PRELIMINARY REPORT OF 041109

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

last update on Tue Nov 9 10:53:18 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	20041108 180518
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	-3.478296	0.006452	0.013797
7	P1	-3.358713	0.012449	0.002666
11	P1	-4.605032	0.017237	0.014149
15	P1	-5.676789	0.030547	0.027841
19	P1	-3.577676	0.005354	-0.058096
22	P1	-4.579988	0.013922	0.006739
26	P1	-4.860483	0.061456	0.104361

30	P1	-7.060031	0.015711	-0.037859
3	P1	-16.054998	0.096529	0.052693
7	P1	-14.041499	0.066078	0.022261
11	P1	-20.568226	0.196990	-0.271670
15	P1	-11.694204	0.033377	0.054841
19	P1	-14.034650	0.025910	-0.054901
22	P1	-16.231867	0.384596	0.114985
26	P1	-17.701736	0.693435	0.414147
30	P1	-18.010042	0.274938	0.061956

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.367821	0.089830	-0.016883
7	P2	-22.608850	0.130549	0.038321
11	P2	-15.095396	0.122612	0.087742
15	P2	-7.130720	0.107859	-0.014078
19	P2	-9.690722	0.127128	-0.044478
22	P2	-17.261278	0.104855	0.058346
26	P2	-16.498352	0.110058	0.007923
30	P2	-19.061983	0.084849	0.049395

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.193839	0.005721	-0.014395
7	P3	-8.193840	0.005721	-0.014389
11	P3	-8.193839	0.005721	-0.014396
15	P3	-8.193838	0.005721	-0.014397
19	P3	-8.193837	0.005721	-0.014405
22	P3	-8.193836	0.005721	-0.014411
26	P3	-8.193835	0.005721	-0.014414
30	P3	-8.193871	0.005724	-0.014926

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	-2.809128	0.011498	0.044273
7	P1	-2.958094	0.025730	0.030088
11	P1	-3.894033	0.021131	-0.013595
15	P1	-3.488989	0.025156	-0.003554
19	P1	-3.576932	0.012426	-0.054740
22	P1	-5.631872	0.065079	0.038475
26	P1	-6.405818	0.077180	0.113648
30	P1	-6.244946	0.042769	-0.055457
3	P1	-10.650085	0.065892	0.253851
7	P1	-10.069428	0.139169	0.011888
11	P1	-12.316718	0.115167	-0.139211
15	P1	-11.688103	0.064050	-0.061058
19	P1	-15.612343	0.055357	-0.017690
22	P1	-23.804174	1.738284	-0.299976
26	P1	-15.091369	0.452030	0.121345
30	P1	-20.295347	1.020689	0.131300

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.047516	0.043109	-0.023497
7	P2	-22.685667	0.034514	0.064057
11	P2	-10.871143	0.041219	0.045490
15	P2	-5.029958	0.030066	-0.031823
19	P2	-6.916022	0.040254	-0.127618
22	P2	-7.379898	0.030498	0.063743
26	P2	-23.919481	0.026738	-0.044790
30	P2	-22.095572	0.020746	0.034162

P3 Cyclic statistics

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

3	P3	-8.035289	0.003478	-0.016868
7	P3	-8.035217	0.003482	-0.016905
11	P3	-8.035283	0.003480	-0.016778
15	P3	-8.035229	0.003472	-0.016986
19	P3	-8.035223	0.003470	-0.016885
22	P3	-8.035318	0.003481	-0.017145
26	P3	-8.035416	0.003465	-0.016751
30	P3	-8.035277	0.003486	-0.017032

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	0.000473676
	stdev	2.15722e-07
MEAN Q	mean	0.000551566
	stdev	2.33056e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126933
	stdev	0.000909065

STDEV Q	mean	0.127146
	stdev	0.000917304

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

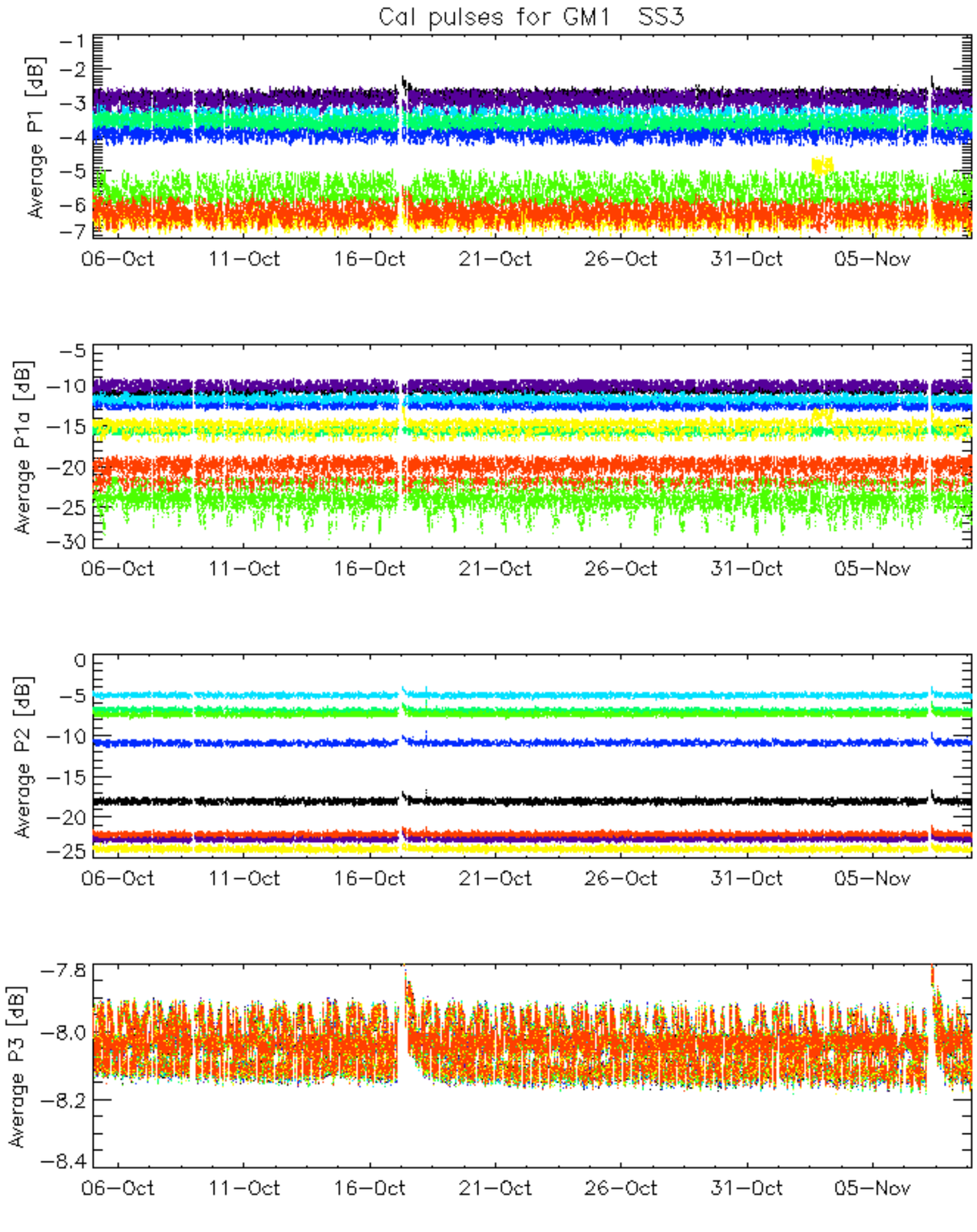
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

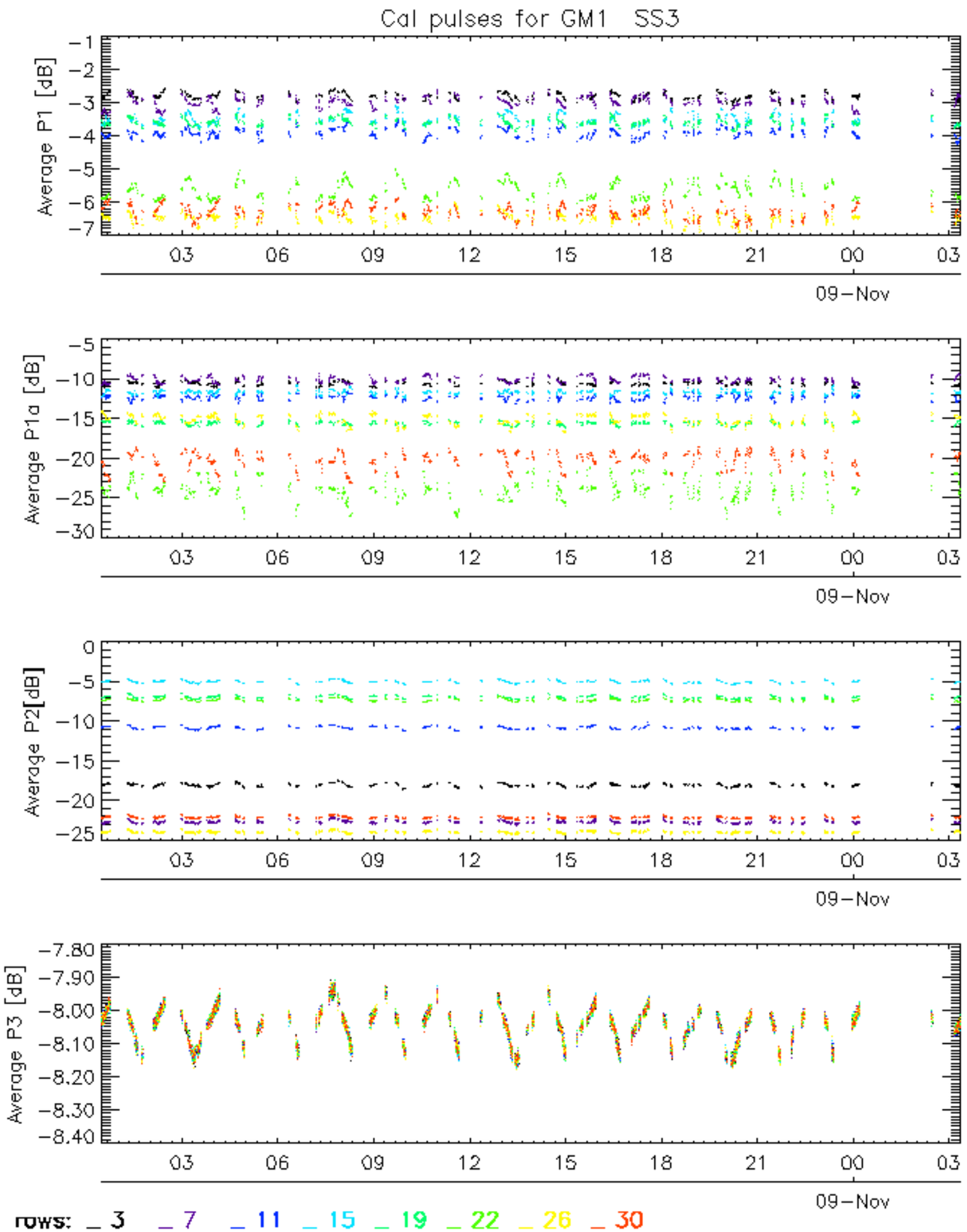
6.5 - Absolute Doppler for GM1

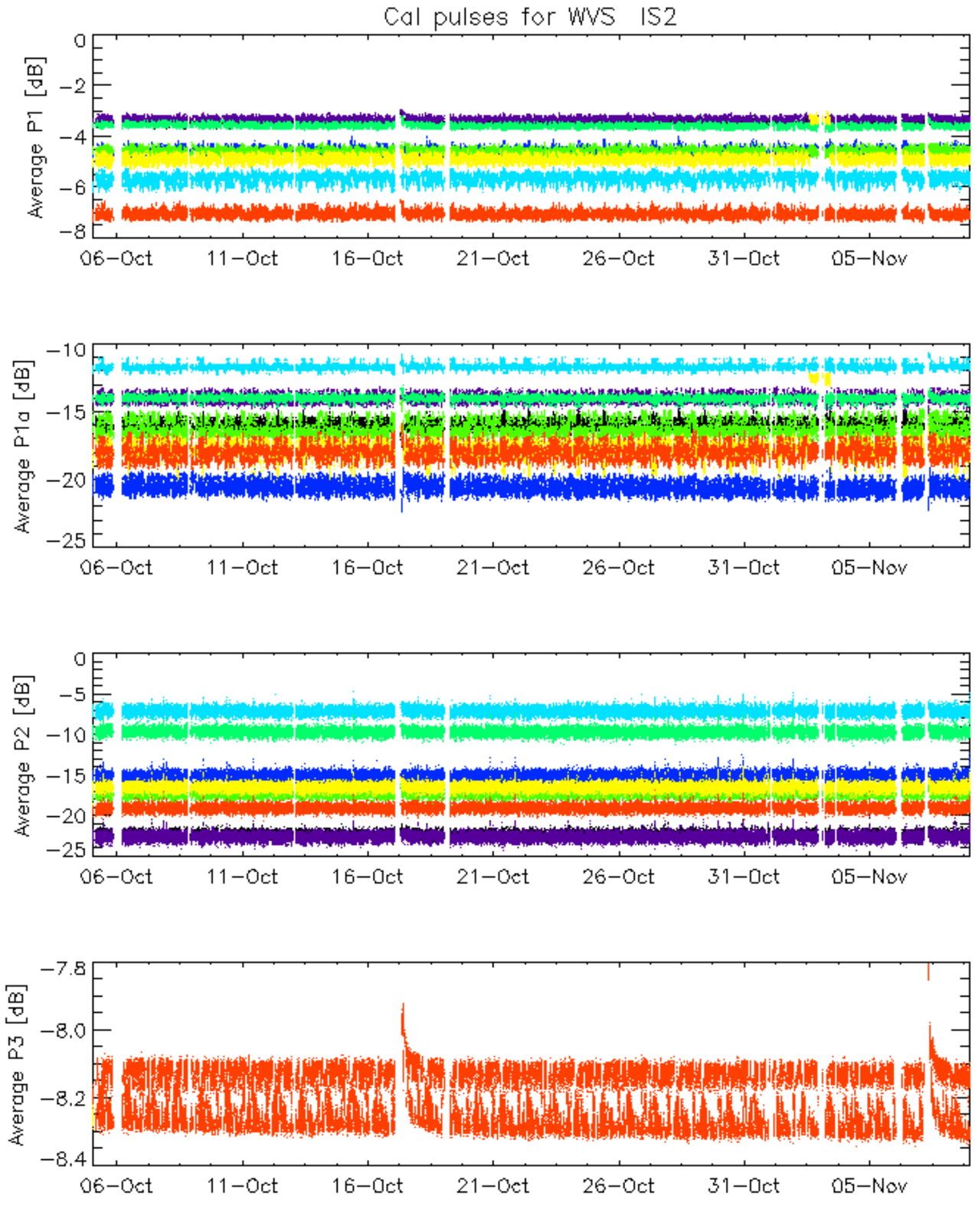
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

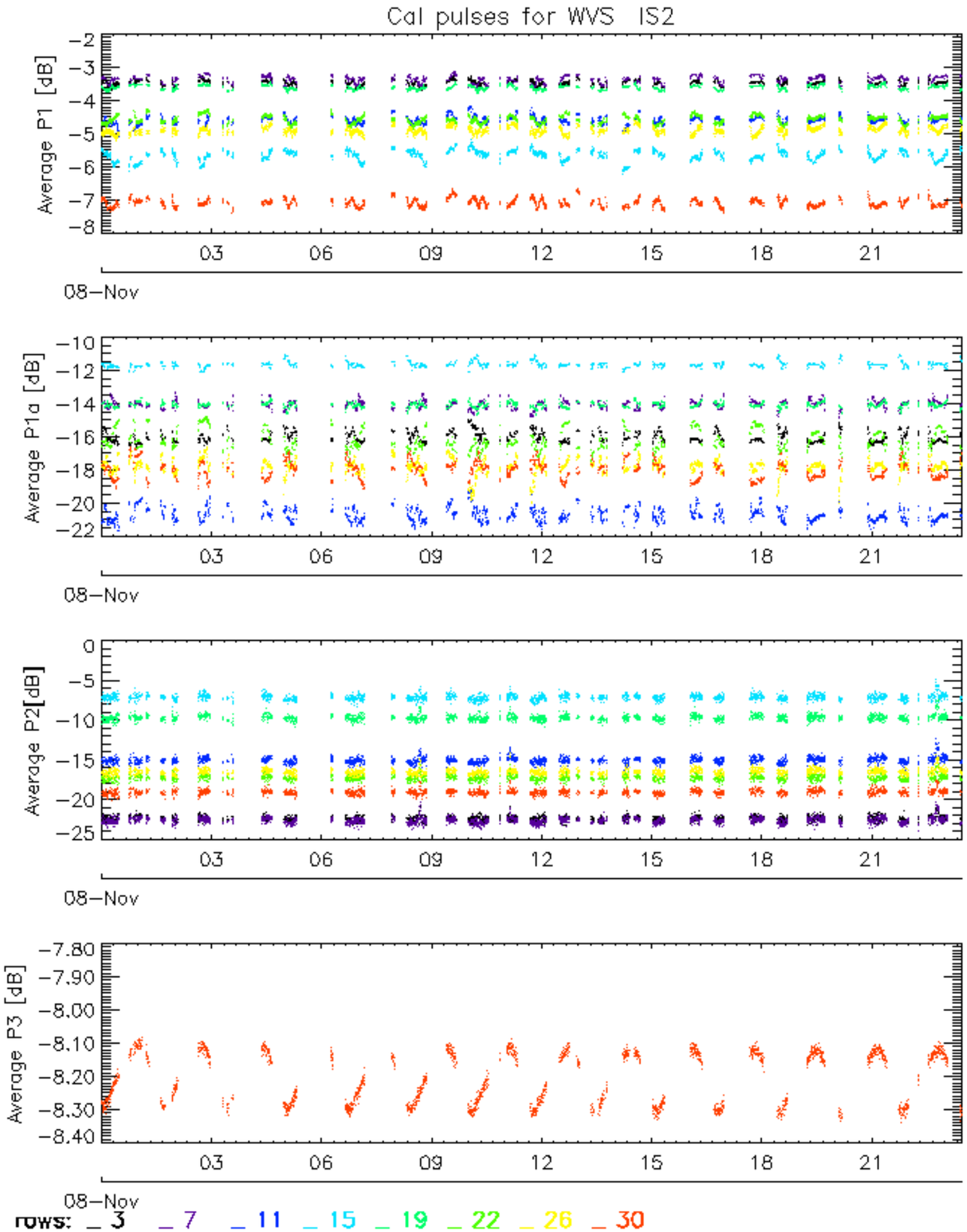
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

