PRELIMINARY REPORT OF 040902

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

last update on Thu Sep 2 13:11:48 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	20040901 170205
H	20040831 173342

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.

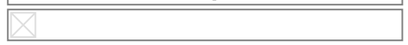
4.1 - Daily statistics

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	-3.469058	0.051714	0.086907
7	P1	-3.314016	0.056697	0.068385
11	P1	-4.656303	0.112793	0.080802
15	P1	-5.758713	0.119035	0.052877
19	P1	-3.467077	0.005843	-0.021230
22	P1	-4.541420	0.011231	0.041379
24	P1	-4.966682	0.020524	0.017479
30	P1	-6.947677	0.021894	-0.075985

3	P1	-15.918233	1.588348	0.303963
7	P1	-14.039655	0.173724	-0.012195
11	P1	-20.157255	0.417665	-0.302708
15	P1	-11.791101	0.167052	-0.003382
19	P1	-13.896600	0.034434	-0.057706
22	P1	-16.184580	0.334445	0.204900
24	P1	-14.537024	0.303976	0.164384
30	P1	-17.817942	0.453426	-0.304158

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.302059	0.082989	-0.000341
7	P2	-22.616438	0.136883	0.049676
11	P2	-15.319971	0.175791	0.138542
15	P2	-7.063557	0.098426	0.047357
19	P2	-9.562160	0.198029	0.072137
22	P2	-17.350050	0.119345	0.099427
24	P2	-20.745684	0.089187	-0.016857
30	P2	-19.254984	0.082534	0.128950

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.141641	0.002715	-0.005671
7	P3	-8.141639	0.002714	-0.005689
11	P3	-8.141634	0.002714	-0.005743
15	P3	-8.141622	0.002713	-0.005790
19	P3	-8.141612	0.002713	-0.005826
22	P3	-8.141603	0.002714	-0.005875
24	P3	-8.141589	0.002715	-0.005938
30	P3	-8.141558	0.002708	-0.006145

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	-2.701436	0.259809	0.095156
7	P1	-2.957568	0.213248	0.128513
11	P1	-3.891035	0.161644	0.065836
15	P1	-3.540596	0.131016	0.073482
19	P1	-3.482497	0.013894	-0.011099
22	P1	-5.694525	0.039788	-0.064476
24	P1	-3.904816	0.015524	-0.093517
30	P1	-6.172040	0.062216	-0.037694
3	P1	-10.392289	1.038430	0.001604
7	P1	-10.064921	0.170328	0.053134
11	P1	-12.143048	0.116057	-0.138545
15	P1	-11.651450	0.102813	-0.084776
19	P1	-15.622815	0.049690	0.007741
22	P1	-23.367397	1.127528	-0.100407
24	P1	-17.887831	0.232117	-0.254639
30	P1	-20.436253	1.209392	-0.095744

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.979130	0.058837	-0.031047
7	P2	-22.754471	0.048888	0.041269
11	P2	-10.986104	0.068594	0.093652
15	P2	-4.949002	0.037097	-0.021628
19	P2	-6.757133	0.053882	-0.015897
22	P2	-7.444323	0.046187	0.010313
24	P2	-11.040474	0.052150	-0.038382
30	P2	-22.195810	0.037470	0.076404

P3 Cyclic statistics

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

3	P3	-7.990567	0.003734	-0.021175
7	P3	-7.990580	0.003741	-0.021454
11	P3	-7.990667	0.003728	-0.021082
15	P3	-7.990574	0.003732	-0.021286
19	P3	-7.990570	0.003740	-0.021263
22	P3	-7.990549	0.003735	-0.021086
24	P3	-7.990622	0.003753	-0.021357
30	P3	-7.990541	0.003732	-0.021046

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	0.000482763
	stdev	2.15776e-07
MEAN Q	mean	0.000544731
	stdev	2.35281e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128719
	stdev	0.000970836

STDEV Q	mean	0.128945
	stdev	0.000981981

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

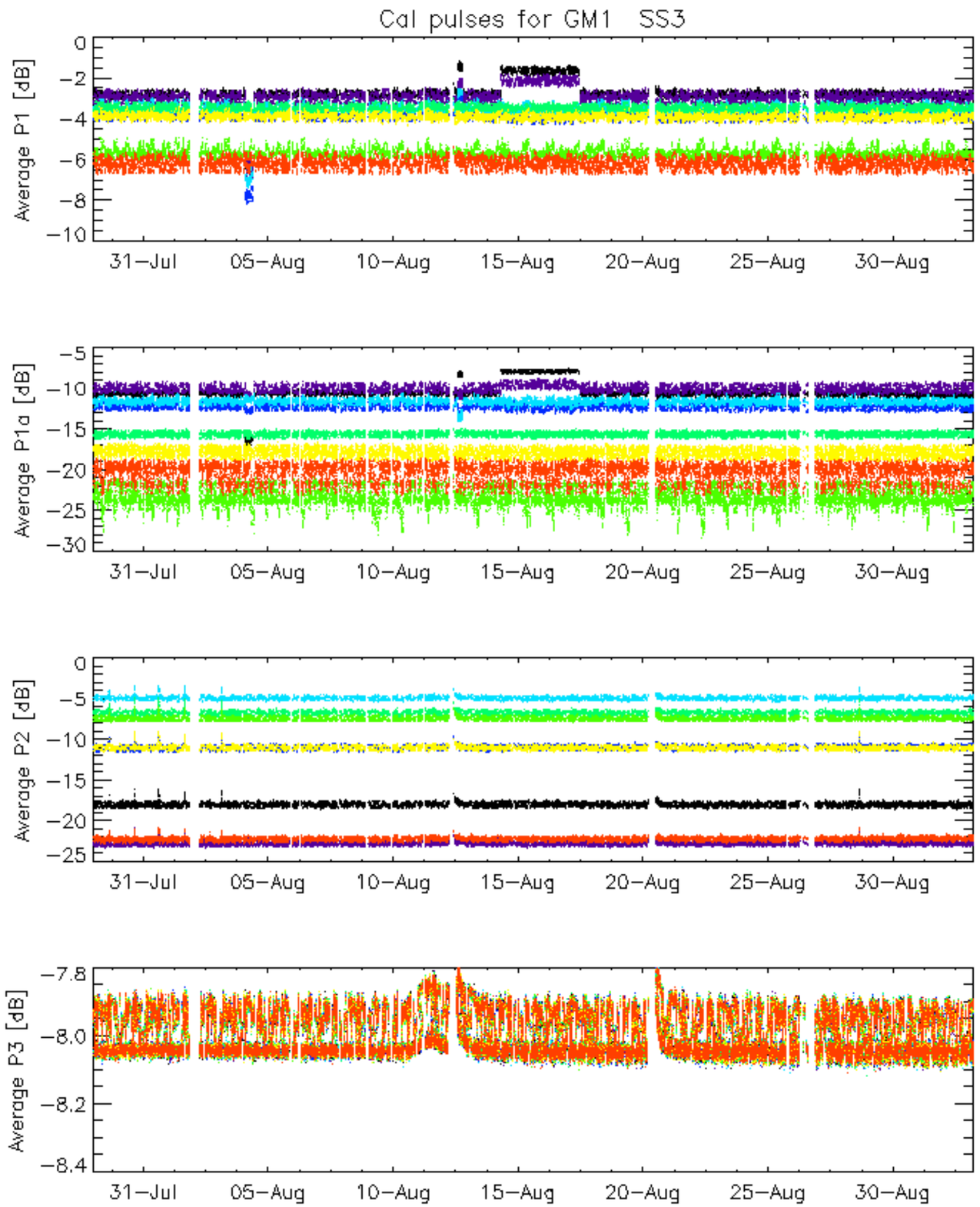
Evolution of Absolute Doppler

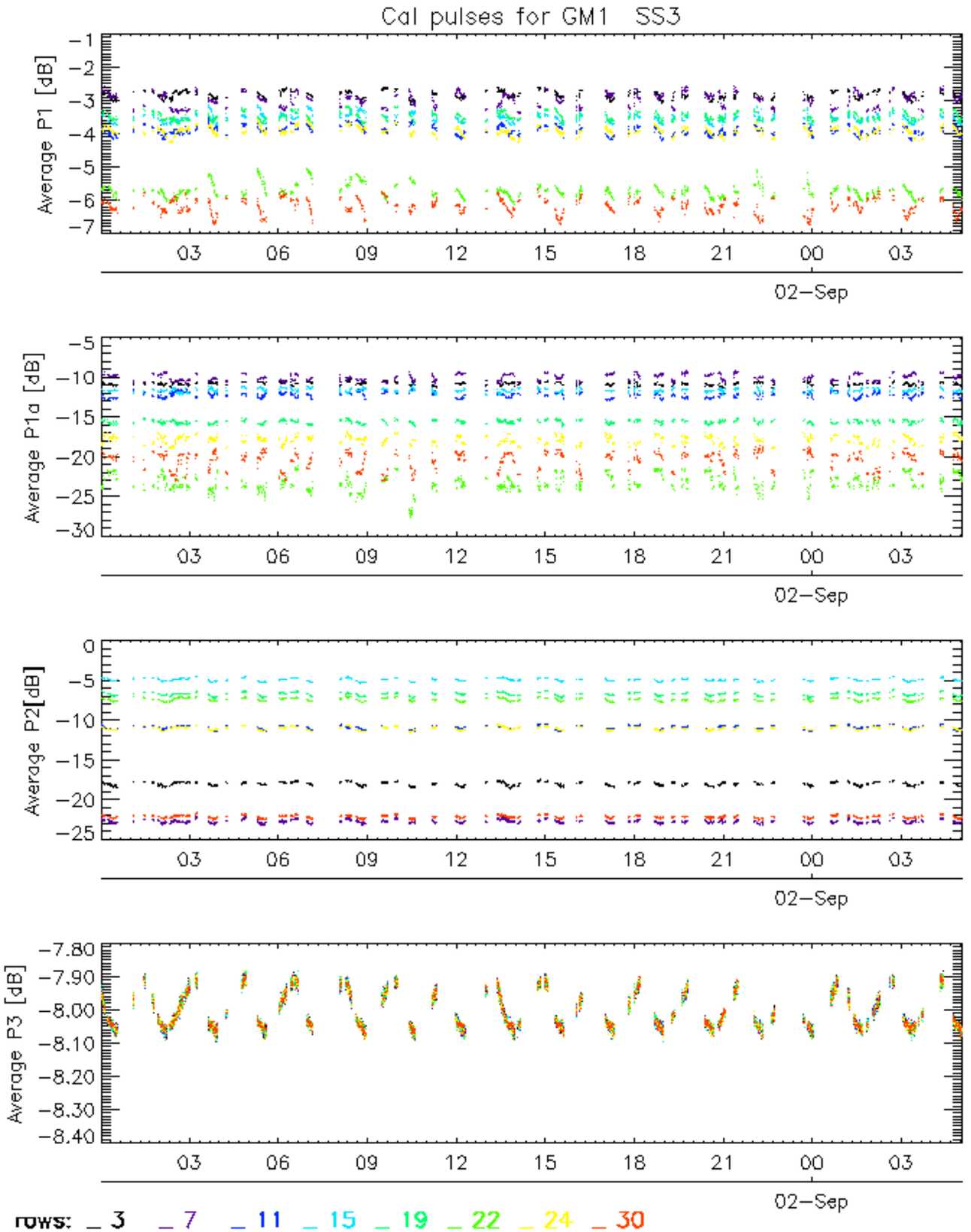
Acsending

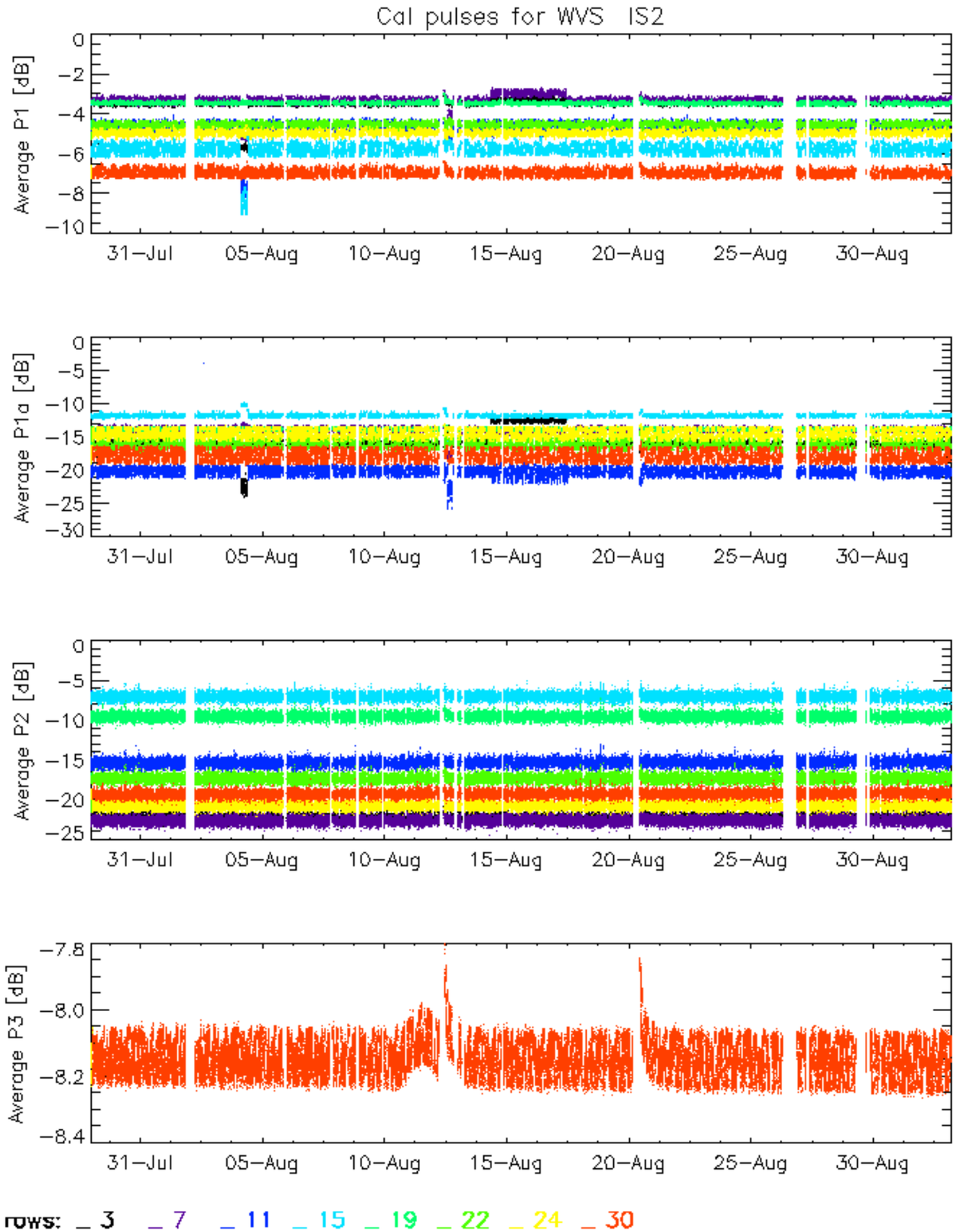
Descending

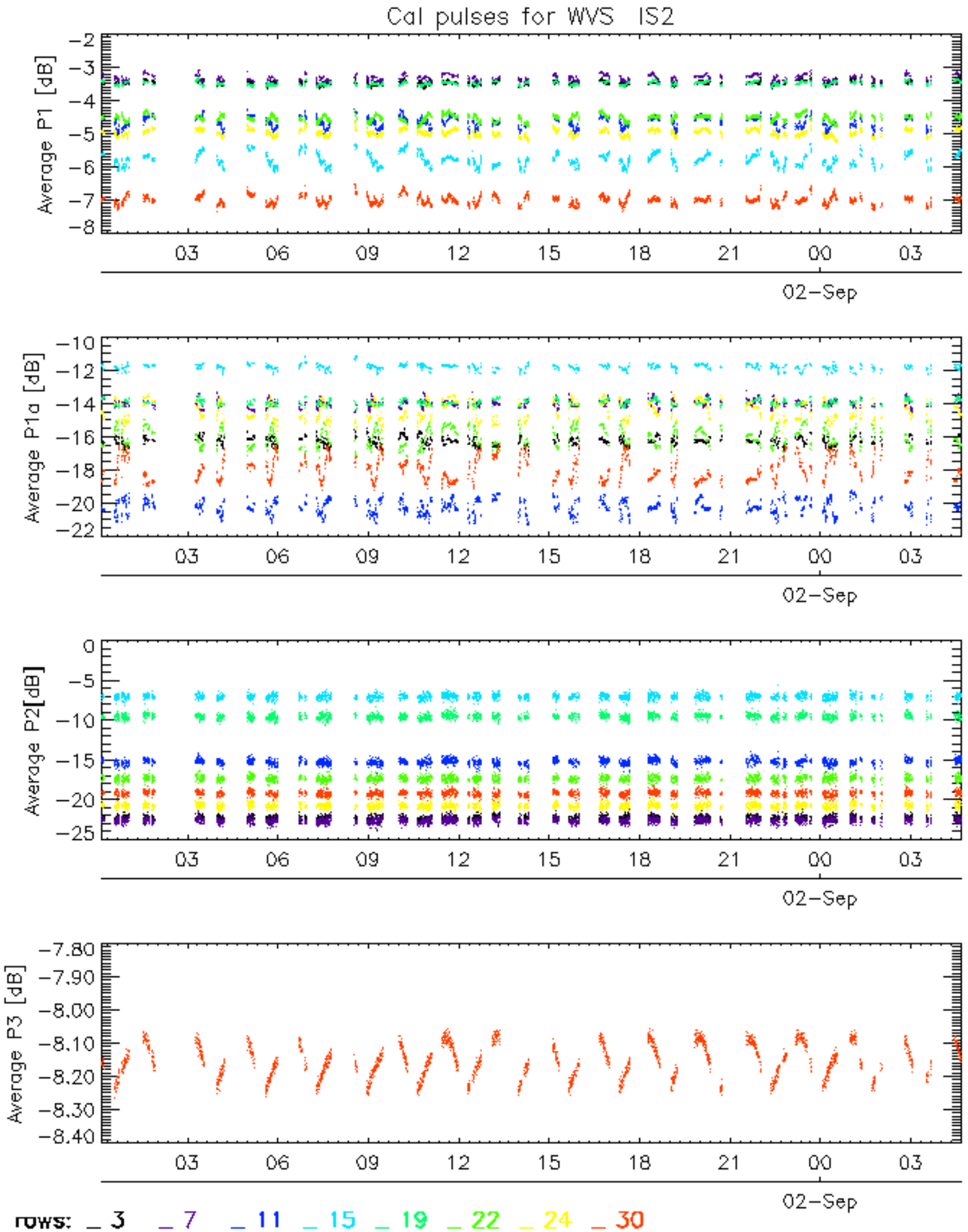
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

