PRELIMINARY REPORT OF 040826

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

last update on Thu Aug 26 13:11:08 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	20040825 071836

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	-3.470198	0.049602	0.075920
7	P1	-3.309684	0.054744	0.082459
11	P1	-4.649574	0.109286	0.005382
15	P1	-5.753185	0.118601	-0.008456
19	P1	-3.461226	0.005807	-0.010725
22	P1	-4.549373	0.011379	0.051389
24	P1	-4.963815	0.020908	0.006965
30	P1	-6.930423	0.023658	-0.071113

3	P1	-15.925022	1.522427	0.886804
7	P1	-14.027508	0.167484	-0.127547
11	P1	-20.127708	0.418771	-0.283340
15	P1	-11.791646	0.162146	-0.008947
19	P1	-13.883195	0.035799	-0.048829
22	P1	-16.228306	0.345291	0.244062
24	P1	-14.559183	0.298488	0.160883
30	P1	-17.765566	0.446426	-0.245645

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.304417	0.081535	0.033775
7	P2	-22.636436	0.137580	0.107860
11	P2	-15.355758	0.174856	0.137612
15	P2	-7.072311	0.096969	0.080850
19	P2	-9.561161	0.199097	0.085997
22	P2	-17.362652	0.117770	0.125844
24	P2	-20.747665	0.087549	0.001617
30	P2	-19.278488	0.080935	0.126858

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.140997	0.002567	0.007673
7	P3	-8.140999	0.002568	0.007695
11	P3	-8.140994	0.002567	0.007642
15	P3	-8.140984	0.002566	0.007591
19	P3	-8.140974	0.002566	0.007549
22	P3	-8.140964	0.002567	0.007478
24	P3	-8.140955	0.002568	0.007453
30	P3	-8.140925	0.002561	0.007377

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	-2.698735	0.262922	0.335037
7	P1	-2.957397	0.215117	0.251135
11	P1	-3.878296	0.164266	-0.006910
15	P1	-3.532983	0.133678	0.004249
19	P1	-3.480963	0.014305	0.001037
22	P1	-5.679023	0.041563	-0.087558
24	P1	-3.888021	0.015642	-0.106548
30	P1	-6.176723	0.065333	0.021307
3	P1	-10.352211	1.029791	0.597003
7	P1	-10.068360	0.163322	0.132164
11	P1	-12.111587	0.116868	-0.182363
15	P1	-11.638109	0.107466	-0.124756
19	P1	-15.625037	0.050251	0.013816
22	P1	-23.373636	1.199530	-0.109798
24	P1	-17.838585	0.227370	-0.332778
30	P1	-20.389626	1.210032	-0.230628

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.979851	0.059673	0.011161
7	P2	-22.769571	0.051565	0.101875
11	P2	-11.011898	0.072390	0.137738
15	P2	-4.951869	0.039199	0.015105
19	P2	-6.764754	0.057625	0.038564
22	P2	-7.451043	0.048207	0.045386
24	P2	-11.040334	0.053853	-0.001538
30	P2	-22.219767	0.043203	0.105624

P3 Cyclic statistics

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

3	P3	-7.988606	0.003769	-0.006733
7	P3	-7.988557	0.003779	-0.006525
11	P3	-7.988685	0.003765	-0.006763
15	P3	-7.988594	0.003770	-0.006820
19	P3	-7.988626	0.003776	-0.006582
22	P3	-7.988567	0.003769	-0.006460
24	P3	-7.988605	0.003784	-0.006768
30	P3	-7.988573	0.003769	-0.006759

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	0.000491478
	stdev	2.13180e-07
MEAN Q	mean	0.000543360
	stdev	2.39693e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129271
	stdev	0.000993813

STDEV Q	mean	0.129507
	stdev	0.00100548

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

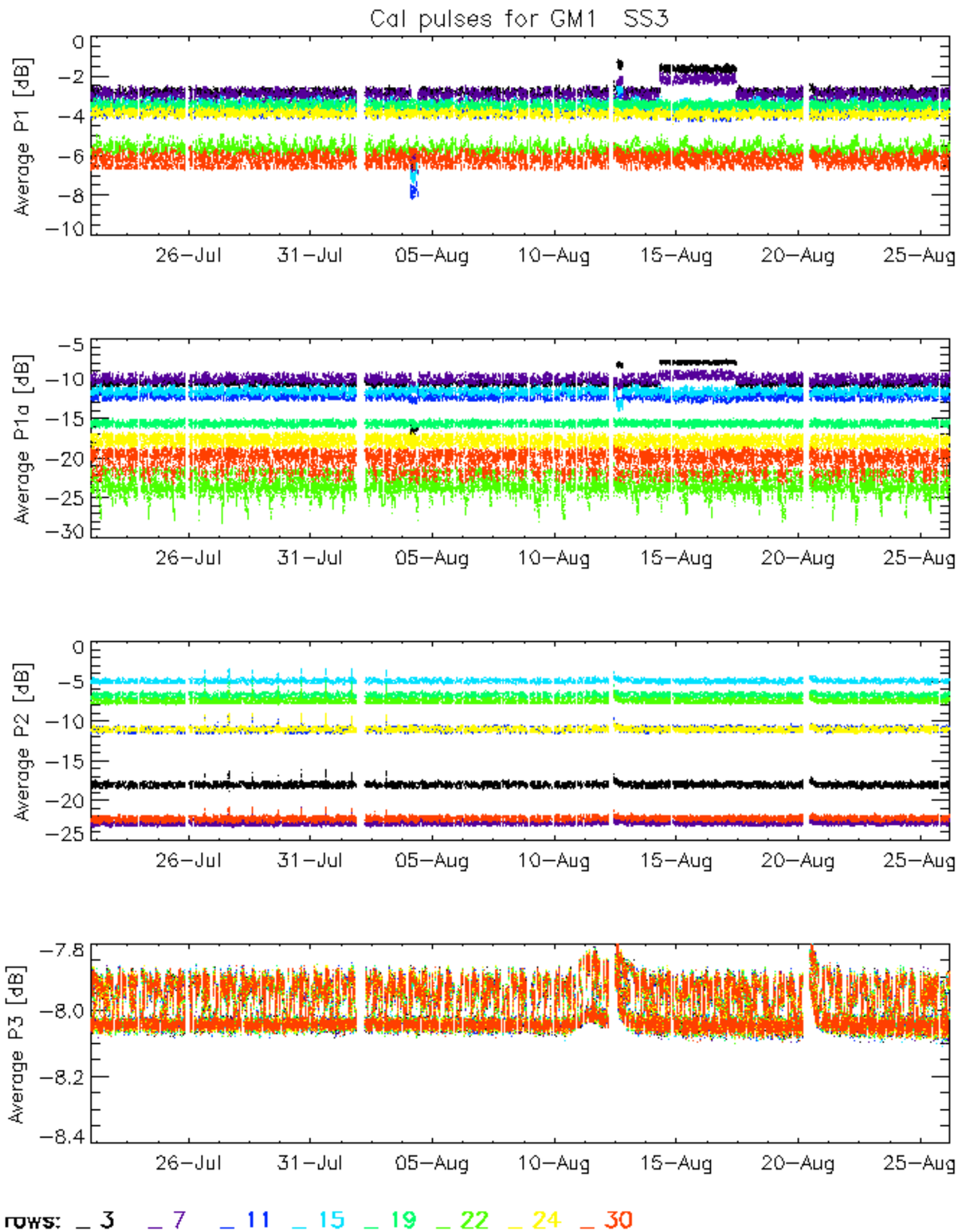
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

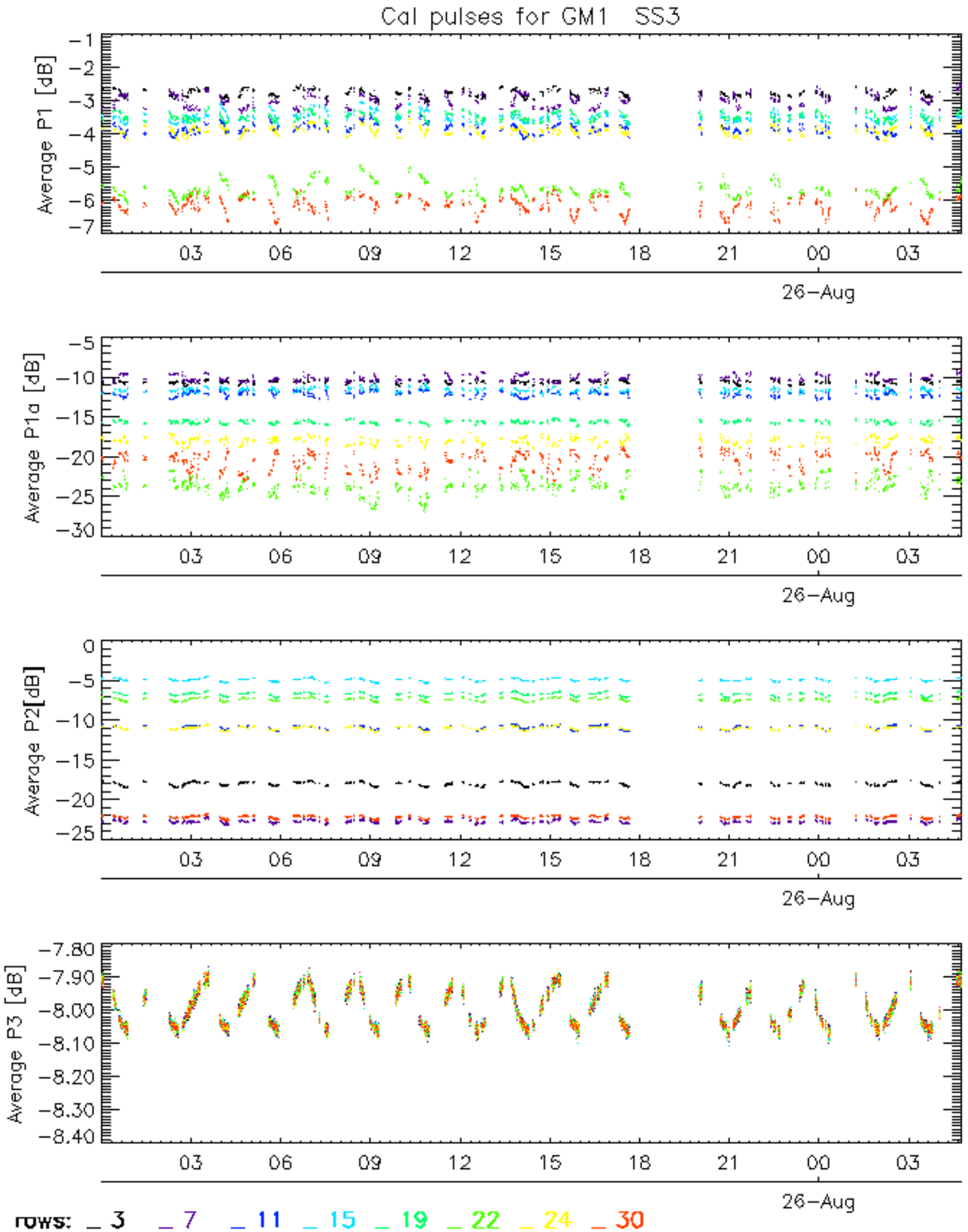
6.5 - Absolute Doppler for GM1

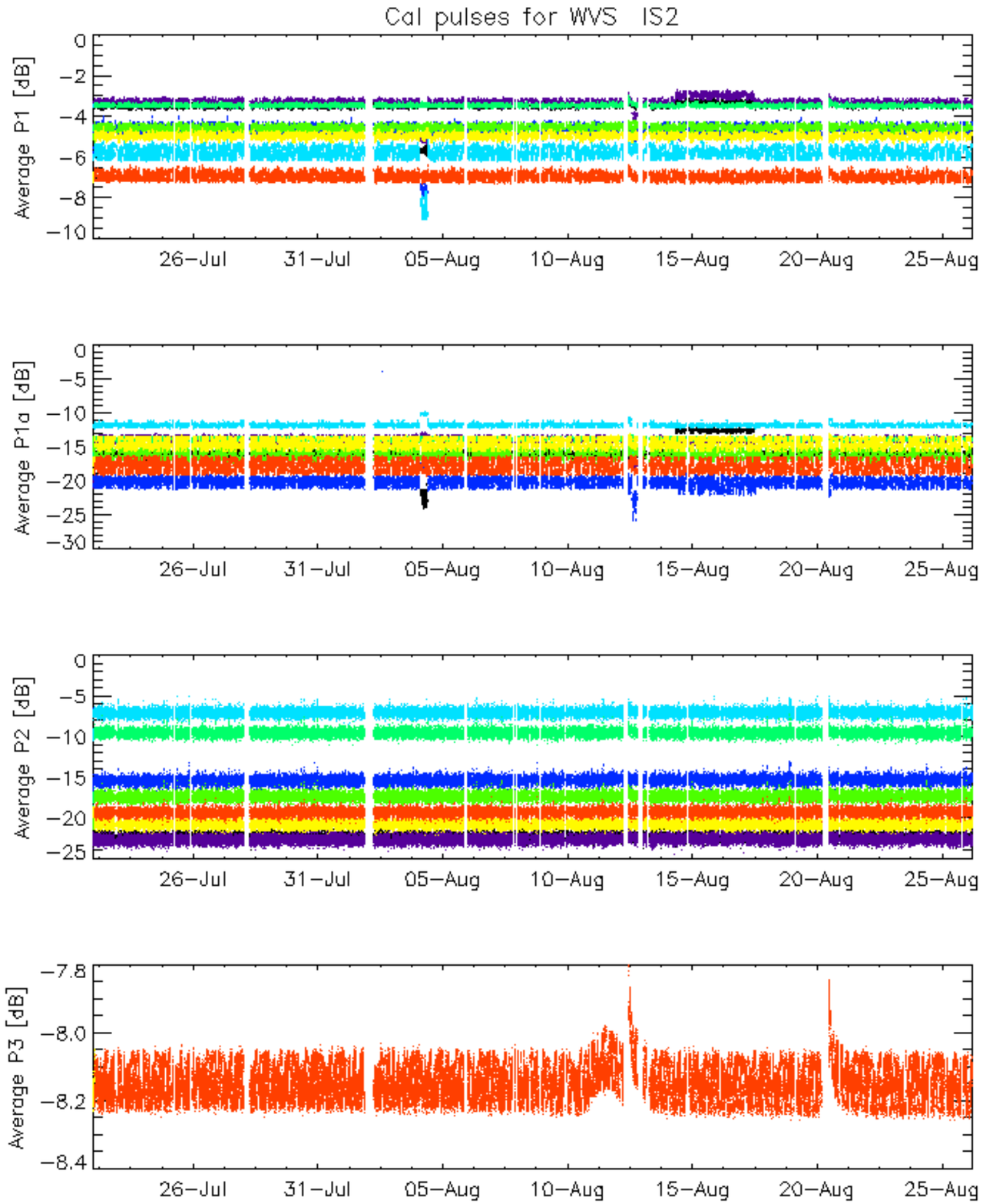
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

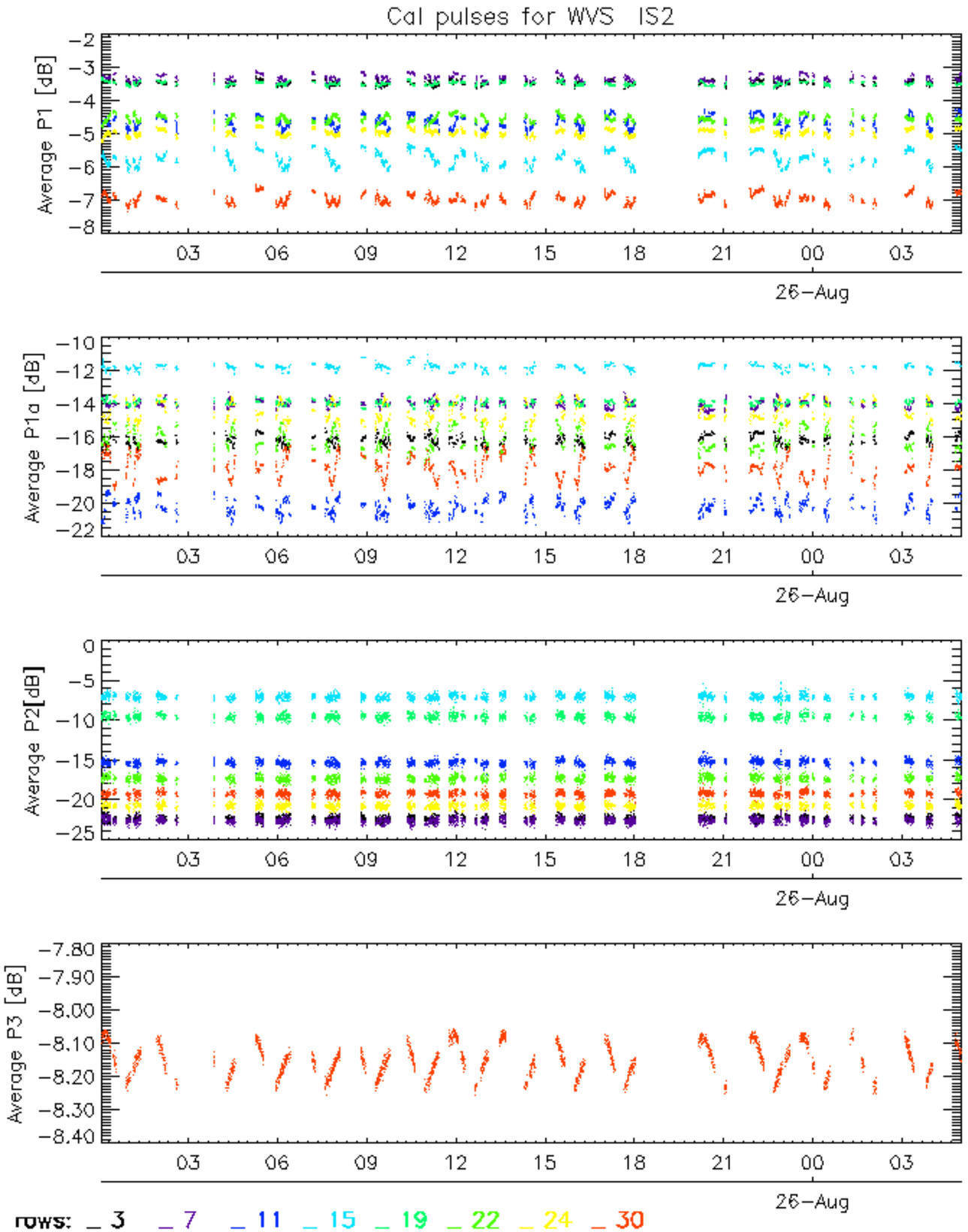
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

