PRELIMINARY REPORT OF 041210

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

last update on Fri Dec 10 10:58:55 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 2004-12-09 00:00:00 to 2004-12-10 10:58:55

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	33	37	6	5	0
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	33	37	6	5	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	33	37	6	5	0
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	33	37	6	5	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	41	37	6	4	4
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	41	37	6	4	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	41	37	6	4	4
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	41	37	6	4	4

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	20041209 100809
H	20041208 071834

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	-3.471308	0.029972	-0.037829
7	P1	-3.190206	0.041074	0.322597
11	P1	-4.624665	0.045696	-0.087241
15	P1	-5.660154	0.032908	-0.036548
19	P1	-3.628575	0.005317	-0.053949
22	P1	-4.580597	0.016073	0.001763
26	P1	-4.918005	0.016898	-0.030995
30	P1	-7.091410	0.014434	-0.043444
3	P1	-15.974134	0.117464	0.058817
7	P1	-15.026775	0.616581	-1.929356
11	P1	-20.684765	0.486680	0.017764
15	P1	-11.622993	0.089593	0.113172
19	P1	-14.112366	0.029753	-0.092200
22	P1	-16.168255	0.439312	0.089590
26	P1	-17.796572	0.256410	0.004371
30	P1	-17.928143	0.295949	0.068497

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.370789	0.086601	0.001684
7	P2	-22.612015	0.140336	0.005461
11	P2	-14.996354	0.132307	0.133124
15	P2	-7.169978	0.109701	-0.019198
19	P2	-9.720556	0.136226	0.012867
22	P2	-17.214933	0.099885	0.045231

26	P2	-16.519457	0.107044	-0.009966
30	P2	-19.014030	0.083073	0.103294

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.207583	0.006972	-0.015272
7	P3	-8.207581	0.006971	-0.015287
11	P3	-8.207579	0.006971	-0.015289
15	P3	-8.207575	0.006971	-0.015294
19	P3	-8.207574	0.006971	-0.015300
22	P3	-8.207573	0.006971	-0.015307
26	P3	-8.207571	0.006971	-0.015317
30	P3	-8.207443	0.006971	-0.015314

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	-2.836354	0.110943	-0.143211
7	P1	-2.981734	0.064958	-0.097423
11	P1	-3.926784	0.049115	-0.091337
15	P1	-3.507664	0.078547	-0.104018
19	P1	-3.597673	0.012674	-0.022143
22	P1	-5.600603	0.068549	0.008310
26	P1	-6.487442	0.022848	-0.055265
30	P1	-6.283842	0.042225	-0.061411
3	P1	-10.618960	0.058817	-0.068094
7	P1	-10.106936	0.153551	0.001772

11	P1	-12.376043	0.199811	0.037298
15	P1	-11.718072	0.104754	0.050001
19	P1	-15.628601	0.050997	-0.033359
22	P1	-24.105946	2.209817	-0.258765
26	P1	-15.141484	0.414325	0.054073
30	P1	-20.232431	1.013814	0.132136

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.053610	0.038898	0.005866
7	P2	-22.665247	0.028724	0.047262
11	P2	-10.791652	0.034460	0.149896
15	P2	-5.064875	0.025807	-0.024663
19	P2	-6.971812	0.033982	-0.023958
22	P2	-7.337306	0.028184	0.033634
26	P2	-23.959301	0.019463	-0.037671
30	P2	-22.073765	0.018567	0.062029

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044114	0.003125	-0.003827
7	P3	-8.044134	0.003132	-0.004185
11	P3	-8.044185	0.003121	-0.003892
15	P3	-8.044021	0.003134	-0.003851
19	P3	-8.044163	0.003132	-0.003976
22	P3	-8.044133	0.003123	-0.003703
26	P3	-8.044169	0.003118	-0.003993
30	P3	-8.044092	0.003125	-0.003979

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	0.000439651
	stdev	2.41949e-07
MEAN Q	mean	0.000499388
	stdev	2.55349e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125185
	stdev	0.000994436
STDEV Q	mean	0.125419
	stdev	0.00100316

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

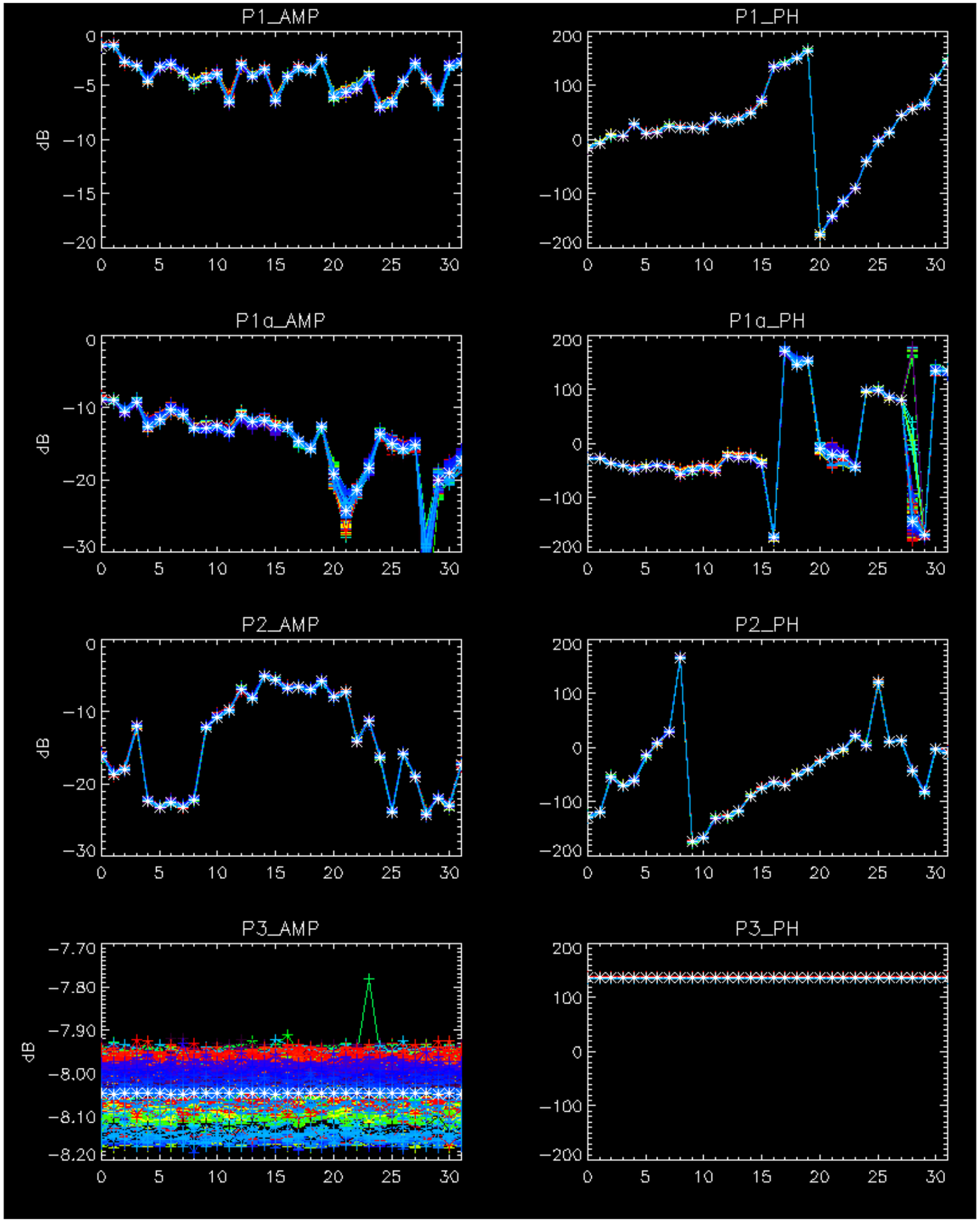

Descending

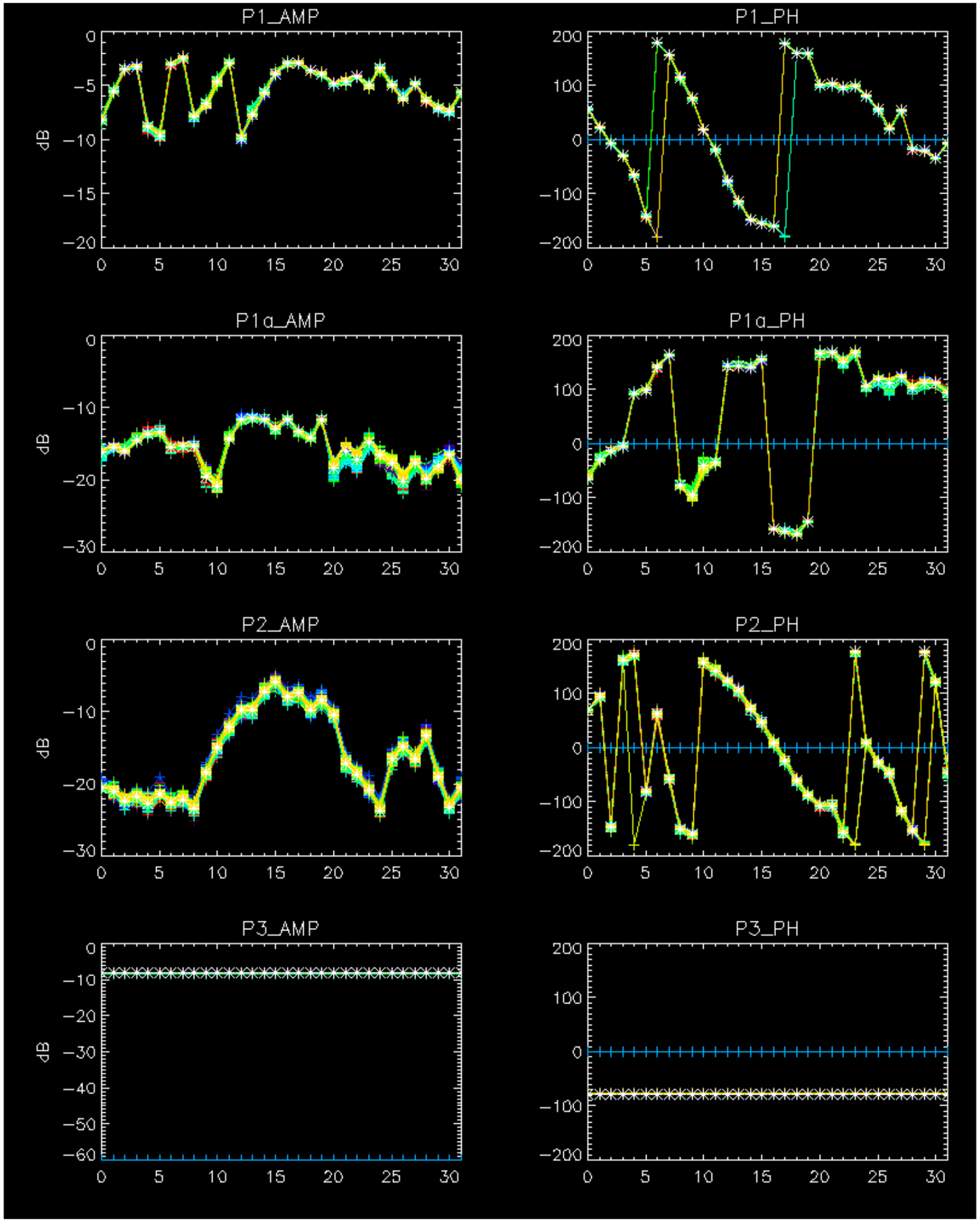
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

No anomalies observed on available browse products

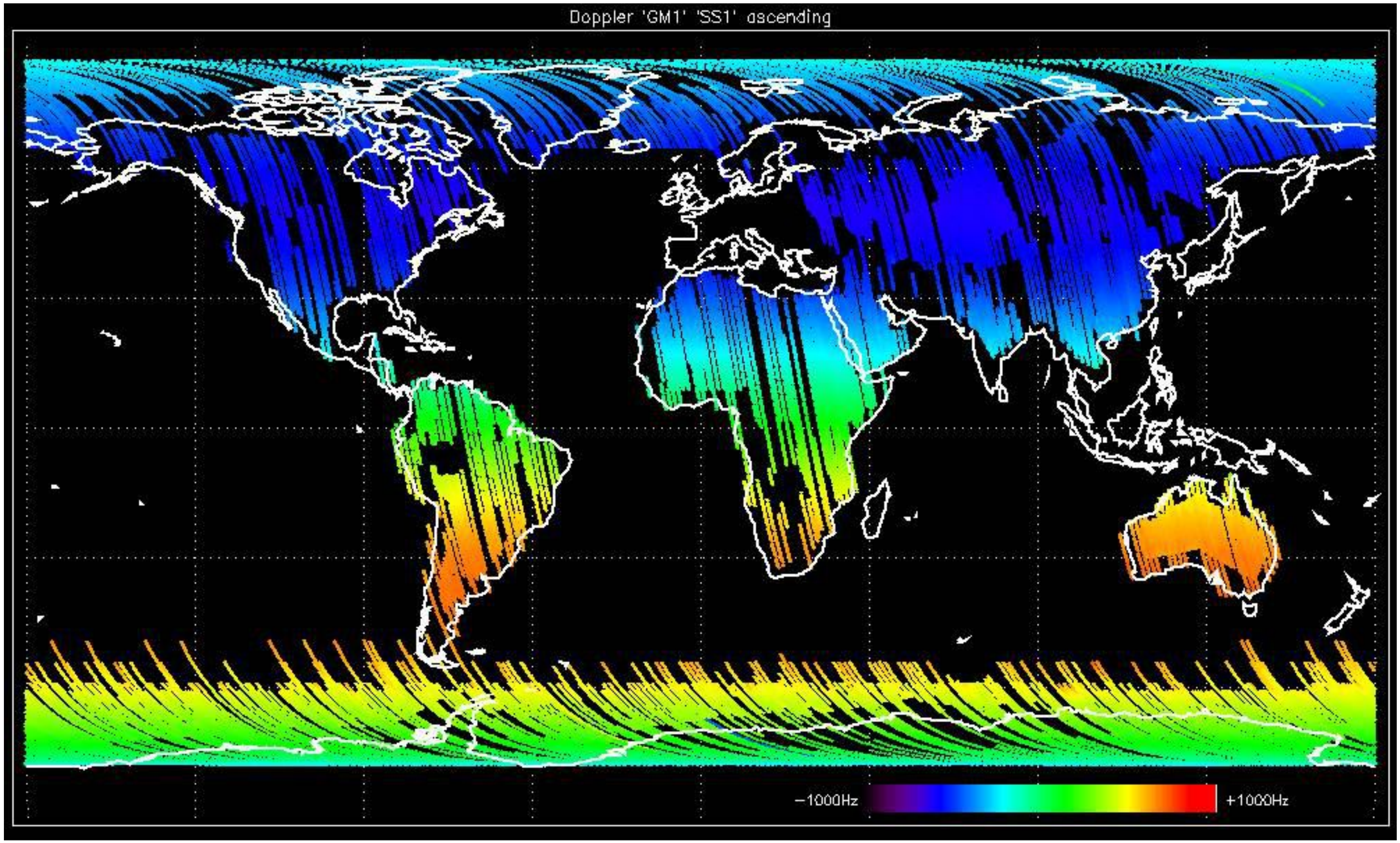
No anomalies observed.

