PRELIMINARY REPORT OF 041108

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

last update on Mon Nov 8 13:18:02 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	20041104 100812
H	20041103 071837

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


P1a Cyclic statistics

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

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.478472	0.006454	0.013057
7	P1	-3.357971	0.012338	0.000956
11	P1	-4.605844	0.017329	0.011420
15	P1	-5.678636	0.030840	0.025370
19	P1	-3.575305	0.005434	-0.060936
22	P1	-4.579543	0.013883	0.004110
24	P1	-4.960053	0.008865	0.017472

30	P1	-7.059239	0.015723	-0.036520
3	P1	-16.058102	0.095716	0.049698
7	P1	-14.041012	0.065769	0.022961
11	P1	-20.561764	0.197373	-0.269840
15	P1	-11.696703	0.033157	0.049336
19	P1	-14.032491	0.025863	-0.053320
22	P1	-16.227144	0.387245	0.092735
24	P1	-14.640742	0.253785	-0.045823
30	P1	-18.014765	0.275530	0.076119

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.367739	0.089486	-0.018697
7	P2	-22.608782	0.129439	0.037562
11	P2	-15.096914	0.121576	0.075642
15	P2	-7.129096	0.107356	-0.014608
19	P2	-9.687162	0.127360	-0.059981
22	P2	-17.264530	0.109502	0.065633
24	P2	-20.799074	0.092814	-0.003814
30	P2	-19.063631	0.084761	0.050027

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.193093	0.005679	-0.014600
7	P3	-8.193091	0.005679	-0.014604
11	P3	-8.193089	0.005679	-0.014606
15	P3	-8.193090	0.005679	-0.014608
19	P3	-8.193091	0.005679	-0.014605
22	P3	-8.193091	0.005679	-0.014609
24	P3	-8.193092	0.005679	-0.014614
30	P3	-8.193057	0.005677	-0.014757

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1a Cyclic statistics

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

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-2.810545	0.011523	0.051640
7	P1	-2.958412	0.026063	0.035757
11	P1	-3.893639	0.021024	-0.011601
15	P1	-3.489349	0.024968	0.000701
19	P1	-3.574586	0.012432	-0.060312
22	P1	-5.634080	0.064950	0.050547
24	P1	-3.977441	0.022025	-0.033629
30	P1	-6.243237	0.042986	-0.050662
3	P1	-10.658439	0.067341	0.290542
7	P1	-10.067495	0.140027	0.008110
11	P1	-12.312532	0.115202	-0.146822
15	P1	-11.687098	0.063961	-0.056148
19	P1	-15.611845	0.055100	-0.017932
22	P1	-23.795155	1.720872	-0.306346
24	P1	-18.166935	0.228071	-0.122248
30	P1	-20.299438	1.021987	0.140355

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.046865	0.043159	-0.020479
7	P2	-22.686234	0.034514	0.069332
11	P2	-10.872324	0.041482	0.043432
15	P2	-5.028112	0.029893	-0.029662
19	P2	-6.911086	0.040555	-0.133925
22	P2	-7.381287	0.030416	0.068361
24	P2	-11.151703	0.037952	-0.044838
30	P2	-22.096262	0.020765	0.042218

P3 Cyclic statistics

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

3	P3	-8.034875	0.003469	-0.016923
7	P3	-8.034815	0.003475	-0.016825
11	P3	-8.034863	0.003471	-0.016662
15	P3	-8.034840	0.003464	-0.016864
19	P3	-8.034820	0.003462	-0.016710
22	P3	-8.034889	0.003473	-0.017012
24	P3	-8.035054	0.003477	-0.016625
30	P3	-8.034870	0.003479	-0.016839

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	0.000474865
	stdev	2.15019e-07
MEAN Q	mean	0.000552174
	stdev	2.32952e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127049
	stdev	0.000907628

STDEV Q	mean	0.127264
	stdev	0.000916012

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

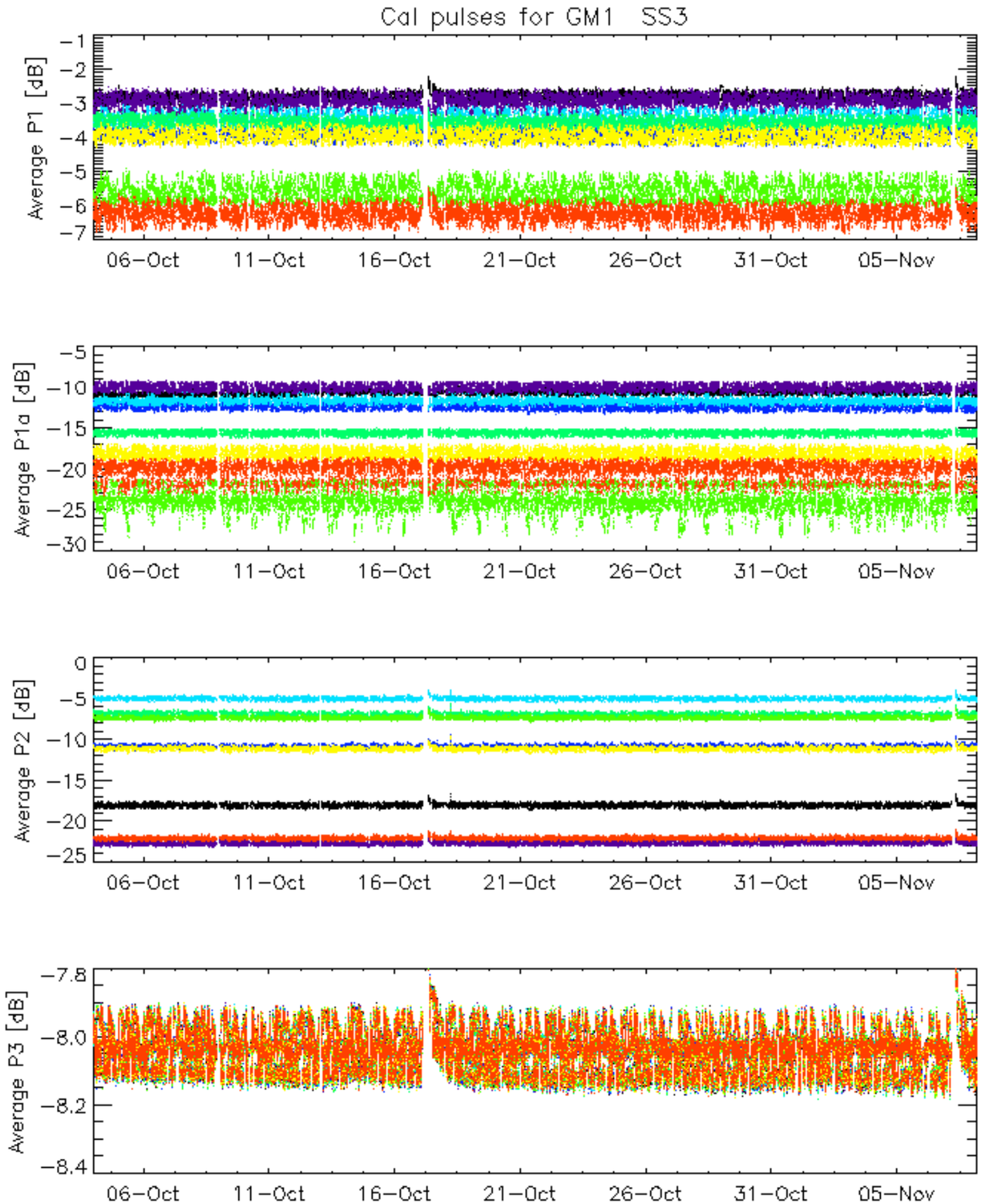
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

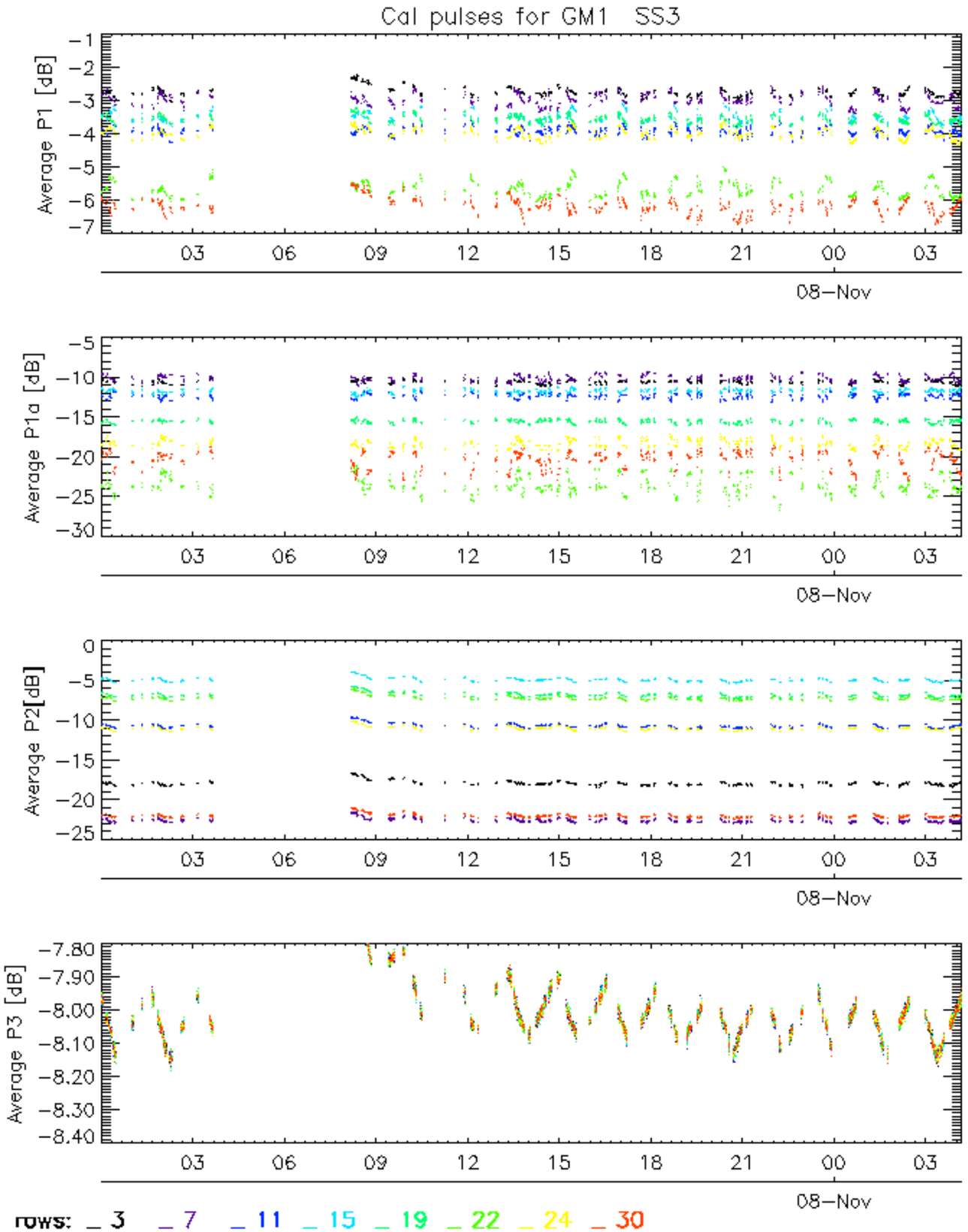
6.5 - Absolute Doppler for GM1

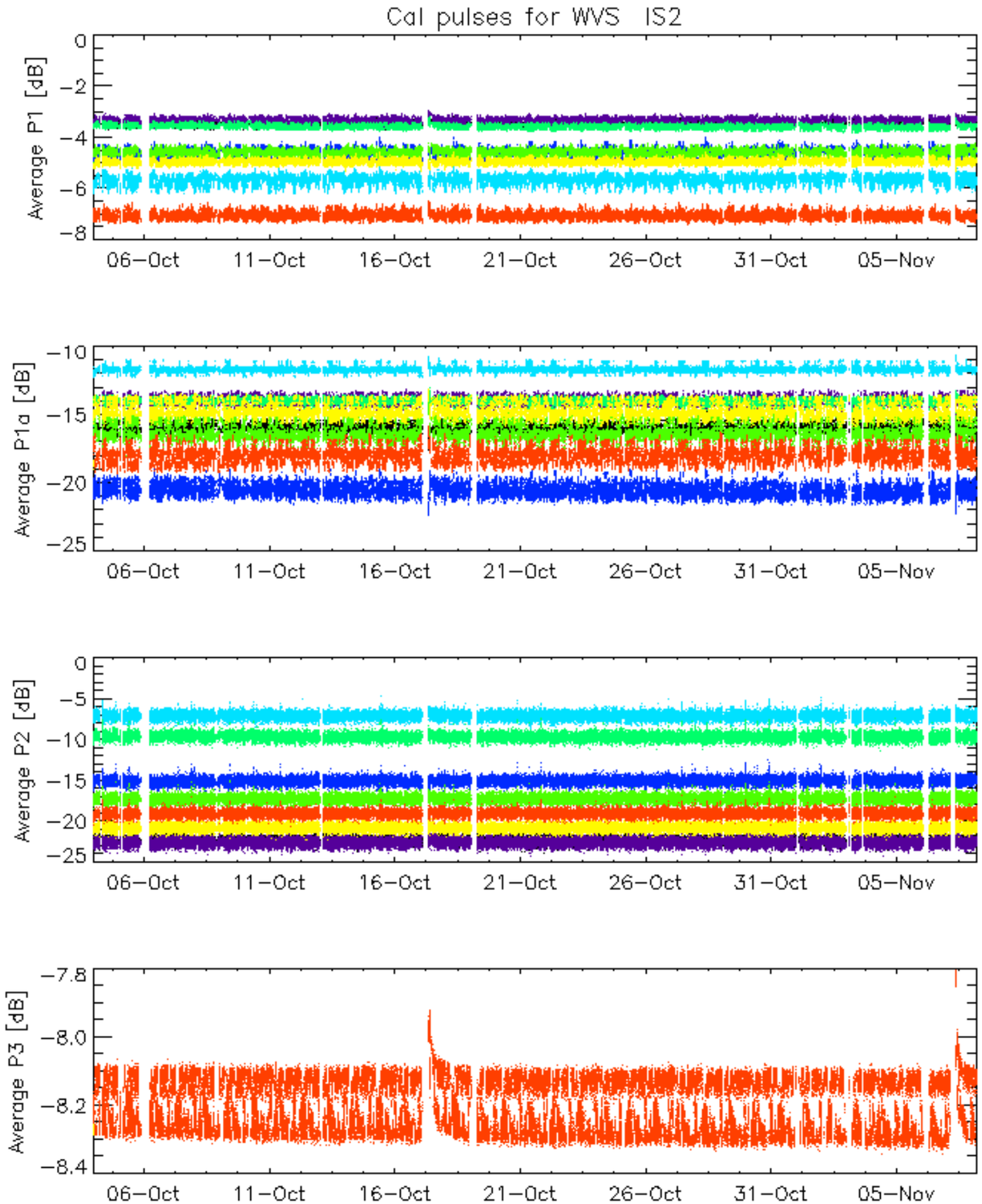
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

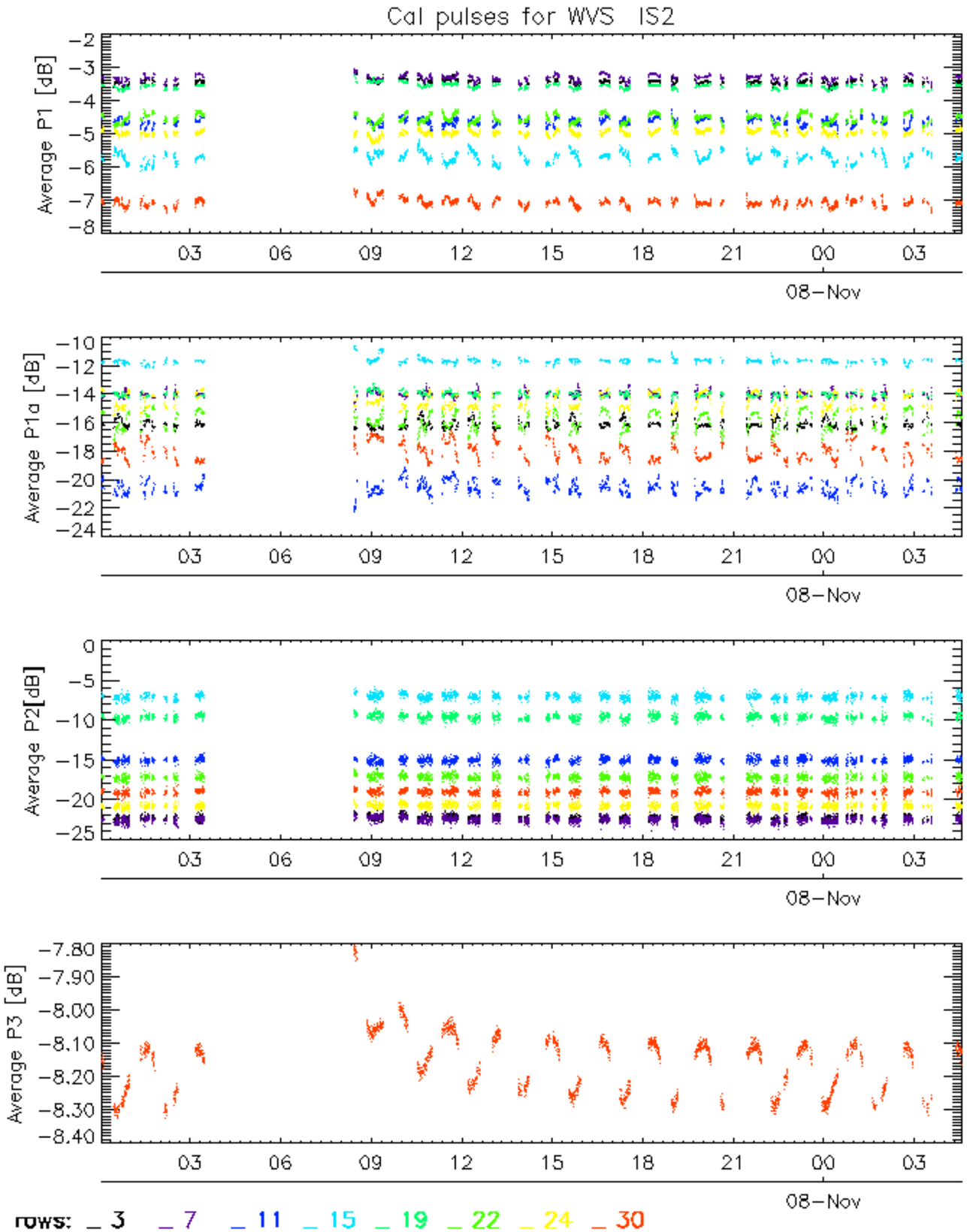
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