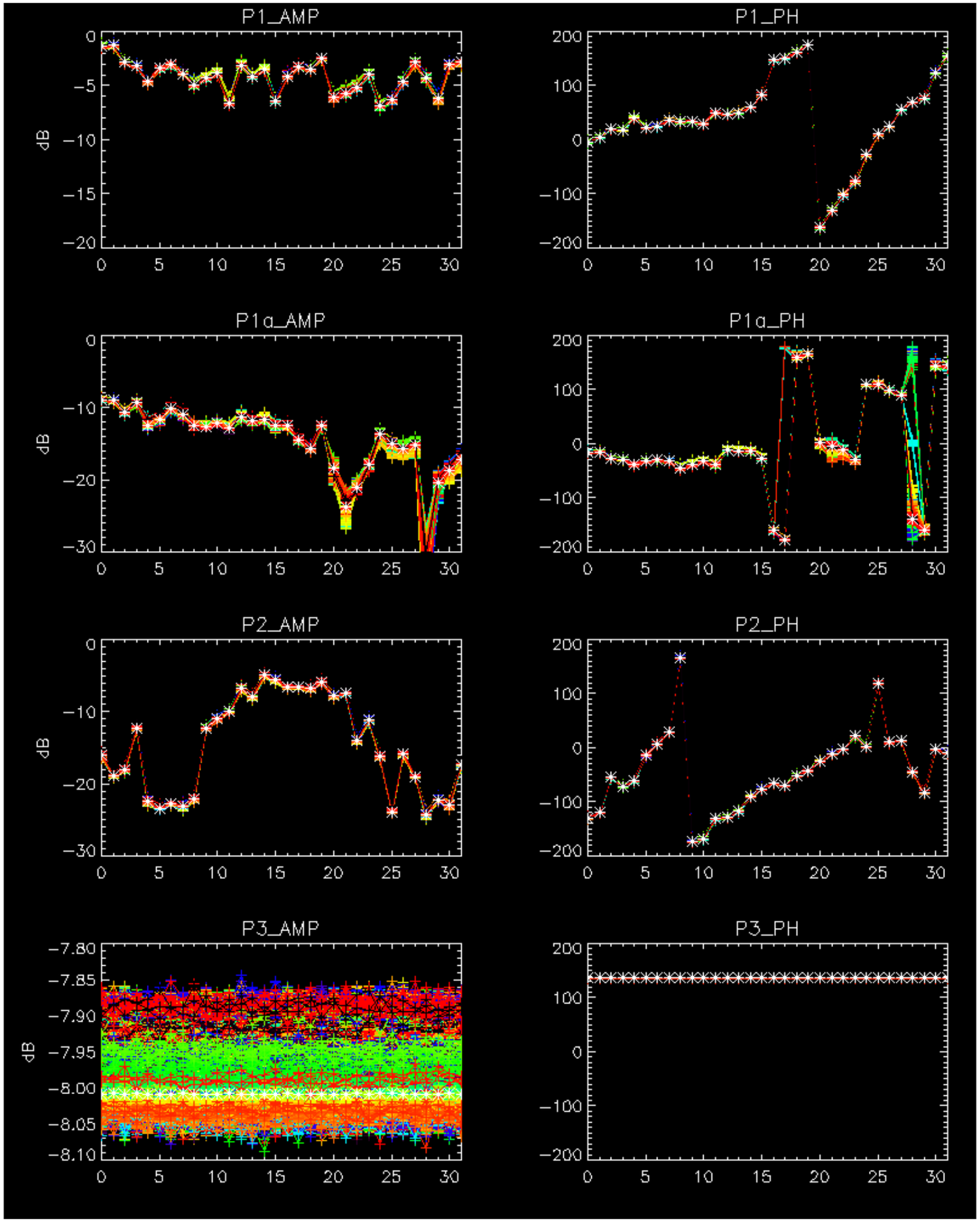

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

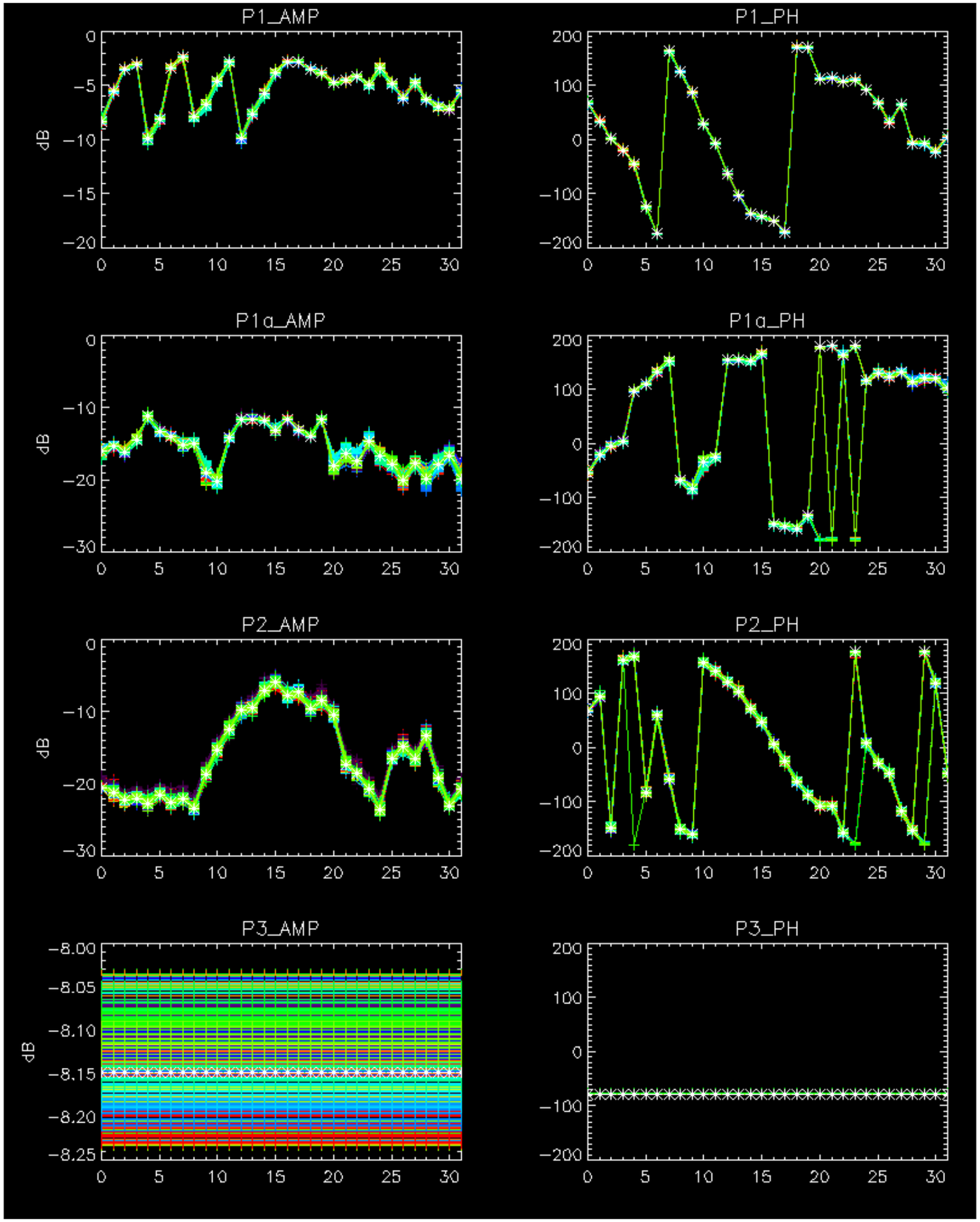

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
26−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


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]
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
26−Aug
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
26−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
26−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
03
26−Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

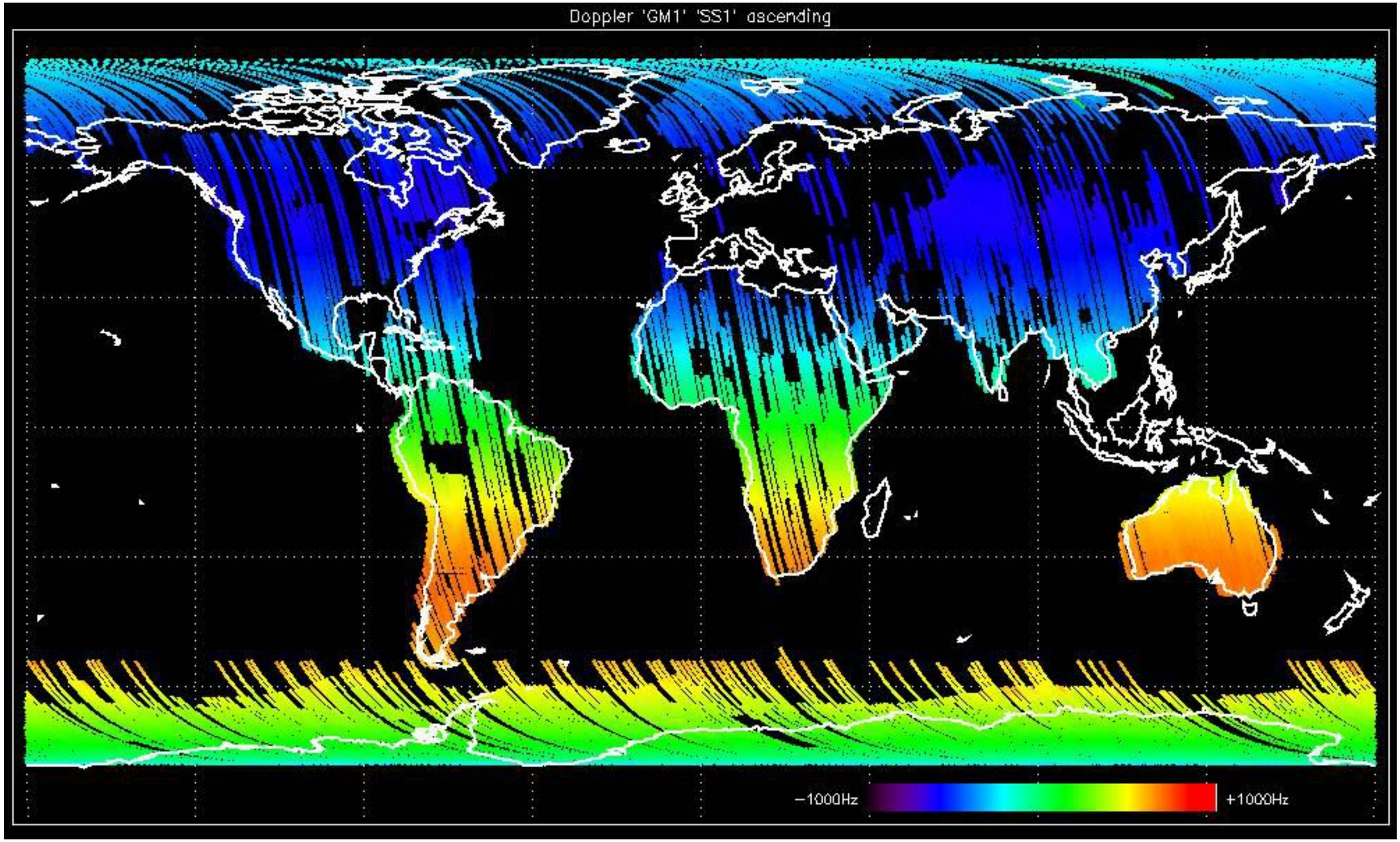
No anomalies observed.

