PRELIMINARY REPORT OF 040905

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

last update on Sun Sep 5 13:13:16 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	20040903 055516
H	20040904 084451

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.

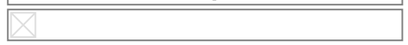
4.1 - Daily statistics

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	-3.468451	0.052900	0.096279
7	P1	-3.315451	0.057559	0.059549
11	P1	-4.660501	0.114649	0.117599
15	P1	-5.763911	0.118998	0.085894
19	P1	-3.470413	0.005696	-0.027430
22	P1	-4.537012	0.011093	0.025678
24	P1	-4.968033	0.020017	0.019626
30	P1	-6.956707	0.021136	-0.073517

3	P1	-15.914197	1.623978	-0.022313
7	P1	-14.044858	0.173316	0.049558
11	P1	-20.169697	0.416230	-0.309947
15	P1	-11.791230	0.168833	-0.000011
19	P1	-13.905660	0.033559	-0.057621
22	P1	-16.156191	0.331800	0.150305
24	P1	-14.523658	0.315063	0.145240
30	P1	-17.847874	0.460099	-0.266944

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.301104	0.083190	-0.006283
7	P2	-22.609894	0.135056	0.024958
11	P2	-15.304089	0.171961	0.121252
15	P2	-7.059880	0.098397	0.033738
19	P2	-9.562495	0.192796	0.061262
22	P2	-17.344732	0.119053	0.093646
24	P2	-20.746166	0.089641	-0.025167
30	P2	-19.242373	0.082501	0.127866

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.142524	0.002799	-0.012741
7	P3	-8.142516	0.002799	-0.012787
11	P3	-8.142508	0.002798	-0.012826
15	P3	-8.142501	0.002798	-0.012868
19	P3	-8.142495	0.002798	-0.012891
22	P3	-8.142480	0.002800	-0.012989
24	P3	-8.142477	0.002800	-0.012988
30	P3	-8.142472	0.002793	-0.012637

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	-2.705182	0.259271	-0.030167
7	P1	-2.958386	0.212239	0.062595
11	P1	-3.896113	0.160433	0.108424
15	P1	-3.544206	0.129543	0.115587
19	P1	-3.483047	0.013758	-0.021815
22	P1	-5.700437	0.038331	-0.043354
24	P1	-3.912909	0.015171	-0.073562
30	P1	-6.174622	0.061766	-0.066163
3	P1	-10.420801	1.050320	-0.333677
7	P1	-10.066712	0.171141	-0.001278
11	P1	-12.154970	0.113965	-0.101919
15	P1	-11.659803	0.101394	-0.068601
19	P1	-15.620245	0.049359	-0.007419
22	P1	-23.364981	1.133744	-0.066106
24	P1	-17.911280	0.231784	-0.171183
30	P1	-20.446012	1.215374	0.007063

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.980070	0.056707	-0.041667
7	P2	-22.750511	0.045754	0.015350
11	P2	-10.976395	0.065573	0.082033
15	P2	-4.950733	0.035166	-0.033383
19	P2	-6.758265	0.050943	-0.035898
22	P2	-7.442821	0.044057	0.003910
24	P2	-11.043659	0.050030	-0.051310
30	P2	-22.187342	0.034660	0.066809

P3 Cyclic statistics

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

3	P3	-7.992104	0.003721	-0.028282
7	P3	-7.992135	0.003726	-0.028281
11	P3	-7.992209	0.003715	-0.027972
15	P3	-7.992094	0.003716	-0.028050
19	P3	-7.992096	0.003723	-0.028123
22	P3	-7.992115	0.003723	-0.028294
24	P3	-7.992142	0.003742	-0.028197
30	P3	-7.992071	0.003720	-0.028000

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	0.000477954
	stdev	2.17382e-07
MEAN Q	mean	0.000544322
	stdev	2.34639e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128272
	stdev	0.000963394

STDEV Q	mean	0.128491
	stdev	0.000974026

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

Preliminary report.The data is not yet controled

6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

Acsending

Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

6.5 - Absolute Doppler for GM1

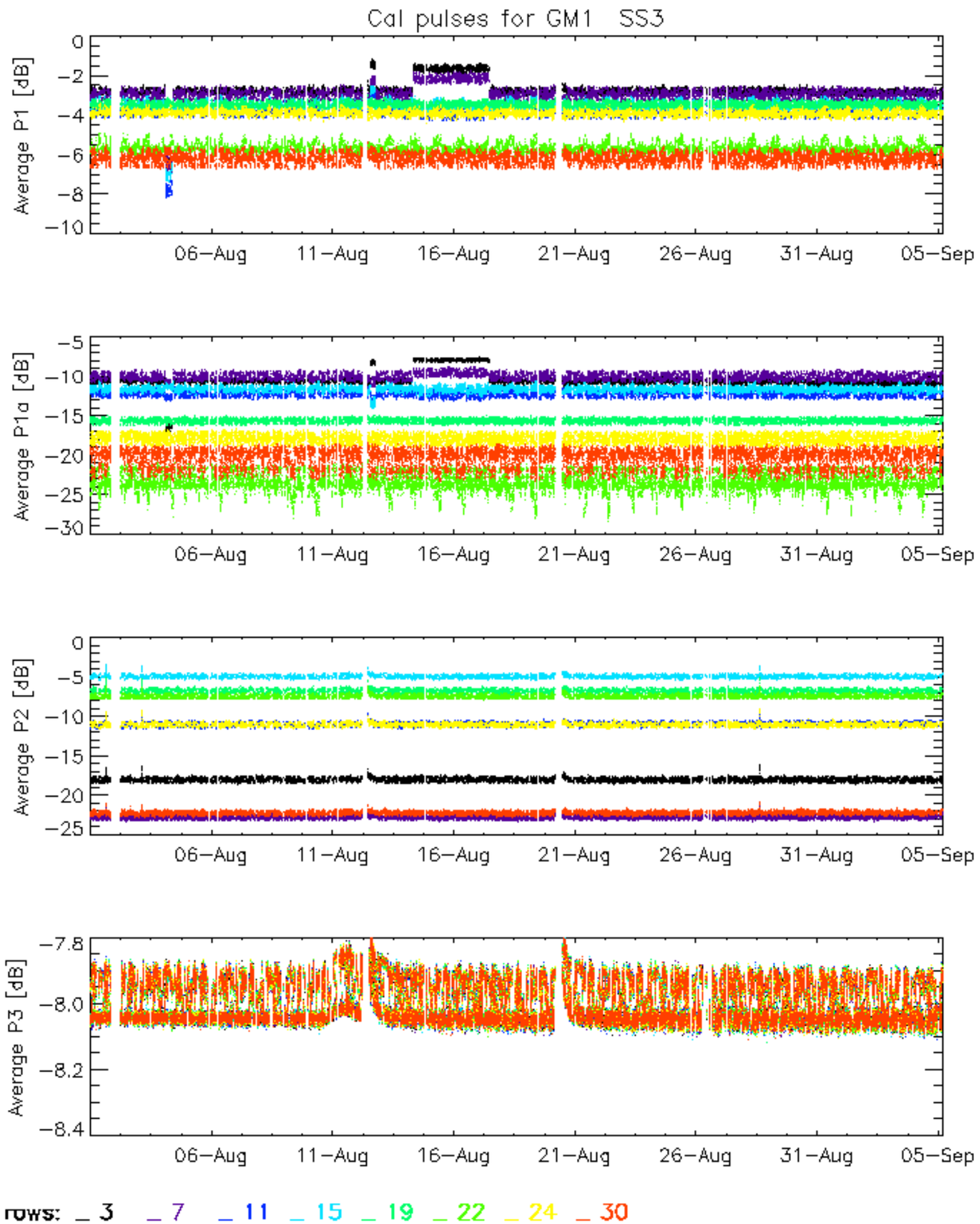
Evolution of Absolute Doppler

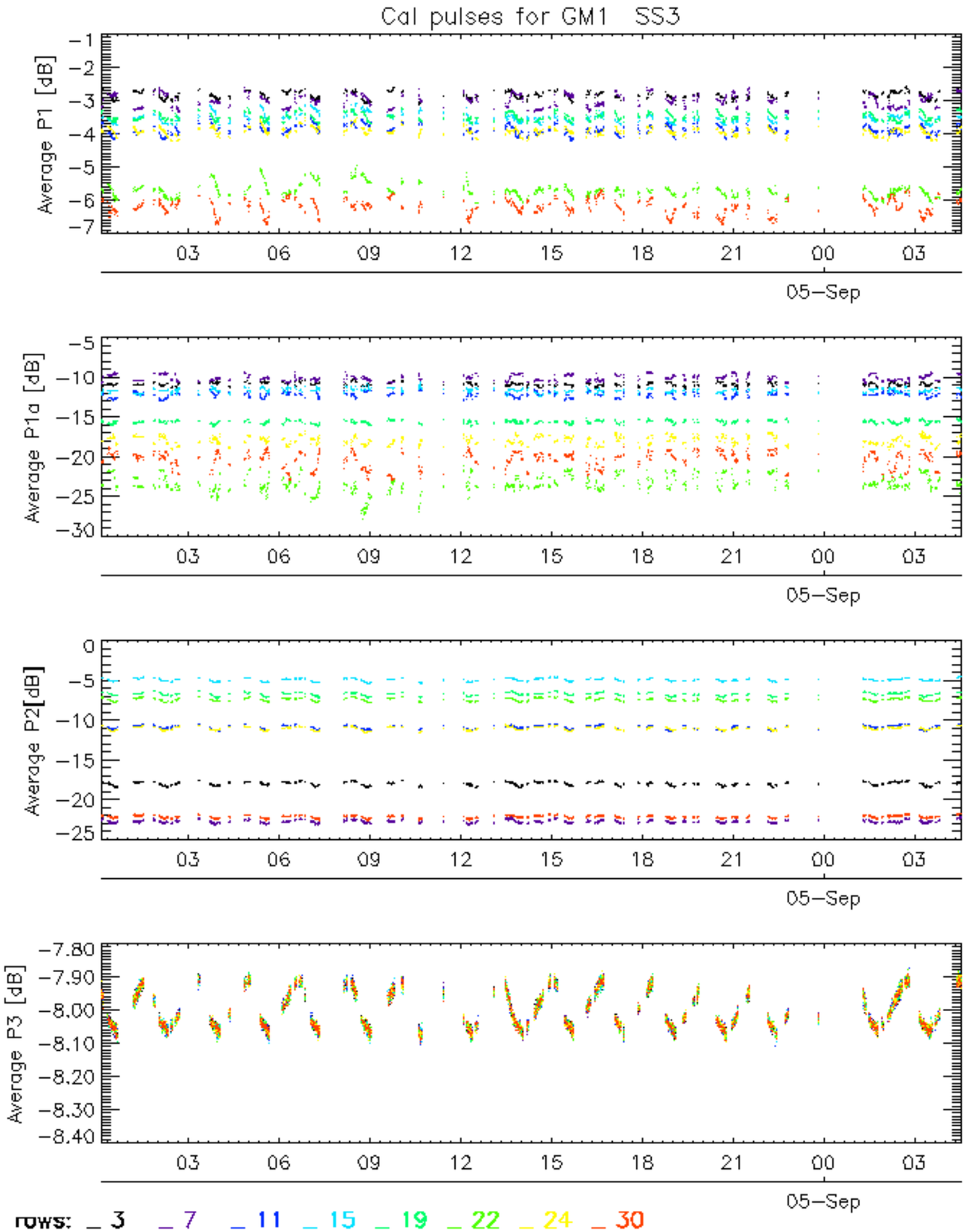
Acsending

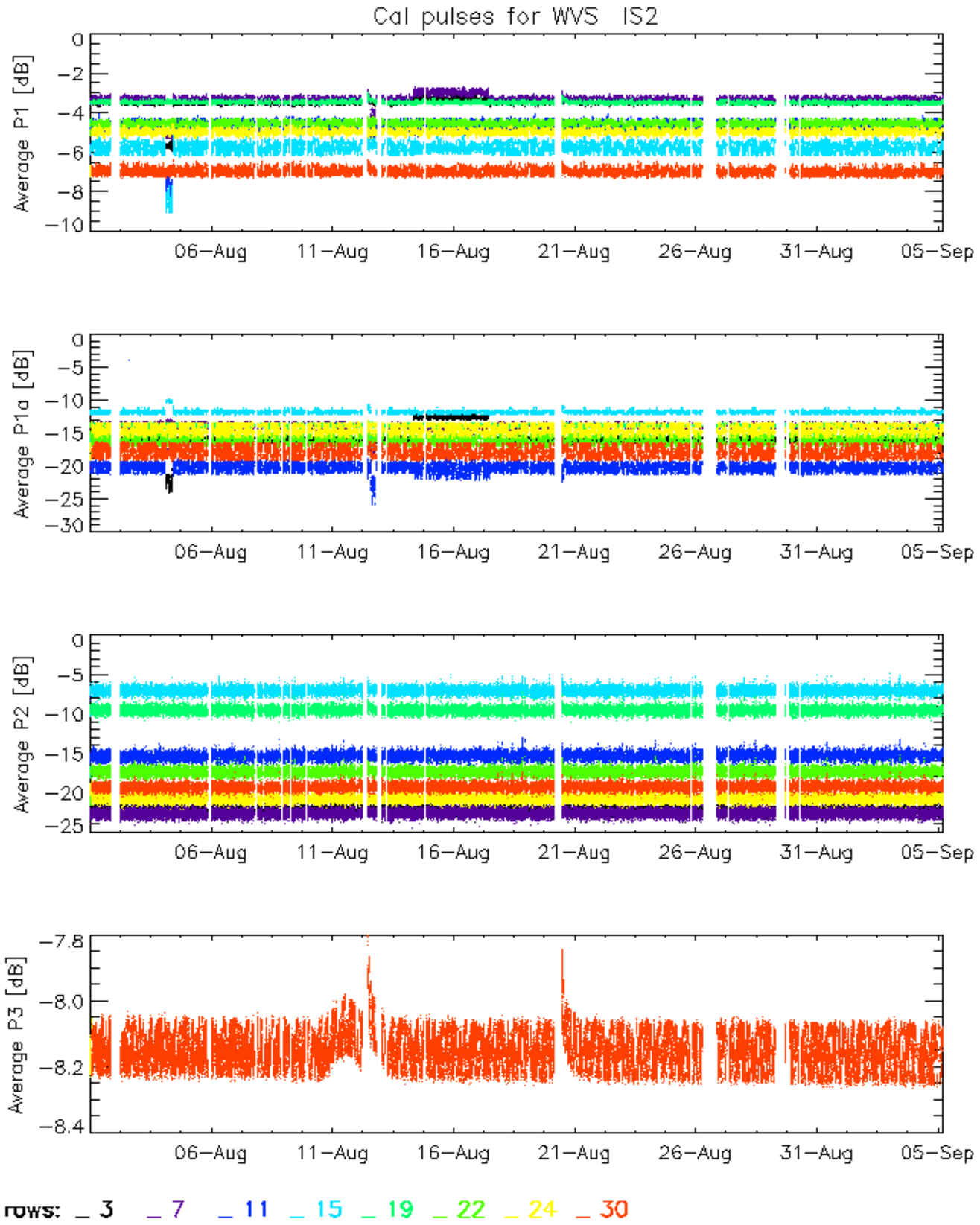
Descending

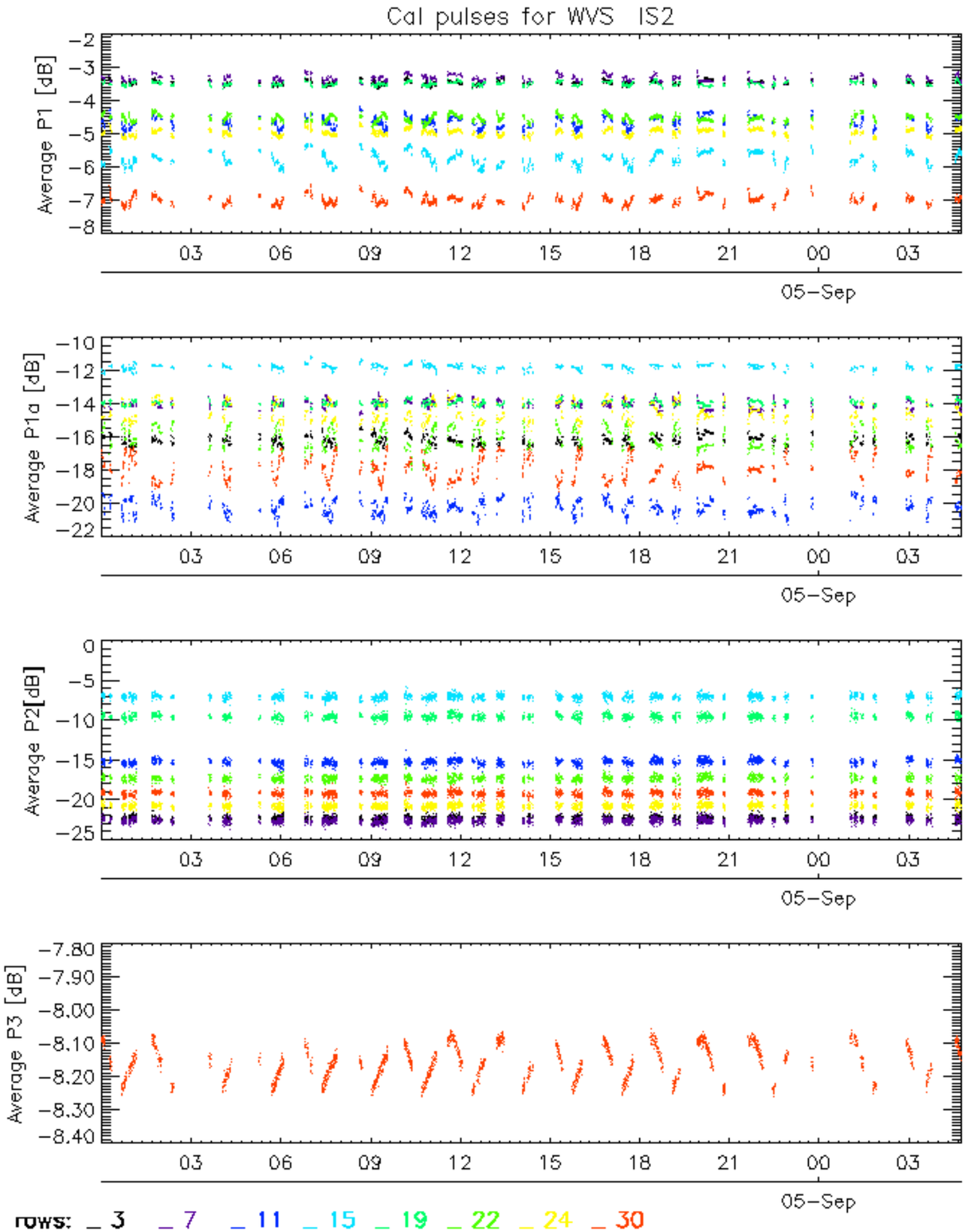
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

