PRELIMINARY REPORT OF 040909

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

last update on Thu Sep 9 13:14:13 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	20040907 085035
H	20040908 081858

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.

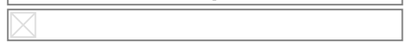
4.1 - Daily statistics

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	-3.446140	0.006387	-0.026239
7	P1	-3.298667	0.026611	-0.066545
11	P1	-4.634256	0.031652	-0.007922
15	P1	-5.738783	0.049243	-0.045773
19	P1	-3.474549	0.005724	-0.036937
22	P1	-4.534021	0.010998	0.015026
24	P1	-4.967934	0.019429	0.019265
30	P1	-6.965677	0.020927	-0.086371

3	P1	-15.848007	1.230075	-0.792811
7	P1	-14.053728	0.169083	0.128034
11	P1	-20.213179	0.343506	-0.151806
15	P1	-11.804871	0.143141	0.096891
19	P1	-13.914607	0.033614	-0.066314
22	P1	-16.135401	0.333852	0.125636
24	P1	-14.511143	0.313187	0.123836
30	P1	-17.882473	0.459820	-0.268994

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.302248	0.083690	-0.021552
7	P2	-22.603943	0.134642	-0.021659
11	P2	-15.282949	0.174570	0.106755
15	P2	-7.057997	0.099063	0.016639
19	P2	-9.563997	0.193675	0.047672
22	P2	-17.337708	0.120054	0.080006
24	P2	-20.746778	0.089942	-0.036838
30	P2	-19.226488	0.082197	0.118530

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143630	0.002913	-0.023015
7	P3	-8.143622	0.002913	-0.023047
11	P3	-8.143608	0.002914	-0.023125
15	P3	-8.143625	0.002913	-0.023005
19	P3	-8.143642	0.002914	-0.022902
22	P3	-8.143640	0.002914	-0.022895
24	P3	-8.143623	0.002913	-0.022988
30	P3	-8.143905	0.002936	-0.024666

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	-2.679940	0.142889	-0.382703
7	P1	-2.926855	0.099025	-0.215837
11	P1	-3.862190	0.025820	-0.050404
15	P1	-3.514219	0.024265	-0.031675
19	P1	-3.483014	0.013700	-0.019059
22	P1	-5.700918	0.038751	-0.008670
24	P1	-3.918863	0.015139	-0.051997
30	P1	-6.183111	0.061232	-0.069305
3	P1	-10.399551	0.743097	-1.028968
7	P1	-10.062587	0.164477	-0.113171
11	P1	-12.157269	0.110530	-0.060592
15	P1	-11.669637	0.098267	0.010128
19	P1	-15.620300	0.048923	-0.006469
22	P1	-23.384192	1.134487	-0.107241
24	P1	-17.927233	0.230148	-0.123412
30	P1	-20.436913	1.202816	-0.030986

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.982388	0.054982	-0.057924
7	P2	-22.747328	0.043758	-0.001130
11	P2	-10.969464	0.063370	0.057798
15	P2	-4.954409	0.033614	-0.042502
19	P2	-6.764097	0.049524	-0.058264
22	P2	-7.440524	0.041932	-0.003194
24	P2	-11.048632	0.047617	-0.056444
30	P2	-22.180443	0.032367	0.060008

P3 Cyclic statistics

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

3	P3	-7.994675	0.003671	-0.034792
7	P3	-7.994630	0.003674	-0.034896
11	P3	-7.994689	0.003666	-0.034701
15	P3	-7.994656	0.003666	-0.034985
19	P3	-7.994564	0.003679	-0.035047
22	P3	-7.994602	0.003672	-0.035073
24	P3	-7.994651	0.003695	-0.034955
30	P3	-7.994610	0.003673	-0.034820

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	0.000471285
	stdev	2.20622e-07
MEAN Q	mean	0.000539696
	stdev	2.36238e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127680
	stdev	0.000965578

STDEV Q	mean	0.127901
	stdev	0.000975720

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

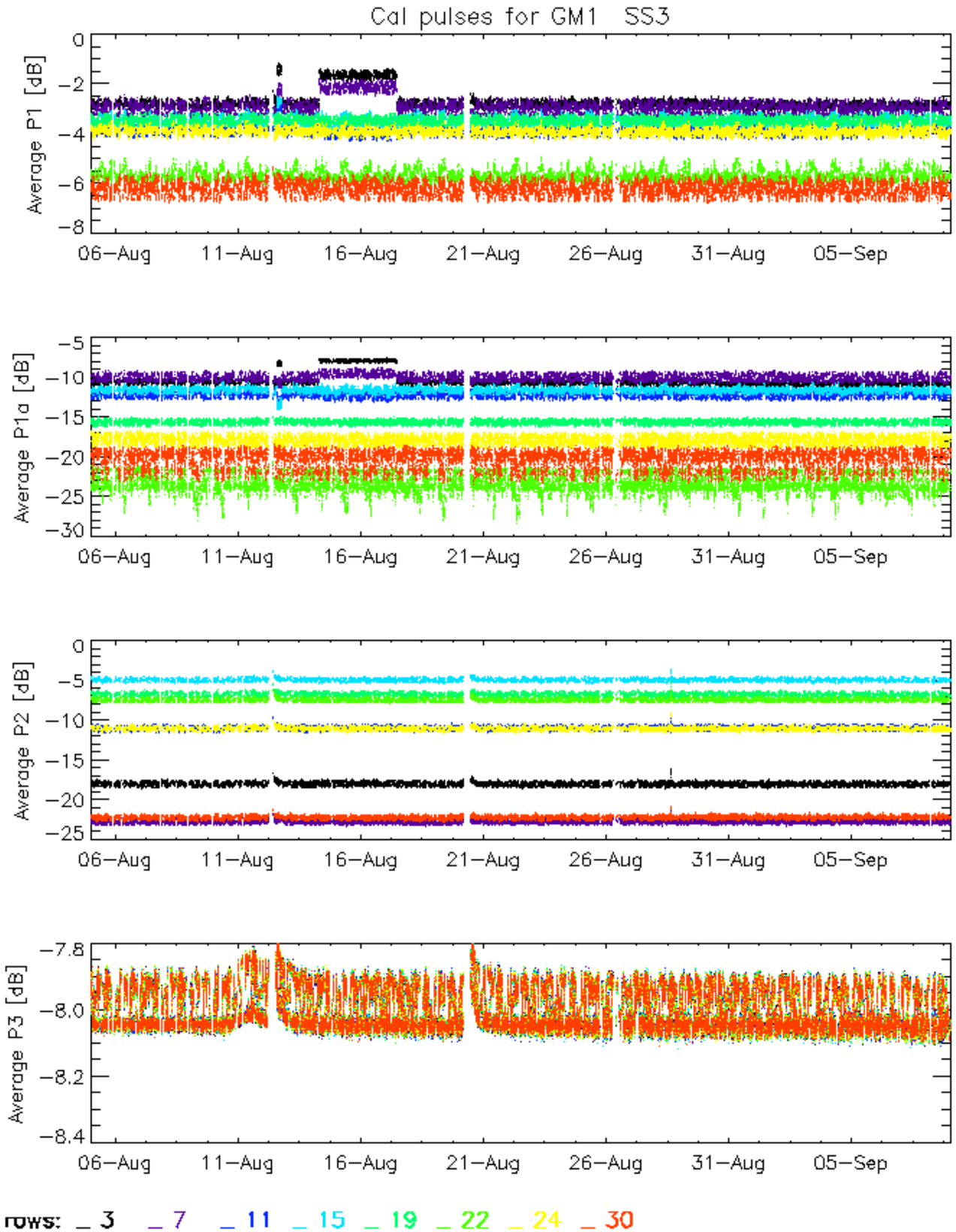
Evolution of Absolute Doppler

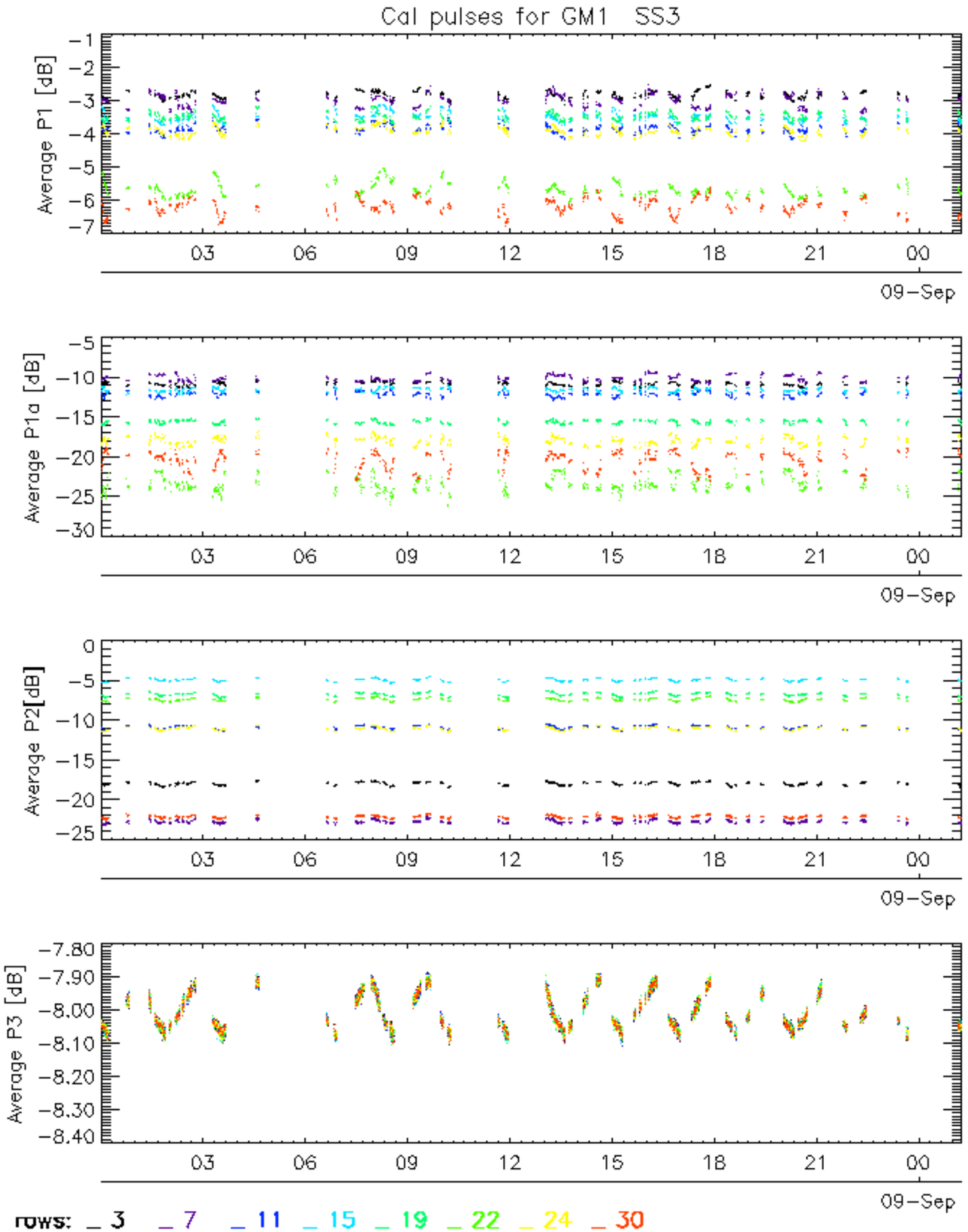
Acsending

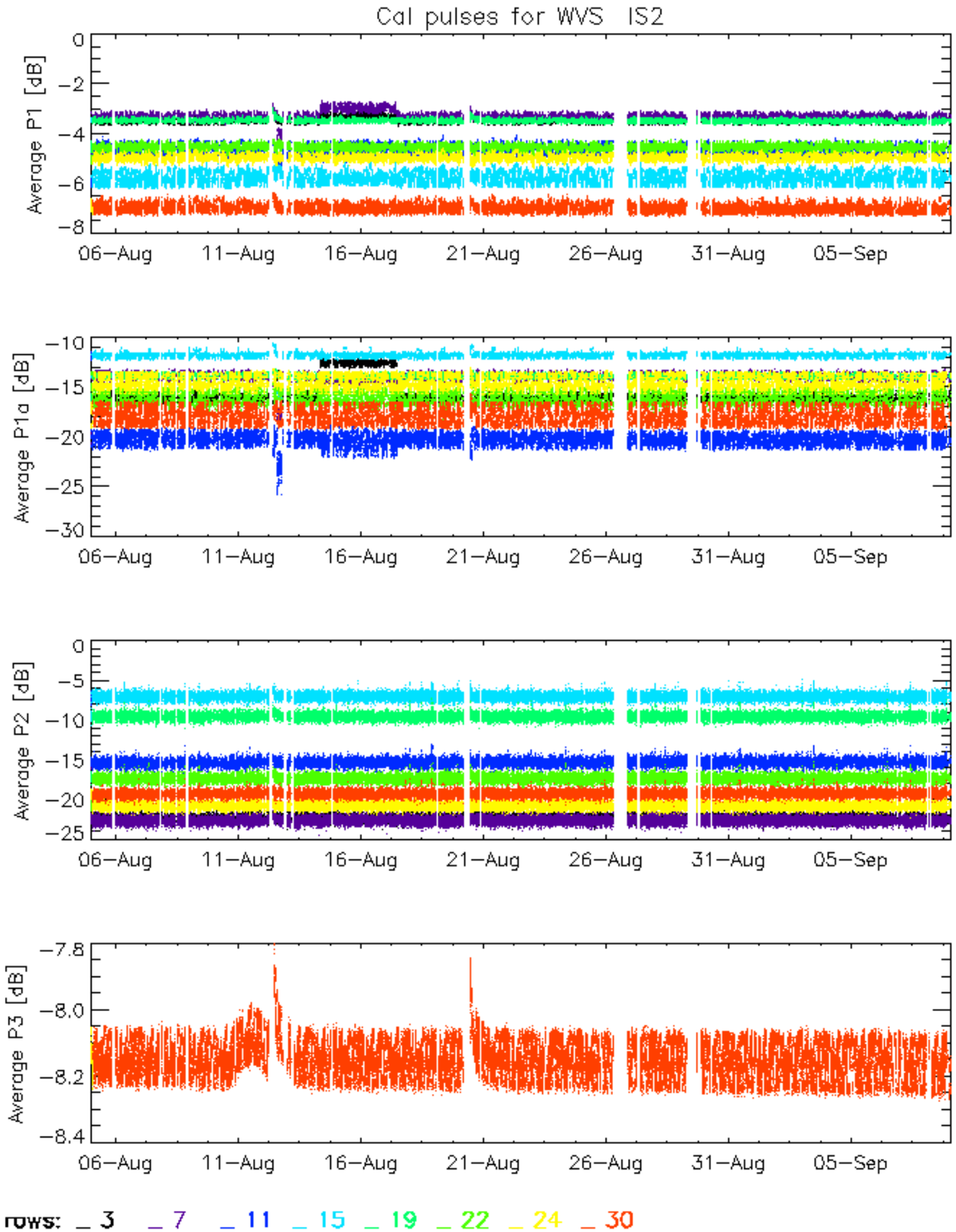
Descending

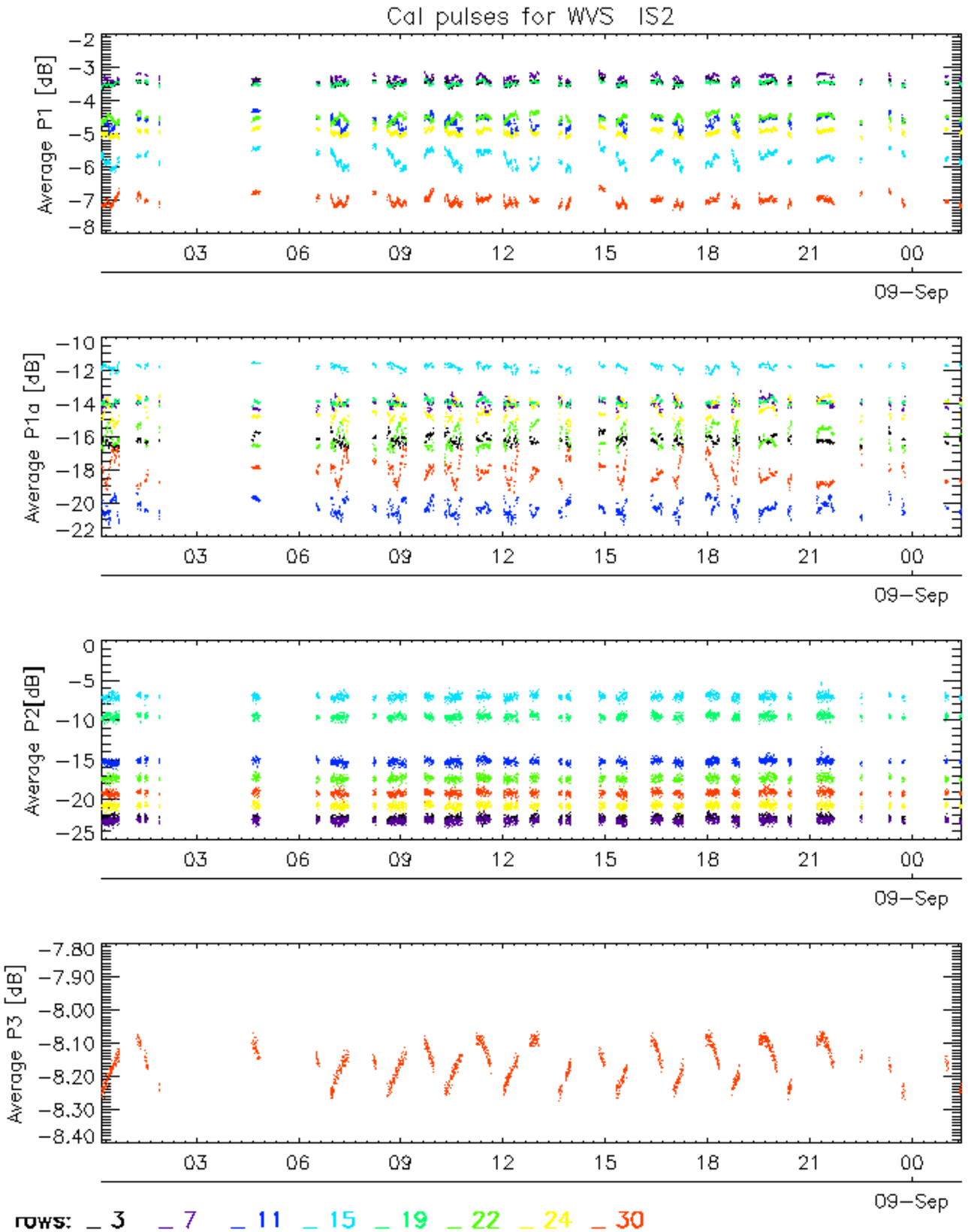
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

