PRELIMINARY REPORT OF 041231

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

last update on Fri Dec 31 10:59:55 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 2004-12-30 00:00:00 to 2004-12-31 10:59:55

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	26	51	3	1	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	26	51	3	1	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	26	51	3	1	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	26	51	3	1	1

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	36	49	4	12	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	36	49	4	12	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	36	49	4	12	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	36	49	4	12	0

2.3 - Browse Visual Inspection

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	20041229 043733
H	20041230 040556

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	-3.455069	0.029176	0.076843
7	P1	-3.099540	0.024394	0.054472
11	P1	-4.649773	0.045609	-0.009795
15	P1	-5.666154	0.038638	-0.019984
19	P1	-3.653493	0.005826	-0.009106
22	P1	-4.576190	0.017018	0.034935
26	P1	-4.938815	0.023941	0.022652
30	P1	-7.115402	0.013547	-0.034986
3	P1	-15.947729	0.111936	0.023049
7	P1	-15.510800	0.161911	0.013952
11	P1	-20.744965	0.538660	-0.243688
15	P1	-11.619074	0.096732	-0.016236
19	P1	-14.160309	0.031957	-0.028608
22	P1	-16.088234	0.468680	0.291443
26	P1	-17.756435	0.265414	0.172077
30	P1	-17.879480	0.305612	0.052174

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.350164	0.086869	0.084785
7	P2	-22.566488	0.168536	0.117759
11	P2	-14.888994	0.176509	0.170083
15	P2	-7.164731	0.117836	0.097249
19	P2	-9.731475	0.200447	0.106356
22	P2	-17.170935	0.100319	0.109228
26	P2	-16.532827	0.115092	0.054625

30	P2	-18.969847	0.083060	0.069733

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210394	0.007172	0.022822
7	P3	-8.210382	0.007171	0.022773
11	P3	-8.210373	0.007170	0.022701
15	P3	-8.210340	0.007172	0.022524
19	P3	-8.210333	0.007173	0.022476
22	P3	-8.210342	0.007171	0.022520
26	P3	-8.210398	0.007172	0.022825
30	P3	-8.210659	0.007173	0.021396

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	-2.849887	0.109236	0.074132
7	P1	-2.981794	0.063688	0.068611
11	P1	-3.947911	0.048339	0.003228
15	P1	-3.520502	0.077758	0.029887
19	P1	-3.609813	0.013106	-0.001777
22	P1	-5.620388	0.069370	-0.060464
26	P1	-6.515256	0.023514	-0.036675
30	P1	-6.300501	0.044523	0.014305
3	P1	-10.718938	0.057891	-0.187206
7	P1	-10.127686	0.157875	-0.040108
11	P1	-12.430559	0.198737	-0.180298

15	P1	-11.728095	0.097774	-0.062801
19	P1	-15.644197	0.048875	-0.002387
22	P1	-24.150917	2.063784	0.247281
26	P1	-15.029073	0.396342	0.345606
30	P1	-20.144167	0.936784	0.204318

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.029861	0.037693	0.087660
7	P2	-22.608694	0.032572	0.131519
11	P2	-10.676161	0.036733	0.208236
15	P2	-5.061170	0.025477	0.052380
19	P2	-6.961986	0.036340	0.067346
22	P2	-7.301546	0.028450	0.093654
26	P2	-23.961460	0.018821	0.035121
30	P2	-22.021509	0.022451	0.106428

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.042759	0.003007	0.017765
7	P3	-8.042733	0.003012	0.017782
11	P3	-8.042682	0.003009	0.018079
15	P3	-8.042761	0.003013	0.017165
19	P3	-8.042701	0.003014	0.018012
22	P3	-8.042698	0.003010	0.017530
26	P3	-8.042760	0.003011	0.017830
30	P3	-8.042664	0.003002	0.017894

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	0.000449428
	stdev	2.35504e-07
MEAN Q	mean	0.000515295
	stdev	2.48086e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126615
	stdev	0.000989369
STDEV Q	mean	0.126852
	stdev	0.000998993

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

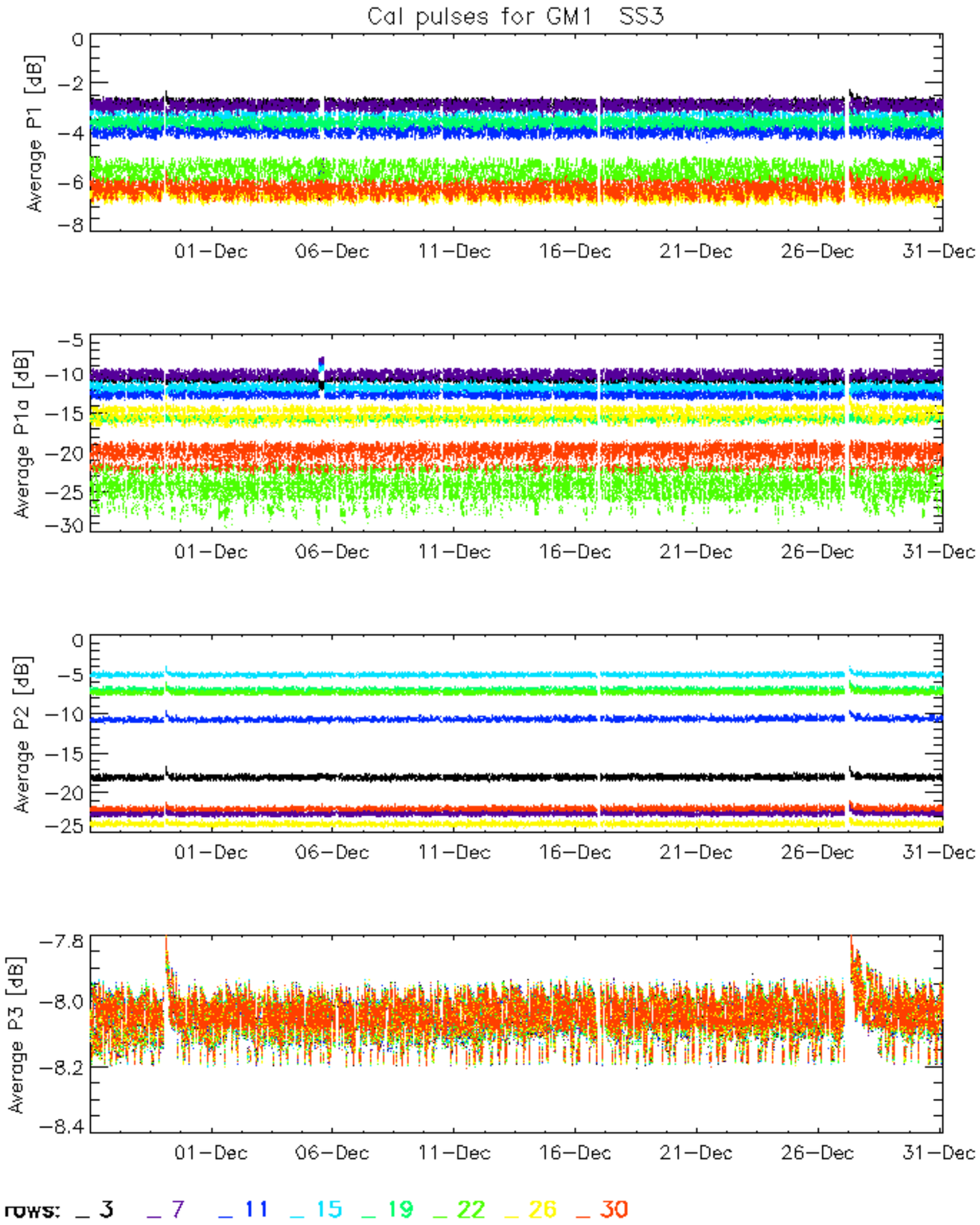
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

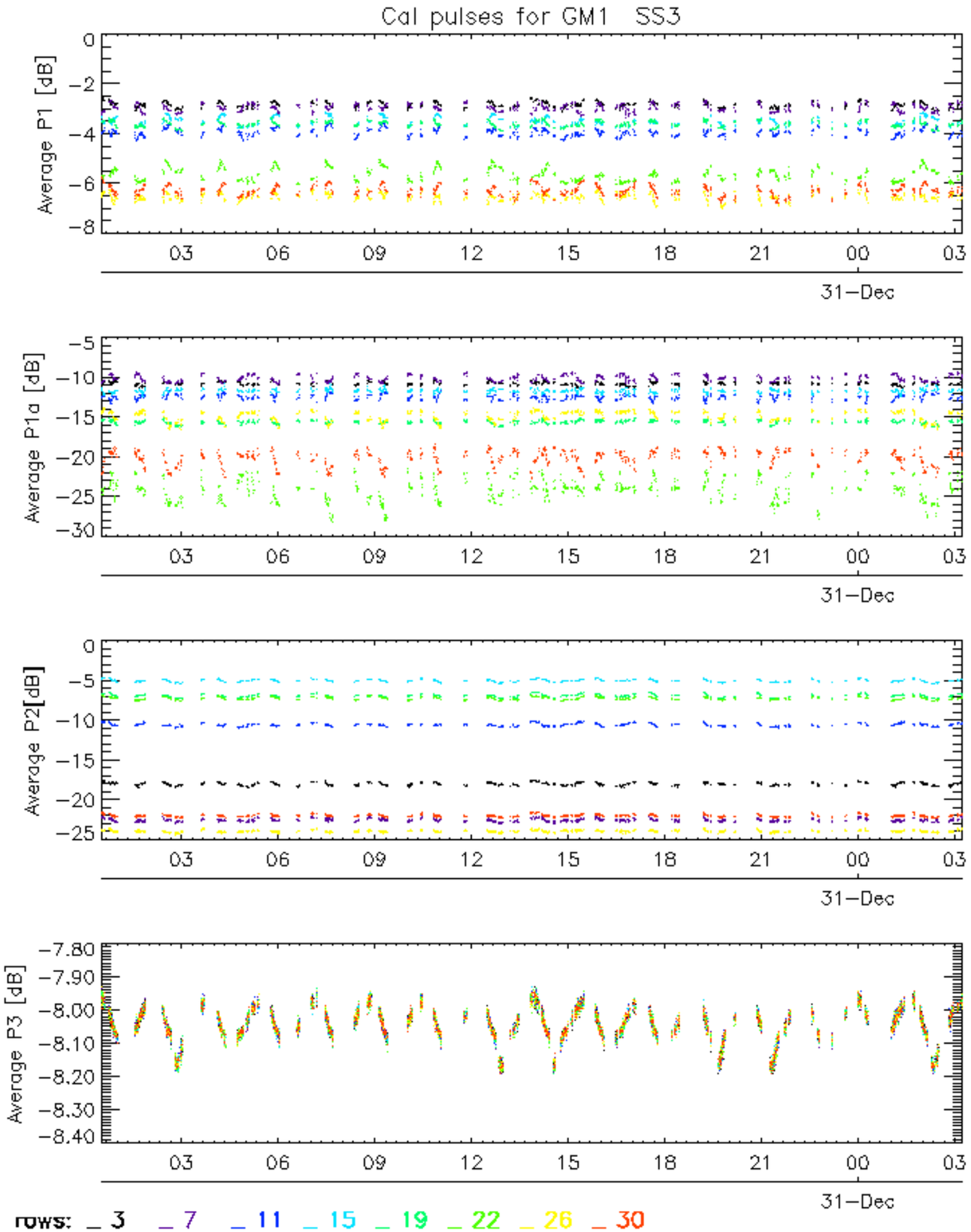
6.5 - Absolute Doppler for GM1

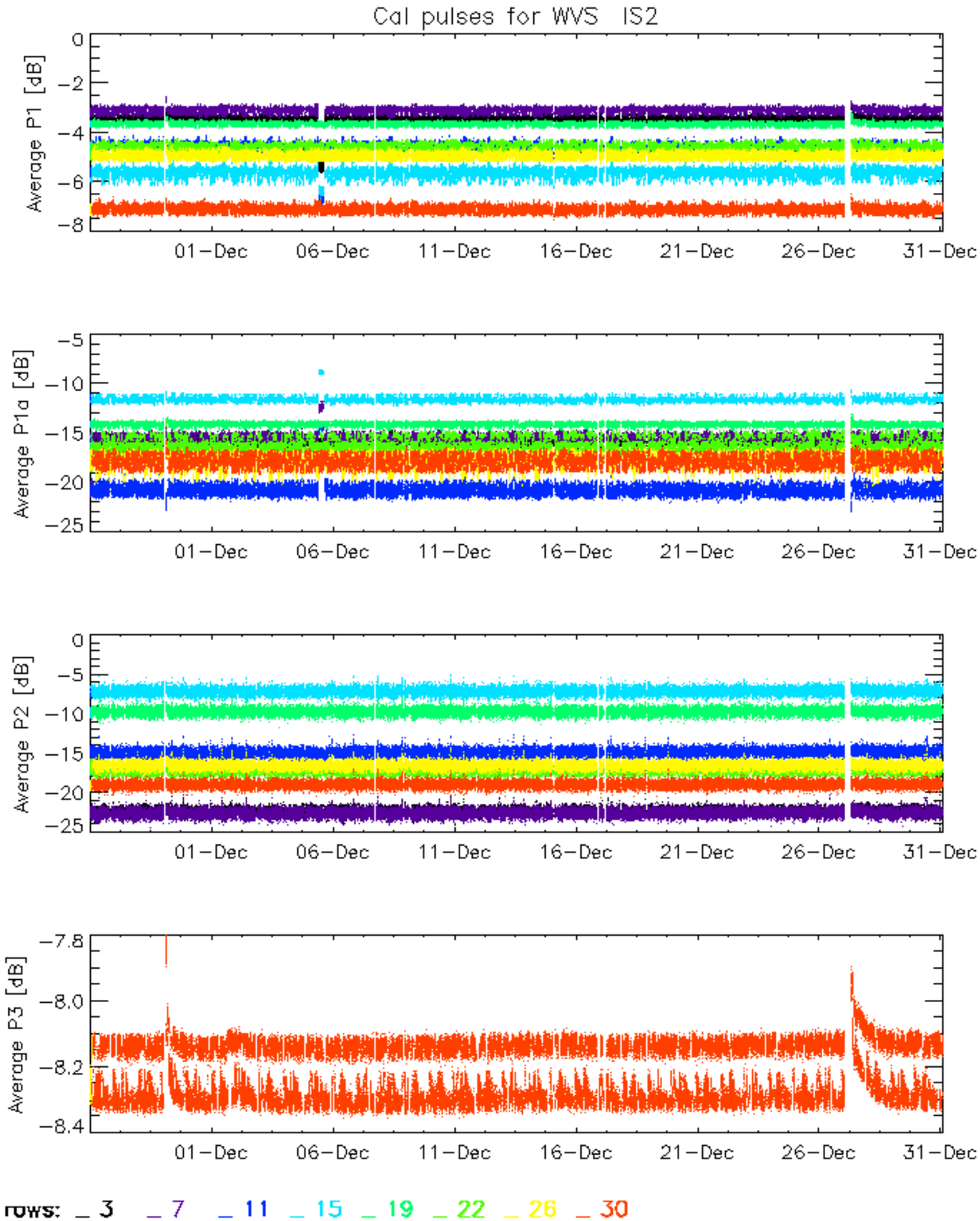
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

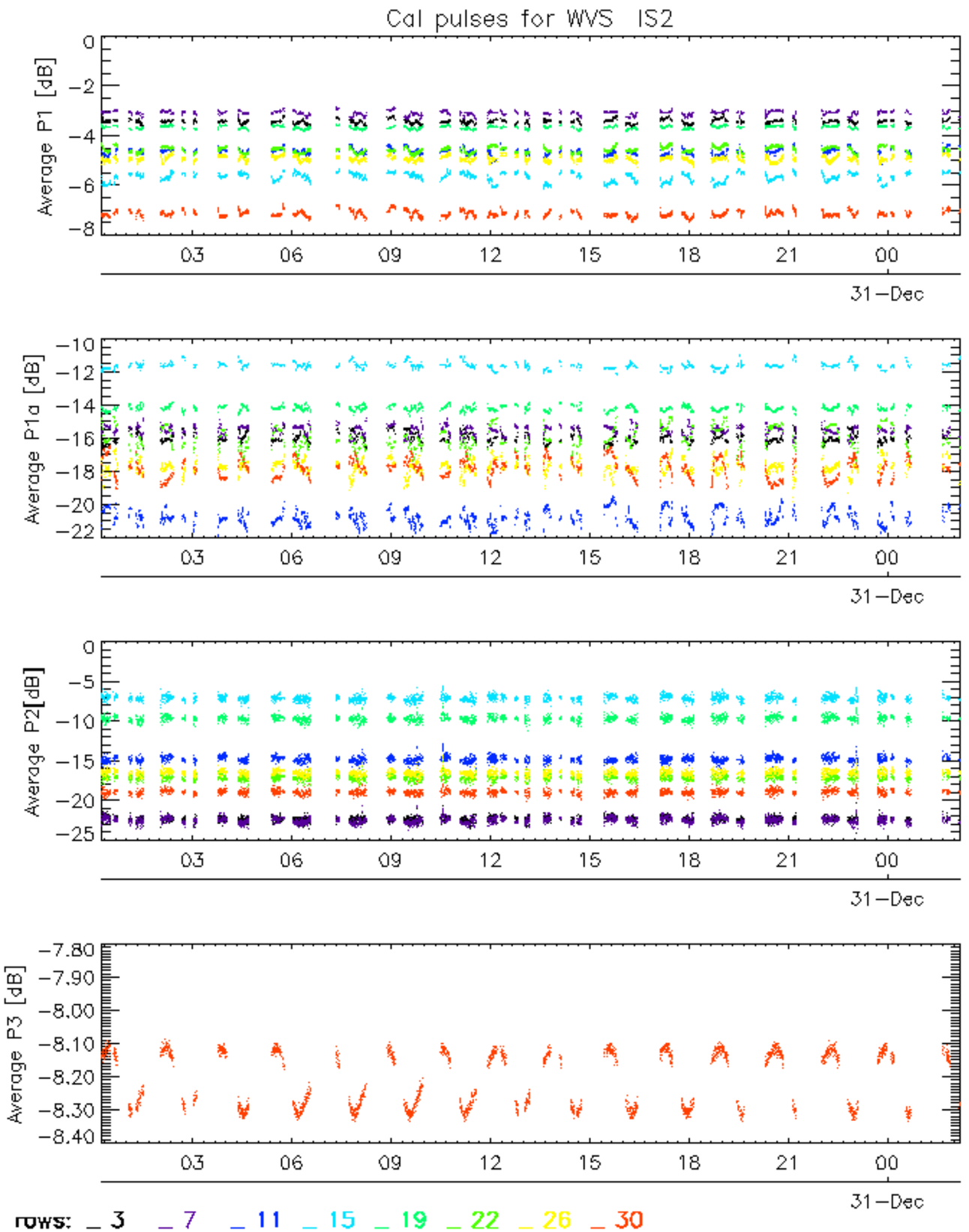
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

