PRELIMINARY REPORT OF 040914

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

last update on Tue Sep 14 13:41:16 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	20040911 064406
H	20040912 061229

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.

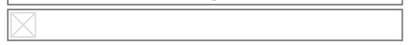
4.1 - Daily statistics

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	-3.444547	0.006370	-0.065908
7	P1	-3.296472	0.026229	-0.134254
11	P1	-4.638525	0.030433	-0.004560
15	P1	-5.743511	0.046122	-0.062192
19	P1	-3.500677	0.079962	-0.173069
22	P1	-4.556576	0.107837	-0.139934
24	P1	-4.996212	0.126628	-0.145480
30	P1	-7.007788	0.150799	-0.267259

3	P1	-15.839993	1.255194	-1.526354
7	P1	-14.054135	0.165052	0.225807
11	P1	-20.245062	0.322310	-0.046393
15	P1	-11.802143	0.143896	0.116961
19	P1	-14.008761	1.106458	-0.564493
22	P1	-16.093019	0.347292	0.190561
24	P1	-14.480709	0.330010	0.159031
30	P1	-17.889709	0.640119	-0.095113

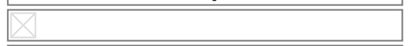
P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.303209	0.084756	-0.037699
7	P2	-22.599268	0.130285	-0.071595
11	P2	-15.261405	0.157680	0.095793
15	P2	-7.055888	0.098655	-0.016459
19	P2	-9.561271	0.172739	0.017691
22	P2	-17.329117	0.115128	0.048652
24	P2	-20.748301	0.090899	-0.052729
30	P2	-19.206778	0.083071	0.109657

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.145267	0.003081	-0.038744
7	P3	-8.145279	0.003082	-0.038696
11	P3	-8.145270	0.003082	-0.038689
15	P3	-8.145238	0.003082	-0.038872
19	P3	-8.145257	0.003081	-0.038770
22	P3	-8.145268	0.003082	-0.038714
24	P3	-8.145272	0.003082	-0.038669
30	P3	-8.145283	0.003082	-0.039814

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	-2.686532	0.141604	-0.573781
7	P1	-2.928870	0.097905	-0.355330
11	P1	-3.864155	0.025491	-0.045552
15	P1	-3.515608	0.024002	-0.036198
19	P1	-3.503459	0.079450	-0.132194
22	P1	-5.723396	0.102426	-0.108943
24	P1	-3.940713	0.045417	-0.109856
30	P1	-6.198660	0.092155	-0.141426
3	P1	-10.441023	0.752793	-1.481529
7	P1	-10.068278	0.165303	-0.180291
11	P1	-12.161682	0.107525	0.011453
15	P1	-11.678146	0.097175	0.033696
19	P1	-15.715246	1.563261	-0.549392
22	P1	-23.358135	1.452315	0.260755
24	P1	-17.930647	0.319644	0.073071
30	P1	-20.427263	1.265138	0.181517

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.980076	0.053384	-0.044015
7	P2	-22.741013	0.042856	-0.012788
11	P2	-10.953218	0.062146	0.057302
15	P2	-4.953597	0.032592	-0.038619
19	P2	-6.763691	0.048220	-0.052406
22	P2	-7.432415	0.040993	0.008576
24	P2	-11.048563	0.046579	-0.053957
30	P2	-22.166763	0.031081	0.071218

P3 Cyclic statistics

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

3	P3	-7.996731	0.003628	-0.038267
7	P3	-7.996644	0.003629	-0.038396
11	P3	-7.996726	0.003620	-0.038117
15	P3	-7.996706	0.003616	-0.038453
19	P3	-7.996706	0.003634	-0.038402
22	P3	-7.996641	0.003626	-0.038607
24	P3	-7.996688	0.003650	-0.038523
30	P3	-7.996644	0.003624	-0.038274

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	0.000469900
	stdev	2.19412e-07
MEAN Q	mean	0.000538934
	stdev	2.35916e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127390
	stdev	0.000958678

STDEV Q	mean	0.127607
	stdev	0.000968542

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

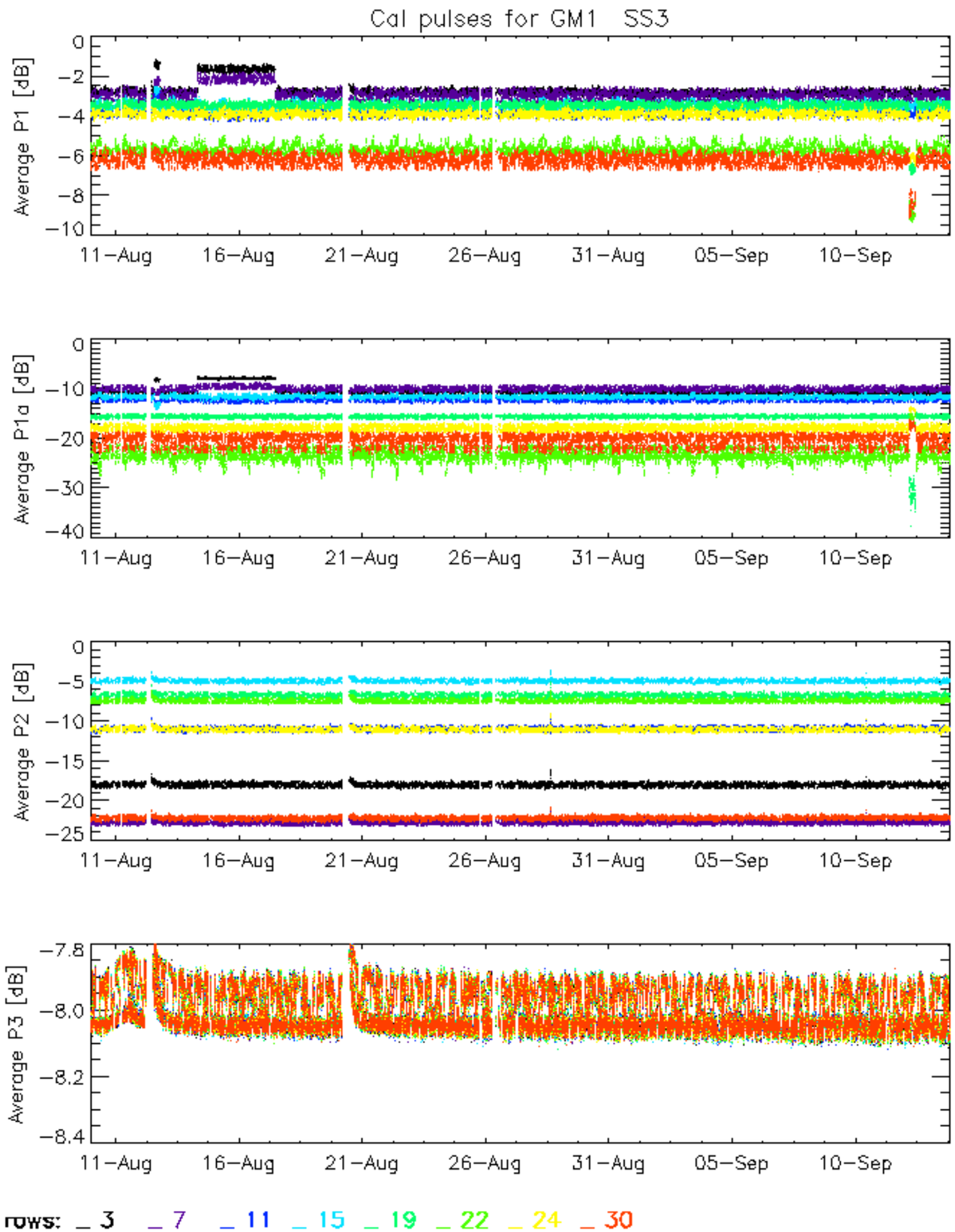
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

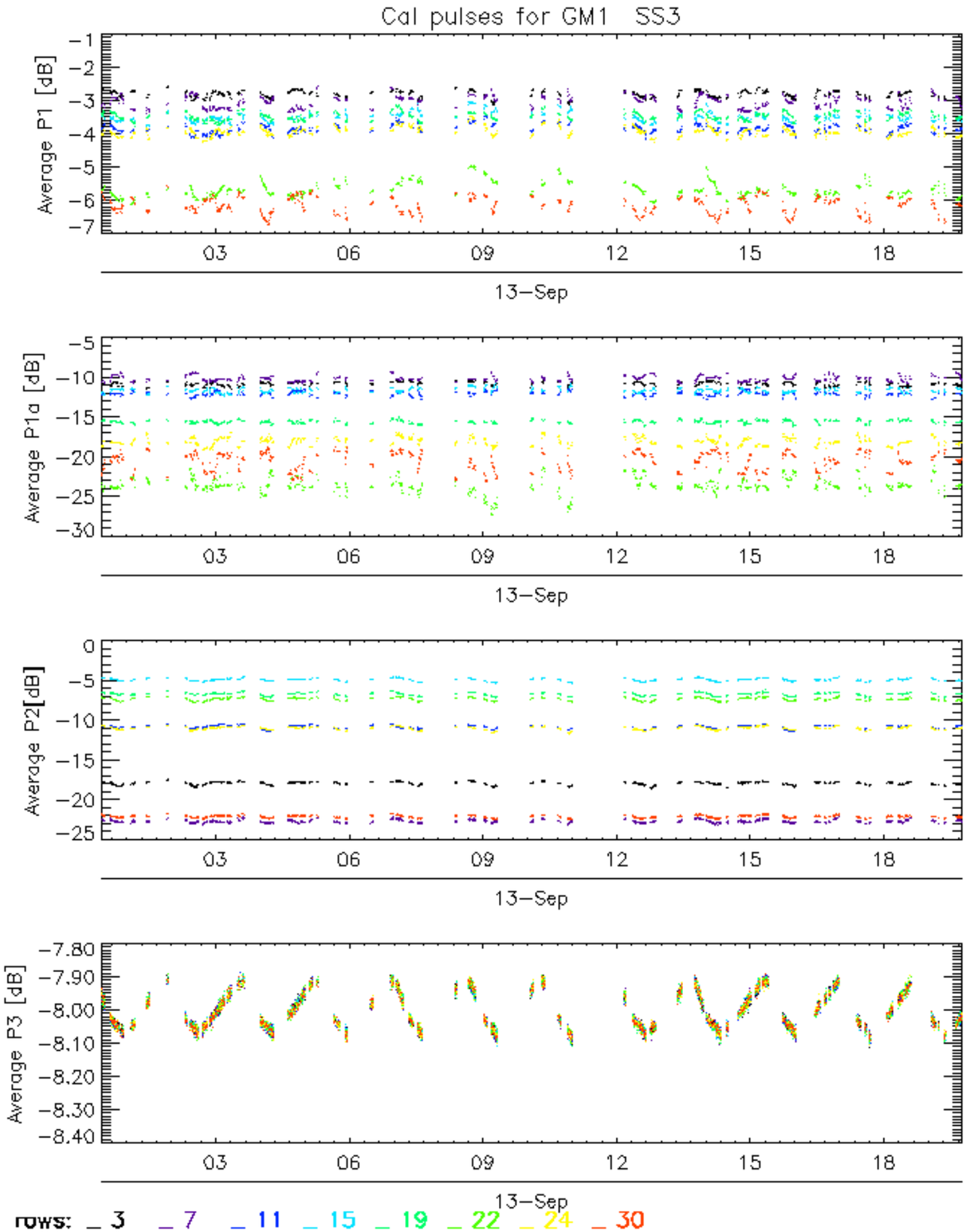
6.5 - Absolute Doppler for GM1

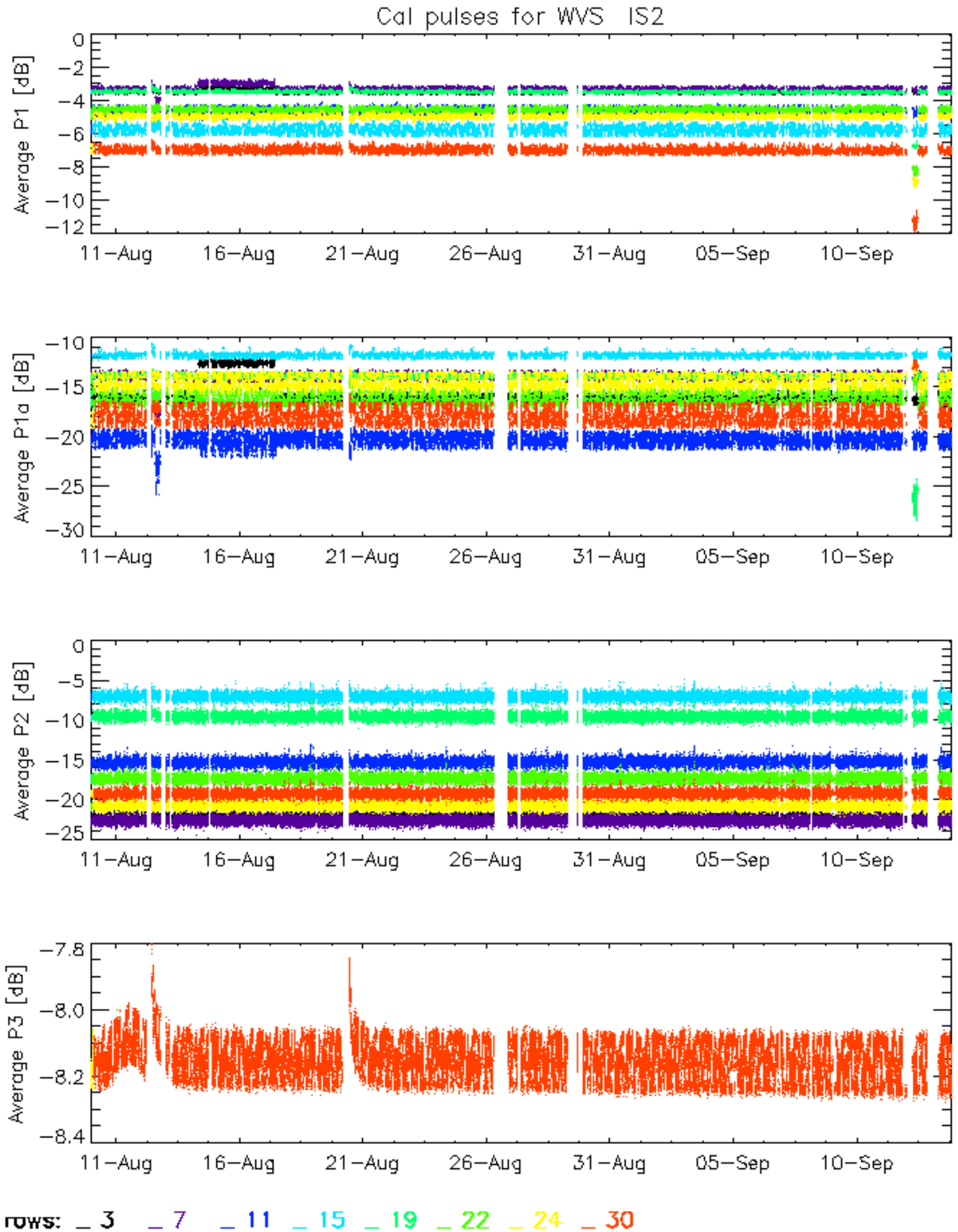
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

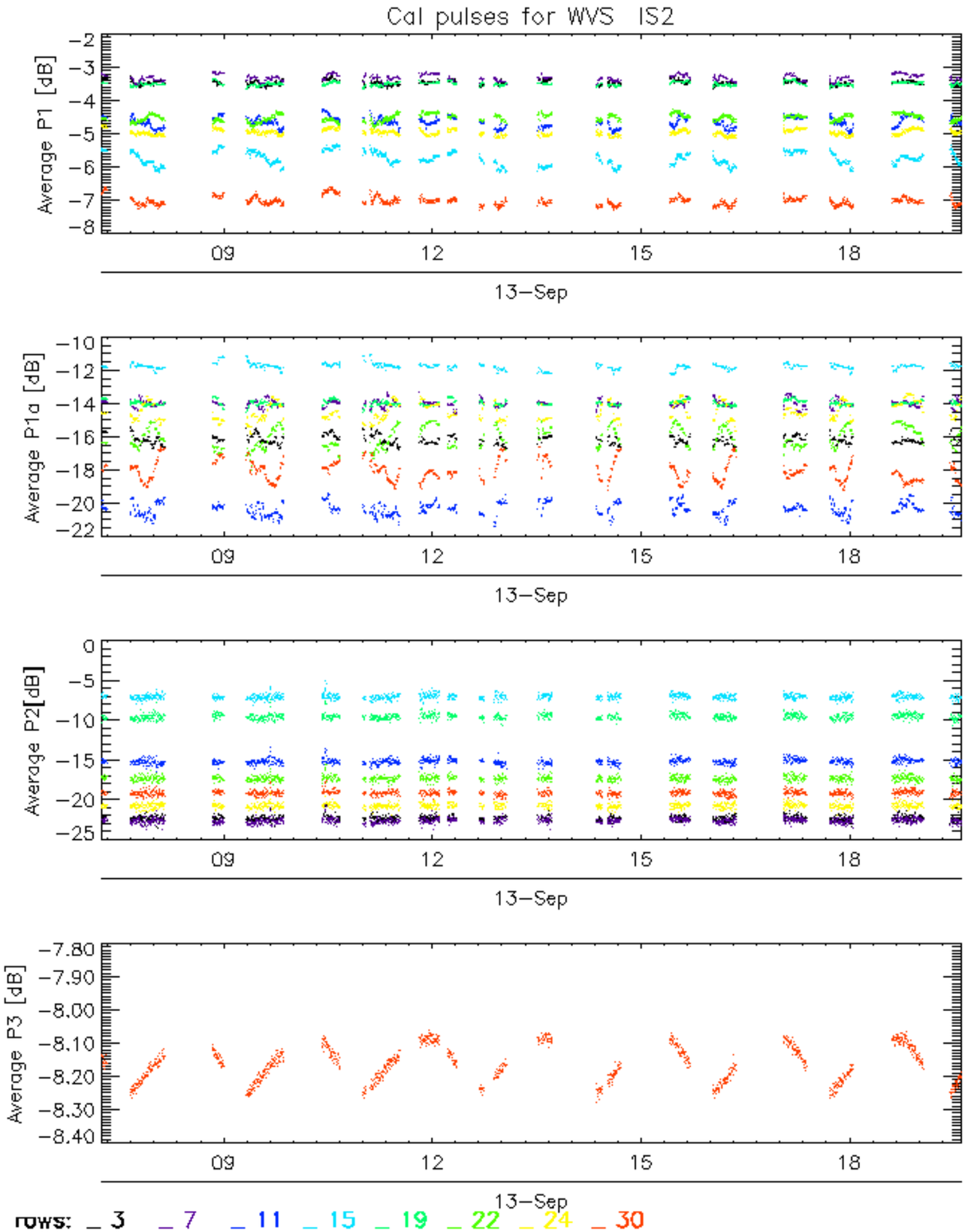
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

