PRELIMINARY REPORT OF 040702

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

last update on Fri Jul 2 13:06:36 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 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	20040701 195007
H	20040630 202144

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	-3.499752	0.010420	0.044042
7	P1	-3.328463	0.014997	-0.005908
11	P1	-4.538004	0.038119	-0.044512
15	P1	-5.683444	0.058517	-0.034589
19	P1	-3.434561	0.004770	-0.011944
22	P1	-4.558037	0.011165	0.014709

24	P1	-4.915518	0.015594	0.003973
30	P1	-6.851860	0.023447	-0.034913
3	P1	-16.096596	0.218484	-0.038842
7	P1	-13.993261	0.101298	0.011235
11	P1	-19.886076	0.305102	-0.211565
15	P1	-11.782027	0.045075	0.002449
19	P1	-13.820186	0.037125	-0.024192
22	P1	-16.521795	0.419935	0.252429
24	P1	-14.675460	0.304880	0.147453
30	P1	-17.691967	0.377163	-0.073429

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.409945	0.082885	0.062855
7	P2	-22.839558	0.122224	0.097442
11	P2	-15.602889	0.133294	0.135037
15	P2	-7.182190	0.097476	0.076771
19	P2	-9.566916	0.147455	0.051857
22	P2	-17.529453	0.105573	0.138554
24	P2	-20.852890	0.088116	0.100332
30	P2	-19.425604	0.079843	0.068246

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143053	0.001986	-0.001086
7	P3	-8.143060	0.001986	-0.001065
11	P3	-8.143064	0.001987	-0.001047
15	P3	-8.143071	0.001987	-0.001024
19	P3	-8.143068	0.001987	-0.001038
22	P3	-8.143064	0.001986	-0.001055
24	P3	-8.143064	0.001986	-0.001073
30	P3	-8.142976	0.001983	-0.001434

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	-3.137234	0.133154	0.037752
7	P1	-2.811580	0.070415	-0.032909
11	P1	-3.798342	0.022669	-0.049178
15	P1	-4.254353	1.005336	-0.014173
19	P1	-3.359076	0.049106	-0.011480
22	P1	-5.723296	0.042876	-0.027597
24	P1	-4.049713	0.078821	-0.018683
30	P1	-6.104569	0.064046	-0.020484
3	P1	-11.015574	0.411224	0.037563
7	P1	-9.768421	0.240741	-0.044731
11	P1	-11.774789	0.169074	-0.056655
15	P1	-11.845615	0.269463	-0.048395
19	P1	-14.999440	0.814506	-0.003963
22	P1	-21.494068	8.817204	0.121407
24	P1	-17.385406	0.293876	-0.049636
30	P1	-21.685186	4.205571	-0.033854

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.155230	0.043521	0.068188
7	P2	-22.933044	0.029416	0.080863
11	P2	-11.015929	0.222909	0.158981
15	P2	-4.997521	0.044384	0.048669
19	P2	-6.930652	0.042910	0.018916
22	P2	-7.666442	0.025170	0.112562
24	P2	-11.066364	0.074093	0.082723
30	P2	-22.382193	0.091844	0.126406

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.984122	0.003344	-0.002261
7	P3	-7.984085	0.003333	-0.002266
11	P3	-7.984024	0.003340	-0.002238
15	P3	-7.984012	0.003342	-0.001956
19	P3	-7.983969	0.003341	-0.001995
22	P3	-7.984149	0.003334	-0.001972
24	P3	-7.984036	0.003364	-0.002499
30	P3	-7.983986	0.003338	-0.002218

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	0.000501843
	stdev	2.06695e-07
MEAN Q	mean	0.000552439
	stdev	2.34924e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.130475
	stdev	0.00101535
STDEV Q	mean	0.130726
	stdev	0.00102789

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

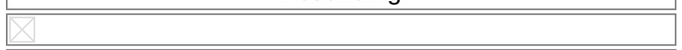
Descending

6.3 - Doppler evolution versus ANX for WVS

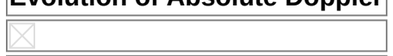
Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

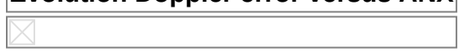
Acsending

Descending

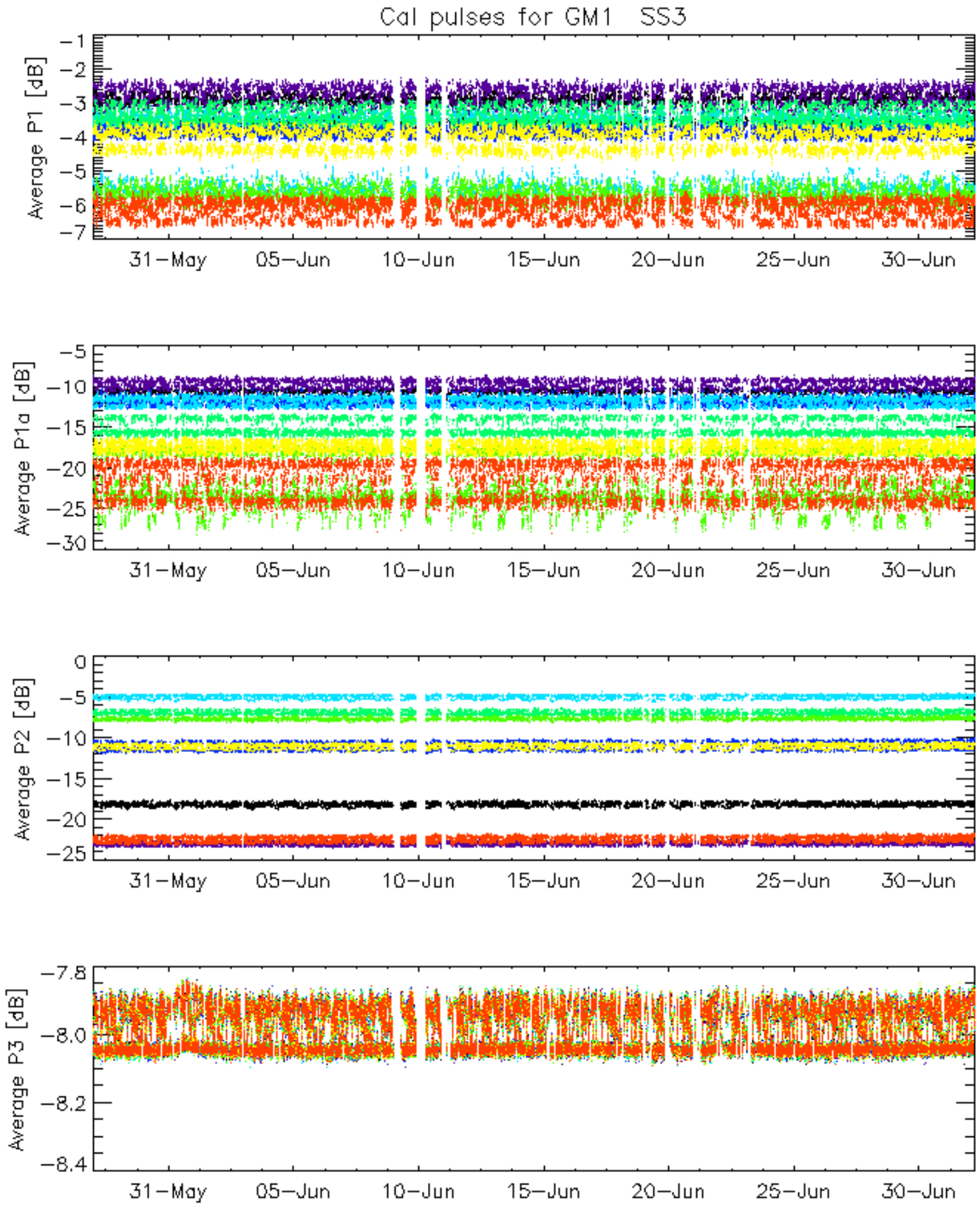
6.5 - Absolute Doppler for GM1

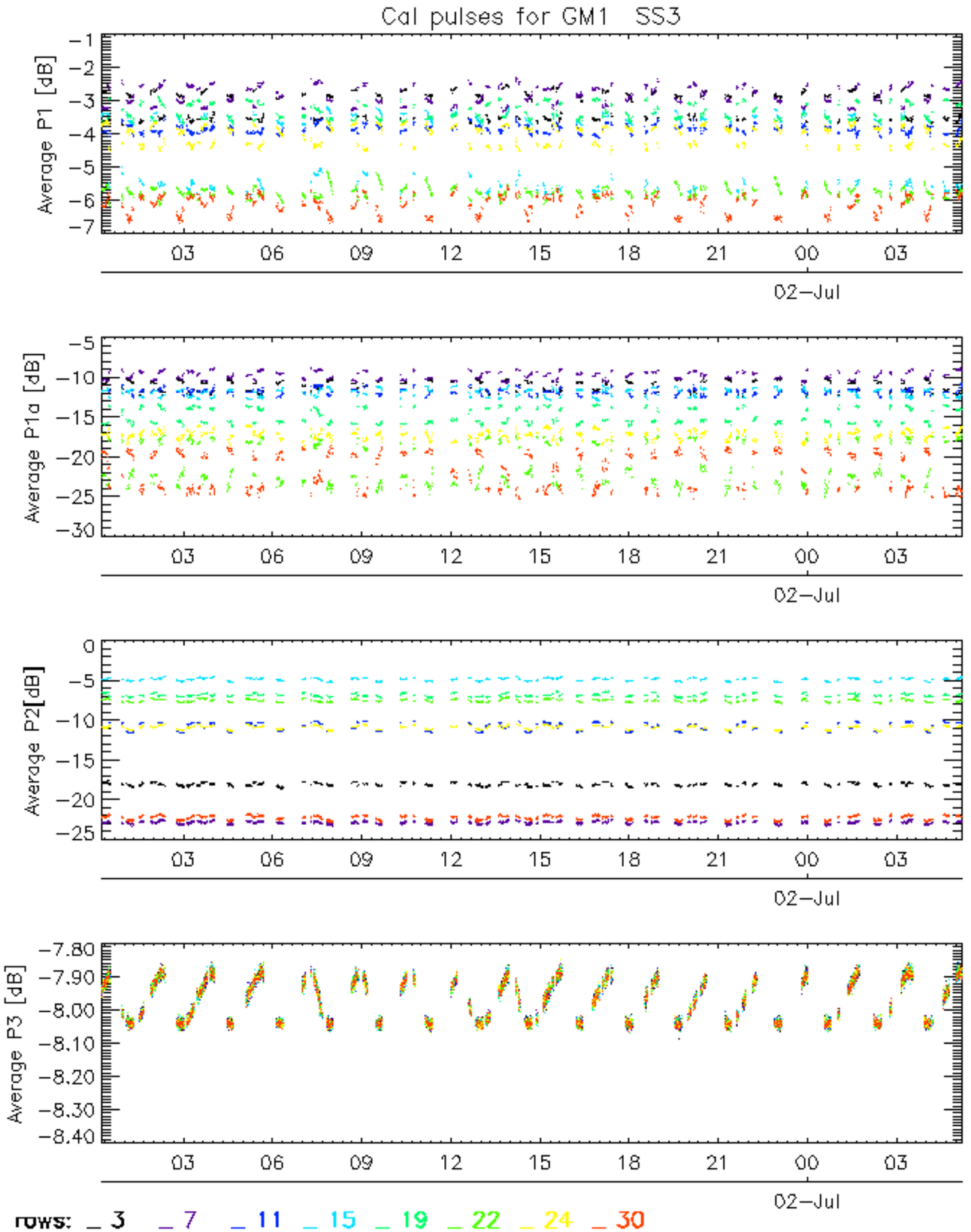
Evolution of Absolute Doppler

Acsending

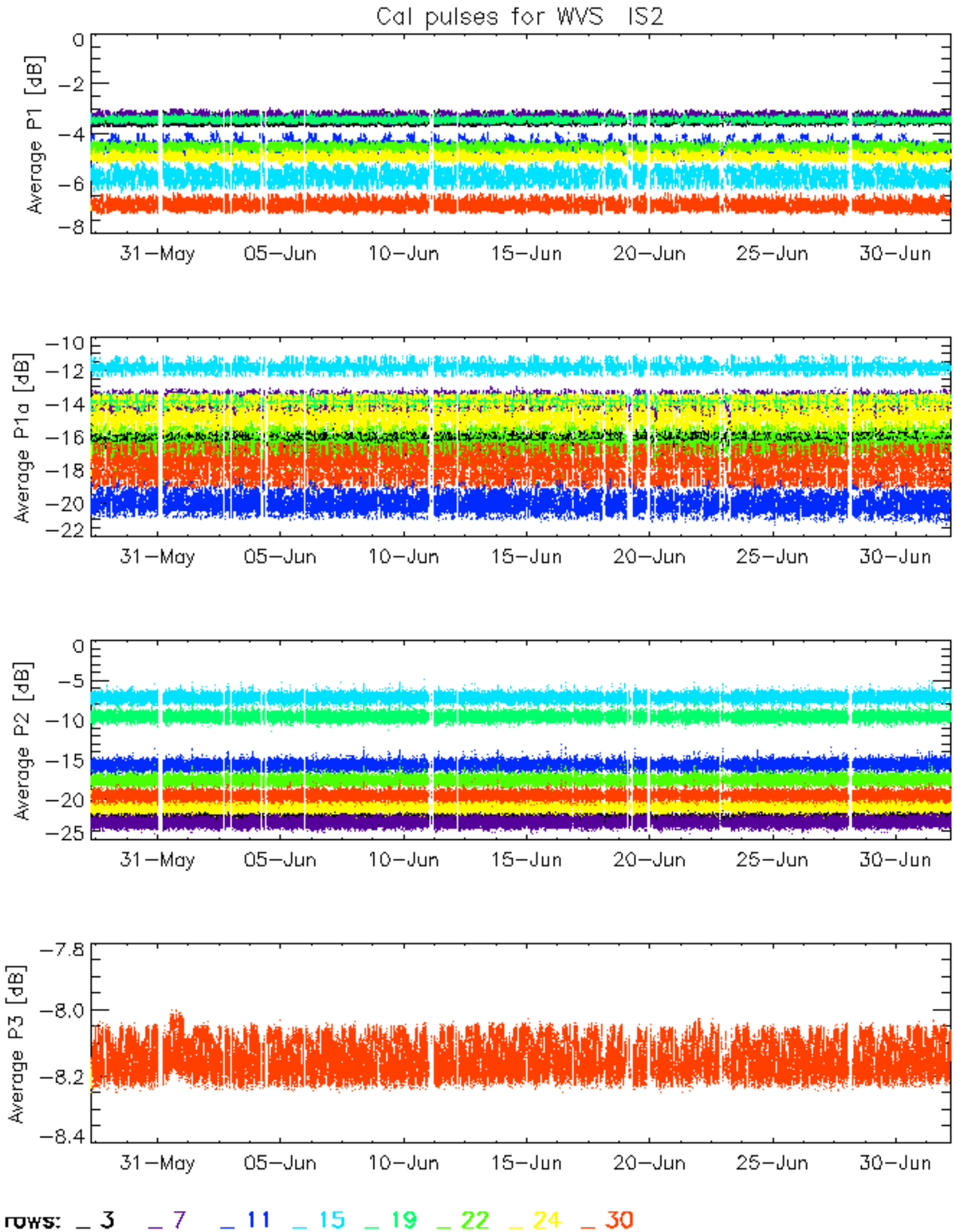
Descending

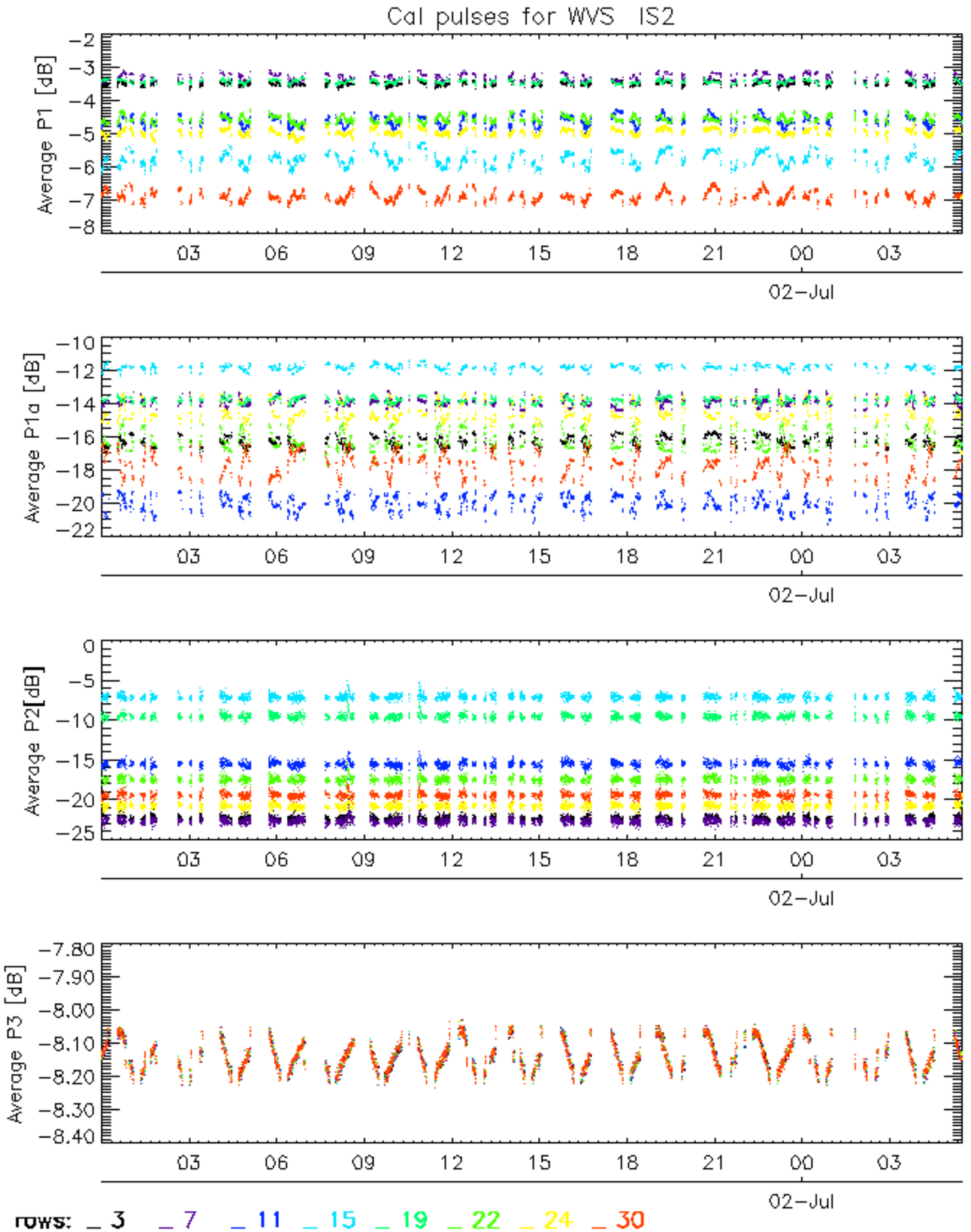
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX



Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun
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

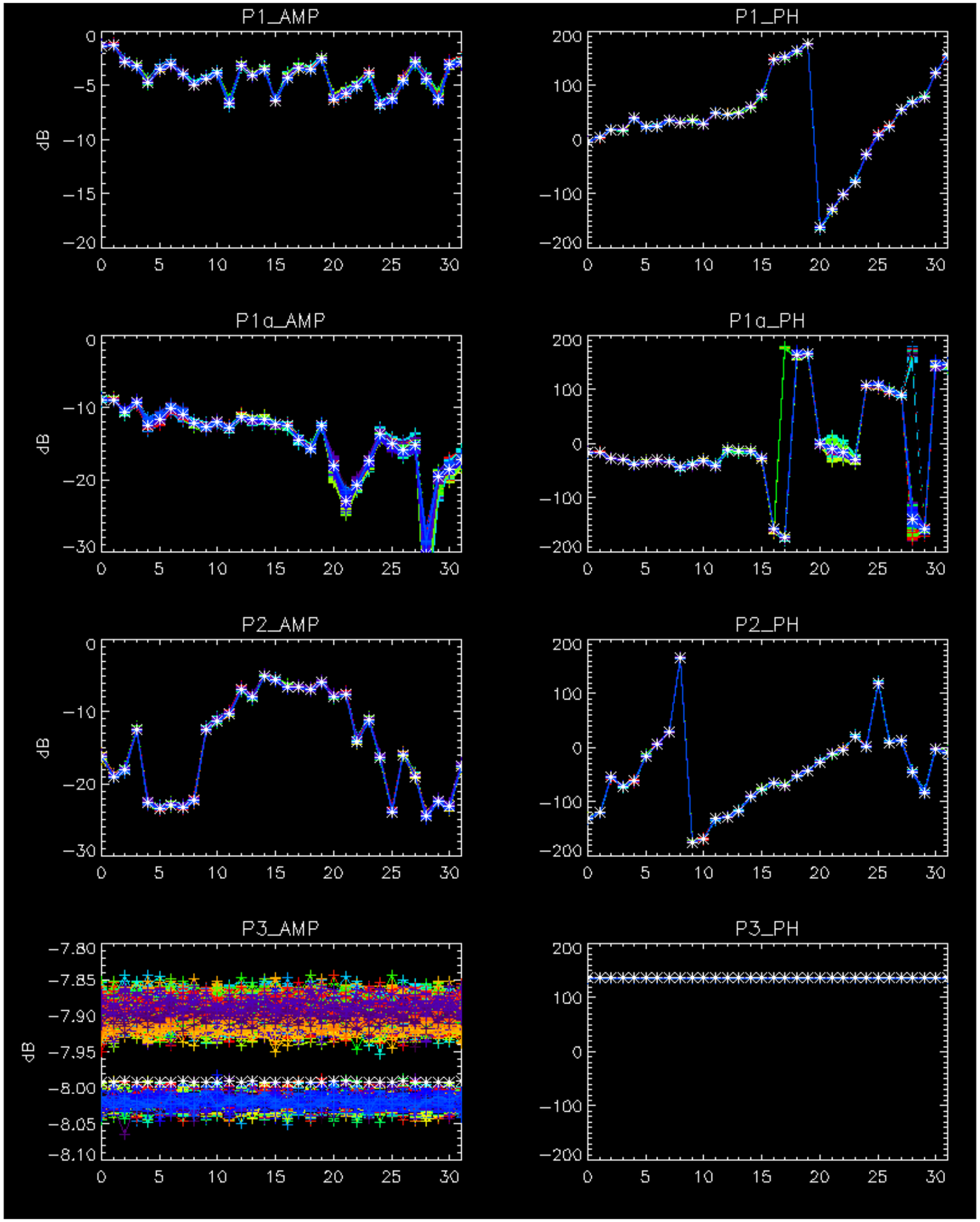

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
02−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
02−Jul
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
02−Jul
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

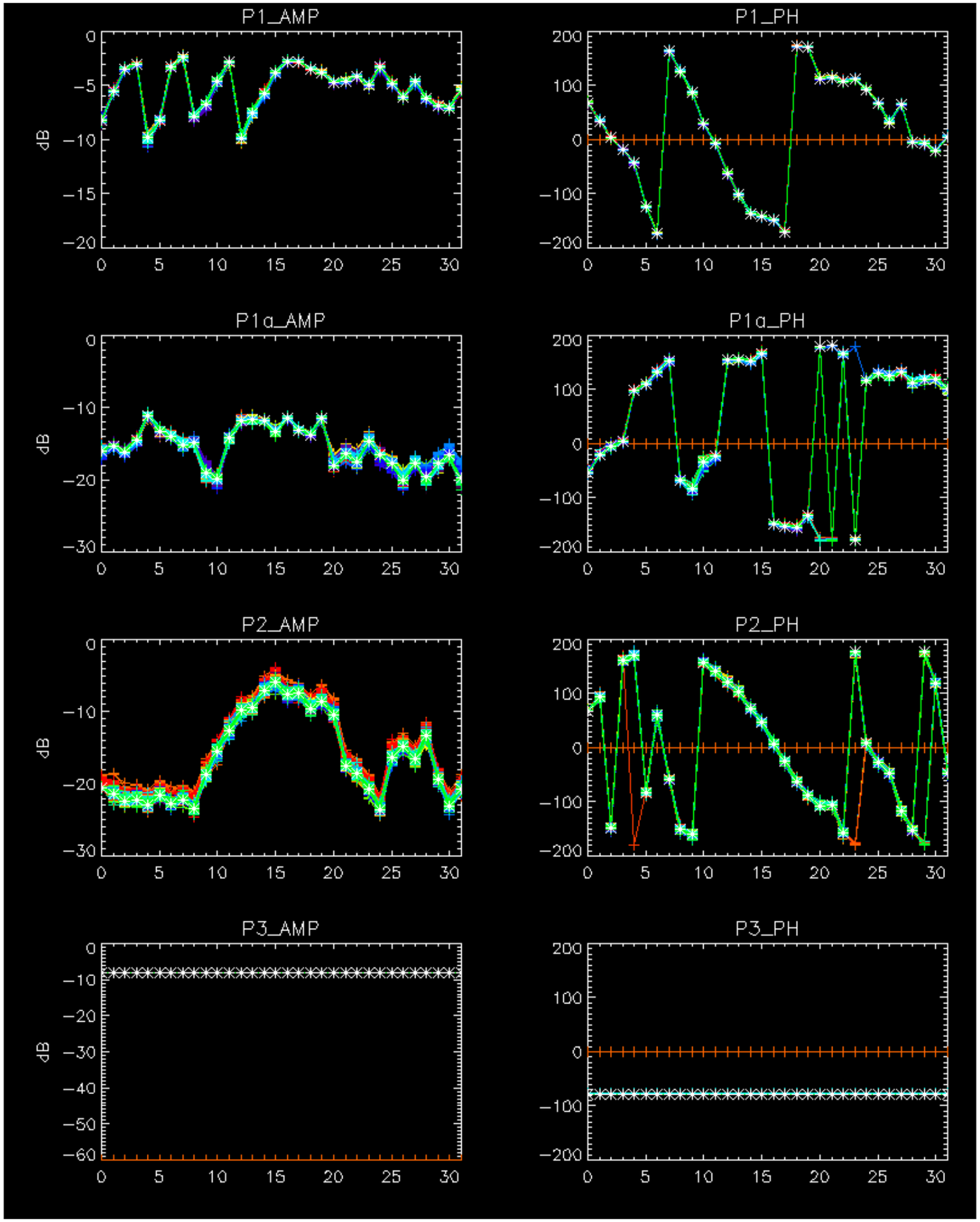

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
02−Jul
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

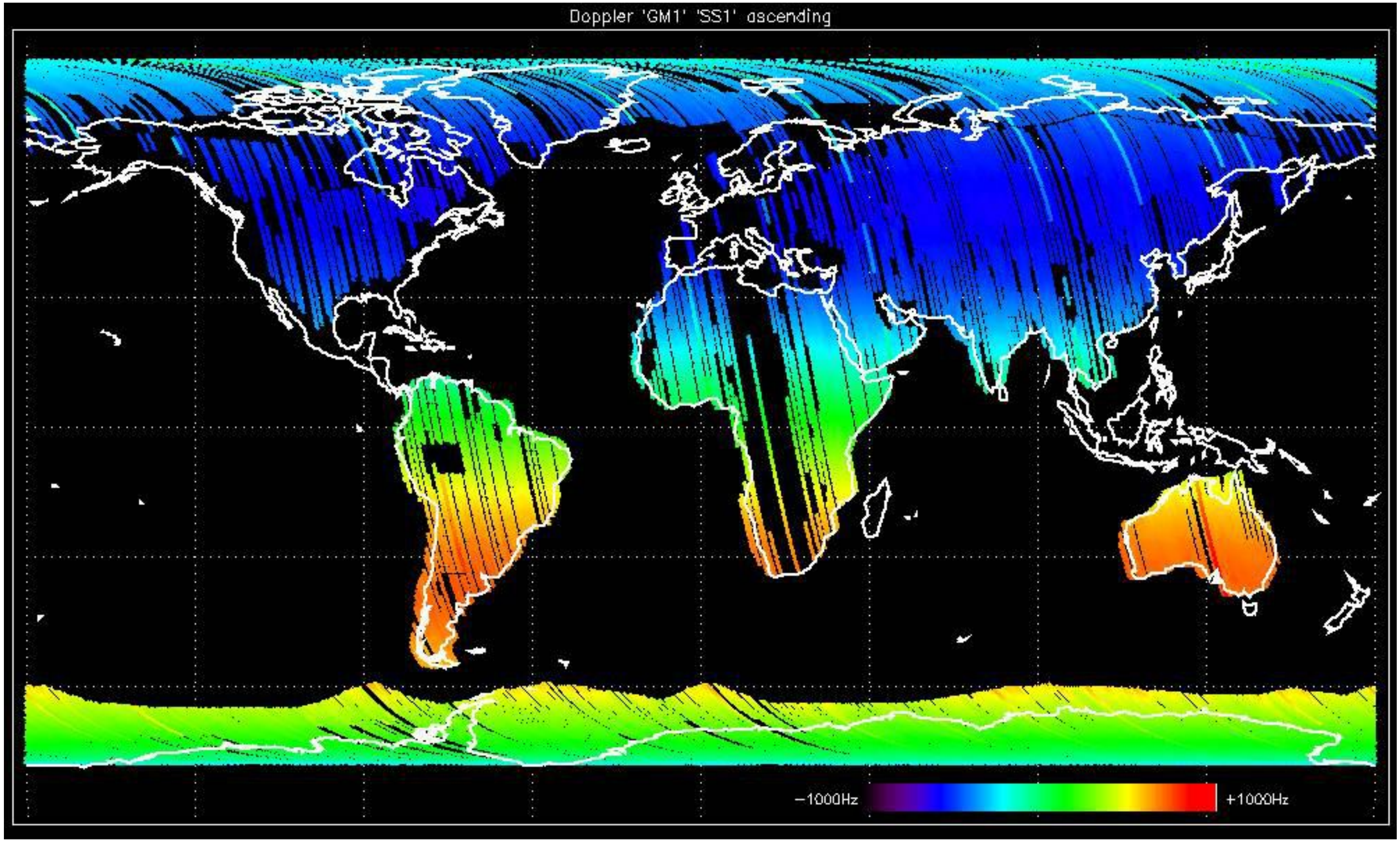
No anomalies observed.

