PRELIMINARY REPORT OF 040812

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

last update on Thu Aug 12 13:04:26 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

No anomalies observed on available browse products

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 any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

- ASA_MS__0PNPDE20040811_043740_000000152029_00219_12798_0007.N1

Polarisation	Start Time
V	20040811 043740
H	20040810 050917

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	-3.492785	0.052276	-0.051210
7	P1	-3.338842	0.044088	-0.052520
11	P1	-4.639518	0.116877	-0.106109
15	P1	-5.753340	0.129056	-0.124145
19	P1	-3.454719	0.004723	-0.005938

22	P1	-4.558588	0.010768	0.033942
24	P1	-4.956631	0.019168	0.014496
30	P1	-6.910211	0.025083	-0.068752
3	P1	-16.256130	0.487231	-0.201987
7	P1	-13.971976	0.082007	0.013164
11	P1	-20.045458	0.334732	-0.067160
15	P1	-11.769959	0.069291	0.033421
19	P1	-13.865496	0.032781	-0.022113
22	P1	-16.291948	0.335691	0.108725
24	P1	-14.594456	0.284602	0.132579
30	P1	-17.698902	0.428814	-0.181197

P2 Cyclic statistics

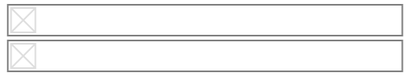
row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.316786	0.077988	0.042051
7	P2	-22.681822	0.125554	0.085814
11	P2	-15.411396	0.154635	0.097134
15	P2	-7.092288	0.089115	0.086601
19	P2	-9.562652	0.174040	0.098209
22	P2	-17.391581	0.108169	0.129916
24	P2	-20.753763	0.084100	-0.005244
30	P2	-19.320936	0.077935	0.130315

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.142735	0.002030	0.006405
7	P3	-8.142750	0.002030	0.006470
11	P3	-8.142741	0.002030	0.006441
15	P3	-8.142721	0.002030	0.006327
19	P3	-8.142709	0.002031	0.006243
22	P3	-8.142720	0.002030	0.006309
24	P3	-8.142727	0.002030	0.006363
30	P3	-8.142858	0.002028	0.006219

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	-2.889064	0.179050	0.213772
7	P1	-3.023543	0.228509	-0.238360
11	P1	-3.873143	0.176289	-0.114941
15	P1	-3.673562	0.403944	0.617009
19	P1	-3.455585	0.027229	-0.123100
22	P1	-5.670566	0.048176	0.033174
24	P1	-3.892037	0.039802	0.134560
30	P1	-6.174624	0.075794	-0.013005
3	P1	-10.698084	0.540755	0.245125
7	P1	-10.065124	0.245487	-0.254169
11	P1	-12.031006	0.198311	-0.193430
15	P1	-11.660065	0.195330	0.333843
19	P1	-15.509698	0.284742	-0.601206
22	P1	-22.923500	3.026046	-2.046698
24	P1	-17.649340	0.280761	-0.585843
30	P1	-20.536581	2.155670	0.954095

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.999046	0.084197	0.083401
7	P2	-22.791843	0.253431	0.034736
11	P2	-11.017720	0.136609	-0.113176
15	P2	-4.952137	0.041980	0.005271
19	P2	-6.798331	0.060151	0.152956
22	P2	-7.492632	0.107652	0.159668
24	P2	-11.039071	0.146427	0.001174
30	P2	-22.243750	0.116980	0.043543

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.984519	0.003663	-0.004770
7	P3	-7.984706	0.003670	-0.004502
11	P3	-7.984630	0.003664	-0.005031
15	P3	-7.984550	0.003665	-0.004873
19	P3	-7.984638	0.003672	-0.004839
22	P3	-7.984601	0.003656	-0.004765
24	P3	-7.984641	0.003683	-0.004862
30	P3	-7.984665	0.003660	-0.004551

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	0.000492235
	stdev	2.15378e-07
MEAN Q	mean	0.000532613
	stdev	2.46634e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129169
	stdev	0.00104372
STDEV Q	mean	0.129419
	stdev	0.00105585

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

No anomaly observed on Doppler evolution.
Analysis performed over the last 35 days.

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

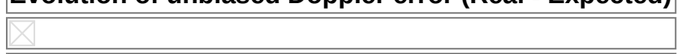
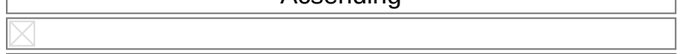
Acsending

Descending

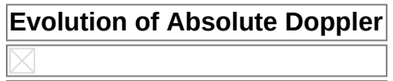
6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

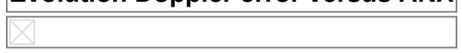
Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

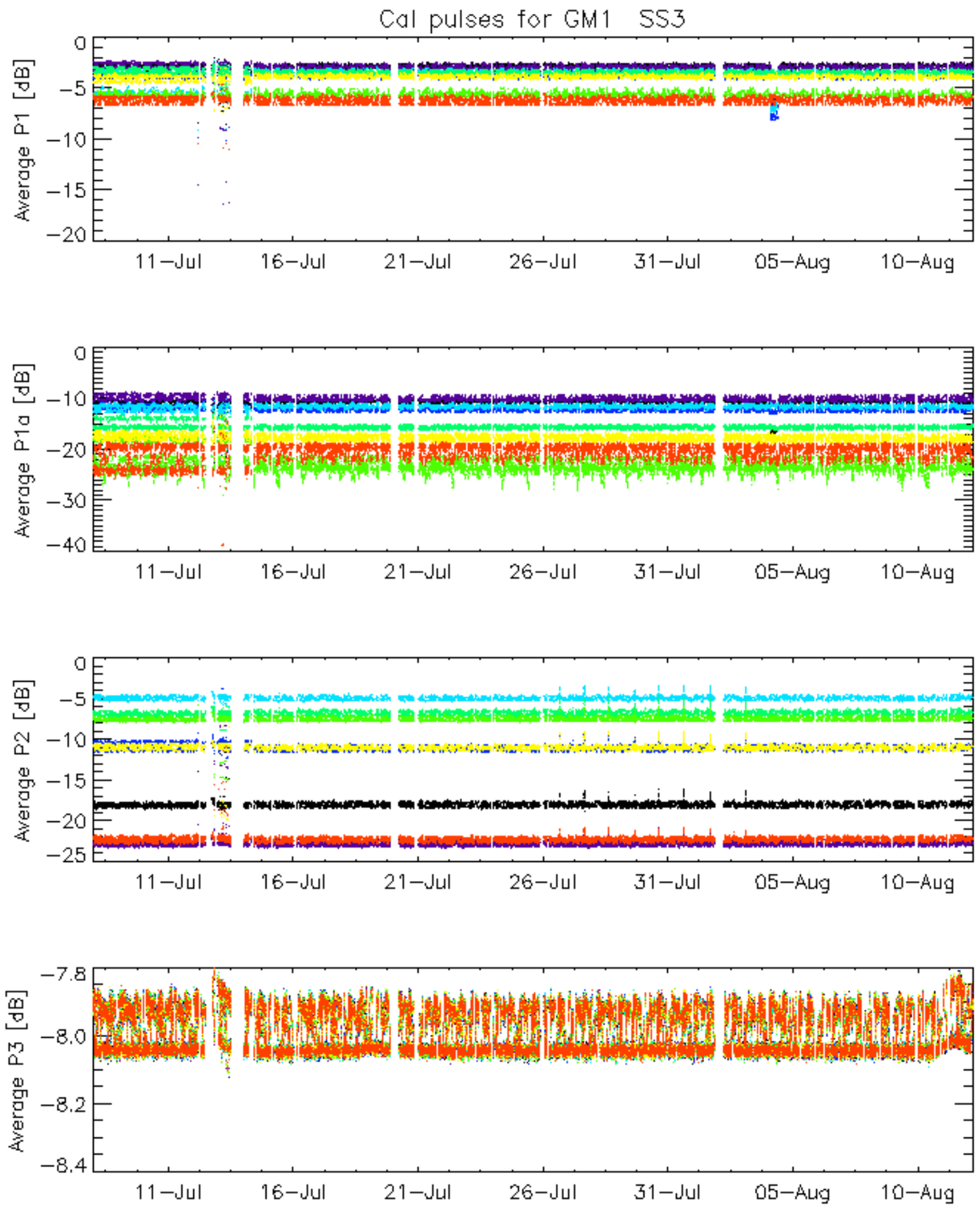
6.5 - Absolute Doppler for GM1

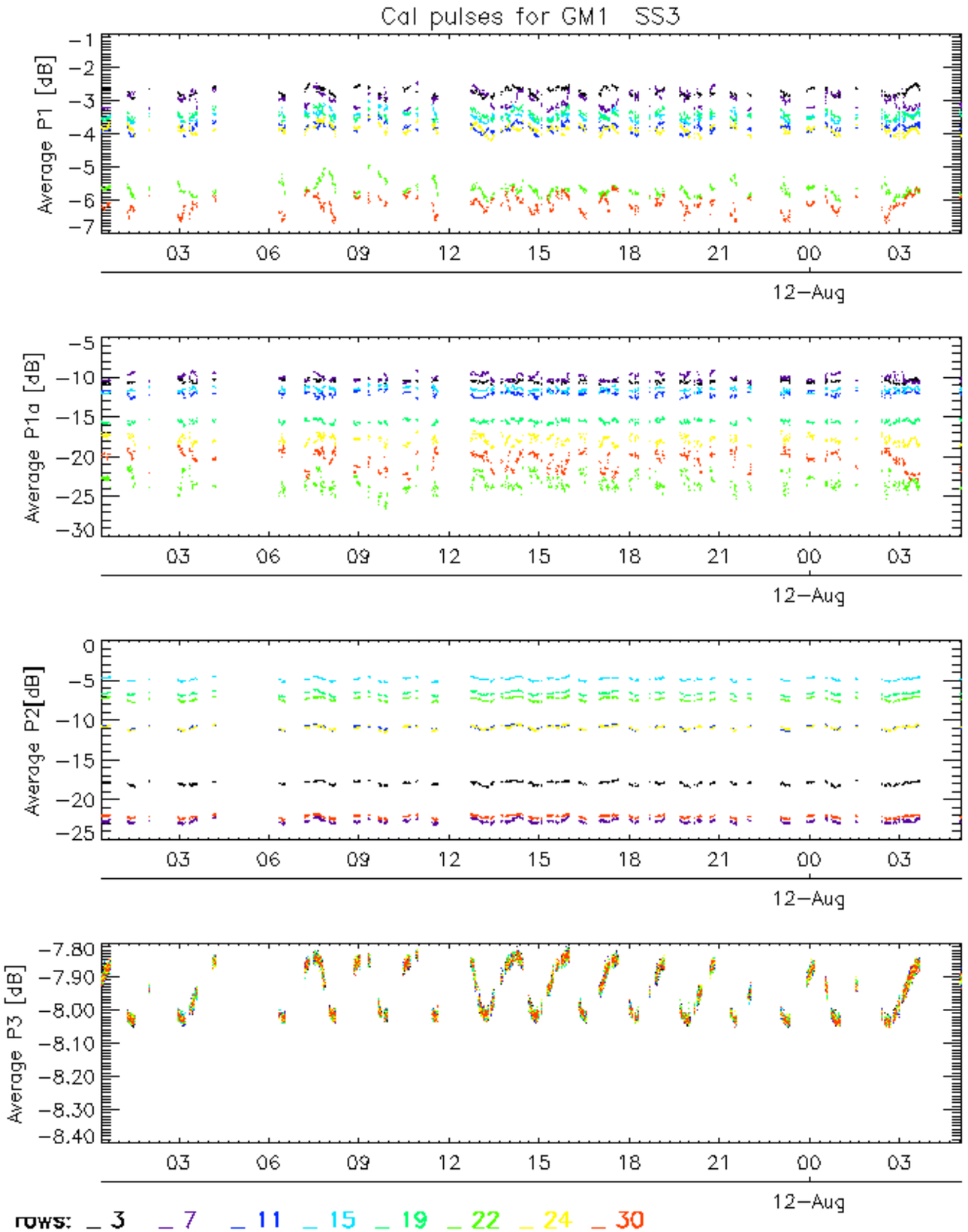
Evolution of Absolute Doppler

Acsending

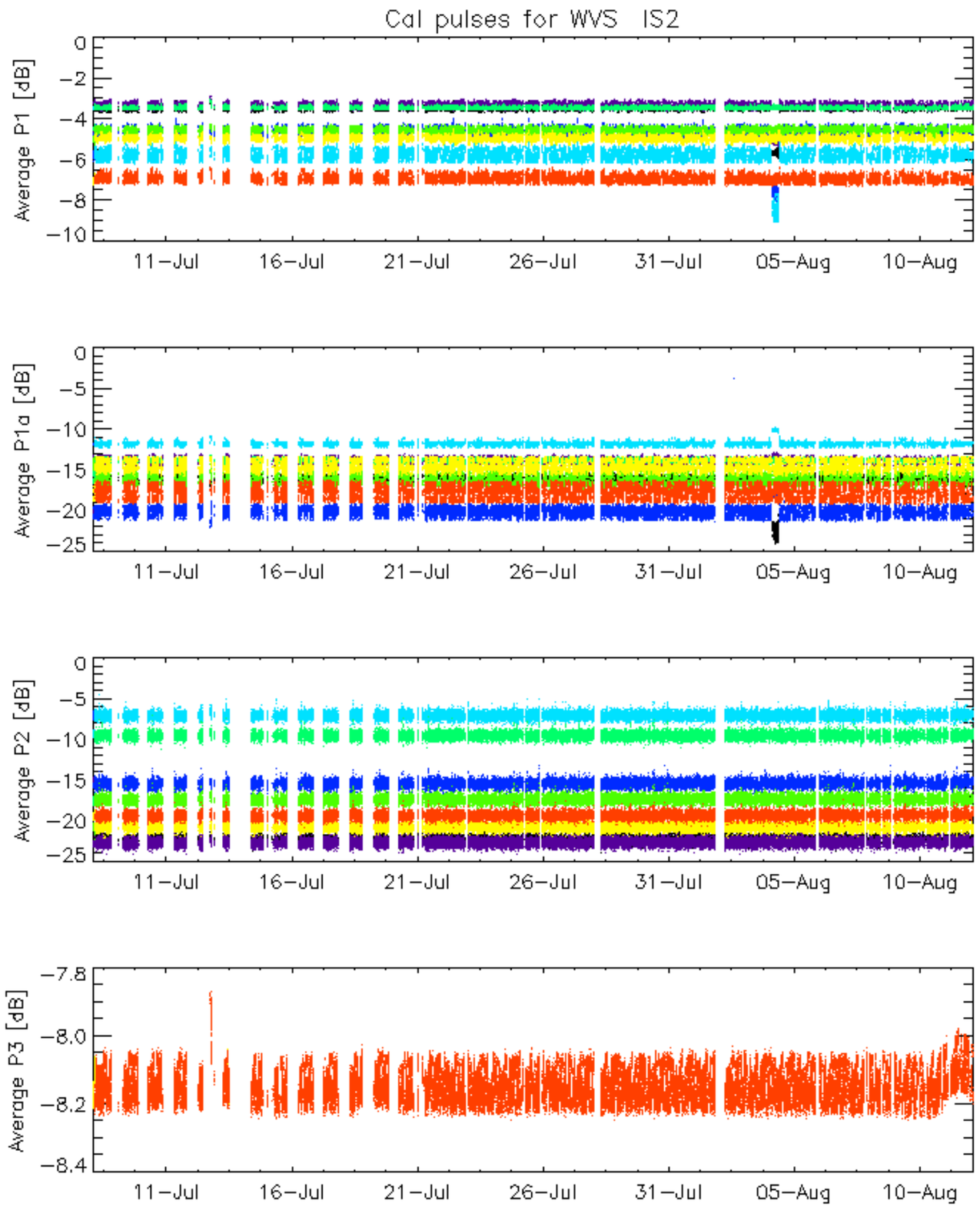
Descending

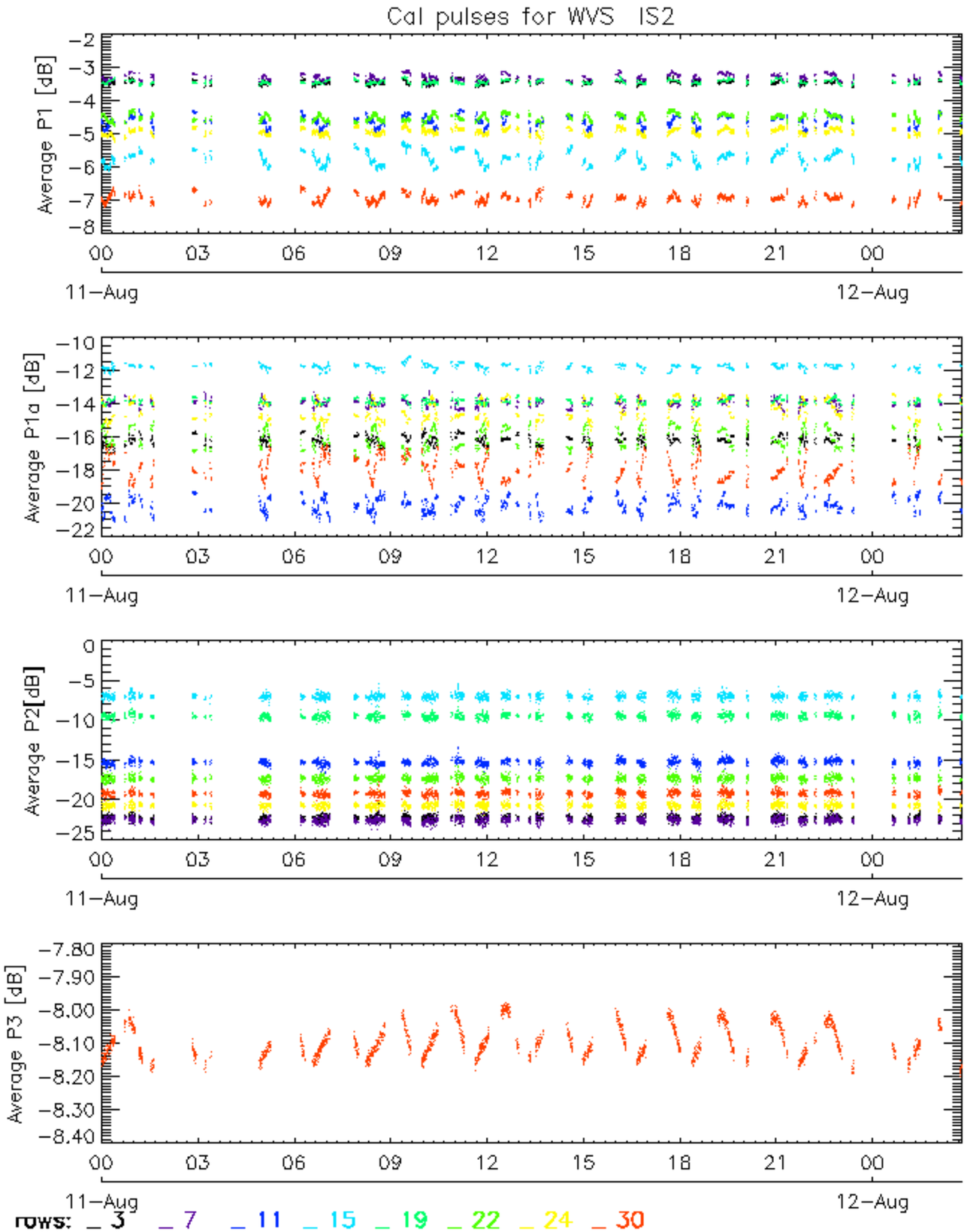
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX