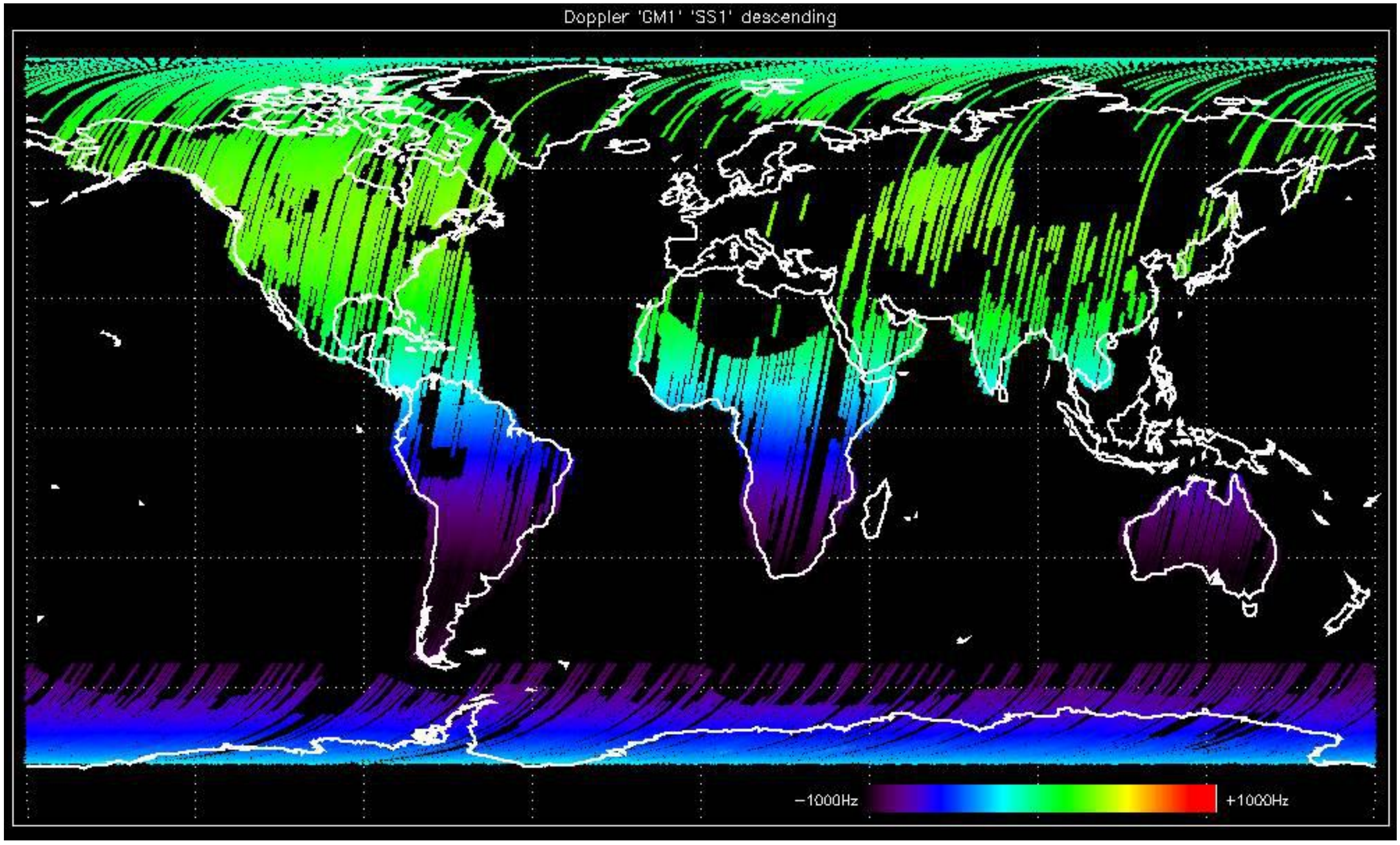

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

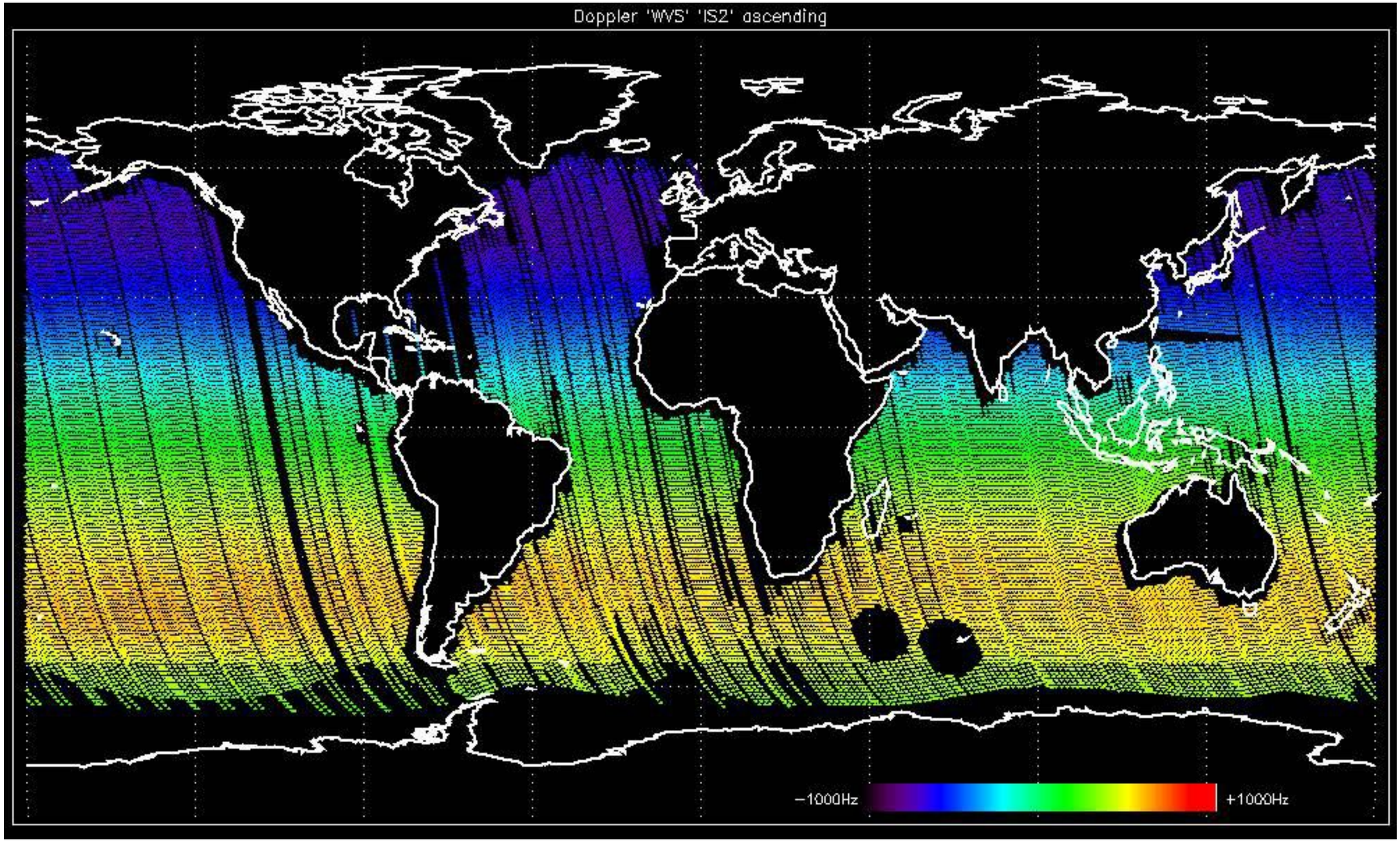

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

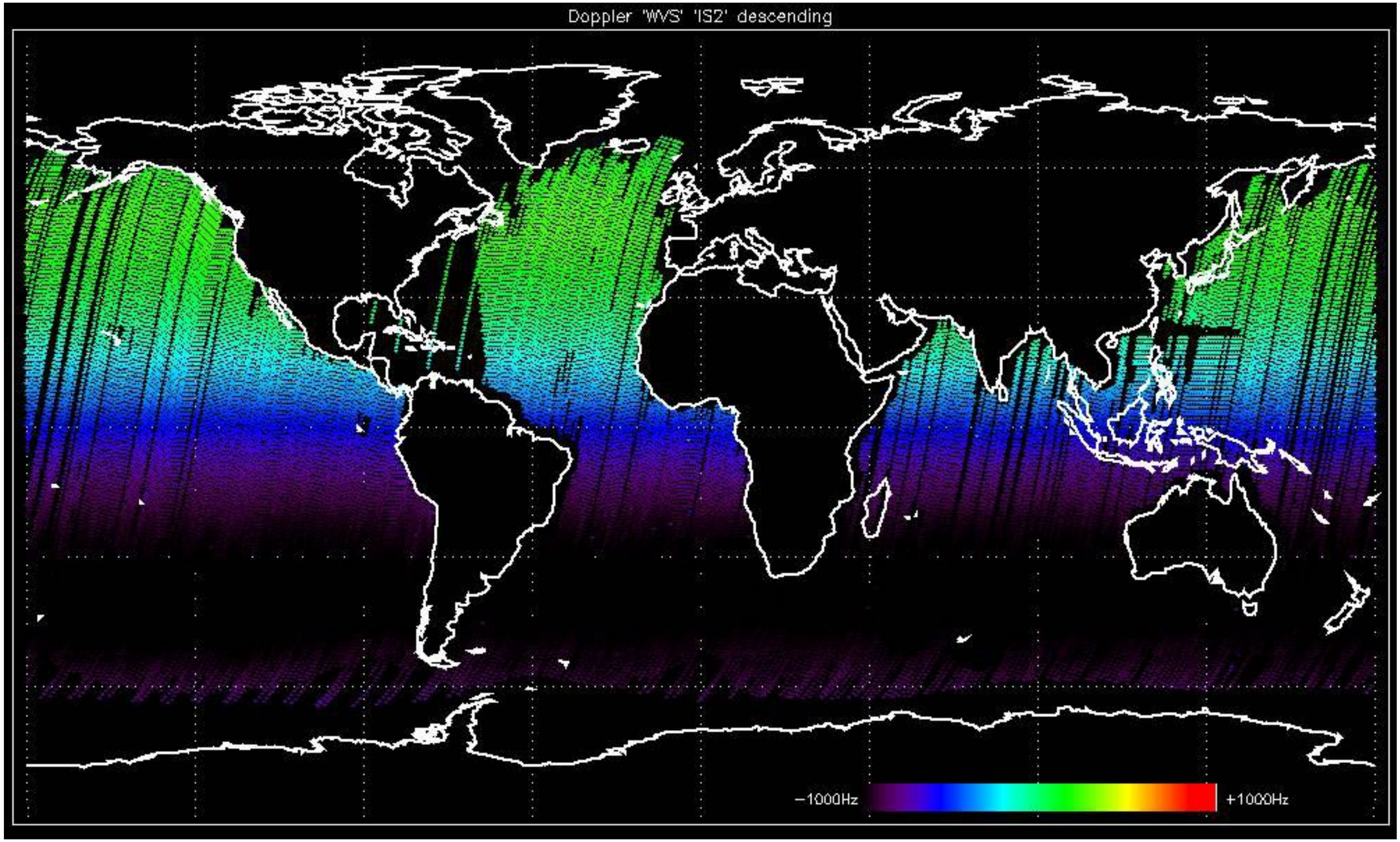
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

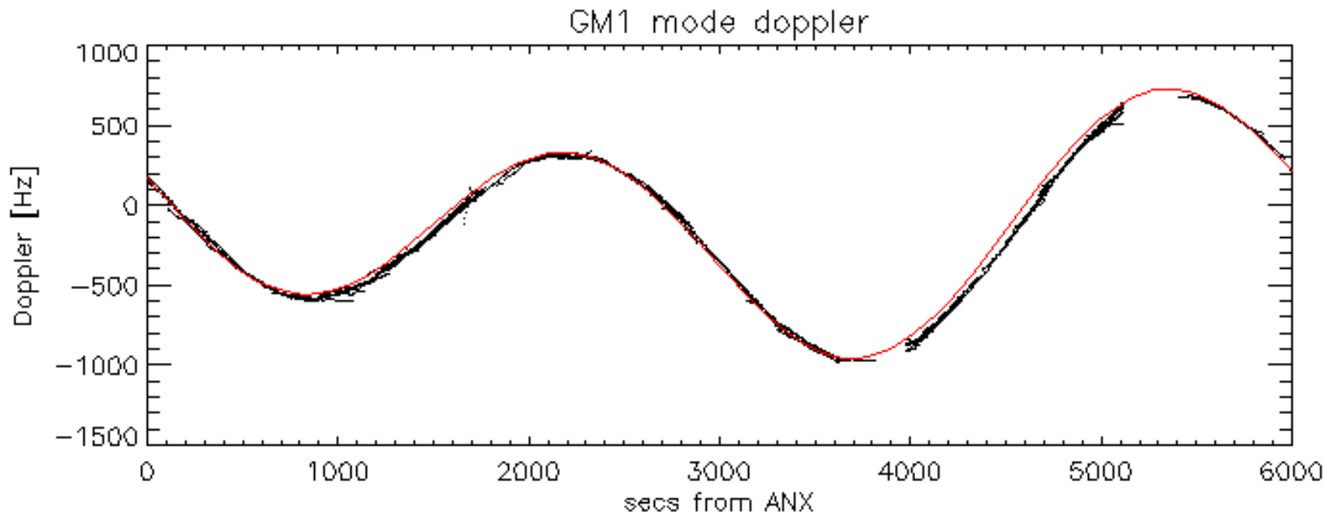
Preliminary report.The data is not yet controled

