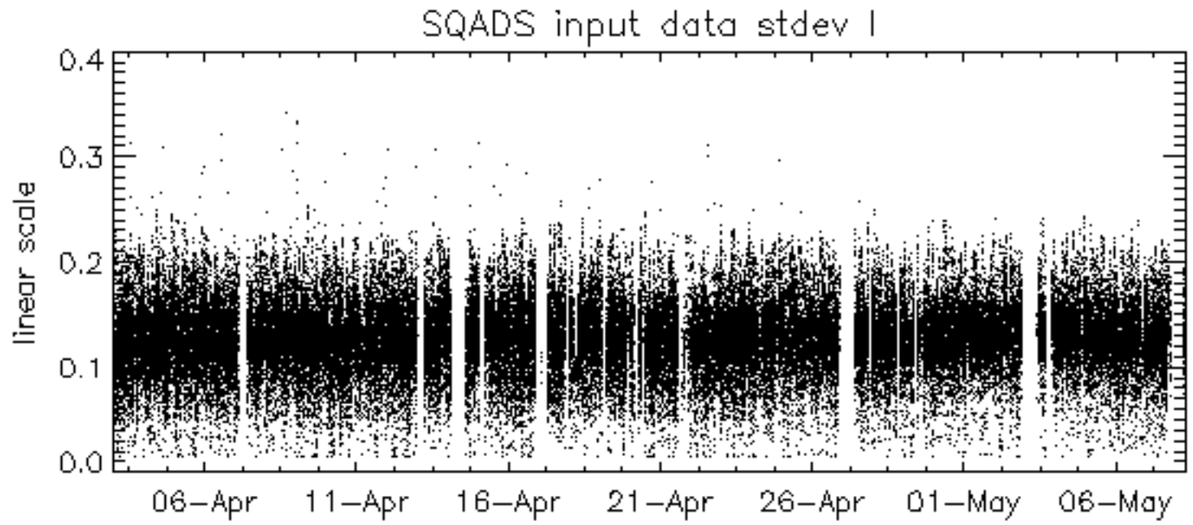

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

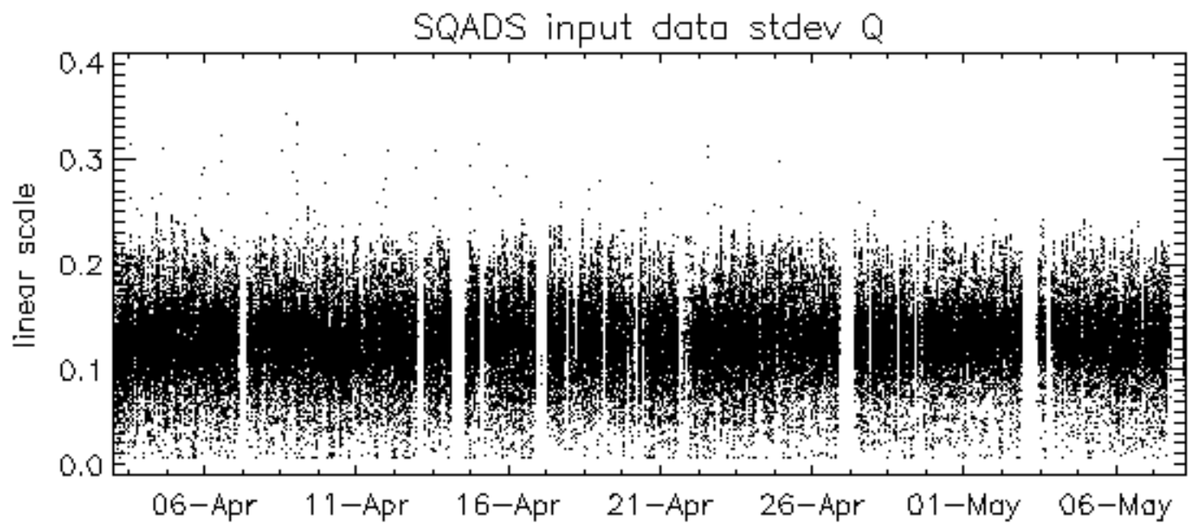

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

