PRELIMINARY REPORT OF 040825

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

last update on Wed Aug 25 13:56:43 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	20040824 042901
H	20040823 050038

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.

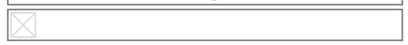
4.1 - Daily statistics

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	-3.470243	0.049714	0.076534
7	P1	-3.308766	0.054934	0.088431
11	P1	-4.648257	0.109258	-0.006287
15	P1	-5.752774	0.119164	-0.019197
19	P1	-3.460137	0.005601	-0.005560
22	P1	-4.549104	0.011064	0.053749
24	P1	-4.962921	0.019822	0.005539
30	P1	-6.930313	0.023854	-0.080060

3	P1	-15.923176	1.525608	0.983860
7	P1	-14.025884	0.164437	-0.141798
11	P1	-20.121811	0.420701	-0.290184
15	P1	-11.791916	0.162038	-0.014558
19	P1	-13.881383	0.038107	-0.036878
22	P1	-16.231346	0.346515	0.264721
24	P1	-14.560659	0.301875	0.182788
30	P1	-17.760107	0.447122	-0.248350

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.304131	0.081348	0.036974
7	P2	-22.637487	0.137634	0.120113
11	P2	-15.358539	0.176925	0.134954
15	P2	-7.072604	0.095849	0.086541
19	P2	-9.560583	0.196893	0.094927
22	P2	-17.364010	0.117259	0.126706
24	P2	-20.746737	0.088405	0.001799
30	P2	-19.282831	0.080856	0.120656

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.140543	0.002557	0.009741
7	P3	-8.140546	0.002556	0.009787
11	P3	-8.140583	0.002556	0.009971
15	P3	-8.140571	0.002557	0.009936
19	P3	-8.140552	0.002556	0.009807
22	P3	-8.140561	0.002555	0.009885
24	P3	-8.140581	0.002556	0.009971
30	P3	-8.140918	0.002568	0.008542

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	-2.699042	0.263915	0.369609
7	P1	-2.957040	0.215770	0.271622
11	P1	-3.877196	0.164954	-0.022916
15	P1	-3.532592	0.134214	-0.009887
19	P1	-3.480963	0.014348	0.003420
22	P1	-5.677756	0.041729	-0.095380
24	P1	-3.885676	0.015616	-0.107577
30	P1	-6.177464	0.065614	0.026709
3	P1	-10.349962	1.032578	0.672308
7	P1	-10.067747	0.162376	0.154480
11	P1	-12.107903	0.117486	-0.195111
15	P1	-11.637214	0.107518	-0.136802
19	P1	-15.625874	0.050350	0.021436
22	P1	-23.365492	1.202294	-0.063409
24	P1	-17.829227	0.227769	-0.330531
30	P1	-20.382847	1.205783	-0.211498

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.980438	0.059732	0.020391
7	P2	-22.772003	0.052002	0.108725
11	P2	-11.015916	0.072854	0.147255
15	P2	-4.952679	0.039334	0.022511
19	P2	-6.765714	0.057829	0.050450
22	P2	-7.453363	0.048387	0.052080
24	P2	-11.040671	0.053794	0.005560
30	P2	-22.222979	0.043895	0.113293

P3 Cyclic statistics

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

3	P3	-7.988436	0.003771	-0.004262
7	P3	-7.988388	0.003781	-0.003946
11	P3	-7.988530	0.003768	-0.004359
15	P3	-7.988435	0.003773	-0.004323
19	P3	-7.988464	0.003778	-0.004178
22	P3	-7.988397	0.003772	-0.003964
24	P3	-7.988443	0.003785	-0.004263
30	P3	-7.988427	0.003773	-0.004313

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	0.000490931
	stdev	2.13937e-07
MEAN Q	mean	0.000541698
	stdev	2.40840e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129170
	stdev	0.000997127

STDEV Q	mean	0.129407
	stdev	0.00100878

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

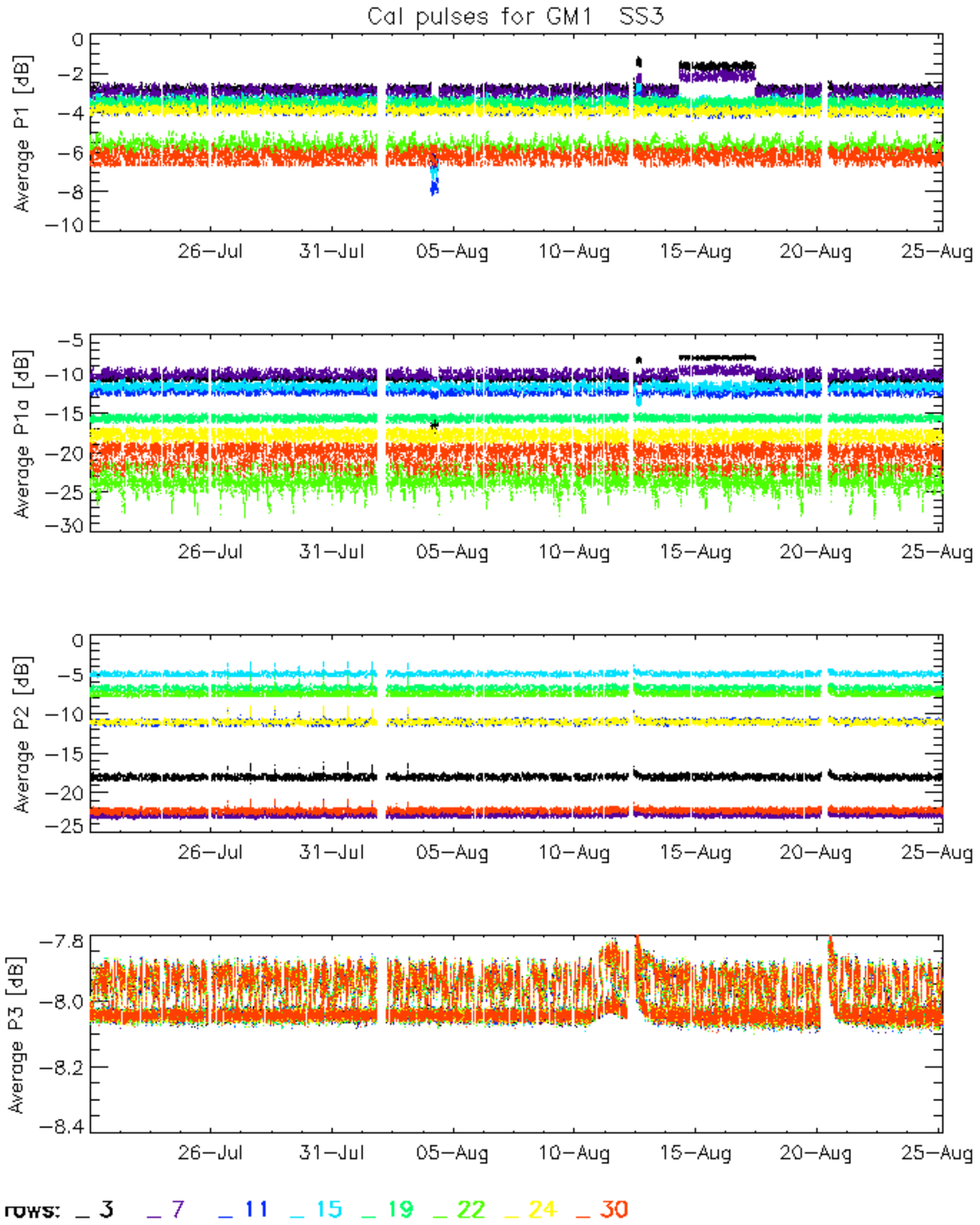
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

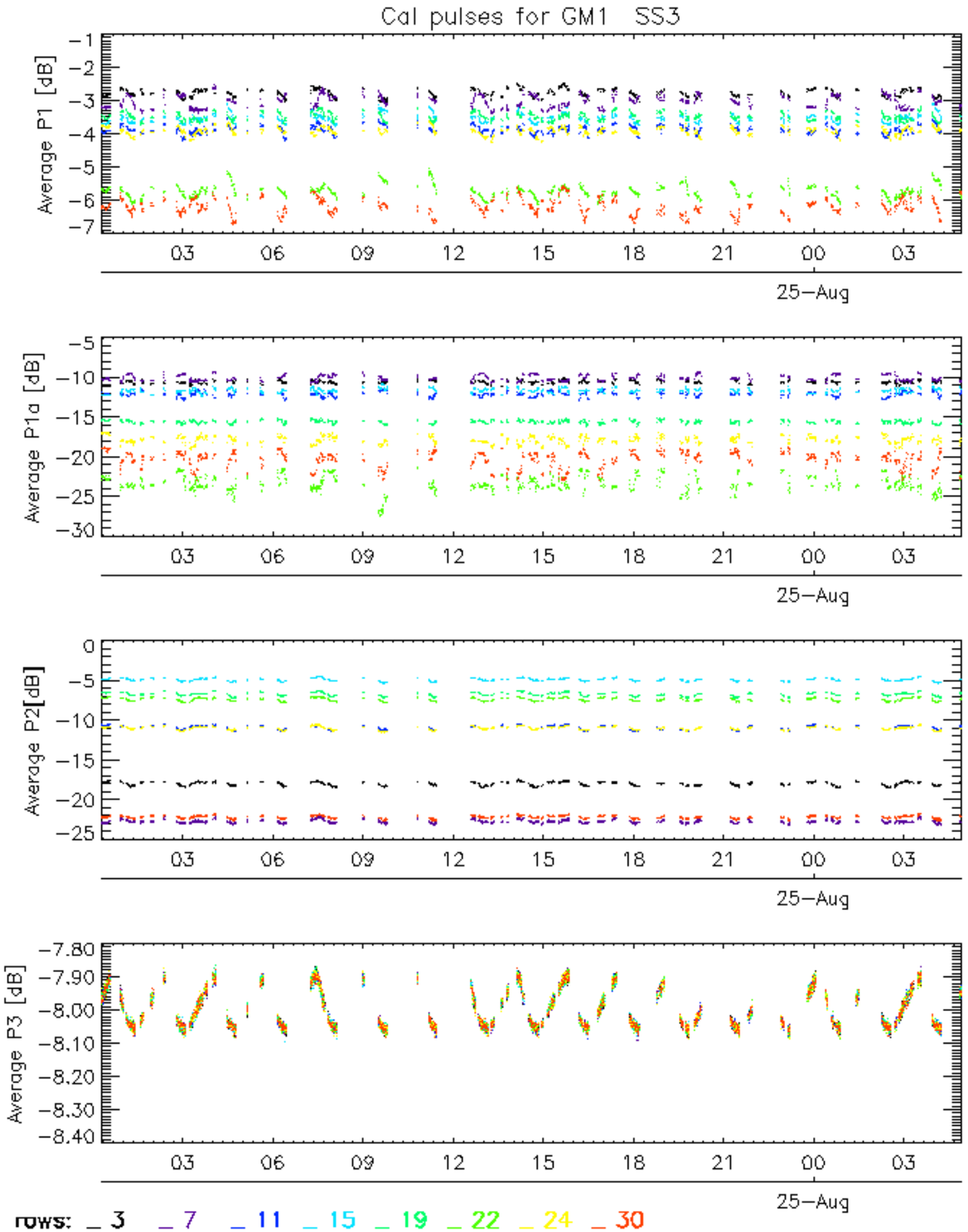
6.5 - Absolute Doppler for GM1

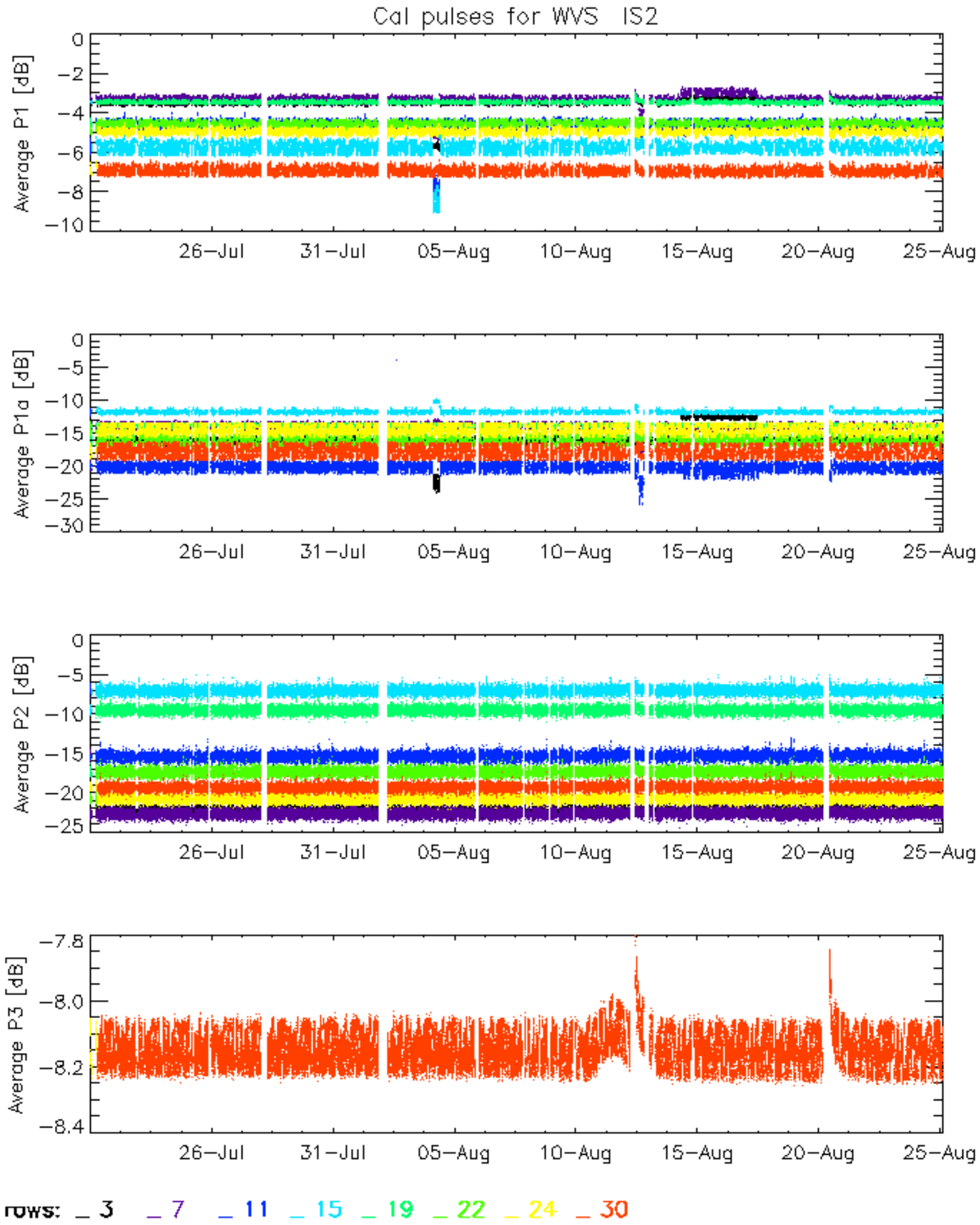
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

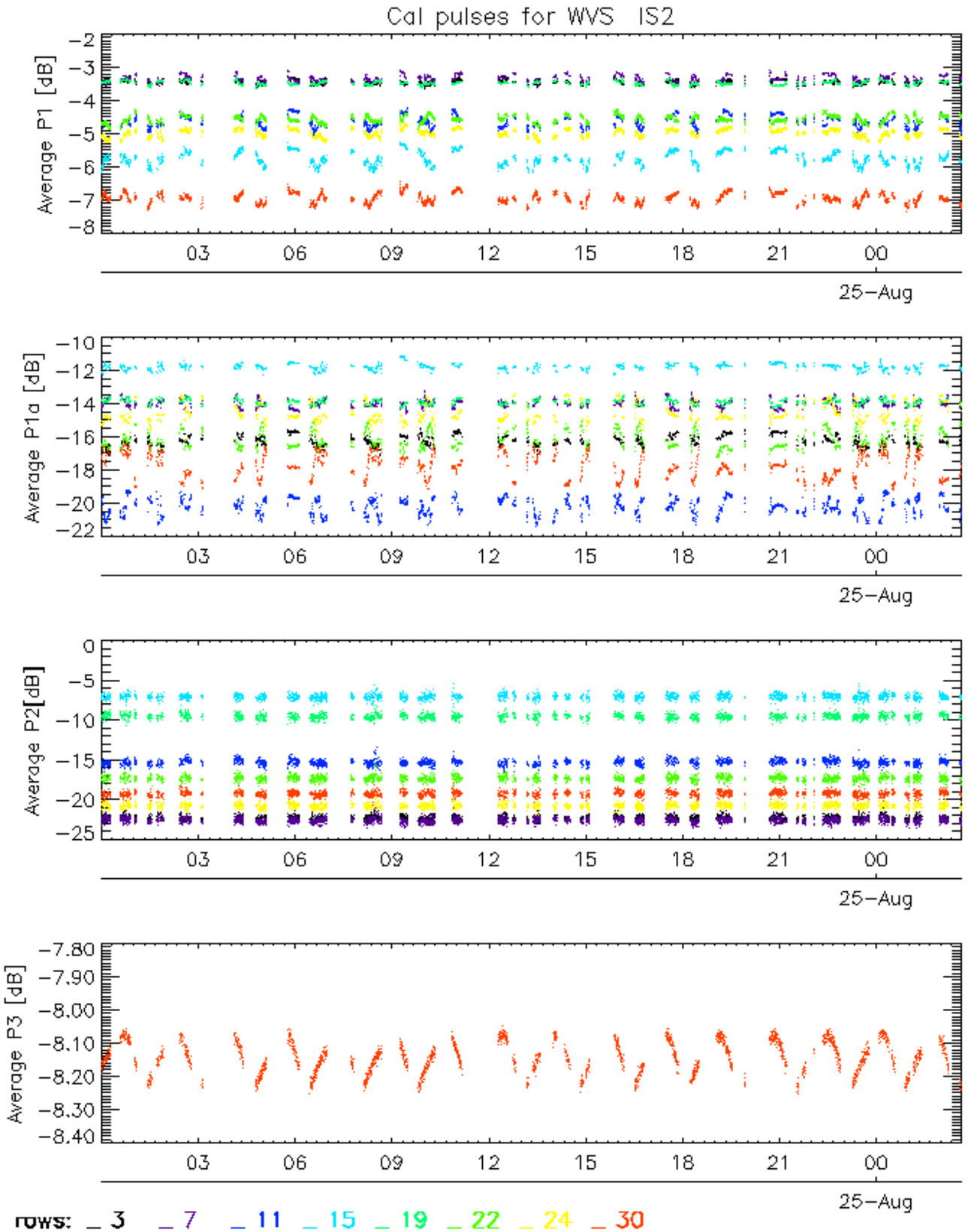
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