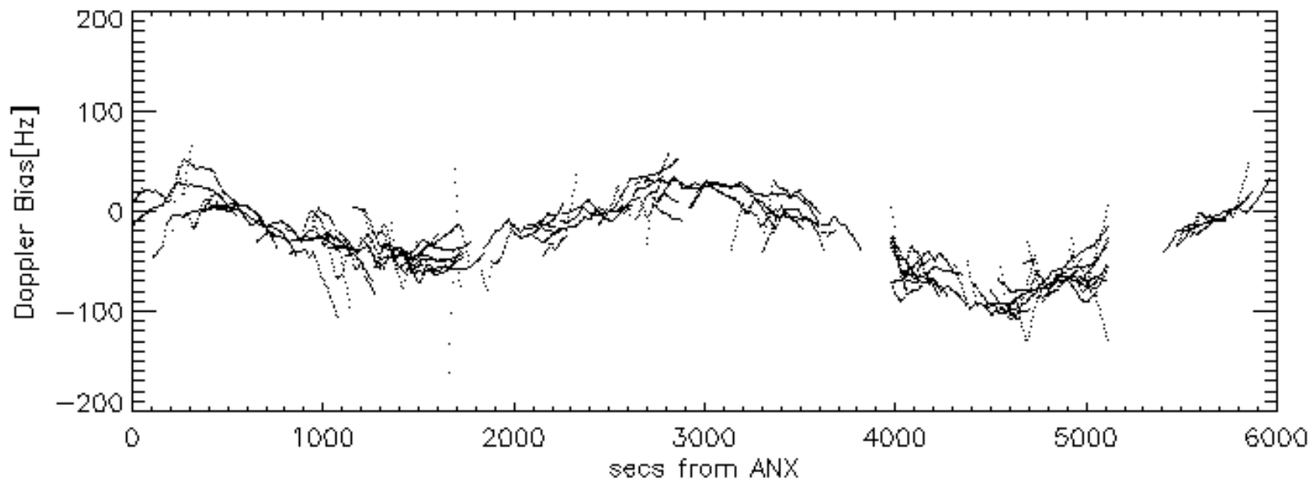

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

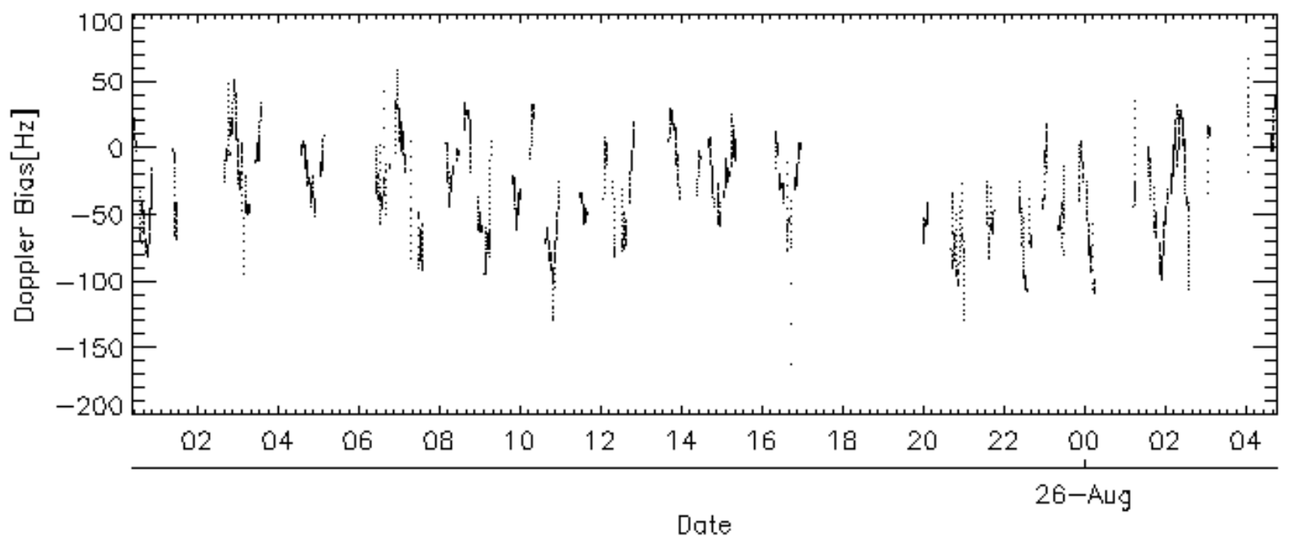

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

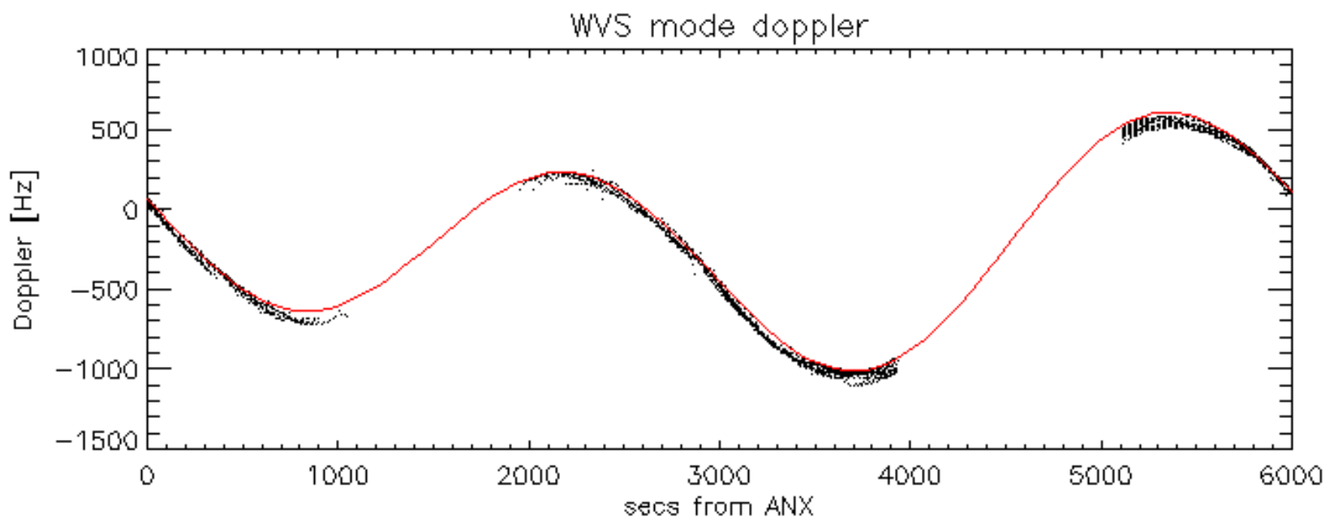

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

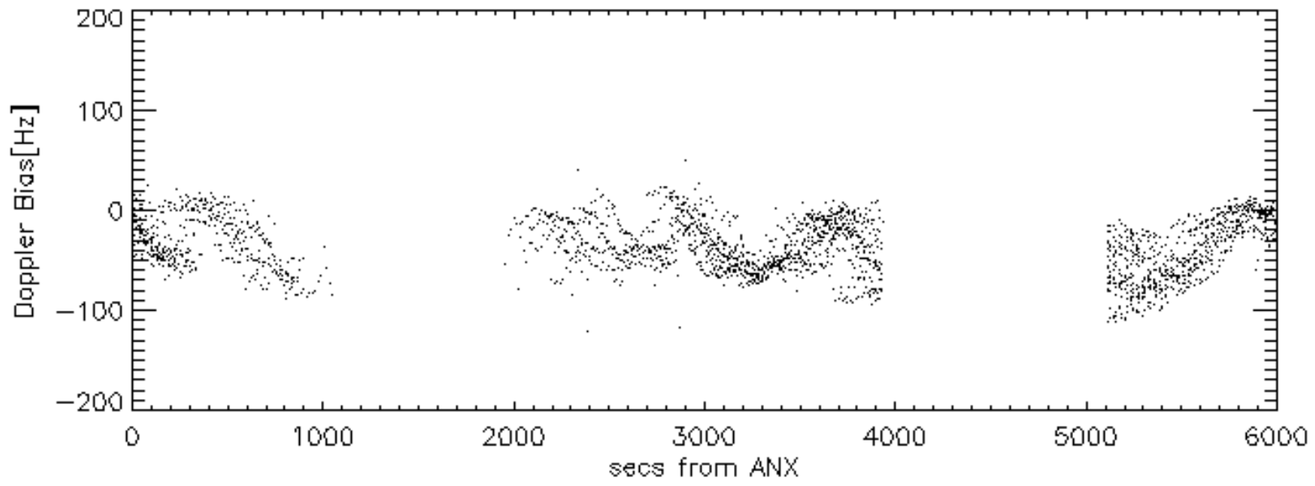

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

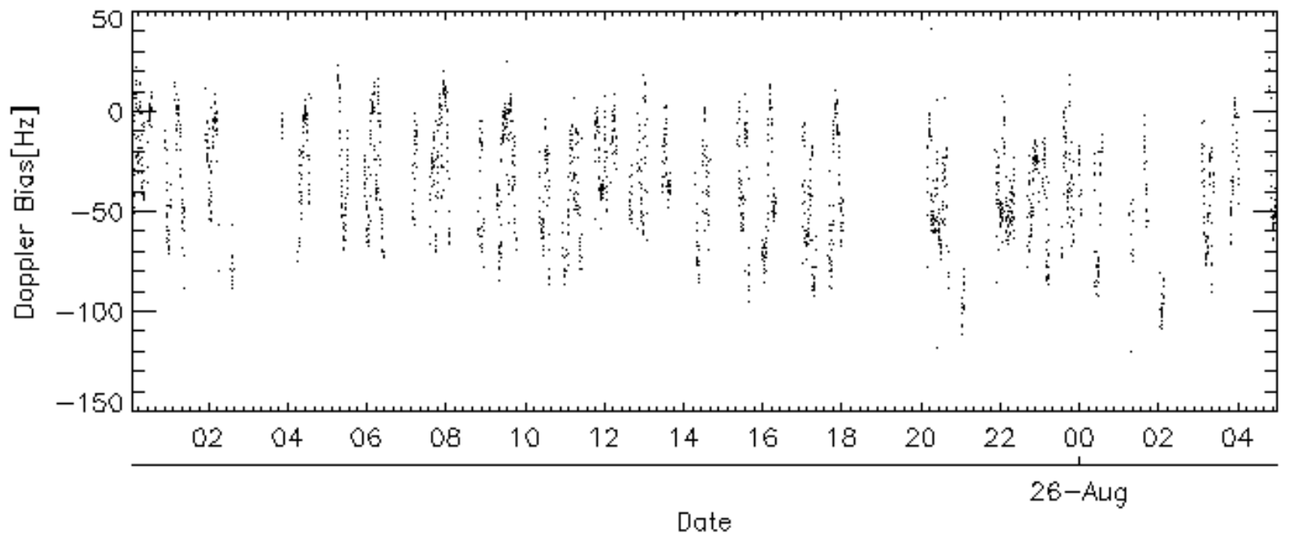

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

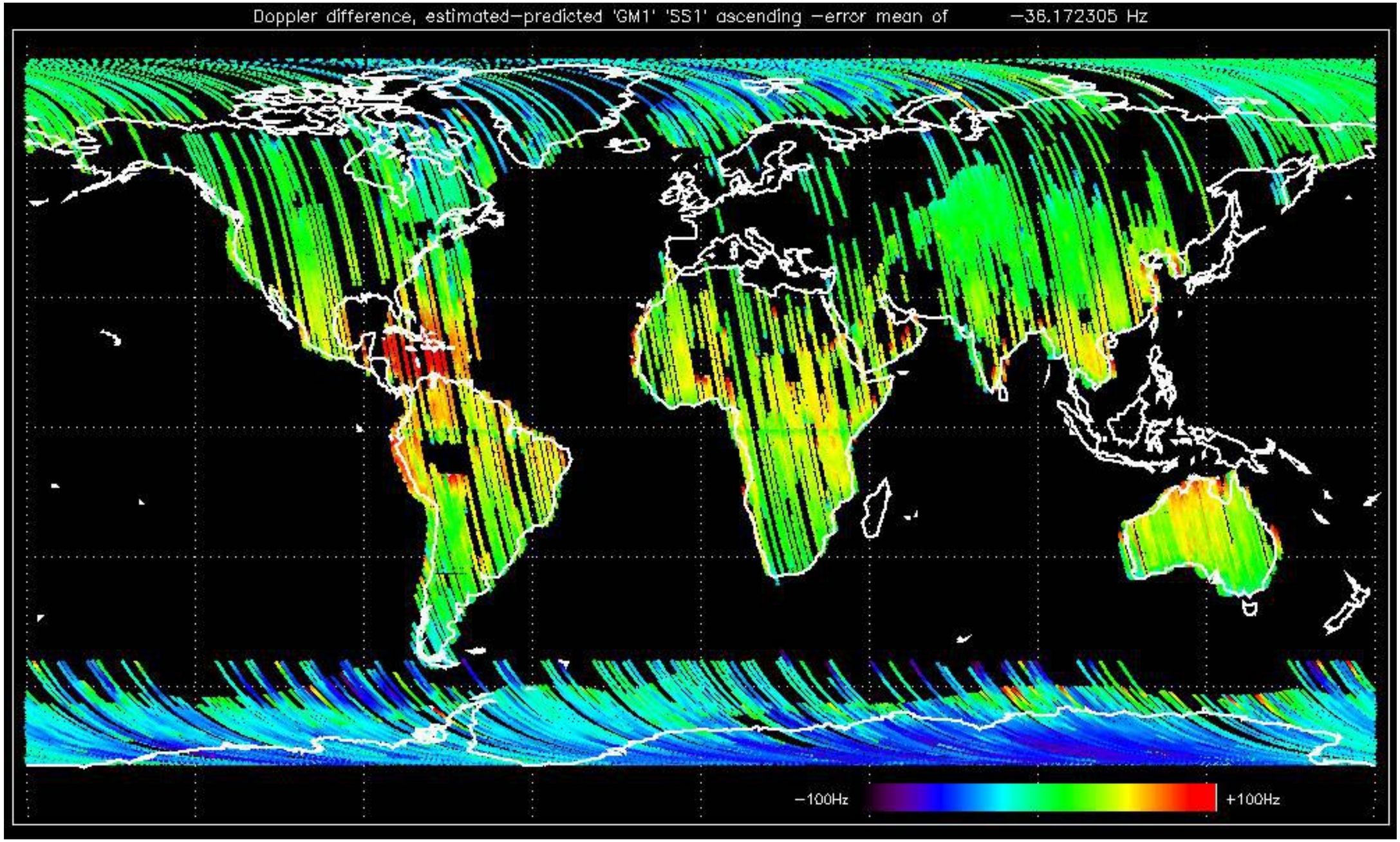

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

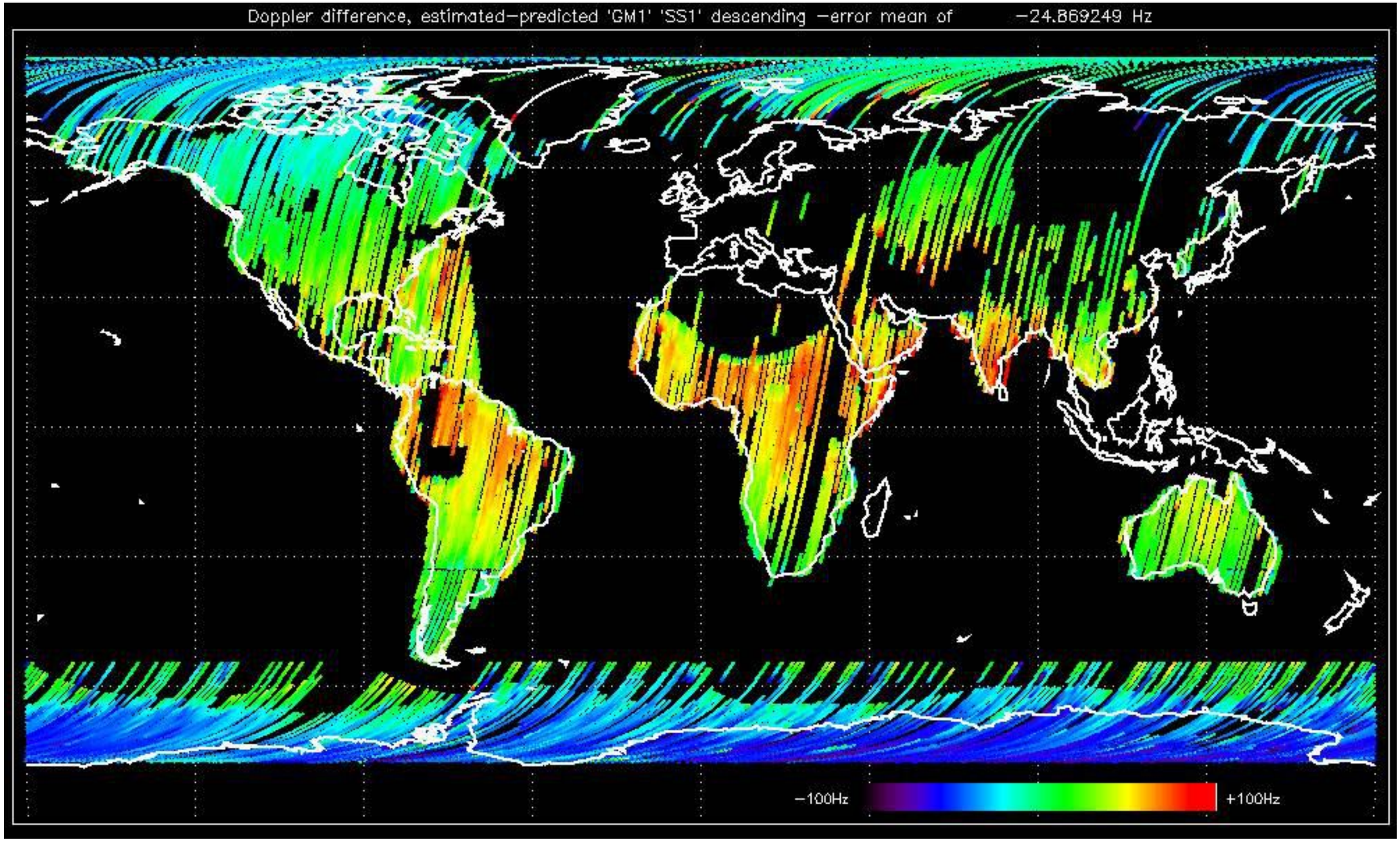

Doppler Bias[Hz]
100
50
0
−50
−100
−150
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
26−Aug
Date

