REPORT OF 040628

last update on Mon Jun 28 13:06:57 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 from 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 any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

- ASA_MS__0PNPDK20040627_201600_000000152028_00085_12163_0005.N1

Polarisation	Start Time
V	20040627 201600
H	20040626 190701

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.

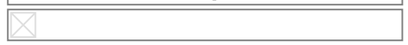
4.1 - Daily statistics

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	-3.505984	0.011000	0.047761
7	P1	-3.327249	0.015686	-0.013210
11	P1	-4.532866	0.038798	-0.014182
15	P1	-5.680824	0.059271	-0.003022
19	P1	-3.431848	0.005029	-0.018922
22	P1	-4.558939	0.011107	0.012613
24	P1	-4.913764	0.015488	0.016712
30	P1	-6.847803	0.023122	-0.029816

3	P1	-16.095453	0.226129	0.027193
7	P1	-13.994123	0.108371	-0.007190
11	P1	-19.861176	0.307731	-0.213499
15	P1	-11.782348	0.046186	0.038511
19	P1	-13.817007	0.036644	-0.042230
22	P1	-16.554415	0.423855	0.184991
24	P1	-14.689383	0.302463	0.109882
30	P1	-17.685381	0.376377	-0.095428

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.416958	0.082483	0.051618
7	P2	-22.854151	0.122750	0.072986
11	P2	-15.622996	0.137682	0.127556
15	P2	-7.191524	0.097808	0.055897
19	P2	-9.567841	0.148635	0.052897
22	P2	-17.544756	0.105485	0.133831
24	P2	-20.867319	0.087910	0.076697
30	P2	-19.433413	0.079955	0.080962

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143578	0.002006	-0.000485
7	P3	-8.143579	0.002006	-0.000491
11	P3	-8.143568	0.002007	-0.000539
15	P3	-8.143569	0.002007	-0.000541
19	P3	-8.143569	0.002007	-0.000527
22	P3	-8.143575	0.002006	-0.000502
24	P3	-8.143589	0.002006	-0.000436
30	P3	-8.143605	0.002003	0.000026

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	-3.142977	0.134552	0.034032
7	P1	-2.810130	0.072080	-0.018899
11	P1	-3.792671	0.022127	-0.027018
15	P1	-4.259392	1.015931	0.023027
19	P1	-3.357304	0.049090	-0.019773
22	P1	-5.721572	0.044240	-0.000795
24	P1	-4.049584	0.079769	-0.009621
30	P1	-6.099902	0.062532	-0.021919
3	P1	-11.024494	0.422810	0.037756
7	P1	-9.766831	0.247137	-0.041706
11	P1	-11.764261	0.168881	-0.060228
15	P1	-11.840712	0.276857	-0.028069
19	P1	-14.996681	0.818858	-0.031233
22	P1	-21.500050	8.910967	-0.001942
24	P1	-17.375889	0.285631	-0.083487
30	P1	-21.713255	4.147813	0.001589

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.162539	0.043266	0.042312
7	P2	-22.943035	0.029281	0.073998
11	P2	-11.035461	0.219078	0.134749
15	P2	-5.003471	0.044414	0.026960
19	P2	-6.933066	0.043206	0.006118
22	P2	-7.680490	0.024080	0.090897
24	P2	-11.075698	0.072963	0.052458
30	P2	-22.396582	0.092847	0.105630

P3 Cyclic statistics

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

3	P3	-7.984520	0.003310	-0.002202
7	P3	-7.984445	0.003301	-0.002296
11	P3	-7.984442	0.003306	-0.002009
15	P3	-7.984533	0.003298	-0.001794
19	P3	-7.984447	0.003312	-0.002217
22	P3	-7.984573	0.003297	-0.002072
24	P3	-7.984366	0.003328	-0.002550
30	P3	-7.984476	0.003300	-0.001982

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	0.000496670
	stdev	2.09166e-07
MEAN Q	mean	0.000548041
	stdev	2.36511e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129905
	stdev	0.00101396

STDEV Q	mean	0.130152
	stdev	0.00102615

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

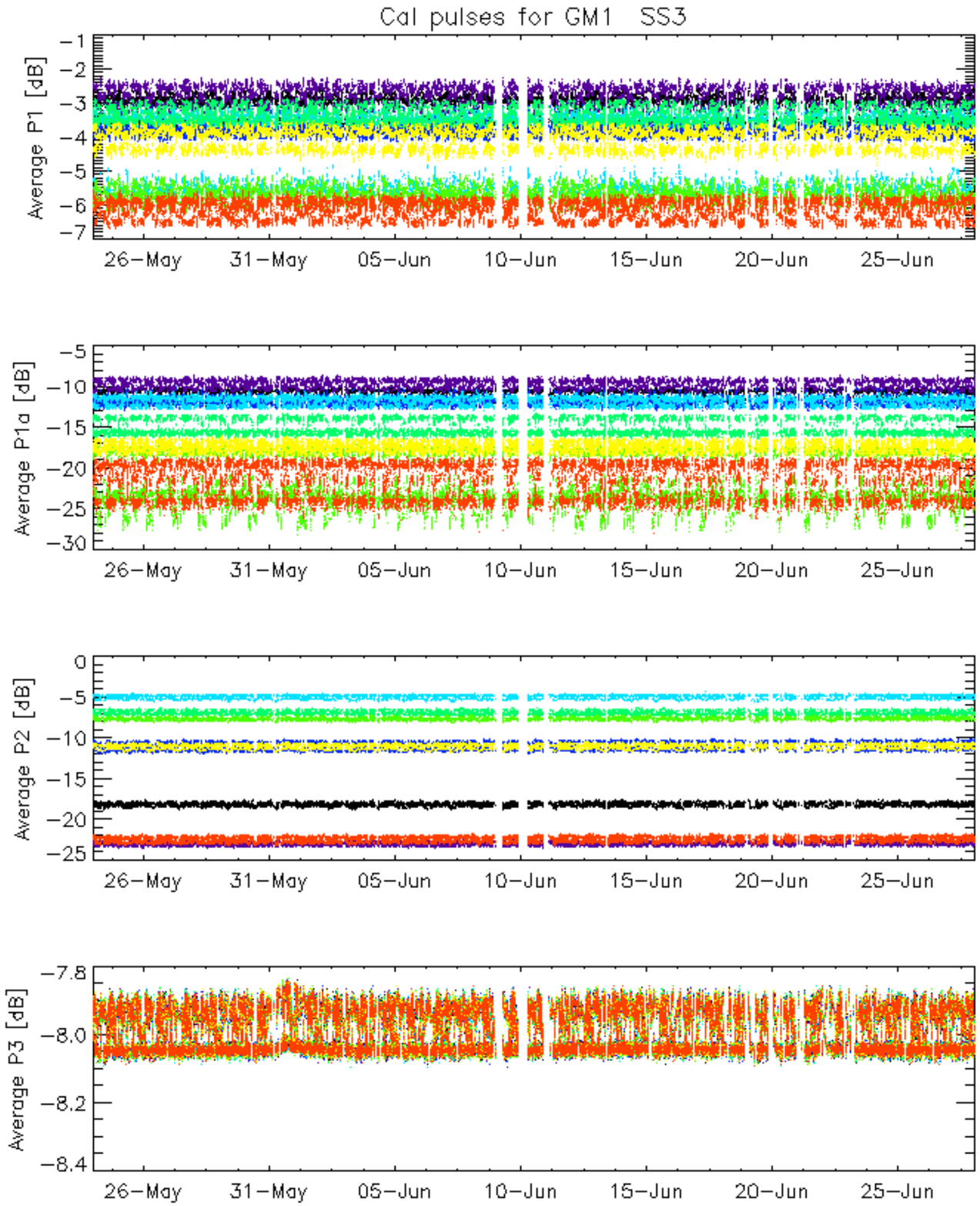
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

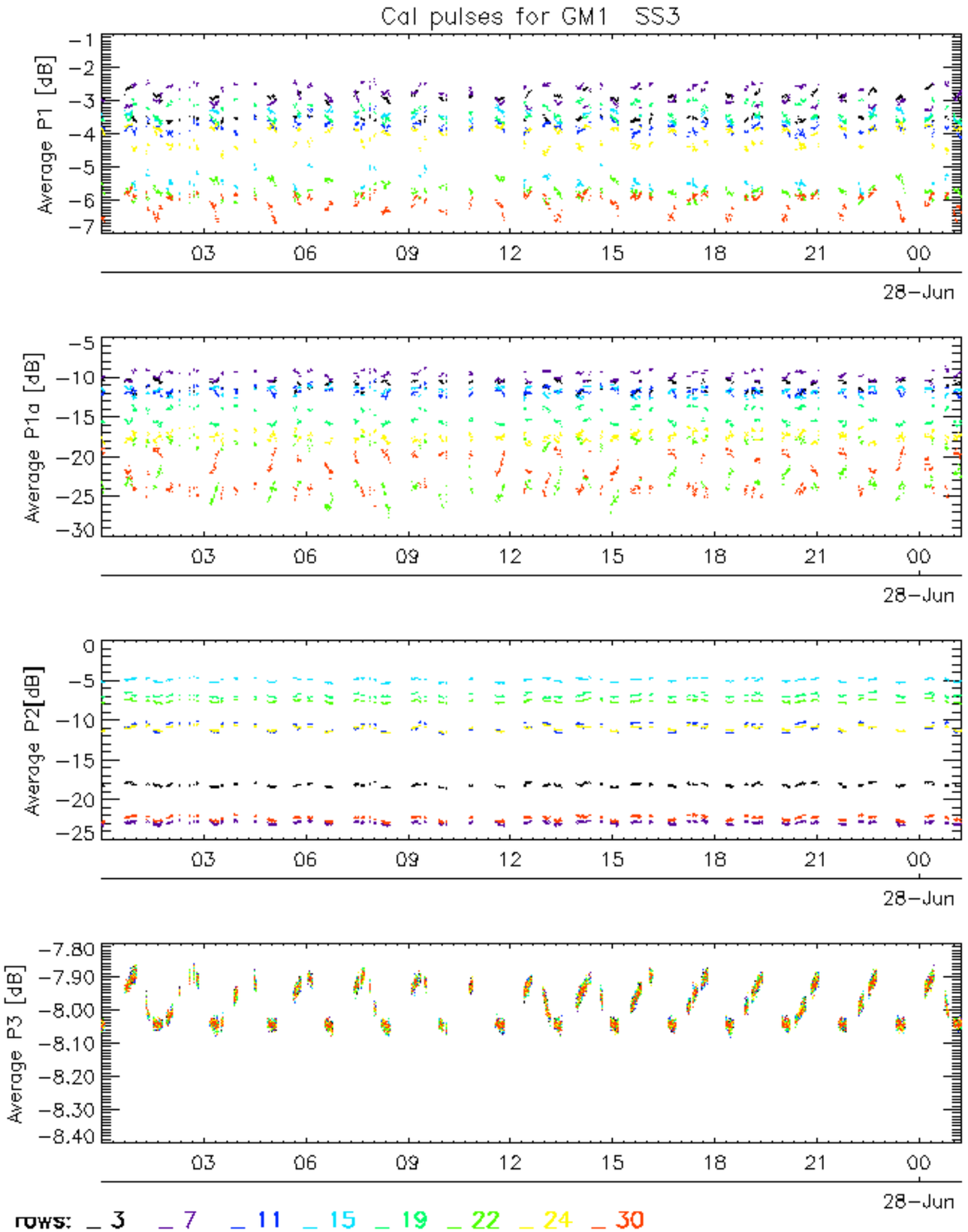
6.5 - Absolute Doppler for GM1

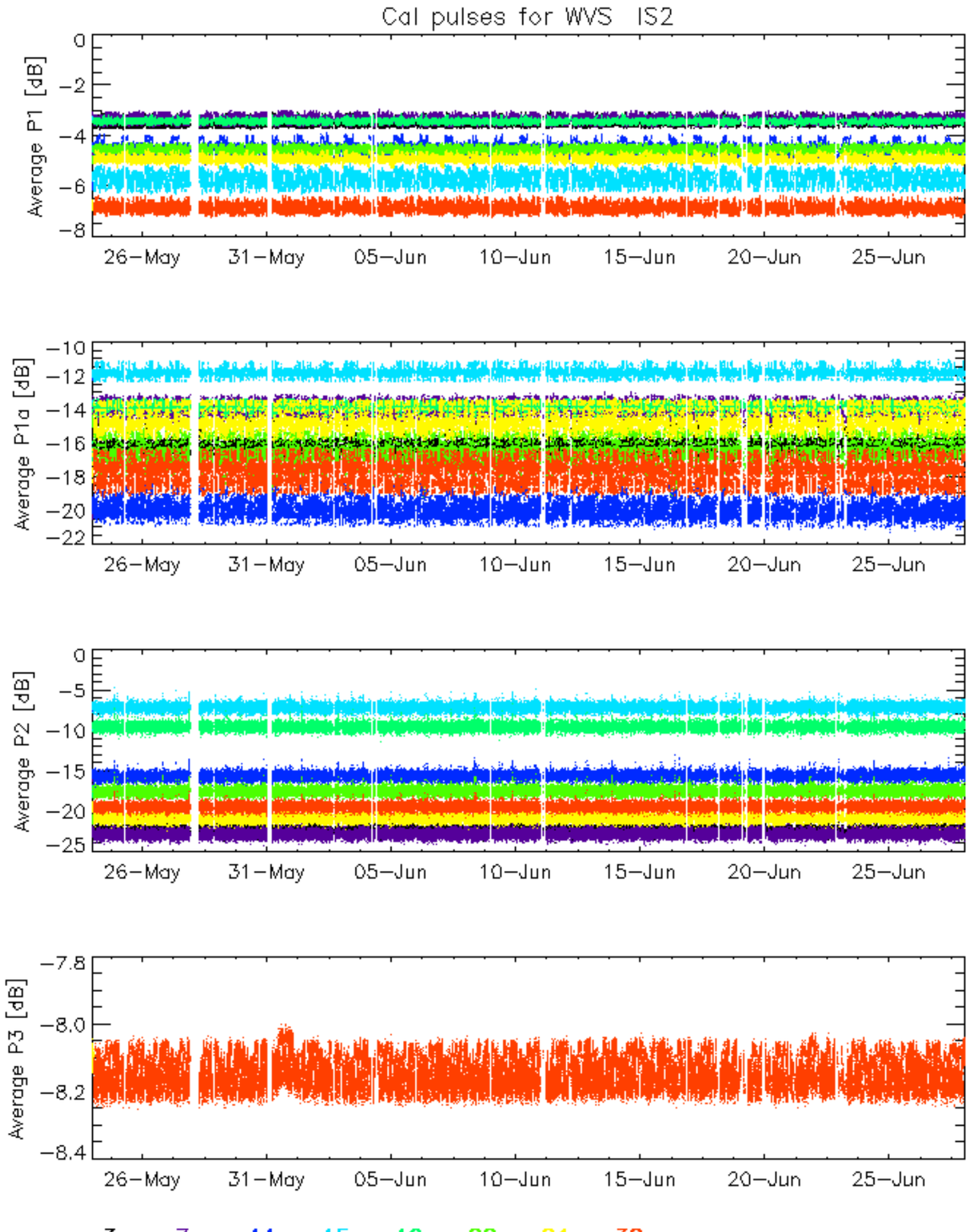
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

