PRELIMINARY REPORT OF 040711

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

last update on Sun Jul 11 13:04:30 GMT 2004

1. Introduction
2. Summary
    - Instrument Unavailability
    - Browse Visual Inspection
    - Module Stepping Results
    - Data Analysis
3. Module Stepping
4. Internal Calibration pulses
    - Daily statistics
    - Cyclic statistics
    - cal pulses monitoring (all rows)
5. Raw Data Statistics
    - raw data mean I and Q
    - raw data stdev I and Q
    - raw gain imbalance
6. Wave Doppler analysis
    - Unbiased Doppler Error for WVS
    - Absolute Doppler for WVS
    - Doppler evolution versus ANX for WVS
    - Unbiased Doppler Error for GM1
    - Absolute Doppler for GM1
    - Doppler evolution versus ANX for GM1

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	20040709 185825
H	20040710 182648

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.

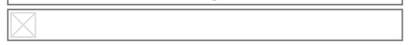
4.1 - Daily statistics

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	-3.492816	0.008851	0.029625
7	P1	-3.327657	0.014543	0.015710
11	P1	-4.556361	0.036632	-0.100945
15	P1	-5.694251	0.057900	-0.098520
19	P1	-3.437992	0.004597	-0.004715
22	P1	-4.557979	0.011326	0.011979
24	P1	-4.923789	0.016942	-0.026983
30	P1	-6.861803	0.024256	-0.058167

3	P1	-16.126347	0.193832	-0.182388
7	P1	-13.984191	0.097726	0.071738
11	P1	-19.931492	0.289295	-0.213292
15	P1	-11.783199	0.044269	-0.034178
19	P1	-13.827283	0.034705	0.009702
22	P1	-16.455441	0.408971	0.364013
24	P1	-14.648417	0.299651	0.200538
30	P1	-17.687702	0.388639	-0.028011

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.389904	0.082333	0.091784
7	P2	-22.808872	0.125072	0.134883
11	P2	-15.565093	0.140672	0.149783
15	P2	-7.164347	0.096034	0.117080
19	P2	-9.564102	0.149892	0.057747
22	P2	-17.500238	0.105670	0.162194
24	P2	-20.826777	0.088111	0.130573
30	P2	-19.410063	0.078998	0.060819

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143225	0.001921	0.003359
7	P3	-8.143225	0.001921	0.003354
11	P3	-8.143227	0.001921	0.003371
15	P3	-8.143233	0.001920	0.003406
19	P3	-8.143249	0.001920	0.003472
22	P3	-8.143256	0.001921	0.003498
24	P3	-8.143256	0.001921	0.003516
30	P3	-8.143335	0.001918	0.003173

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	-3.127275	0.131675	0.067031
7	P1	-2.822372	0.071212	-0.058247
11	P1	-3.815626	0.022860	-0.074244
15	P1	-4.270503	1.004322	-0.009105
19	P1	-3.358322	0.050287	0.007107
22	P1	-5.732044	0.044095	-0.028149
24	P1	-4.050940	0.078326	0.020100
30	P1	-6.112540	0.068617	-0.030893
3	P1	-11.001910	0.385487	0.101819
7	P1	-9.783797	0.242502	-0.088860
11	P1	-11.796252	0.168718	-0.092676
15	P1	-11.866743	0.268130	-0.068733
19	P1	-14.989523	0.825884	0.022057
22	P1	-21.394054	8.375093	0.352048
24	P1	-17.362917	0.306299	0.075076
30	P1	-21.685947	4.345780	0.151072

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.131437	0.042211	0.106023
7	P2	-22.905756	0.030124	0.089979
11	P2	-10.959057	0.227329	0.194886
15	P2	-4.974262	0.044094	0.086682
19	P2	-6.921764	0.041087	0.051213
22	P2	-7.626200	0.028181	0.151196
24	P2	-11.033591	0.073894	0.123580
30	P2	-22.339279	0.085893	0.154967

P3 Cyclic statistics

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

3	P3	-7.982826	0.003391	0.004867
7	P3	-7.982829	0.003383	0.004486
11	P3	-7.982769	0.003392	0.004452
15	P3	-7.982737	0.003395	0.004848
19	P3	-7.982727	0.003395	0.004777
22	P3	-7.982802	0.003382	0.004936
24	P3	-7.982773	0.003417	0.004866
30	P3	-7.982781	0.003391	0.004709

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	0.000499286
	stdev	2.09105e-07
MEAN Q	mean	0.000549018
	stdev	2.38164e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129883
	stdev	0.00102474

STDEV Q	mean	0.130133
	stdev	0.00103658

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

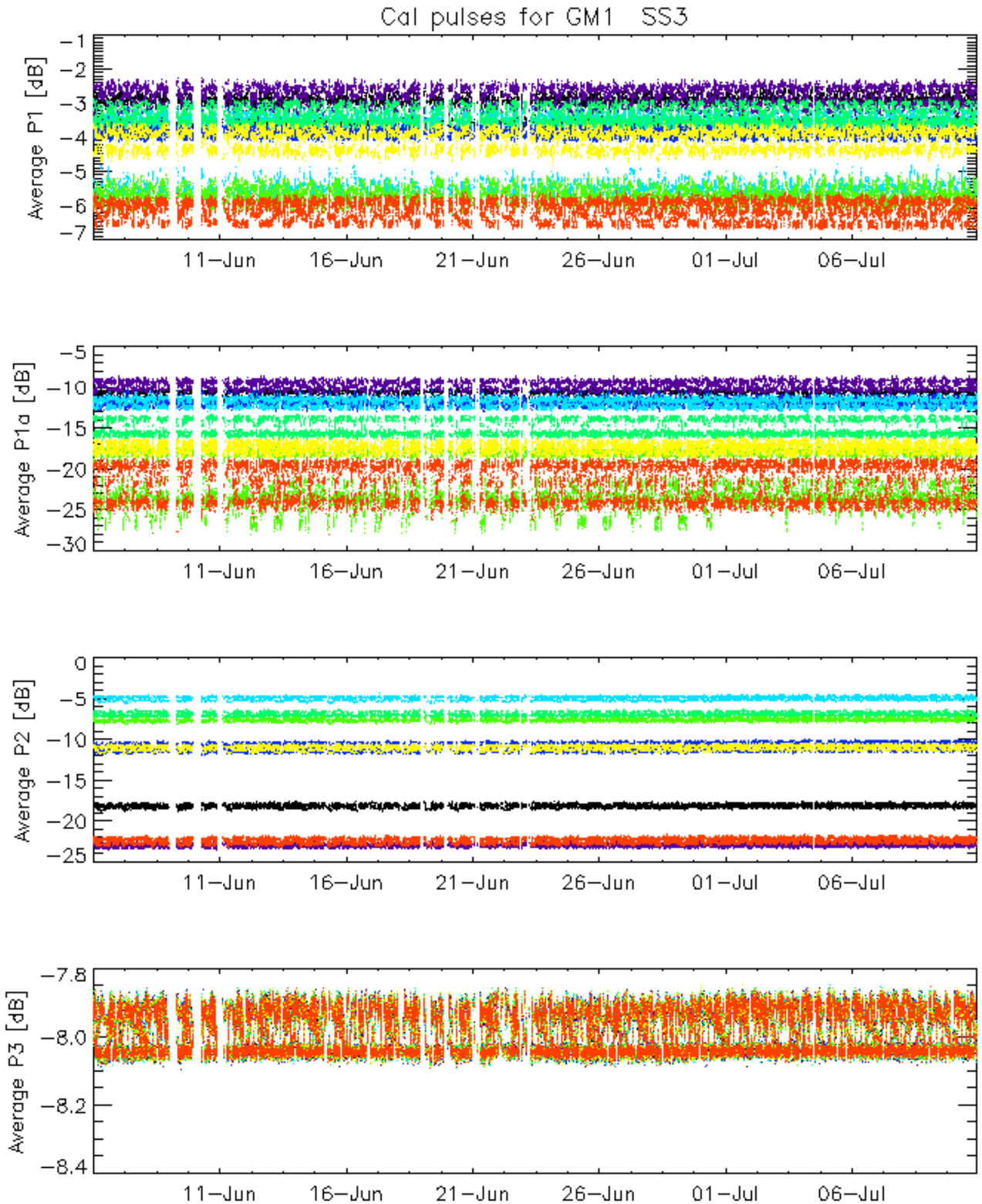
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

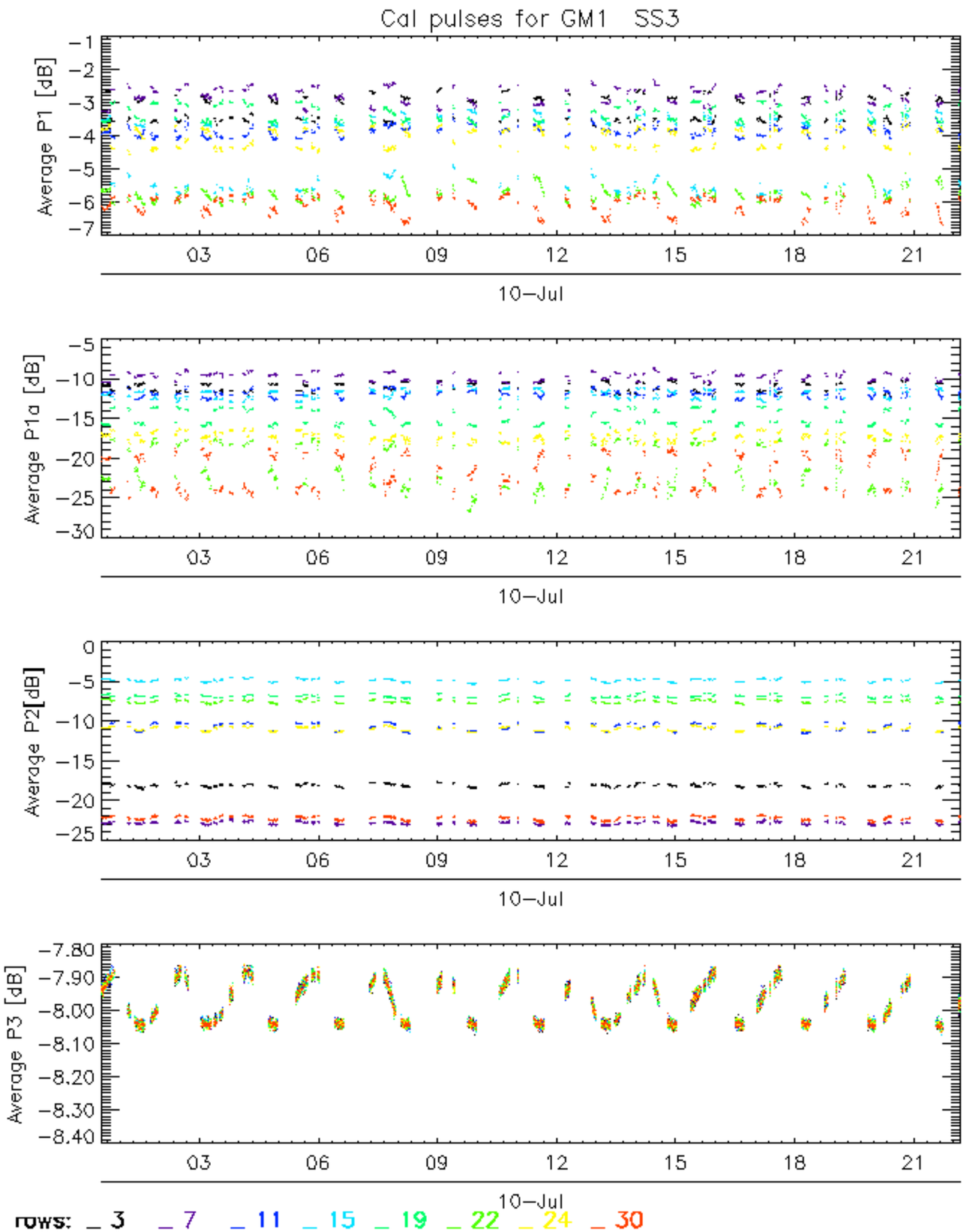
6.5 - Absolute Doppler for GM1

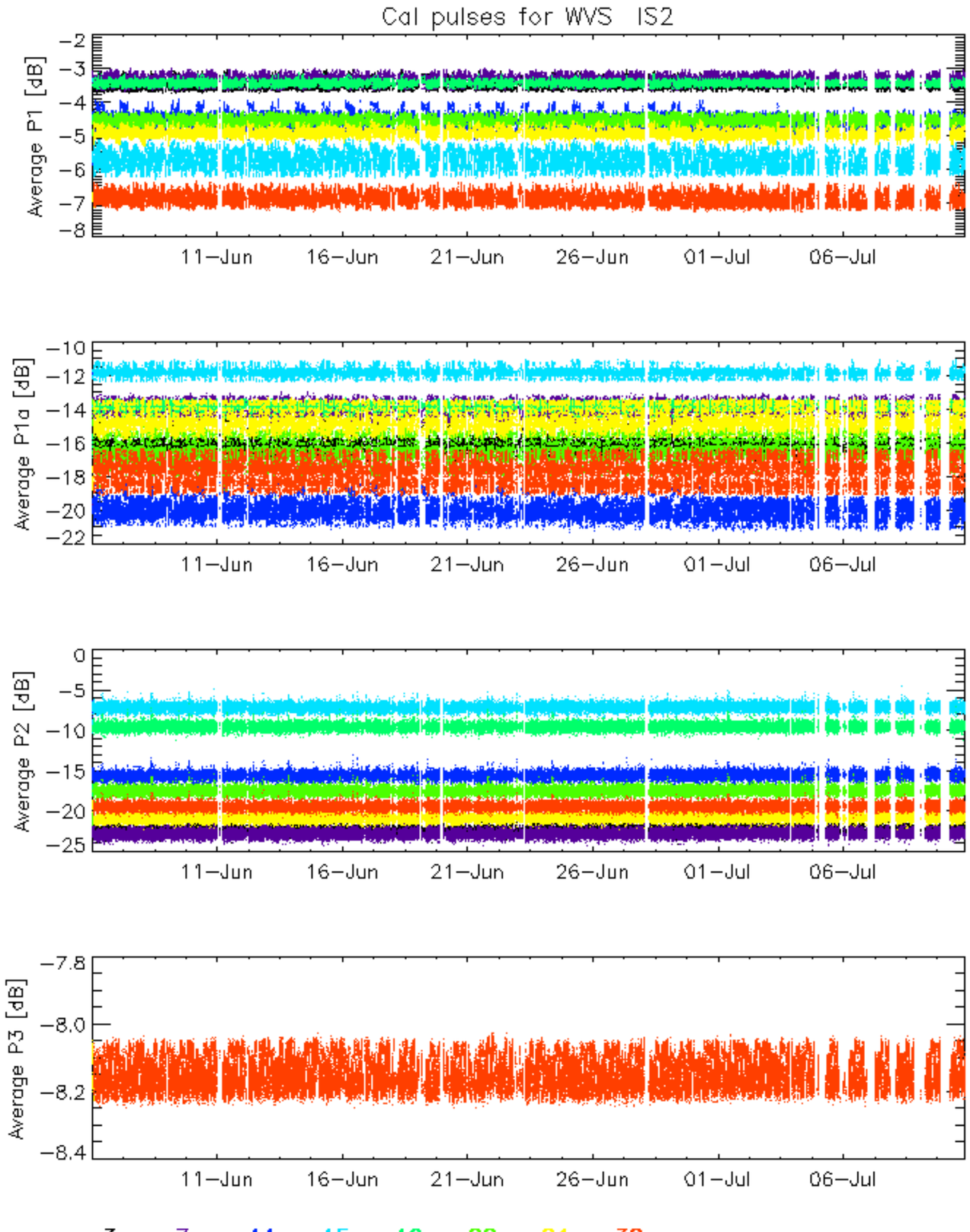
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

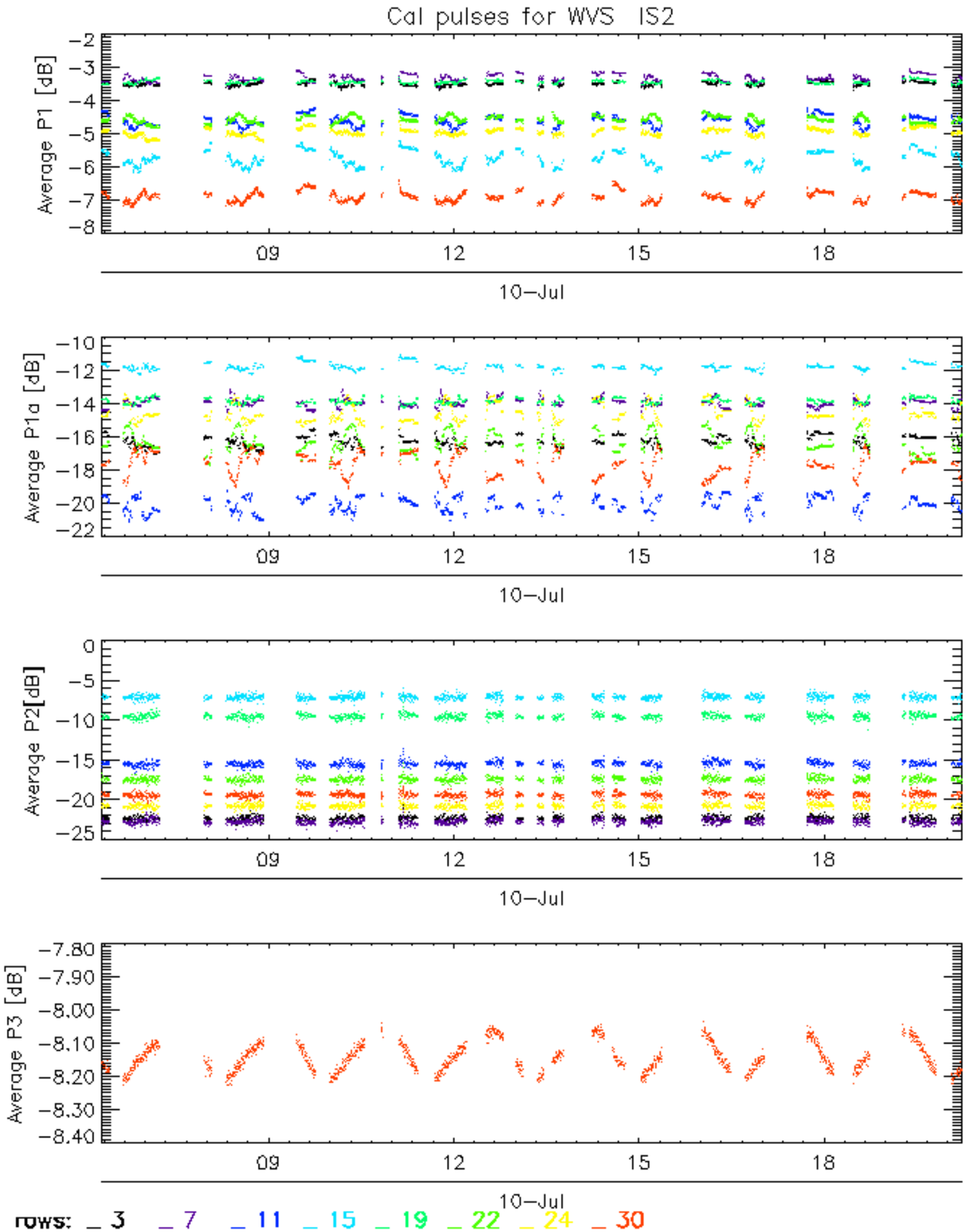
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