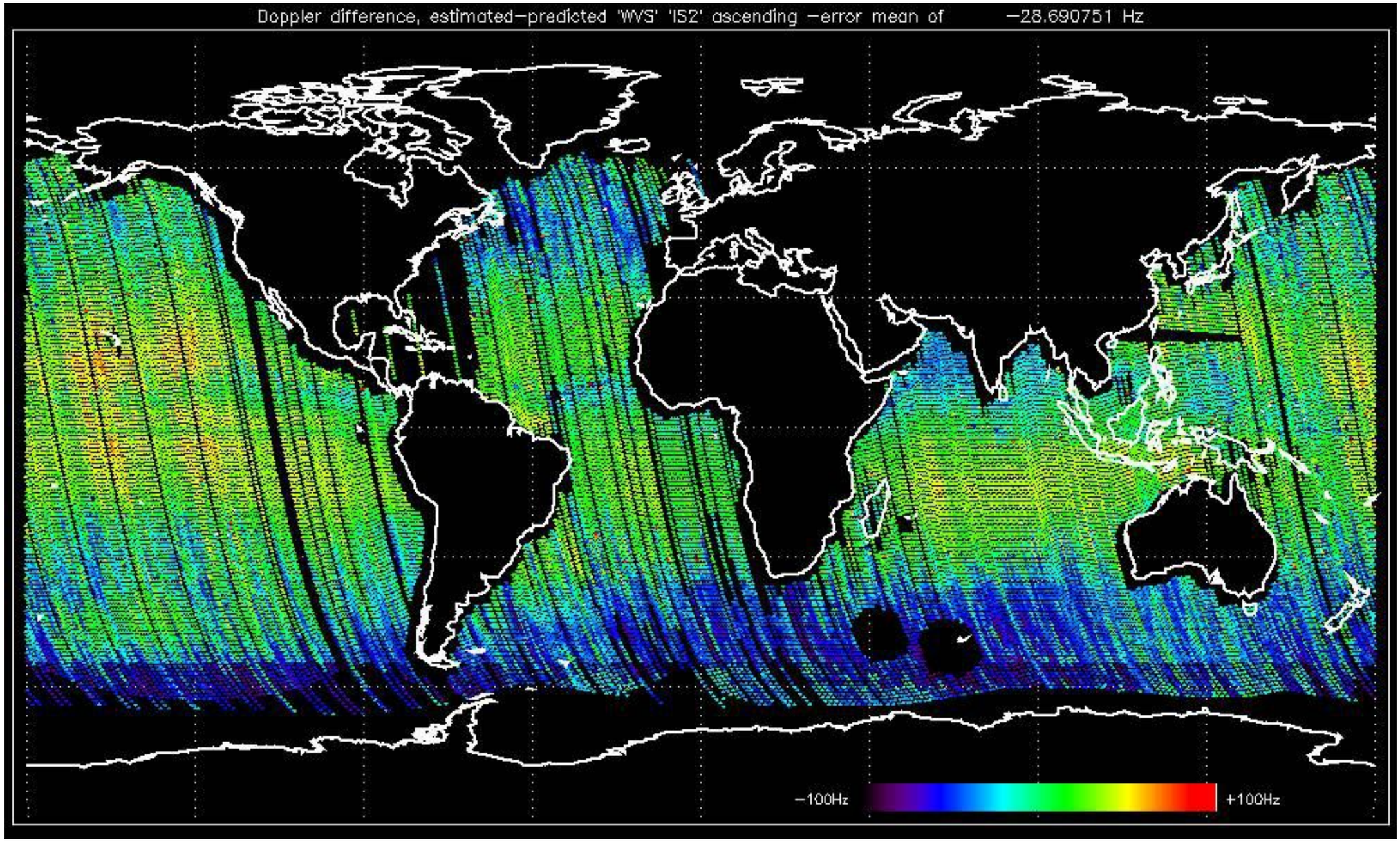

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

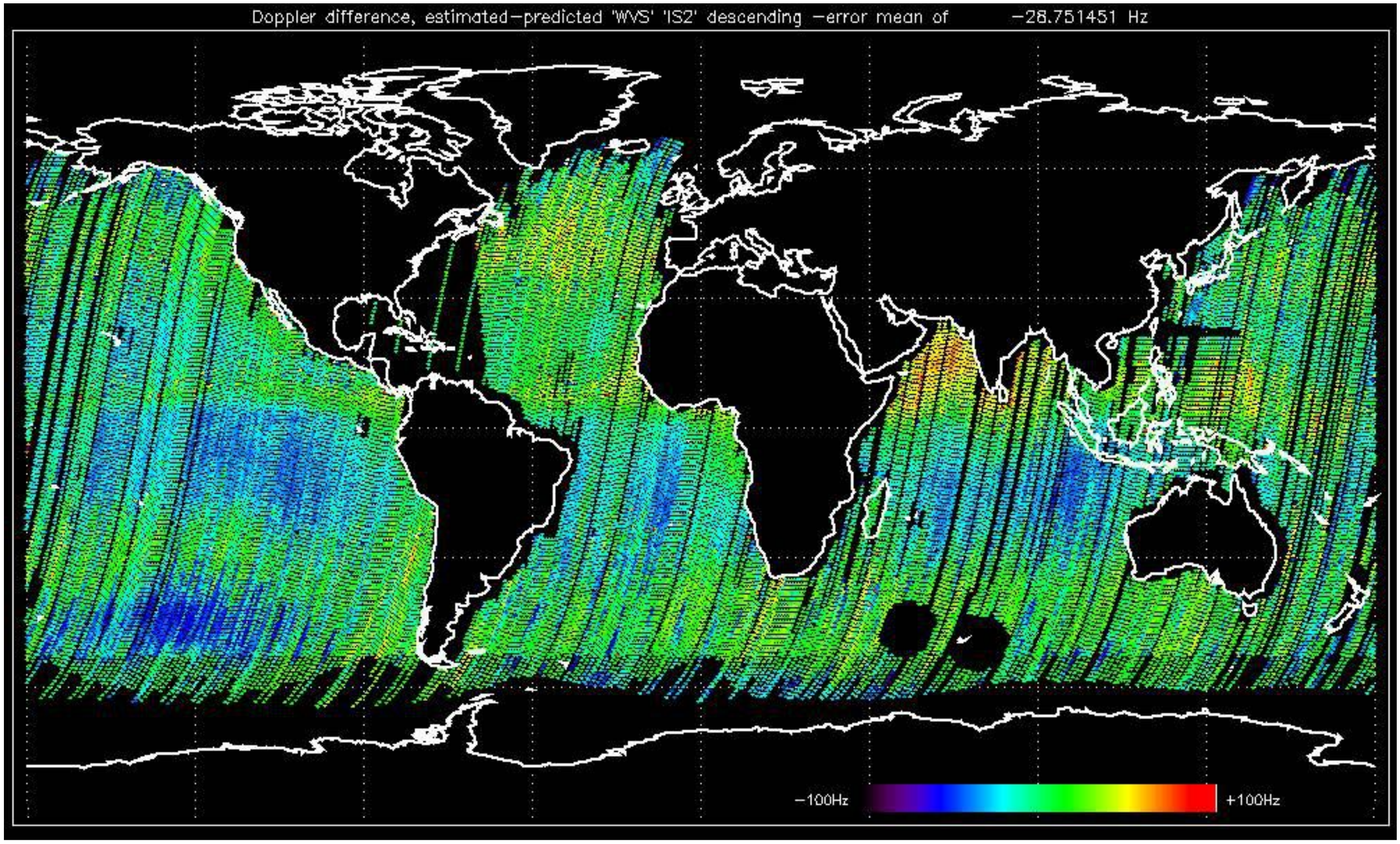

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −36.172305 Hz
−100Hz
+100Hz

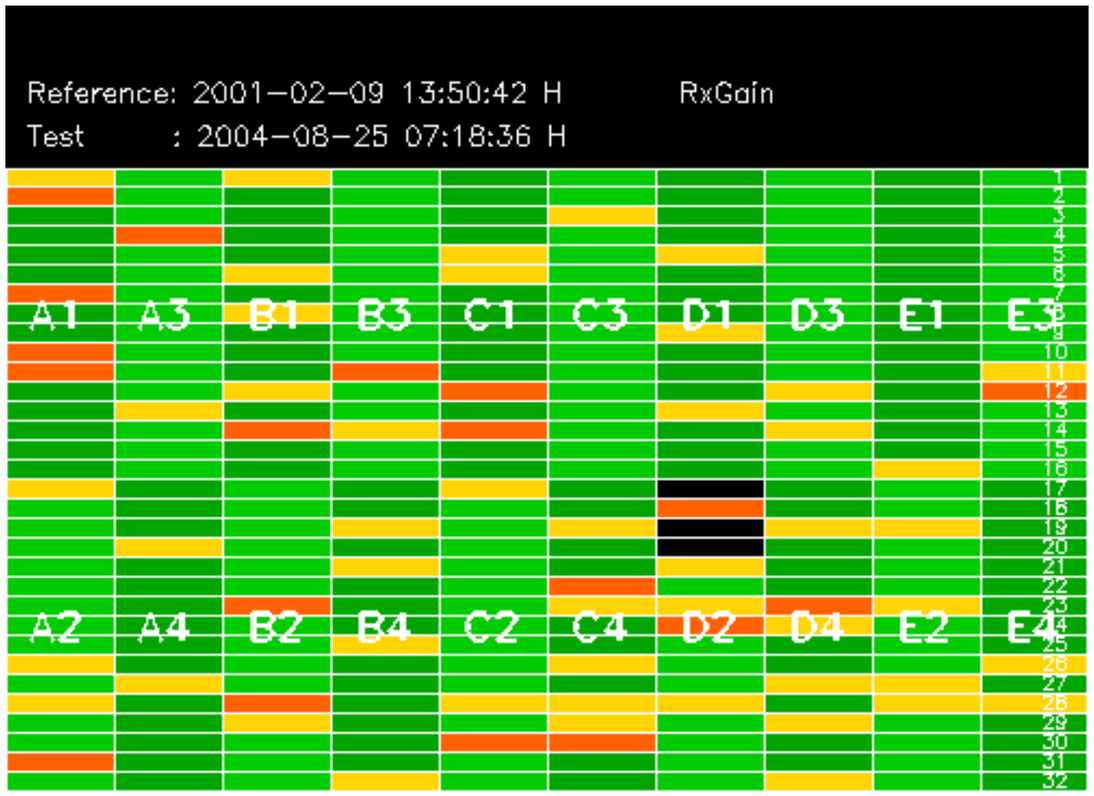

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −24.869249 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.690751 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −28.751451 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 : 2004-08-25 07:18:36 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
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17
18
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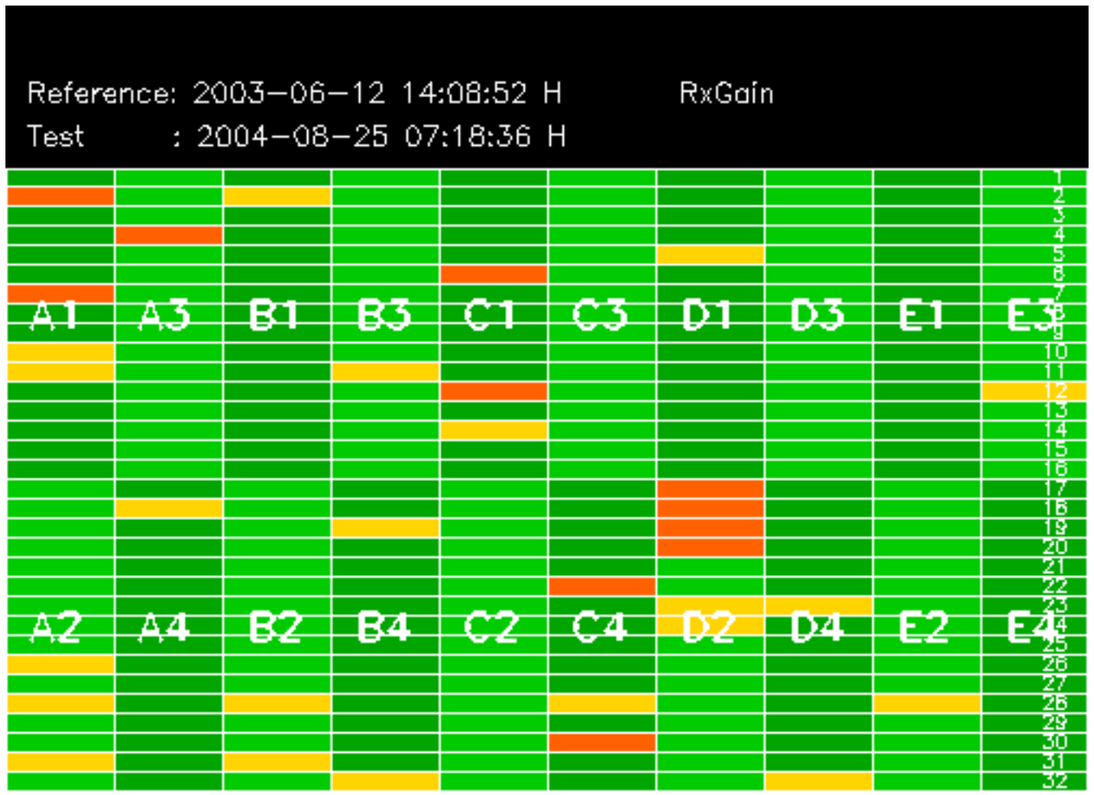
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-08-25 07:18:36 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
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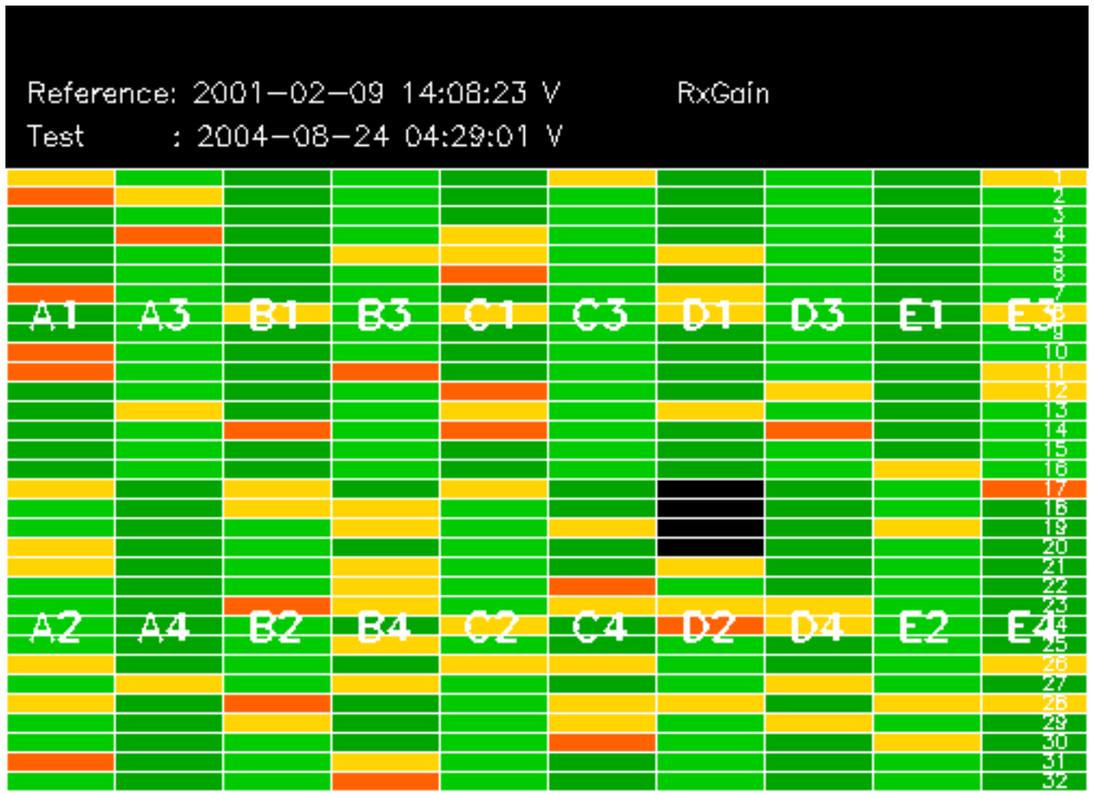
Reference: 2001-02-09 14:08:23 V
Test : 2004-08-24 04:29:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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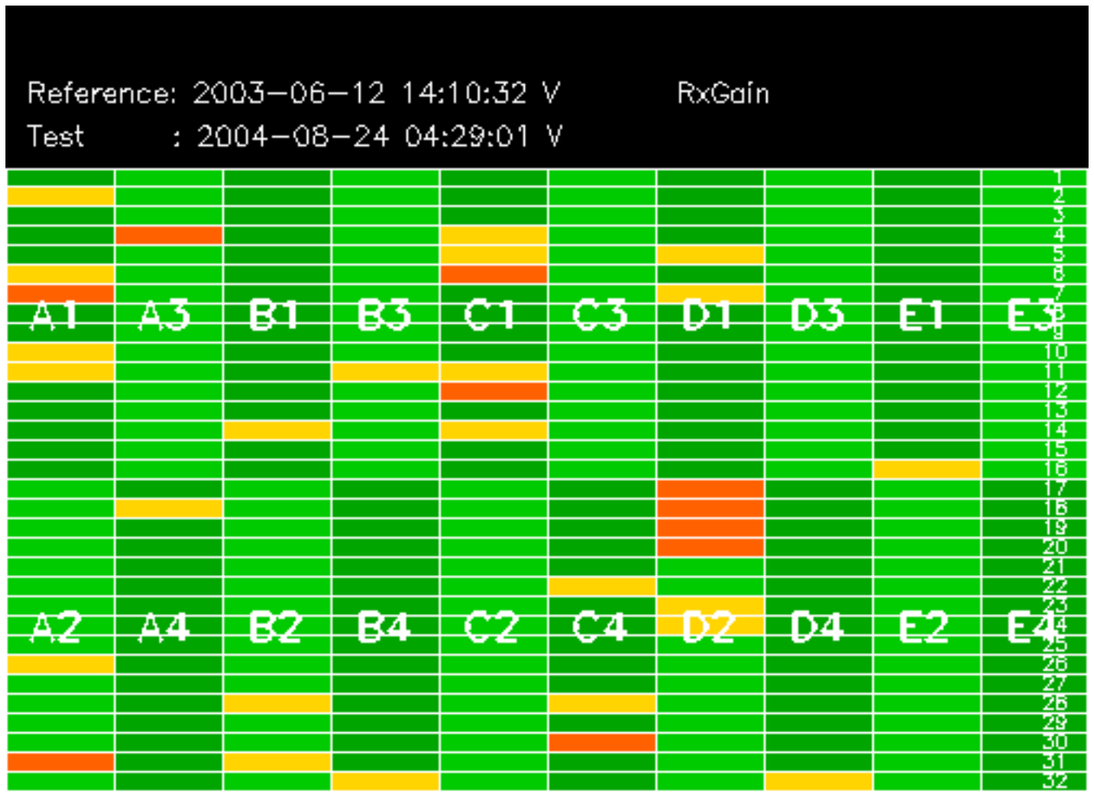
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-24 04:29:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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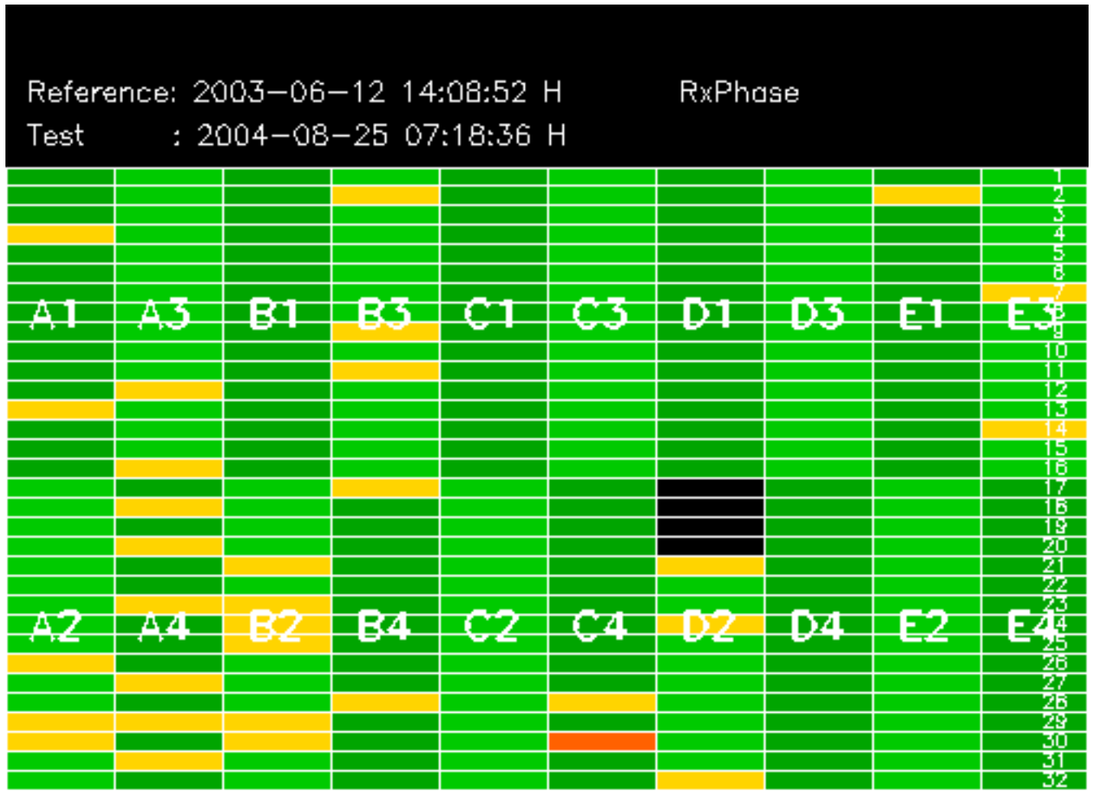
31
32