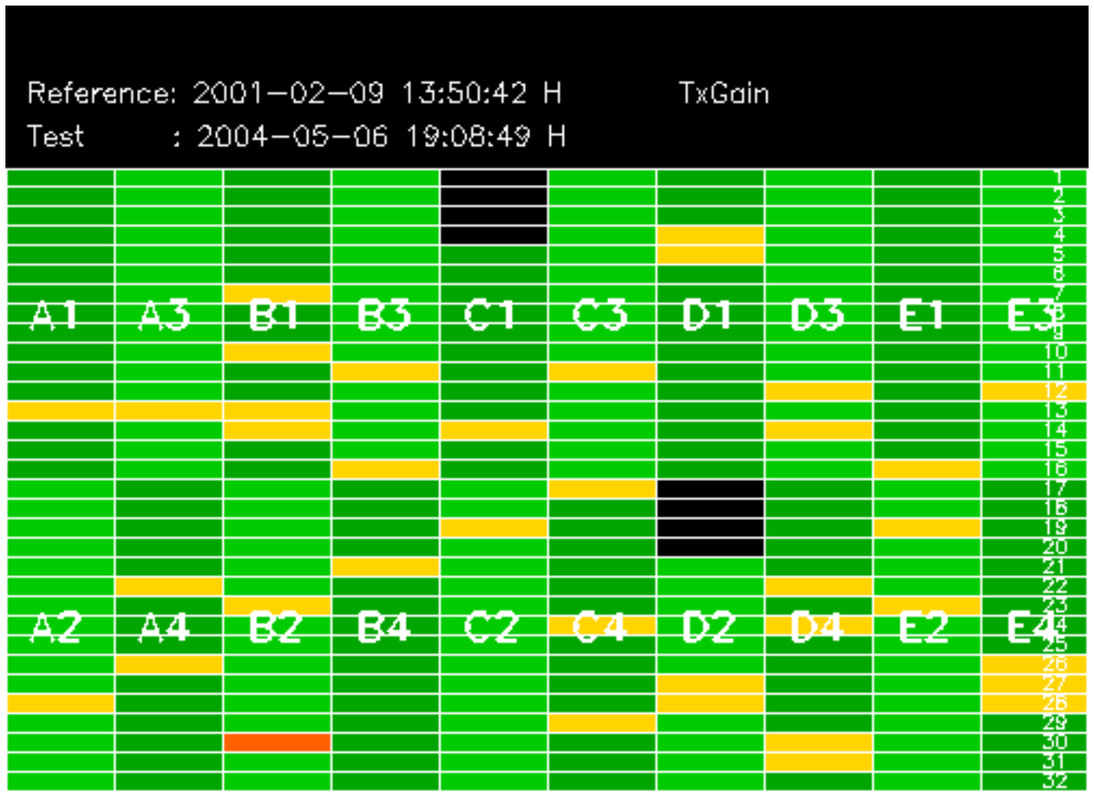

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

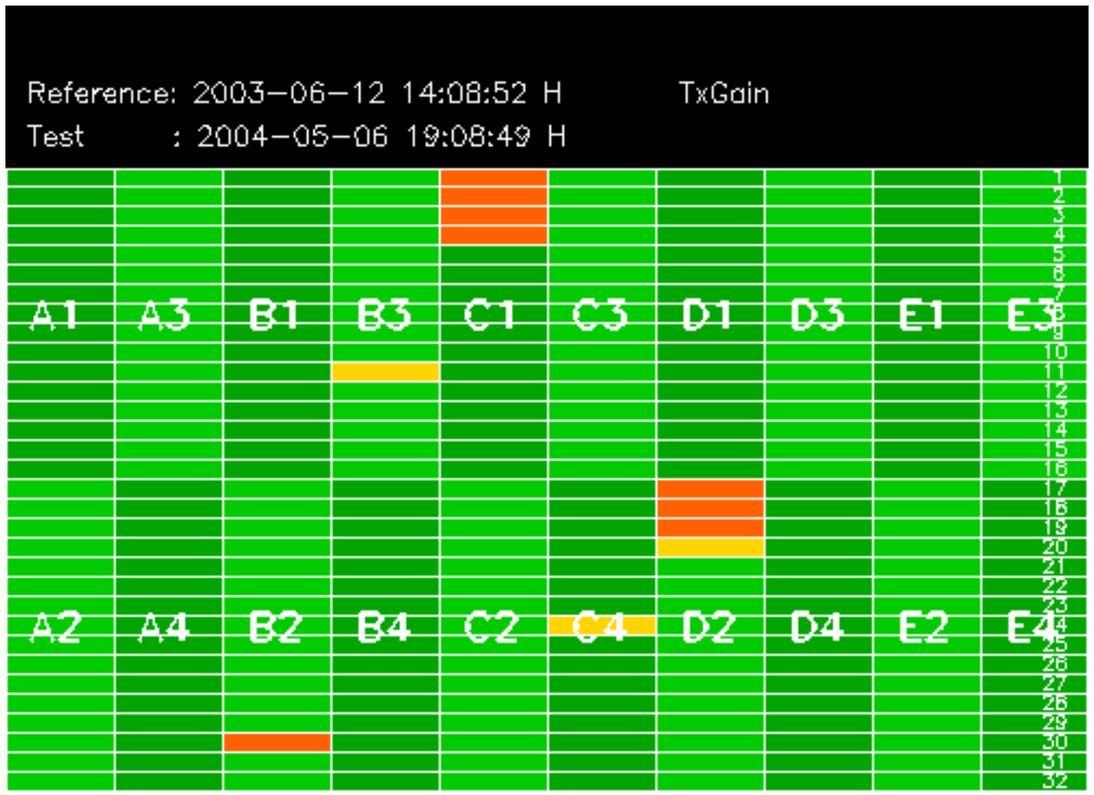