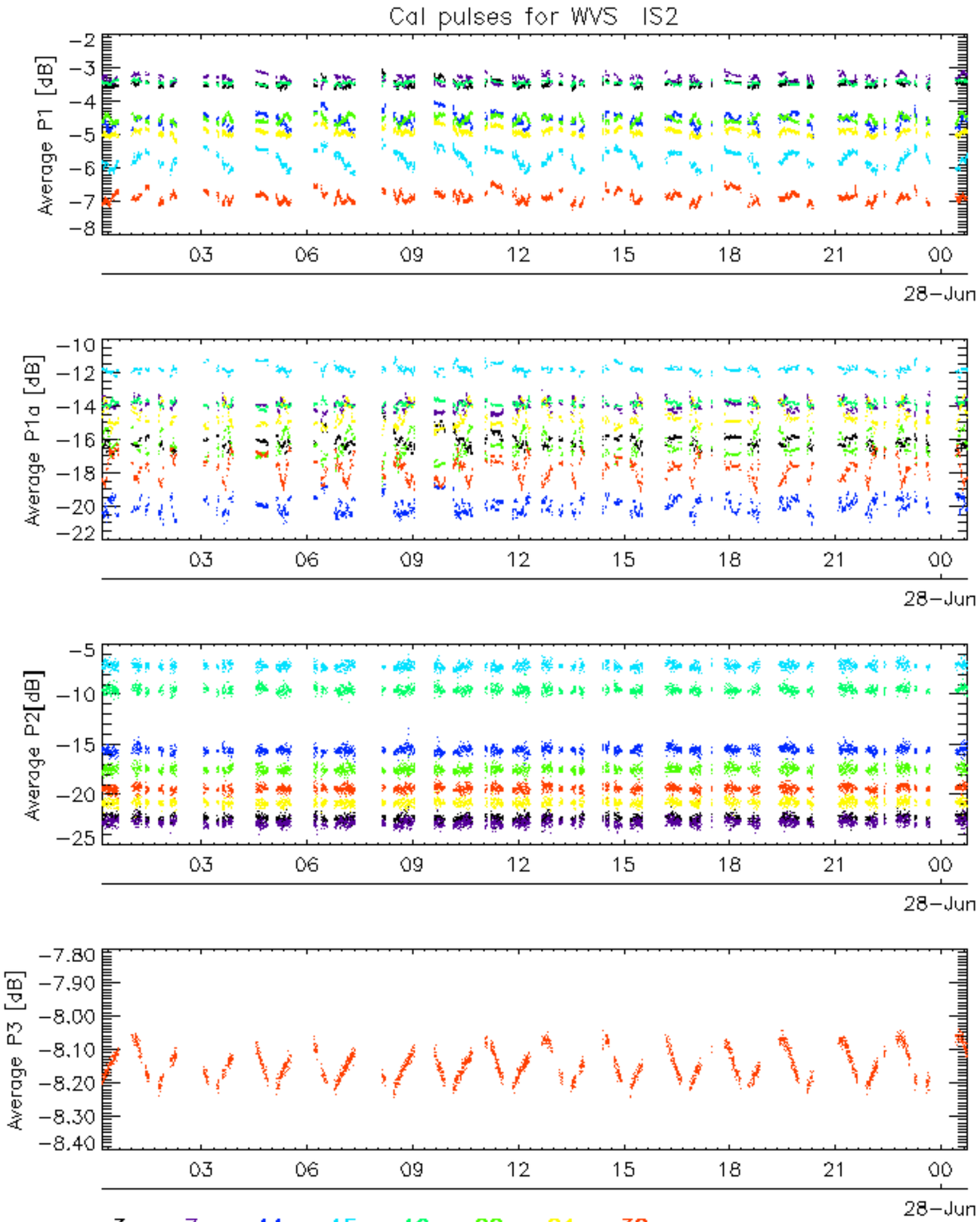
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒


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

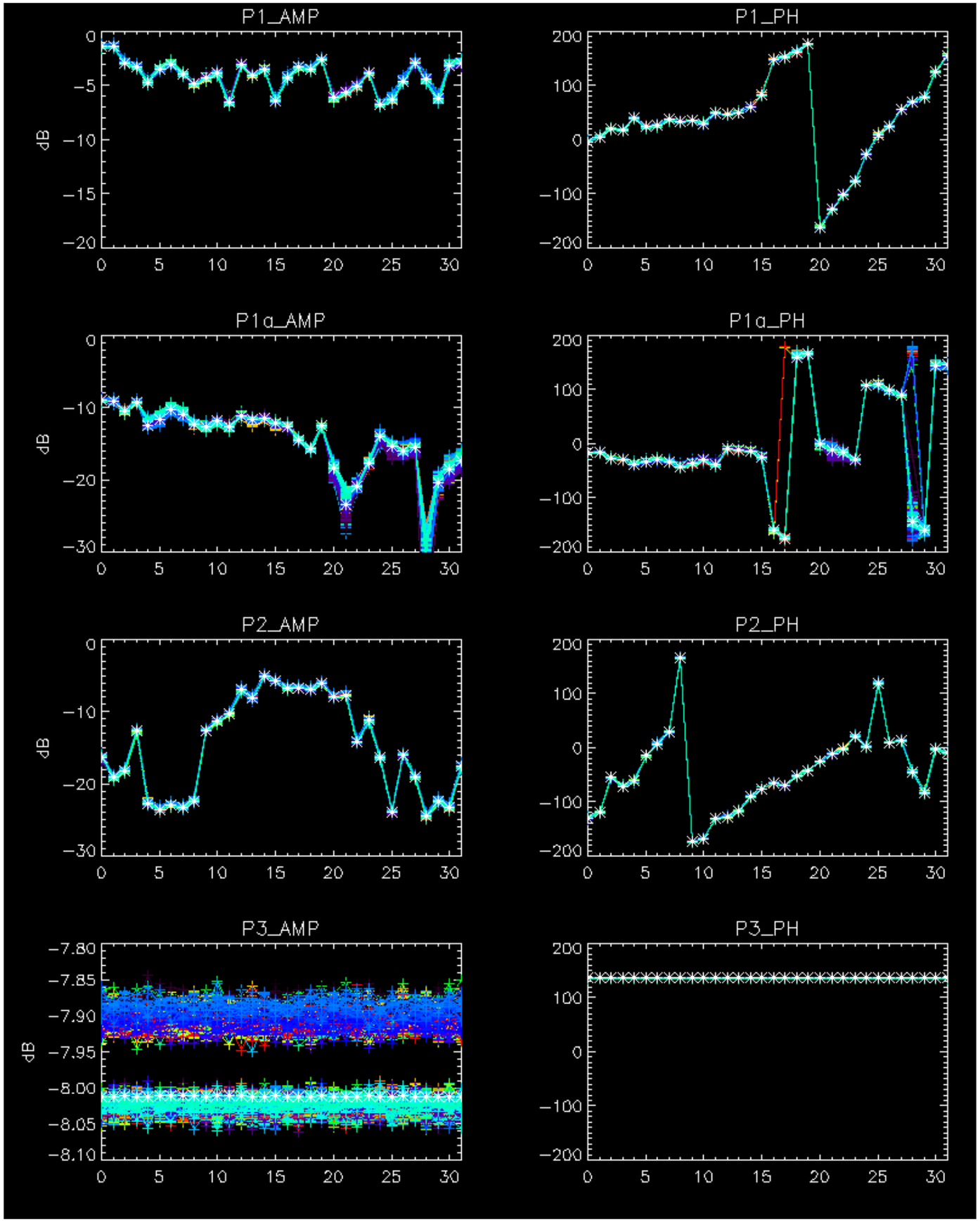

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
28−Jun
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
28−Jun
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
28−Jun
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15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

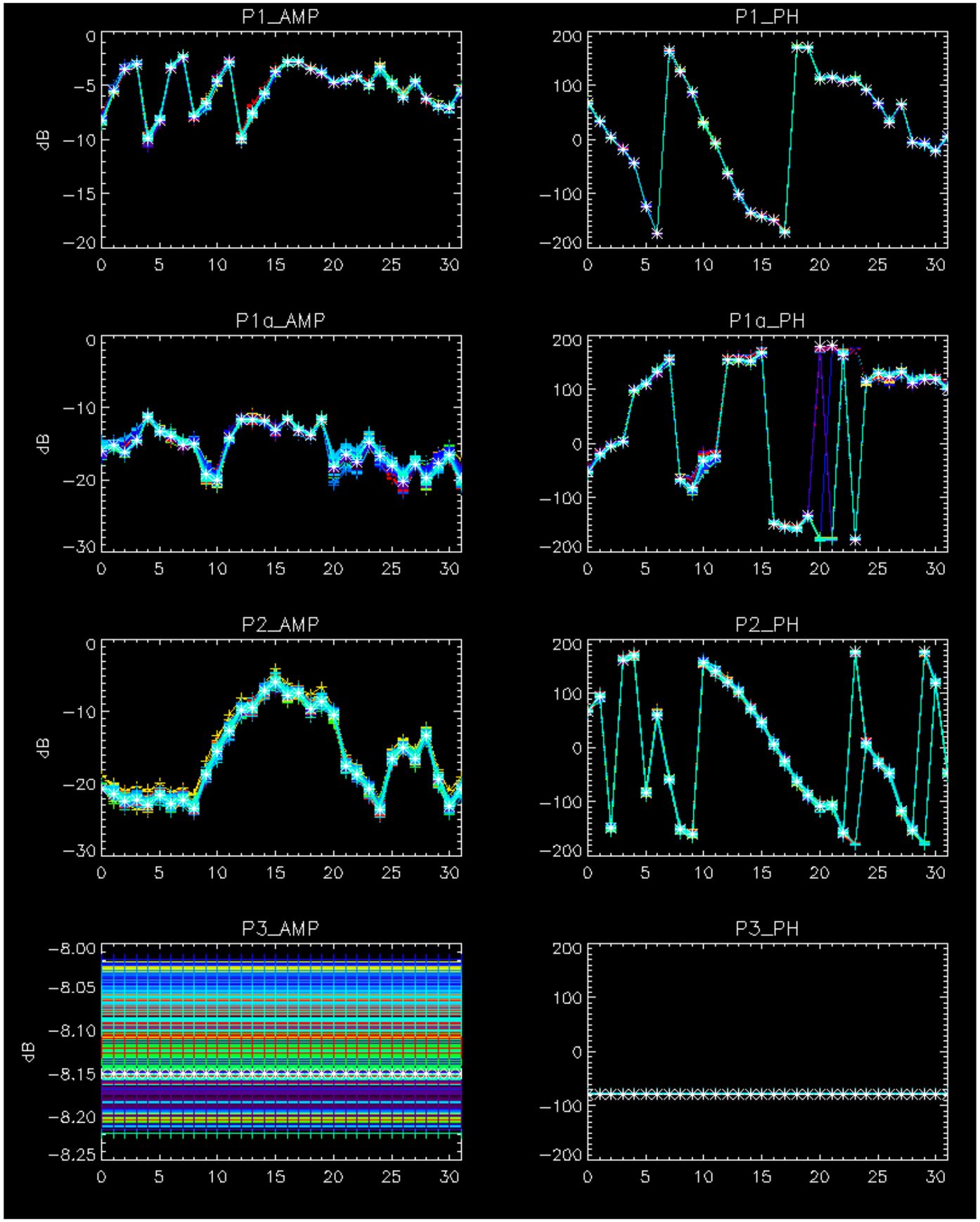

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


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

No anomalies observed from browse visual inspection.

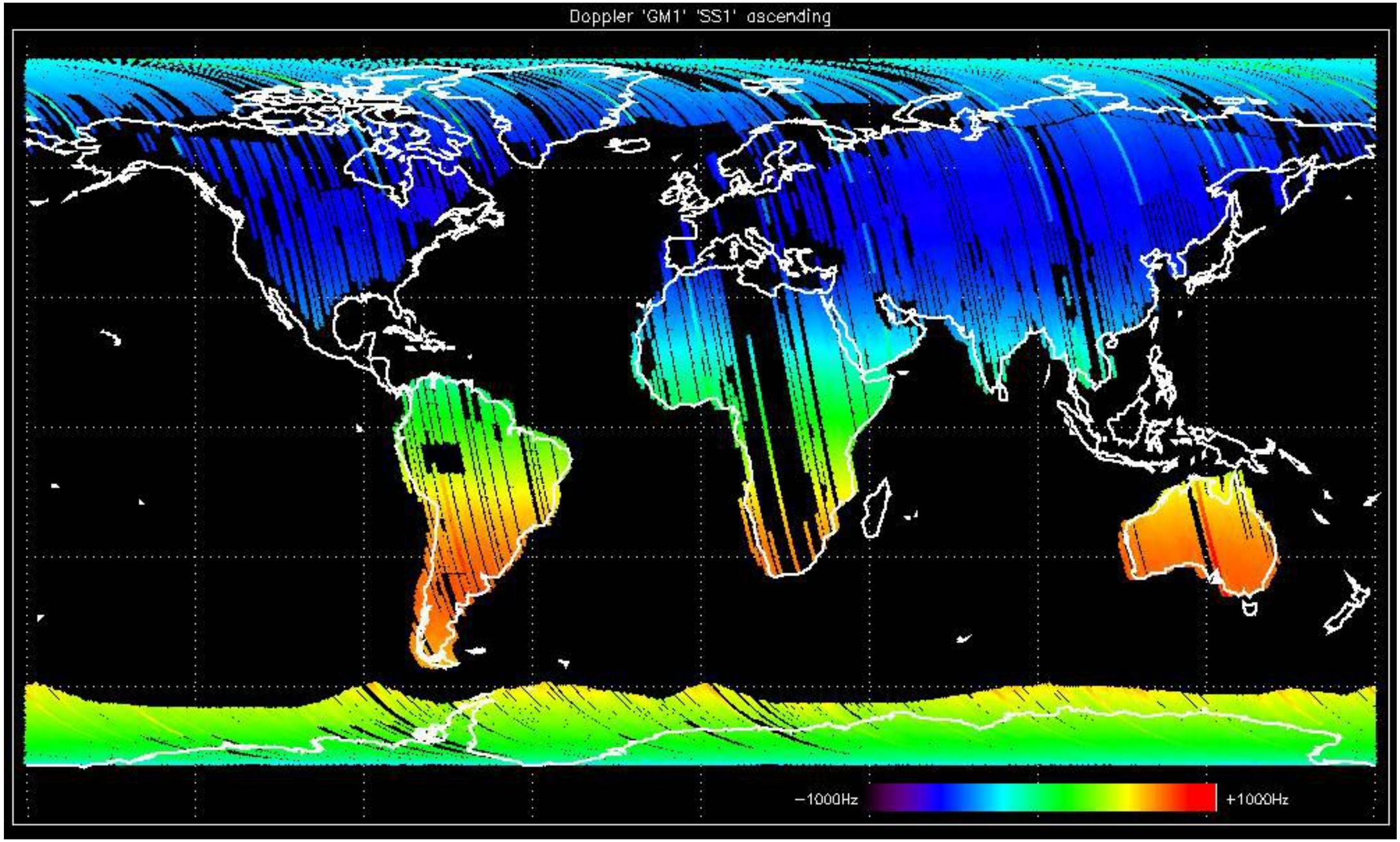
No anomalies observed.