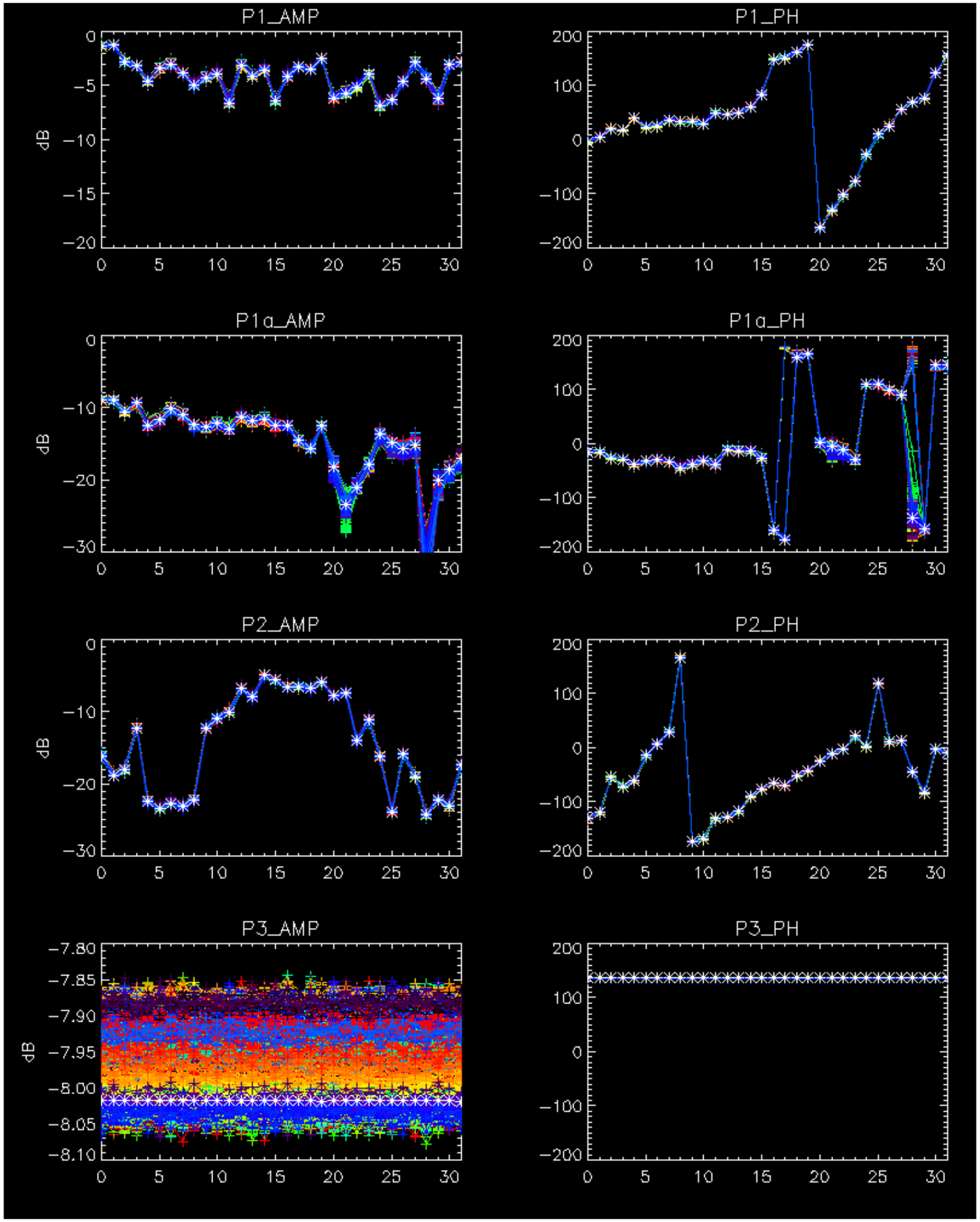

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

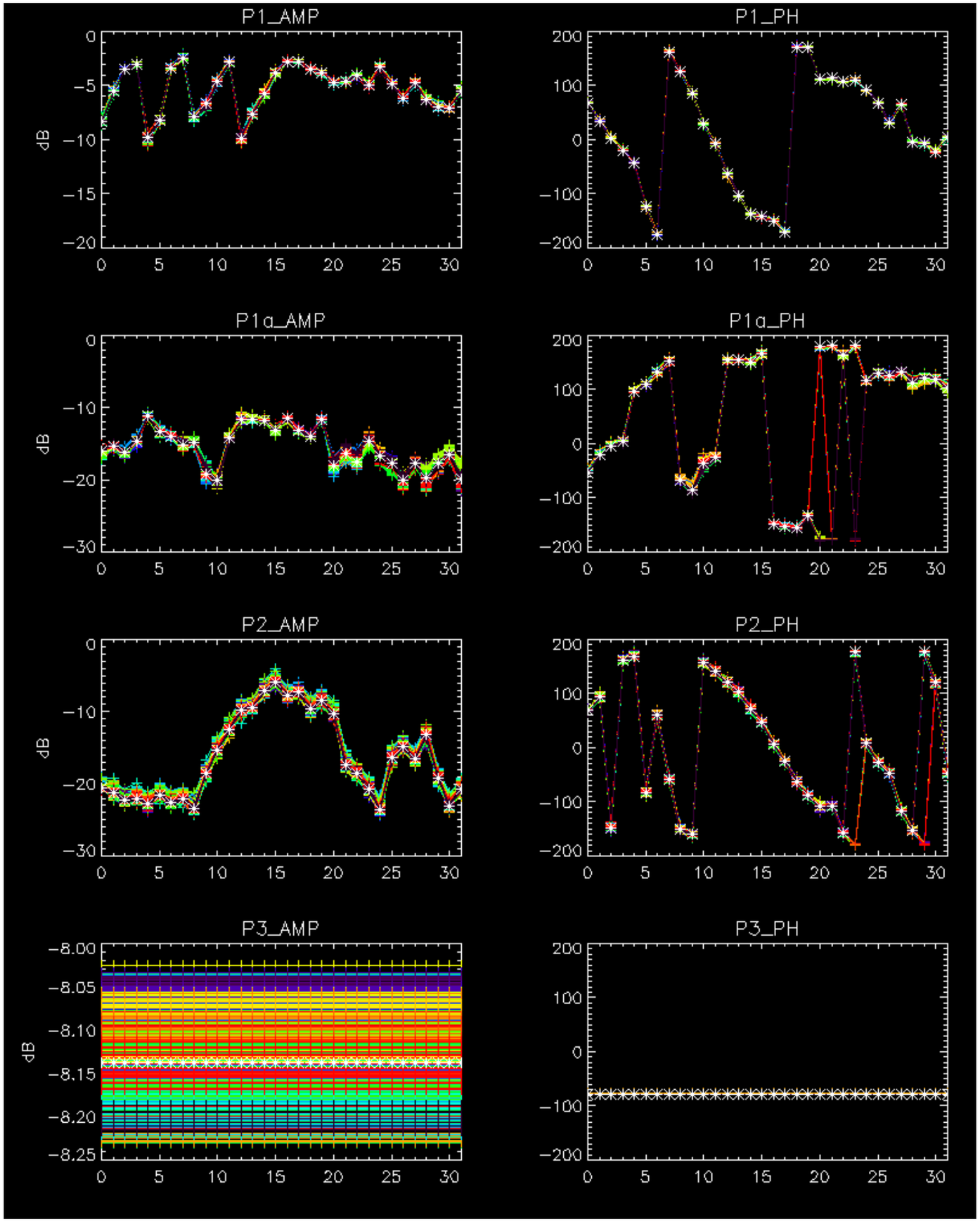

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
25−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


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

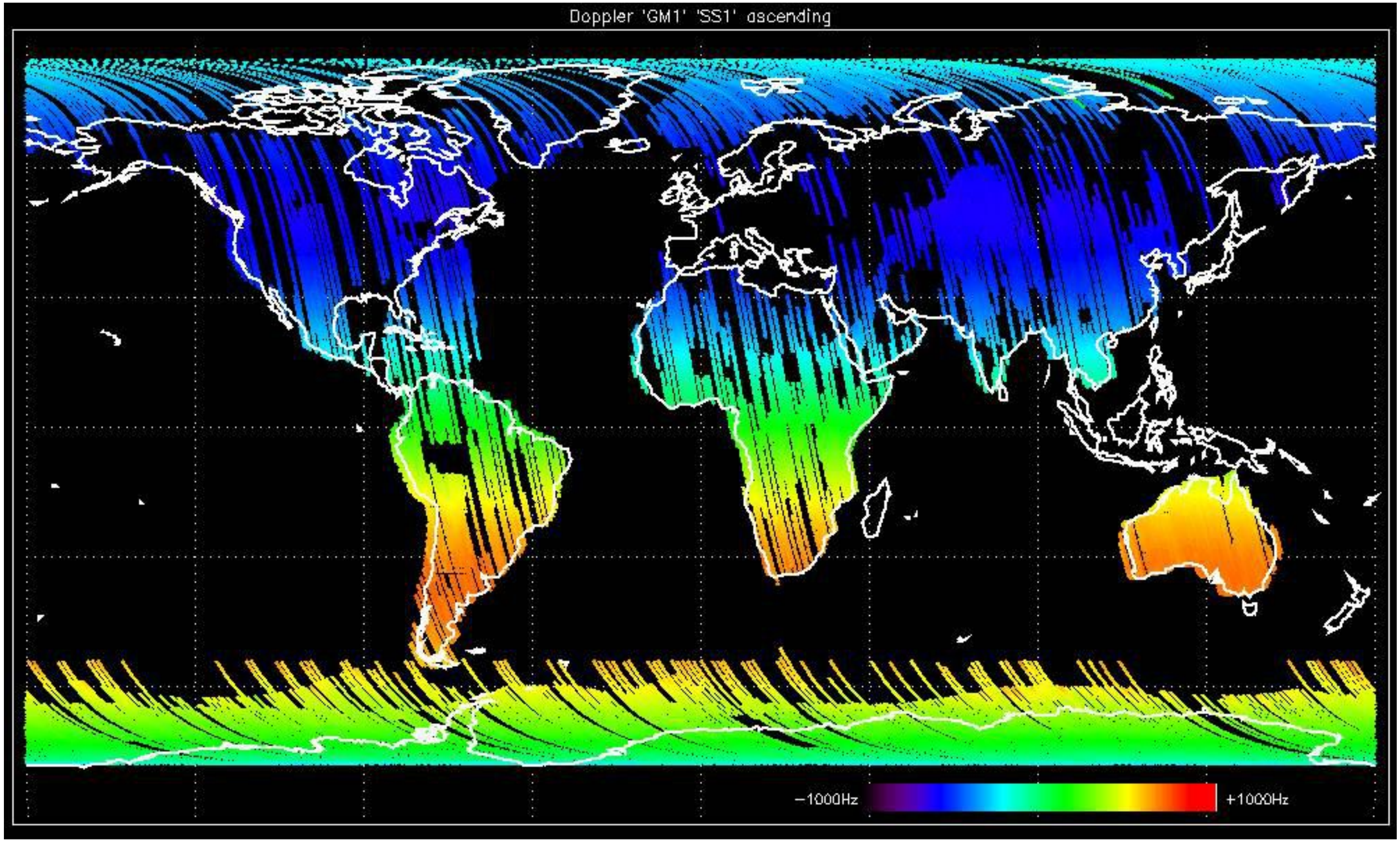
No anomalies observed.

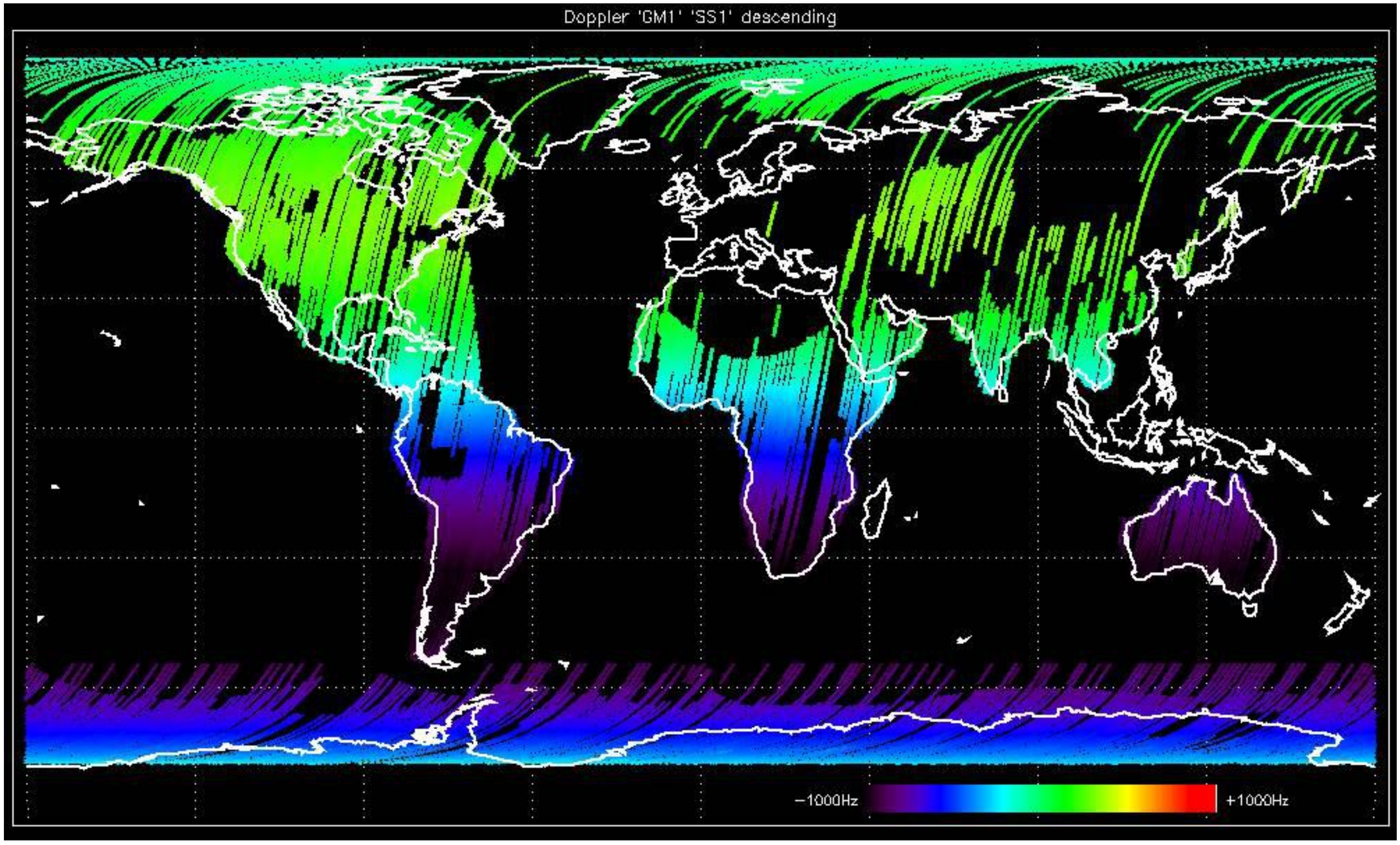

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95
−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