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May


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

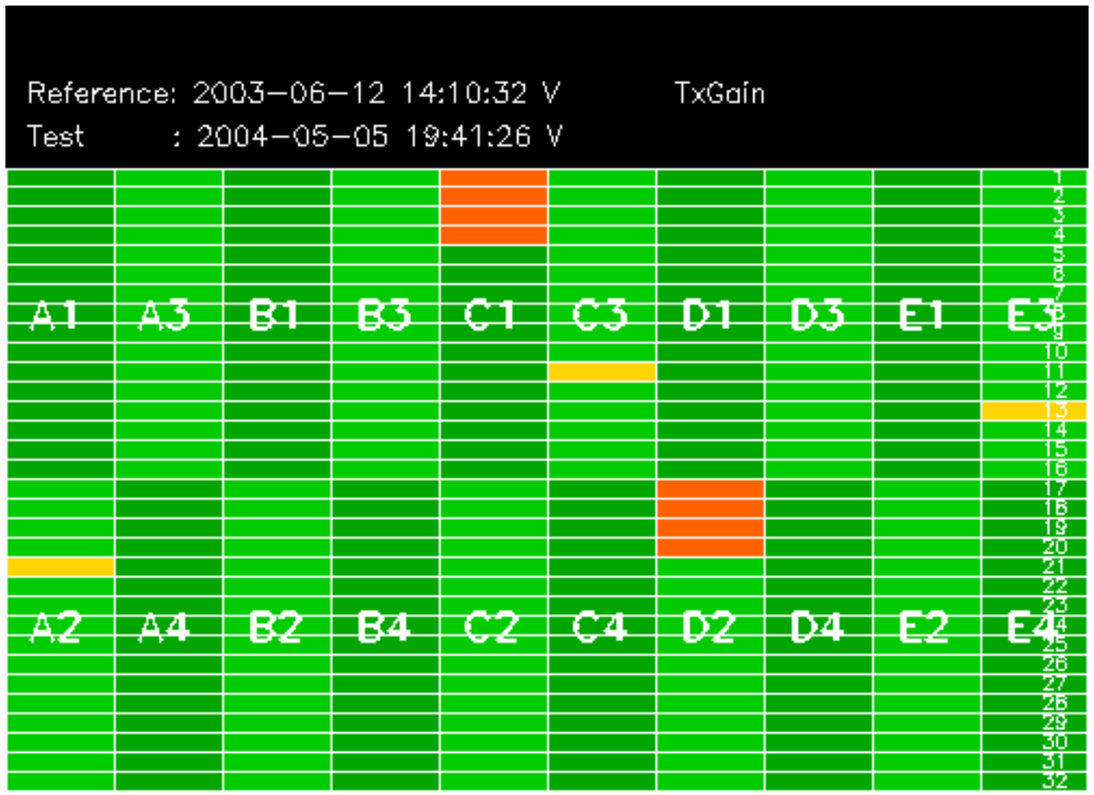

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

