PRELIMINARY REPORT OF 040828

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

last update on Sat Aug 28 13:07:12 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	20040826 100811
H	20040827 143822

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.

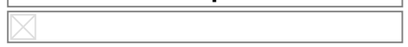
4.1 - Daily statistics

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	-3.469236	0.050650	0.081454
7	P1	-3.311021	0.055428	0.077768
11	P1	-4.650434	0.110795	0.023352
15	P1	-5.754120	0.119135	0.012048
19	P1	-3.462294	0.005373	-0.015713
22	P1	-4.547299	0.011141	0.047343
24	P1	-4.963826	0.020033	0.006403
30	P1	-6.934099	0.023355	-0.071436

3	P1	-15.918041	1.551960	0.759093
7	P1	-14.031662	0.166065	-0.106533
11	P1	-20.136478	0.415681	-0.291550
15	P1	-11.791577	0.163329	-0.009646
19	P1	-13.885625	0.034096	-0.054199
22	P1	-16.220209	0.345370	0.234586
24	P1	-14.557106	0.303501	0.166938
30	P1	-17.777637	0.446064	-0.263205

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.303213	0.082095	0.025189
7	P2	-22.630123	0.135900	0.097661
11	P2	-15.346561	0.171098	0.144032
15	P2	-7.068911	0.095896	0.069961
19	P2	-9.559892	0.189089	0.072579
22	P2	-17.356667	0.116725	0.119567
24	P2	-20.746370	0.088402	-0.003244
30	P2	-19.273708	0.081658	0.112796

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.140590	0.002611	0.004037
7	P3	-8.140592	0.002611	0.004052
11	P3	-8.140597	0.002610	0.004093
15	P3	-8.140618	0.002610	0.004225
19	P3	-8.140630	0.002610	0.004285
22	P3	-8.140626	0.002610	0.004263
24	P3	-8.140610	0.002609	0.004177
30	P3	-8.140590	0.002603	0.004197

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	-2.697778	0.263848	0.285827
7	P1	-2.957580	0.216162	0.221130
11	P1	-3.881424	0.164641	0.010826
15	P1	-3.535486	0.133894	0.021796
19	P1	-3.480975	0.014130	-0.001865
22	P1	-5.683377	0.041163	-0.086715
24	P1	-3.893079	0.015694	-0.105138
30	P1	-6.175087	0.064803	0.006770
3	P1	-10.356583	1.037316	0.474948
7	P1	-10.068406	0.165083	0.112943
11	P1	-12.119157	0.116150	-0.174251
15	P1	-11.641935	0.106882	-0.123796
19	P1	-15.623444	0.050052	0.014547
22	P1	-23.379091	1.175460	-0.083819
24	P1	-17.855162	0.229292	-0.322930
30	P1	-20.401991	1.214709	-0.172562

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.978907	0.059345	0.004069
7	P2	-22.765549	0.051114	0.082183
11	P2	-11.004478	0.071818	0.133304
15	P2	-4.950438	0.038916	0.004260
19	P2	-6.762202	0.056877	0.028011
22	P2	-7.448178	0.047867	0.034292
24	P2	-11.039582	0.053697	-0.012991
30	P2	-22.214121	0.041774	0.095466

P3 Cyclic statistics

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

3	P3	-7.988833	0.003768	-0.008911
7	P3	-7.988767	0.003774	-0.008792
11	P3	-7.988894	0.003764	-0.009025
15	P3	-7.988788	0.003768	-0.009043
19	P3	-7.988813	0.003774	-0.008733
22	P3	-7.988758	0.003768	-0.008667
24	P3	-7.988767	0.003782	-0.008948
30	P3	-7.988812	0.003764	-0.008740

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	0.000491361
	stdev	2.12708e-07
MEAN Q	mean	0.000546399
	stdev	2.37772e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129213
	stdev	0.000985591

STDEV Q	mean	0.129445
	stdev	0.000997075

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

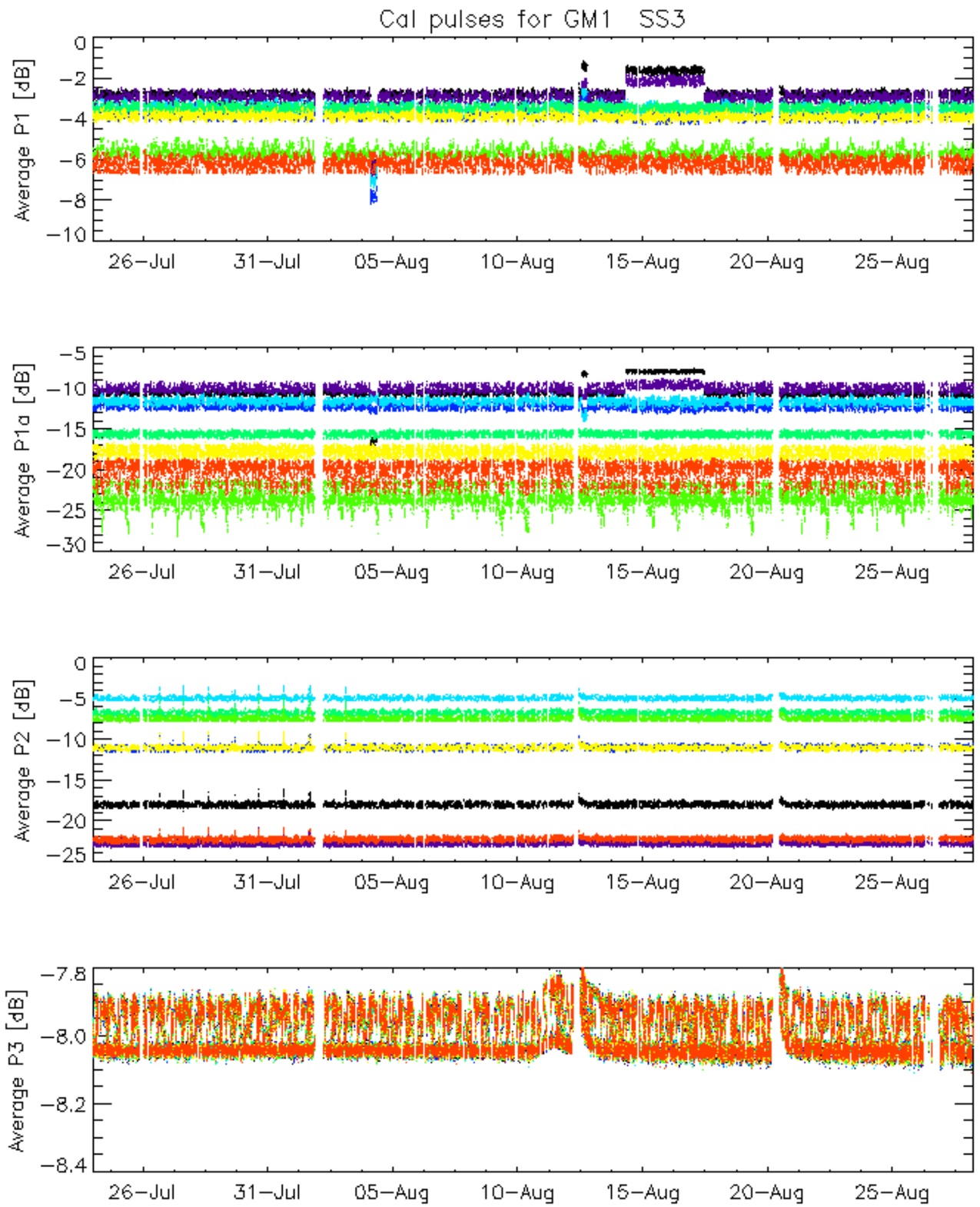
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

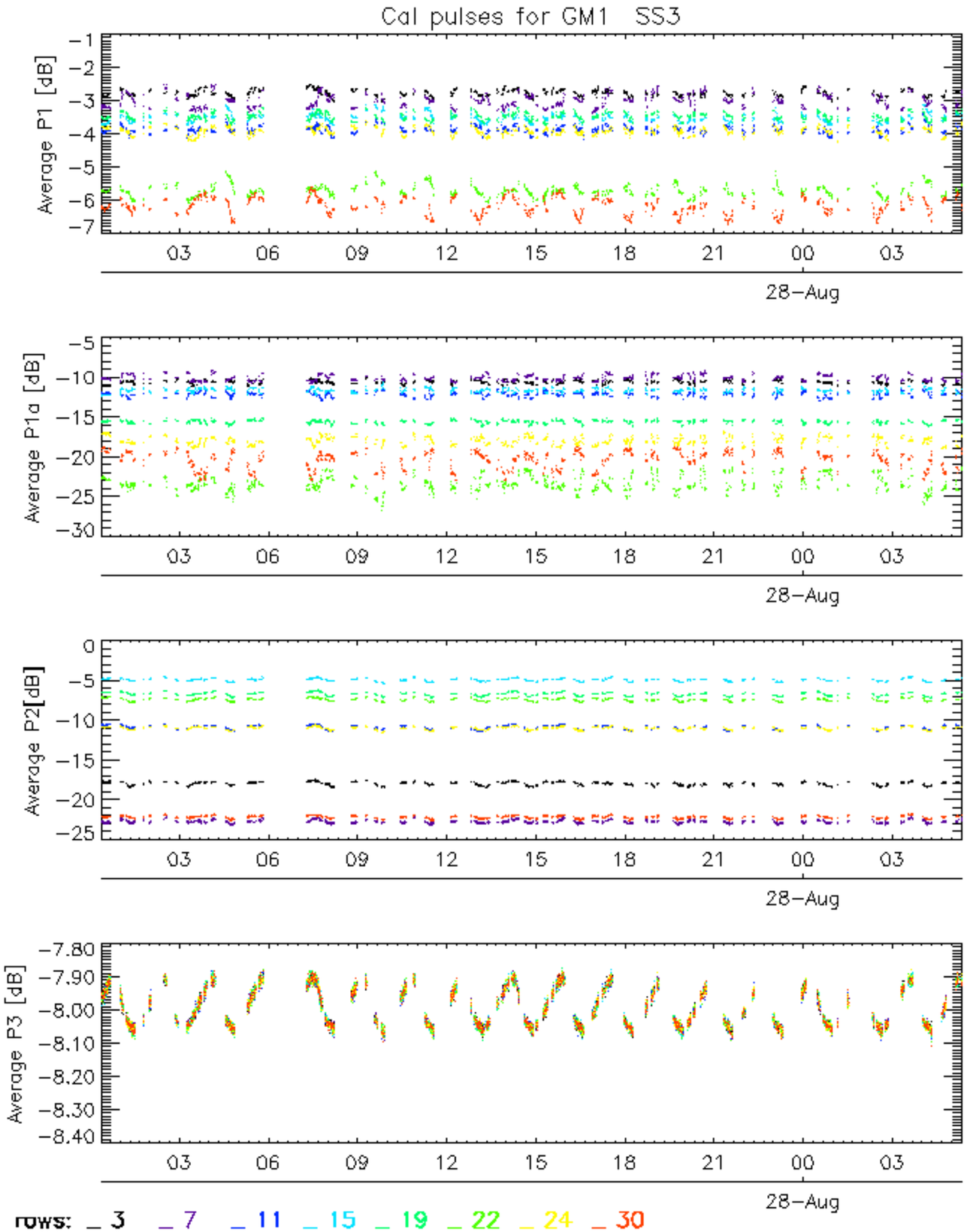
6.5 - Absolute Doppler for GM1

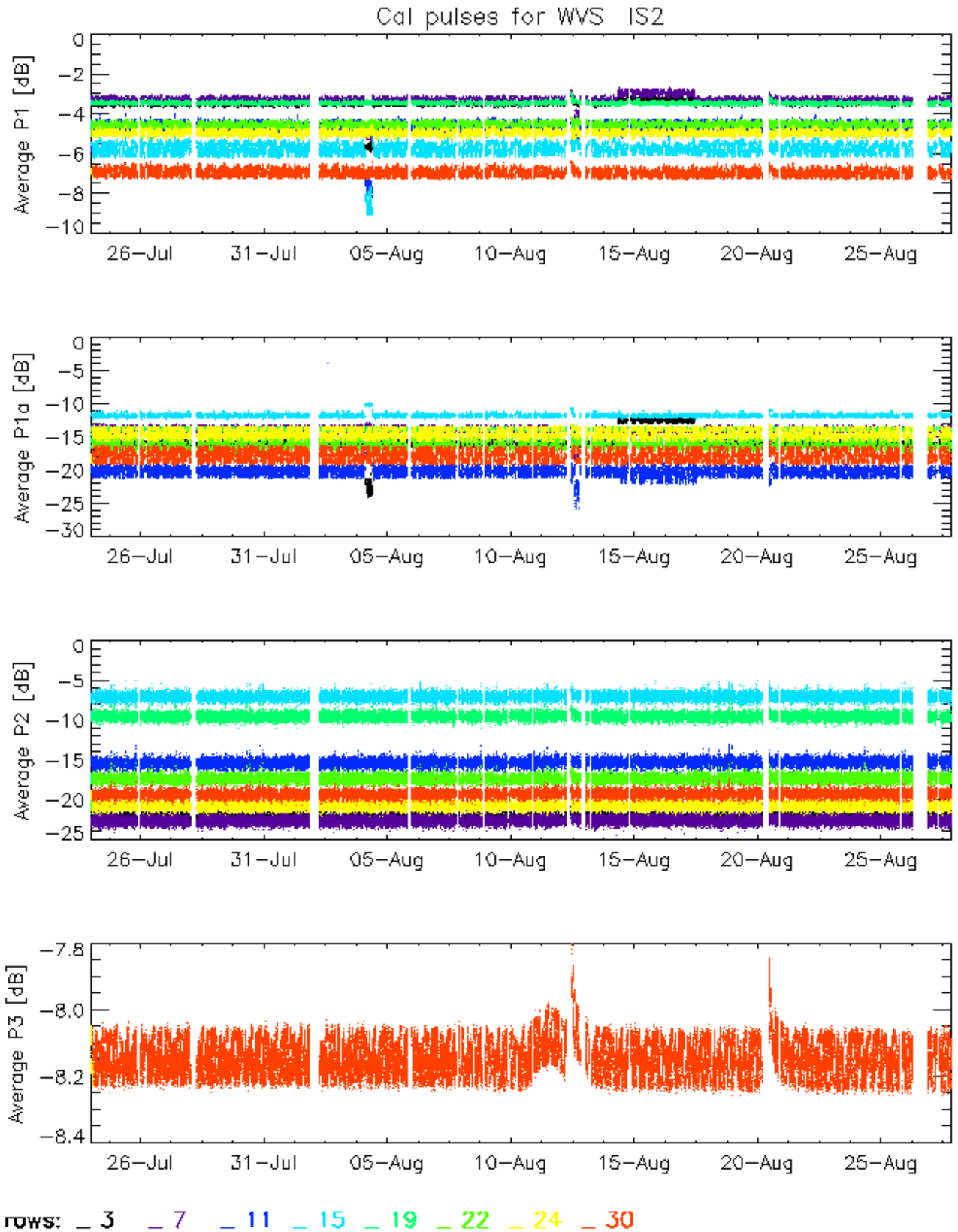
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

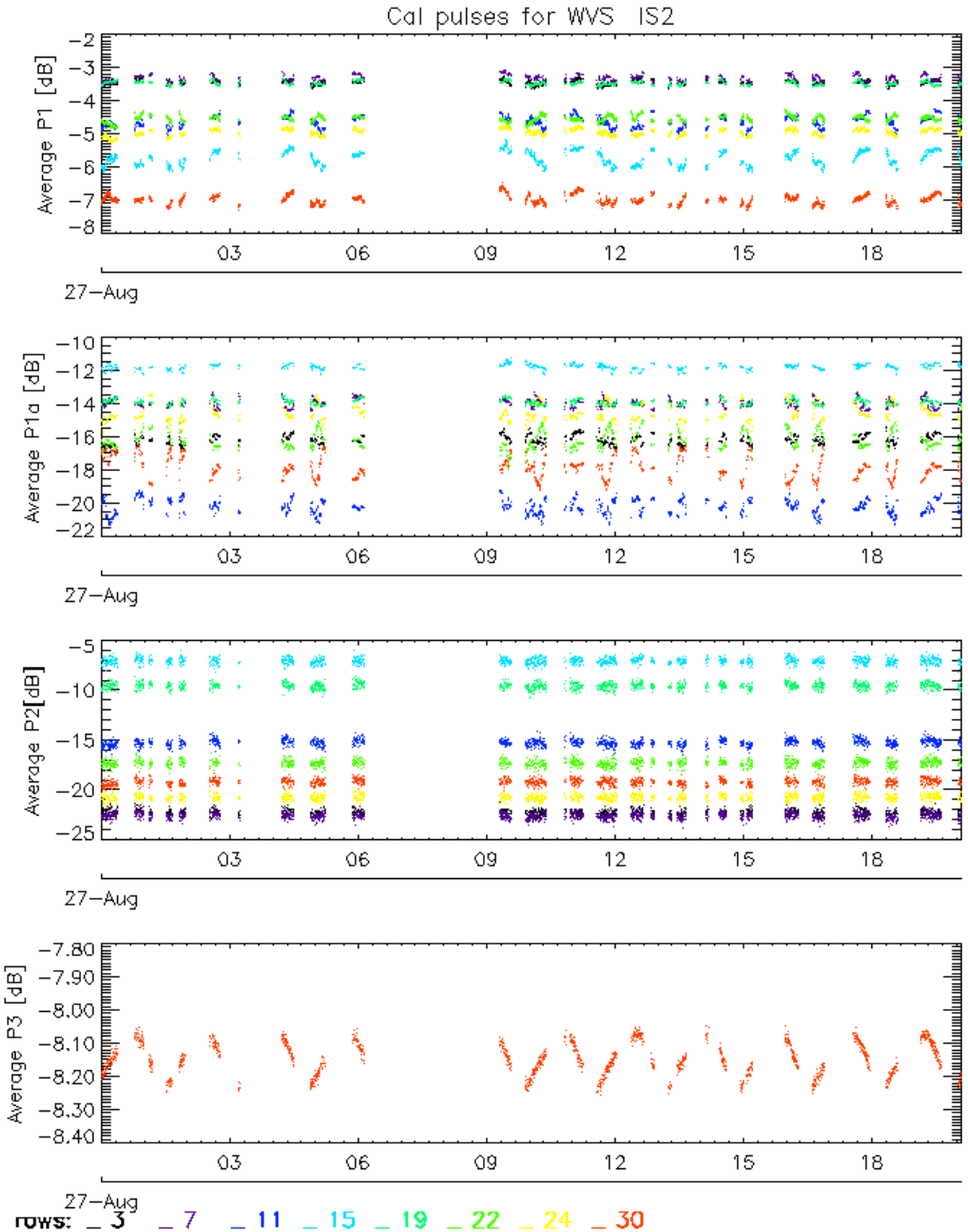
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

