PRELIMINARY REPORT OF 041114

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

last update on Sun Nov 14 10:52:48 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	20041112 055513
H	20041113 084448

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	-3.476701	0.006486	0.014617
7	P1	-3.360936	0.012664	-0.003237
11	P1	-4.600816	0.016407	-0.000309
15	P1	-5.667159	0.029285	0.019209
19	P1	-3.587461	0.005439	-0.046699
22	P1	-4.583286	0.014175	0.006023
26	P1	-4.861082	0.060495	0.041862

30	P1	-7.063043	0.015563	-0.044933
3	P1	-16.040178	0.099936	0.071457
7	P1	-14.042347	0.066639	0.007438
11	P1	-20.602674	0.197728	-0.236942
15	P1	-11.683129	0.033860	0.055123
19	P1	-14.042746	0.027958	-0.066568
22	P1	-16.245037	0.383173	0.120566
26	P1	-17.702526	0.699945	0.212524
30	P1	-17.992208	0.270204	0.067166

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.371637	0.089466	-0.015791
7	P2	-22.612225	0.132285	0.001596
11	P2	-15.084613	0.123233	0.073752
15	P2	-7.140621	0.108899	-0.036371
19	P2	-9.705171	0.126703	-0.003837
22	P2	-17.254528	0.104943	0.040473
26	P2	-16.501902	0.110835	-0.012481
30	P2	-19.056797	0.084605	0.026273

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.196704	0.005986	-0.021150
7	P3	-8.196704	0.005986	-0.021150
11	P3	-8.196706	0.005986	-0.021151
15	P3	-8.196706	0.005986	-0.021152
19	P3	-8.196709	0.005986	-0.021151
22	P3	-8.196709	0.005986	-0.021150
26	P3	-8.196712	0.005986	-0.021152
30	P3	-8.196620	0.005983	-0.021263

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	-2.803996	0.011401	0.002187
7	P1	-2.954339	0.024217	0.007065
11	P1	-3.893998	0.022075	-0.014869
15	P1	-3.485223	0.026564	-0.005739
19	P1	-3.587959	0.011987	-0.010523
22	P1	-5.618224	0.066810	0.026914
26	P1	-6.411228	0.079434	0.057299
30	P1	-6.252565	0.041815	-0.048765
3	P1	-10.608537	0.056242	0.040765
7	P1	-10.075120	0.137003	-0.022990
11	P1	-12.330507	0.118467	-0.110589
15	P1	-11.692936	0.064906	-0.087674
19	P1	-15.618509	0.054869	-0.000570
22	P1	-23.897614	1.909284	-0.372553
26	P1	-15.120878	0.474435	0.060192
30	P1	-20.291250	1.030330	-0.000271

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.053694	0.042924	-0.022606
7	P2	-22.682064	0.033881	0.038015
11	P2	-10.867940	0.039225	0.049342
15	P2	-5.039655	0.030584	-0.037696
19	P2	-6.941648	0.037978	-0.069077
22	P2	-7.372370	0.031037	0.061225
26	P2	-23.928932	0.025485	-0.052537
30	P2	-22.094870	0.020478	0.012882

P3 Cyclic statistics

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

3	P3	-8.038408	0.003540	-0.018549
7	P3	-8.038333	0.003548	-0.018536
11	P3	-8.038395	0.003544	-0.018357
15	P3	-8.038356	0.003539	-0.018539
19	P3	-8.038340	0.003539	-0.018565
22	P3	-8.038448	0.003536	-0.018864
26	P3	-8.038437	0.003524	-0.018112
30	P3	-8.038407	0.003550	-0.018607

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	0.000467830
	stdev	2.20179e-07
MEAN Q	mean	0.000544442
	stdev	2.36700e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126470
	stdev	0.000926964

STDEV Q	mean	0.126686
	stdev	0.000935017

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

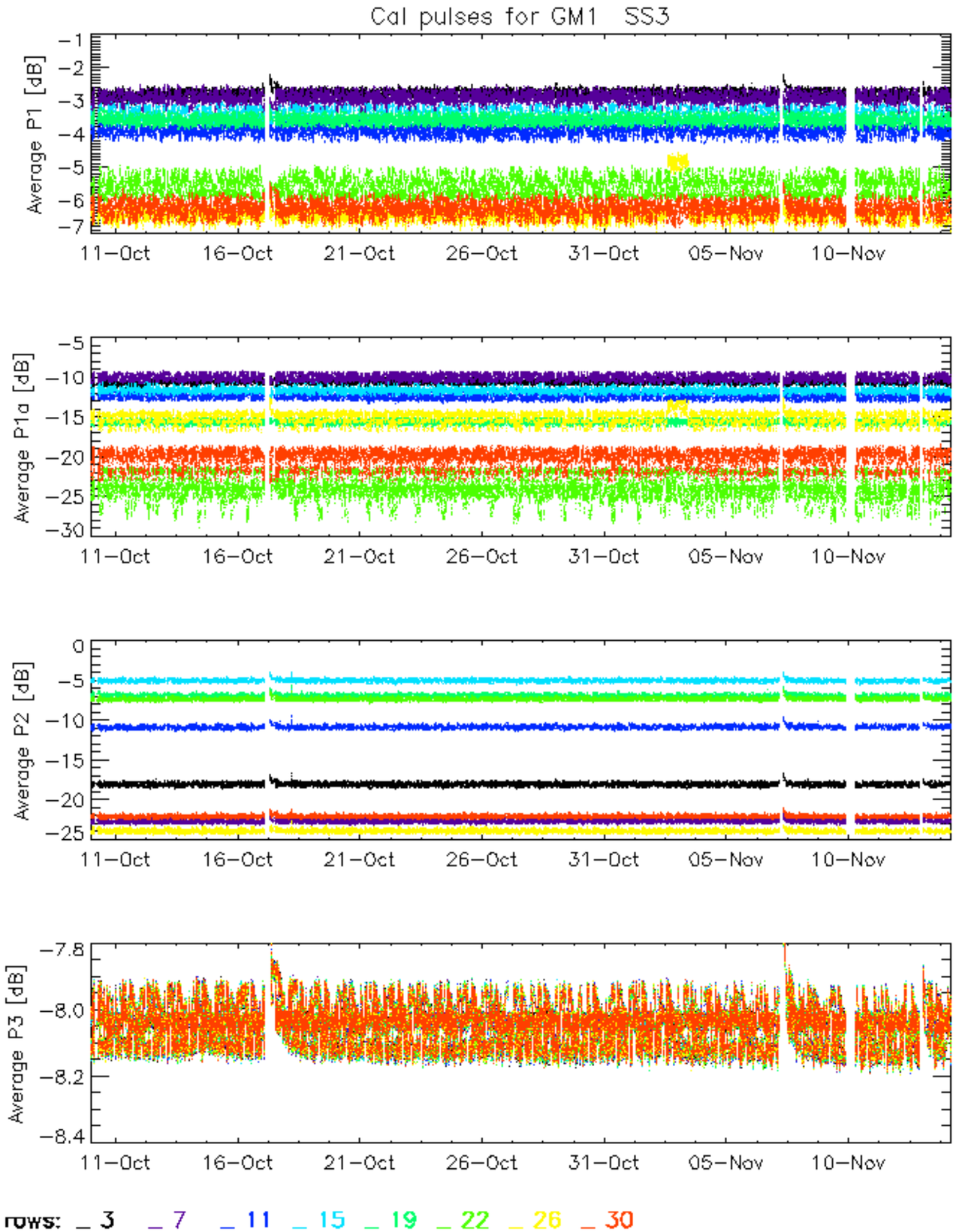
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

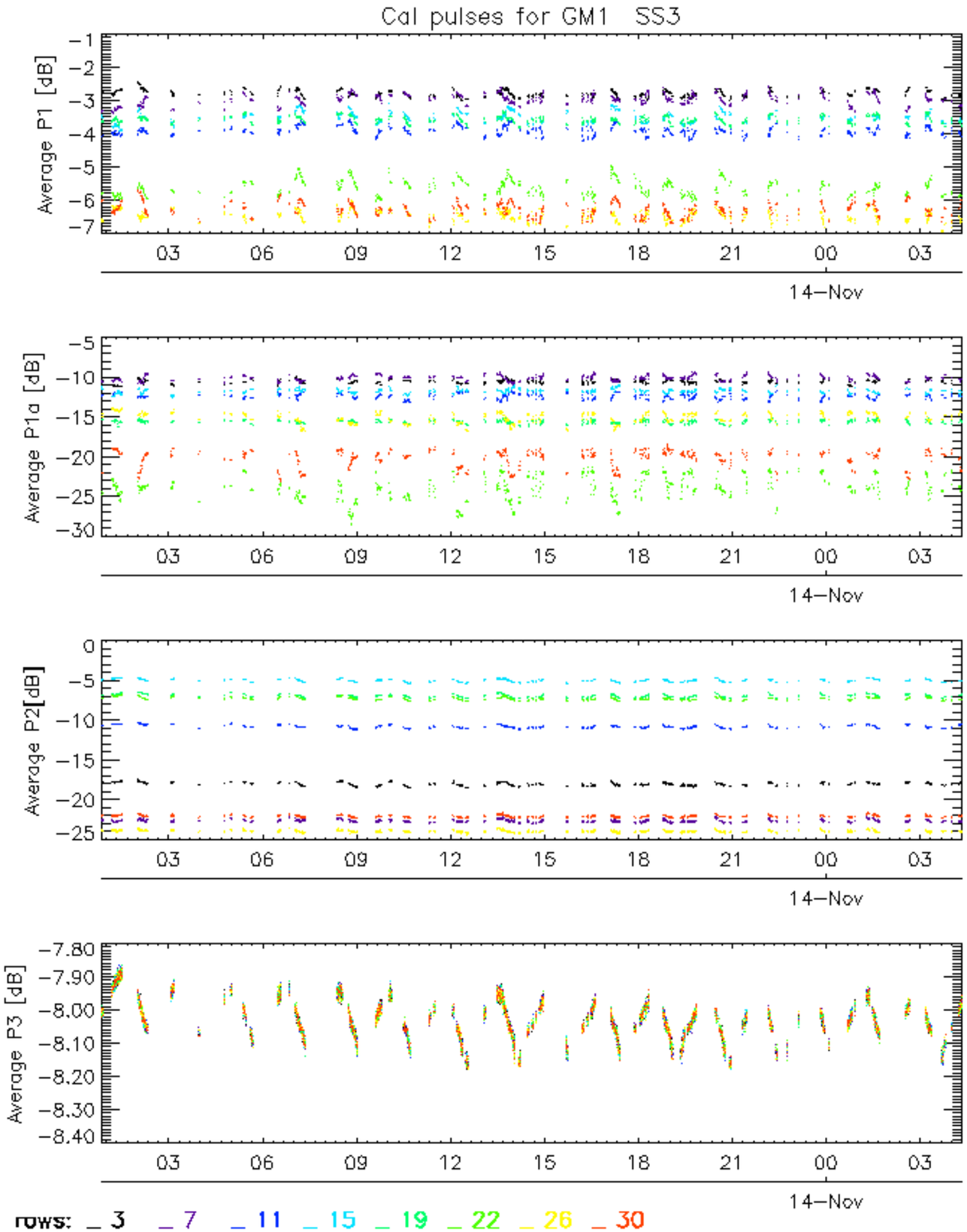
6.5 - Absolute Doppler for GM1

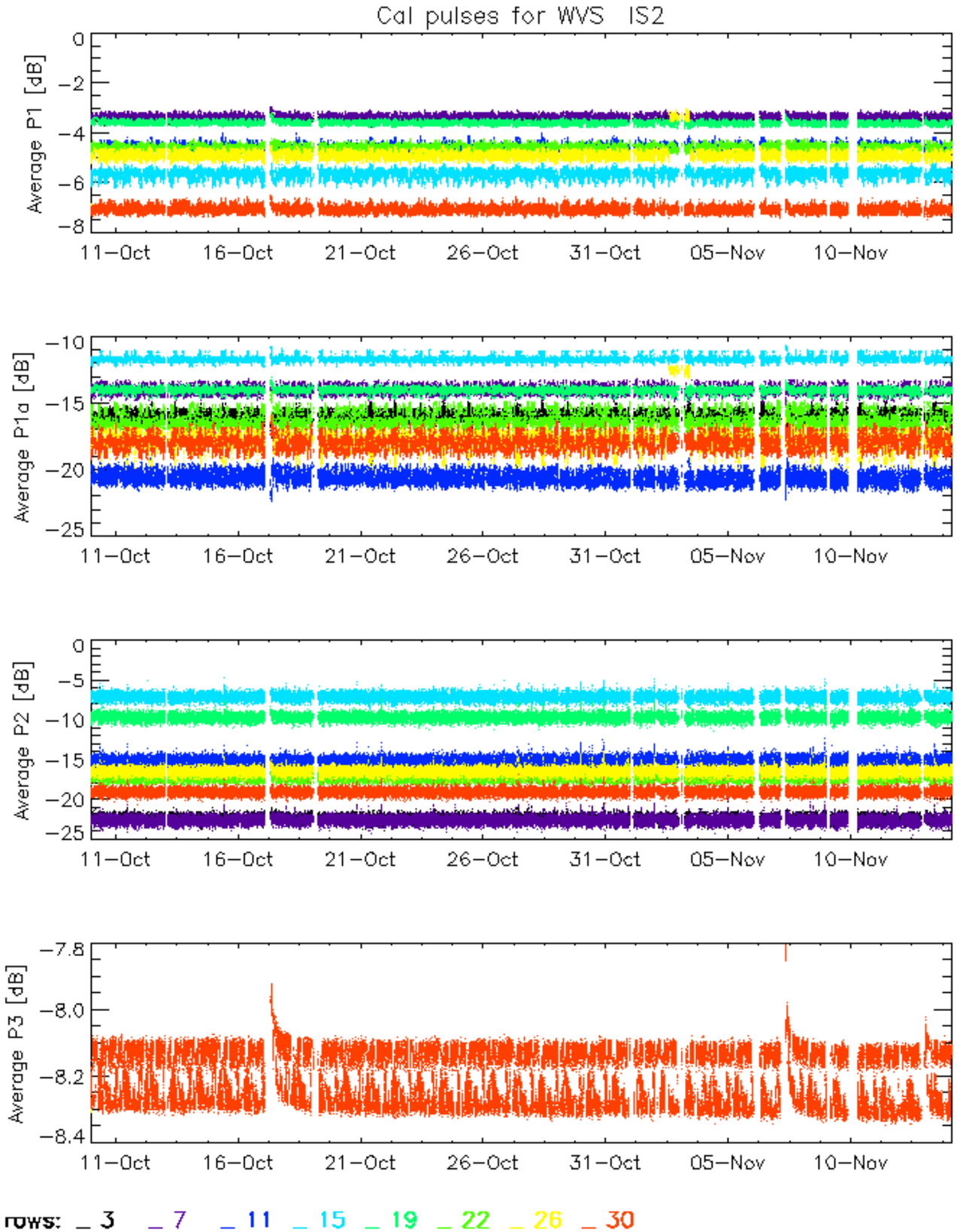
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

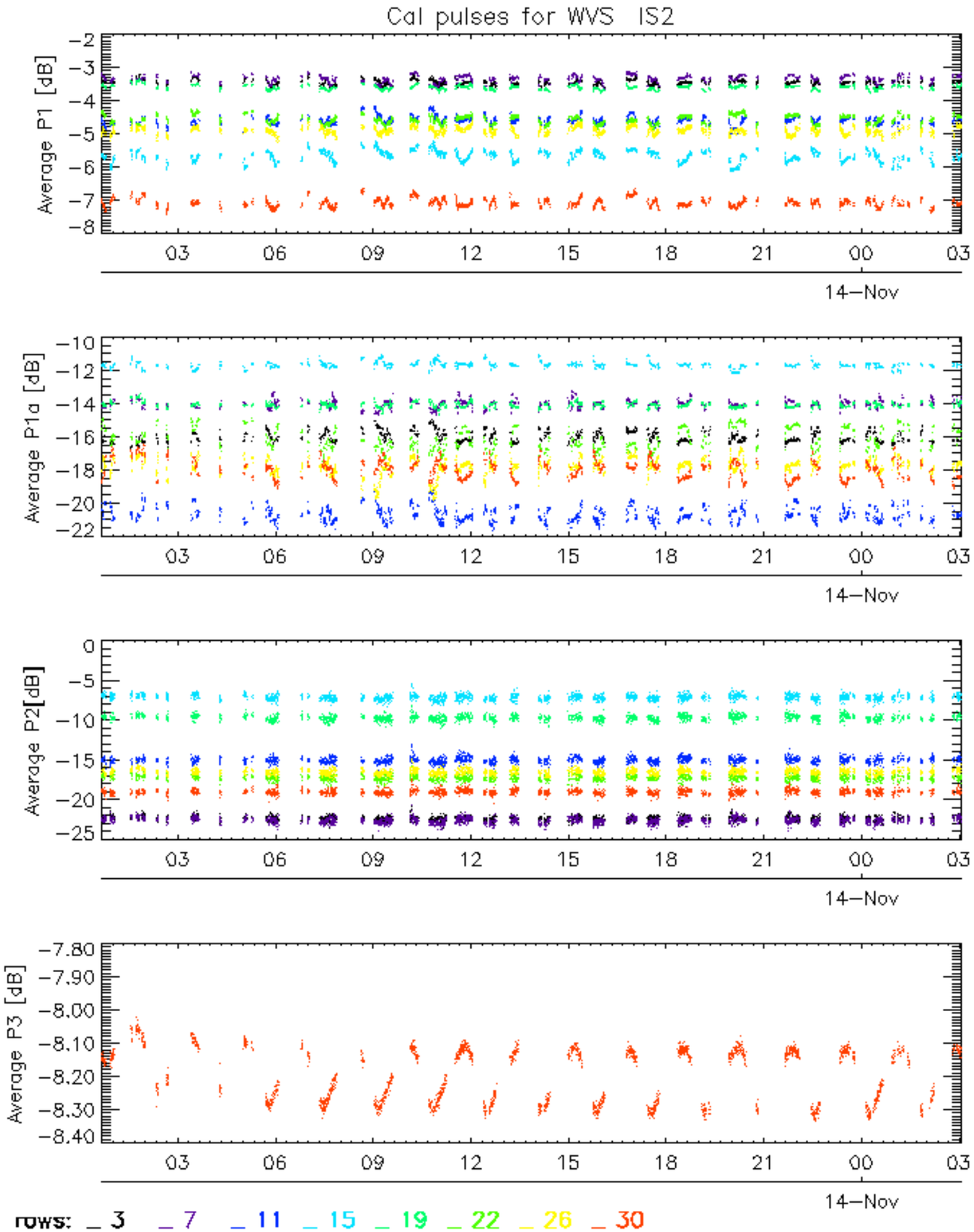
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