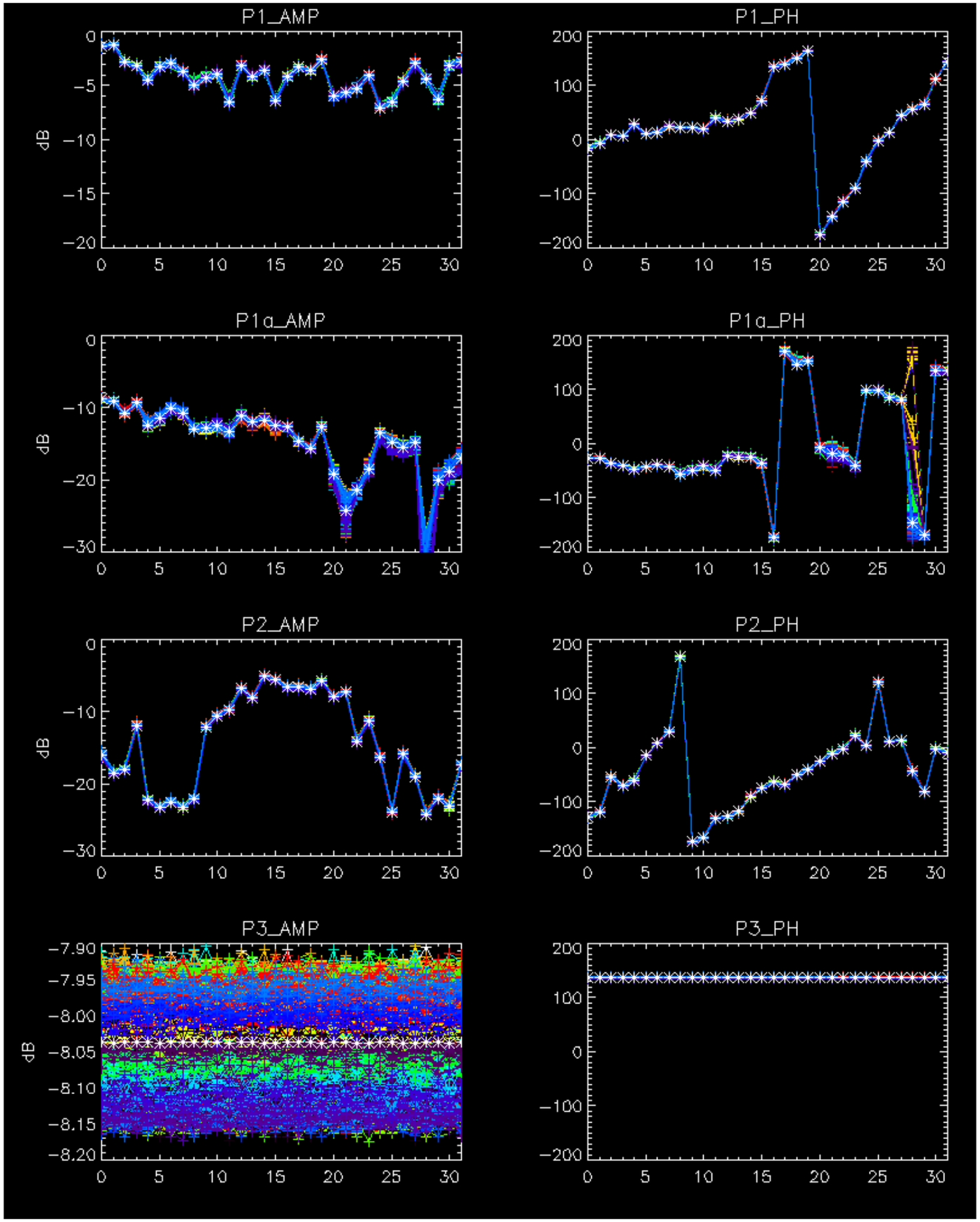

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

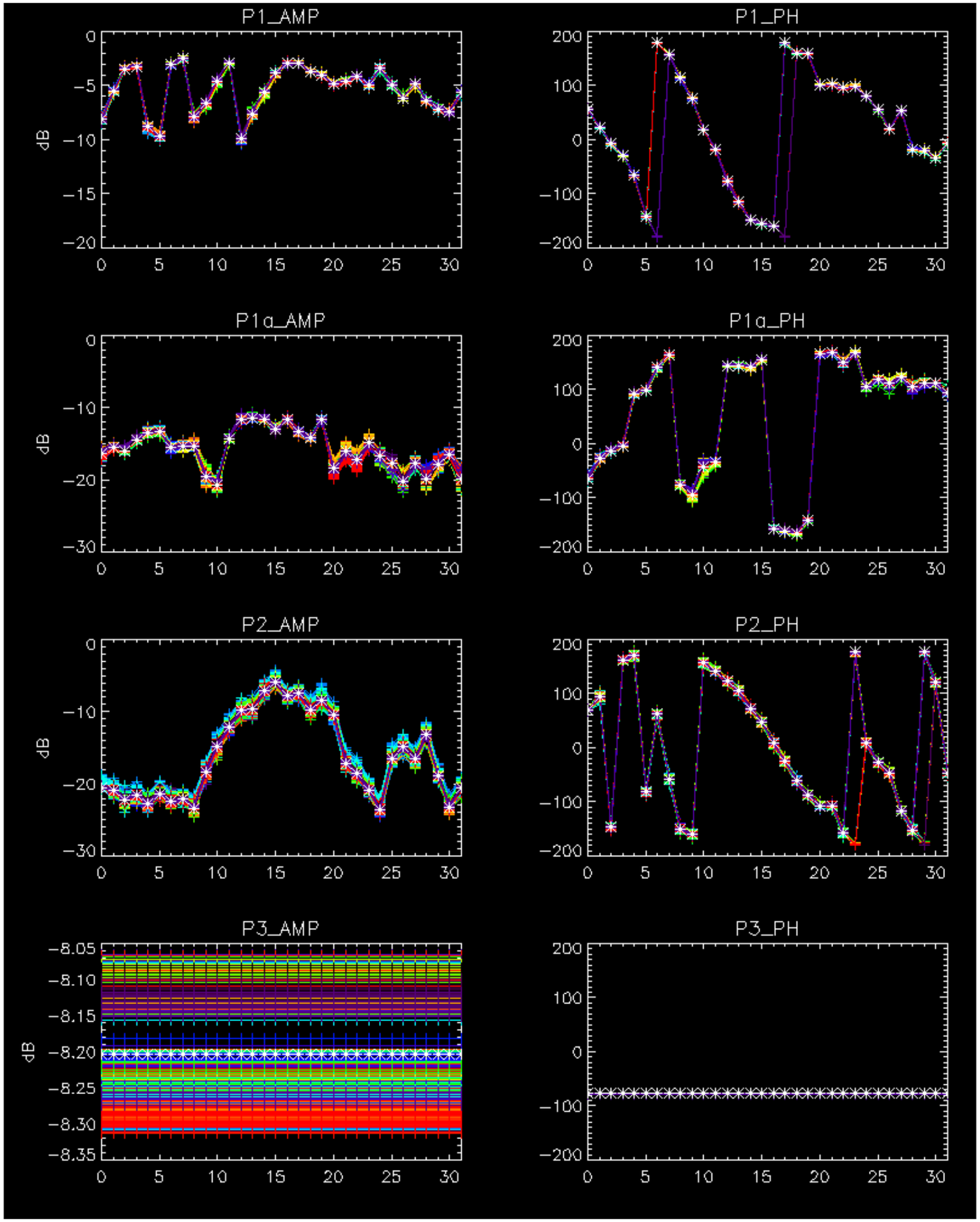

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
00
03
31−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
31−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
31−Dec
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2[dB]
−5
−15
−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

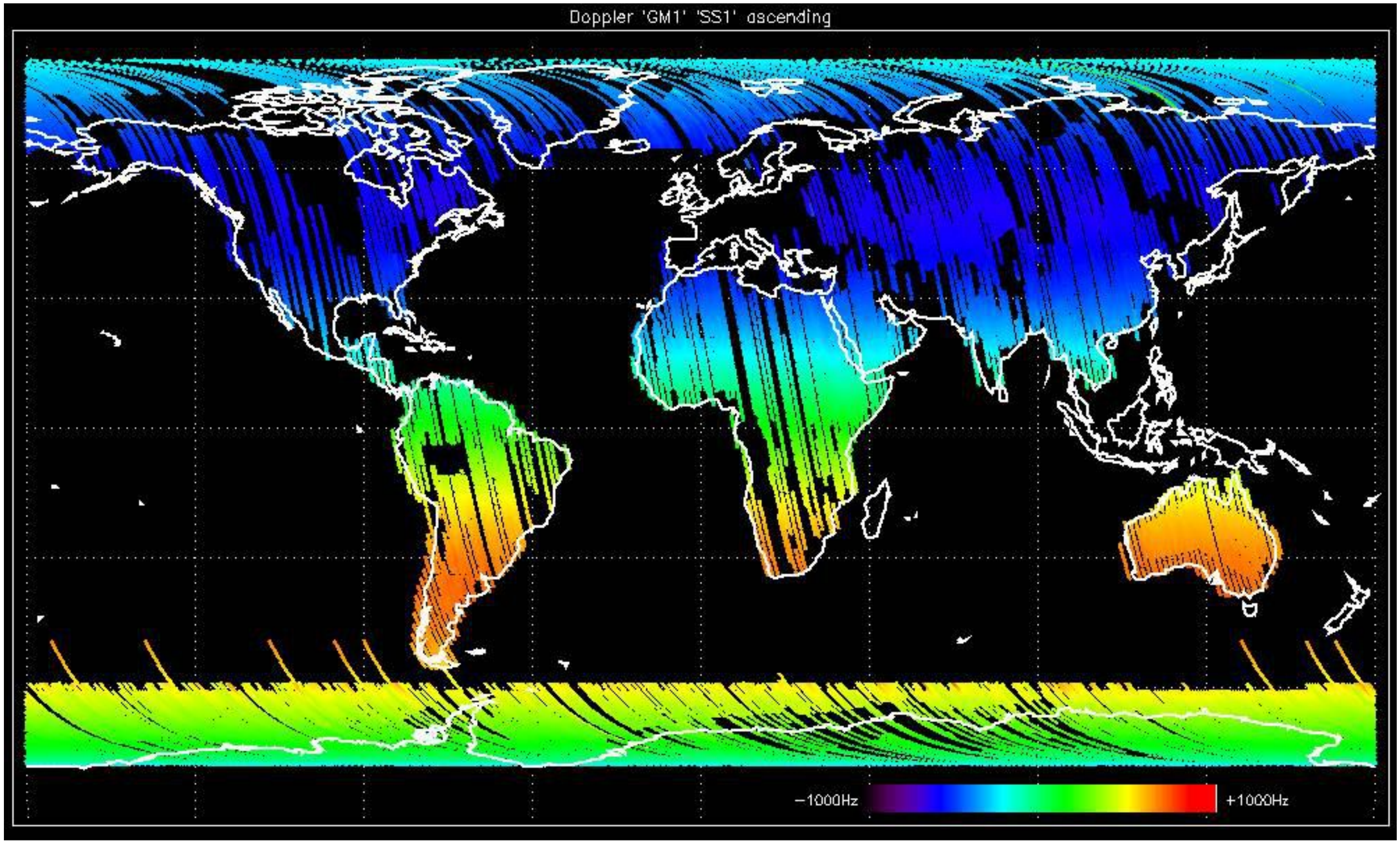
No anomalies observed.

