PRELIMINARY REPORT OF 040904

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

last update on Sat Sep 4 13:12:19 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	20040903 055516
H	20040902 062652

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.

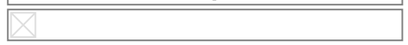
4.1 - Daily statistics

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	-3.468770	0.052278	0.092298
7	P1	-3.314585	0.056743	0.061047
11	P1	-4.658781	0.112720	0.096759
15	P1	-5.761950	0.119022	0.066214
19	P1	-3.469312	0.005758	-0.024537
22	P1	-4.538037	0.010983	0.028968
24	P1	-4.967919	0.020431	0.015730
30	P1	-6.954262	0.021512	-0.076888

3	P1	-15.917267	1.605541	0.082661
7	P1	-14.041795	0.170528	0.028847
11	P1	-20.165915	0.422473	-0.301876
15	P1	-11.790704	0.167225	-0.006757
19	P1	-13.904081	0.039168	-0.050370
22	P1	-16.164627	0.332654	0.180738
24	P1	-14.527674	0.313952	0.154164
30	P1	-17.838226	0.458122	-0.270195

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.301556	0.082992	-0.001085
7	P2	-22.612288	0.138389	0.038002
11	P2	-15.309418	0.174798	0.124554
15	P2	-7.060739	0.096714	0.039698
19	P2	-9.562483	0.193034	0.064854
22	P2	-17.346731	0.119696	0.095392
24	P2	-20.745817	0.089753	-0.022073
30	P2	-19.247736	0.082829	0.120849

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.142169	0.002766	-0.010395
7	P3	-8.142179	0.002765	-0.010323
11	P3	-8.142200	0.002765	-0.010214
15	P3	-8.142205	0.002765	-0.010208
19	P3	-8.142216	0.002767	-0.010145
22	P3	-8.142205	0.002766	-0.010168
24	P3	-8.142201	0.002766	-0.010192
30	P3	-8.142093	0.002759	-0.010659

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	-2.703991	0.257135	0.010264
7	P1	-2.959729	0.210934	0.085764
11	P1	-3.893798	0.159537	0.084998
15	P1	-3.541389	0.129222	0.087837
19	P1	-3.483375	0.013757	-0.016672
22	P1	-5.697126	0.039391	-0.059473
24	P1	-3.909594	0.015386	-0.082533
30	P1	-6.172591	0.062511	-0.067047
3	P1	-10.411283	1.036561	-0.222440
7	P1	-10.069847	0.170654	0.028827
11	P1	-12.149960	0.114417	-0.119244
15	P1	-11.654426	0.101818	-0.091027
19	P1	-15.621718	0.049612	0.001477
22	P1	-23.370316	1.125174	-0.038023
24	P1	-17.904436	0.231015	-0.186681
30	P1	-20.453541	1.220671	0.033492

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.979166	0.057575	-0.041073
7	P2	-22.752277	0.047098	0.021966
11	P2	-10.979468	0.066452	0.078162
15	P2	-4.950559	0.035996	-0.028356
19	P2	-6.757897	0.052201	-0.034394
22	P2	-7.442853	0.044953	0.004241
24	P2	-11.042705	0.051023	-0.047571
30	P2	-22.190342	0.035878	0.067673

P3 Cyclic statistics

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

3	P3	-7.991484	0.003722	-0.026578
7	P3	-7.991520	0.003726	-0.026626
11	P3	-7.991608	0.003714	-0.026299
15	P3	-7.991446	0.003718	-0.026467
19	P3	-7.991469	0.003726	-0.026500
22	P3	-7.991477	0.003721	-0.026556
24	P3	-7.991506	0.003741	-0.026612
30	P3	-7.991457	0.003720	-0.026342

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	0.000478500
	stdev	2.17270e-07
MEAN Q	mean	0.000542711
	stdev	2.35185e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128379
	stdev	0.000968770

STDEV Q	mean	0.128601
	stdev	0.000979551

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

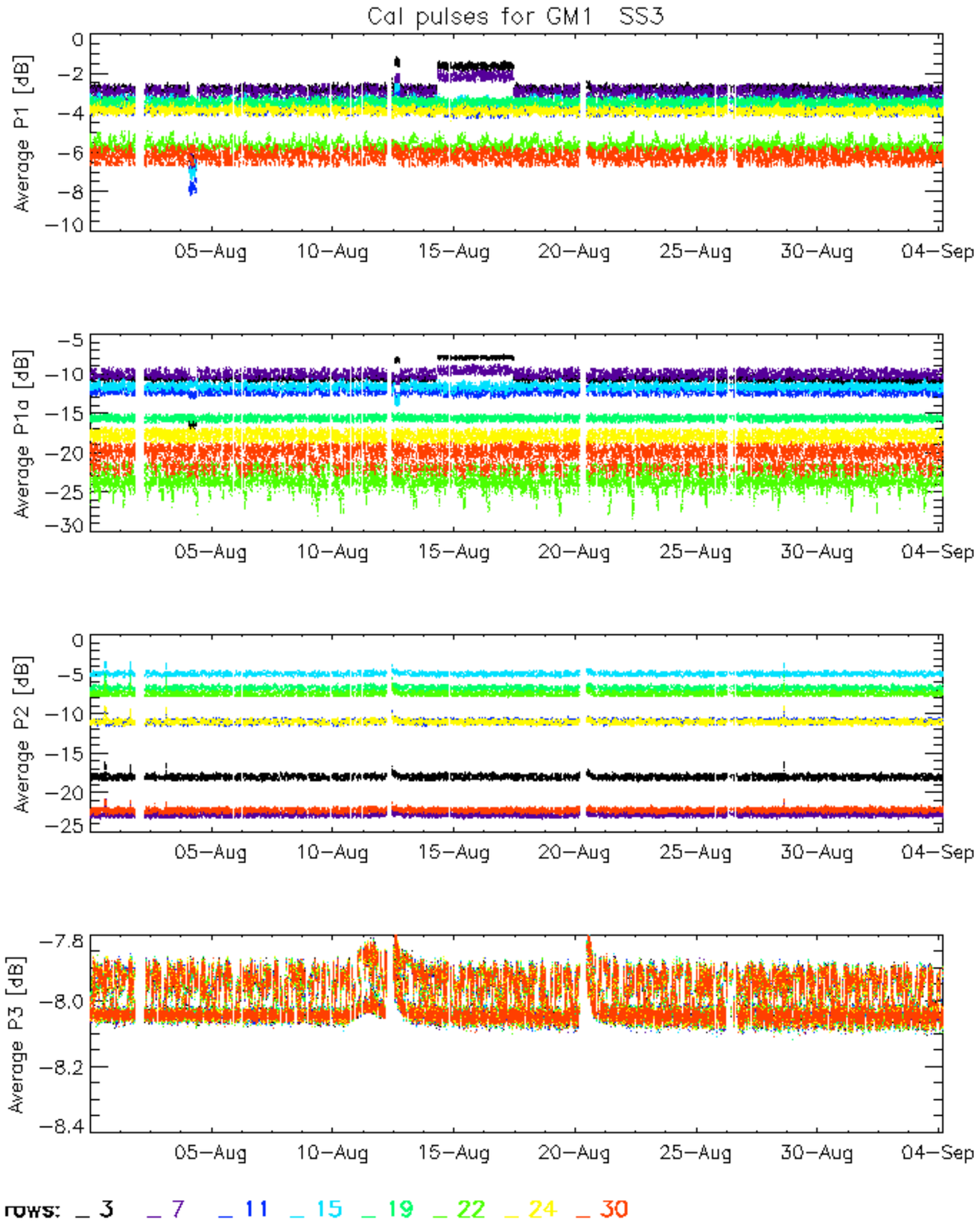
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

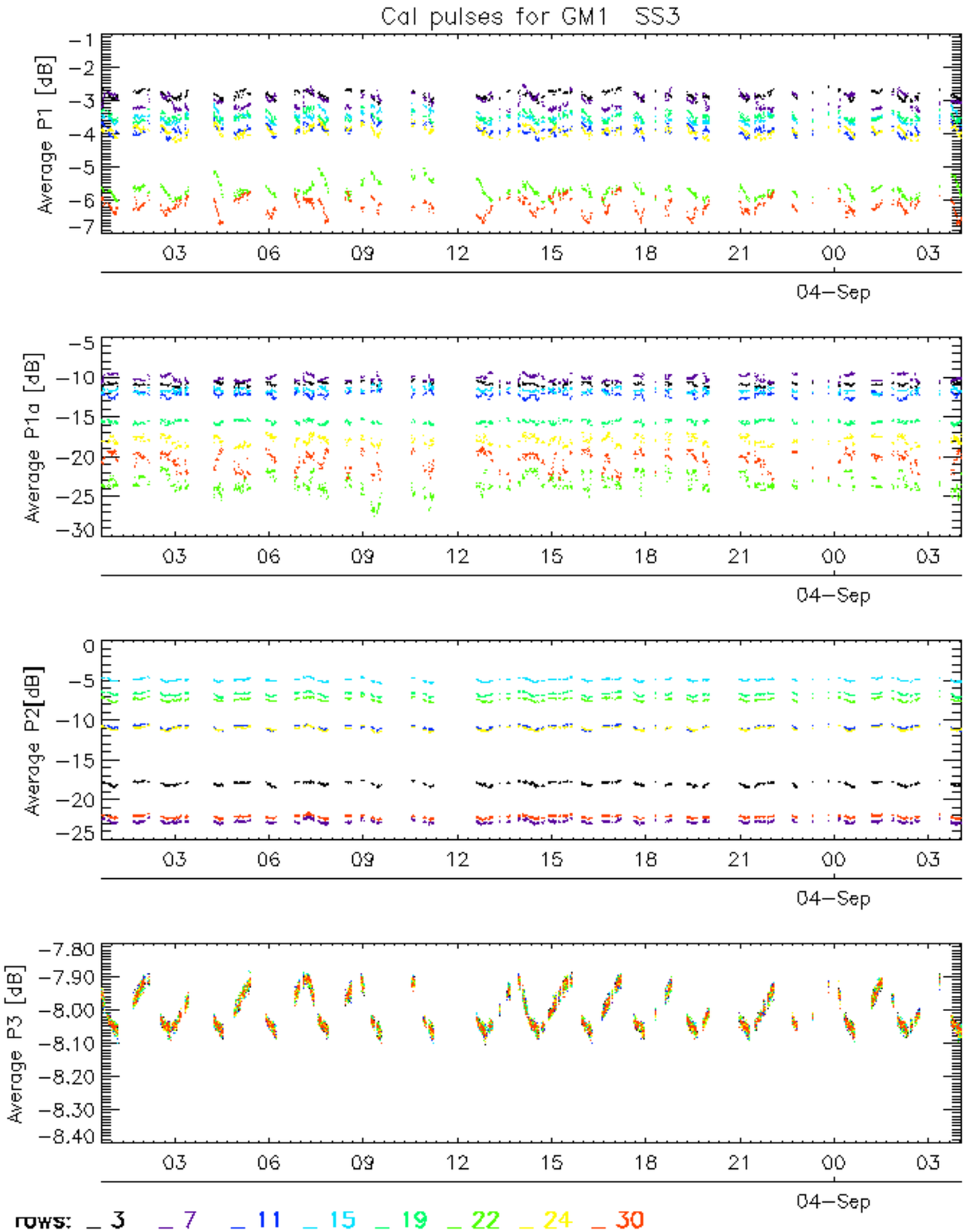
6.5 - Absolute Doppler for GM1

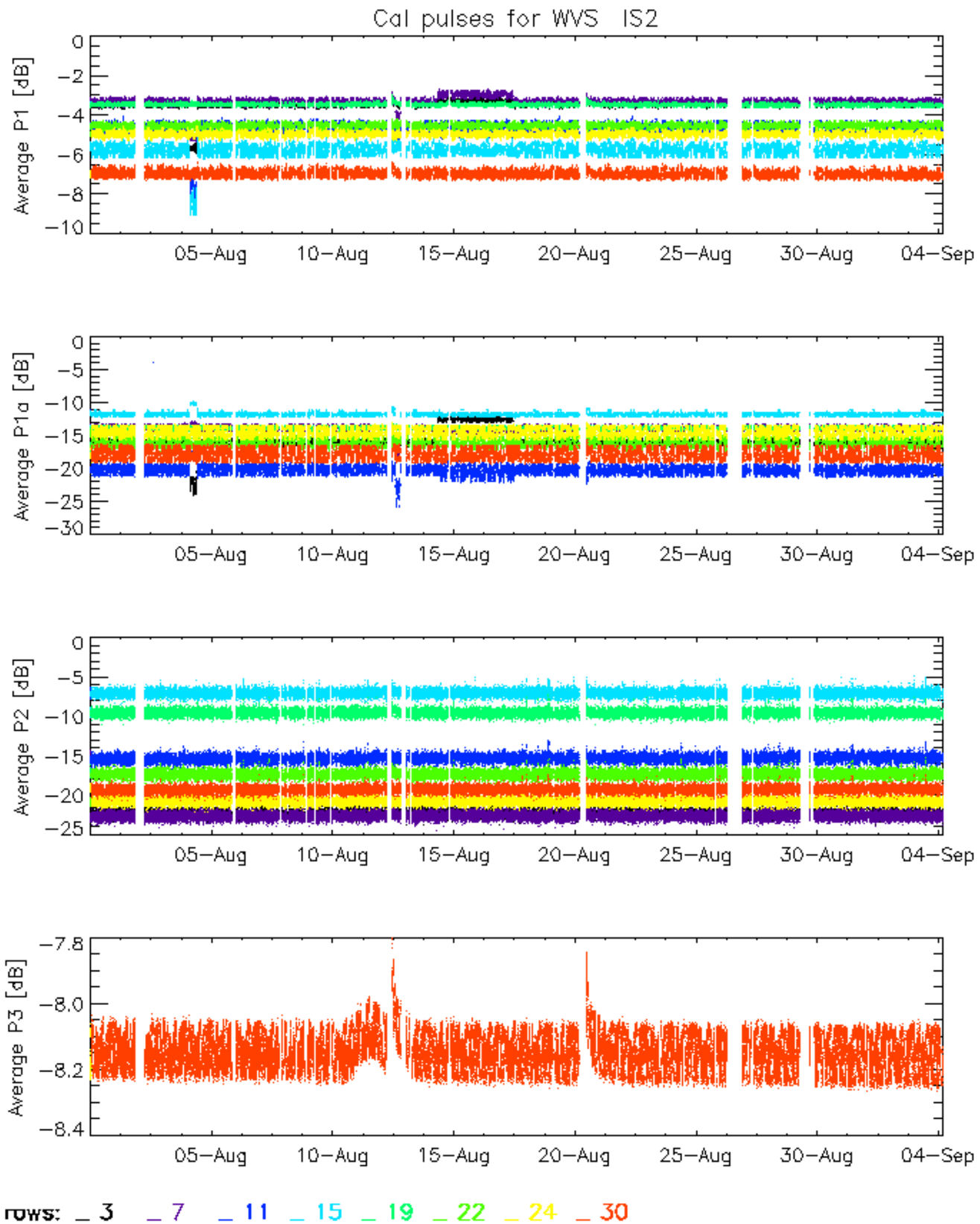
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

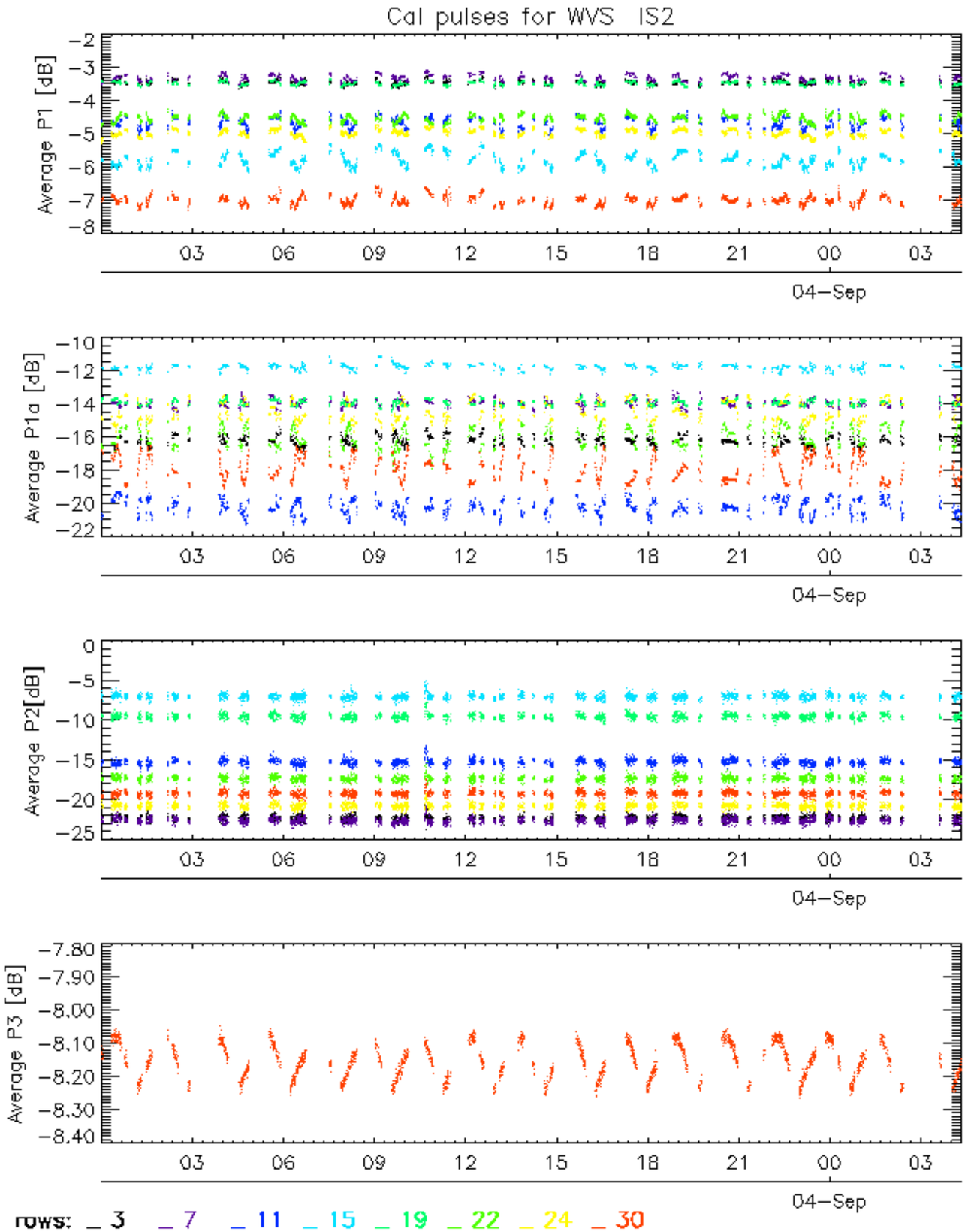
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