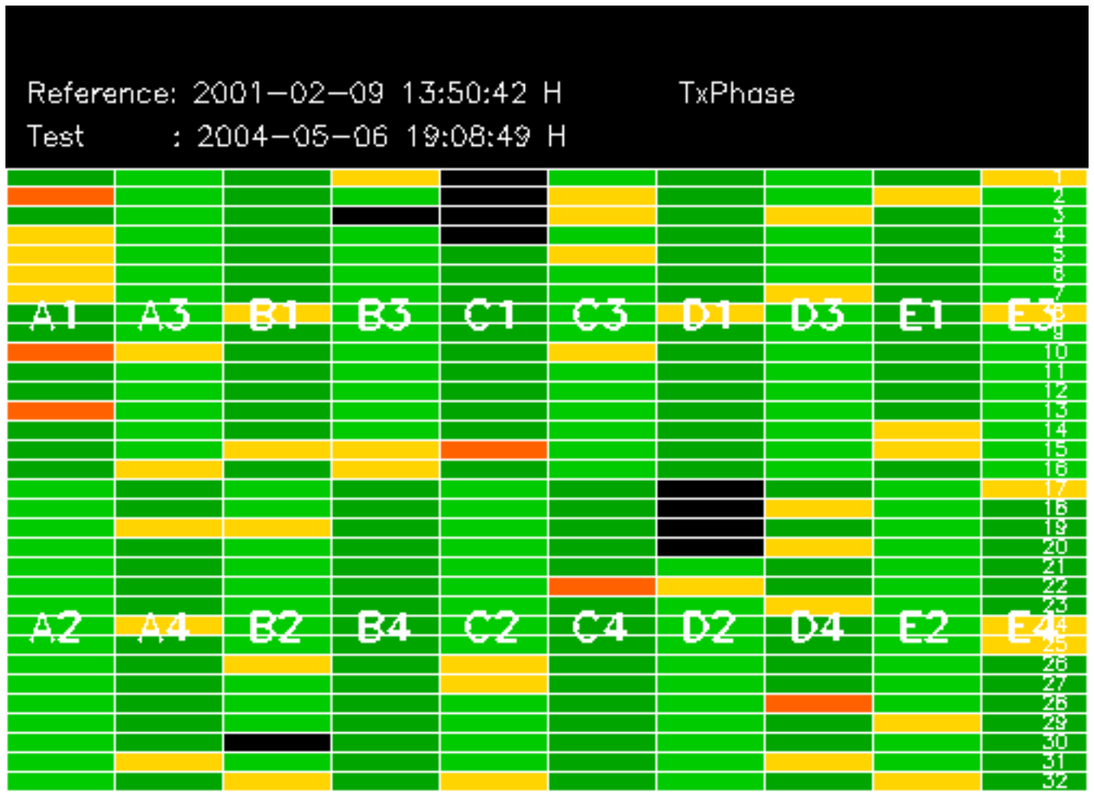

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
06−Apr
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