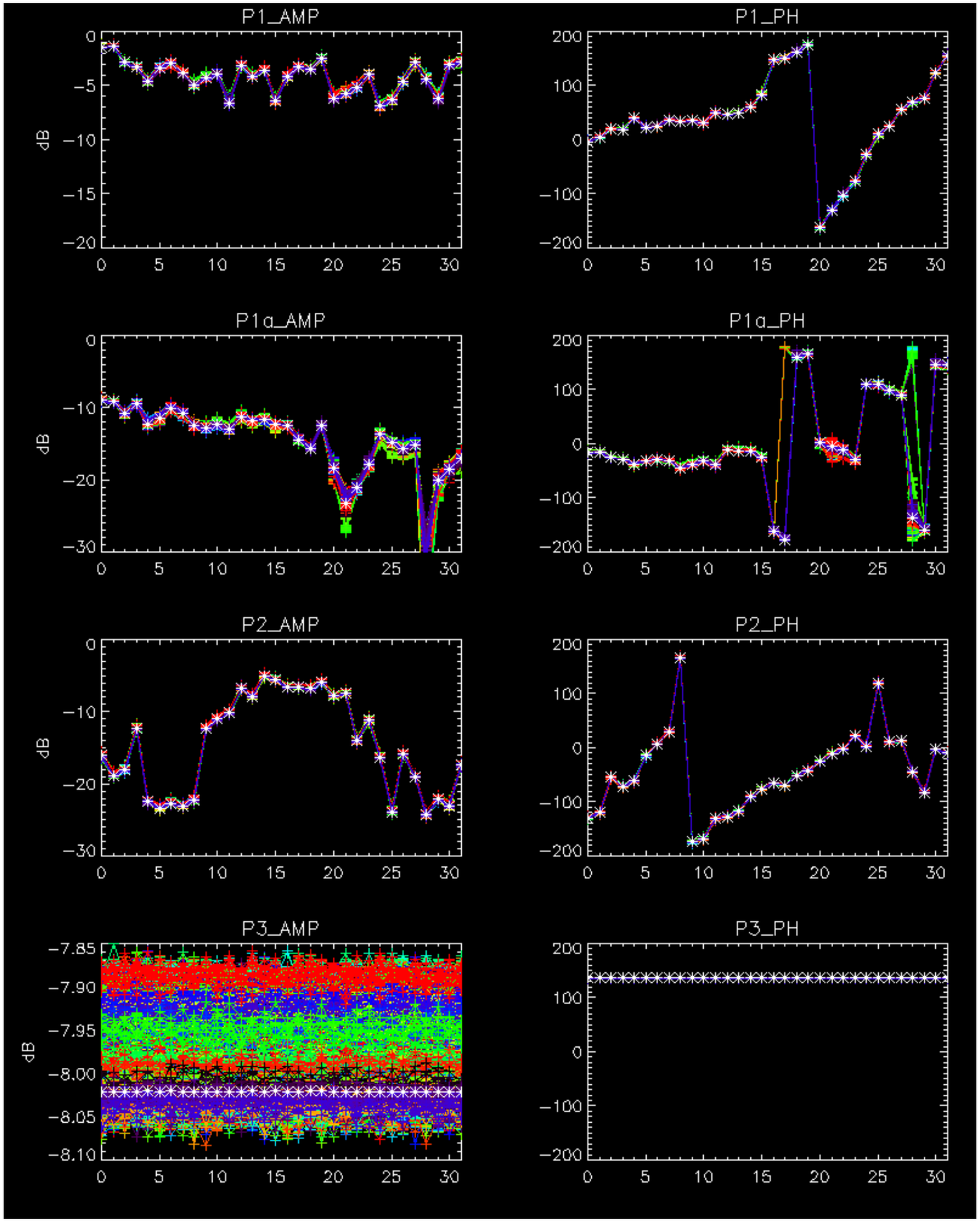


Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

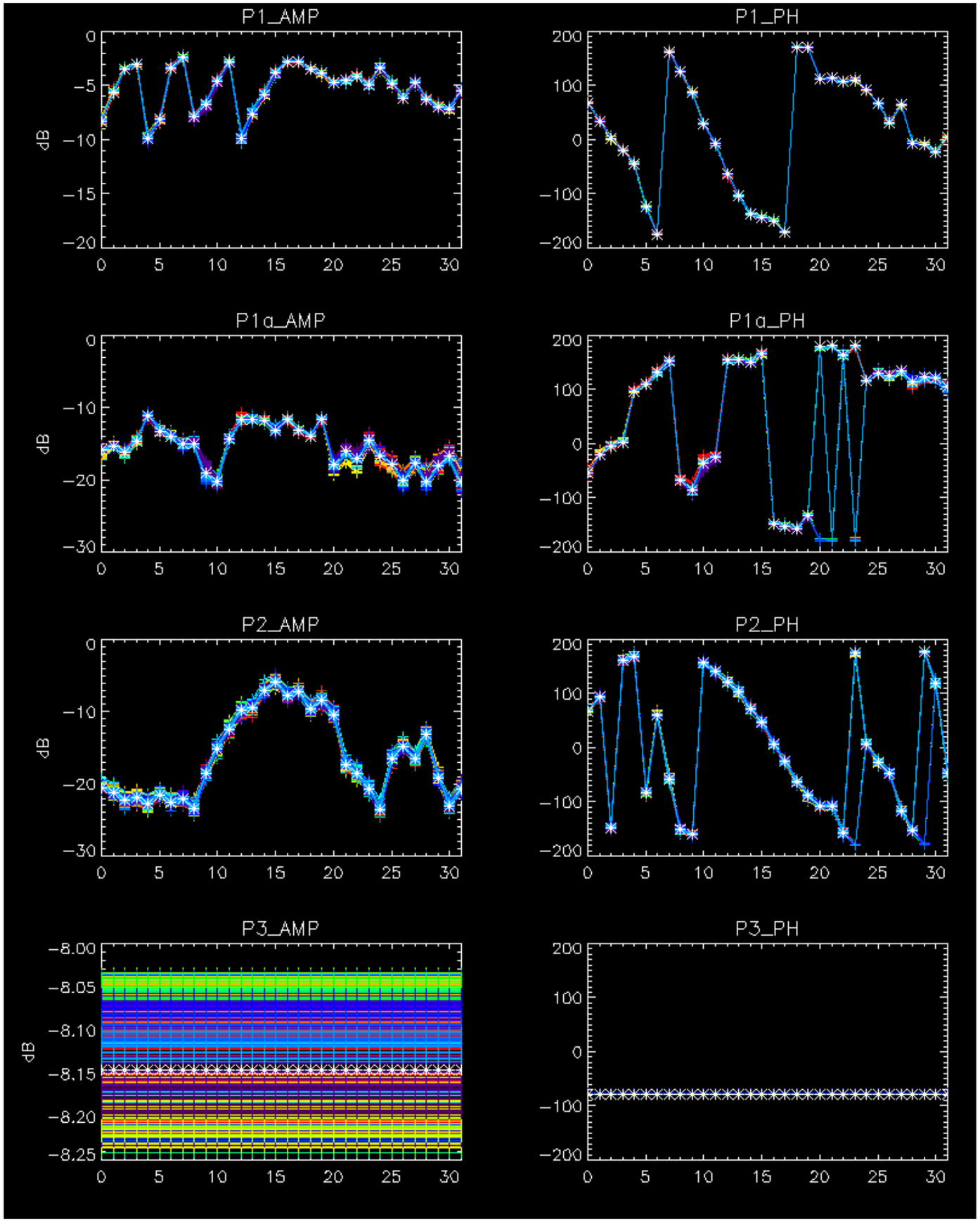

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
02−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
02−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
02−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−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
21
00
03
02−Sep
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
02−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
02−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
02−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

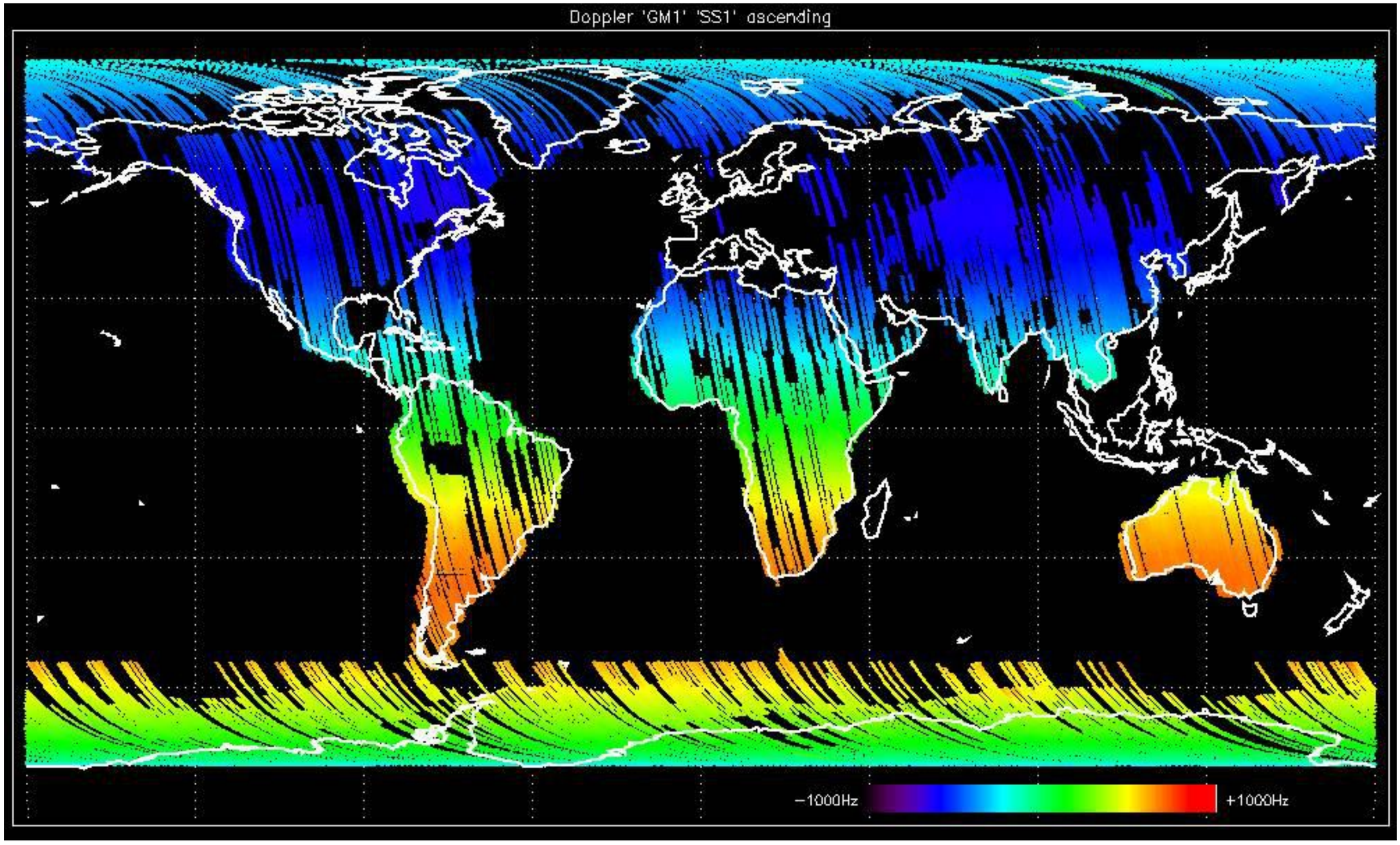
No anomalies observed.