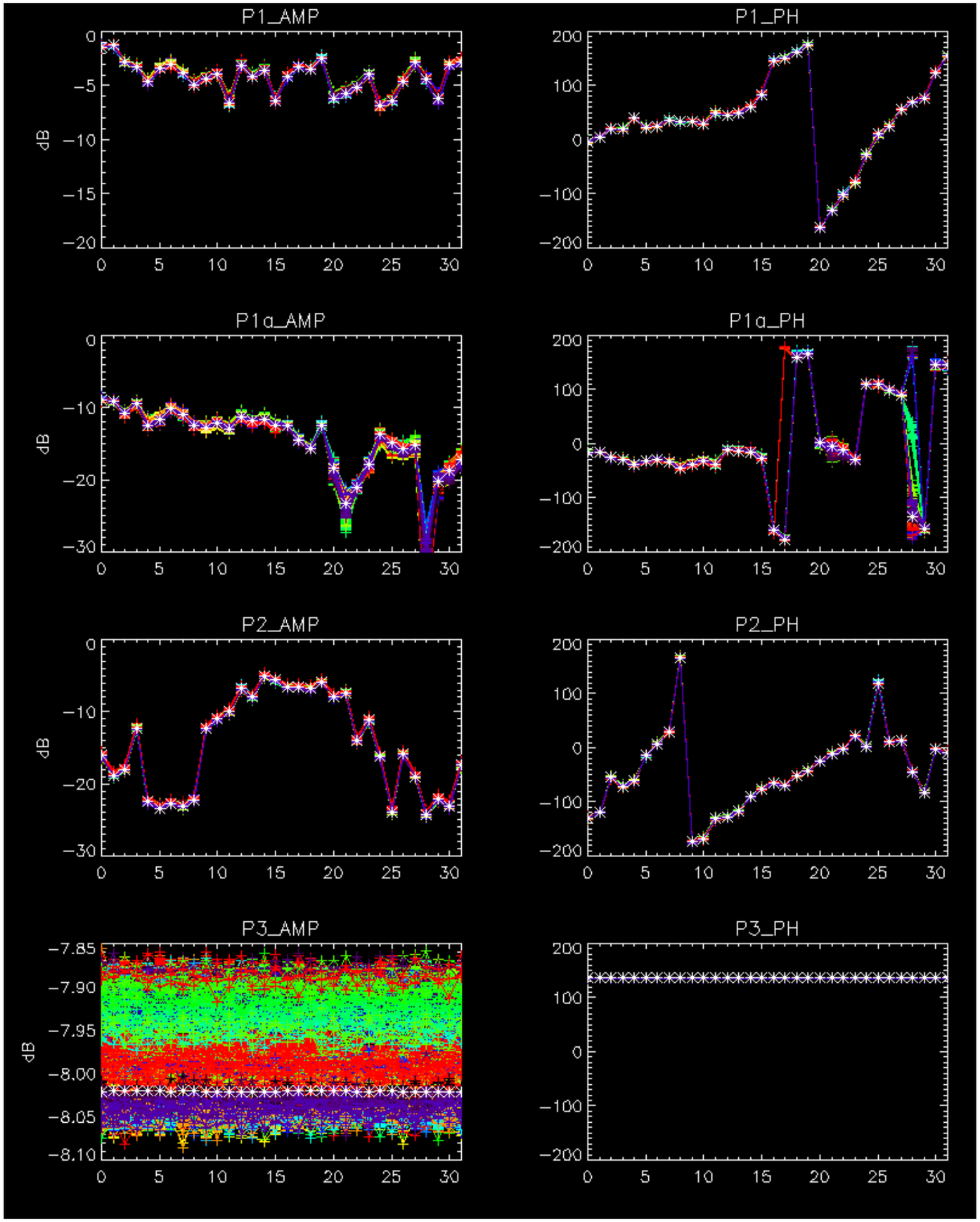

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

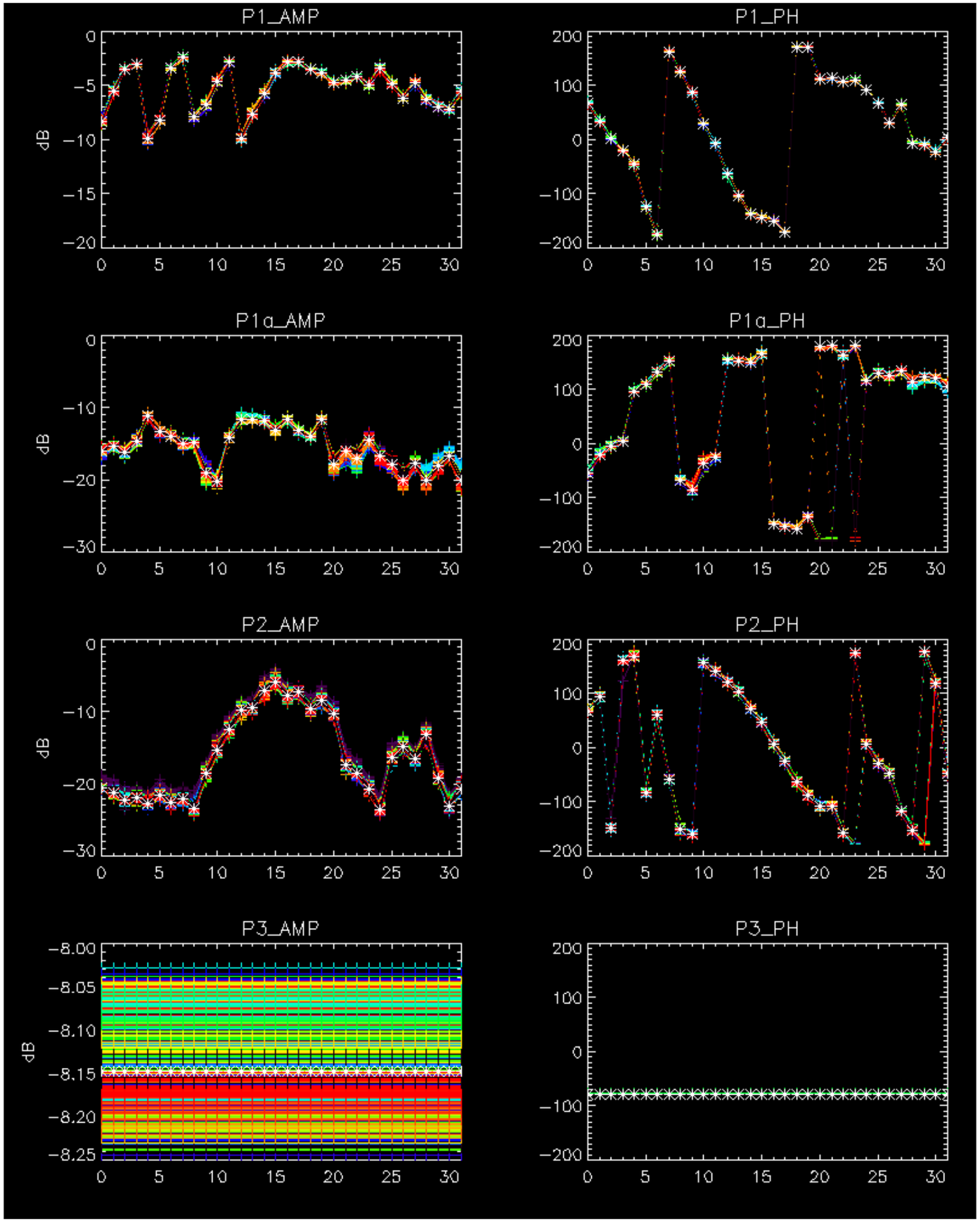

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
04−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
04−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
04−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−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
04−Sep
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
04−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
04−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
04−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

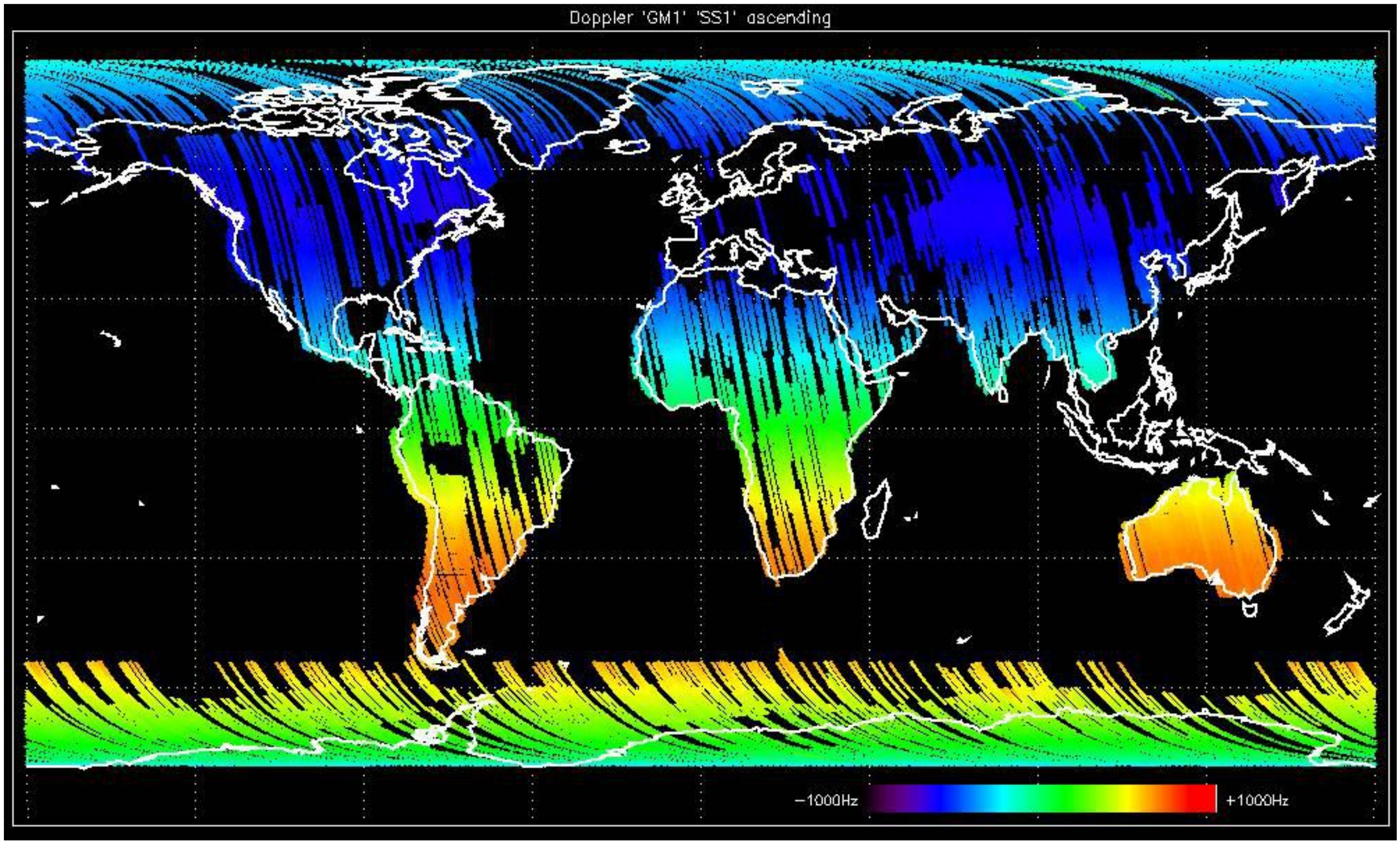
No anomalies observed.