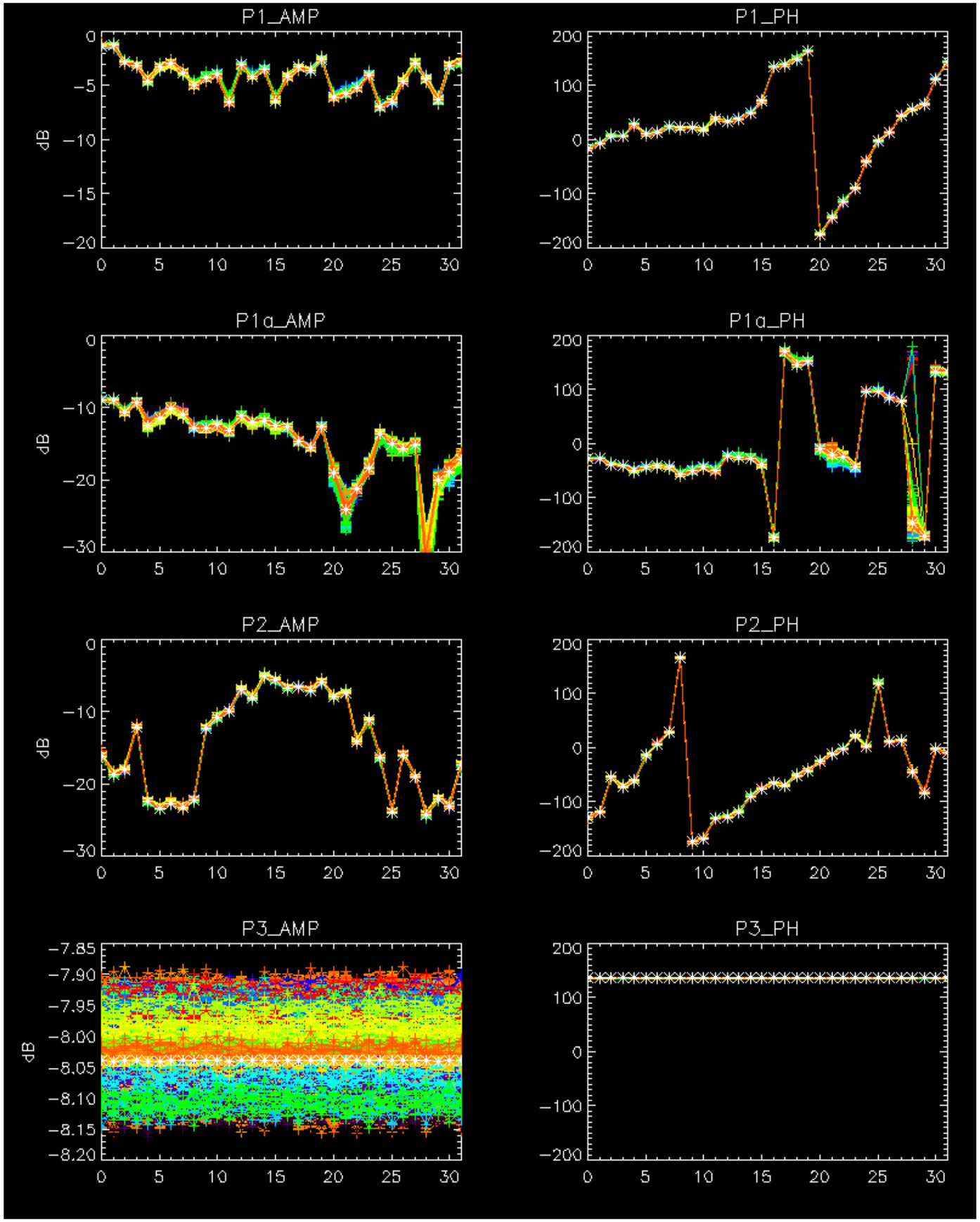

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

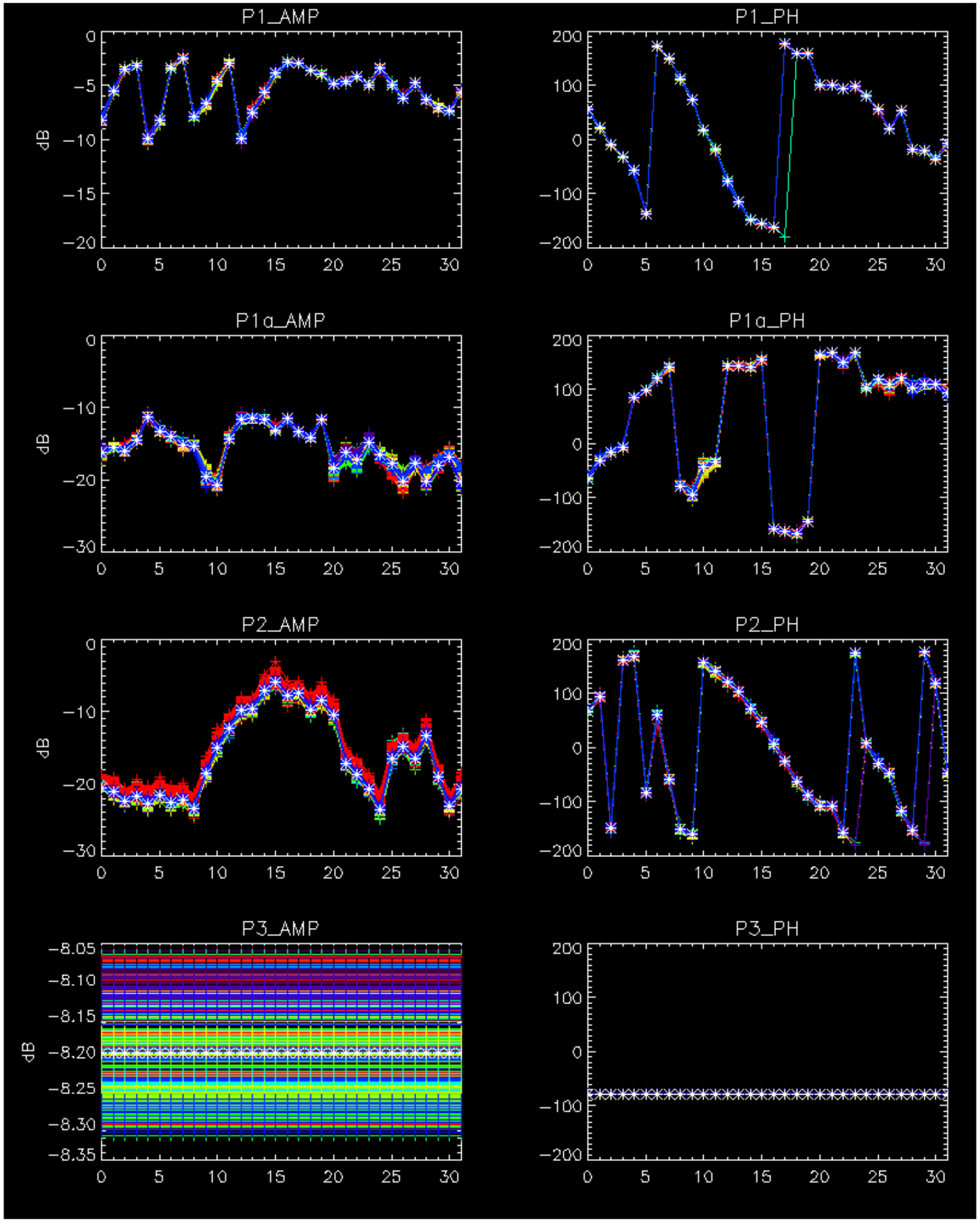

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
09−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
09−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
09−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
09−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 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 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
08−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
08−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
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
08−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

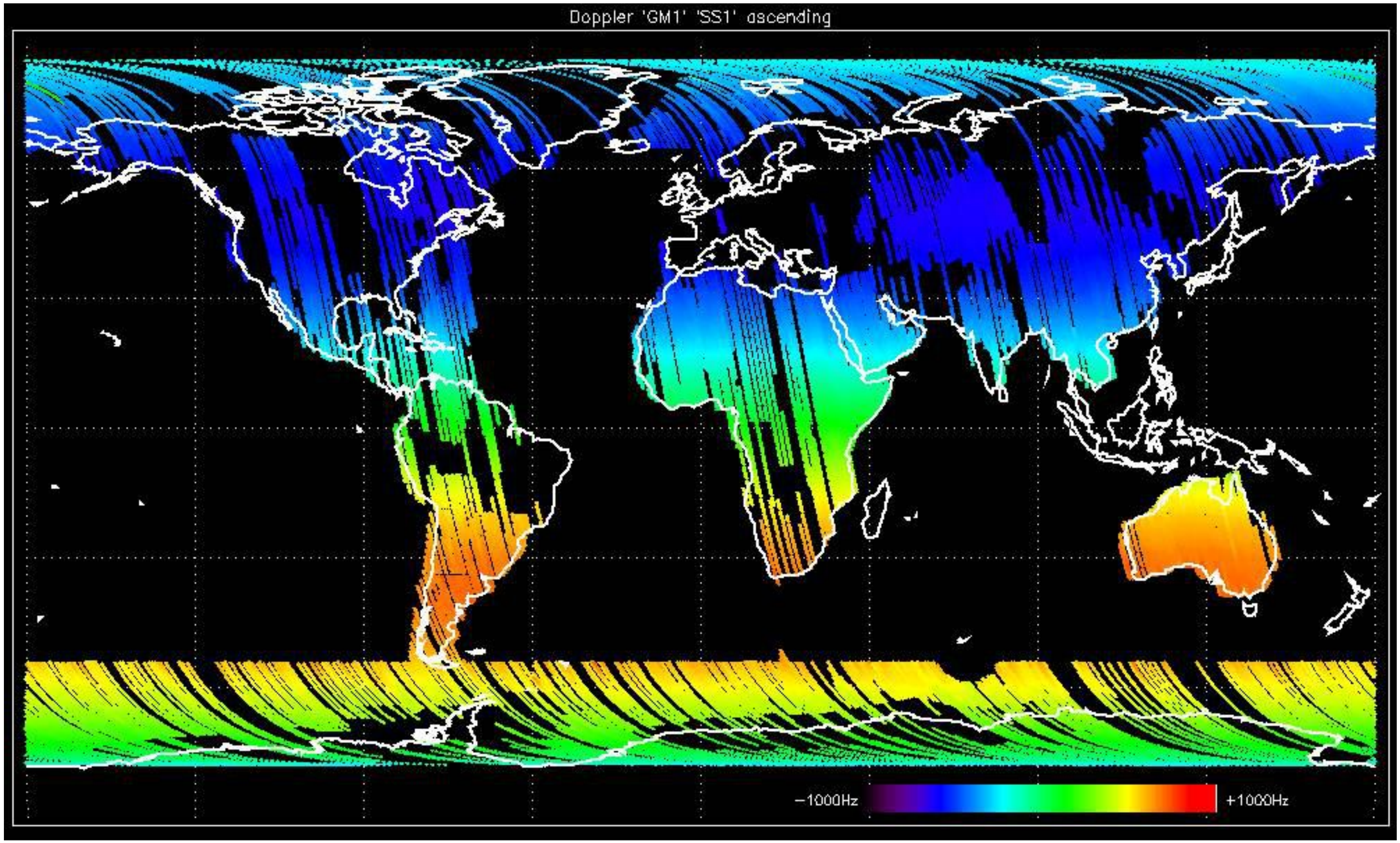
No anomalies observed.

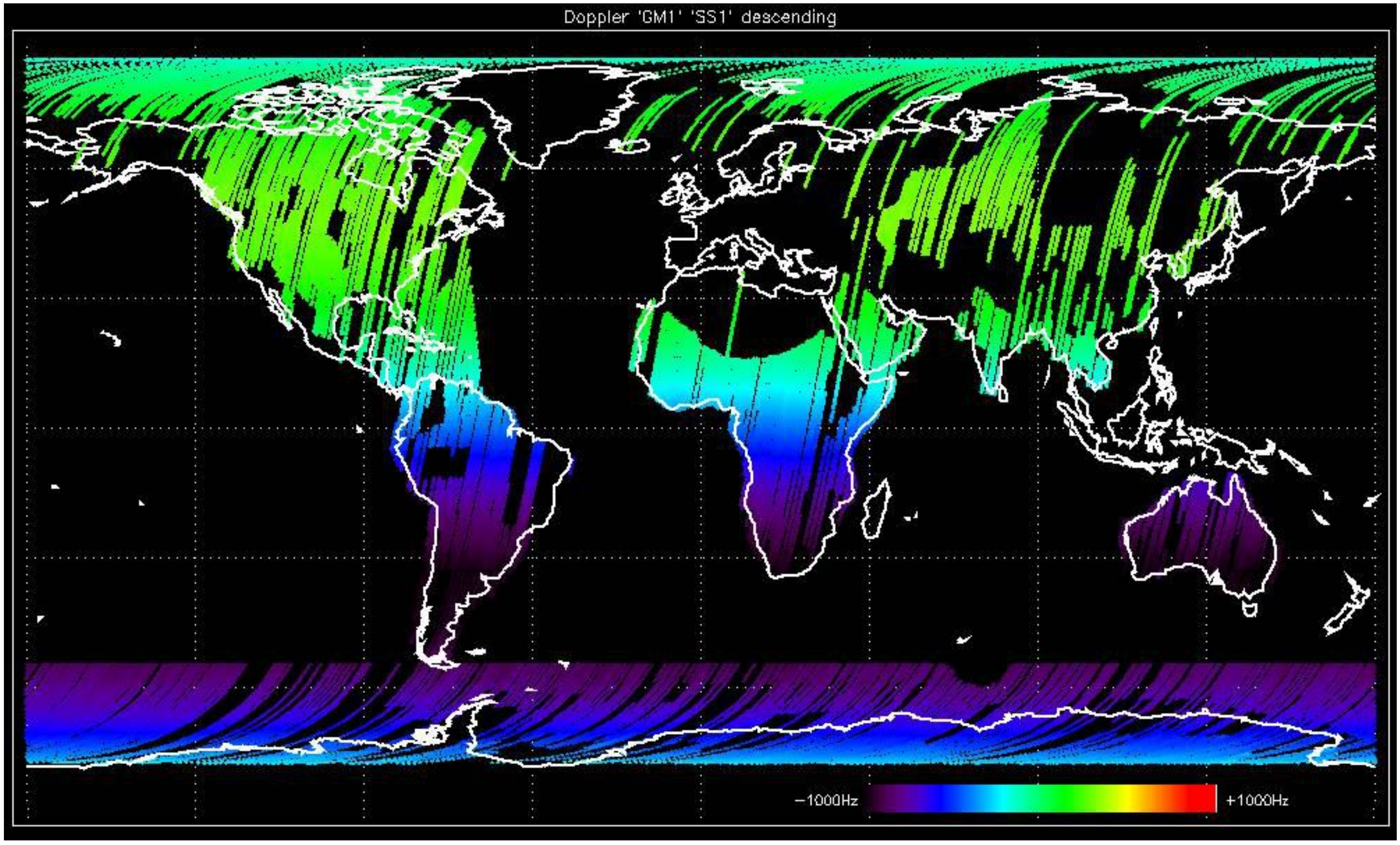

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
−8.15
−8.20
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

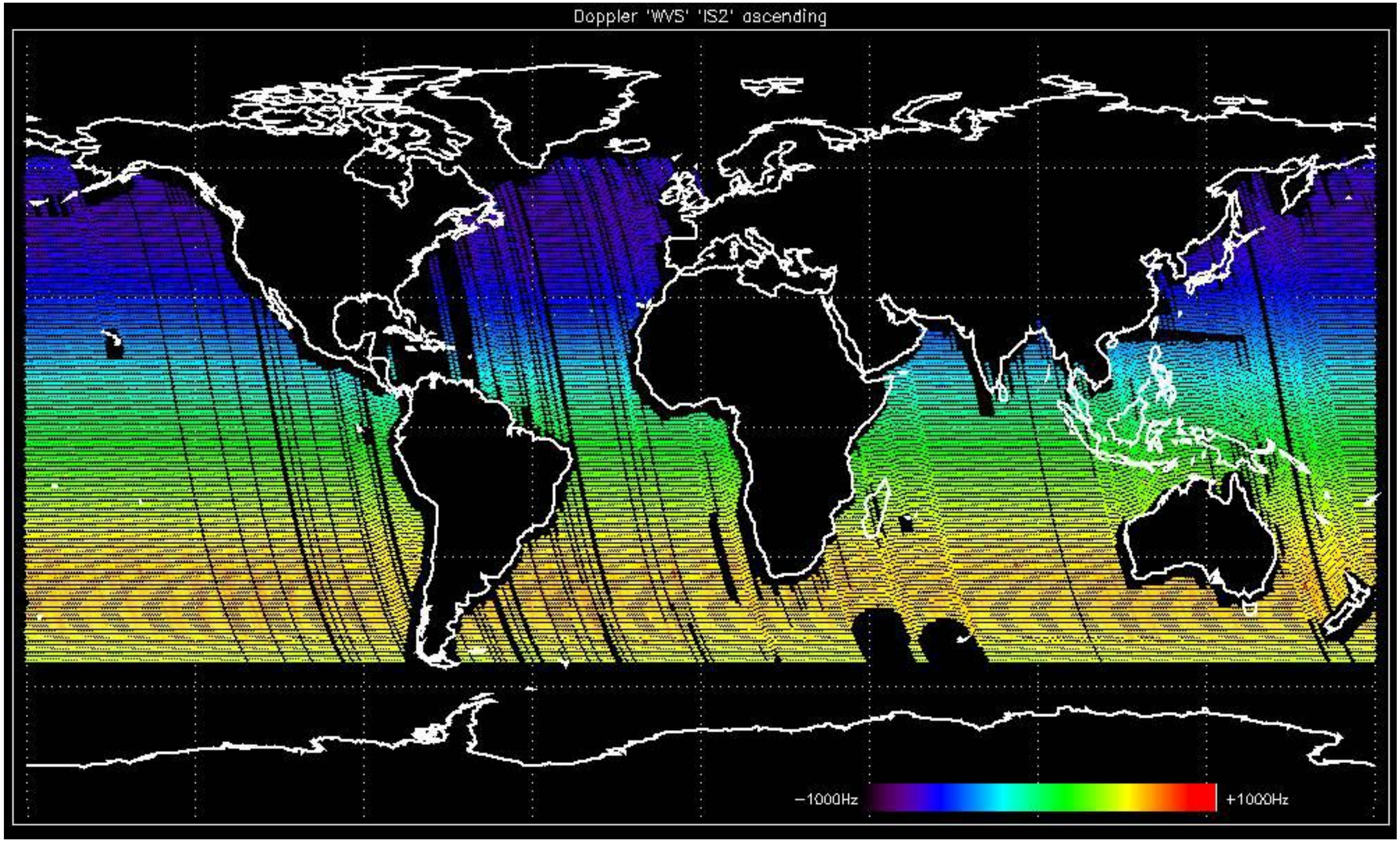

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
−8.35
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