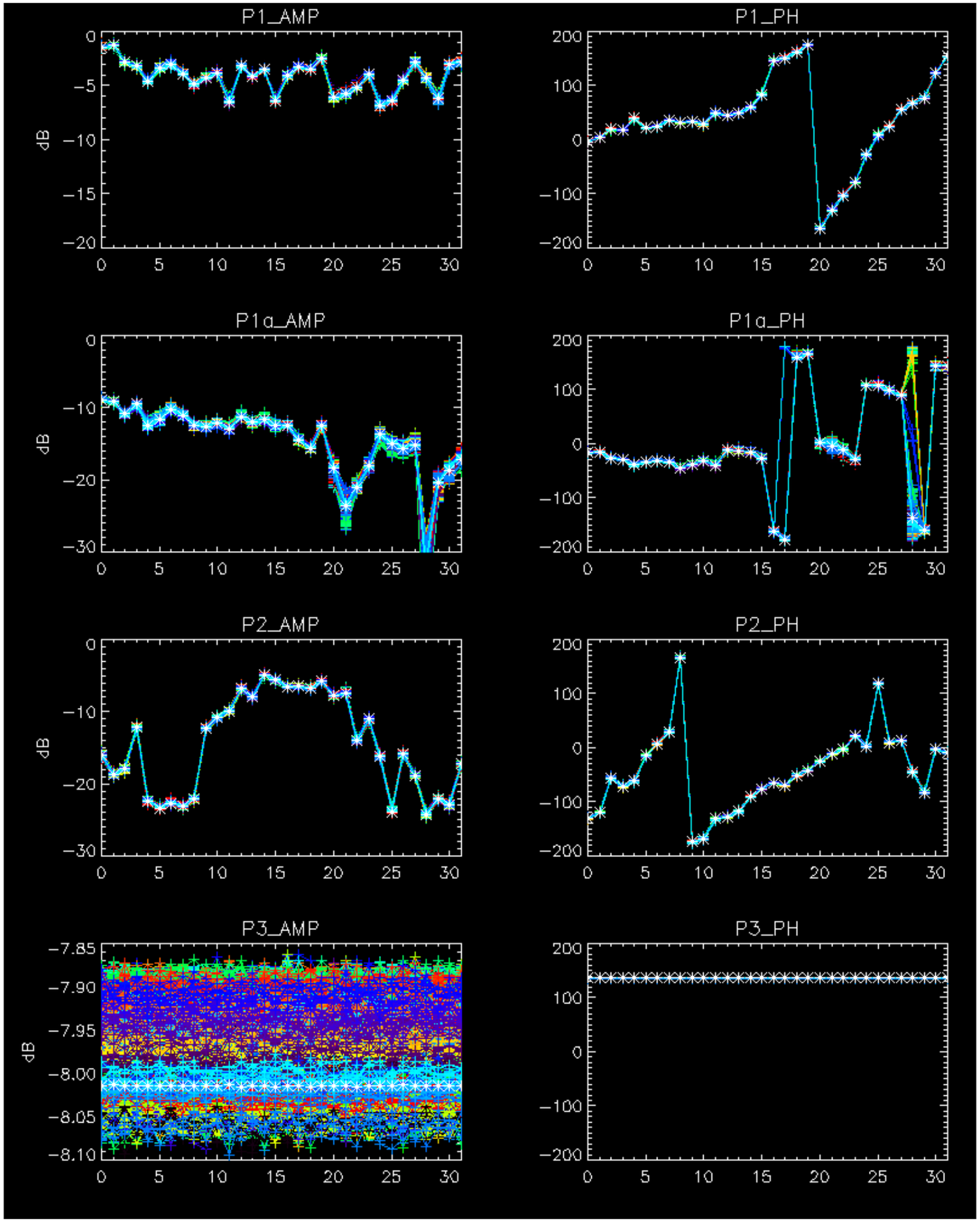

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
Average P1a [dB]
0
−10
−20
−30
−40
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

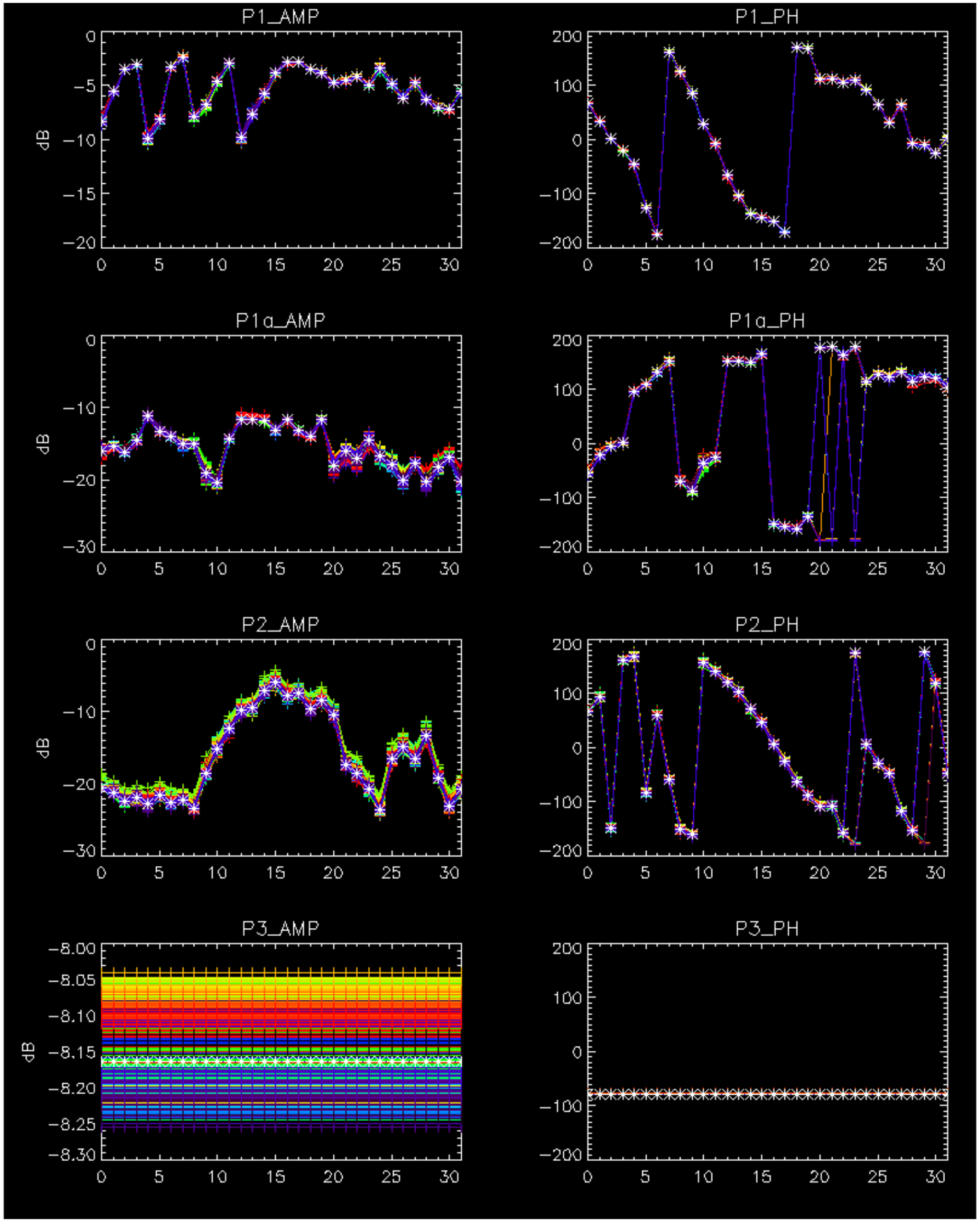

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
13−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
13−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
13−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
13−Sep
rows: _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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
Average P1a [dB]
−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
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


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

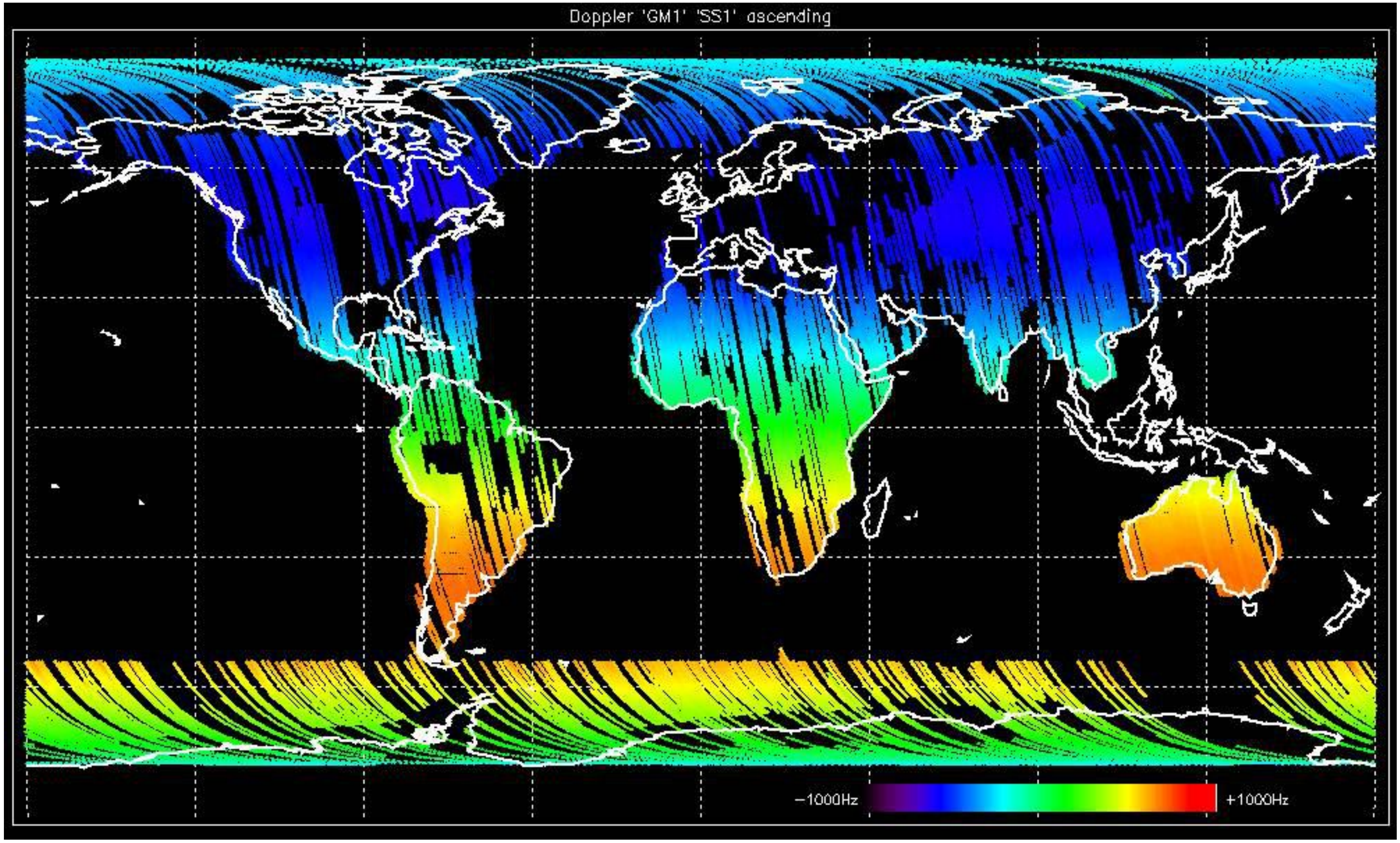
No anomalies observed.