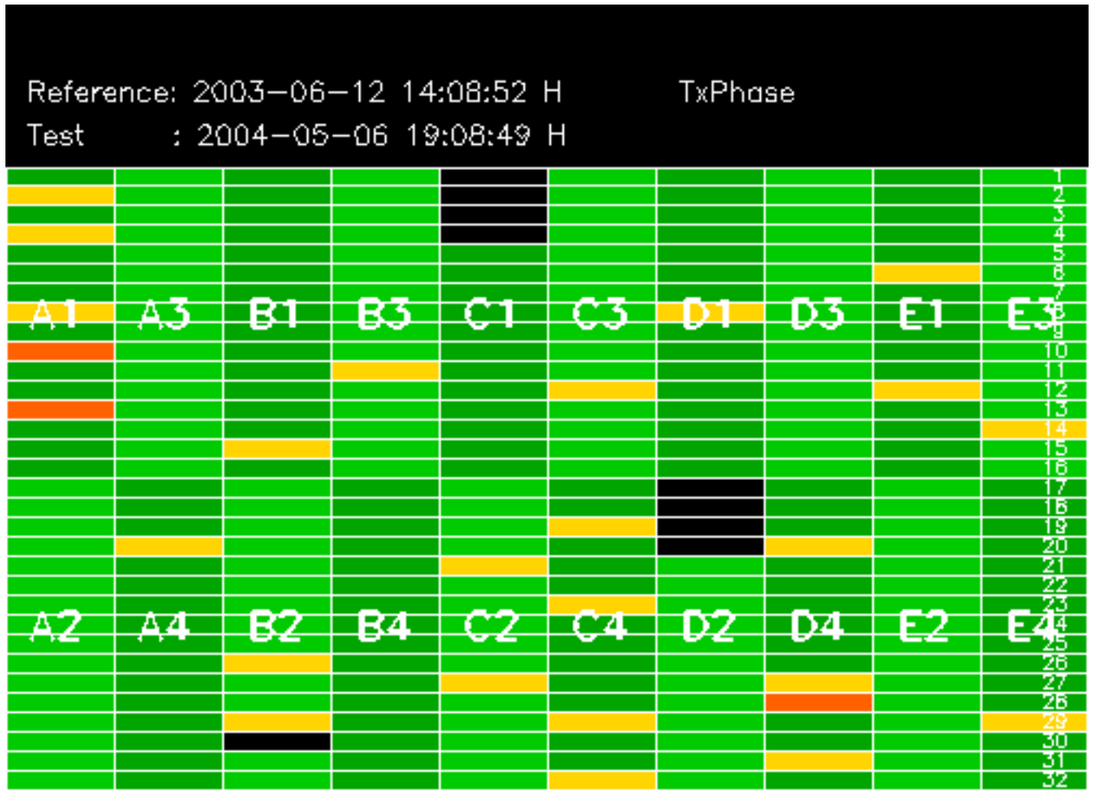

Reference: 2001-02-09 13:50:42 H
Test : 2004-05-06 19:08:49 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