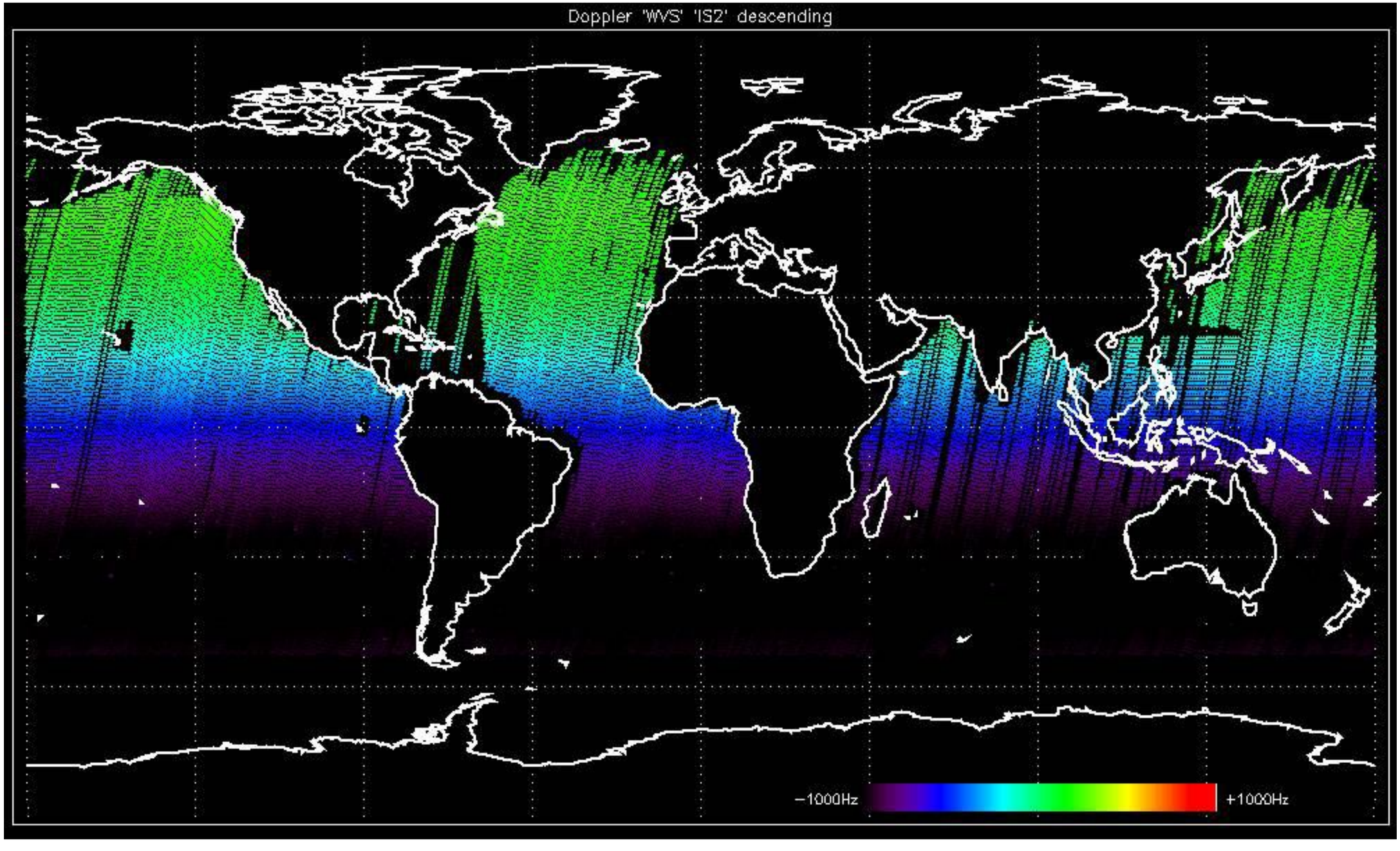
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

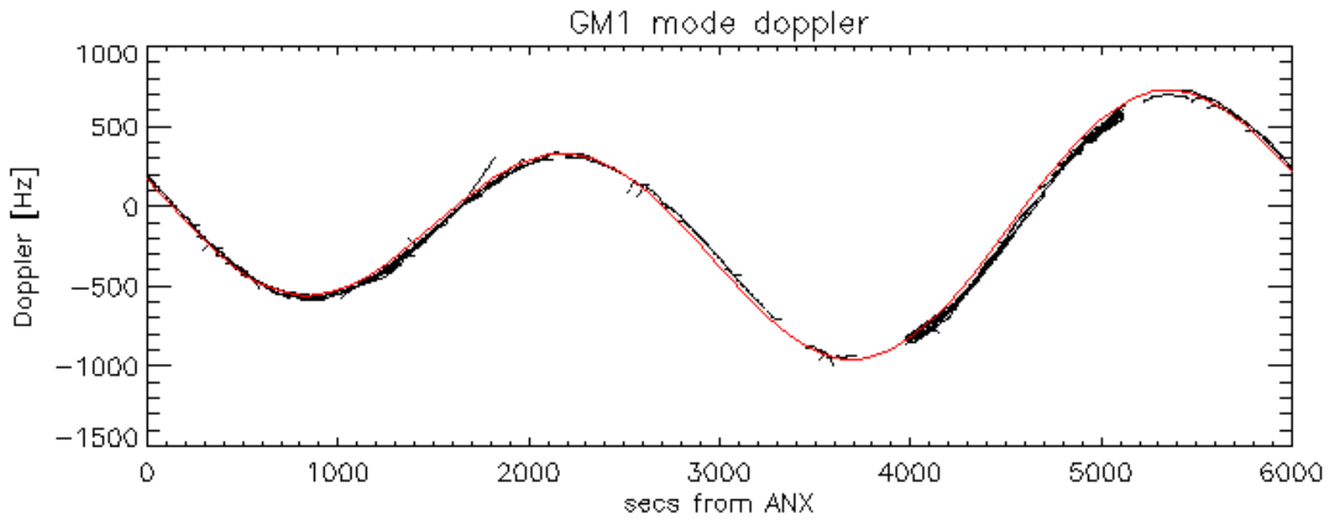
Preliminary report.The data is not yet controled

