PRELIMINARY REPORT OF 041003

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

last update on Sun Oct 3 11:37:05 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	20040928 042859
H	20040929 071834

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.

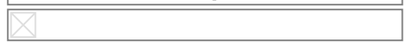
4.1 - Daily statistics

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	-3.468242	0.023517	0.001282
7	P1	-3.335774	0.022576	0.004219
11	P1	-4.650586	0.038313	-0.007797
15	P1	-5.762643	0.082991	0.008410
19	P1	-3.516689	0.079920	0.014536
22	P1	-4.553703	0.110149	0.032034
24	P1	-5.002851	0.124504	0.026330
30	P1	-7.049318	0.148200	-0.023596

3	P1	-16.215704	0.398354	0.083512
7	P1	-14.018408	0.064415	-0.028414
11	P1	-20.263803	0.244902	-0.090611
15	P1	-11.766104	0.041868	0.058466
19	P1	-14.046174	1.112213	0.045580
22	P1	-15.998461	0.370714	0.140160
24	P1	-14.452722	0.302412	0.023733
30	P1	-17.982641	0.617503	-0.116944

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.306185	0.086472	0.016696
7	P2	-22.590775	0.120351	0.053542
11	P2	-15.186861	0.133851	0.119503
15	P2	-7.056082	0.098975	0.028106
19	P2	-9.566845	0.141489	0.039440
22	P2	-17.302790	0.109455	0.086558
24	P2	-20.762924	0.088922	-0.022486
30	P2	-19.151043	0.081975	0.082725

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.154303	0.003904	0.001550
7	P3	-8.154312	0.003904	0.001574
11	P3	-8.154322	0.003904	0.001618
15	P3	-8.154323	0.003904	0.001612
19	P3	-8.154321	0.003904	0.001609
22	P3	-8.154317	0.003904	0.001600
24	P3	-8.154314	0.003904	0.001591
30	P3	-8.154220	0.003901	0.001411

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	-2.837026	0.051029	-0.005109
7	P1	-3.030818	0.105221	-0.012402
11	P1	-3.893087	0.067182	-0.019386
15	P1	-3.530913	0.082385	0.020182
19	P1	-3.525522	0.101247	-0.003186
22	P1	-5.728098	0.129199	0.029154
24	P1	-3.967099	0.058279	-0.041616
30	P1	-6.207776	0.099173	0.043338
3	P1	-10.876534	0.178142	-0.155465
7	P1	-10.117435	0.175405	0.005234
11	P1	-12.175520	0.124081	-0.046677
15	P1	-11.690864	0.083296	-0.056146
19	P1	-15.730826	2.149223	0.189123
22	P1	-23.347210	1.518920	-0.163882
24	P1	-17.998537	0.368577	-0.270136
30	P1	-20.413883	1.287793	0.018237

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.979717	0.050060	0.035416
7	P2	-22.721008	0.069619	0.092173
11	P2	-10.894889	0.060542	0.154632
15	P2	-4.959704	0.029233	0.010085
19	P2	-6.770725	0.042618	0.020137
22	P2	-7.408883	0.046418	0.078180
24	P2	-11.061053	0.056387	-0.002153
30	P2	-22.127562	0.043084	0.071441

P3 Cyclic statistics

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

3	P3	-8.004405	0.003440	0.004840
7	P3	-8.004478	0.003440	0.004854
11	P3	-8.004512	0.003432	0.004730
15	P3	-8.004550	0.003429	0.004731
19	P3	-8.004521	0.003436	0.004885
22	P3	-8.004500	0.003435	0.004810
24	P3	-8.004558	0.003458	0.004910
30	P3	-8.004462	0.003445	0.004566

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	0.000469972
	stdev	2.20114e-07
MEAN Q	mean	0.000535768
	stdev	2.38738e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126935
	stdev	0.000963492

STDEV Q	mean	0.127157
	stdev	0.000972522

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

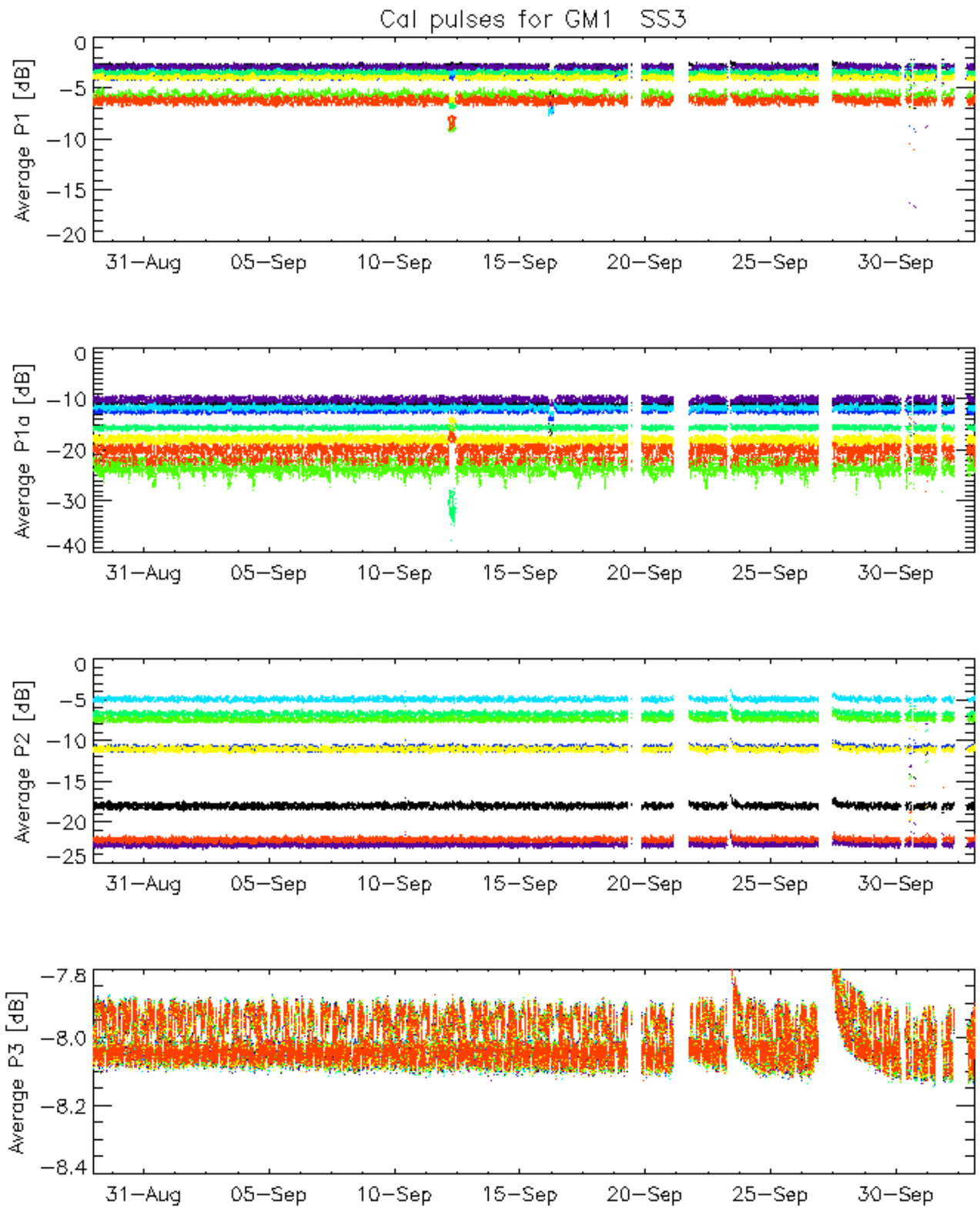
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

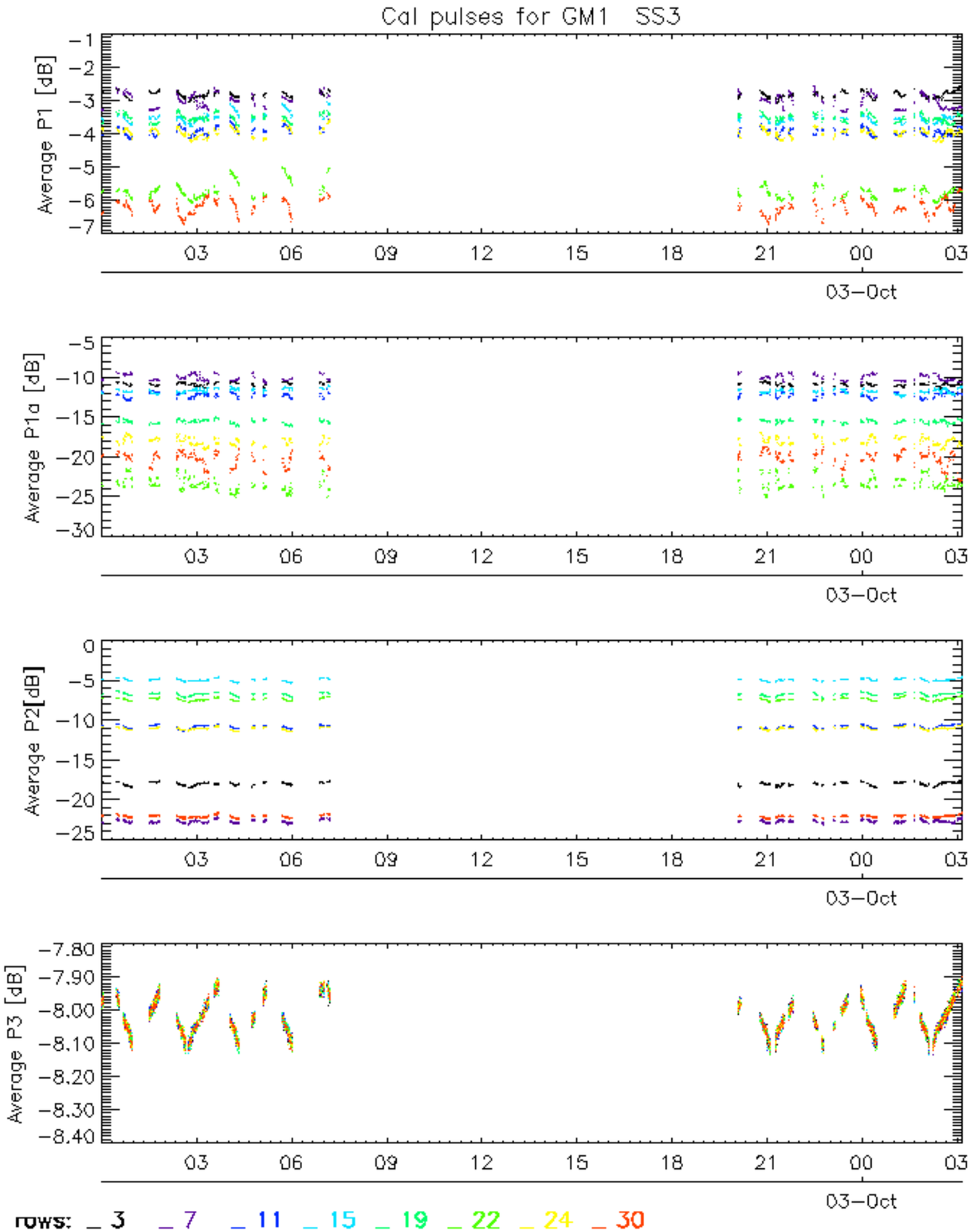
6.5 - Absolute Doppler for GM1

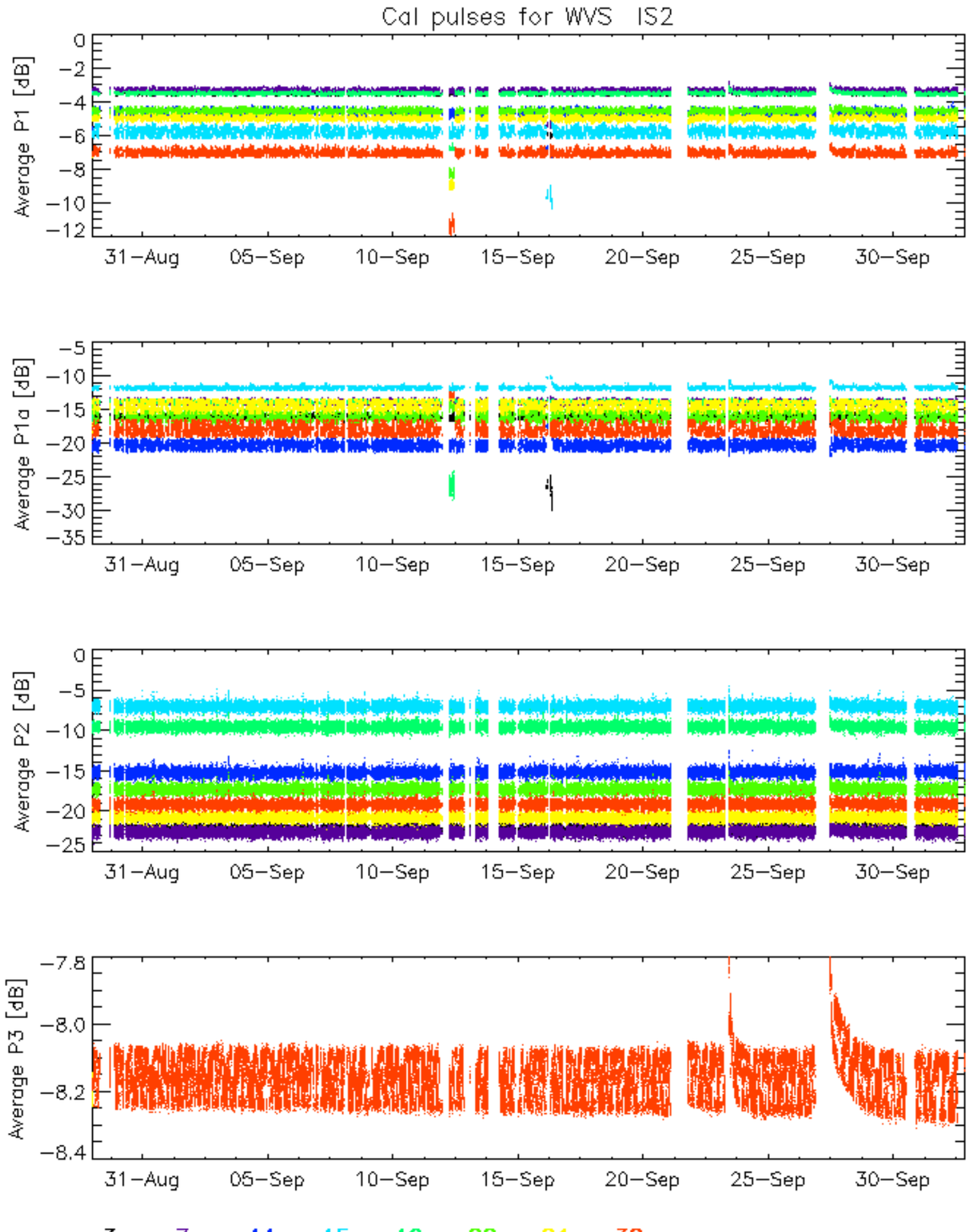
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

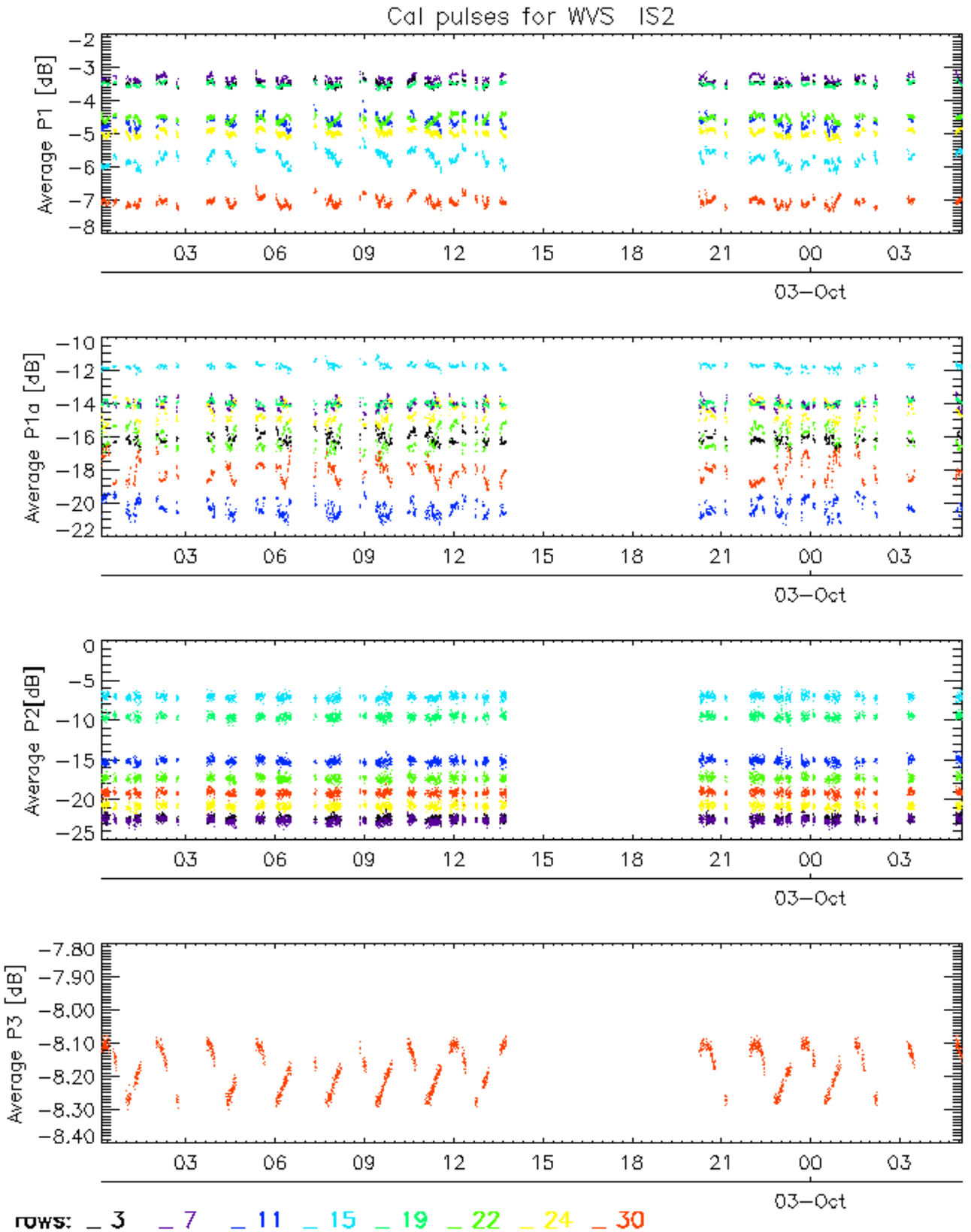
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