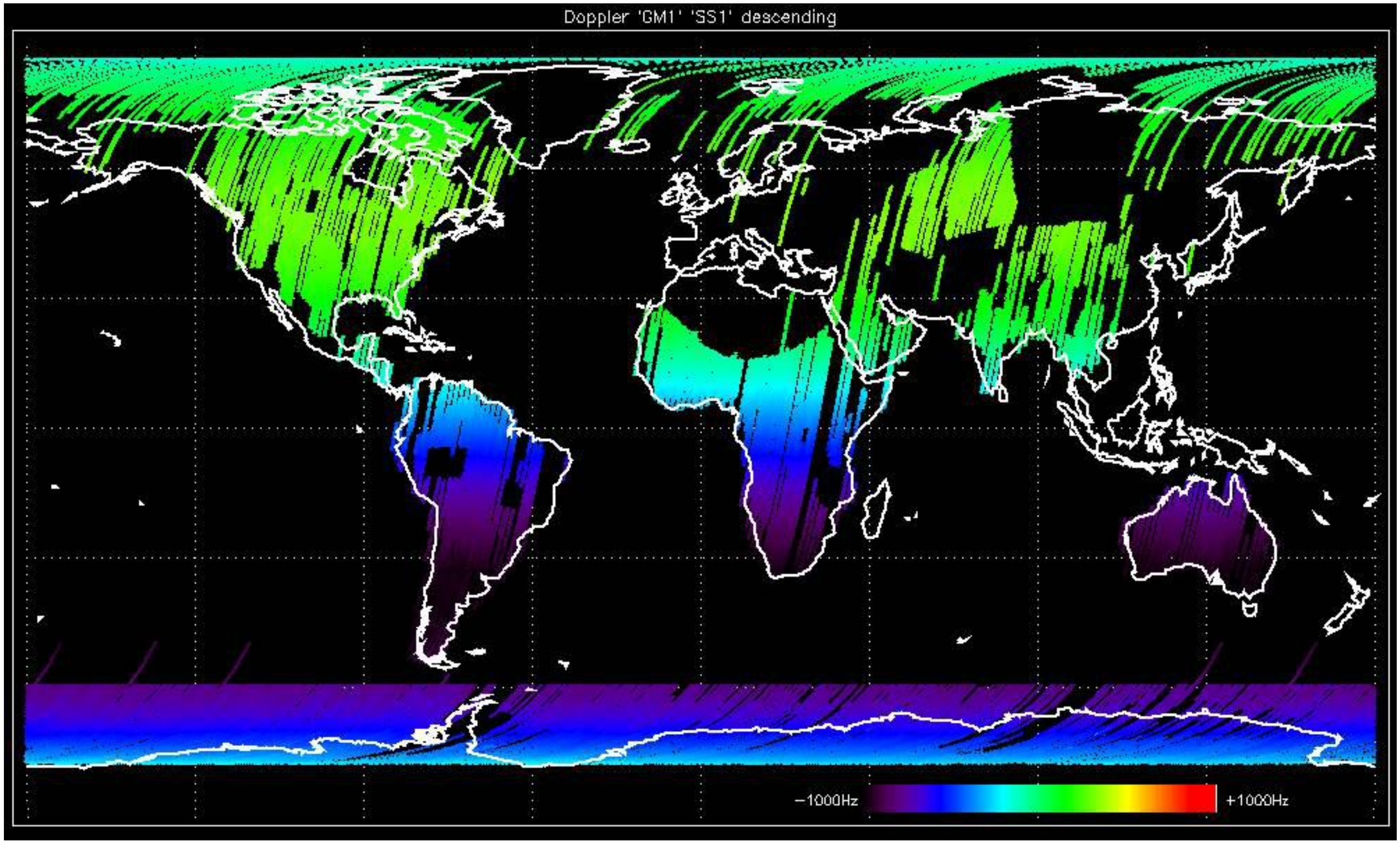

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

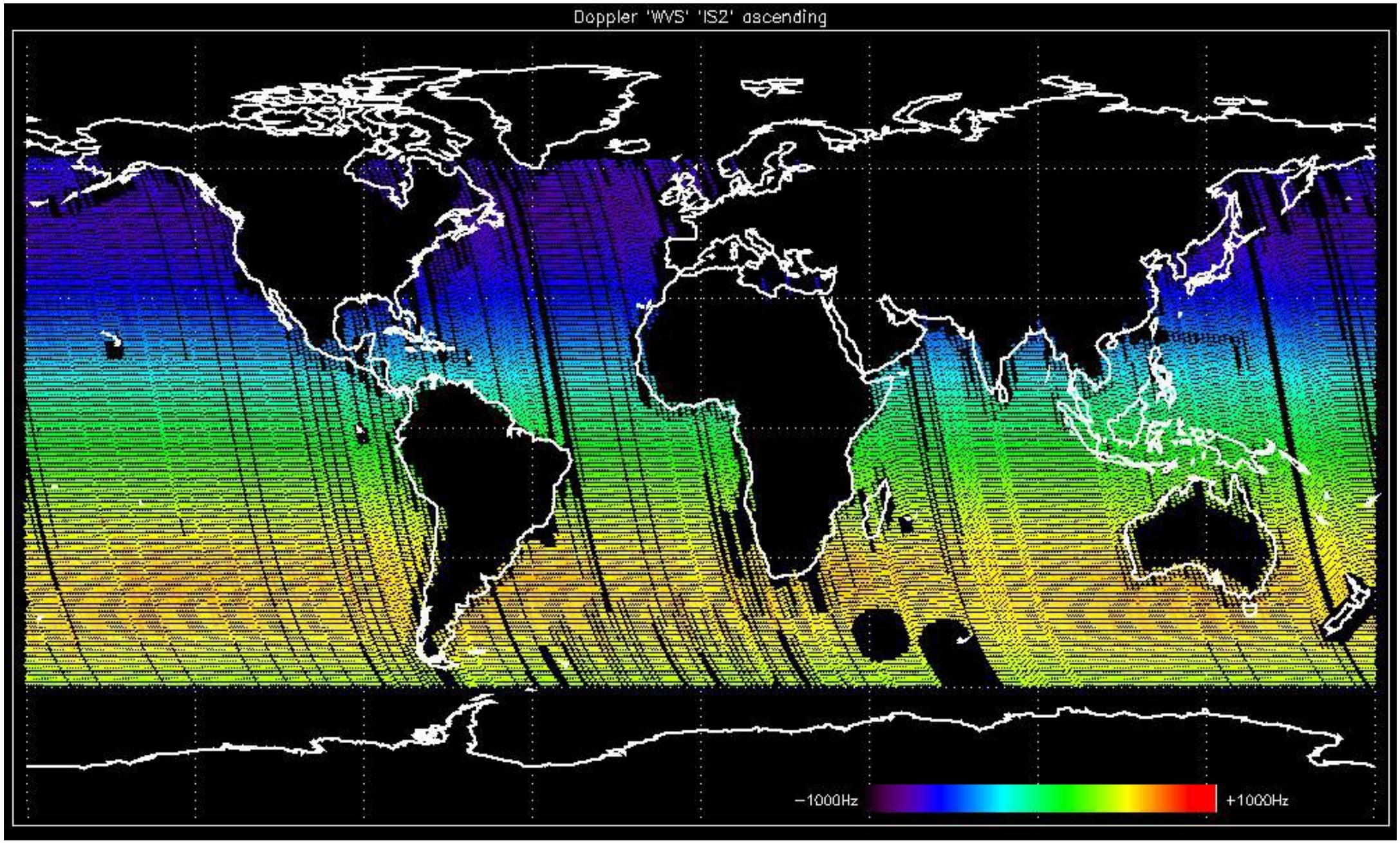

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

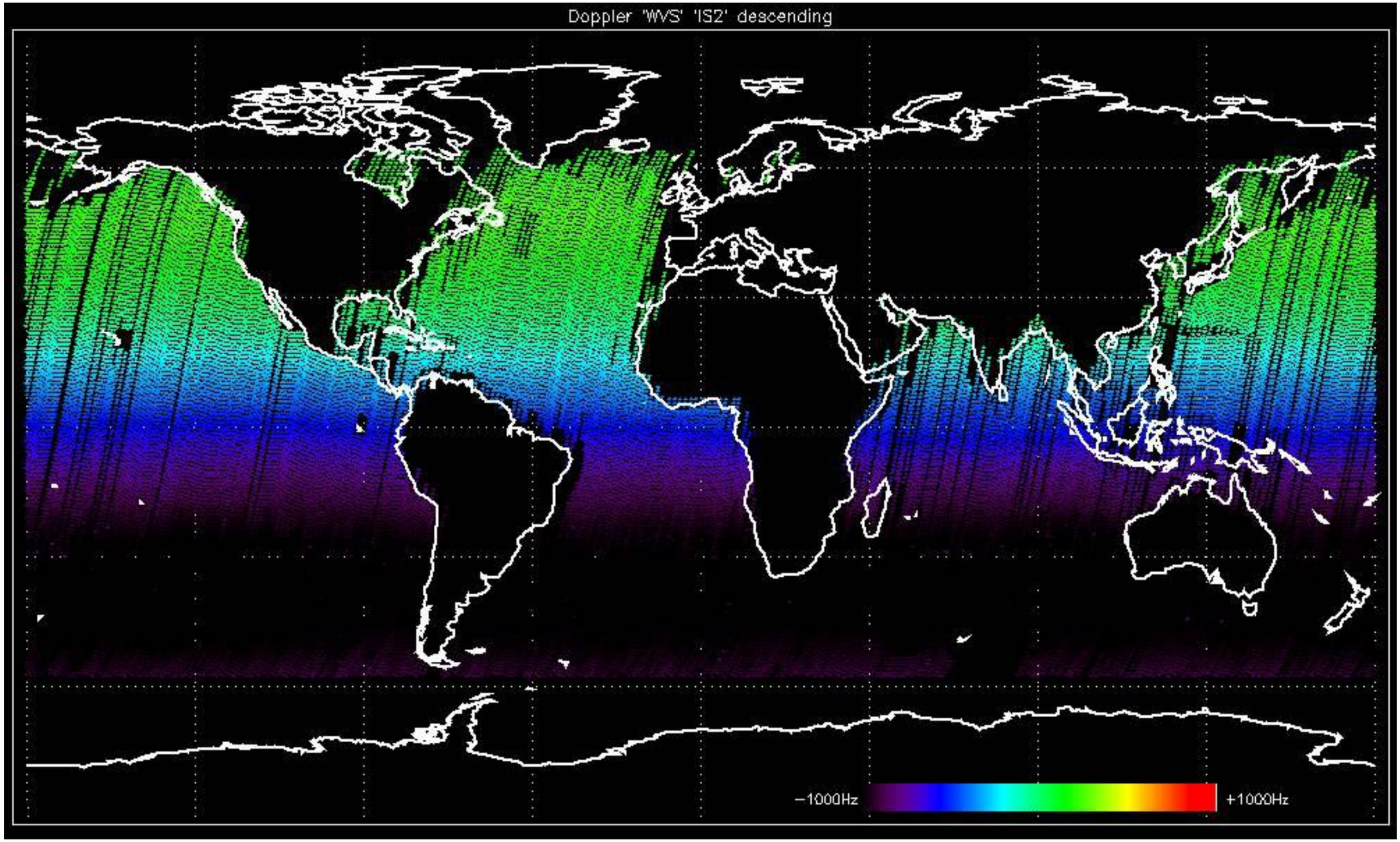
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

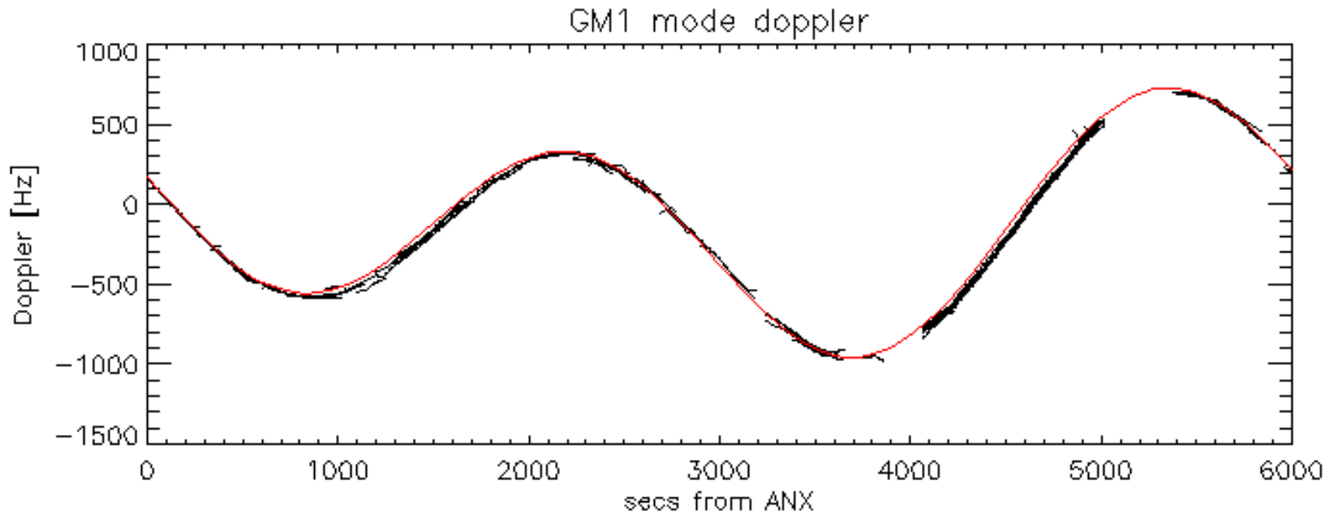
Preliminary report.The data is not yet controled