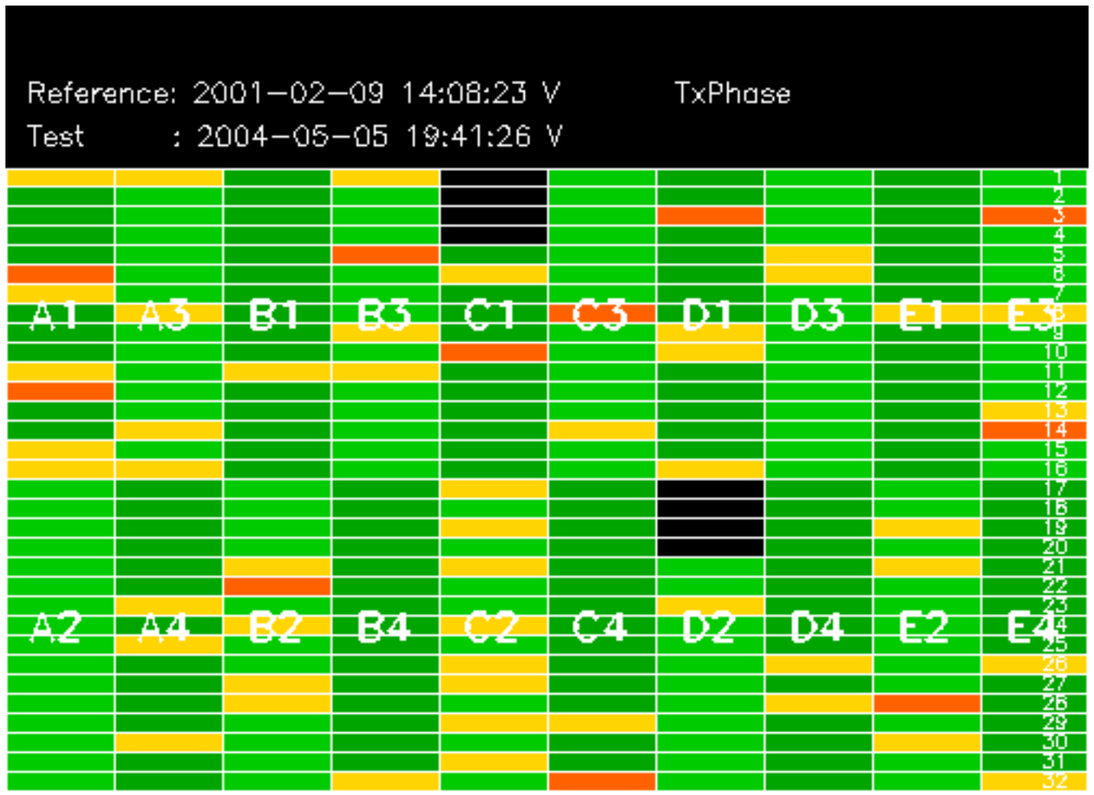

Reference: 2003-06-12 14:08:52 H
Test : 2004-05-06 19:08:49 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

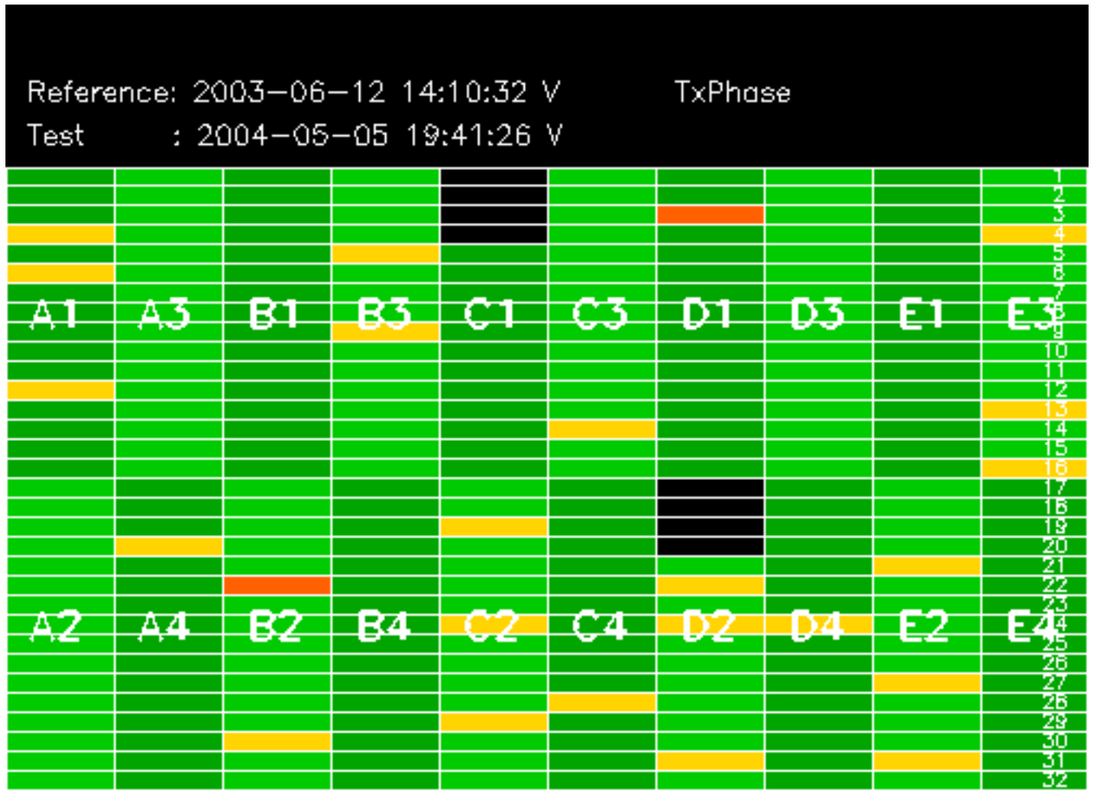

Reference: 2001-02-09 14:08:23 V
Test : 2004-05-05 19:41:26 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-05-05 19:41:26 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
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-05-06 19:08:49 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
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-05-06 19:08:49 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
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2004-05-05 19:41:26 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 : 2004-05-05 19:41:26 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.