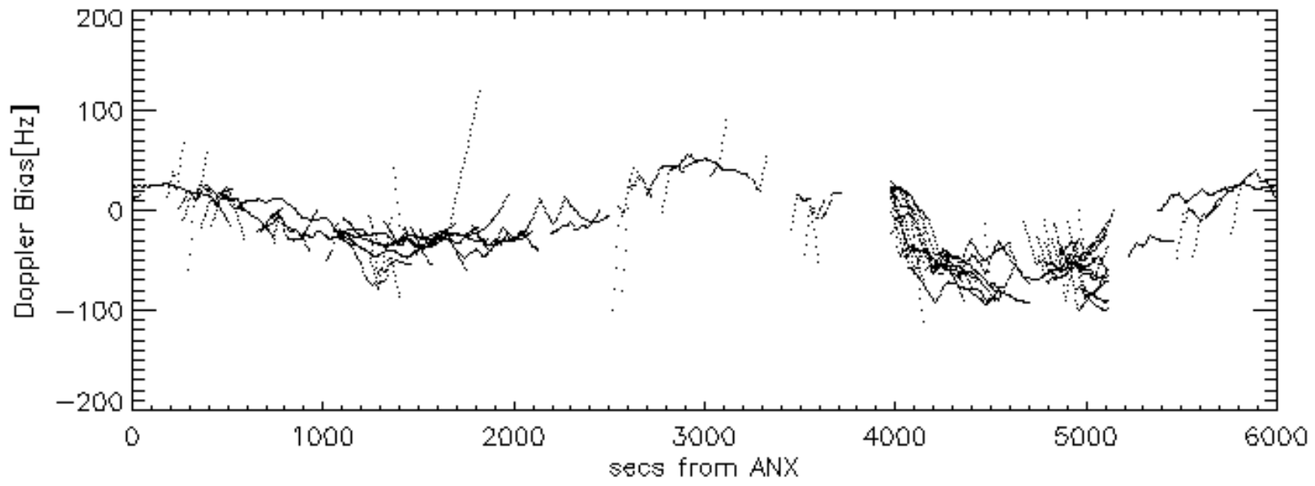

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

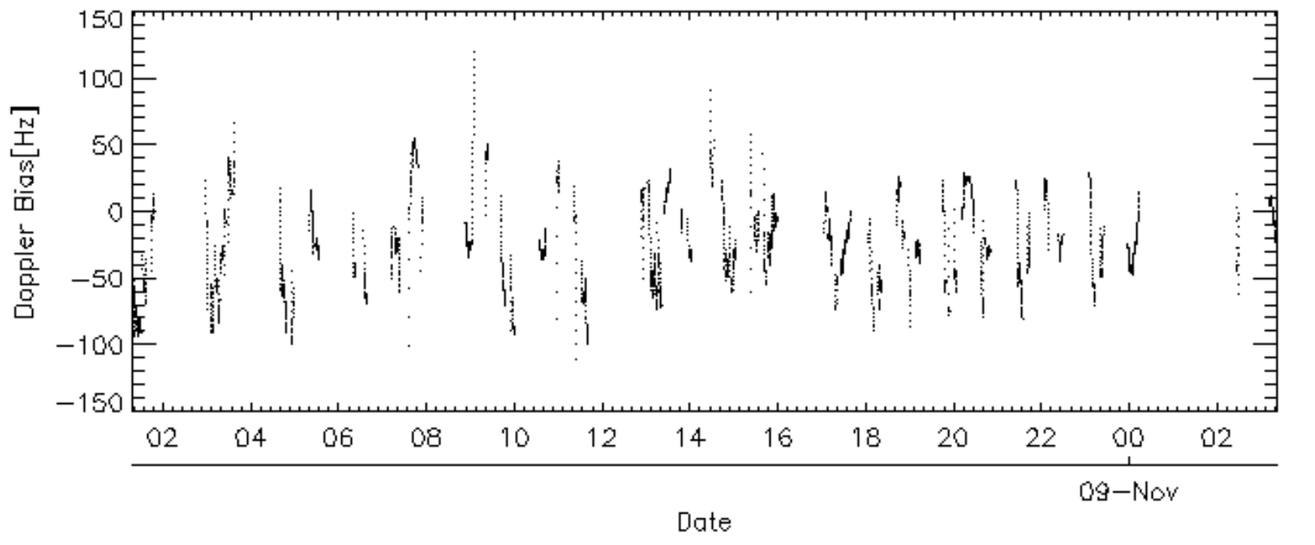

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

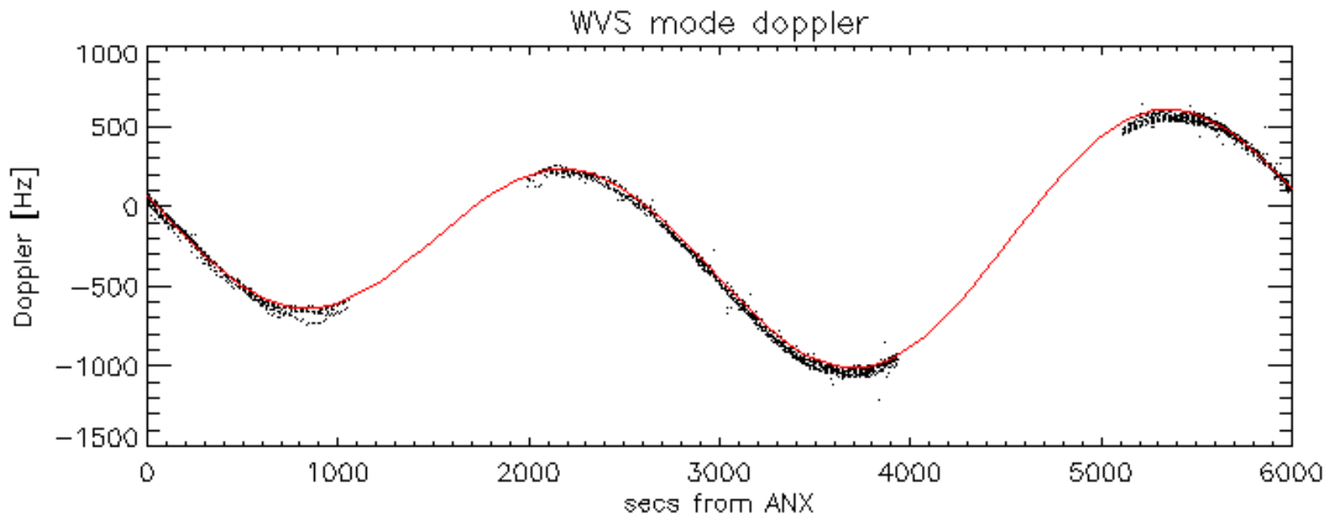

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

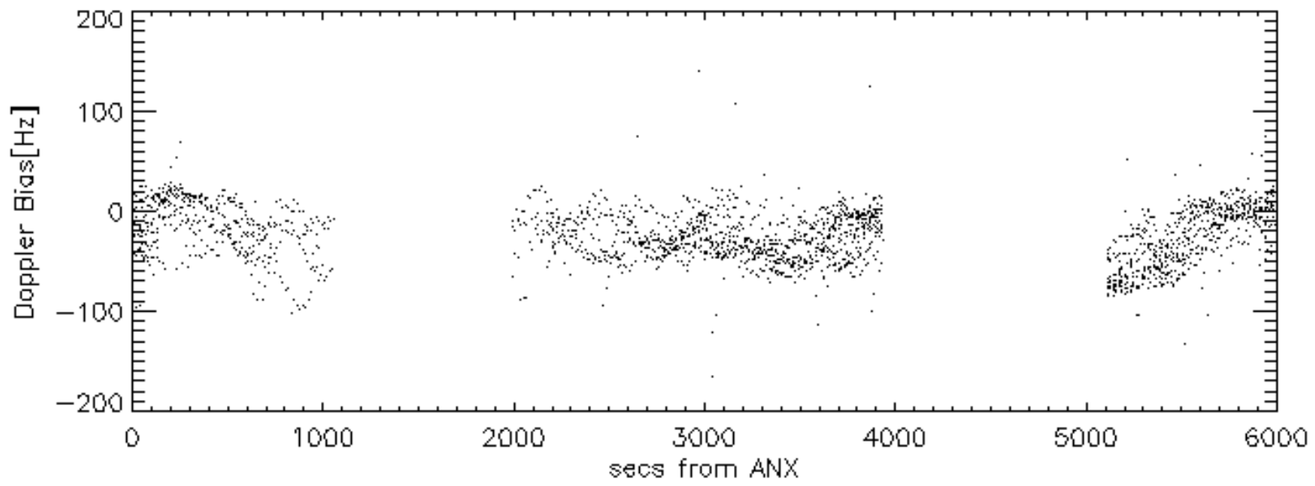

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

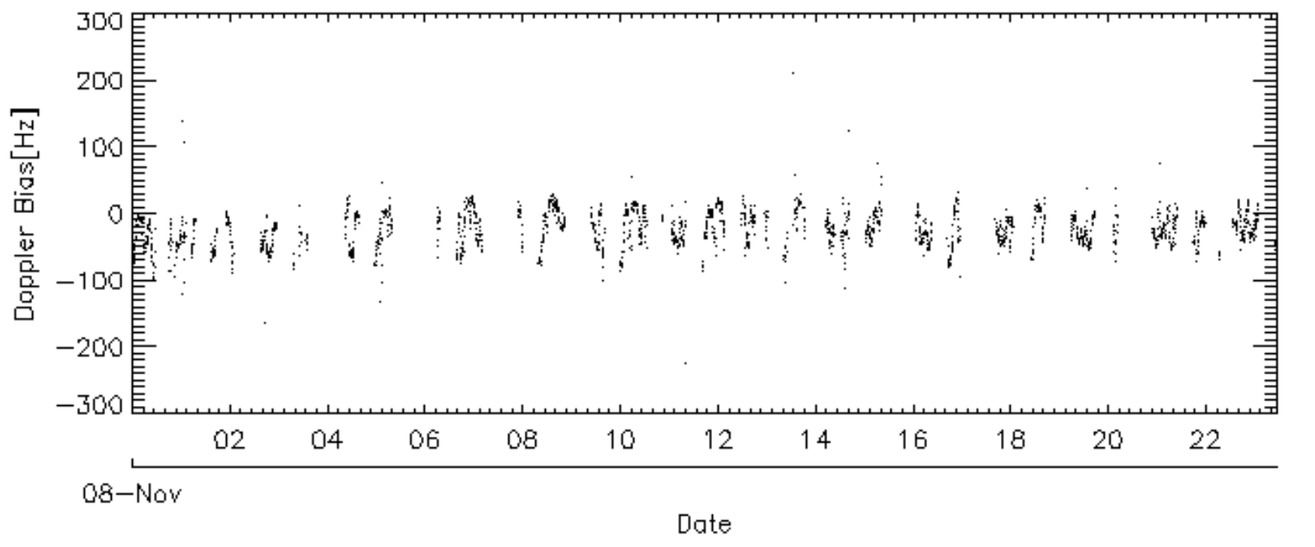

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

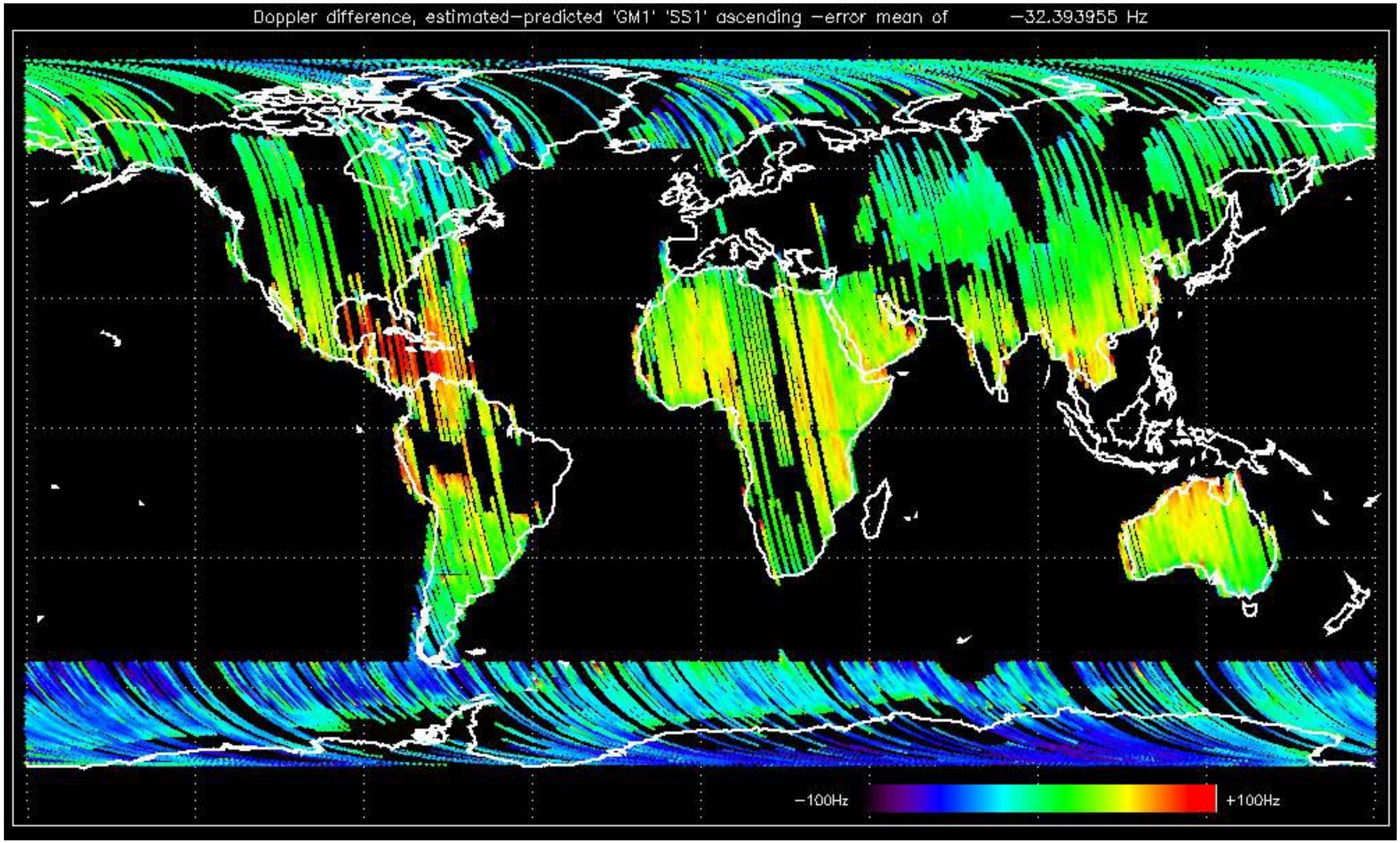

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

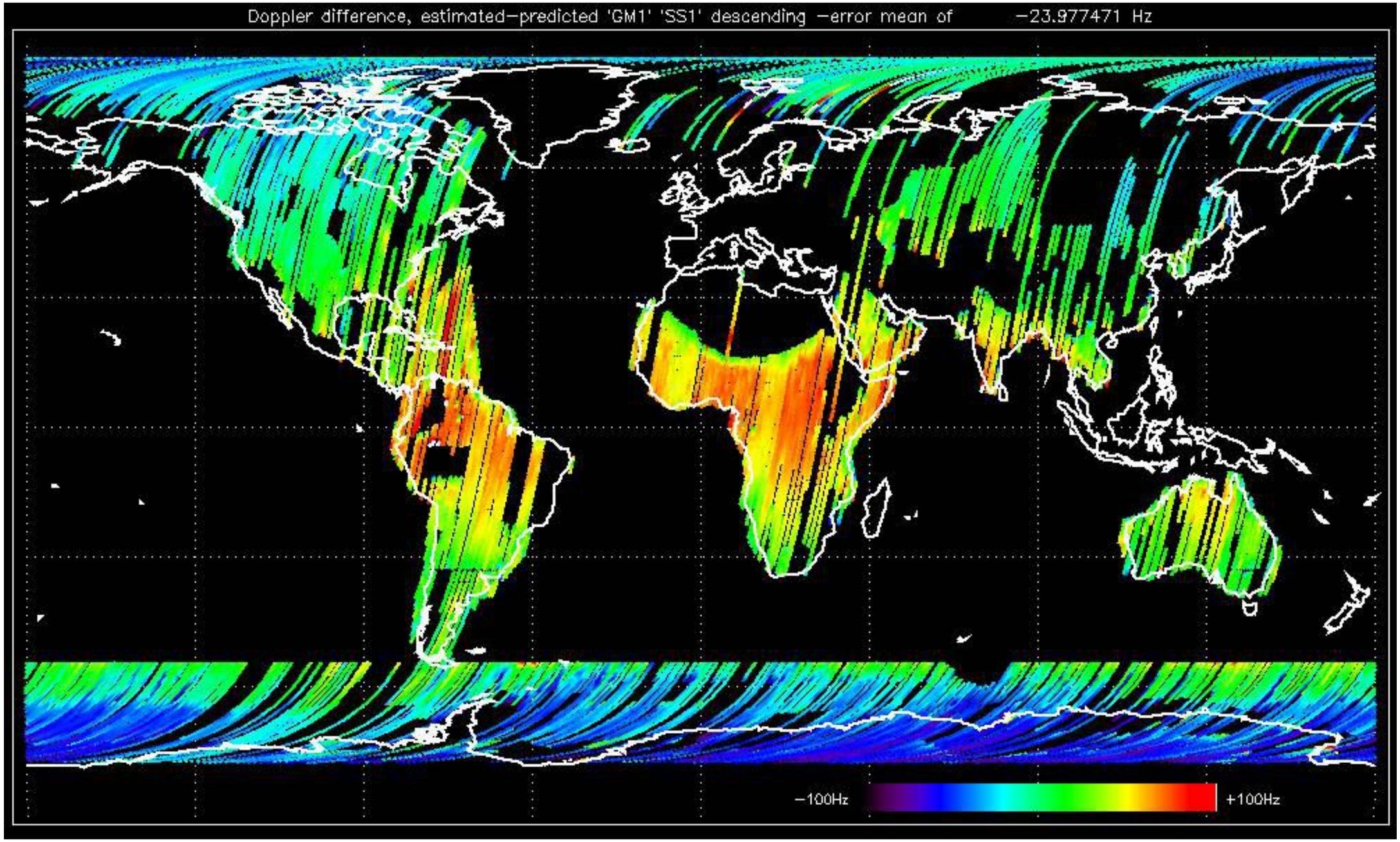

Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
09−Nov
Date

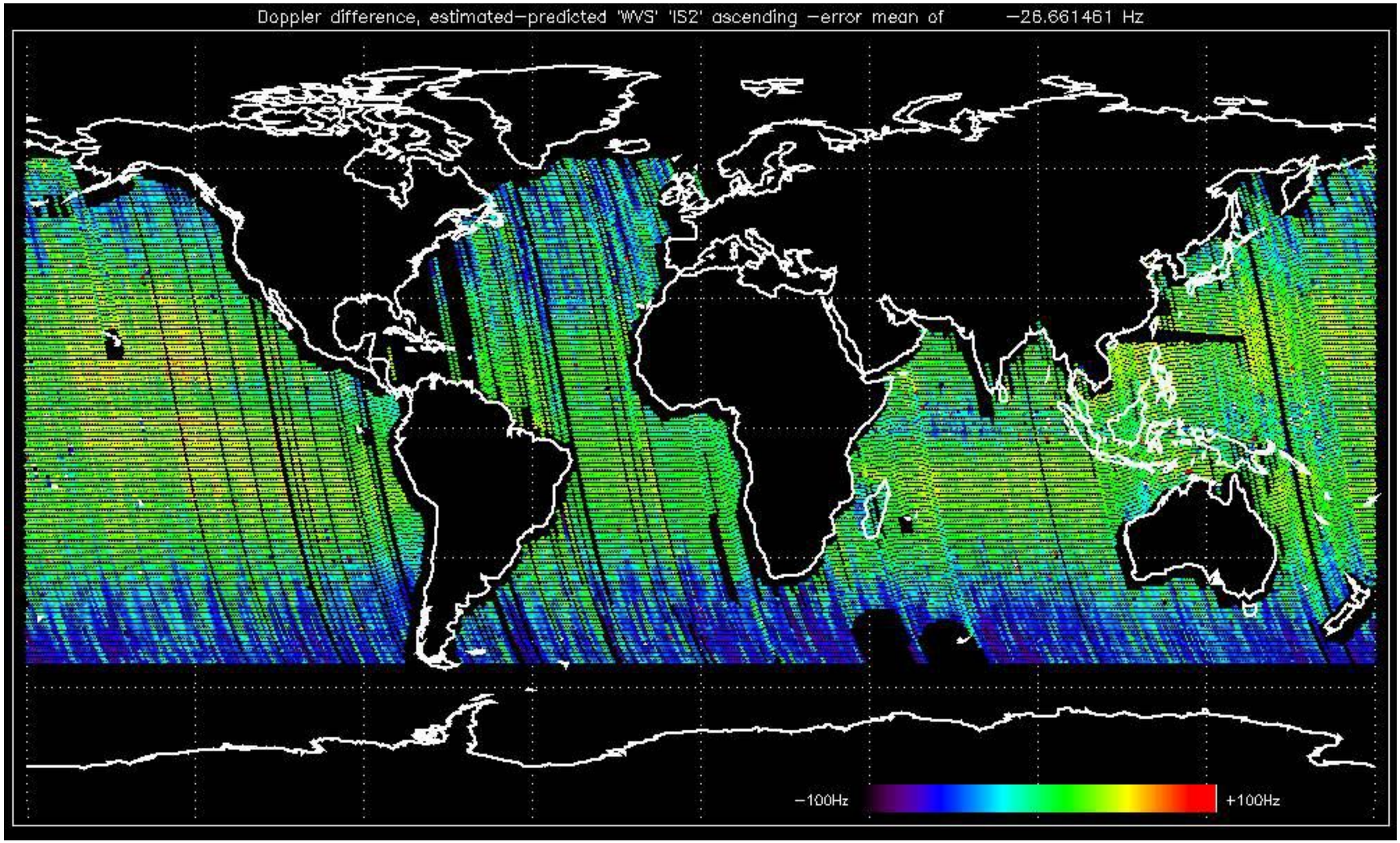

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

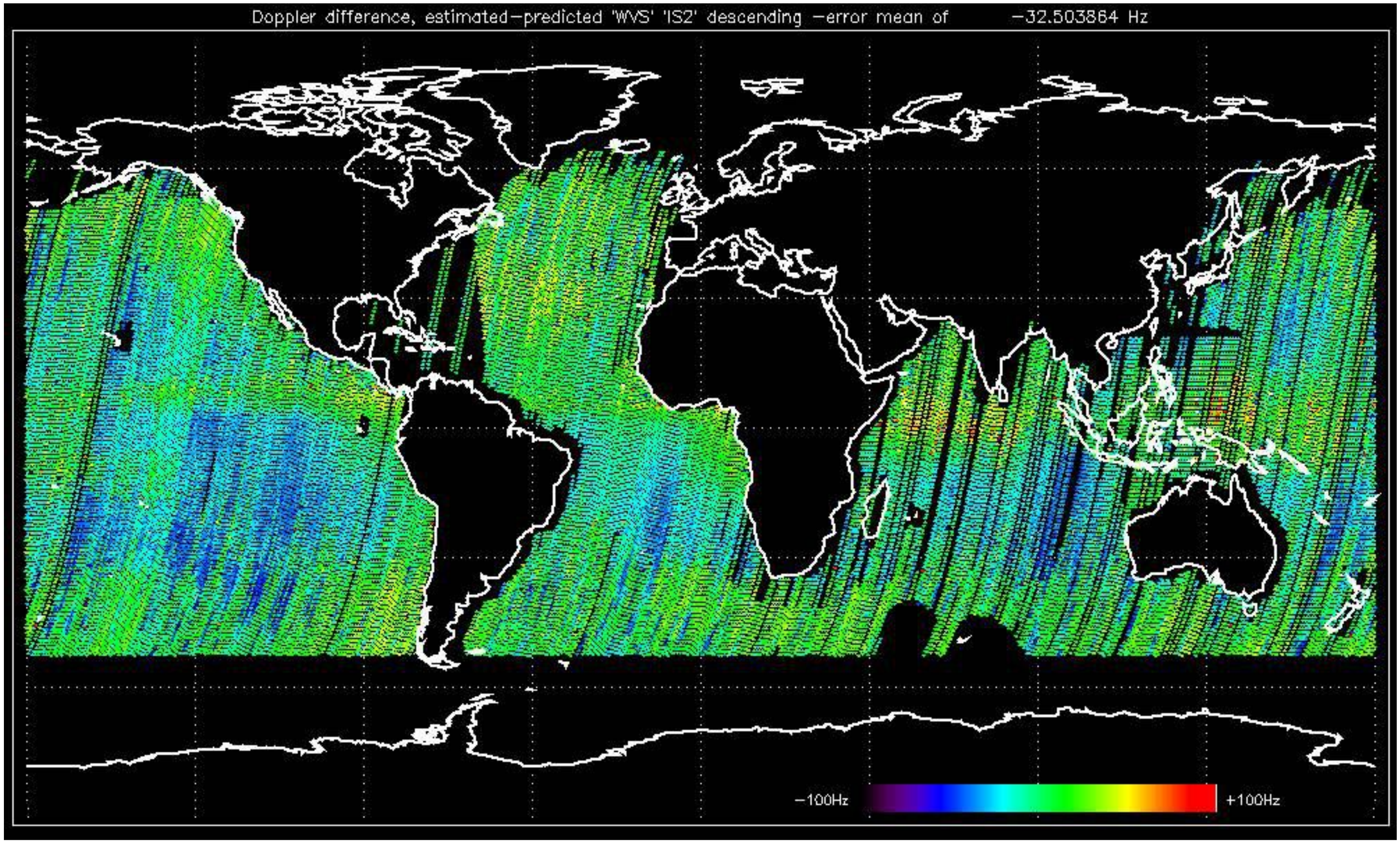

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −32.393955 Hz
−100Hz
+100Hz

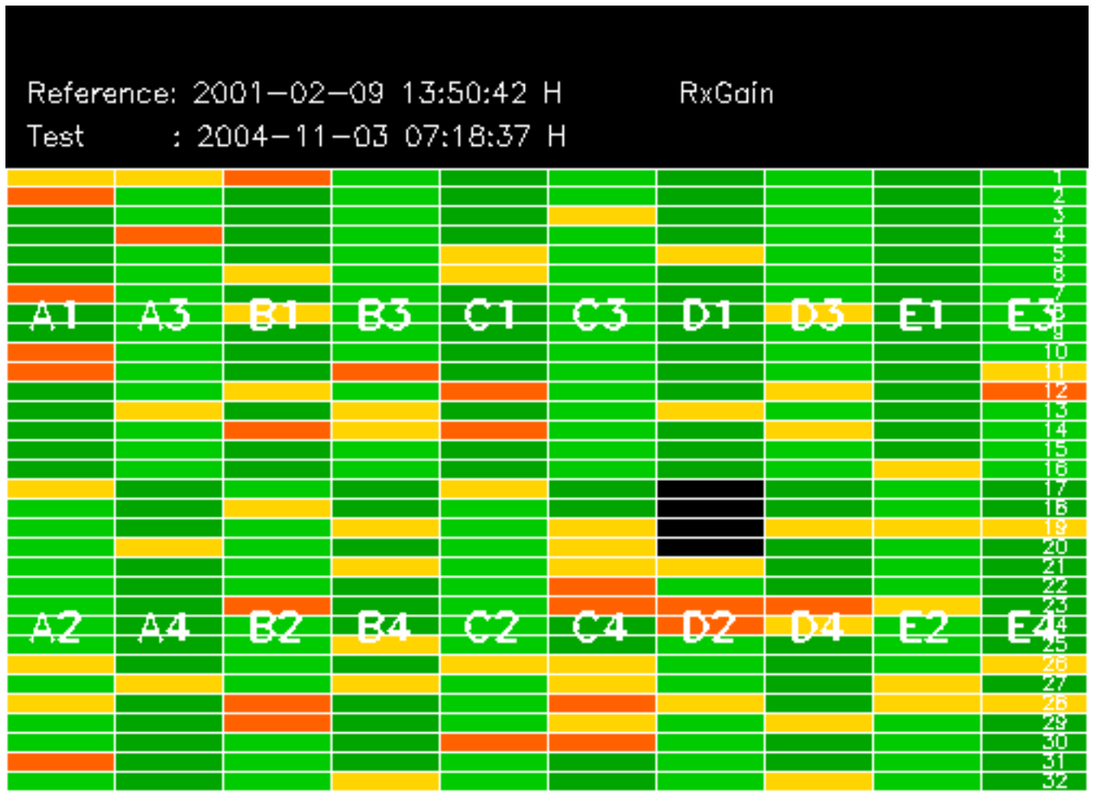

