PRELIMINARY REPORT OF 041229

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

last update on Wed Dec 29 10:59:52 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 - Auxiliary files

Summary of the auxiliary files used from 2004-12-28 00:00:00 to 2004-12-29 10:59:52

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	29	58	0	8	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	29	58	0	8	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	29	58	0	8	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	29	58	0	8	4

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	45	41	5	5	3
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	45	41	5	5	3
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	45	41	5	5	3
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	45	41	5	5	3

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	20041225 064402
H	20041228 050910

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
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☒

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	-3.455235	0.029287	0.060916
7	P1	-3.098589	0.024602	0.043276
11	P1	-4.645693	0.046067	-0.015680
15	P1	-5.664632	0.039204	-0.021357
19	P1	-3.650533	0.005571	-0.016708
22	P1	-4.574672	0.016890	0.018766
26	P1	-4.937663	0.023026	0.018551
30	P1	-7.111920	0.013645	-0.038960
3	P1	-15.946492	0.113060	0.025424
7	P1	-15.512405	0.161593	0.020091
11	P1	-20.740496	0.536346	-0.247468
15	P1	-11.618324	0.095574	-0.006310
19	P1	-14.156762	0.031456	-0.031999
22	P1	-16.092724	0.466049	0.236575
26	P1	-17.763638	0.269183	0.162897
30	P1	-17.889536	0.306467	0.030237

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.351828	0.086417	0.061263
7	P2	-22.570868	0.169112	0.091540
11	P2	-14.897106	0.179191	0.161303
15	P2	-7.164146	0.115561	0.075945
19	P2	-9.728330	0.195227	0.090975
22	P2	-17.173416	0.100287	0.093627
26	P2	-16.530304	0.113072	0.038026

30	P2	-18.970417	0.083751	0.077125

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.208188	0.007190	0.008760
7	P3	-8.208214	0.007188	0.008897
11	P3	-8.208183	0.007192	0.008705
15	P3	-8.208191	0.007190	0.008739
19	P3	-8.208220	0.007188	0.008901
22	P3	-8.208245	0.007187	0.009034
26	P3	-8.208239	0.007187	0.008996
30	P3	-8.208097	0.007196	0.011181

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	-2.848454	0.111131	0.044586
7	P1	-2.979782	0.064639	0.037098
11	P1	-3.945334	0.048512	-0.004855
15	P1	-3.518643	0.078419	0.017138
19	P1	-3.607949	0.013128	-0.012789
22	P1	-5.616620	0.069041	-0.051287
26	P1	-6.511979	0.023513	-0.047945
30	P1	-6.302233	0.044064	0.001224
3	P1	-10.706477	0.058800	-0.203638
7	P1	-10.121451	0.157656	-0.073393
11	P1	-12.424399	0.198933	-0.137550

15	P1	-11.725138	0.099358	-0.055781
19	P1	-15.641463	0.049137	-0.016665
22	P1	-24.150951	2.086047	0.157846
26	P1	-15.043067	0.392517	0.271056
30	P1	-20.135147	0.930161	0.155892

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.030079	0.037607	0.085152
7	P2	-22.613892	0.031977	0.114015
11	P2	-10.685798	0.036204	0.199688
15	P2	-5.060505	0.025592	0.032320
19	P2	-6.961721	0.036296	0.044076
22	P2	-7.304113	0.028119	0.083185
26	P2	-23.959301	0.019147	0.011879
30	P2	-22.025349	0.022039	0.100443

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.040856	0.003111	0.006054
7	P3	-8.040848	0.003113	0.006162
11	P3	-8.040782	0.003107	0.006497
15	P3	-8.040813	0.003114	0.005663
19	P3	-8.040823	0.003116	0.006142
22	P3	-8.040841	0.003113	0.005975
26	P3	-8.040913	0.003111	0.006144
30	P3	-8.040801	0.003102	0.006127

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	0.000443903
	stdev	2.38342e-07
MEAN Q	mean	0.000510075
	stdev	2.49895e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126200
	stdev	0.000980617
STDEV Q	mean	0.126435
	stdev	0.000989807

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

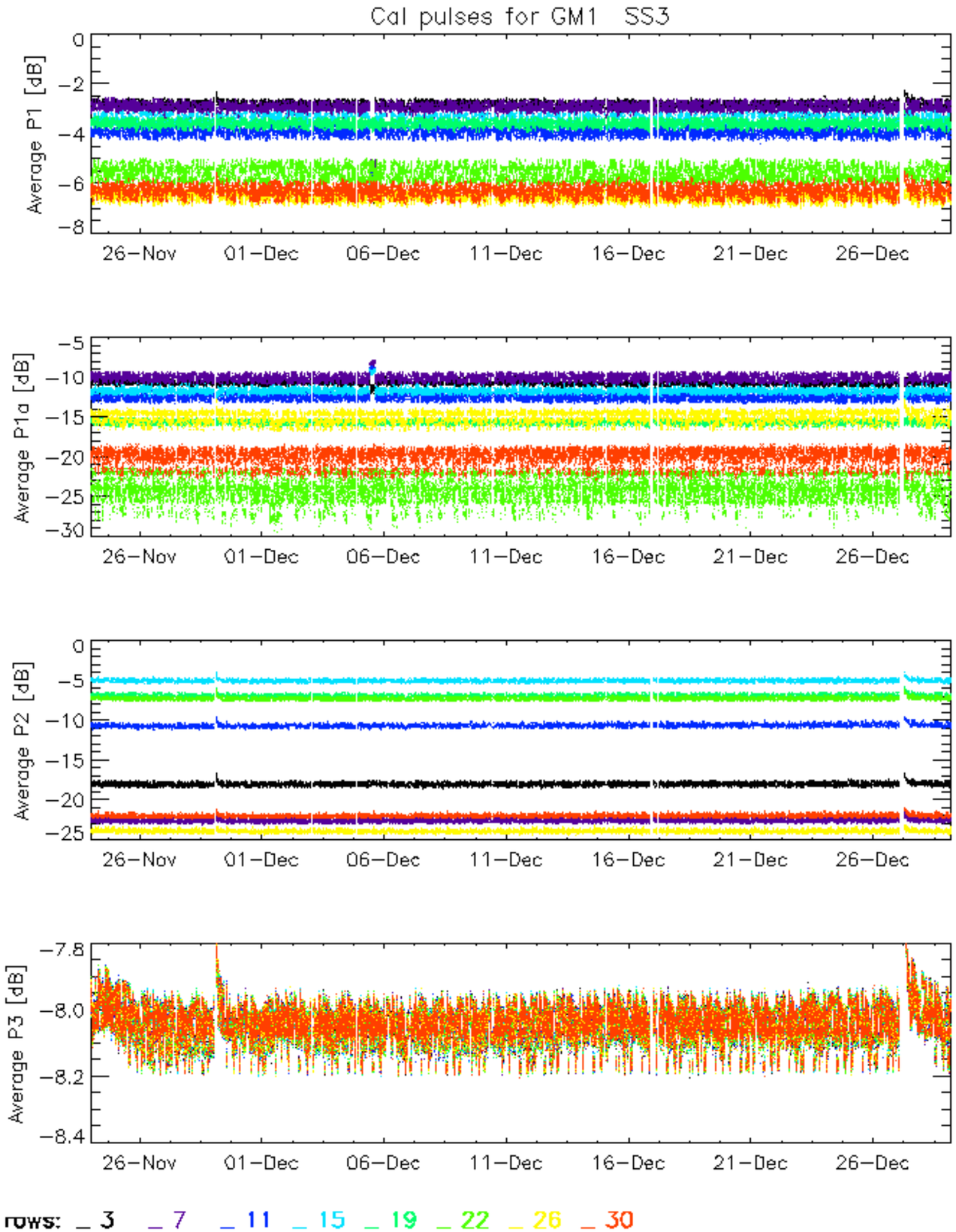
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

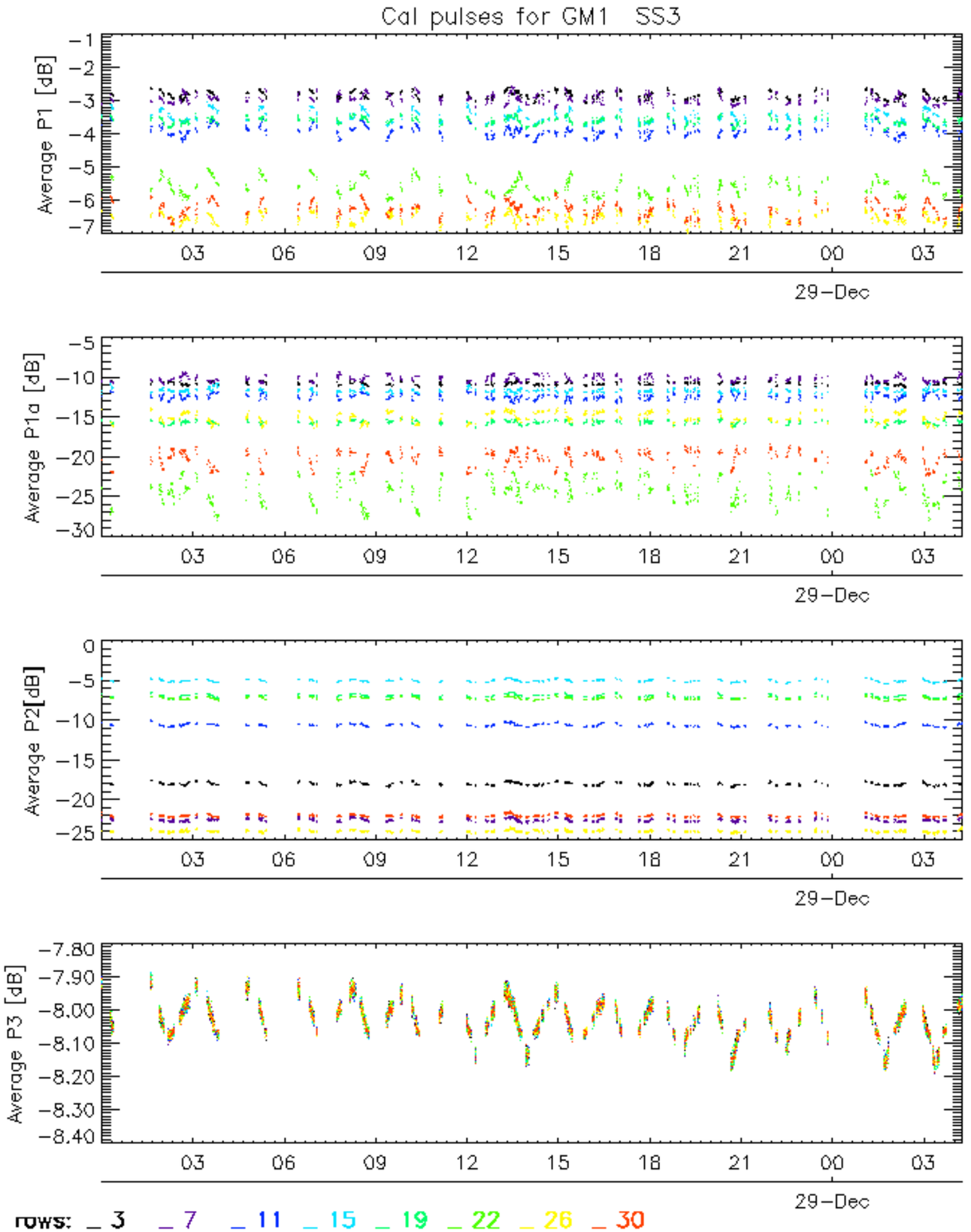
6.5 - Absolute Doppler for GM1

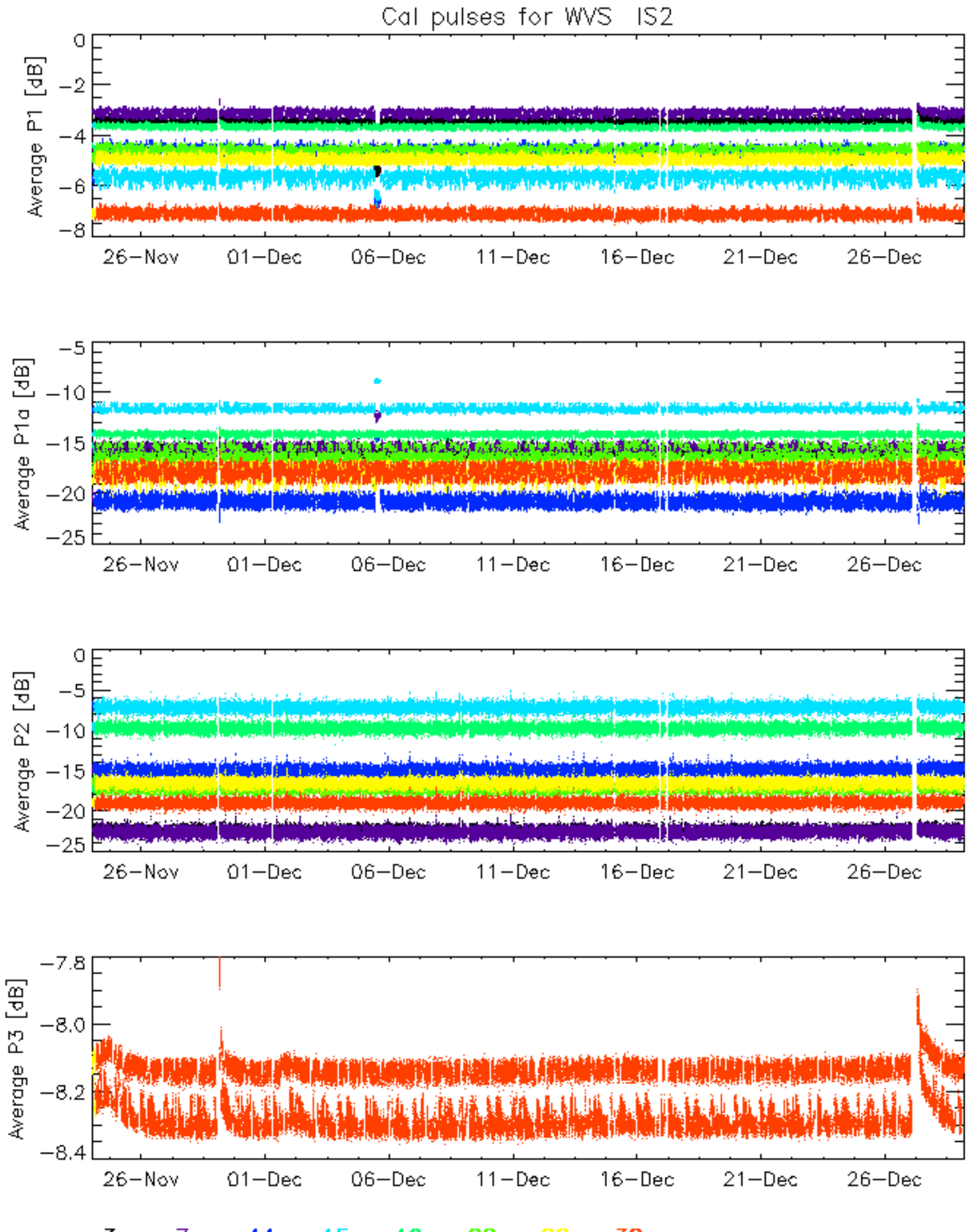
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

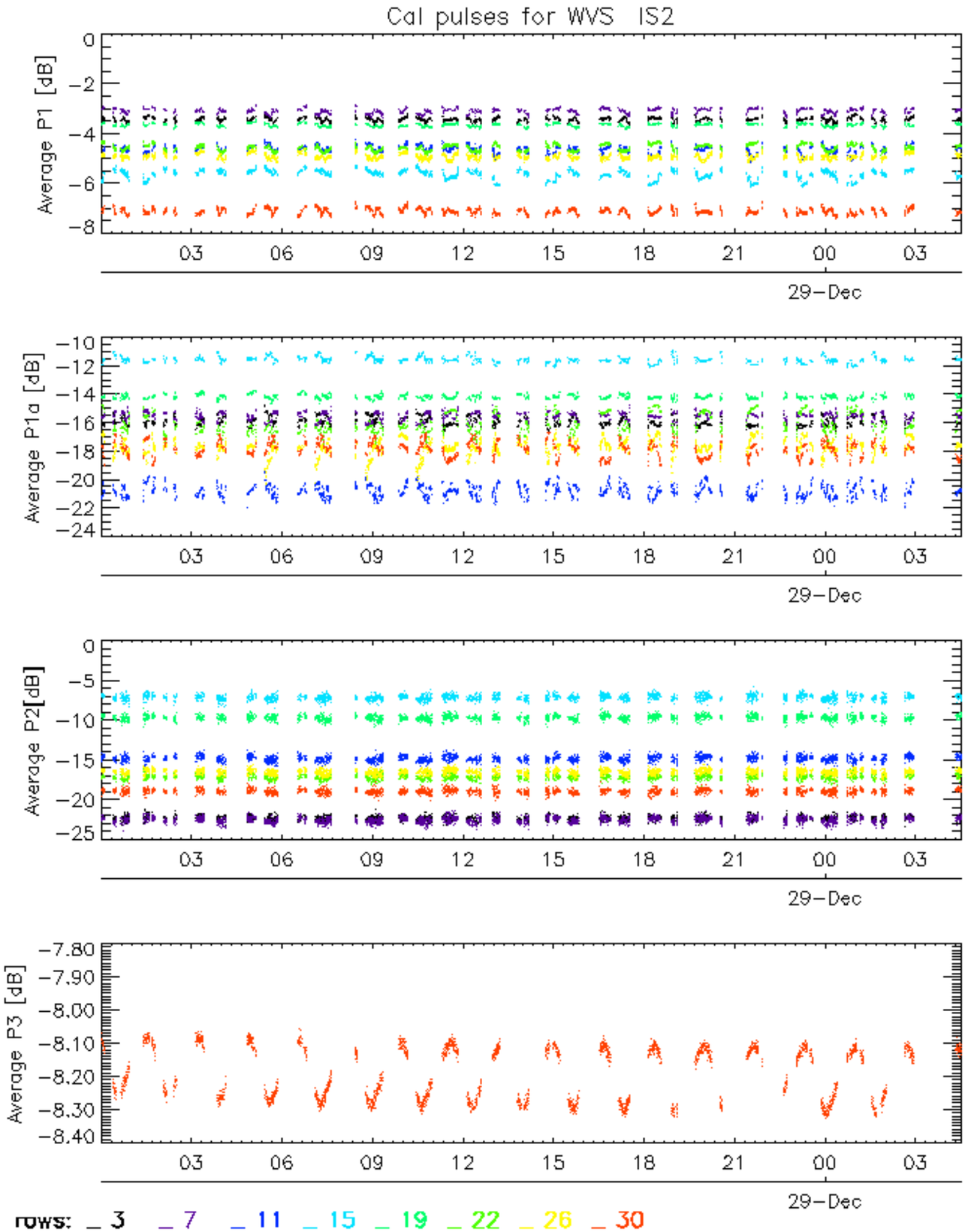
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