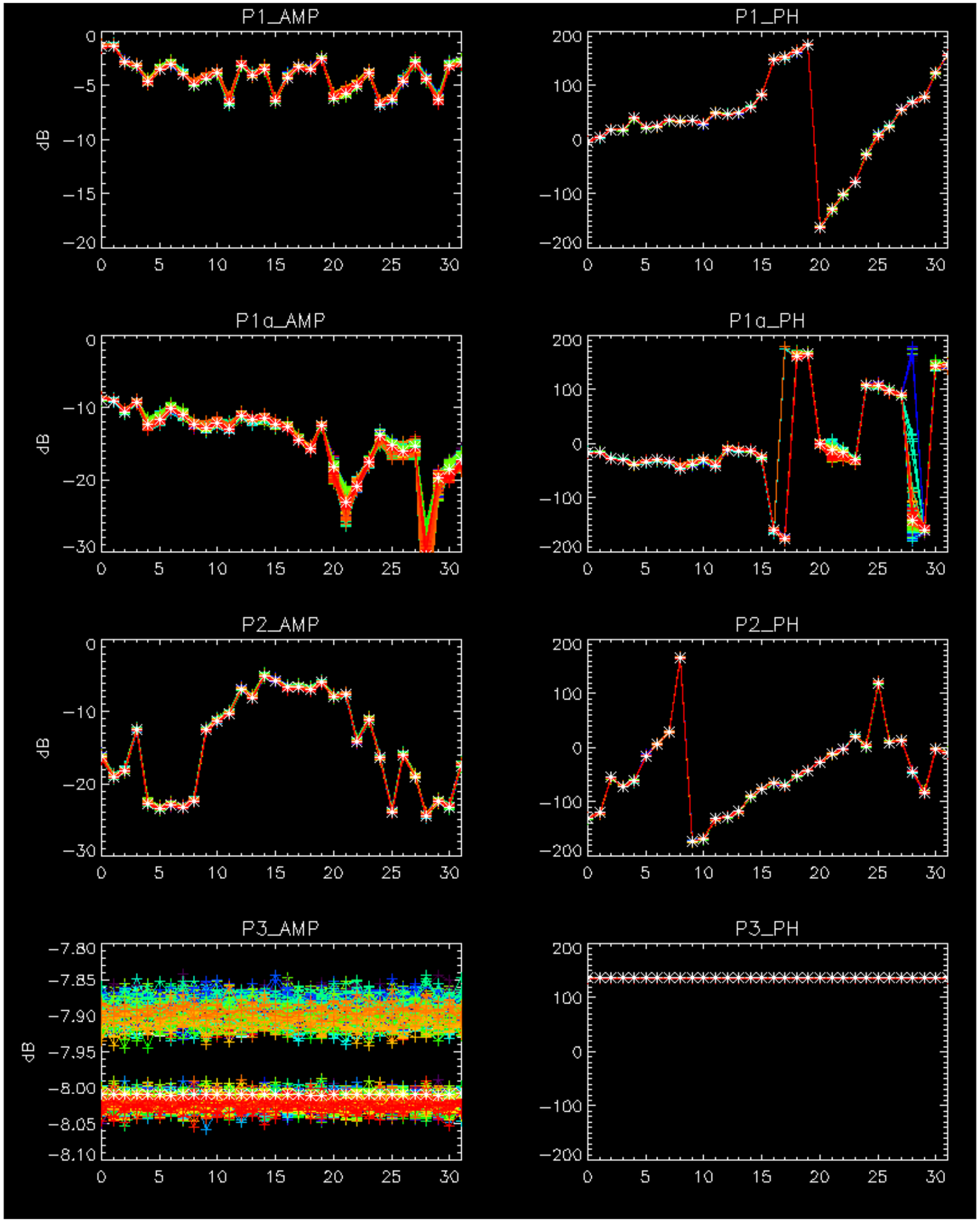

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
11−Jun
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

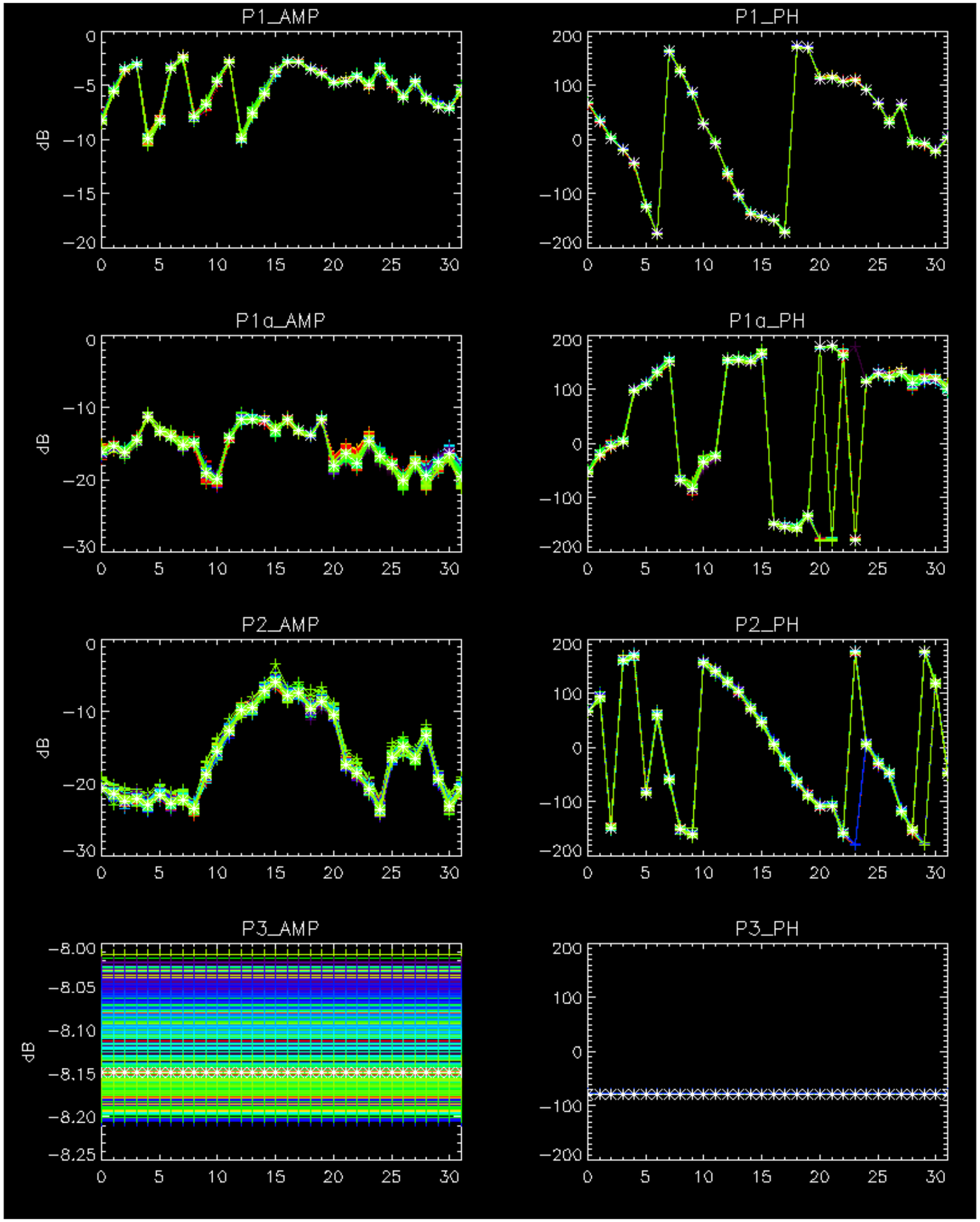

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
10−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
10−Jul
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
10−Jul
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
10−Jul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


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
11−Jun
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
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
09
12
15
18
10−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
09
12
15
18
10−Jul
Average P2[dB]
0
−5
−10
−15
−20
−25
09
12
15
18
10−Jul
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
09
12
15
18
10−Jul
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

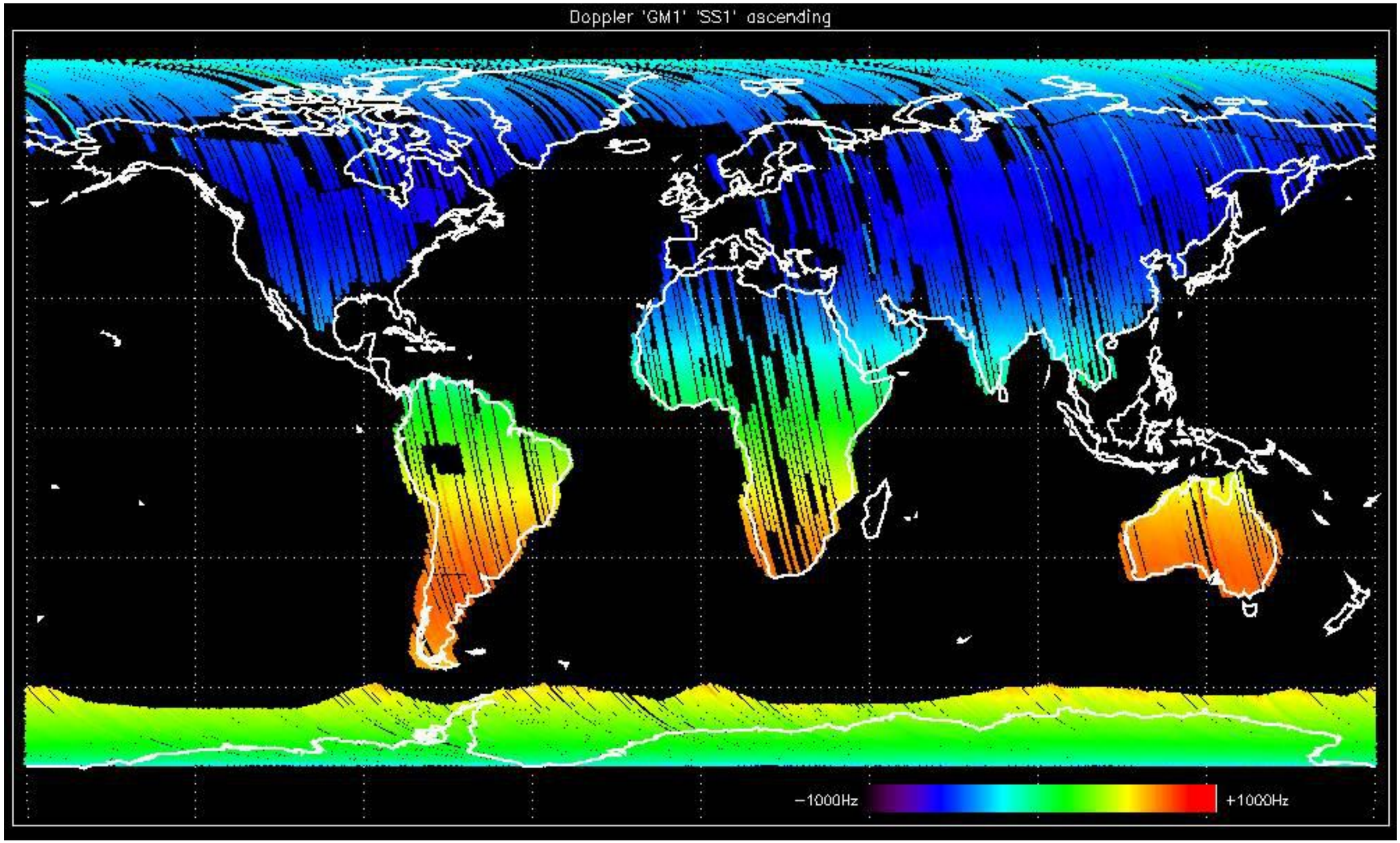
No anomalies observed.