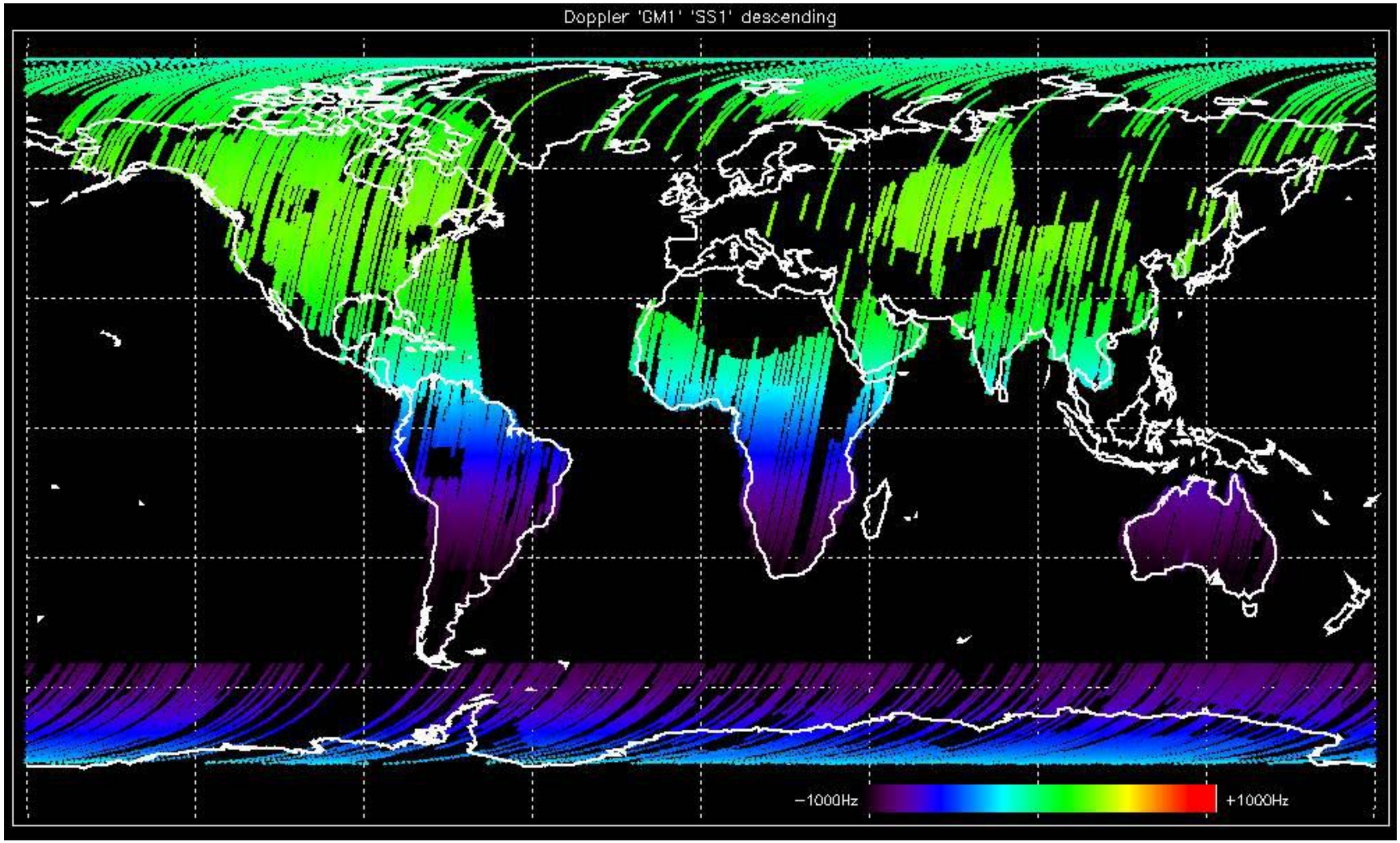

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

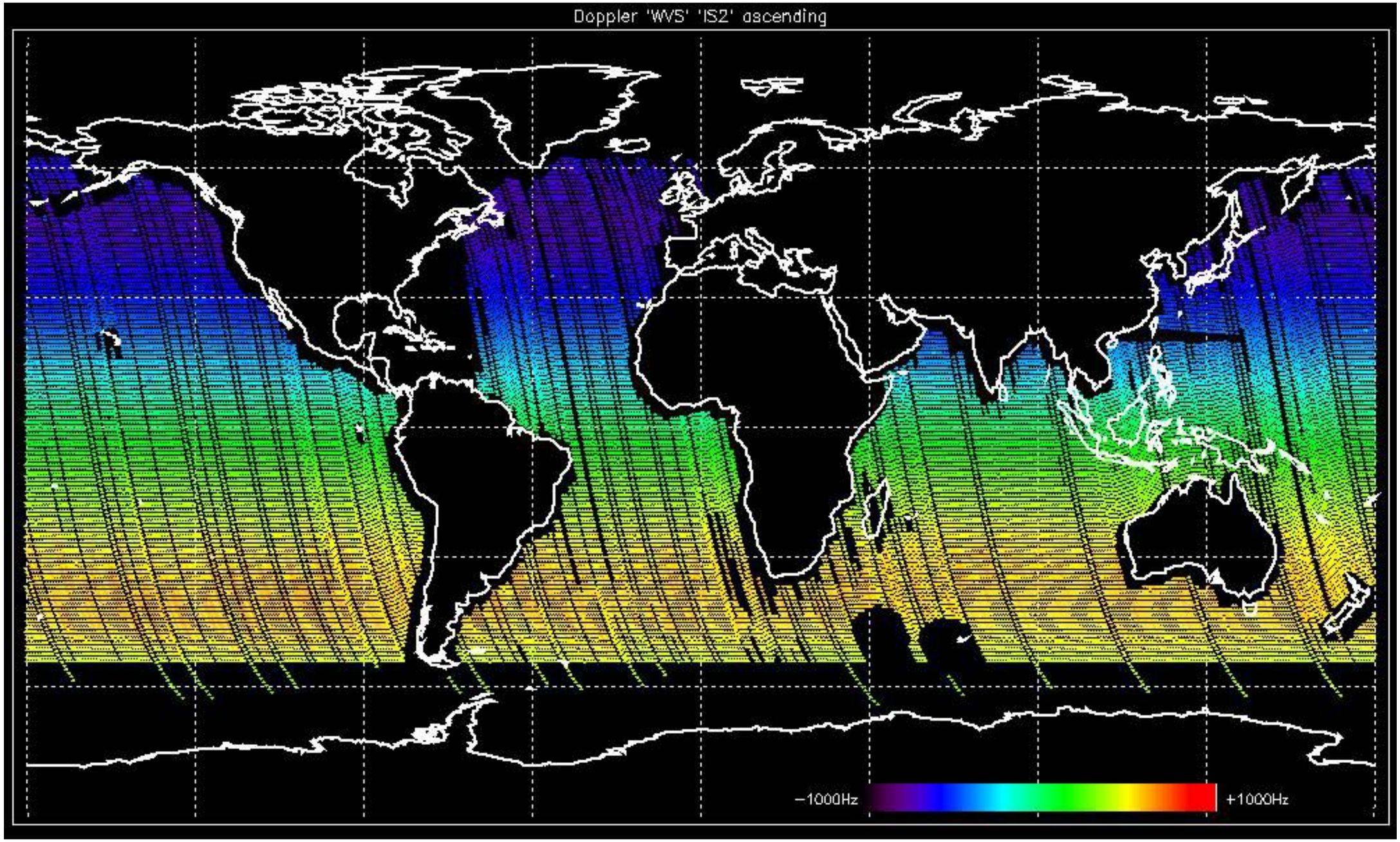

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

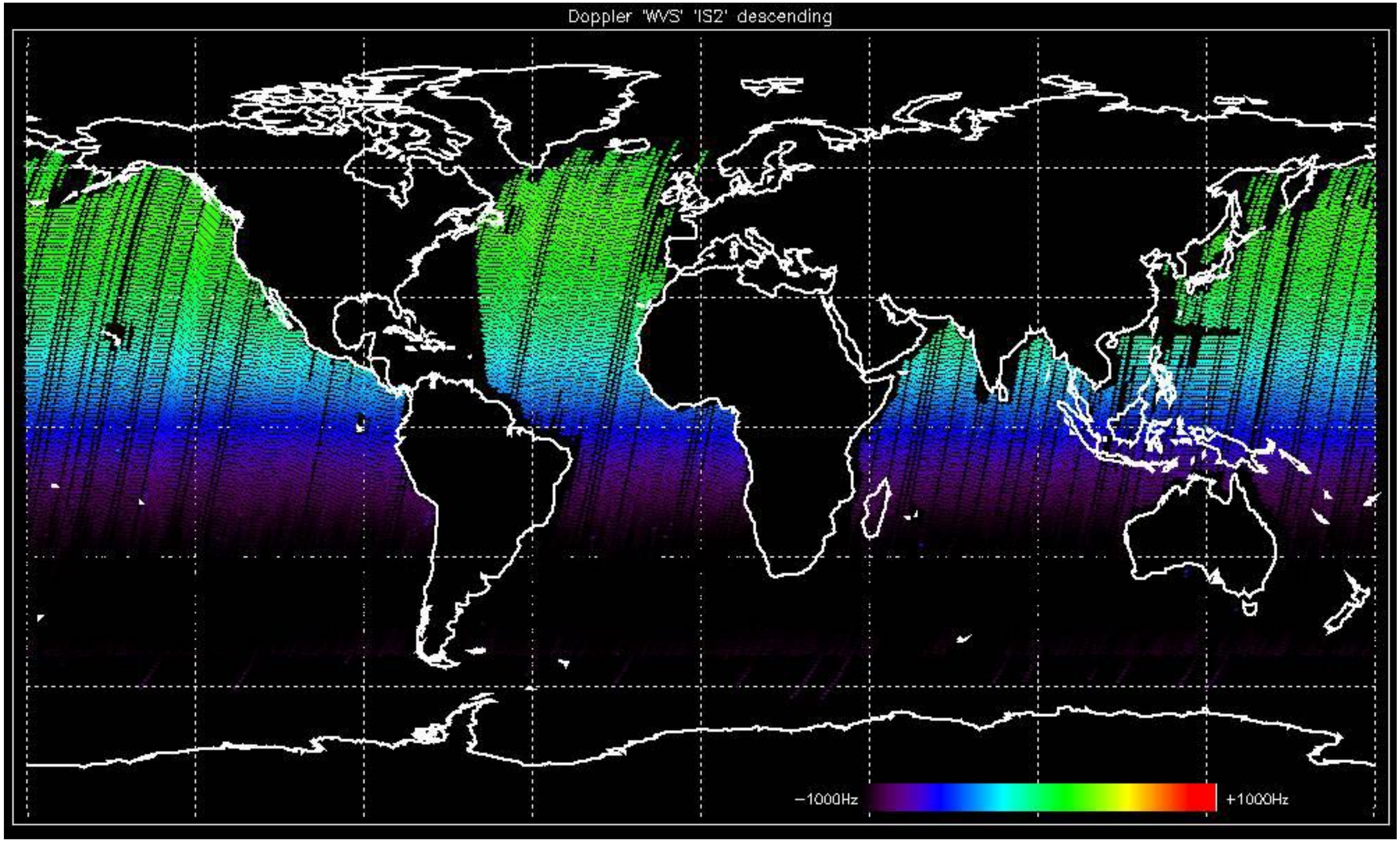
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

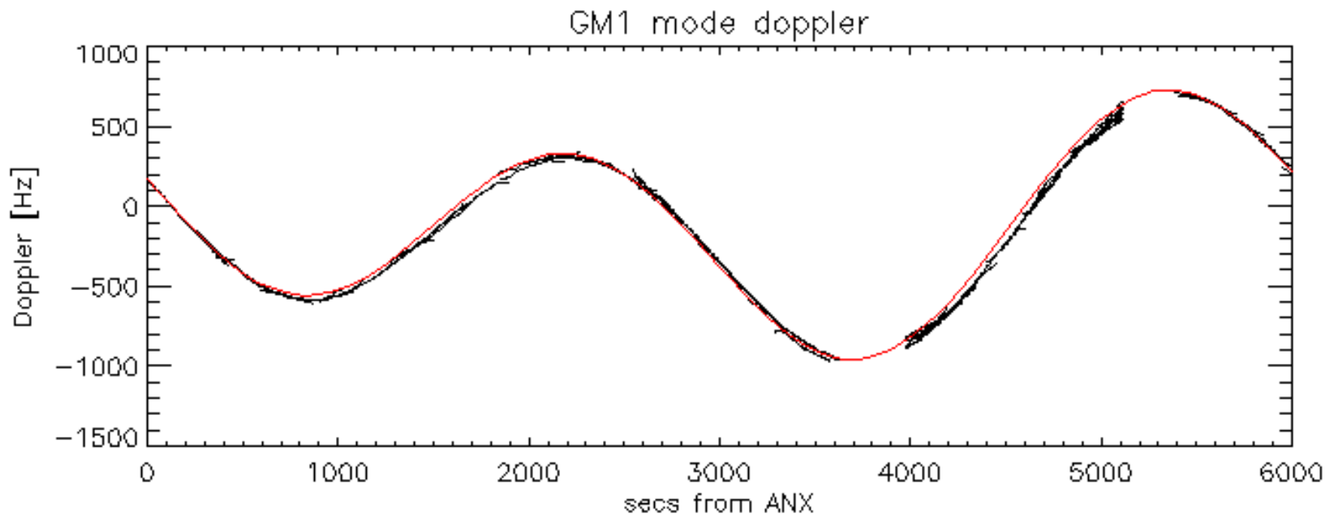
Preliminary report.The data is not yet controled

