PRELIMINARY REPORT OF 040725

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

last update on Sun Jul 25 13:02:25 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	20040723 143825
H	20040724 204912

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.

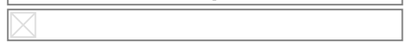
4.1 - Daily statistics

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	-3.482239	0.006293	0.021240
7	P1	-3.323591	0.013714	0.030719
11	P1	-4.585279	0.033337	-0.065883
15	P1	-5.713295	0.056695	-0.044451
19	P1	-3.443952	0.004581	-0.008023
22	P1	-4.558348	0.011138	-0.015513
24	P1	-4.937828	0.017747	-0.031257
30	P1	-6.879188	0.025262	-0.032594

3	P1	-16.168289	0.143636	-0.103653
7	P1	-13.974656	0.091653	0.064157
11	P1	-19.993320	0.270521	-0.169306
15	P1	-11.786296	0.044734	0.020733
19	P1	-13.838762	0.033005	-0.019973
22	P1	-16.359339	0.367244	0.140648
24	P1	-14.610932	0.281849	0.058345
30	P1	-17.686733	0.406245	0.095938

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.358549	0.080164	0.098095
7	P2	-22.757359	0.122650	0.125340
11	P2	-15.501880	0.144456	0.131150
15	P2	-7.131584	0.091918	0.093087
19	P2	-9.562798	0.157901	0.053782
22	P2	-17.454210	0.105542	0.148251
24	P2	-20.783857	0.084172	0.076747
30	P2	-19.382345	0.077118	0.080910

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143268	0.001913	-0.000309
7	P3	-8.143268	0.001913	-0.000318
11	P3	-8.143266	0.001913	-0.000348
15	P3	-8.143262	0.001913	-0.000359
19	P3	-8.143255	0.001913	-0.000374
22	P3	-8.143253	0.001913	-0.000390
24	P3	-8.143251	0.001914	-0.000422
30	P3	-8.143368	0.001911	-0.000537

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	-3.028456	0.130738	0.412967
7	P1	-2.894018	0.130830	-0.266139
11	P1	-3.829620	0.030291	-0.017194
15	P1	-4.052349	0.851432	0.996525
19	P1	-3.390521	0.046702	-0.148509
22	P1	-5.709920	0.048746	0.113077
24	P1	-3.990003	0.076141	0.279151
30	P1	-6.142221	0.078982	-0.141532
3	P1	-10.873244	0.400201	0.582222
7	P1	-9.897876	0.305172	-0.442447
11	P1	-11.885127	0.229254	-0.347220
15	P1	-11.812378	0.291254	0.323226
19	P1	-15.167712	0.719509	-0.822640
22	P1	-21.863985	6.822651	-2.305839
24	P1	-17.431139	0.319575	-0.303209
30	P1	-21.245785	4.052180	2.015928

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.071278	0.074891	0.189549
7	P2	-22.851765	0.234675	0.143471
11	P2	-10.964718	0.218604	-0.158547
15	P2	-4.959628	0.041464	0.016840
19	P2	-6.877928	0.048249	0.156892
22	P2	-7.572474	0.092910	0.169803
24	P2	-11.028270	0.150829	-0.030925
30	P2	-22.289932	0.132965	0.096099

P3 Cyclic statistics

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

3	P3	-7.982859	0.003582	-0.002707
7	P3	-7.982925	0.003577	-0.003073
11	P3	-7.982832	0.003587	-0.002896
15	P3	-7.982827	0.003594	-0.002959
19	P3	-7.982773	0.003591	-0.002910
22	P3	-7.982886	0.003575	-0.002735
24	P3	-7.982833	0.003615	-0.002952
30	P3	-7.982879	0.003585	-0.002958

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	0.000491168
	stdev	2.14997e-07
MEAN Q	mean	0.000535796
	stdev	2.43690e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129275
	stdev	0.00105129

STDEV Q	mean	0.129526
	stdev	0.00106311

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

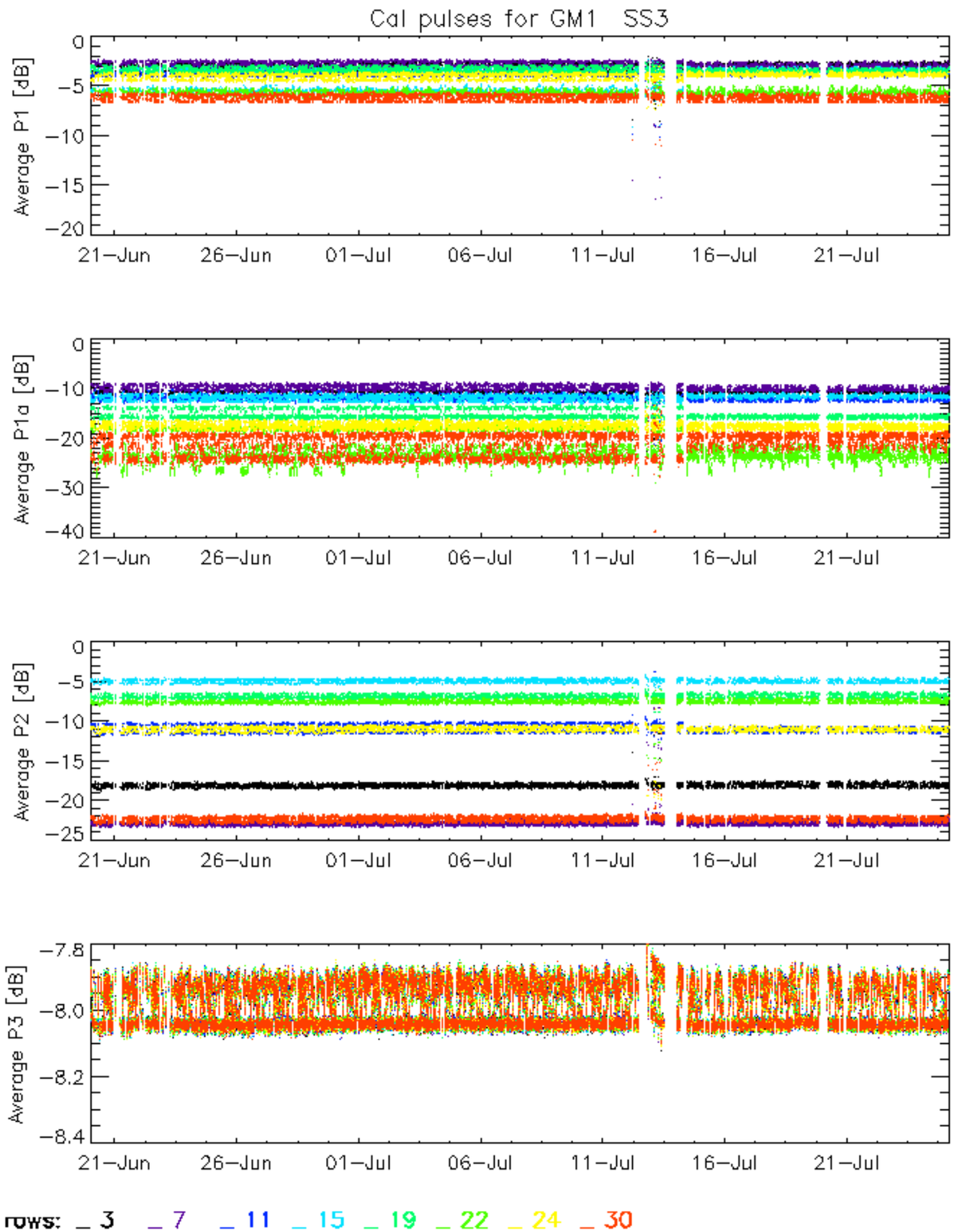
Evolution of Absolute Doppler

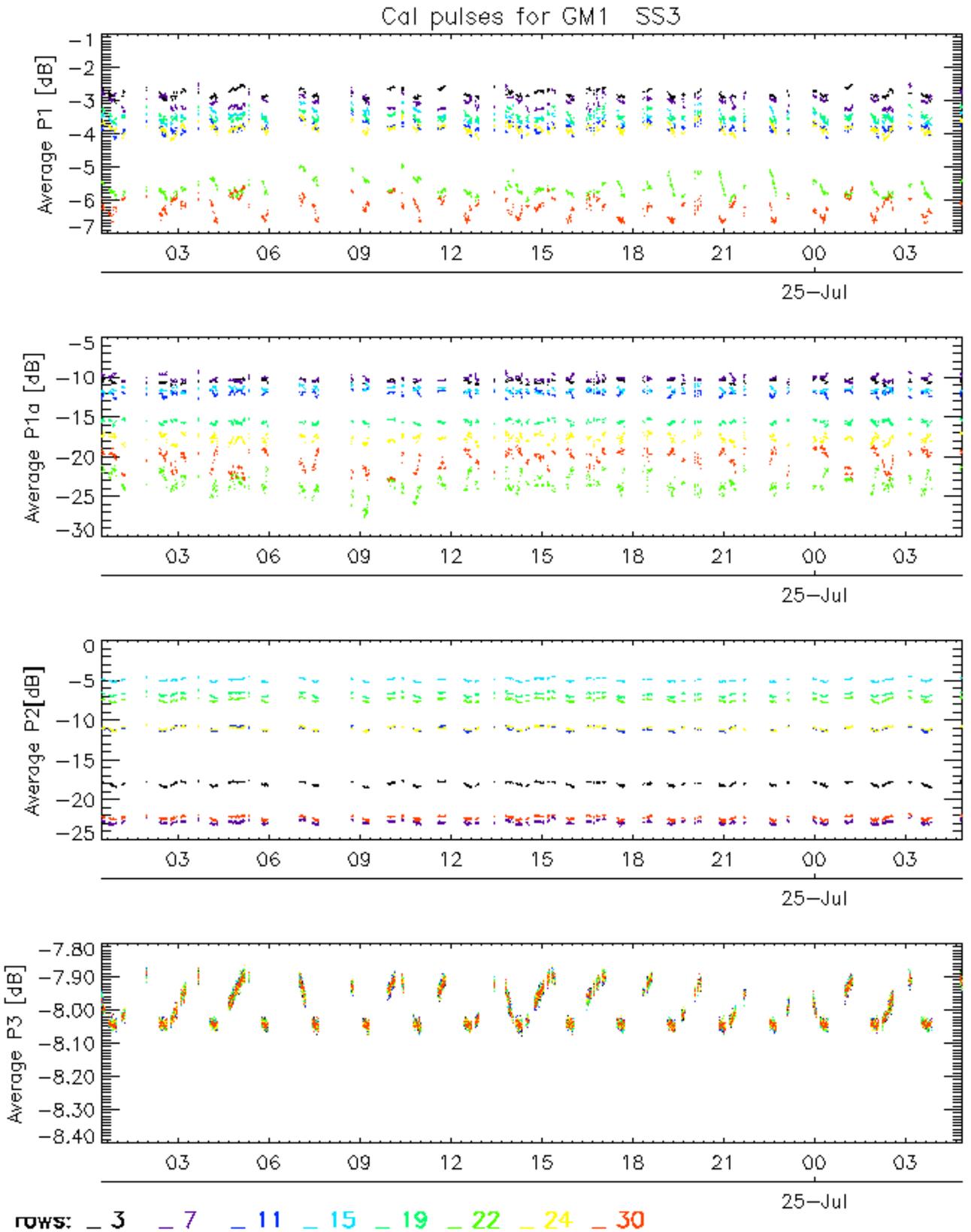
Acsending

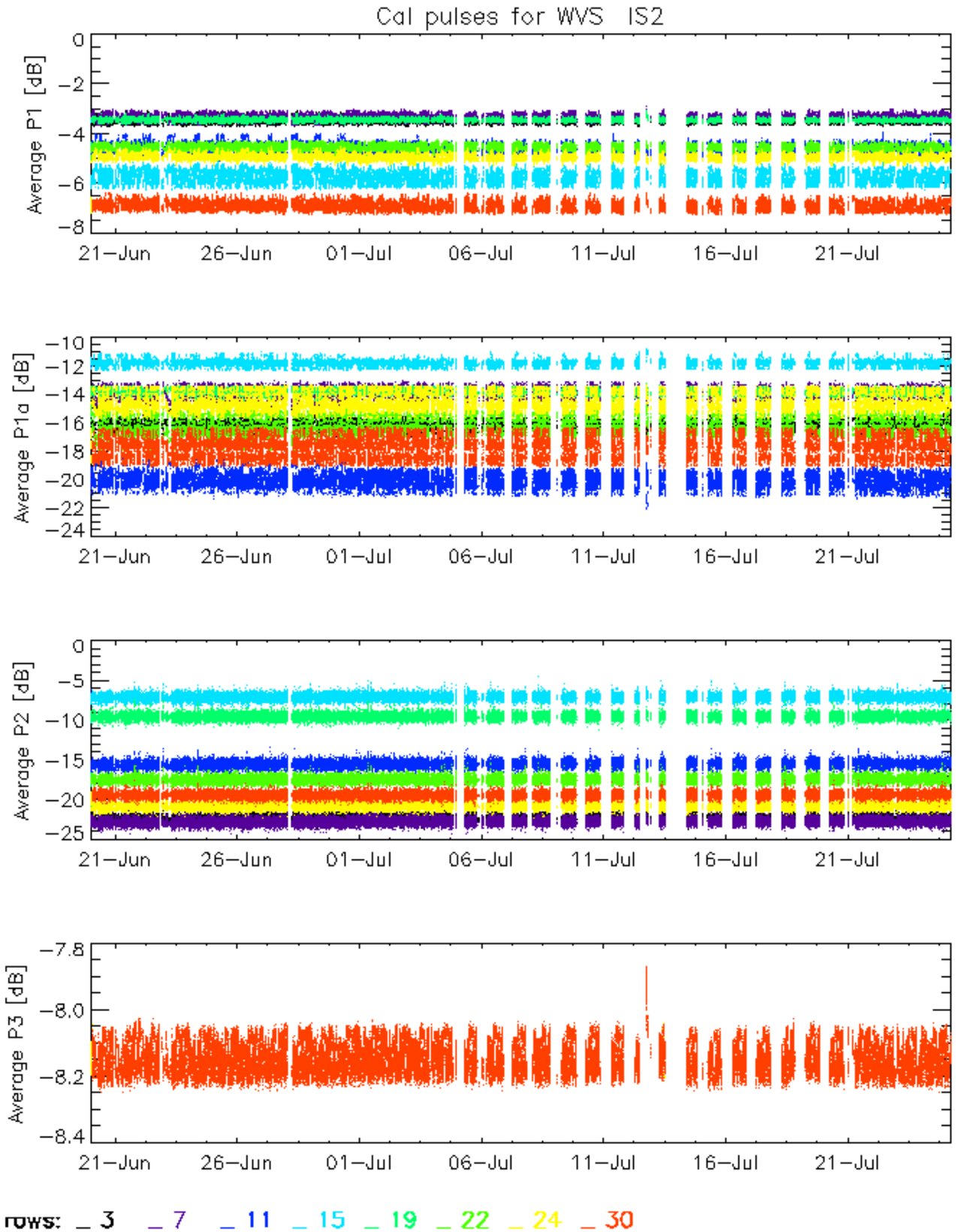
Descending

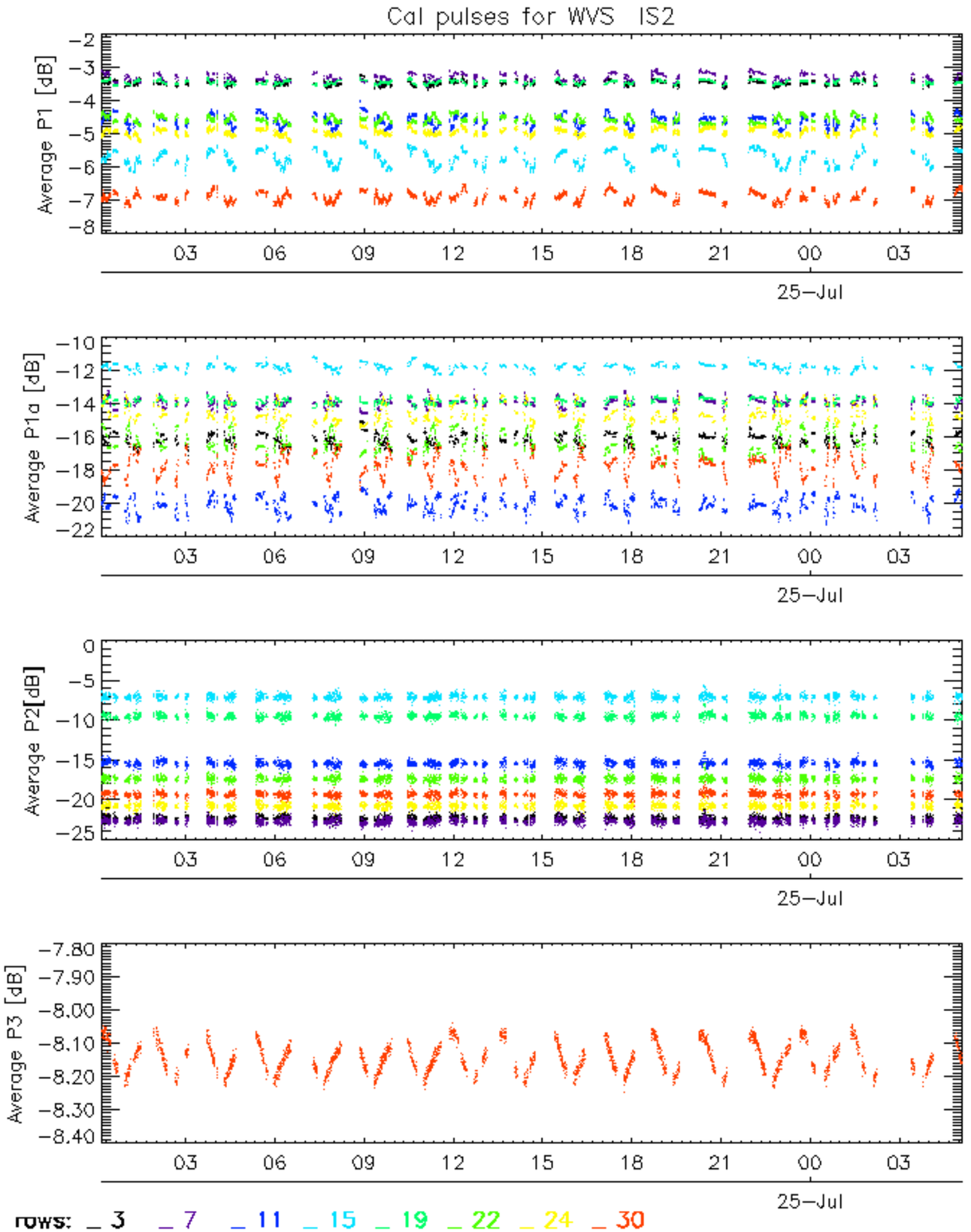
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