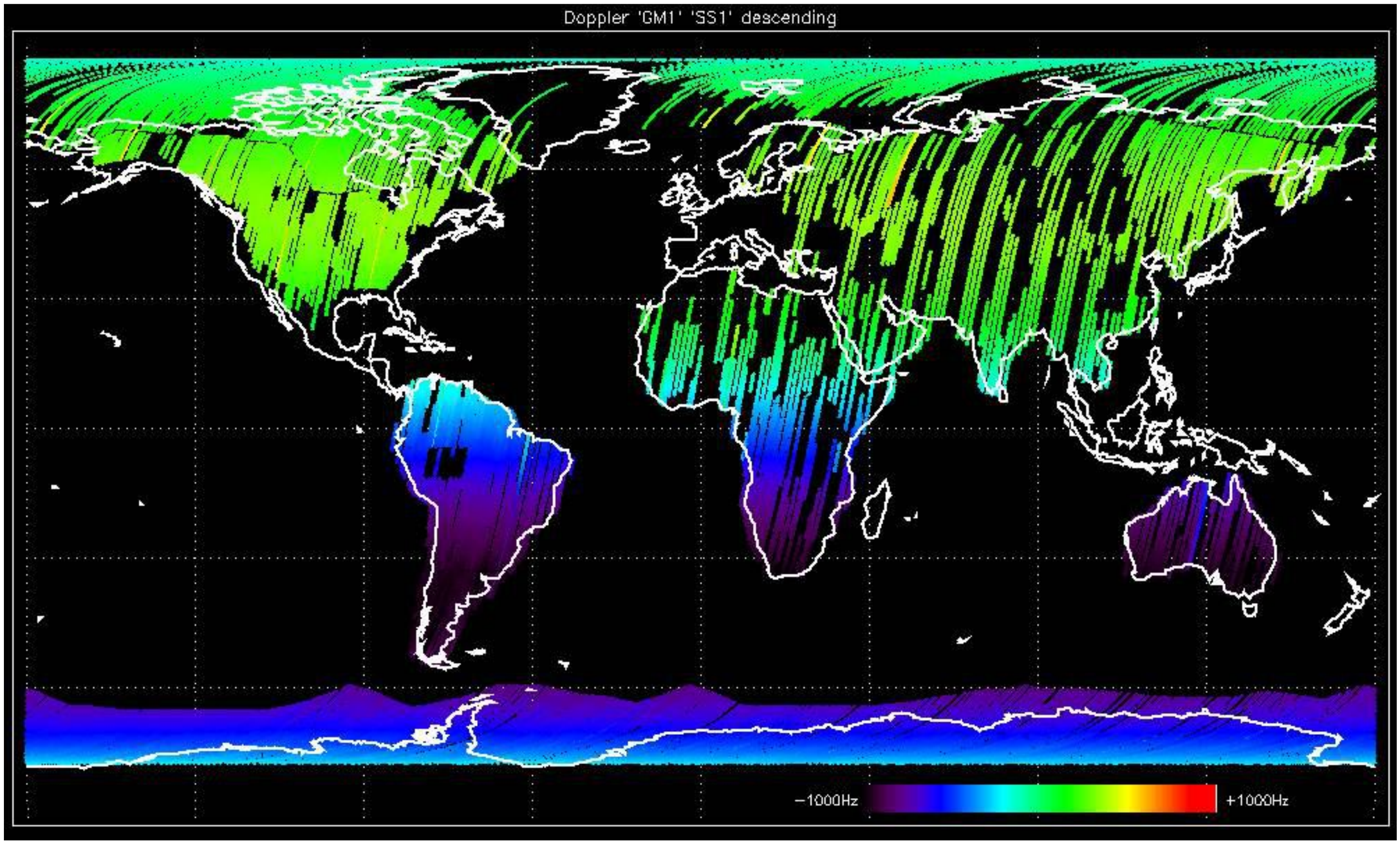

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

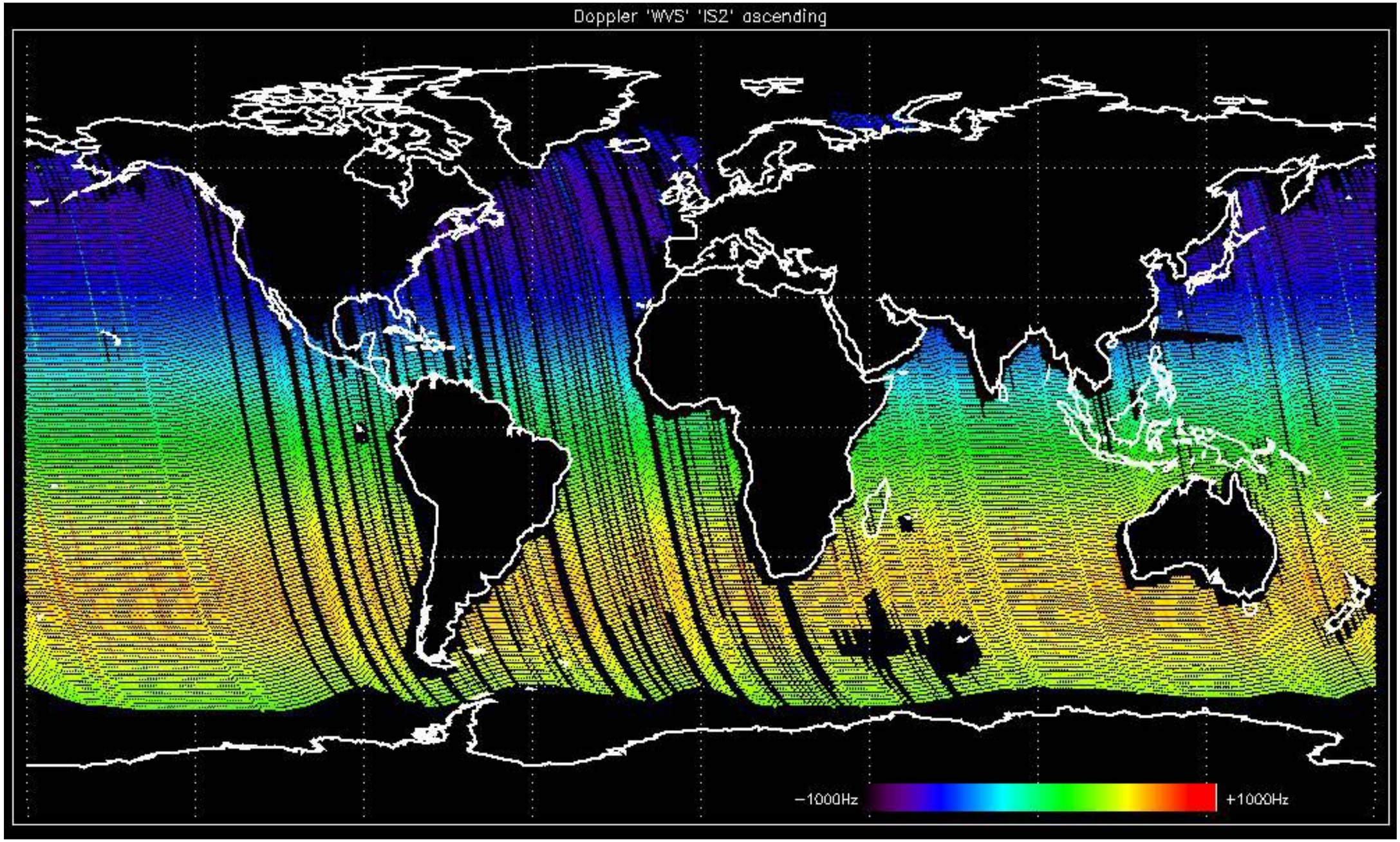

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

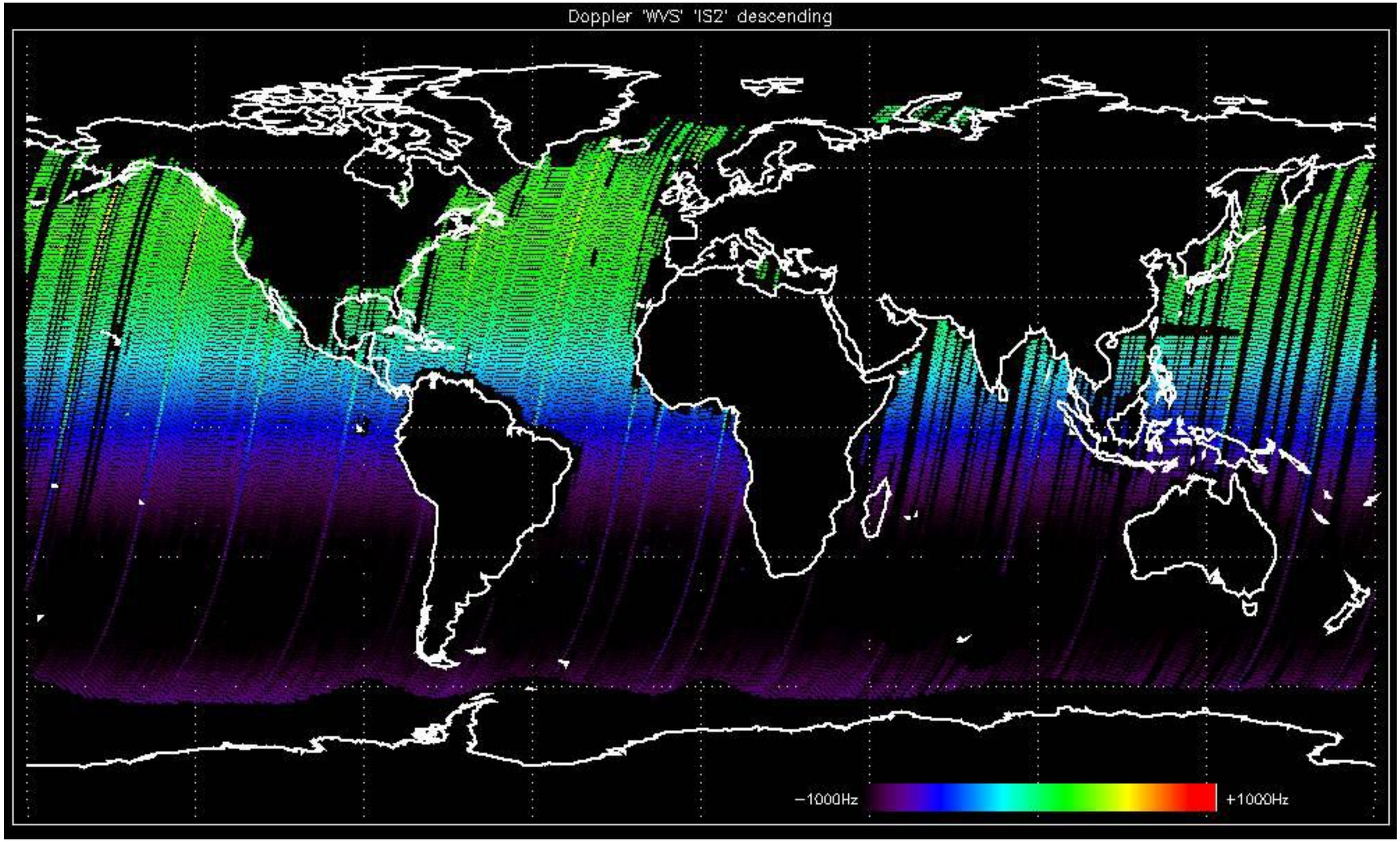
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

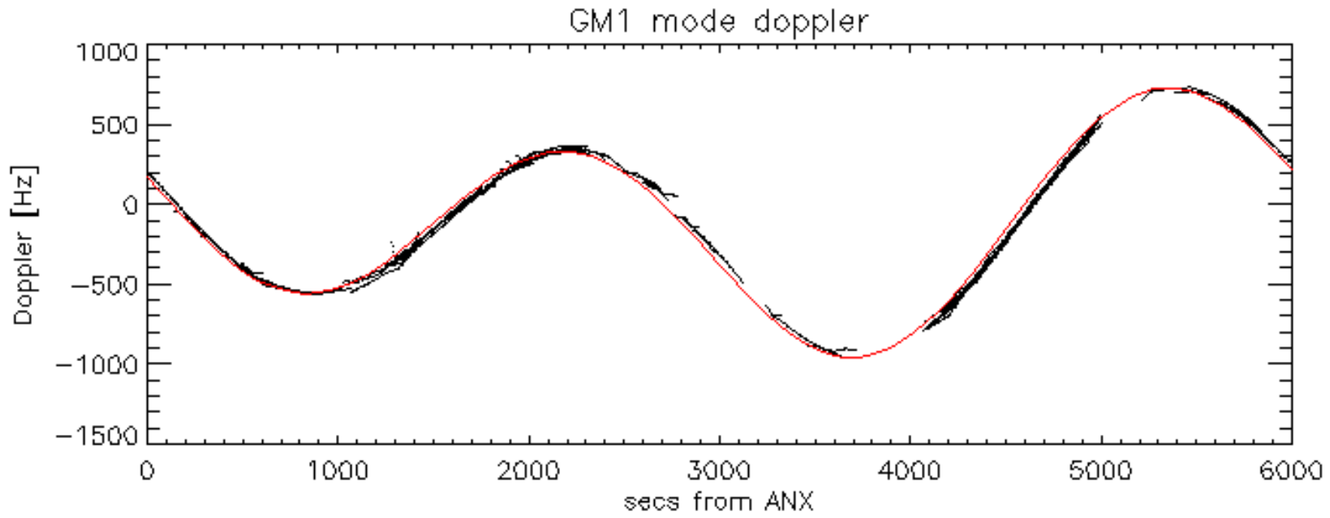
Preliminary report.The data is not yet controled

