PRELIMINARY REPORT OF 040906

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

last update on Mon Sep 6 13:11:30 GMT 2004

1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and
on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Browse Visual Inspection

2.3 - Data Analysis

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

3 - Module Stepping Mode

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

Polarisation	Start Time
V	20040905 095349
H	20040904 084451

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.

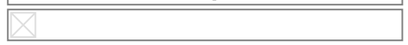
4.1 - Daily statistics

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	-3.468181	0.052769	0.096448
7	P1	-3.315405	0.057054	0.054143
11	P1	-4.660801	0.114189	0.126255
15	P1	-5.765203	0.118546	0.089286
19	P1	-3.471655	0.005731	-0.028956
22	P1	-4.535602	0.011041	0.022234
24	P1	-4.968053	0.019171	0.018162
30	P1	-6.960006	0.021162	-0.078173

3	P1	-15.915730	1.619358	-0.129576
7	P1	-14.045079	0.167042	0.062209
11	P1	-20.171886	0.415914	-0.293484
15	P1	-11.790176	0.168181	-0.000649
19	P1	-13.909081	0.034236	-0.056544
22	P1	-16.147112	0.330243	0.154740
24	P1	-14.518332	0.313293	0.143928
30	P1	-17.859377	0.463857	-0.274121

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.301126	0.083330	-0.013151
7	P2	-22.608616	0.134792	0.013829
11	P2	-15.299058	0.172740	0.116715
15	P2	-7.059117	0.098272	0.028936
19	P2	-9.562662	0.192803	0.056201
22	P2	-17.343225	0.119808	0.089115
24	P2	-20.747171	0.089277	-0.028923
30	P2	-19.238293	0.082504	0.125408

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.142804	0.002825	-0.015092
7	P3	-8.142811	0.002825	-0.015045
11	P3	-8.142808	0.002825	-0.015044
15	P3	-8.142800	0.002825	-0.015091
19	P3	-8.142788	0.002825	-0.015135
22	P3	-8.142783	0.002825	-0.015167
24	P3	-8.142784	0.002825	-0.015175
30	P3	-8.142871	0.002836	-0.016460

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	-2.707075	0.258872	-0.064726
7	P1	-2.958493	0.211611	0.042430
11	P1	-3.896529	0.159991	0.125625
15	P1	-3.545110	0.129078	0.128609
19	P1	-3.482988	0.013731	-0.019696
22	P1	-5.701680	0.038170	-0.040536
24	P1	-3.914715	0.015097	-0.070502
30	P1	-6.177165	0.061480	-0.063198
3	P1	-10.430109	1.052823	-0.421954
7	P1	-10.066989	0.170830	-0.020799
11	P1	-12.156667	0.113554	-0.086773
15	P1	-11.662755	0.100428	-0.049402
19	P1	-15.620470	0.049162	-0.005291
22	P1	-23.367609	1.134507	-0.074762
24	P1	-17.914093	0.231639	-0.164777
30	P1	-20.442642	1.211716	-0.029038

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.981441	0.056220	-0.045188
7	P2	-22.749640	0.044906	0.013840
11	P2	-10.975031	0.064745	0.075014
15	P2	-4.951496	0.034541	-0.033311
19	P2	-6.760191	0.050231	-0.040456
22	P2	-7.442466	0.043443	0.003772
24	P2	-11.044950	0.049191	-0.050056
30	P2	-22.185690	0.033925	0.066164

P3 Cyclic statistics

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

3	P3	-7.992821	0.003702	-0.030000
7	P3	-7.992857	0.003705	-0.030047
11	P3	-7.992937	0.003693	-0.029831
15	P3	-7.992845	0.003697	-0.030016
19	P3	-7.992800	0.003707	-0.030134
22	P3	-7.992830	0.003707	-0.030206
24	P3	-7.992888	0.003727	-0.029990
30	P3	-7.992784	0.003703	-0.029917

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	0.000476032
	stdev	2.18404e-07
MEAN Q	mean	0.000544831
	stdev	2.34574e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128088
	stdev	0.000958532

STDEV Q	mean	0.128307
	stdev	0.000968923

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

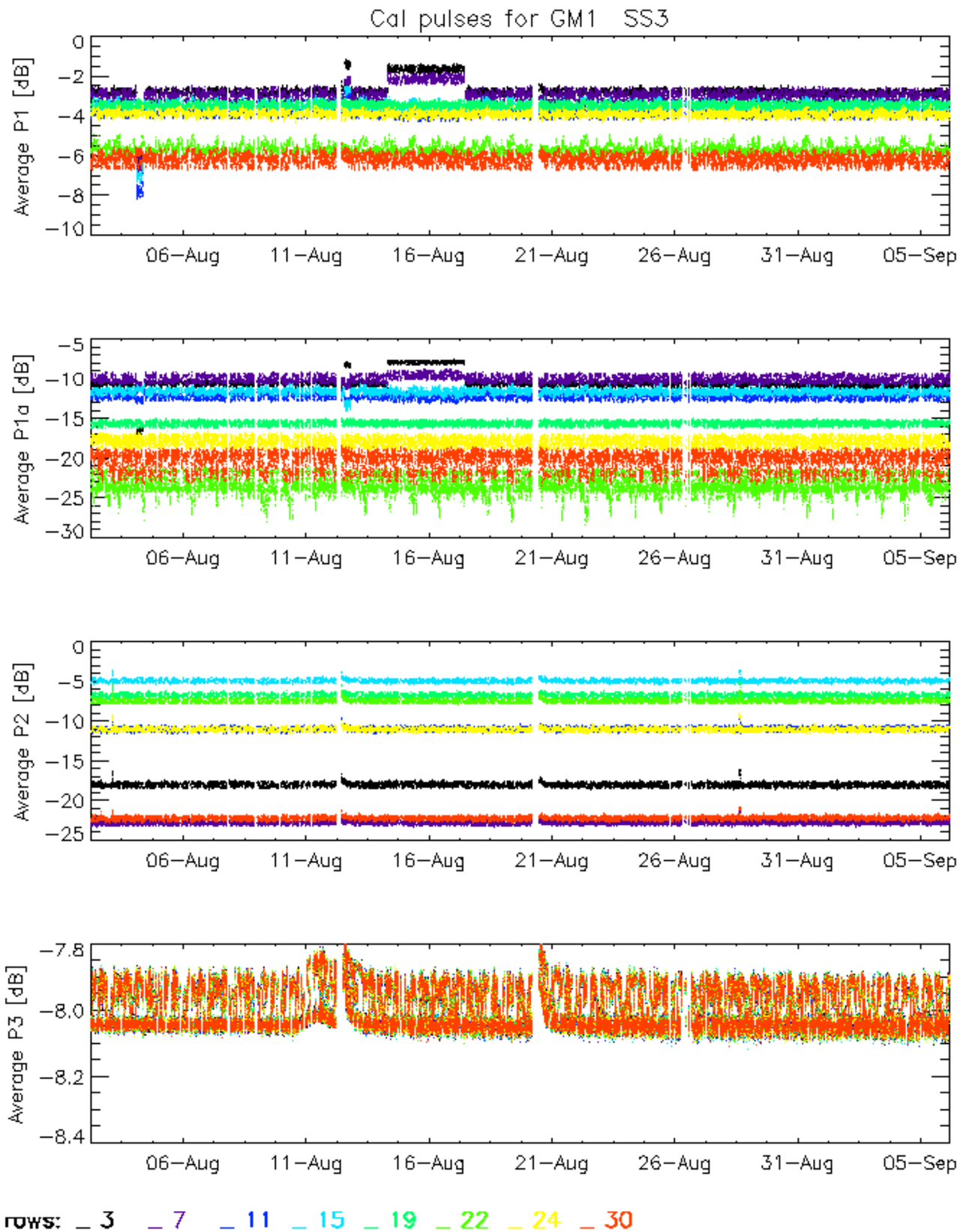
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

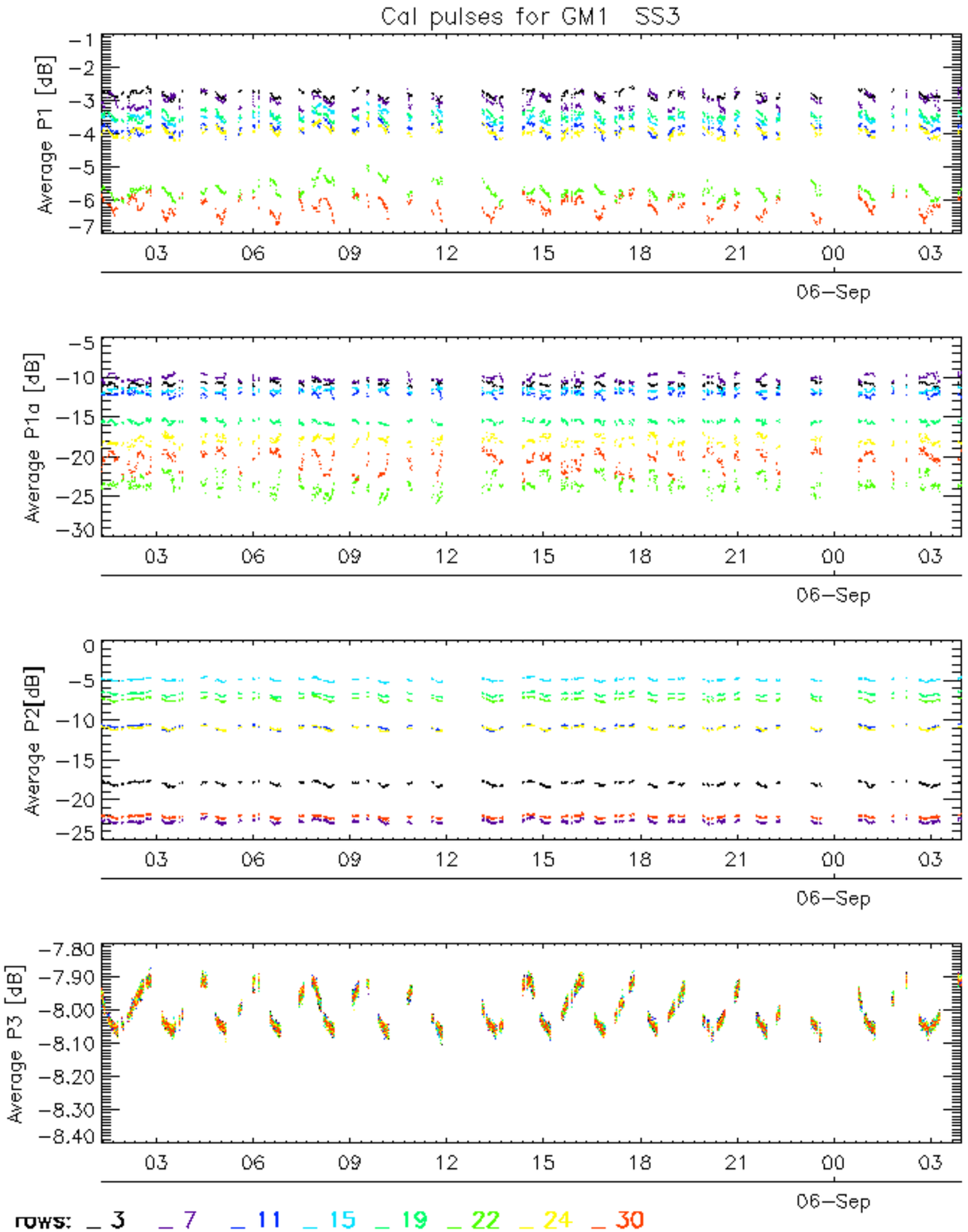
6.5 - Absolute Doppler for GM1

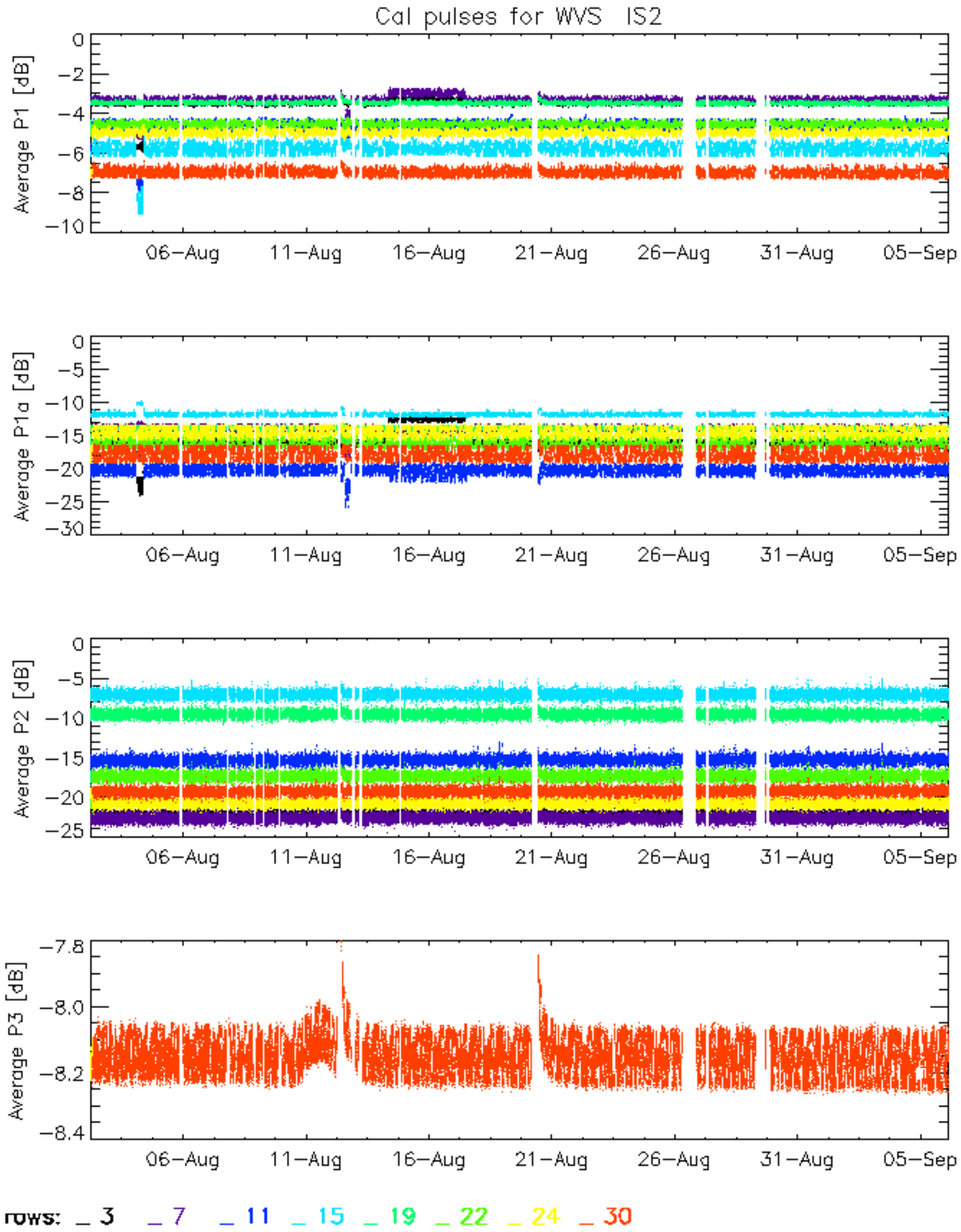
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

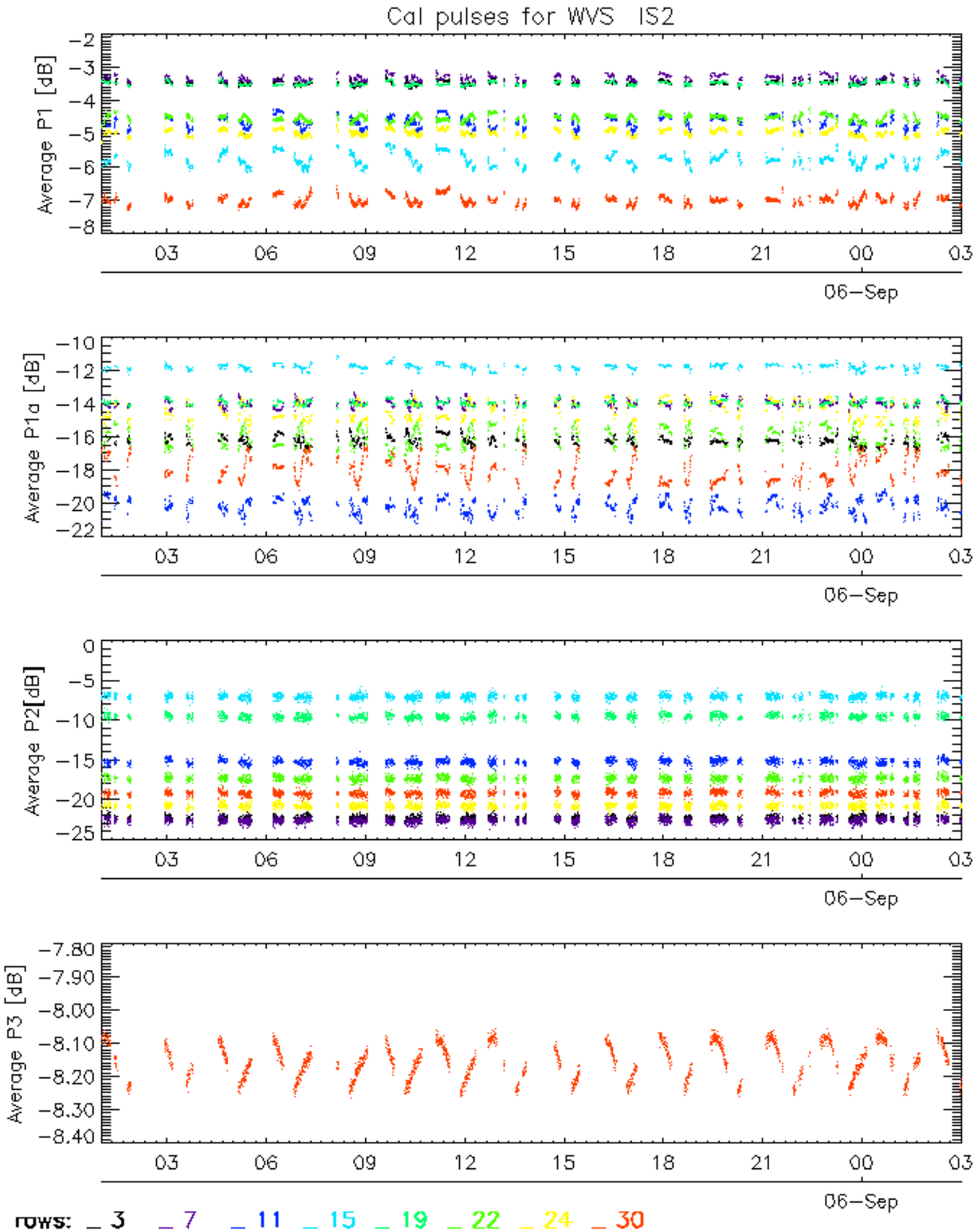
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

