PRELIMINARY REPORT OF 041030

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

last update on Sat Oct 30 10:50:48 GMT 2004

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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	20041029 063531
H	20041028 070708

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.

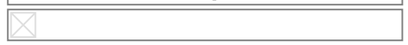
4.1 - Daily statistics

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	-3.475835	0.006815	-0.022059
7	P1	-3.350648	0.012249	-0.040132
11	P1	-4.616849	0.019281	0.057132
15	P1	-5.697688	0.033363	0.077596
19	P1	-3.553154	0.006205	-0.105793
22	P1	-4.566625	0.013899	-0.066206
24	P1	-4.965677	0.008996	0.030703
30	P1	-7.052608	0.016650	-0.033703

3	P1	-16.086931	0.091556	0.110781
7	P1	-14.039817	0.064406	0.002381
11	P1	-20.472614	0.212107	-0.386131
15	P1	-11.714150	0.034316	0.065288
19	P1	-14.015988	0.025832	-0.058583
22	P1	-16.170847	0.400953	-0.319067
24	P1	-14.591789	0.258431	-0.240541
30	P1	-18.032618	0.312394	0.066387

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.350803	0.089066	-0.082364
7	P2	-22.603607	0.123614	-0.046019
11	P2	-15.115955	0.118560	0.058870
15	P2	-7.108394	0.106397	-0.107649
19	P2	-9.654758	0.126214	-0.179881
22	P2	-17.273804	0.107144	0.039089
24	P2	-20.793140	0.090950	-0.042376
30	P2	-19.080528	0.084006	0.077492

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.183143	0.005829	-0.051896
7	P3	-8.183143	0.005829	-0.051900
11	P3	-8.183143	0.005829	-0.051898
15	P3	-8.183141	0.005829	-0.051906
19	P3	-8.183142	0.005829	-0.051905
22	P3	-8.183143	0.005829	-0.051905
24	P3	-8.183140	0.005829	-0.051910
30	P3	-8.183123	0.005831	-0.051743

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	-2.818402	0.014141	0.041689
7	P1	-2.972106	0.049558	0.091572
11	P1	-3.892276	0.022408	-0.030859
15	P1	-3.491510	0.023540	0.004497
19	P1	-3.554908	0.013675	-0.121972
22	P1	-5.651672	0.061181	0.090827
24	P1	-3.972573	0.022615	-0.008052
30	P1	-6.224074	0.047681	-0.112594
3	P1	-10.735935	0.095142	0.465715
7	P1	-10.073551	0.170954	0.087754
11	P1	-12.281535	0.127893	-0.217127
15	P1	-11.683519	0.073791	0.005846
19	P1	-15.599643	0.061109	-0.067872
22	P1	-23.692190	1.558089	-0.413184
24	P1	-18.146603	0.231108	-0.051068
30	P1	-20.339933	1.078768	0.393588

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.030006	0.048233	-0.107955
7	P2	-22.691645	0.064211	0.007837
11	P2	-10.870103	0.047652	-0.030665
15	P2	-5.010616	0.030049	-0.096064
19	P2	-6.866479	0.043934	-0.235455
22	P2	-7.390501	0.039866	0.003725
24	P2	-11.130352	0.053883	-0.134299
30	P2	-22.101715	0.037320	0.012110

P3 Cyclic statistics

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

3	P3	-8.025978	0.003735	-0.048393
7	P3	-8.025910	0.003738	-0.048297
11	P3	-8.025993	0.003726	-0.048003
15	P3	-8.025940	0.003726	-0.048045
19	P3	-8.025936	0.003728	-0.048100
22	P3	-8.025950	0.003728	-0.048156
24	P3	-8.026103	0.003746	-0.048433
30	P3	-8.025984	0.003737	-0.048161

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	0.000476203
	stdev	2.15497e-07
MEAN Q	mean	0.000550618
	stdev	2.33941e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127009
	stdev	0.000924935