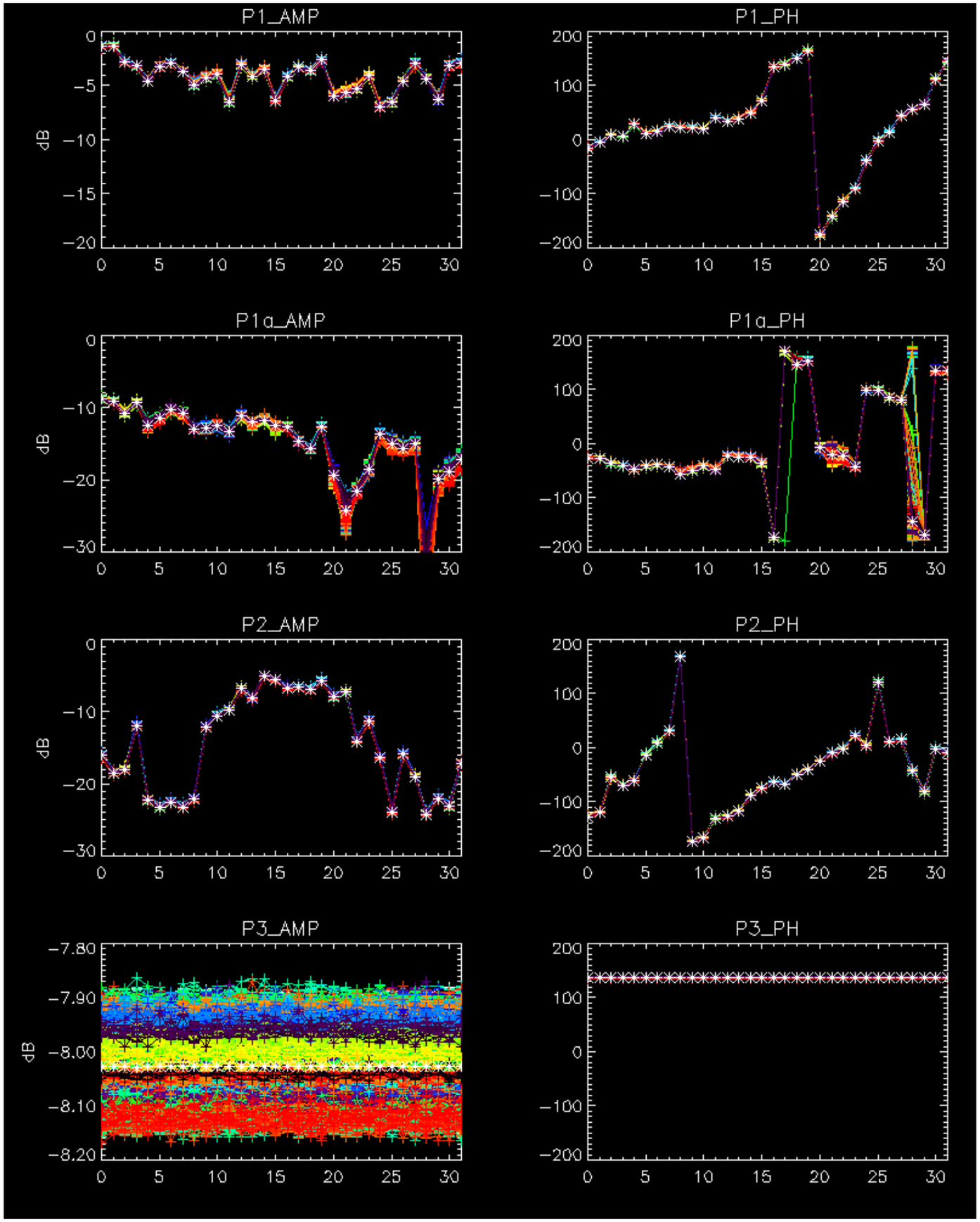

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

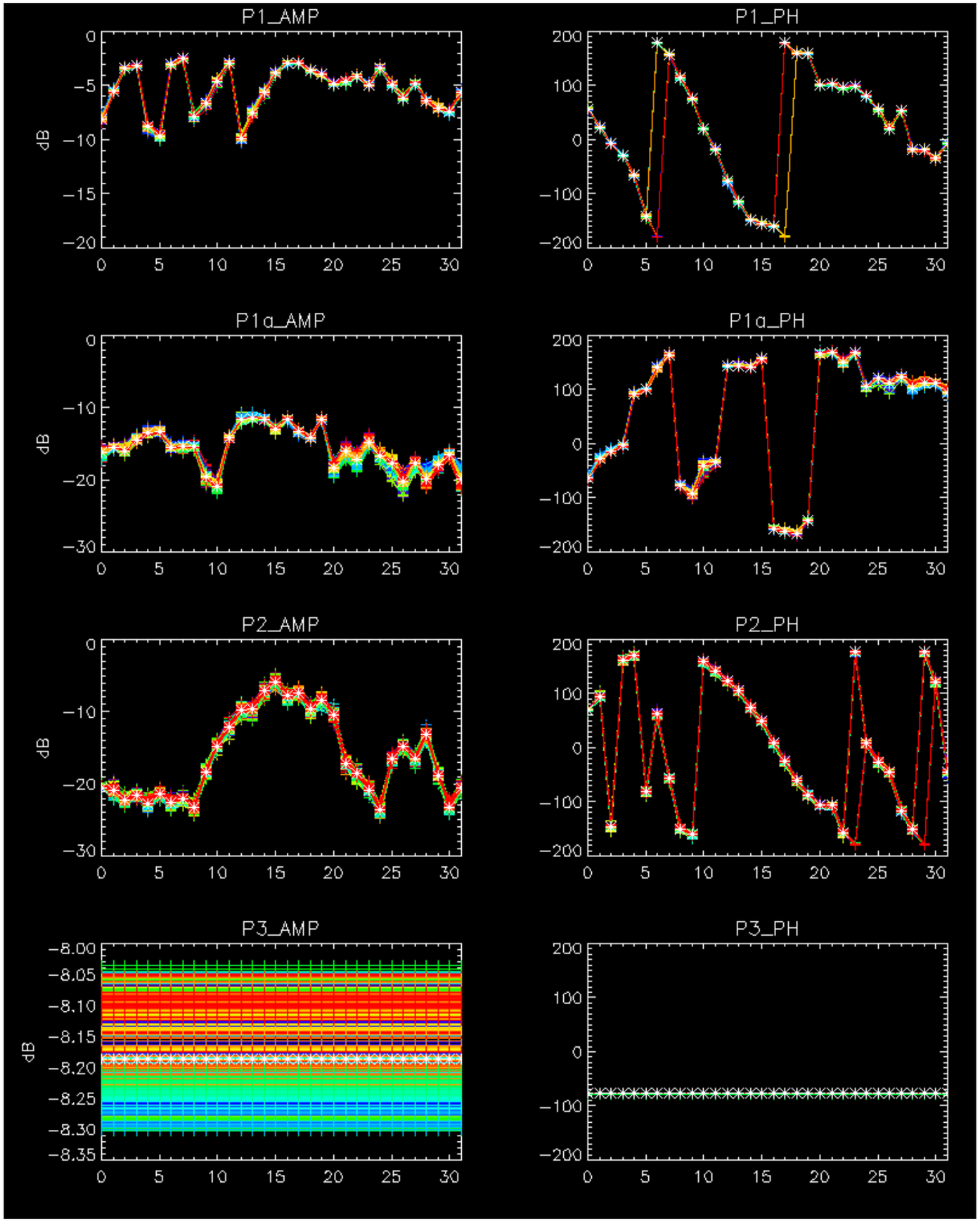

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
29−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
29−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
29−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−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
03
29−Dec
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
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

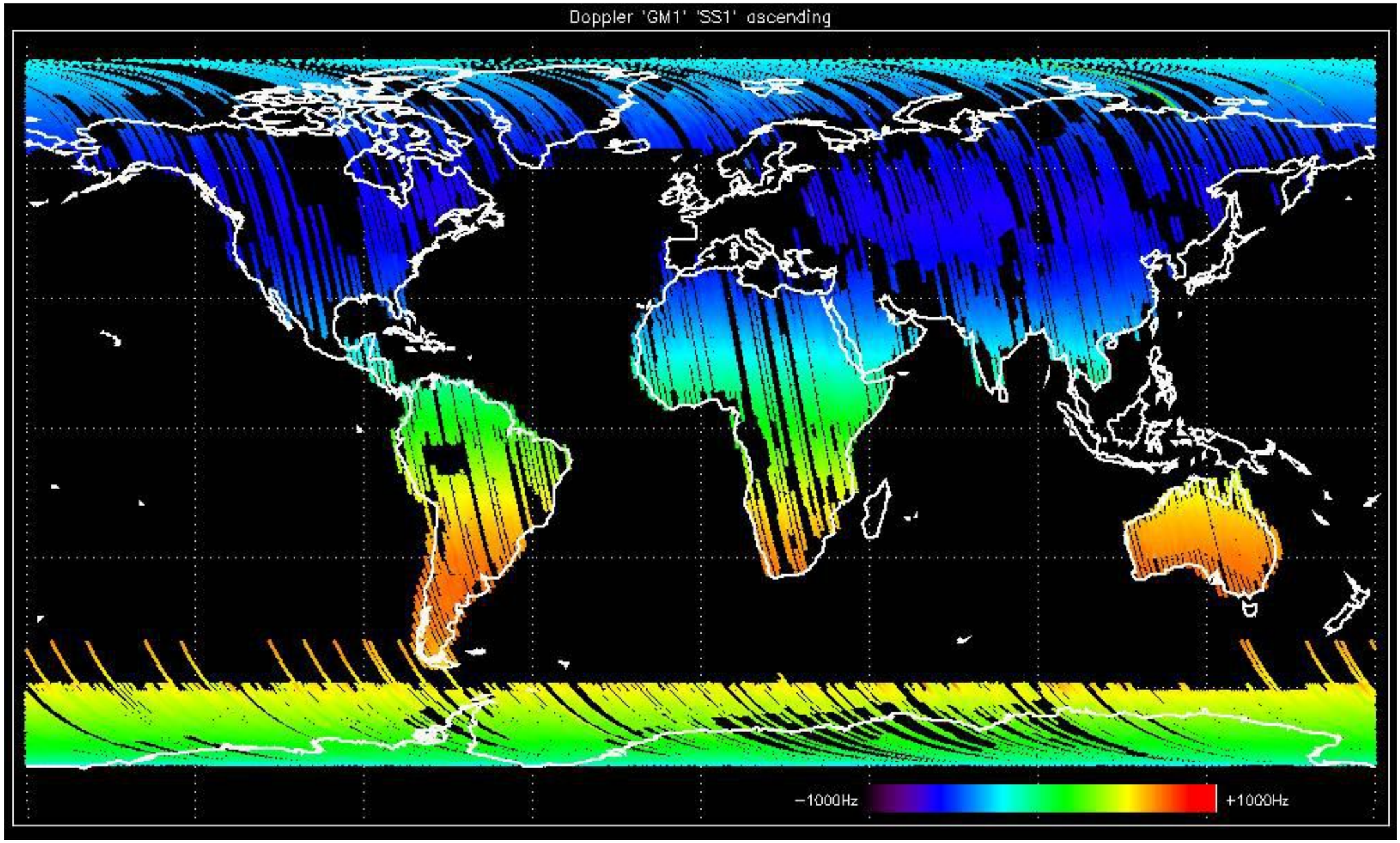
No anomalies observed.

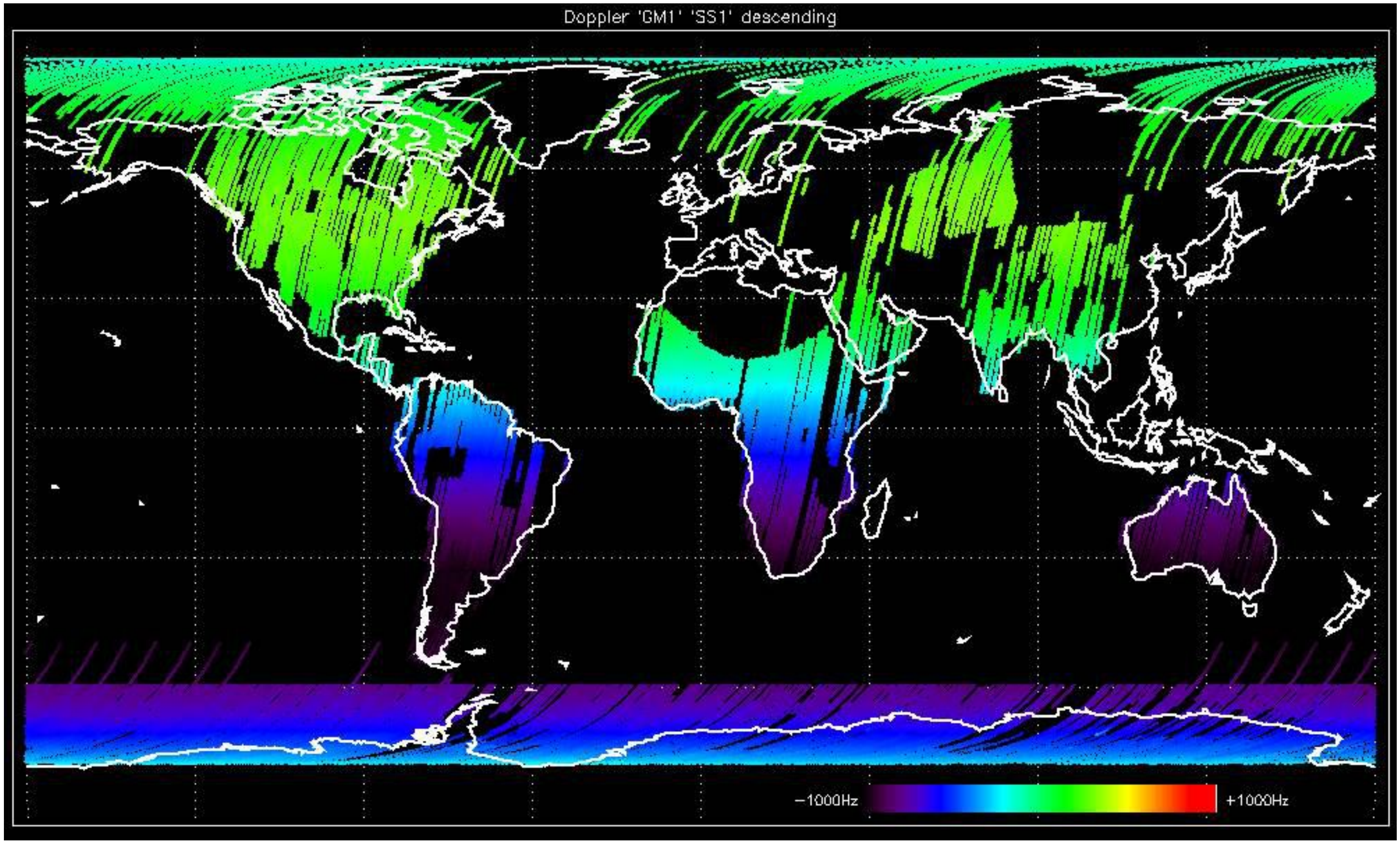

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.90
−8.00
−8.10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