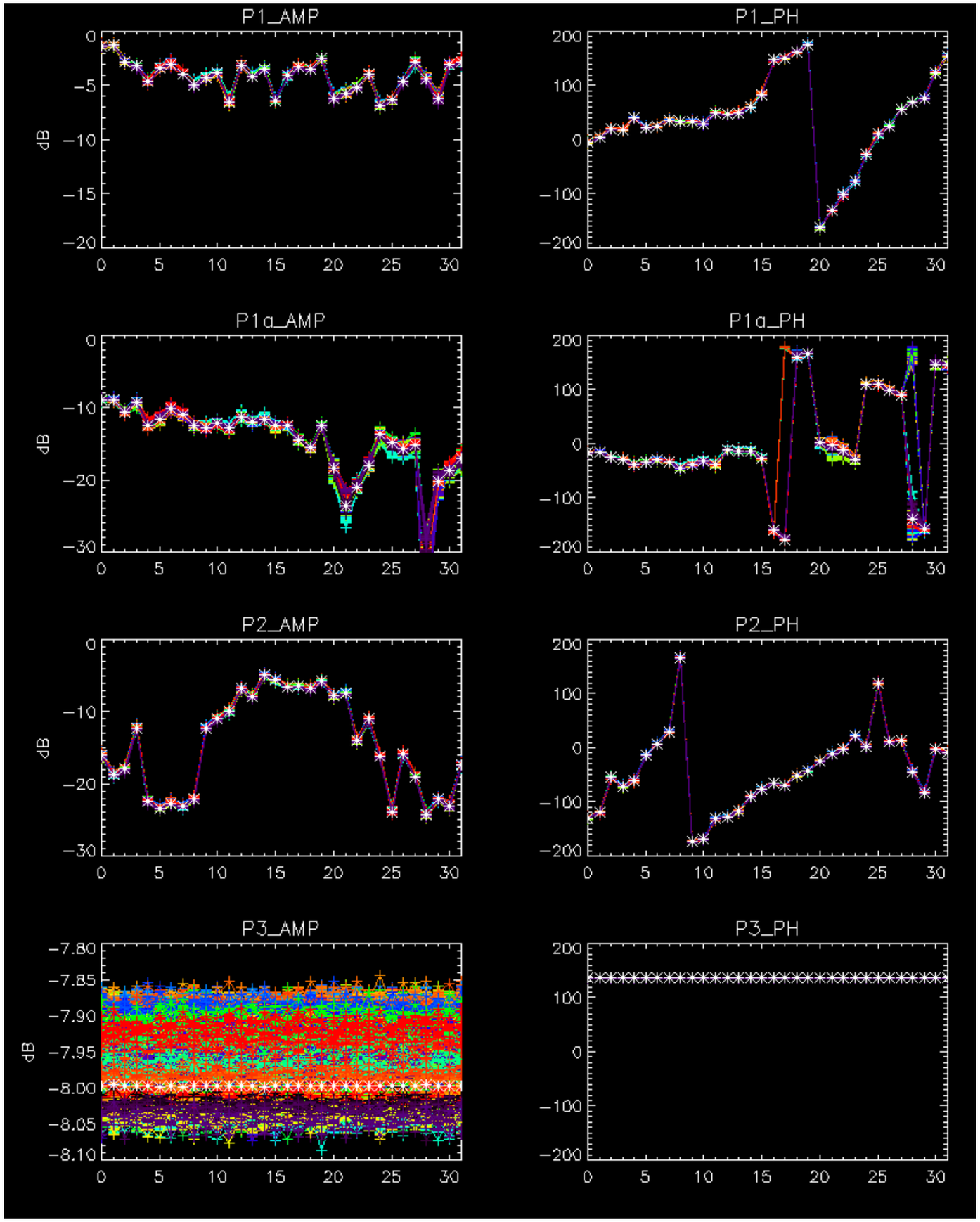

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

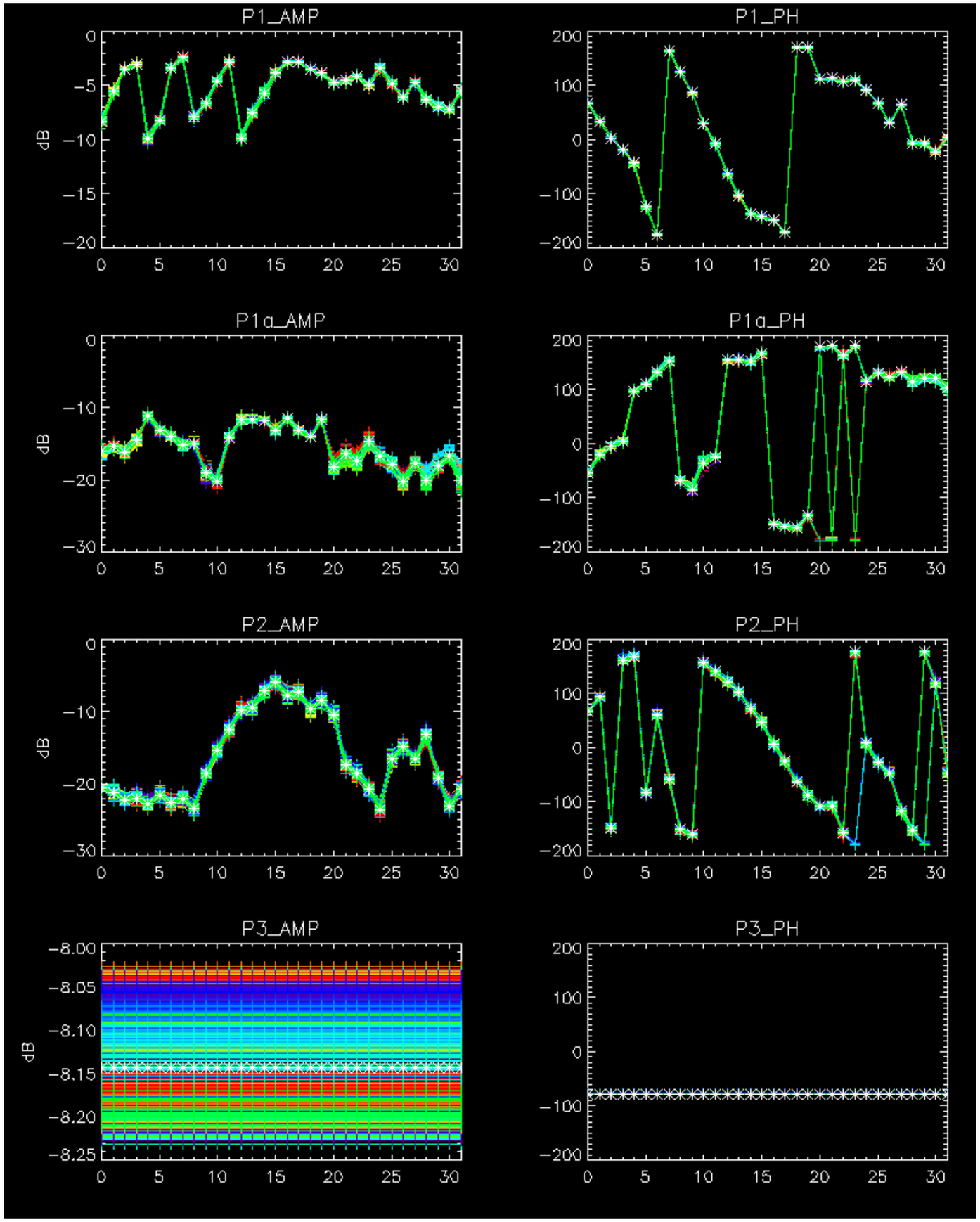

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
28−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
28−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
28−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
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
27−Aug
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
27−Aug
Average P2[dB]
−5
−10
−15
−20
−25
03
06
09
12
15
18
27−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
27−Aug
rows: 3 7 11 15 19 22 24 30

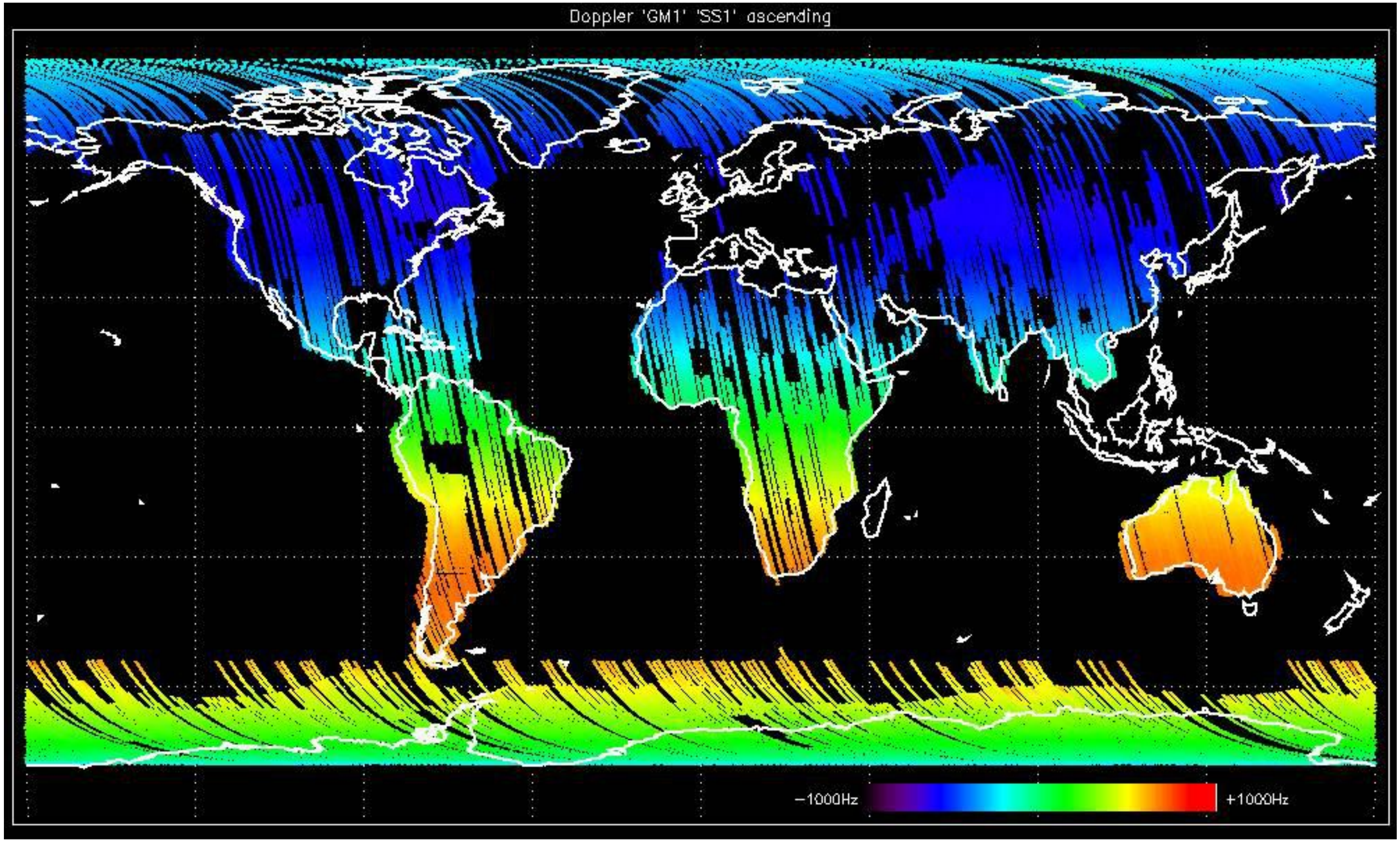
No anomalies observed.

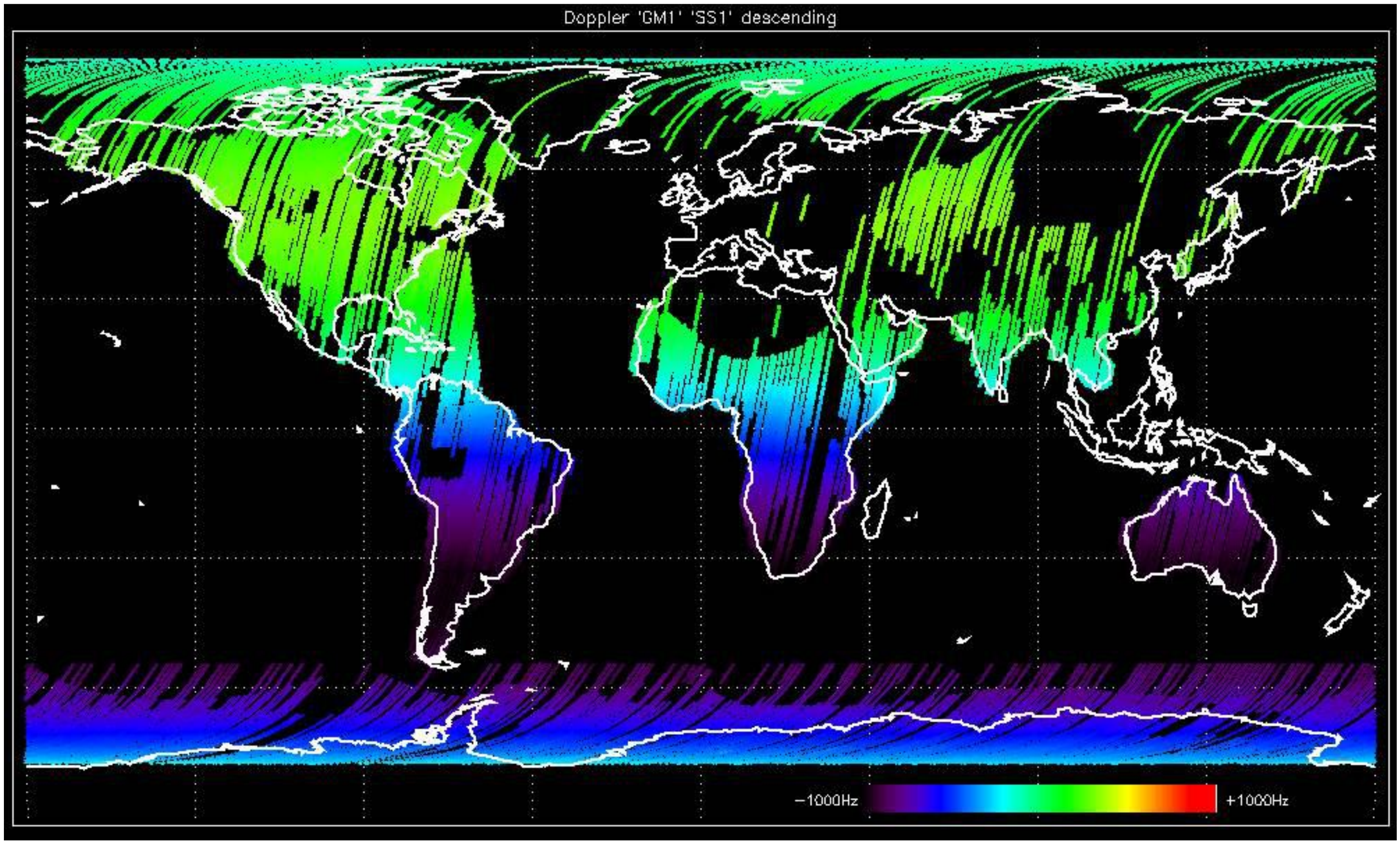

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95
−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