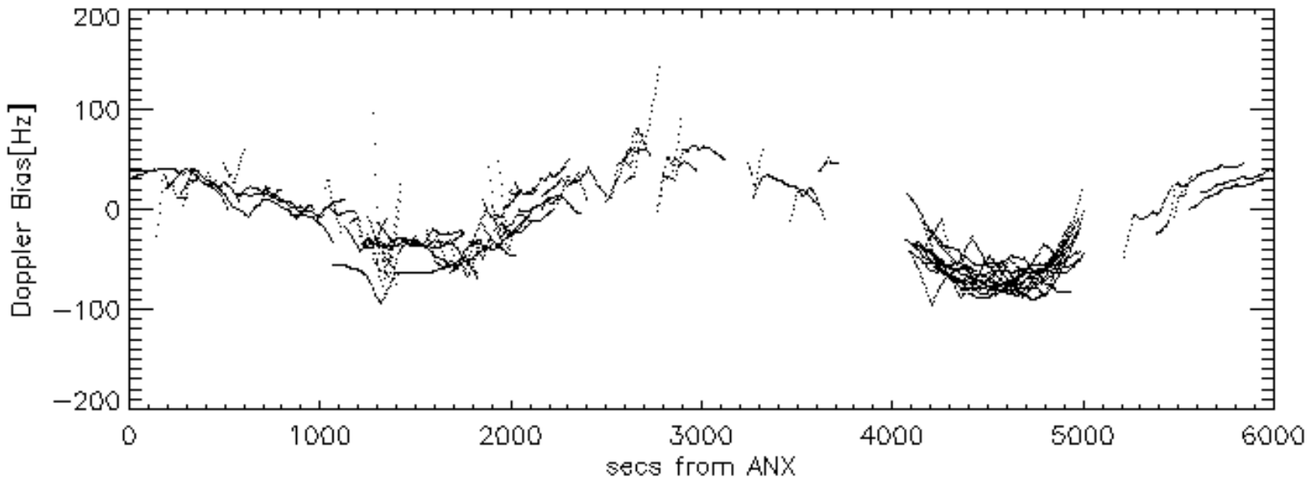

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

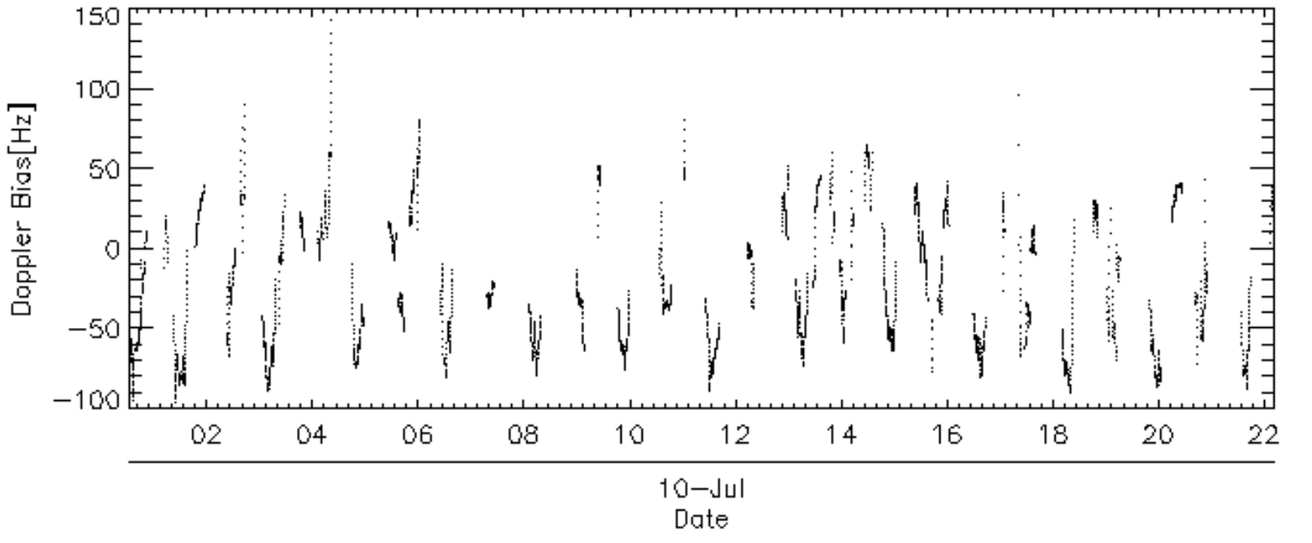

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

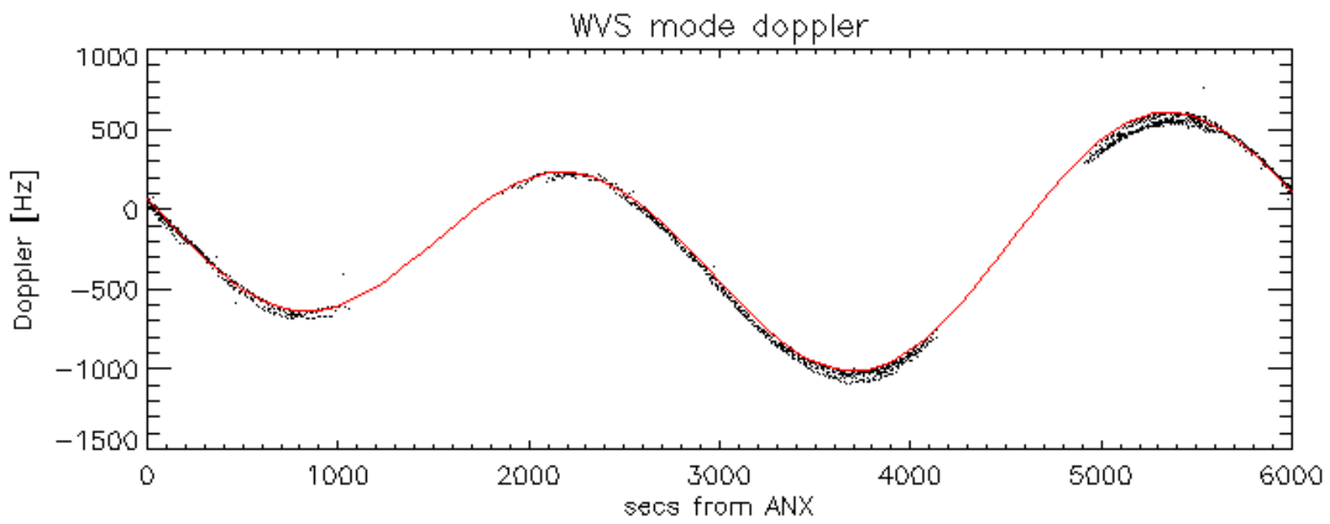

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

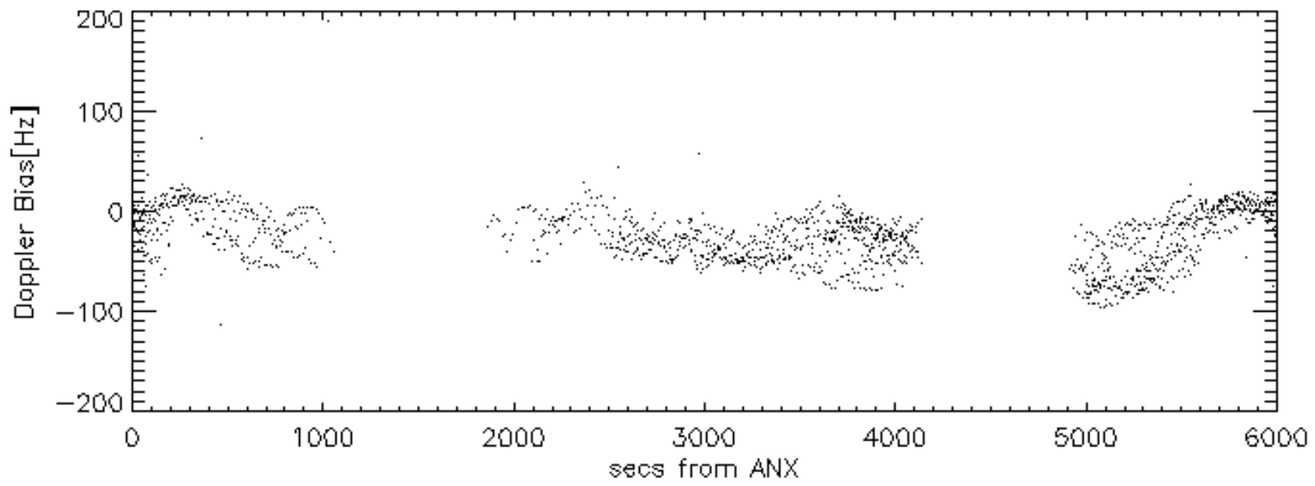

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

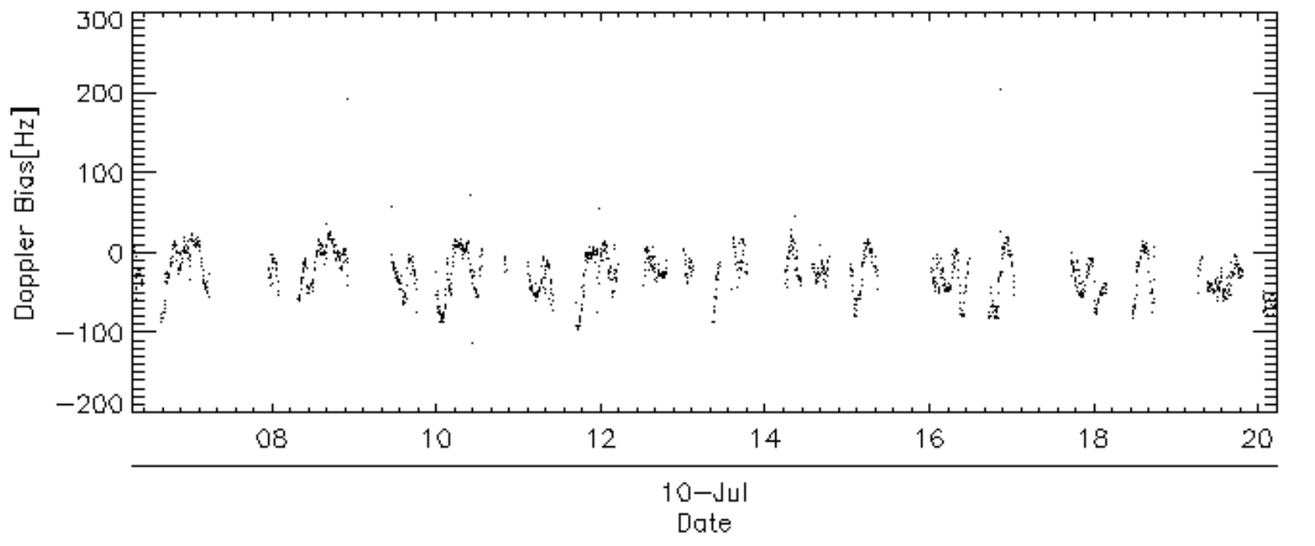

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

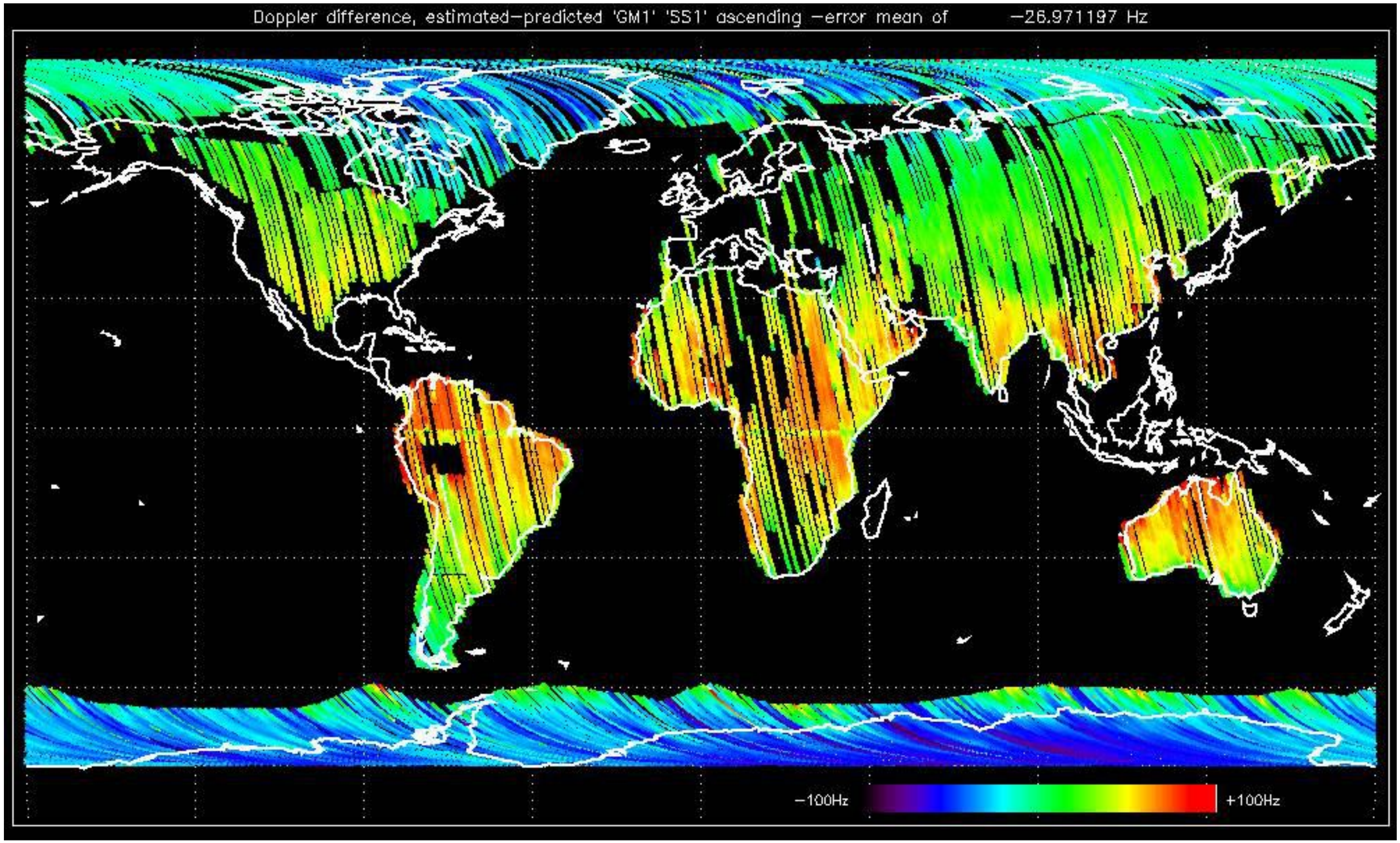

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

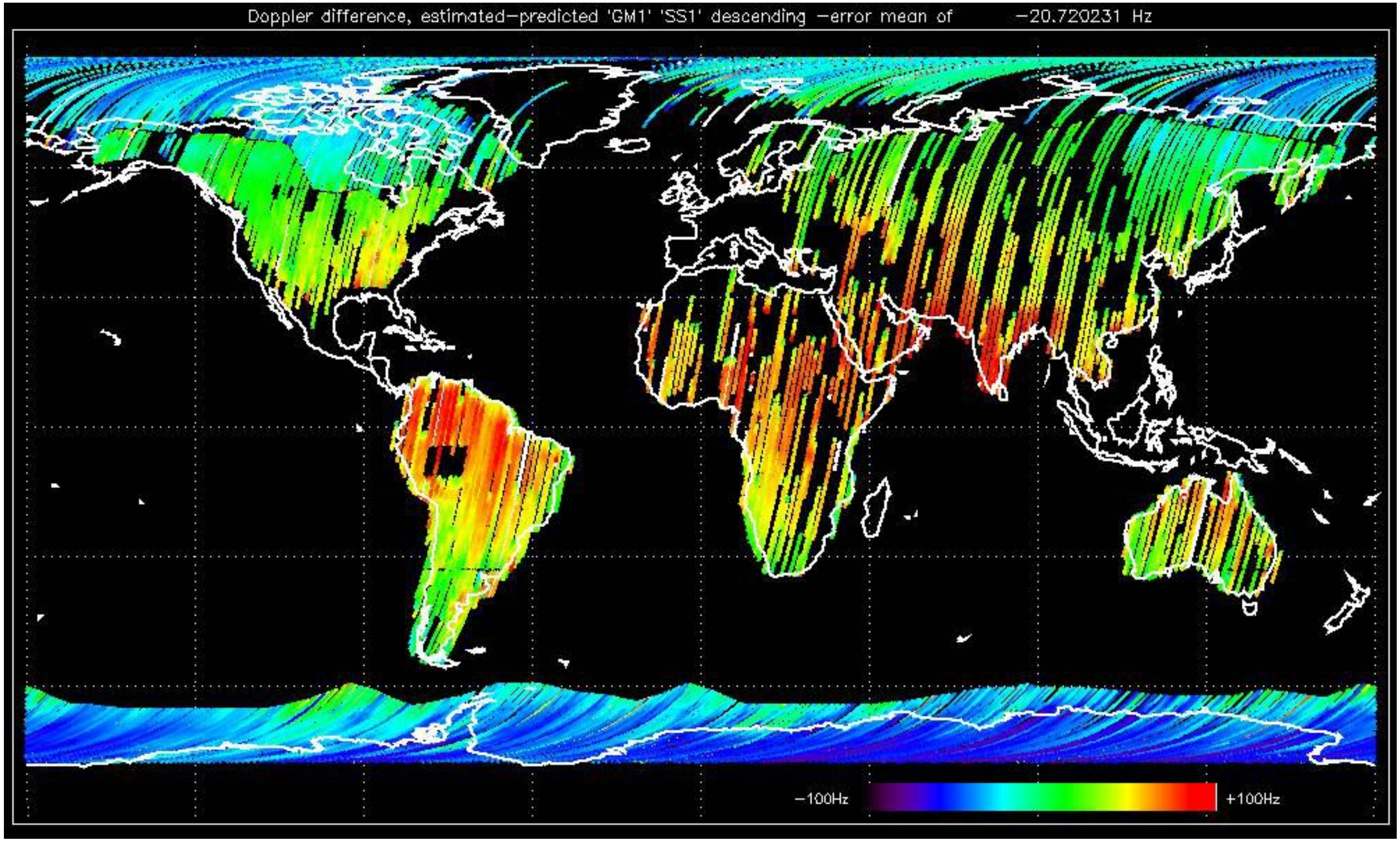

Doppler Bias[Hz]
150
100
50
0
−50
−100
02
04
06
08
10
12
14
16
18
20
22
10−Jul
Date

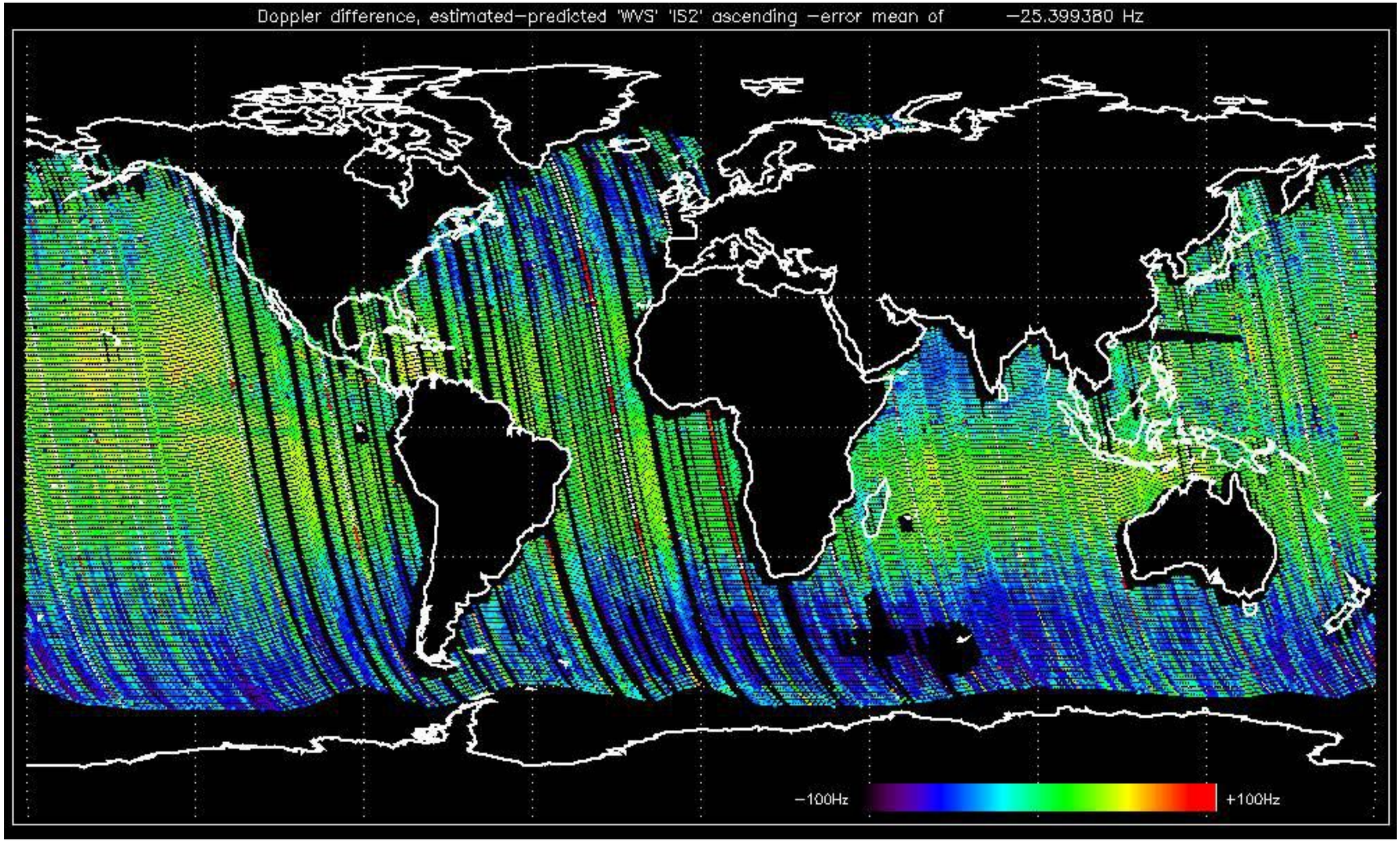

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

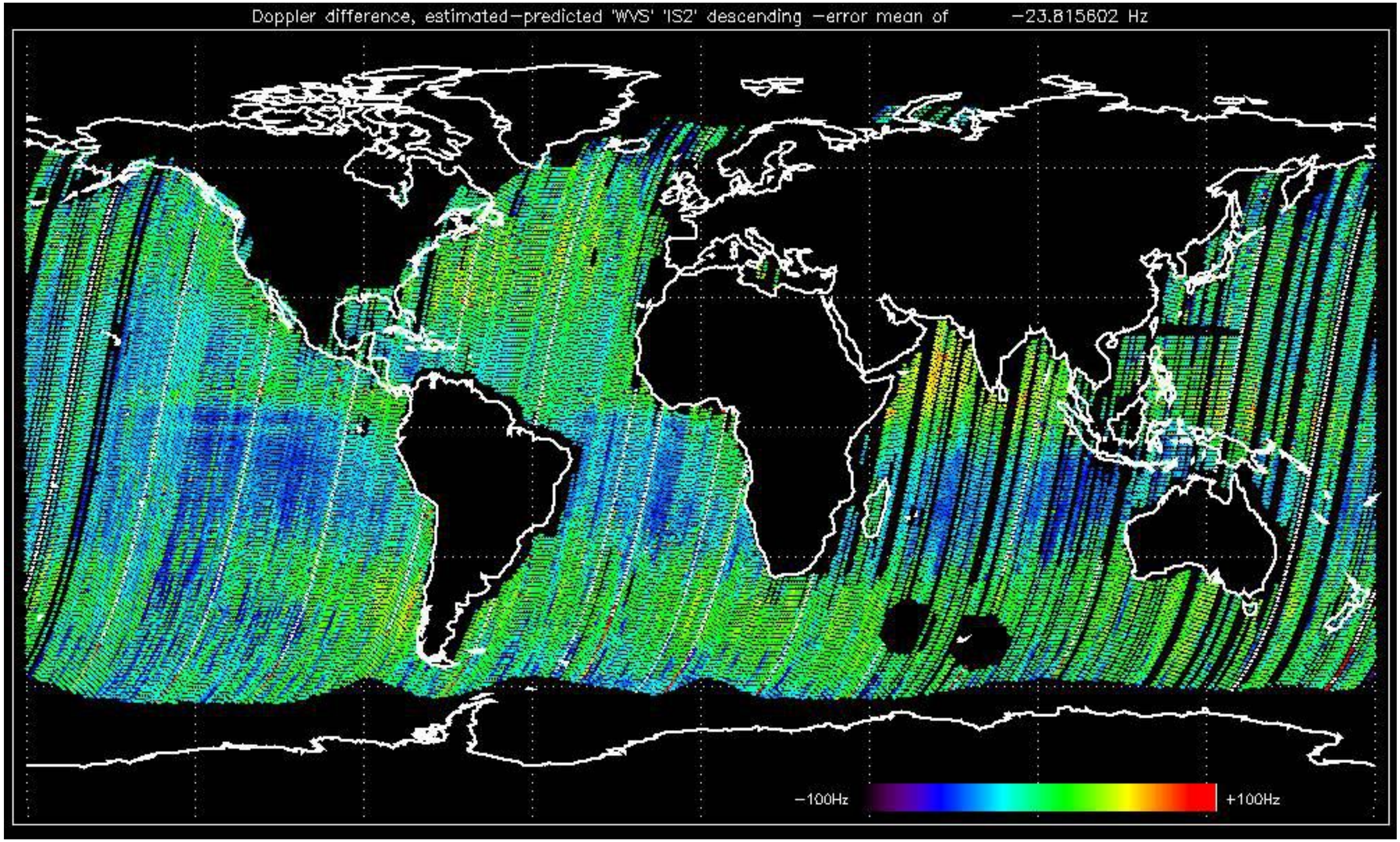

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
300
200
100
0
−100
−200
08
10
12
14
16
18
20
10−Jul
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −26.971197 Hz
−100Hz
+100Hz