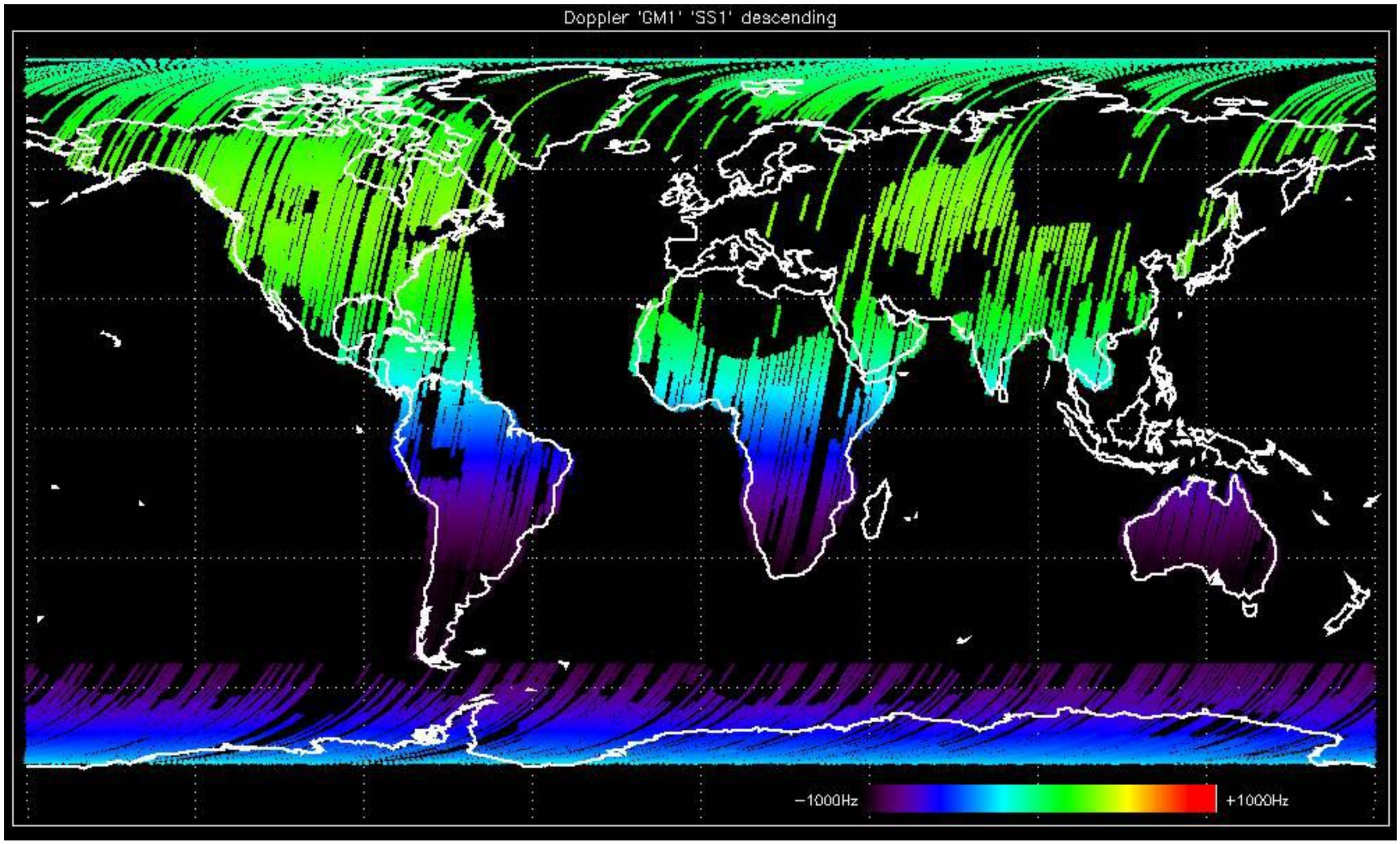

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

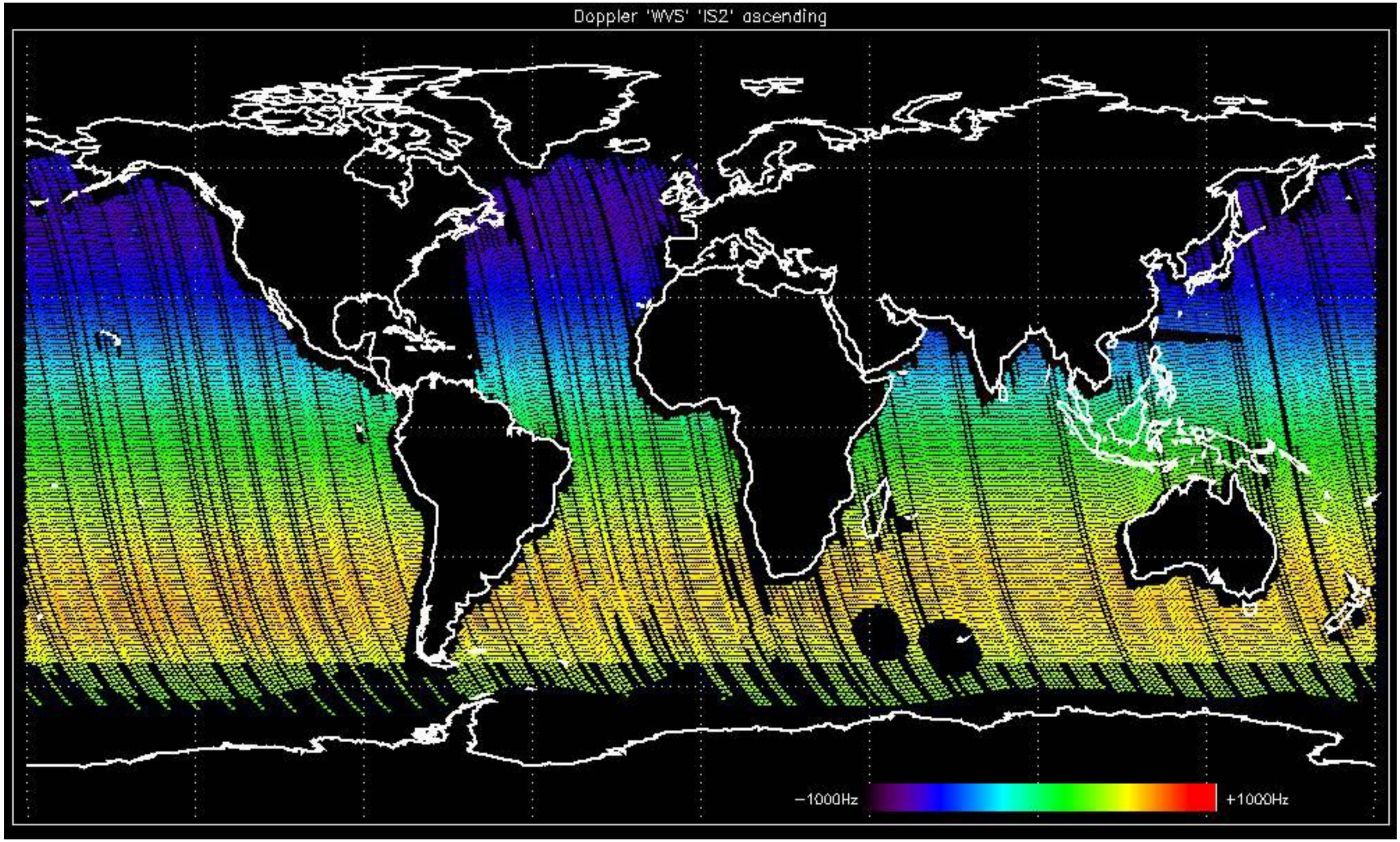

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

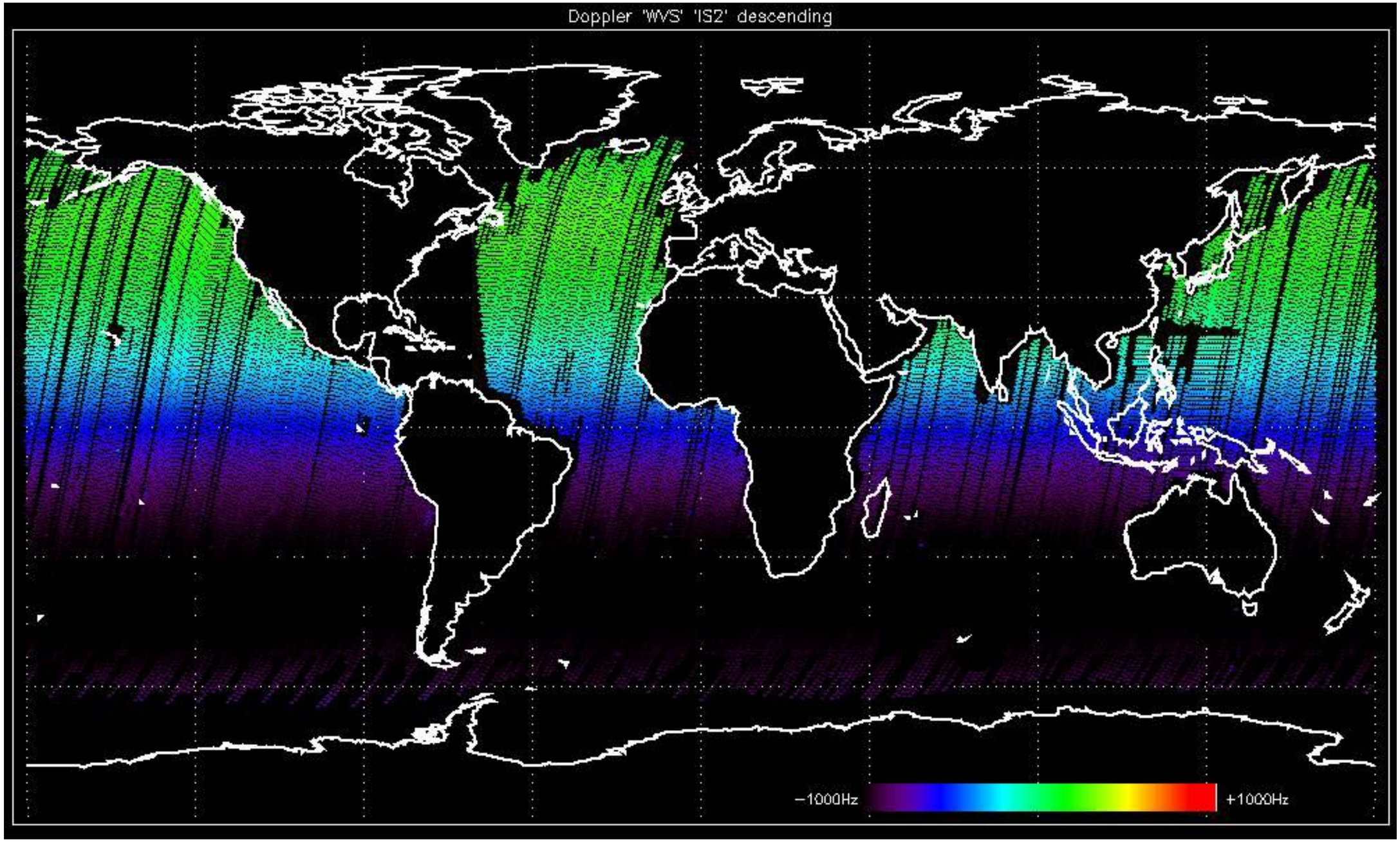
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

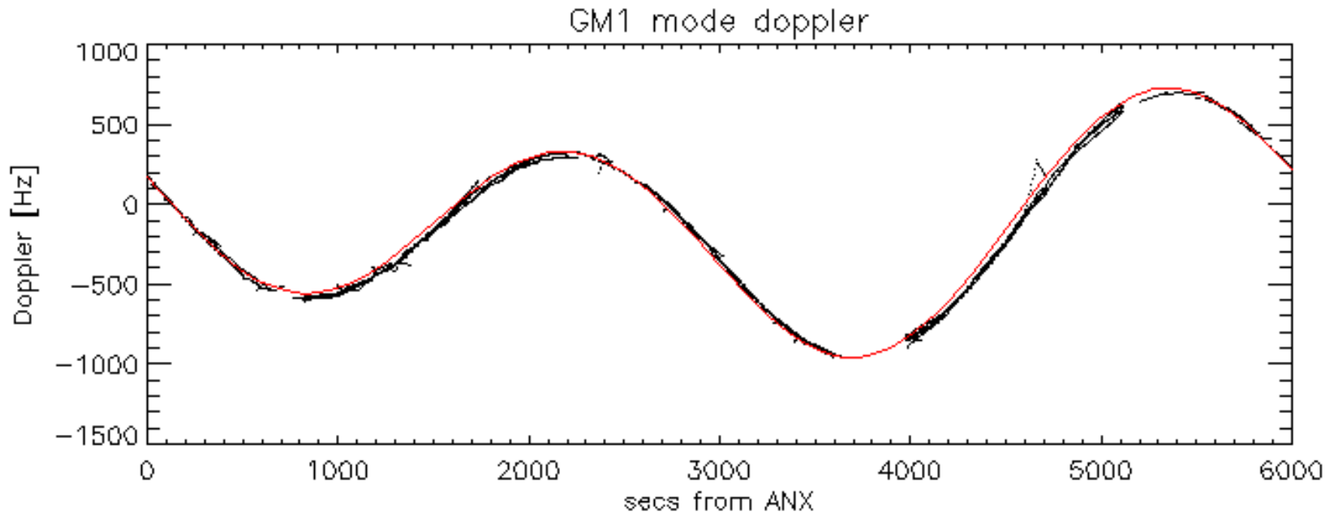
Preliminary report.The data is not yet controled