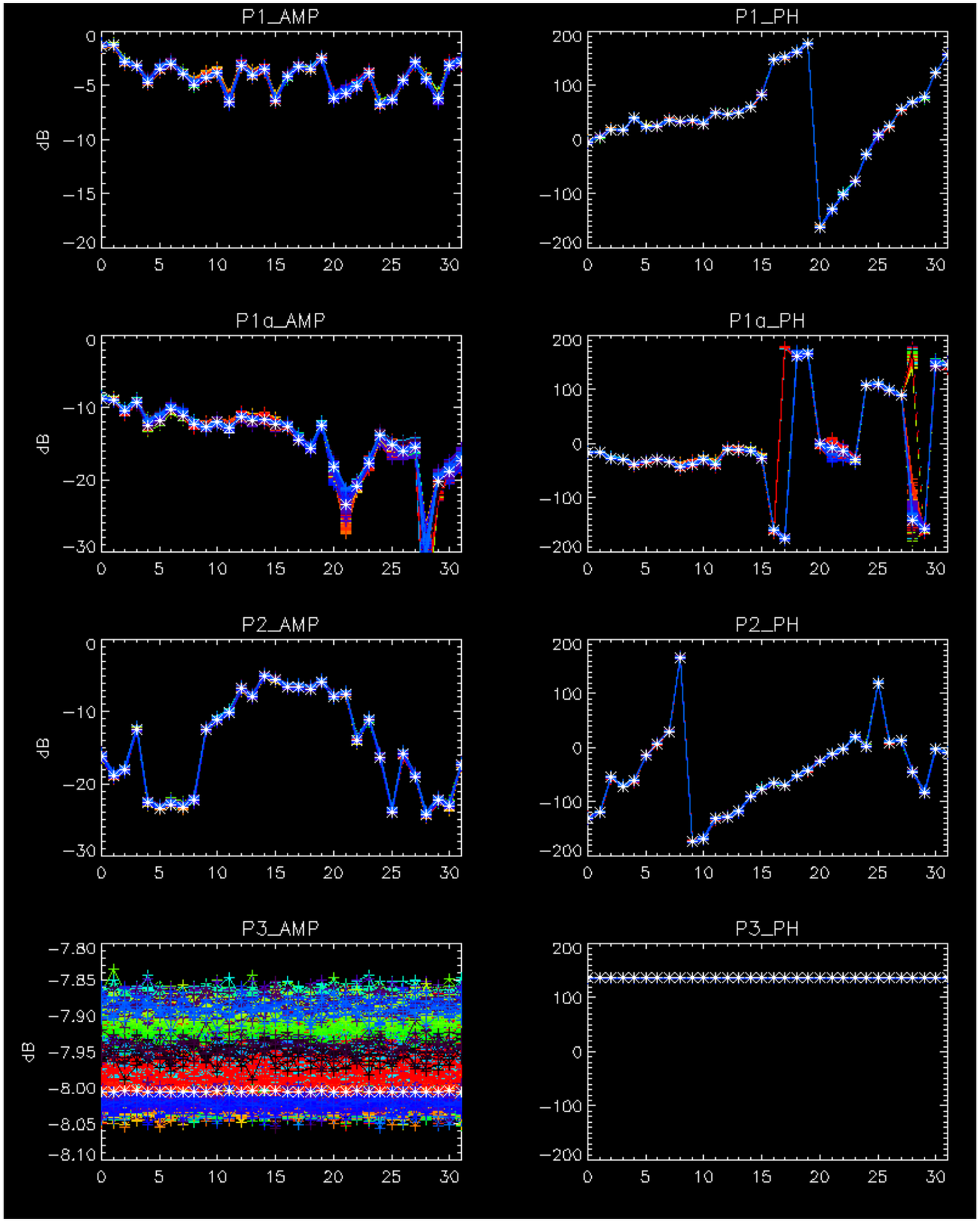


Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
Average P1a [dB]
0
−10
−20
−30
−40
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
Average P2 [dB]
0
−5
−10
−15
−20
−25
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

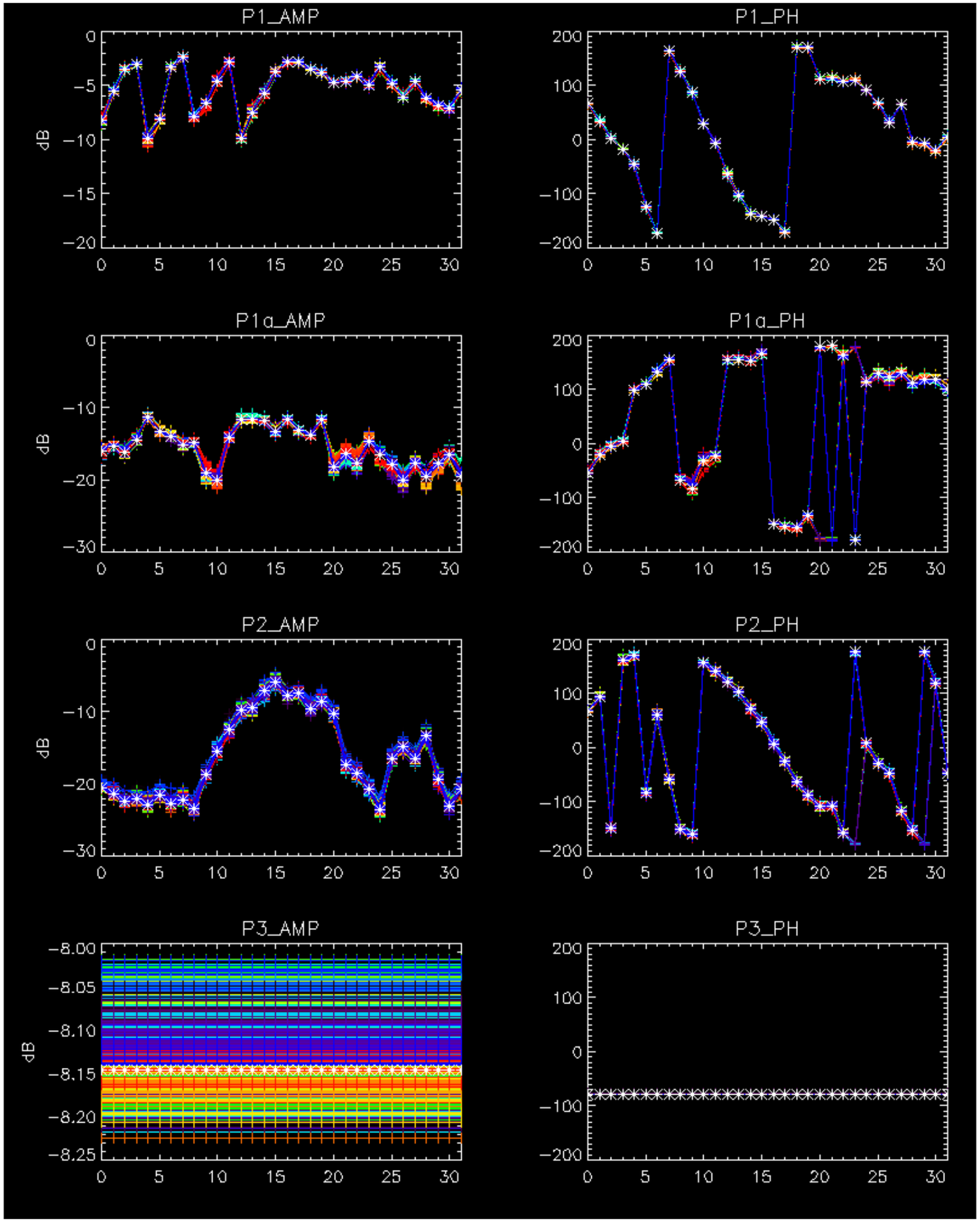

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
25−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: 3 7 11 15 19 22 24 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
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
25−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
25−Jul
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
25−Jul
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
25−Jul
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

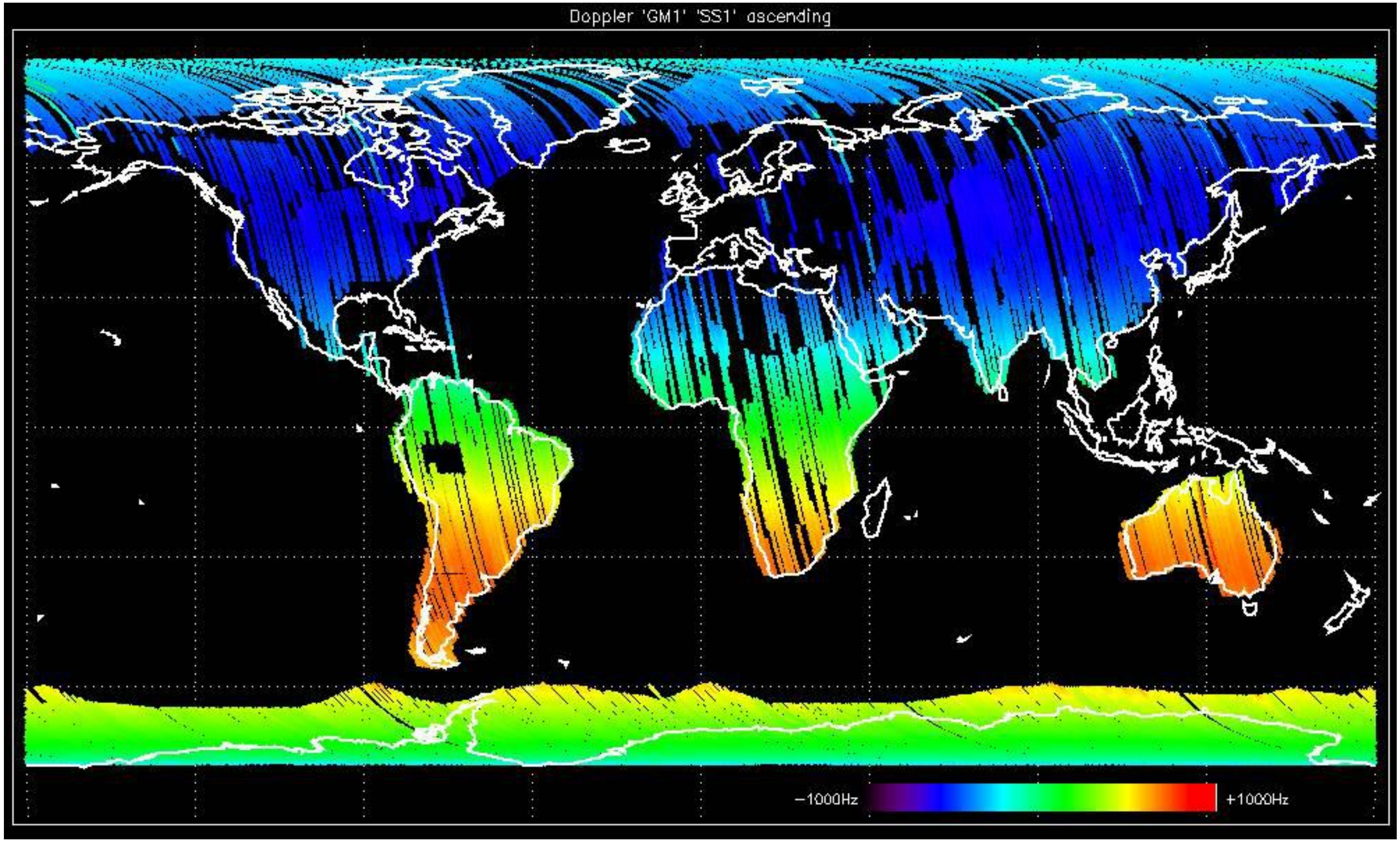
No anomalies observed.