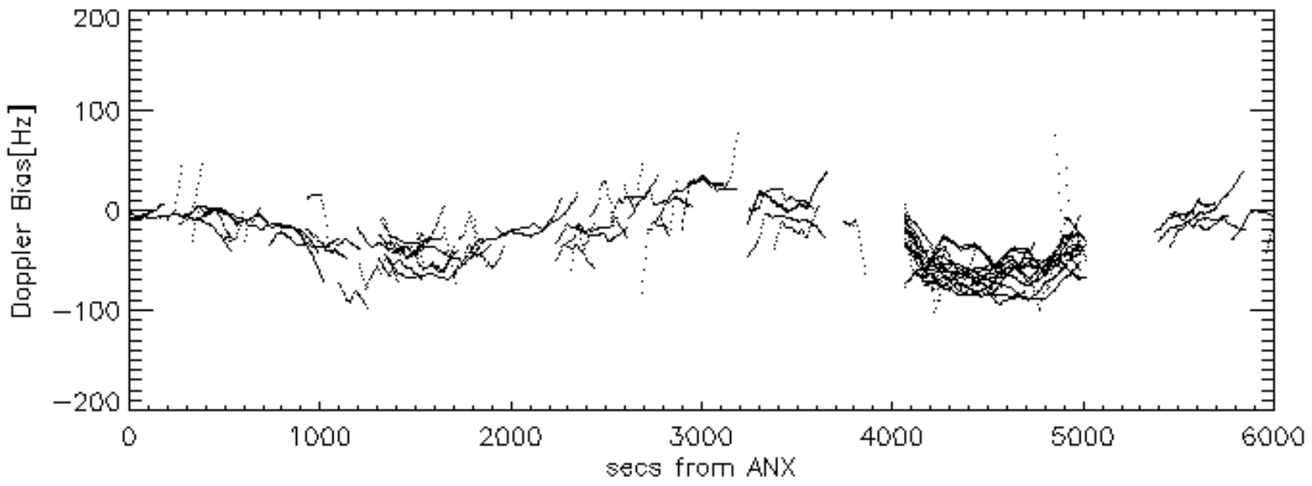

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

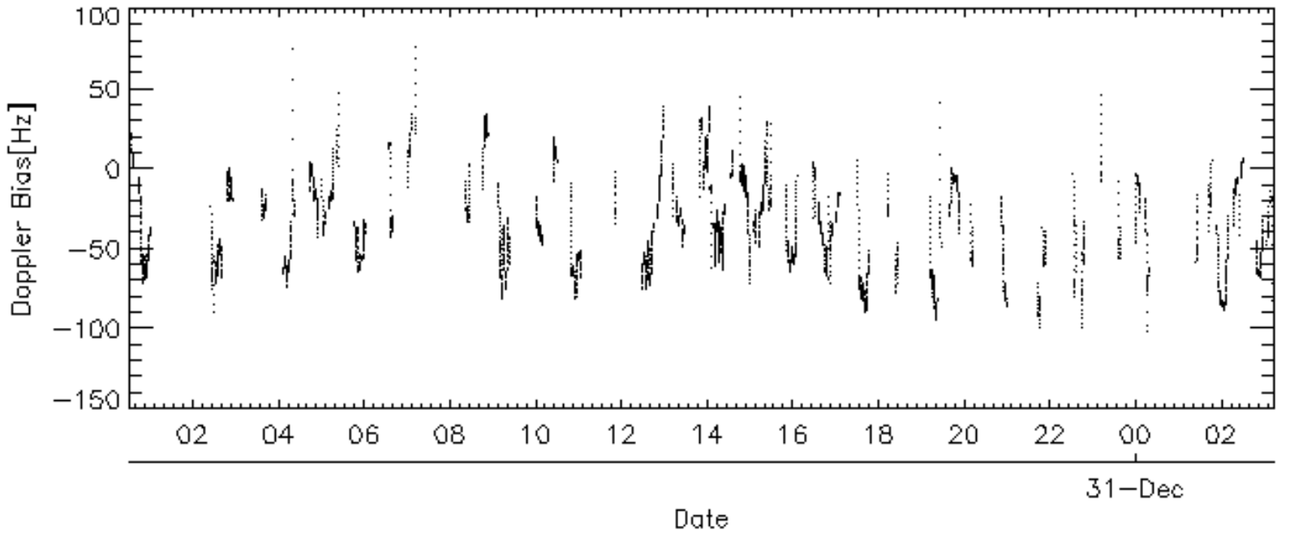

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

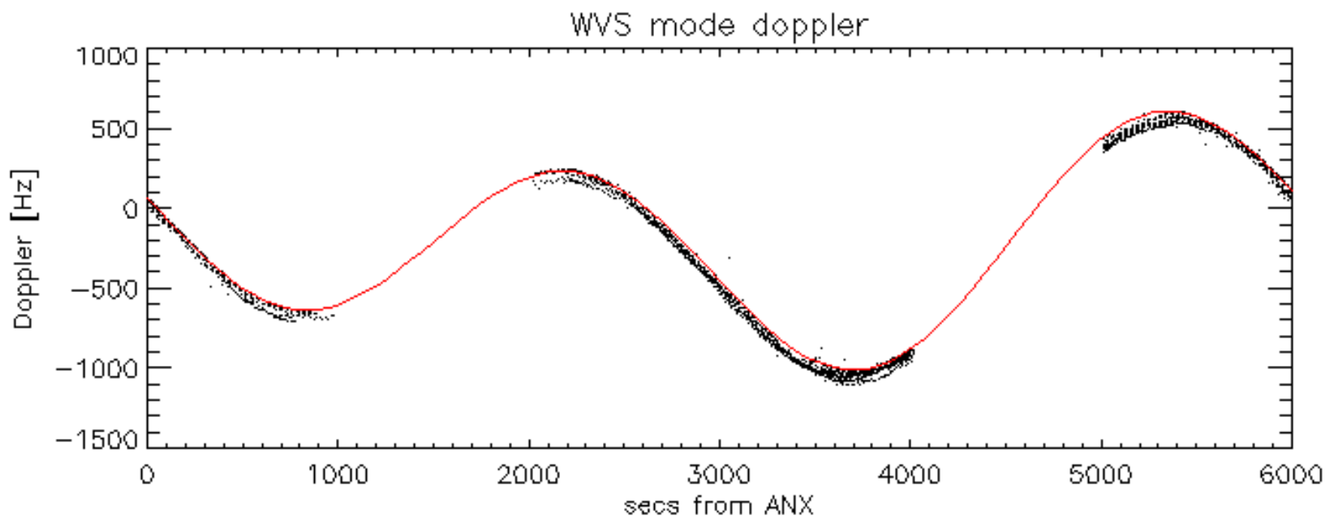

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

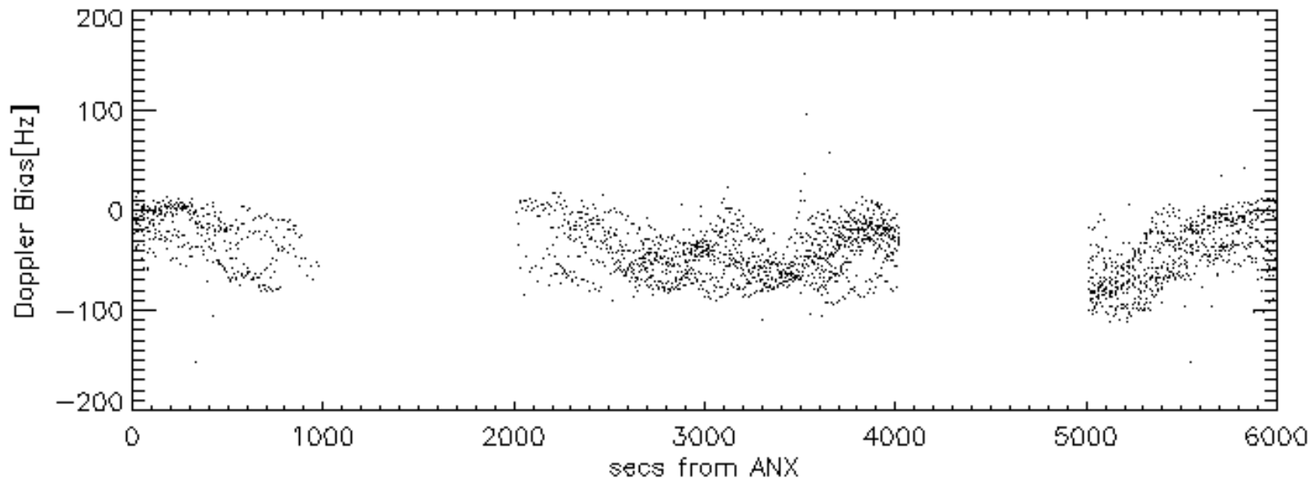

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

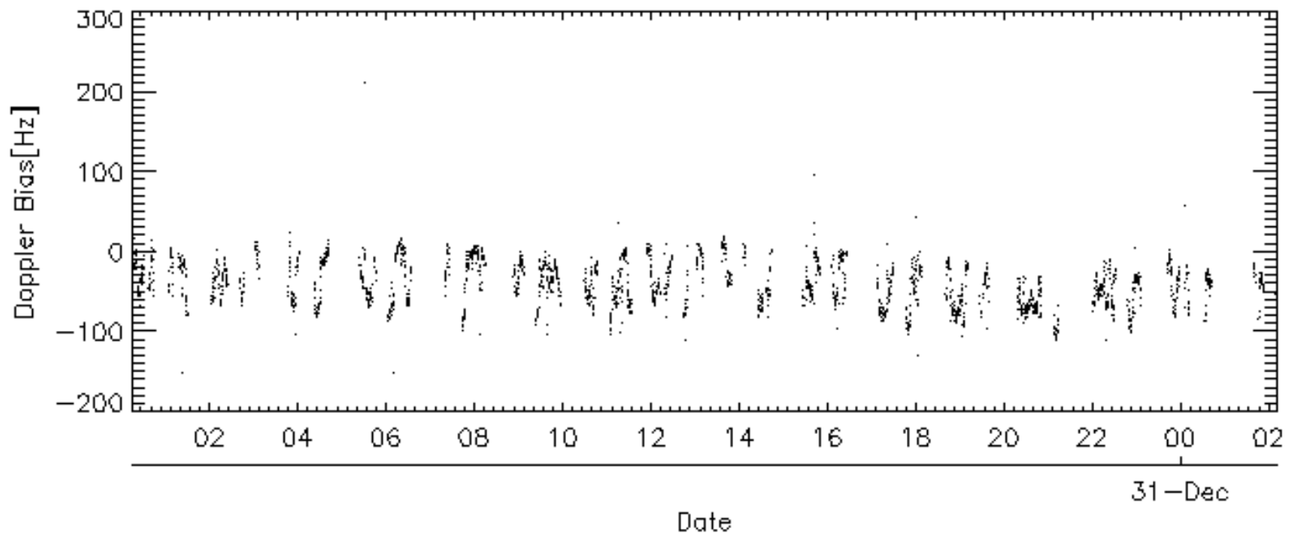

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

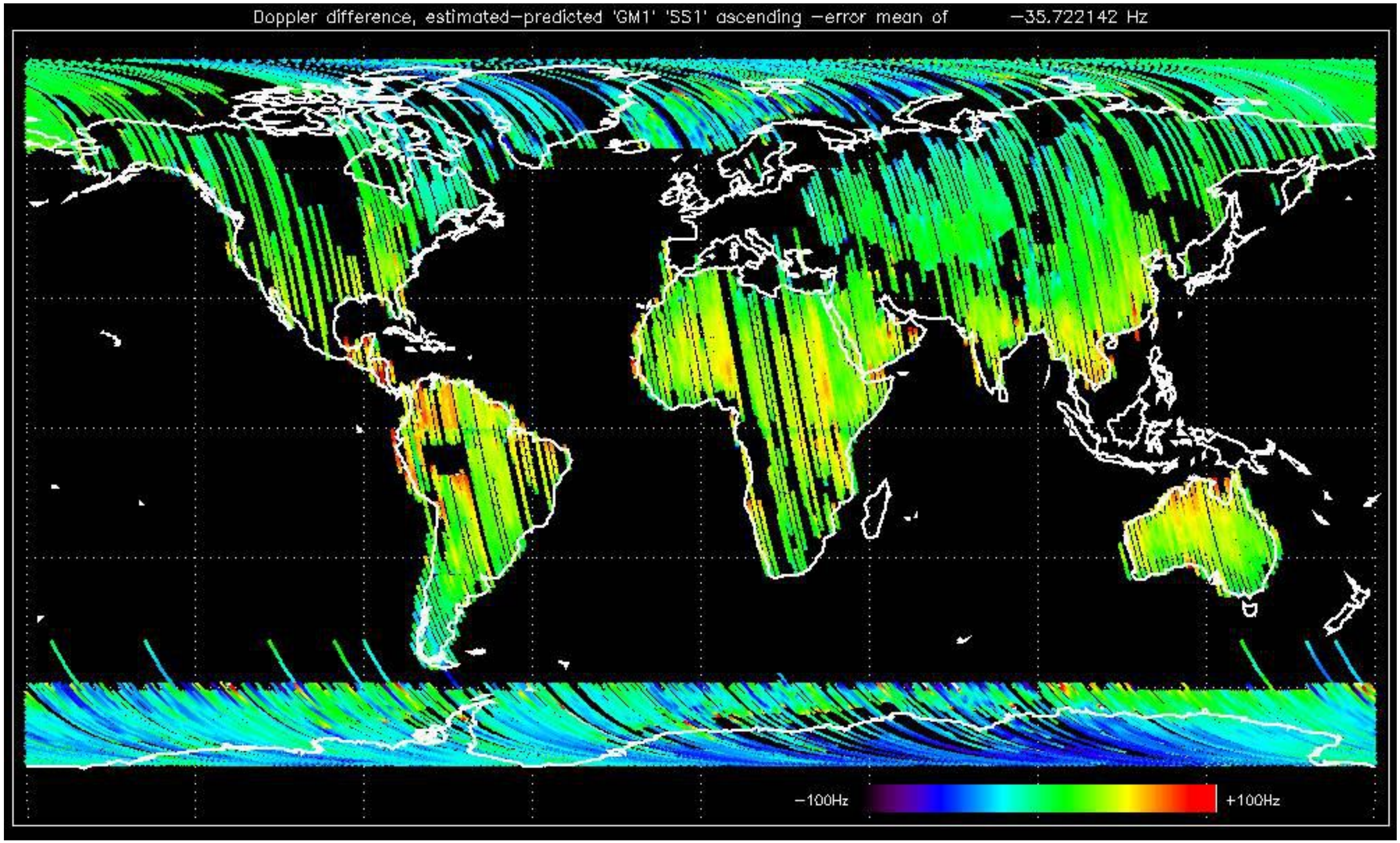

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

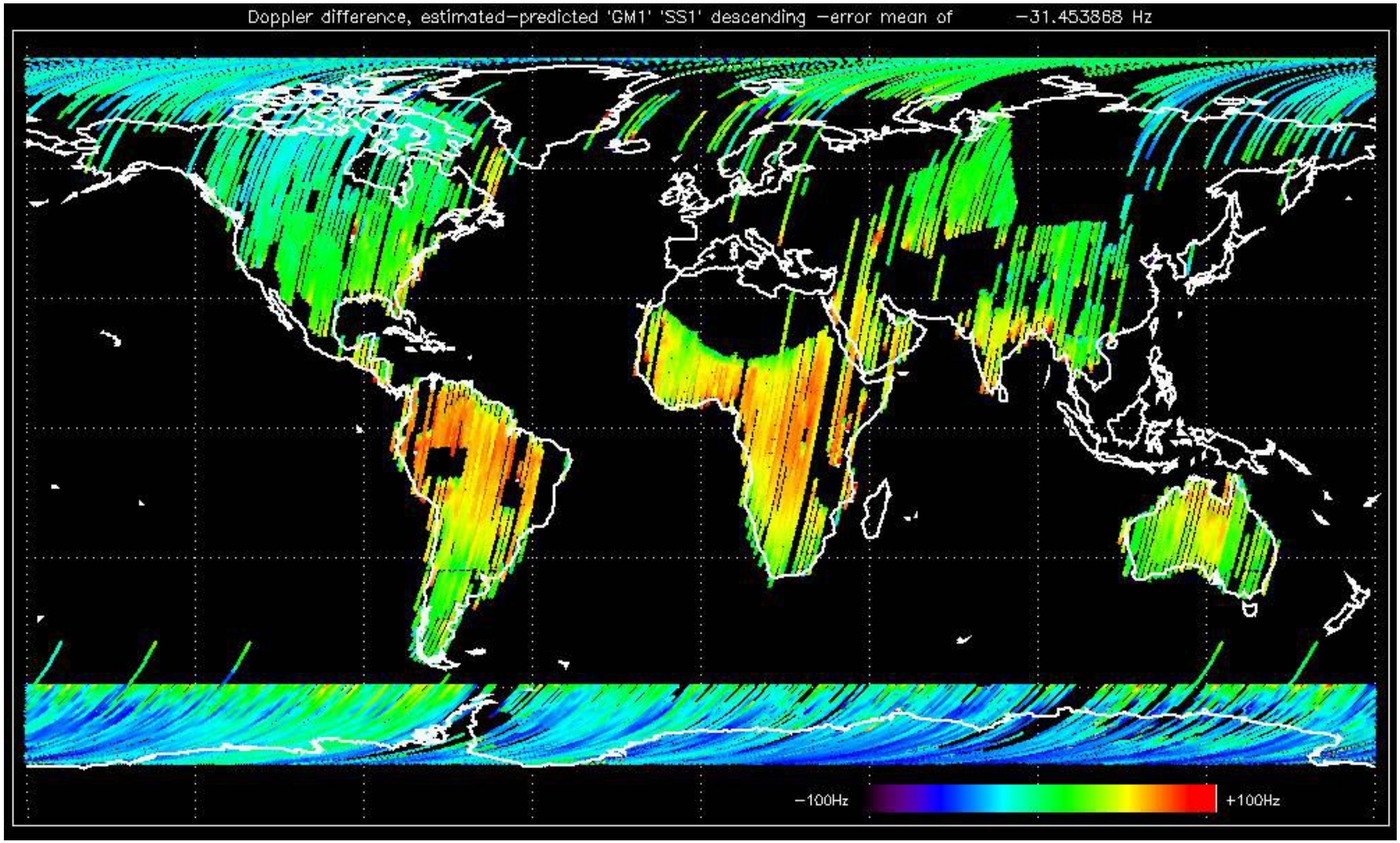

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
31−Dec
Date

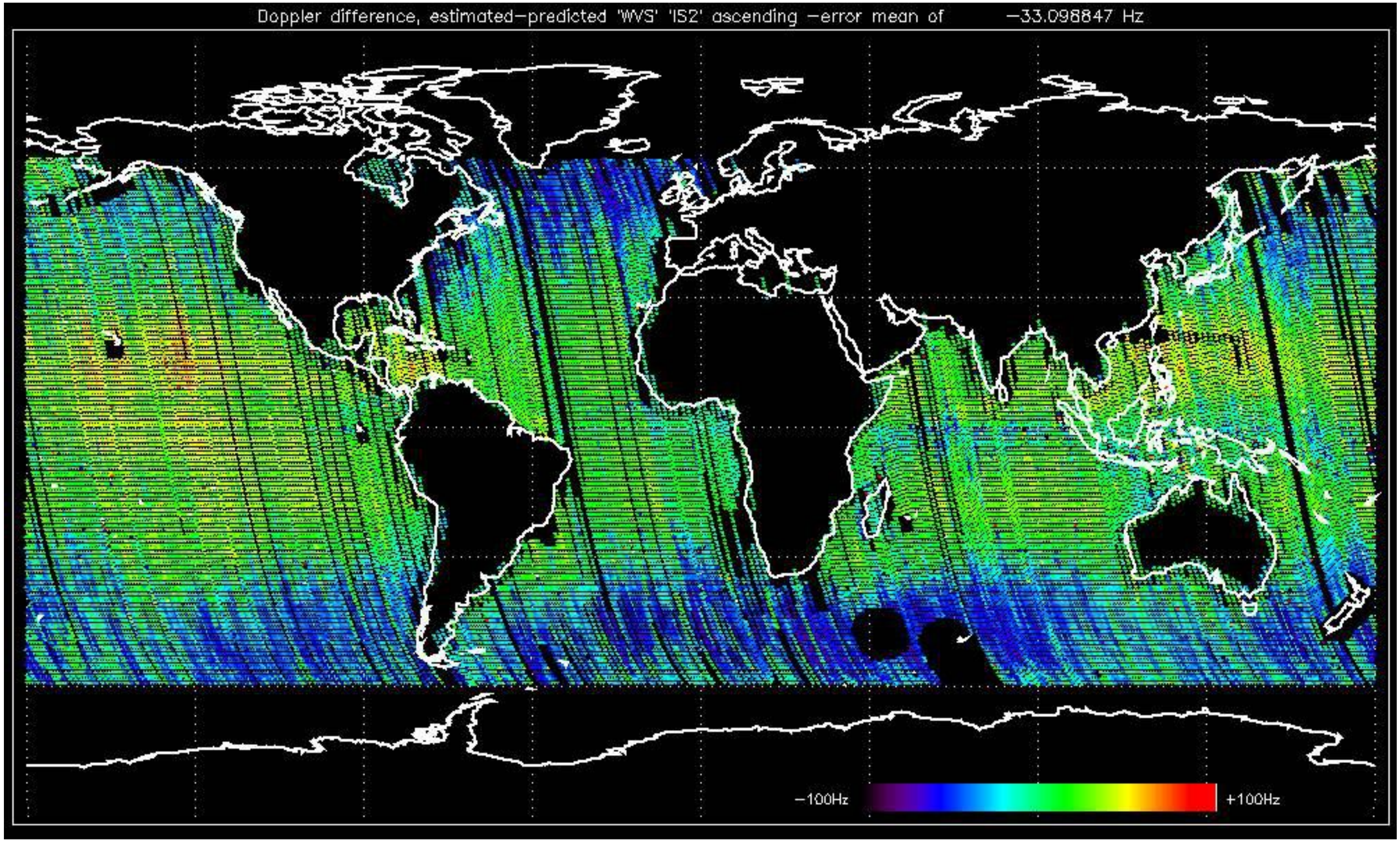

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

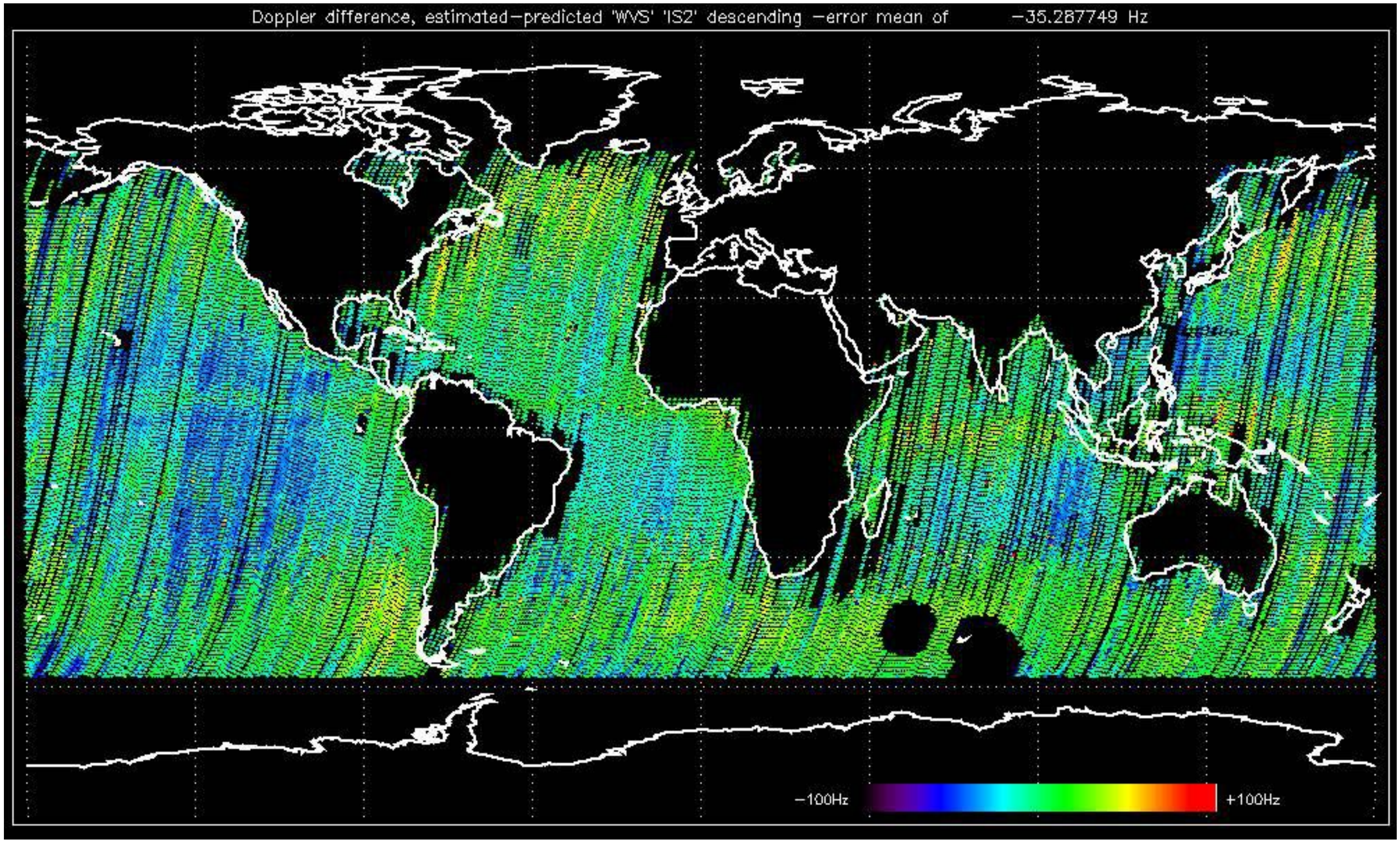

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.722142 Hz
−100Hz
+100Hz

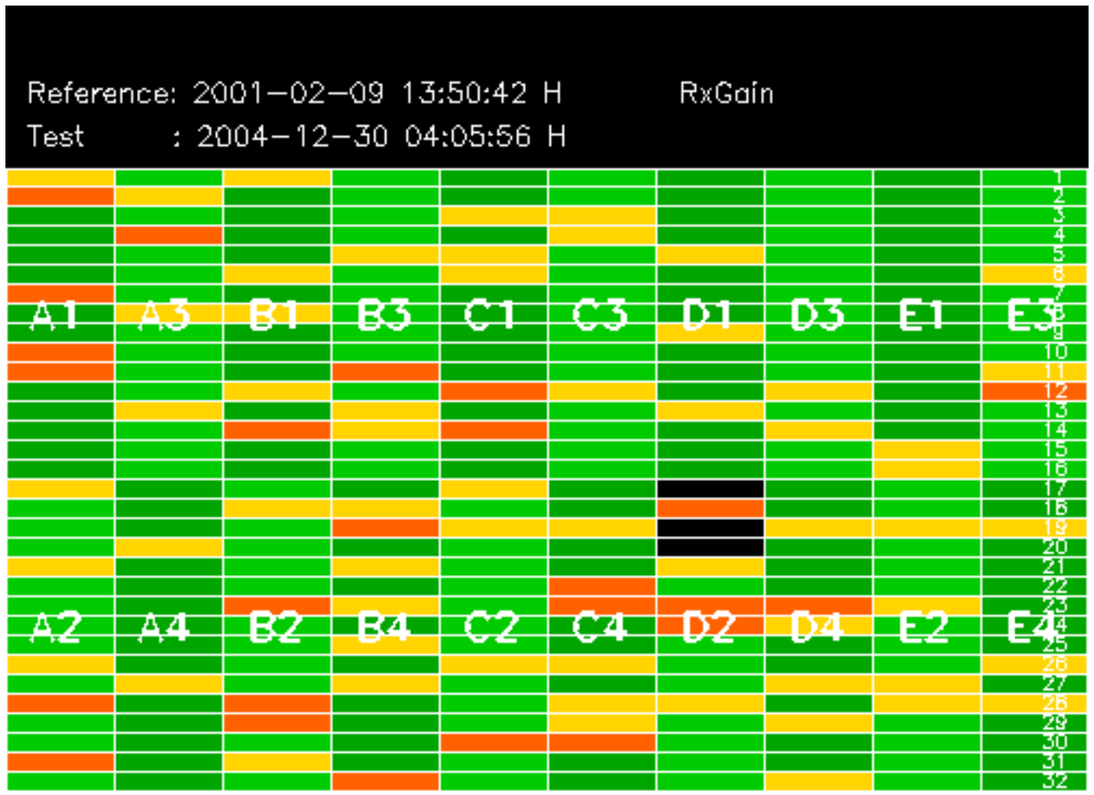