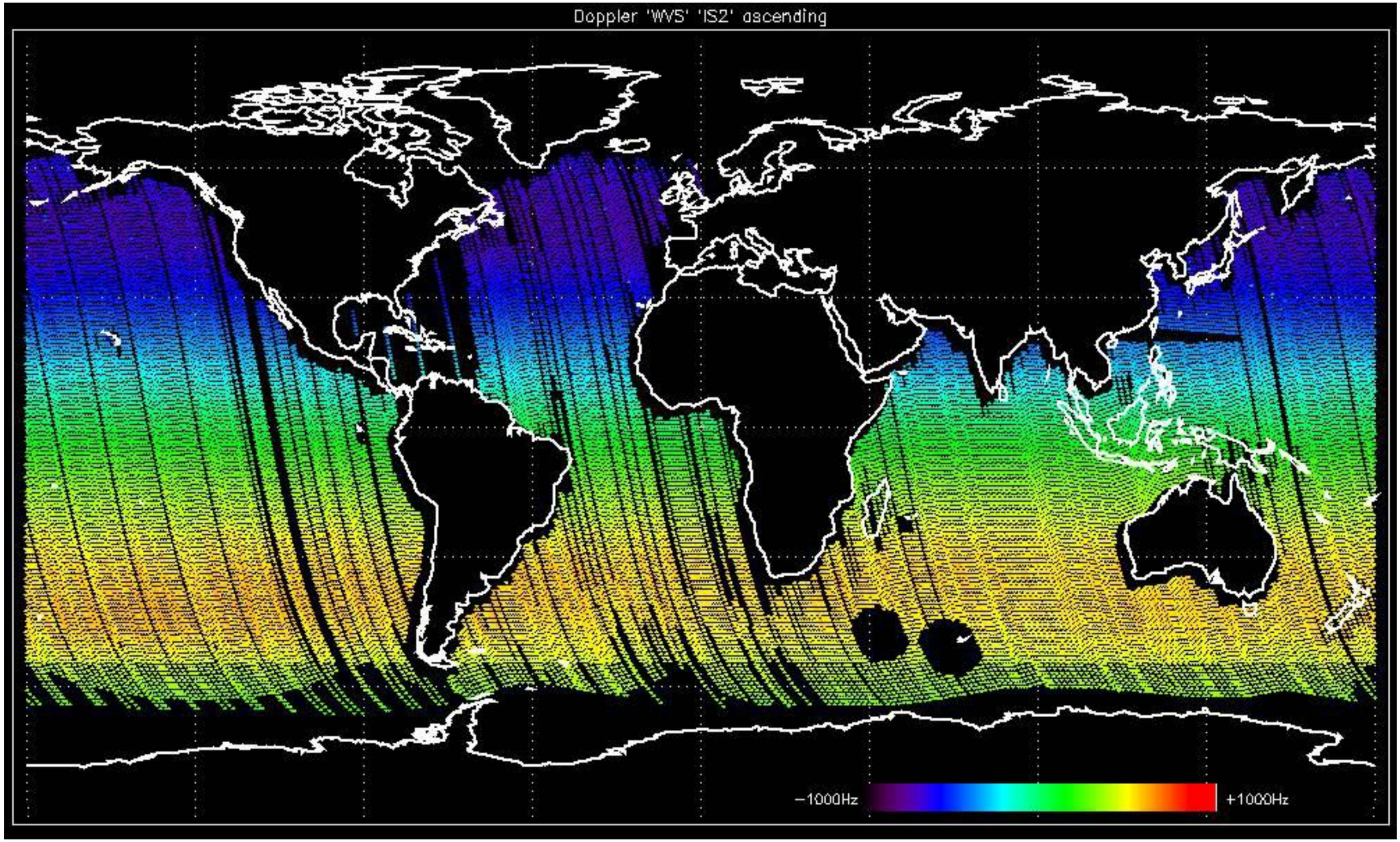

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

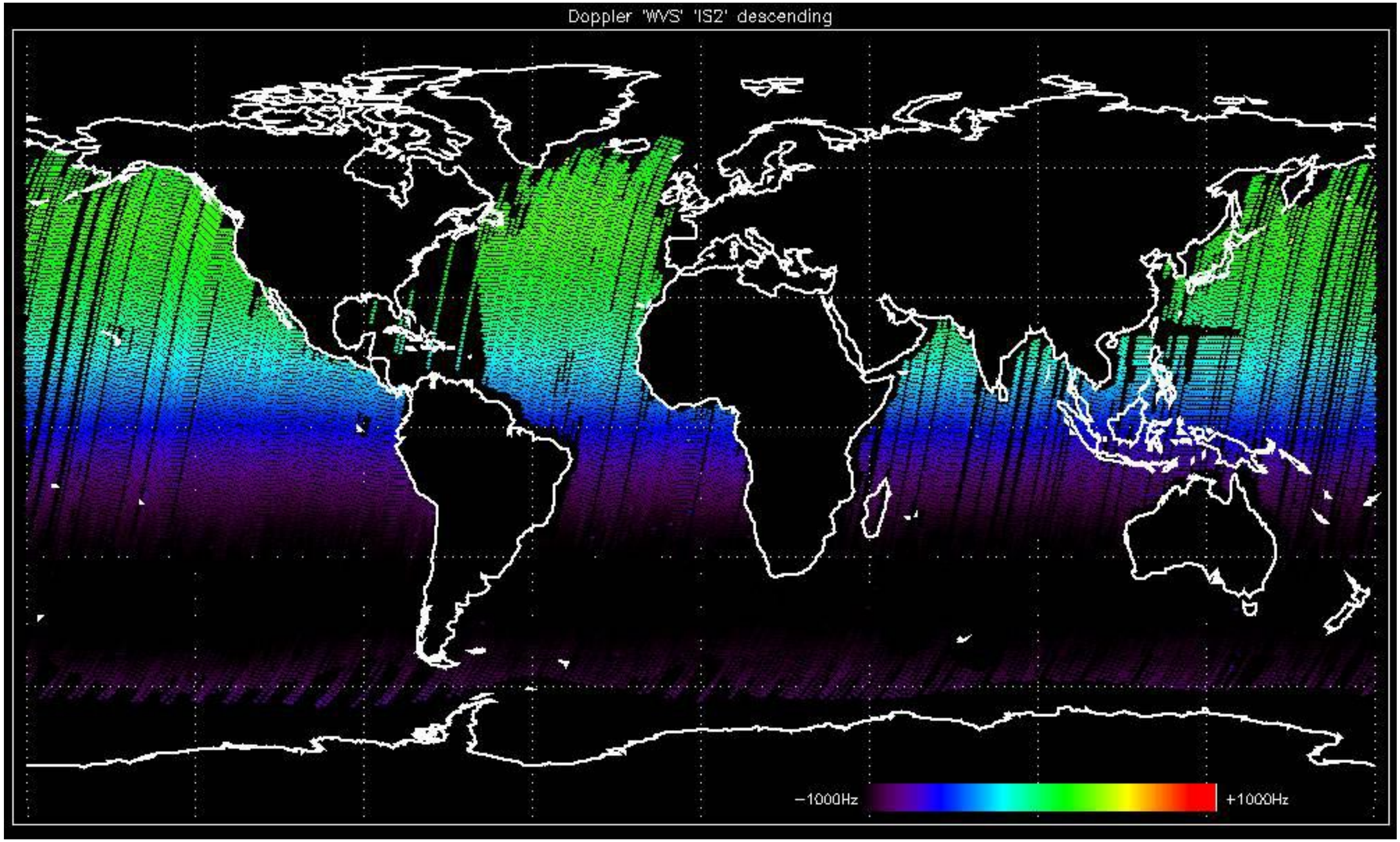
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

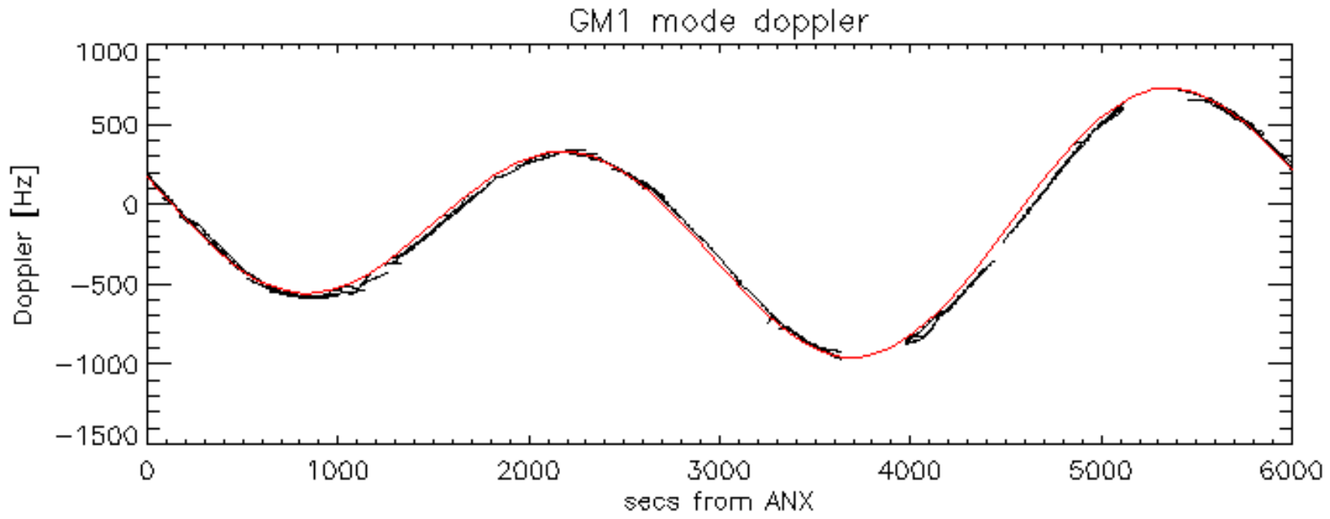
Preliminary report.The data is not yet controled

