PRELIMINARY REPORT OF 041123

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

last update on Tue Nov 23 10:54:05 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

Anomaly detected on module A1-6 that stopped transmitting in V pol.
The anomaly started on 17-NOV-2003 21:11:30 UTC.
Please see report 18-NOV-2003 for detailed analysis

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Polarisation	Start Time
V	20041122 054052
H	20041121 061229

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.

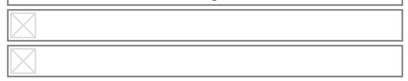
4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

4.1.2 - Evolution for GM1

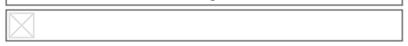
Evolution of cal pulses for GM1



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	-3.472554	0.006488	0.031575
7	P1	-3.322040	0.022612	0.208088
11	P1	-4.603580	0.016464	-0.004099
15	P1	-5.662233	0.028603	0.034879
19	P1	-3.601961	0.005277	-0.050029

22	P1	-4.582537	0.015181	-0.003396
26	P1	-4.870260	0.061625	-0.040414
30	P1	-7.075533	0.014543	-0.020616
3	P1	-16.020369	0.105659	0.102243
7	P1	-14.255676	0.334024	-1.108447
11	P1	-20.653843	0.203619	-0.212725
15	P1	-11.669836	0.035421	0.074632
19	P1	-14.064900	0.027643	-0.074218
22	P1	-16.210464	0.405134	0.096027
26	P1	-17.701502	0.723715	0.010502
30	P1	-17.980019	0.274121	0.126724

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.375719	0.088905	0.005550
7	P2	-22.615437	0.136714	-0.017692
11	P2	-15.061608	0.127459	0.086514
15	P2	-7.152101	0.109042	-0.029972
19	P2	-9.713387	0.130362	-0.001031
22	P2	-17.244509	0.103954	0.064715
26	P2	-16.509340	0.111372	-0.009747
30	P2	-19.050123	0.084317	0.024751

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.203440	0.006370	-0.013883
7	P3	-8.203440	0.006370	-0.013881
11	P3	-8.203443	0.006369	-0.013872
15	P3	-8.203443	0.006369	-0.013873
19	P3	-8.203439	0.006370	-0.013882
22	P3	-8.203441	0.006370	-0.013876
26	P3	-8.203440	0.006370	-0.013877
30	P3	-8.203424	0.006371	-0.013405

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	-2.804434	0.010878	-0.003830
7	P1	-2.952600	0.022686	-0.010104
11	P1	-3.902141	0.022401	-0.013961
15	P1	-3.489239	0.027230	0.008703
19	P1	-3.589924	0.012055	-0.000874
22	P1	-5.615469	0.067202	0.052618
26	P1	-6.423241	0.082549	-0.086468
30	P1	-6.265707	0.040356	-0.034869
3	P1	-10.599623	0.052333	0.014436
7	P1	-10.077270	0.134078	-0.075807
11	P1	-12.366570	0.115303	-0.078319
15	P1	-11.713898	0.063463	-0.070989
19	P1	-15.617836	0.053041	-0.014394
22	P1	-23.949772	1.995293	-0.277022
26	P1	-15.109573	0.463786	-0.080043
30	P1	-20.252075	0.988840	0.075068

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.059465	0.039718	0.002717
7	P2	-22.677145	0.031435	0.000551
11	P2	-10.852352	0.036029	0.065953
15	P2	-5.049184	0.028137	-0.039371
19	P2	-6.955426	0.035071	-0.055196
22	P2	-7.362620	0.029149	0.060518
26	P2	-23.940437	0.022855	-0.052329
30	P2	-22.091919	0.018795	0.010767

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.043941	0.003235	-0.011109
7	P3	-8.043902	0.003242	-0.011455
11	P3	-8.043973	0.003242	-0.011487
15	P3	-8.043849	0.003242	-0.011378
19	P3	-8.043926	0.003242	-0.011639
22	P3	-8.043971	0.003237	-0.011521
26	P3	-8.043960	0.003225	-0.011401
30	P3	-8.043921	0.003241	-0.011164

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	0.000458656
	stdev	2.26784e-07
MEAN Q	mean	0.000528412
	stdev	2.42415e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125928
	stdev	0.000964670
STDEV Q	mean	0.126149
	stdev	0.000973158

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

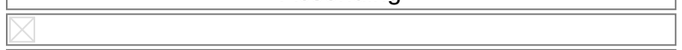
Descending

6.3 - Doppler evolution versus ANX for WVS

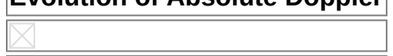
Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

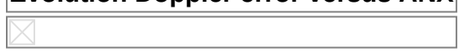
Acsending

Descending

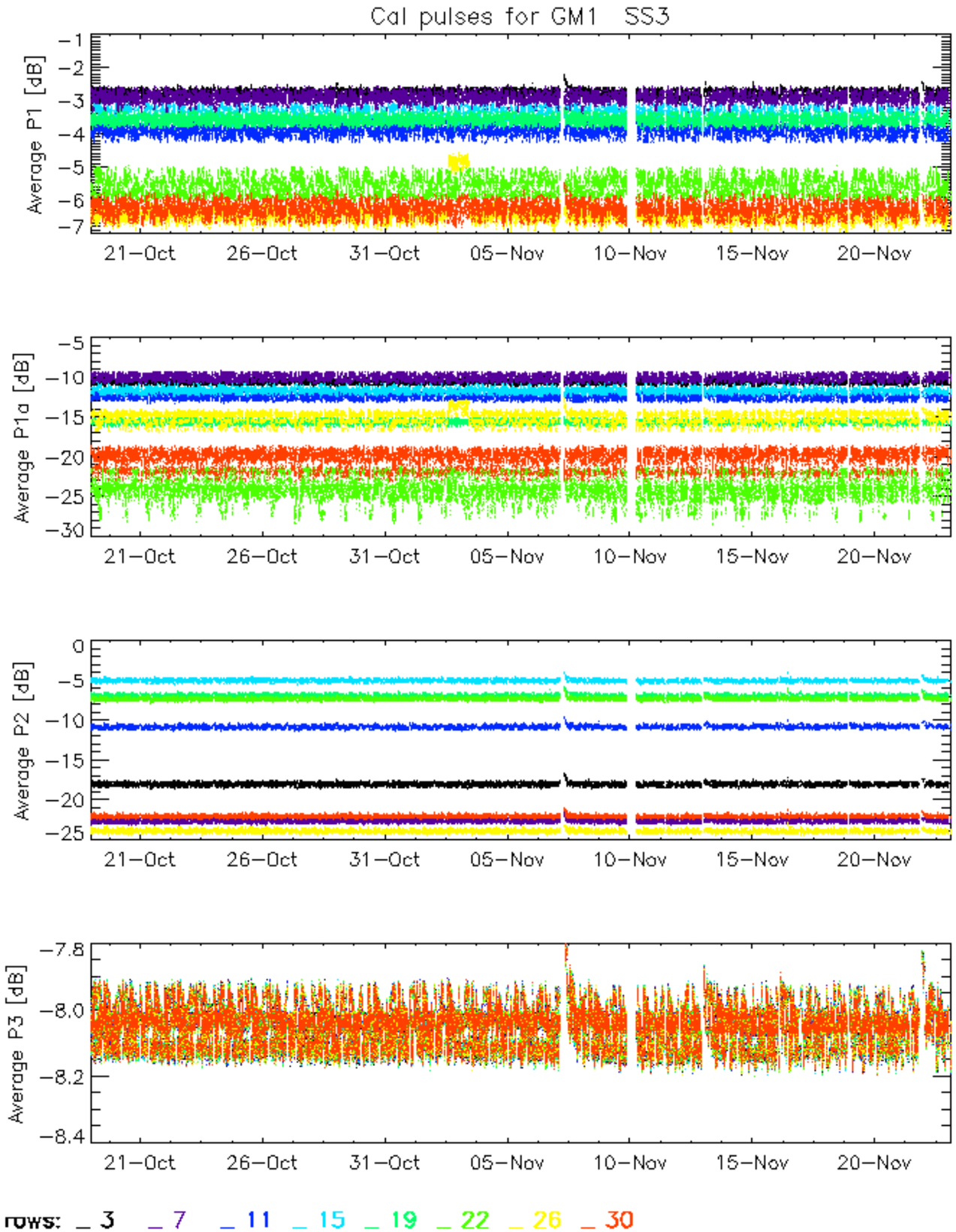
6.5 - Absolute Doppler for GM1

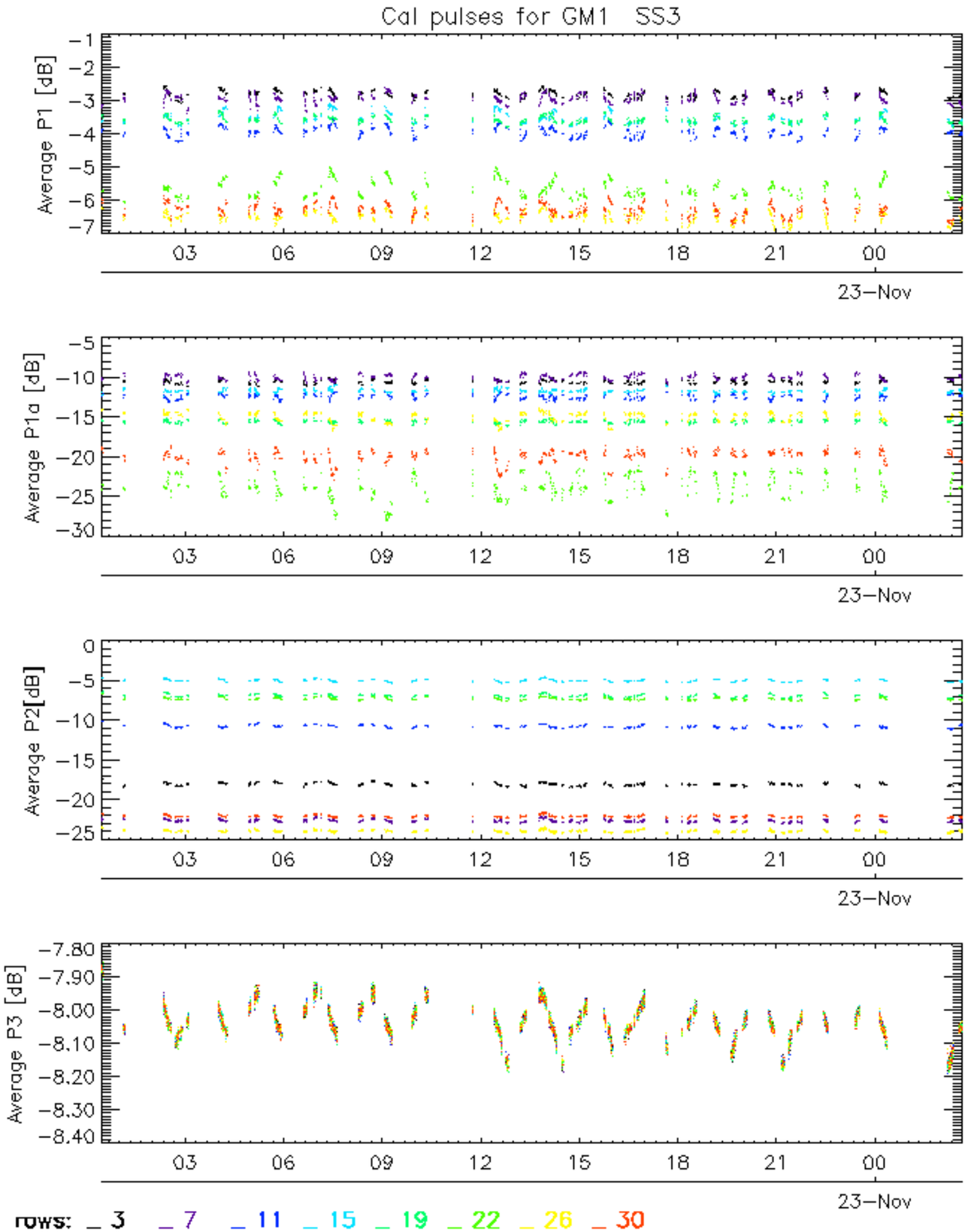
Evolution of Absolute Doppler

Acsending

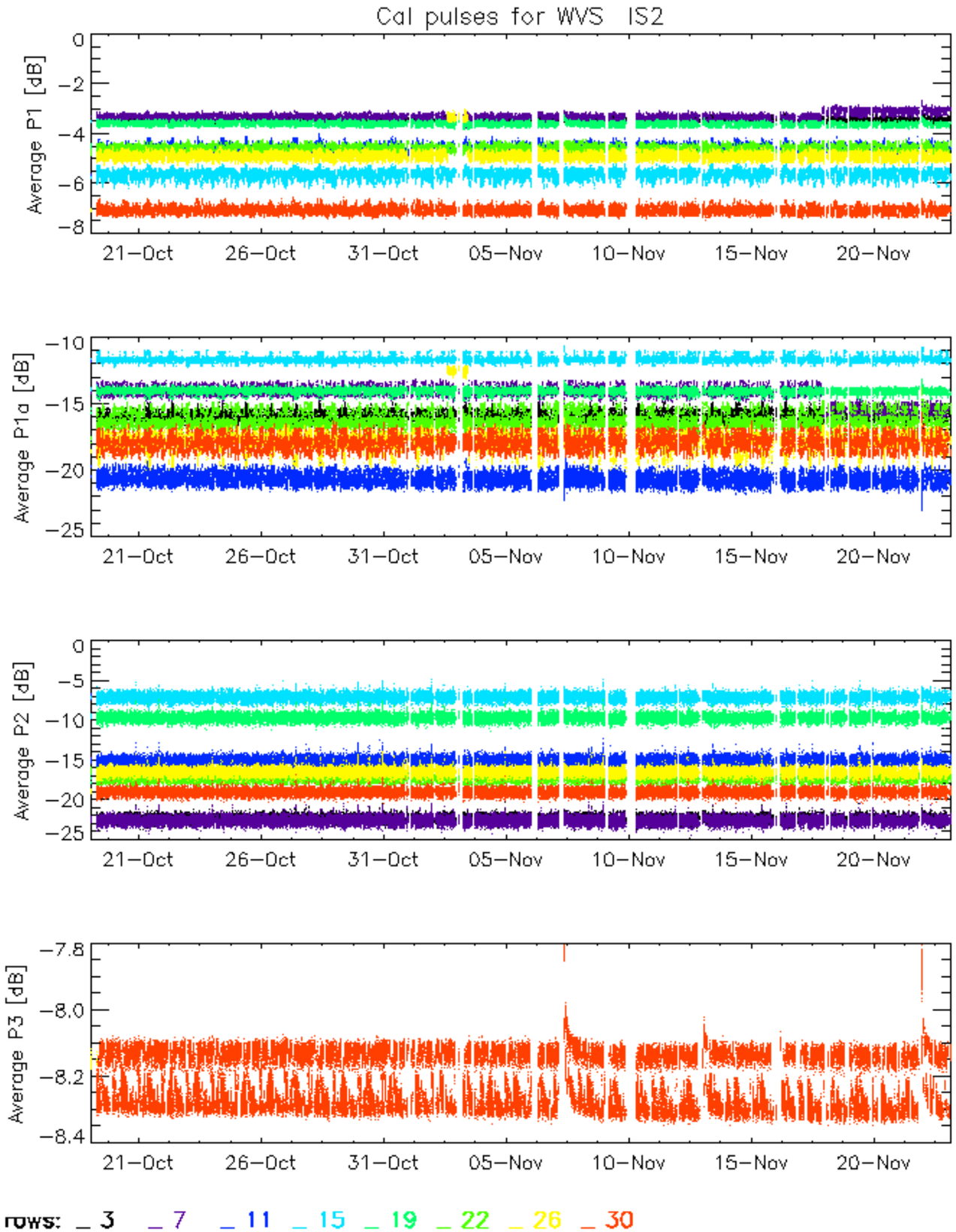
Descending

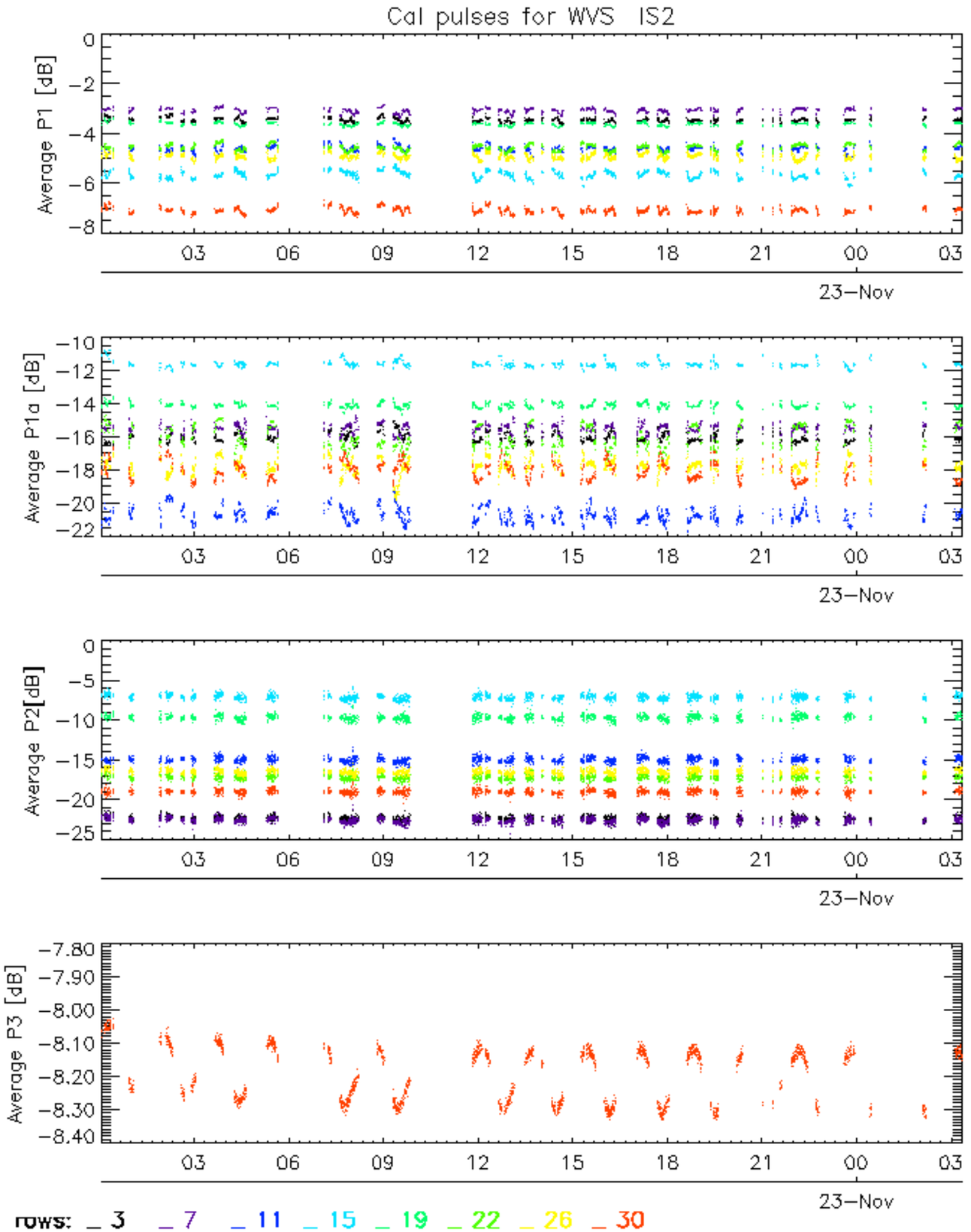
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX