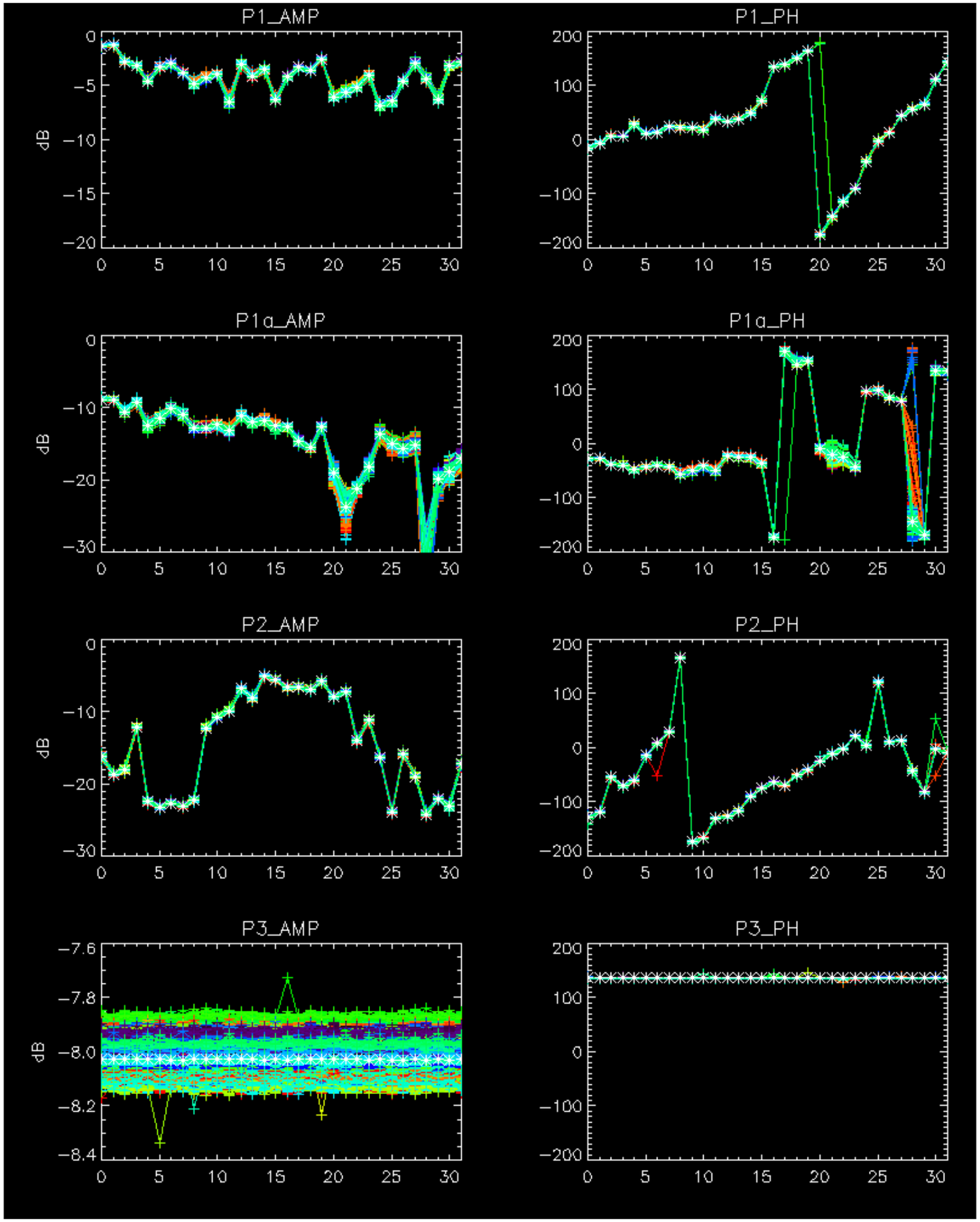

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 26 30

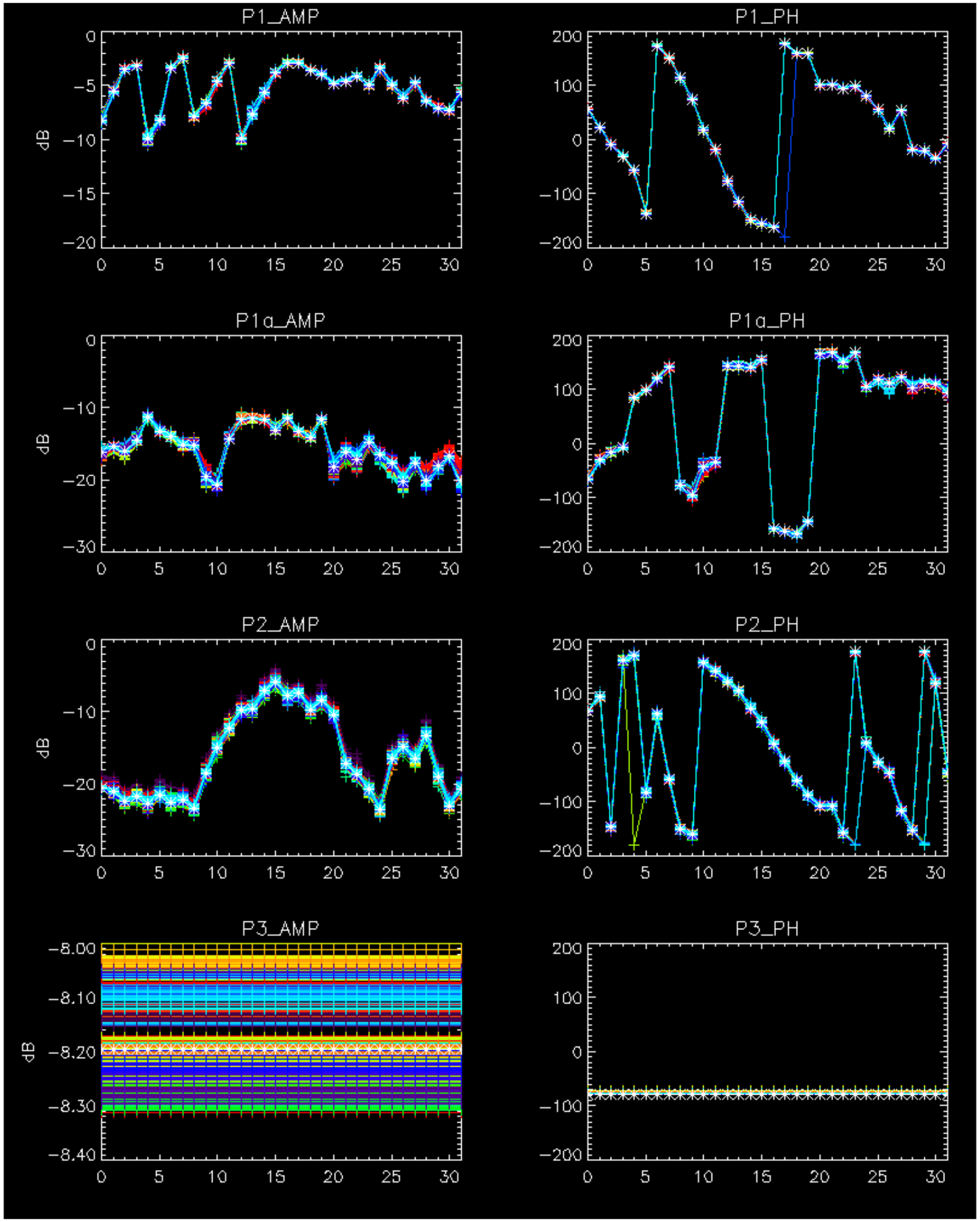

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
14−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
14−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
14−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


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

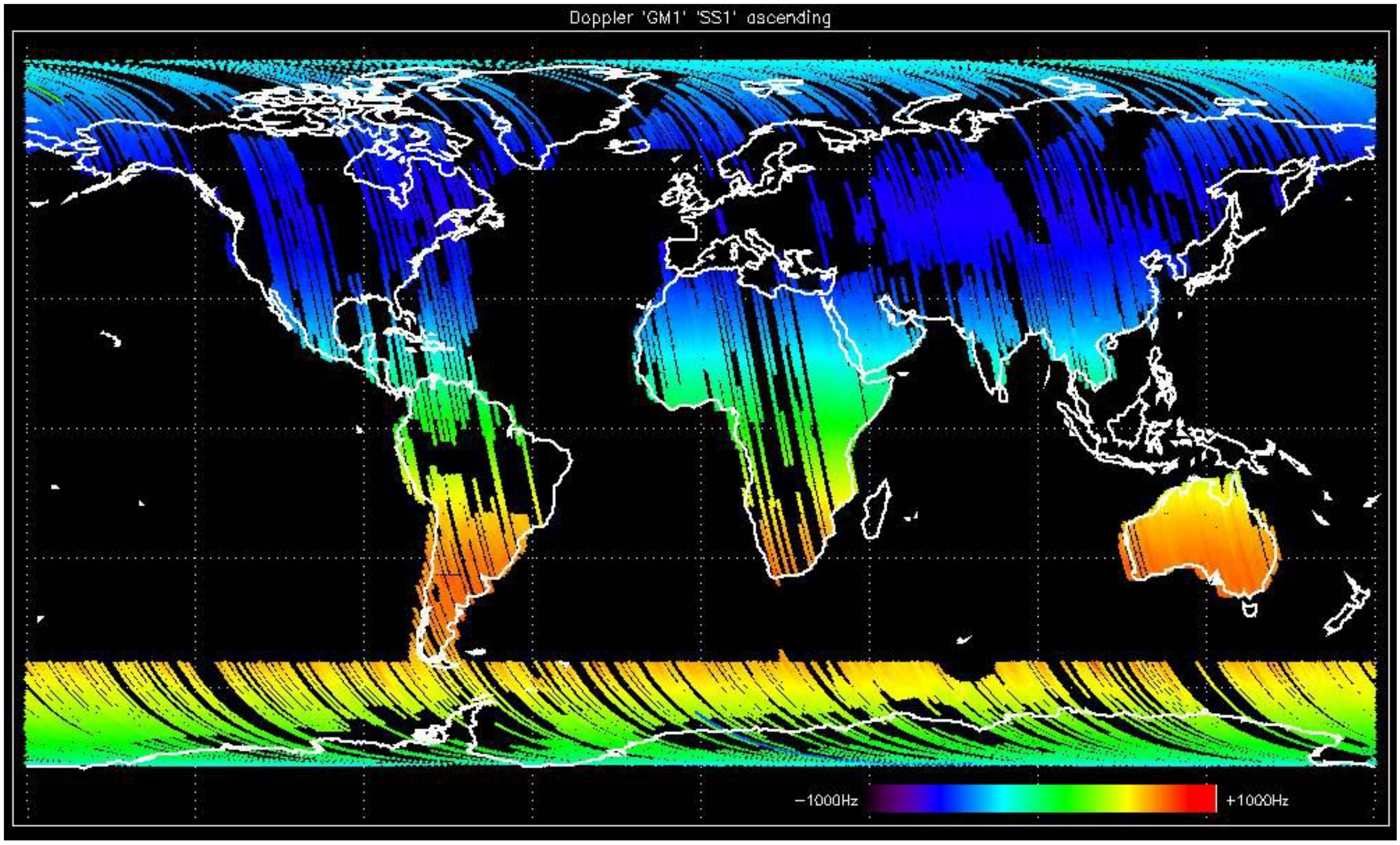
No anomalies observed.

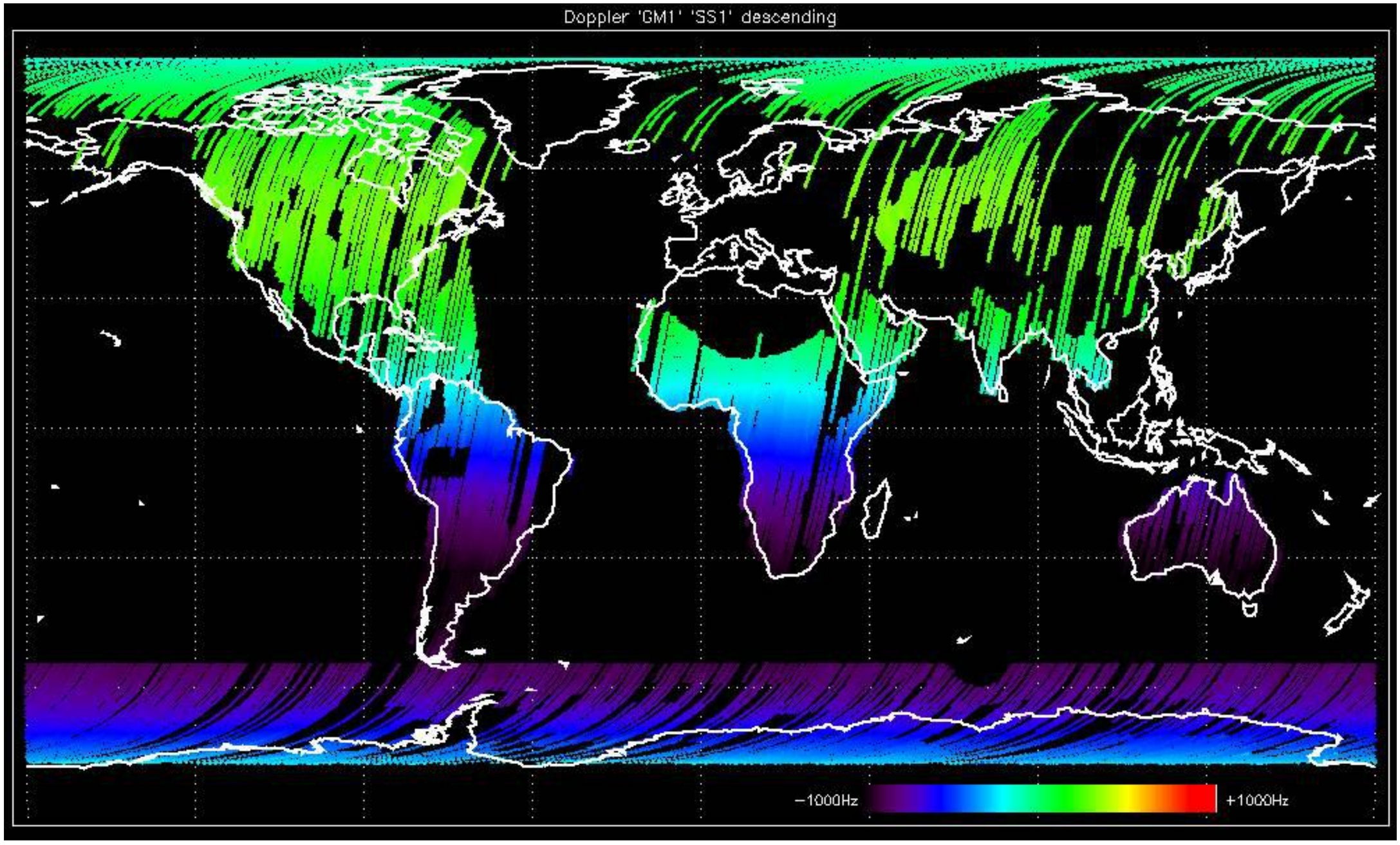

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.6
−7.8
−8.0
−8.2
−8.4
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

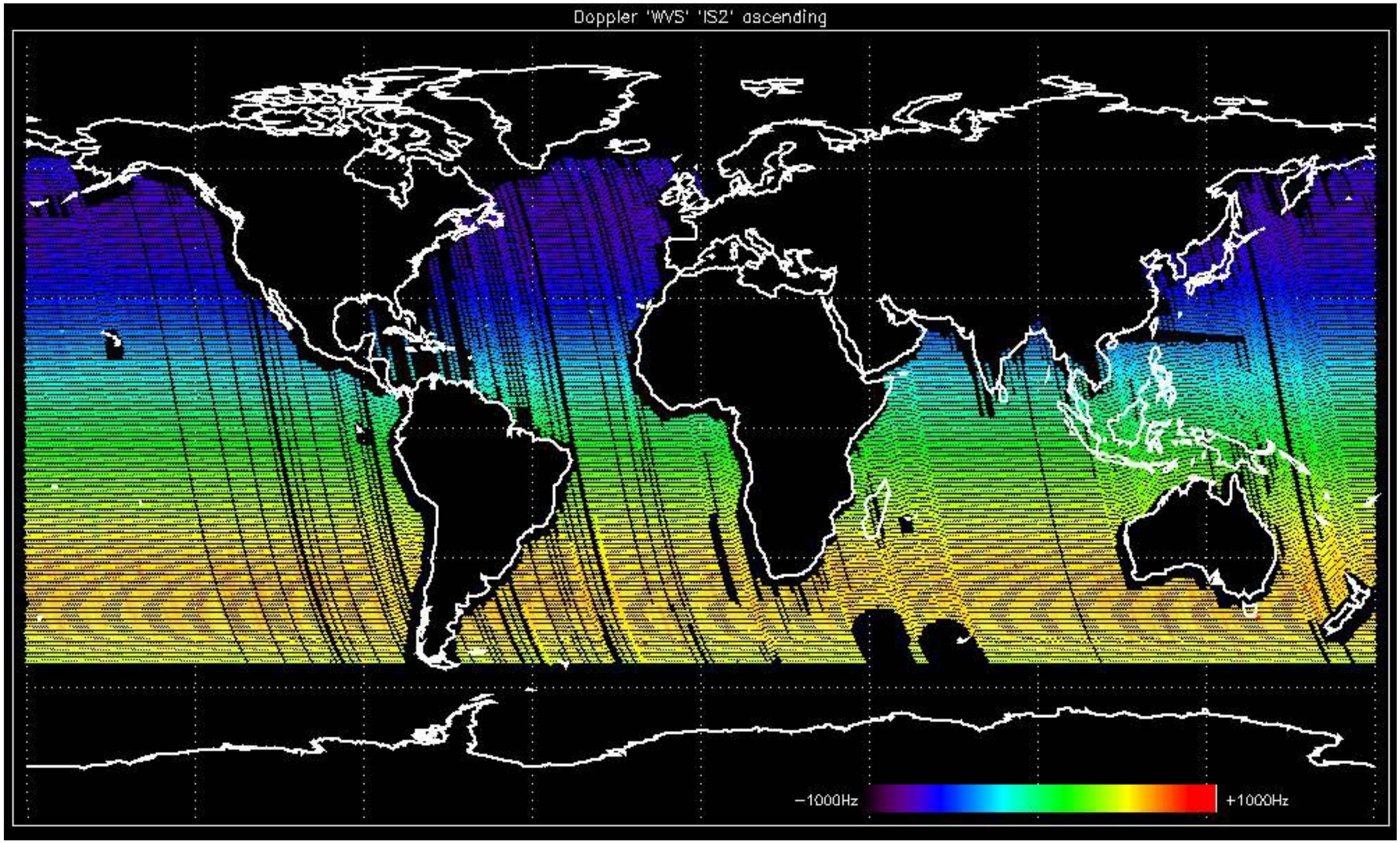

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.10
−8.20
−8.30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