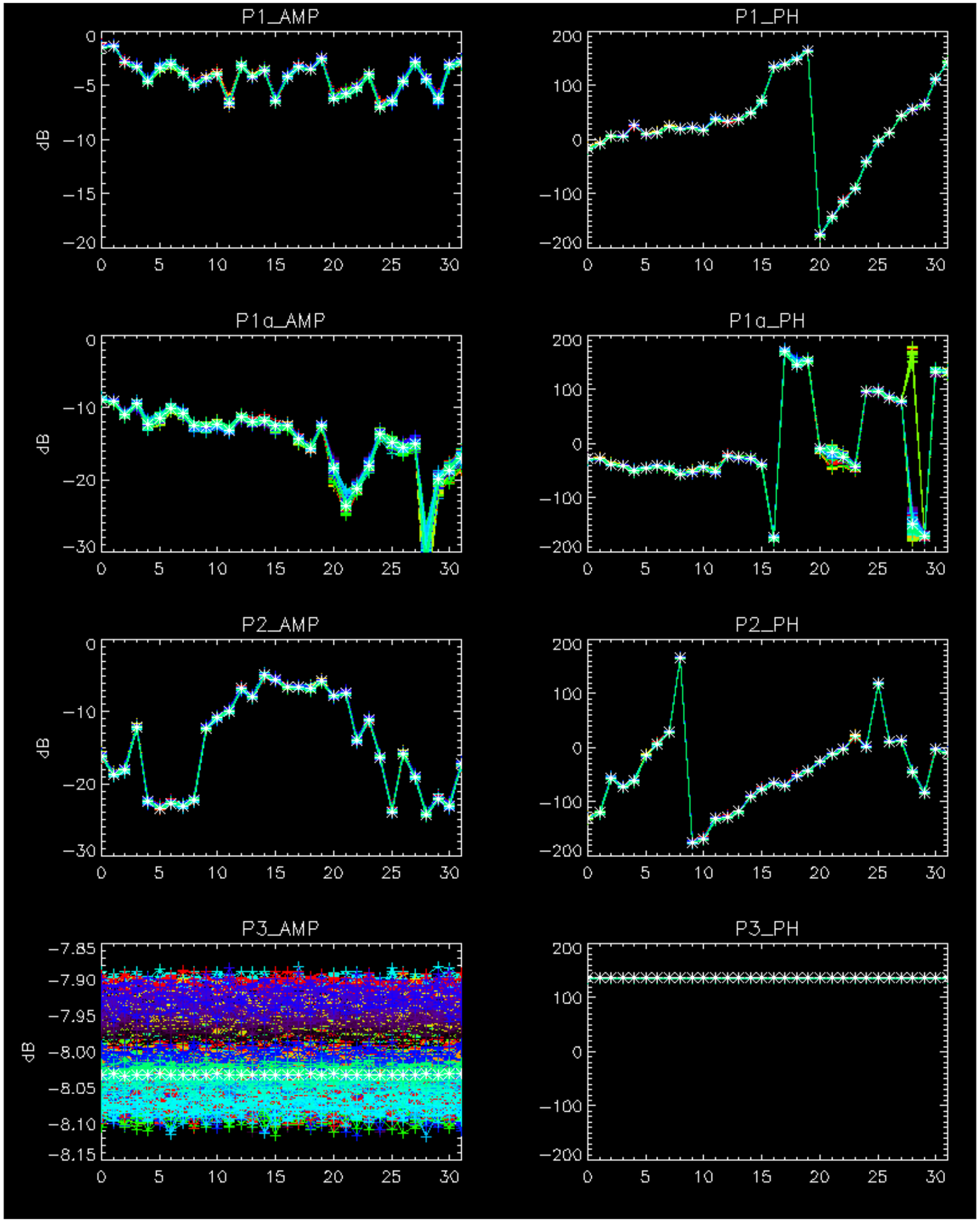

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
25−Sep
30−Sep
Average P1a [dB]
0
−10
−20
−30
−40
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 24 30

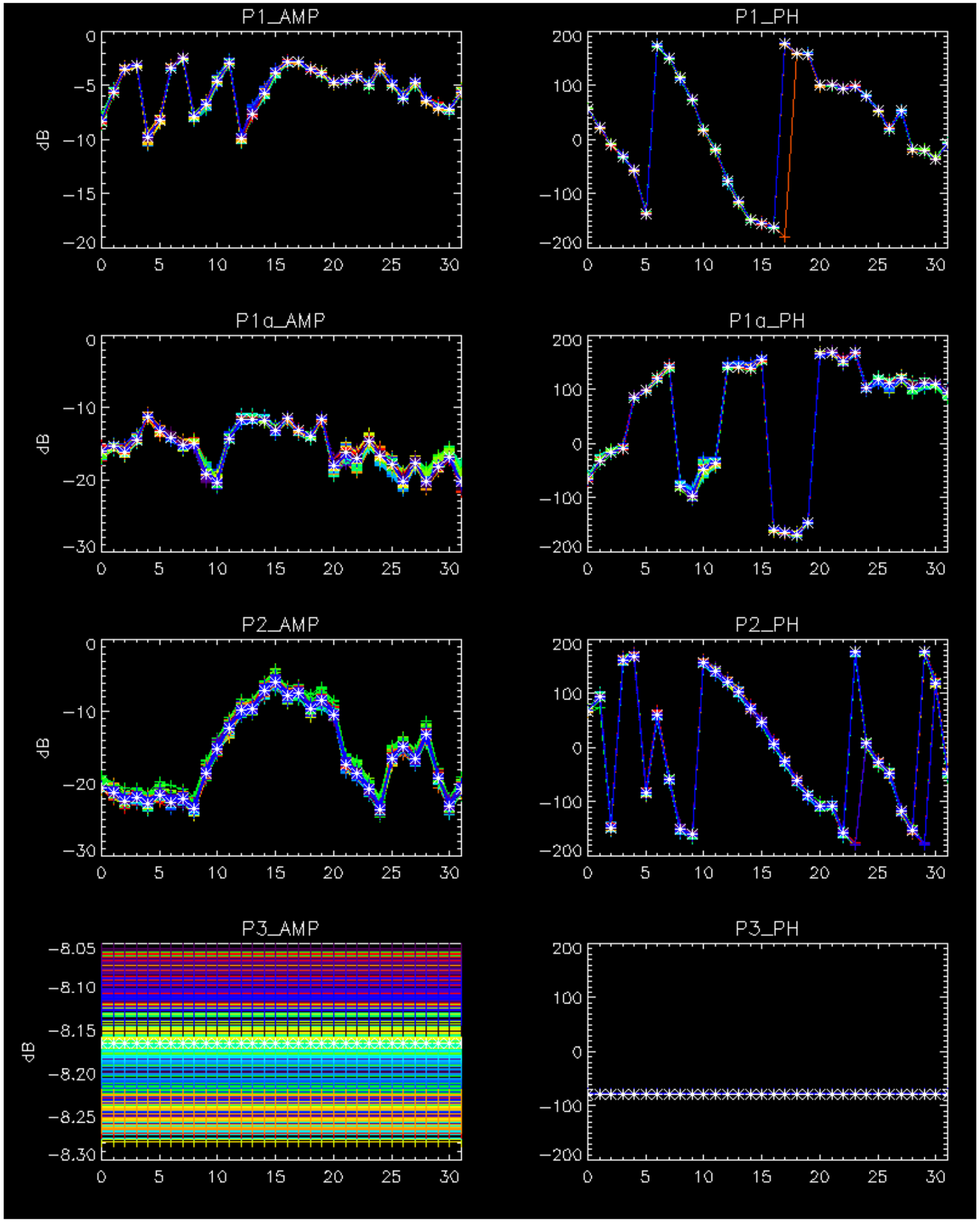

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
03−Oct
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
03−Oct
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
03−Oct
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
25−Sep
30−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
−35
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
03
06
09
12
15
18
21
00
03
03−Oct
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

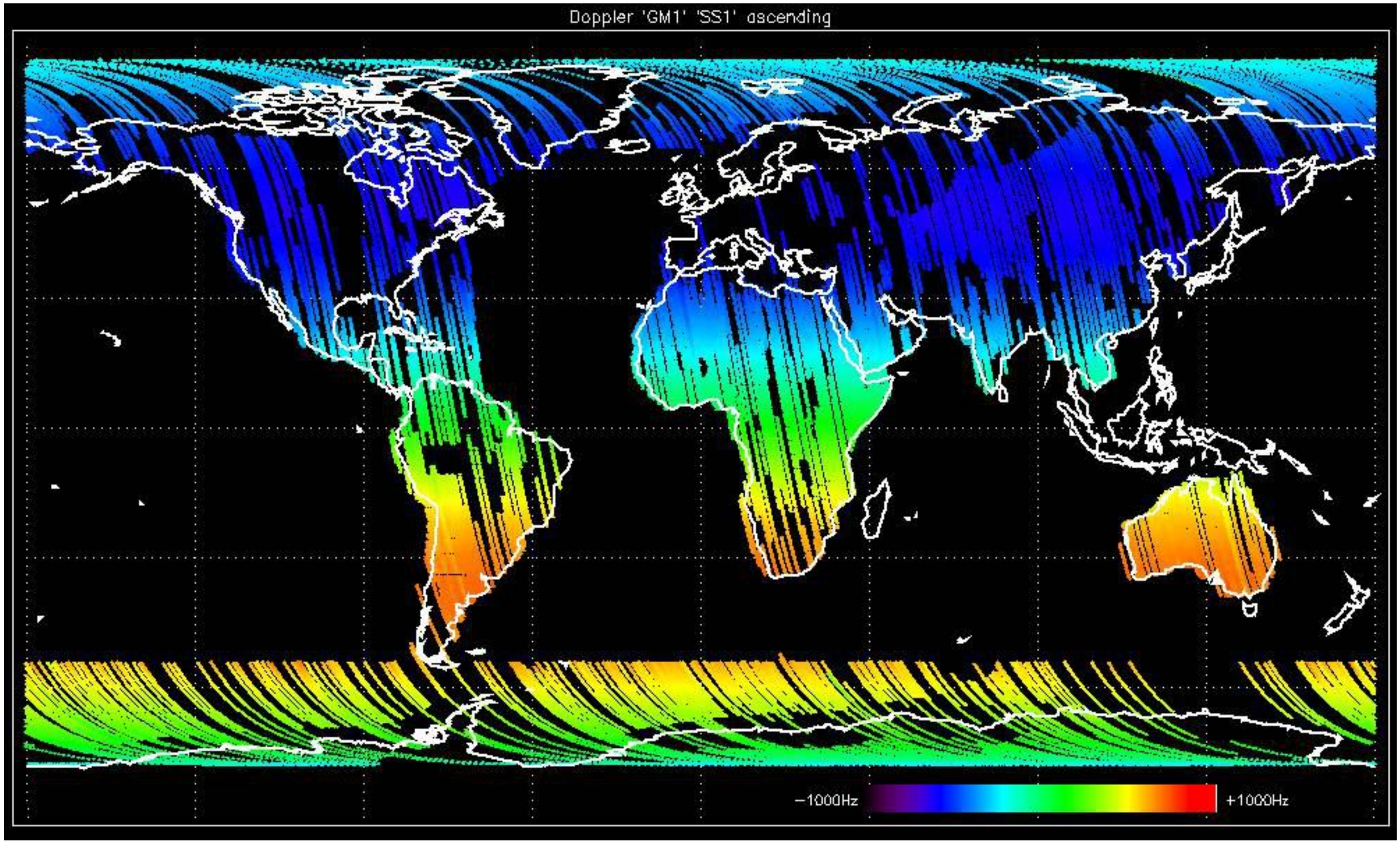
No anomalies observed.

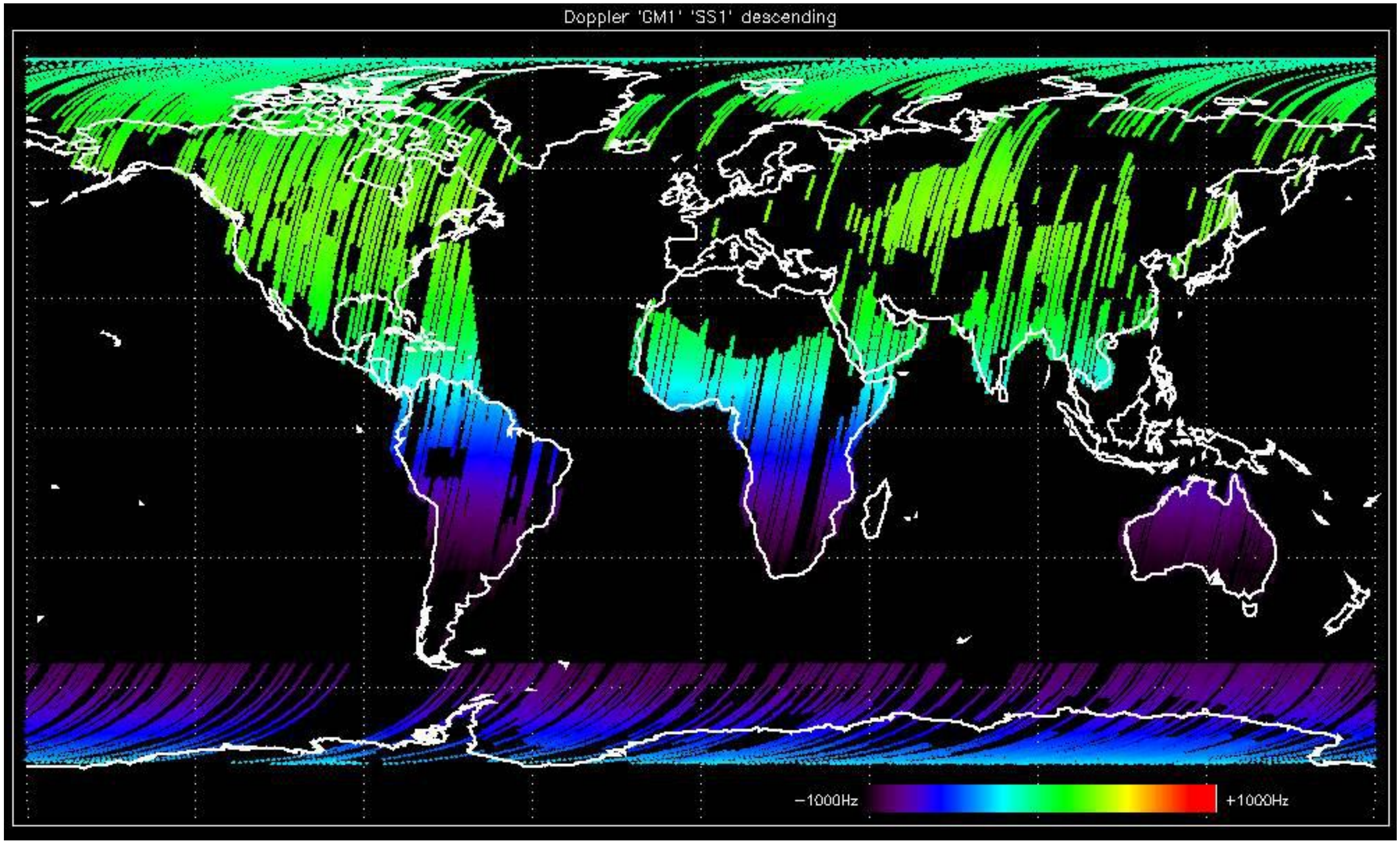

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
−8.15
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