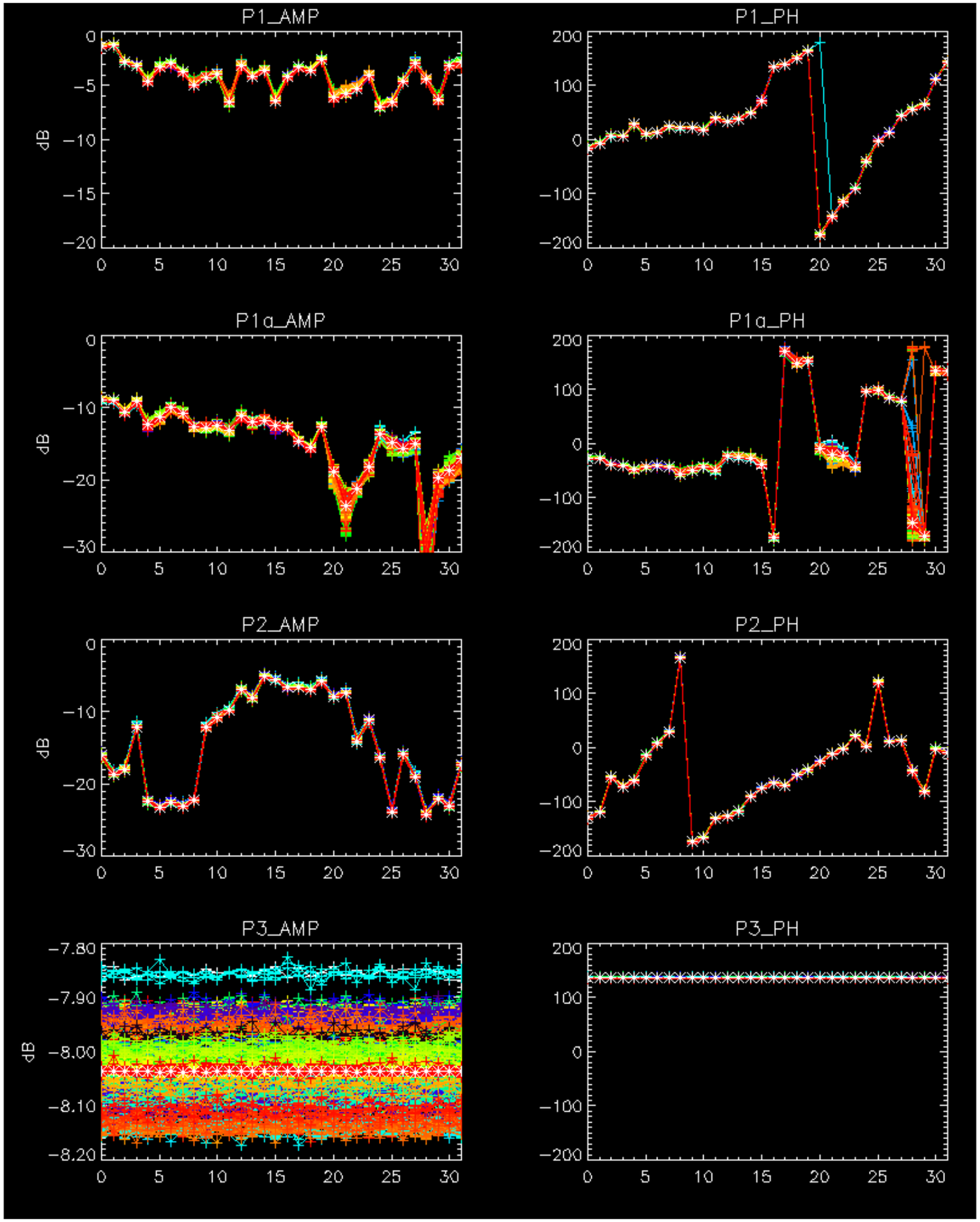

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

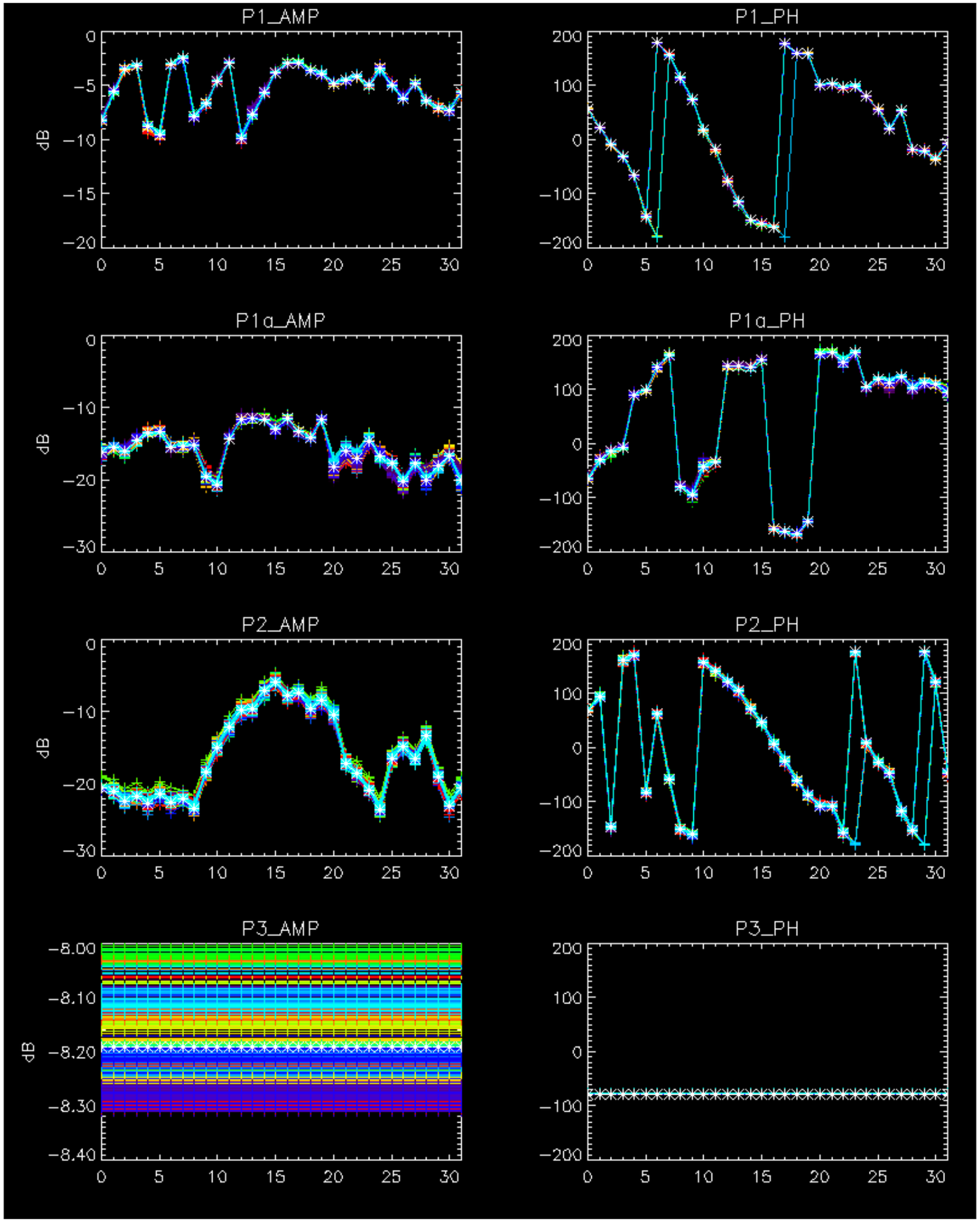

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
23−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
23−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
23−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
Average P1a [dB]
−10
−15
−20
−25
Average P2 [dB]
−5
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]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
00
03
23−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2[dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: 3 7 11 15 19 22 26 30

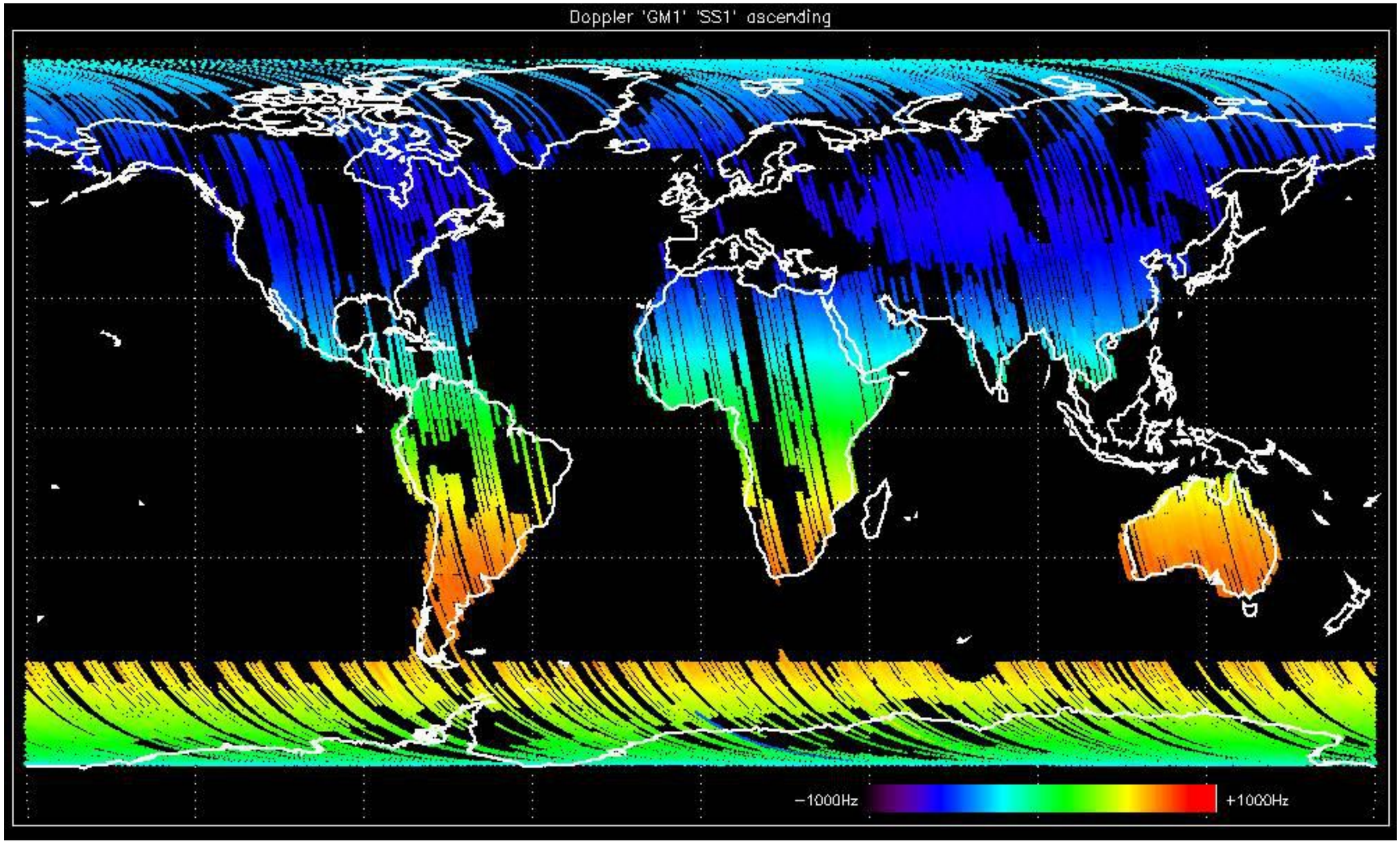
No anomalies observed.

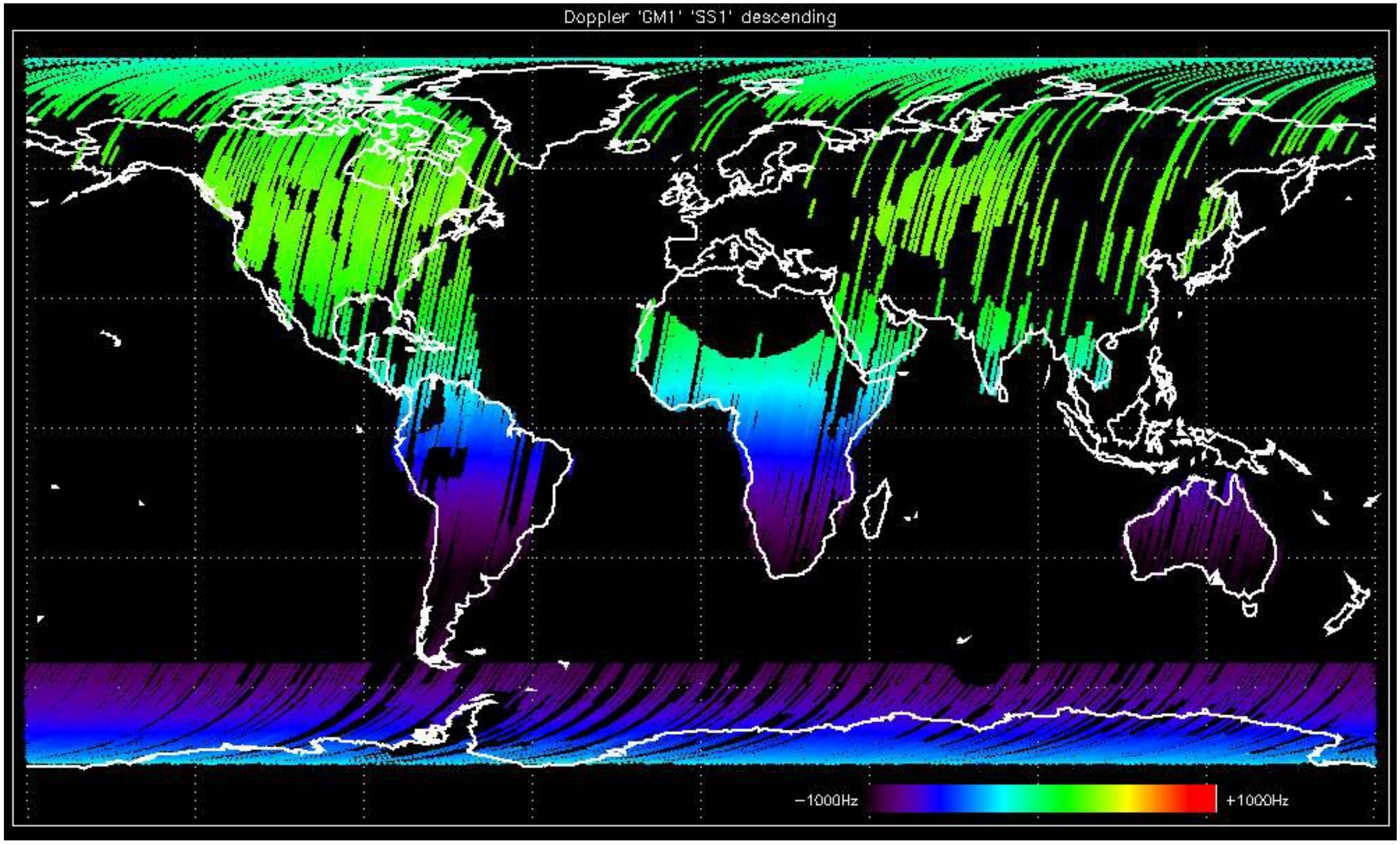

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.90
−8.00
−8.10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