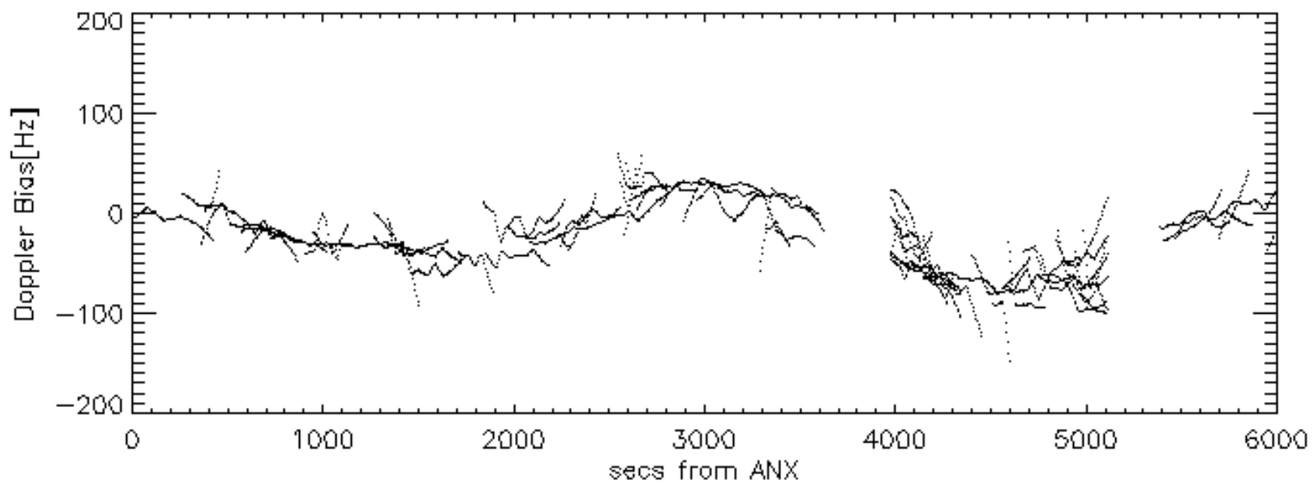

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

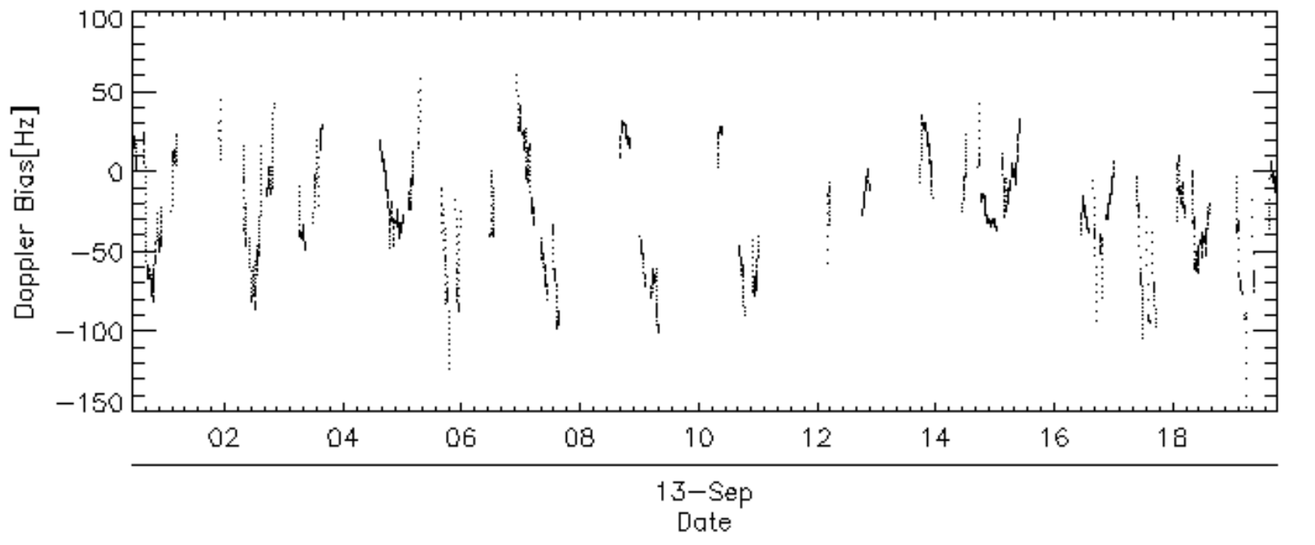

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

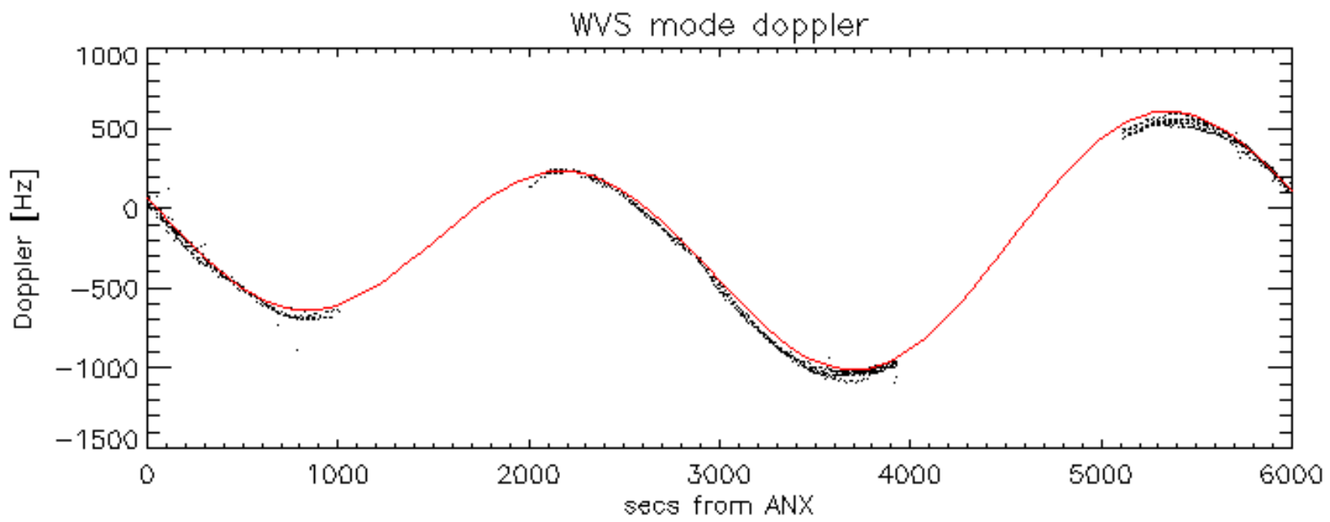

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

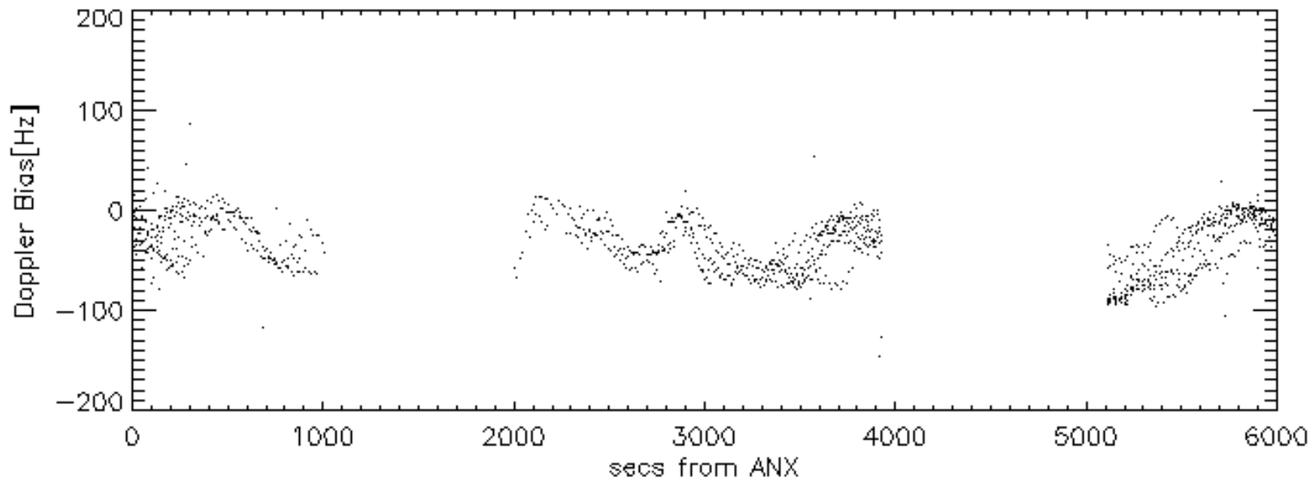

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

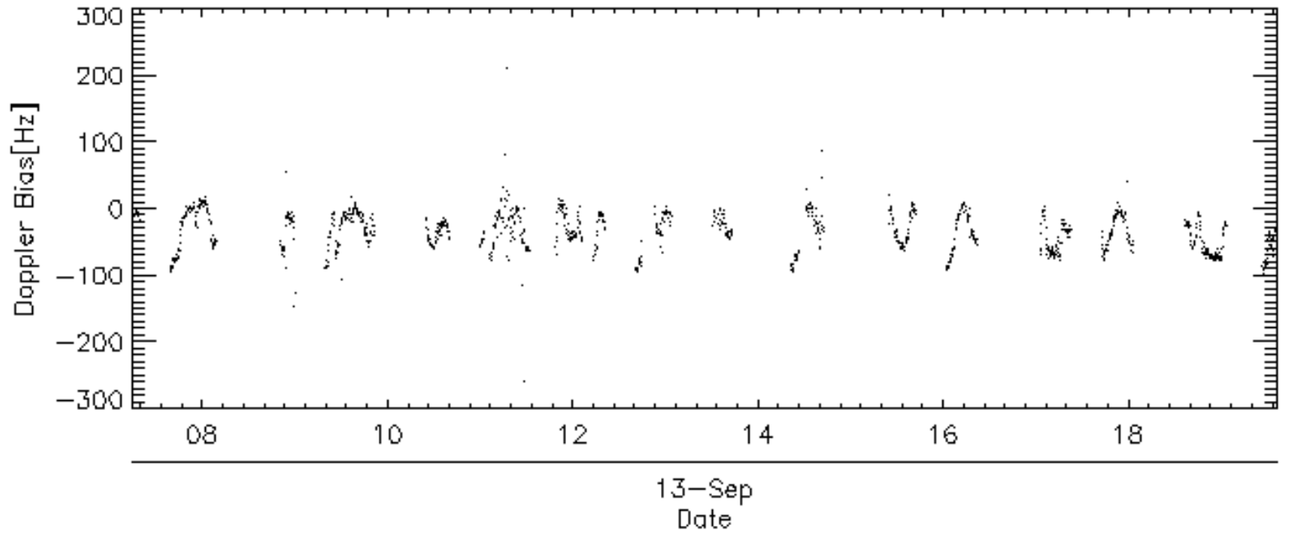

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

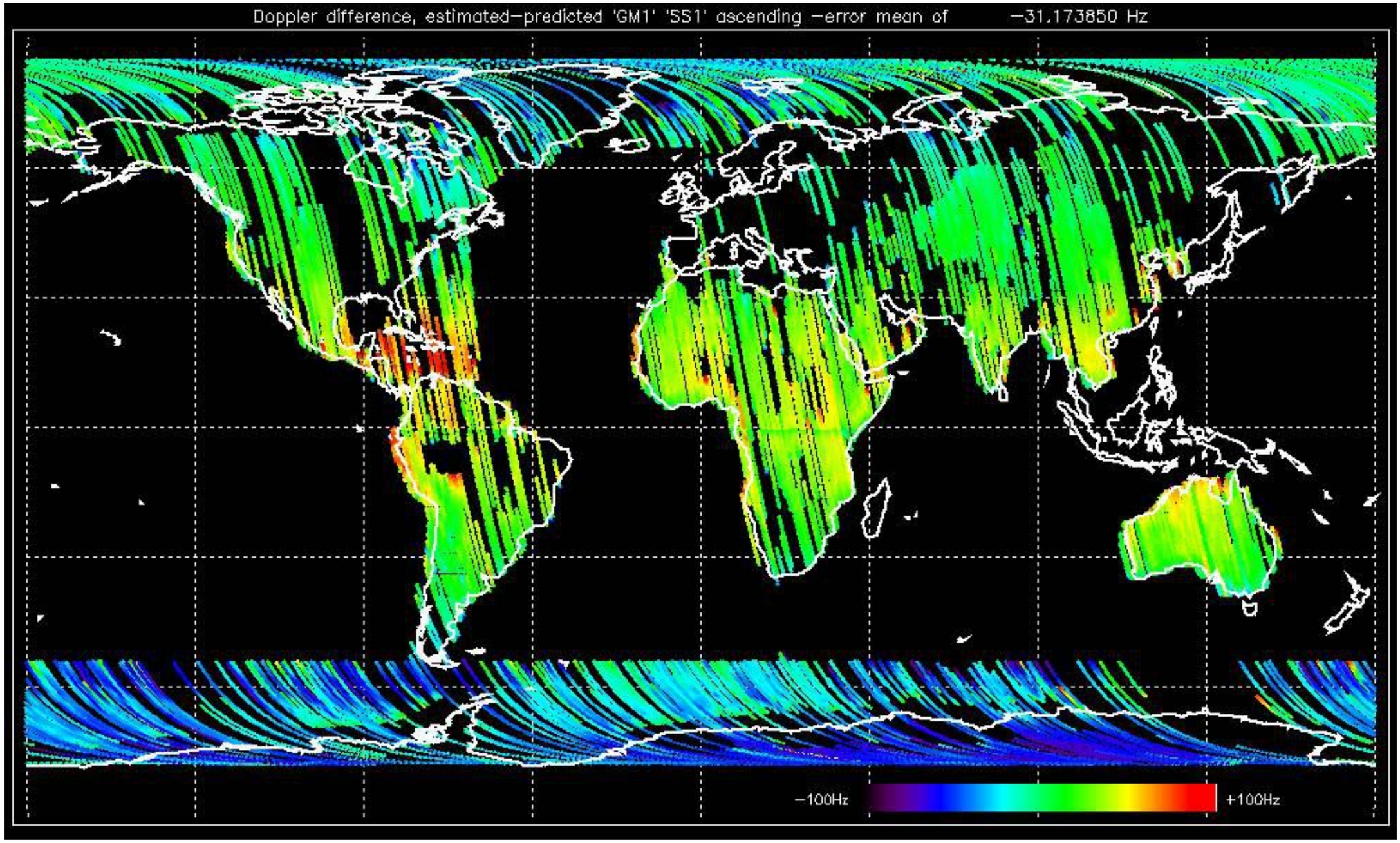

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

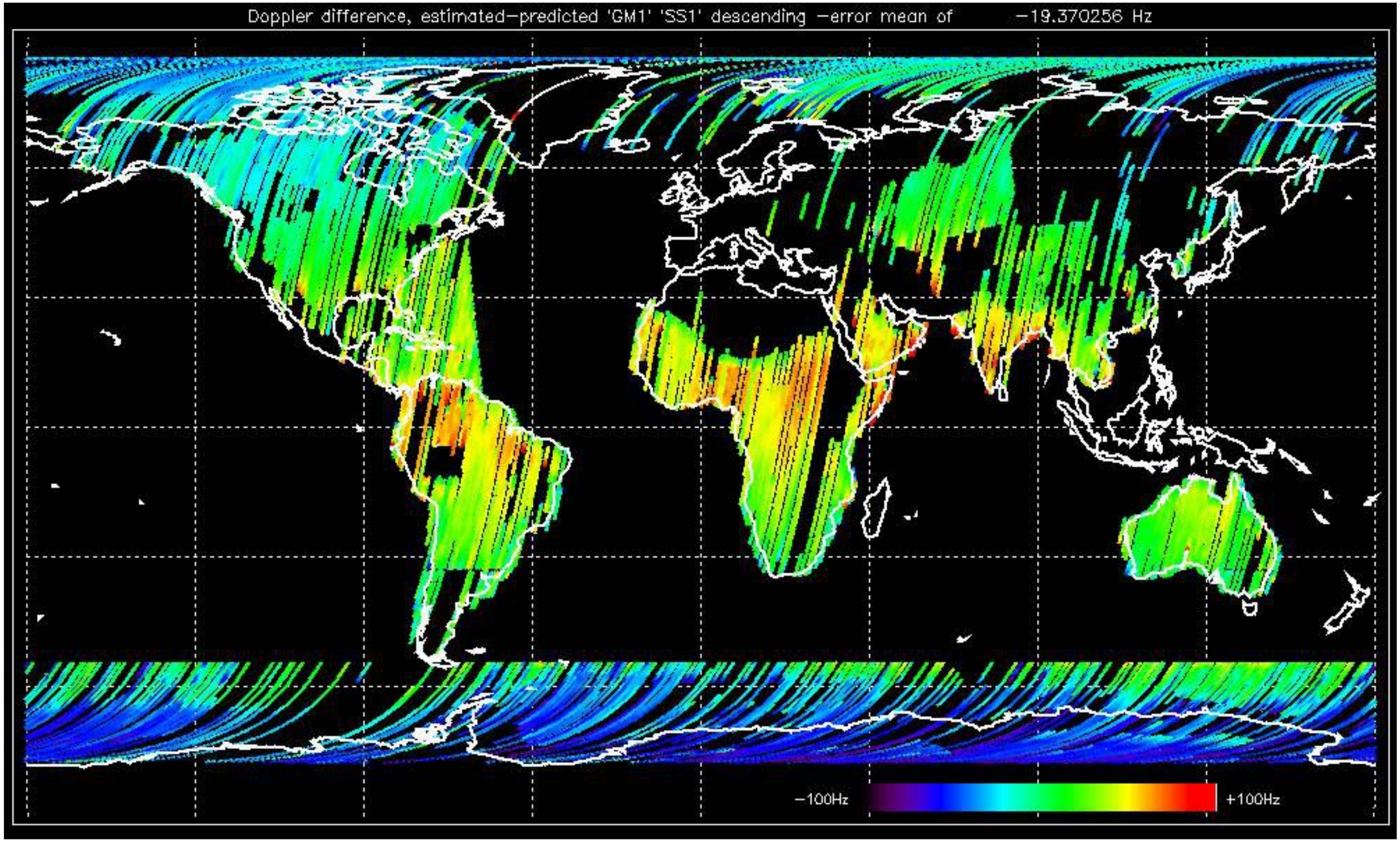

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
13−Sep
Date

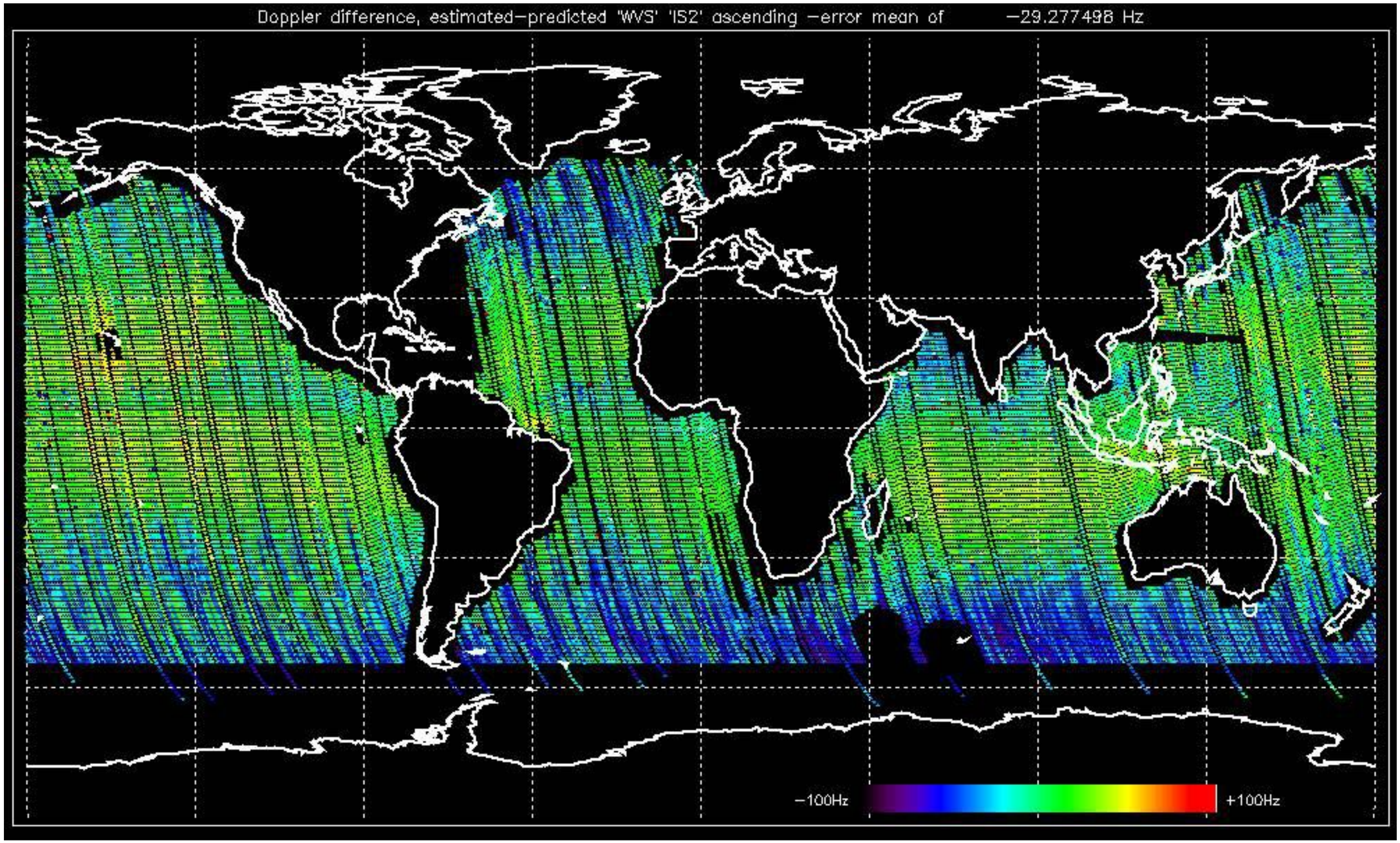

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

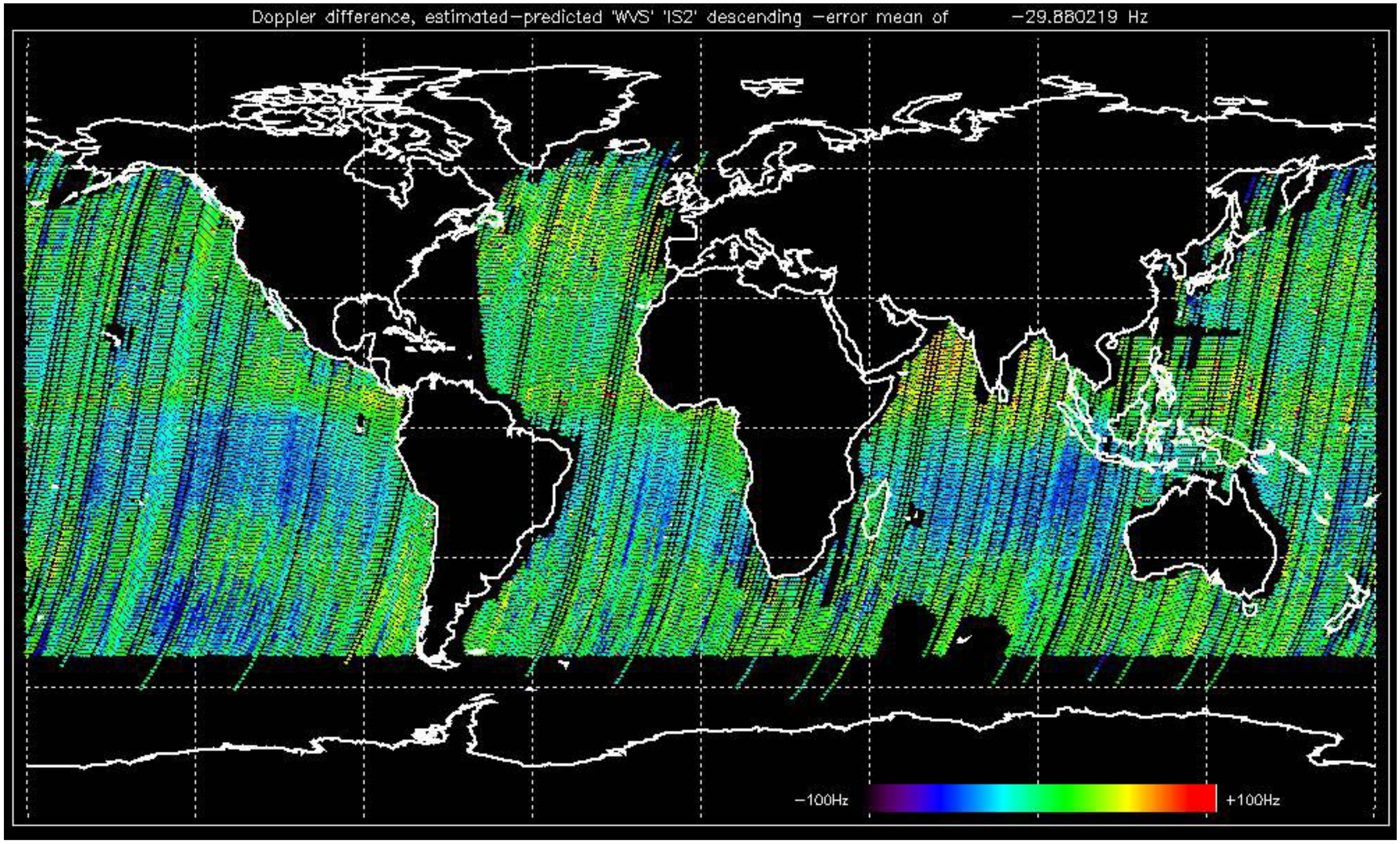

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
300
200
100
0
−100
−200
−300
08
10
12
14
16
18
13−Sep
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −31.173850 Hz
−100Hz
+100Hz

