PRELIMINARY REPORT OF 040907

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

last update on Tue Sep 7 13:11:41 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	20040906 092212

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.

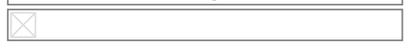
4.1 - Daily statistics

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	-3.468111	0.052676	0.097090
7	P1	-3.315558	0.057006	0.049361
11	P1	-4.660800	0.113913	0.135791
15	P1	-5.764862	0.118642	0.097261
19	P1	-3.472403	0.005541	-0.031816
22	P1	-4.534813	0.010910	0.015967
24	P1	-4.968372	0.019962	0.020658
30	P1	-6.961436	0.020773	-0.070277

3	P1	-15.916488	1.615301	-0.210185
7	P1	-14.046337	0.167933	0.073967
11	P1	-20.175484	0.417956	-0.300271
15	P1	-11.789729	0.167870	0.003914
19	P1	-13.910534	0.032874	-0.059748
22	P1	-16.142567	0.333806	0.128577
24	P1	-14.516657	0.318605	0.132994
30	P1	-17.864578	0.460607	-0.244483

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.301413	0.083349	-0.015366
7	P2	-22.607080	0.137659	0.002305
11	P2	-15.293341	0.175960	0.114062
15	P2	-7.058801	0.097730	0.023956
19	P2	-9.563404	0.197282	0.056417
22	P2	-17.341307	0.120758	0.088542
24	P2	-20.746891	0.090067	-0.031798
30	P2	-19.233961	0.082500	0.124667

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.142884	0.002849	-0.017143
7	P3	-8.142887	0.002848	-0.017112
11	P3	-8.142919	0.002847	-0.016950
15	P3	-8.142921	0.002848	-0.016878
19	P3	-8.142918	0.002847	-0.016925
22	P3	-8.142898	0.002847	-0.016993
24	P3	-8.142888	0.002847	-0.017029
30	P3	-8.142856	0.002841	-0.017120

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	-2.709519	0.257145	-0.097731
7	P1	-2.959283	0.209978	0.029774
11	P1	-3.896599	0.158698	0.140940
15	P1	-3.544487	0.128279	0.137597
19	P1	-3.483393	0.013629	-0.017566
22	P1	-5.701383	0.038722	-0.026815
24	P1	-3.916302	0.015108	-0.062908
30	P1	-6.177963	0.061962	-0.079522
3	P1	-10.438951	1.048093	-0.492037
7	P1	-10.069004	0.170906	-0.026543
11	P1	-12.158511	0.112946	-0.067362
15	P1	-11.662304	0.100079	-0.044154
19	P1	-15.620733	0.048981	-0.004787
22	P1	-23.381136	1.133405	-0.096888
24	P1	-17.920572	0.229832	-0.144133
30	P1	-20.449825	1.217079	0.046023

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.982330	0.056123	-0.049767
7	P2	-22.748964	0.044627	0.006266
11	P2	-10.972857	0.064395	0.062095
15	P2	-4.952614	0.034278	-0.039645
19	P2	-6.761559	0.050351	-0.054093
22	P2	-7.441887	0.043046	-0.000743
24	P2	-11.046098	0.048864	-0.054896
30	P2	-22.184048	0.033398	0.059955

P3 Cyclic statistics

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

3	P3	-7.993460	0.003688	-0.031395
7	P3	-7.993460	0.003691	-0.031272
11	P3	-7.993537	0.003679	-0.031106
15	P3	-7.993503	0.003683	-0.031378
19	P3	-7.993410	0.003693	-0.031451
22	P3	-7.993433	0.003691	-0.031478
24	P3	-7.993511	0.003715	-0.031398
30	P3	-7.993428	0.003689	-0.031323

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	0.000475016
	stdev	2.18733e-07
MEAN Q	mean	0.000543124
	stdev	2.35160e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127992
	stdev	0.000962113

STDEV Q	mean	0.128211
	stdev	0.000972453

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

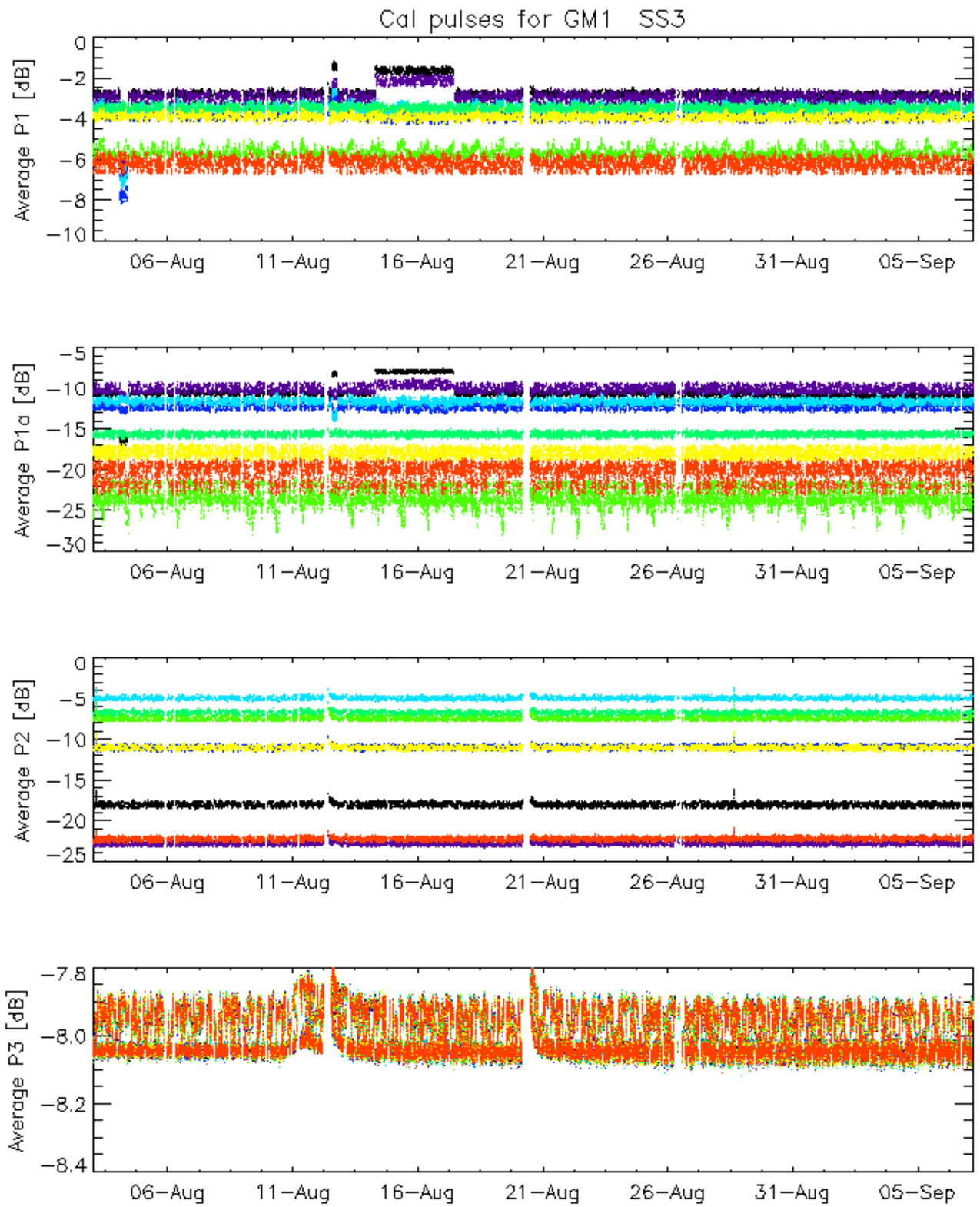
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

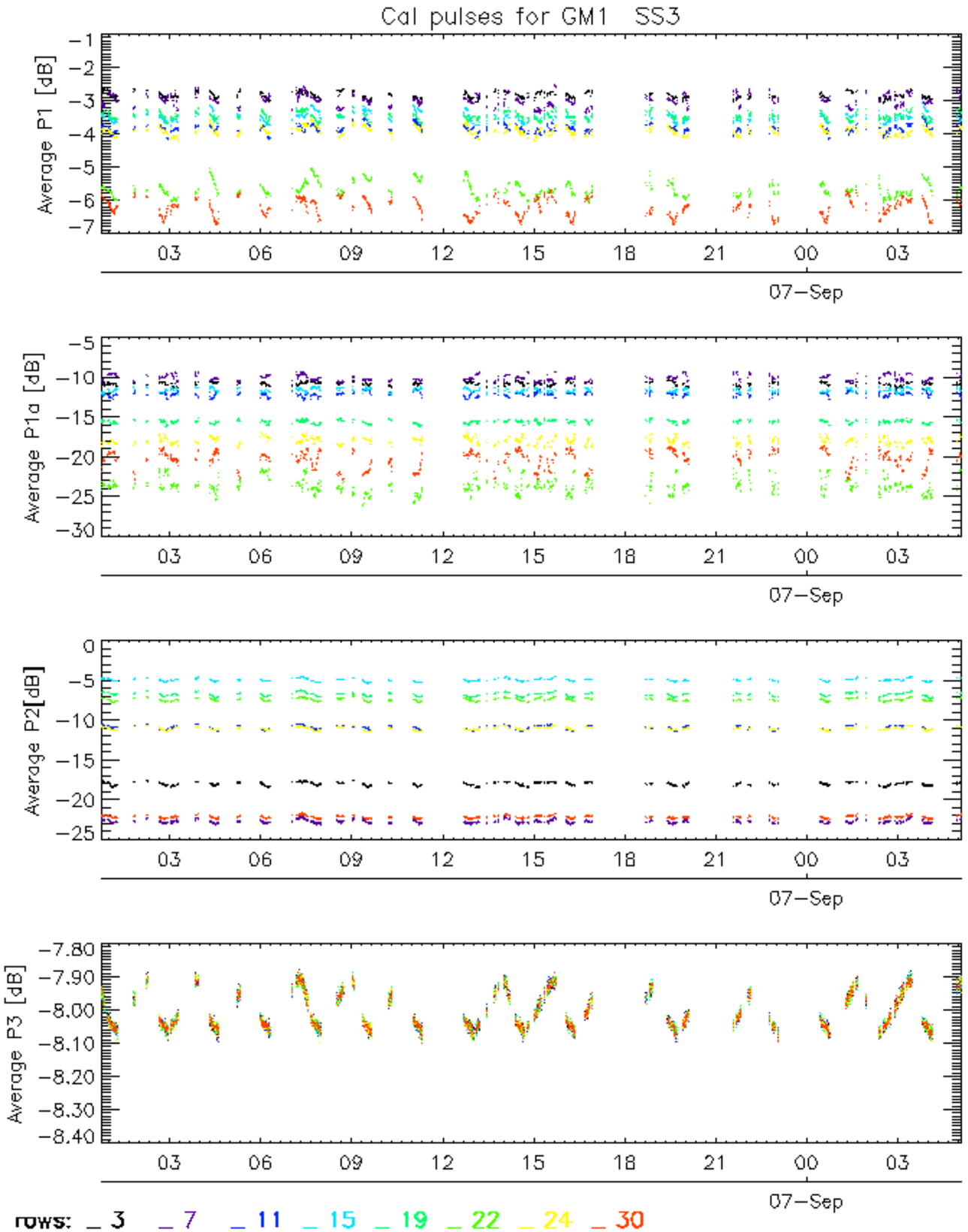
6.5 - Absolute Doppler for GM1

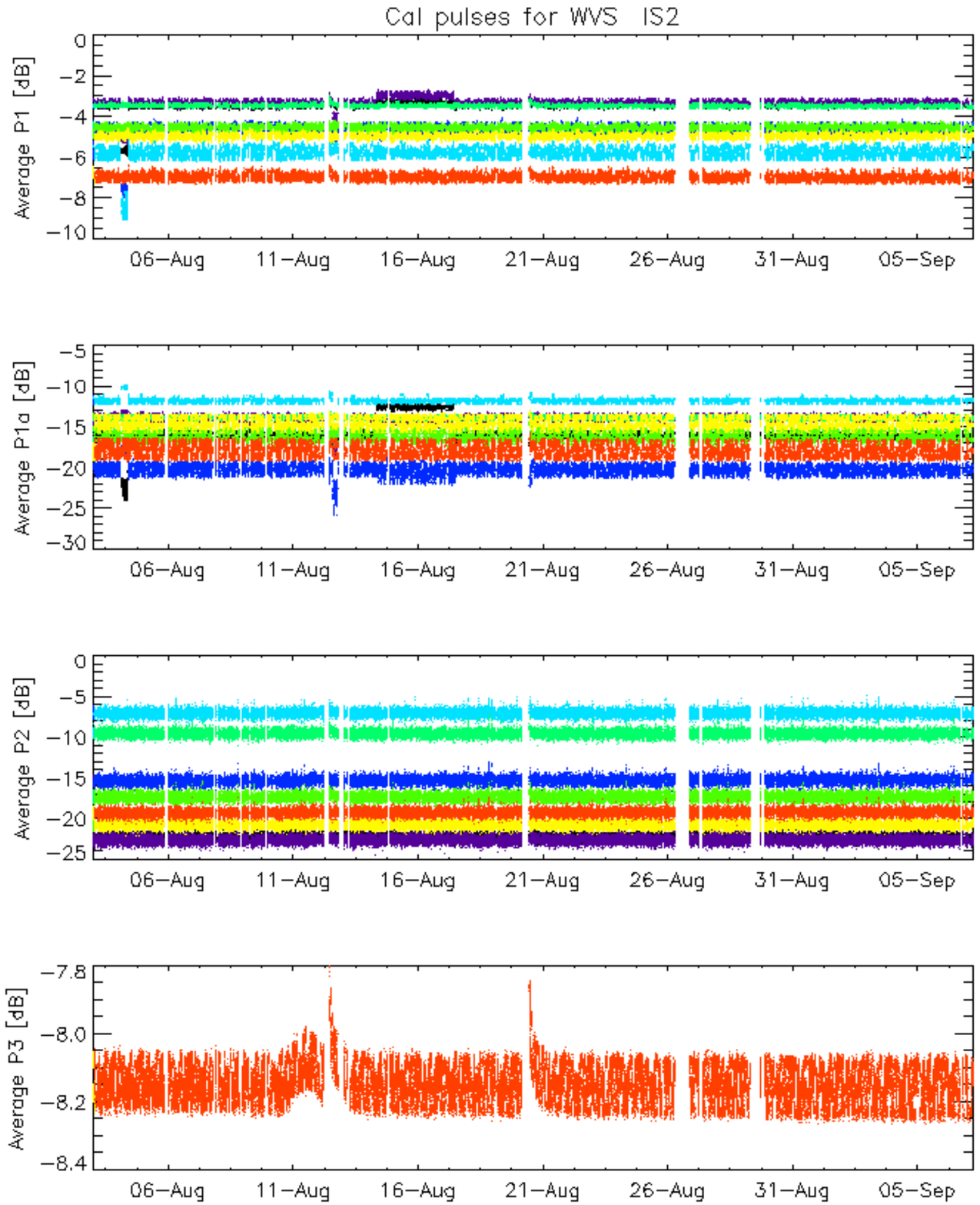
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

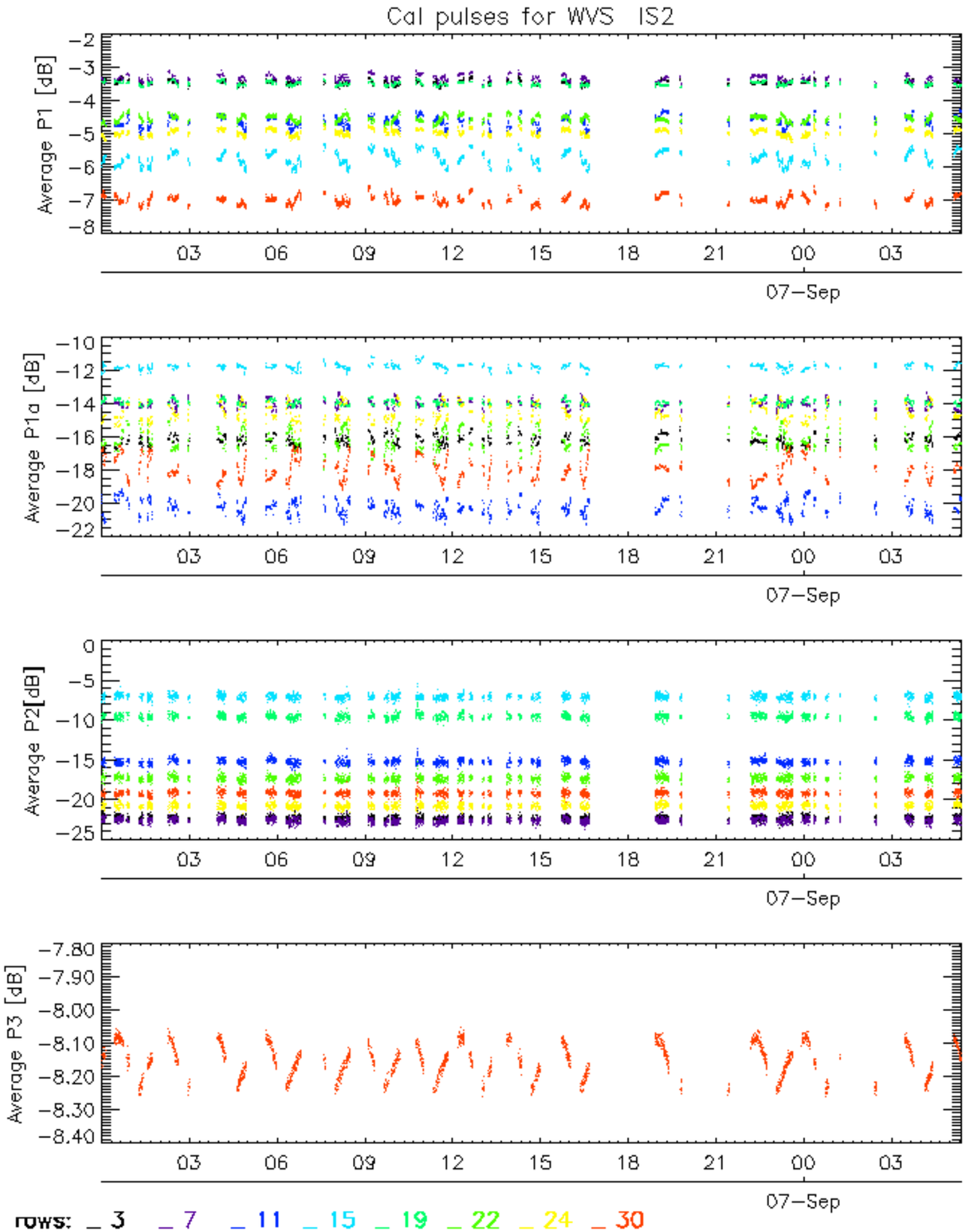
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