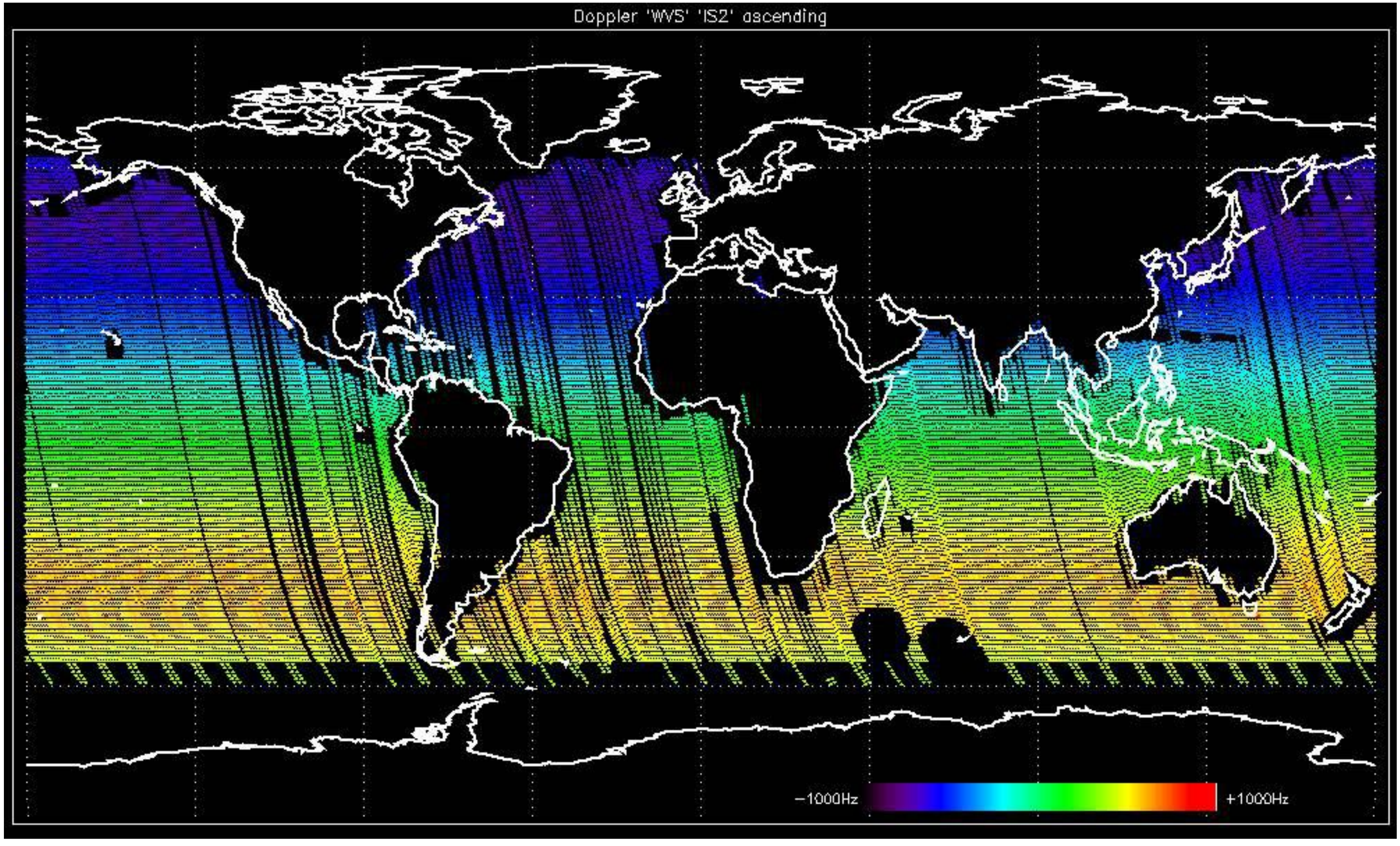

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.10
−8.20
−8.30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

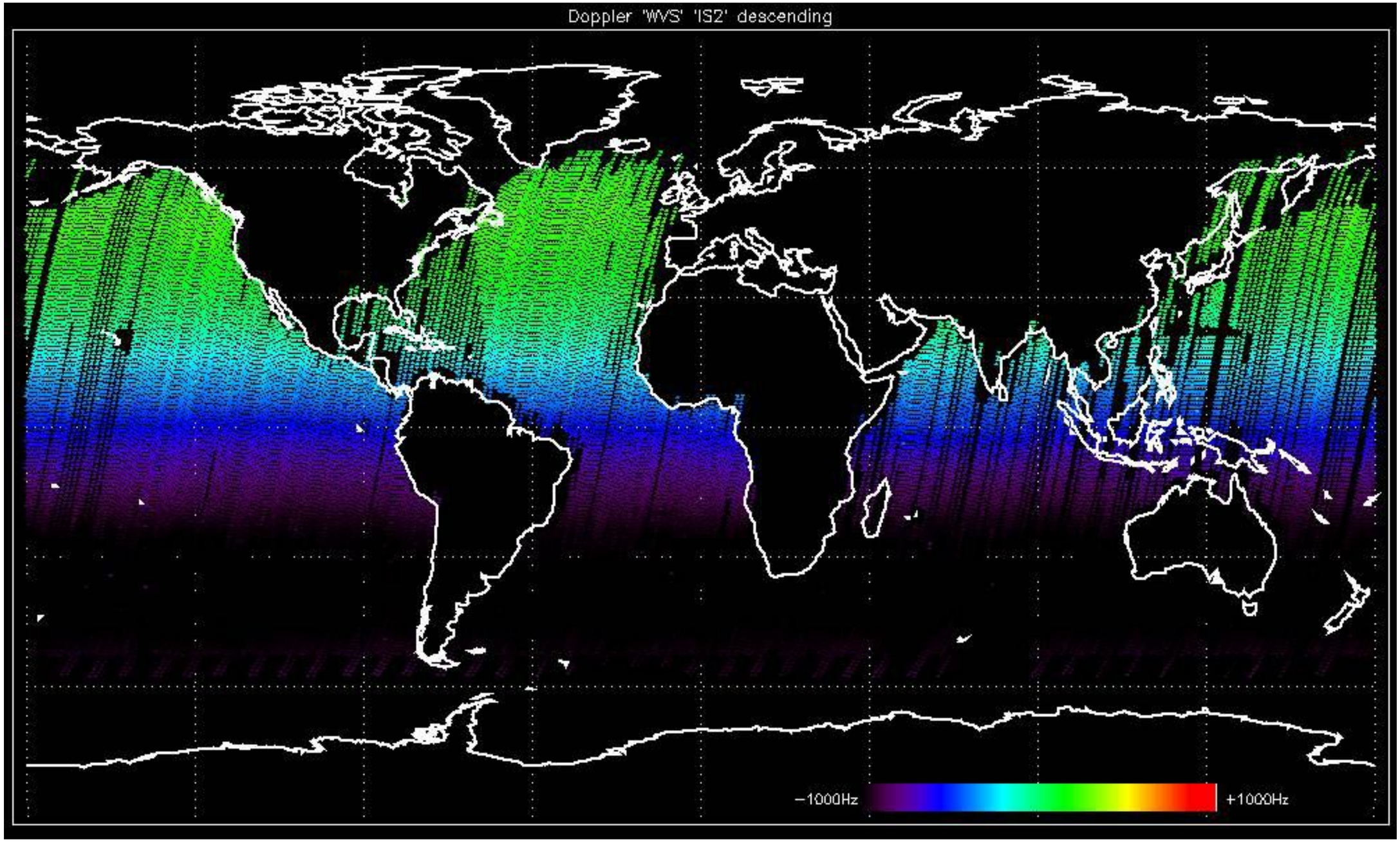
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

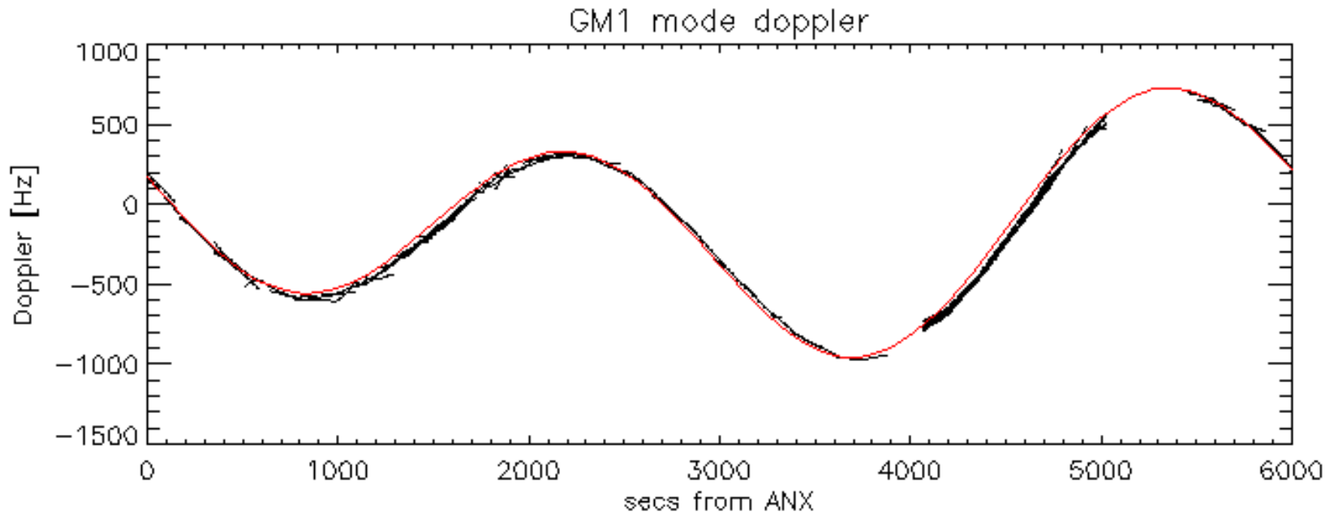
Preliminary report.The data is not yet controled