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

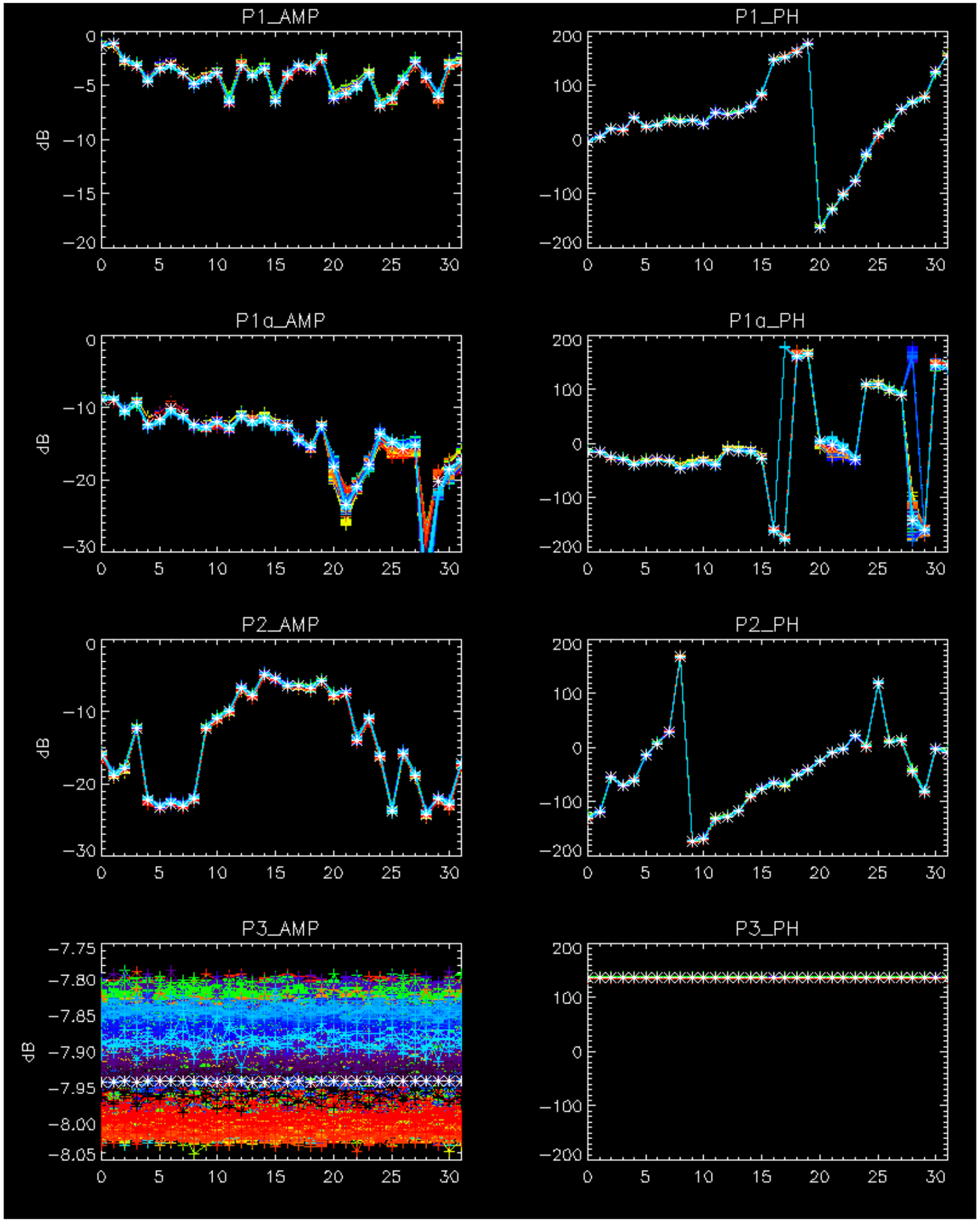

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
12−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
12−Aug
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
12−Aug
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

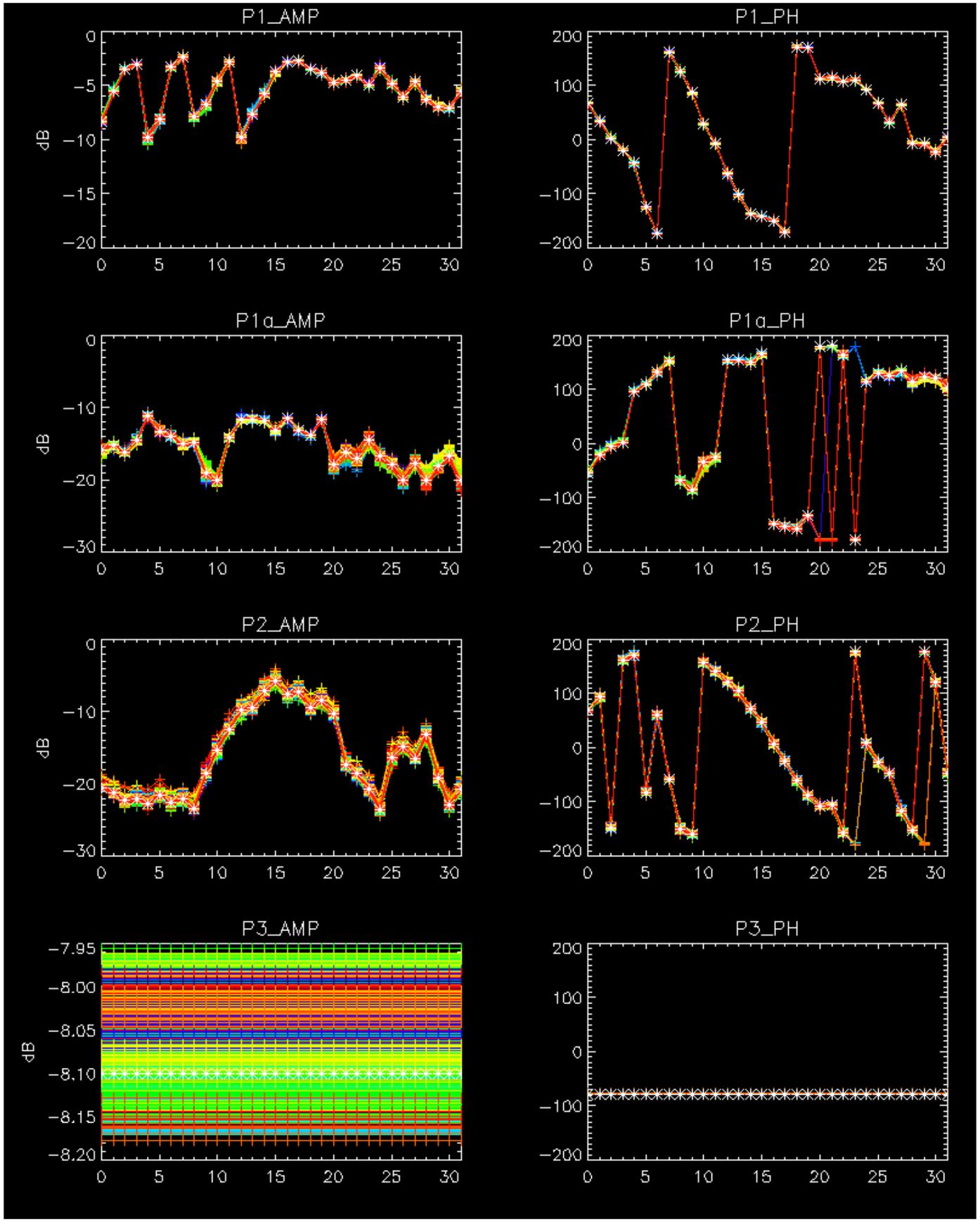

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug
Average P1a [dB]
0
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
00
03
06
09
12
15
18
21
00
11−Aug
12−Aug
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2[dB]
0
−5
−10
−15
−20
−25
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

No anomalies observed on available browse products

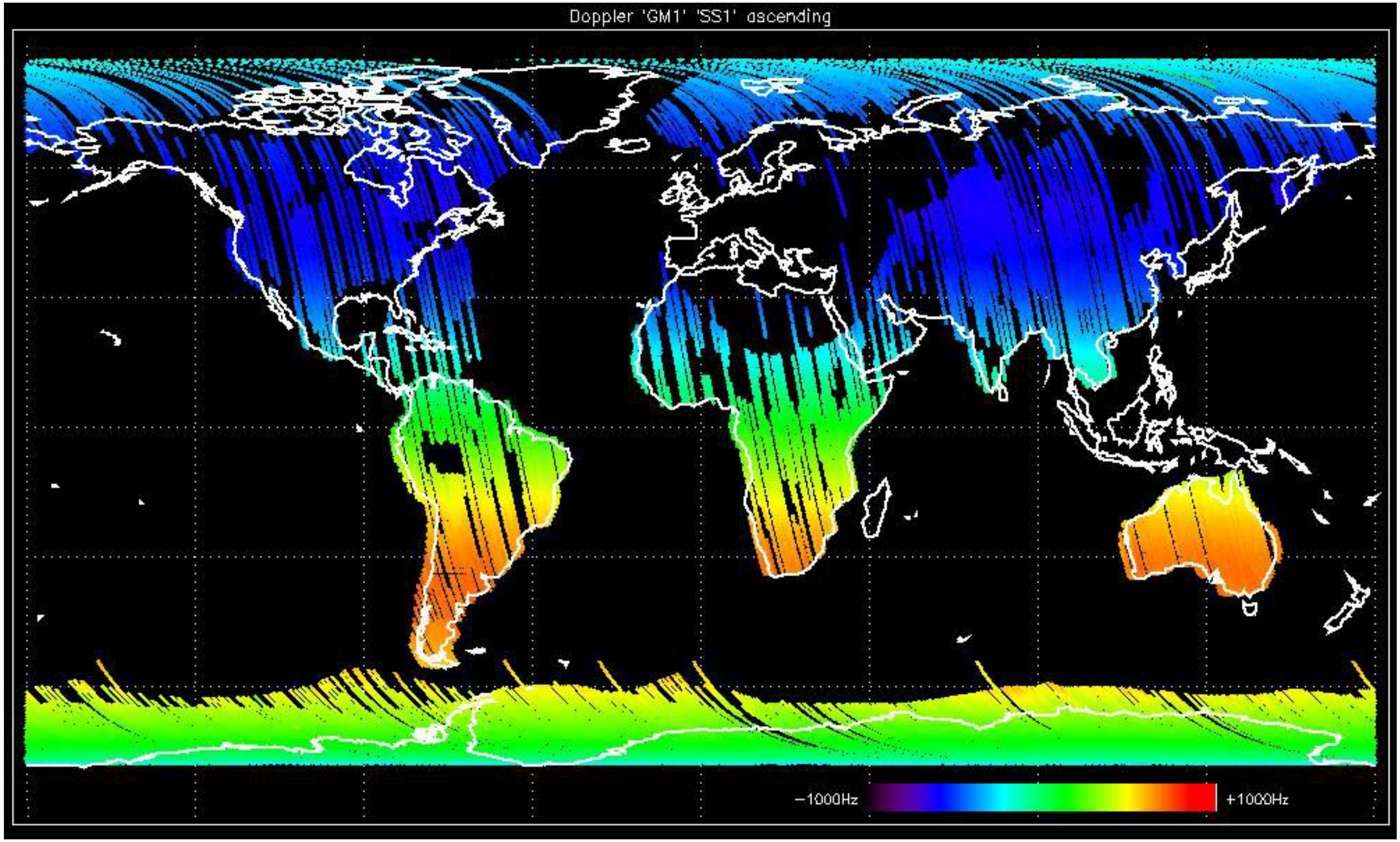
No anomalies observed.

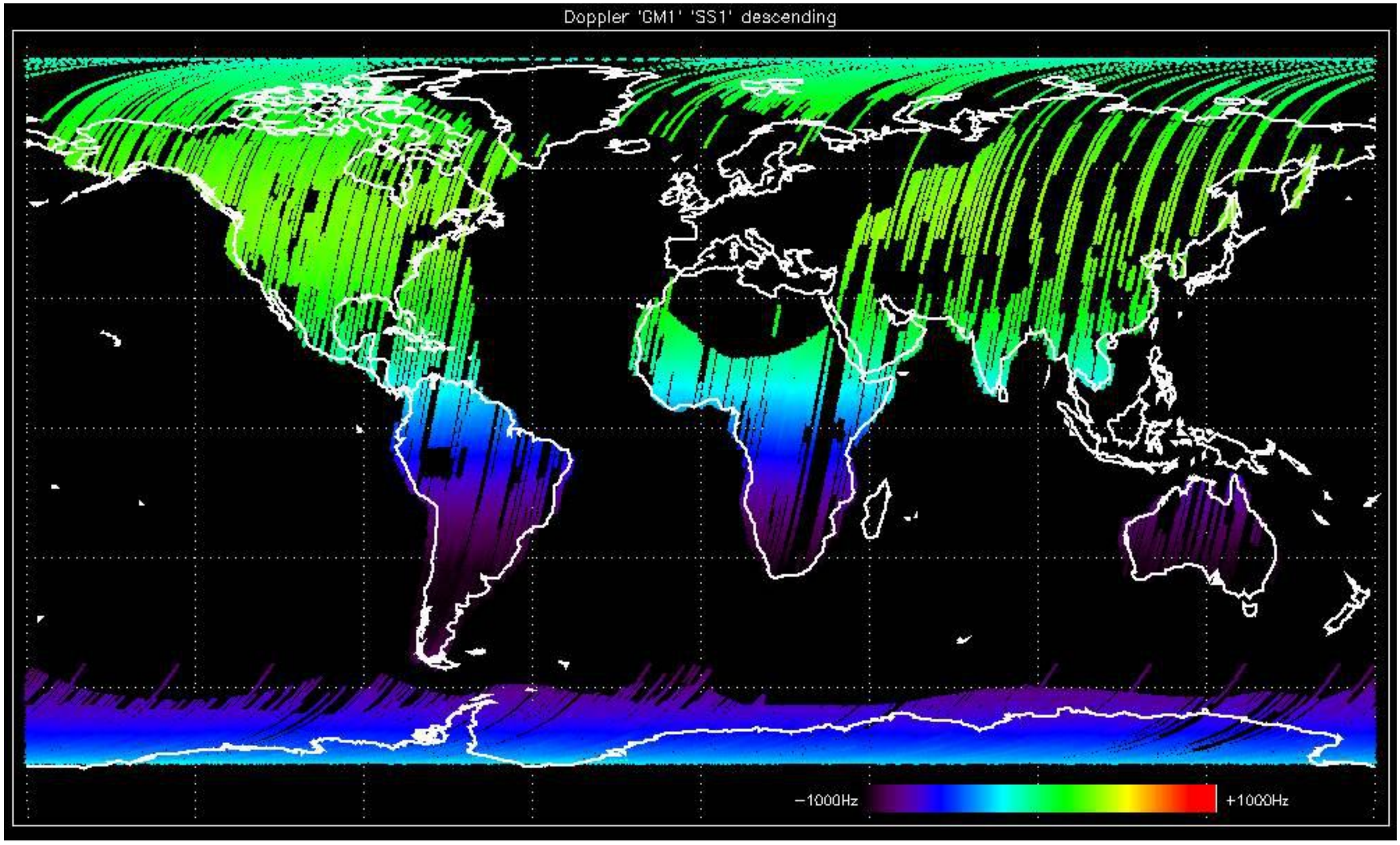

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.75
−7.80
−7.85
−7.90
−7.95
−8.00
−8.05
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