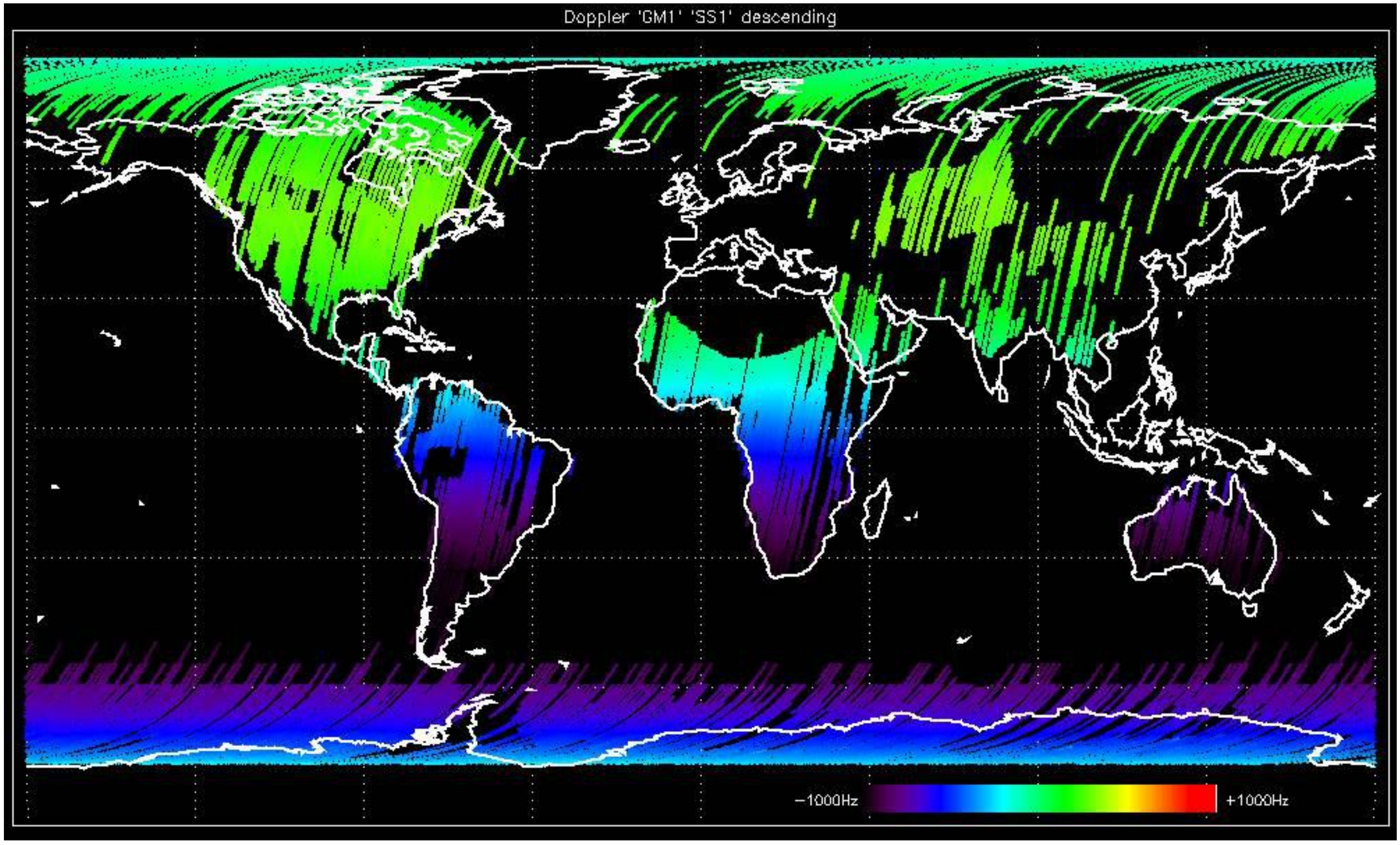

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.70
−7.80
−7.90
−8.00
−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

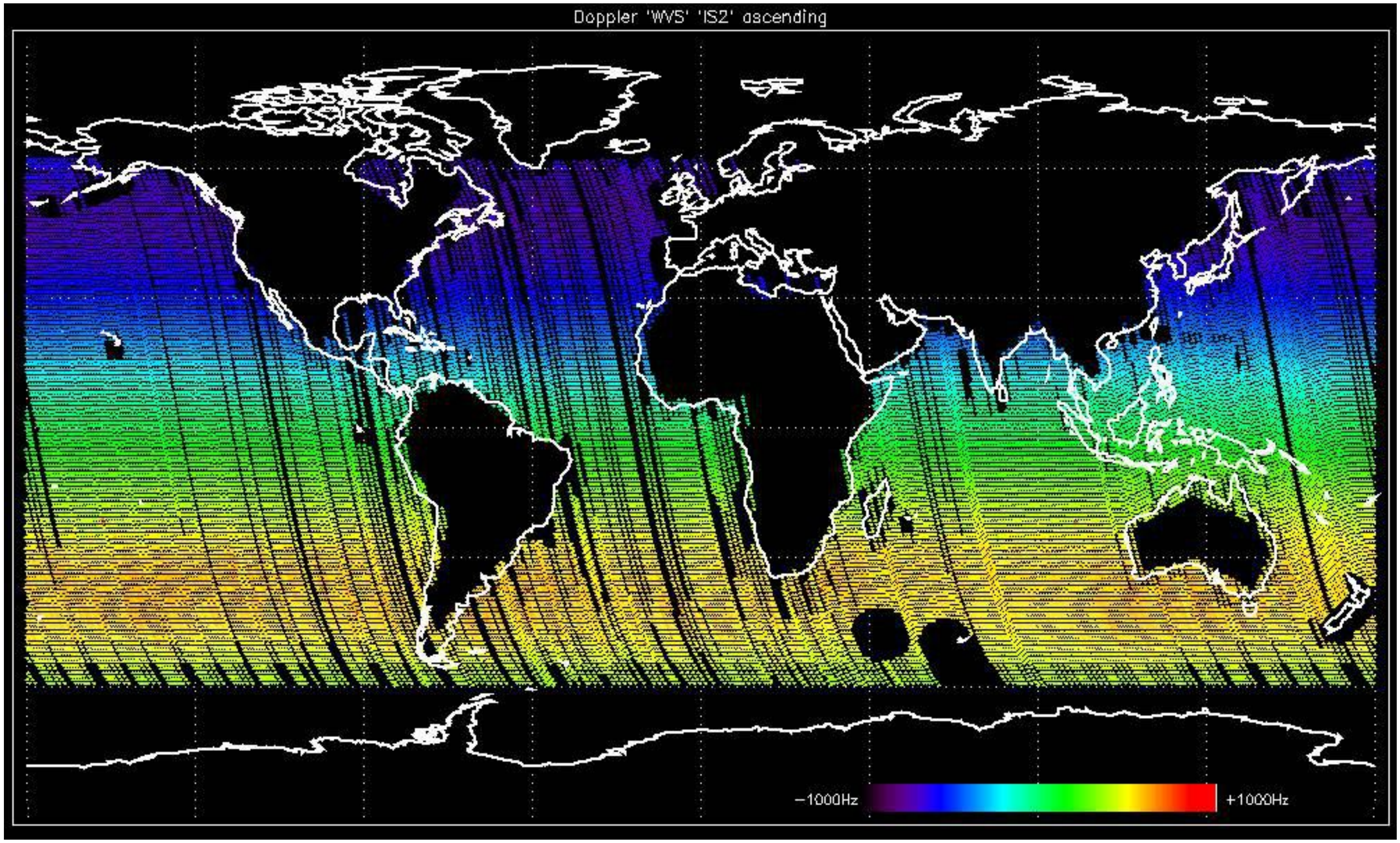

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

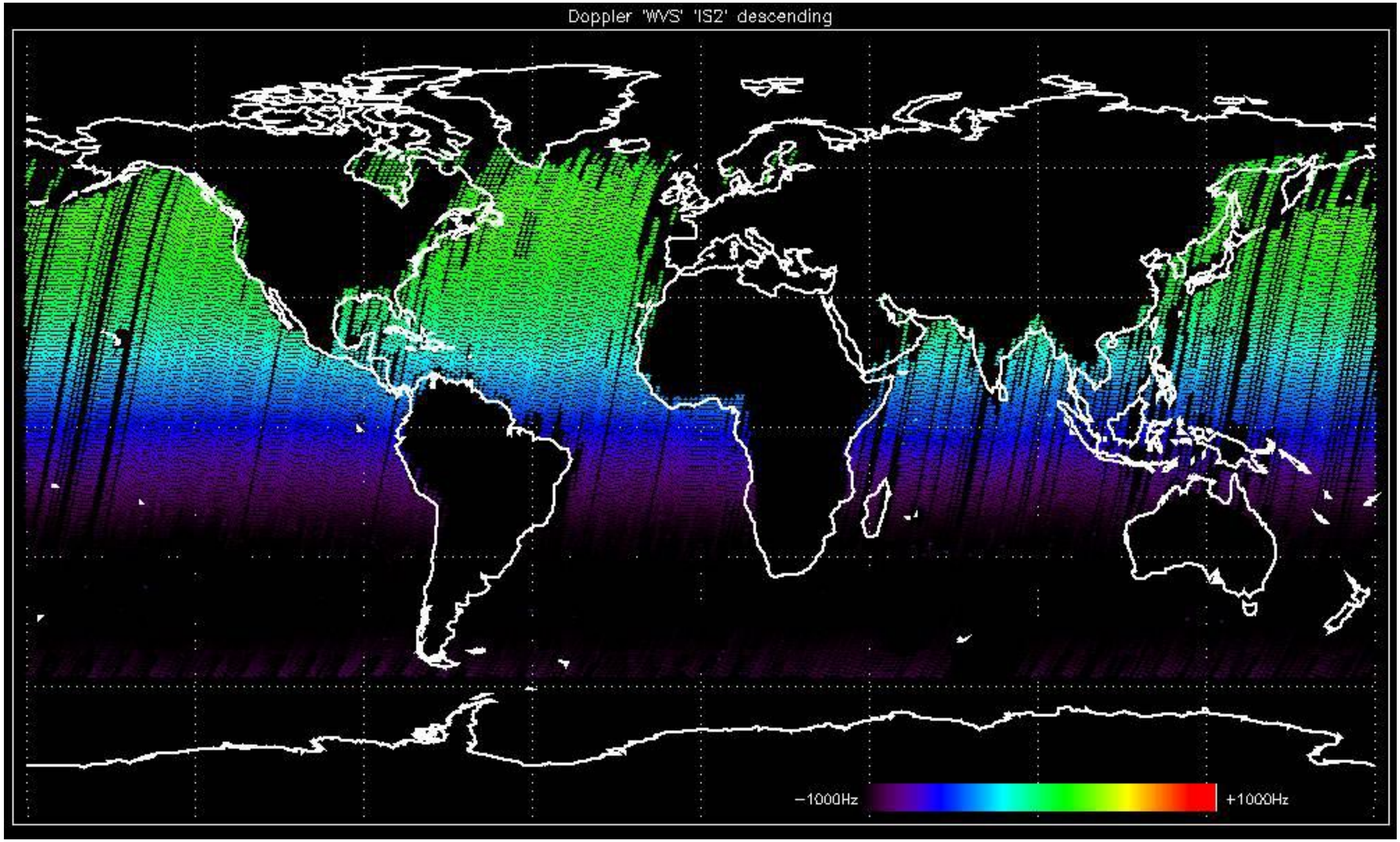
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

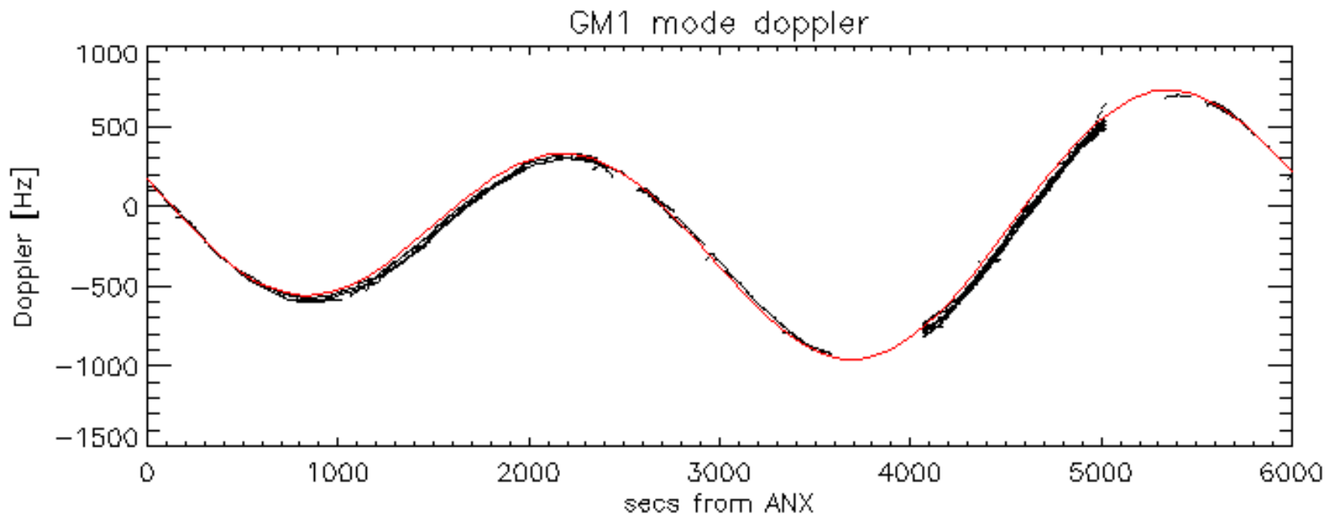
Preliminary report.The data is not yet controled