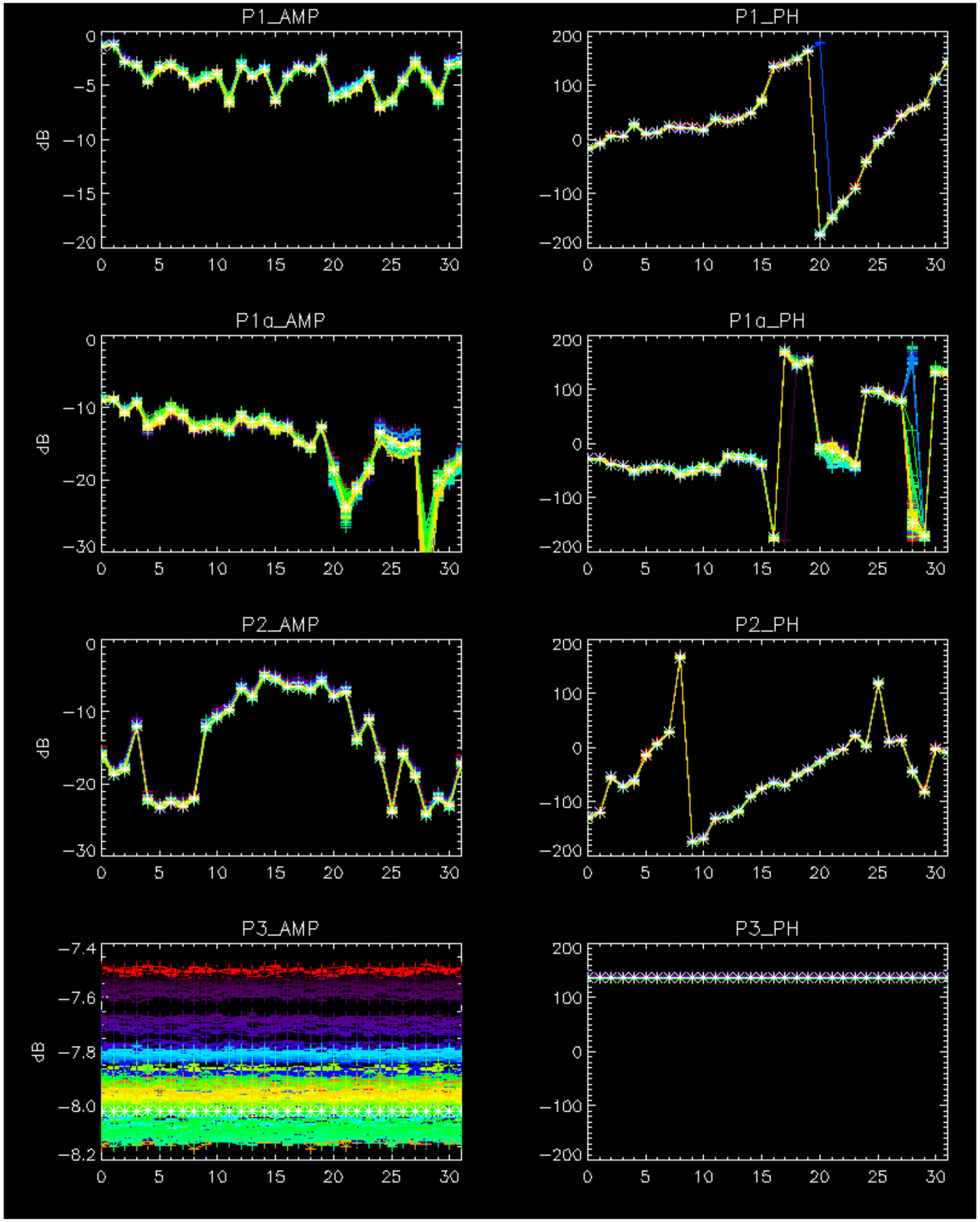

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

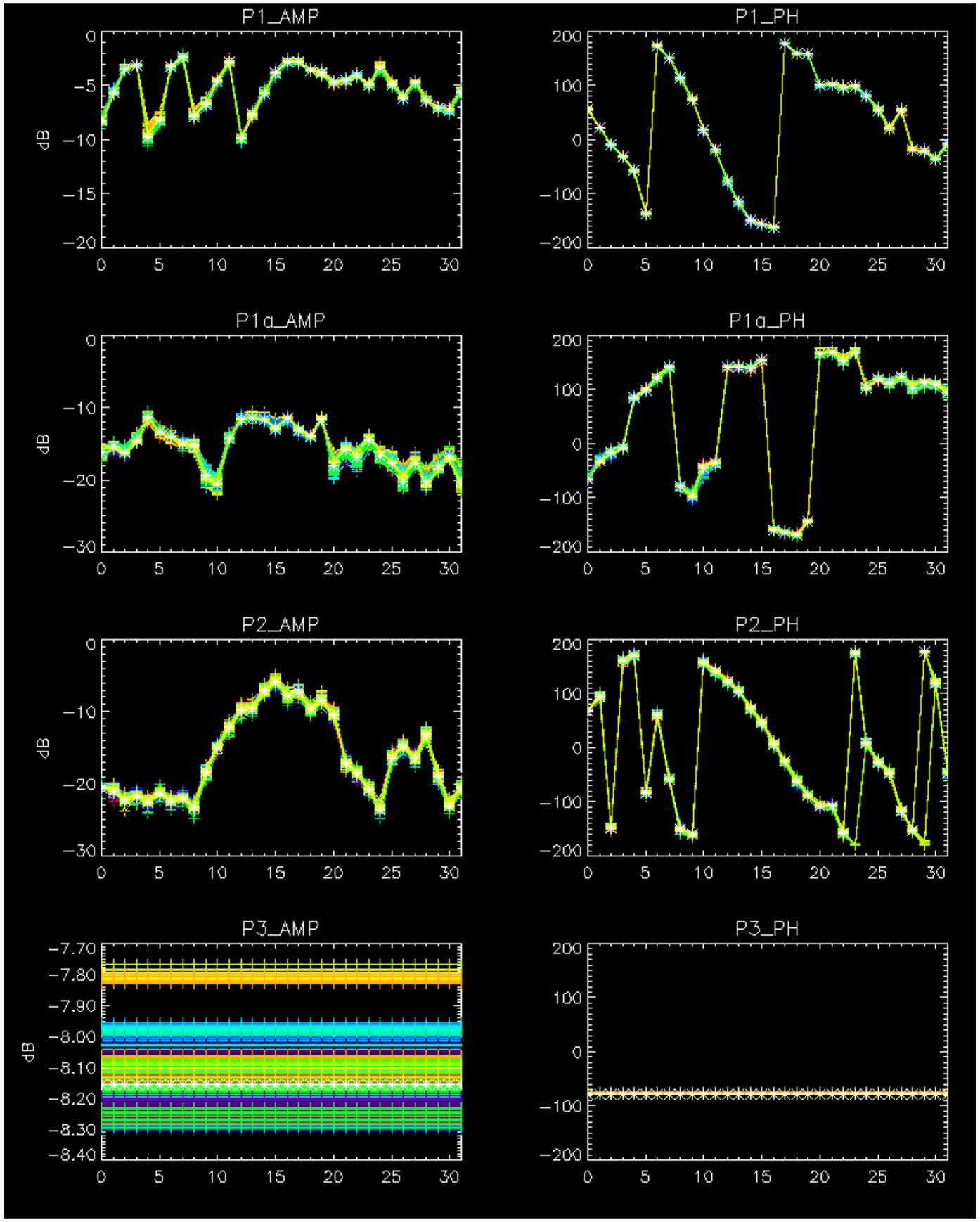

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
08−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
08−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
08−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
08−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
Average P1a [dB]
−10
−15
−20
−25
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
08−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
03
06
09
12
15
18
21
00
03
08−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
08−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
08−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

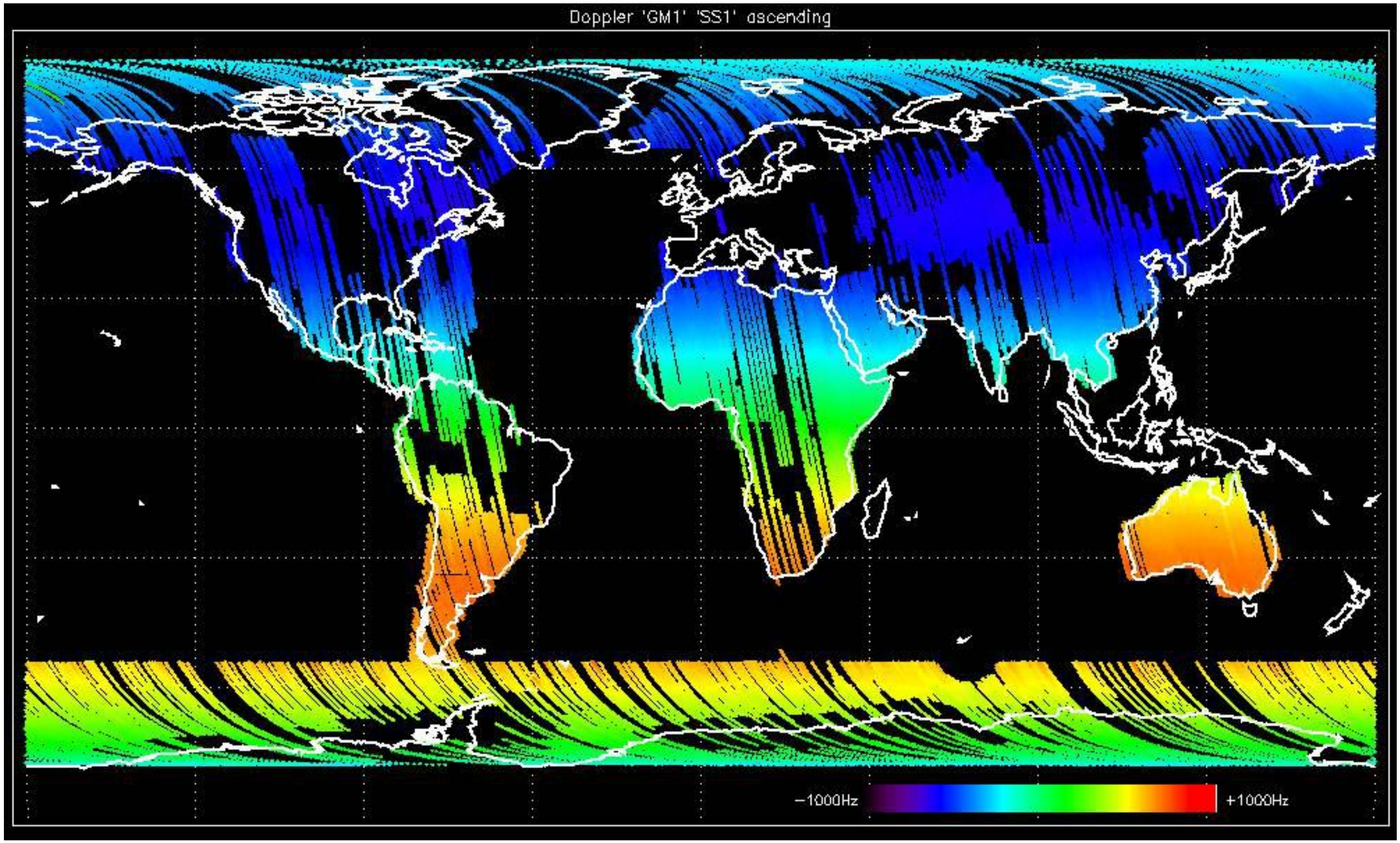
No anomalies observed.

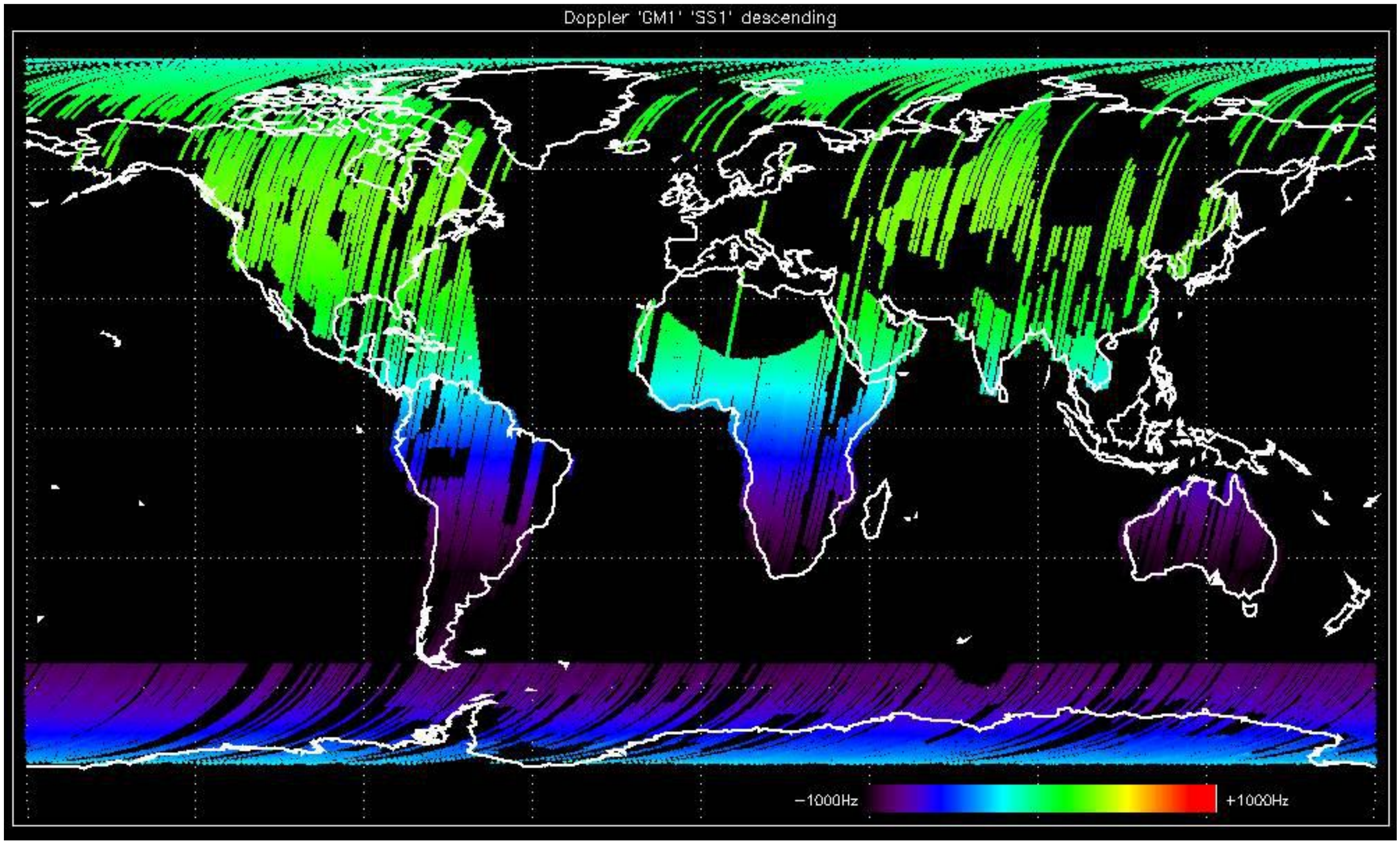

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.4
−7.6
−7.8
−8.0
−8.2
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