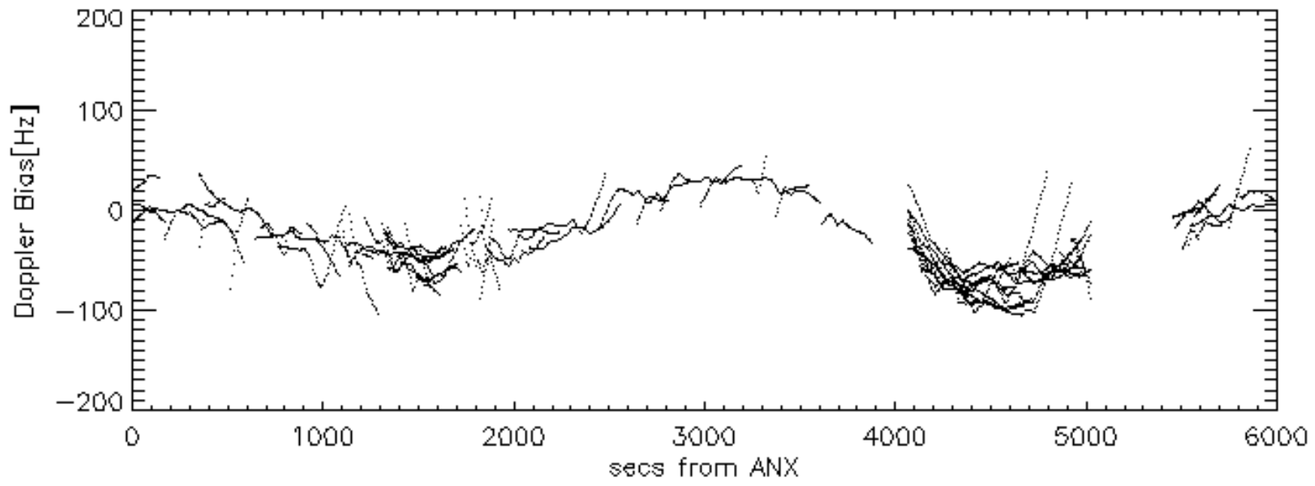

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

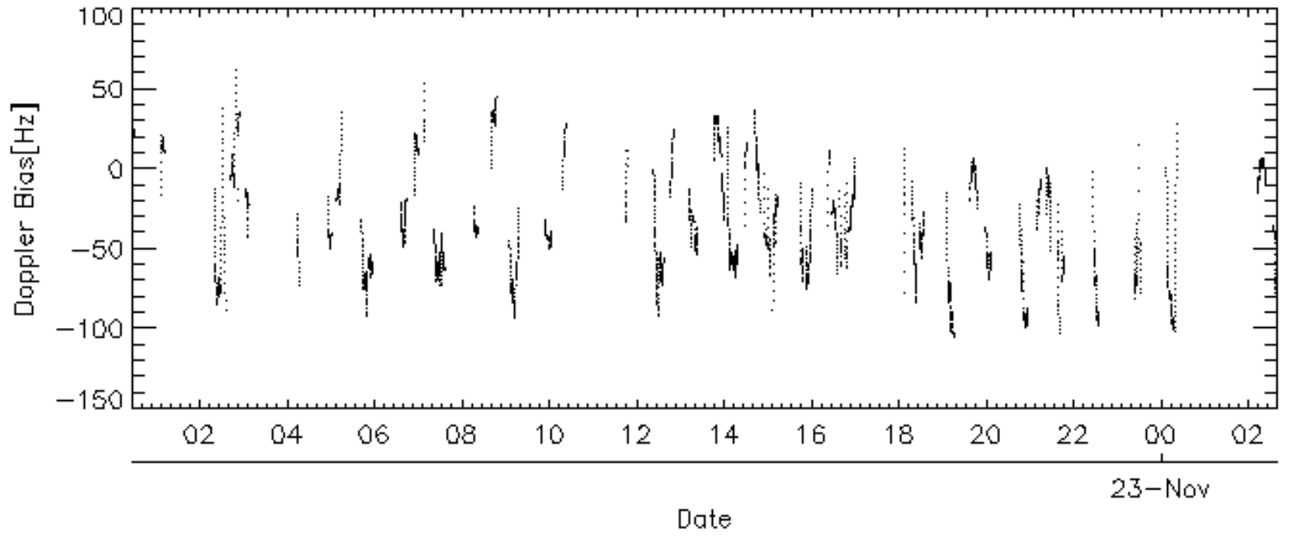

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

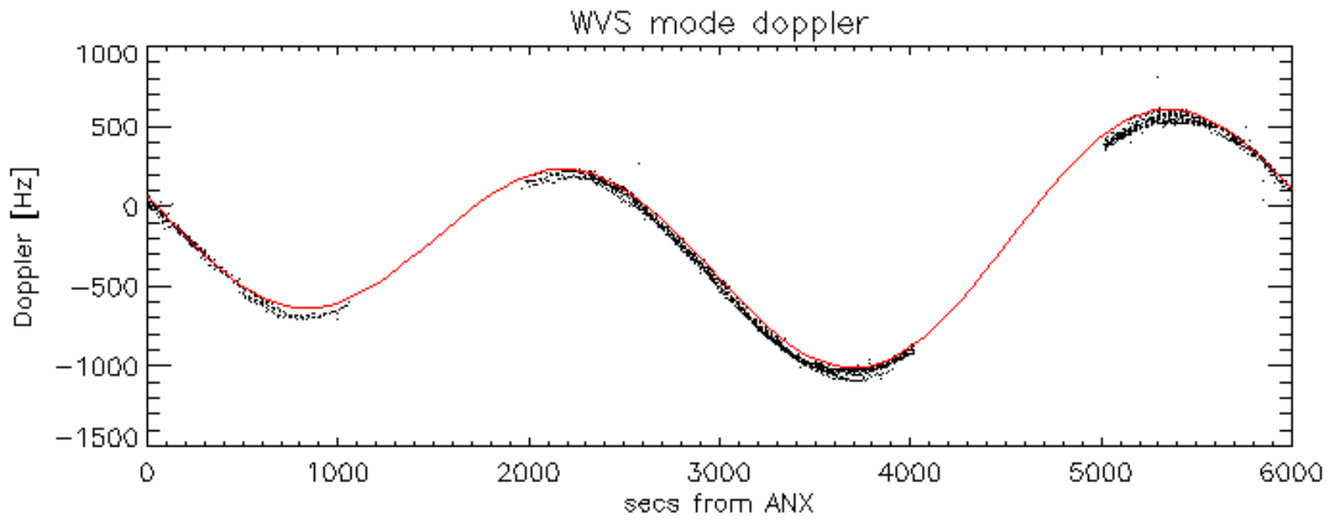

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

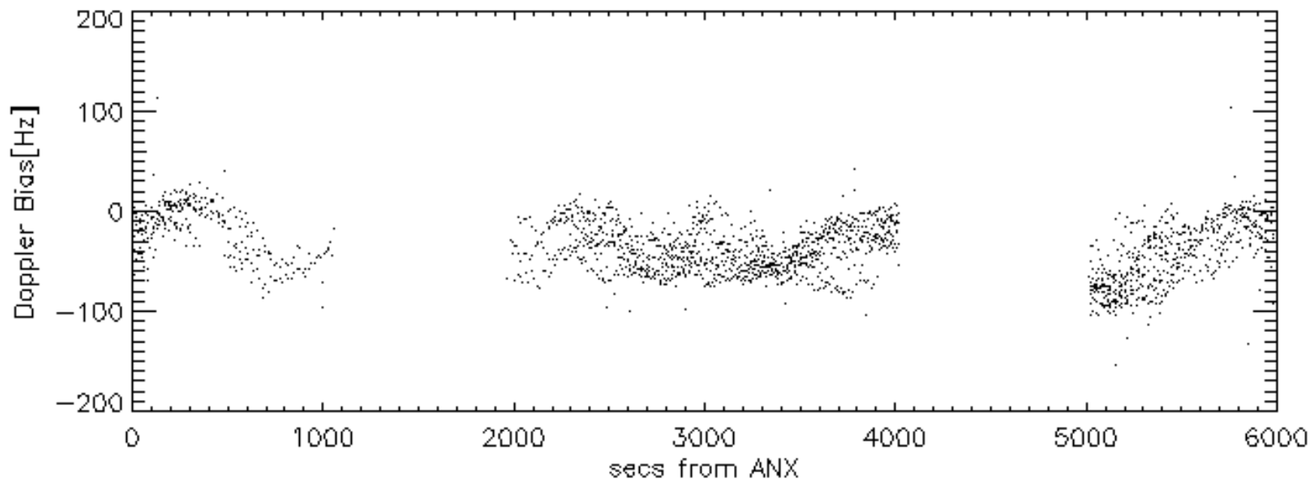

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

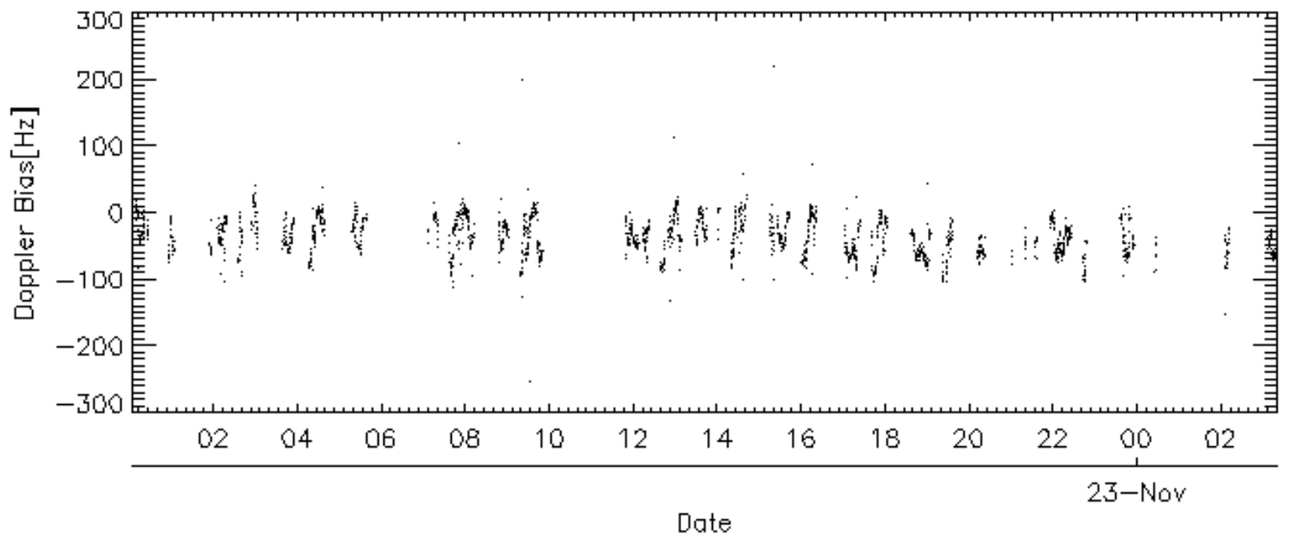

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

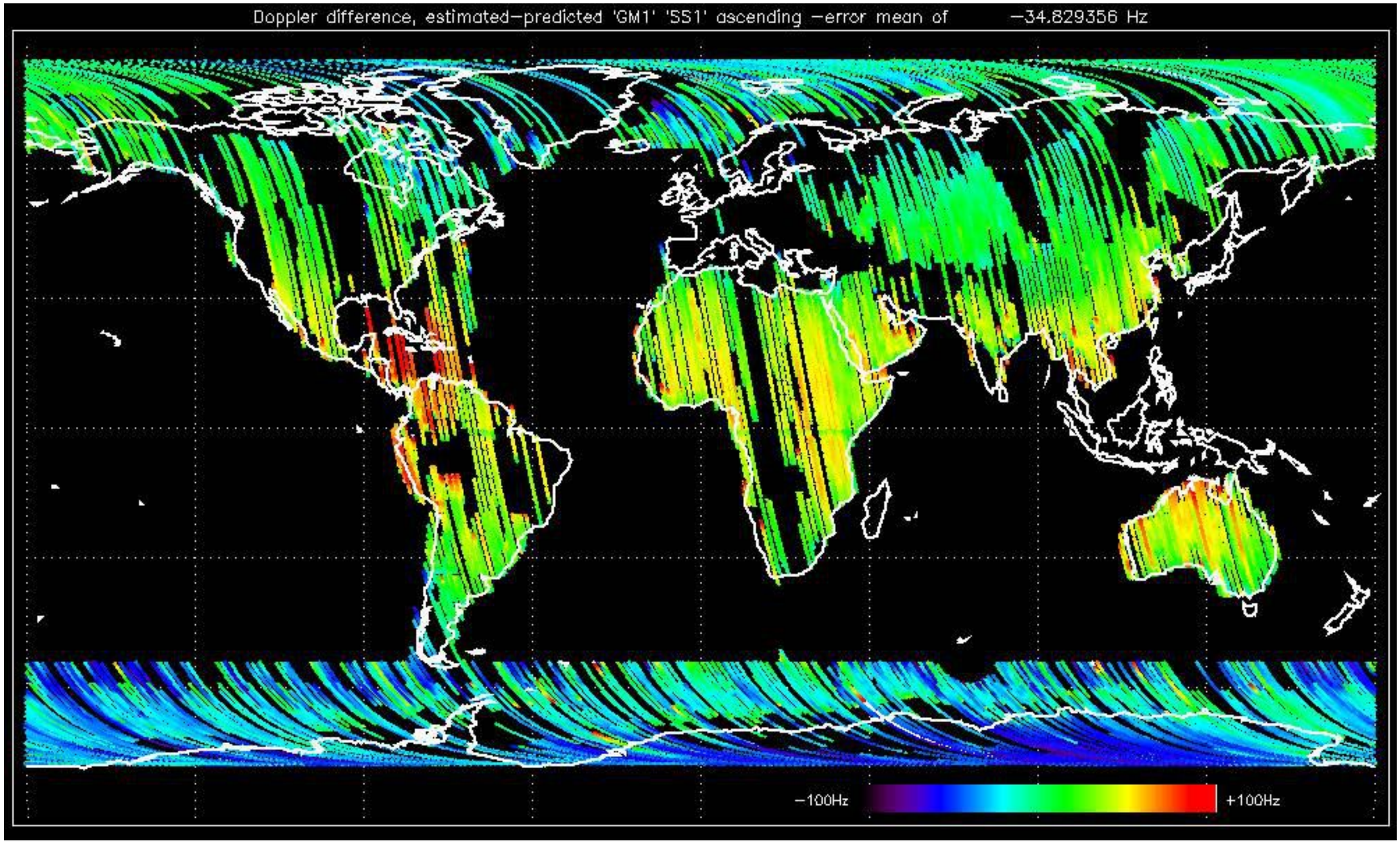

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

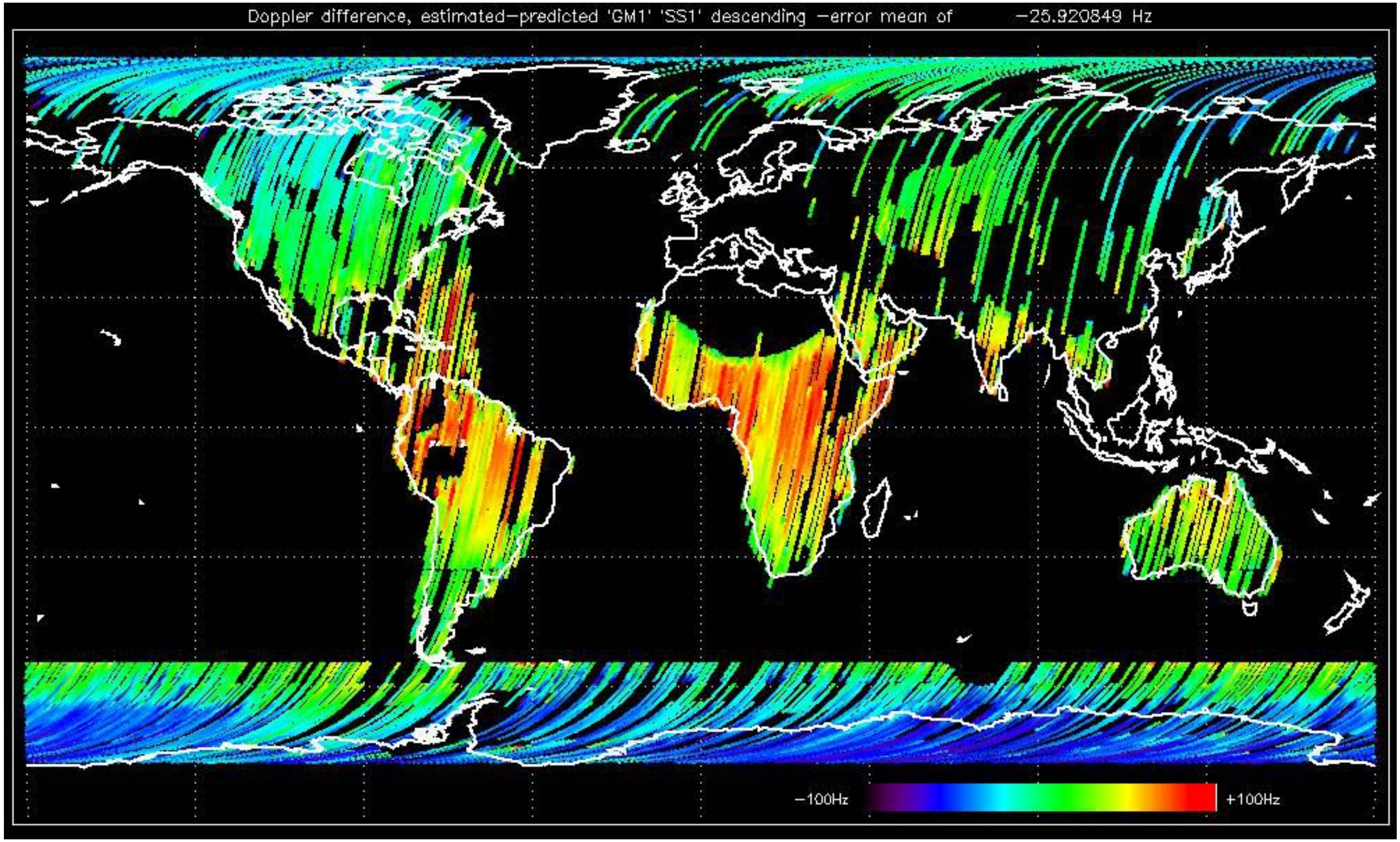

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
23−Nov
Date

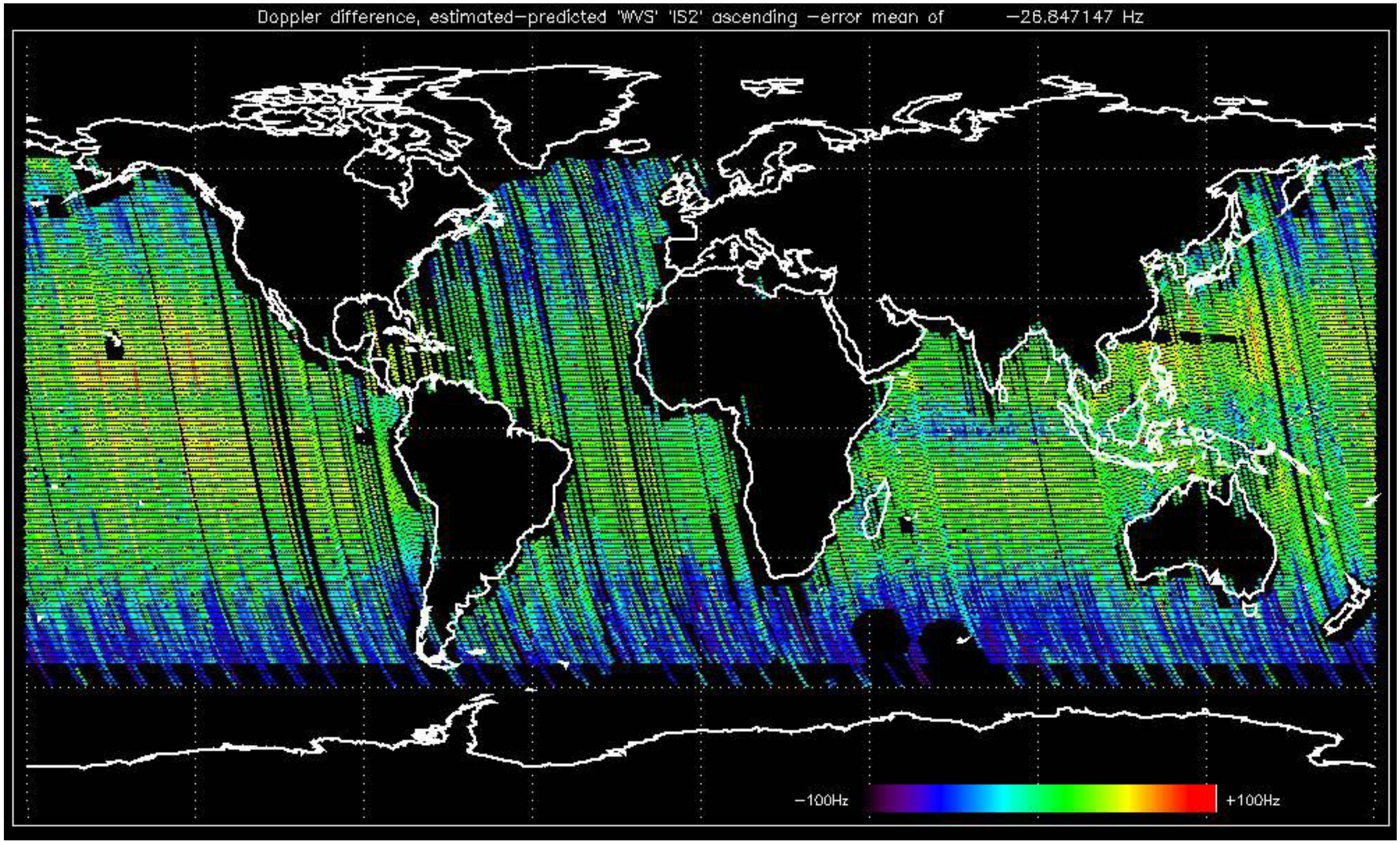

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

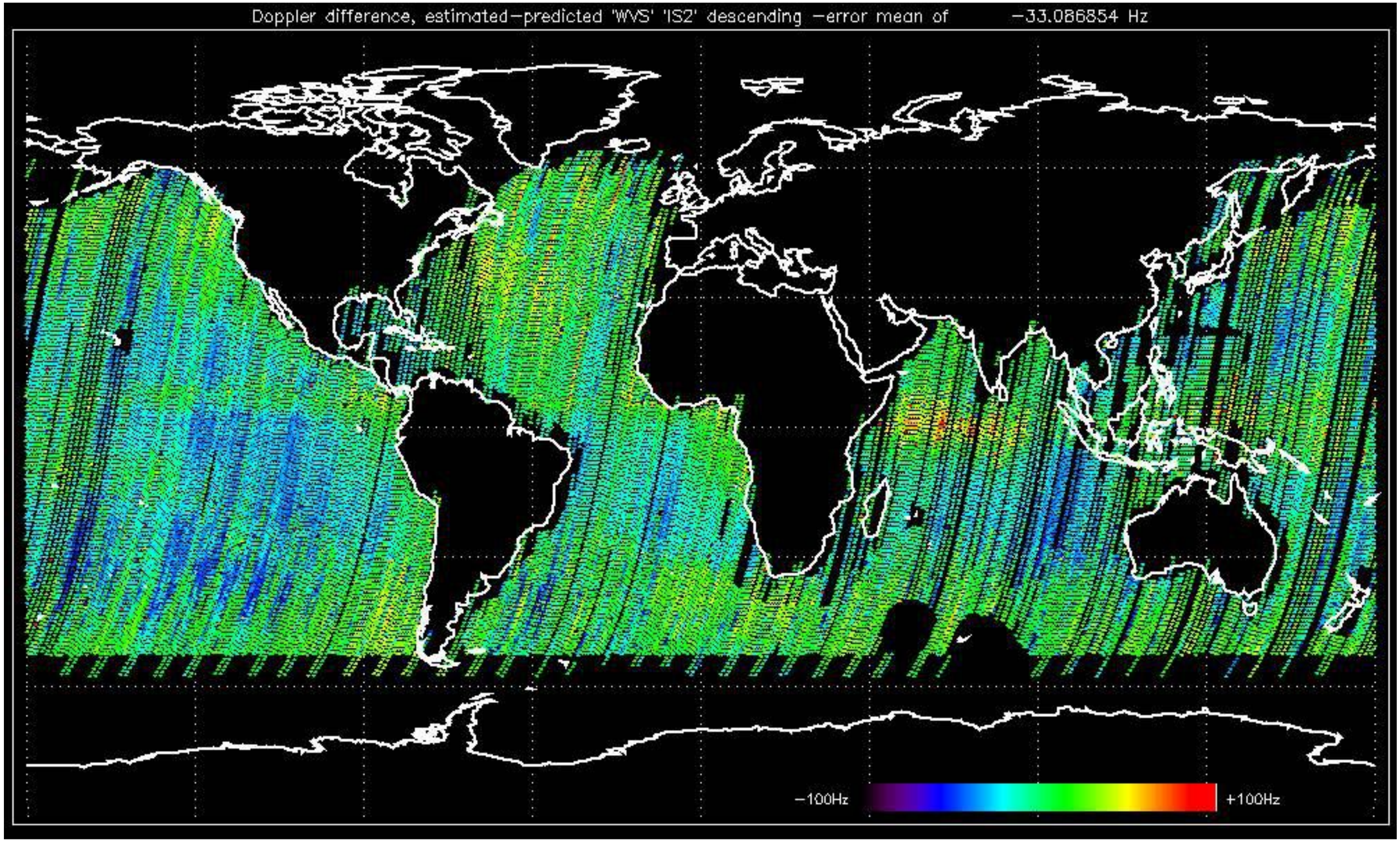

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −34.829356 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −25.920849 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.847147 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −33.086854 Hz
−100Hz
+100Hz

Anomaly detected on module A1-6 that stopped transmitting in V pol.
The anomaly started on 17-NOV-2003 21:11:30 UTC.
Please see report 18-NOV-2003 for detailed analysis