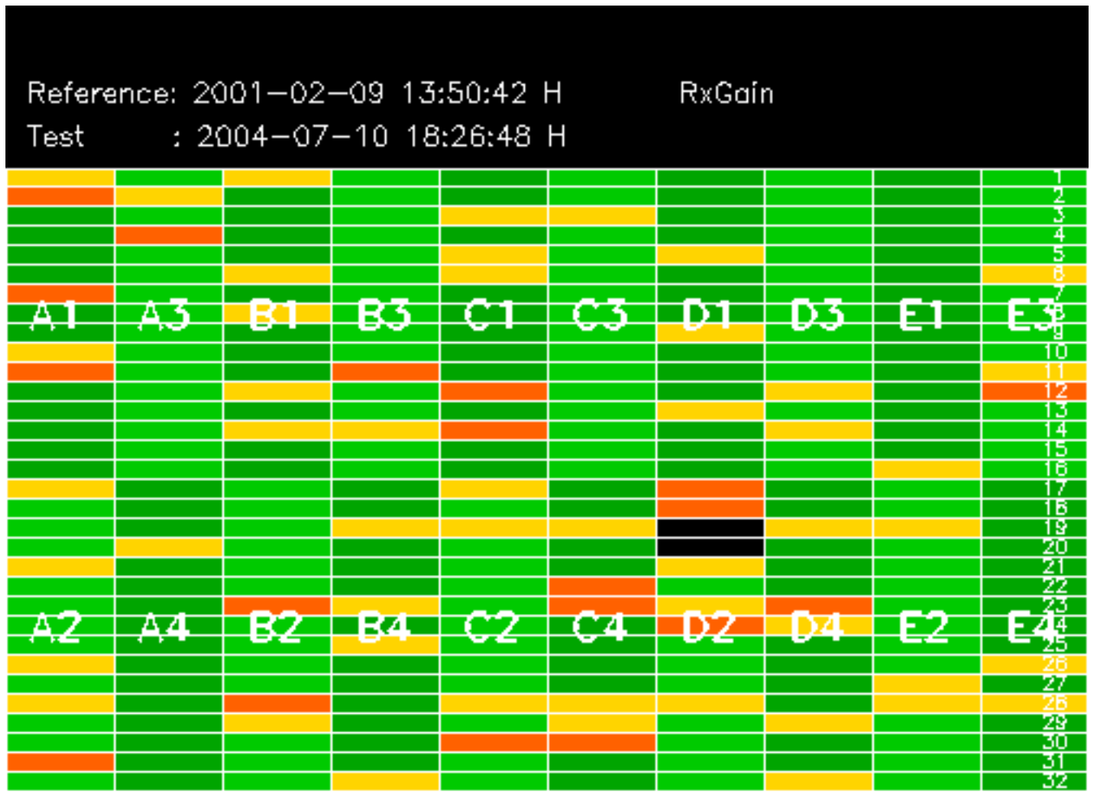

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −20.720231 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −25.399380 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −23.815602 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 : 2004-07-10 18:26:48 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
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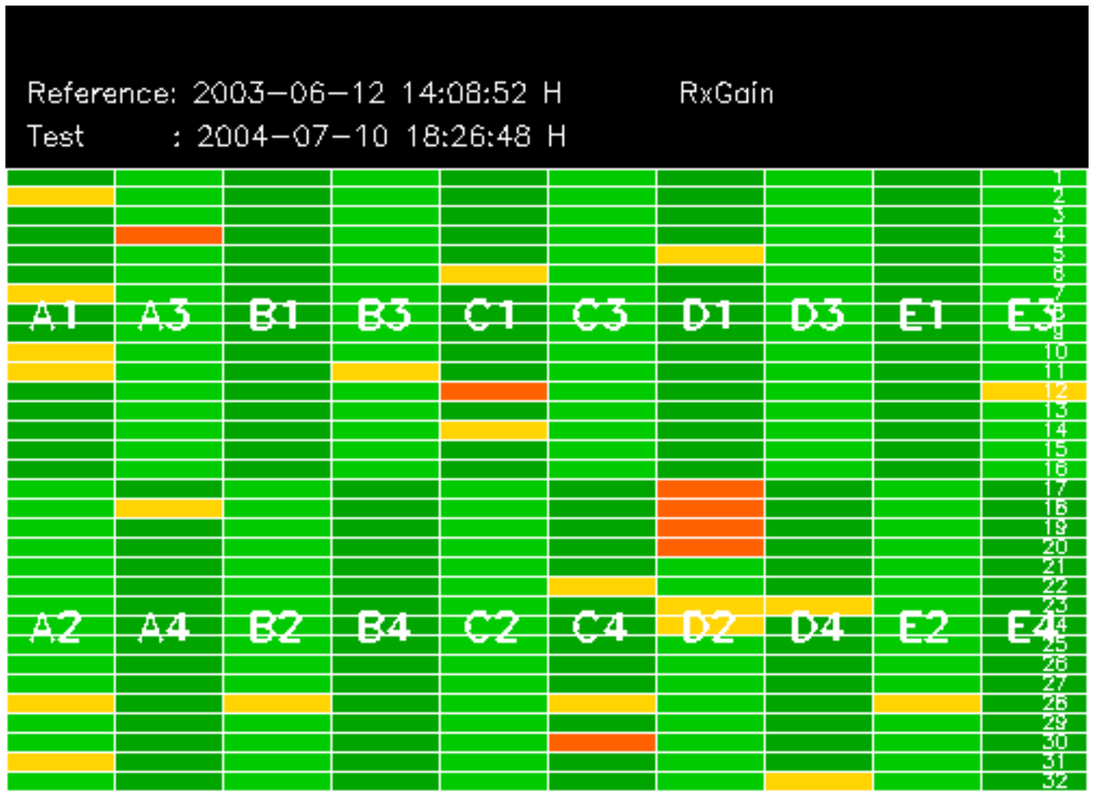
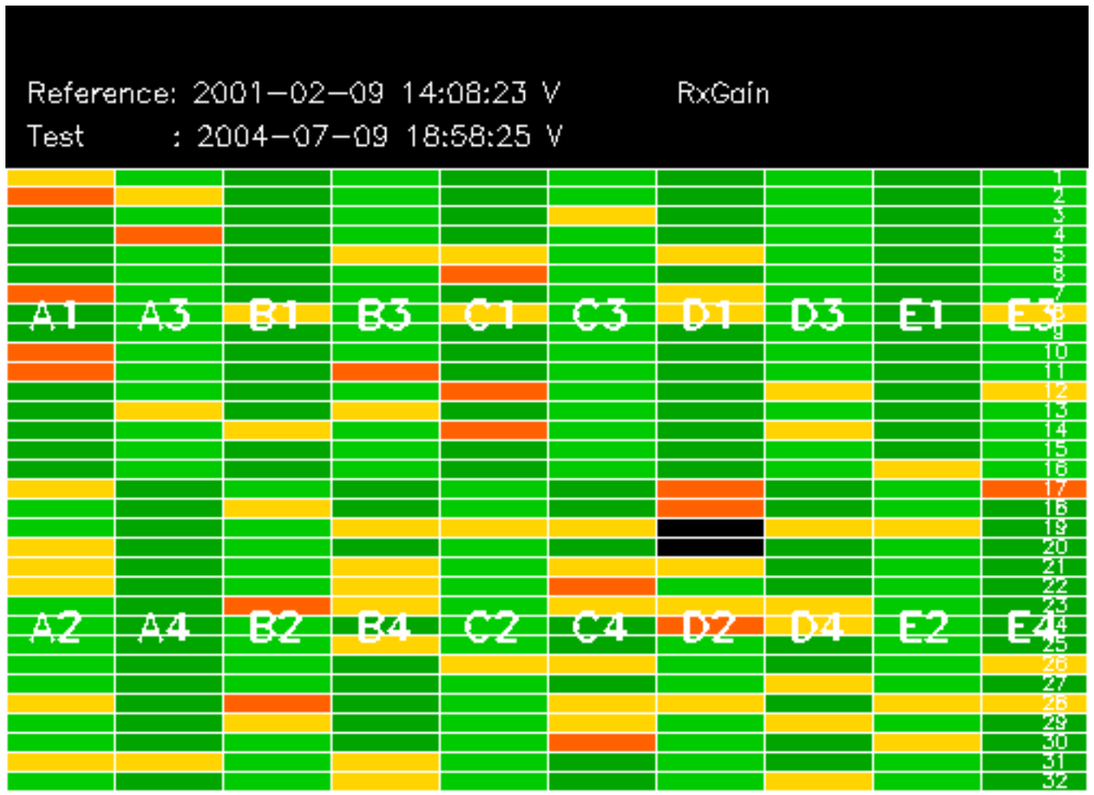