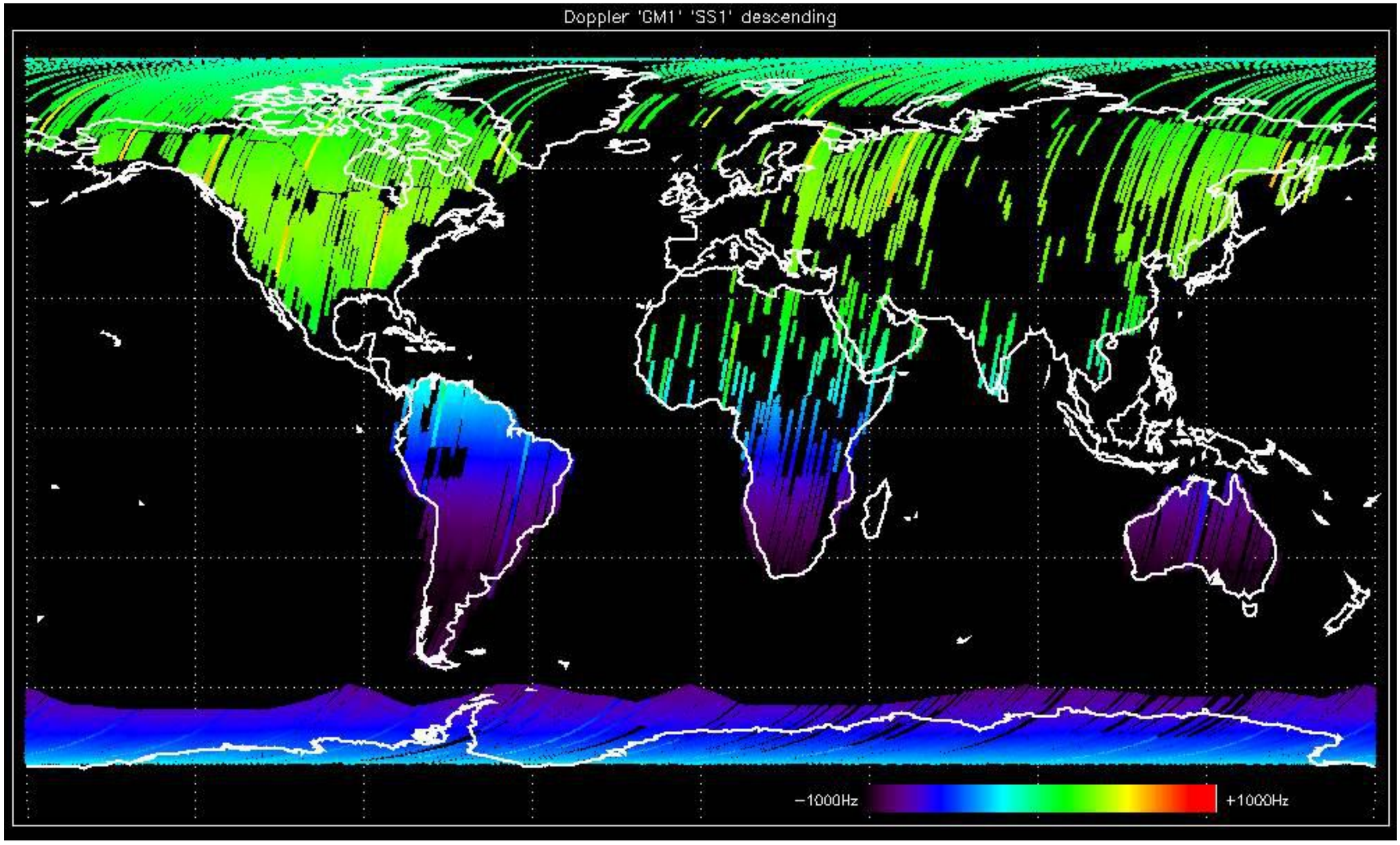

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

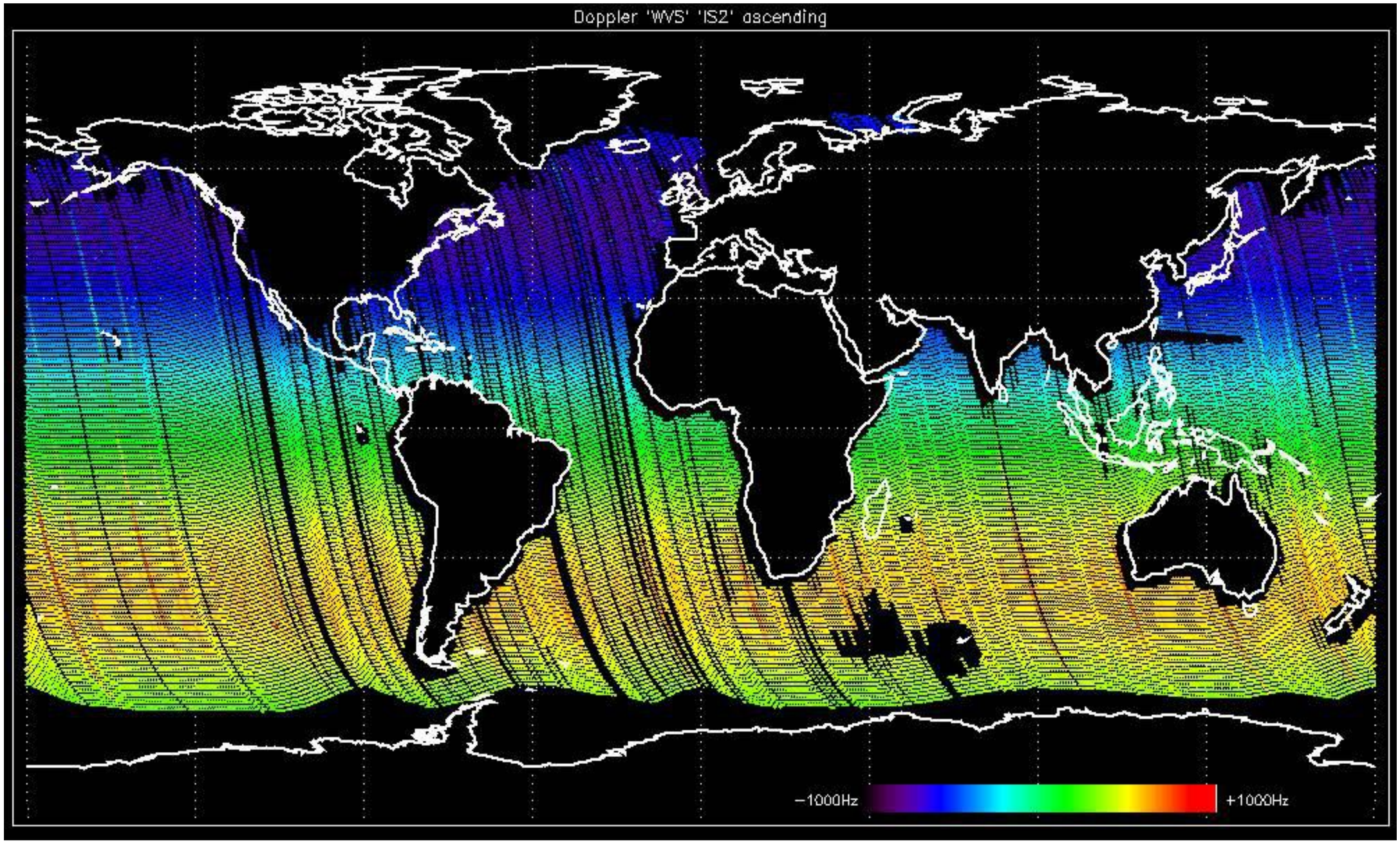

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

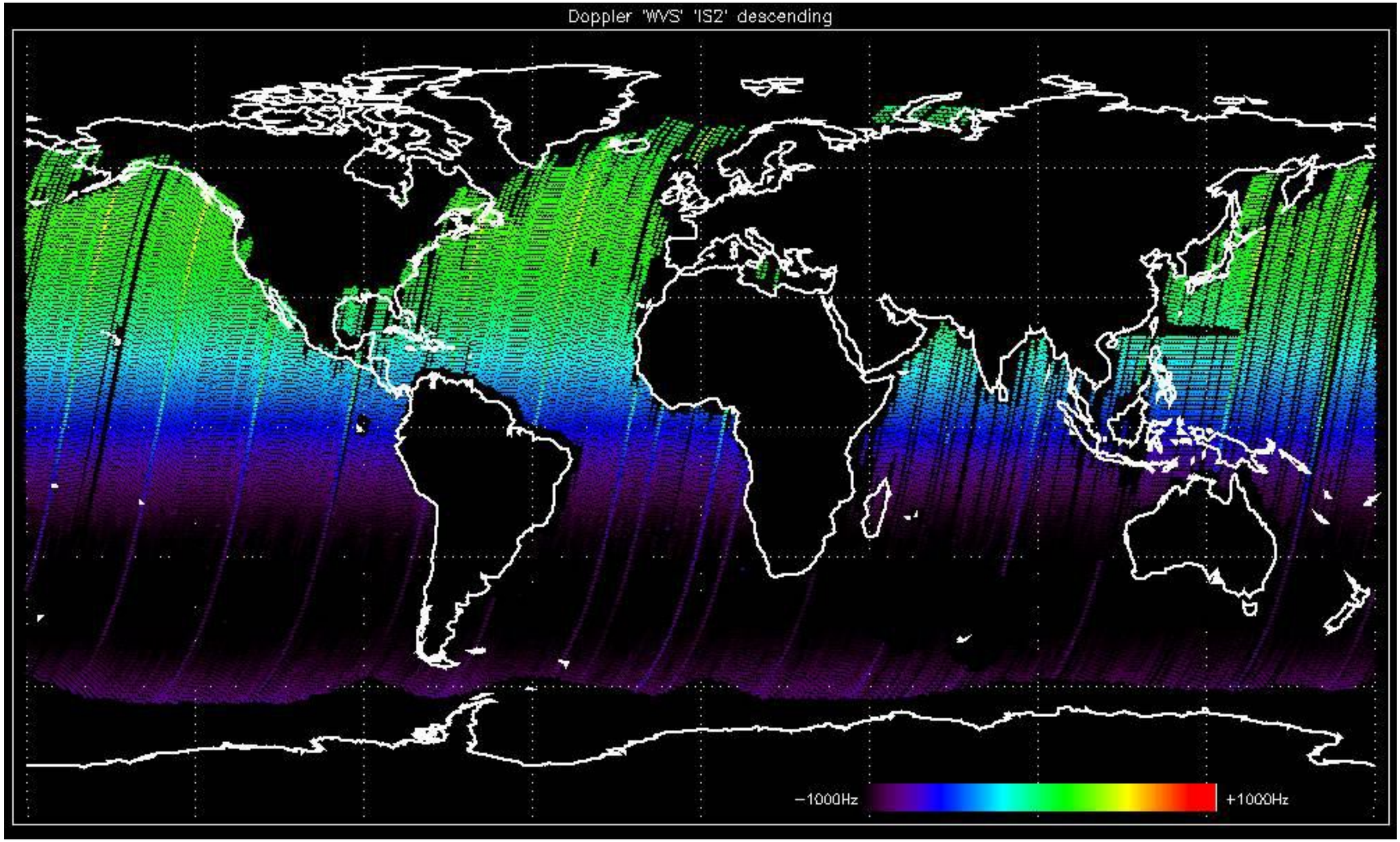
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

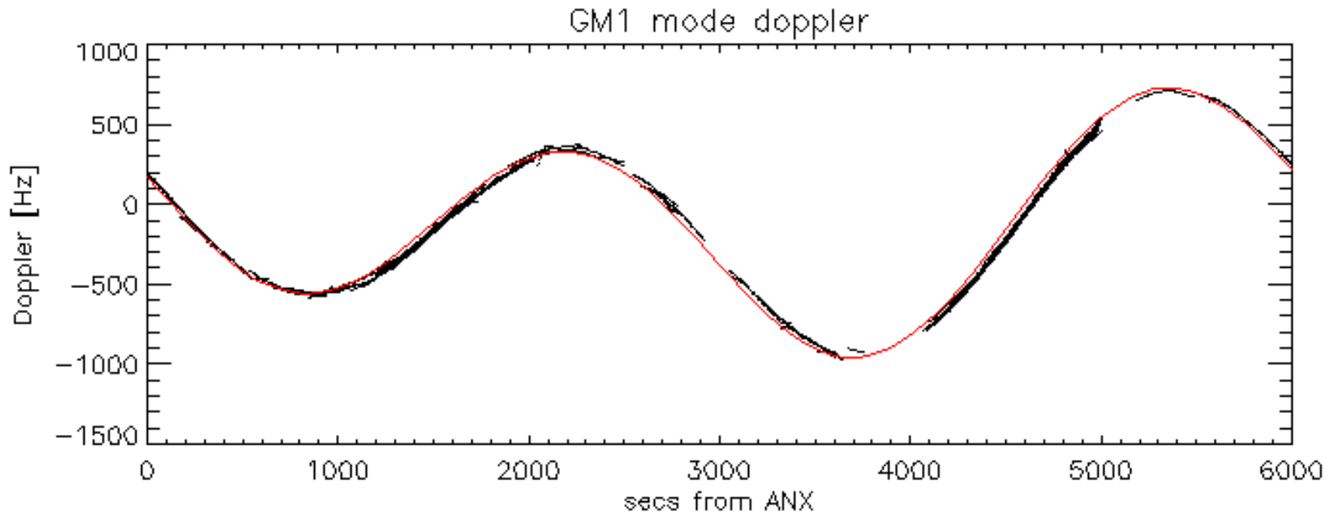
Preliminary report.The data is not yet controled