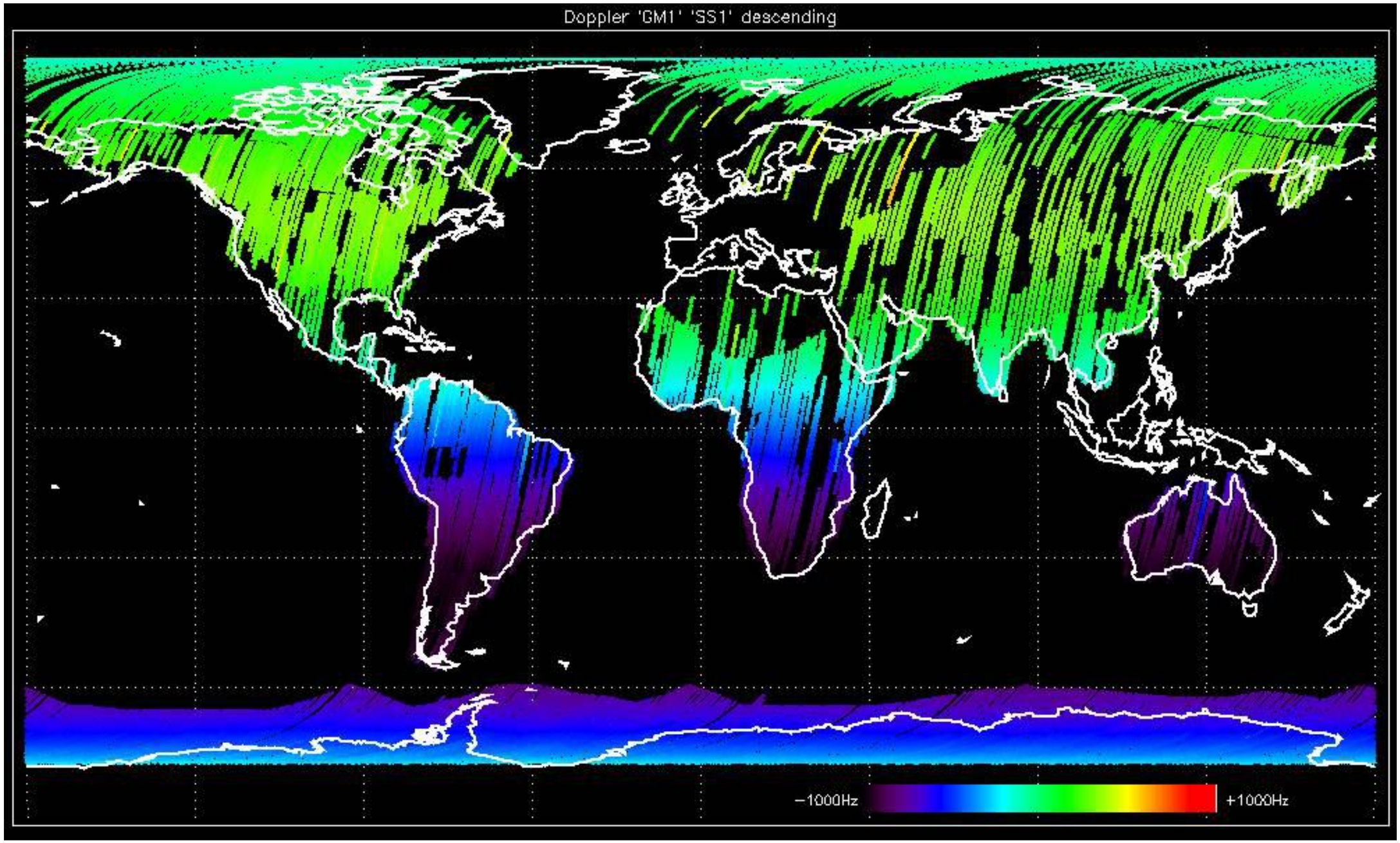

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

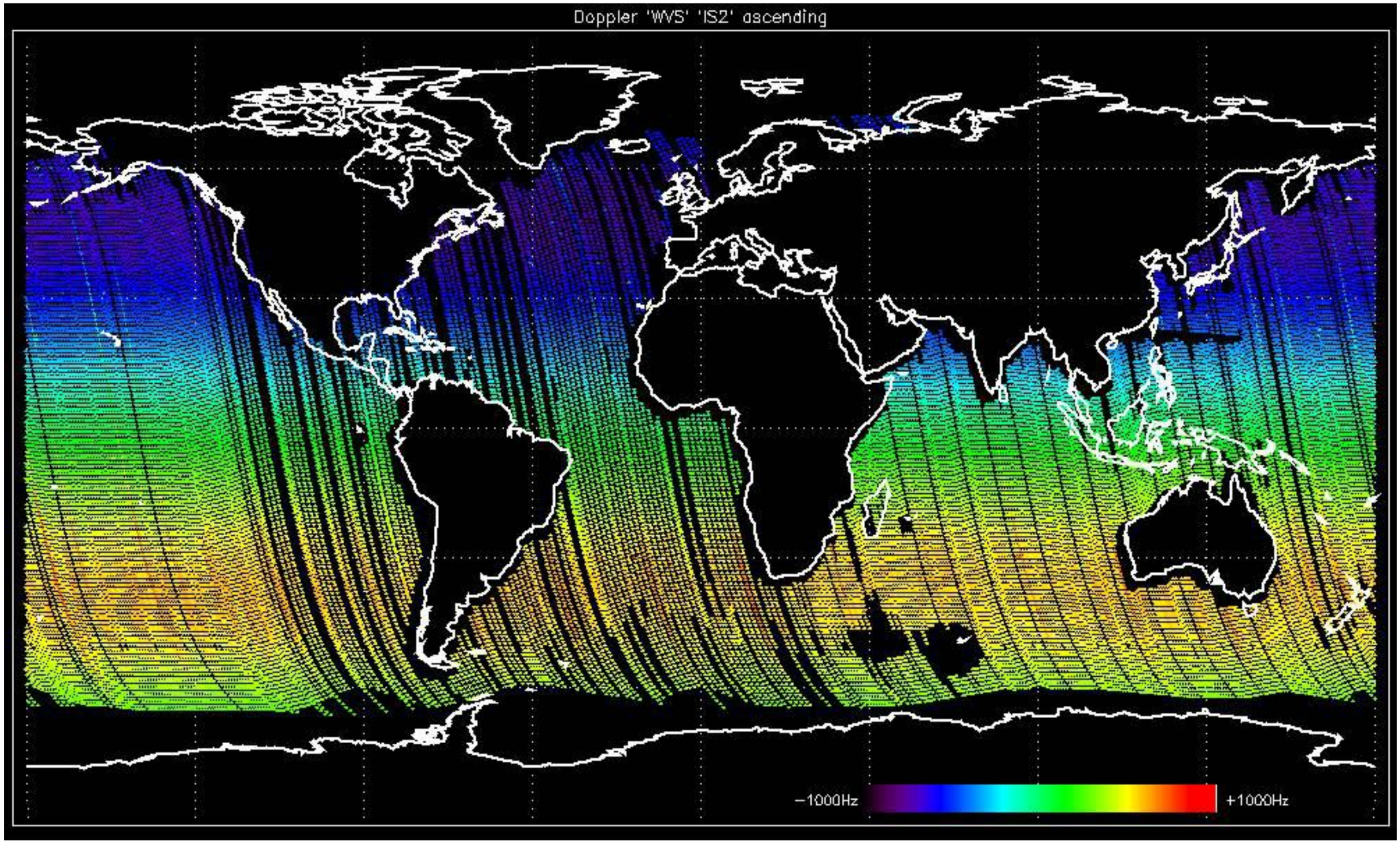

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

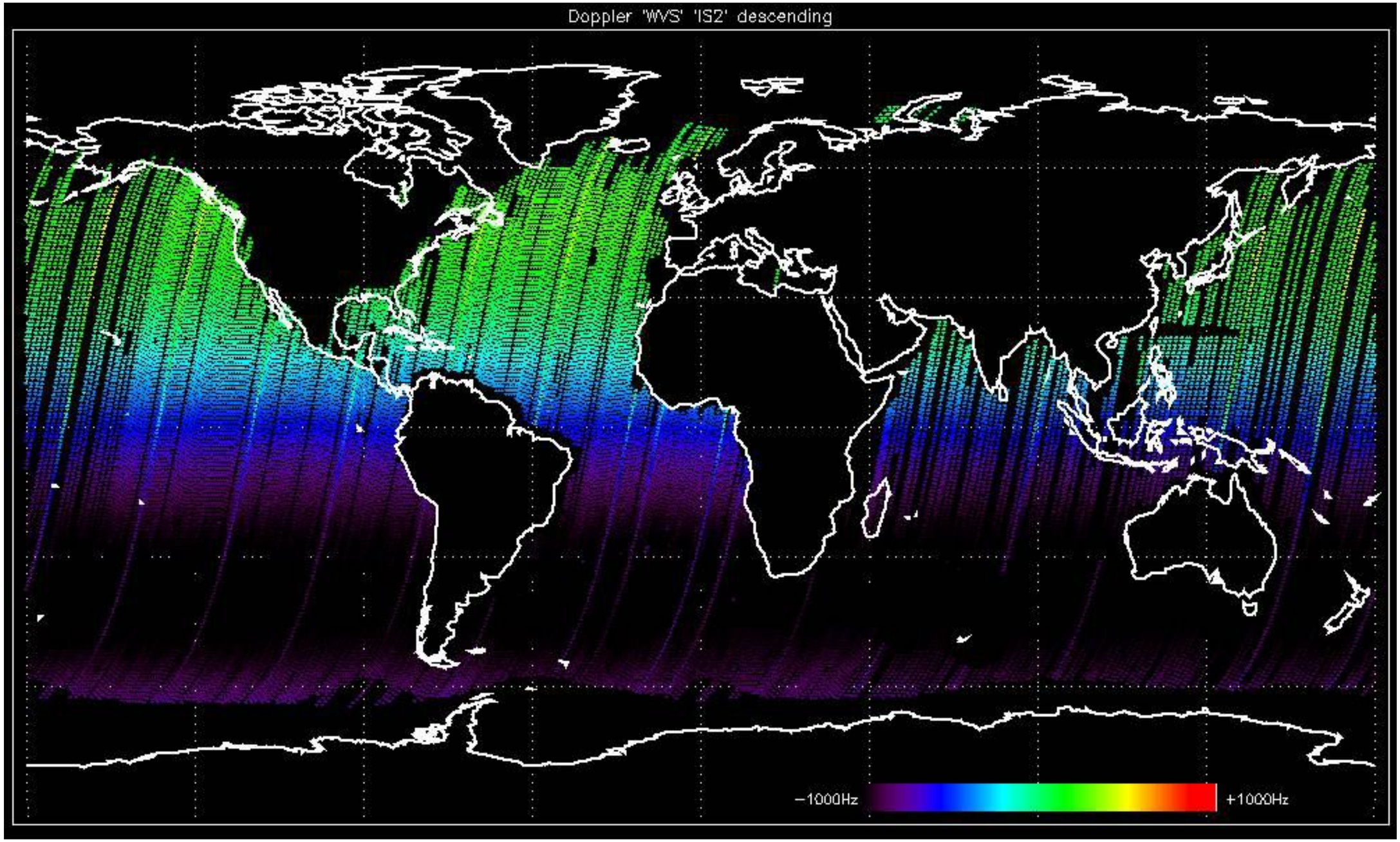
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

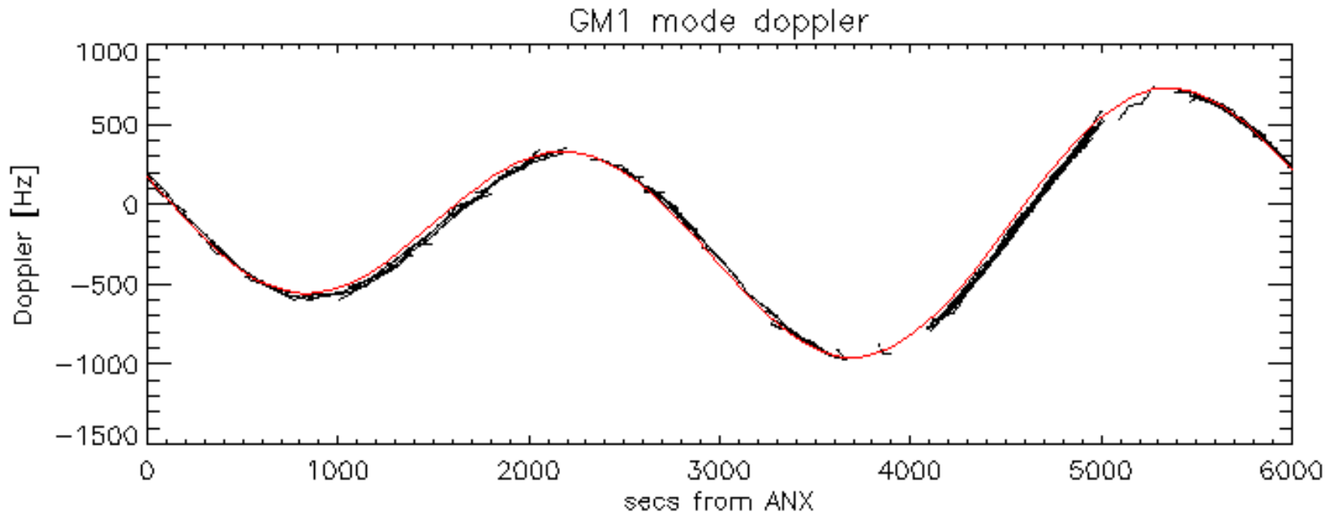
Preliminary report.The data is not yet controled