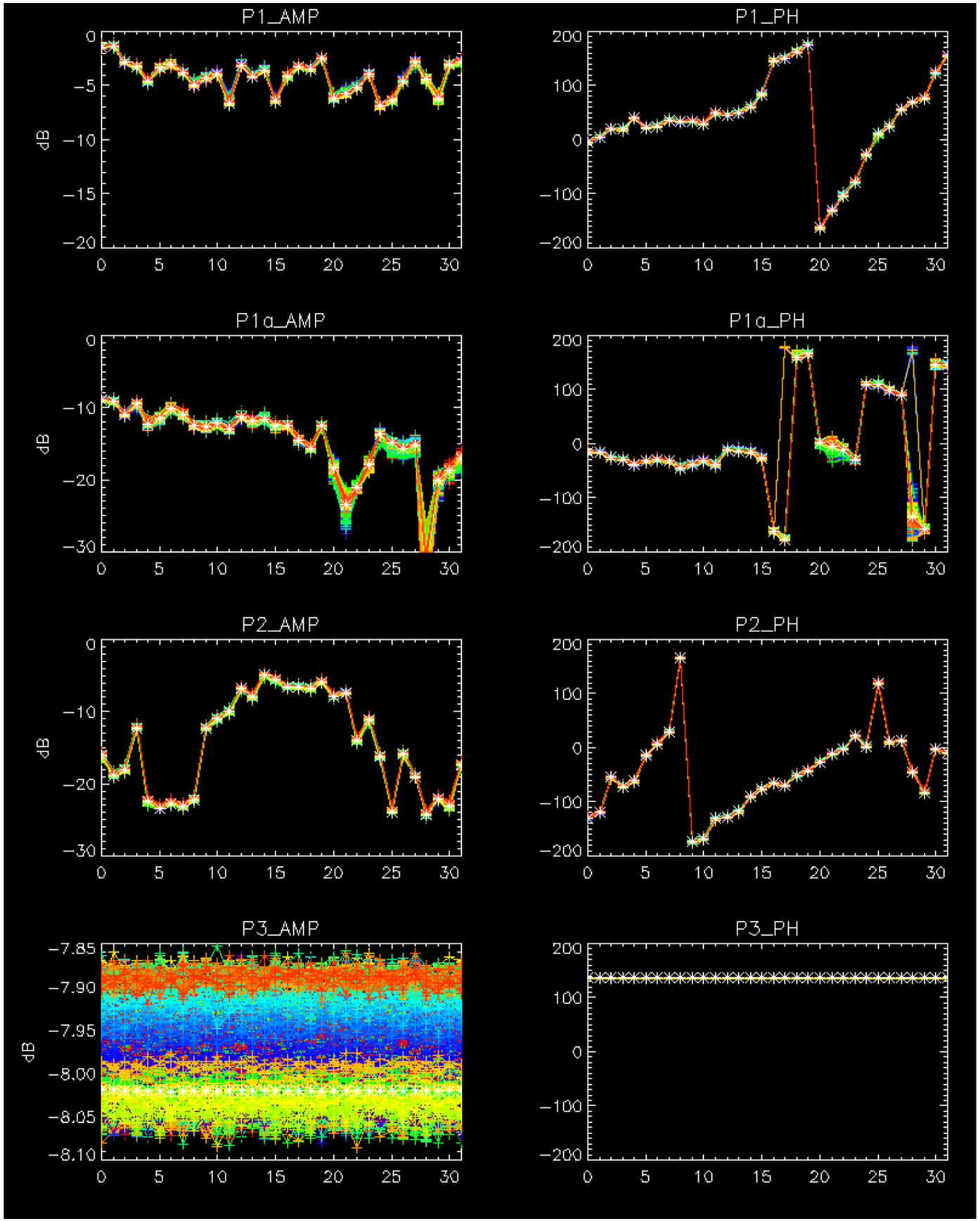


Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

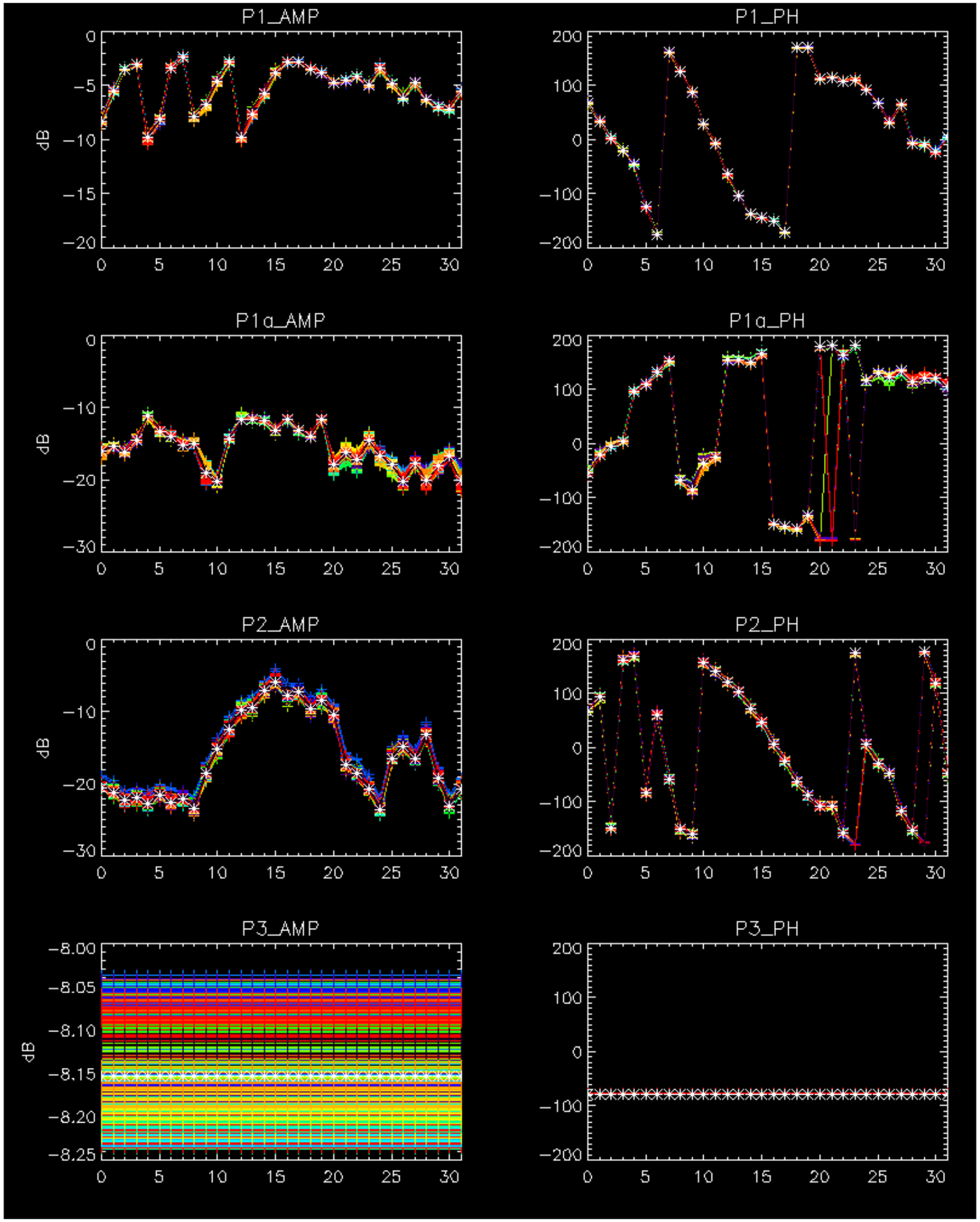

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
05−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
05−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
05−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


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

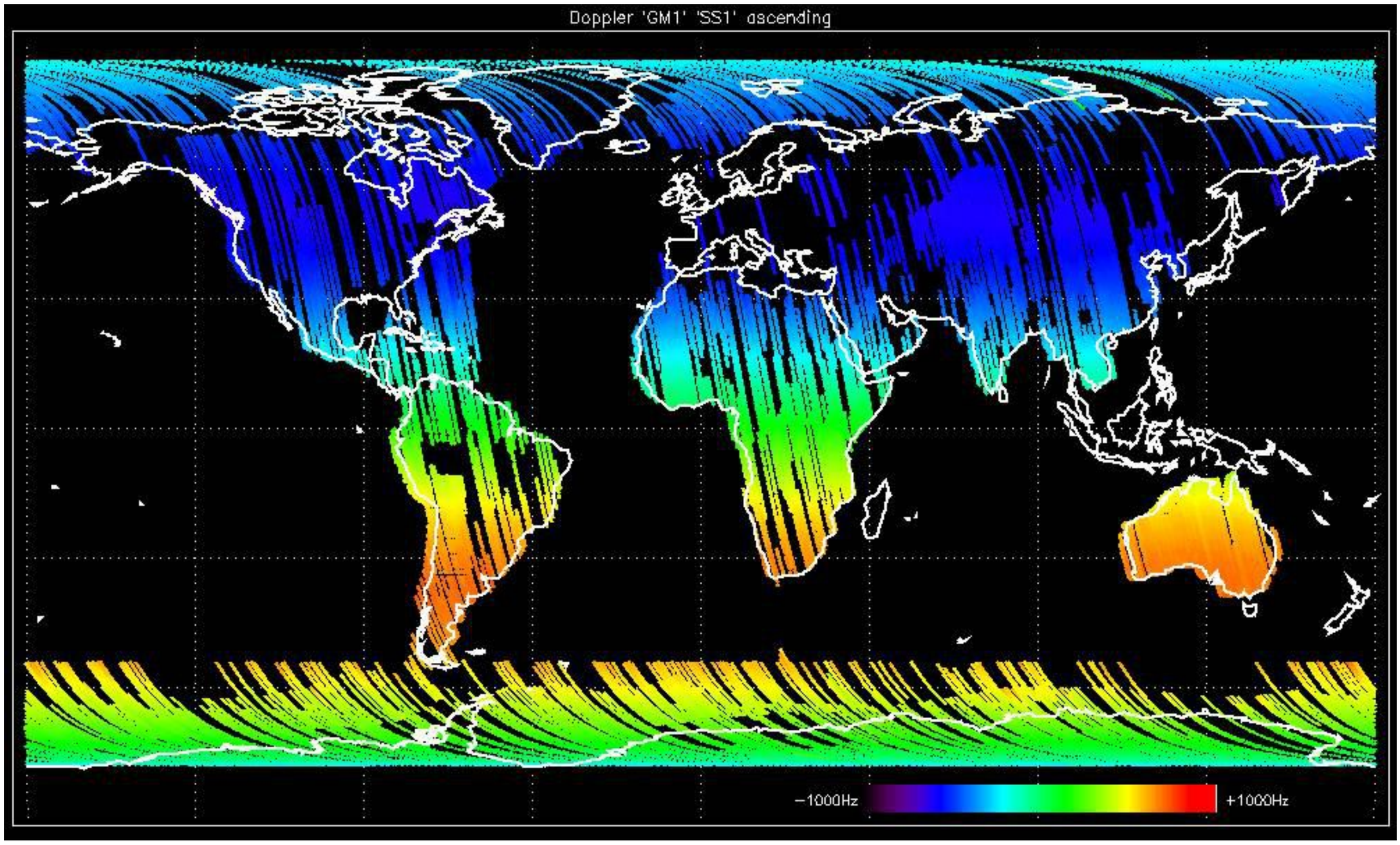
No anomalies observed.