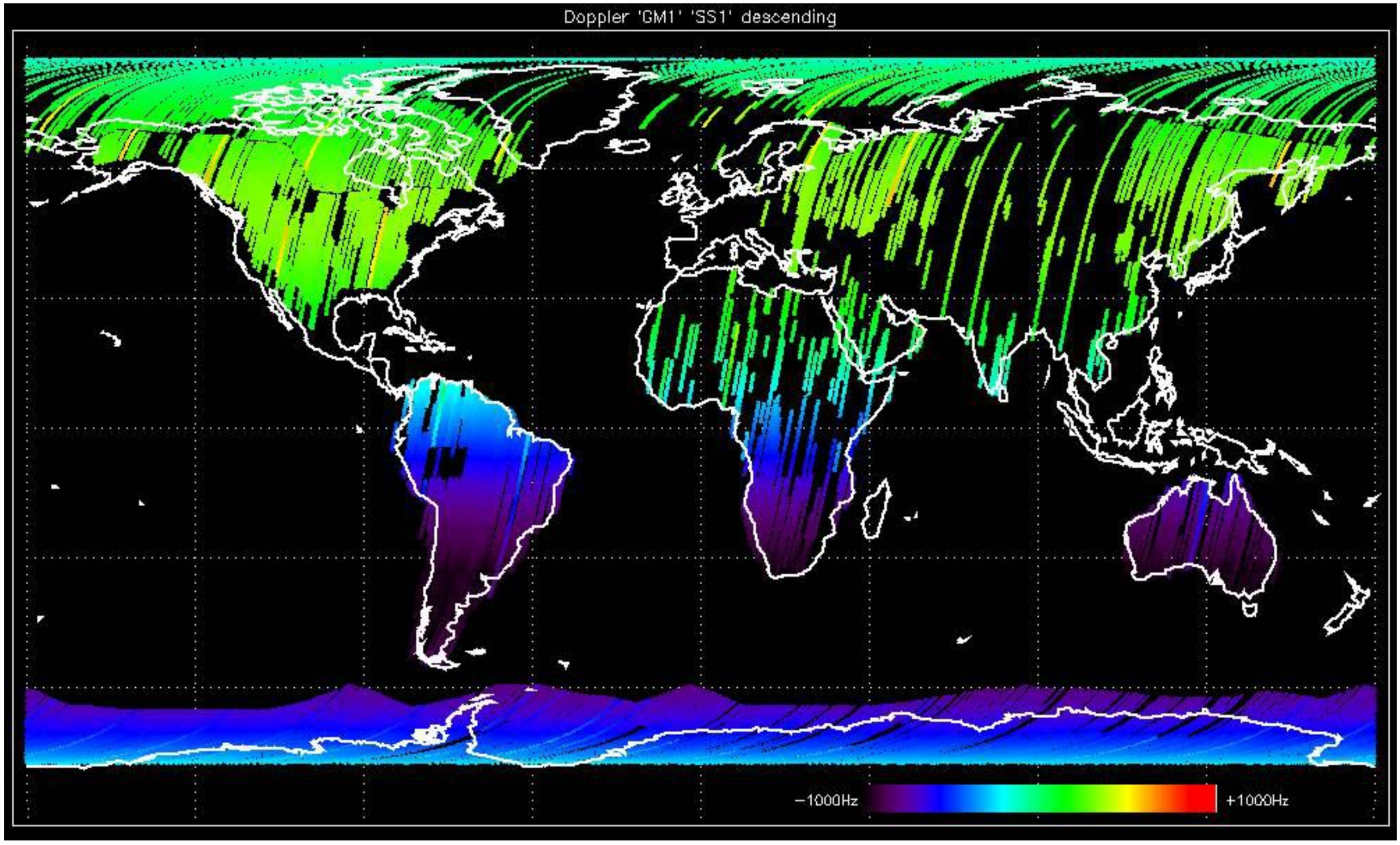

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

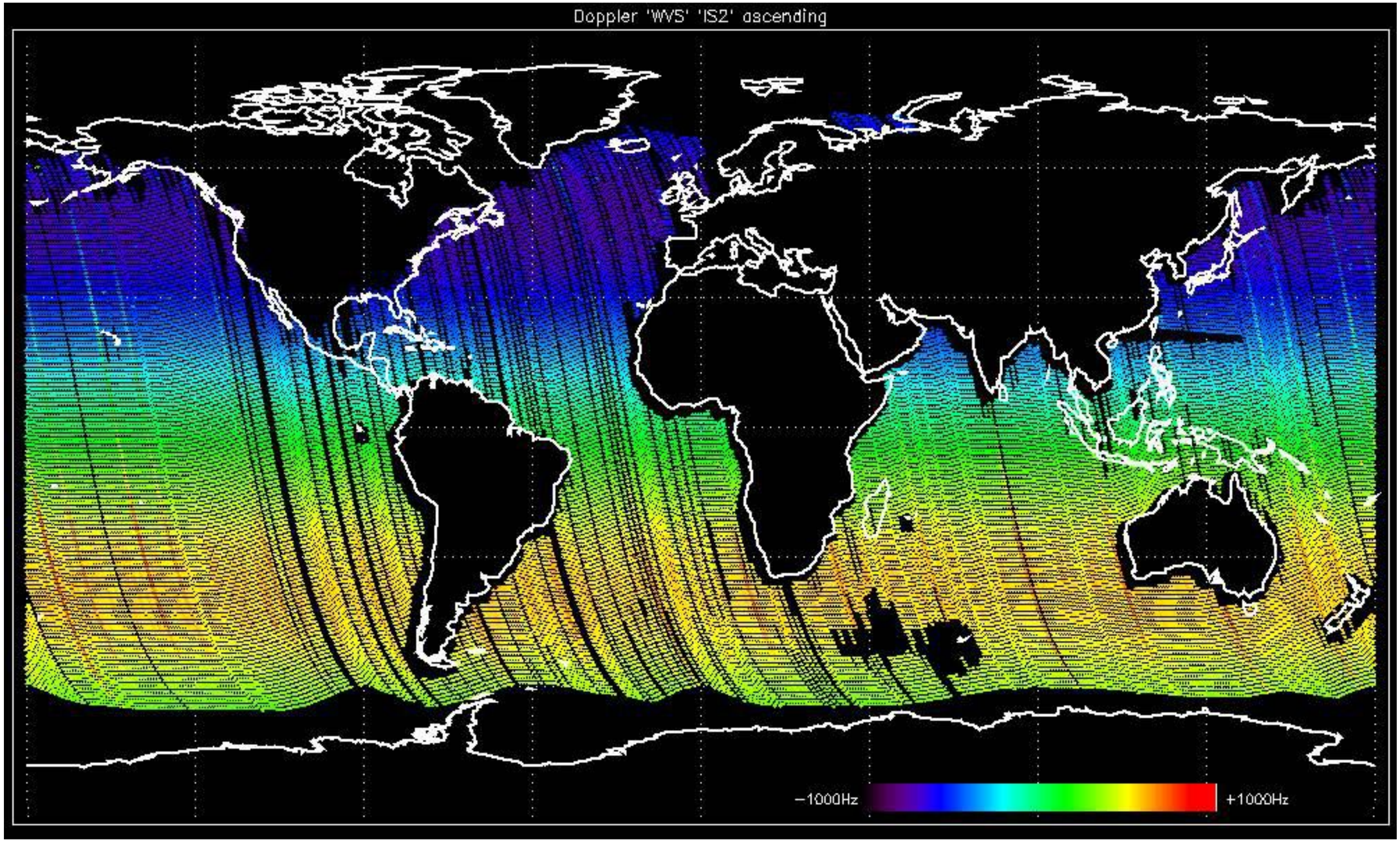

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

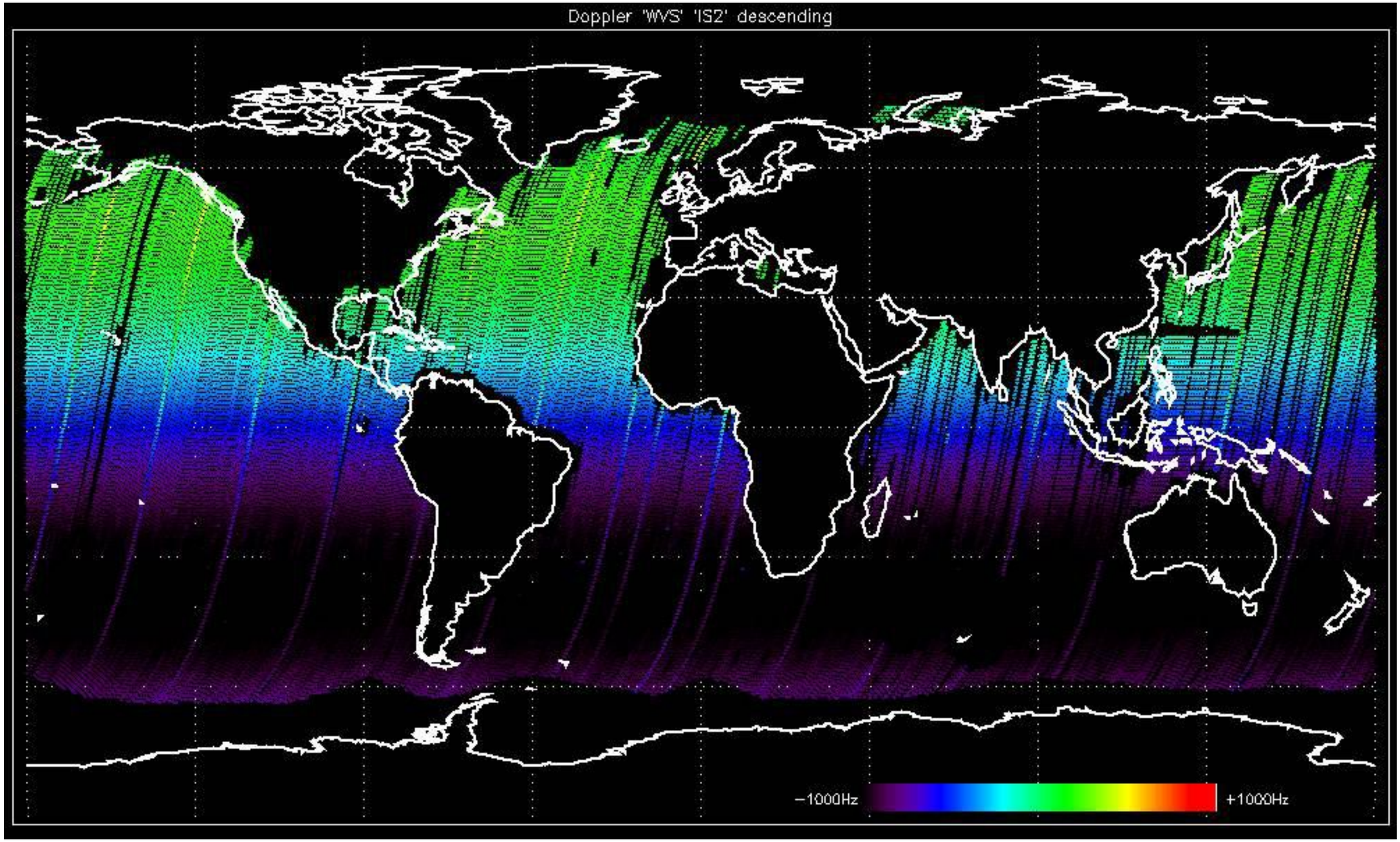
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

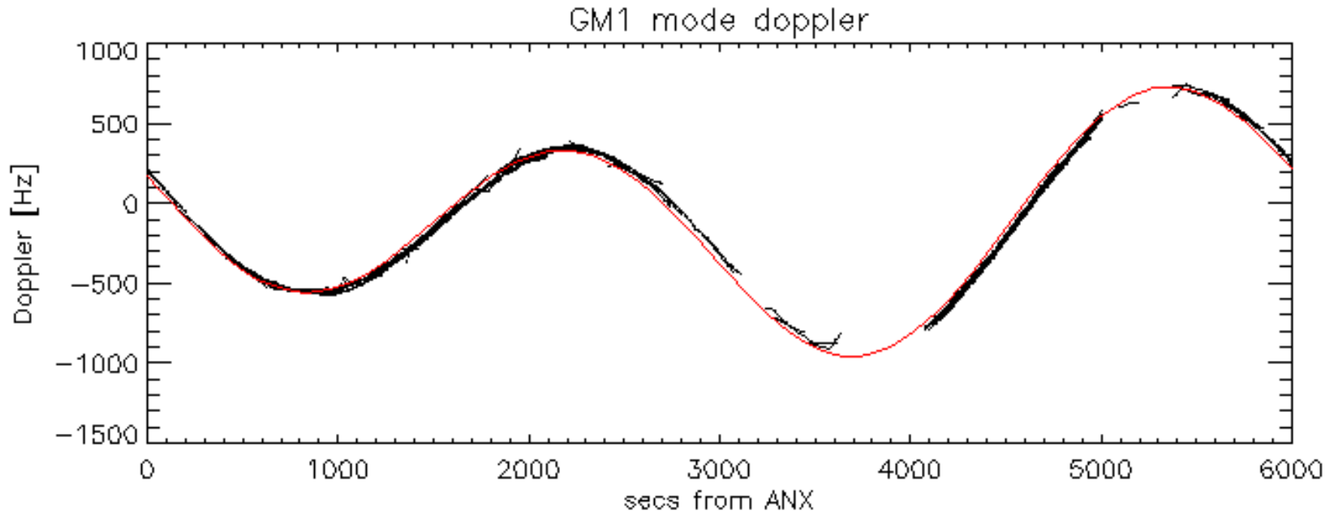
Preliminary report.The data is not yet controled

