PRELIMINARY REPORT OF 040623

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

last update on Wed Jun 23 13:06:41 GMT 2004

1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and
on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Browse Visual Inspection

2.3 - Data Analysis

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

3 - Module Stepping Mode

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

Polarisation	Start Time
V	20040620 185432
H	20040622 193254

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.

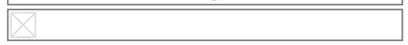
4.1 - Daily statistics

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	-3.512927	0.011357	0.052390
7	P1	-3.325705	0.015910	-0.009896
11	P1	-4.529509	0.039265	0.004087
15	P1	-5.680306	0.059479	0.021495
19	P1	-3.427453	0.005117	-0.023068
22	P1	-4.560685	0.011080	0.002840
24	P1	-4.913562	0.016538	0.024542
30	P1	-6.842251	0.023195	-0.025240

3	P1	-16.097883	0.231095	0.067896
7	P1	-13.993869	0.111572	0.001166
11	P1	-19.834942	0.312500	-0.212976
15	P1	-11.785151	0.046855	0.056112
19	P1	-13.806179	0.035854	-0.055957
22	P1	-16.583862	0.424597	0.106645
24	P1	-14.703669	0.305918	0.067351
30	P1	-17.671644	0.374117	-0.056922

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.424440	0.082391	0.051684
7	P2	-22.867760	0.124753	0.066261
11	P2	-15.645332	0.139576	0.116935
15	P2	-7.199095	0.097846	0.047081
19	P2	-9.570415	0.154483	0.060921
22	P2	-17.560667	0.105767	0.134922
24	P2	-20.881056	0.087686	0.062657
30	P2	-19.445225	0.079919	0.085607

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.144089	0.002015	0.003583
7	P3	-8.144084	0.002015	0.003566
11	P3	-8.144082	0.002015	0.003537
15	P3	-8.144067	0.002015	0.003454
19	P3	-8.144060	0.002015	0.003414
22	P3	-8.144065	0.002015	0.003446
24	P3	-8.144073	0.002014	0.003500
30	P3	-8.144135	0.002014	0.002934

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	-3.149850	0.136799	0.007839
7	P1	-2.808051	0.073579	0.024428
11	P1	-3.788742	0.021399	-0.014701
15	P1	-4.270052	1.028419	-0.006763
19	P1	-3.351872	0.048813	-0.020382
22	P1	-5.722054	0.044870	0.007085
24	P1	-4.050228	0.081027	-0.015161
30	P1	-6.094127	0.060719	-0.028608
3	P1	-11.035657	0.434958	0.025876
7	P1	-9.762602	0.253087	0.018408
11	P1	-11.756213	0.167045	-0.058334
15	P1	-11.841690	0.283316	-0.024431
19	P1	-14.982865	0.823148	-0.018537
22	P1	-21.476942	8.916254	0.048173
24	P1	-17.363283	0.280778	-0.055048
30	P1	-21.733219	4.157643	0.000396

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.167812	0.042879	0.023714
7	P2	-22.951506	0.029137	0.072260
11	P2	-11.051359	0.216210	0.147531
15	P2	-5.004315	0.044023	0.016030
19	P2	-6.932400	0.043569	-0.009359
22	P2	-7.692056	0.023447	0.074632
24	P2	-11.078618	0.071405	0.030458
30	P2	-22.408476	0.092620	0.086078

P3 Cyclic statistics

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

3	P3	-7.984078	0.003298	0.002619
7	P3	-7.983932	0.003285	0.002456
11	P3	-7.983939	0.003294	0.002705
15	P3	-7.984103	0.003281	0.002740
19	P3	-7.983939	0.003295	0.002500
22	P3	-7.984117	0.003278	0.002706
24	P3	-7.983861	0.003312	0.002227
30	P3	-7.983952	0.003290	0.002770

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	0.000487328
	stdev	2.13250e-07
MEAN Q	mean	0.000538567
	stdev	2.38934e-07

☒

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129095
	stdev	0.00101707

STDEV Q	mean	0.129336
	stdev	0.00102900

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

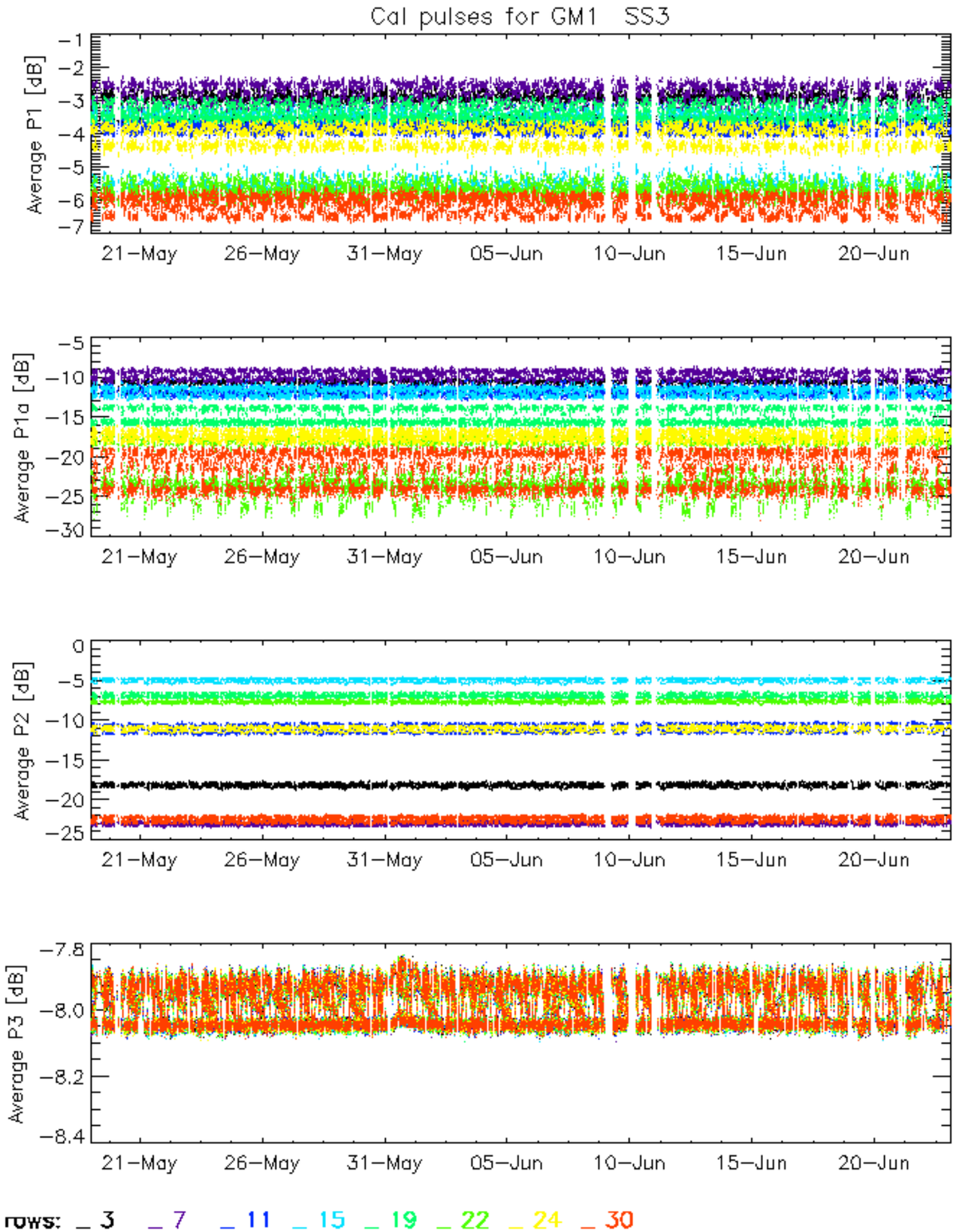
Evolution of Absolute Doppler

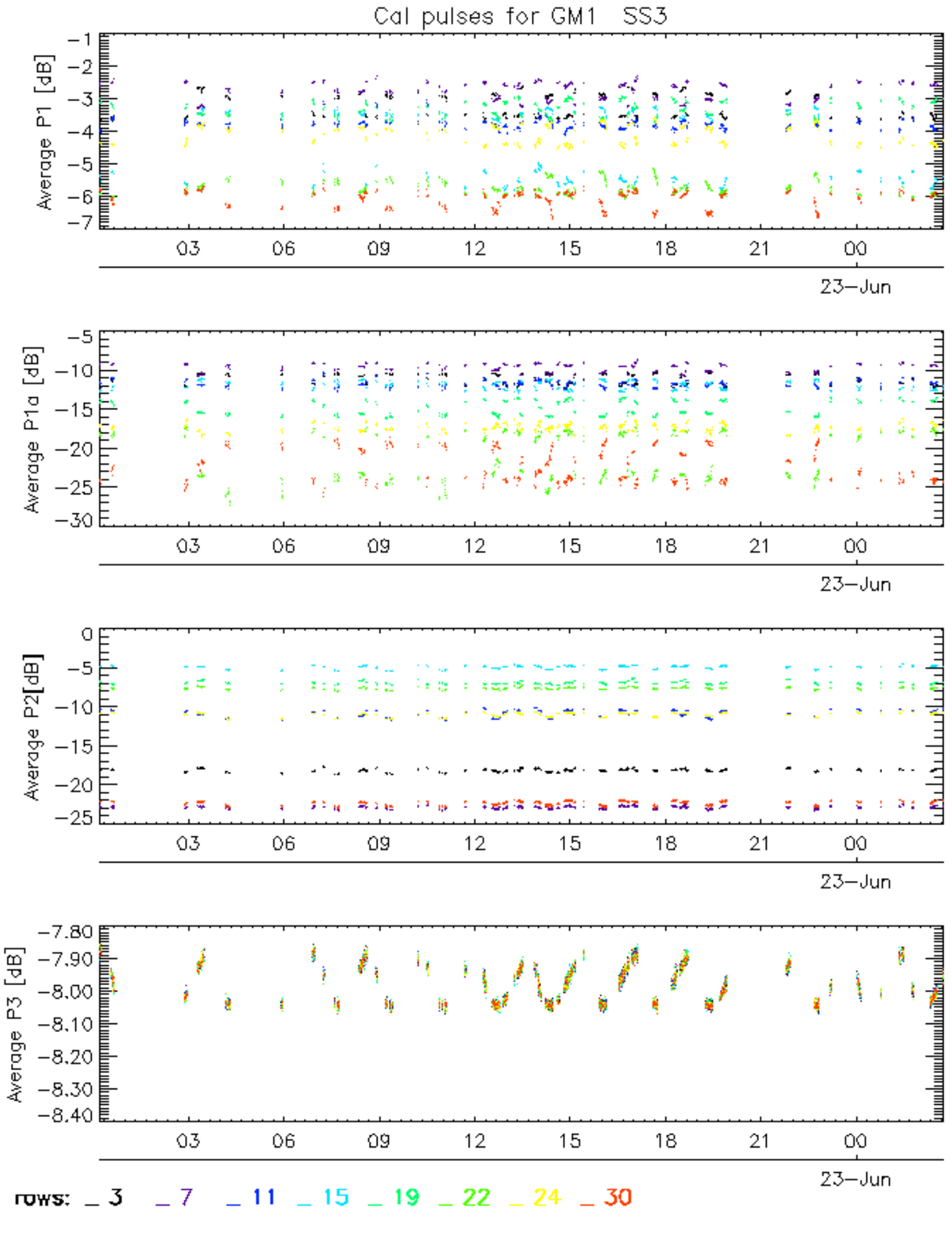
Acsending

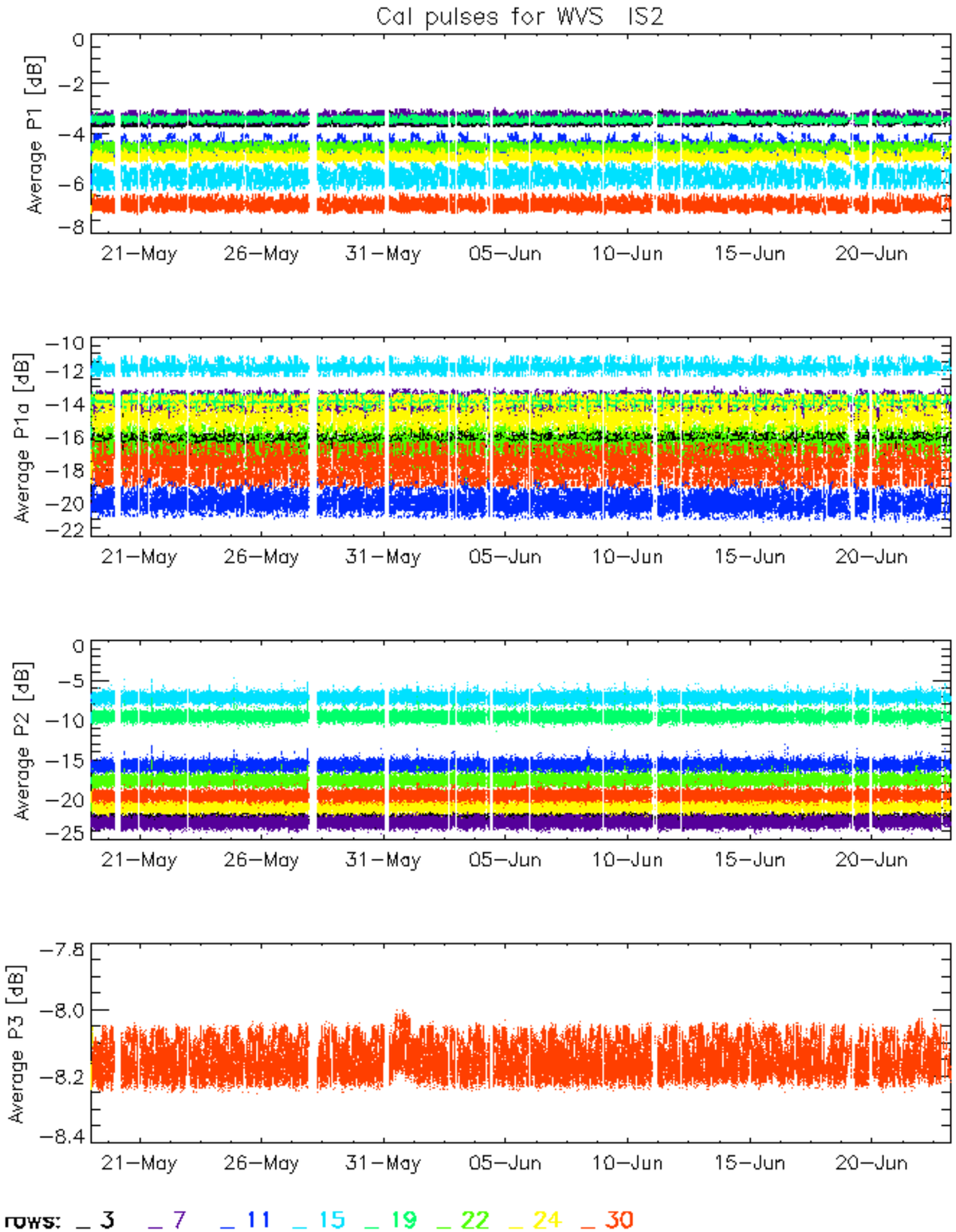
Descending

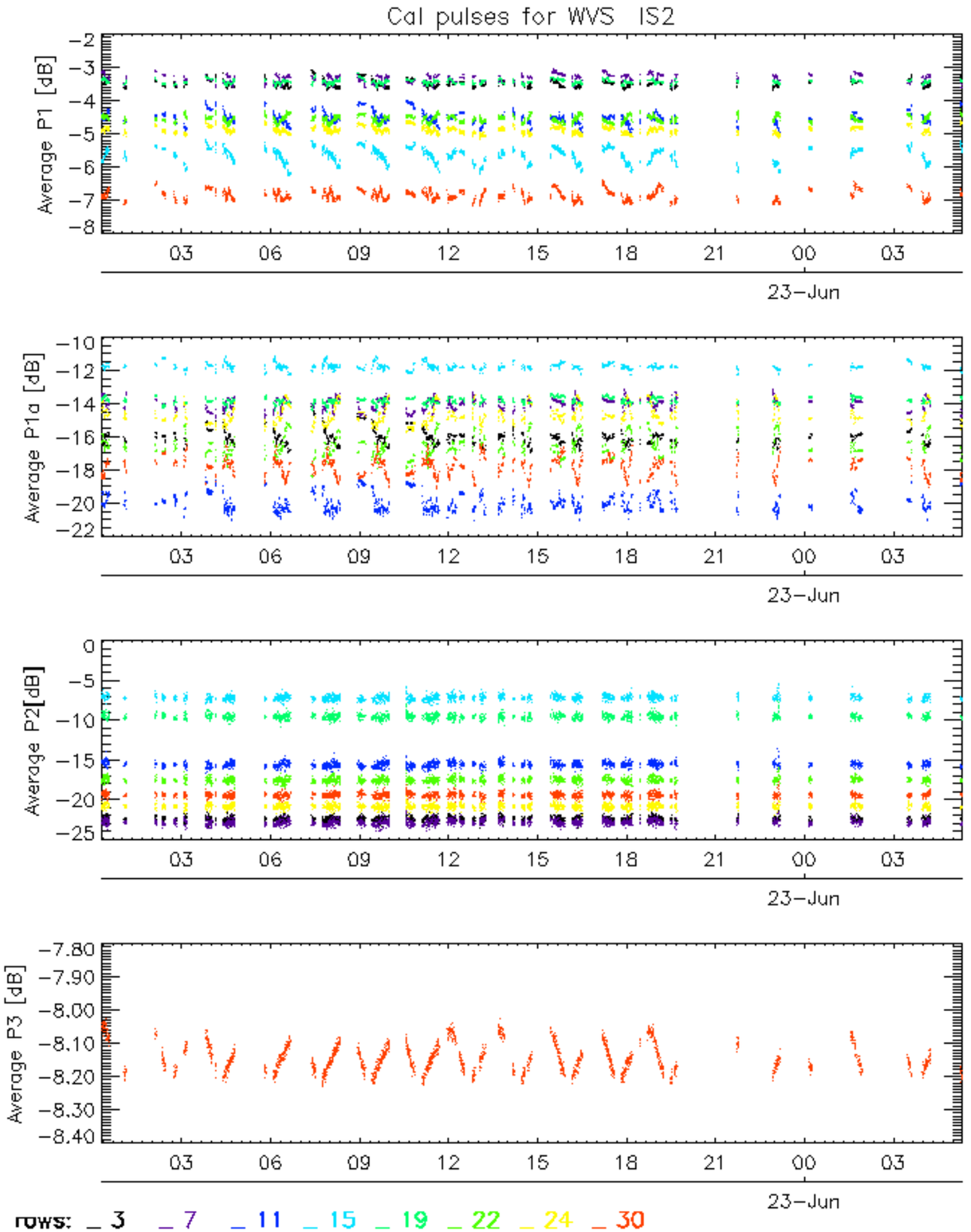
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