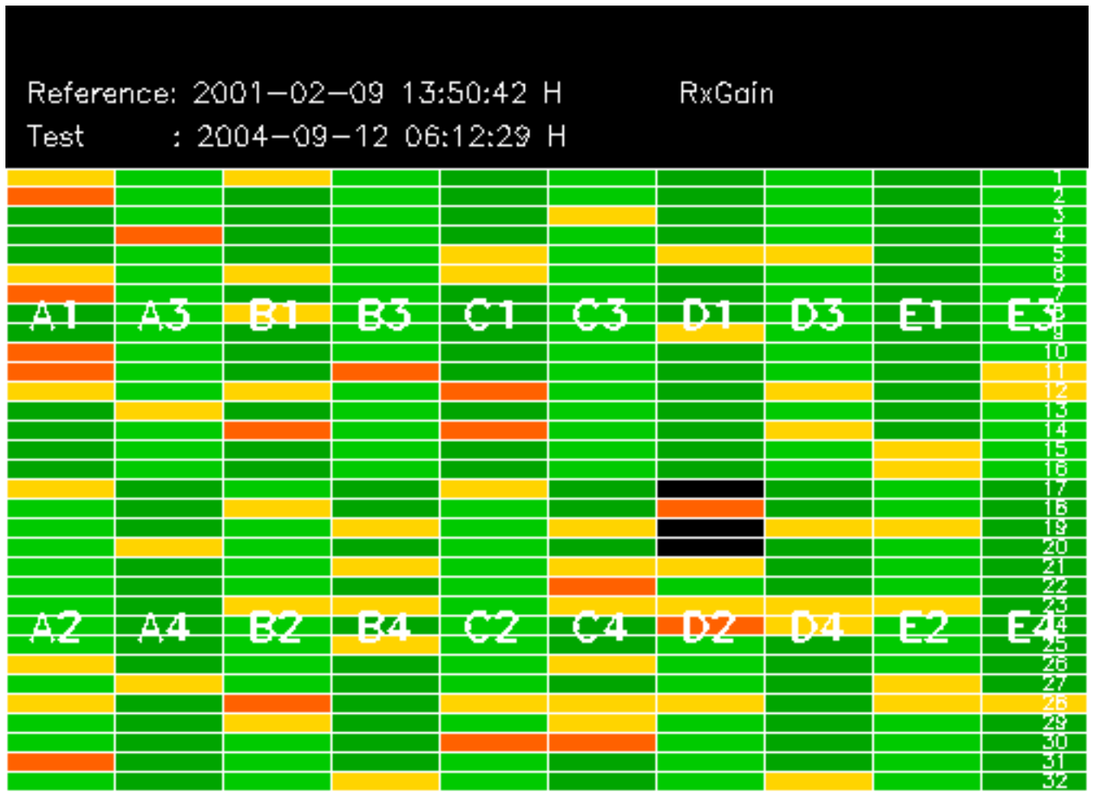

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −19.370256 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.277498 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.880219 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 : 2004-09-12 06:12:29 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
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31
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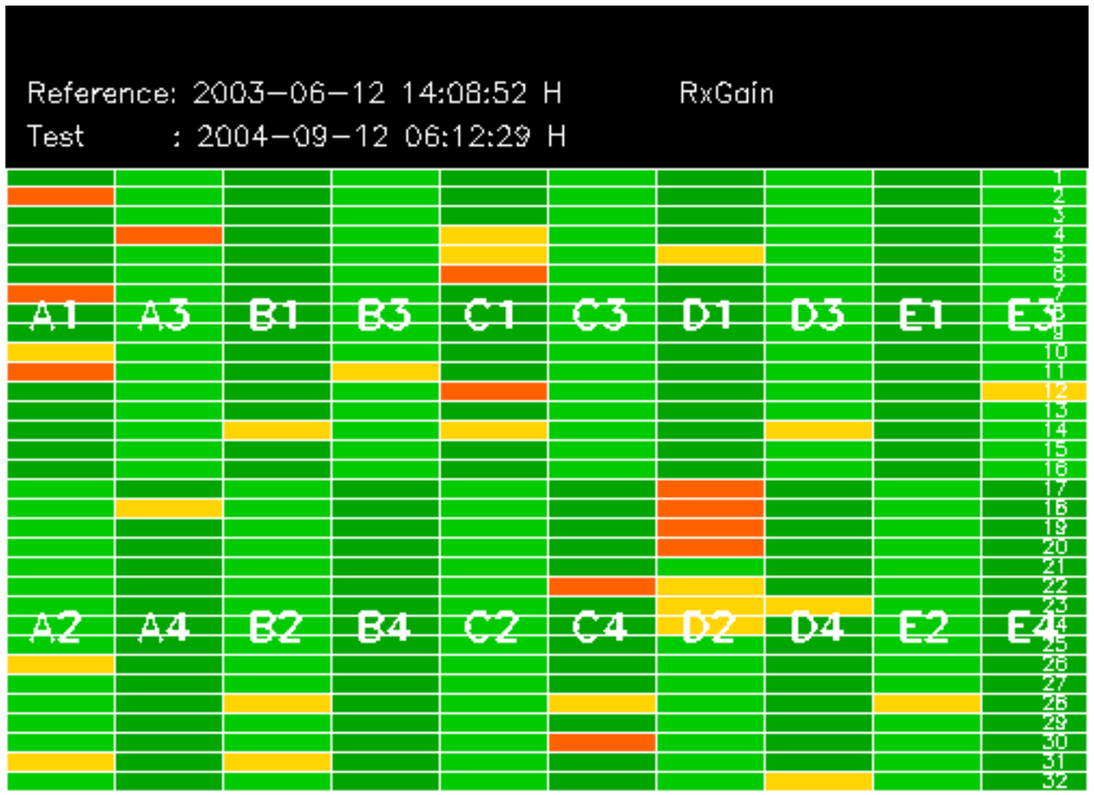
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-12 06:12:29 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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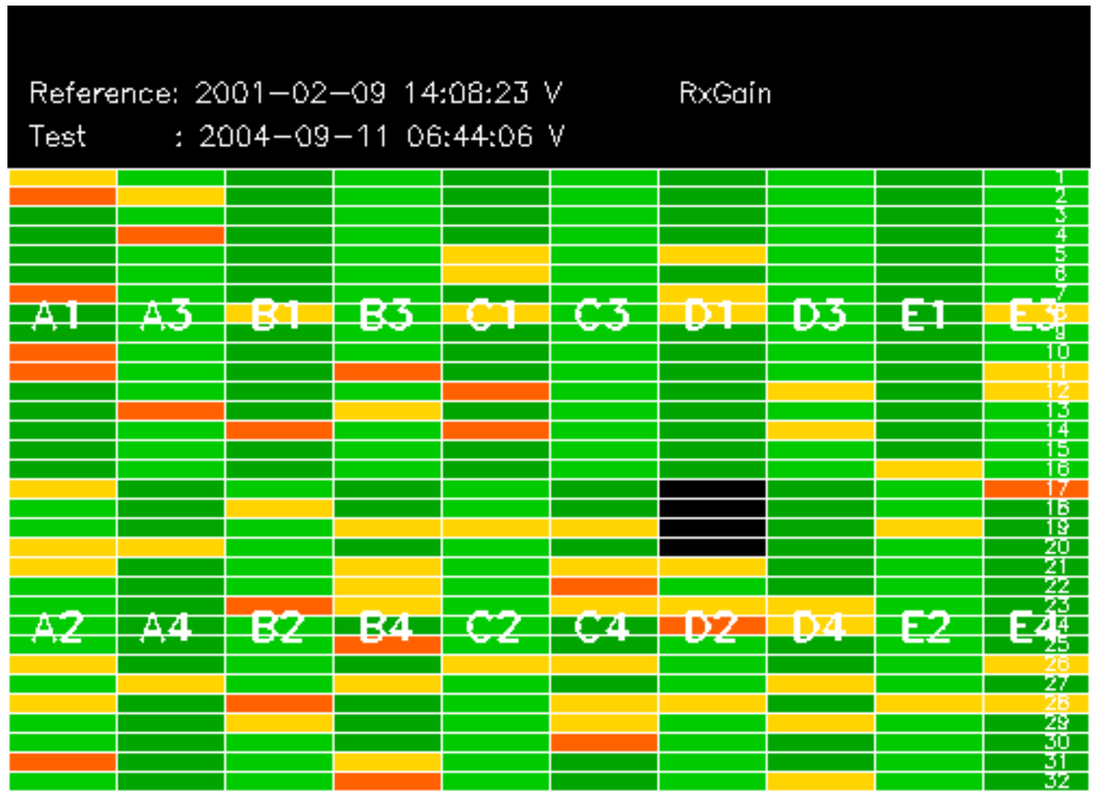
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-11 06:44:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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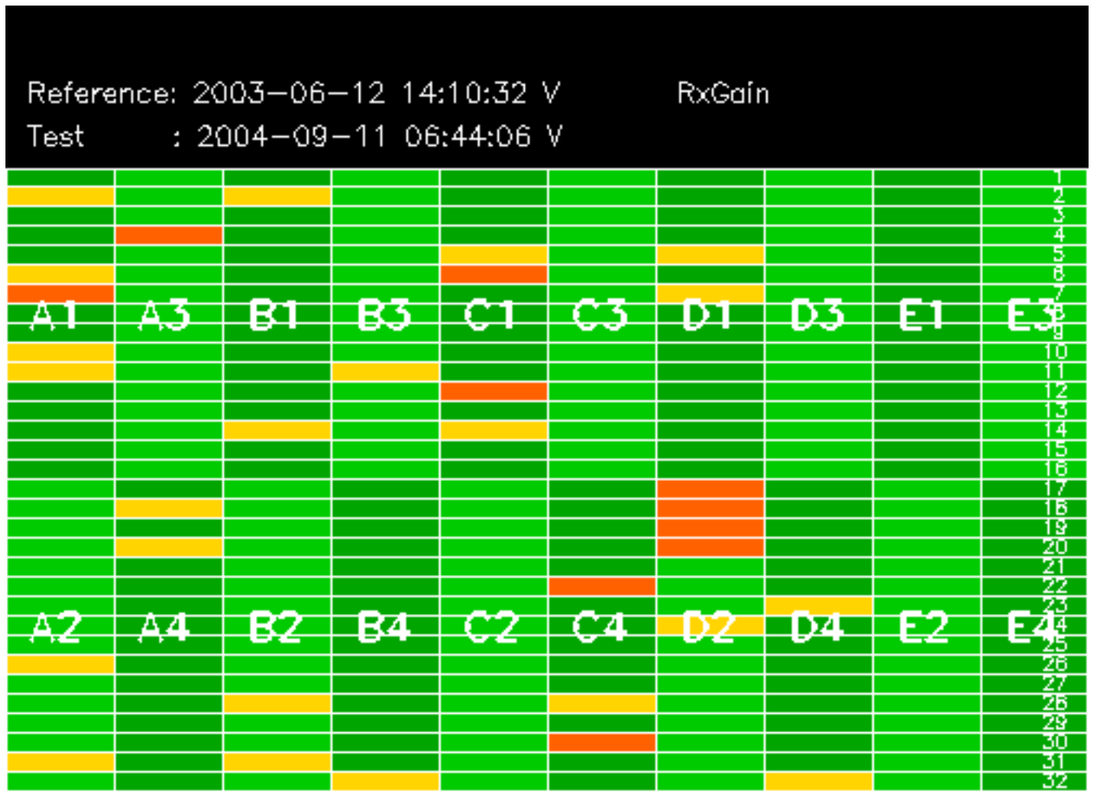
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-11 06:44:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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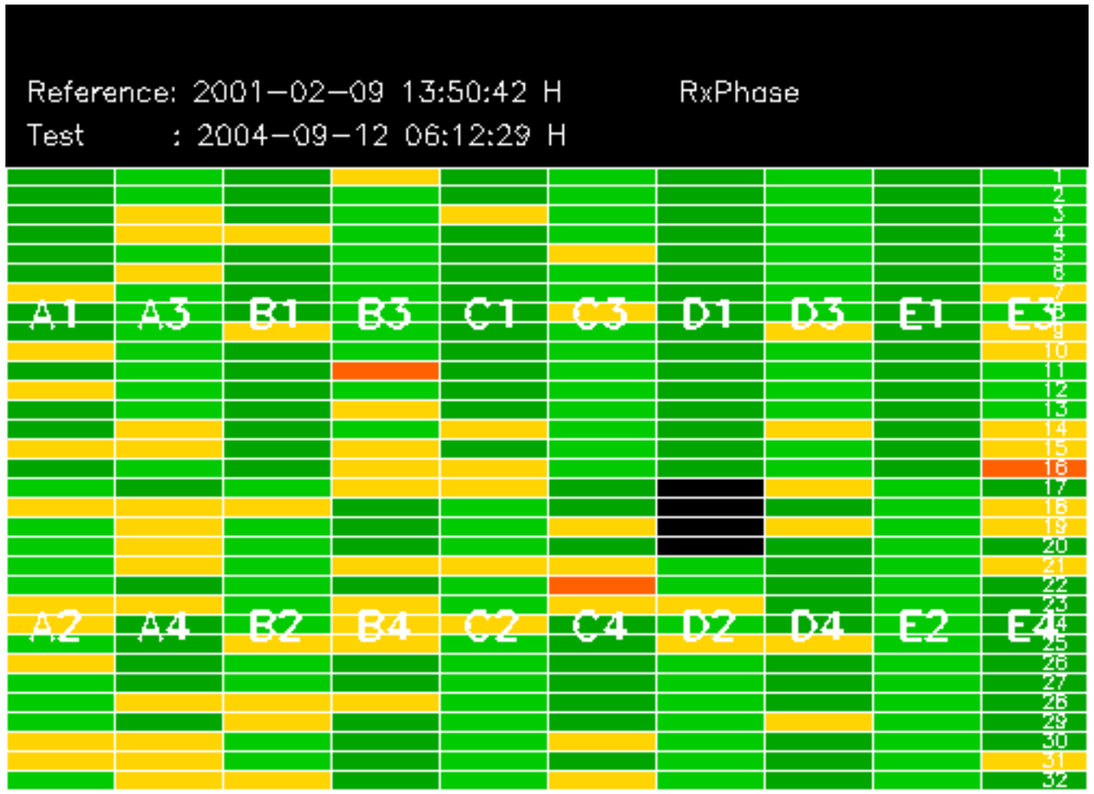
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-09-12 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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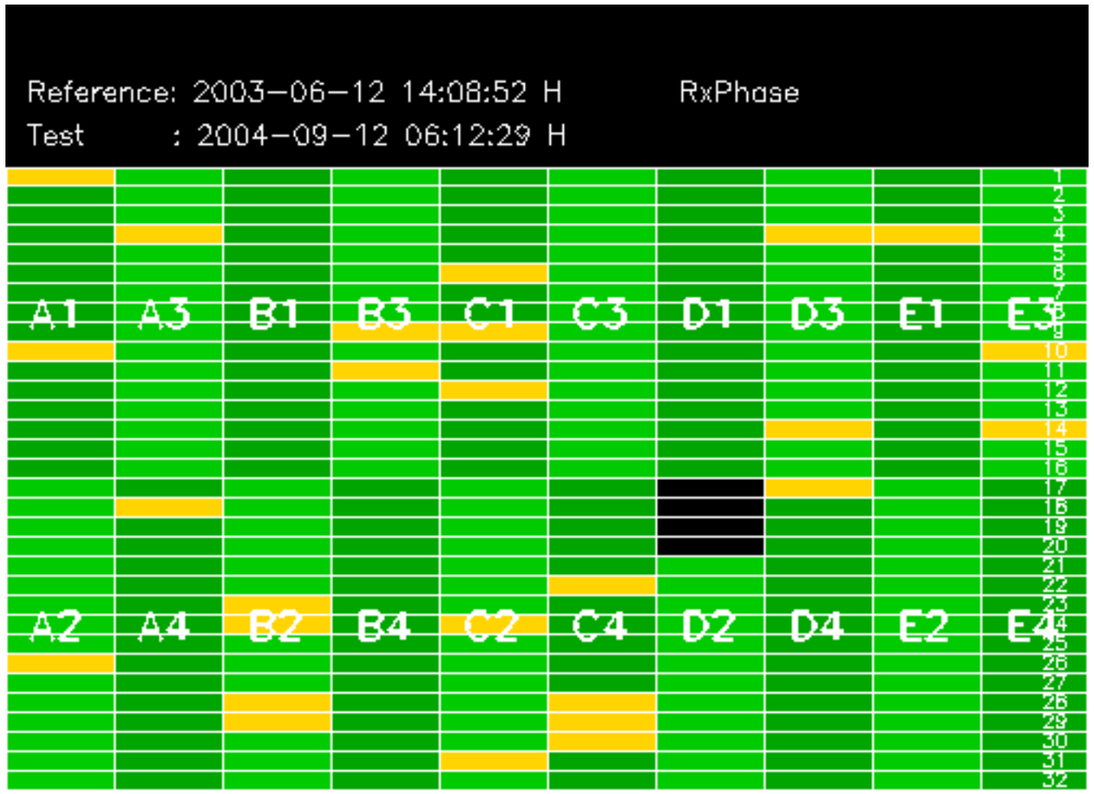
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-12 06:12:29 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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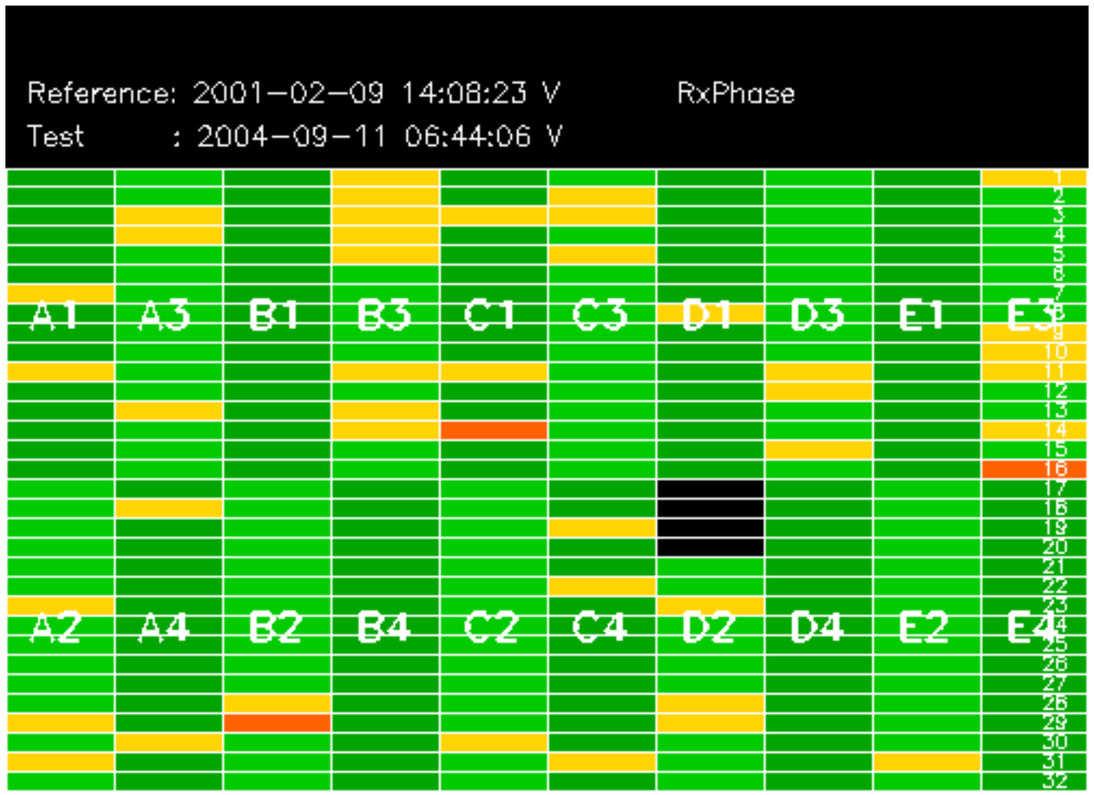
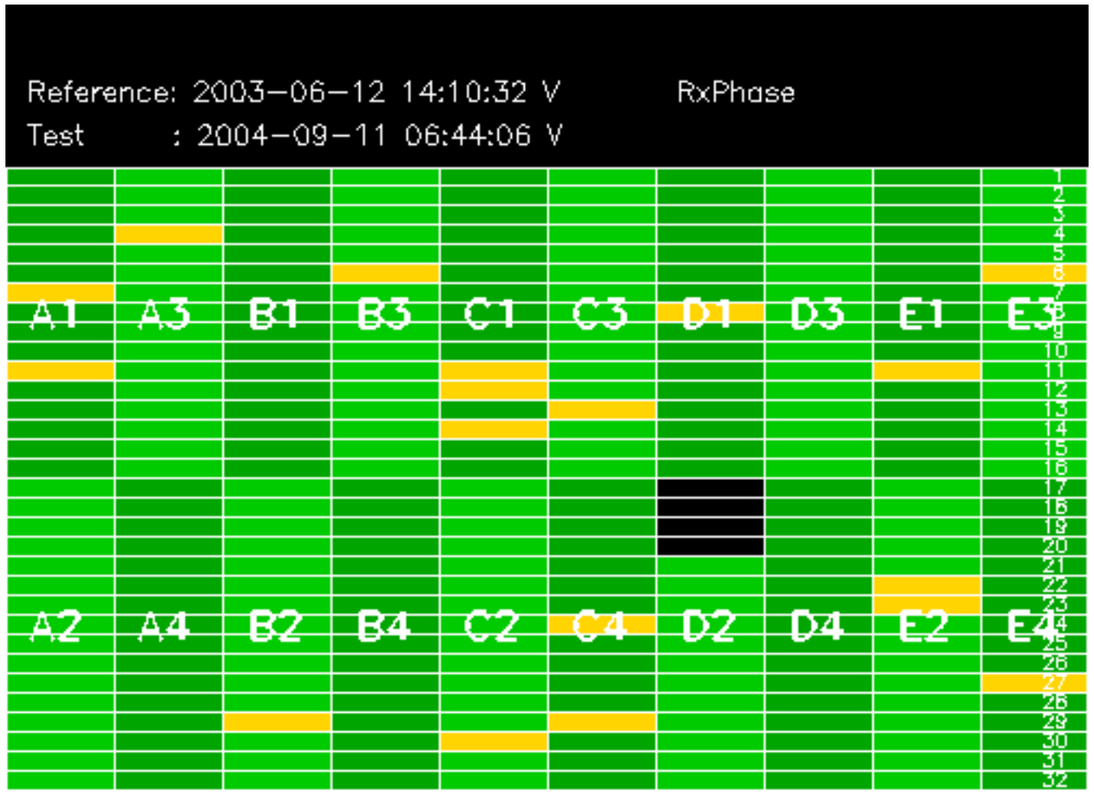
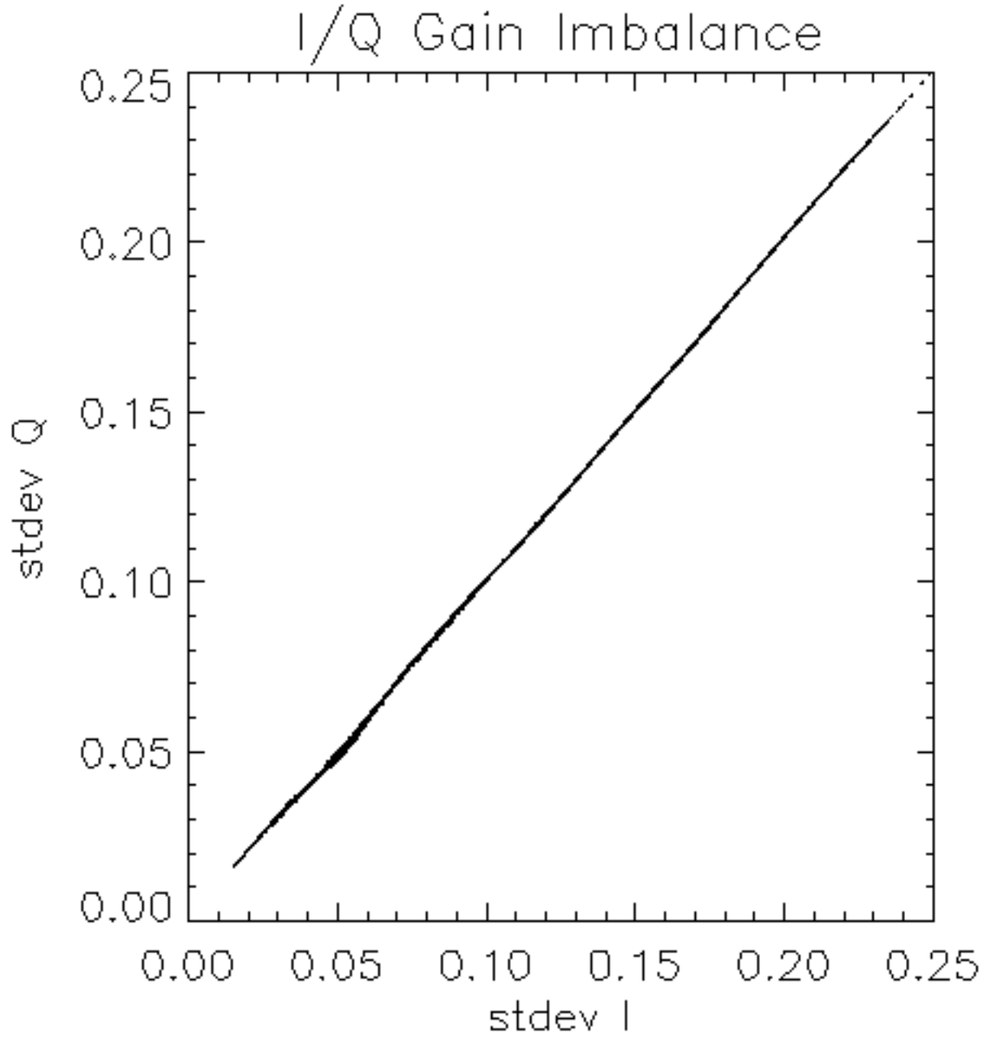
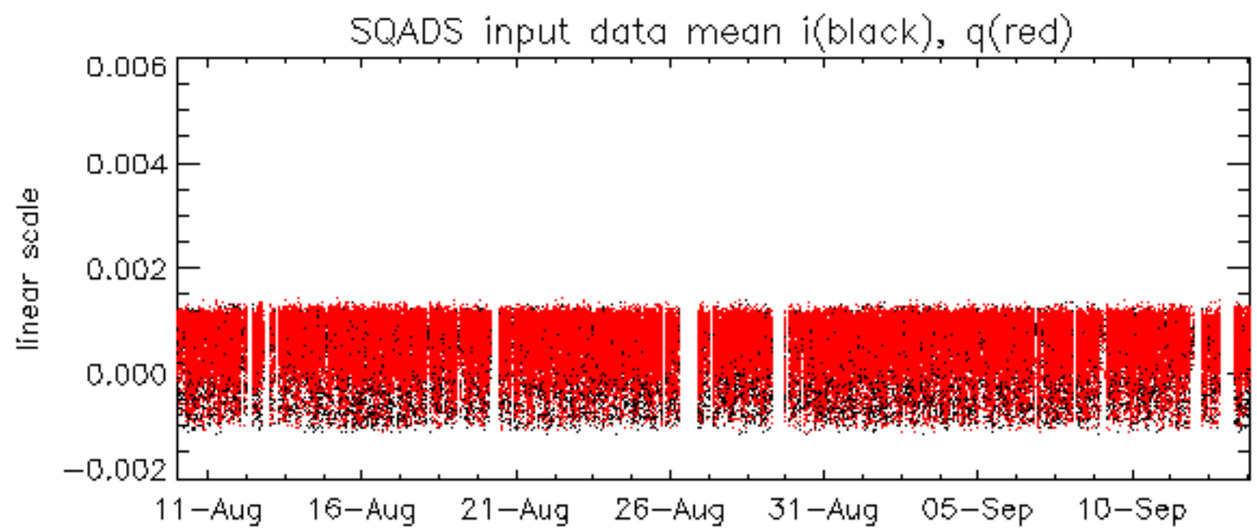
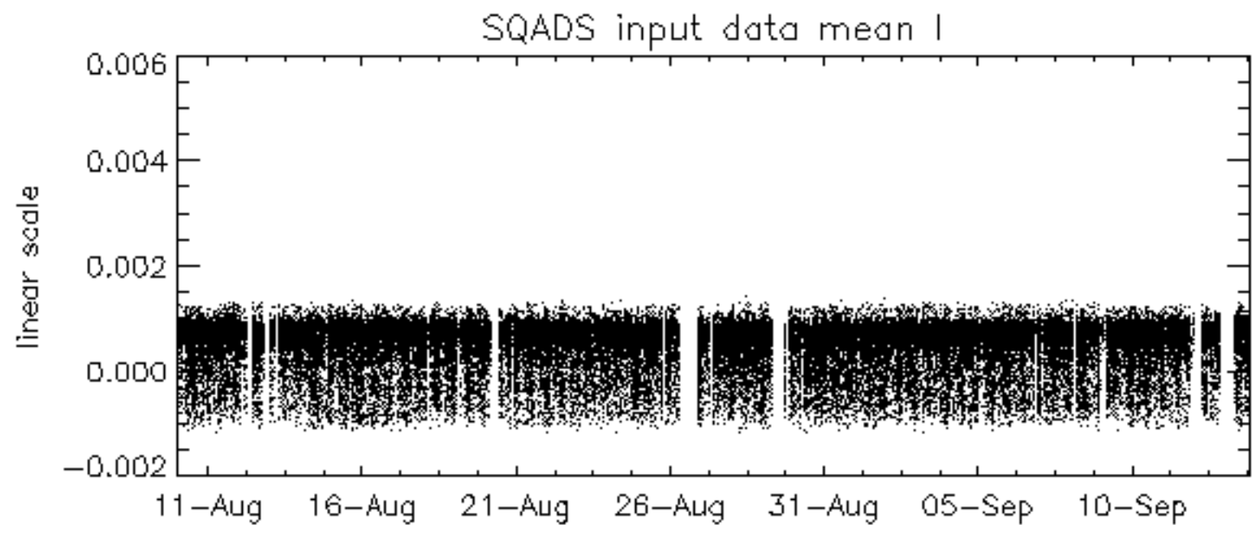
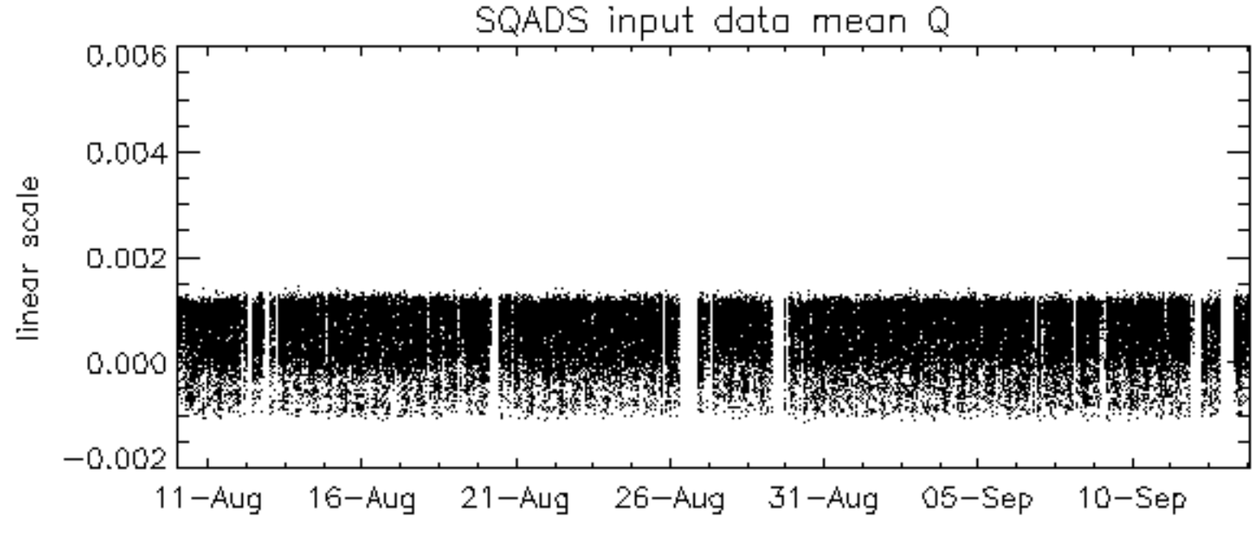