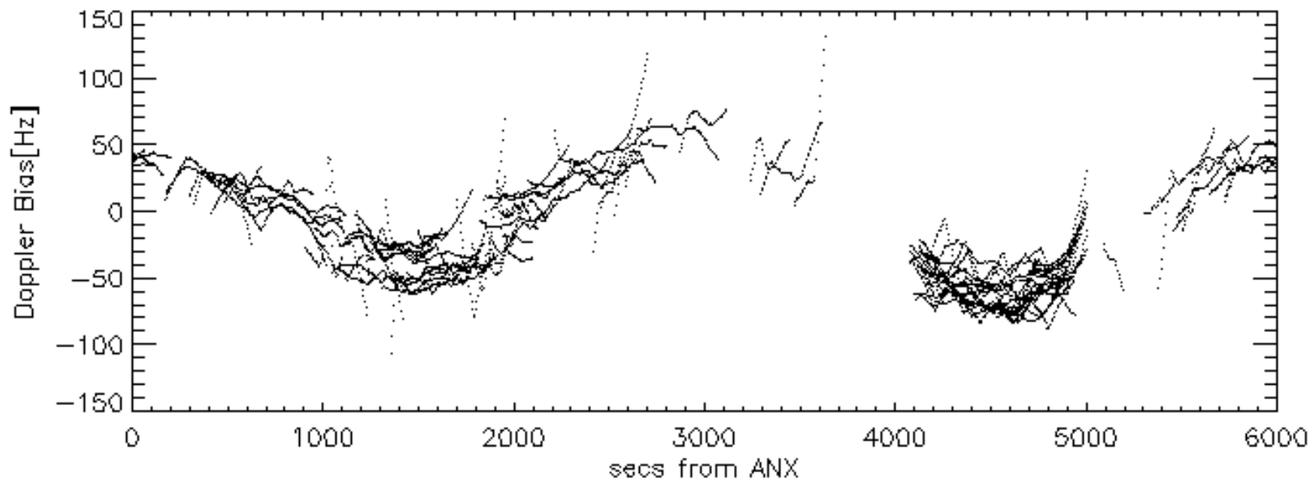

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

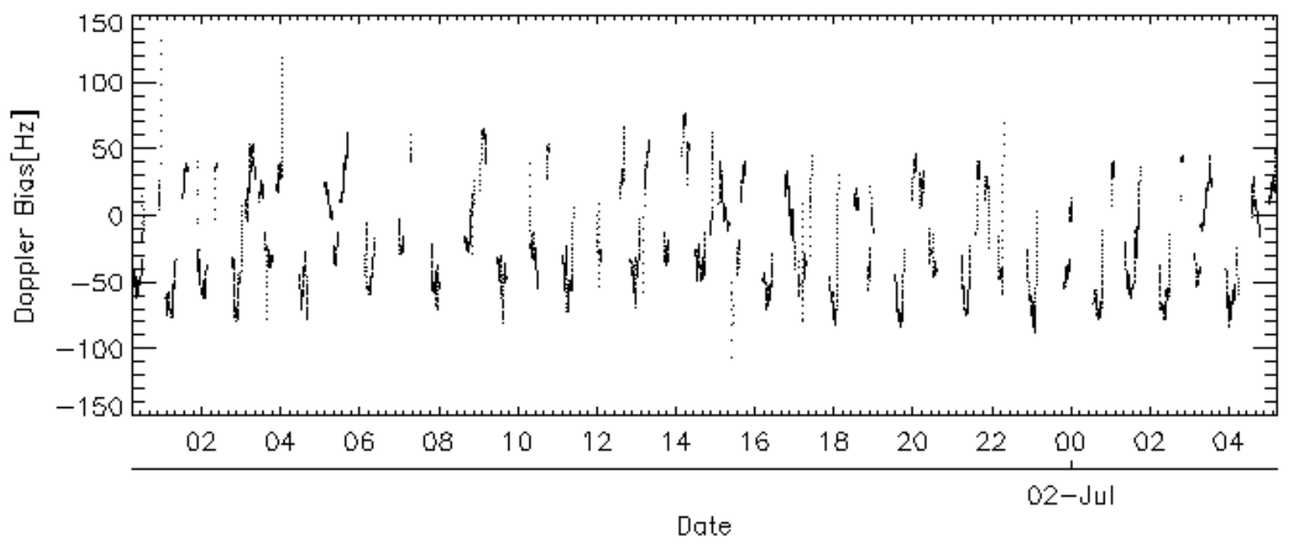

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

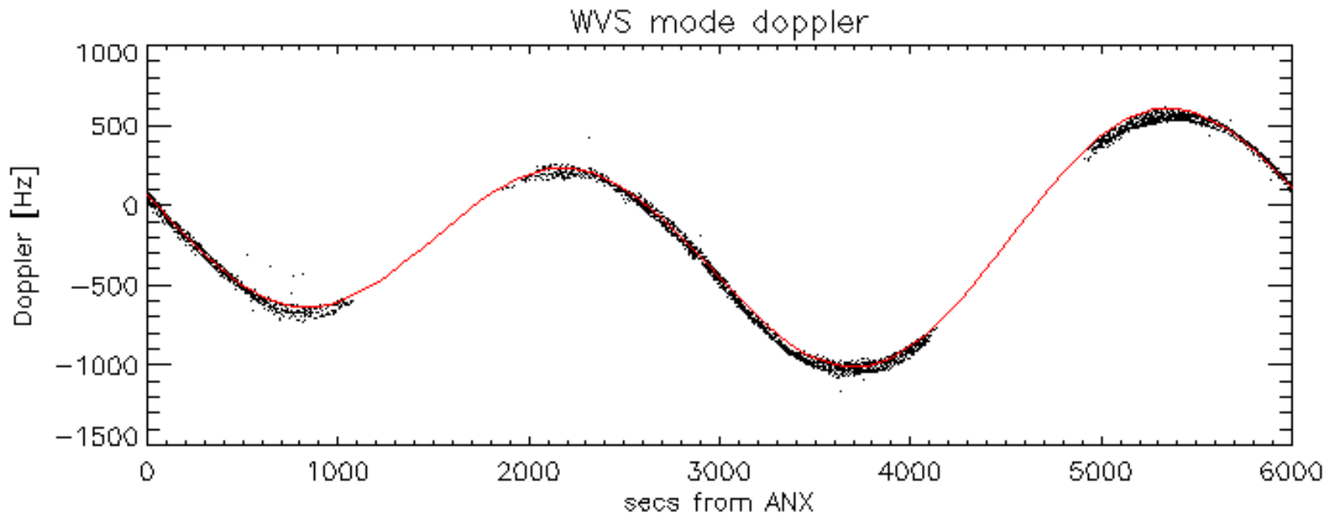

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

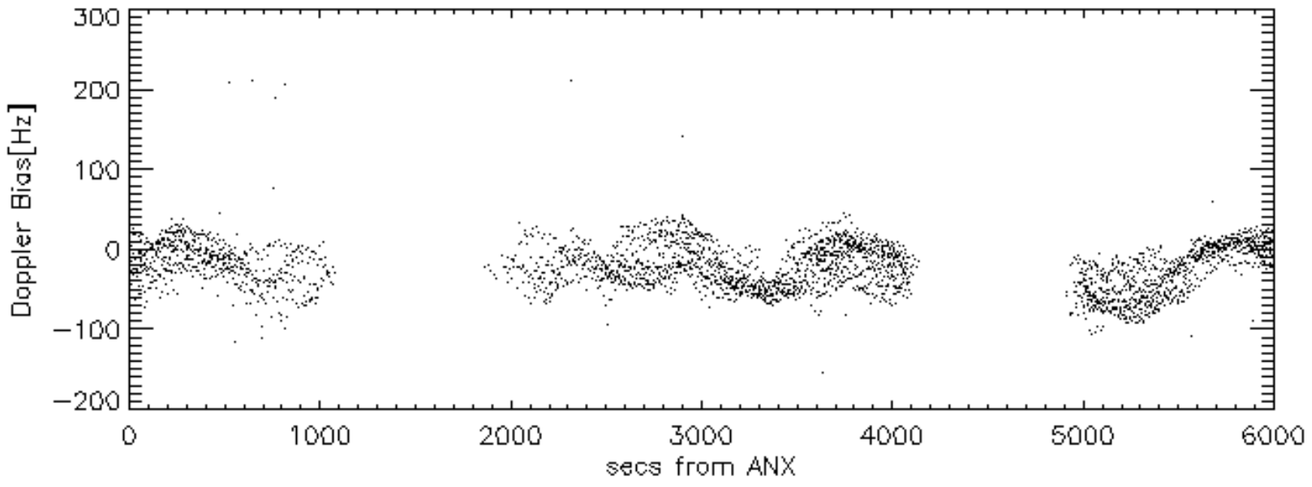

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

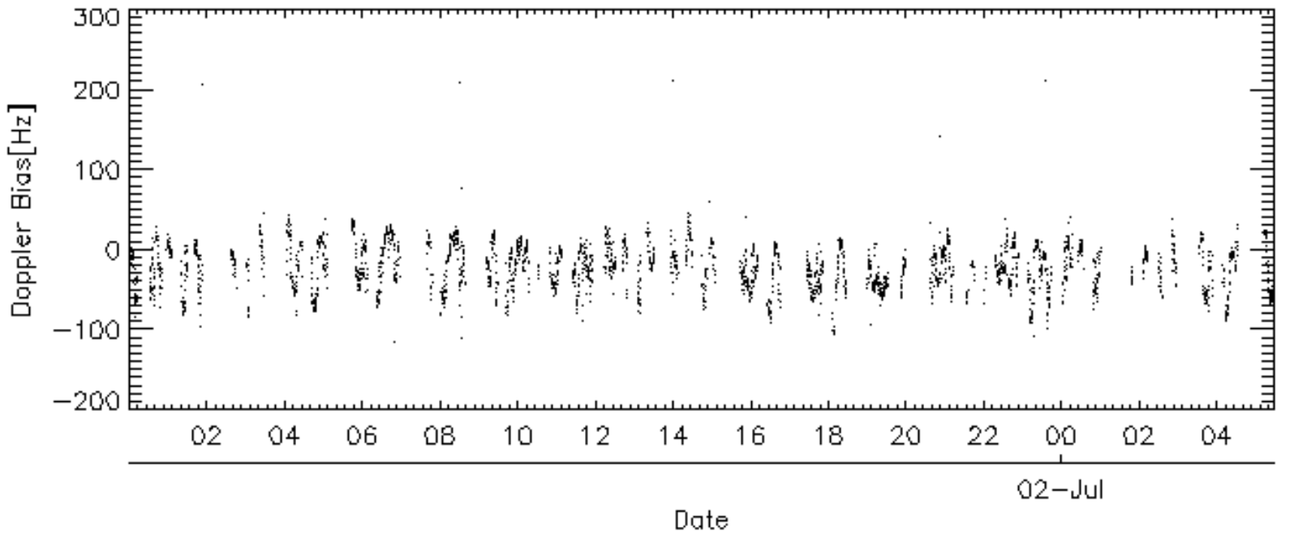

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

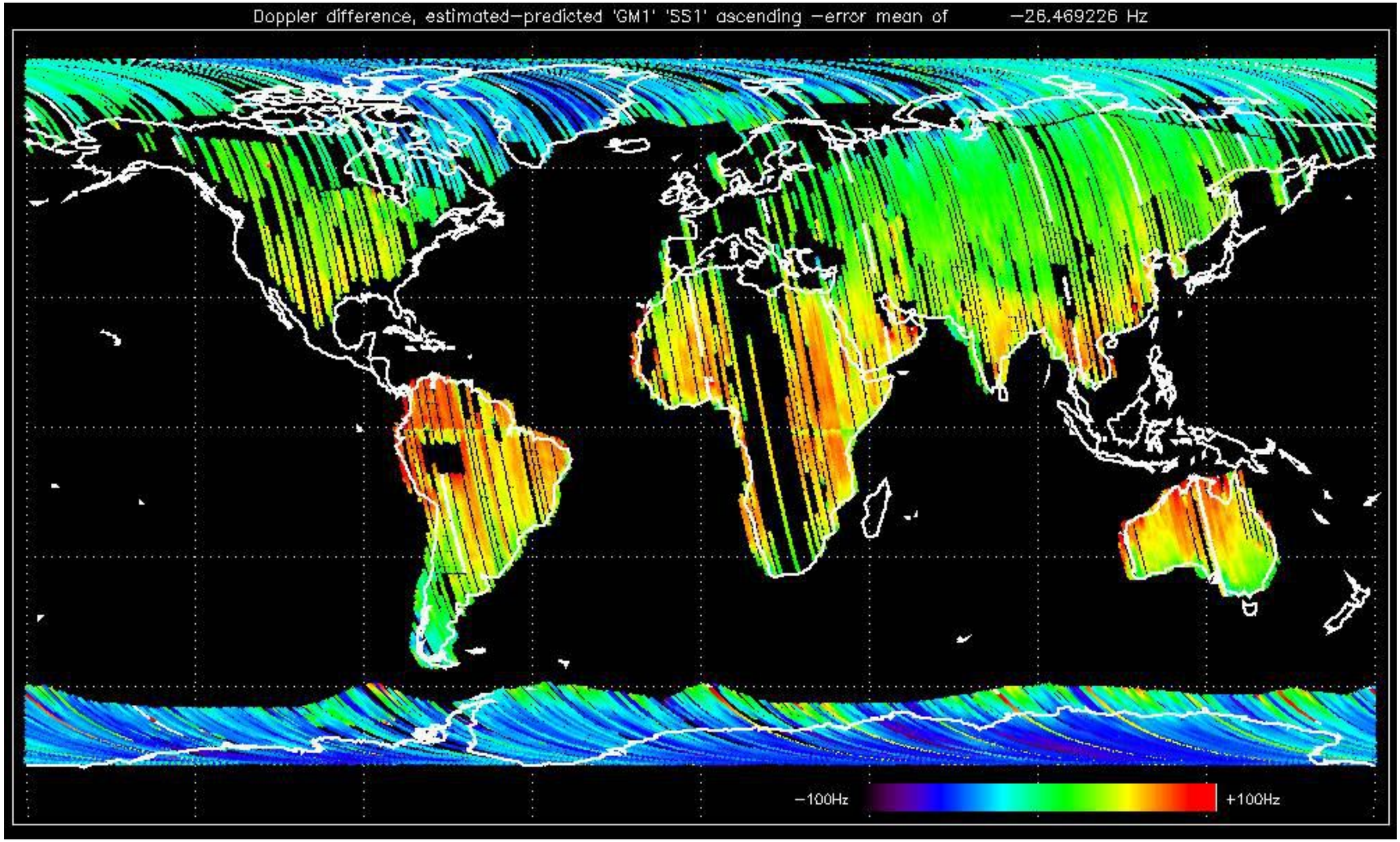

Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
0
1000
2000
3000
4000
5000
6000
secs from ANX

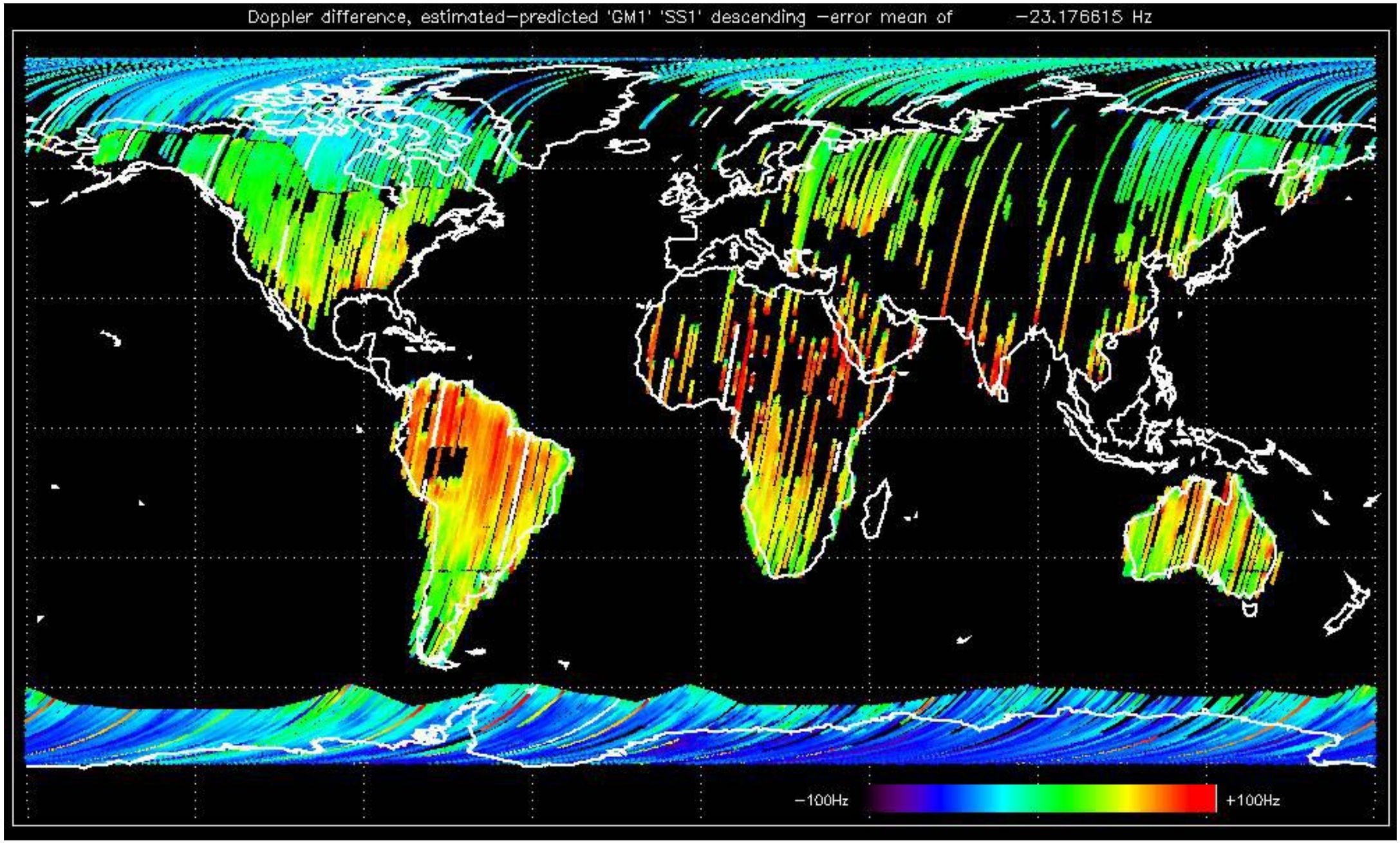

Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
02−Jul
Date

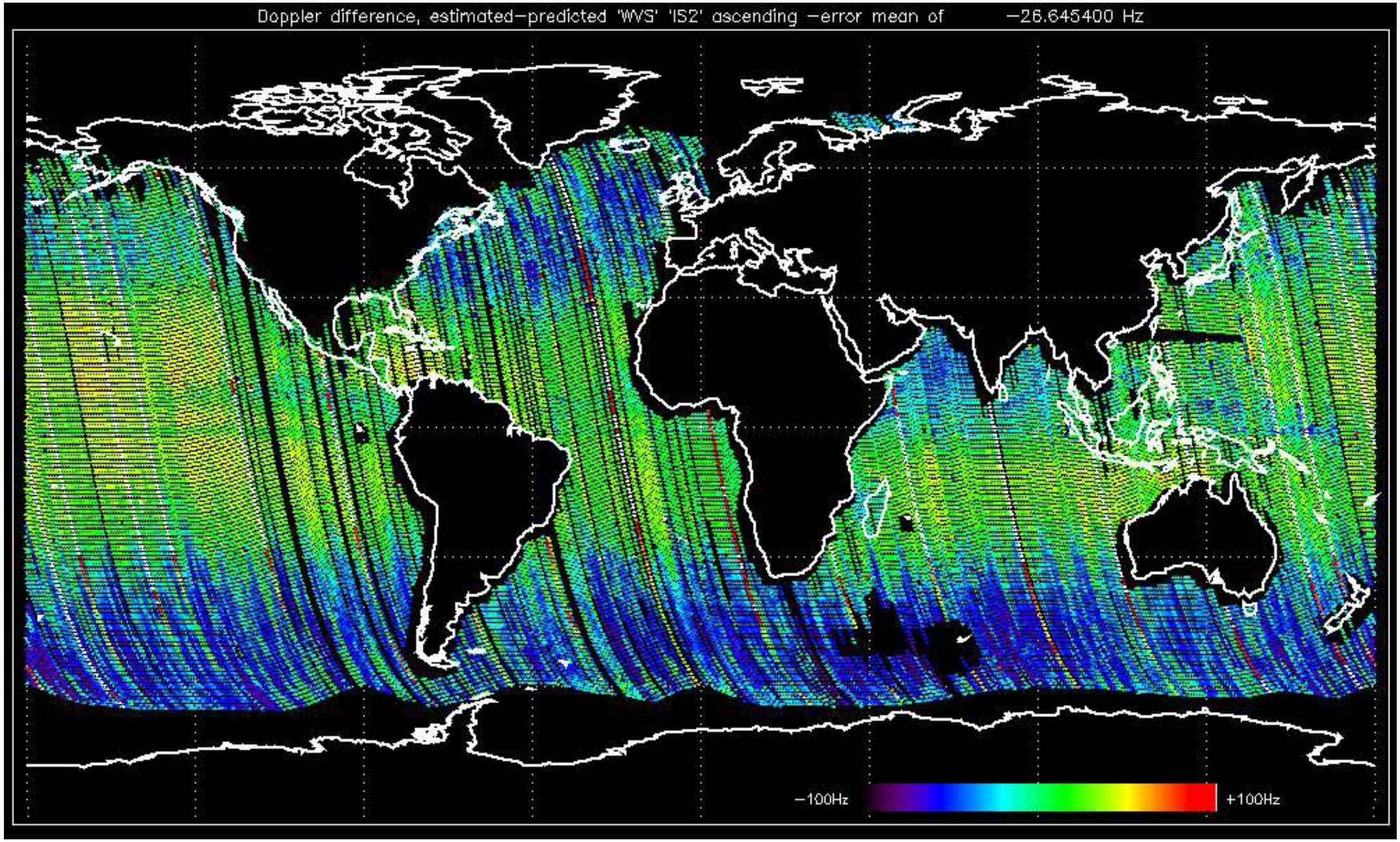

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

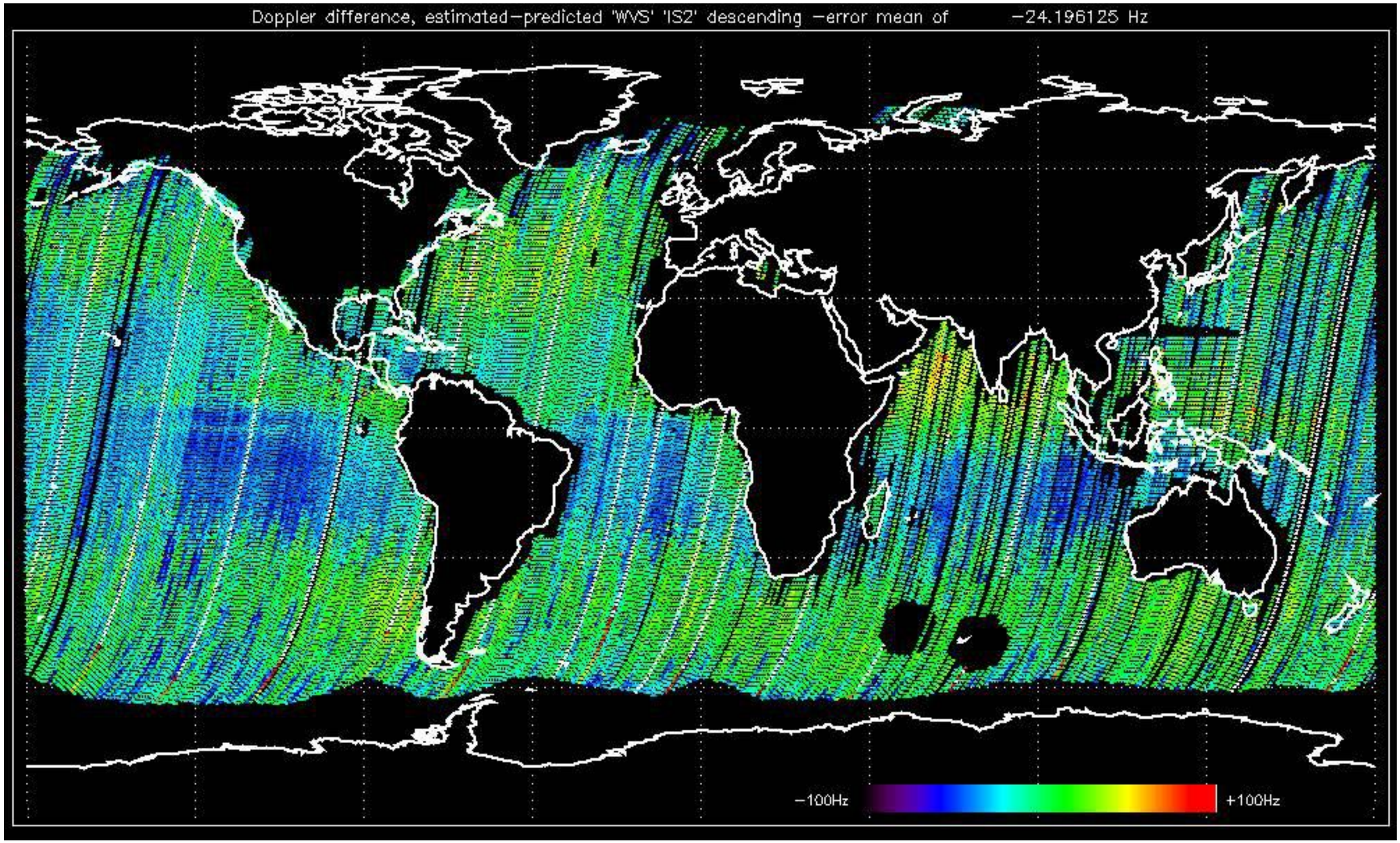

Doppler Bias[Hz]
300
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −26.469226 Hz
−100Hz
+100Hz