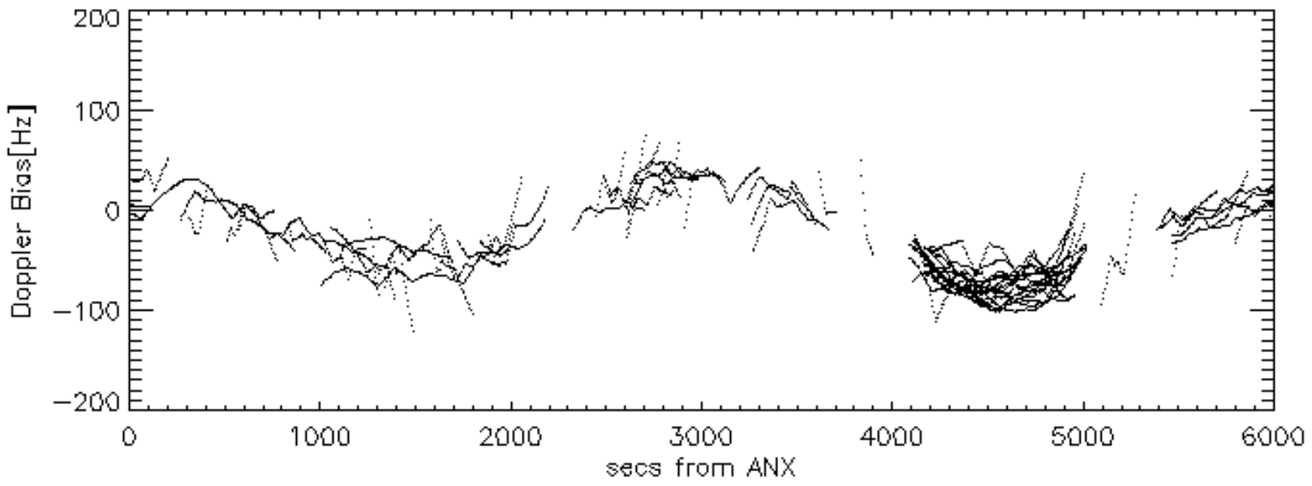

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

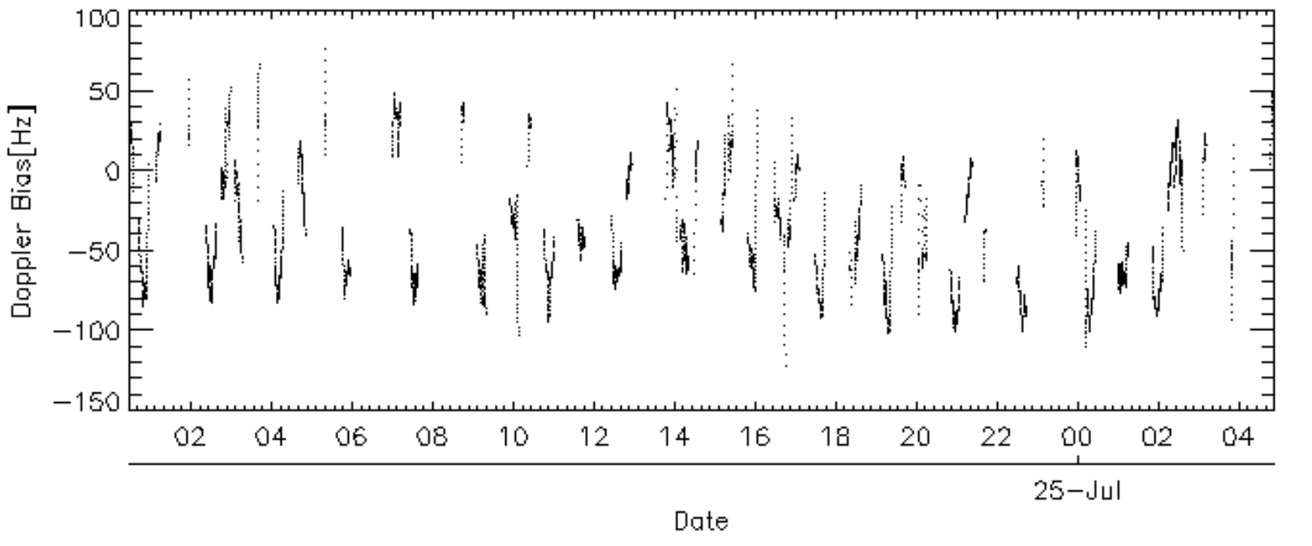

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

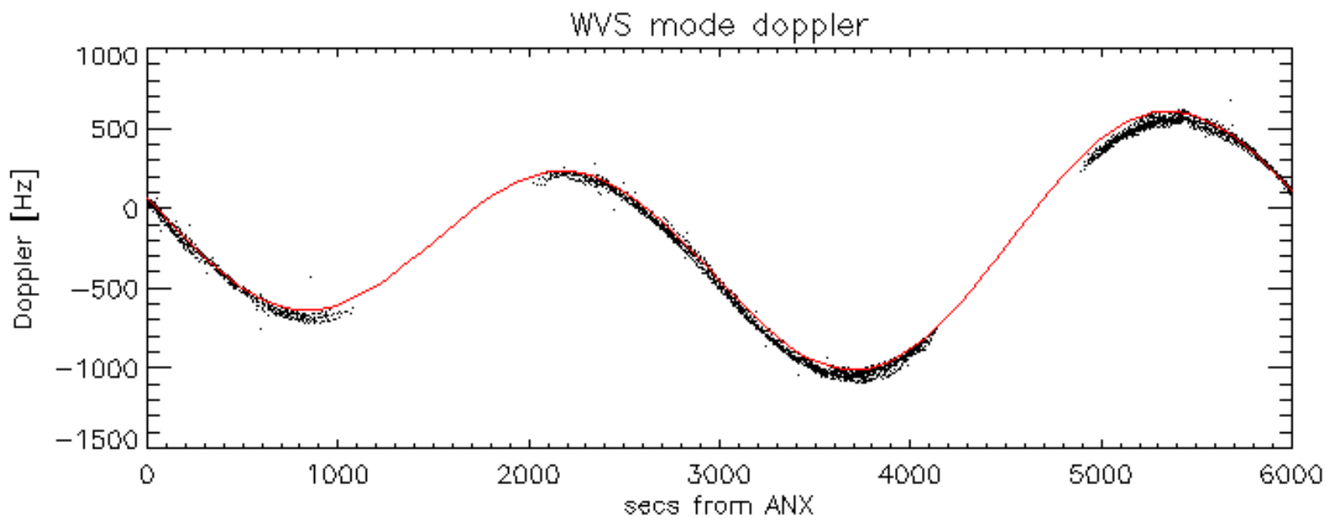

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

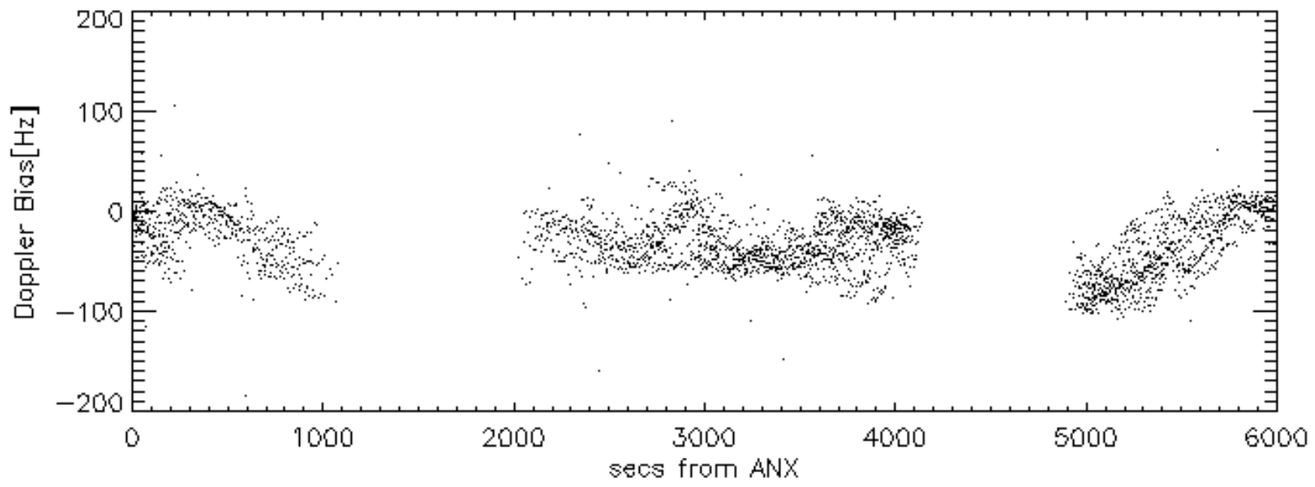

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

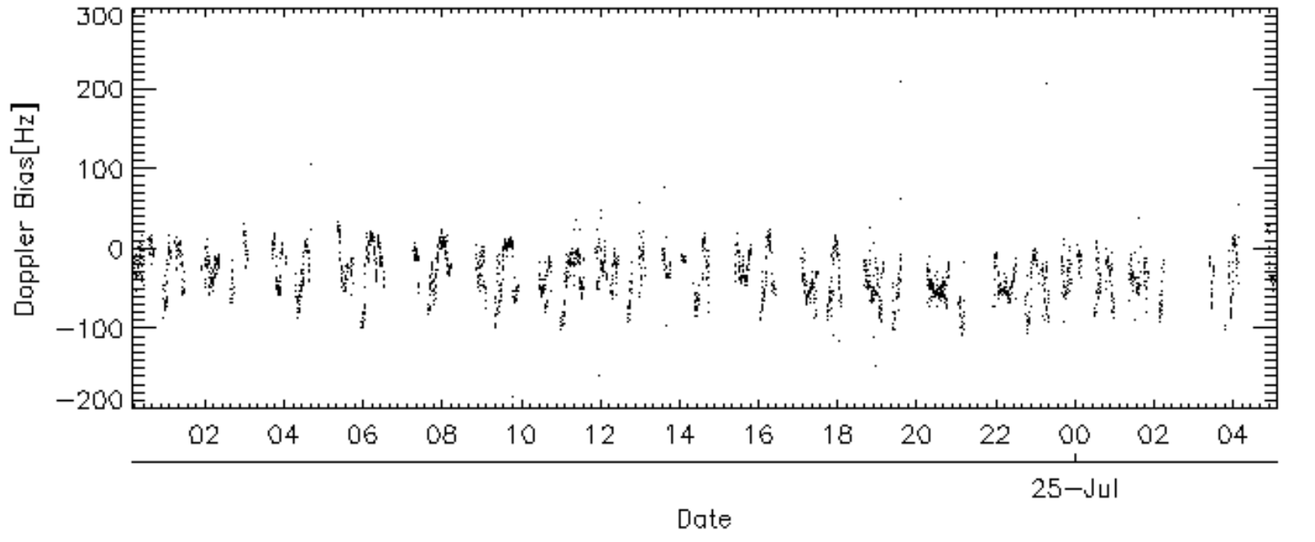

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

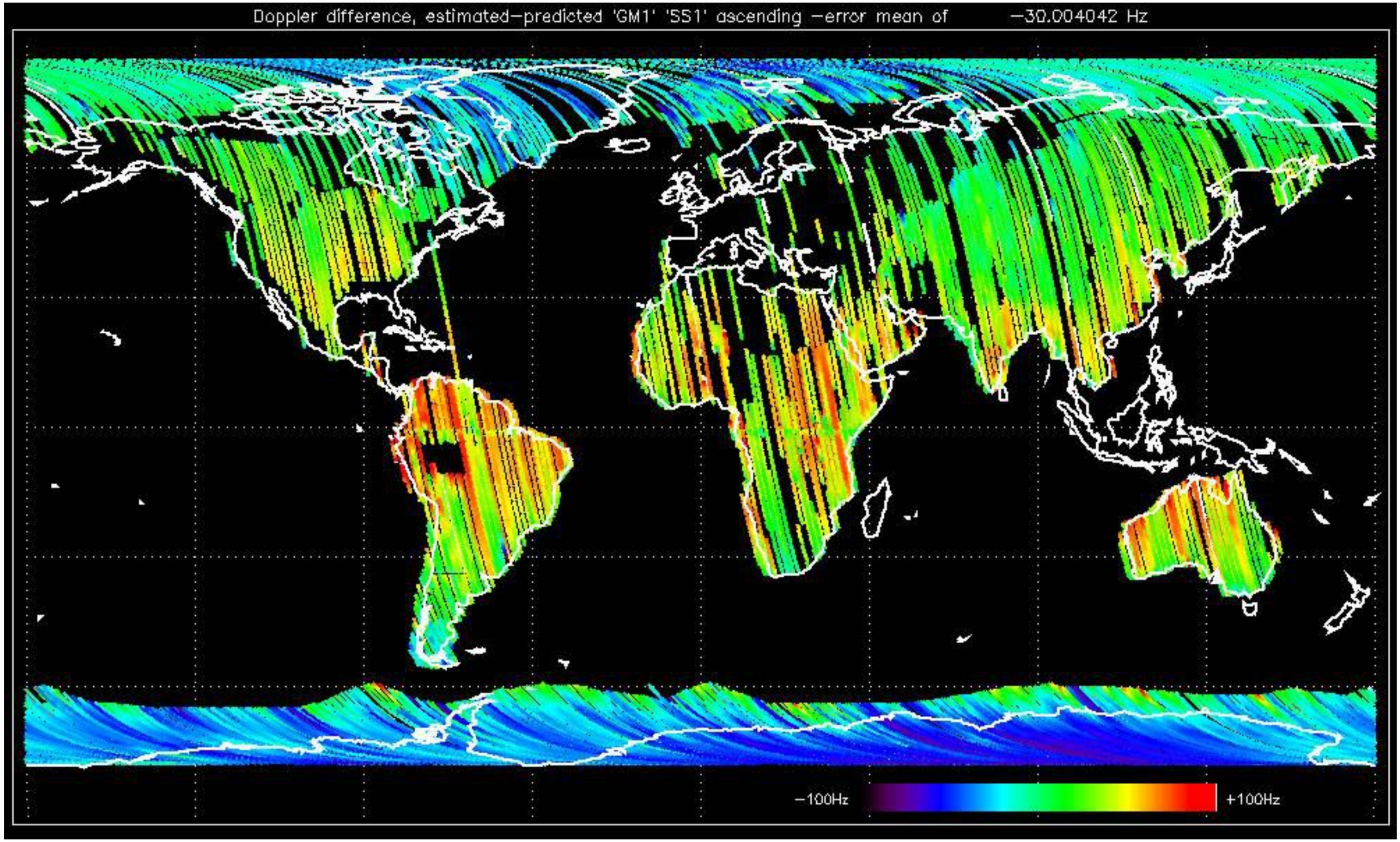

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

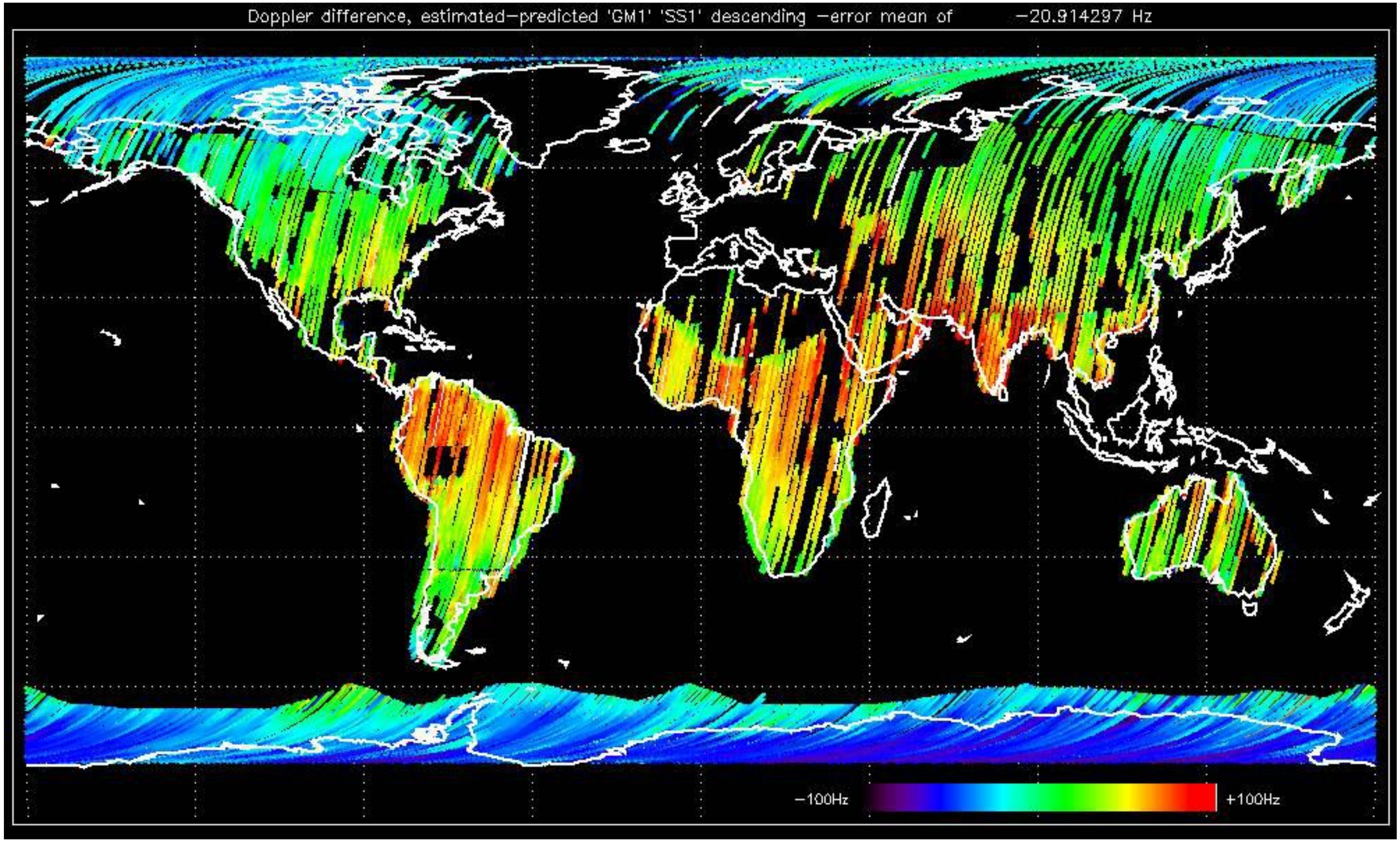

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
25−Jul
Date