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-11 06:44:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

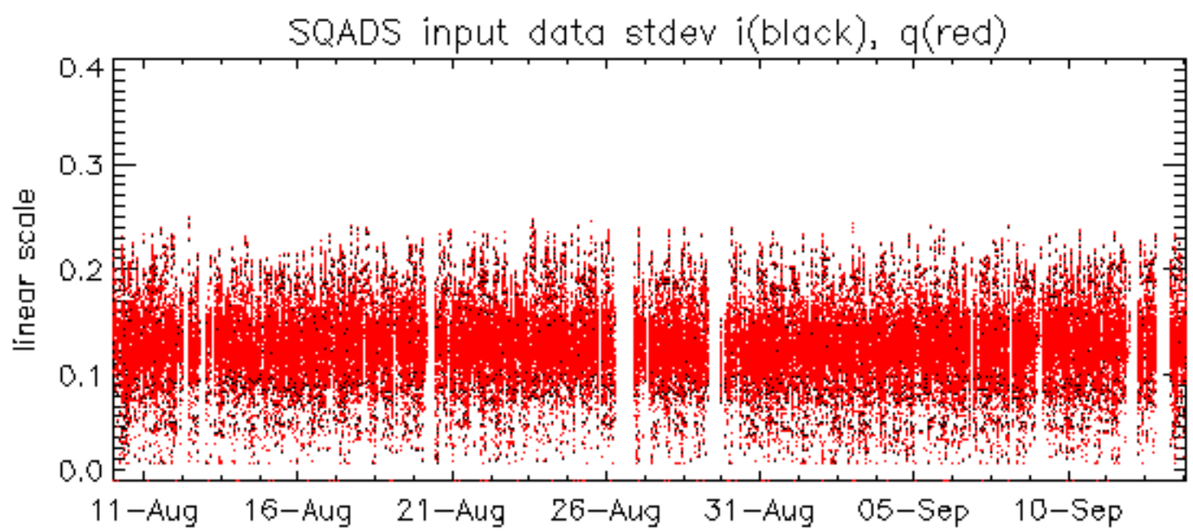

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-11 06:44:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