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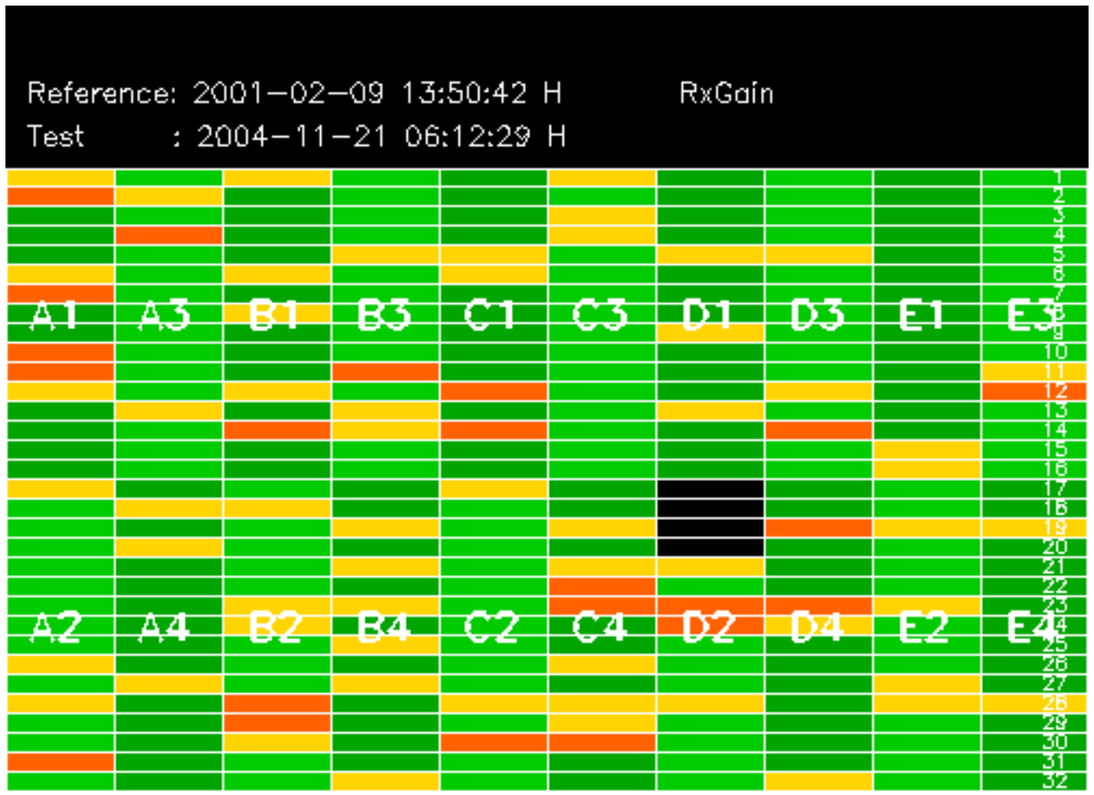
No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-21 06:12:29 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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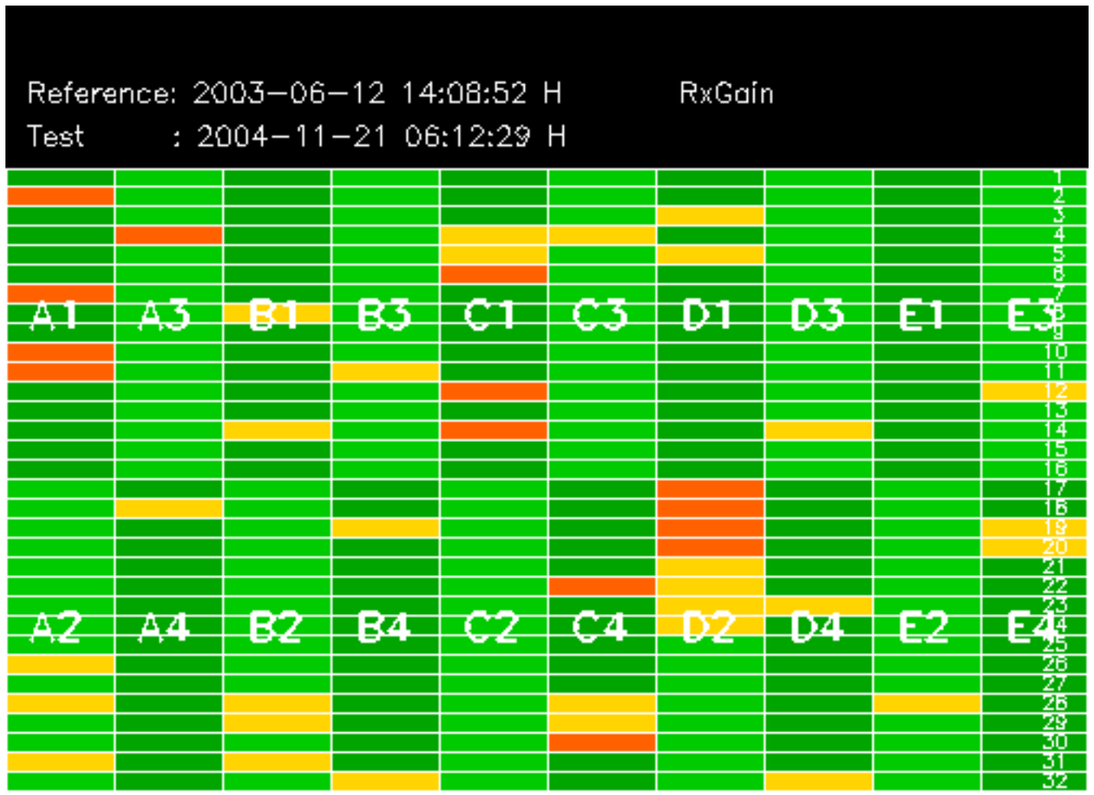
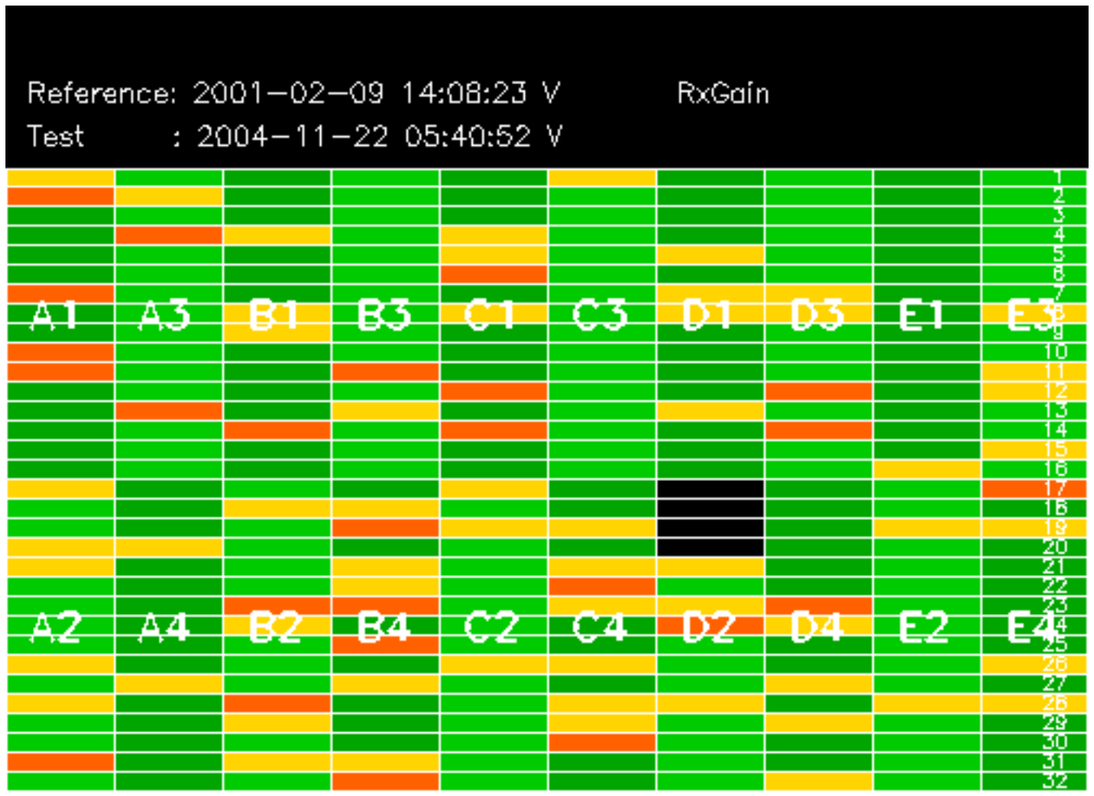

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-21 06:12:29 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-11-22 05:40:52 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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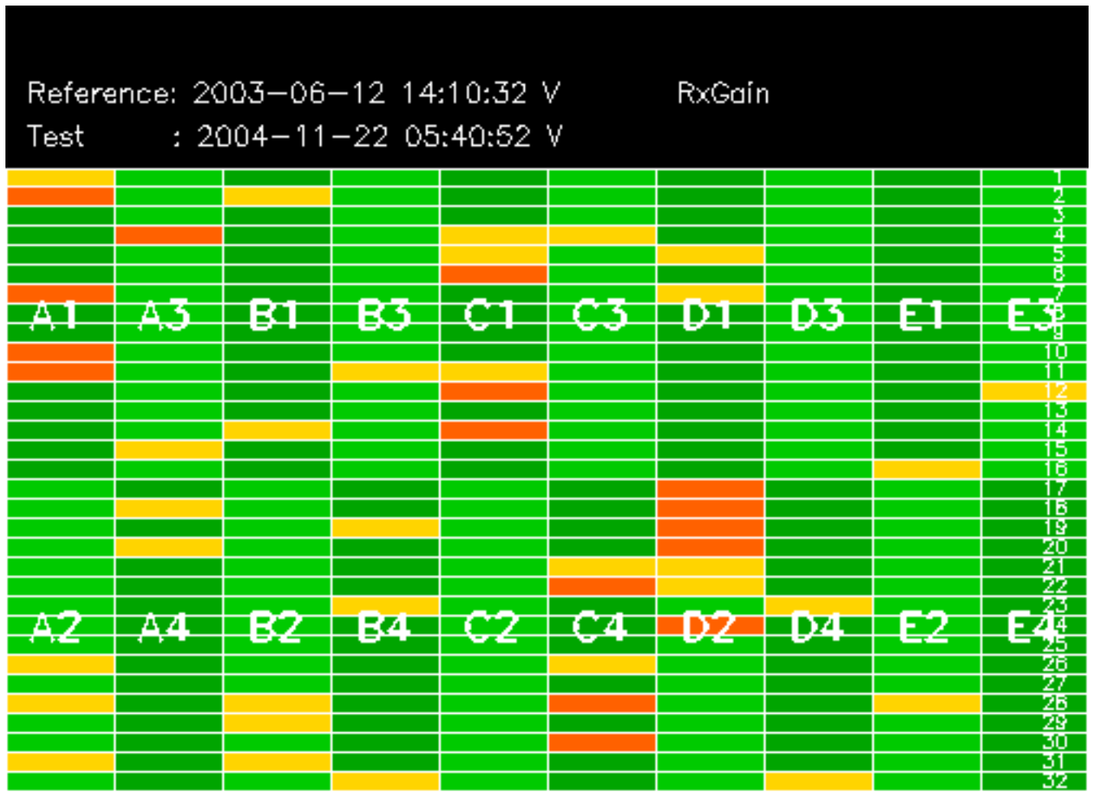
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-22 05:40:52 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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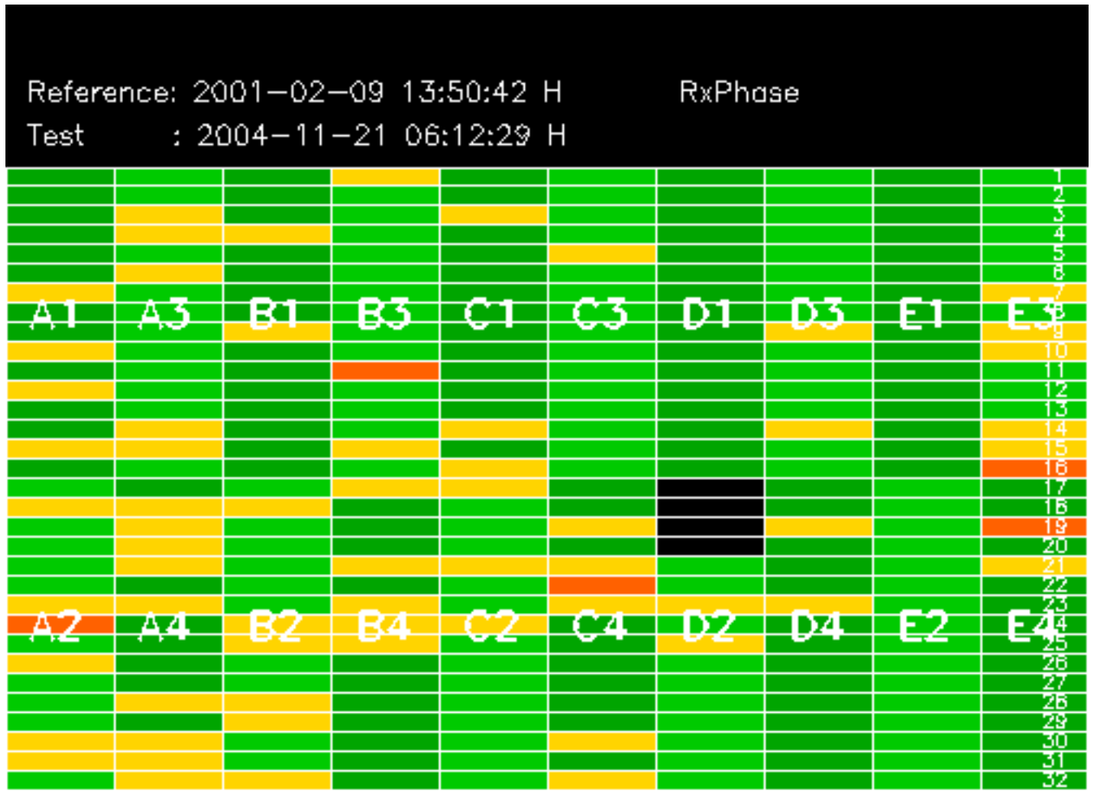
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-11-21 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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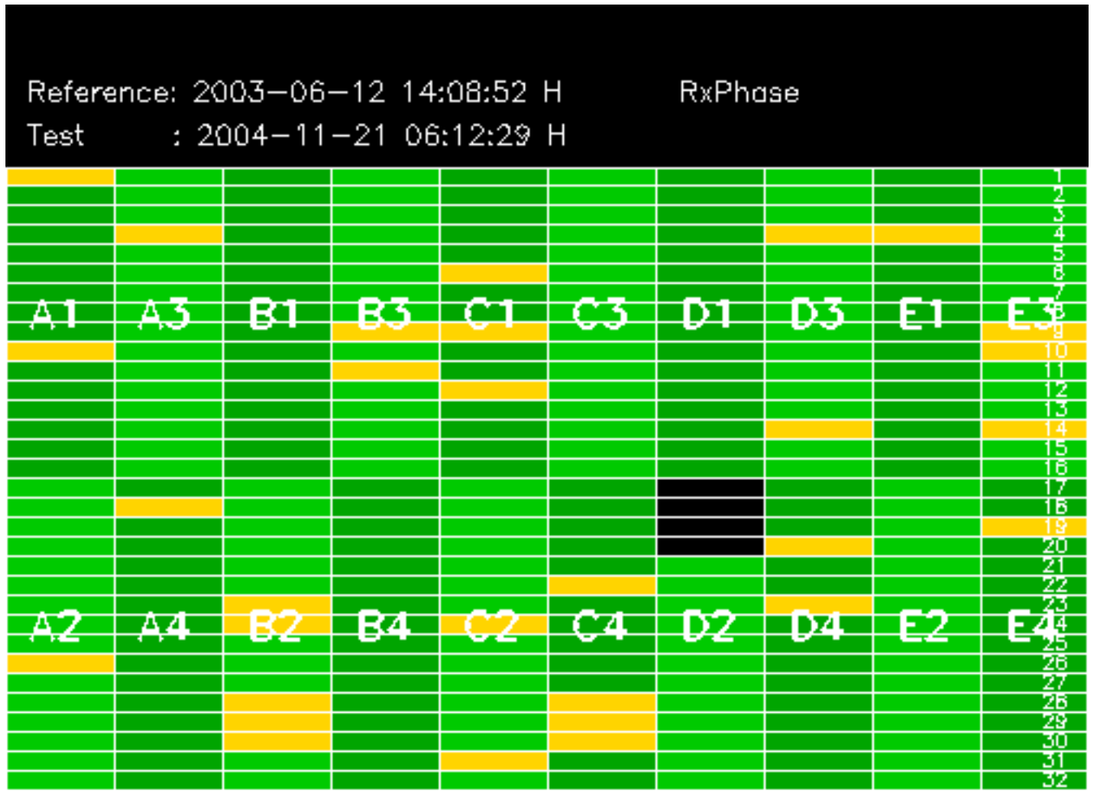
Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-11-21 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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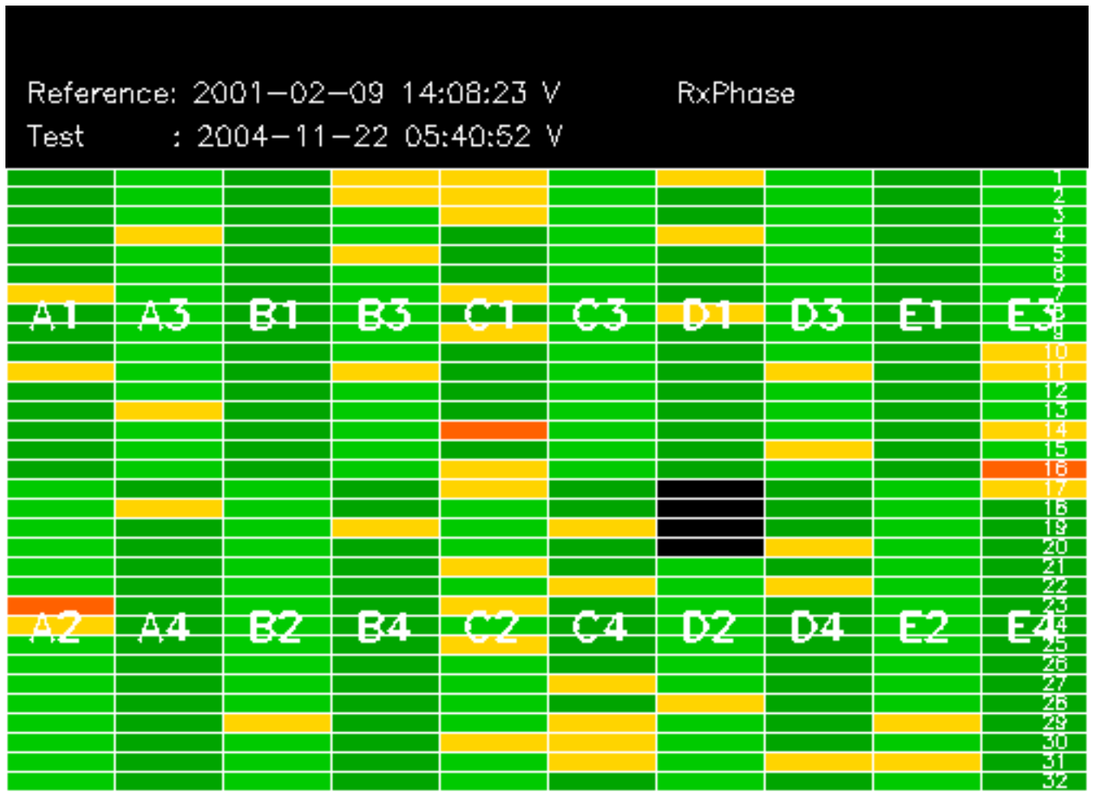
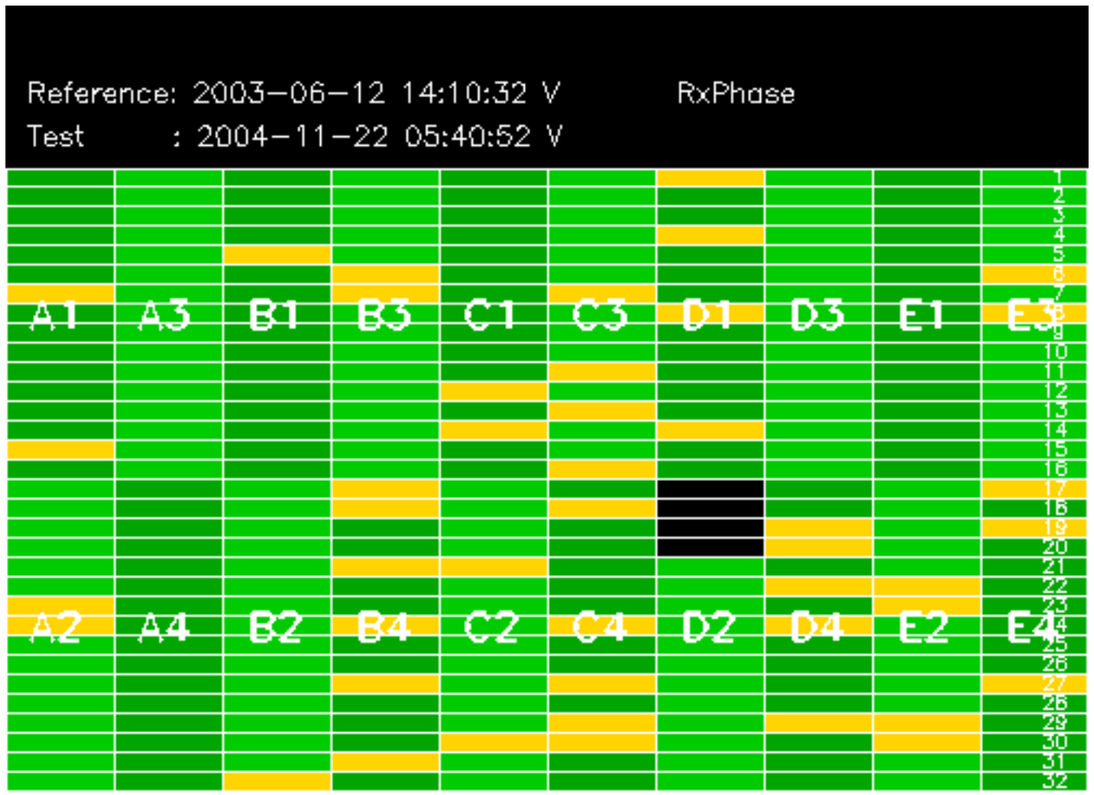