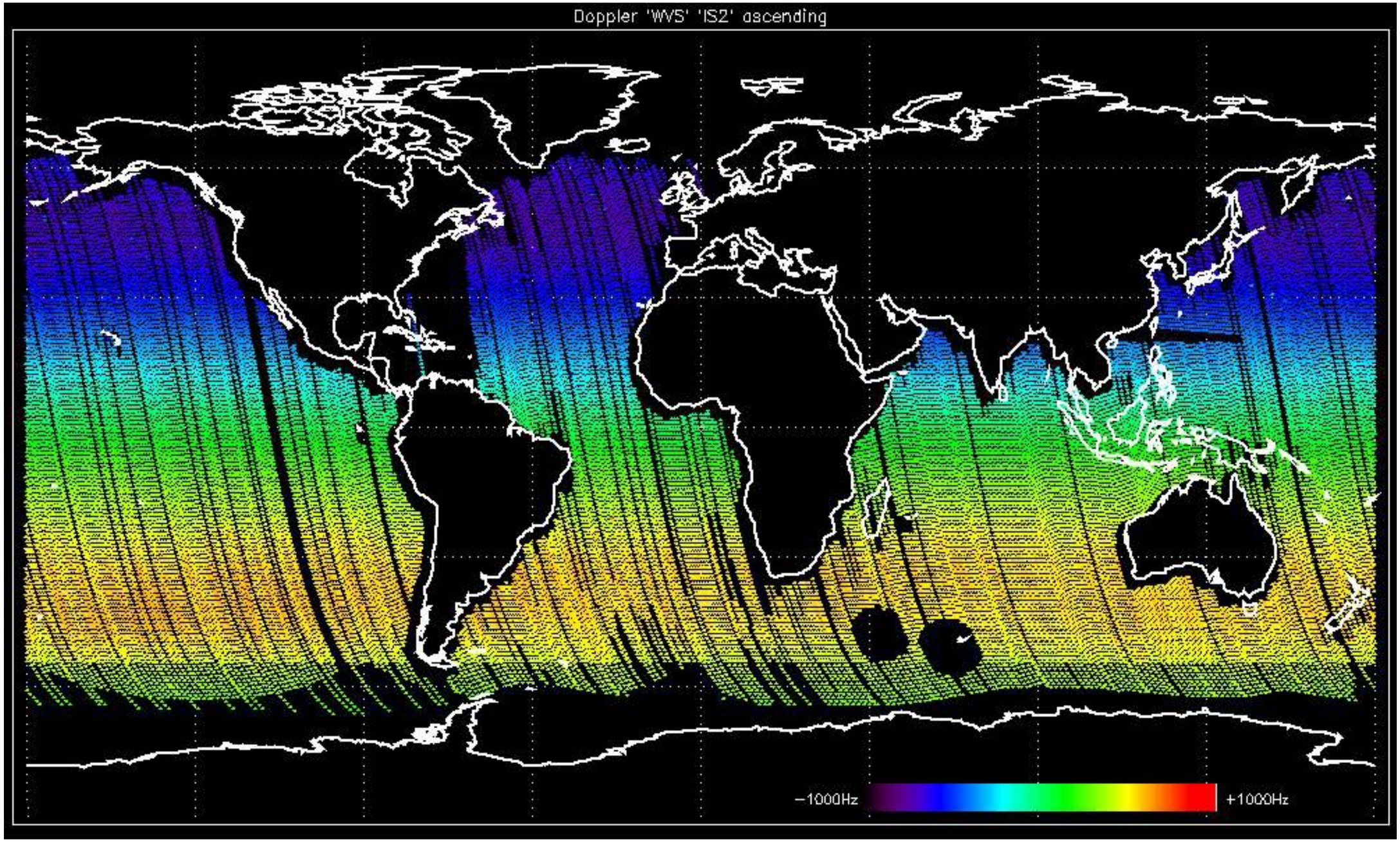

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

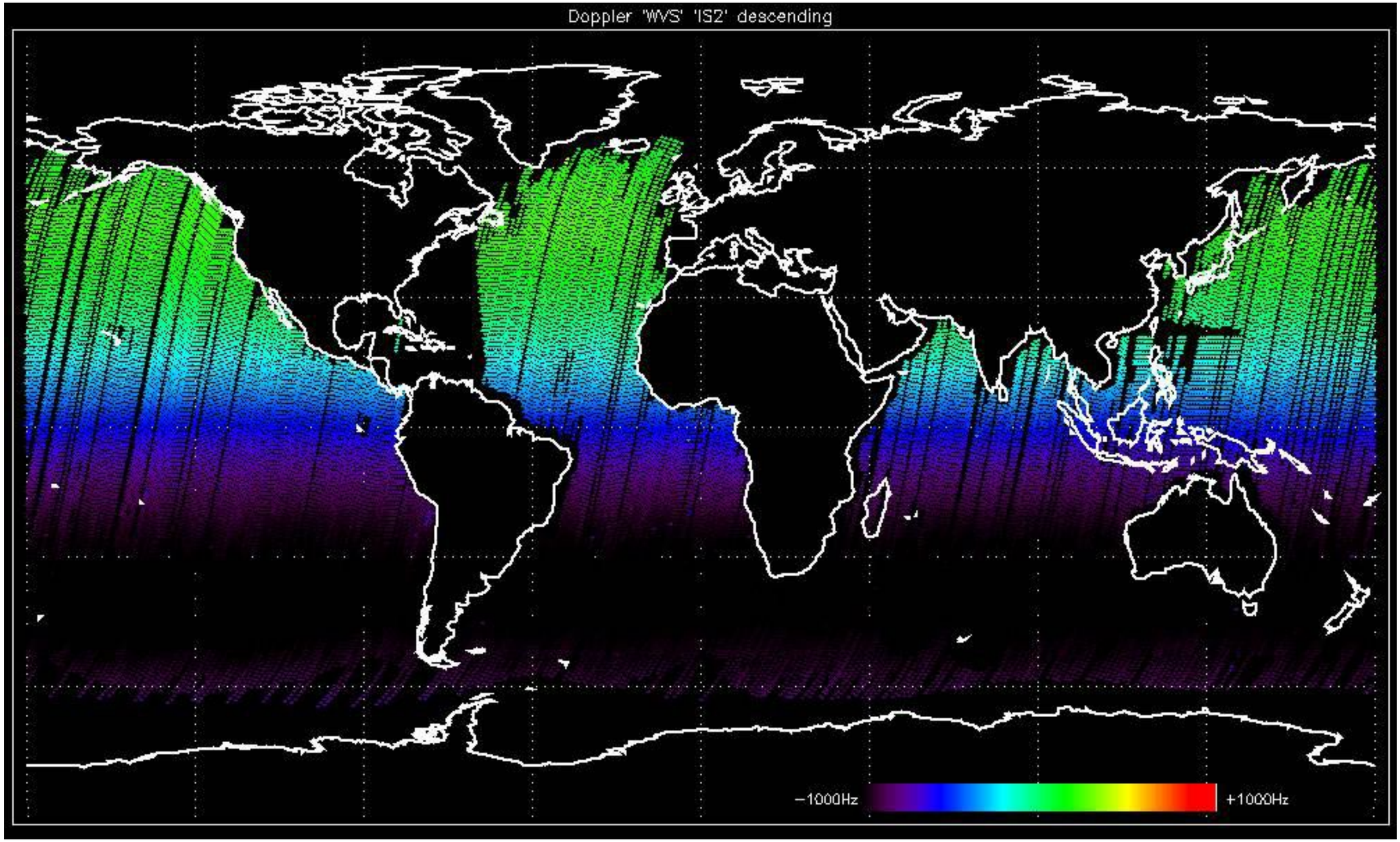
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

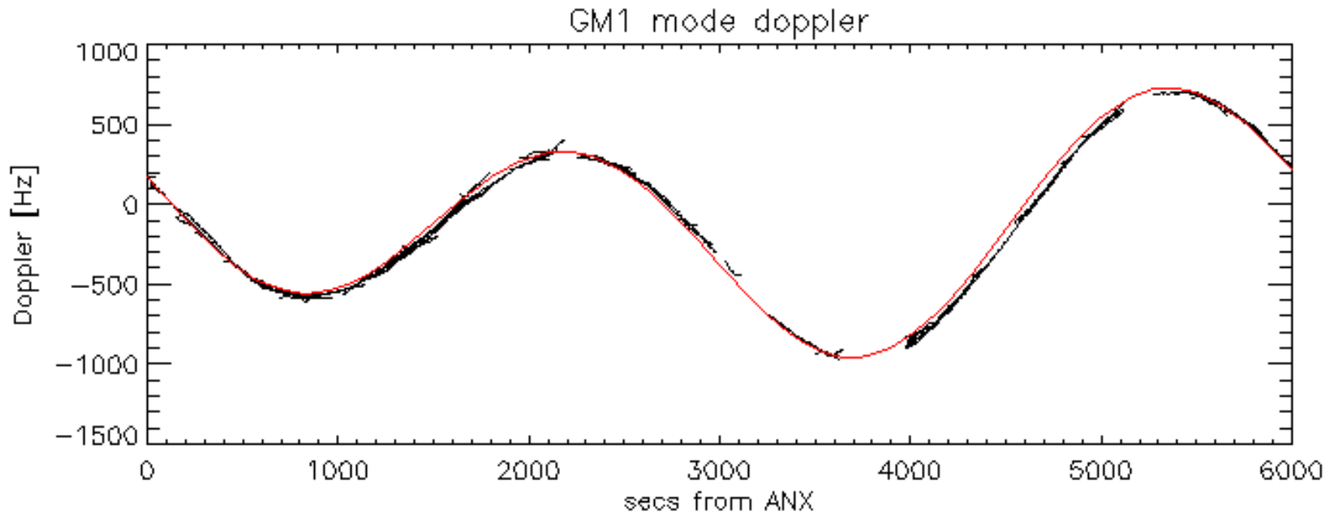
Preliminary report.The data is not yet controled