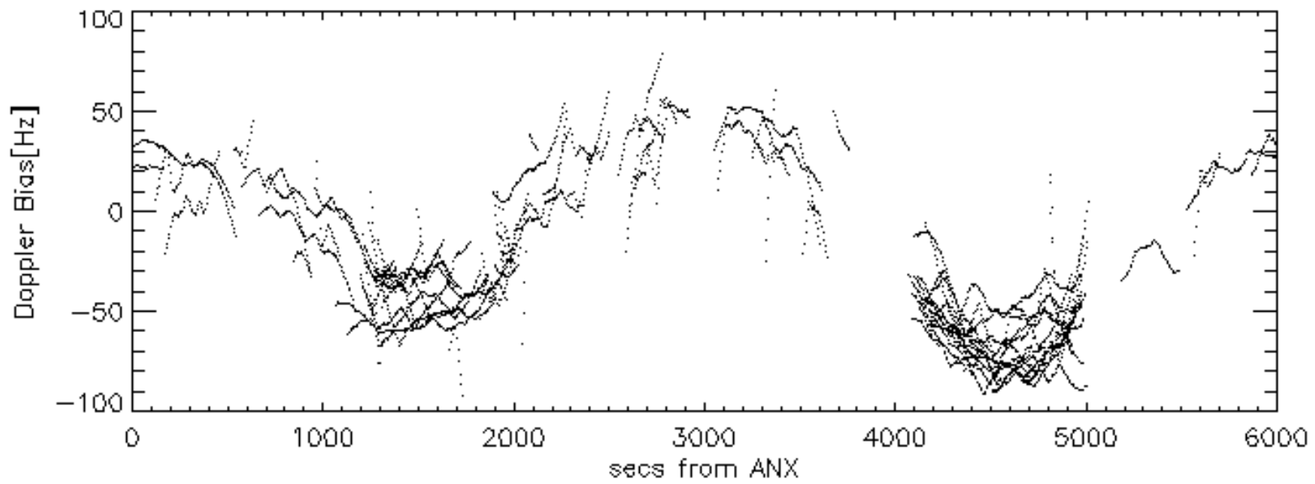

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

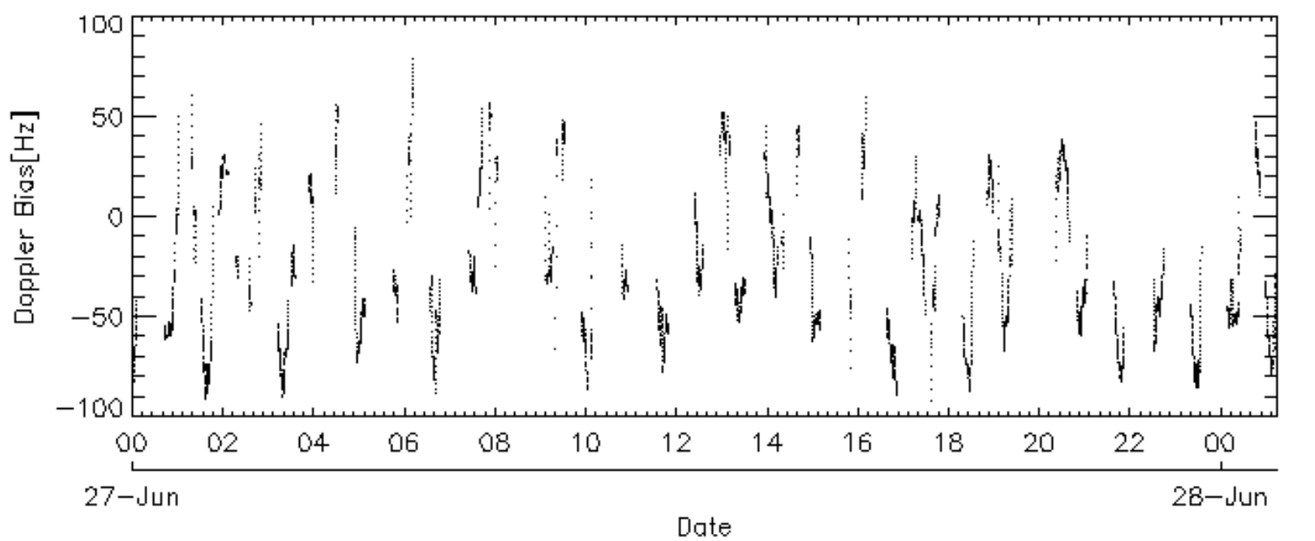

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

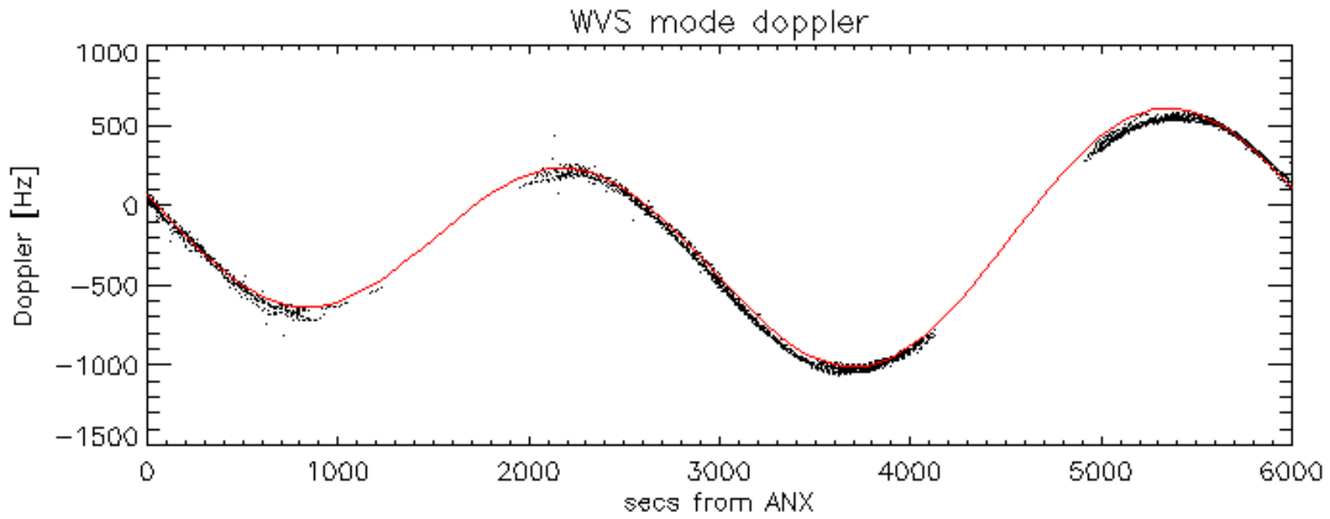

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

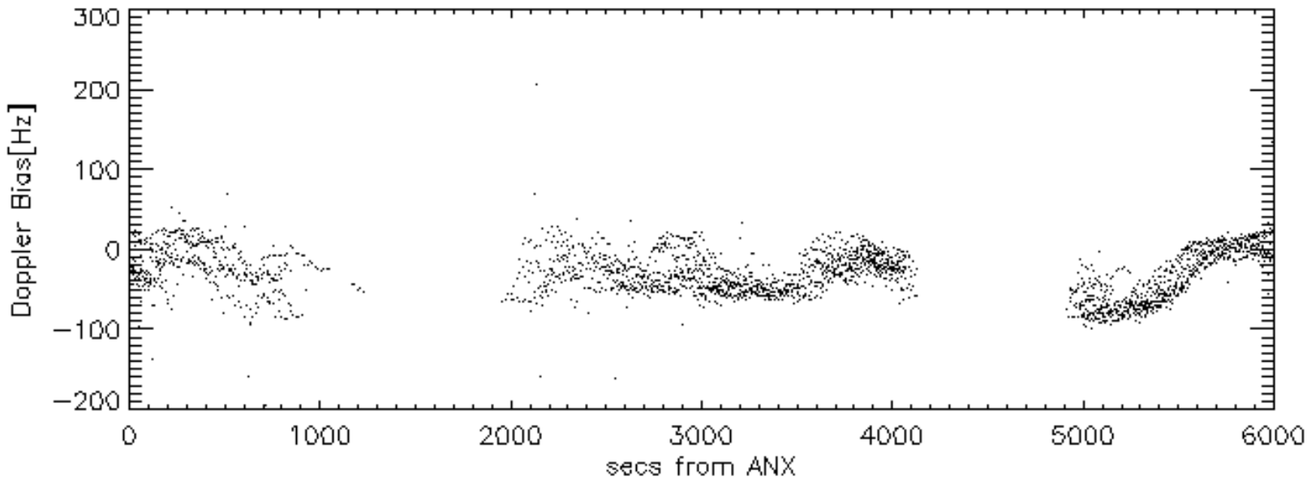

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

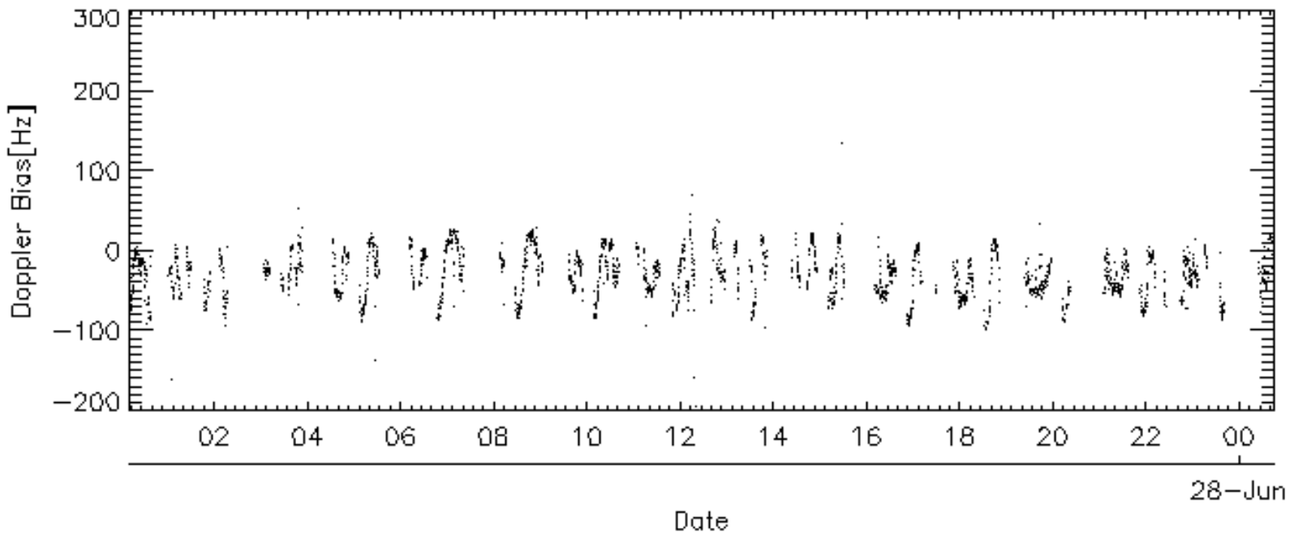

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

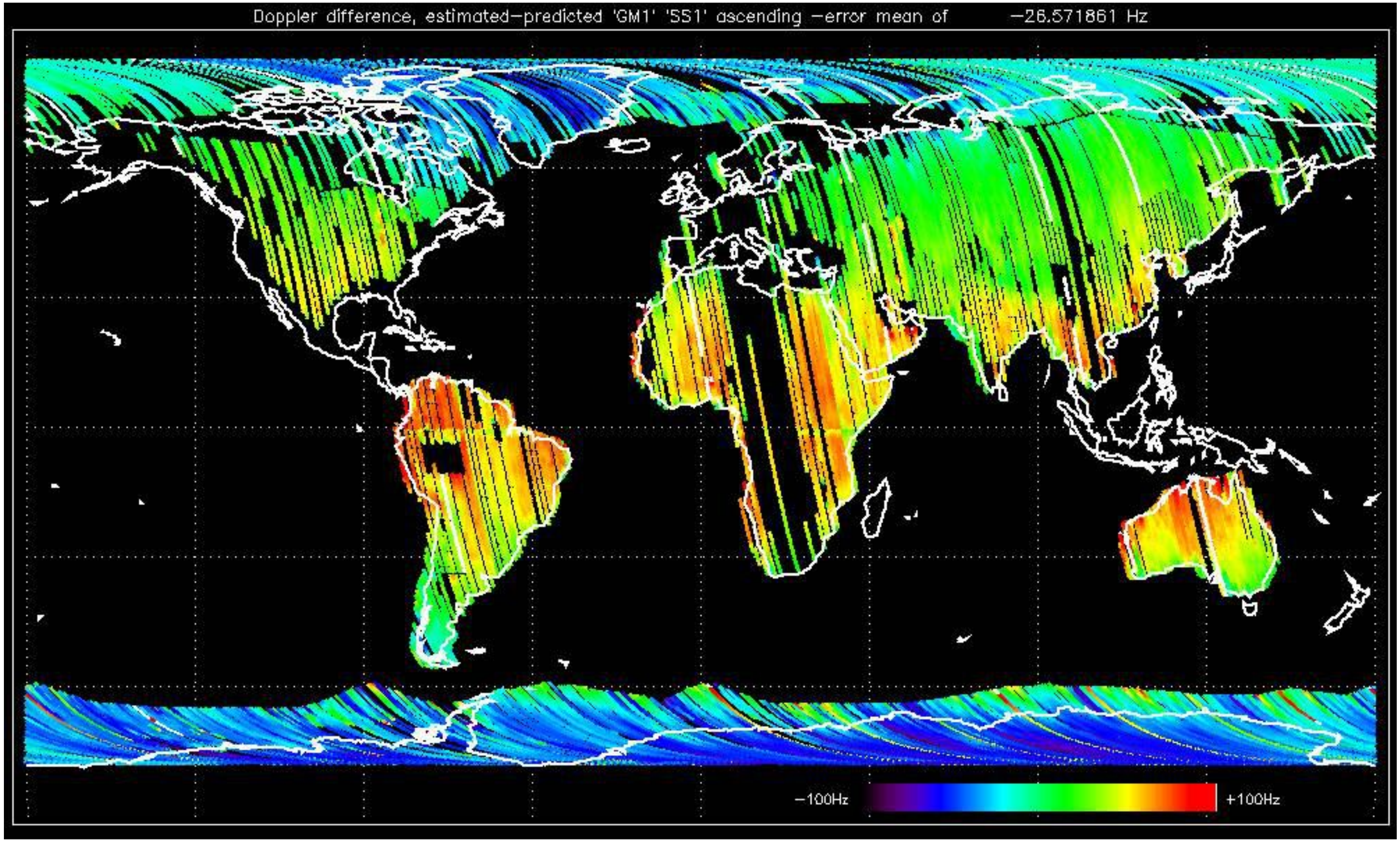

Doppler Bias[Hz]
100
50
0
−50
−100
0
1000
2000
3000
4000
5000
6000
secs from ANX

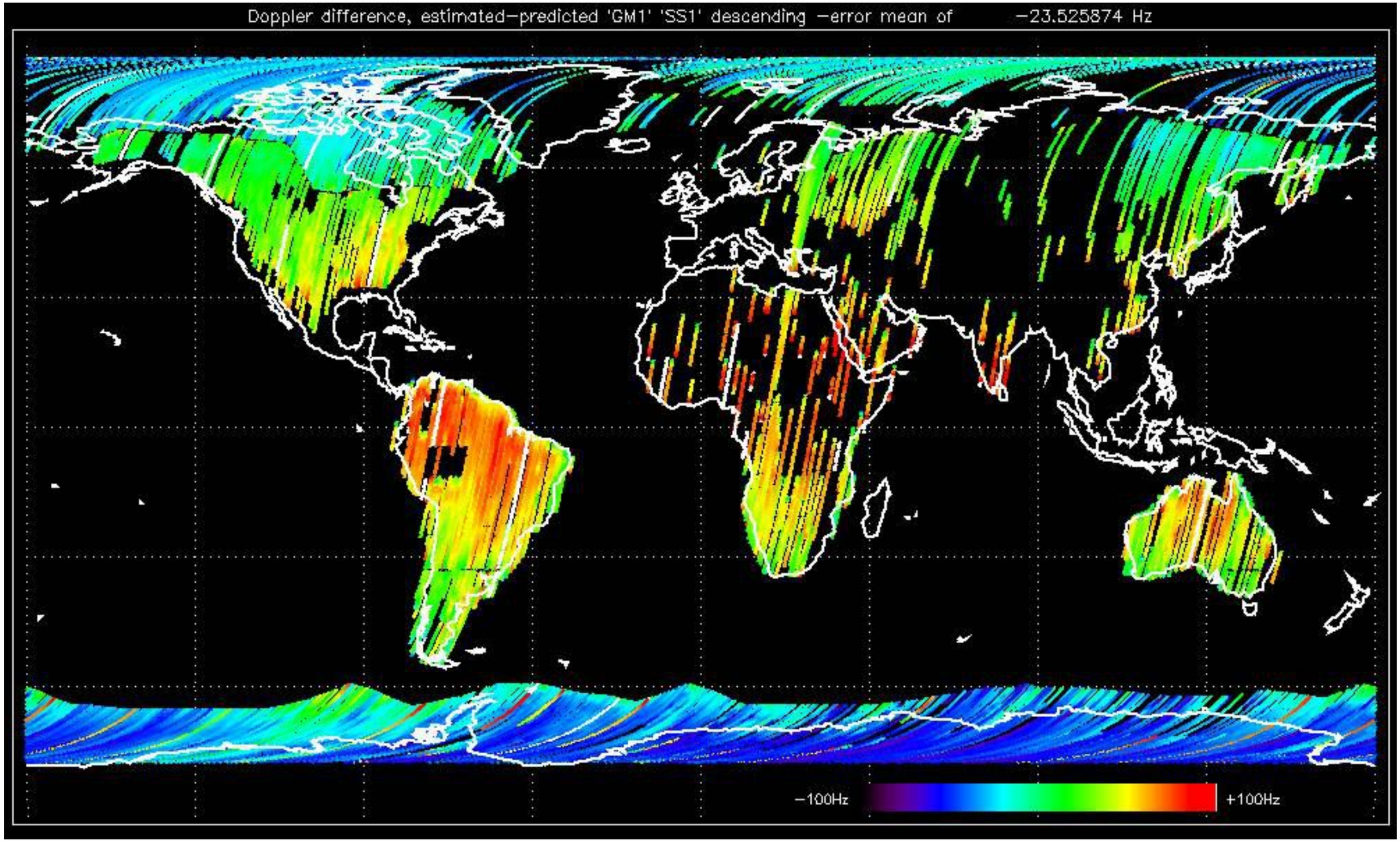

Doppler Bias[Hz]
100
50
0
−50
−100
00
02
04
06
08
10
12
14
16
18
20
22
00
27−Jun
28−Jun
Date

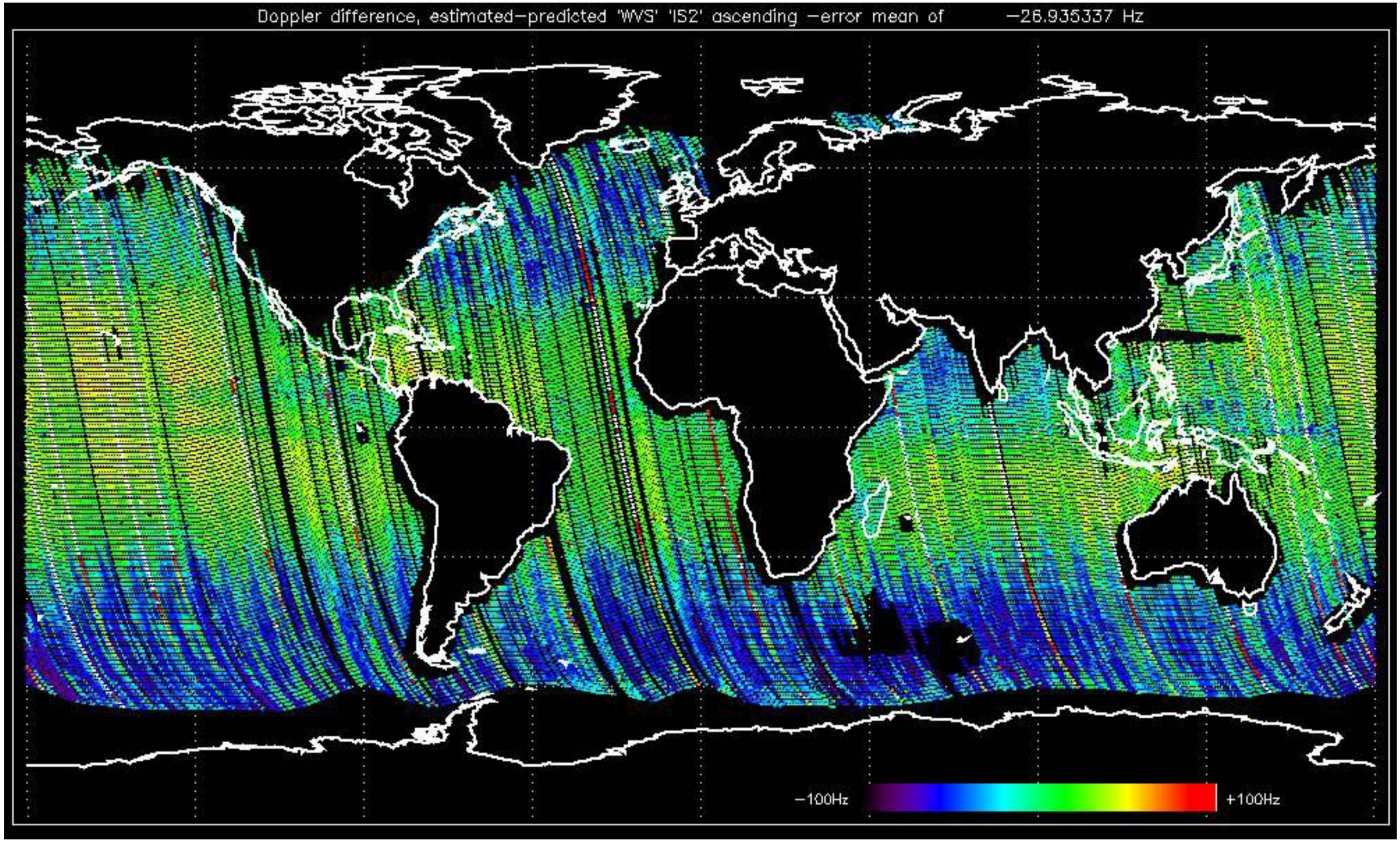

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

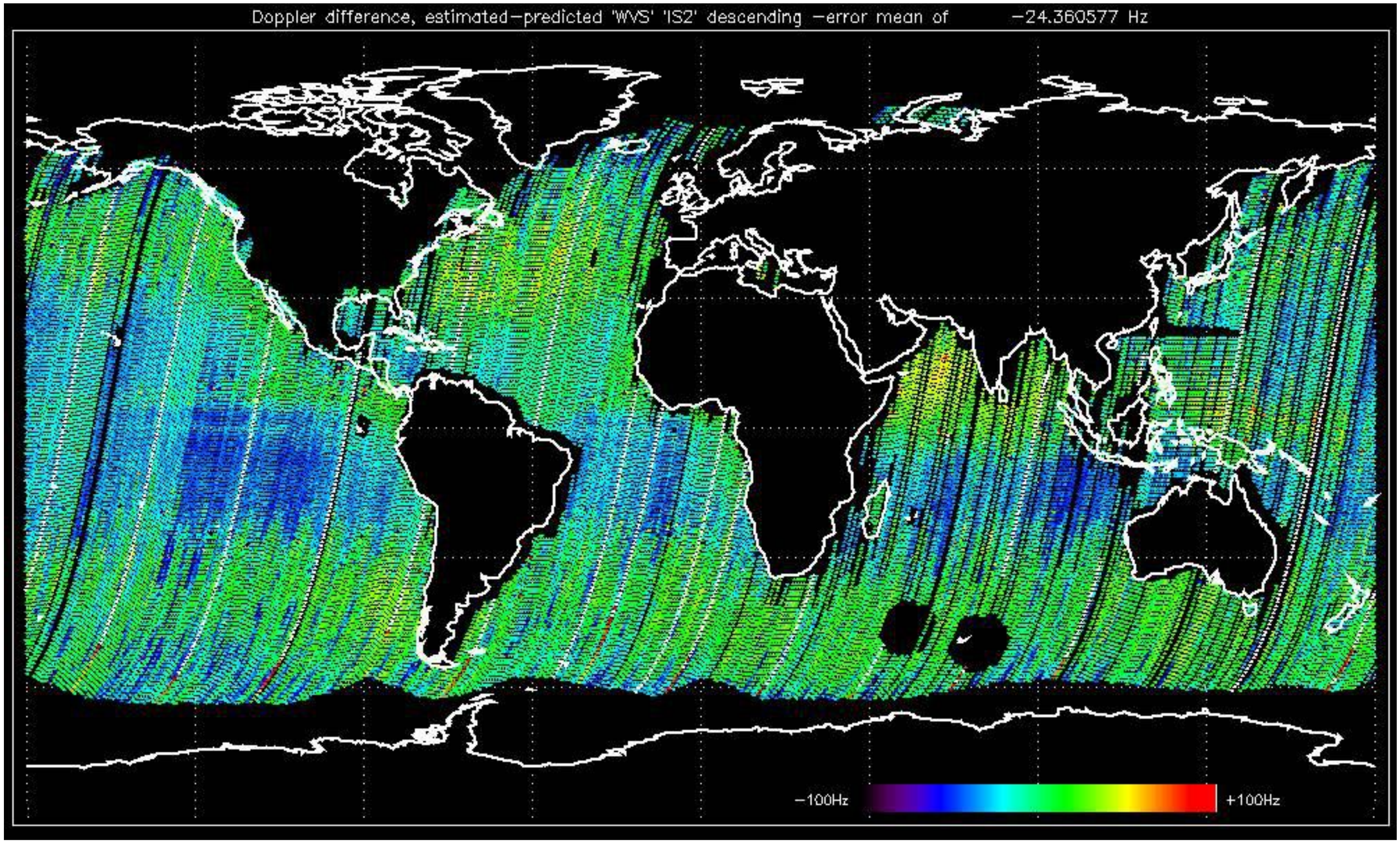

Doppler Bias[Hz]
300
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −26.571861 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.525874 Hz
−100Hz
+100Hz