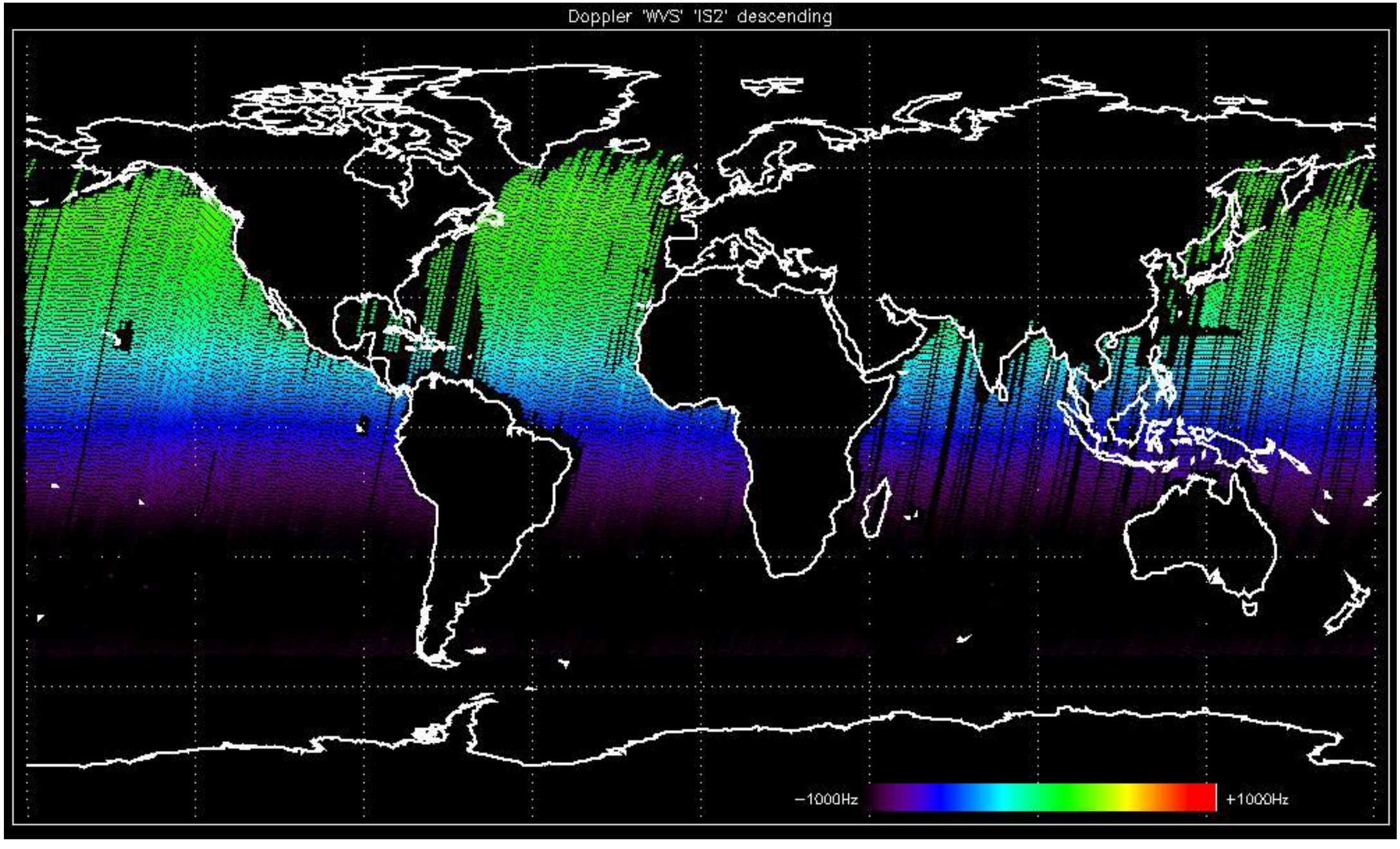
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

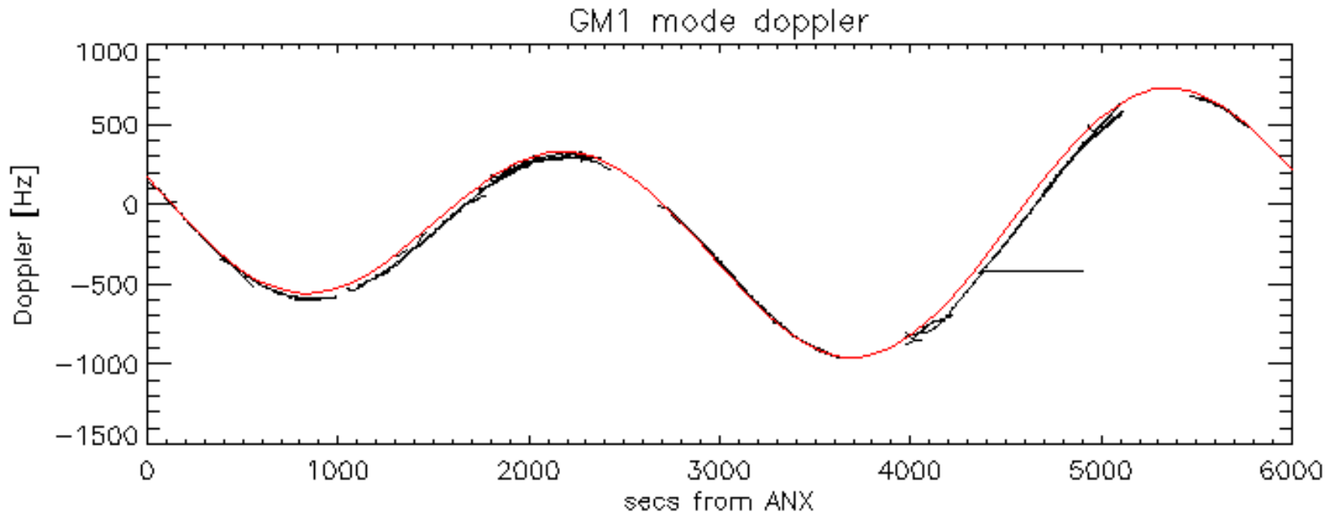
Preliminary report.The data is not yet controled