STDEV Q	mean	0.127223
	stdev	0.000933837

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

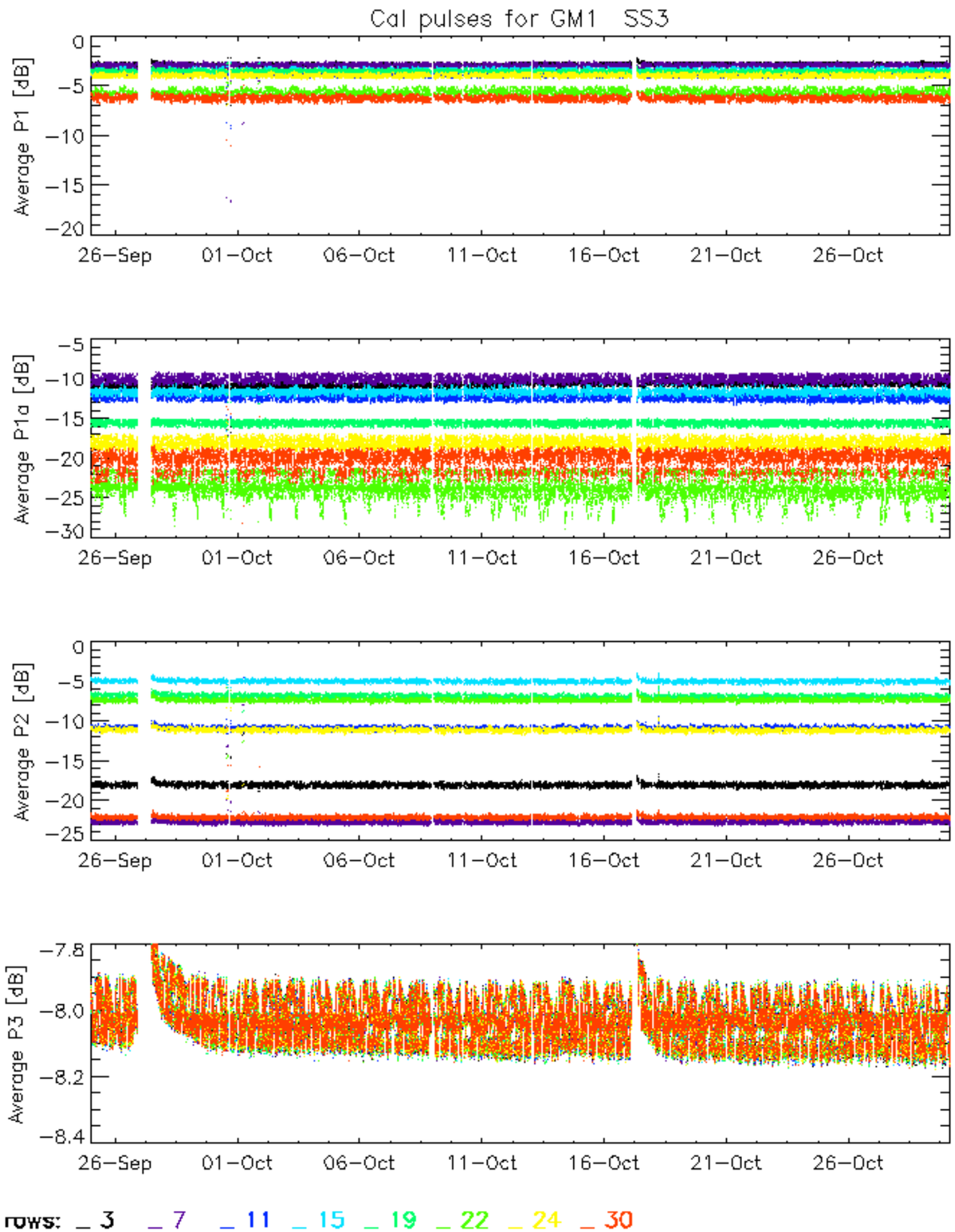
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