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-08-25 07:18:36 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 : 2004-08-25 07:18:36 H
RxPhase
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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9
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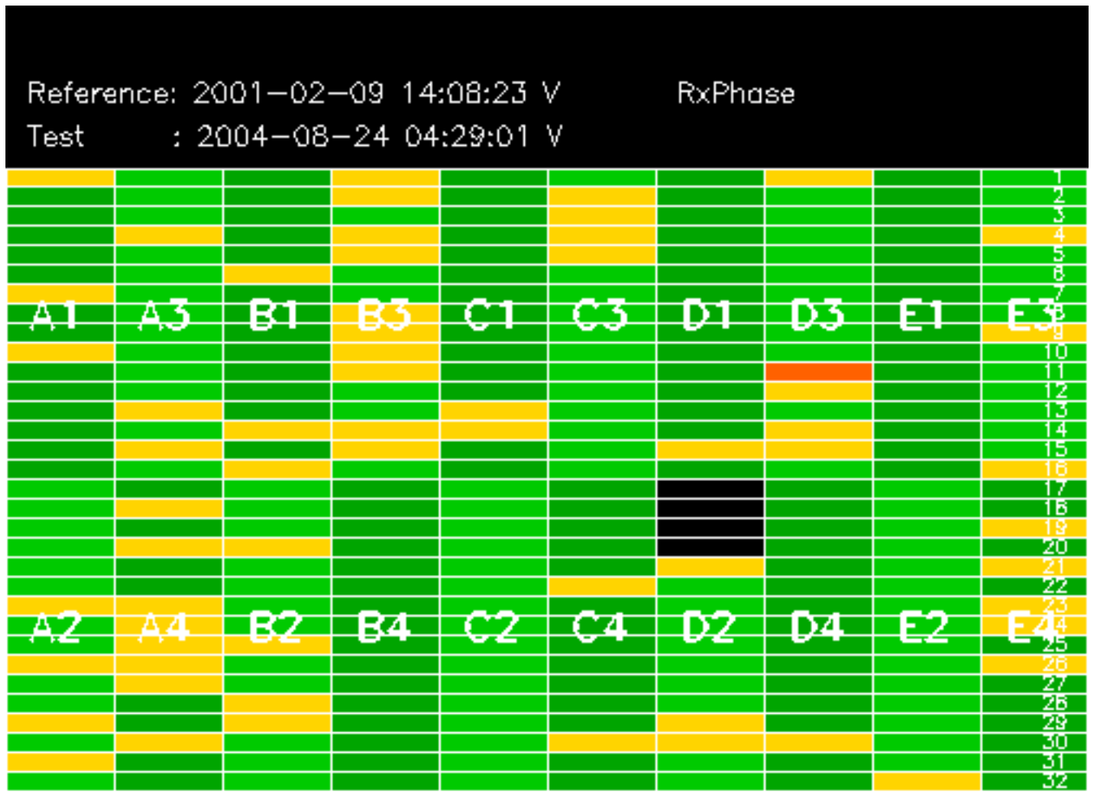
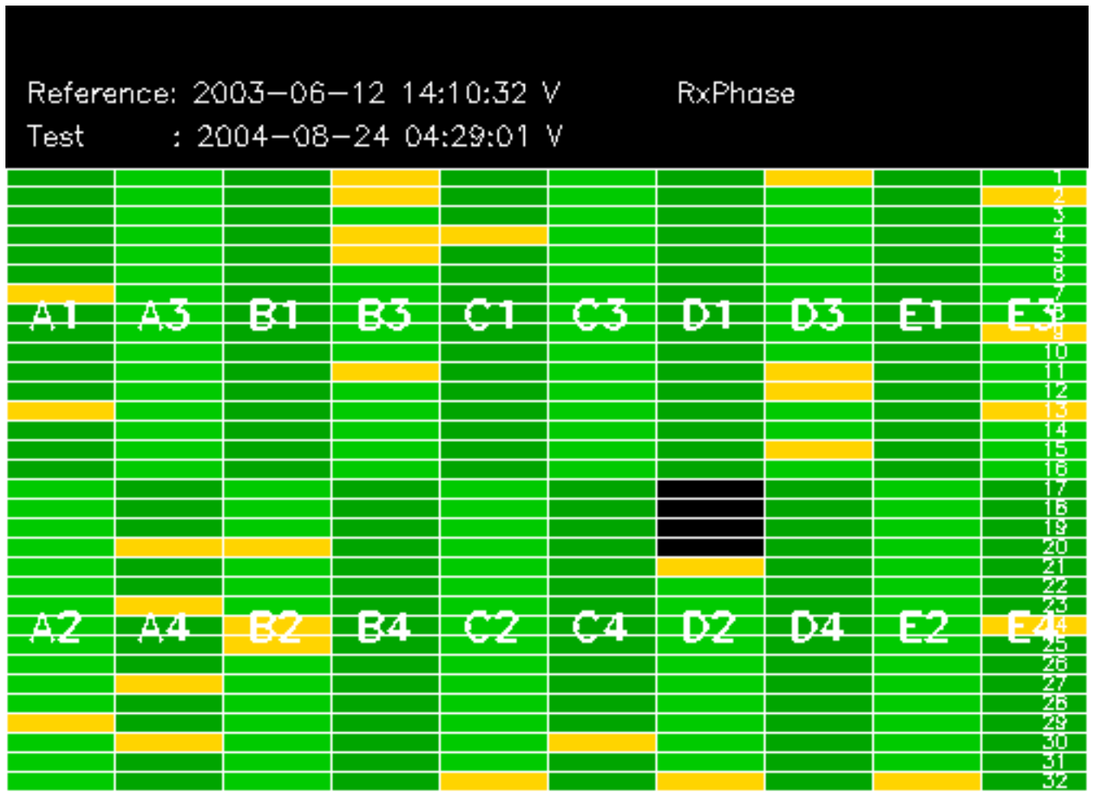
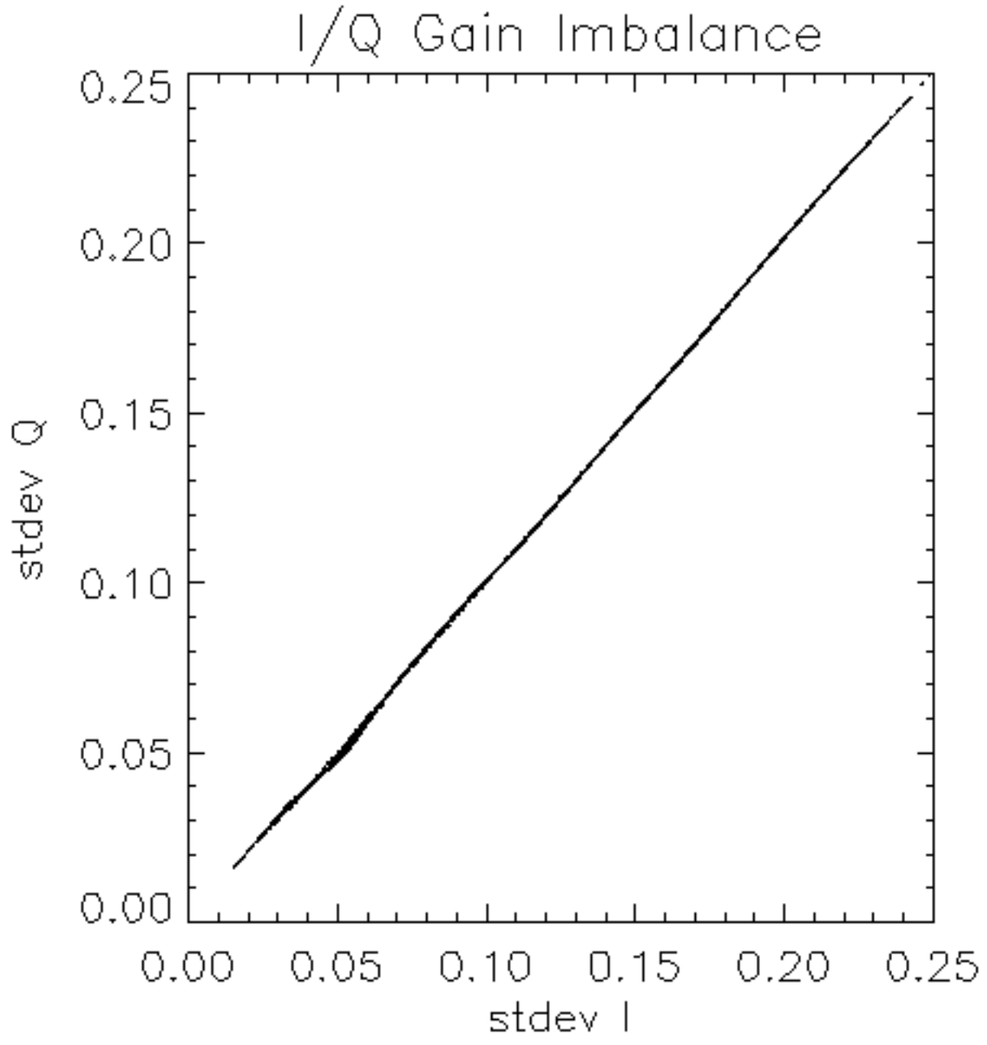
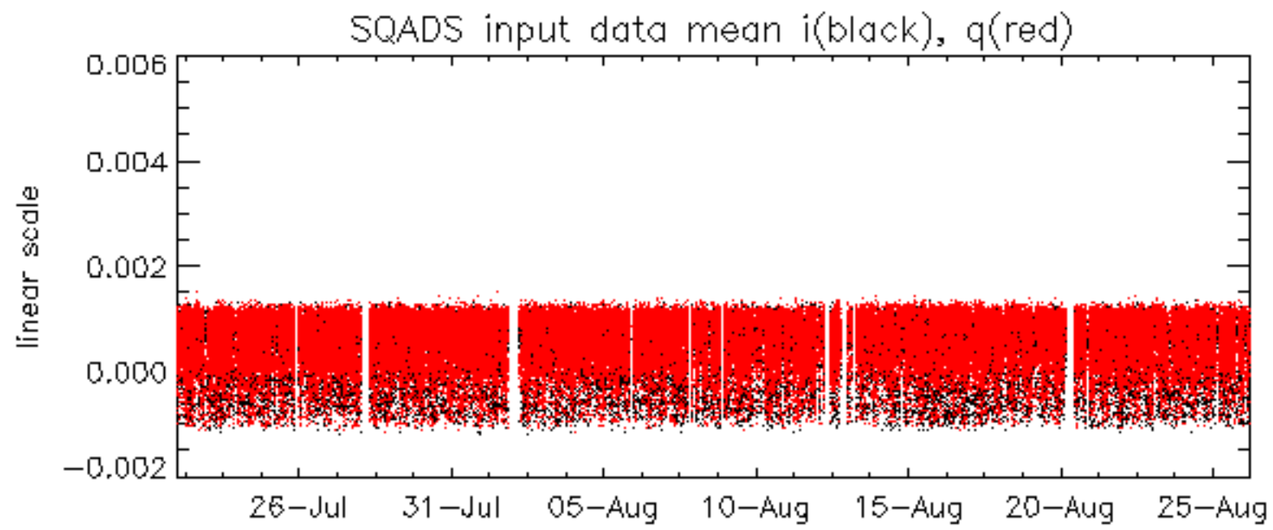
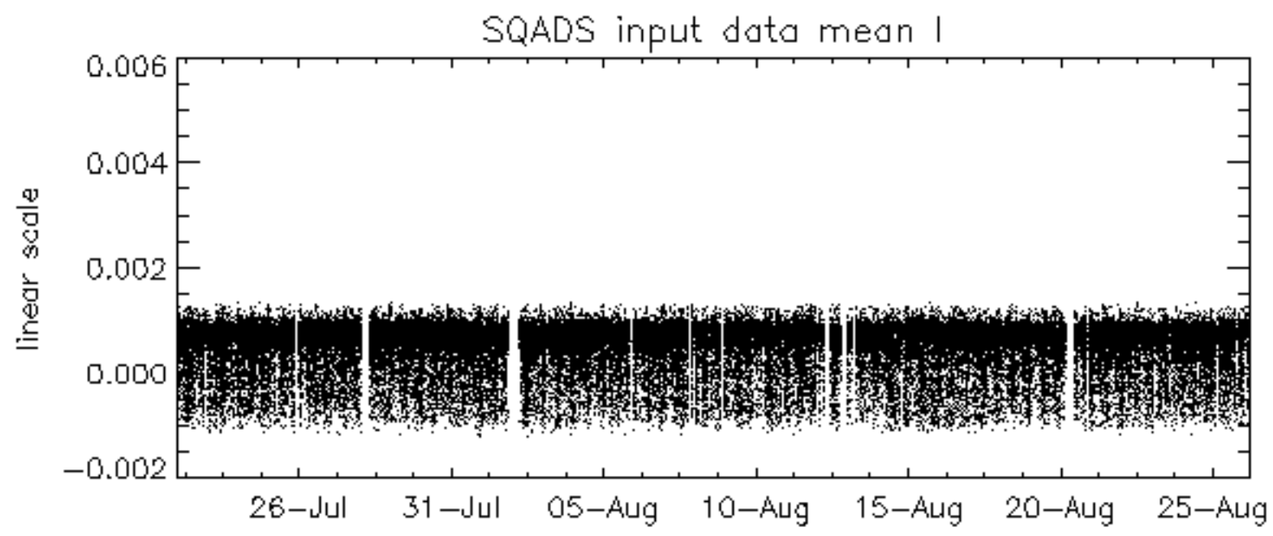
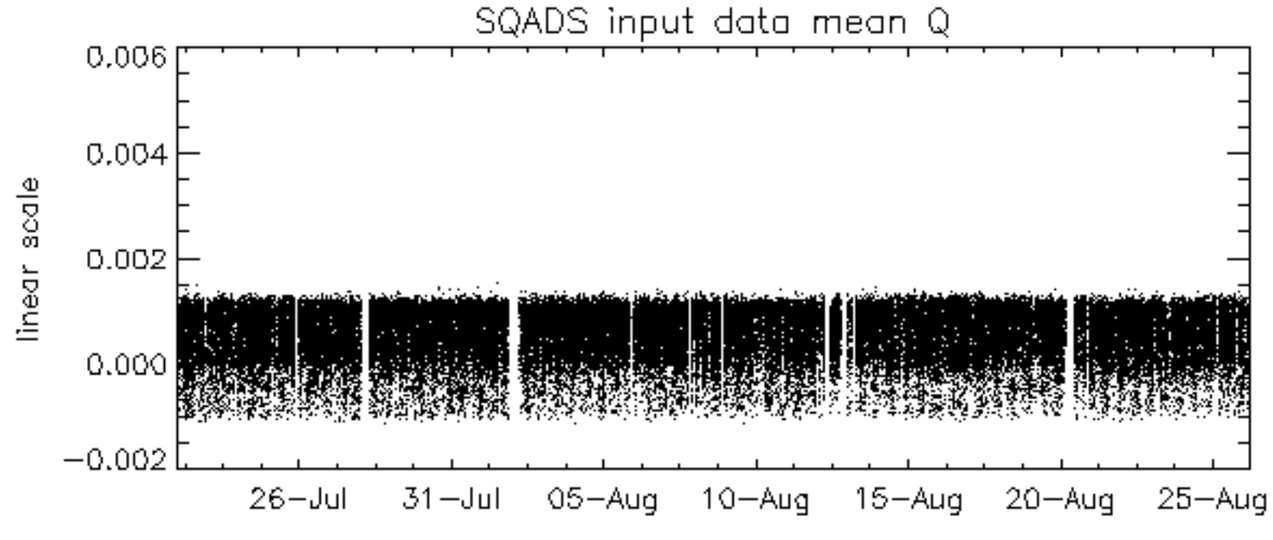

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-24 04:29:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

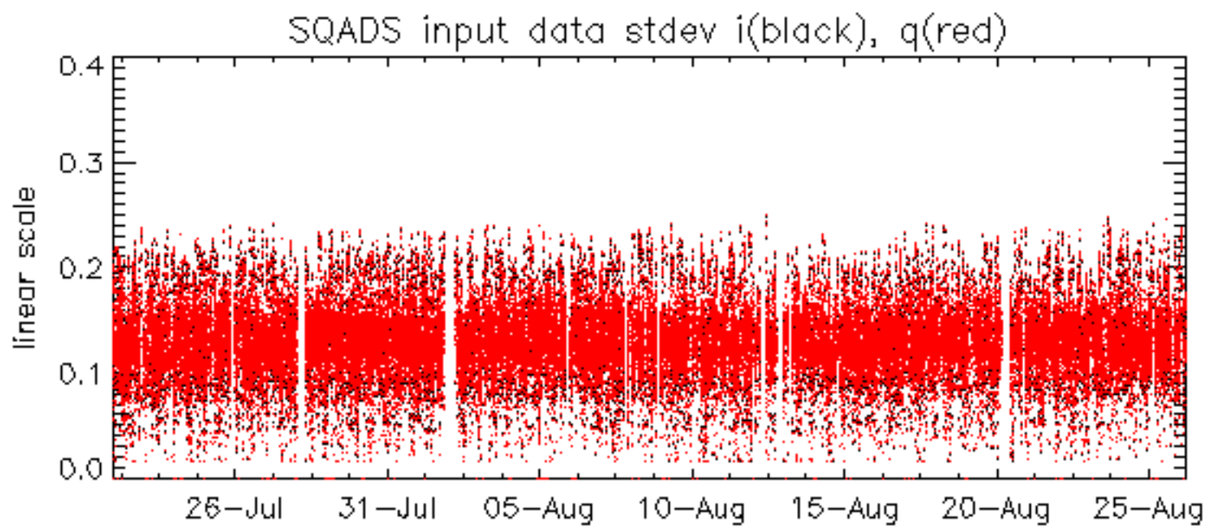

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-24 04:29:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