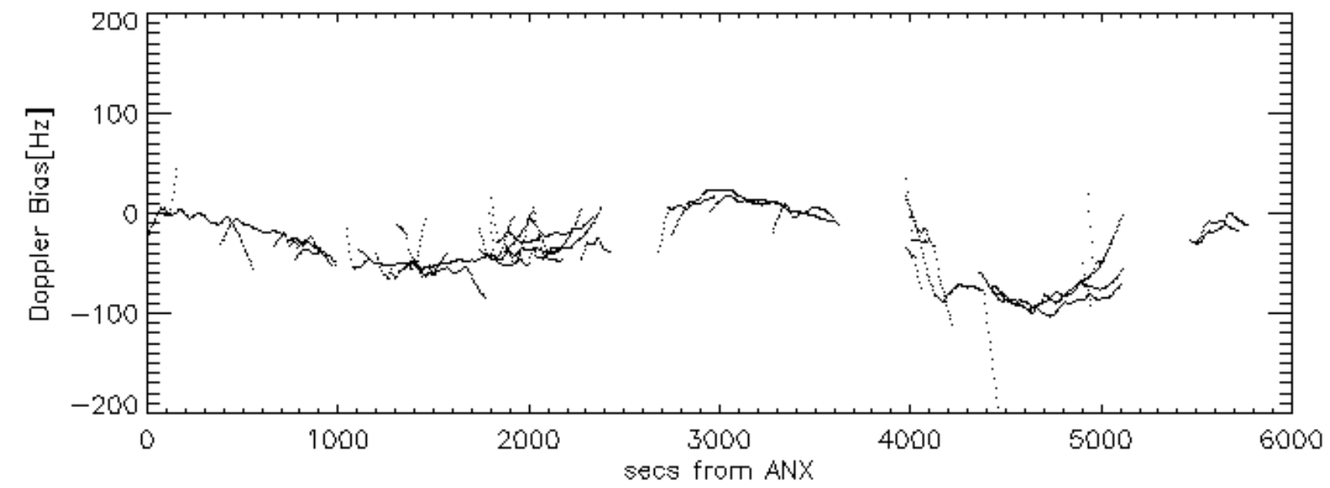

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

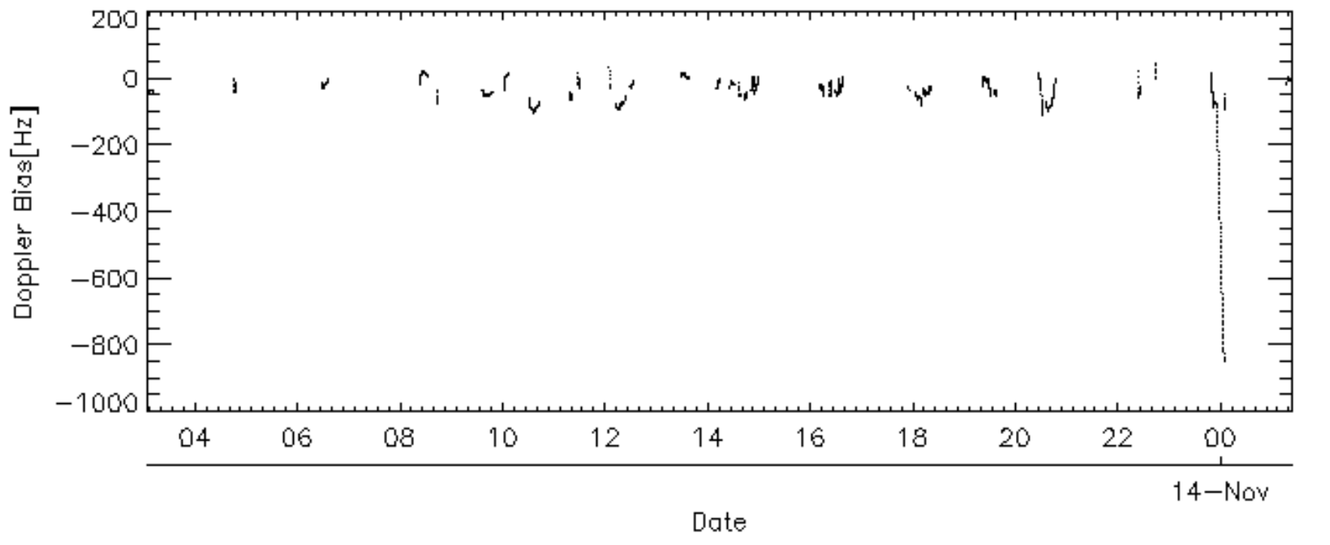

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

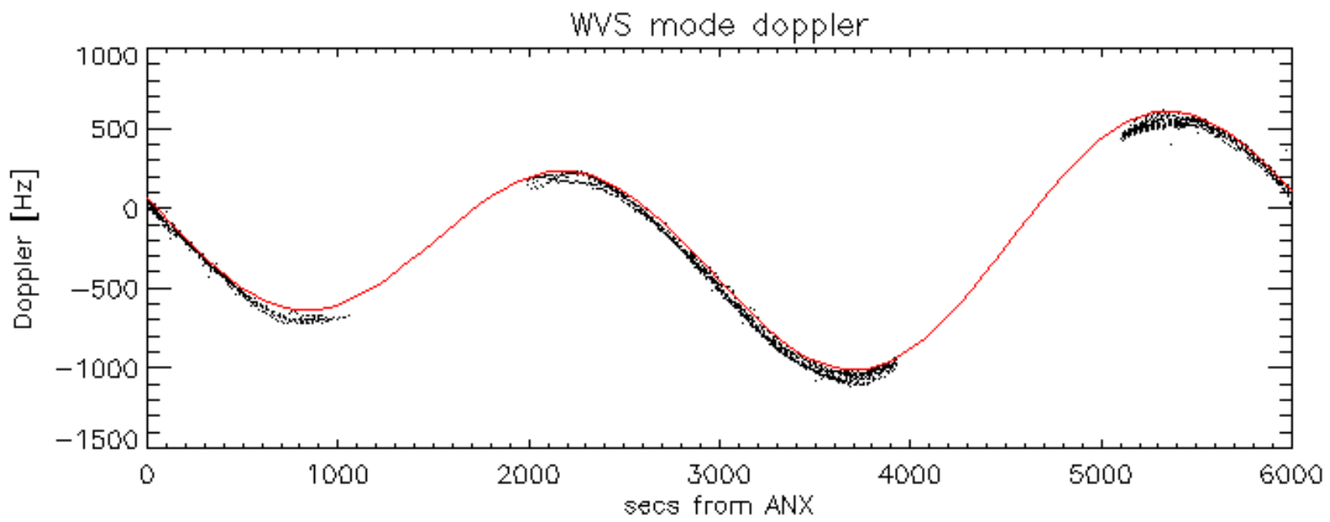

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

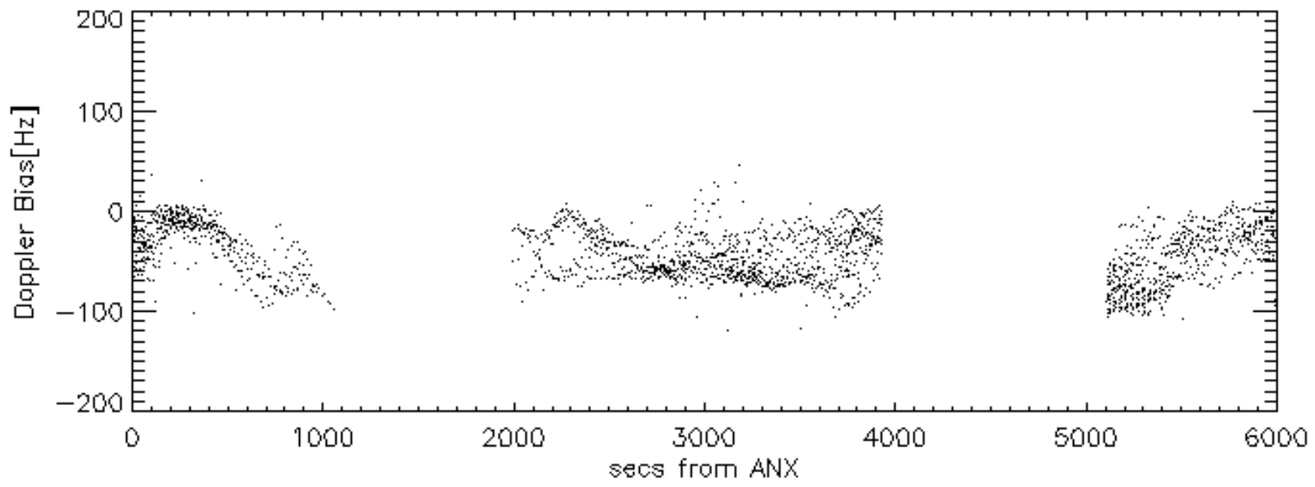

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

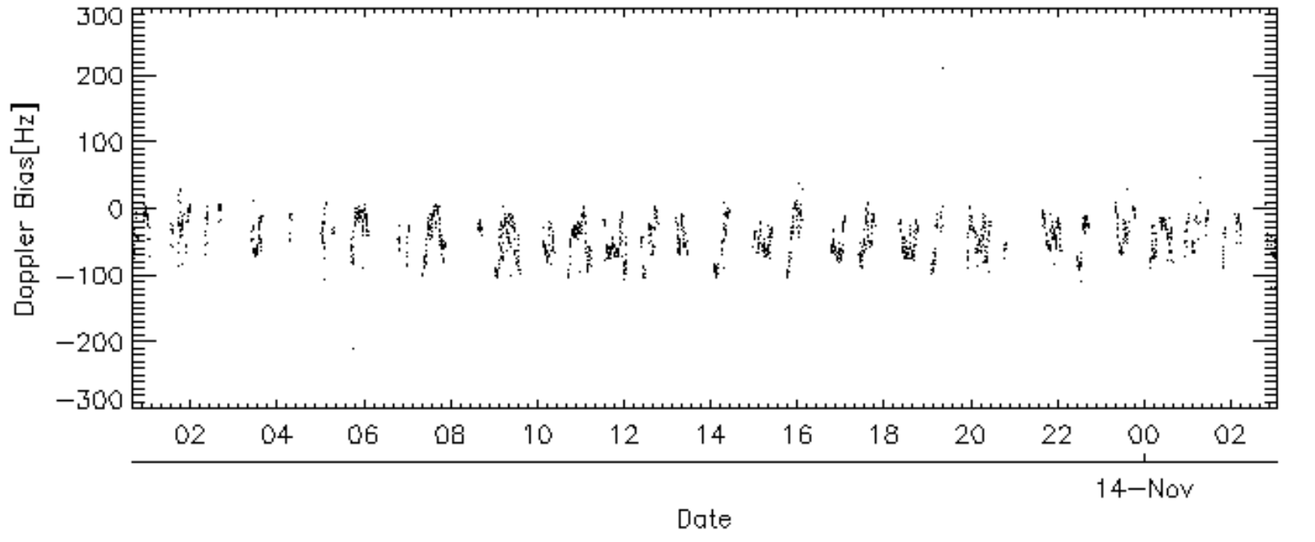

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

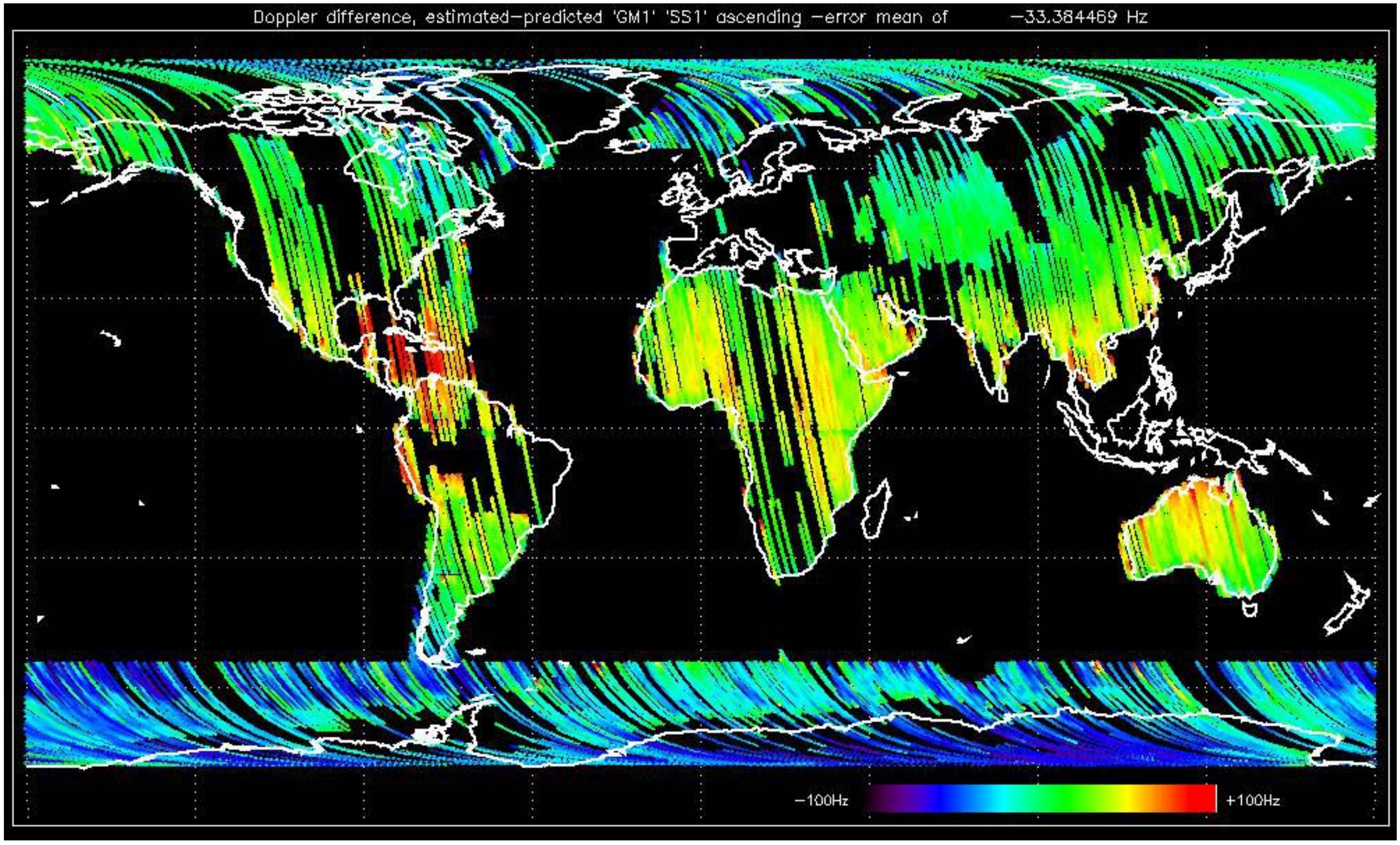

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

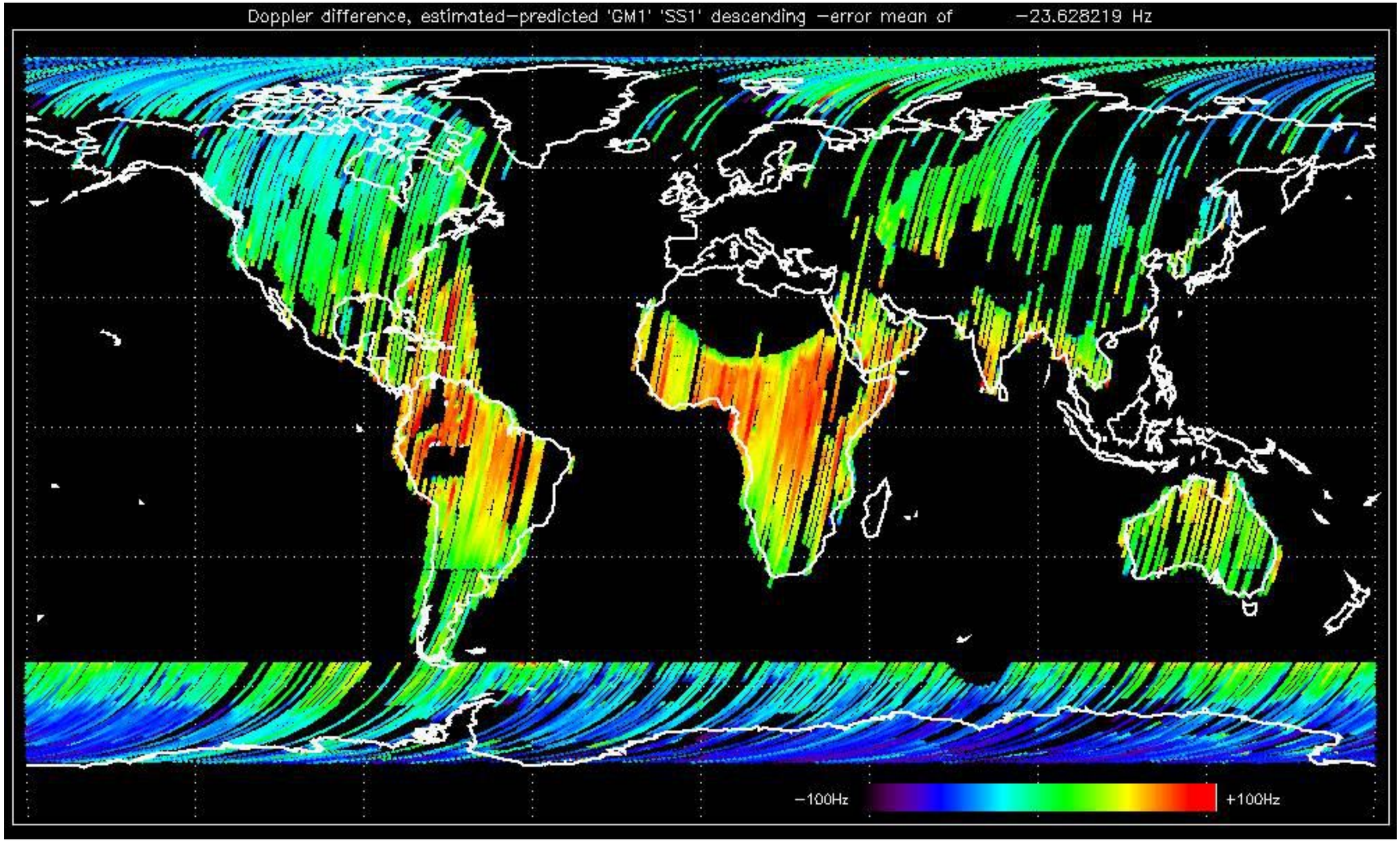

Doppler Bias[Hz]
200
0
−200
−400
−600
−800
−1000
04
06
08
10
12
14
16
18
20
22
00
14−Nov
Date