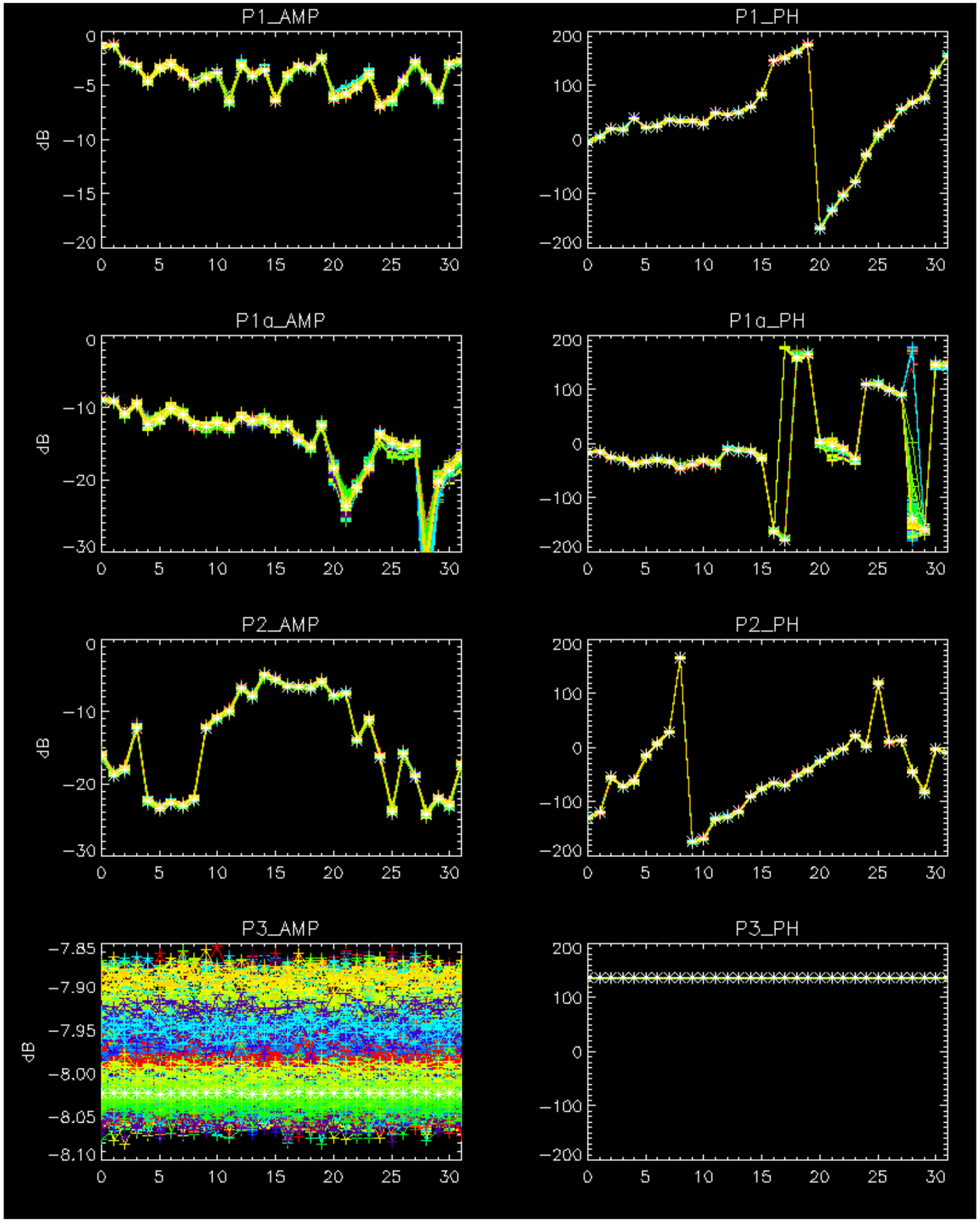

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

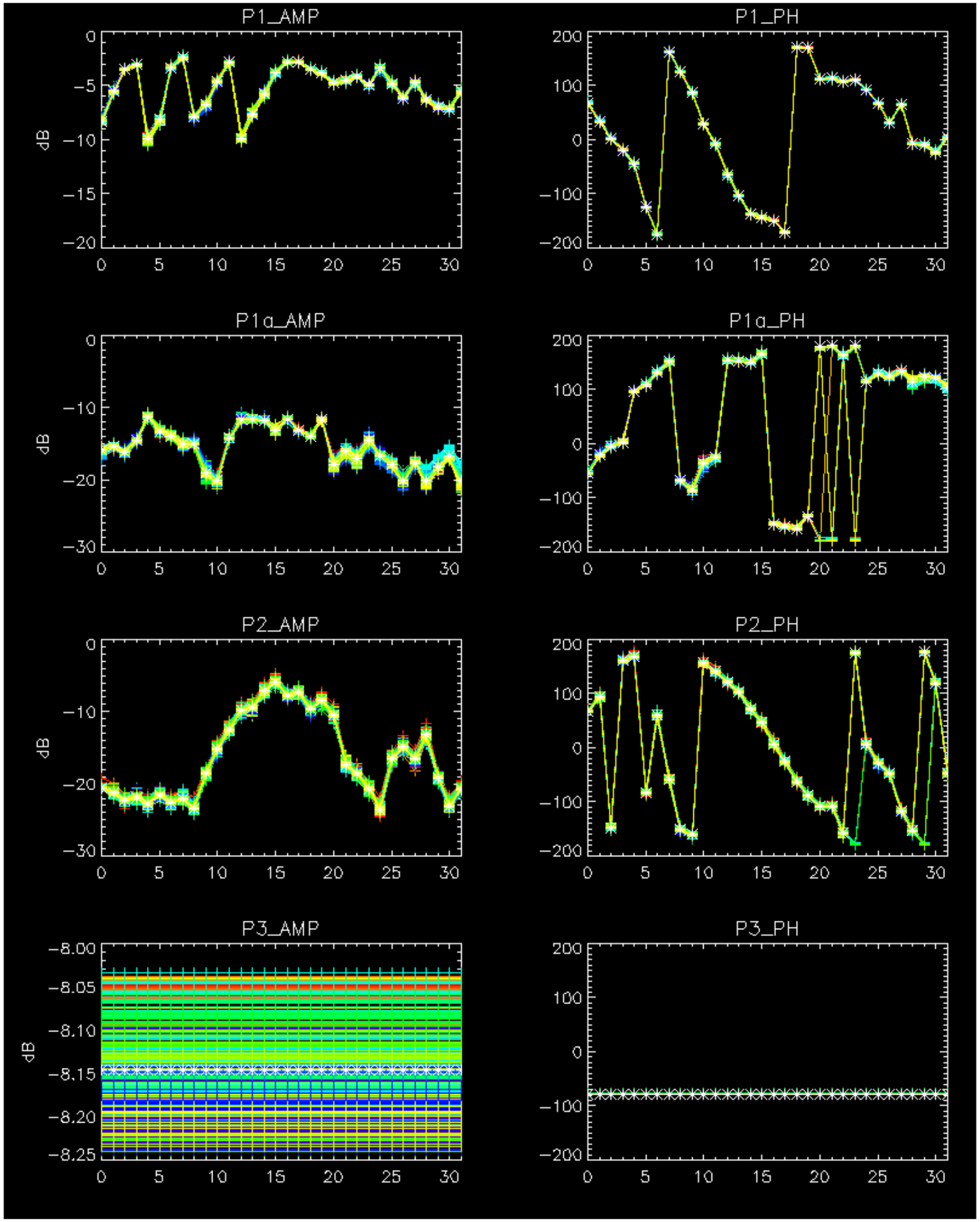

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
06−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: 3 7 11 15 19 22 24 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
Average P1a [dB]
0
−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 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
06−Sep
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
06−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
06−Sep
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
06−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

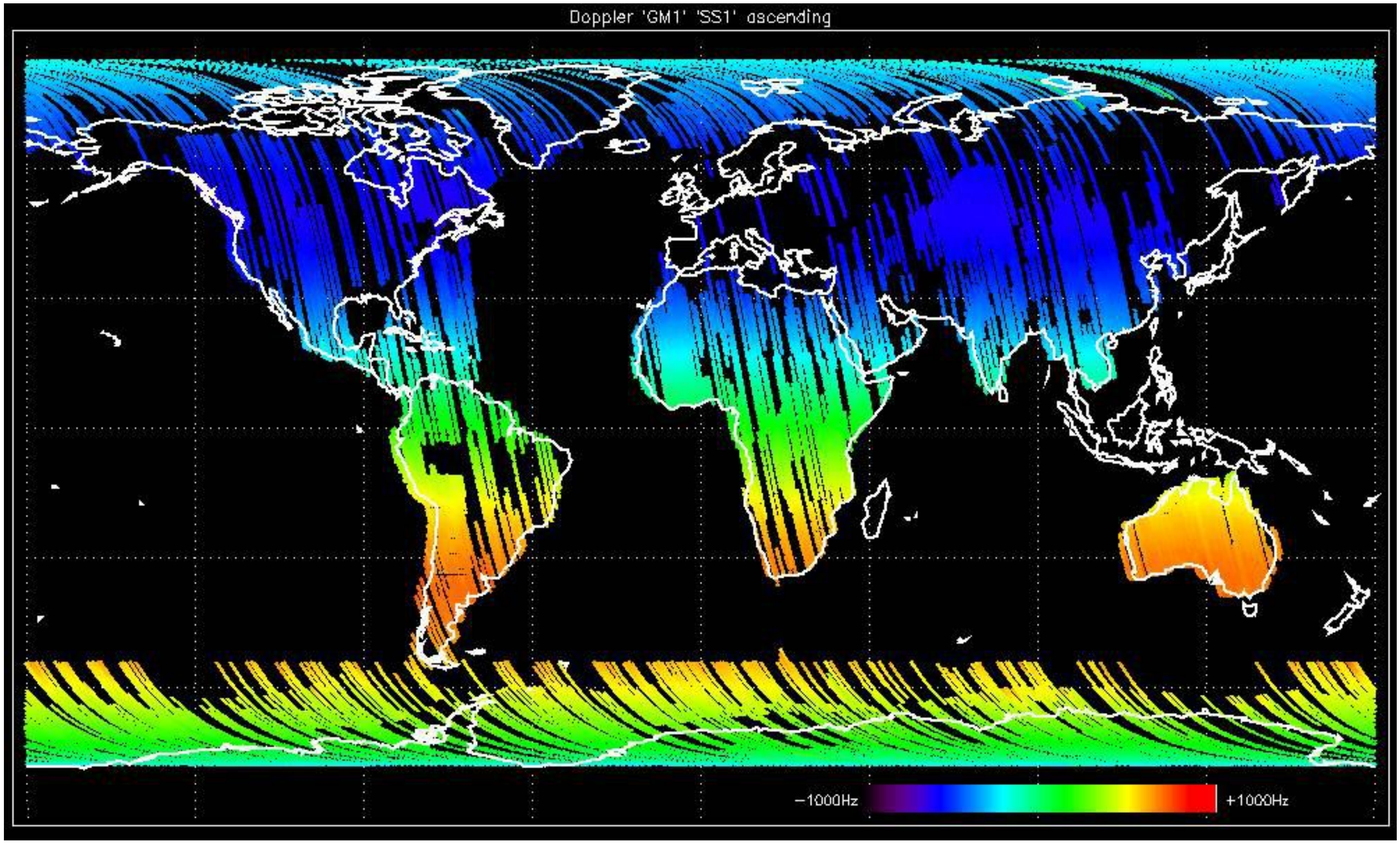
No anomalies observed.