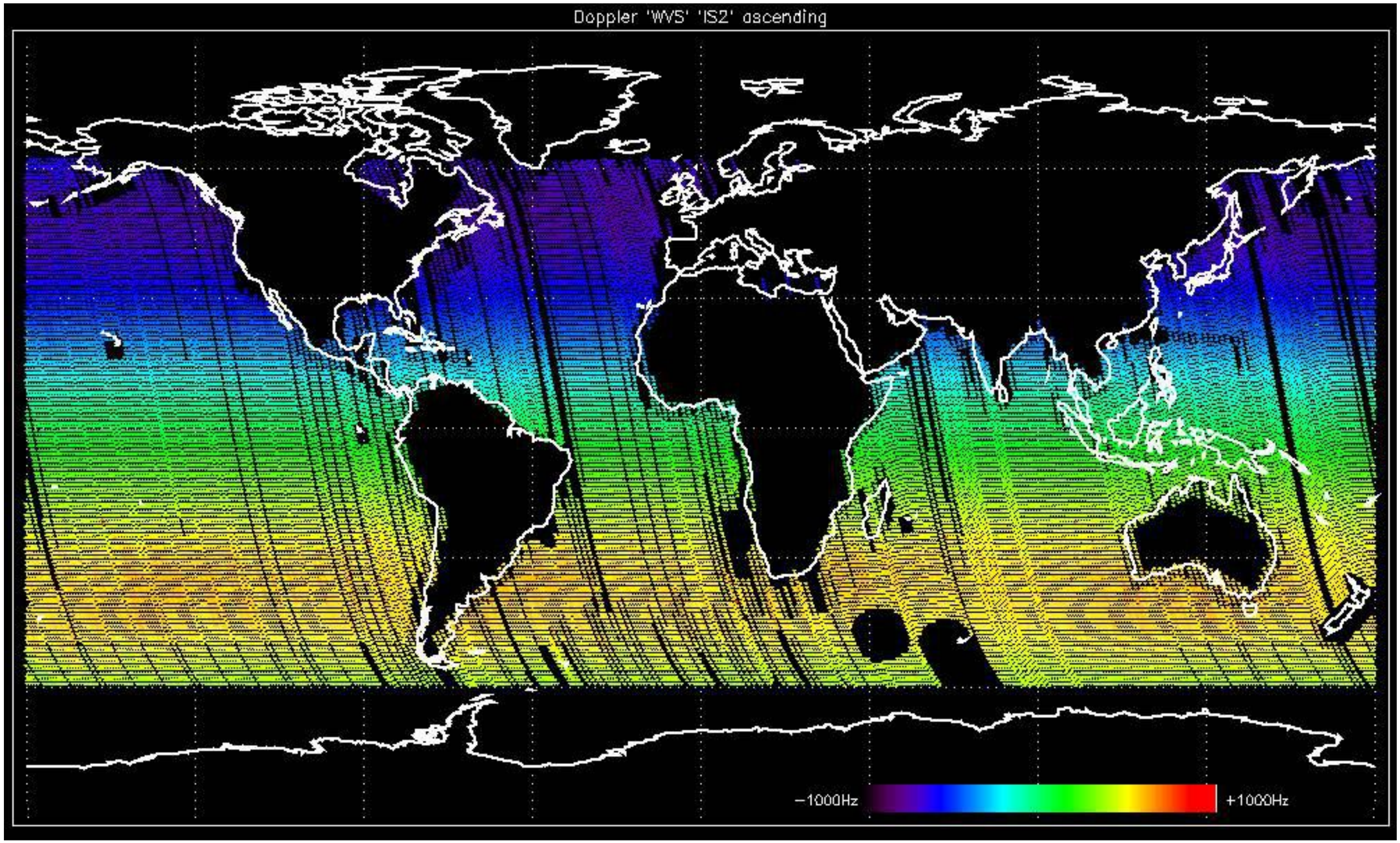

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

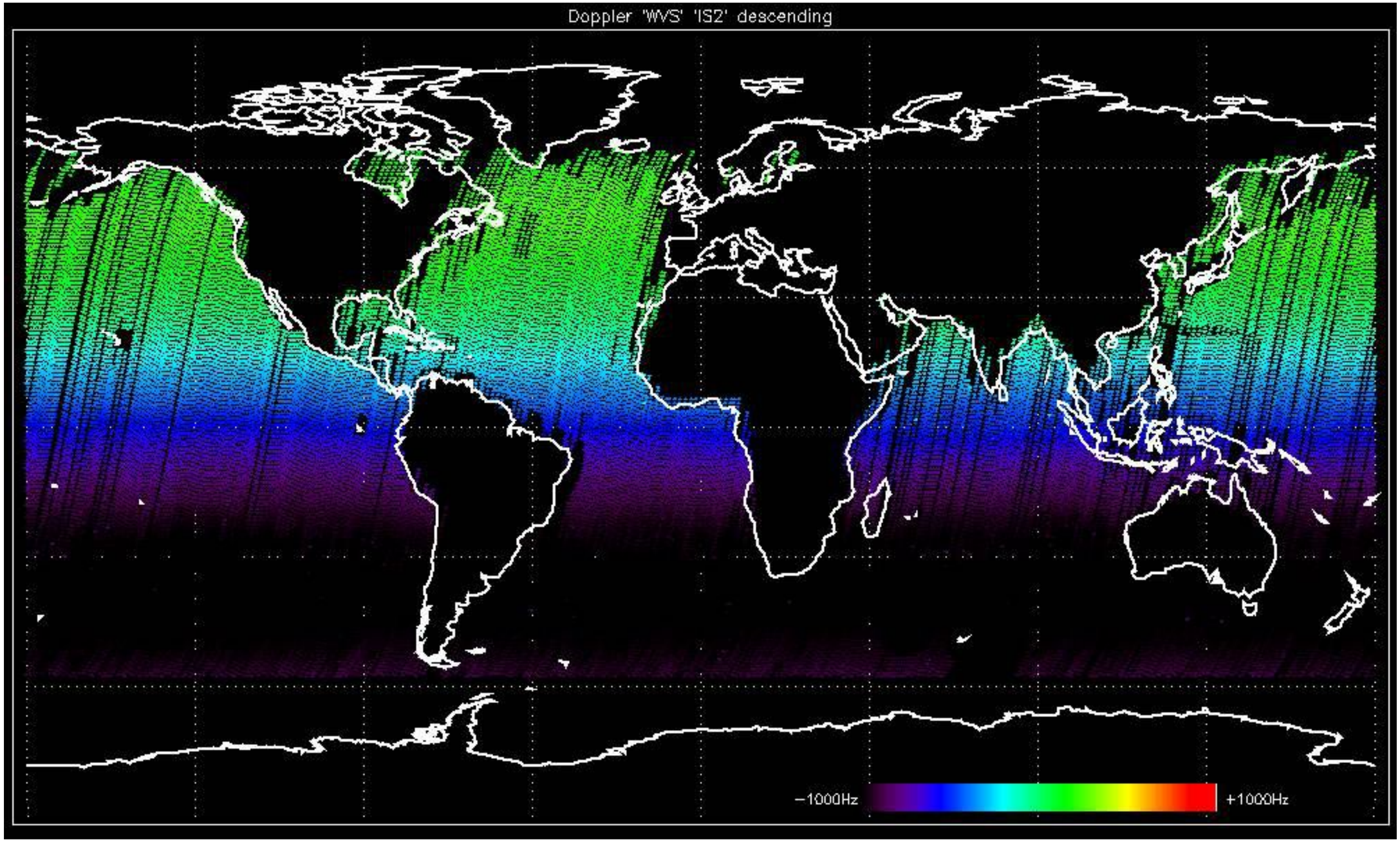
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

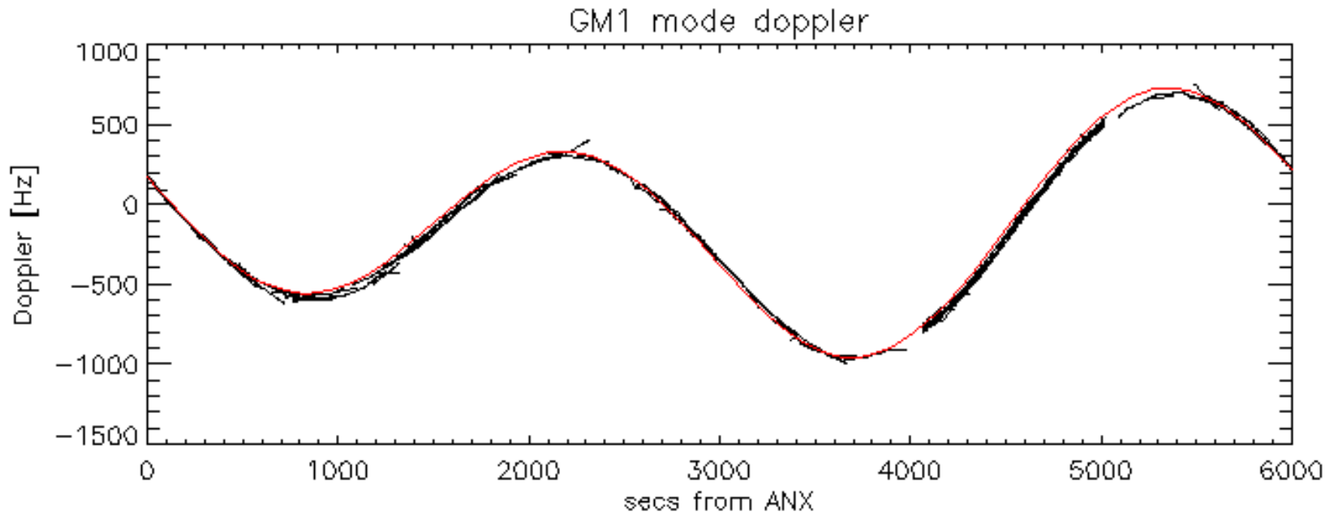
Preliminary report.The data is not yet controled