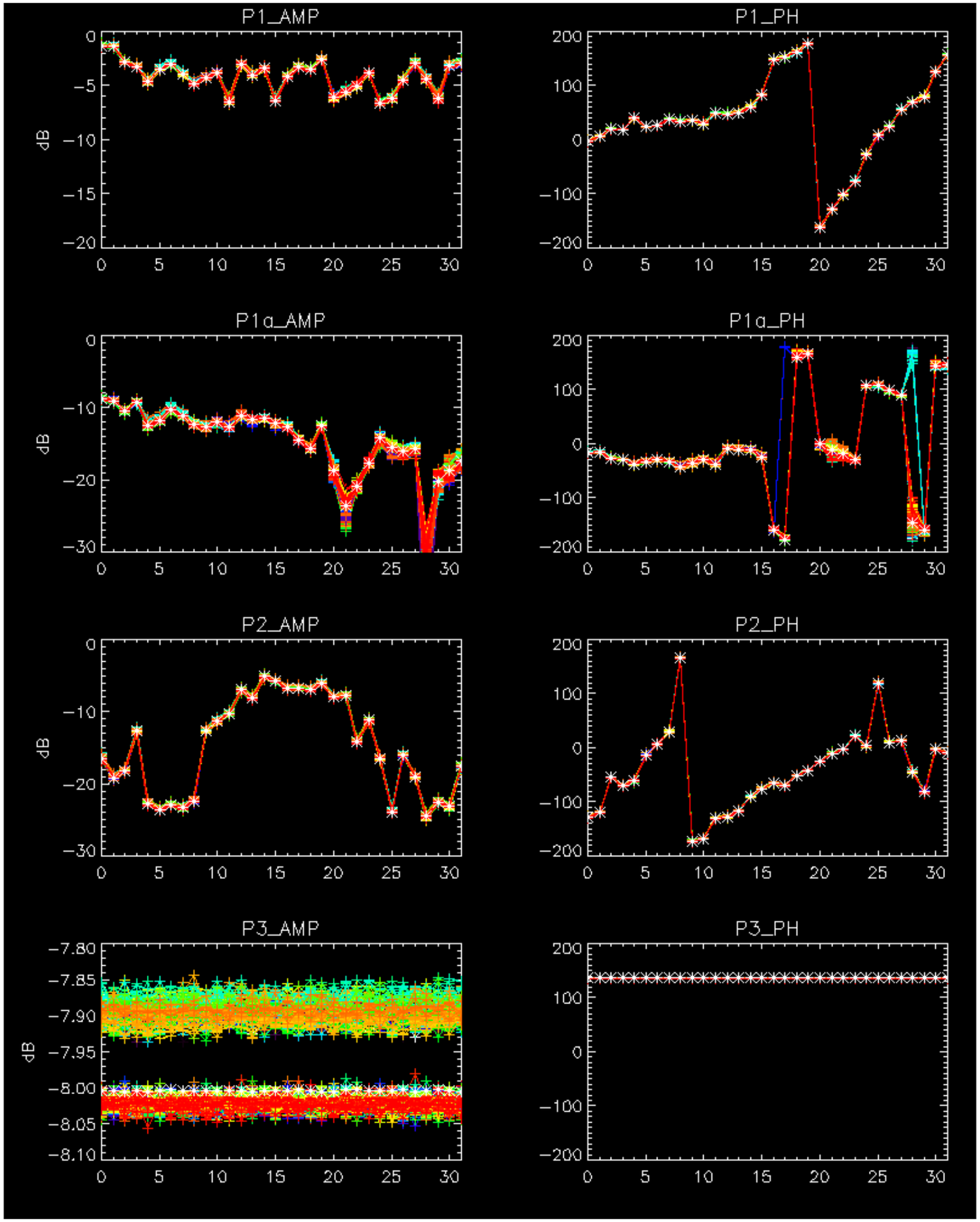


Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

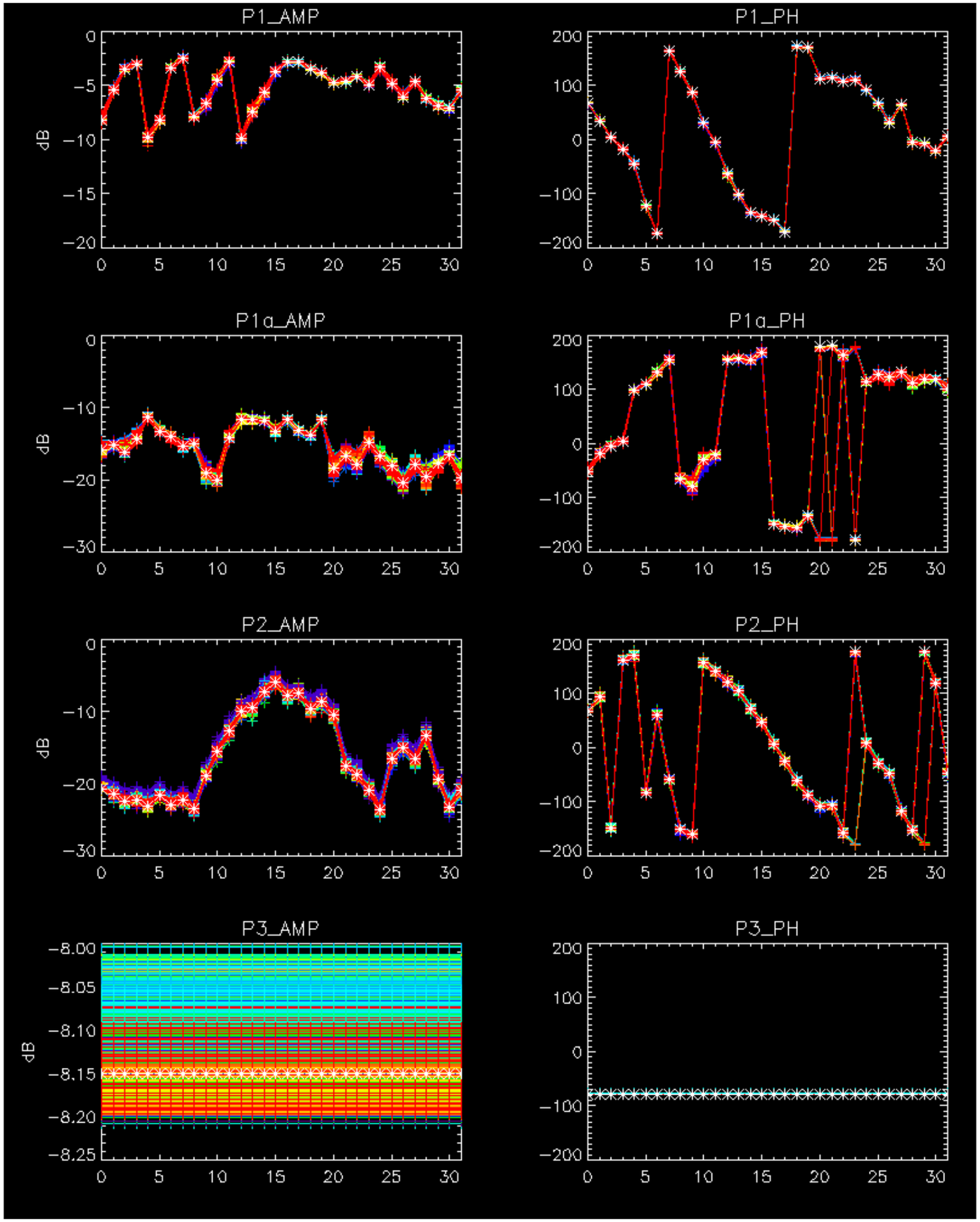

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
23−Jun
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
23−Jun
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
23−Jun
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
20−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
23−Jun
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

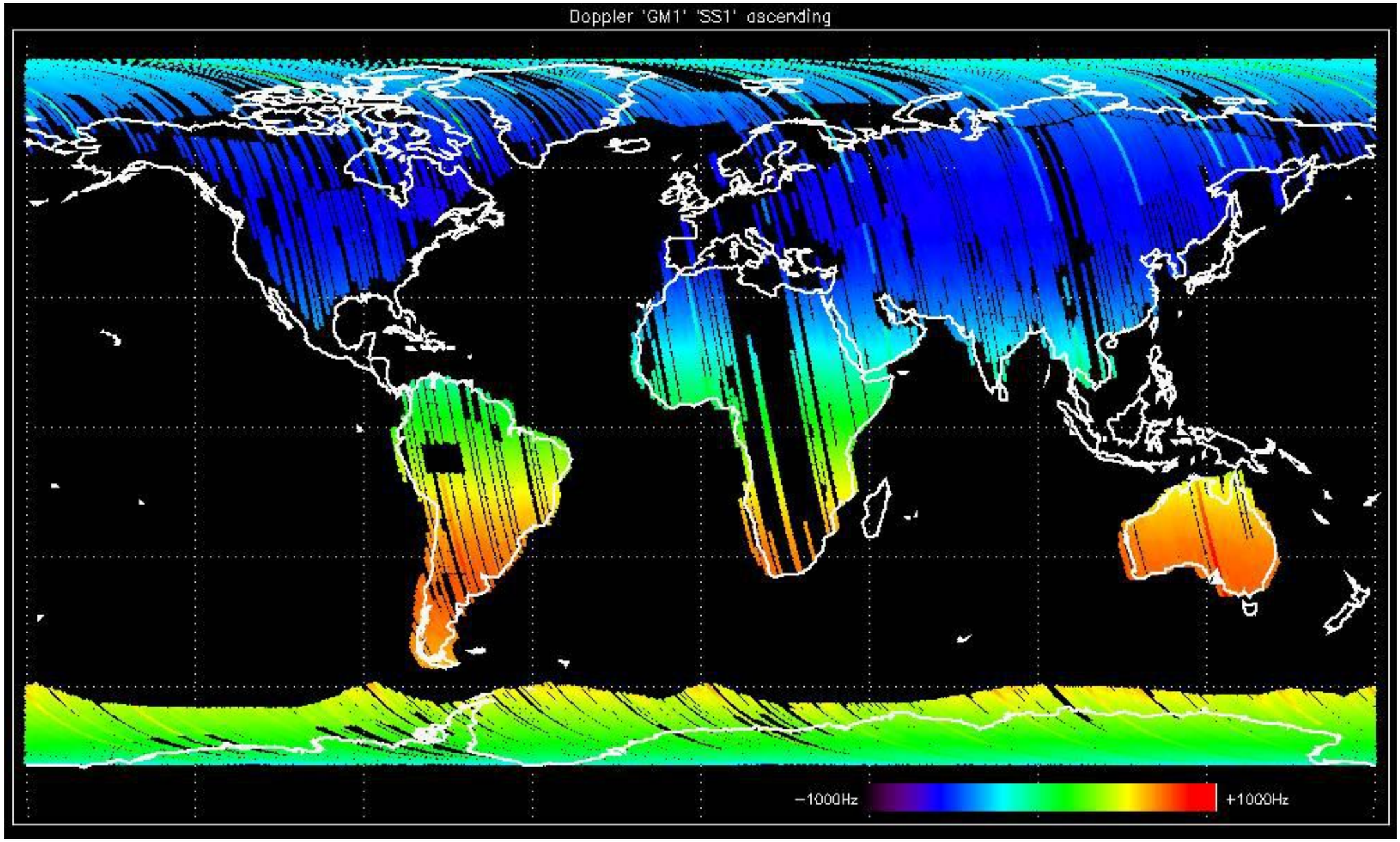
No anomalies observed.

