PRELIMINARY REPORT OF 041213

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

last update on Mon Dec 13 11:07:09 GMT 2004

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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 - Auxiliary files

Summary of the auxiliary files used from 2004-12-12 00:00:00 to 2004-12-13 11:07:09

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	32	47	4	2	5
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	32	47	4	2	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	32	47	4	2	5
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	32	47	4	2	5

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	44	41	2	2	2
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	44	41	2	2	2
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	44	41	2	2	2
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	44	41	2	2	2

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

2.4 - 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	20041211 204906
H	20041212 183653

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	-3.469536	0.029605	-0.021207
7	P1	-3.169549	0.039097	0.286671
11	P1	-4.627170	0.045791	-0.079053
15	P1	-5.659433	0.033609	-0.047021
19	P1	-3.634263	0.005180	-0.045782
22	P1	-4.581132	0.016151	0.012644
26	P1	-4.922204	0.016896	-0.037065
30	P1	-7.095348	0.014349	-0.041891
3	P1	-15.964621	0.118231	0.040258
7	P1	-15.151395	0.544717	-1.649671
11	P1	-20.694115	0.485845	0.010355
15	P1	-11.621063	0.089789	0.080835
19	P1	-14.122983	0.029255	-0.088928
22	P1	-16.164852	0.444261	0.167544
26	P1	-17.799549	0.264719	0.005175
30	P1	-17.914064	0.298655	0.050188

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.371059	0.086003	0.009613
7	P2	-22.613674	0.141950	0.031161
11	P2	-14.985896	0.134872	0.139437
15	P2	-7.174354	0.110374	0.006825
19	P2	-9.723931	0.137887	0.031769
22	P2	-17.211472	0.100002	0.046737

26	P2	-16.524227	0.107431	-0.007279
30	P2	-19.008940	0.083164	0.105919

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210262	0.006889	-0.010865
7	P3	-8.210262	0.006889	-0.010861
11	P3	-8.210259	0.006888	-0.010870
15	P3	-8.210258	0.006888	-0.010872
19	P3	-8.210258	0.006888	-0.010878
22	P3	-8.210255	0.006888	-0.010888
26	P3	-8.210253	0.006888	-0.010900
30	P3	-8.210110	0.006888	-0.010939

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	-2.812190	0.010863	0.041460
3	P1	-10.596110	0.054727	0.300306

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.066484	0.038054	NaN

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.049726	0.003037	NaN

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	0.000441552
	stdev	2.41109e-07
MEAN Q	mean	0.000499595
	stdev	2.55044e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125491
	stdev	0.00100610
STDEV Q	mean	0.125729
	stdev	0.00101525

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)

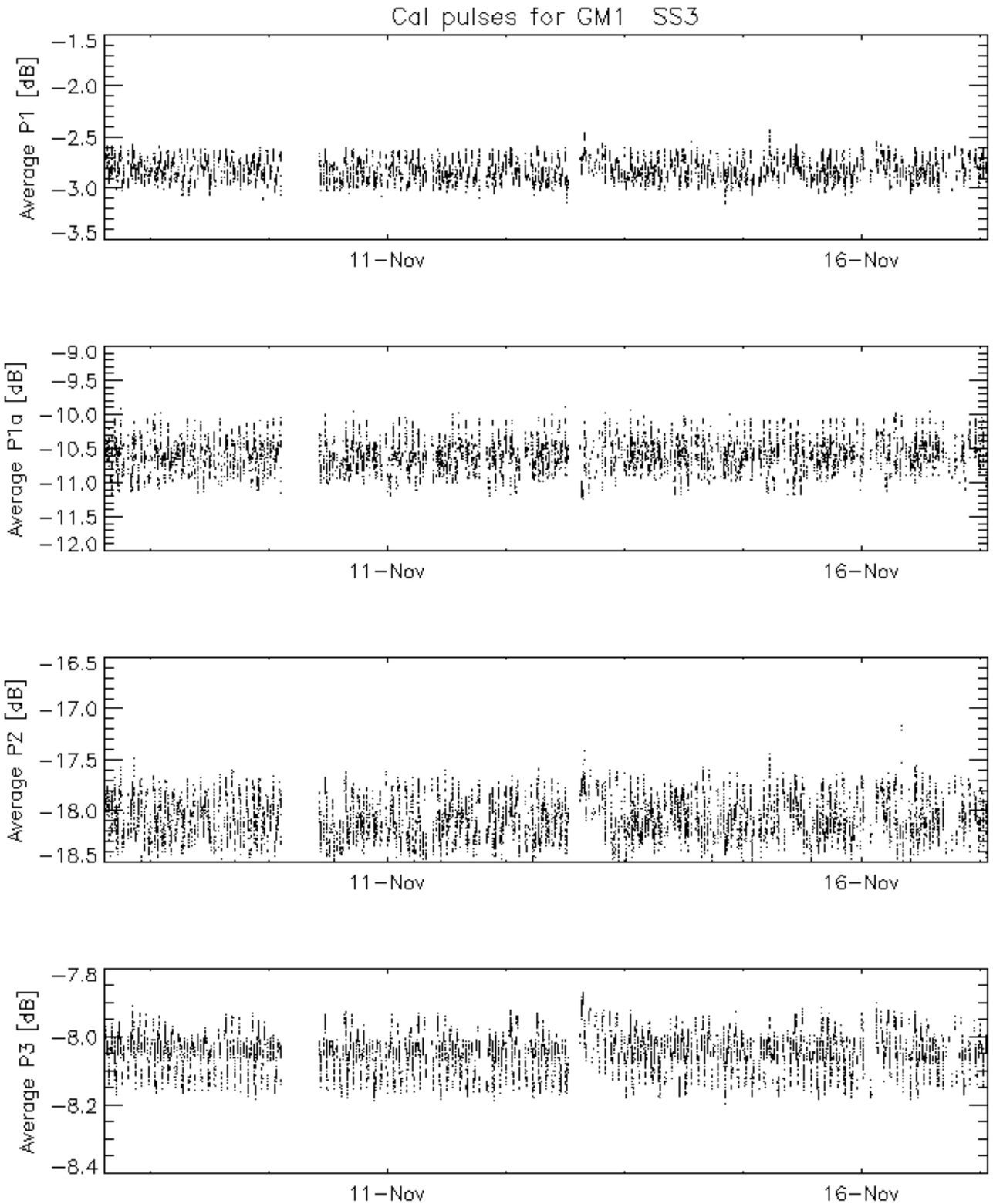
Acsending
☒
Descending

6.5 - Absolute Doppler for GM1

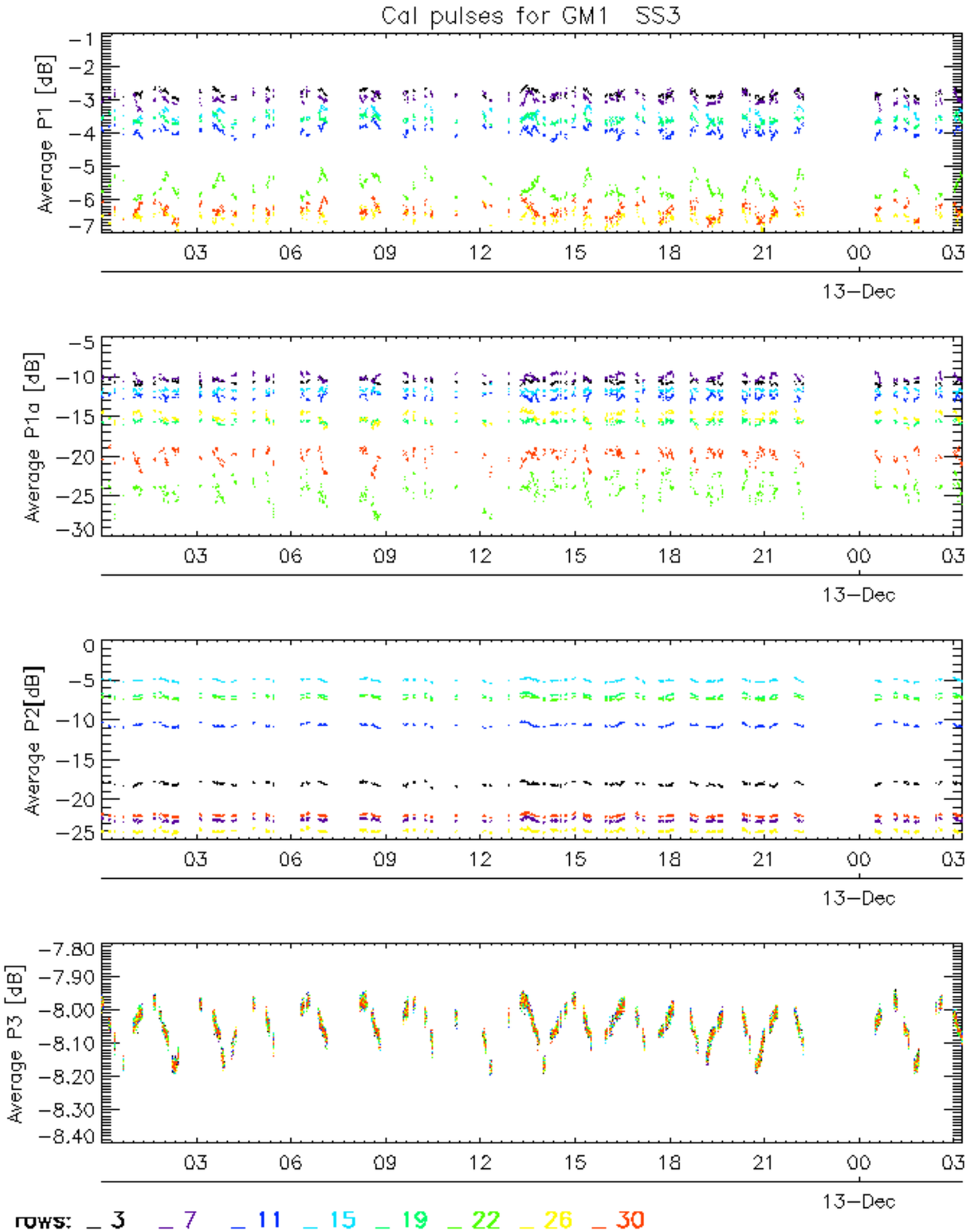
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

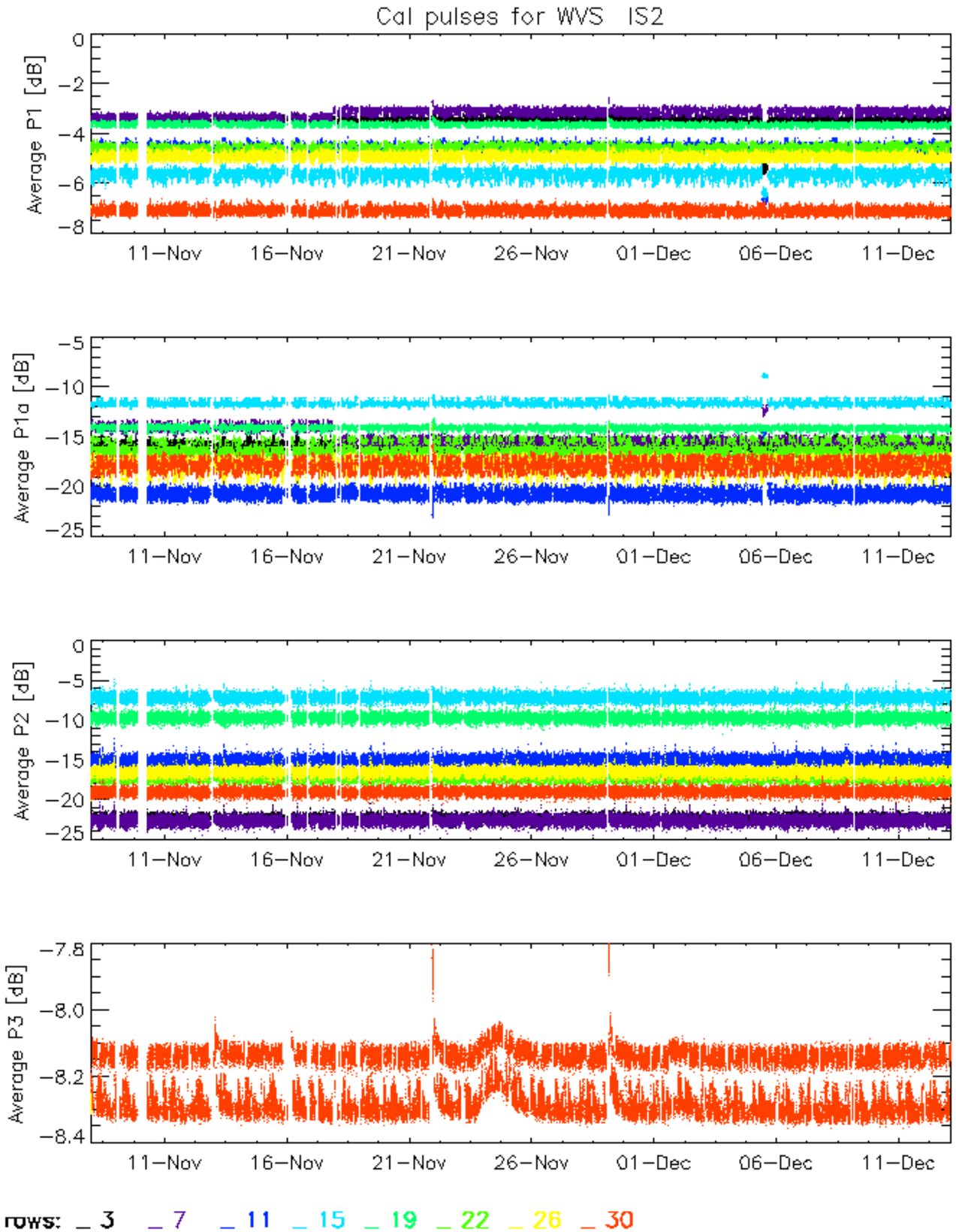
6.6 - Doppler evolution versus ANX for GM1

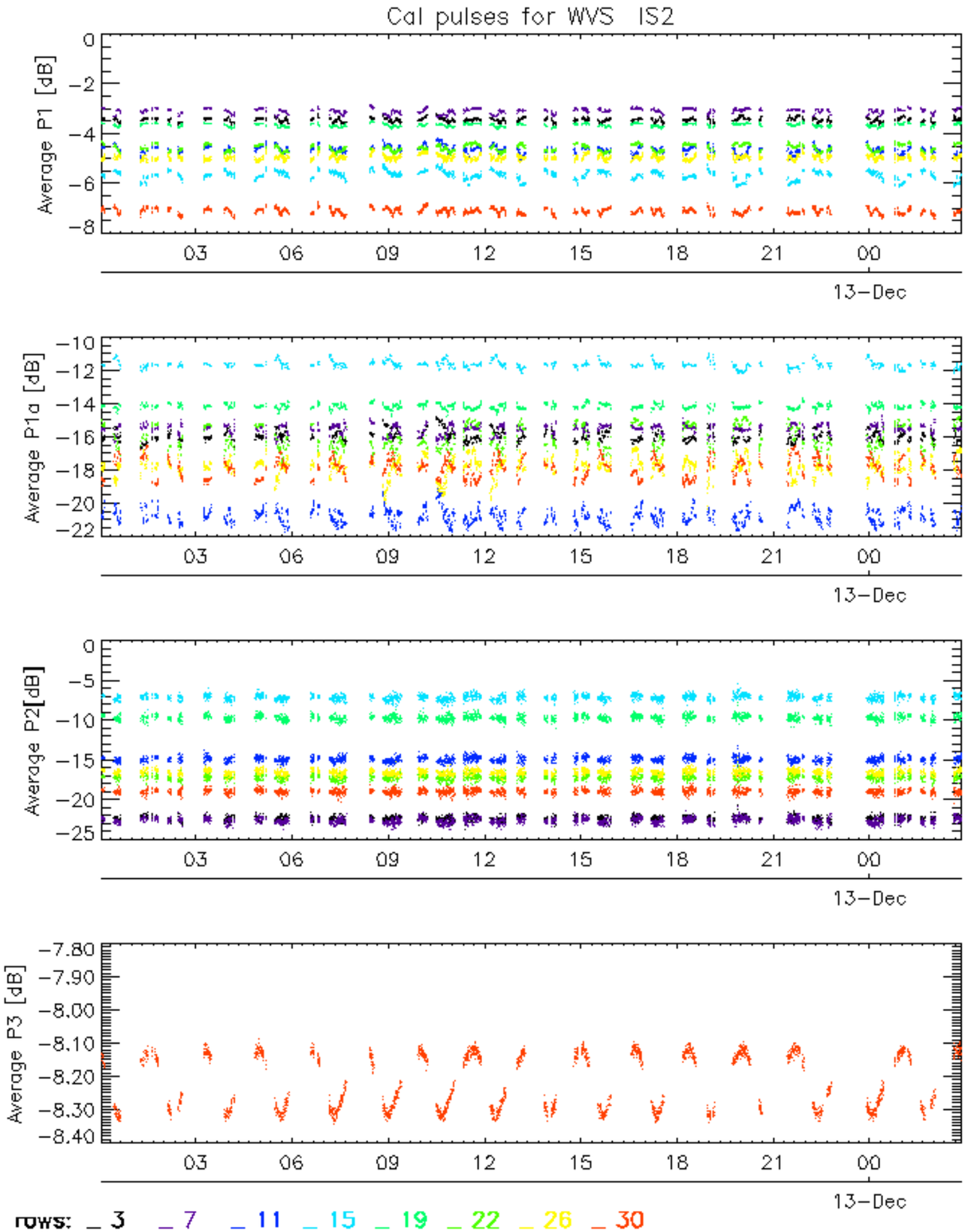
Evolution Doppler error versus ANX
☒


Cal pulses for GM1 SS3
Average P1 [dB]
−1.5
−2.0
−2.5
−3.0
−3.5
11−Nov
16−Nov
Average P1a [dB]
−9.0
−9.5
−10.0
−10.5
−11.0
−11.5
−12.0
11−Nov
16−Nov
Average P2 [dB]
−16.5
−17.0
−17.5
−18.0
−18.5
11−Nov
16−Nov
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
11−Nov
16−Nov