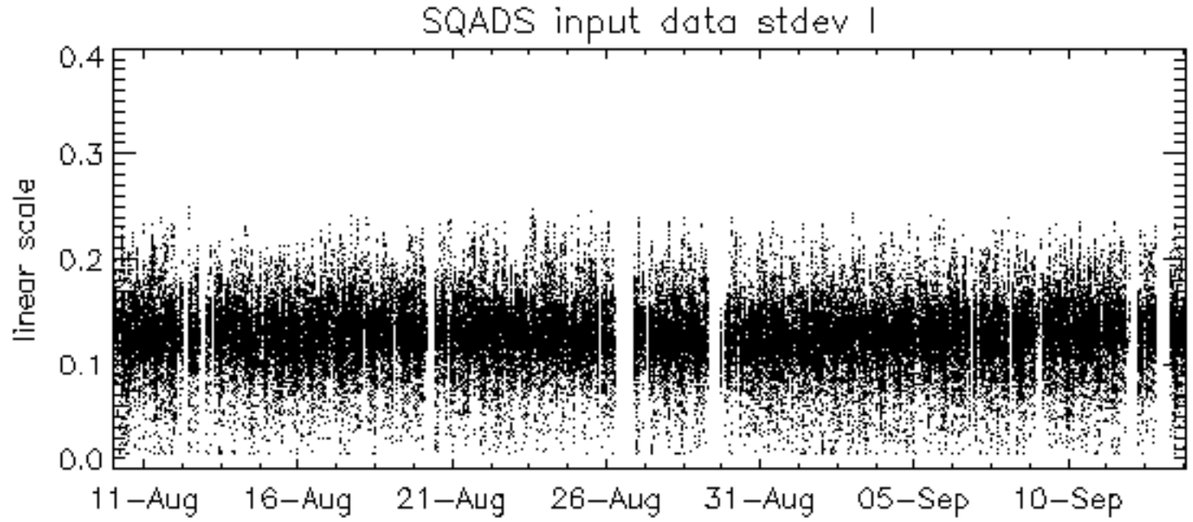

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

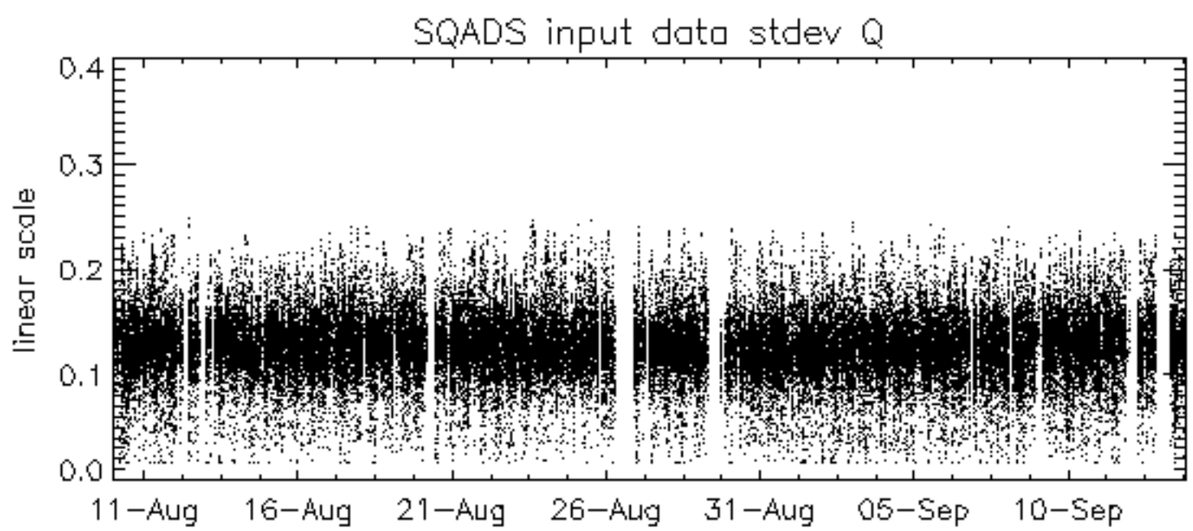

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep

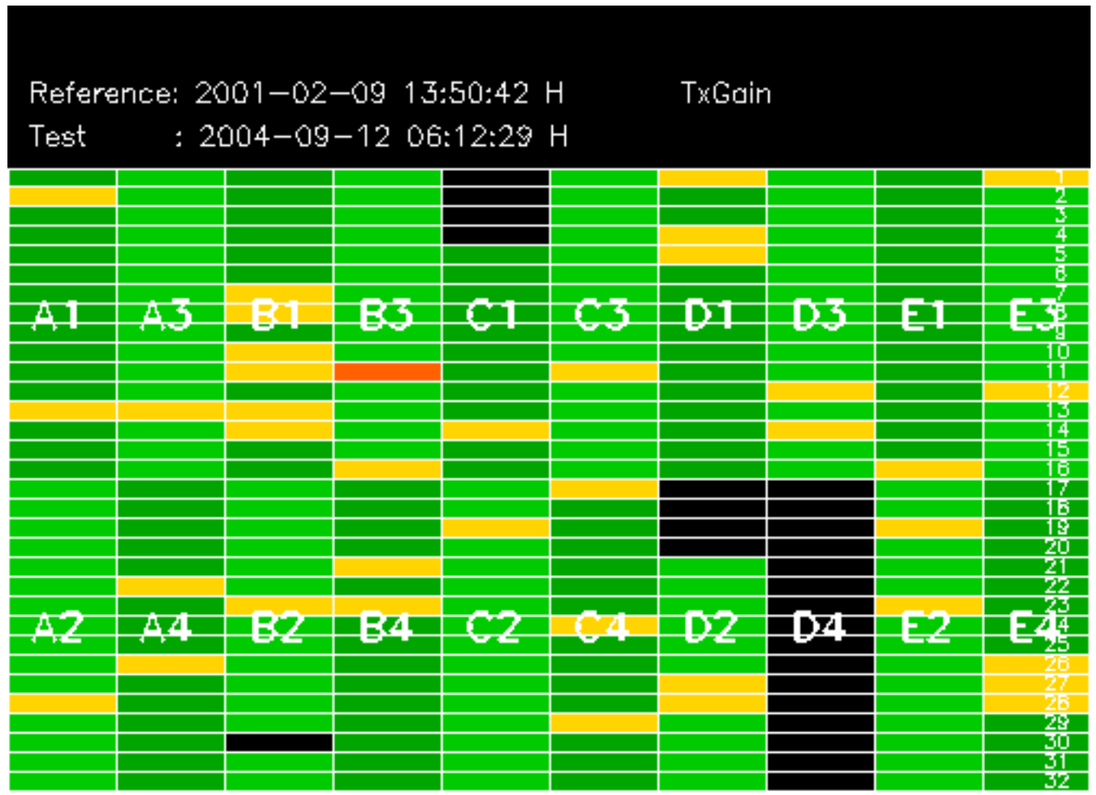

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-12 06:12:29 H
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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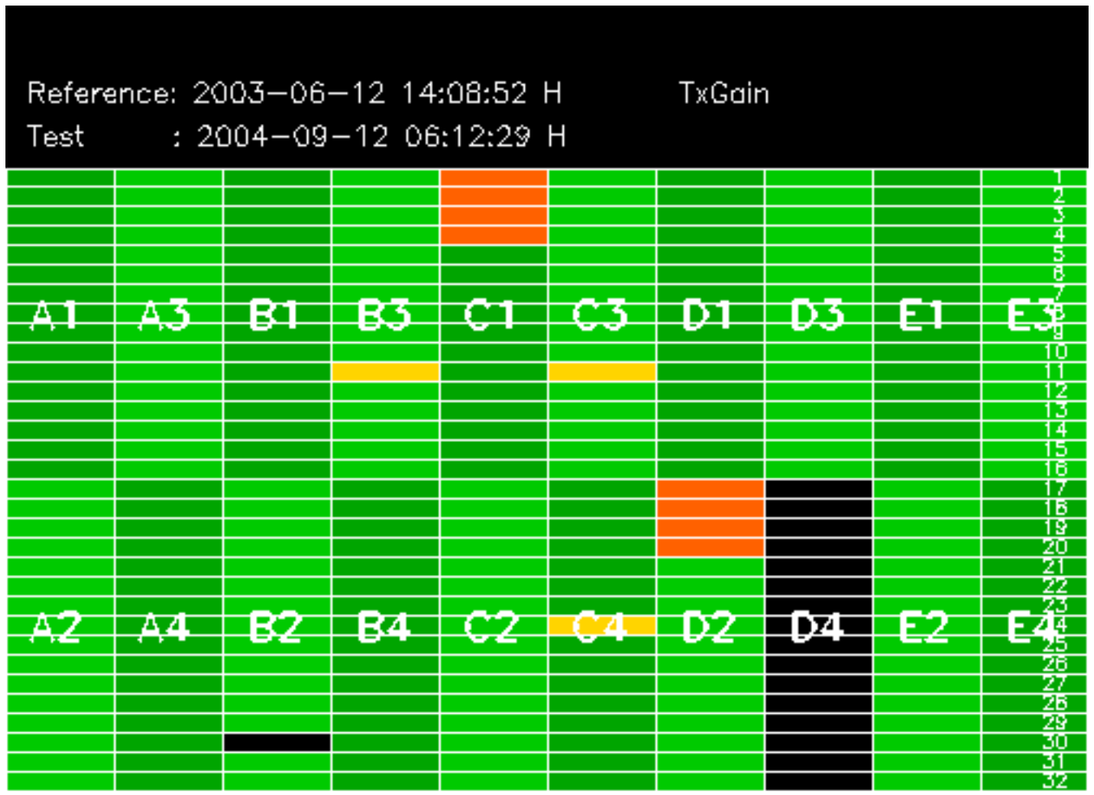
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-12 06:12:29 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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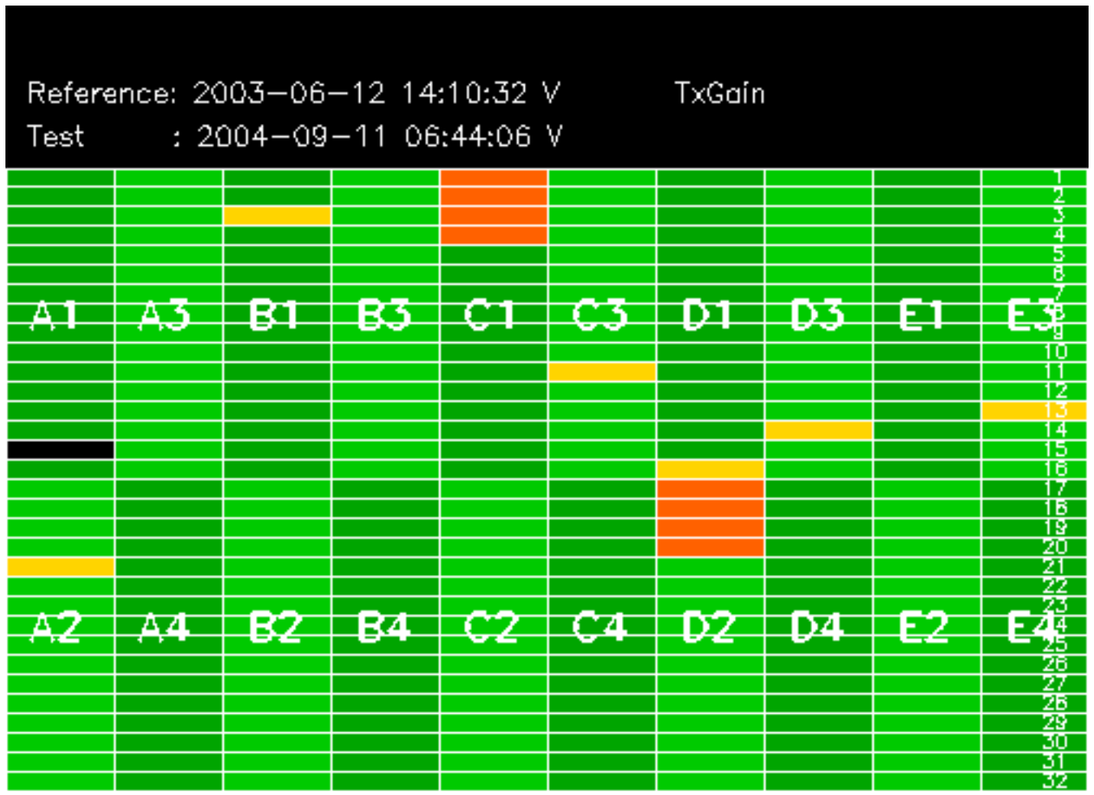
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-11 06:44:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-11 06:44:06 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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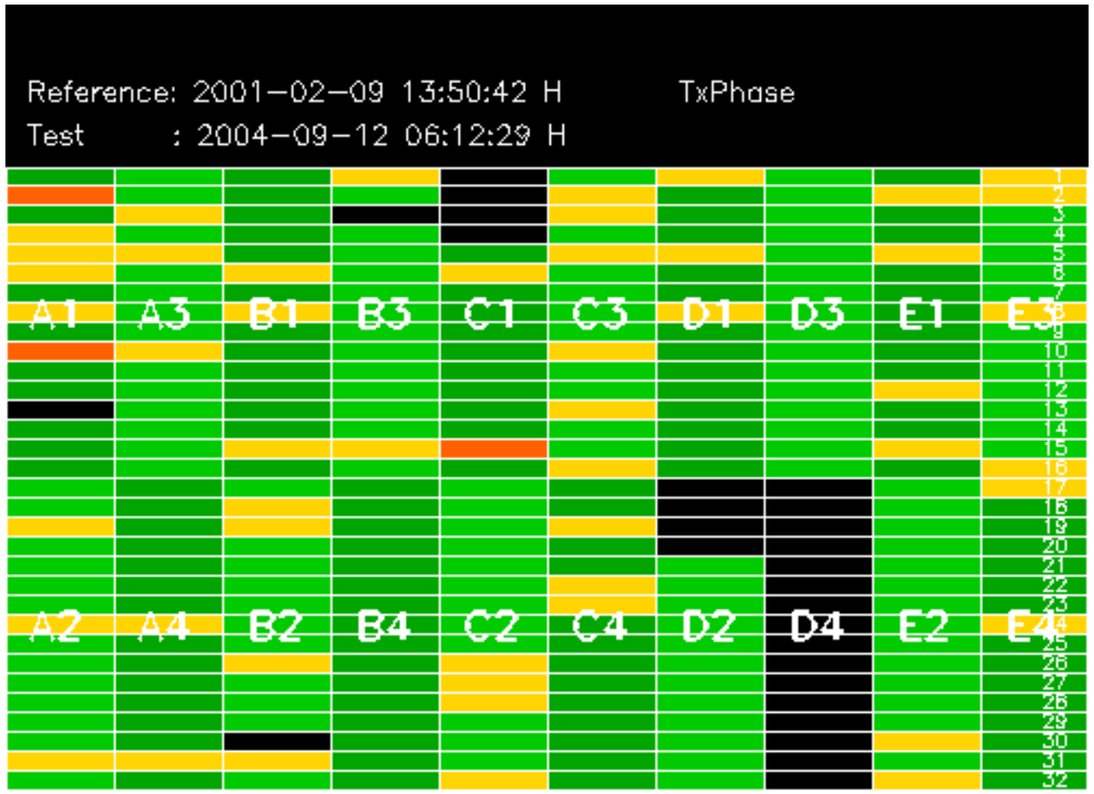
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-09-12 06:12:29 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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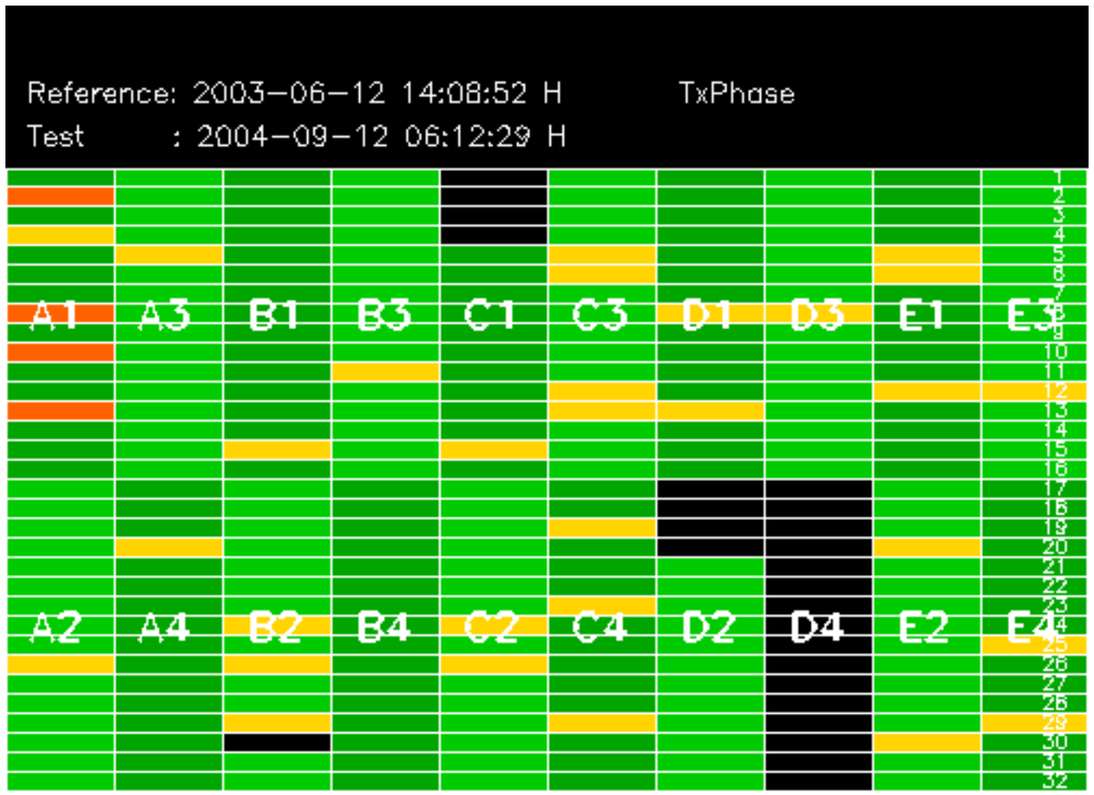
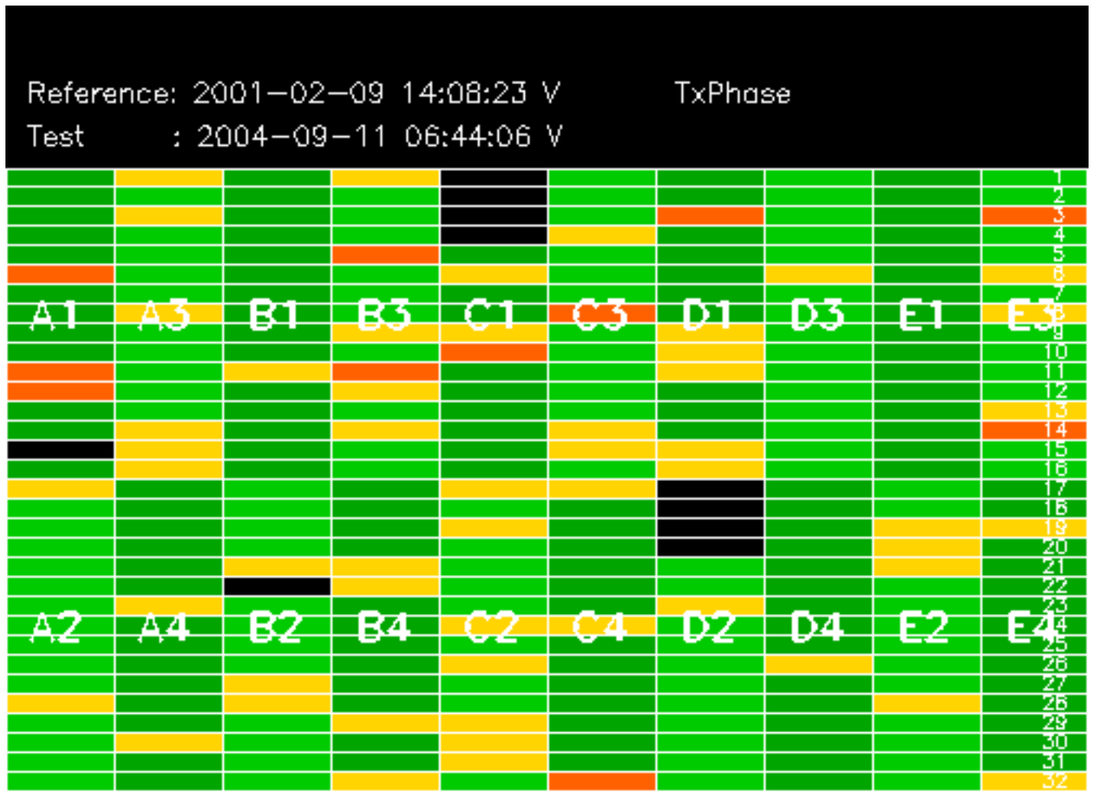
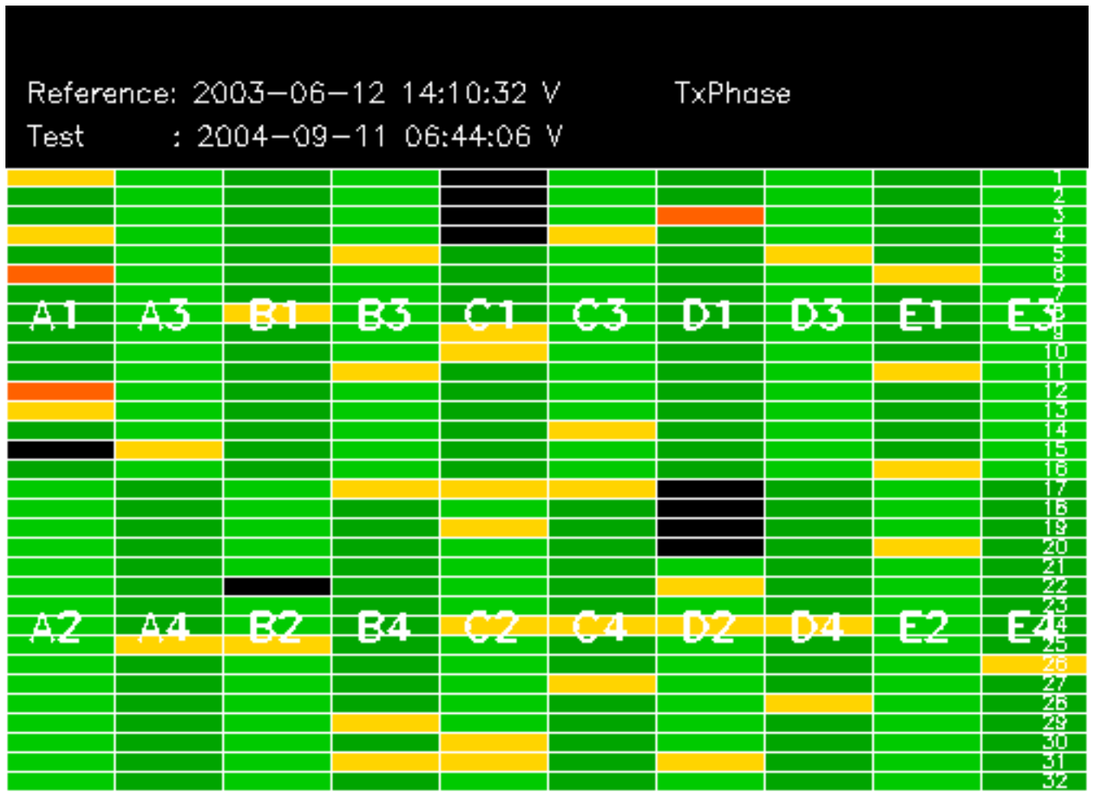