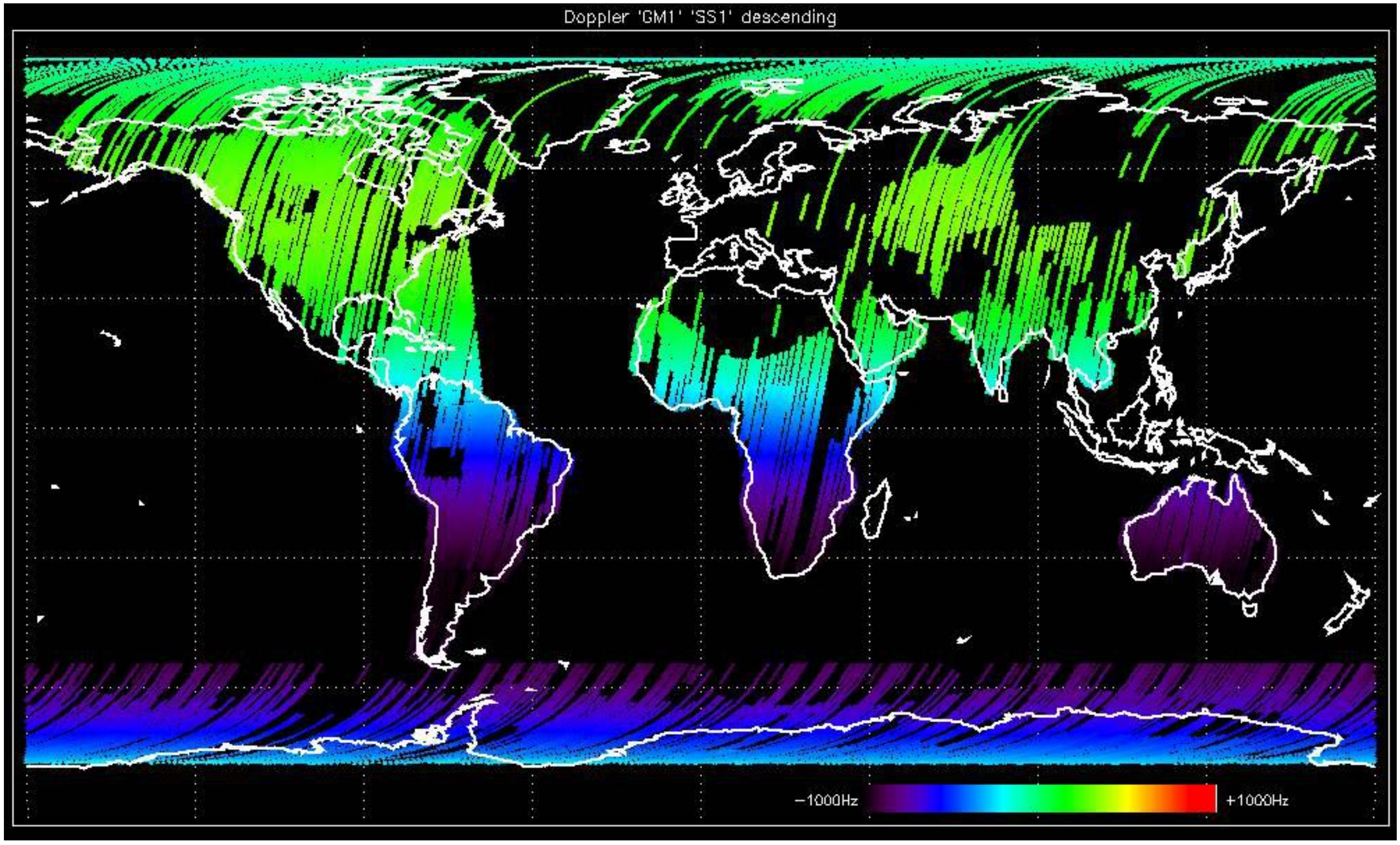

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

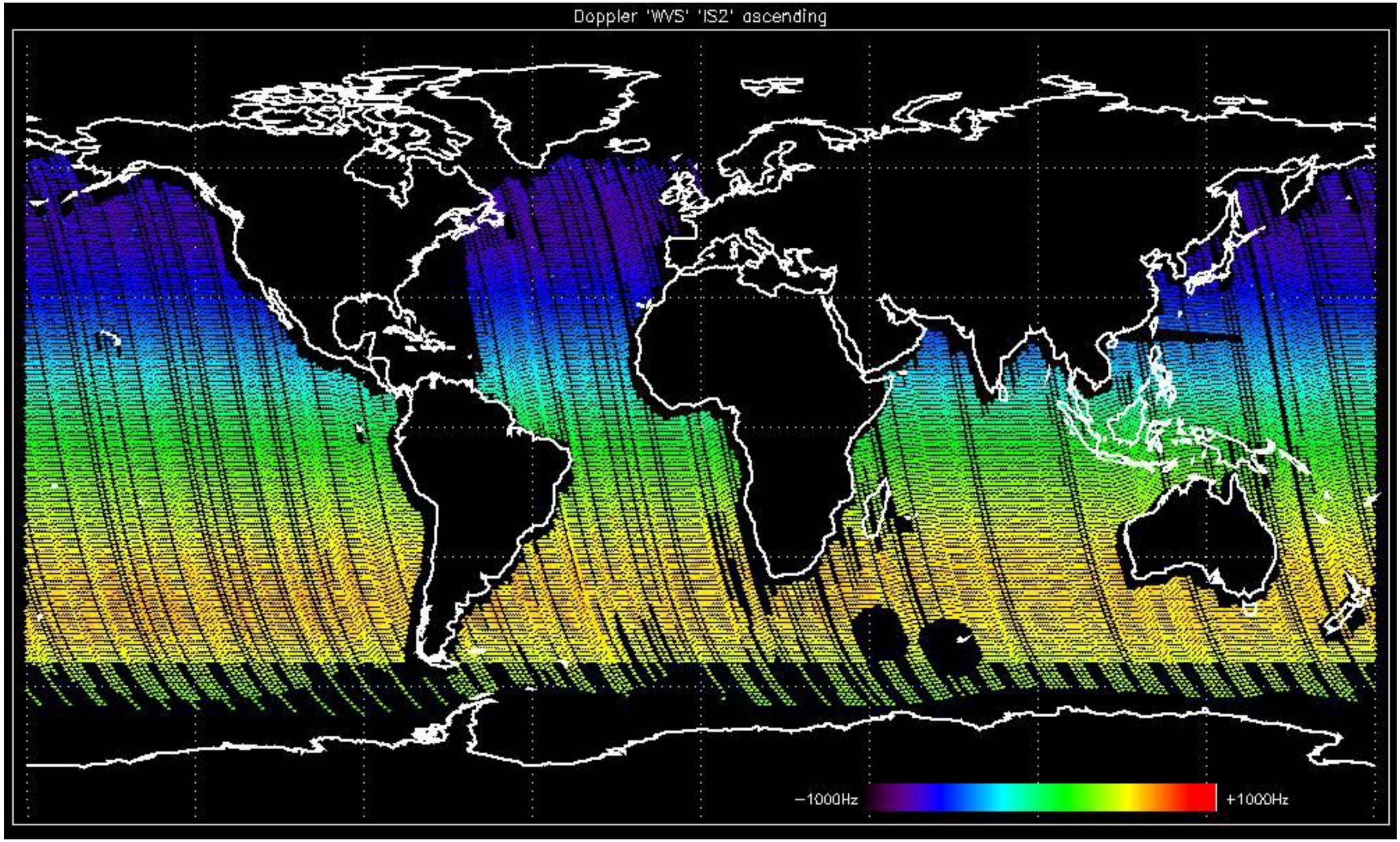

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

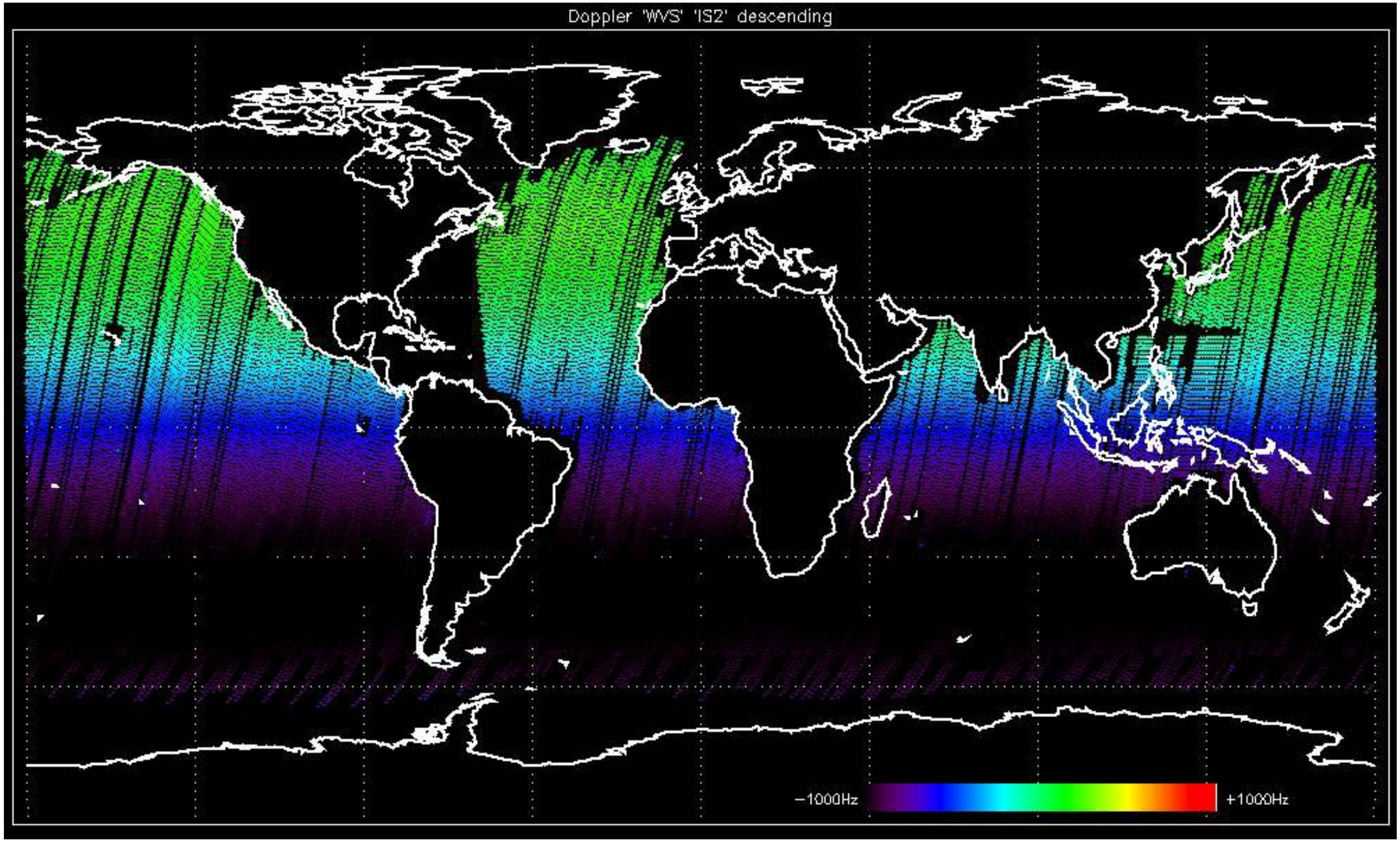
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

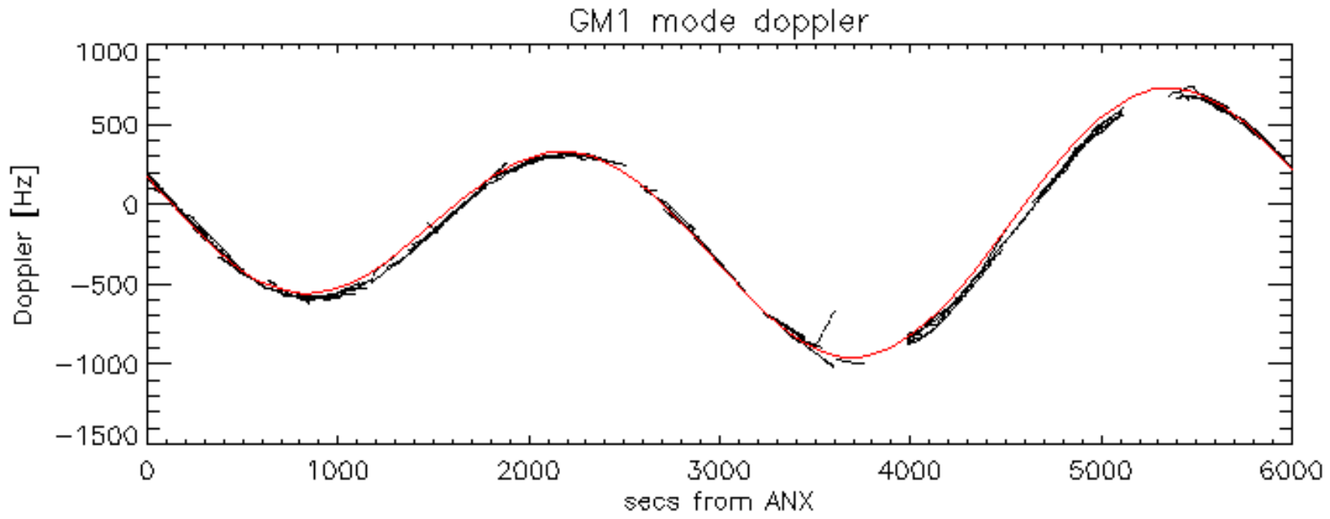
Preliminary report.The data is not yet controled