rows: _ 3

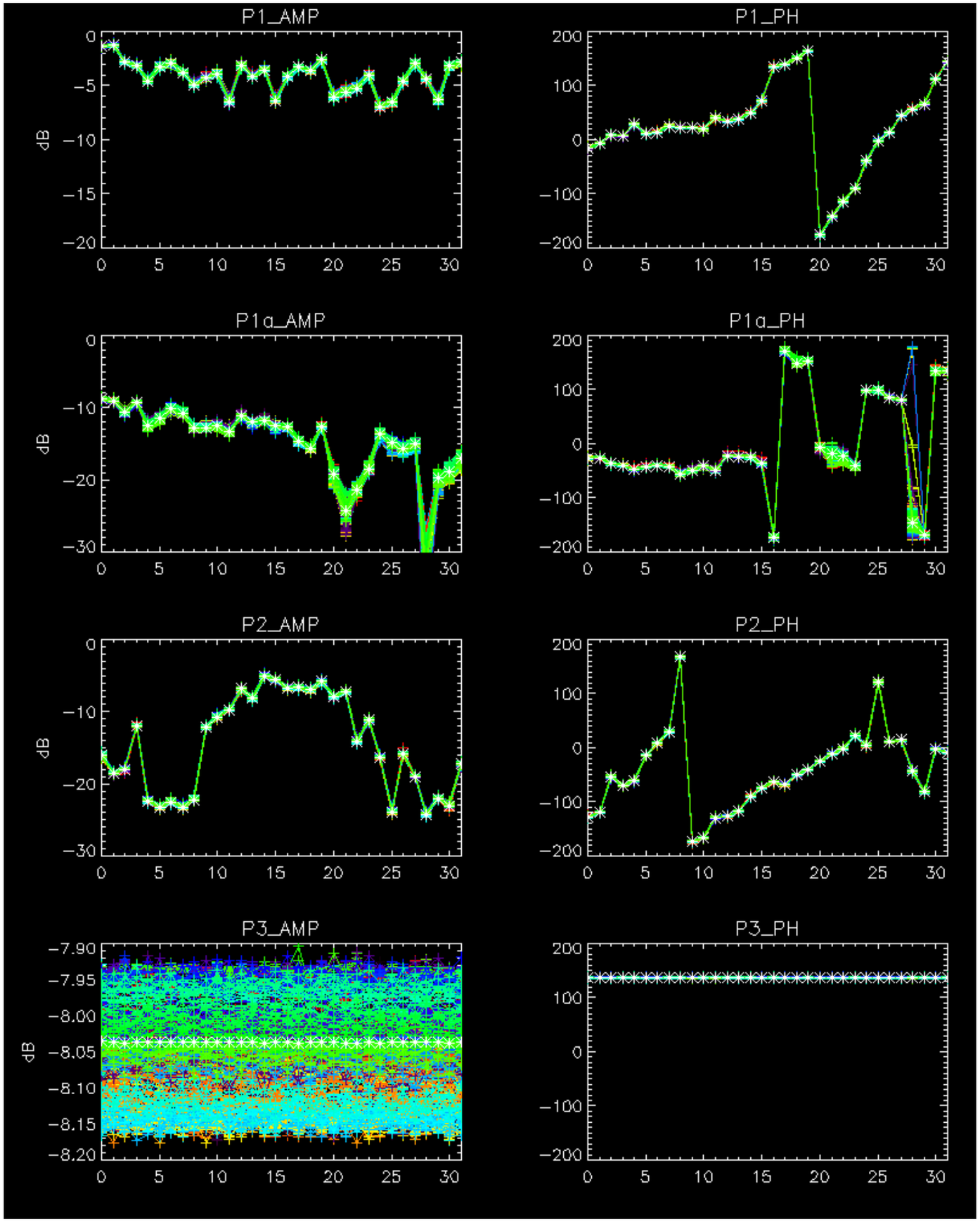

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
13−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
13−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
13−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

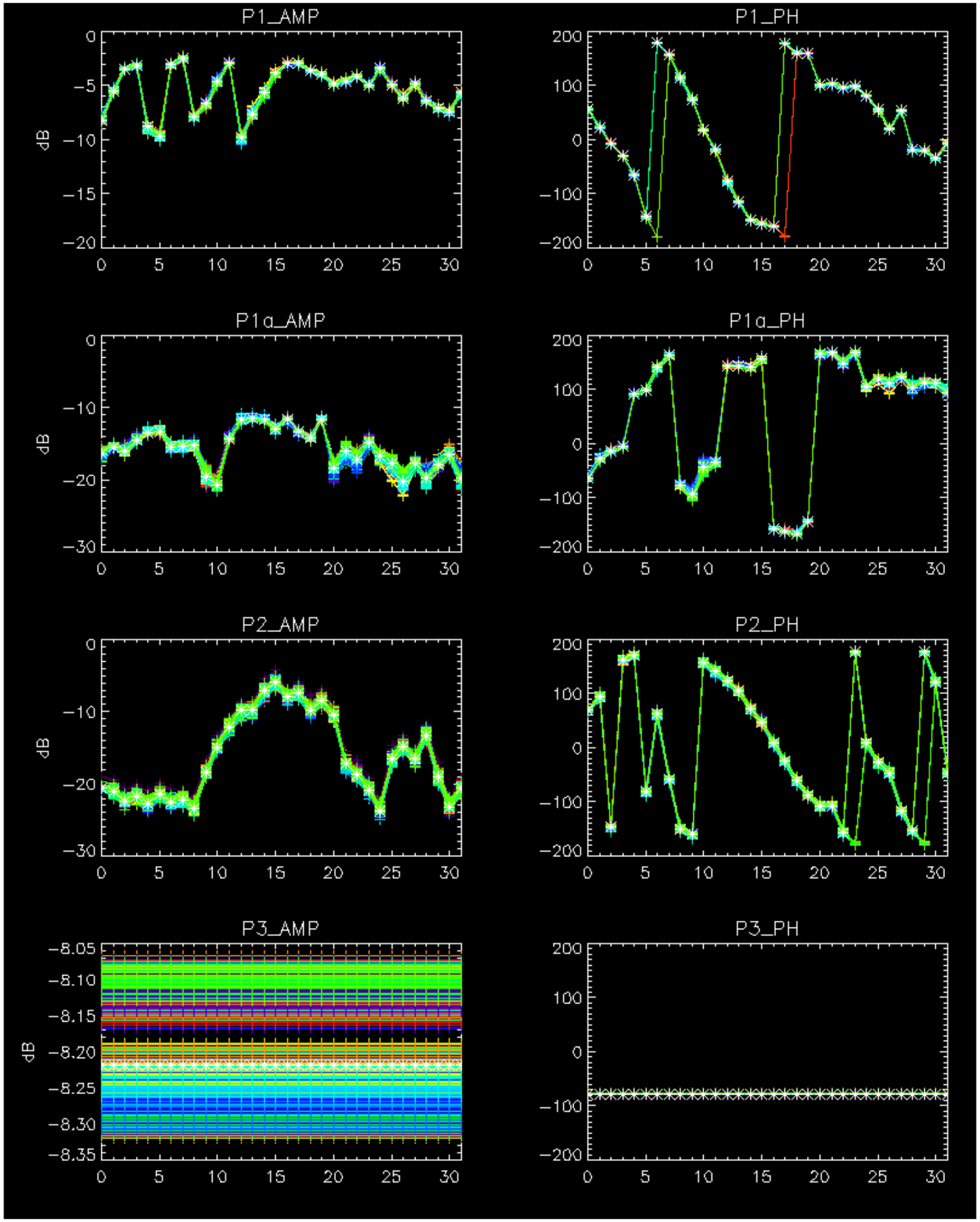

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 26 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
00
13−Dec
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 on available browse products

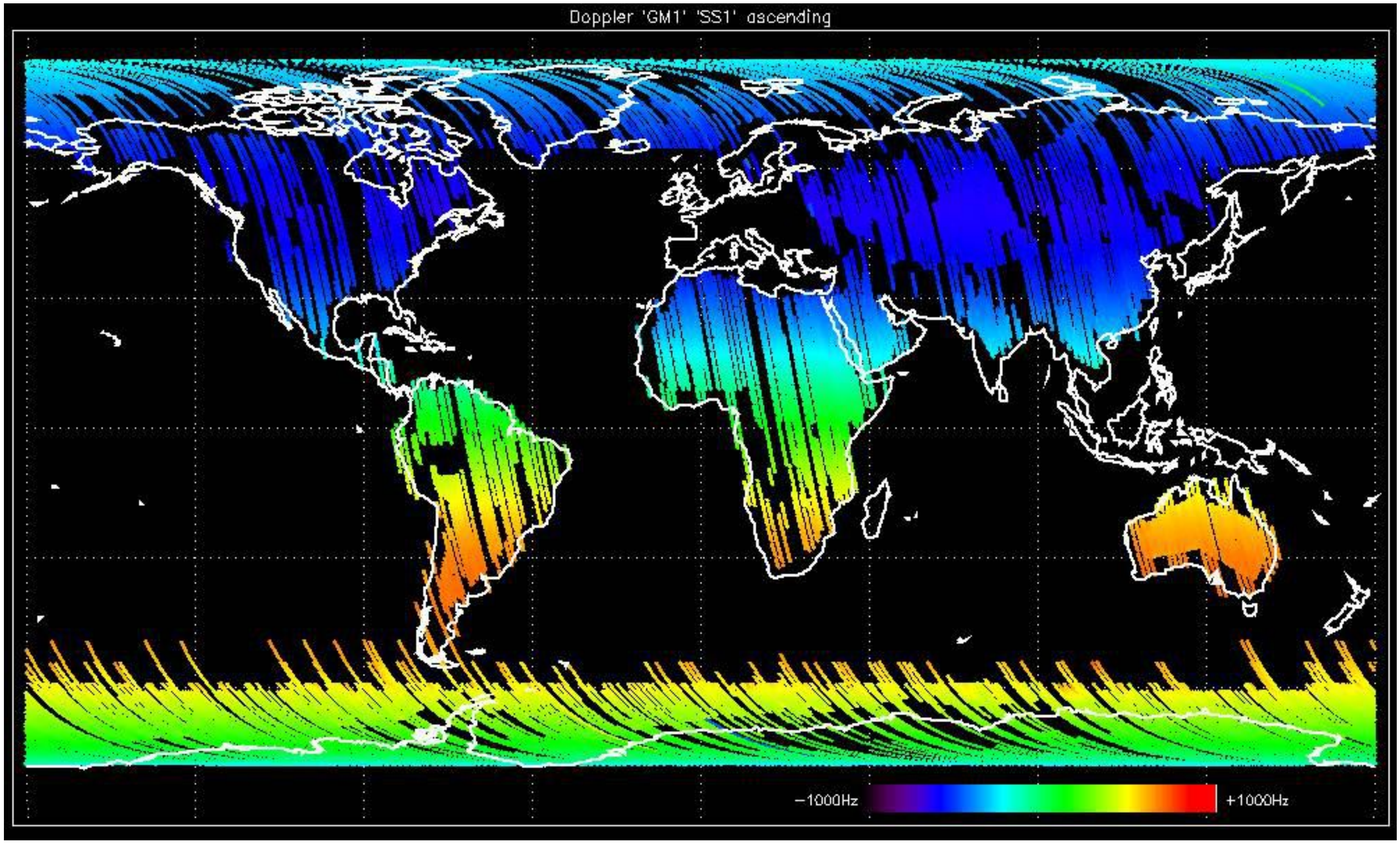
No anomalies observed.