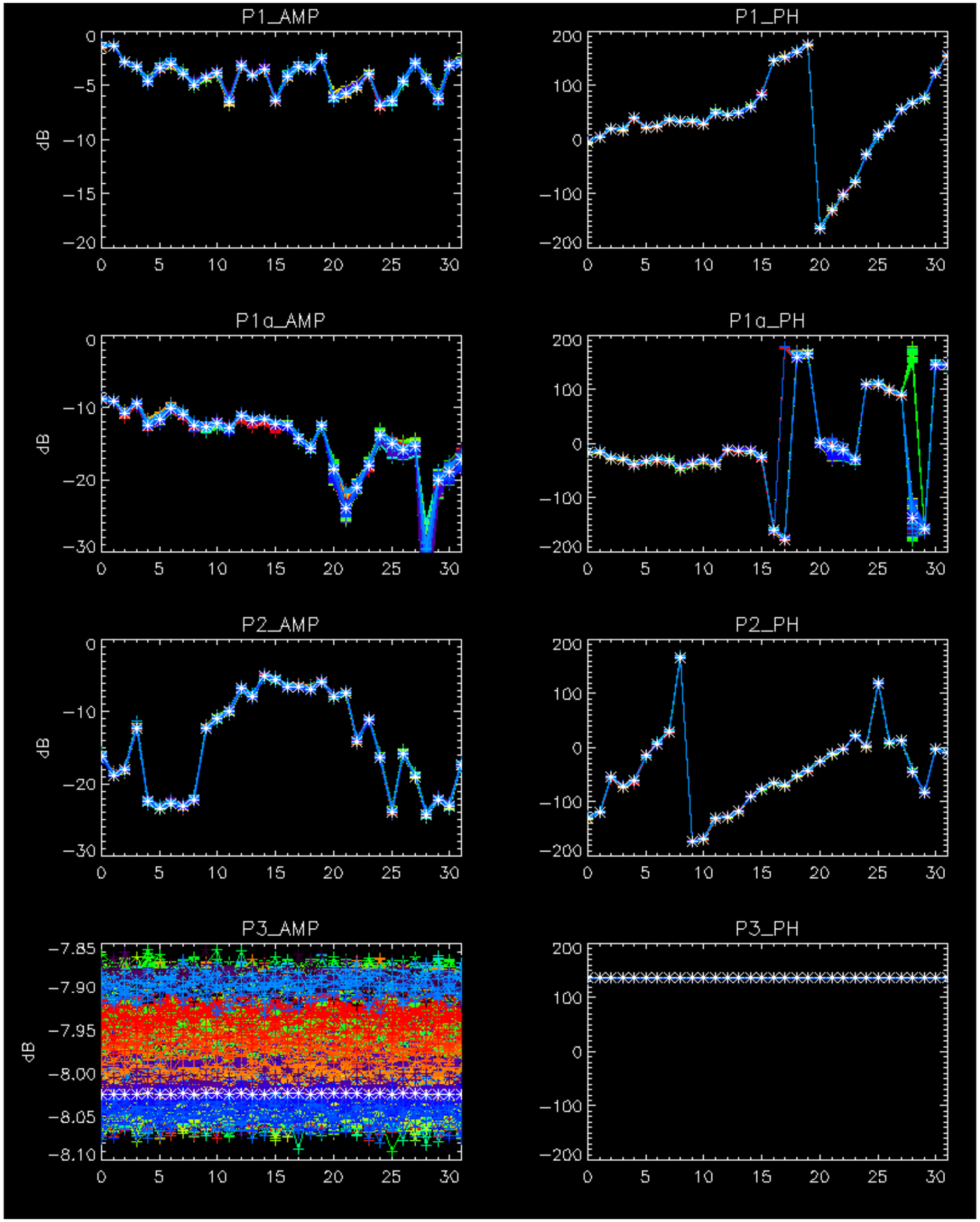

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

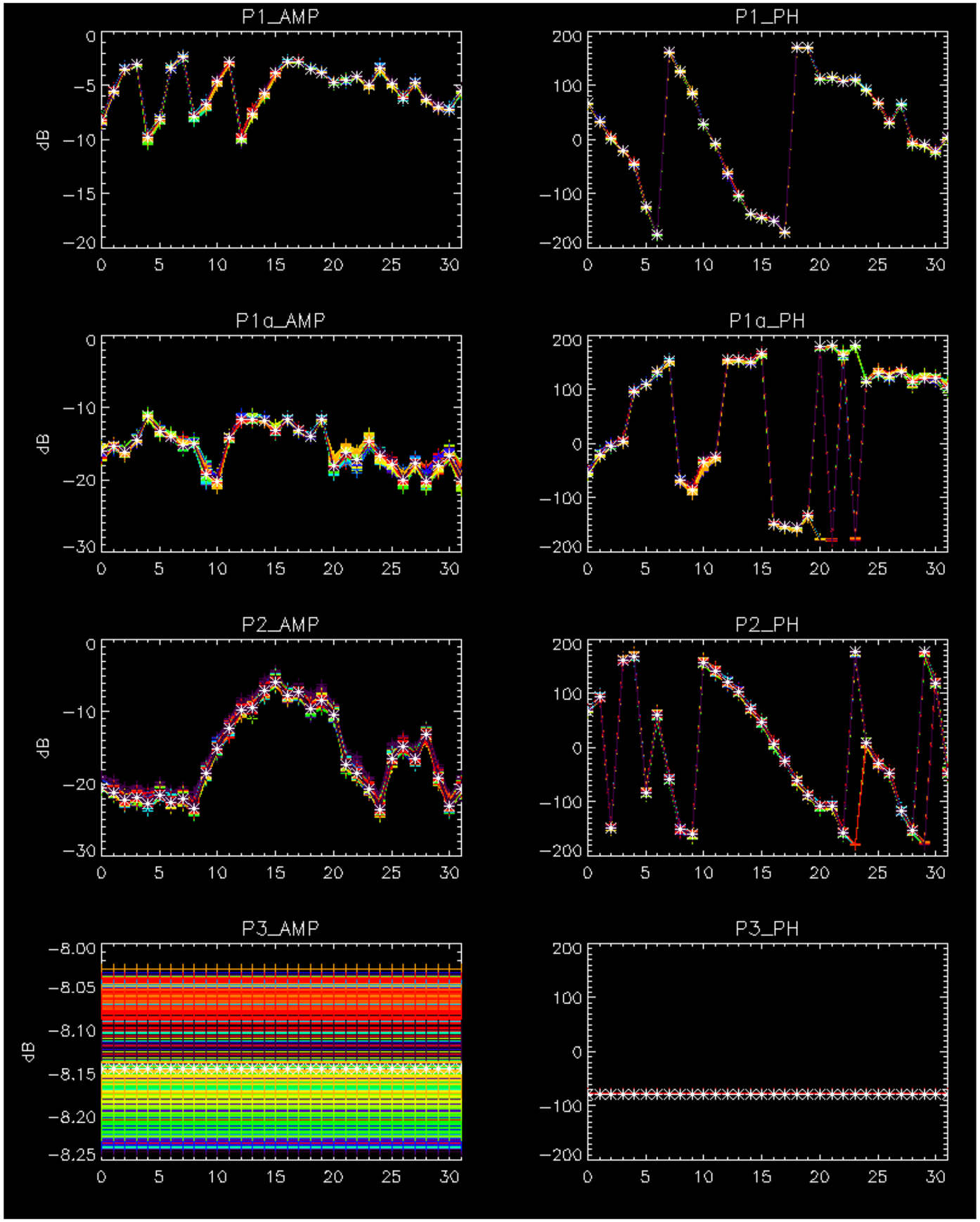

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
07−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
07−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
07−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
07−Sep
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]
−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
07−Sep
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
07−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
07−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
07−Sep
rows: 3 7 11 15 19 22 24 30

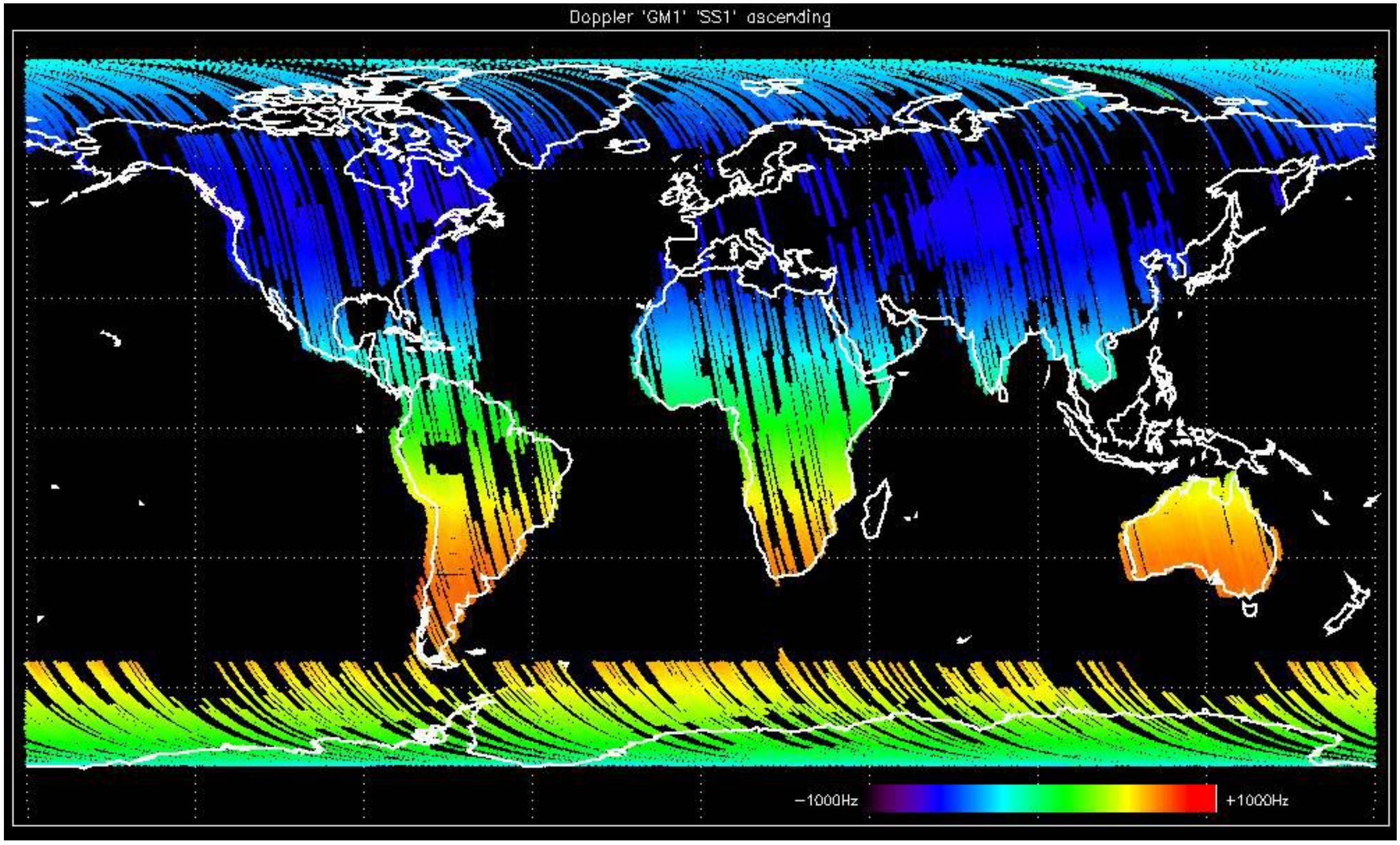
No anomalies observed.