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -31.453868 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −33.098847 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −35.287749 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
Test : 2004-12-30 04:05:56 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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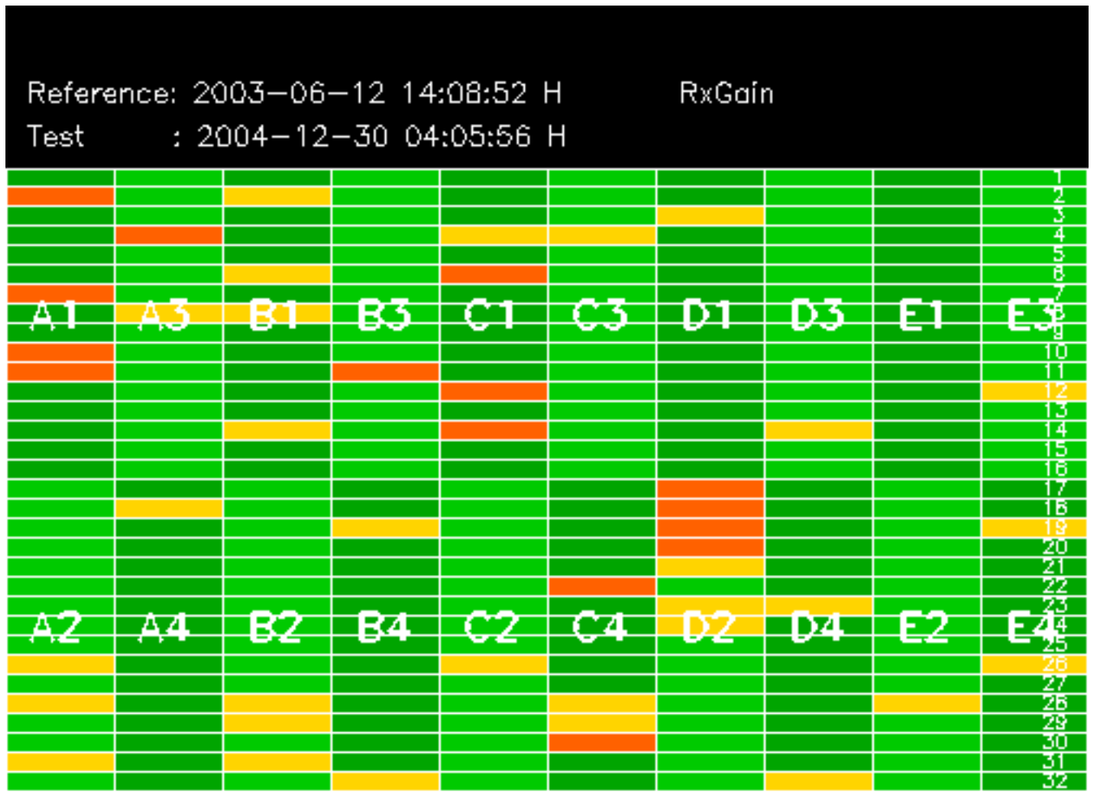
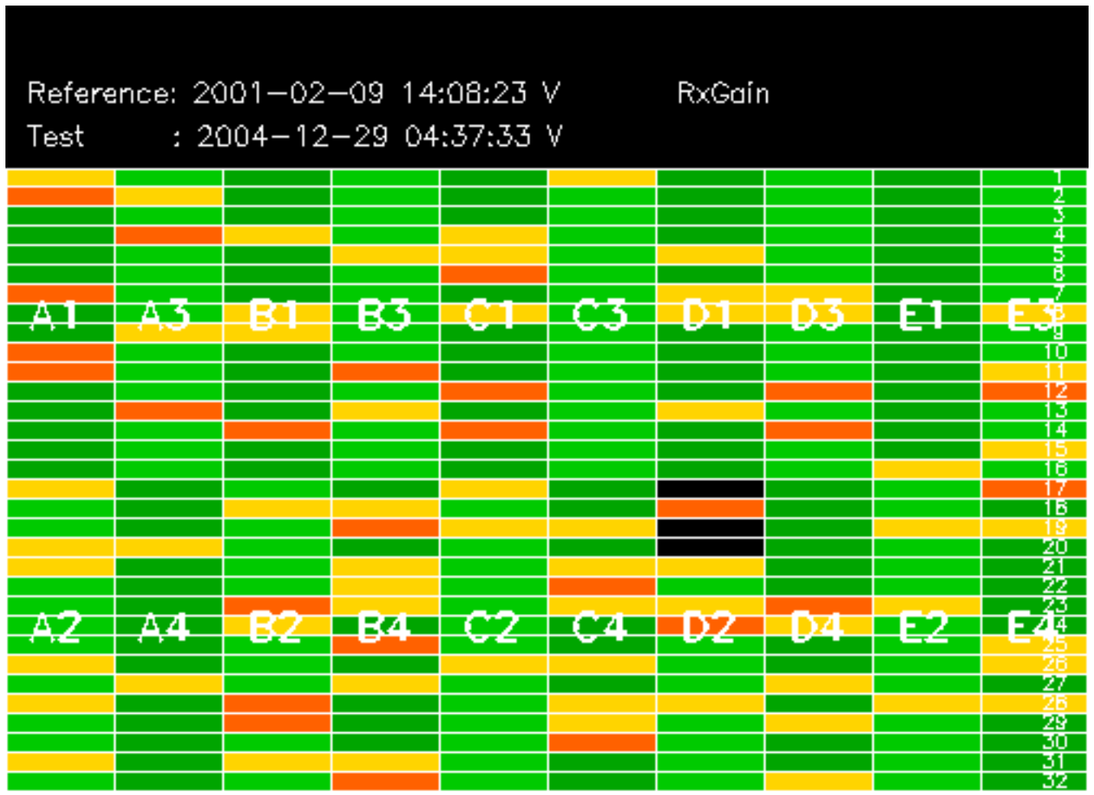

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-30 04:05:56 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-29 04:37:33 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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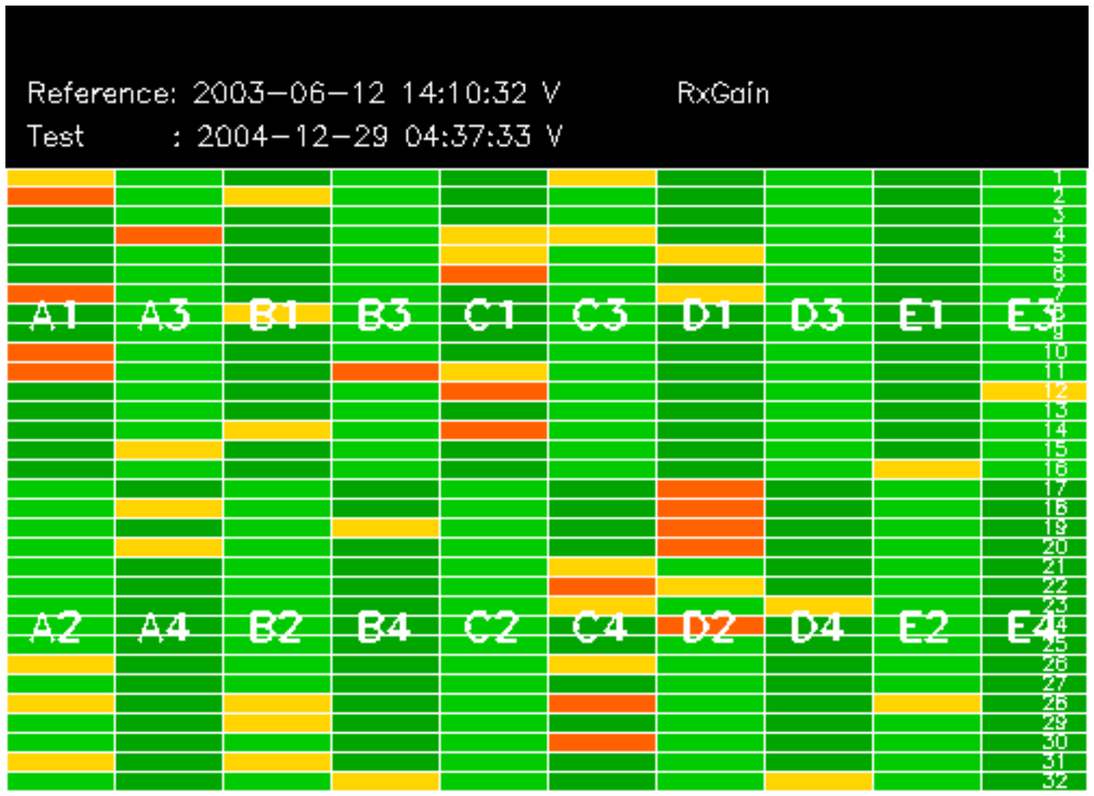
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-29 04:37:33 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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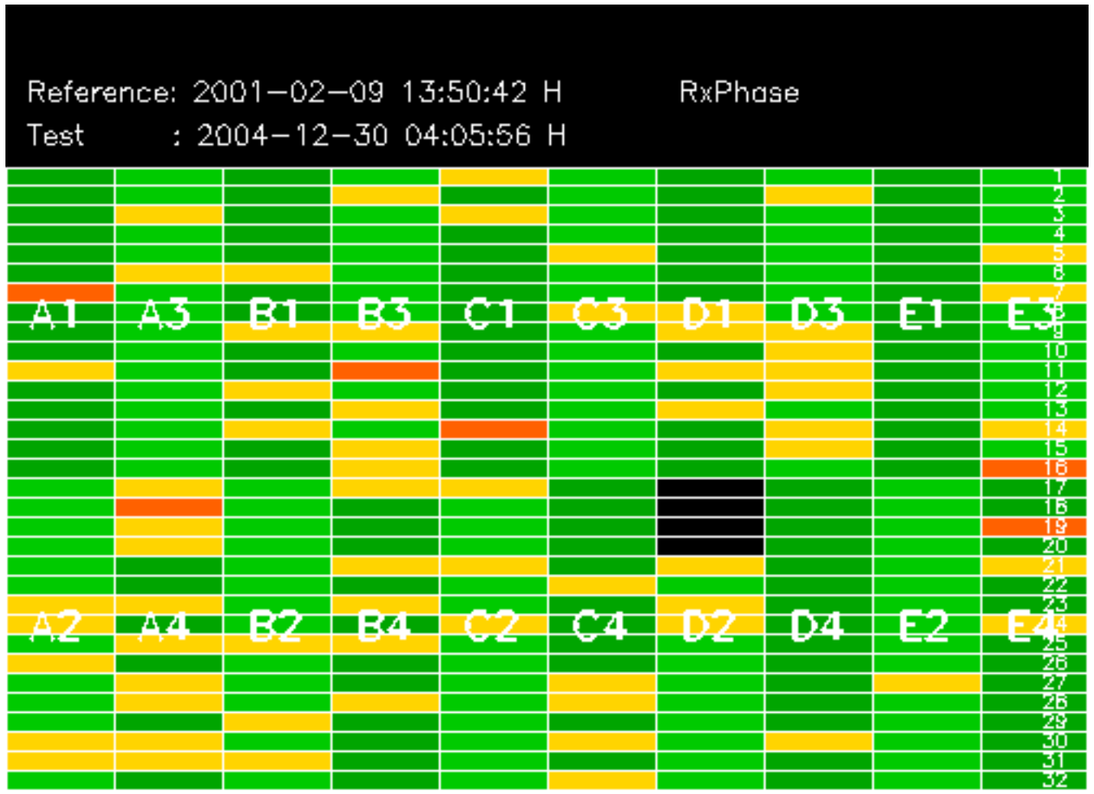
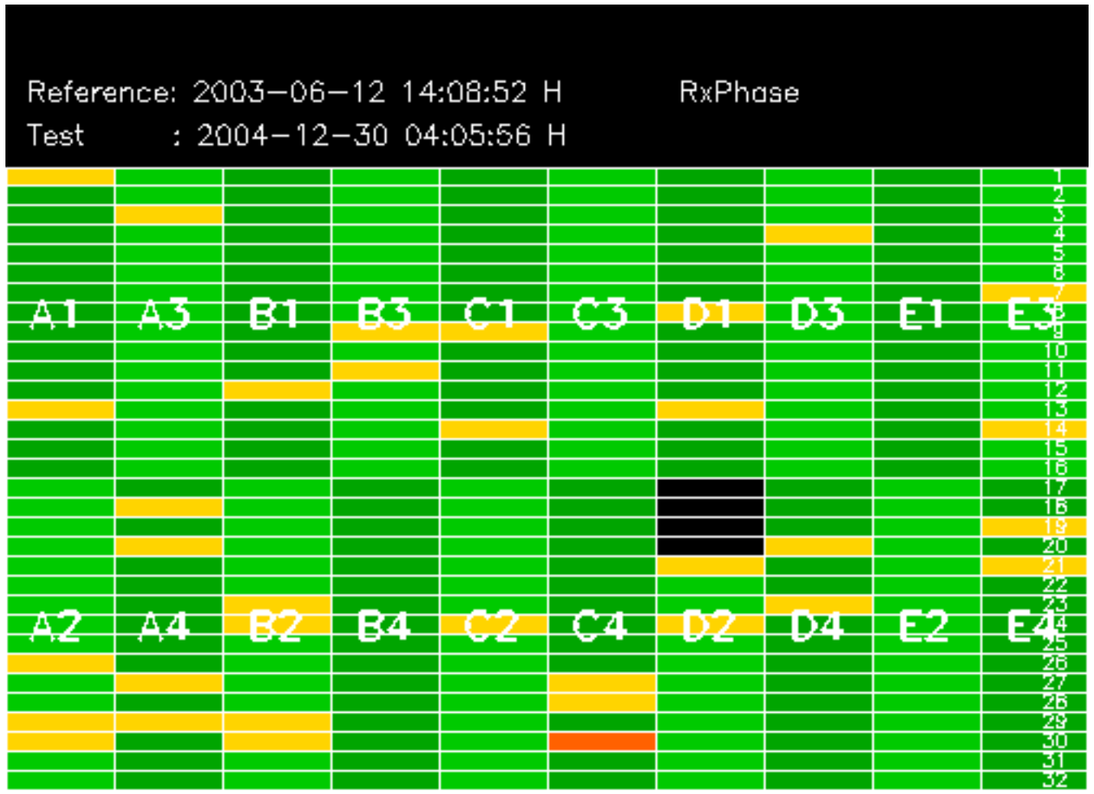