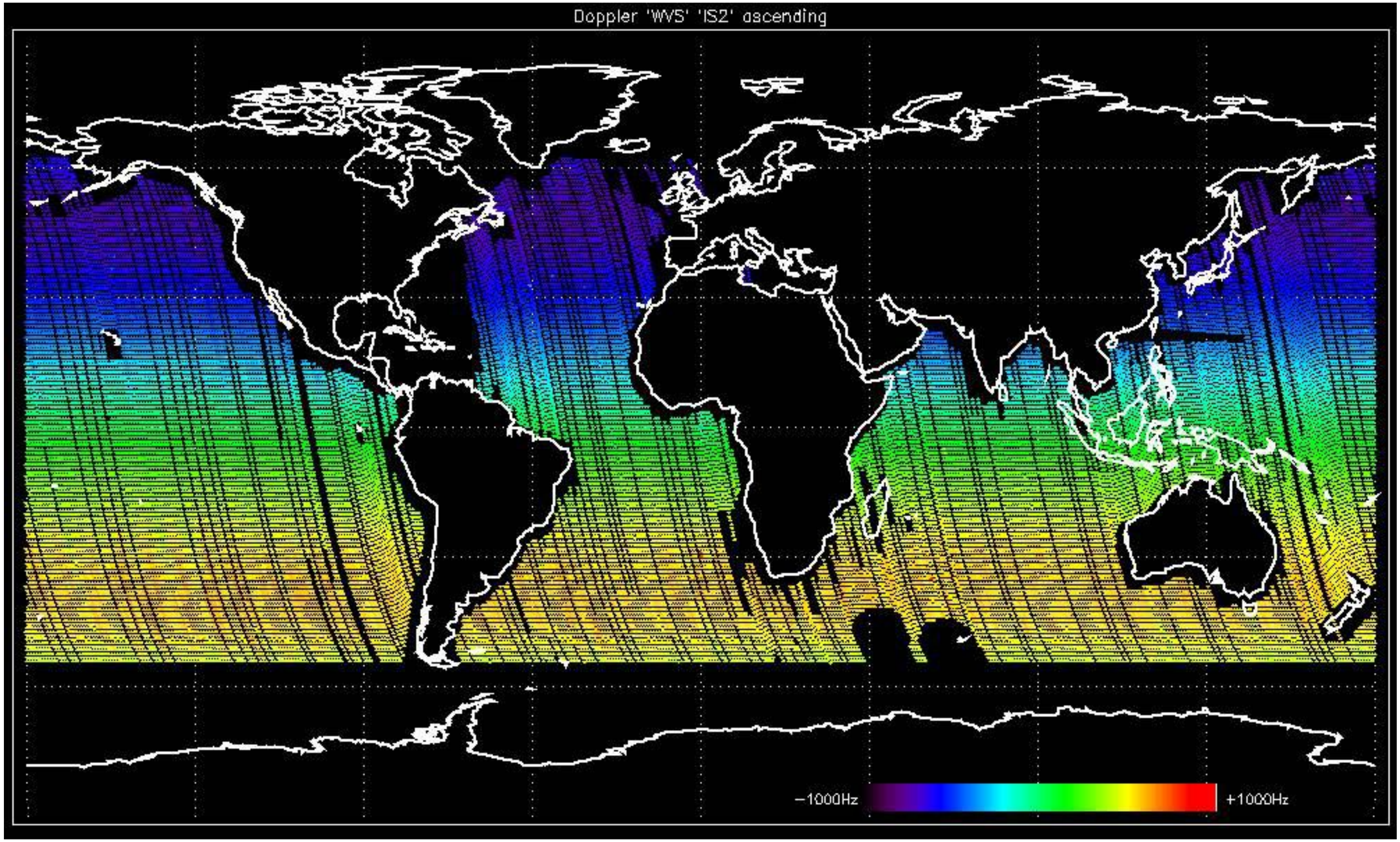

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

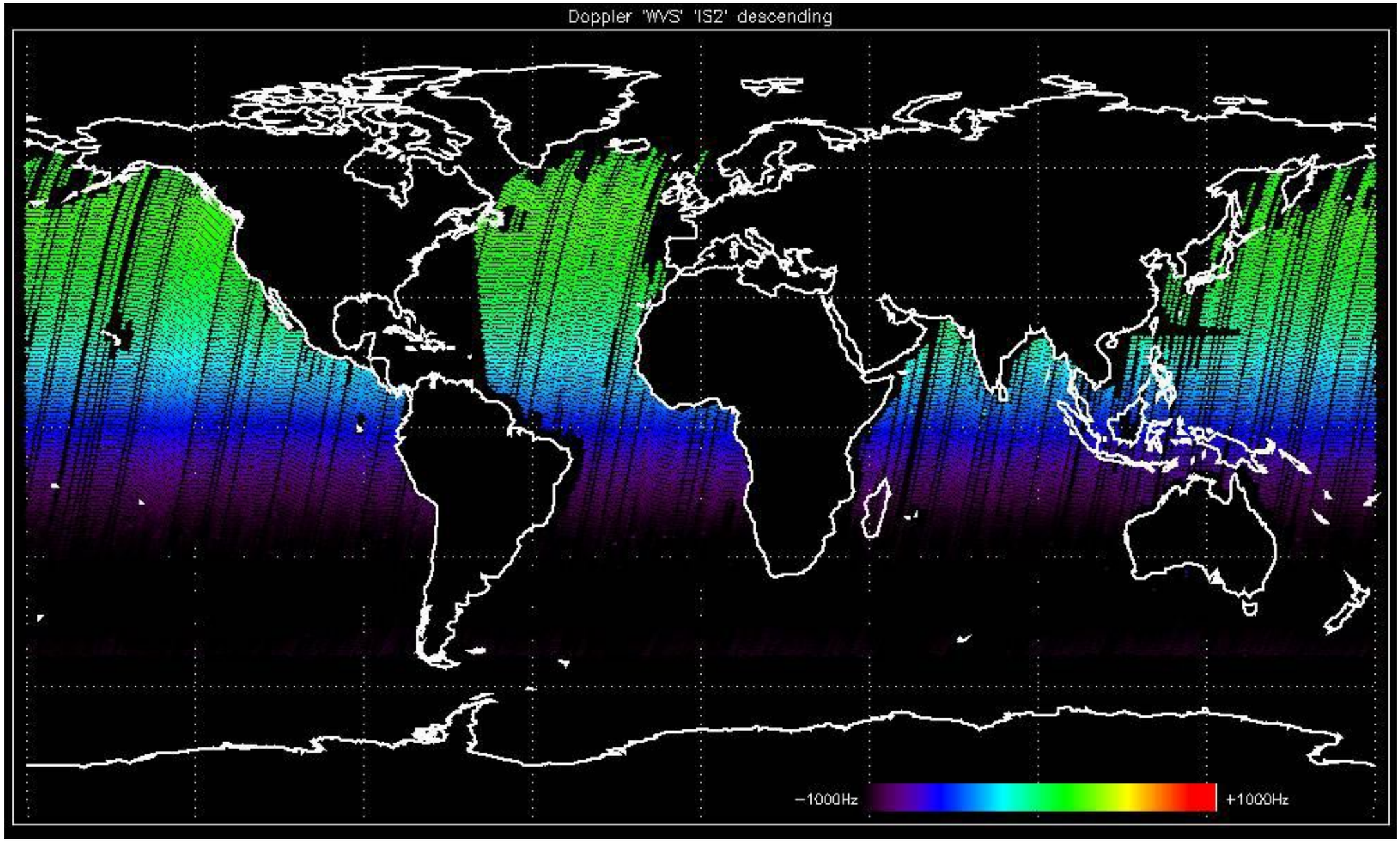
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

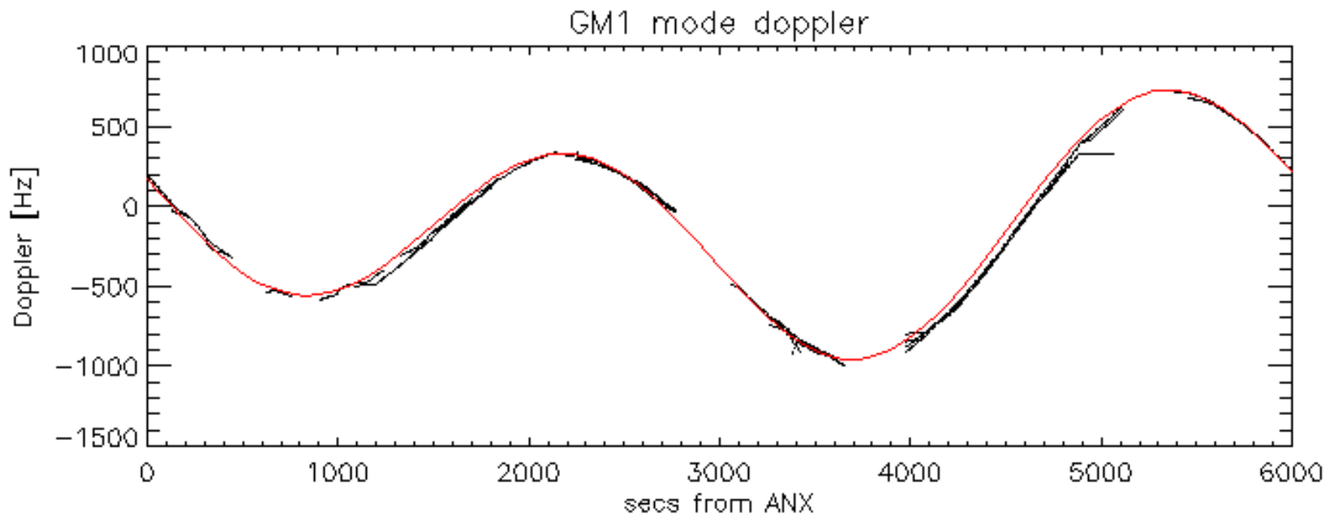
Preliminary report.The data is not yet controled