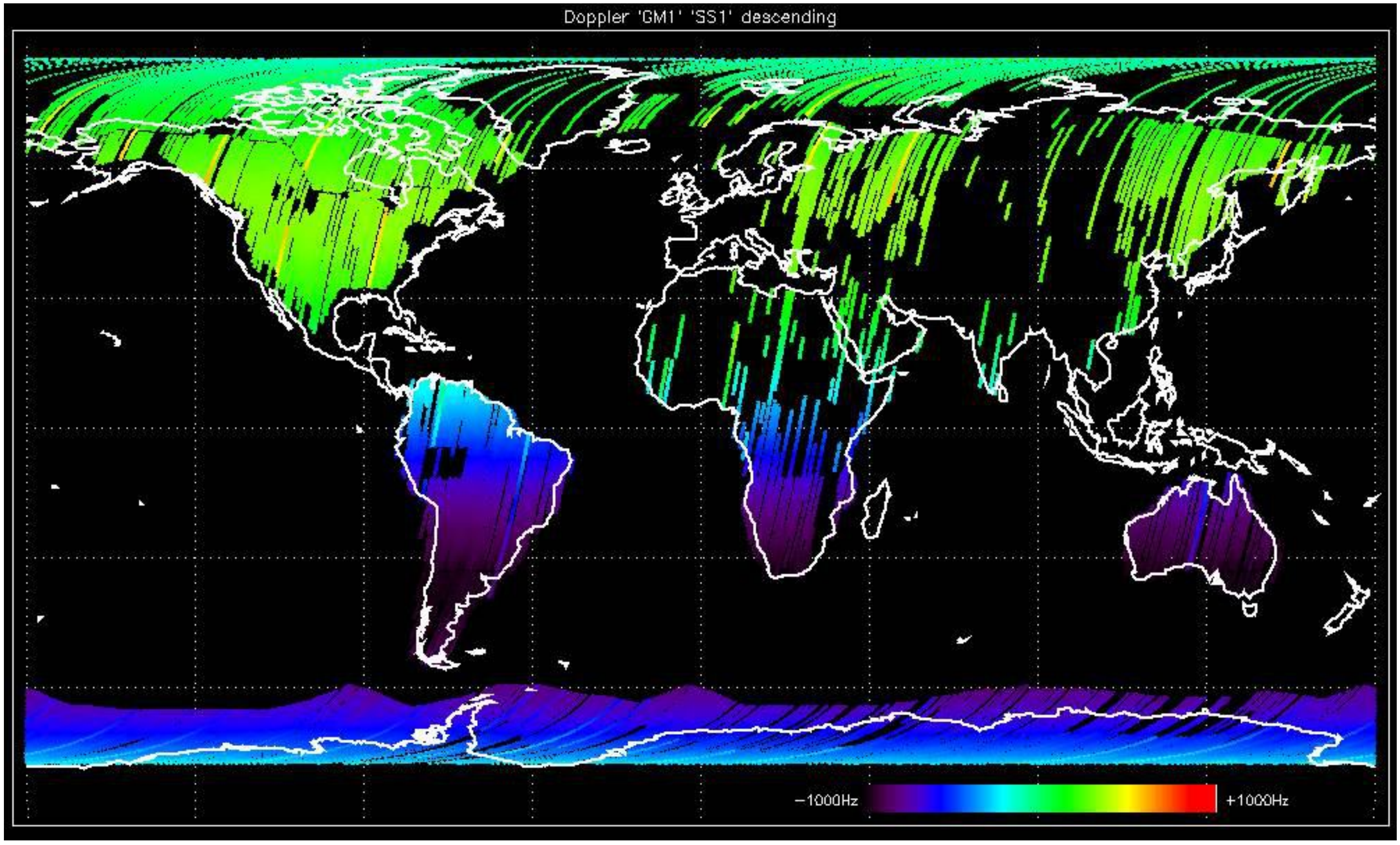

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

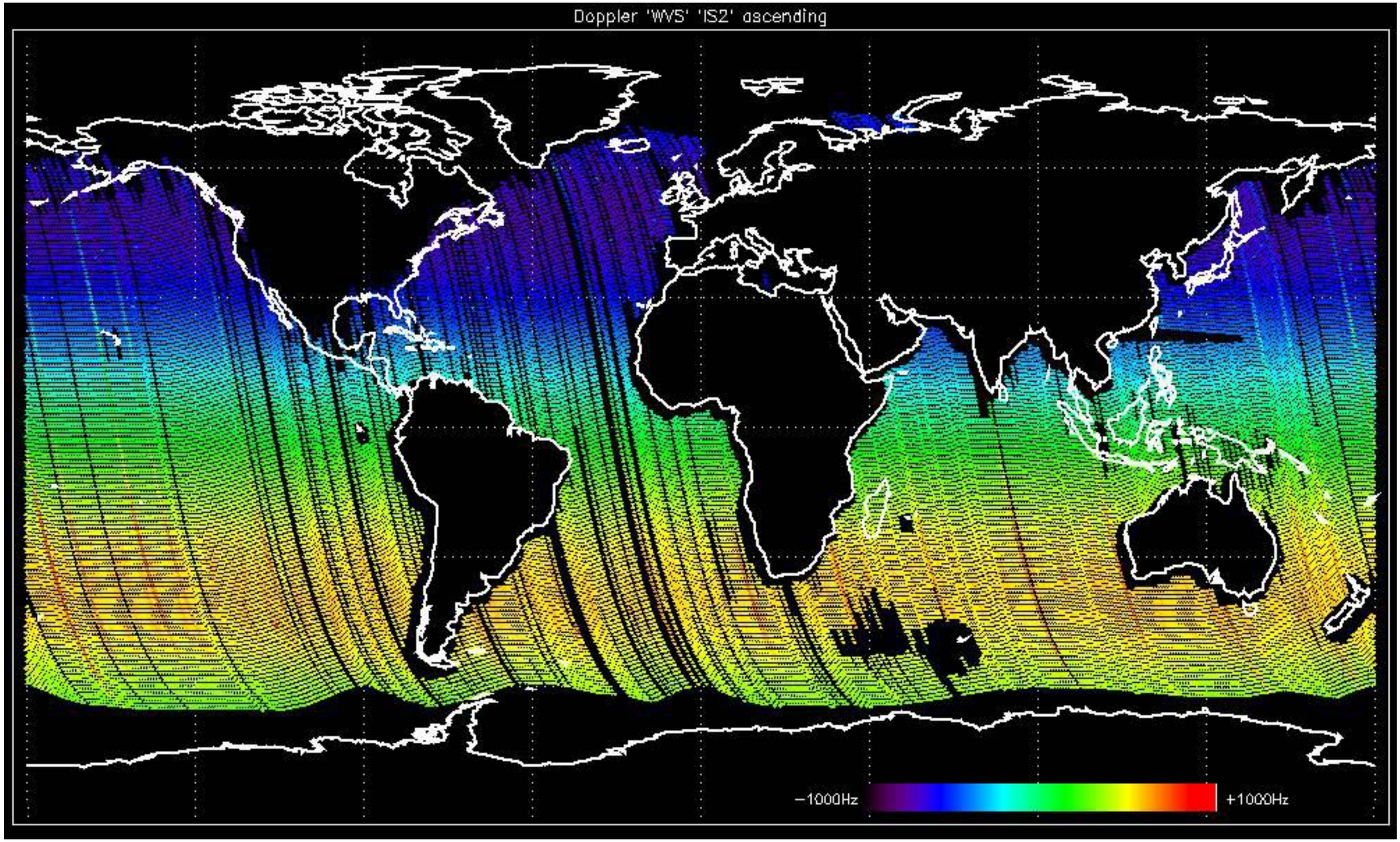

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

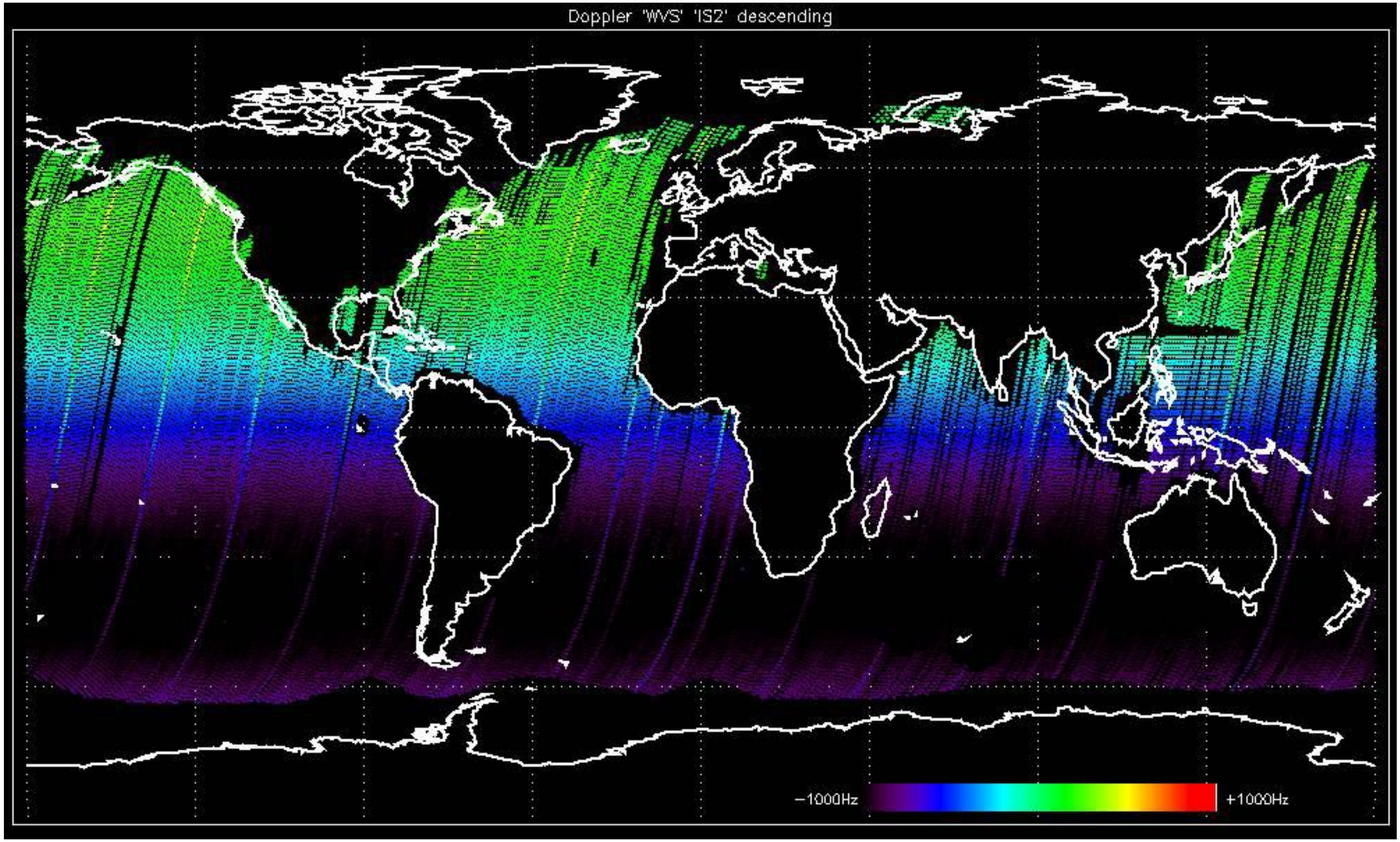
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

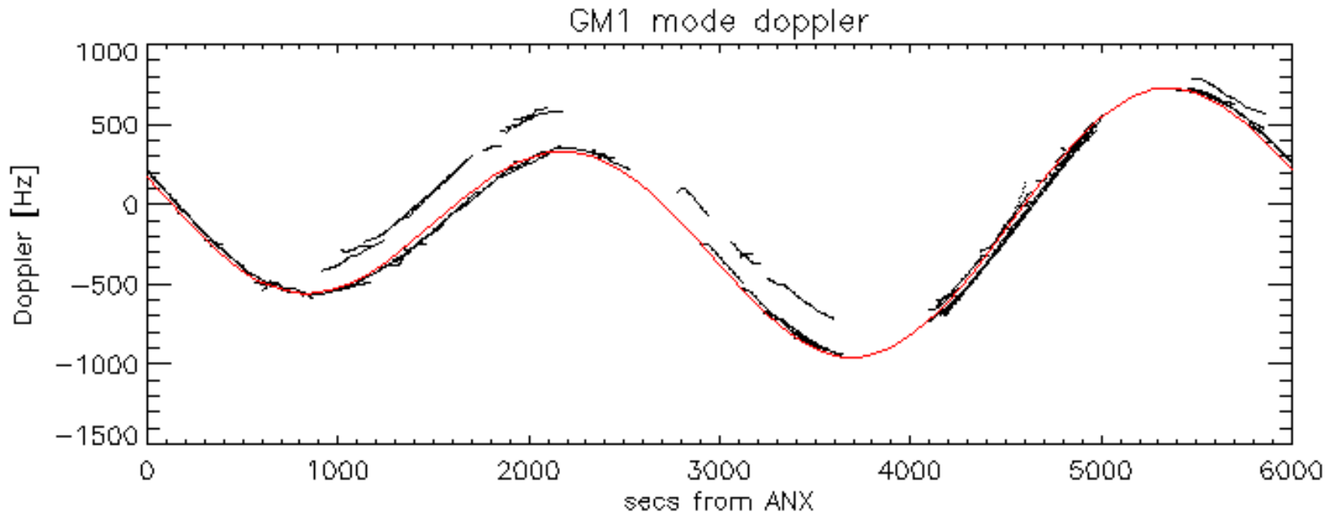
Preliminary report.The data is not yet controled