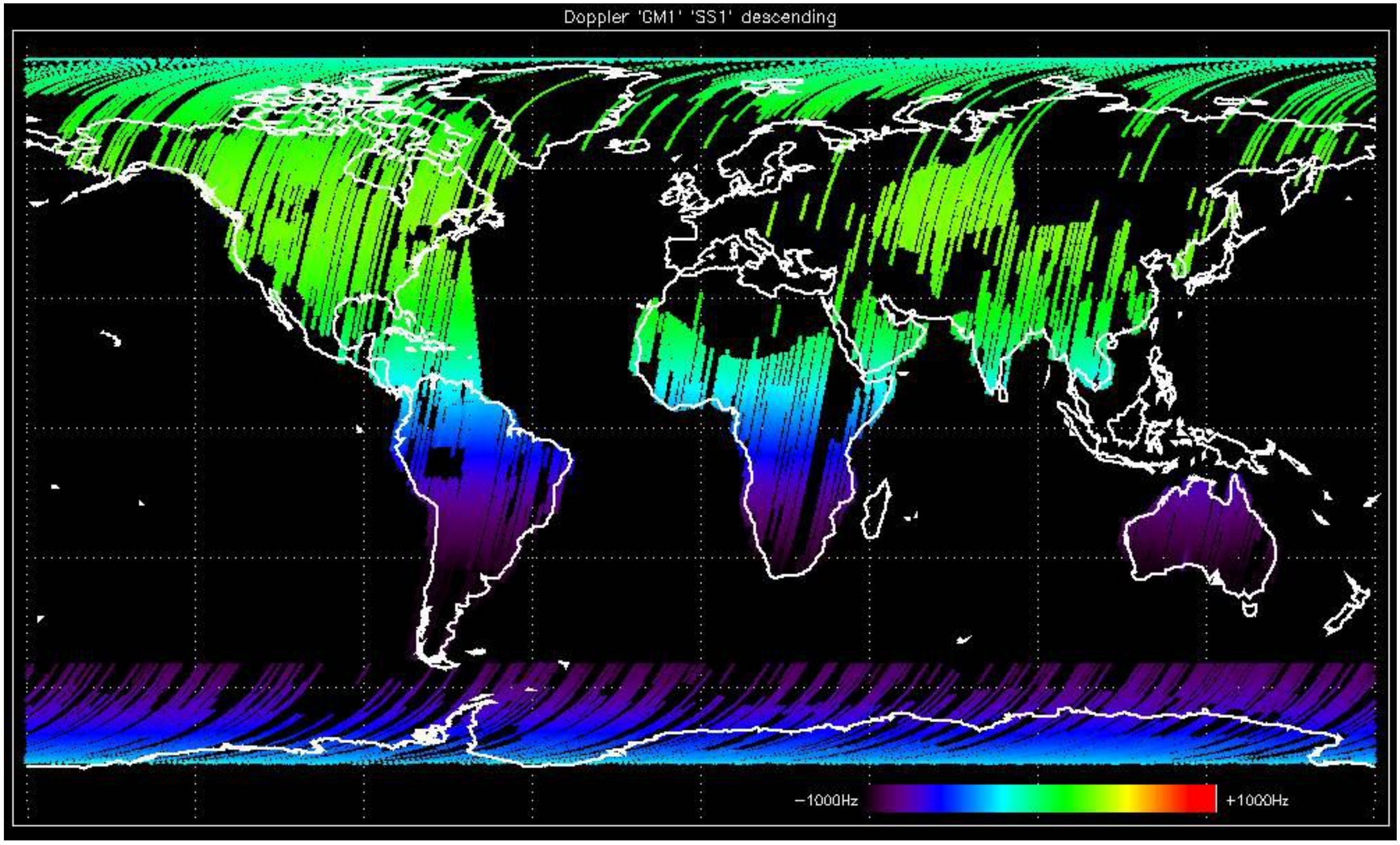

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

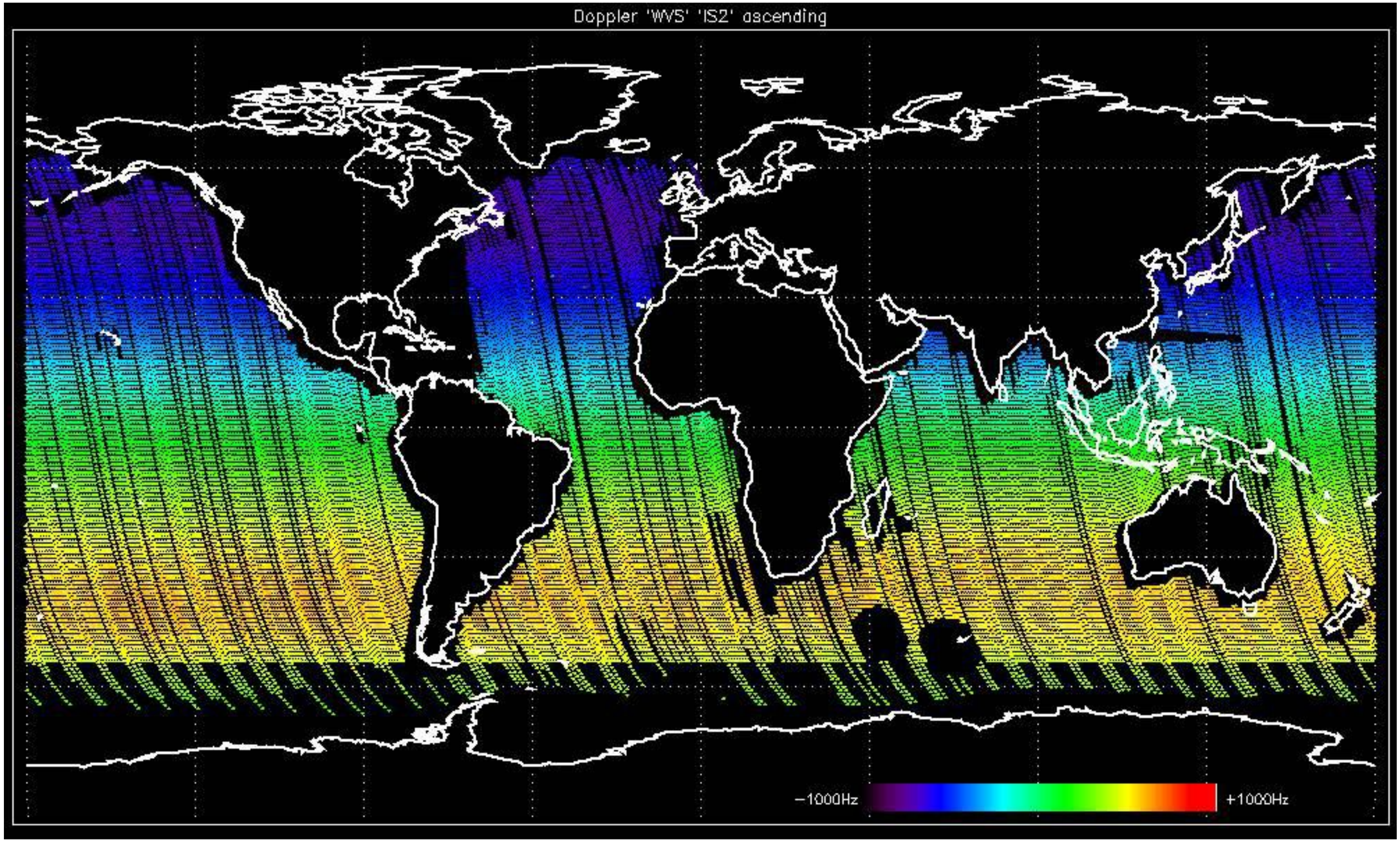

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

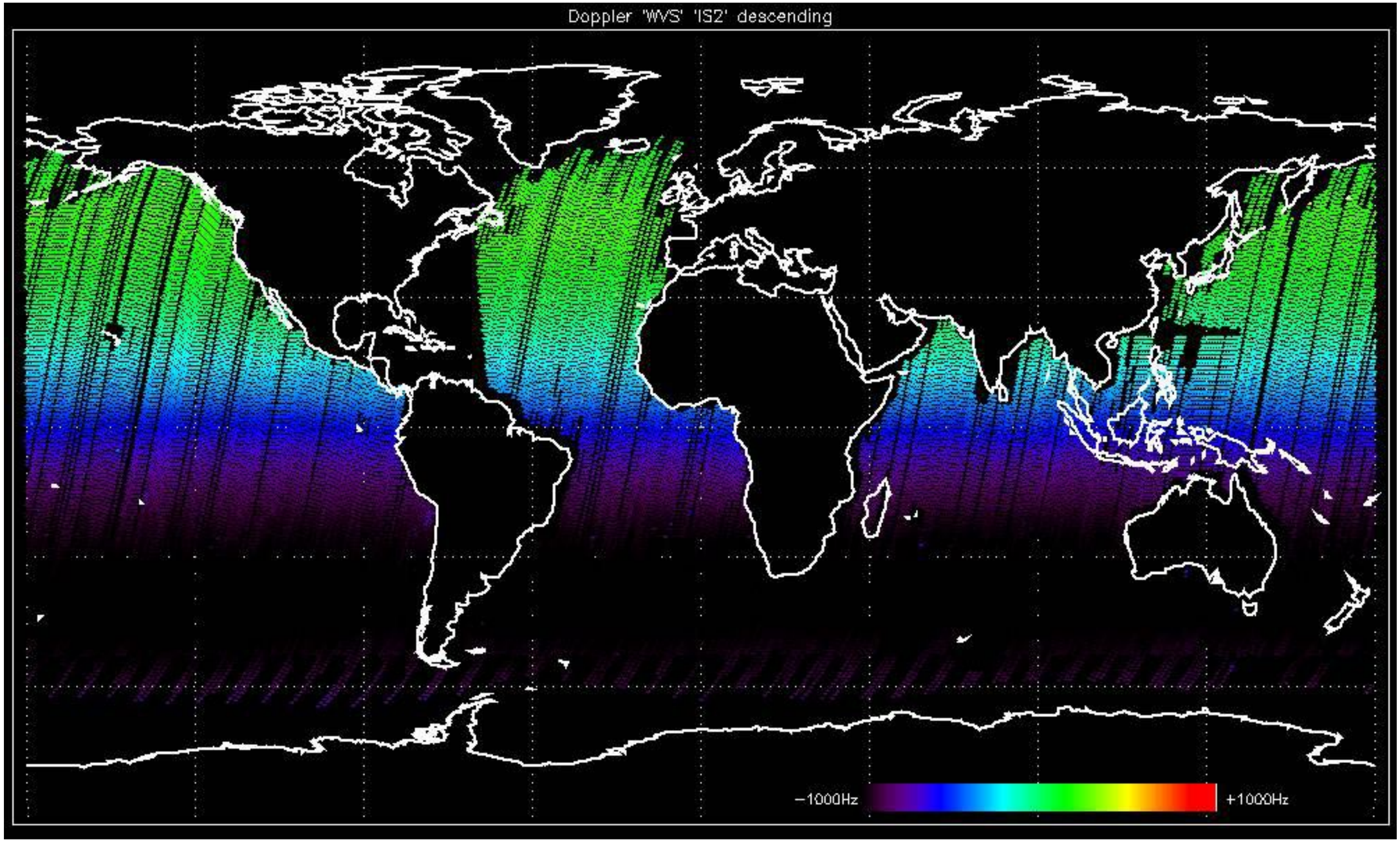
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

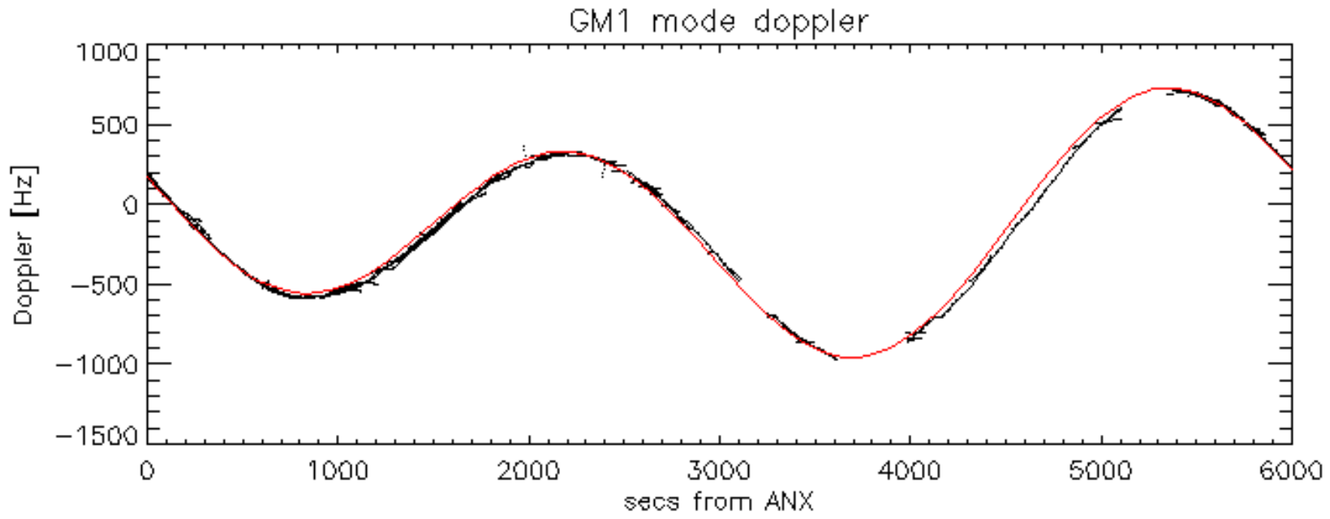
Preliminary report.The data is not yet controled