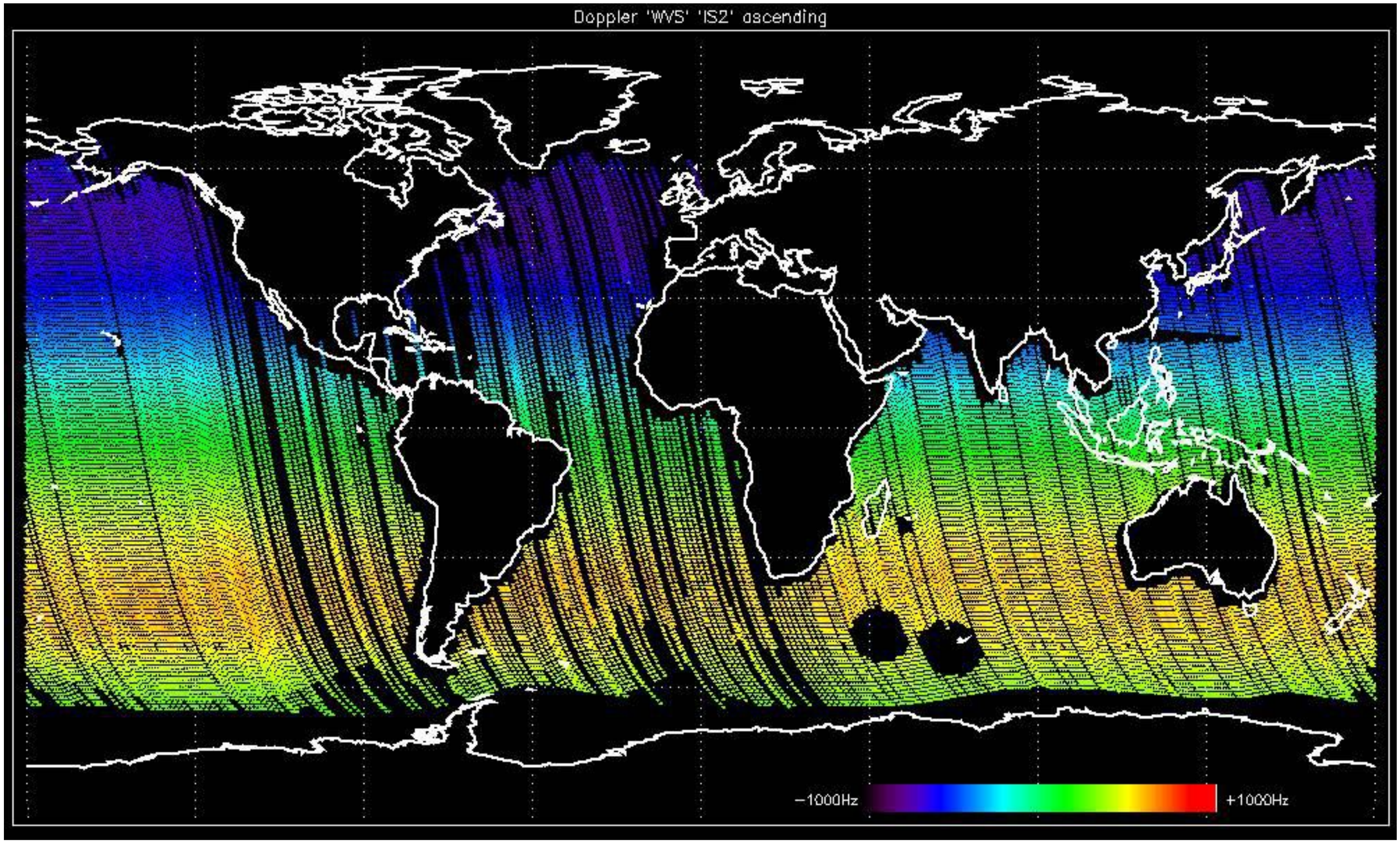

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.95
−8.00
−8.05
−8.10
−8.15
−8.20
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

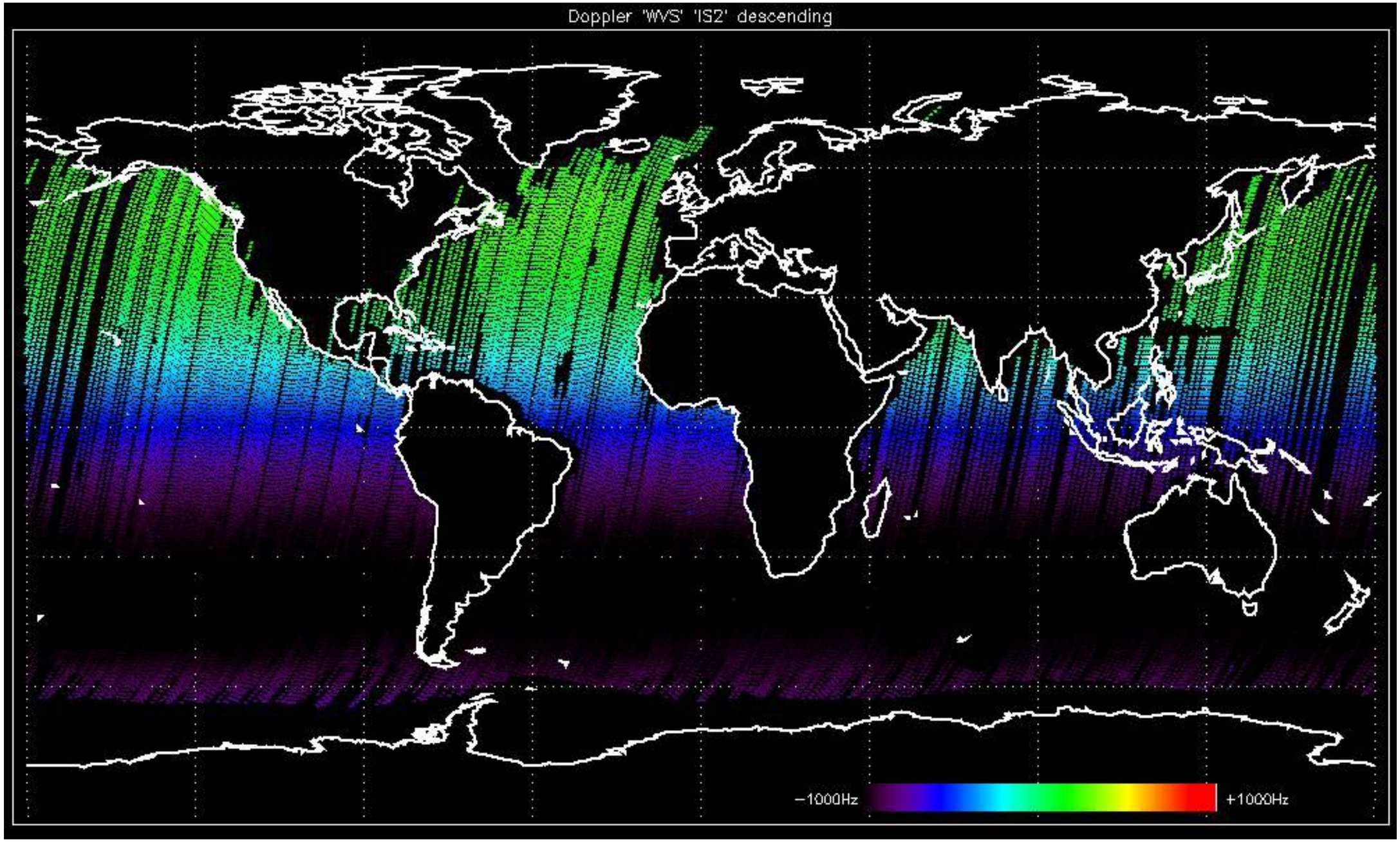
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

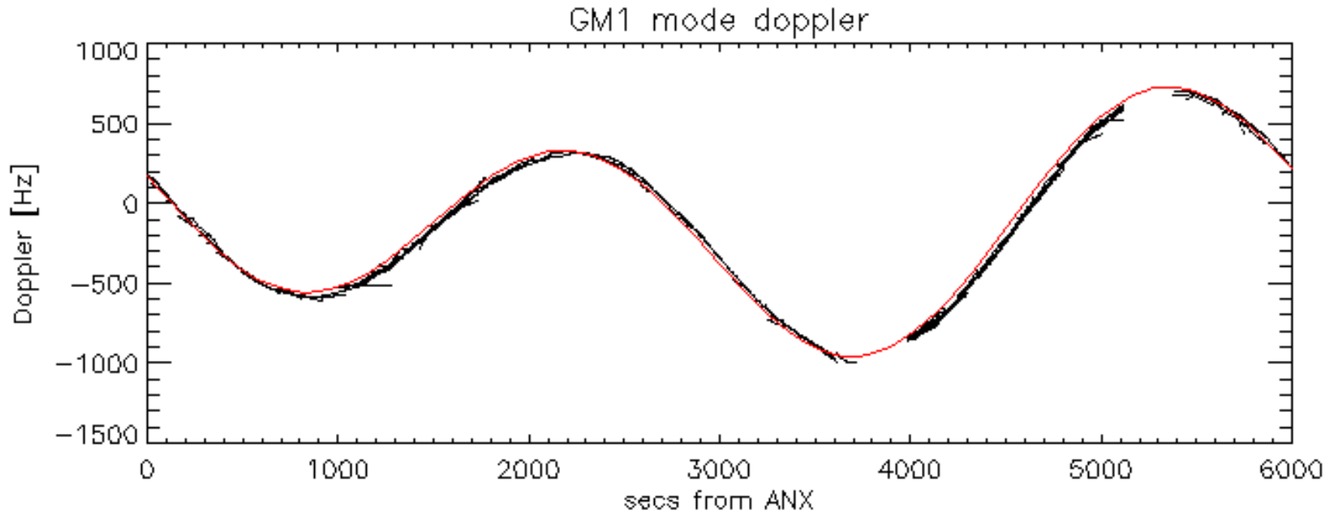
No anomaly observed on Doppler evolution.
Analysis performed over the last 35 days.