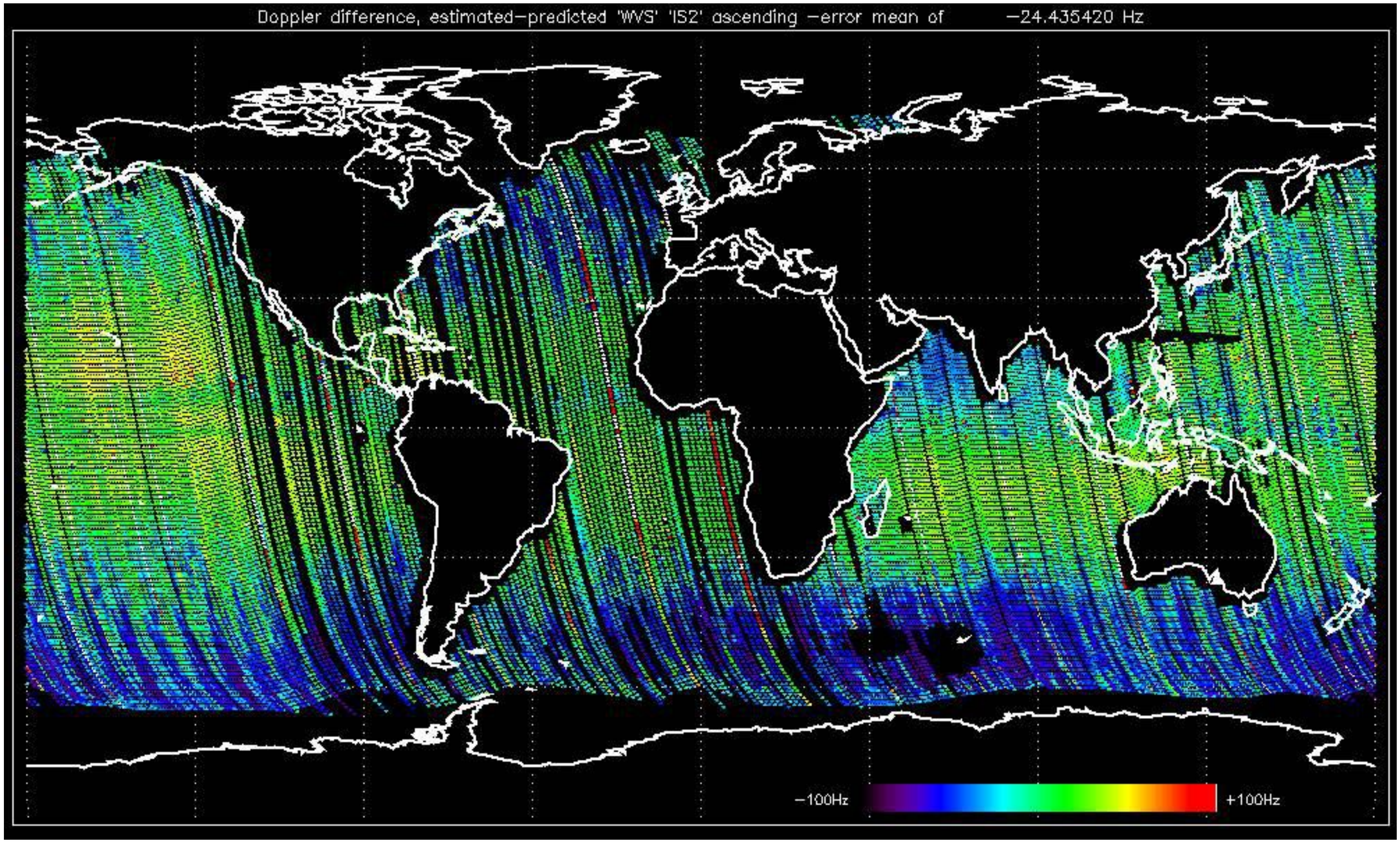

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

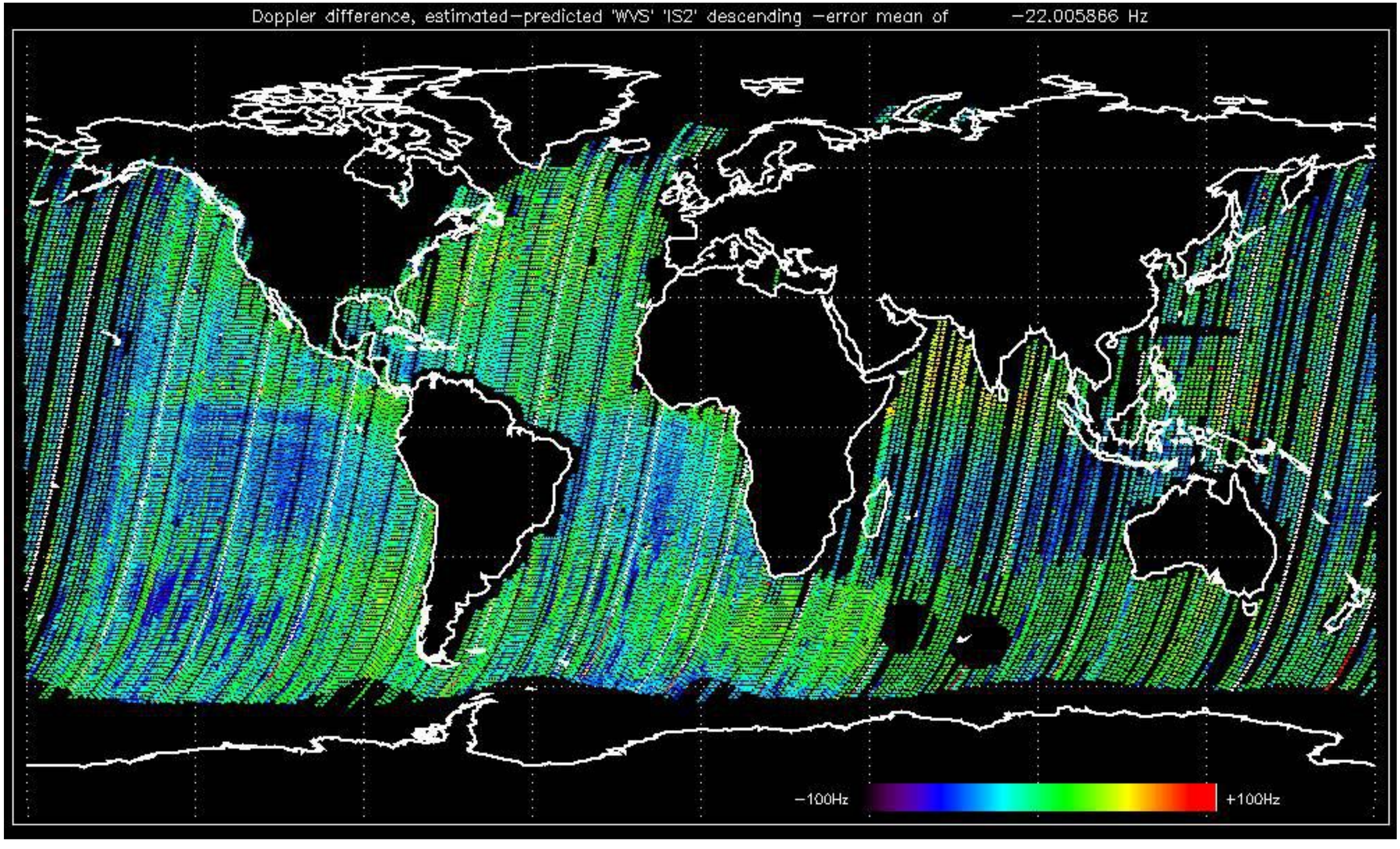

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −30.004042 Hz
−100Hz
+100Hz

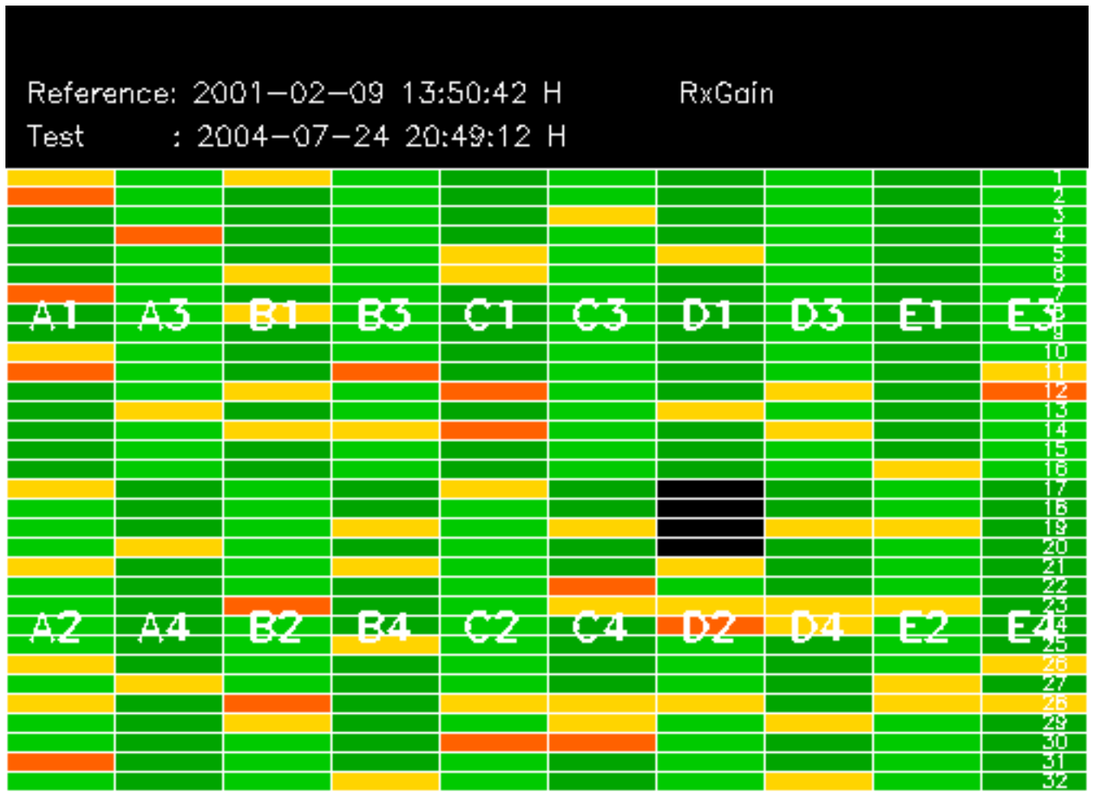

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -20.914297 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −24.435420 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −22.005866 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 : 2004-07-24 20:49:12 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
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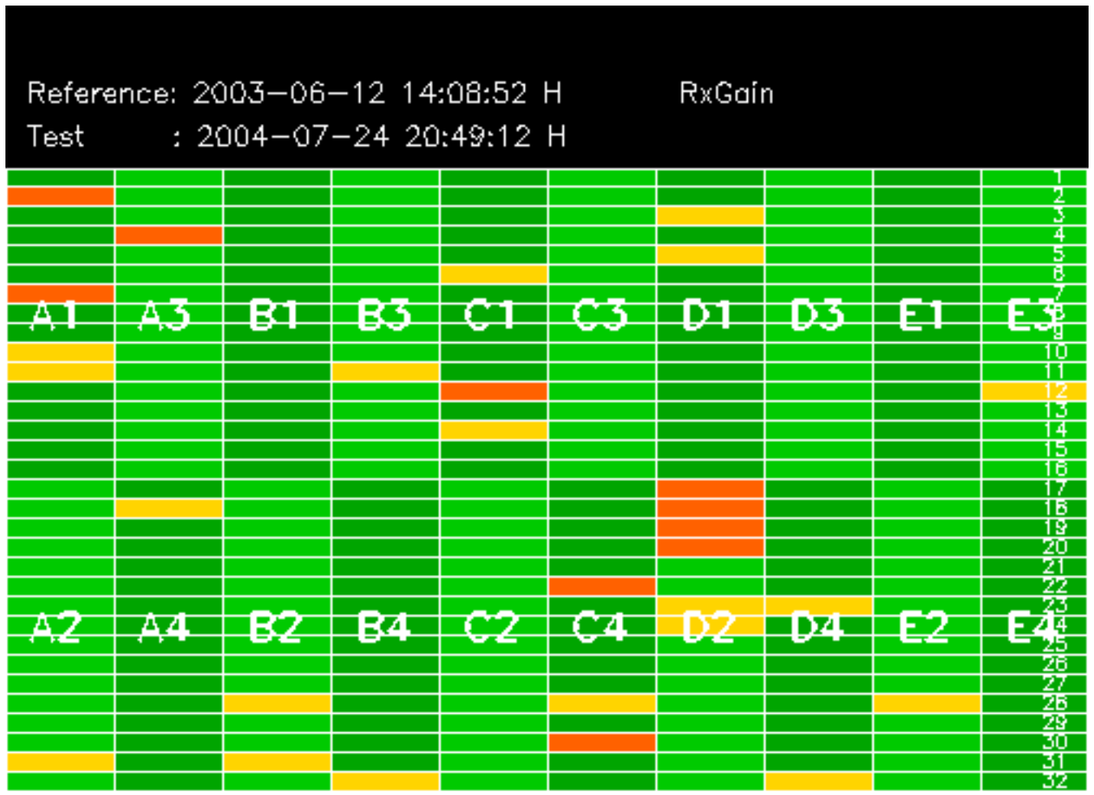
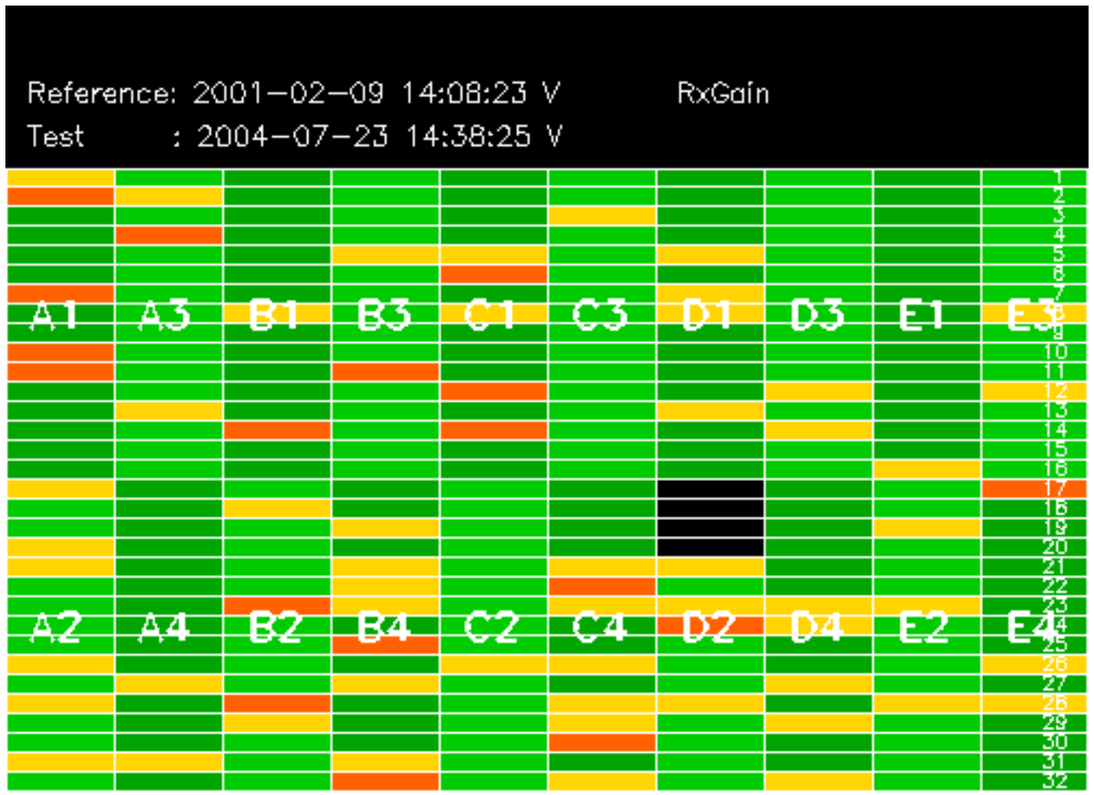