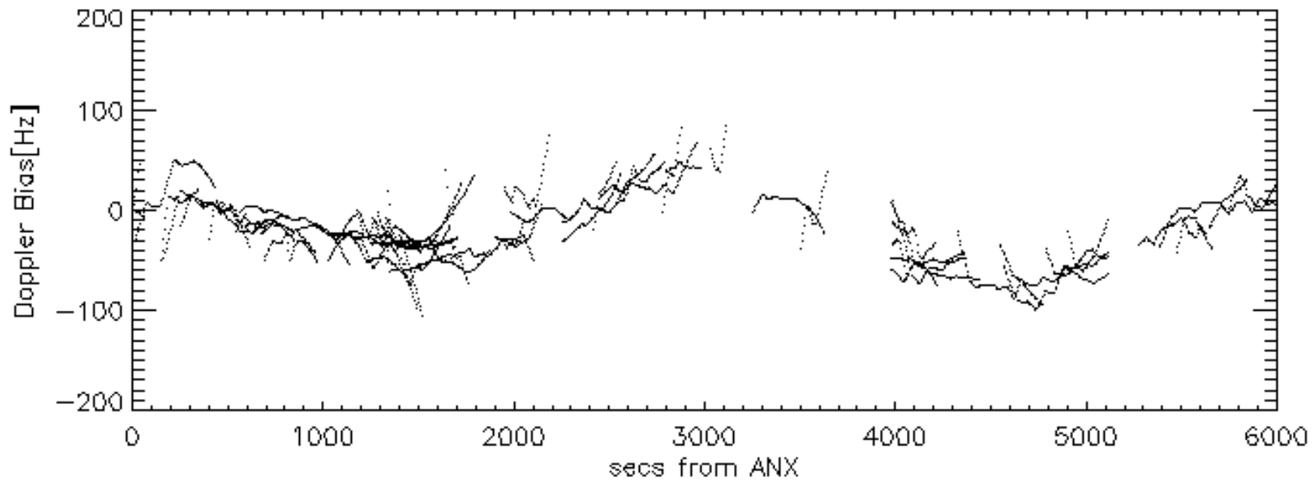

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

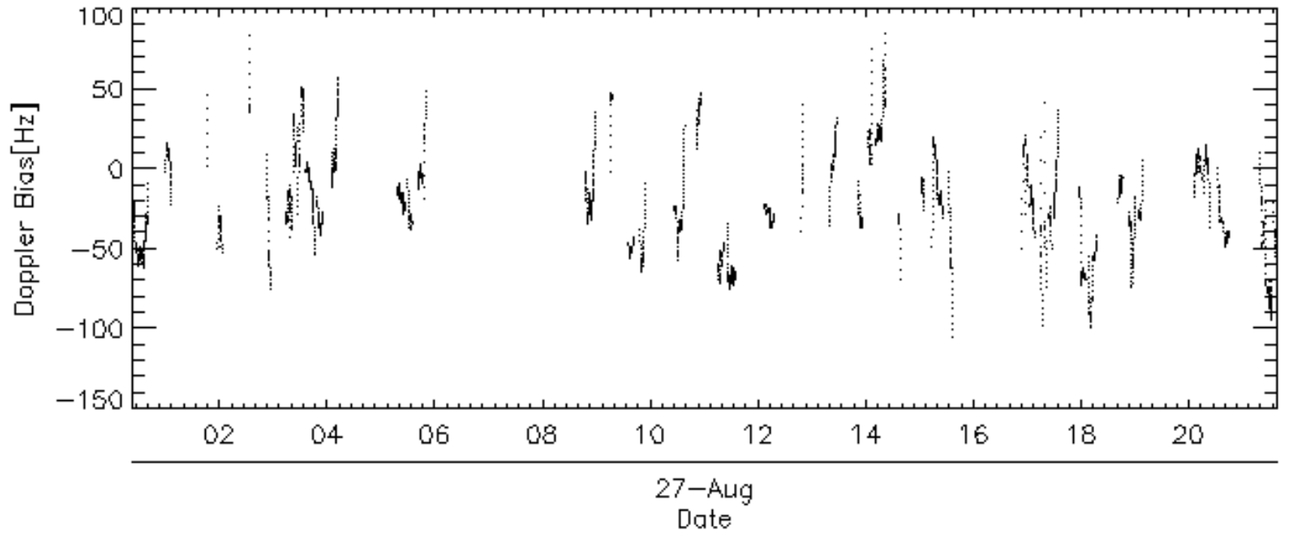

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

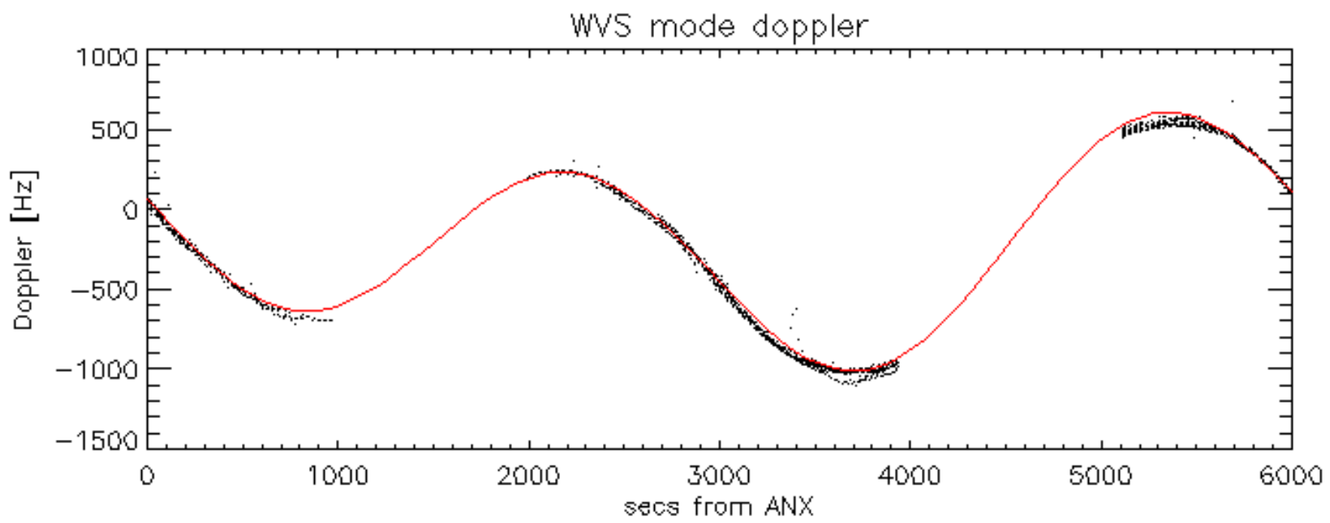

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

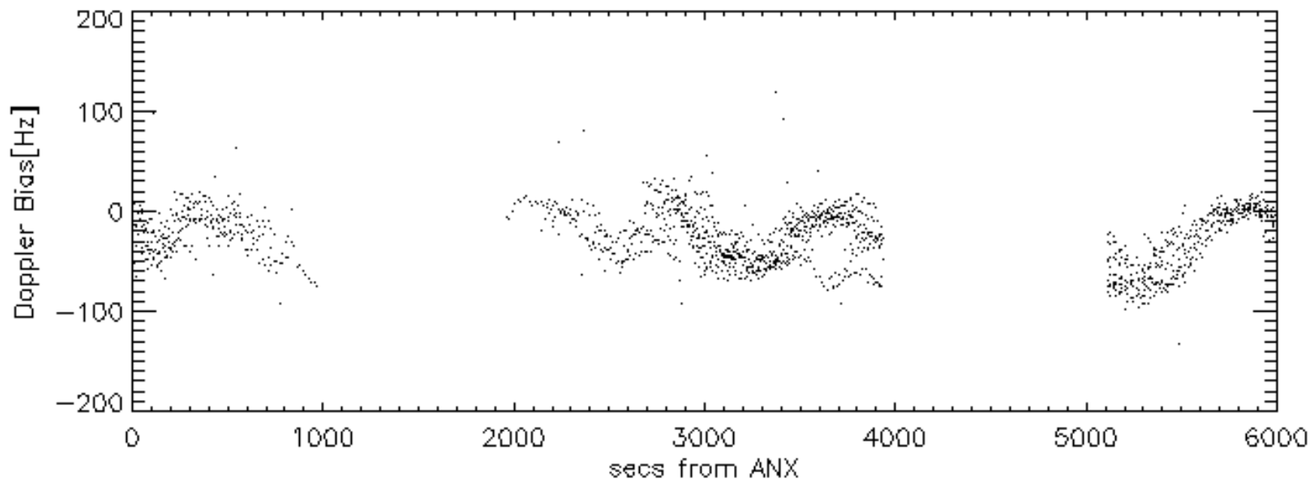

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

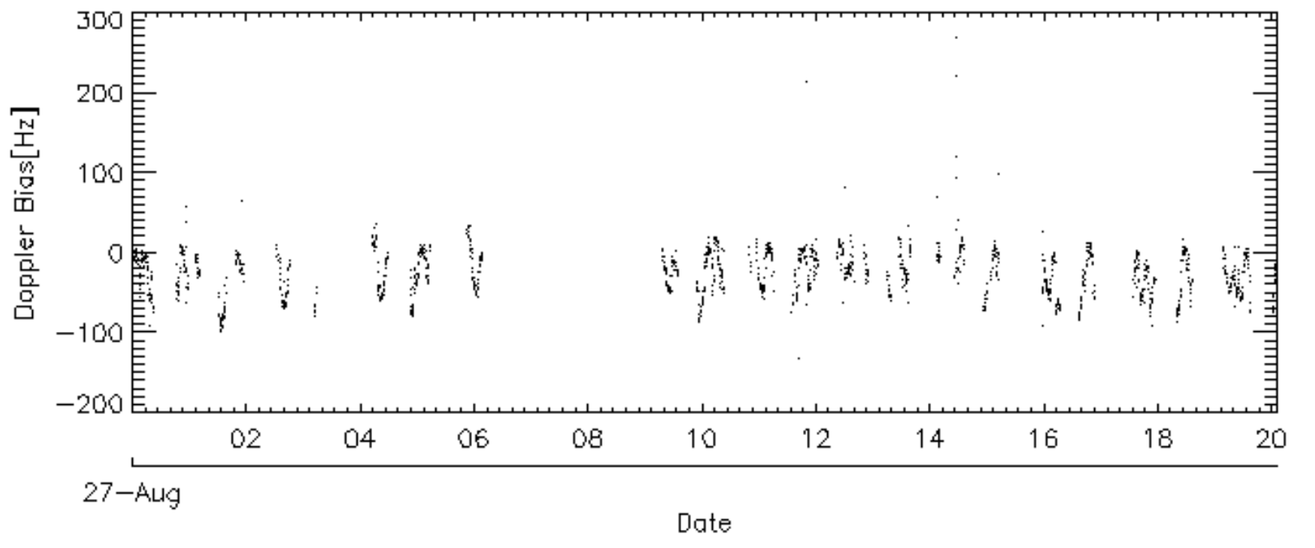

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

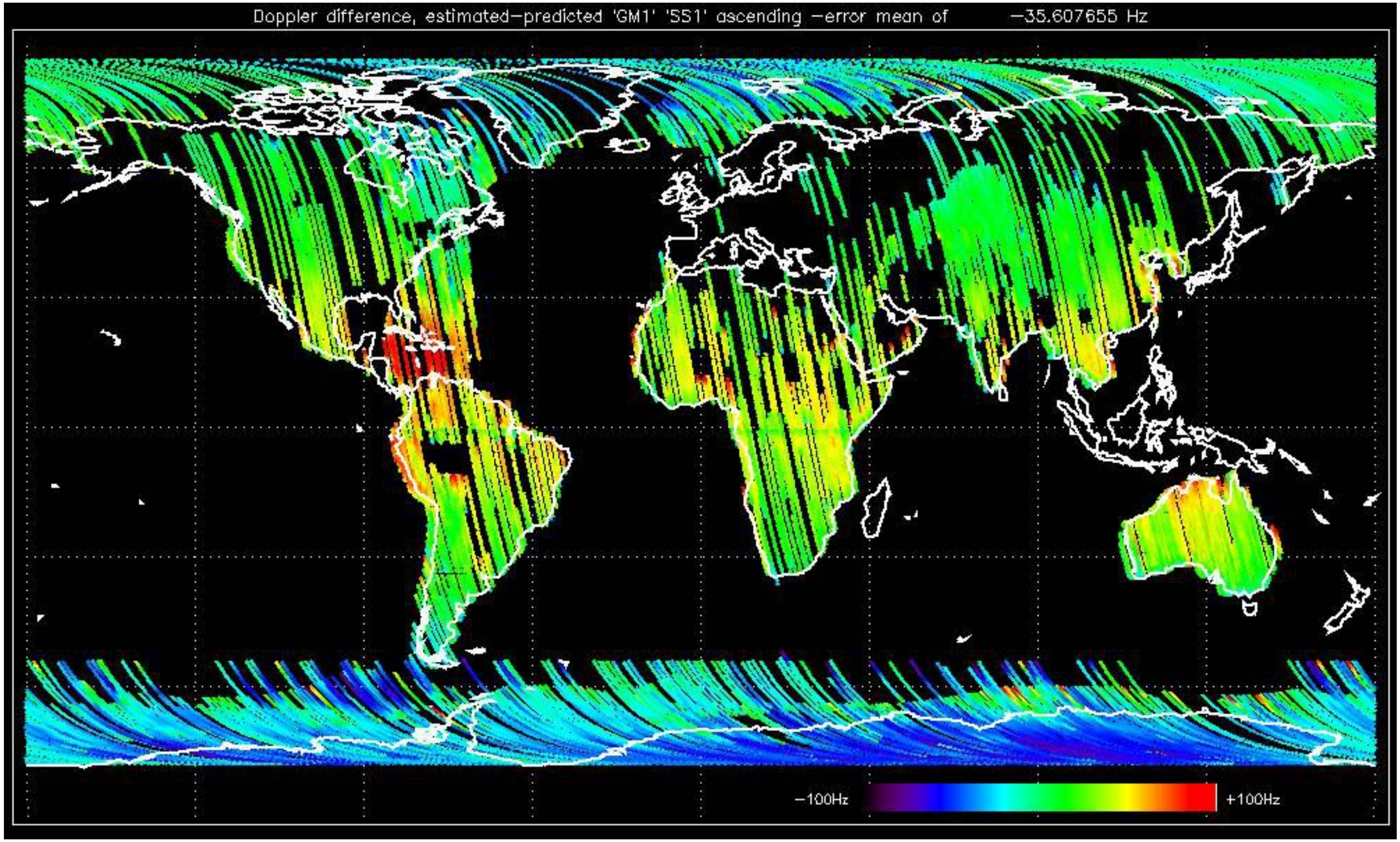

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

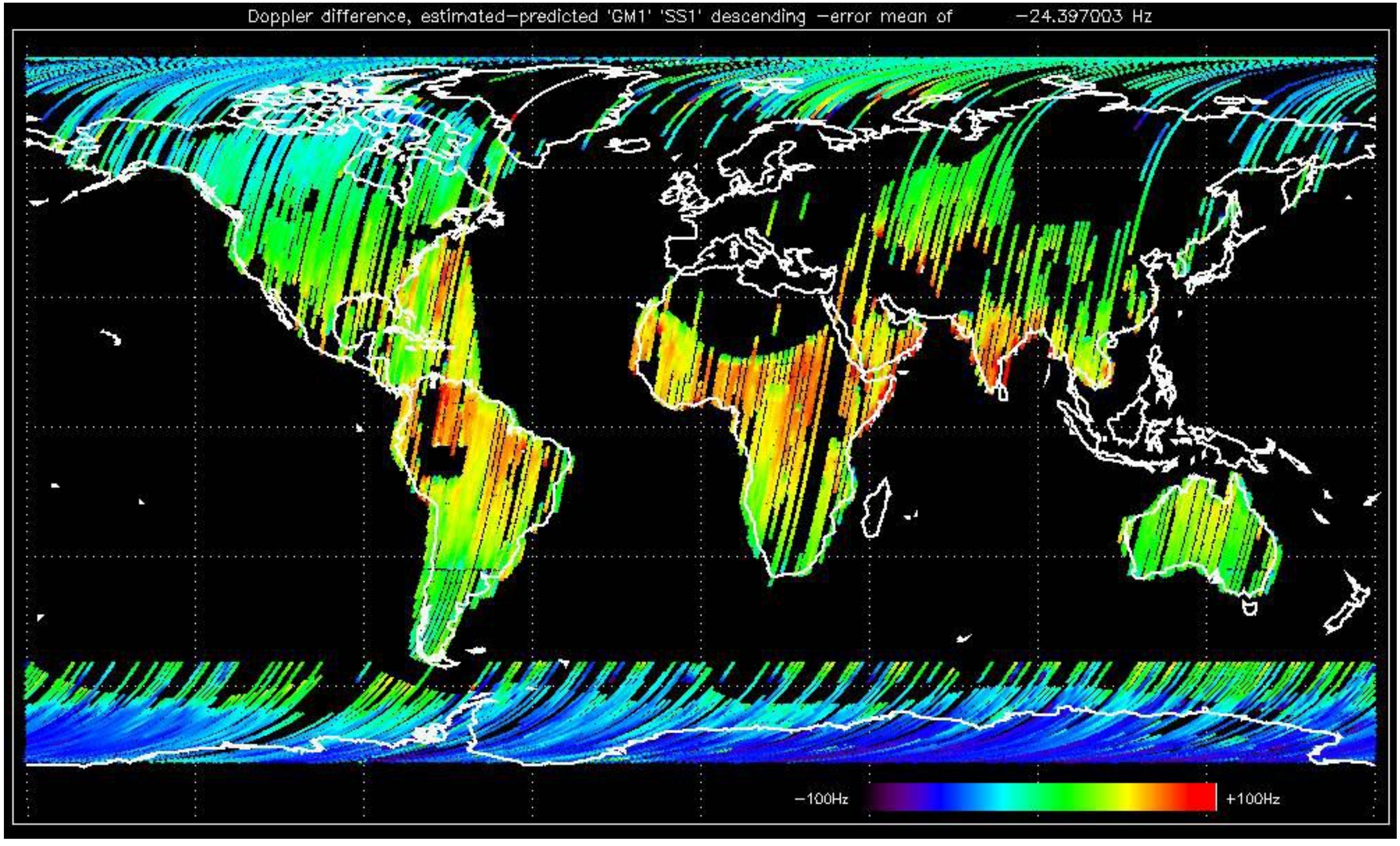

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
27−Aug
Date

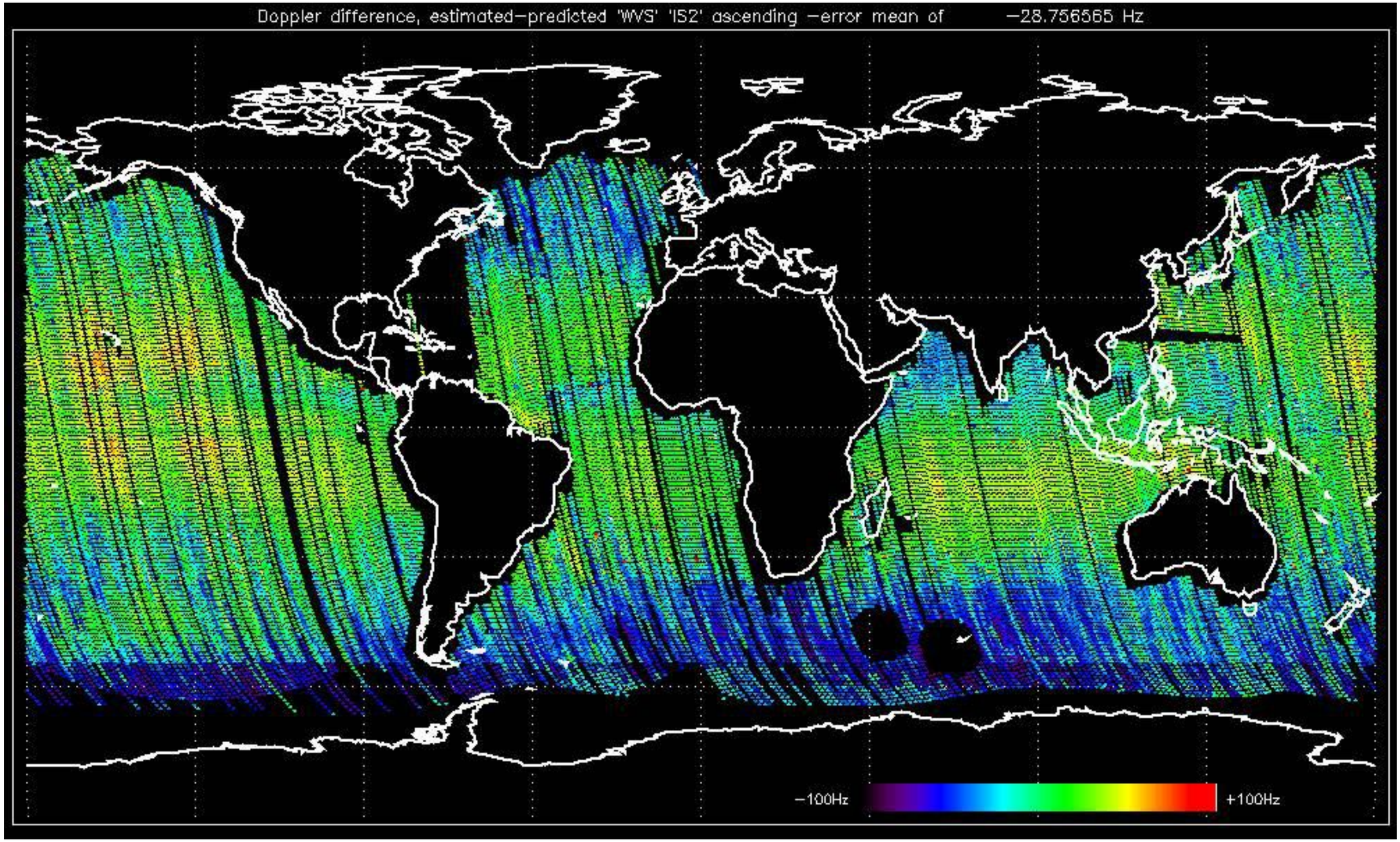

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

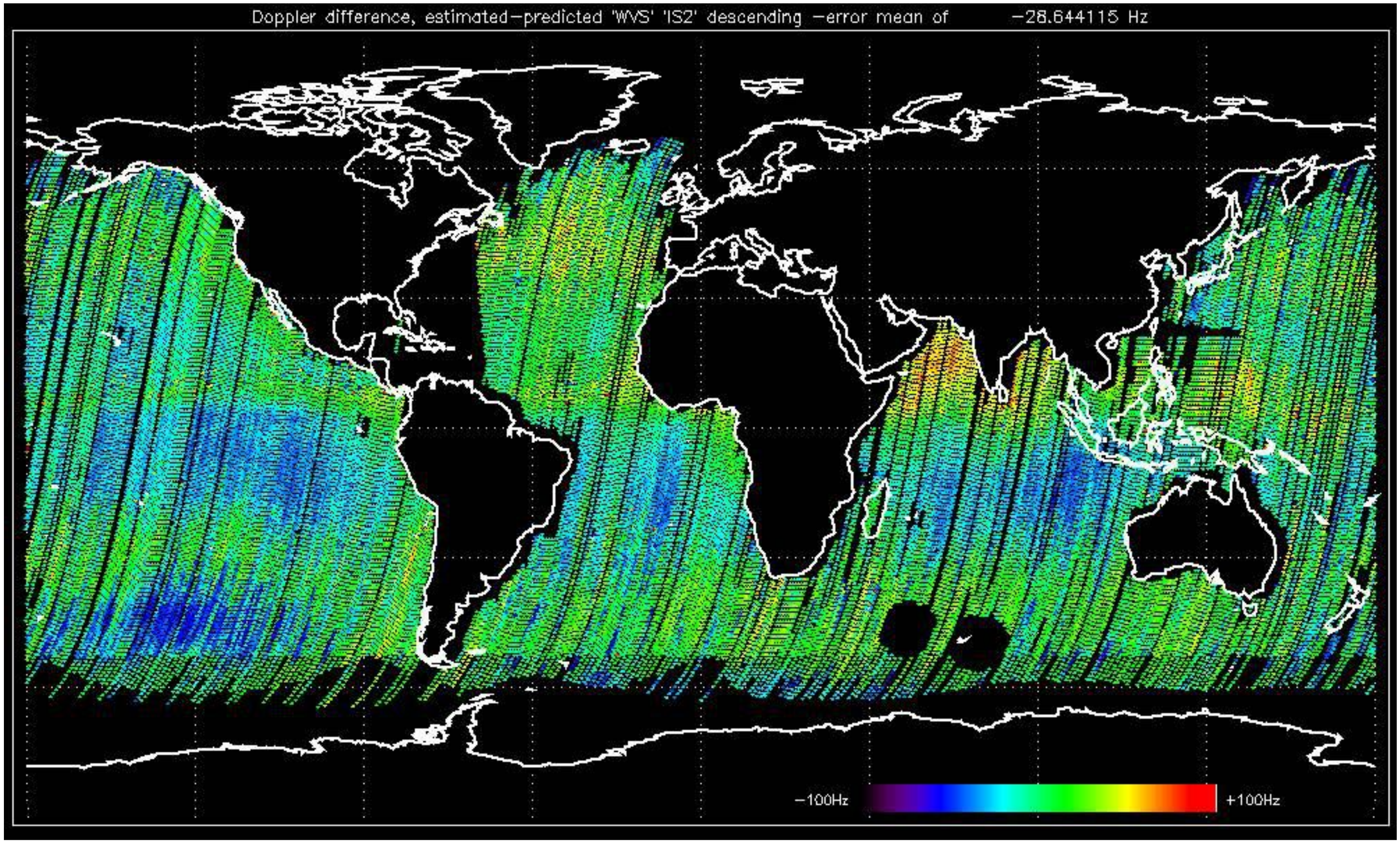

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.607655 Hz
−100Hz
+100Hz

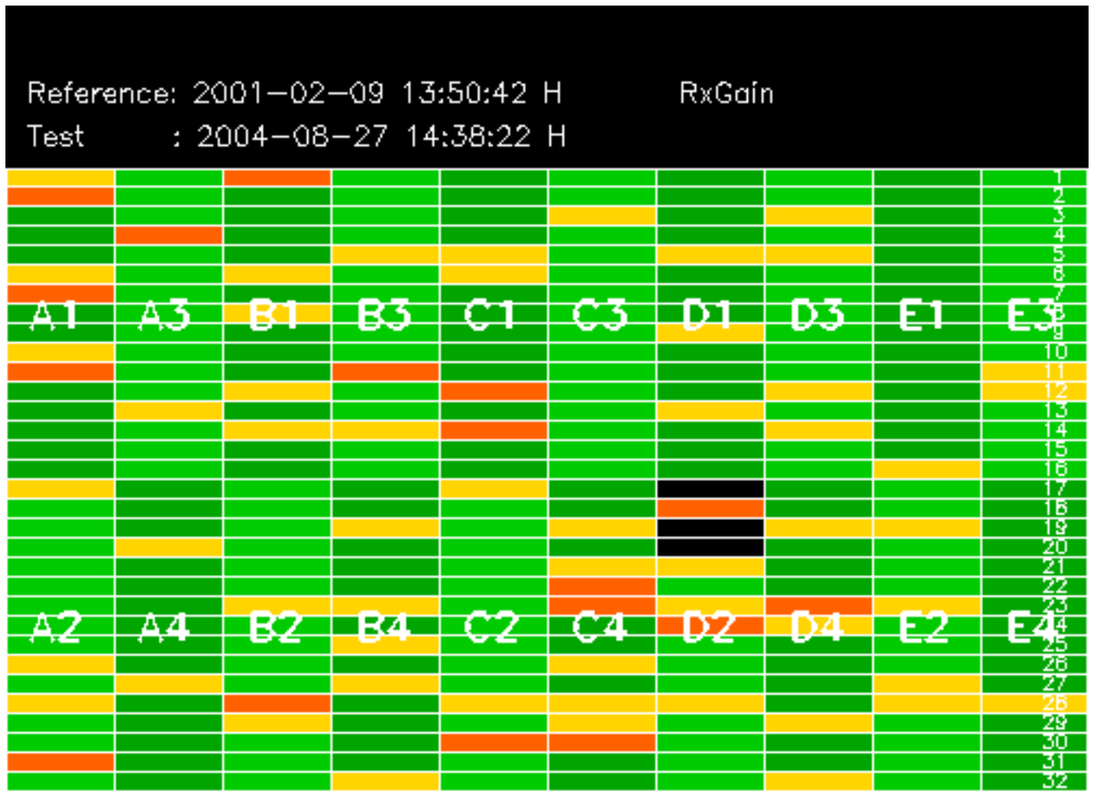

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −24.397003 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.756565 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −28.644115 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 : 2004-08-27 14:38:22 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