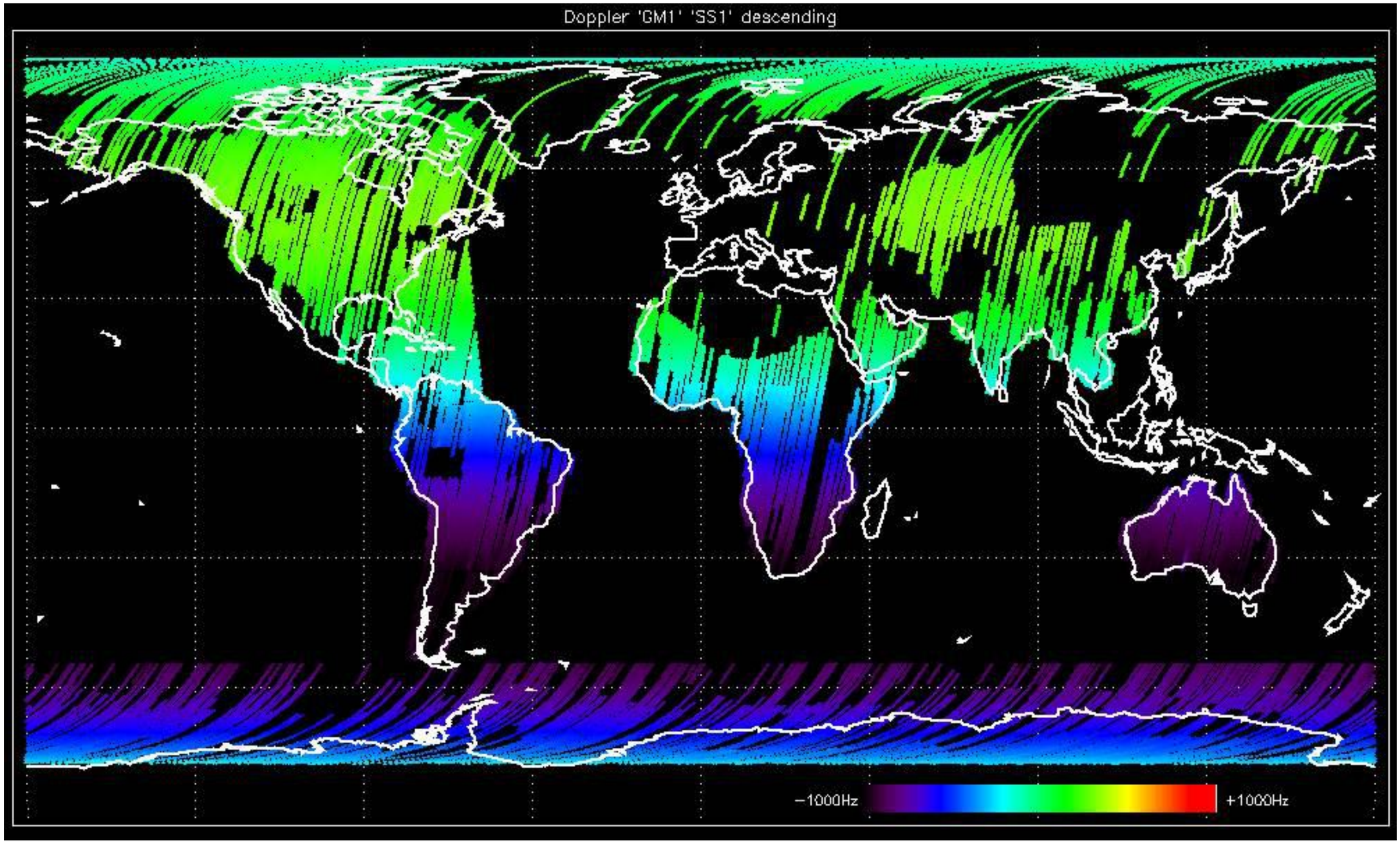

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

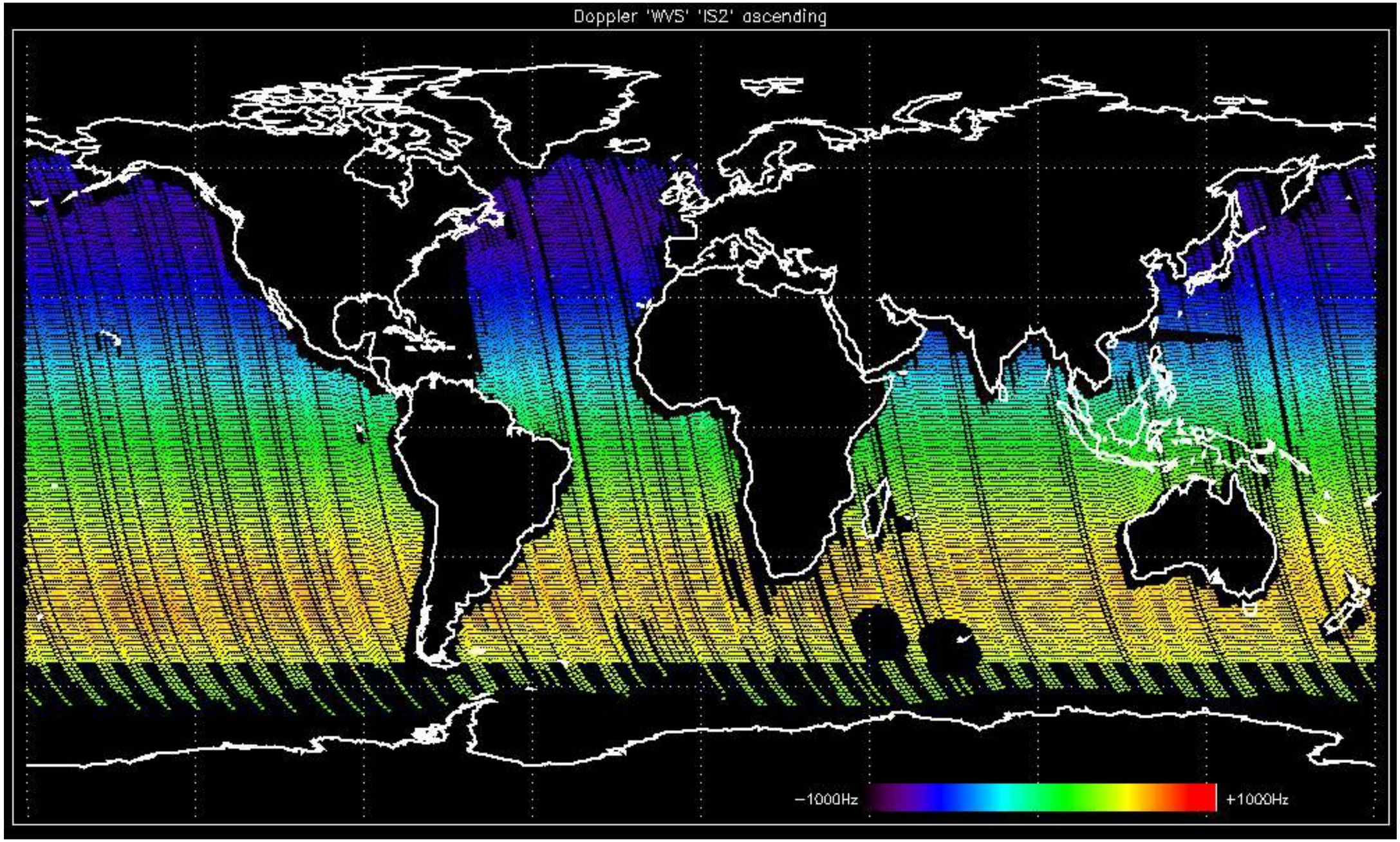

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

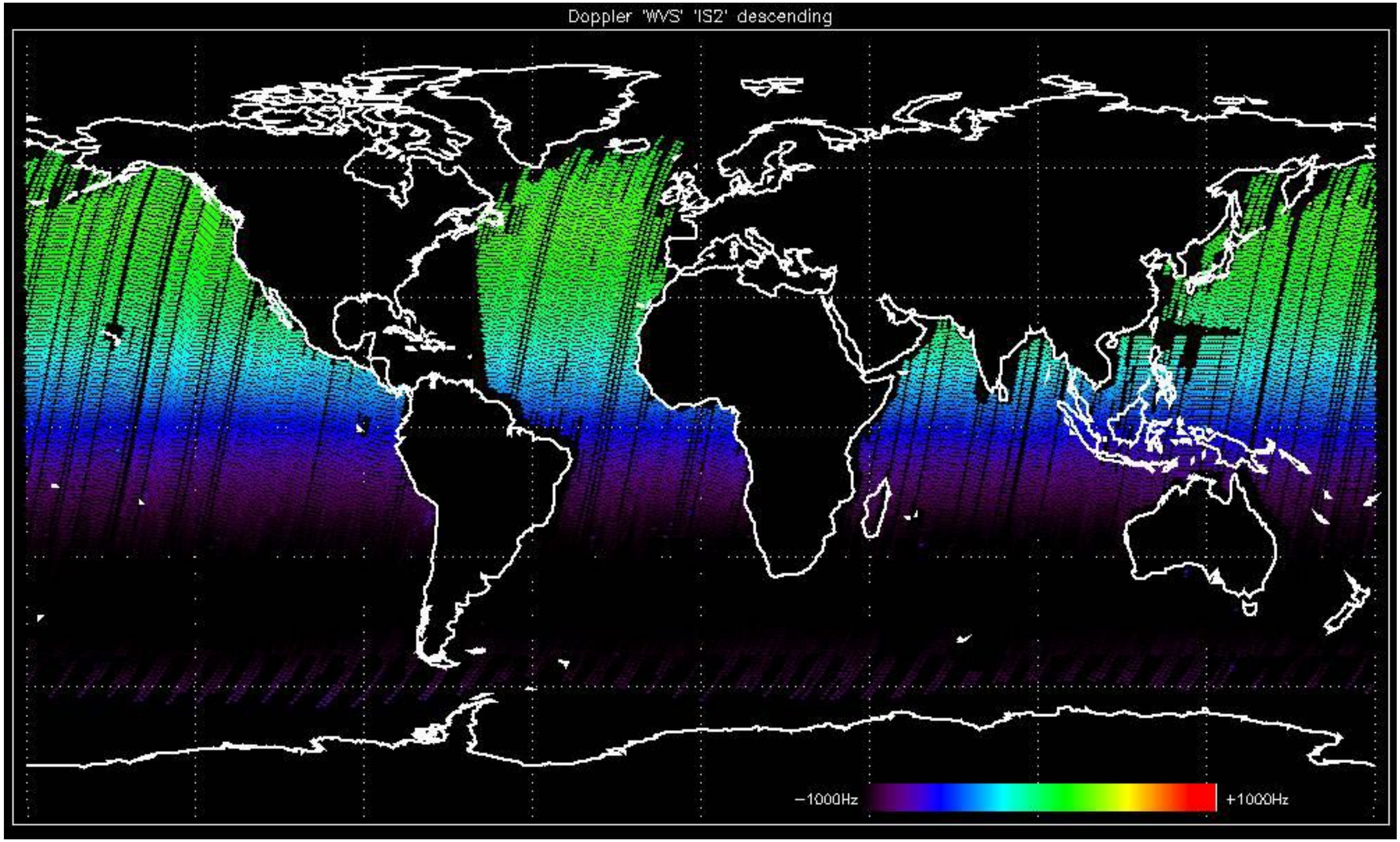
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

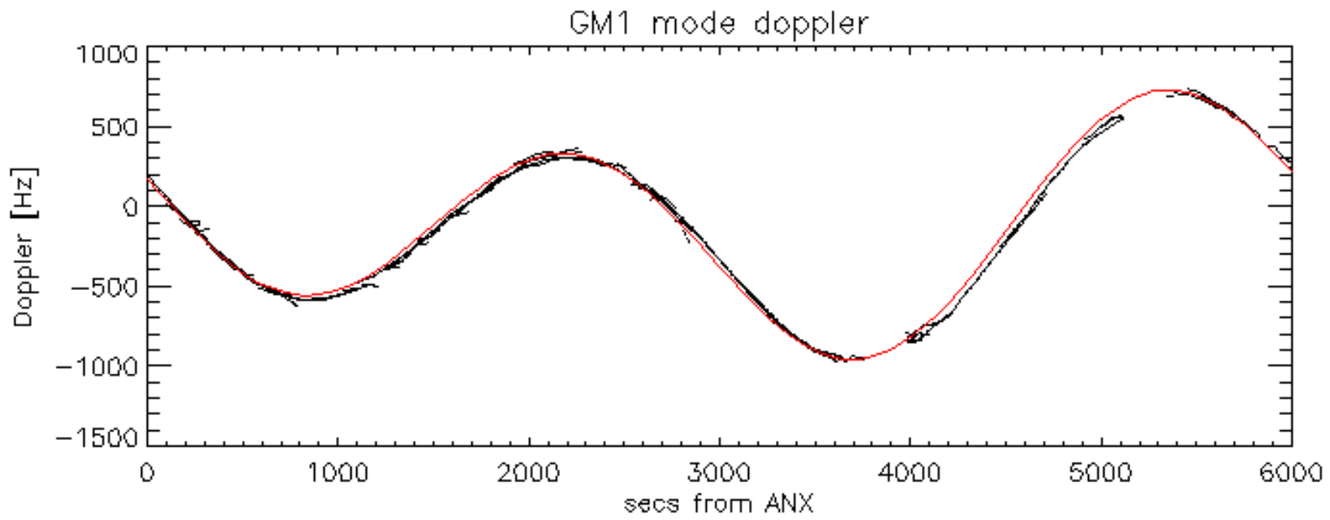
Preliminary report.The data is not yet controled