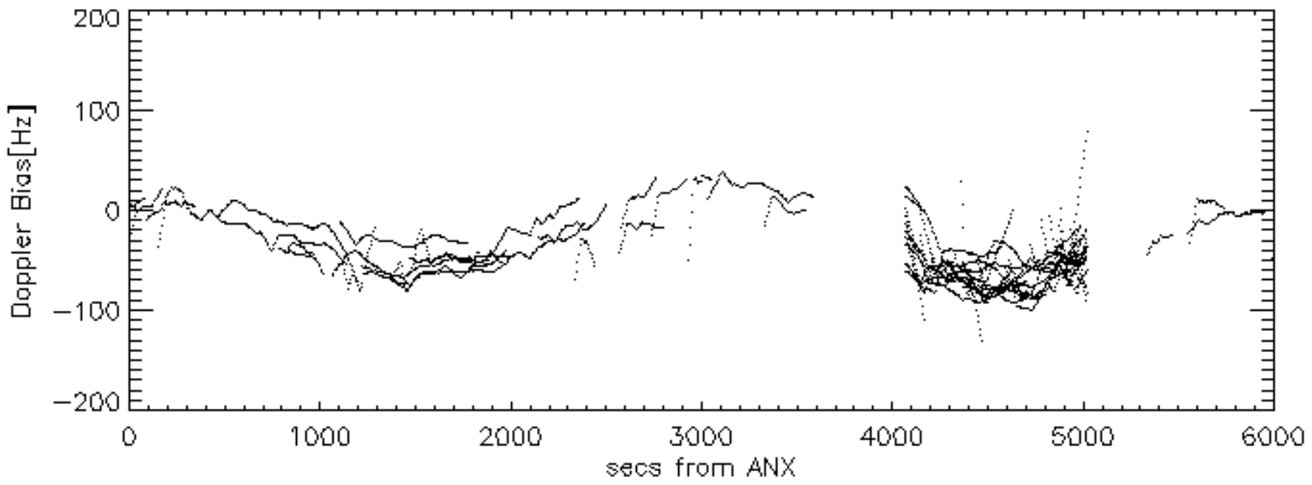

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

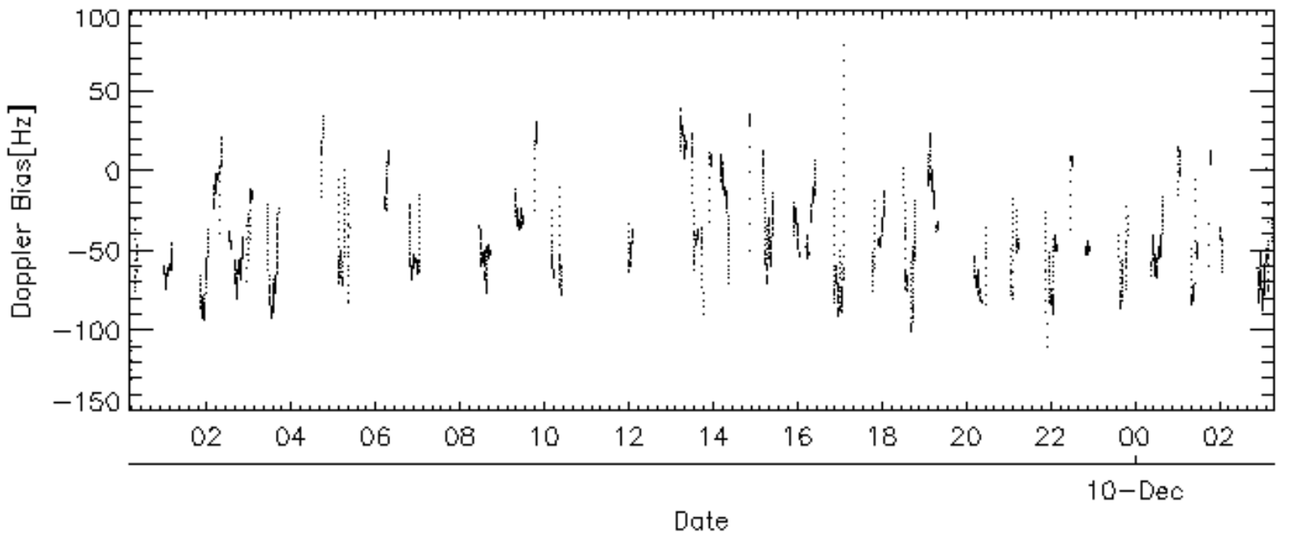

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

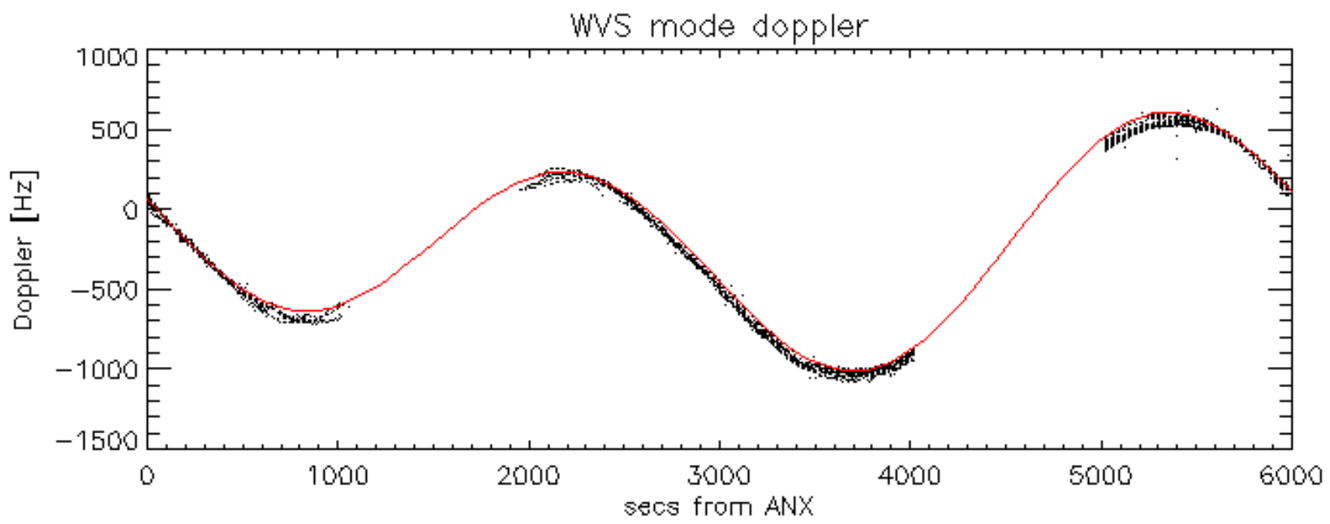

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

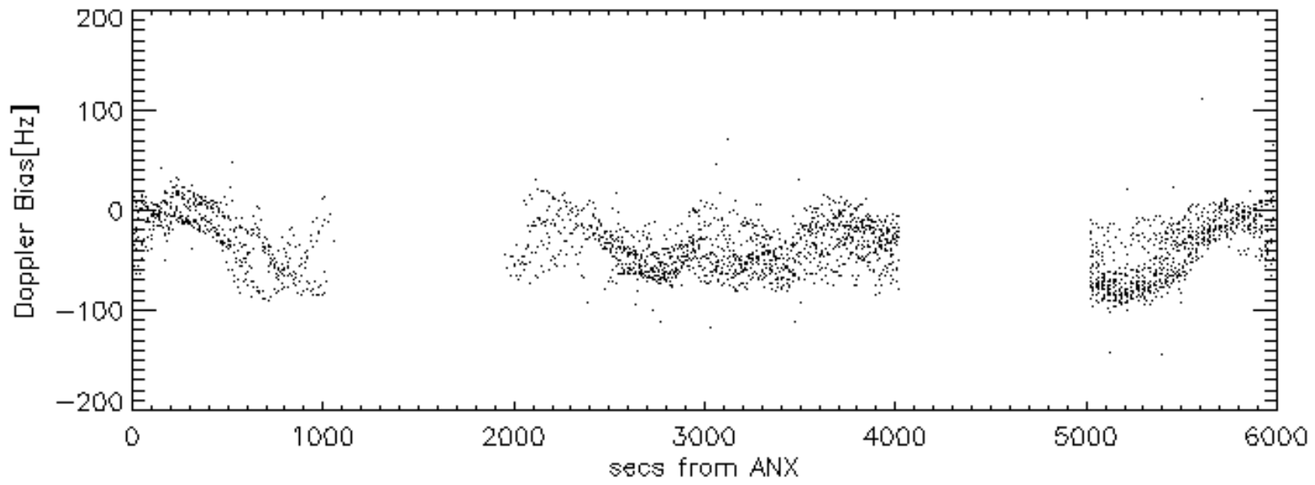

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

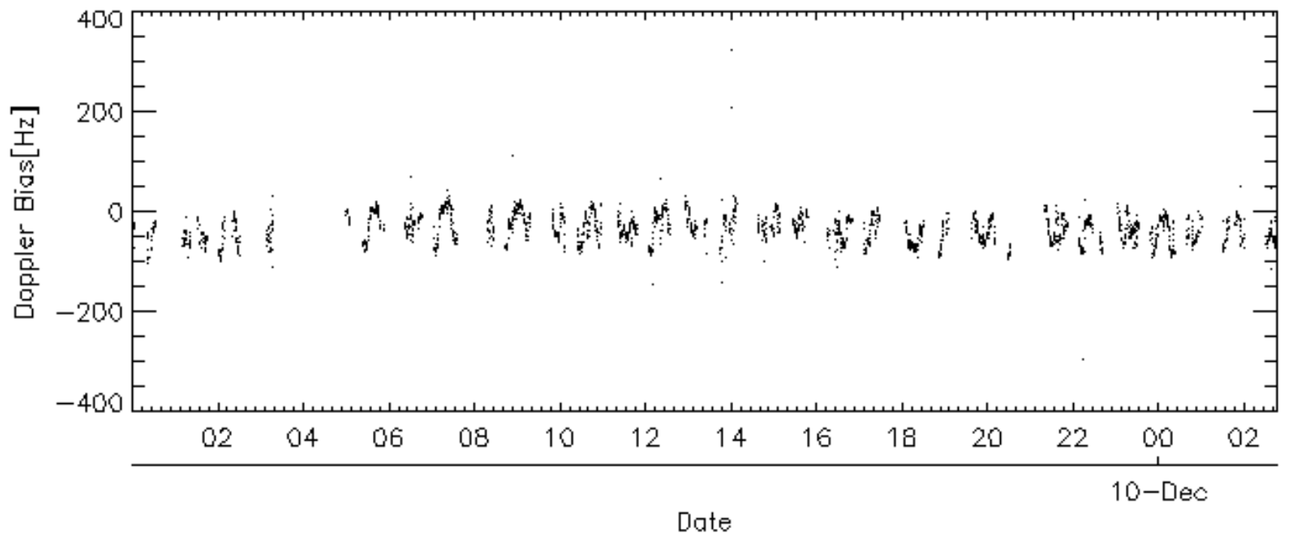

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

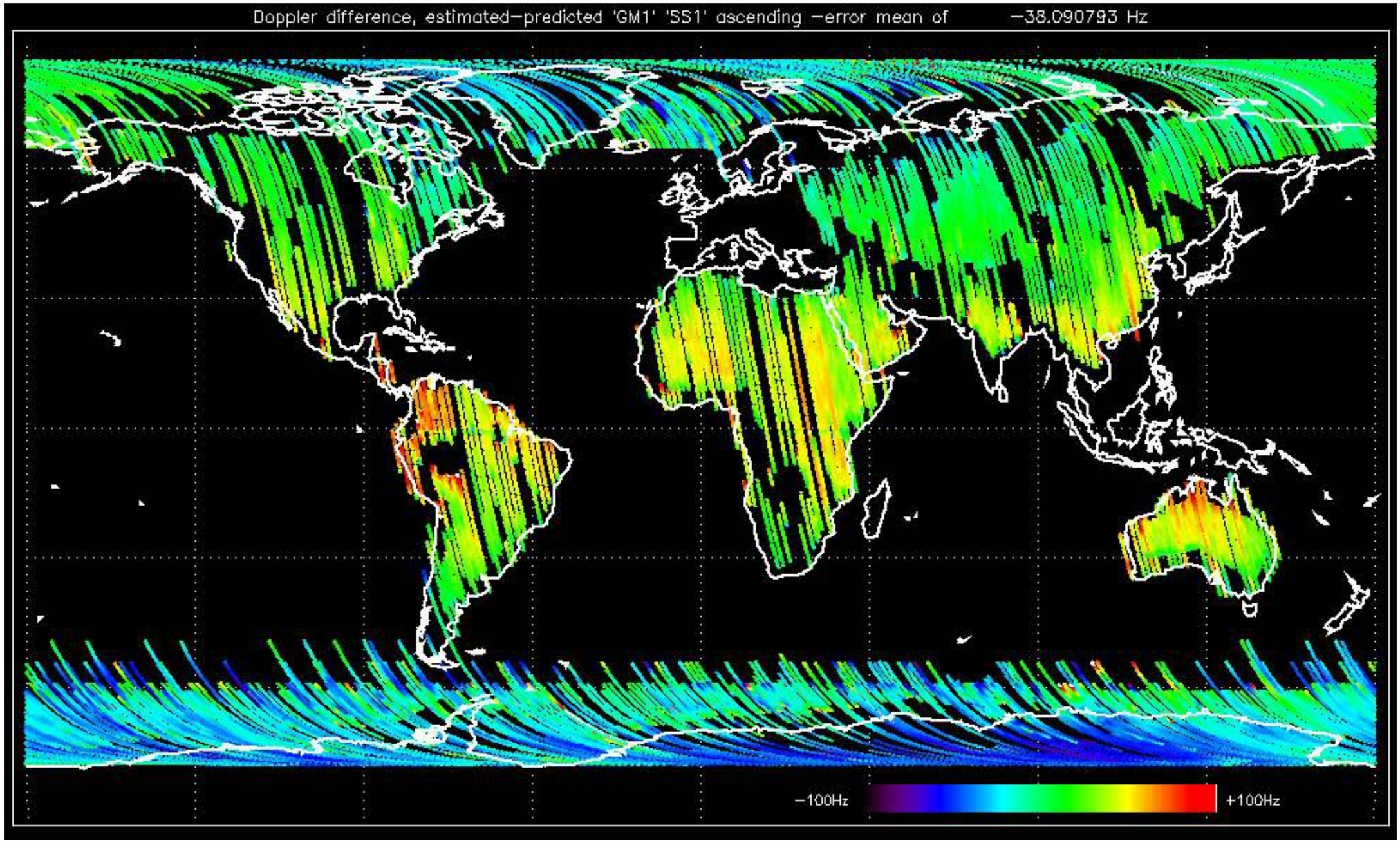