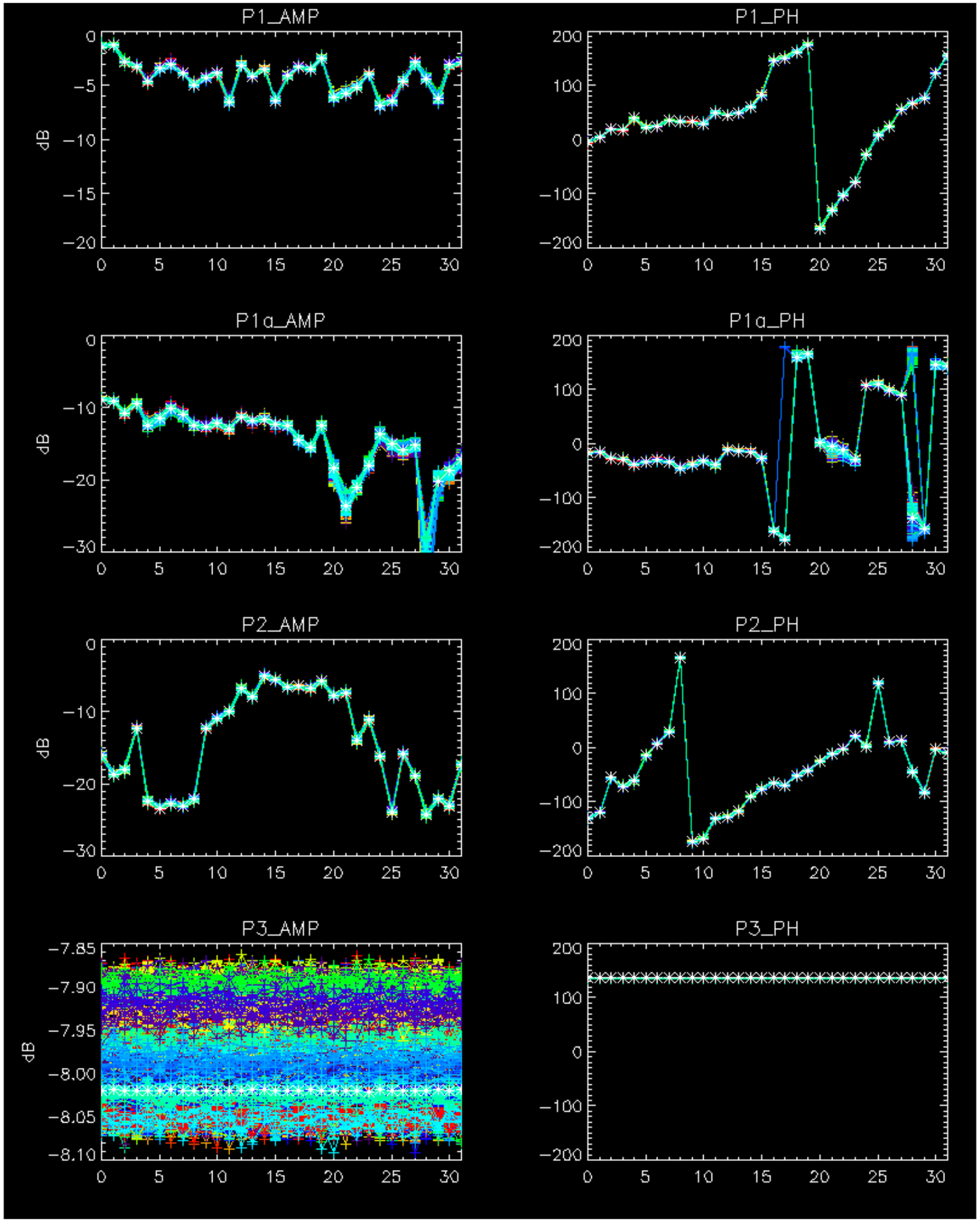


Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

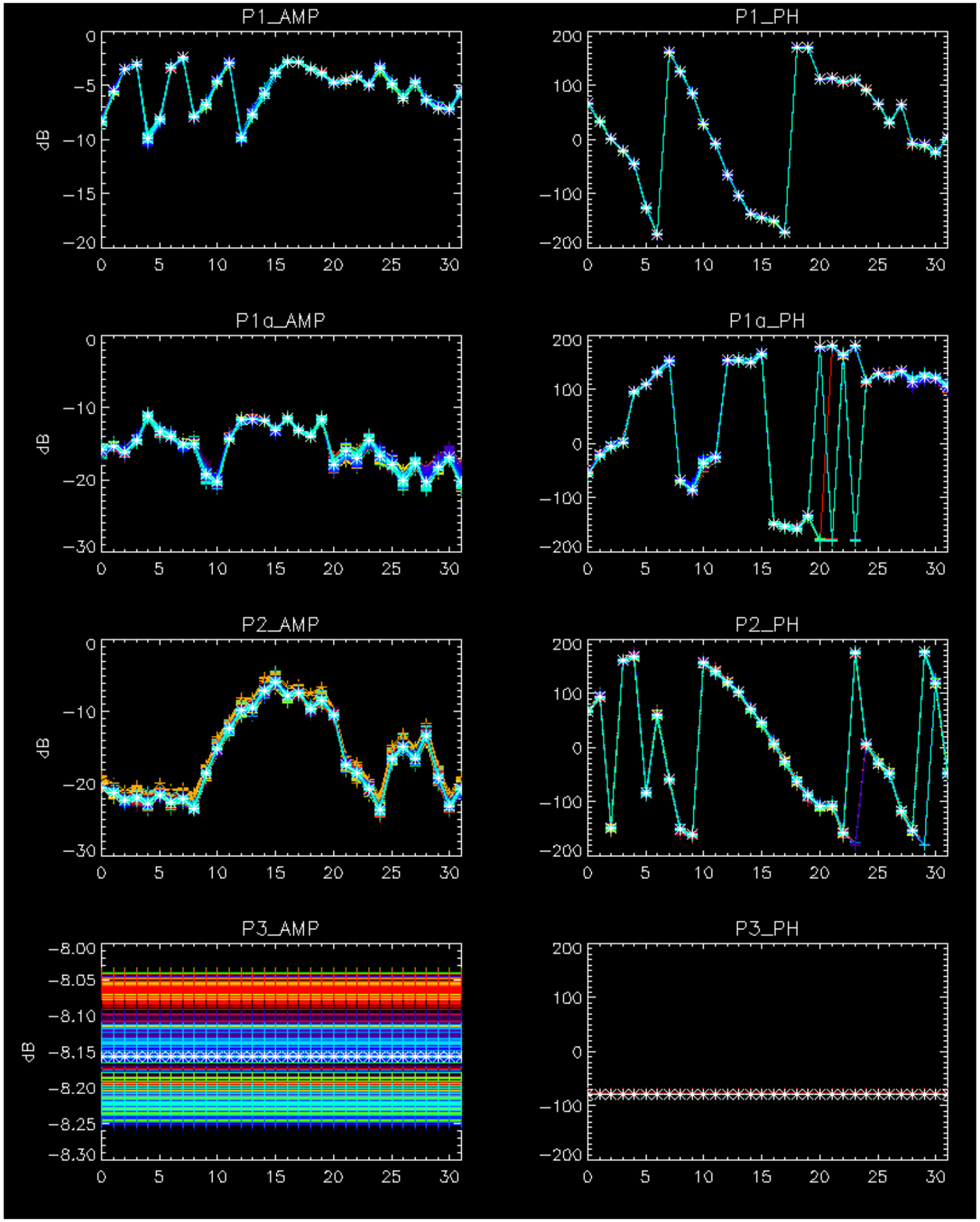

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
09−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
09−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
09−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15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


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

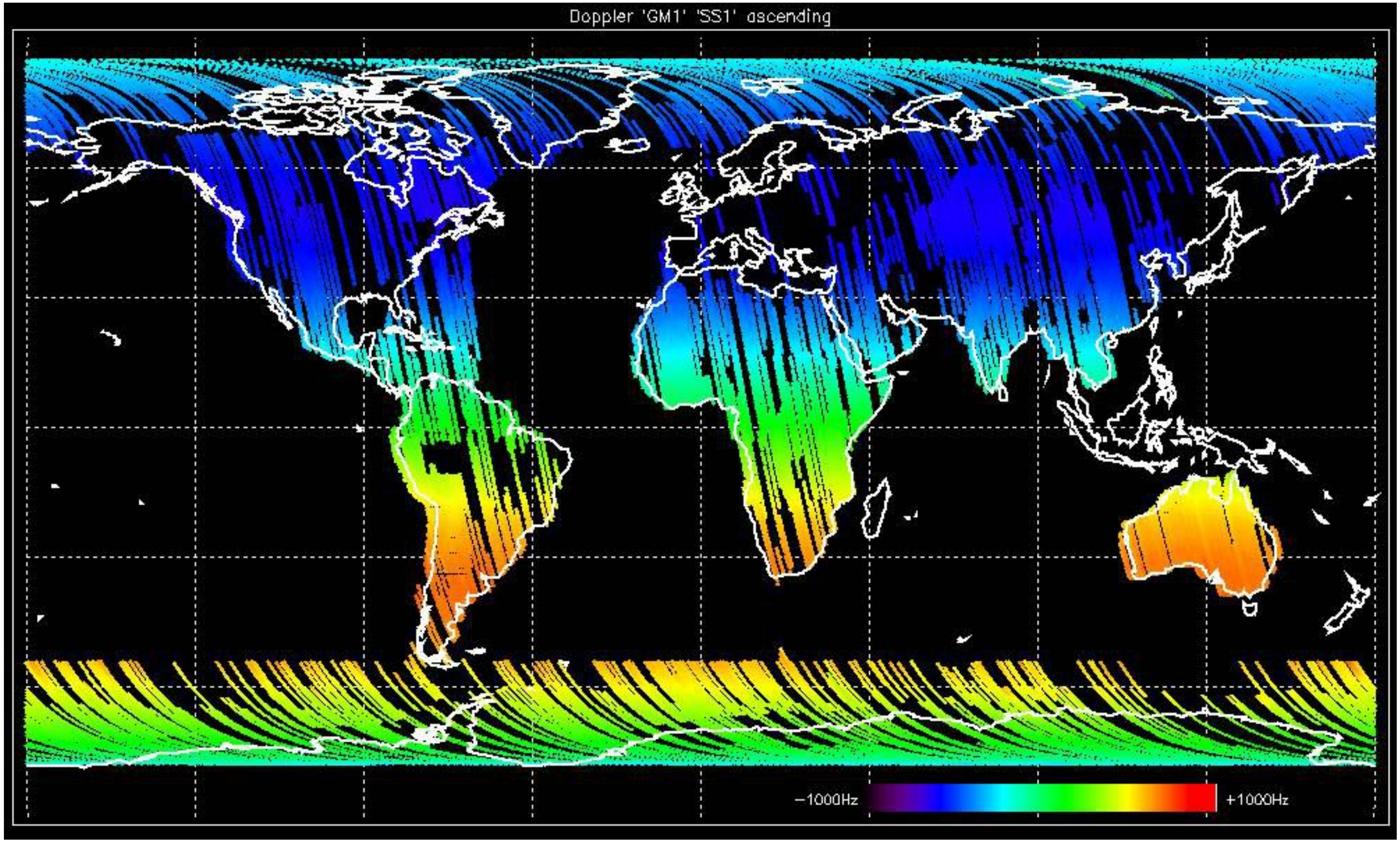
No anomalies observed.