Reference: 2003-06-12 14:08:52 H
Test : 2004-07-24 20:49:12 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-07-23 14:38:25 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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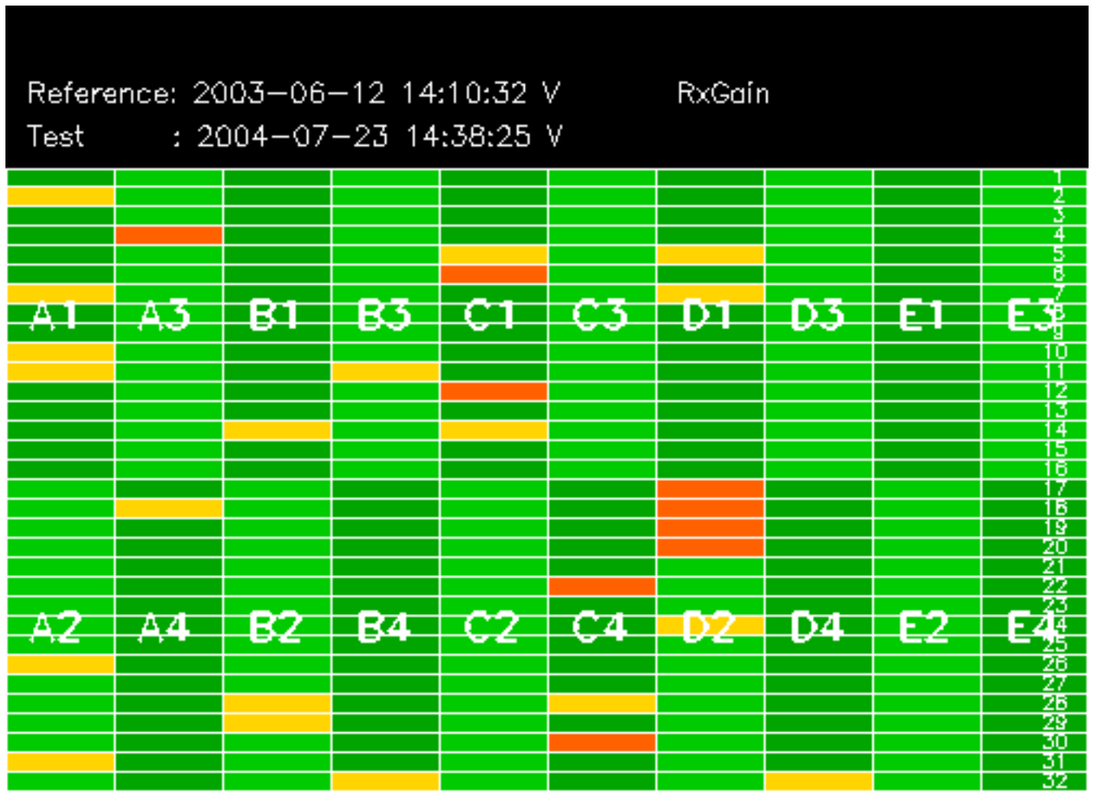
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-23 14:38:25 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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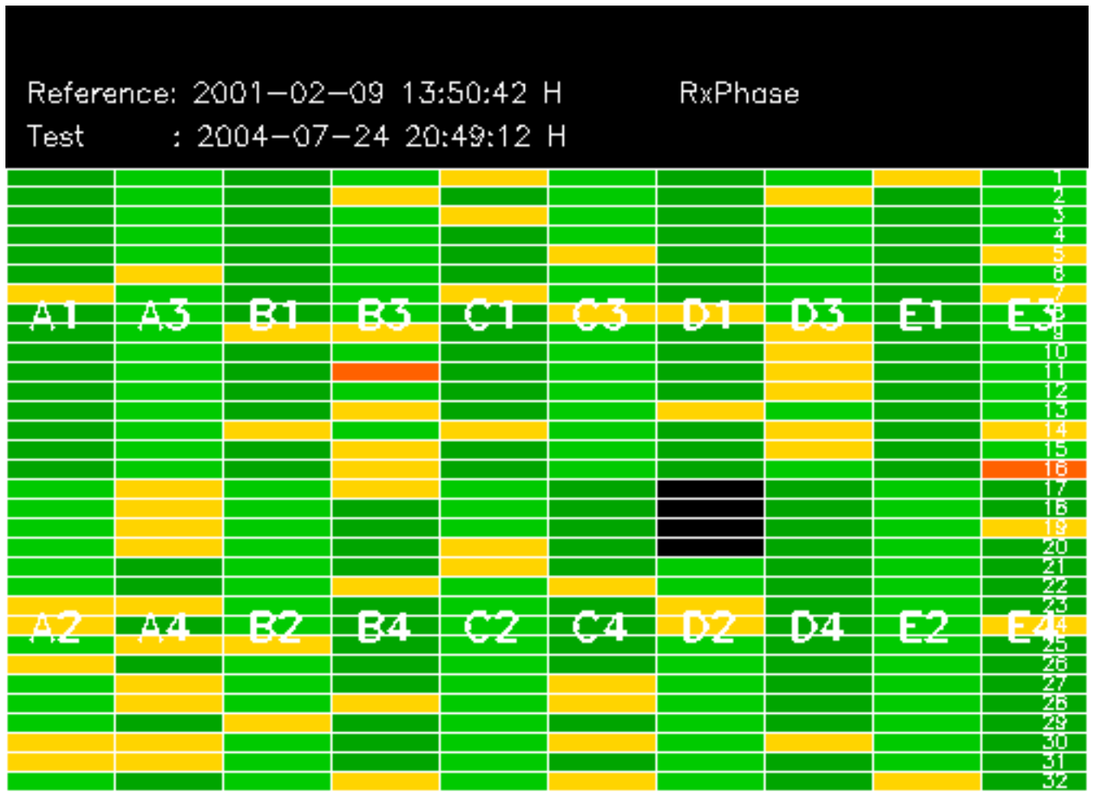
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-07-24 20:49:12 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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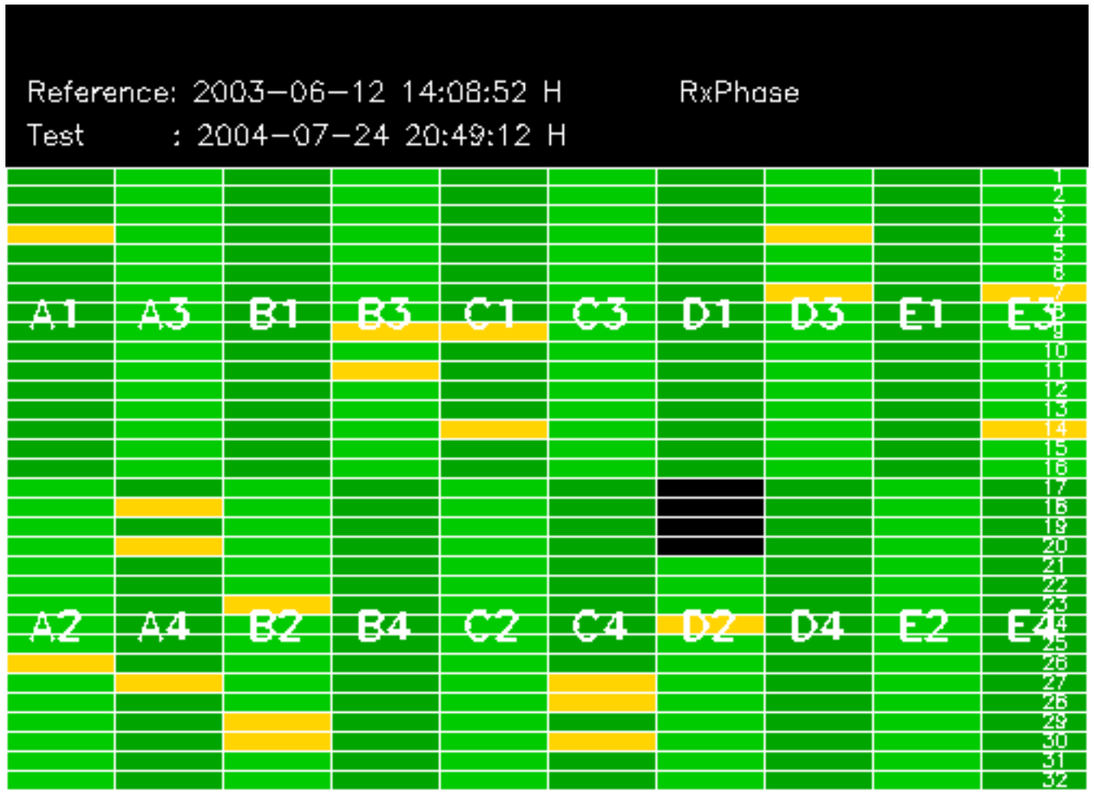
Reference: 2003-06-12 14:08:52 H
Test : 2004-07-24 20:49:12 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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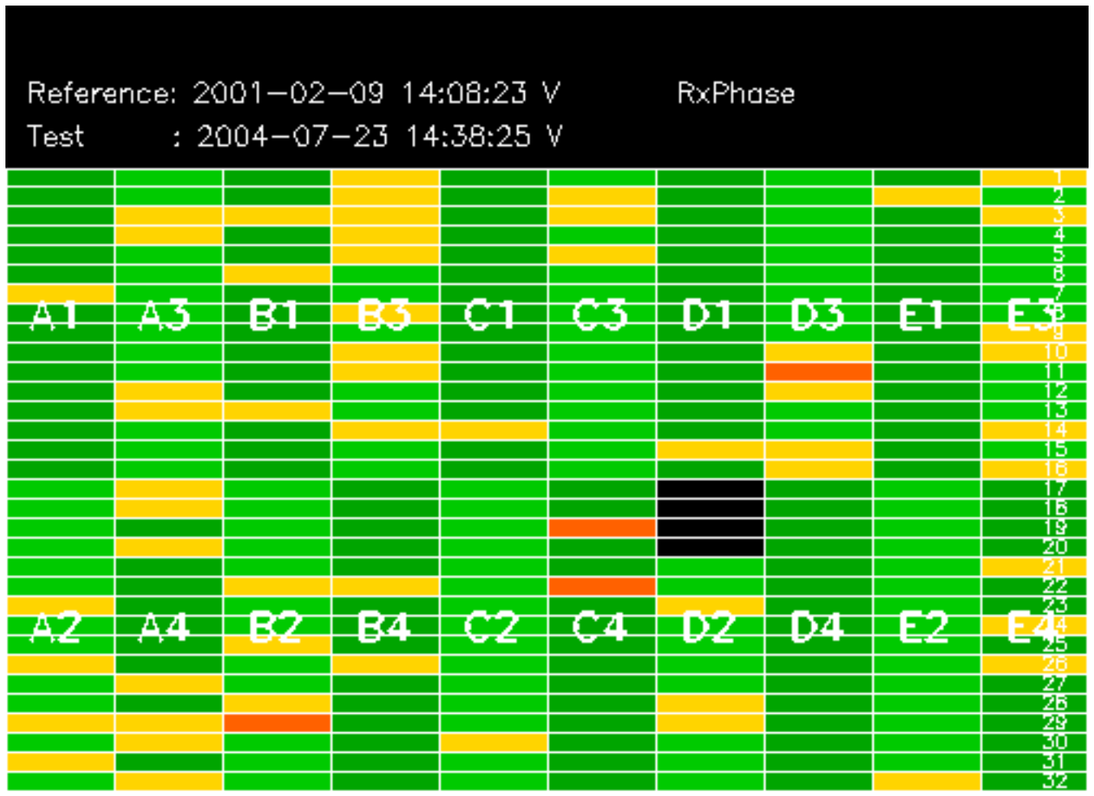
Reference: 2001-02-09 14:08:23 V
Test : 2004-07-23 14:38:25 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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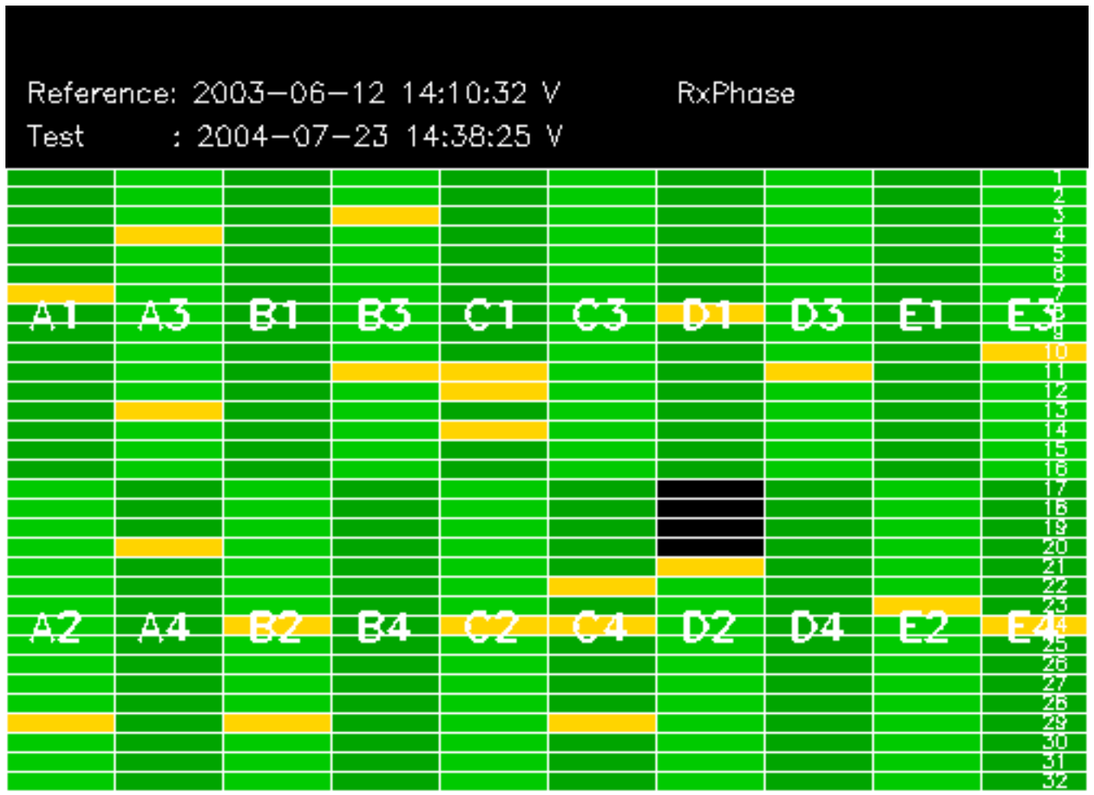
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-23 14:38:25 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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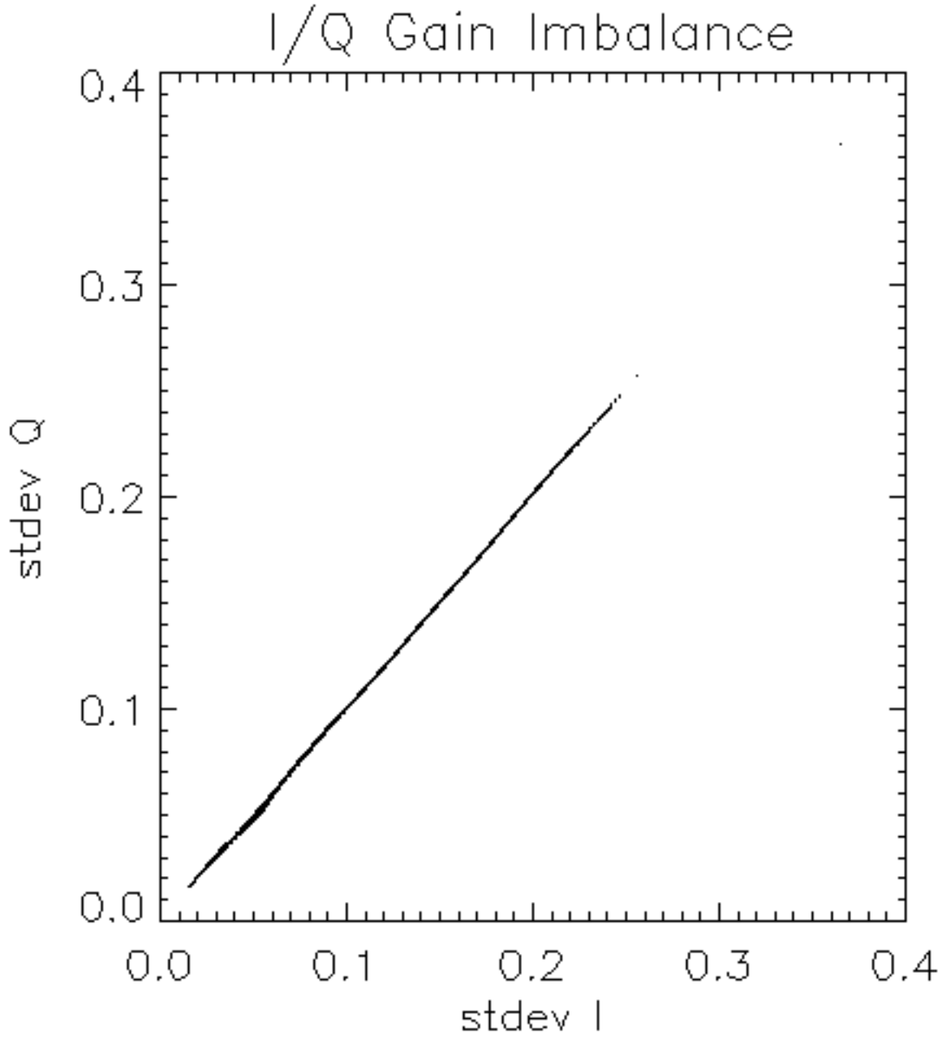
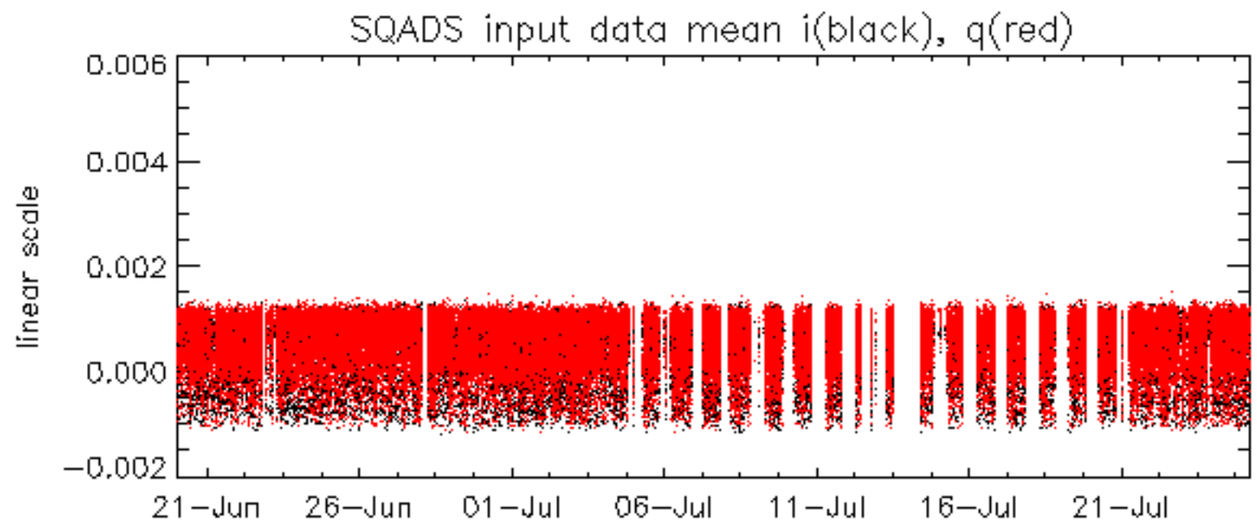
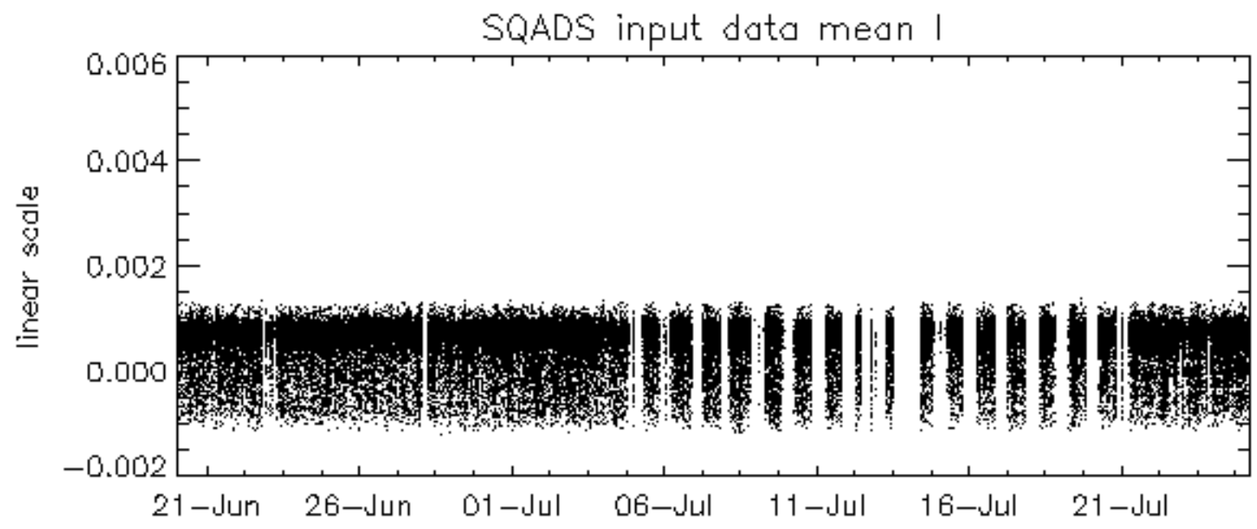
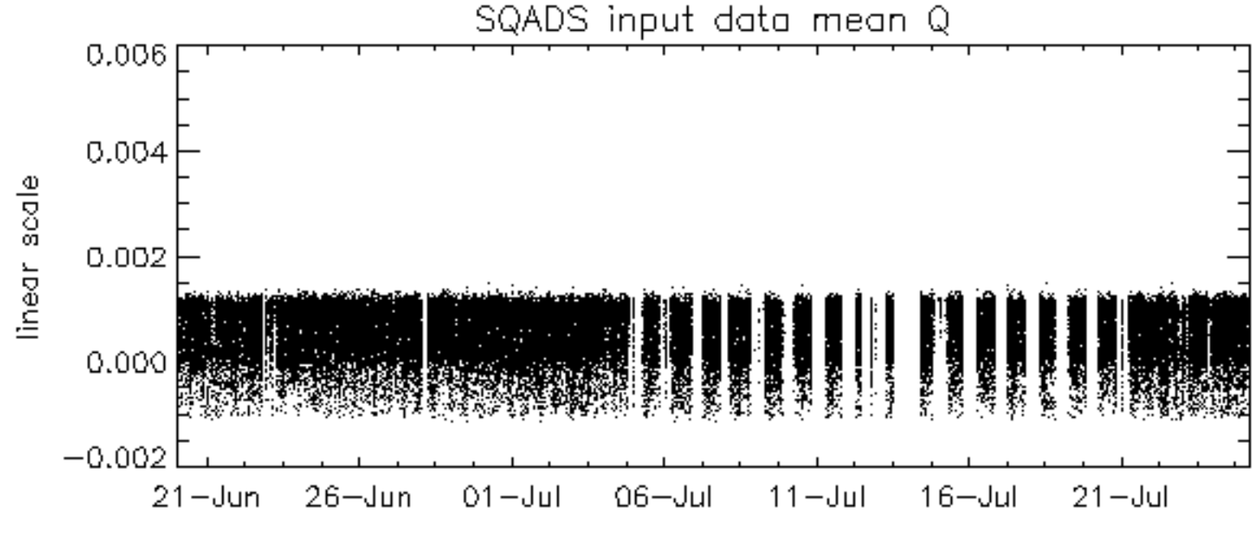
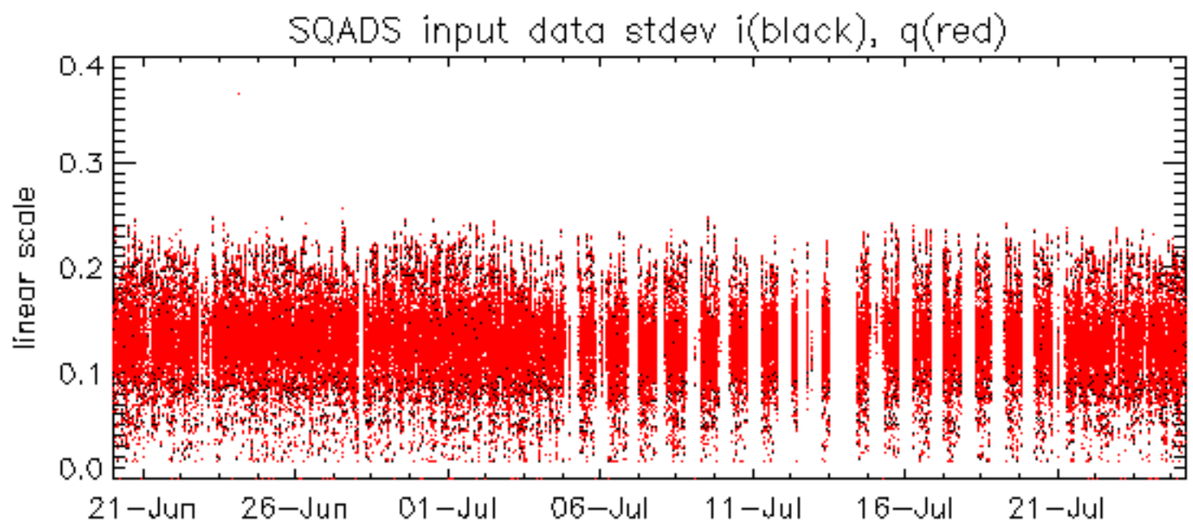
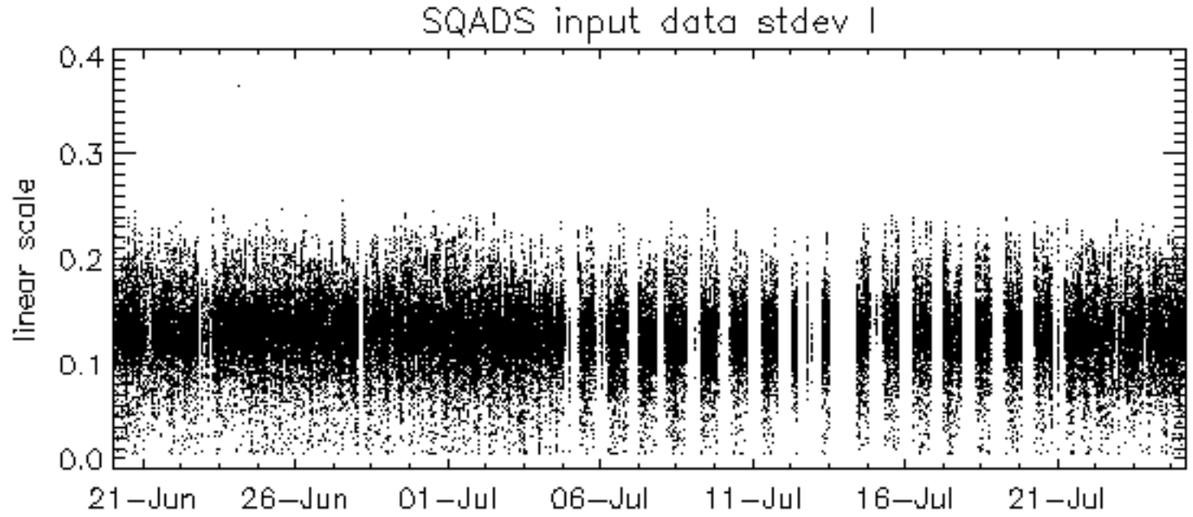