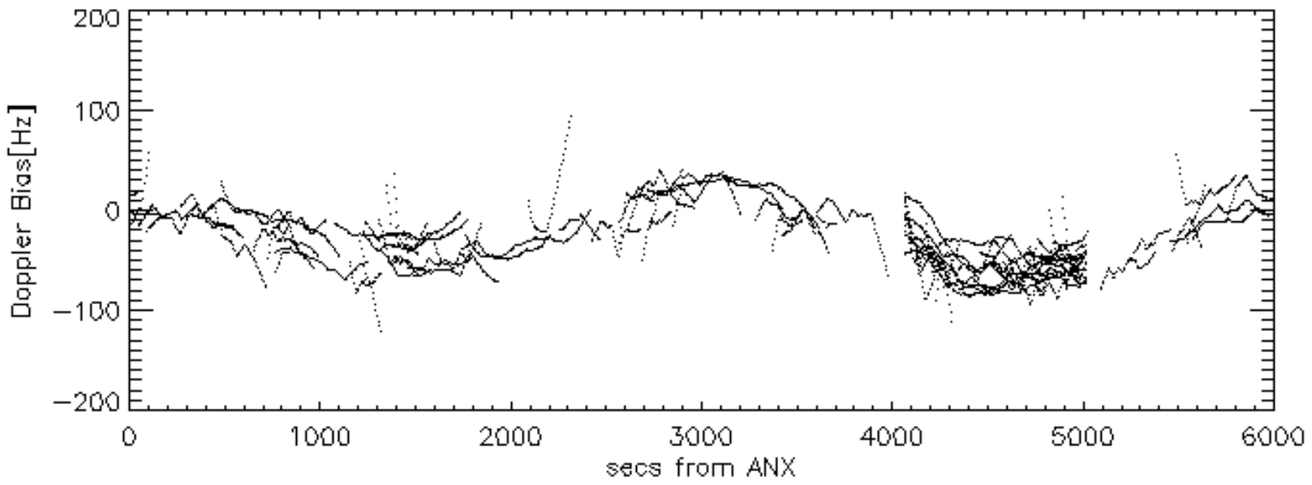

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

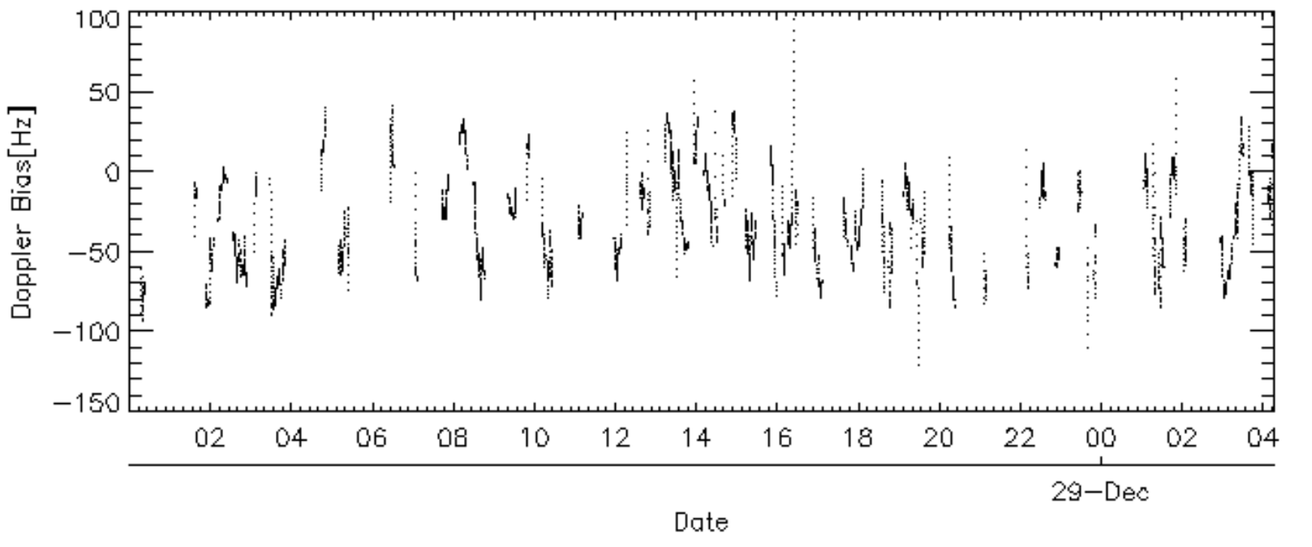

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

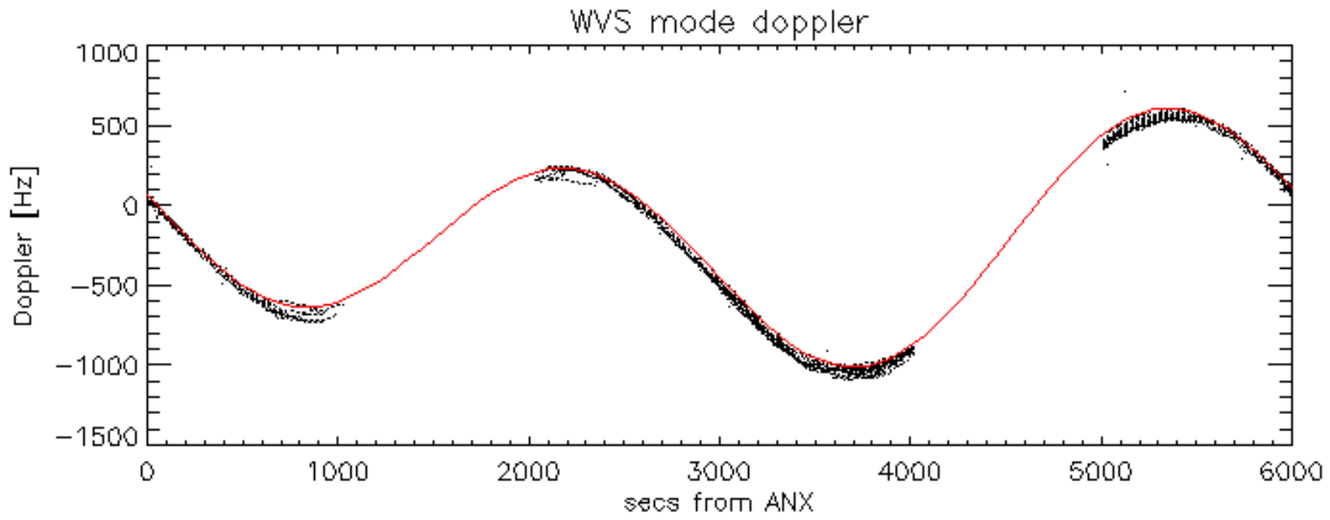

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

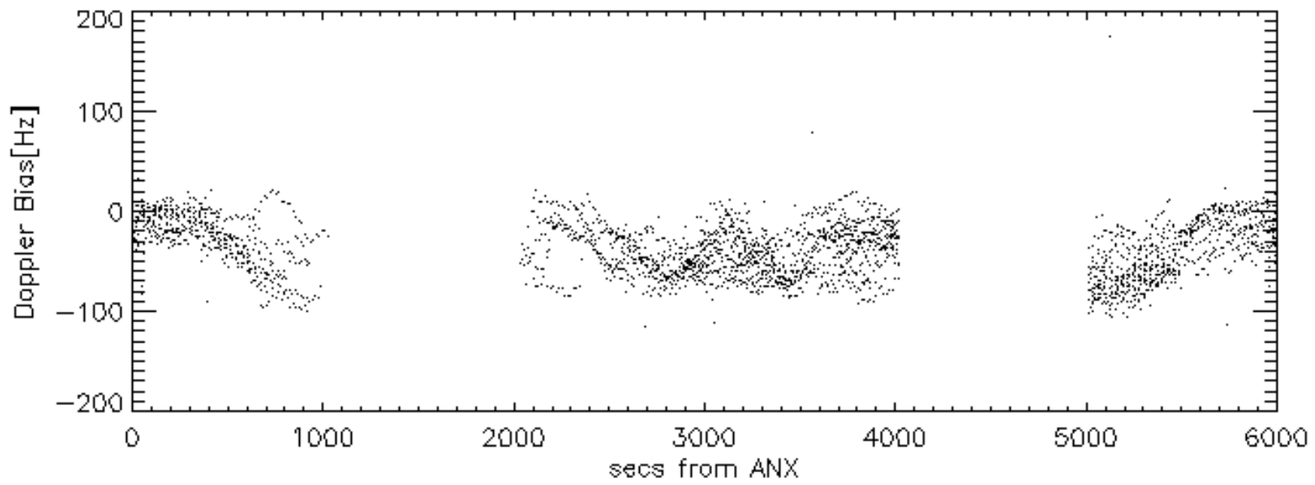

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

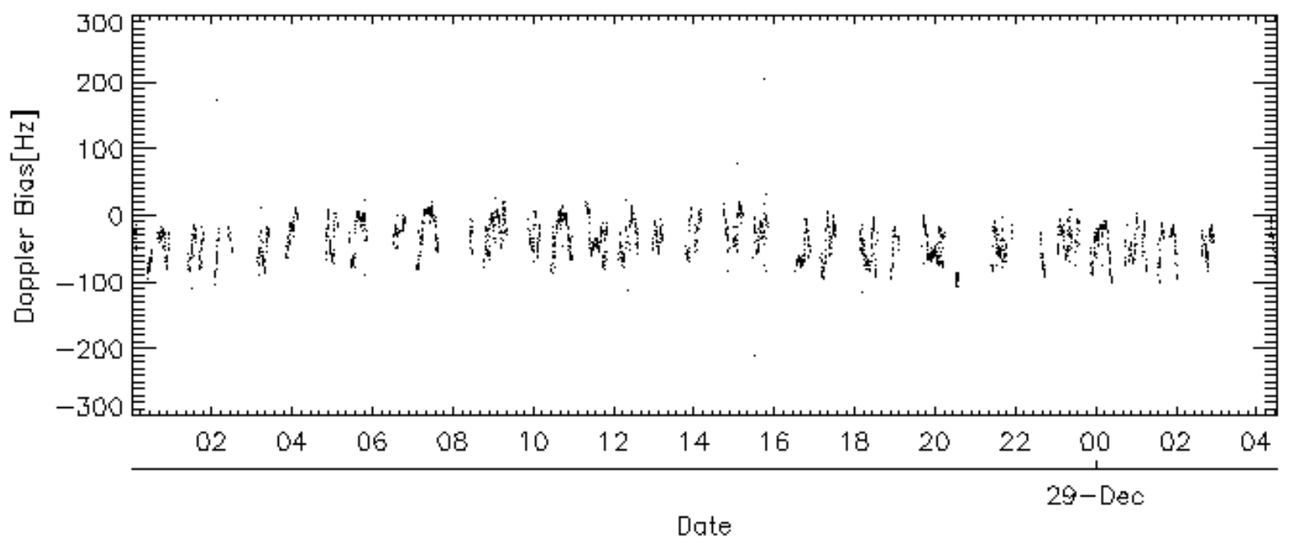

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

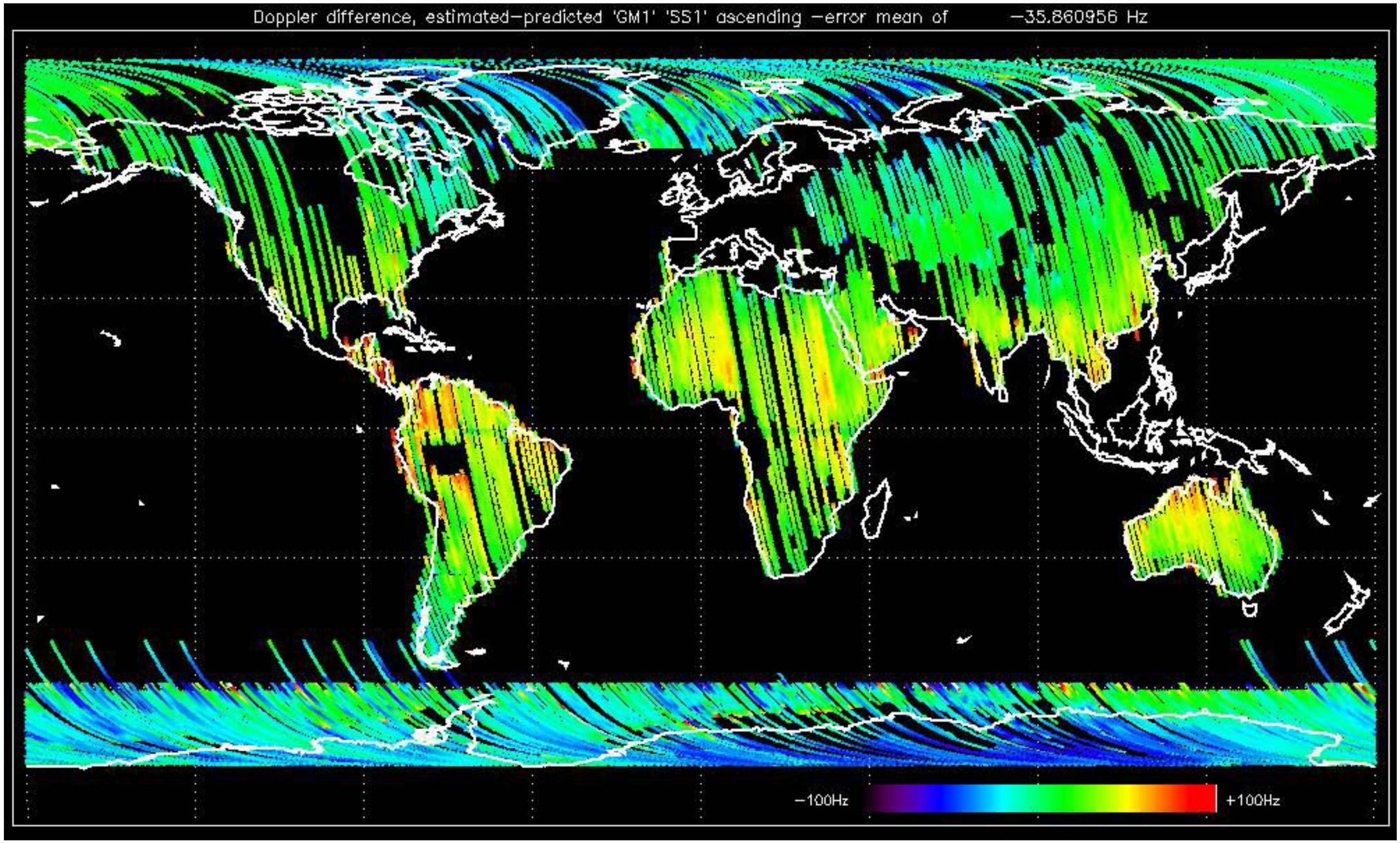

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

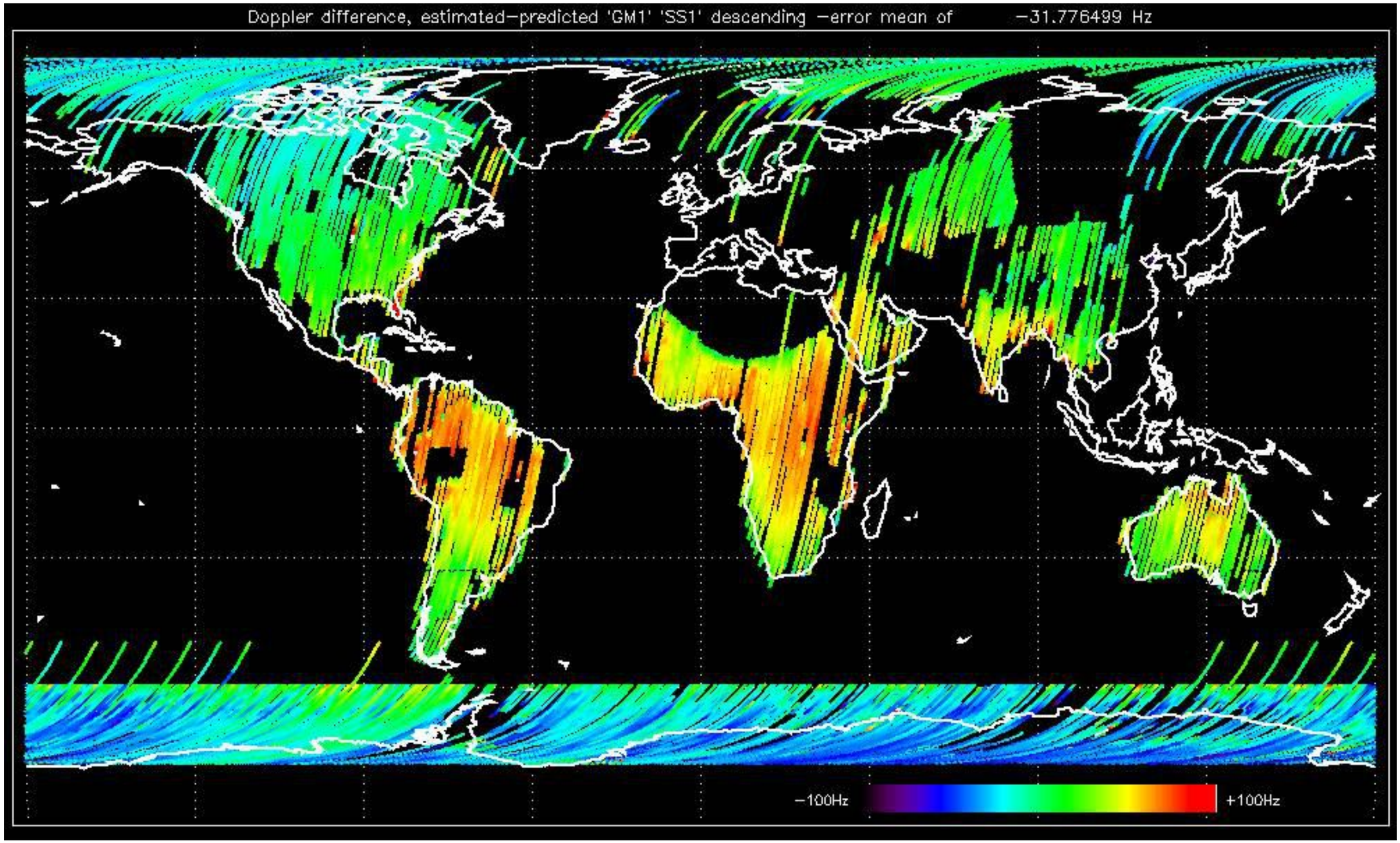

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
29−Dec
Date

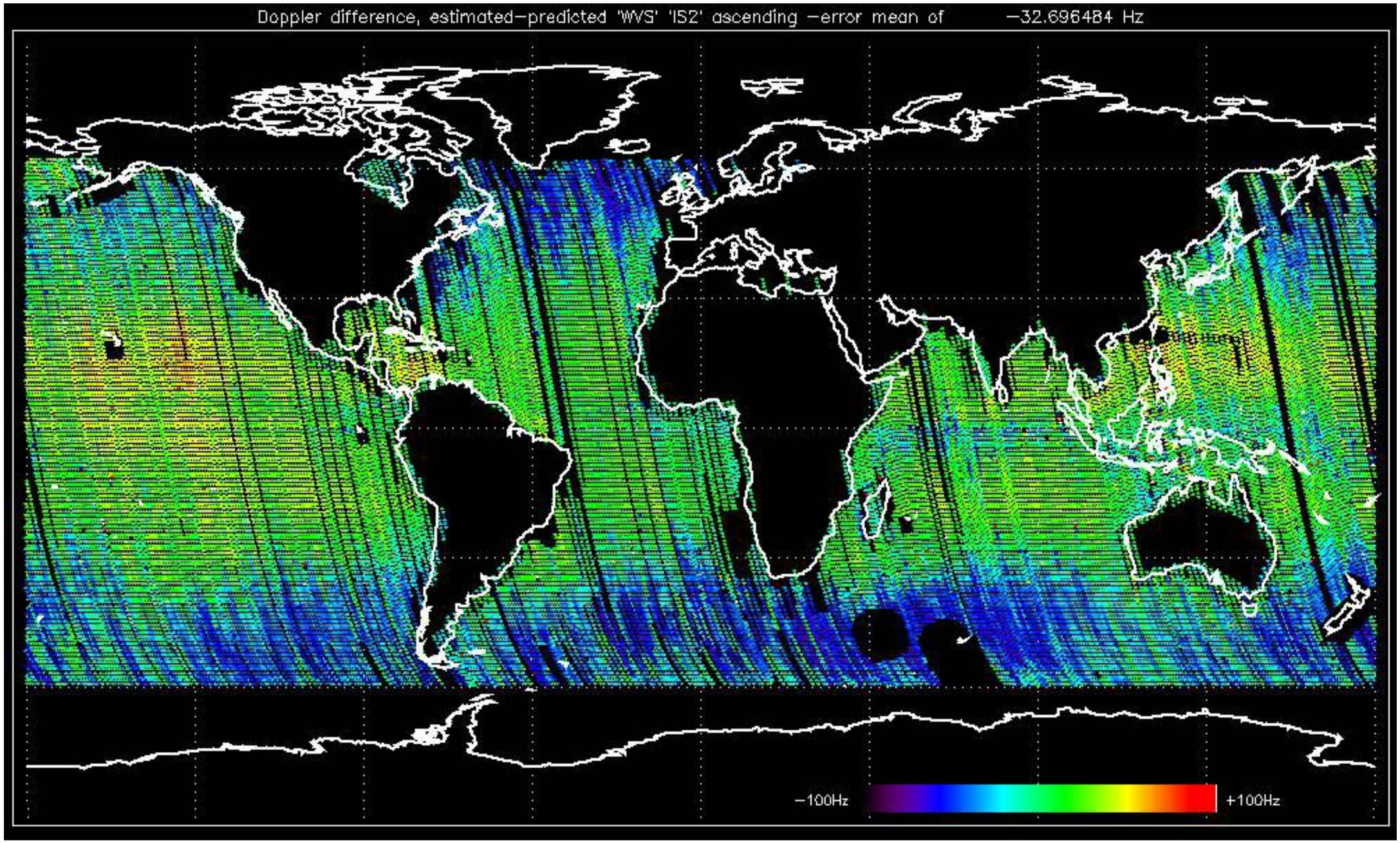

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

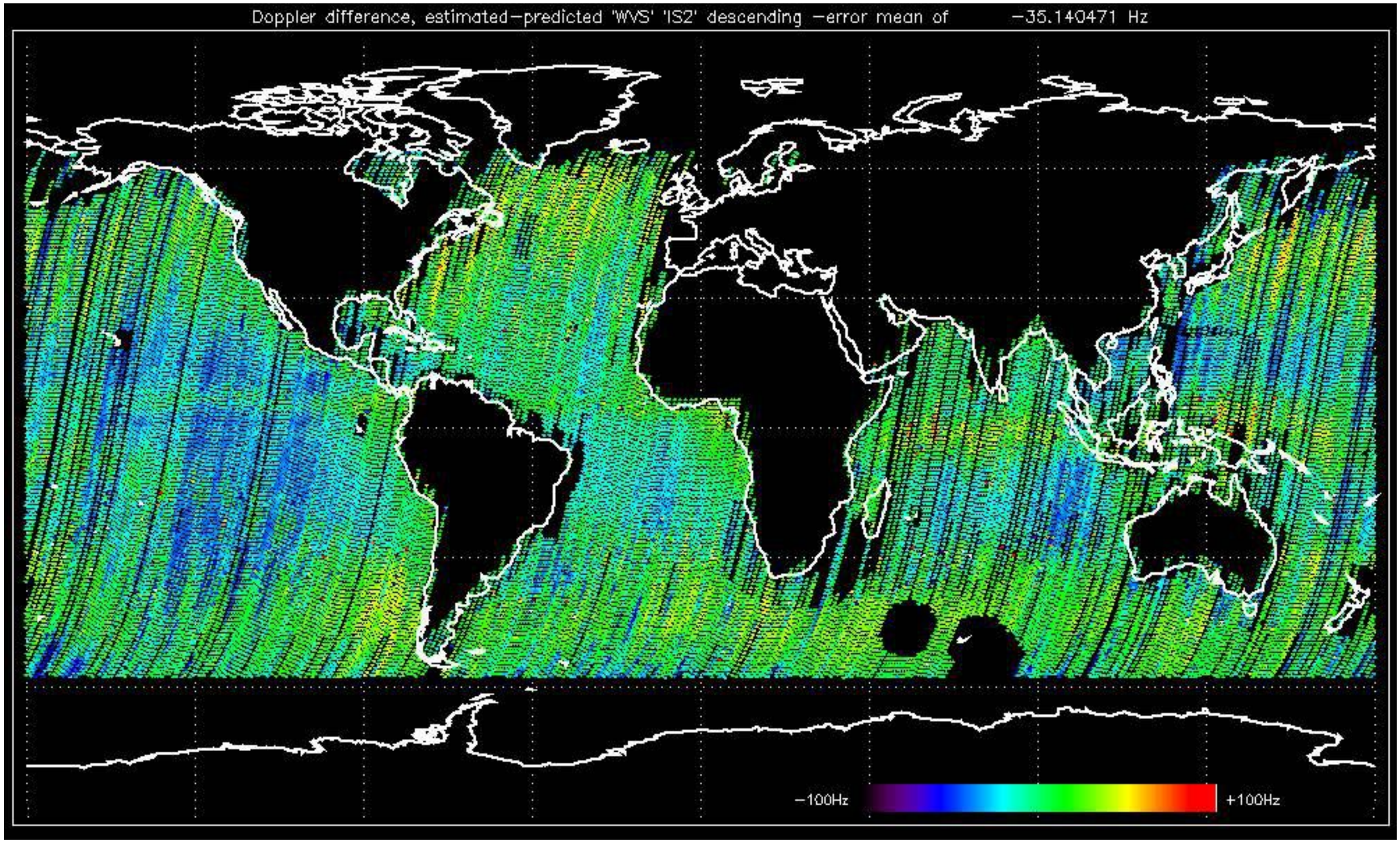

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.860956 Hz
−100Hz
+100Hz

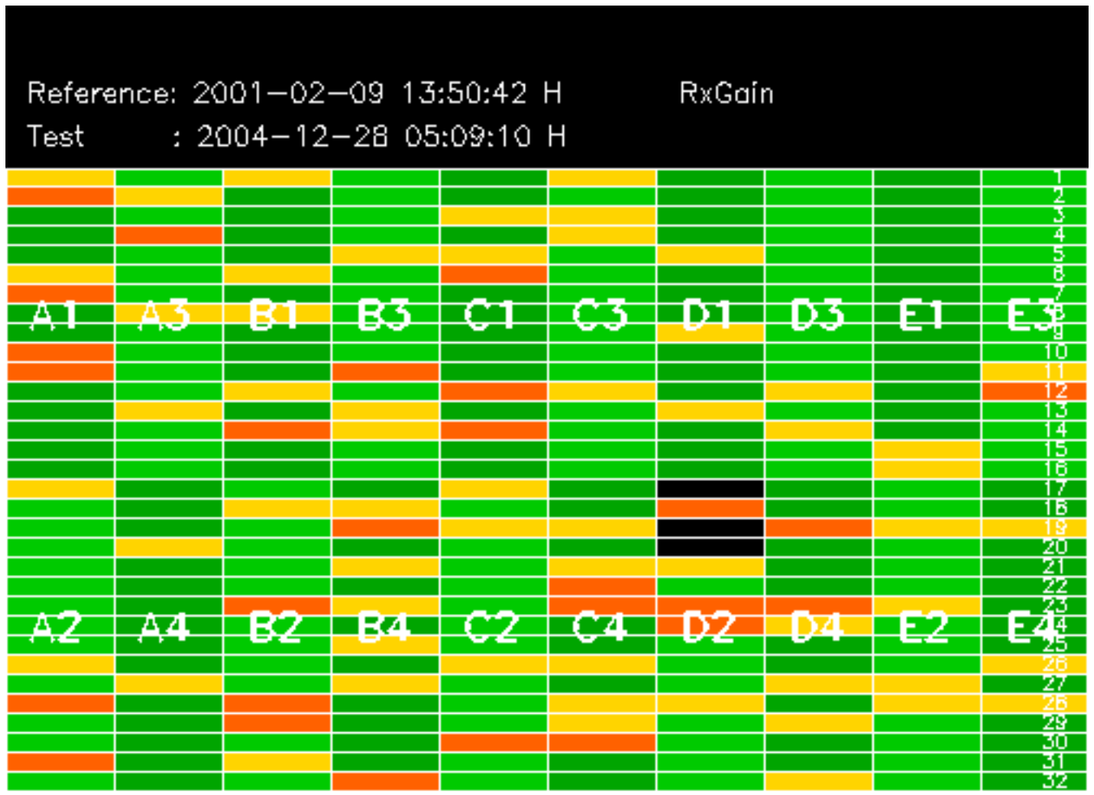