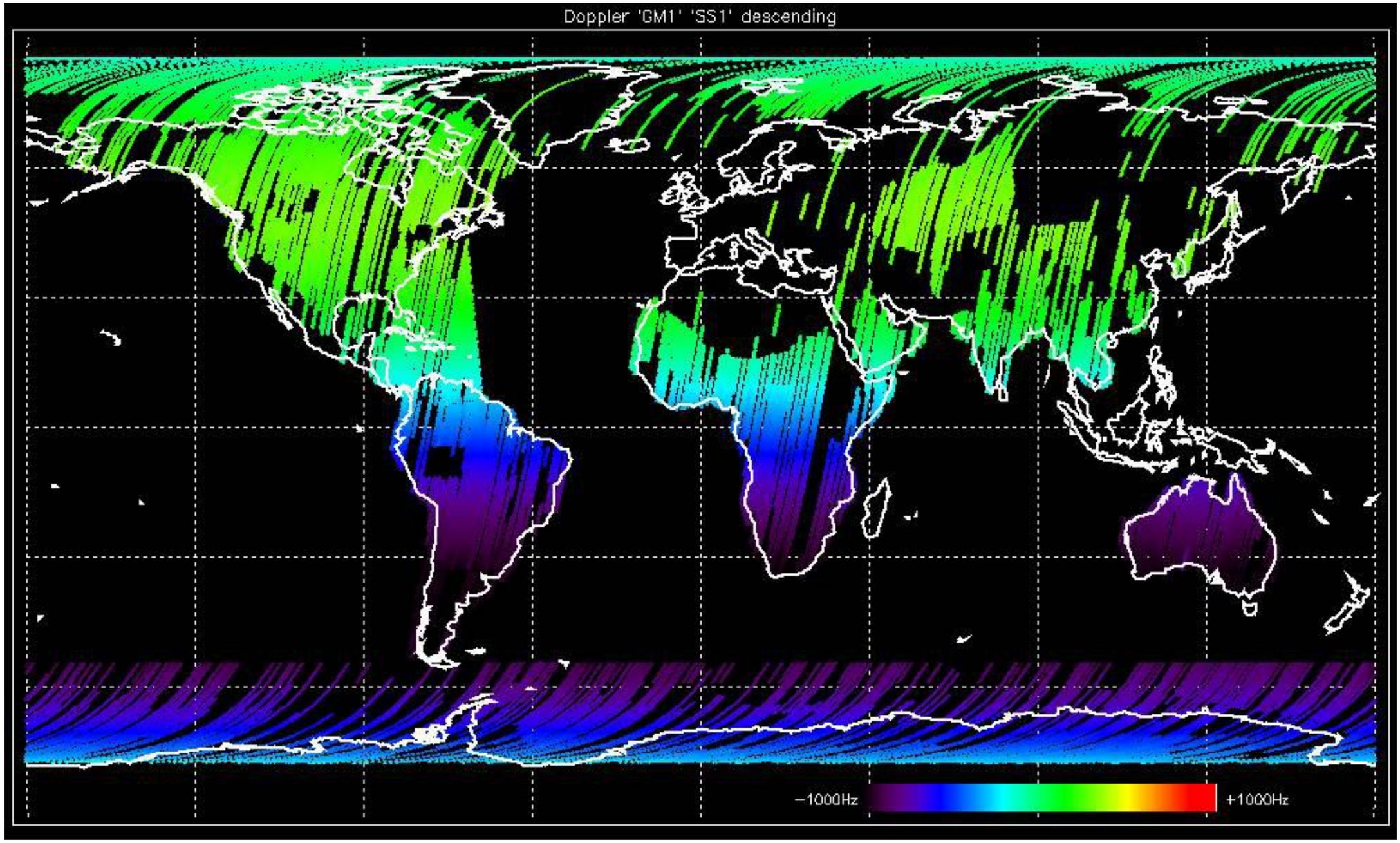

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

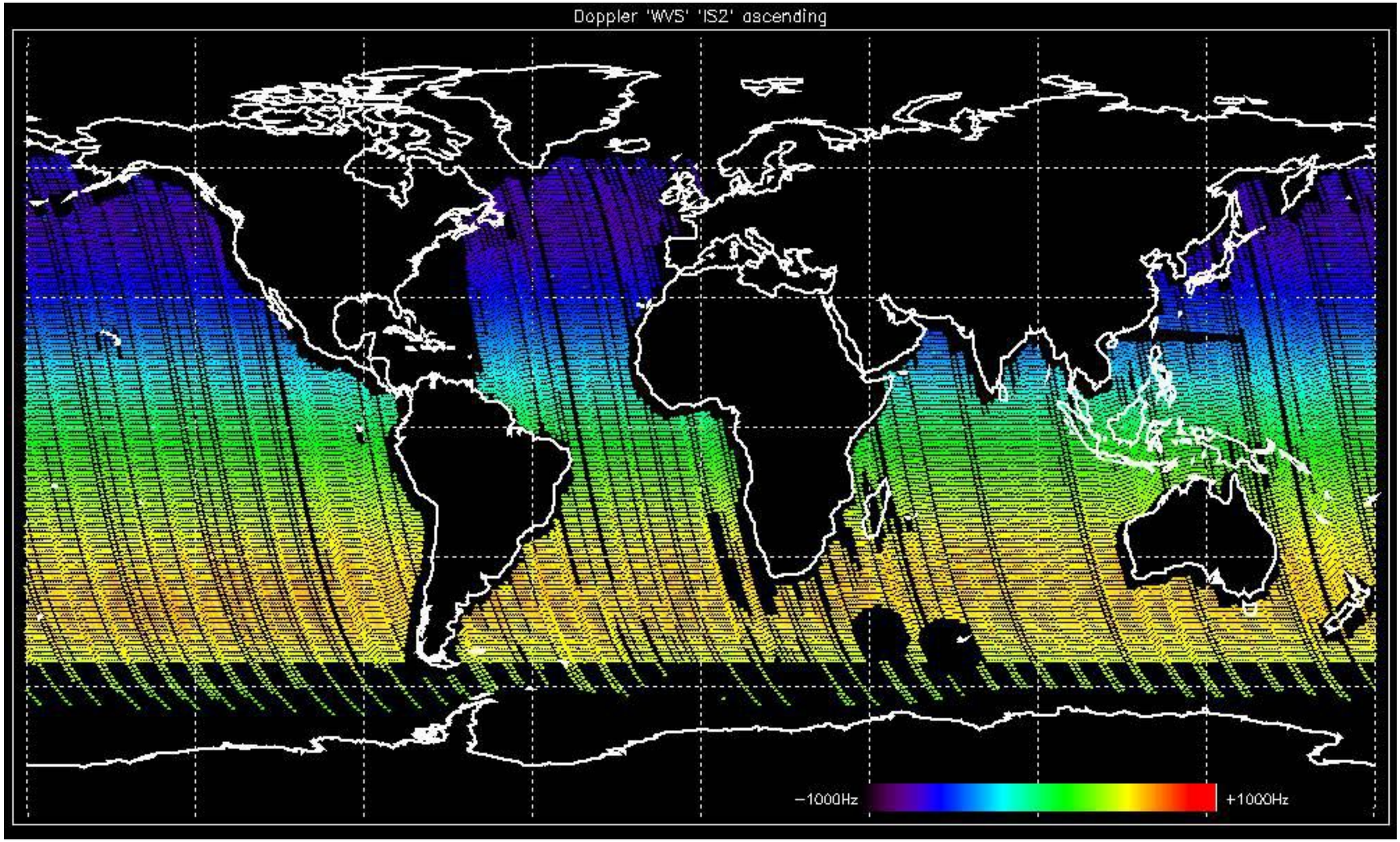

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

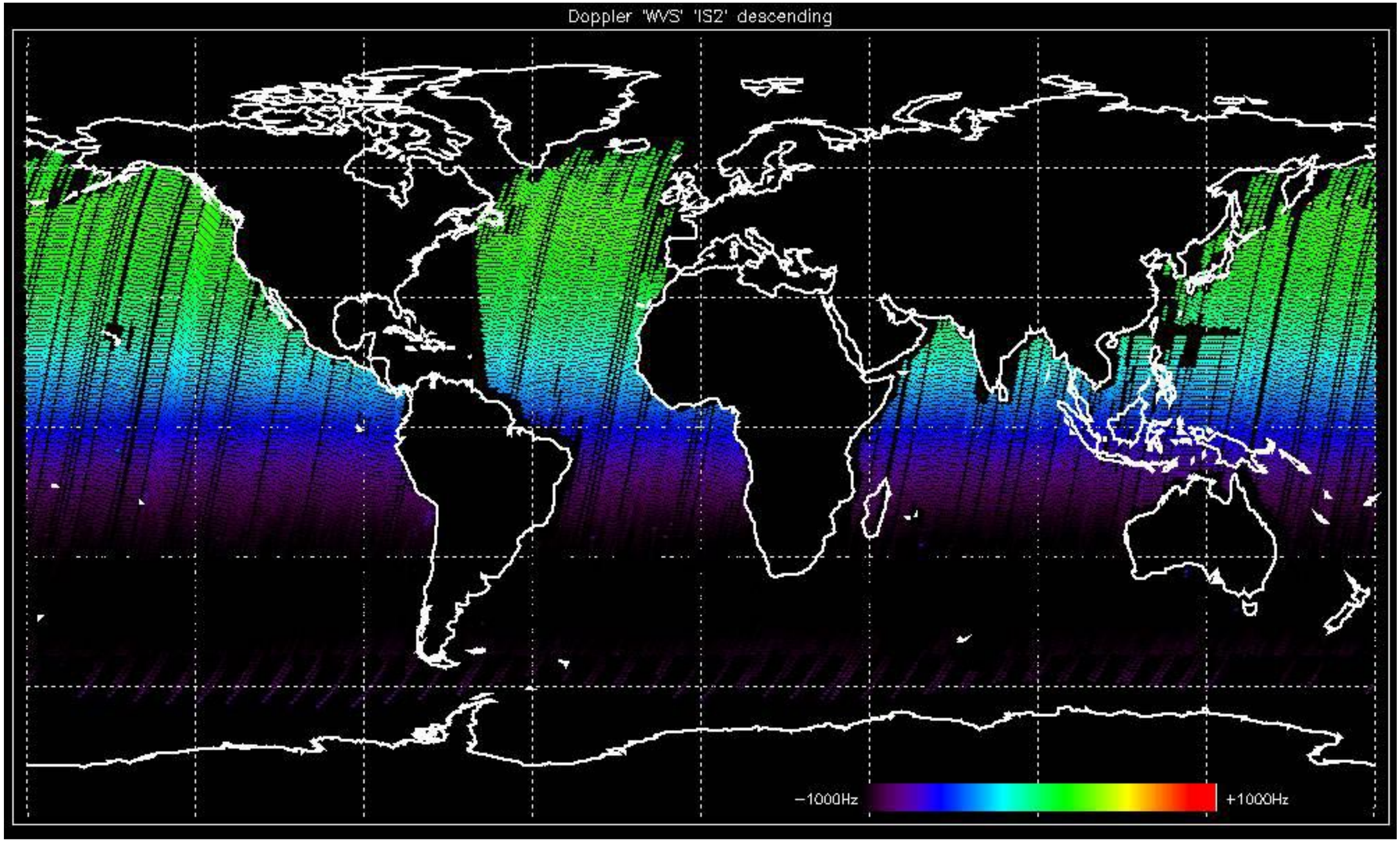
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

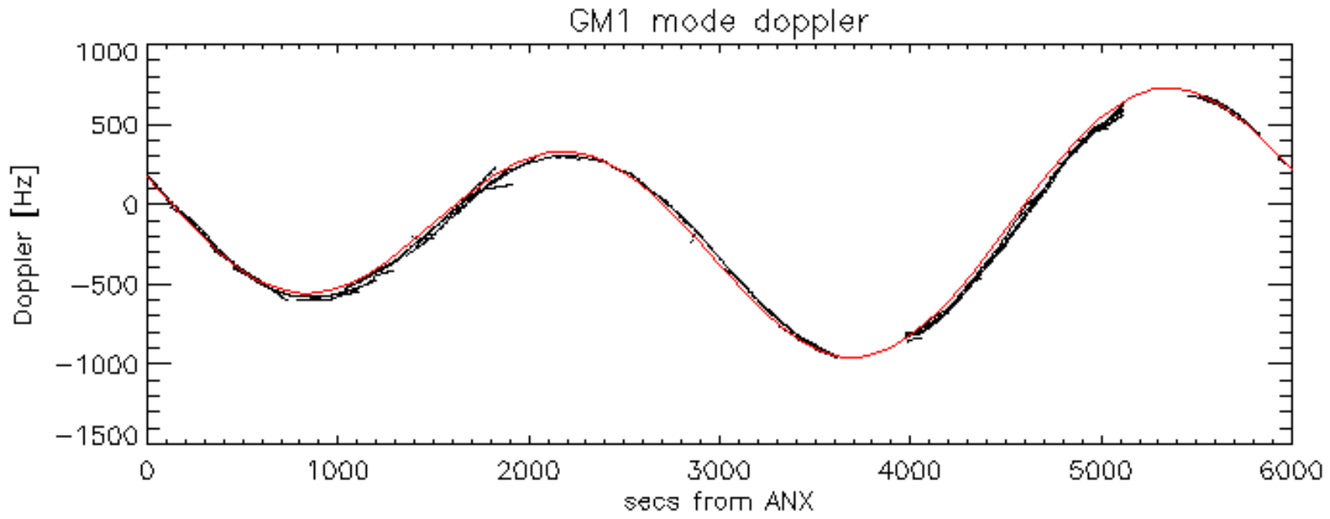
Preliminary report.The data is not yet controled