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

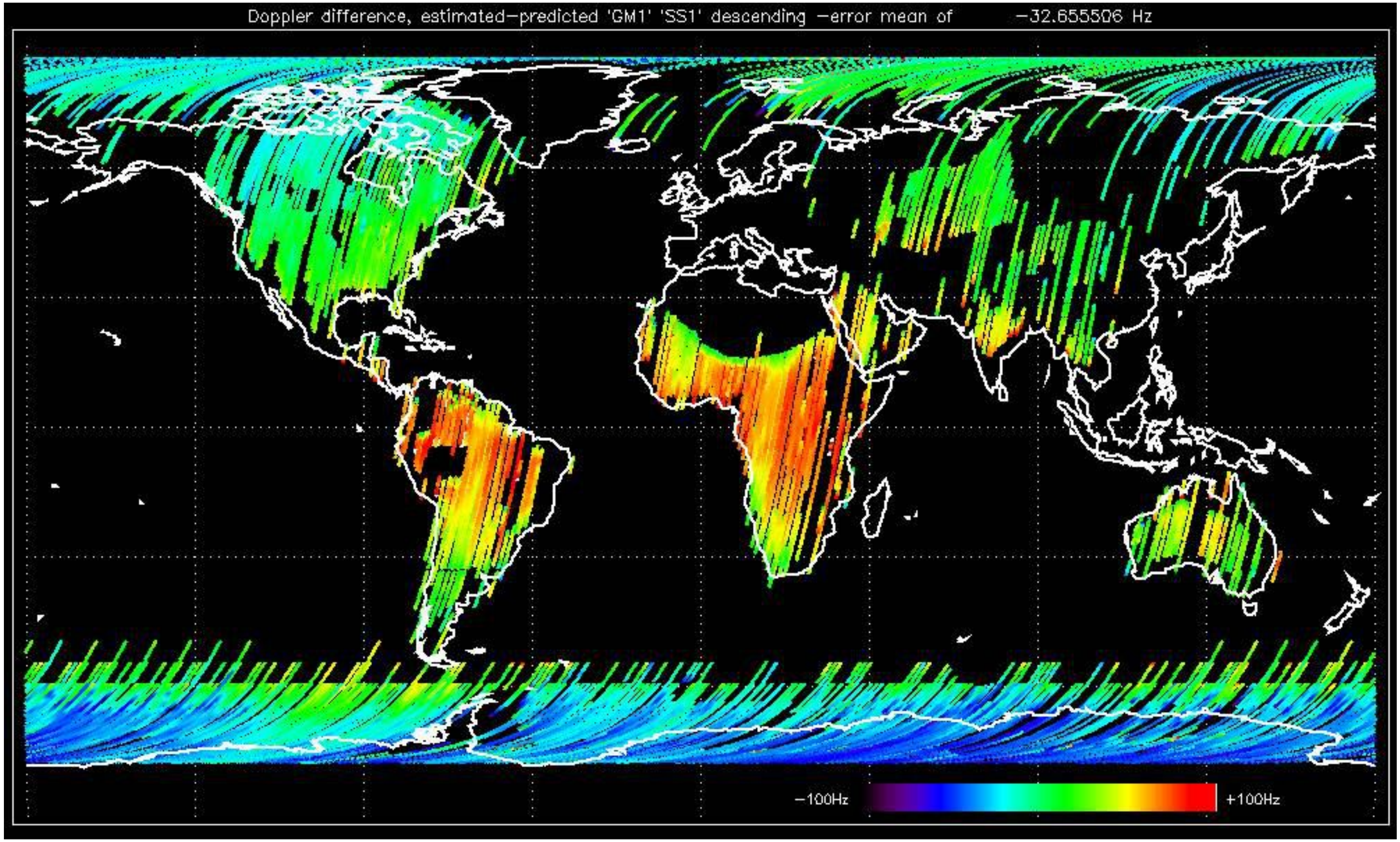

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
10−Dec
Date

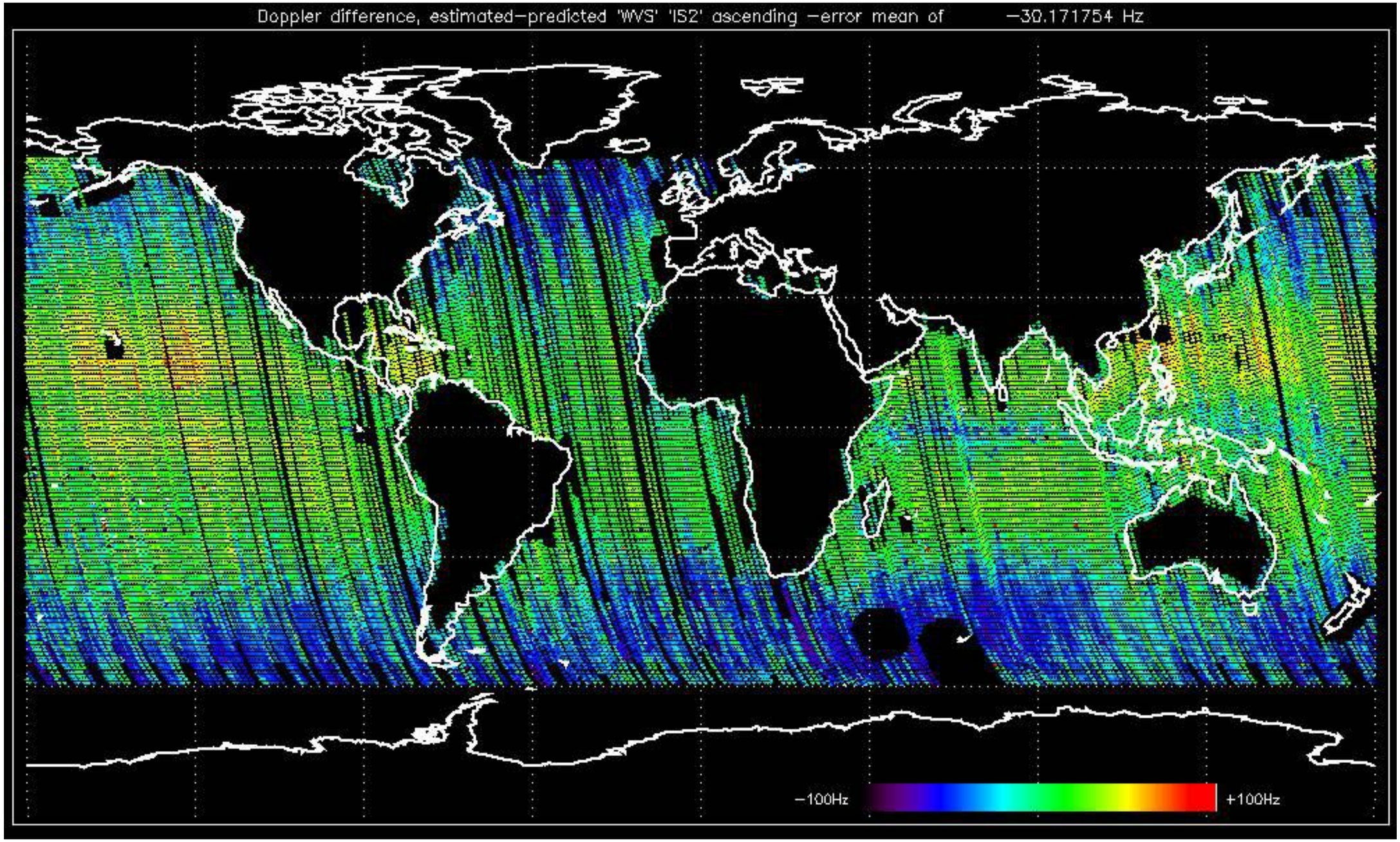

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

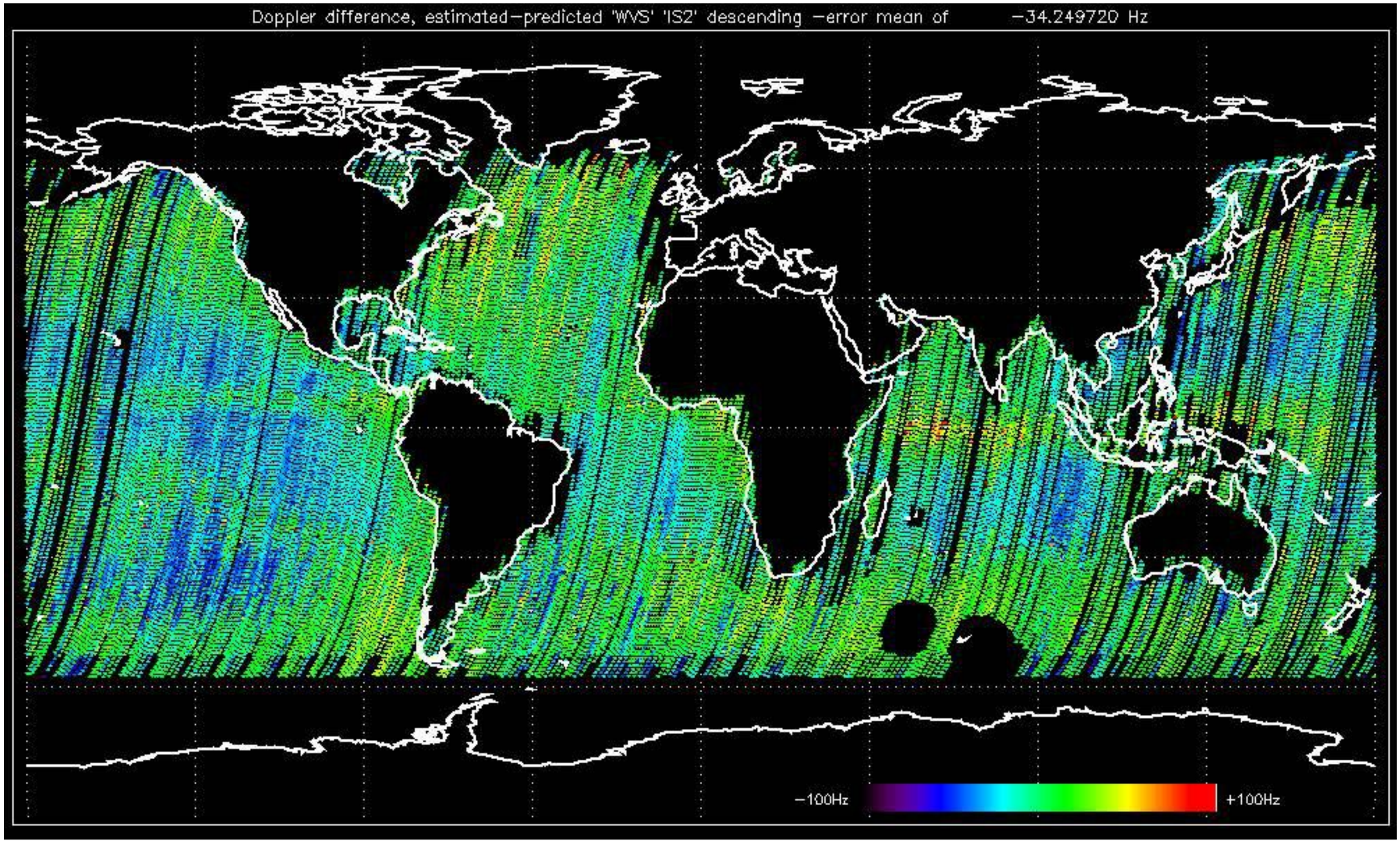

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
400
200
0
−200
−400
02
04
06
08
10
12
14
16
18
20
22
00
02
10−Dec
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −38.090793 Hz
−100Hz
+100Hz