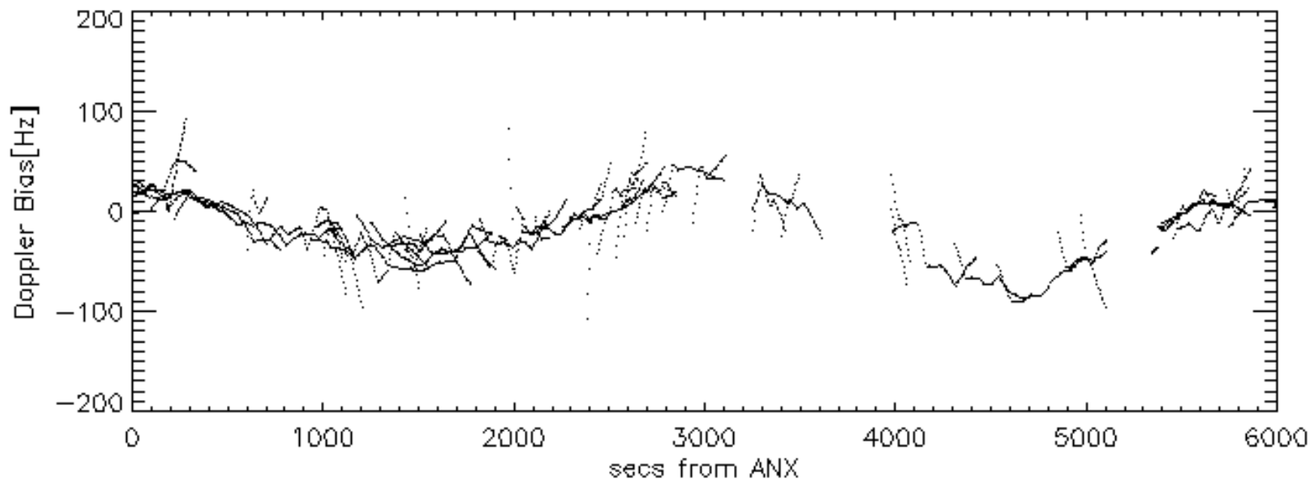

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

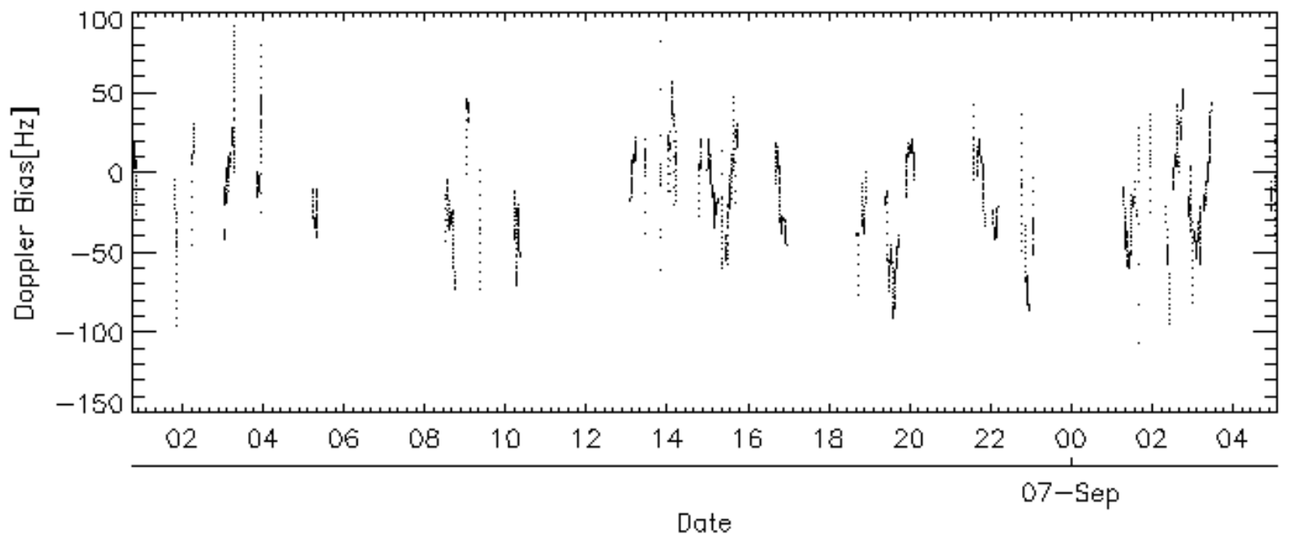

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

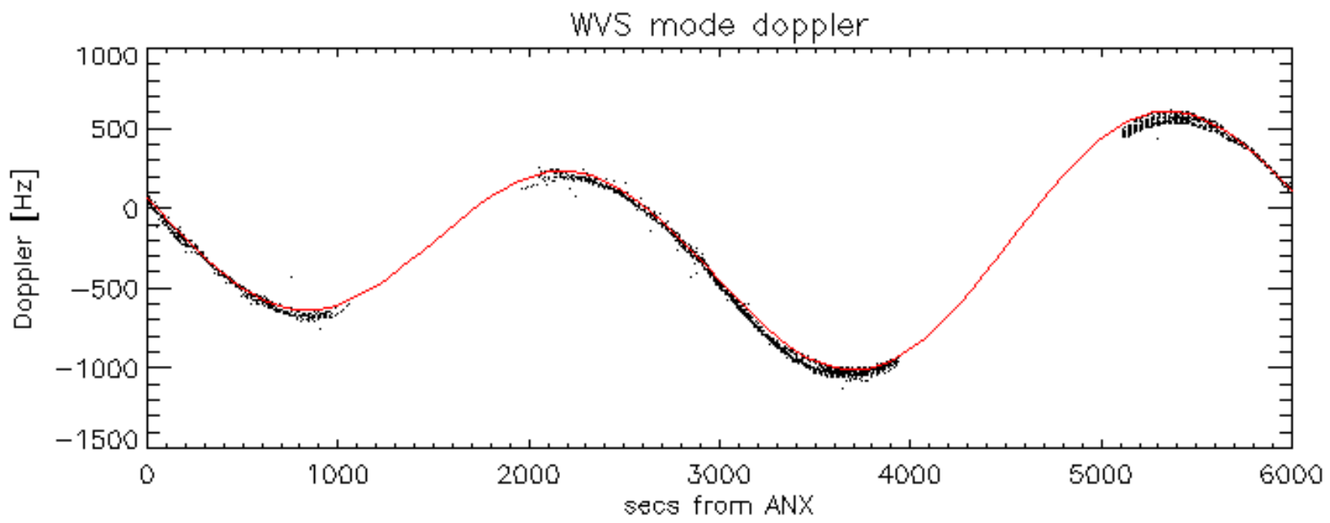

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

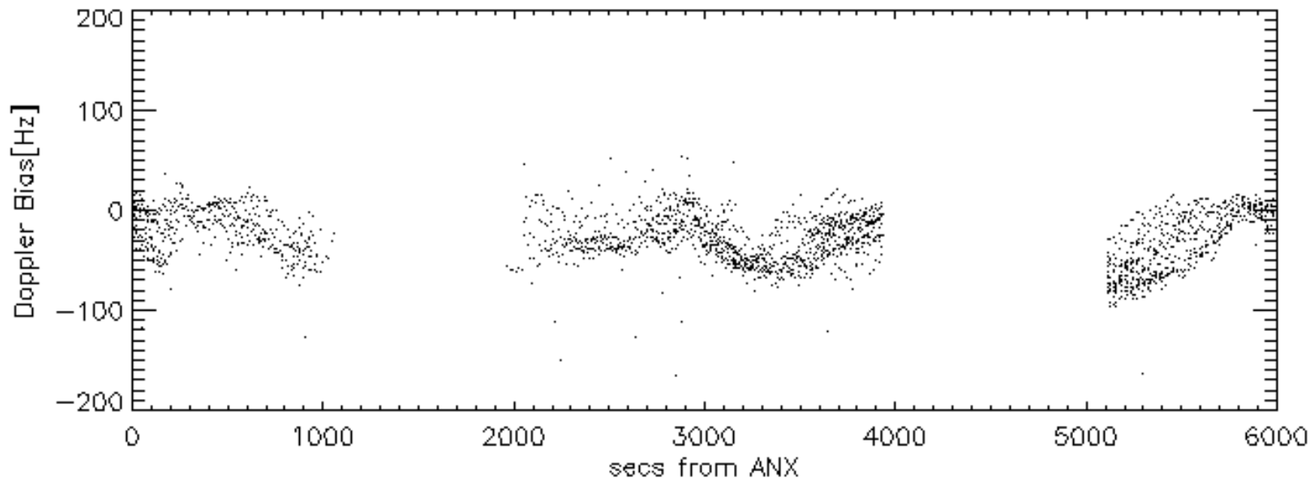

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

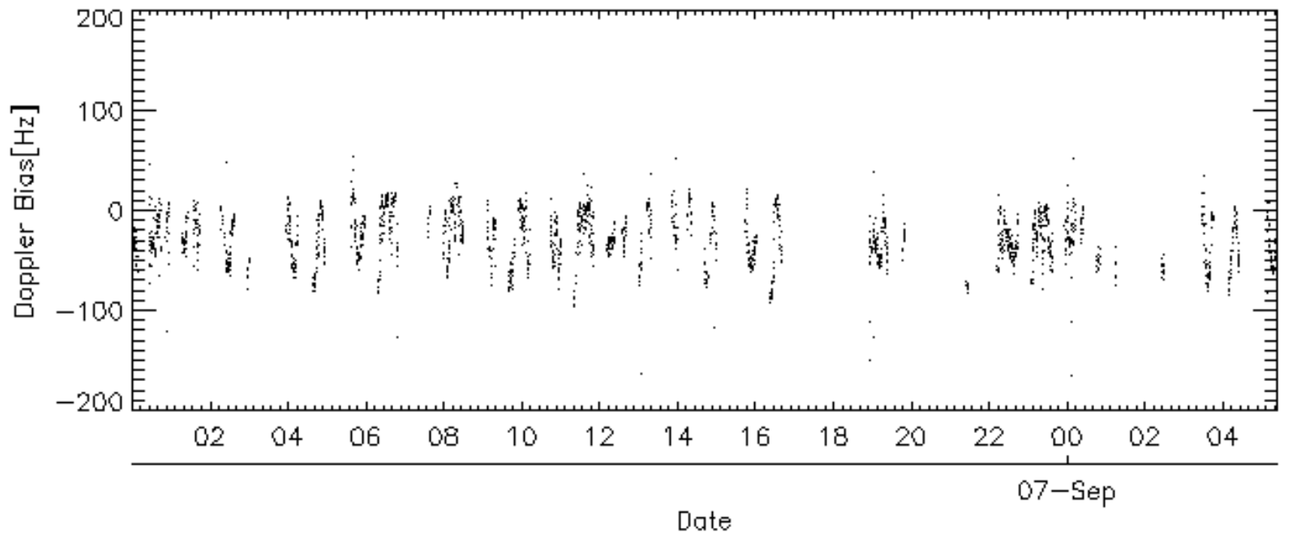

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

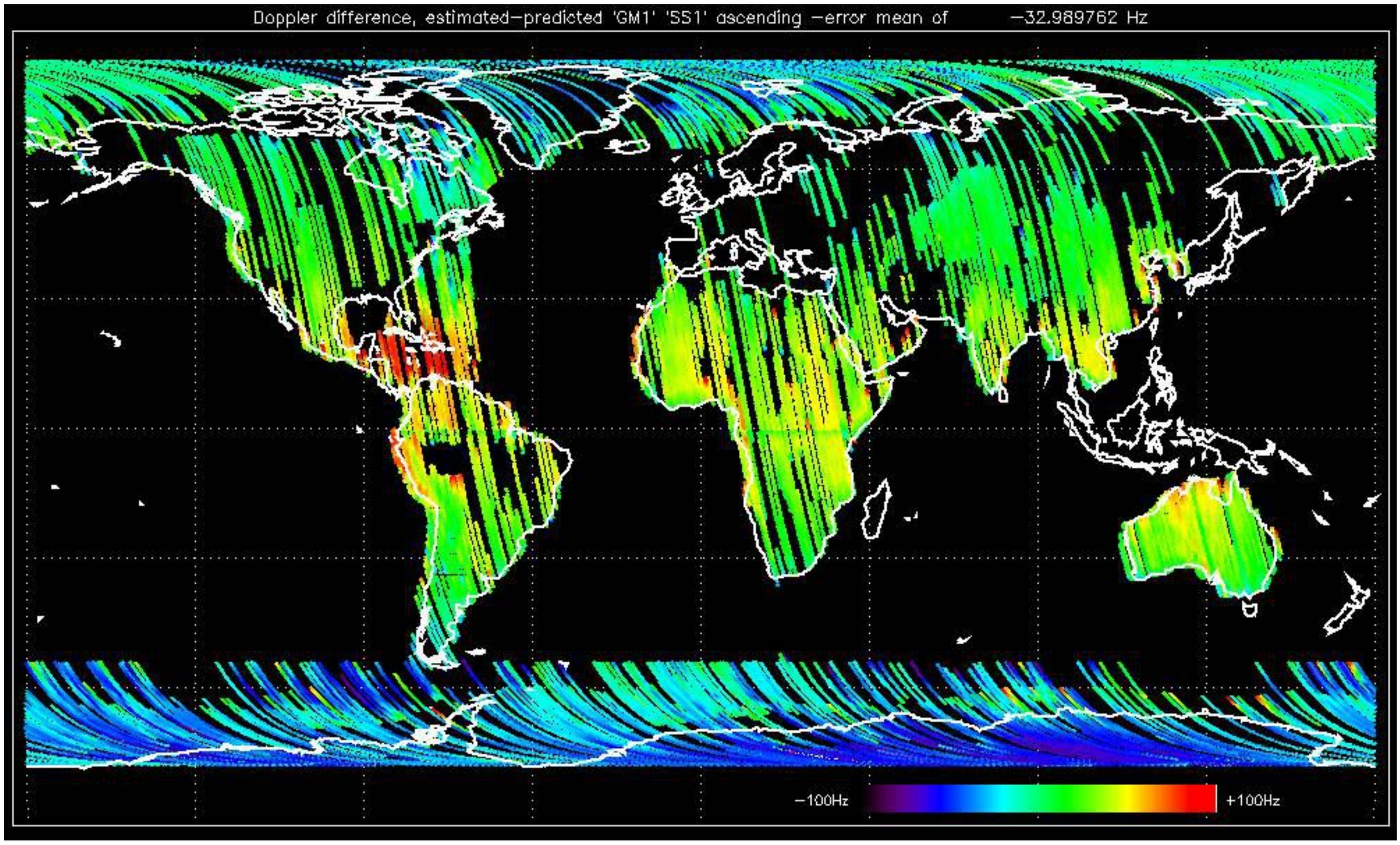

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

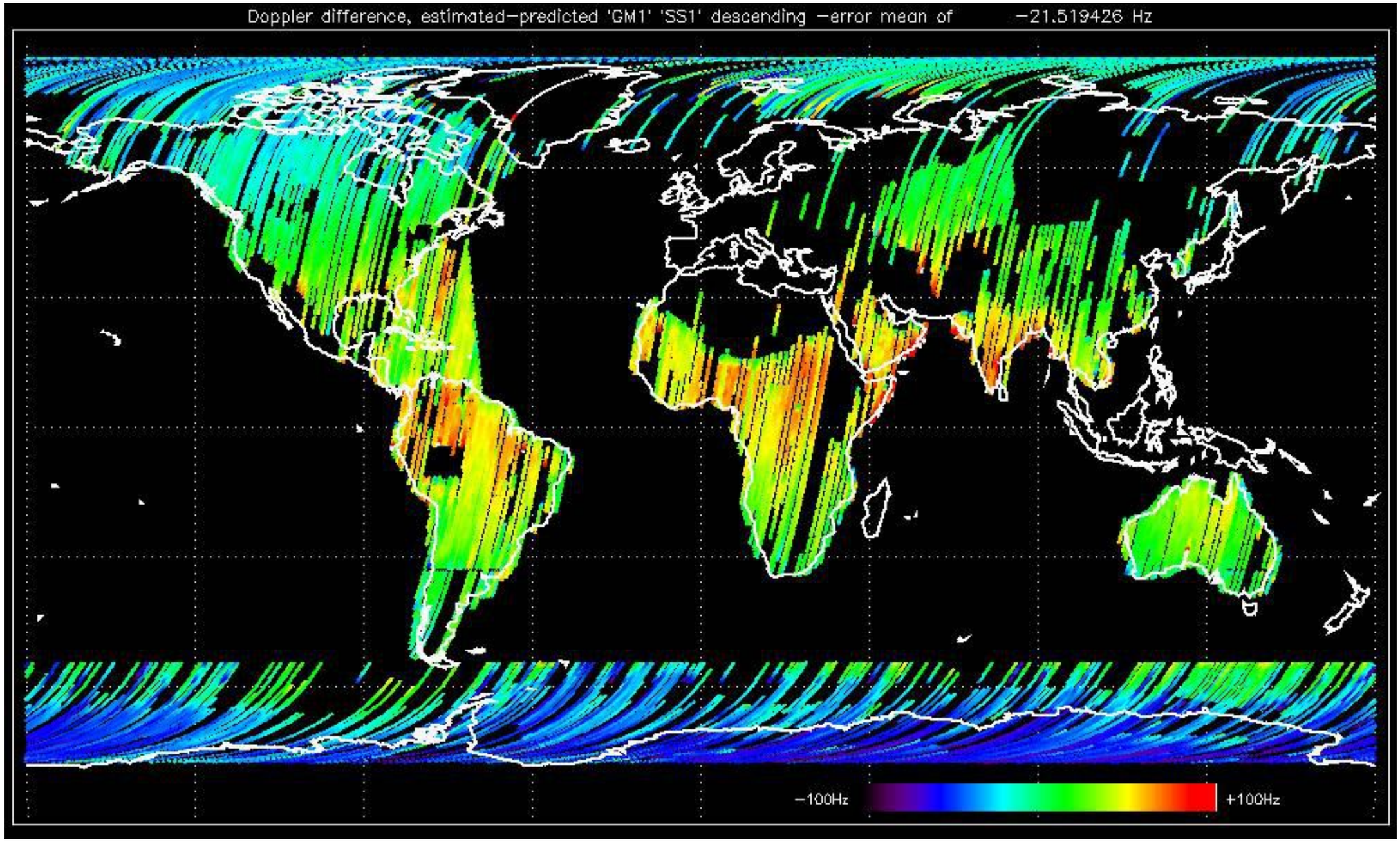

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
07−Sep
Date

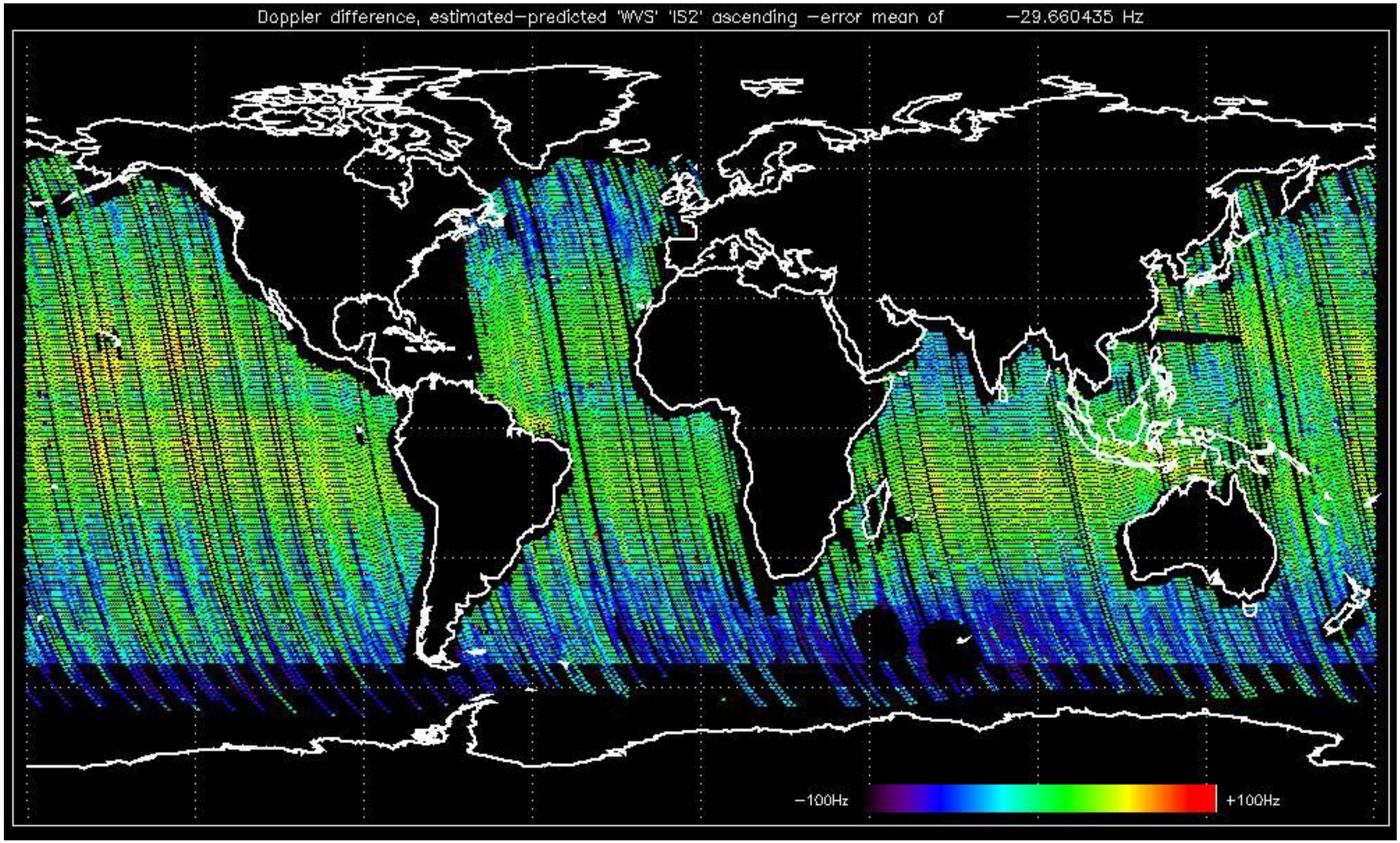

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

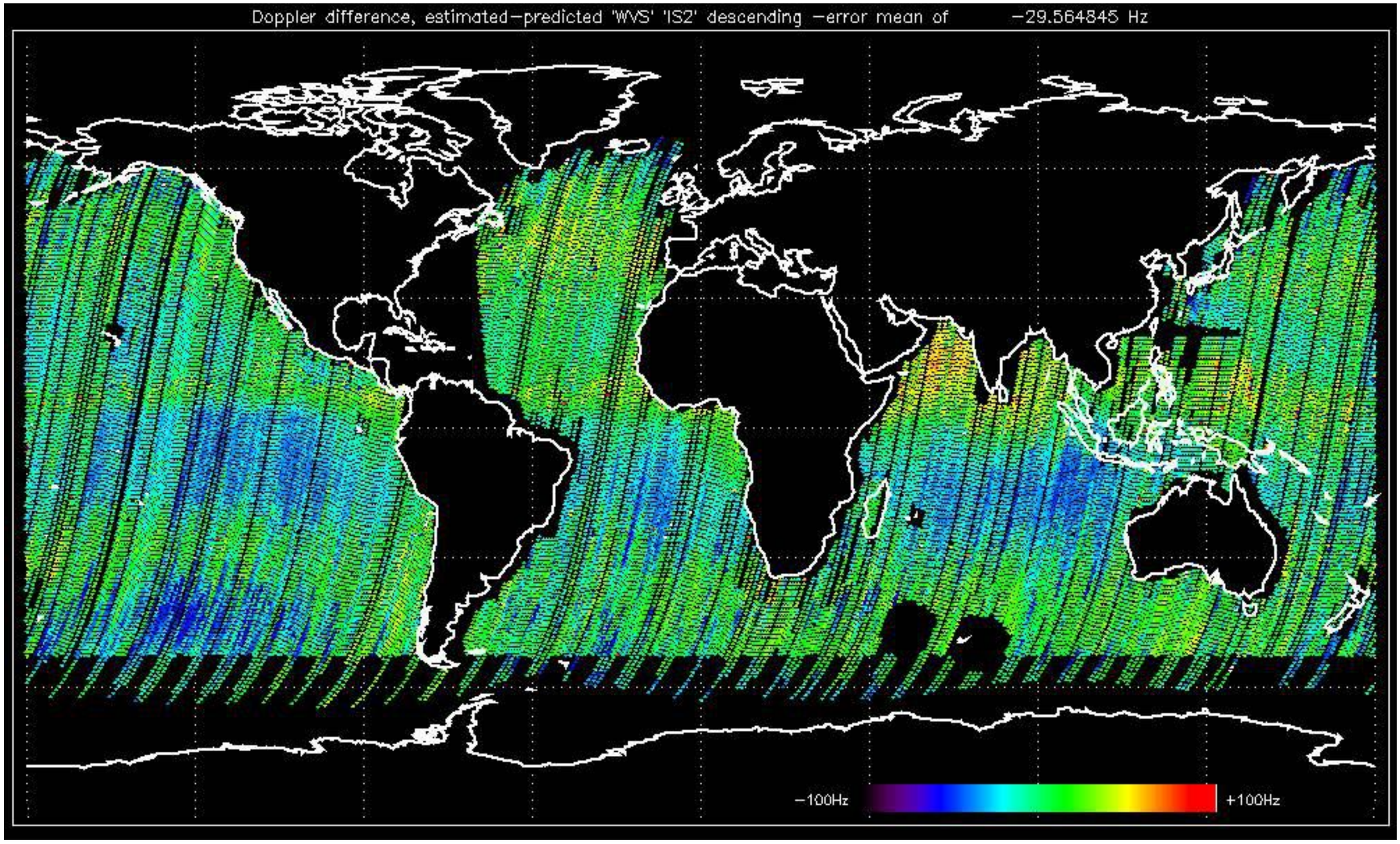

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −32.989762 Hz
−100Hz
+100Hz