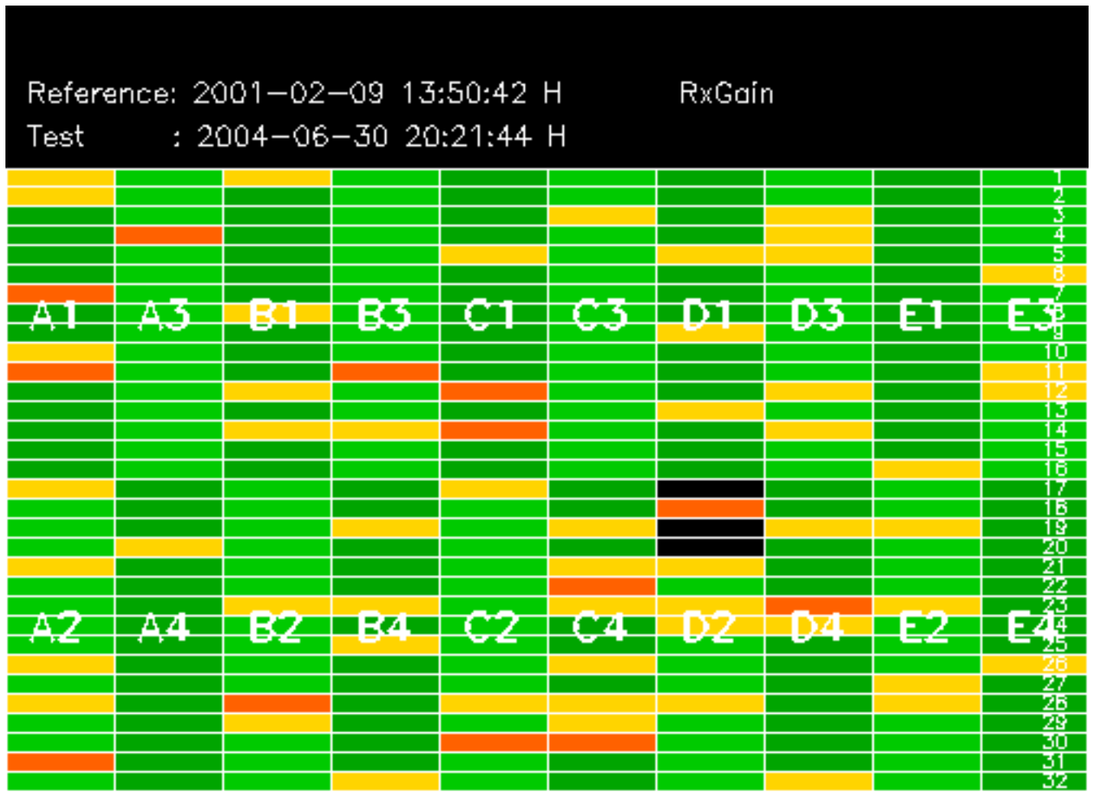

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.176615 Hz
−100Hz
+100Hz

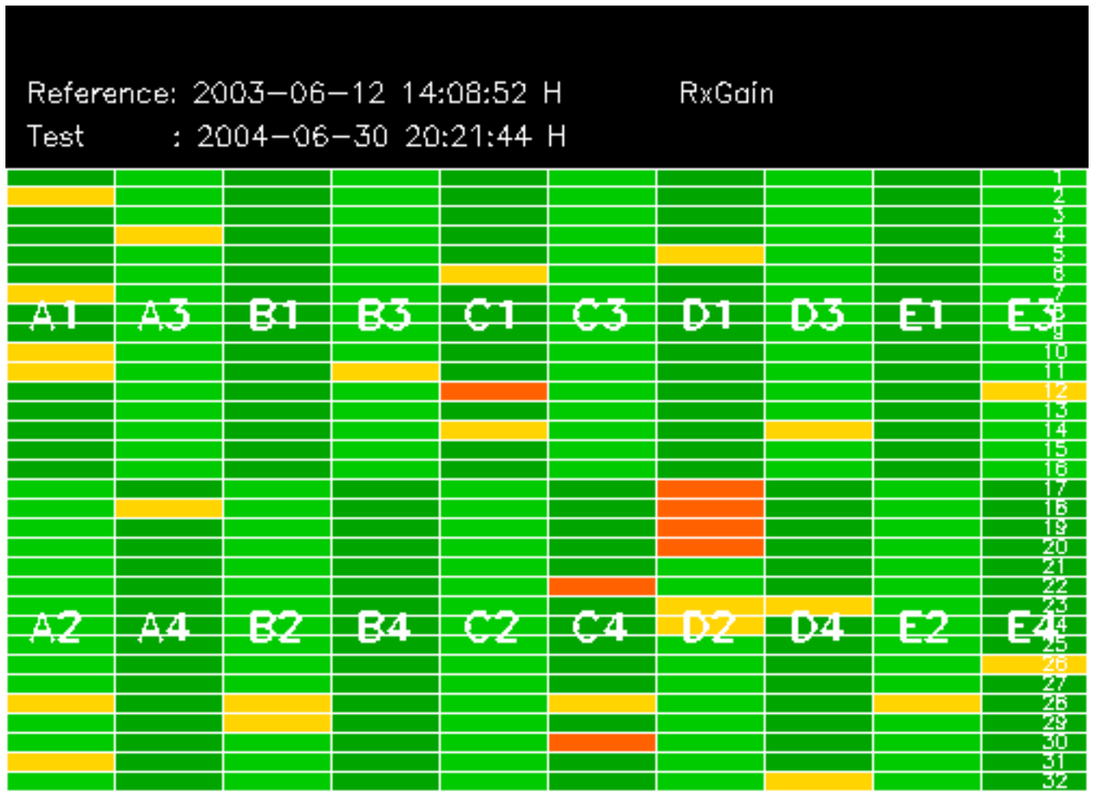

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.645400 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −24.196125 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 : 2004-06-30 20:21:44 H
RxGain
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 : 2004-06-30 20:21:44 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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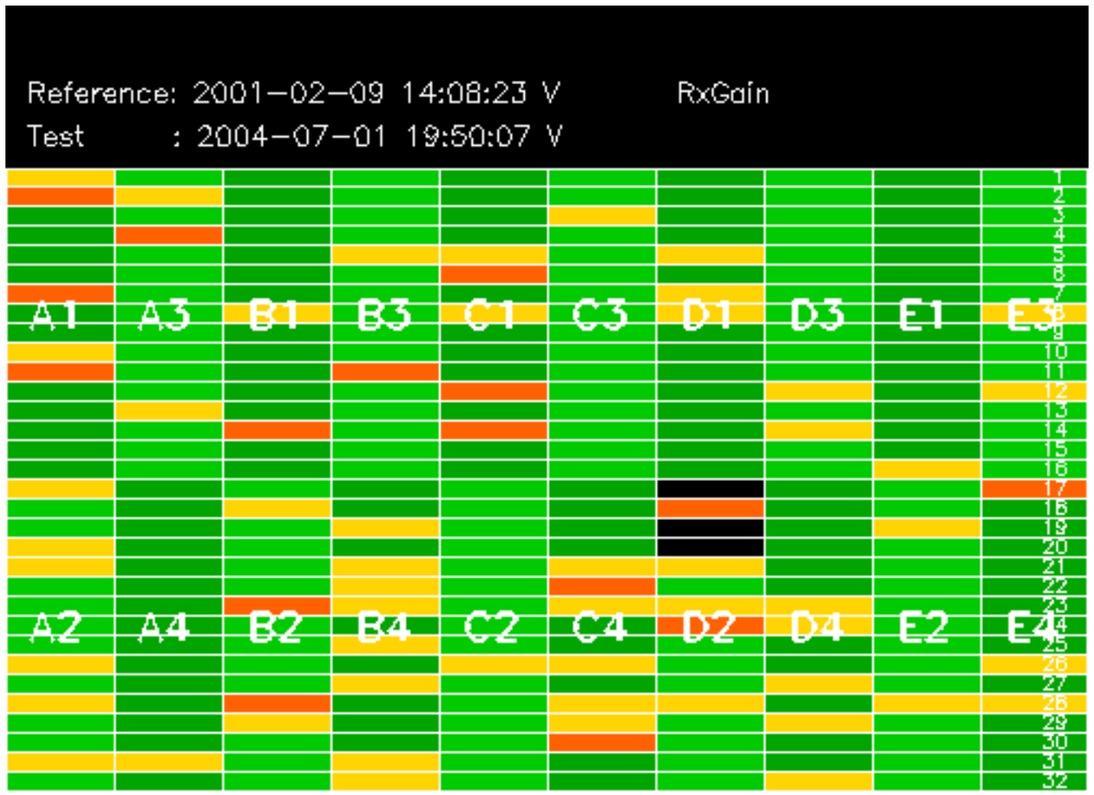
Reference: 2001-02-09 14:08:23 V
Test : 2004-07-01 19:50:07 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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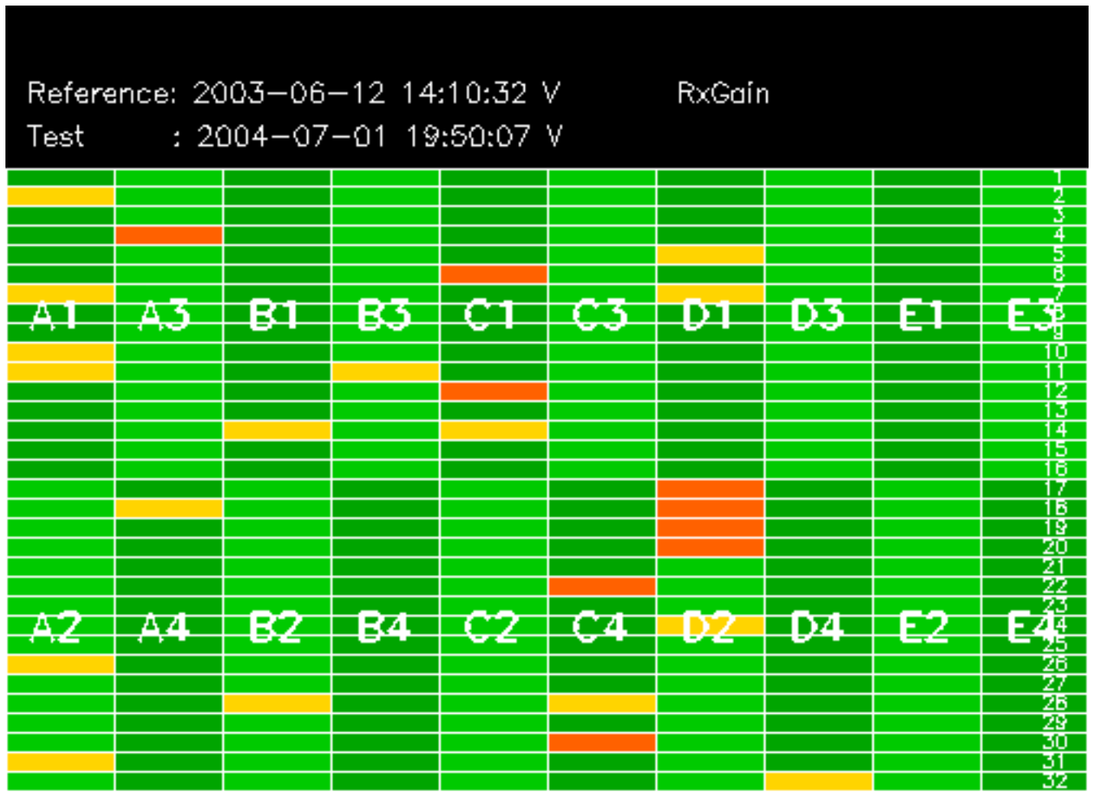
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-01 19:50:07 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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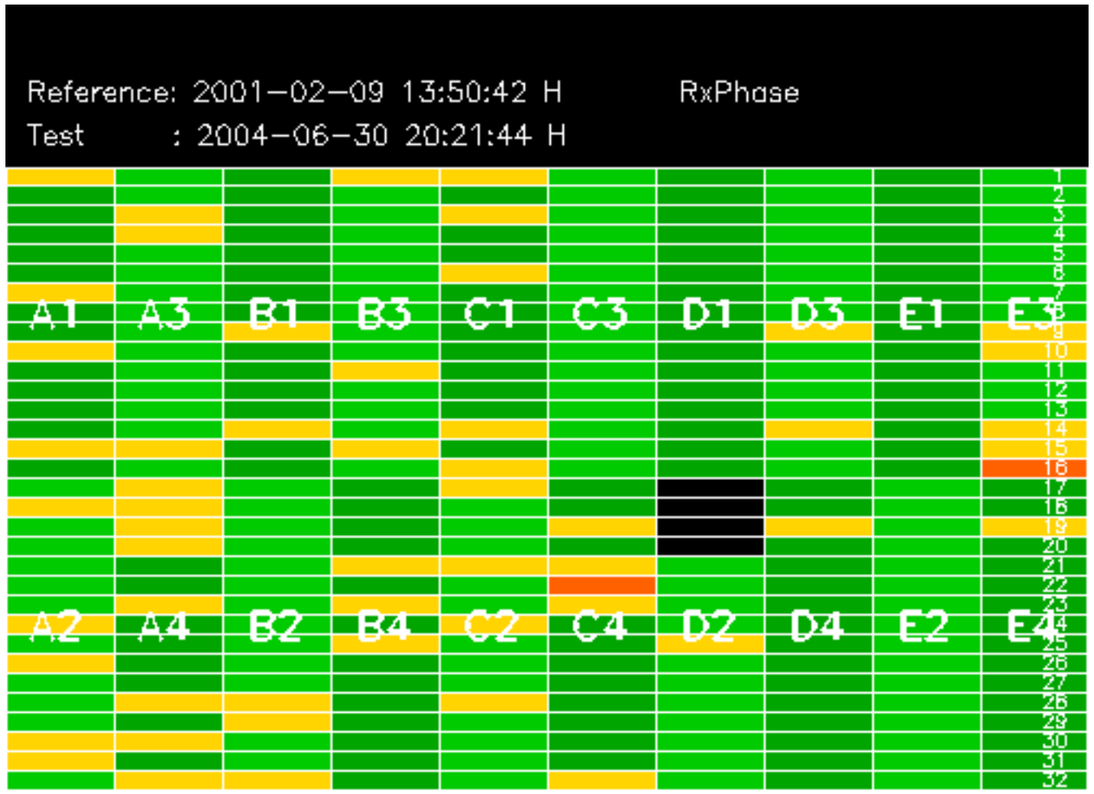