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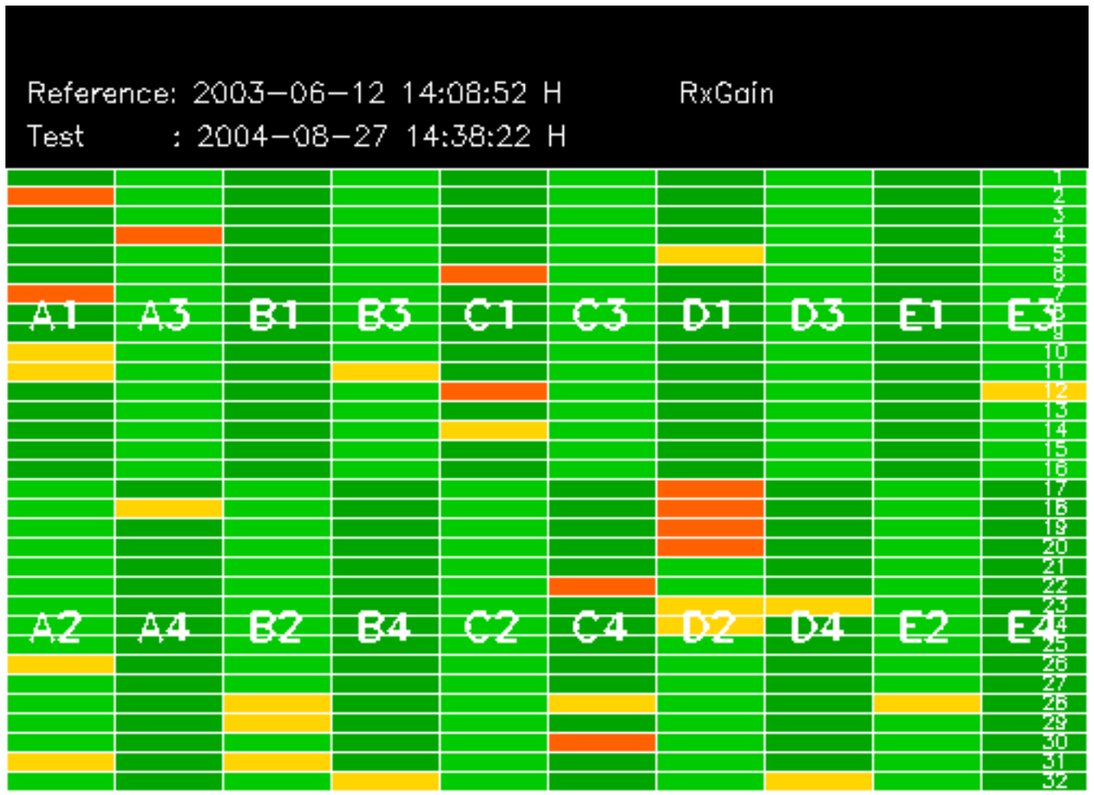
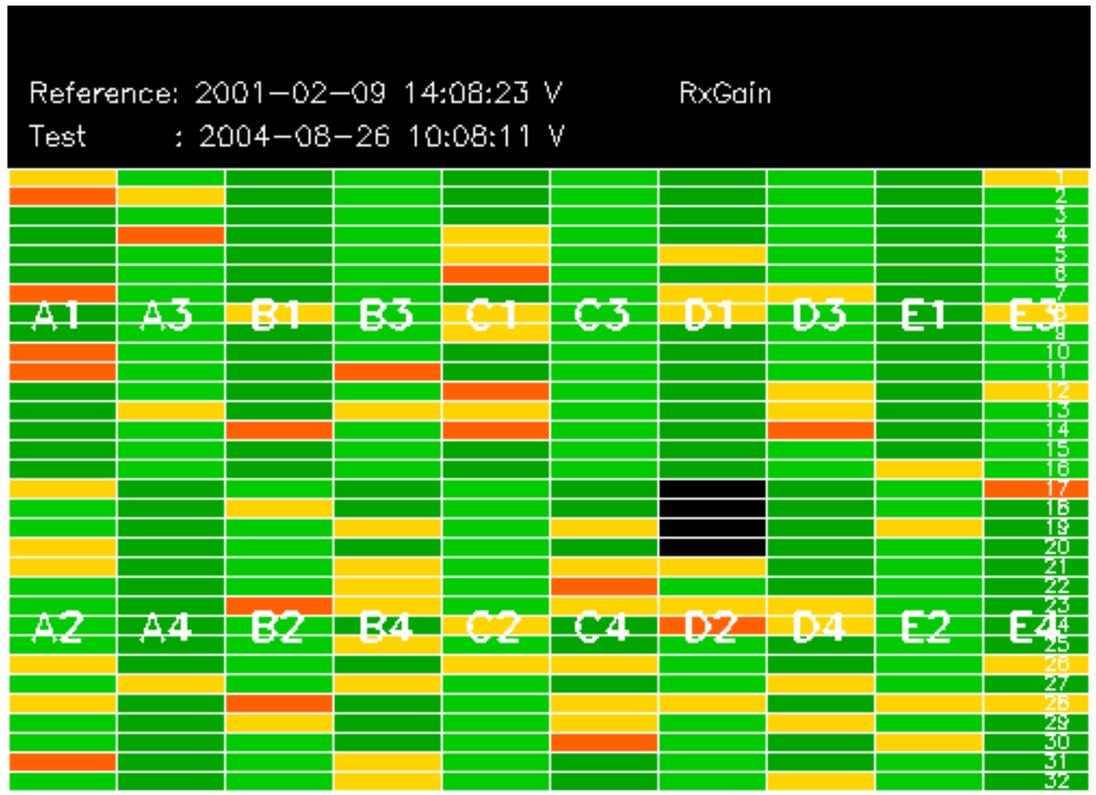
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-08-27 14:38:22 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 : 2004-08-26 10:08:11 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
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14
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21
22
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24
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26
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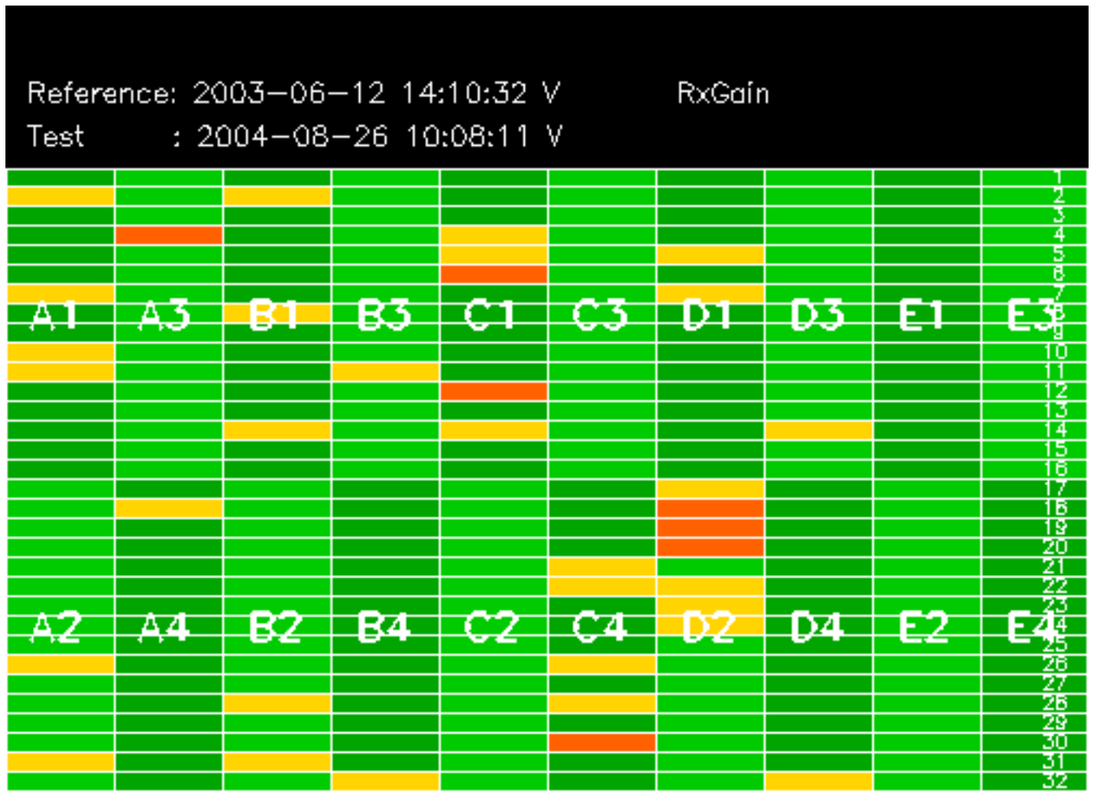
28
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2004-08-26 10:08:11 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
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8
9
10
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31
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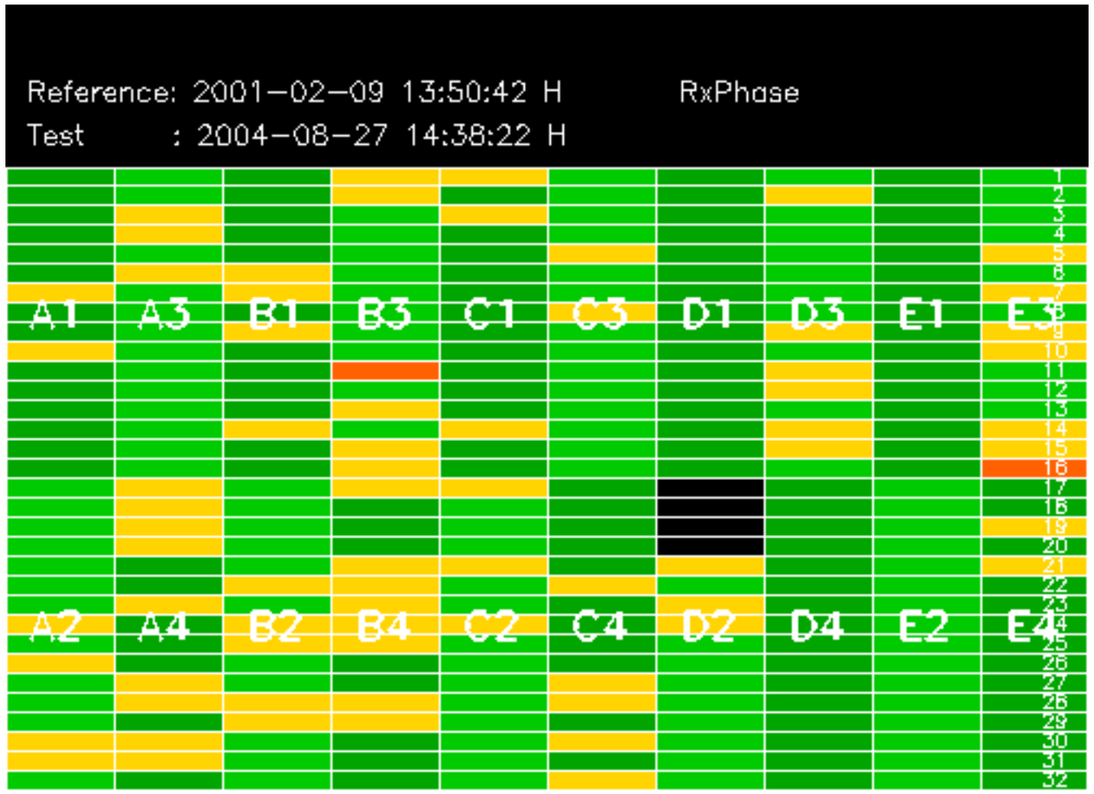
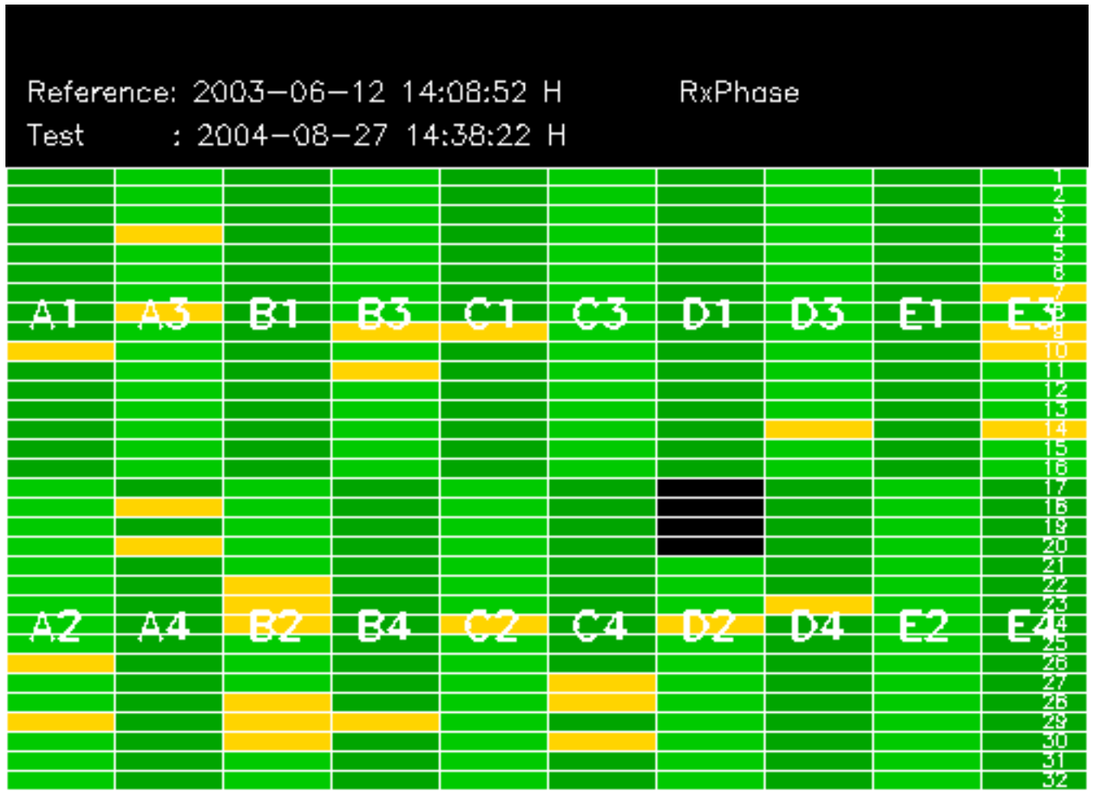
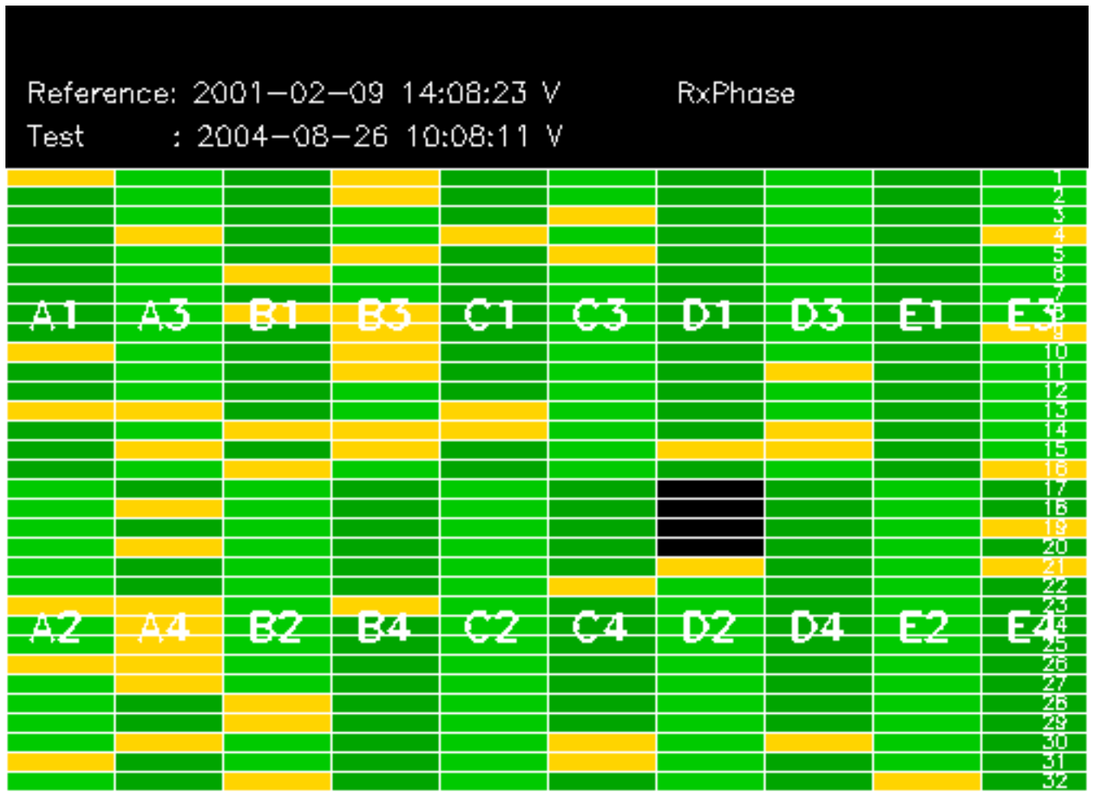
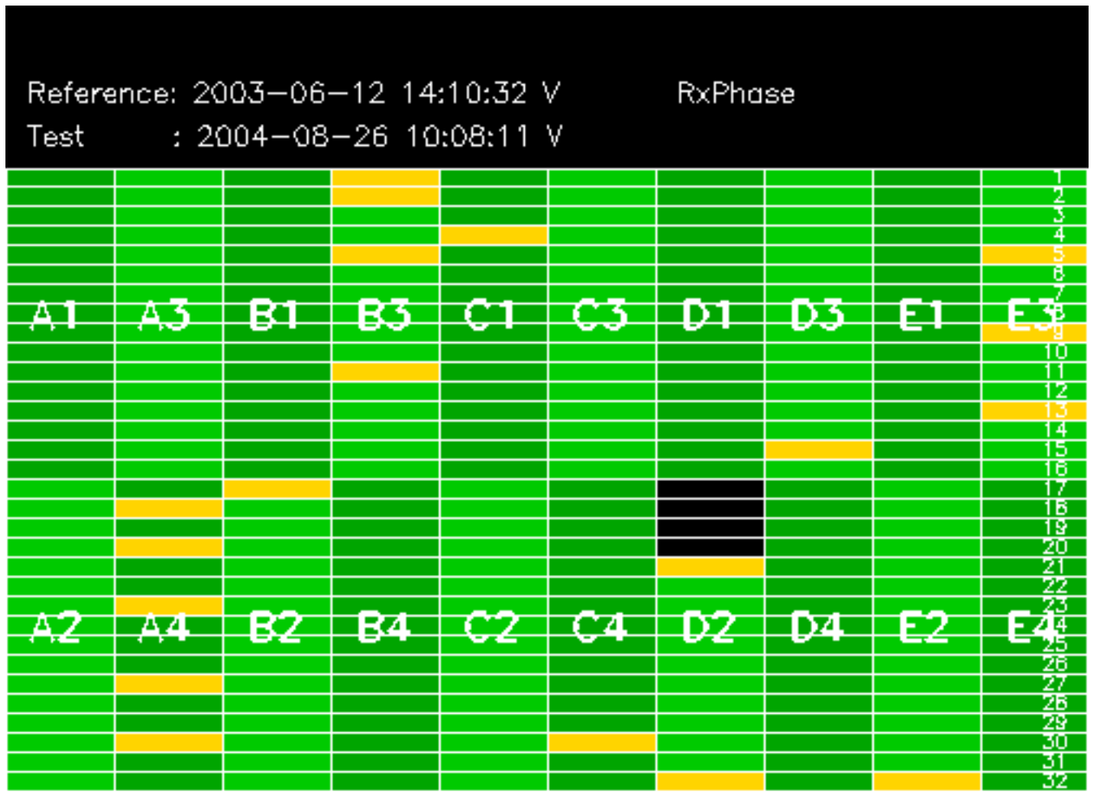
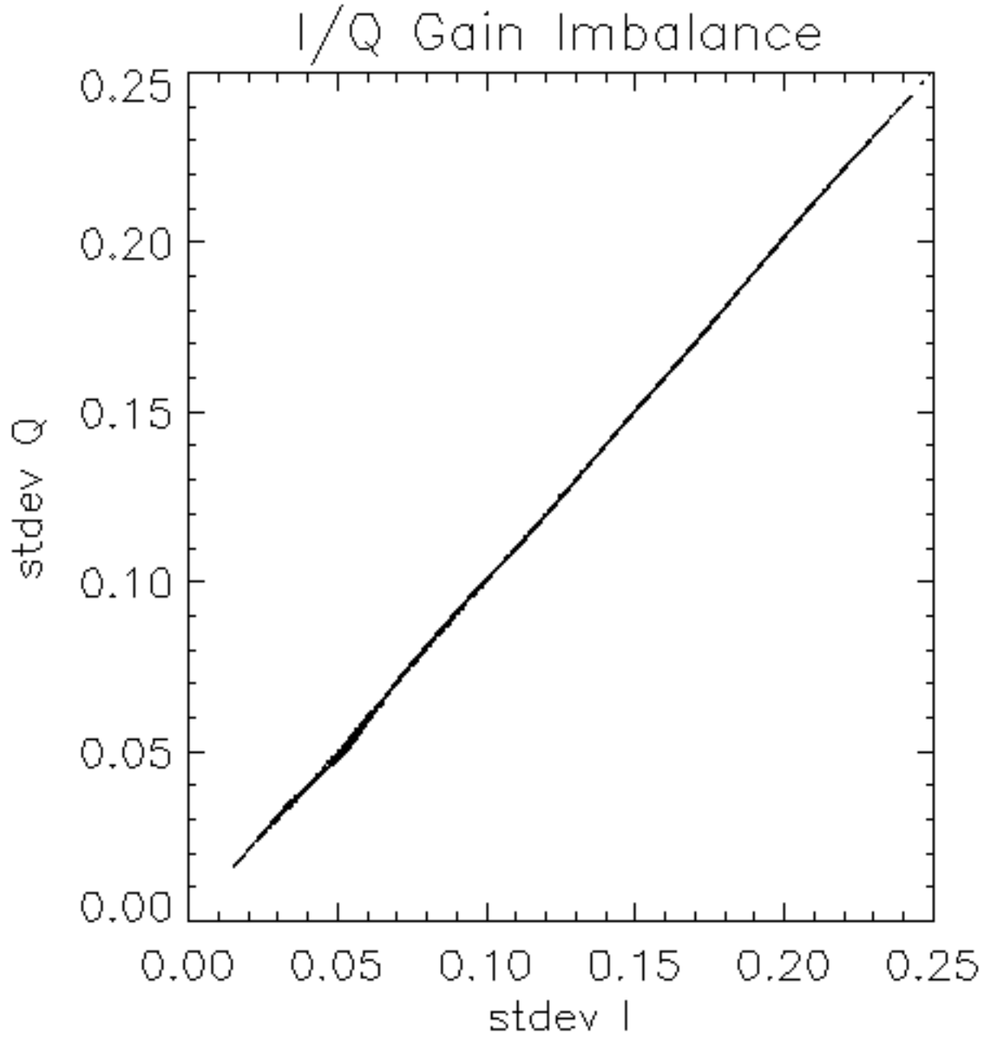
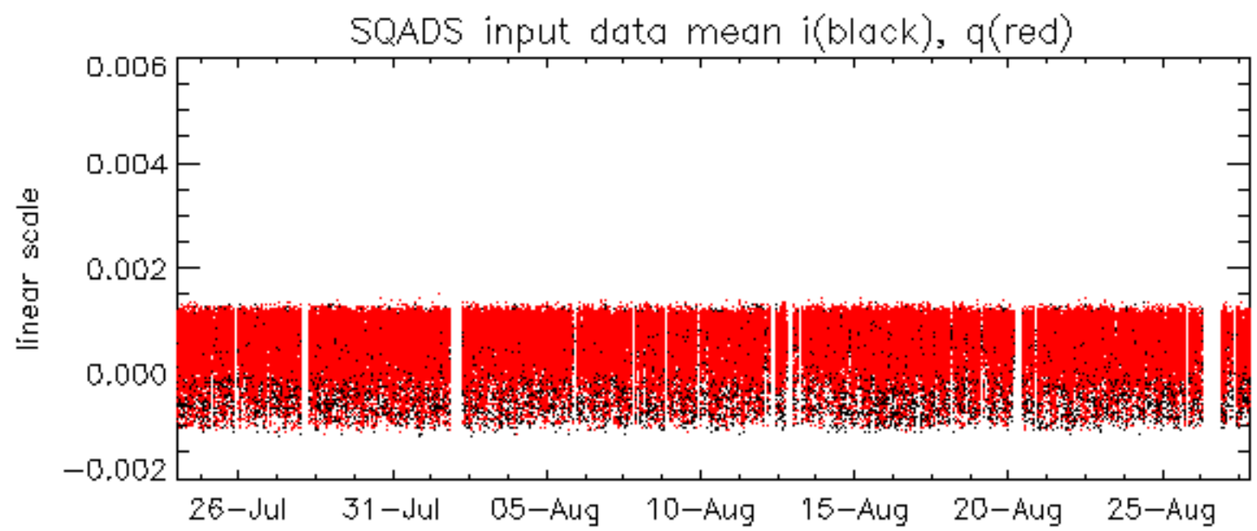