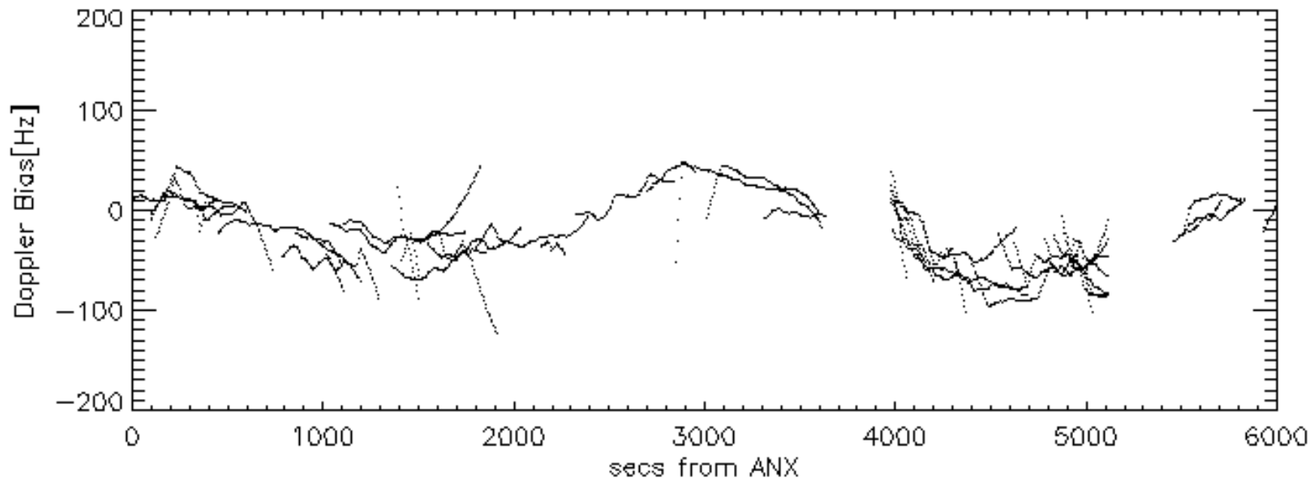

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

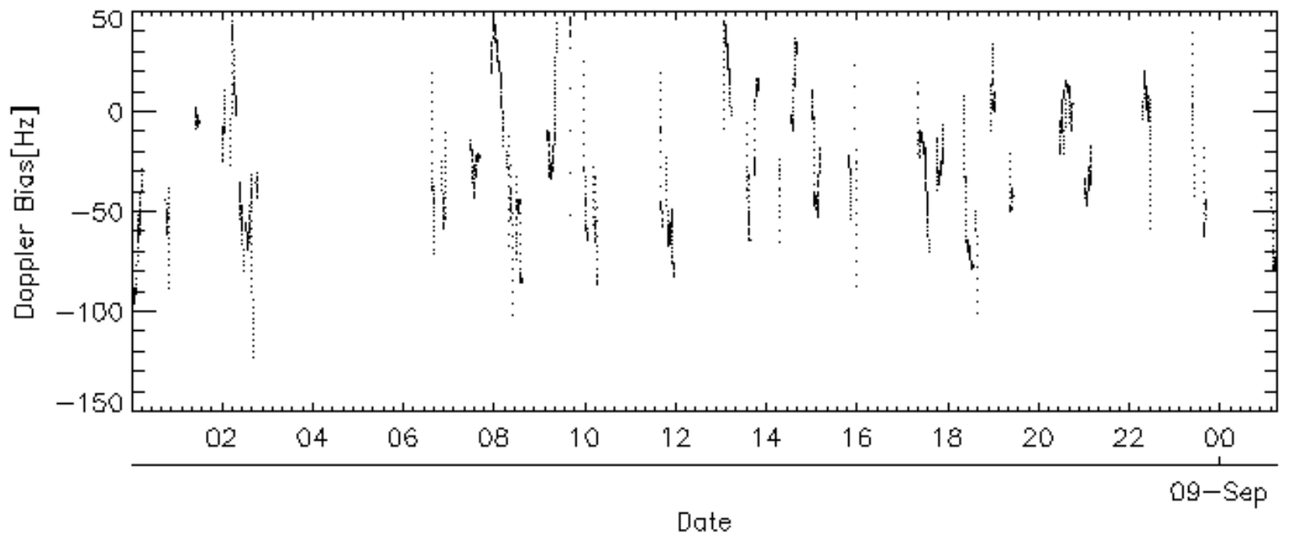

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

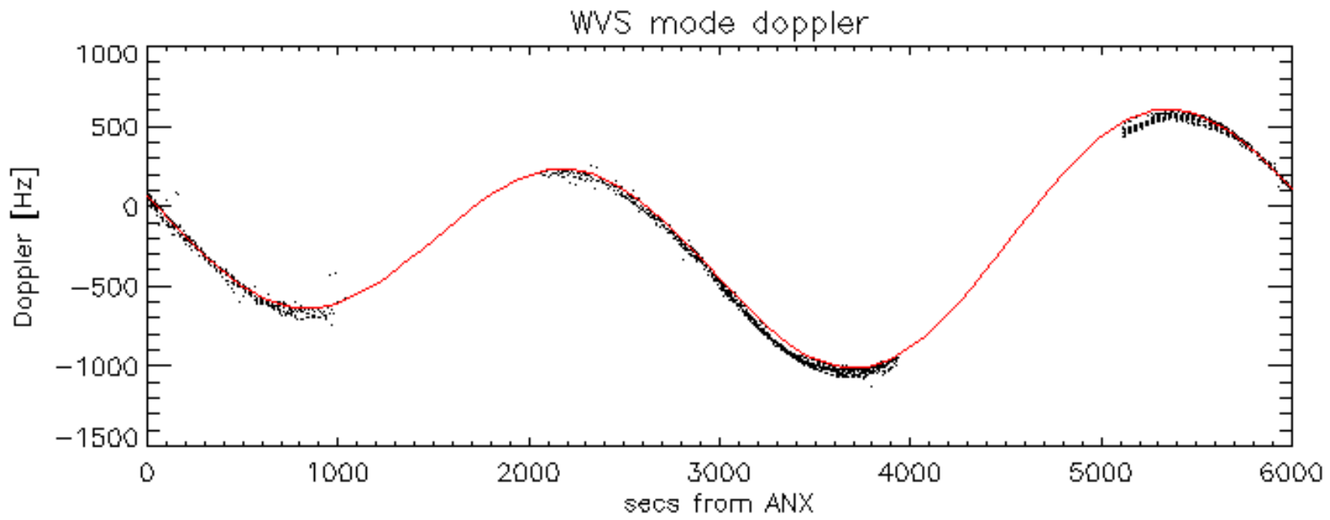

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

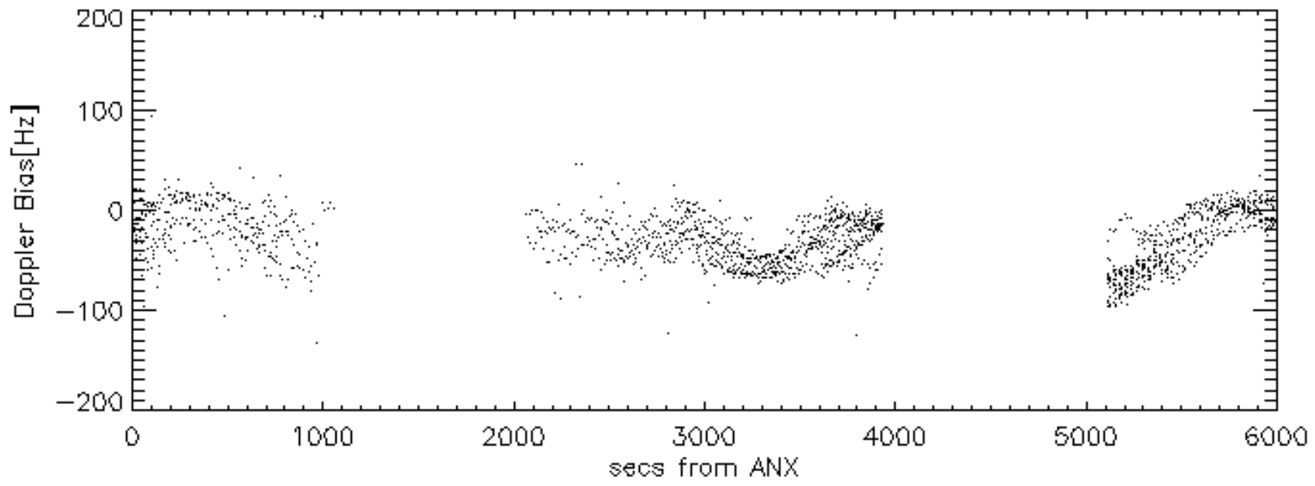

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

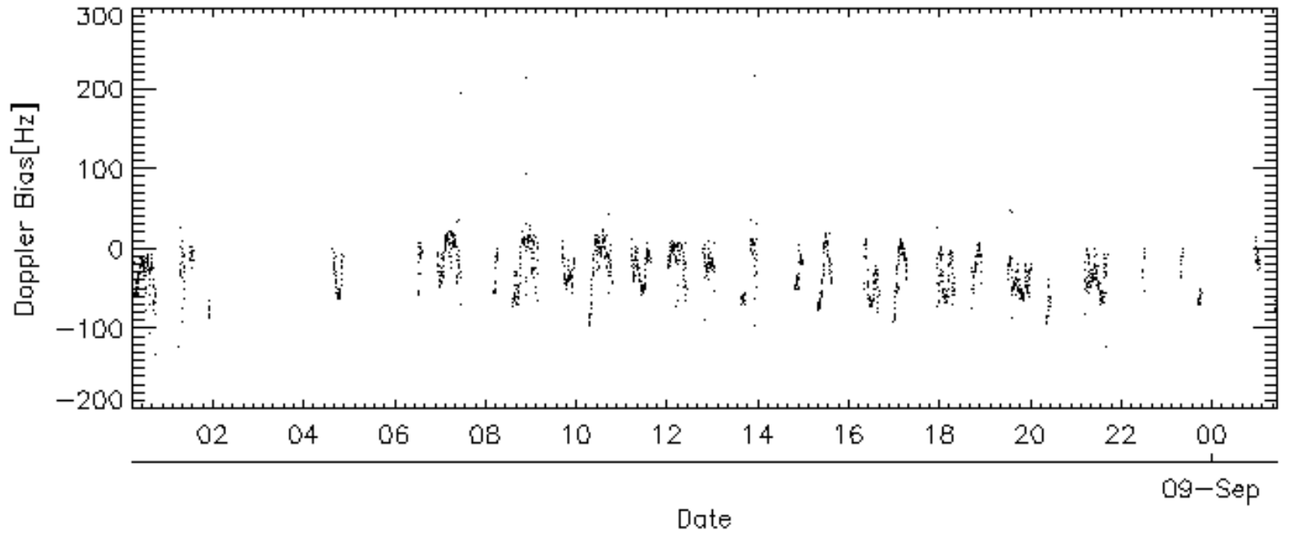

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

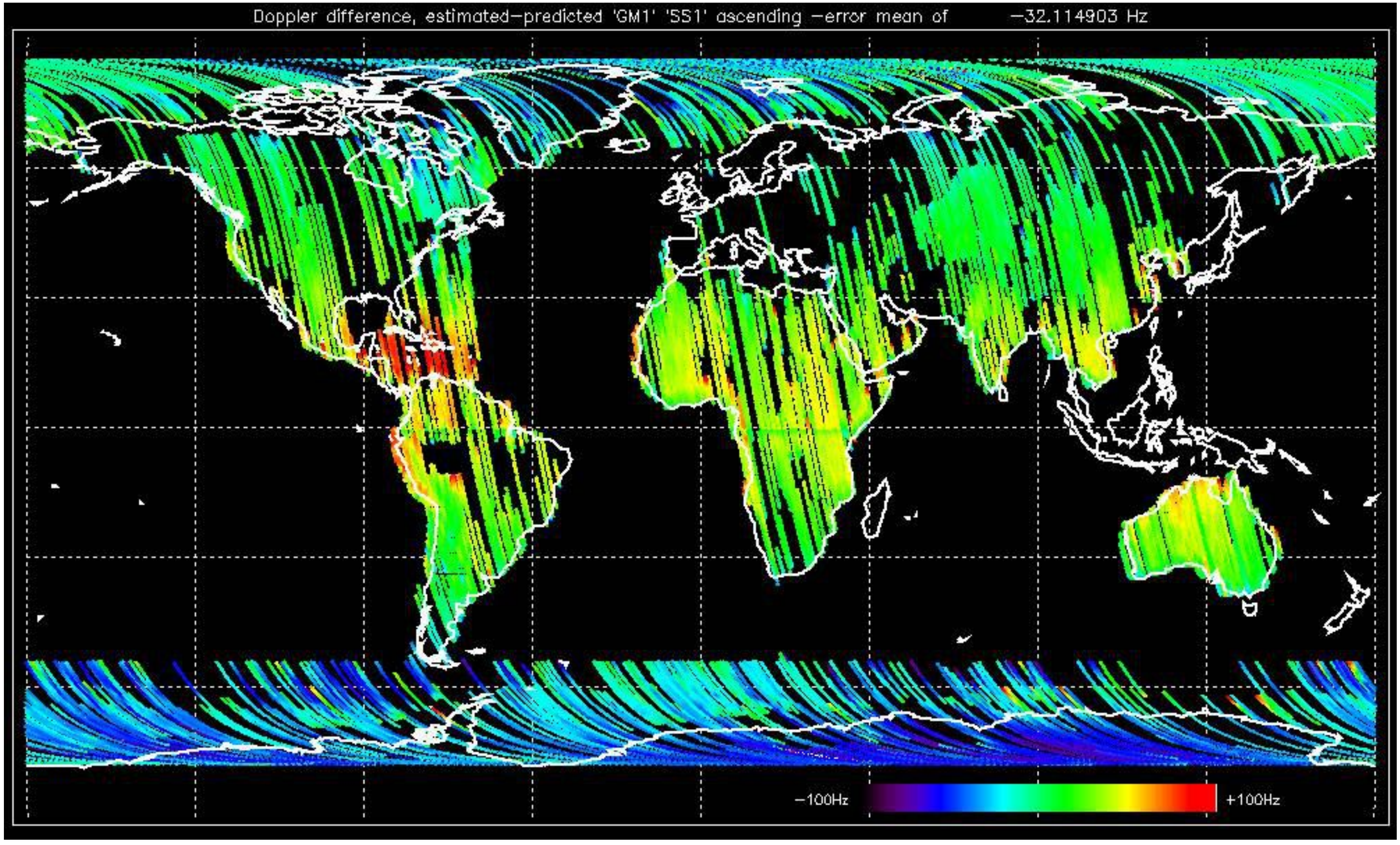

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

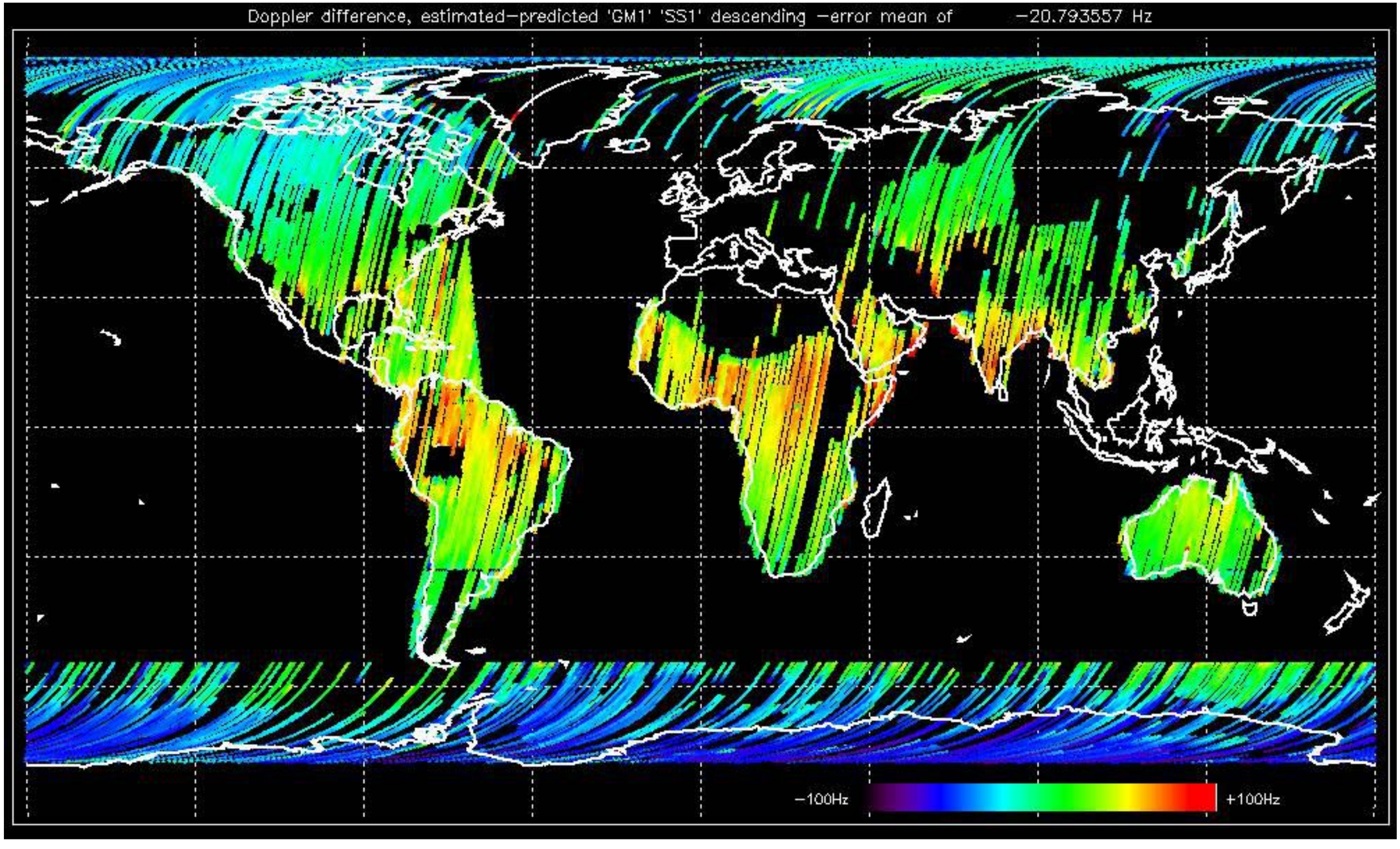

Doppler Bias[Hz]
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
09−Sep
Date