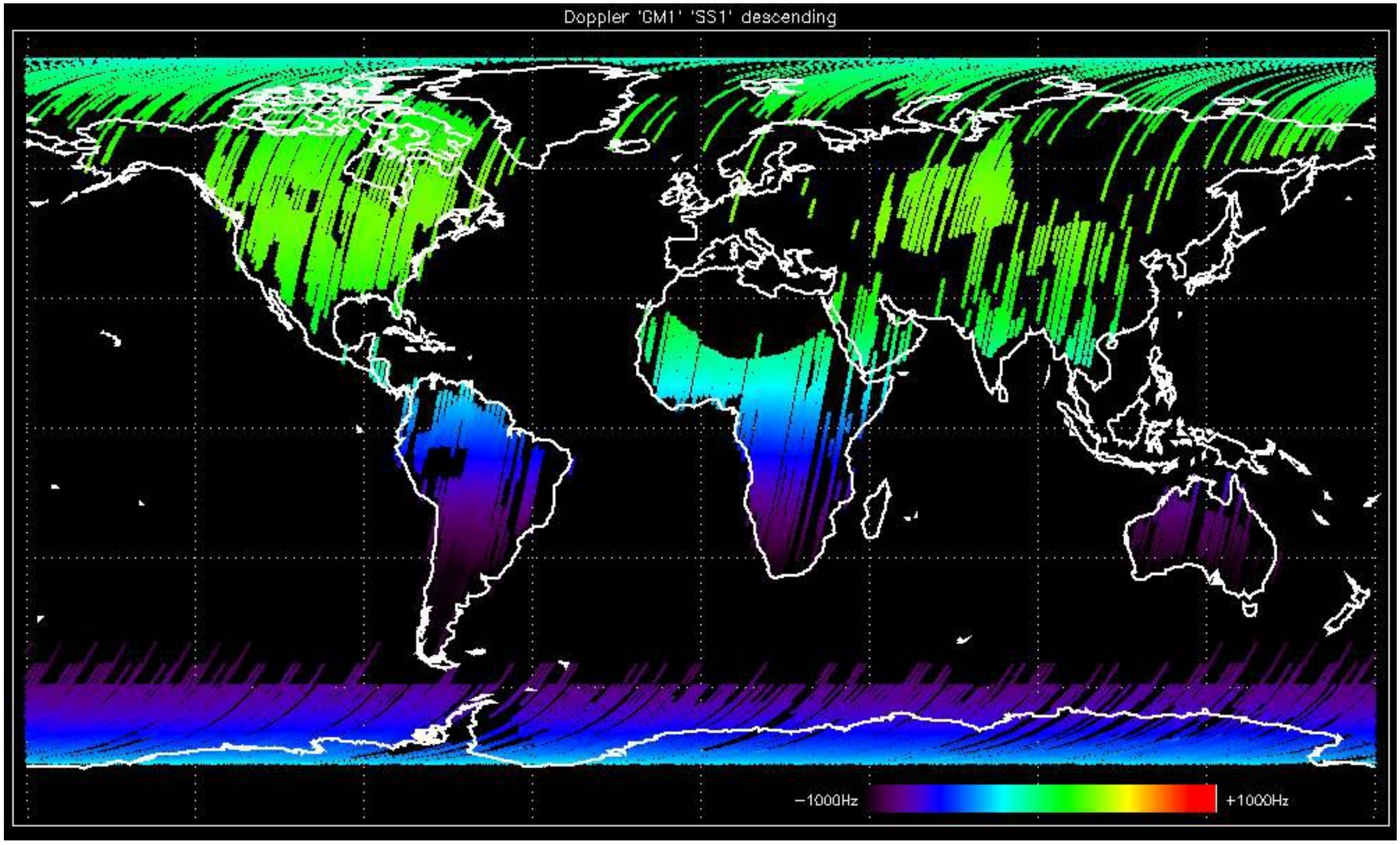

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

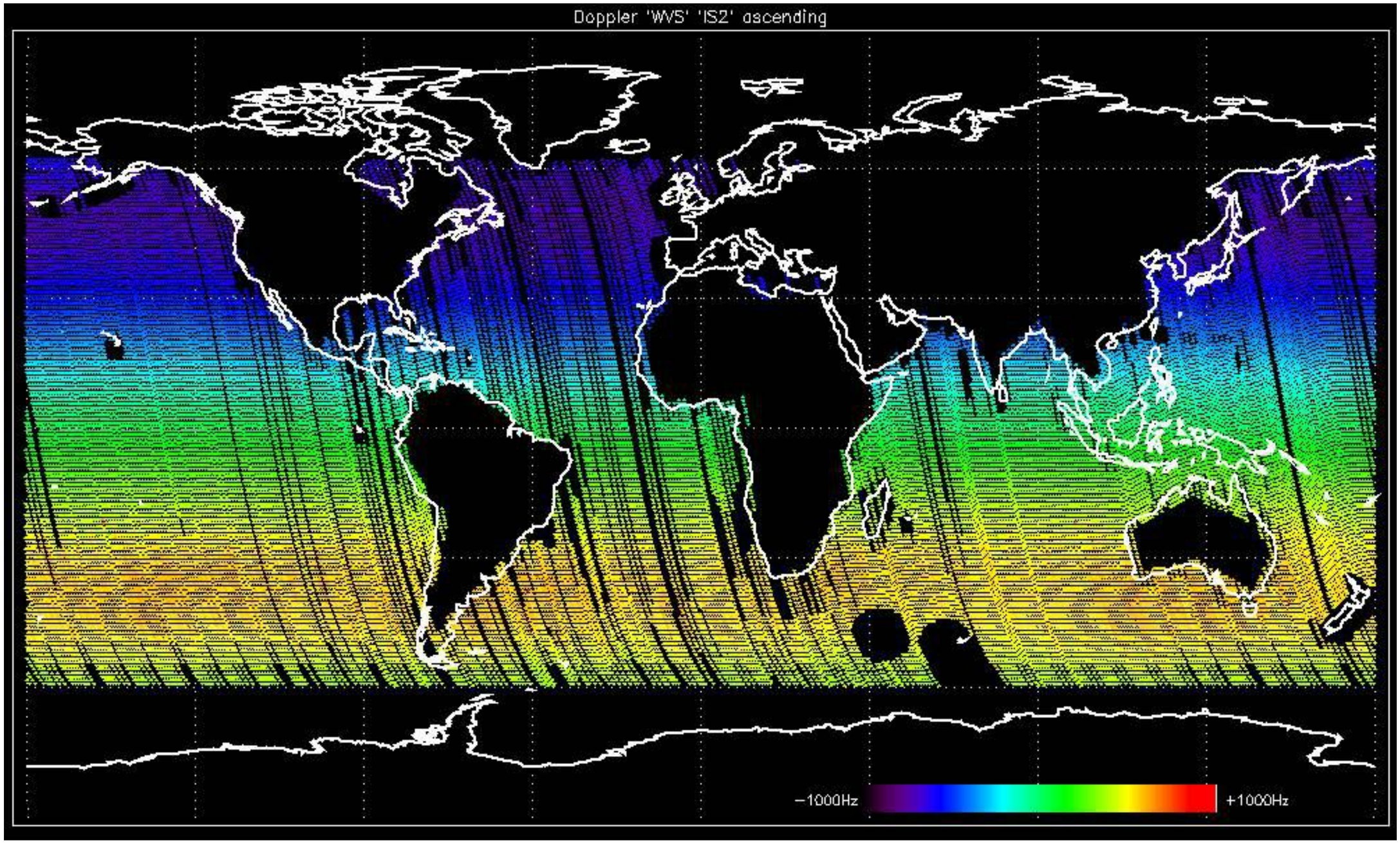

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

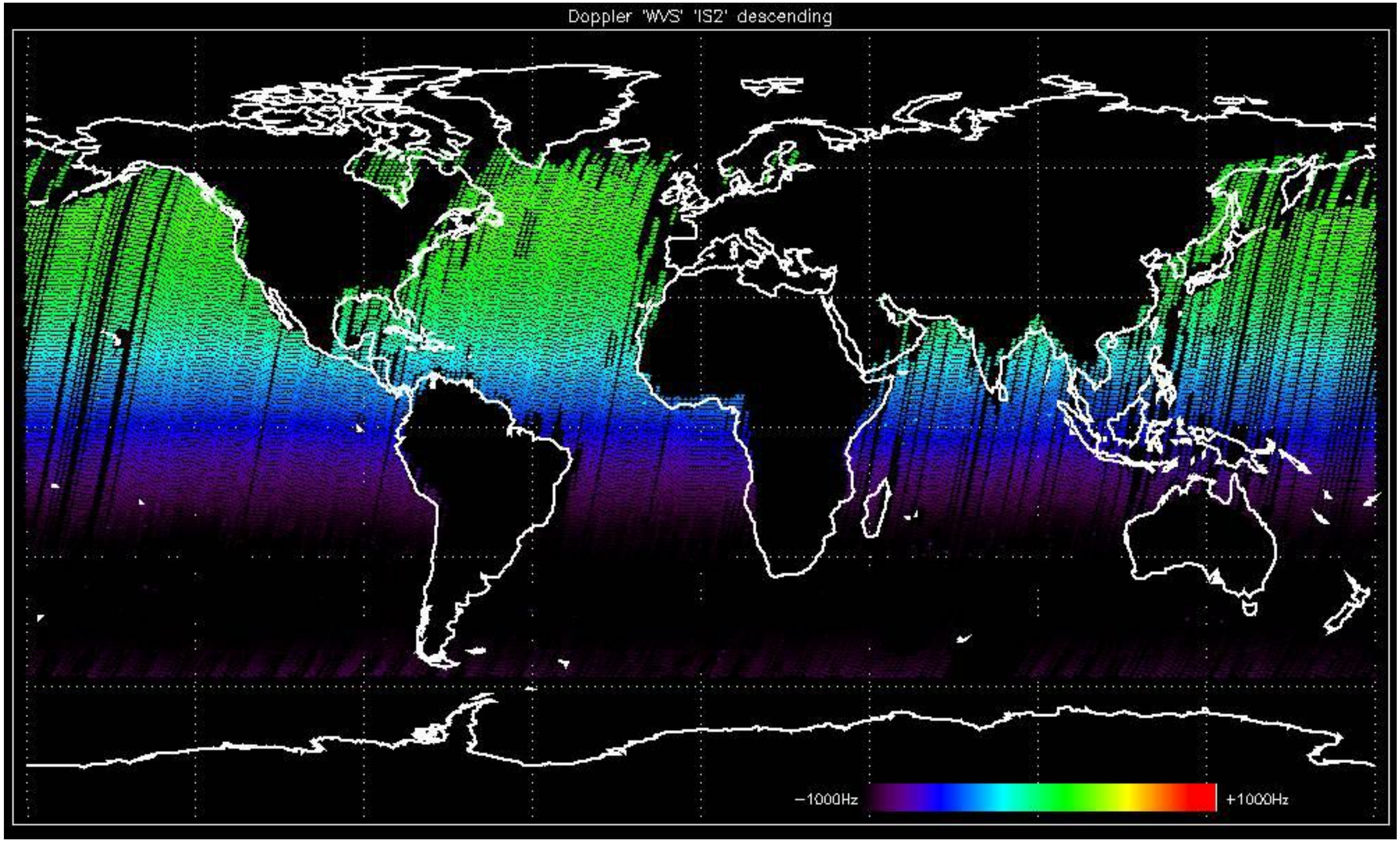
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

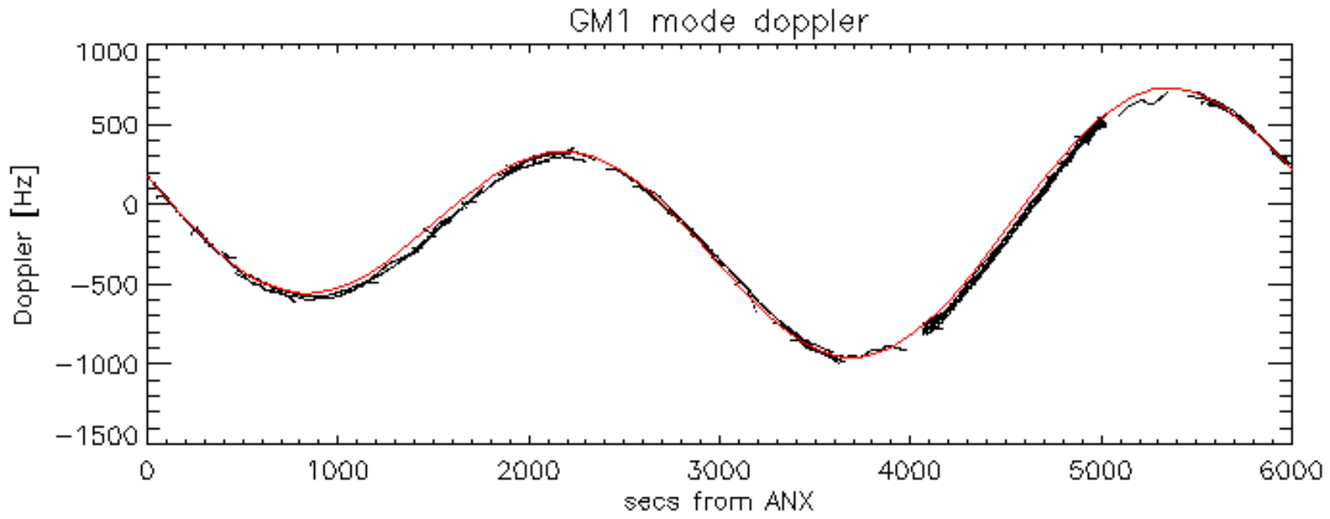
Preliminary report.The data is not yet controled