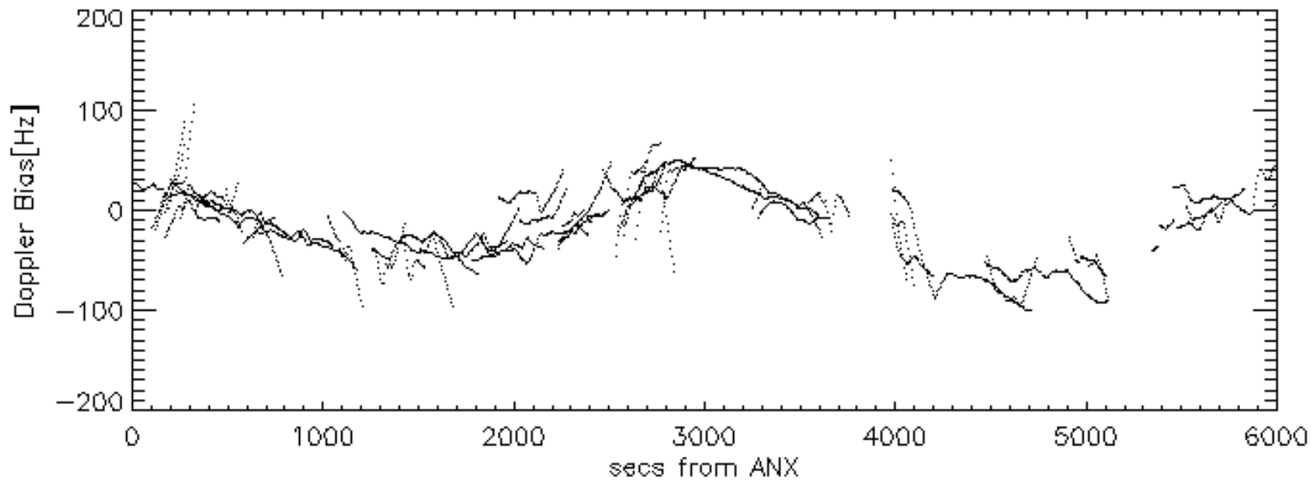

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

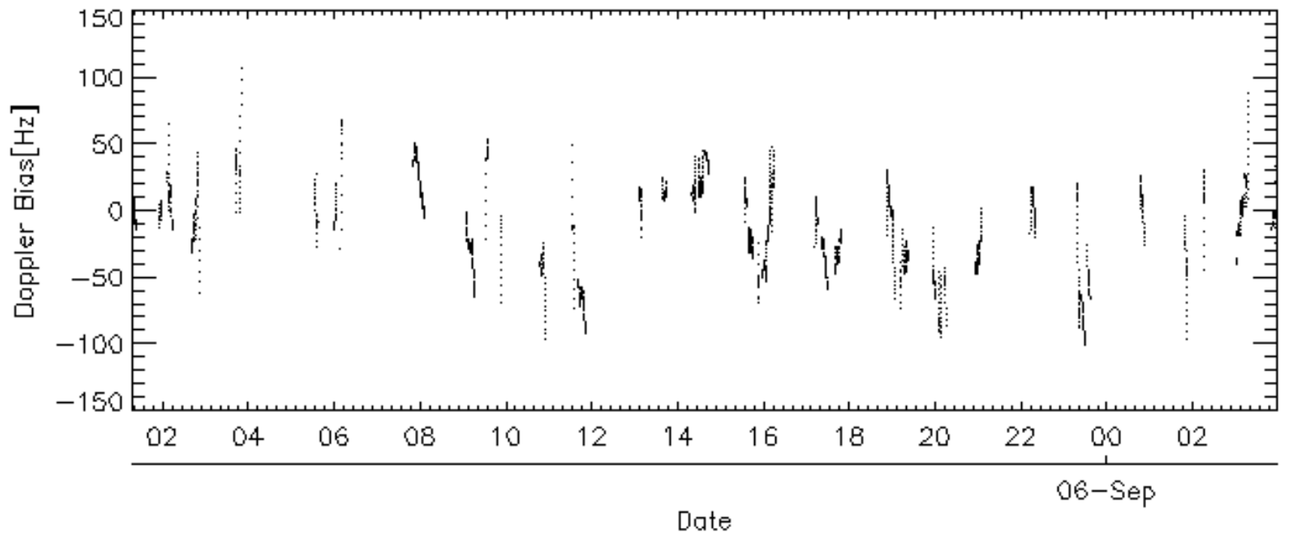

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

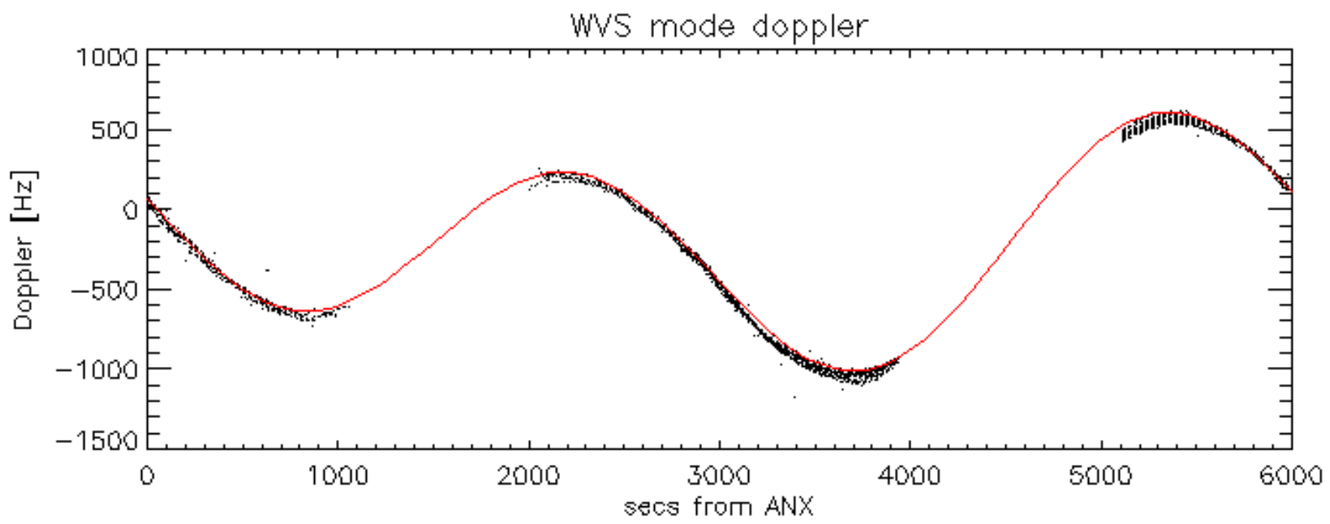

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

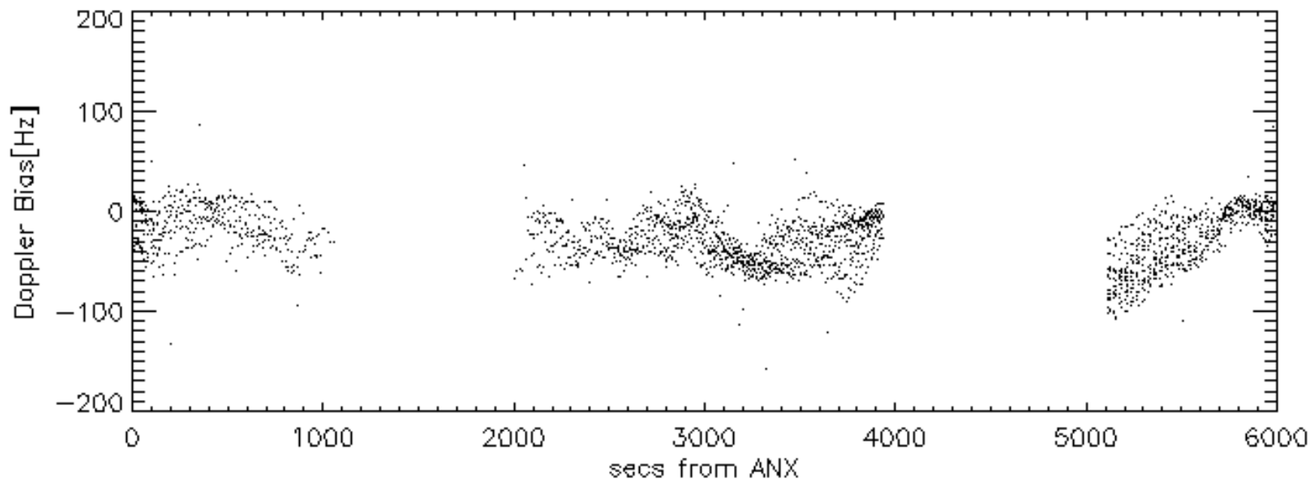

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

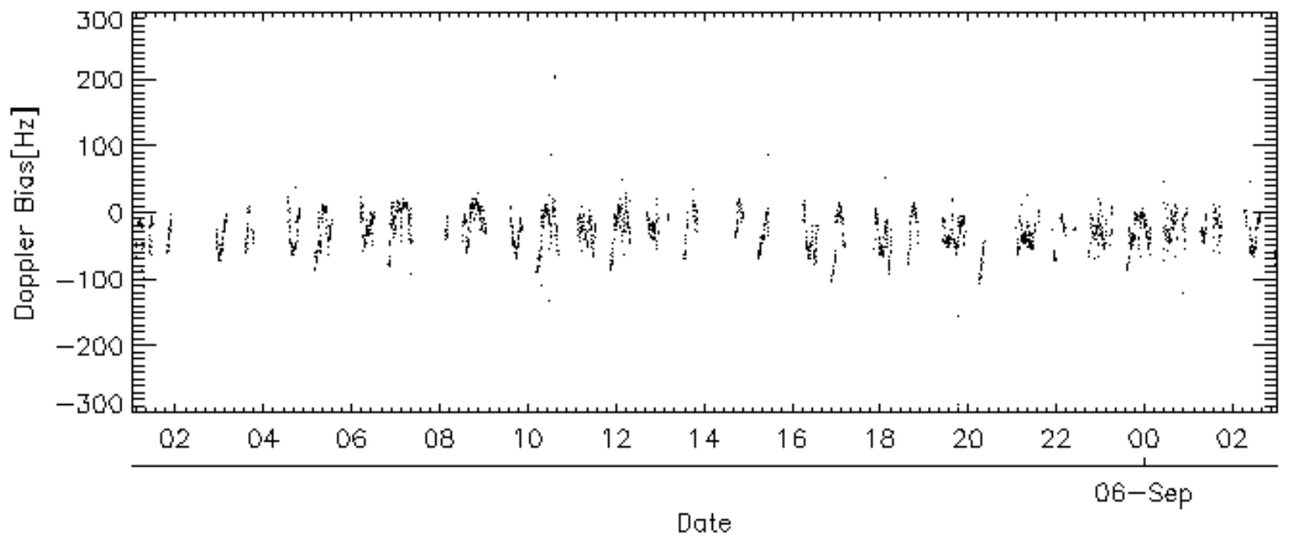

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

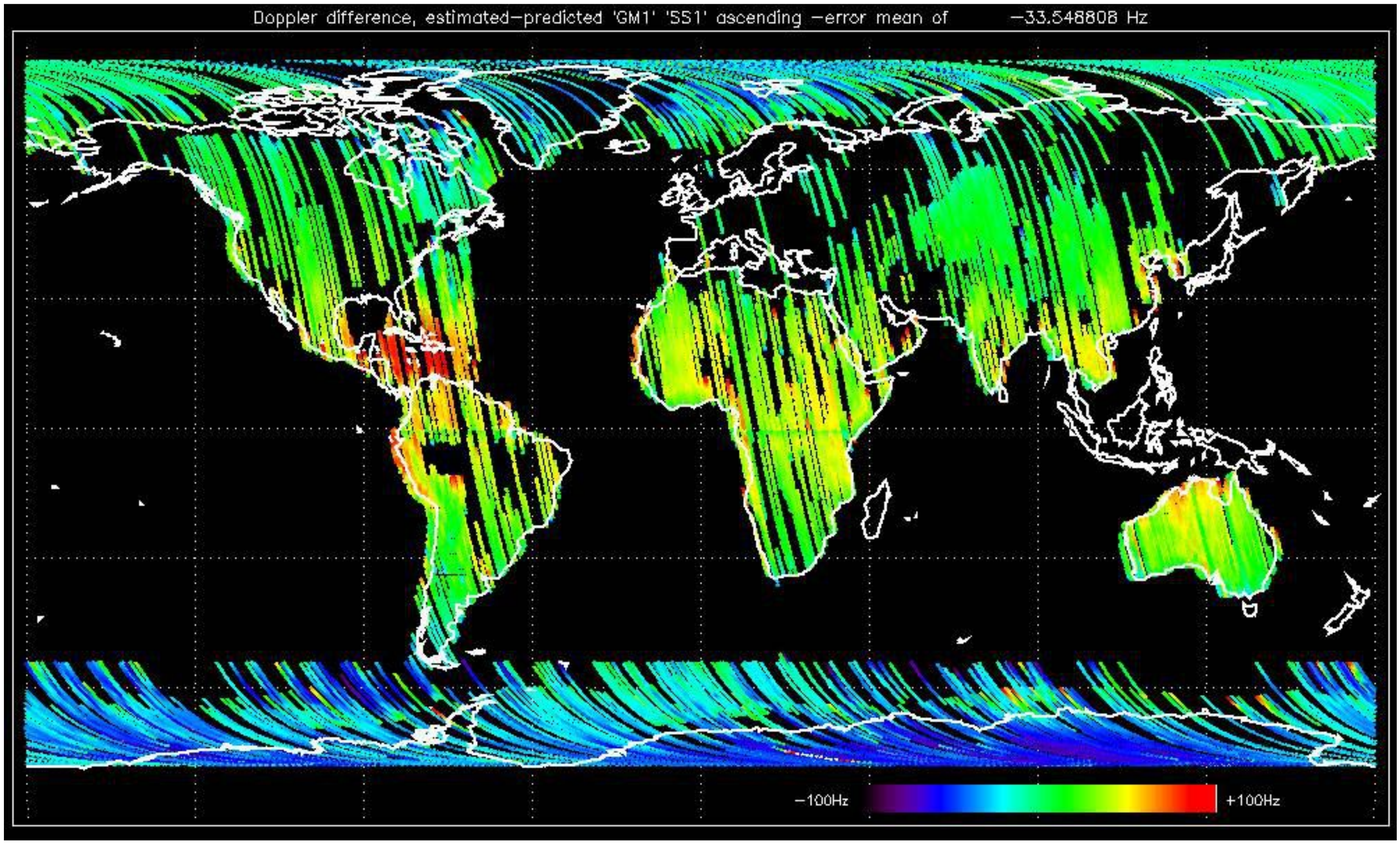

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

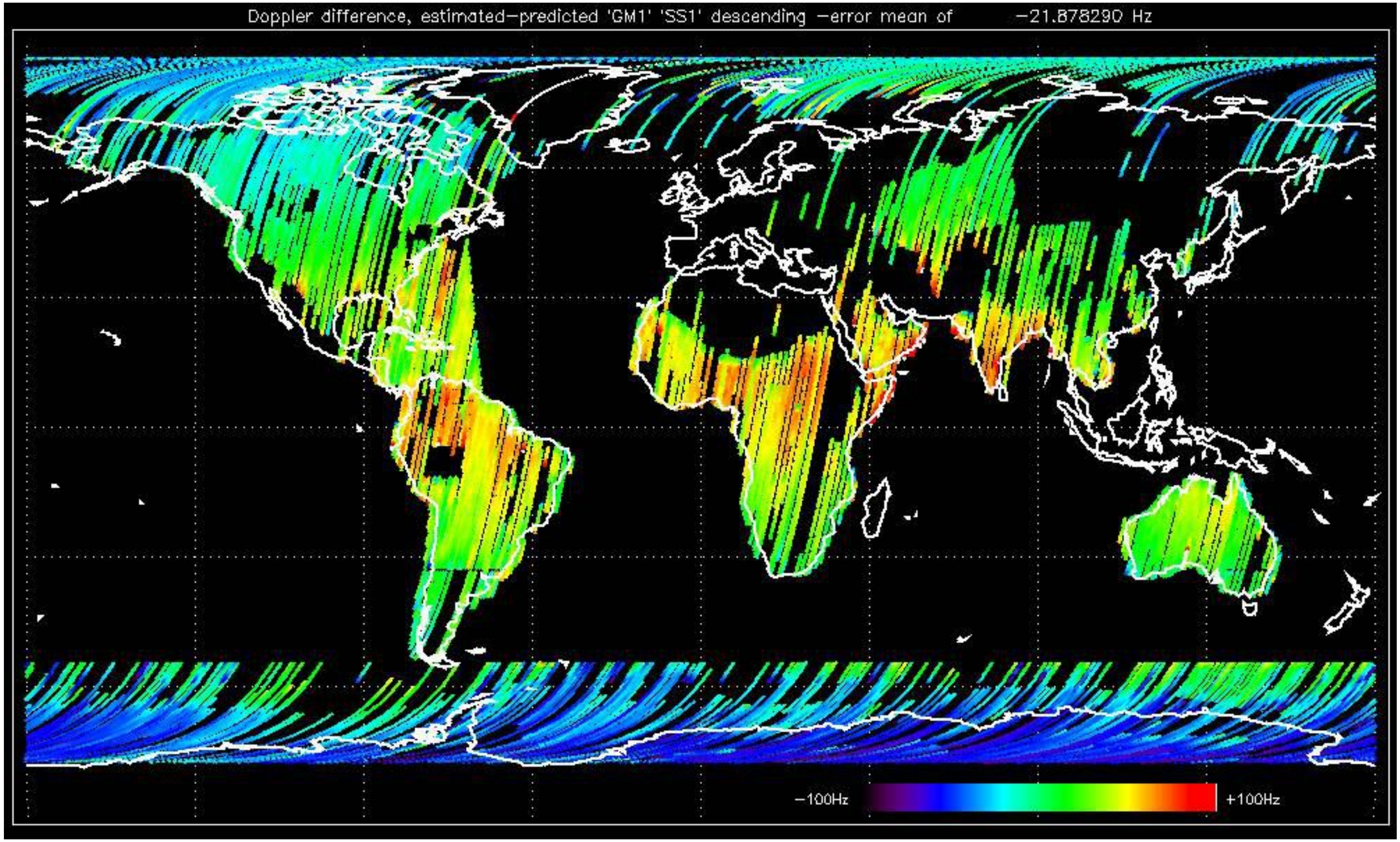

Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
06−Sep
Date

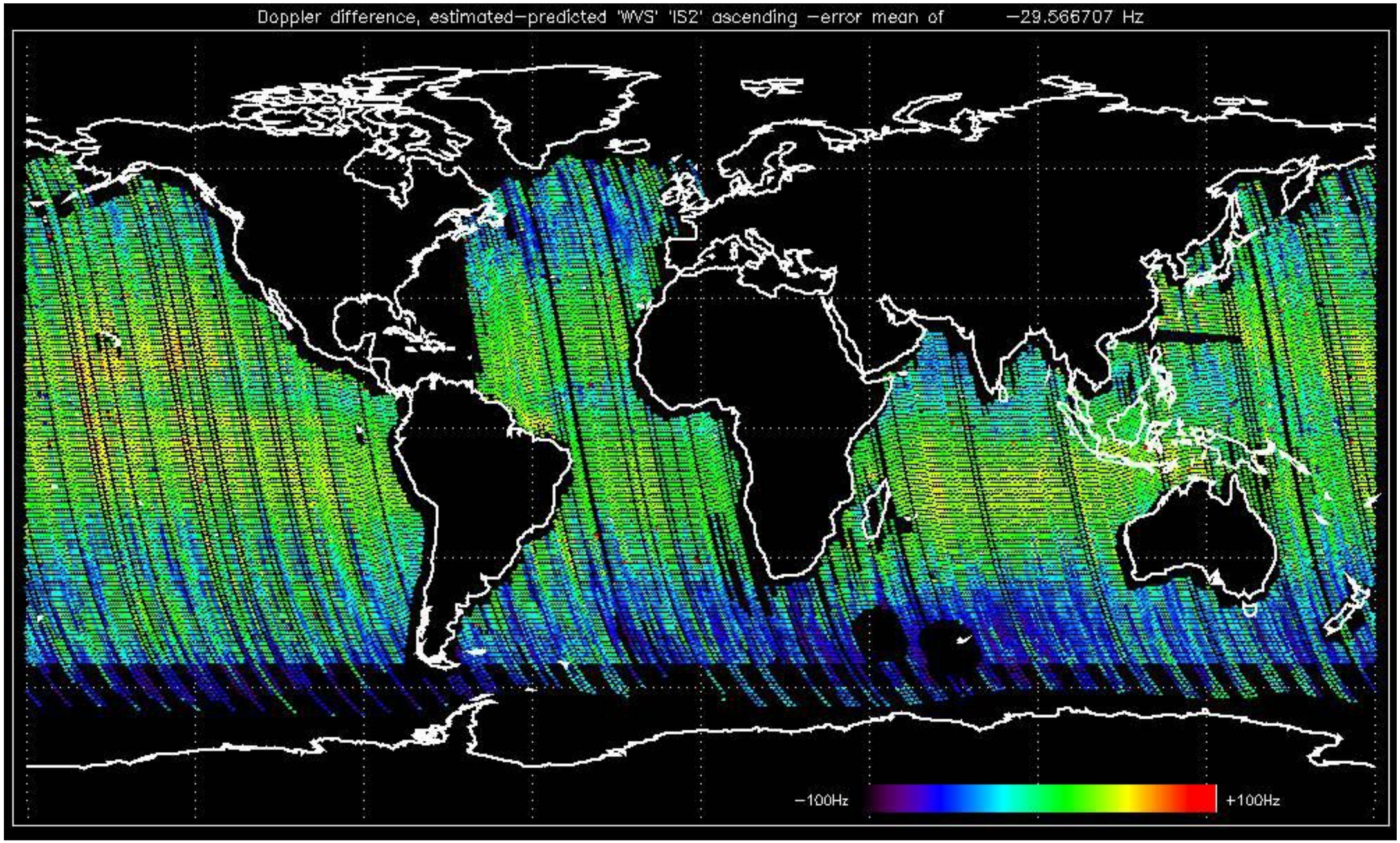

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

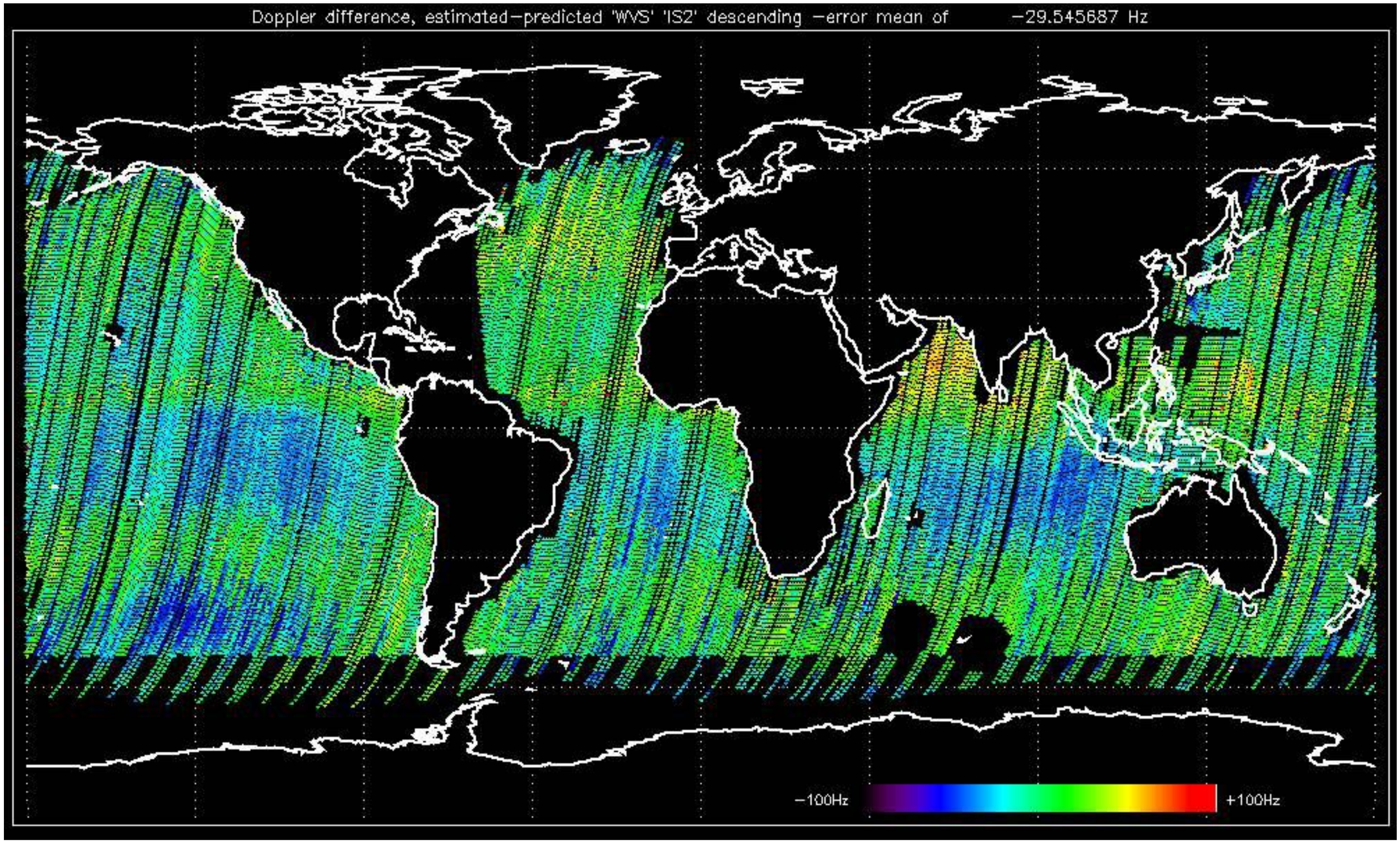

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −33.548808 Hz
−100Hz
+100Hz