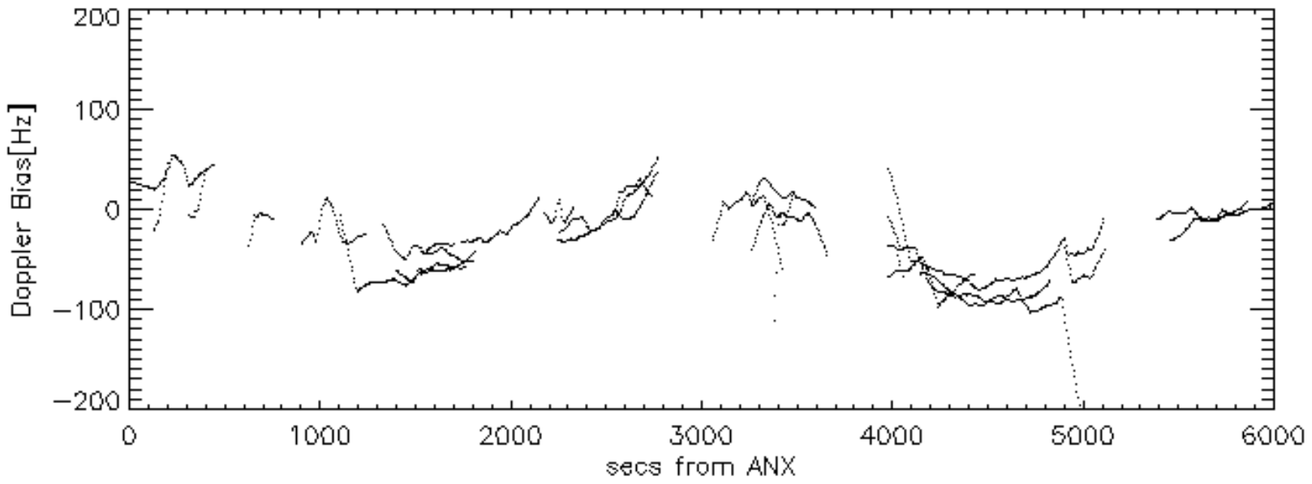

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

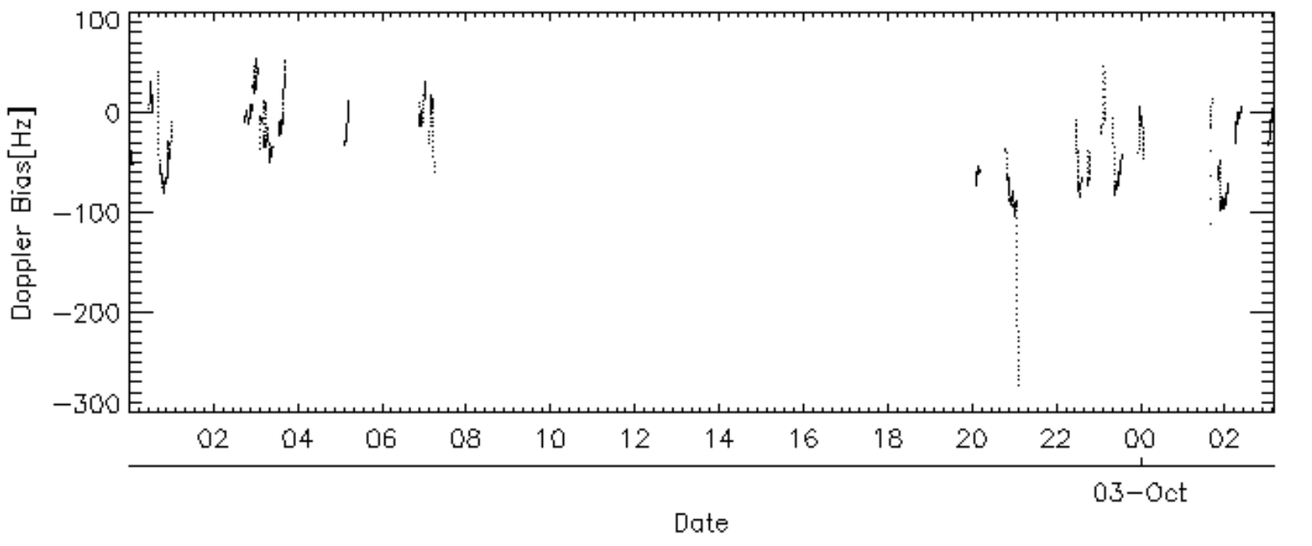

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

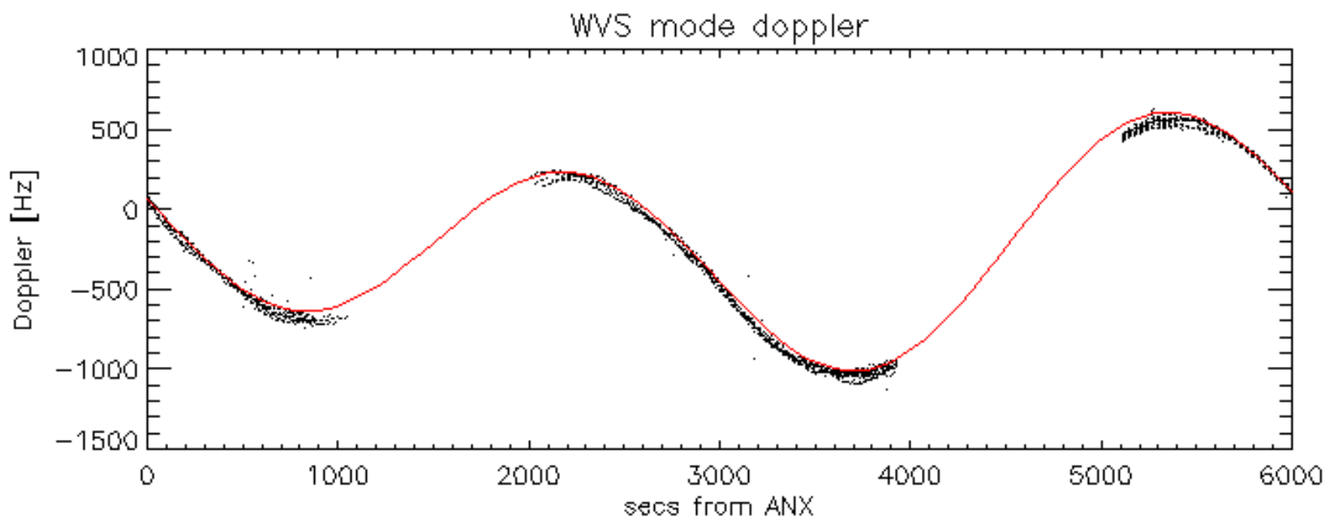

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

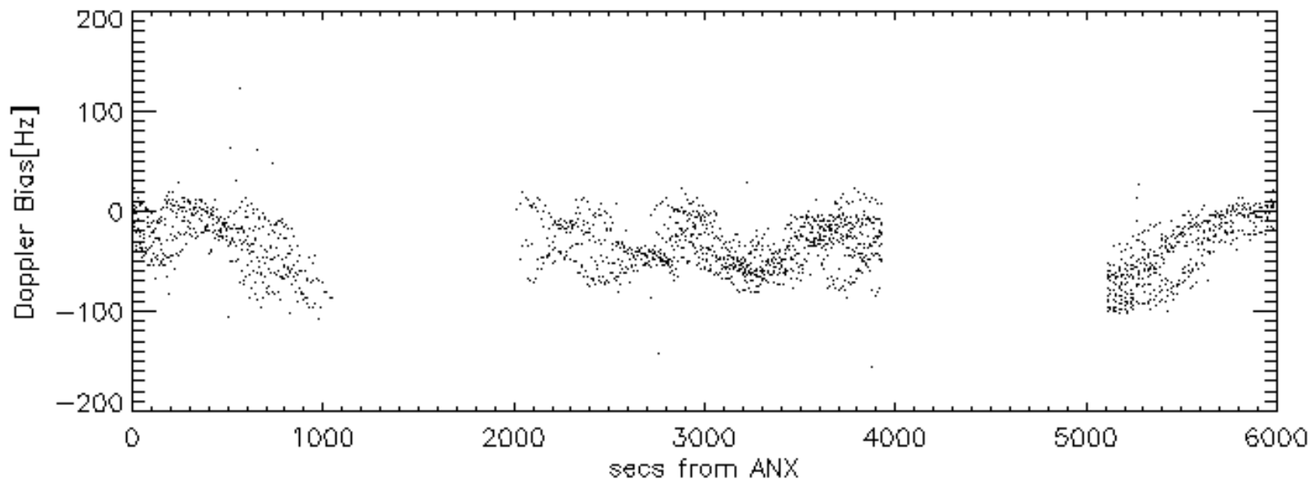

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

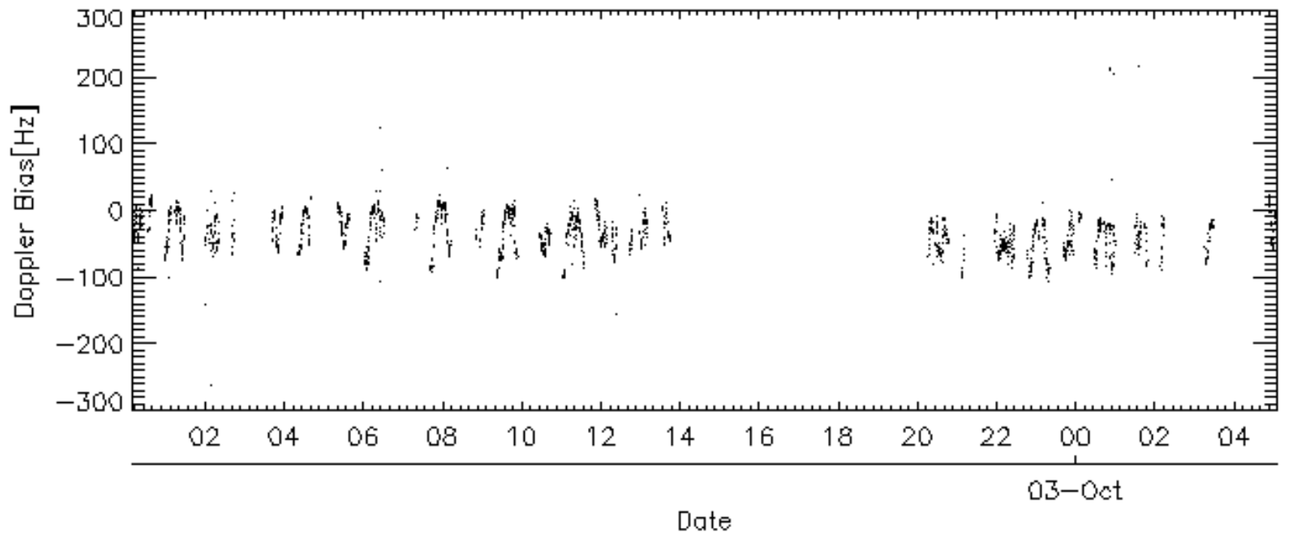

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

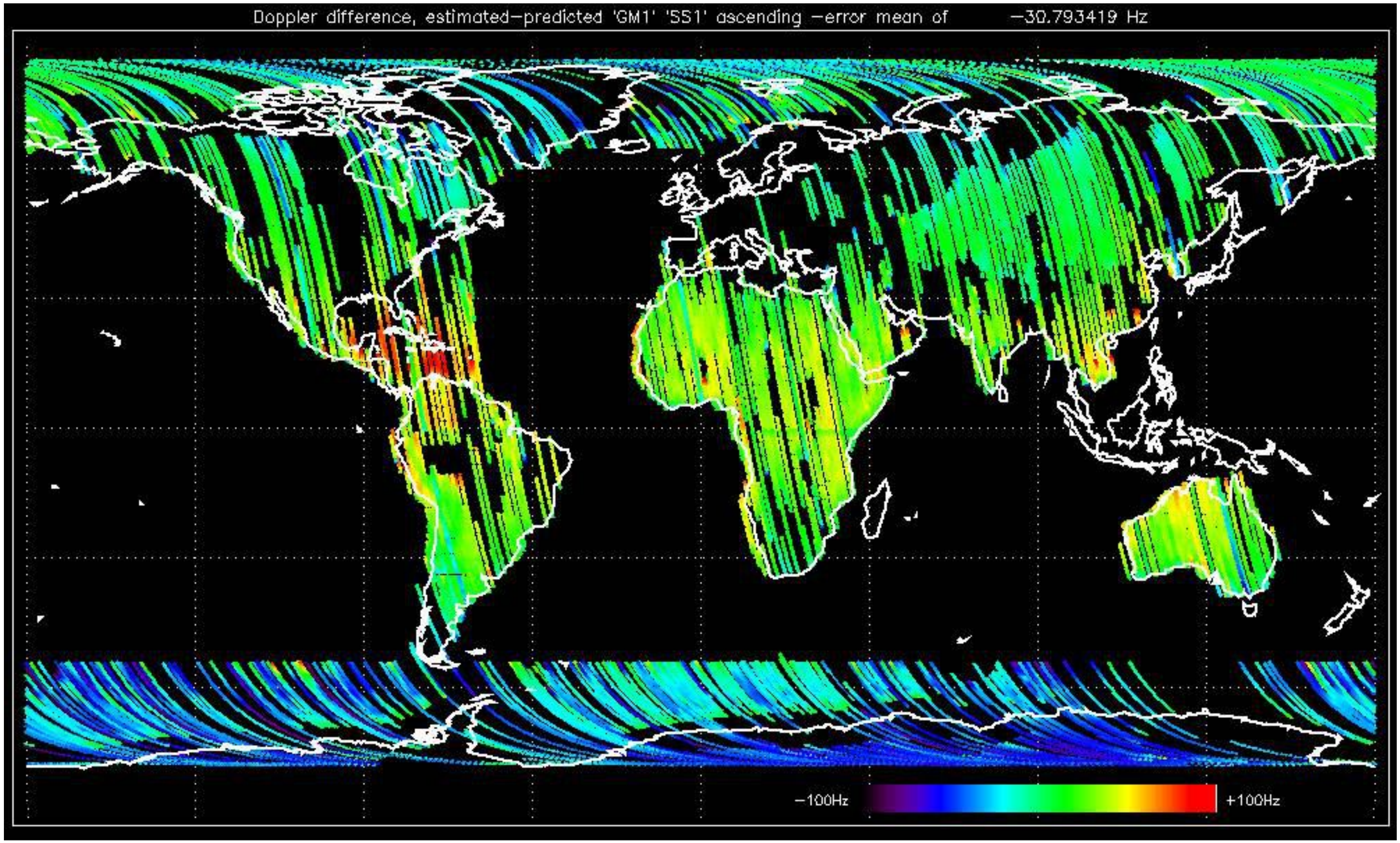

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

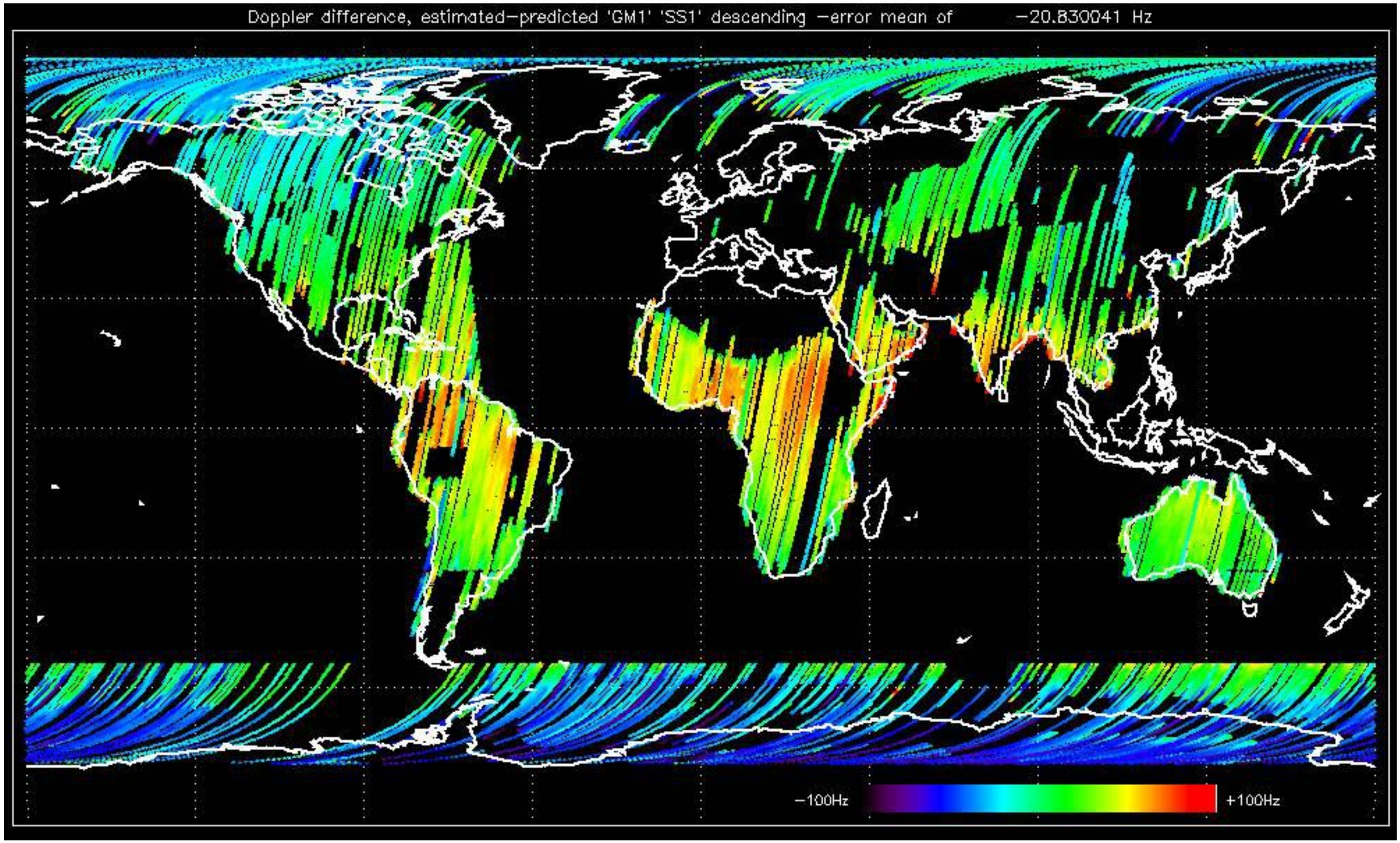

Doppler Bias[Hz]
100
0
−100
−200
−300
02
04
06
08
10
12
14
16
18
20
22
00
02
03−Oct
Date