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-30 04:05:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-30 04:05:56 H
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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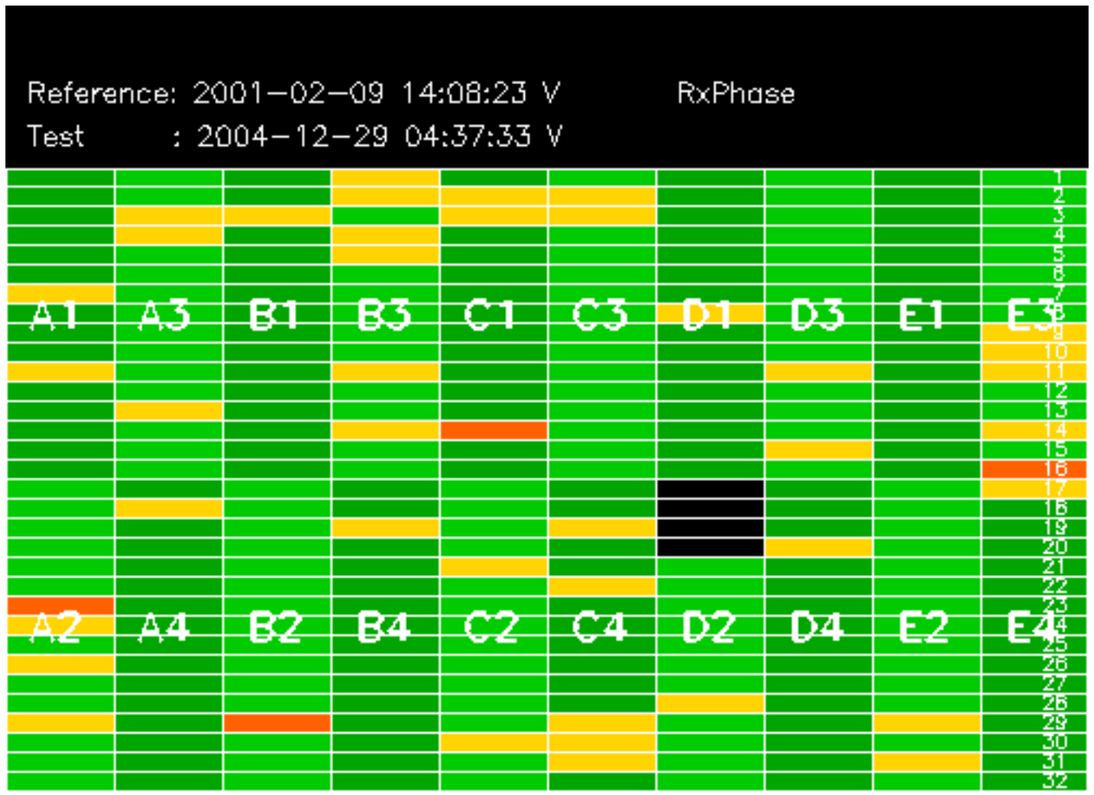
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-29 04:37:33 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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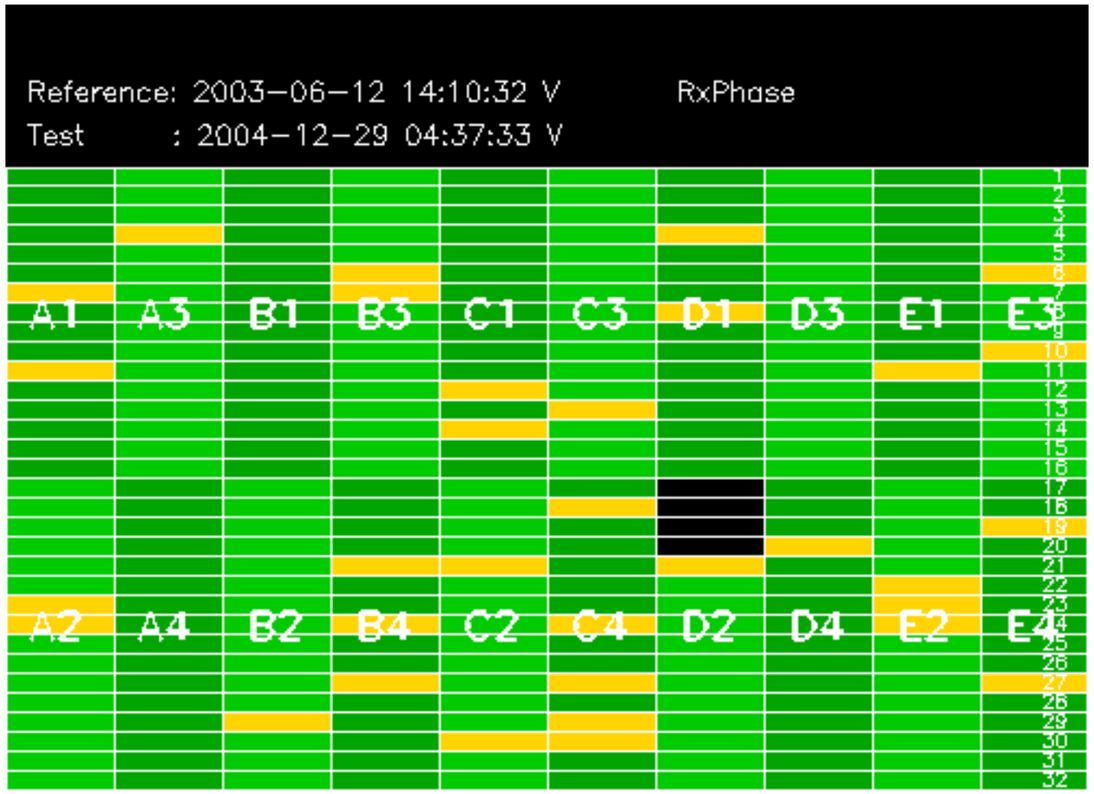
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-29 04:37:33 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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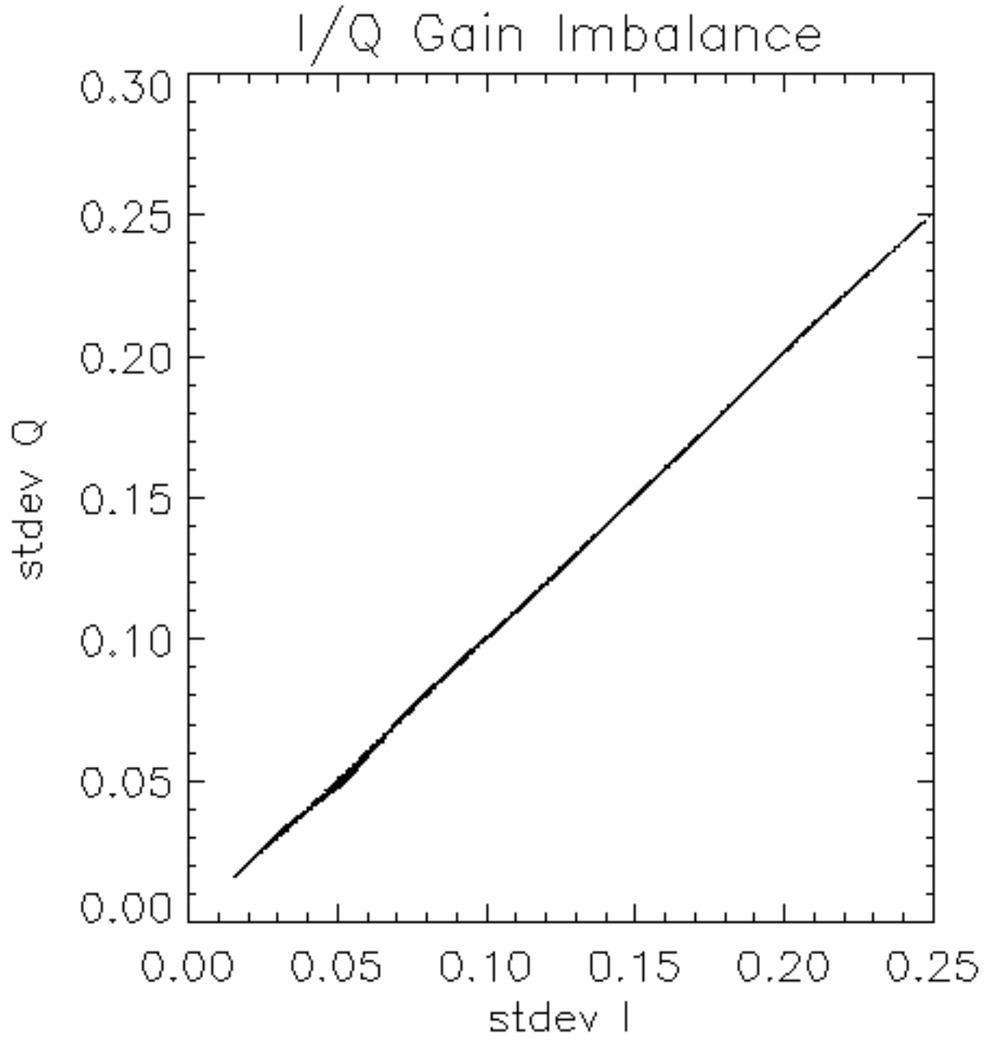
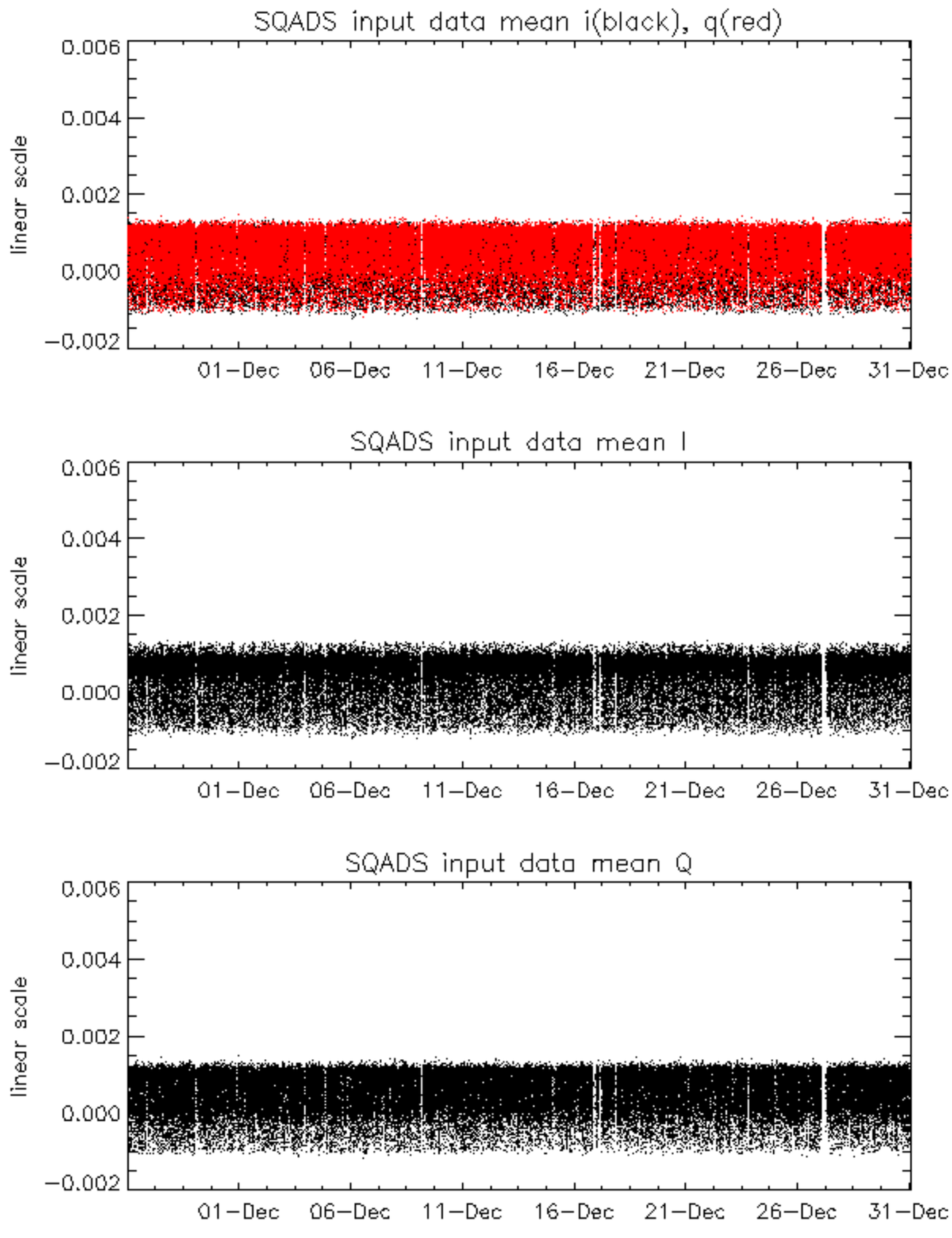
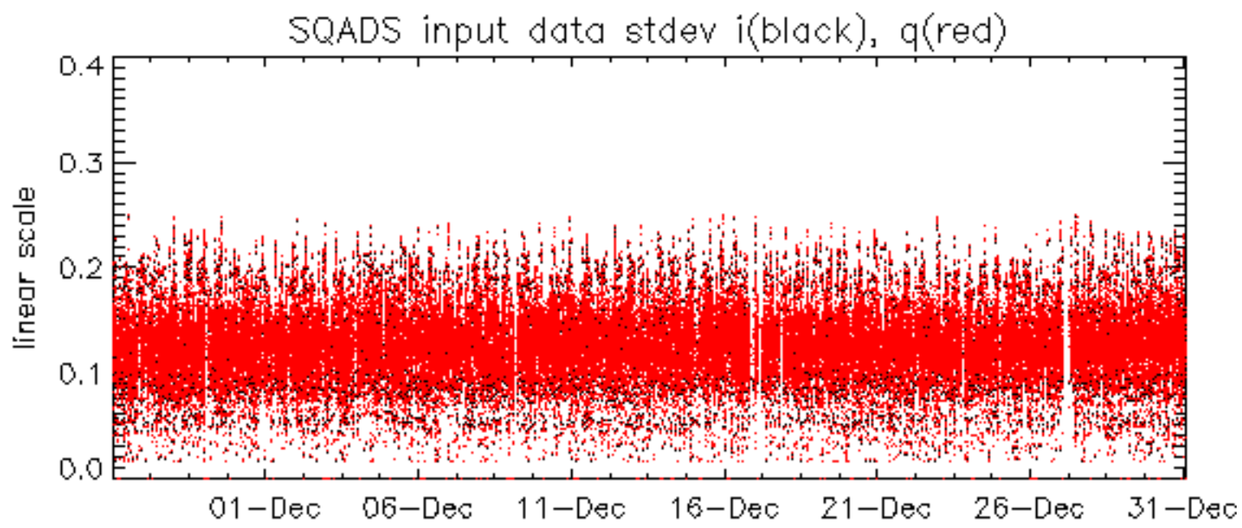
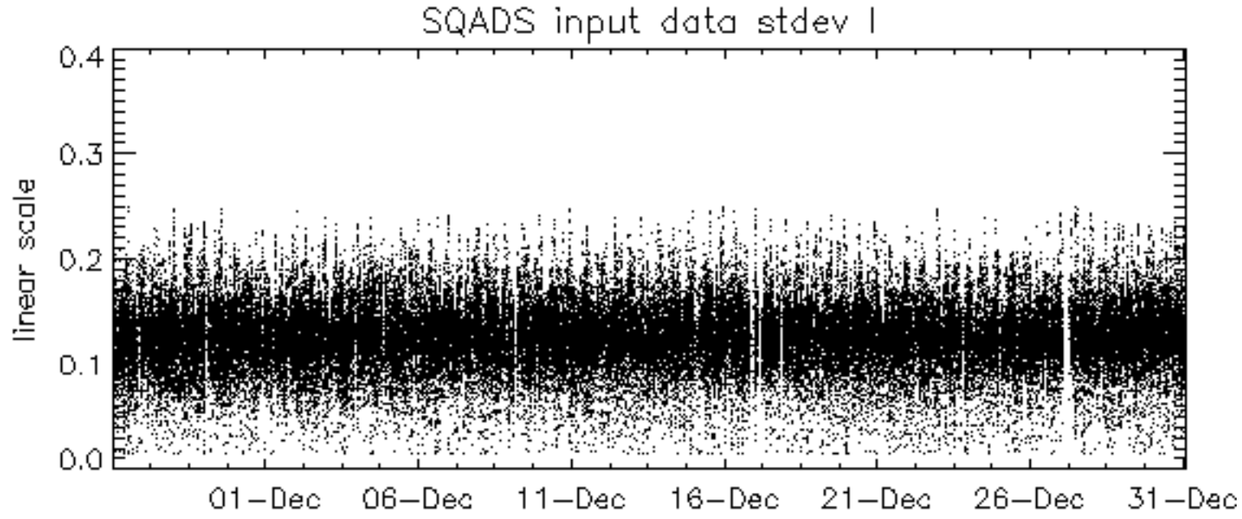
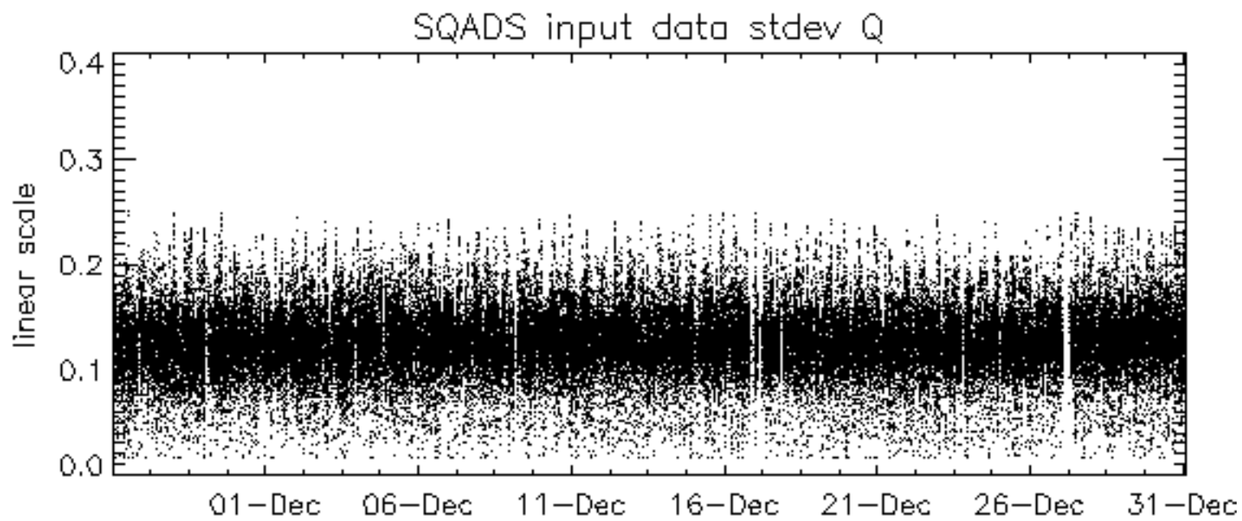
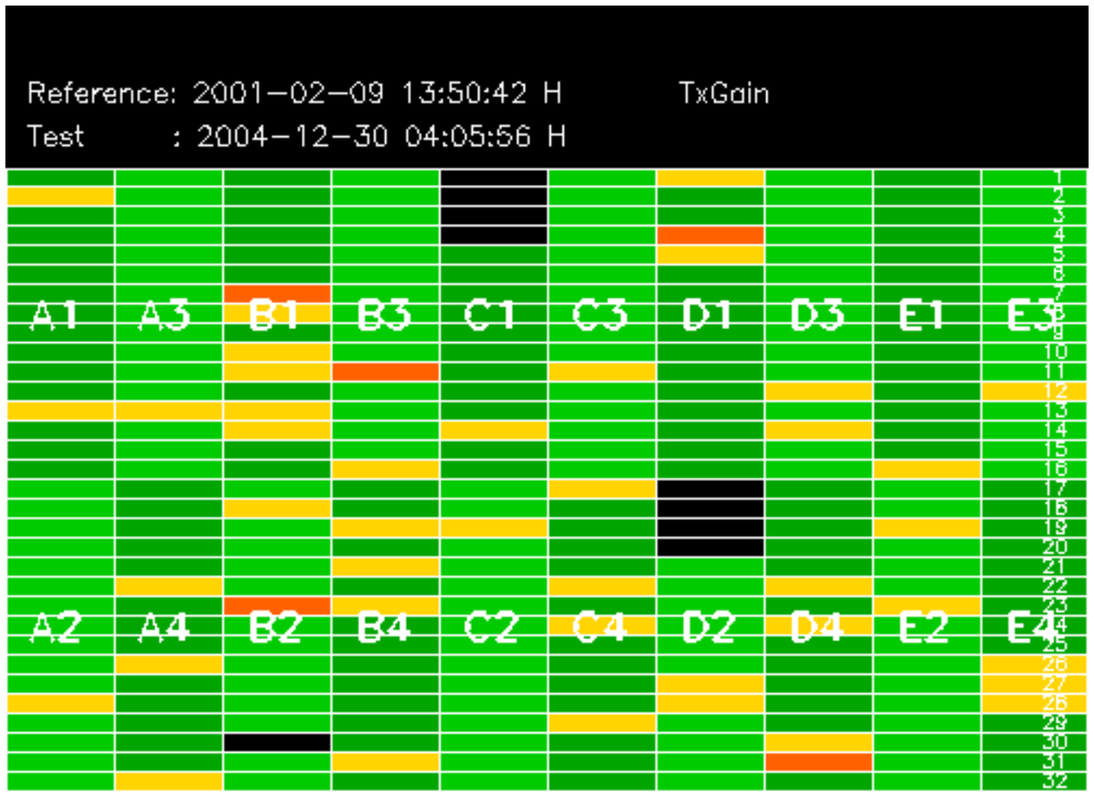