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -31.776499 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.696484 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −35.140471 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 : 2004-12-28 05:09:10 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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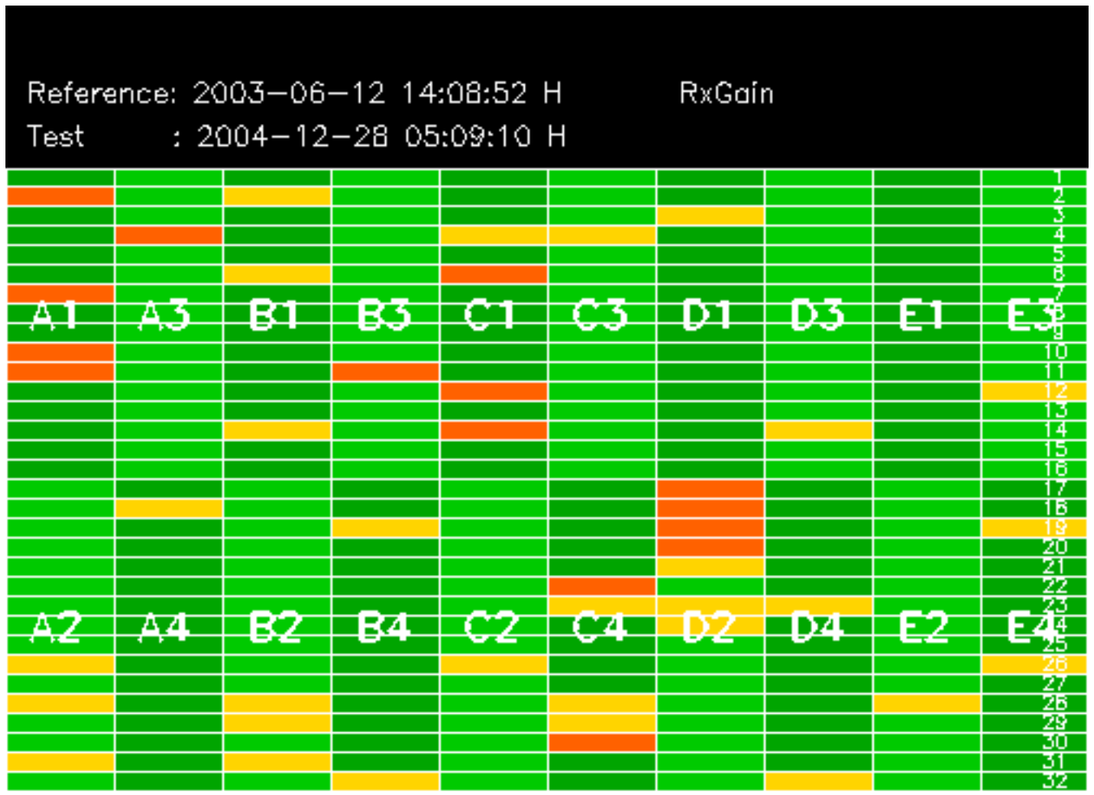
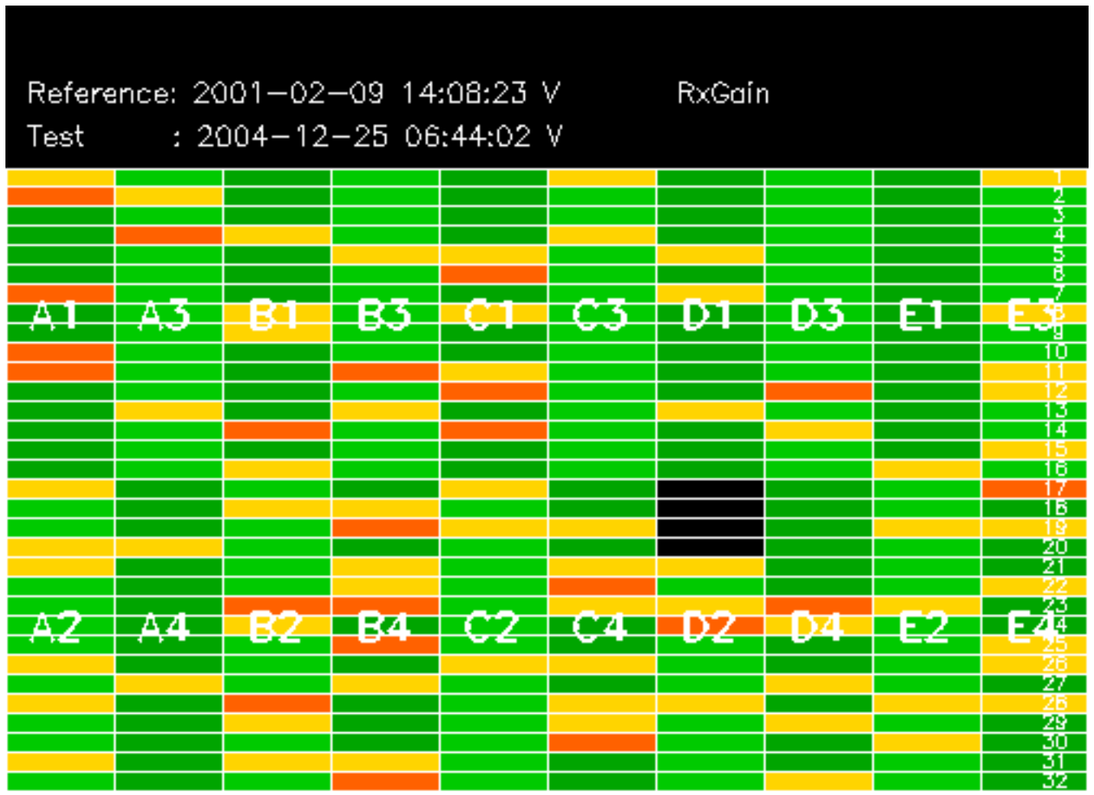

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-28 05:09:10 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-25 06:44:02 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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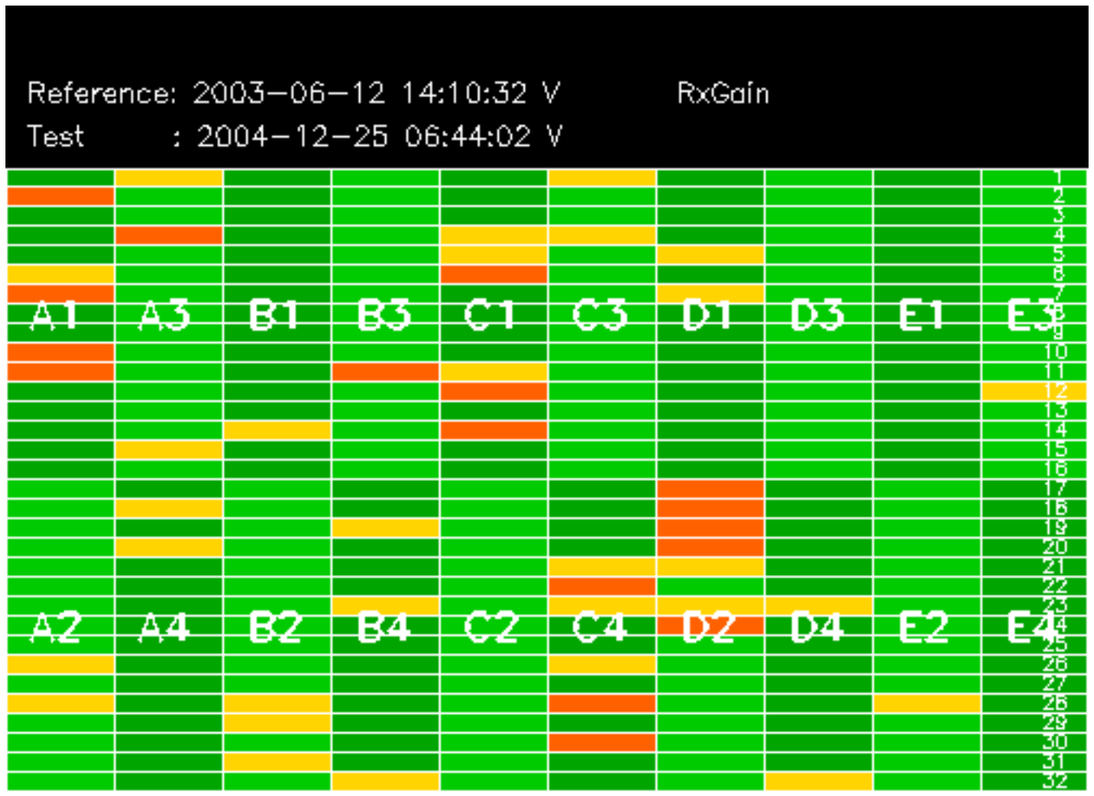
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-25 06:44:02 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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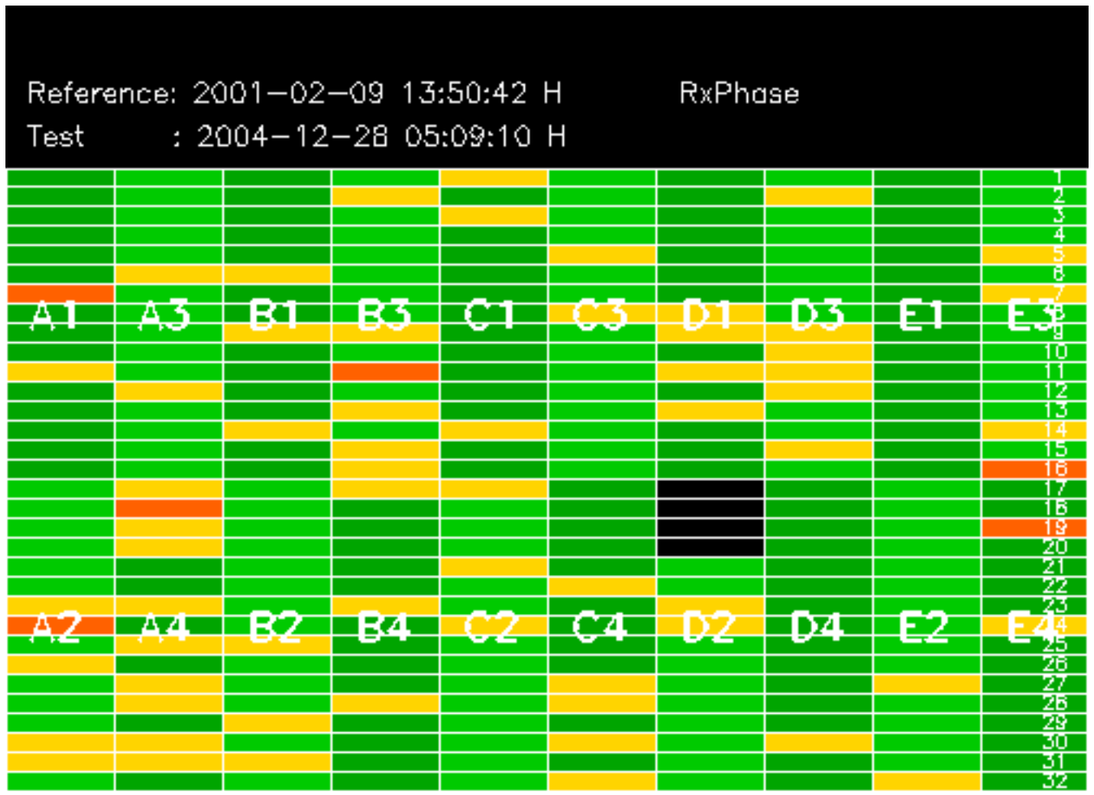
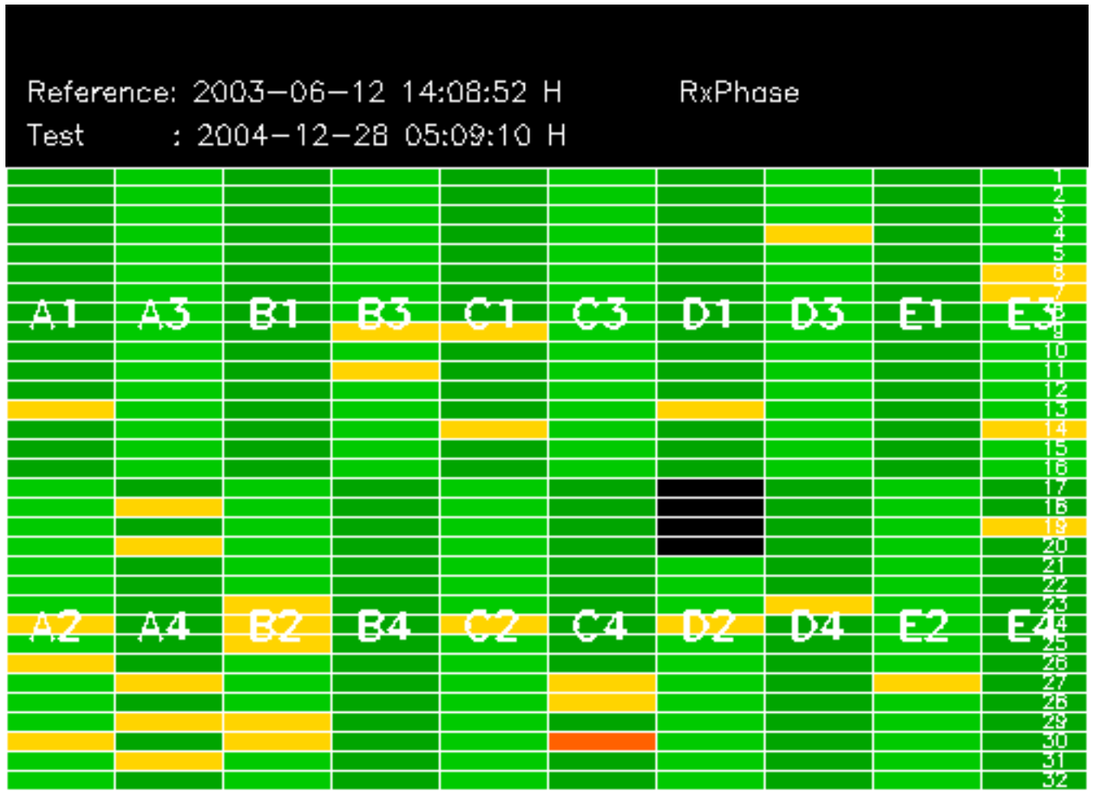