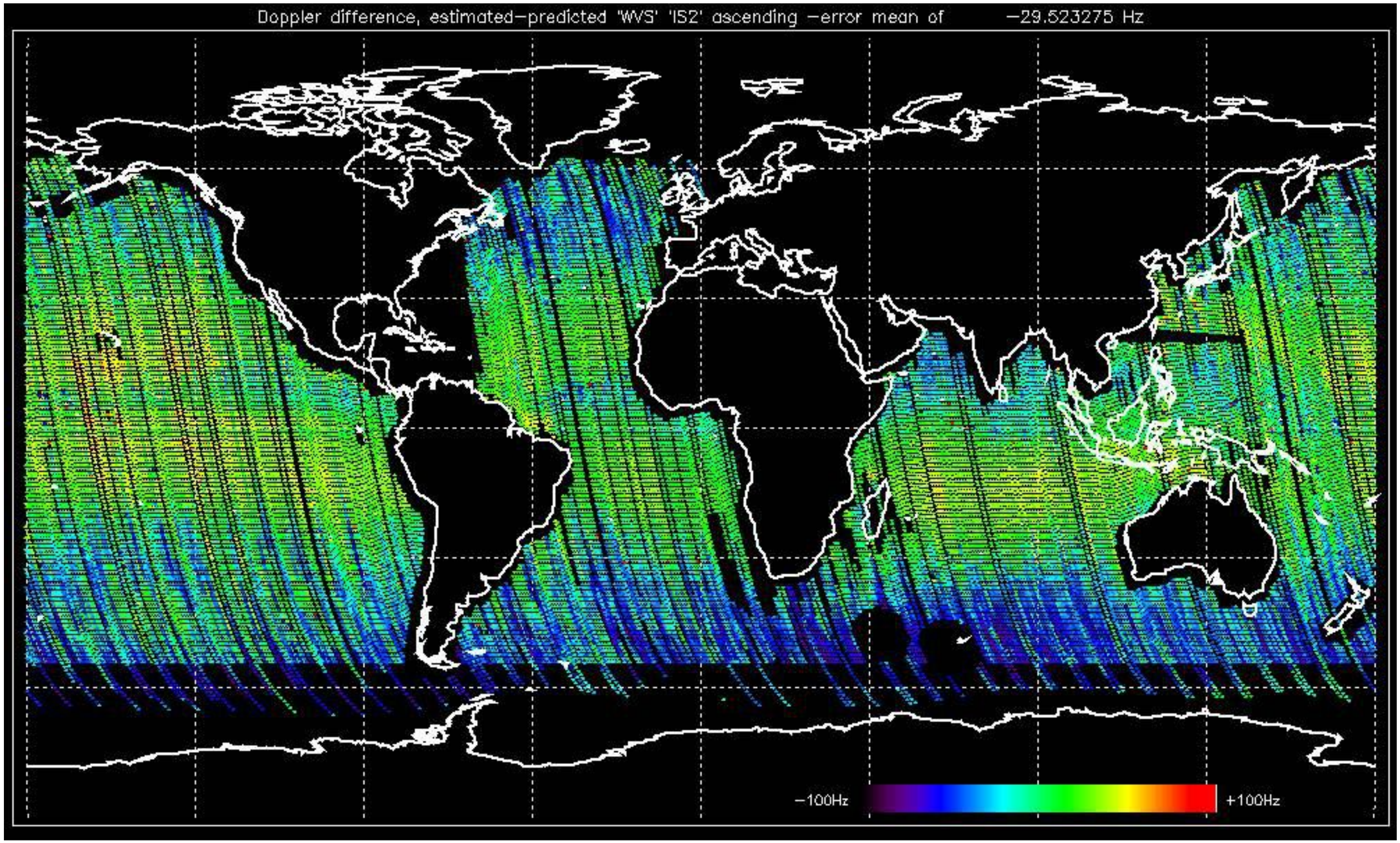

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

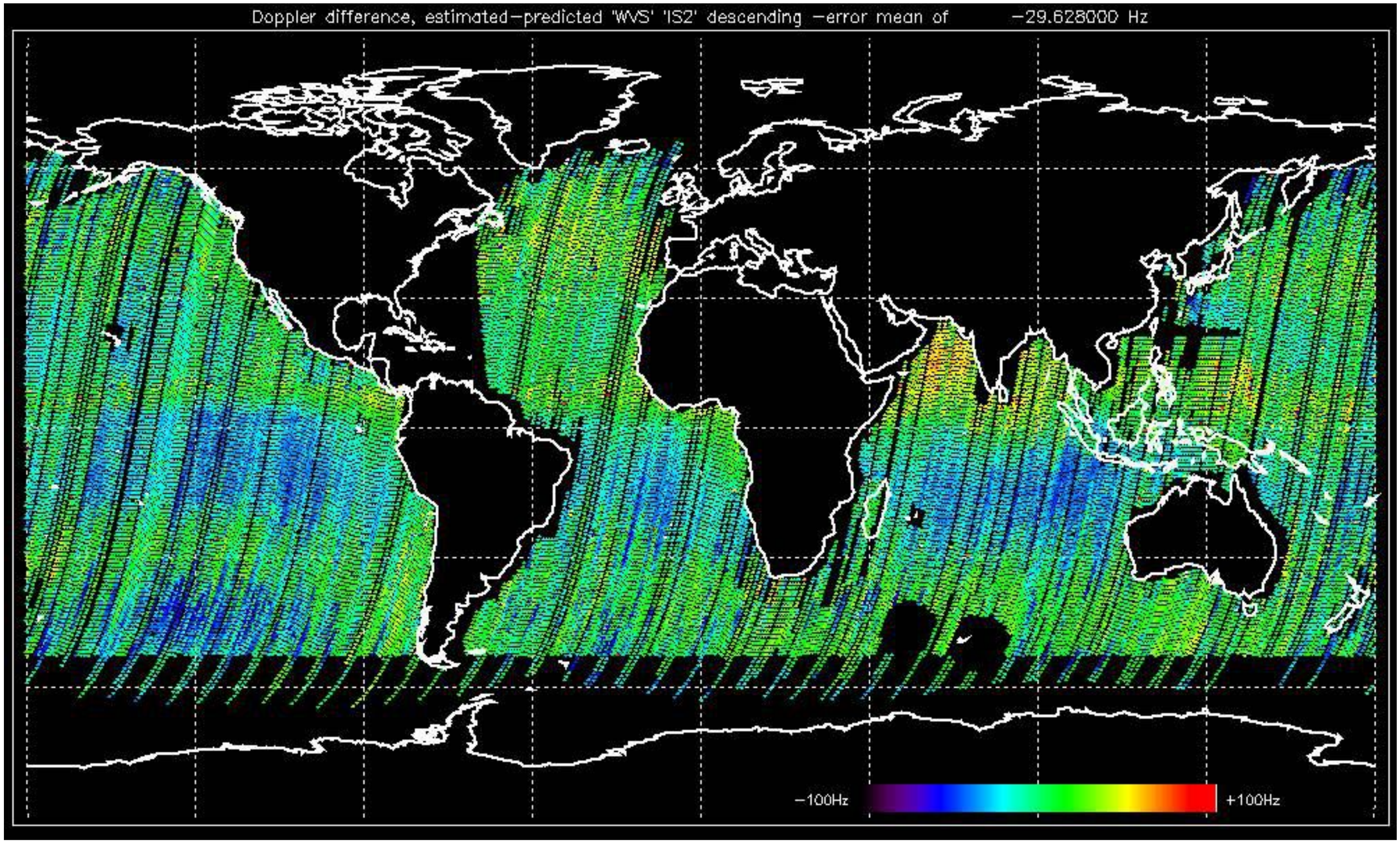

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −32.114903 Hz
−100Hz
+100Hz

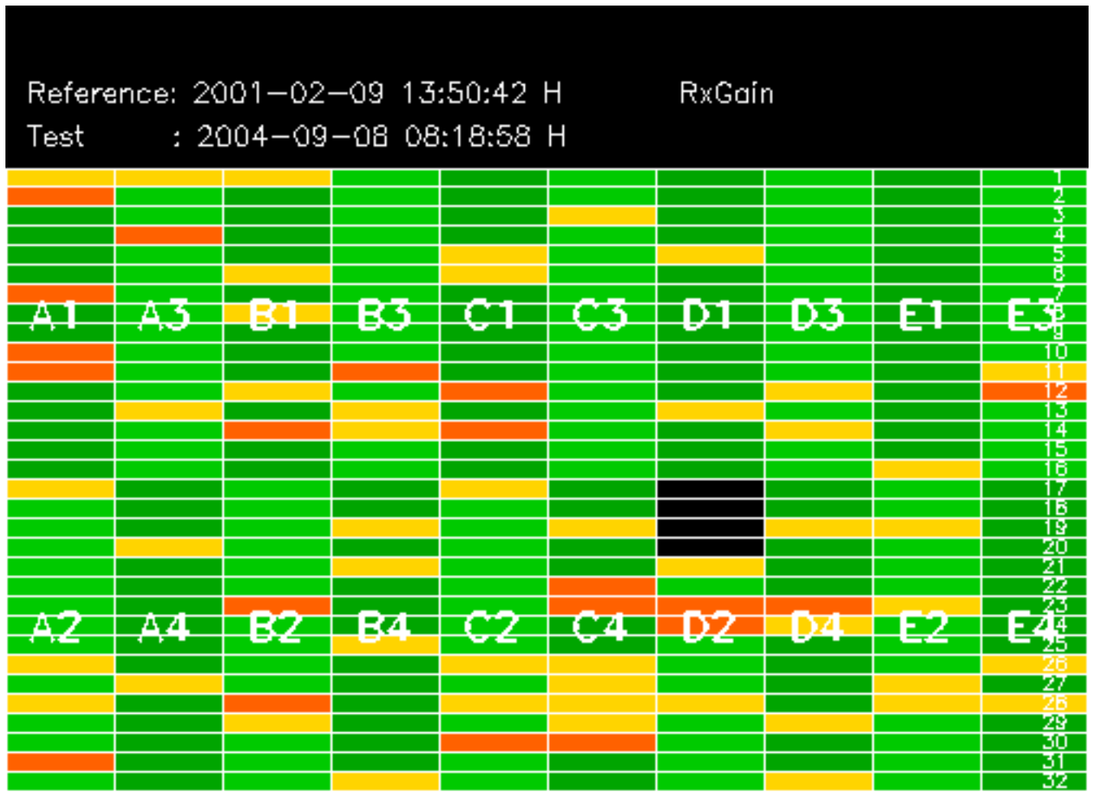

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −20.793557 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.523275 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.628000 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 : 2004-09-08 08:18:58 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
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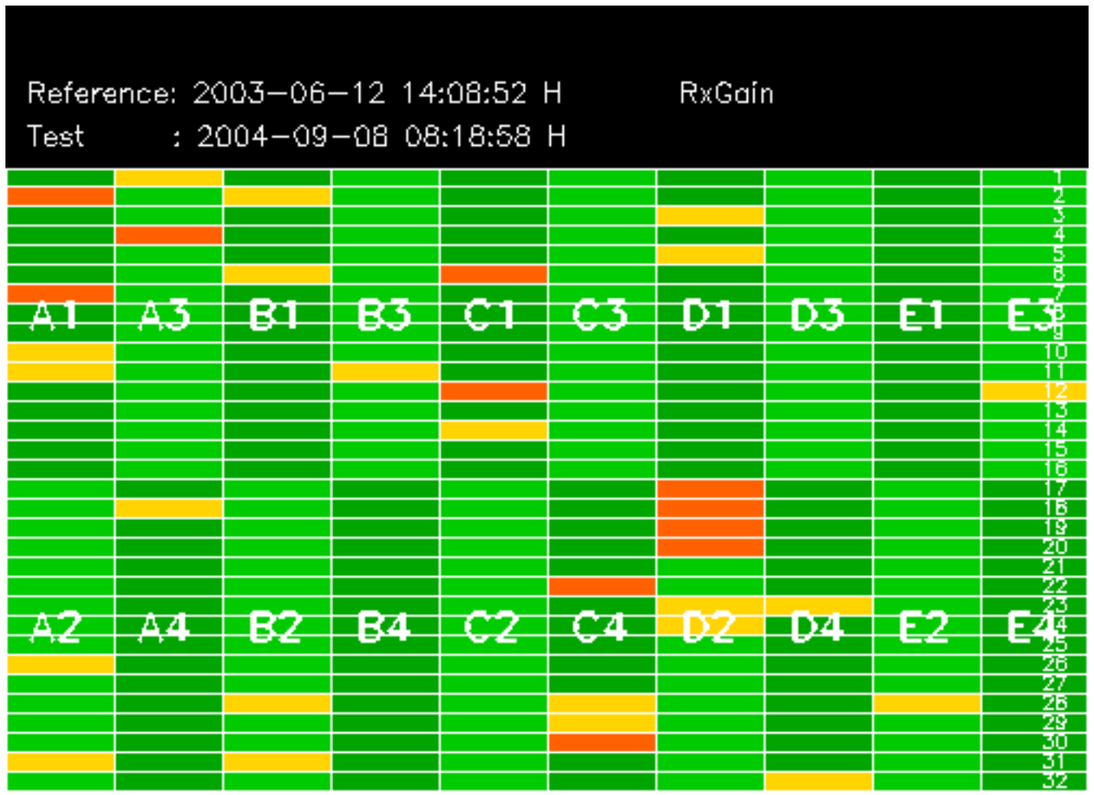
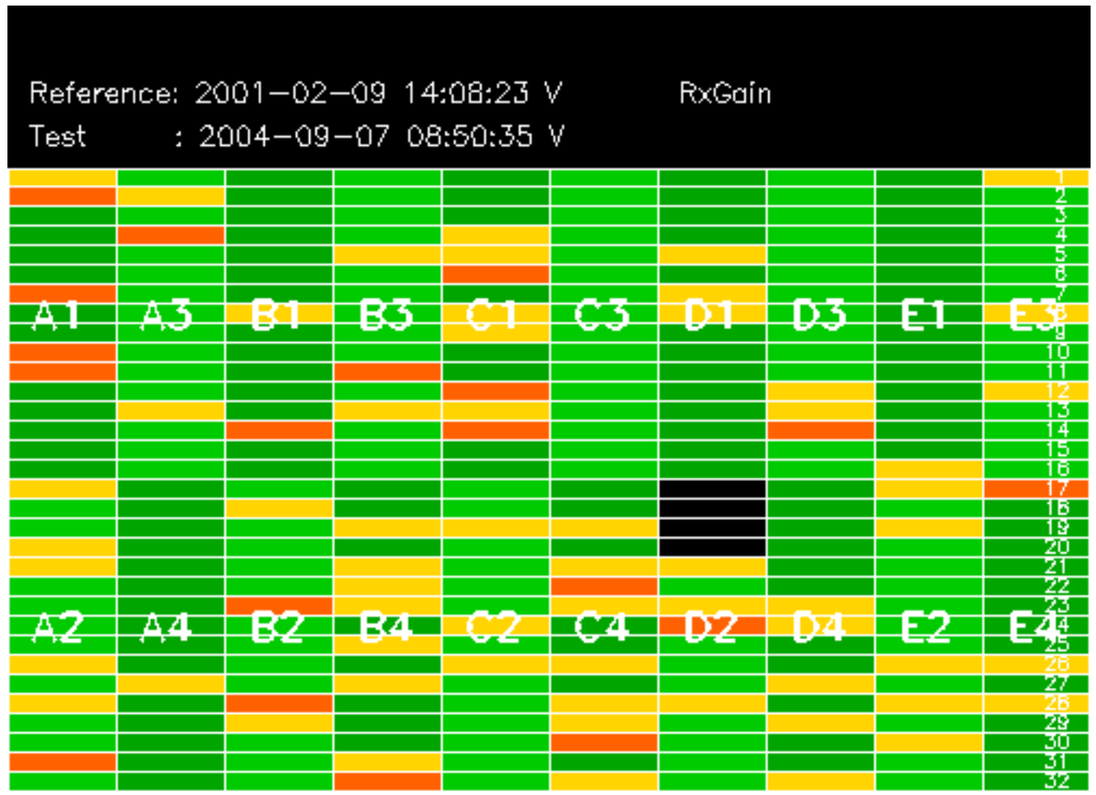
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-08 08:18:58 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 : 2004-09-07 08:50:35 V
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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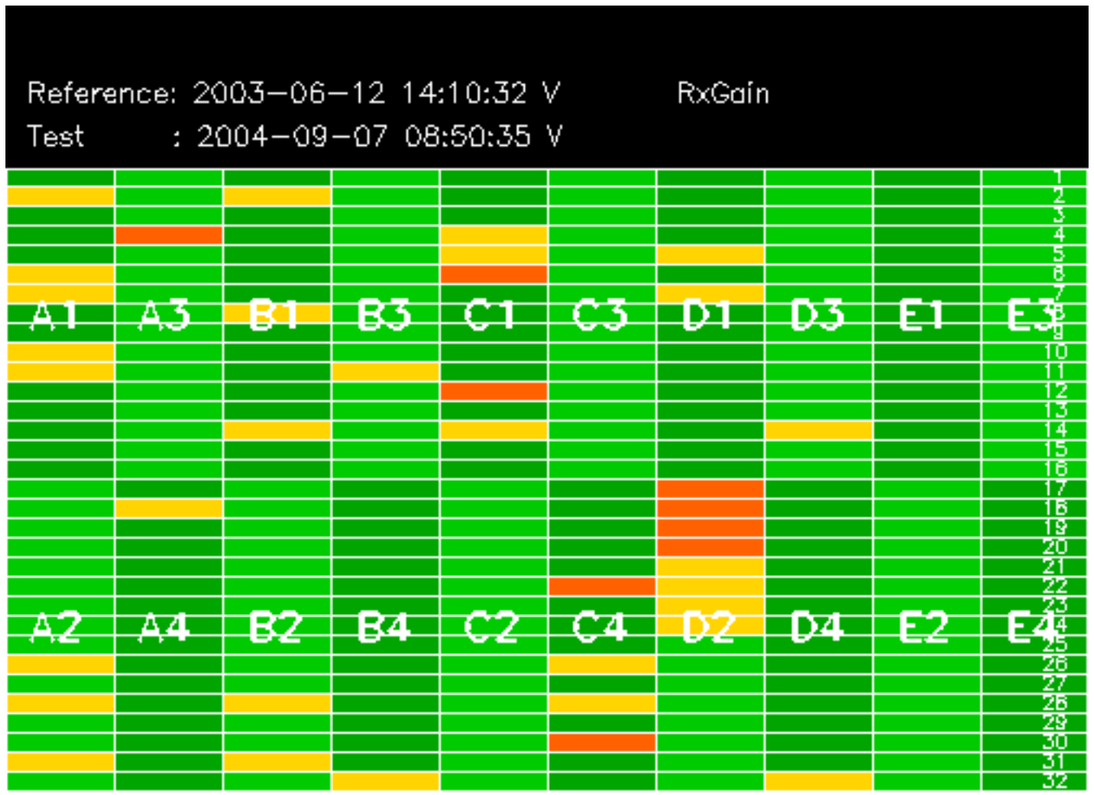