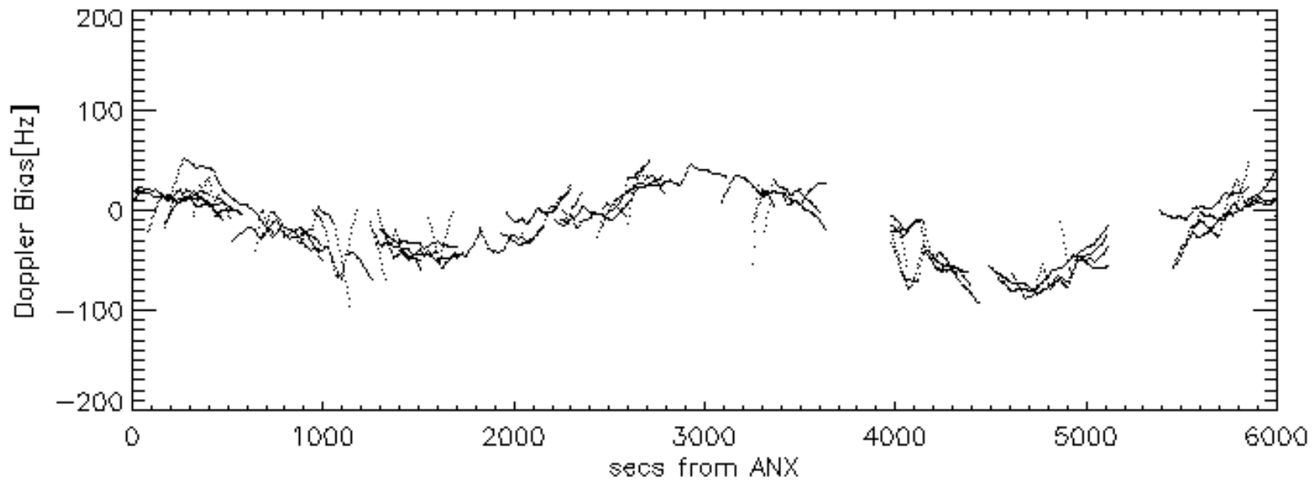

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

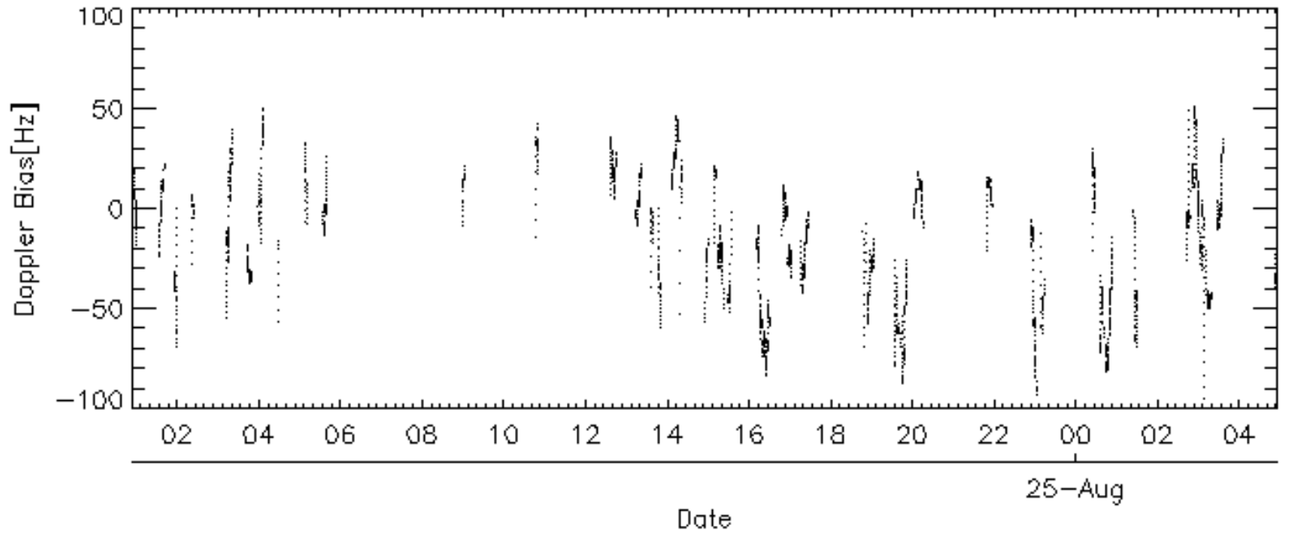

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

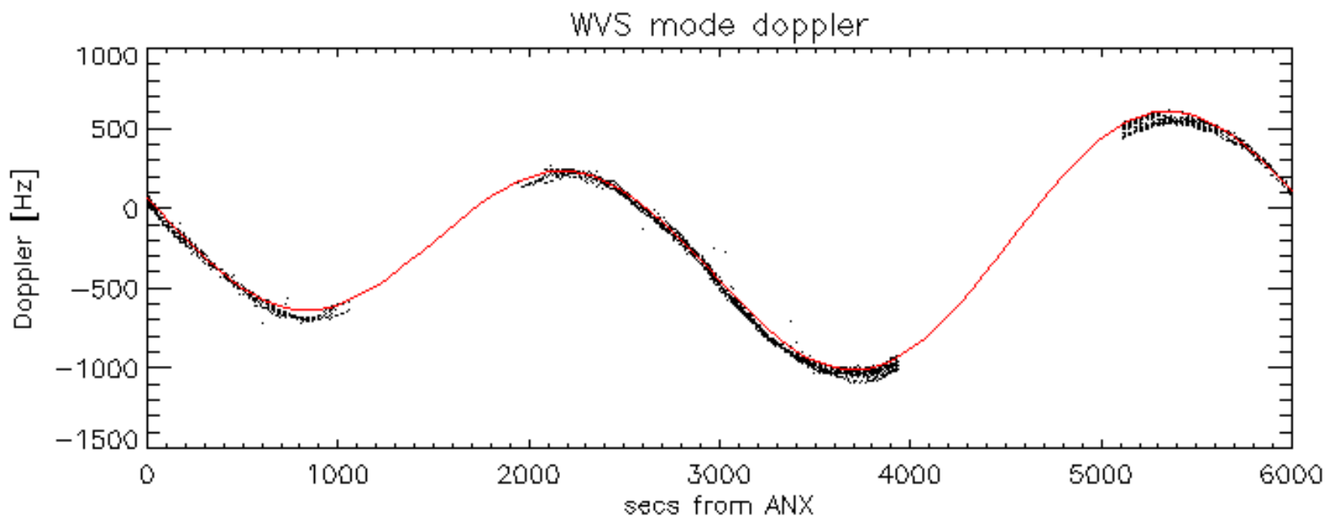

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

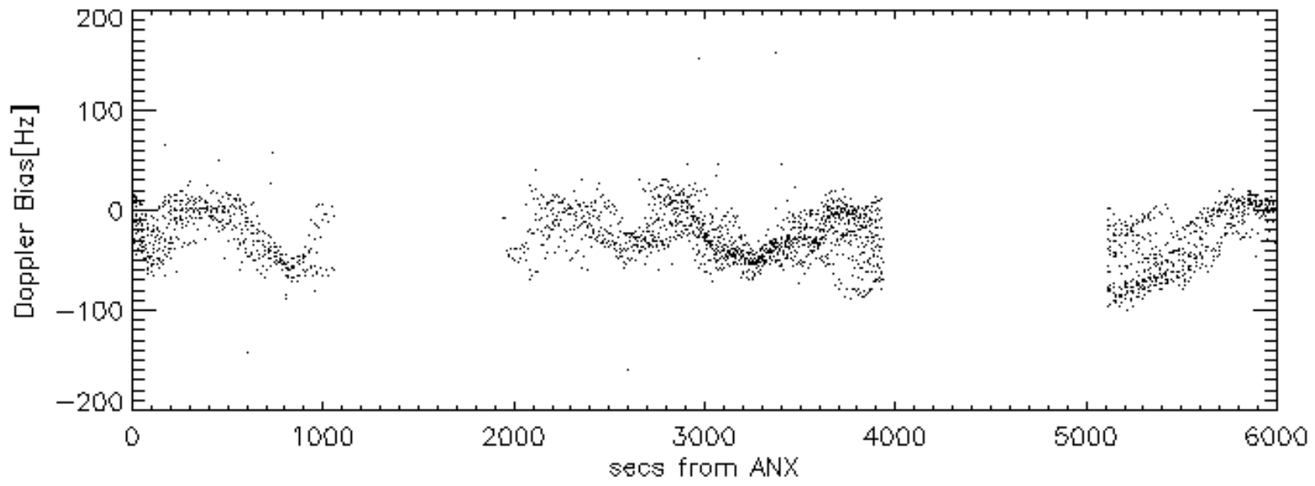

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

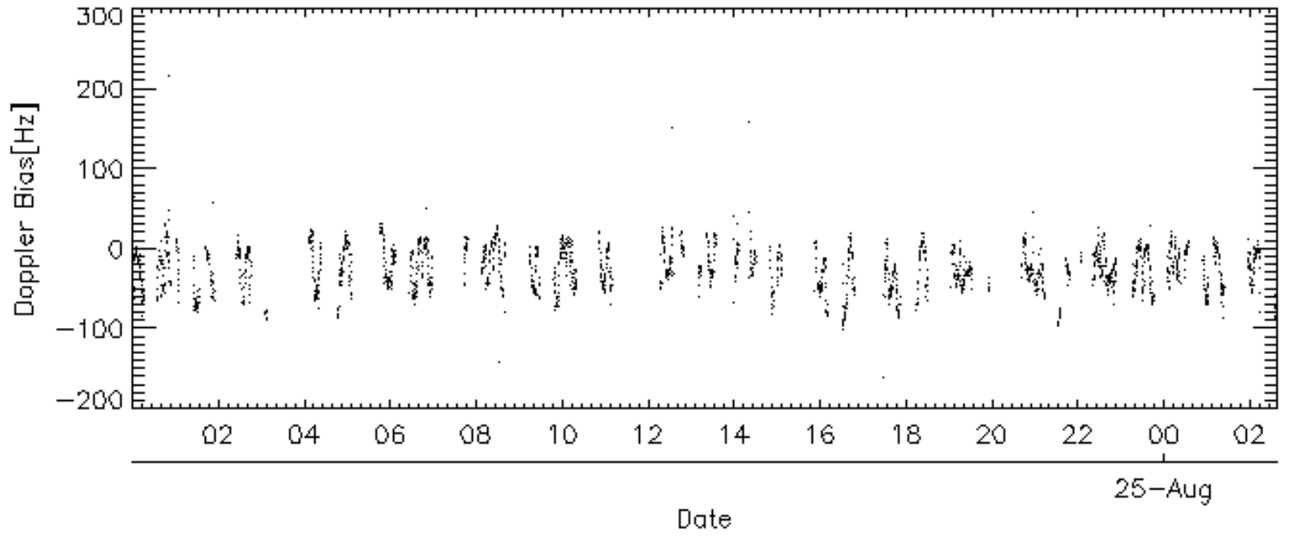

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

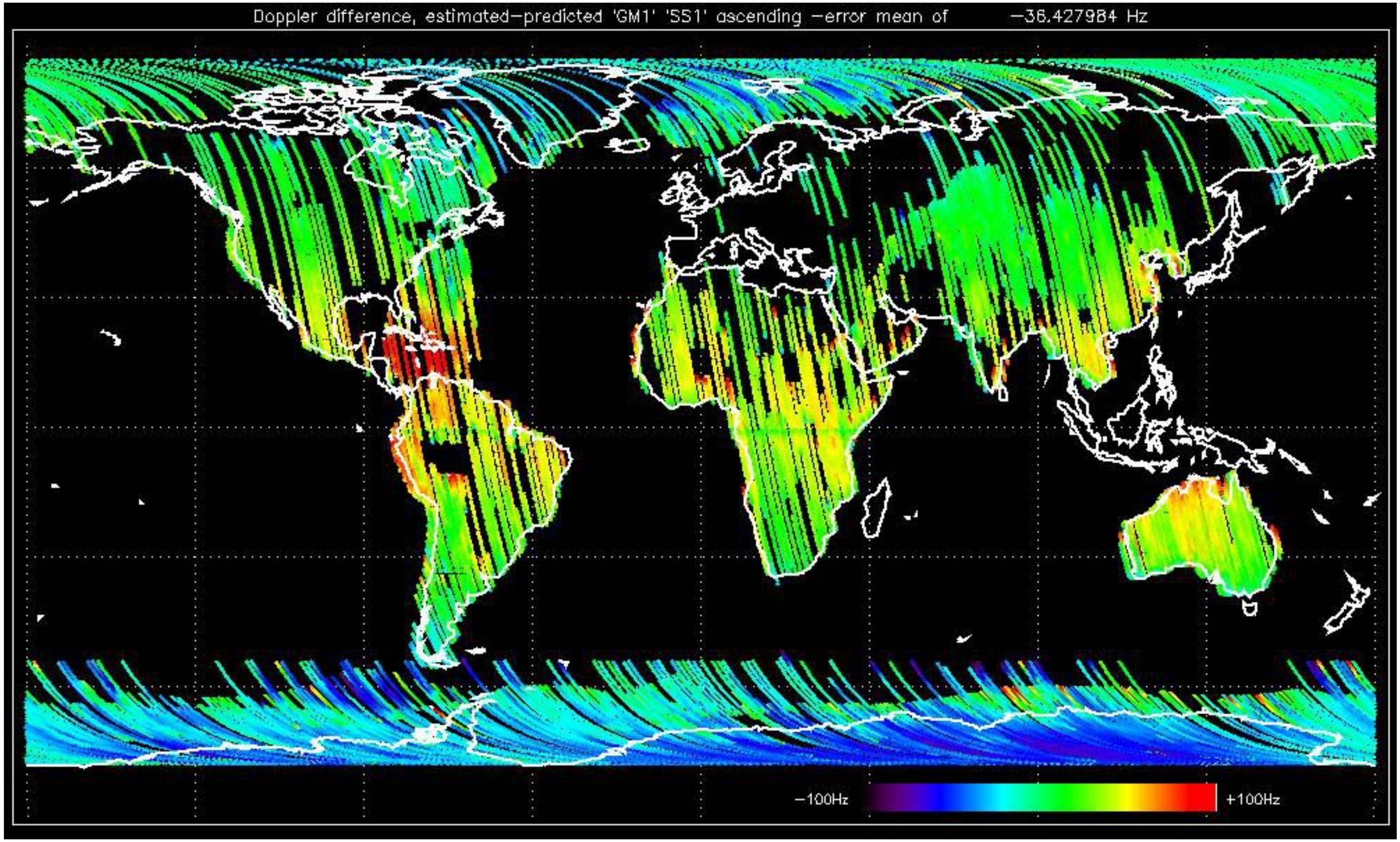

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

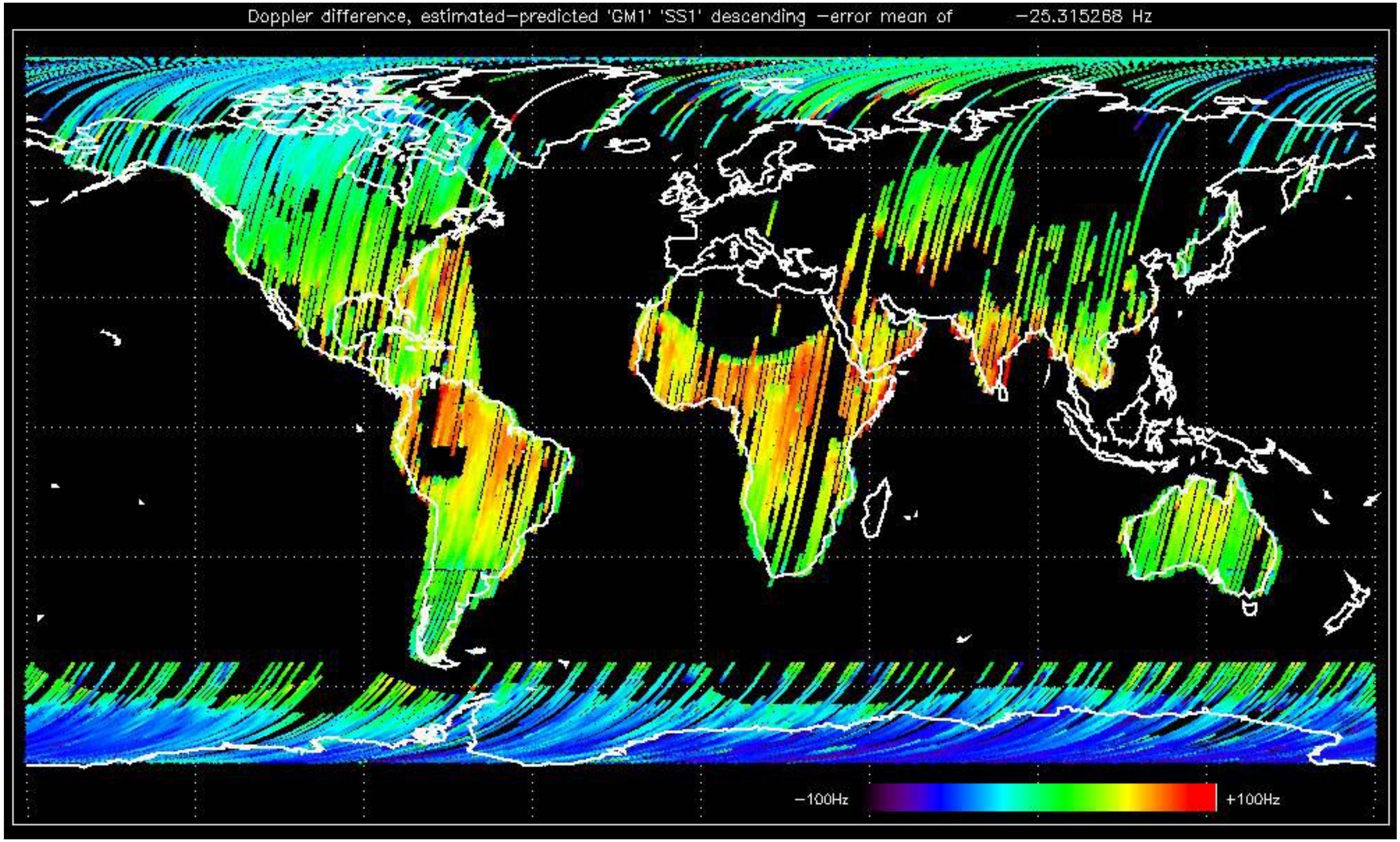

Doppler Bias[Hz]
100
50
0
−50
−100
02
04
06
08
10
12
14
16
18
20
22
00
02
04
25−Aug
Date