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

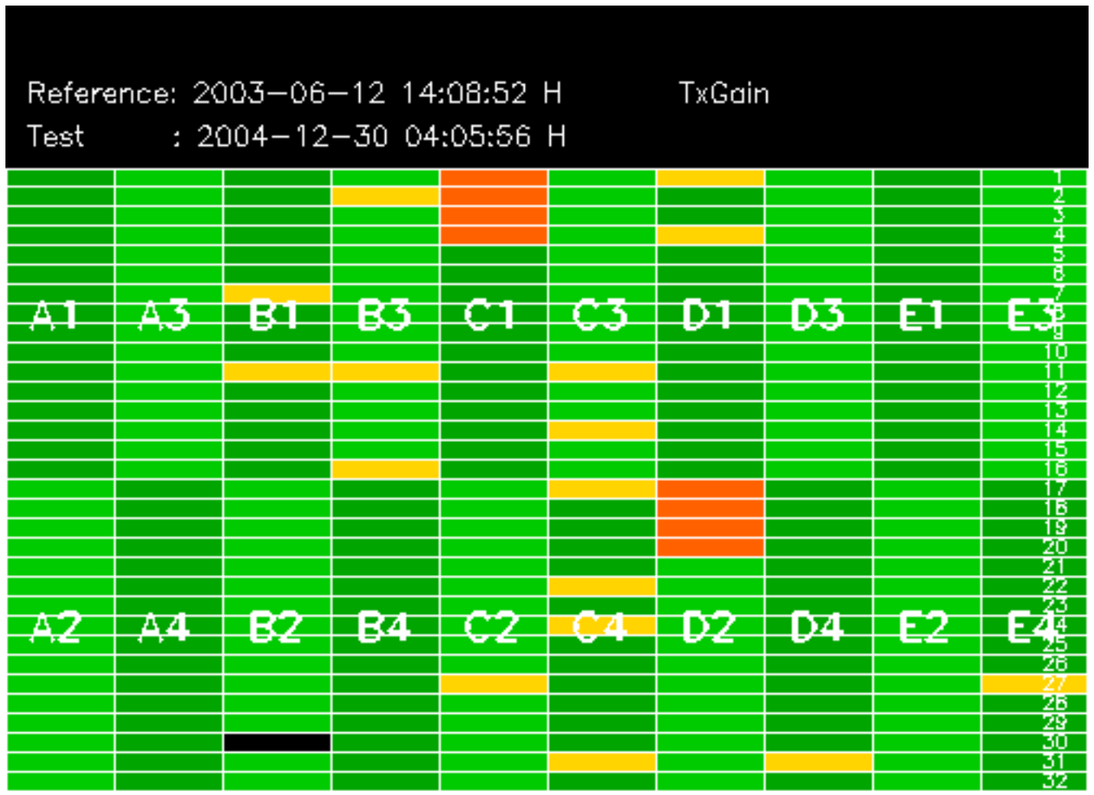

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
SQADS input data mean Q
linear scale
0.006
0.004
0.002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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-30 04:05:56 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 : 2004-12-30 04:05:56 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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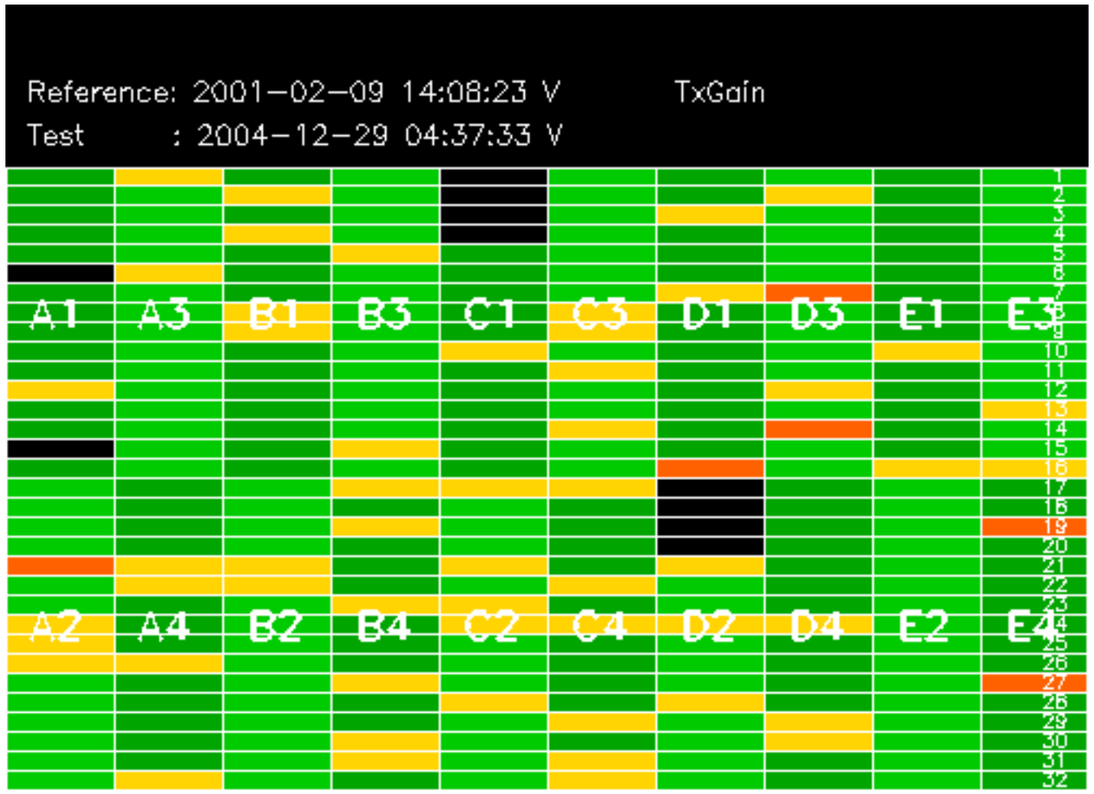
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-29 04:37:33 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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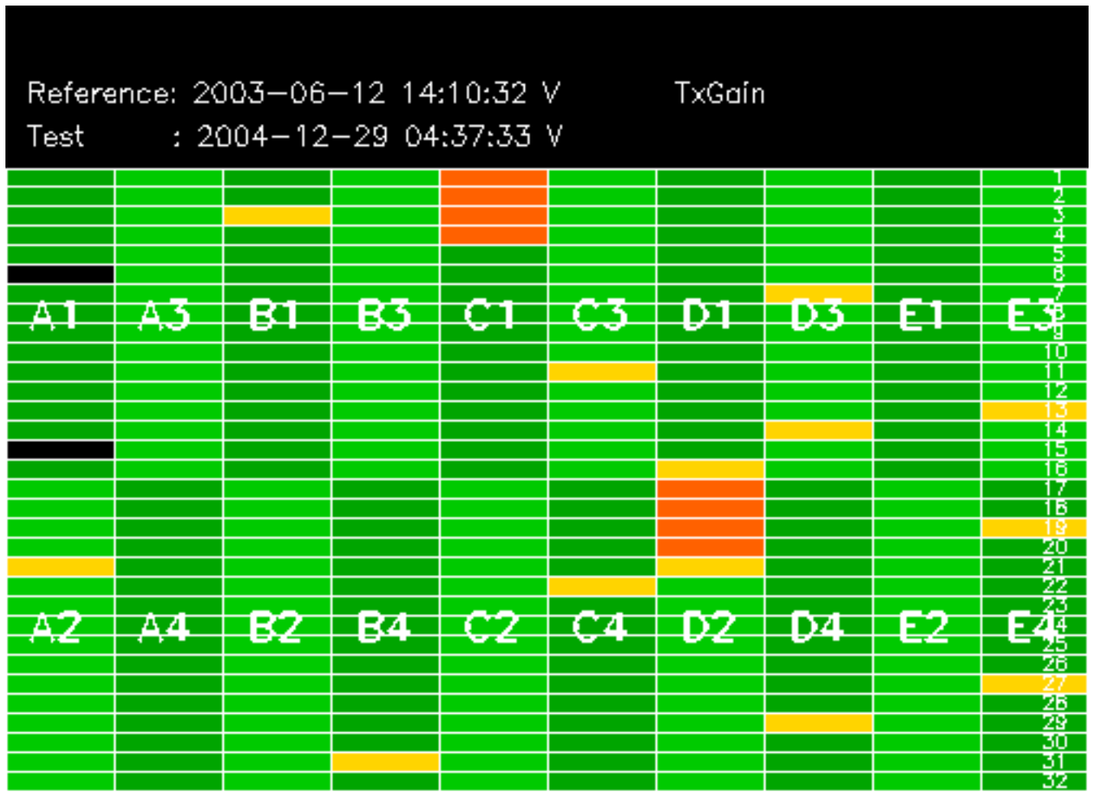
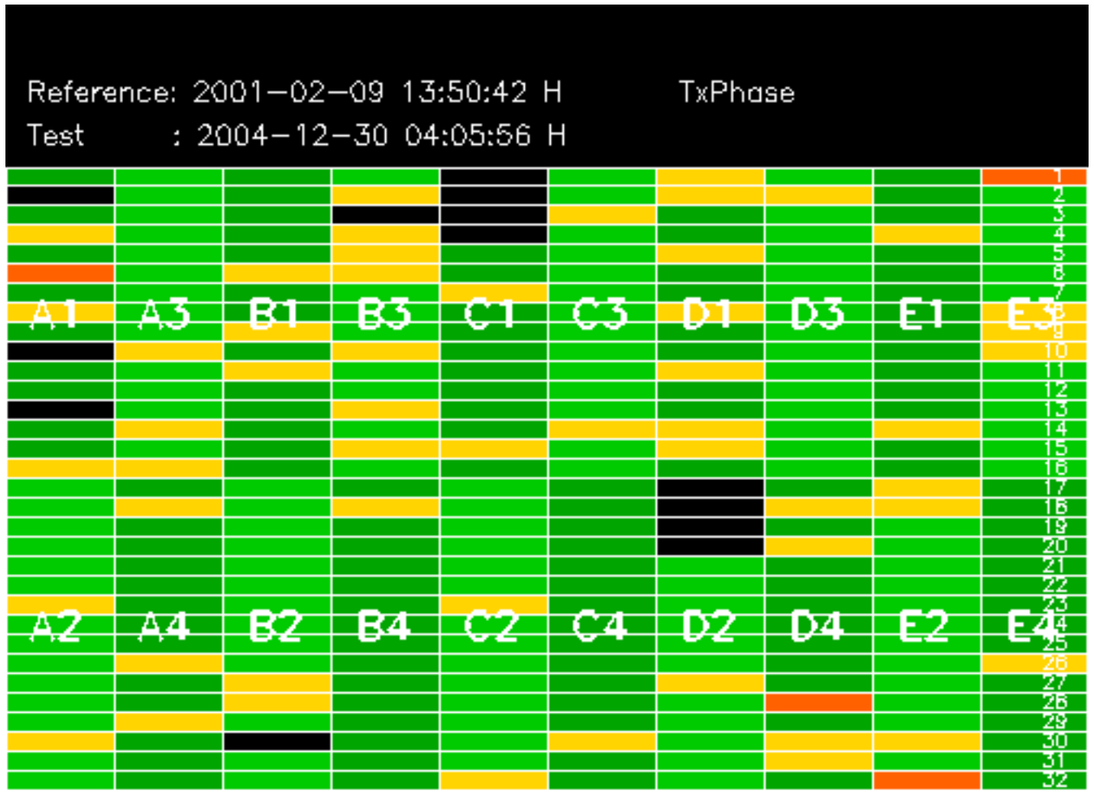