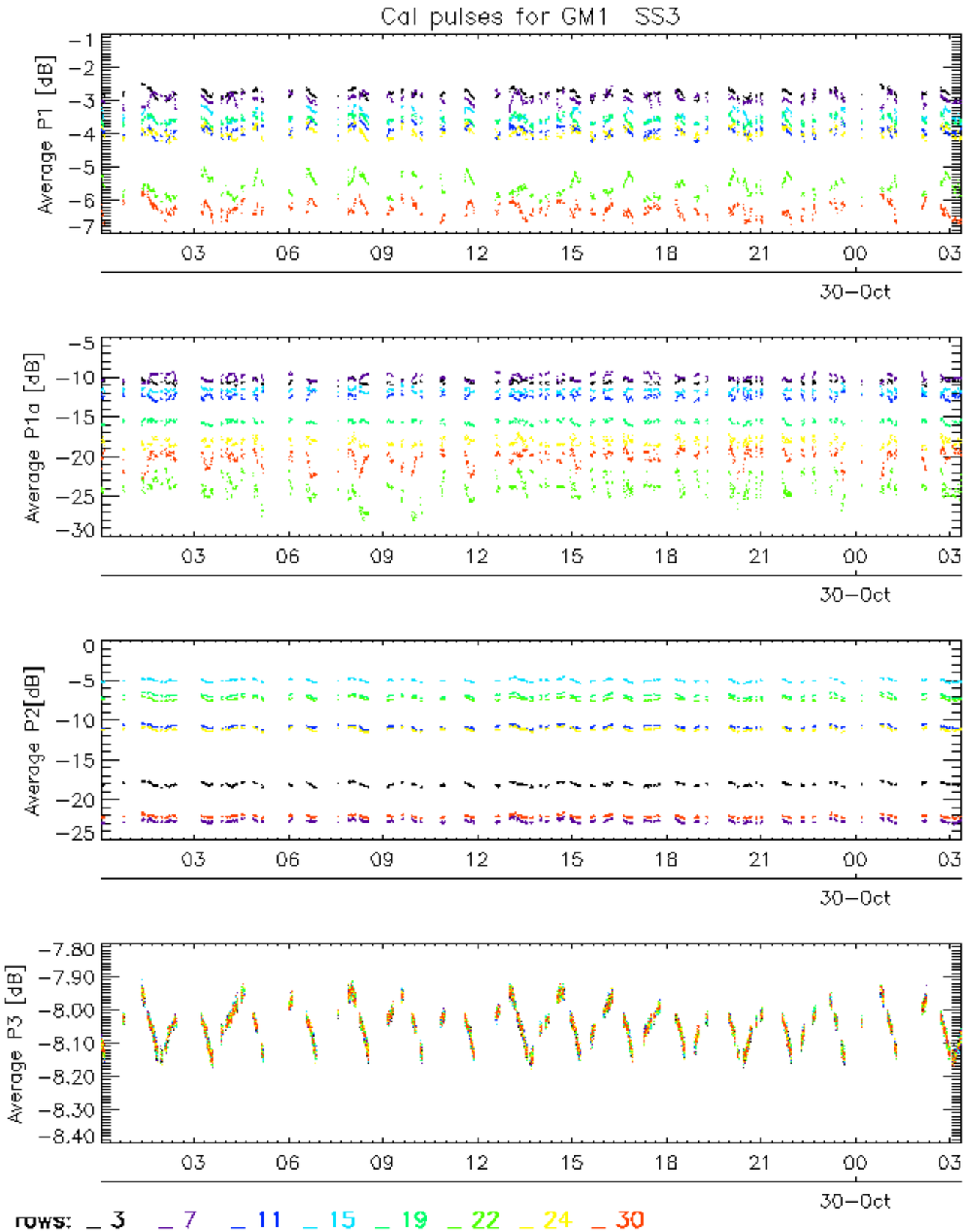
6.5 - Absolute Doppler for GM1