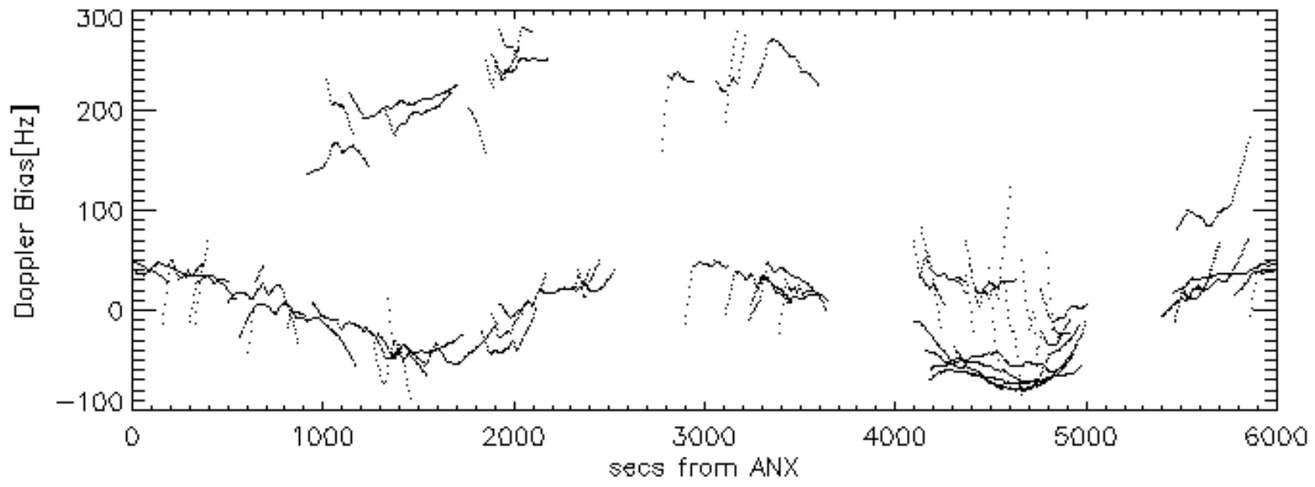

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

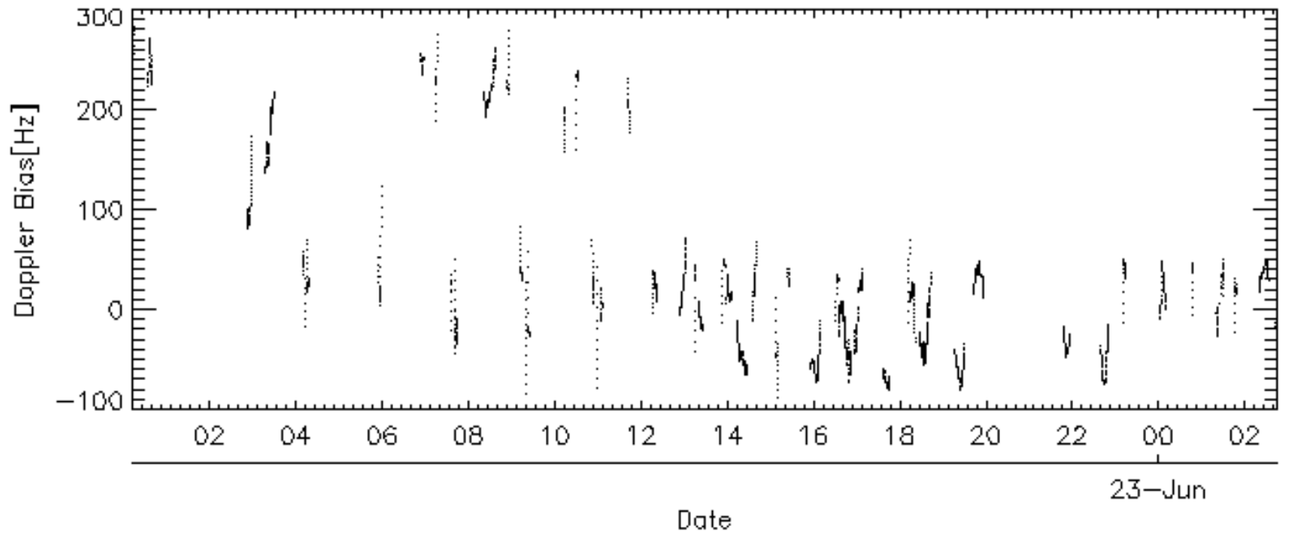

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

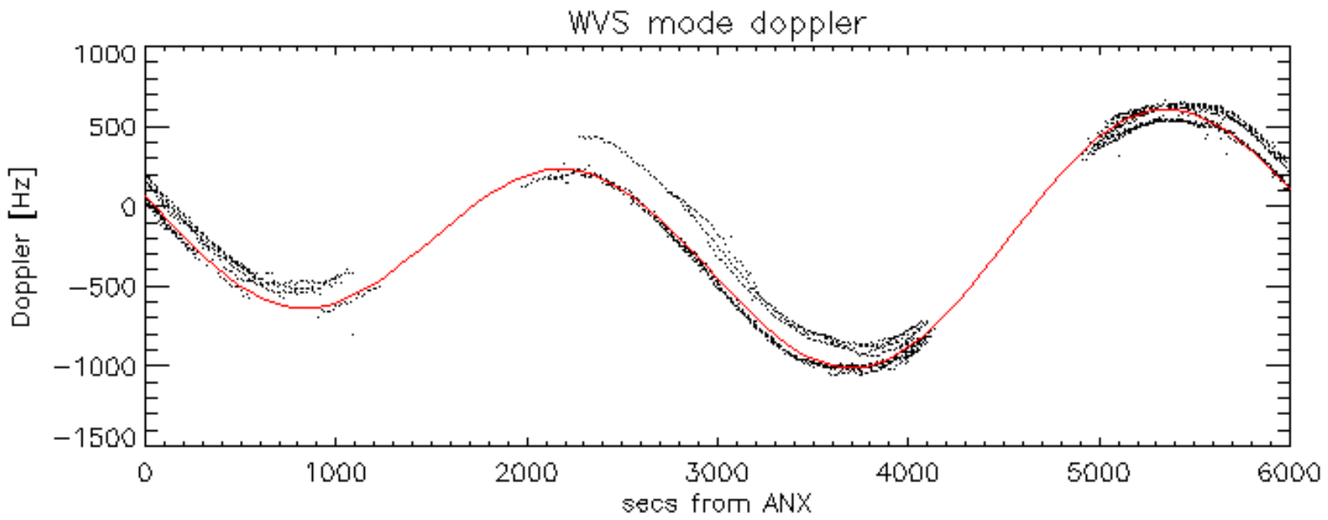

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

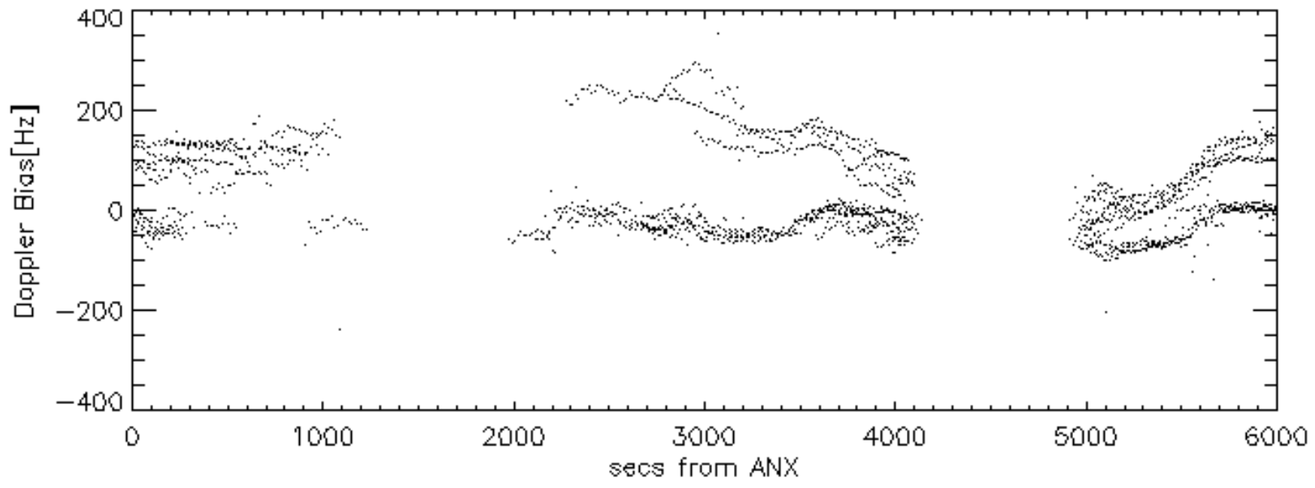

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

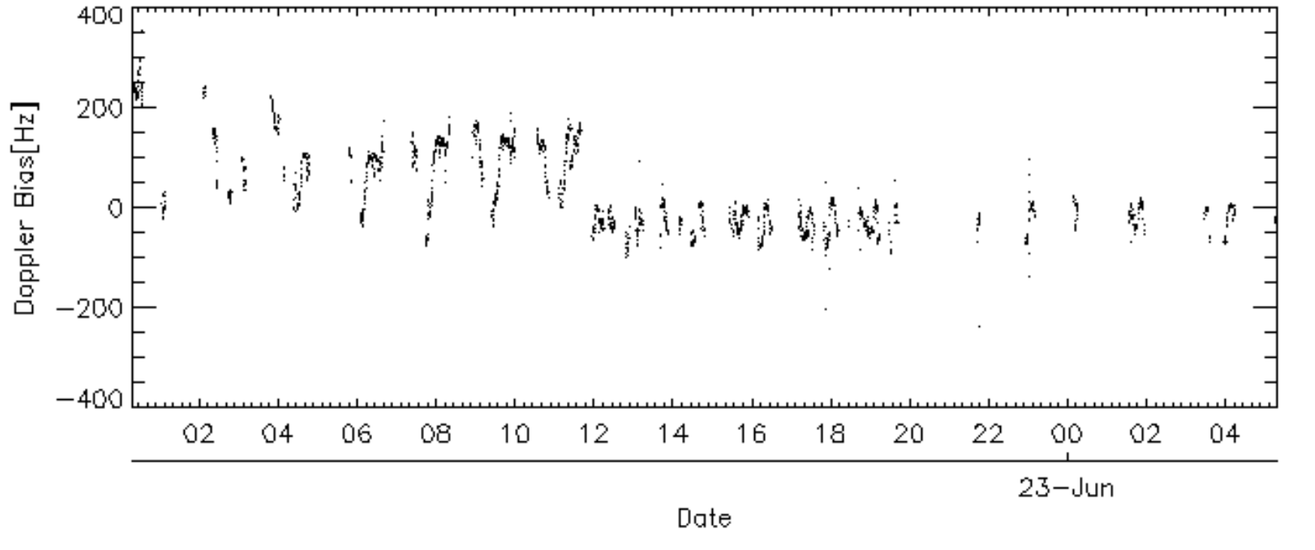

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

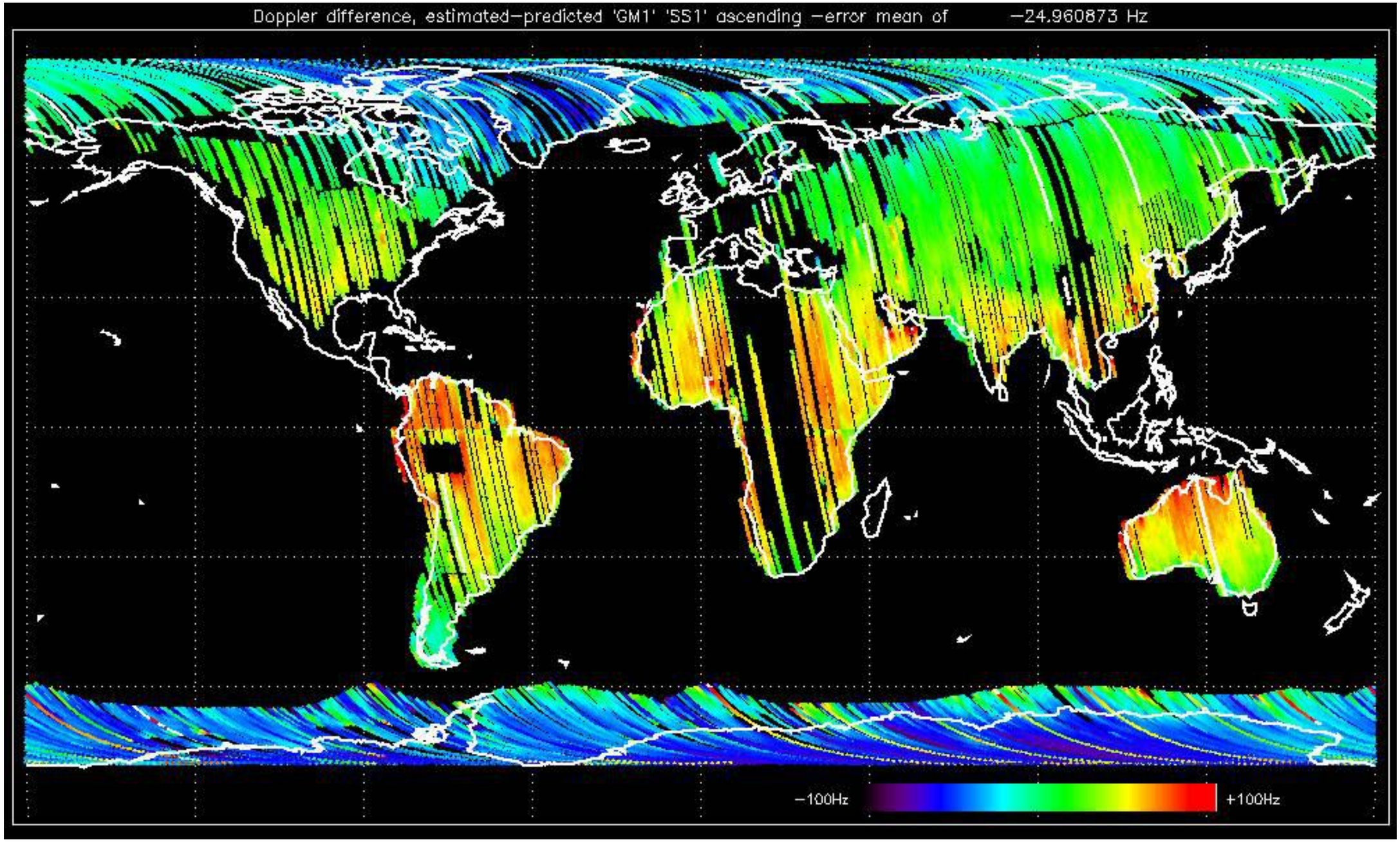

Doppler Bias[Hz]
300
200
100
0
−100
0
1000
2000
3000
4000
5000
6000
secs from ANX

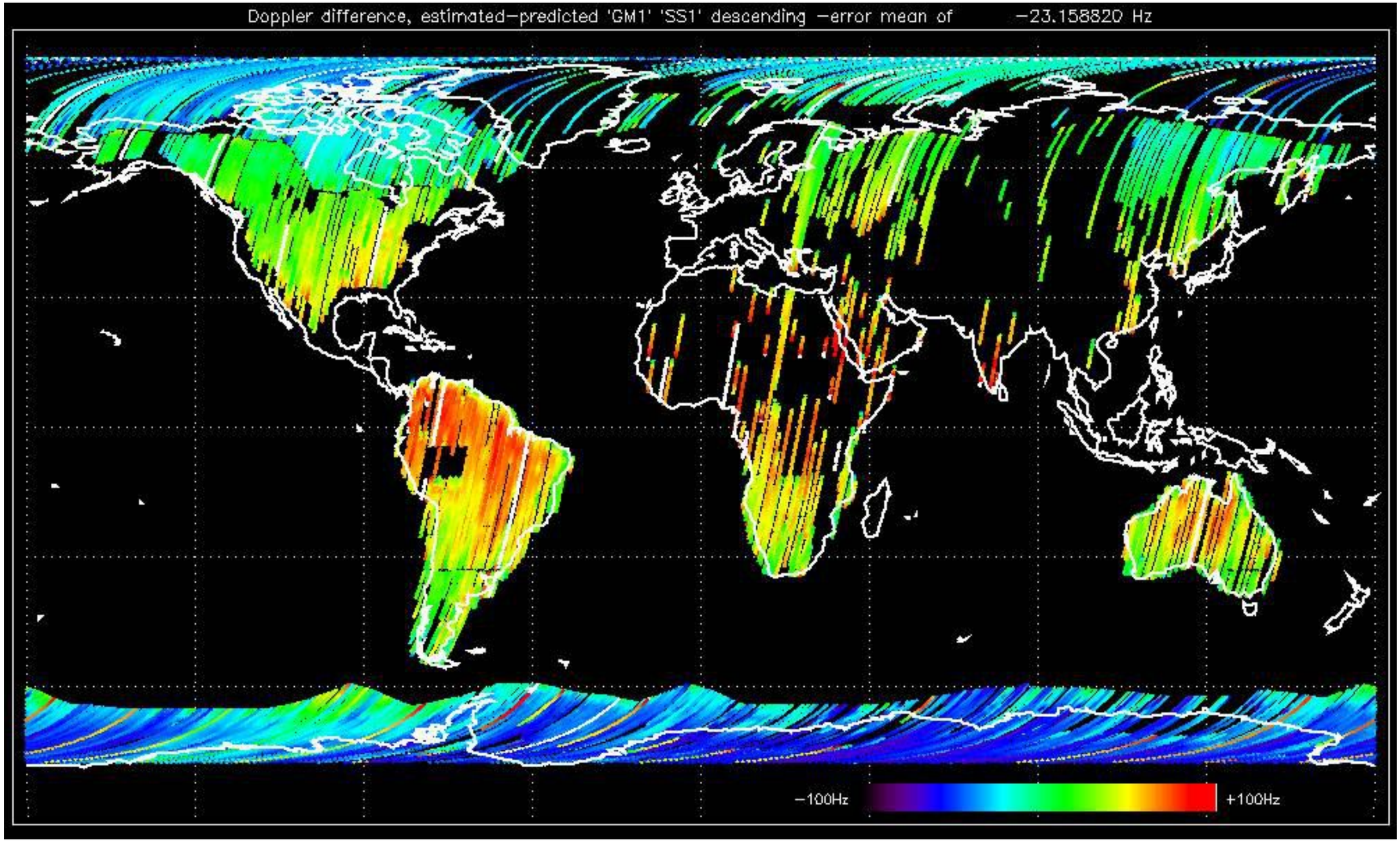

Doppler Bias[Hz]
300
200
100
0
−100
02
04
06
08
10
12
14
16
18
20
22
00
02
23−Jun
Date