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

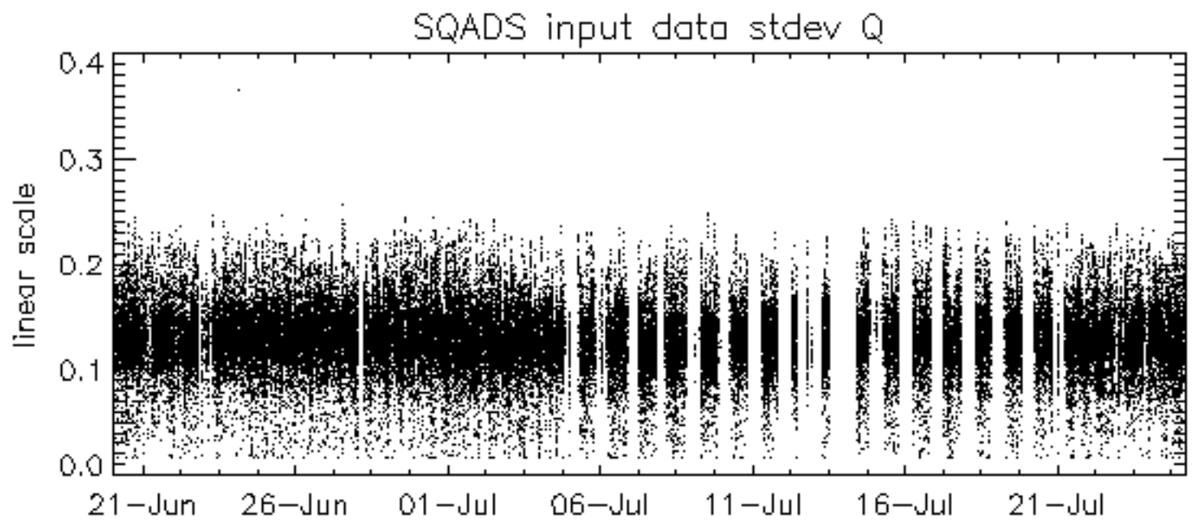

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul

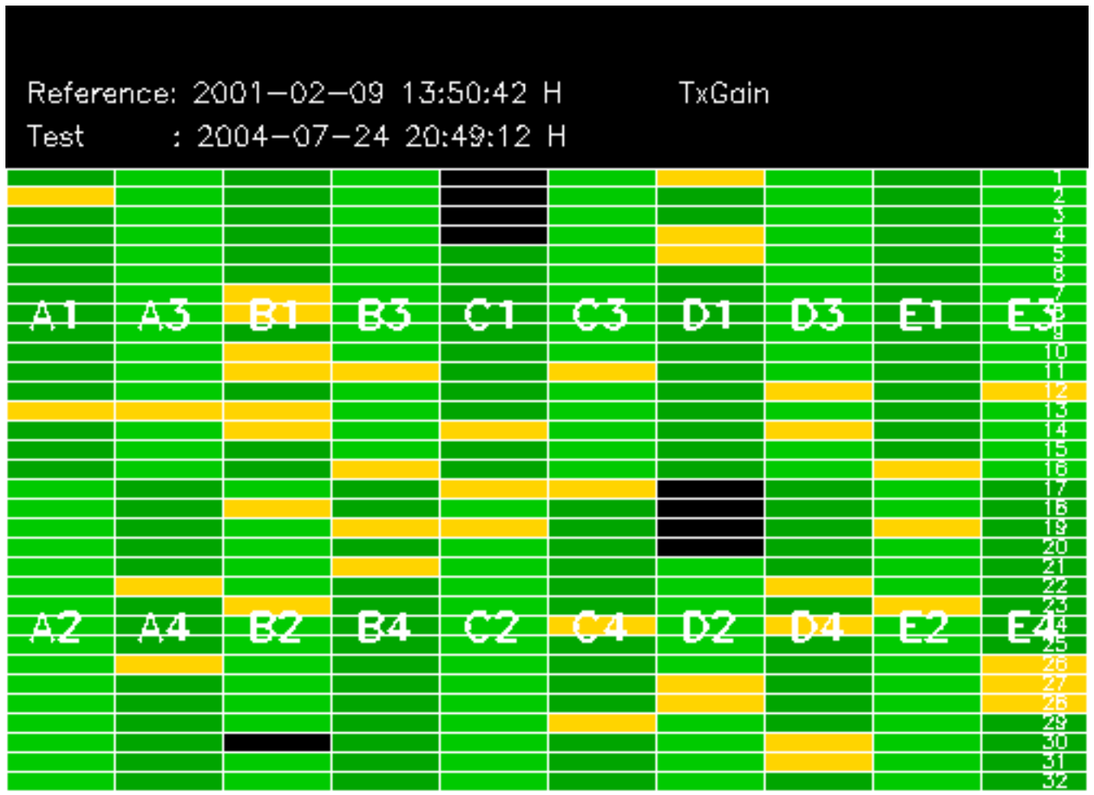

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul

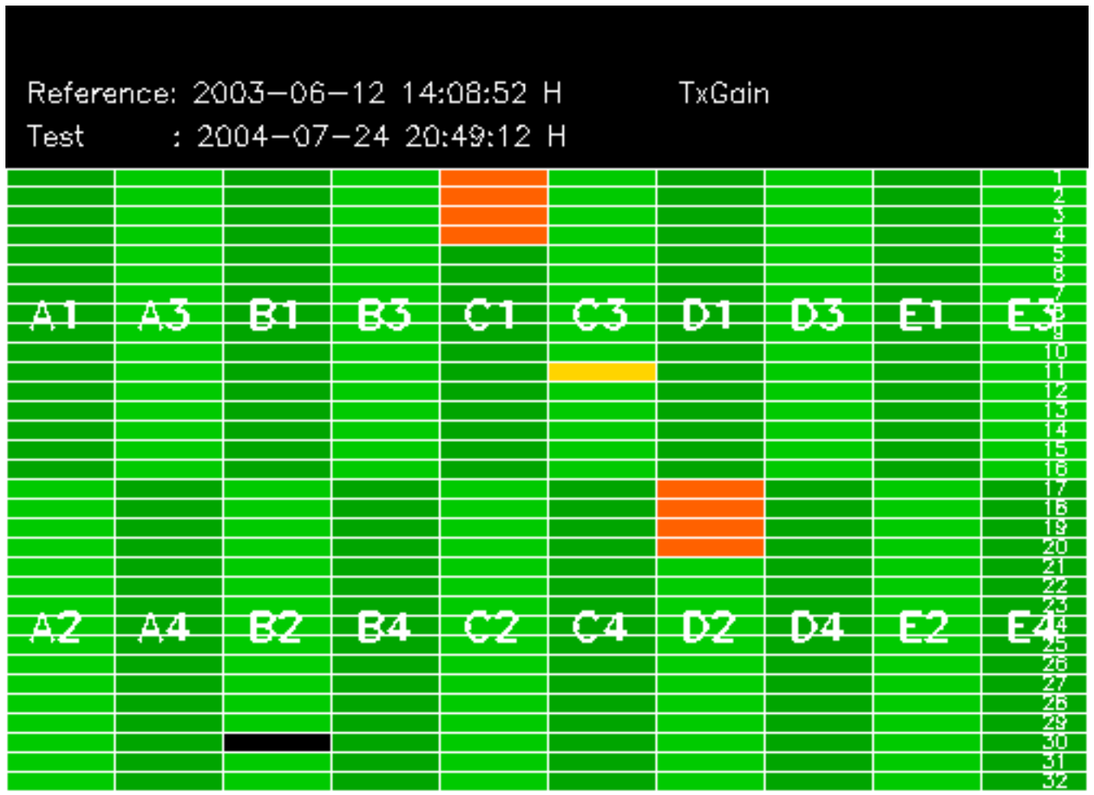

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul


Reference: 2001-02-09 13:50:42 H
Test : 2004-07-24 20:49:12 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 : 2004-07-24 20:49:12 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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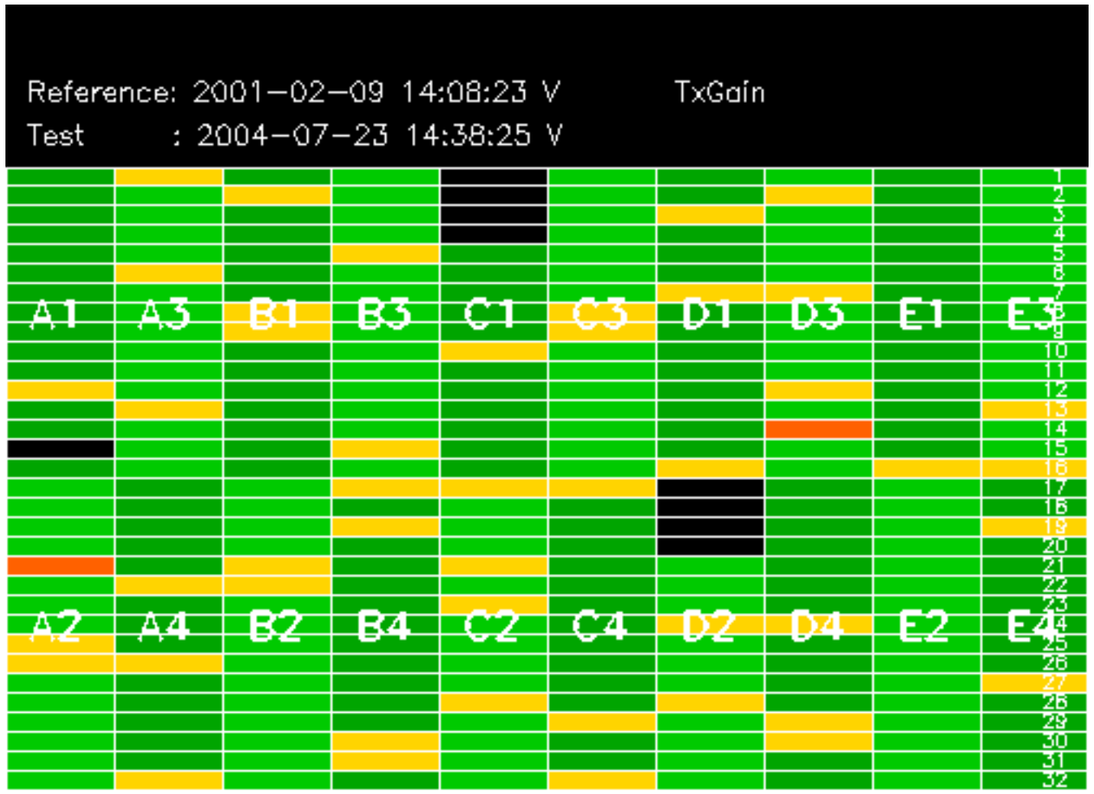
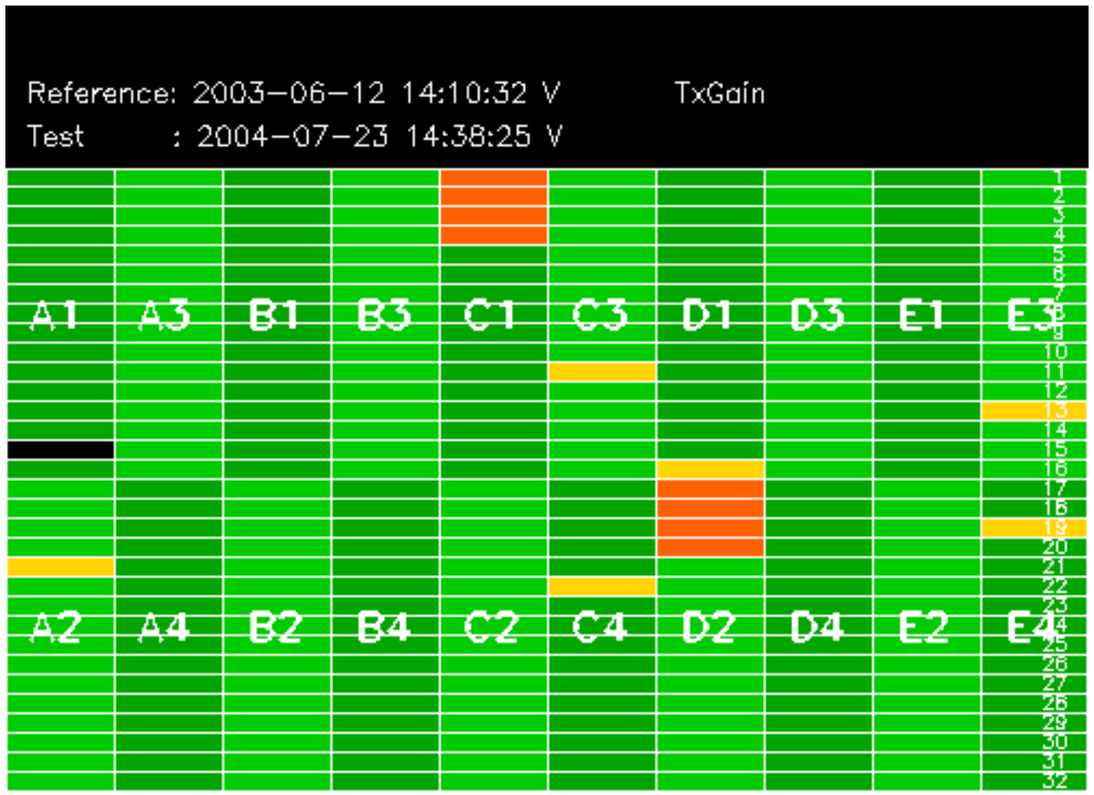
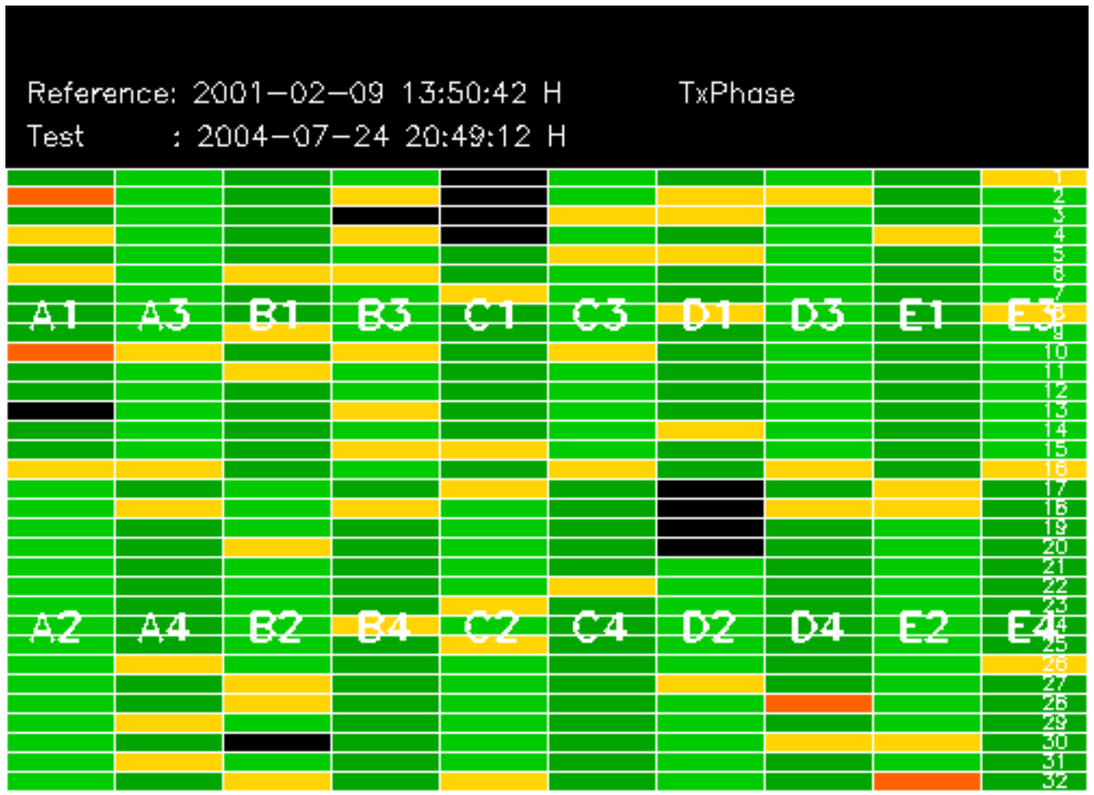