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-07 08:50:35 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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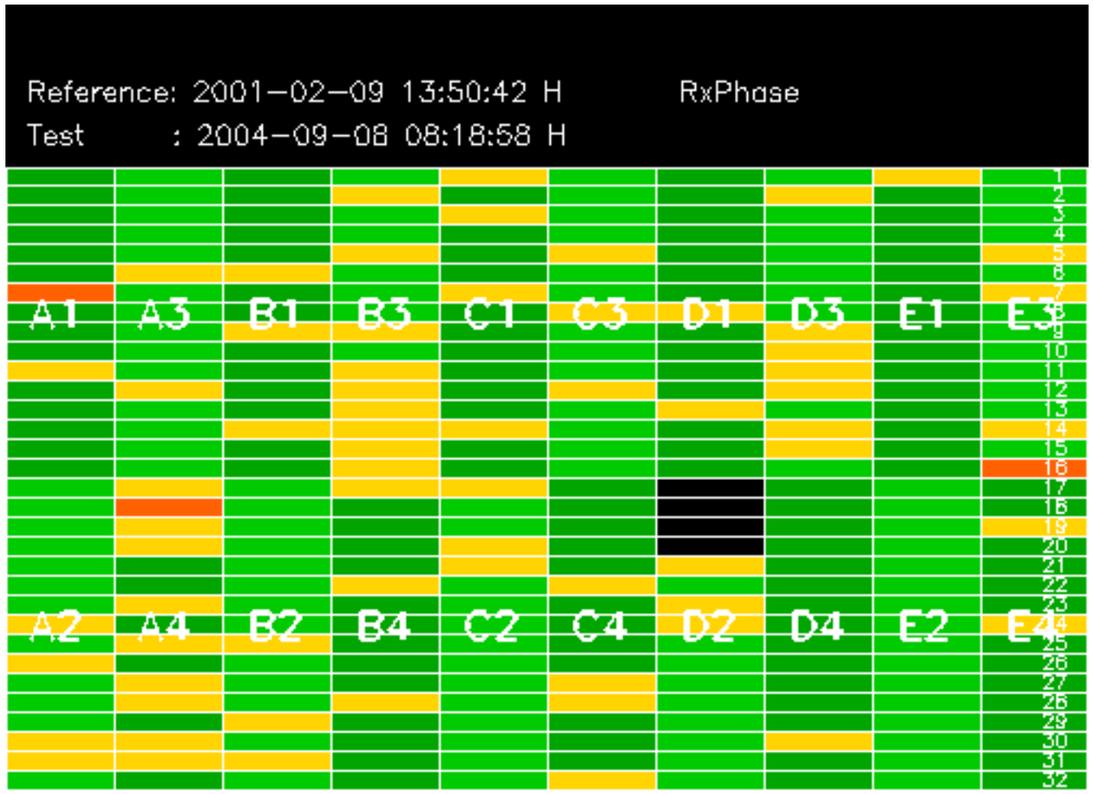
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-09-08 08:18:58 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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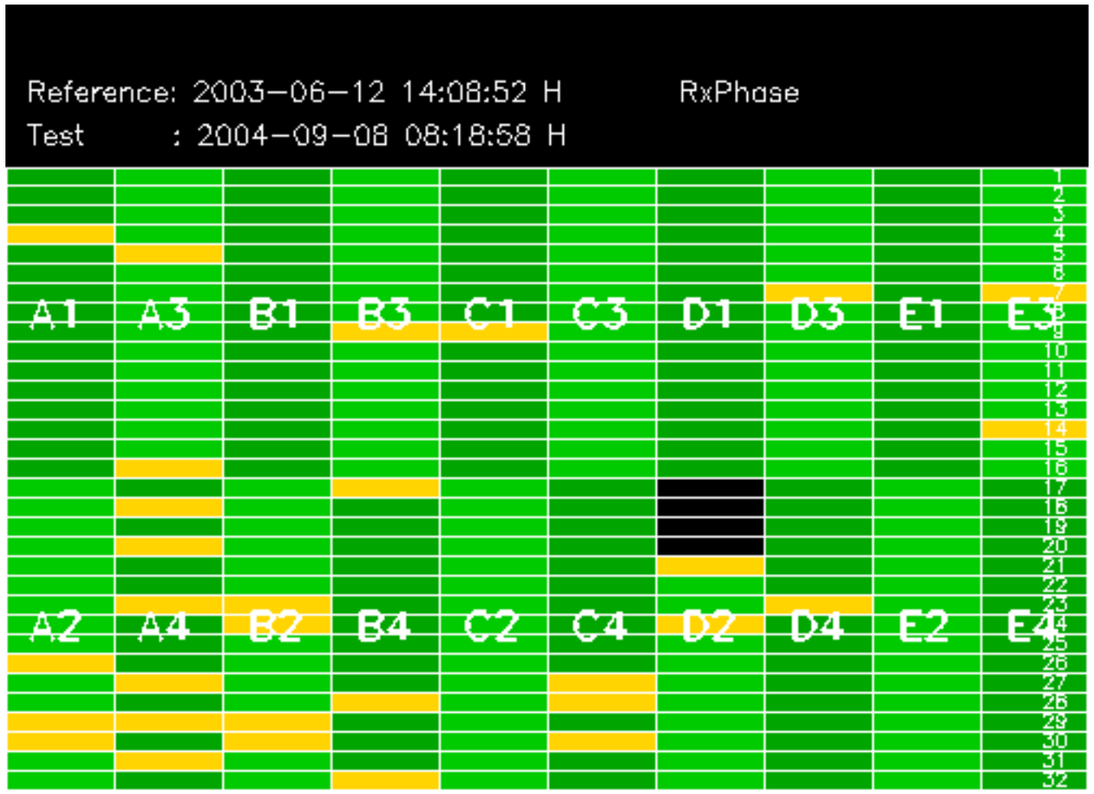
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-08 08:18:58 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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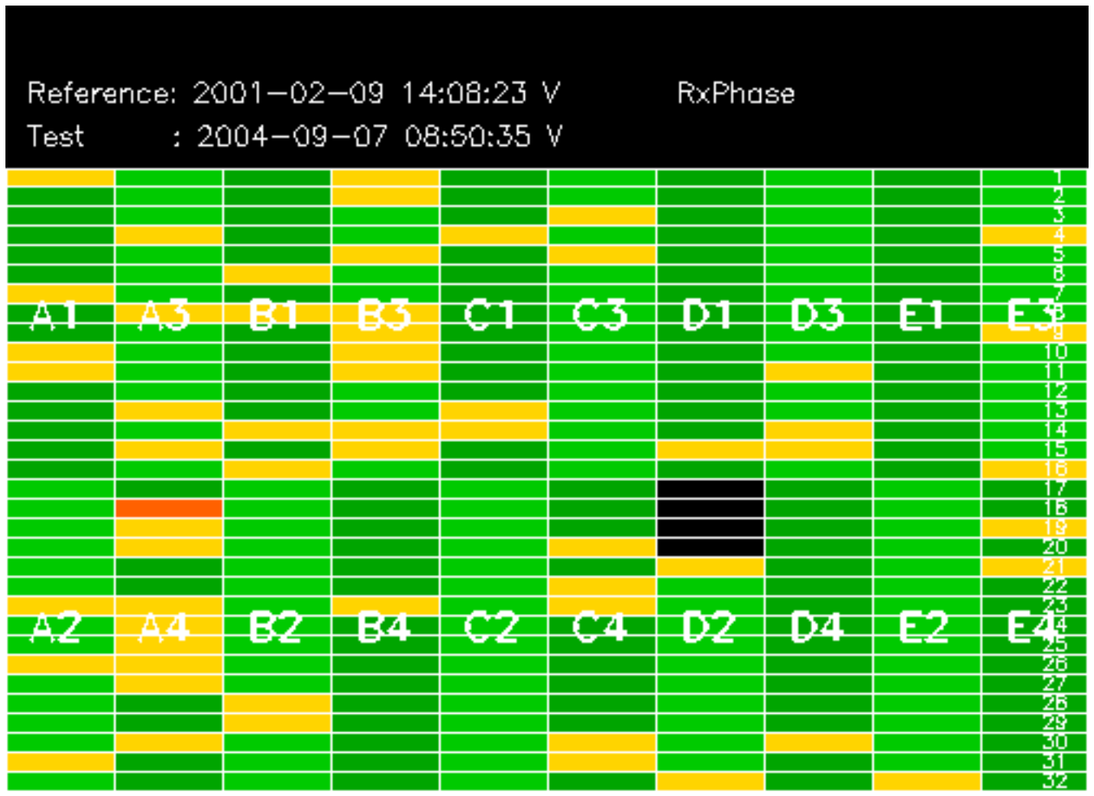
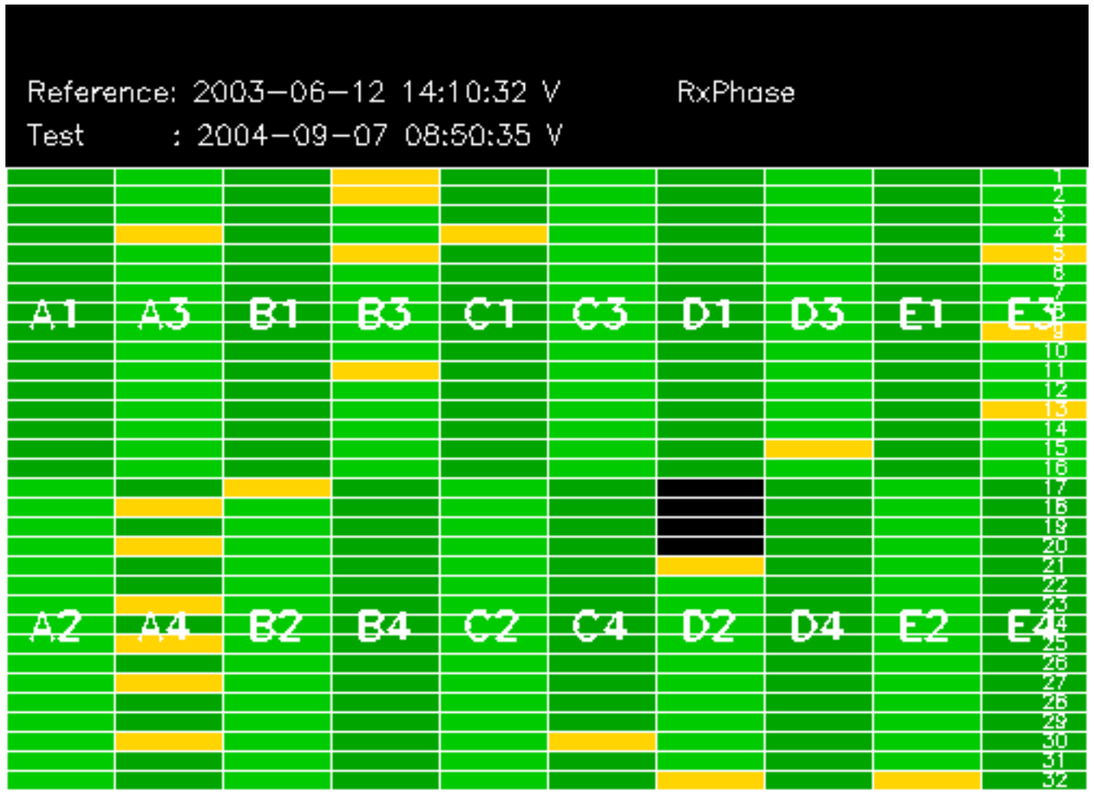
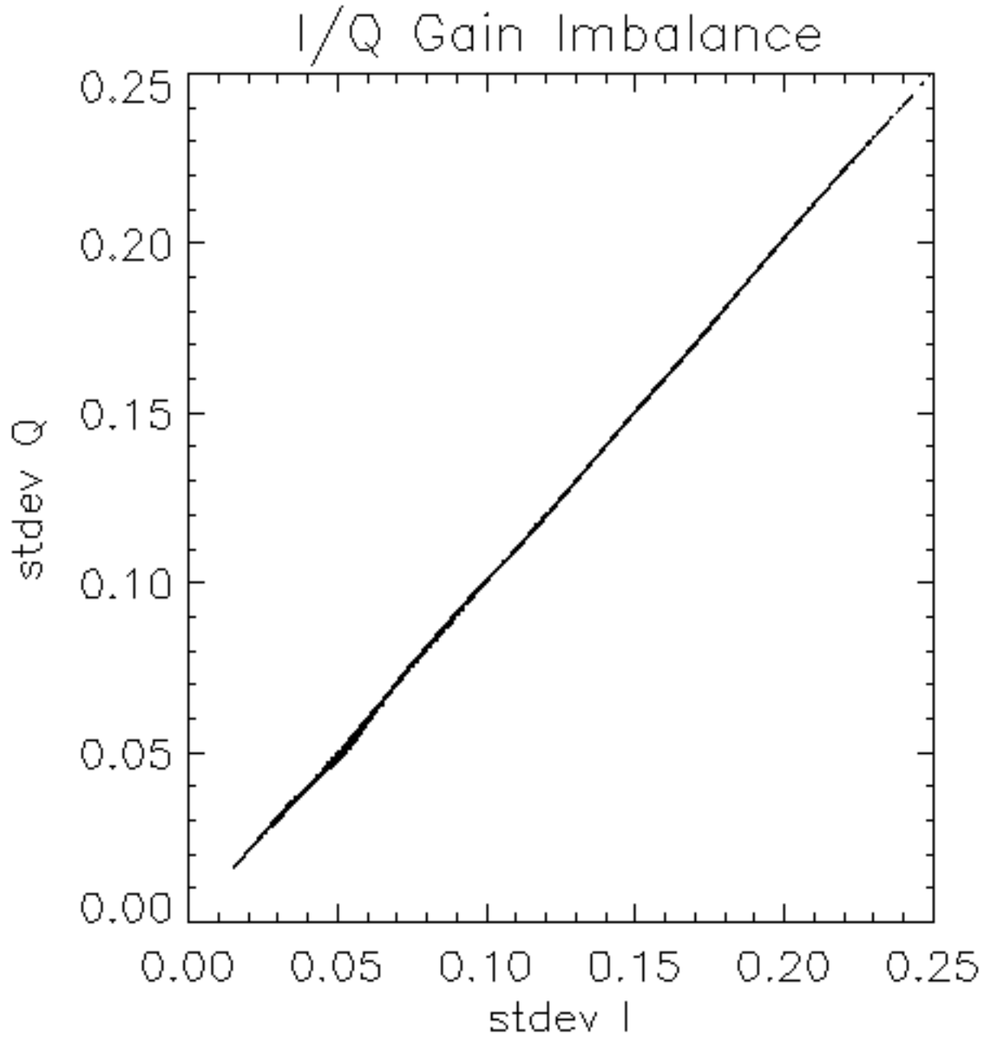
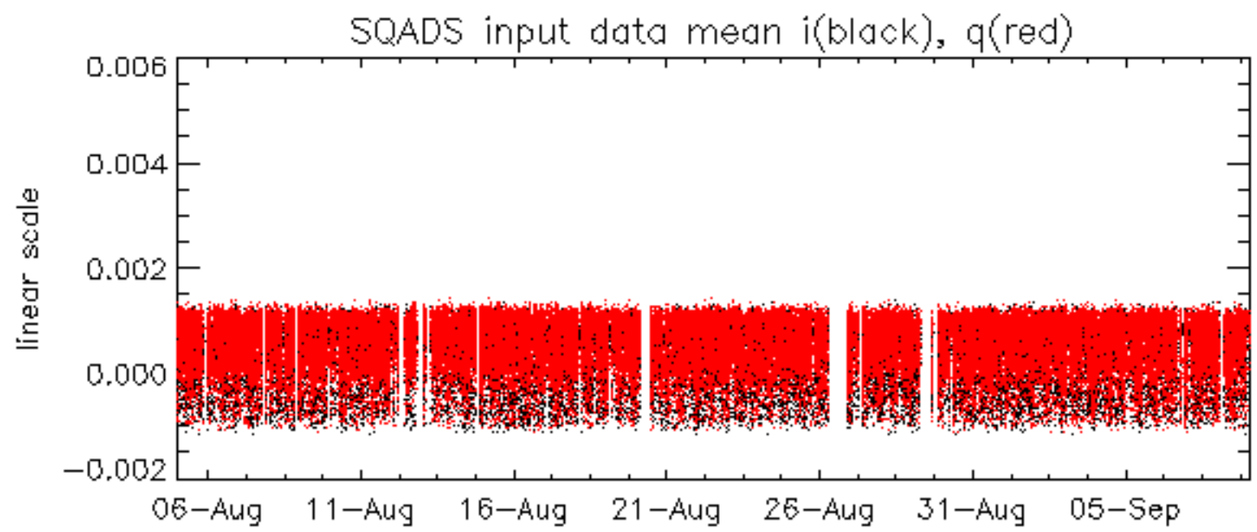
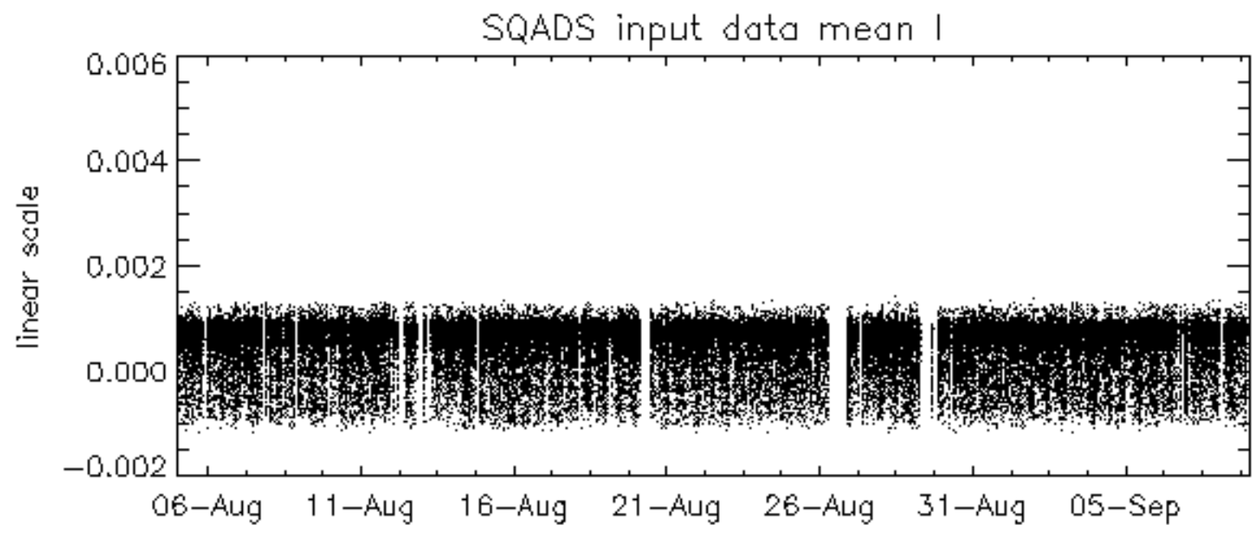
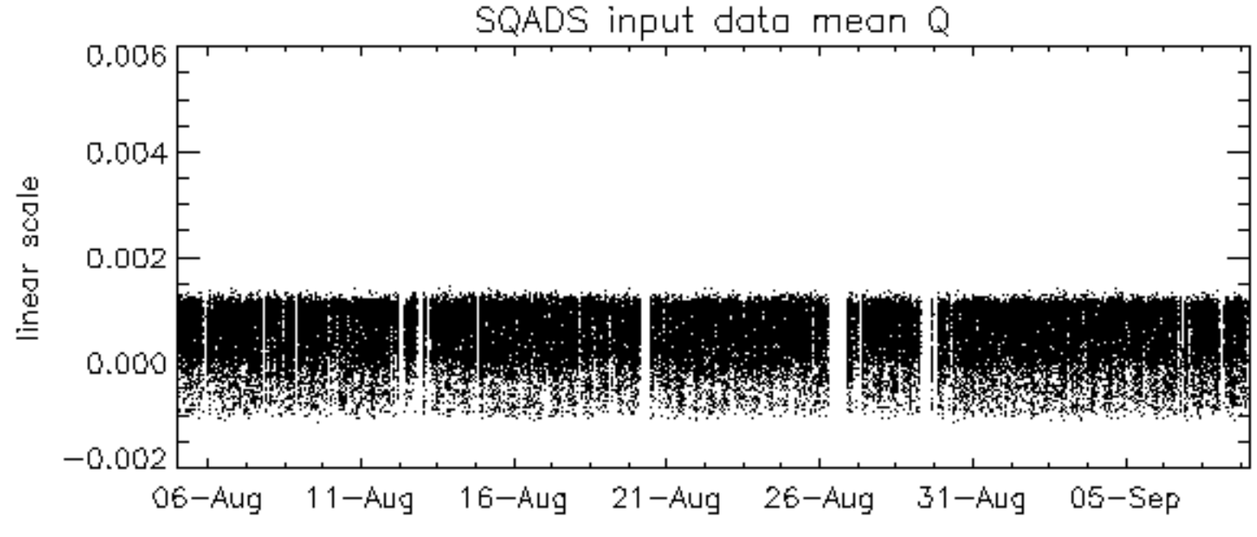

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-07 08:50:35 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