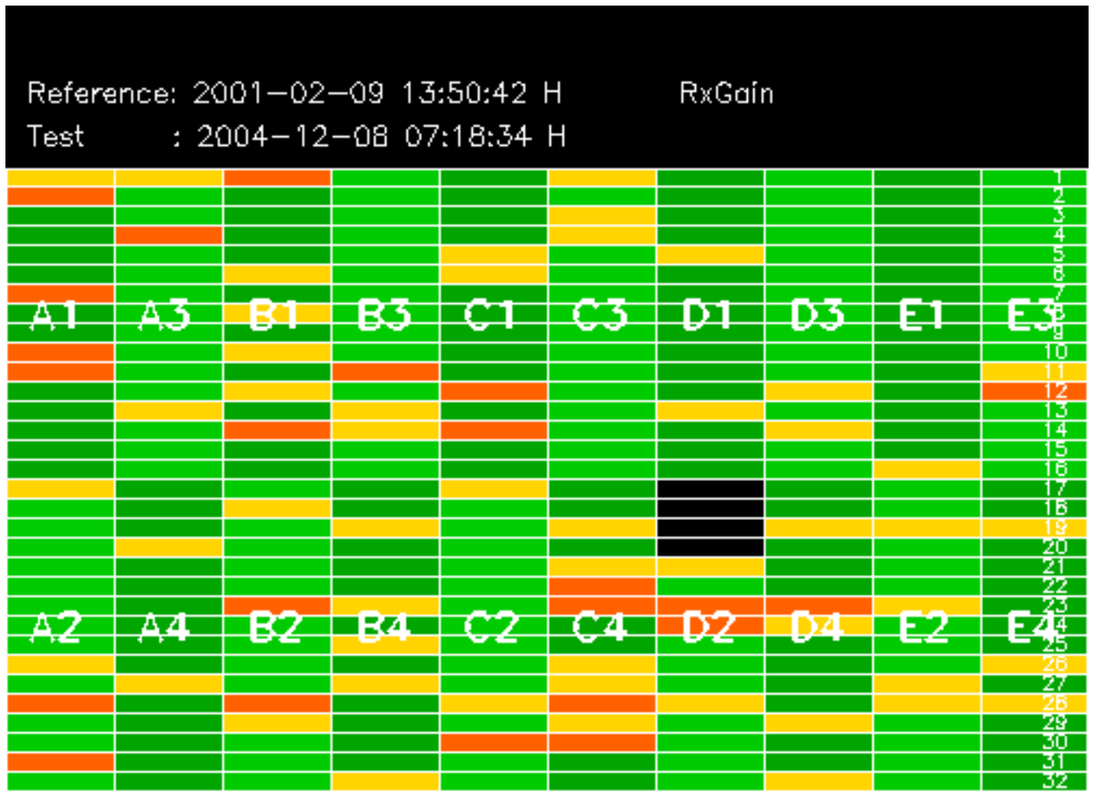

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -32.655506 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −30.171754 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.249720 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 : 2004-12-08 07:18:34 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
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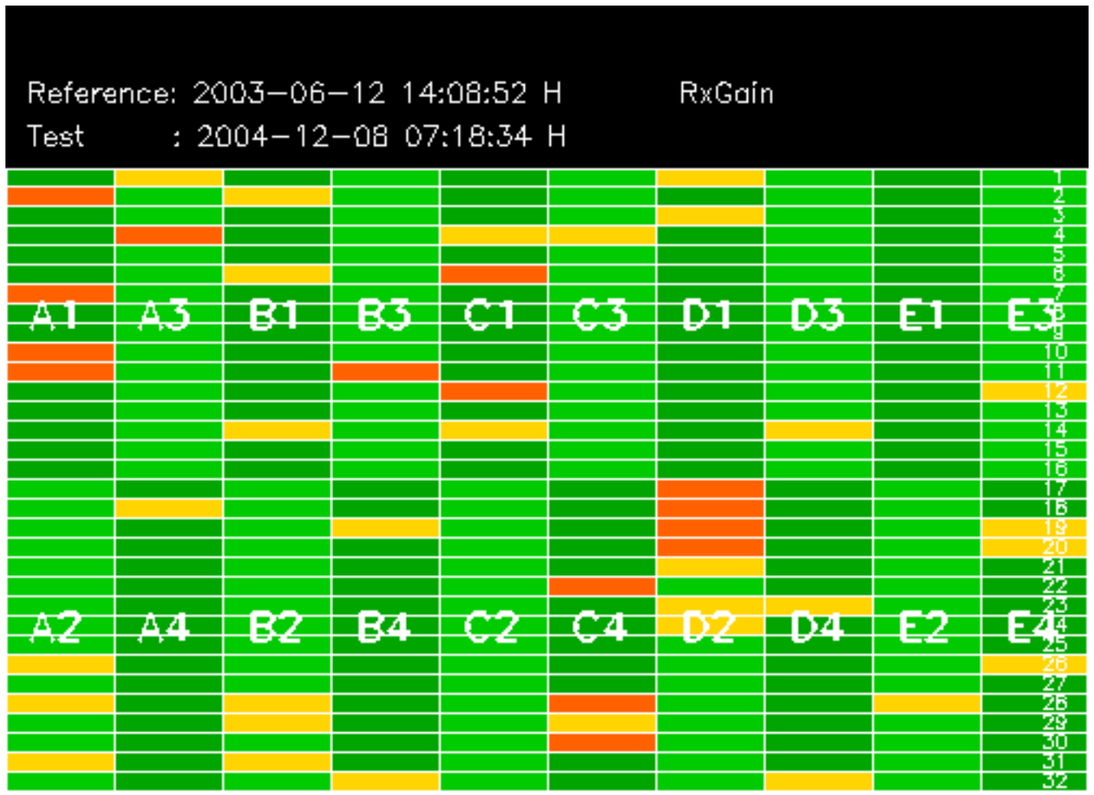
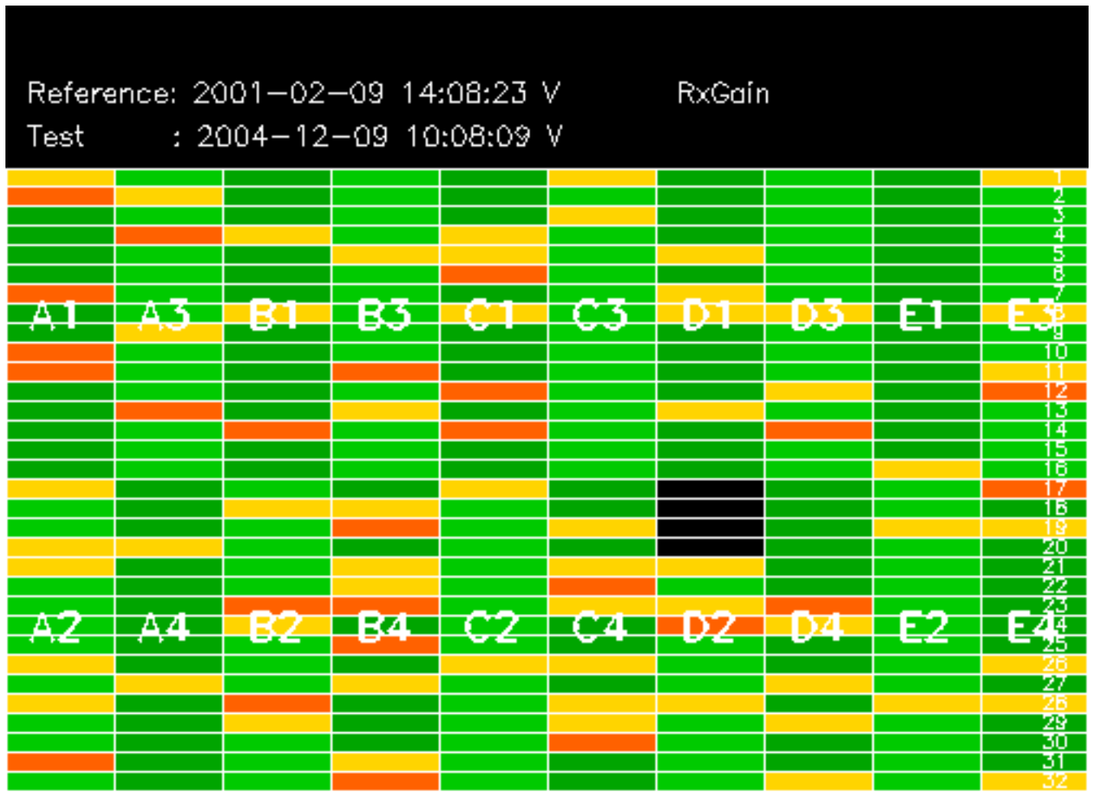
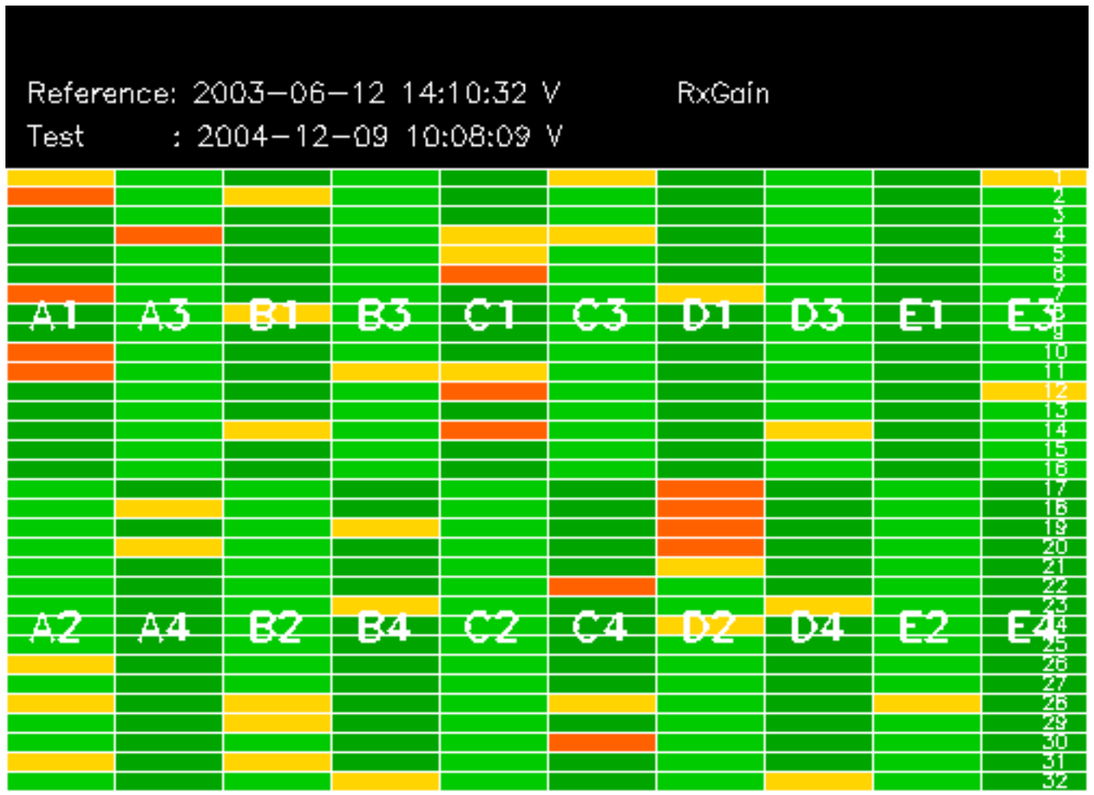
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-08 07:18:34 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 : 2004-12-09 10:08:09 V
RxGain
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 : 2004-12-09 10:08:09 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
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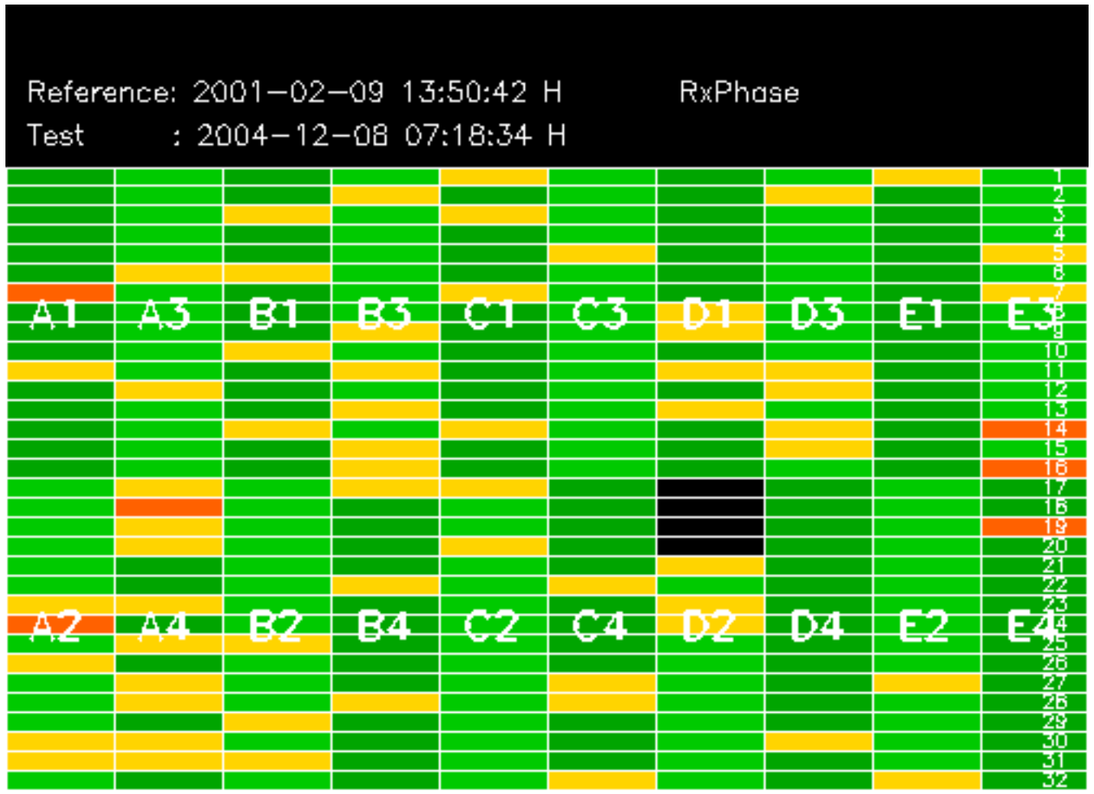
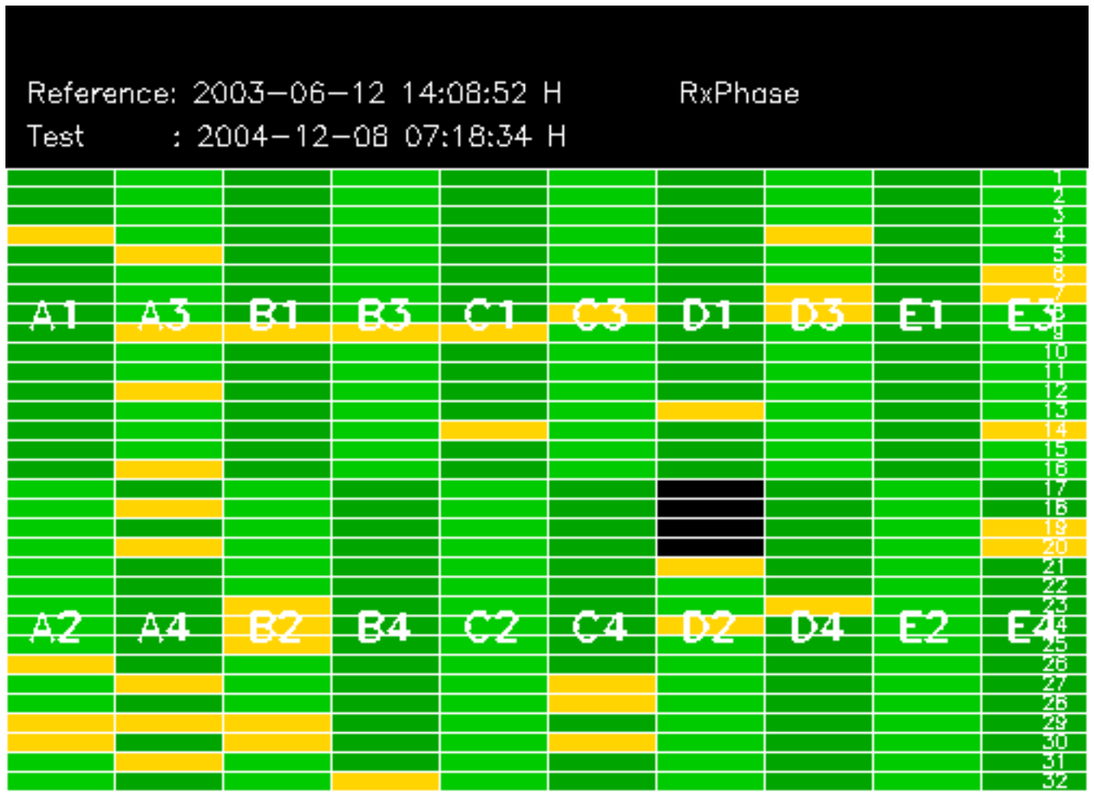
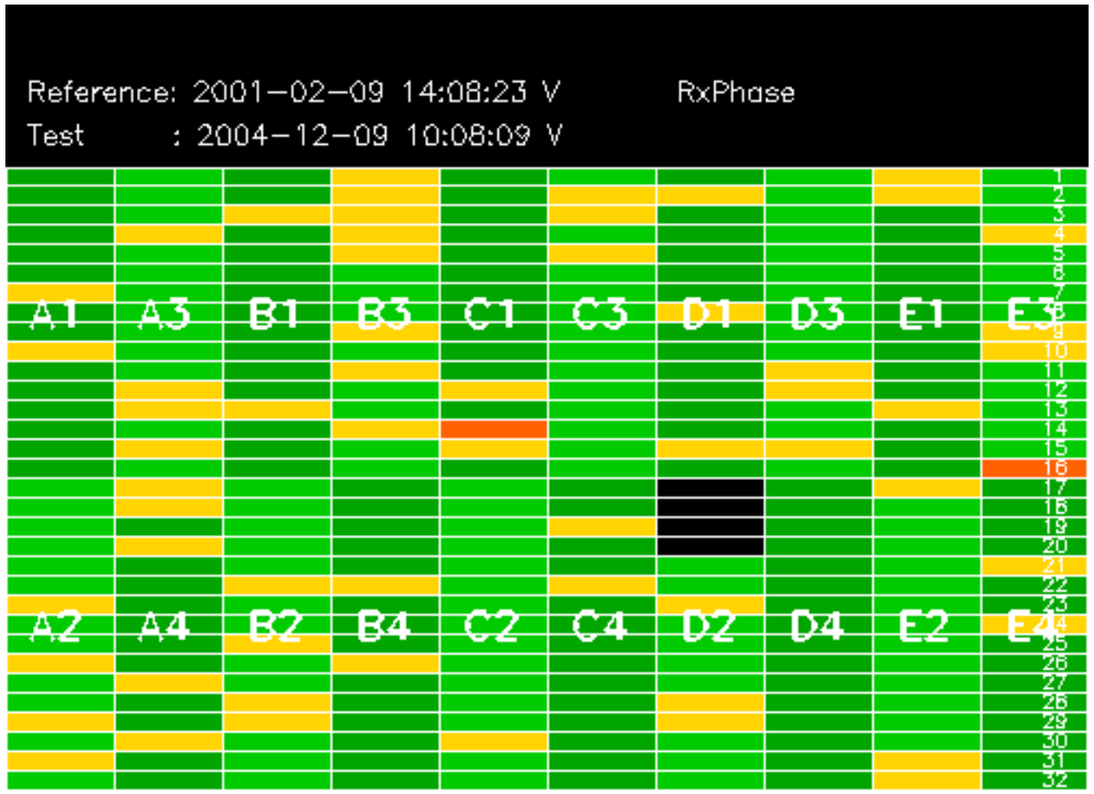
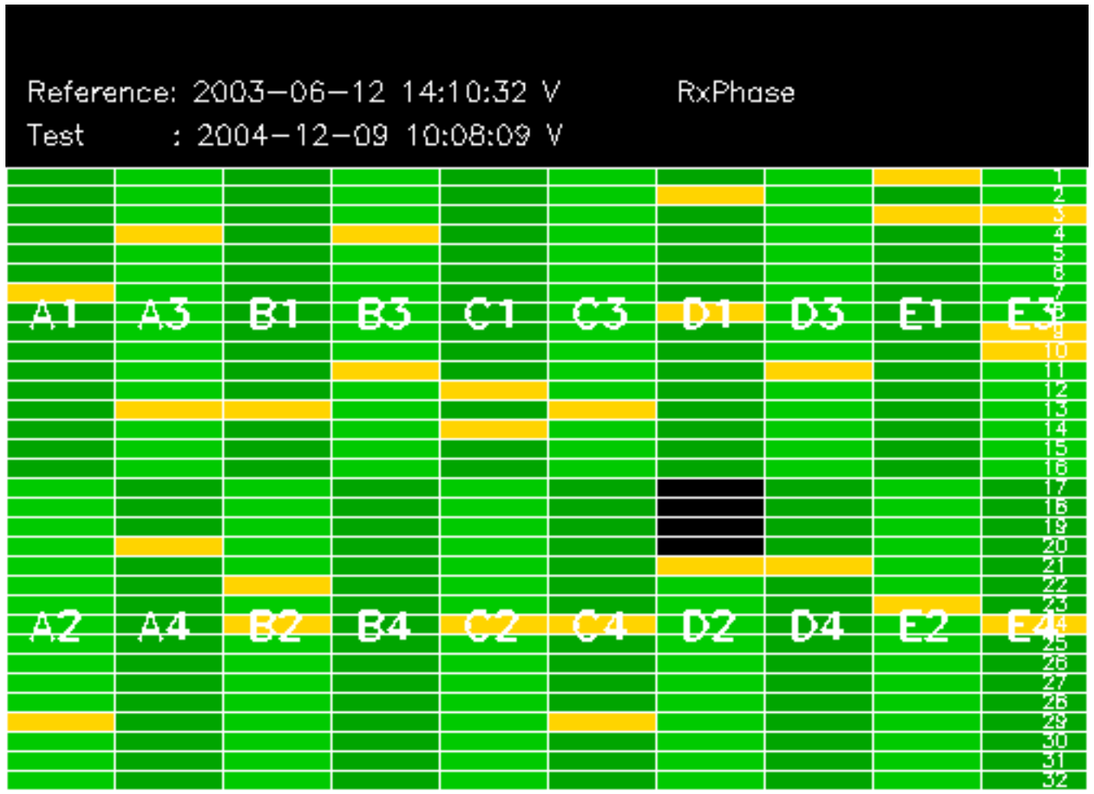
31
32