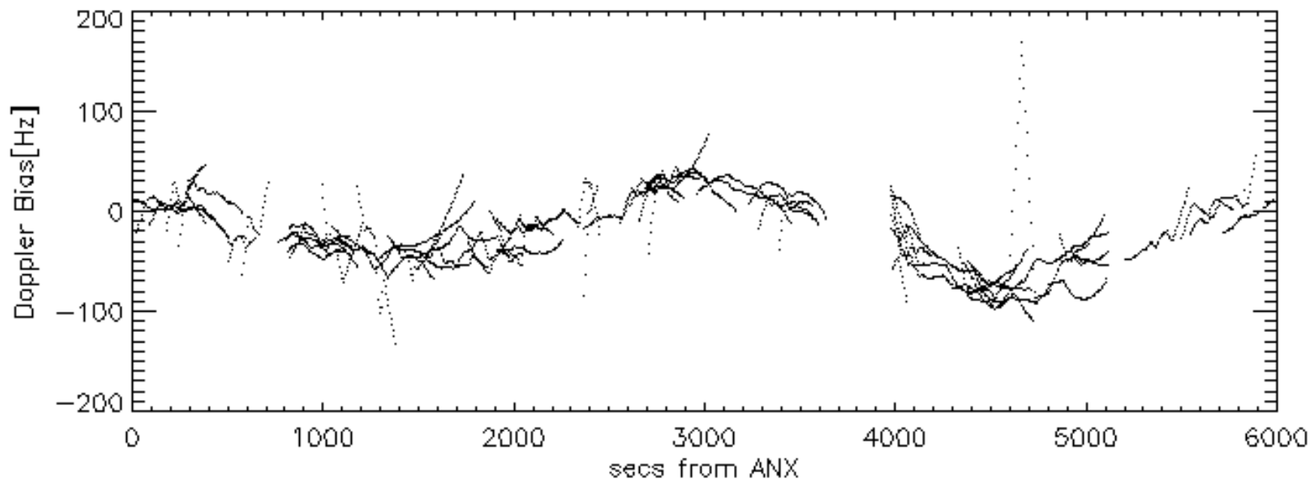

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

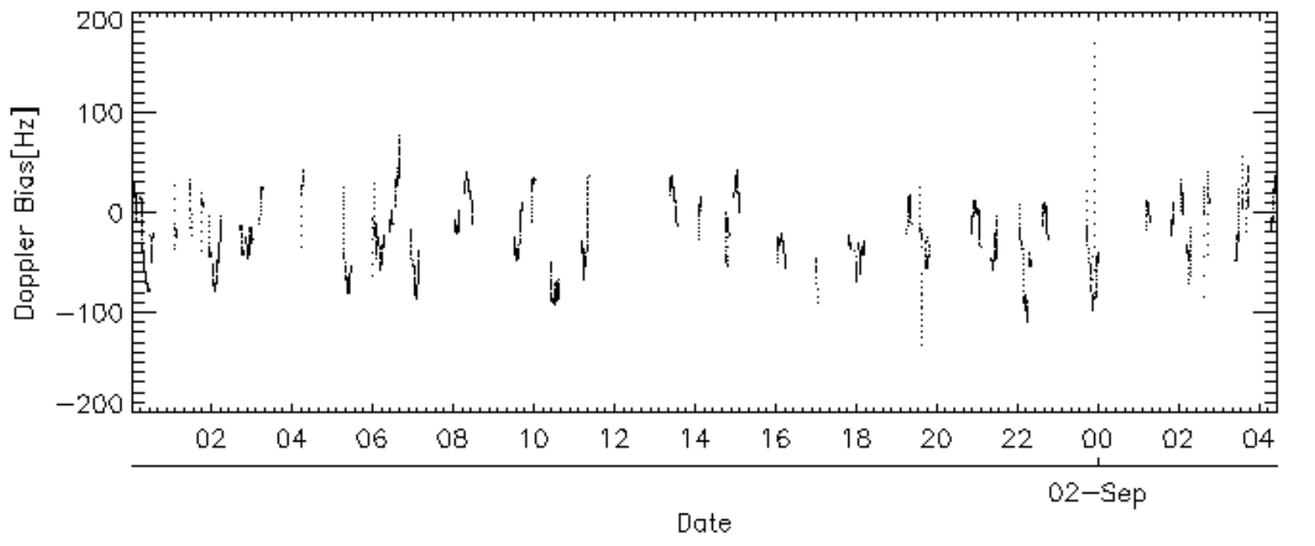

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

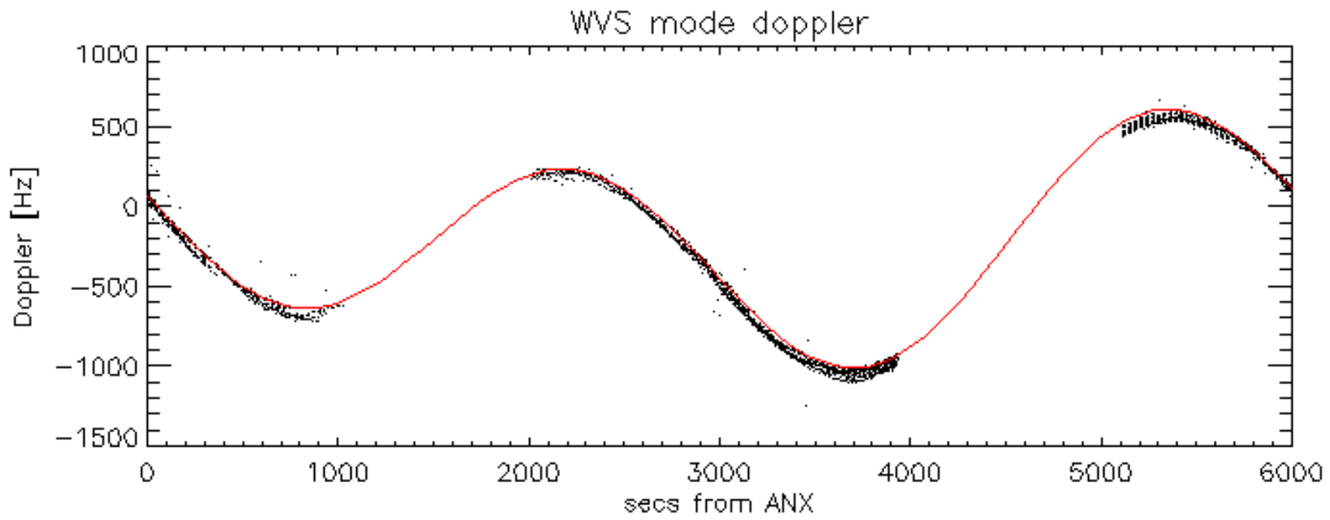

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

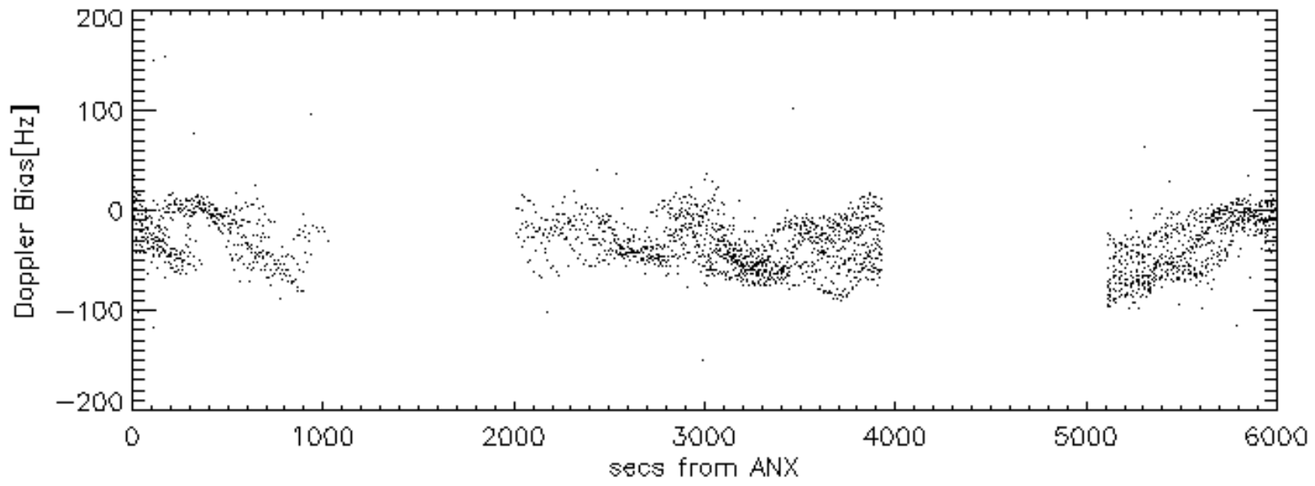

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

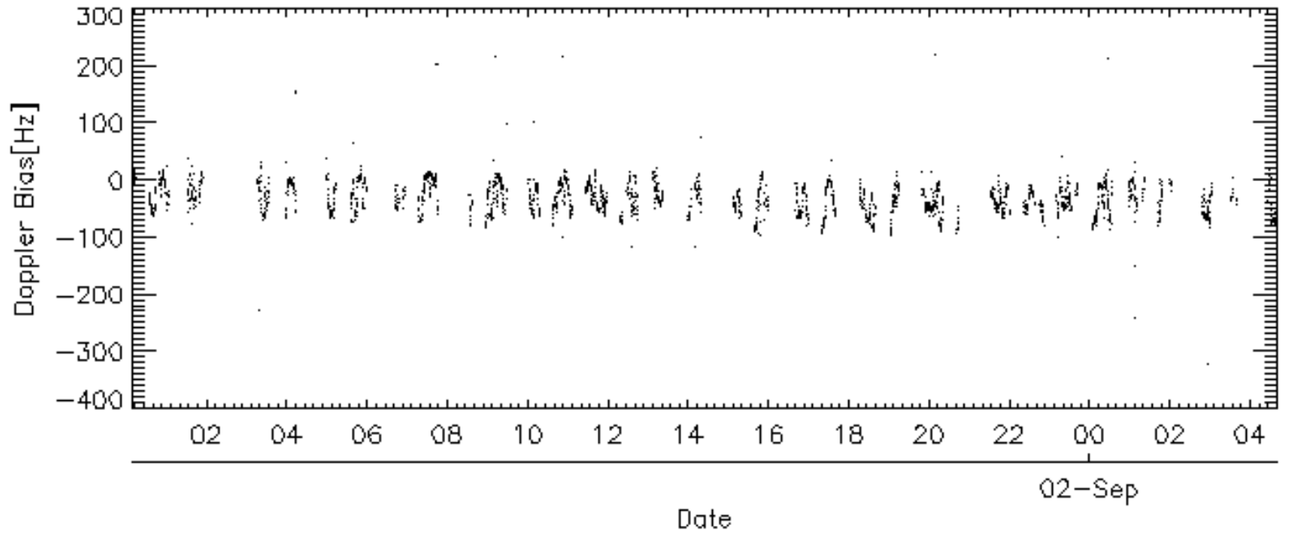

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

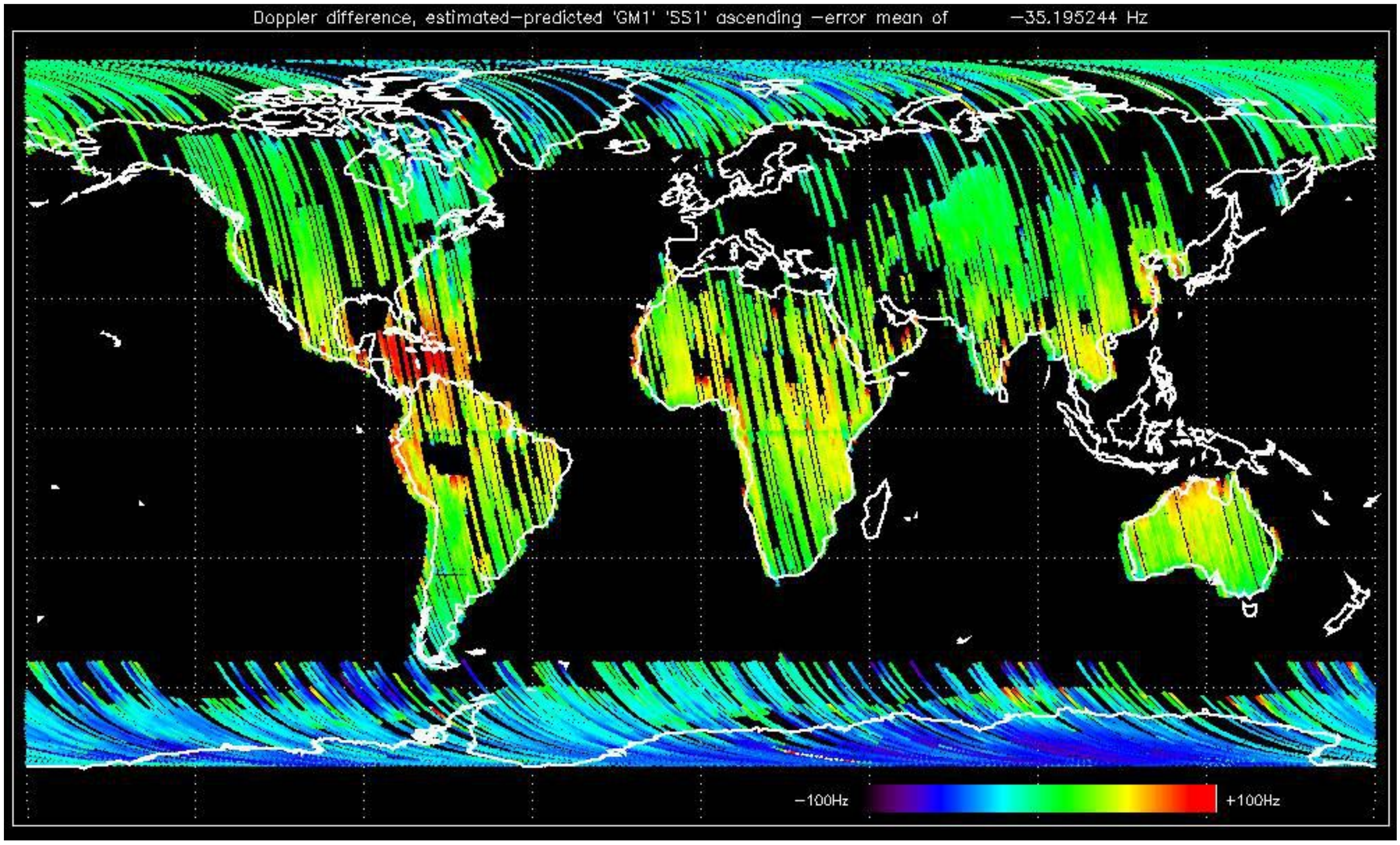

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

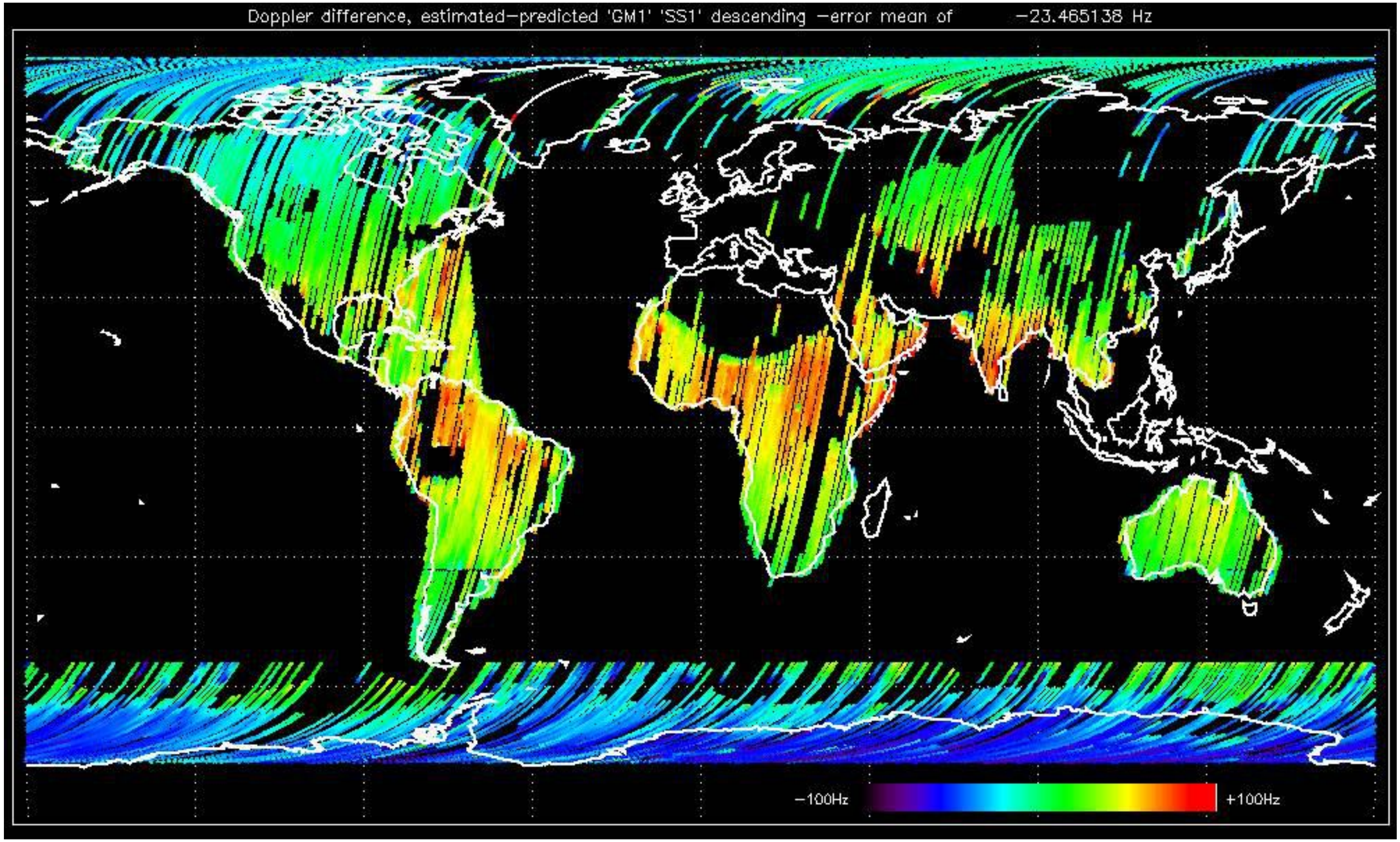

Doppler Bias[Hz]
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
02−Sep
Date

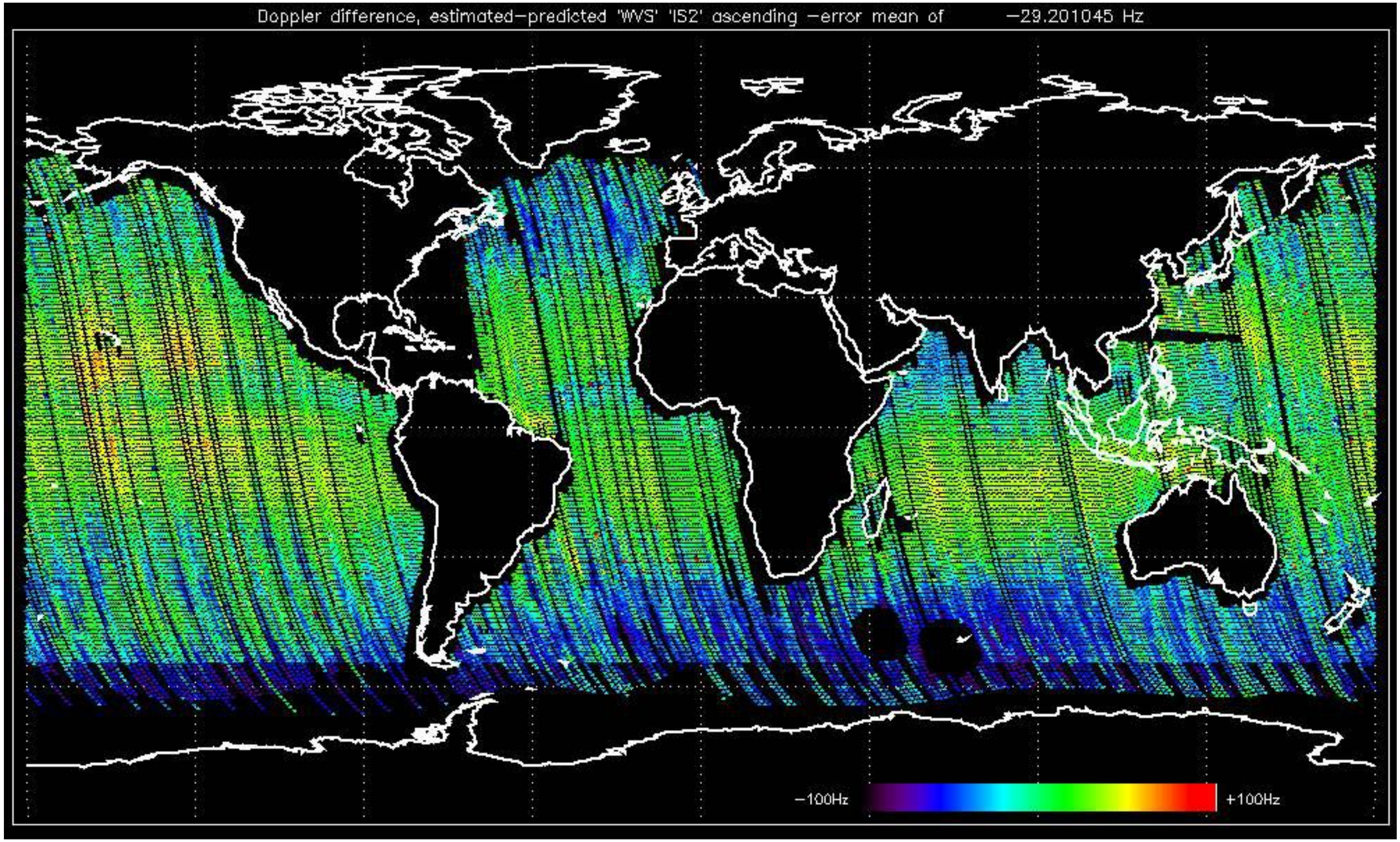

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

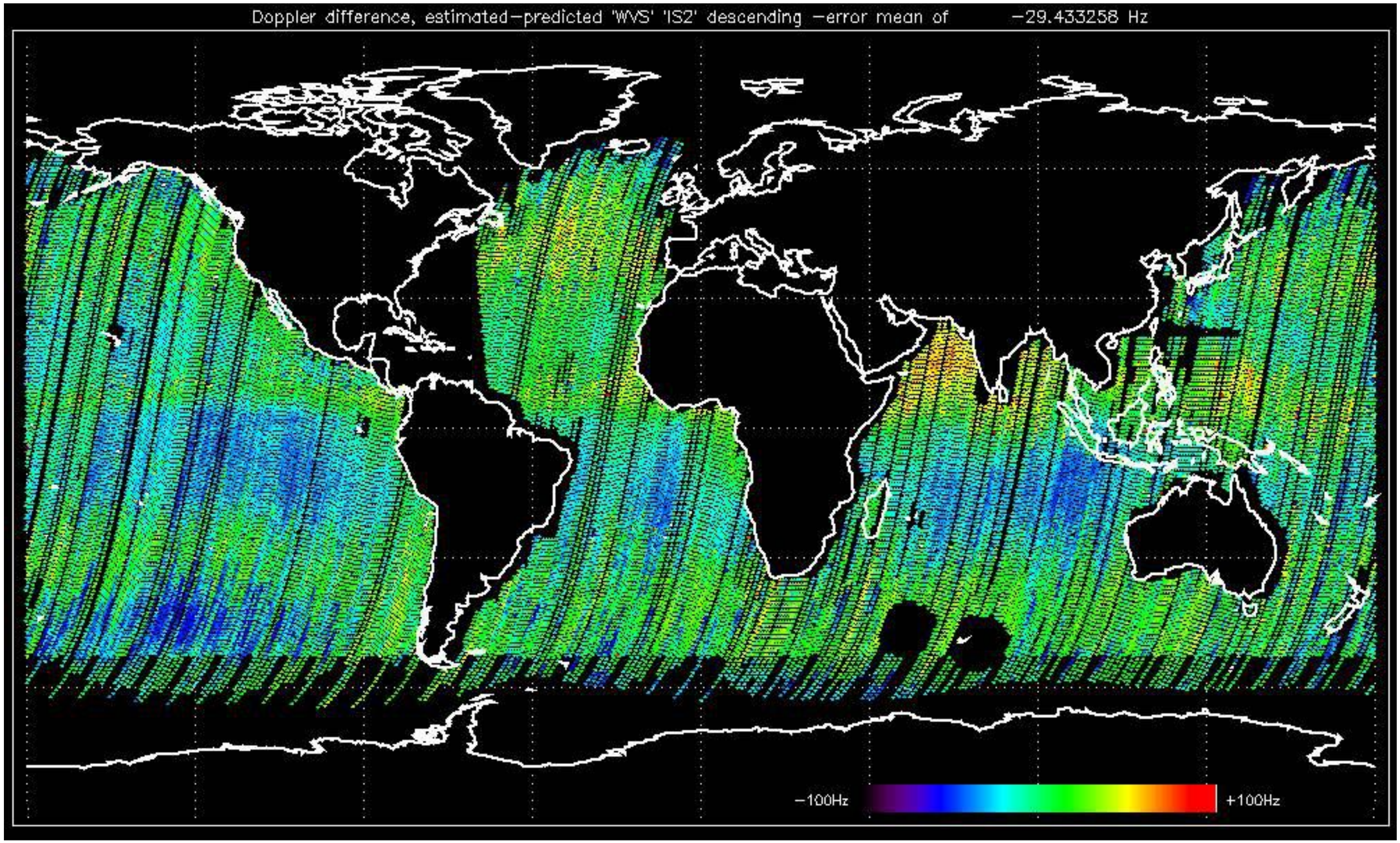

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
300
200
100
0
−100
−200
−300
−400
02
04
06
08
10
12
14
16
18
20
22
00
02
04
02−Sep
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.195244 Hz
−100Hz
+100Hz