Reference: 2003-06-12 14:08:52 H
Test : 2004-09-12 06:12:29 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-09-11 06:44:06 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 : 2004-09-11 06:44:06 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
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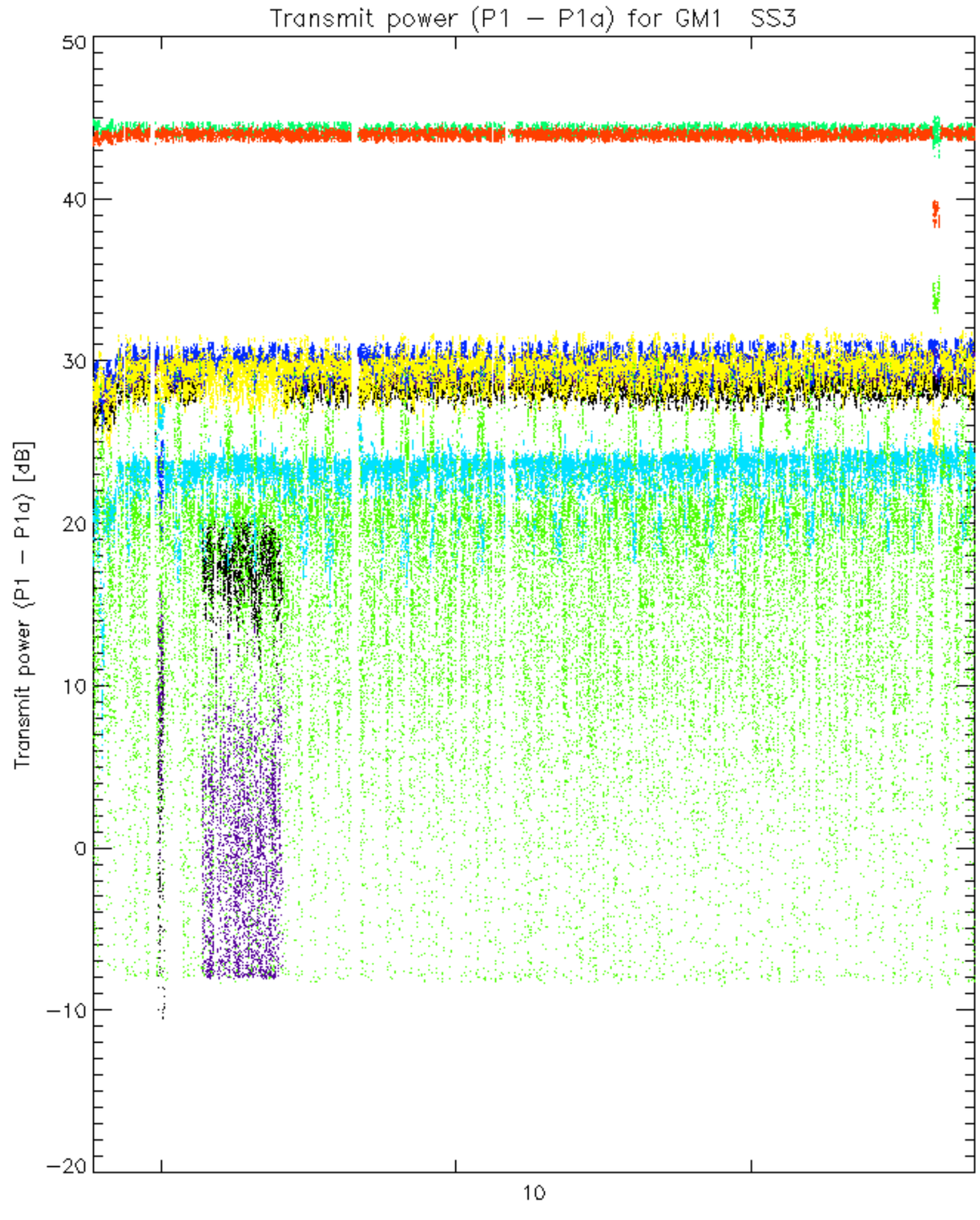
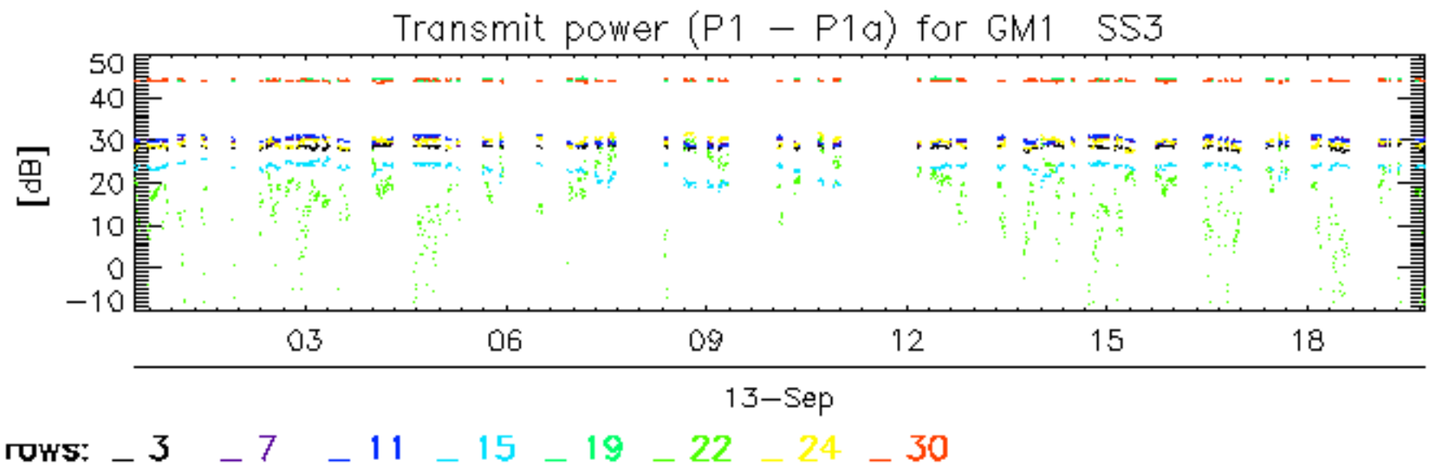
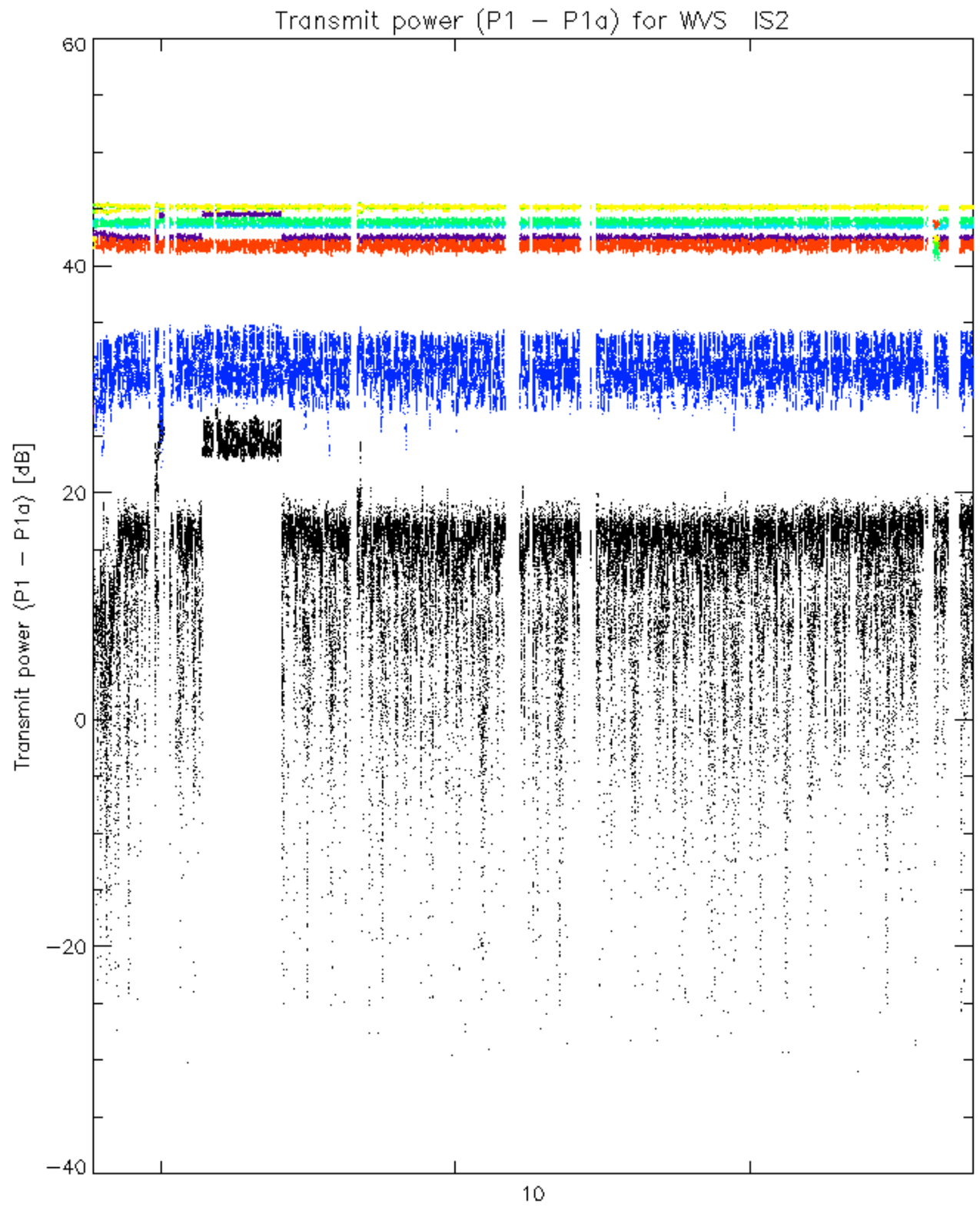
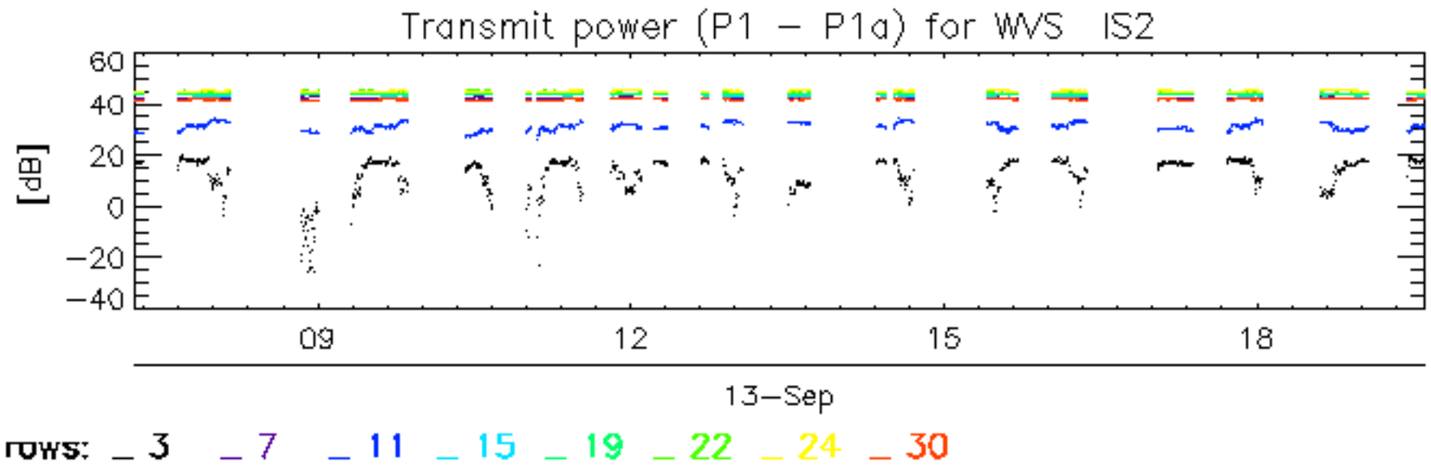

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
10
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
13–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
10
rows: 3 7 11 15 19 22 24 30


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

No unavailabilities during the reported period.