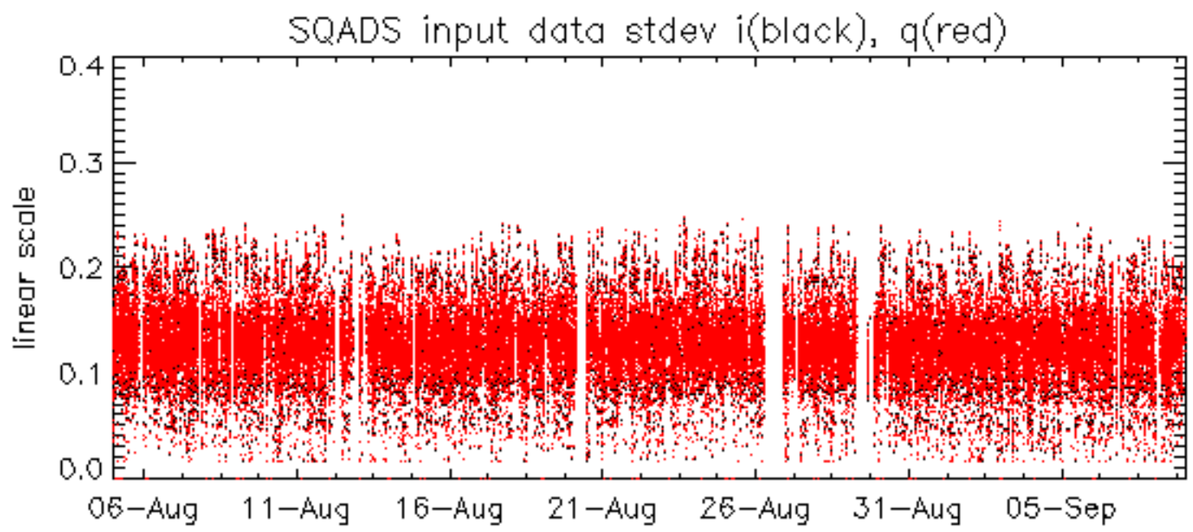

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-07 08:50:35 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

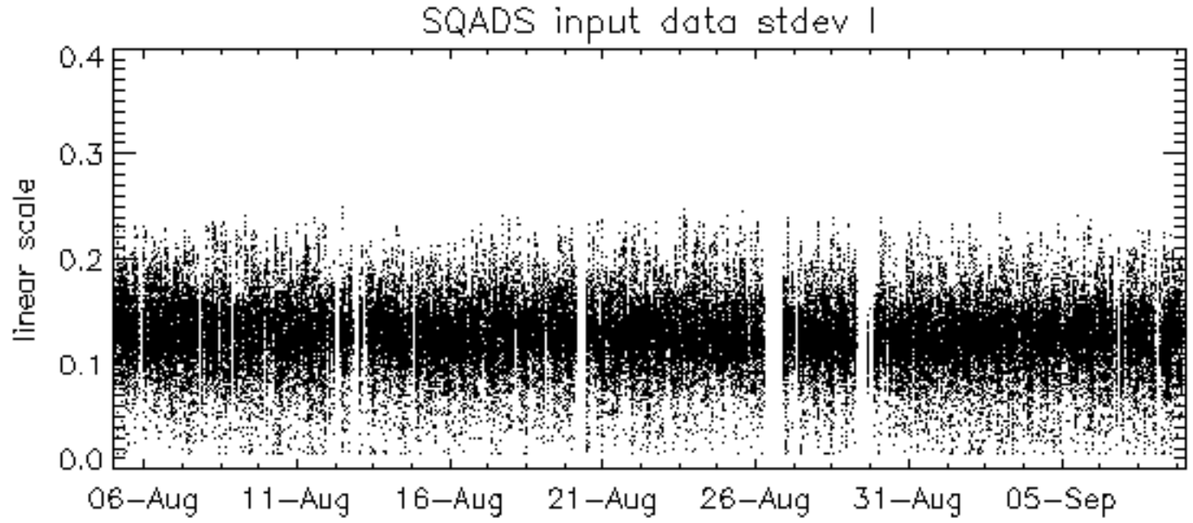

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

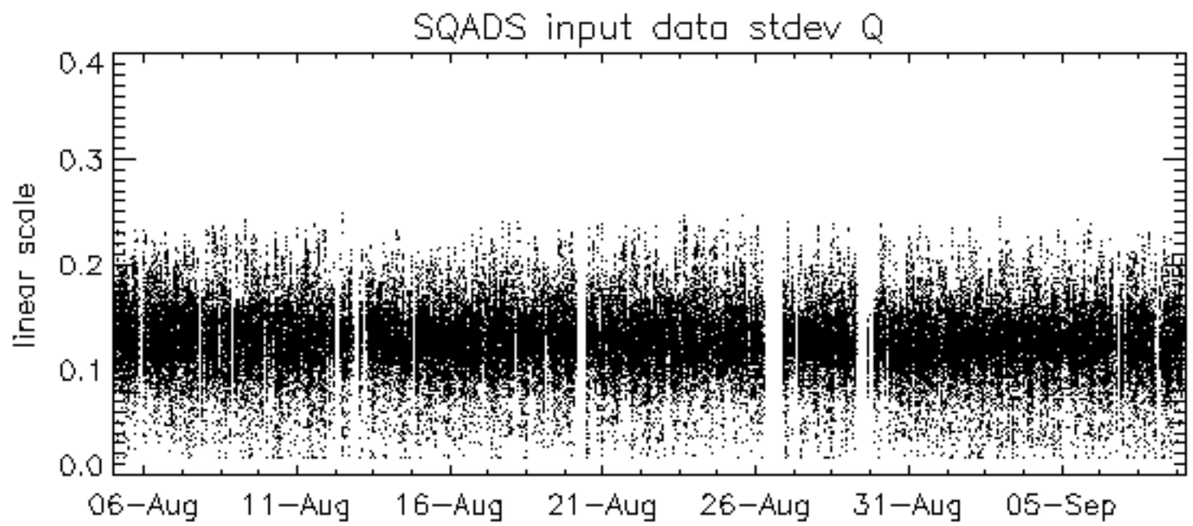

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

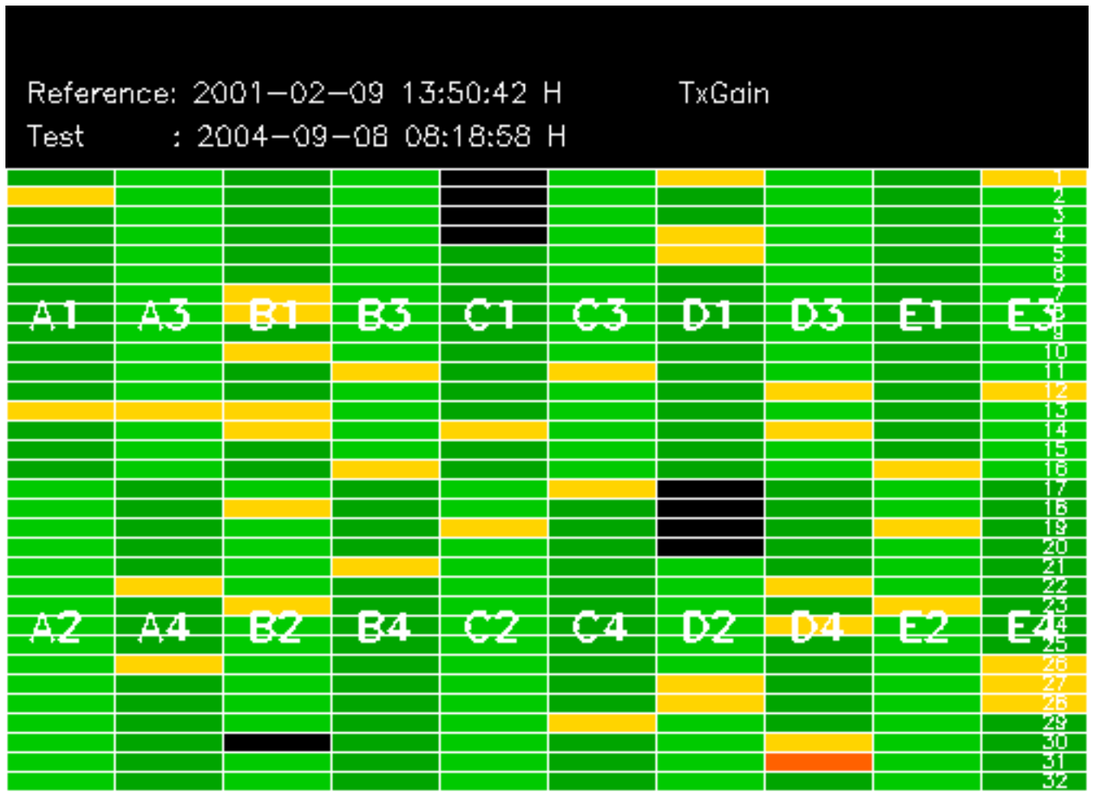

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep

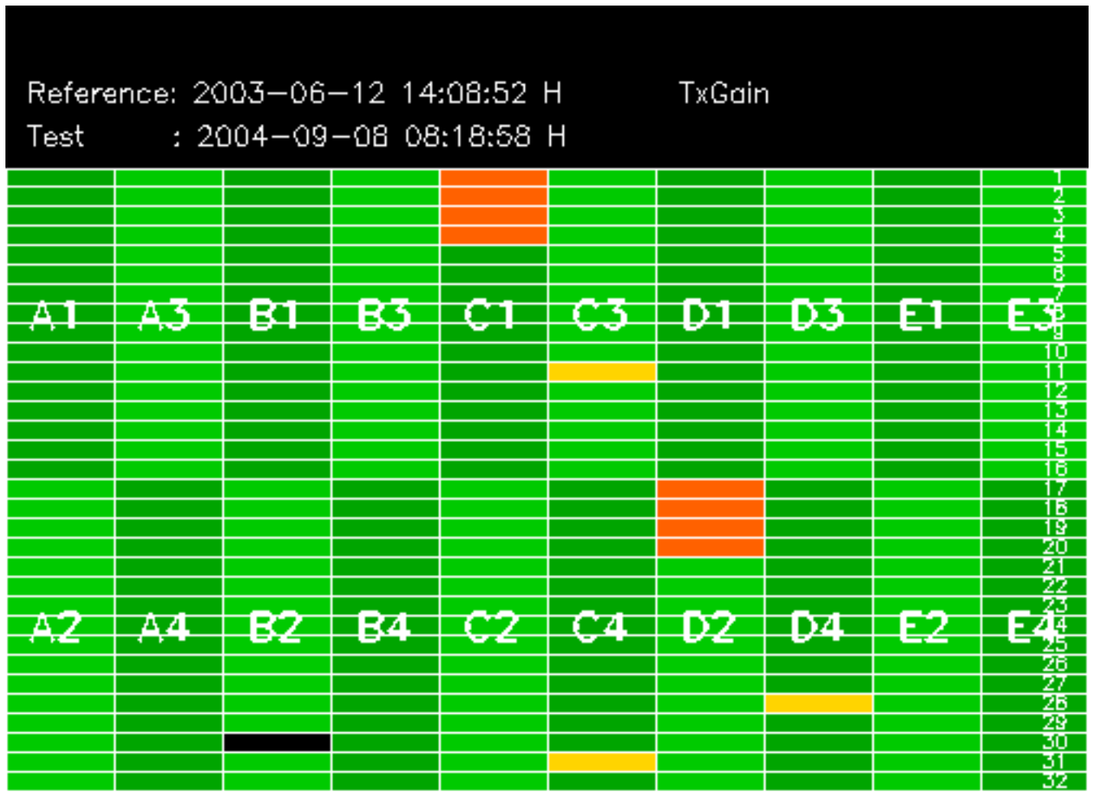

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
06−Aug
11−Aug
16−Aug
21−Aug
26−Aug
31−Aug
05−Sep


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 : 2004-09-08 08:18:58 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 : 2004-09-08 08:18:58 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 : 2004-09-07 08:50:35 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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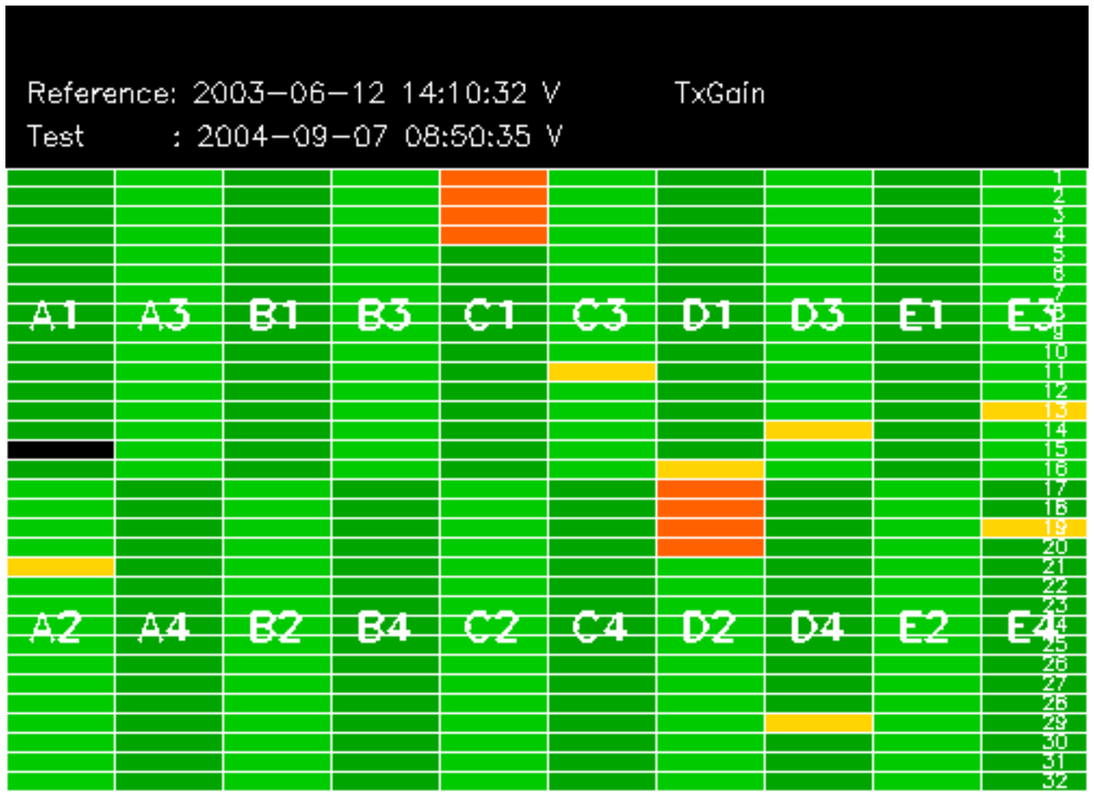
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-07 08:50:35 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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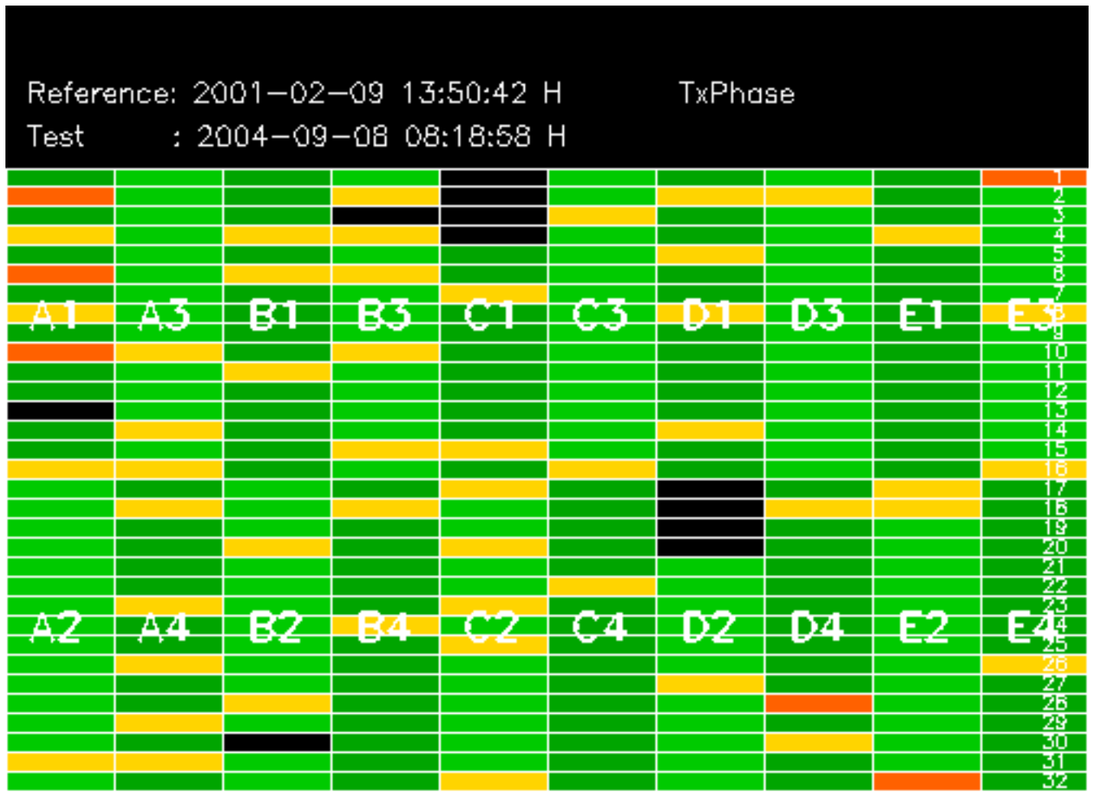
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-09-08 08:18:58 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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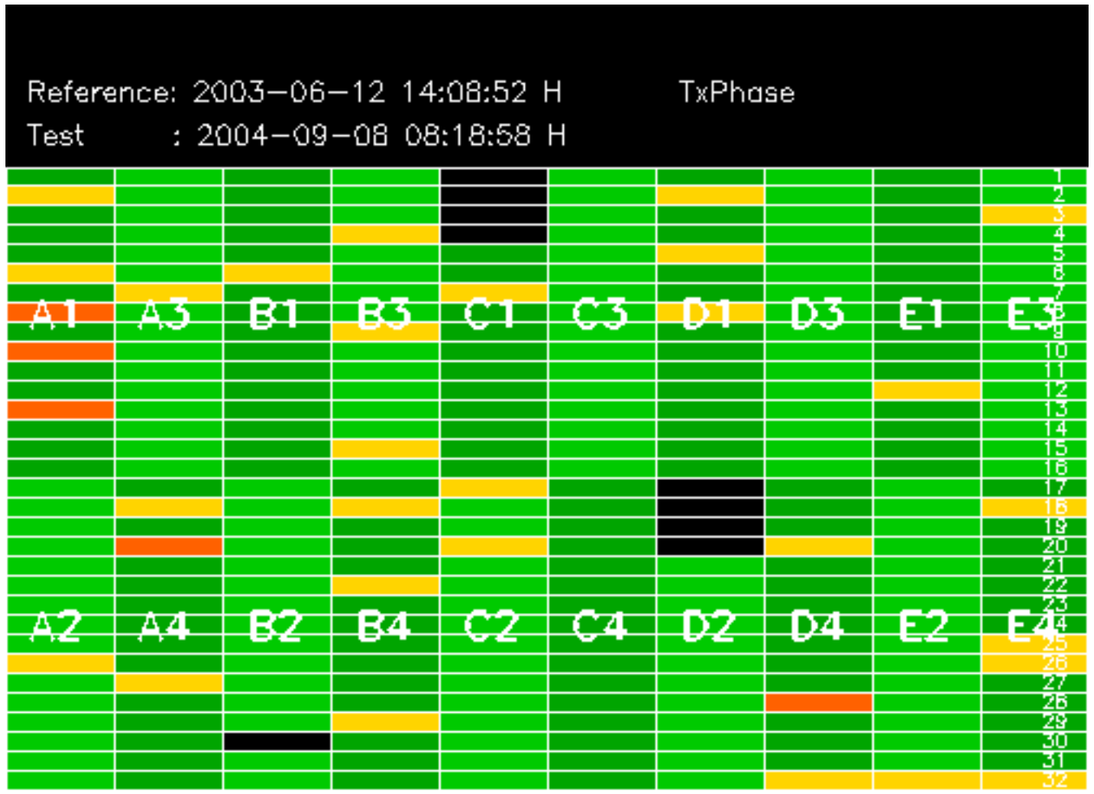
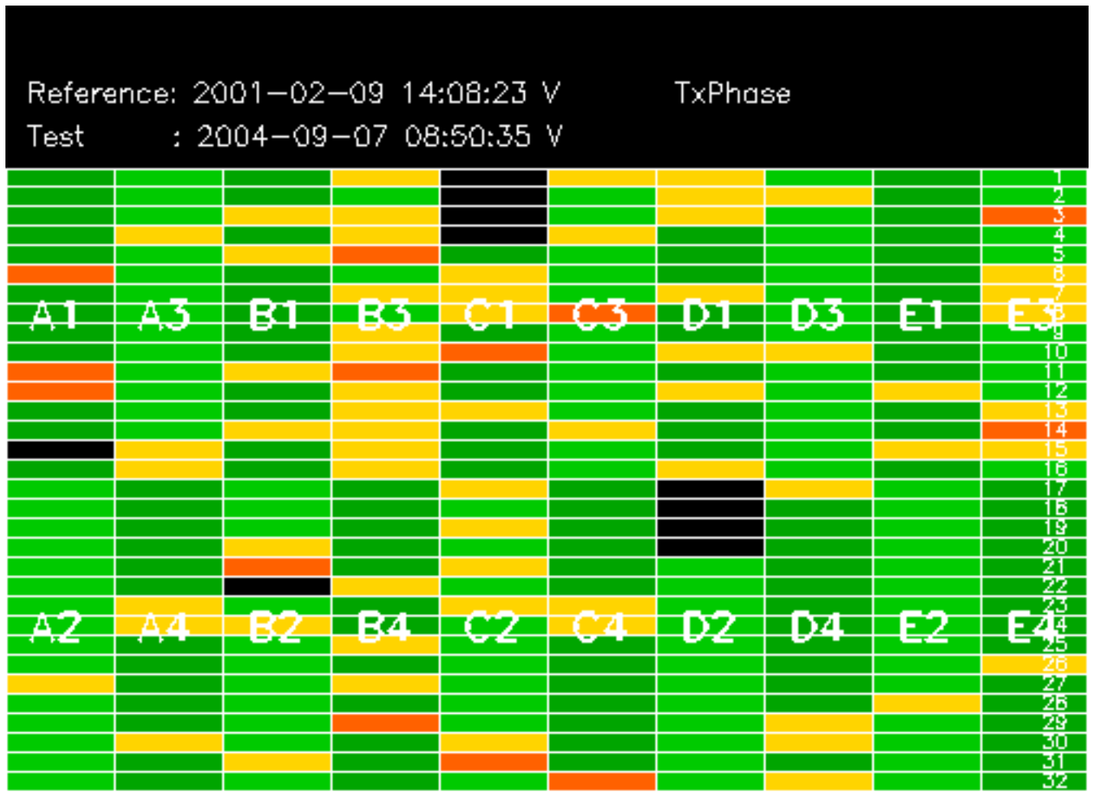