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-28 05:09:10 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-28 05:09:10 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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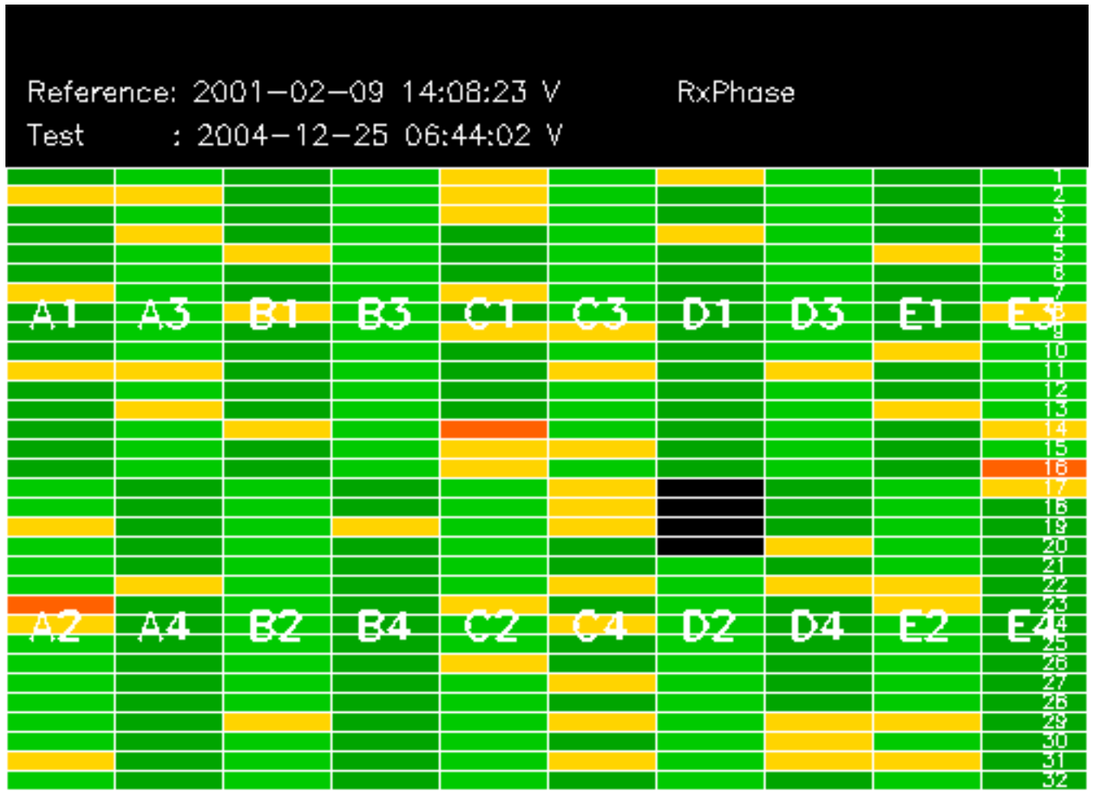
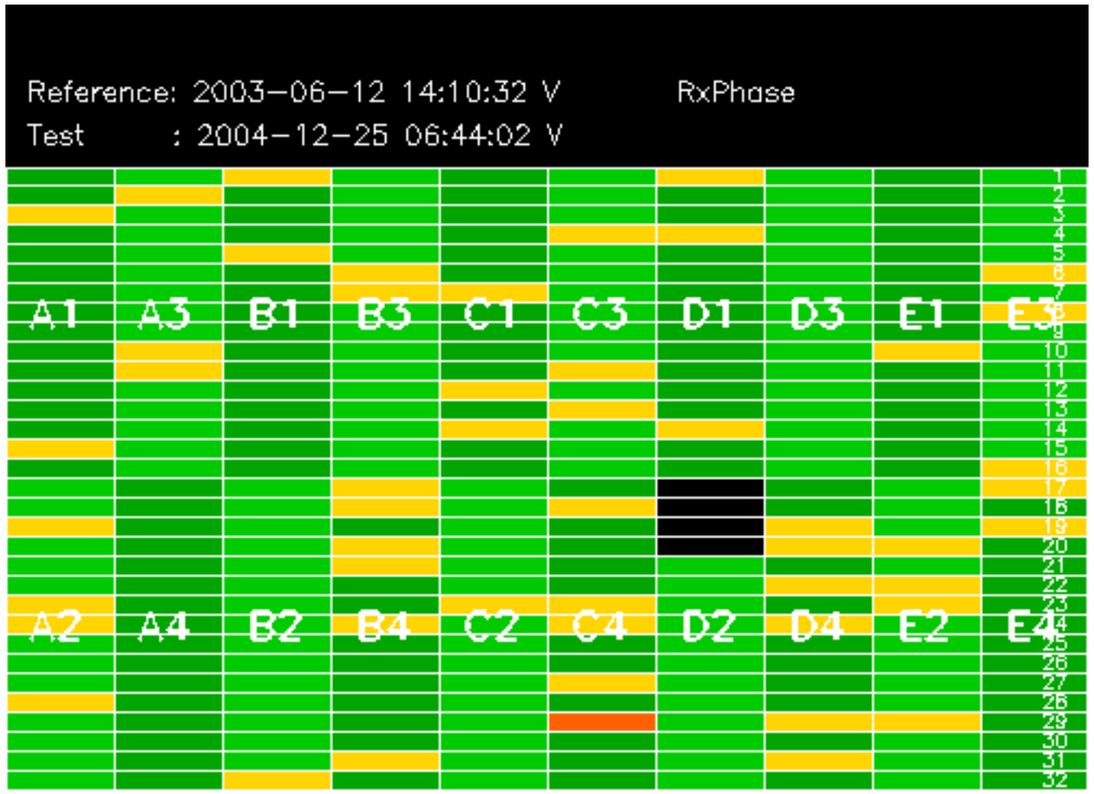
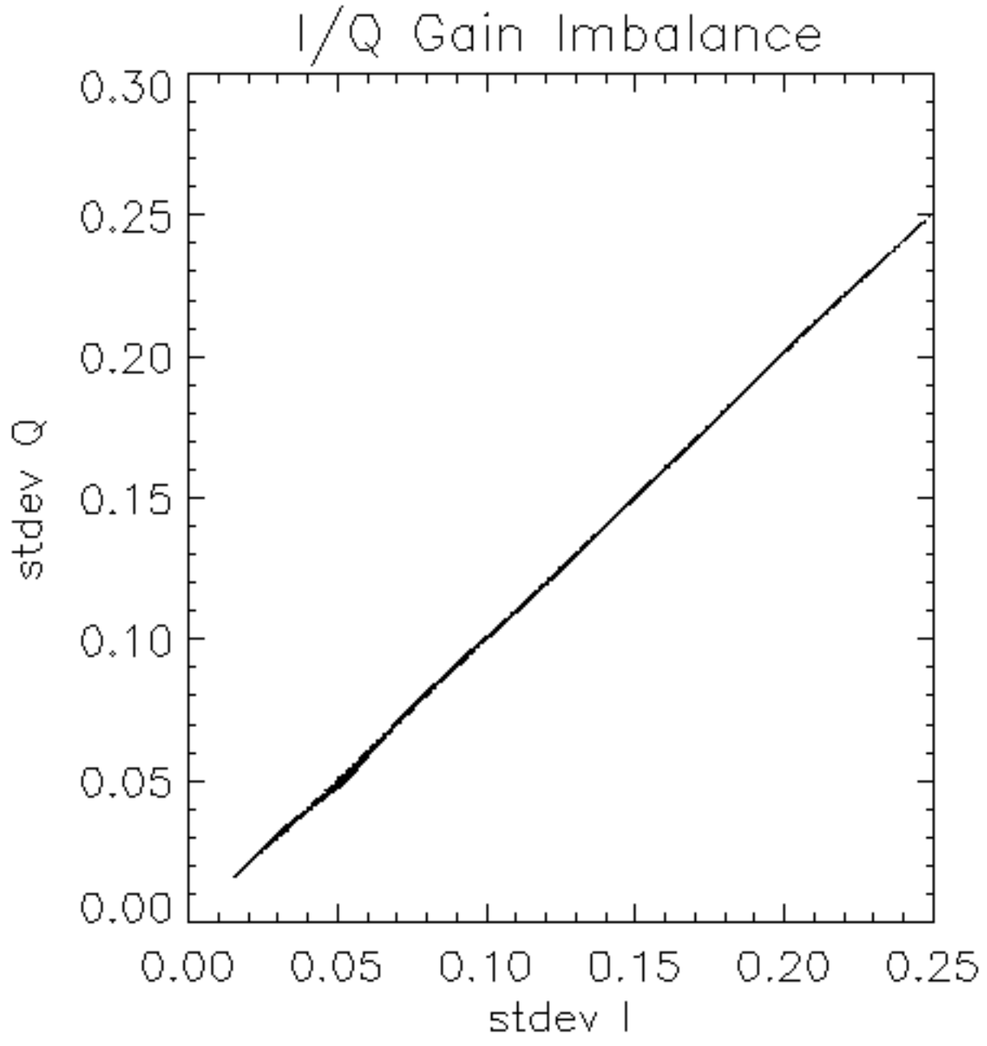
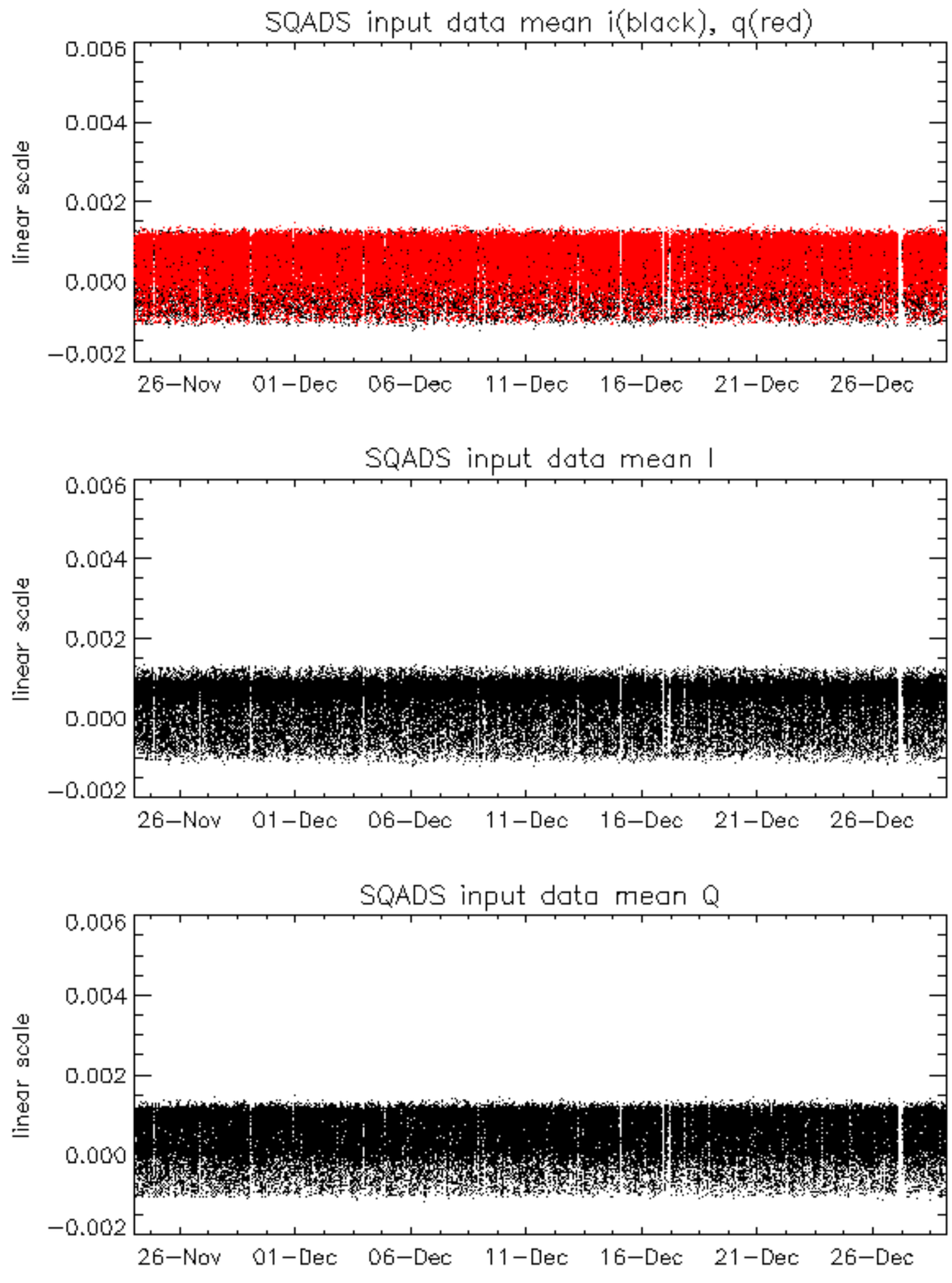
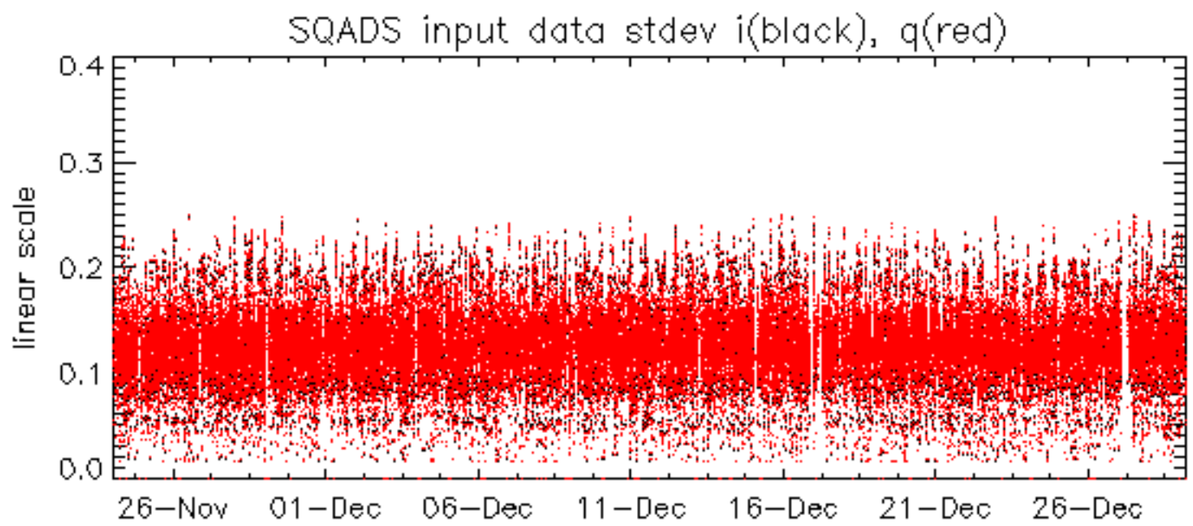
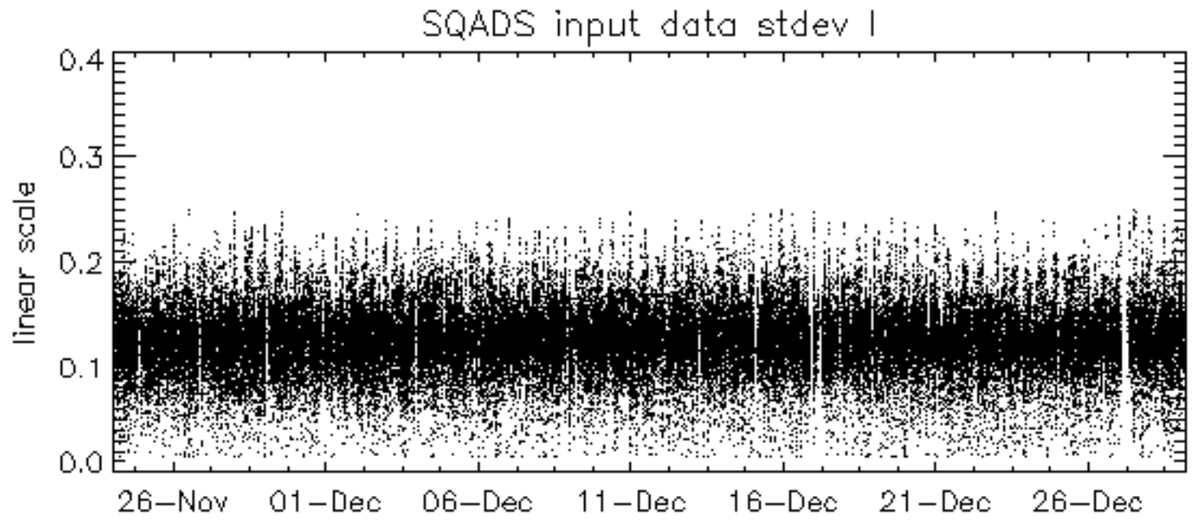

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2004-12-25 06:44:02 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

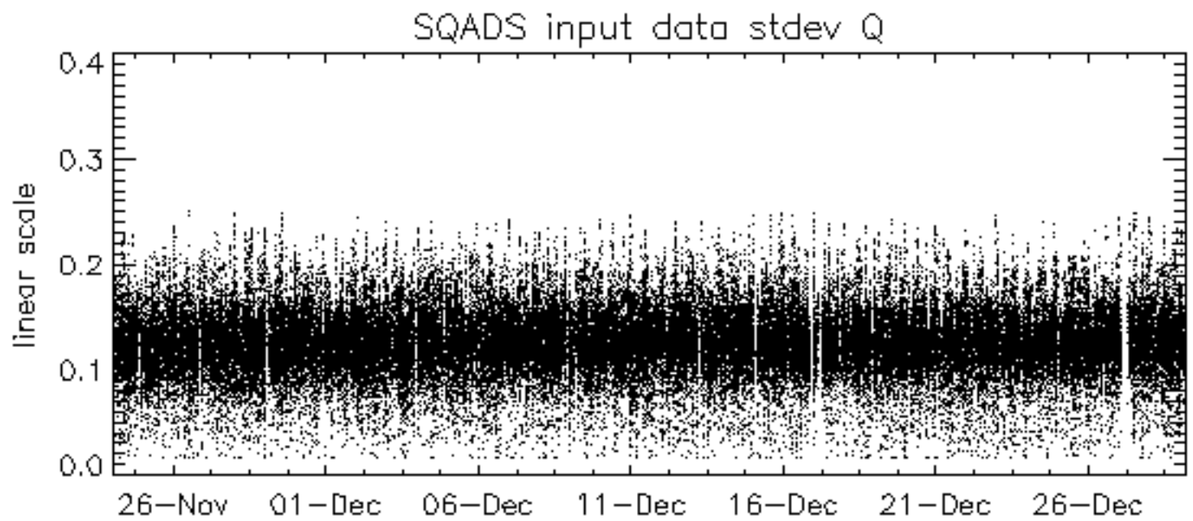

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-25 06:44:02 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