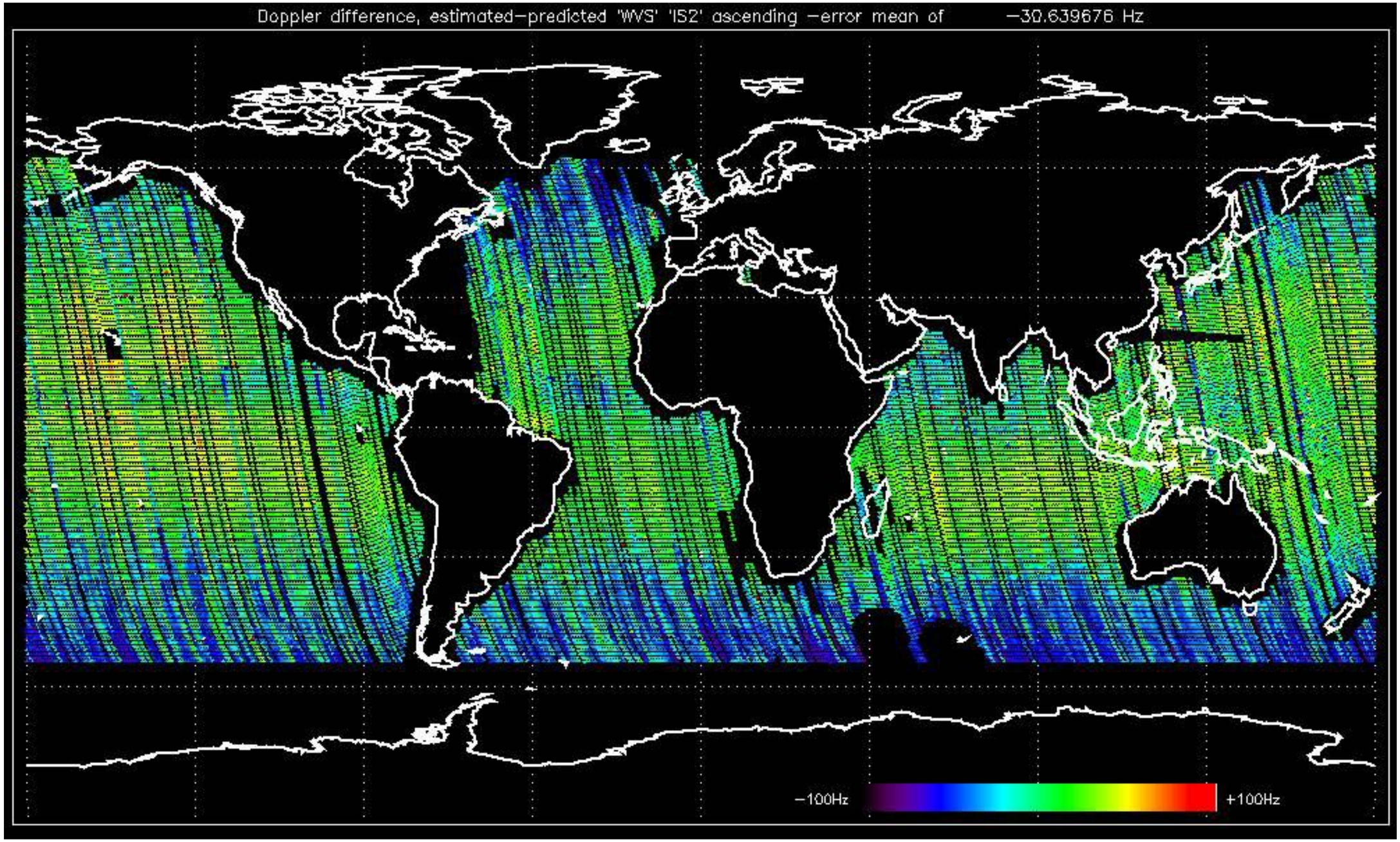

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

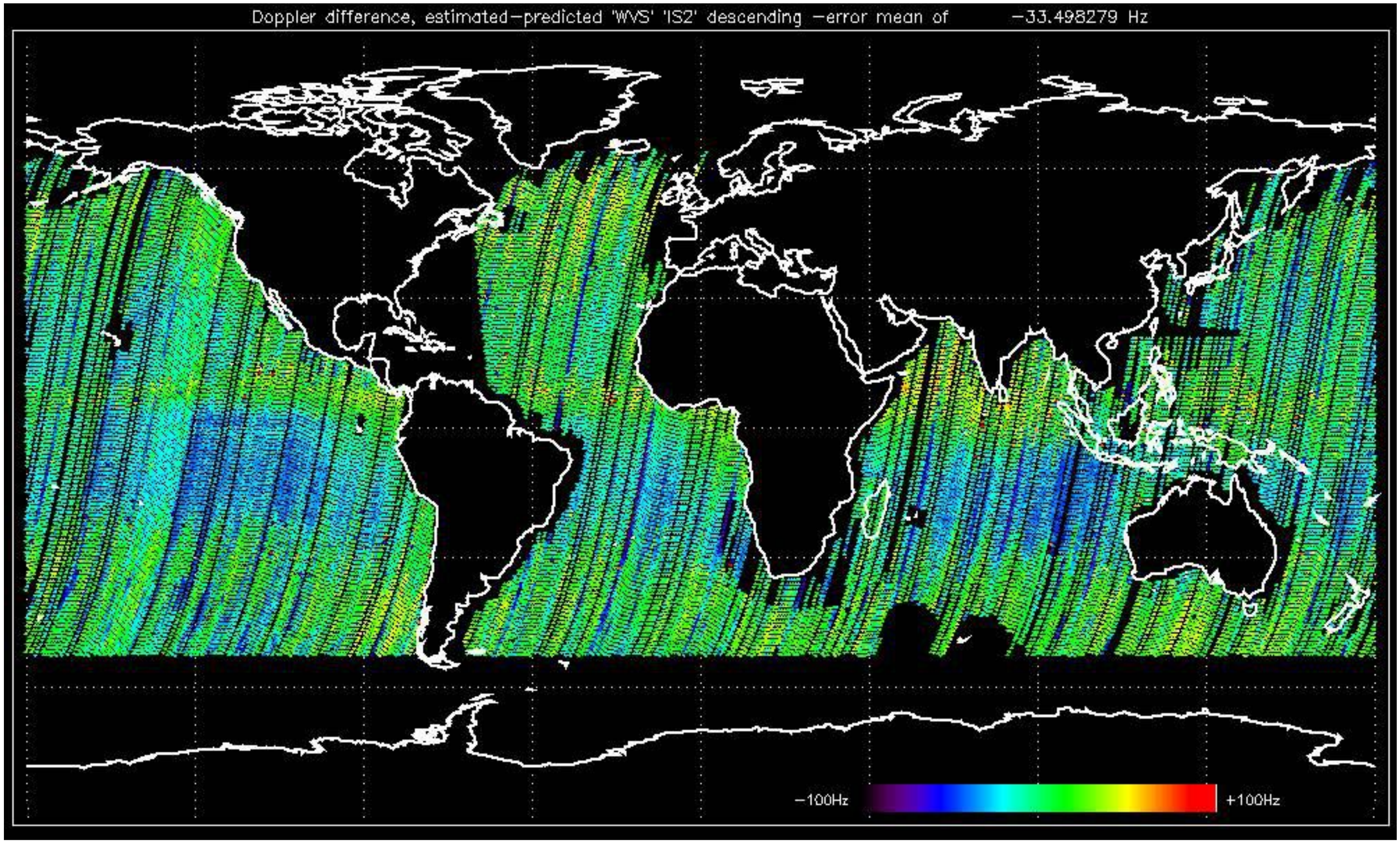

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −30.793419 Hz
−100Hz
+100Hz

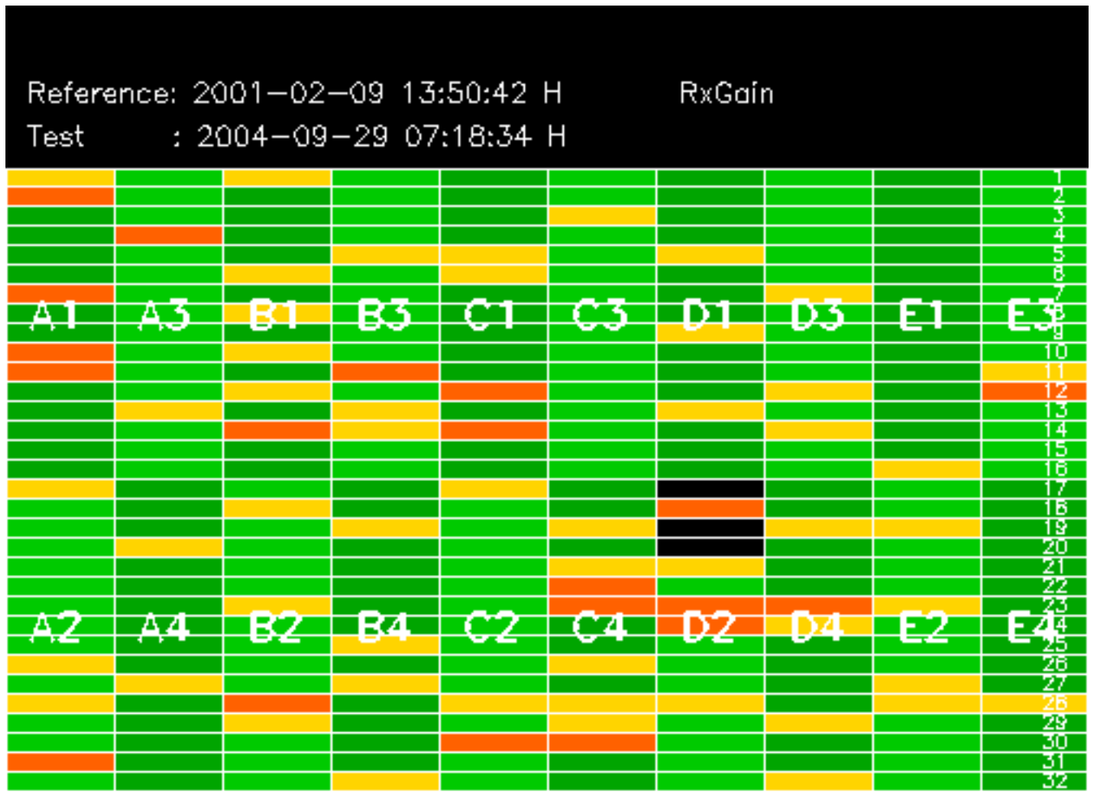

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −20.830041 Hz
−100Hz
+100Hz

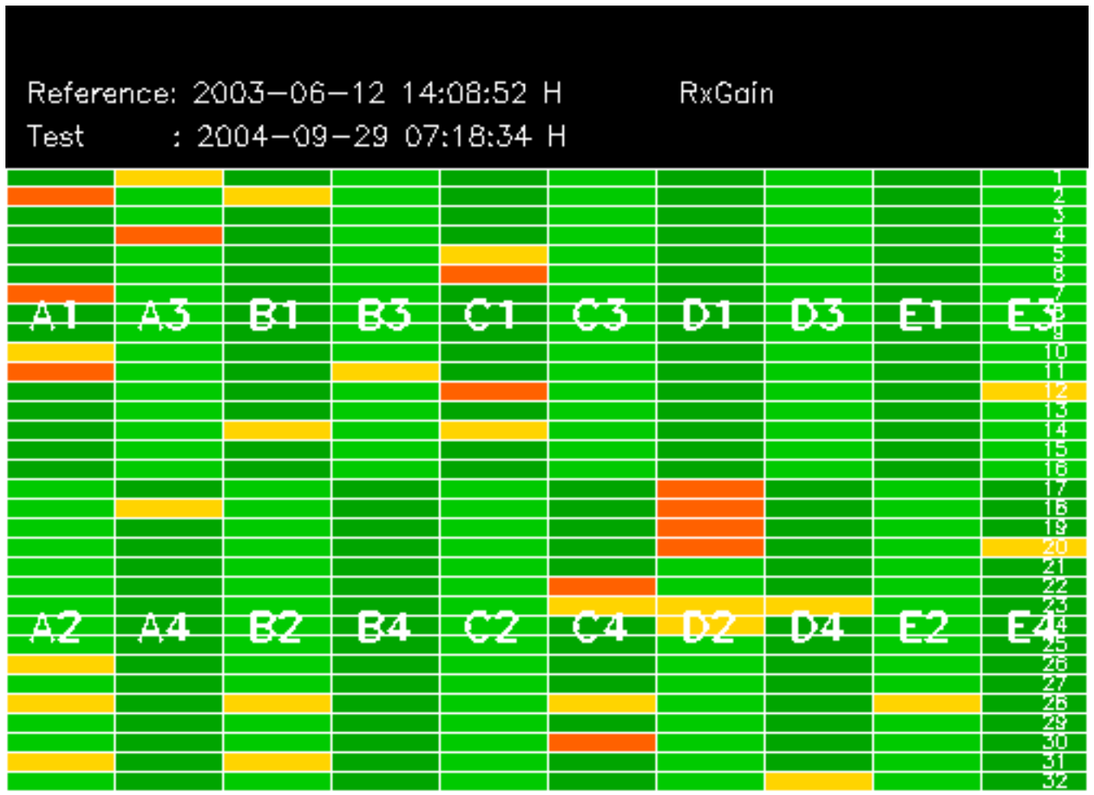

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −30.639676 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −33.498279 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 : 2004-09-29 07:18:34 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 : 2004-09-29 07:18:34 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 : 2004-09-28 04:28:59 V
RxGain
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
16
17
18
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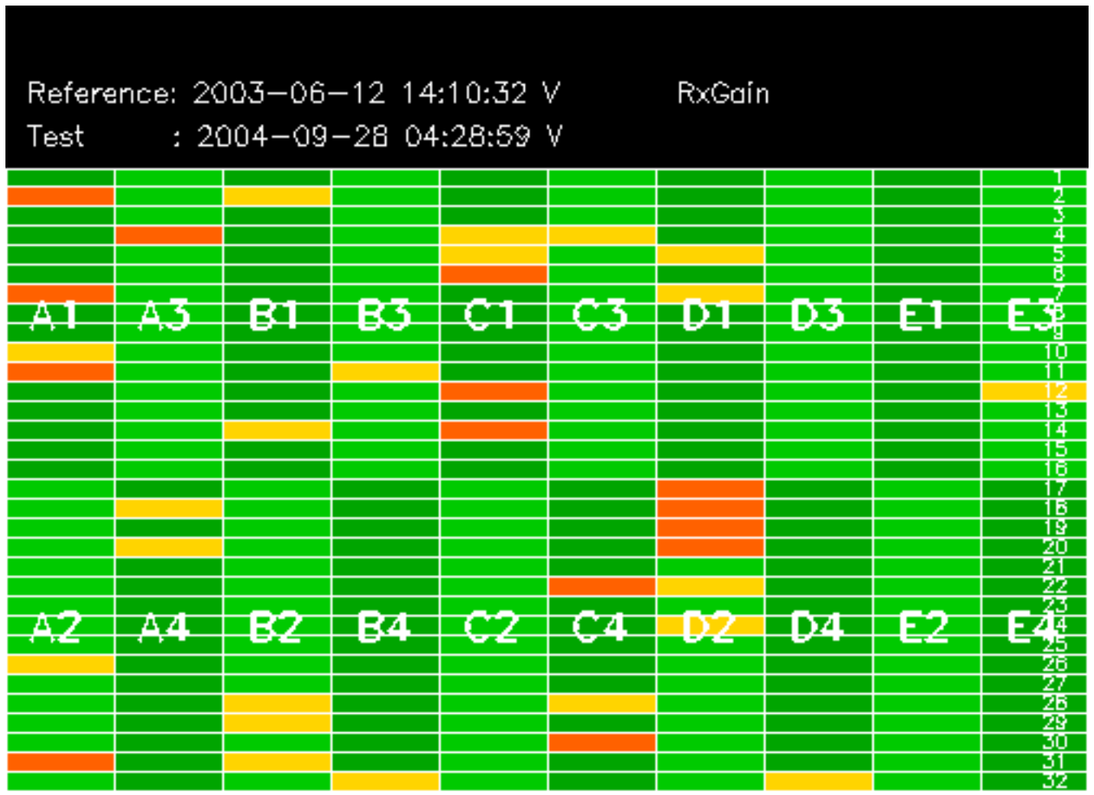
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-28 04:28:59 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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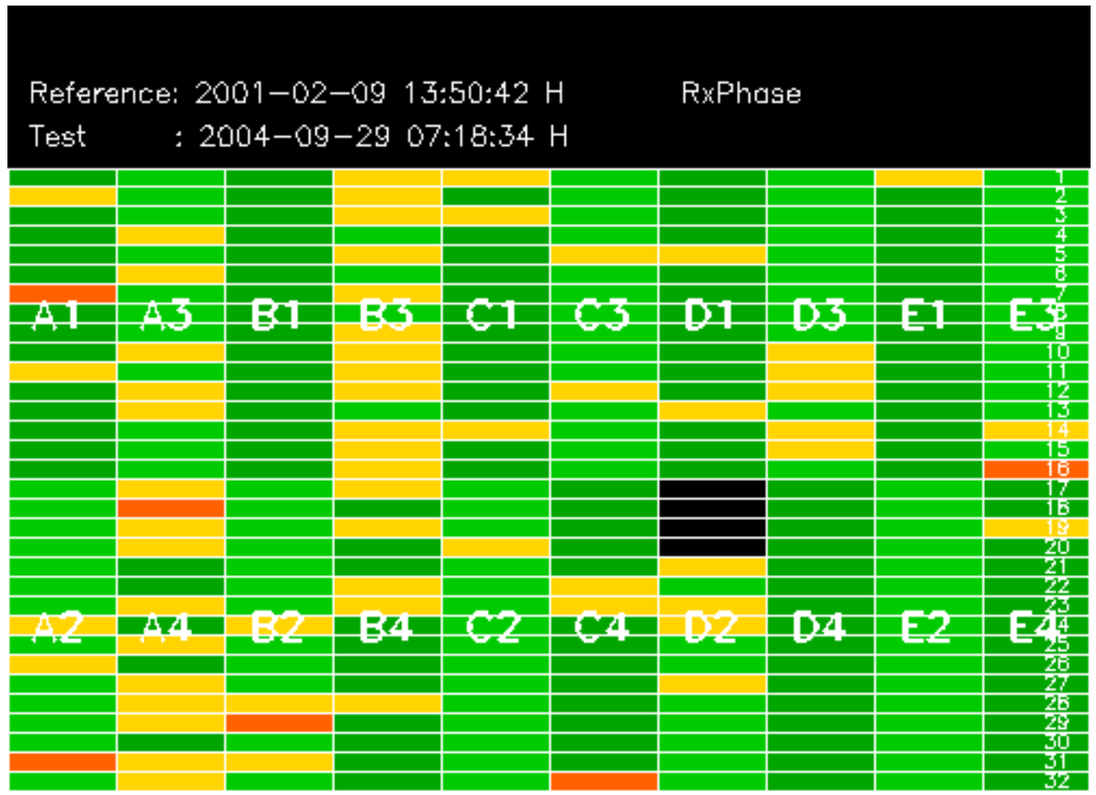
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-09-29 07:18:34 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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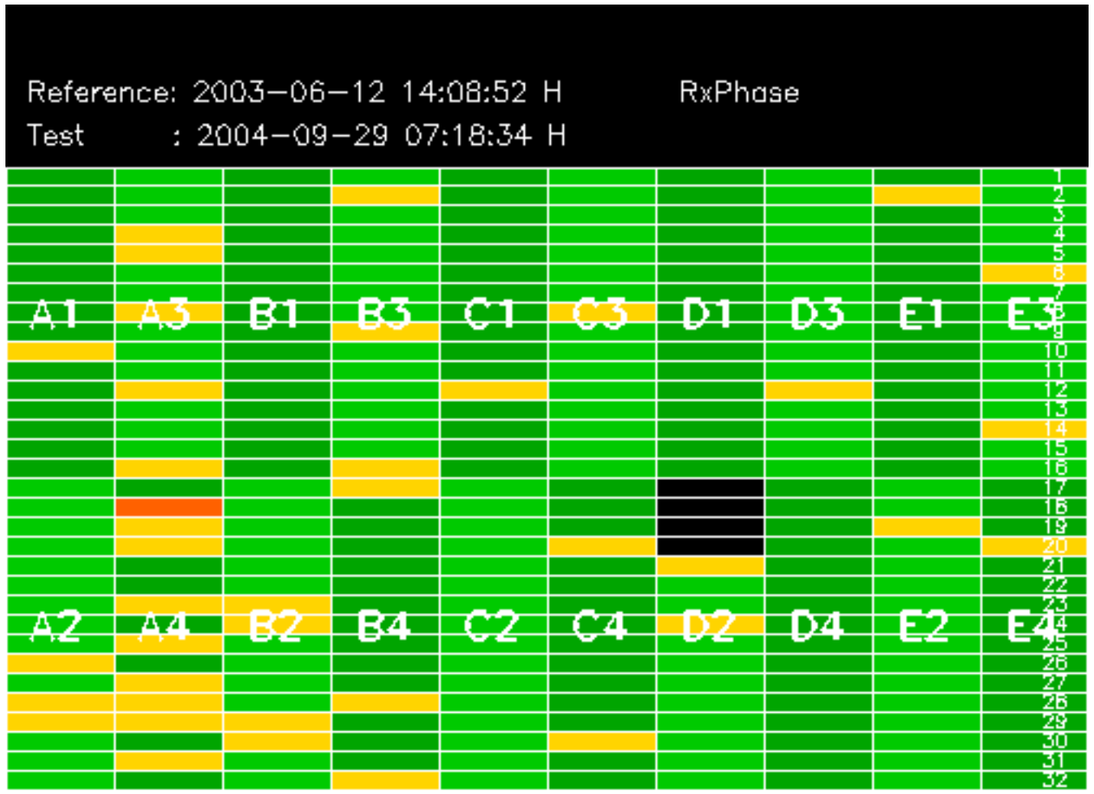
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-29 07:18:34 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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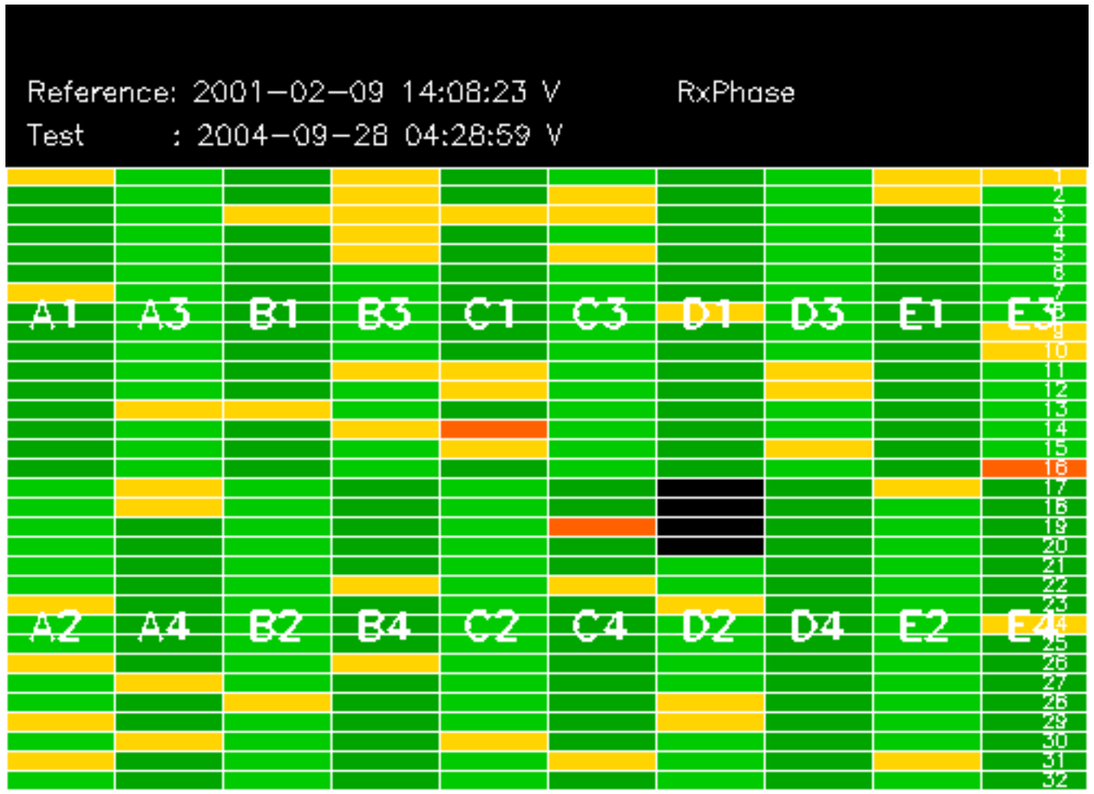
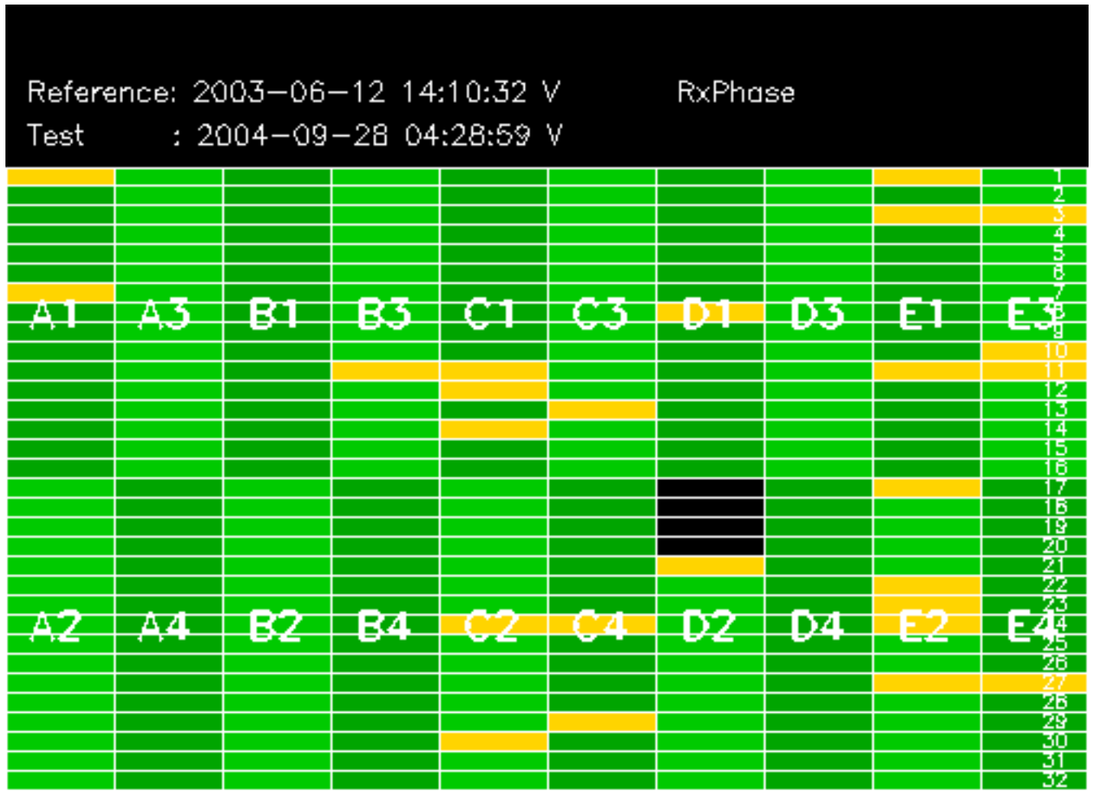