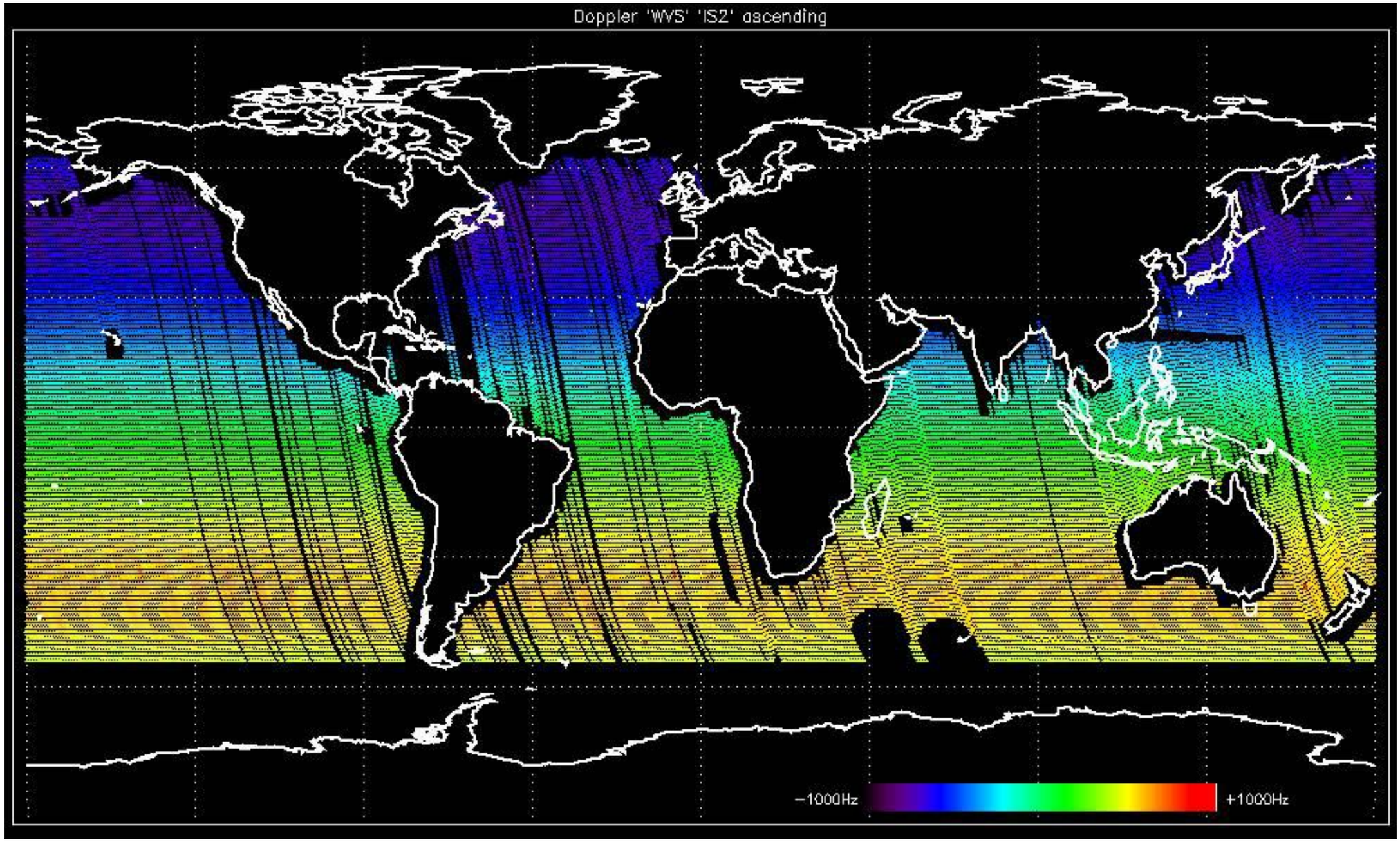

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.70
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

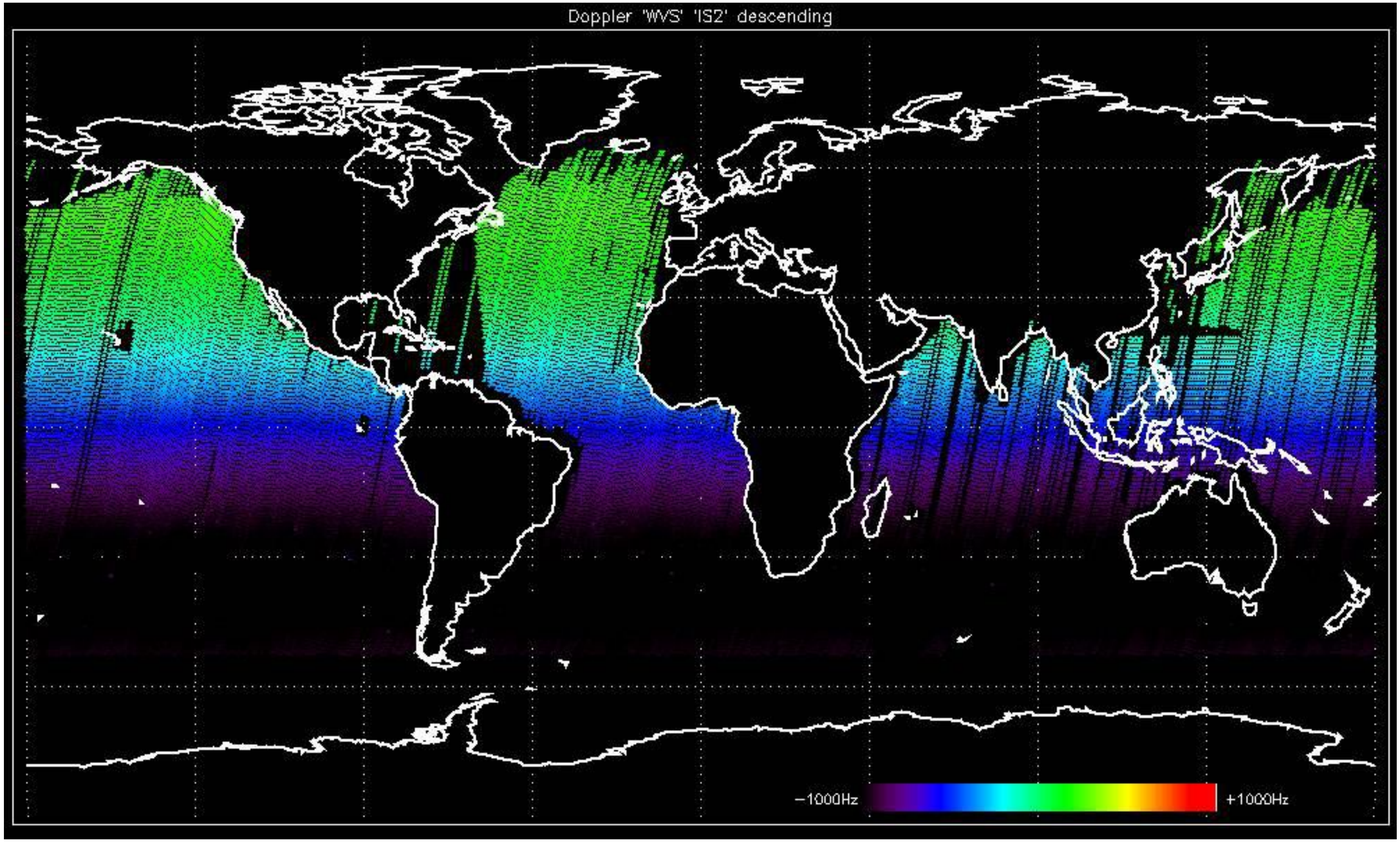
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

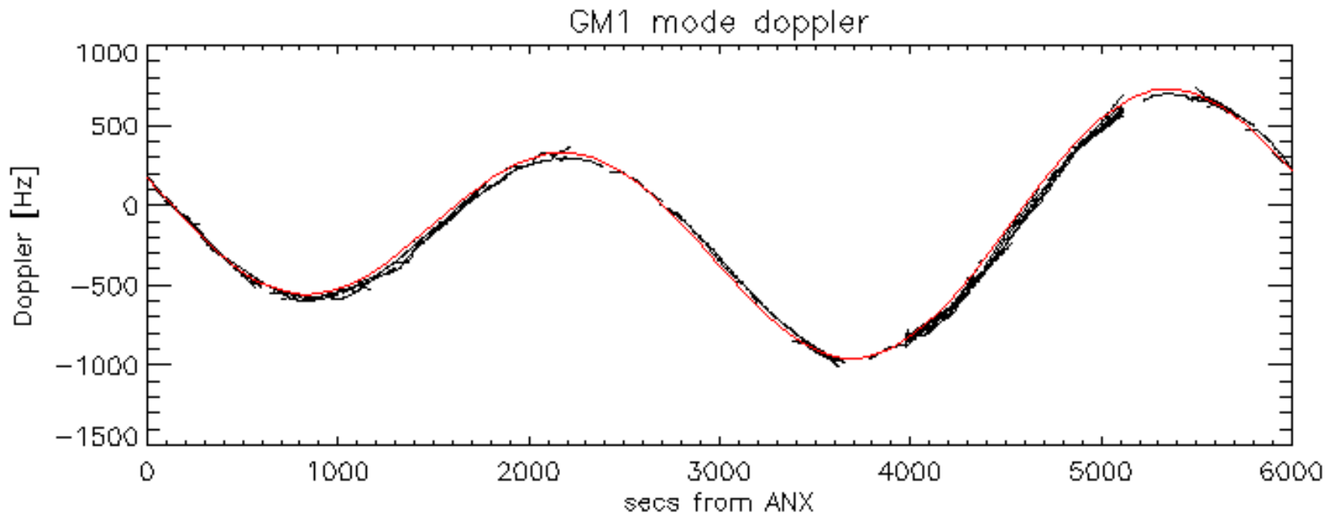
Preliminary report.The data is not yet controled