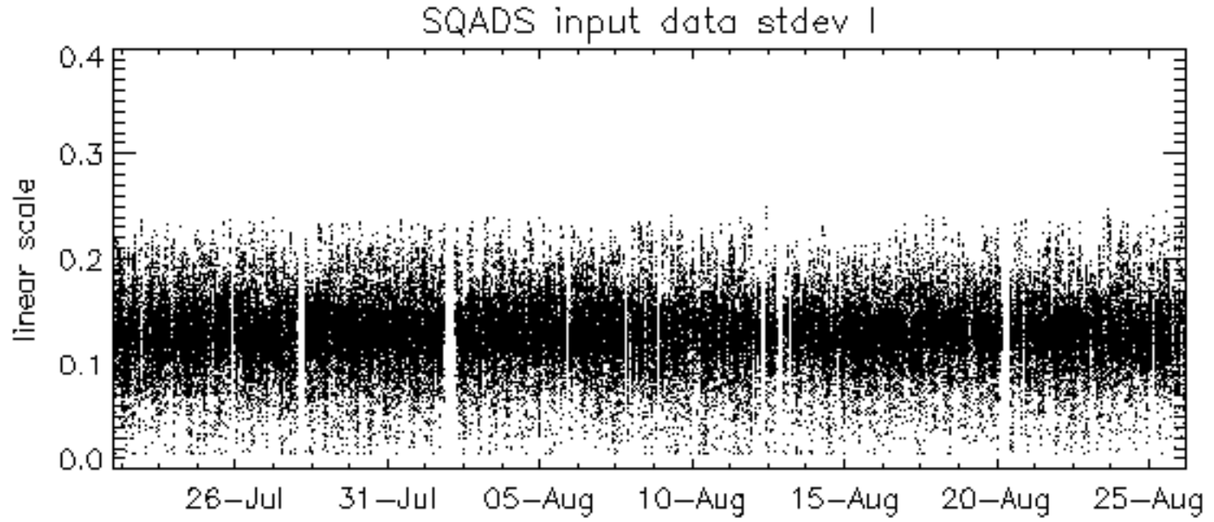

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

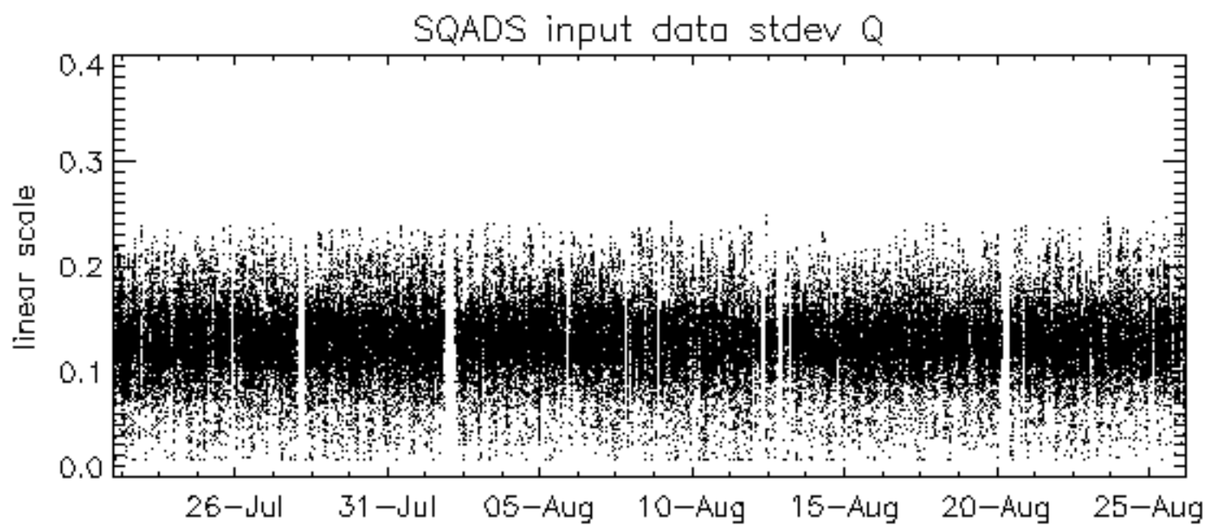

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug

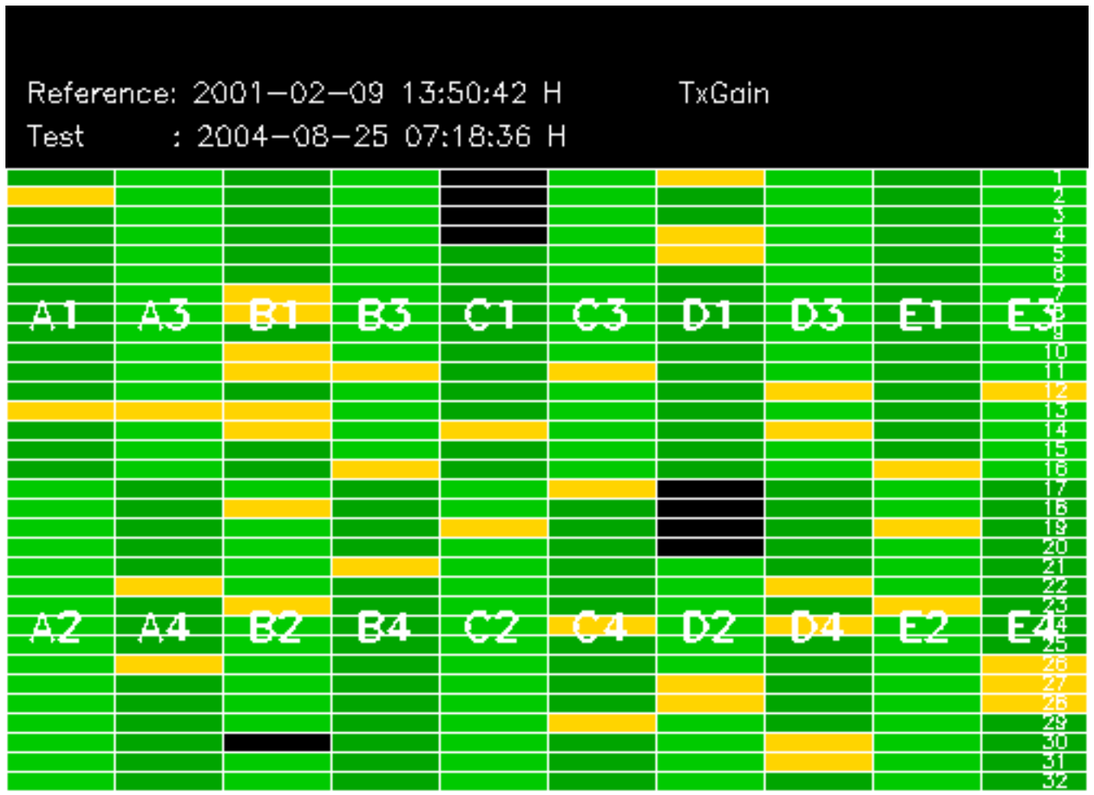

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug

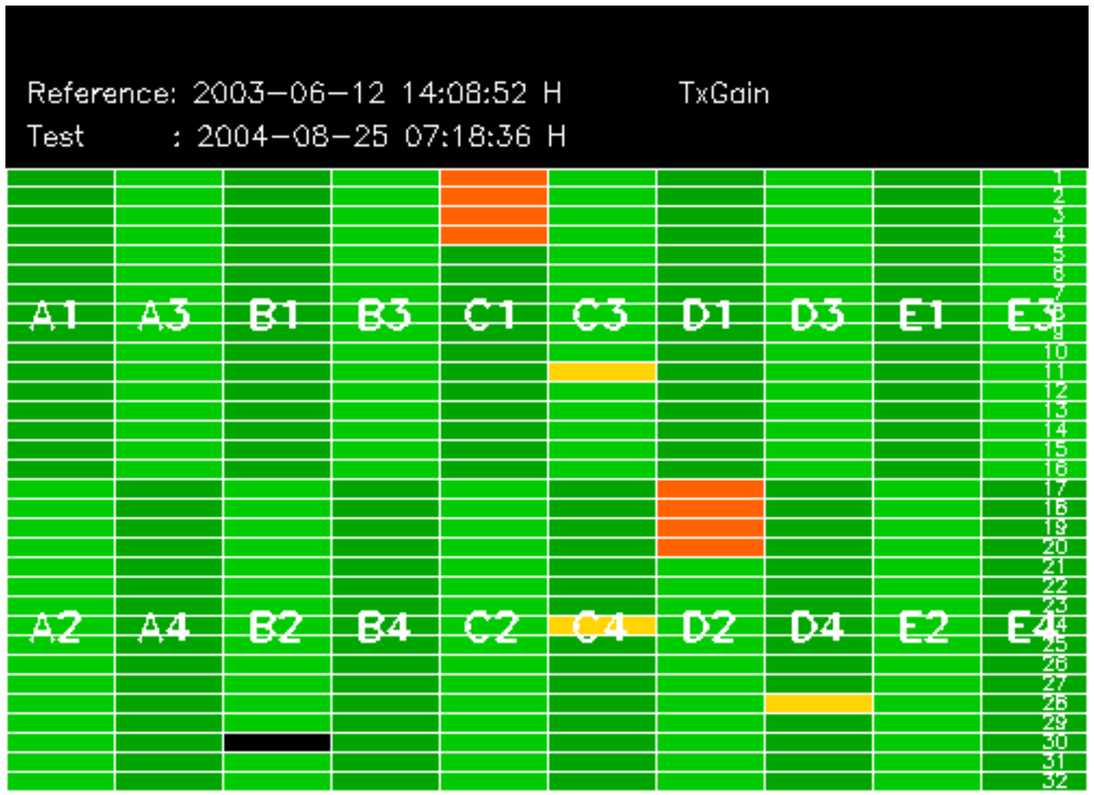

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug


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 : 2004-08-25 07:18:36 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 : 2004-08-25 07:18:36 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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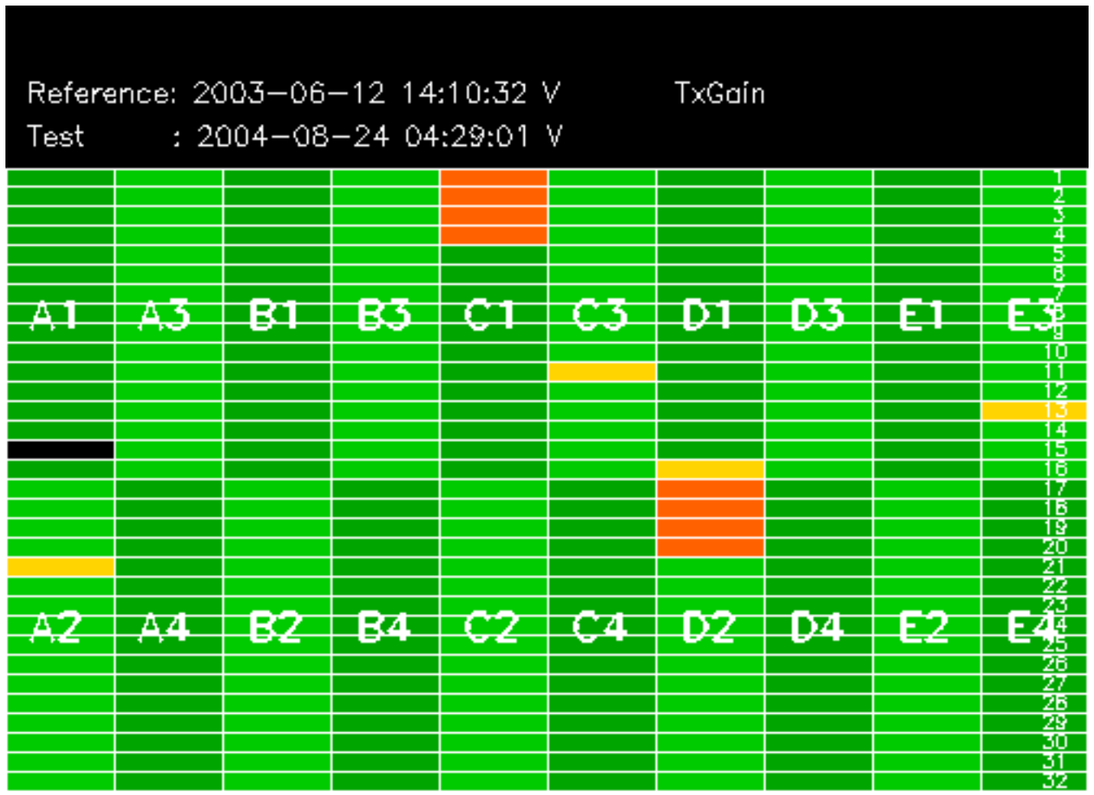
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-24 04:29:01 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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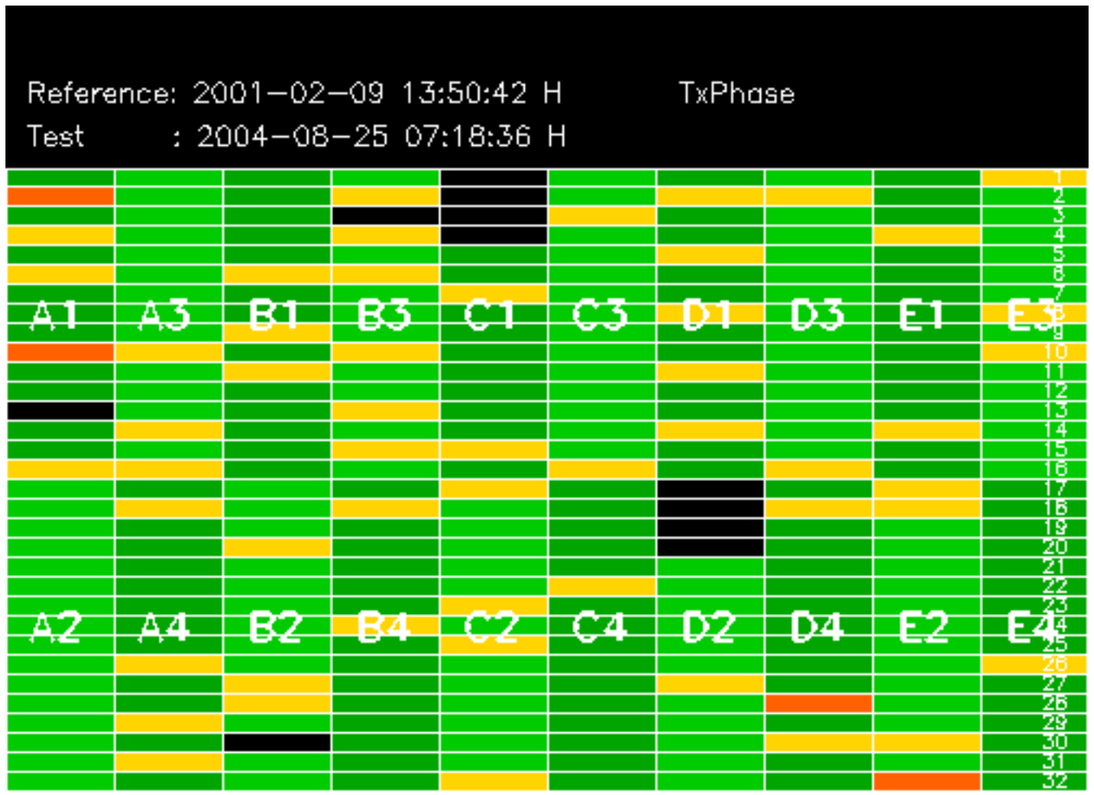
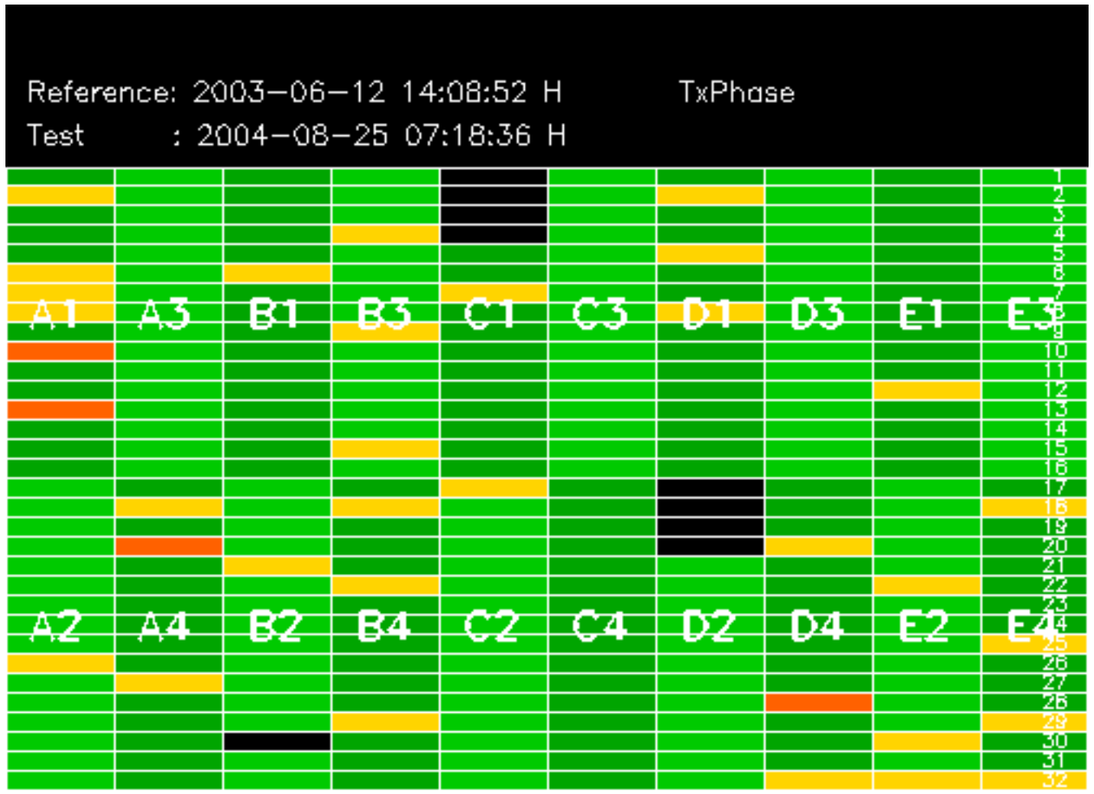
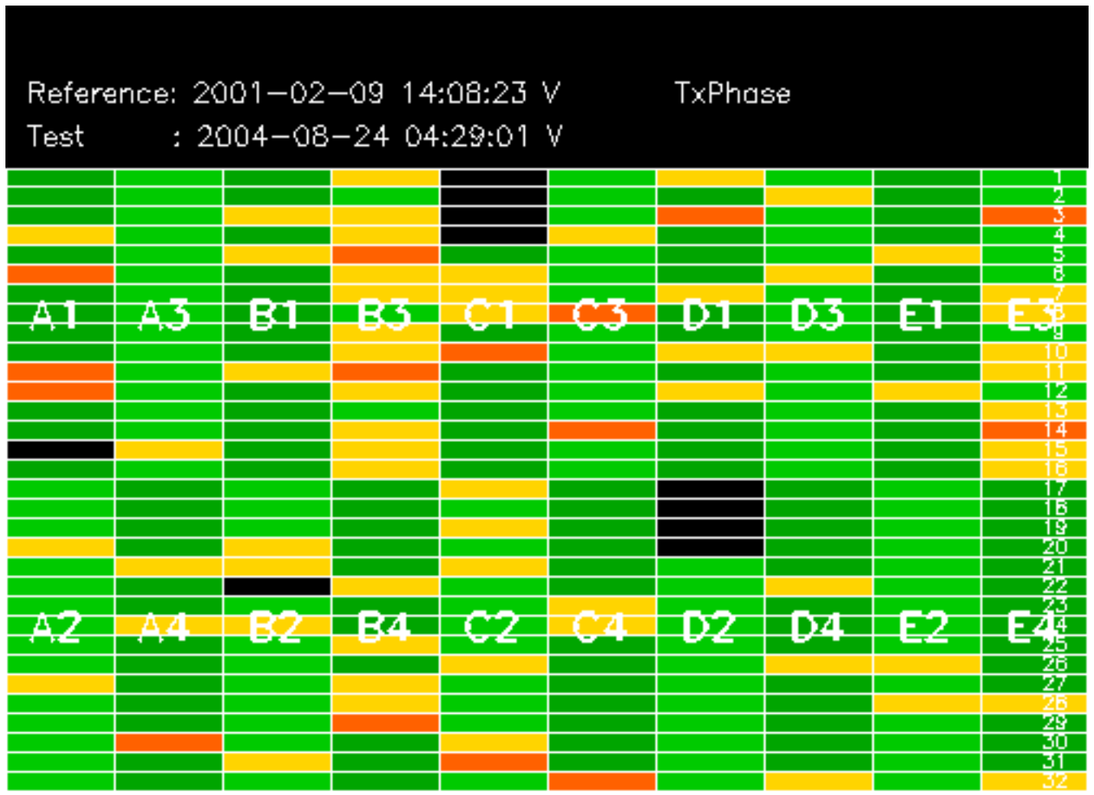
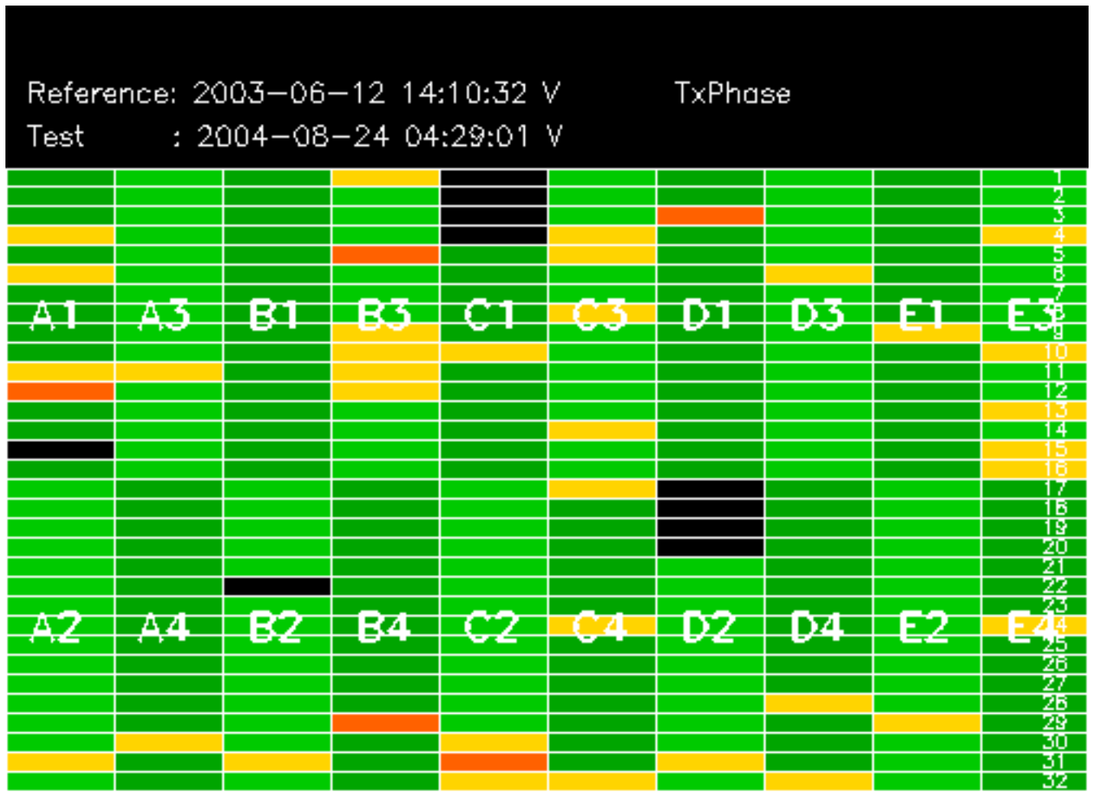