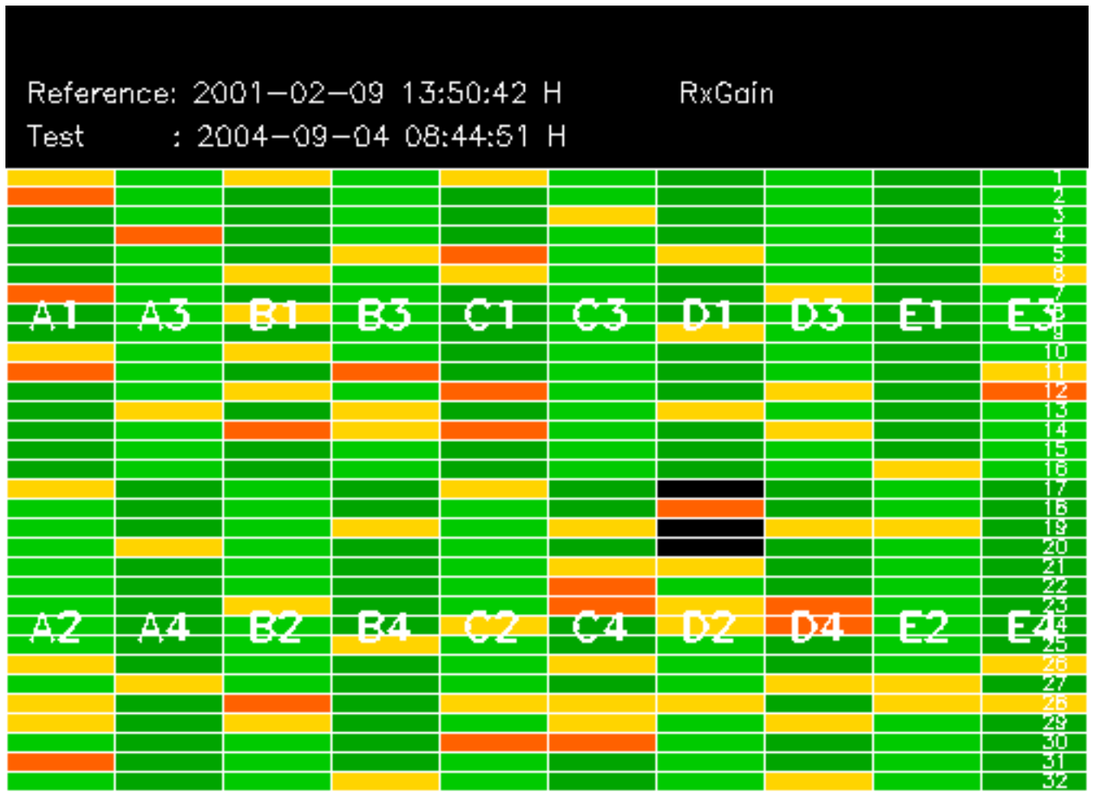

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -21.878290 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.566707 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.545687 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 : 2004-09-04 08:44:51 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
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22
23
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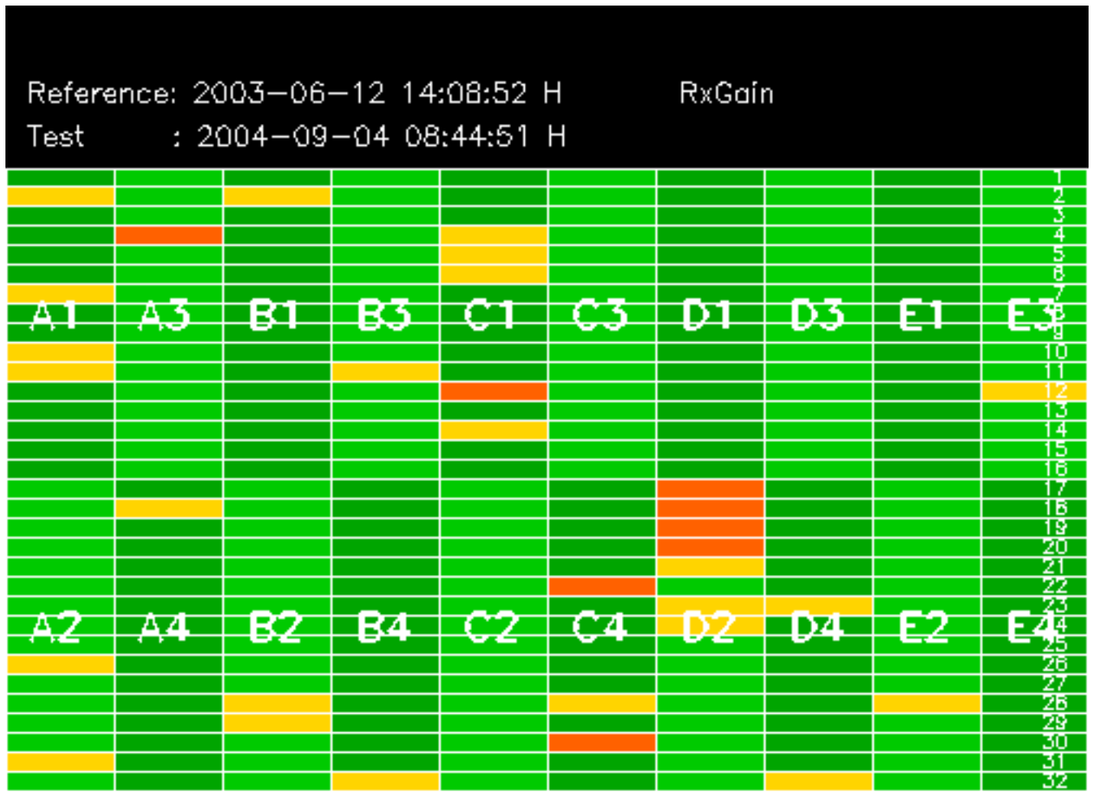
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-04 08:44:51 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
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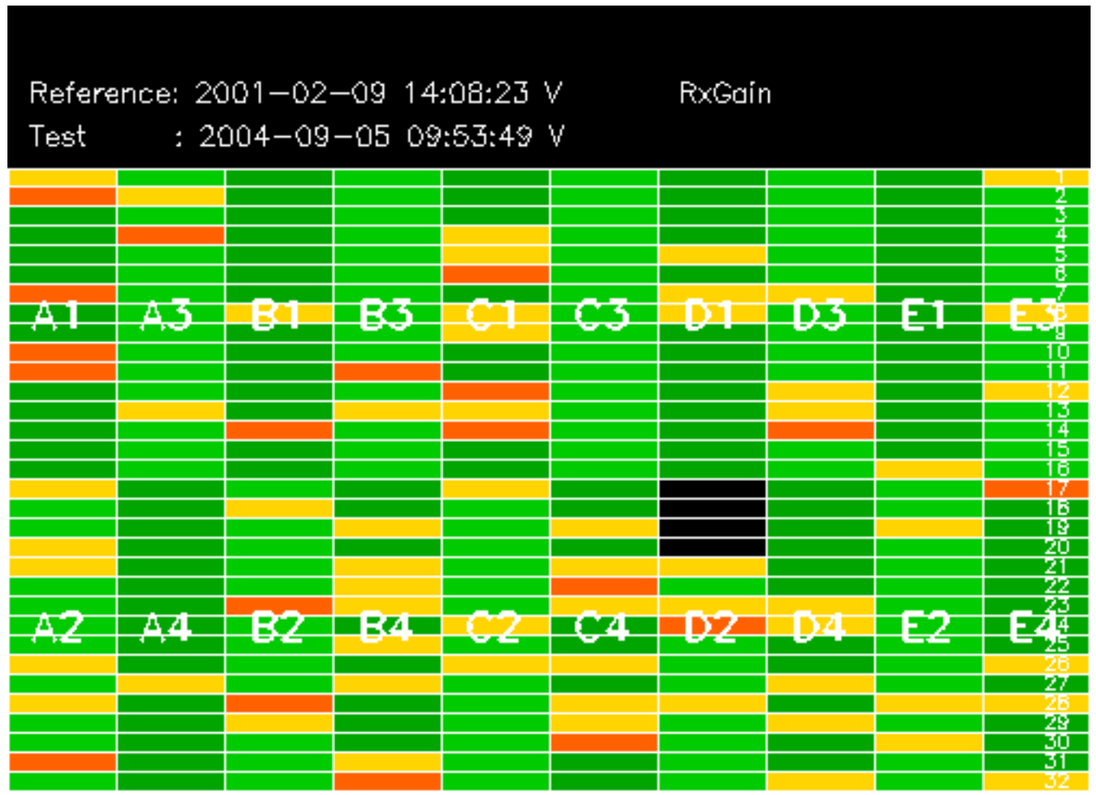
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2004-09-05 09:53:49 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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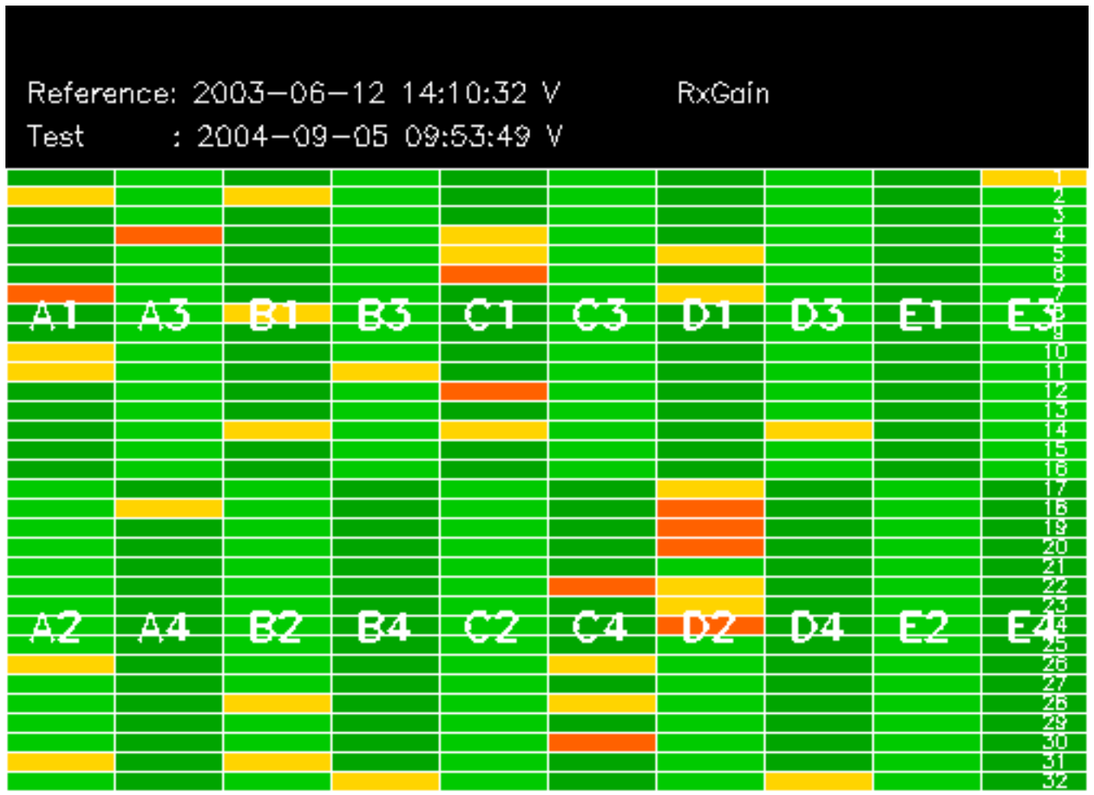