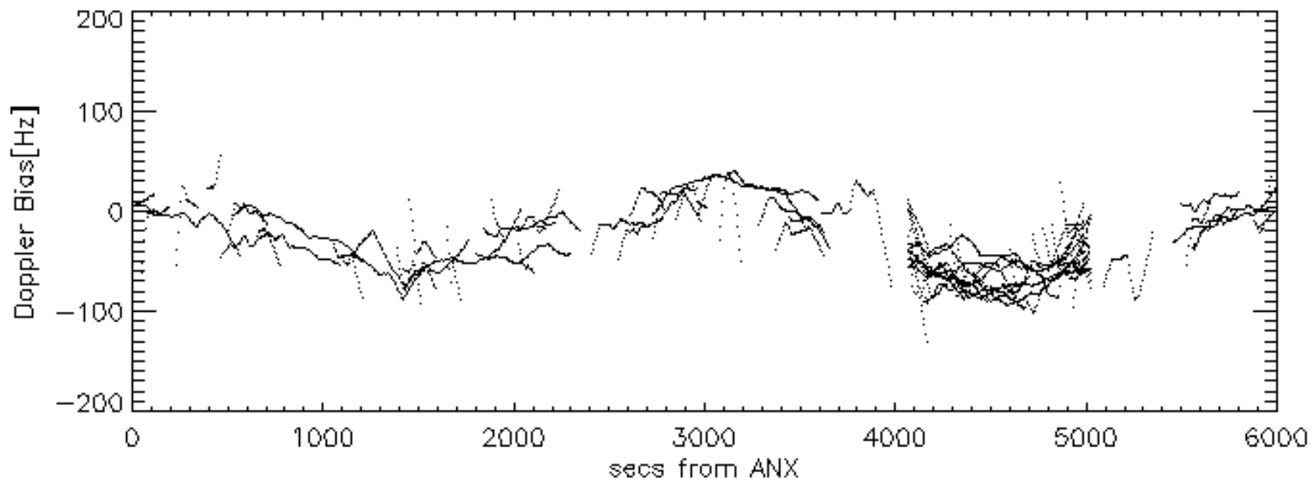

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

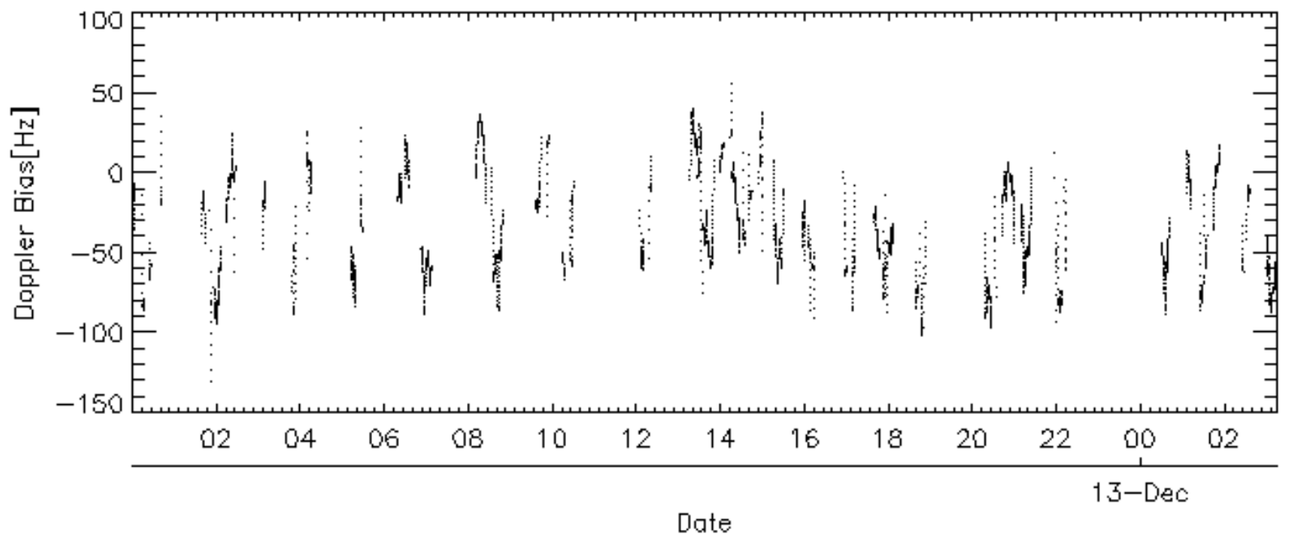

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

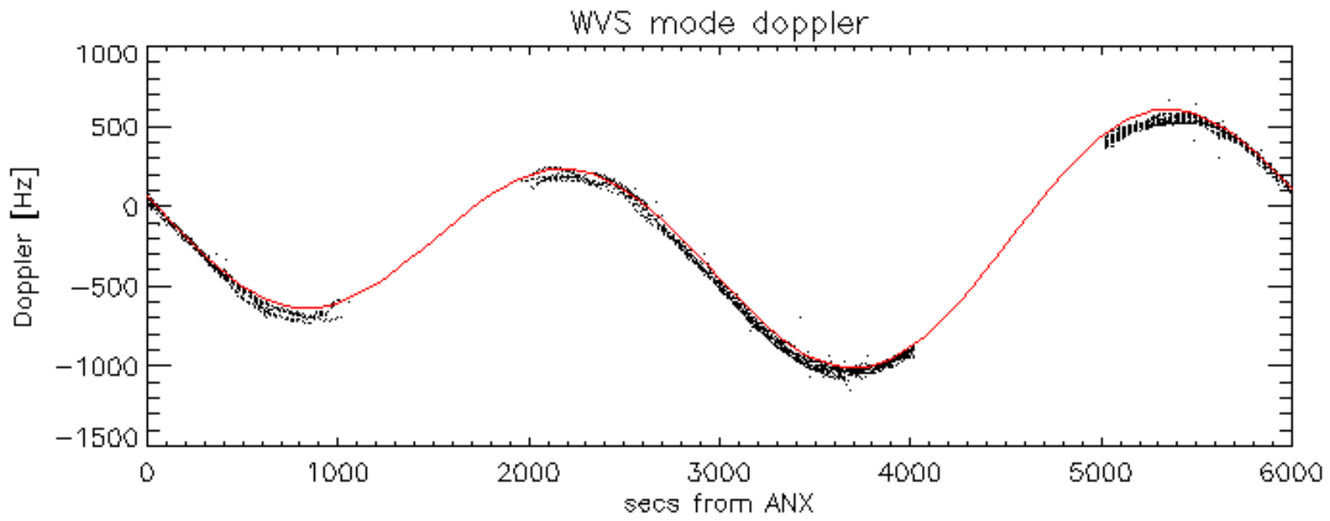

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

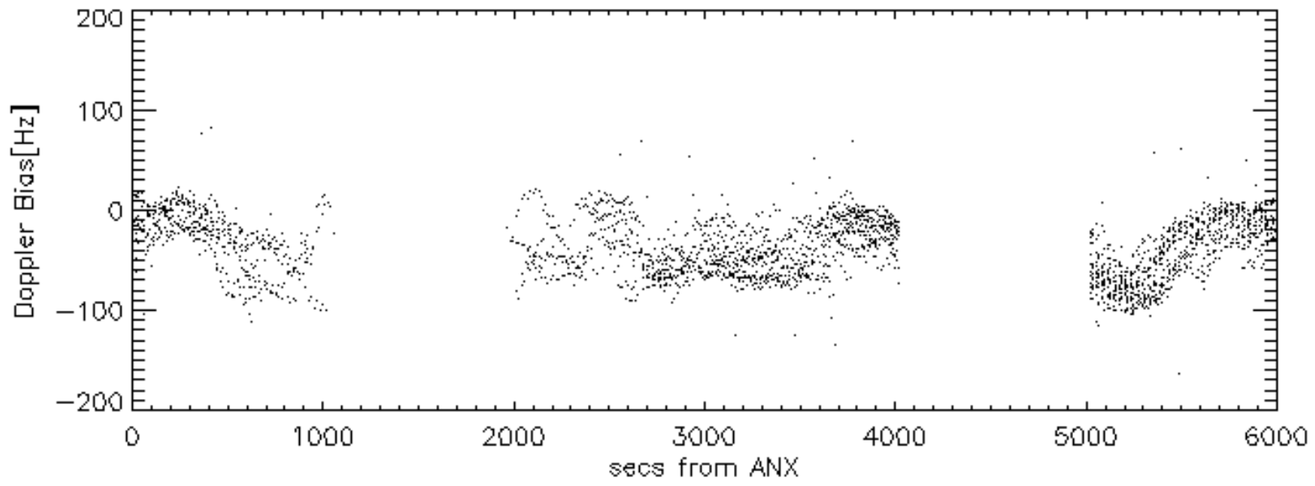

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

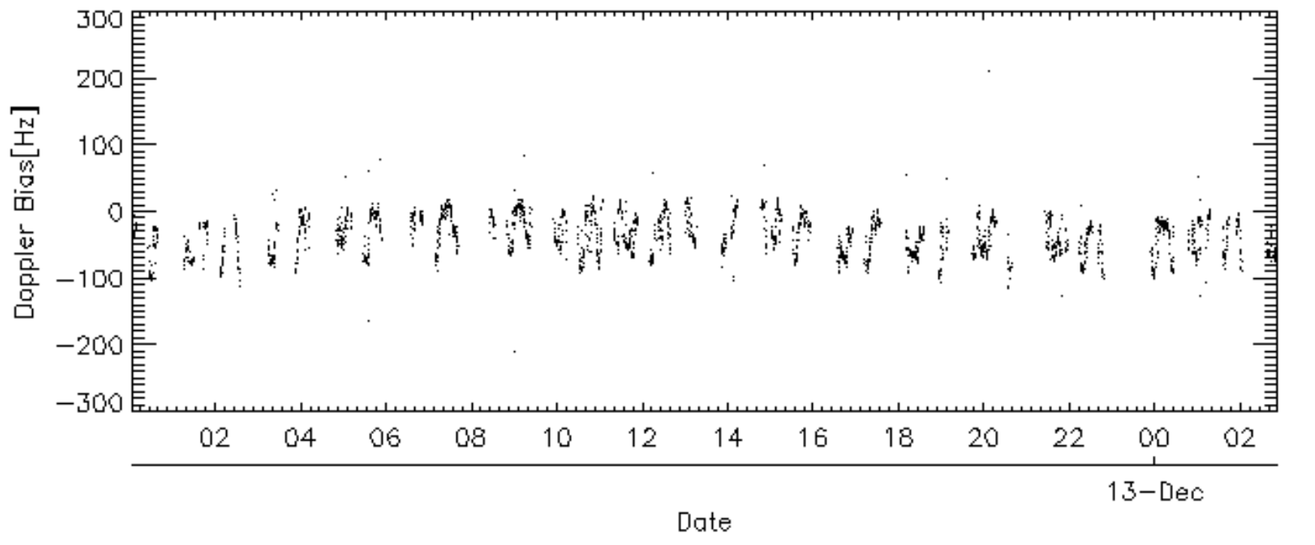

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

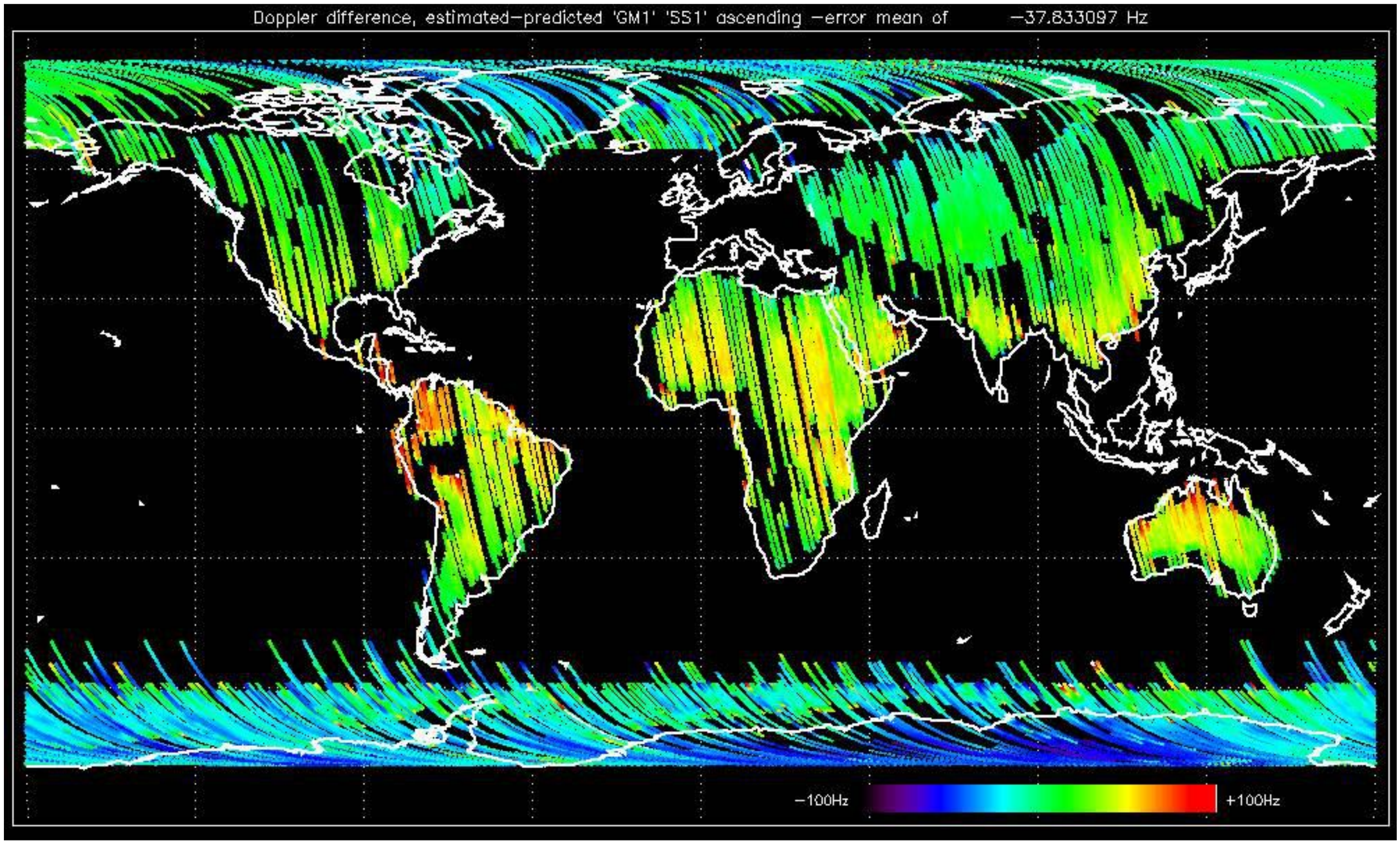

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

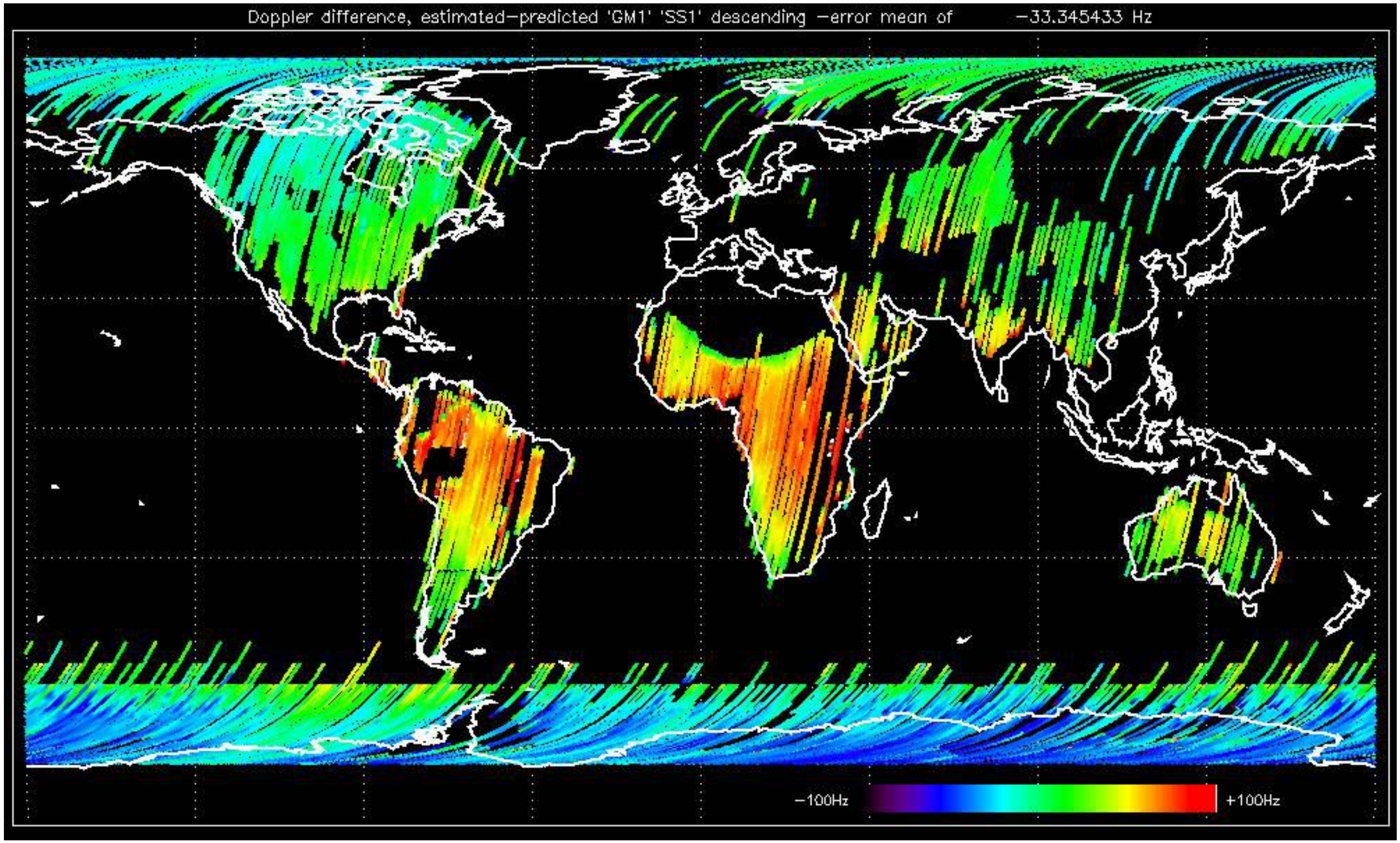

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
13−Dec
Date

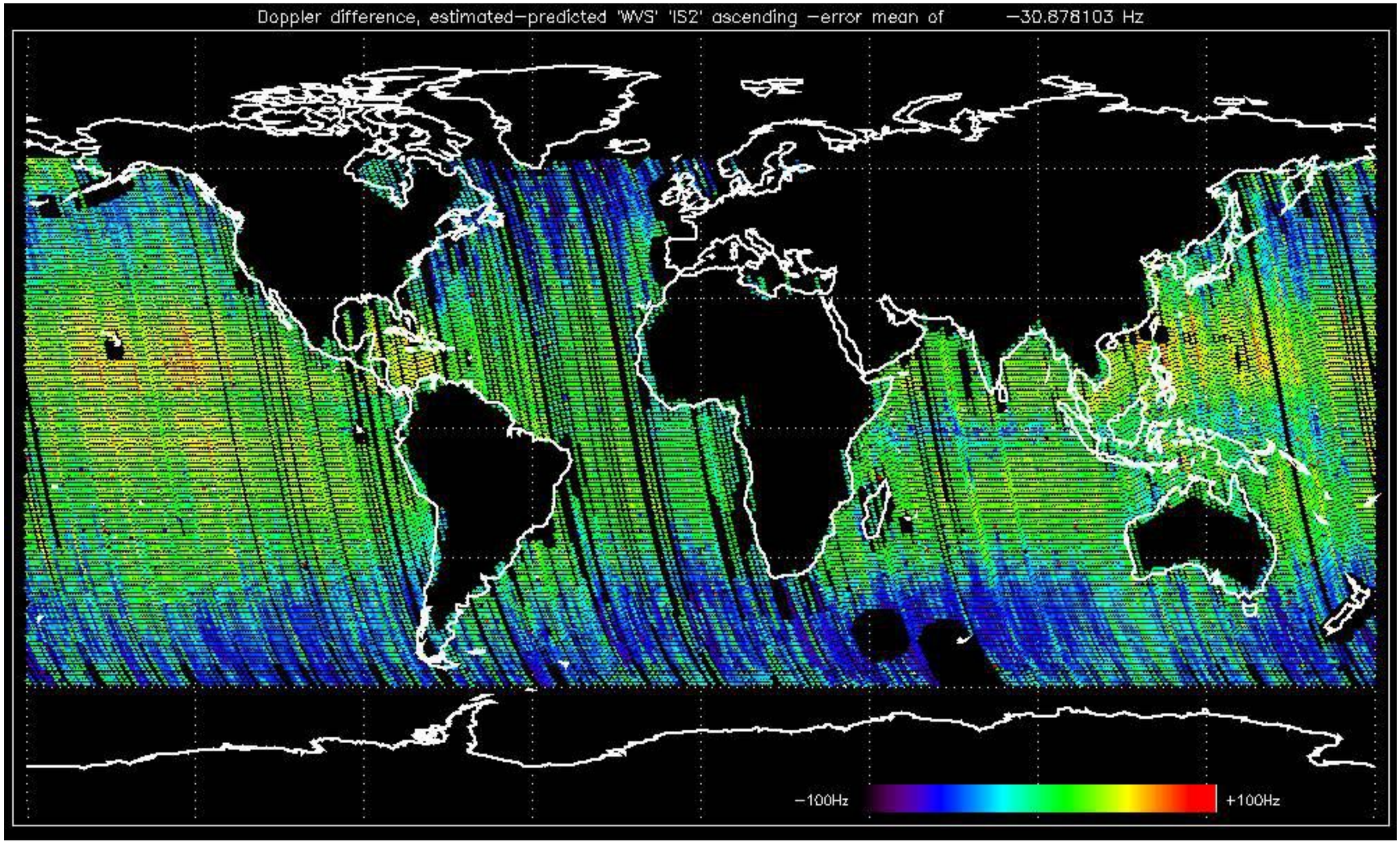

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

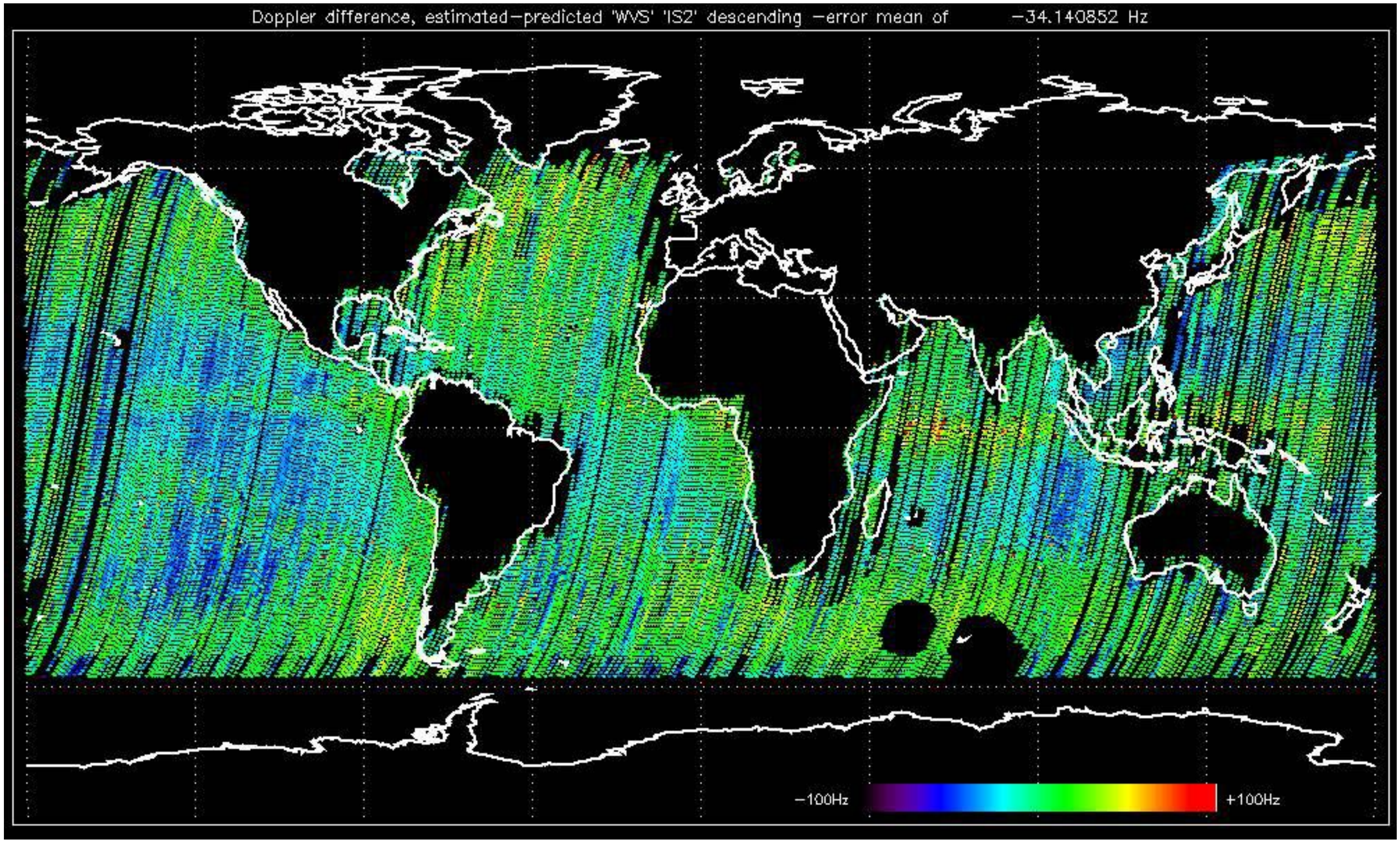

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −37.833097 Hz
−100Hz
+100Hz

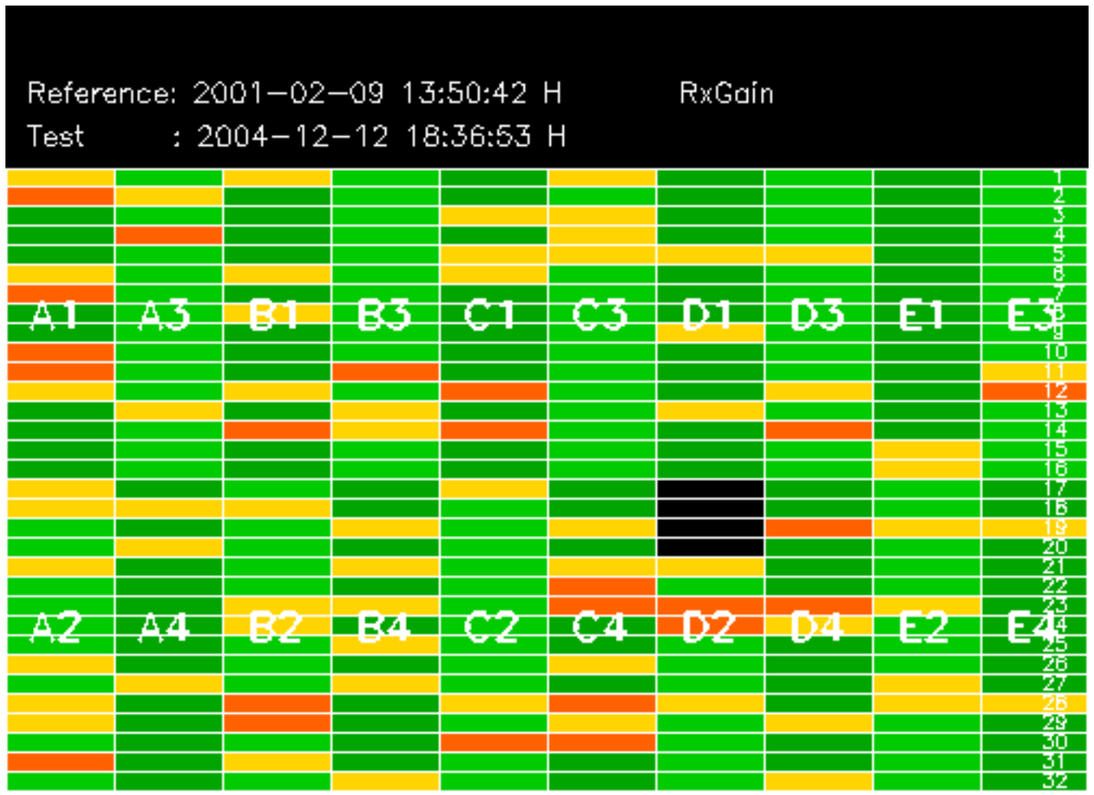

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −33.345433 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −30.878103 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.140852 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 : 2004-12-12 18:36:53 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