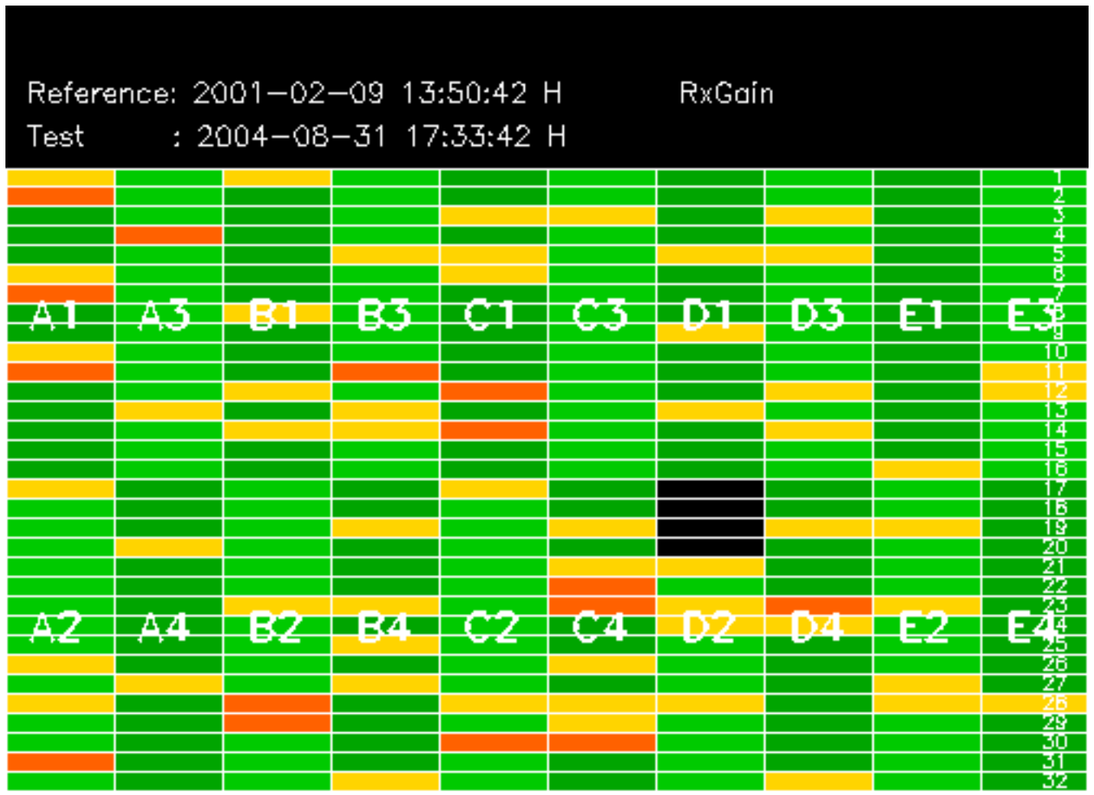

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -23.465138 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.201045 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.433258 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 : 2004-08-31 17:33:42 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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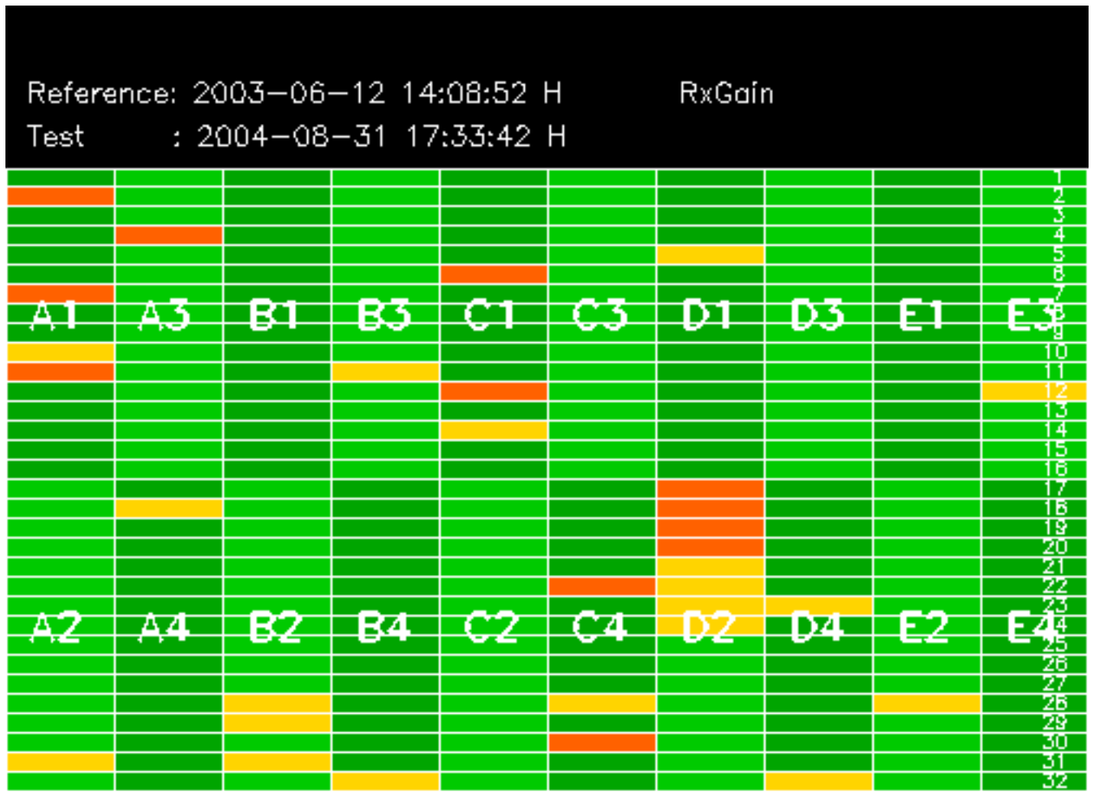
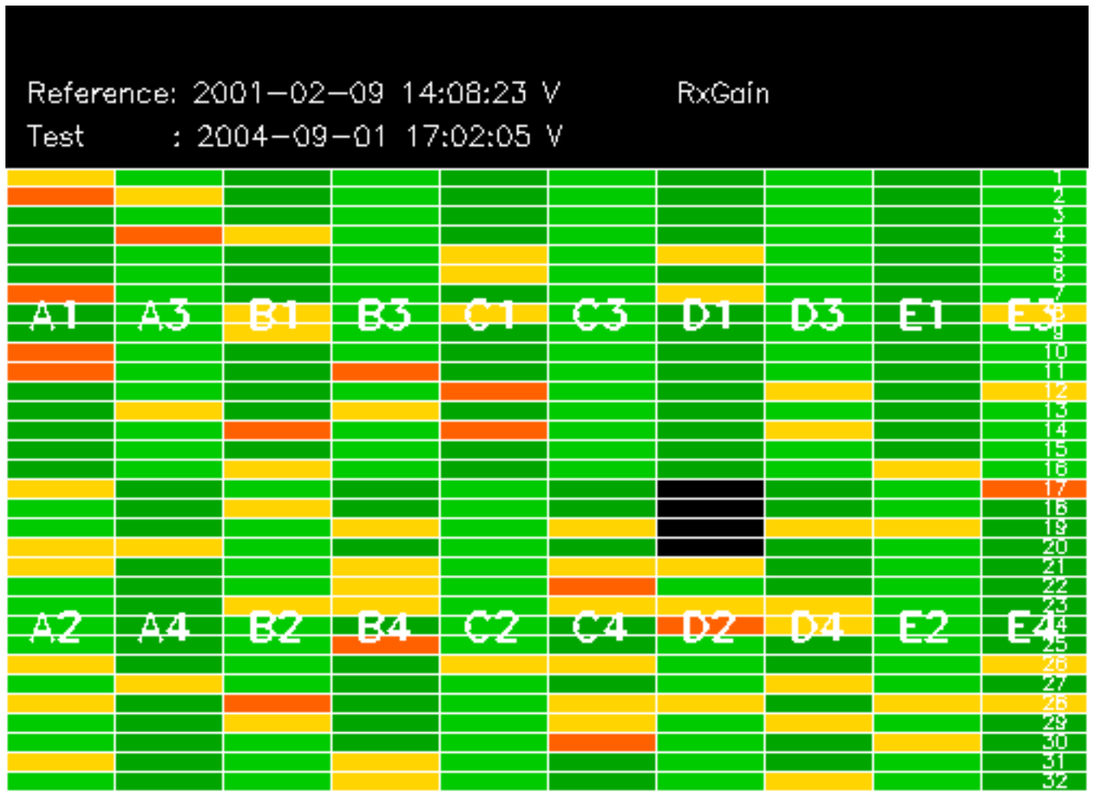

Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-09-01 17:02:05 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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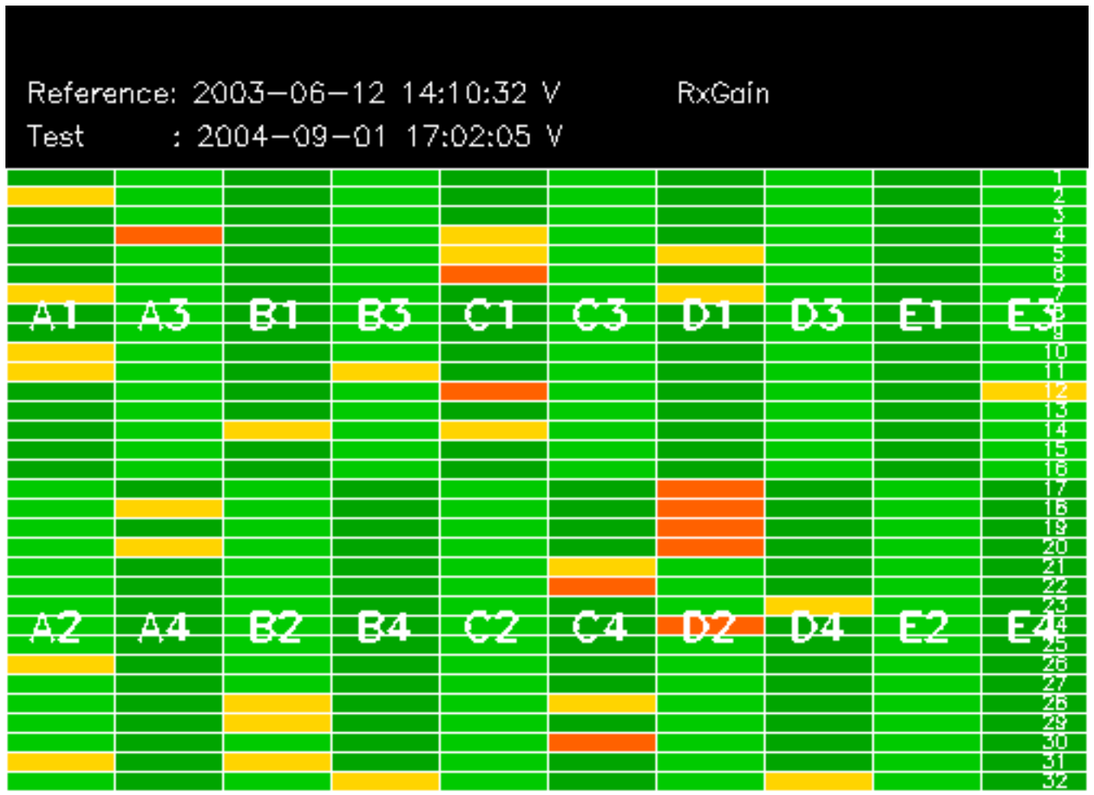
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-01 17:02:05 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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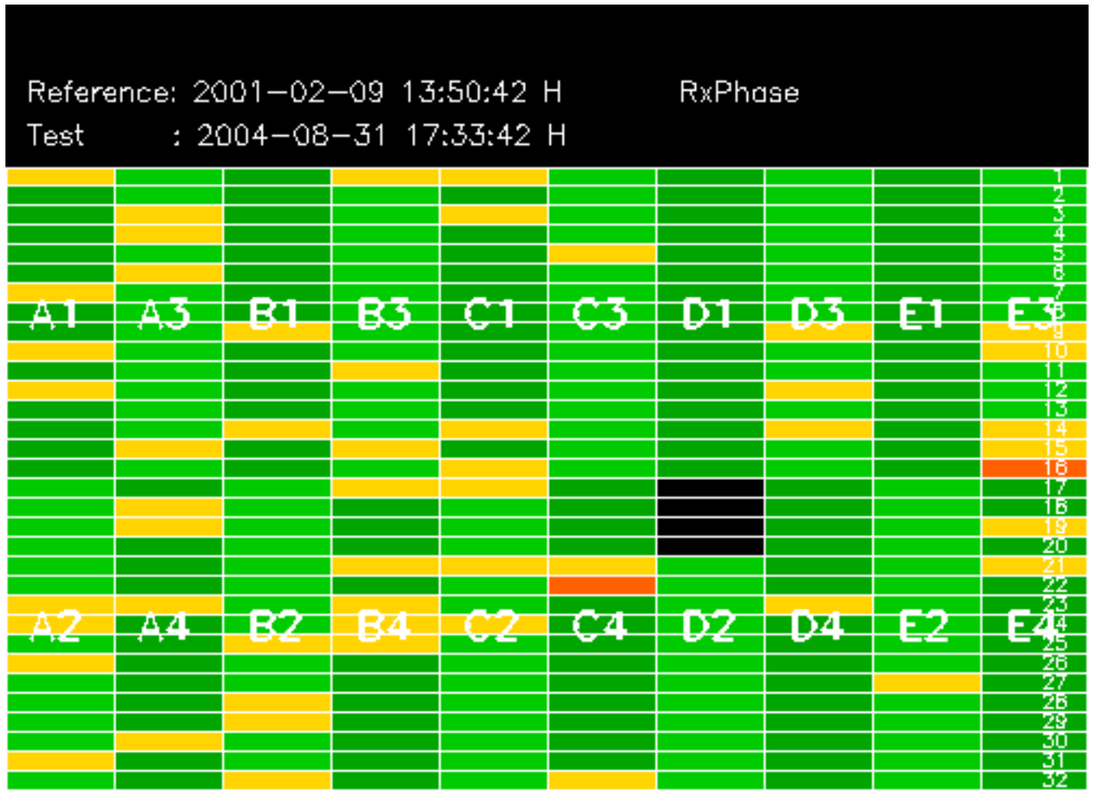
Reference: 2001-02-09 13:50:42 H
Test : 2004-08-31 17:33:42 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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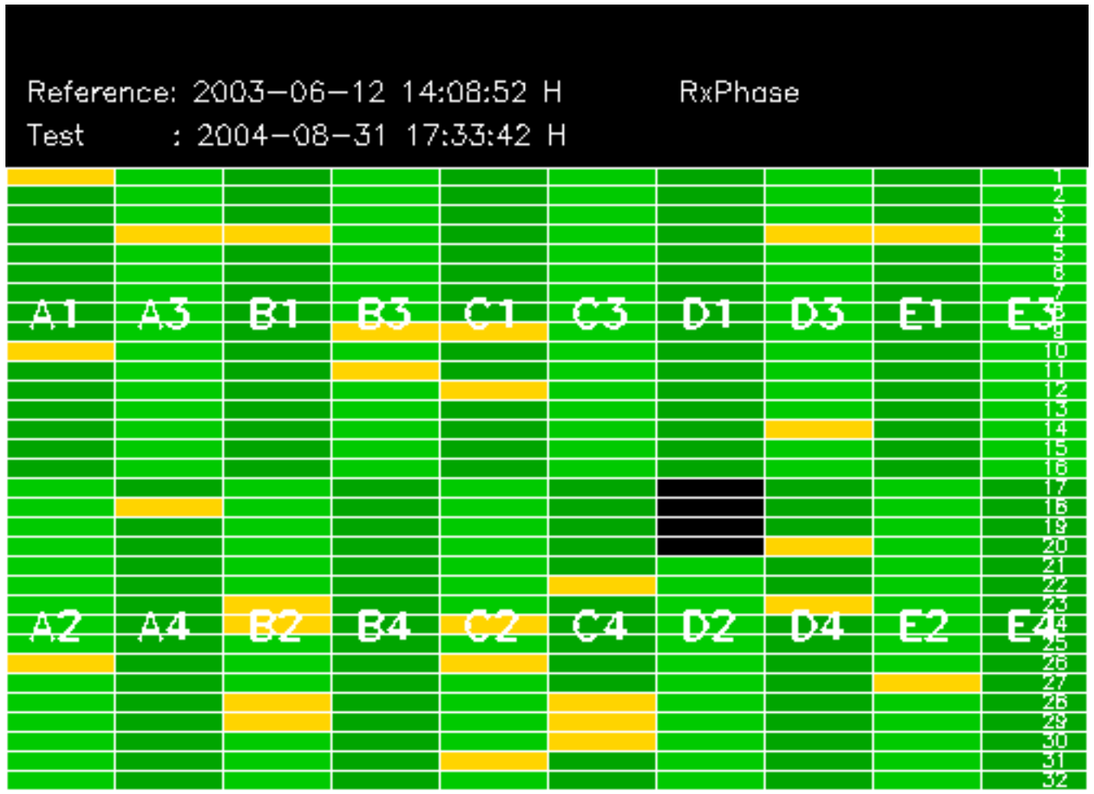
Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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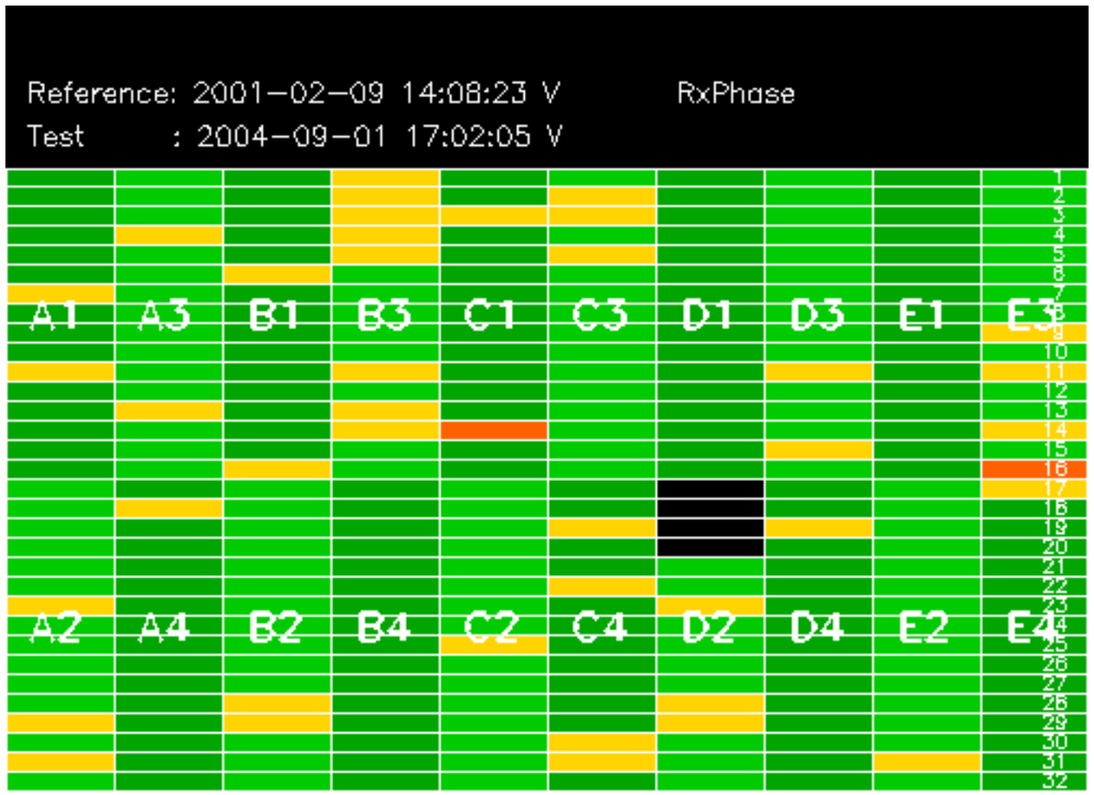
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-01 17:02:05 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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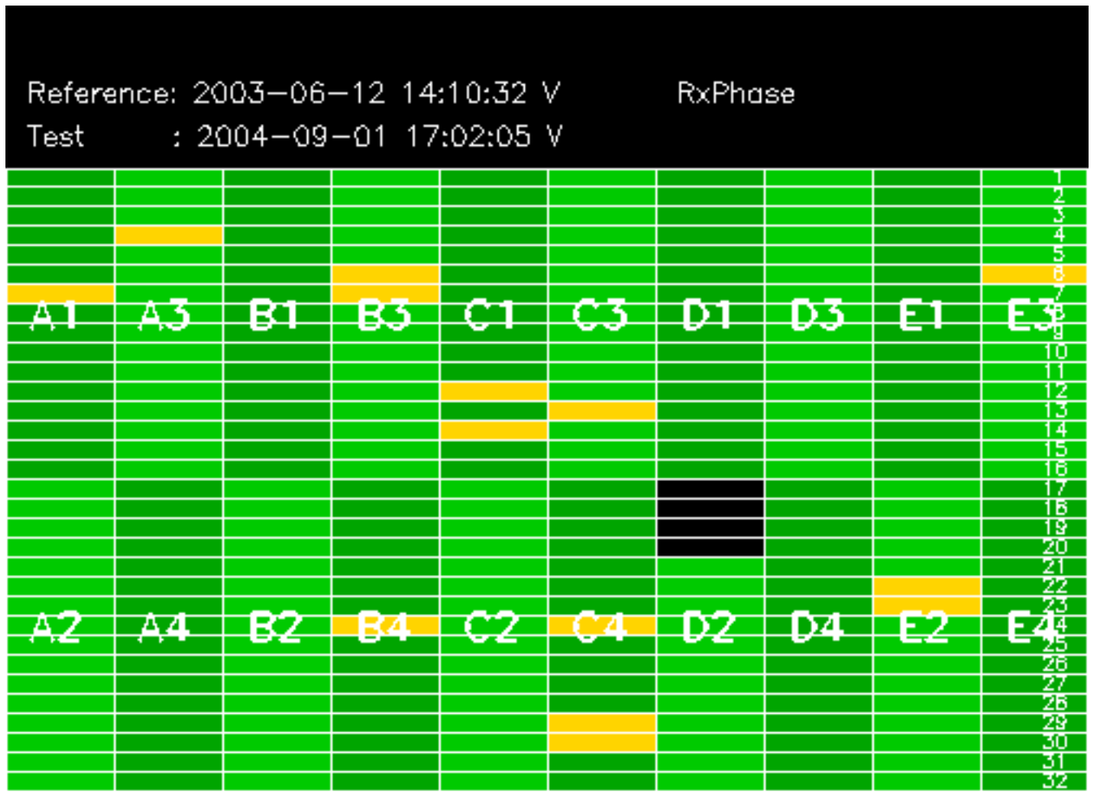
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-01 17:02:05 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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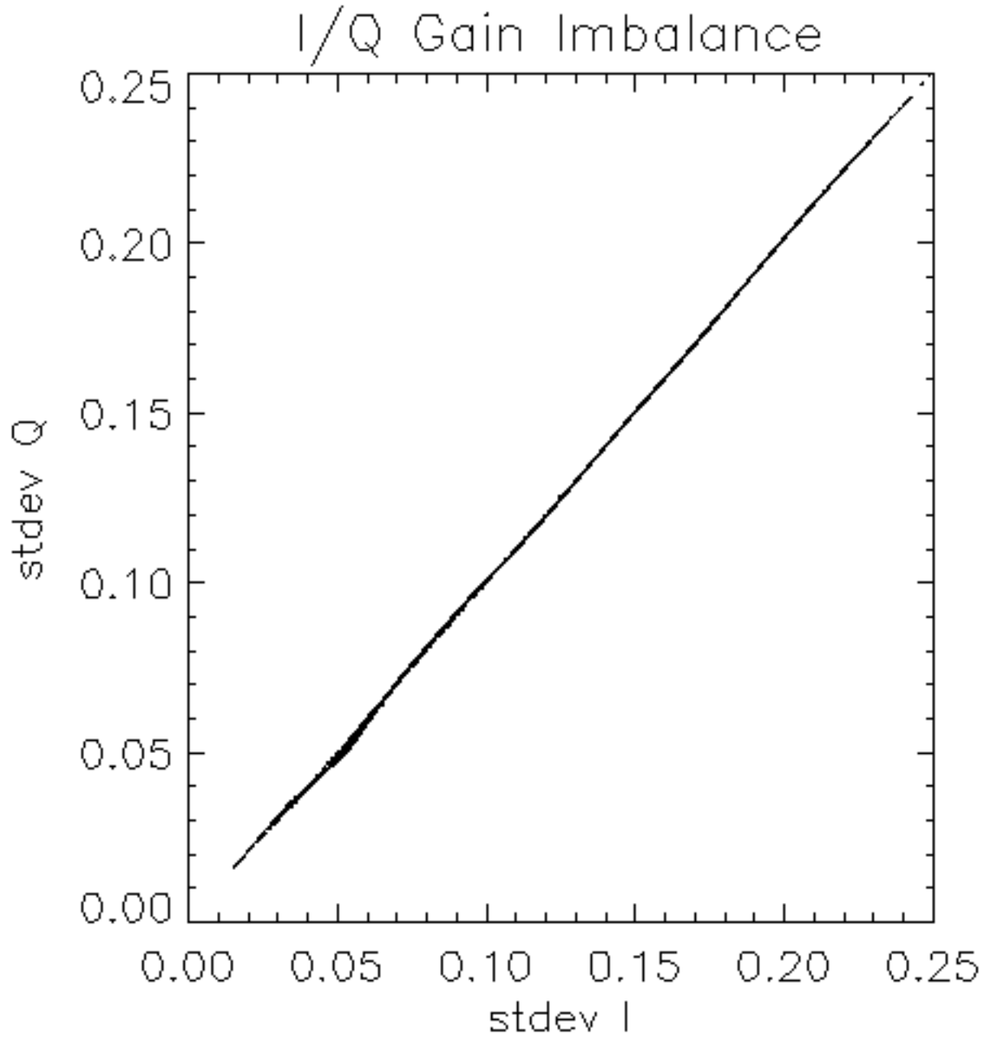
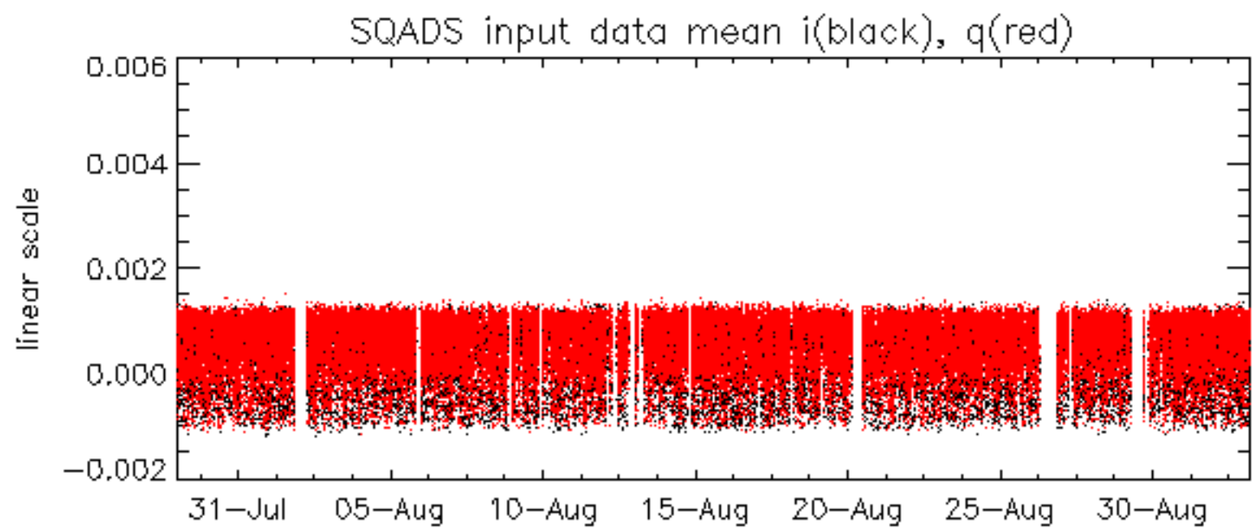
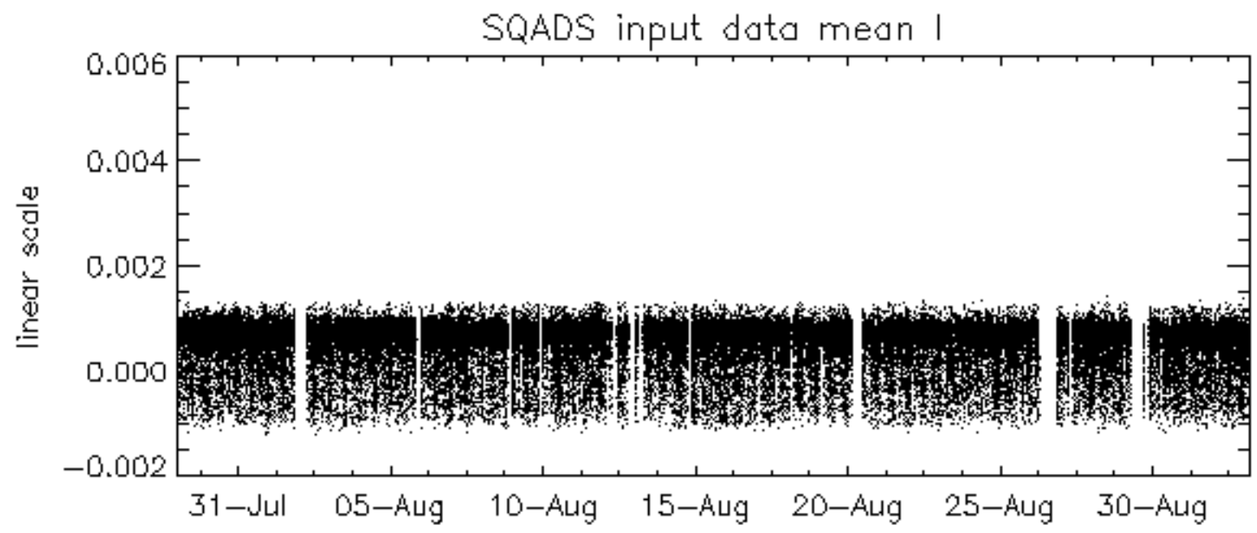
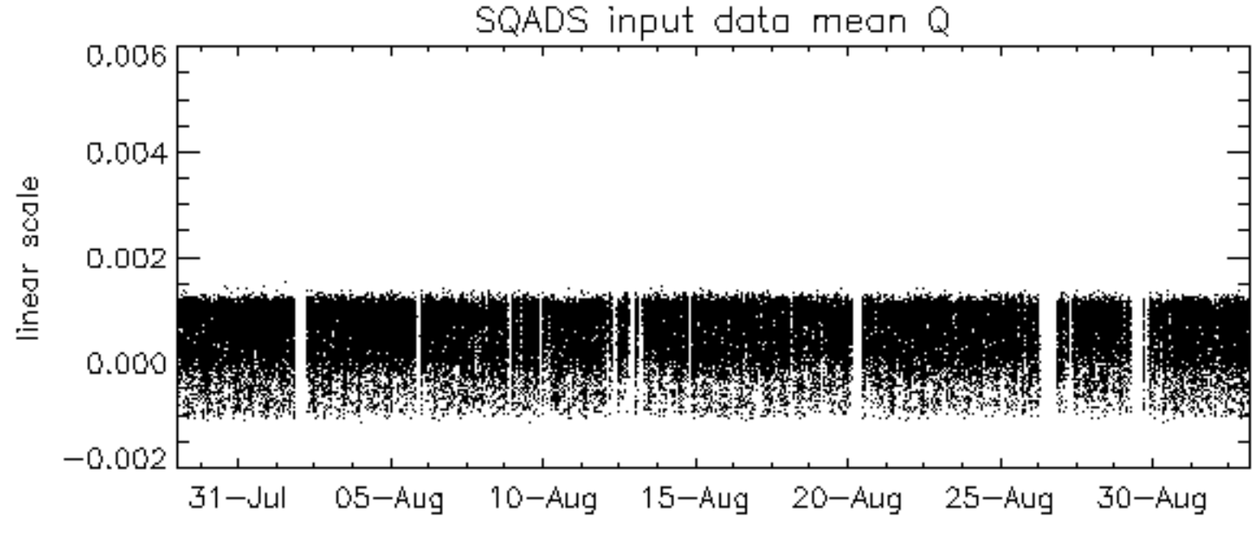
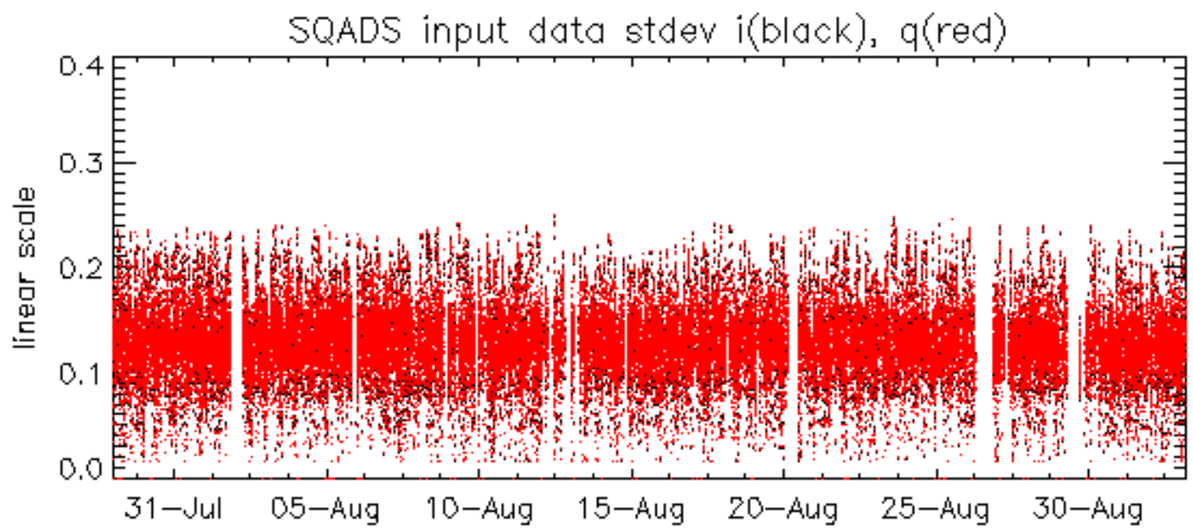
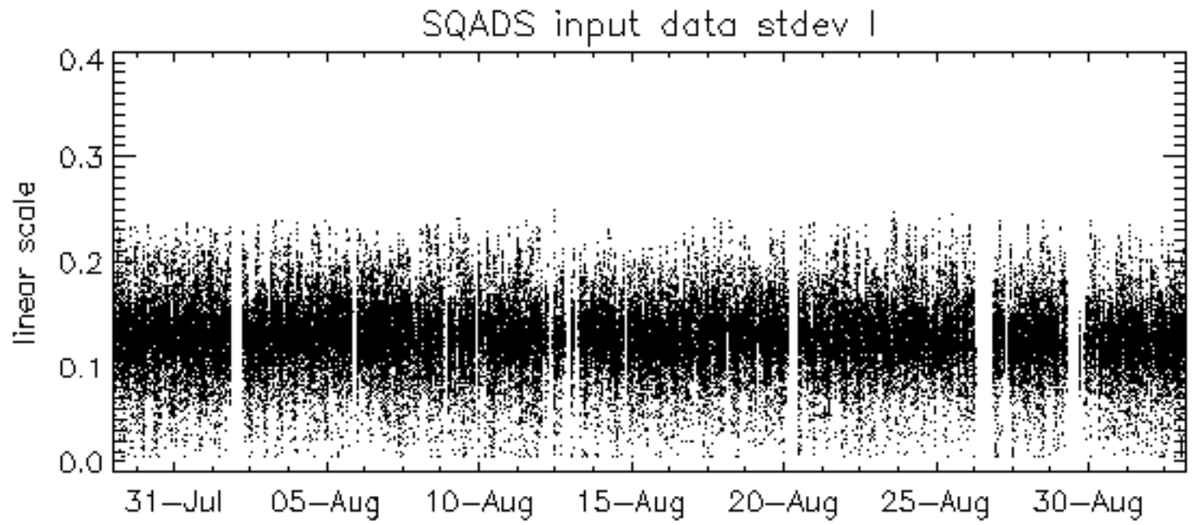