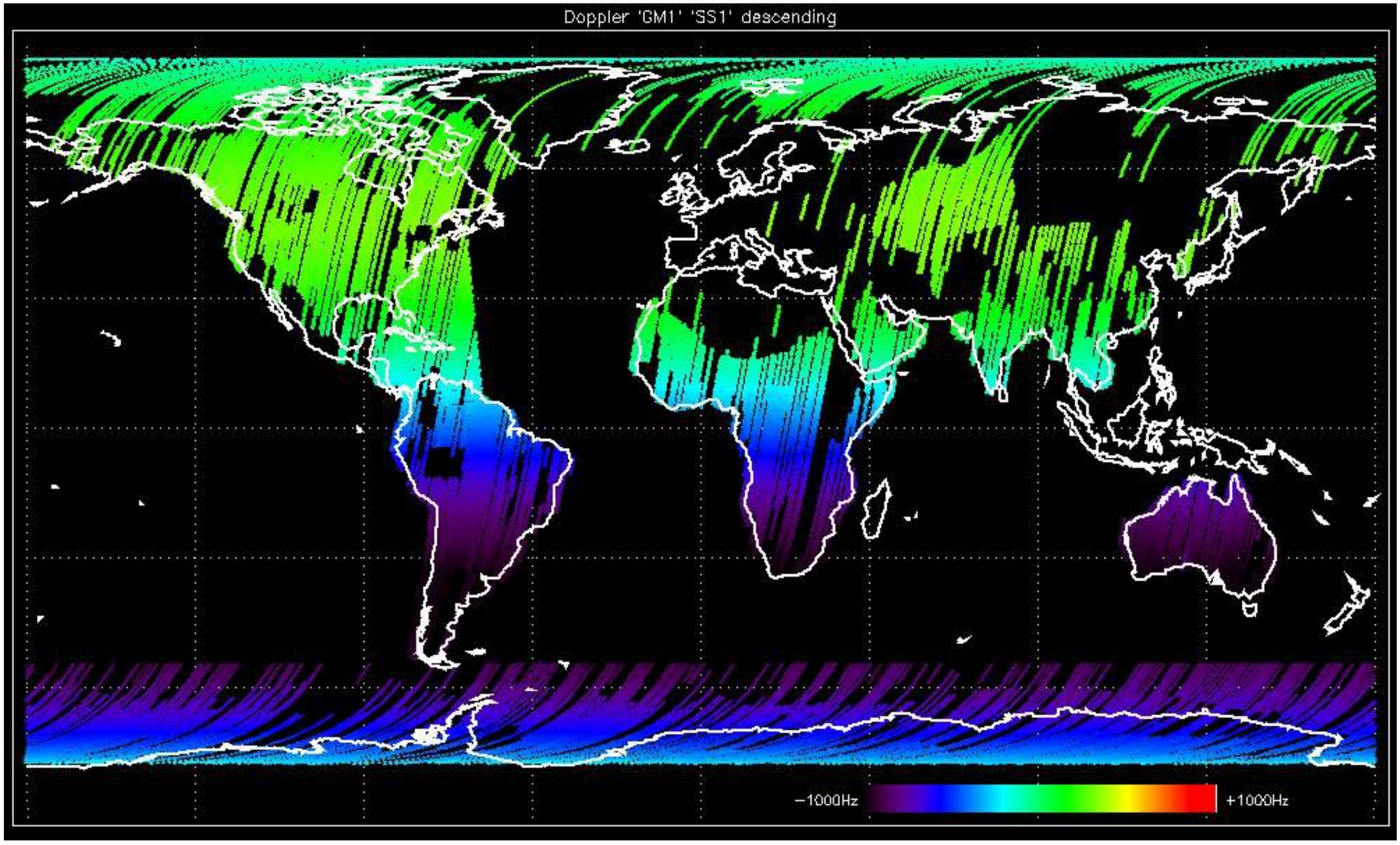

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

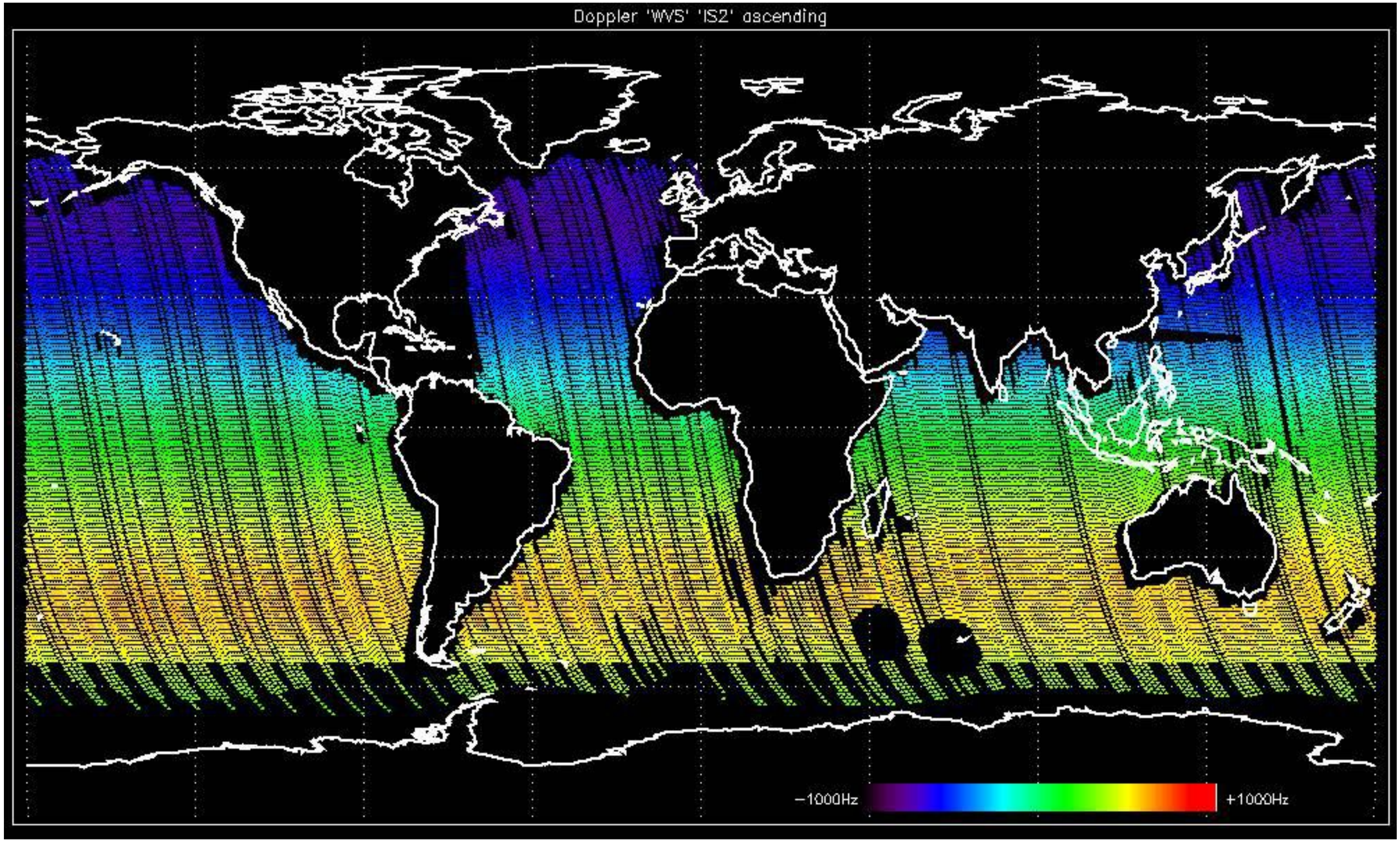

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

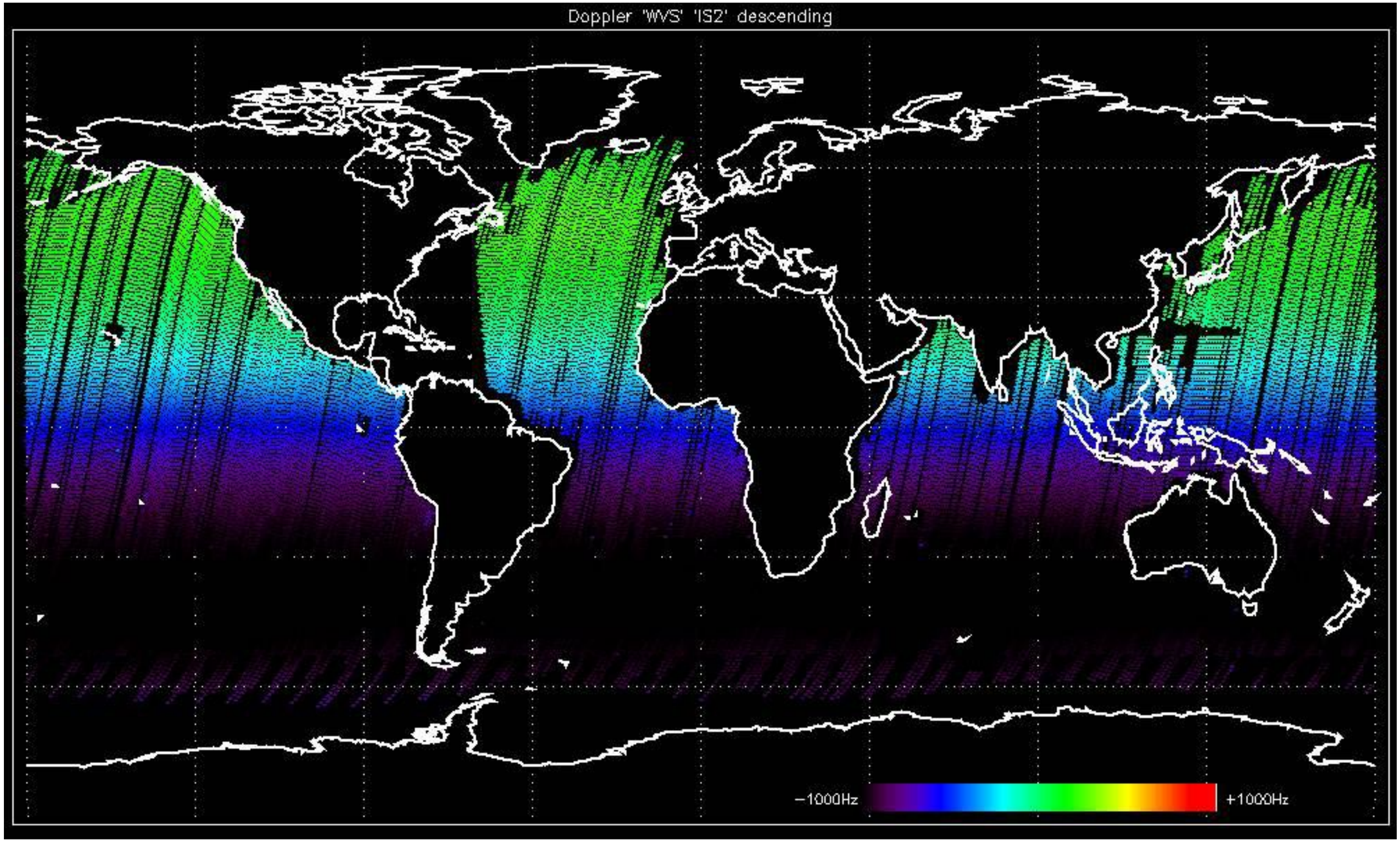
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

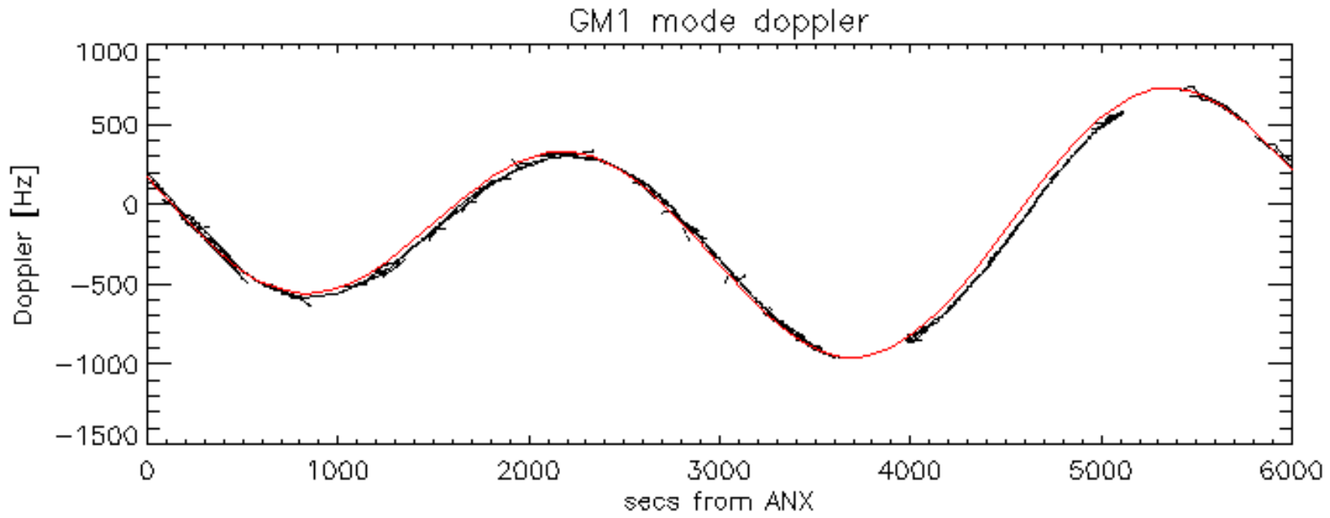
Preliminary report.The data is not yet controled