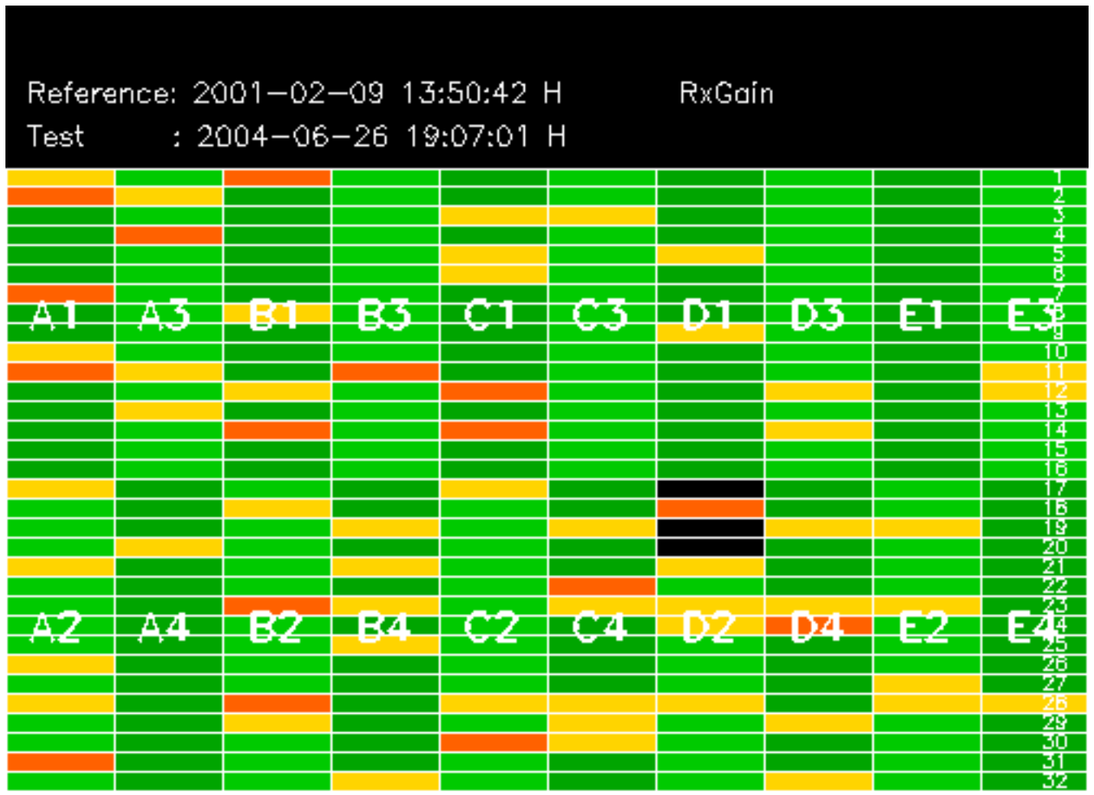

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.935337 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −24.360577 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__0PNPDK20040627_201600_000000152028_00085_12163_0005.N1

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2004-06-26 19:07:01 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
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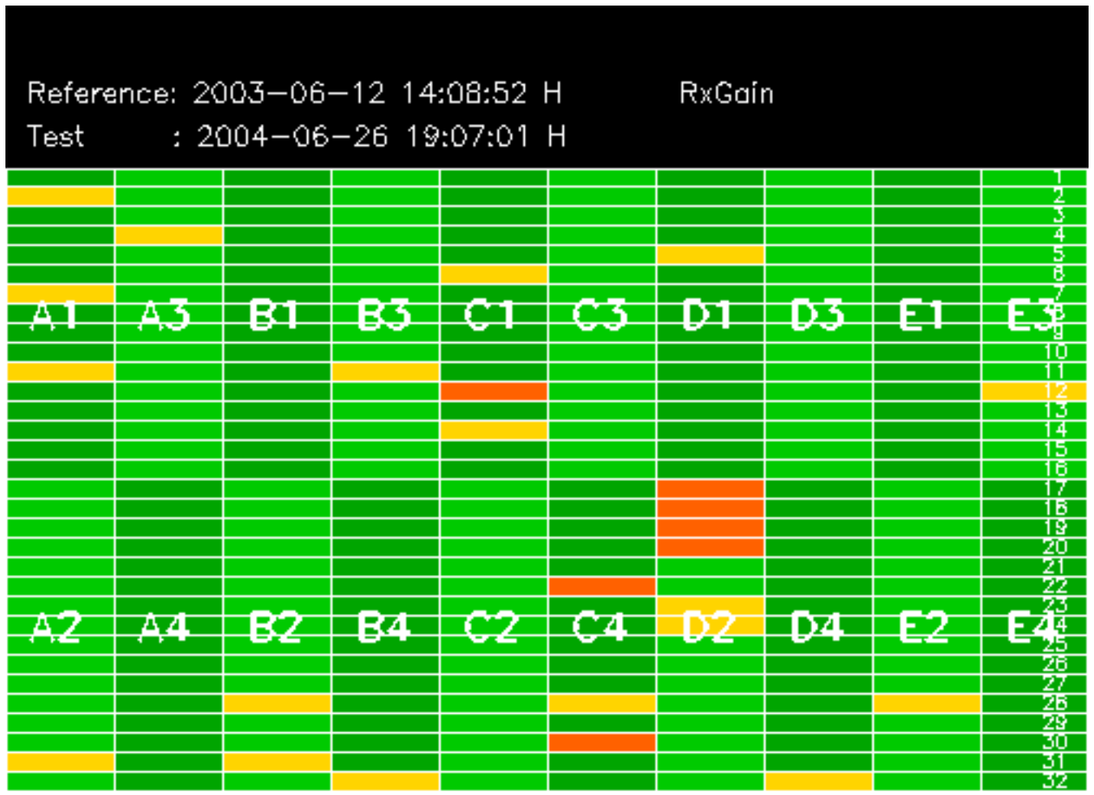
Reference: 2003-06-12 14:08:52 H
Test : 2004-06-26 19:07:01 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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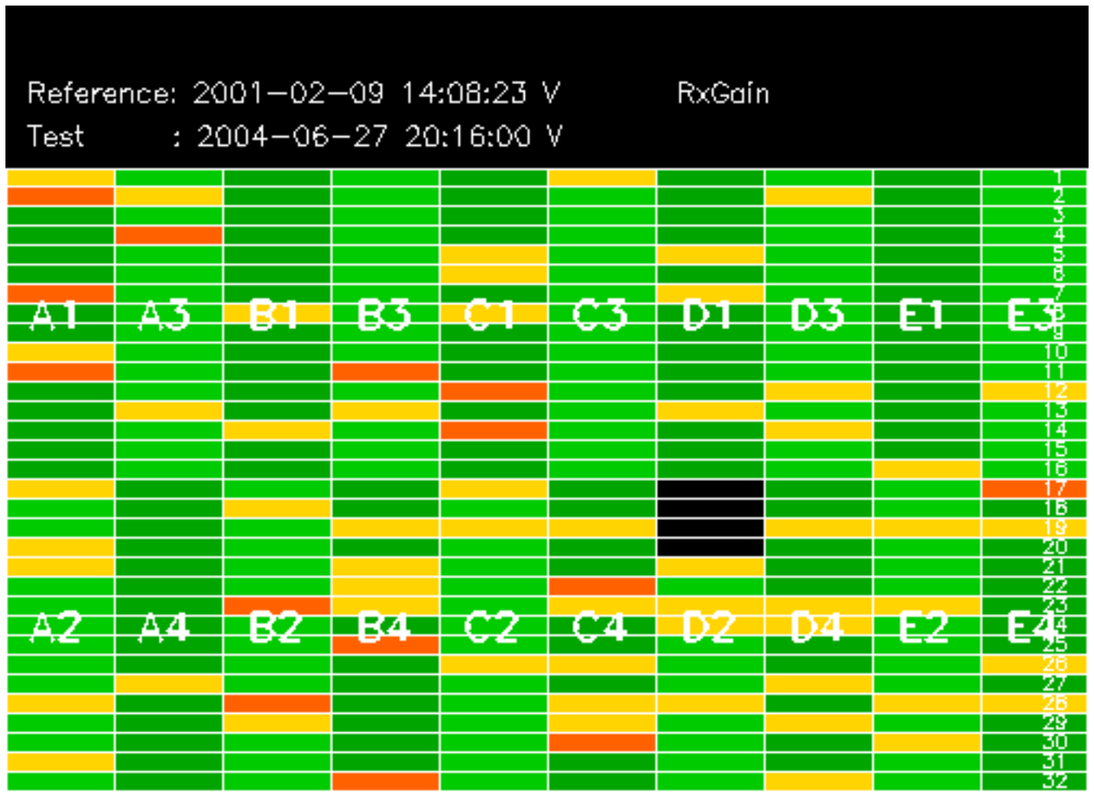
Reference: 2001-02-09 14:08:23 V
Test : 2004-06-27 20:16:00 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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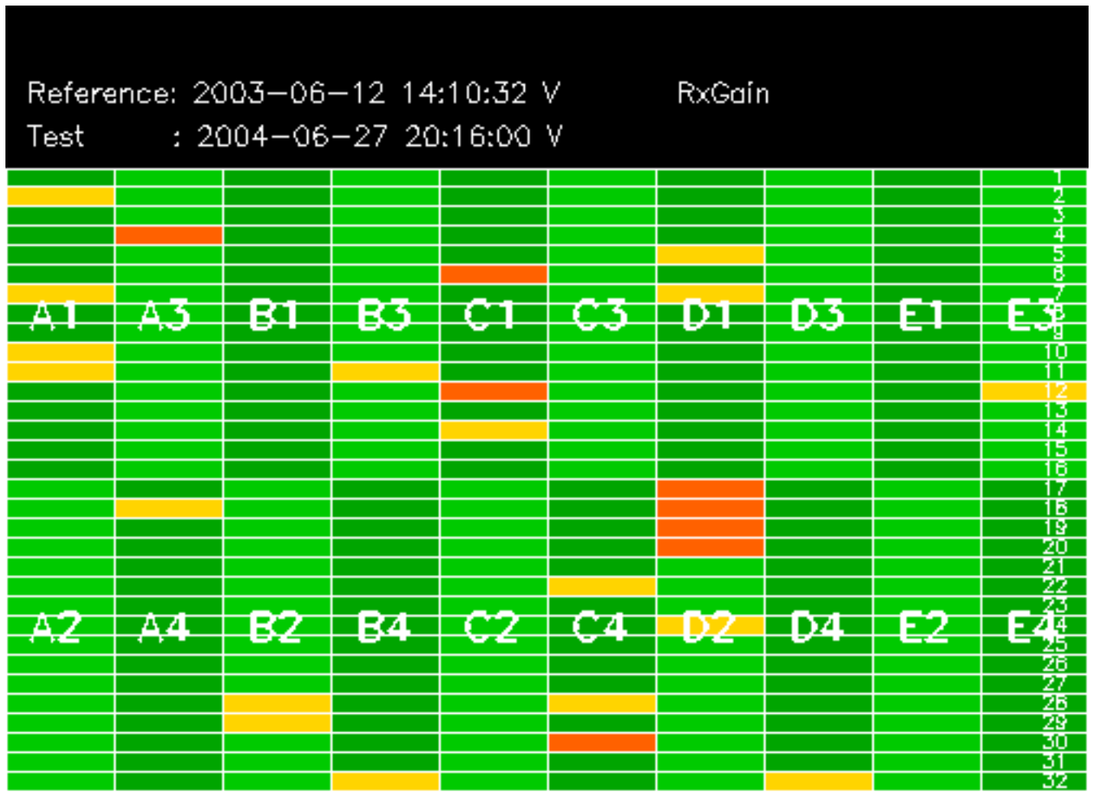
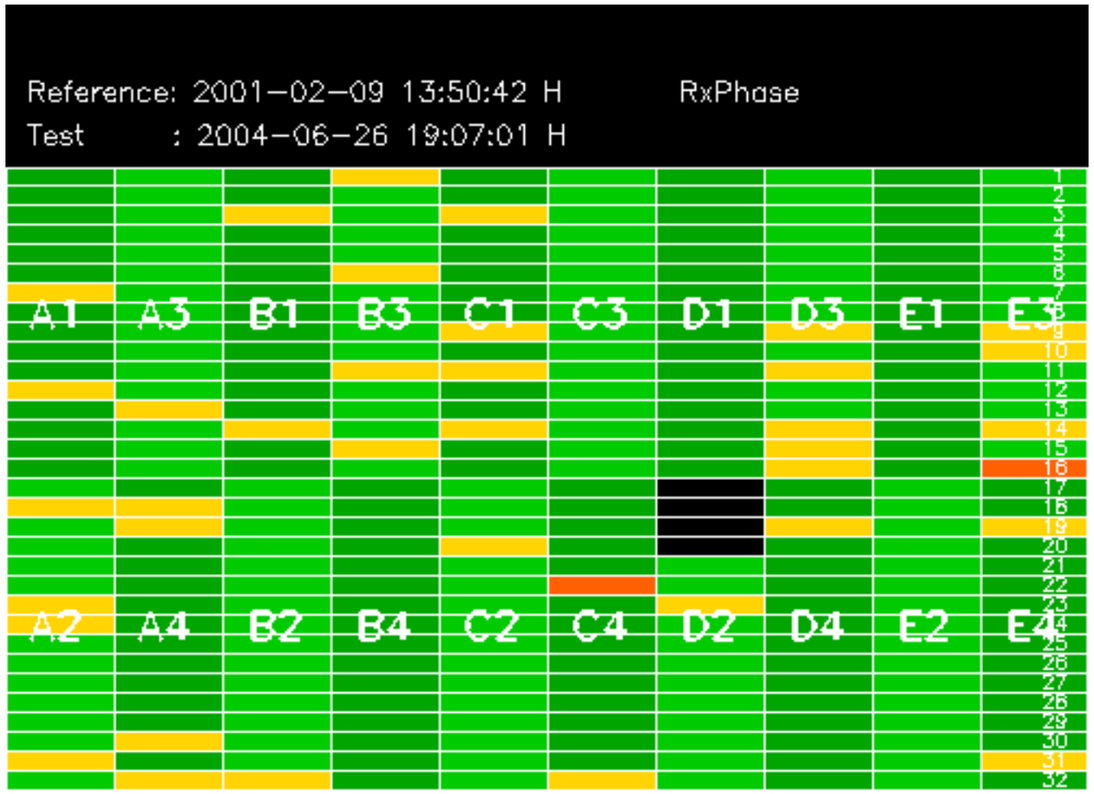
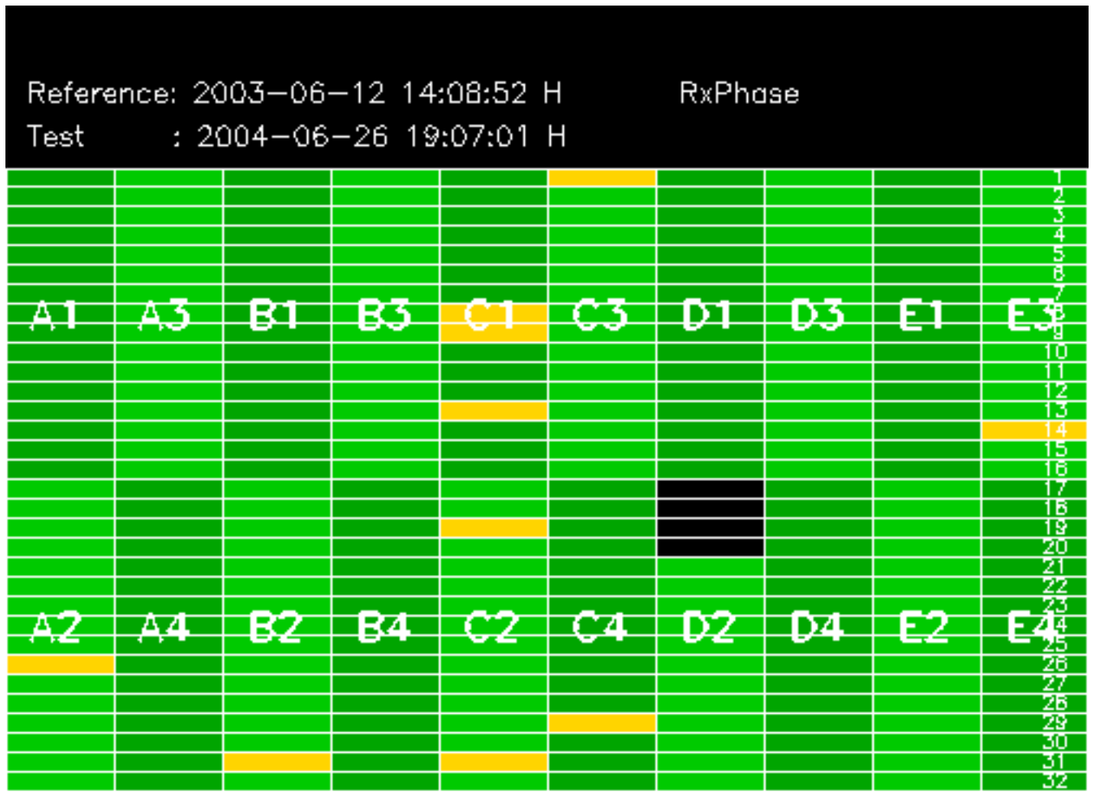