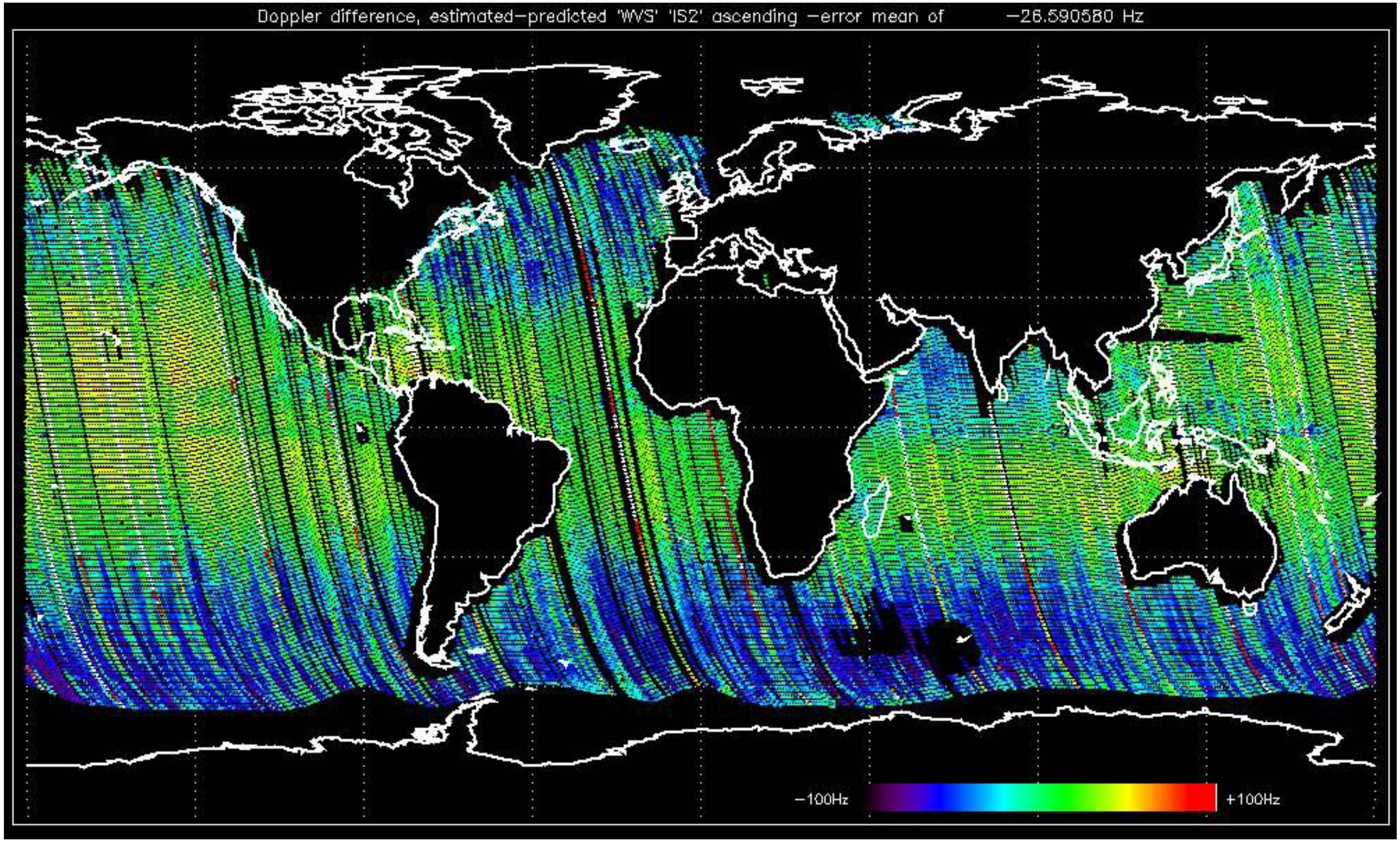

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

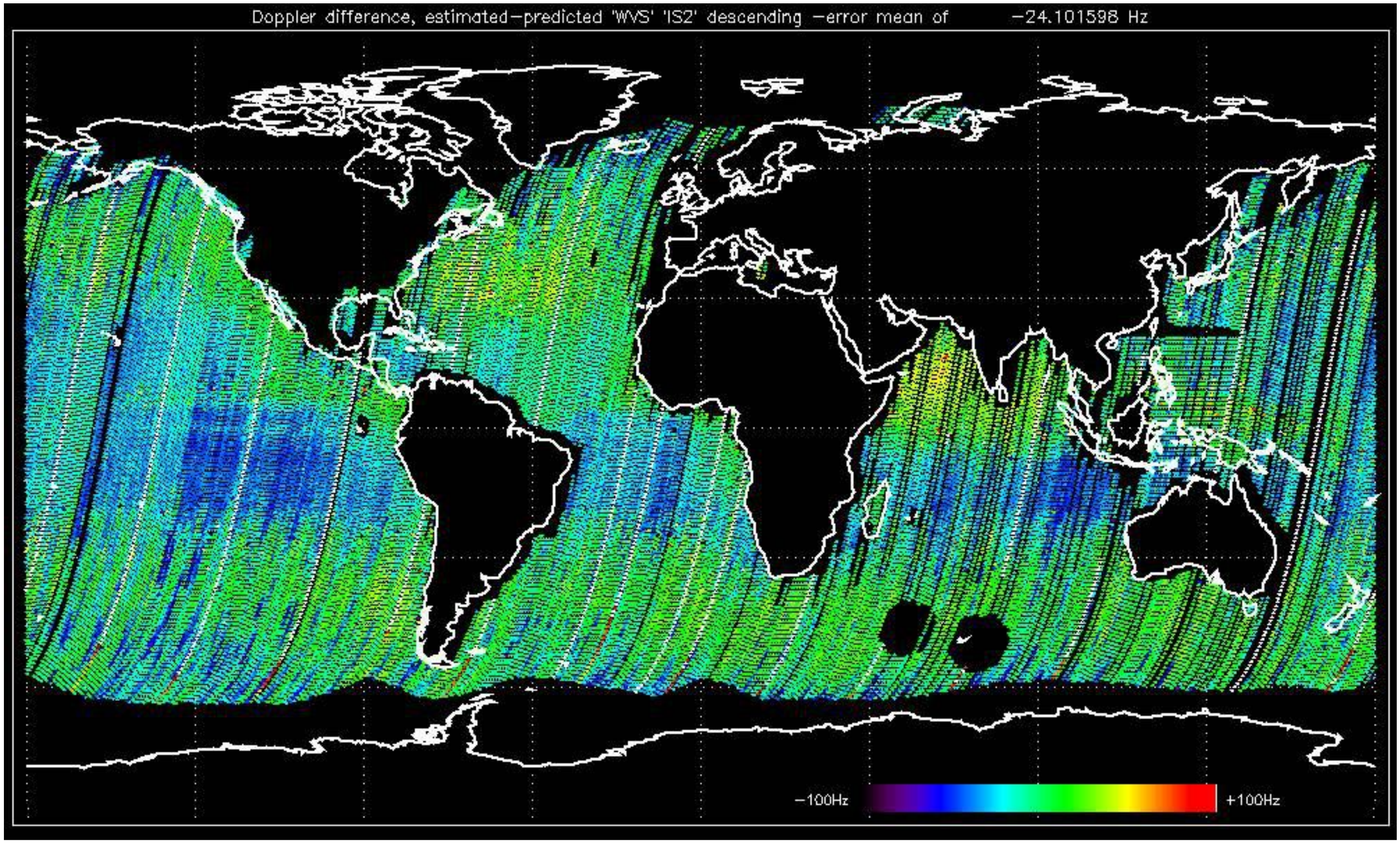

Doppler Bias[Hz]
400
200
0
−200
−400
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
400
200
0
−200
−400
02
04
06
08
10
12
14
16
18
20
22
00
02
04
23−Jun
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −24.960873 Hz
−100Hz
+100Hz

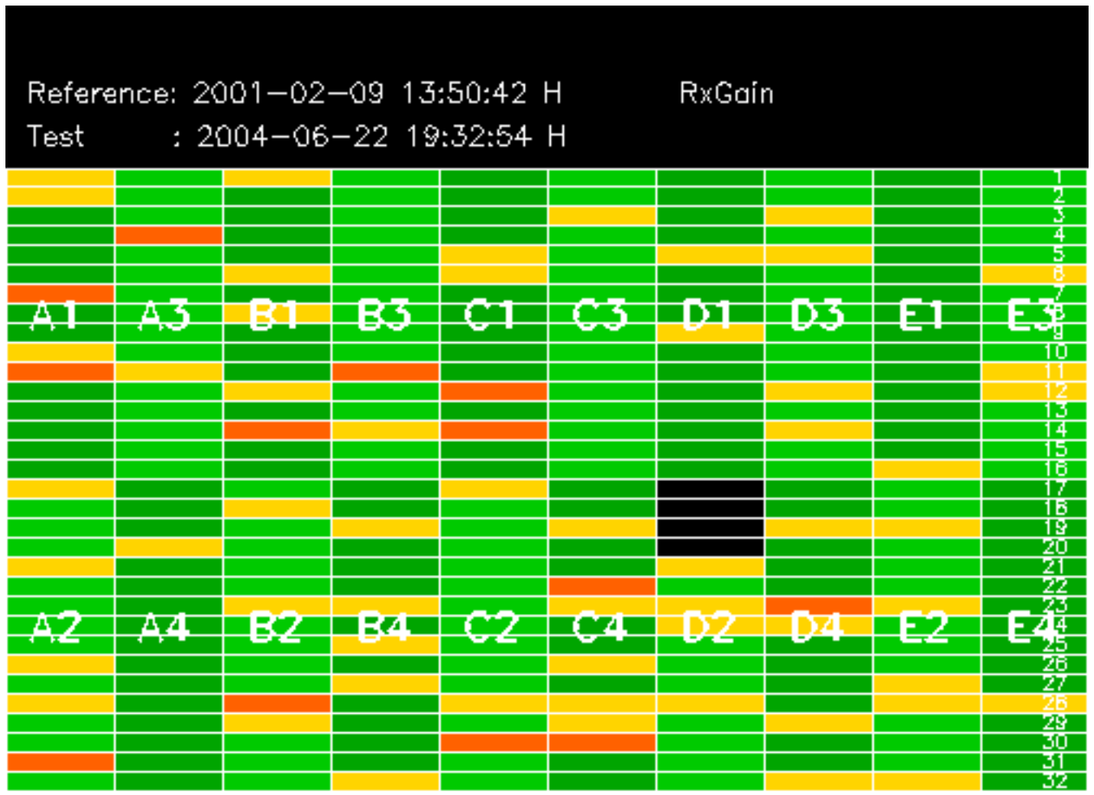

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -23.158820 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.590580 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −24.101598 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 : 2004-06-22 19:32:54 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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17
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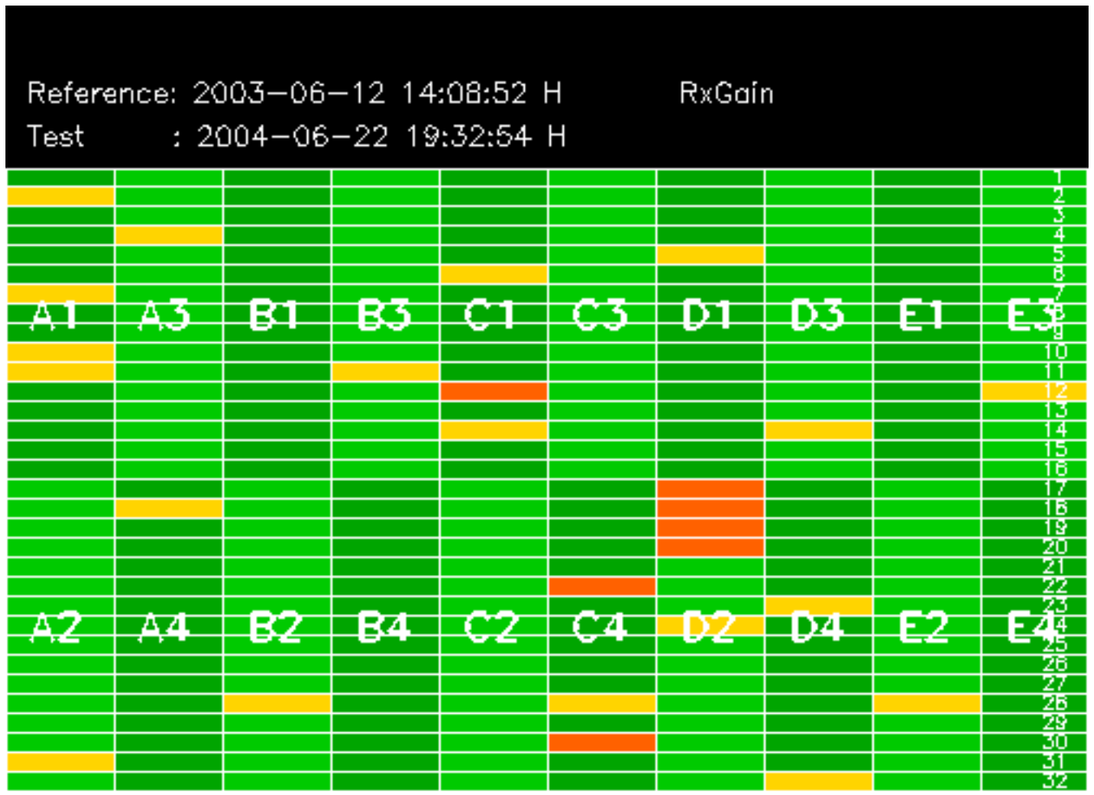
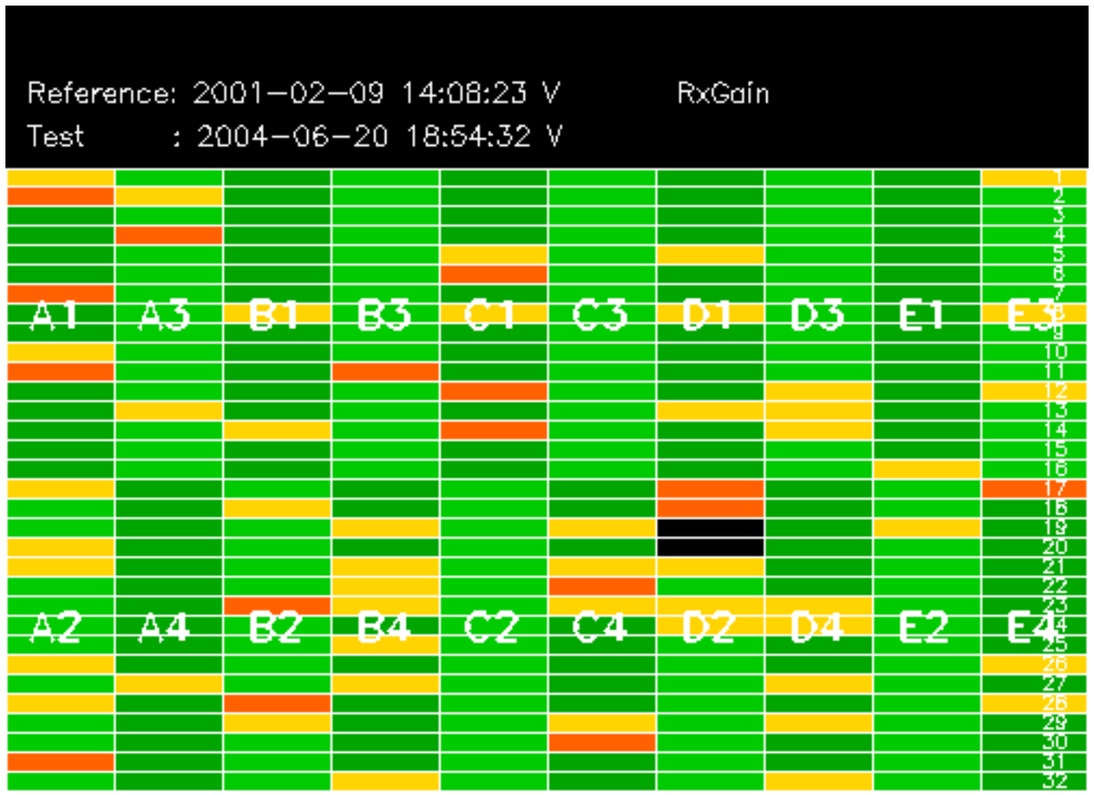
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-06-22 19:32:54 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 : 2004-06-20 18:54:32 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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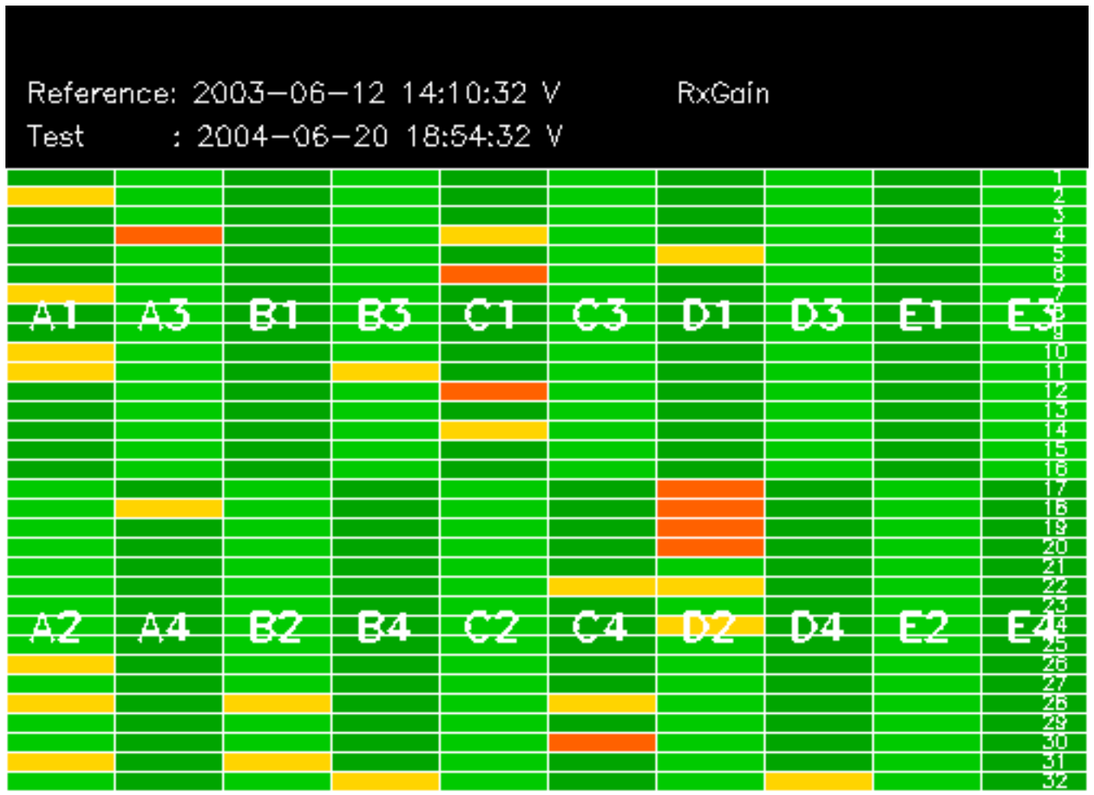
Reference: 2003-06-12 14:10:32 V
Test : 2004-06-20 18:54:32 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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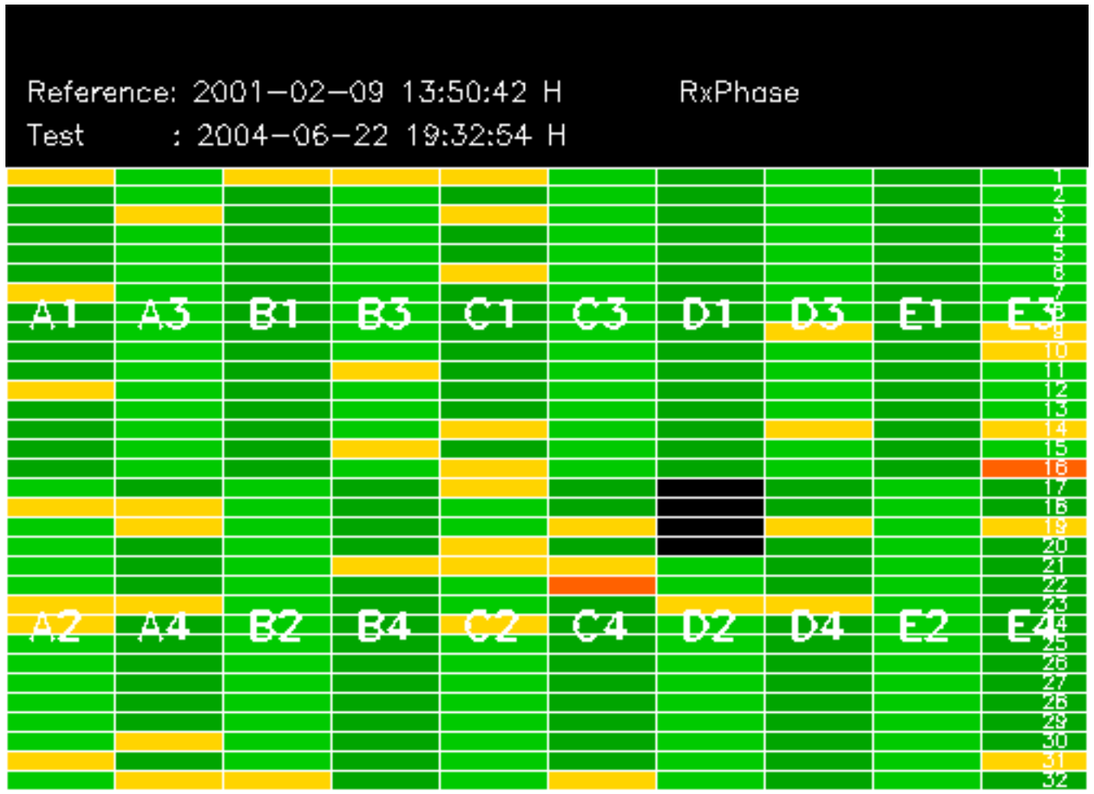
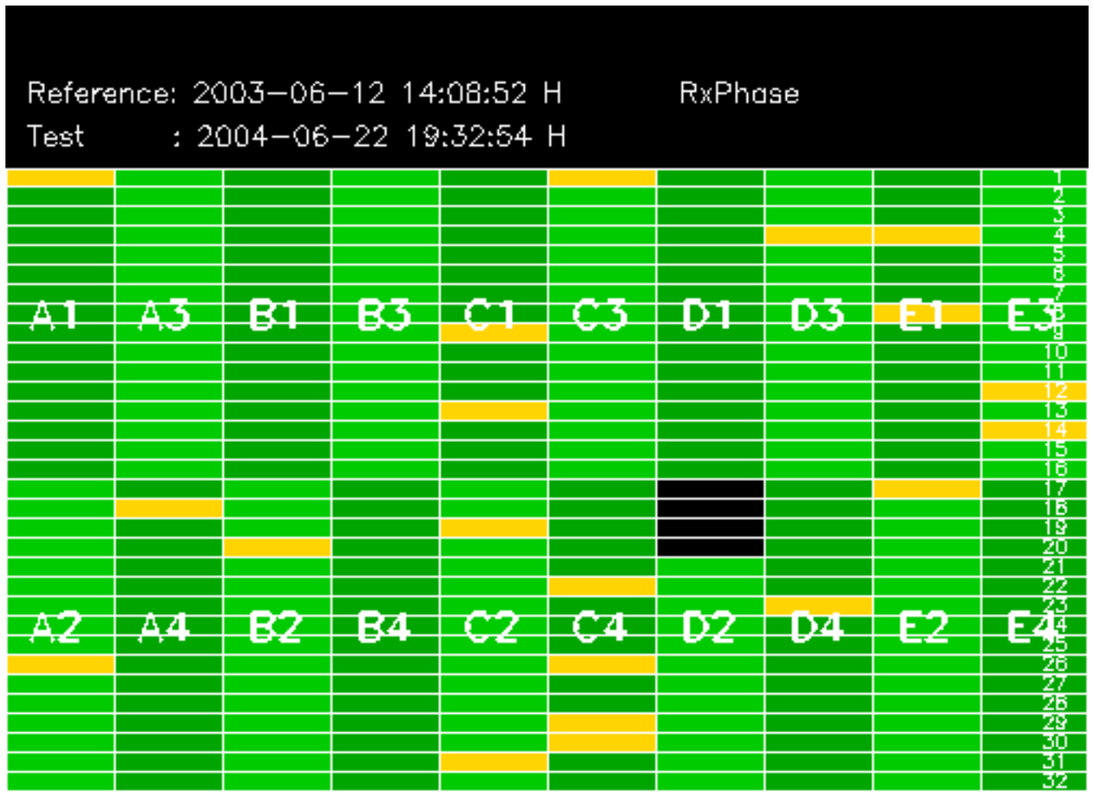