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -23.977471 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.661461 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −32.503864 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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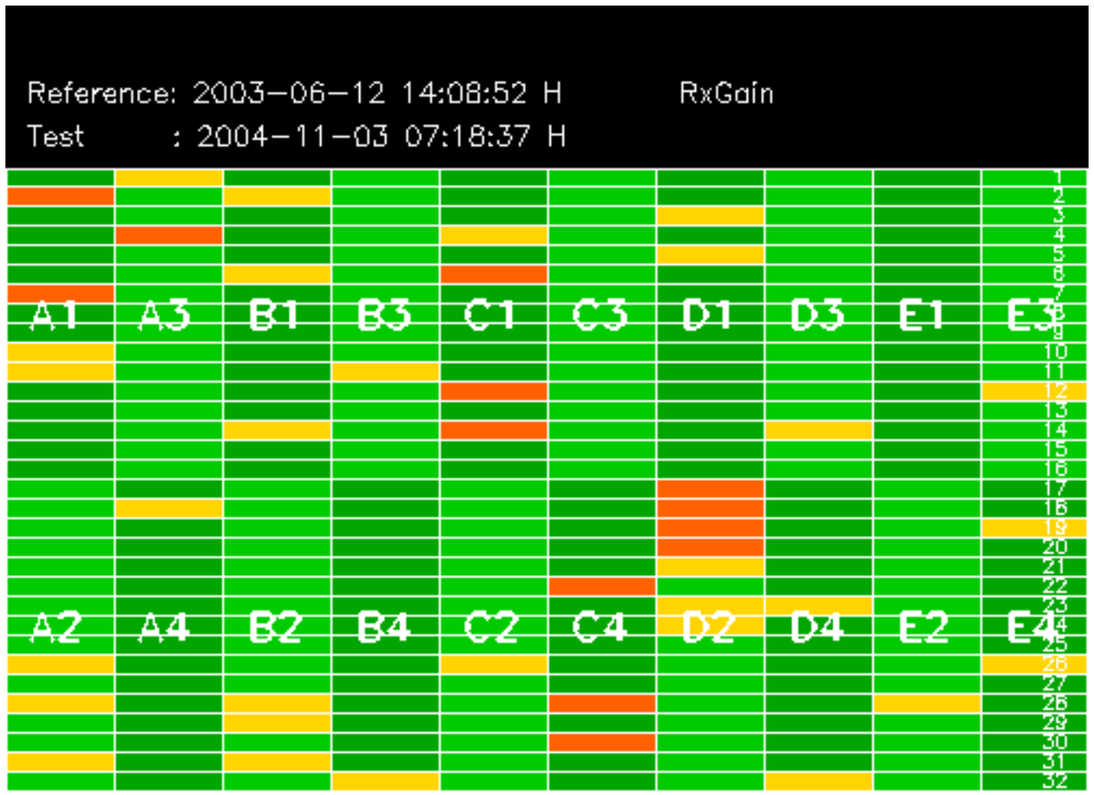
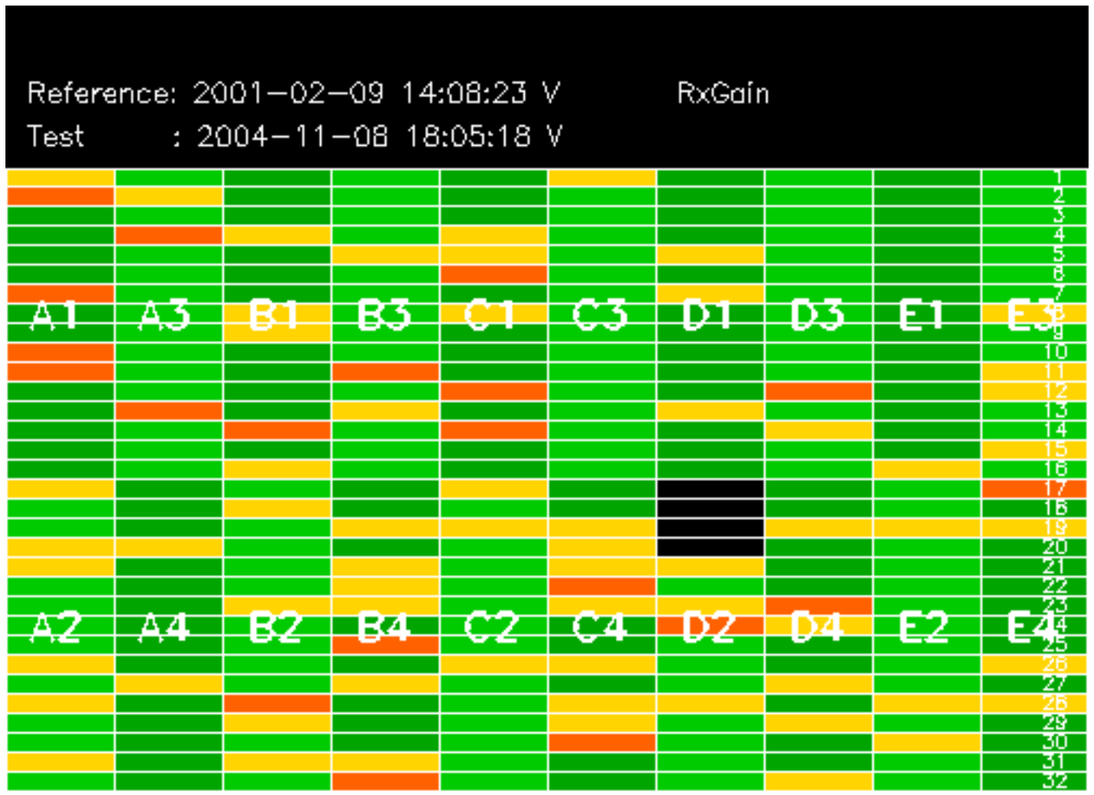
23
24
25
26
27
28
29
30
31
32


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 : 2004-11-08 18:05:18 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
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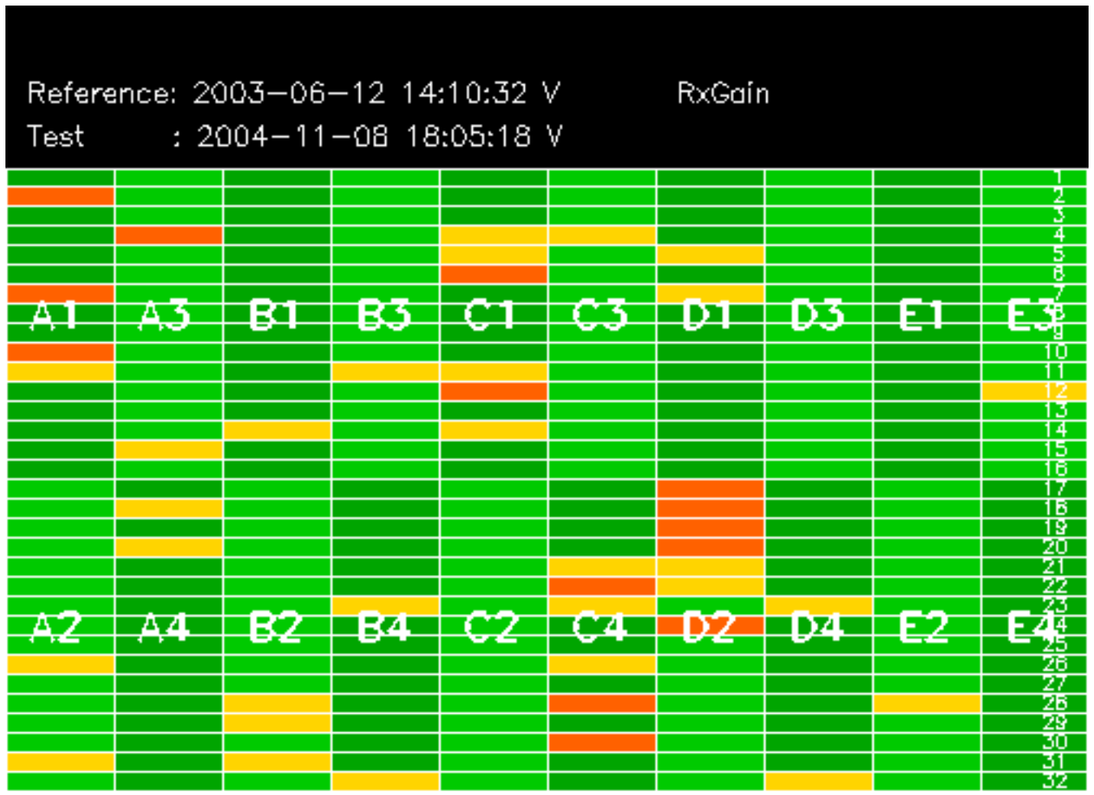
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-08 18:05:18 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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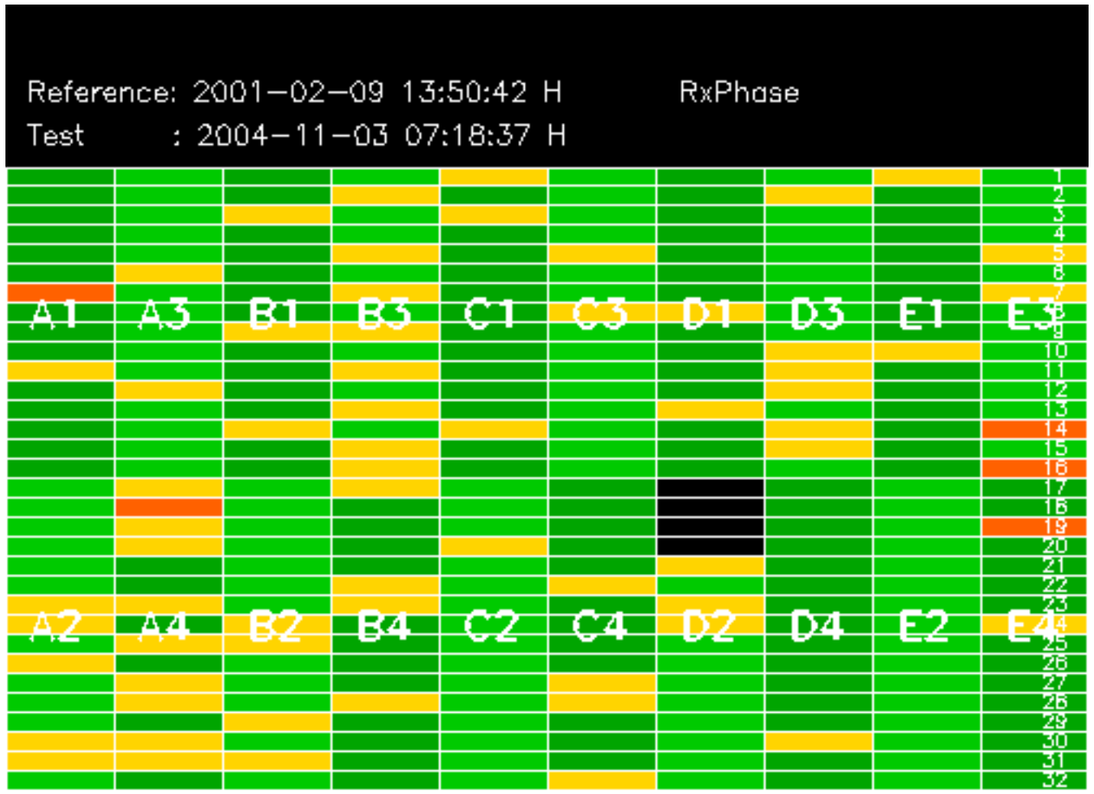
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-11-03 07:18:37 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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9
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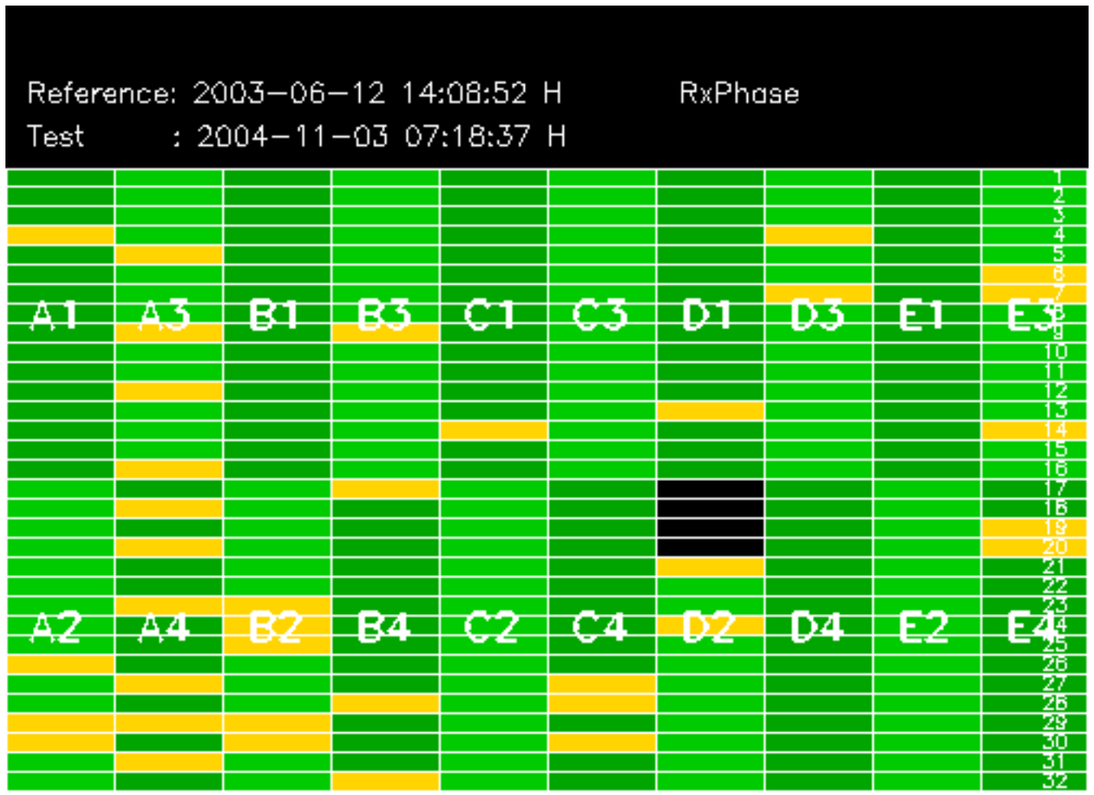
31
32