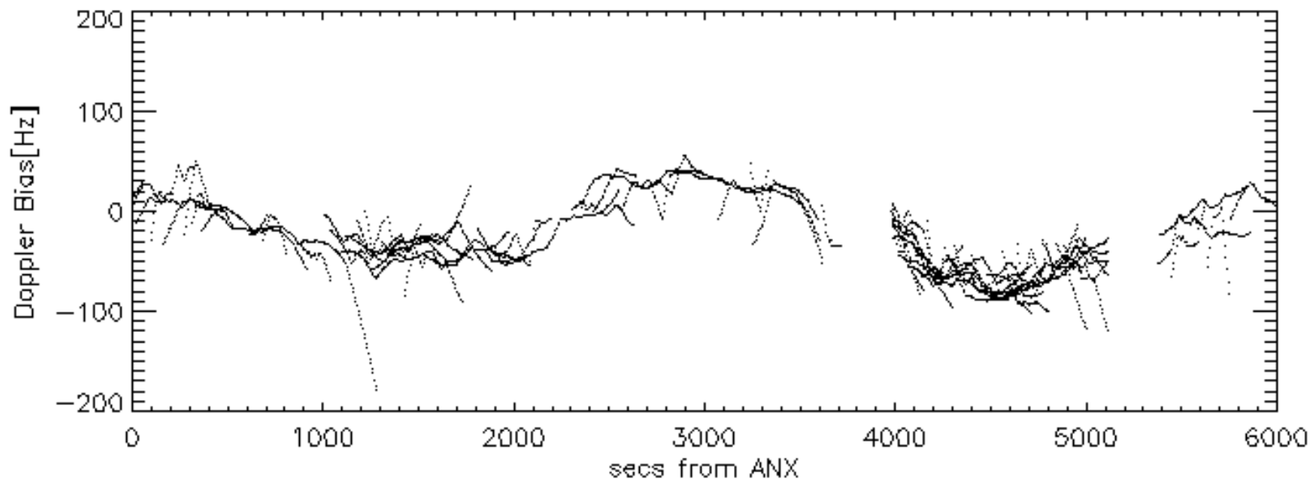

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

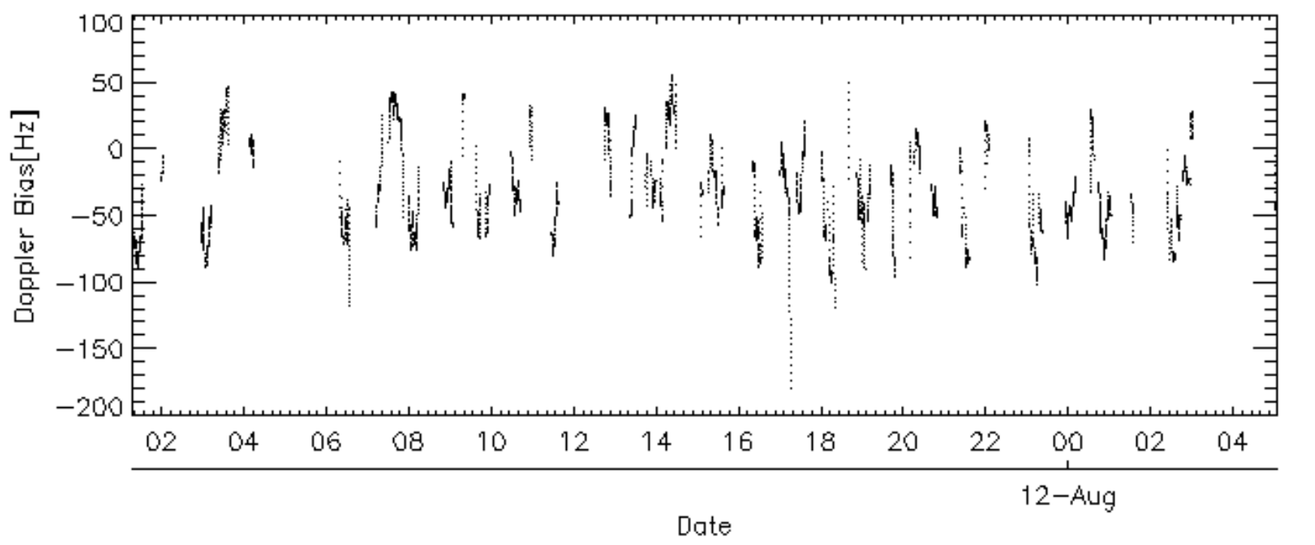

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

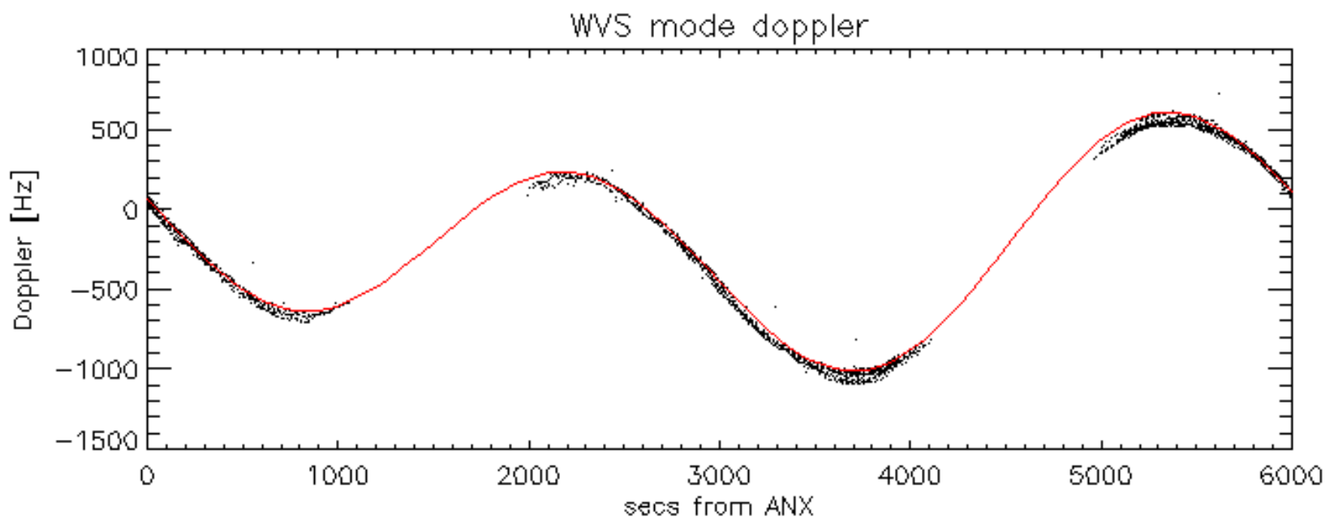

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

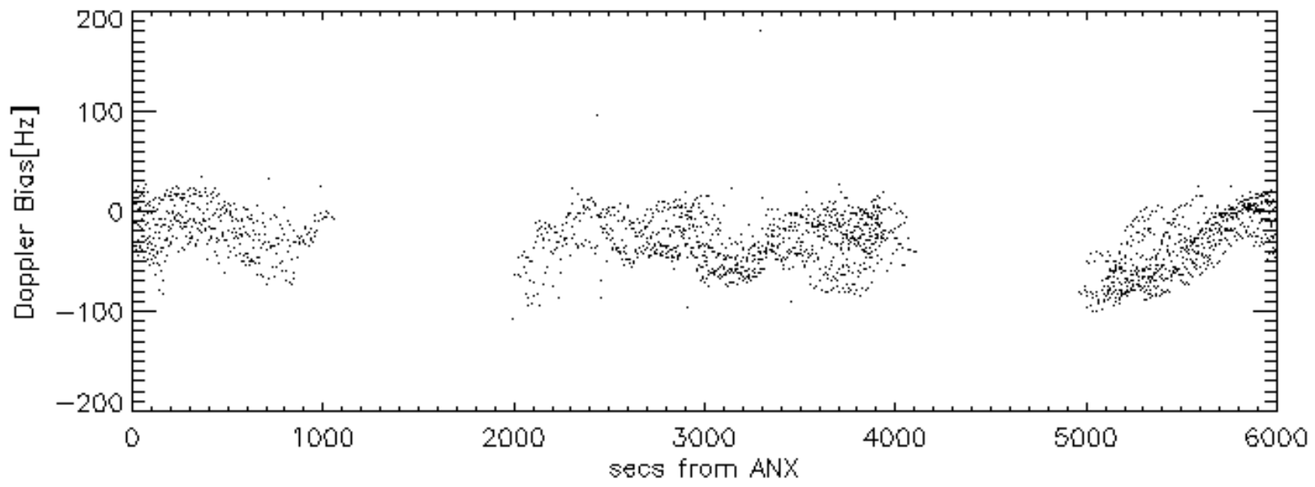

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

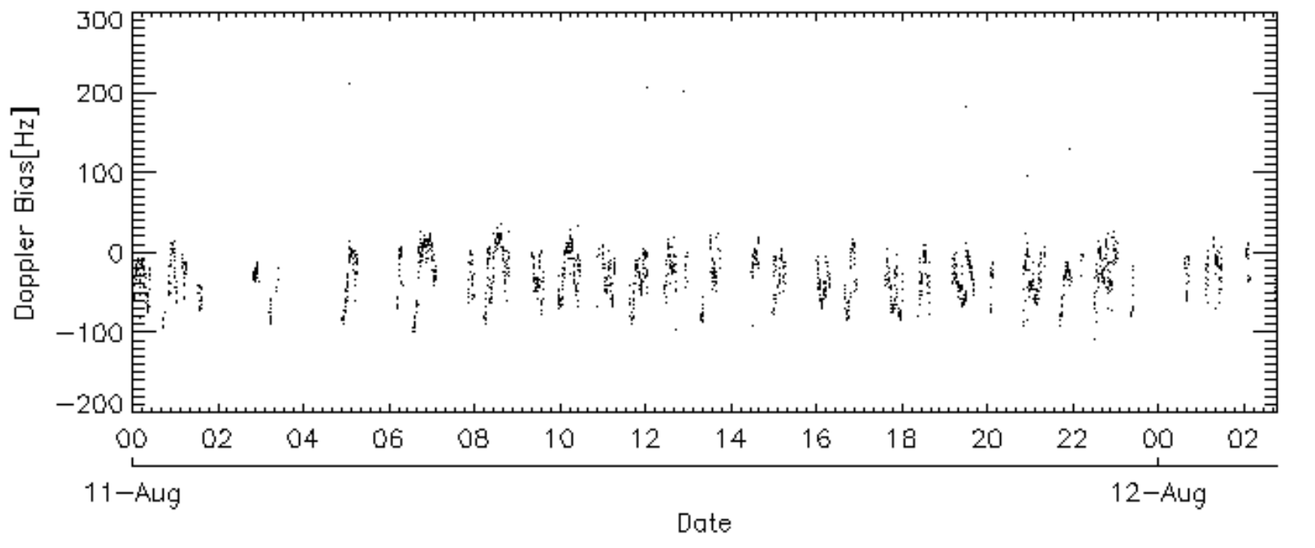

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

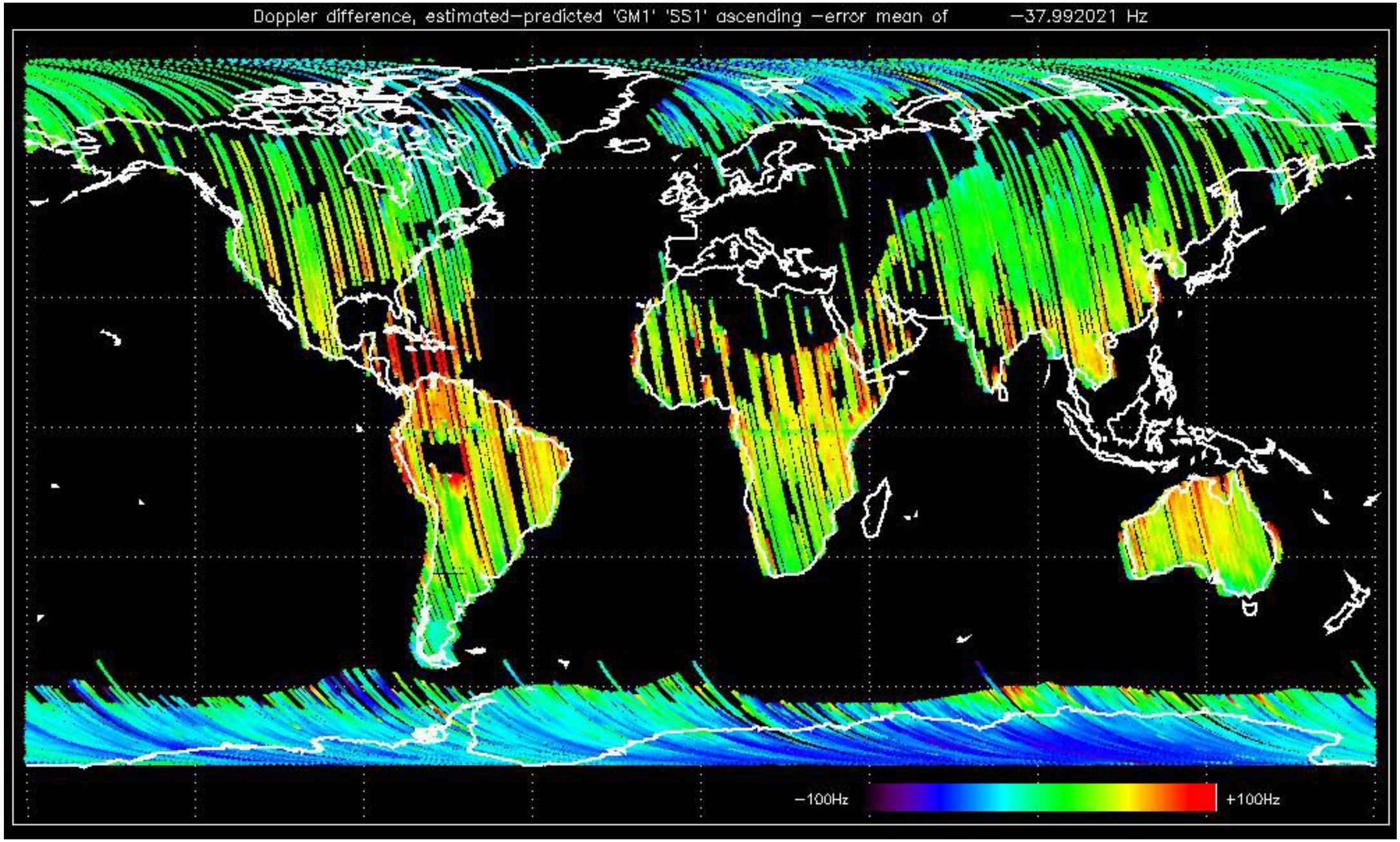

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

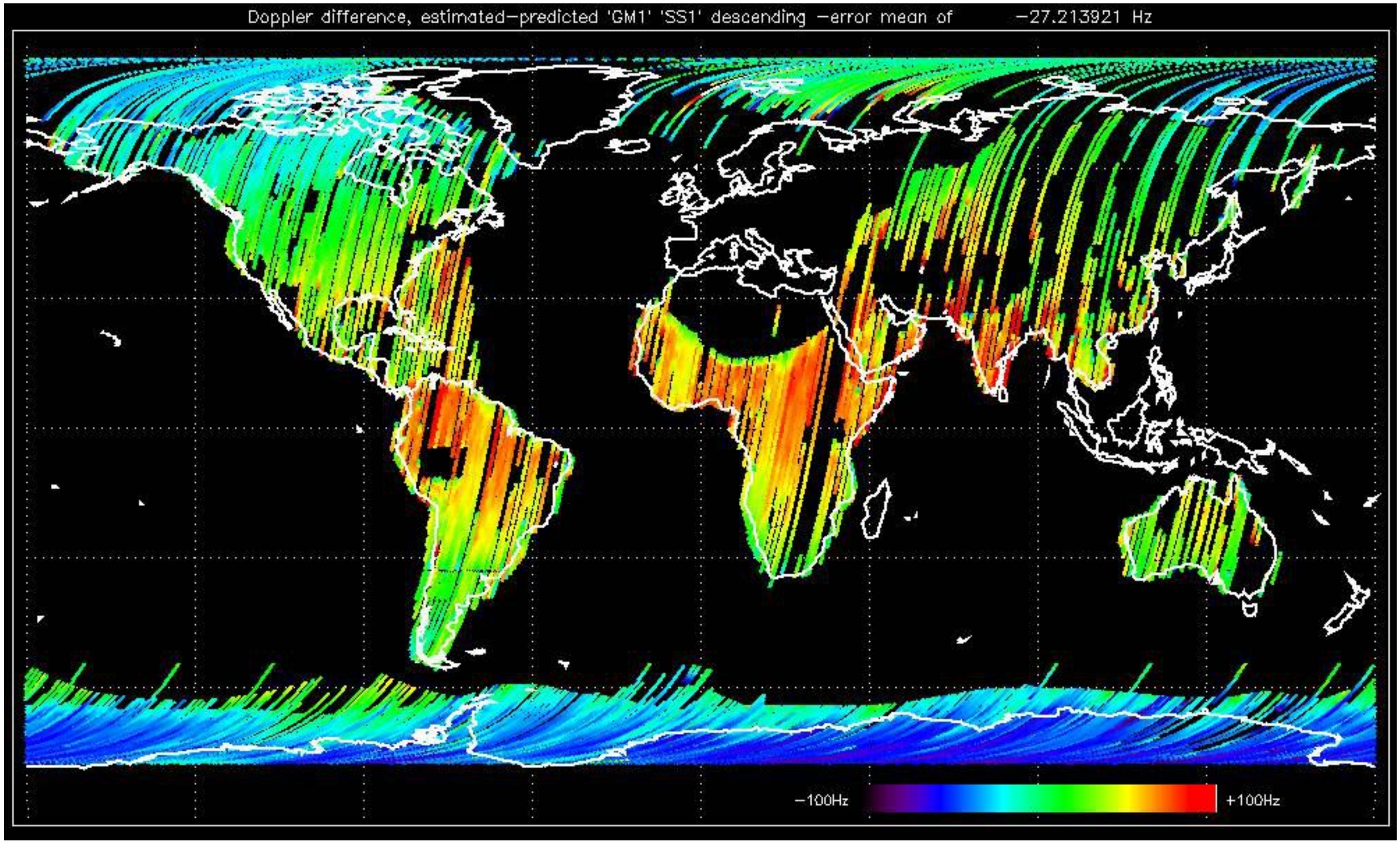

Doppler Bias[Hz]
100
50
0
−50
−100
−150
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
12−Aug
Date

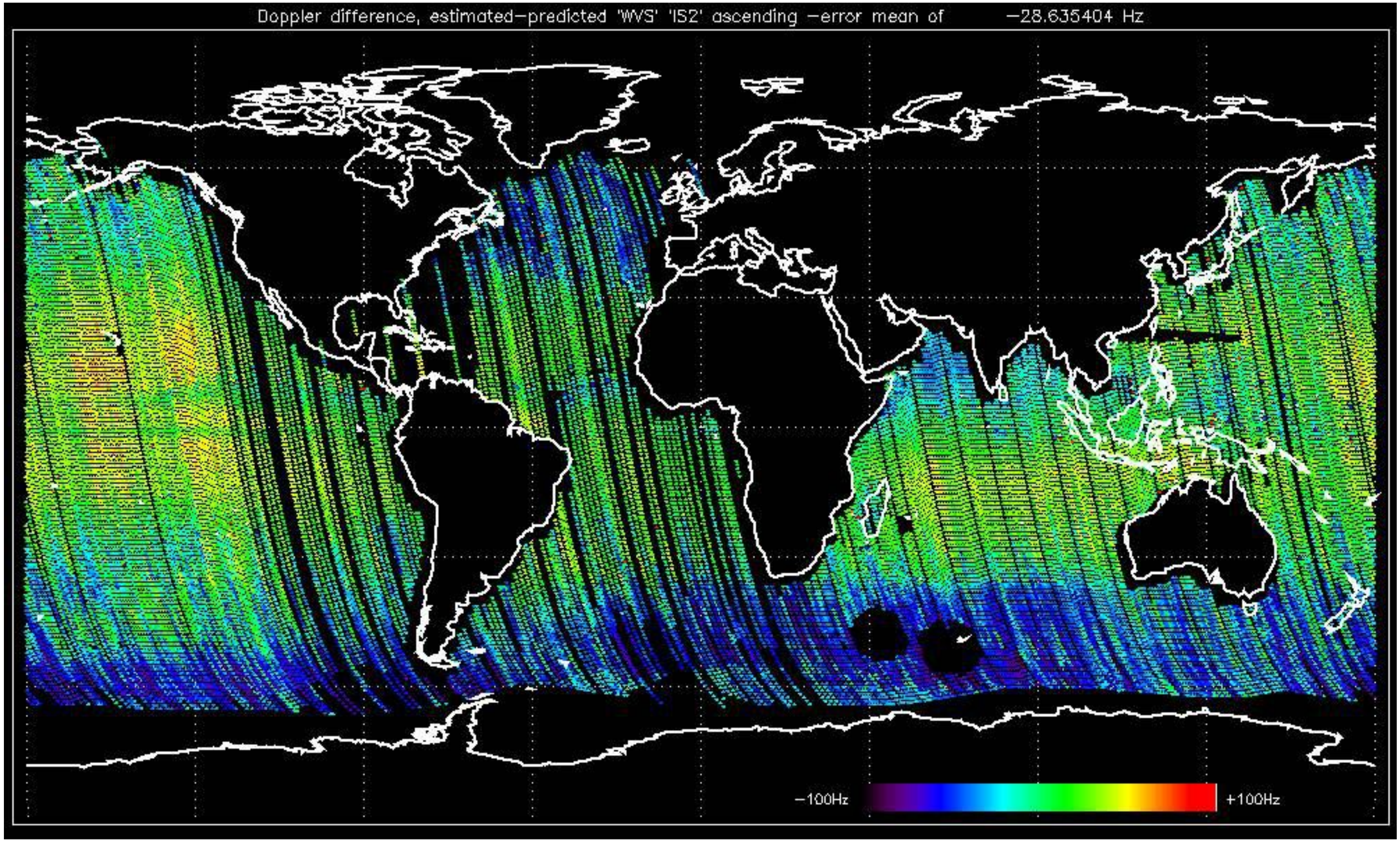

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

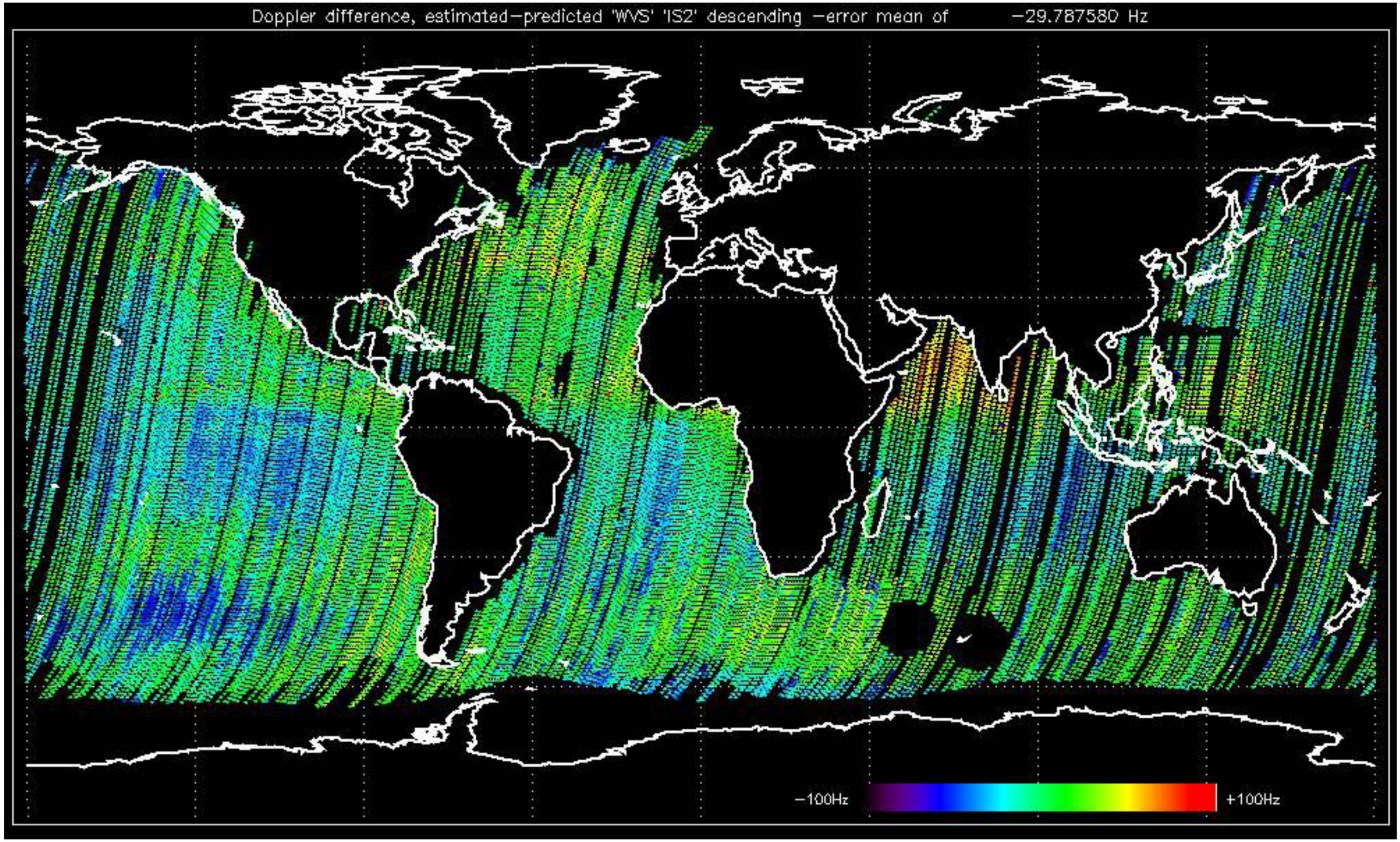

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −37.992021 Hz
−100Hz
+100Hz


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -27.213921 Hz
-100Hz
+100Hz

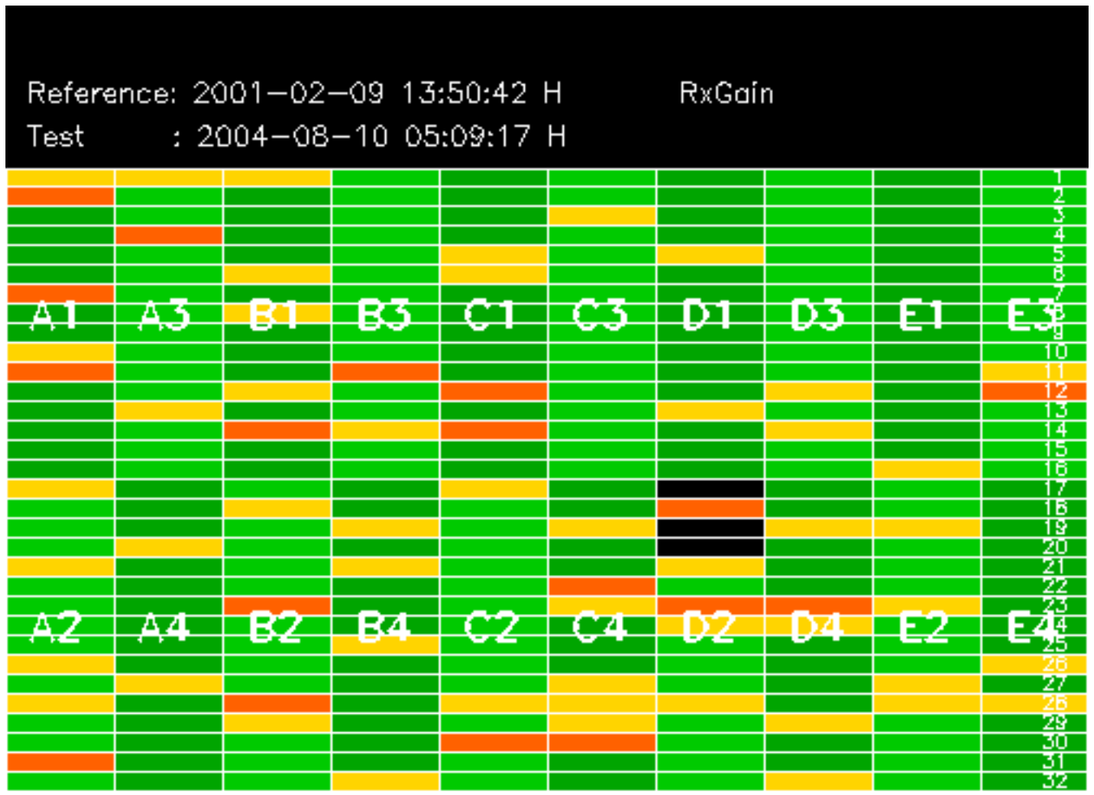

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.635404 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.787580 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