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-08 07:18:34 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 : 2004-12-08 07:18:34 H
RxPhase
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 : 2004-12-09 10:08:09 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 : 2004-12-09 10:08:09 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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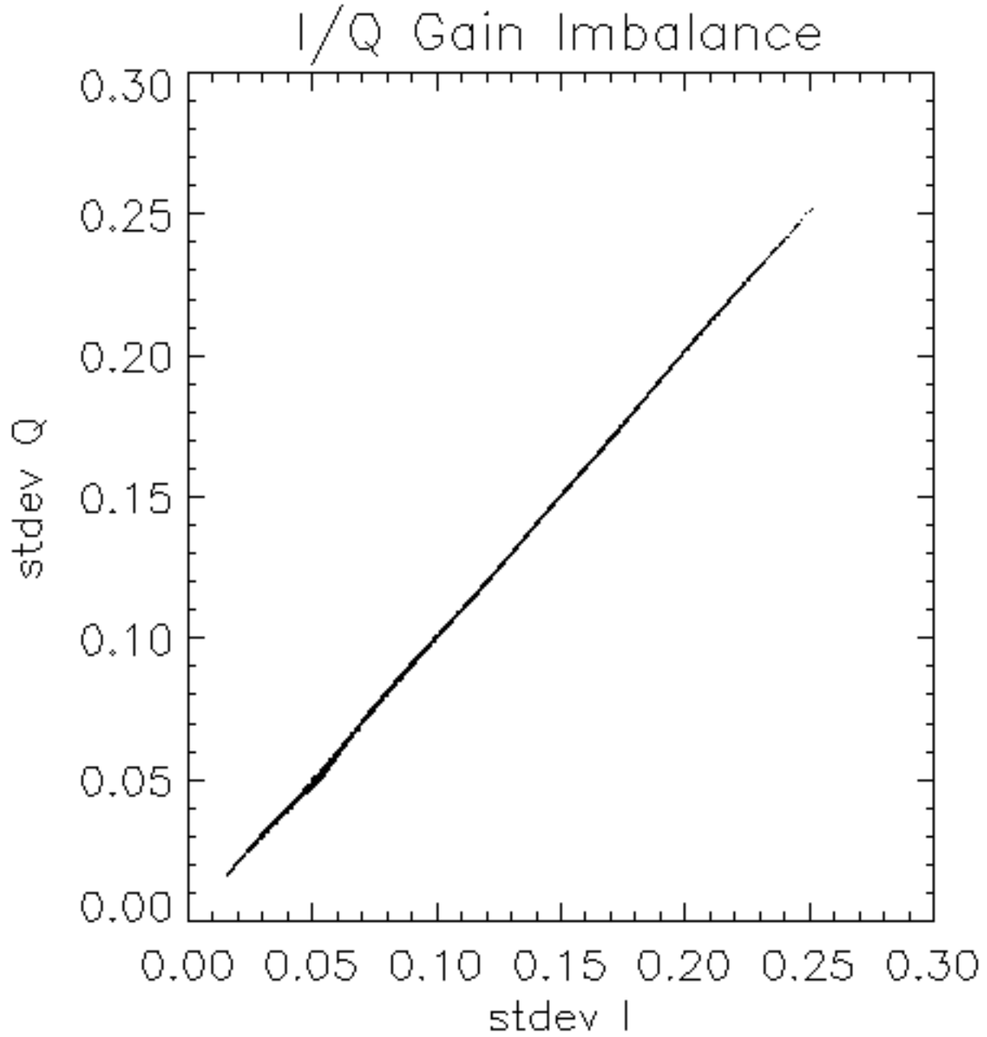
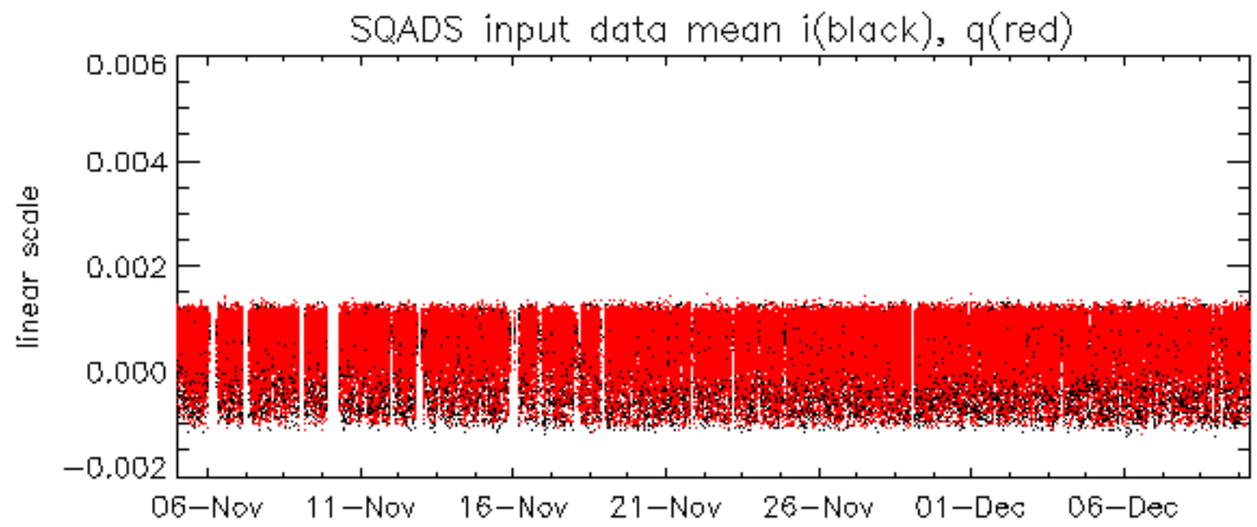
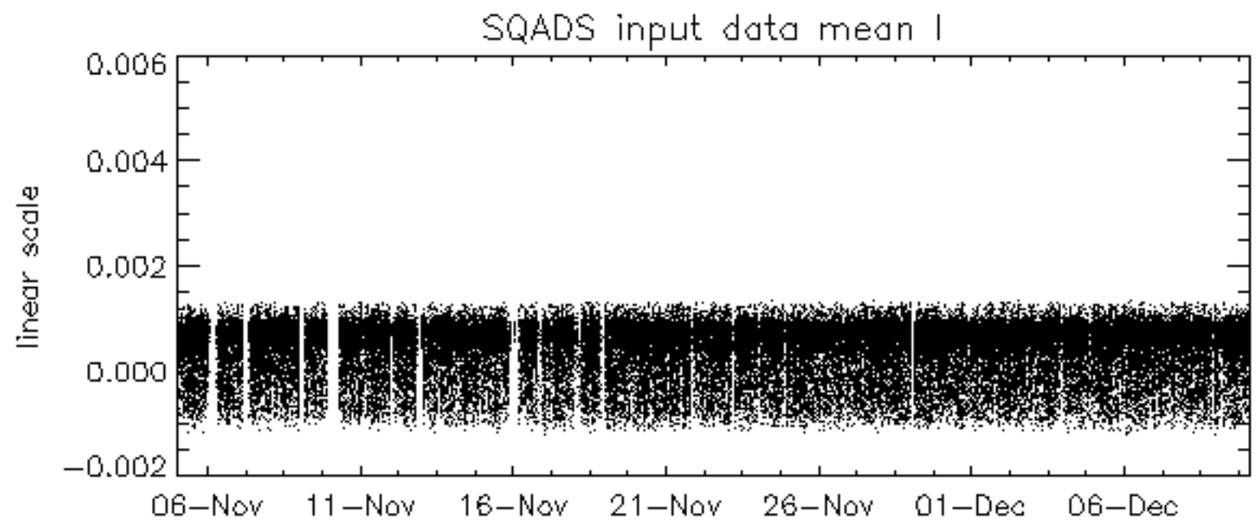
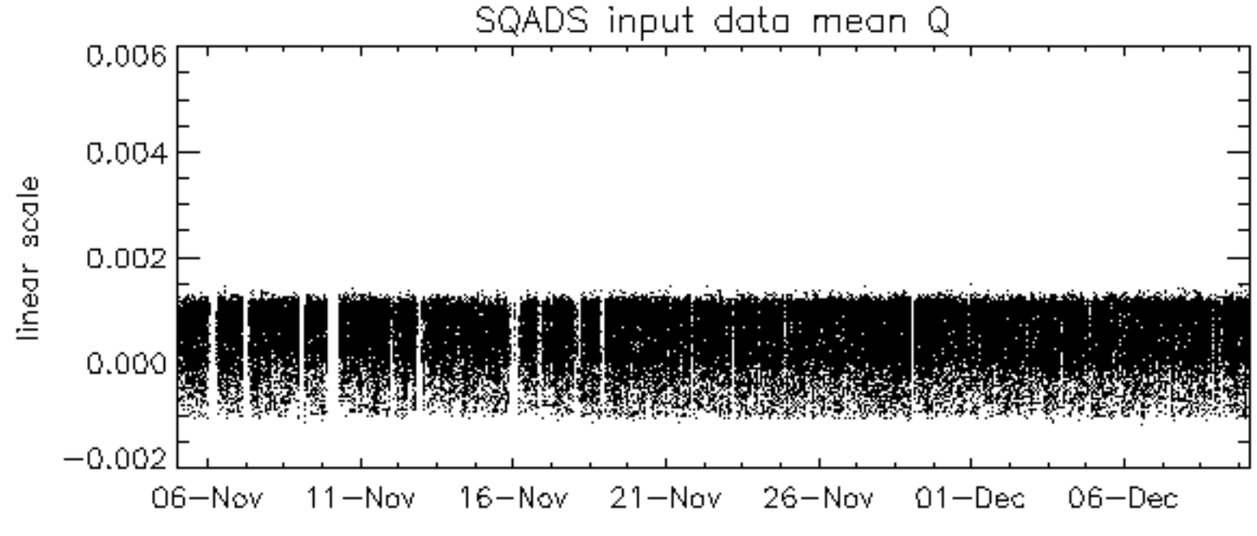
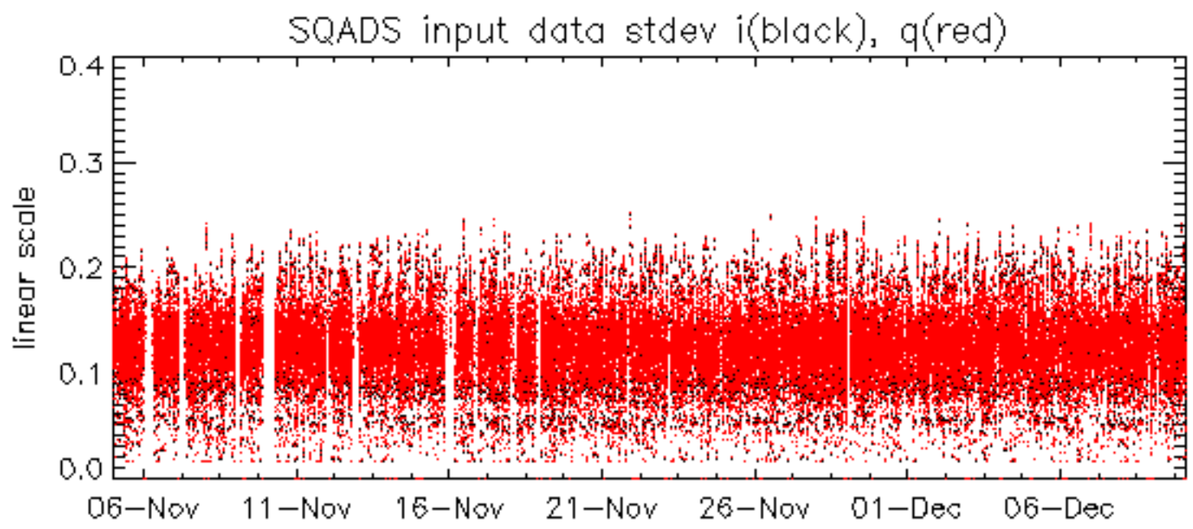
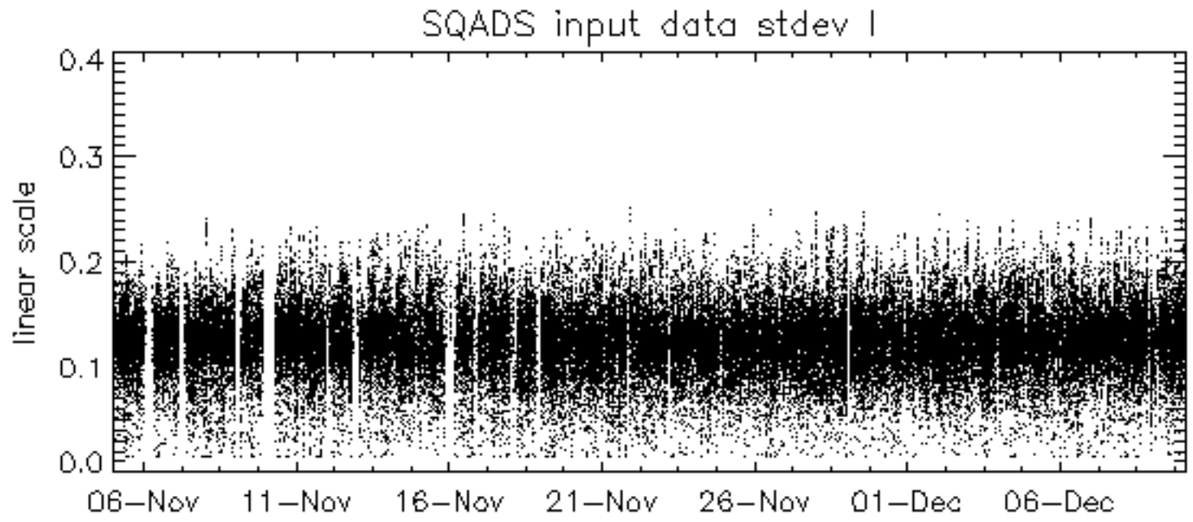

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

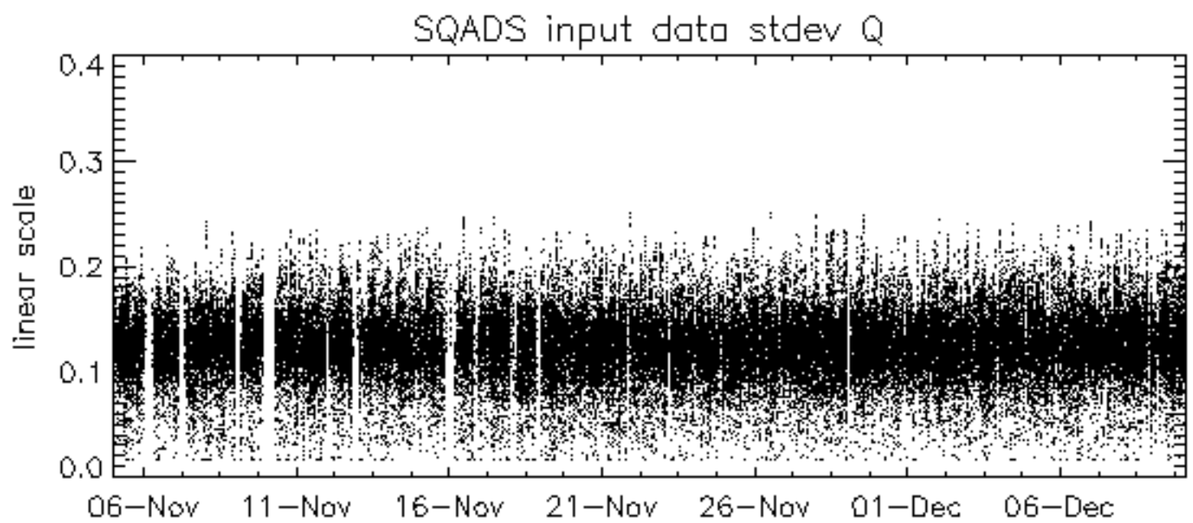

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Nov
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec