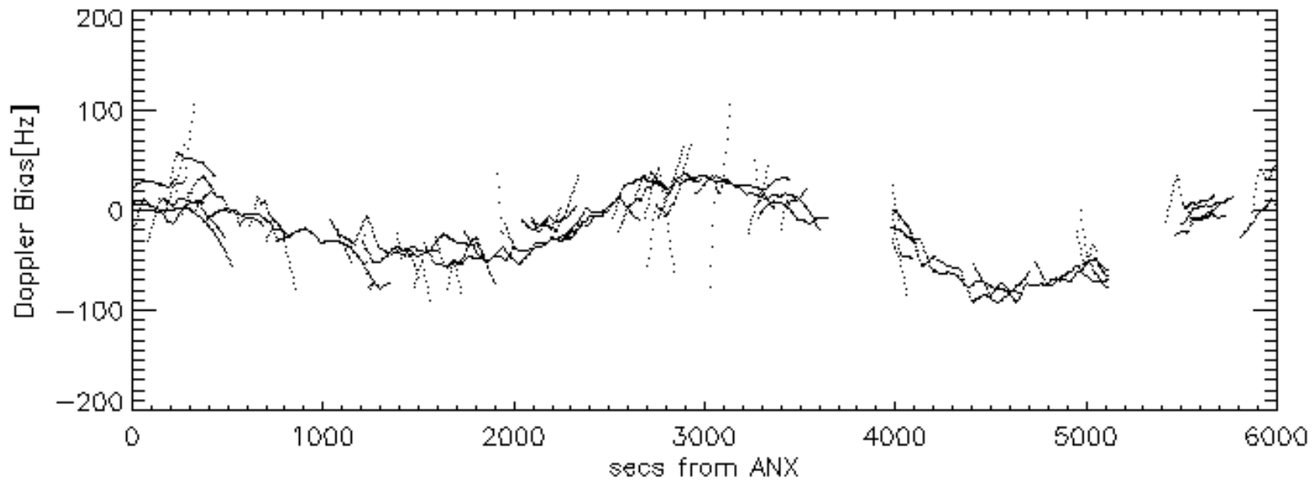

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

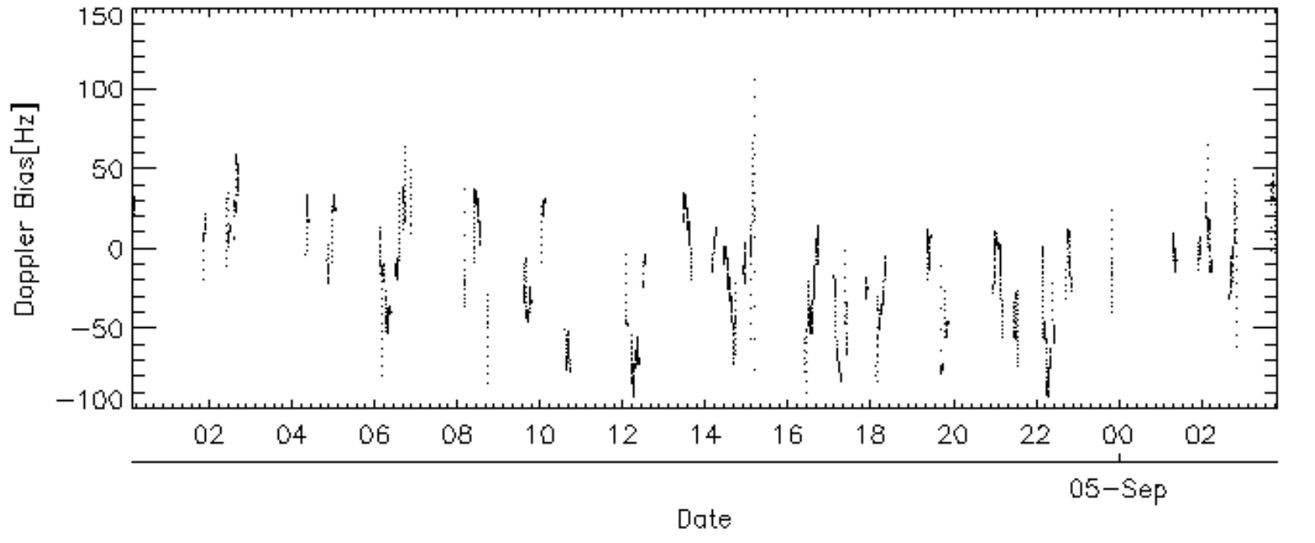

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

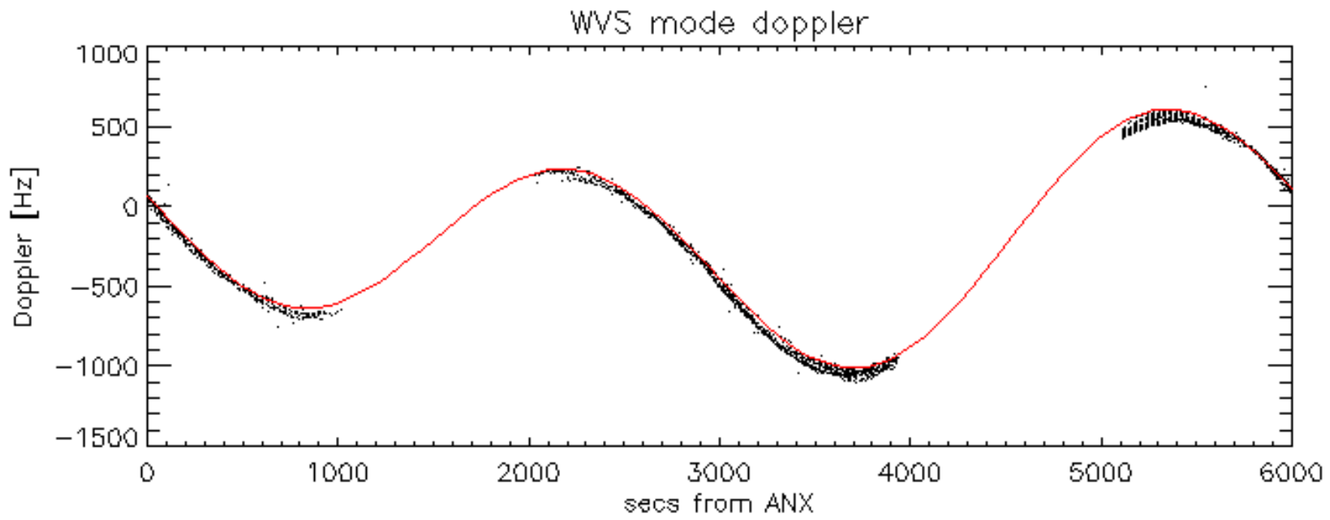

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

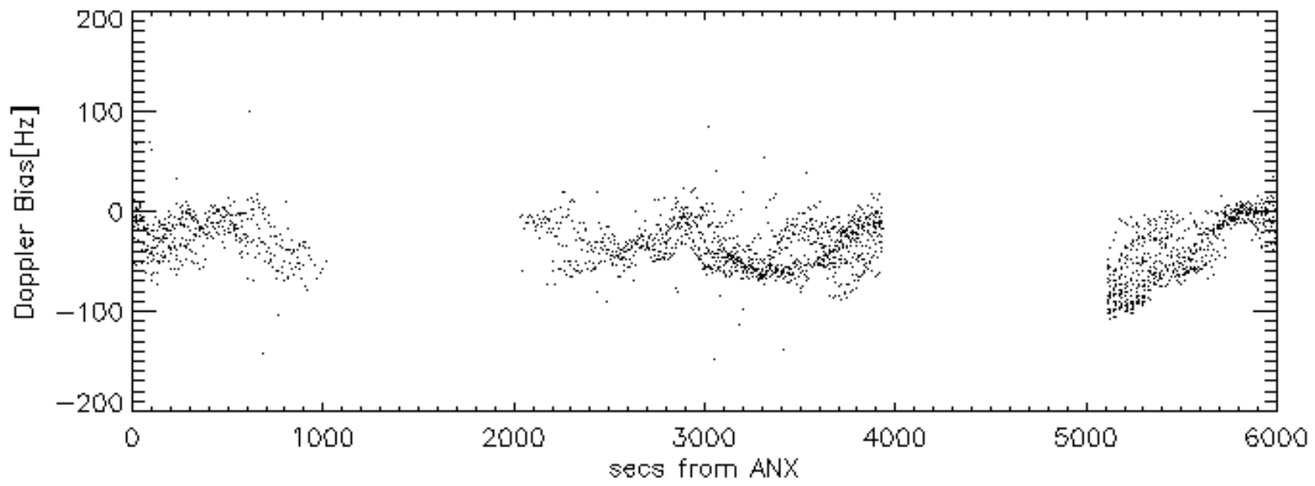

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

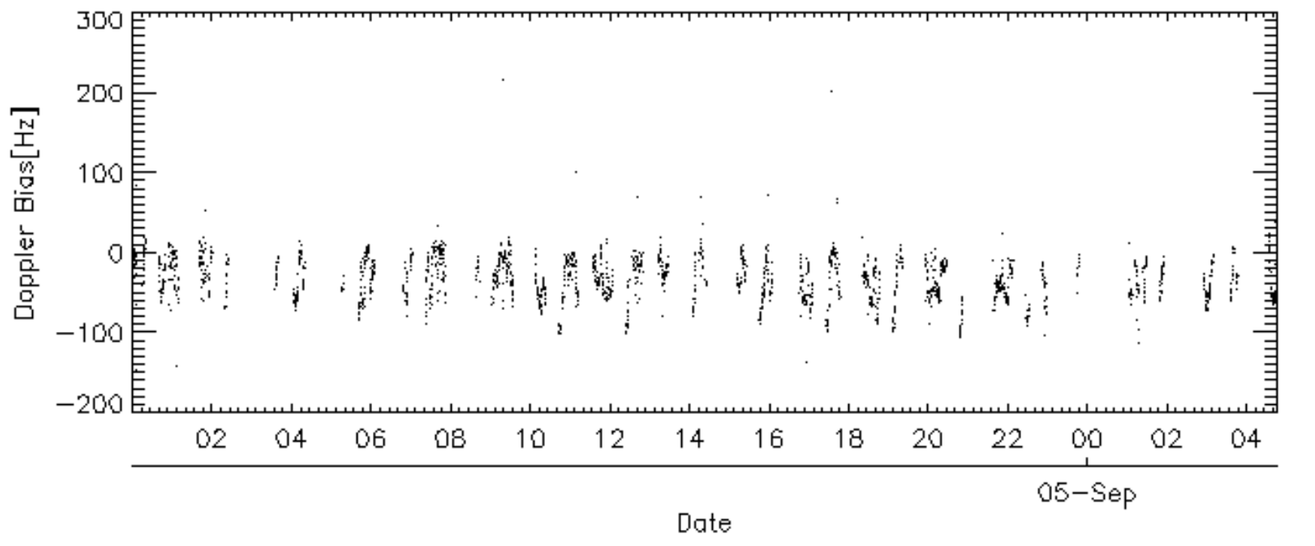

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

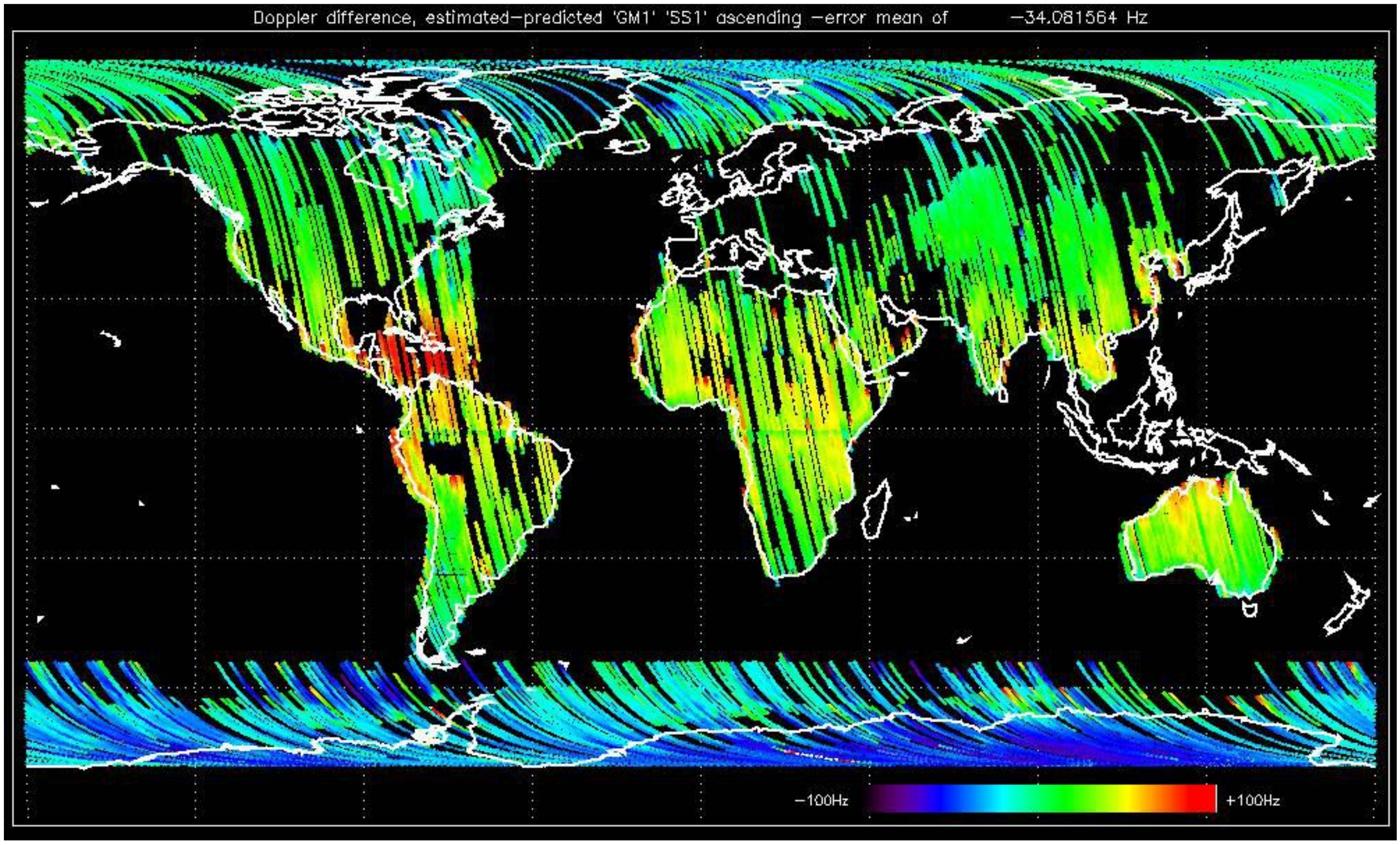

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

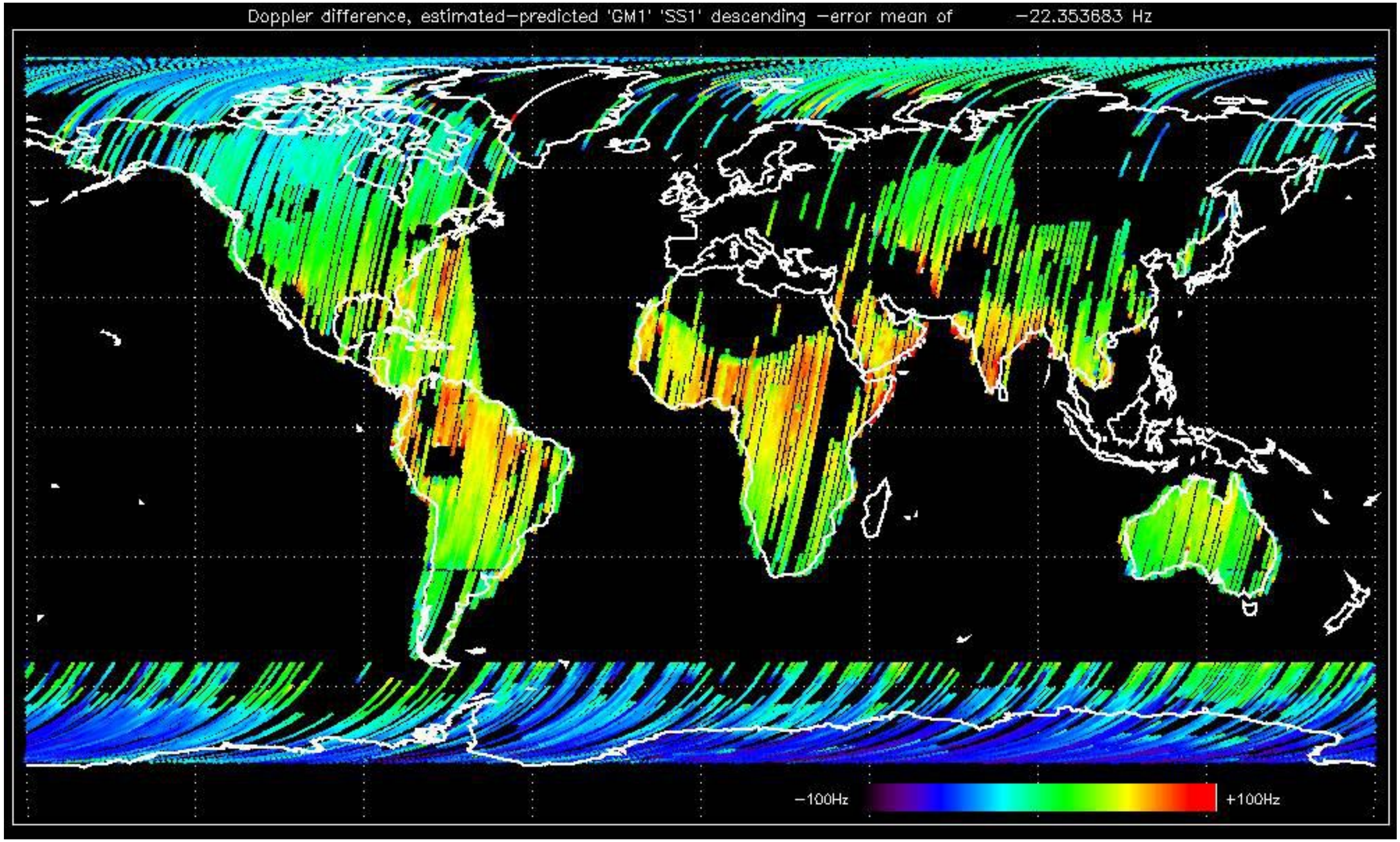

Doppler Bias[Hz]
150
100
50
0
−50
−100
02
04
06
08
10
12
14
16
18
20
22
00
02
05−Sep
Date