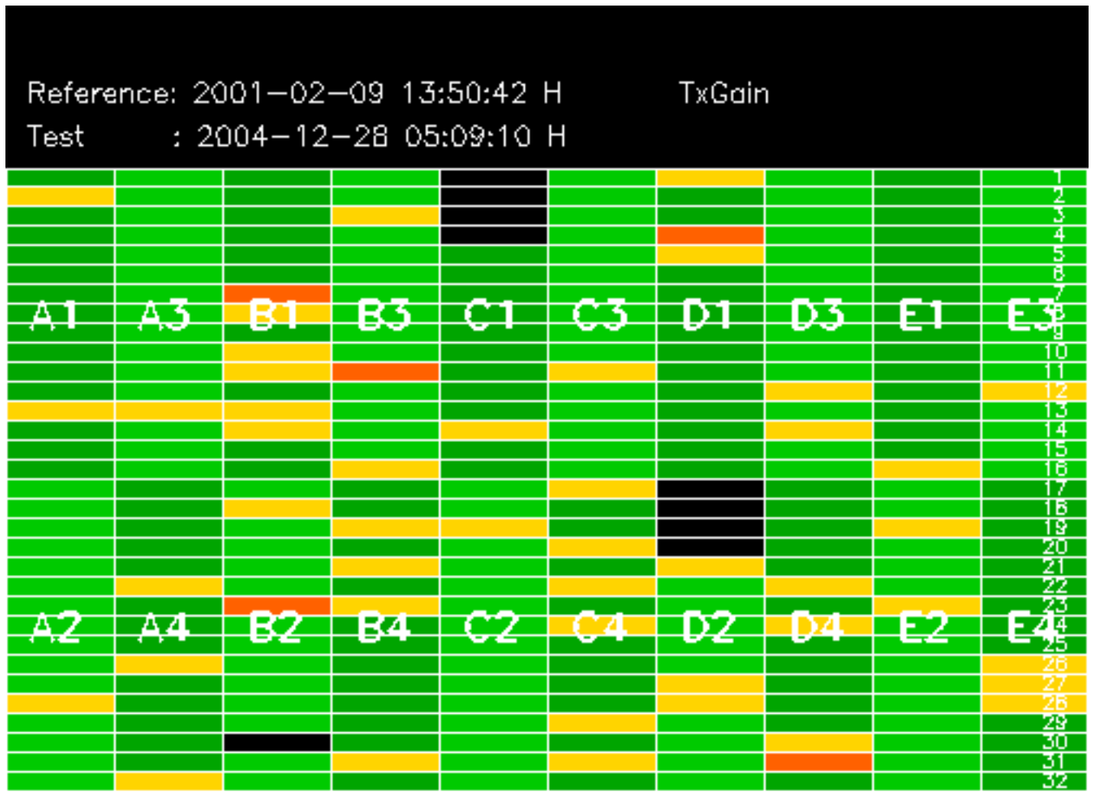

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

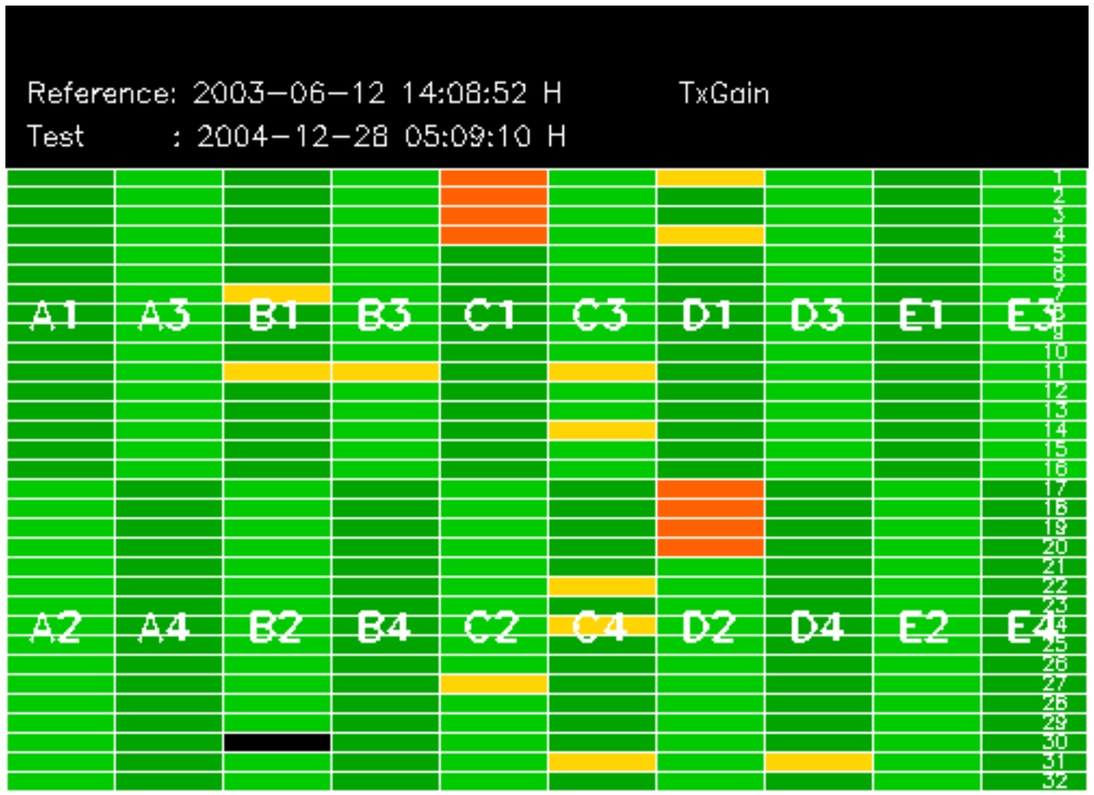

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
26−Dec
SQADS input data mean Q
linear scale
0.006
0.004
0.002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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-28 05:09:10 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 : 2004-12-28 05:09:10 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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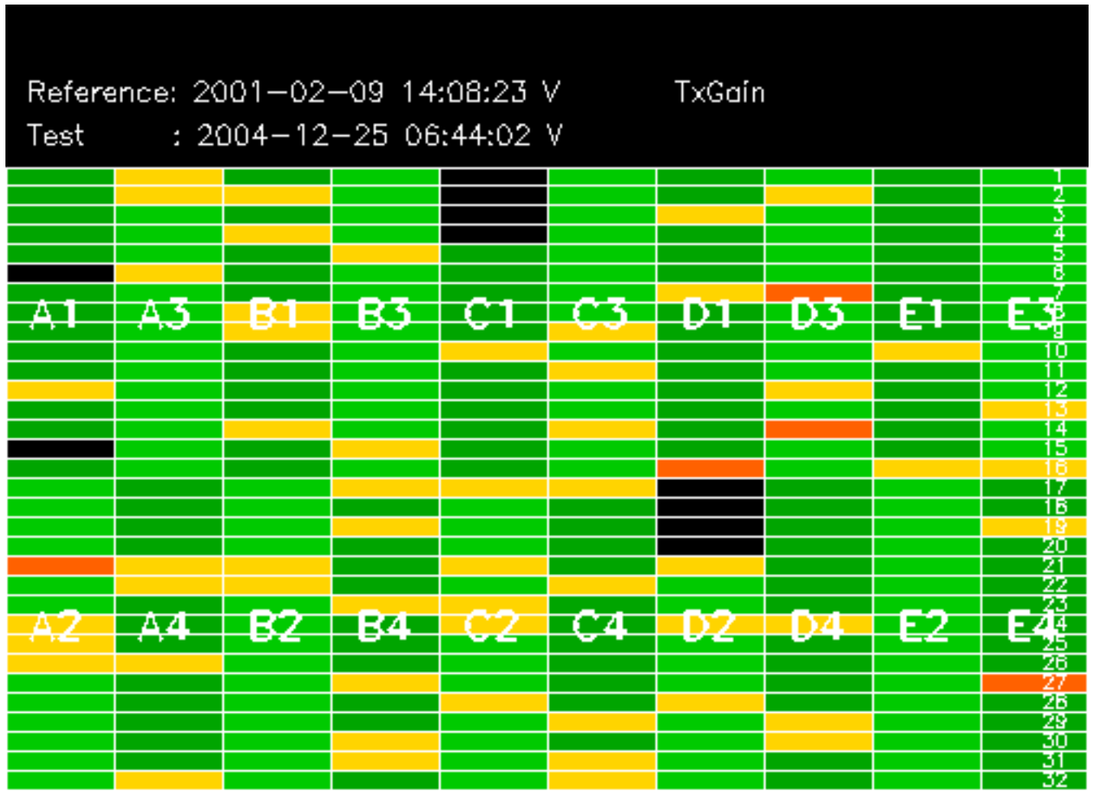
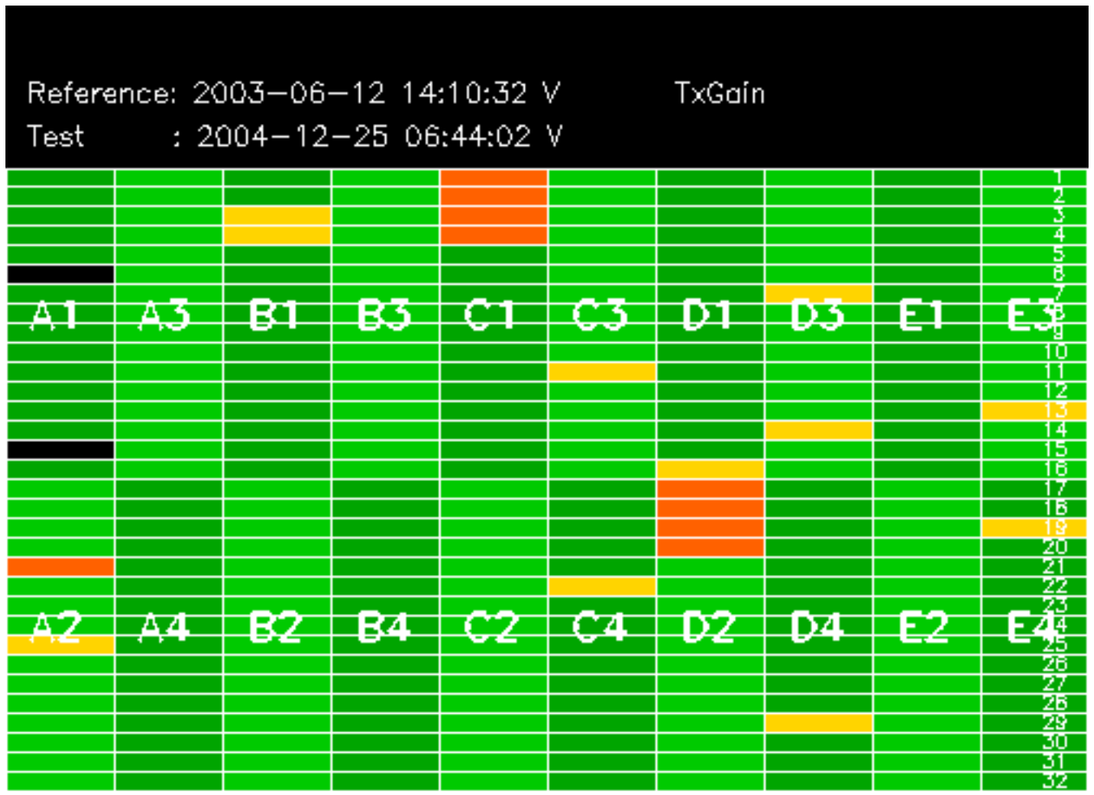