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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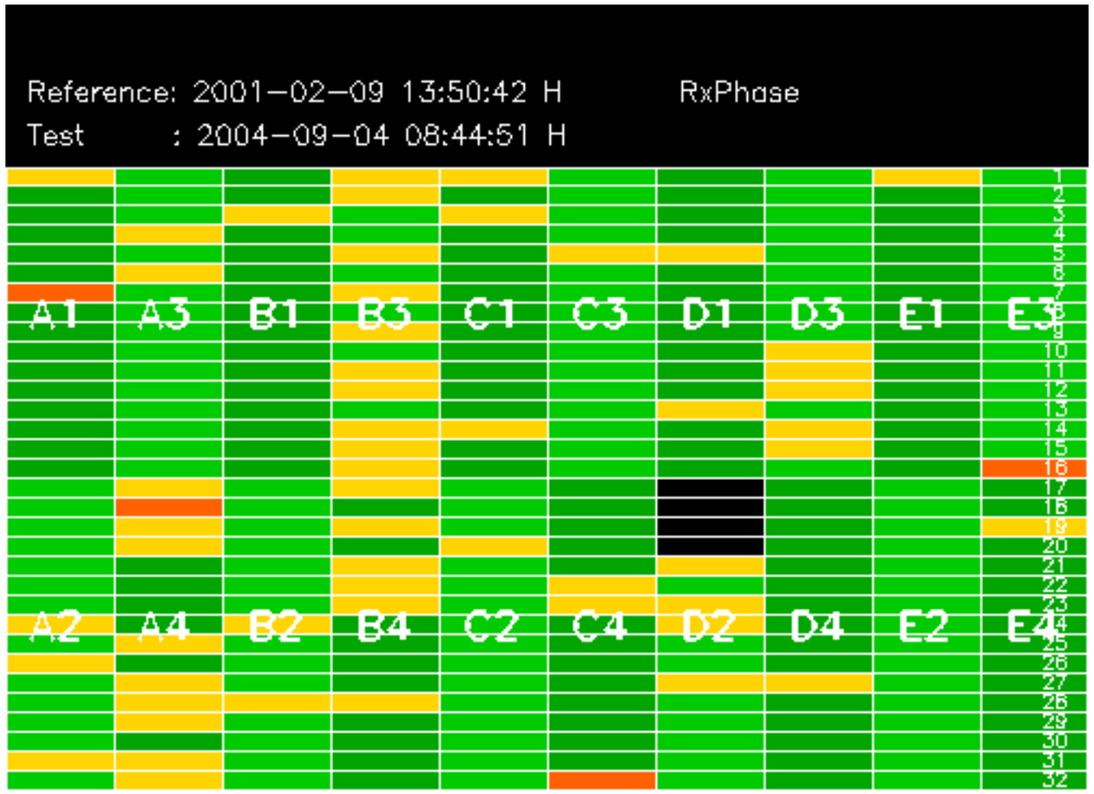
Reference: 2001-02-09 13:50:42 H
Test : 2004-09-04 08:44:51 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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8
9
10
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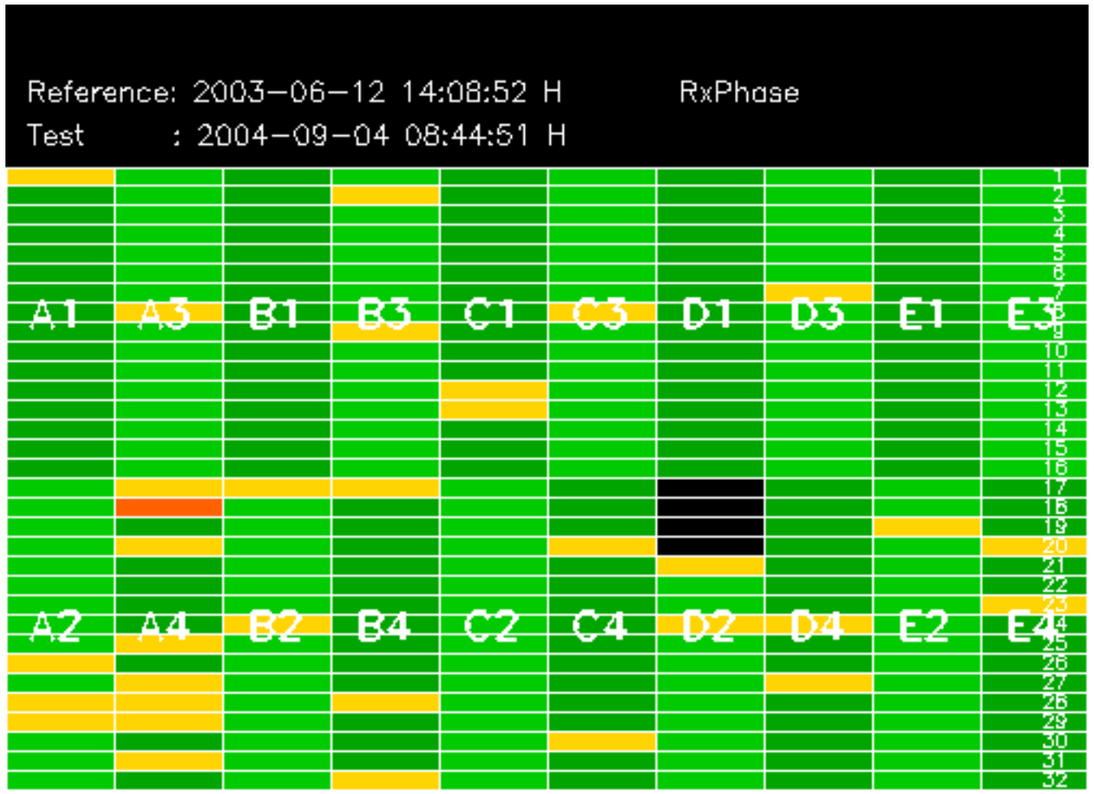
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-04 08:44:51 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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9
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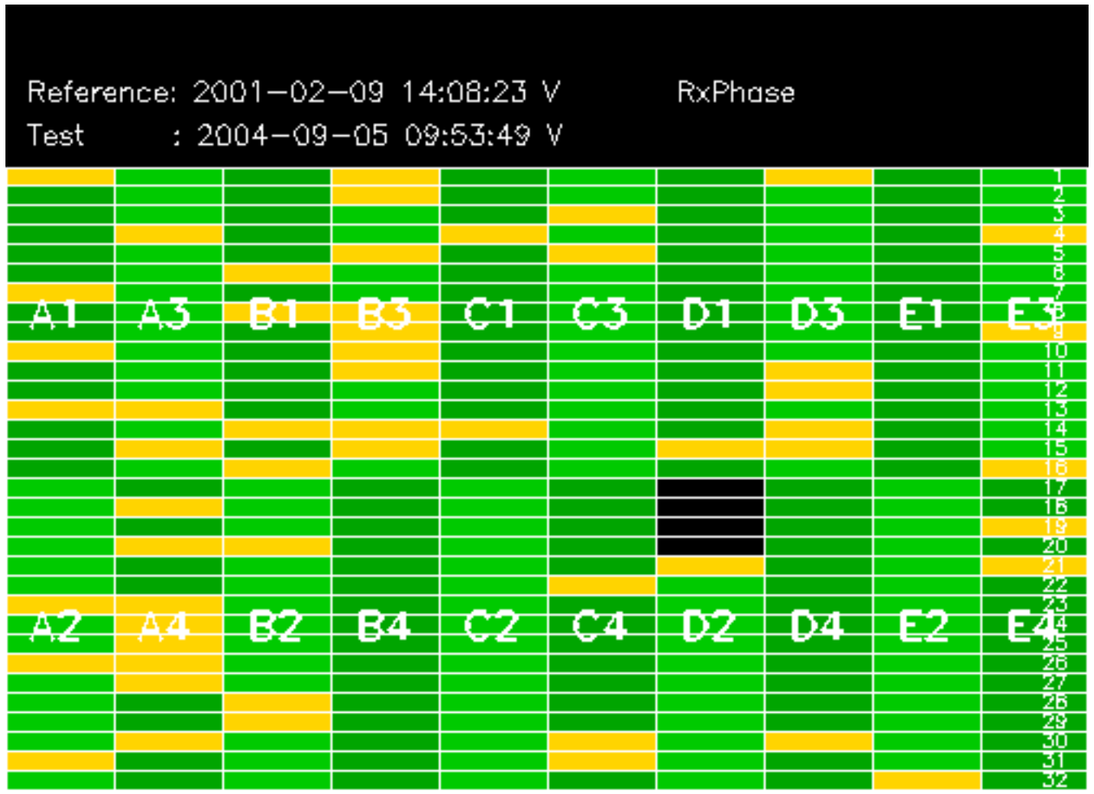
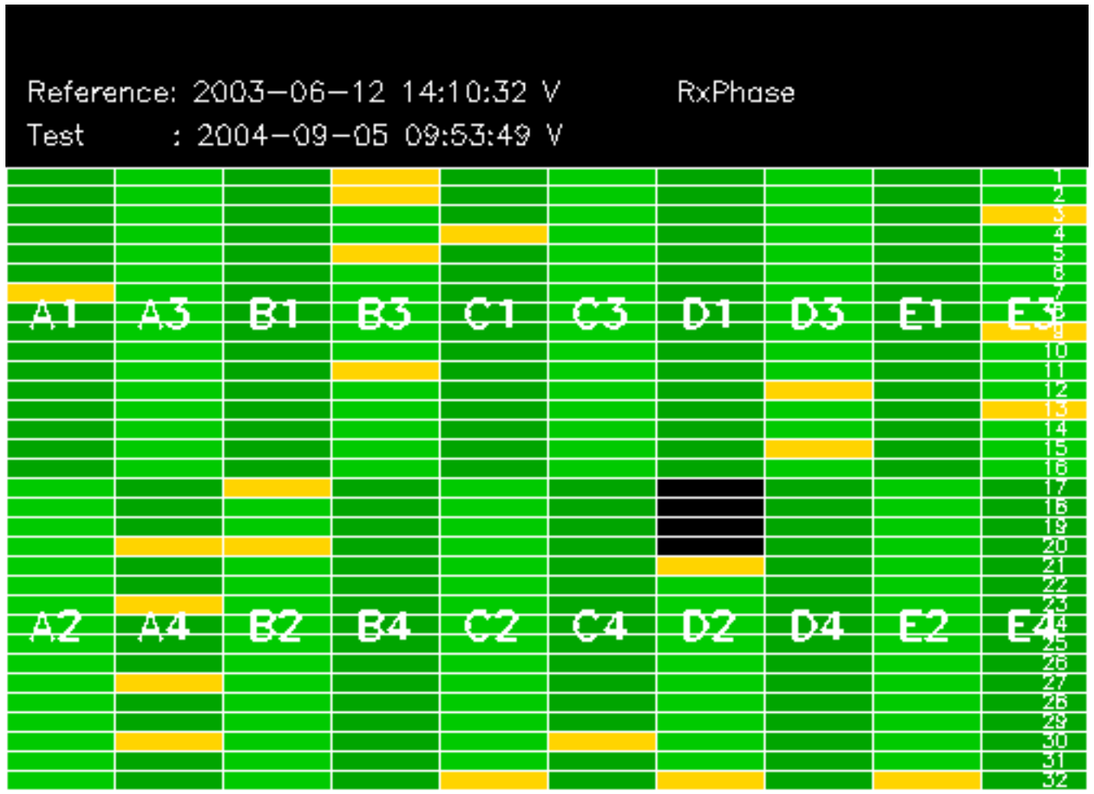
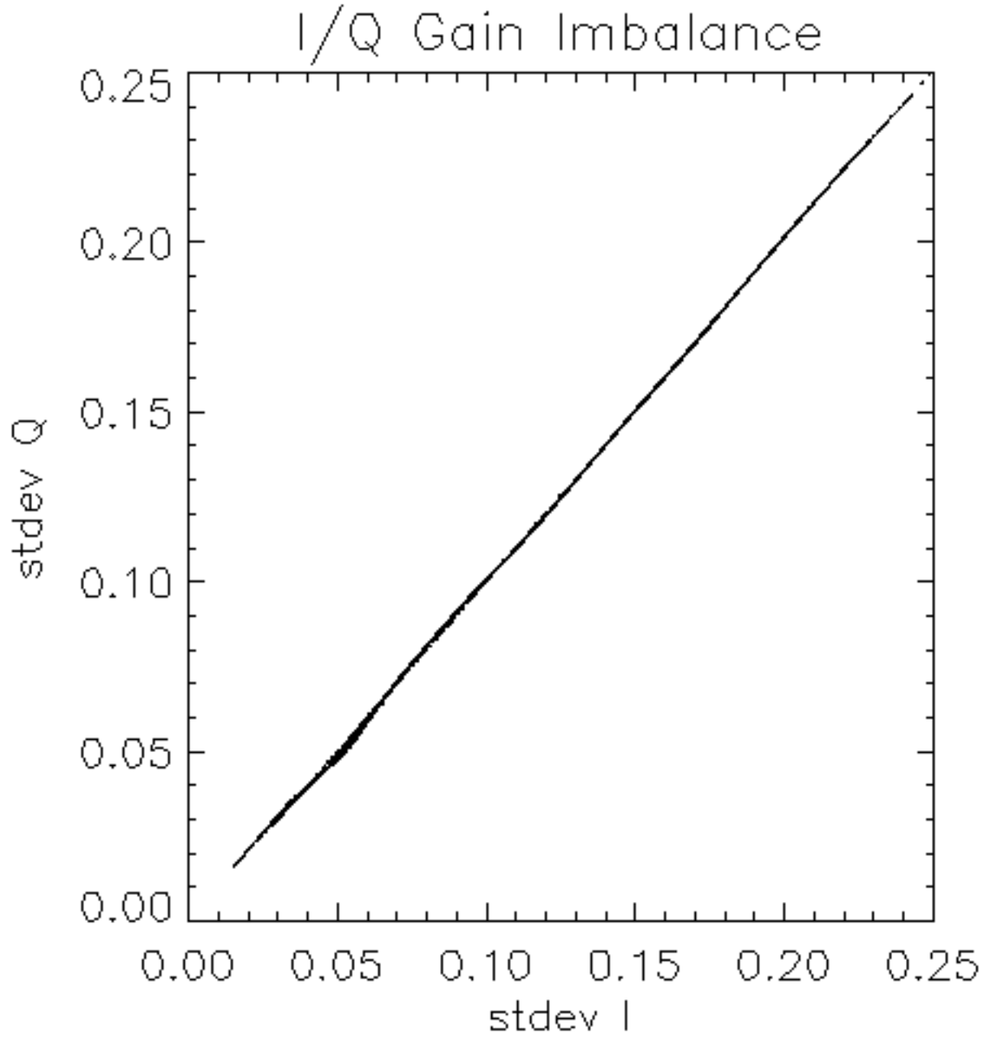
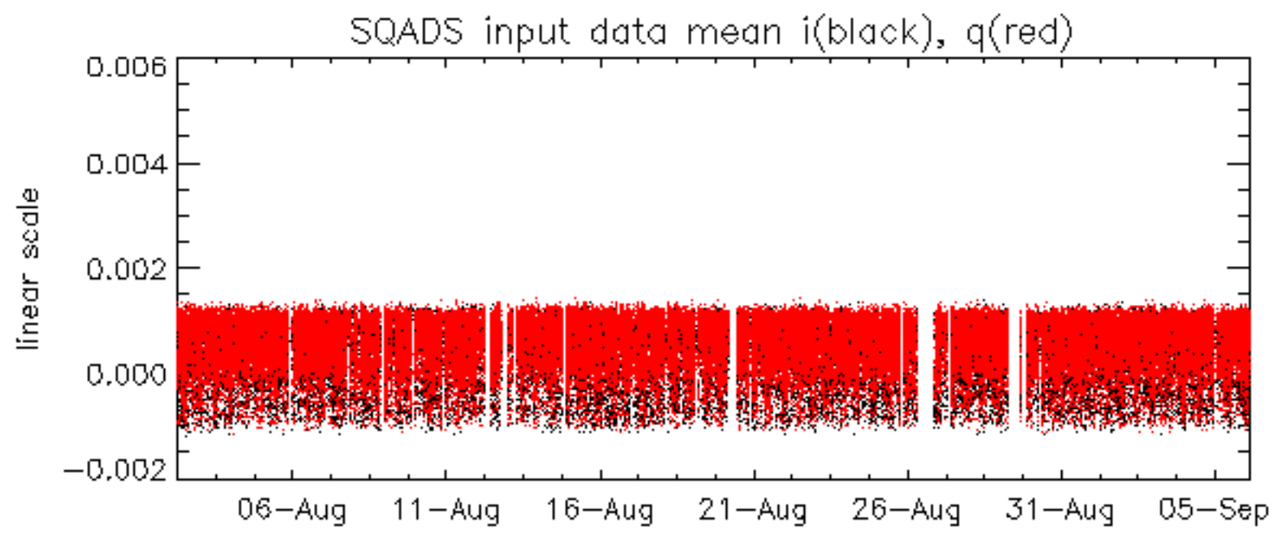
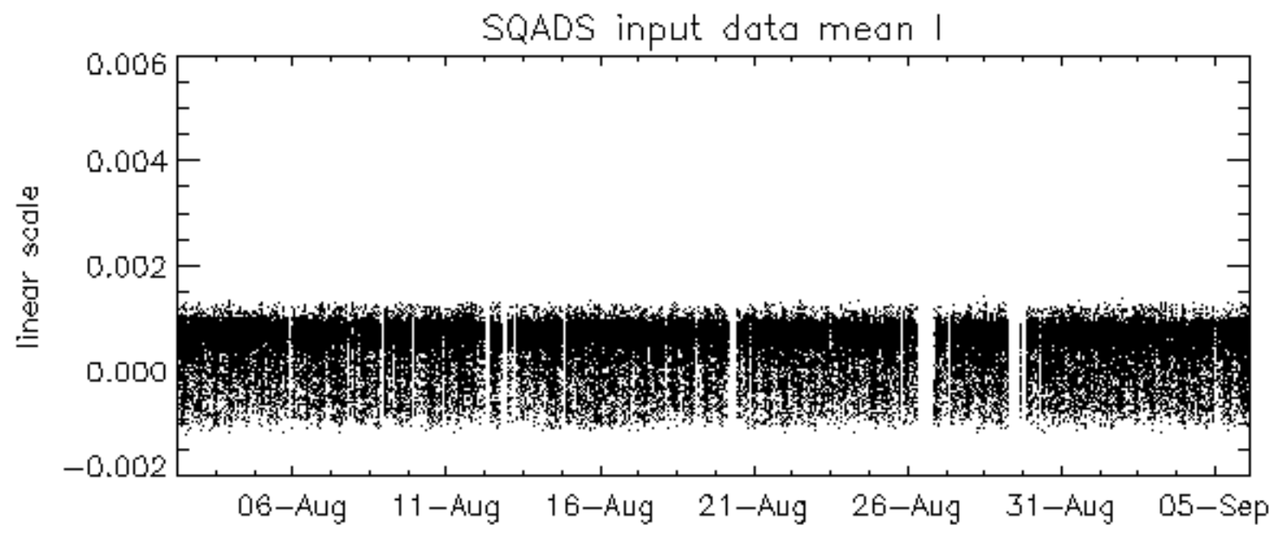
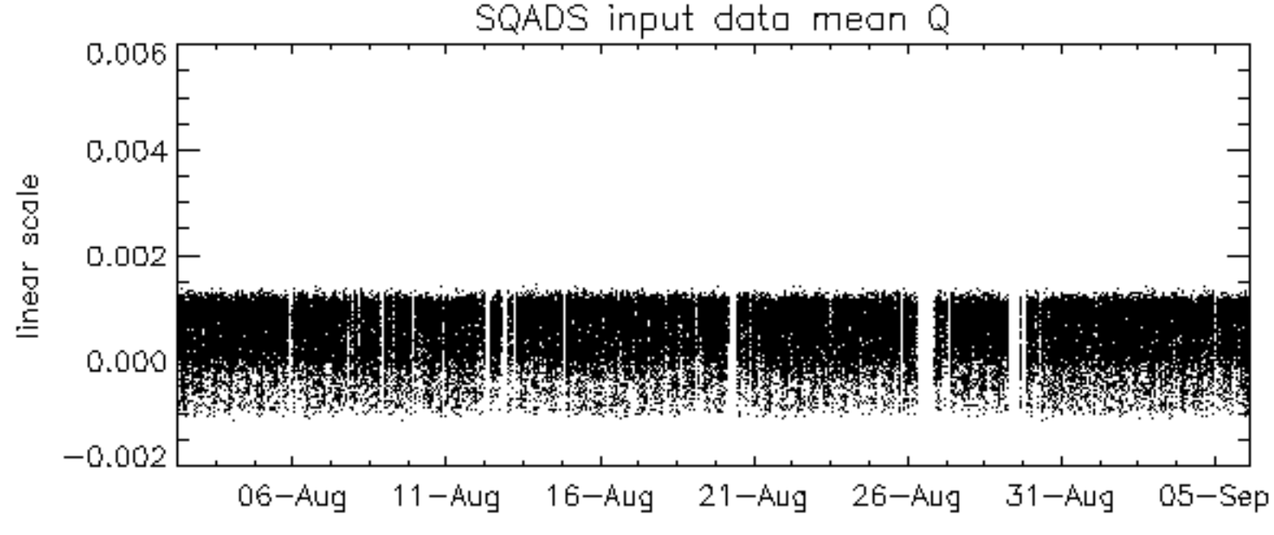