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-08-27 14:38:22 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

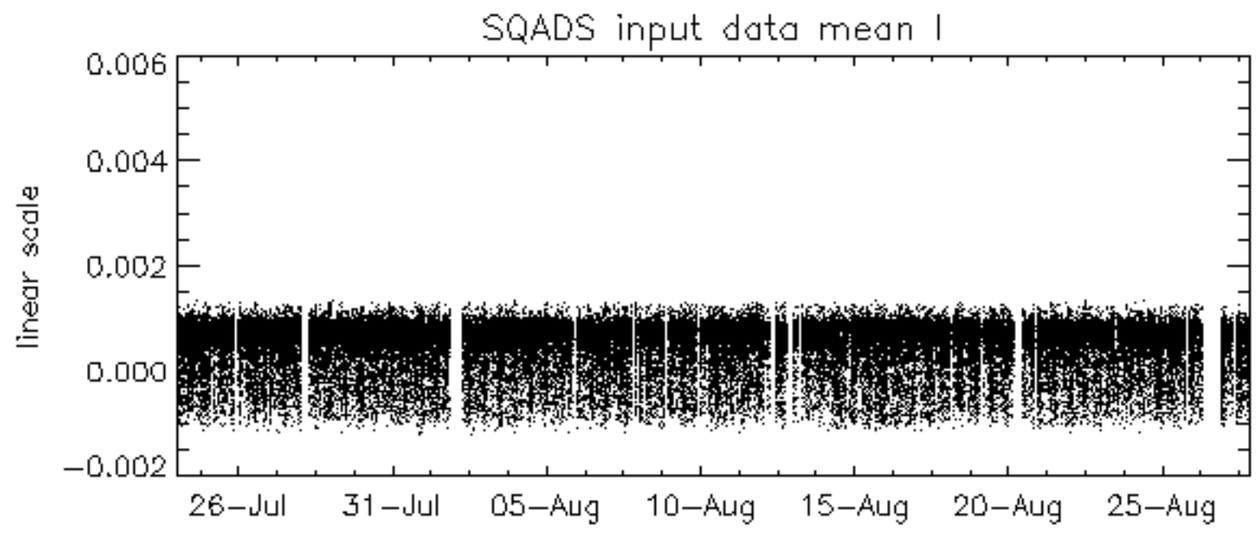

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-08-27 14:38:22 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

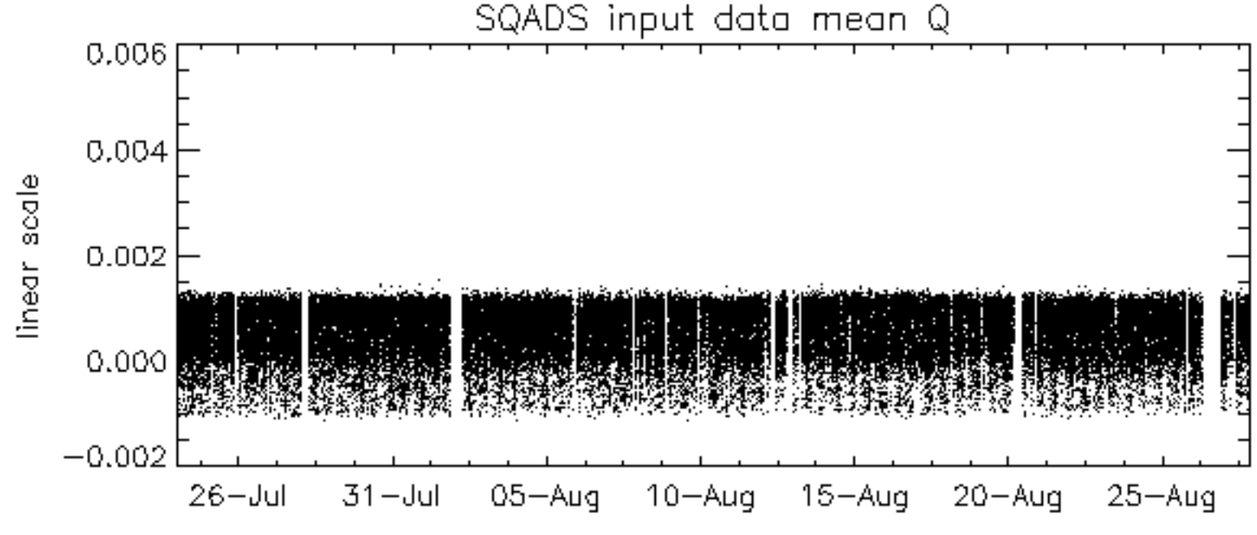

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-26 10:08:11 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