Reference: 2001-02-09 14:08:23 V
Test : 2004-09-28 04:28:59 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-28 04:28:59 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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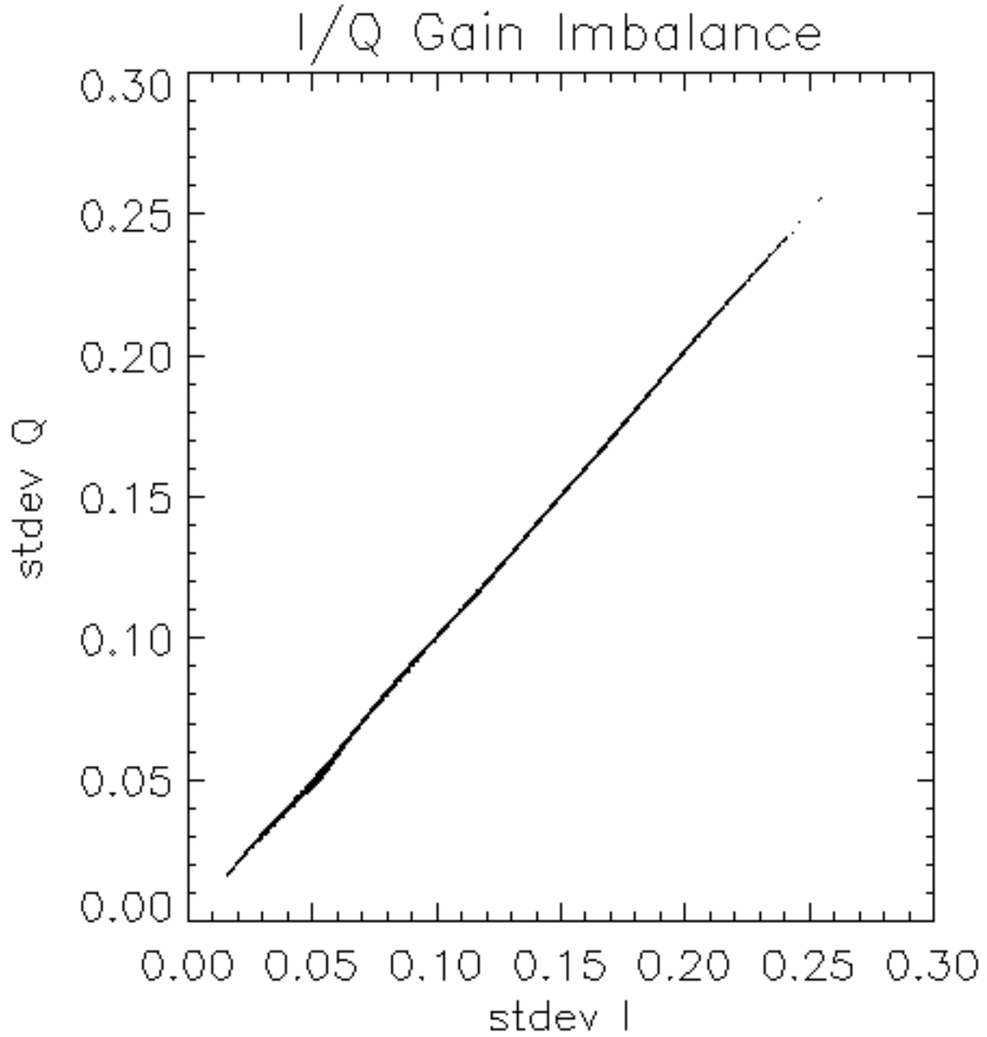
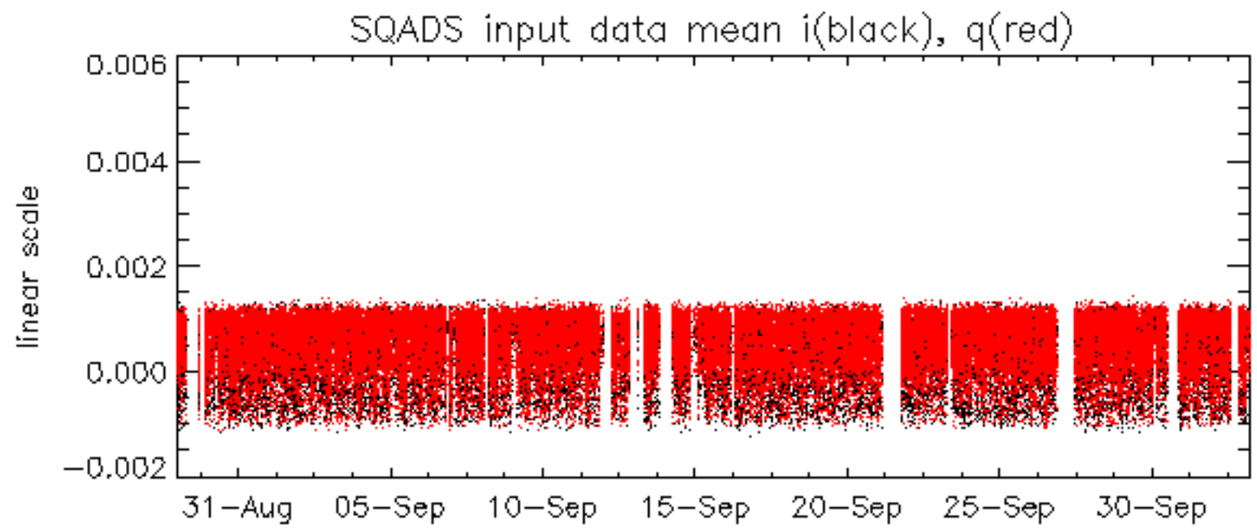
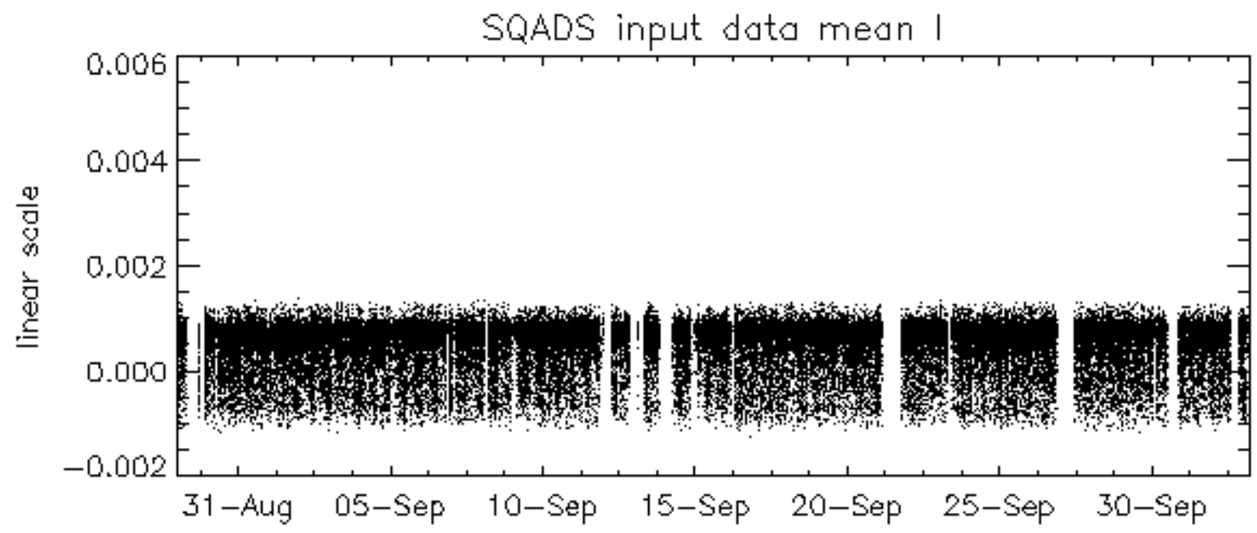
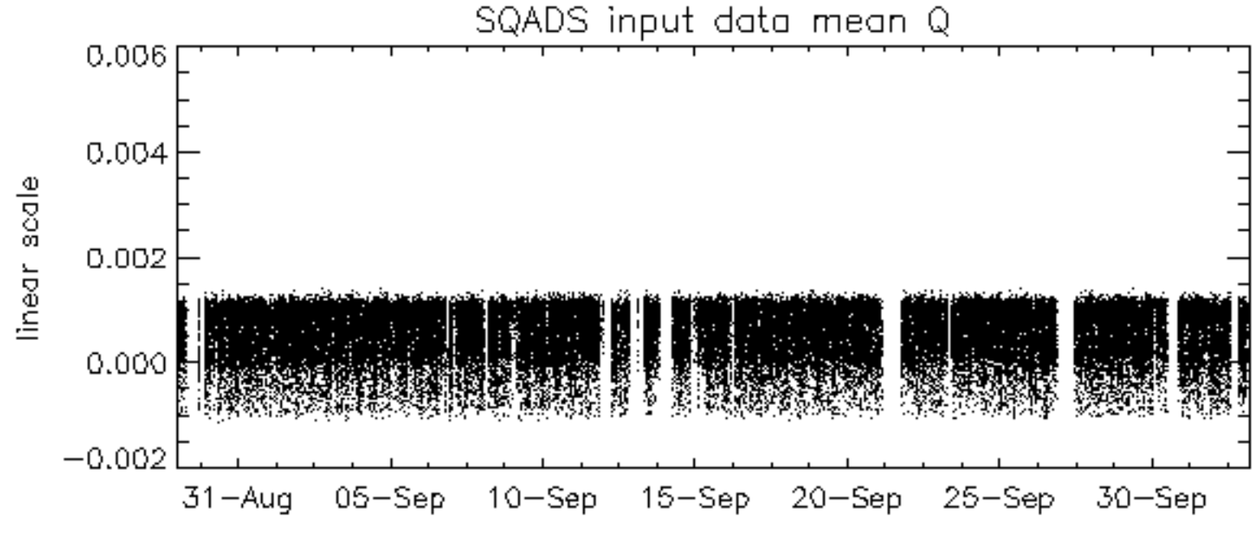
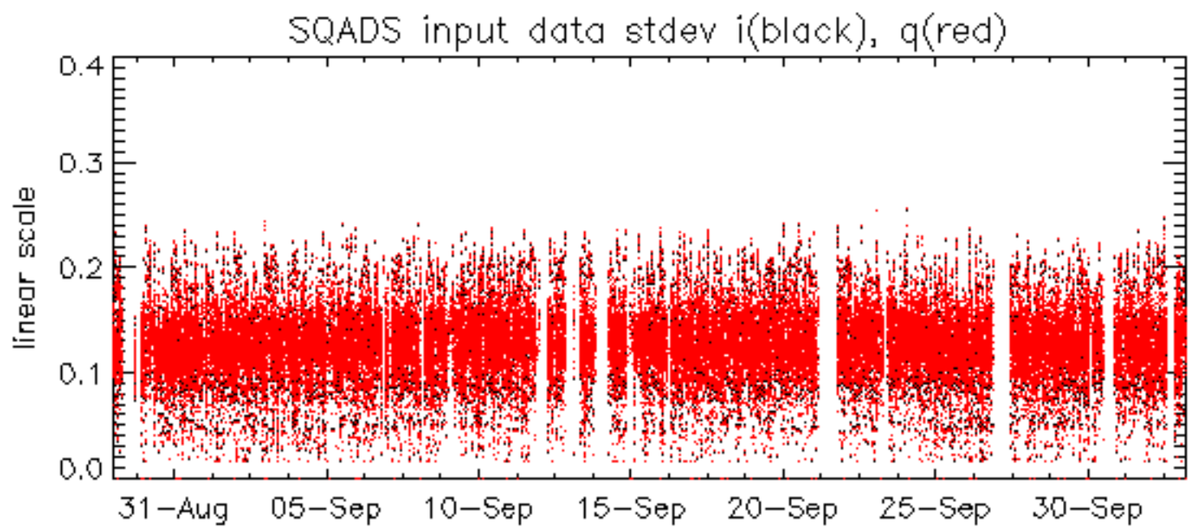
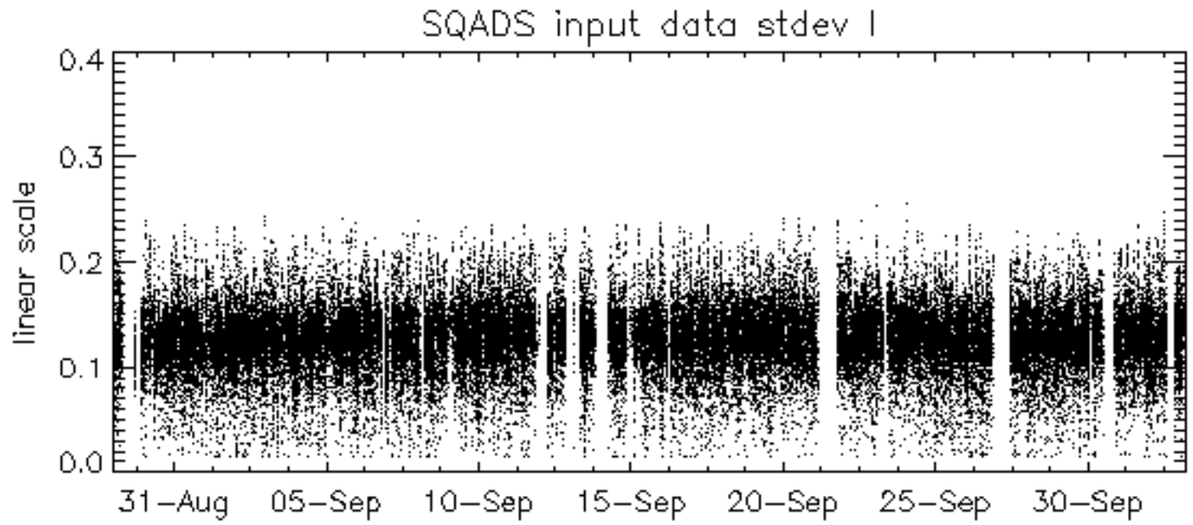