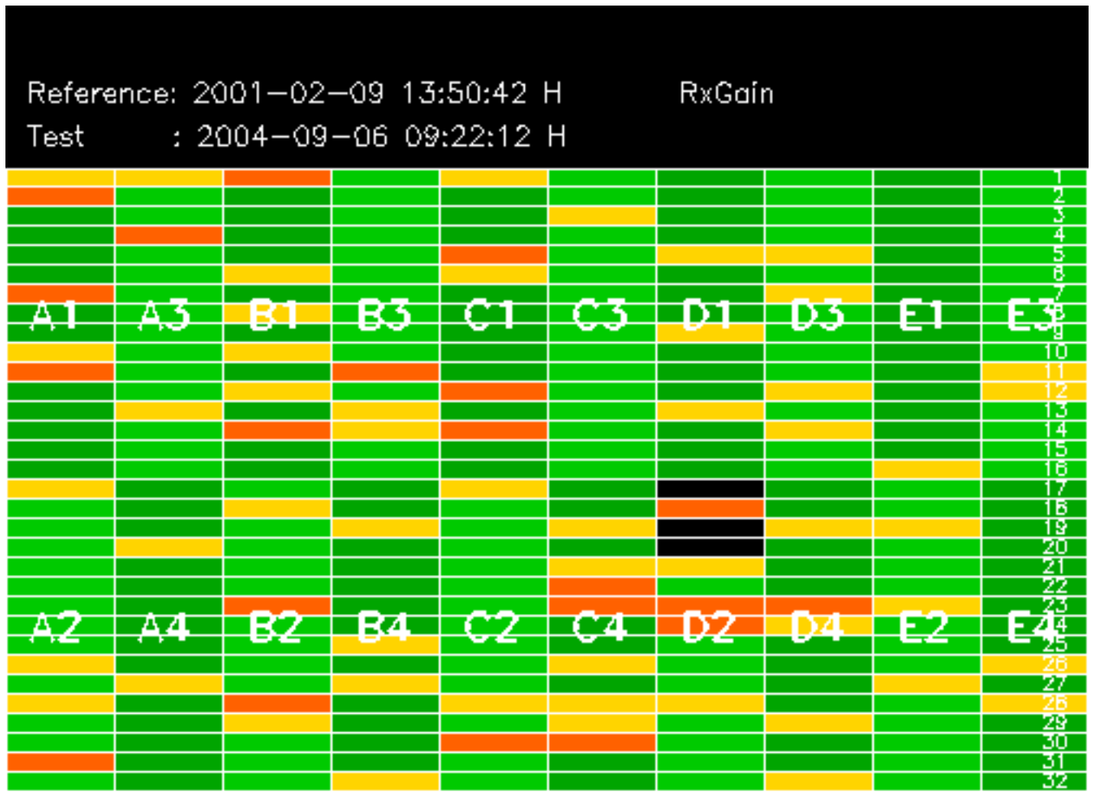

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -21.519426 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.660435 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.564845 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 : 2004-09-06 09:22:12 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
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23
24
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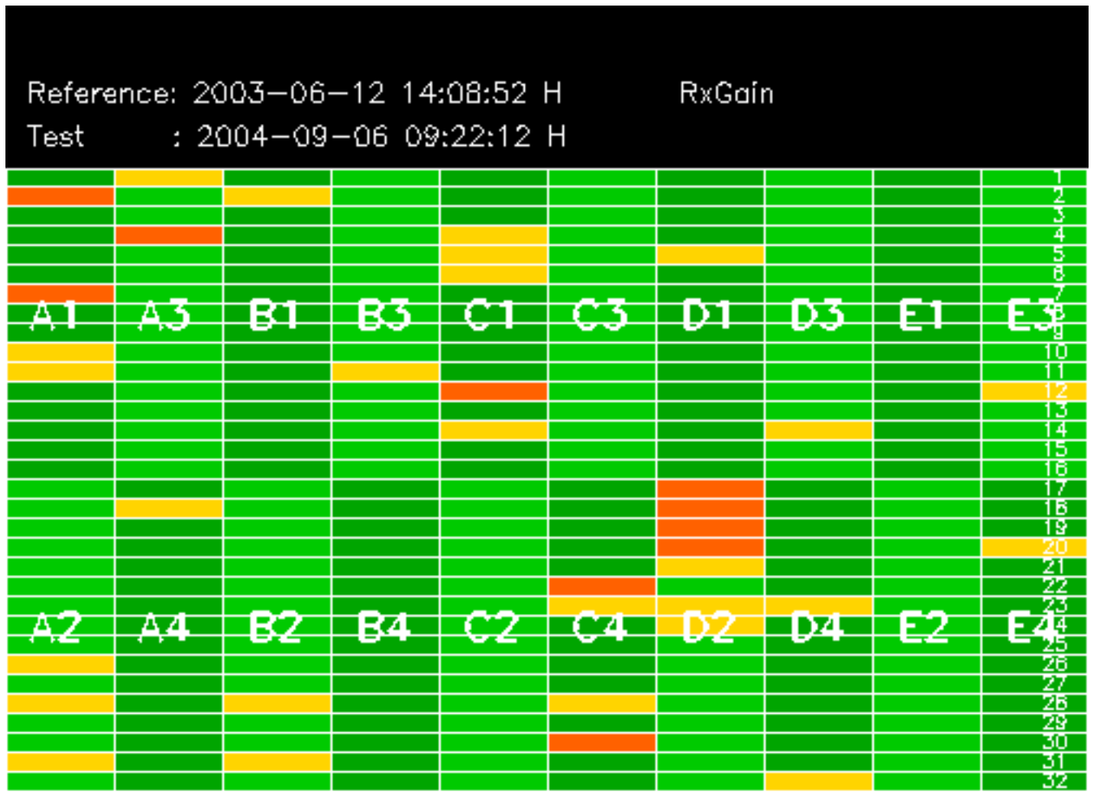
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-06 09:22:12 H
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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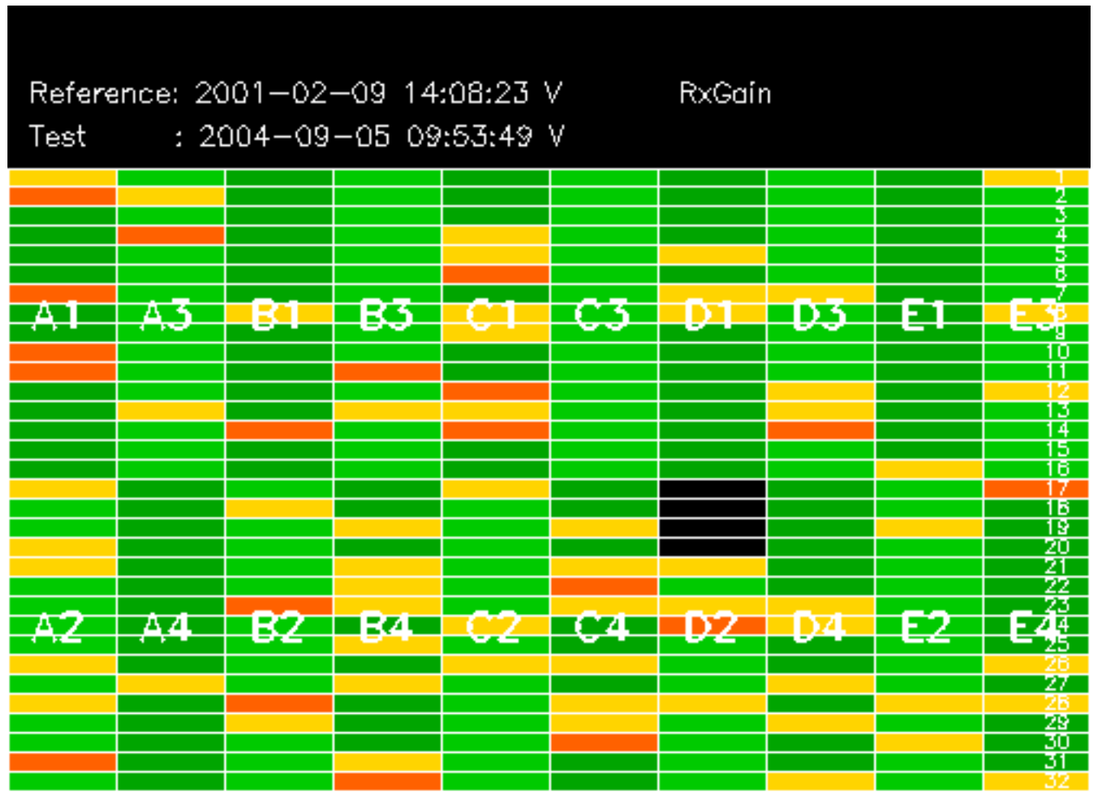
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-05 09:53:49 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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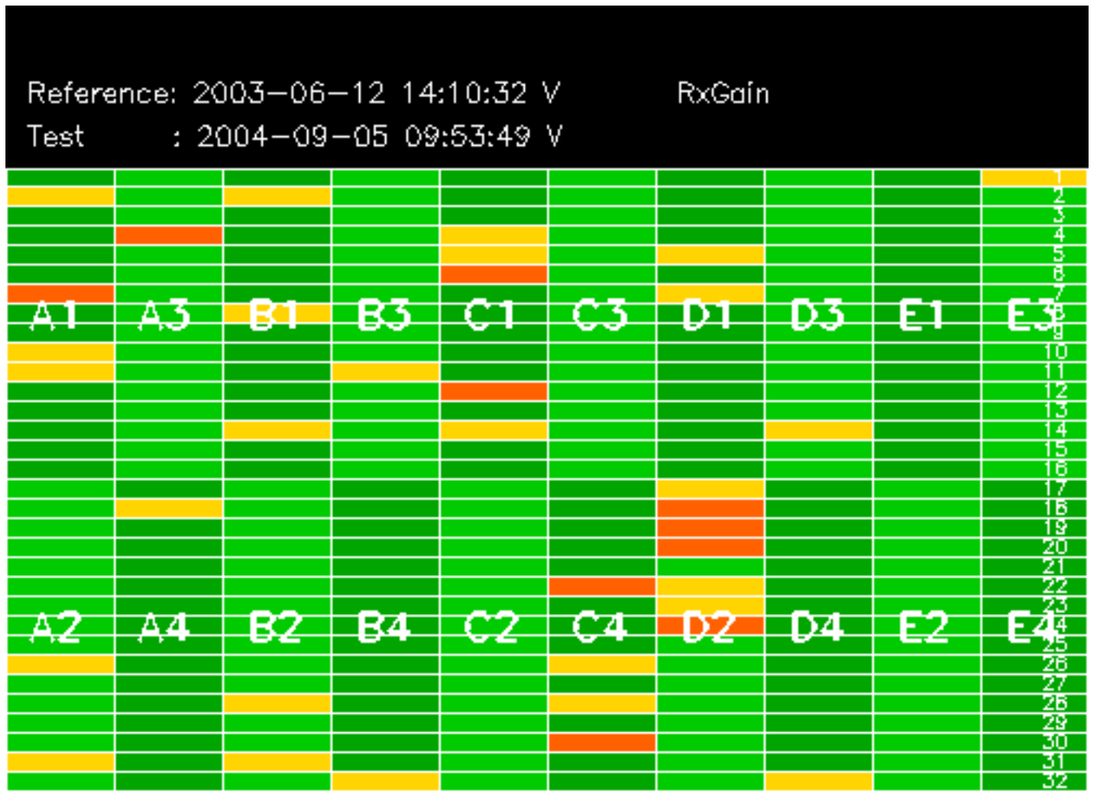