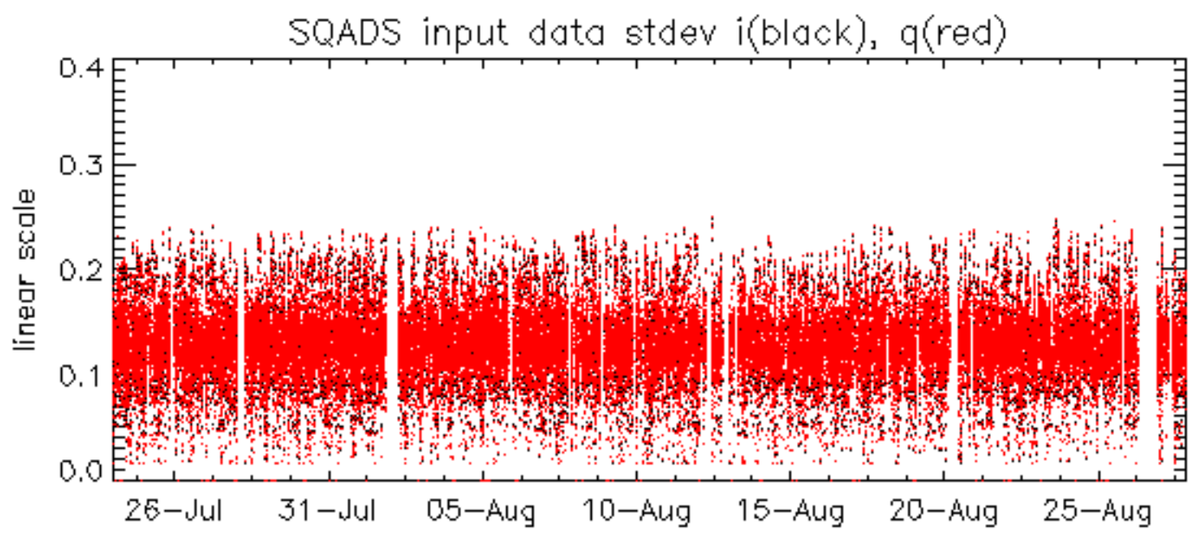

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-26 10:08:11 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

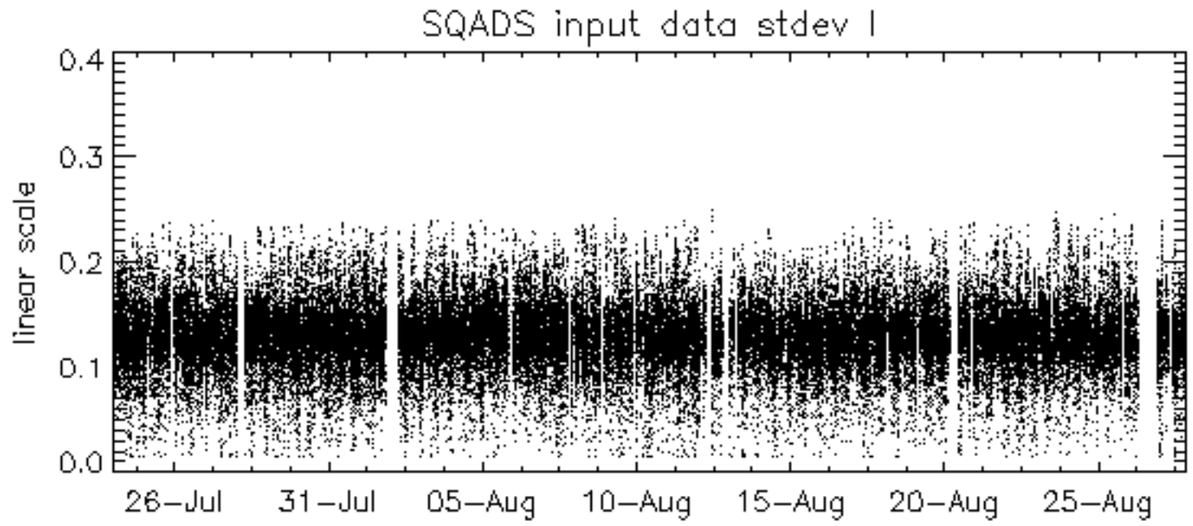

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

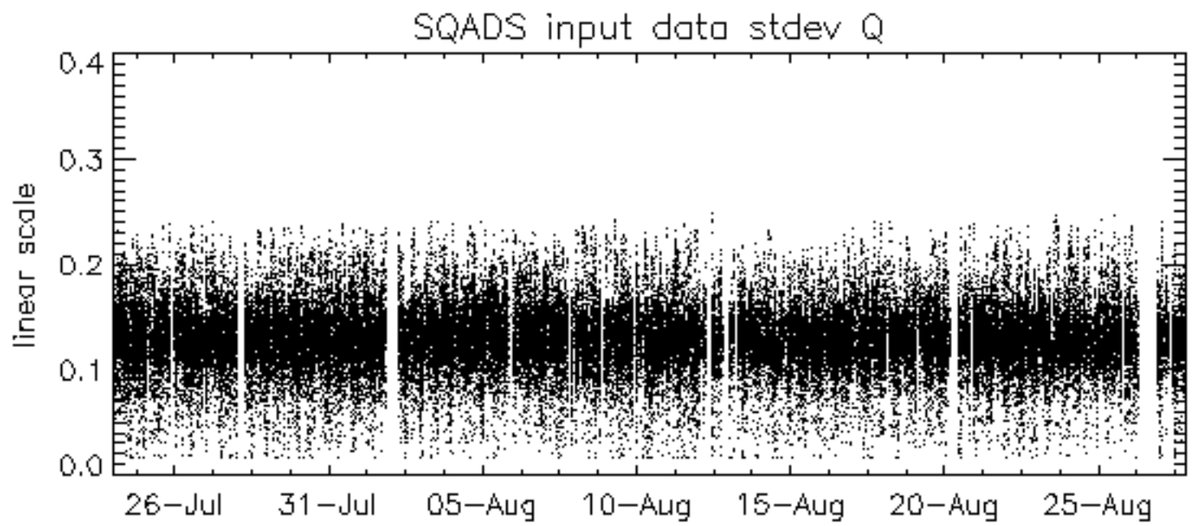

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug

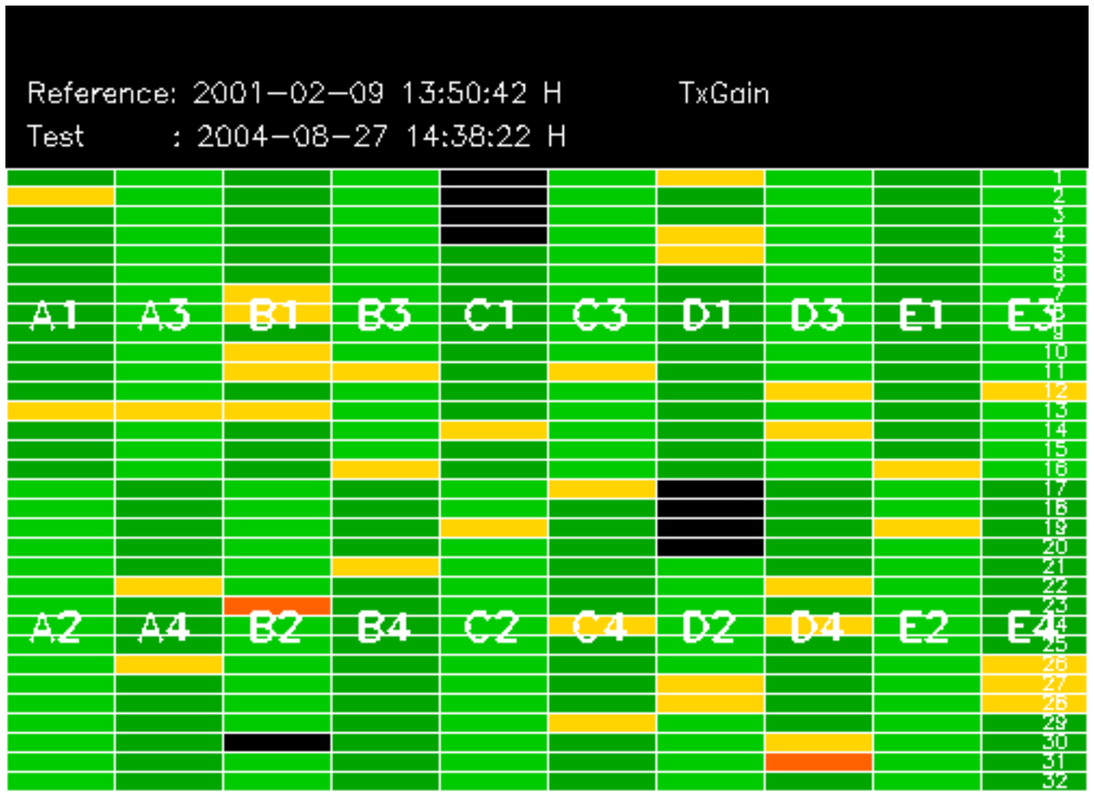

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug

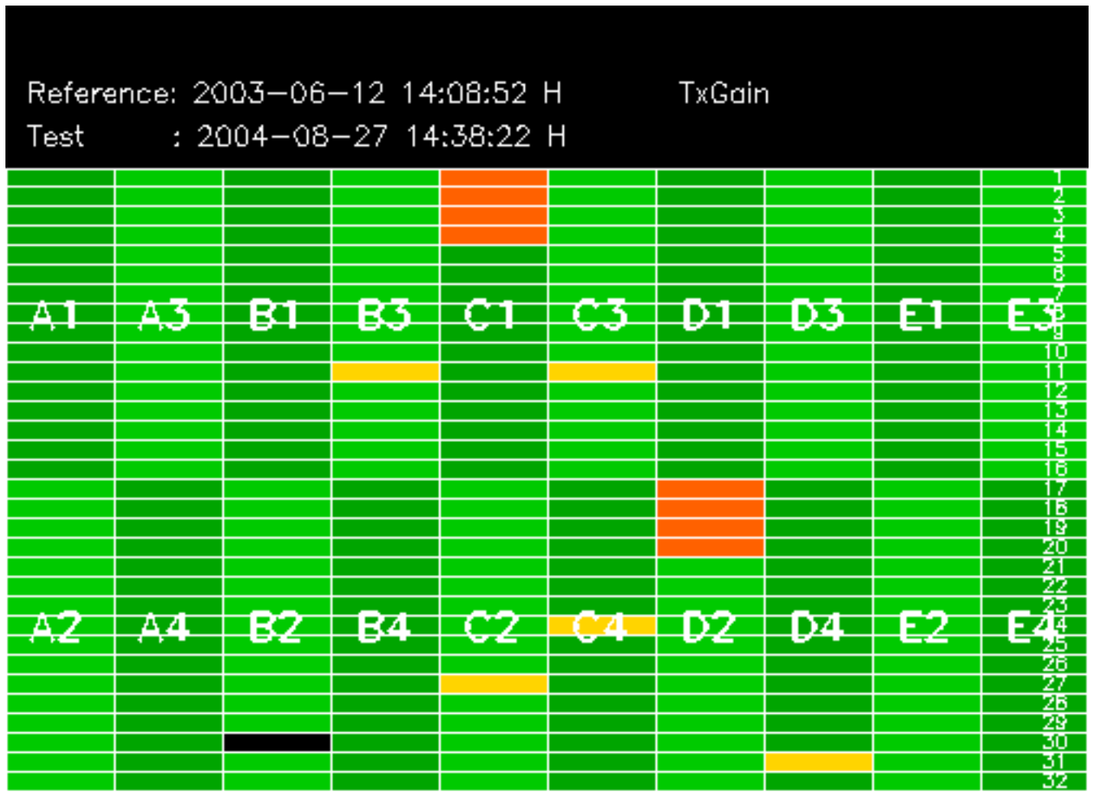

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug
25–Aug


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug
25–Aug


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug
20–Aug
25–Aug


Reference: 2001-02-09 13:50:42 H
TxGain
Test : 2004-08-27 14:38:22 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 : 2004-08-27 14:38:22 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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29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-26 10:08:11 V
TxGain
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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27
28
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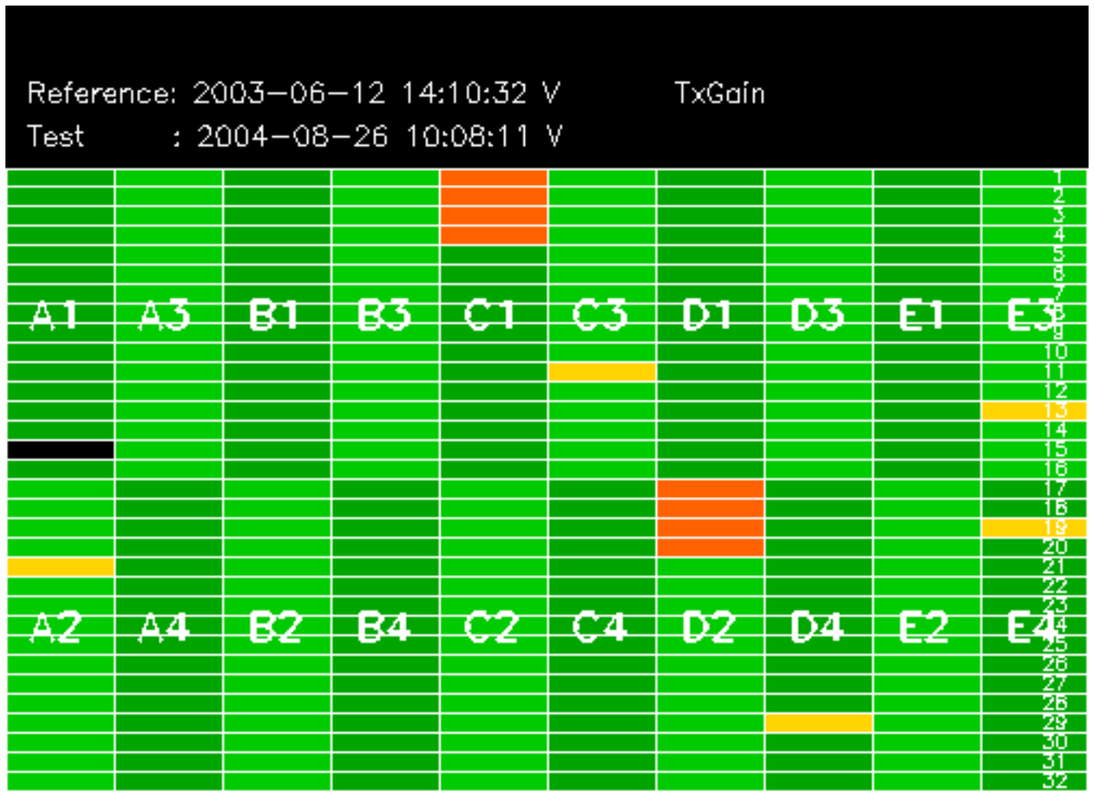
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2004-08-26 10:08:11 V
TxGain
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
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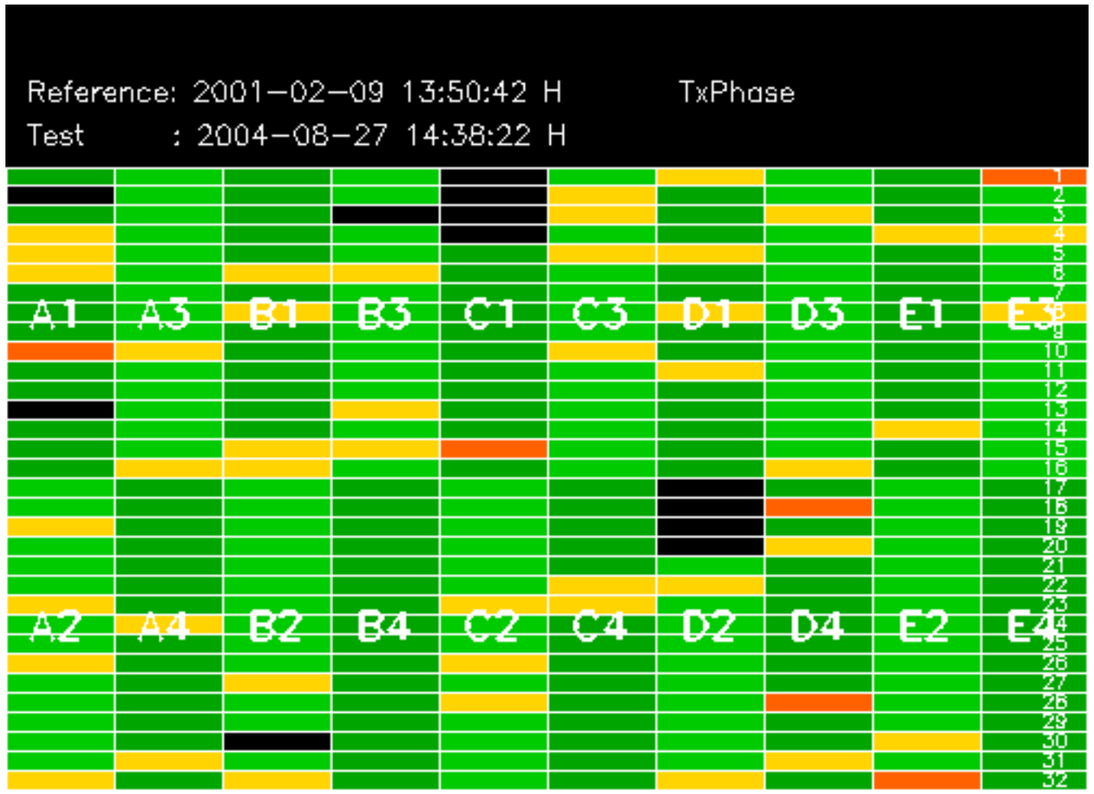
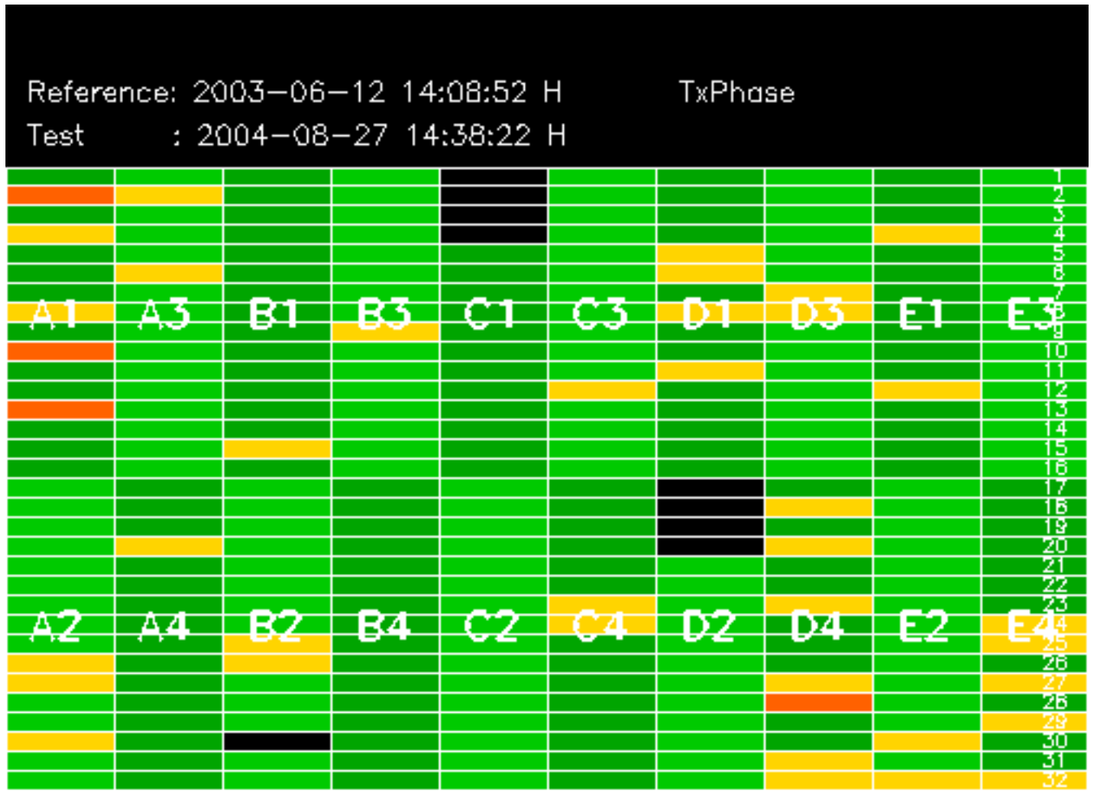
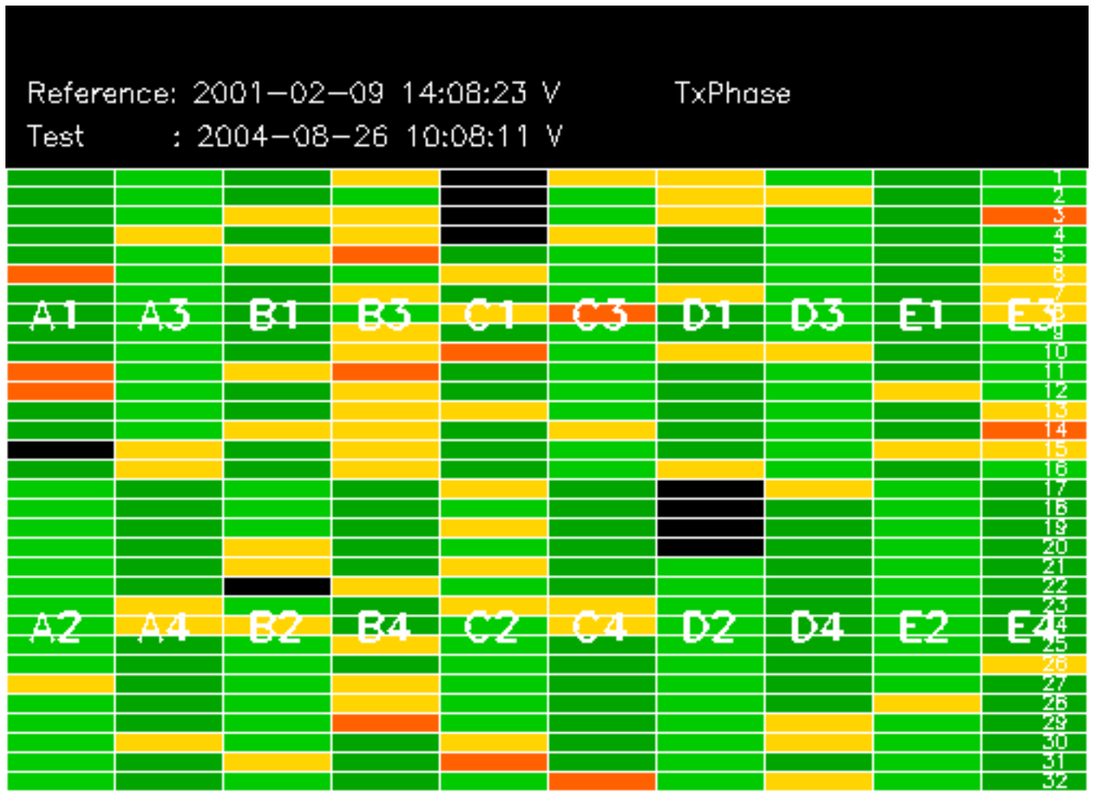