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-05 09:53:49 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

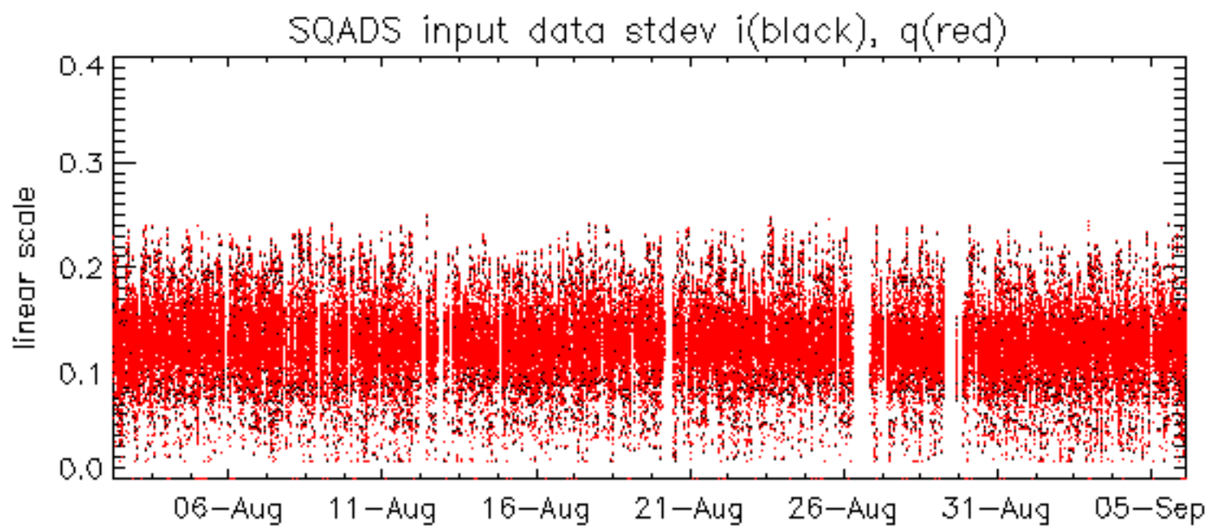

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

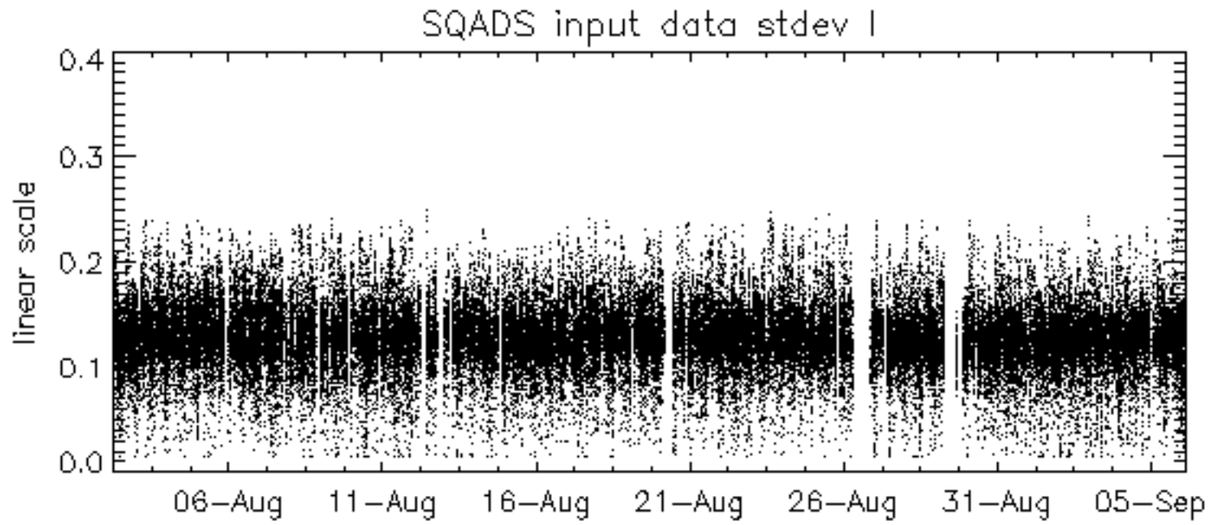

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

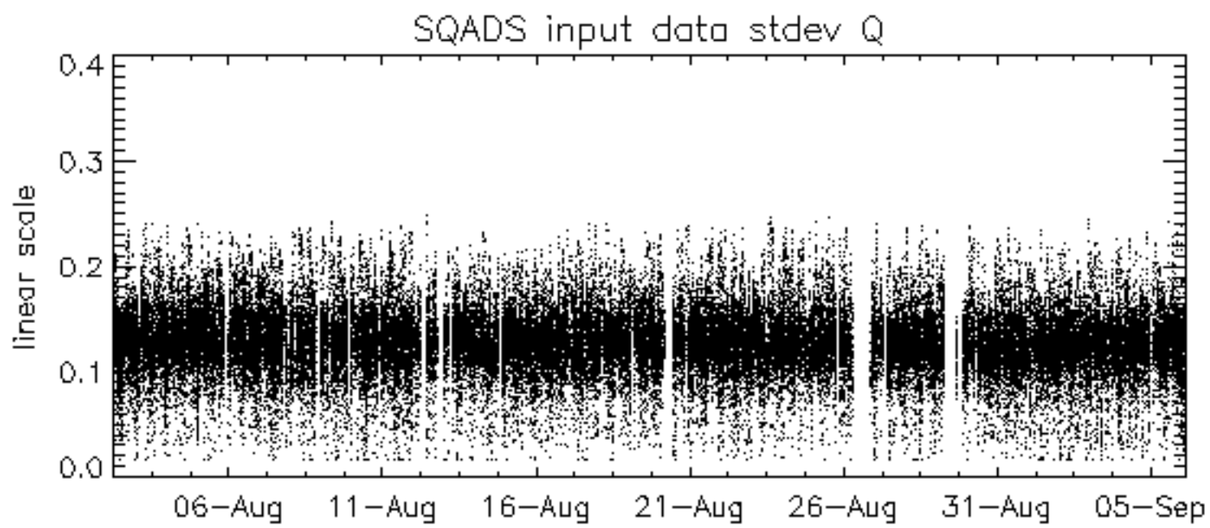

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

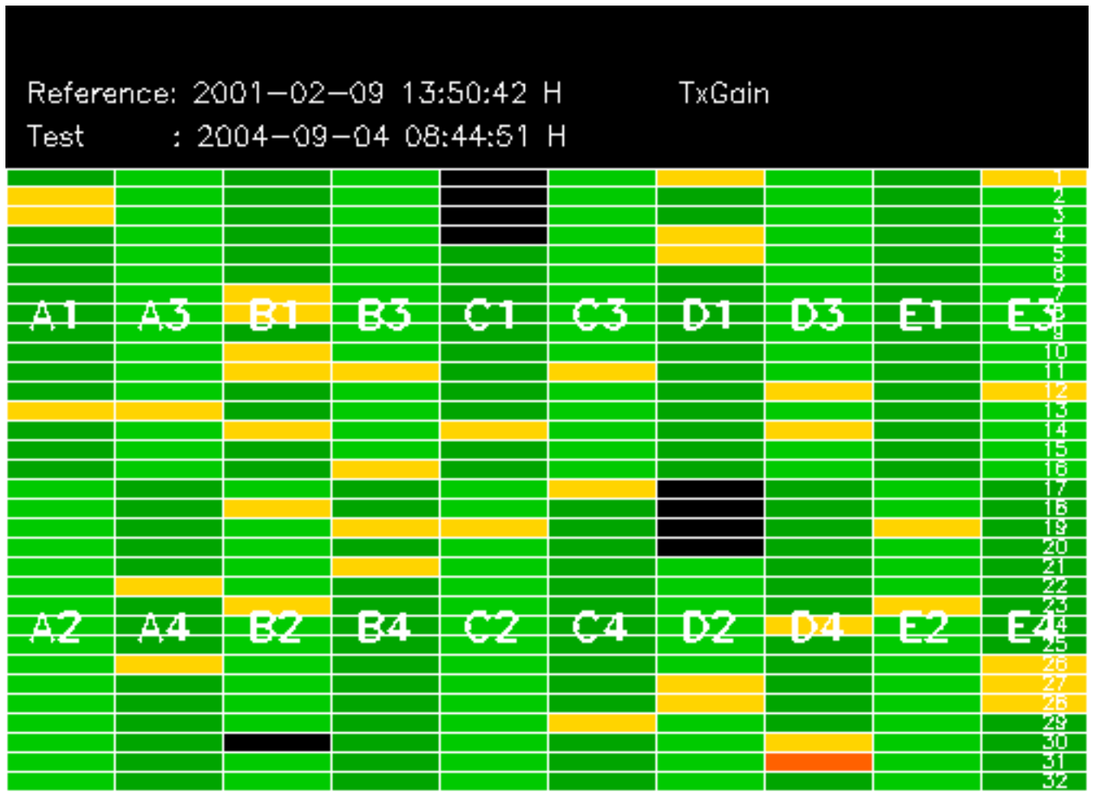

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

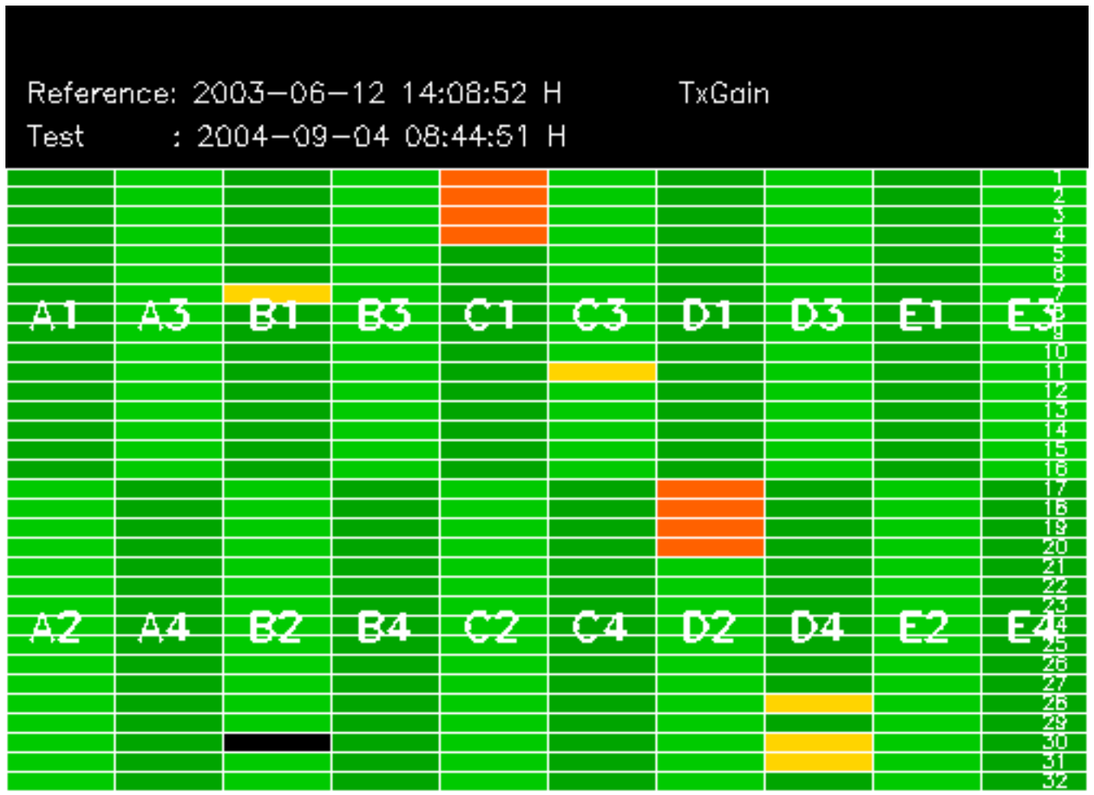

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-04 08:44:51 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 : 2004-09-04 08:44:51 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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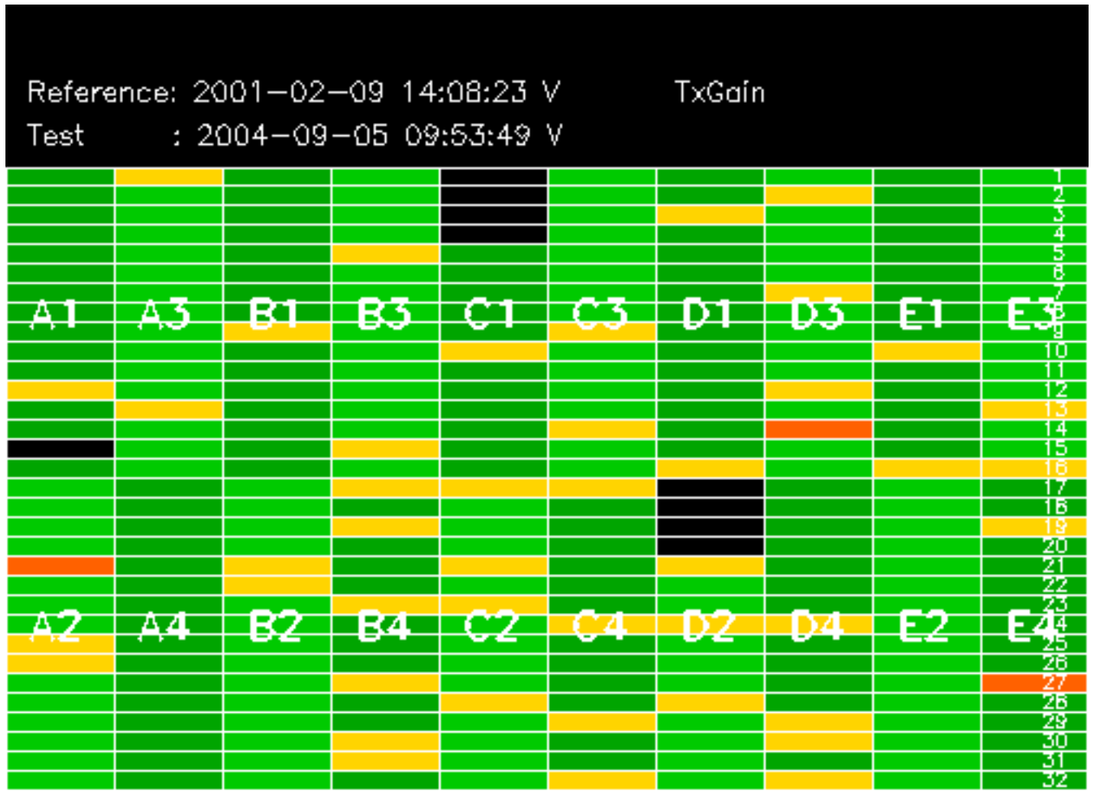
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-05 09:53:49 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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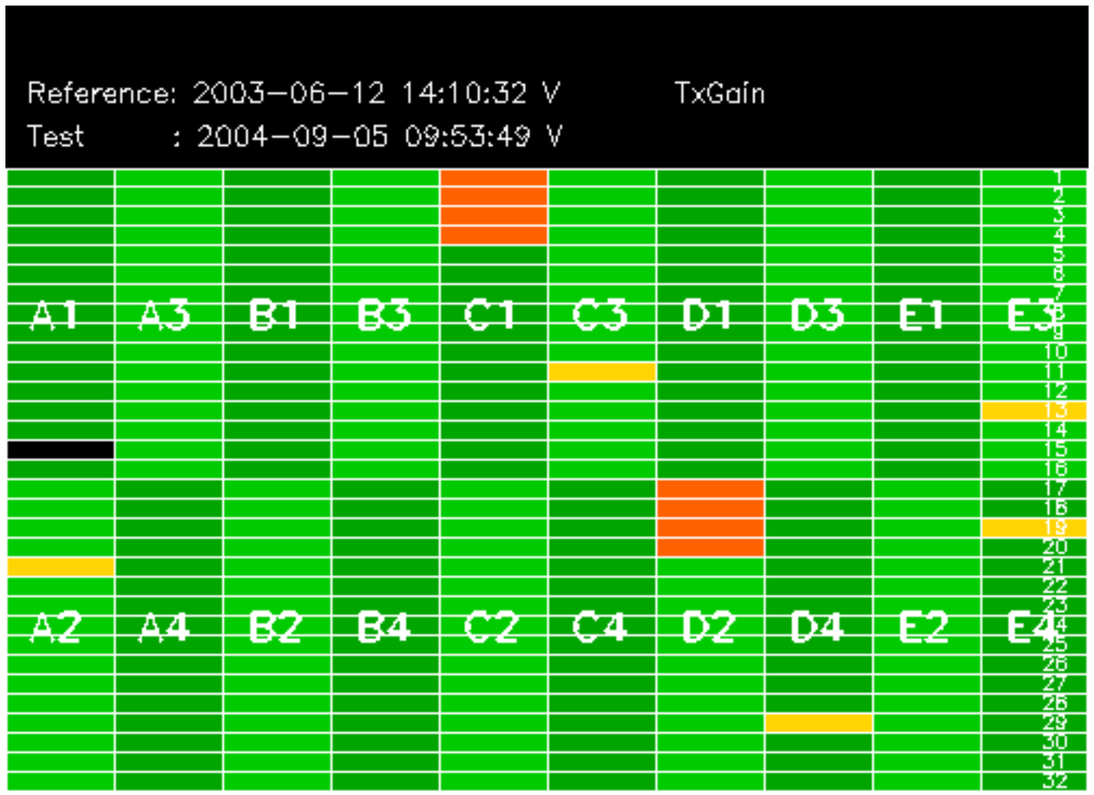
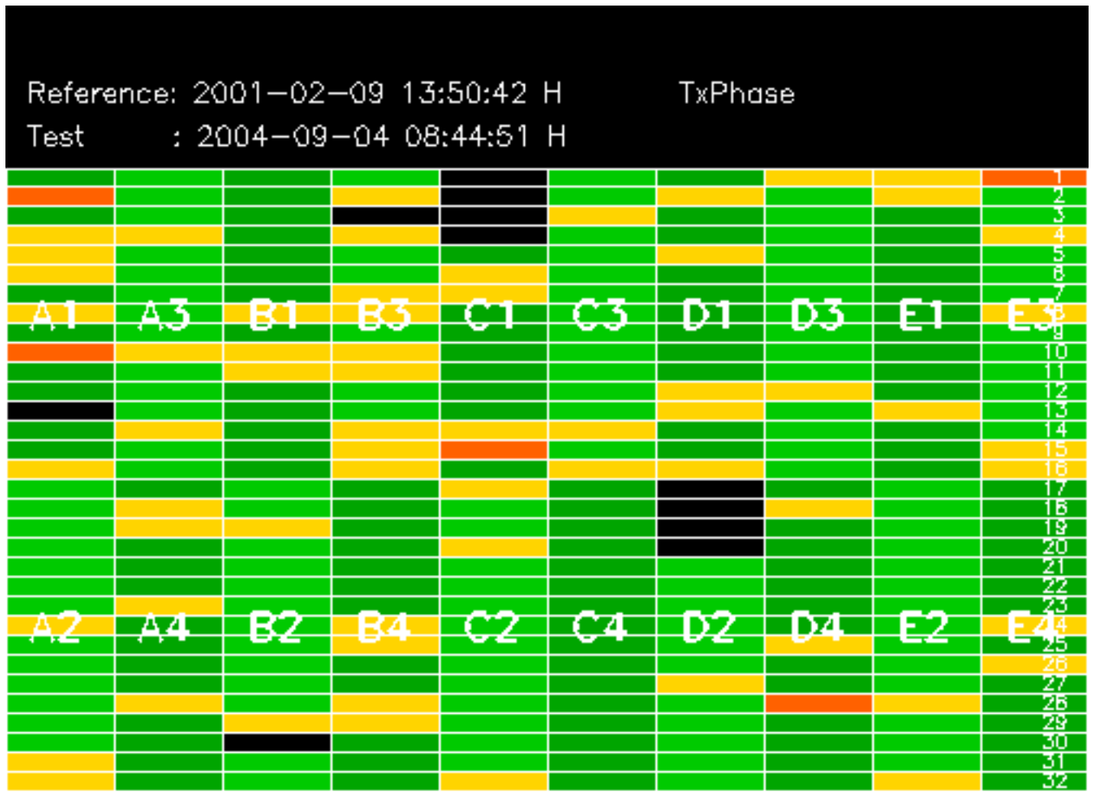
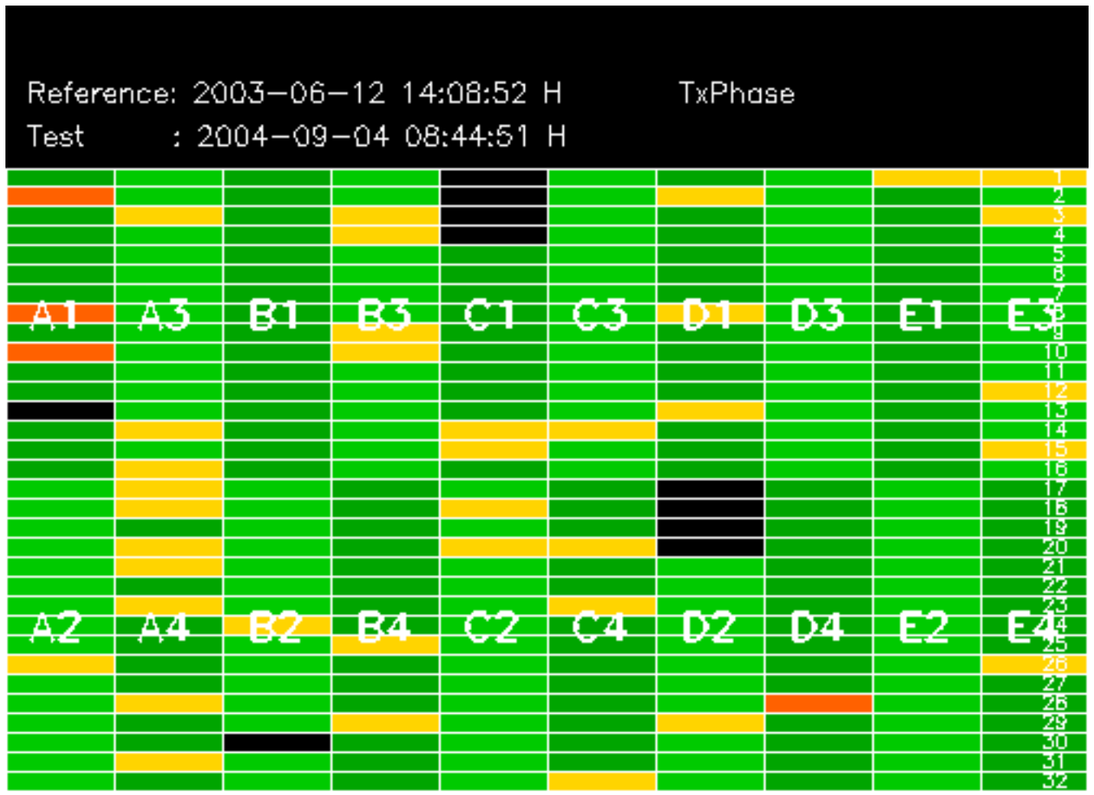