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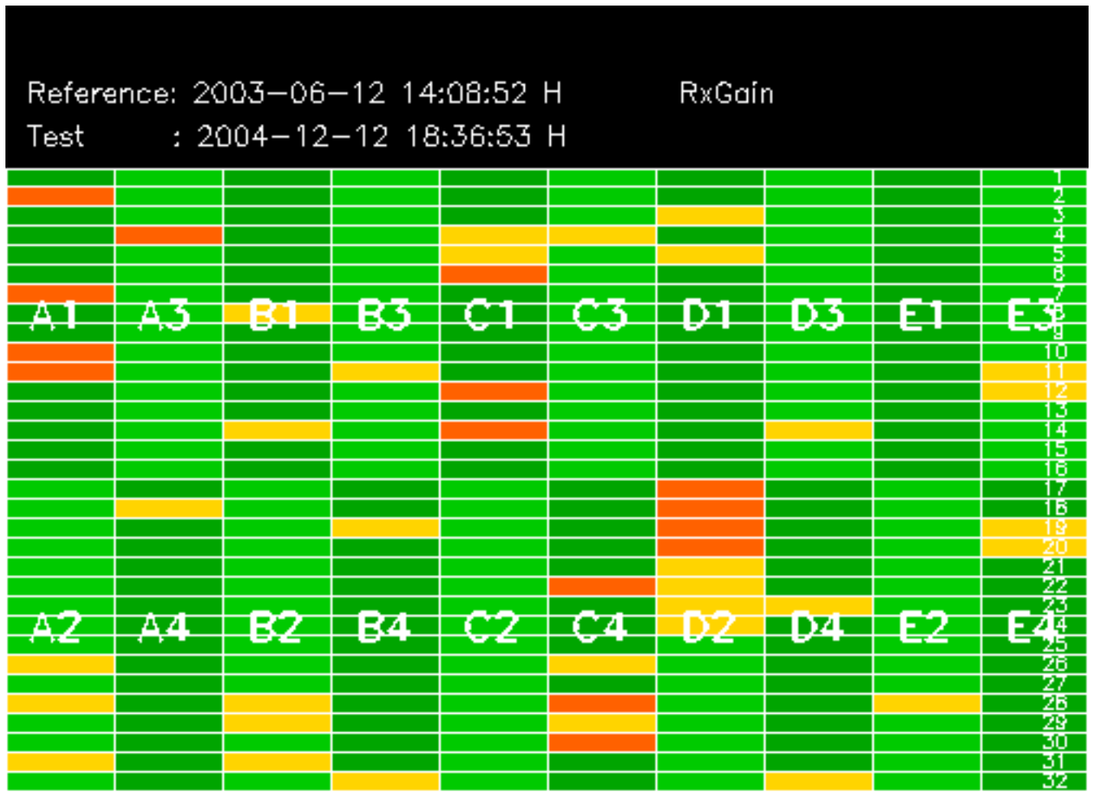
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-12 18:36:53 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
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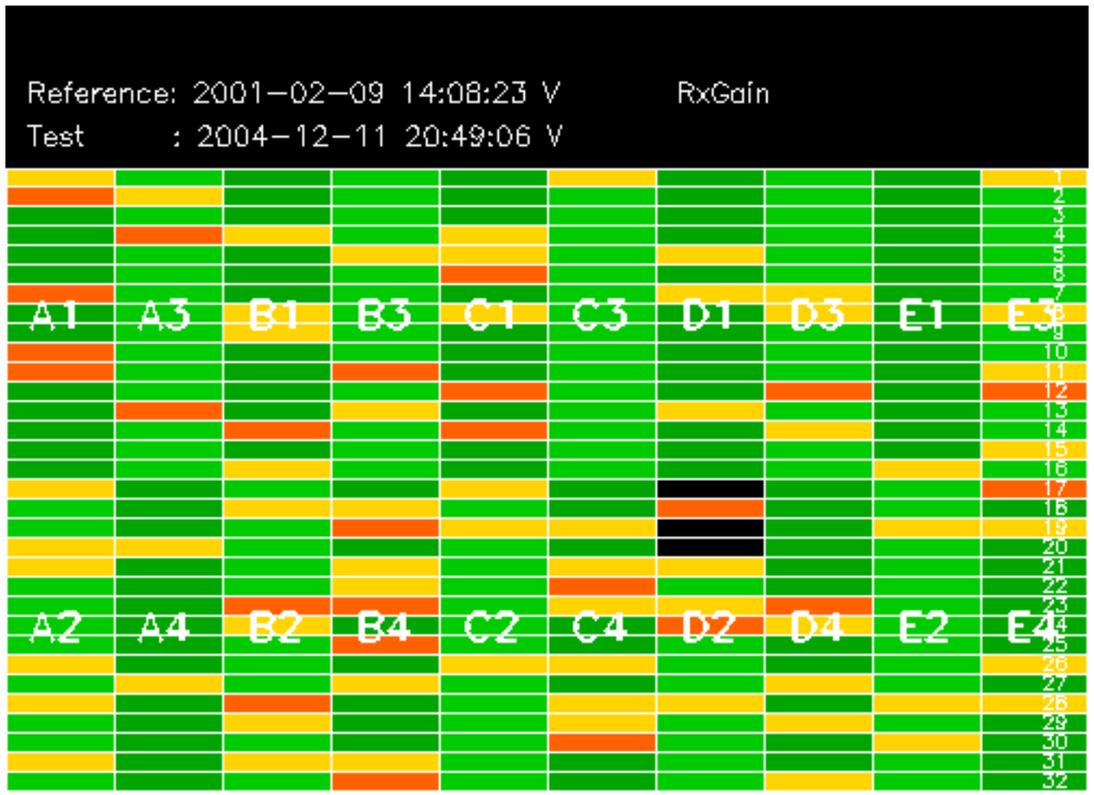
Reference: 2001-02-09 14:08:23 V
RxGain
Test : 2004-12-11 20:49:06 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
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31
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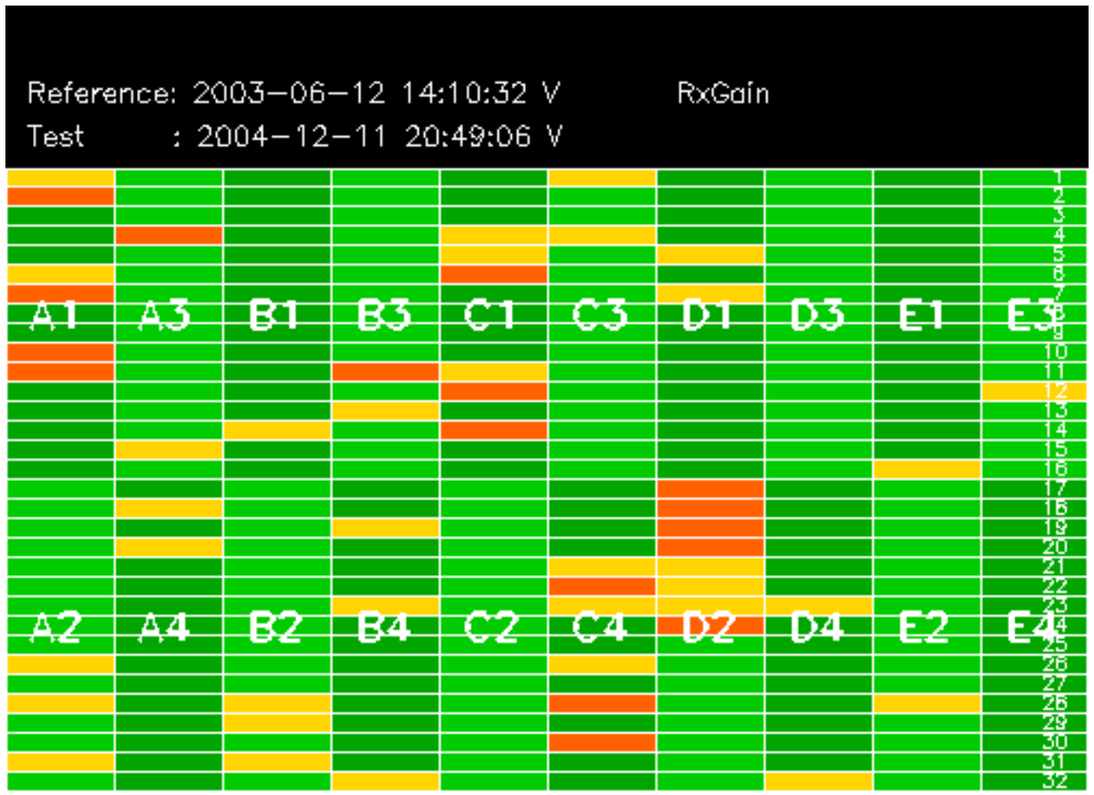
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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30
31
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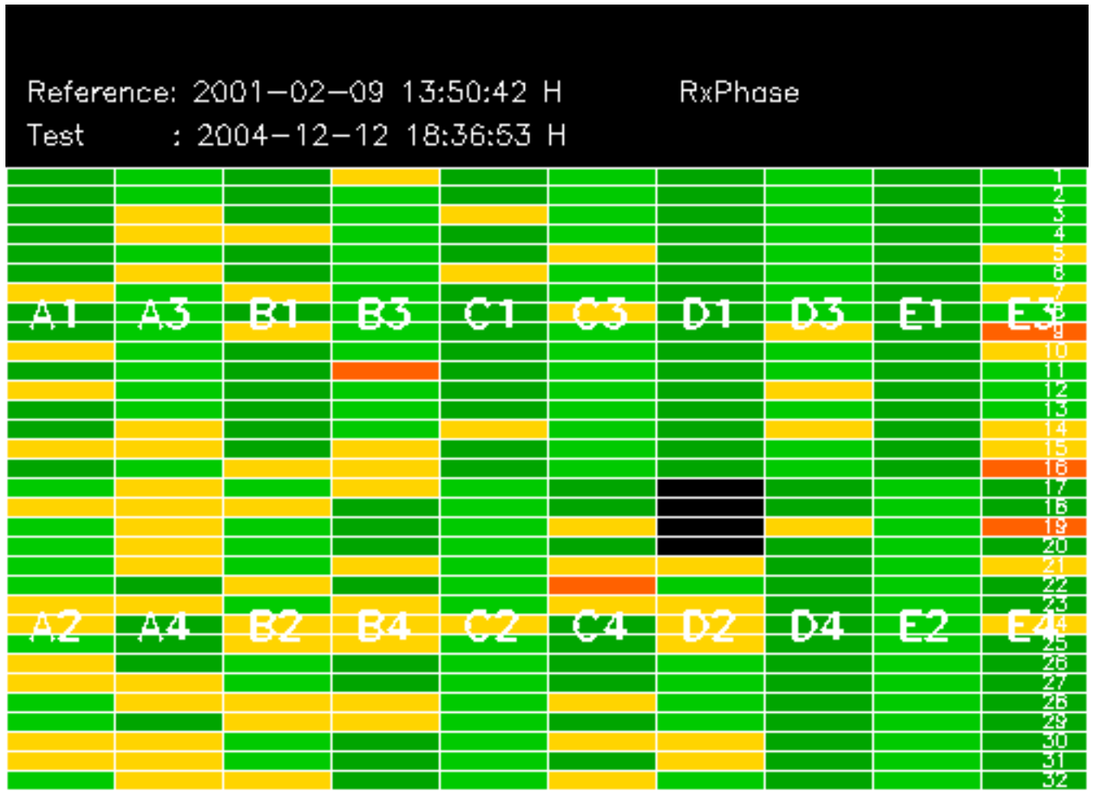
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-12 18:36:53 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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8
9
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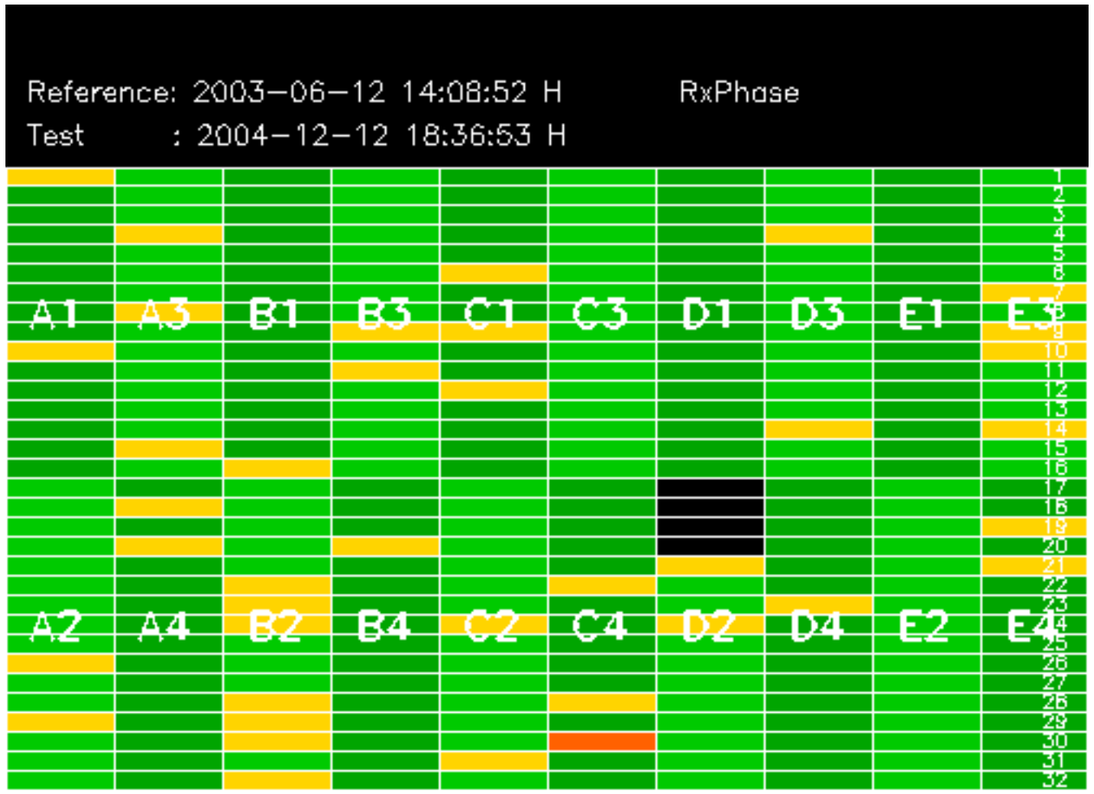
31
32


Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-12-12 18:36:53 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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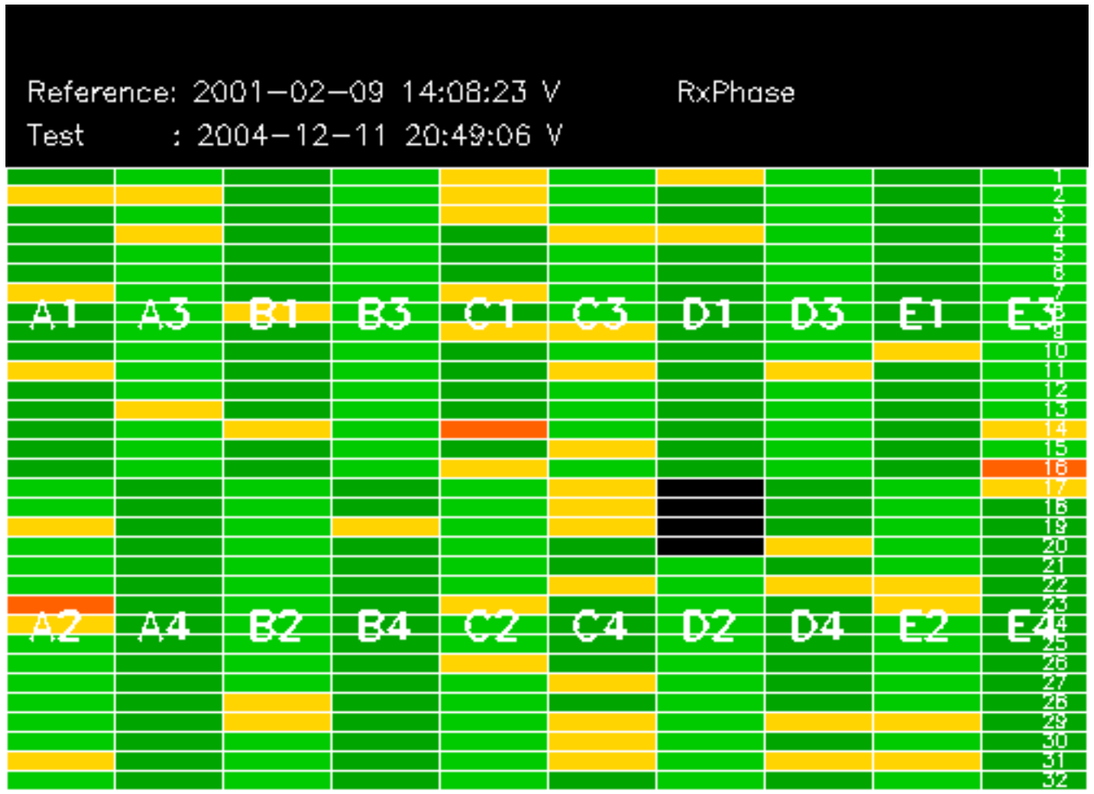
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-11 20:49:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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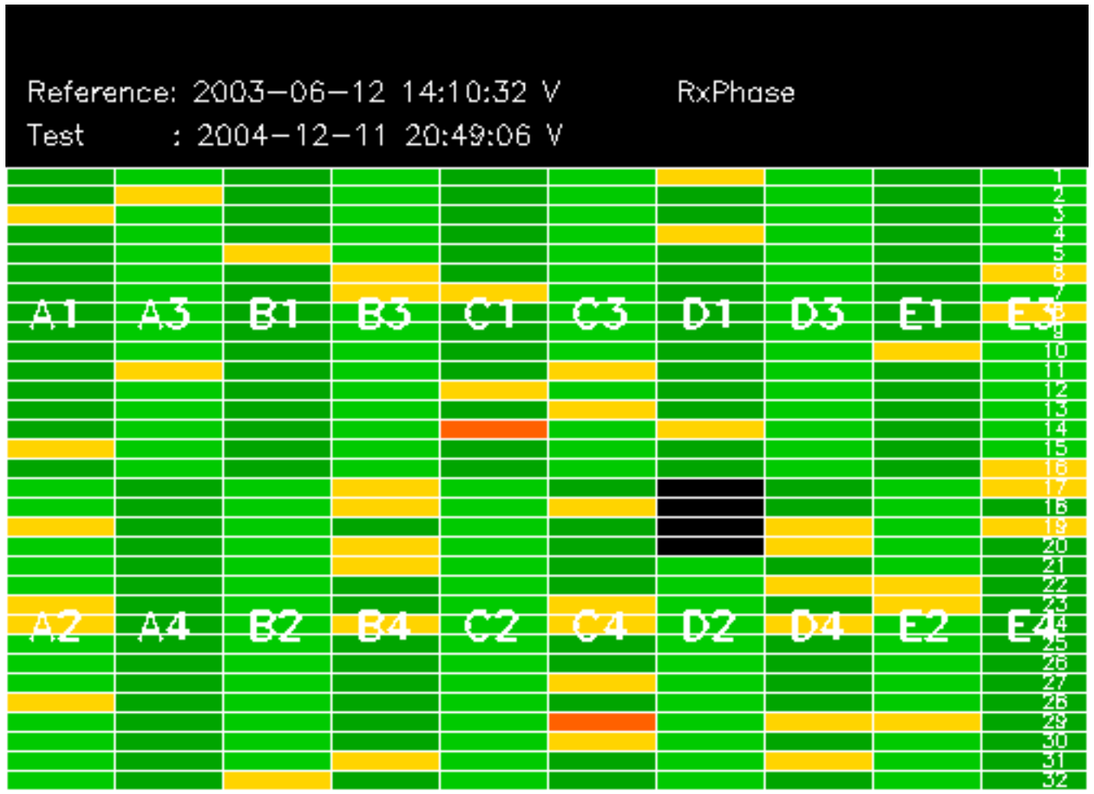
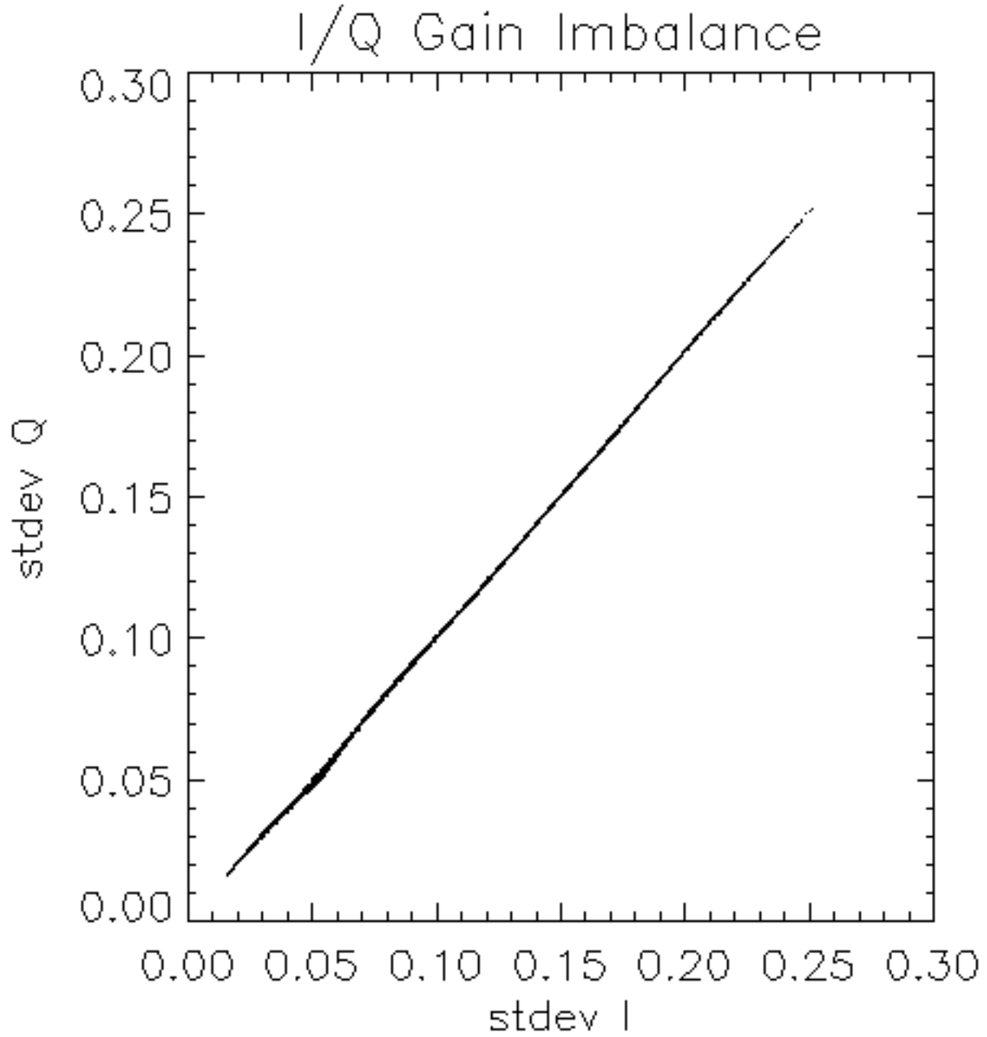
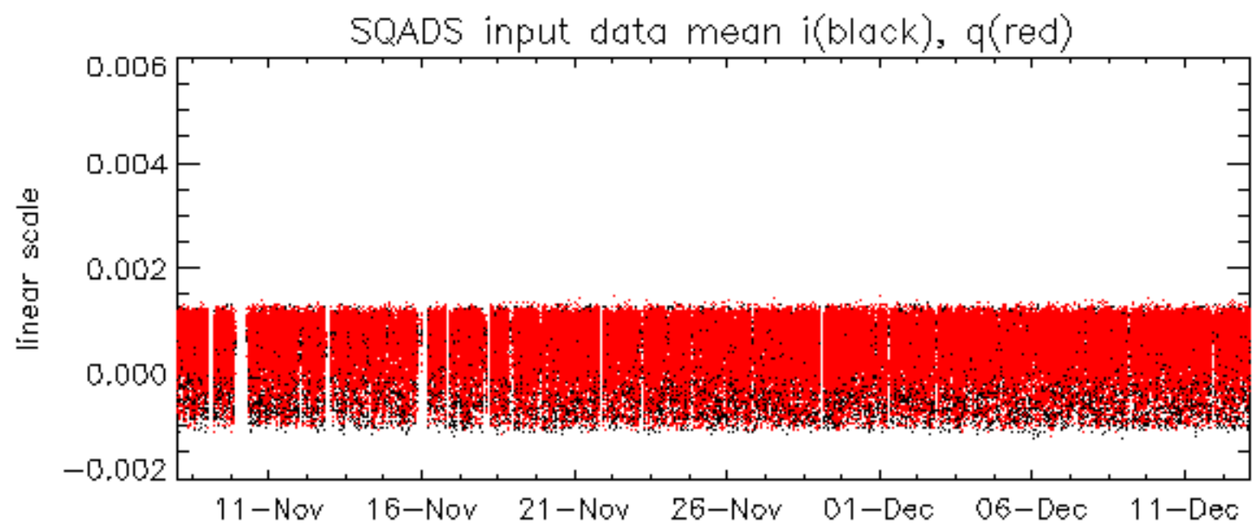
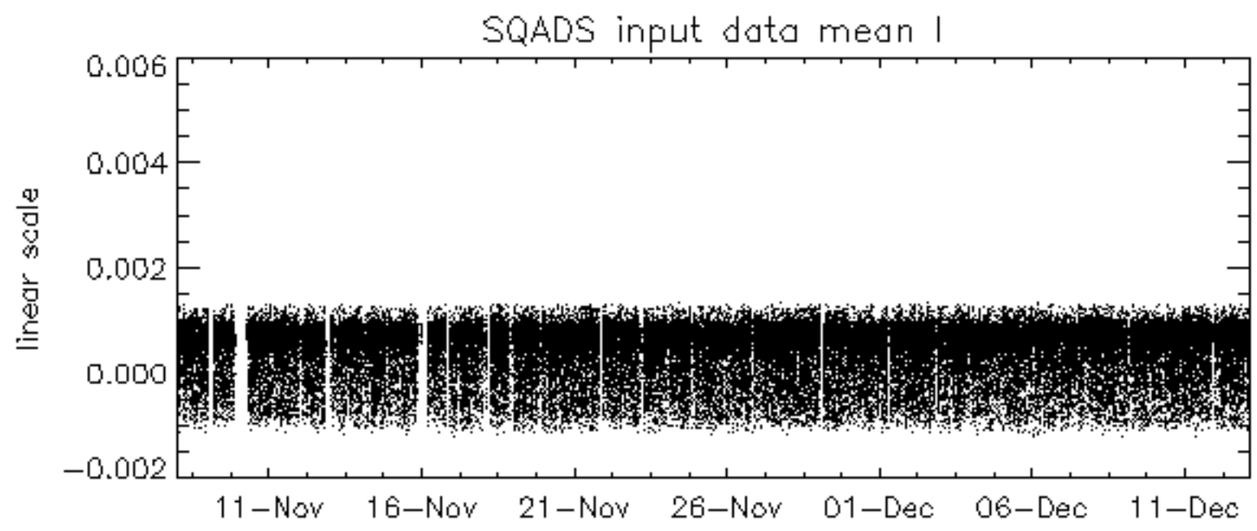
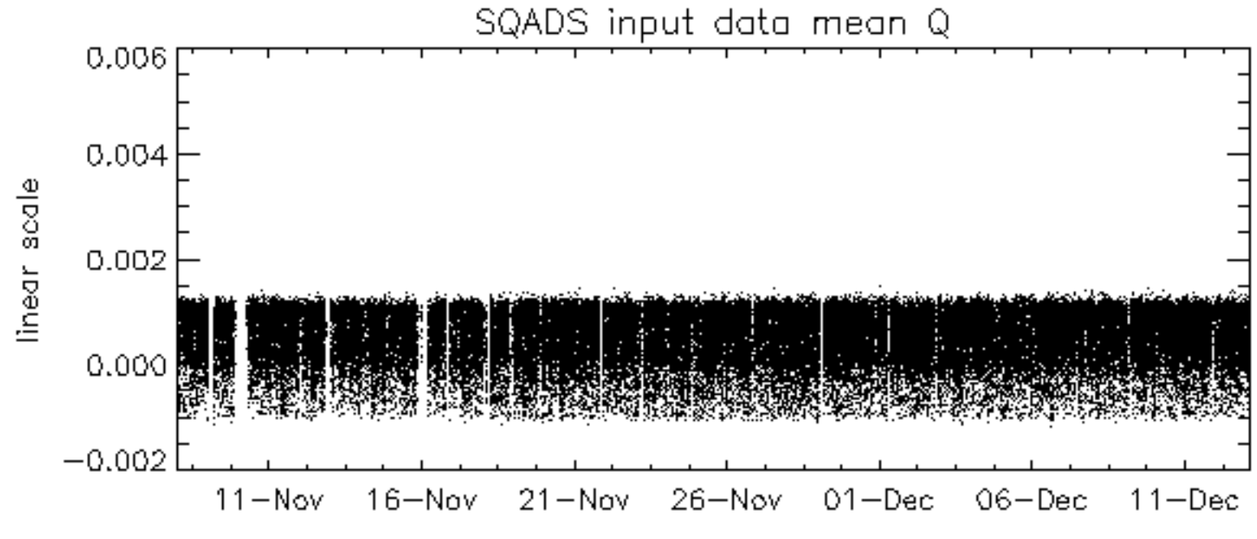
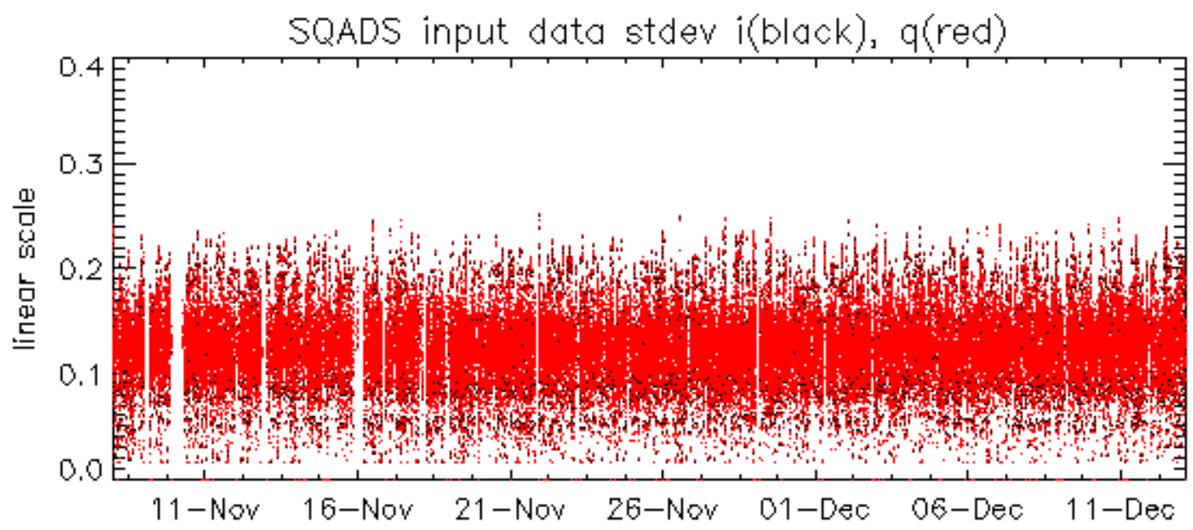