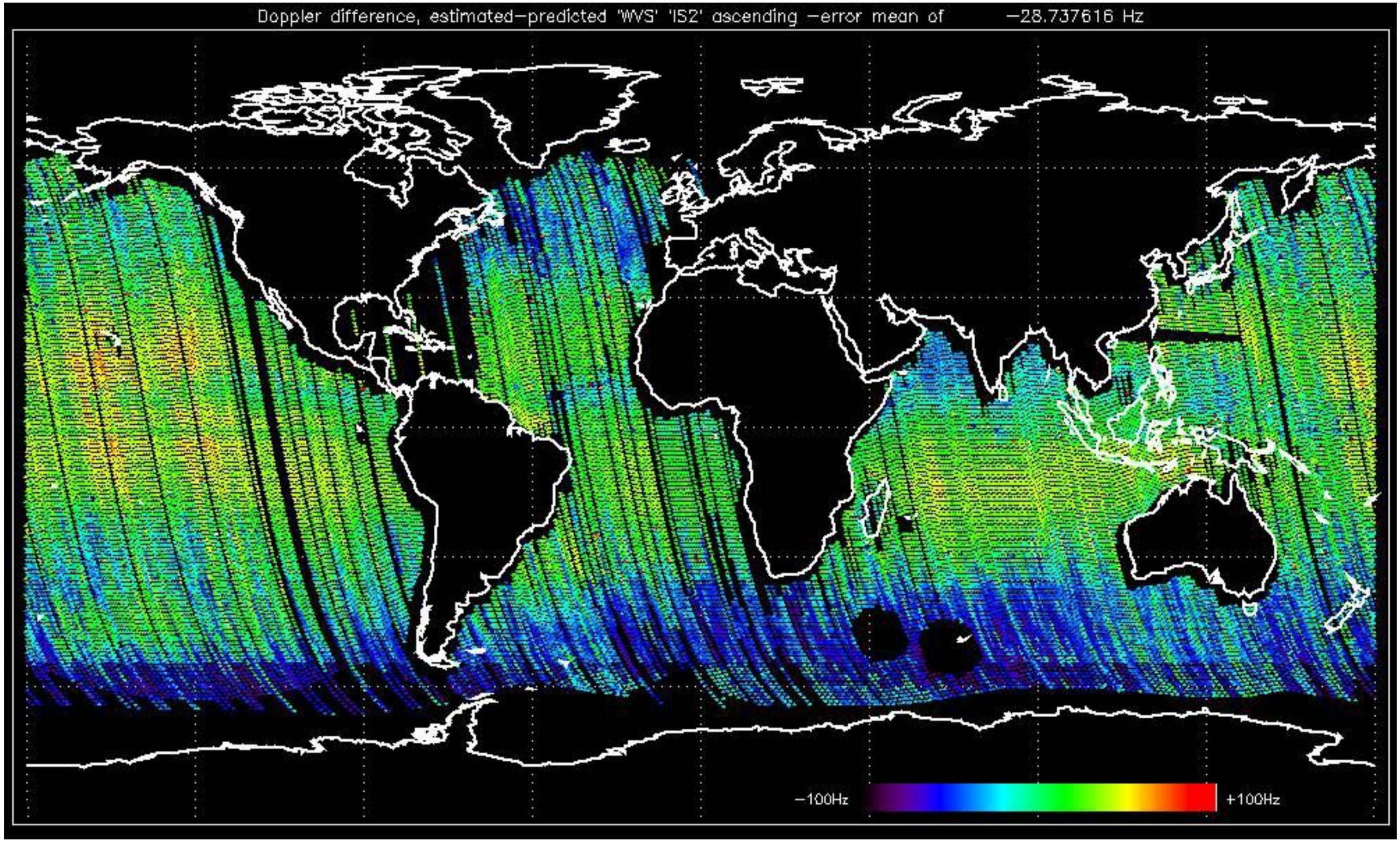

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

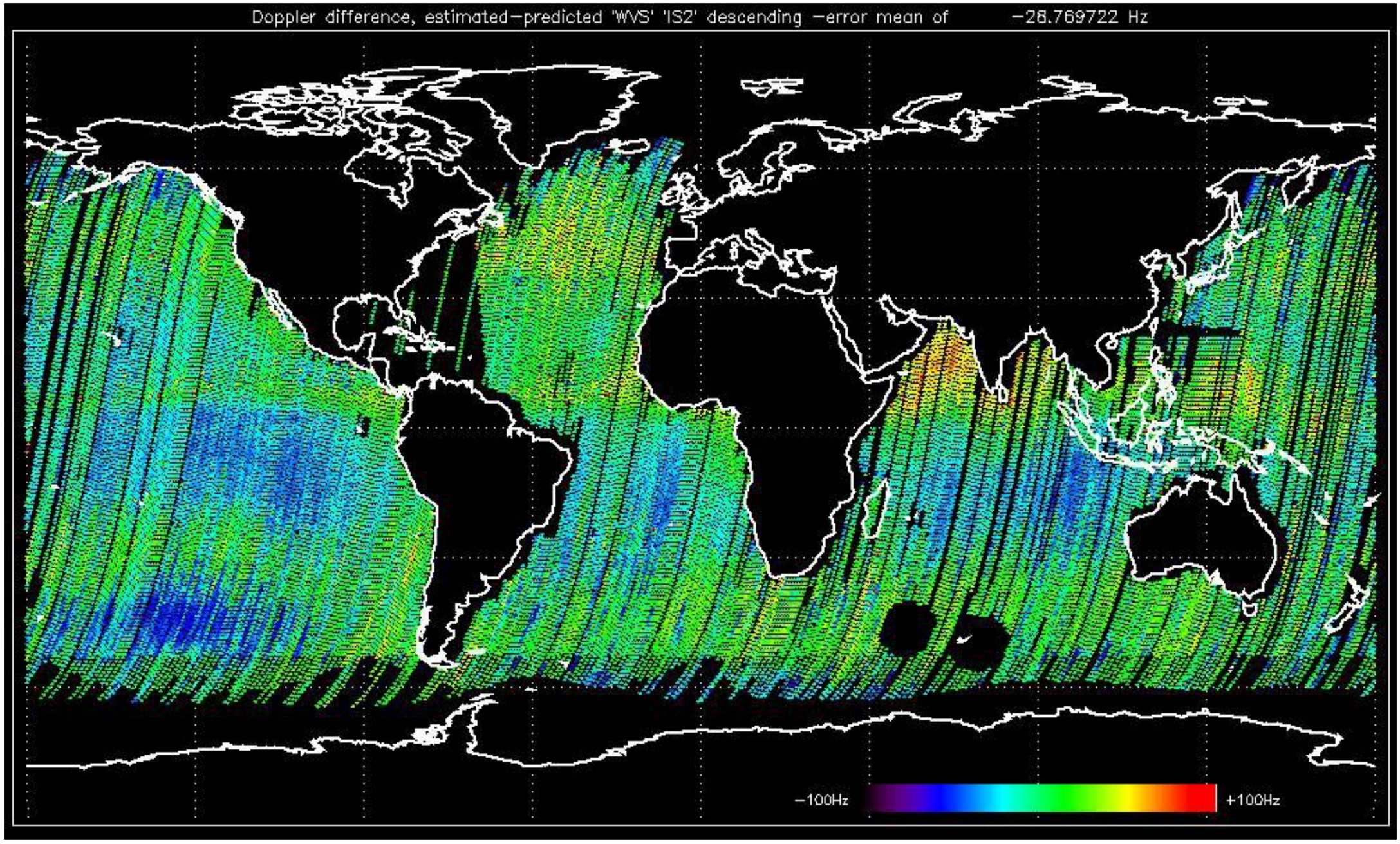

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −36.427984 Hz
−100Hz
+100Hz

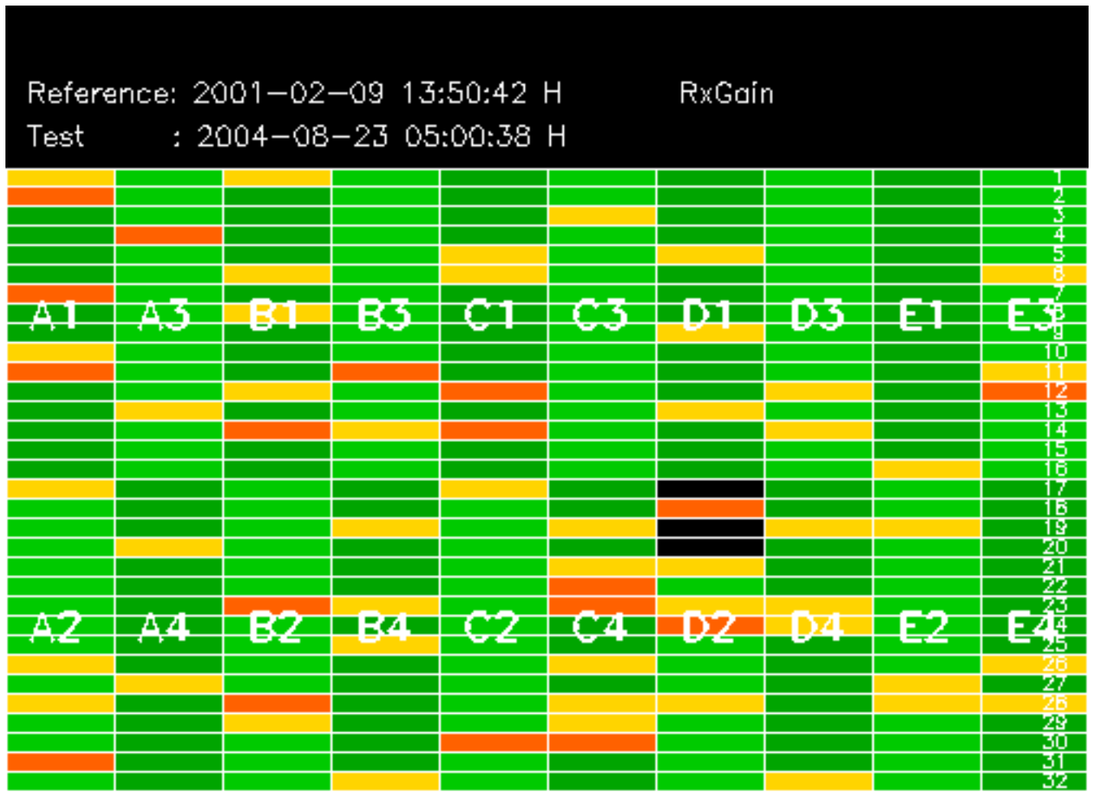

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −25.315268 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.737616 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −28.769722 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 : 2004-08-23 05:00:38 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
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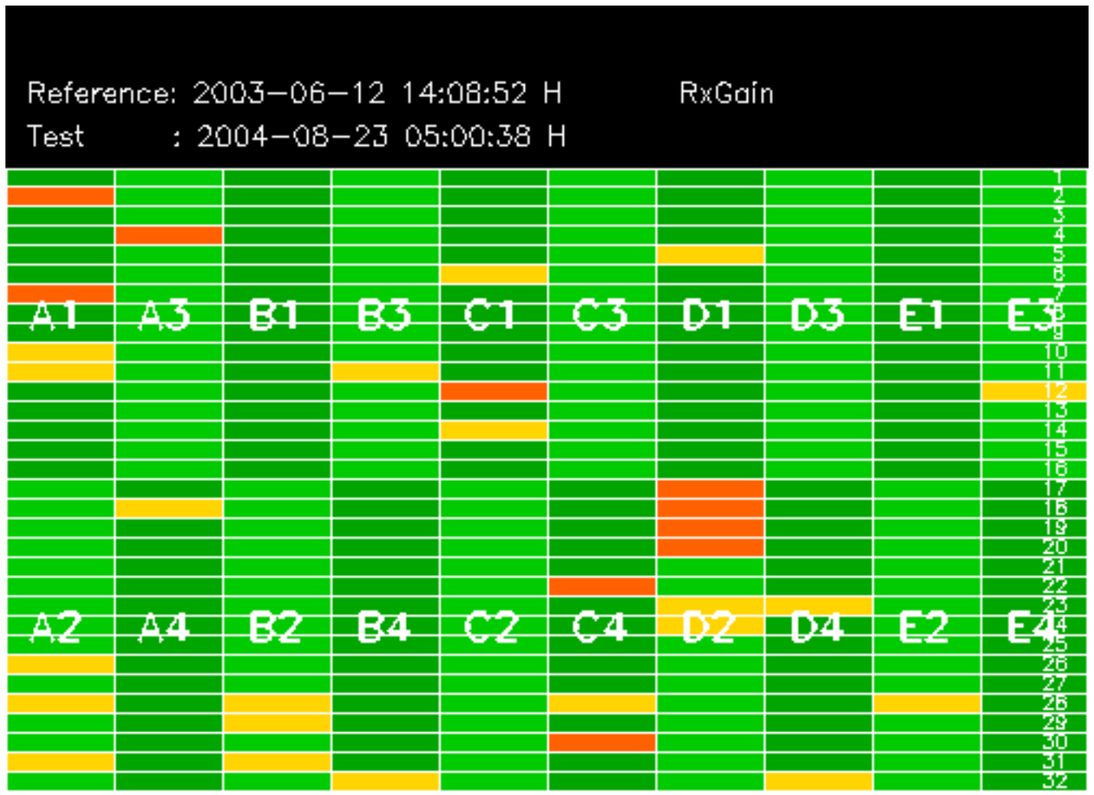
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-08-23 05:00:38 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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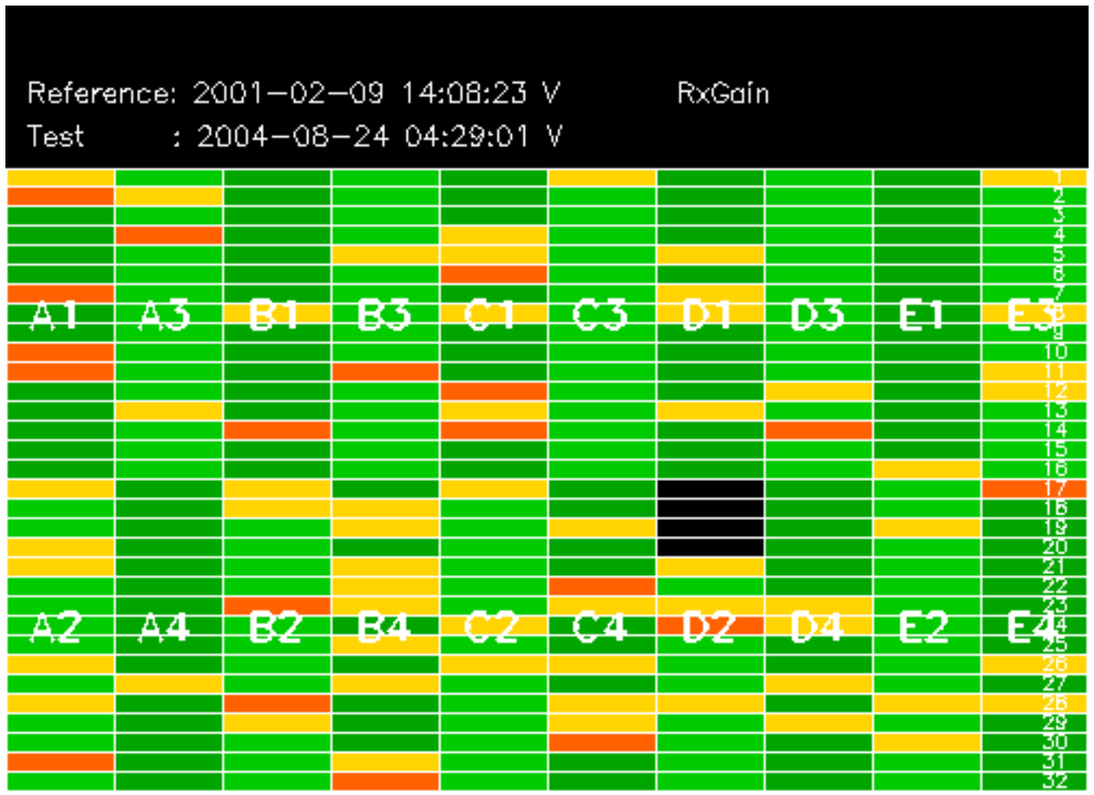
Reference: 2001-02-09 14:08:23 V
Test : 2004-08-24 04:29:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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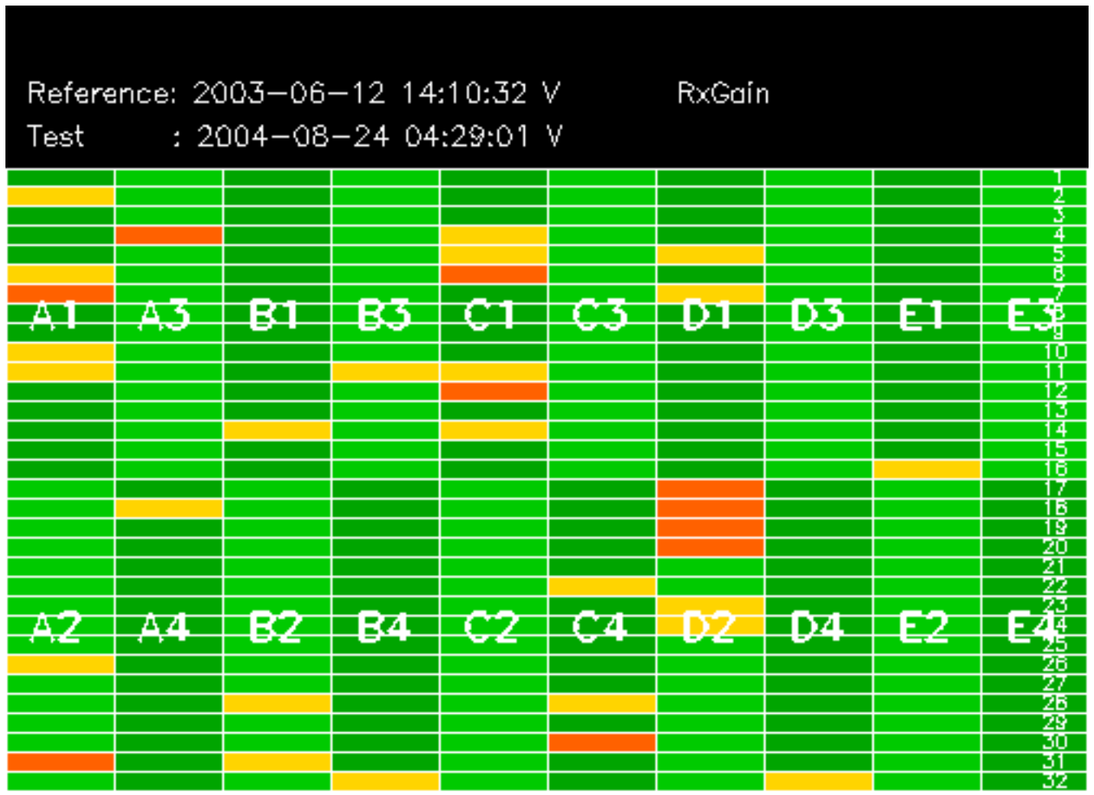
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-24 04:29:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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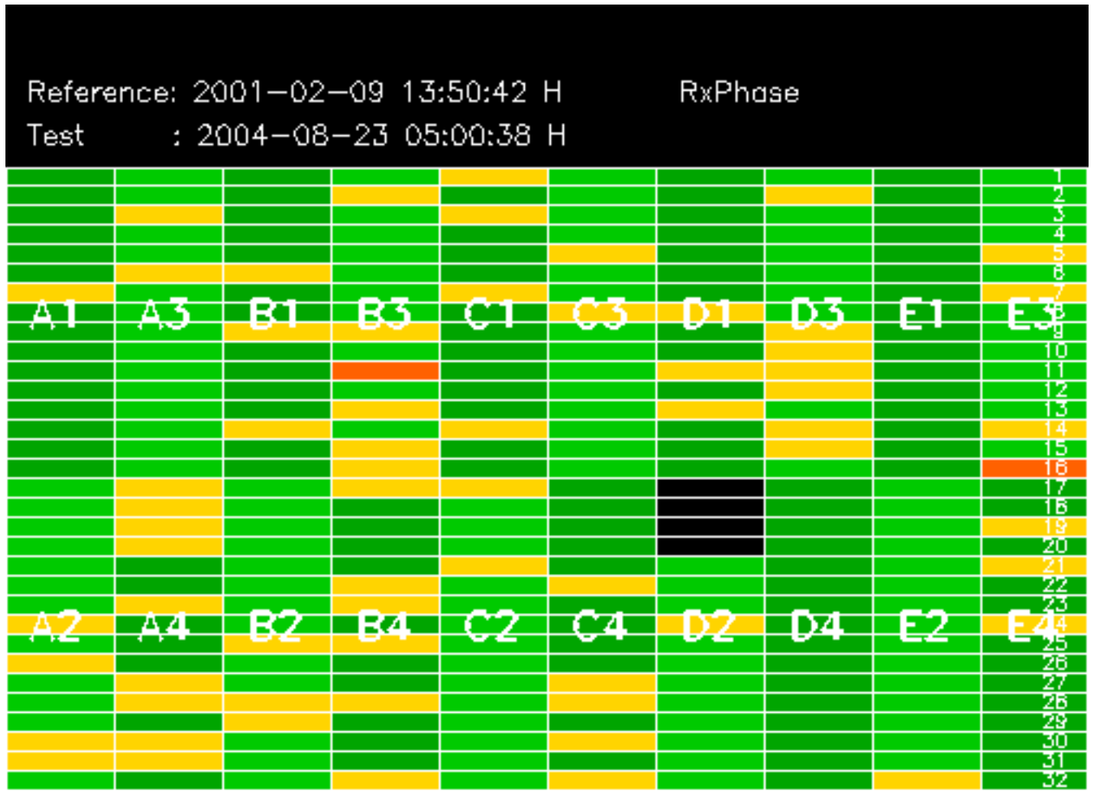
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-08-23 05:00:38 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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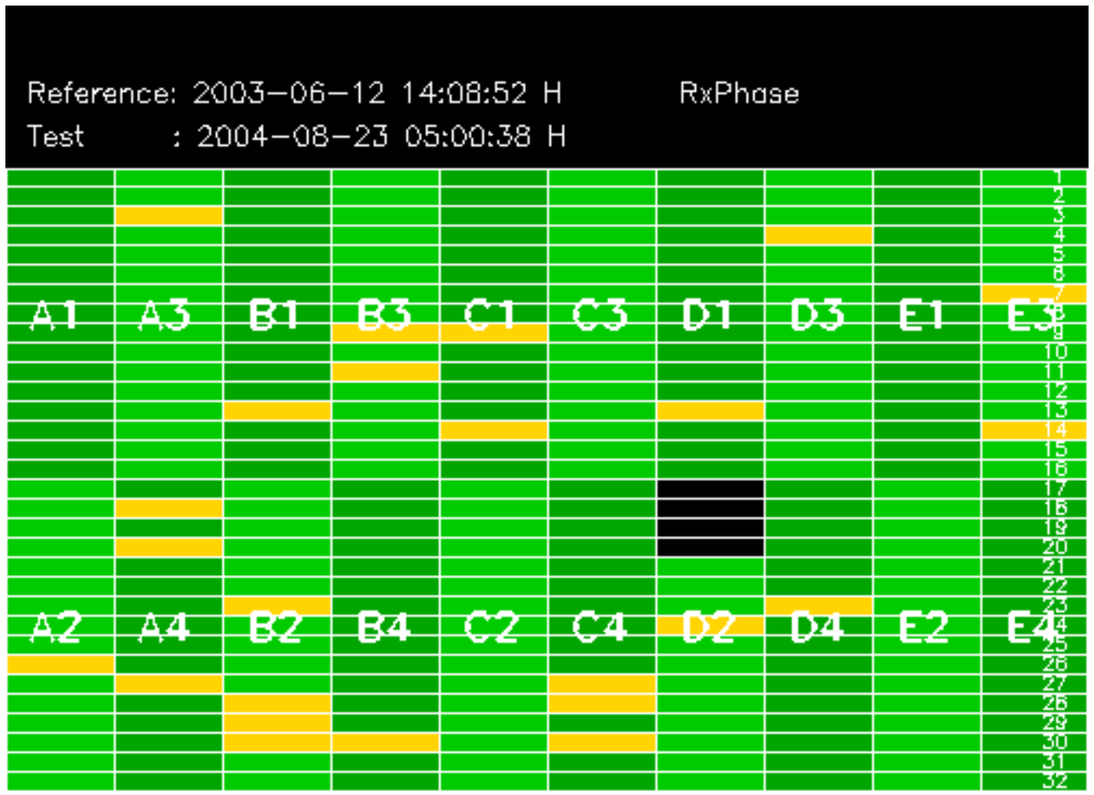
Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-08-23 05:00:38 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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9
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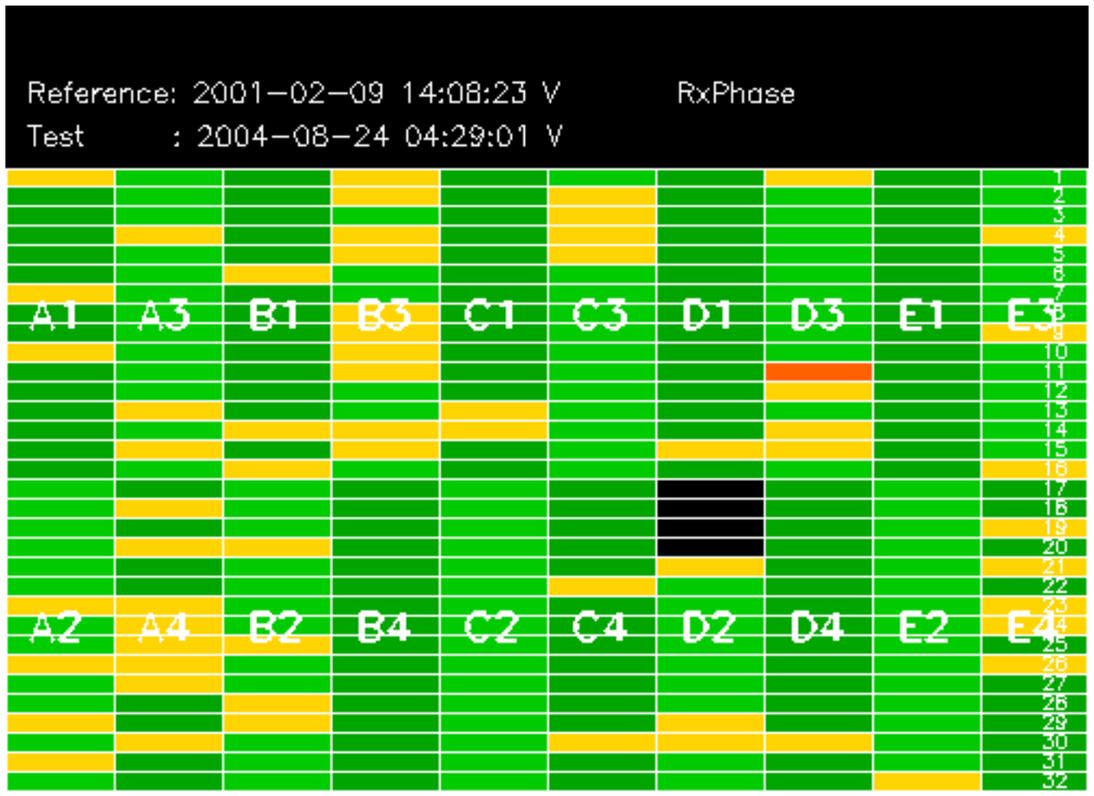
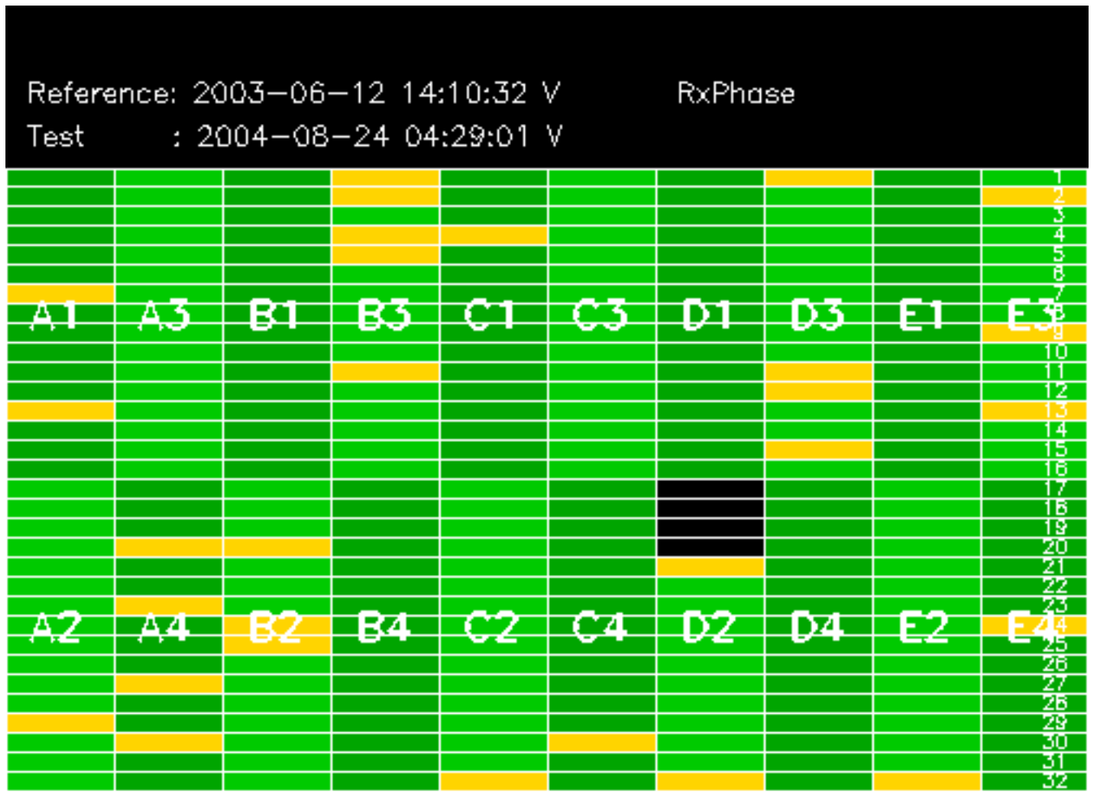
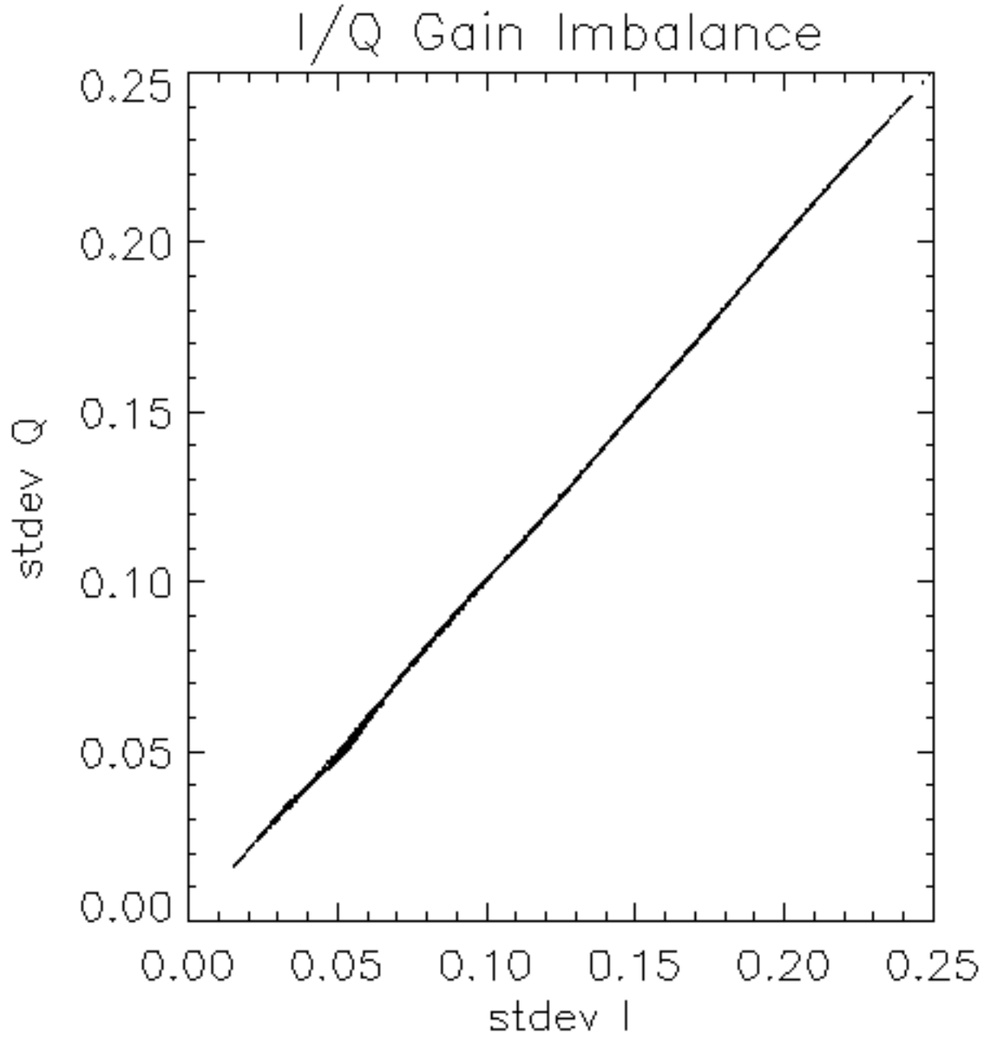
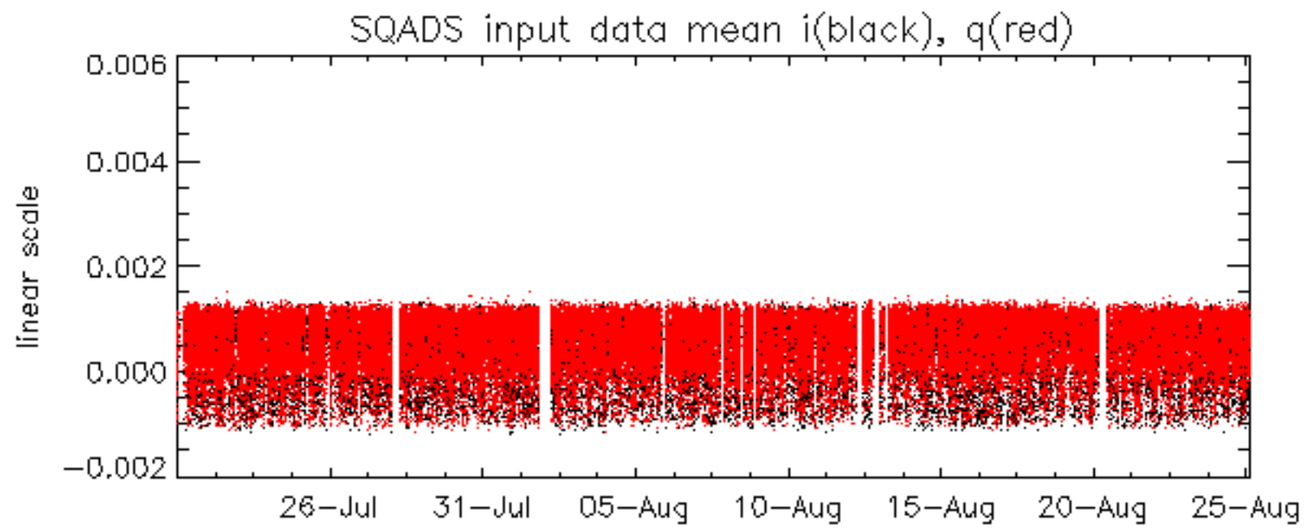
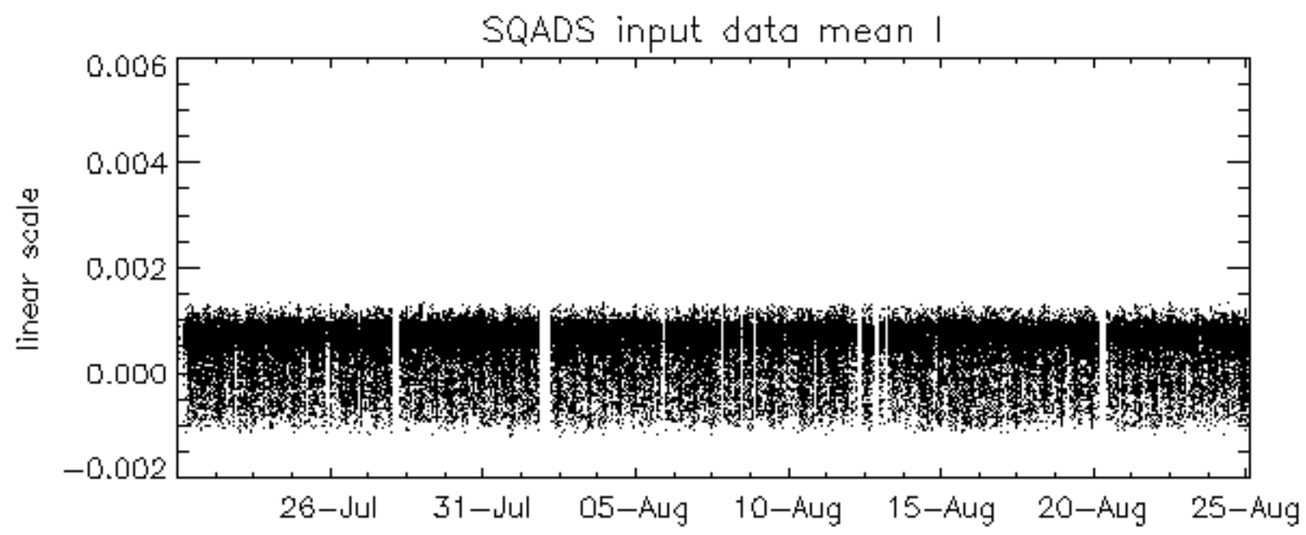
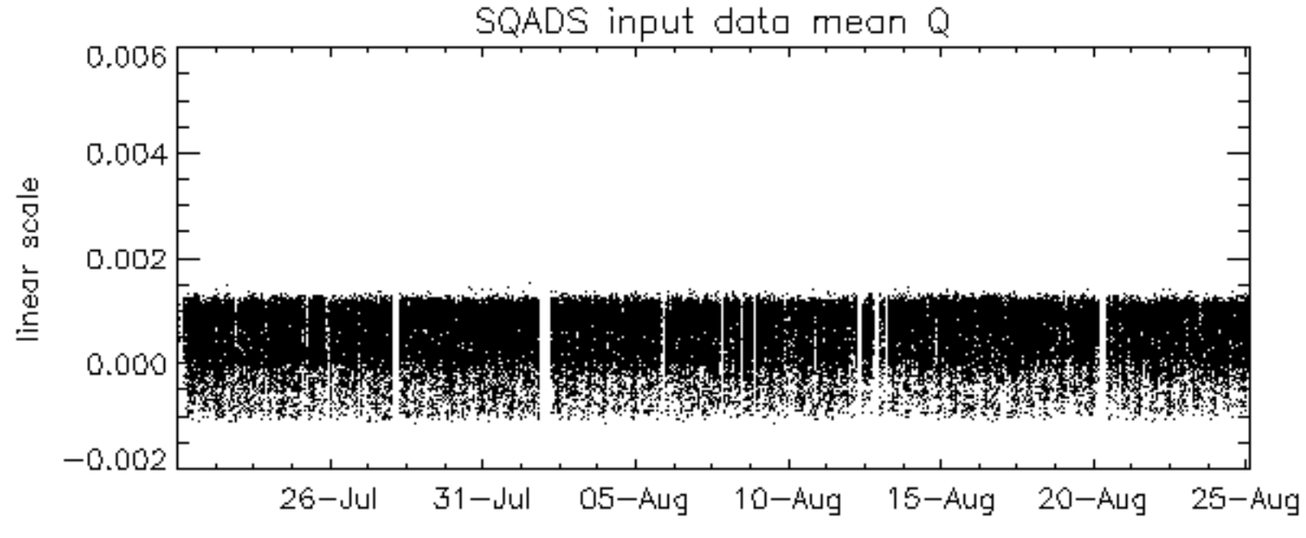