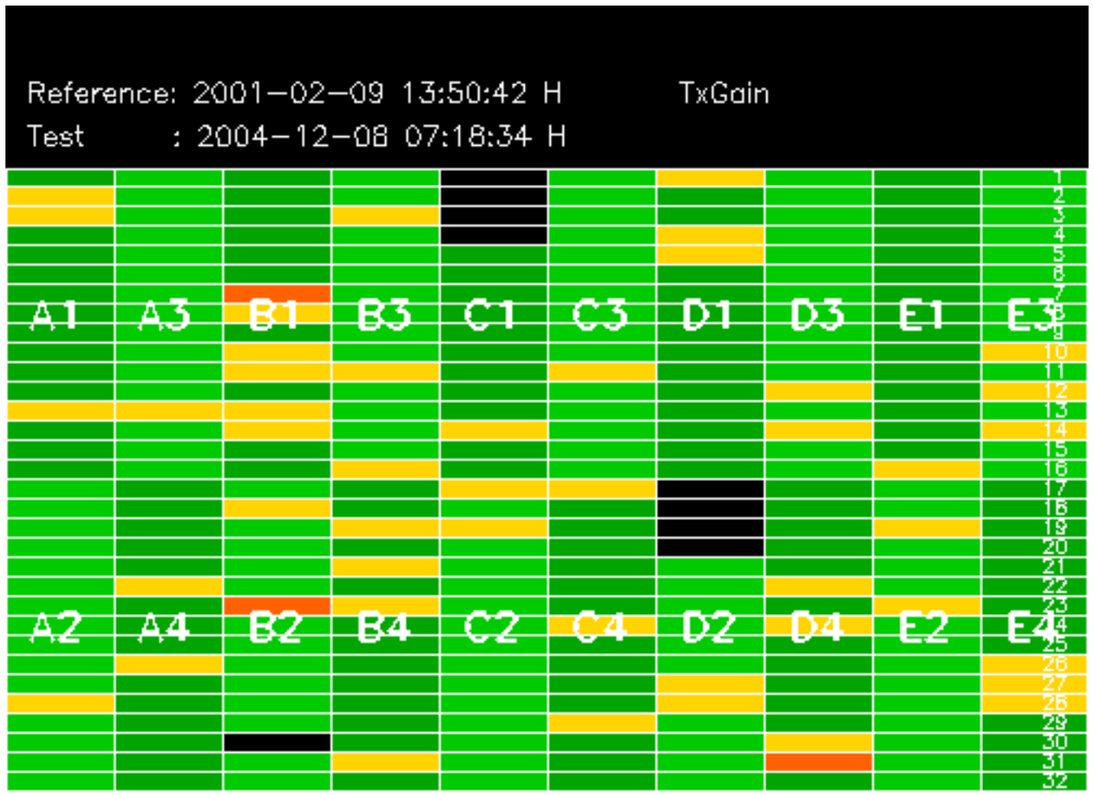

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Nov
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-08 07:18:34 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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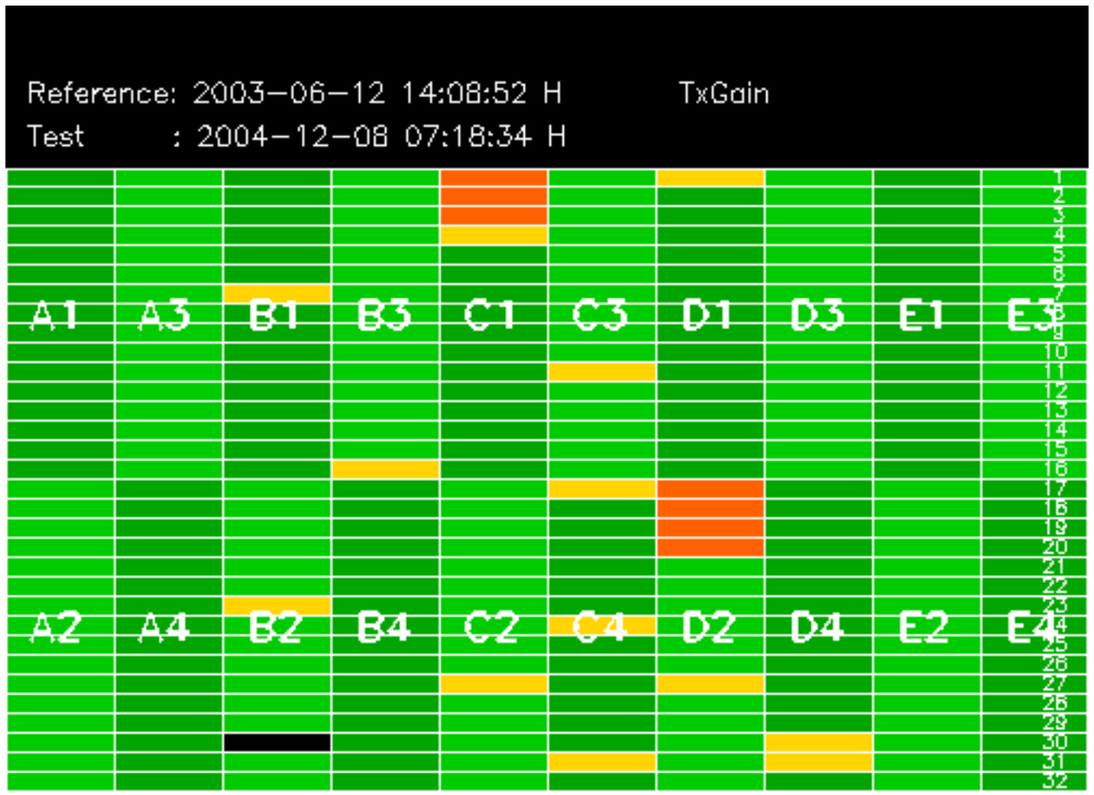
Reference: 2003-06-12 14:08:52 H
Test : 2004-12-08 07:18:34 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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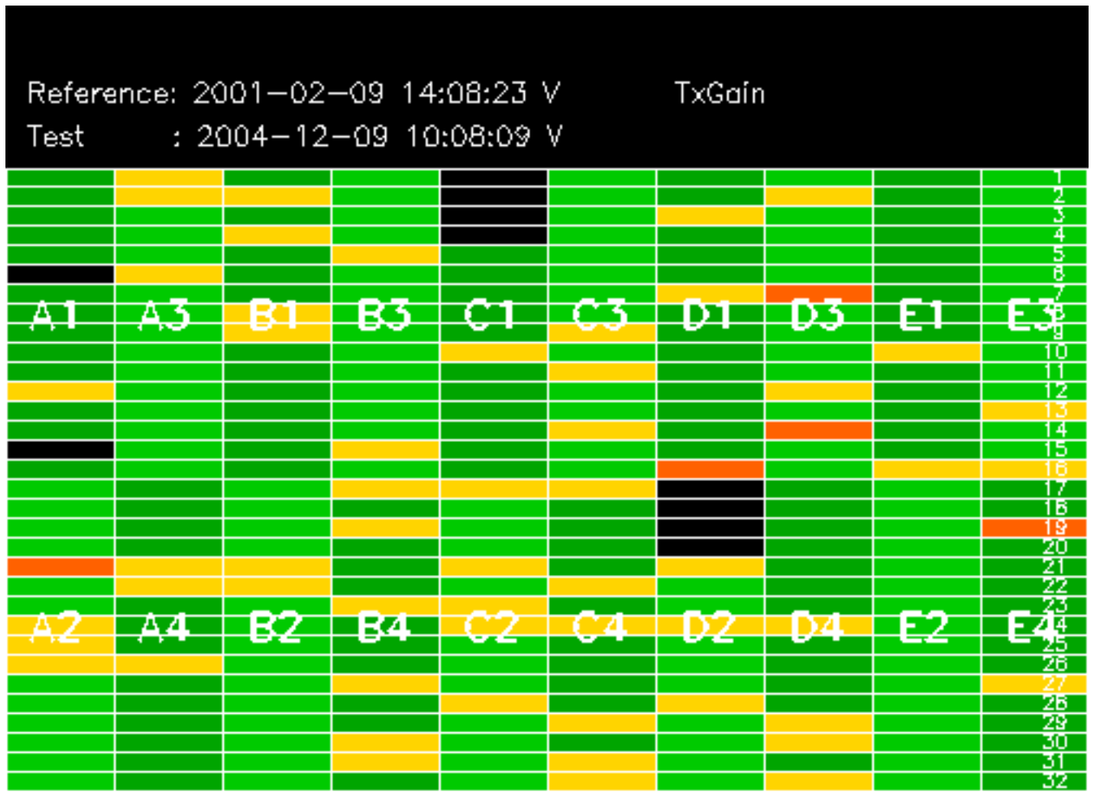
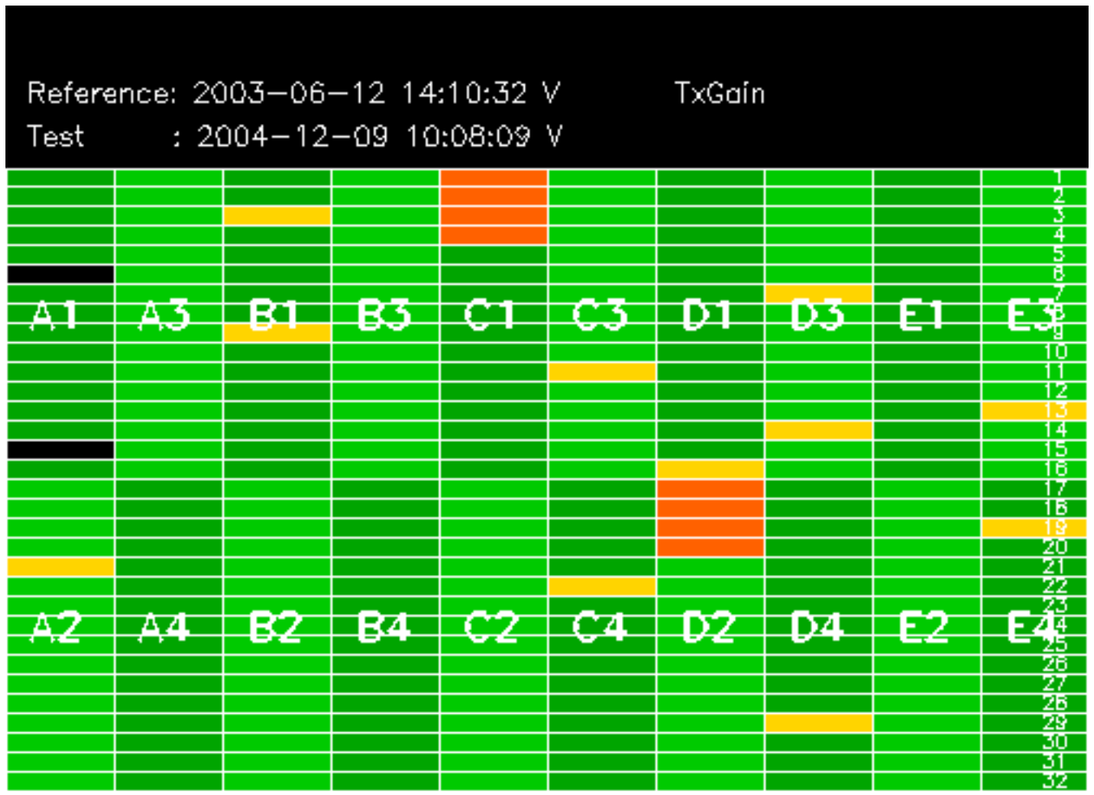
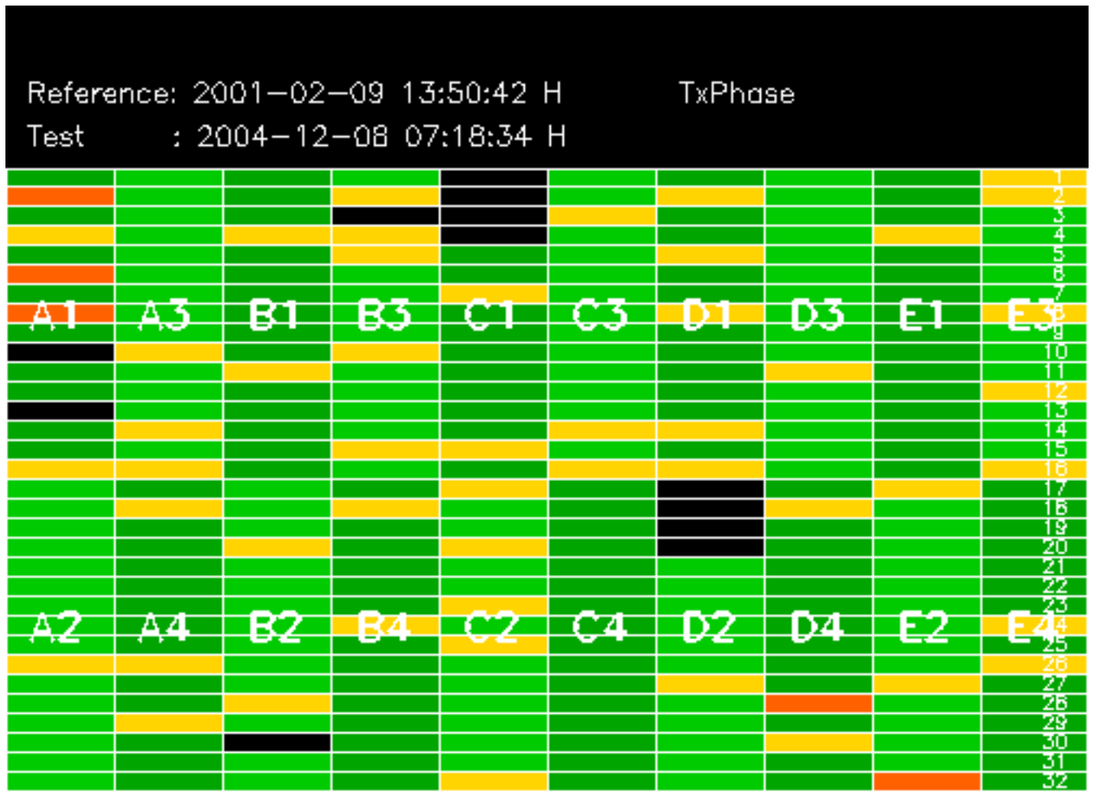

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-09 10:08:09 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-09 10:08:09 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 : 2004-12-08 07:18:34 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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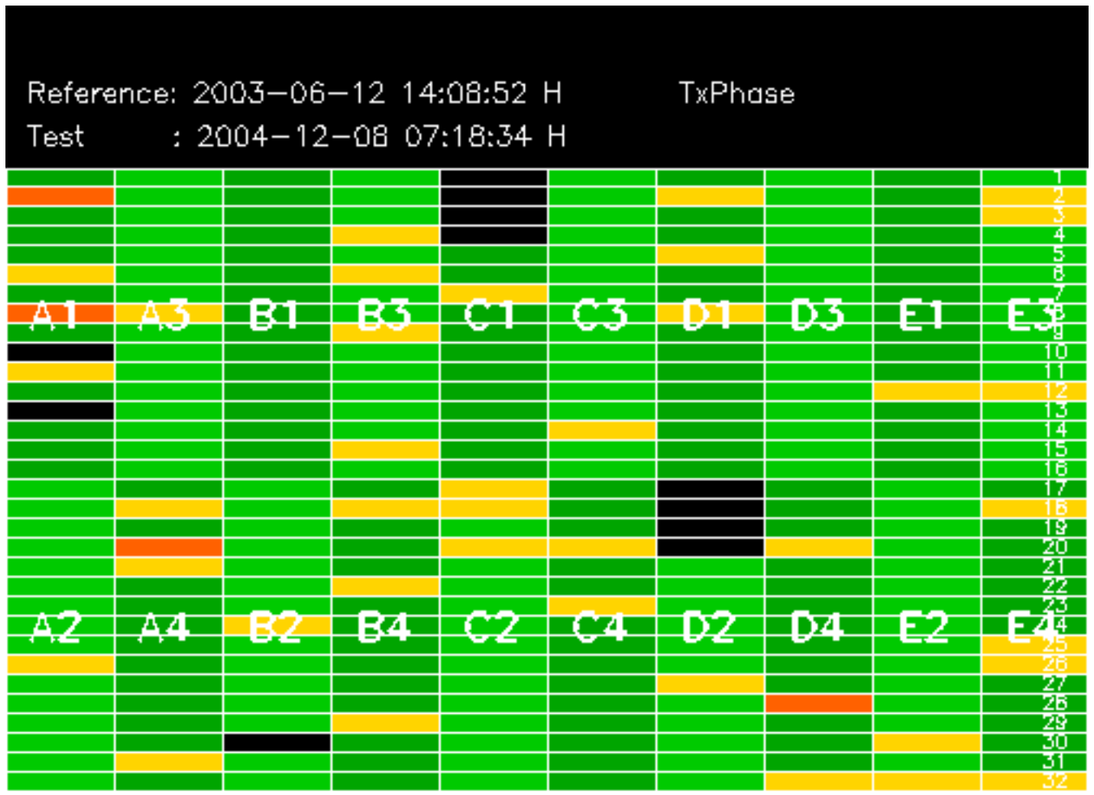
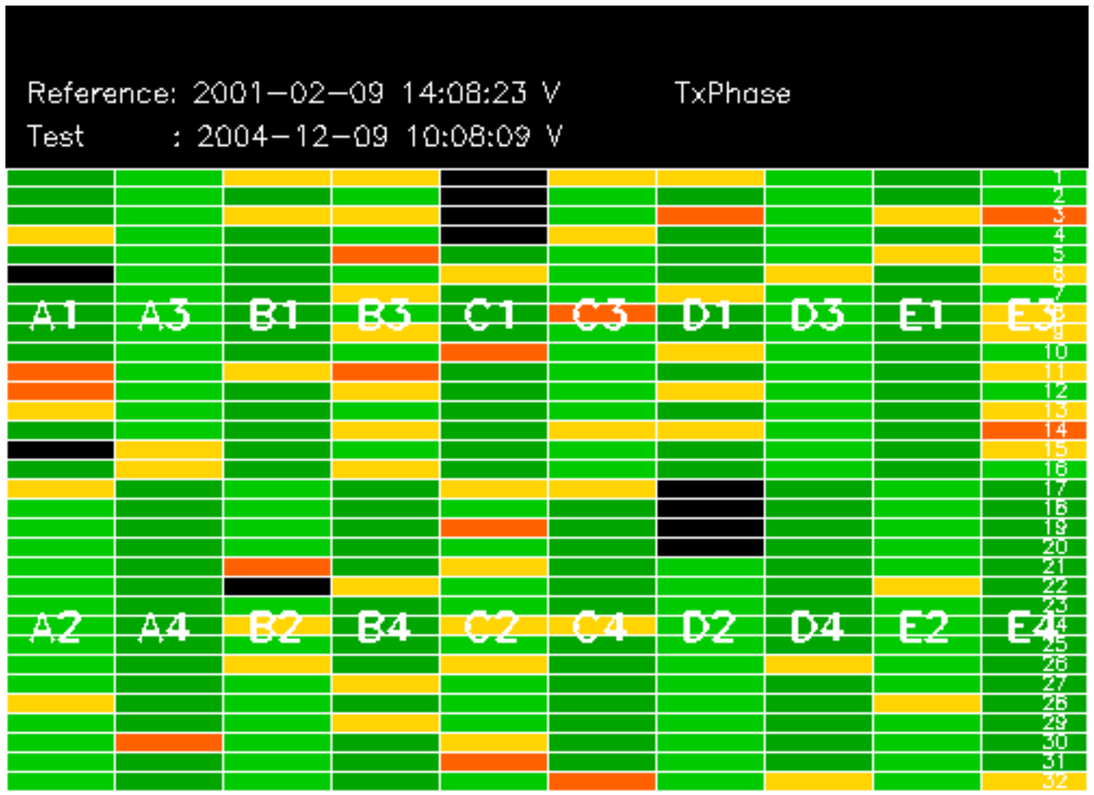