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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3
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9
10
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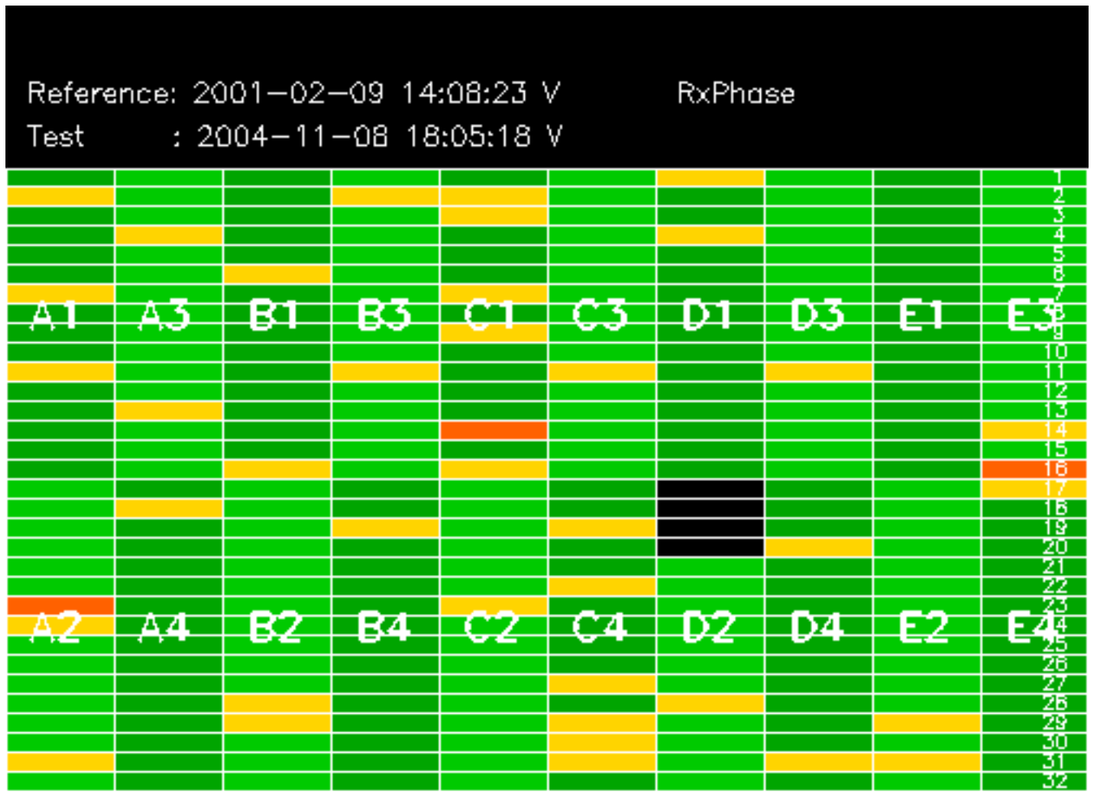
Reference: 2001-02-09 14:08:23 V
Test : 2004-11-08 18:05:18 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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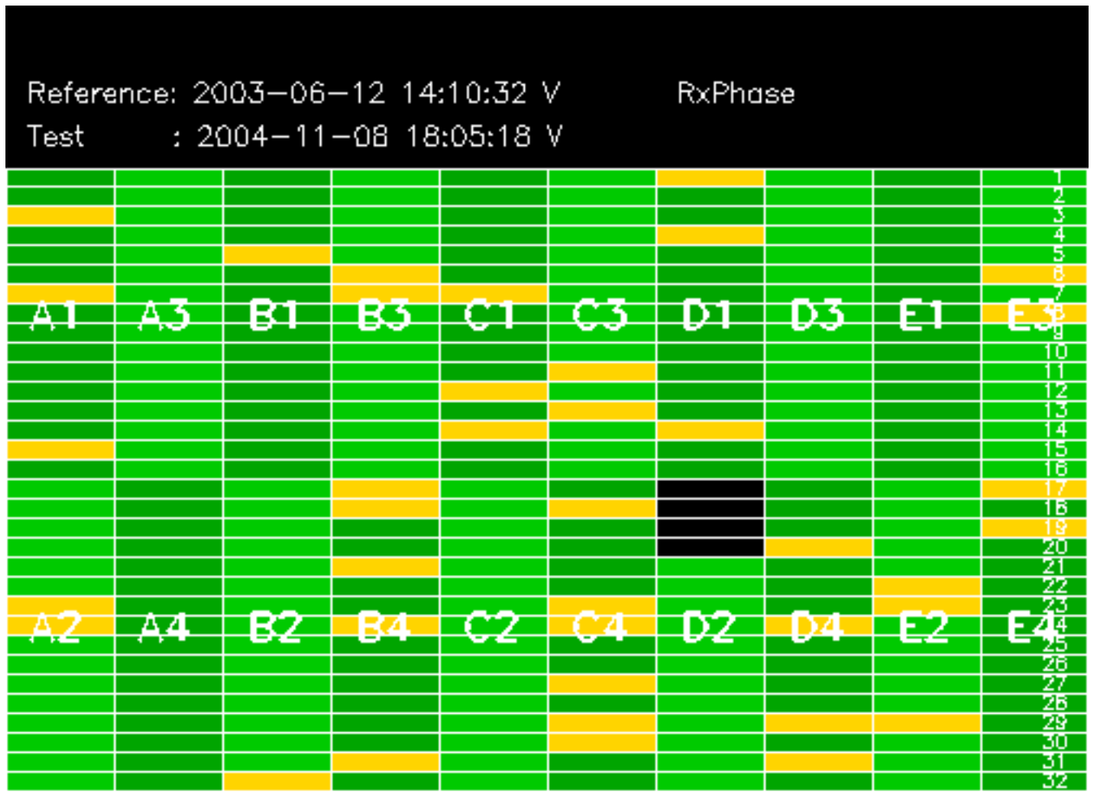
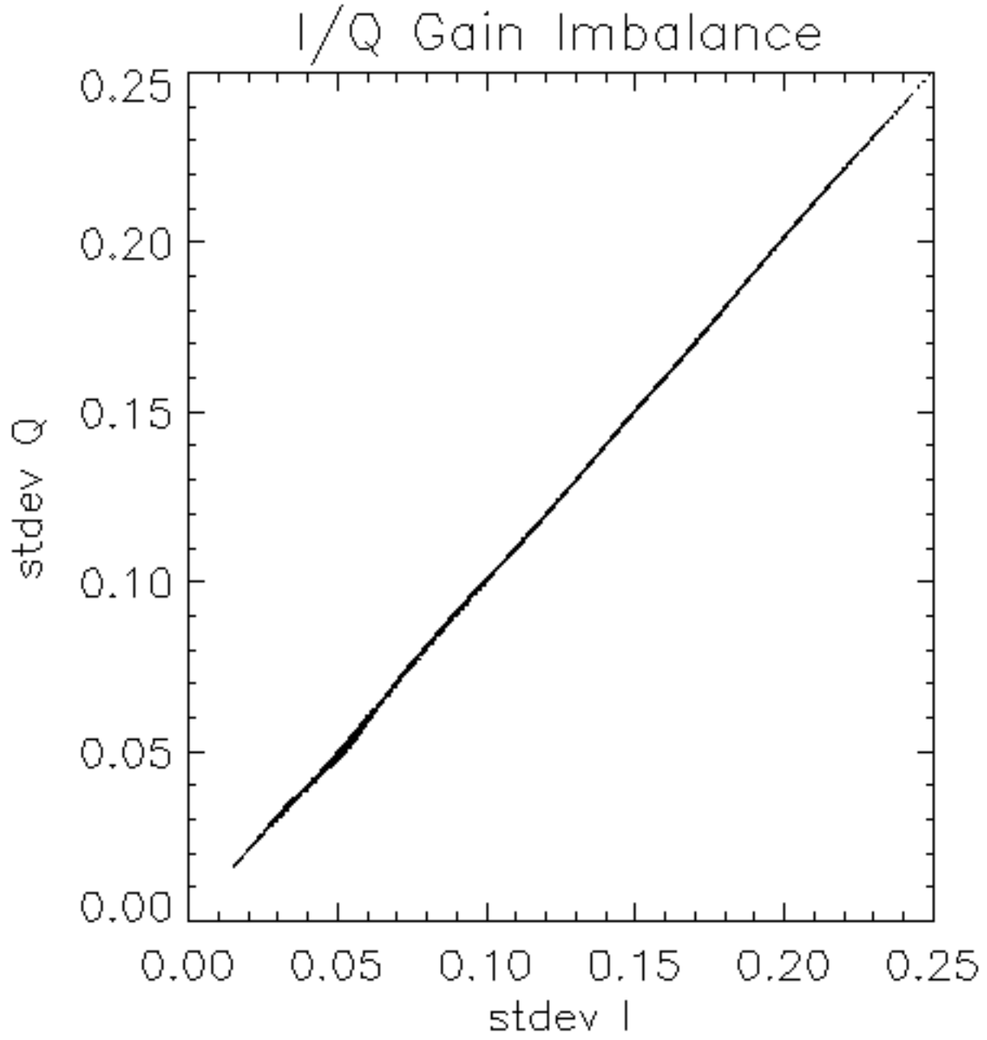
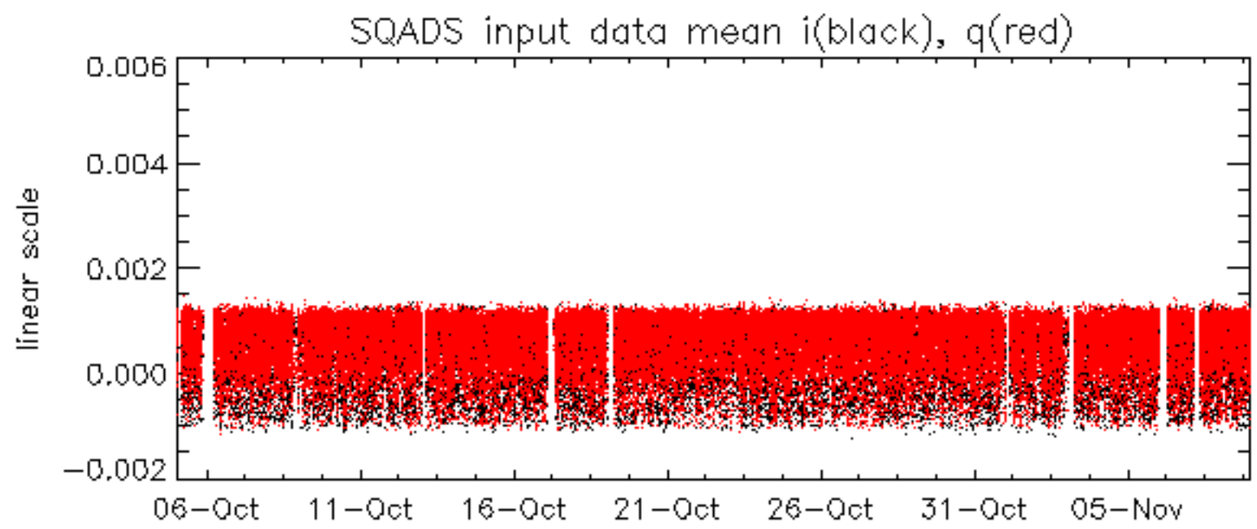
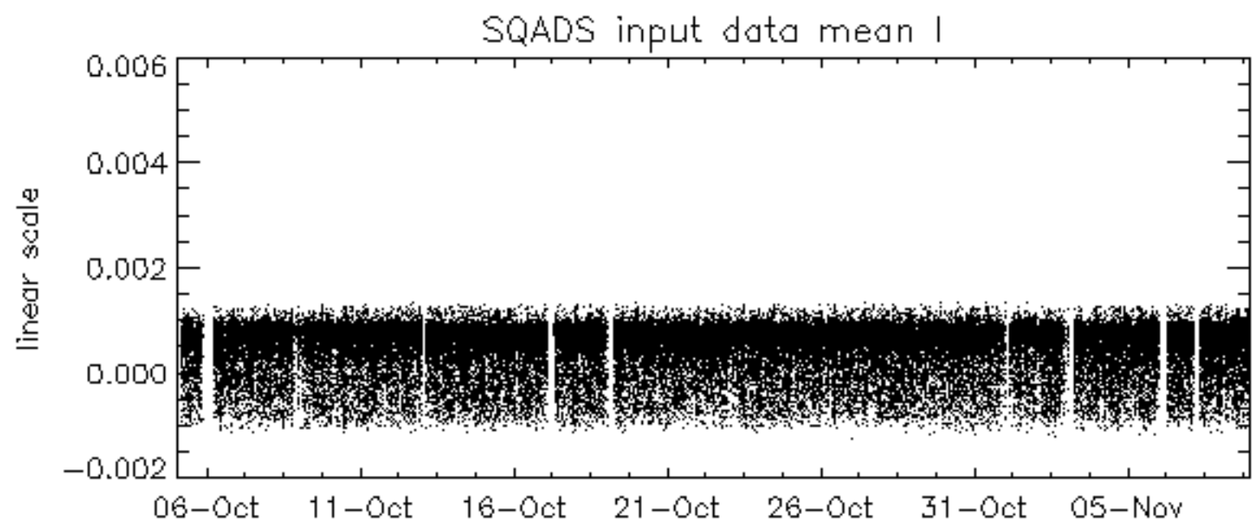
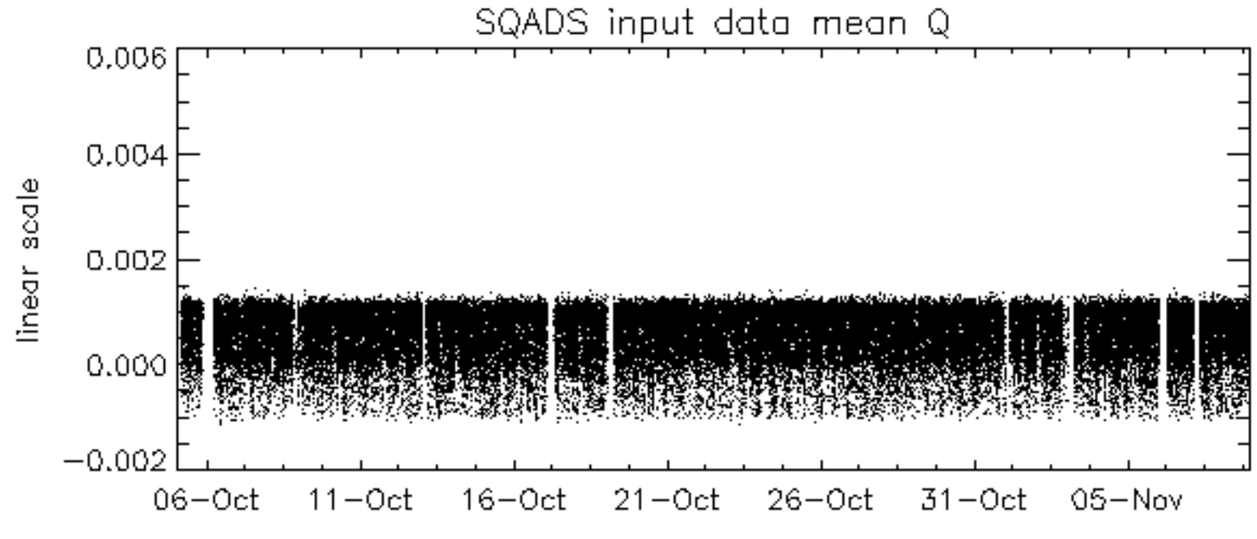
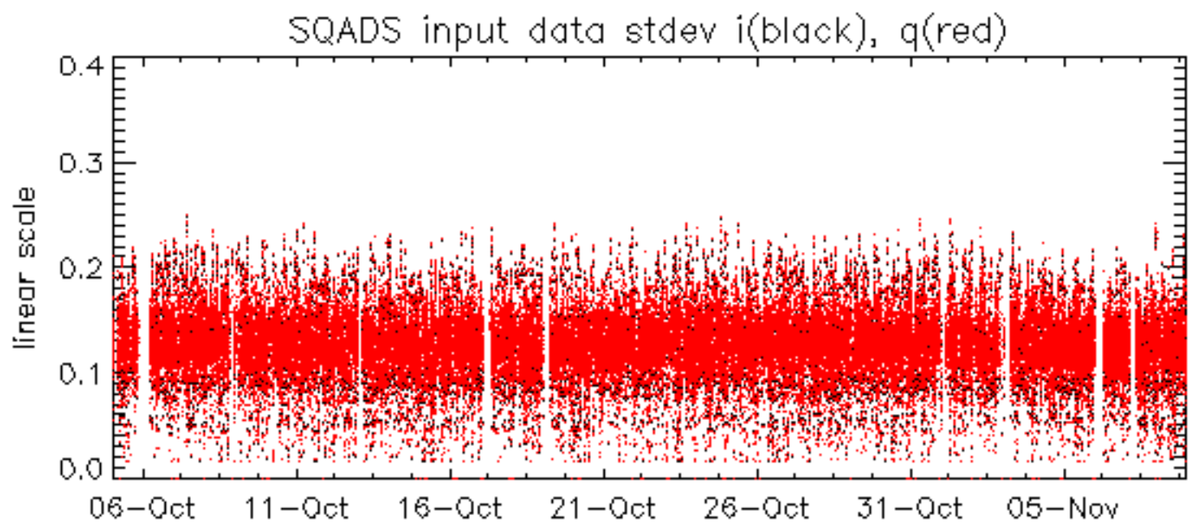

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-08 18:05:18 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