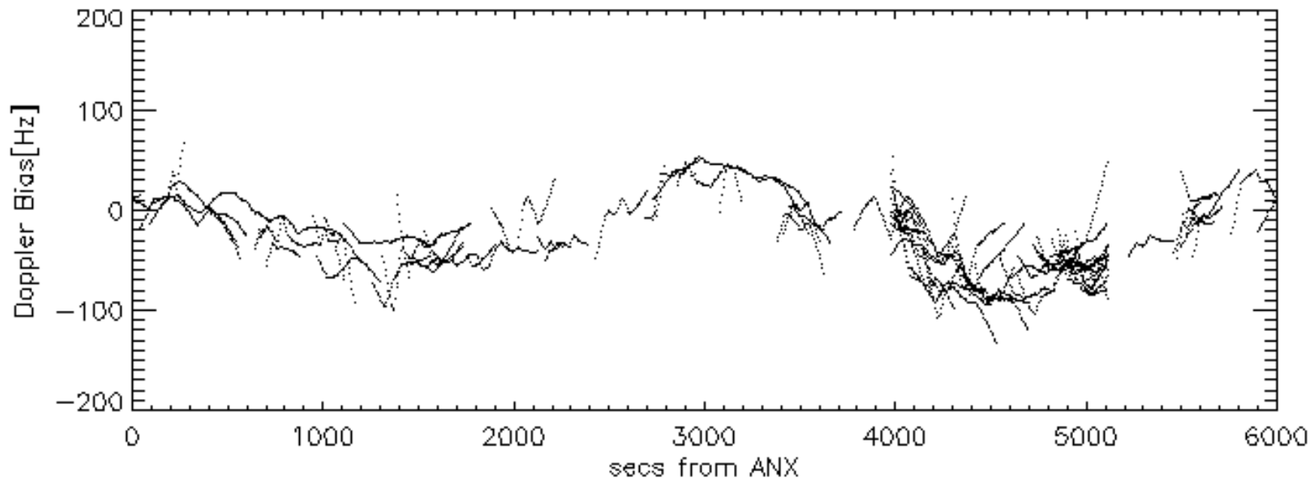

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

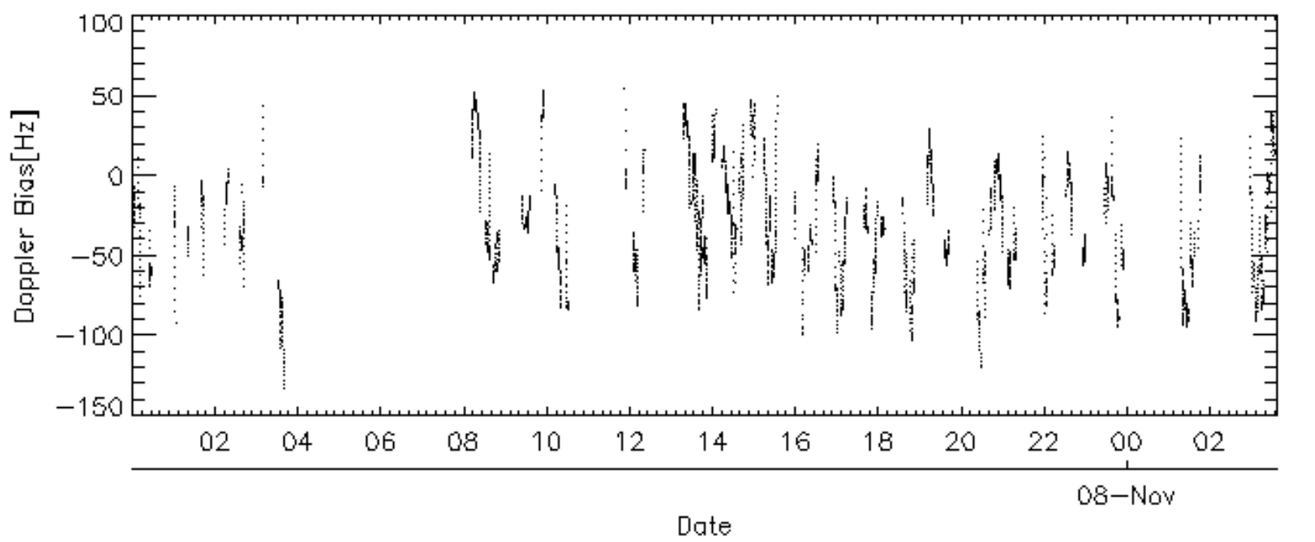

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

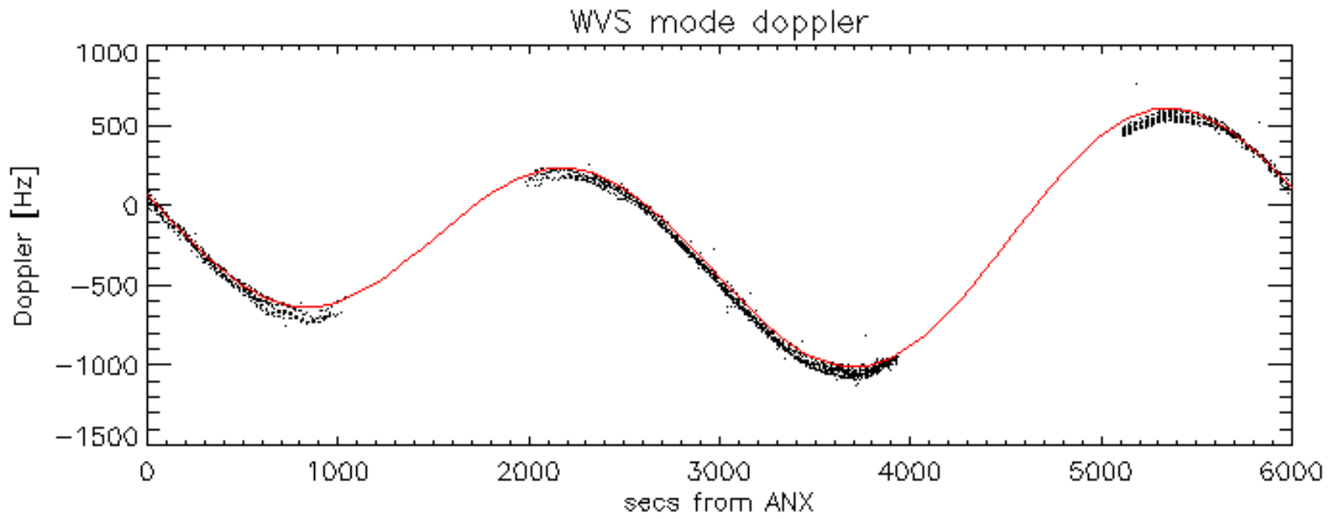

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

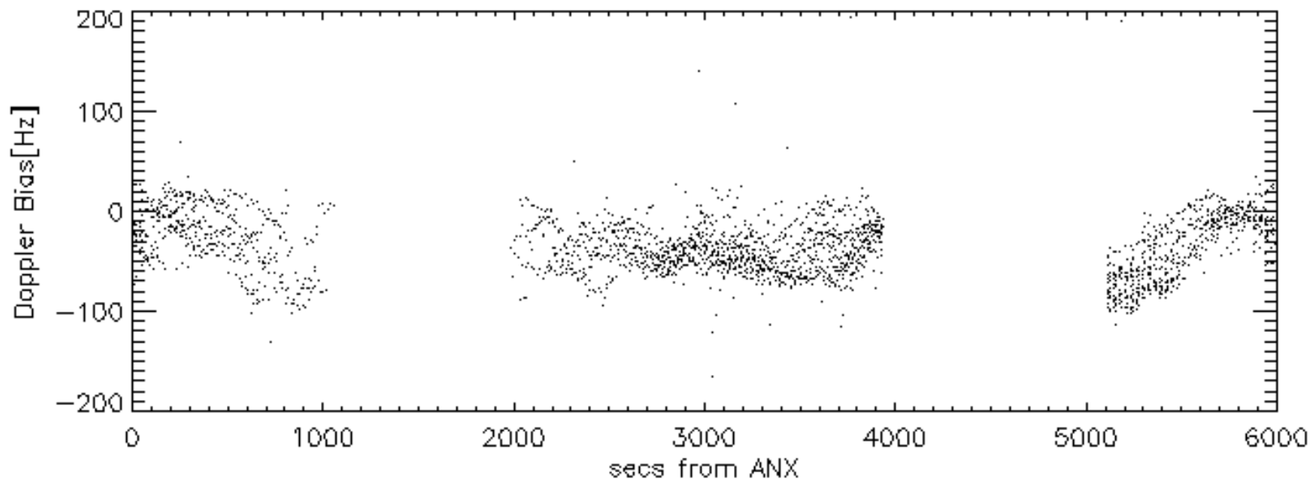

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

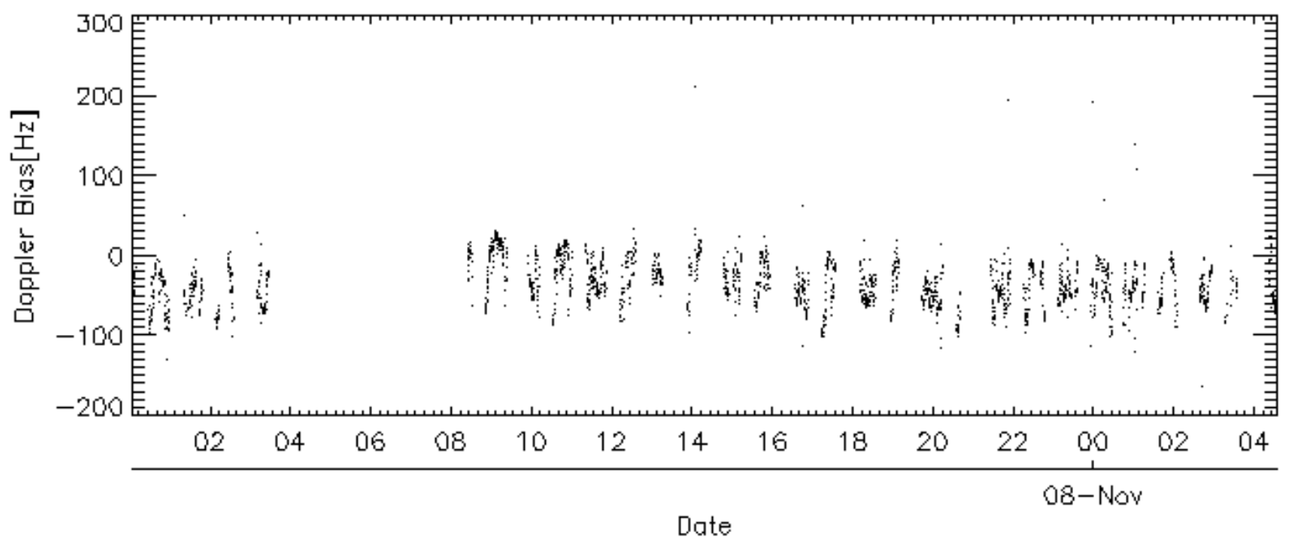

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

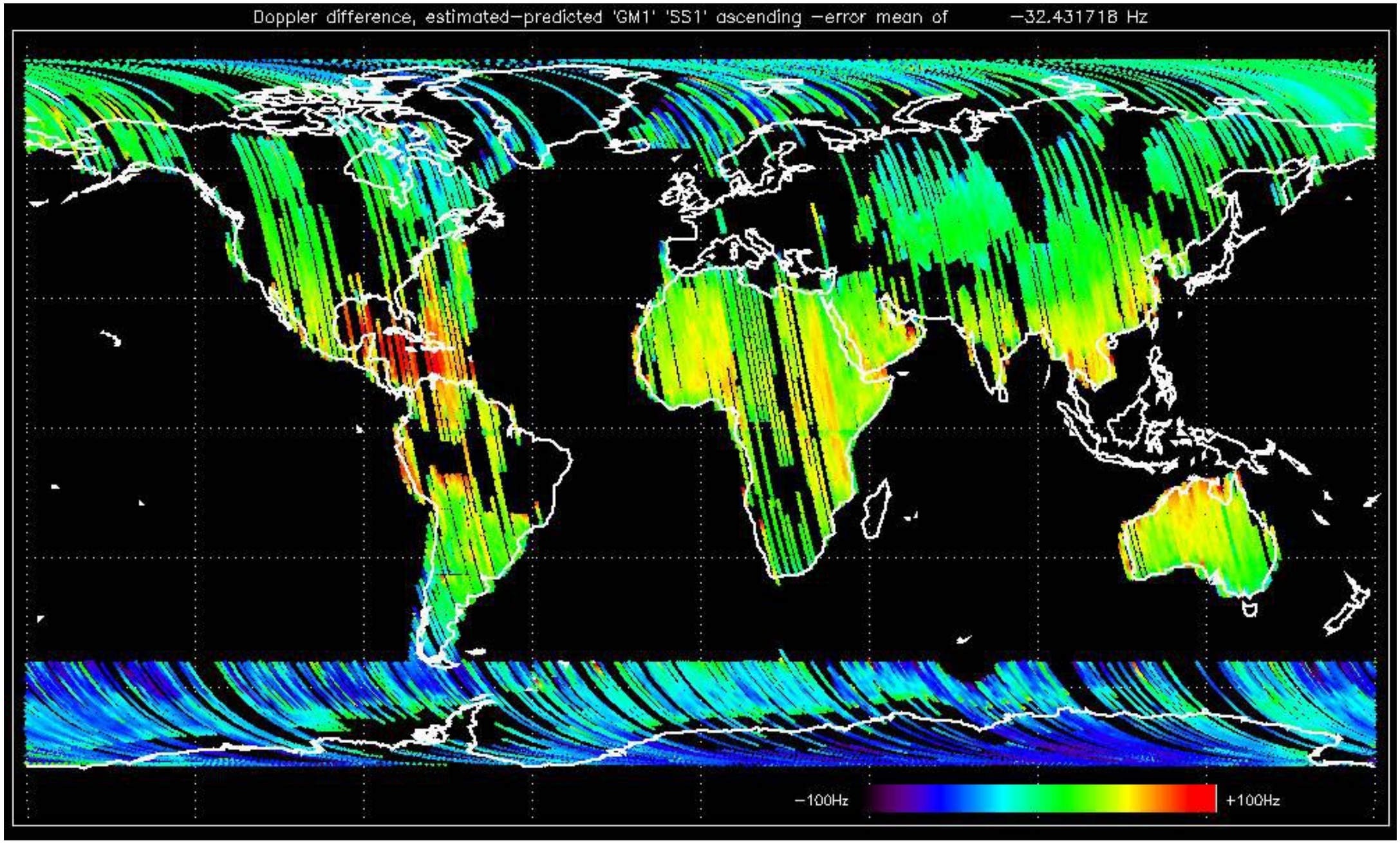

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

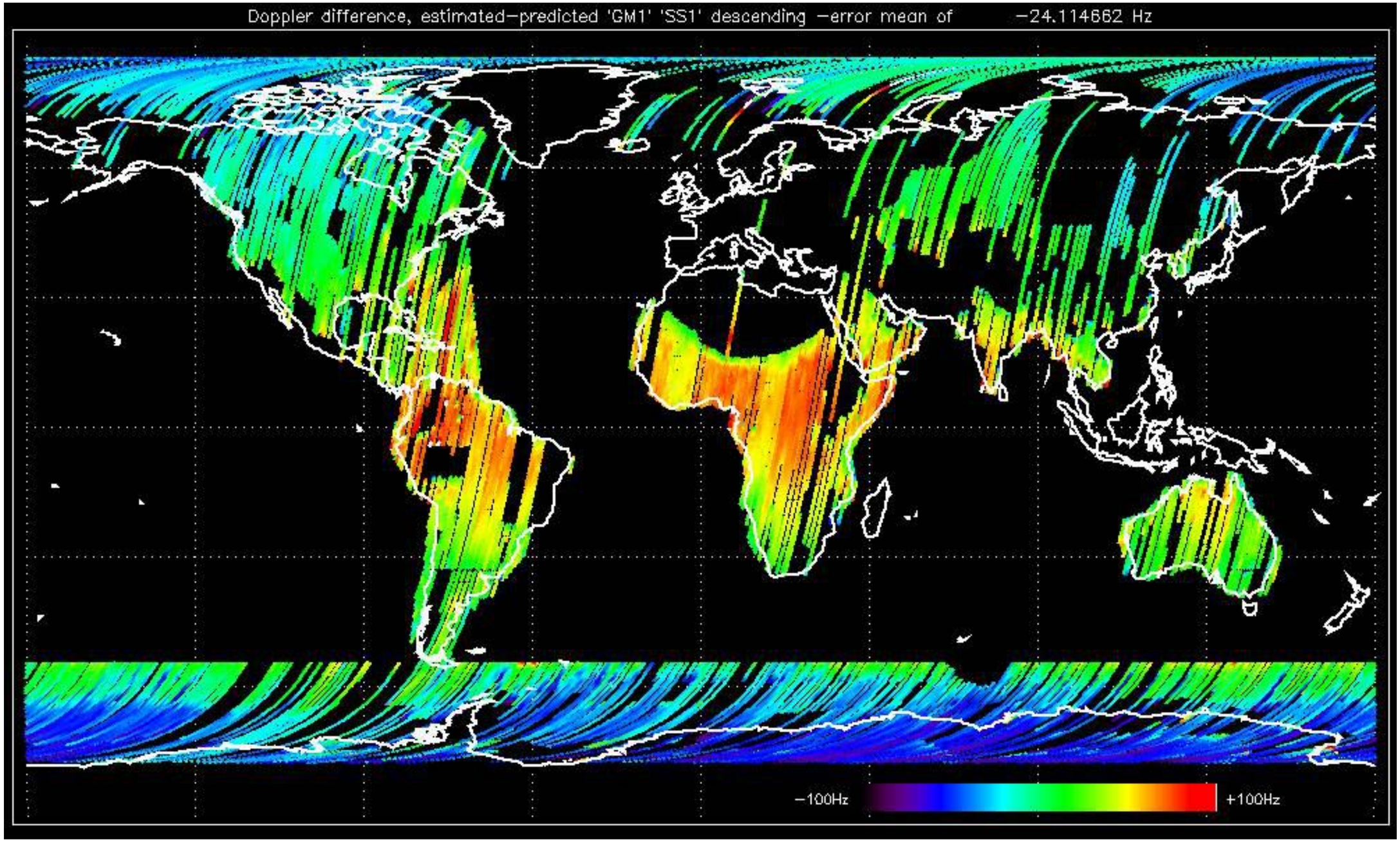

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
08−Nov
Date

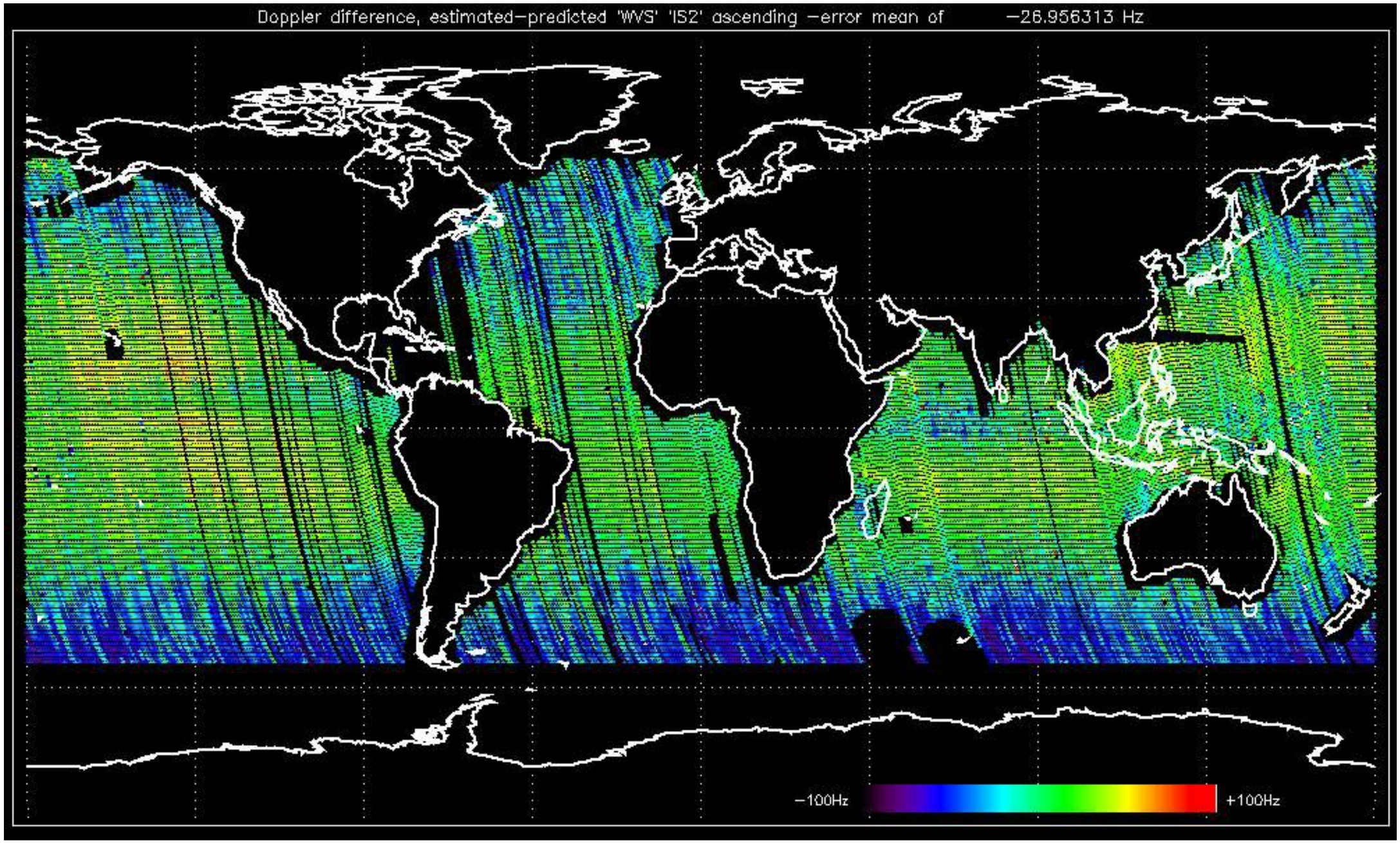

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

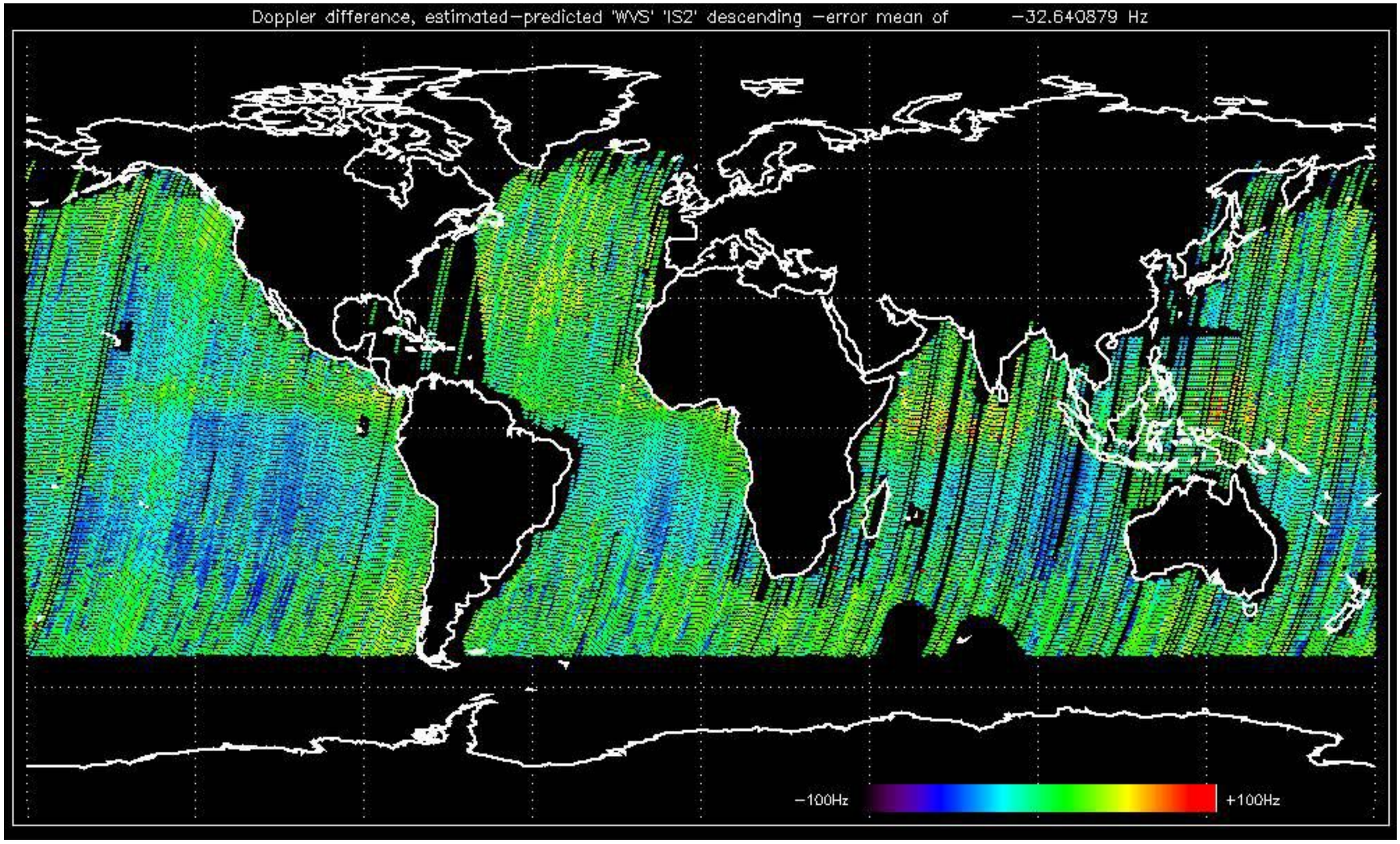

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
300
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
08−Nov
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −32.431718 Hz
−100Hz
+100Hz