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-08 07:18:34 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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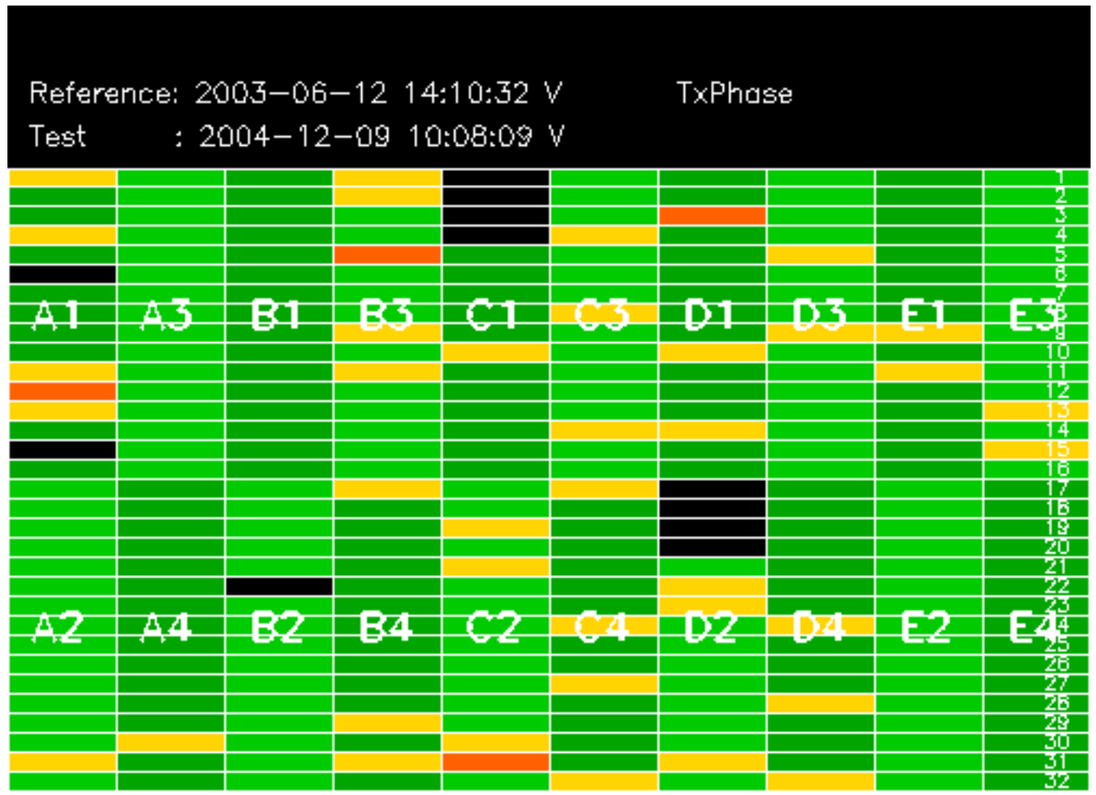
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-09 10:08:09 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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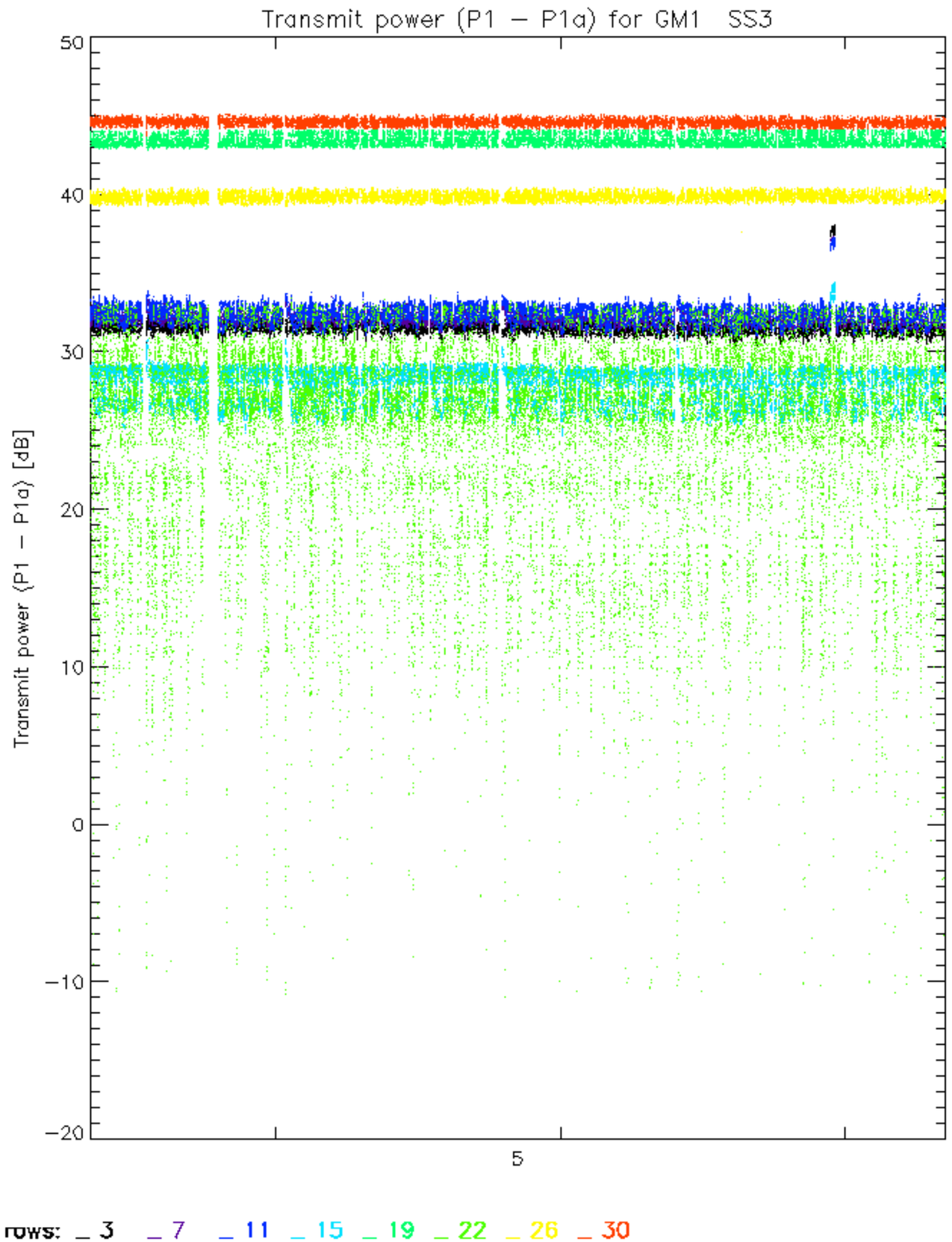
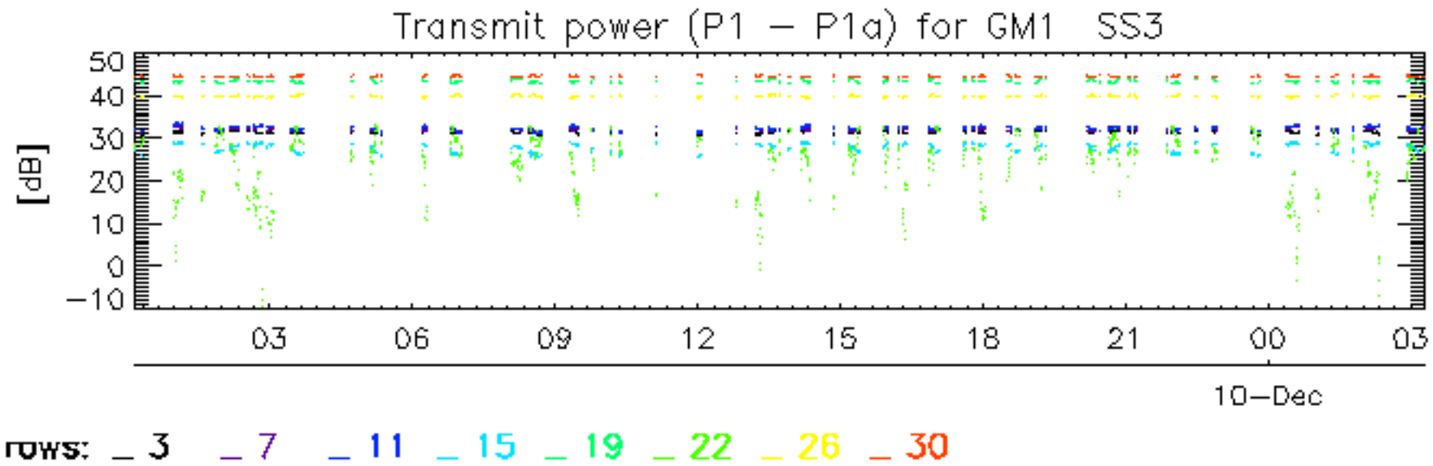
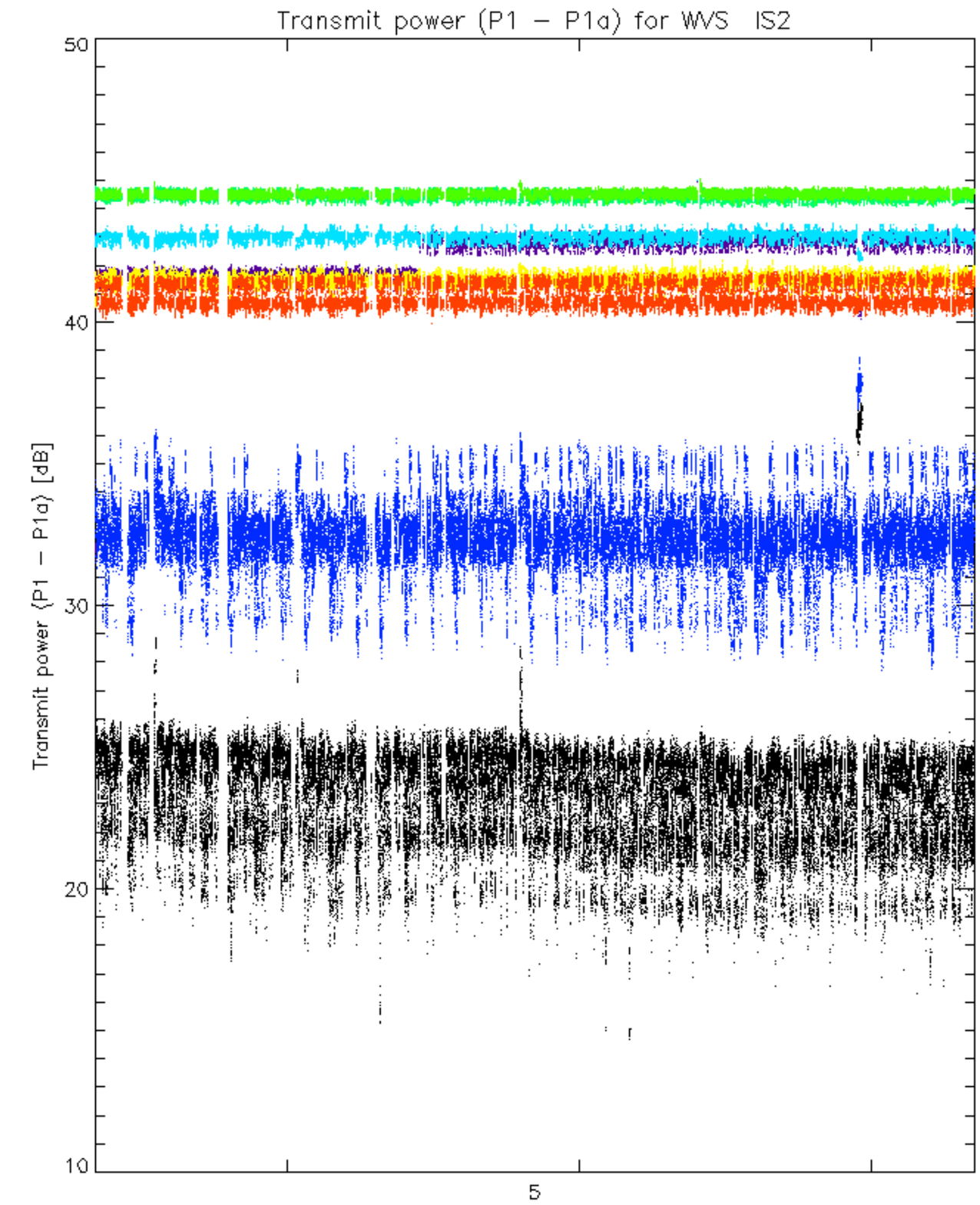
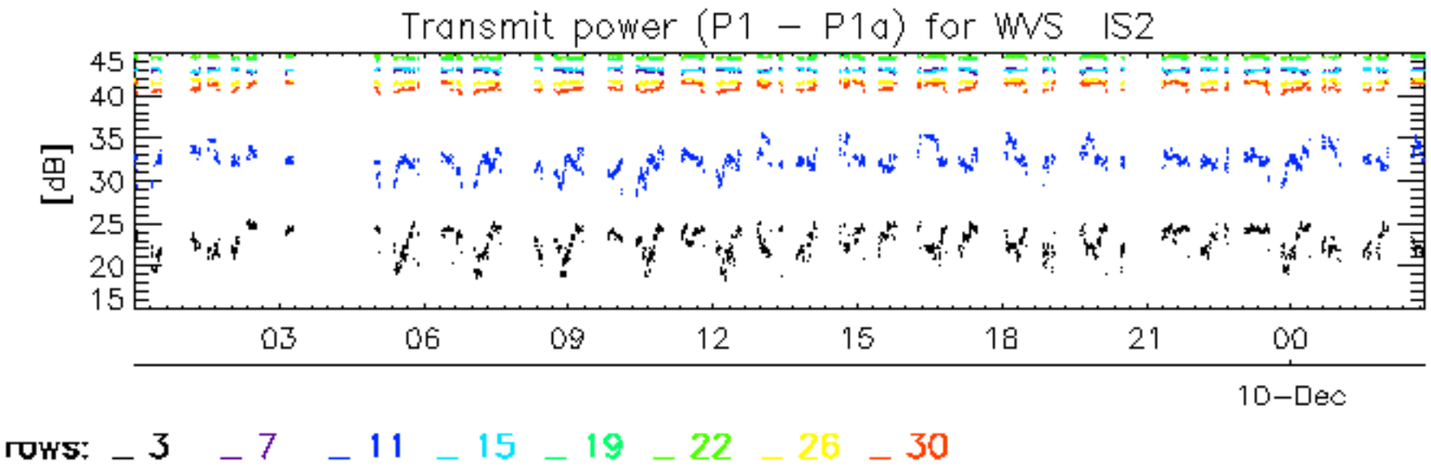

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
5
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
10–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
5
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
10–Dec
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.