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

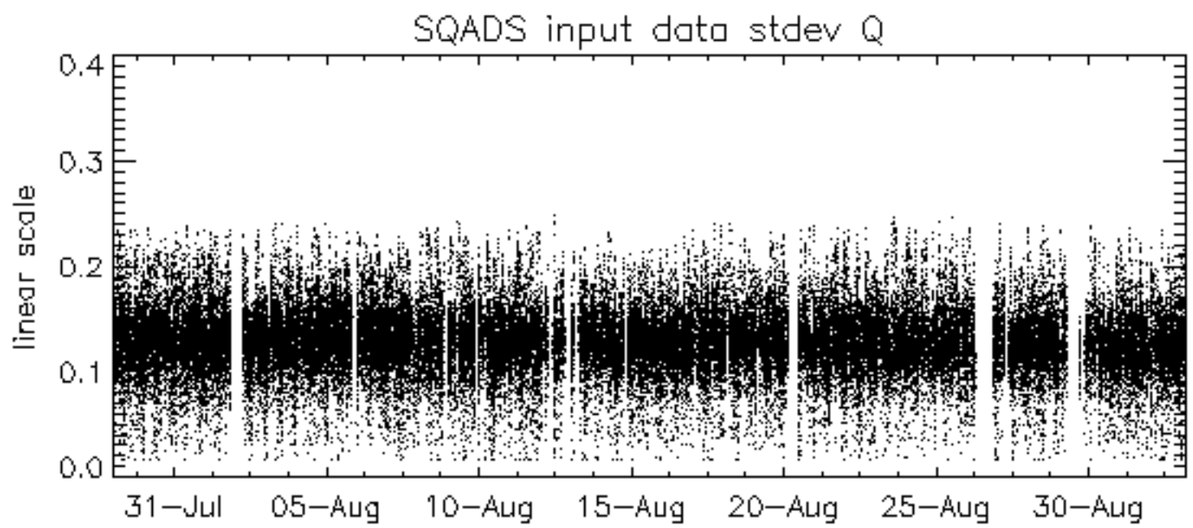

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug

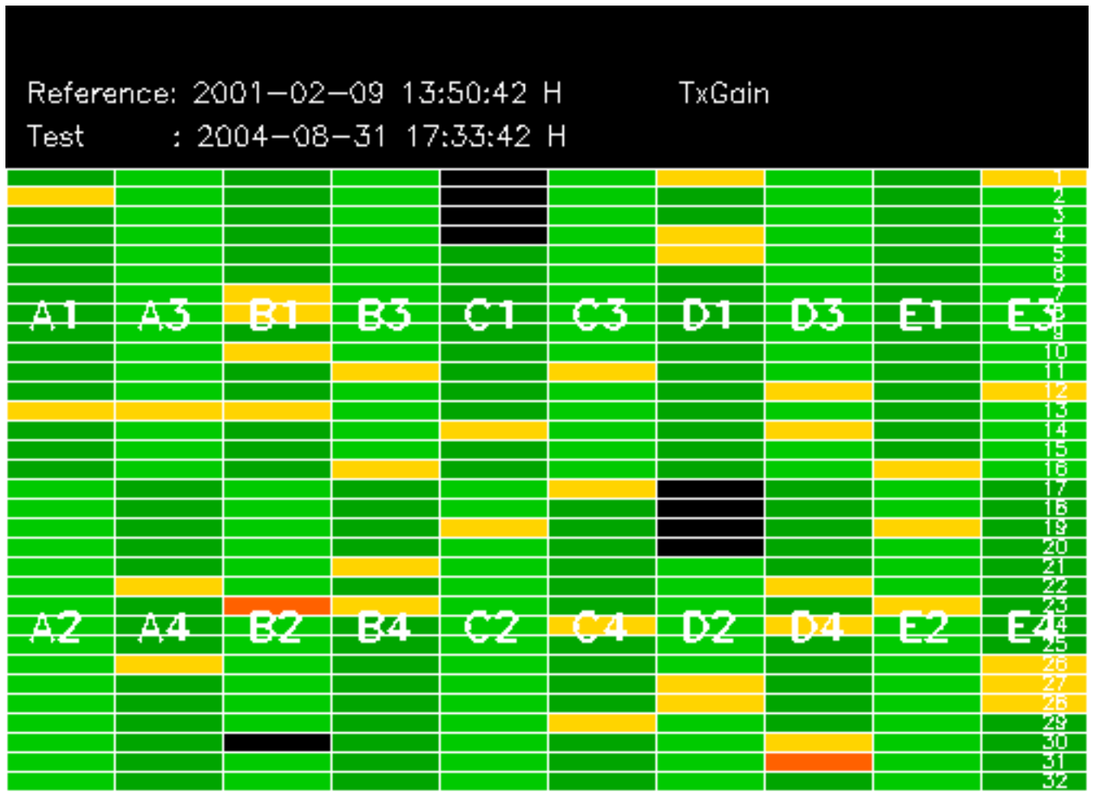

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-08-31 17:33:42 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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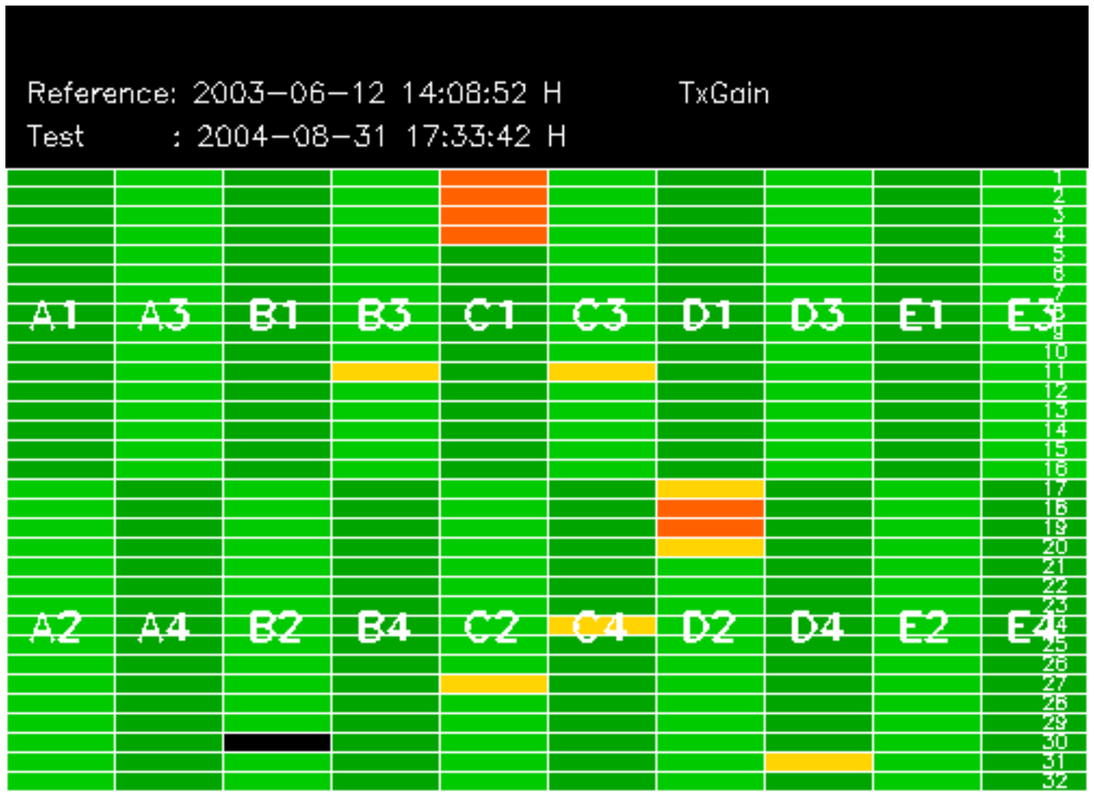
Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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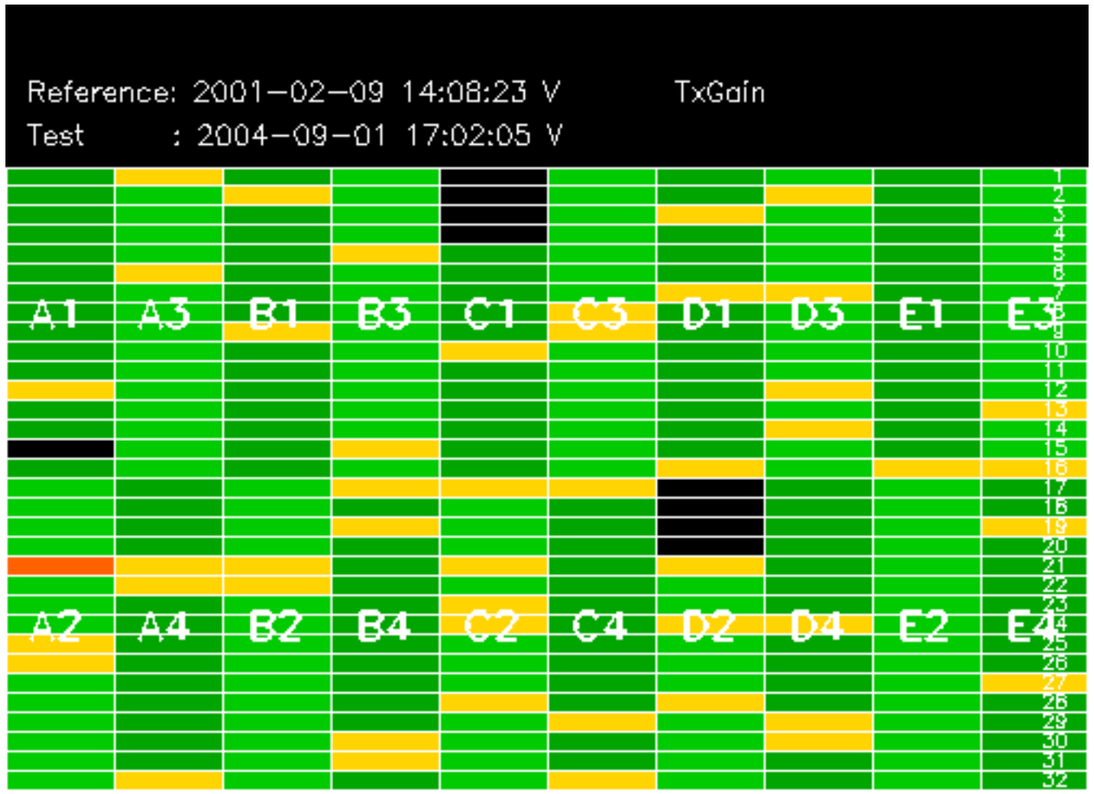
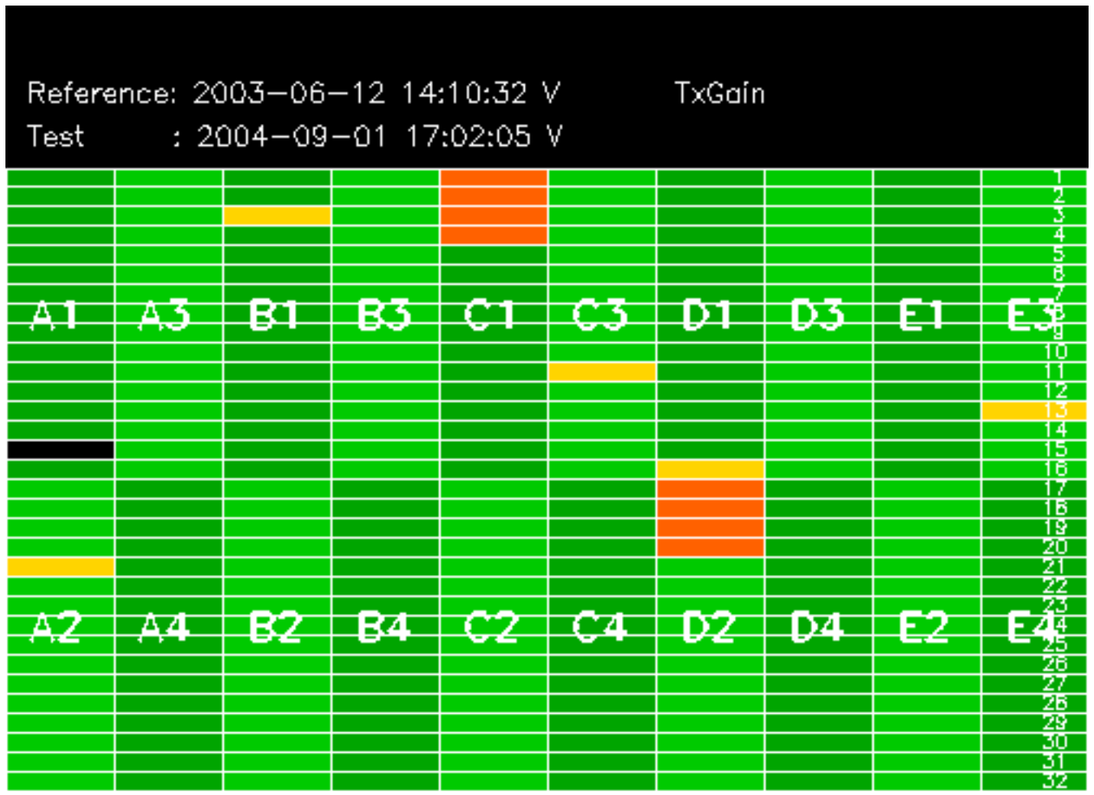
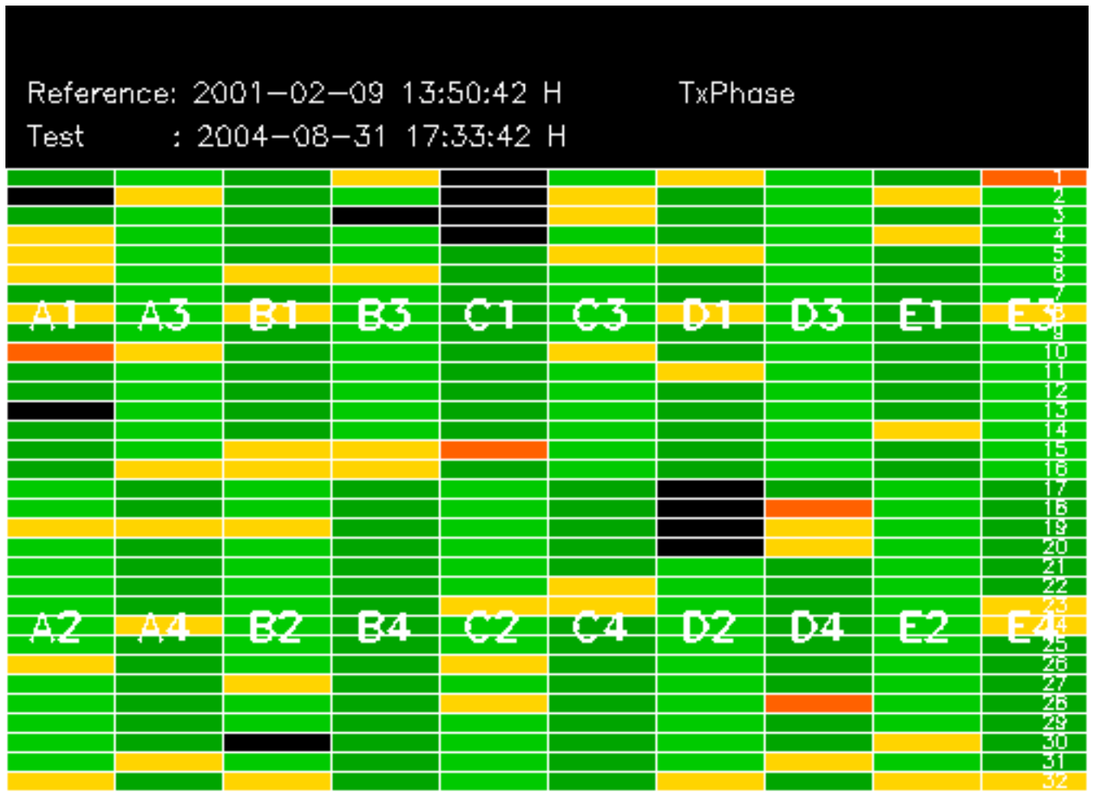
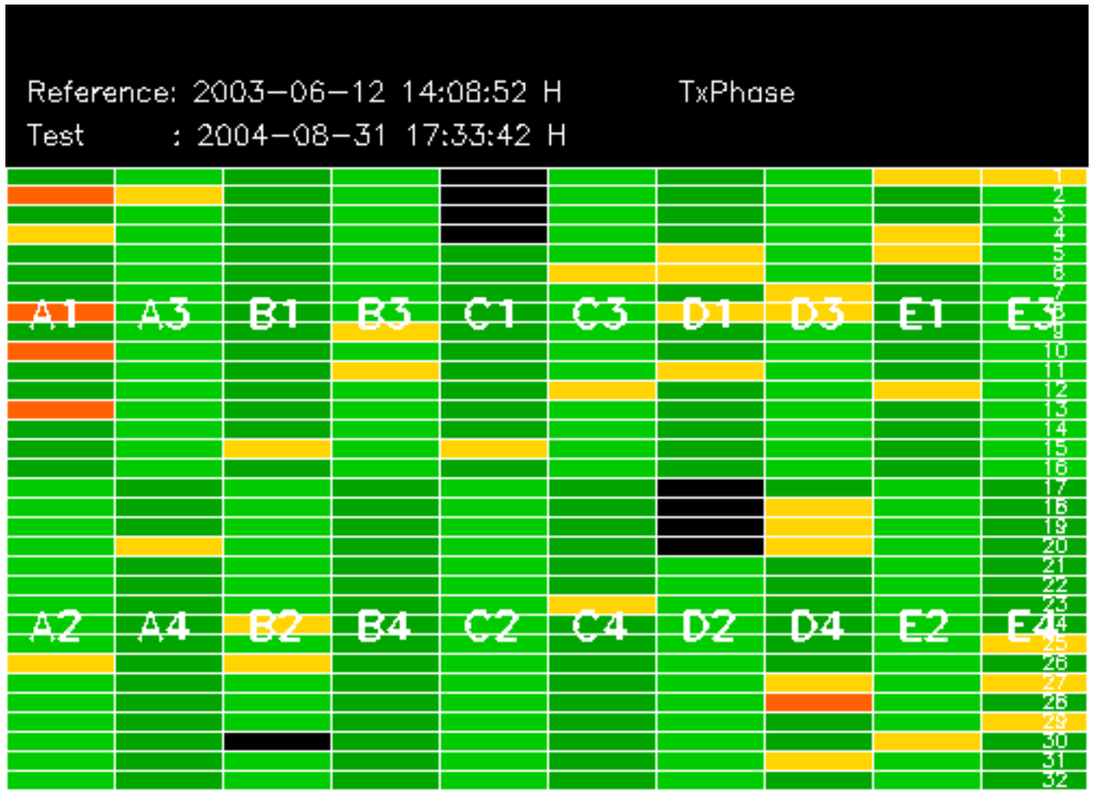