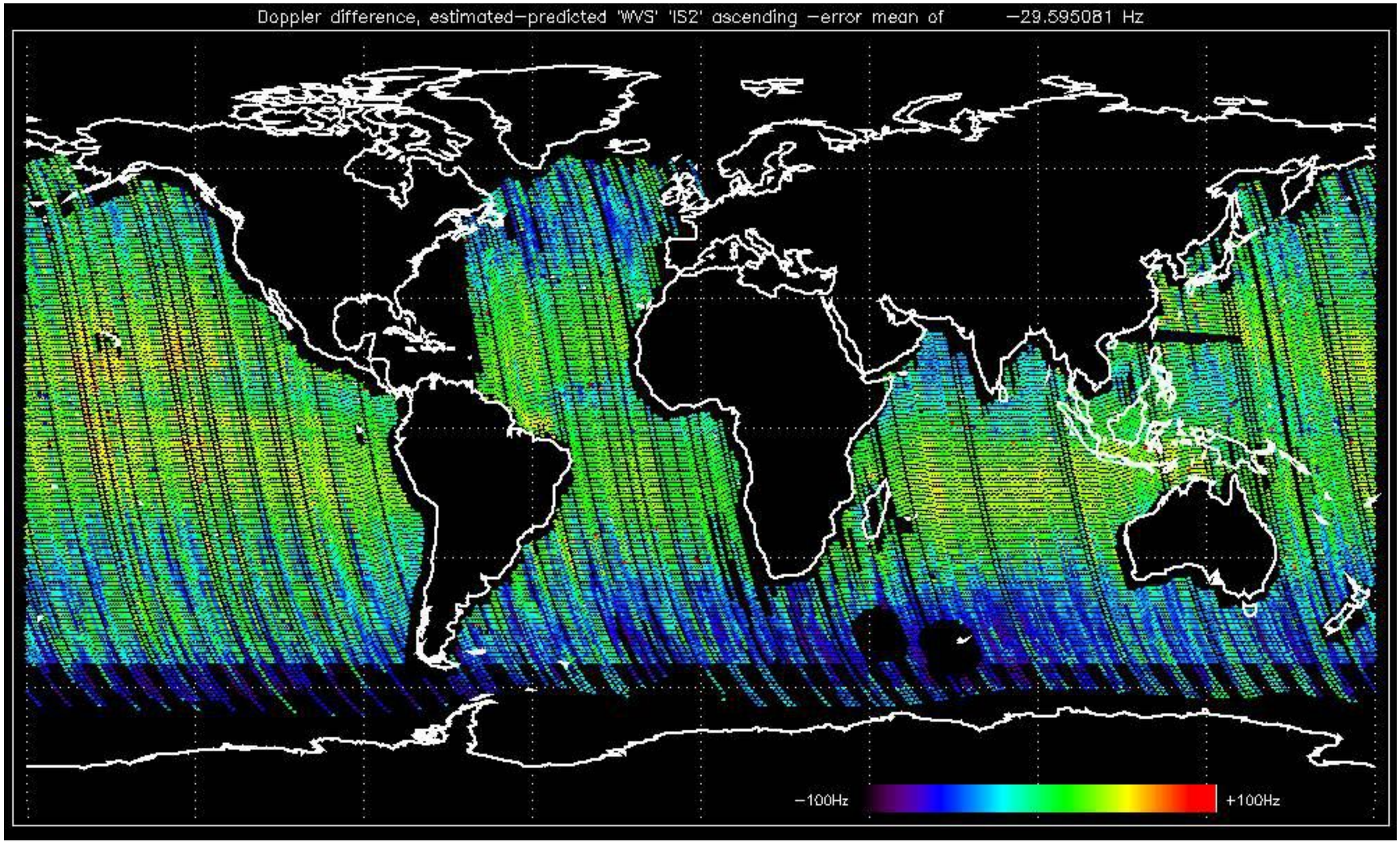

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

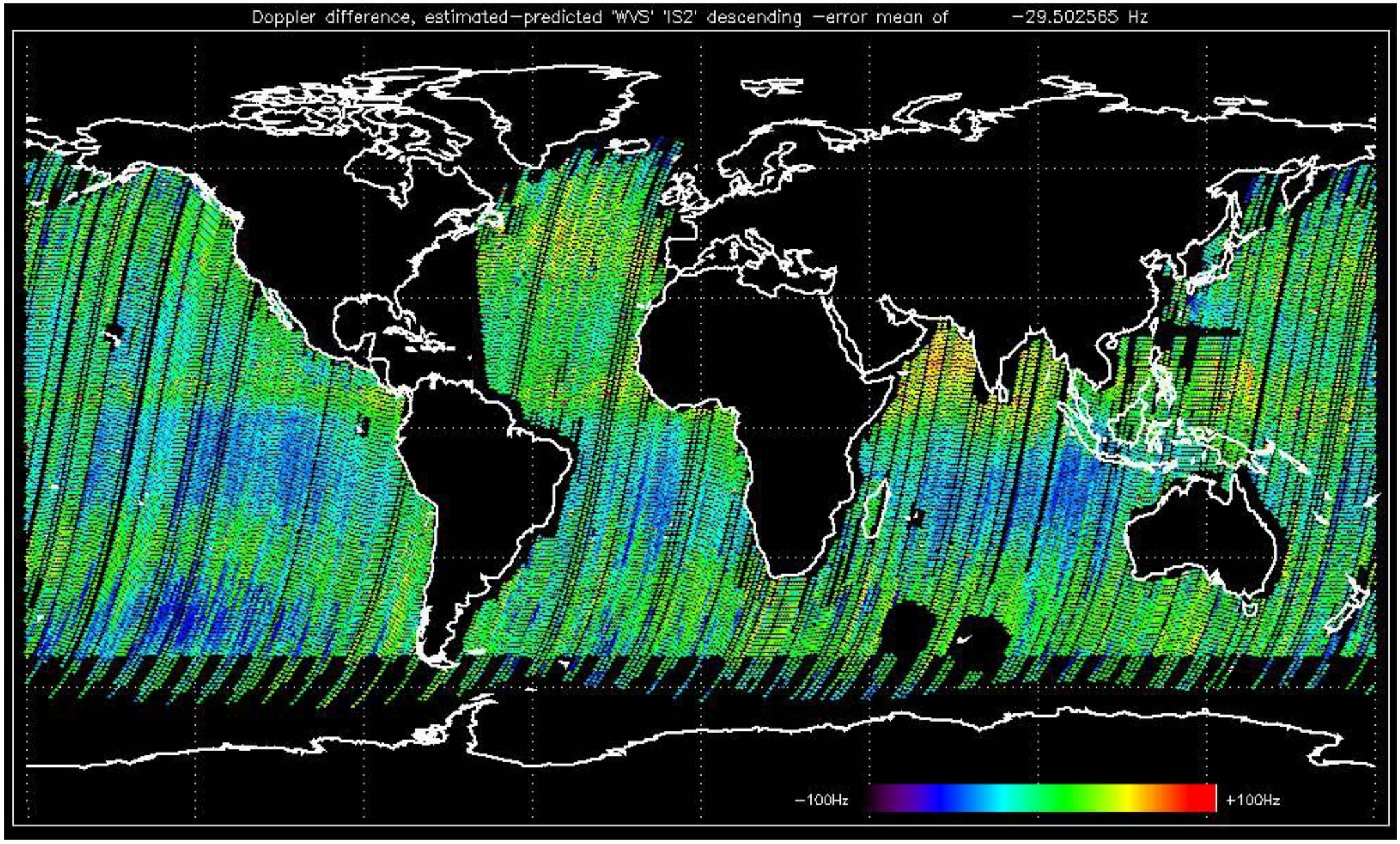

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −34.081564 Hz
−100Hz
+100Hz

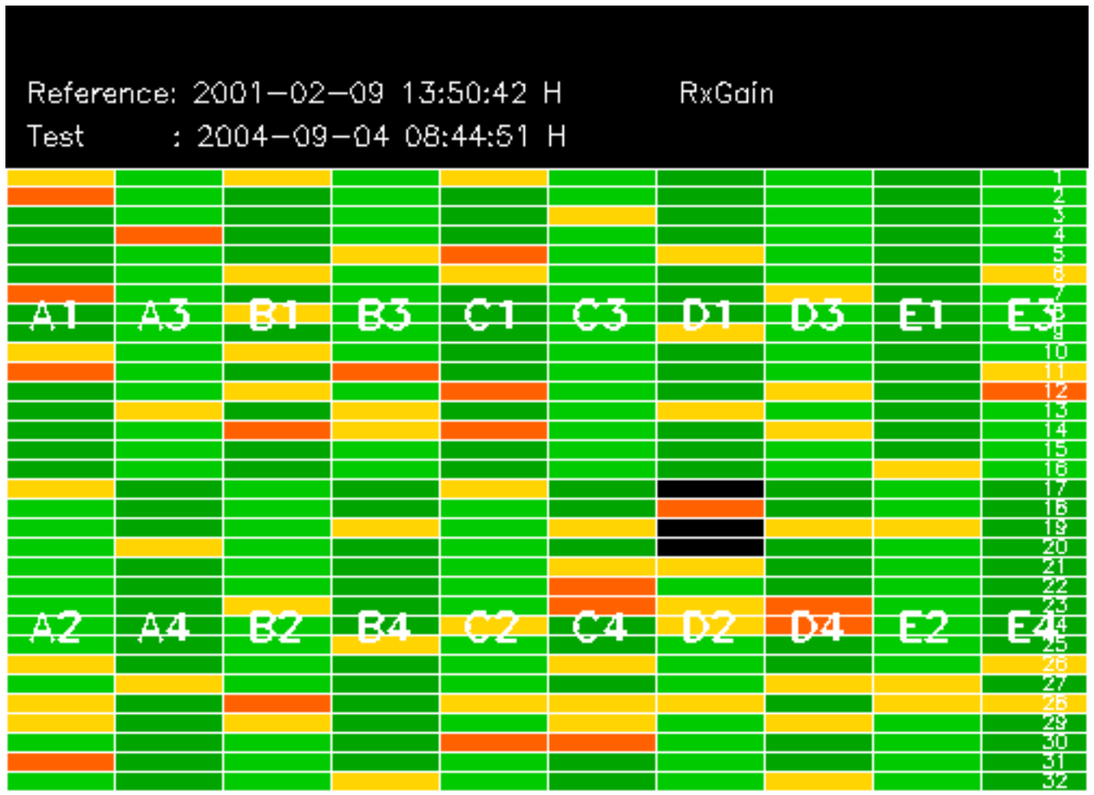

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −22.353683 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.595081 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.502565 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-09-04 08:44:51 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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20
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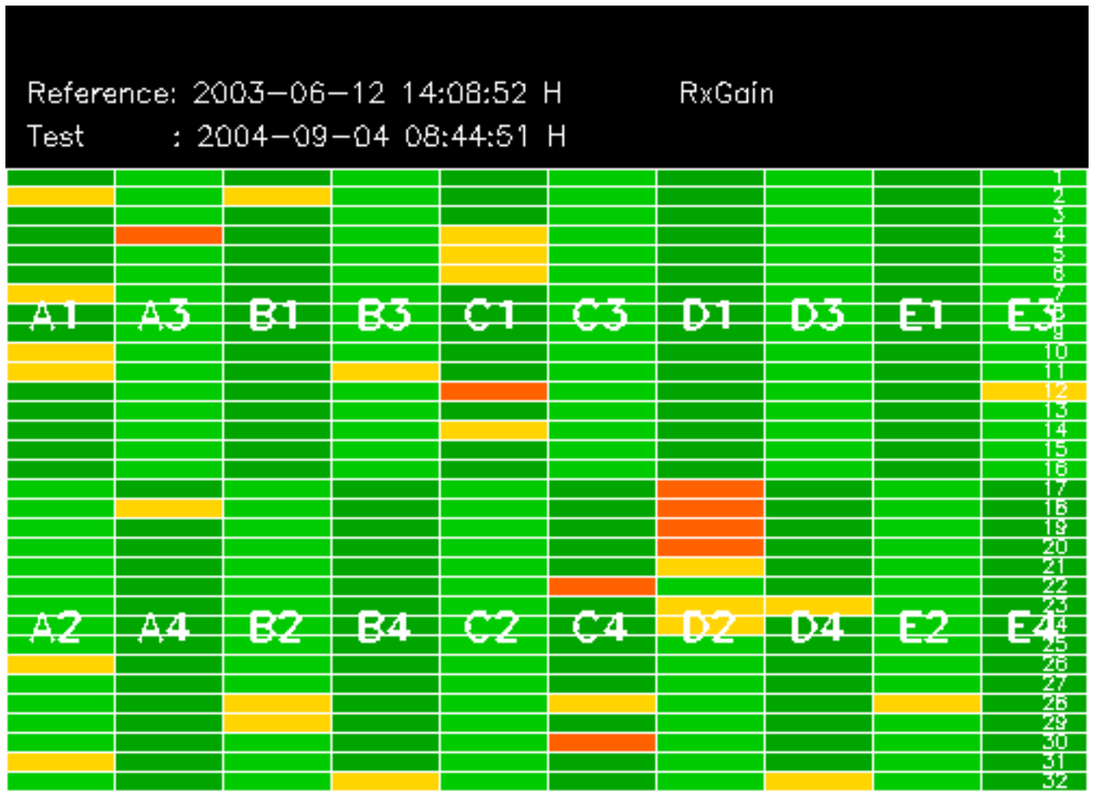
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-04 08:44:51 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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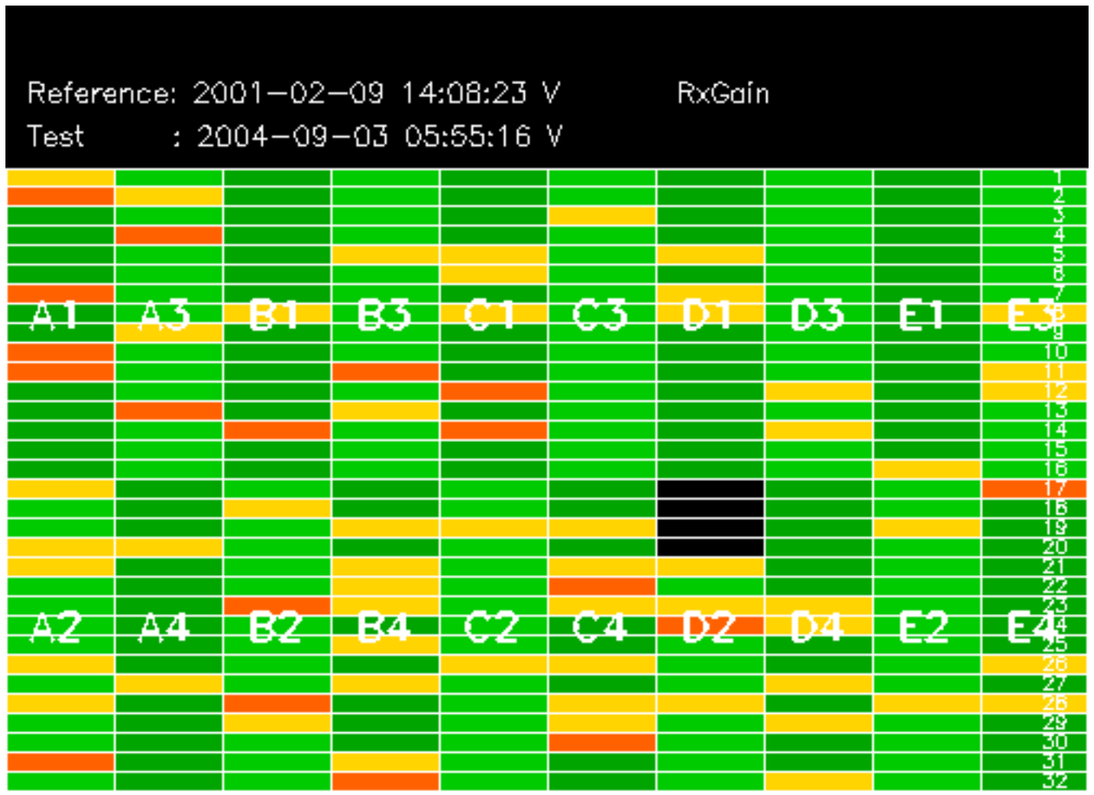
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-03 05:55:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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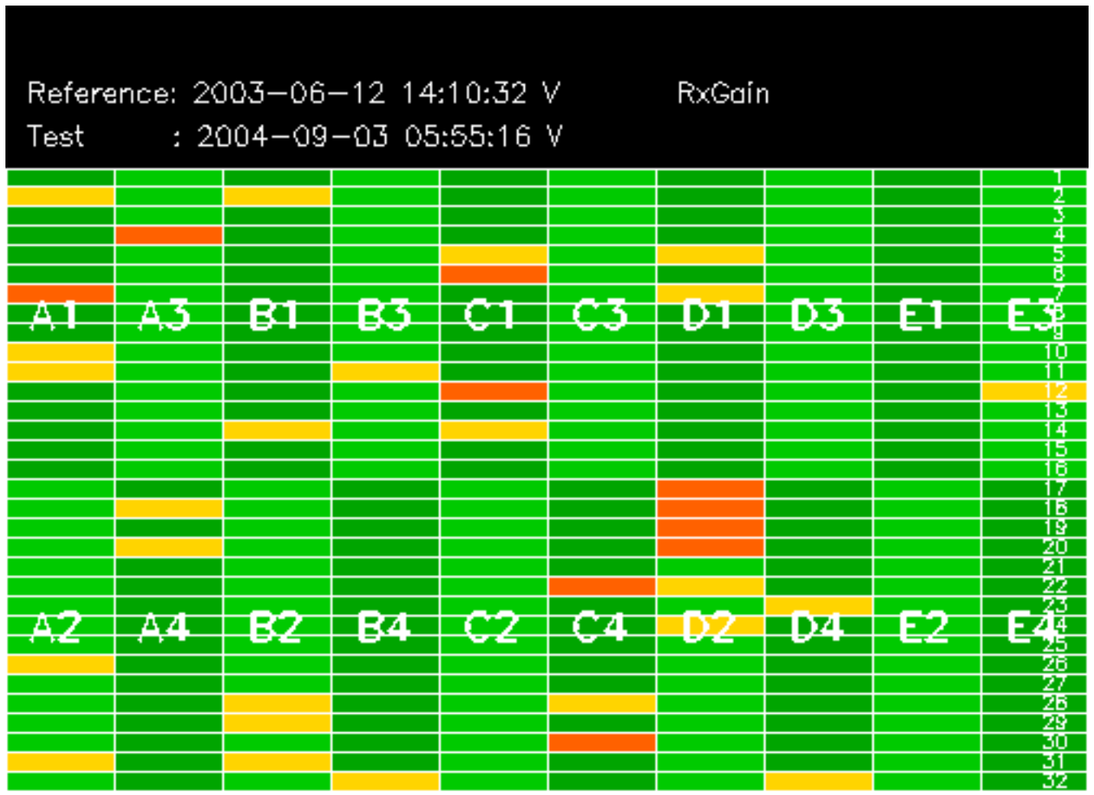
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-03 05:55:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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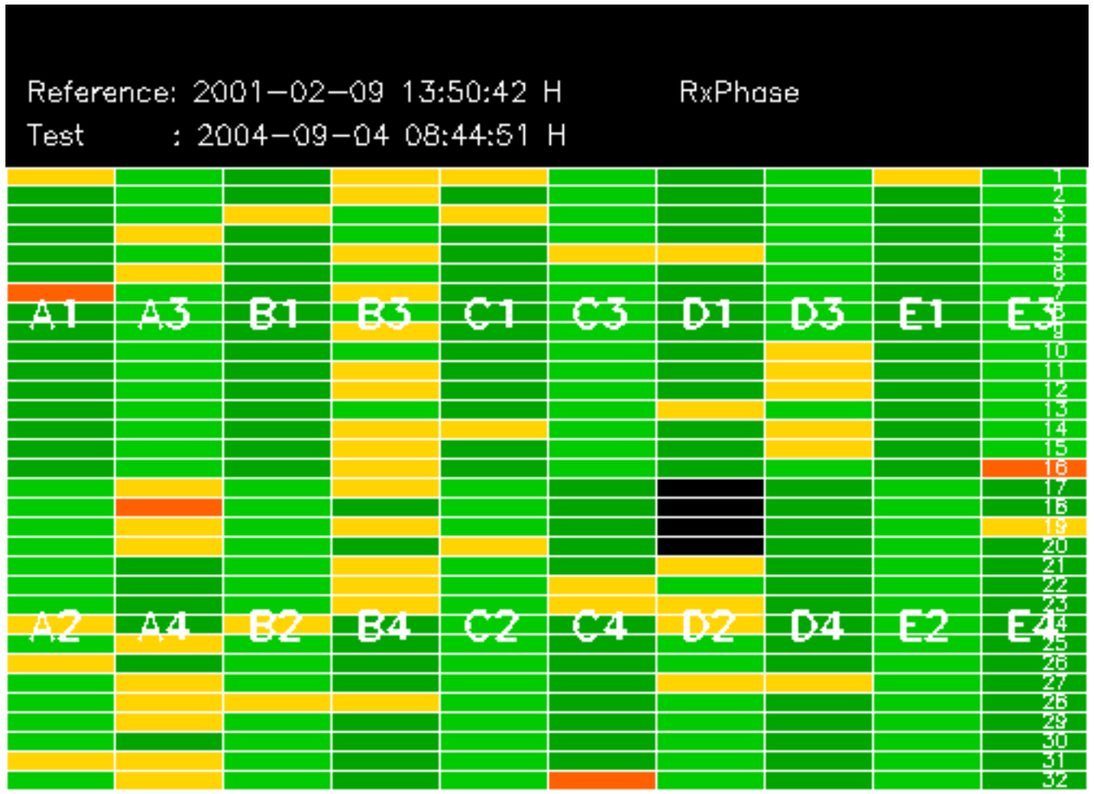
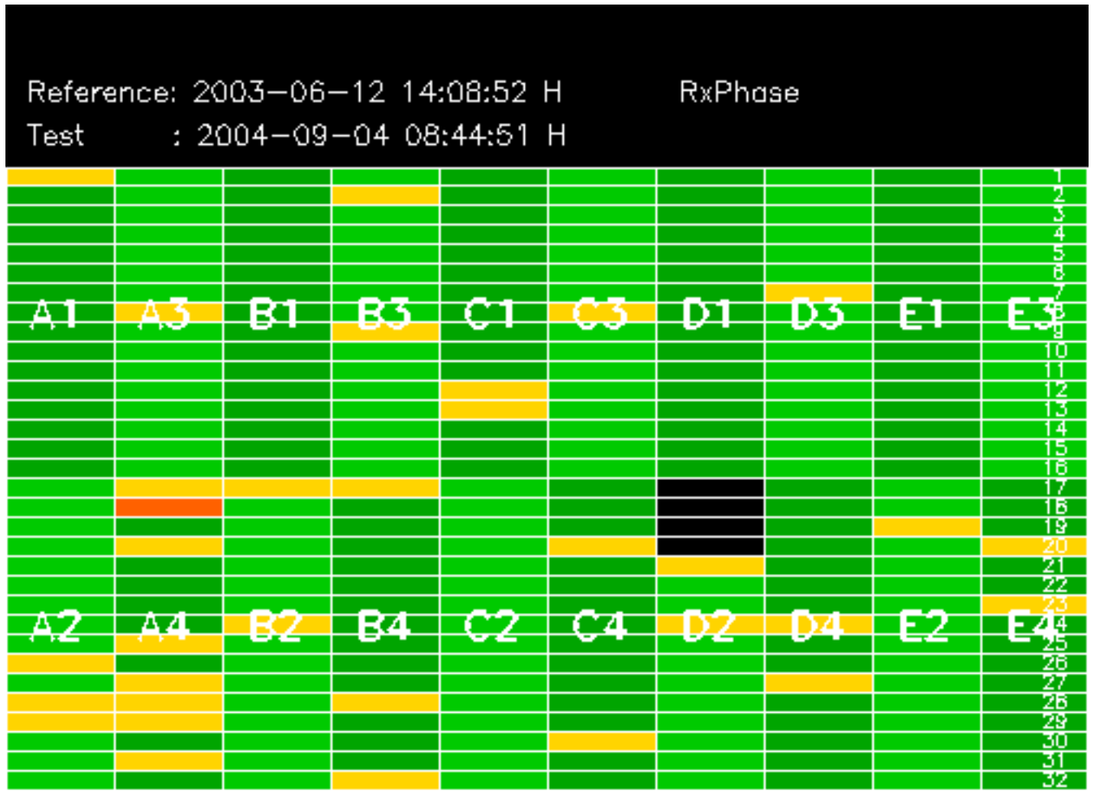
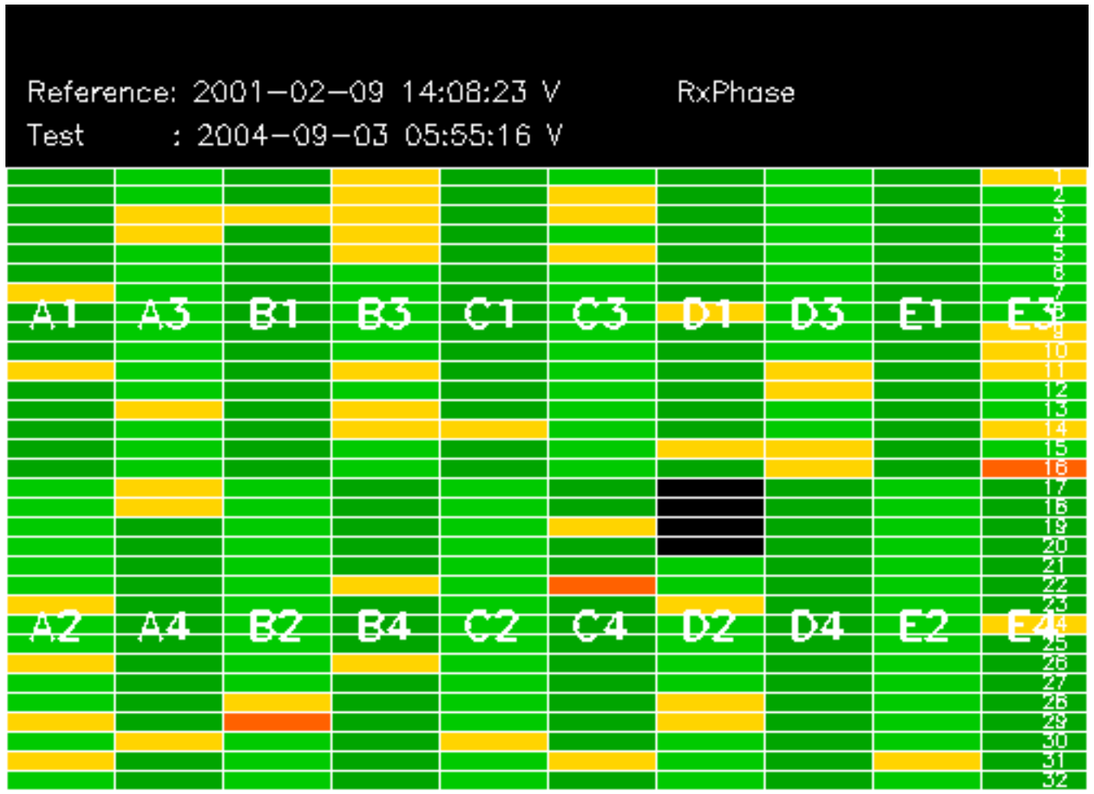