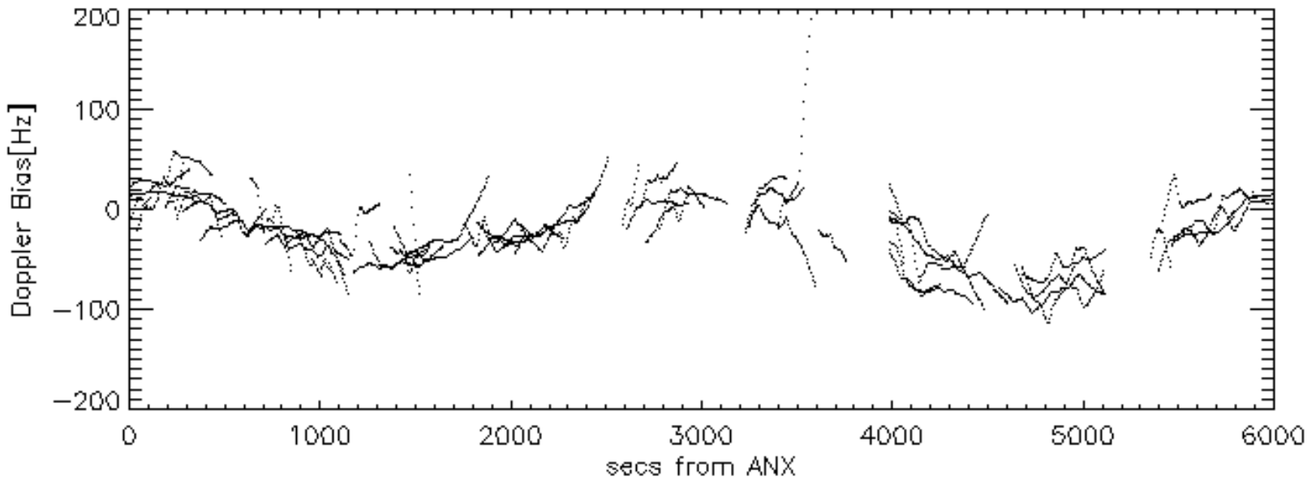

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

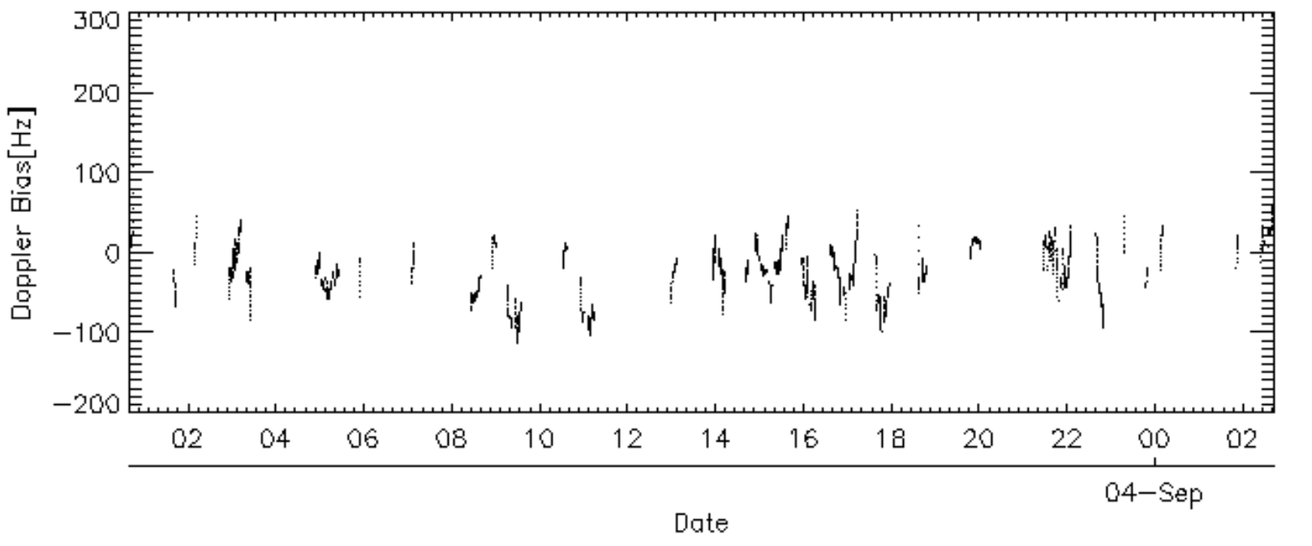

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

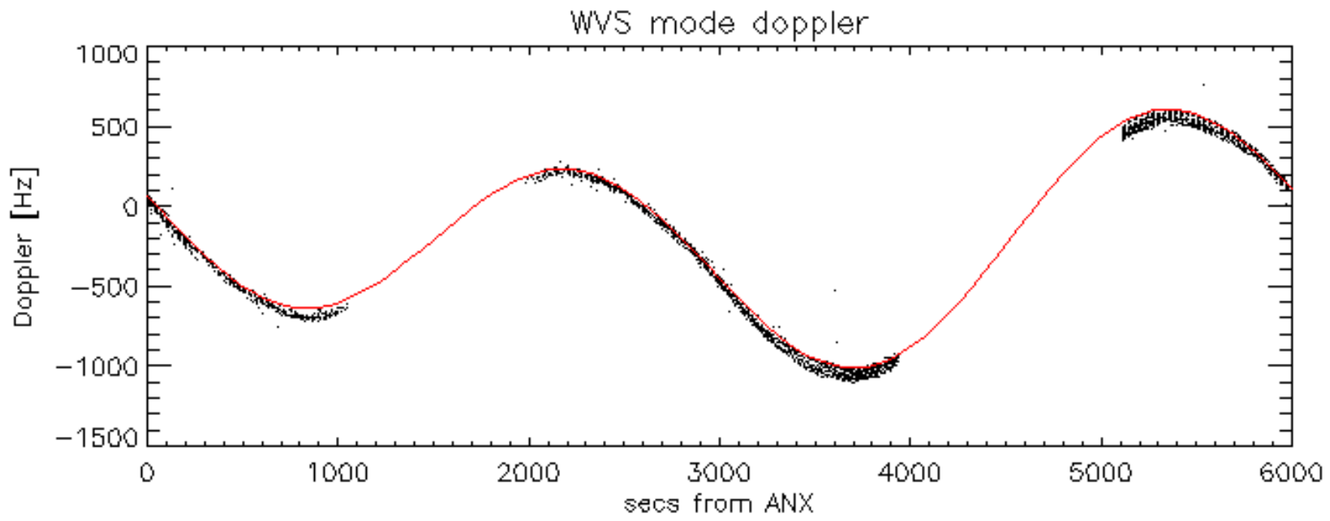

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

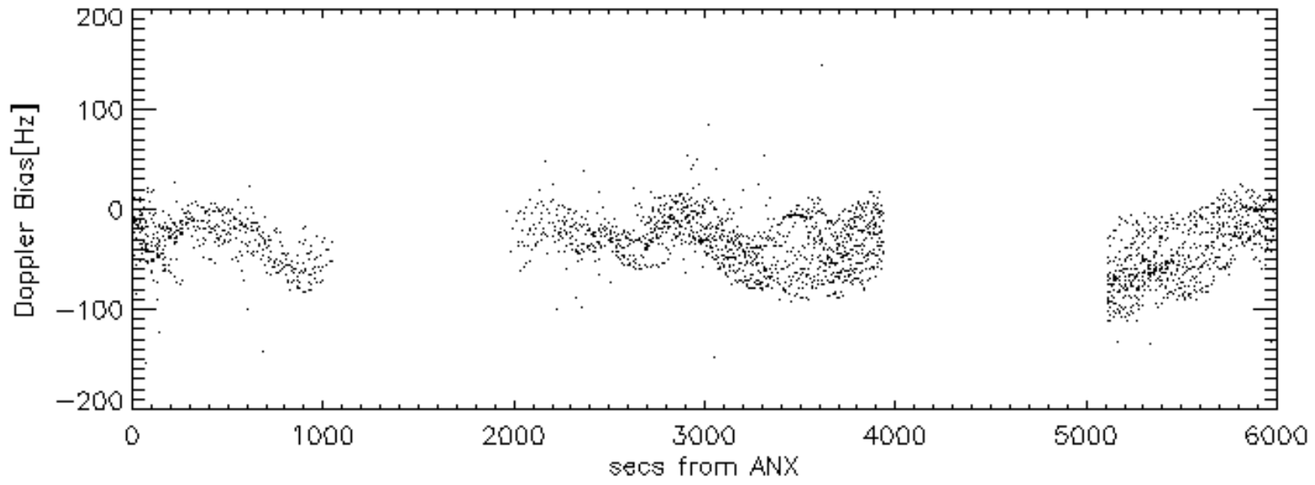

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

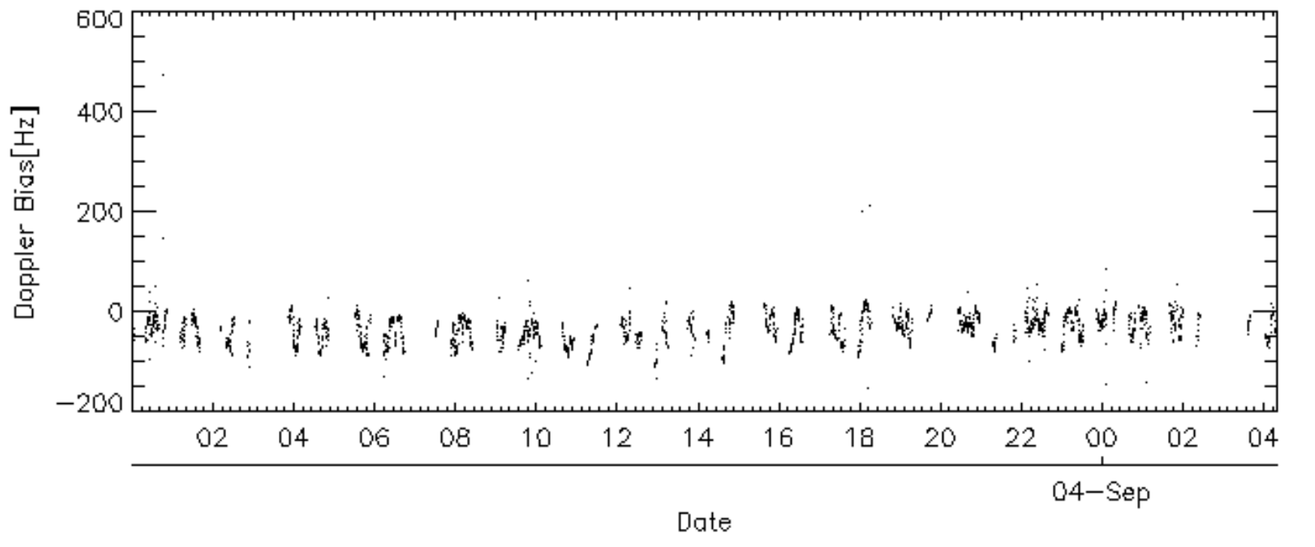

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

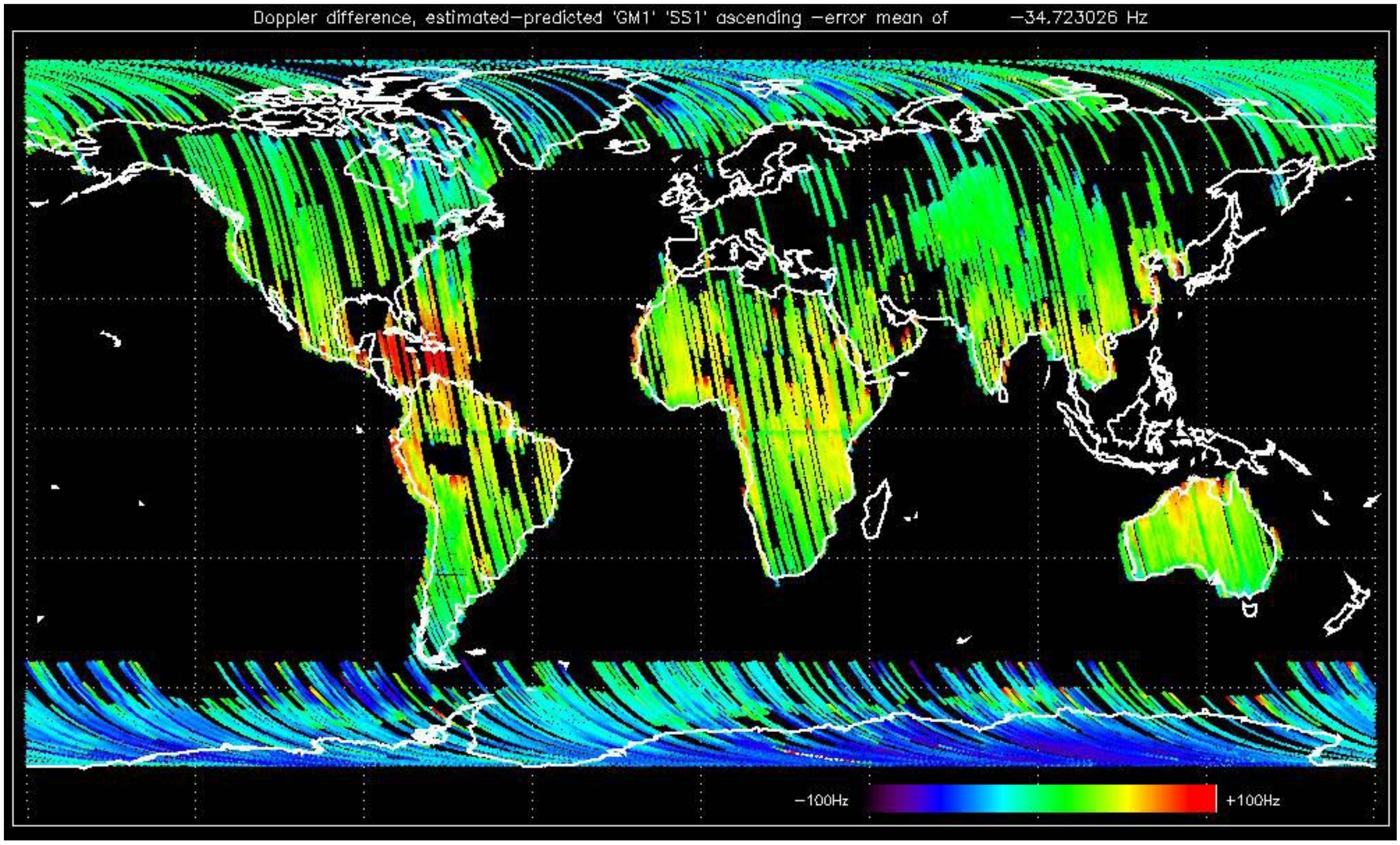

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

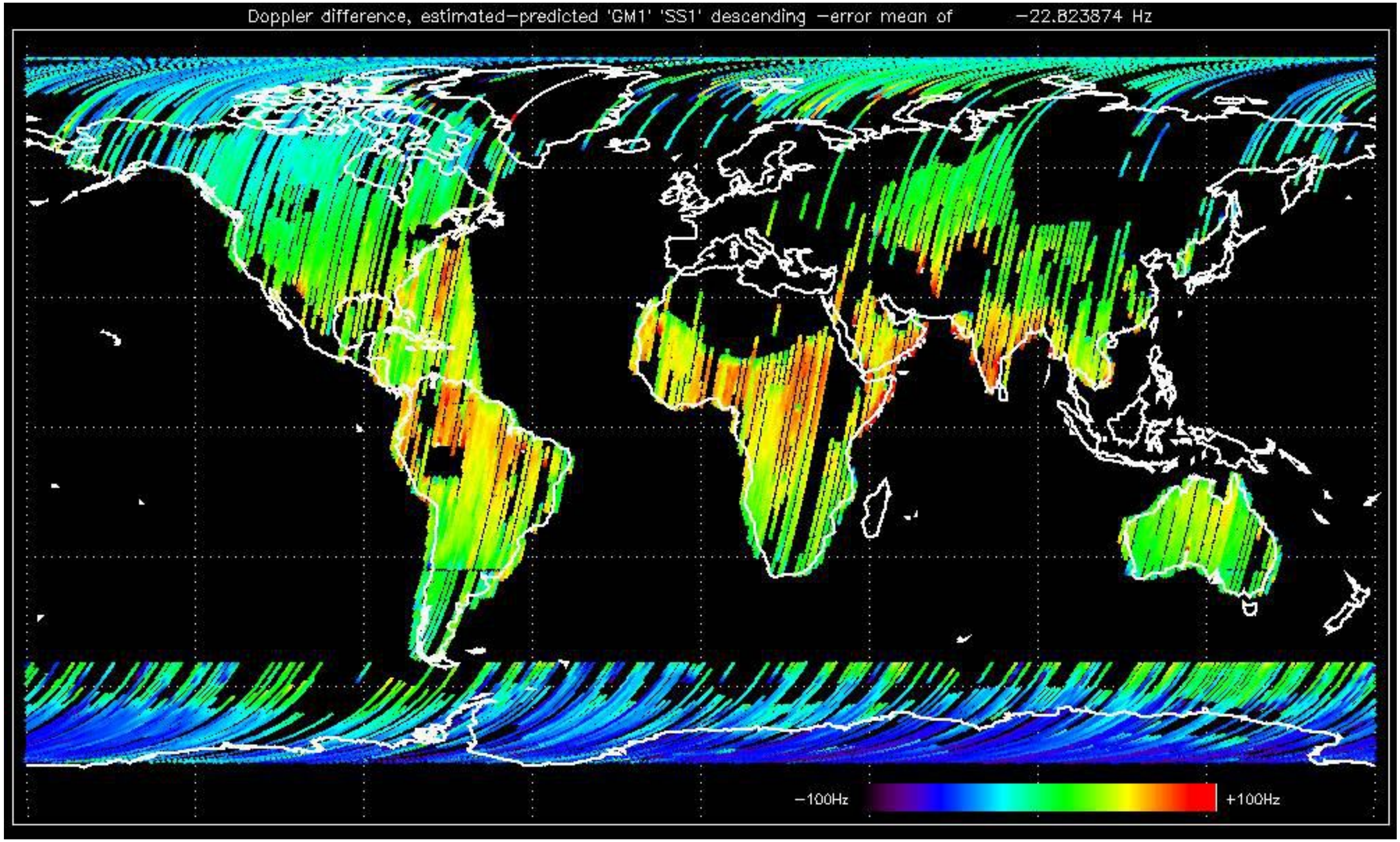

Doppler Bias[Hz]
300
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04−Sep
Date

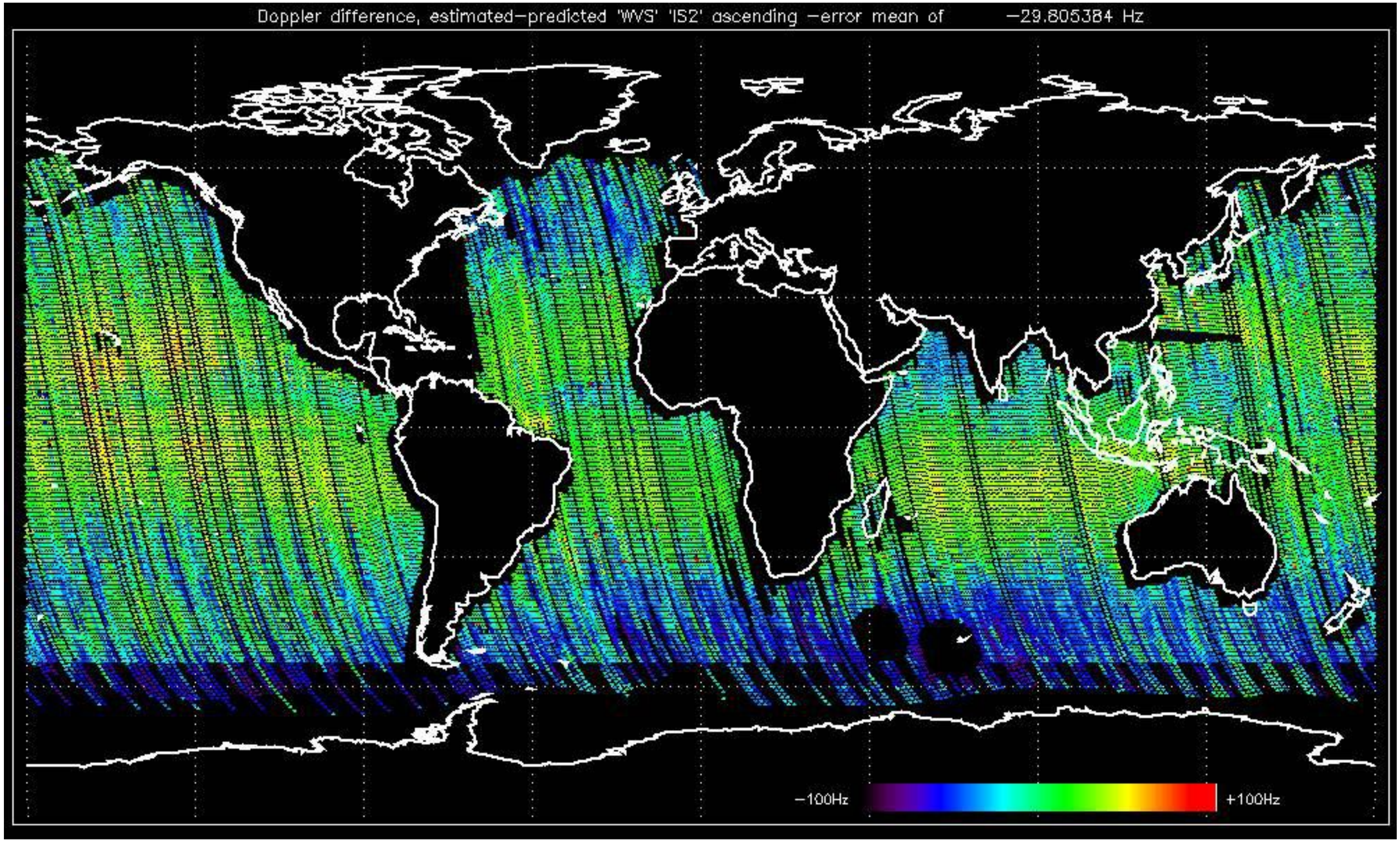

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

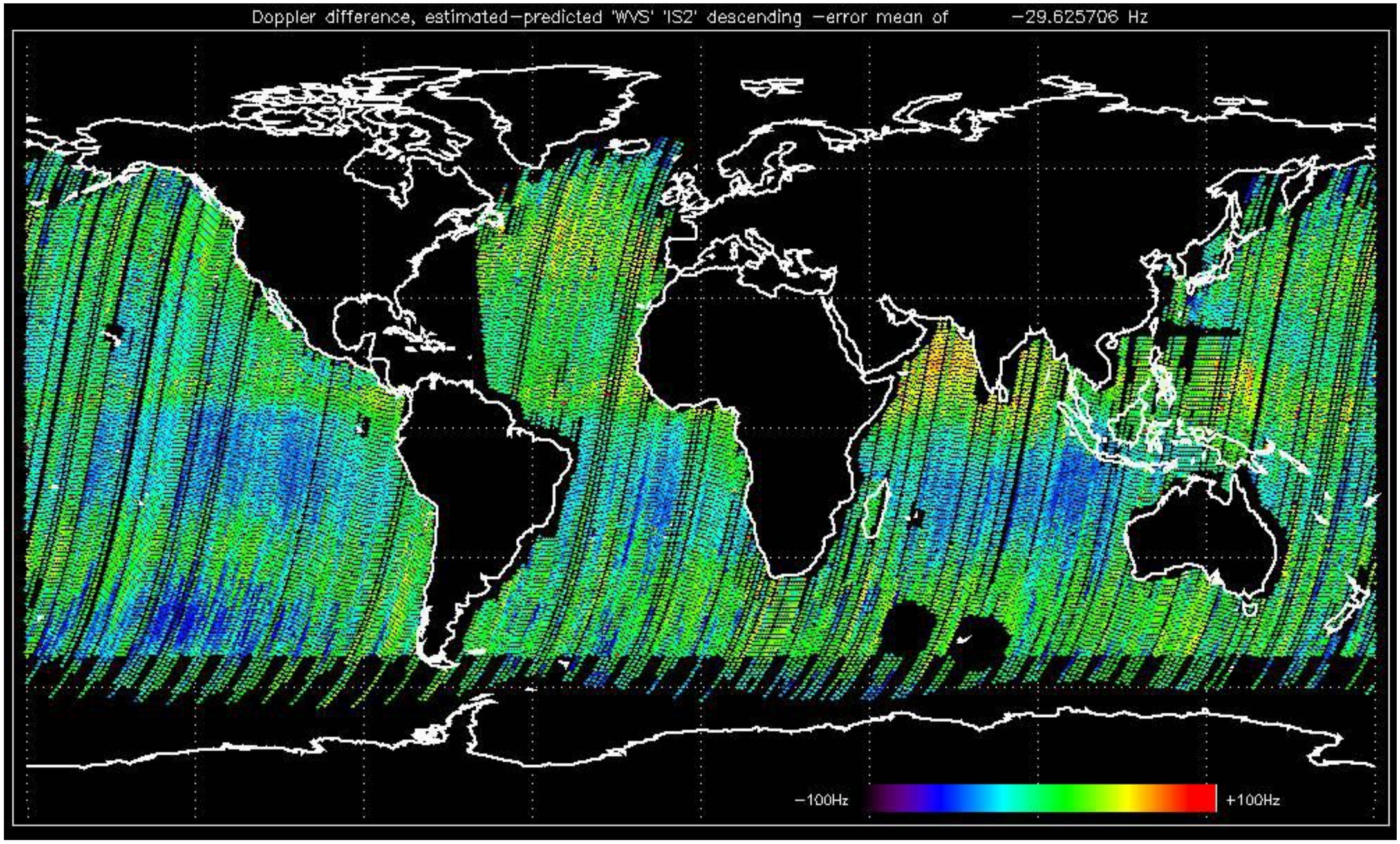

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
600
400
200
0
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
04−Sep
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −34.723026 Hz
−100Hz
+100Hz