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-01 17:02:05 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-01 17:02:05 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
Test : 2004-08-31 17:33:42 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 : 2004-08-31 17:33:42 H
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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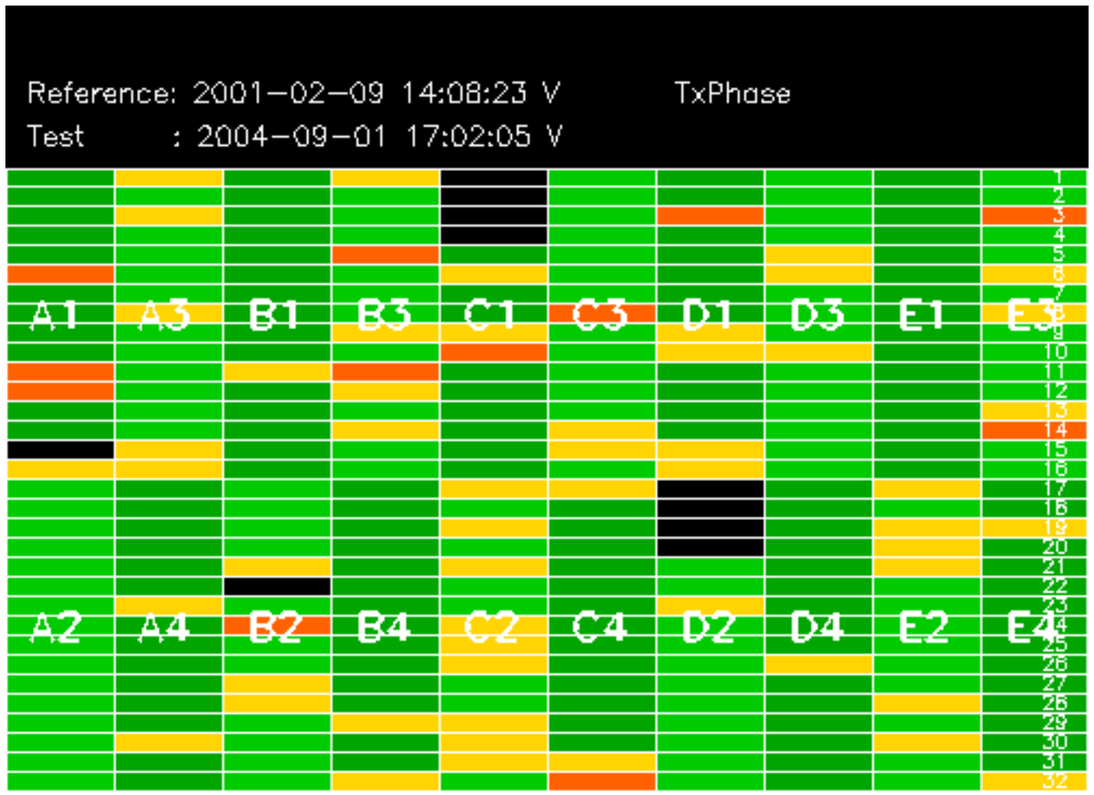
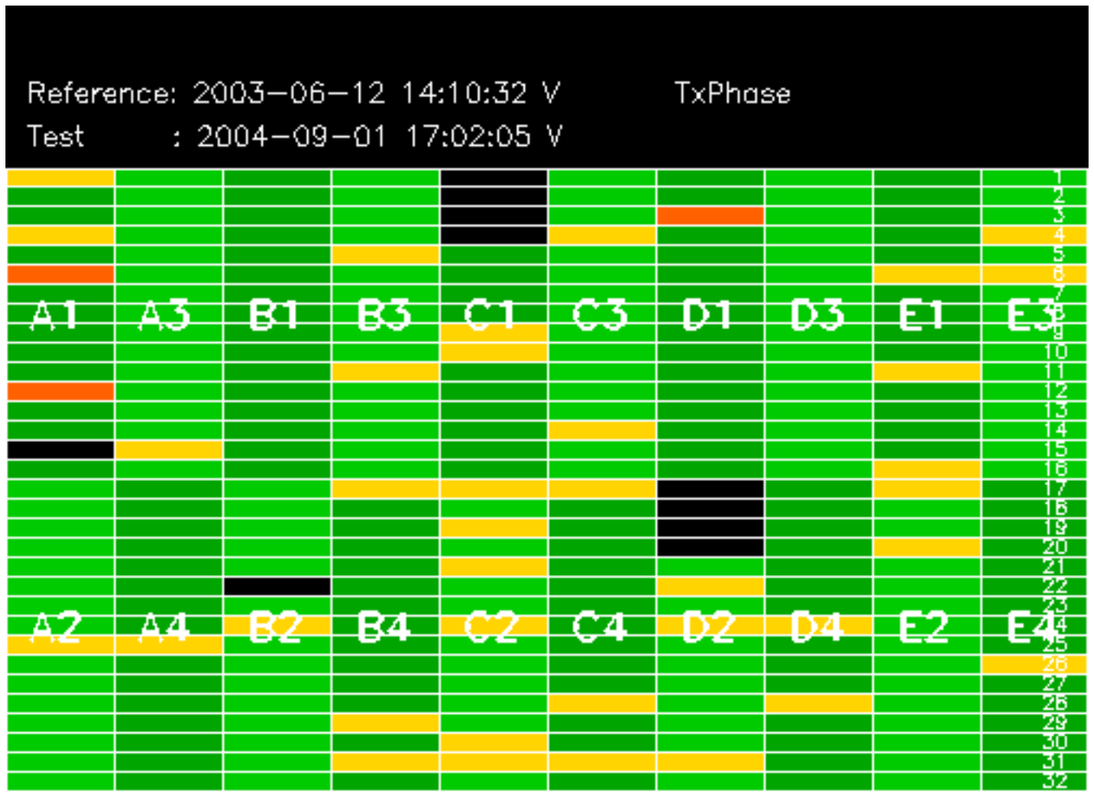
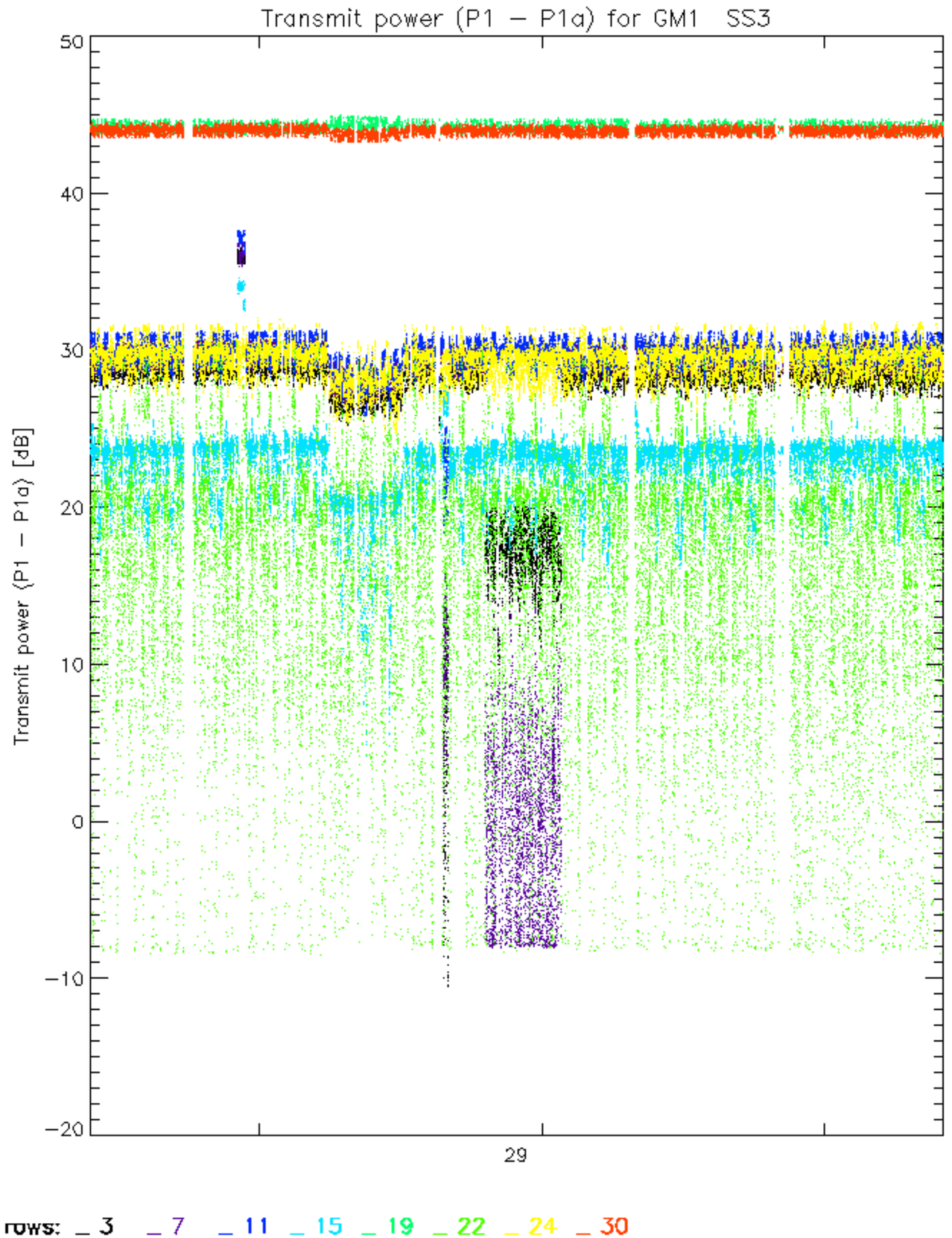
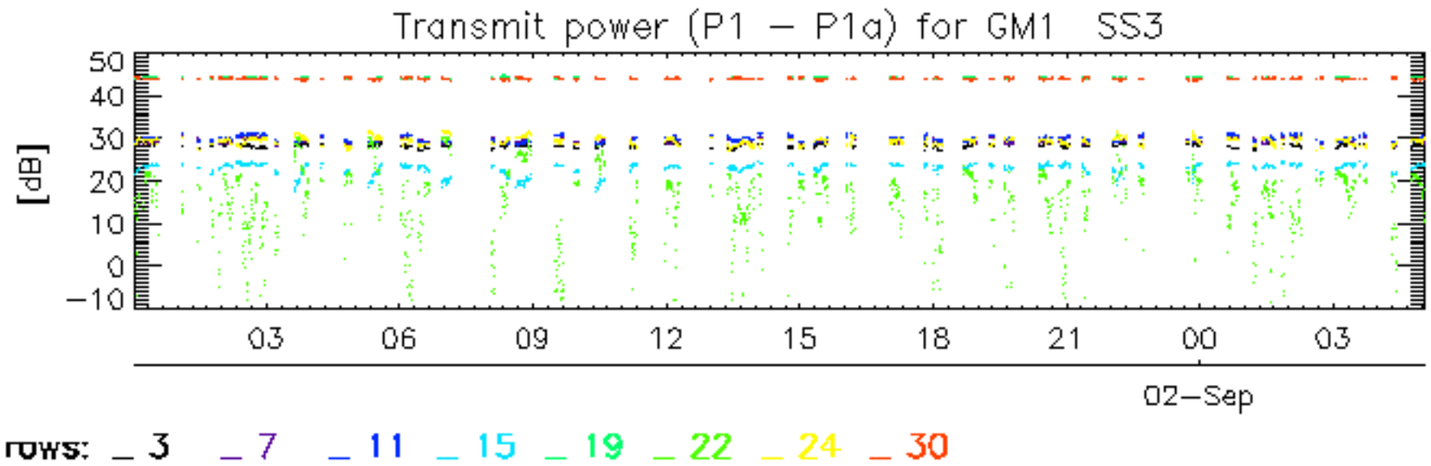
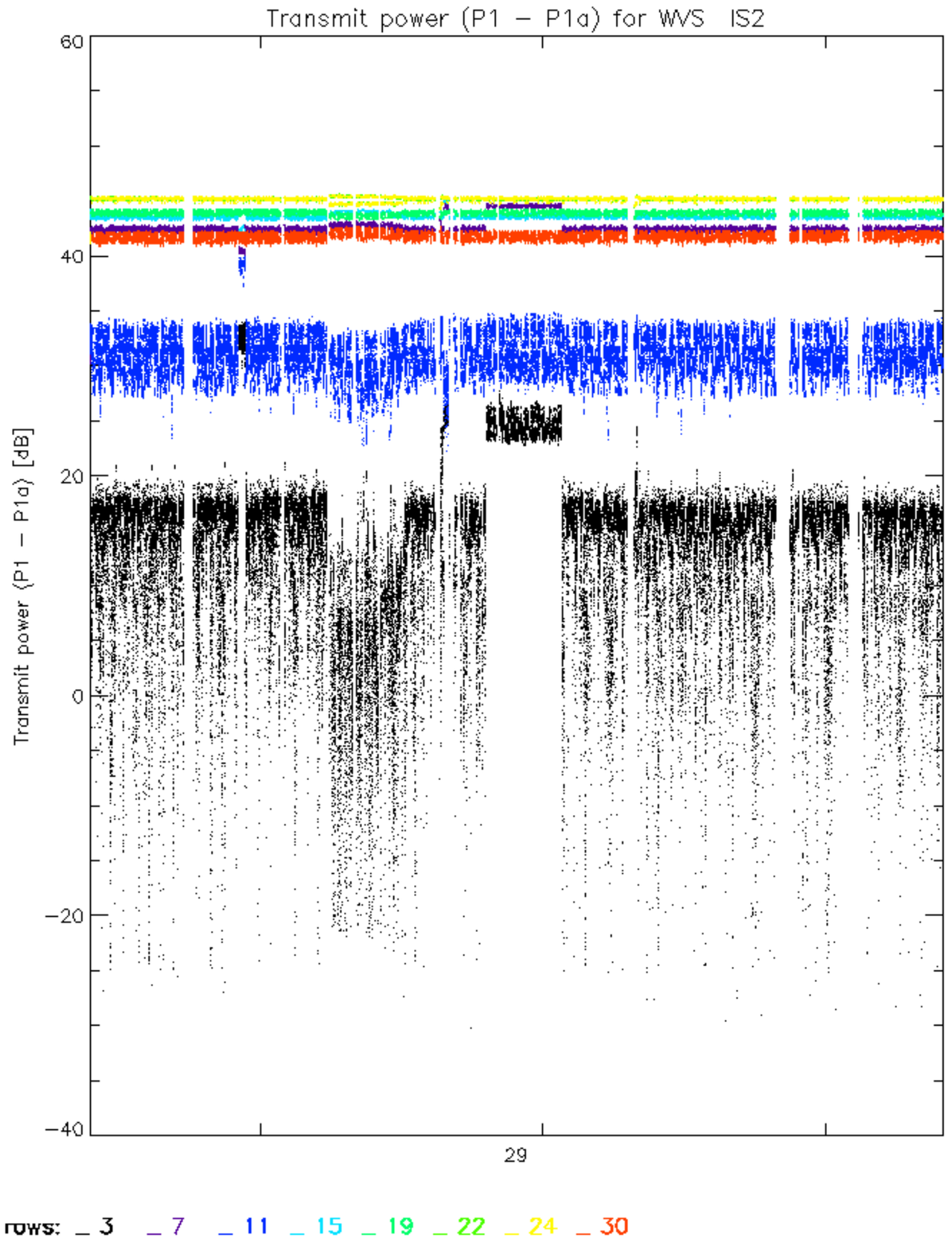
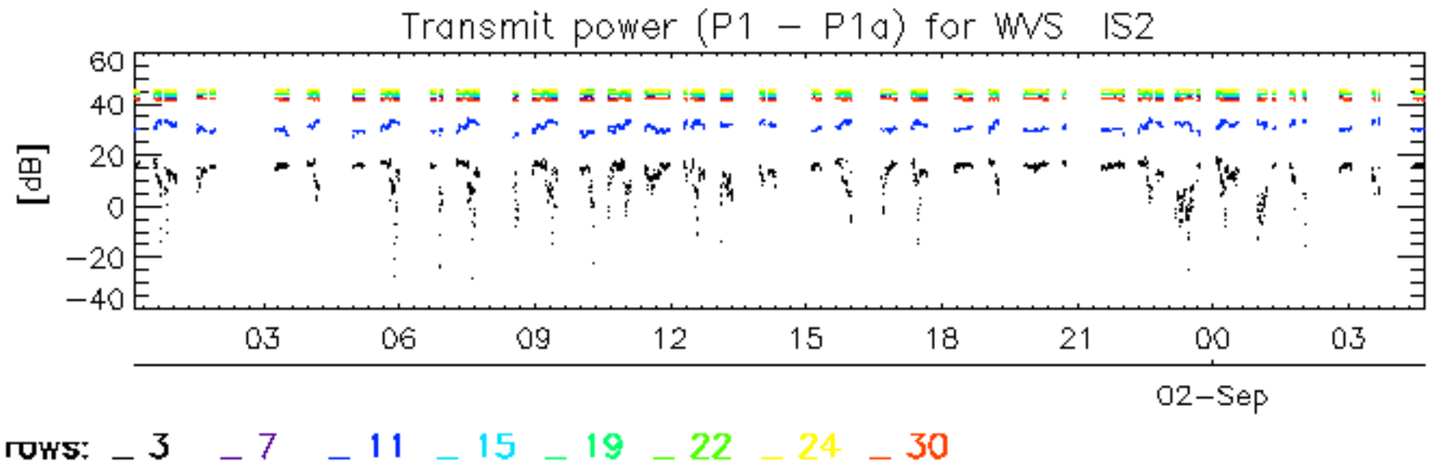

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-01 17:02:05 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-01 17:02:05 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
29
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
02–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
29
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
02−Sep
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.