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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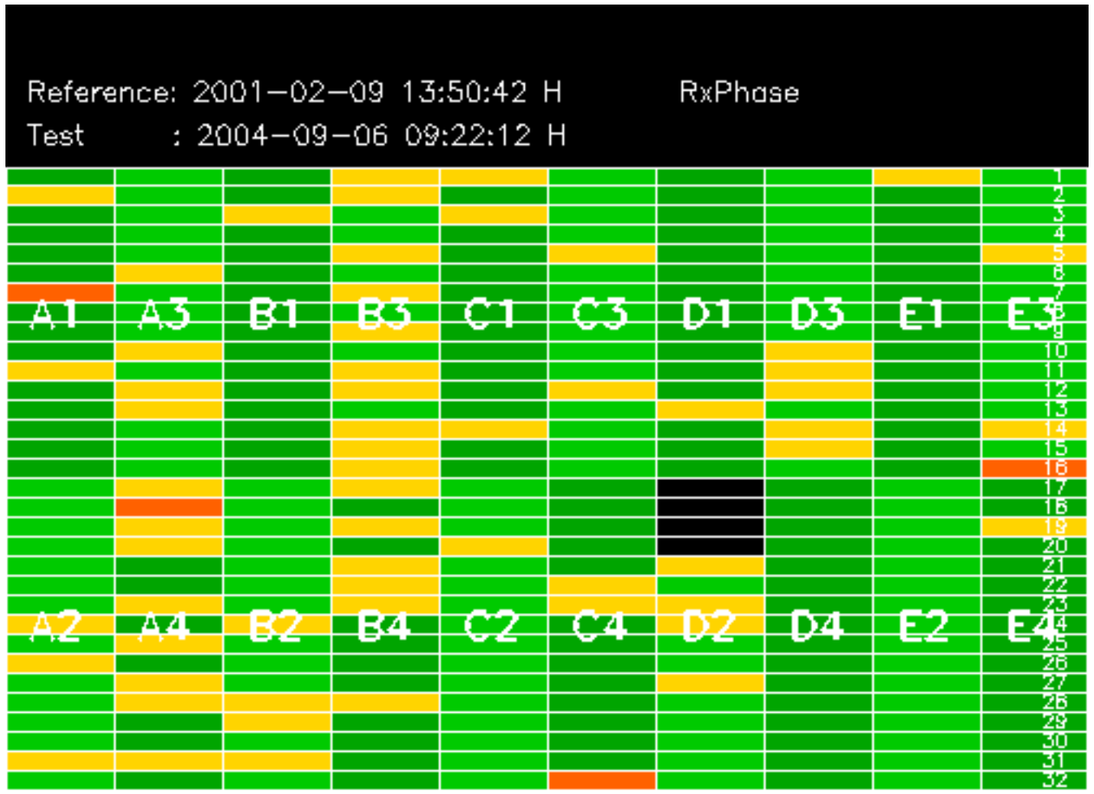
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-09-06 09:22:12 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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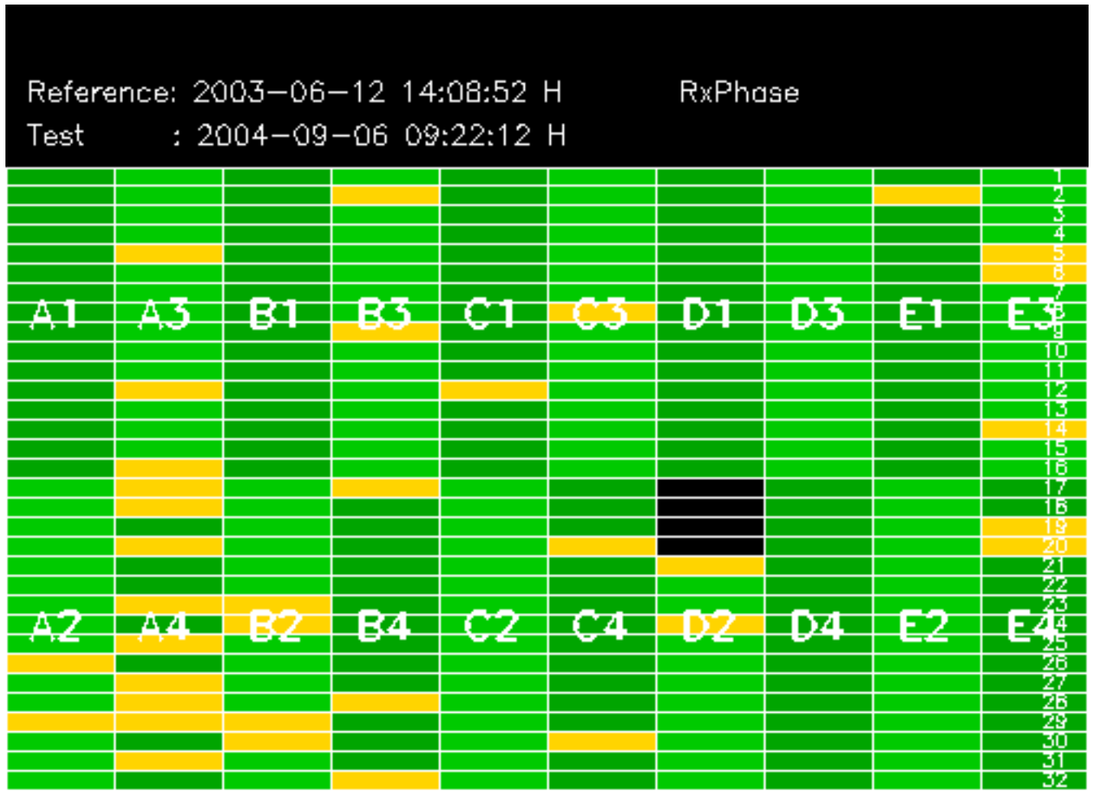
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-06 09:22:12 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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4
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9
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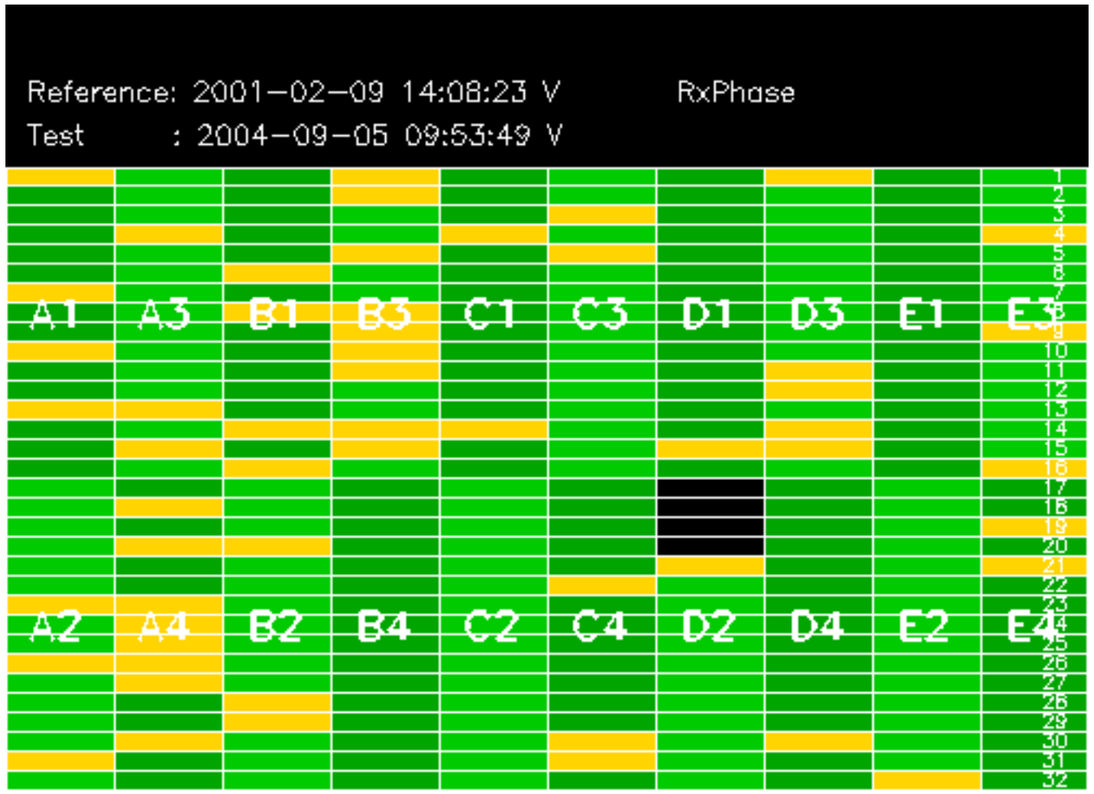
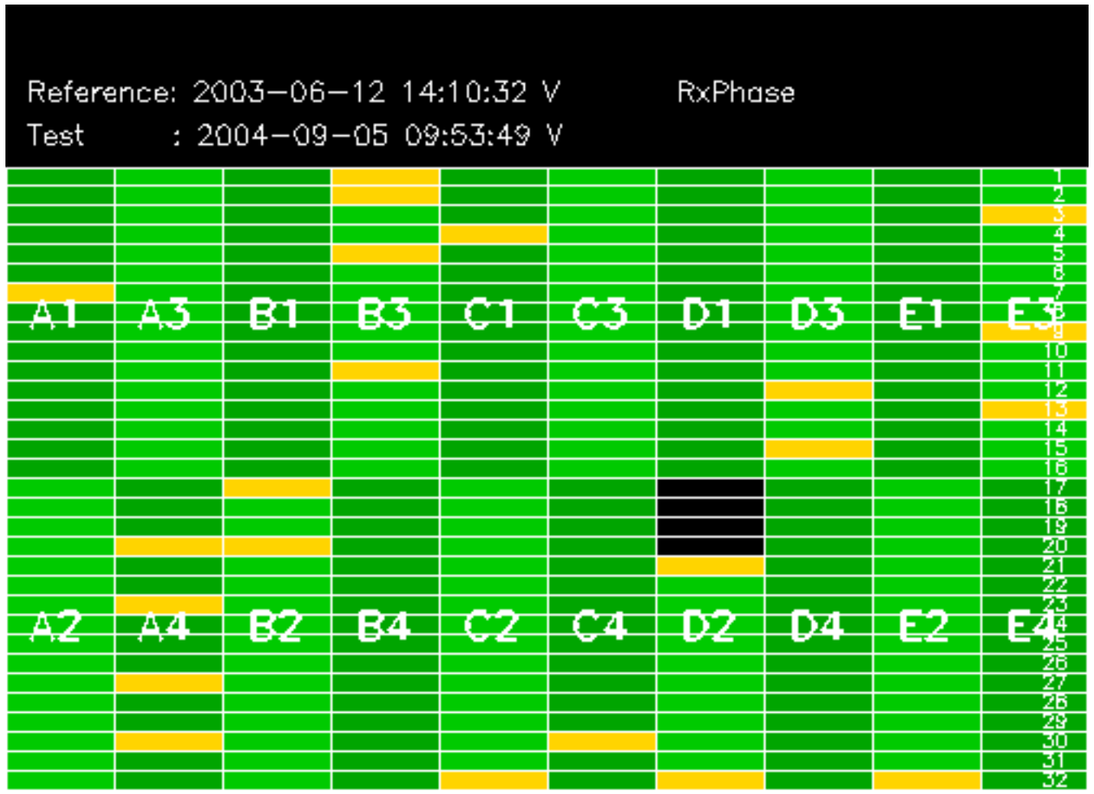
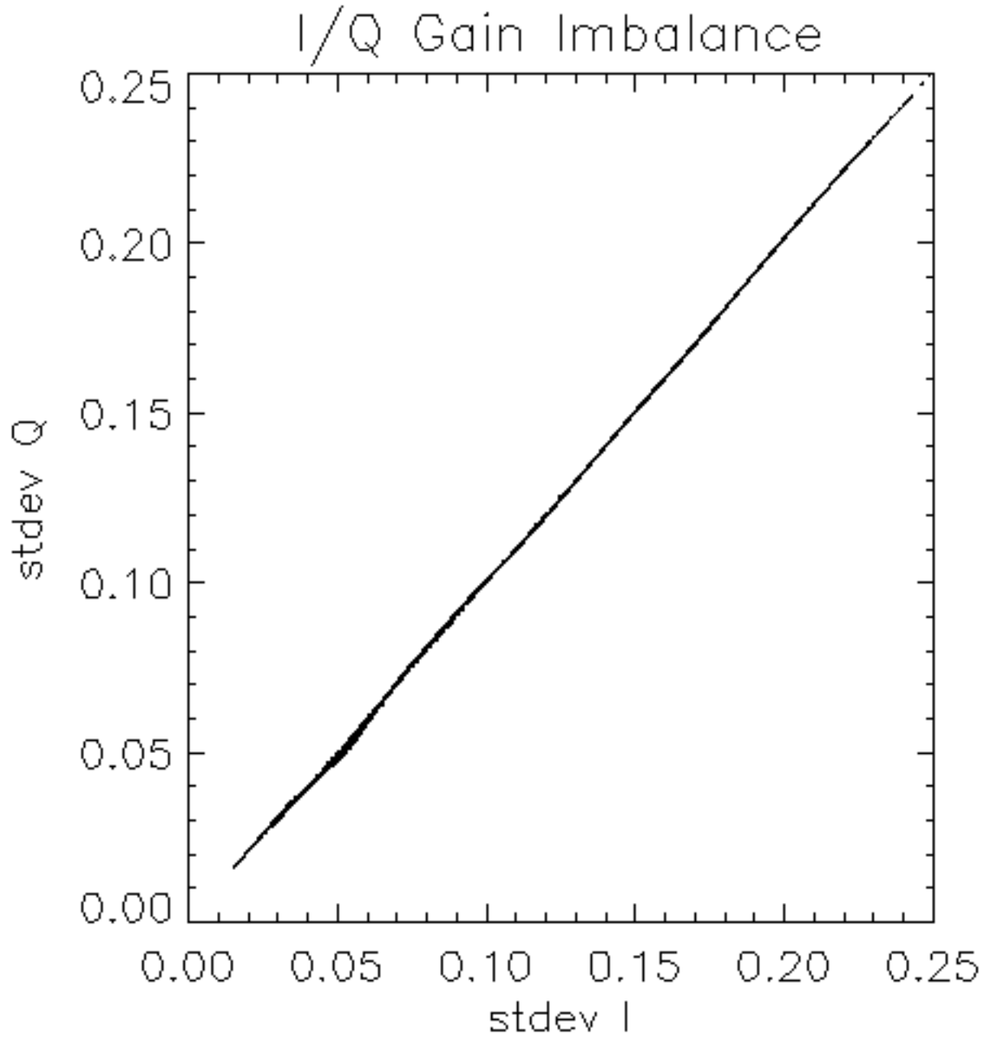
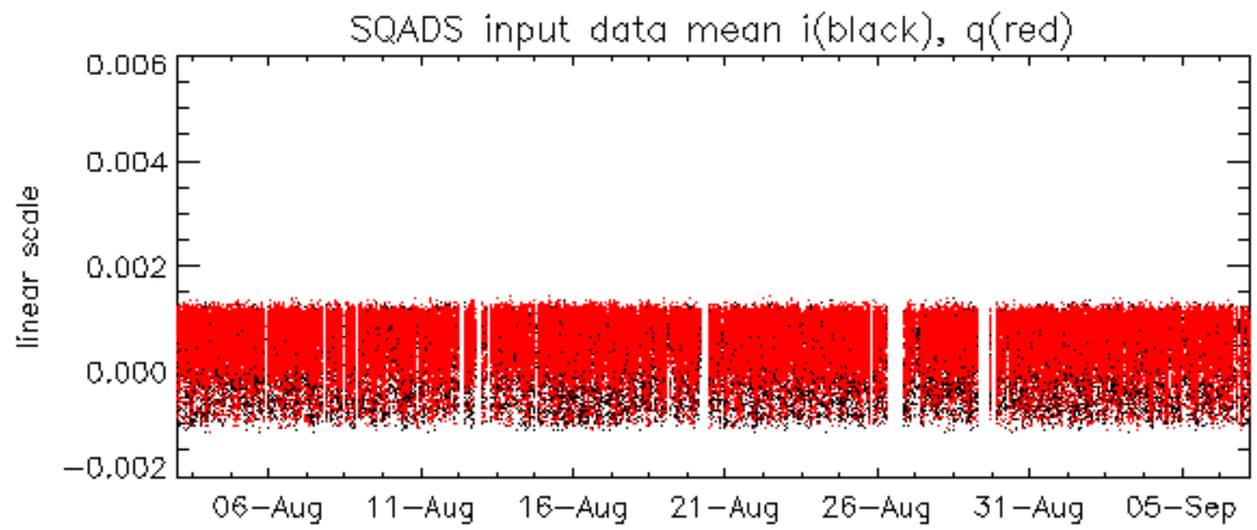
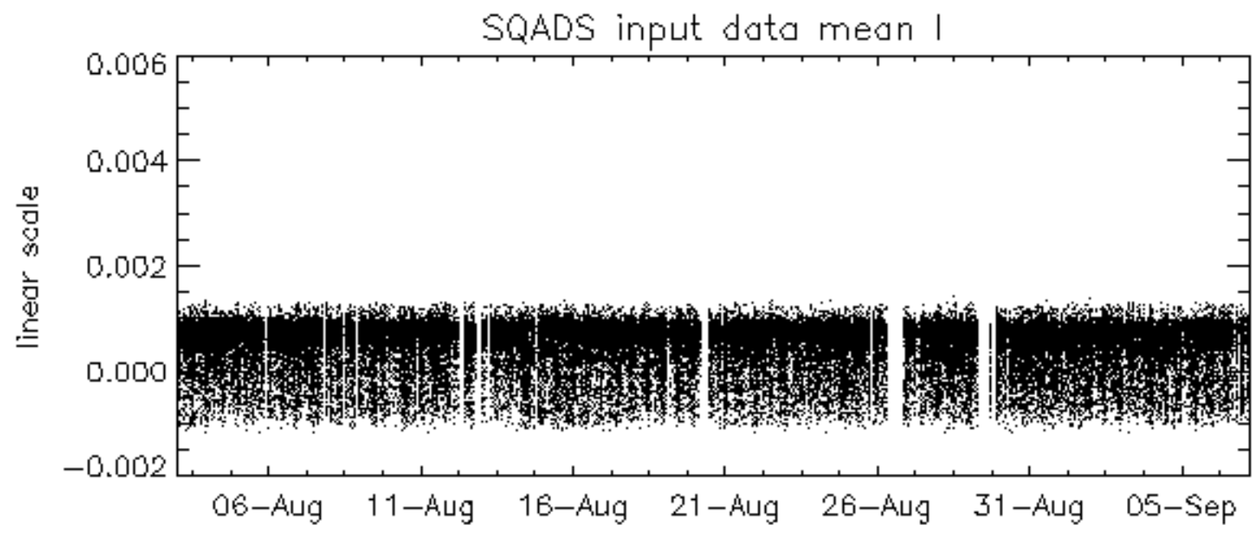
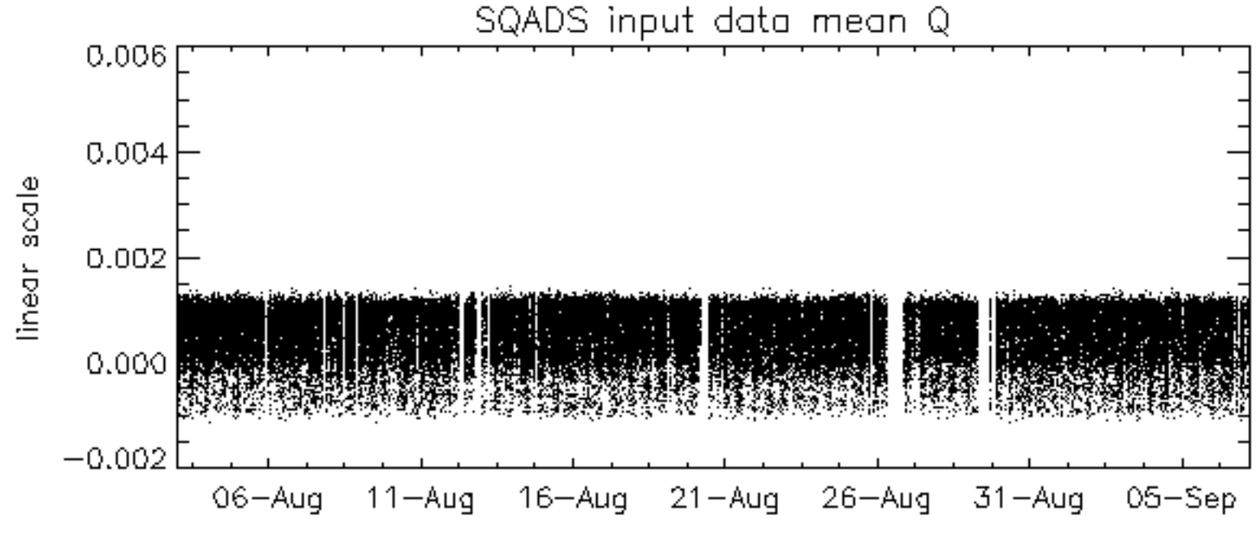