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-22 05:40:52 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-22 05:40:52 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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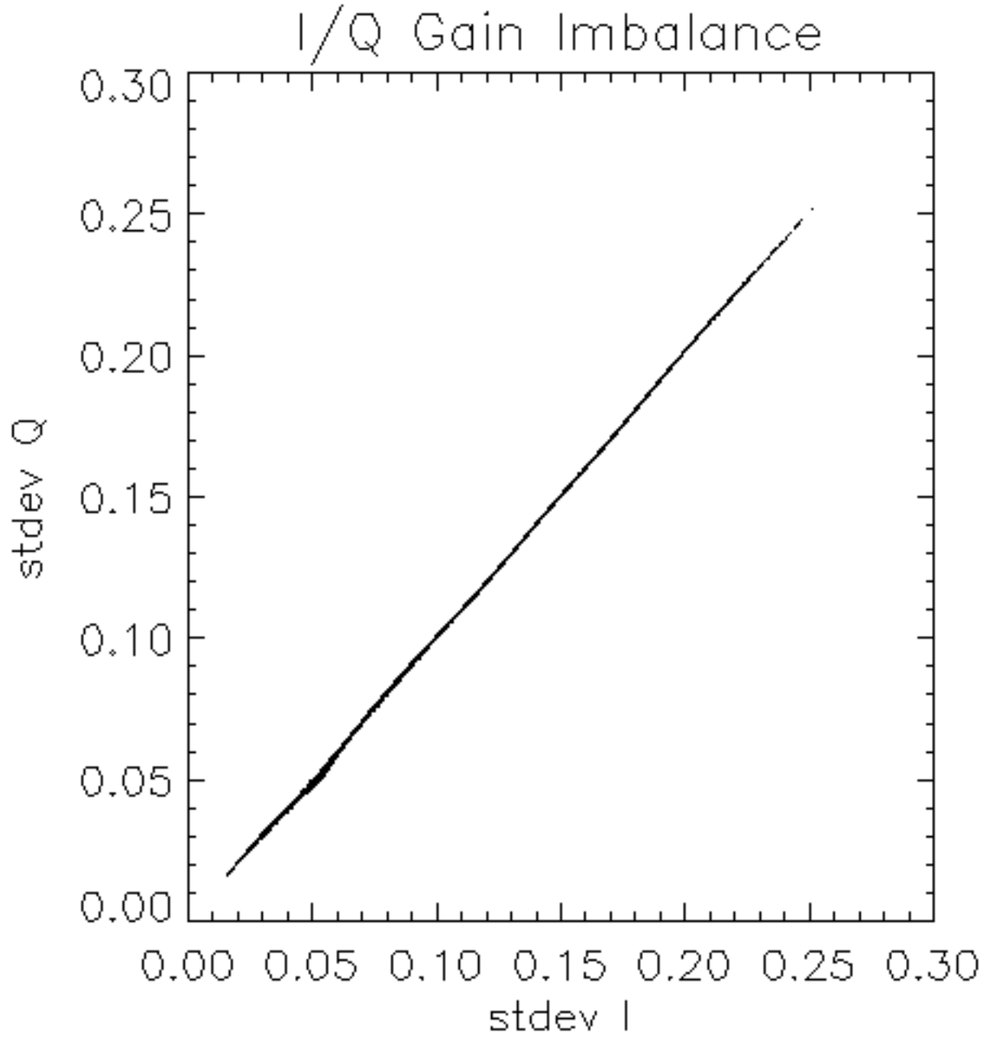
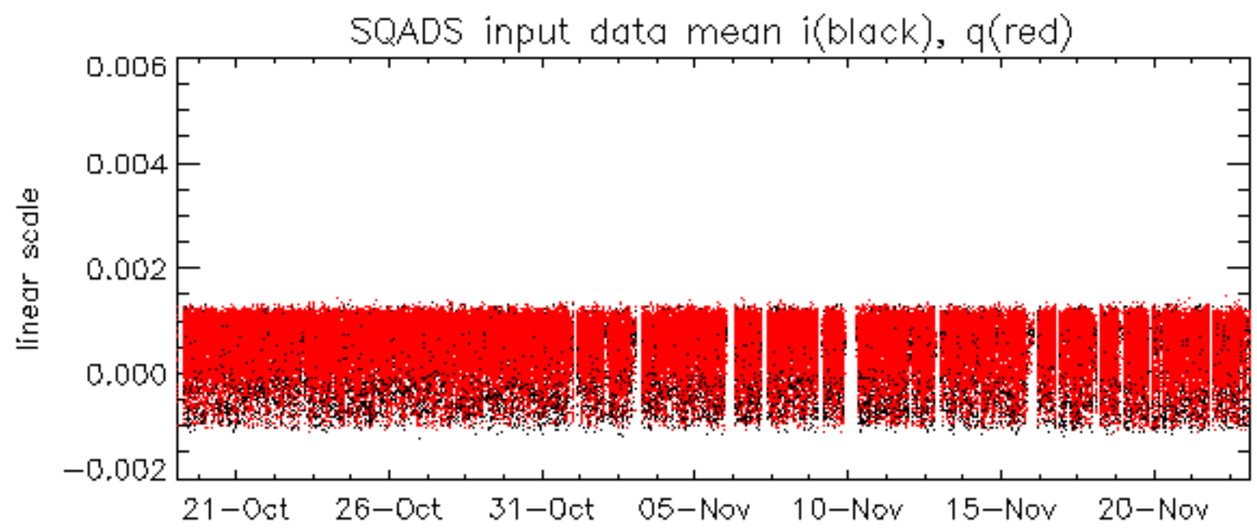
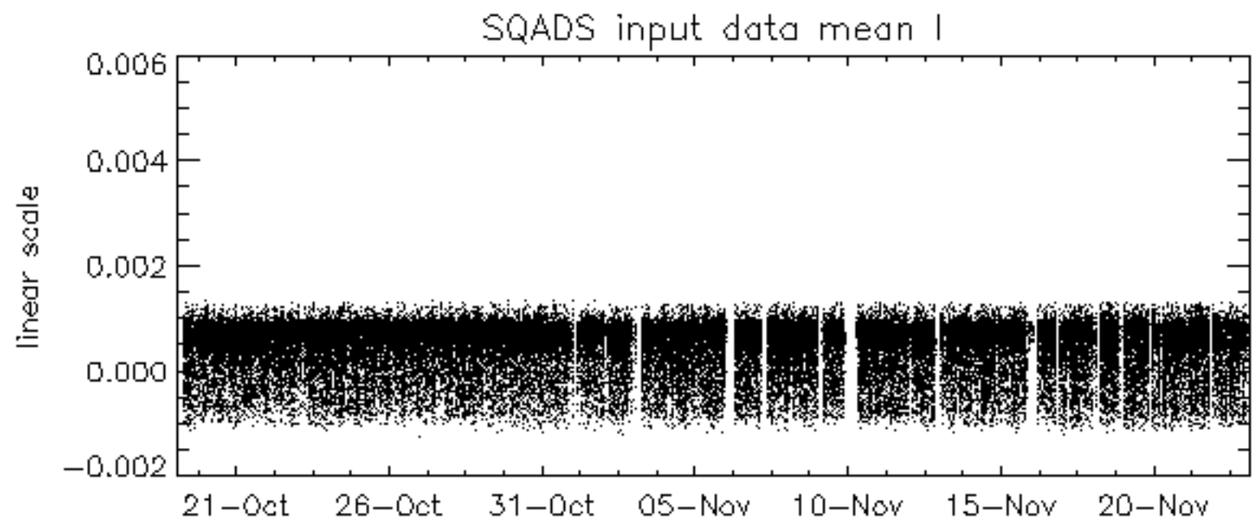
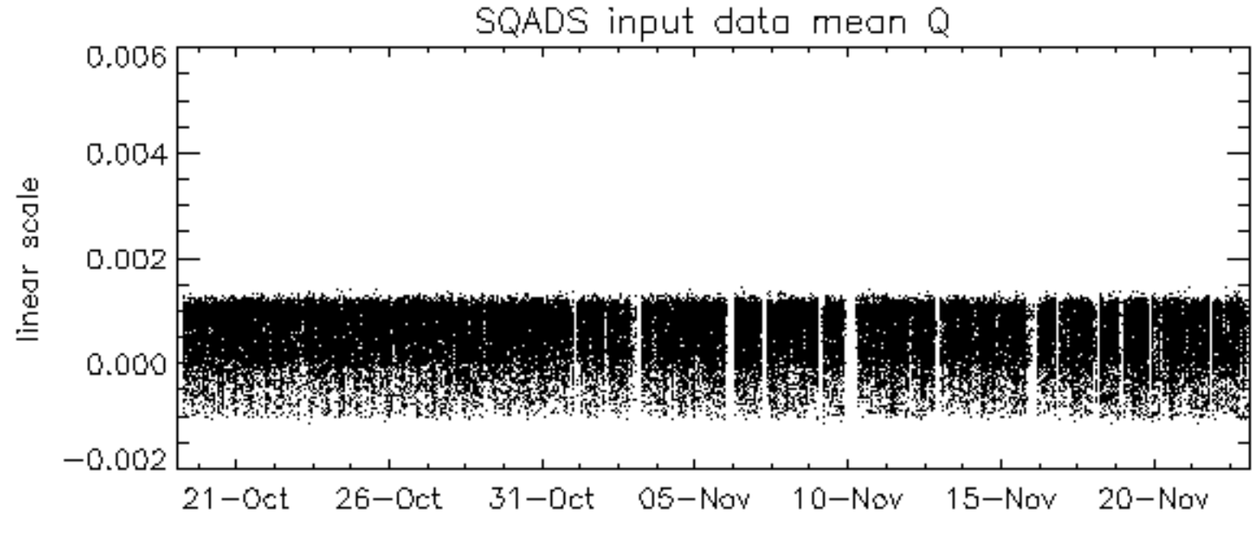
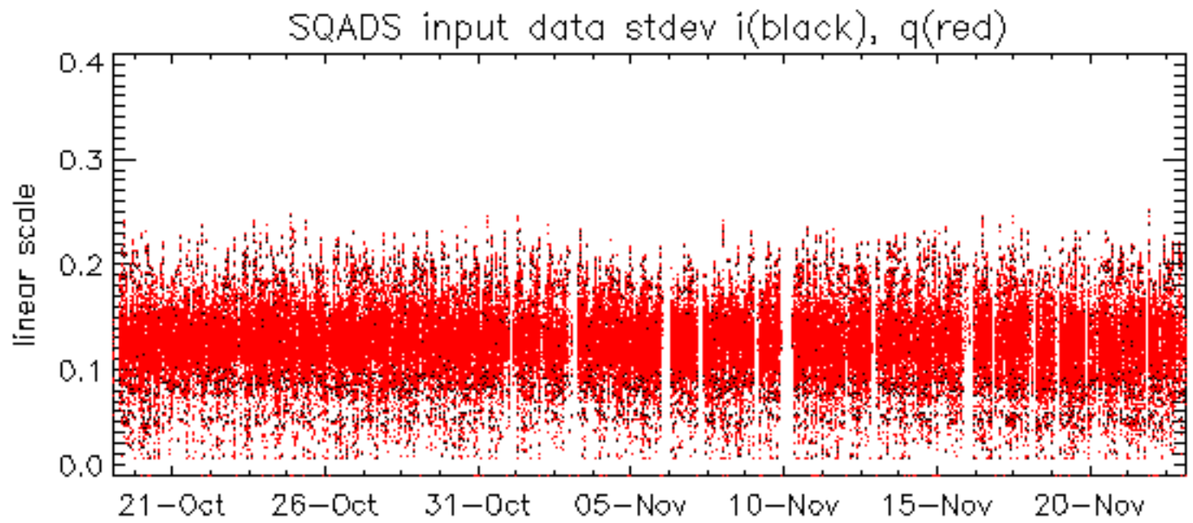
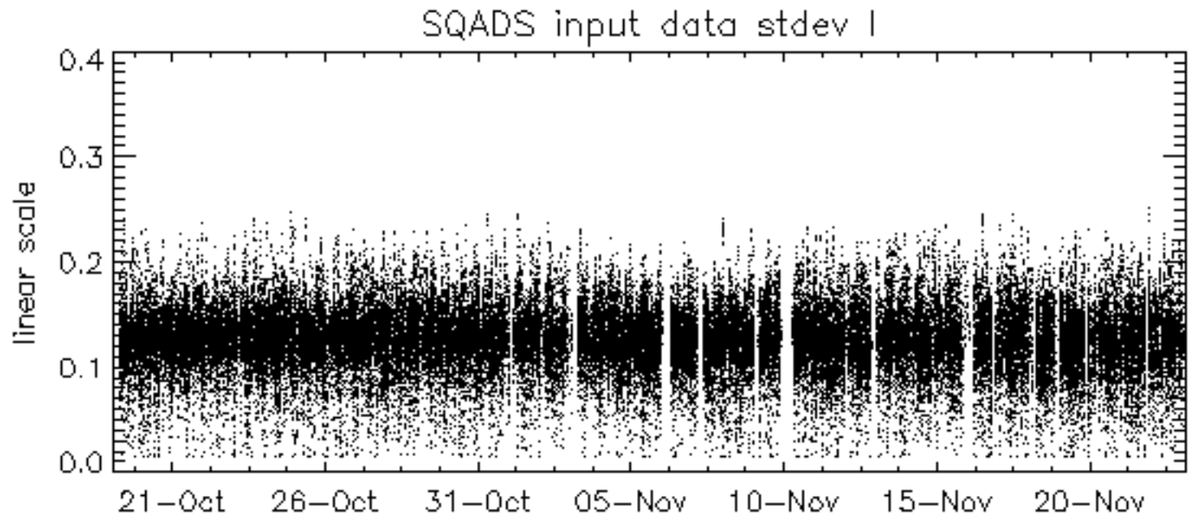