- ASA_MS__0PNPDE20040811_043740_000000152029_00219_12798_0007.N1

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-08-10 05:09:17 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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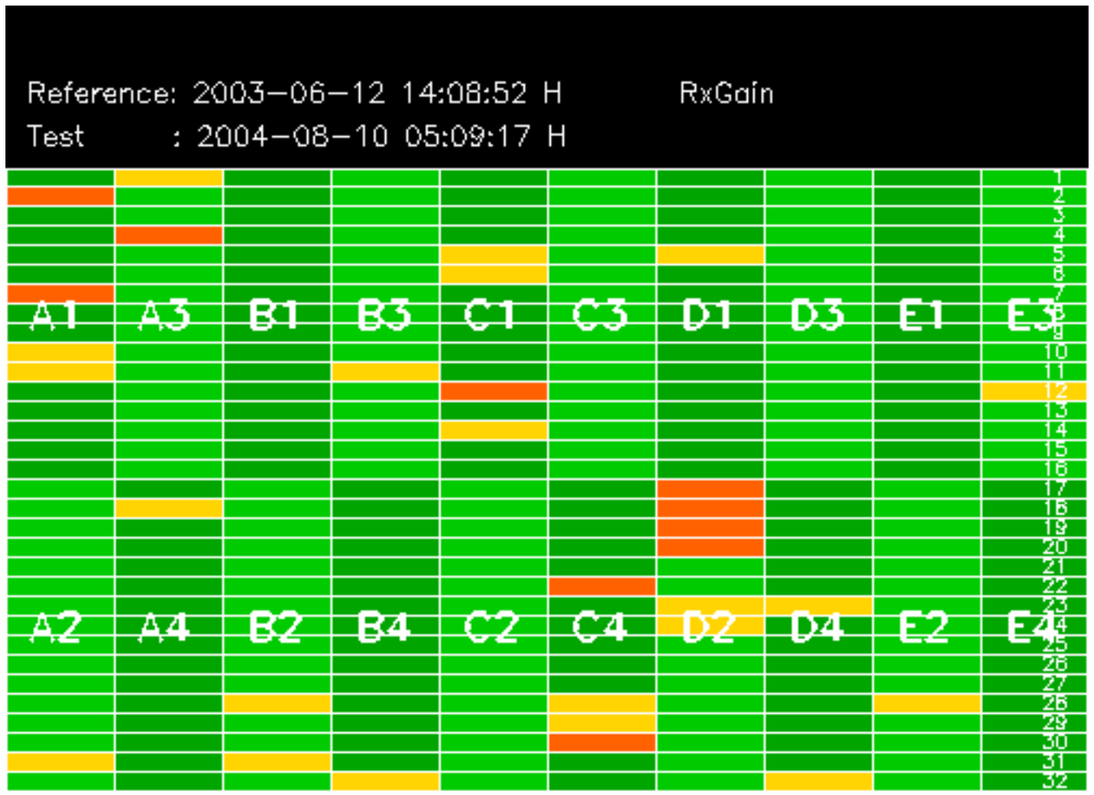
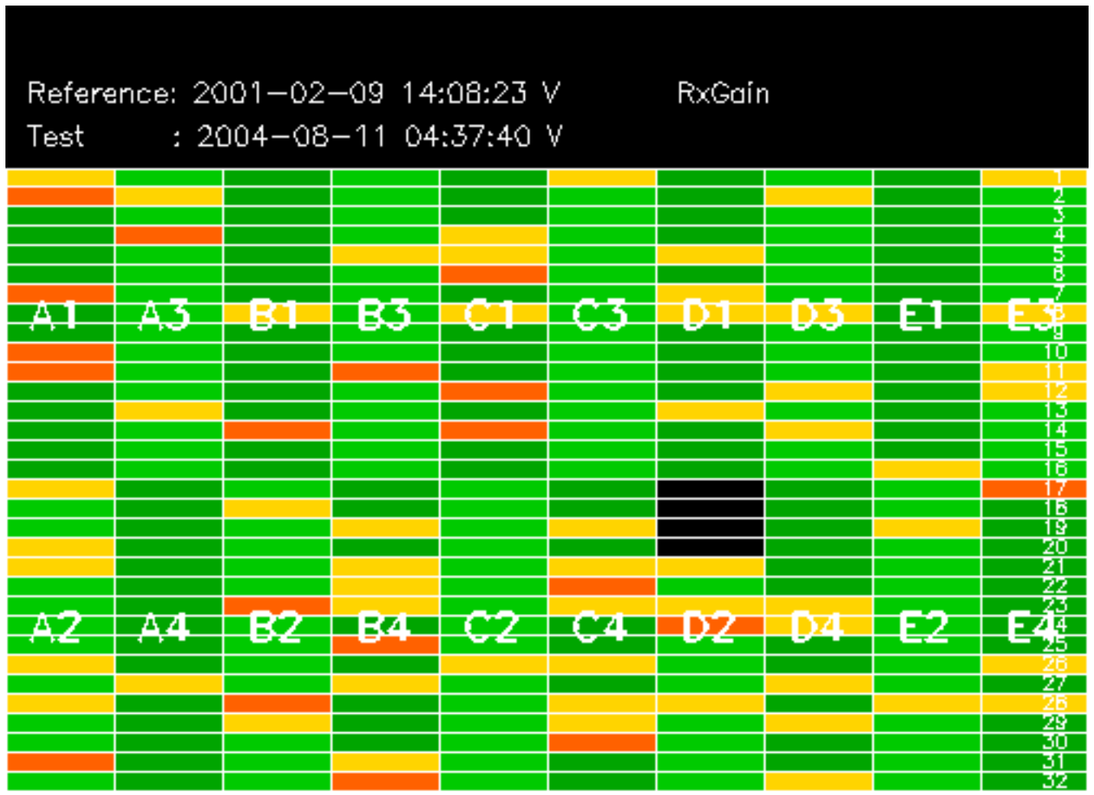