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-08-25 07:18:36 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-08-25 07:18:36 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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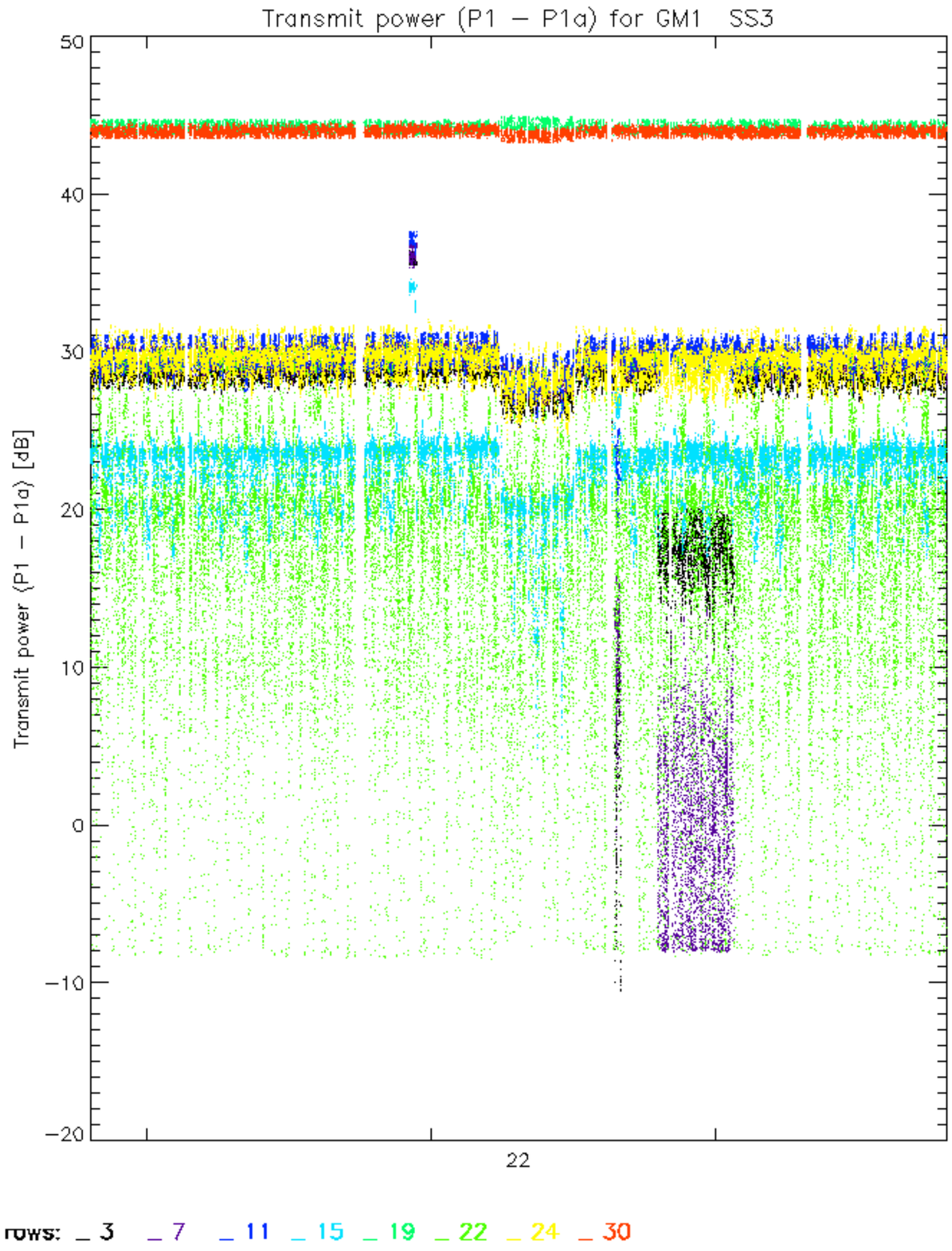
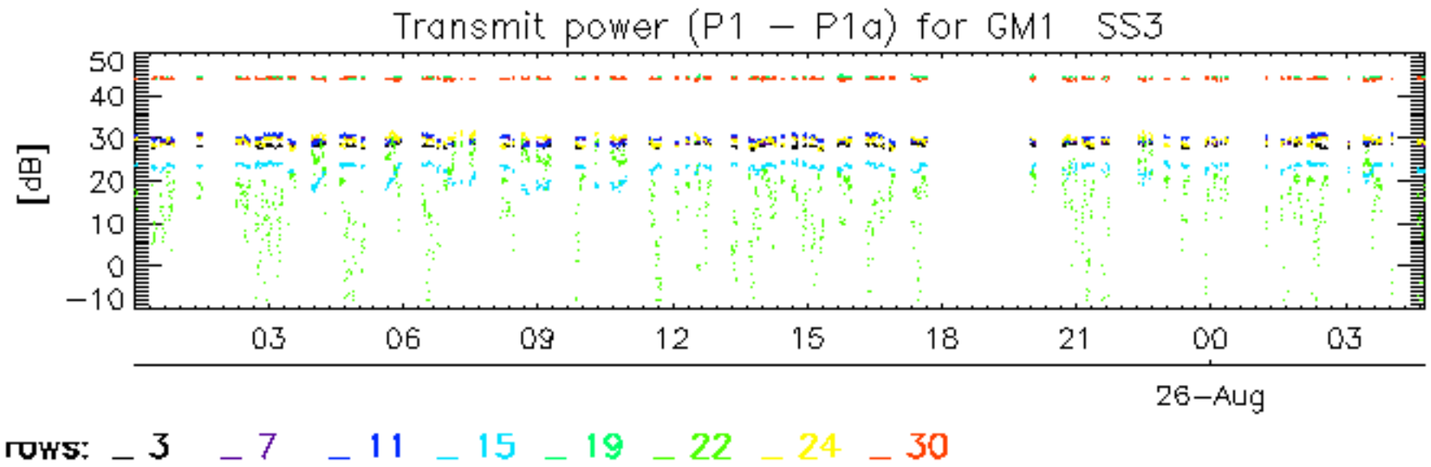
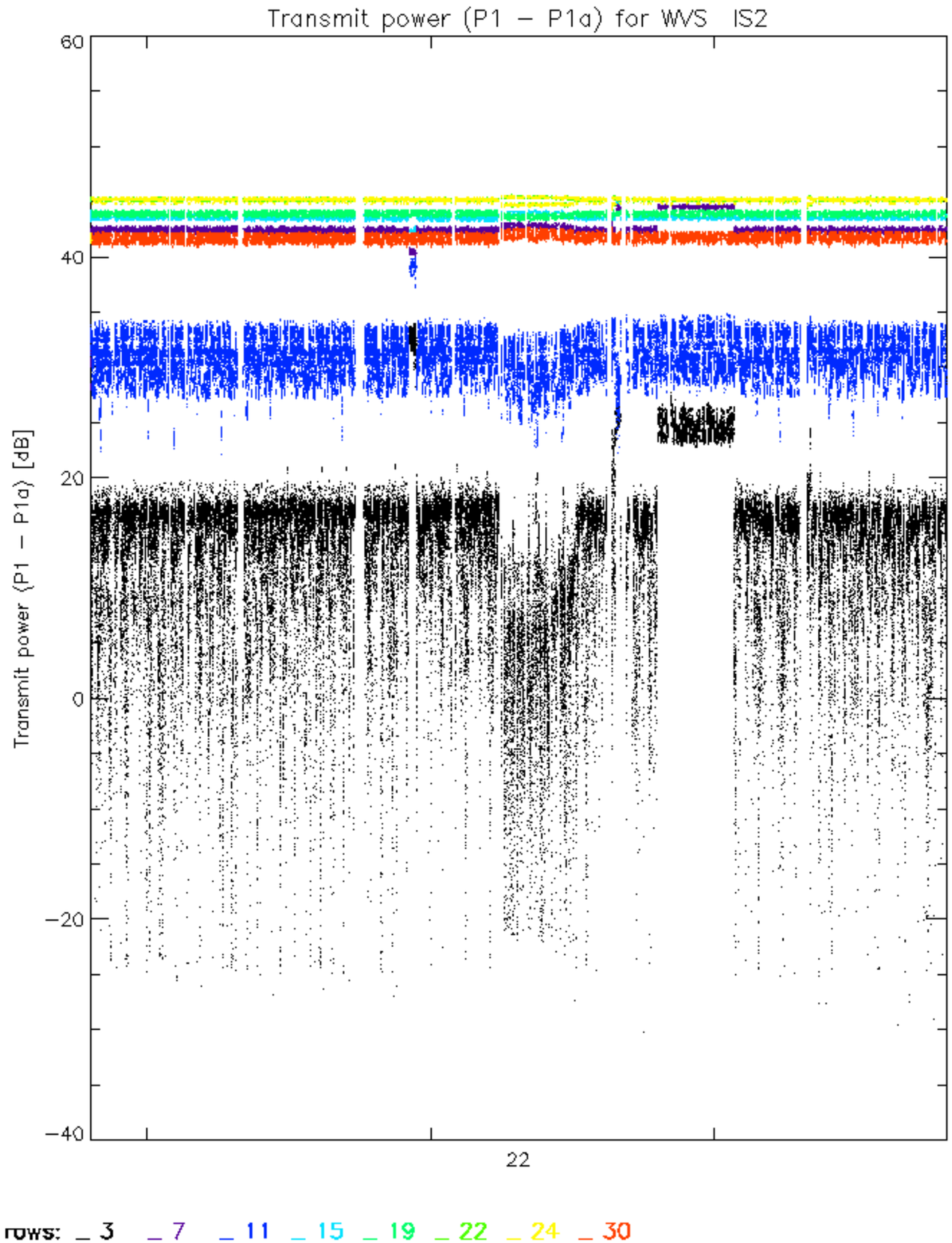
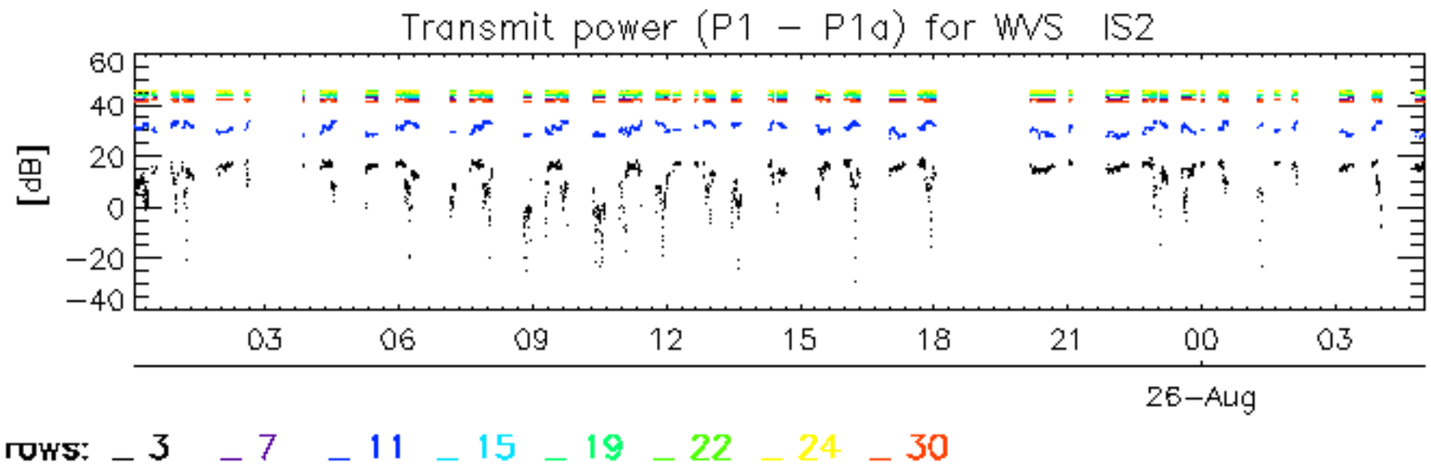

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
22
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
26–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]
22
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
26–Aug
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.