Reference: 2003-06-12 14:08:52 H
Test : 2004-07-10 18:26:48 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-07-09 18:58:25 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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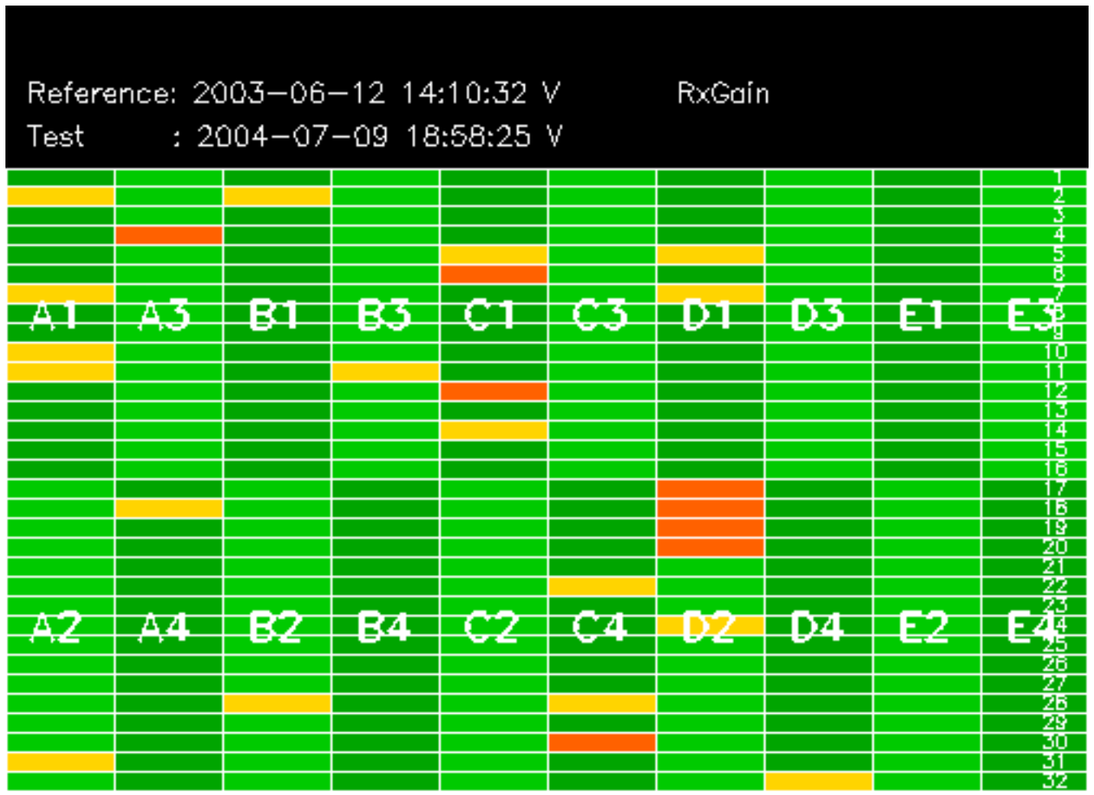
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-09 18:58:25 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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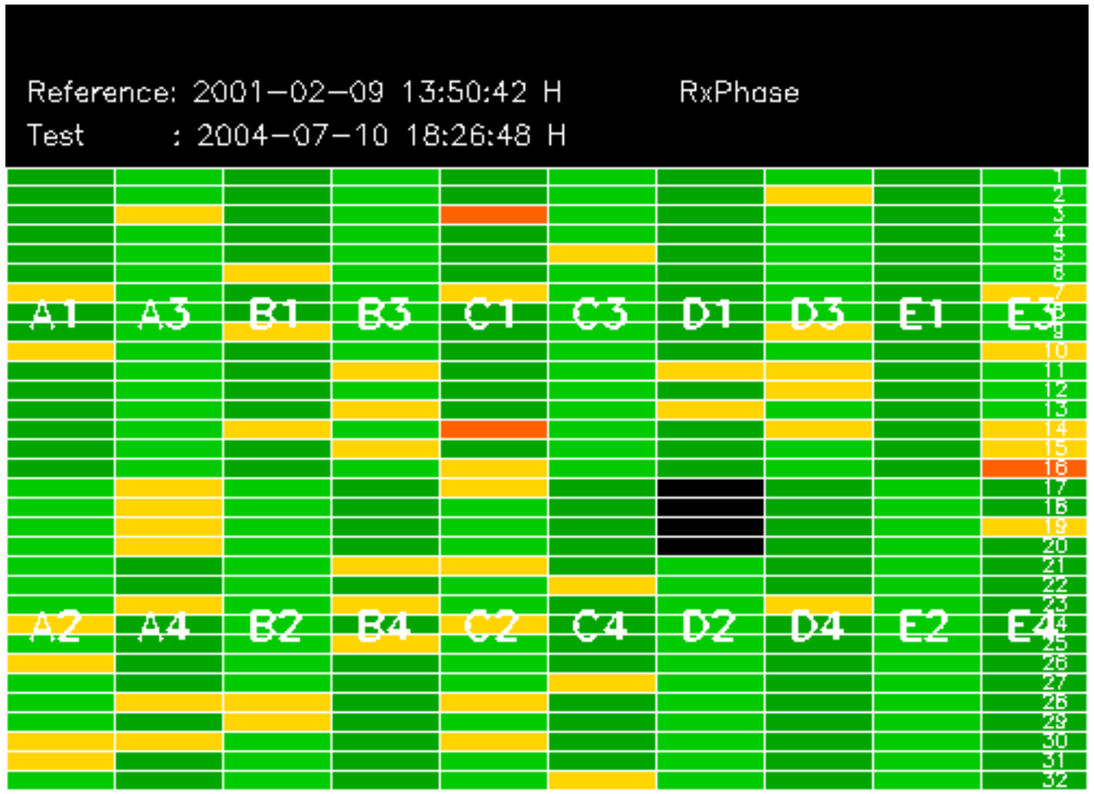
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-07-10 18:26:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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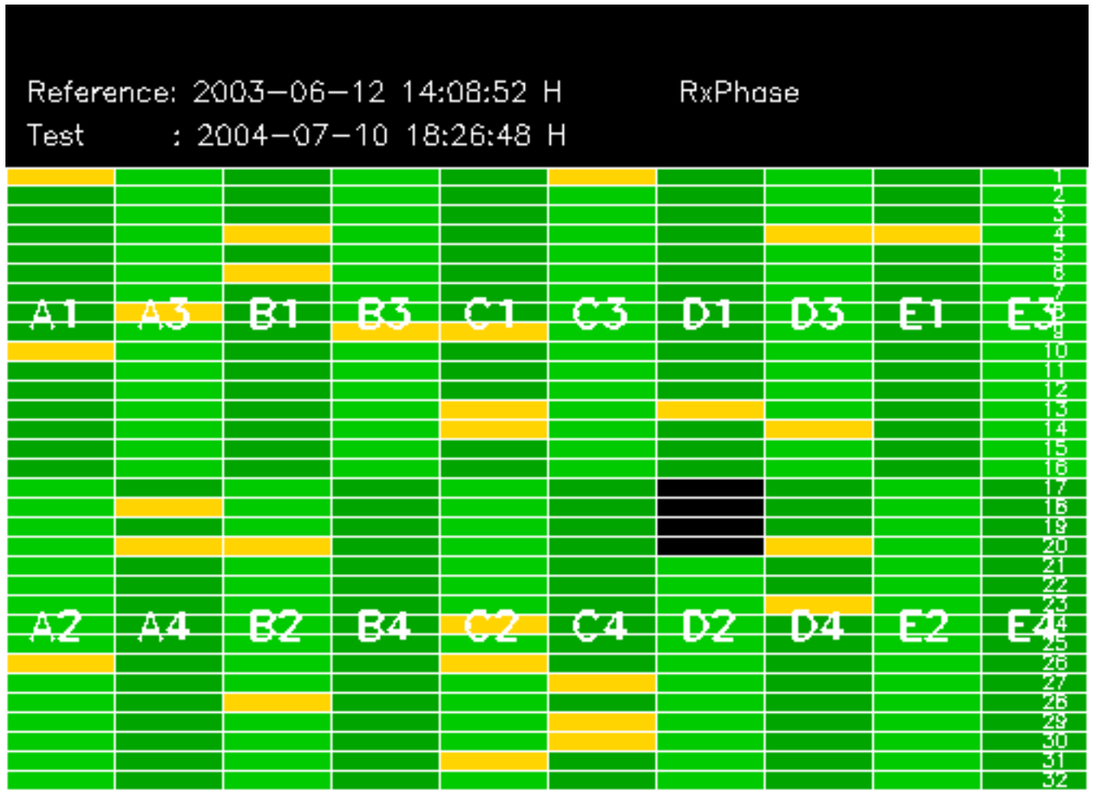
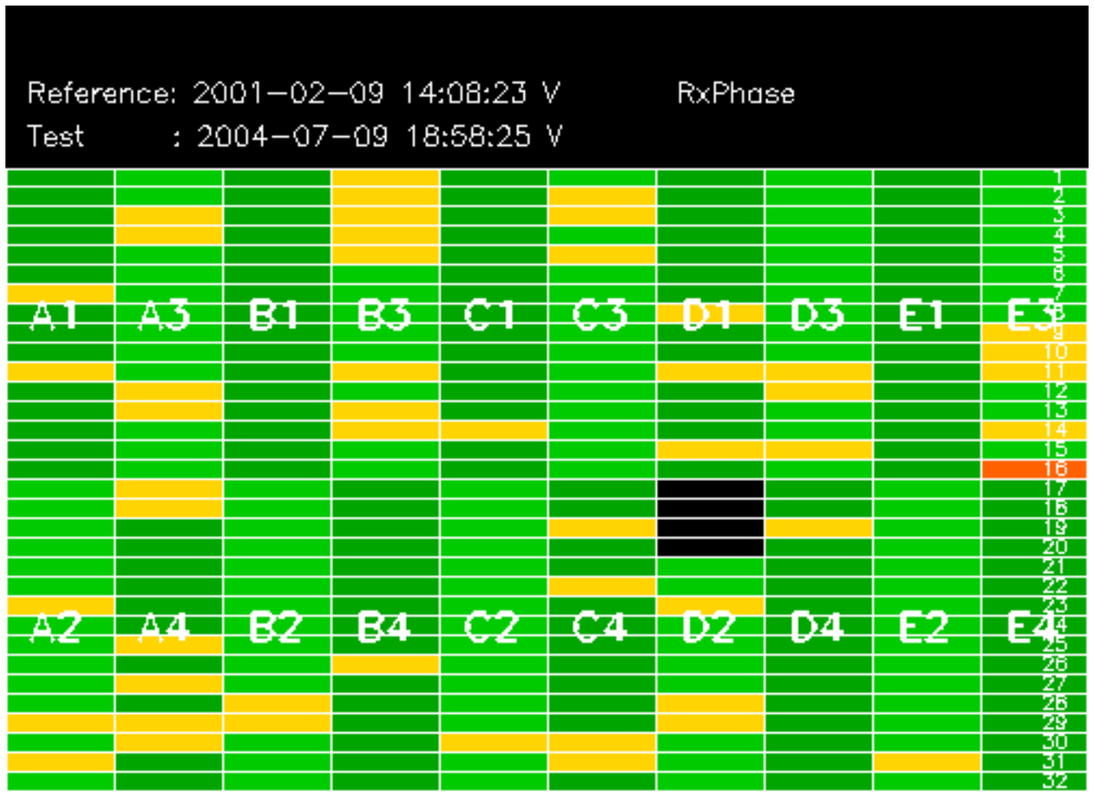
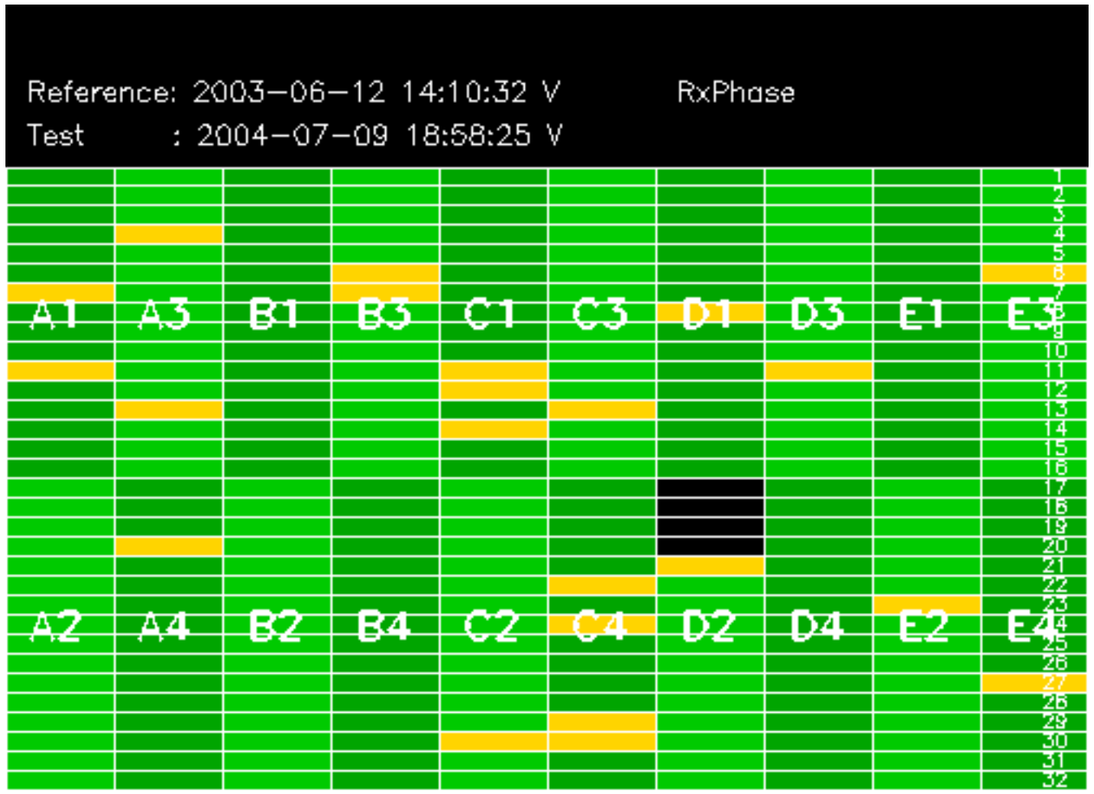
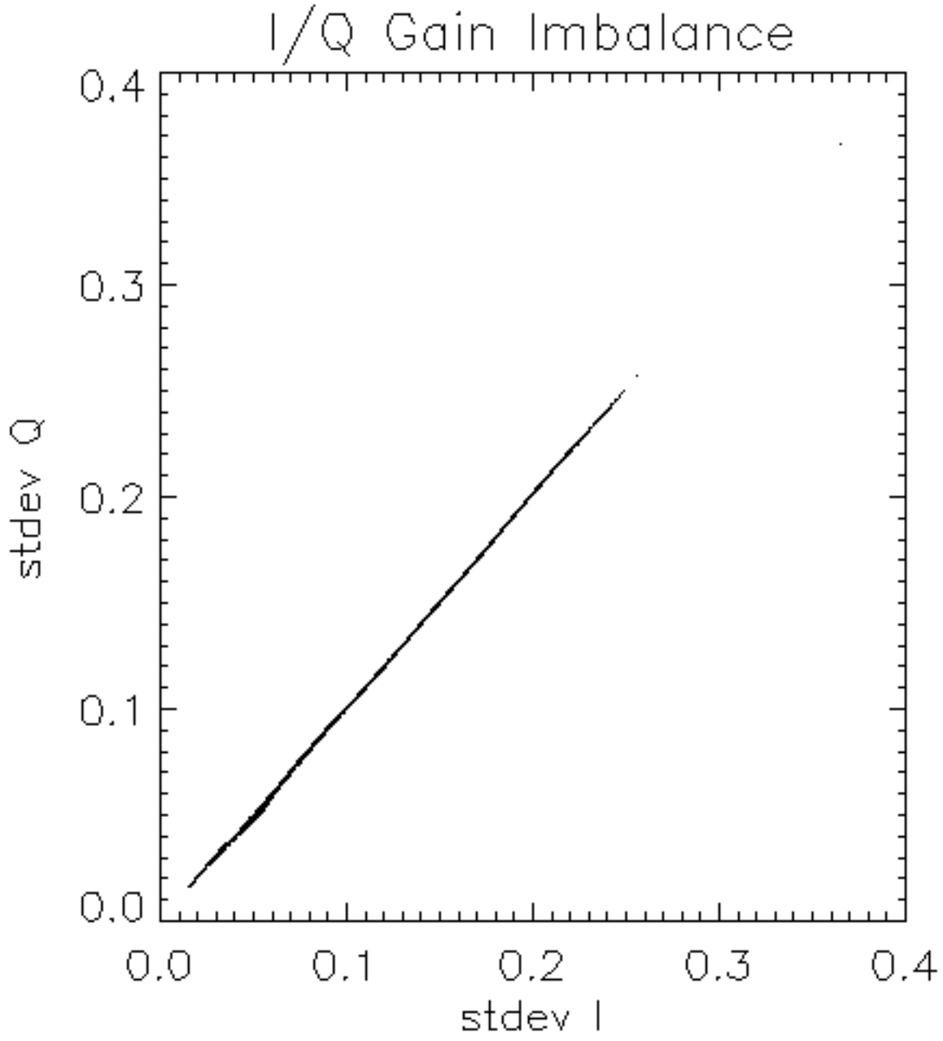
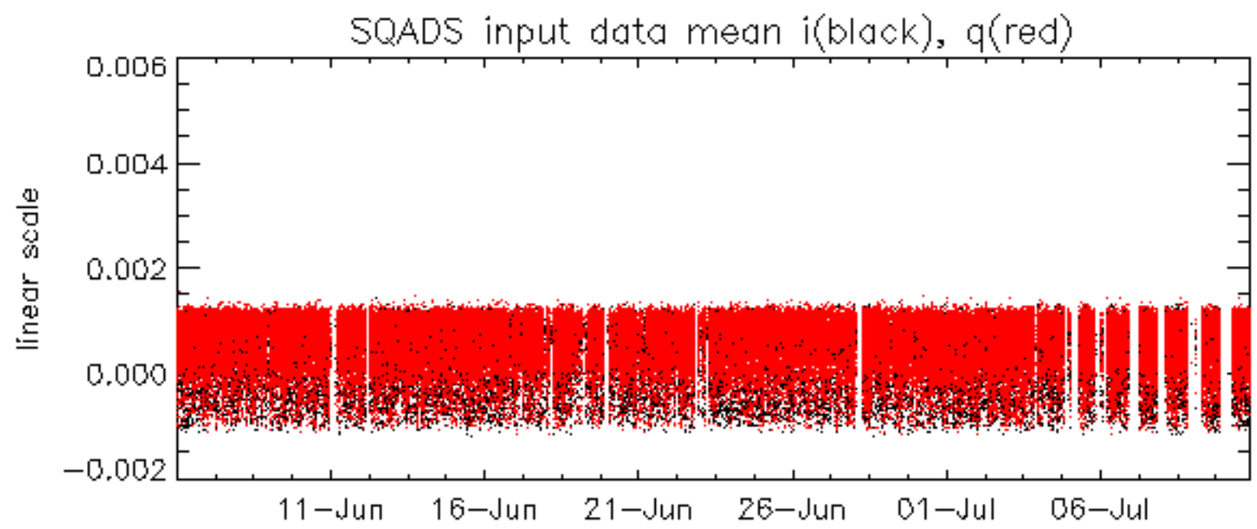
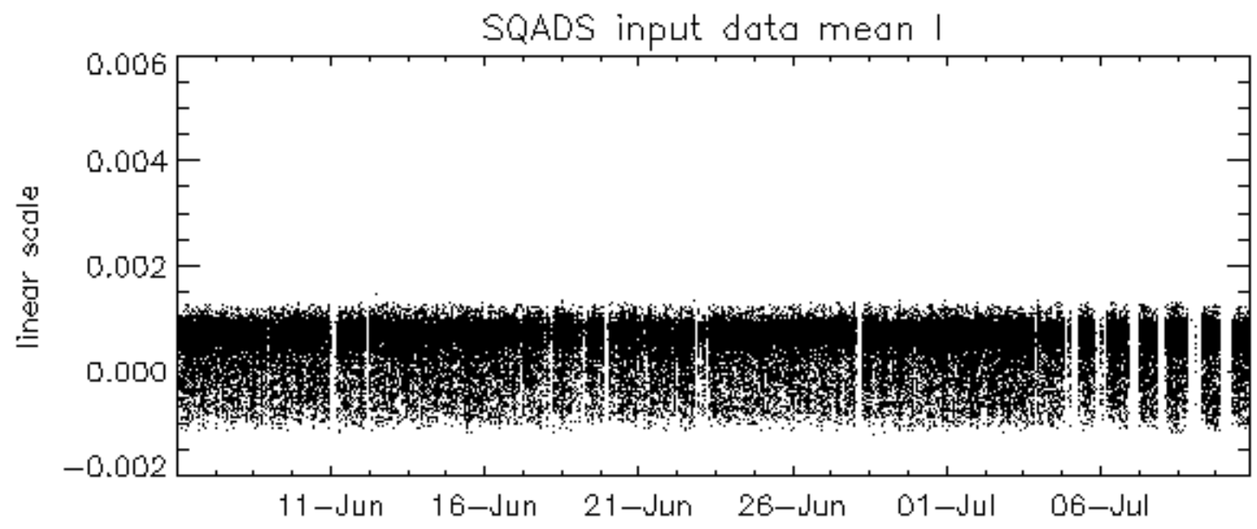

Reference: 2003-06-12 14:08:52 H
Test : 2004-07-10 18:26:48 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

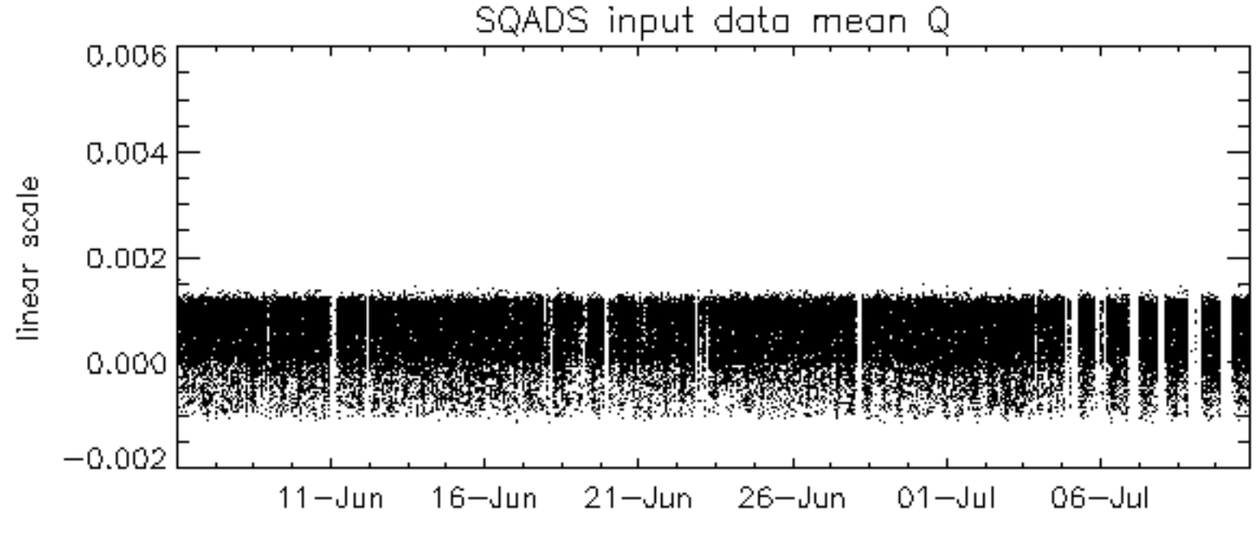

Reference: 2001-02-09 14:08:23 V
Test : 2004-07-09 18:58:25 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

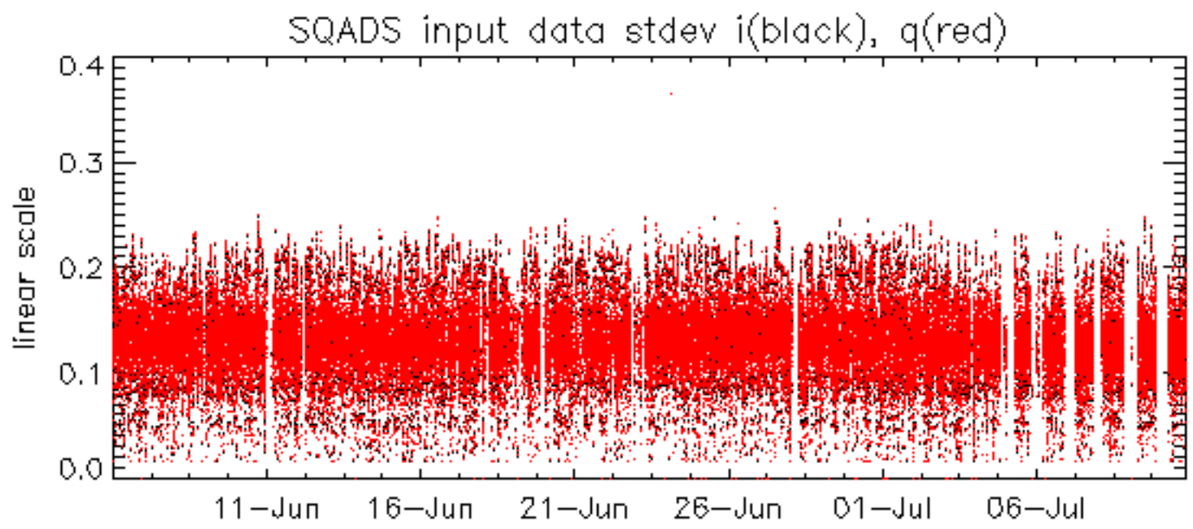

Reference: 2003-06-12 14:10:32 V
Test : 2004-07-09 18:58:25 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

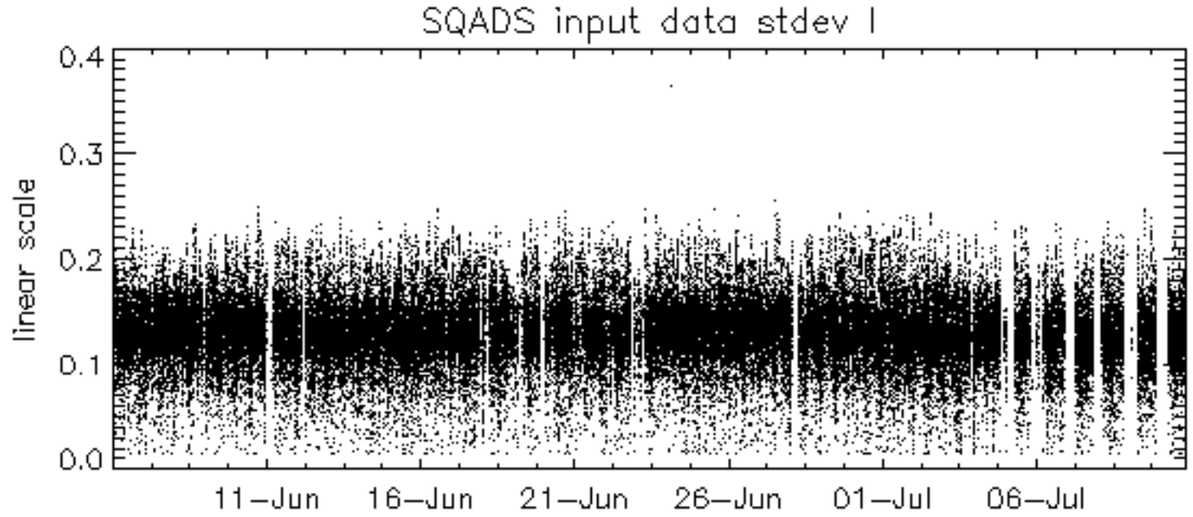

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

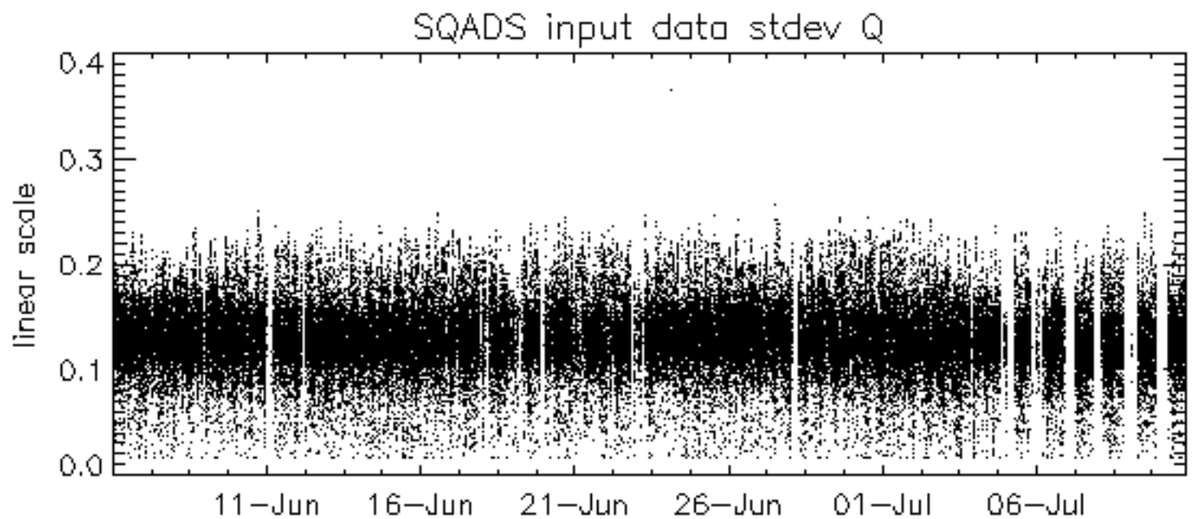

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Jun
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul