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-05 09:53:49 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

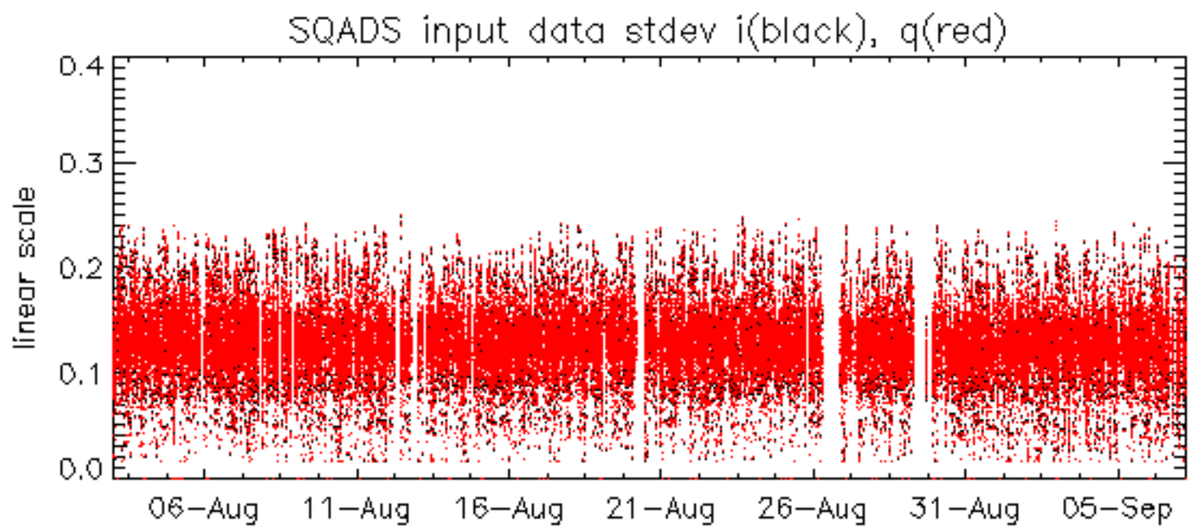

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

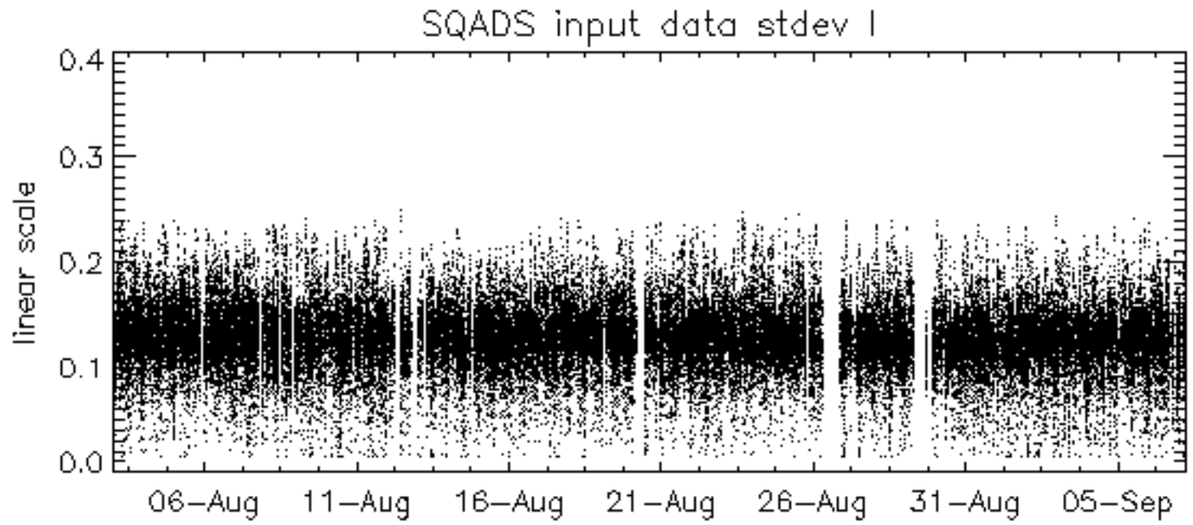

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

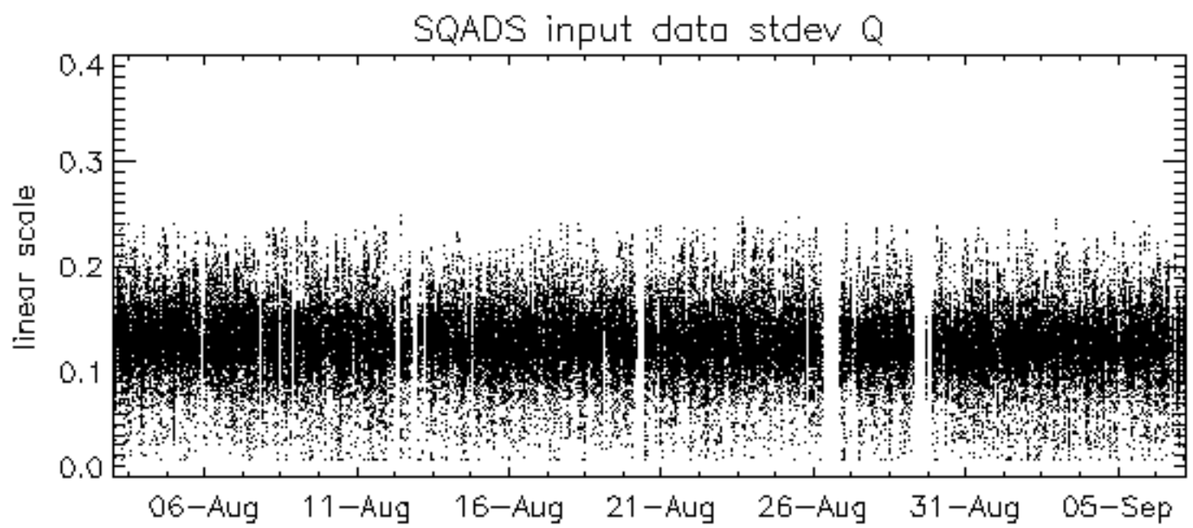

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

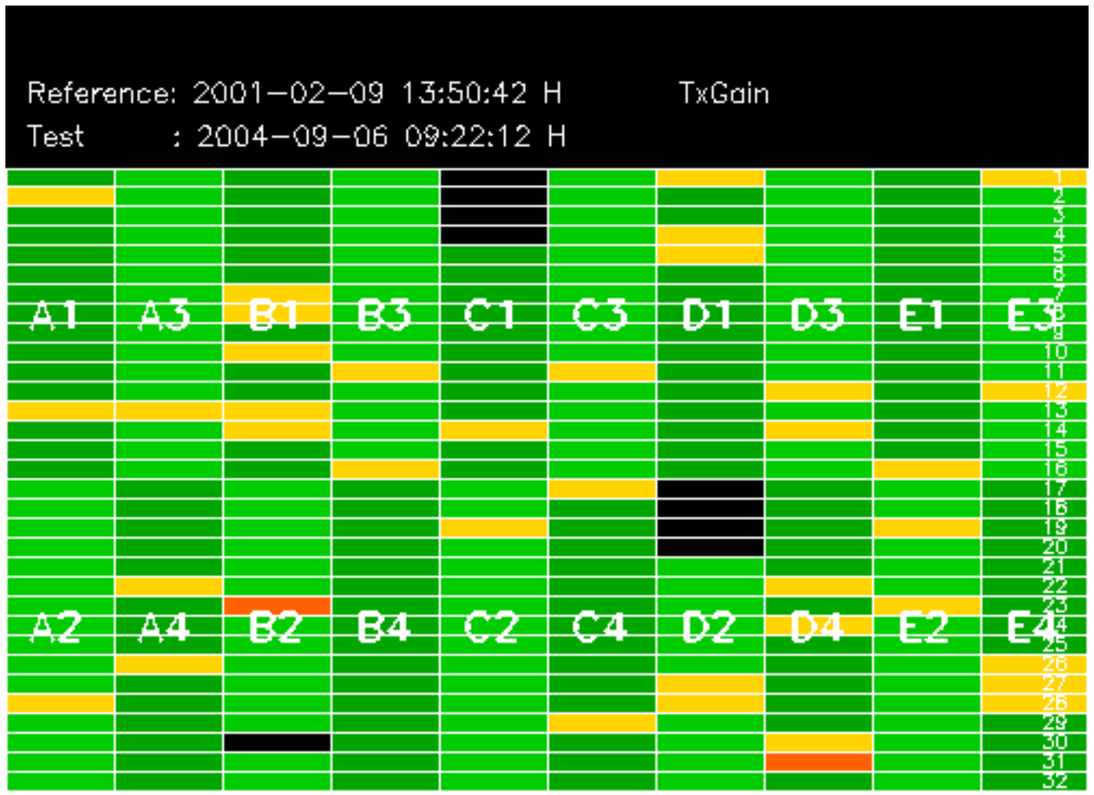

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

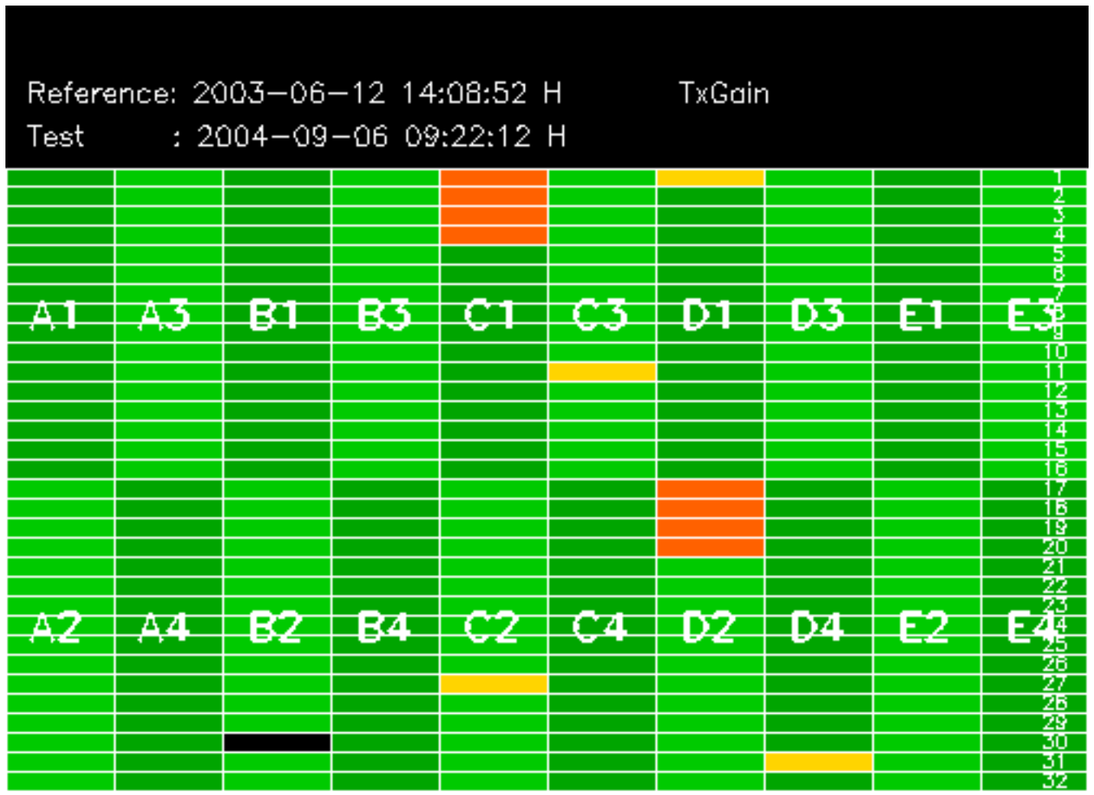

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep


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 : 2004-09-06 09:22:12 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 : 2004-09-06 09:22:12 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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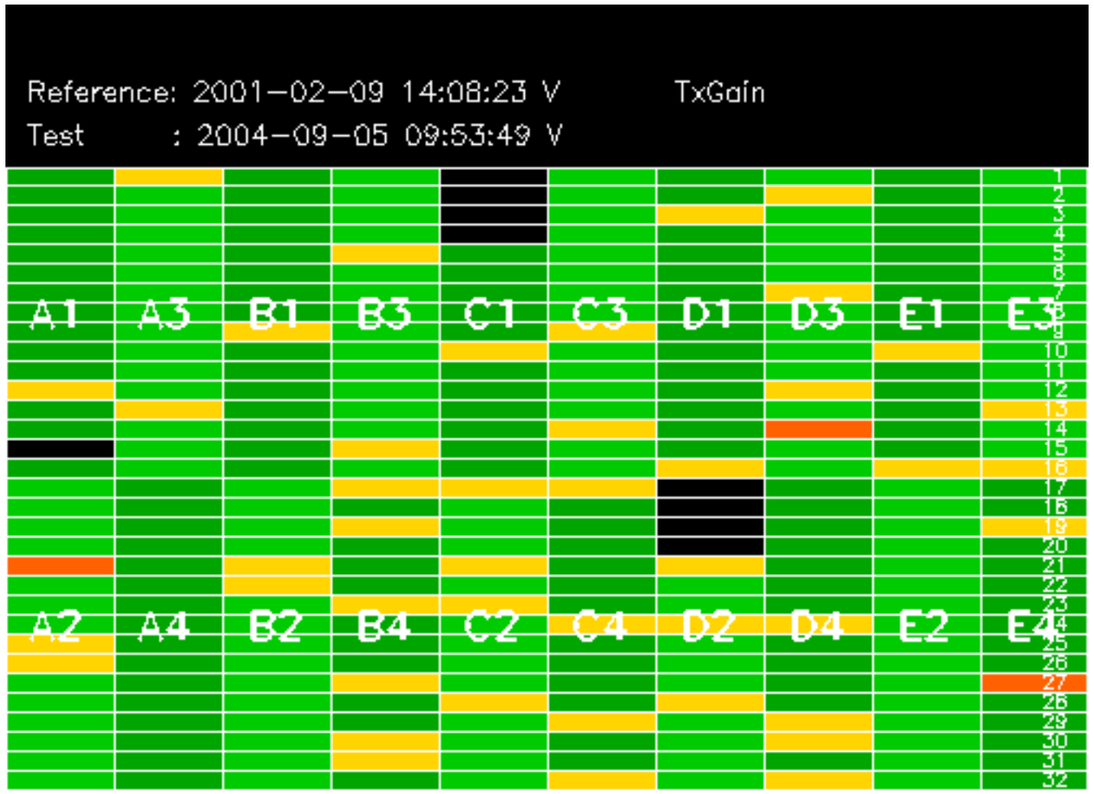
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-05 09:53:49 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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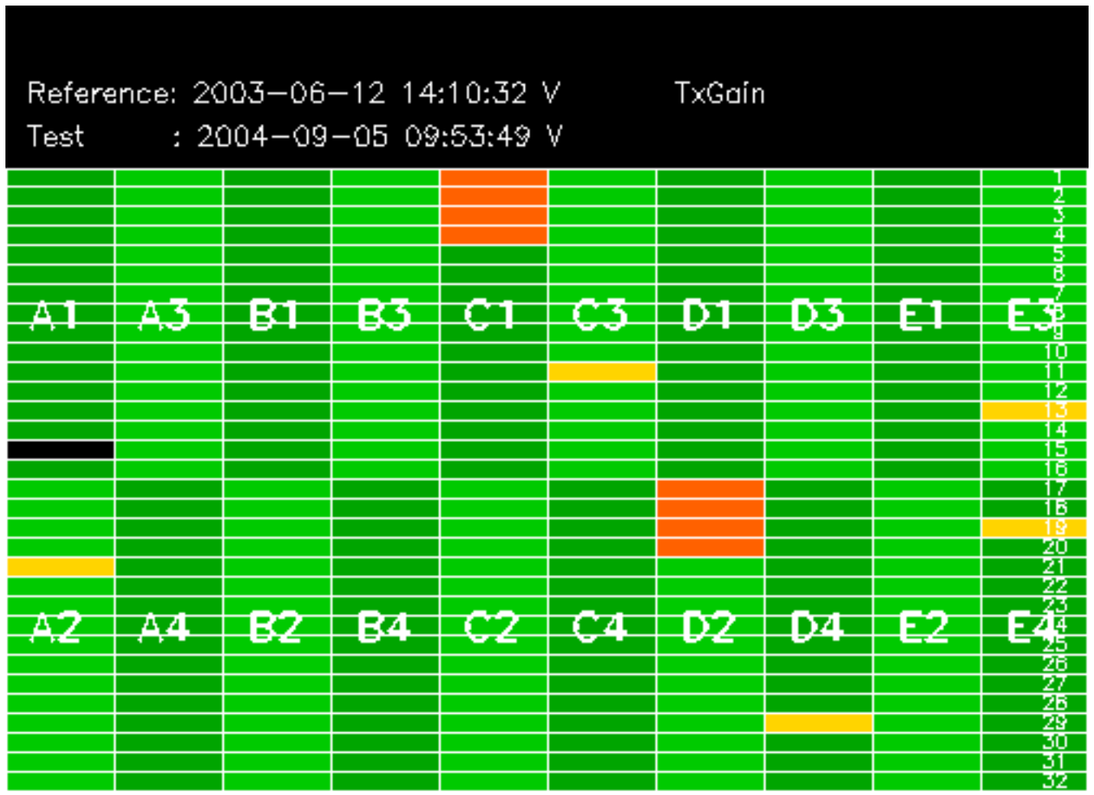
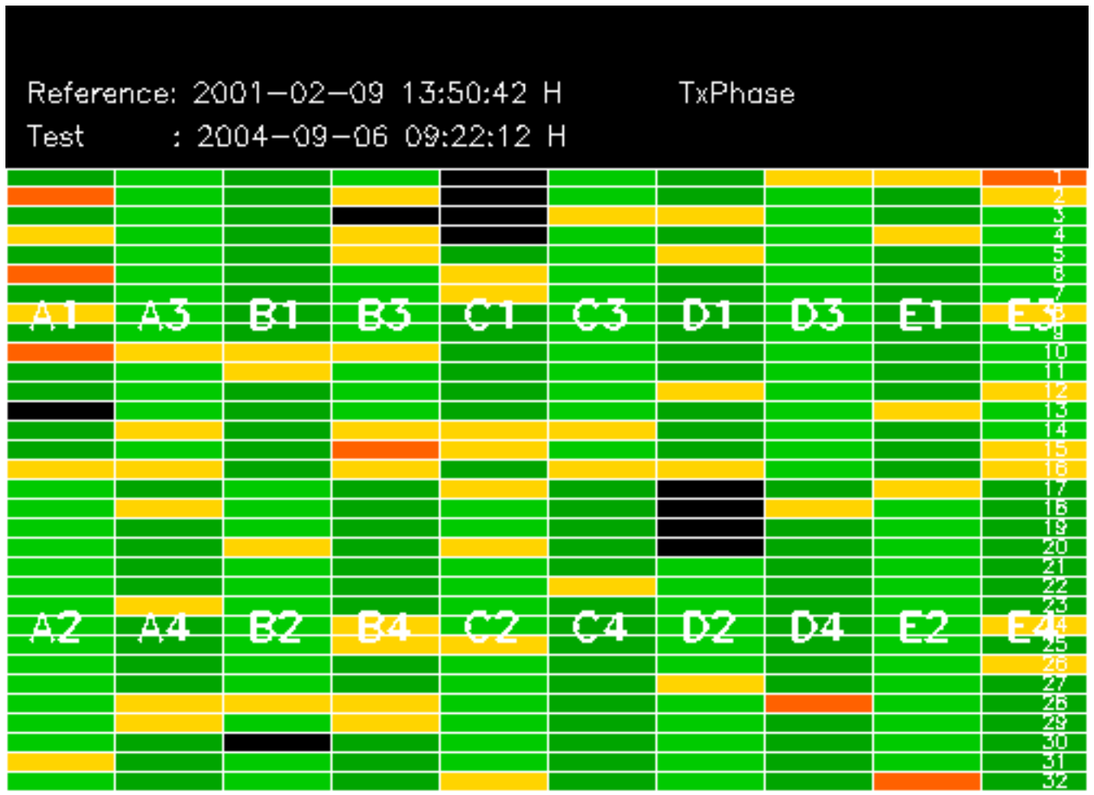
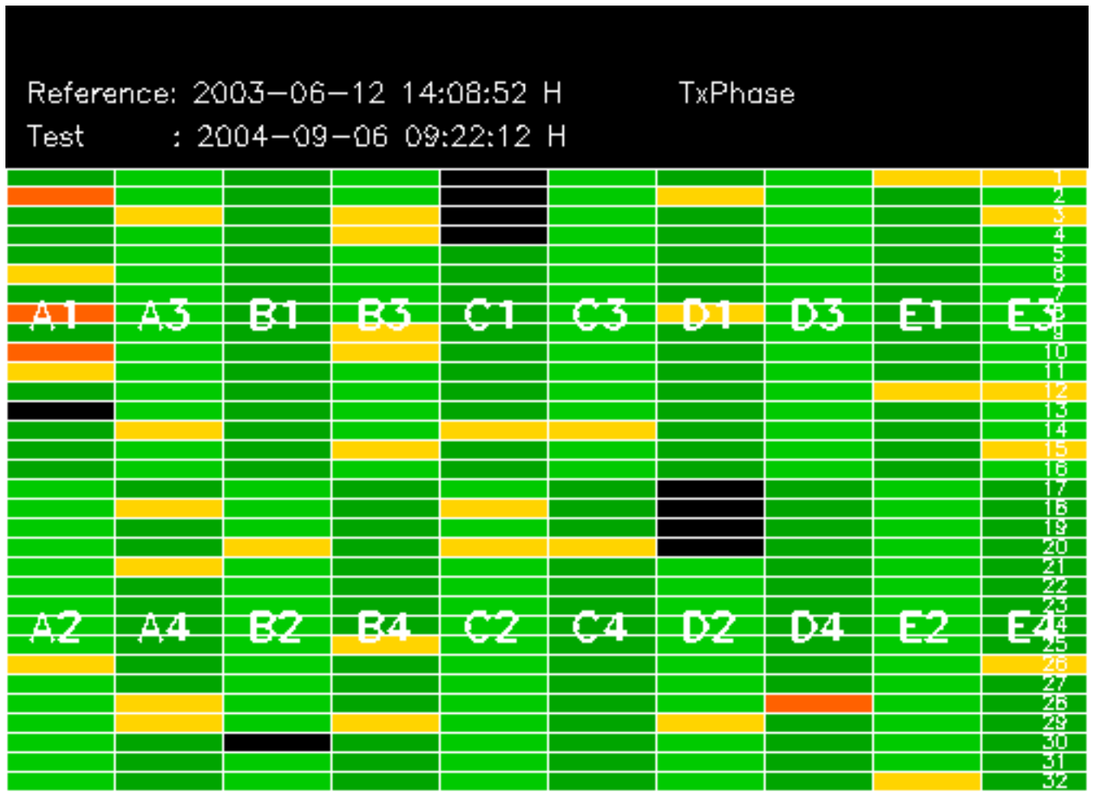
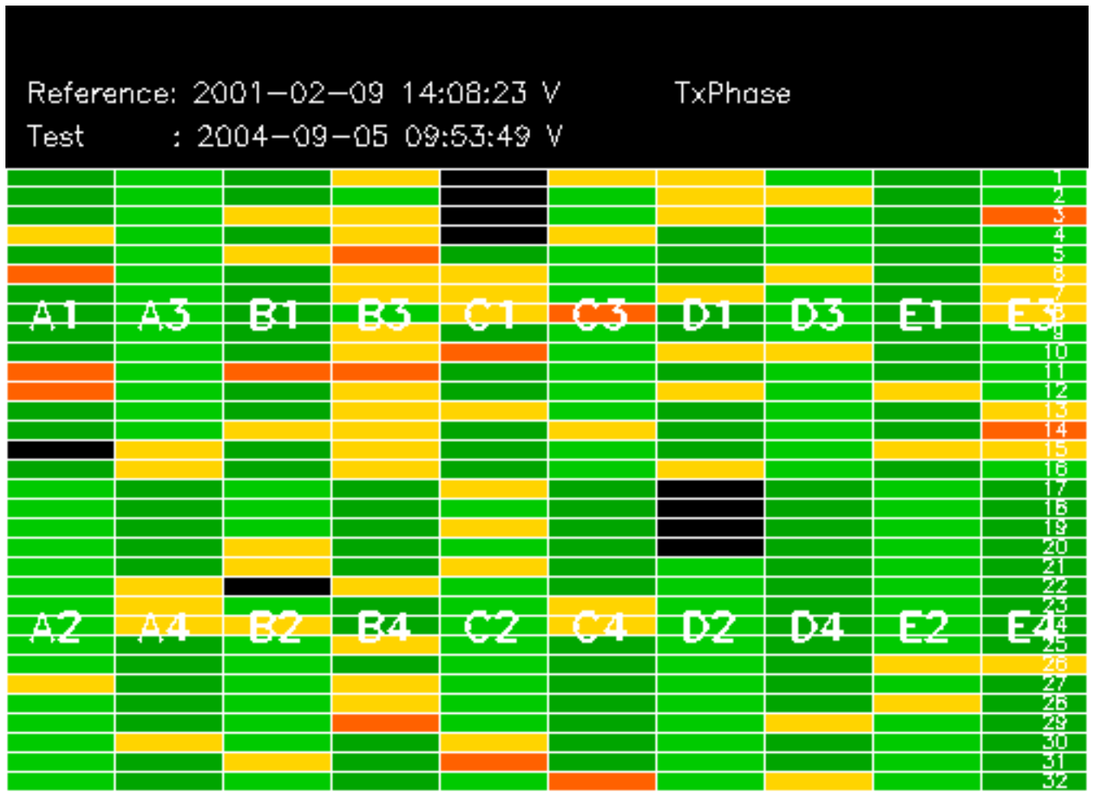