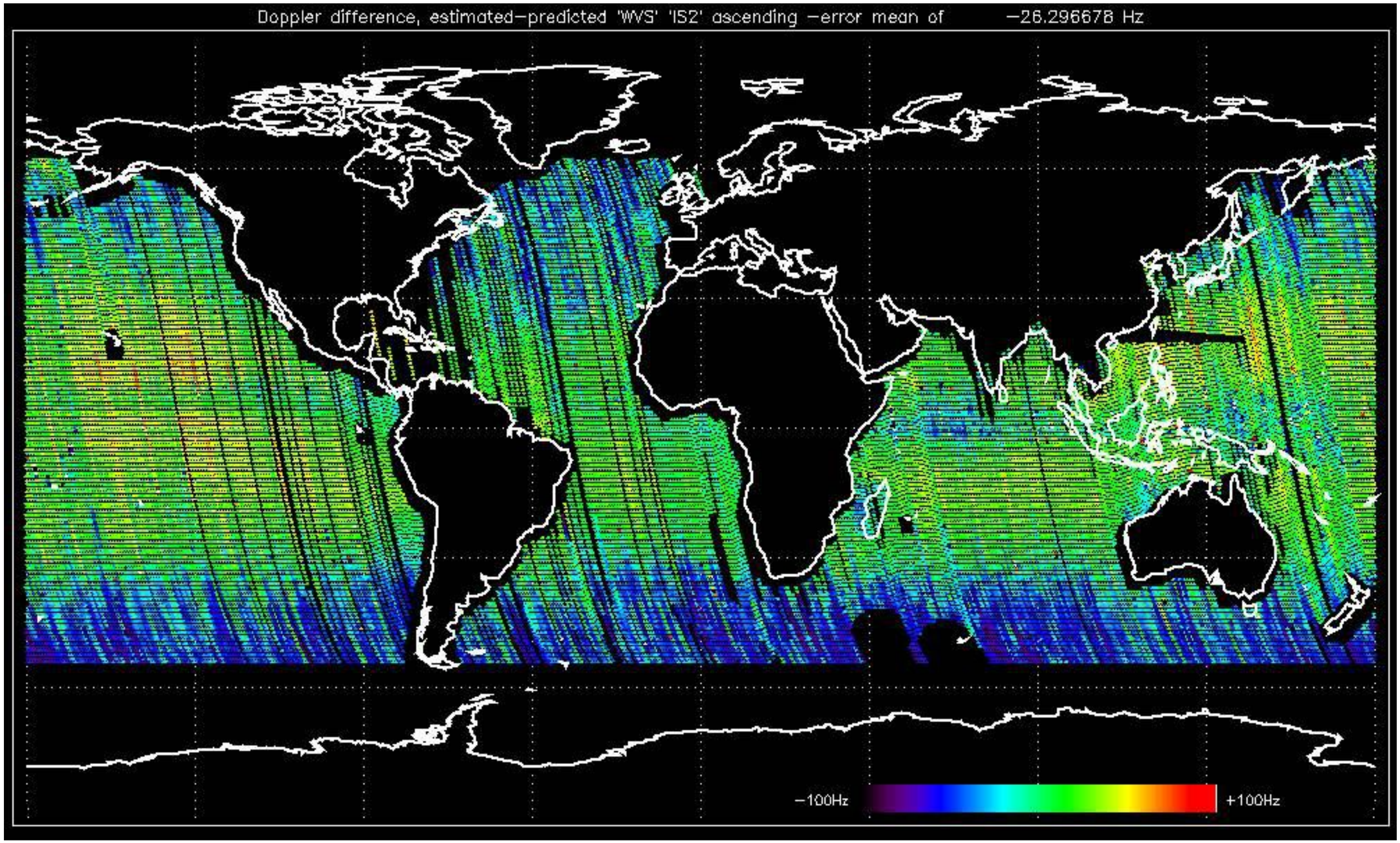

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

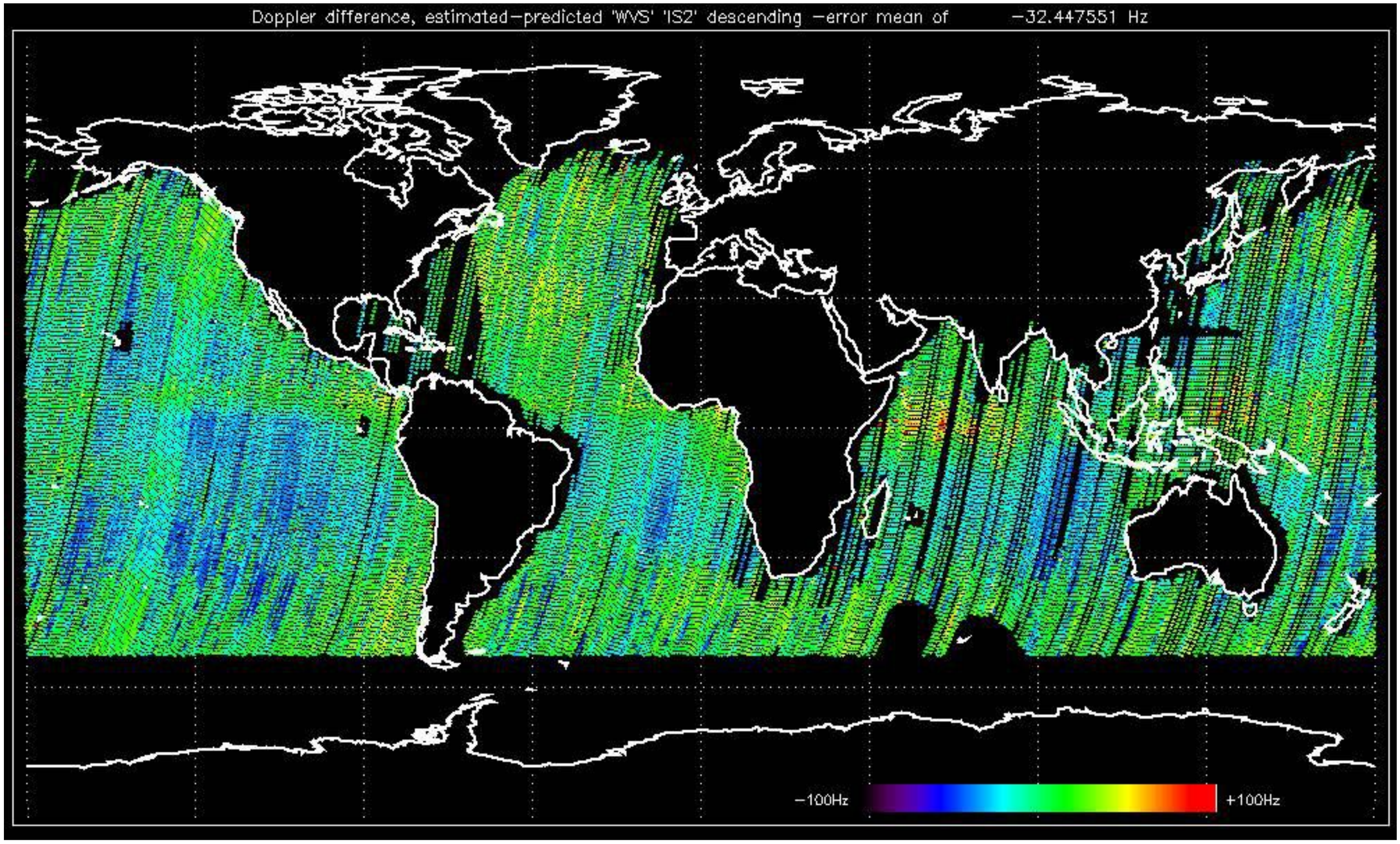

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −33.384469 Hz
−100Hz
+100Hz

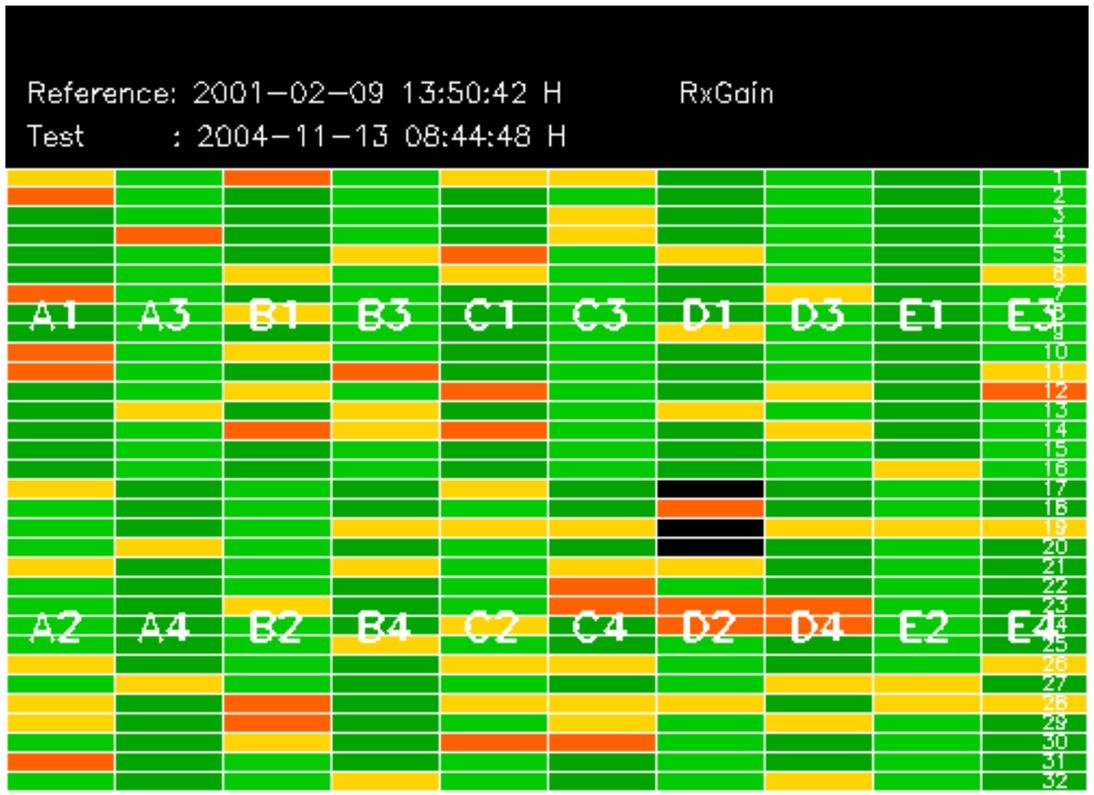

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.628219 Hz
−100Hz
+100Hz

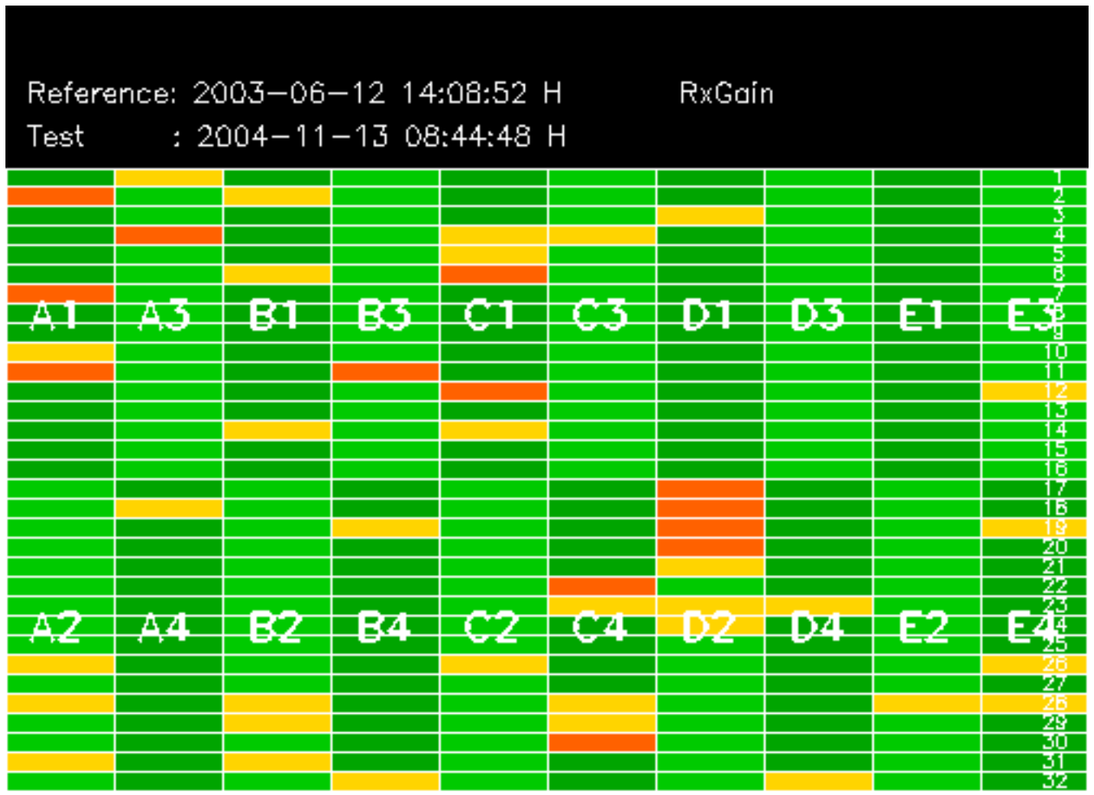

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.296678 Hz
−100Hz
+100Hz

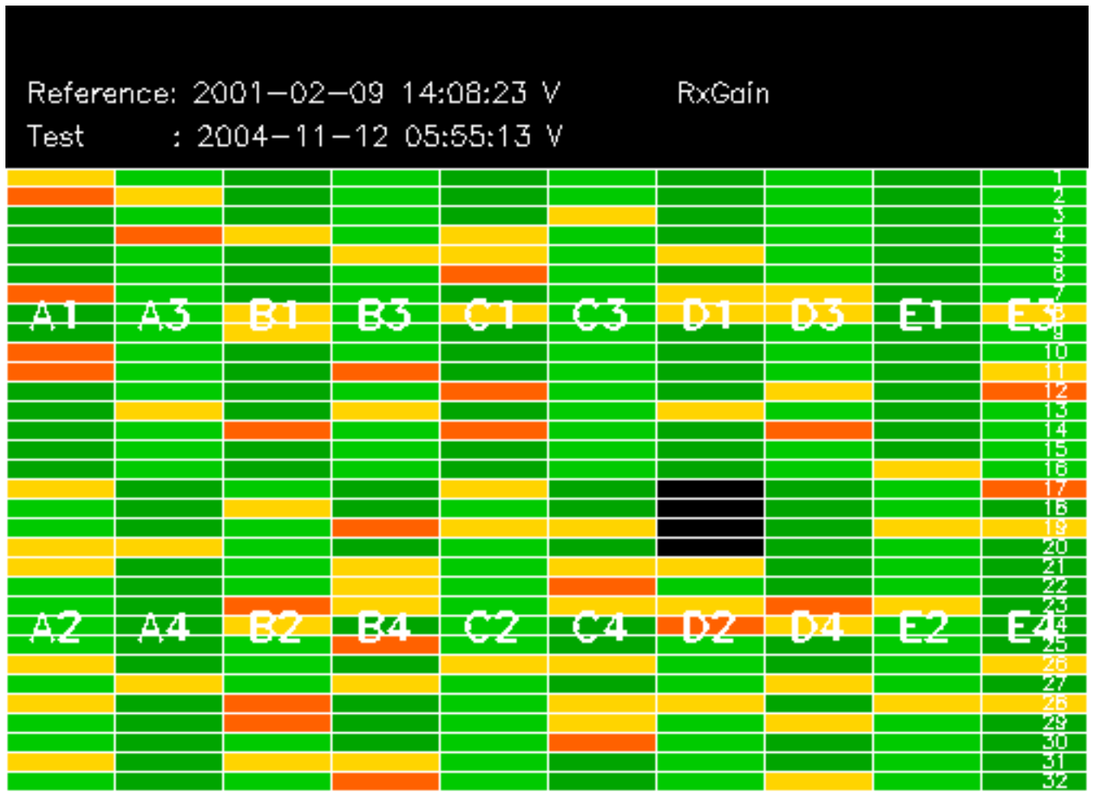

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −32.447551 Hz
−100Hz
+100Hz

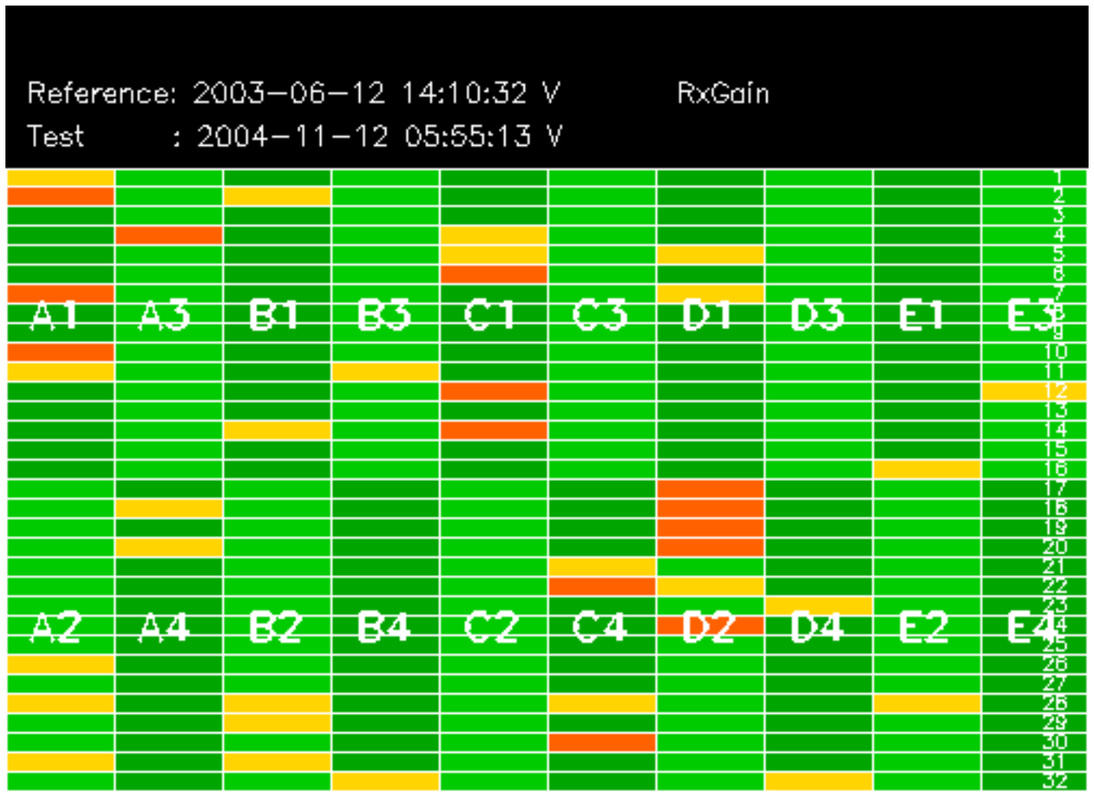
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

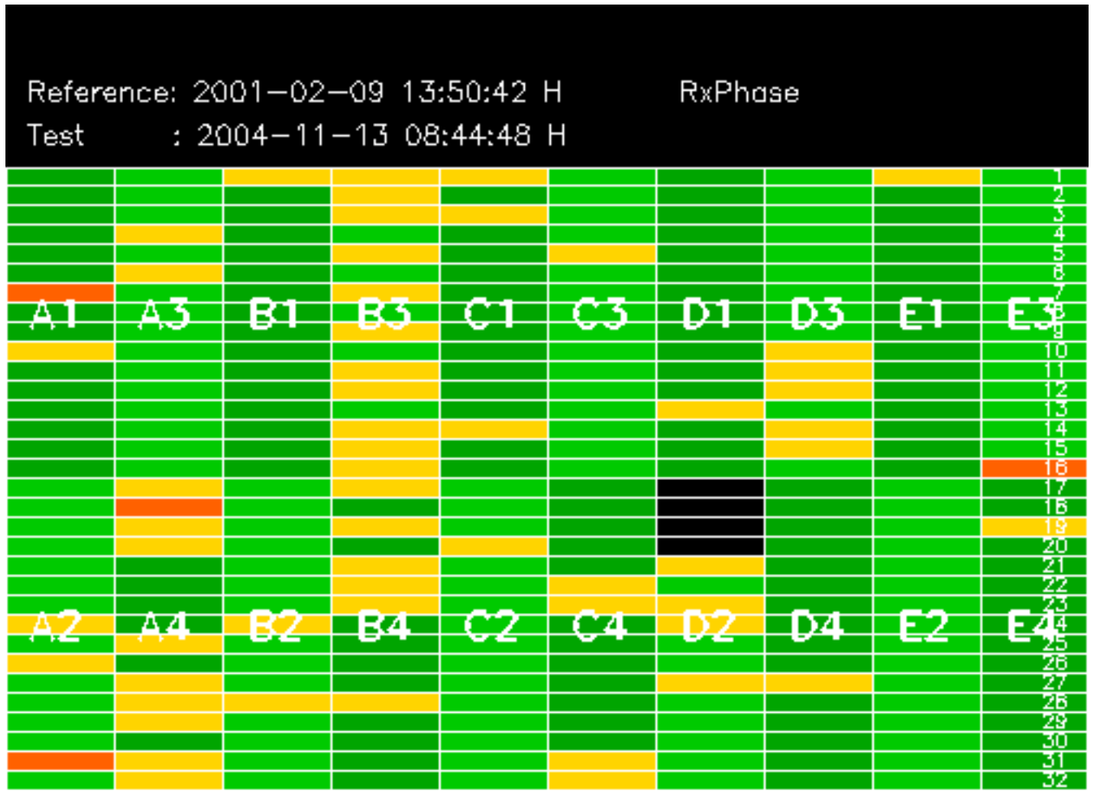
No anomalies observed.

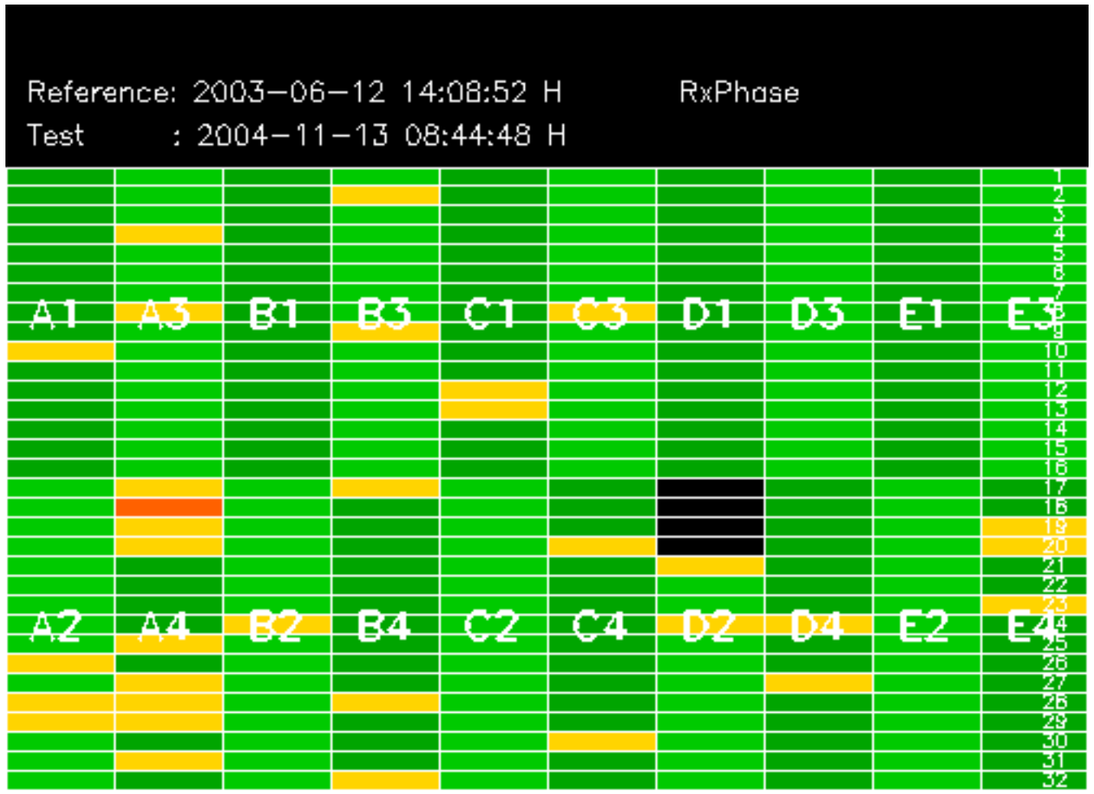

Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-11-13 08:44:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

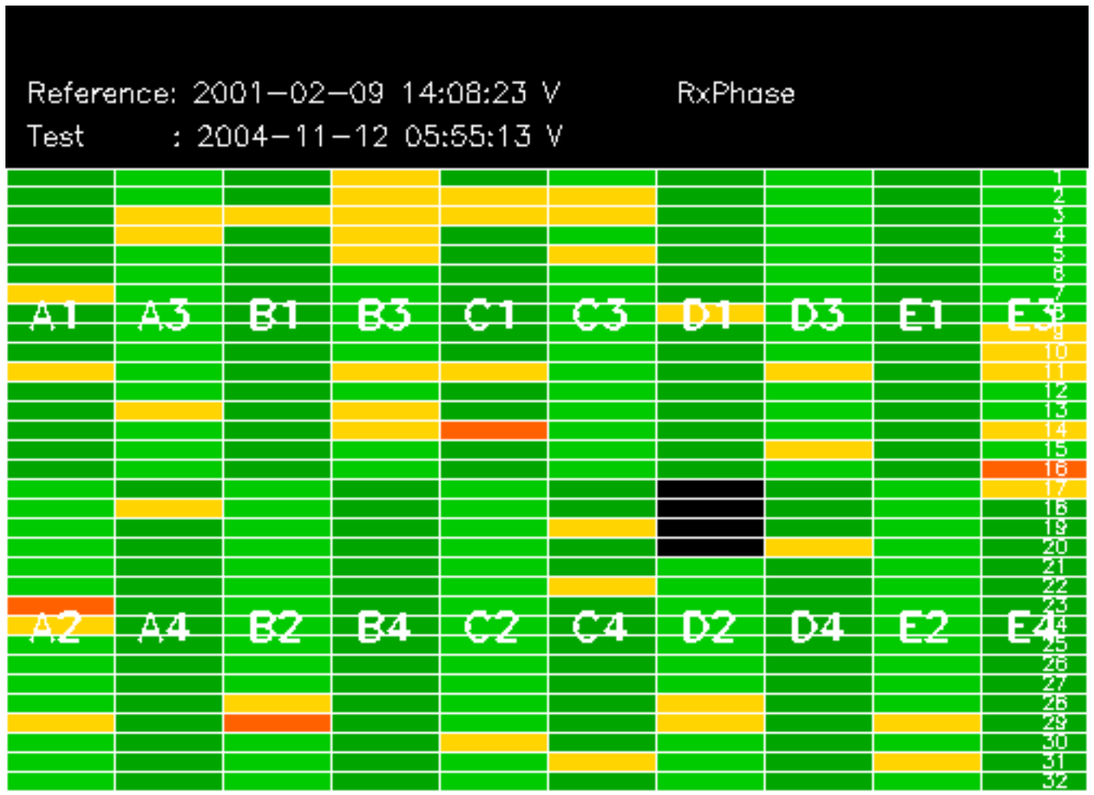

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-13 08:44:48 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