Reference: 2003-06-12 14:08:52 H
Test : 2004-09-08 08:18:58 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-09-07 08:50:35 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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Reference: 2003-06-12 14:10:32 V
Test : 2004-09-07 08:50:35 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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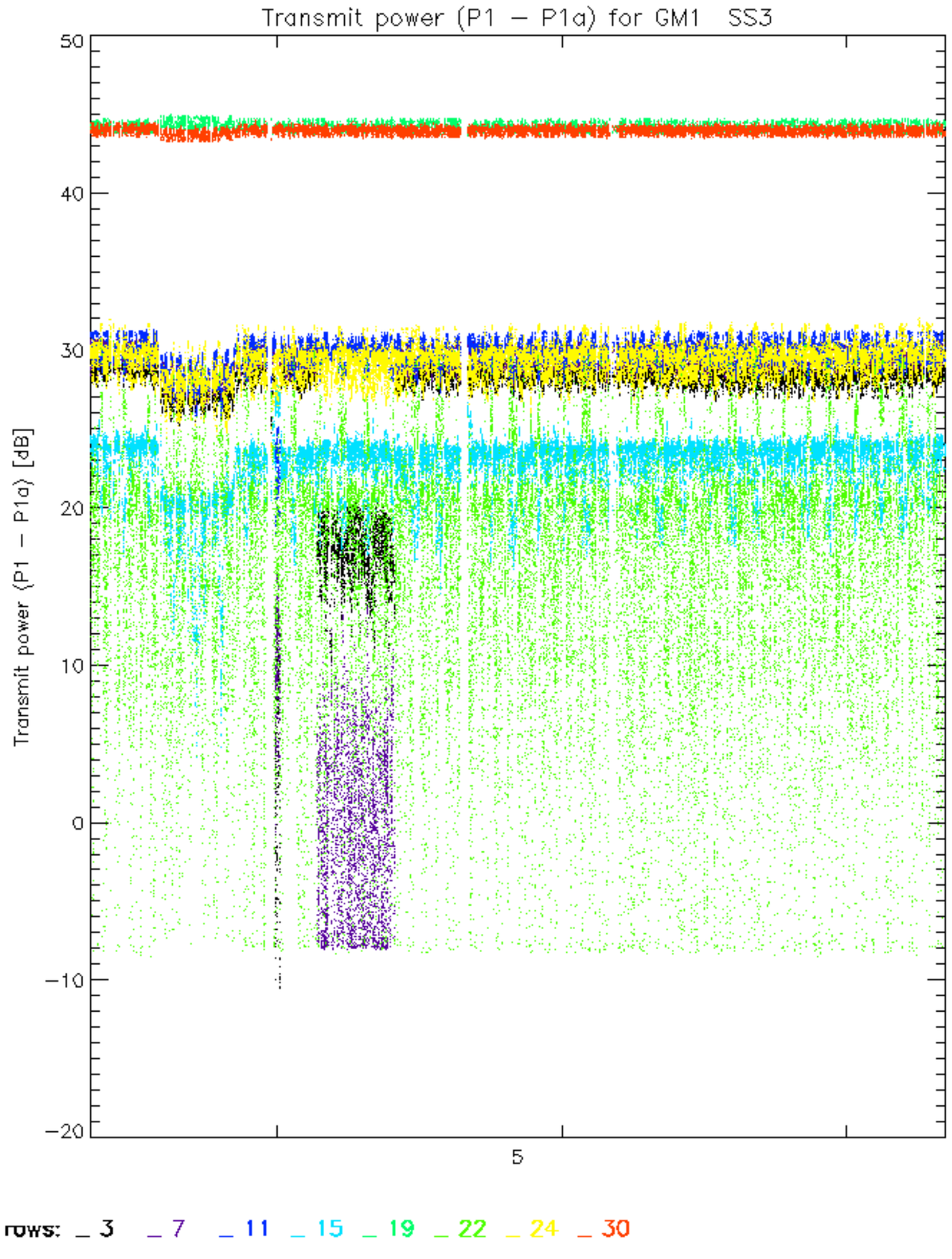
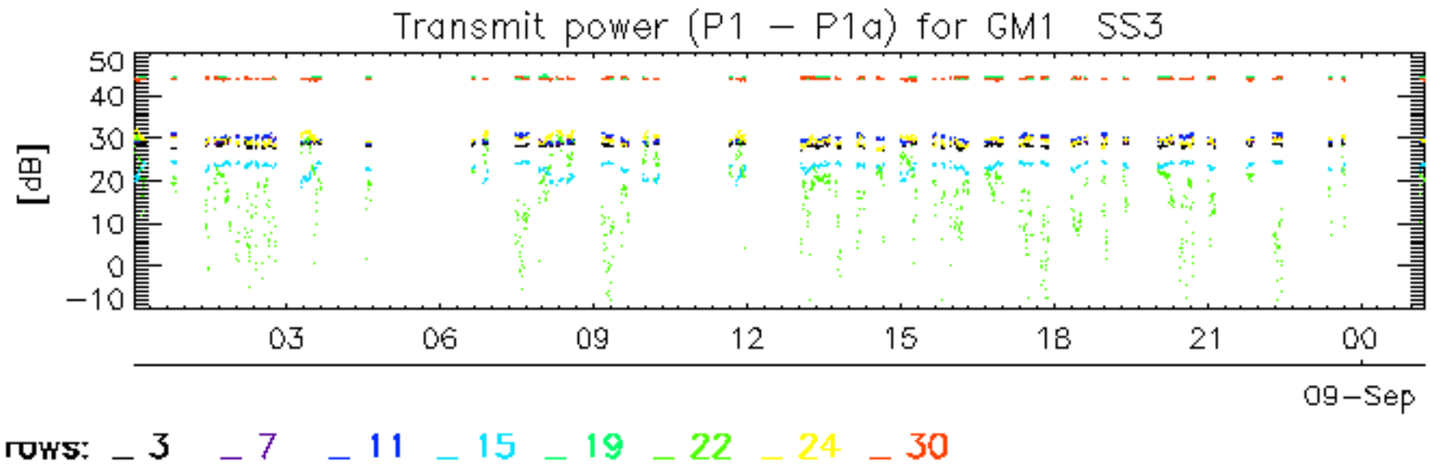
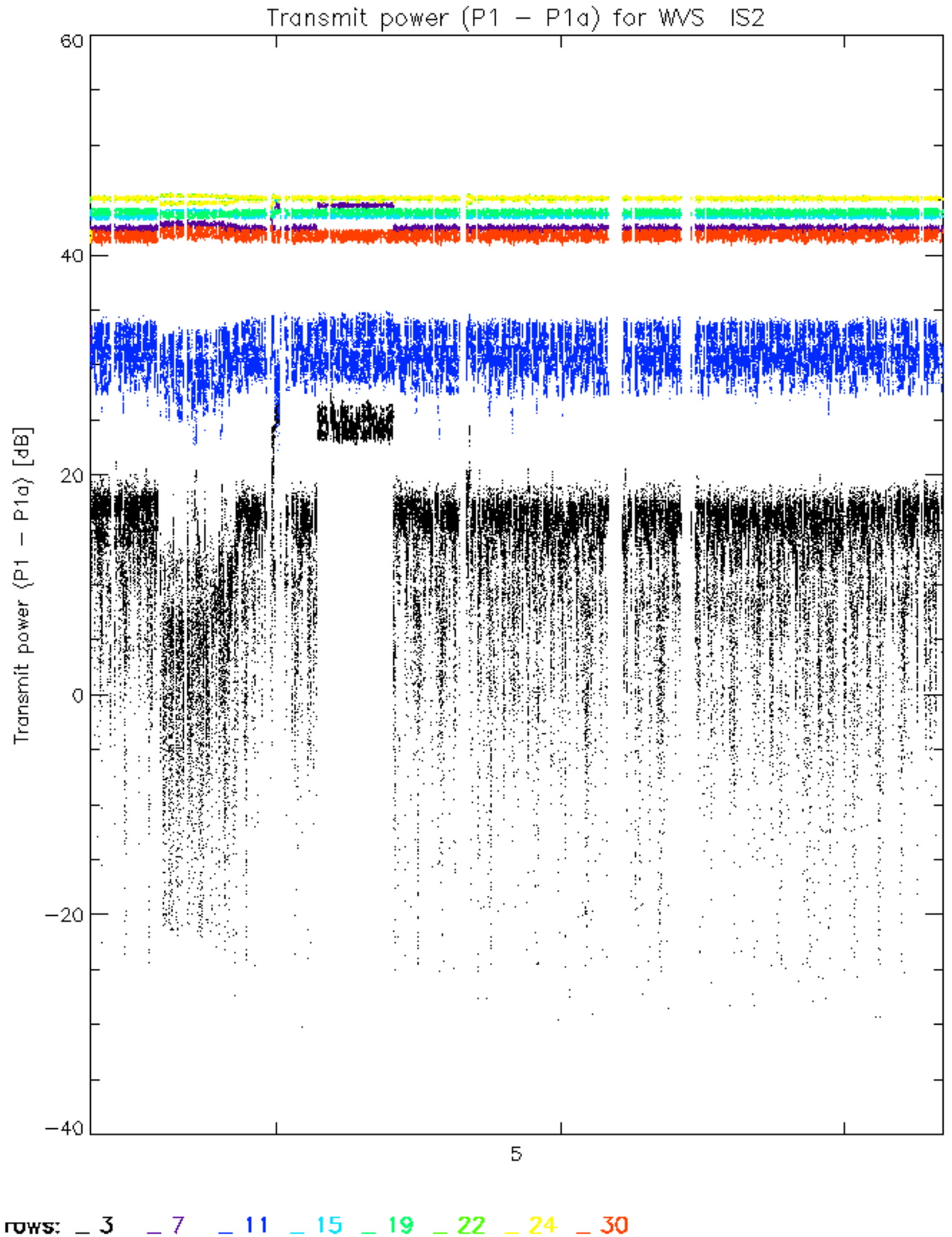
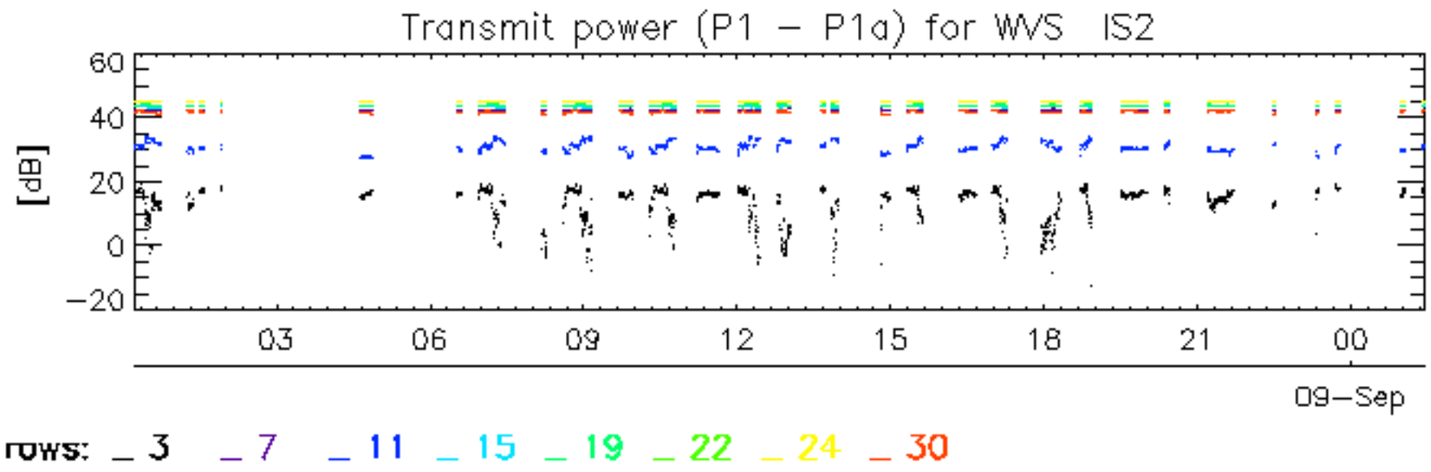

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
5
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
09−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
5
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
60
40
20
0
−20
03
06
09
12
15
18
21
00
09–Sep
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.