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

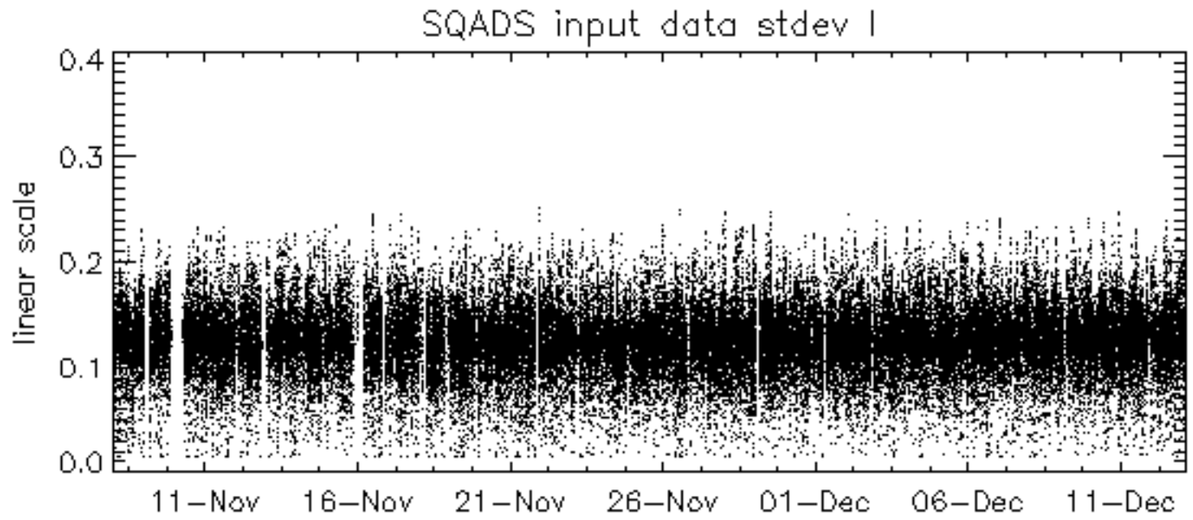

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

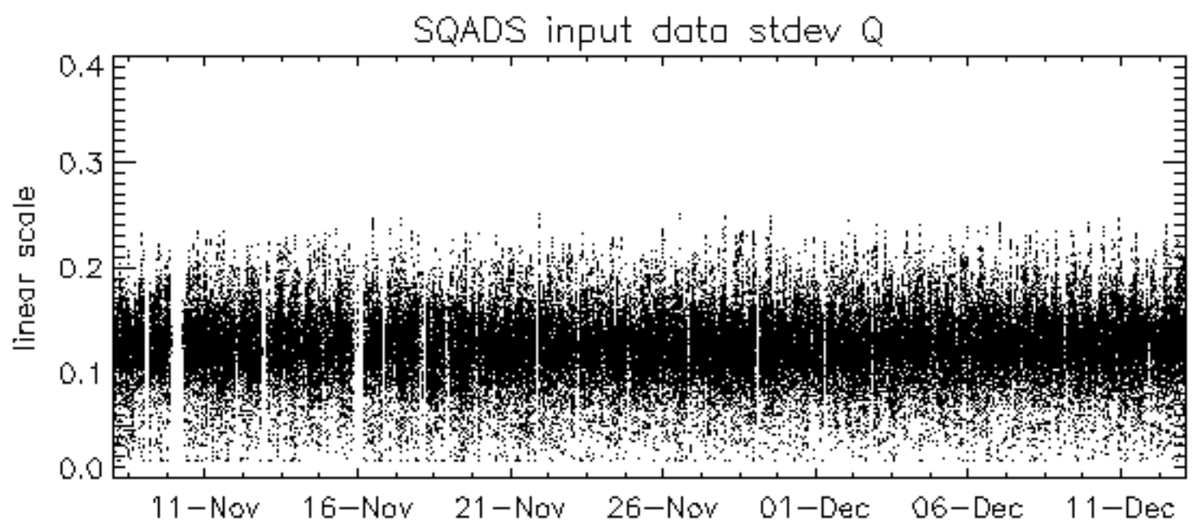

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

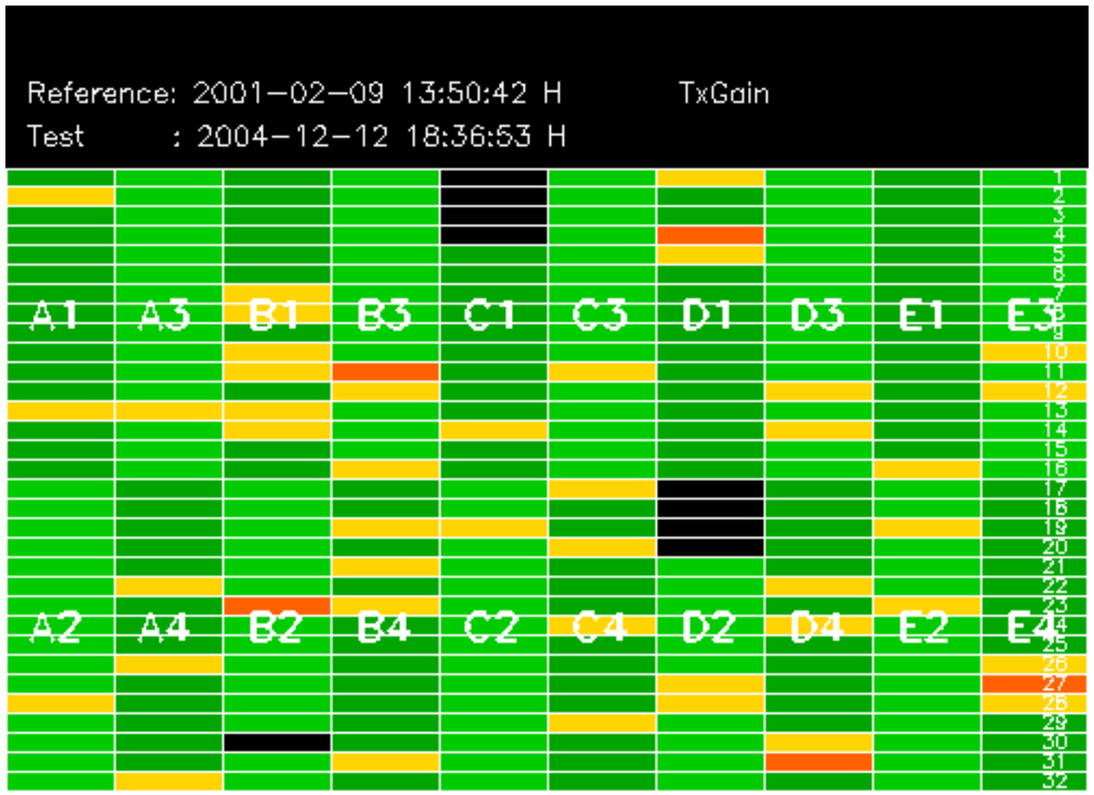

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

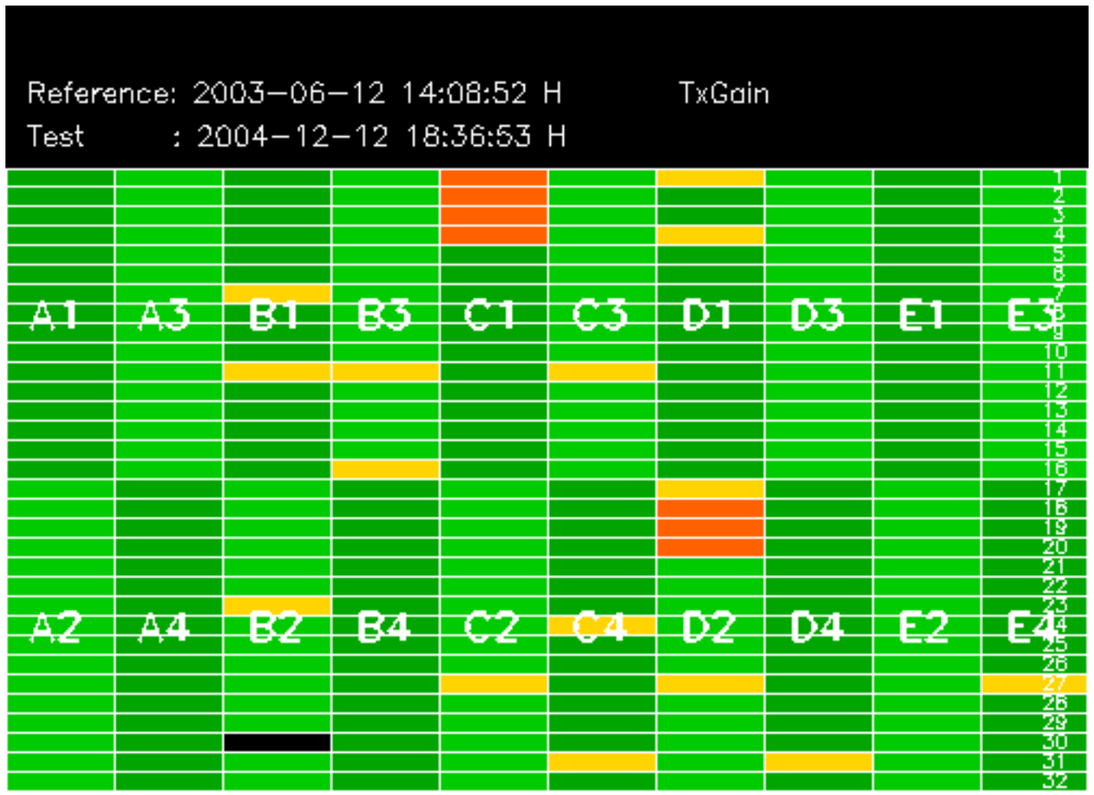

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

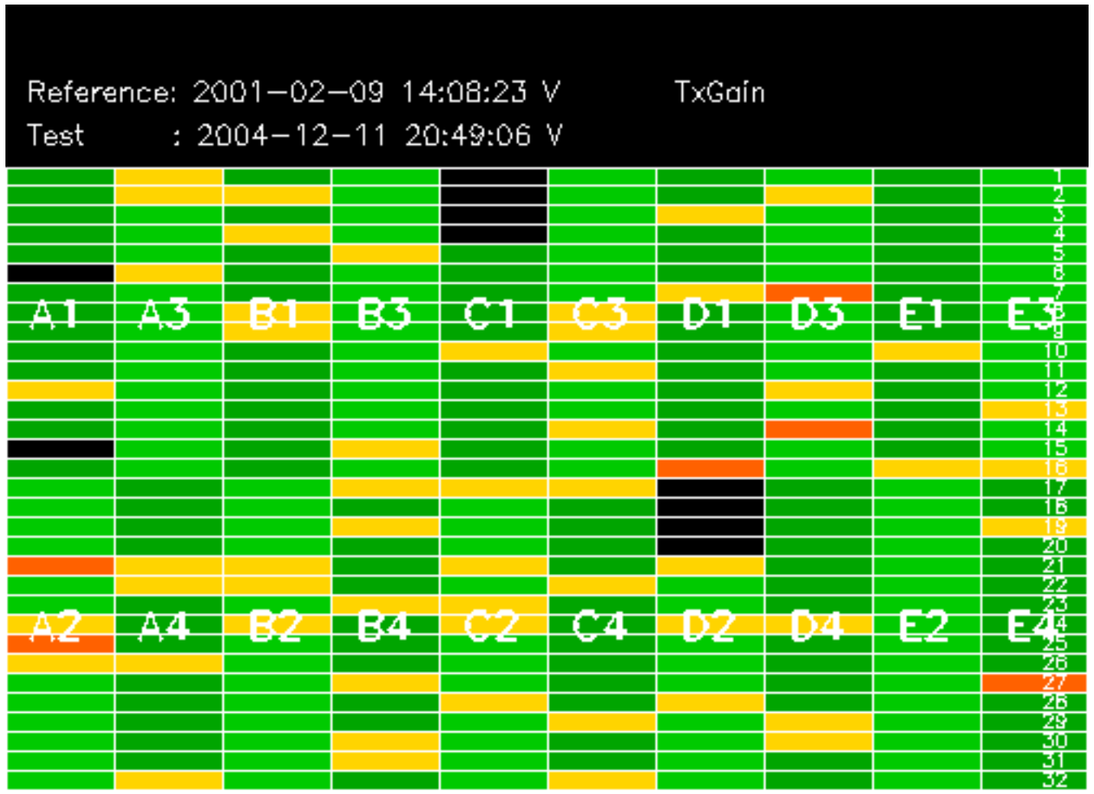

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

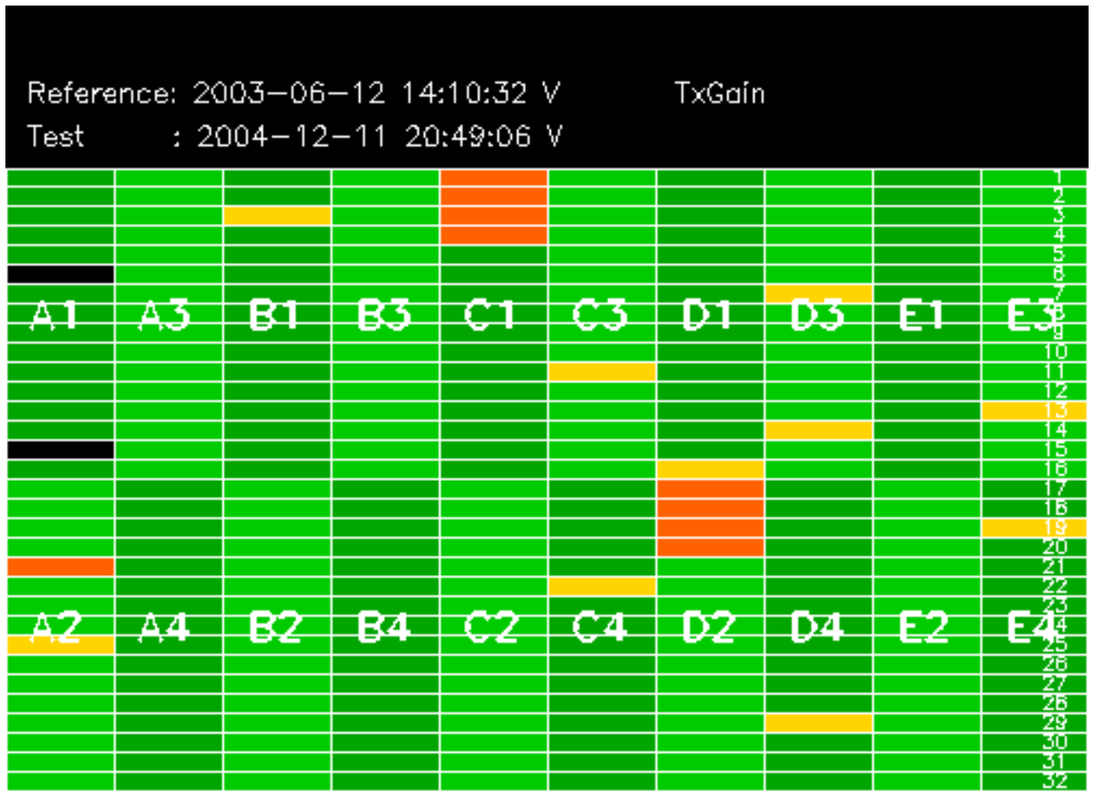

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

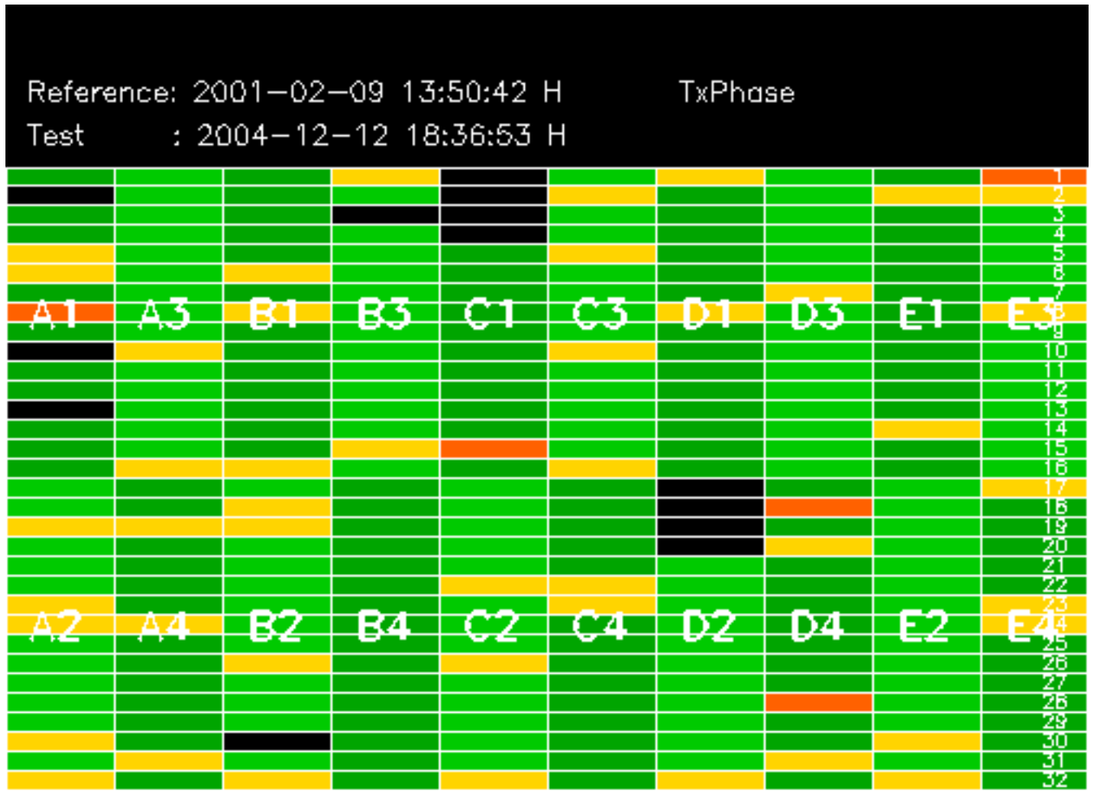

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

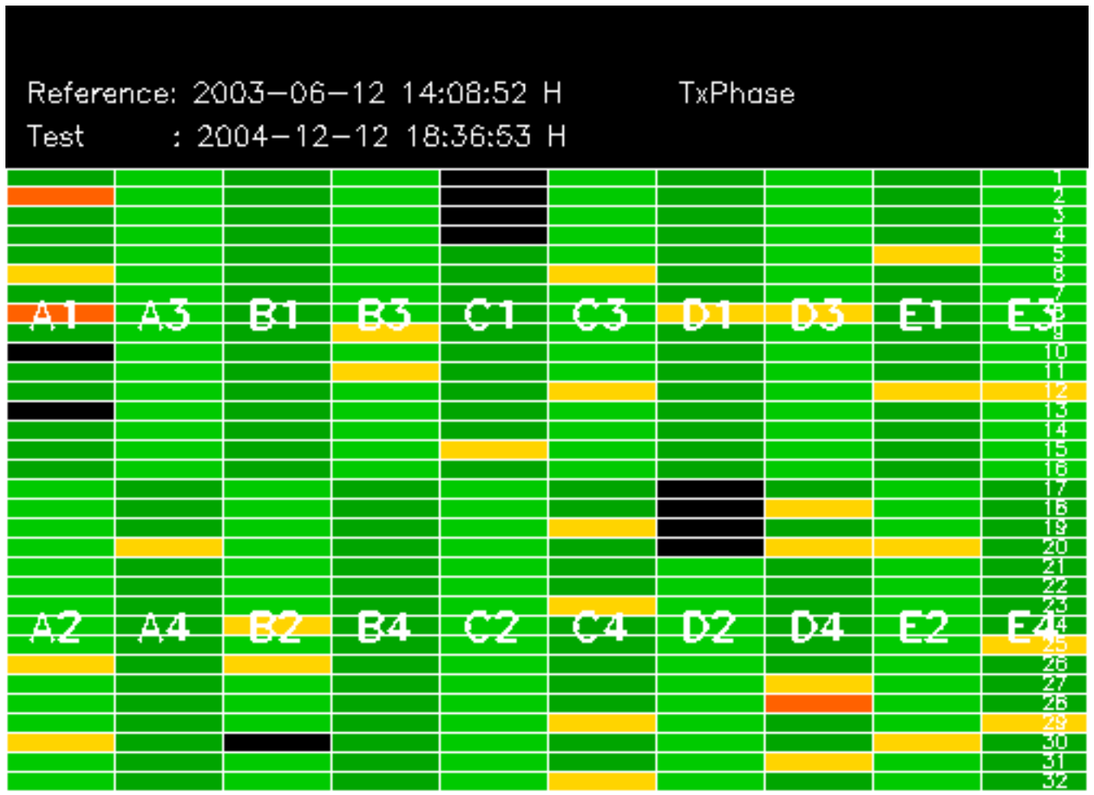

Reference: 2001-02-09 13:50:42 H
Test : 2004-12-12 18:36:53 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