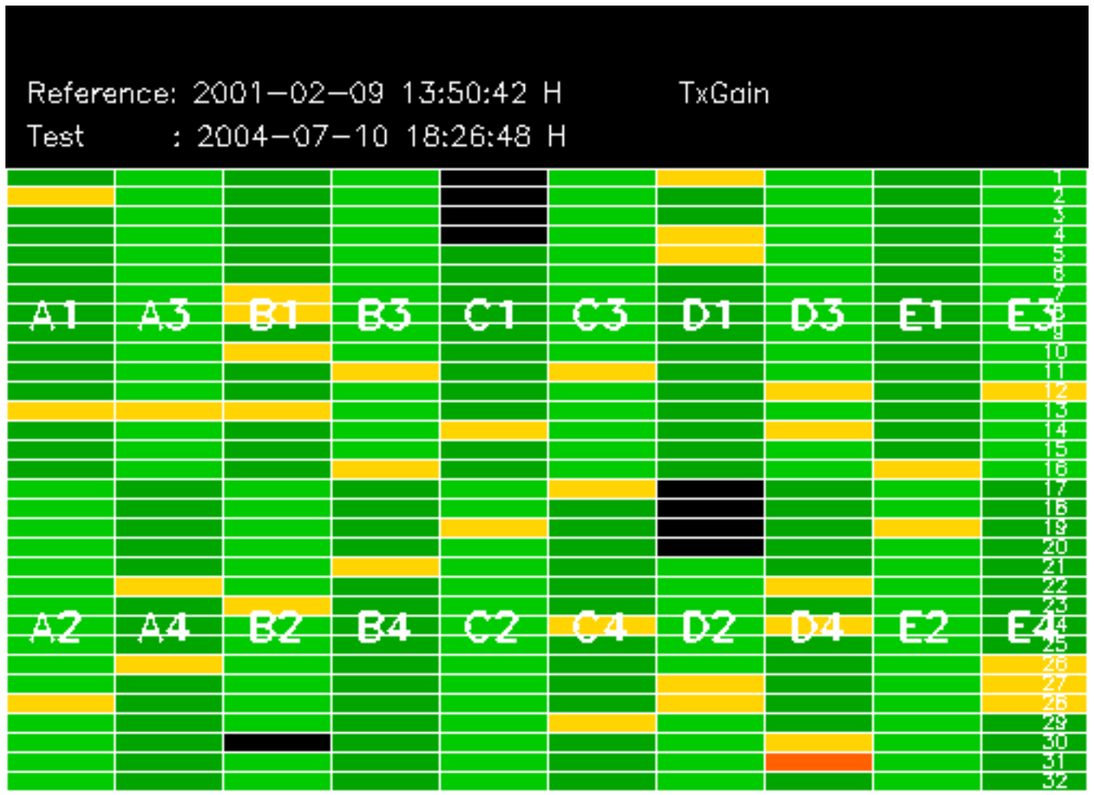

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Jun
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-07-10 18:26:48 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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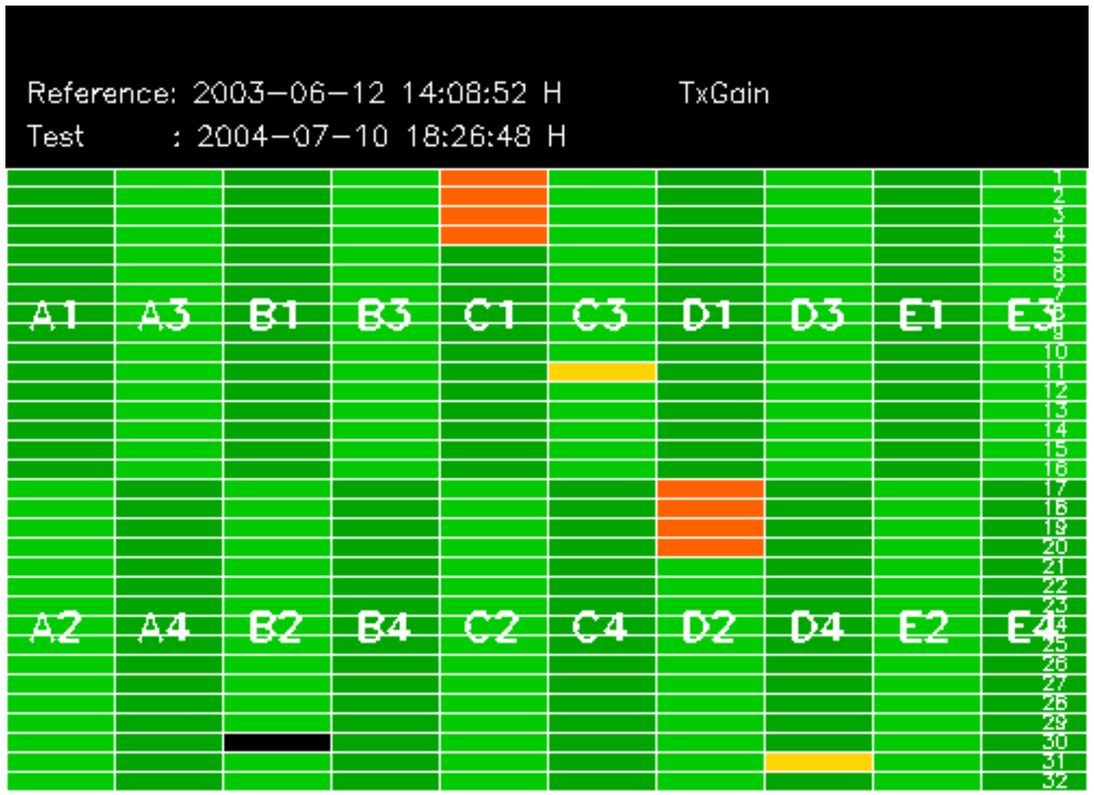
Reference: 2003-06-12 14:08:52 H
Test : 2004-07-10 18:26:48 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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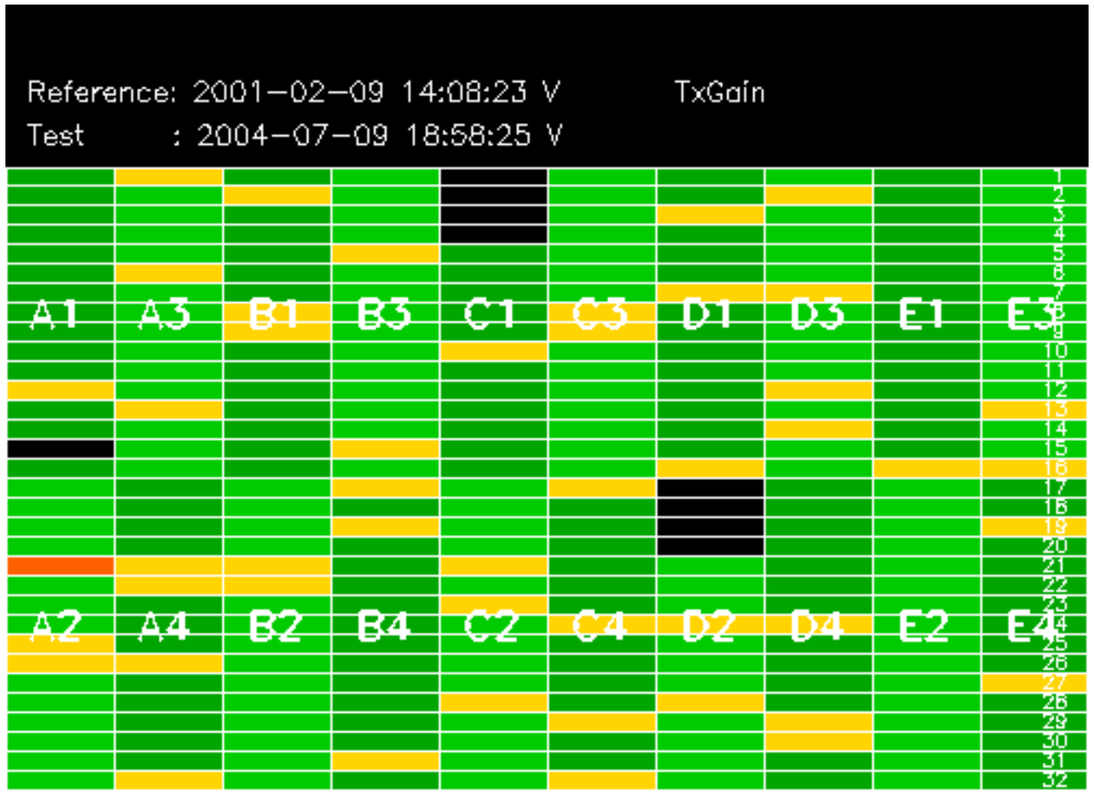
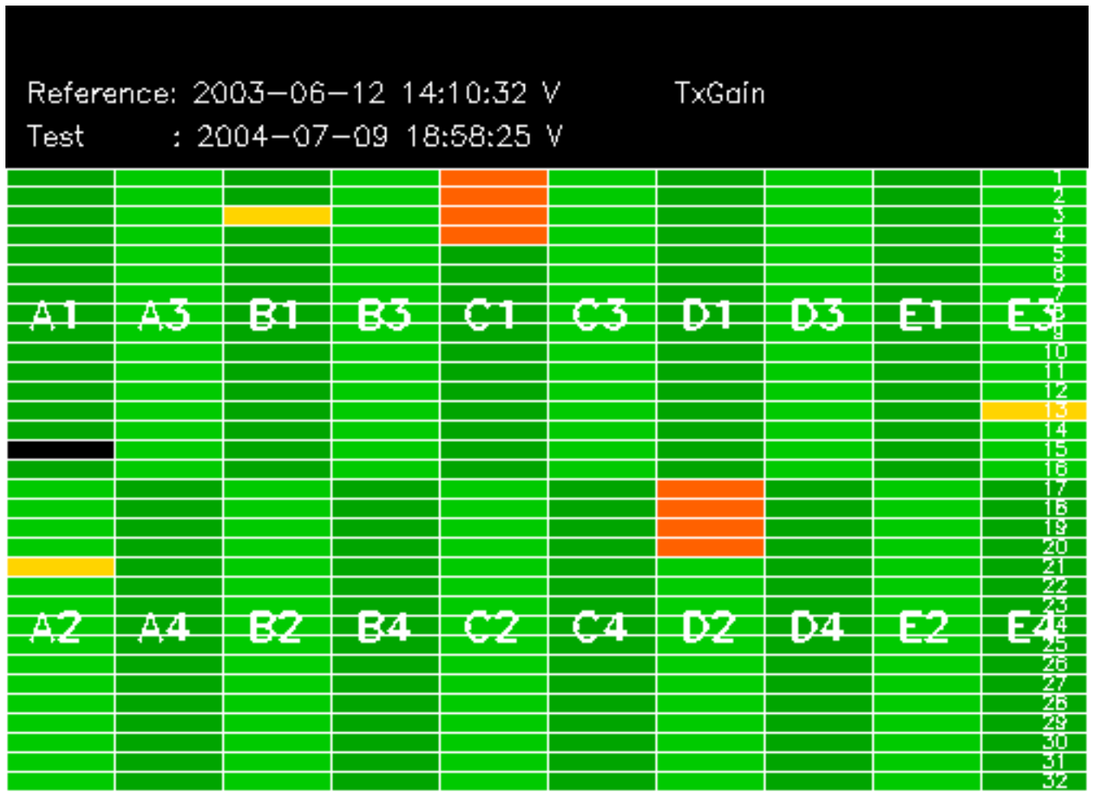