Reference: 2003-06-12 14:08:52 H
Test : 2004-08-10 05:09:17 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-11 04:37:40 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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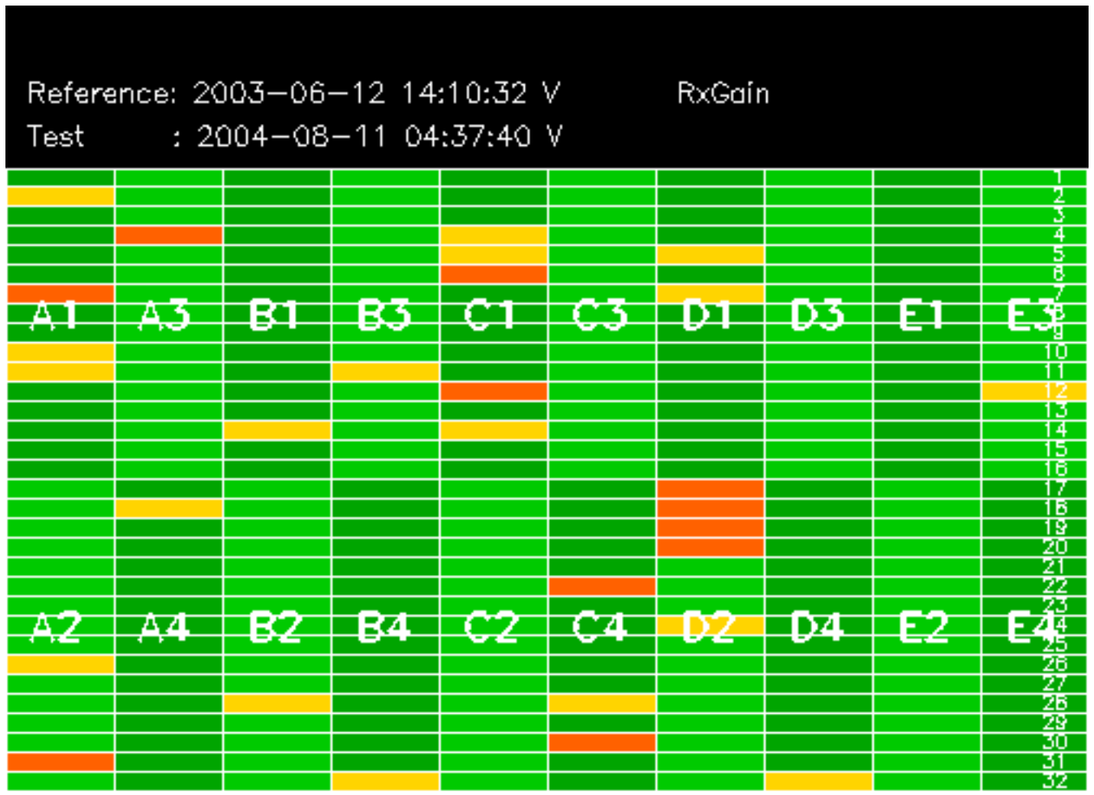
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-11 04:37:40 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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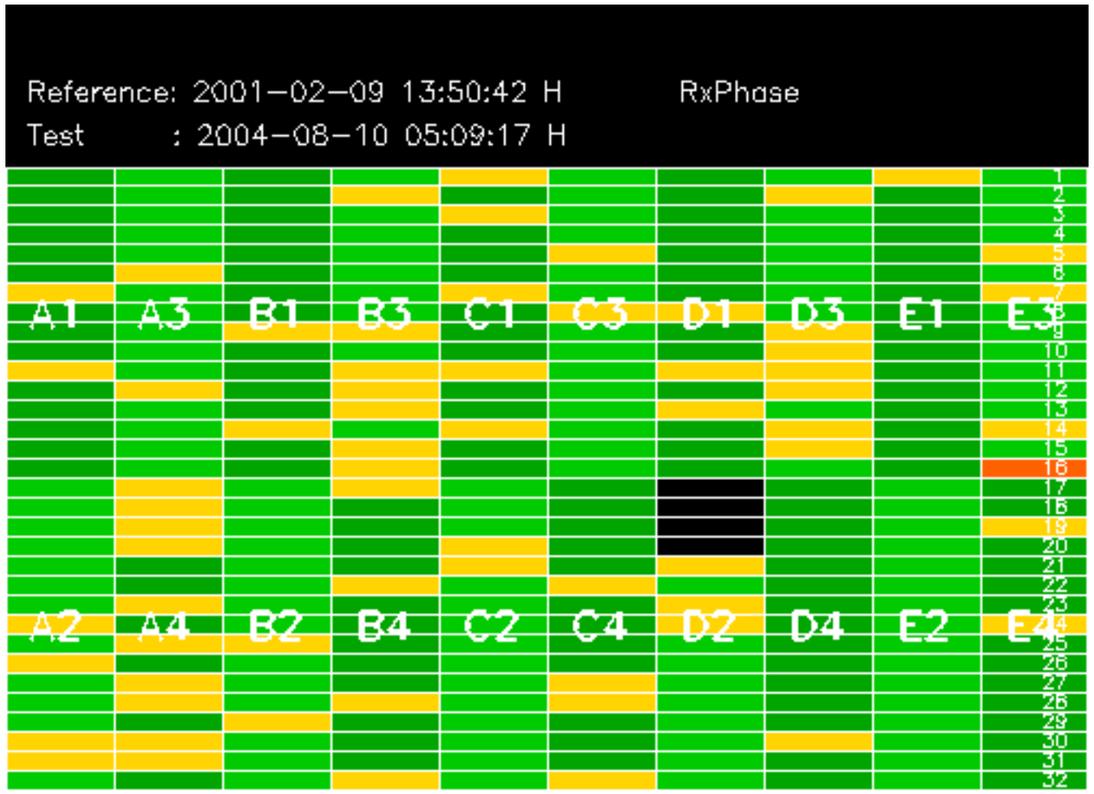
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-08-10 05:09:17 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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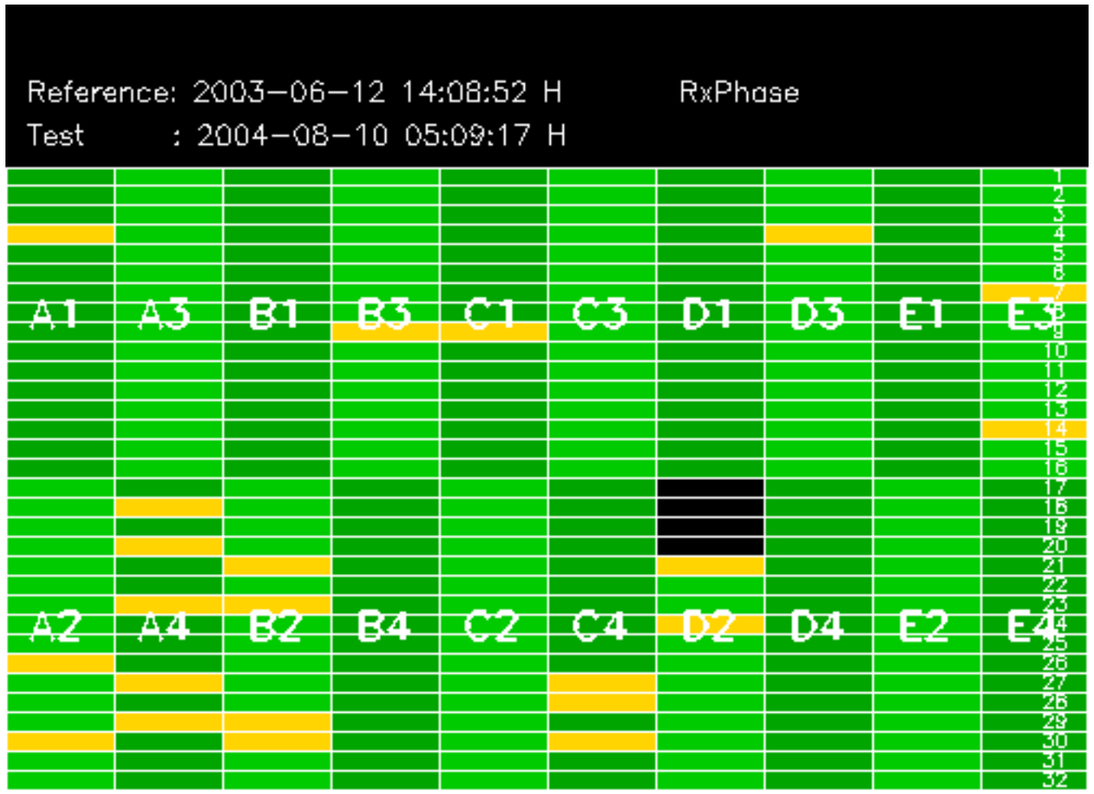
Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-08-10 05:09:17 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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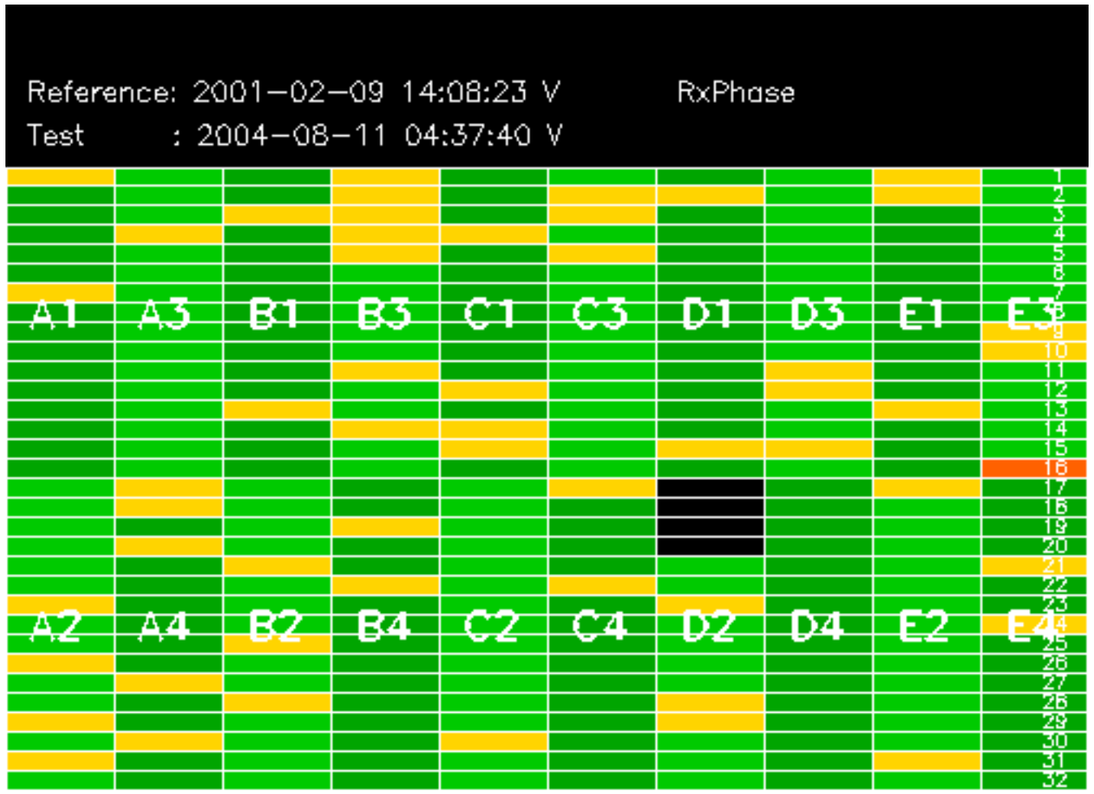
Reference: 2001-02-09 14:08:23 V
Test : 2004-08-11 04:37:40 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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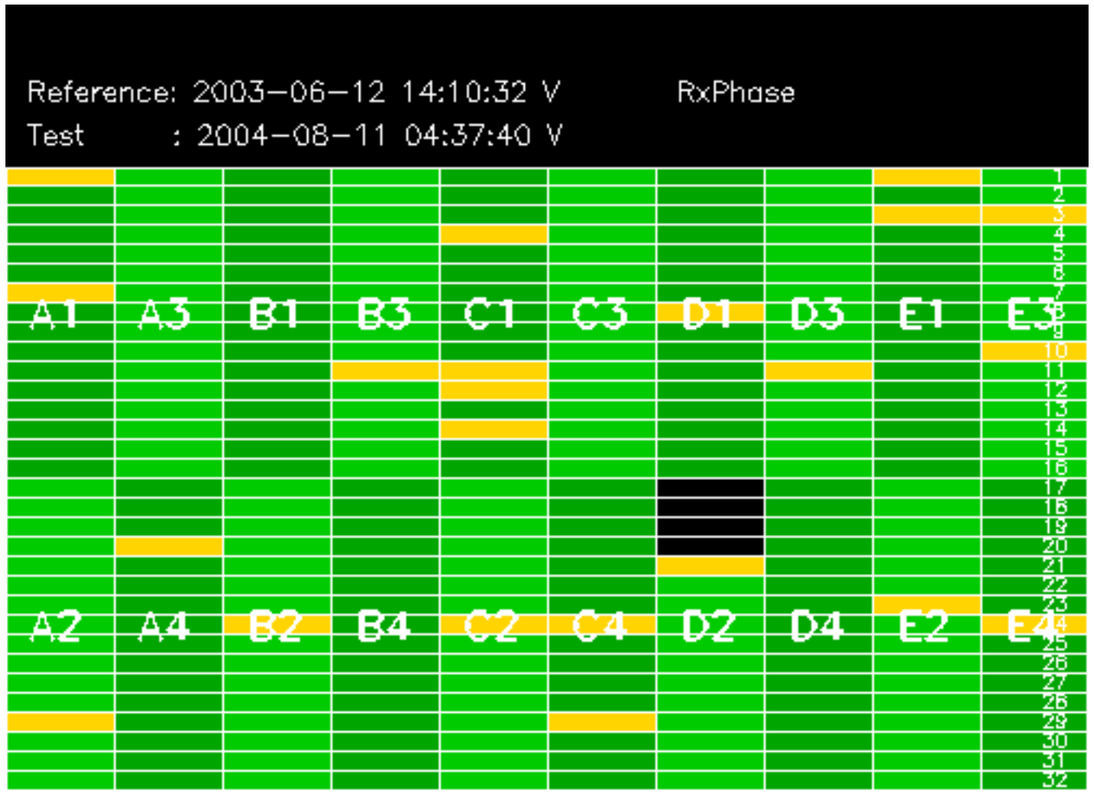
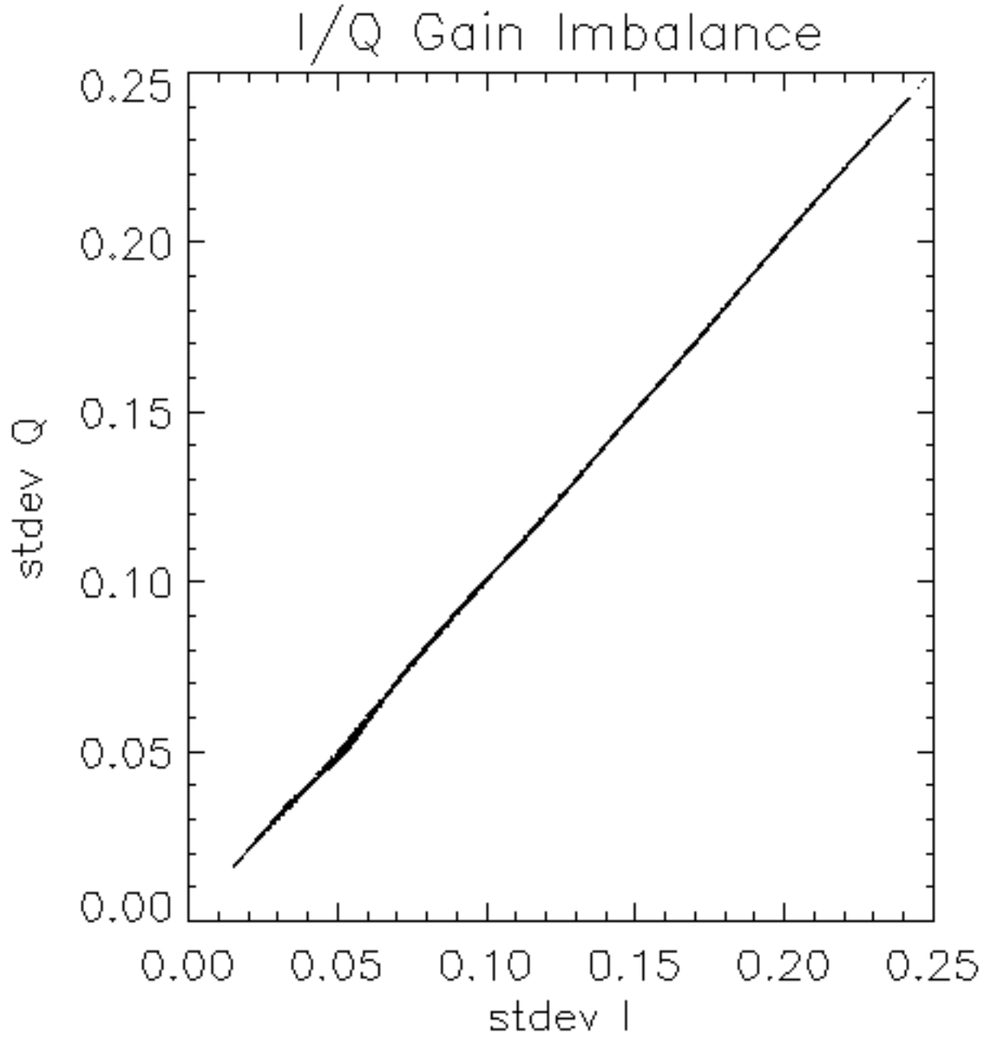
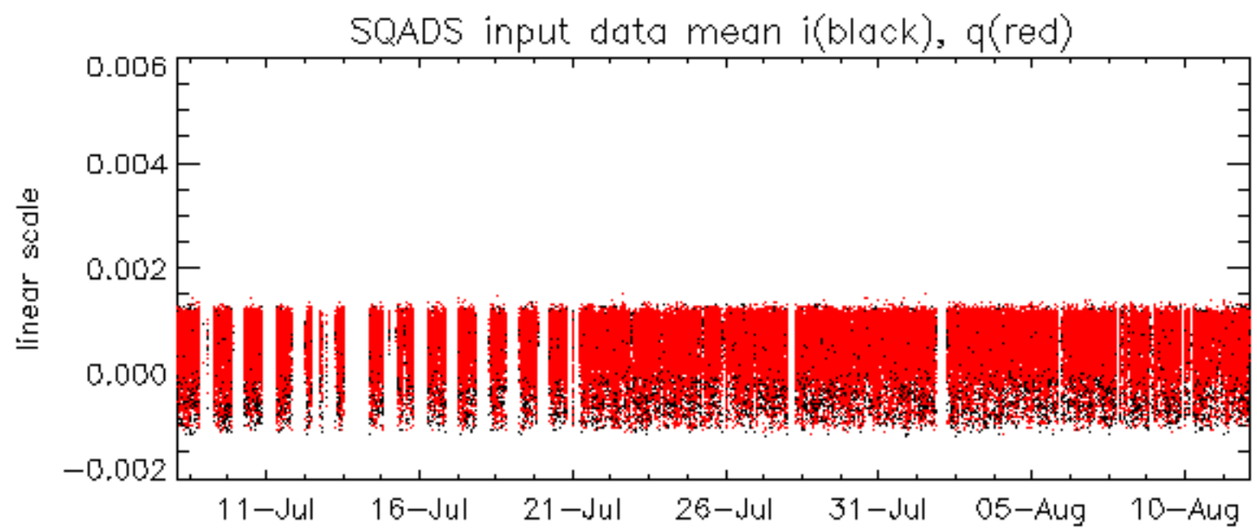
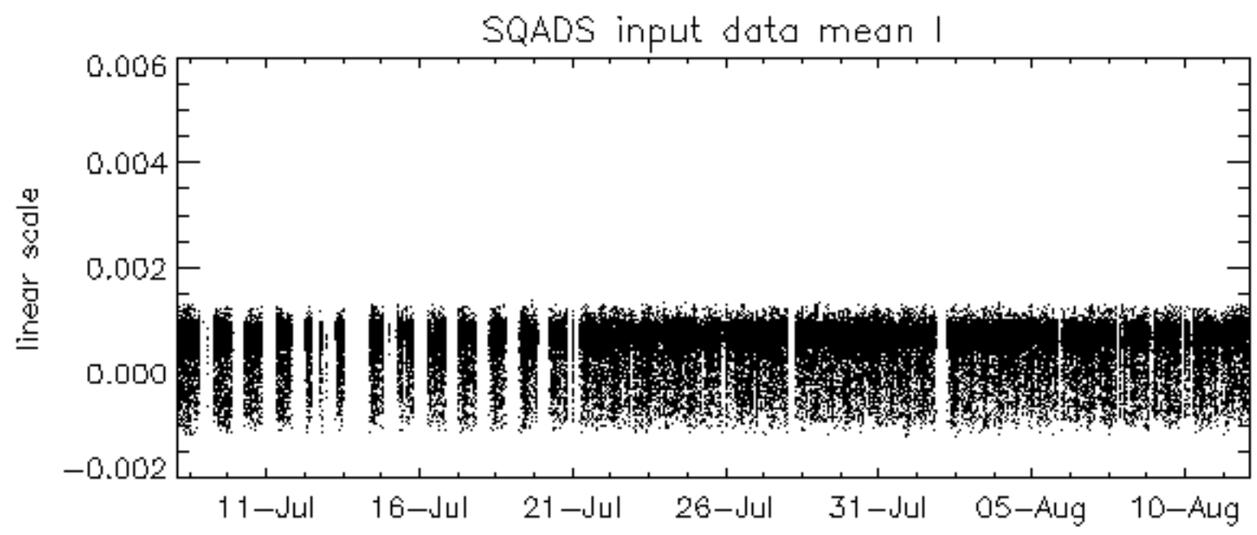
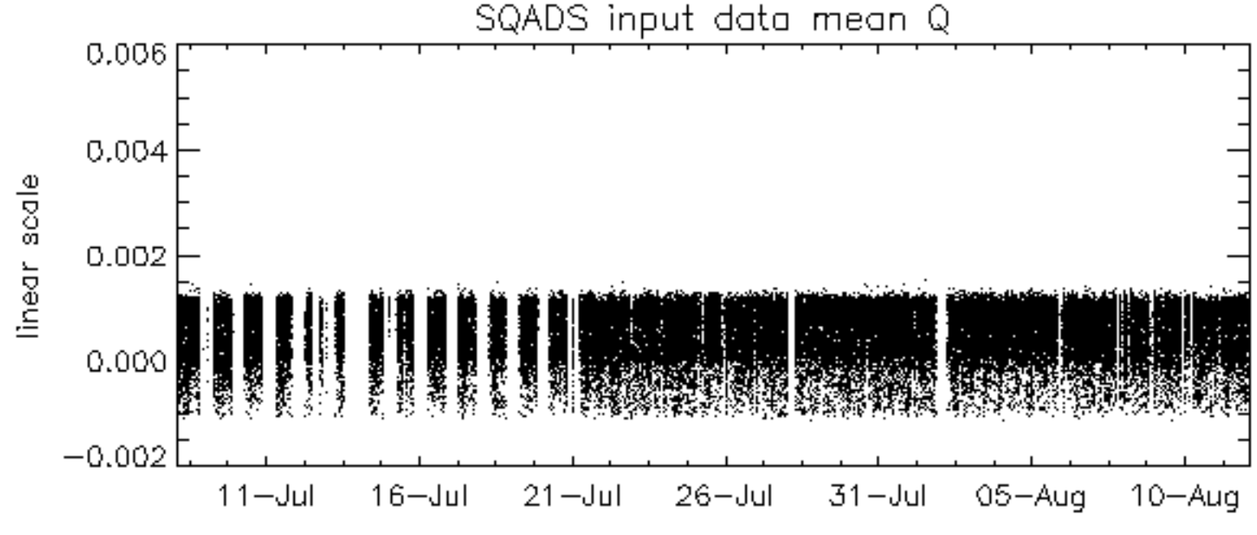
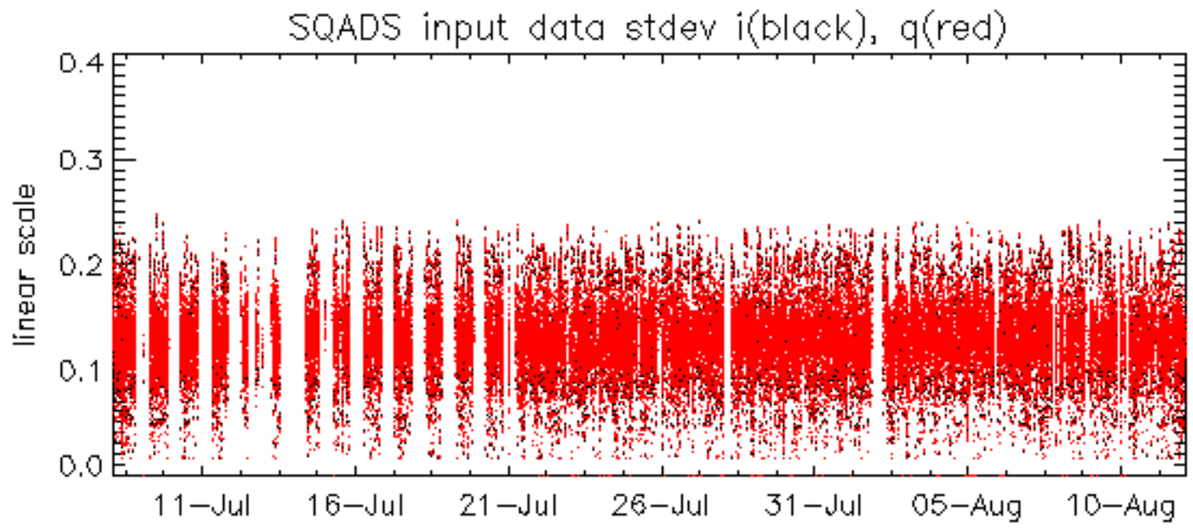

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-11 04:37:40 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