Reference: 2001-02-09 13:50:42 H
Test : 2004-09-04 08:44:51 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-04 08:44:51 H
RxPhase
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 : 2004-09-03 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
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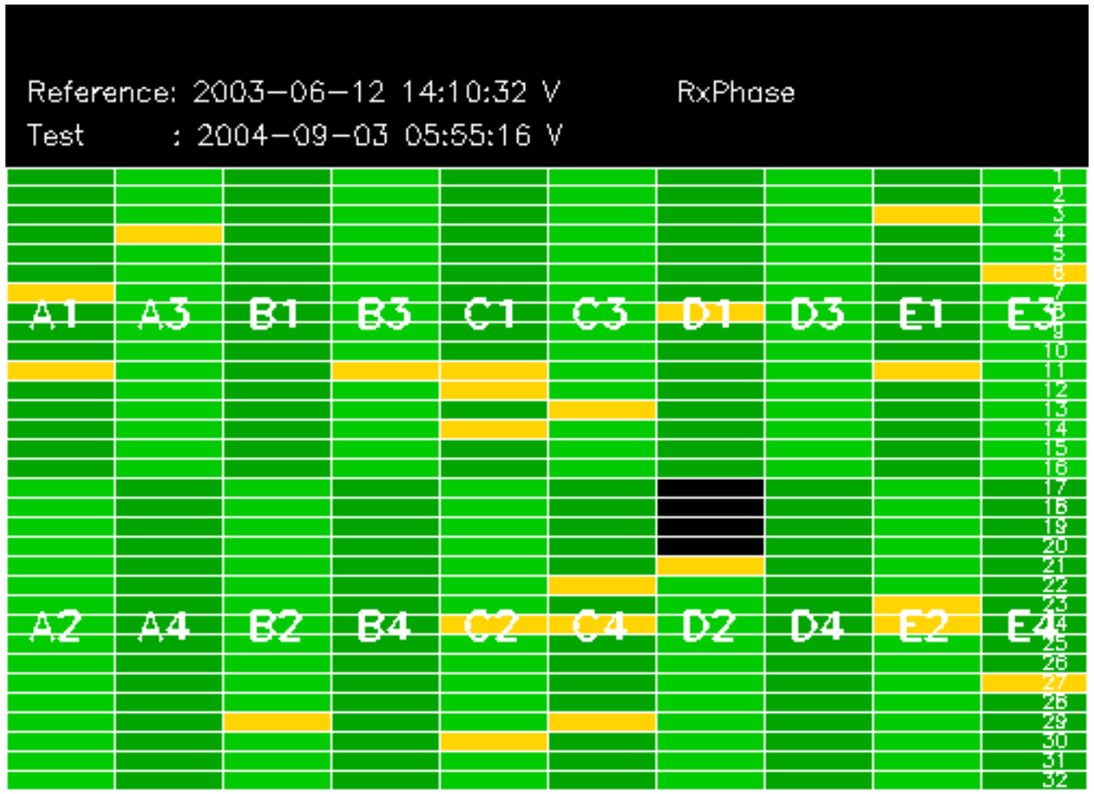
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-03 05:55:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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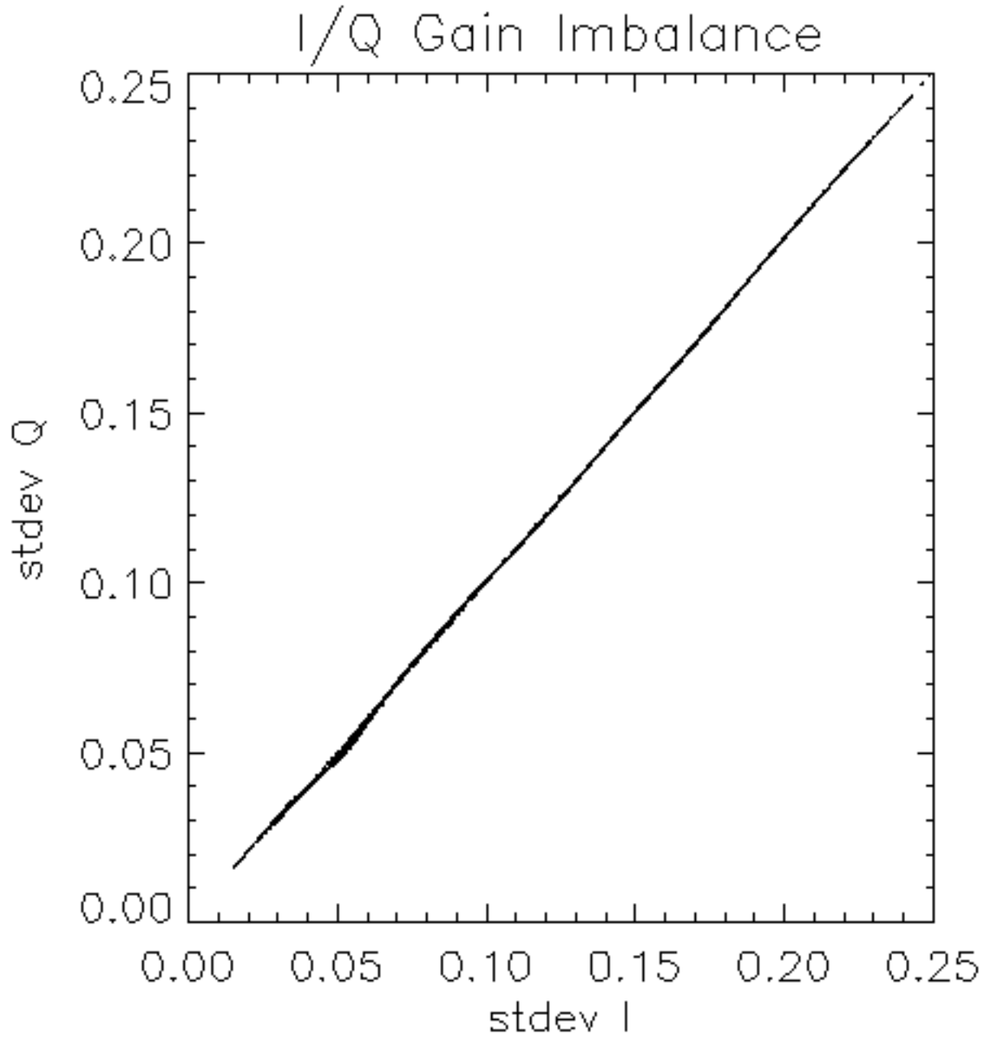
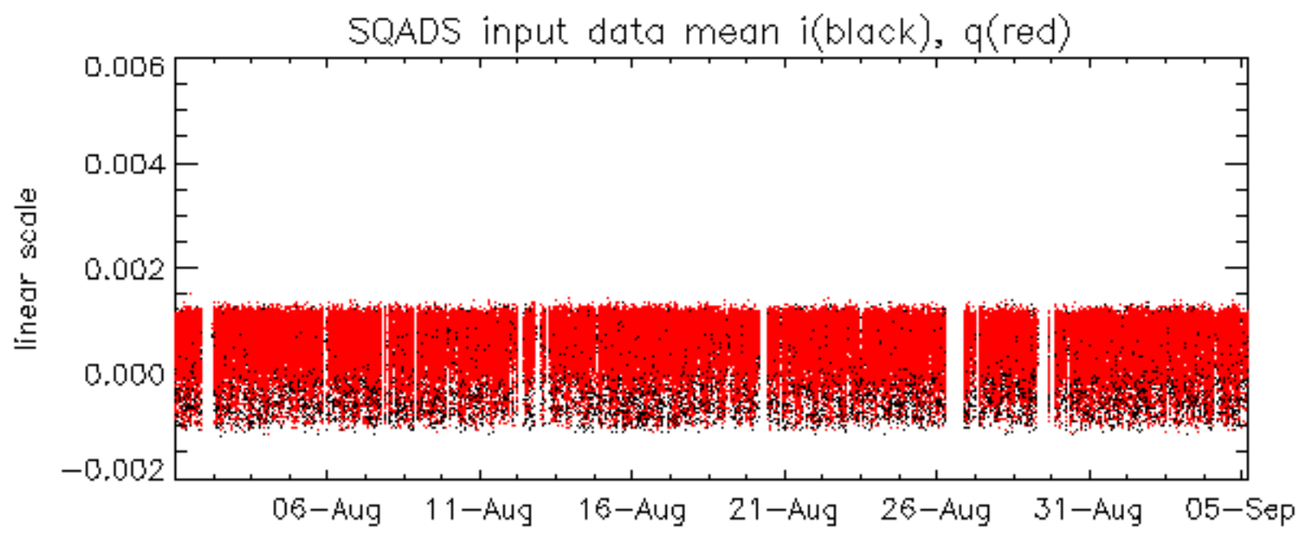
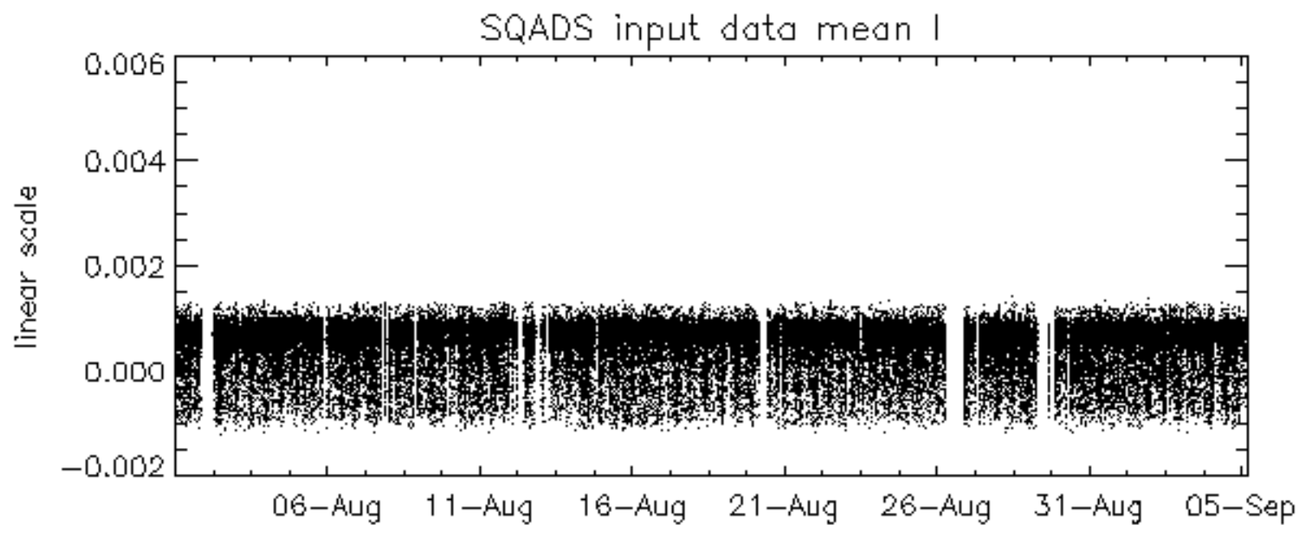
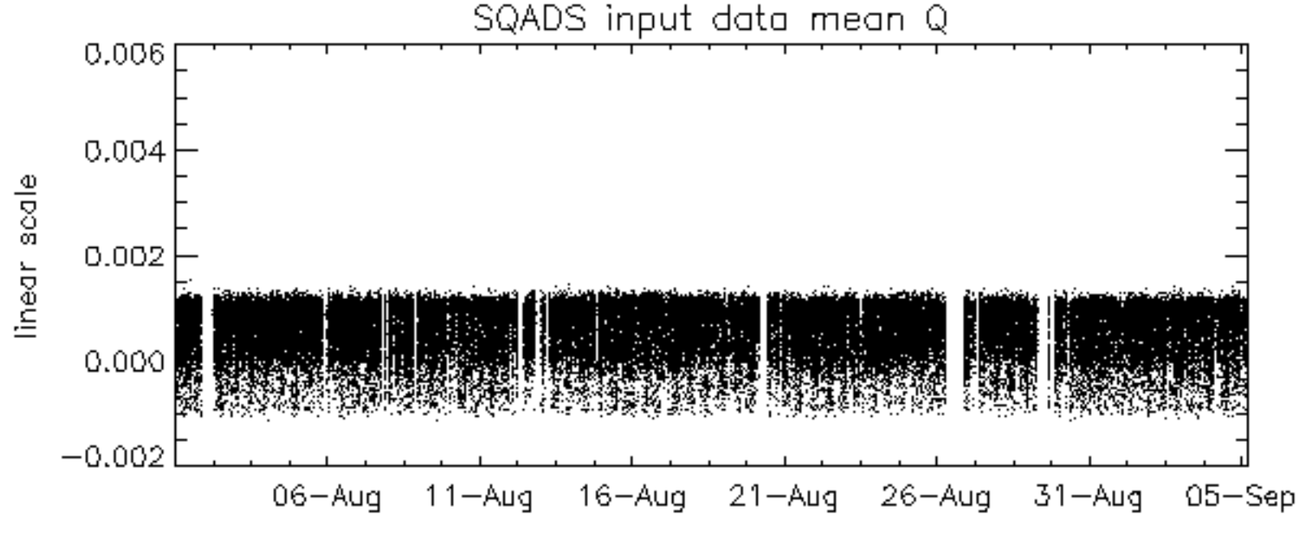
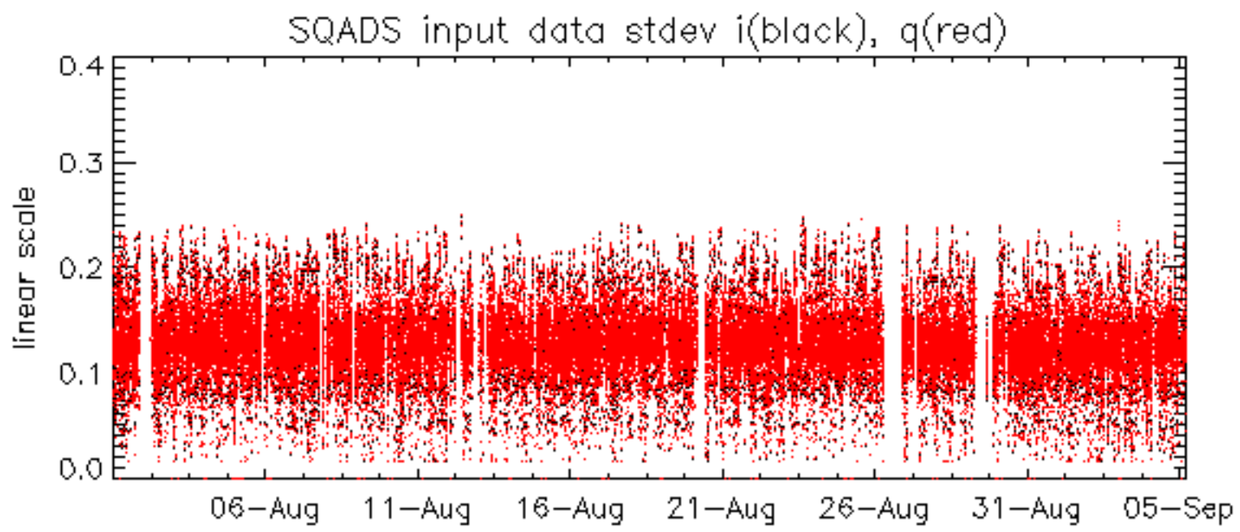
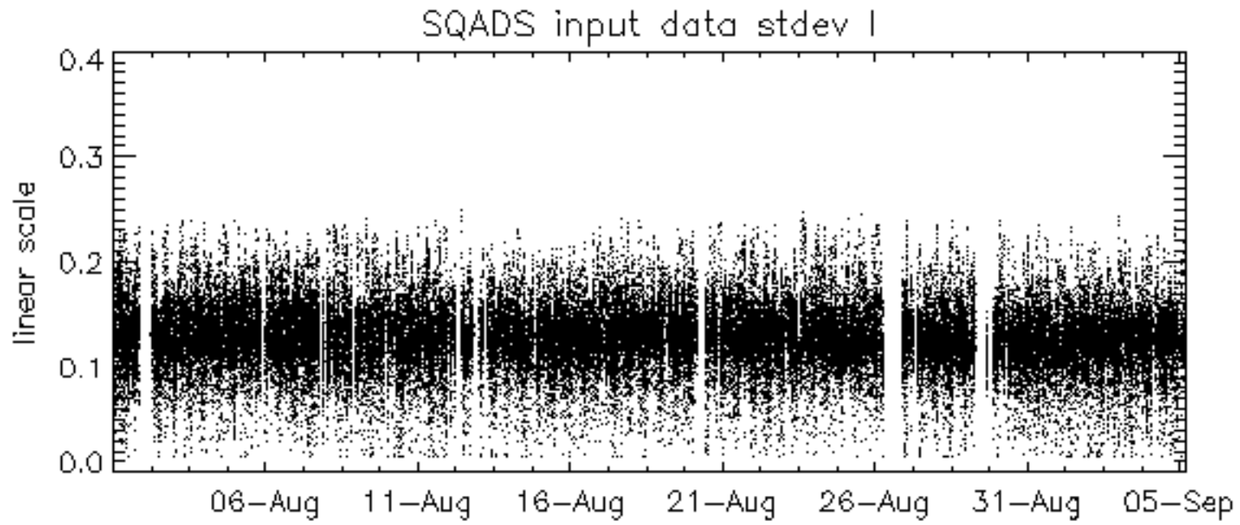