Reference: 2001-02-09 14:08:23 V
Test : 2004-07-09 18:58:25 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-07-09 18:58:25 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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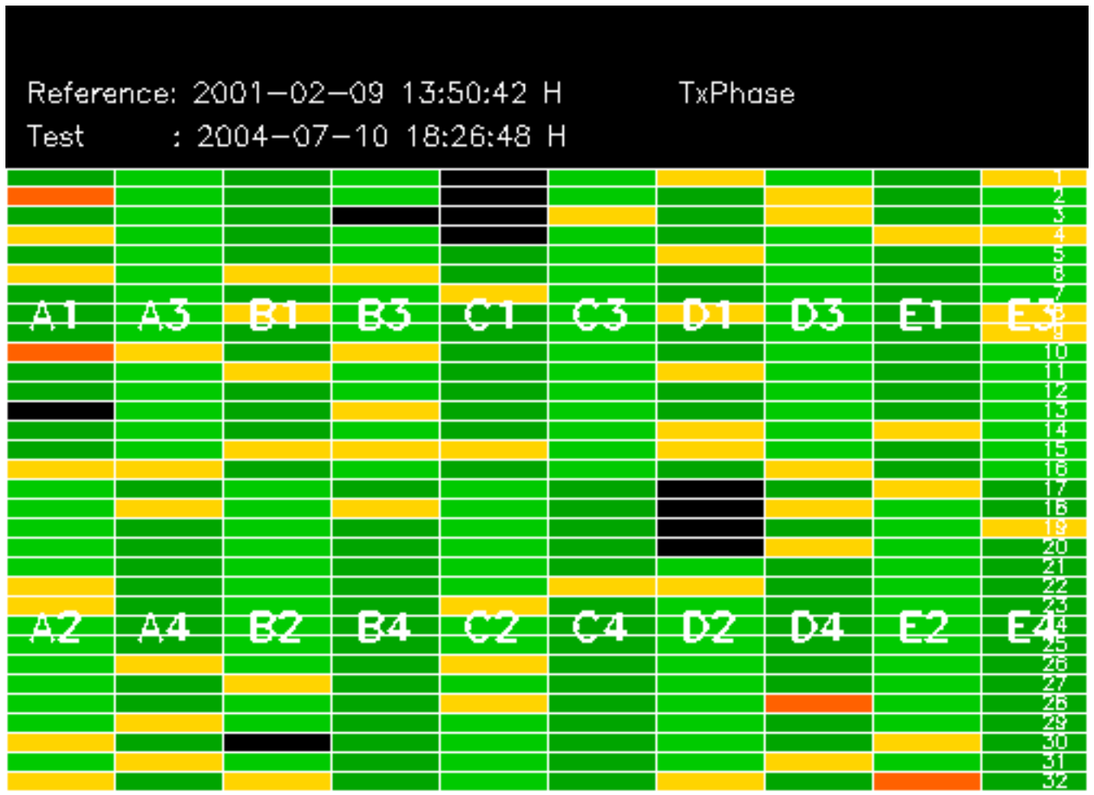
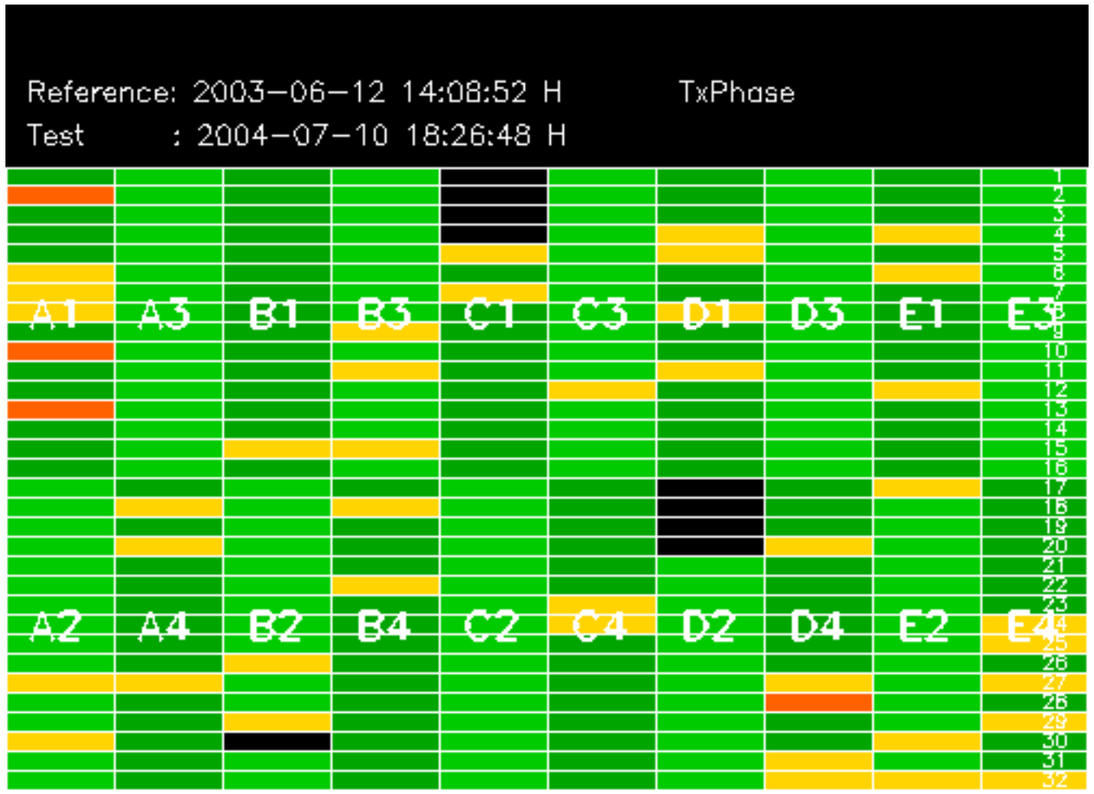
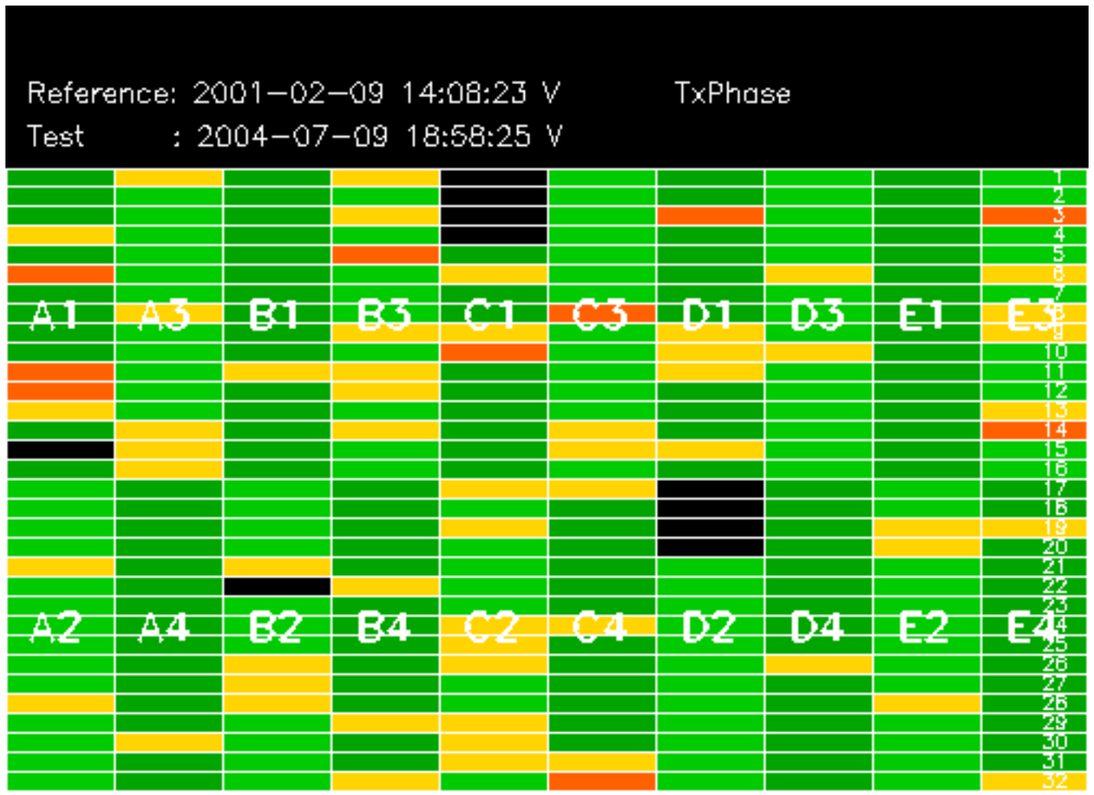
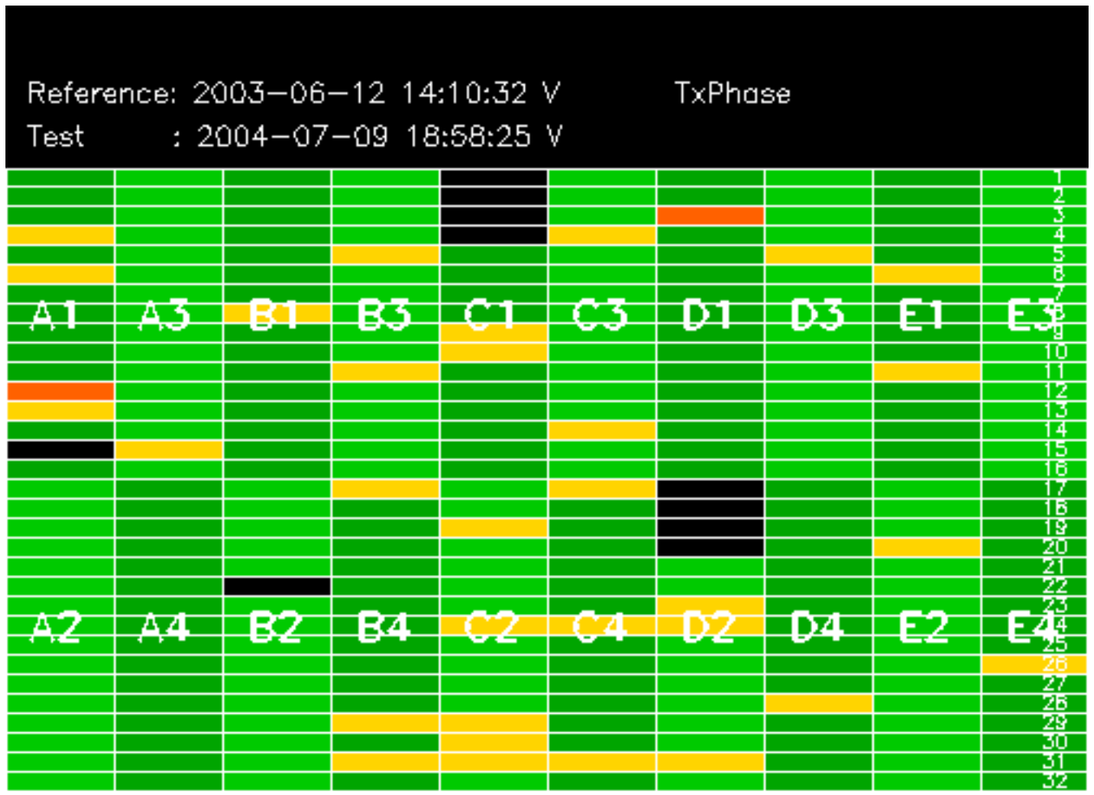

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-07-10 18:26:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-07-10 18:26:48 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 : 2004-07-09 18:58:25 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 : 2004-07-09 18:58:25 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
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B2
B4
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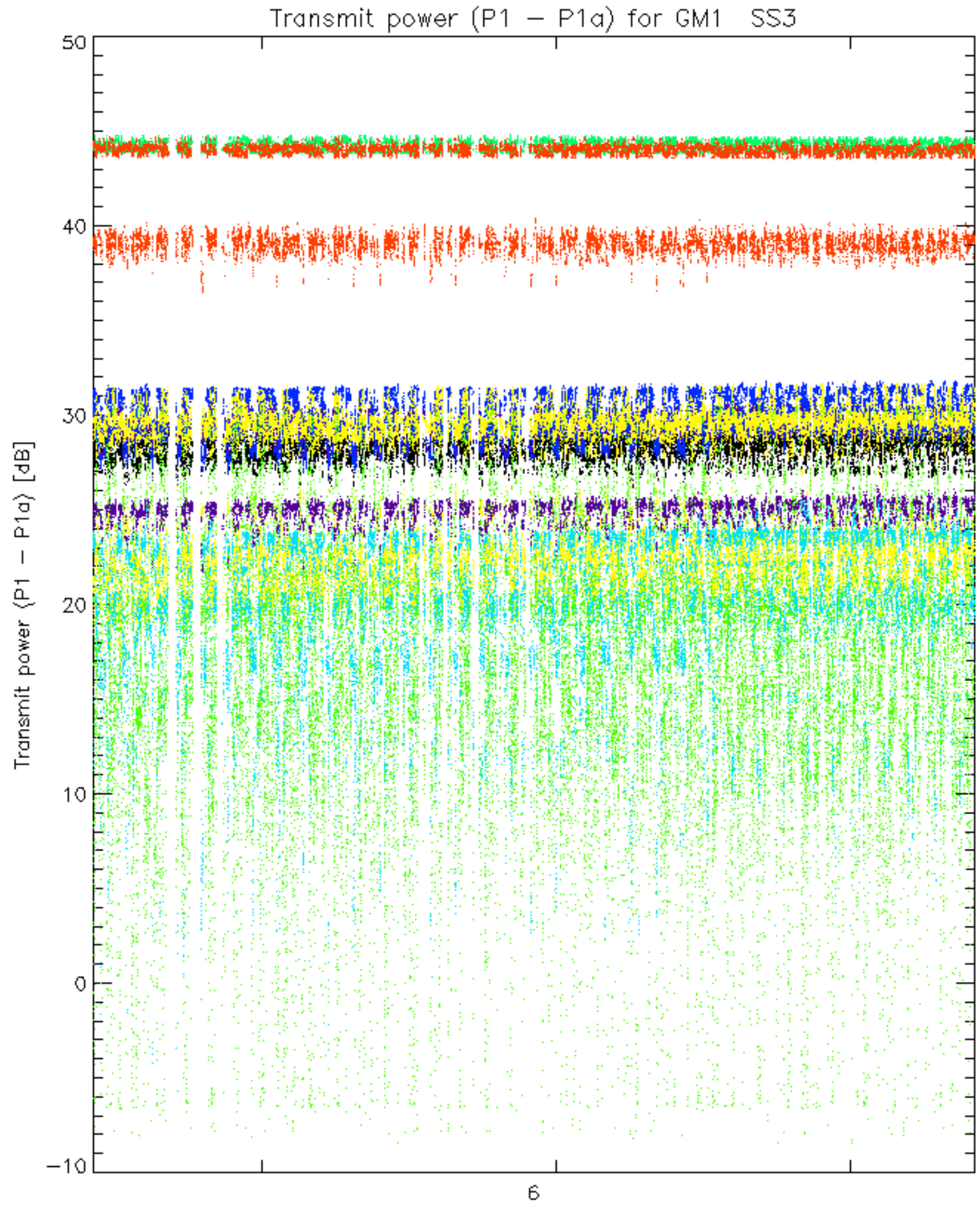
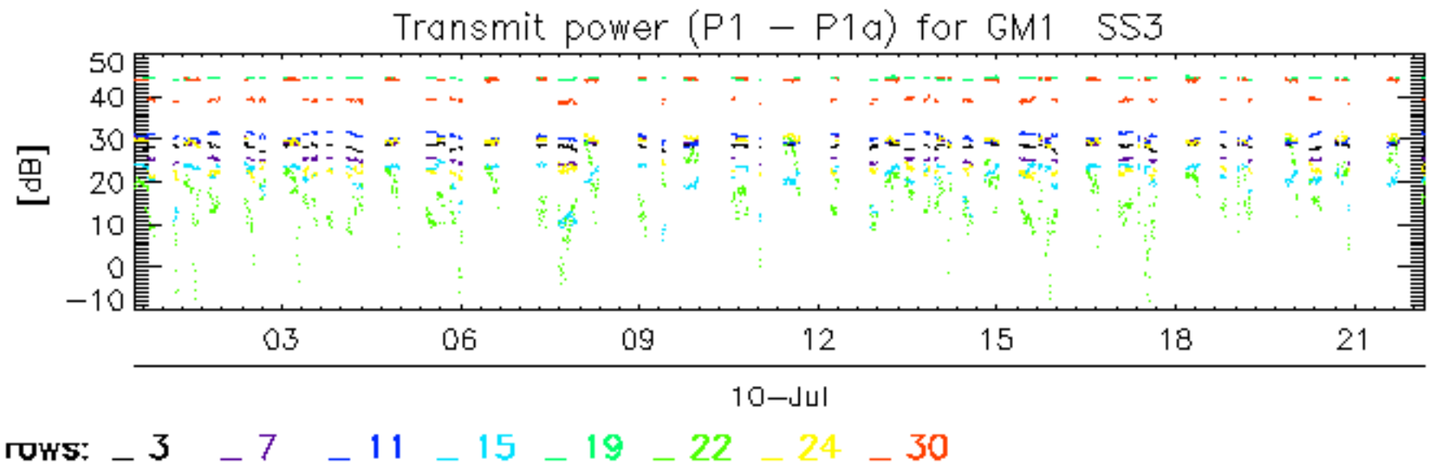
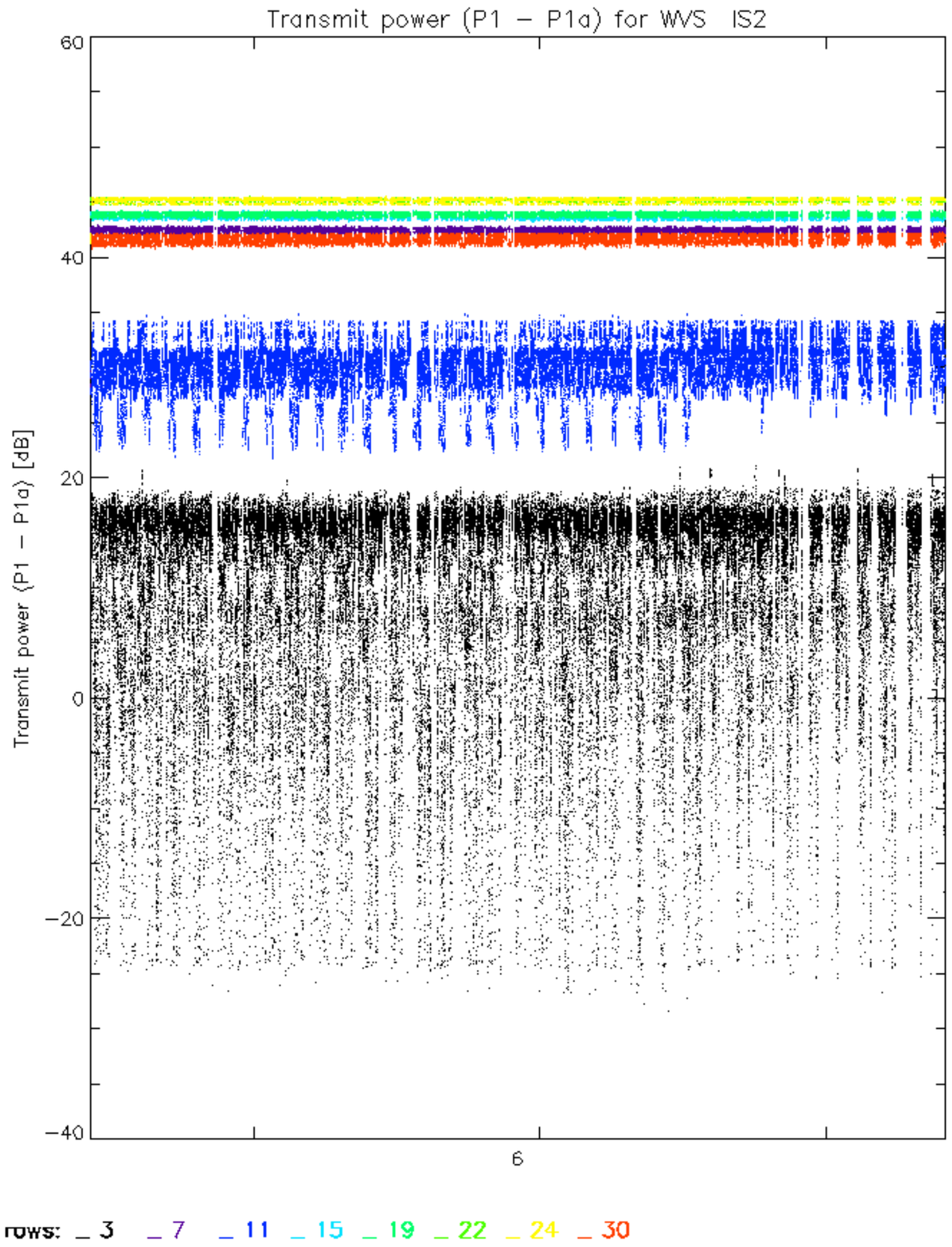
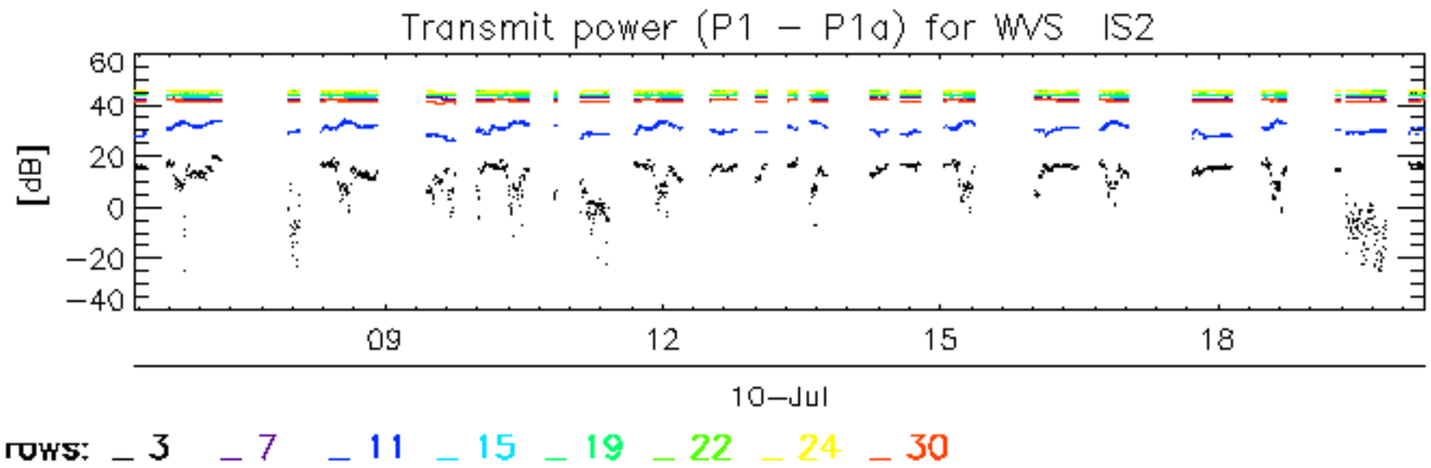

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
6
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
10–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
6
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 − P1a) for WVS IS2
[dB]
60
40
20
0
−20
−40
09
12
15
18
10−Jul
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.