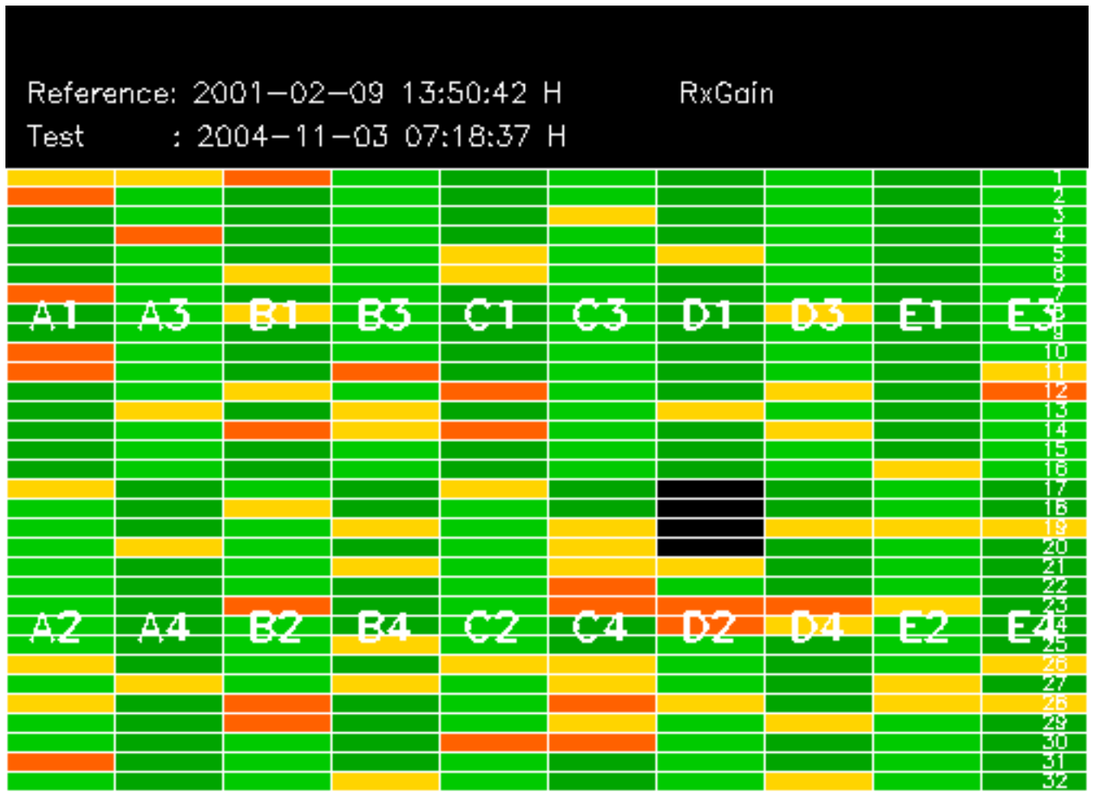

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.114662 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.956313 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −32.640879 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 : 2004-11-03 07:18:37 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
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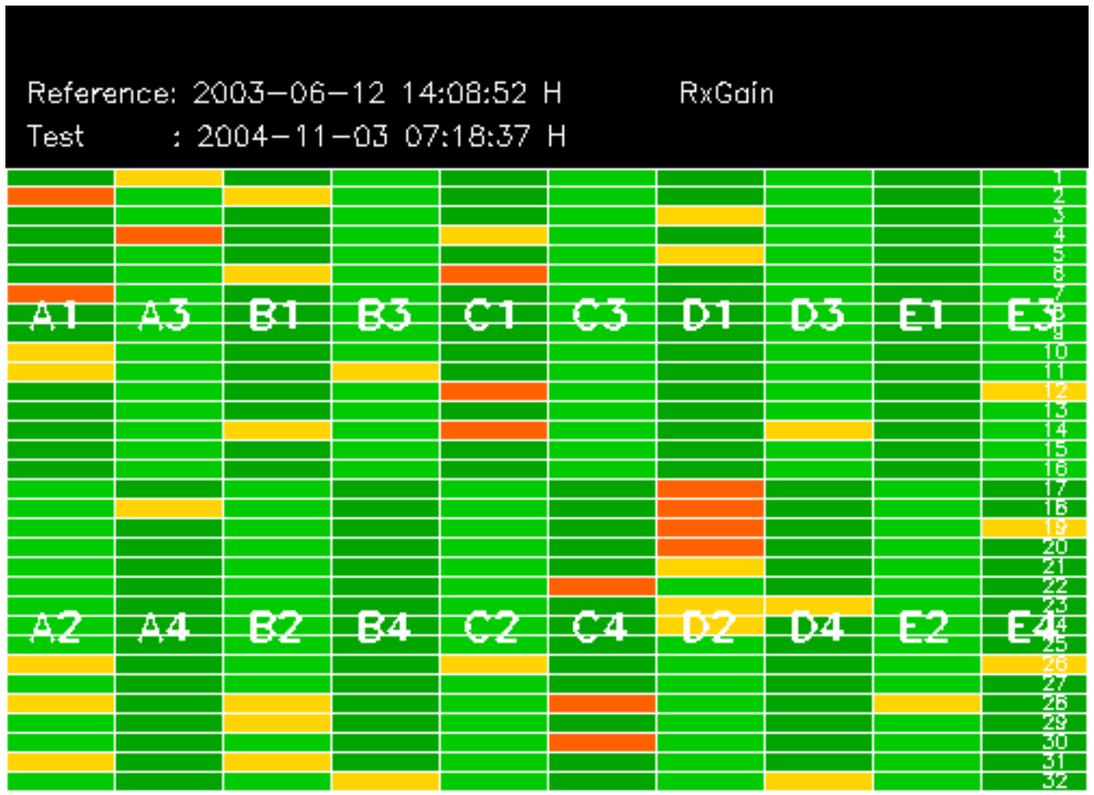
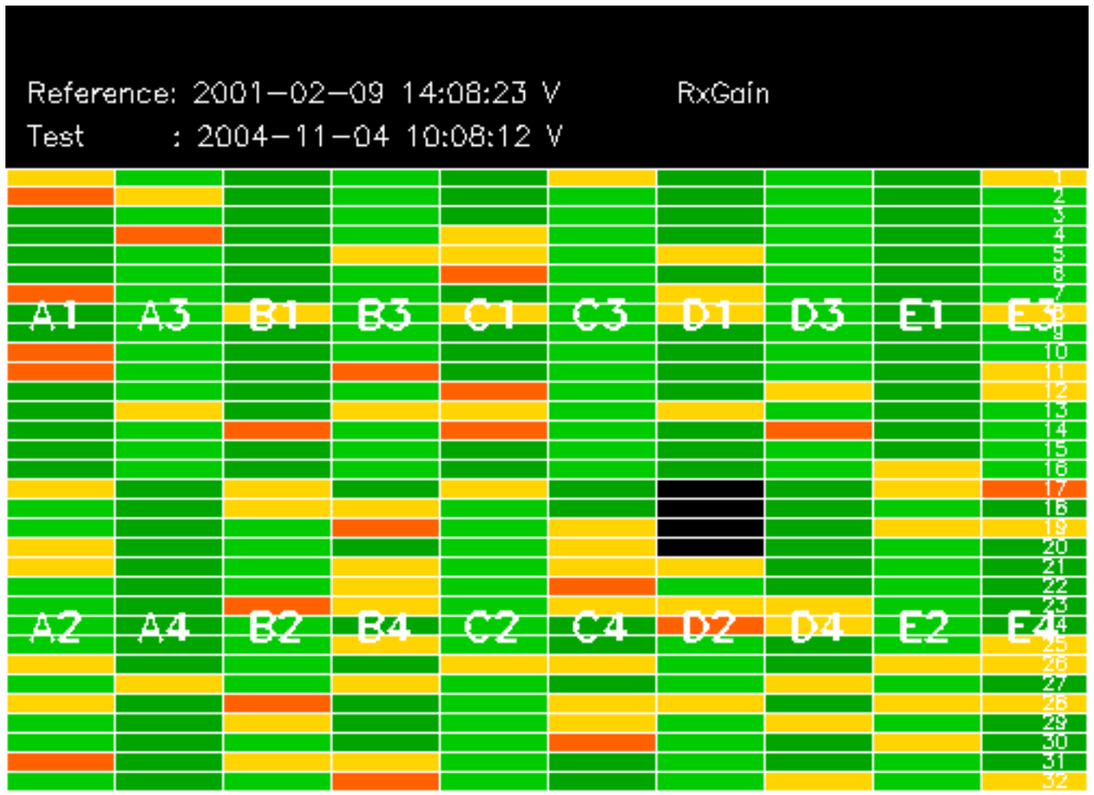
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-11-03 07:18:37 H
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 14:08:23 V
Test : 2004-11-04 10:08:12 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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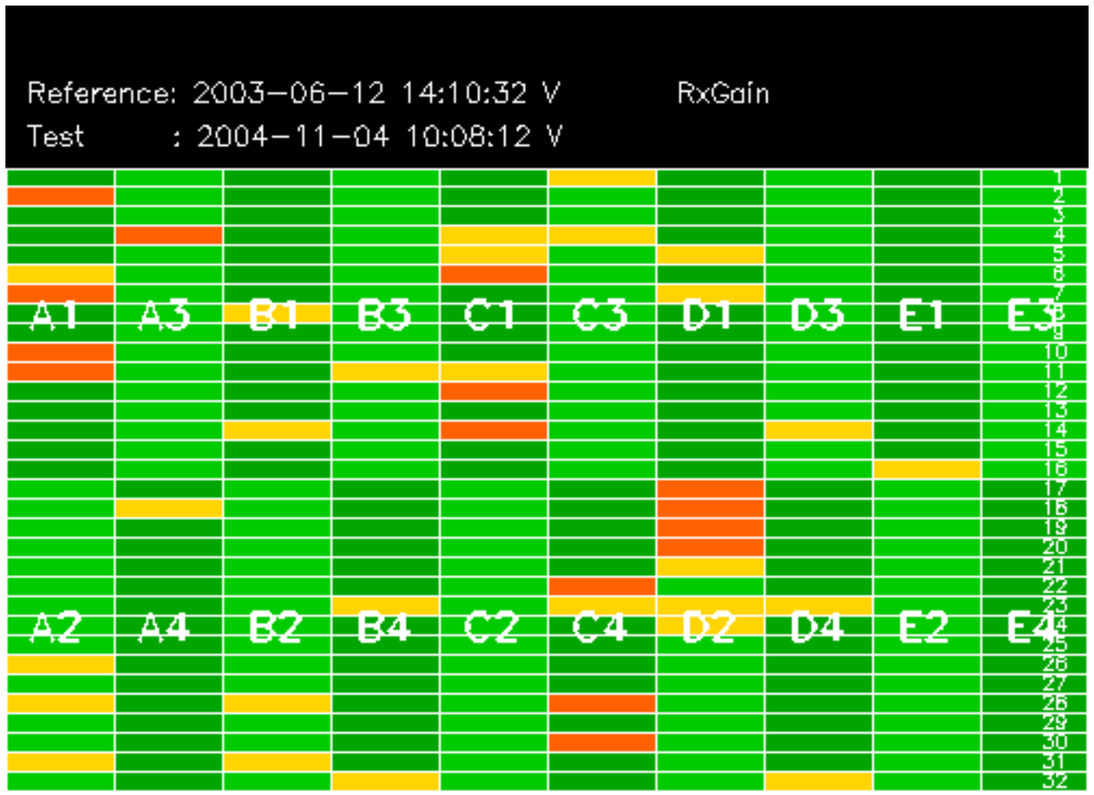
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-04 10:08:12 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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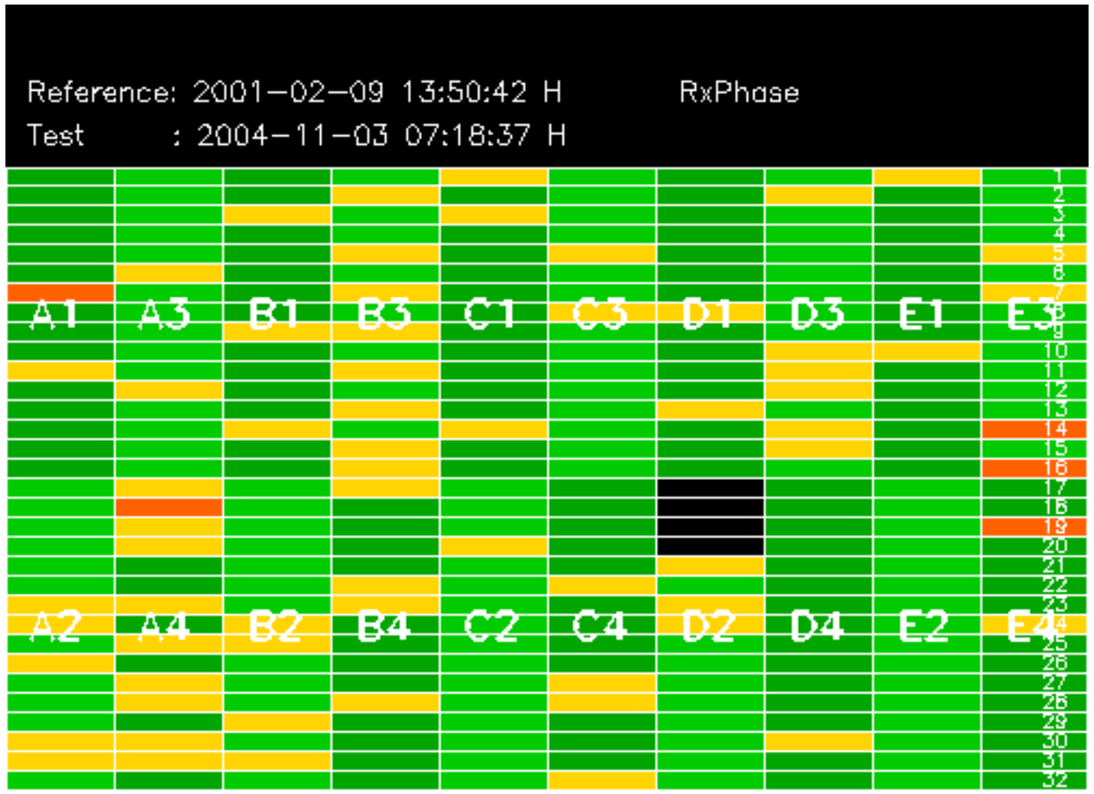