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-09-06 09:22:12 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 : 2004-09-06 09:22:12 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 : 2004-09-05 09:53:49 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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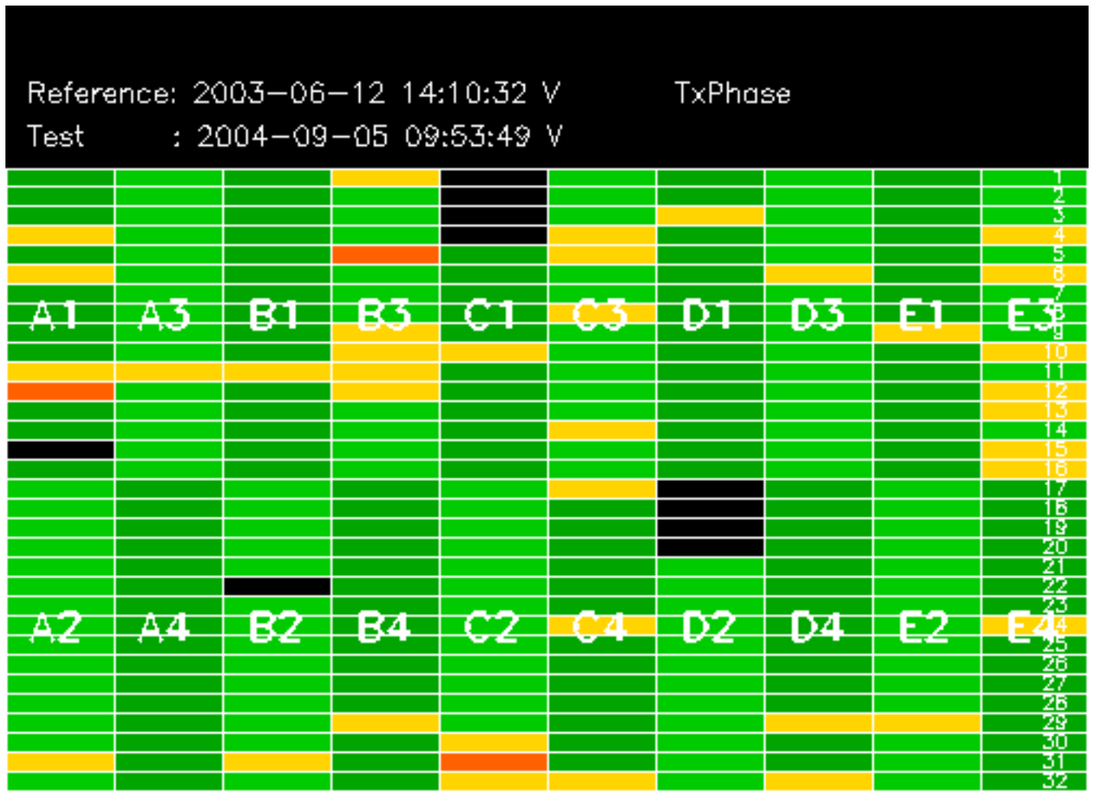
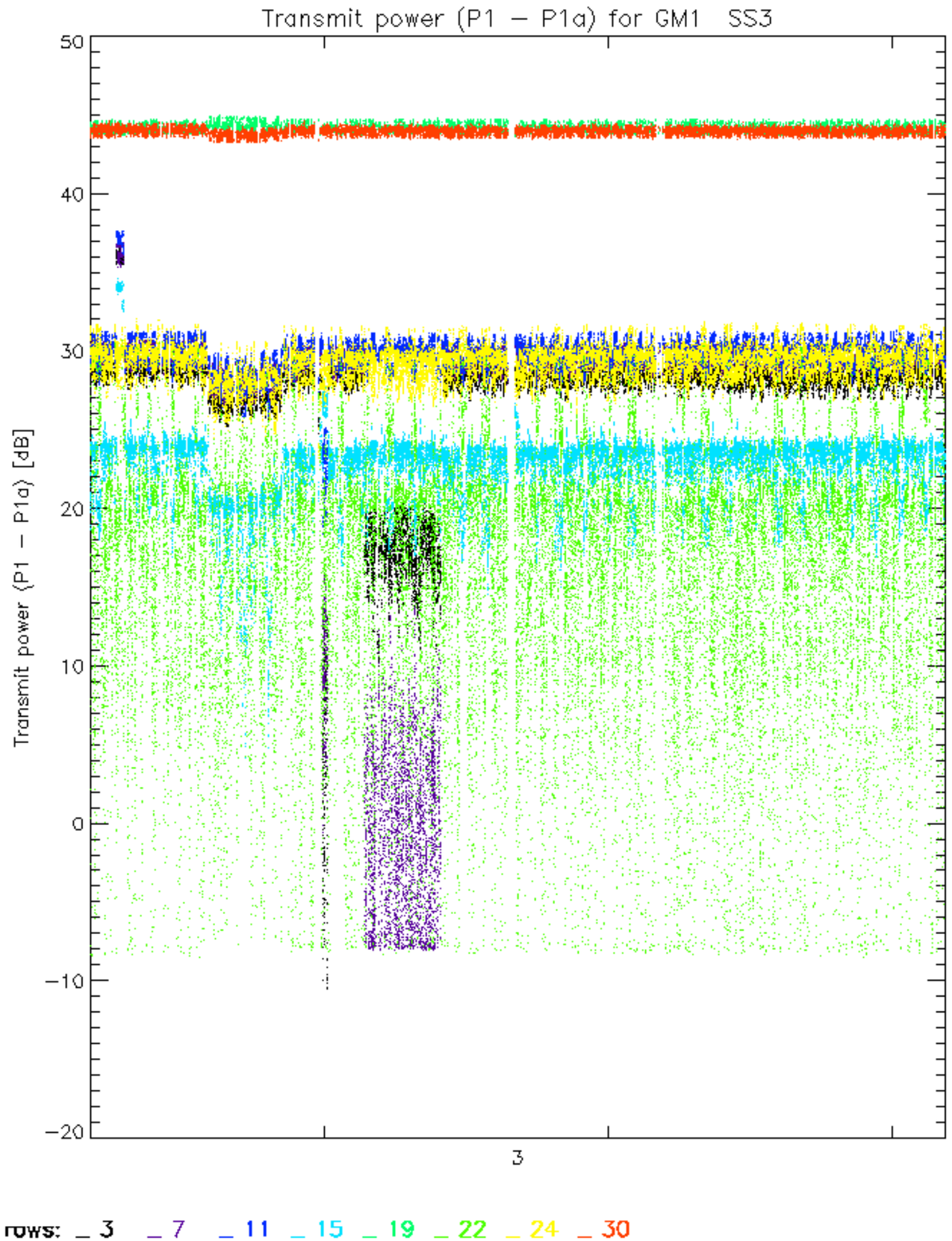
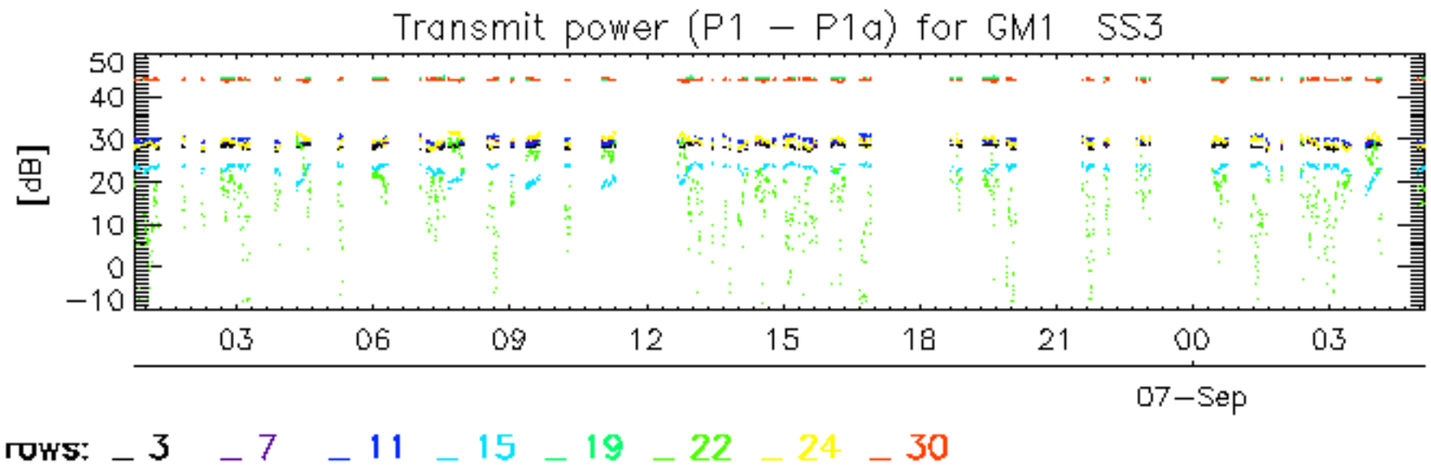
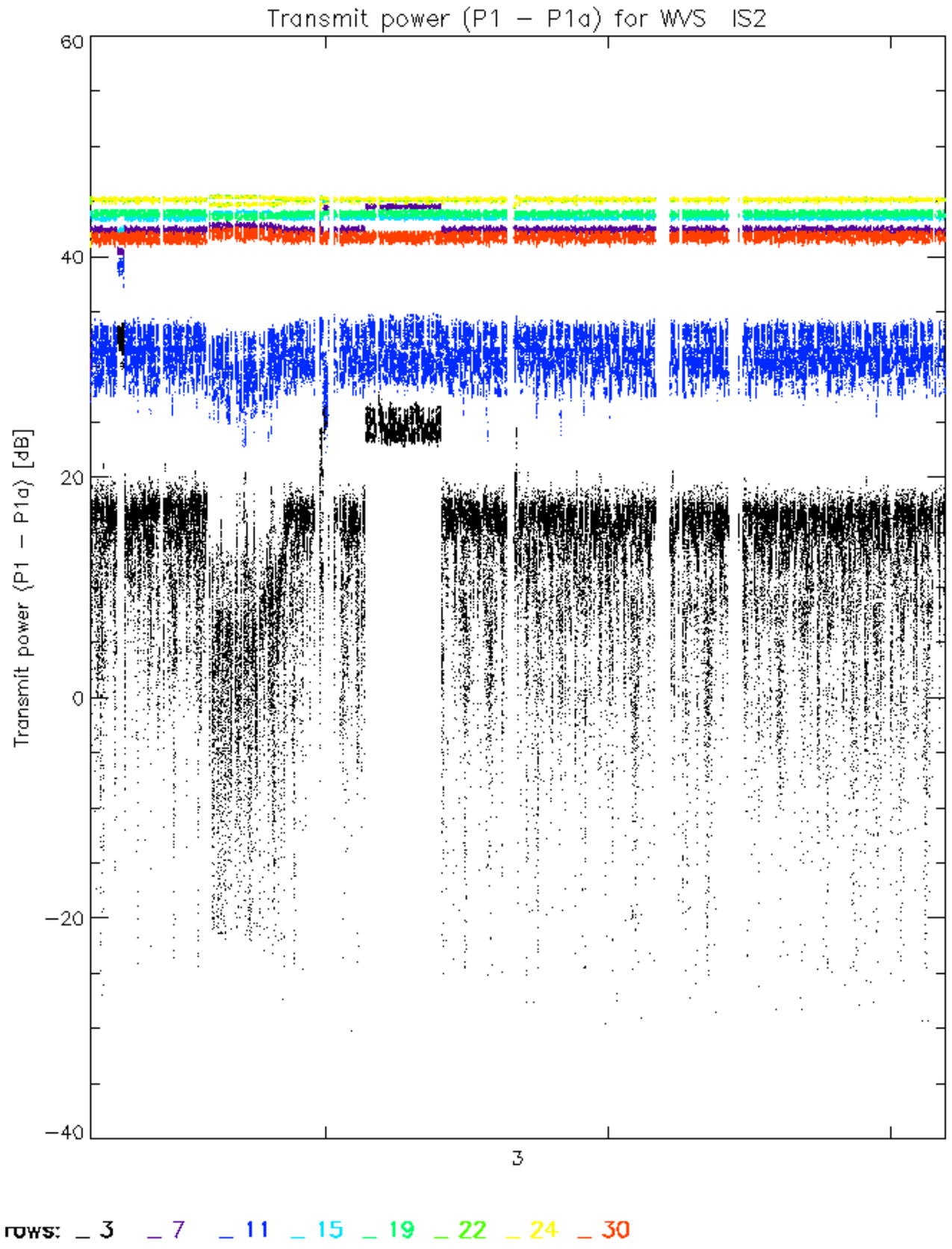
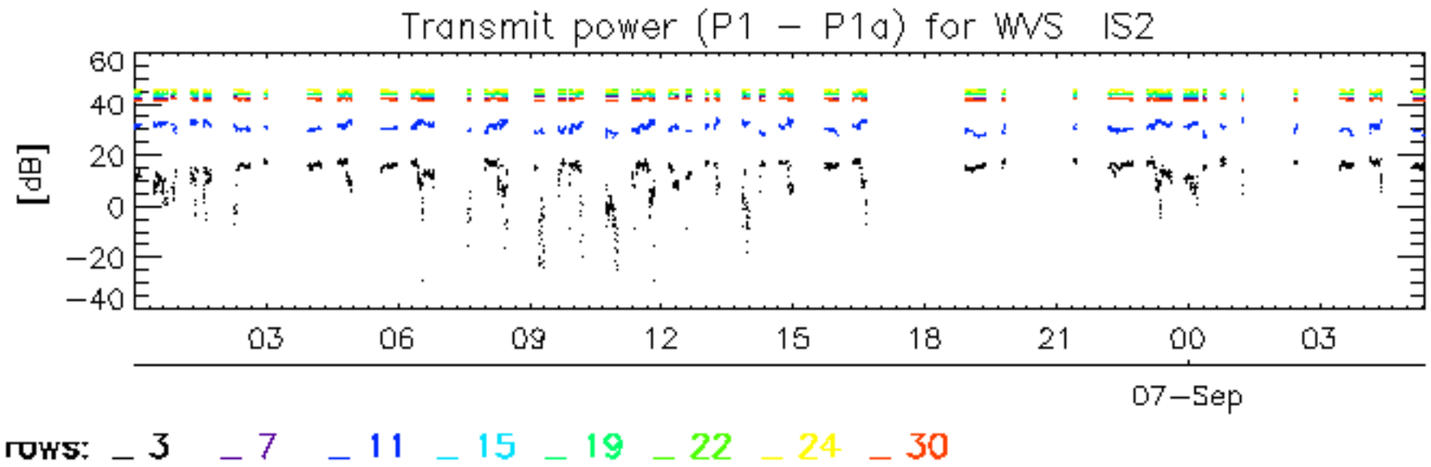

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-05 09:53:49 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
3
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
07–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]
3
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
07–Sep
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.