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

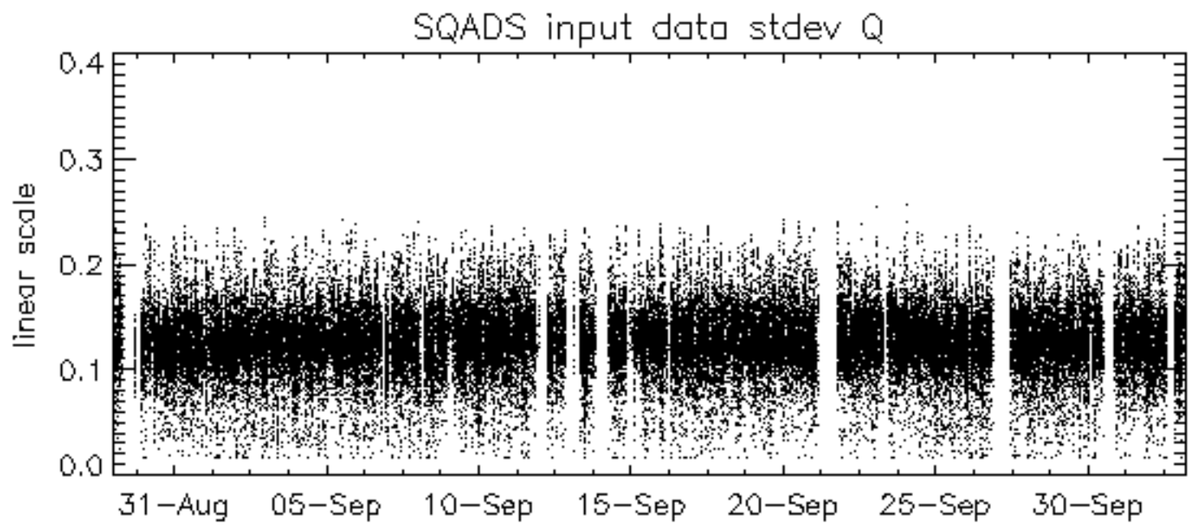

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
25−Sep
30−Sep

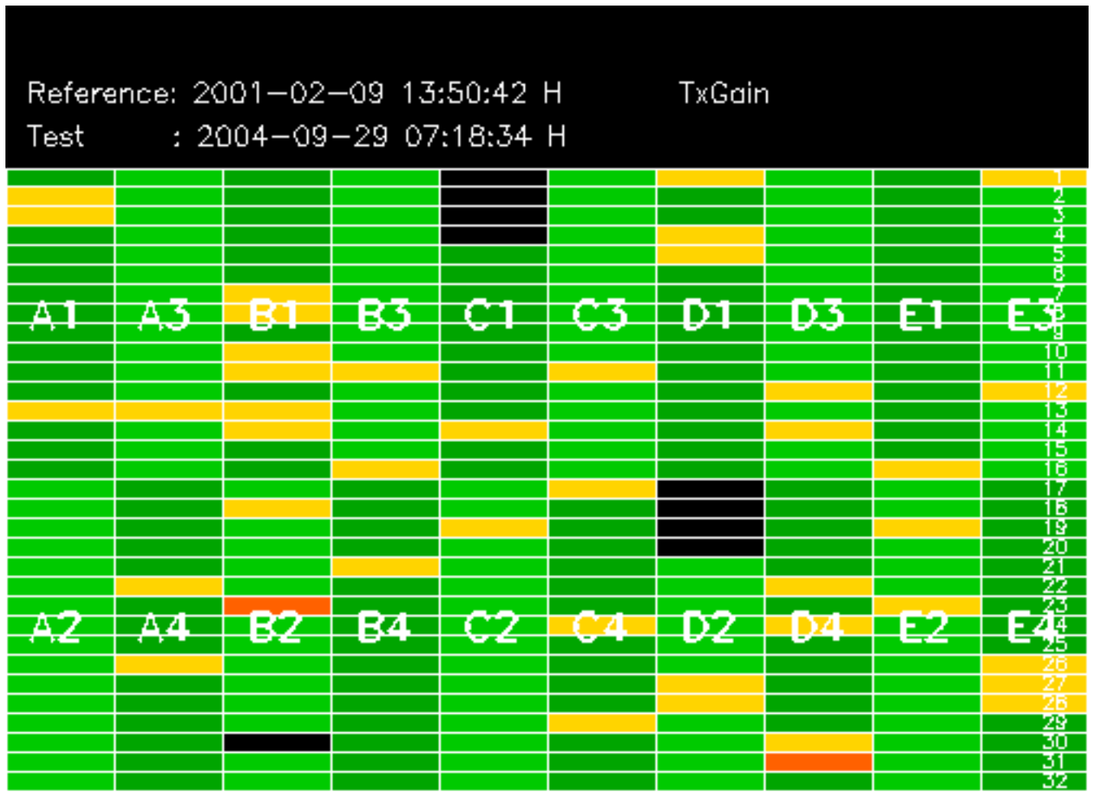

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
25−Sep
30−Sep


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-29 07:18:34 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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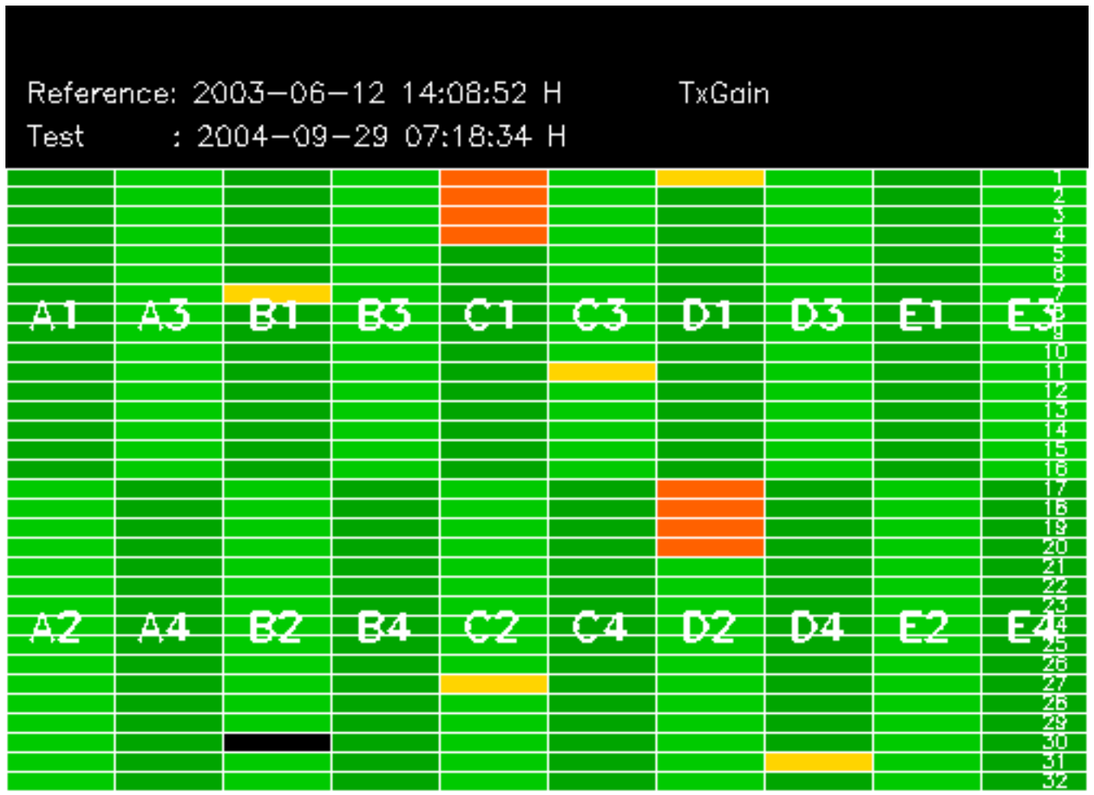
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-29 07:18:34 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-09-28 04:28:59 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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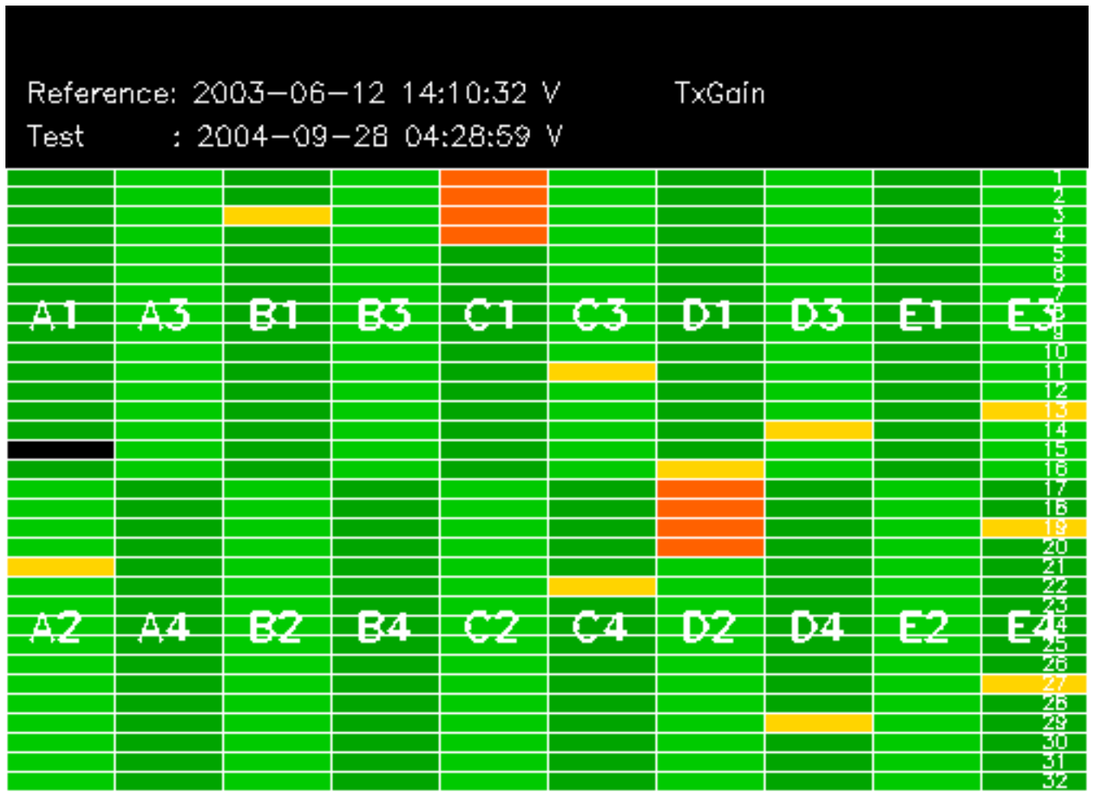
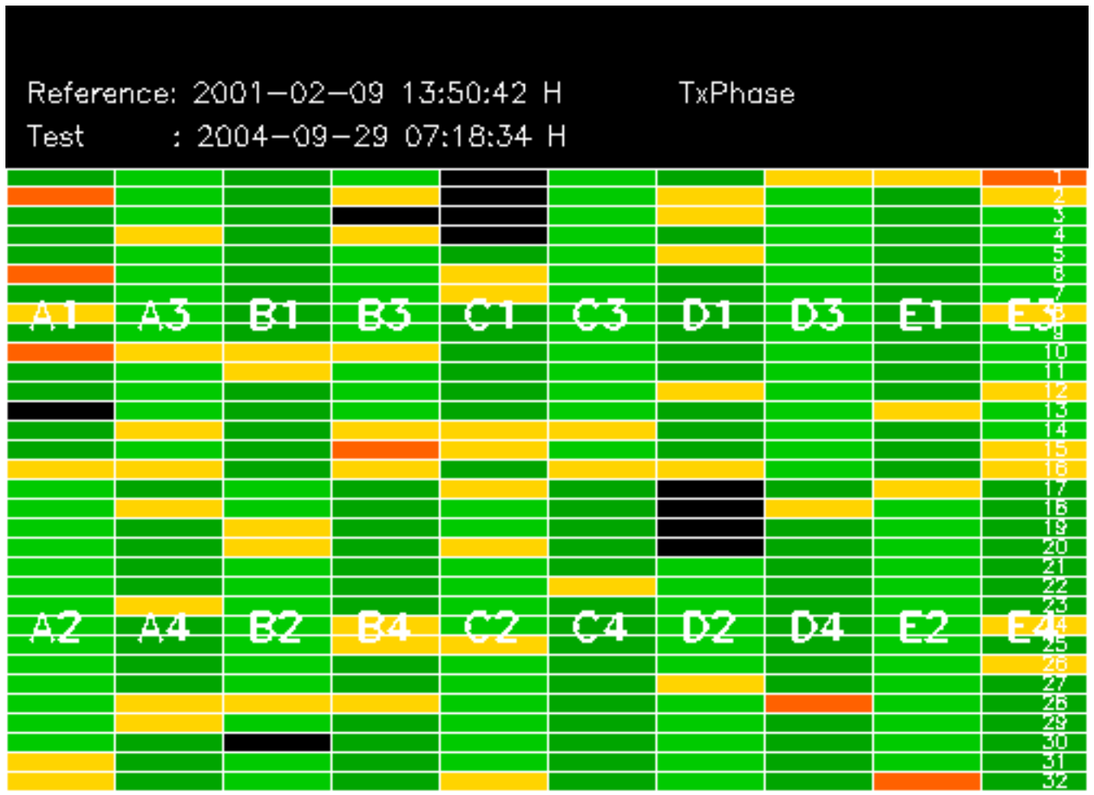
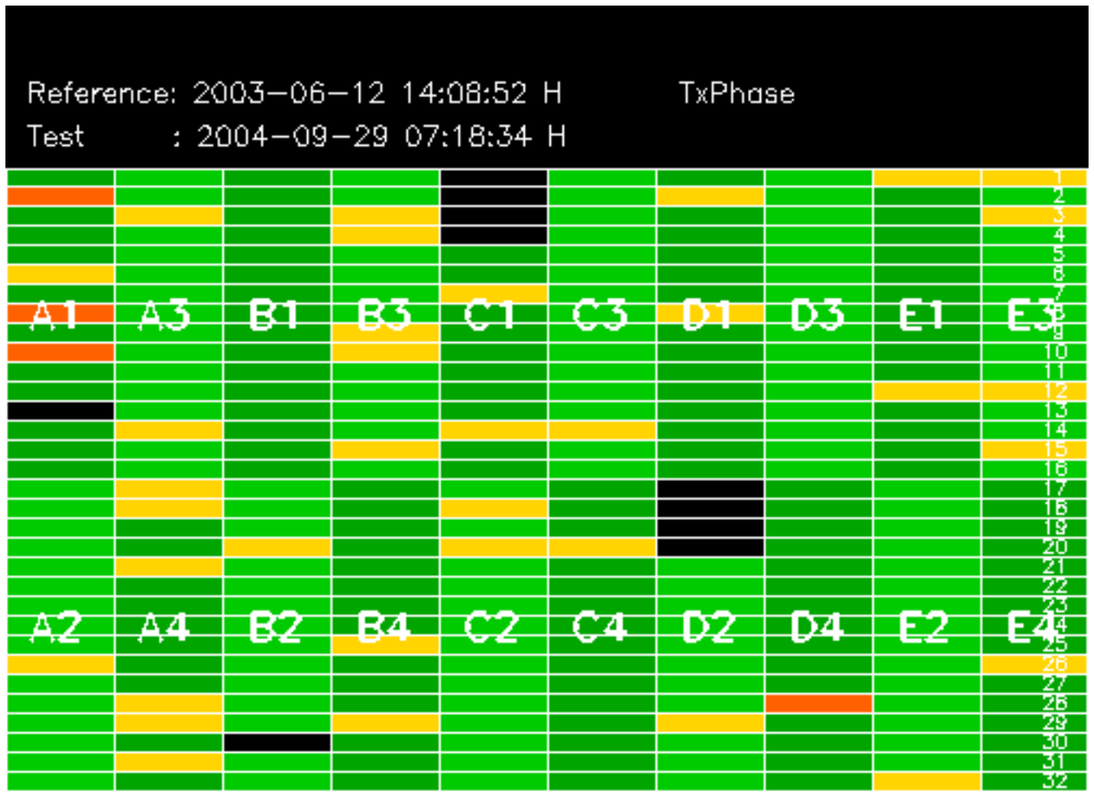