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-11-03 07:18:37 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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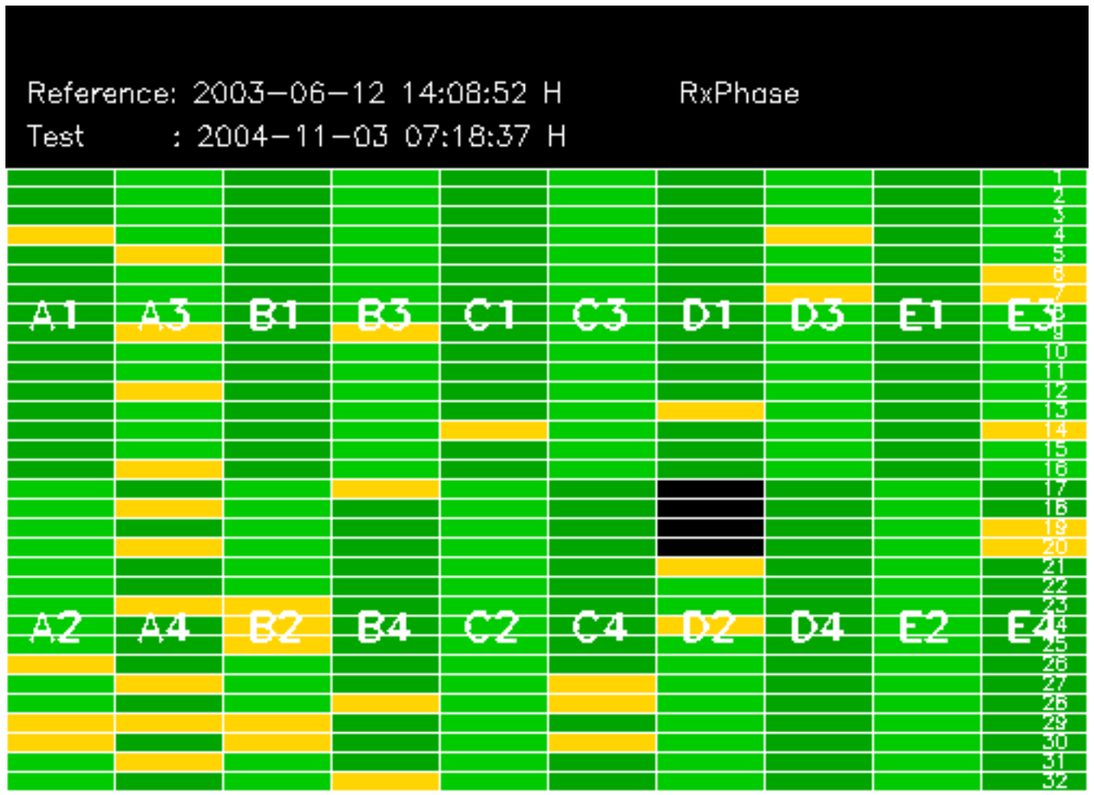
Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-11-03 07:18:37 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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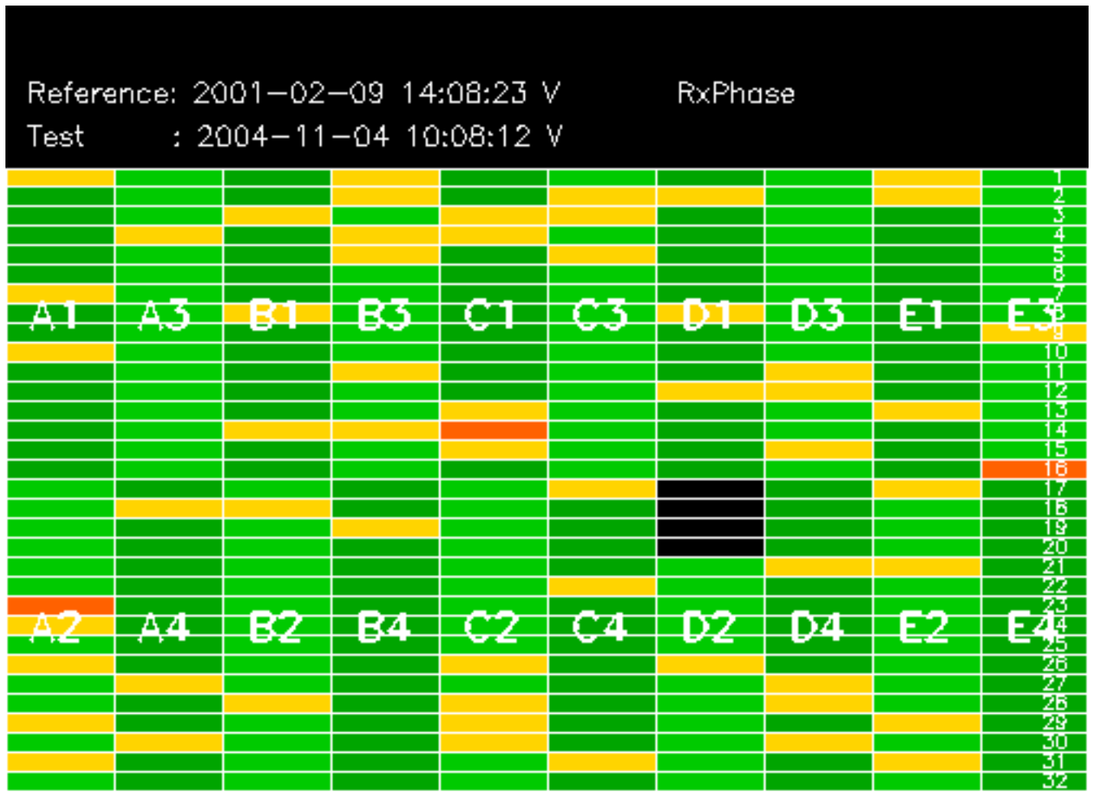
Reference: 2001-02-09 14:08:23 V
Test : 2004-11-04 10:08:12 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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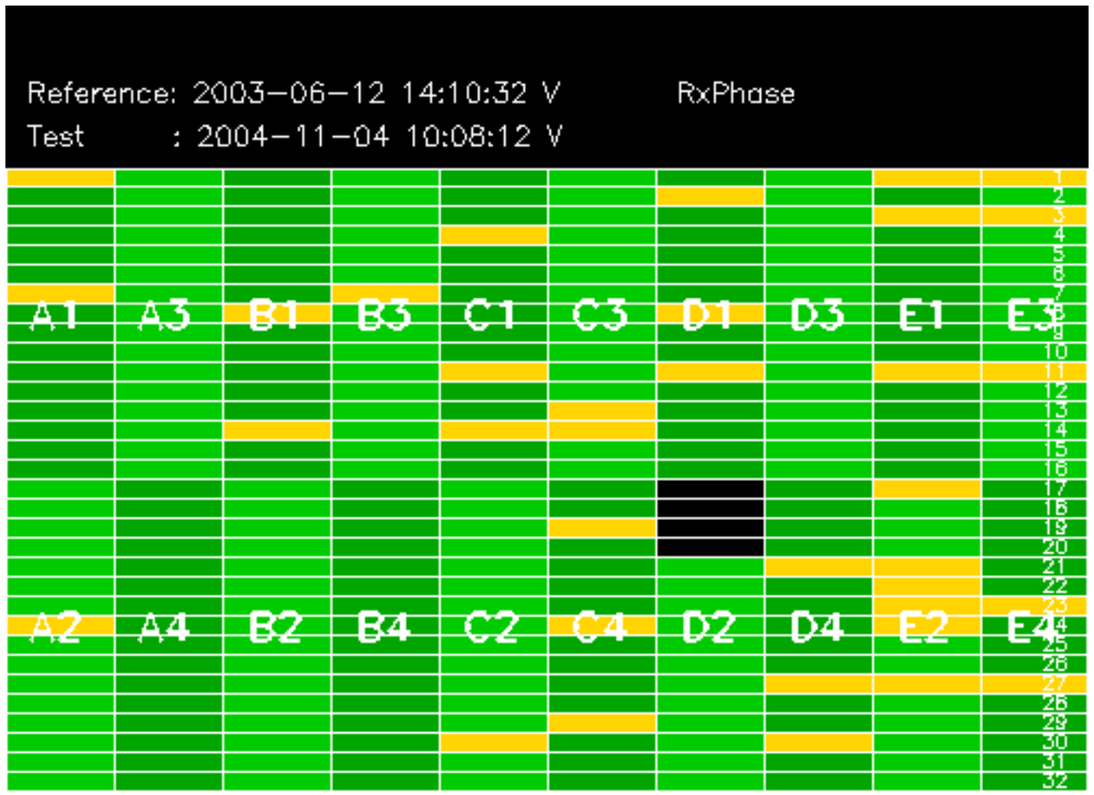
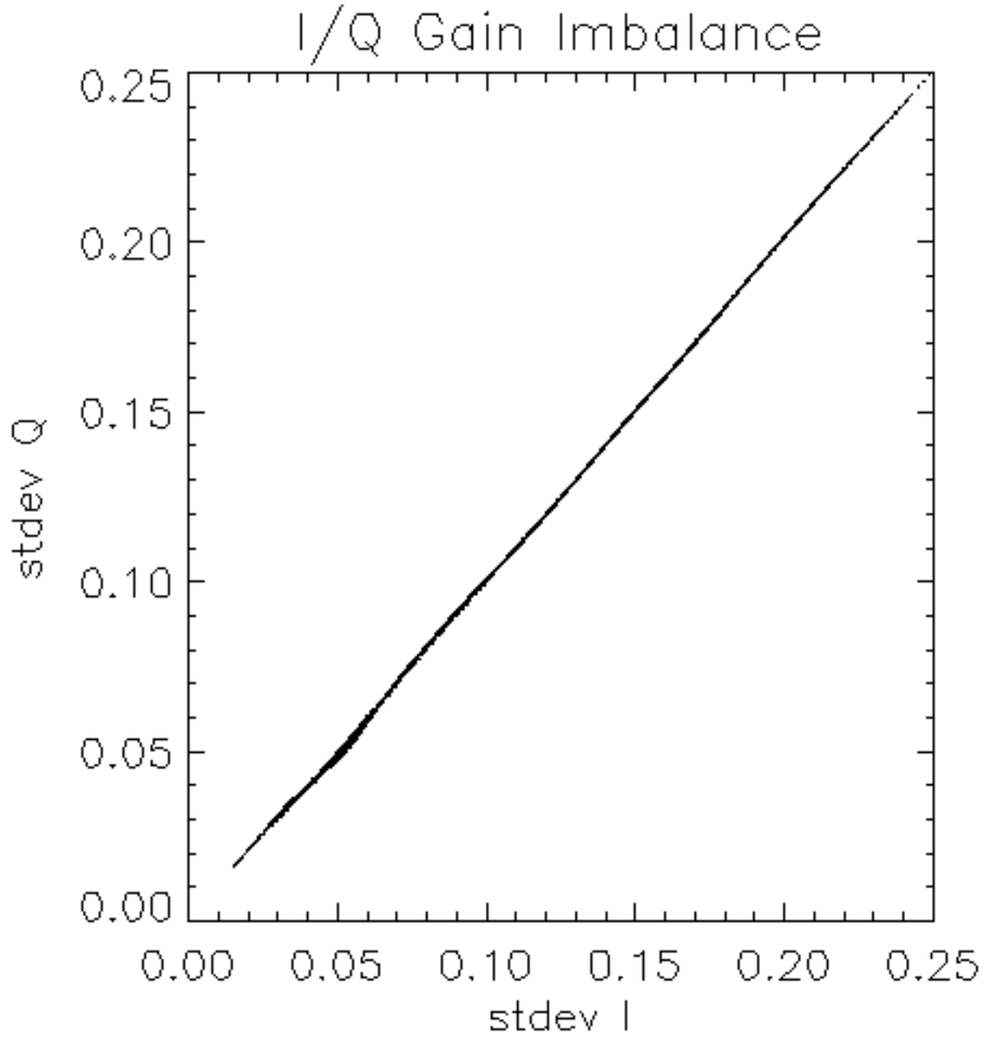
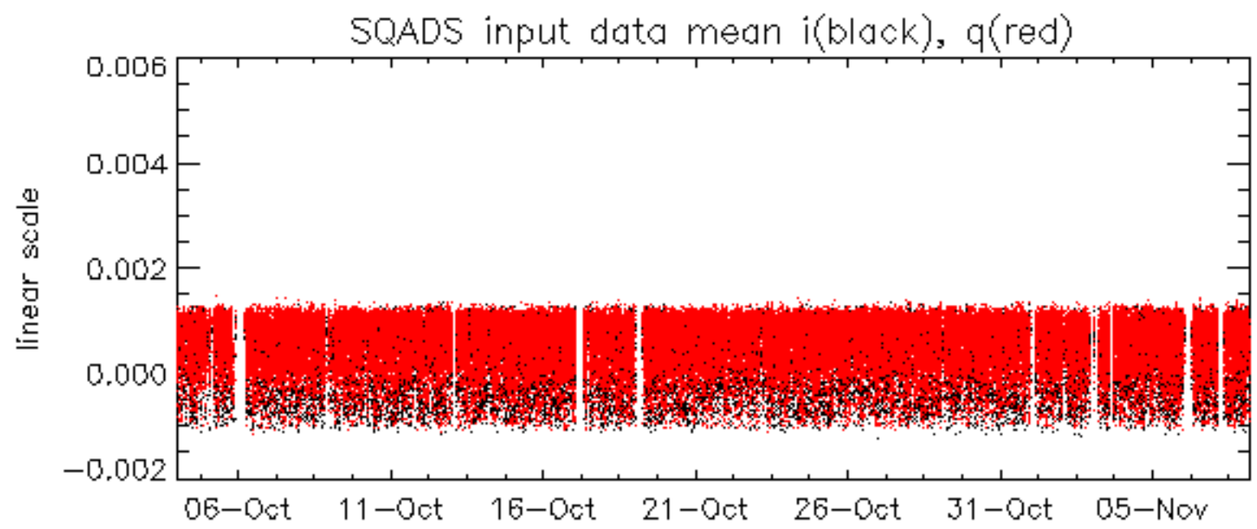
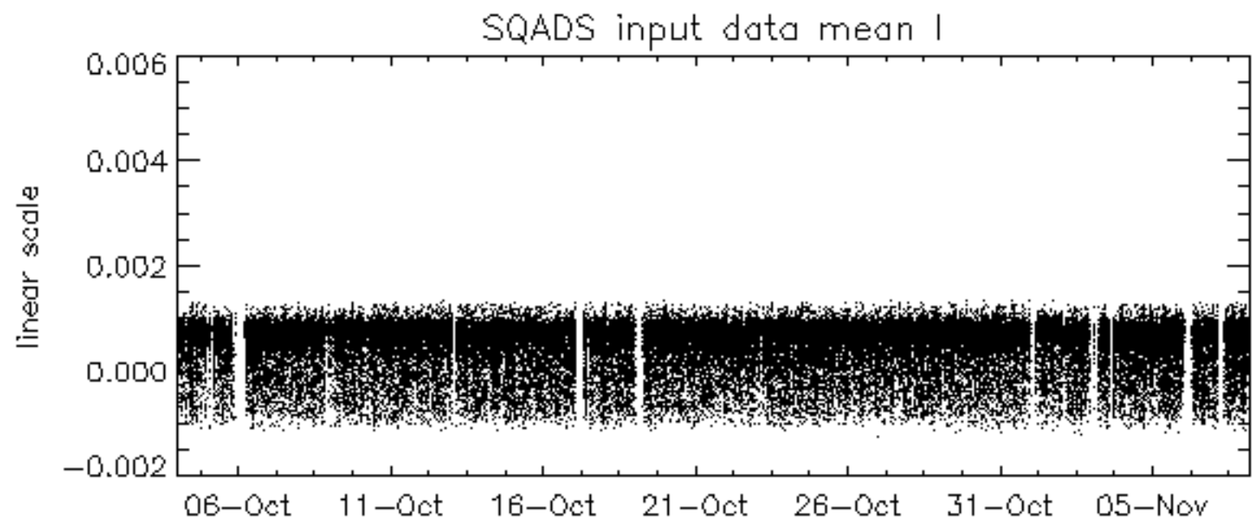
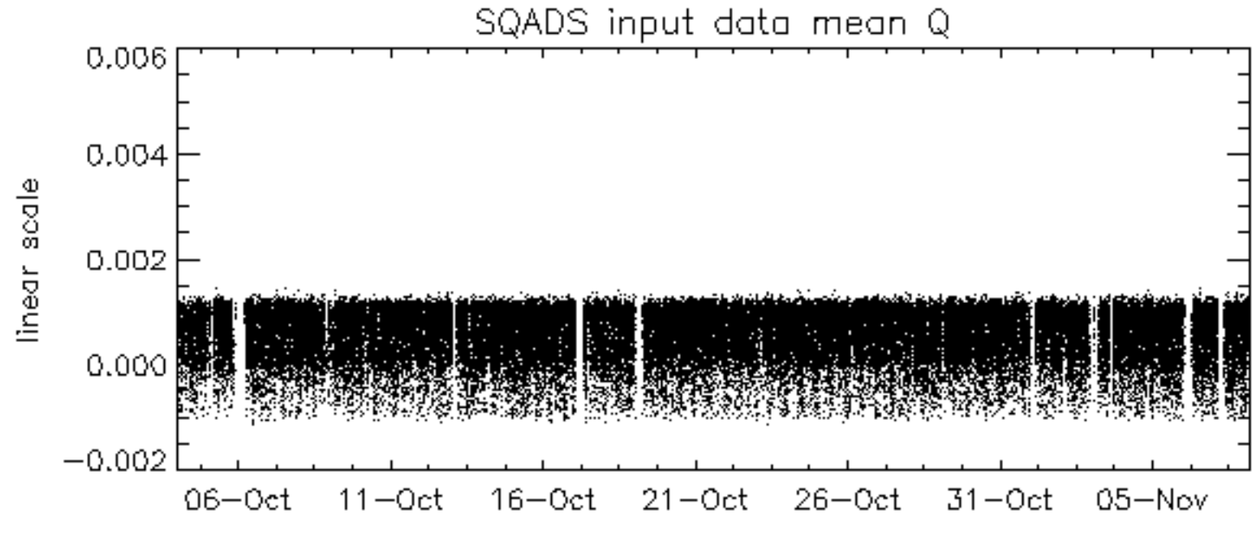
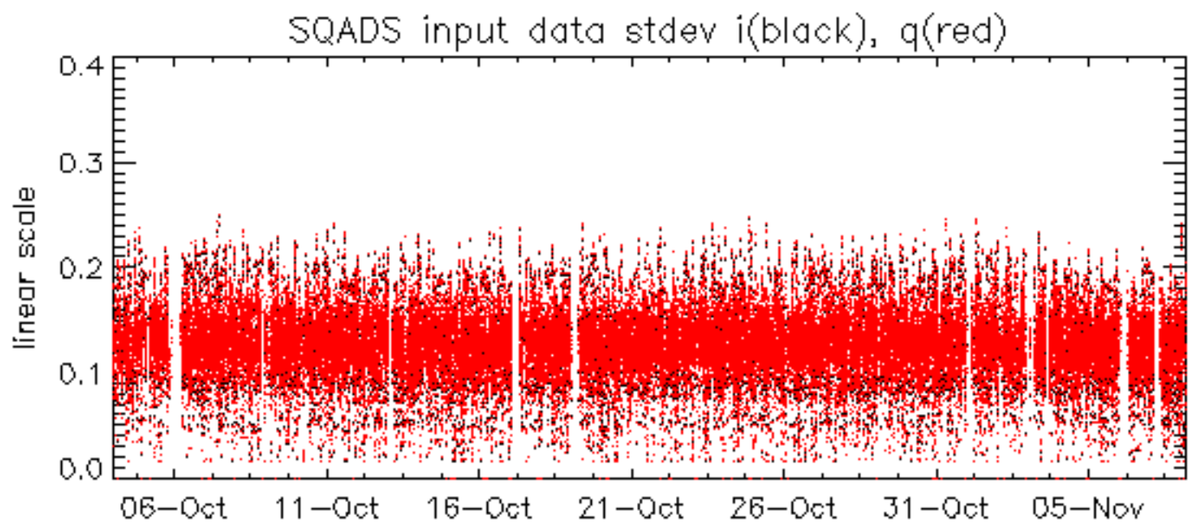