Reference: 2001-02-09 13:50:42 H
Test : 2004-06-30 20:21:44 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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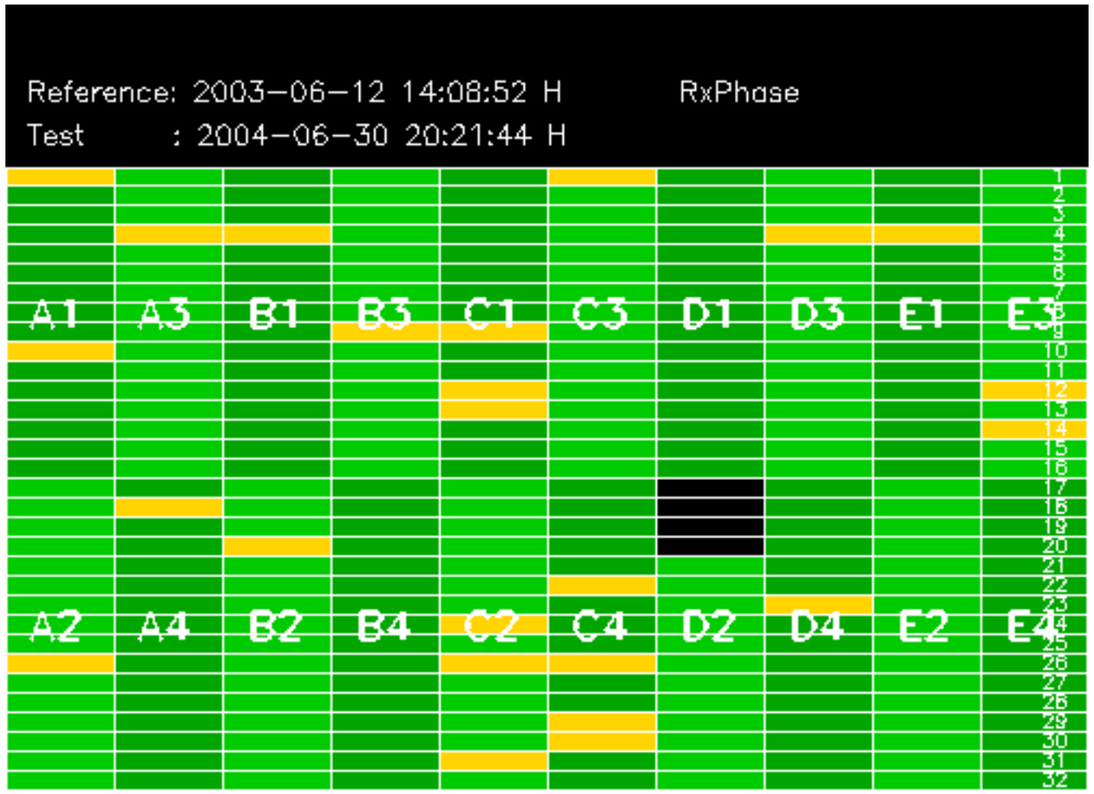
Reference: 2003-06-12 14:08:52 H
Test : 2004-06-30 20:21:44 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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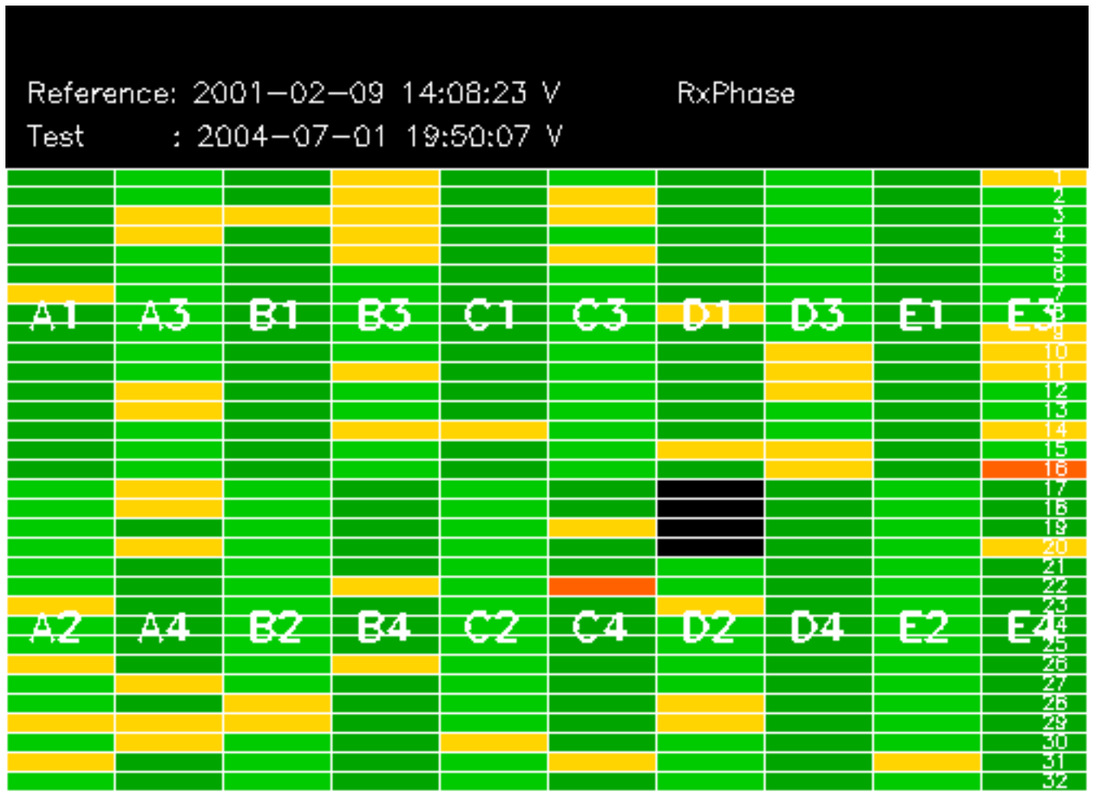
Reference: 2001-02-09 14:08:23 V
Test : 2004-07-01 19:50:07 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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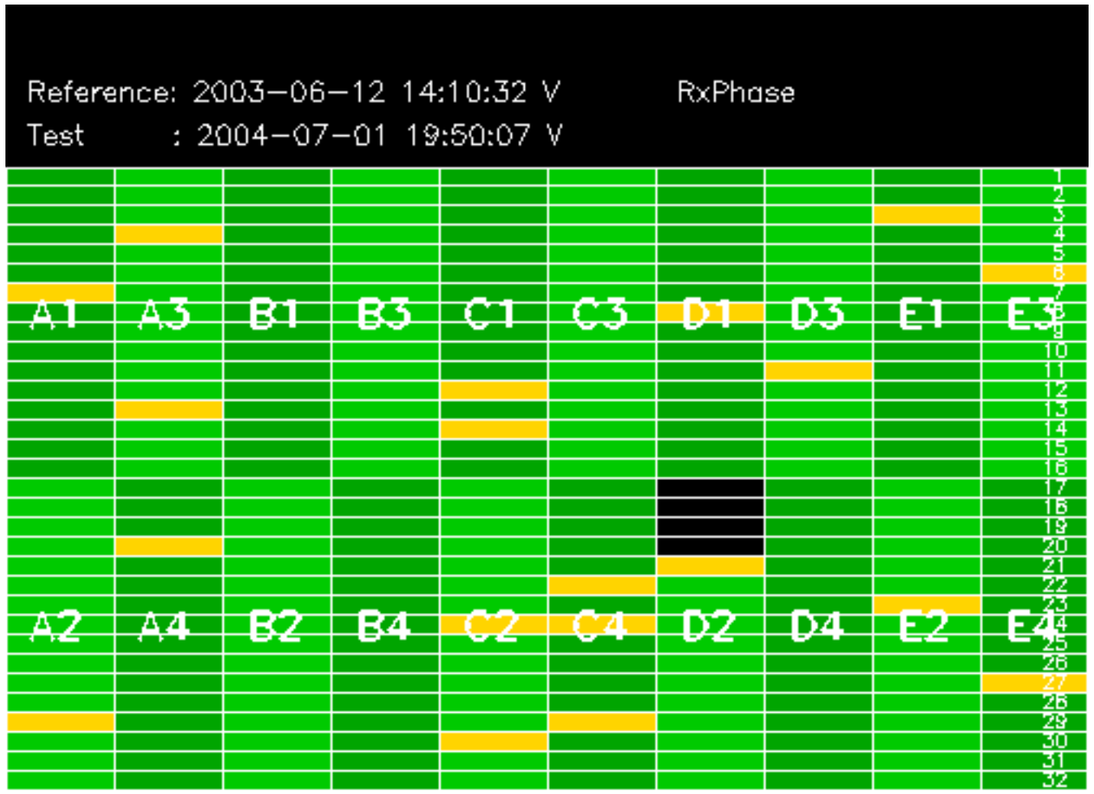
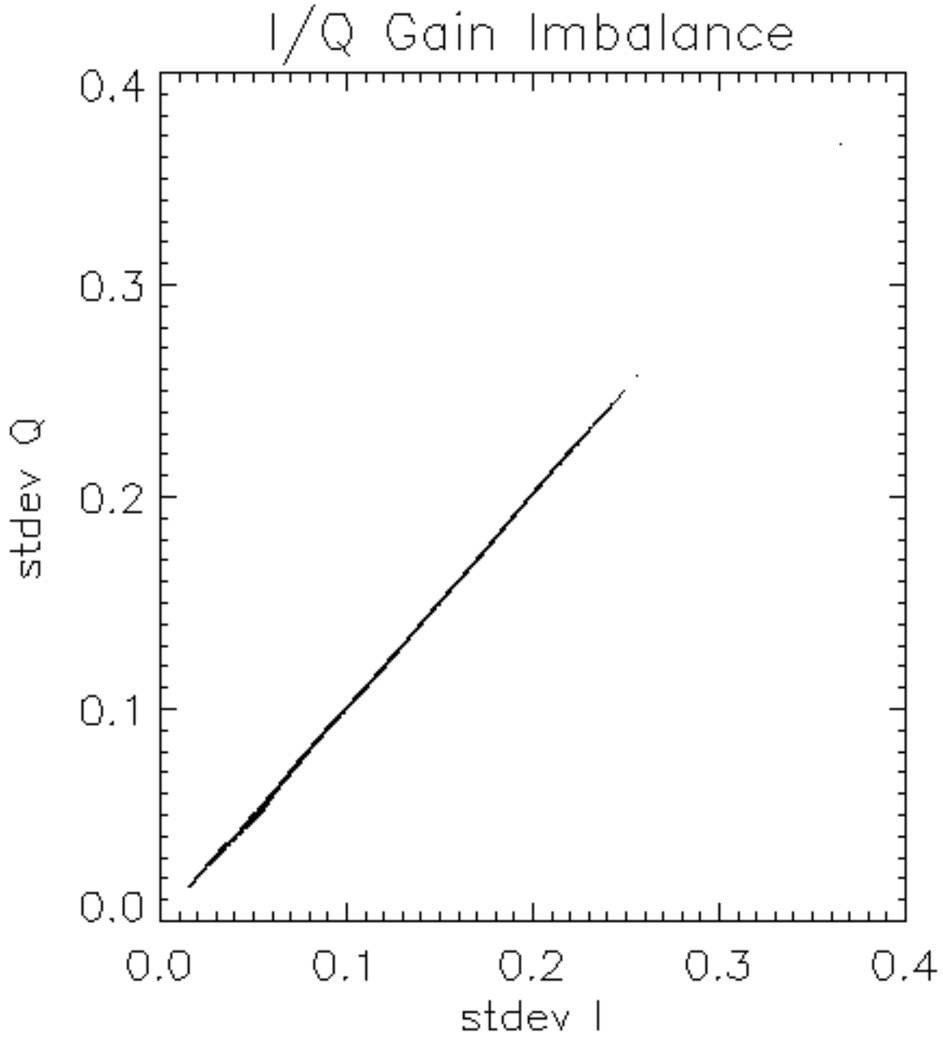
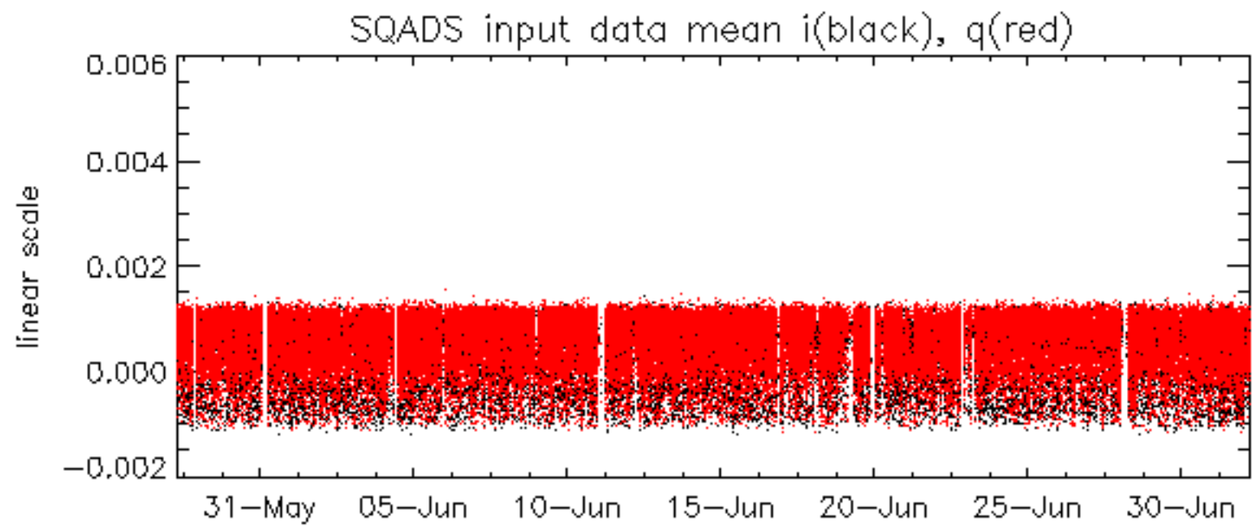
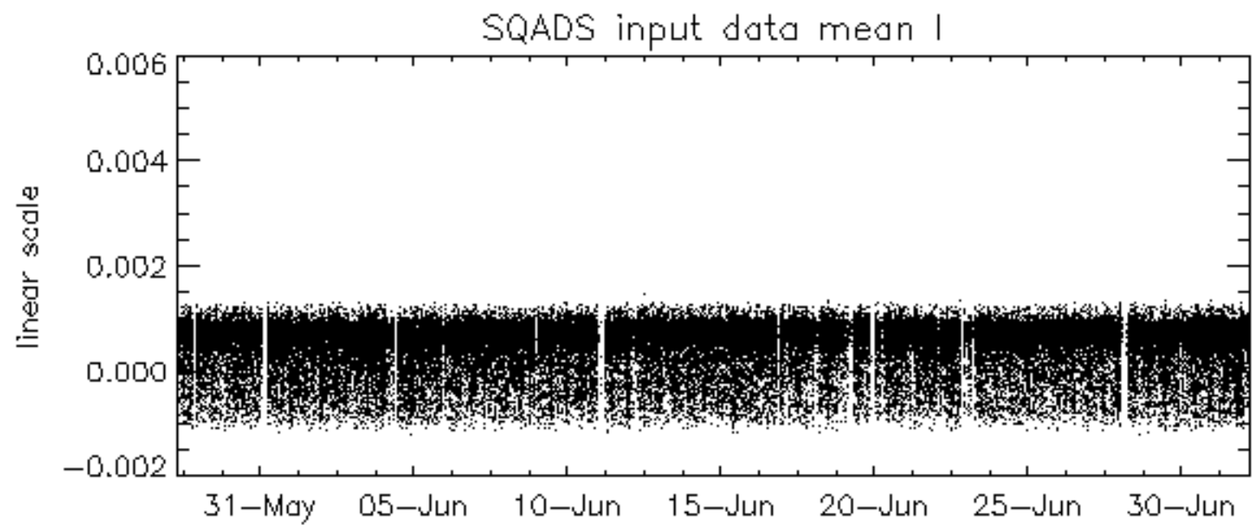
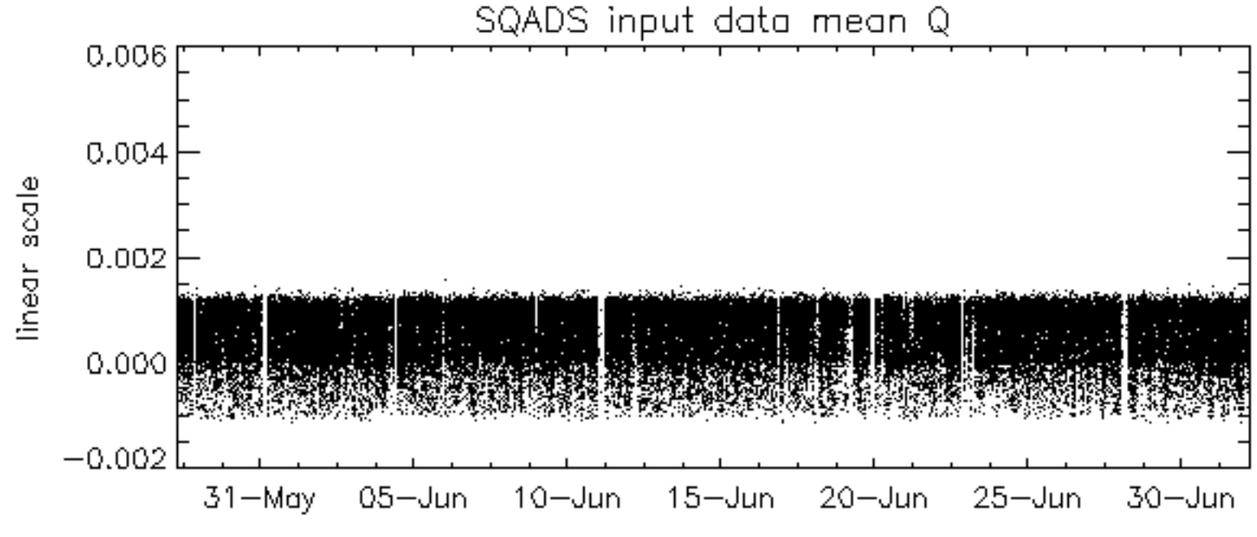
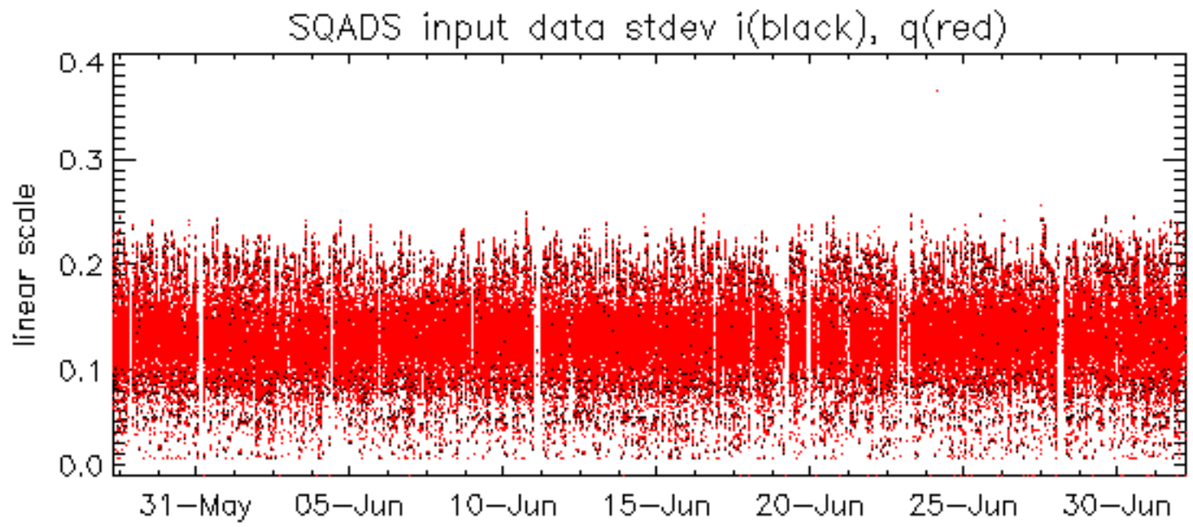

Reference: 2003-06-12 14:10:32 V
Test : 2004-07-01 19:50:07 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