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-29 04:37:33 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-30 04:05:56 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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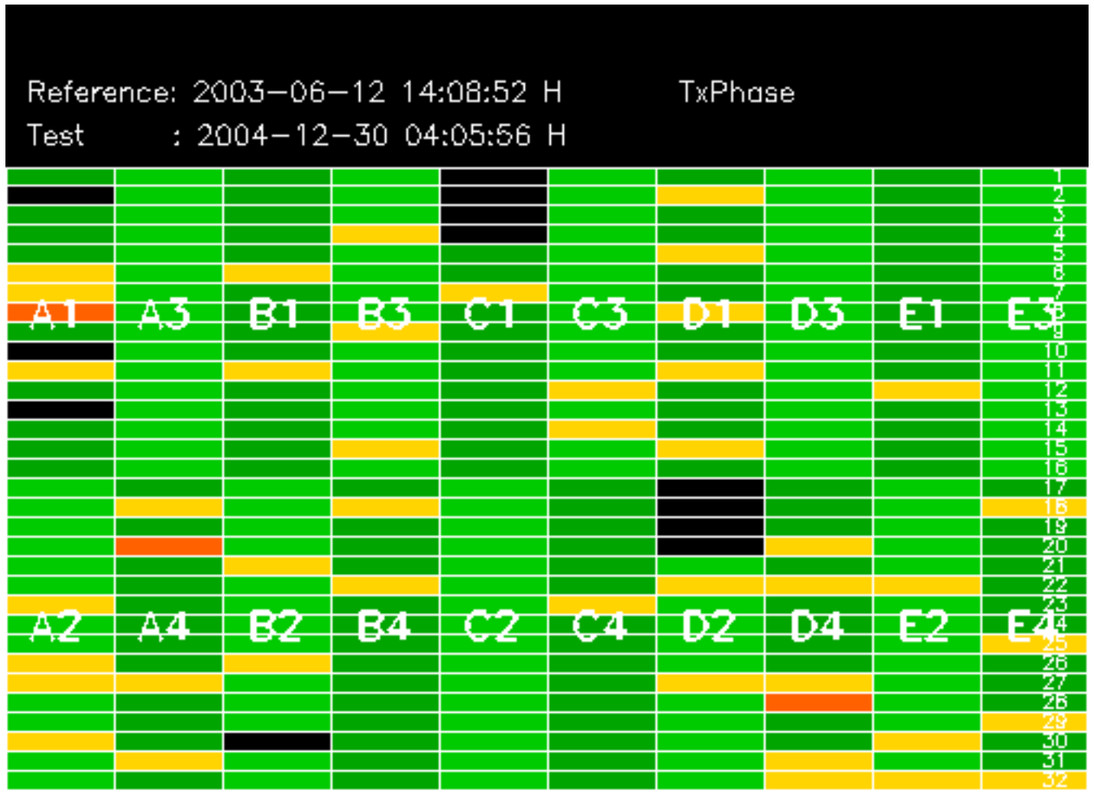
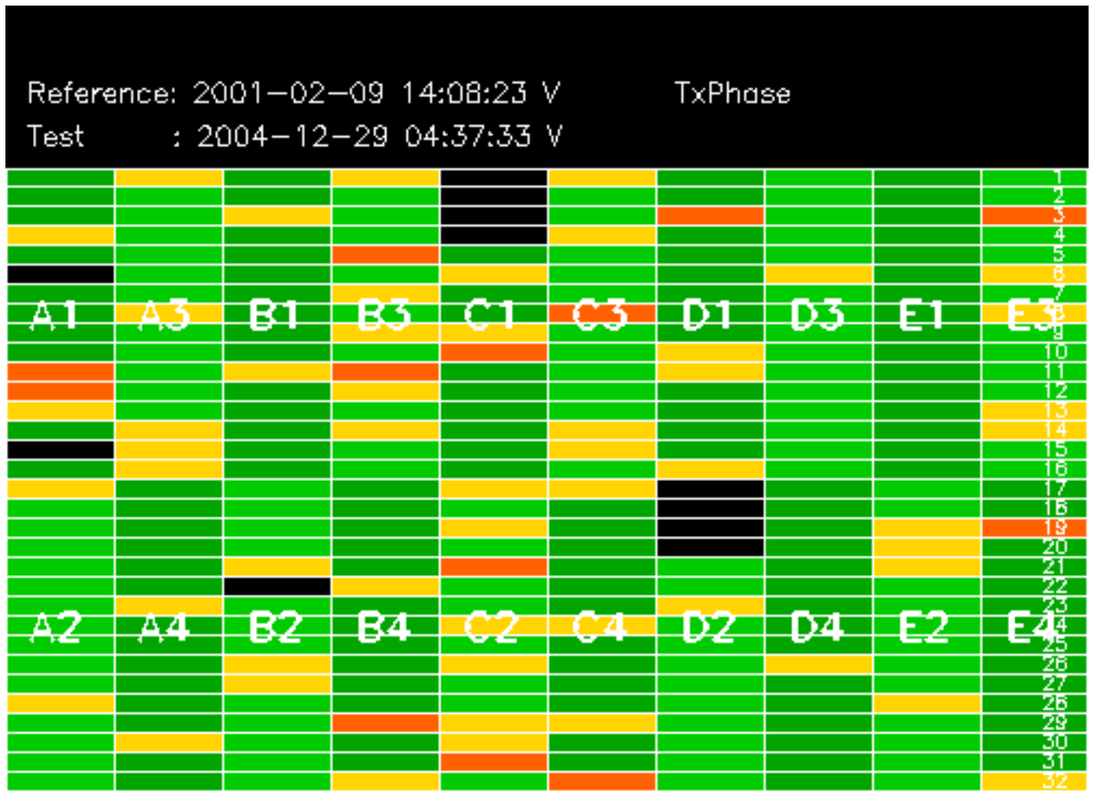
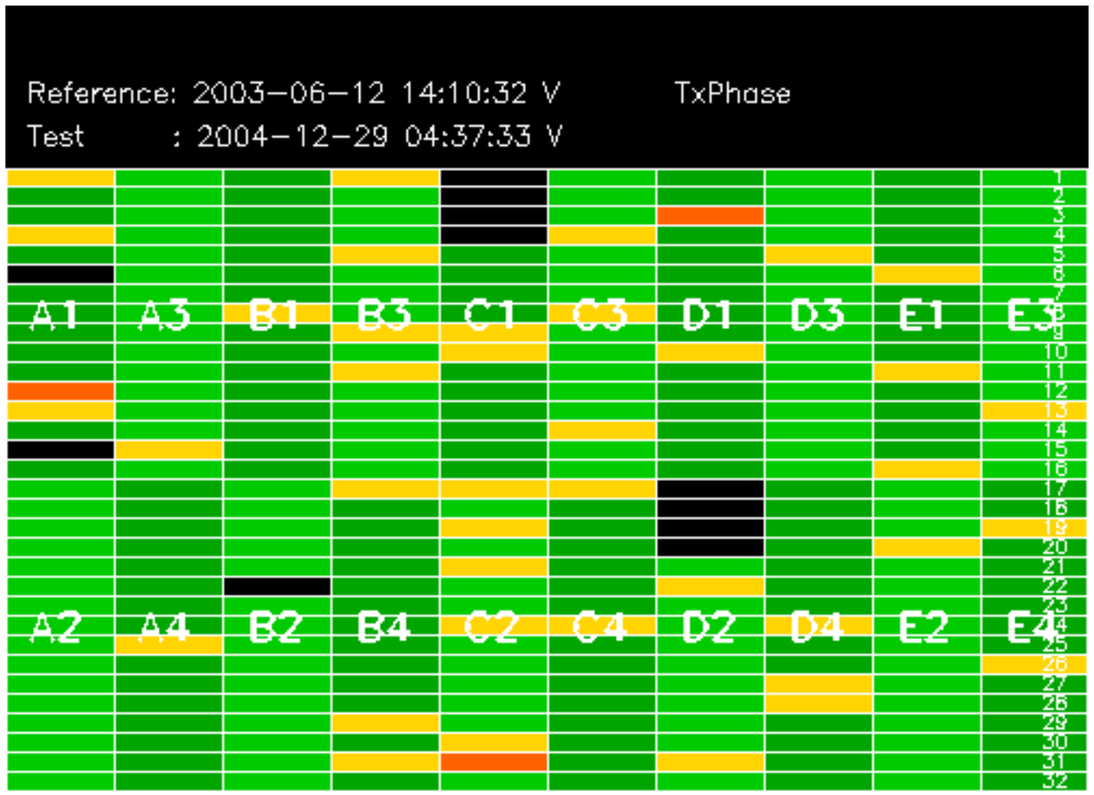

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-30 04:05:56 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-29 04:37:33 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 : 2004-12-29 04:37:33 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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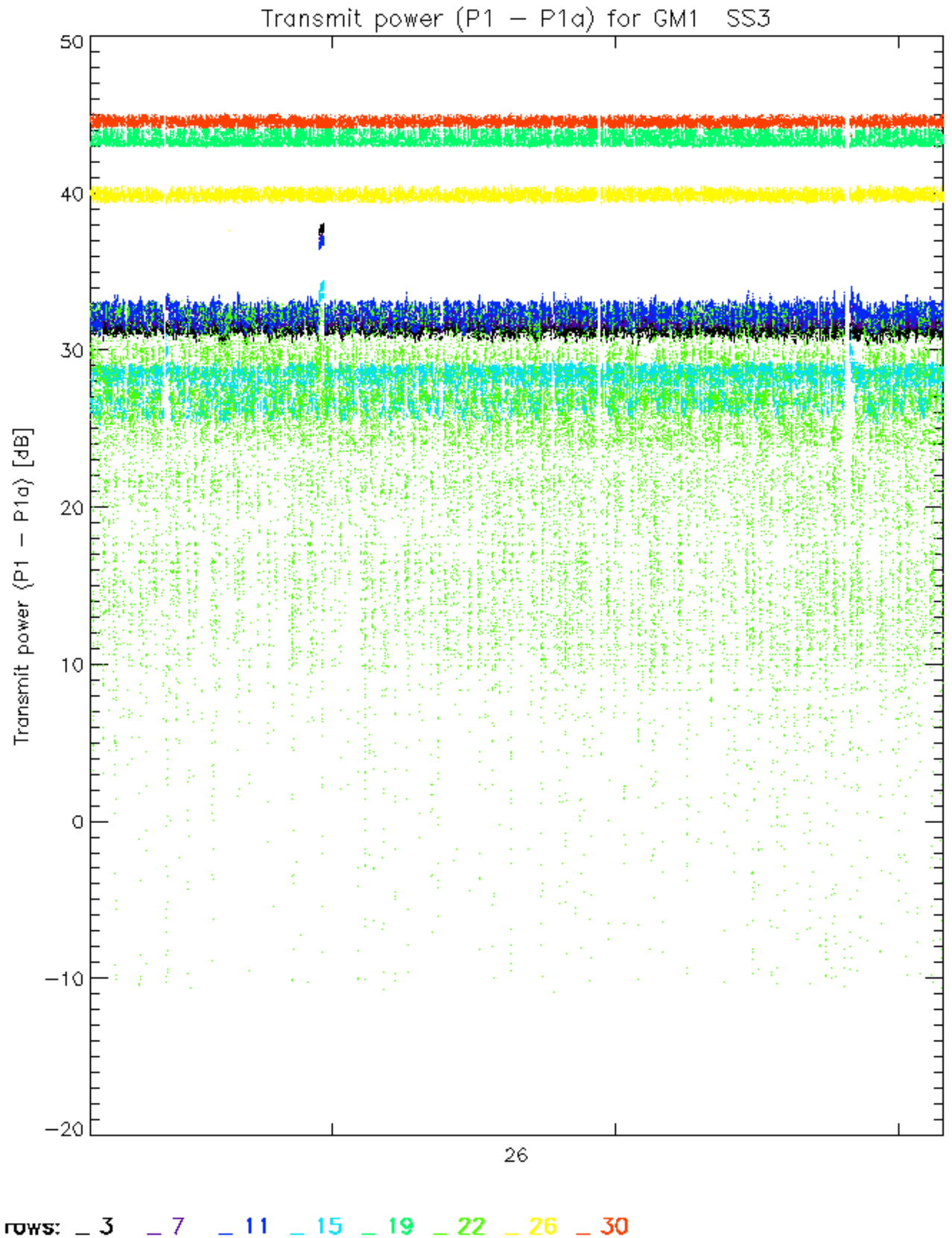
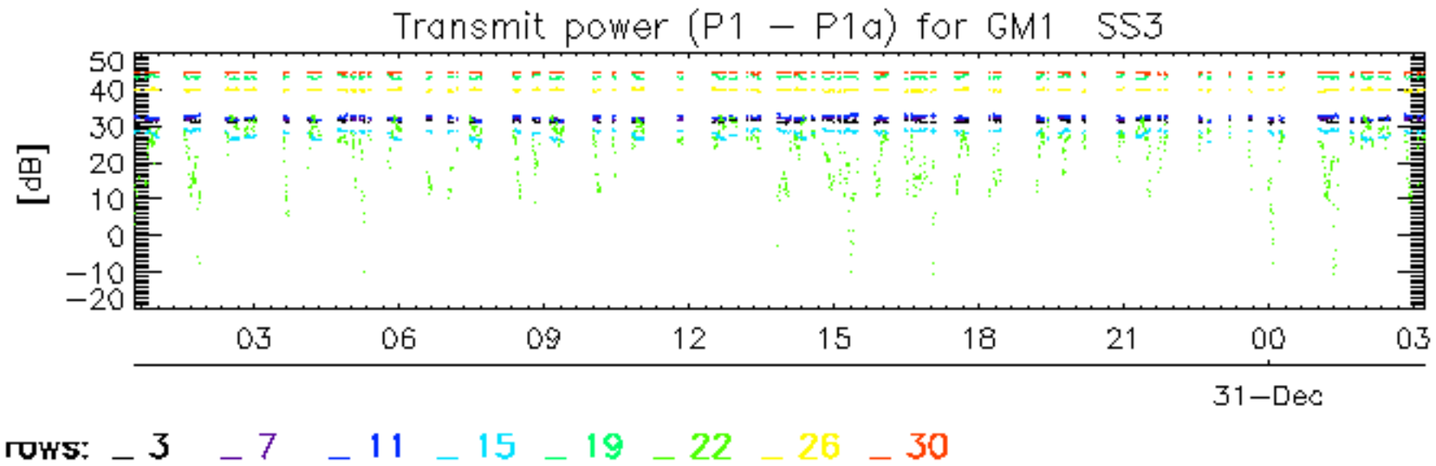
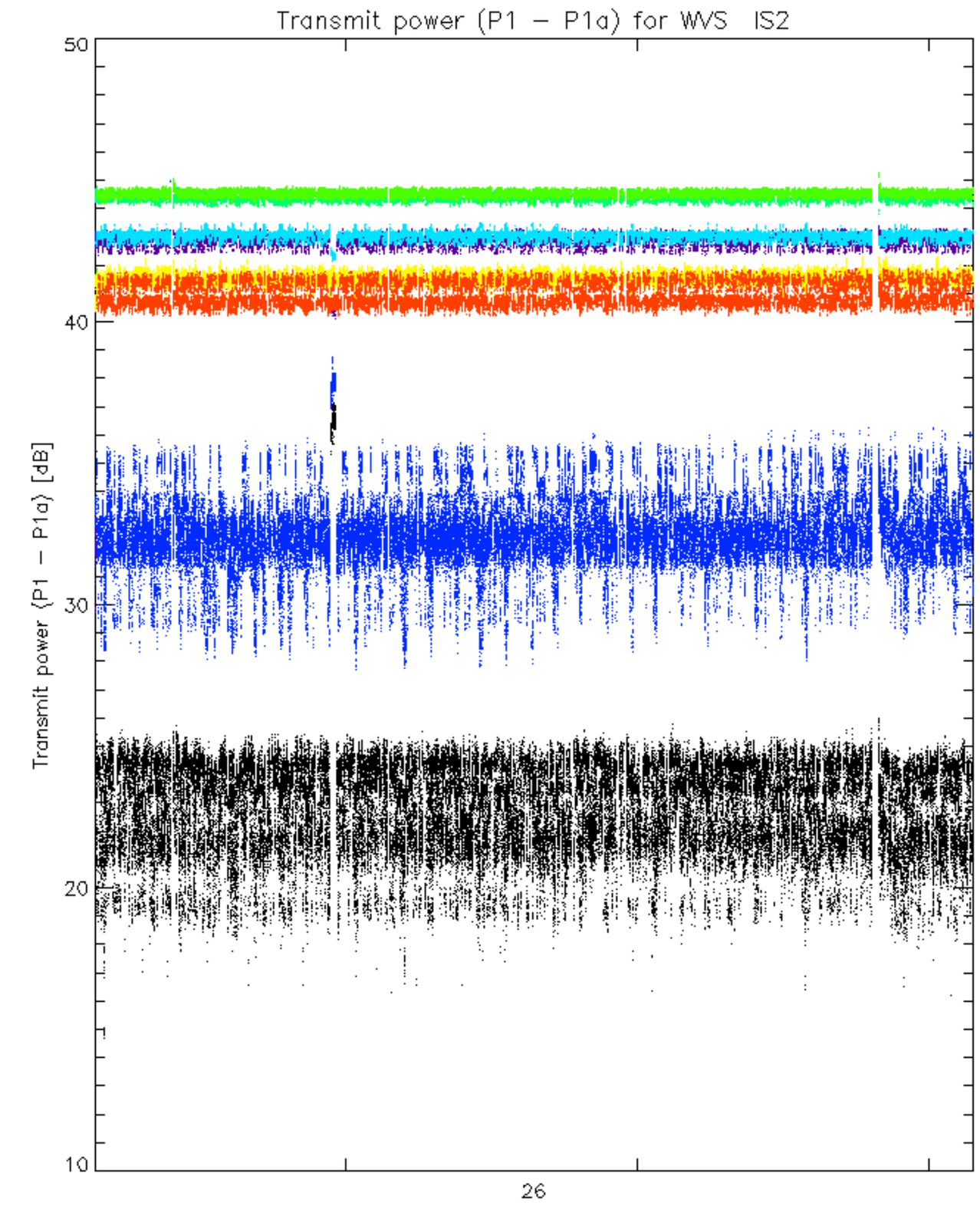
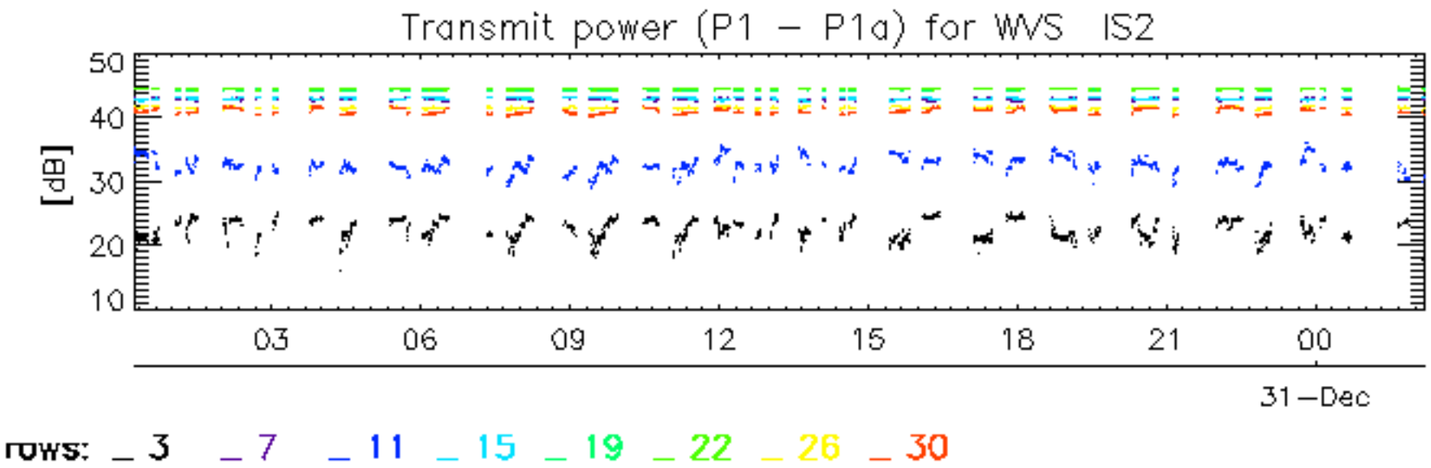

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
26
rows: 3 7 11 15 19 22 26 30


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
31–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
26
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
31–Dec
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.