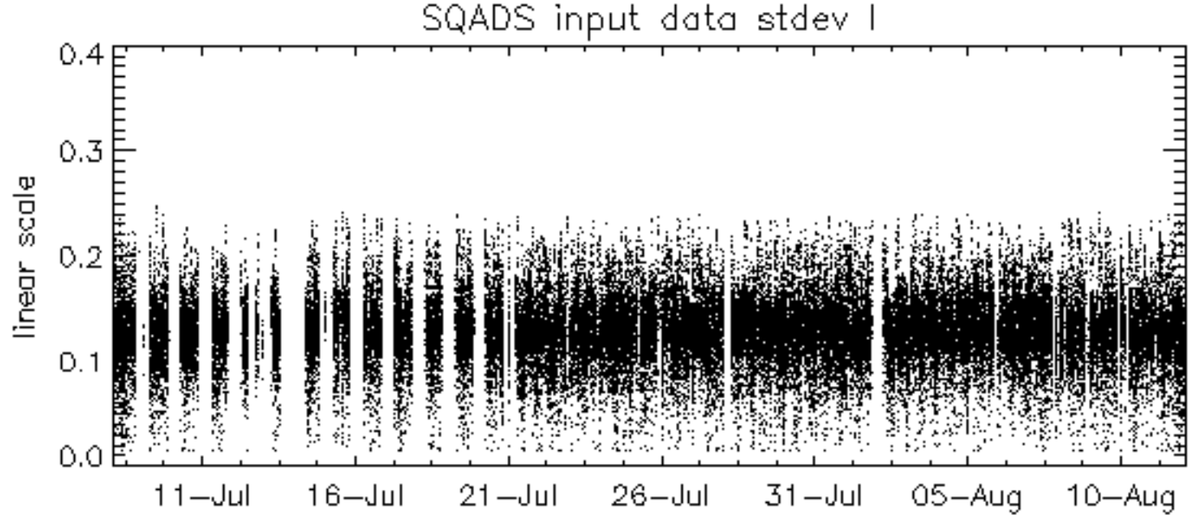

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

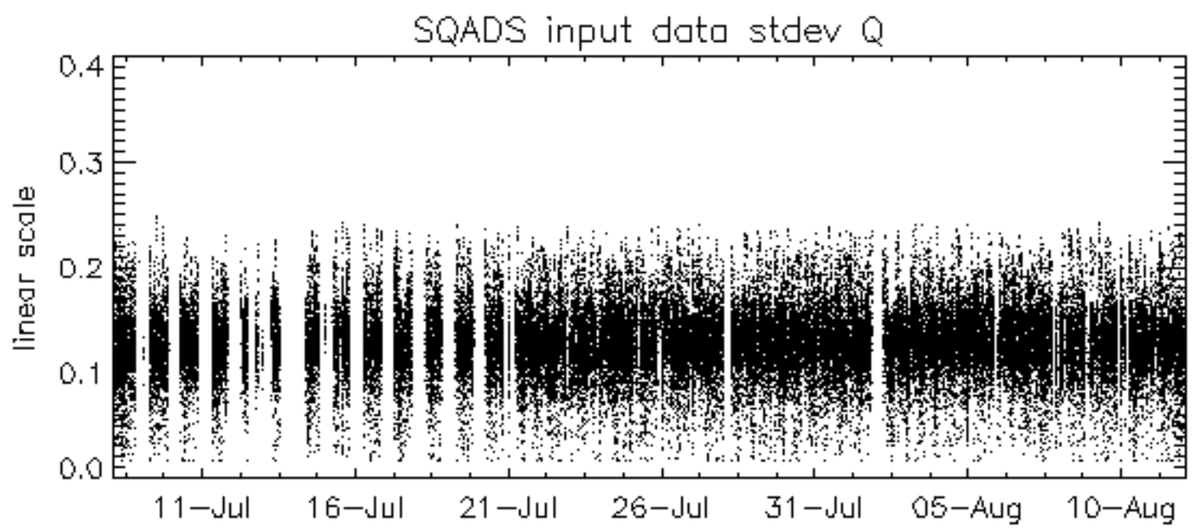

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug

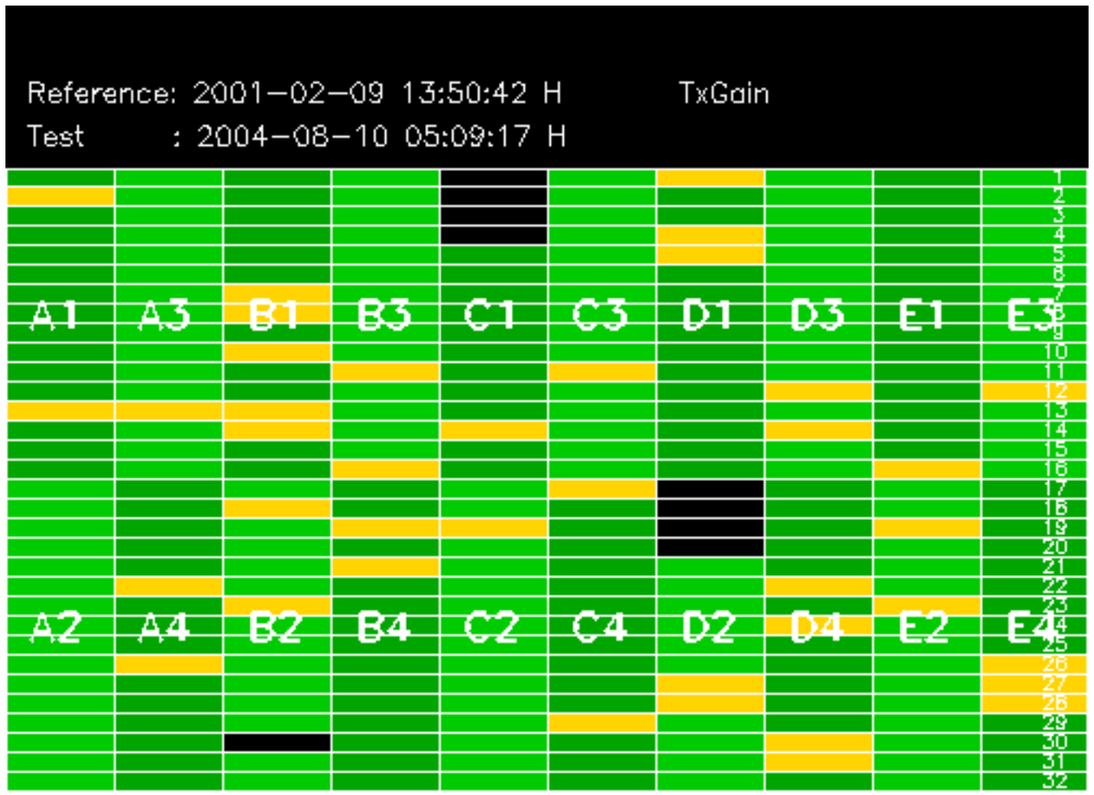

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug

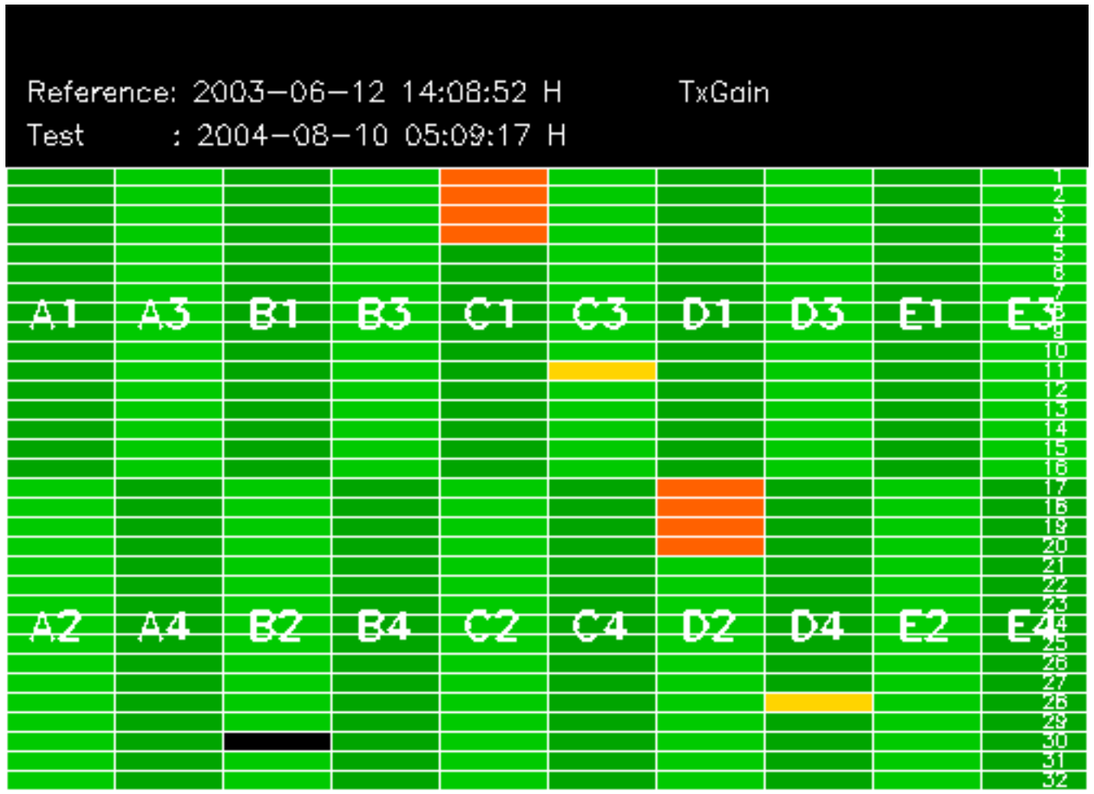

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
05−Aug
10−Aug


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul
05–Aug
10–Aug


Reference: 2001-02-09 13:50:42 H
Test : 2004-08-10 05:09:17 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 : 2004-08-10 05:09:17 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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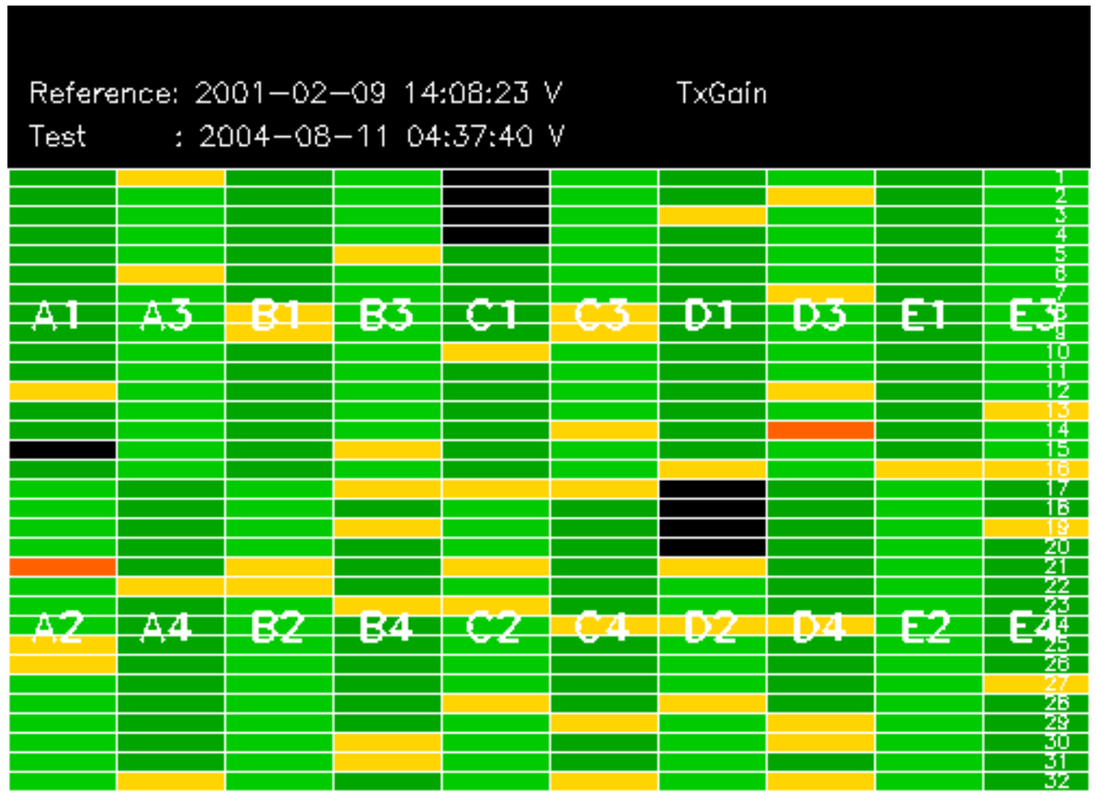
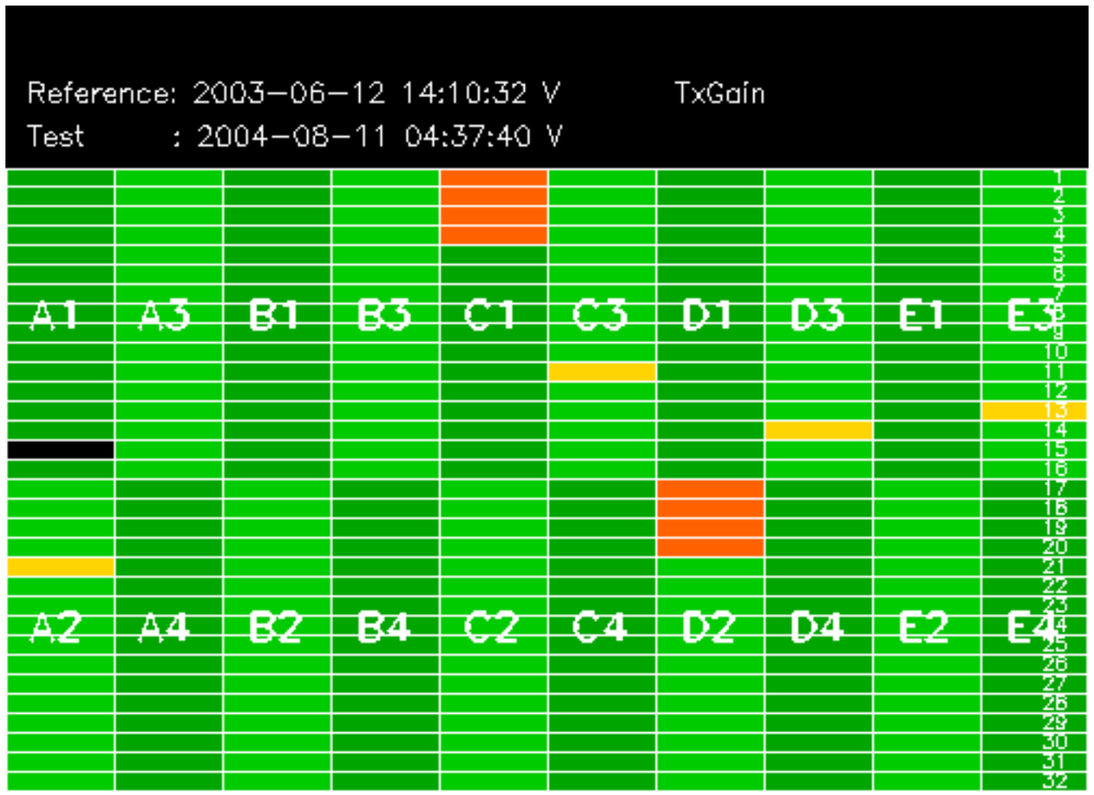

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-11 04:37:40 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-08-11 04:37:40 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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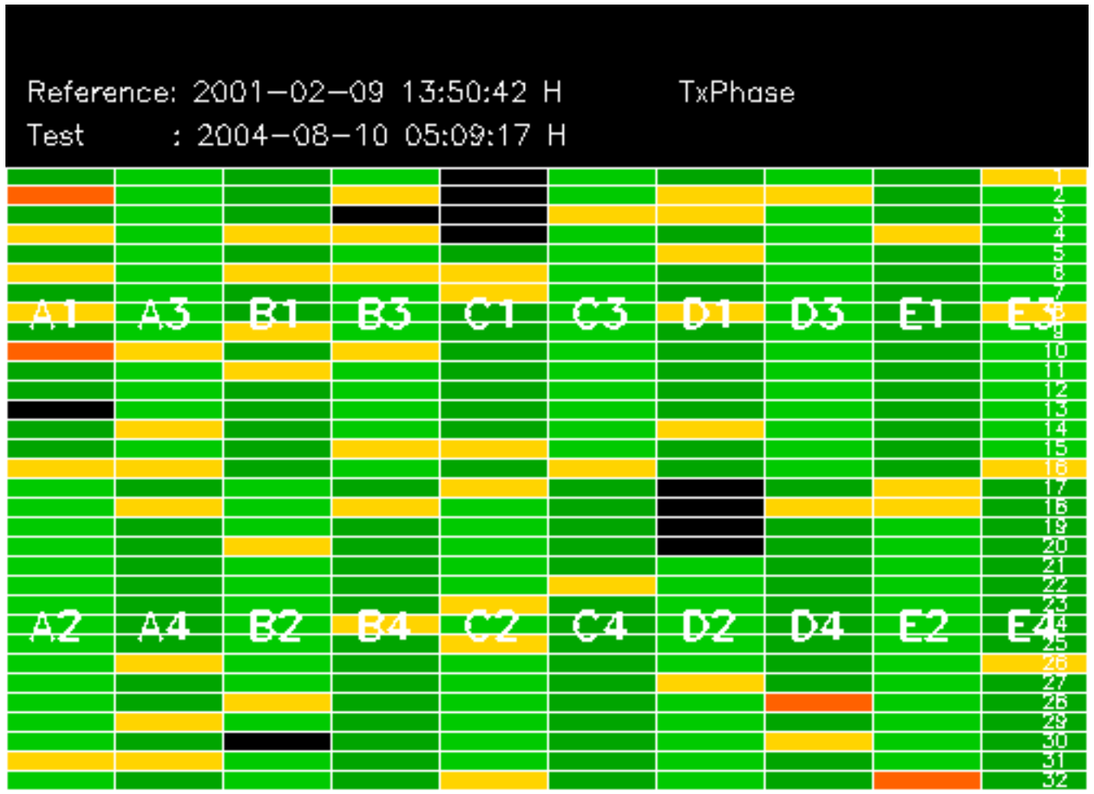
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-08-10 05:09:17 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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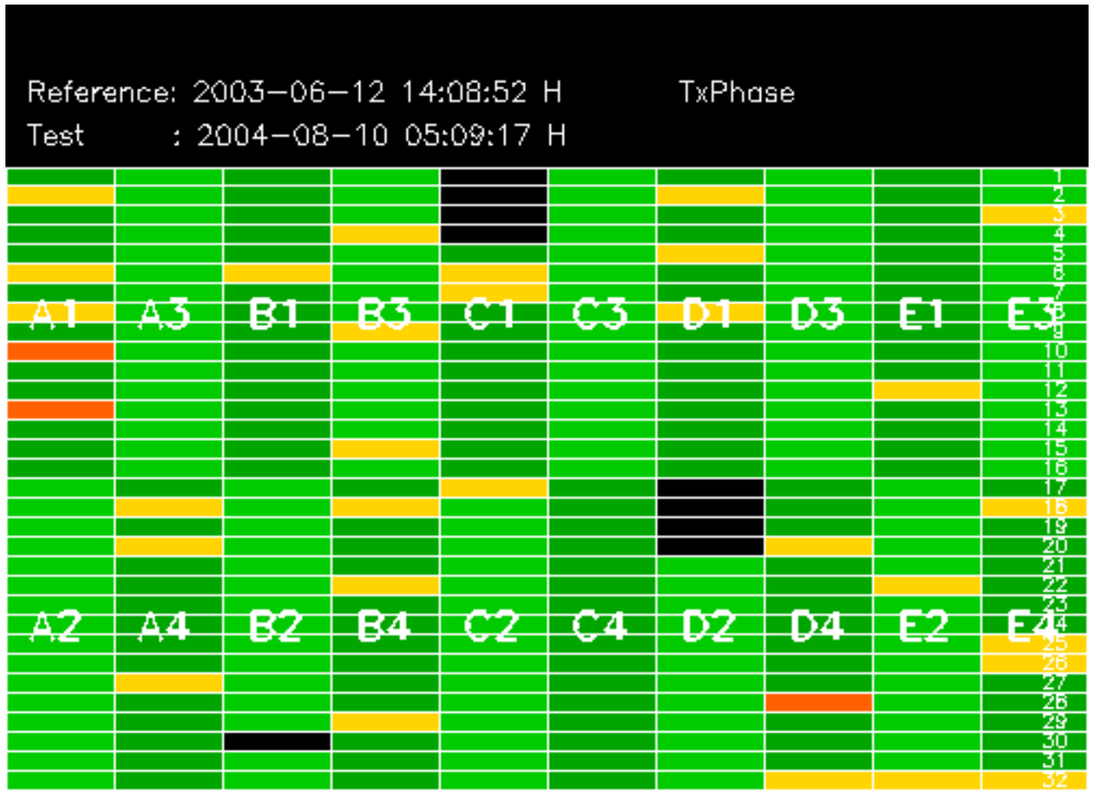
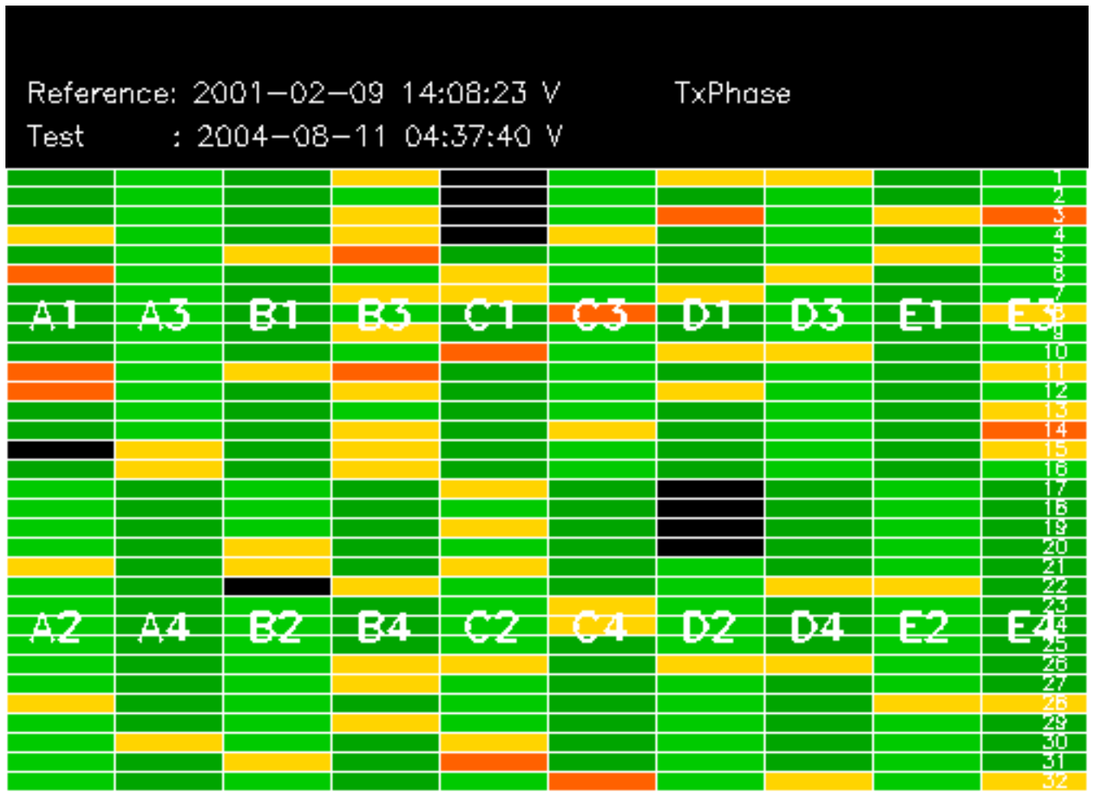