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-24 04:29:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

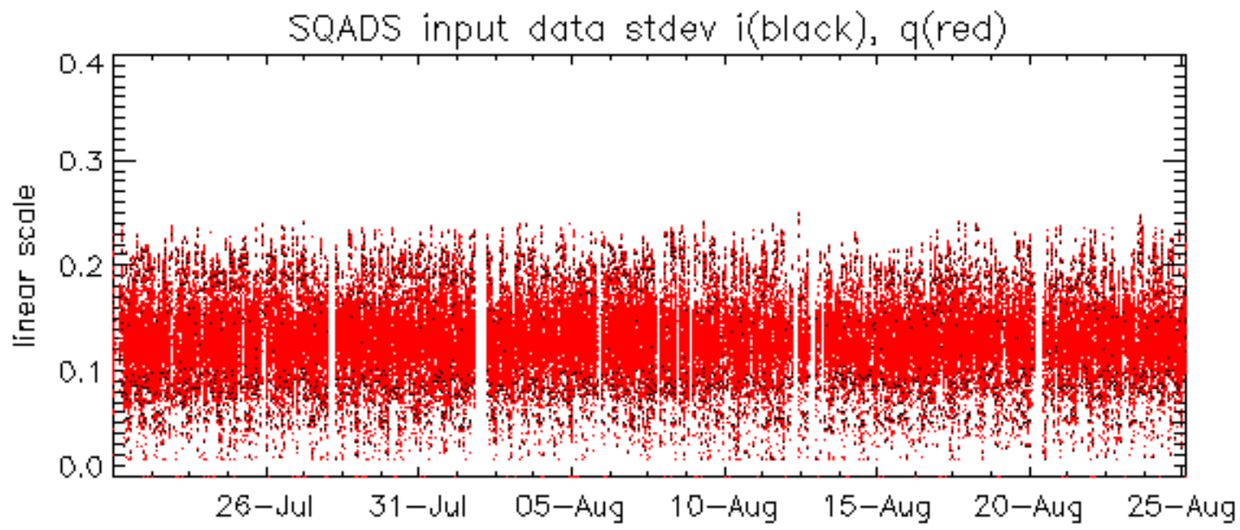

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-24 04:29:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