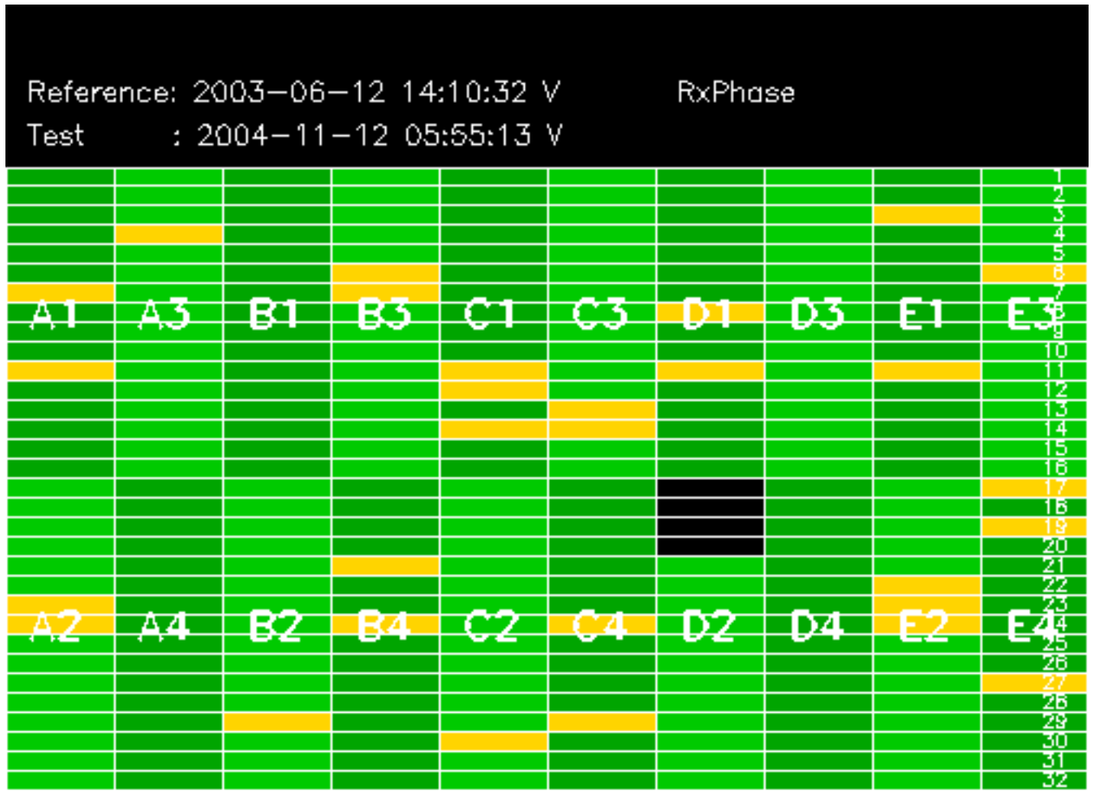

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-12 05:55:13 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

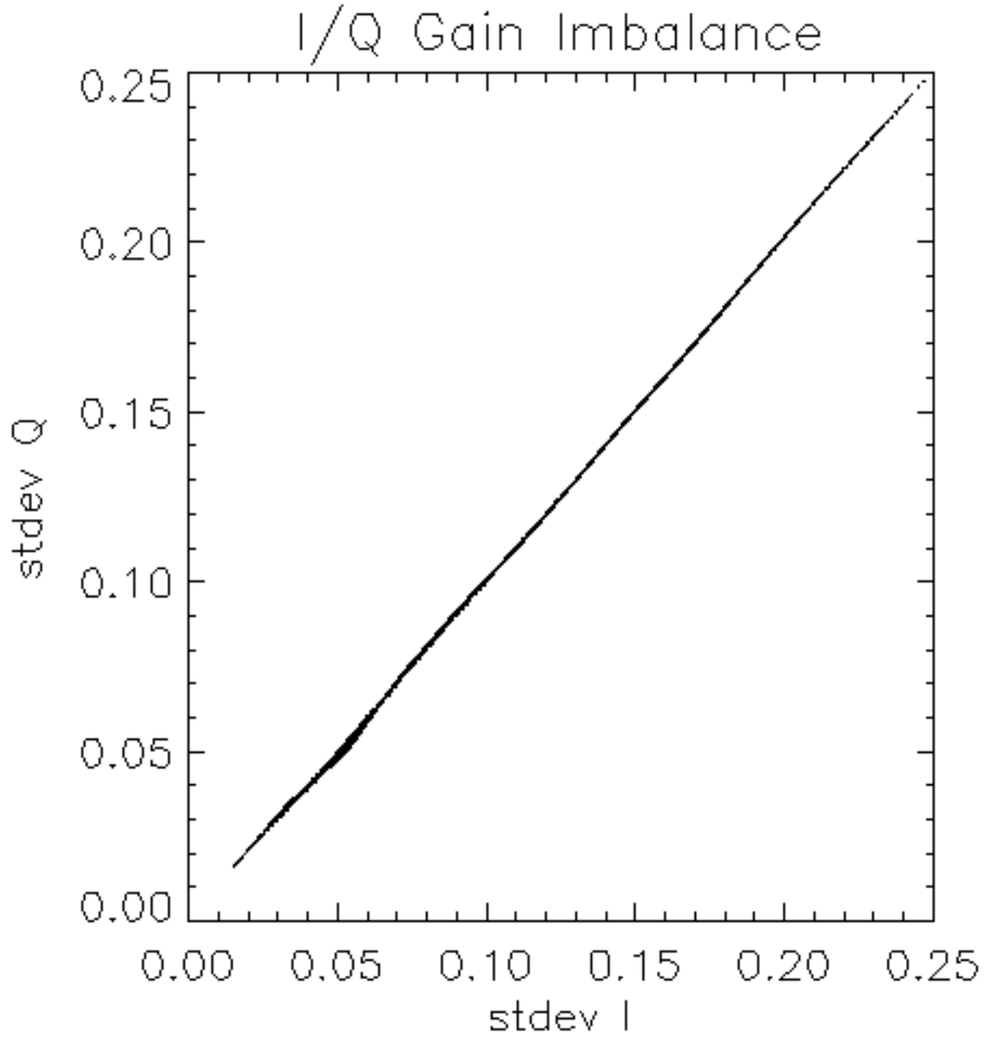

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-12 05:55:13 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

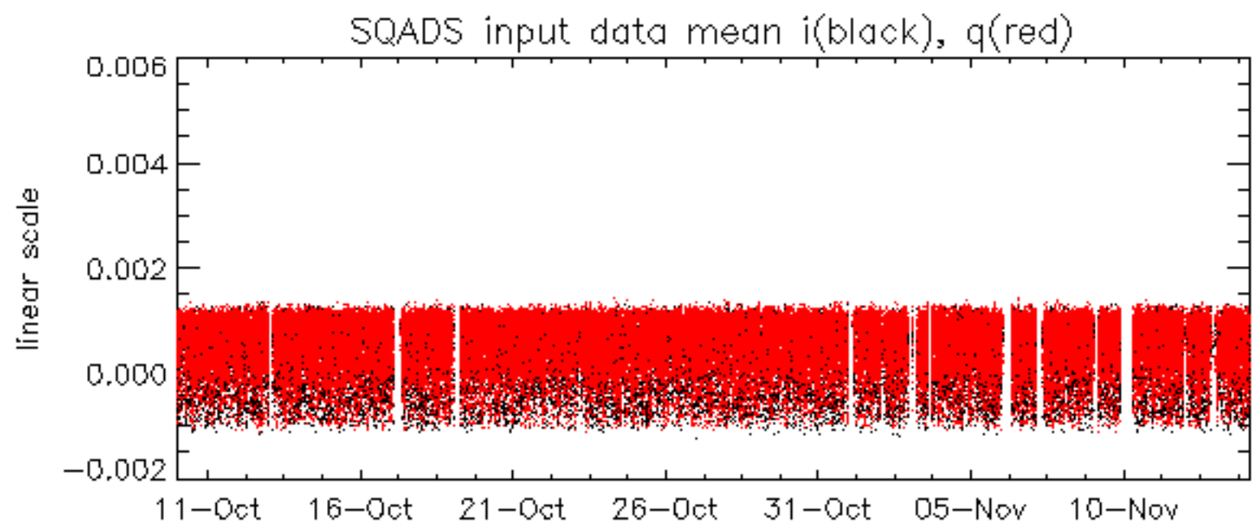

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-11-13 08:44:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

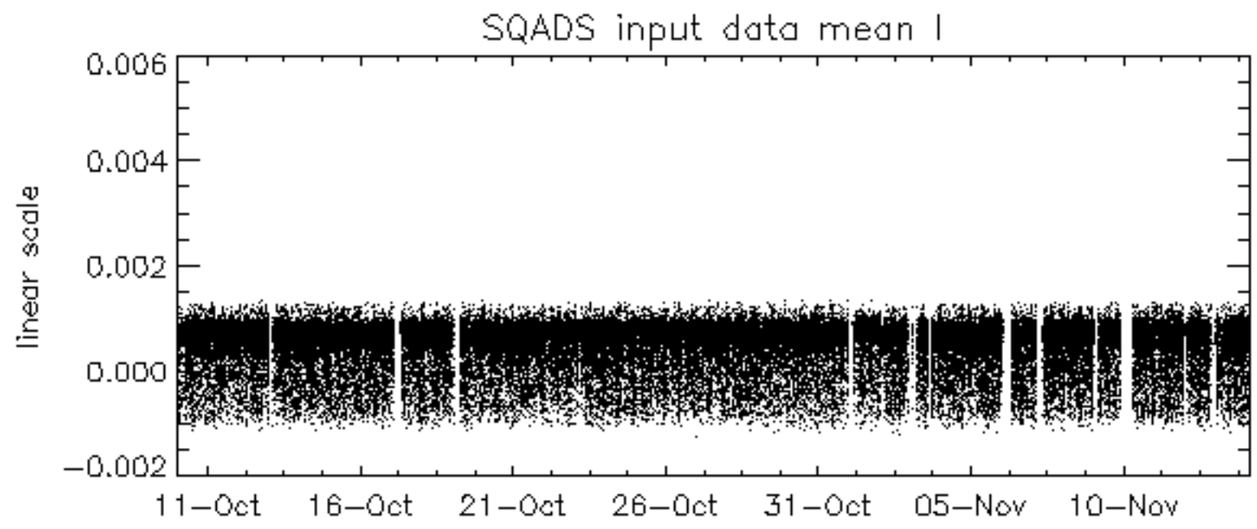

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-11-13 08:44:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

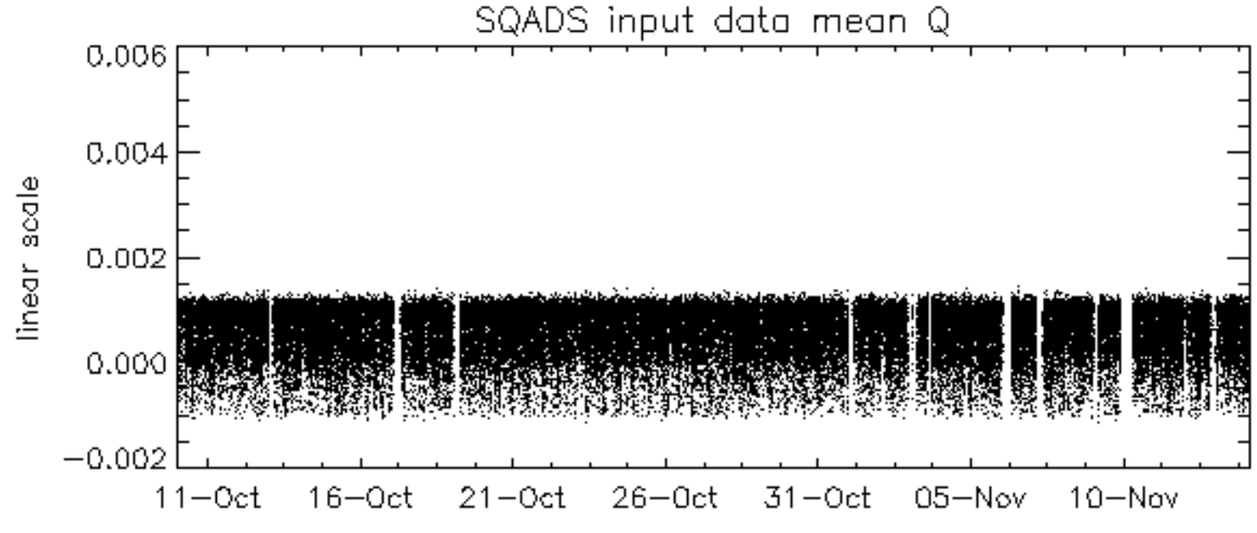

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-12 05:55:13 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

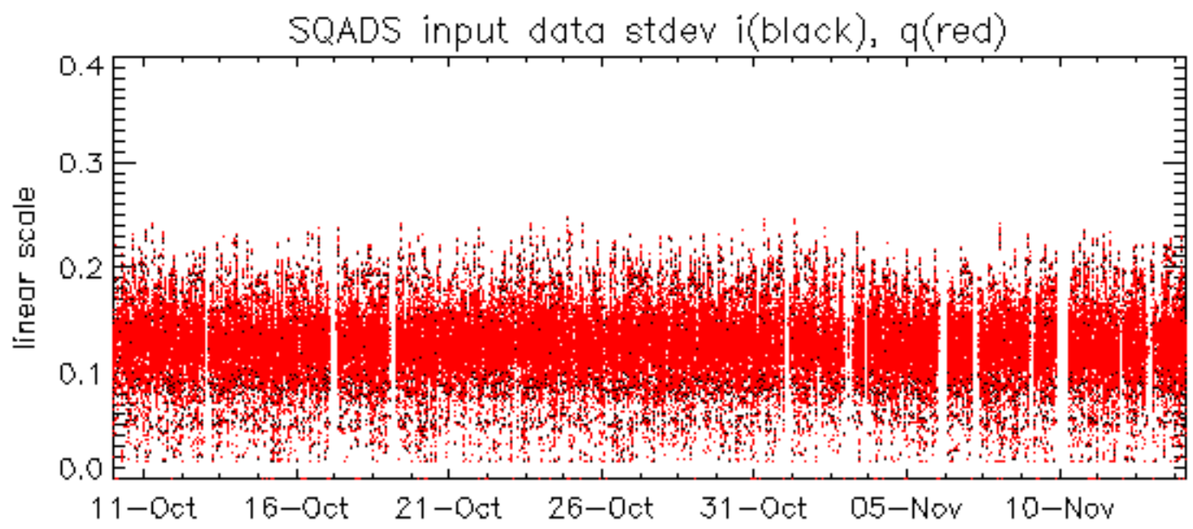

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-12 05:55:13 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