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

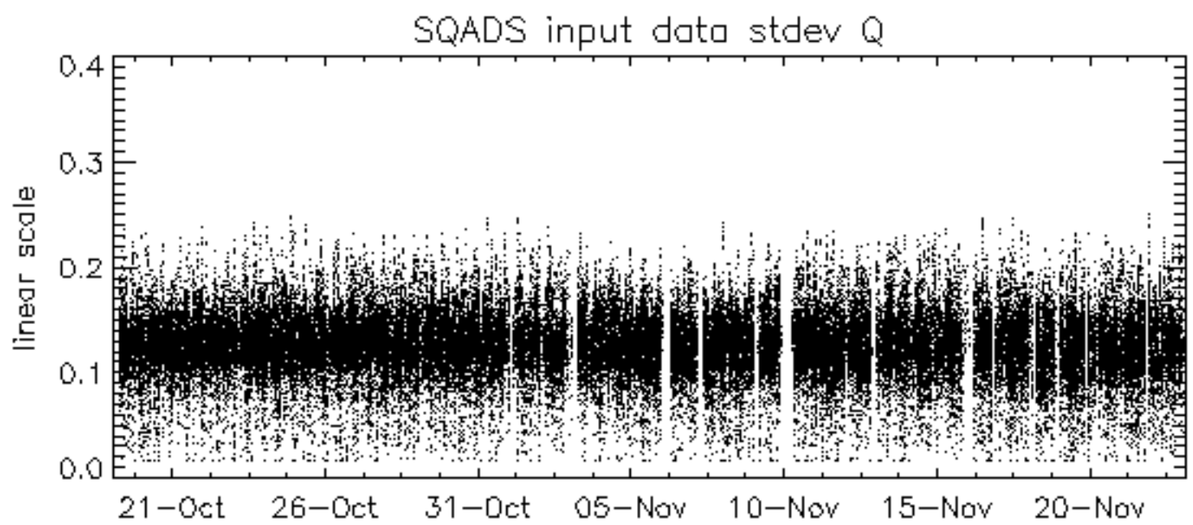

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov

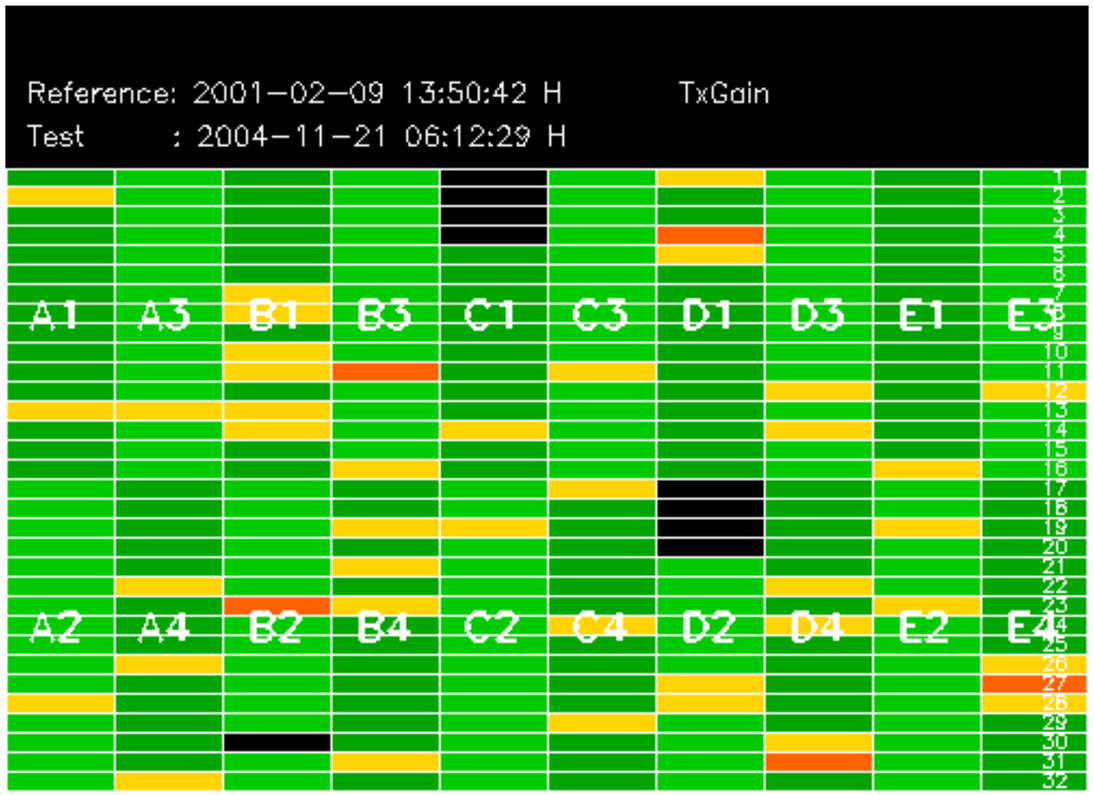

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov

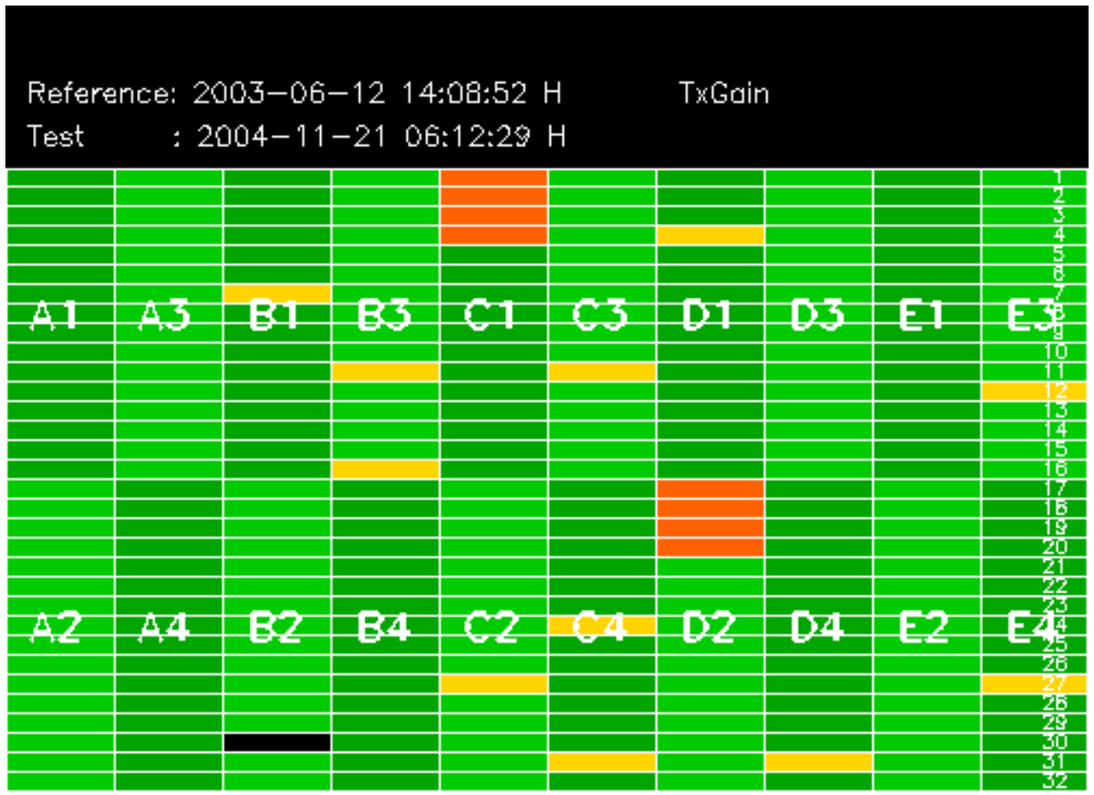

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-21 06:12:29 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 : 2004-11-21 06:12:29 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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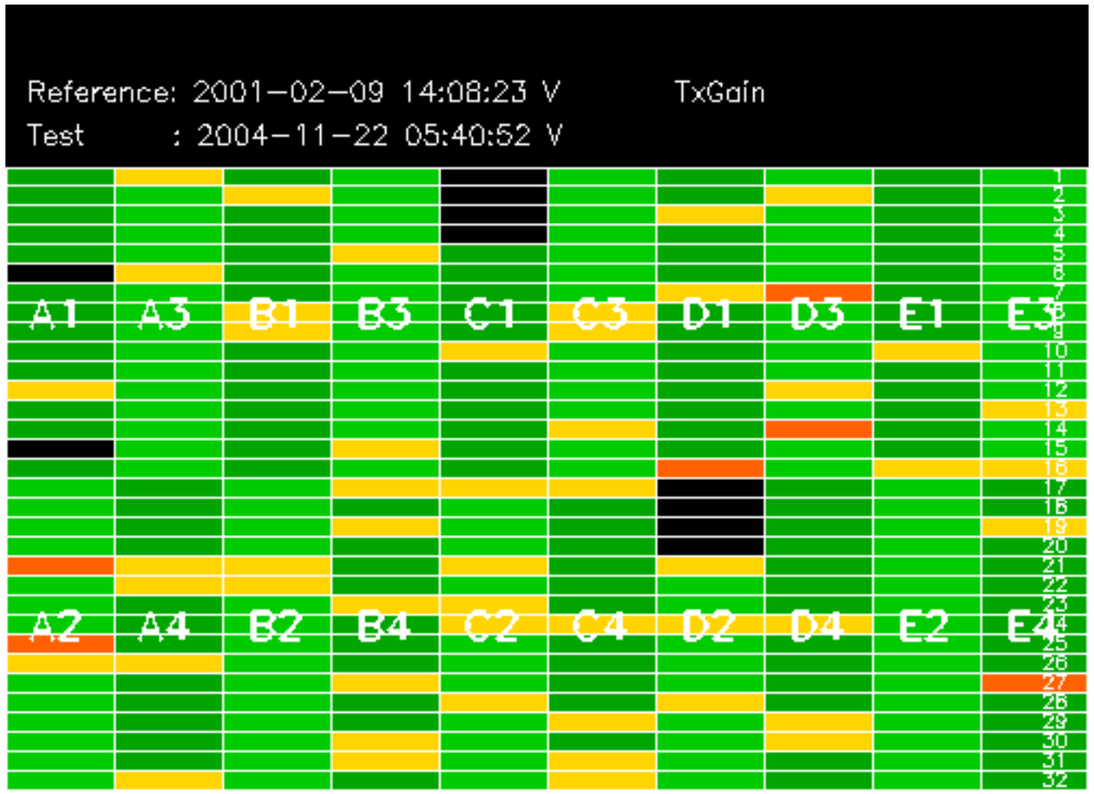
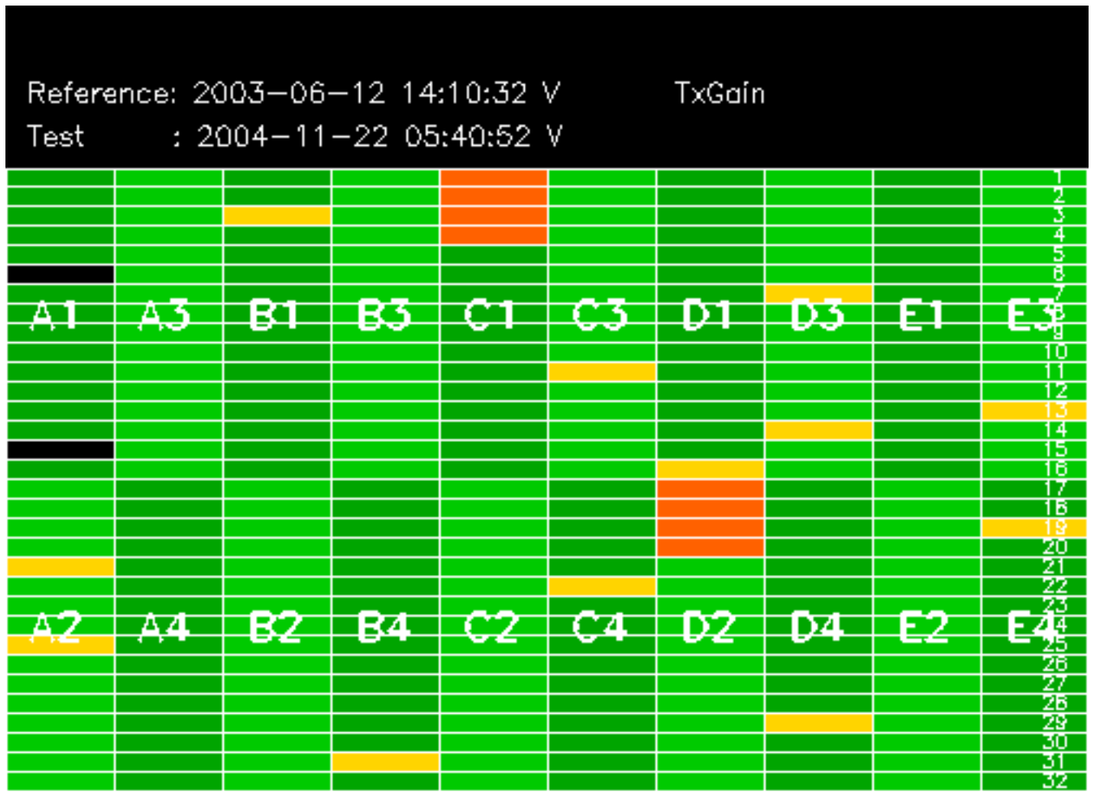