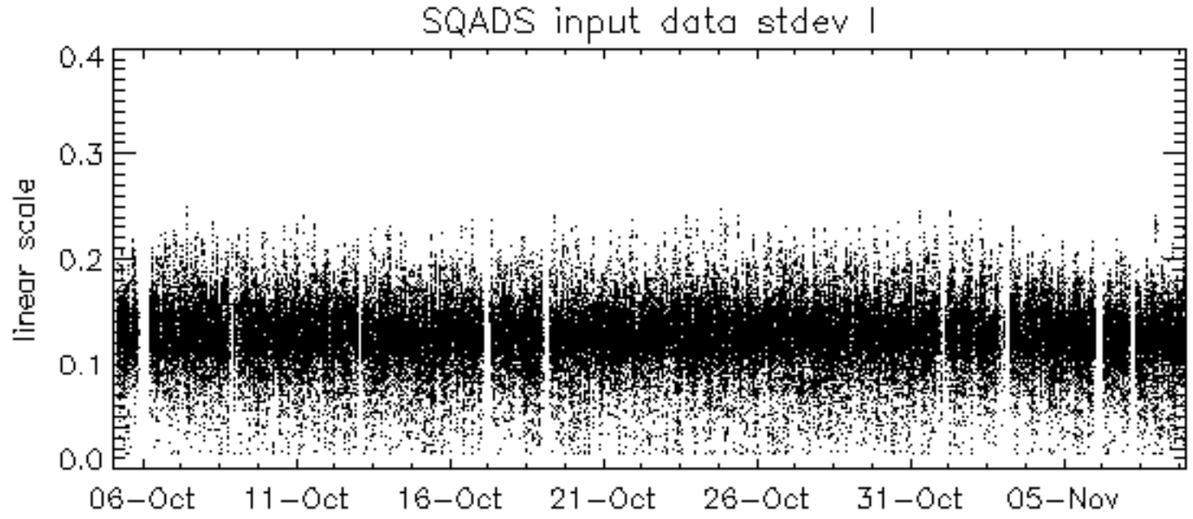

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

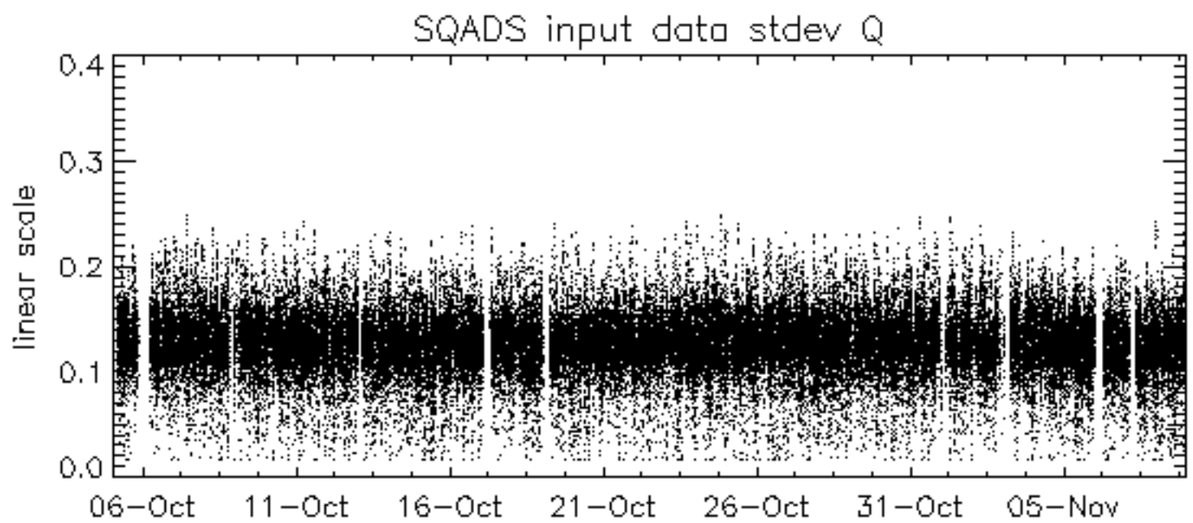

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov

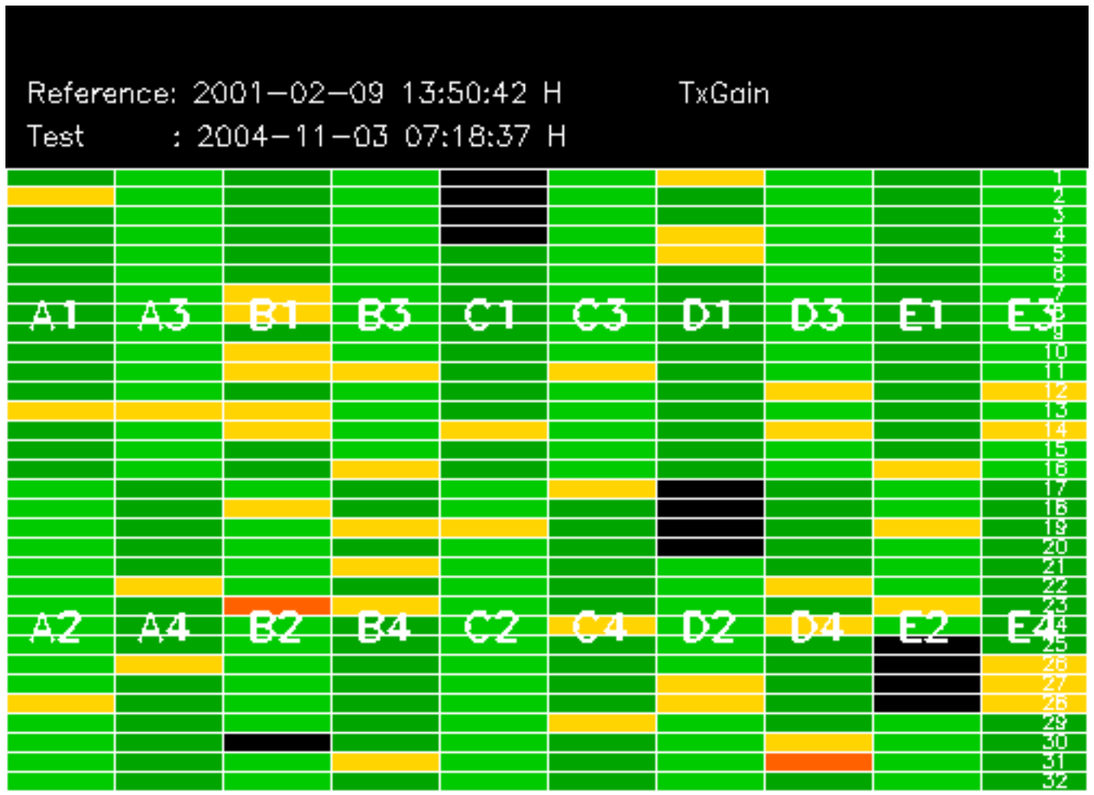

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov

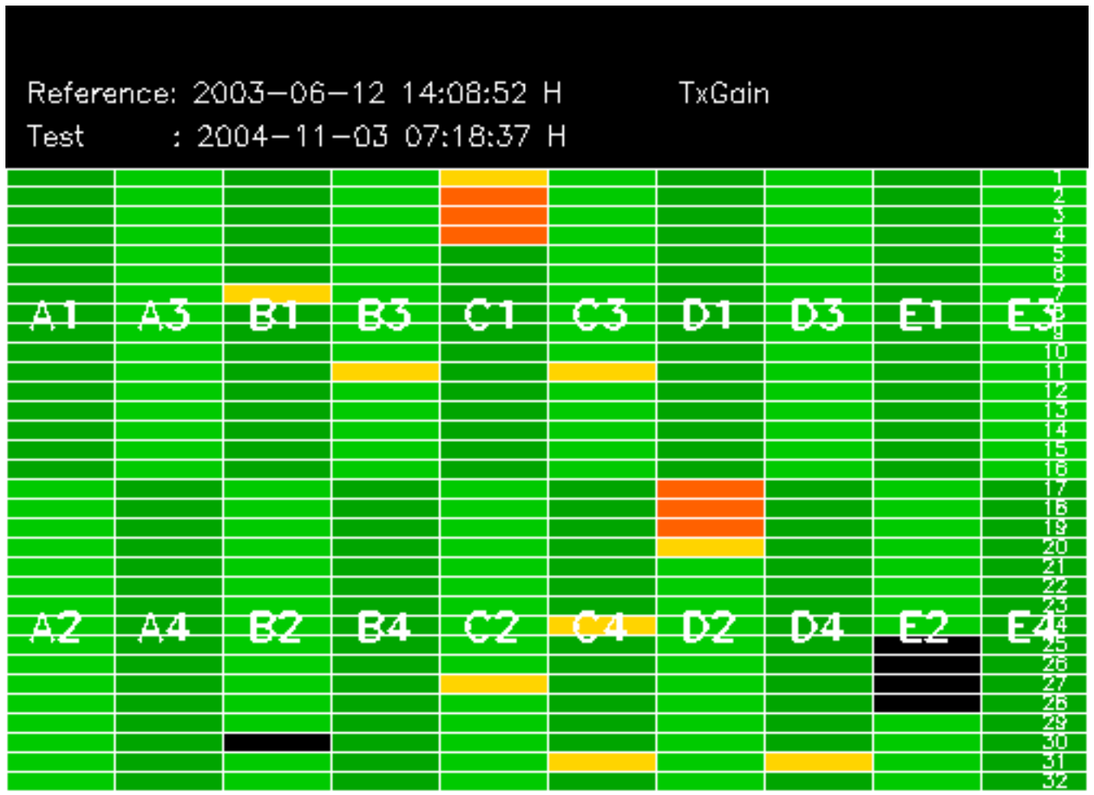

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov


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
E4
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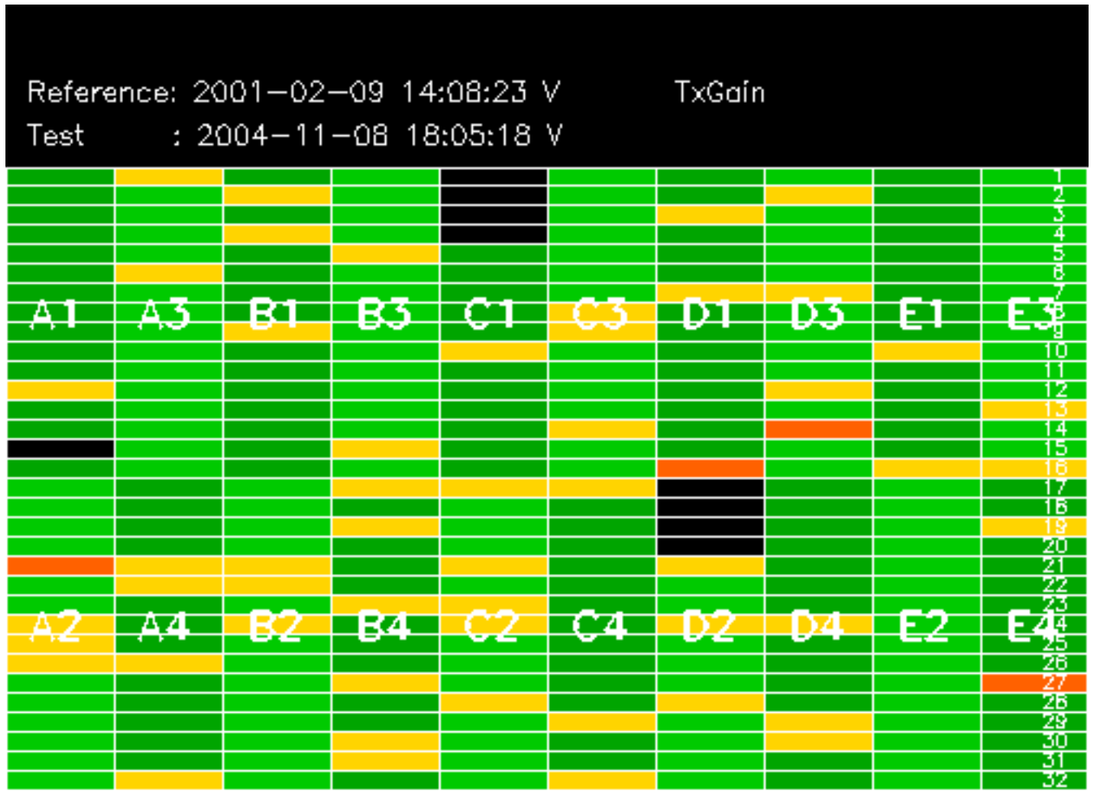
Reference: 2001-02-09 14:08:23 V
Test : 2004-11-08 18:05:18 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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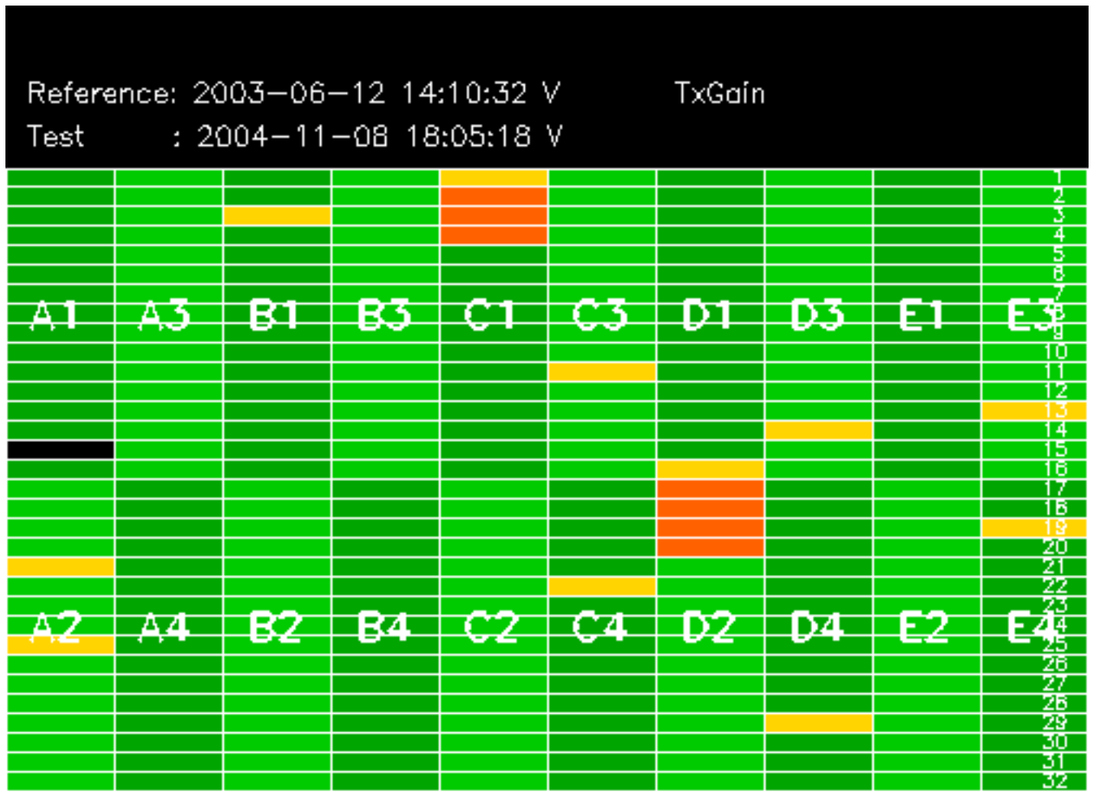
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-08 18:05:18 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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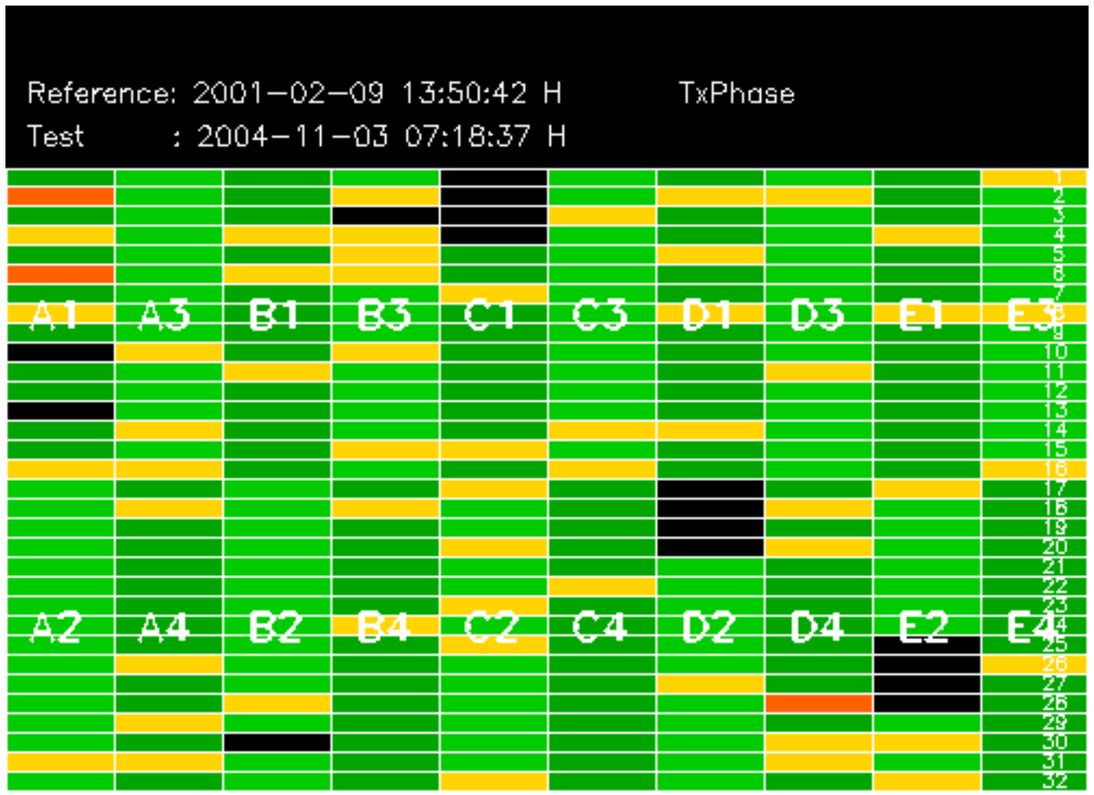