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-06-22 19:32:54 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-06-22 19:32:54 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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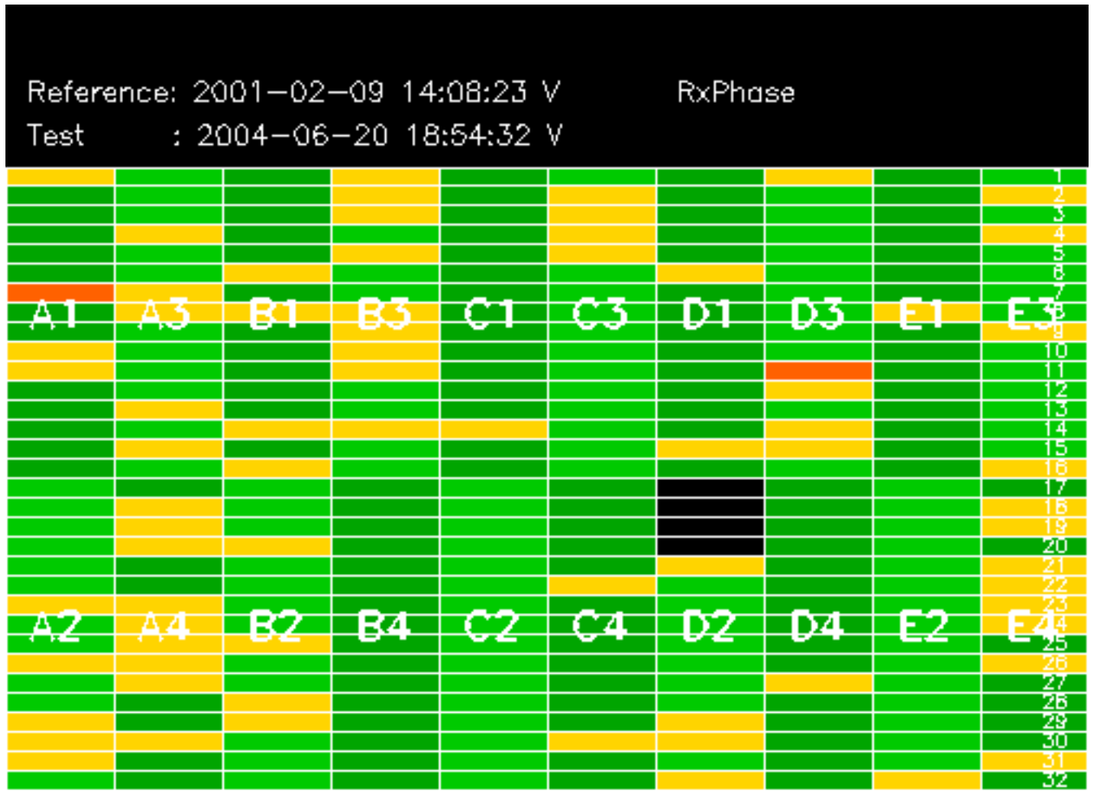
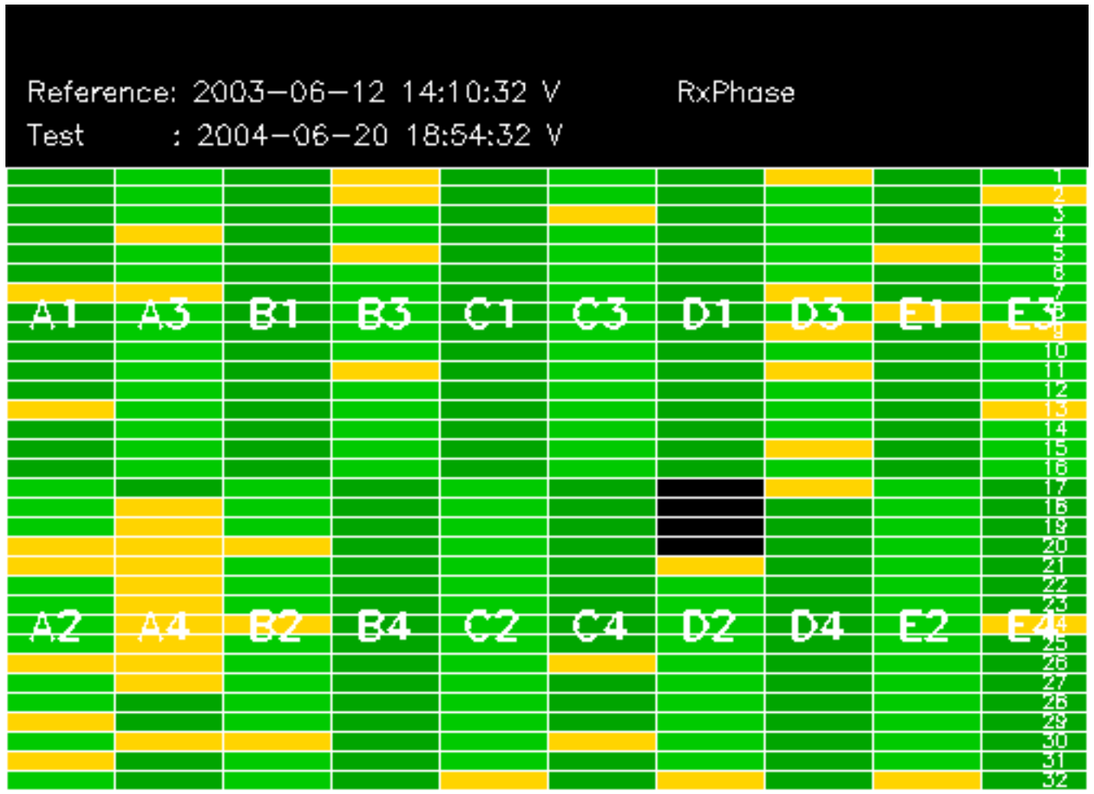
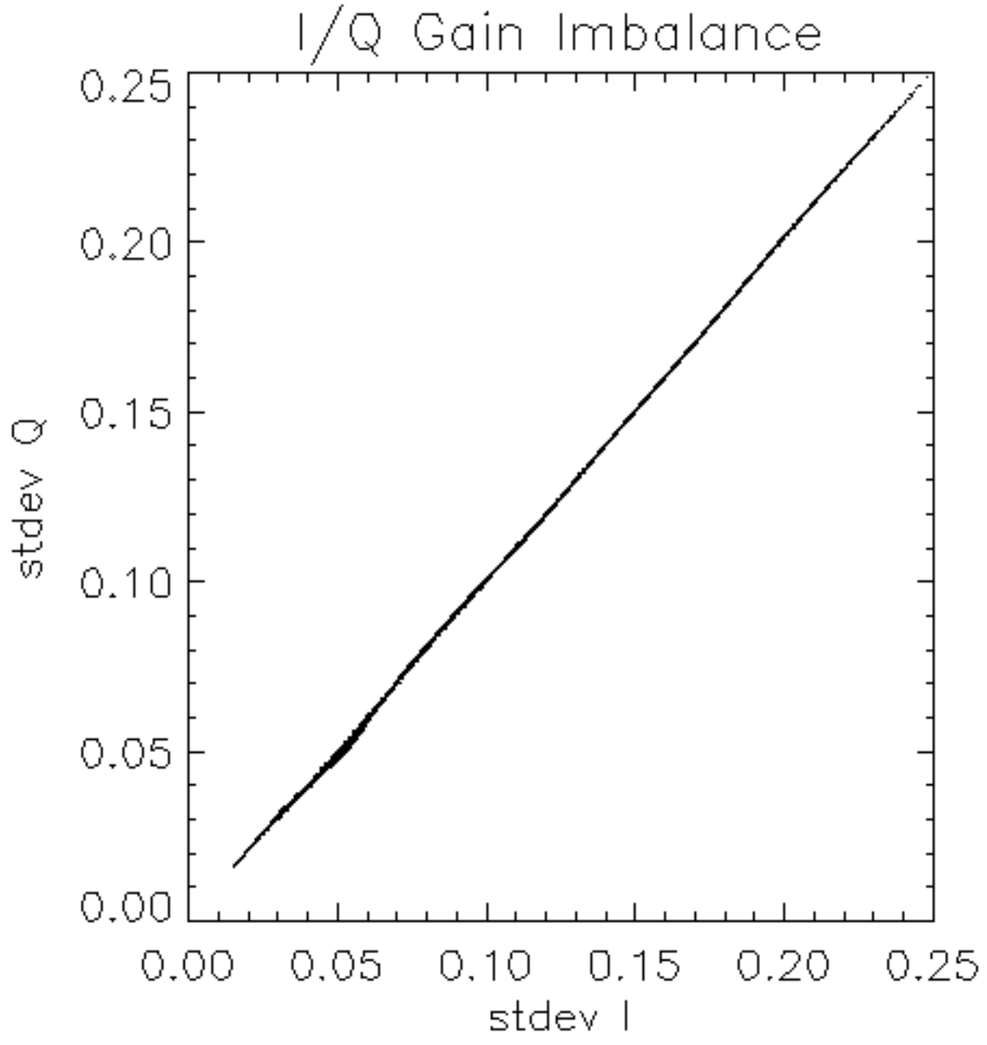
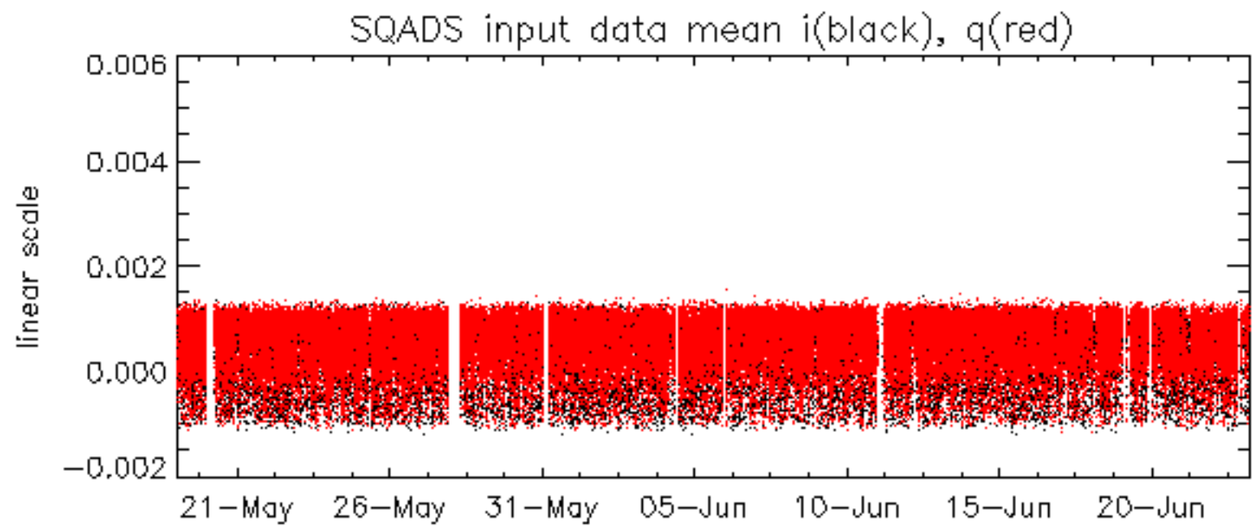
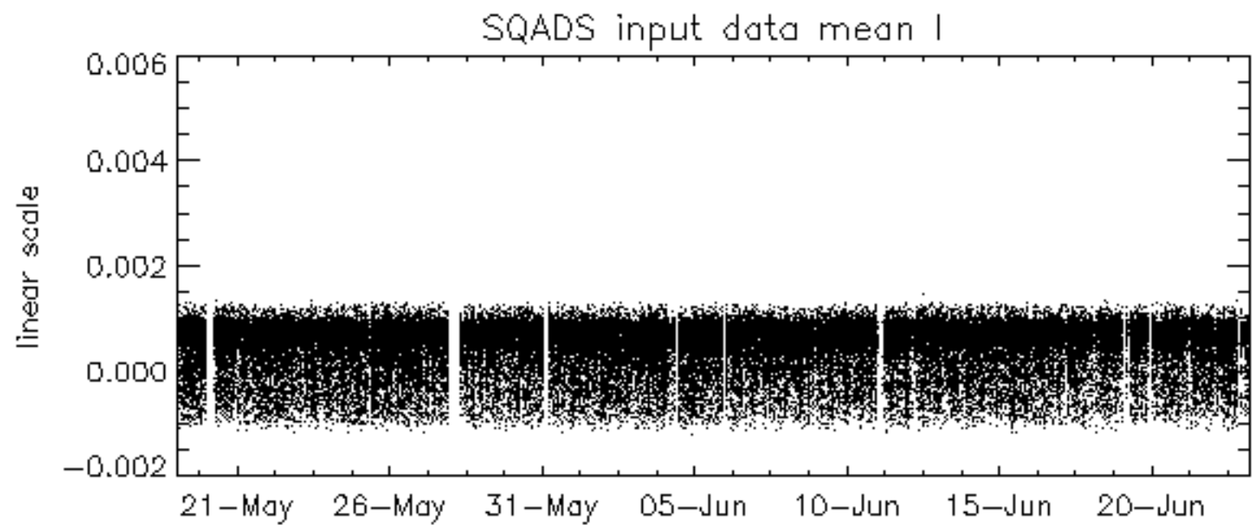
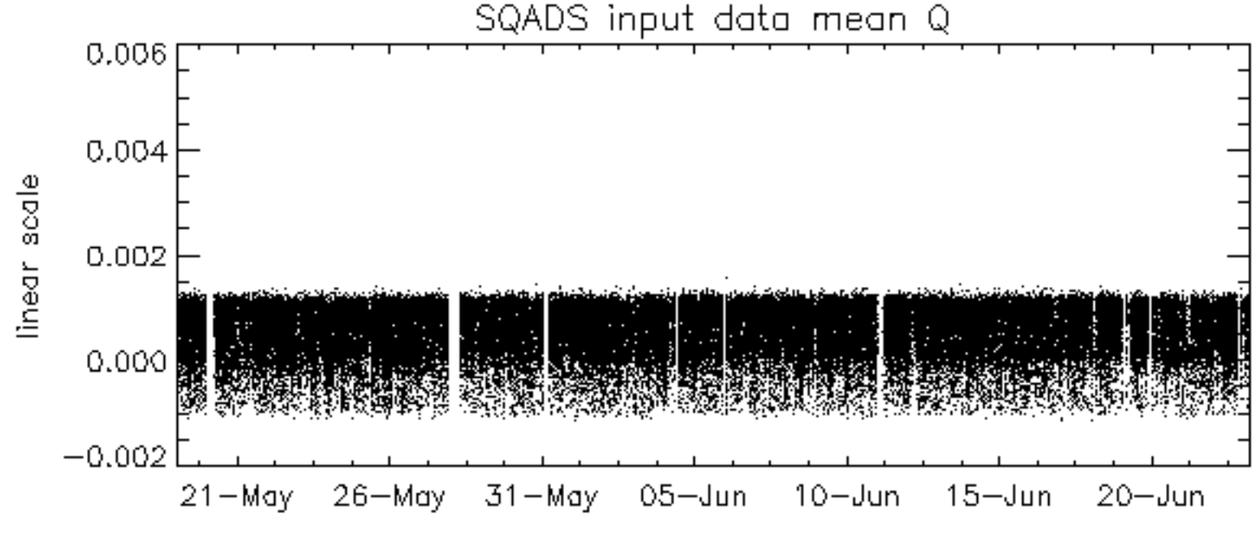