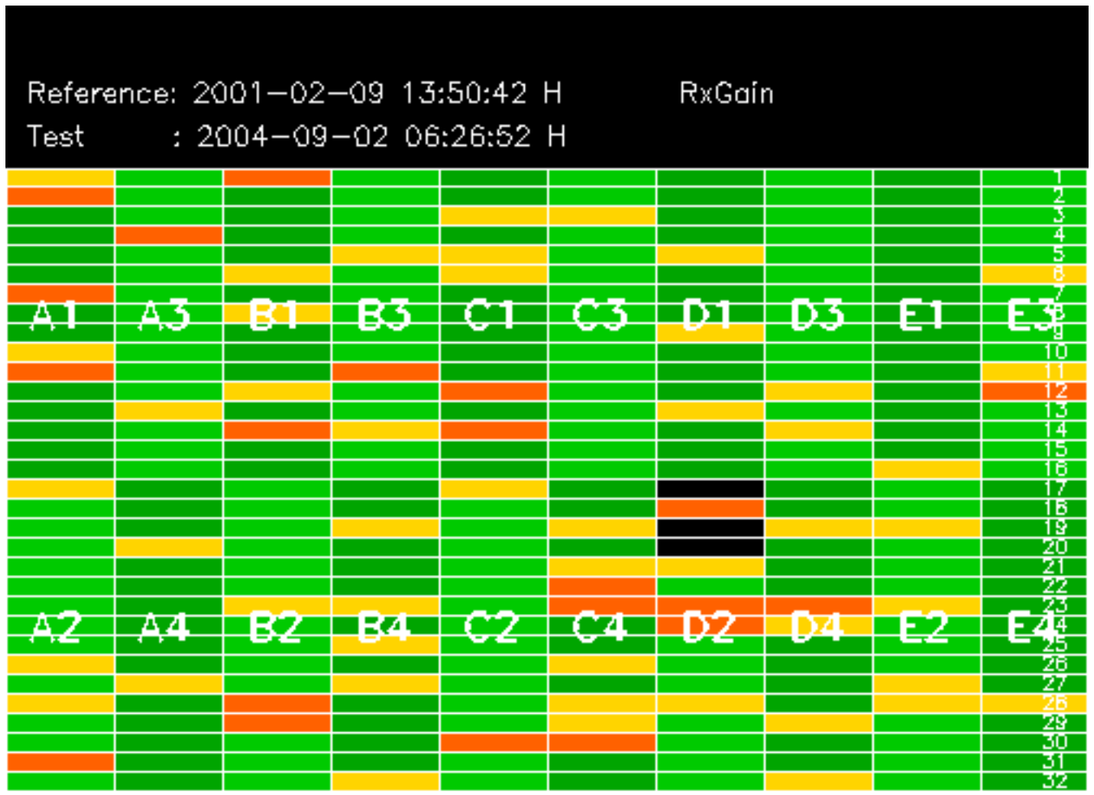

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −22.823874 Hz
−100Hz
+100Hz

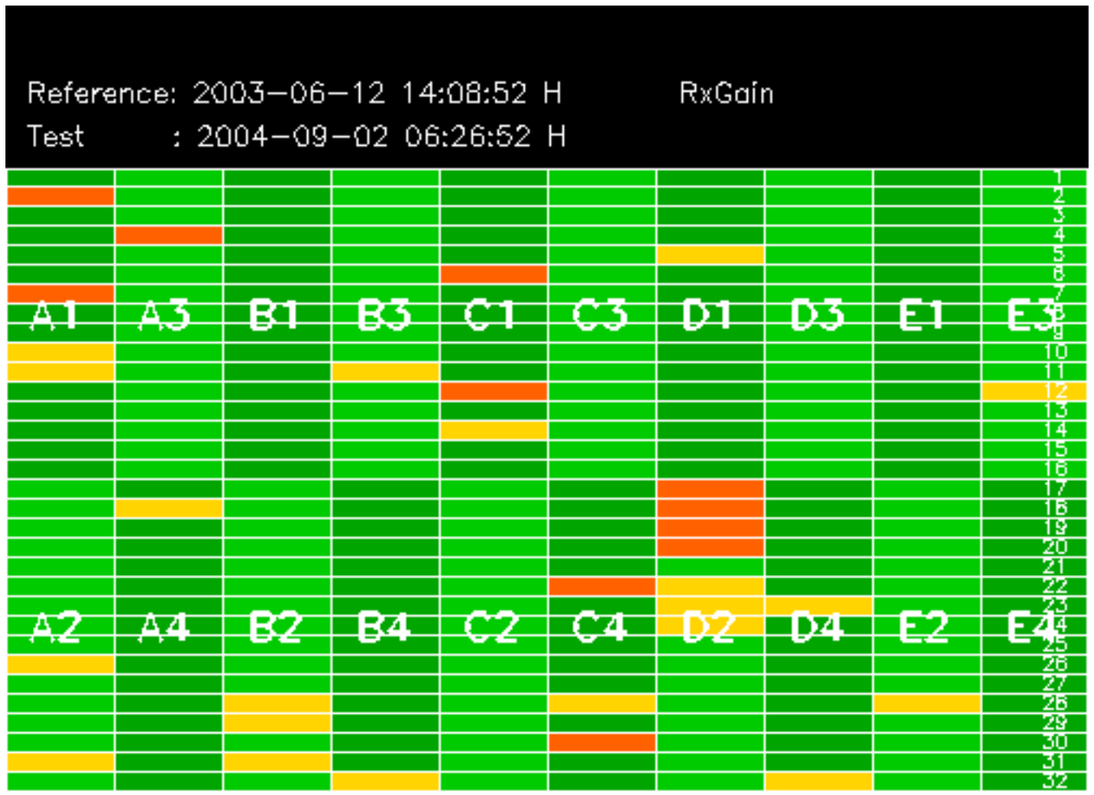

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.805384 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.625706 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 : 2004-09-02 06:26:52 H
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 14:08:52 H
Test : 2004-09-02 06:26:52 H
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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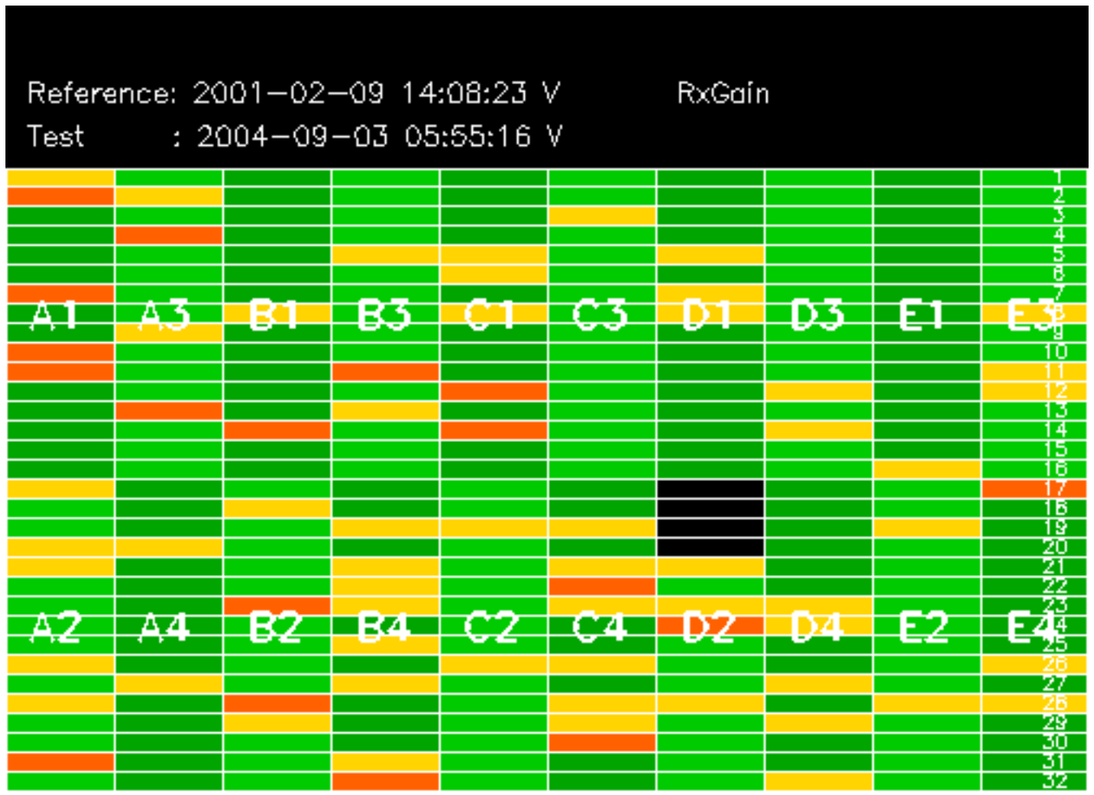
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-03 05:55:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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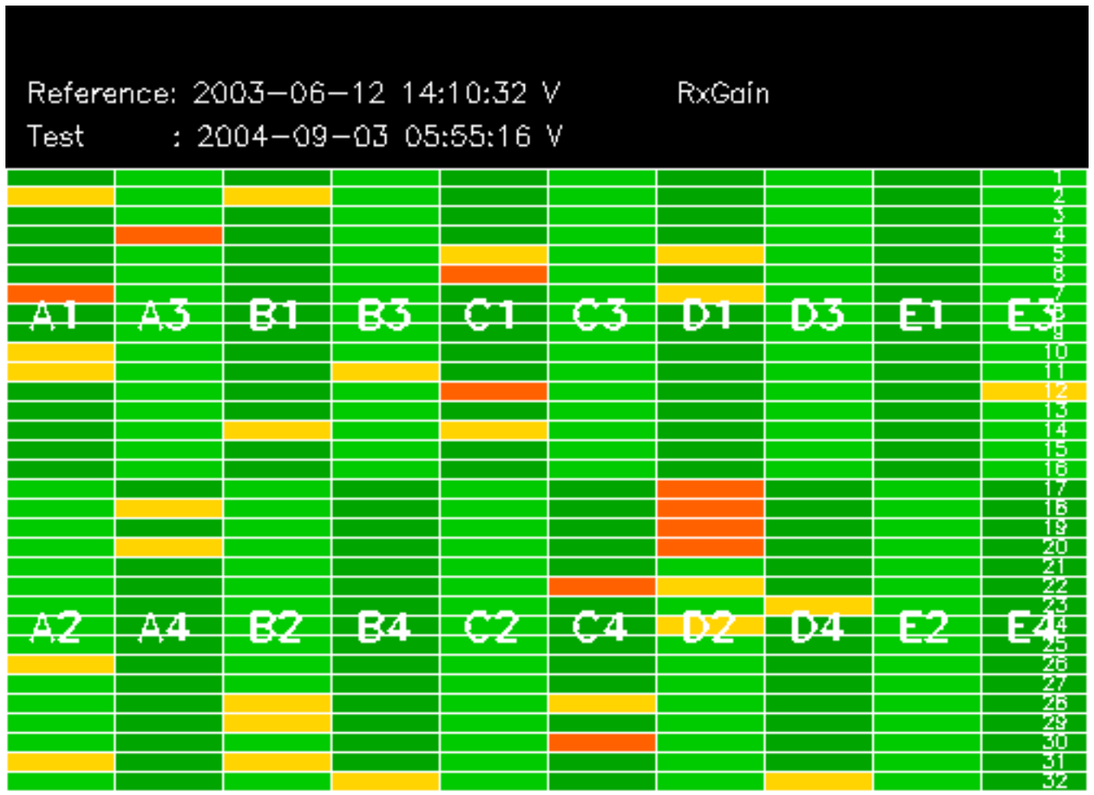
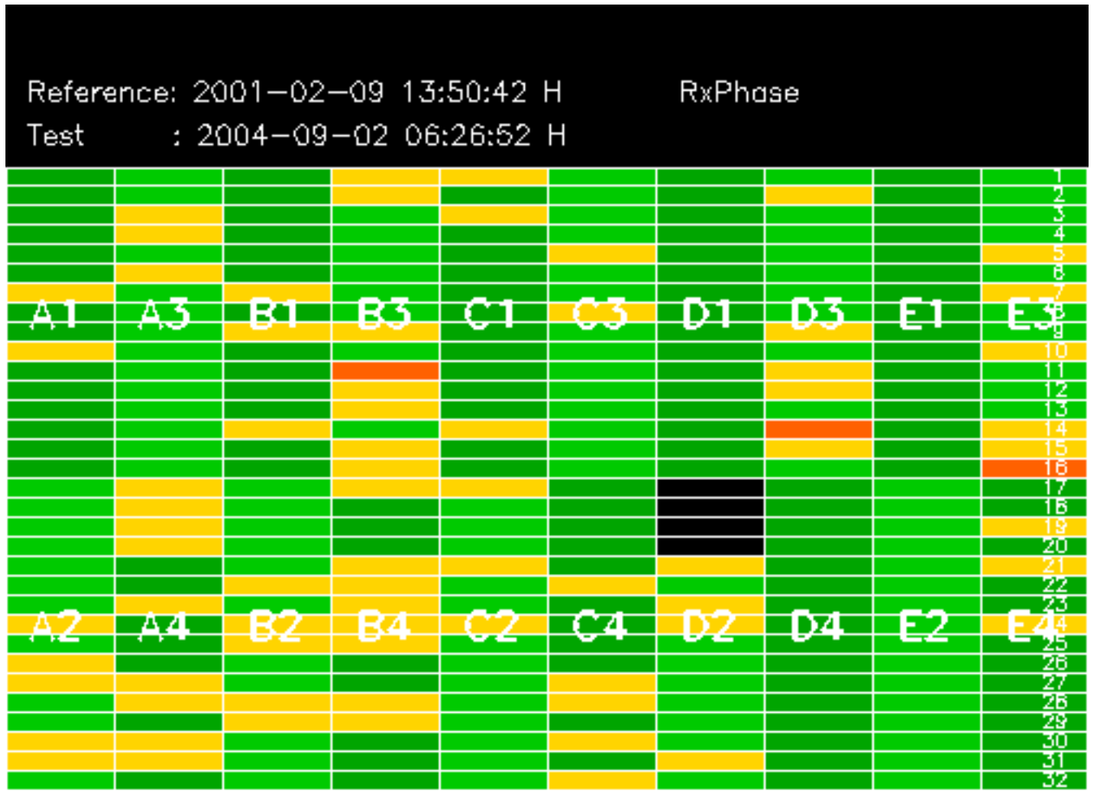