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-04 10:08:12 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

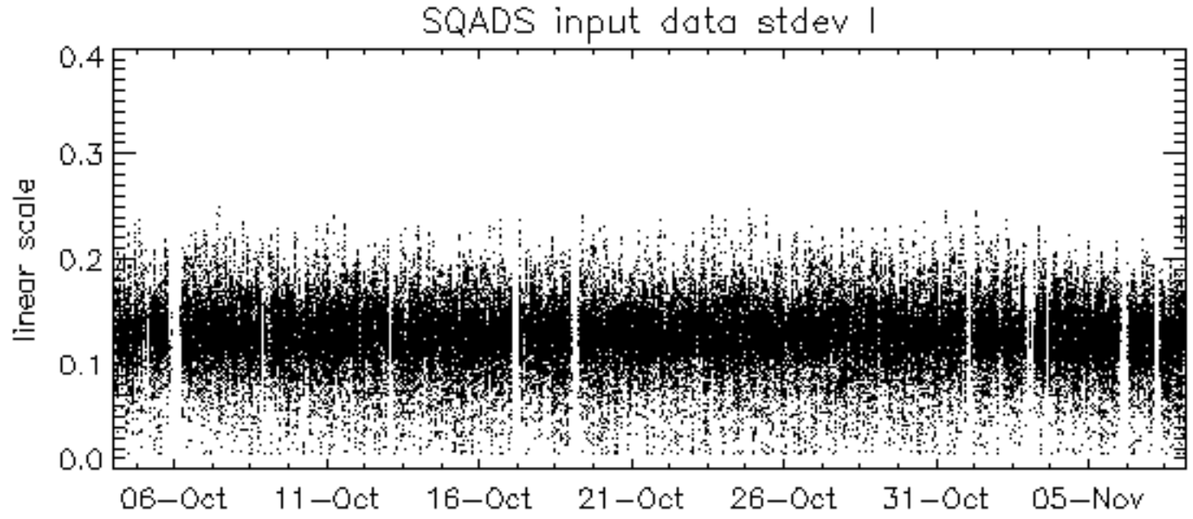

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

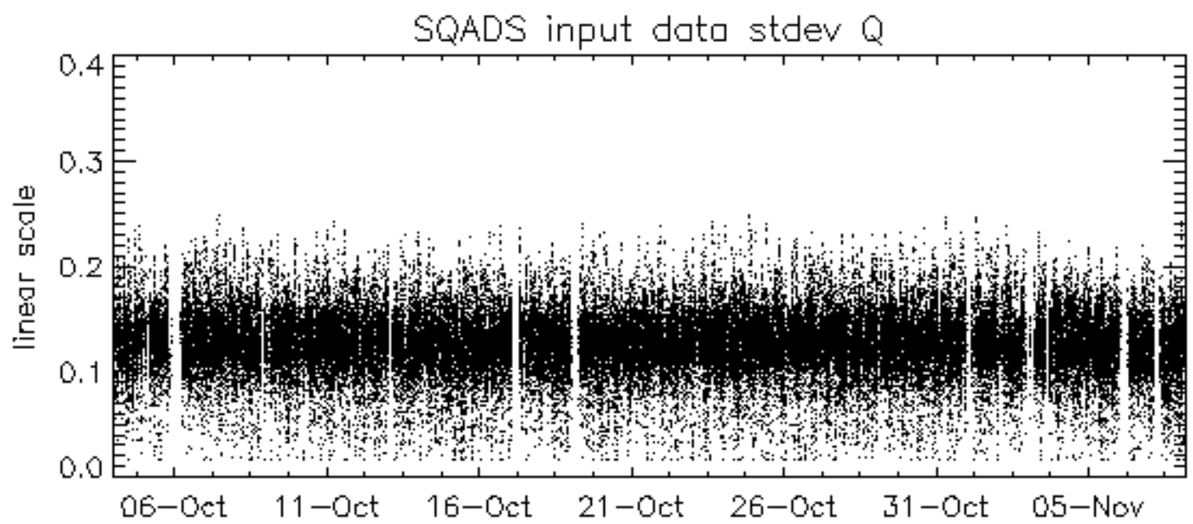

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov

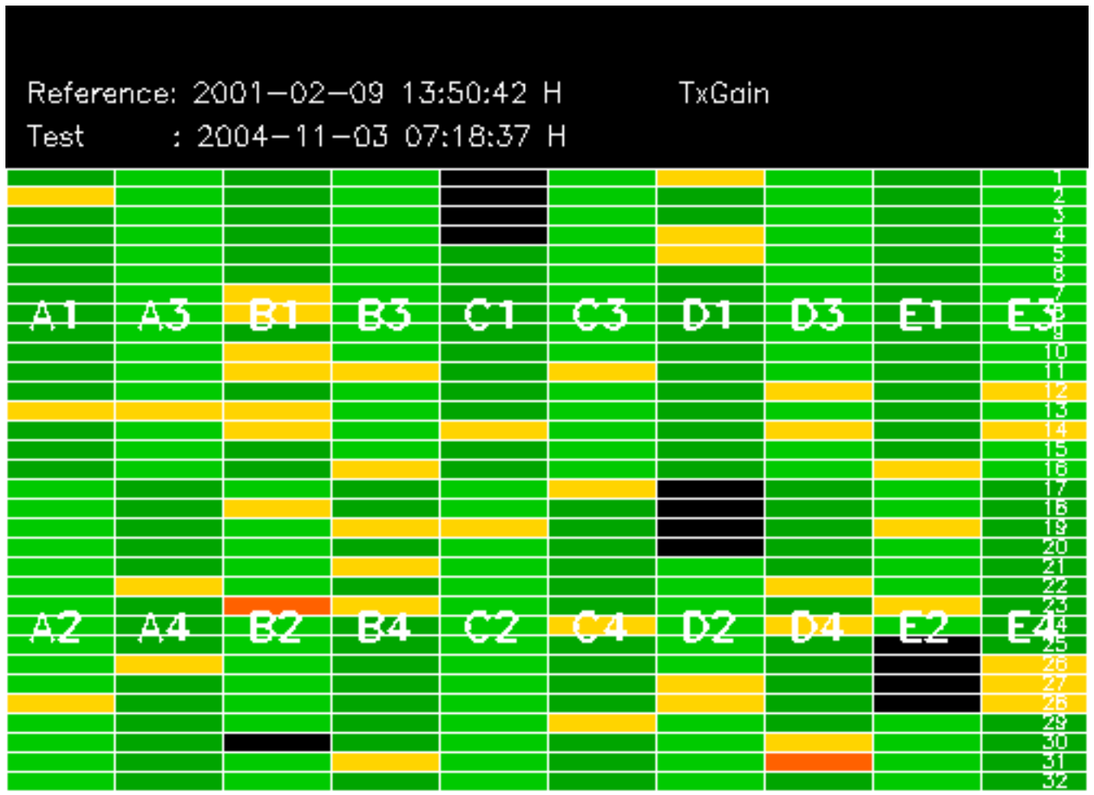

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov

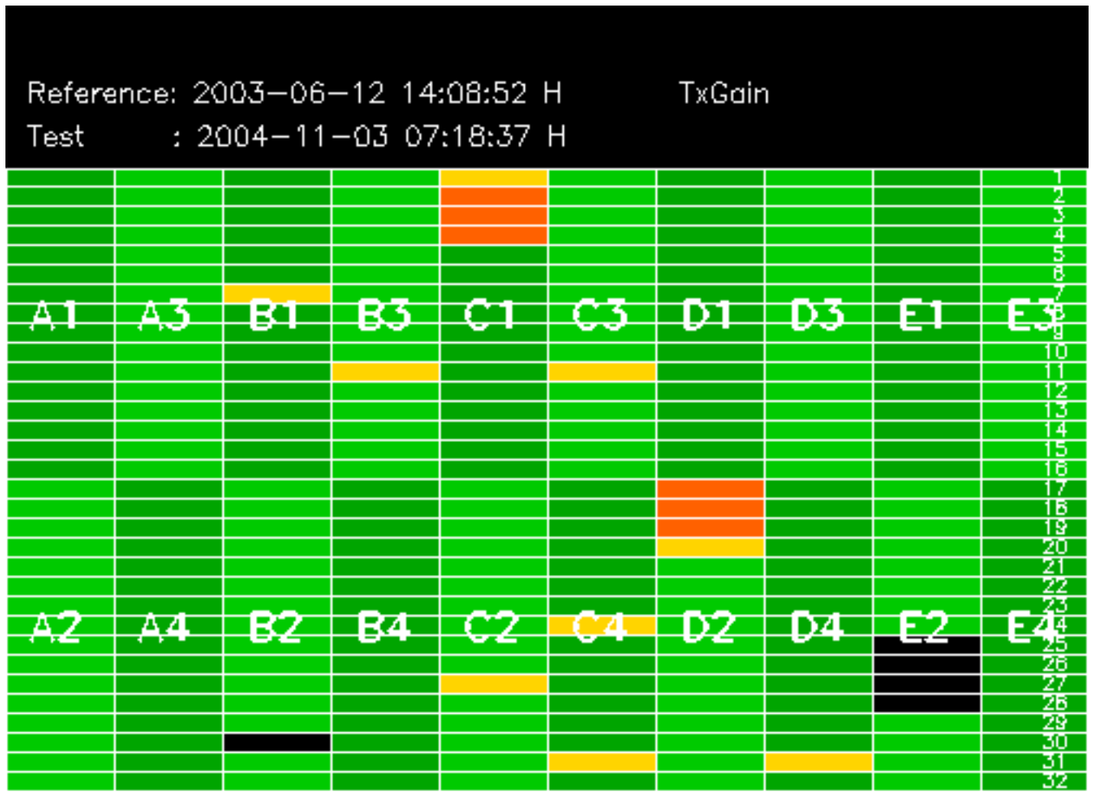

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-03 07:18:37 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 : 2004-11-03 07:18:37 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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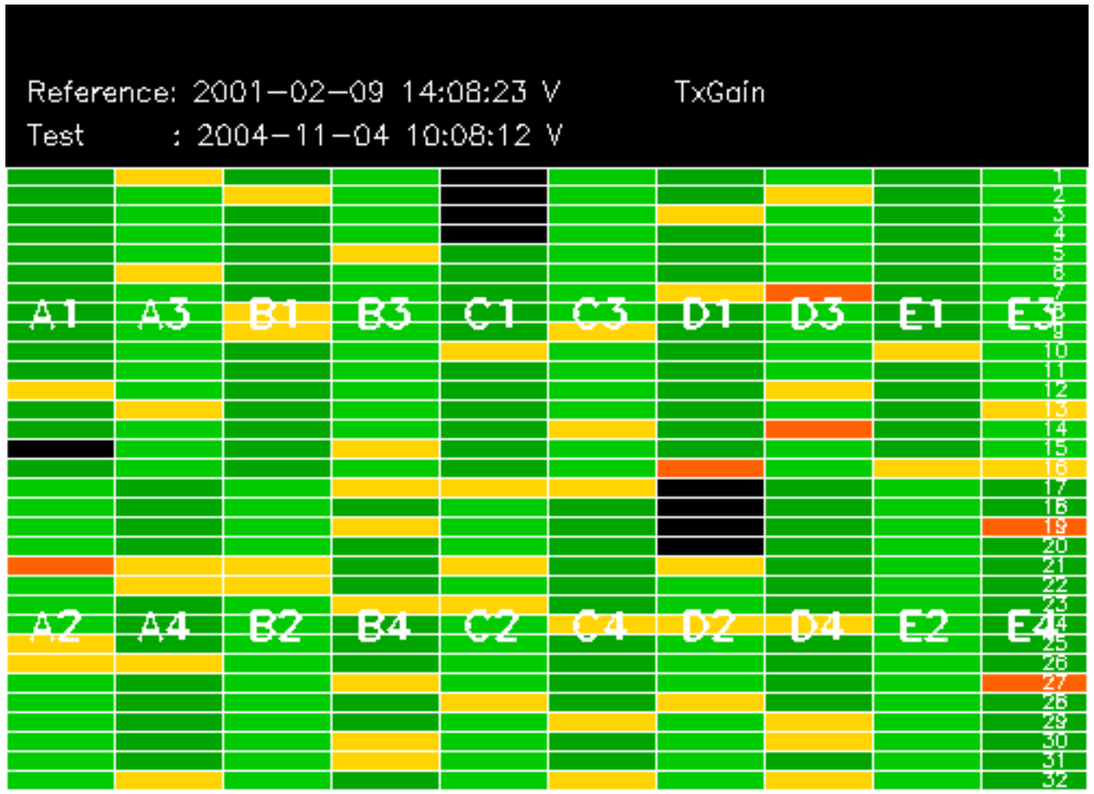
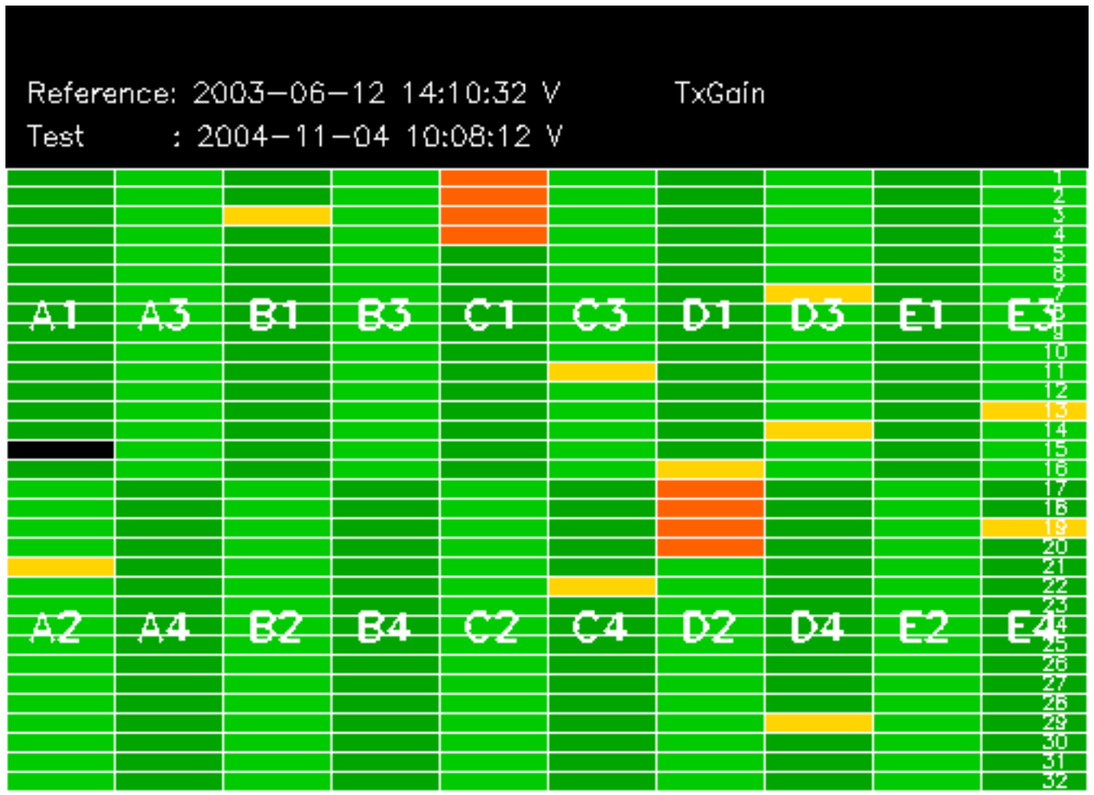

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-04 10:08:12 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-04 10:08:12 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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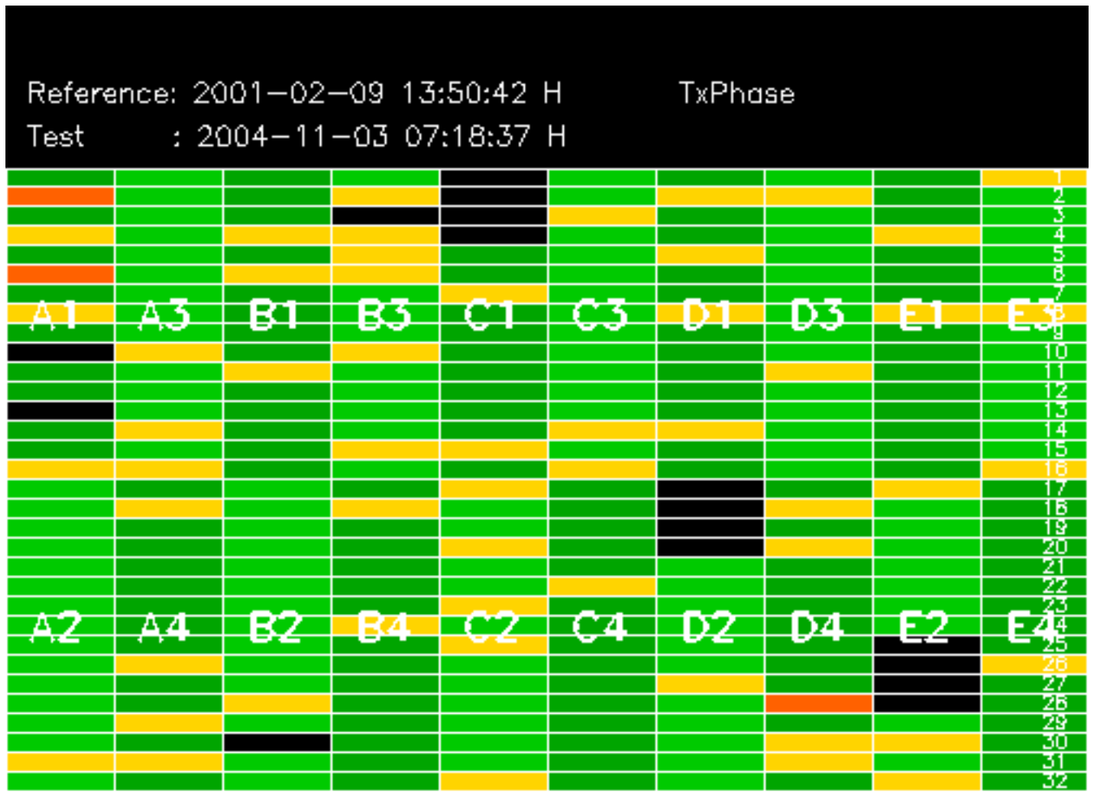
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-11-03 07:18:37 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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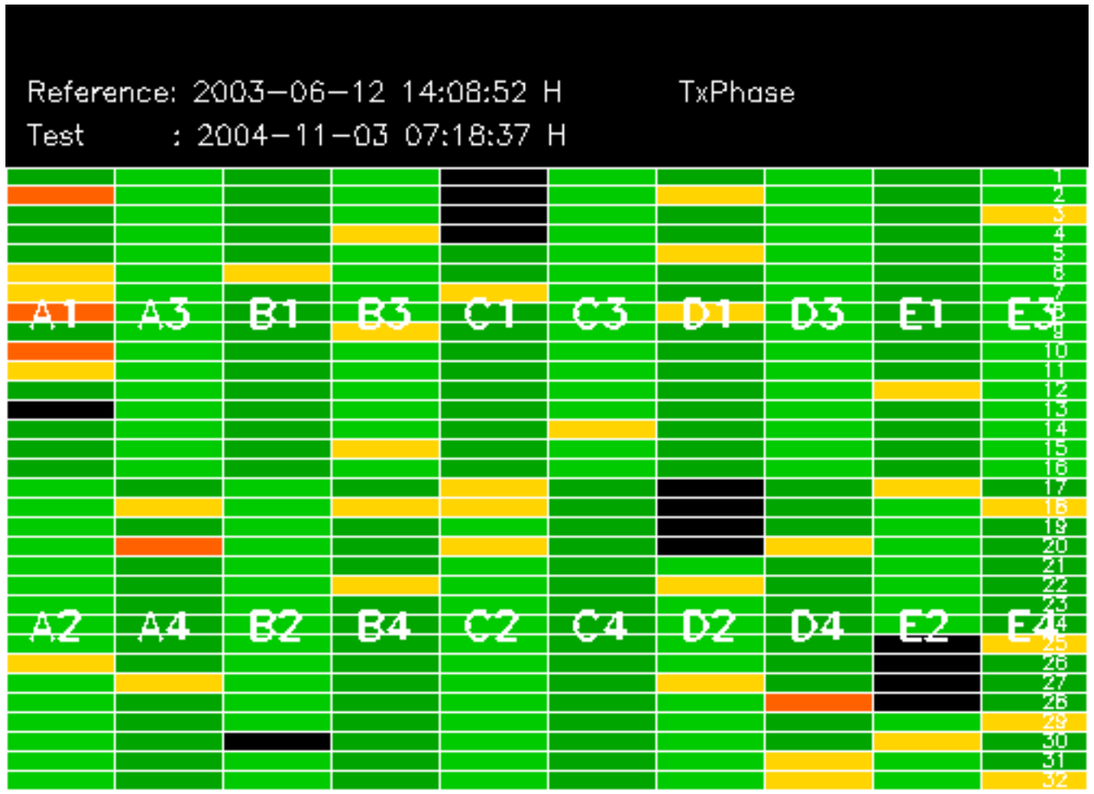
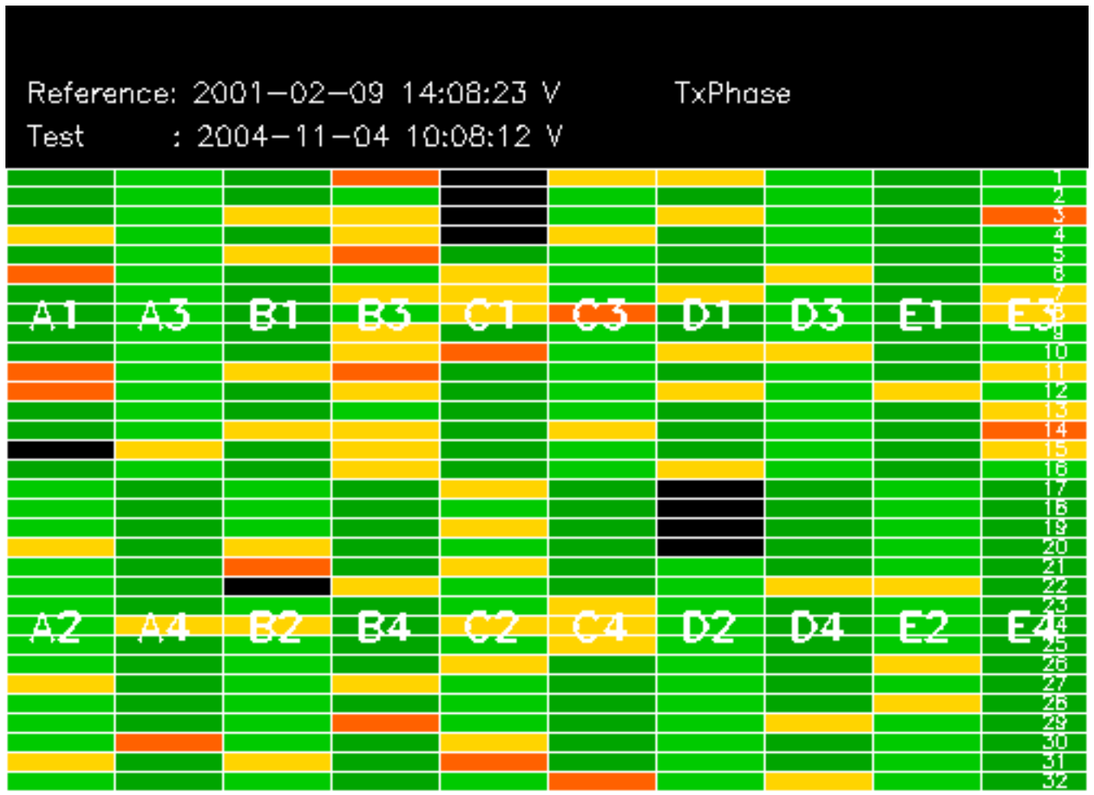