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

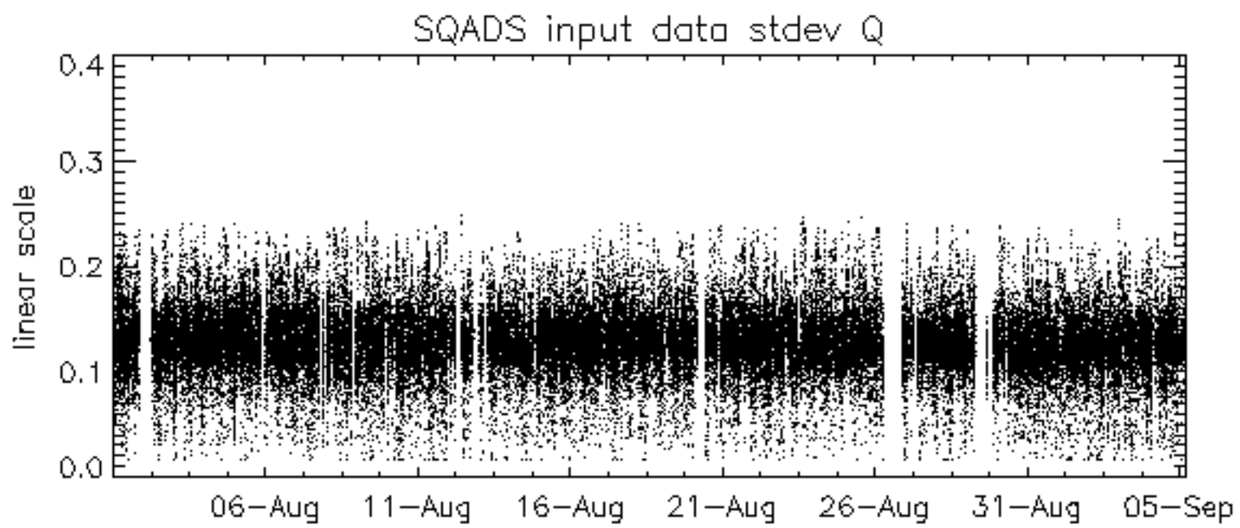

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

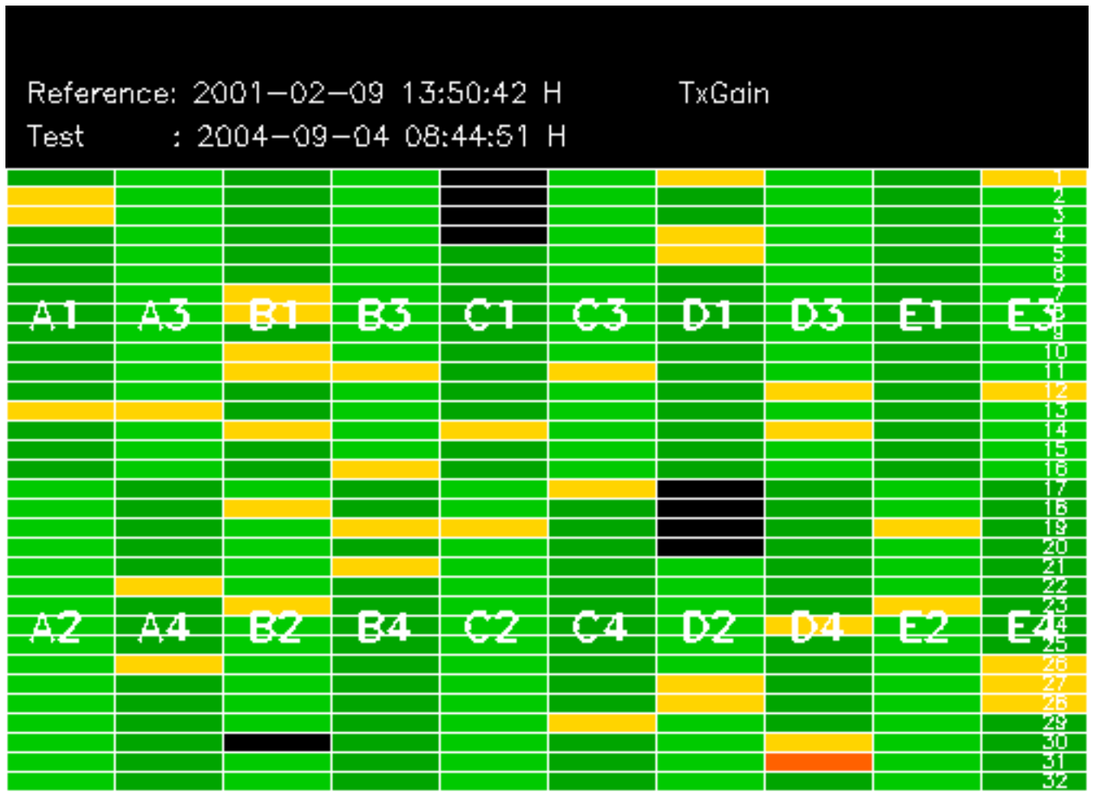

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

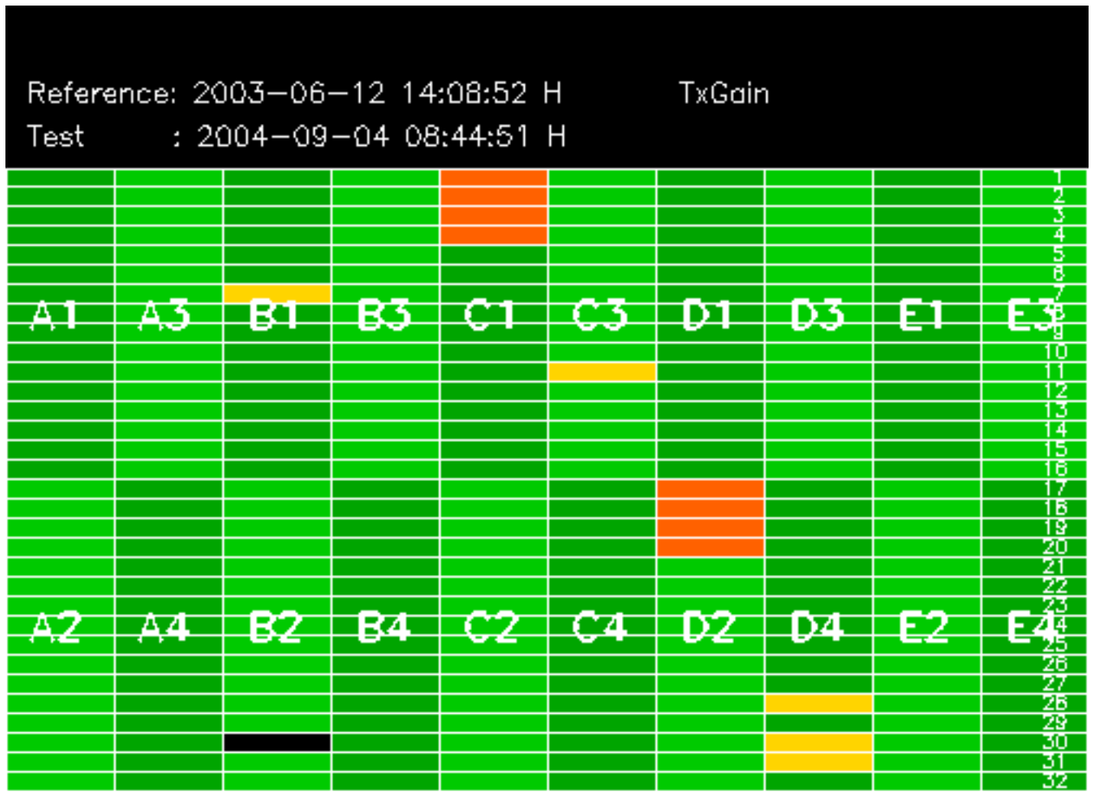

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-04 08:44:51 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-04 08:44:51 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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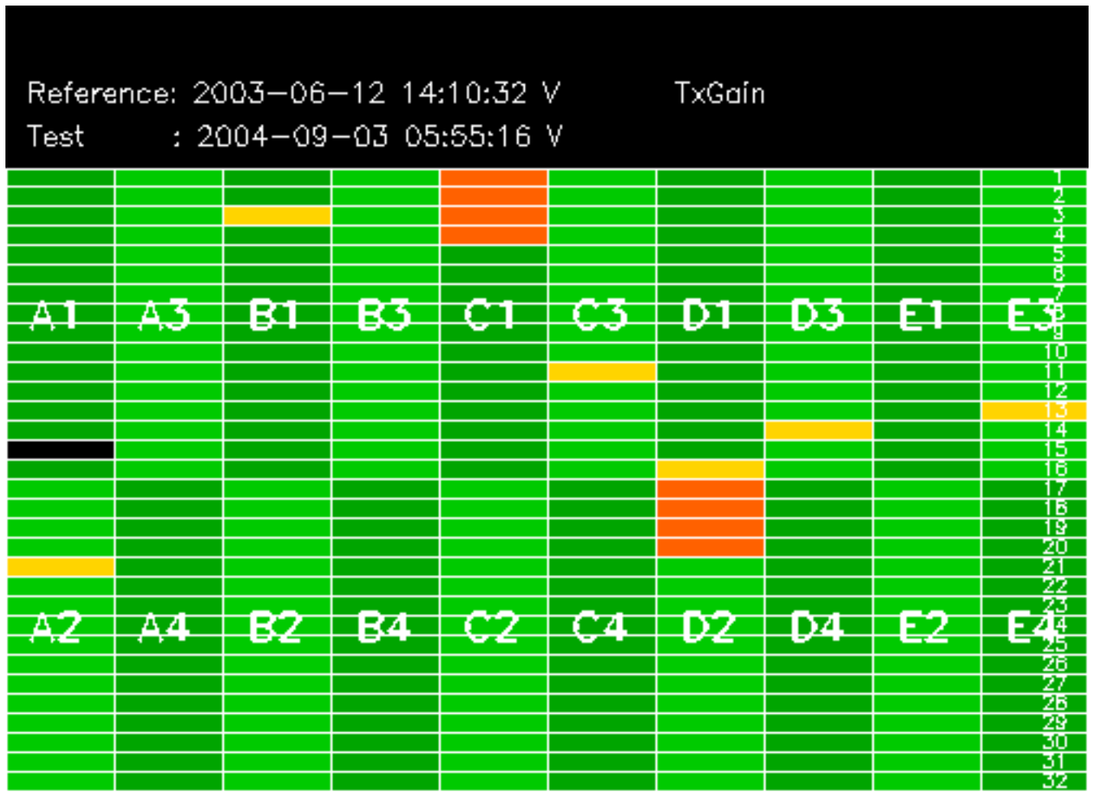
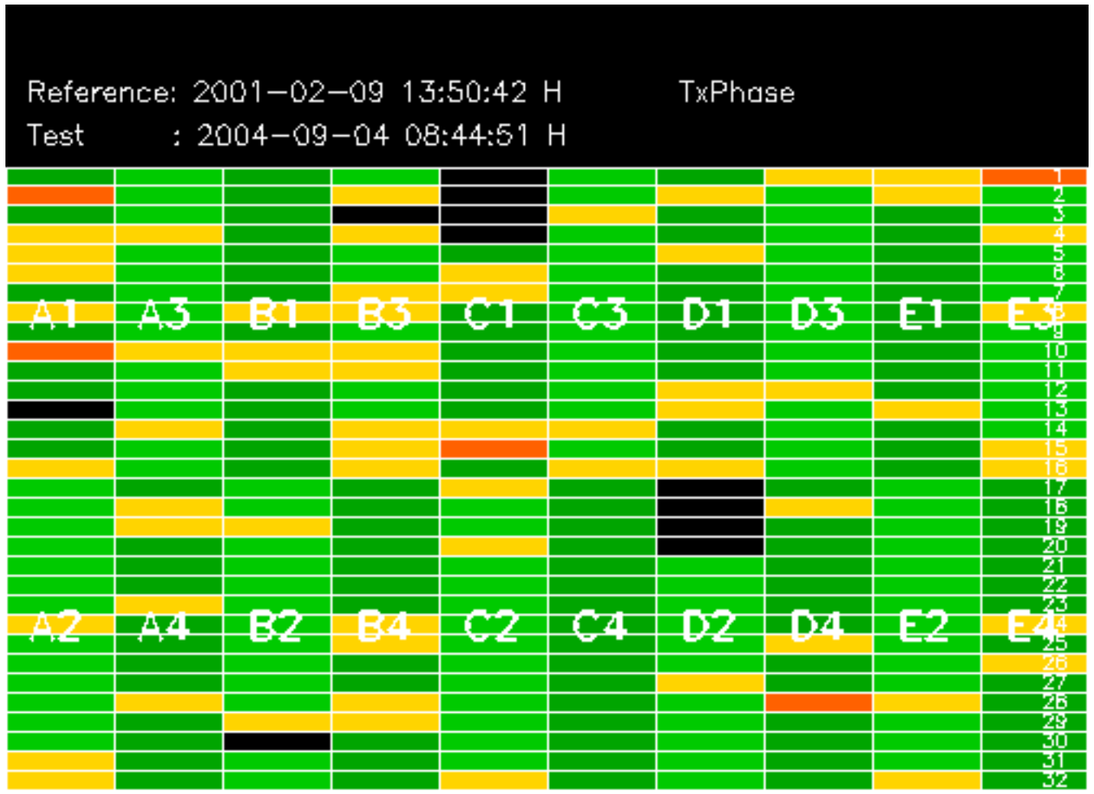
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-03 05:55:16 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-09-04 08:44:51 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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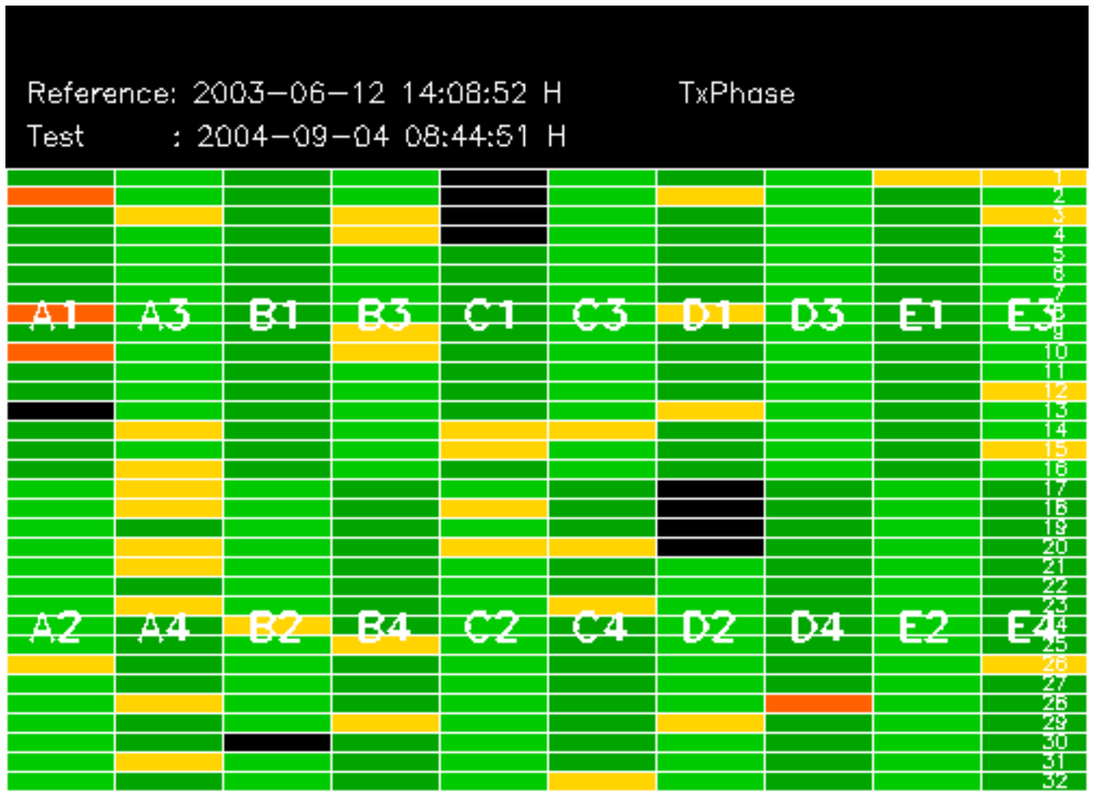
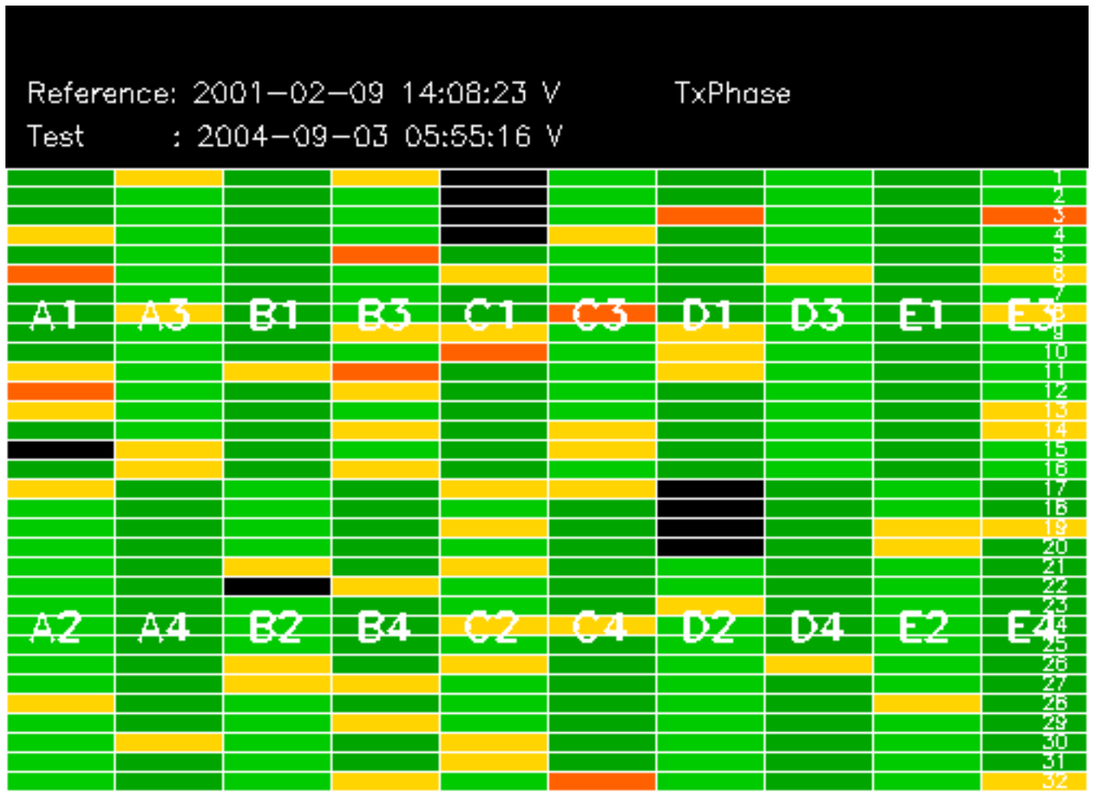
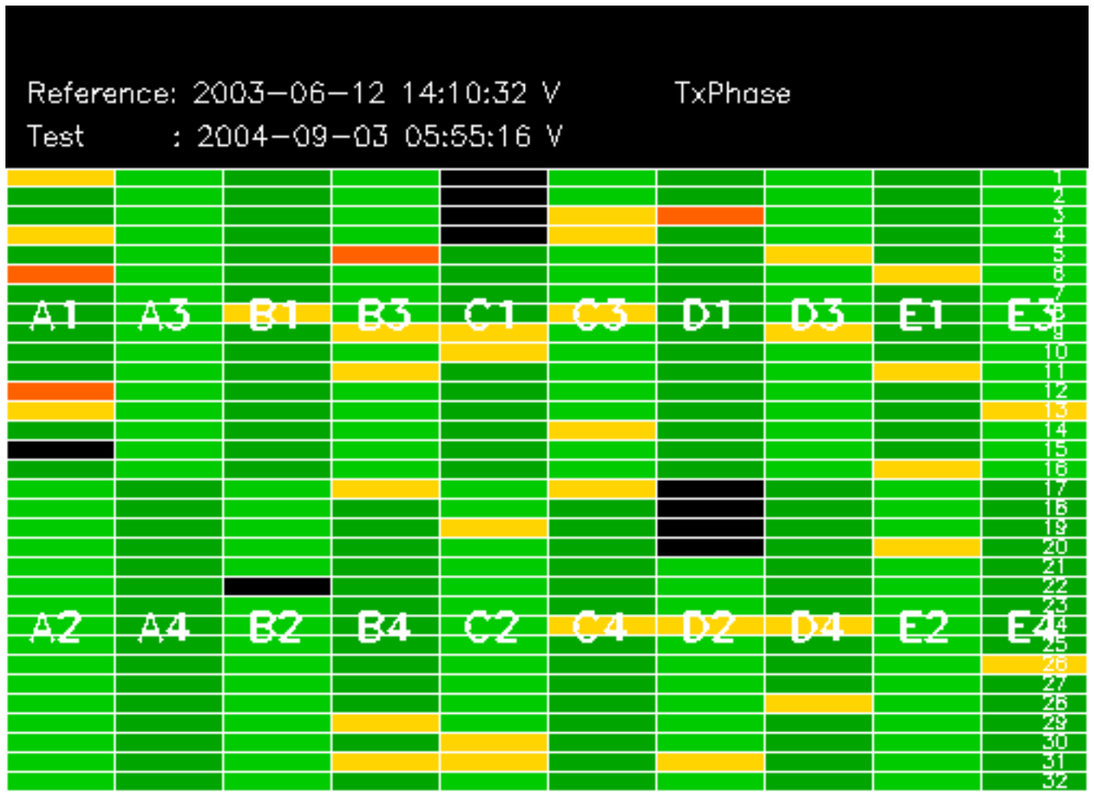