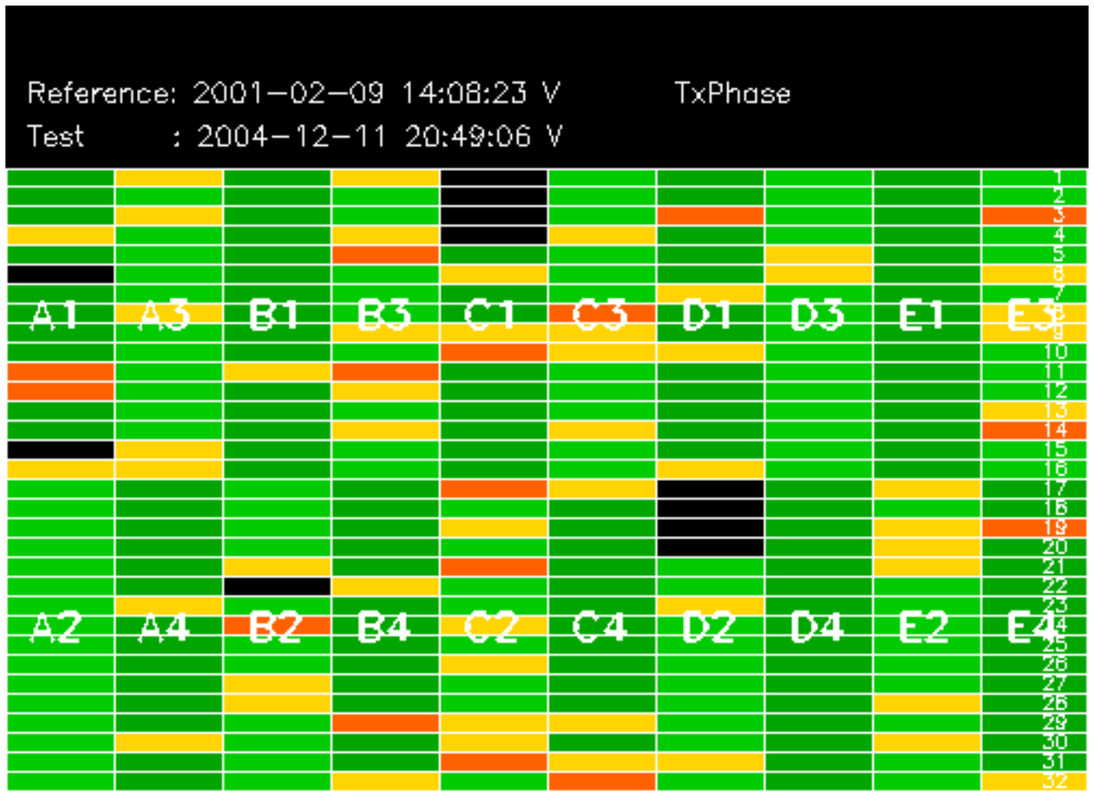

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-12 18:36:53 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

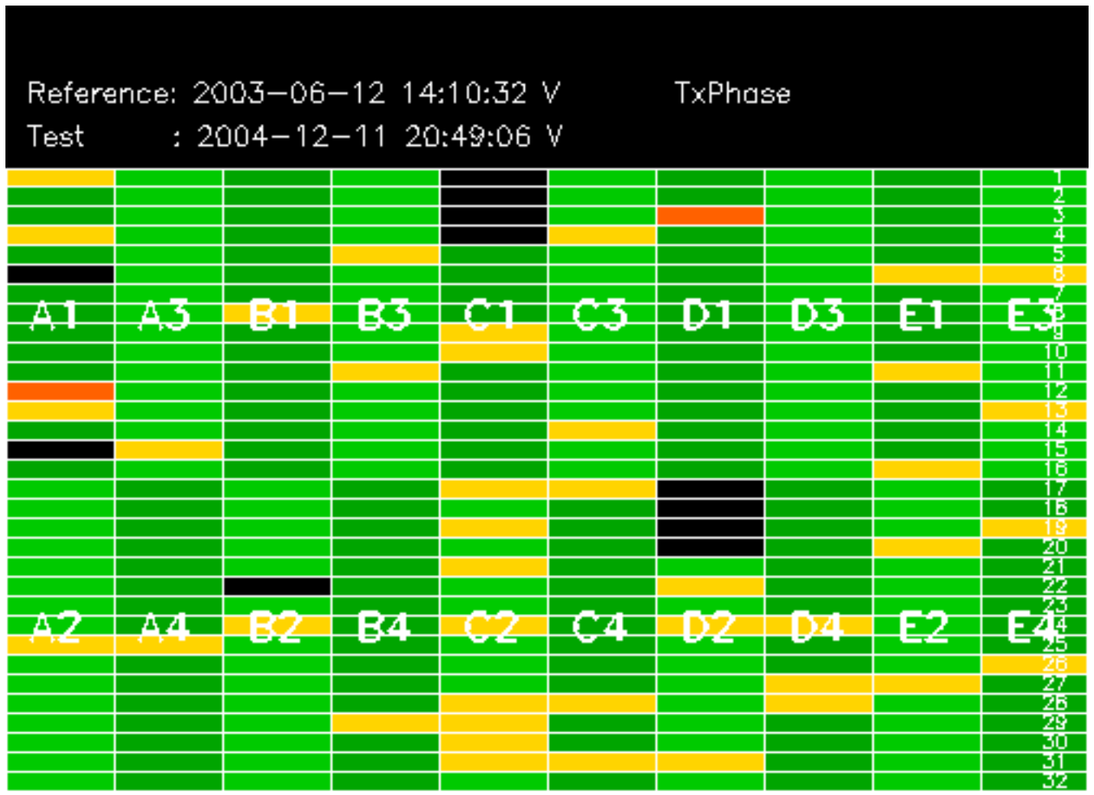

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-11 20:49:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

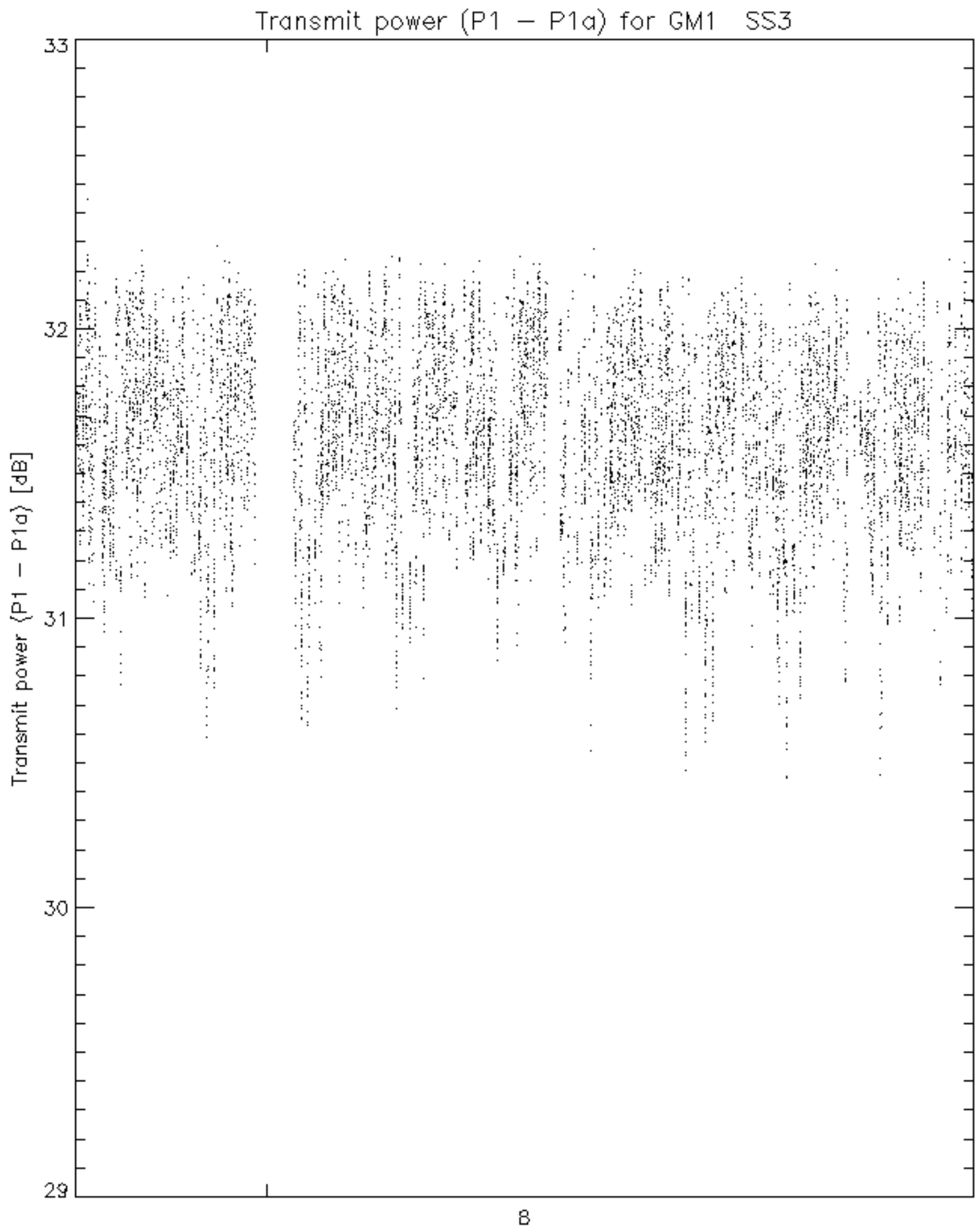

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-12-12 18:36:53 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

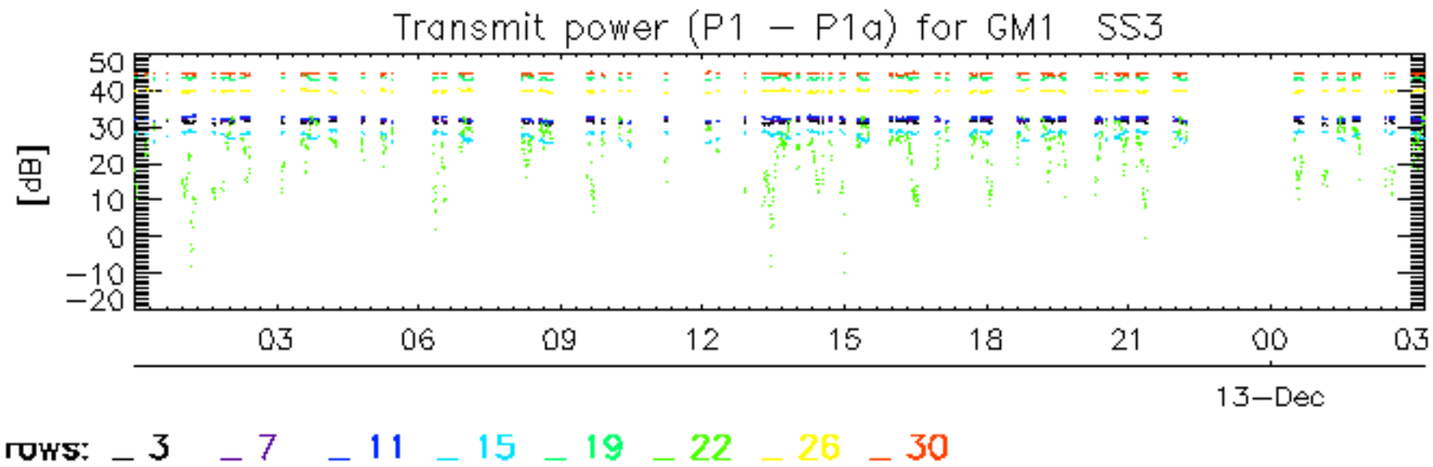

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-12 18:36:53 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

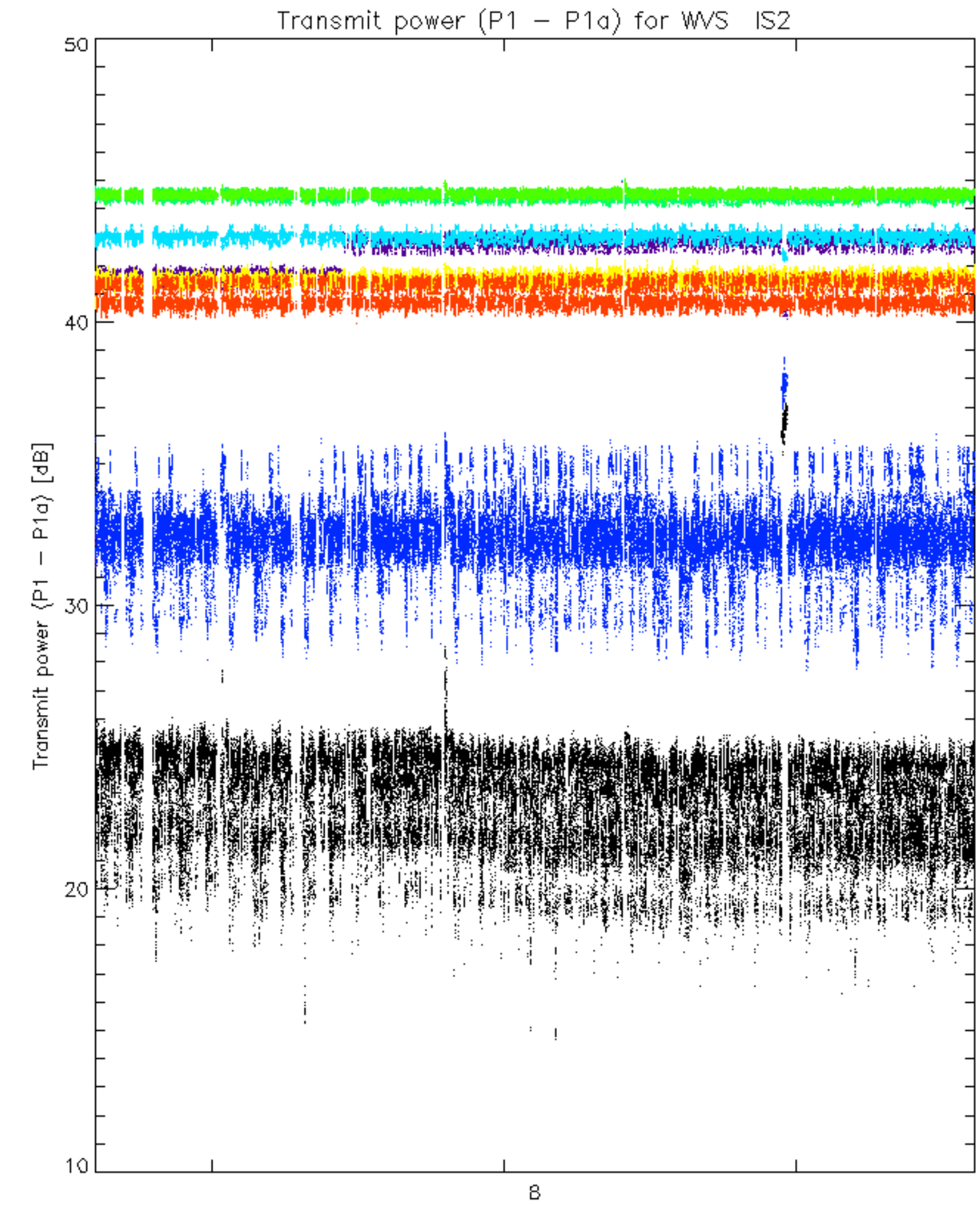

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-12-11 20:49:06 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

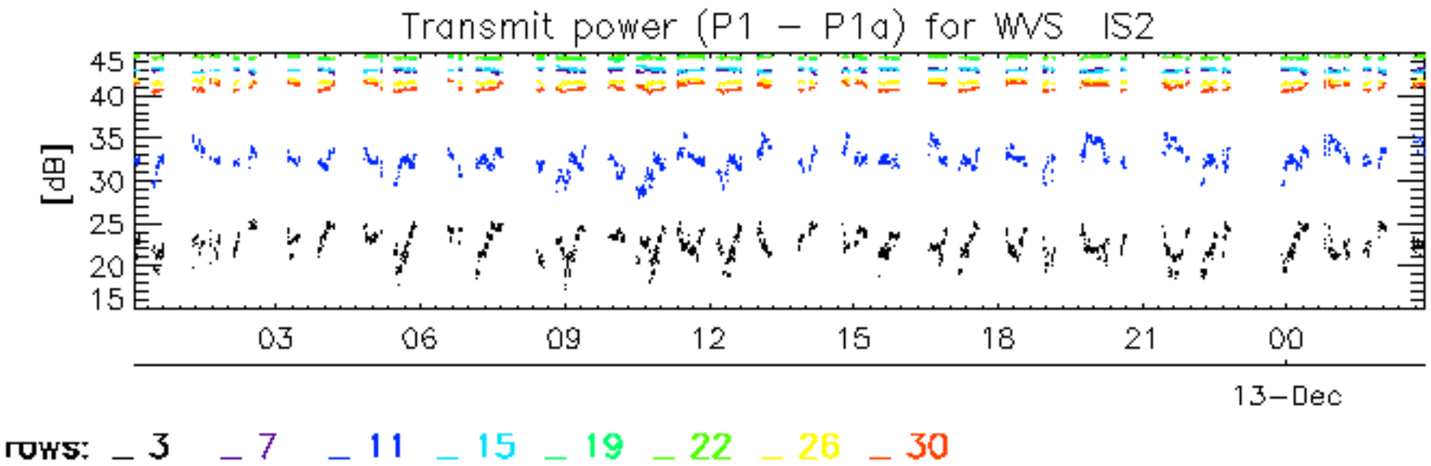

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
33
32
31
30
29
8

rows: _ 3


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
13–Dec
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
8
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
13–Dec
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.