Reference: 2001-02-09 14:08:23 V
Test : 2004-07-23 14:38:25 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-07-23 14:38:25 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 : 2004-07-24 20:49:12 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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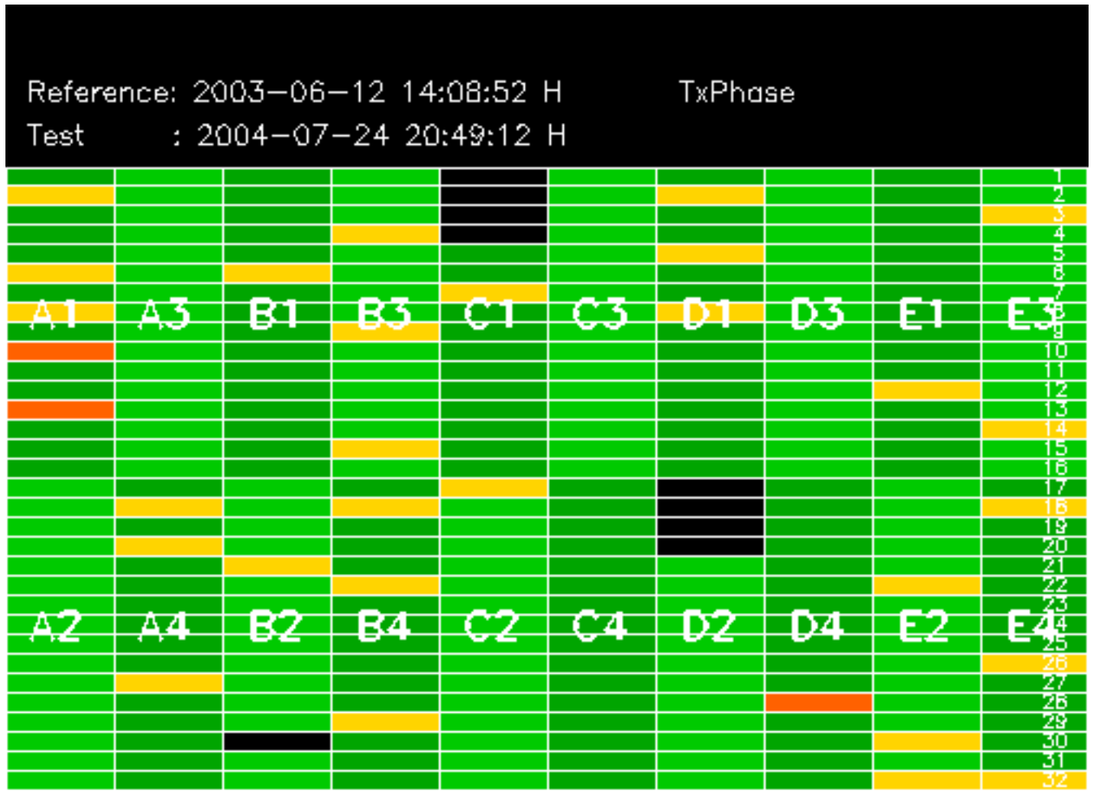
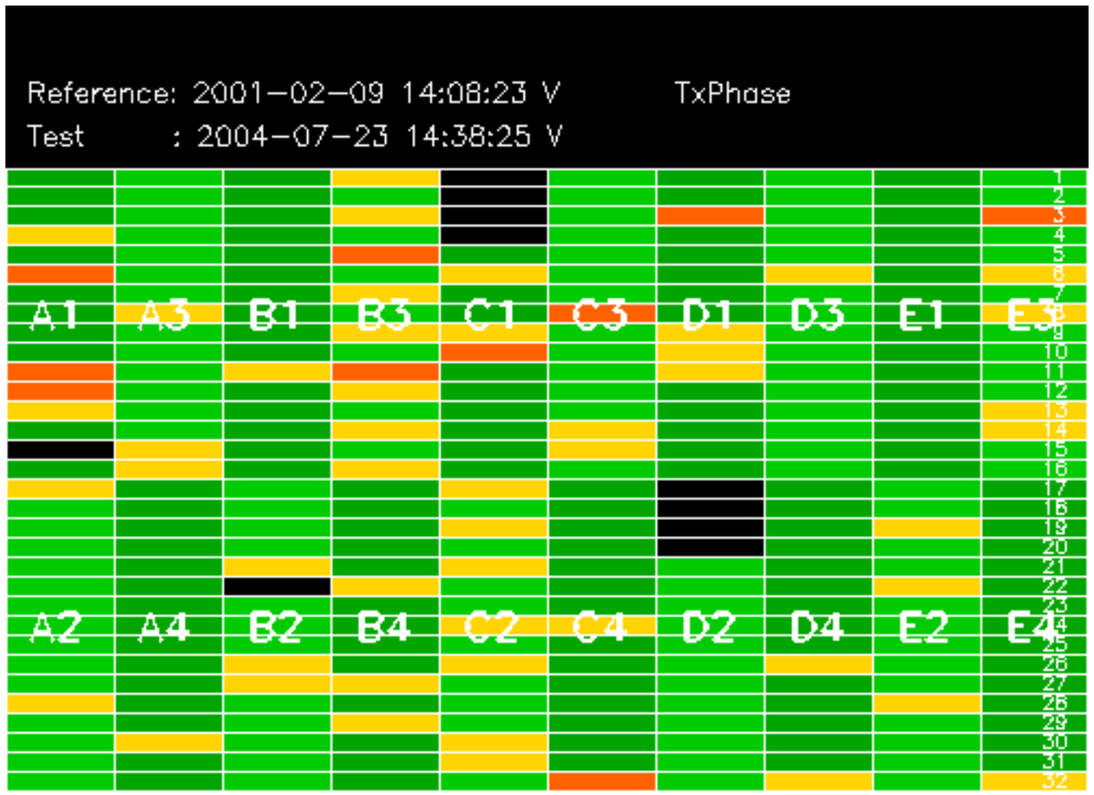
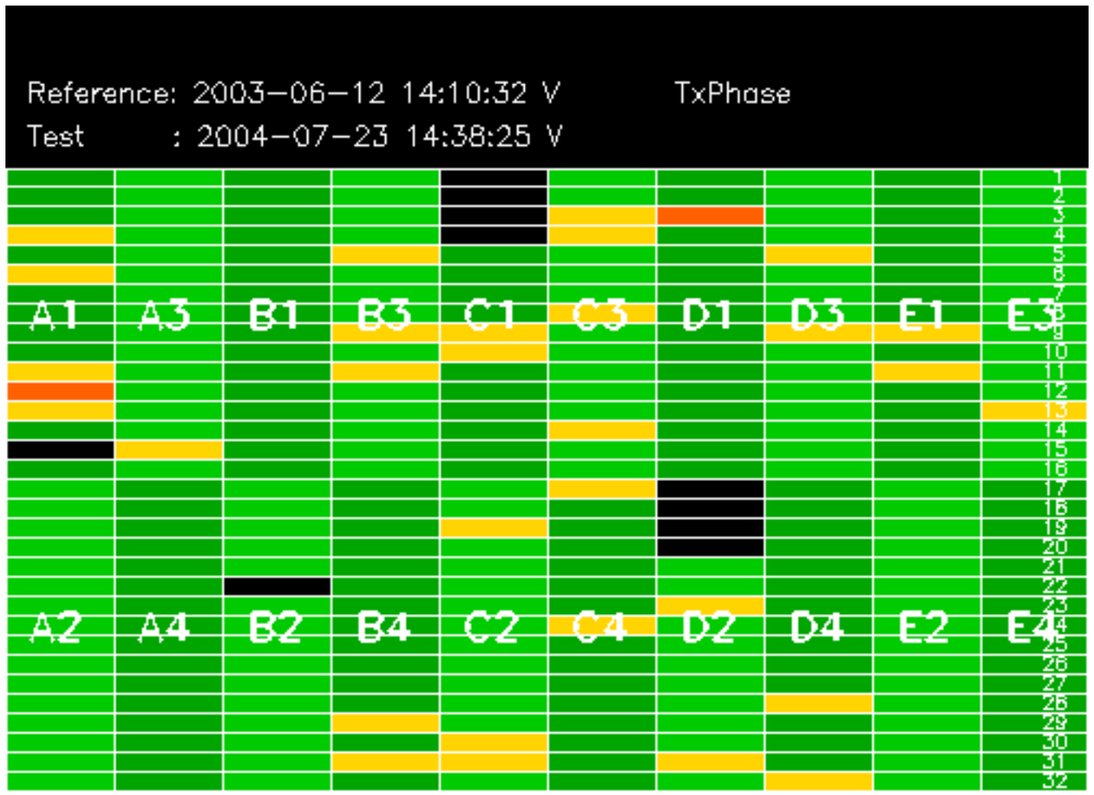

Reference: 2003-06-12 14:08:52 H
Test : 2004-07-24 20:49:12 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-07-23 14:38:25 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 : 2004-07-23 14:38:25 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
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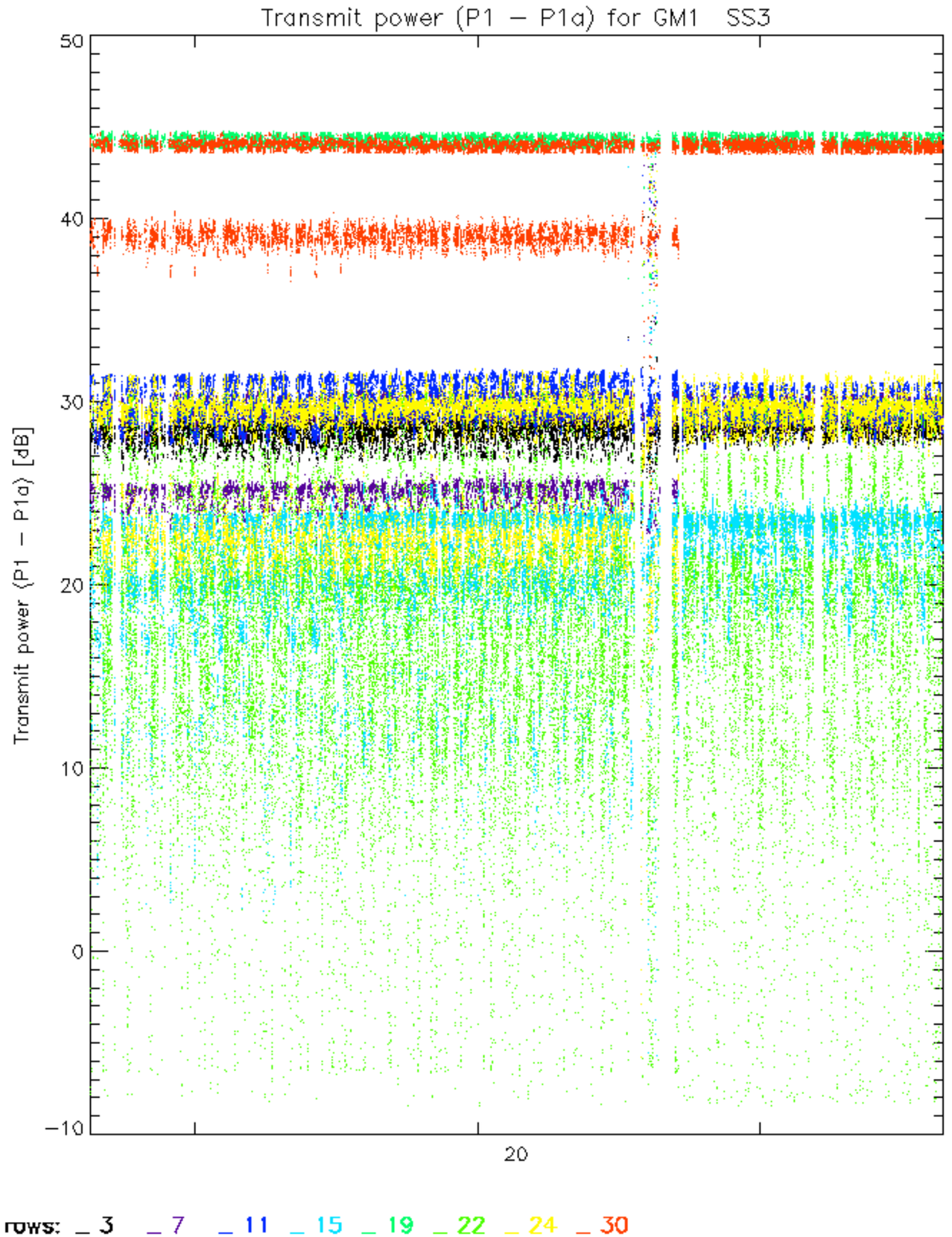
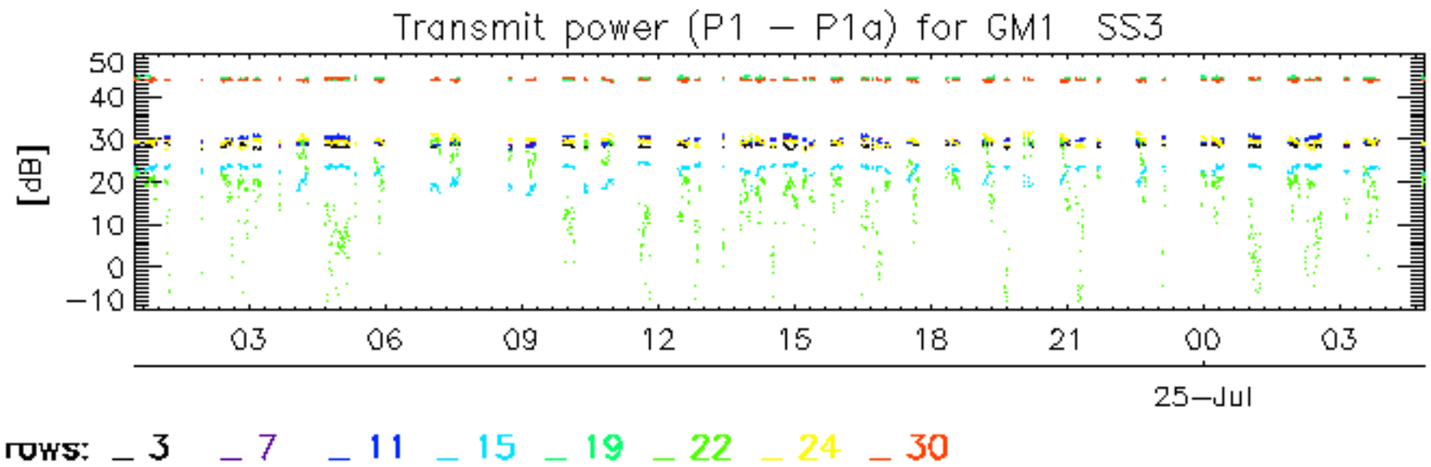
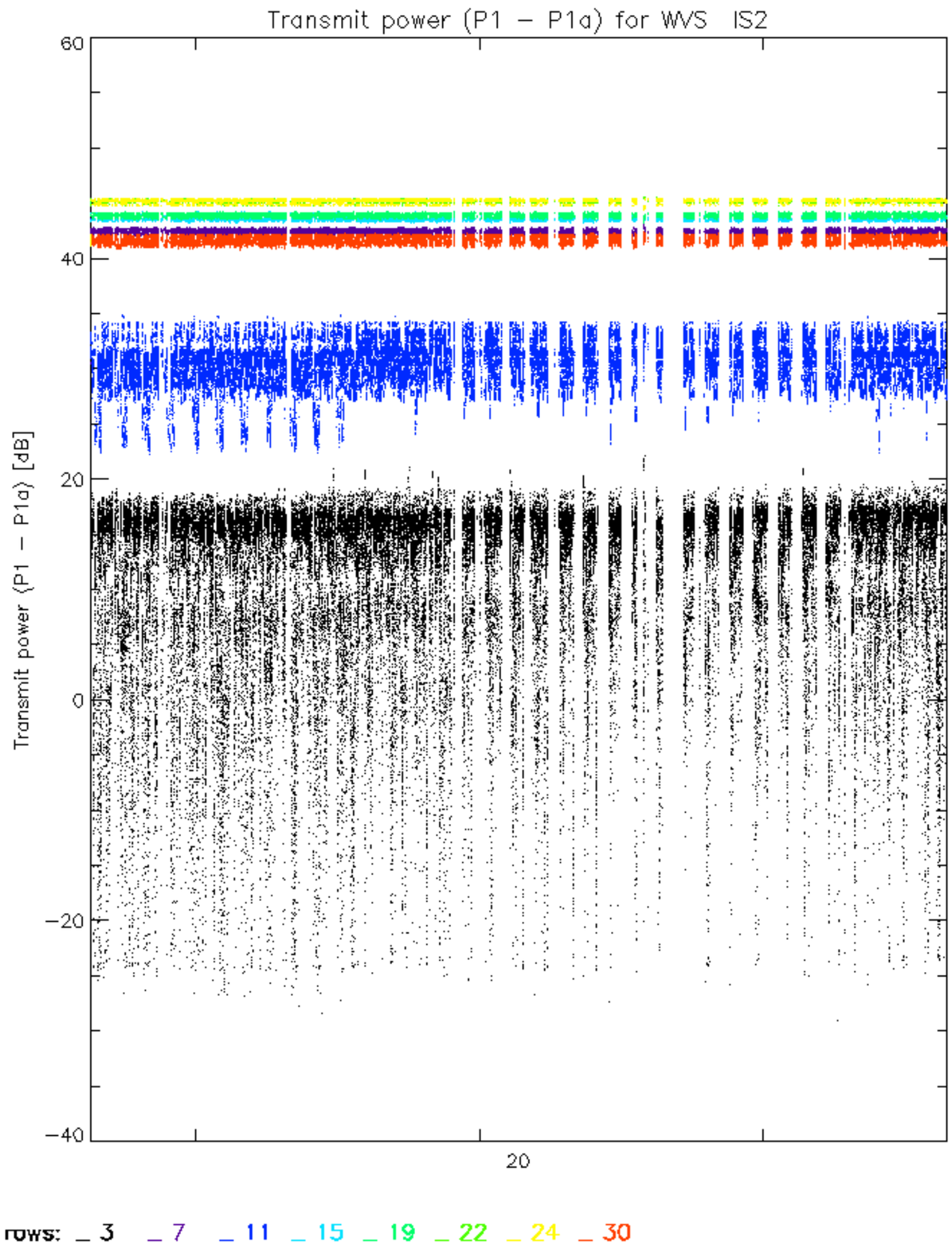
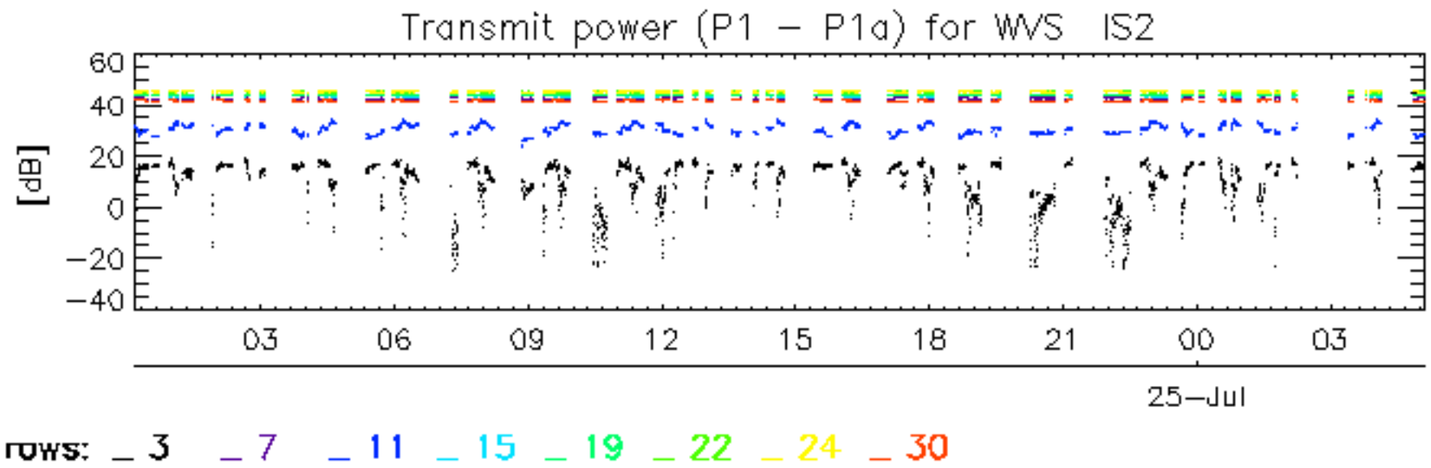

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
20
rows: 3 7 11 15 19 22 24 30


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–Jul
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
20
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
25–Jul
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.