Reference: 2003-06-12 14:08:52 H
Test : 2004-09-04 08:44:51 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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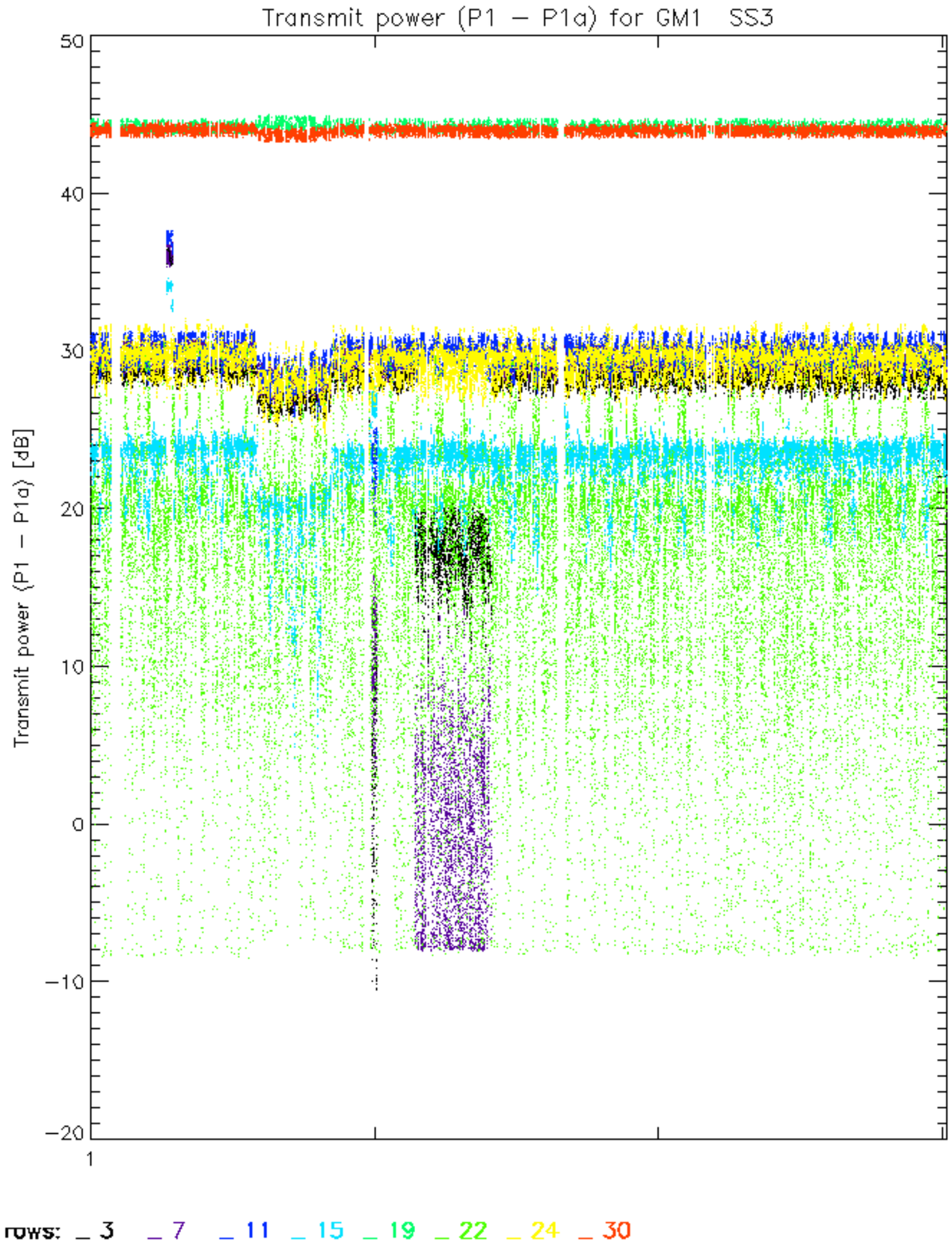
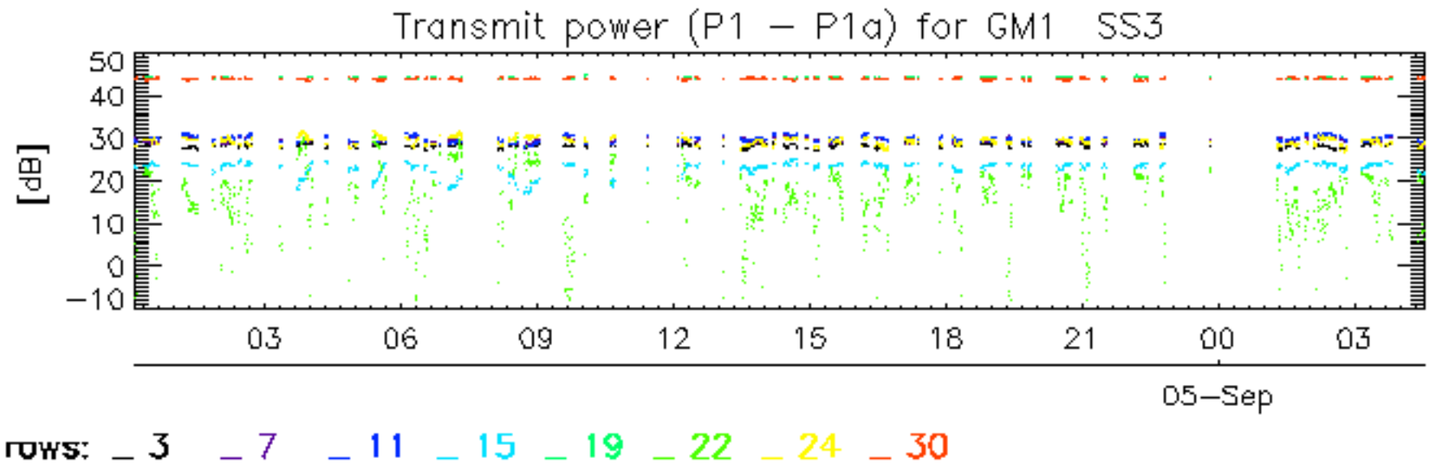
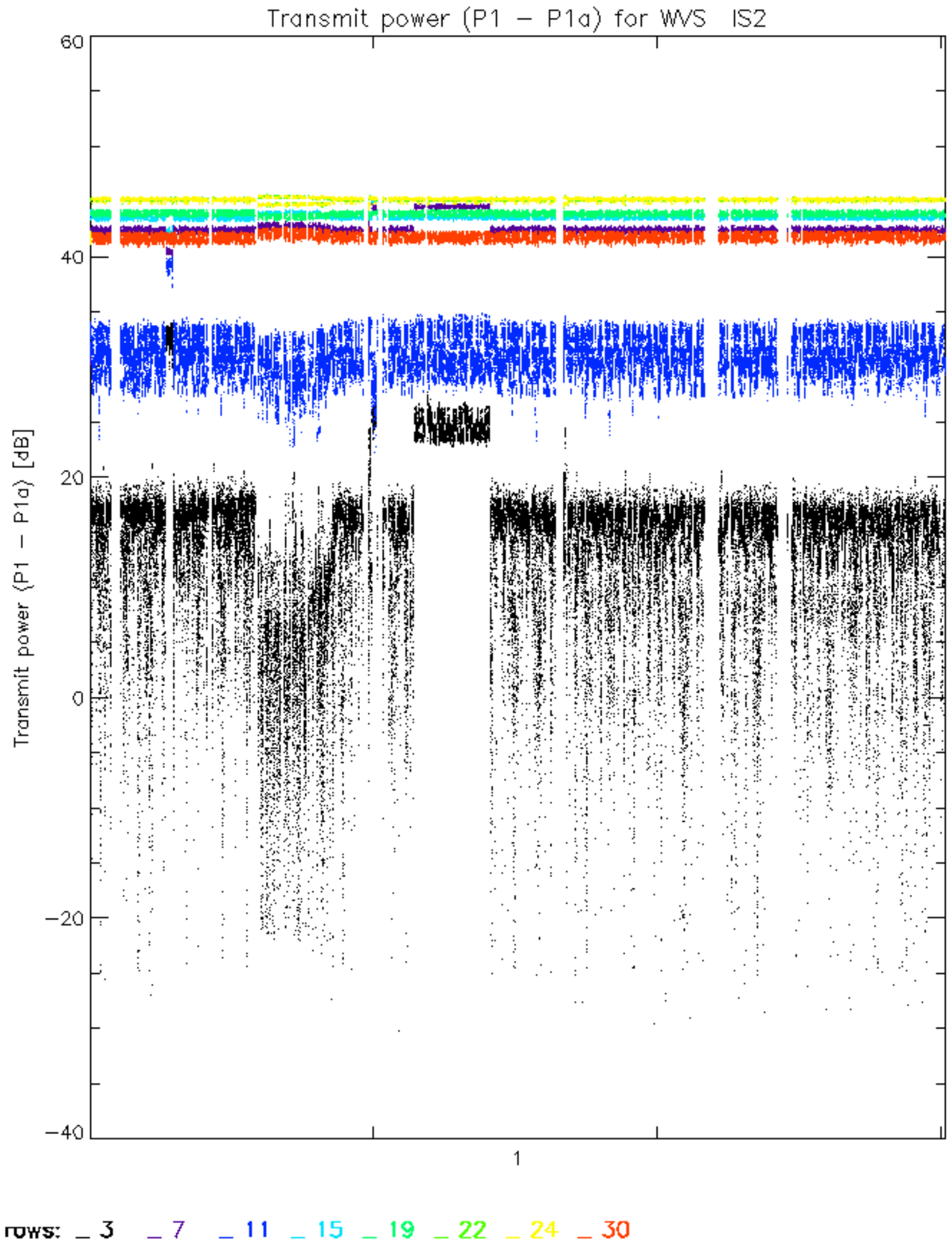
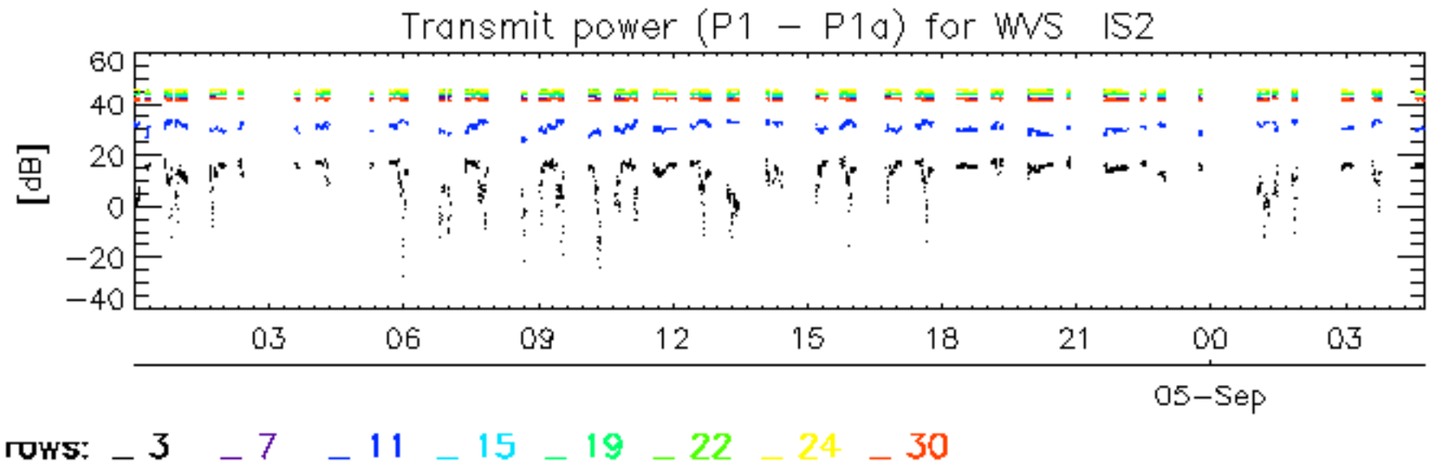

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
−20
1
rows: 3 7 11 15 19 22 24 30


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


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power (P1 – P1a) [dB]
1
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
05−Sep
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.