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-25 06:44:02 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-25 06:44:02 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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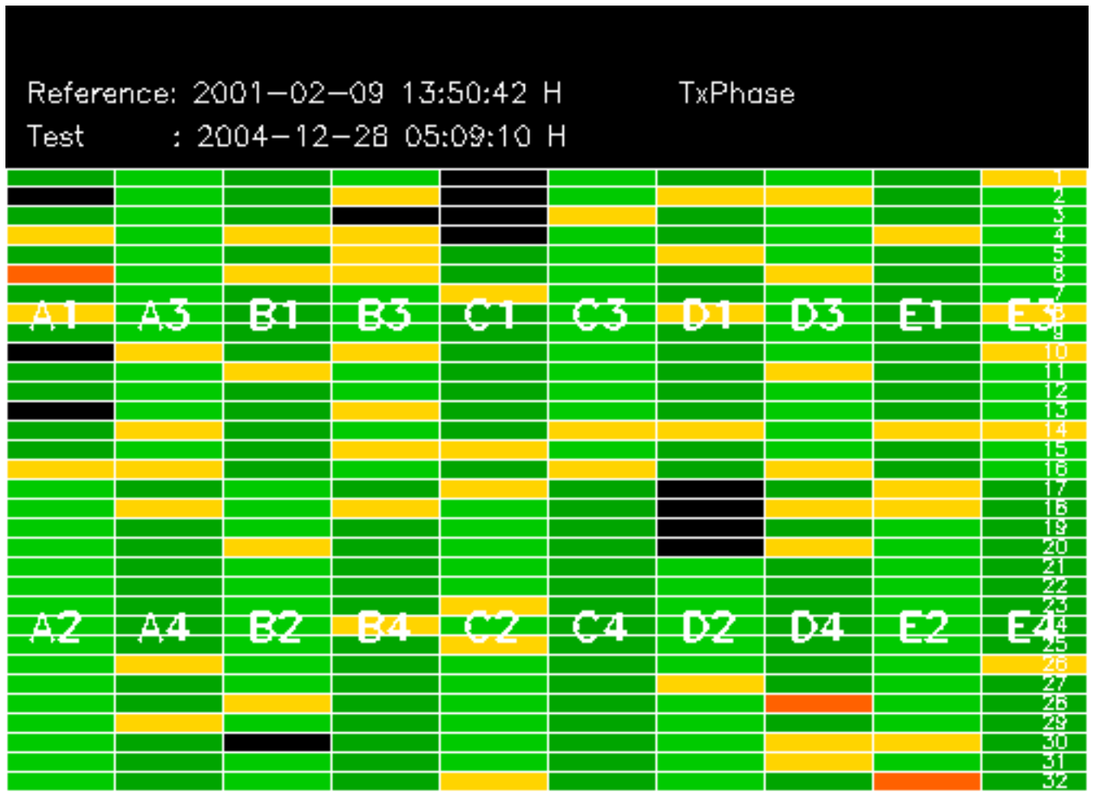
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-12-28 05:09:10 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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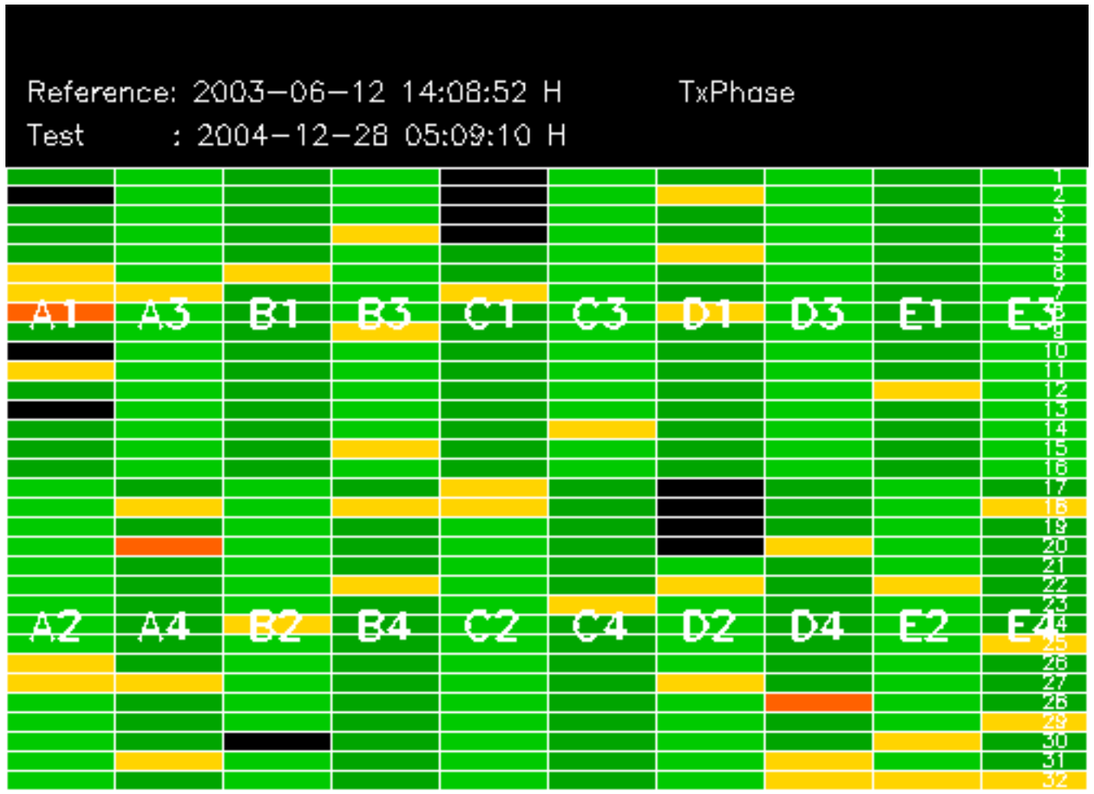
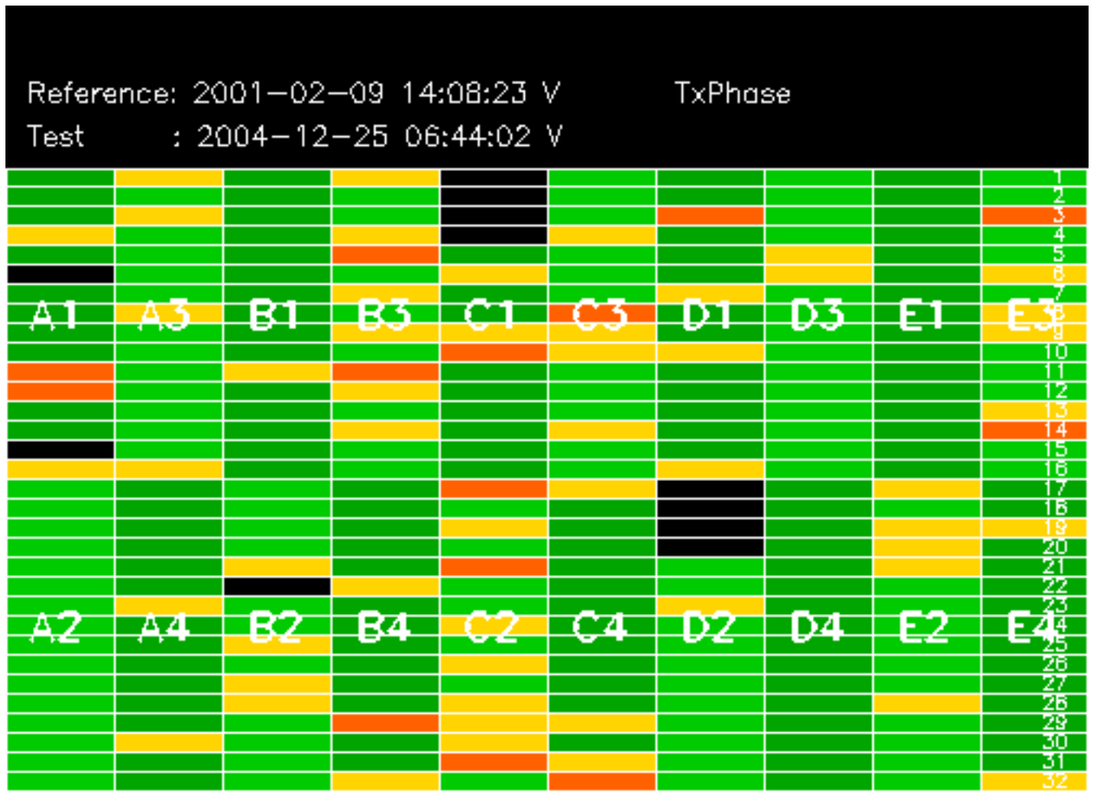
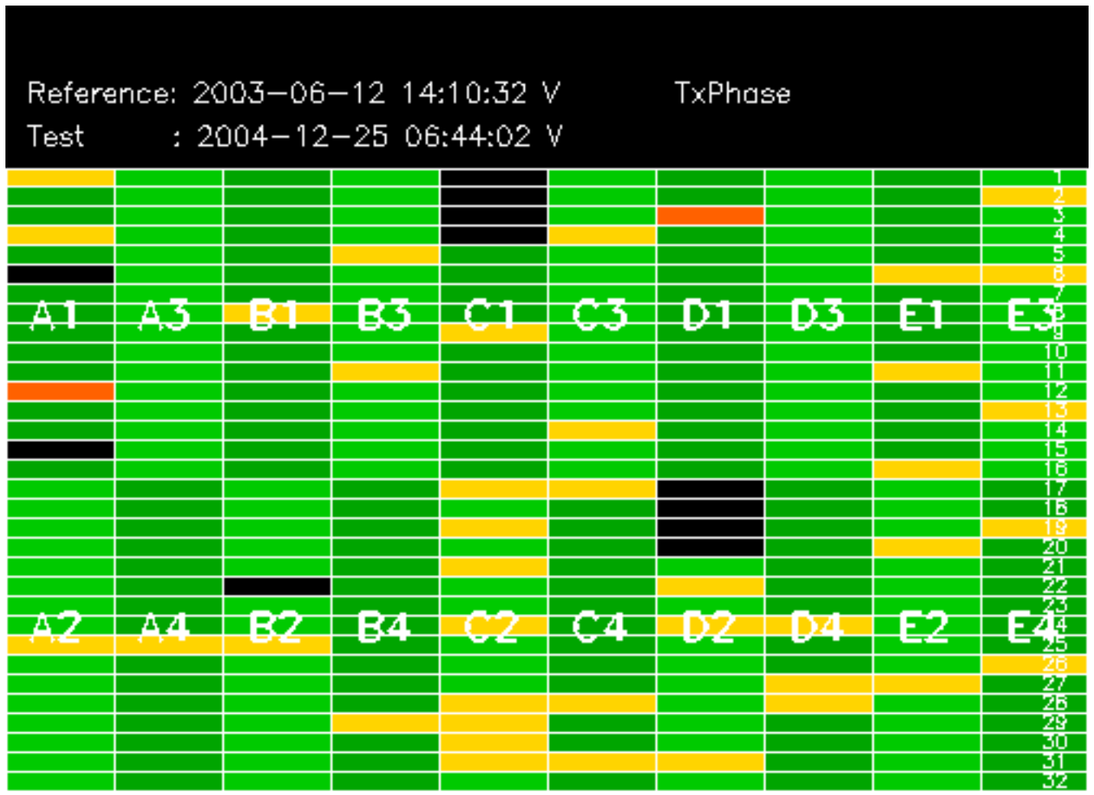
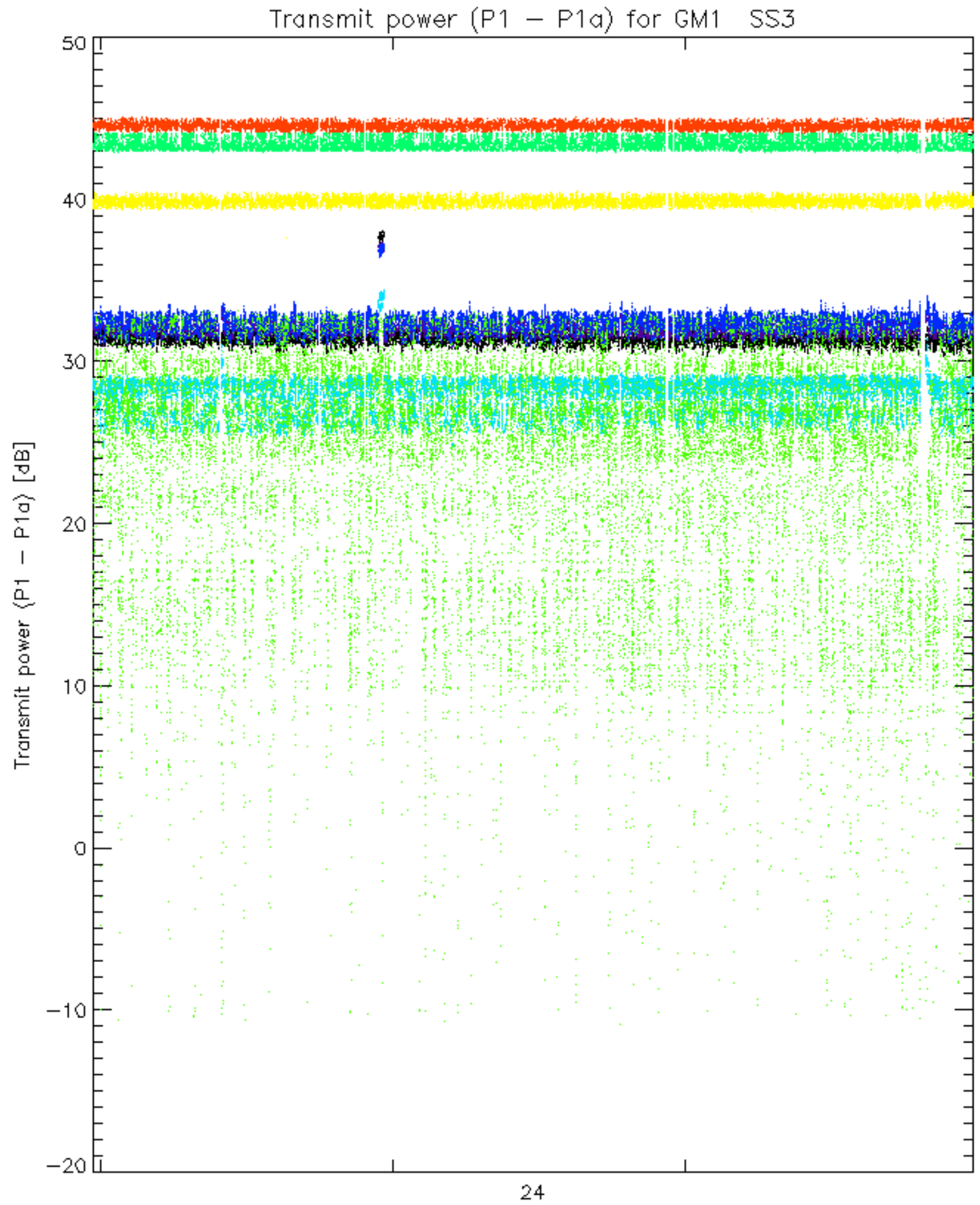
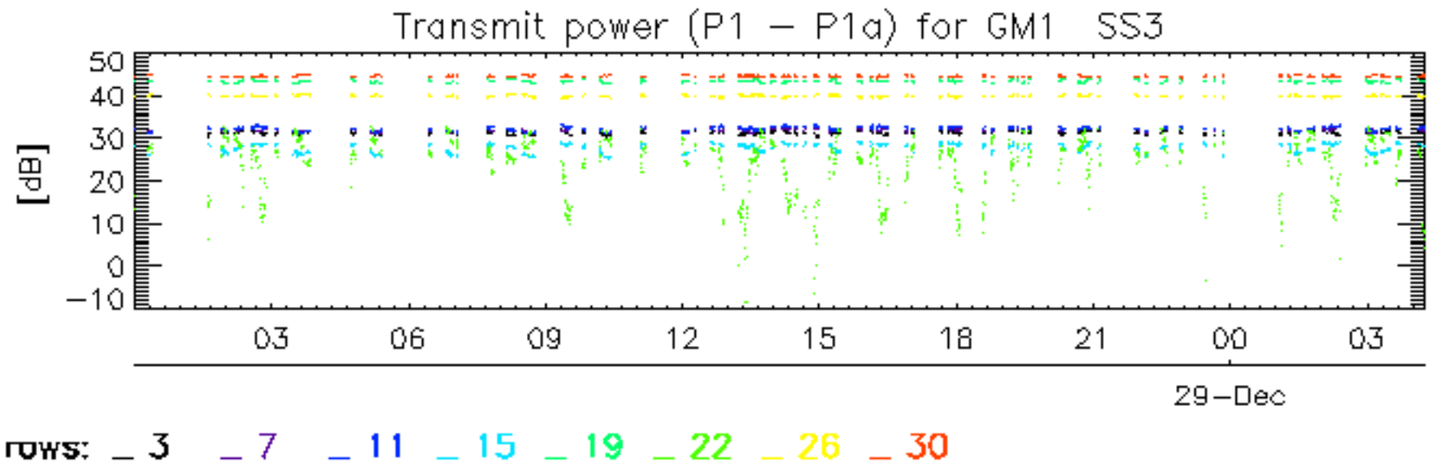
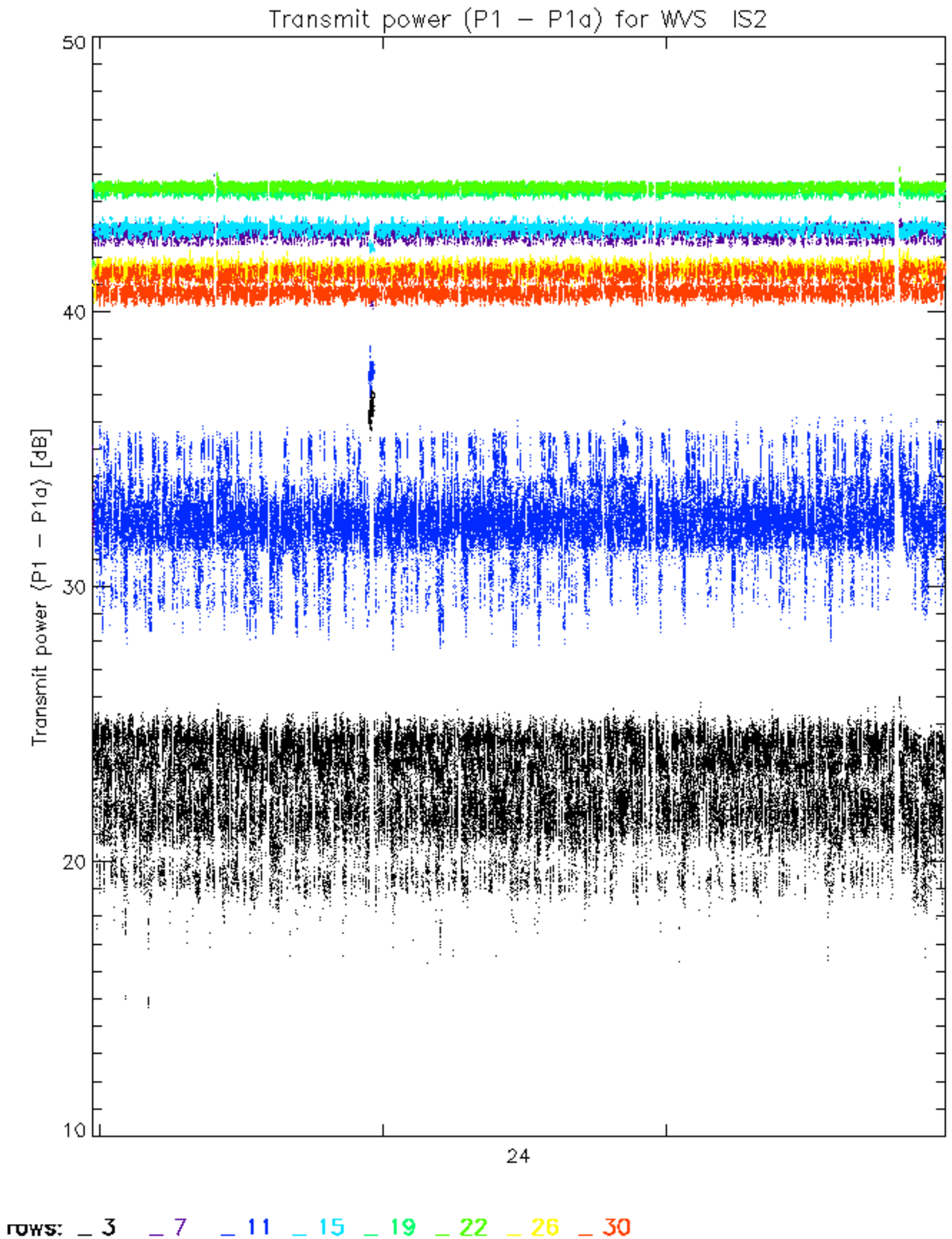

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-28 05:09:10 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

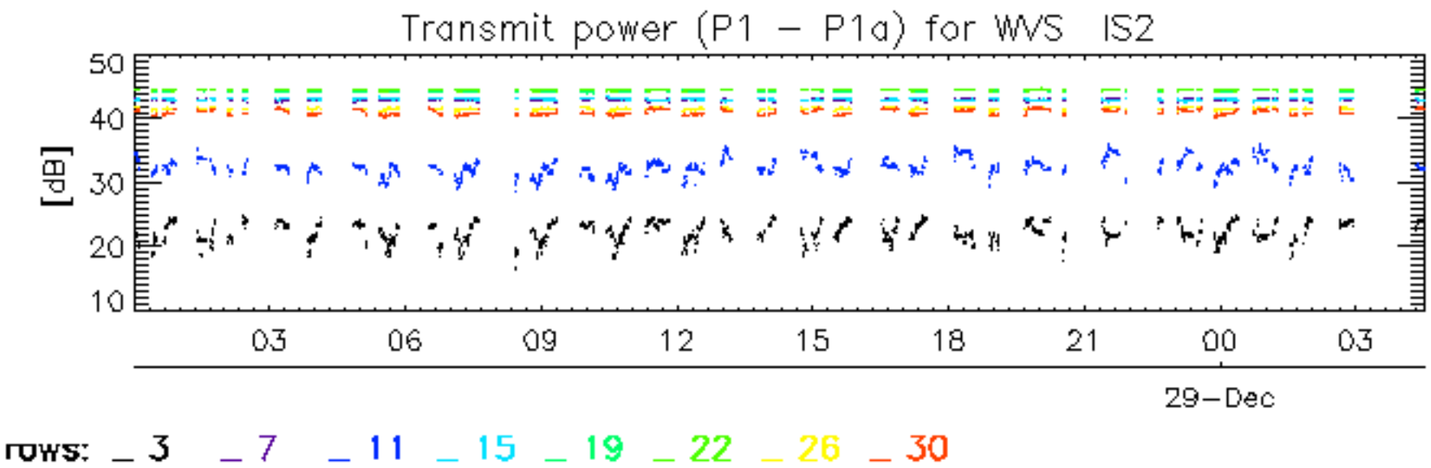

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-12-25 06:44:02 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-25 06:44:02 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
24
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
29−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
24
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
29–Dec
rows: 3
7
11
15
19
22
26
30

No unavailabilities during the reported period.