Reference: 2003-06-12 14:10:32 V
Test : 2004-06-27 20:16:00 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-06-26 19:07:01 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 : 2004-06-26 19:07:01 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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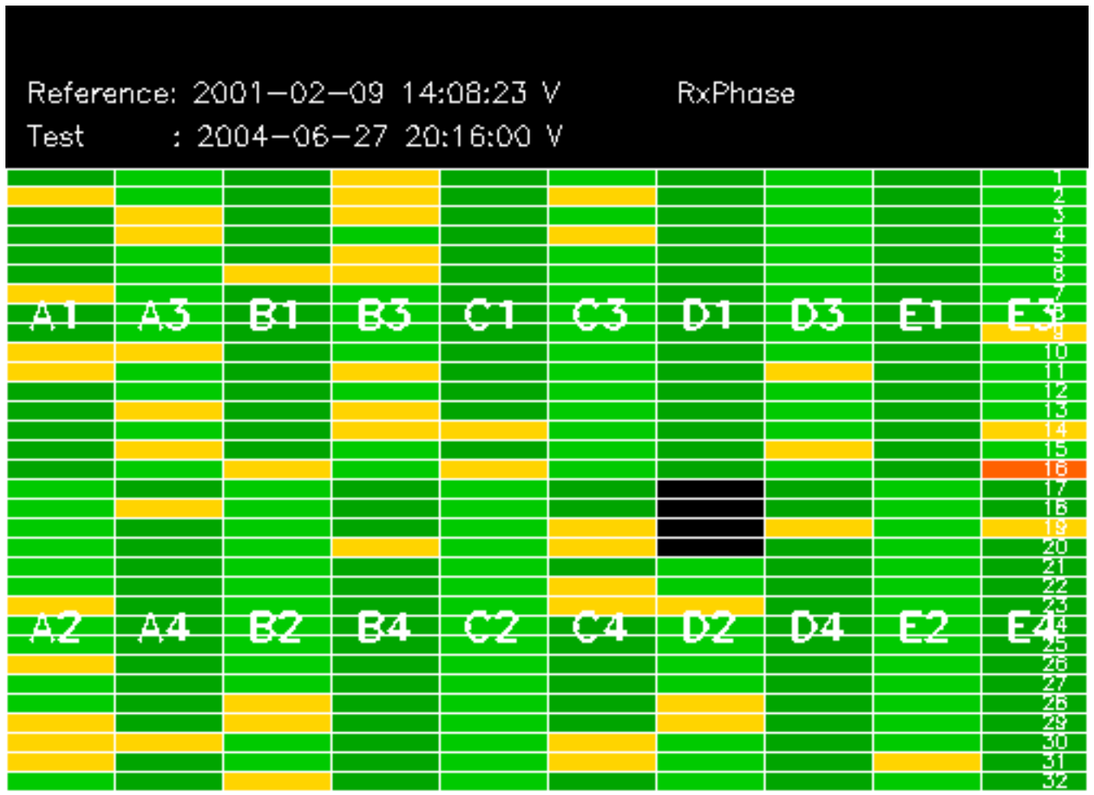
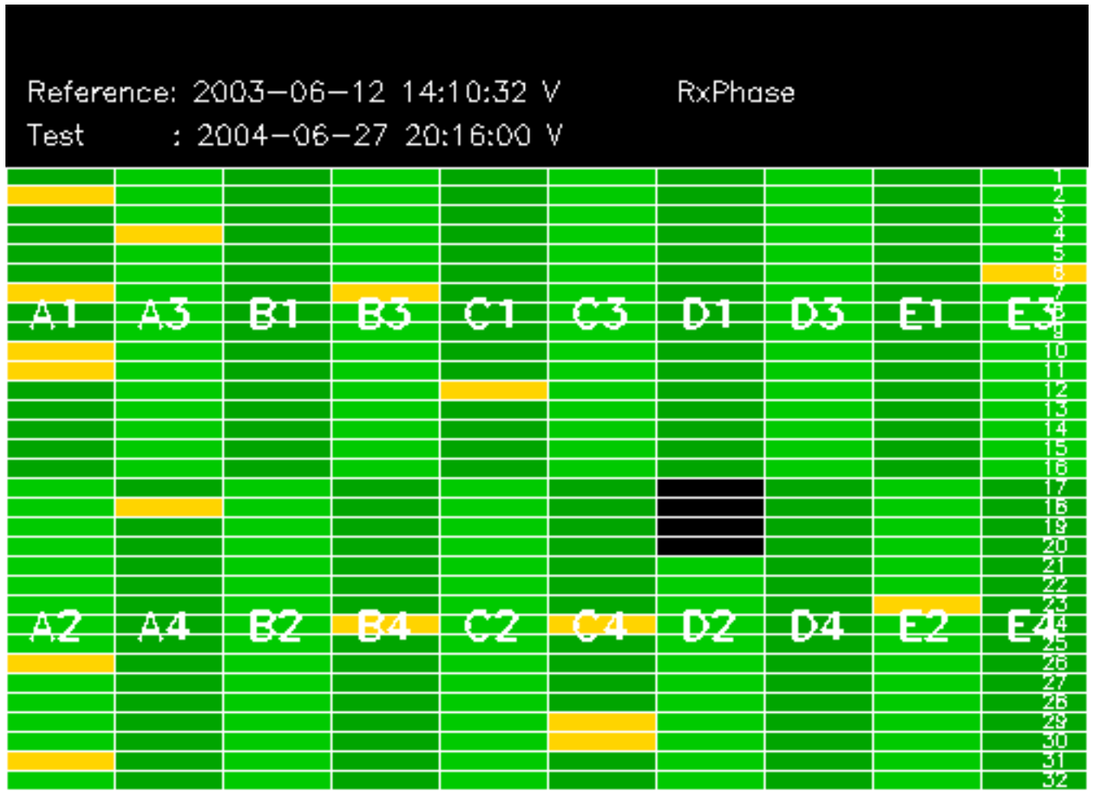
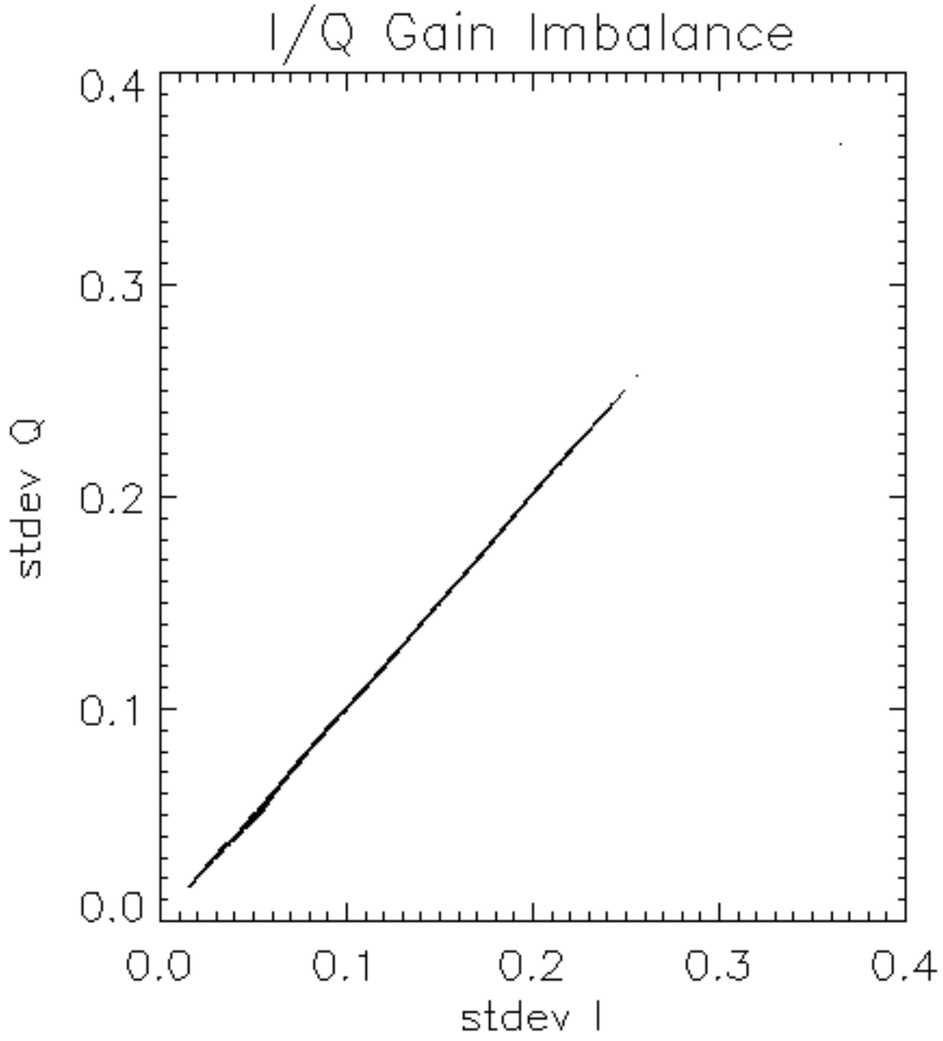
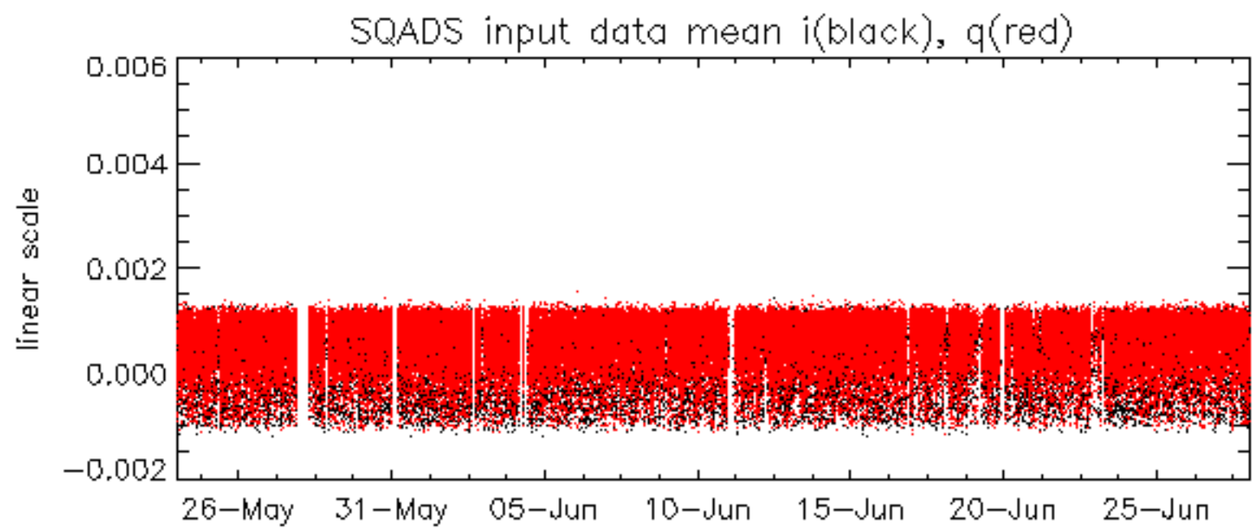
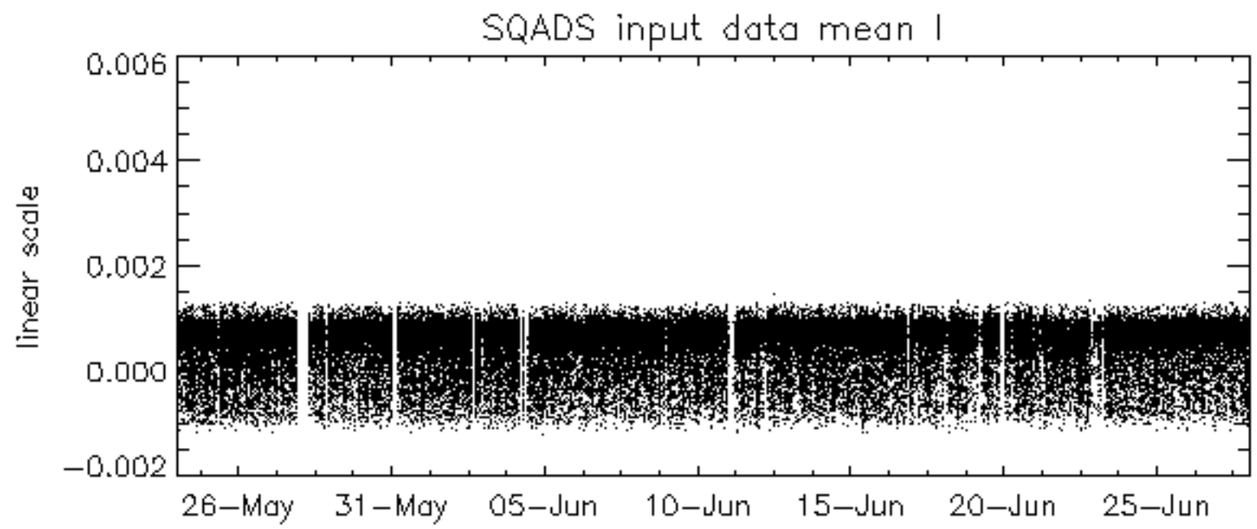
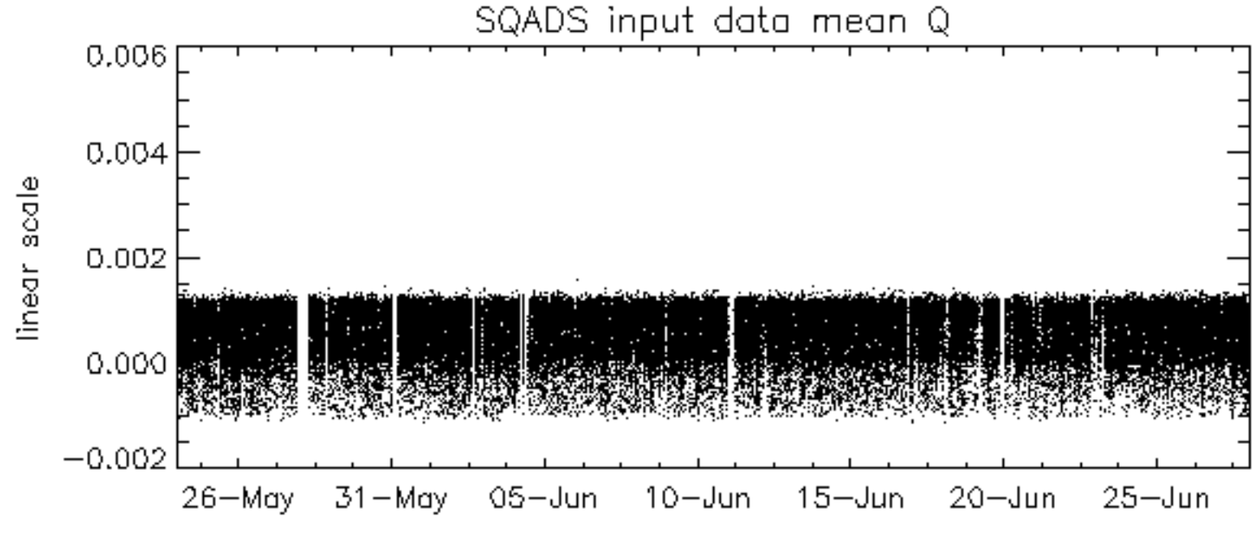