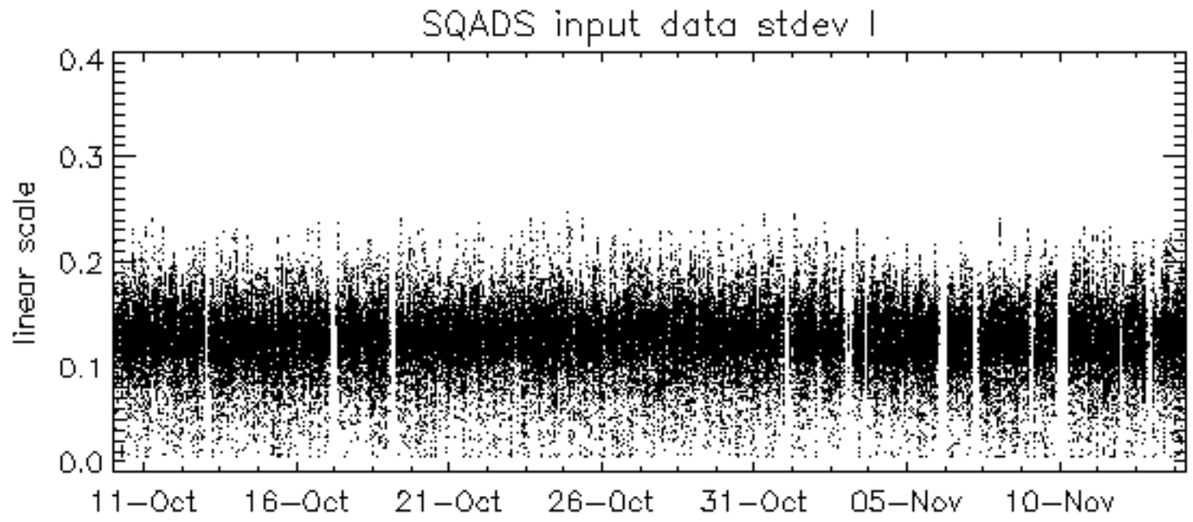

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

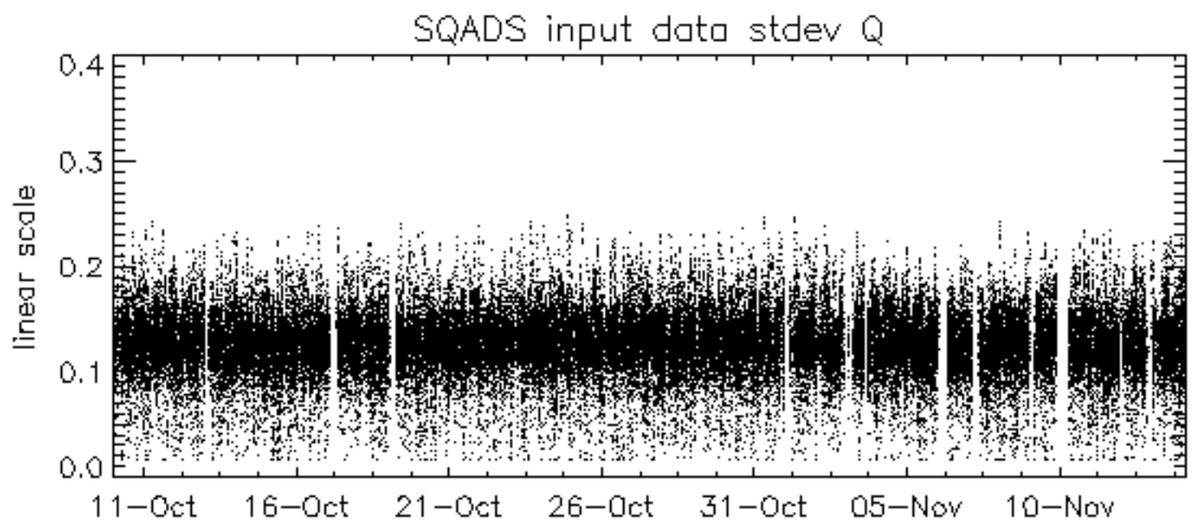

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

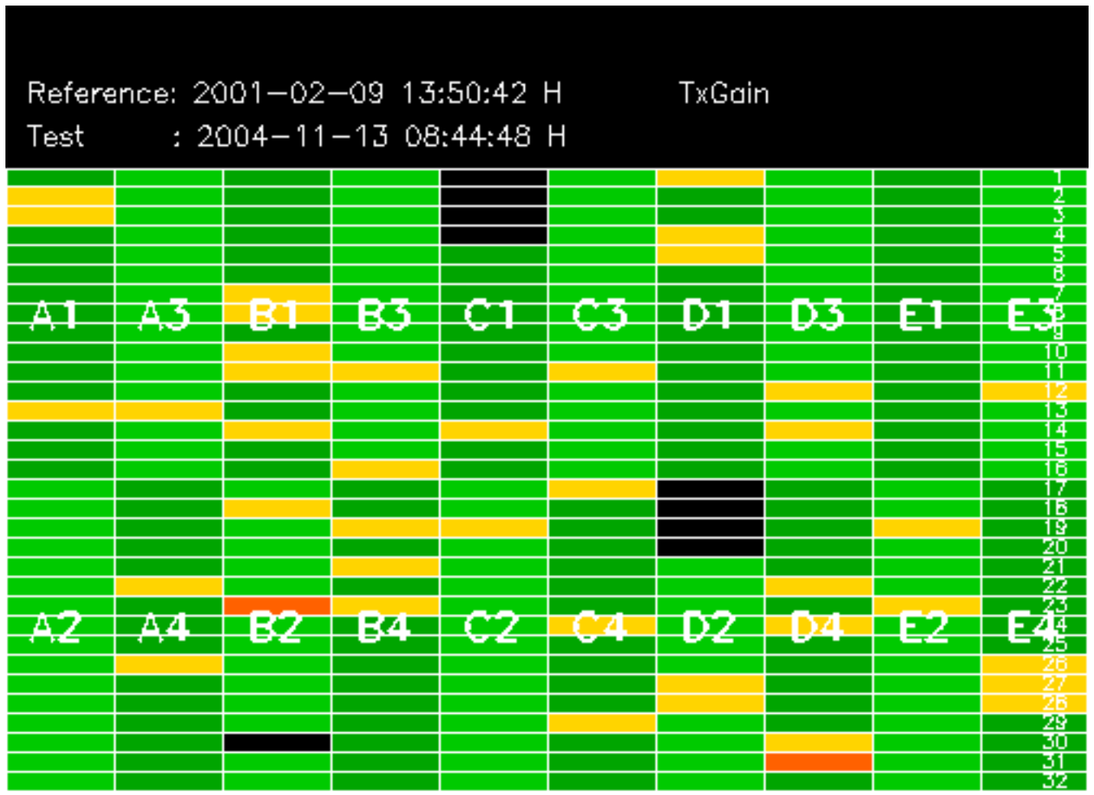

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

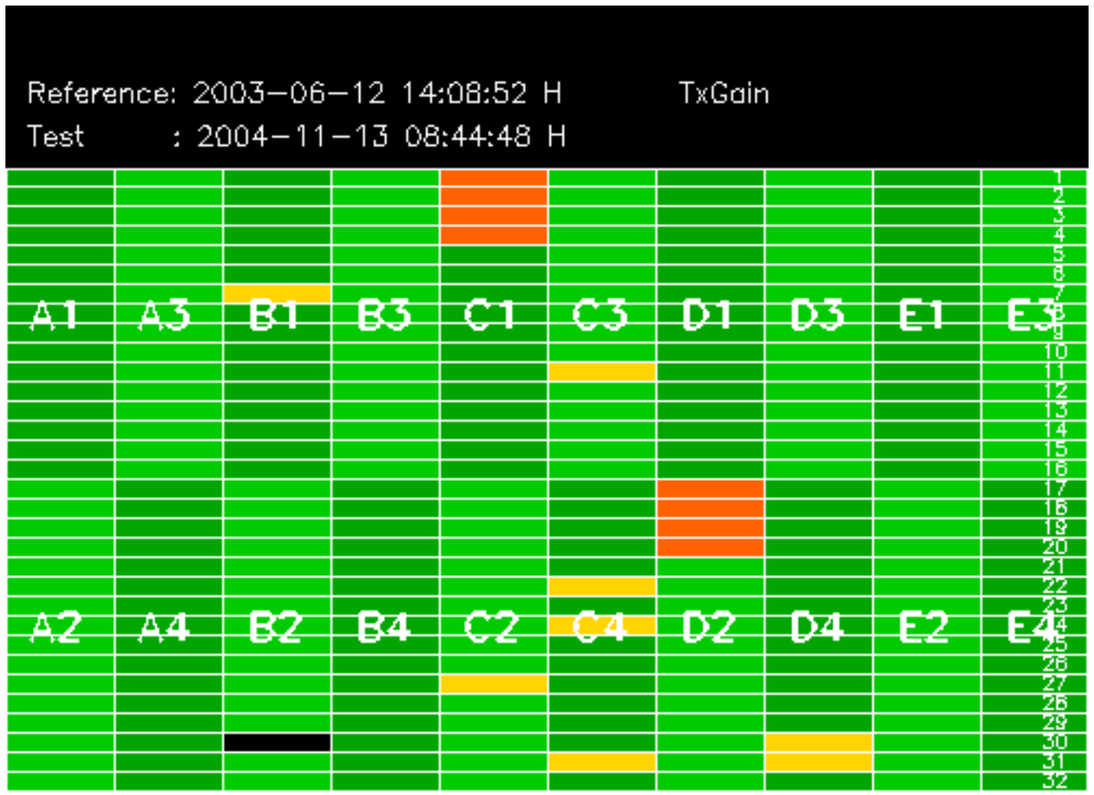

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

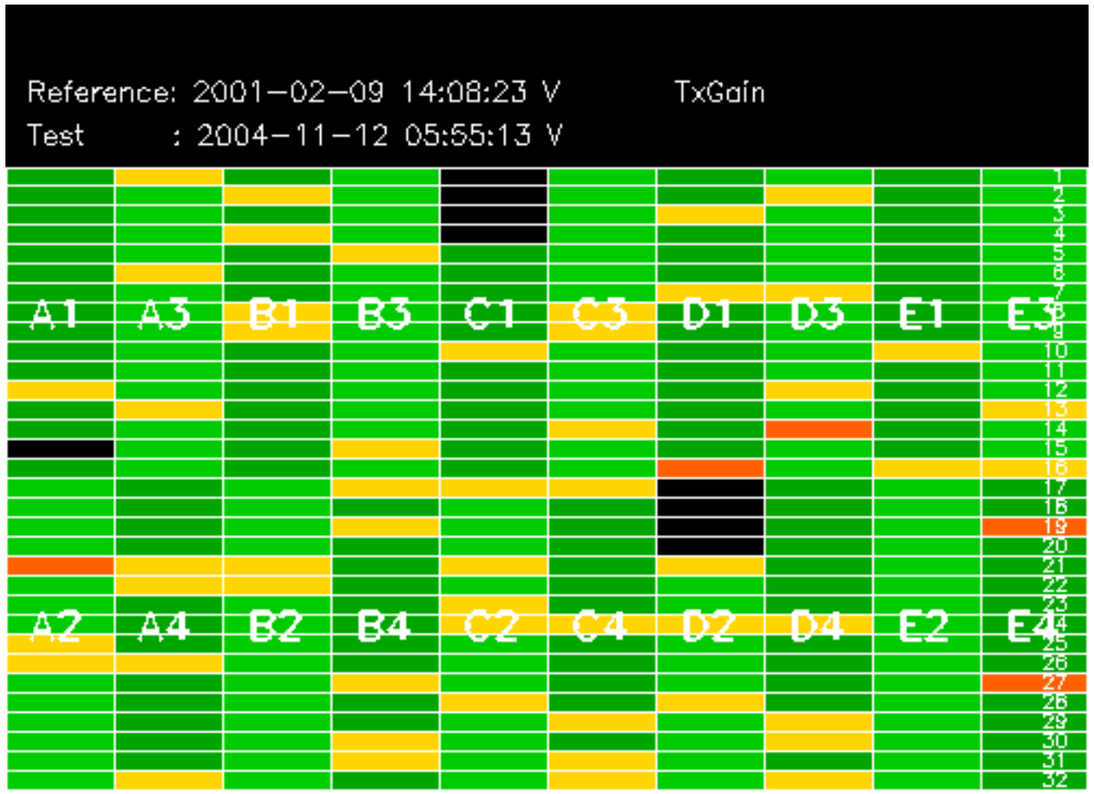

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

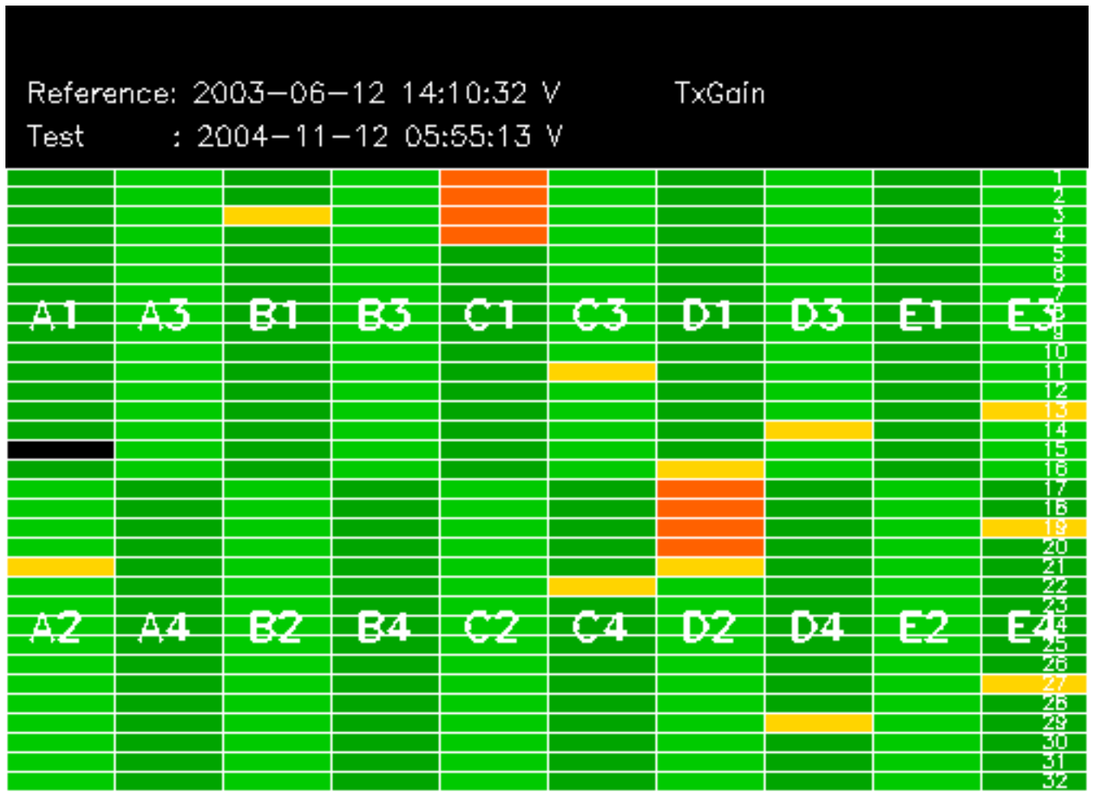

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

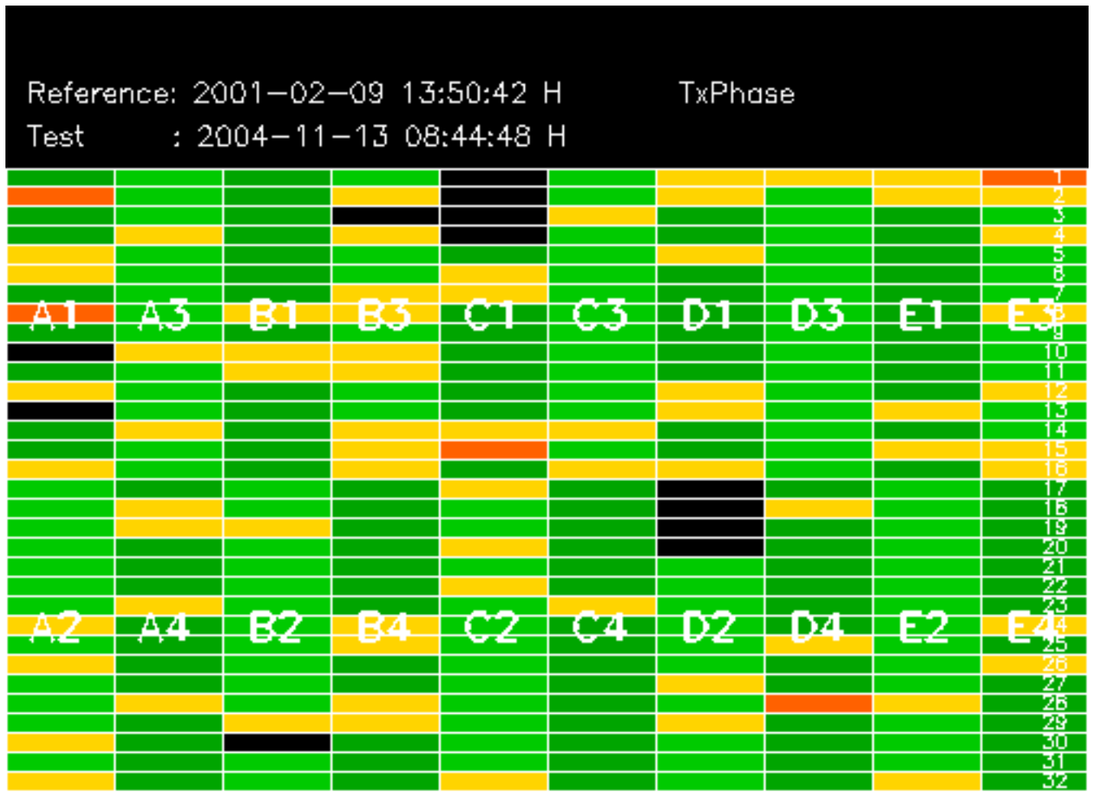

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov

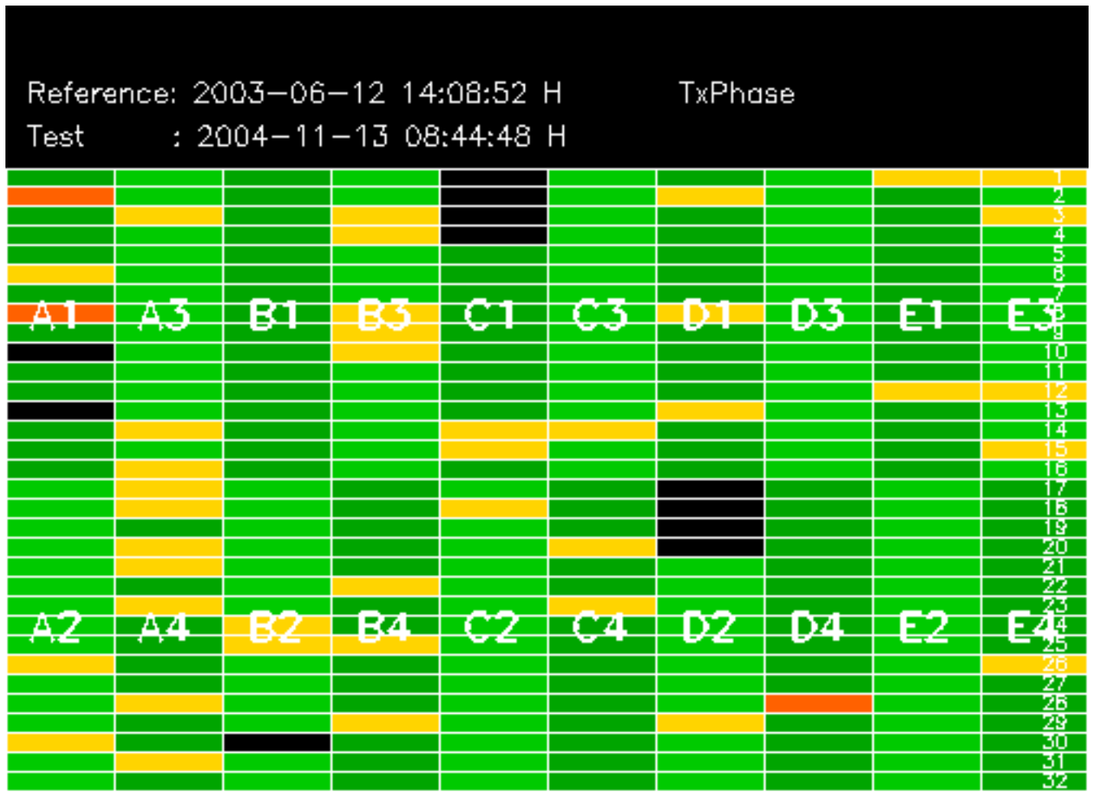

Reference: 2001-02-09 13:50:42 H
Test : 2004-11-13 08:44:48 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