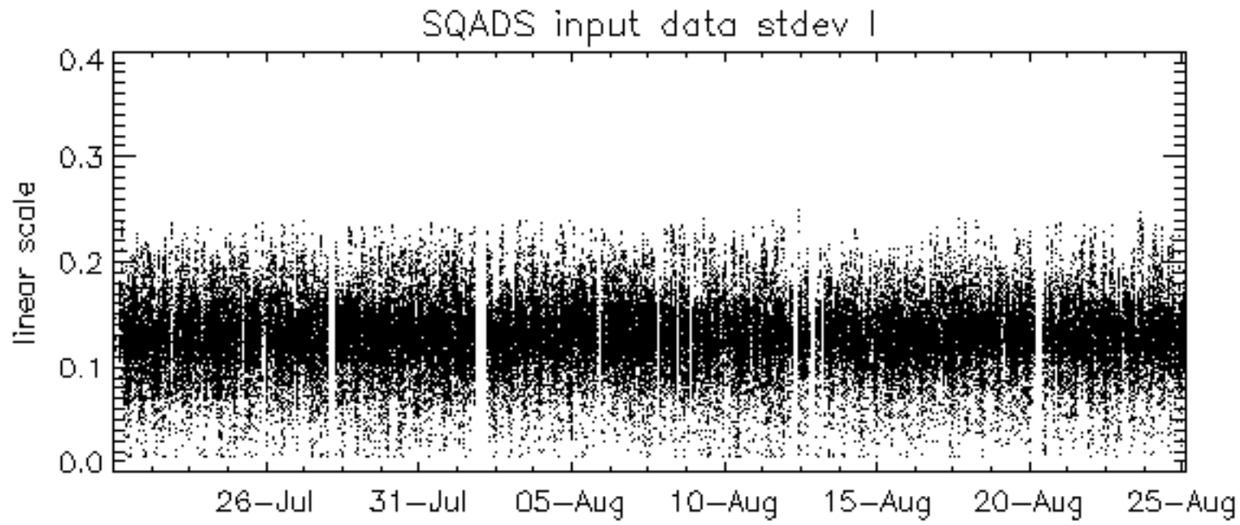

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

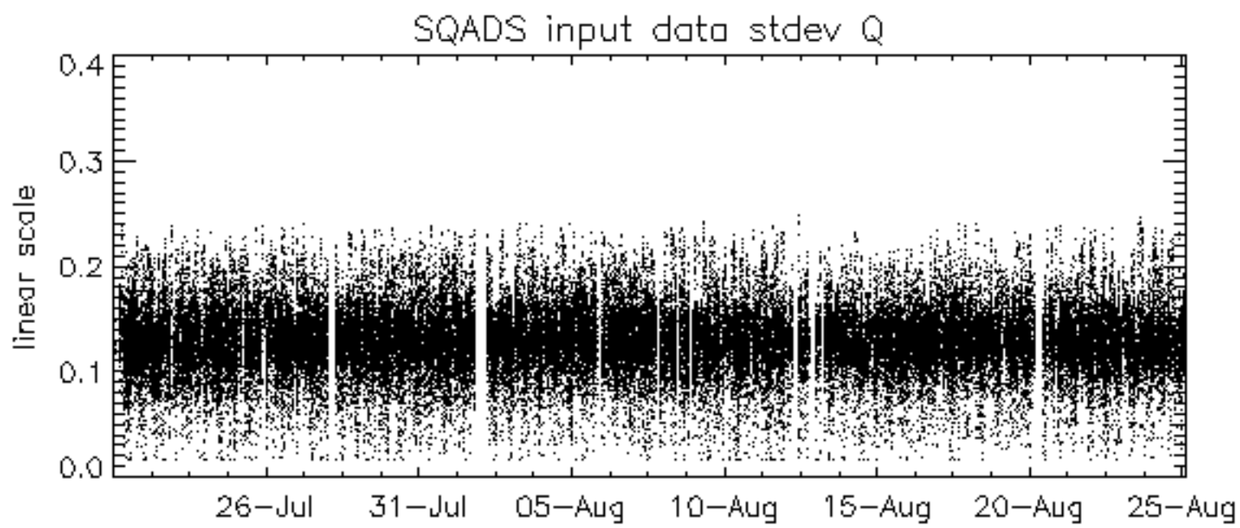

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug

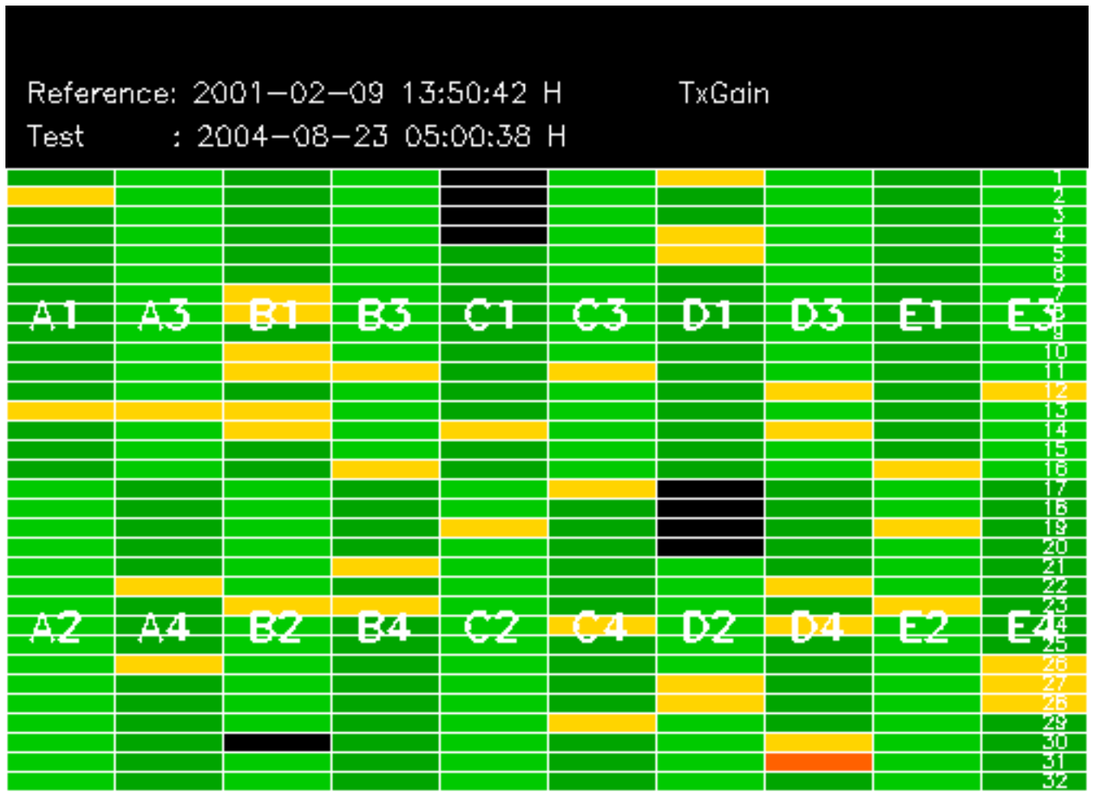

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug

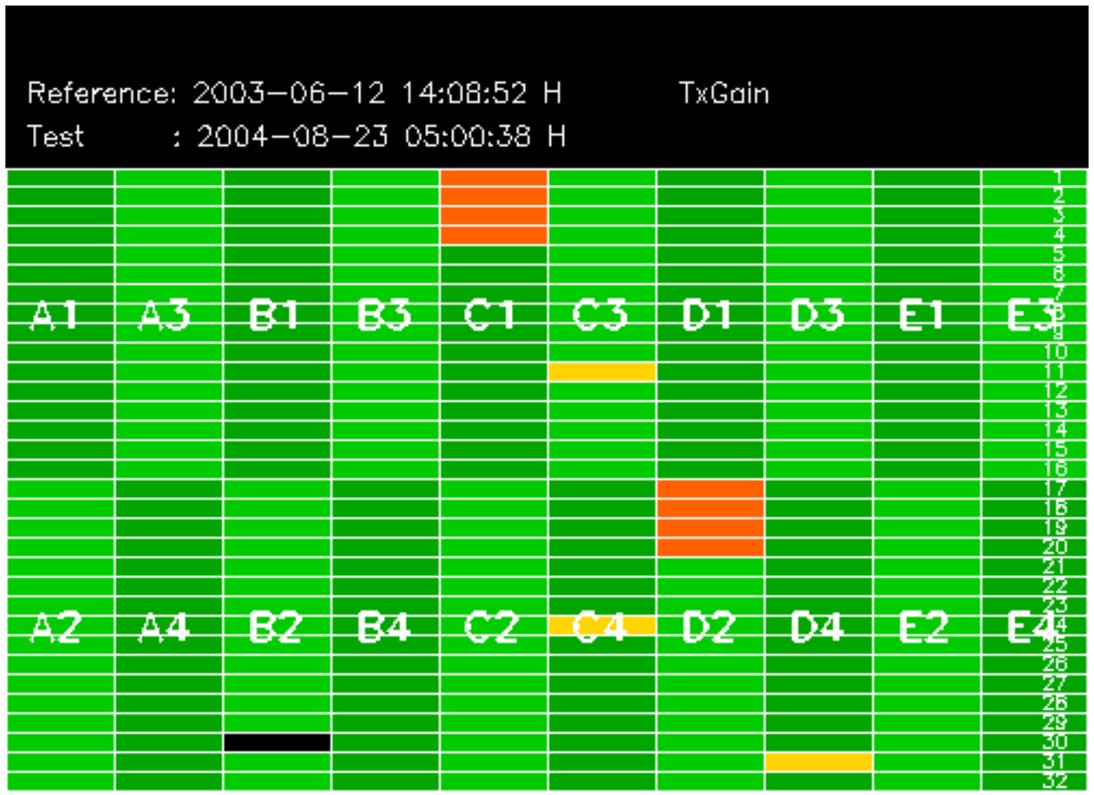

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-08-23 05:00:38 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 : 2004-08-23 05:00:38 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
TxGain
Test : 2004-08-24 04:29:01 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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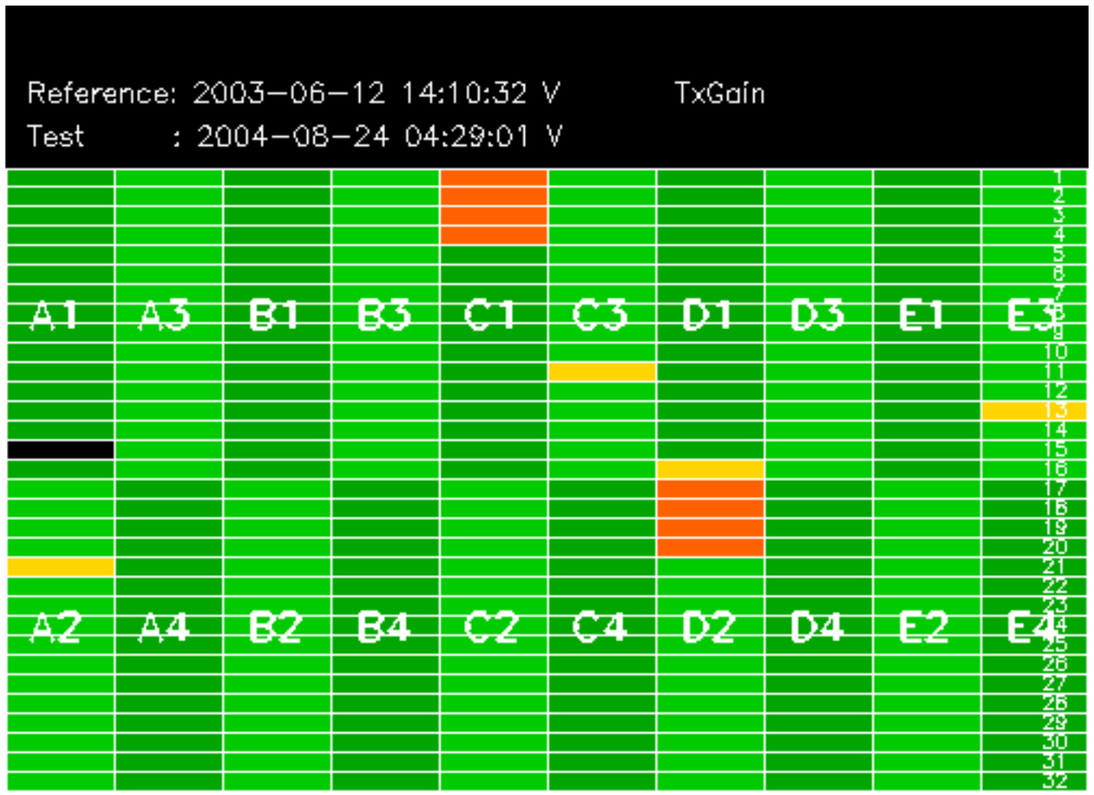
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-24 04:29:01 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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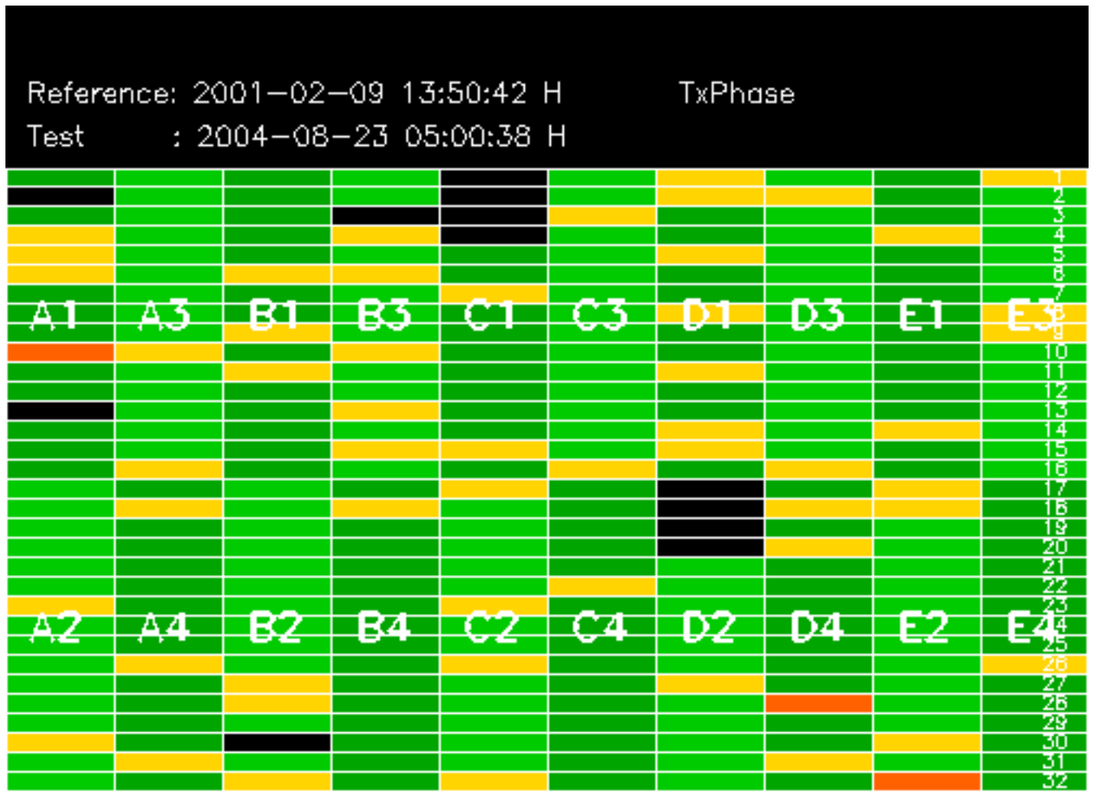
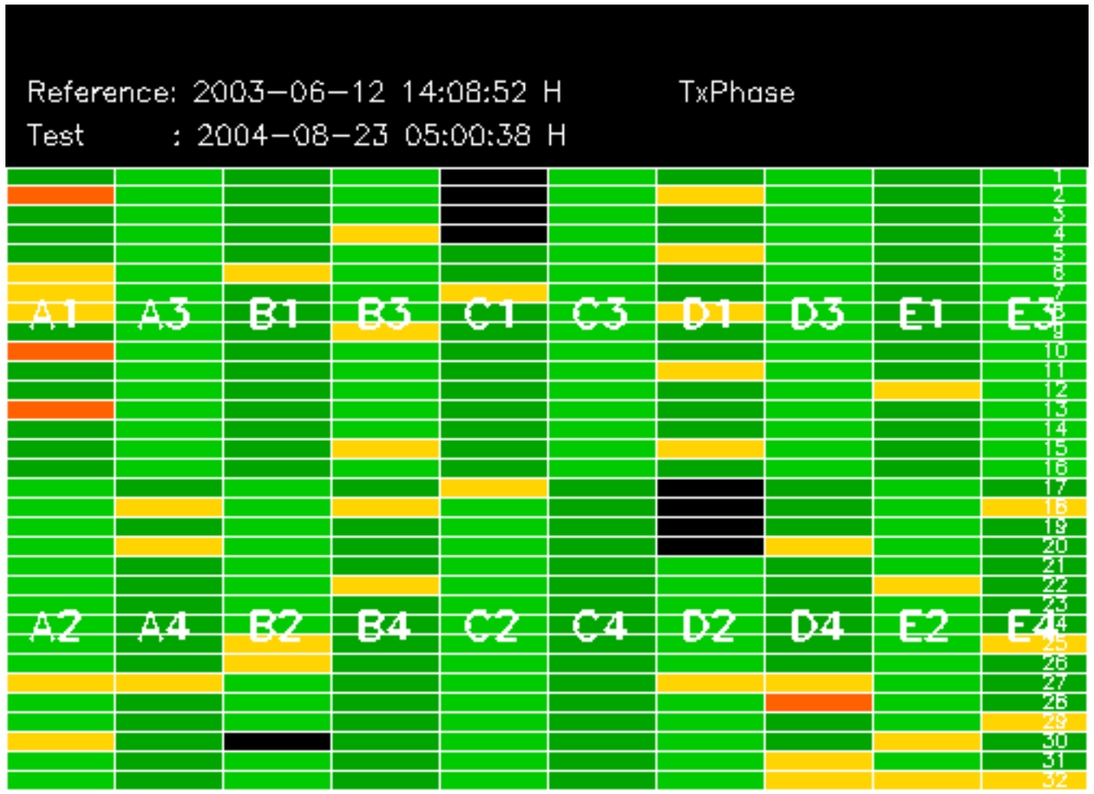
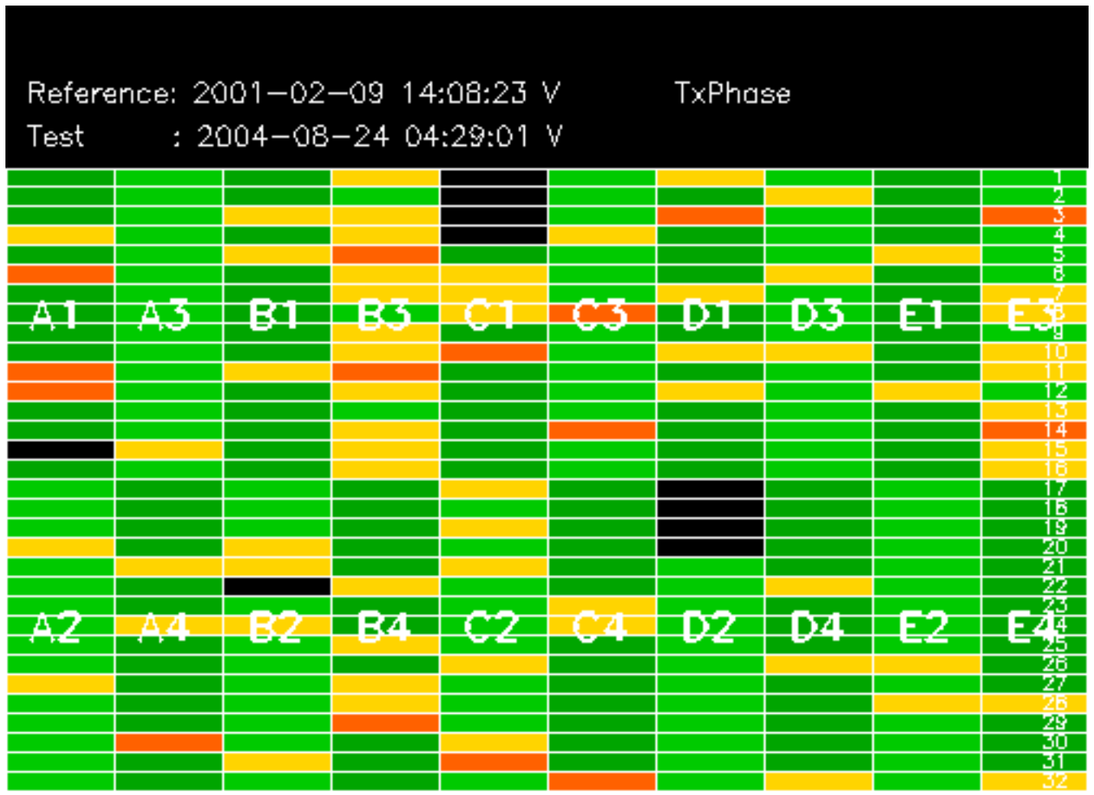
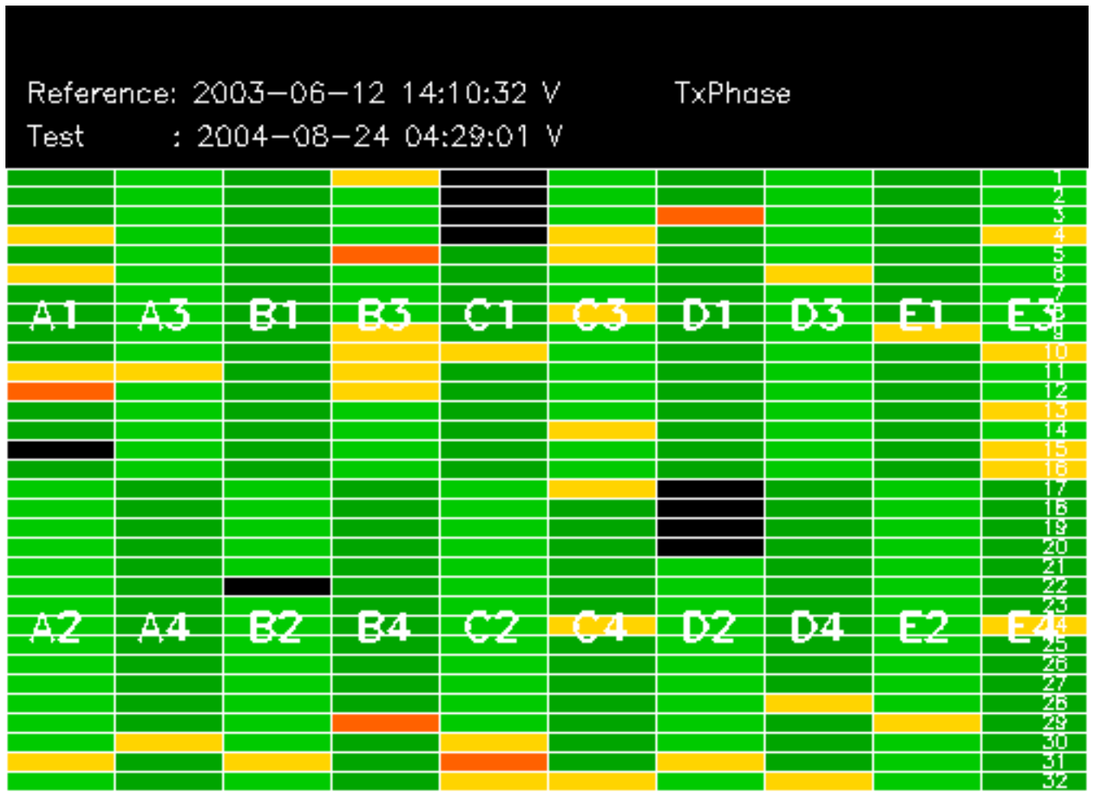