Reference: 2001-02-09 14:08:23 V
Test : 2004-06-27 20:16:00 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

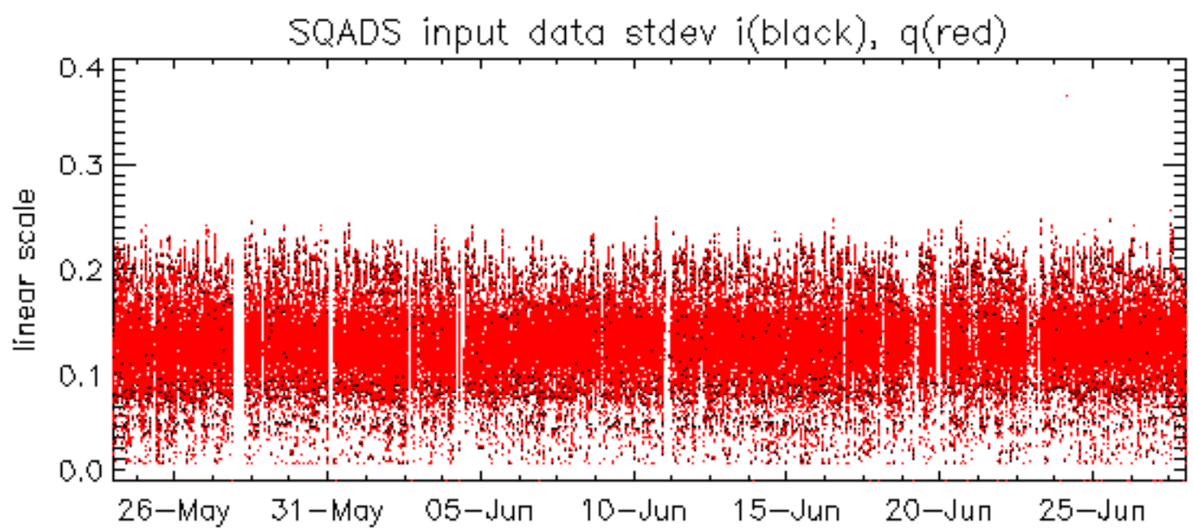

Reference: 2003-06-12 14:10:32 V
Test : 2004-06-27 20:16:00 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