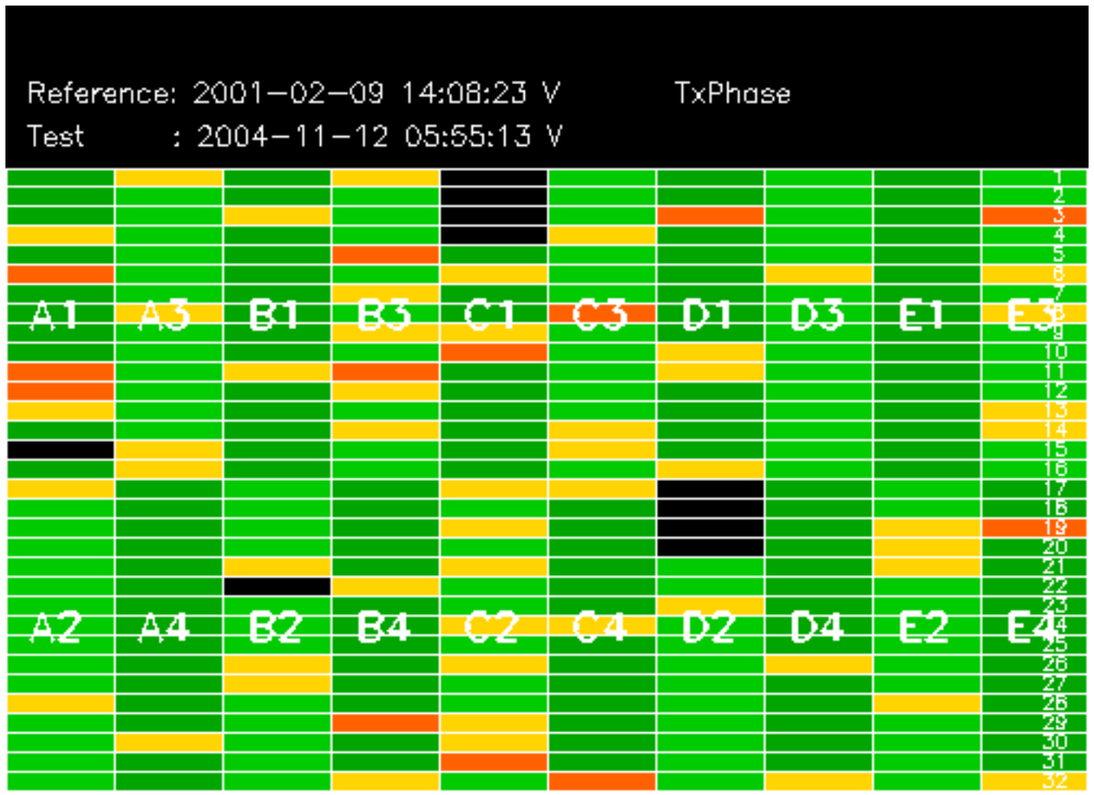

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-13 08:44:48 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

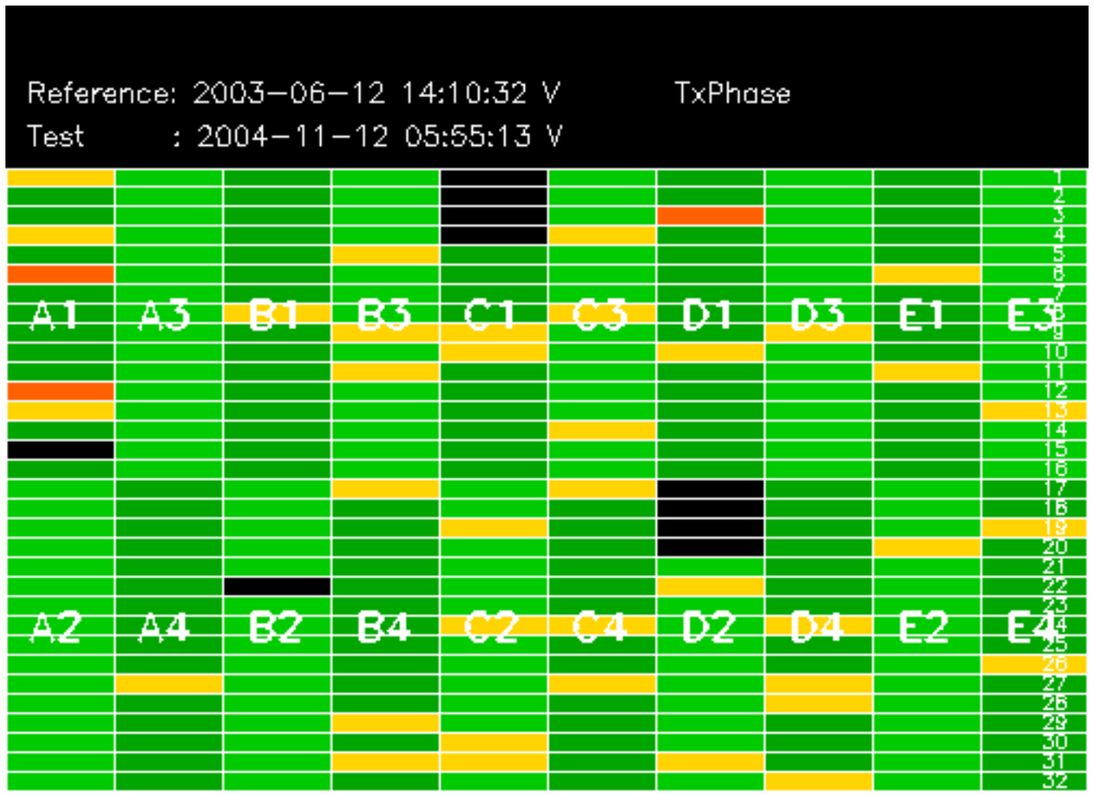

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-12 05:55:13 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

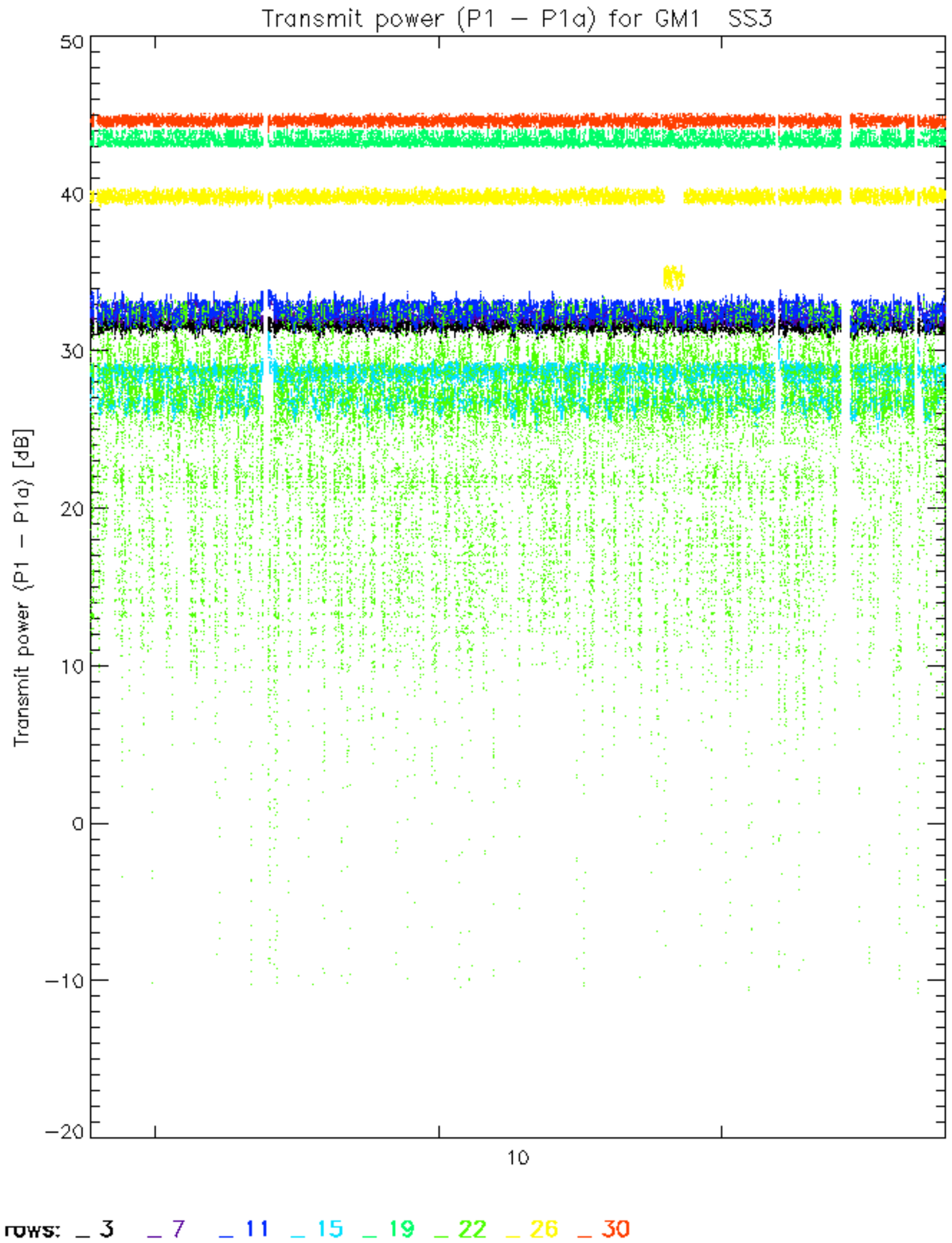

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-12 05:55:13 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

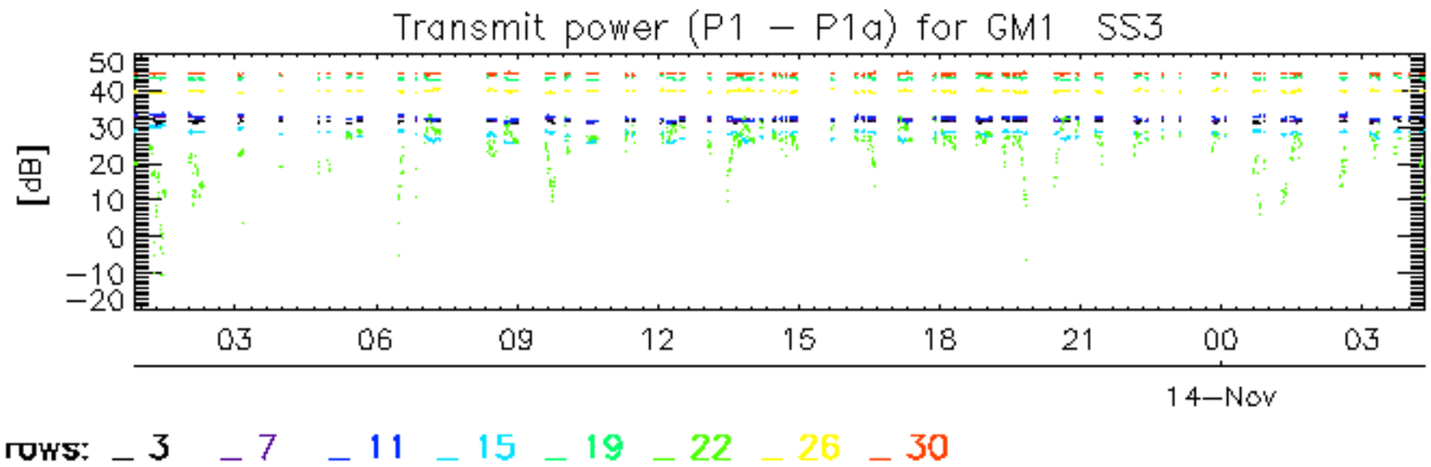

Reference: 2001-02-09 13:50:42 H
Test : 2004-11-13 08:44:48 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

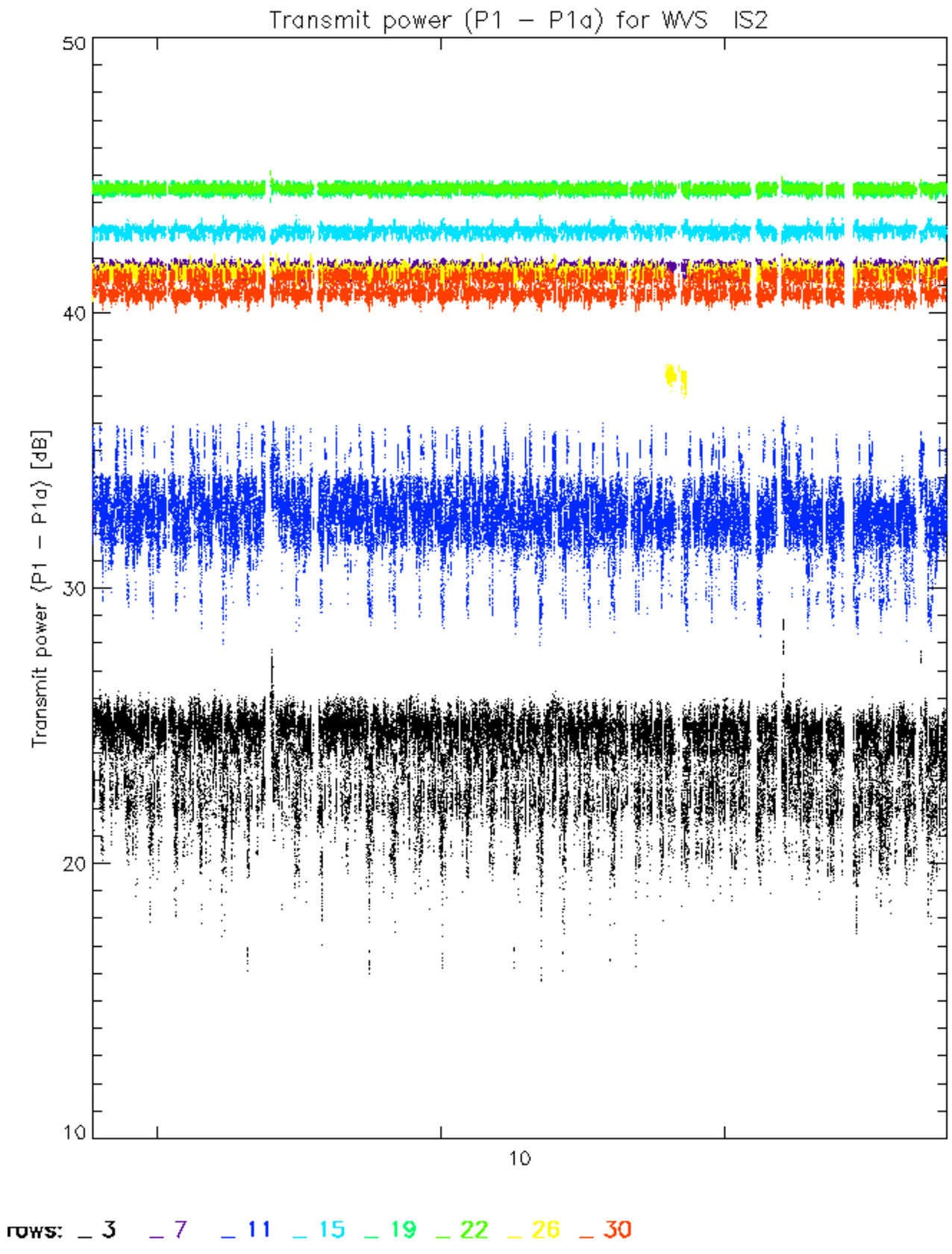

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-13 08:44:48 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

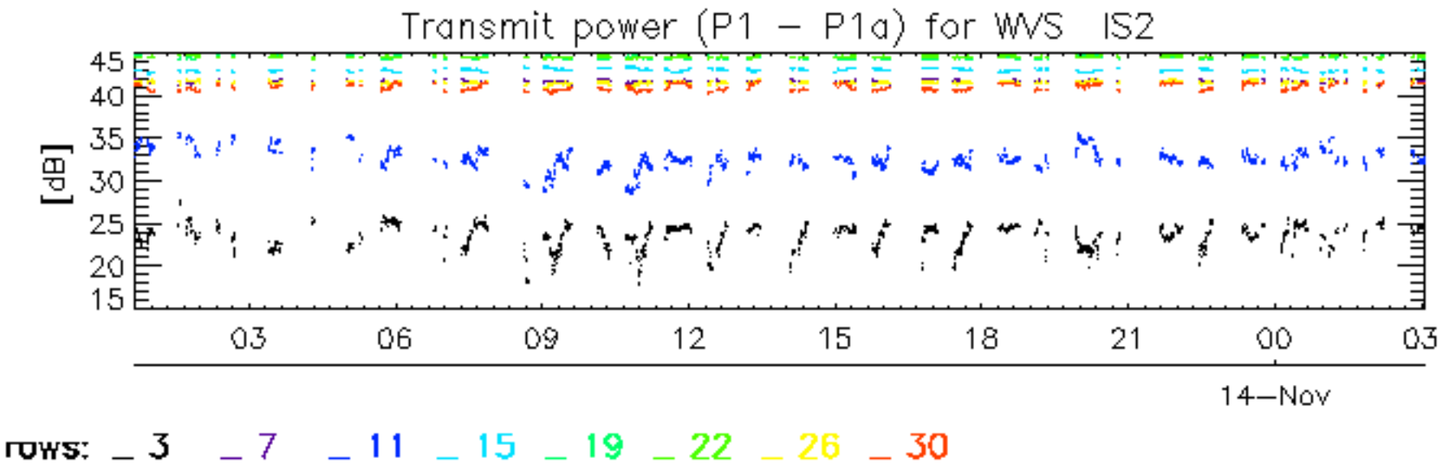

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-11-12 05:55:13 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-12 05:55:13 V
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


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
10
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
03
14–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
10
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
00
03
14—Nov
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.