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-08-23 05:00:38 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-08-23 05:00:38 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 : 2004-08-24 04:29:01 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 : 2004-08-24 04:29:01 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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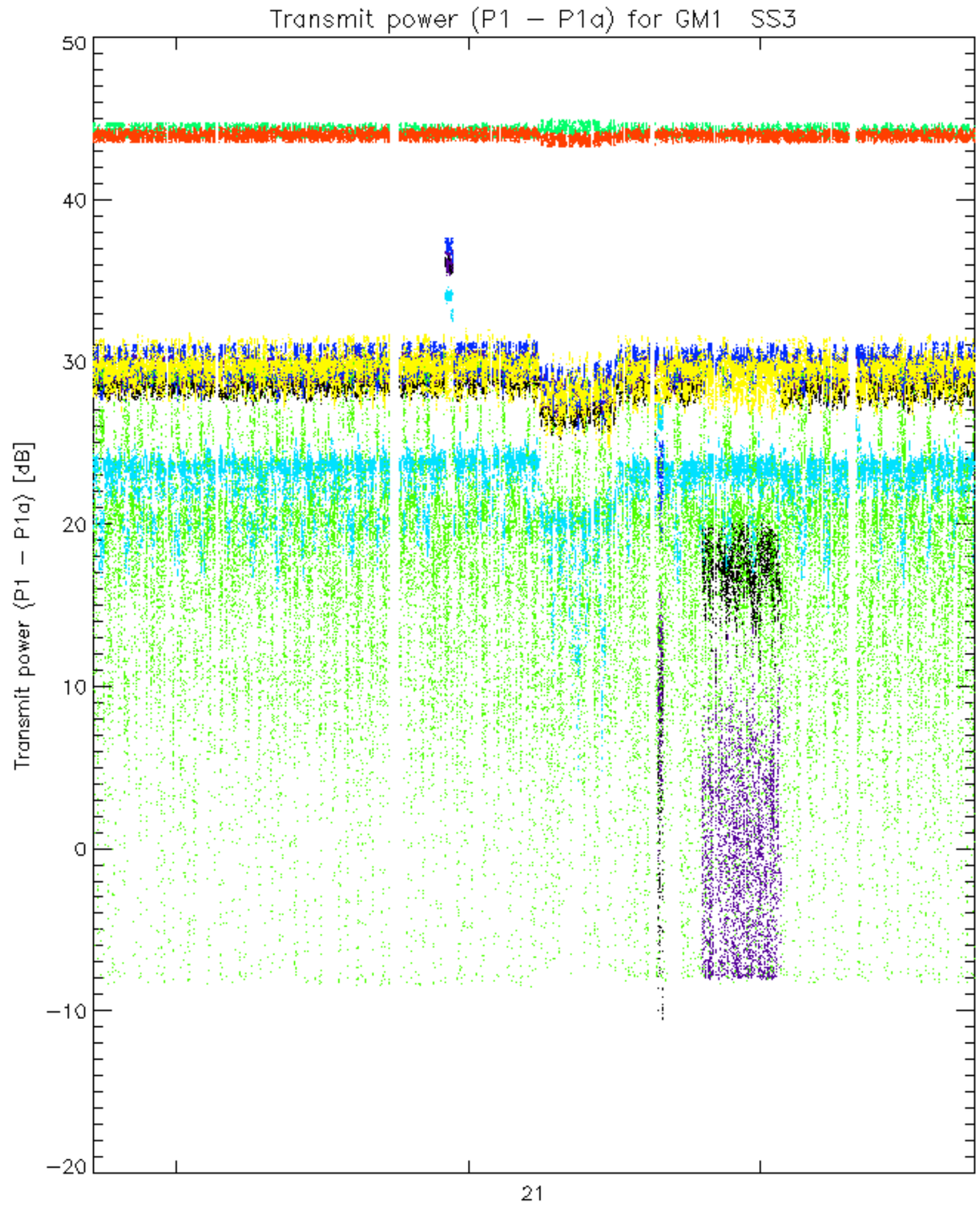
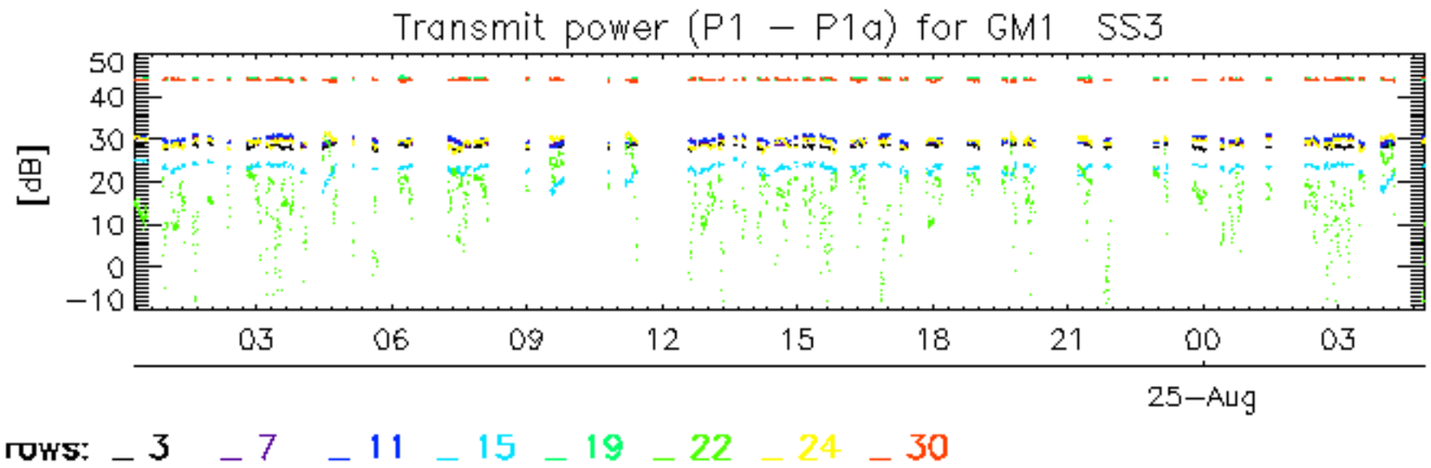
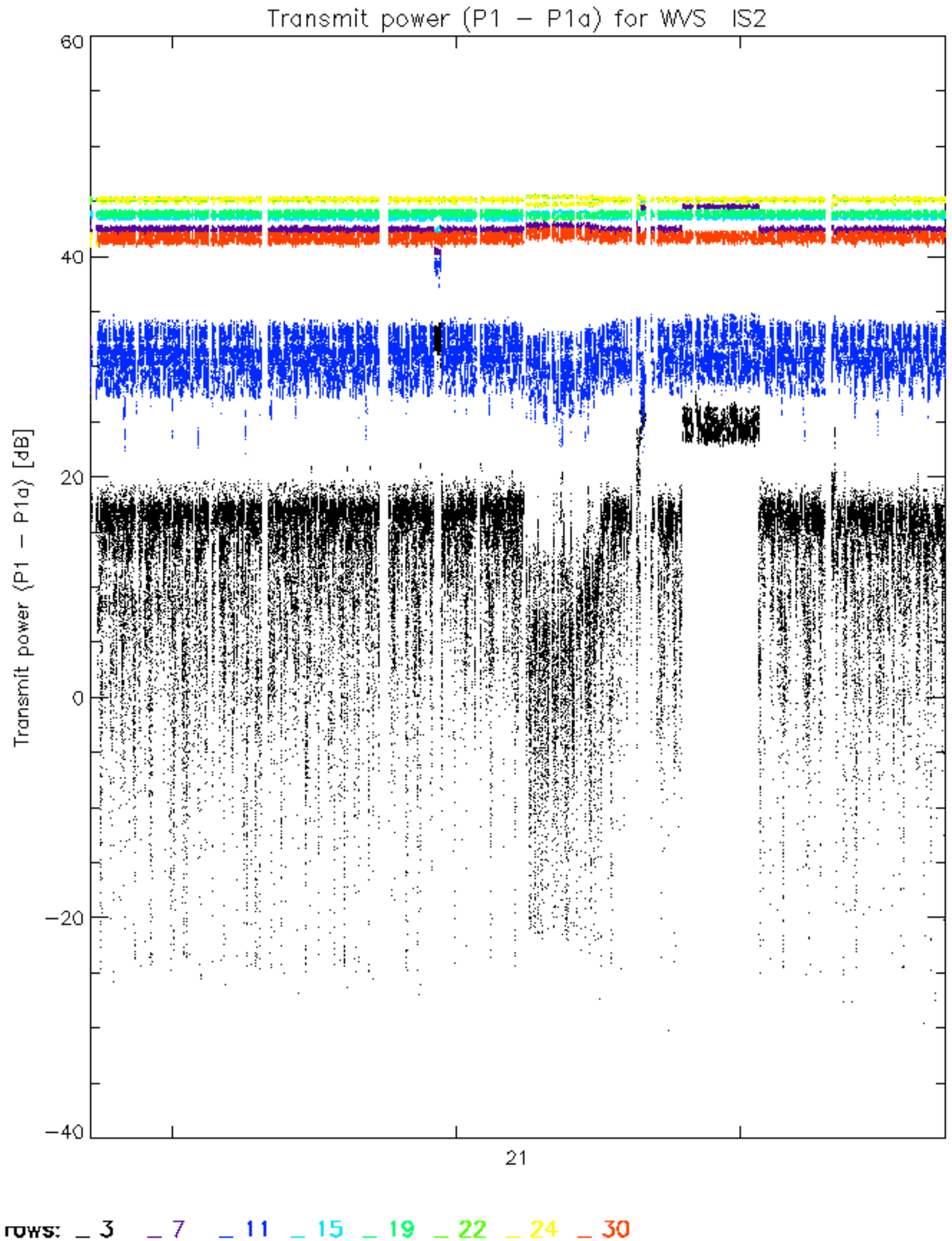
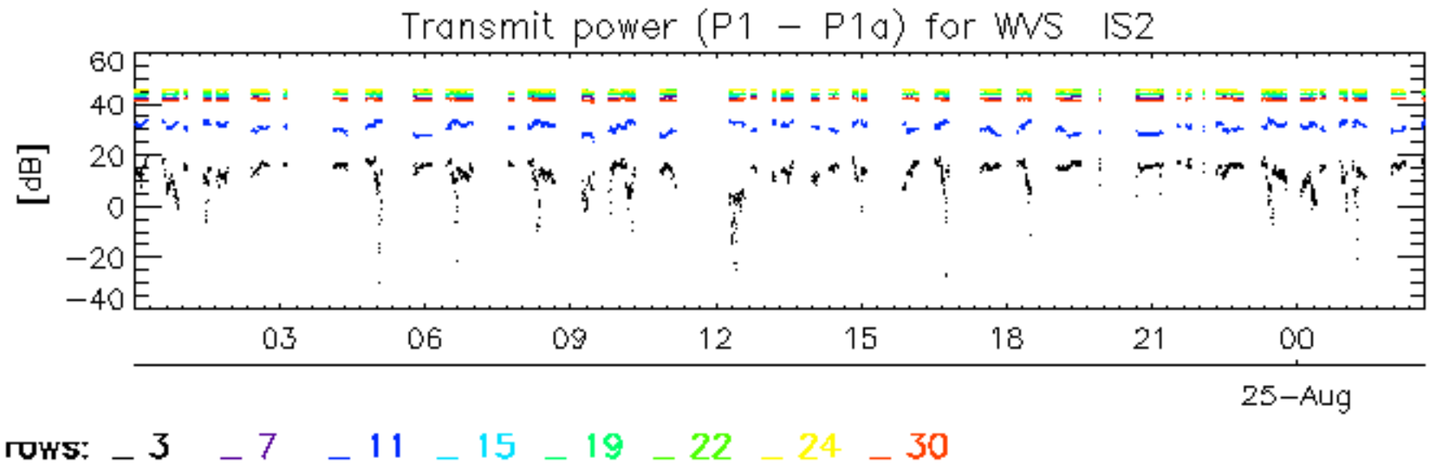

Transmit power (P1 – P1a) for GM1 SS3
50
40
30
20
10
0
−10
−20
Transmit power (P1 – P1a) [dB]
21
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


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

No unavailabilities during the reported period.