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-03 07:18:37 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-11-04 10:08:12 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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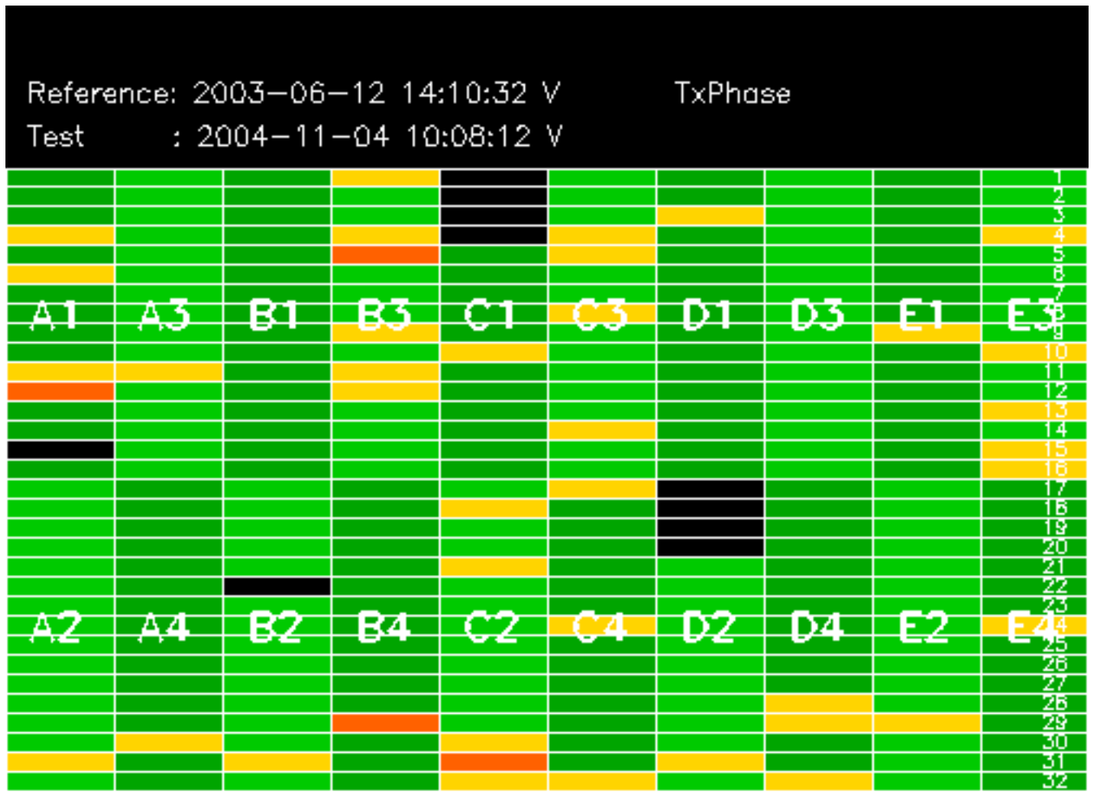
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-04 10:08:12 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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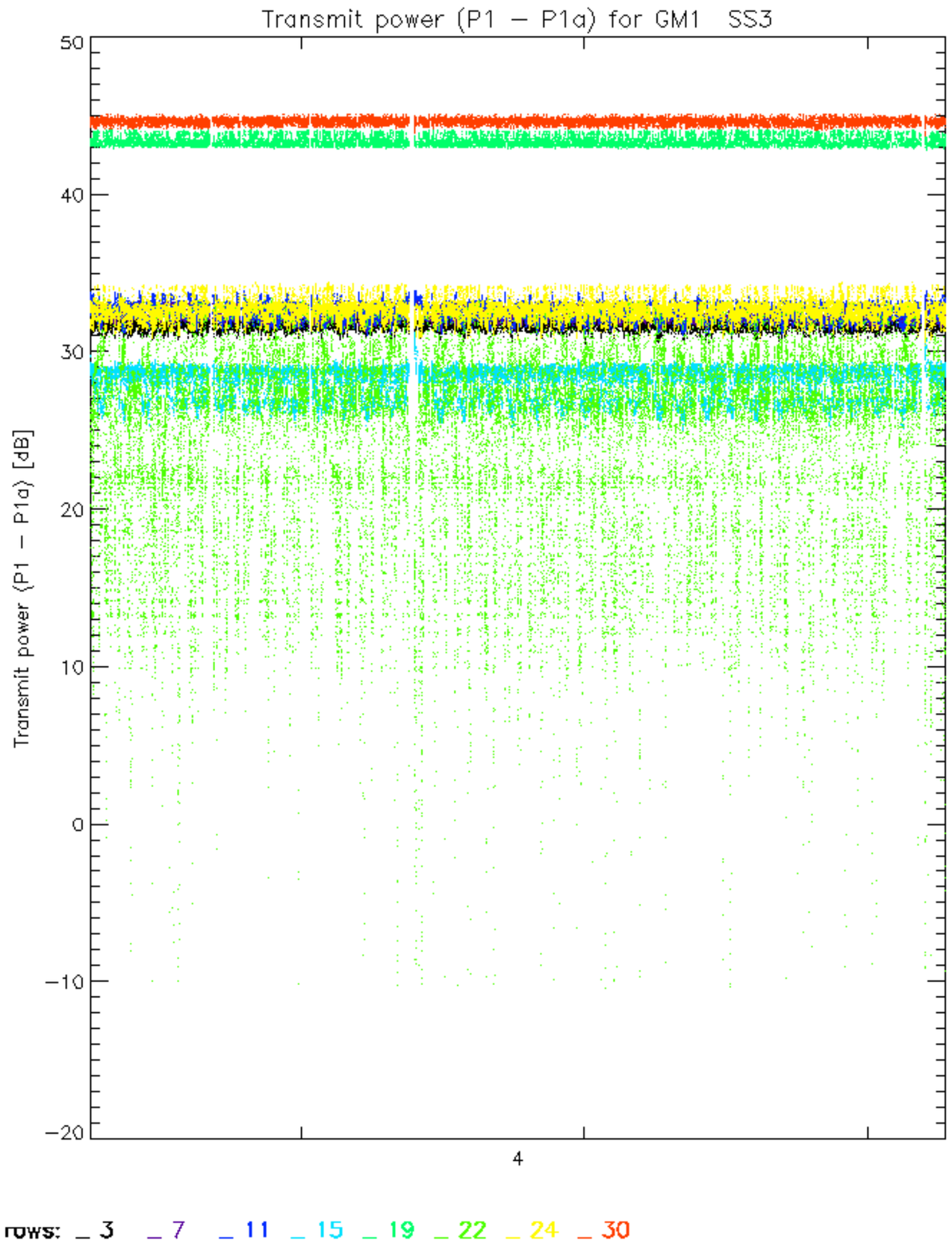
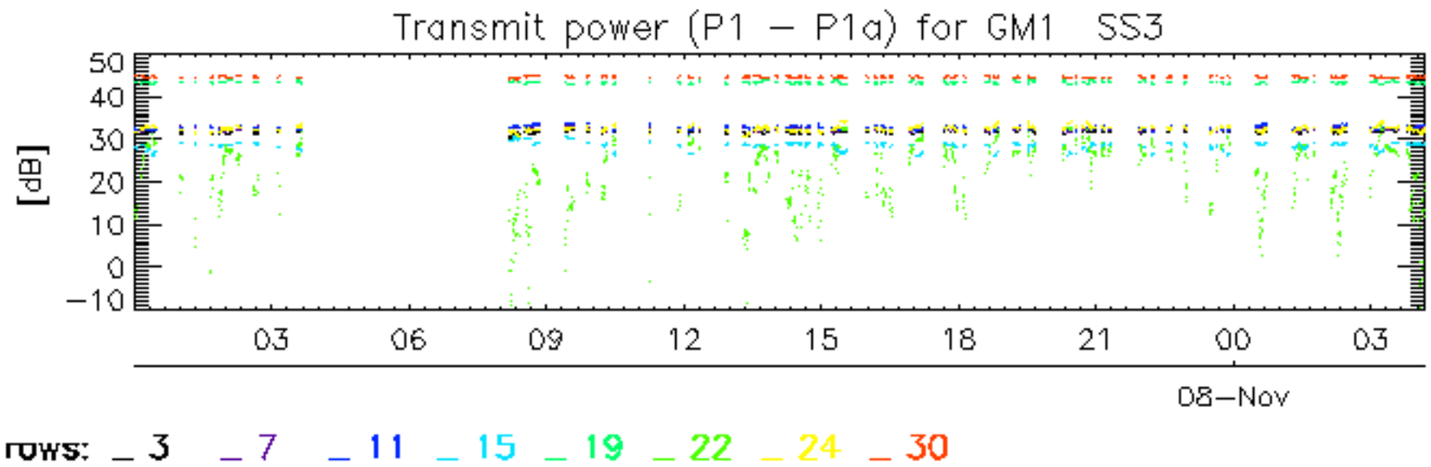
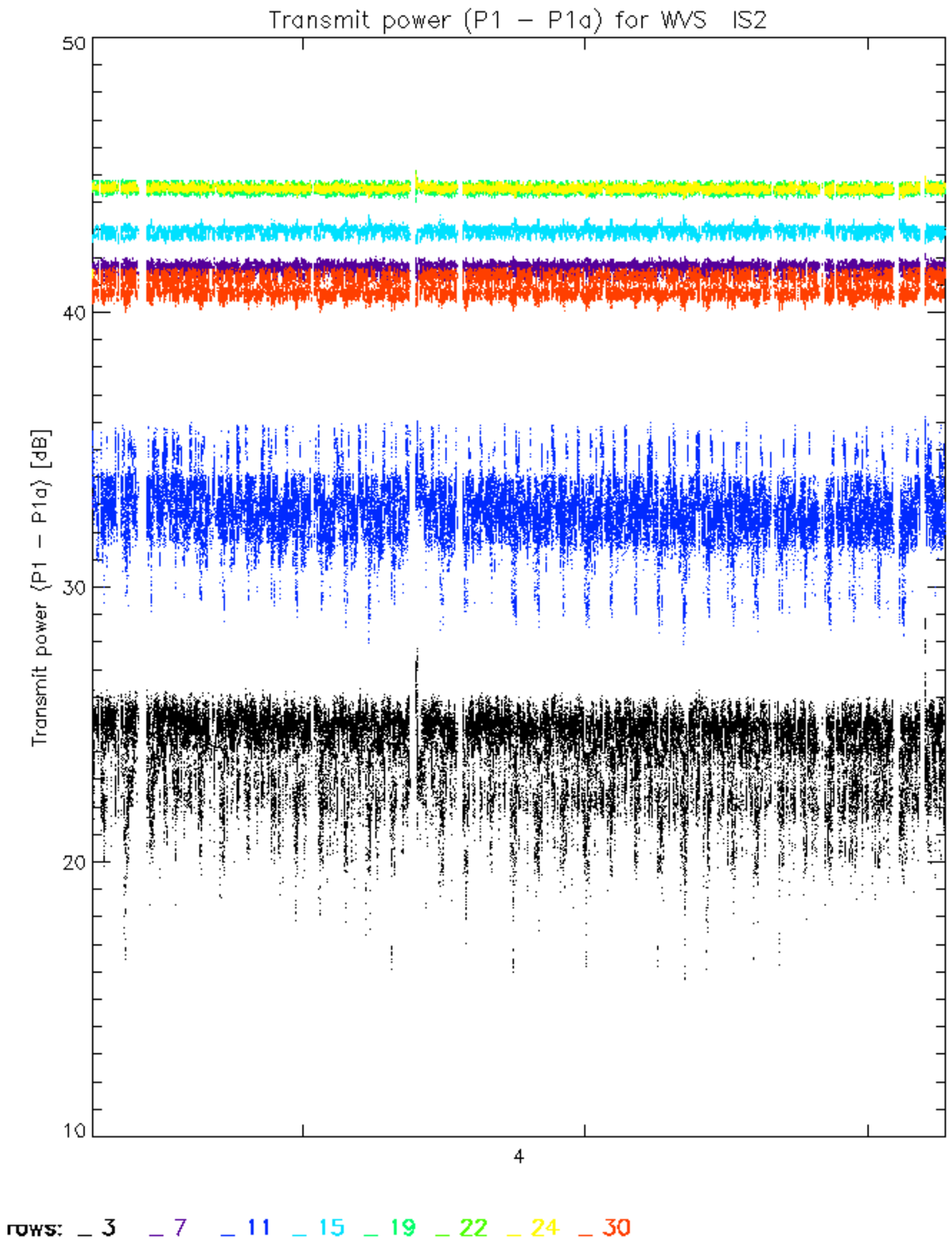
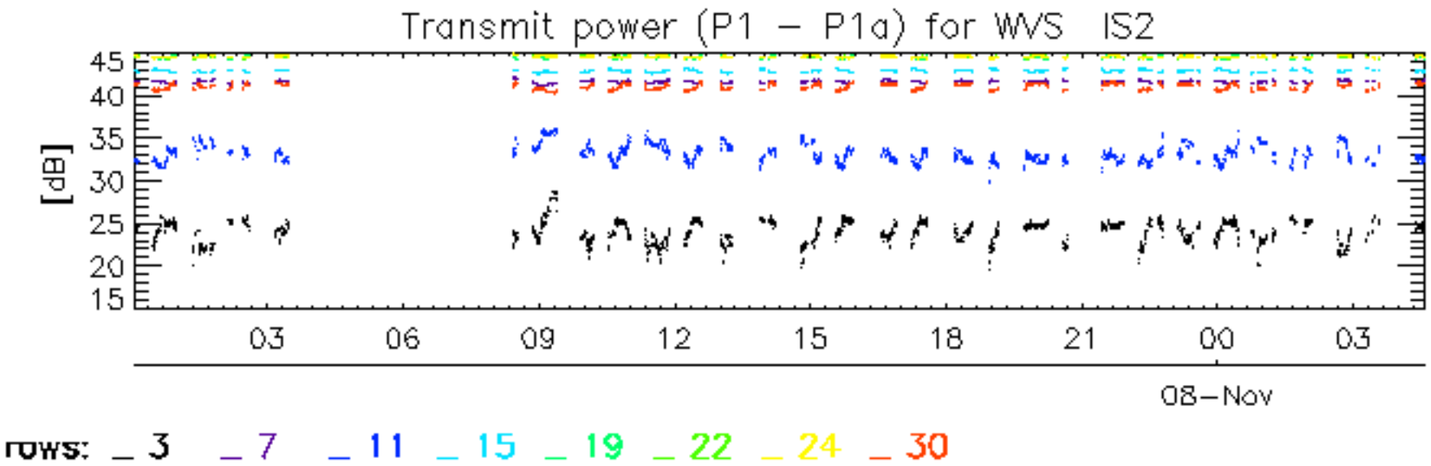

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
4
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
08–Nov
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
50
40
30
20
10
Transmit power (P1 – P1a) [dB]
4
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
45
40
35
30
25
20
15
03
06
09
12
15
18
21
00
03
08–Nov
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.