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-03 05:55:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-09-02 06:26:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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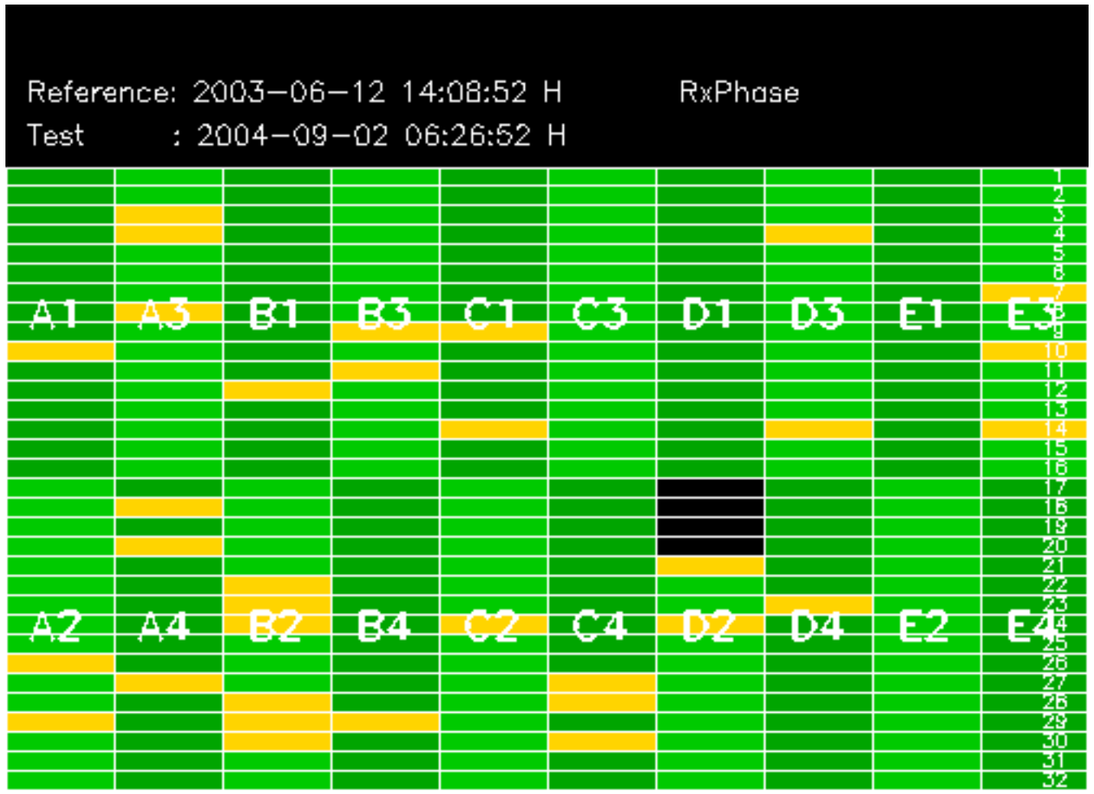
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-02 06:26:52 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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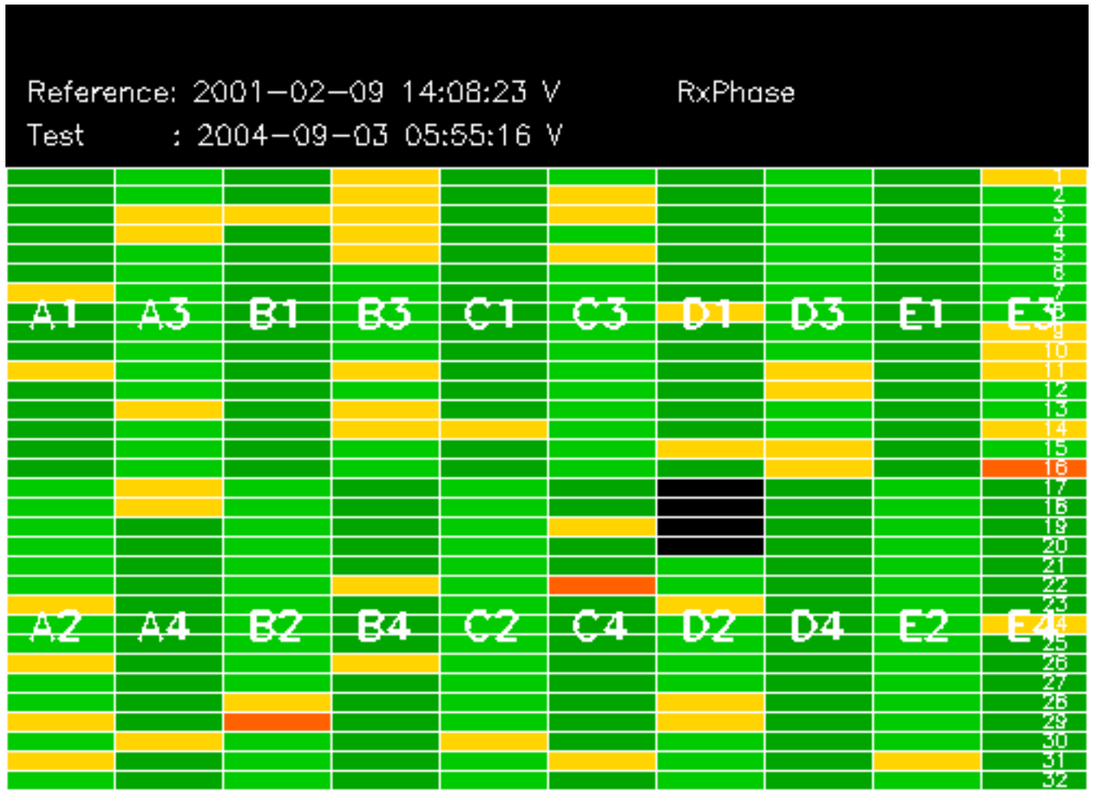
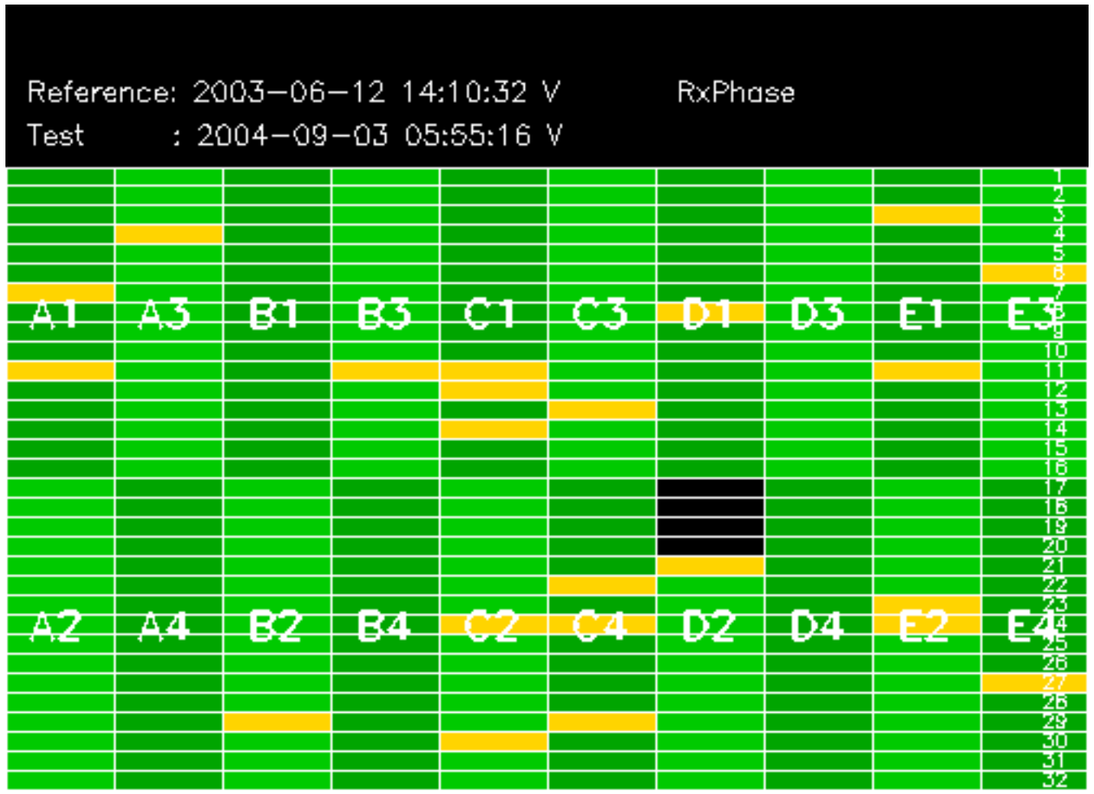

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-03 05:55:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-03 05:55:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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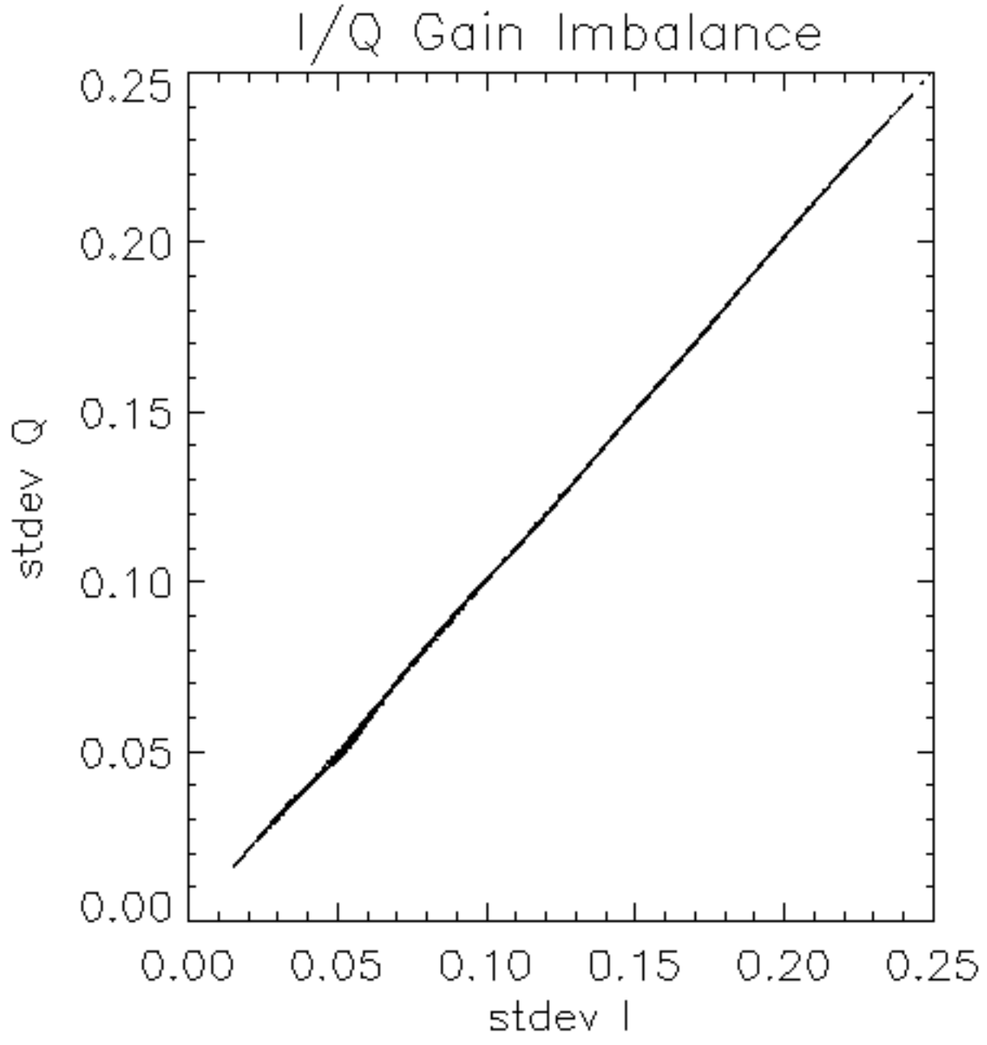
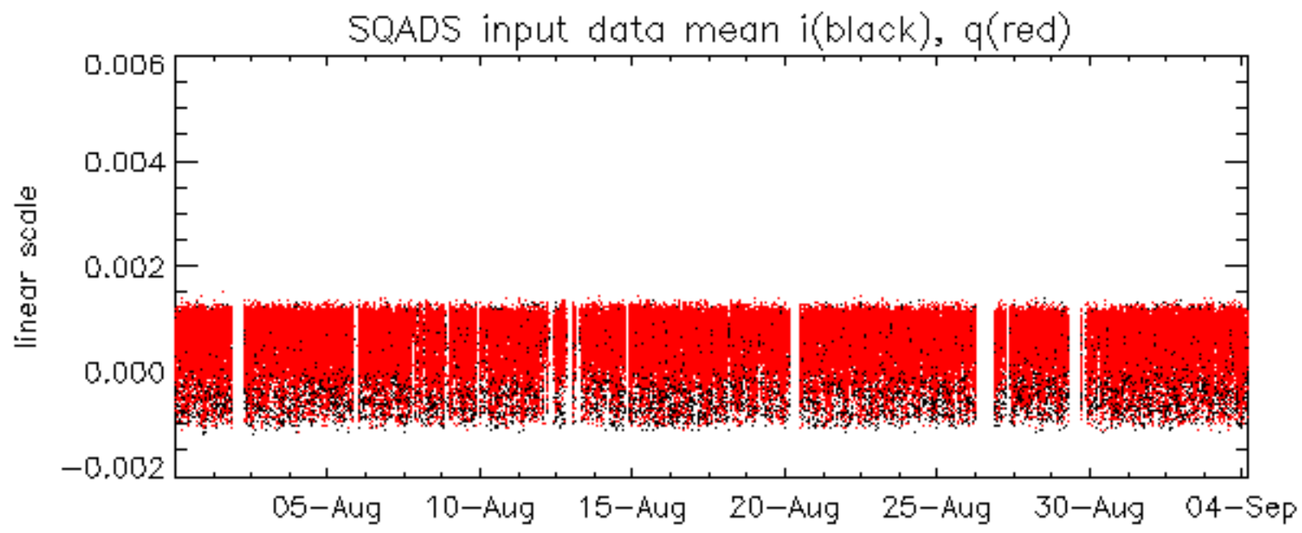
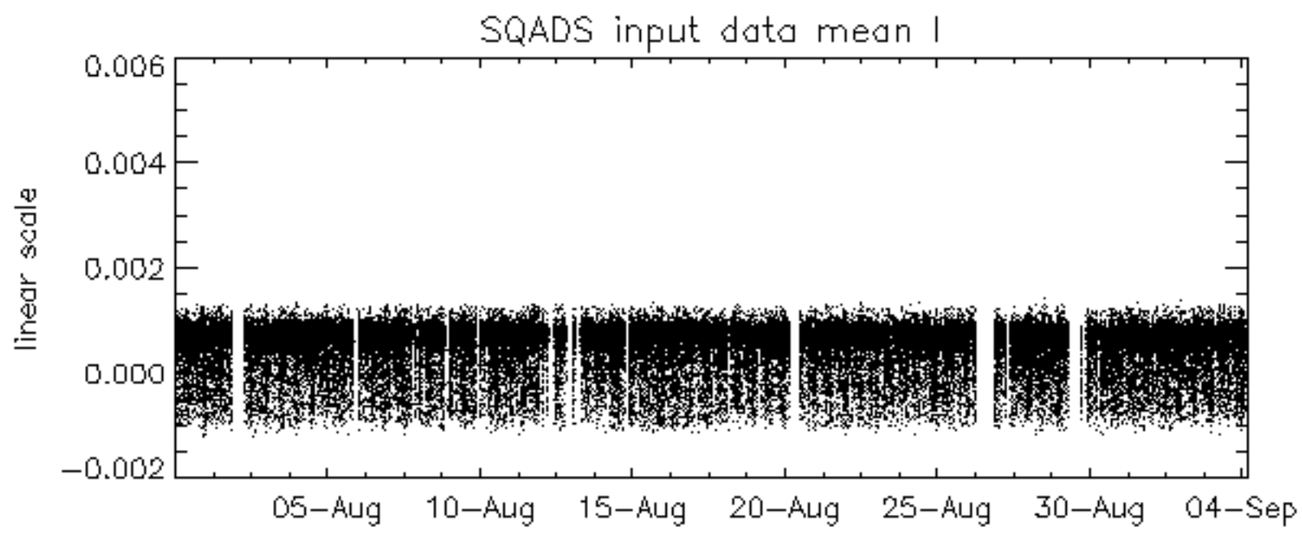
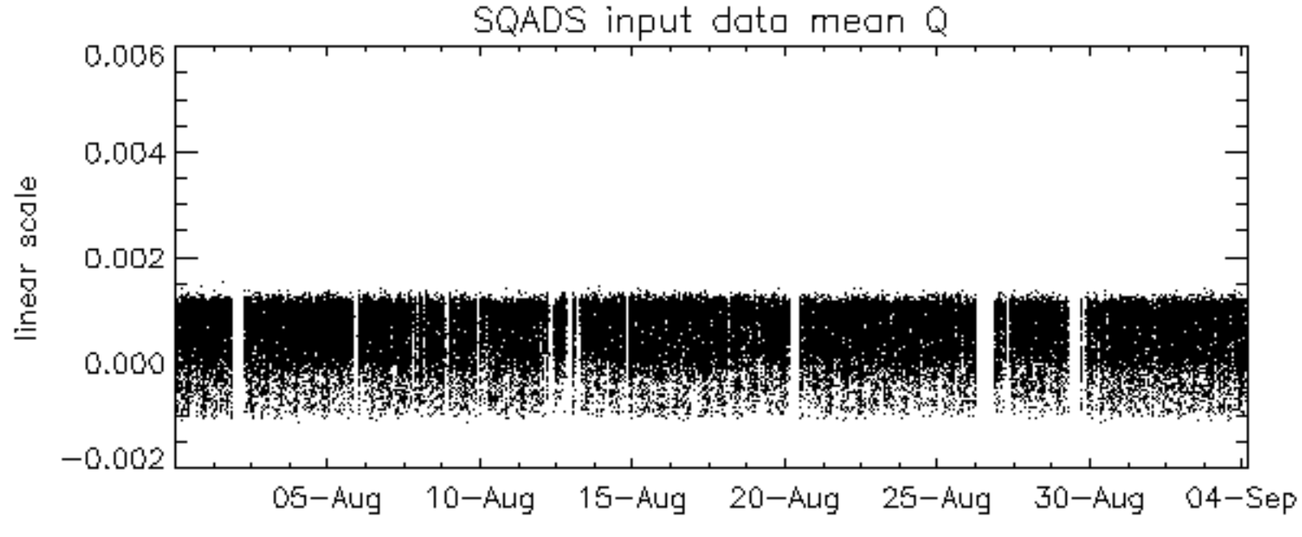
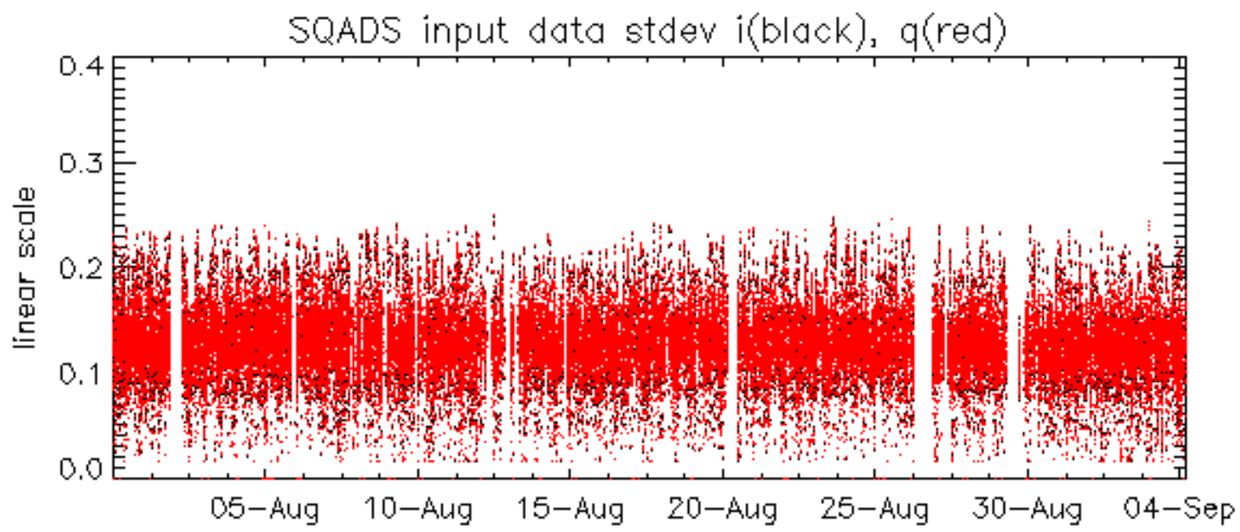
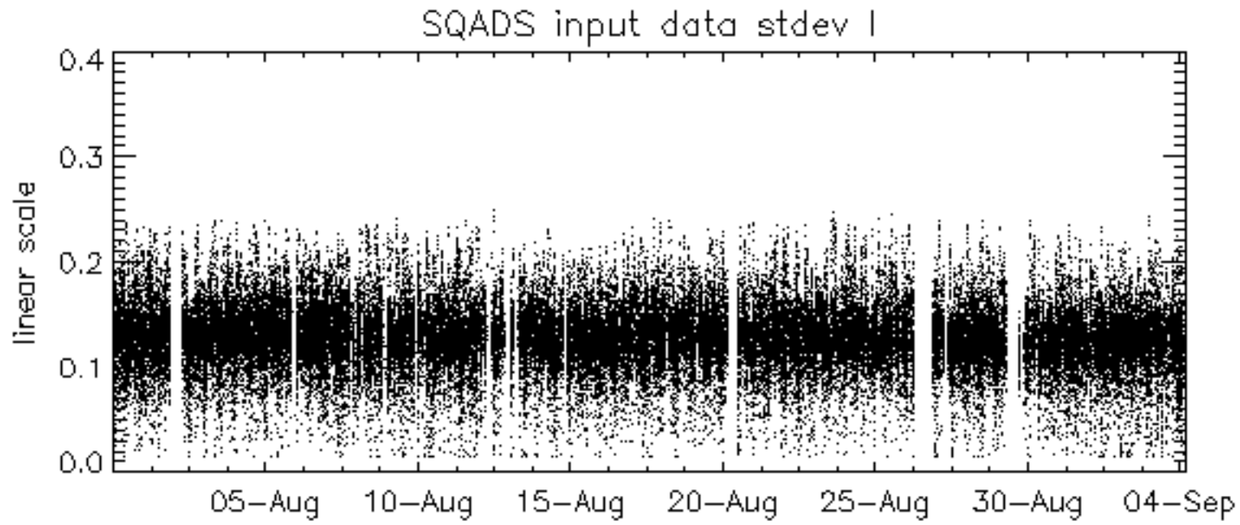