Reference: 2003-06-12 14:08:52 H
Test : 2004-08-10 05:09:17 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-11 04:37:40 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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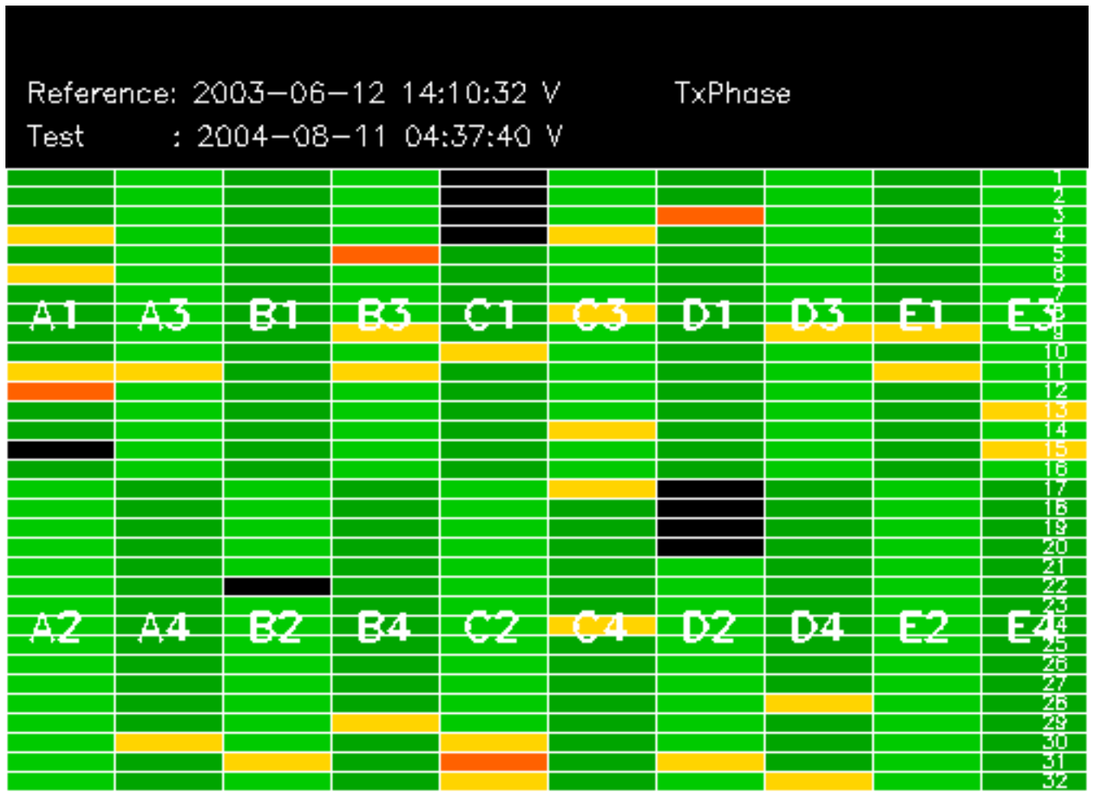
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-11 04:37:40 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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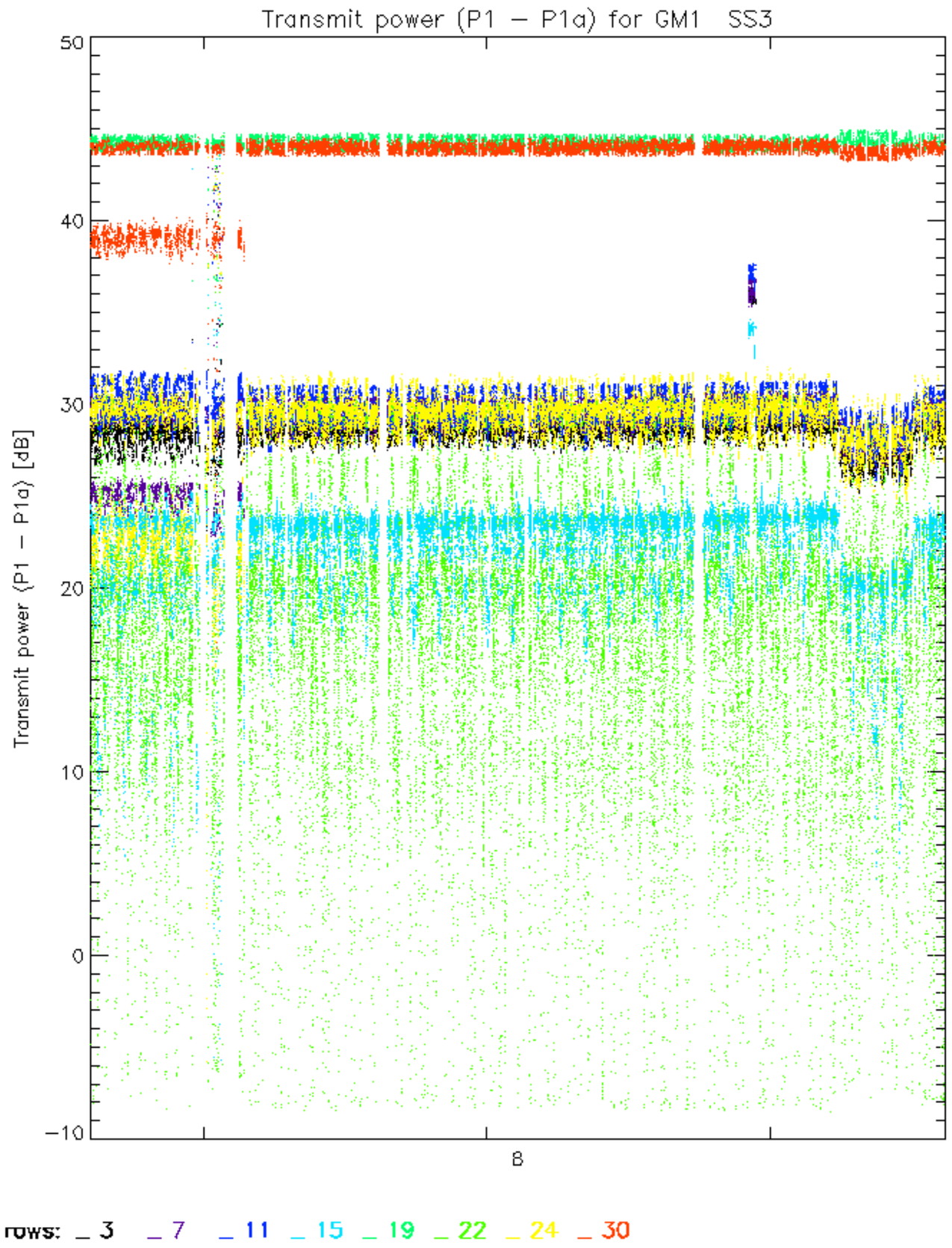
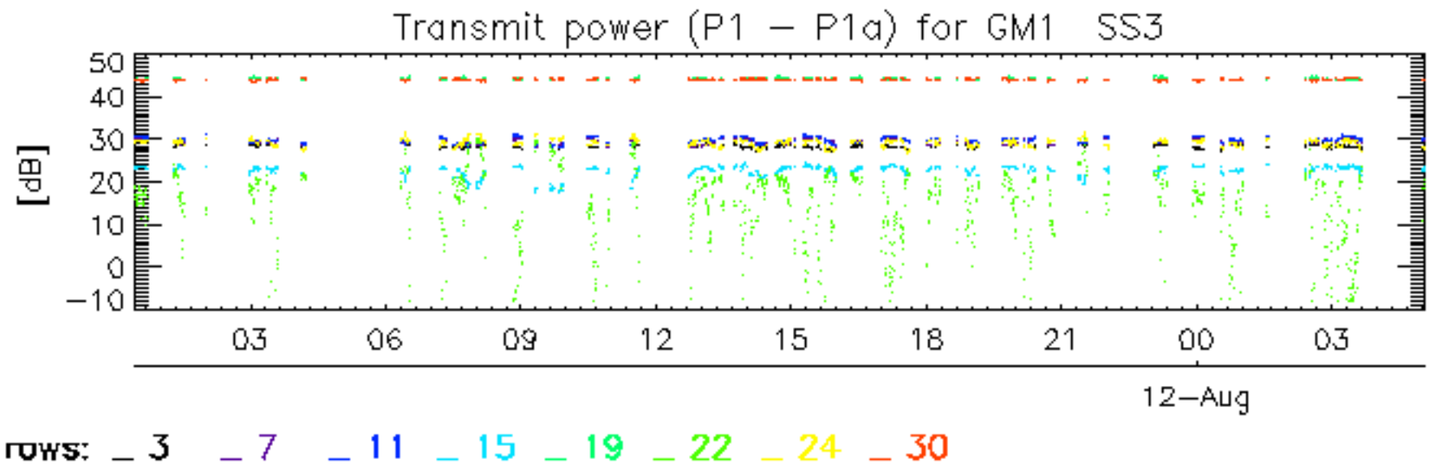
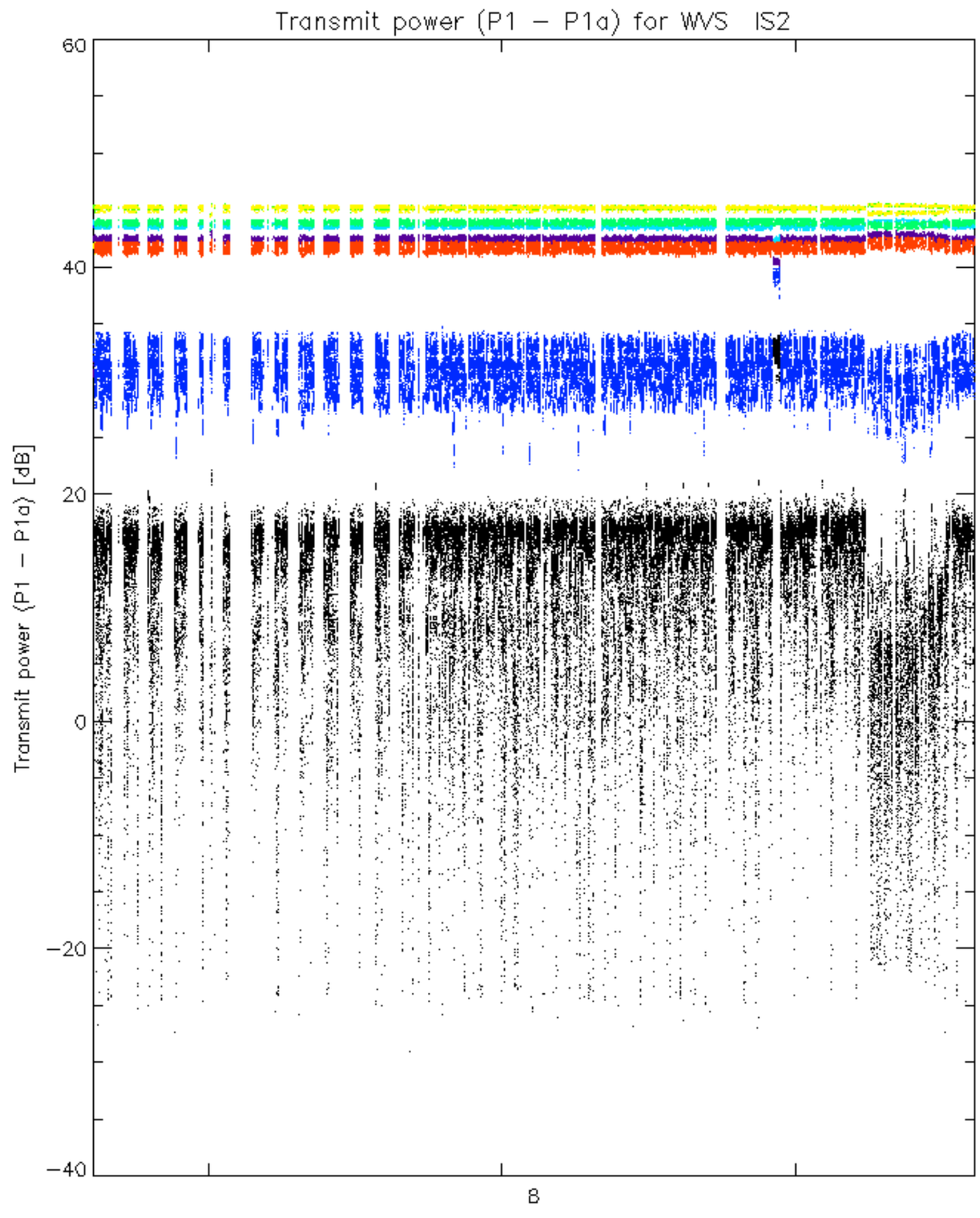
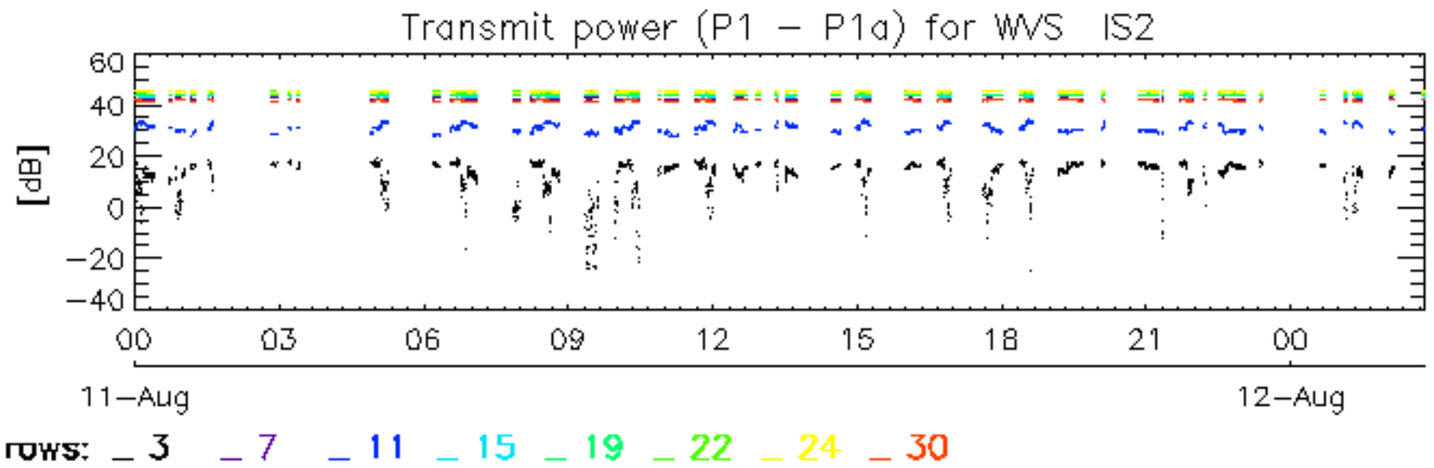

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
8
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
12–Aug
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
8
rows: 3 7 11 15 19 22 24 30


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

No unavailabilities during the reported period.