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-28 04:28:59 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-09-29 07:18:34 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 : 2004-09-29 07:18:34 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
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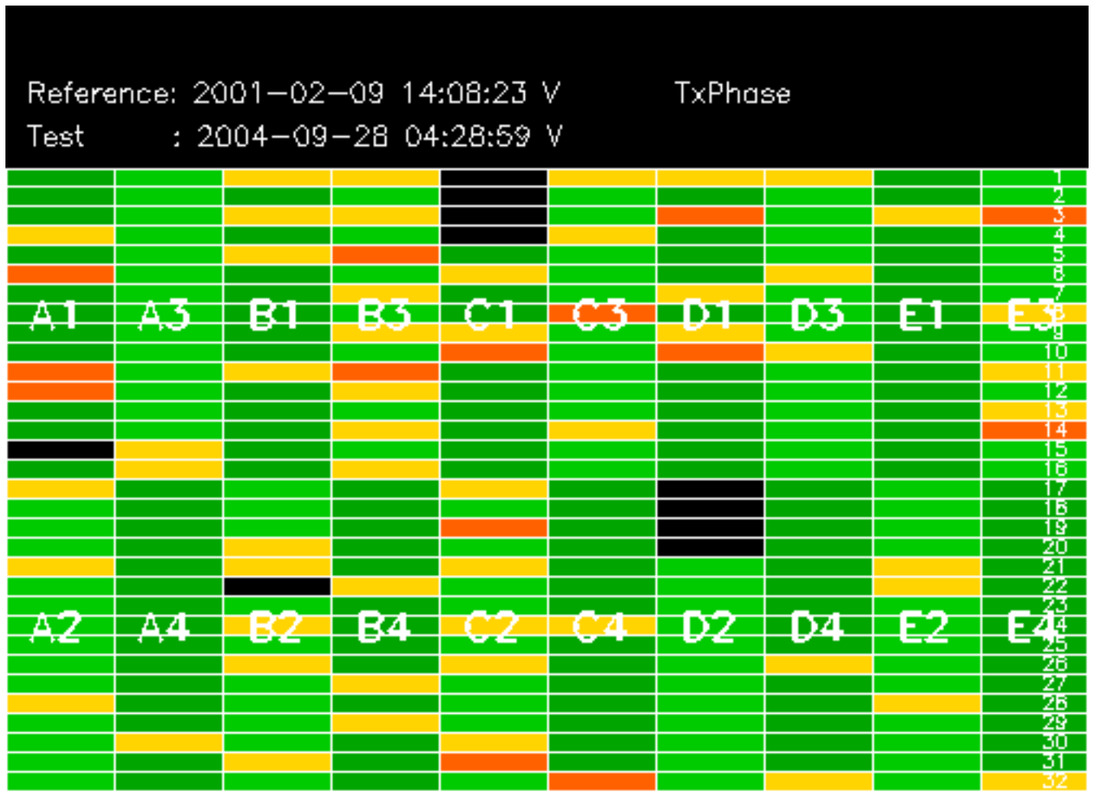
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-28 04:28:59 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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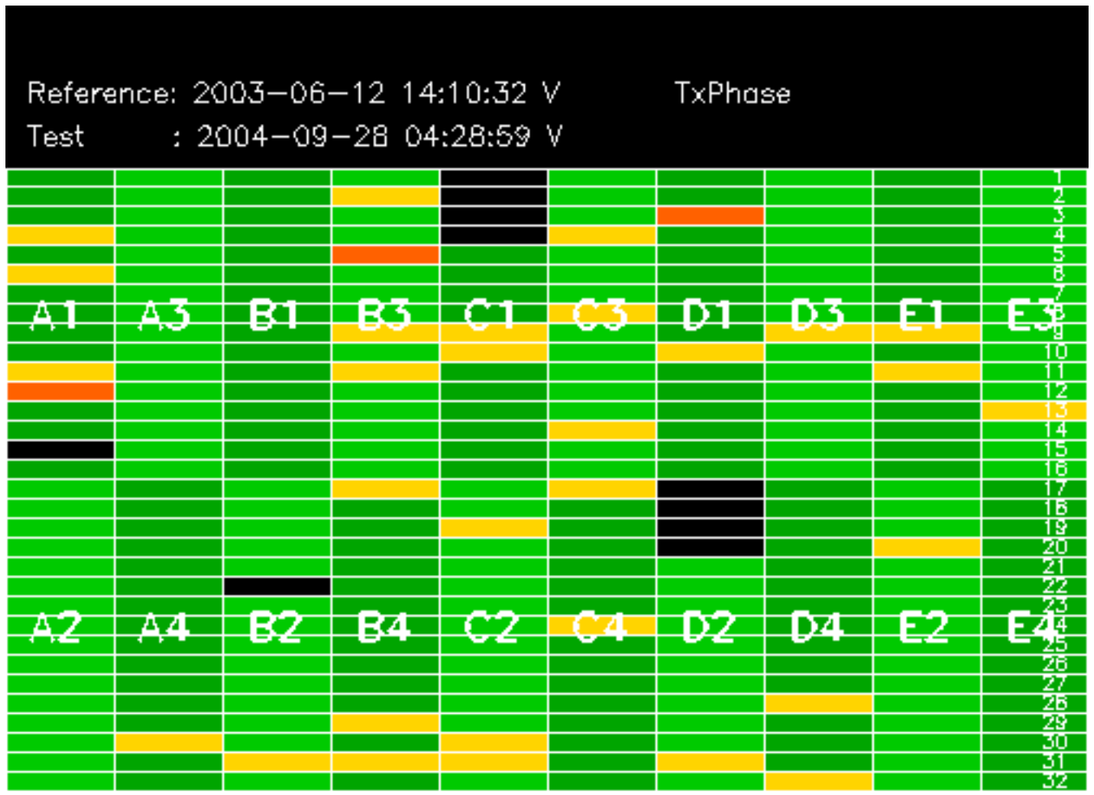
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-28 04:28:59 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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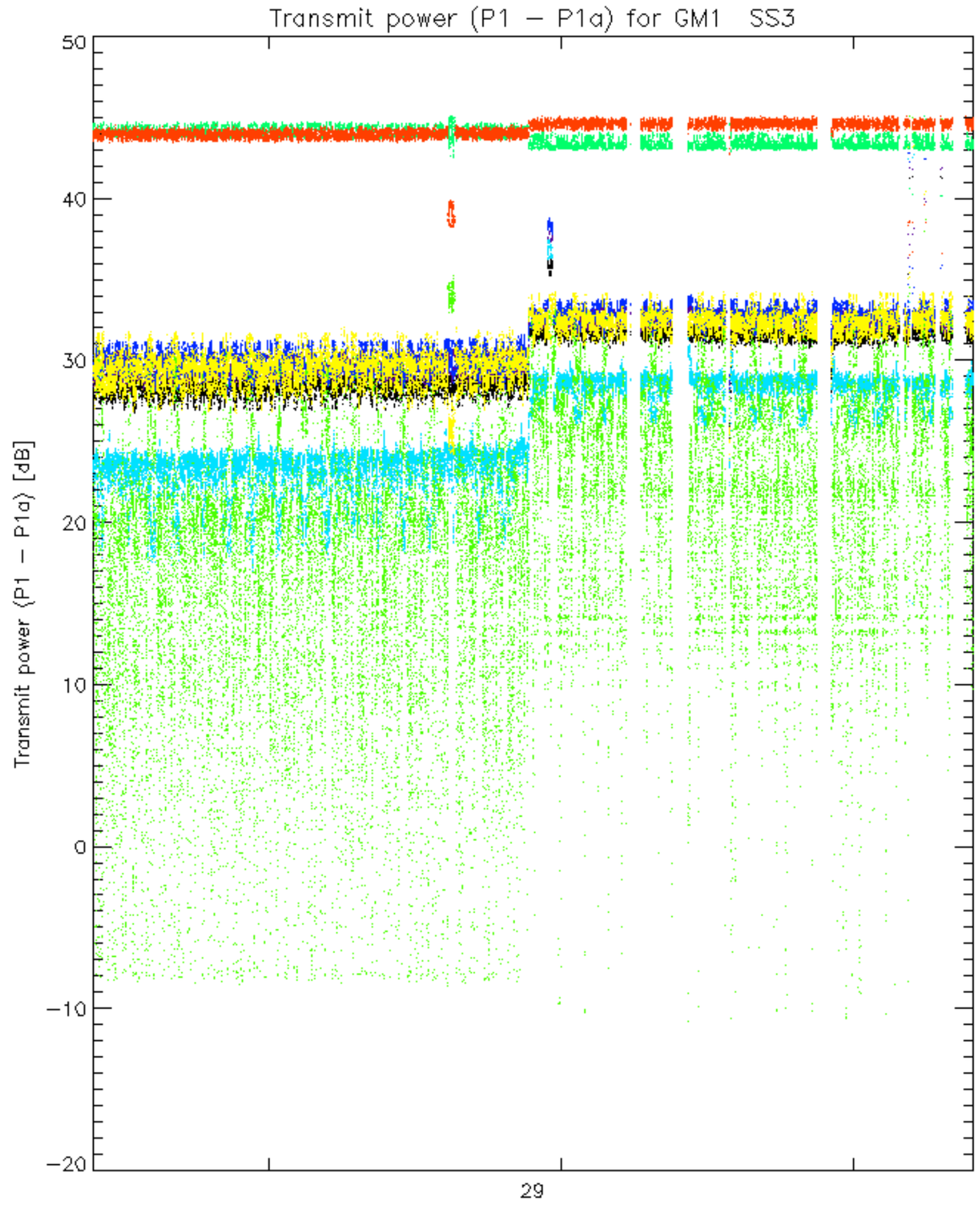
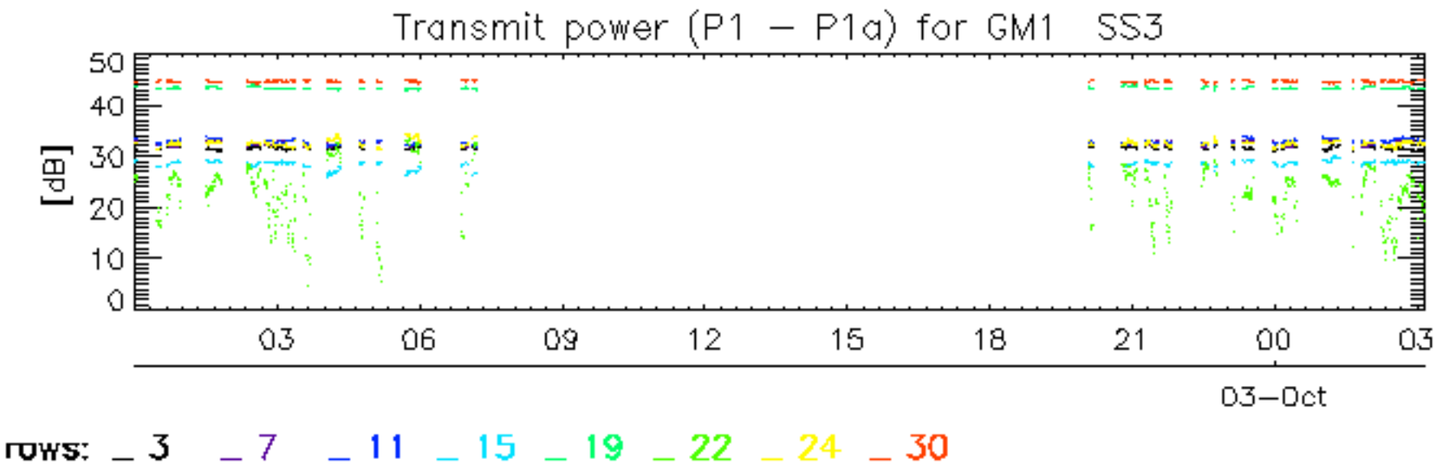
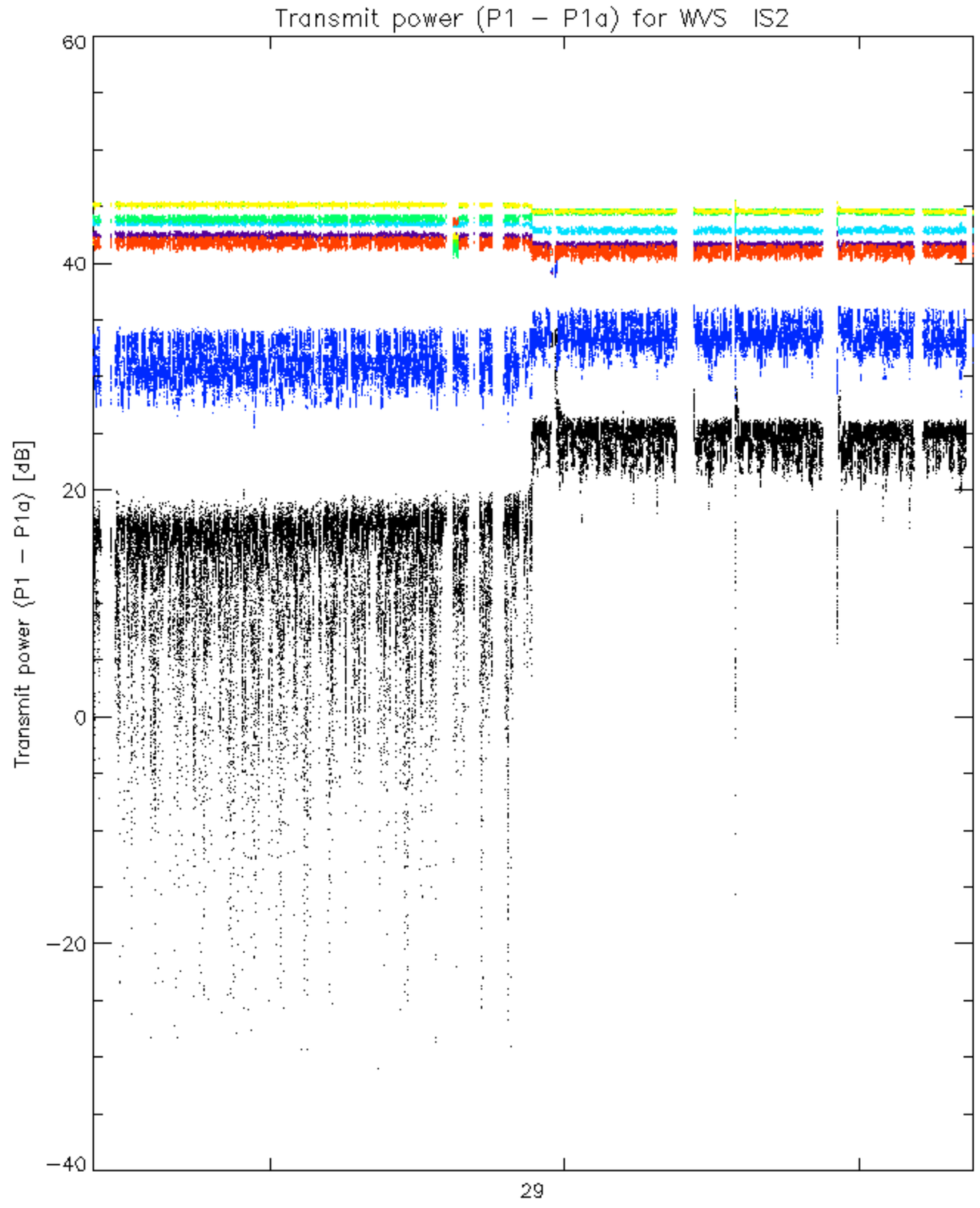
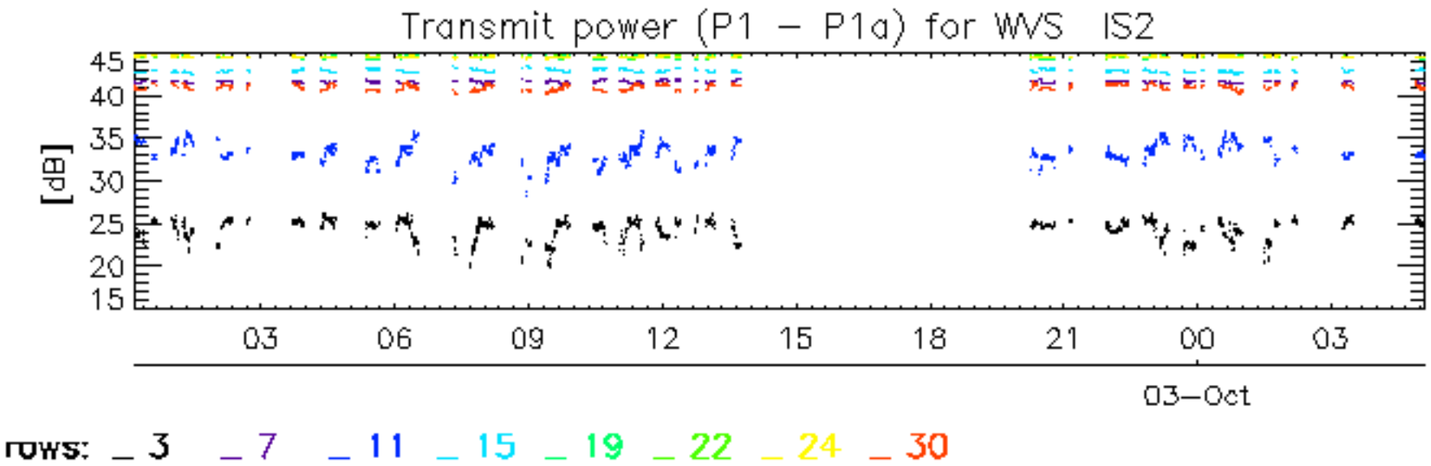

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
29
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
03
06
09
12
15
18
21
00
03
03–Oct
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
29
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
45
40
35
30
25
20
15
03
06
09
12
15
18
21
00
03
03–Oct
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.