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

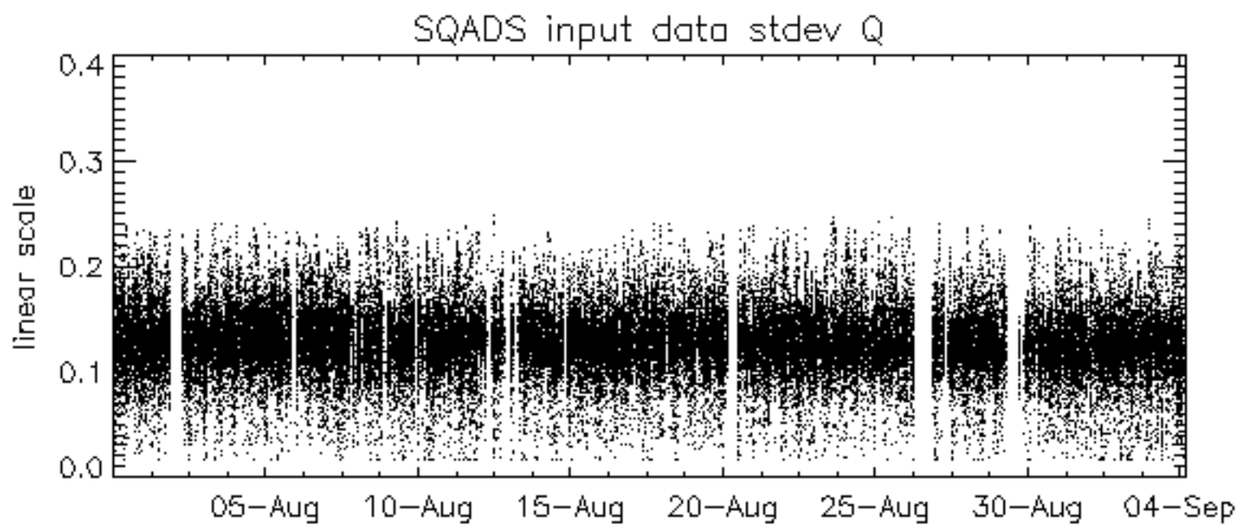

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep

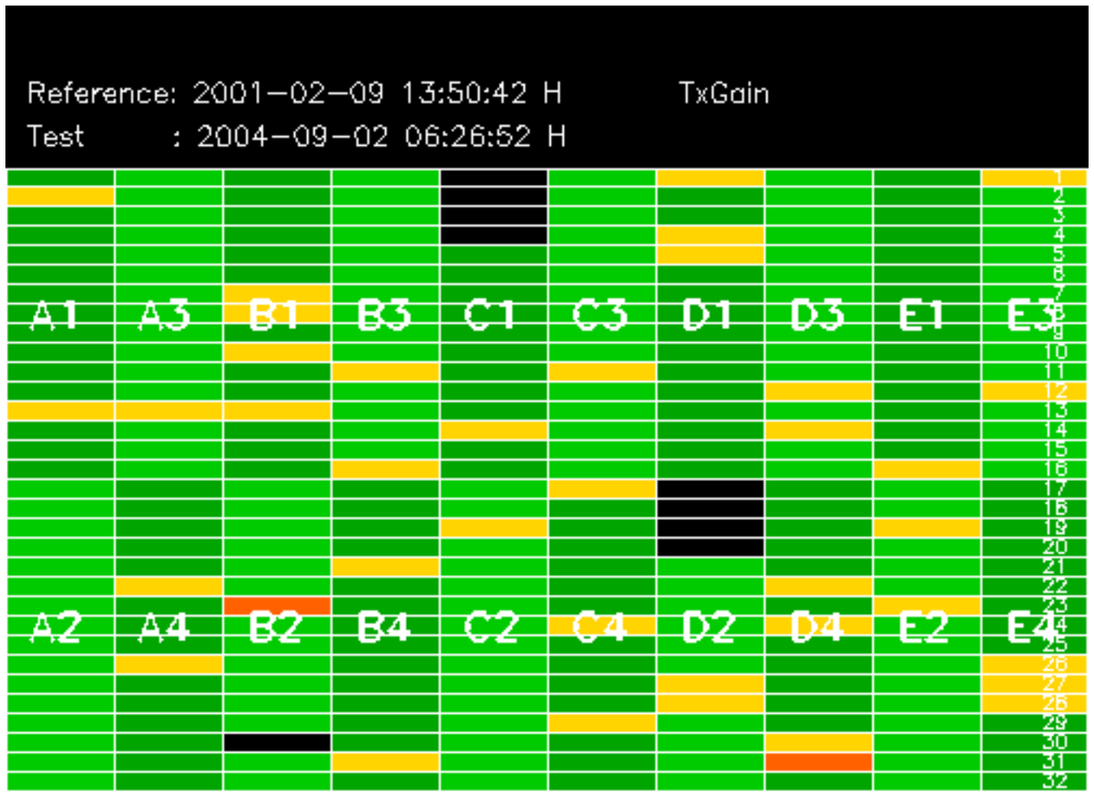

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep


SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
04−Sep


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-02 06:26:52 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
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B4
C2
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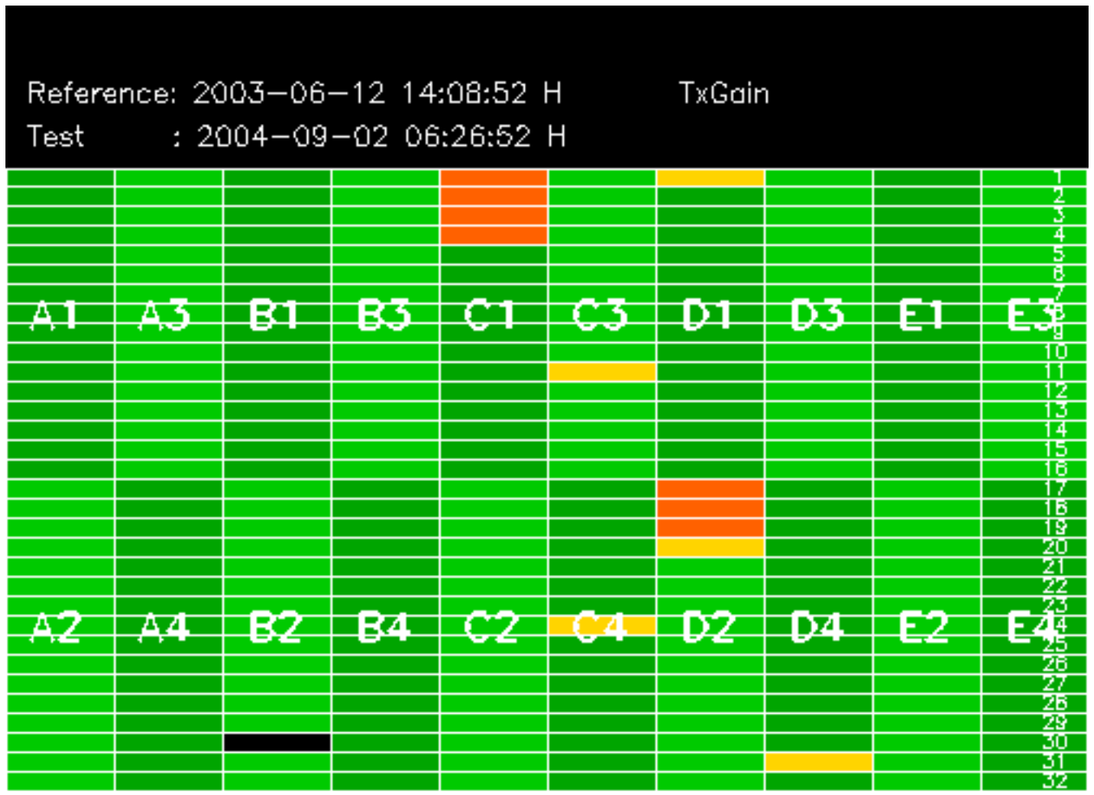
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-02 06:26:52 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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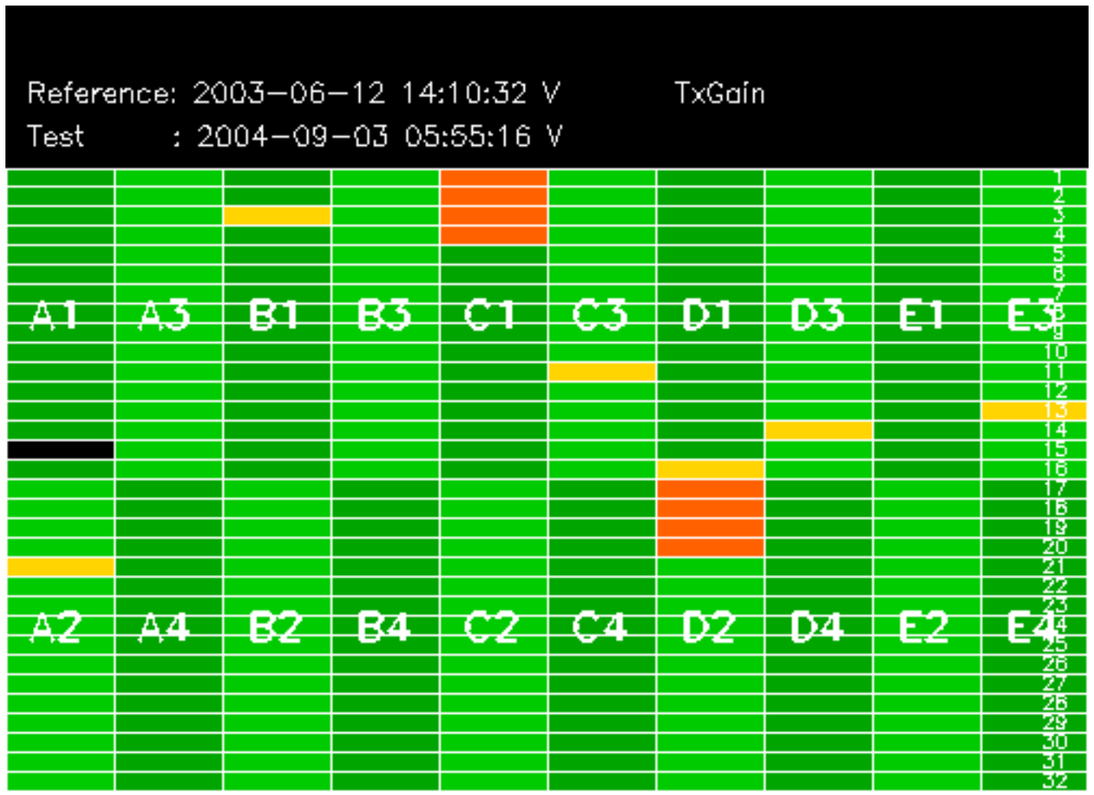
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-03 05:55:16 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-03 05:55:16 V
TxGain
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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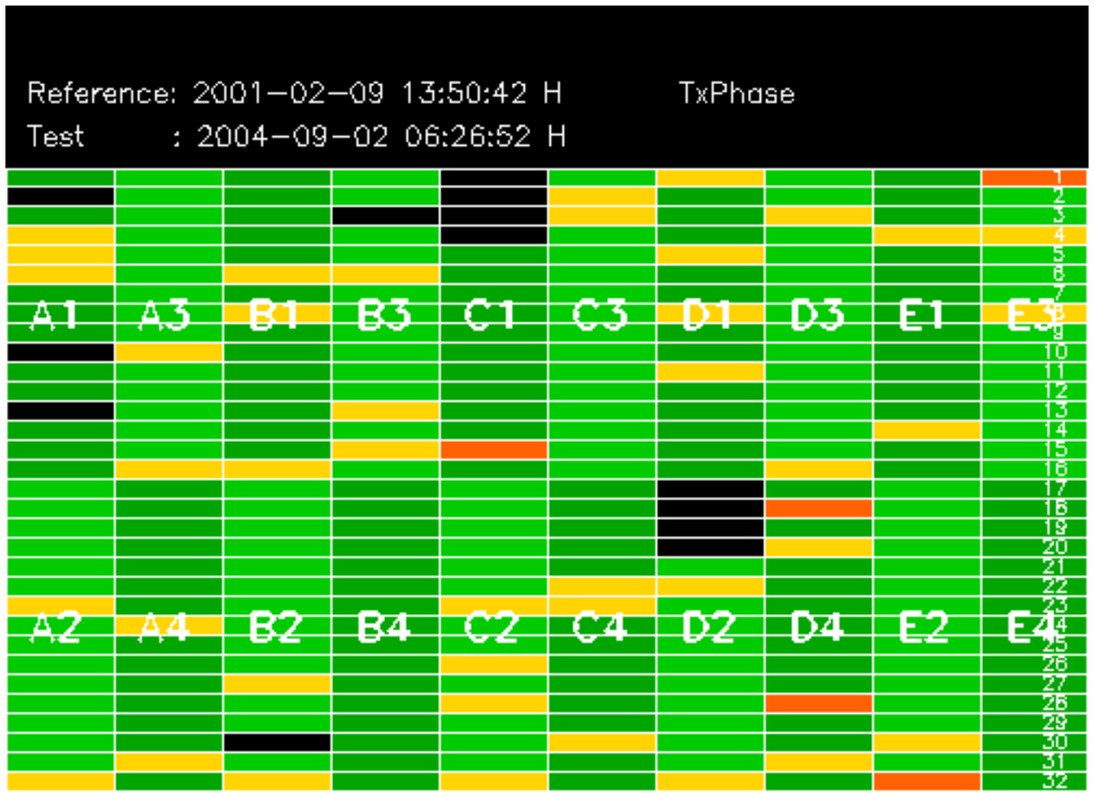
Reference: 2001-02-09 13:50:42 H
Test : 2004-09-02 06:26:52 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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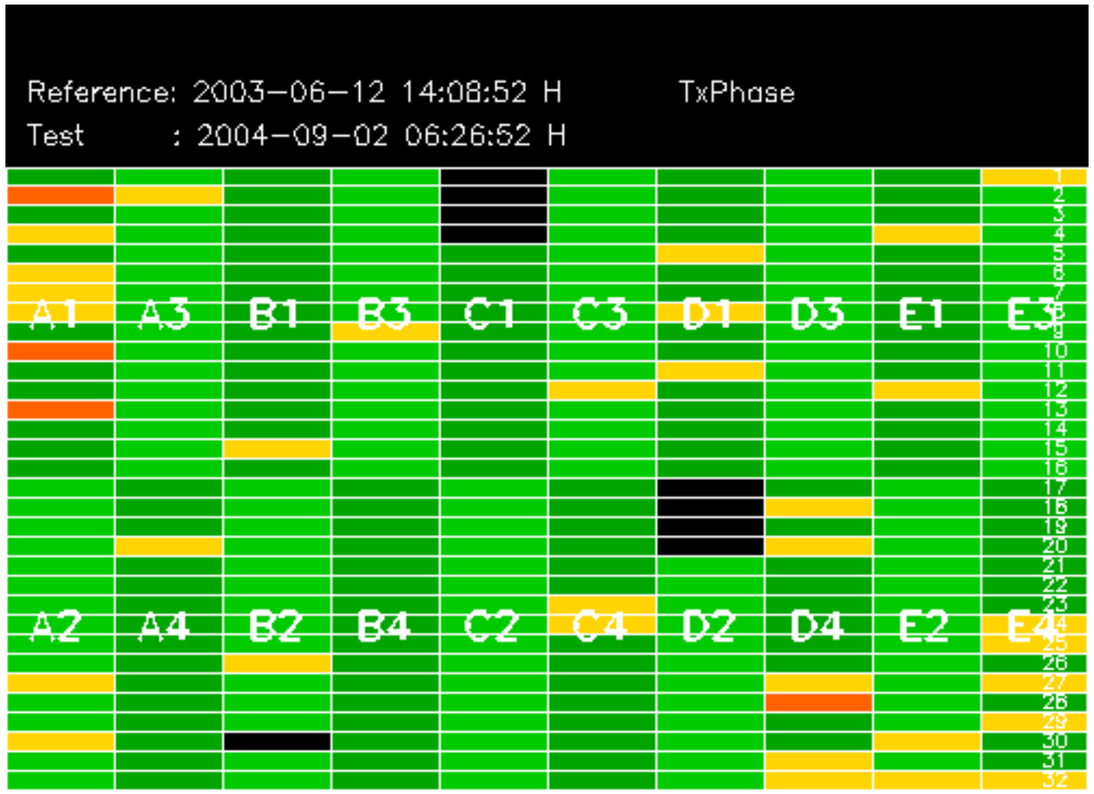
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-02 06:26:52 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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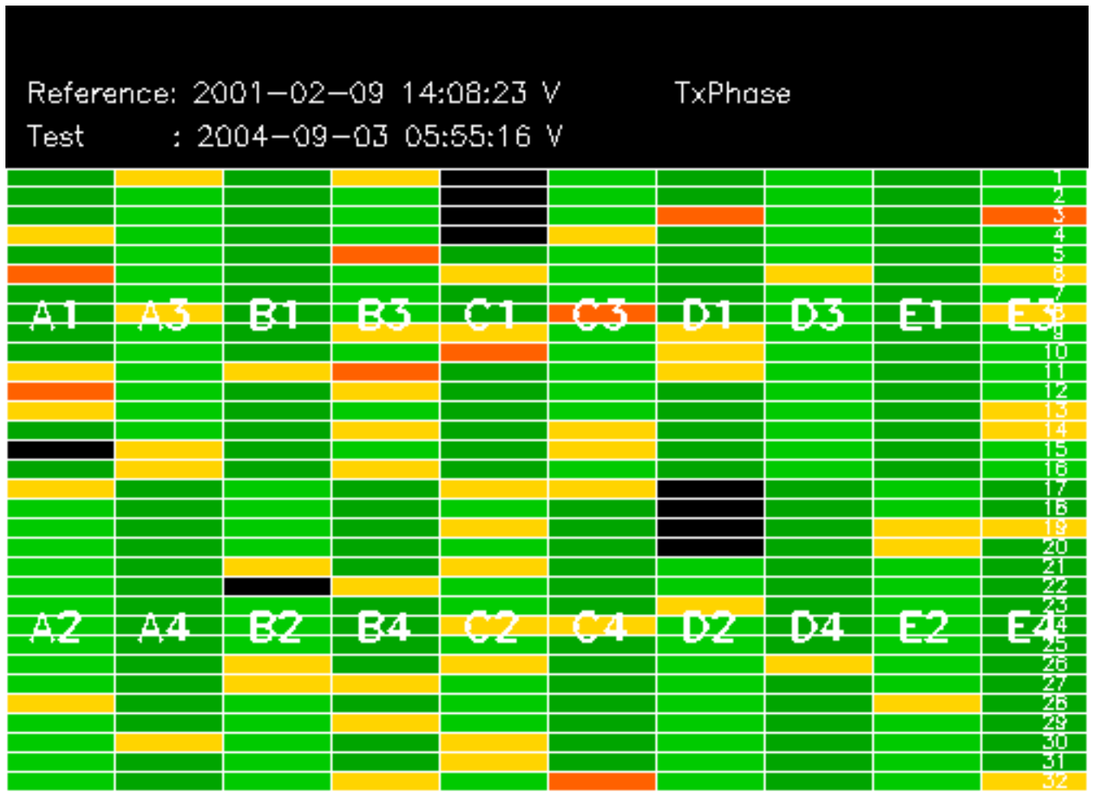
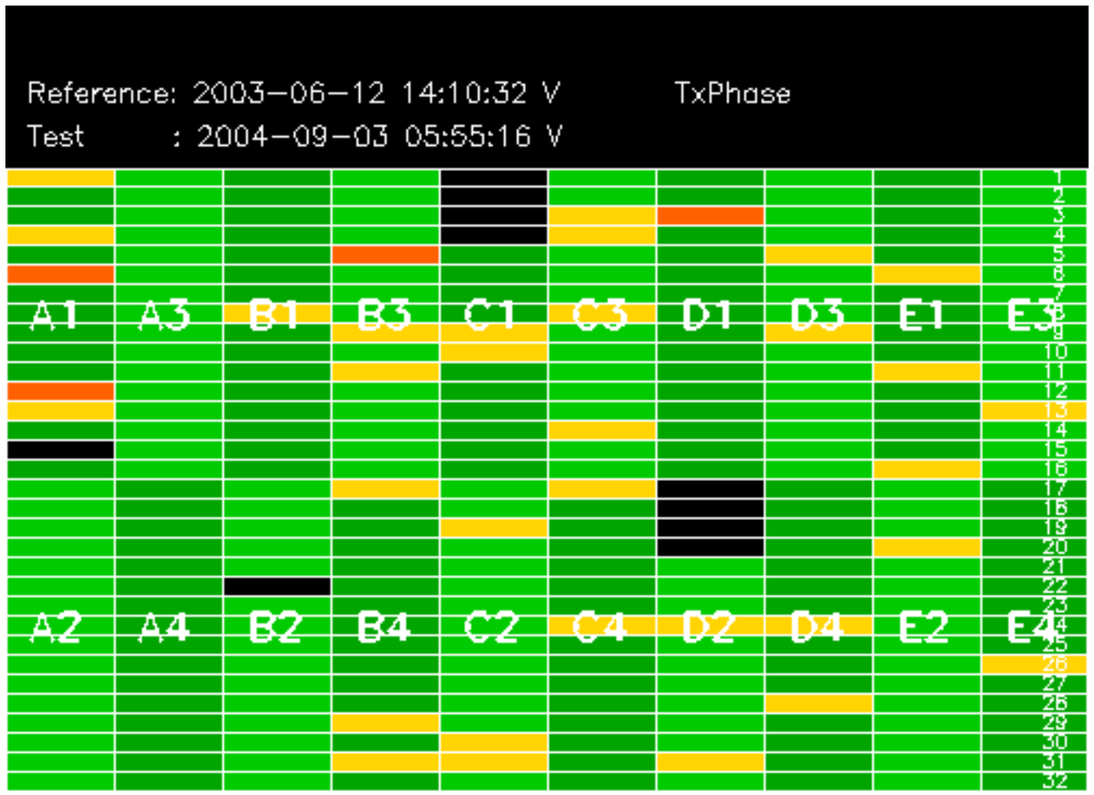