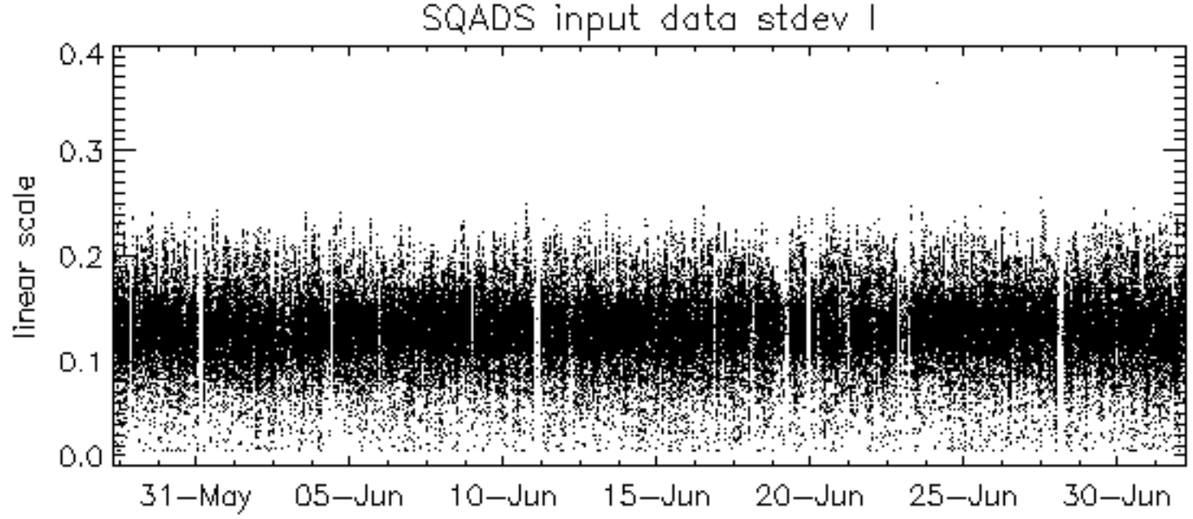

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

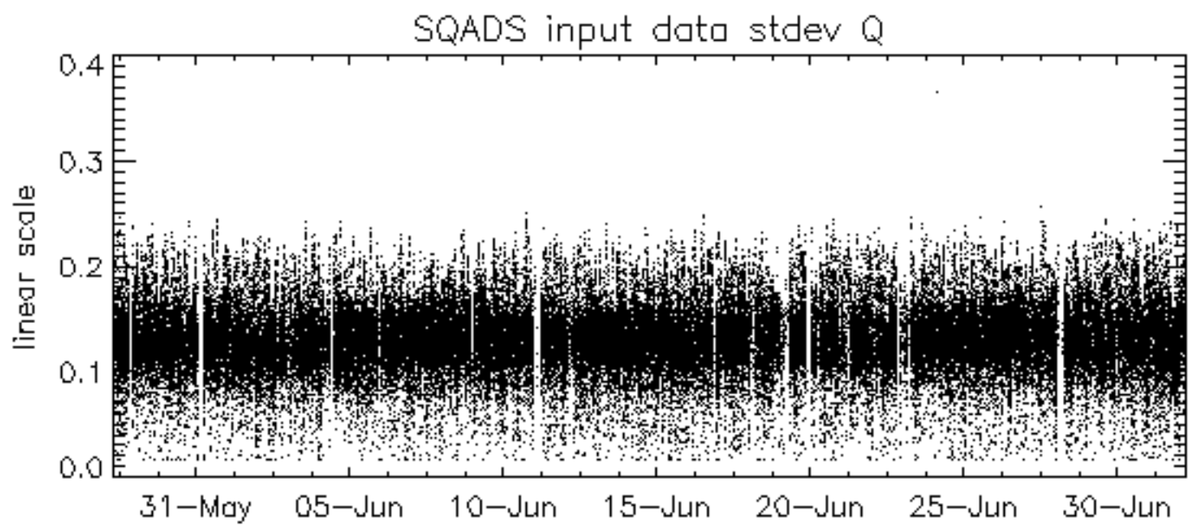

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun

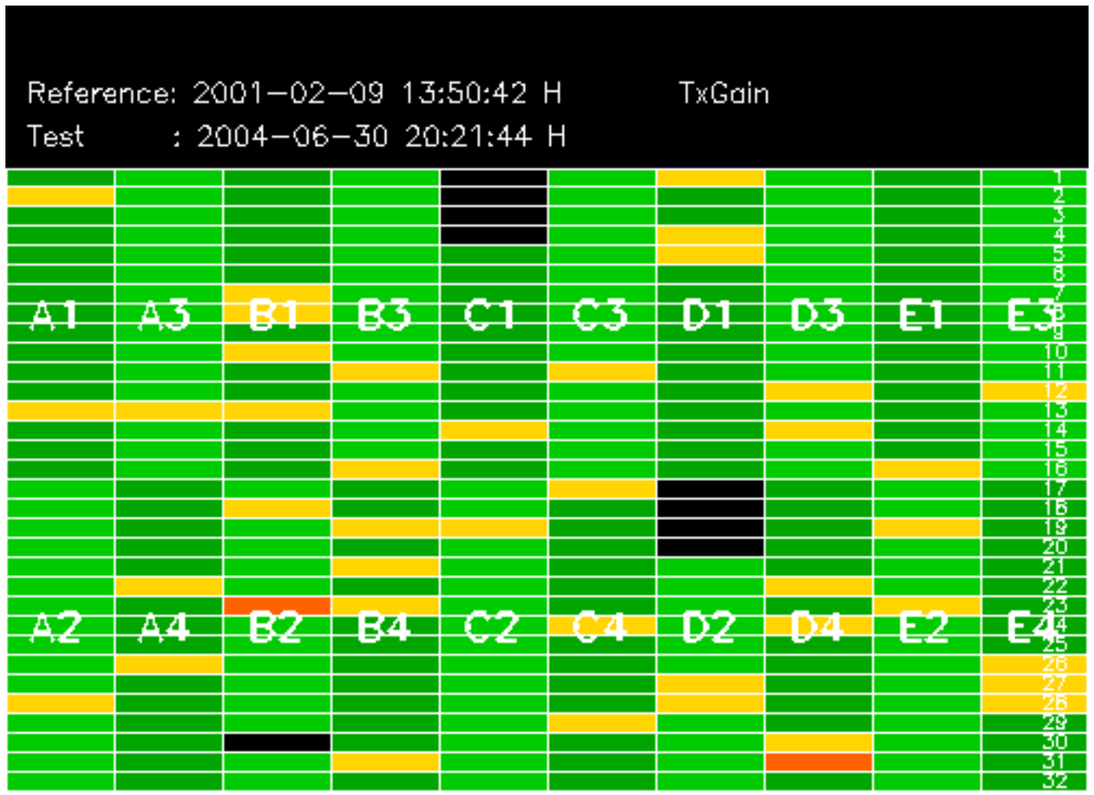

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun

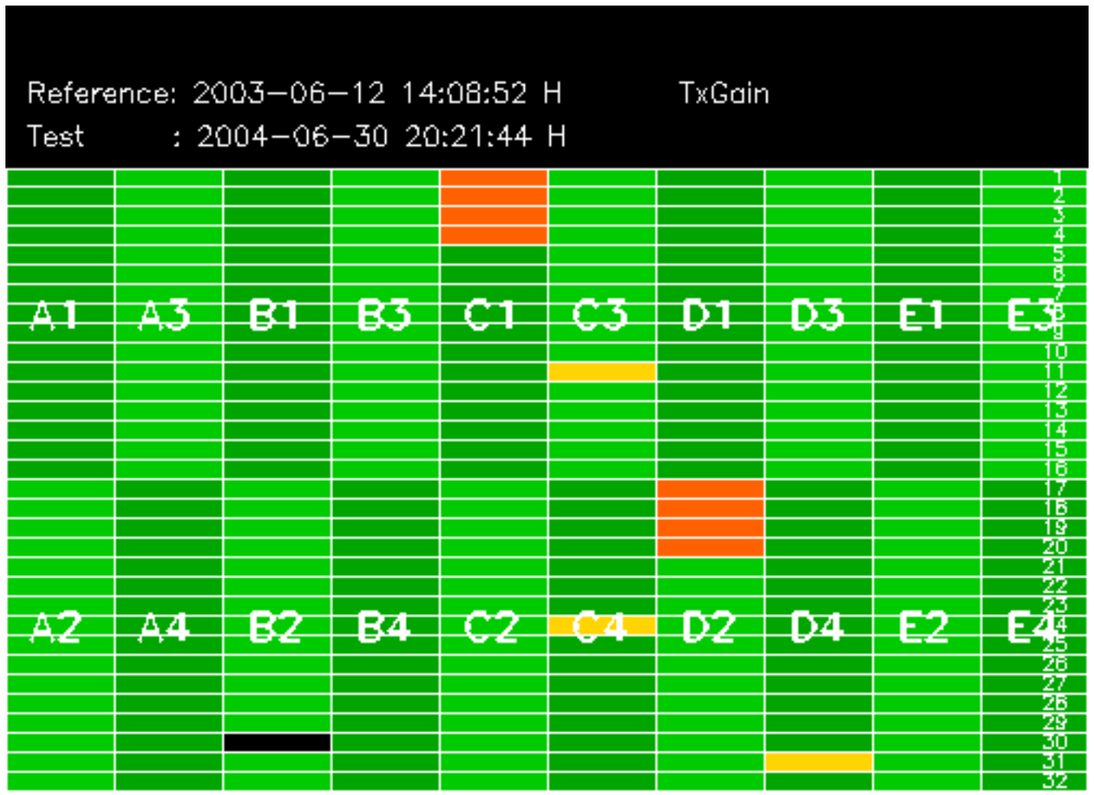

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
30−Jun


Reference: 2001-02-09 13:50:42 H
Test : 2004-06-30 20:21:44 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 : 2004-06-30 20:21:44 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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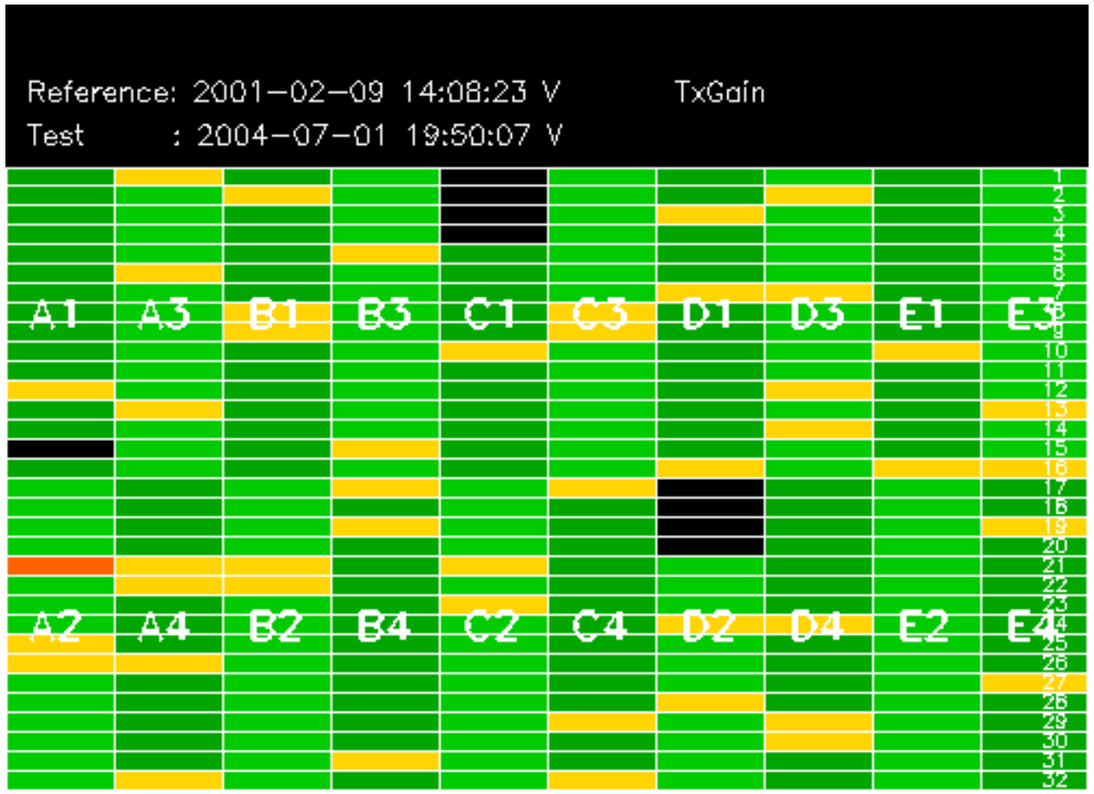
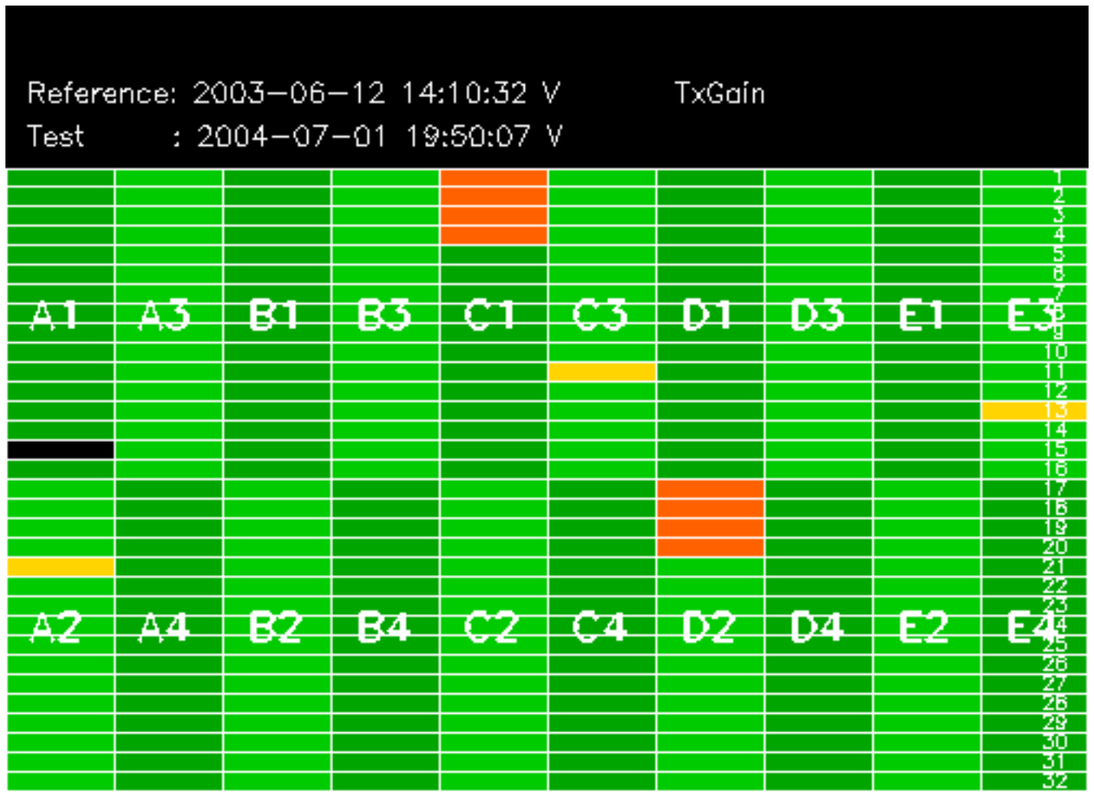