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-11-03 07:18:37 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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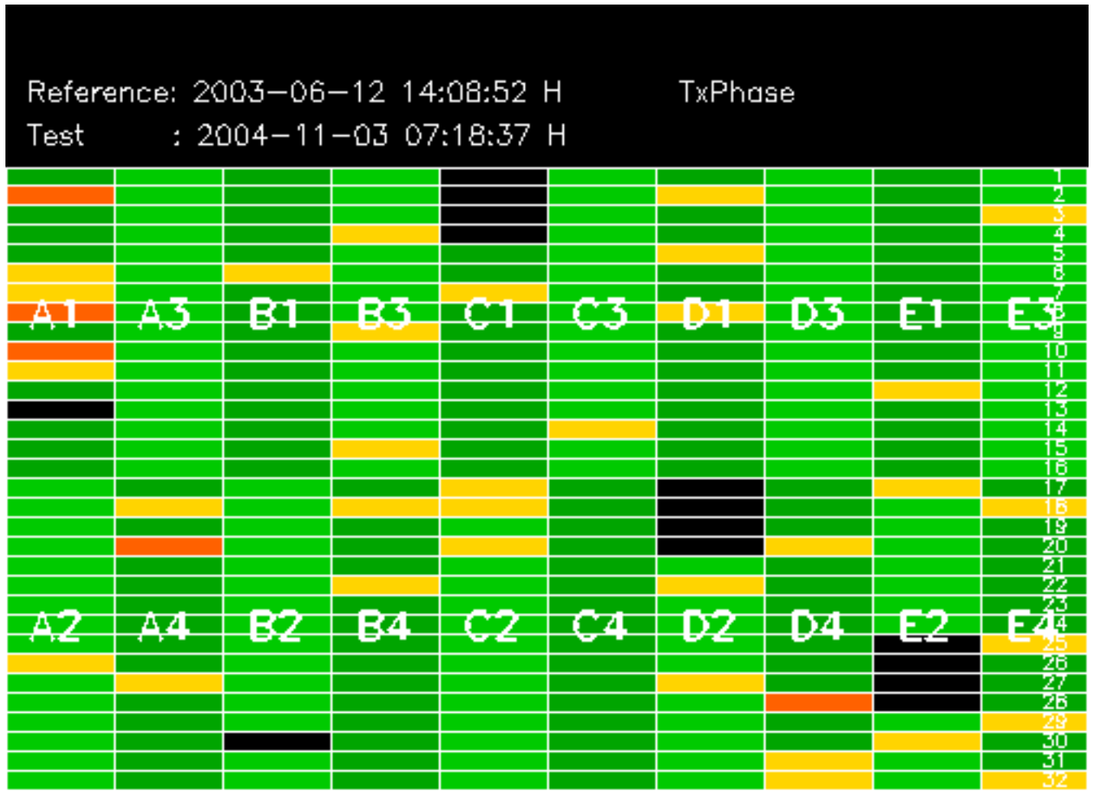
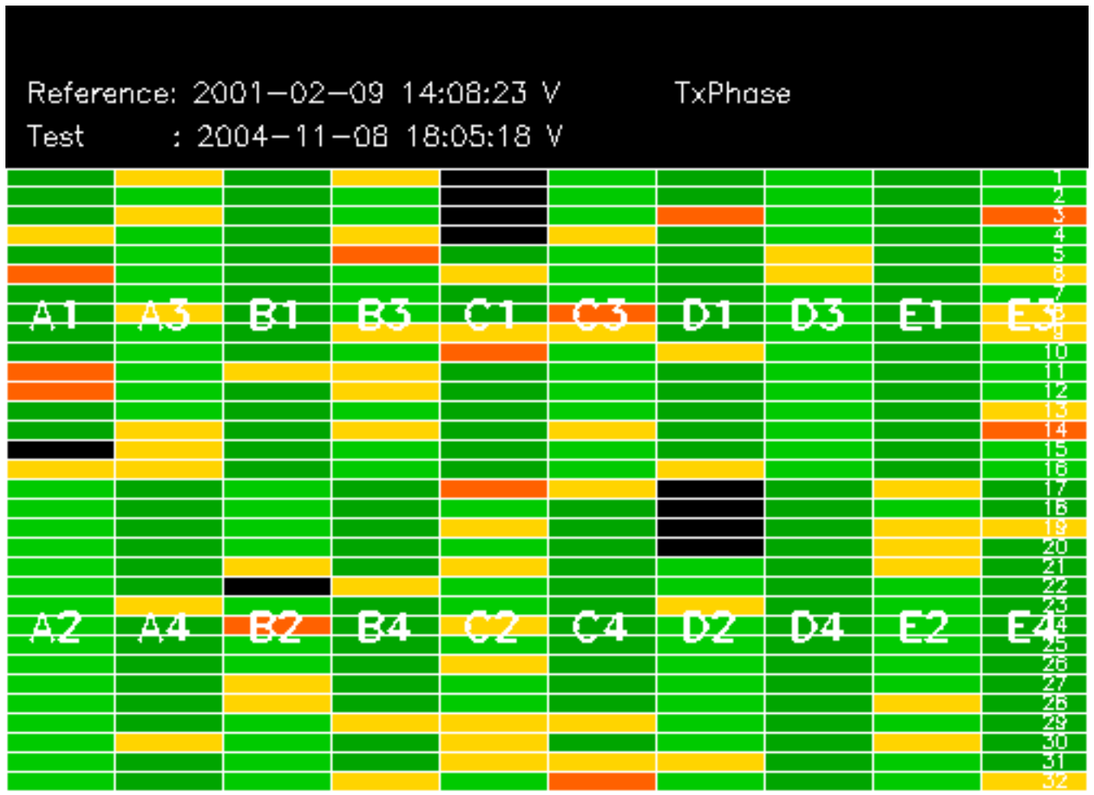
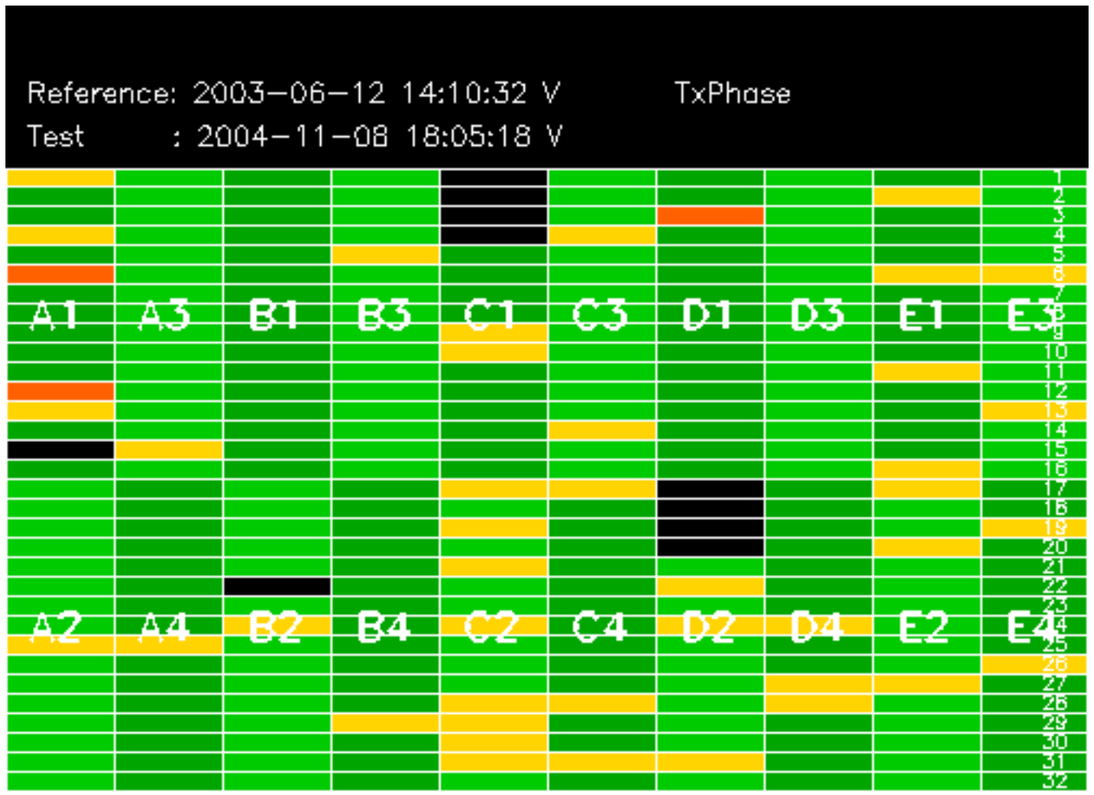
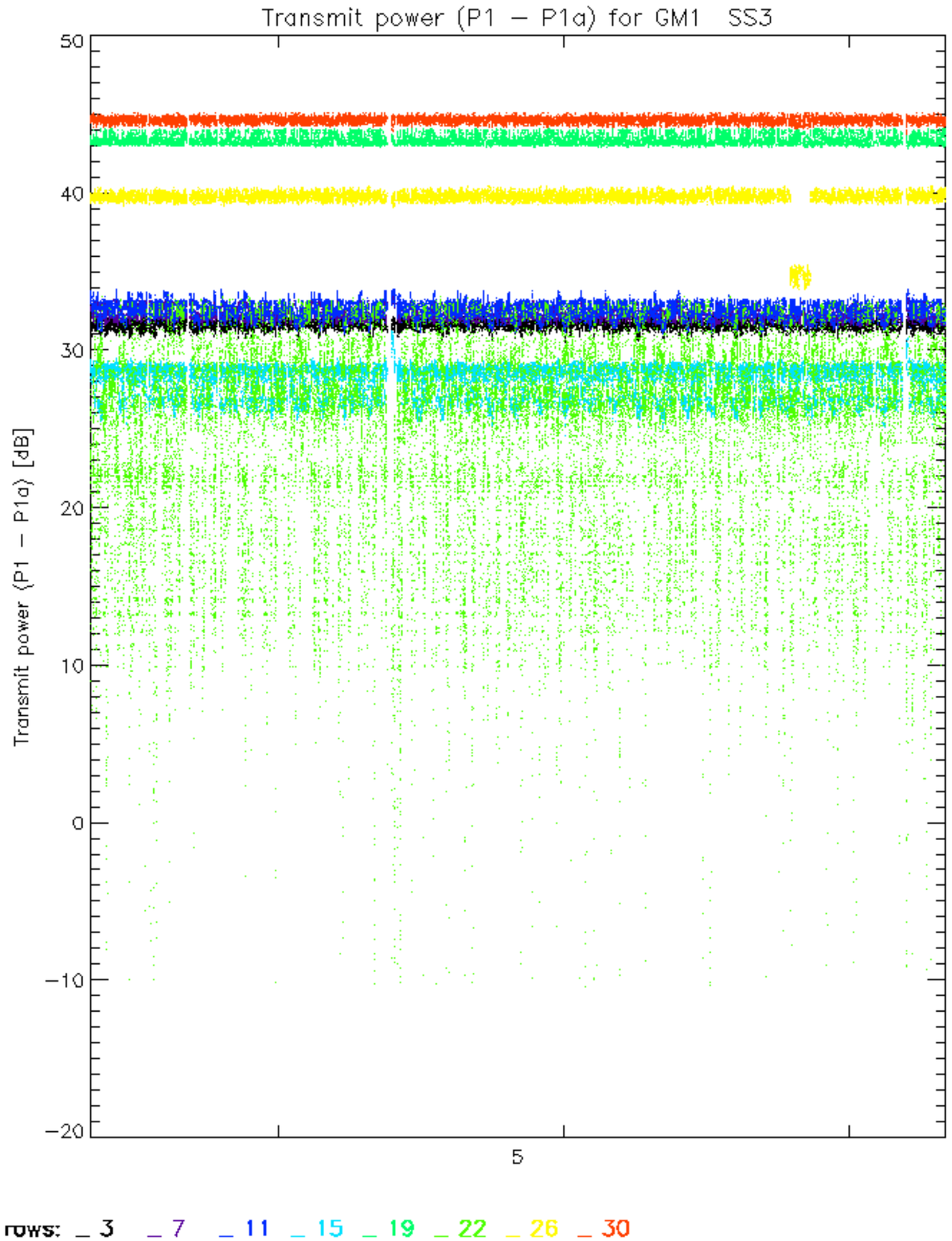
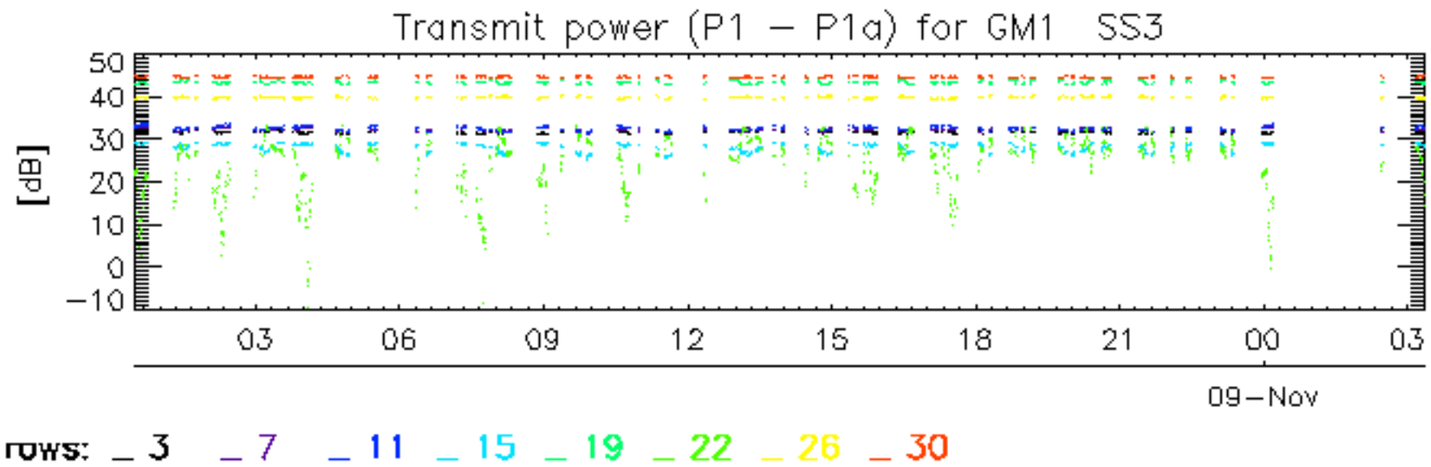
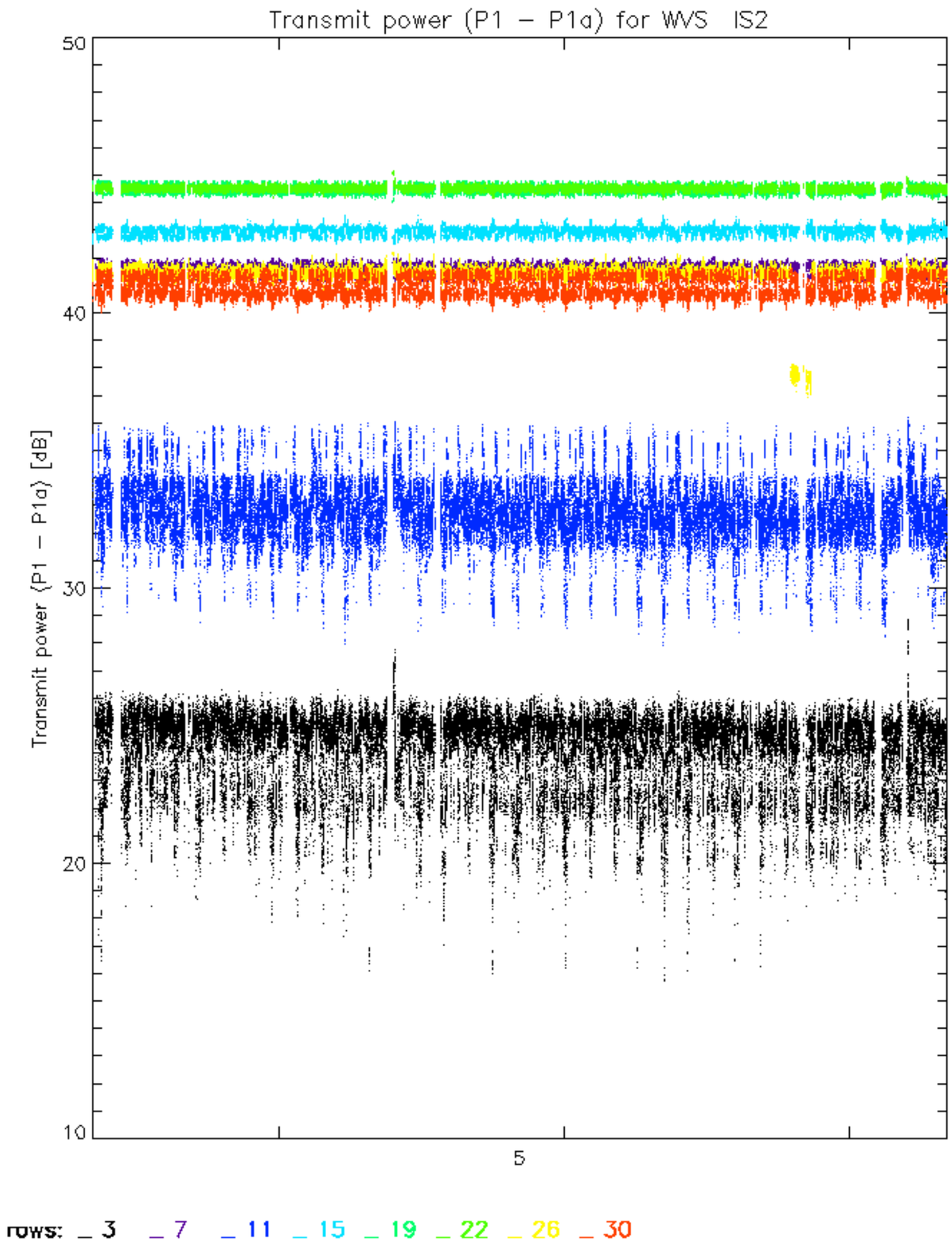

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-03 07:18:37 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

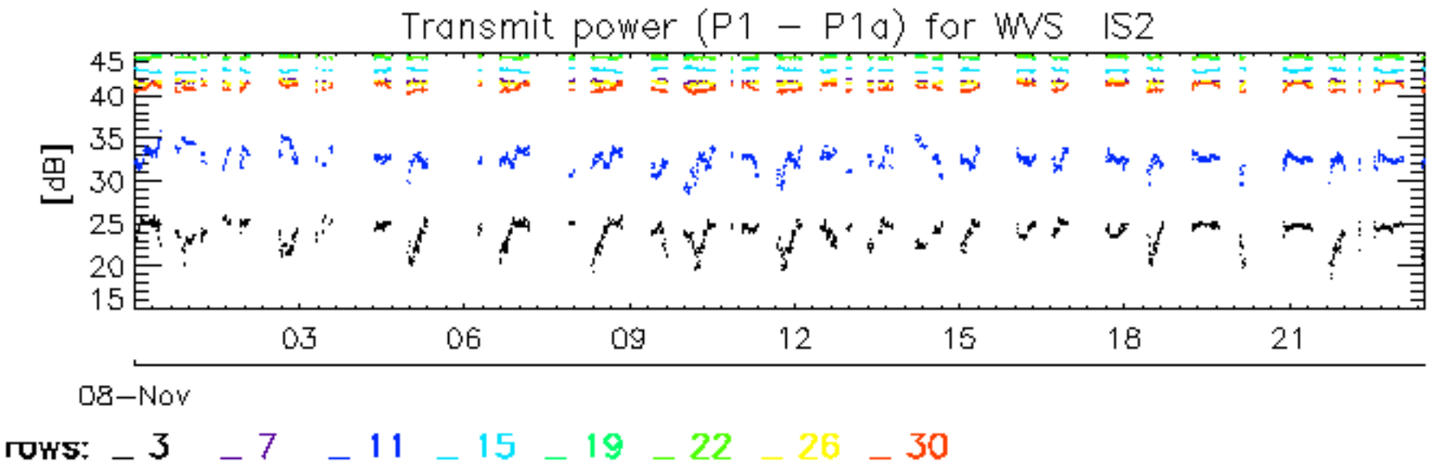

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-08 18:05:18 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-08 18:05:18 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
5
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 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
09–Nov
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
5
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
45
40
35
30
25
20
15
03
06
09
12
15
18
21
08–Nov
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.