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-09-04 08:44:51 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 : 2004-09-04 08:44:51 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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E4
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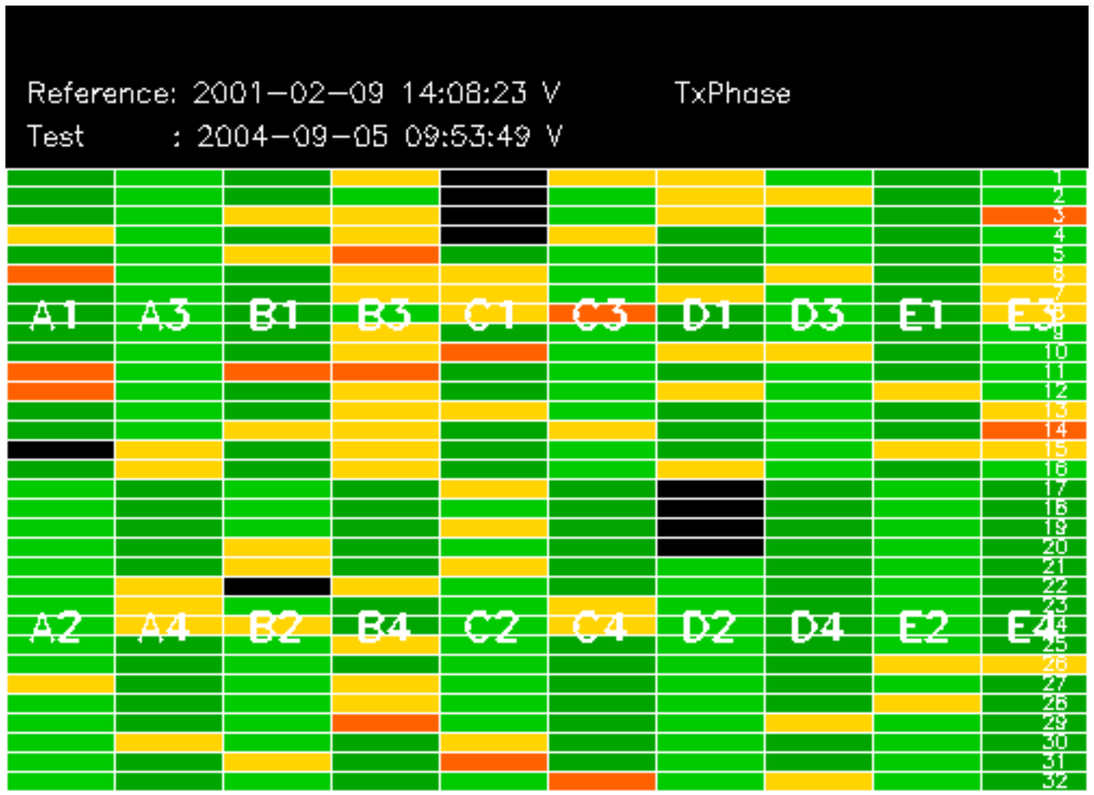
Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-09-05 09:53:49 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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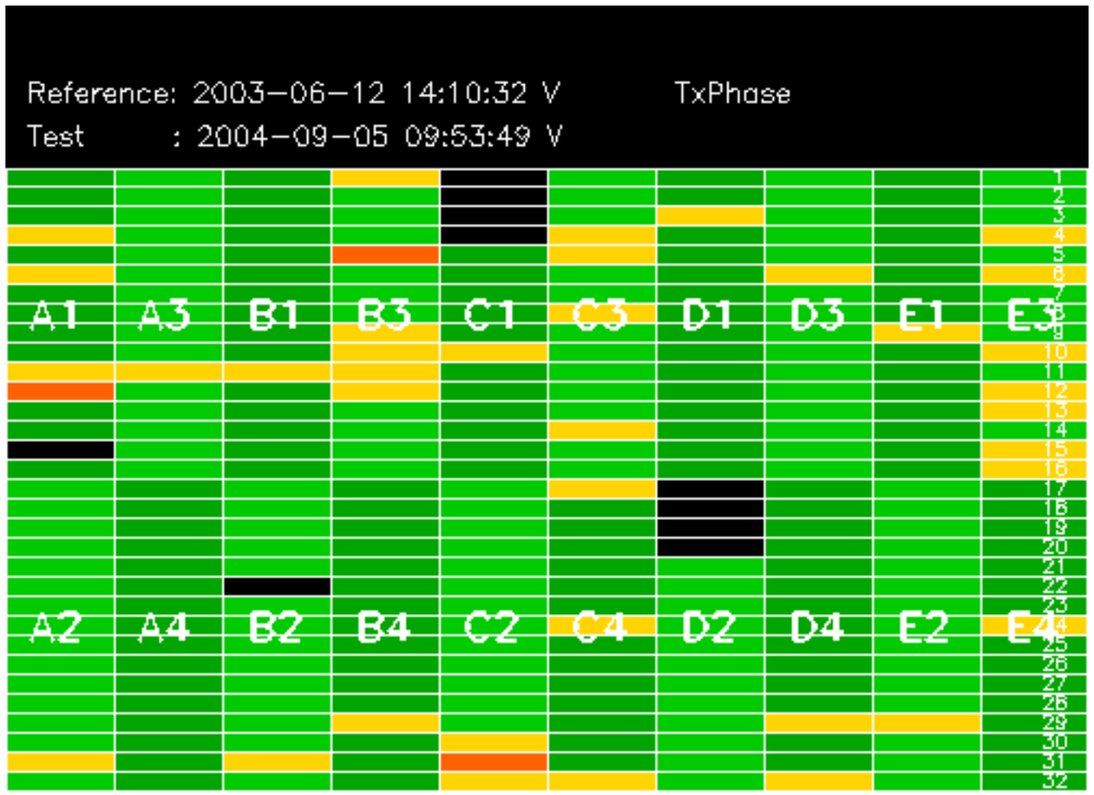
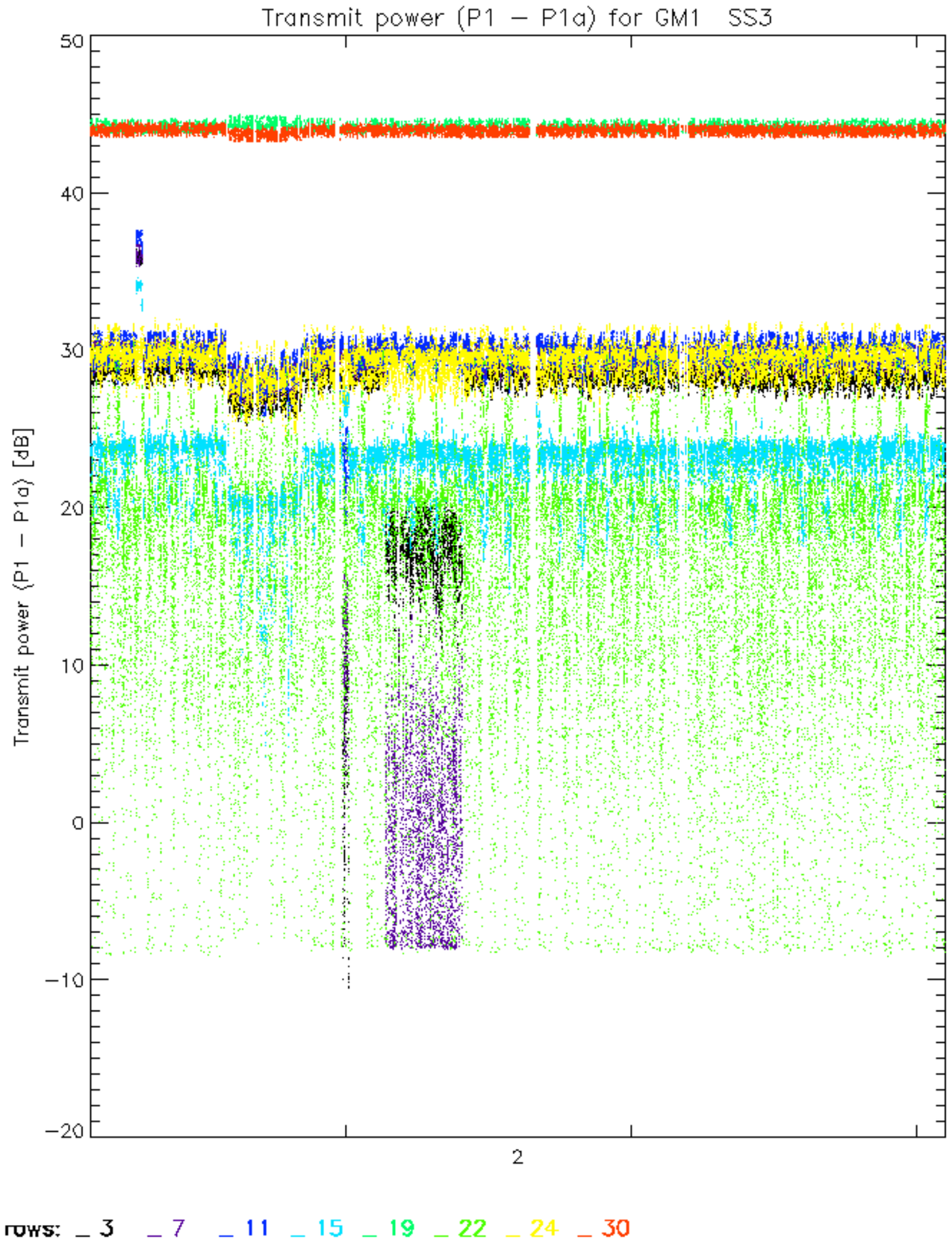
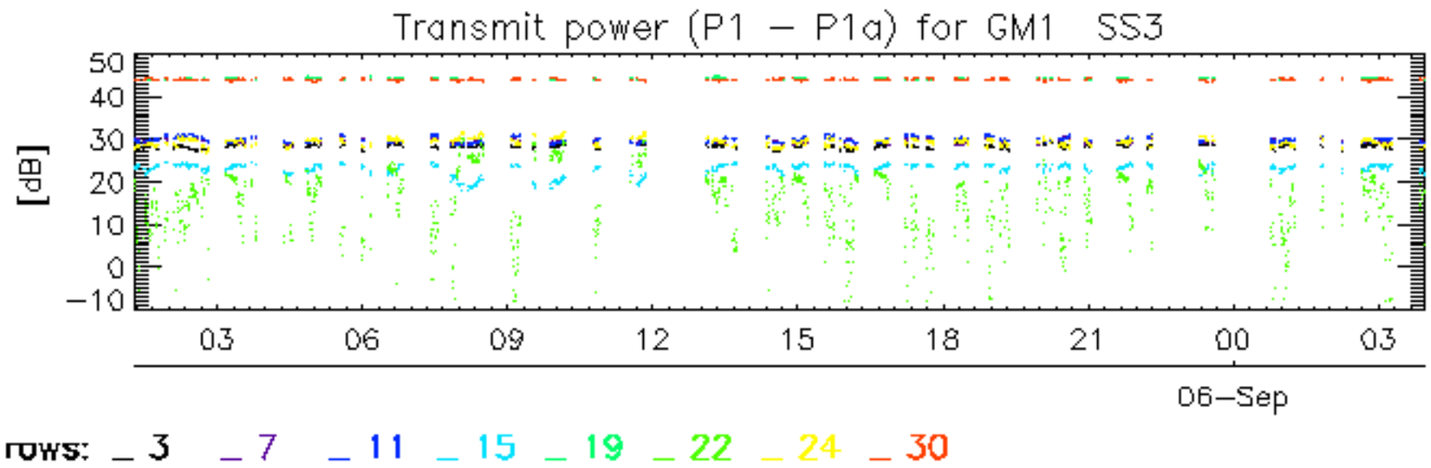
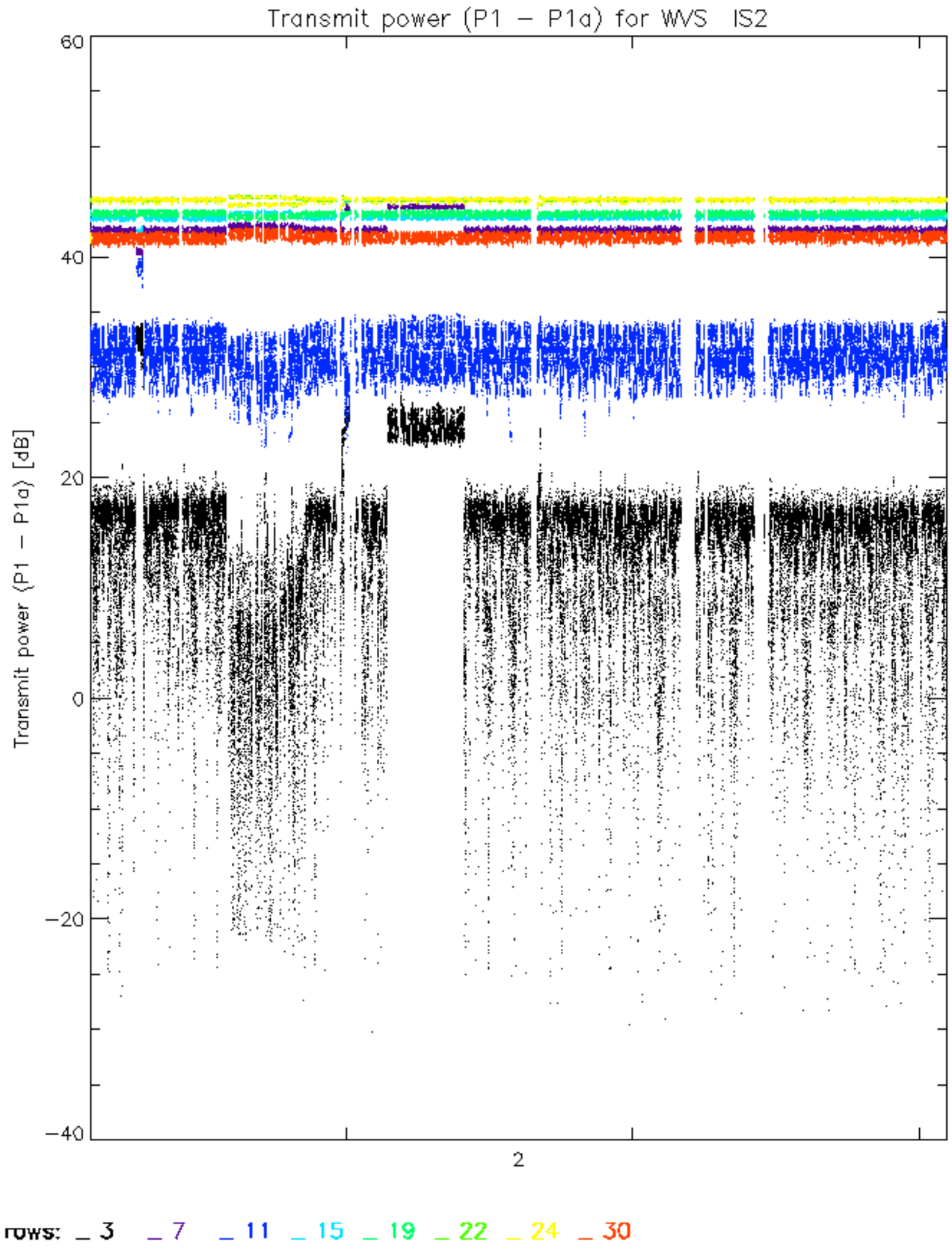
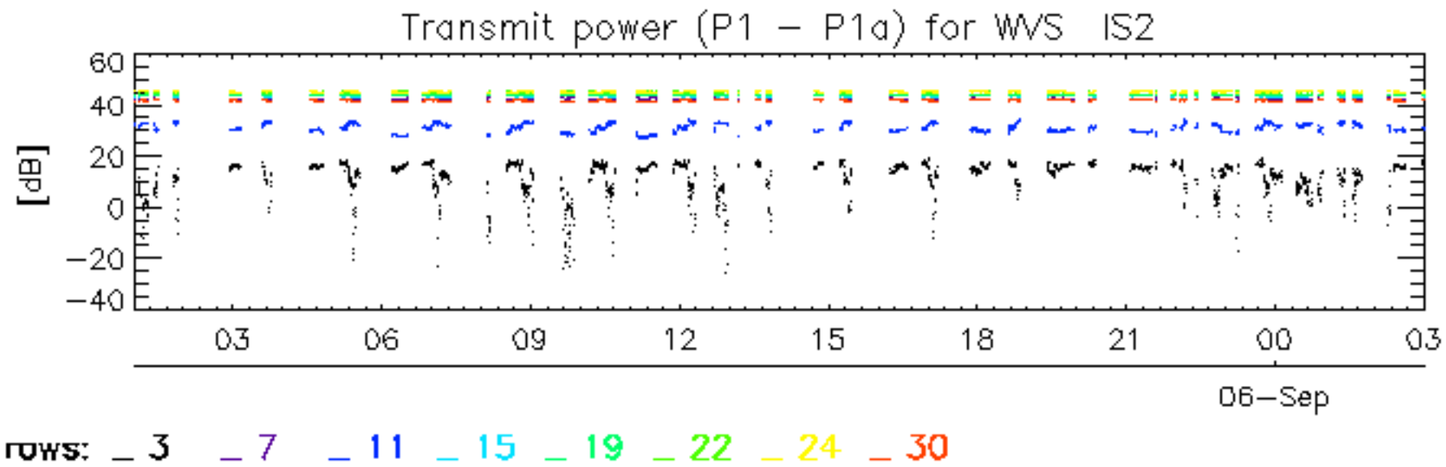

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
50
40
30
20
10
0
−10
−20
Transmit power ⟨P1 – P1a⟩ [dB]
2
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 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
06–Sep
rows: 3
7
11
15
19
22
24
30


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power ⟨P1 – P1a⟩ [dB]
2
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 − P1a) for WVS IS2
[dB]
60
40
20
0
−20
−40
03
06
09
12
15
18
21
00
03
06−Sep
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.