Reference: 2001-02-09 14:08:23 V
Test : 2004-06-20 18:54:32 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

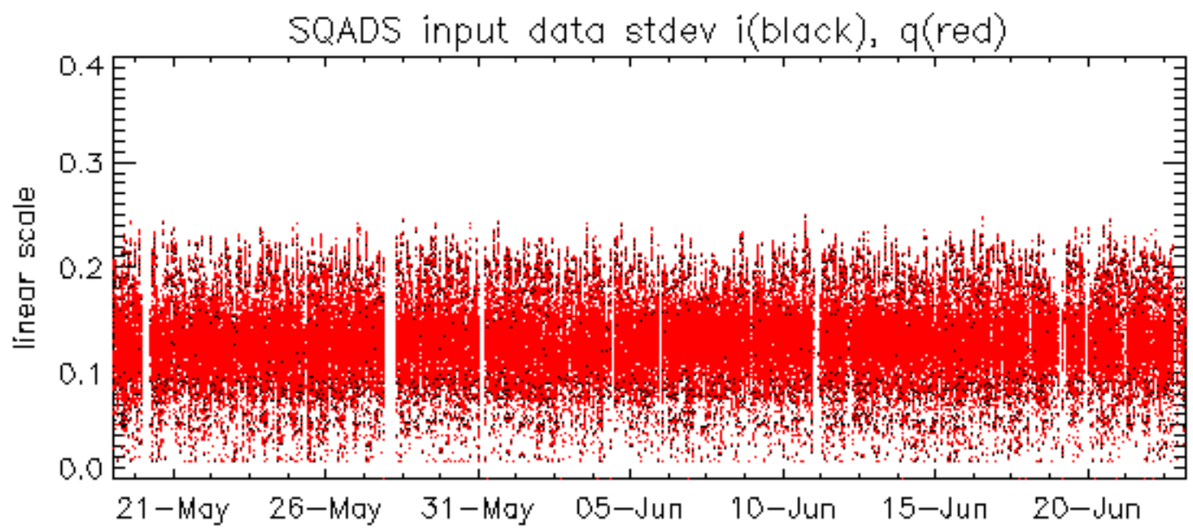

Reference: 2003-06-12 14:10:32 V
Test : 2004-06-20 18:54:32 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