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-22 05:40:52 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-22 05:40:52 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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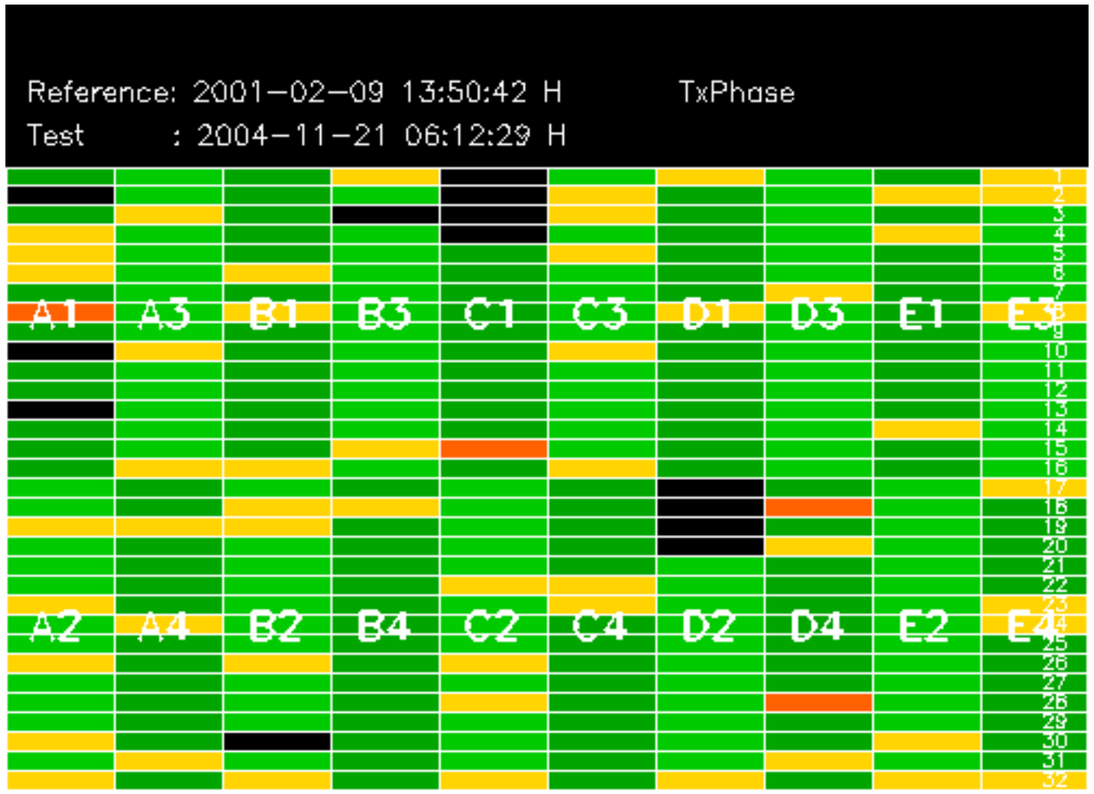
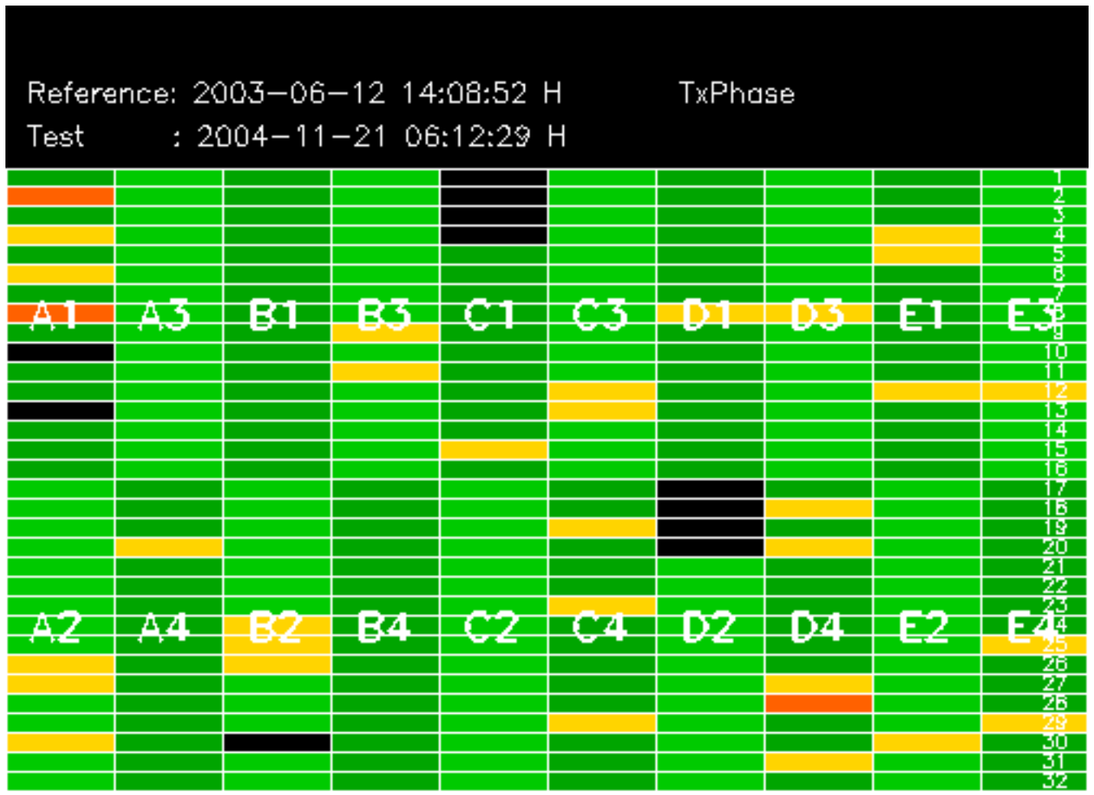
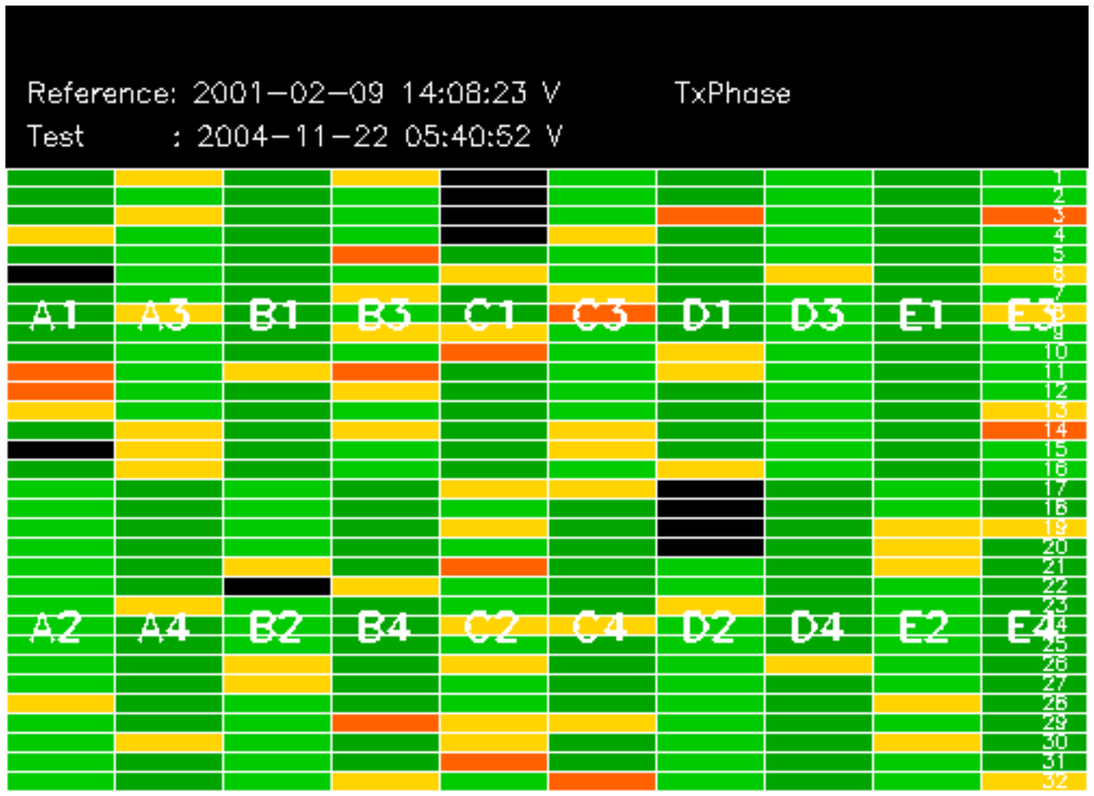
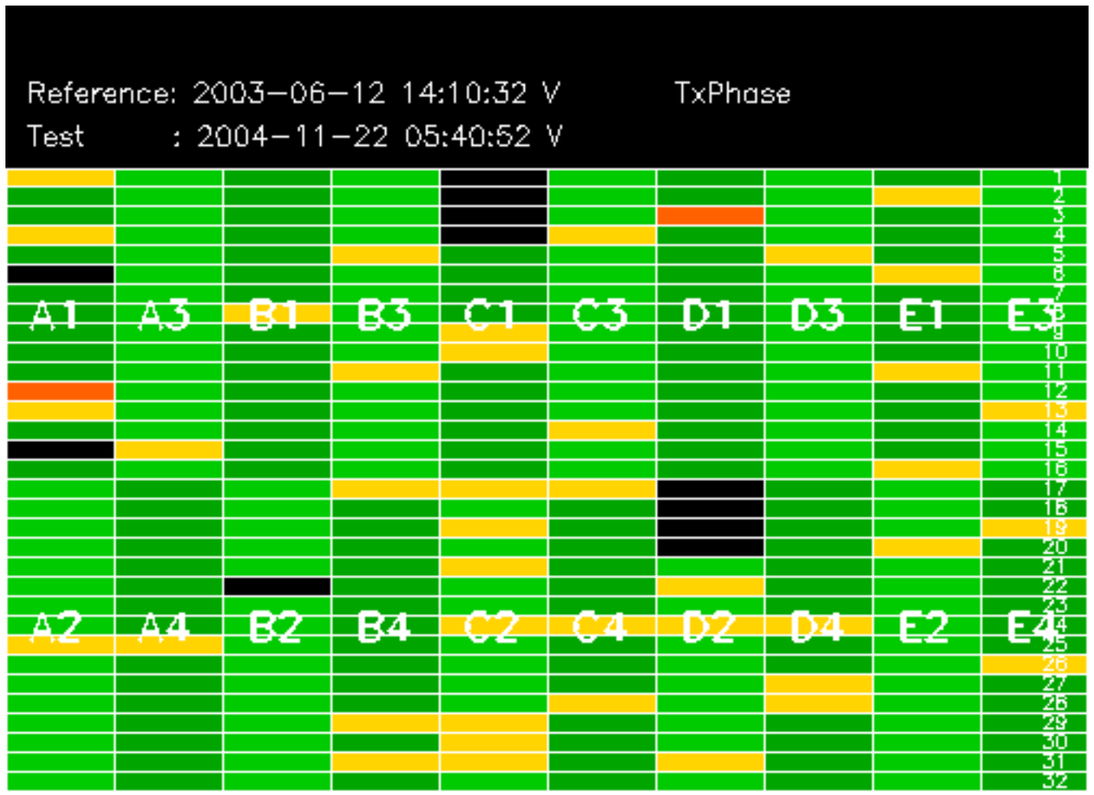

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-11-21 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
TxPhase
Test : 2004-11-21 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-11-22 05:40:52 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-22 05:40:52 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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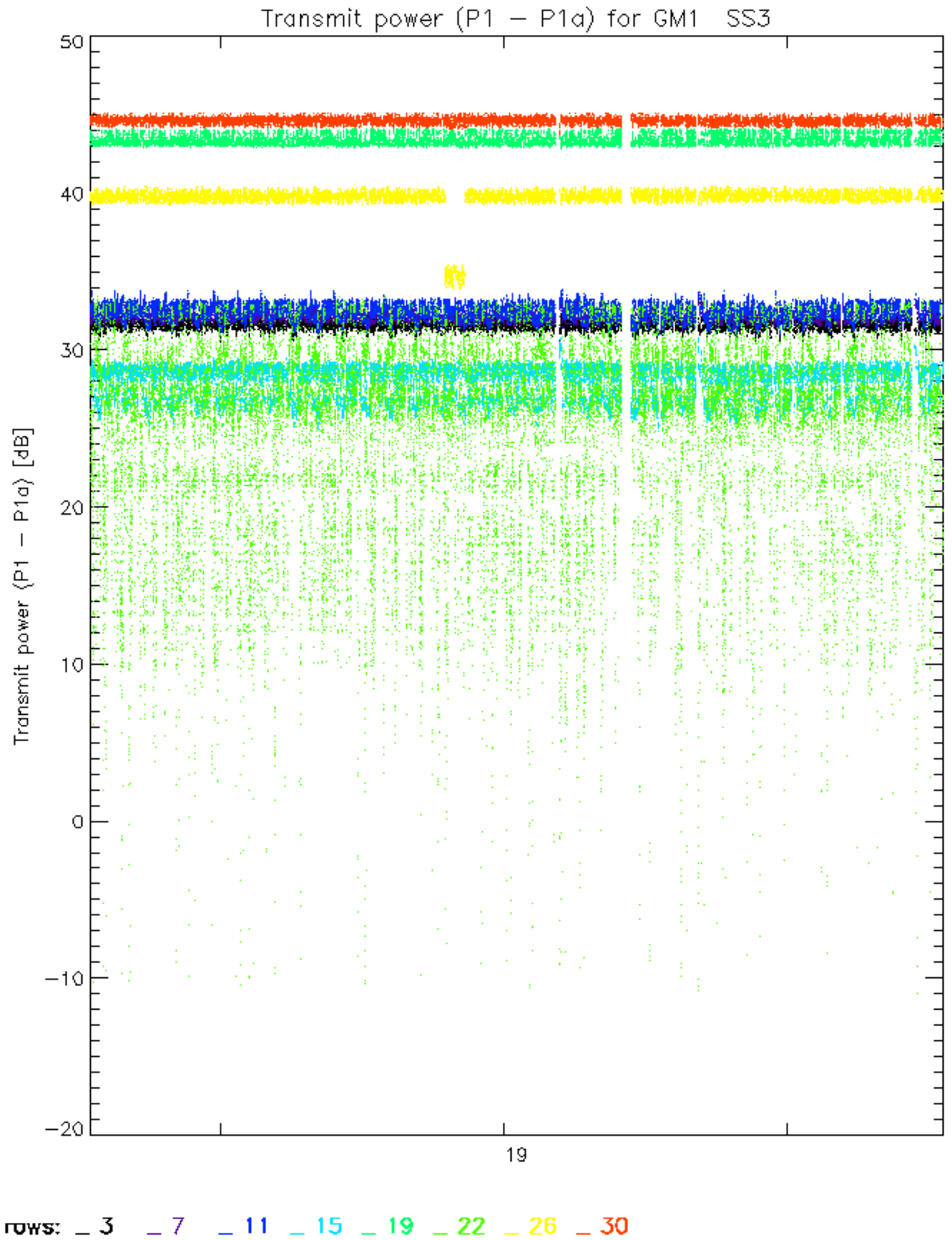
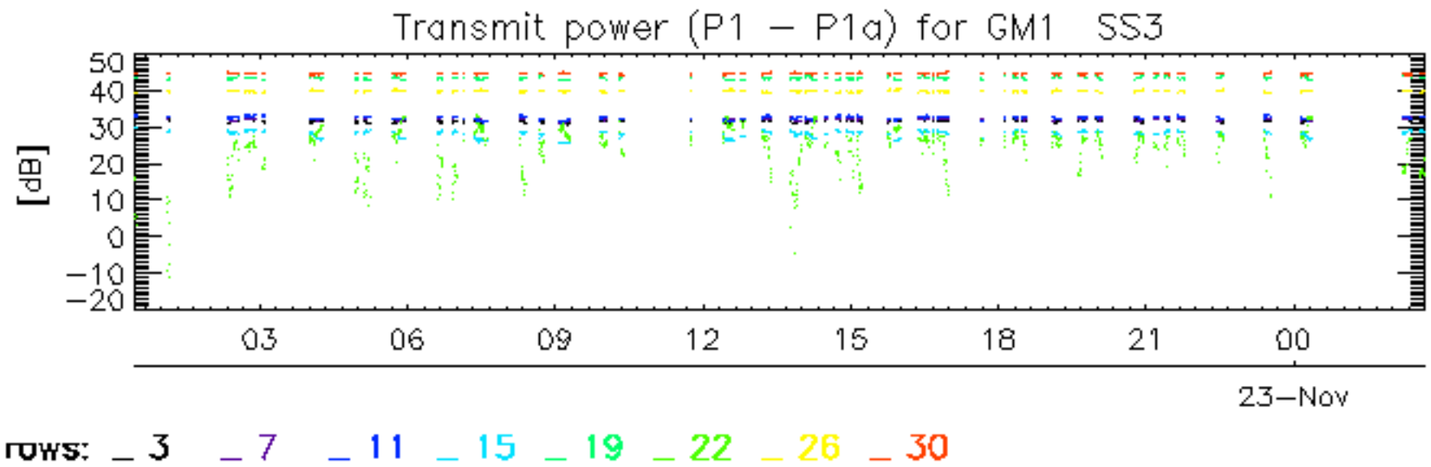
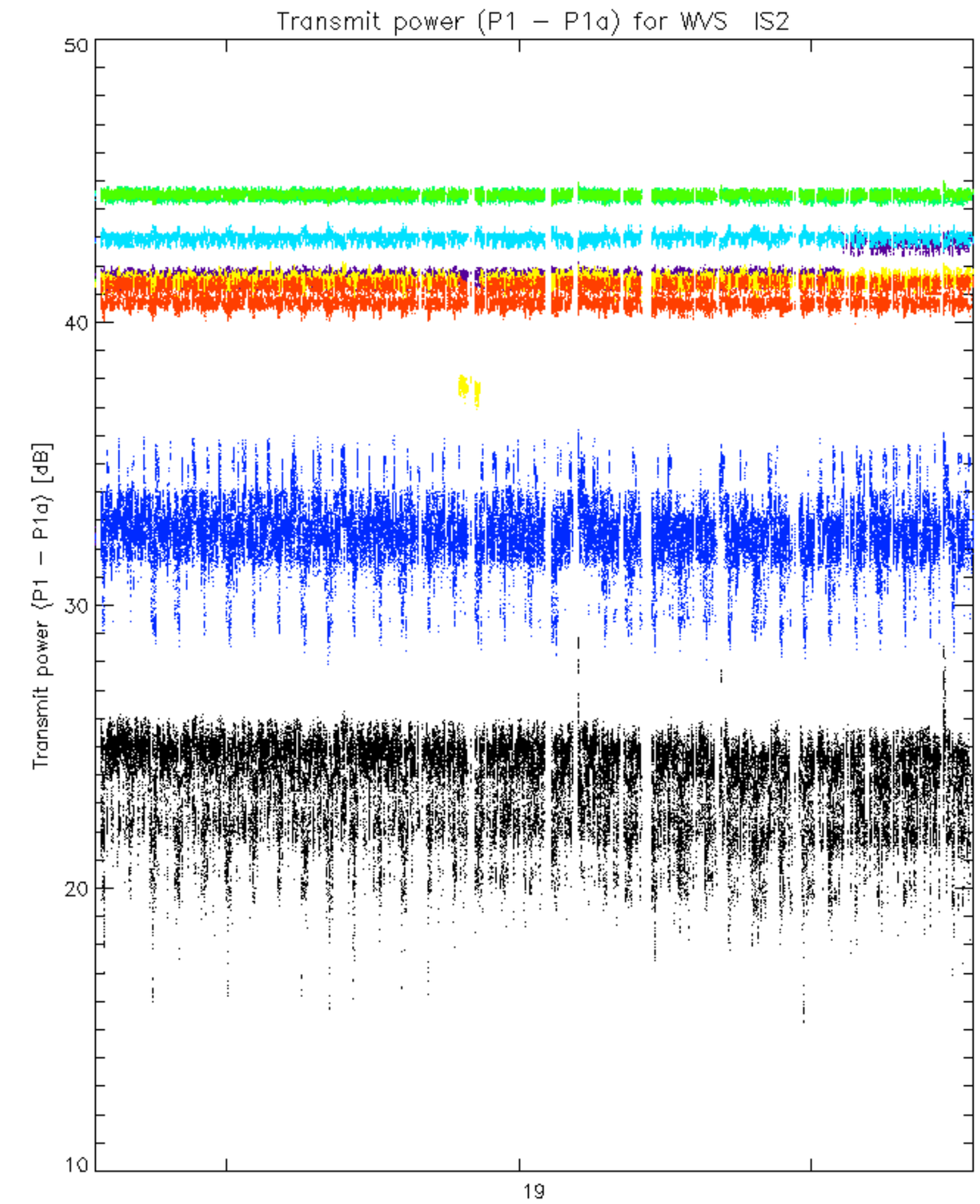
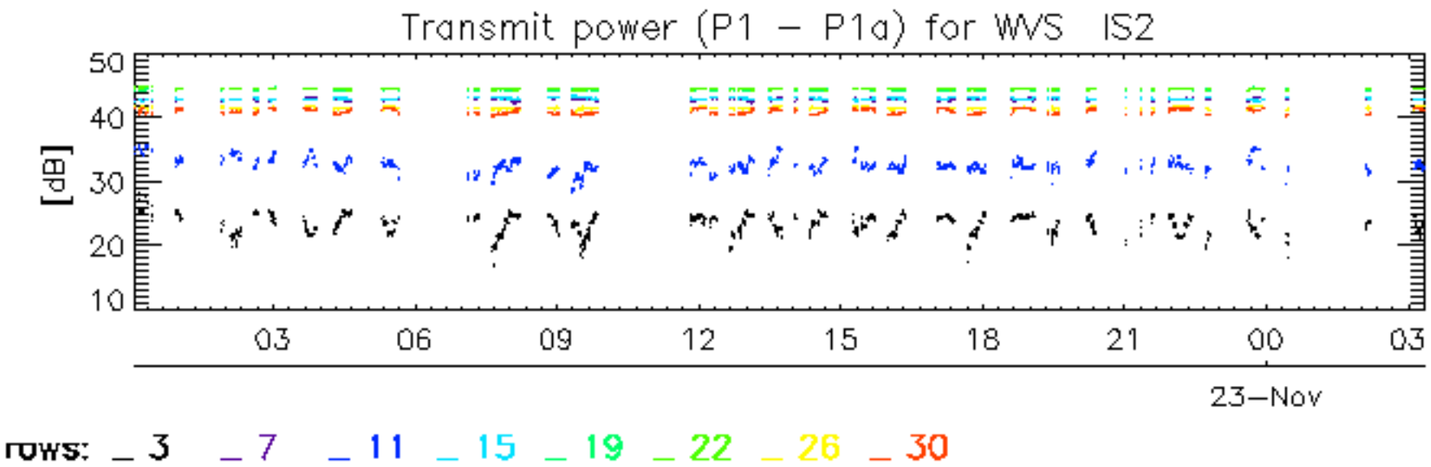

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
19
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
−20
03
06
09
12
15
18
21
00
23–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
19
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
50
40
30
20
10
03
06
09
12
15
18
21
00
03
23–Nov
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.