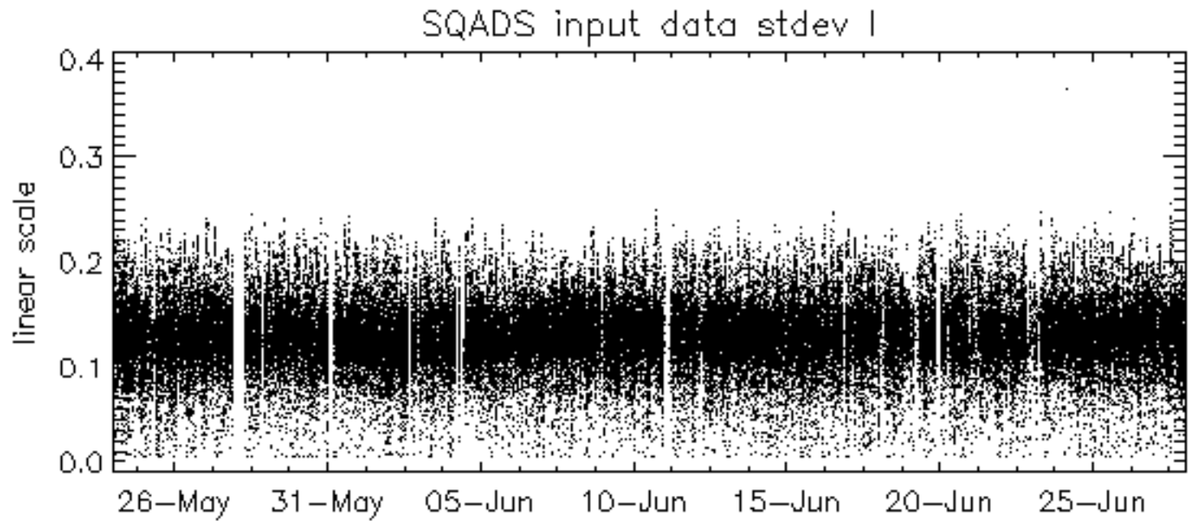

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

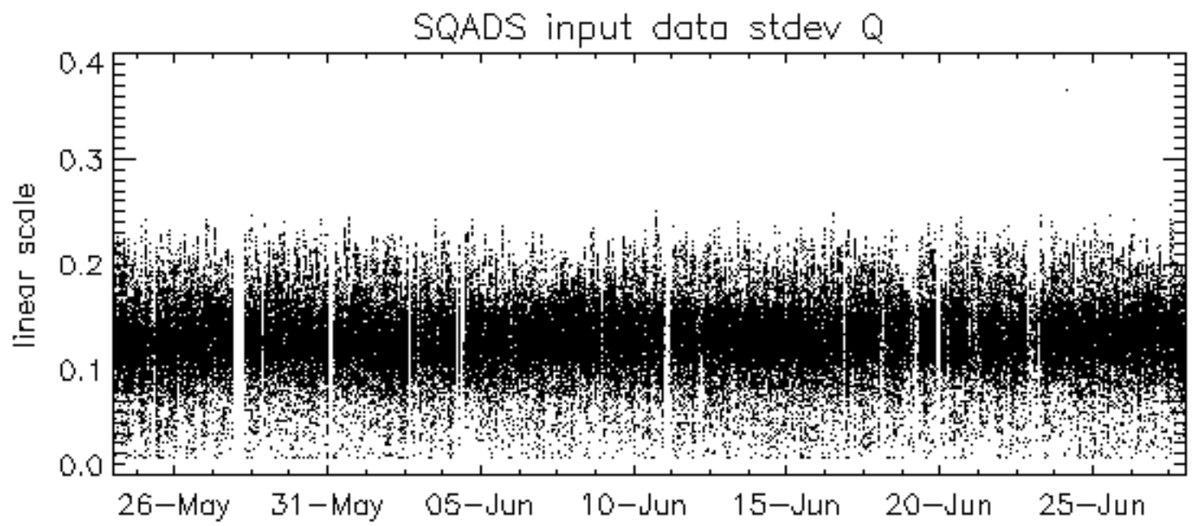

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun

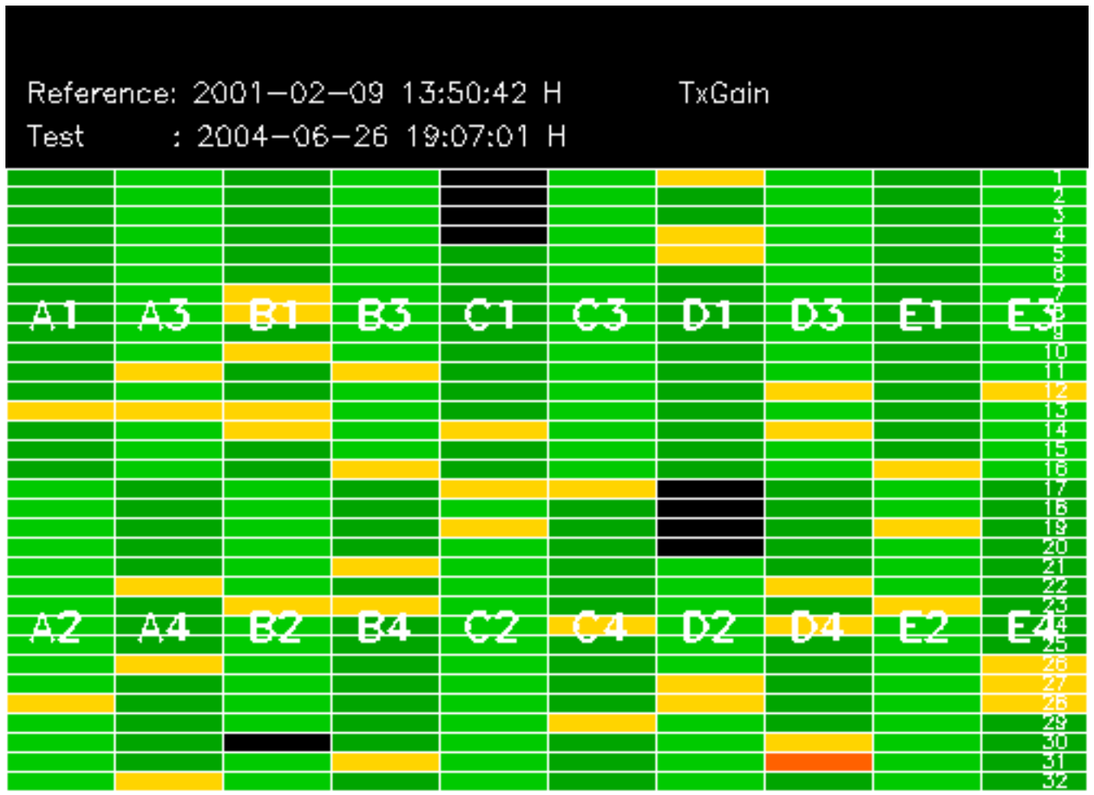

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun

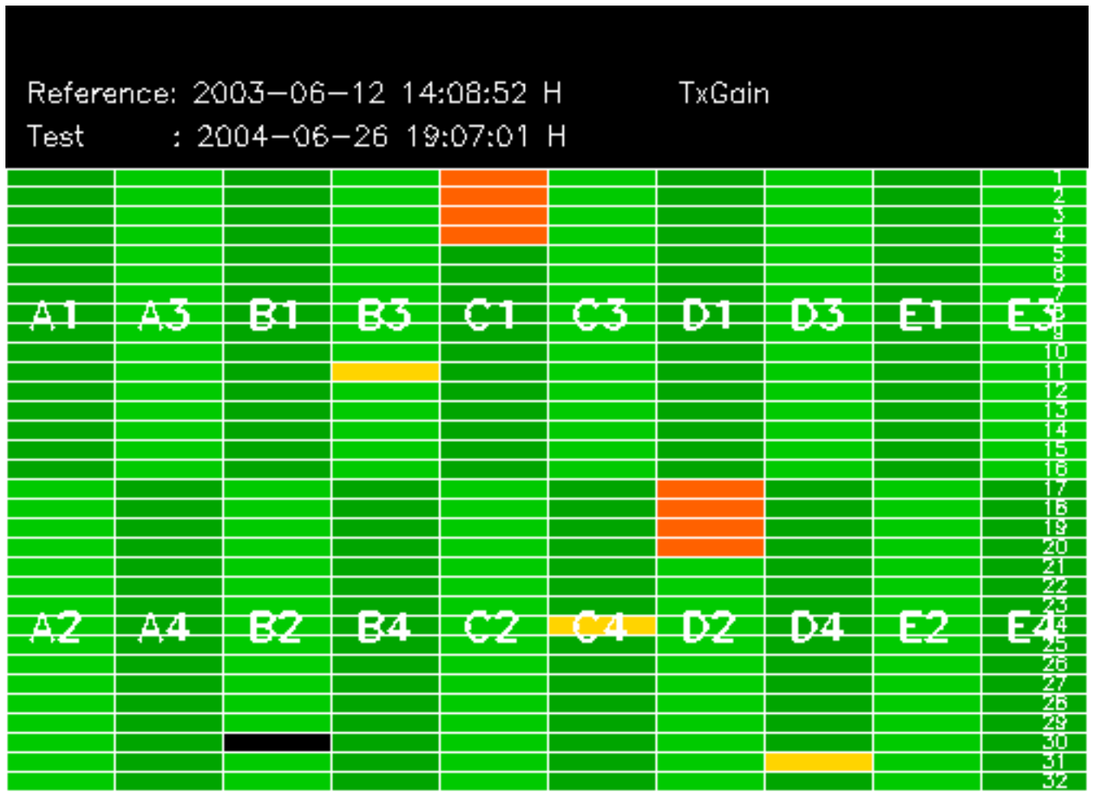

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun
25−Jun


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-06-26 19:07:01 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 : 2004-06-26 19:07:01 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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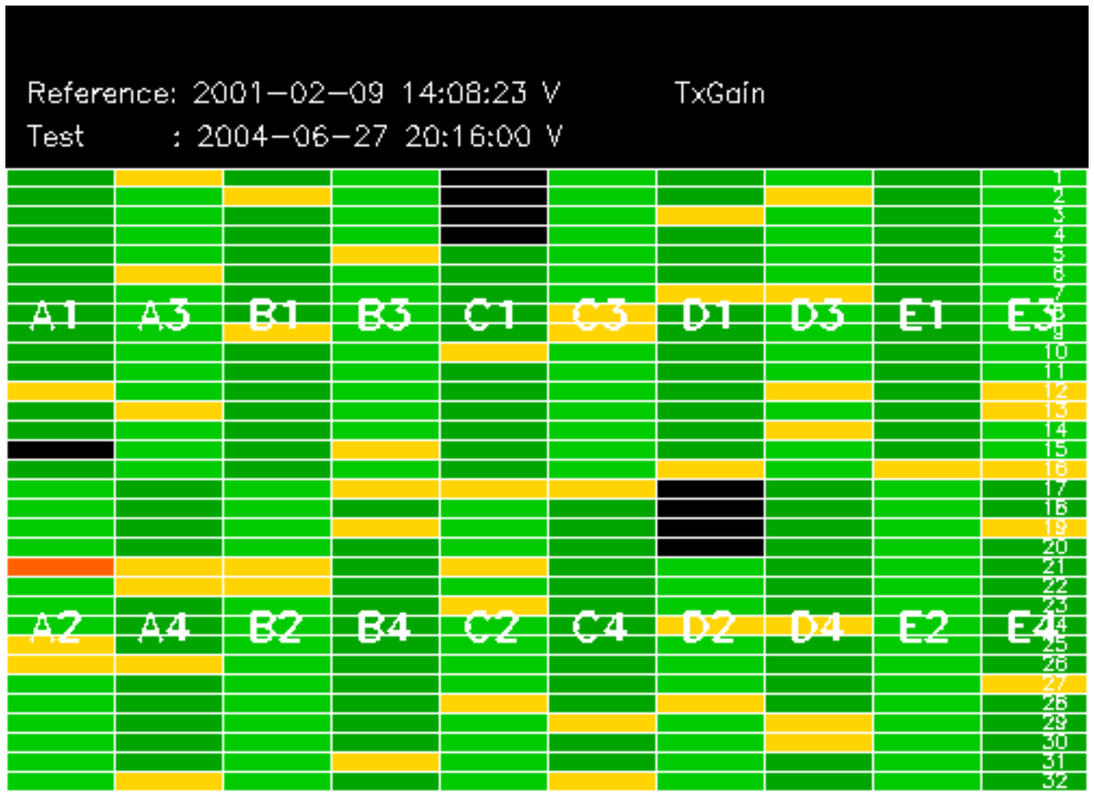
Reference: 2001-02-09 14:08:23 V
Test : 2004-06-27 20:16:00 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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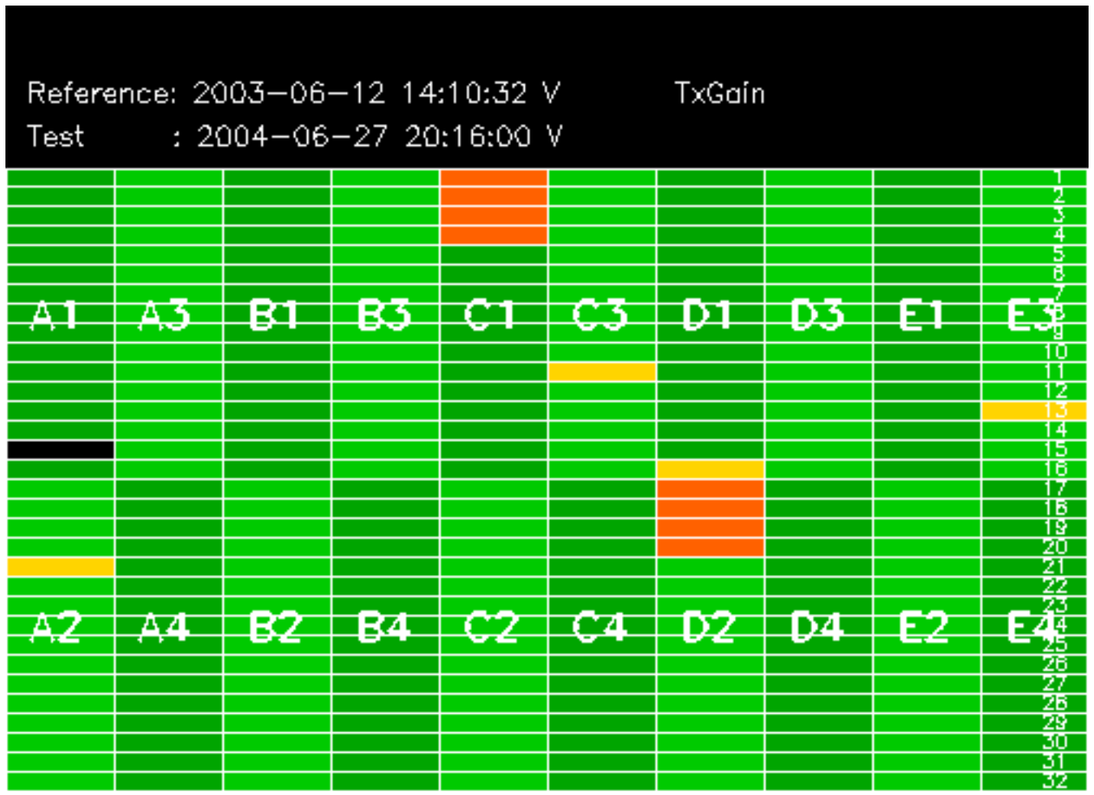
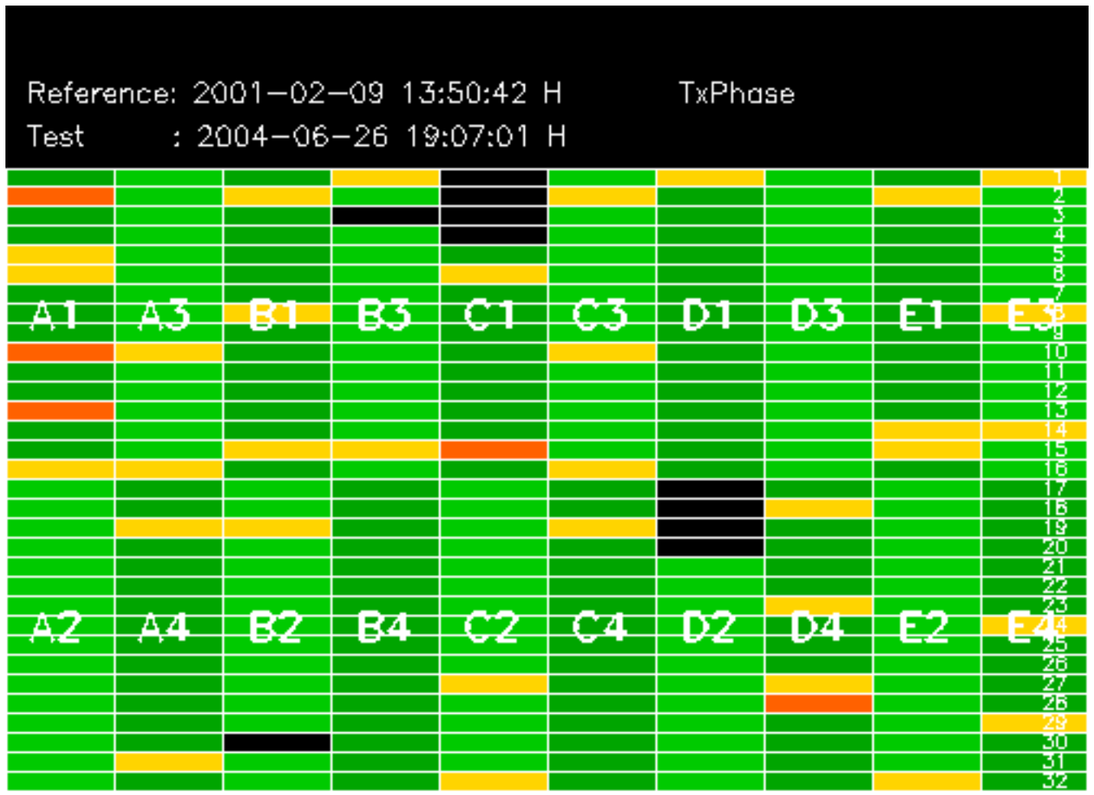
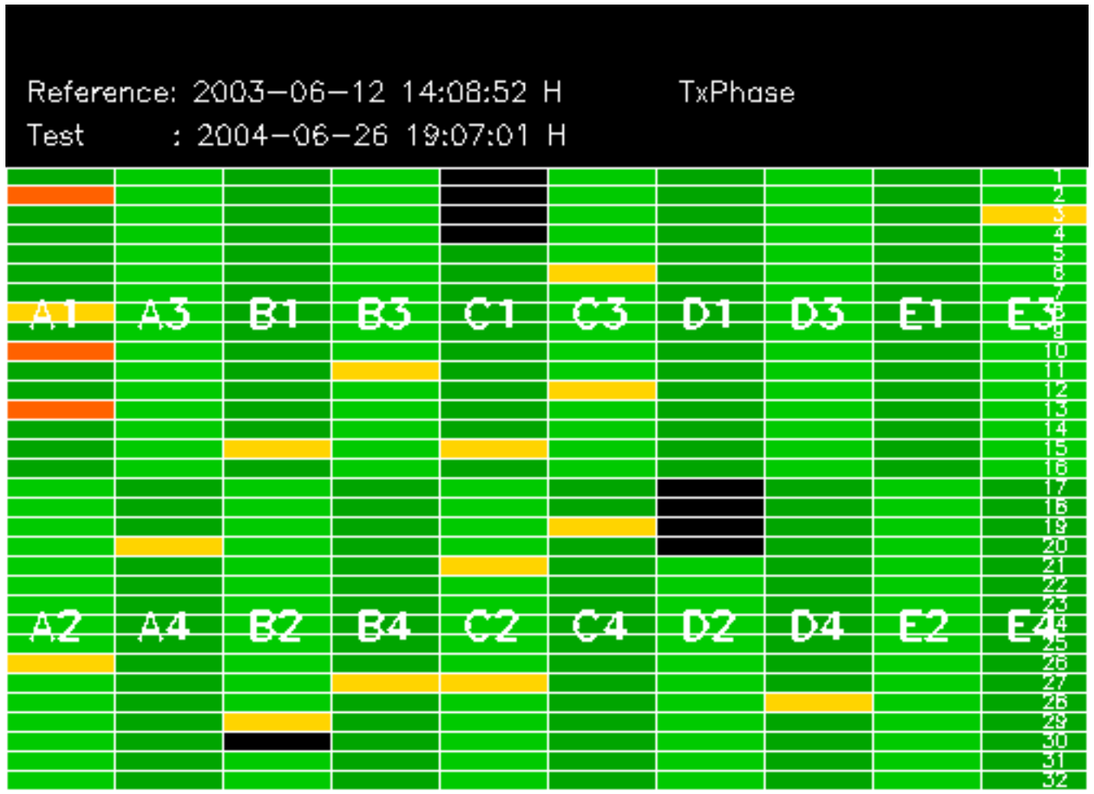
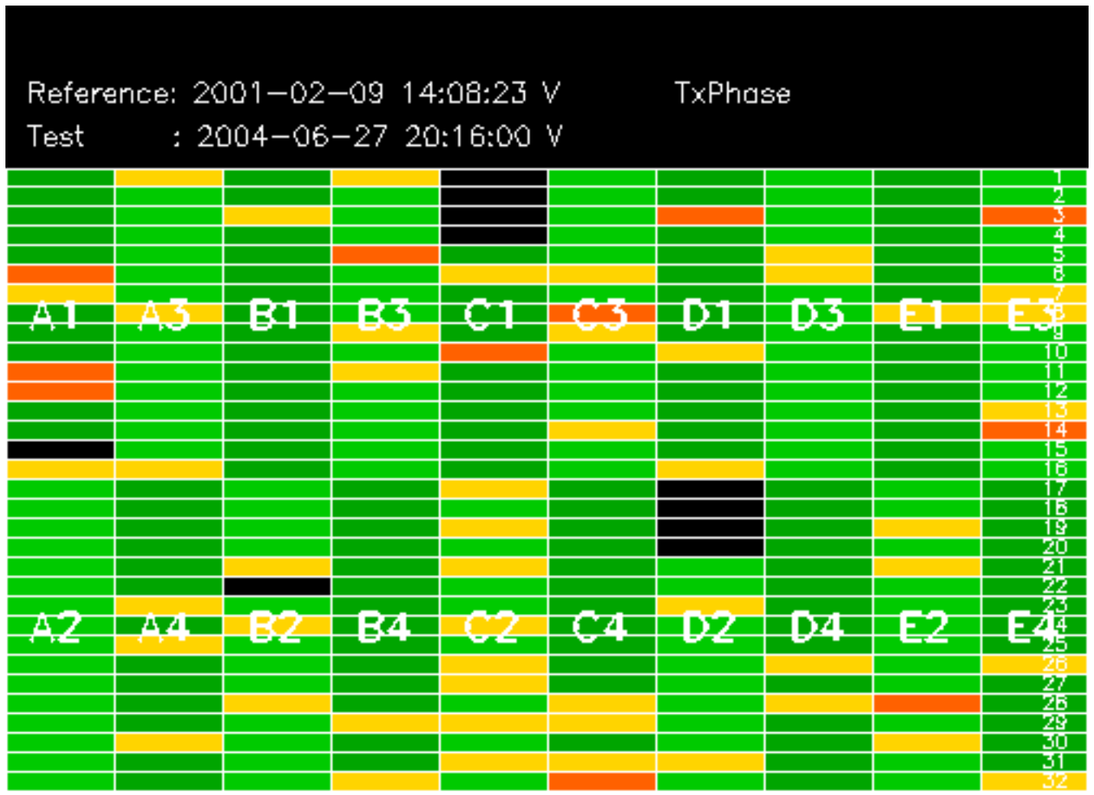
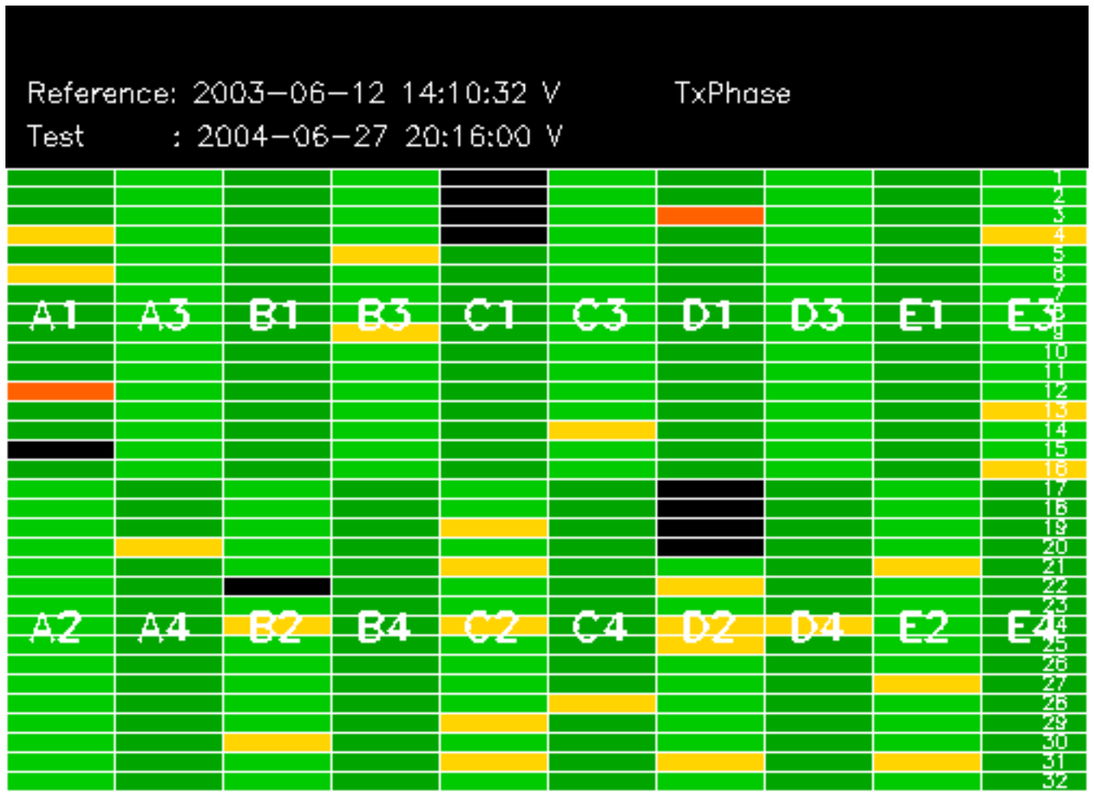
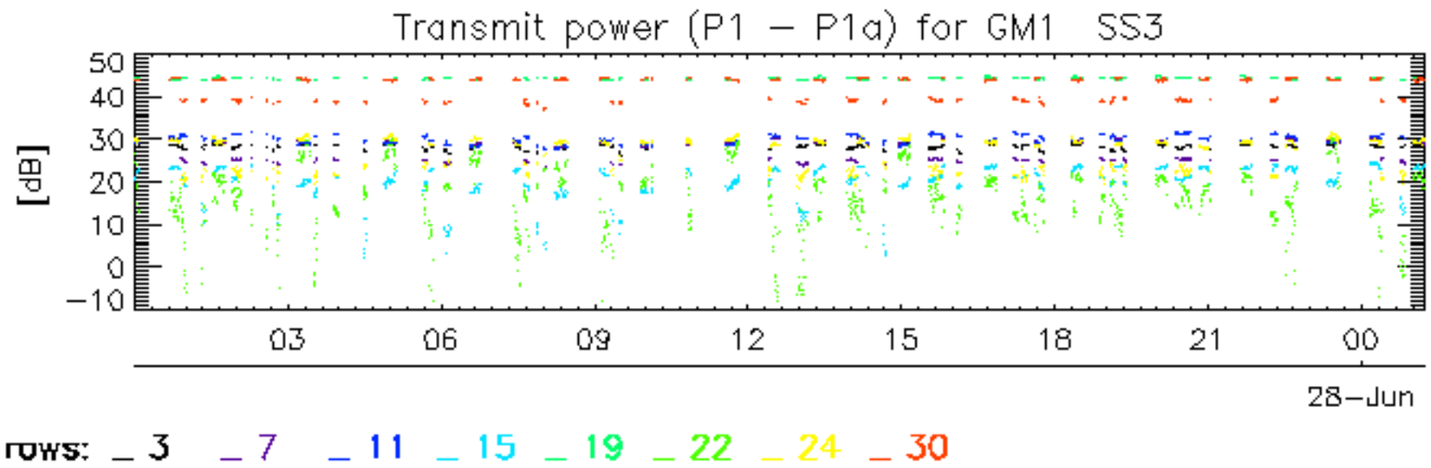

Reference: 2003-06-12 14:10:32 V
Test : 2004-06-27 20:16:00 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

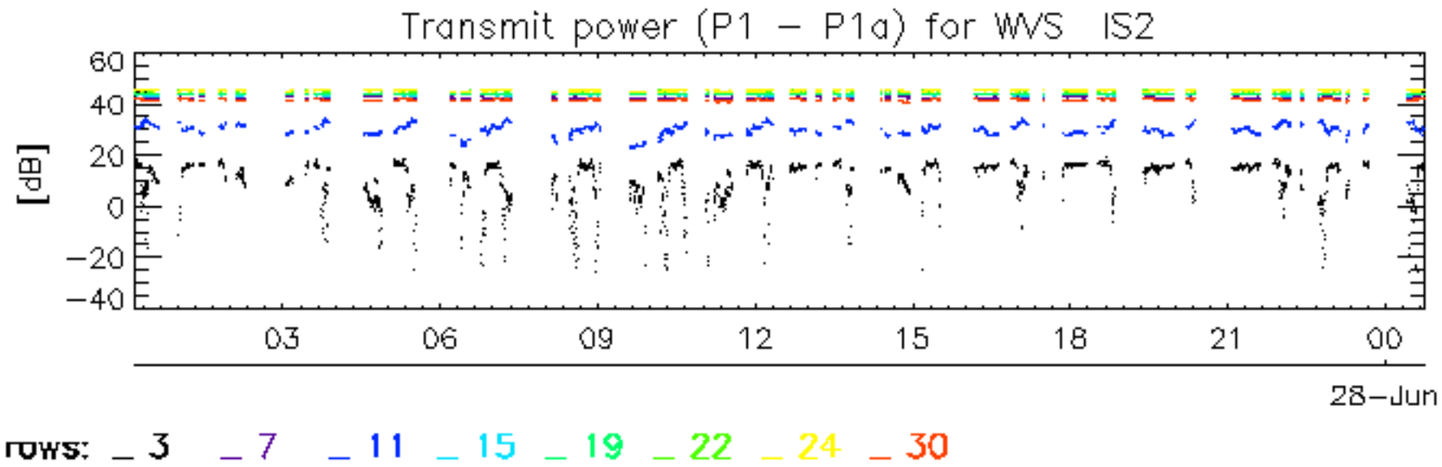

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-06-26 19:07:01 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-06-26 19:07:01 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 : 2004-06-27 20:16:00 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 : 2004-06-27 20:16:00 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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

No unavailabilities during the reported period.