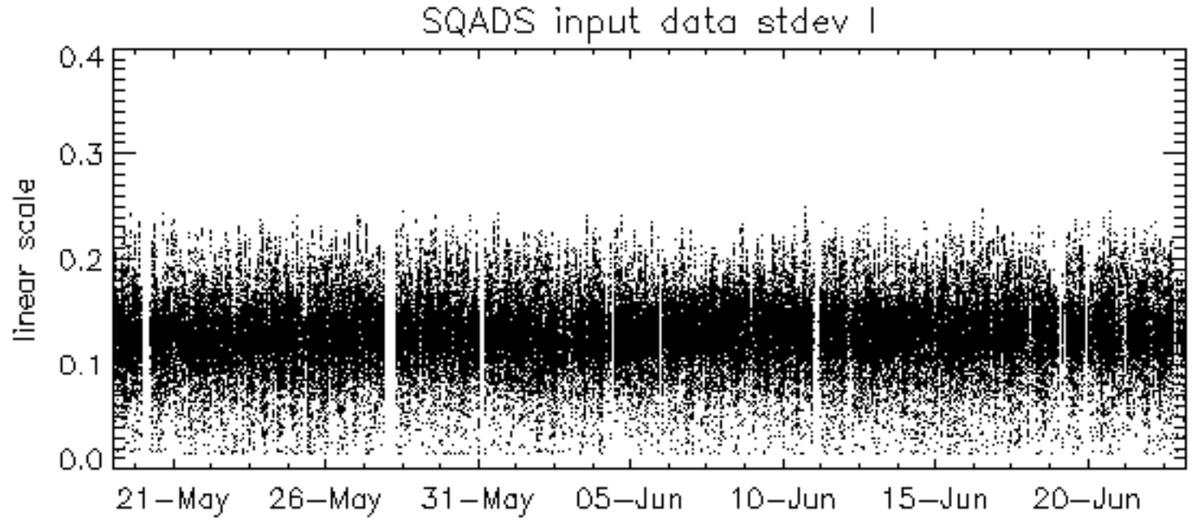

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

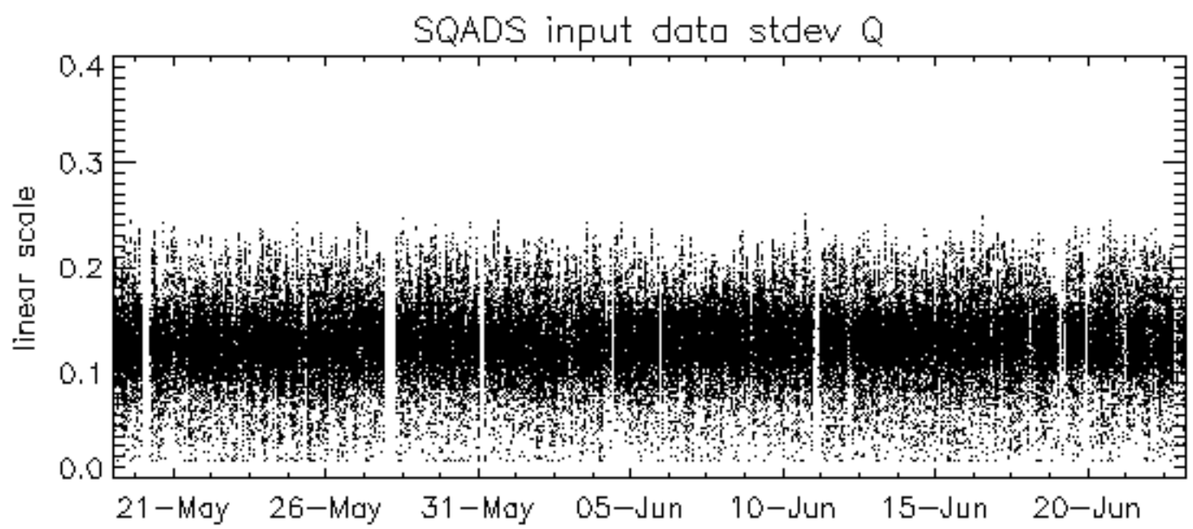

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun

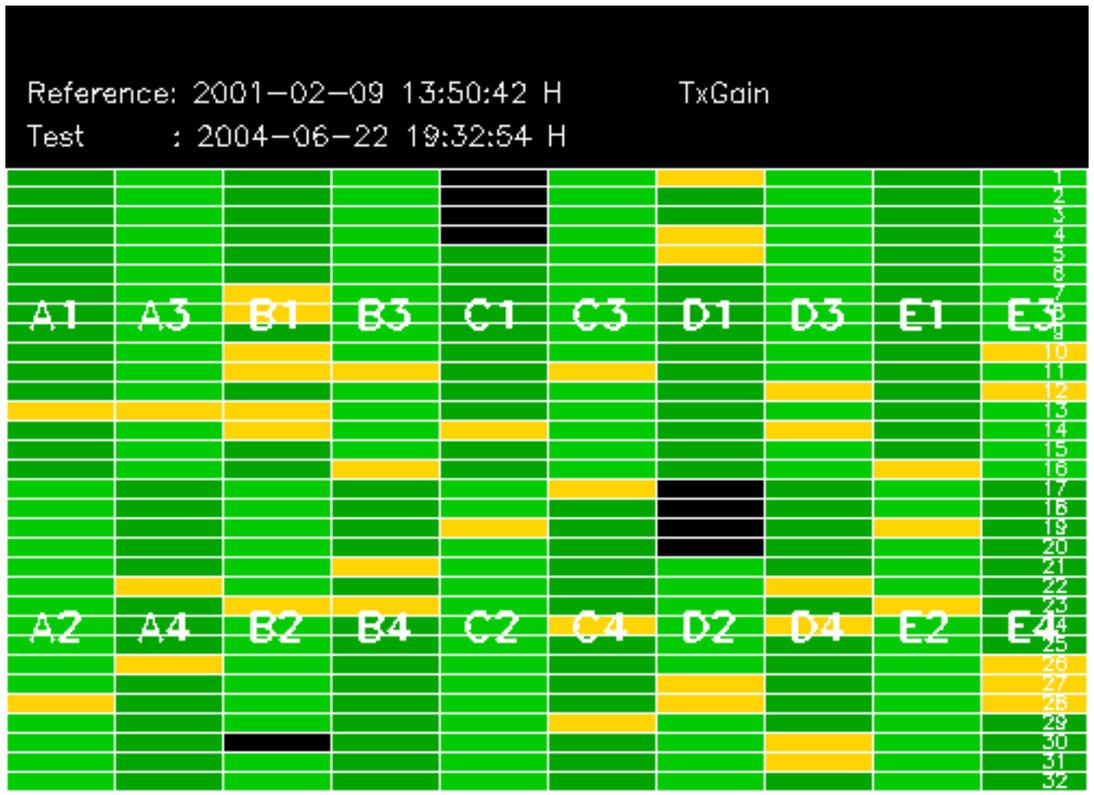

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun

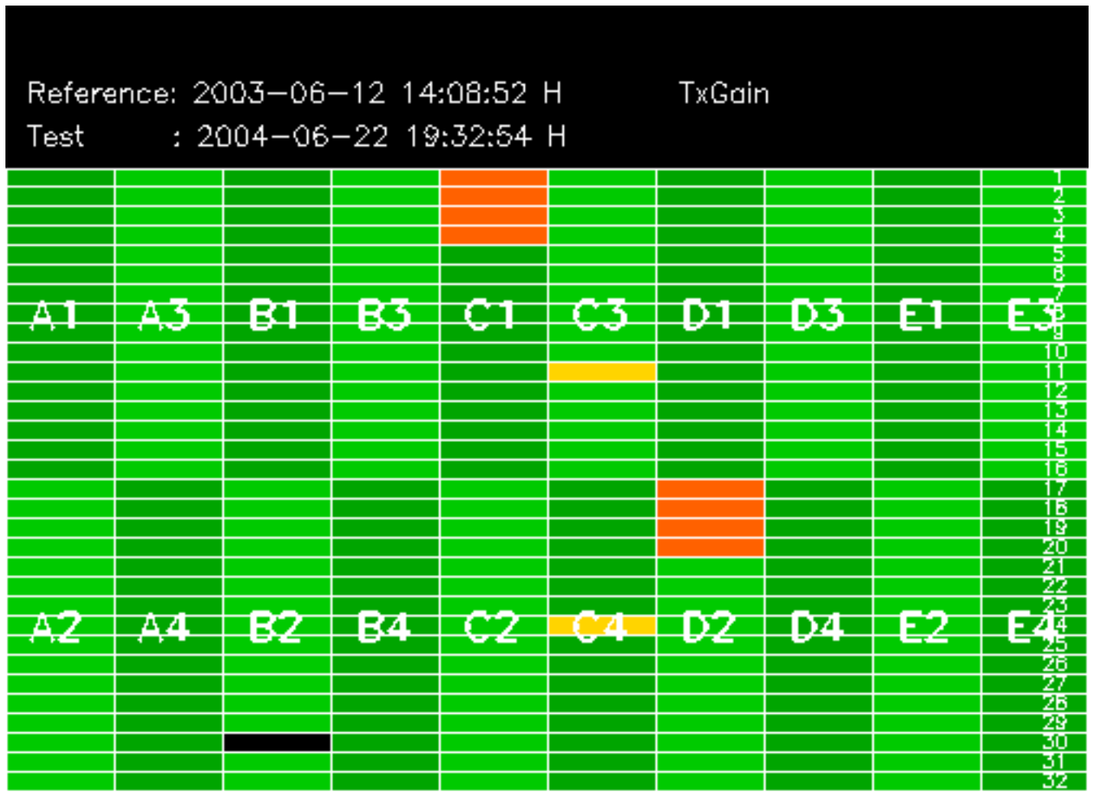

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
20−Jun


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-06-22 19:32:54 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 : 2004-06-22 19:32:54 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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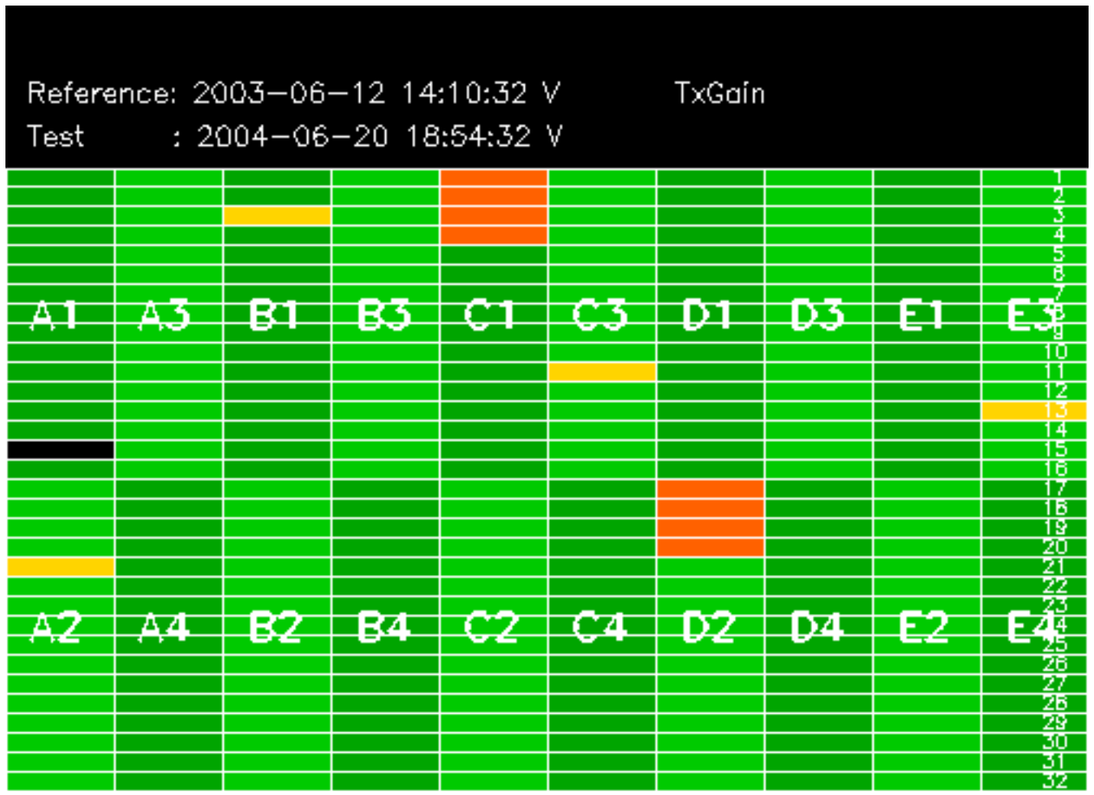
Reference: 2001-02-09 14:08:23 V
Test : 2004-06-20 18:54:32 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-06-20 18:54:32 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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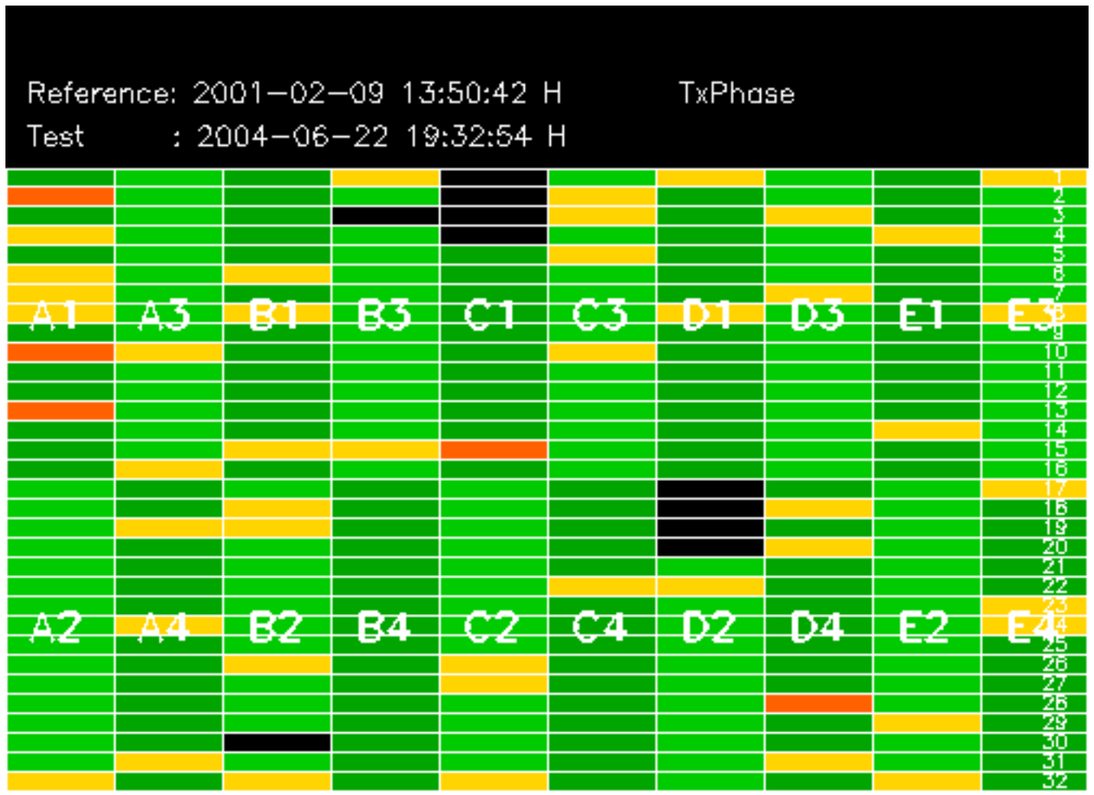
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-06-22 19:32:54 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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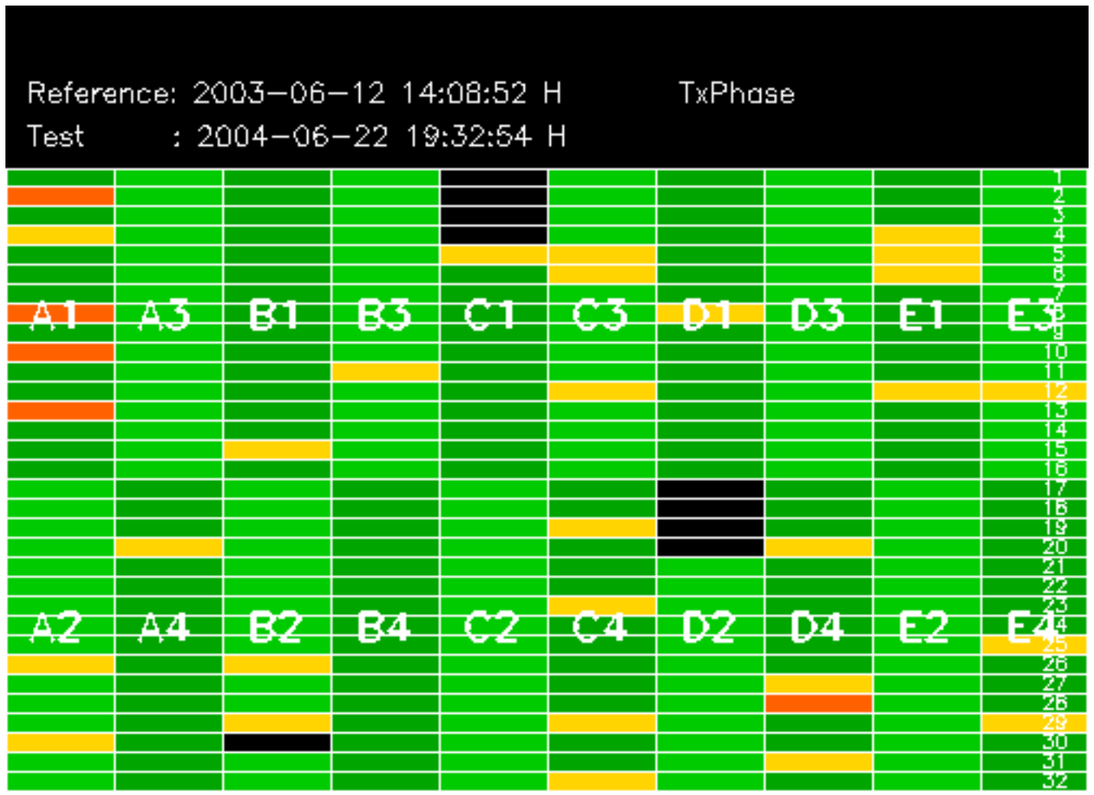
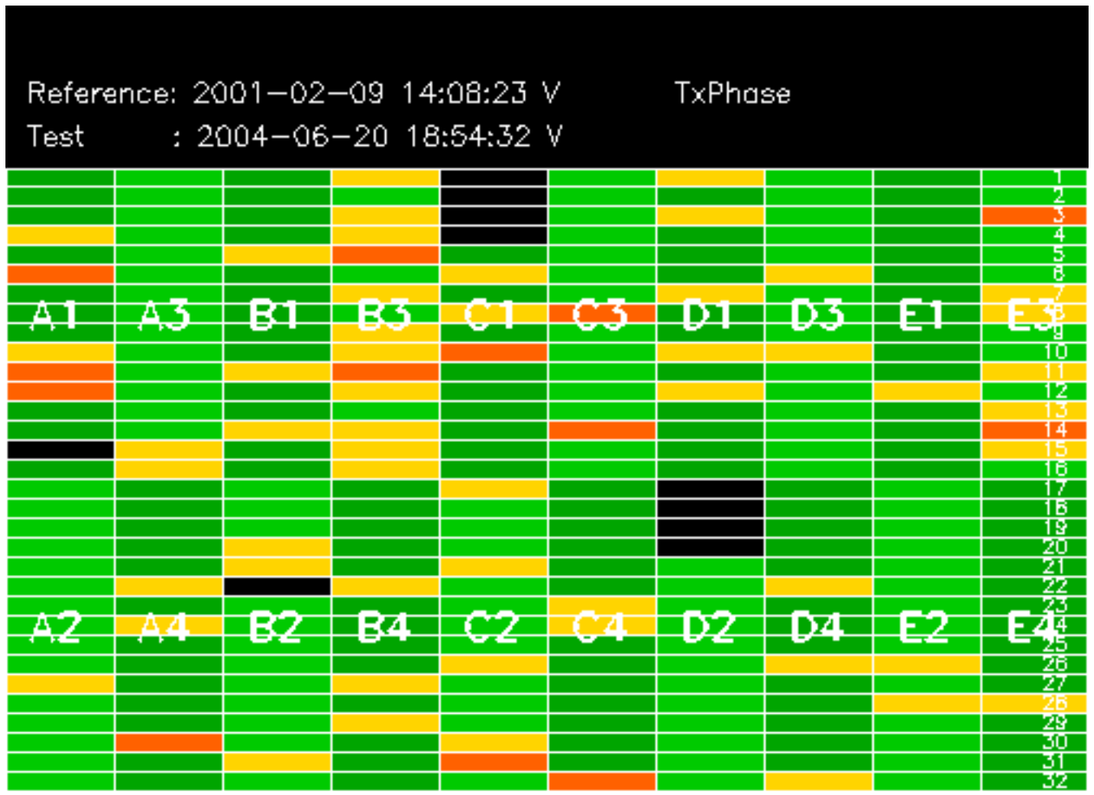

Reference: 2003-06-12 14:08:52 H
Test : 2004-06-22 19:32:54 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-06-20 18:54:32 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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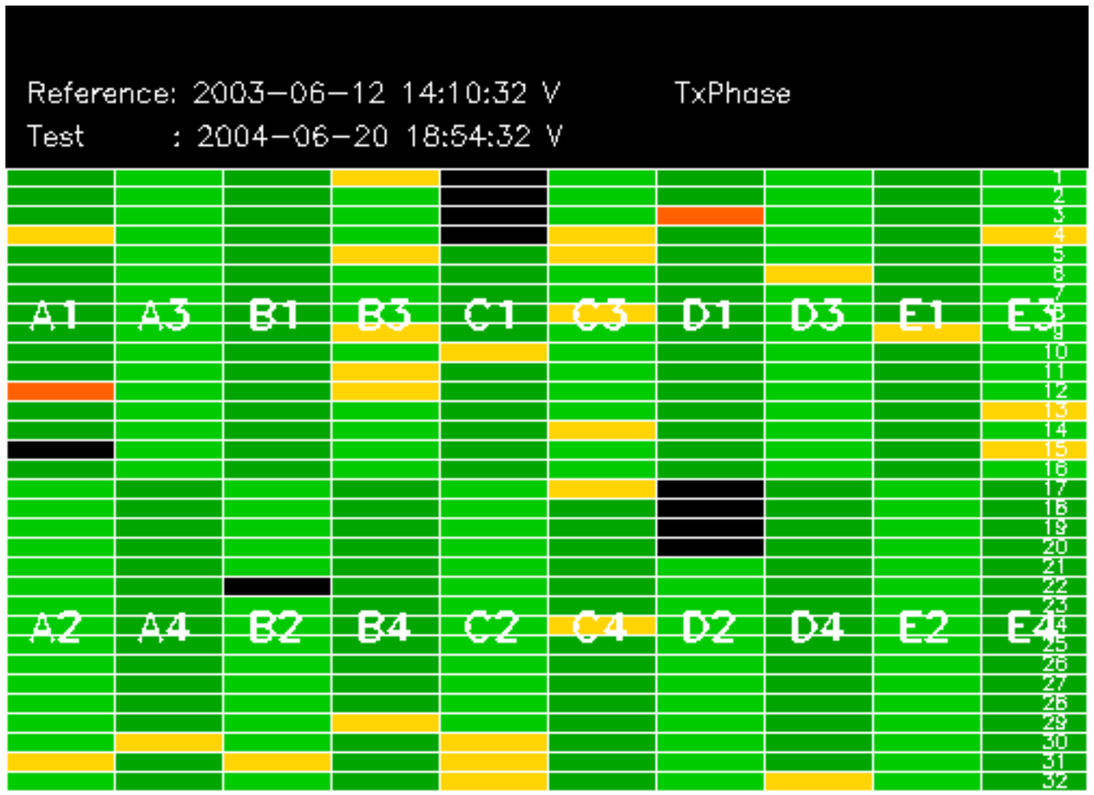
Reference: 2003-06-12 14:10:32 V
Test : 2004-06-20 18:54:32 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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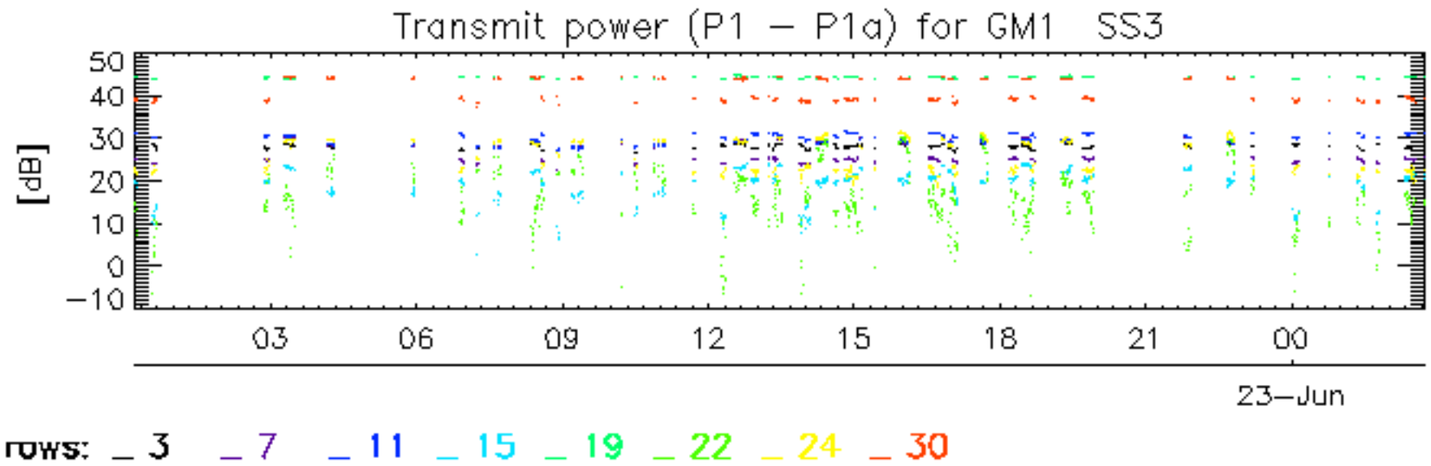
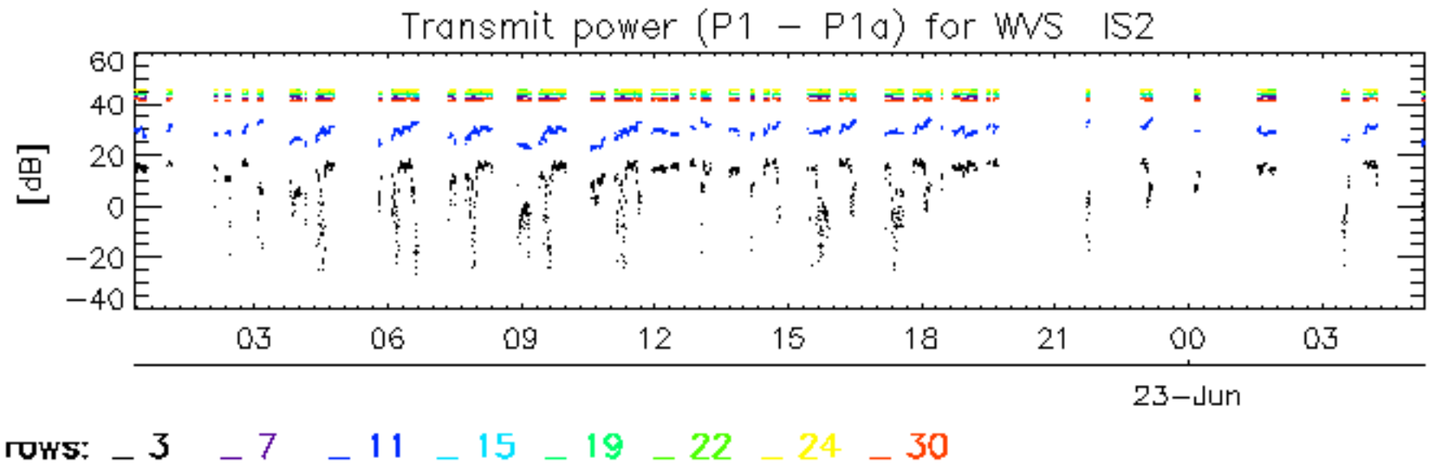

Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
23–Jun
rows: 3 7 11 15 19 22 24 30


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

No unavailabilities during the reported period.