Reference: 2001-02-09 13:50:42 H
Test : 2004-08-27 14:38:22 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-08-27 14:38:22 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-26 10:08:11 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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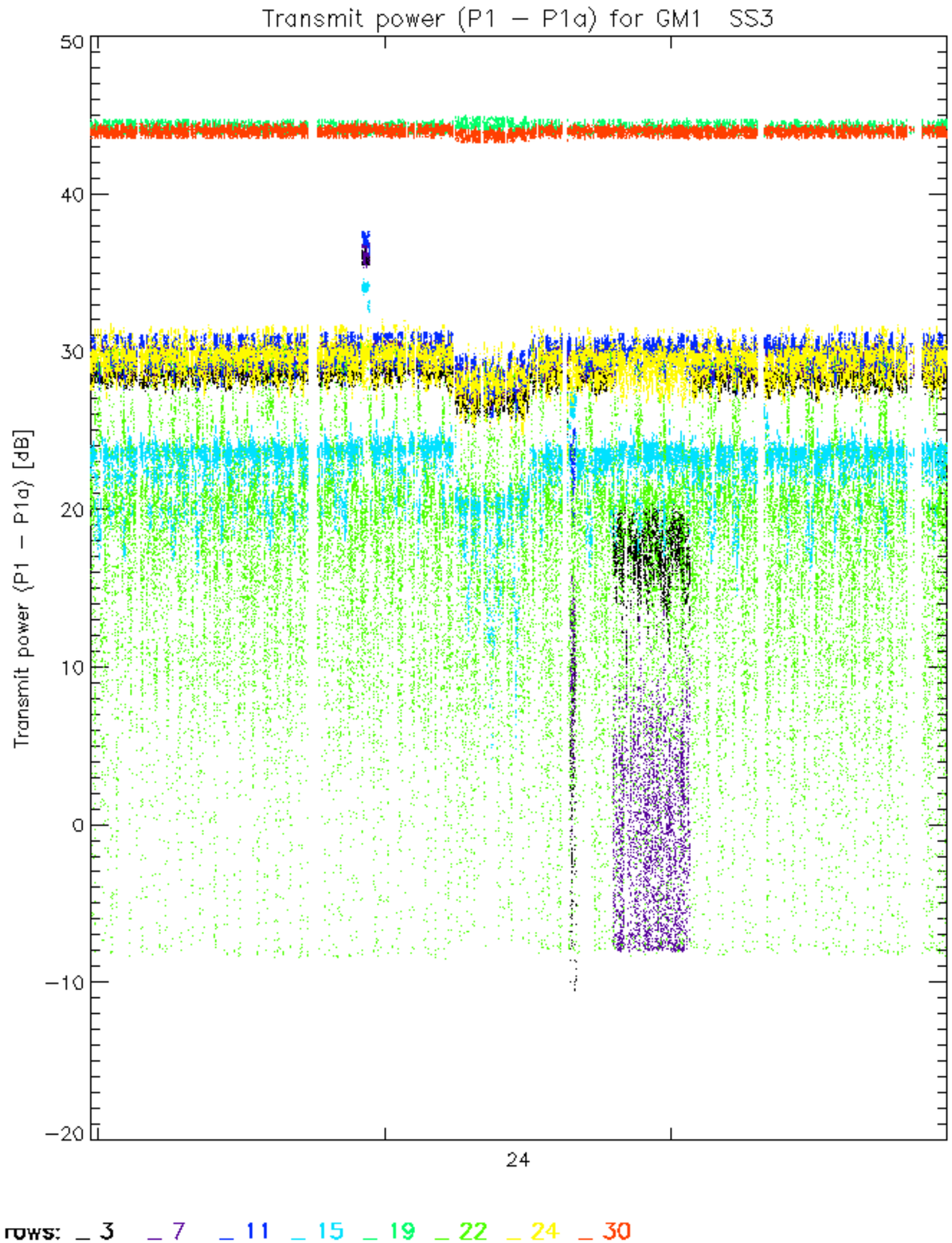
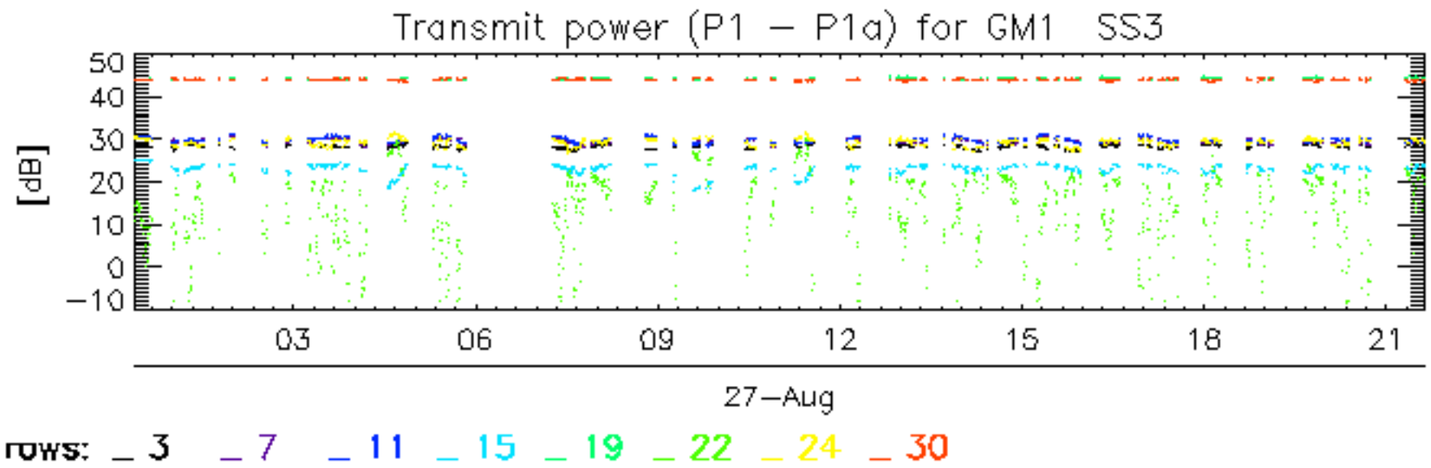
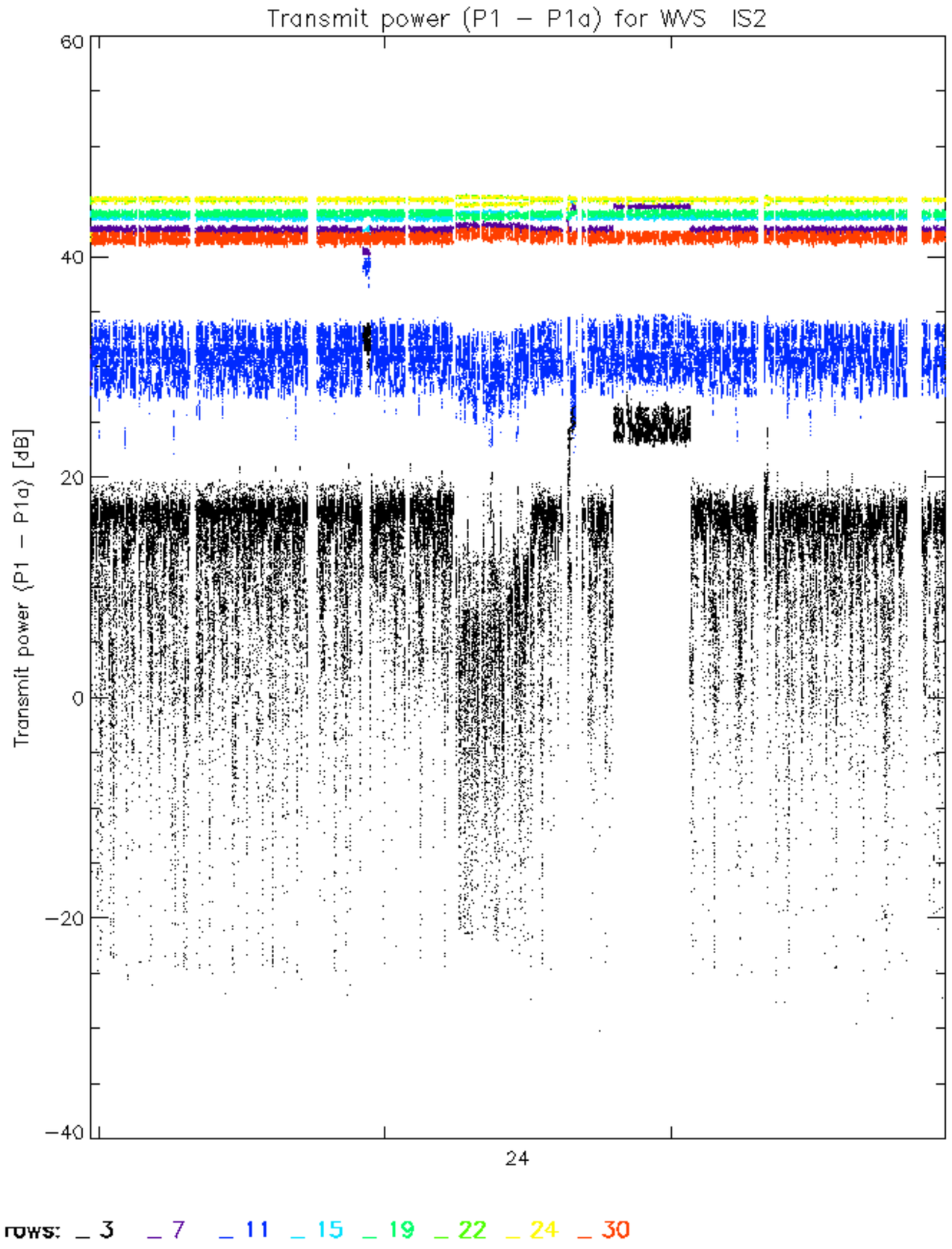
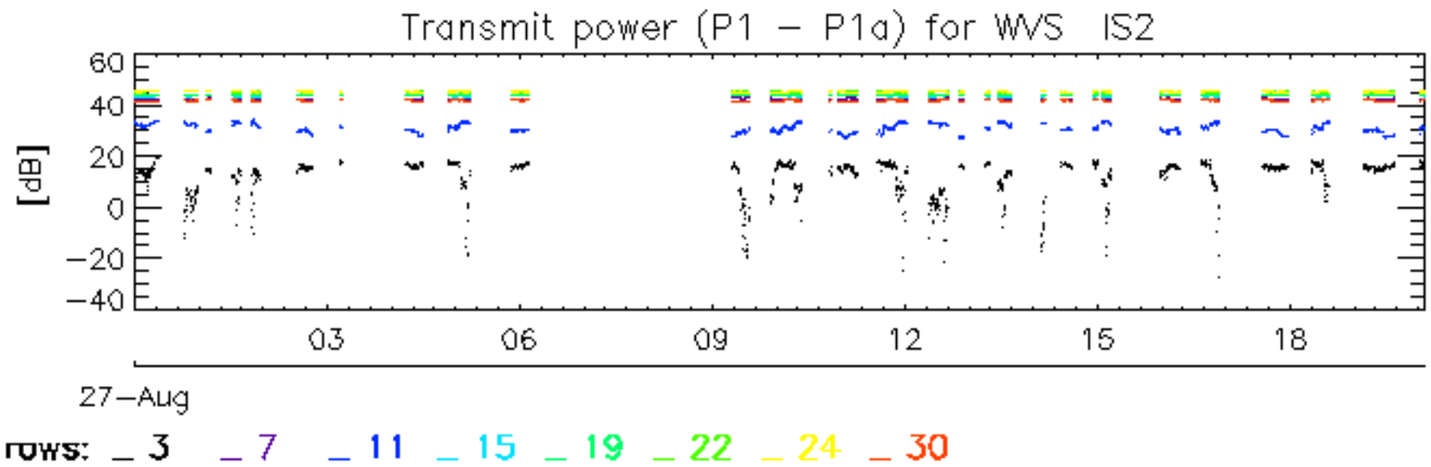
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2004-08-26 10:08:11 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 24 30


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


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

No unavailabilities during the reported period.