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-09-03 05:55:16 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-03 05:55:16 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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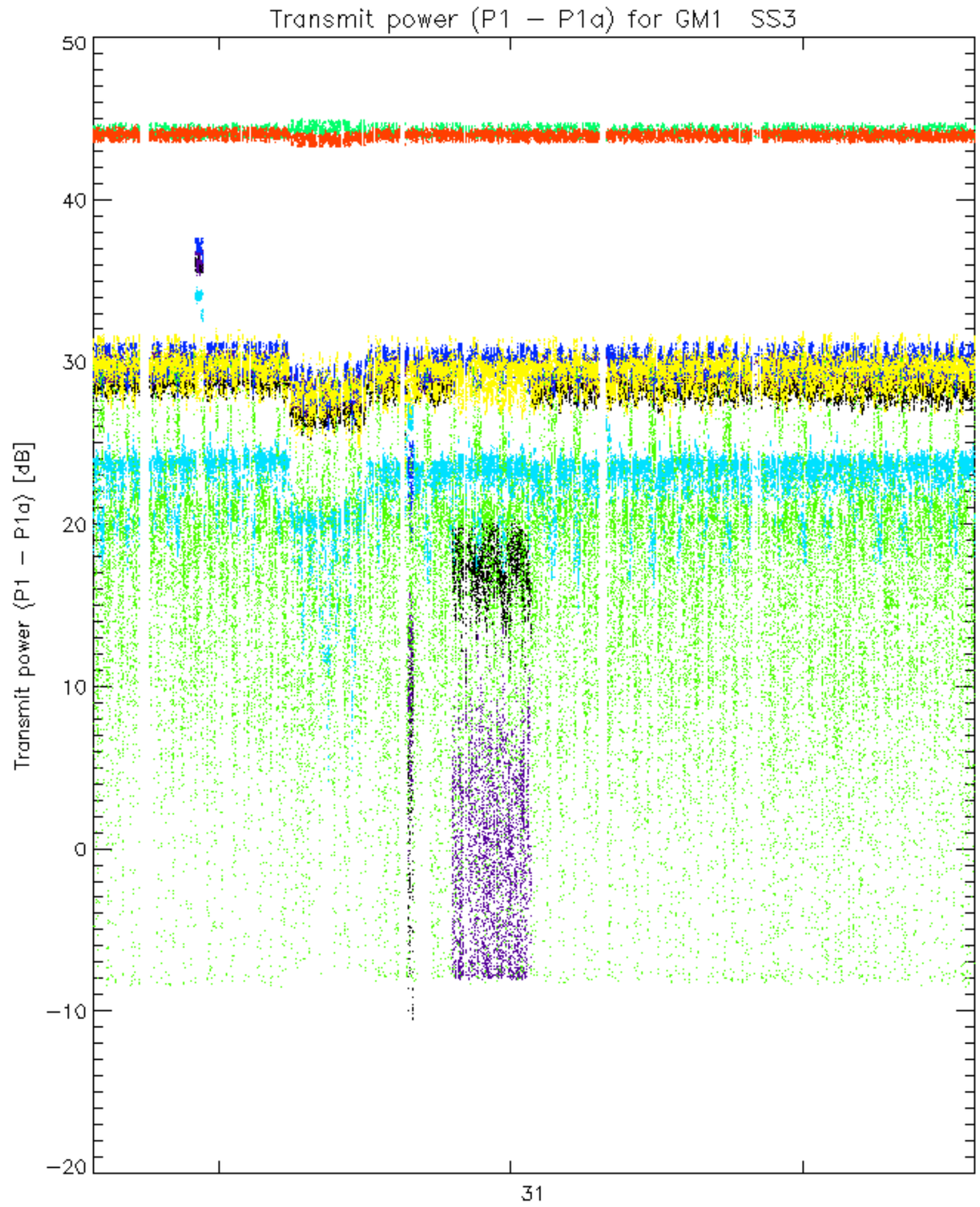
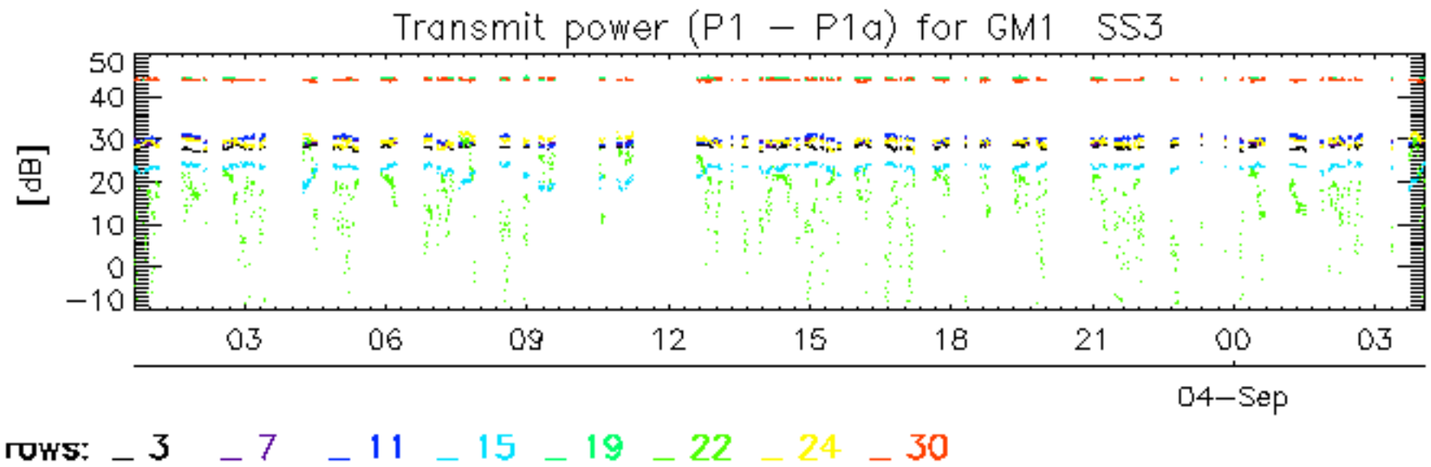
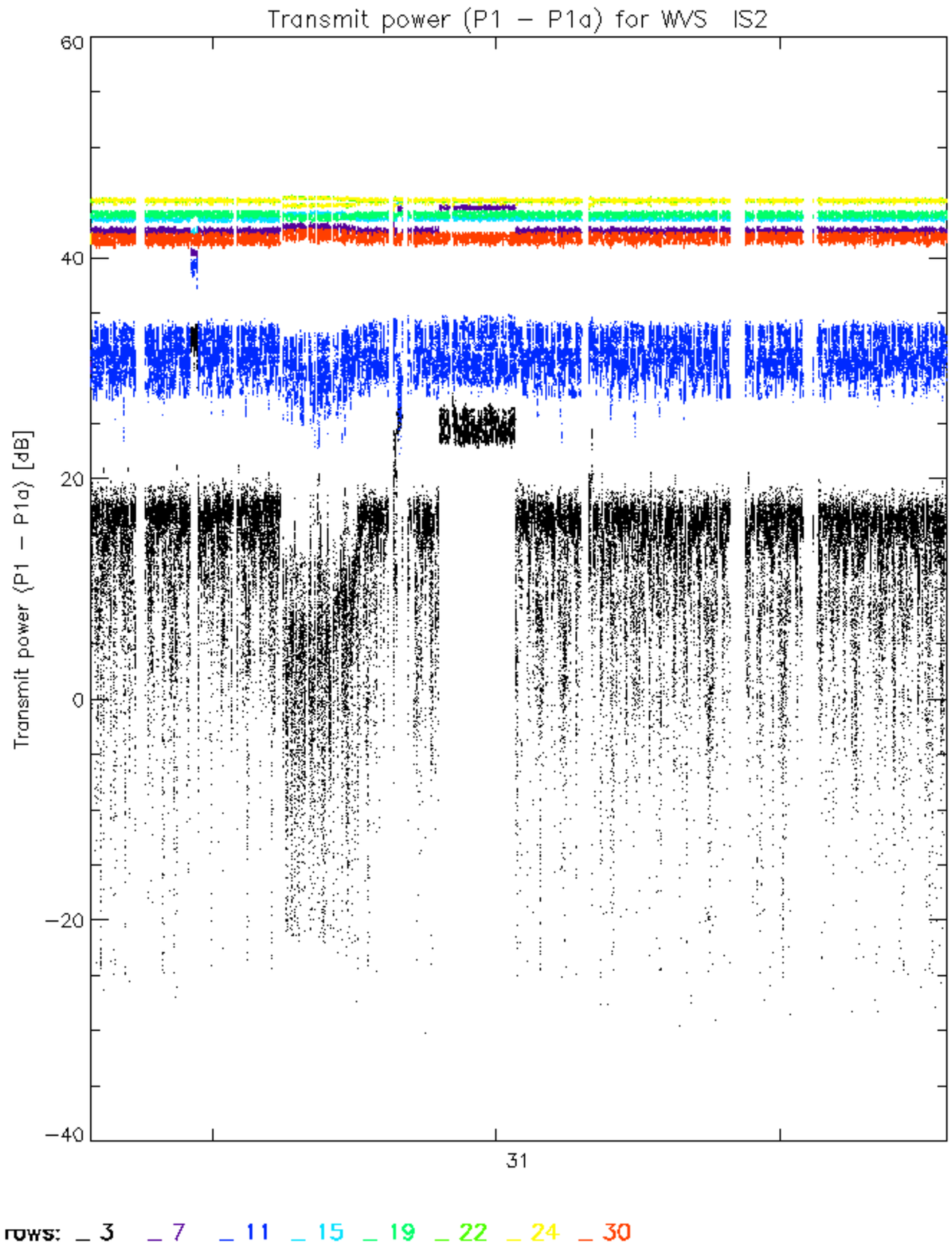
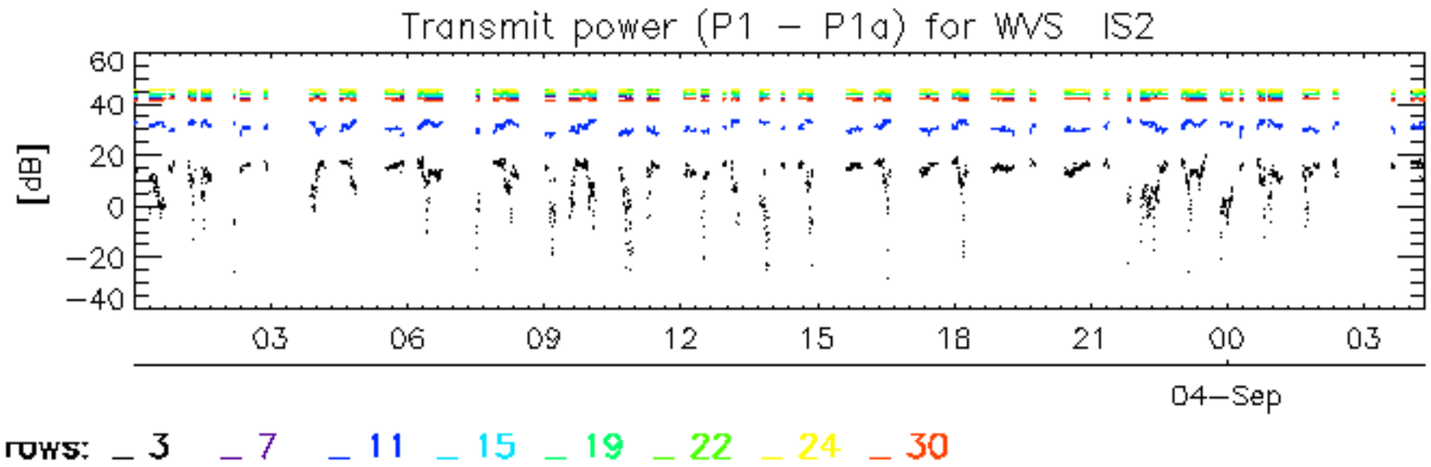

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
−20
31
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
04–Sep
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
31
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
04−Sep
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.