Reference: 2001-02-09 14:08:23 V
Test : 2004-07-01 19:50:07 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-07-01 19:50:07 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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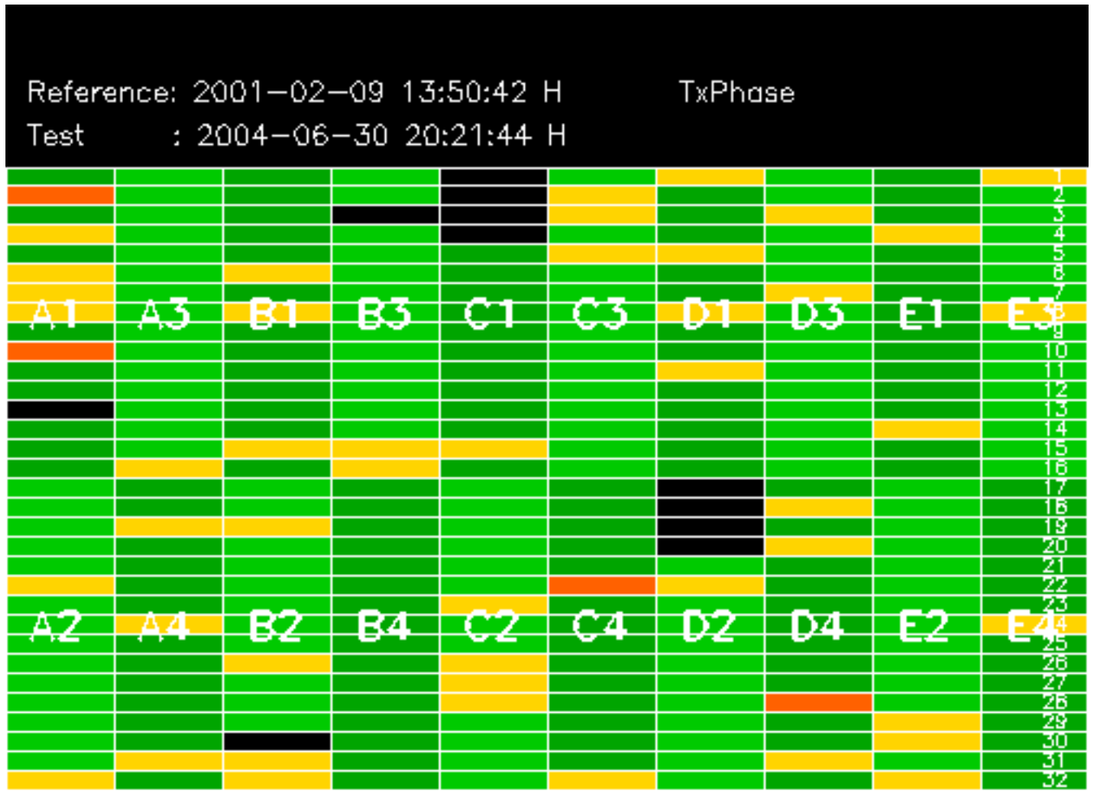
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-06-30 20:21:44 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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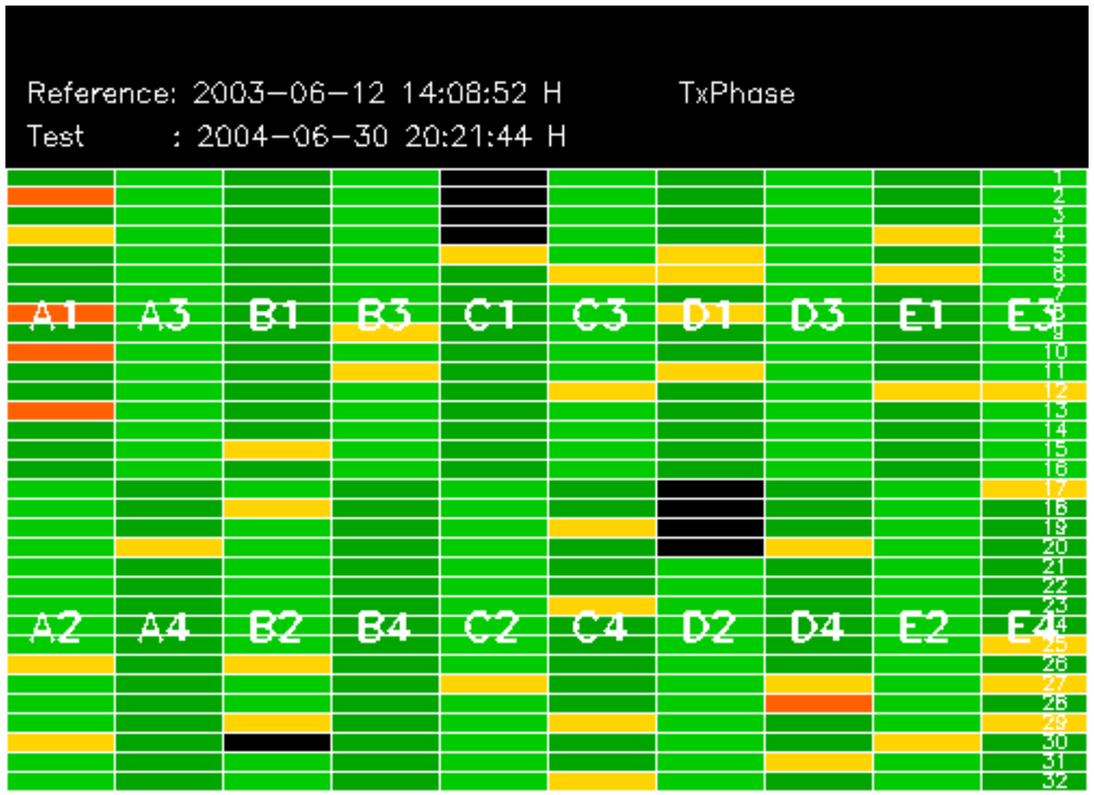
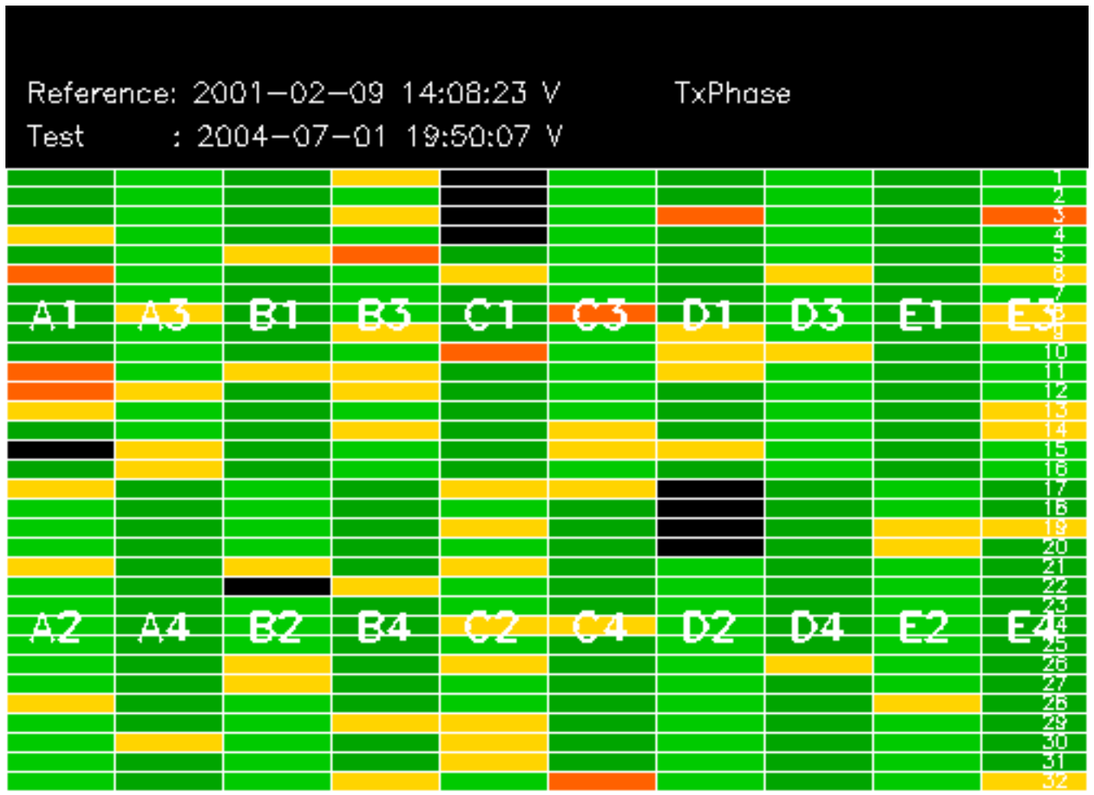
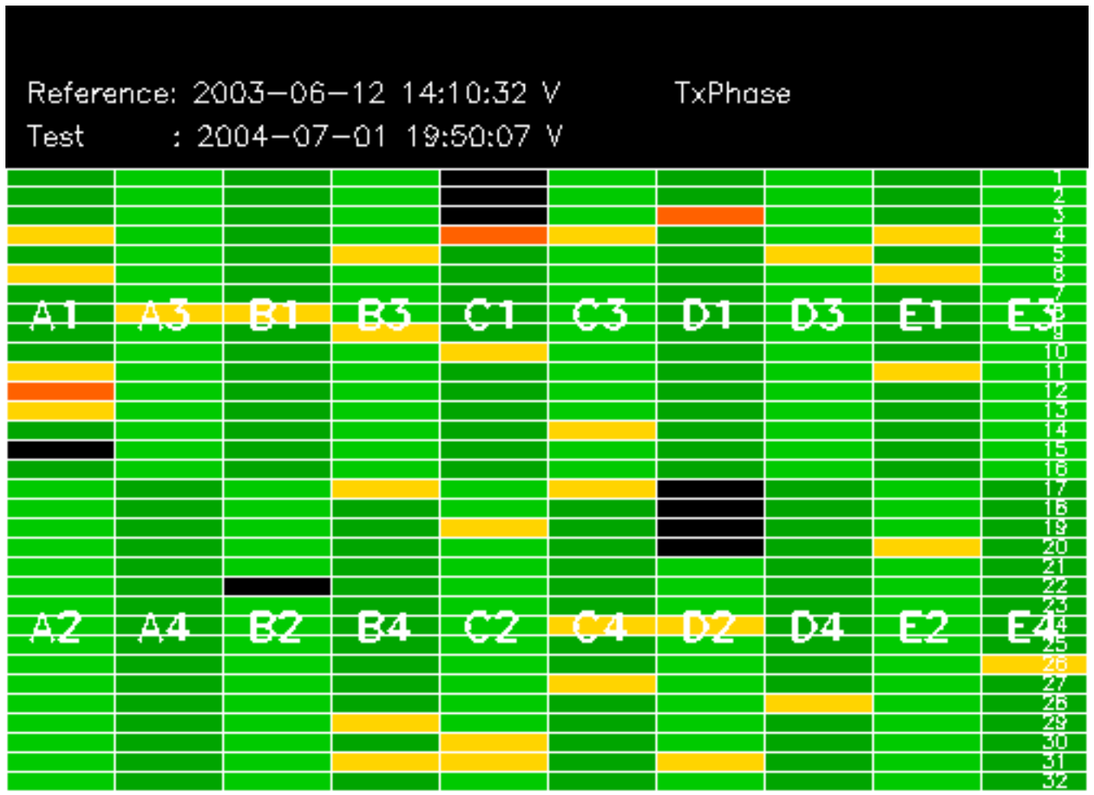

Reference: 2003-06-12 14:08:52 H
Test : 2004-06-30 20:21:44 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-07-01 19:50:07 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 : 2004-07-01 19:50:07 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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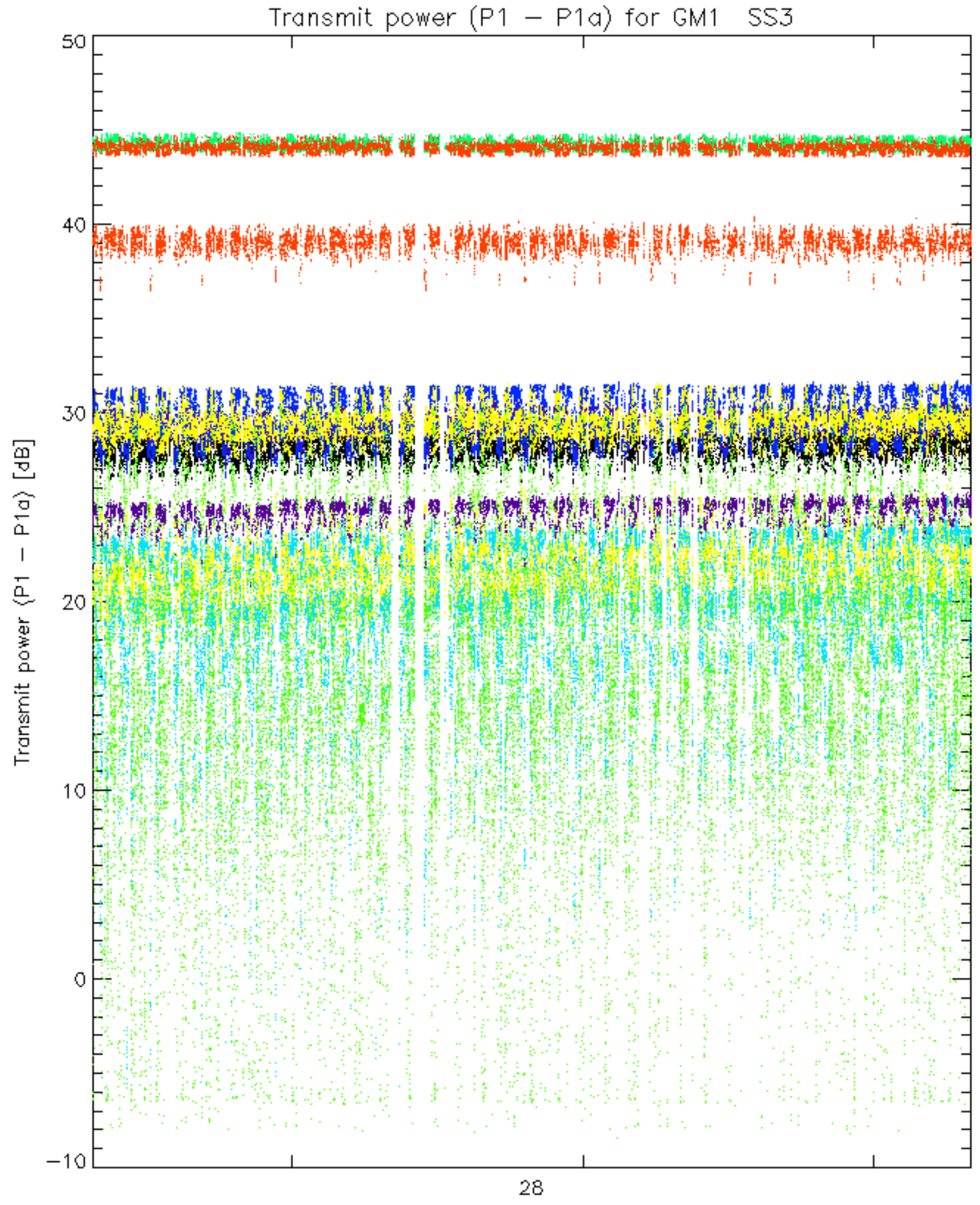
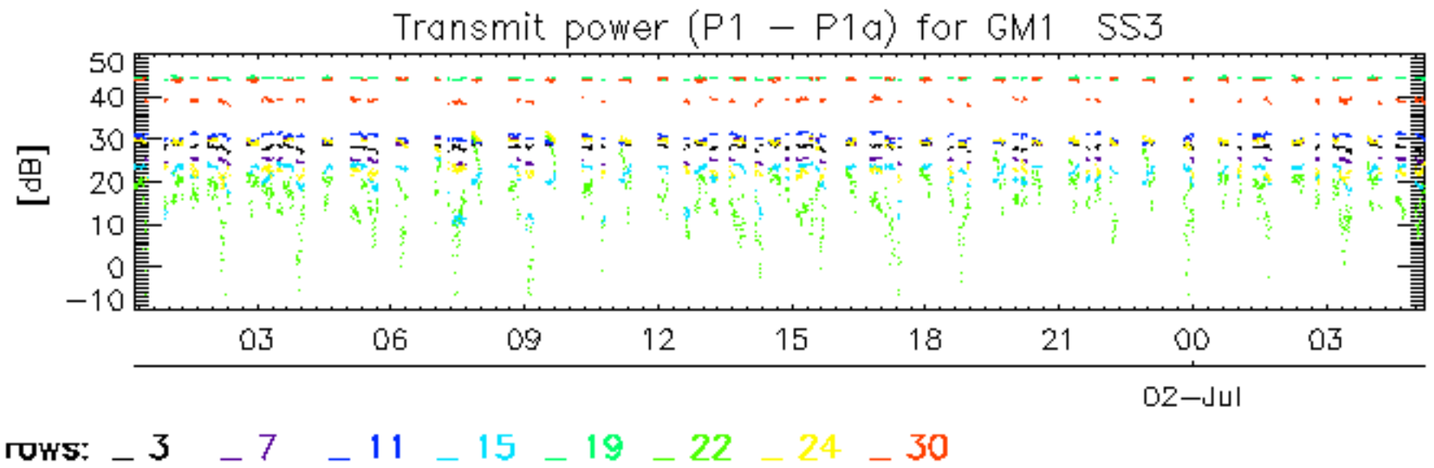
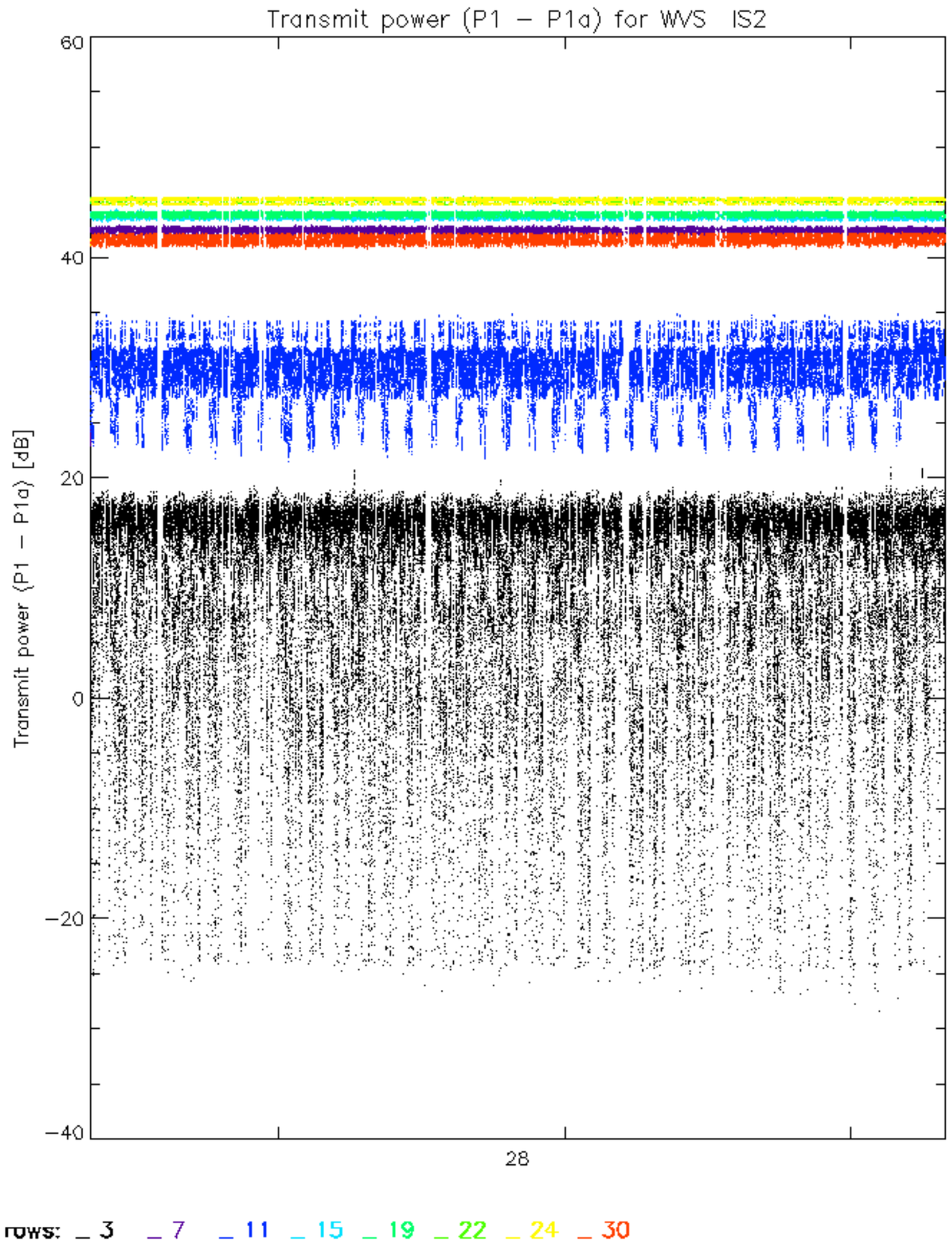
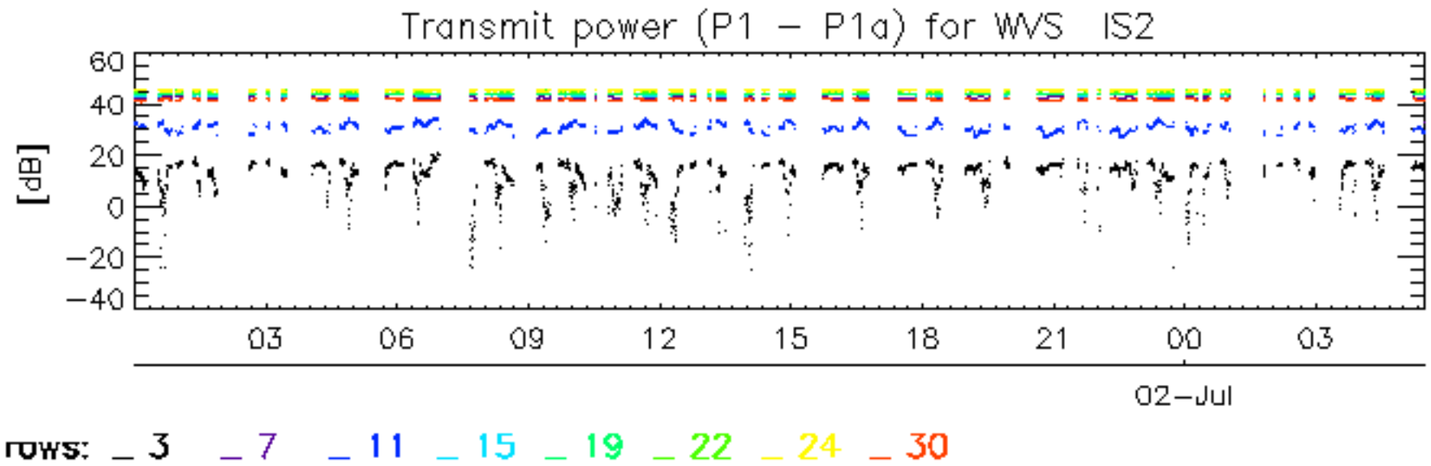

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
28
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
02–Jul
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]
28
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
02−Jul
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.