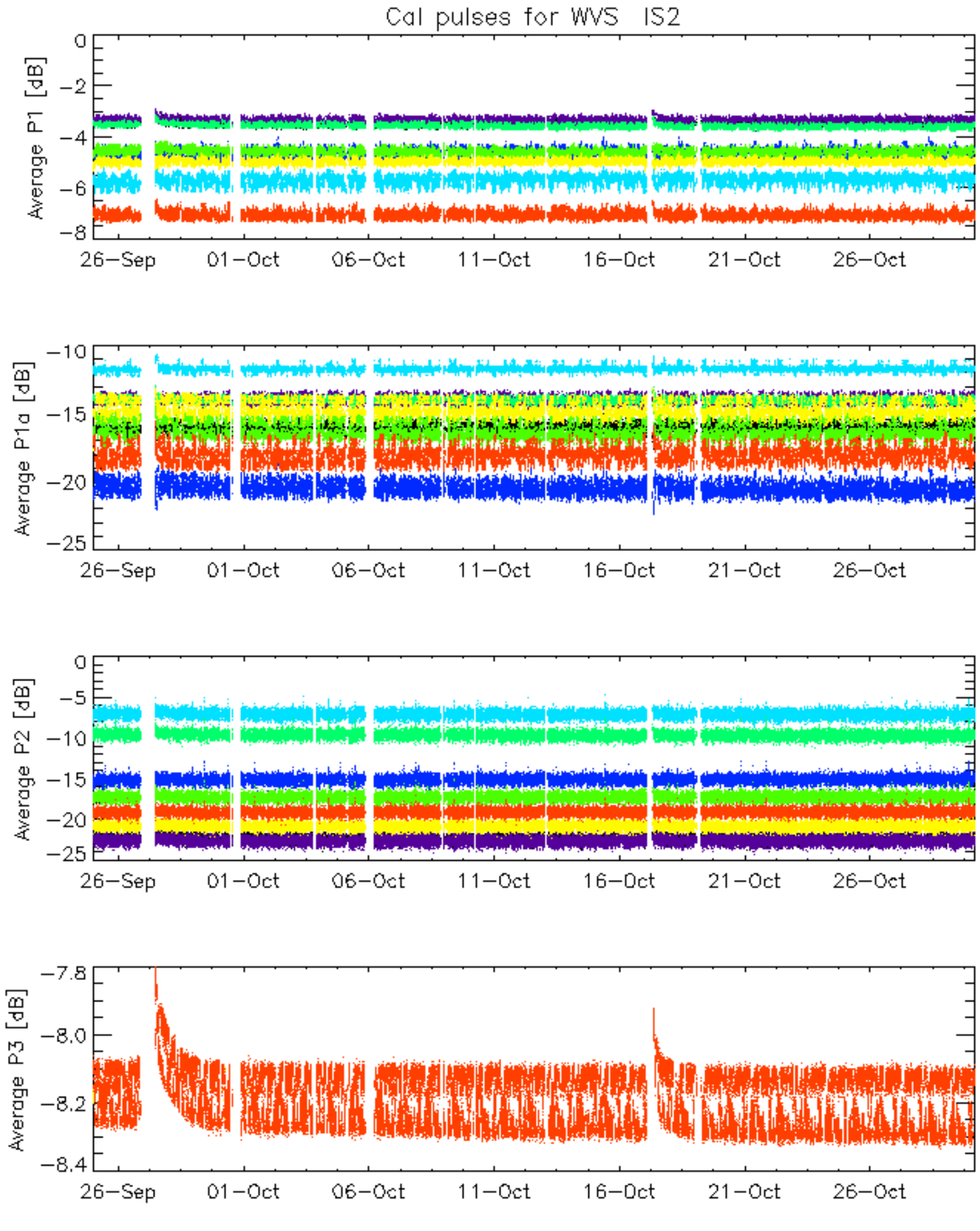
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

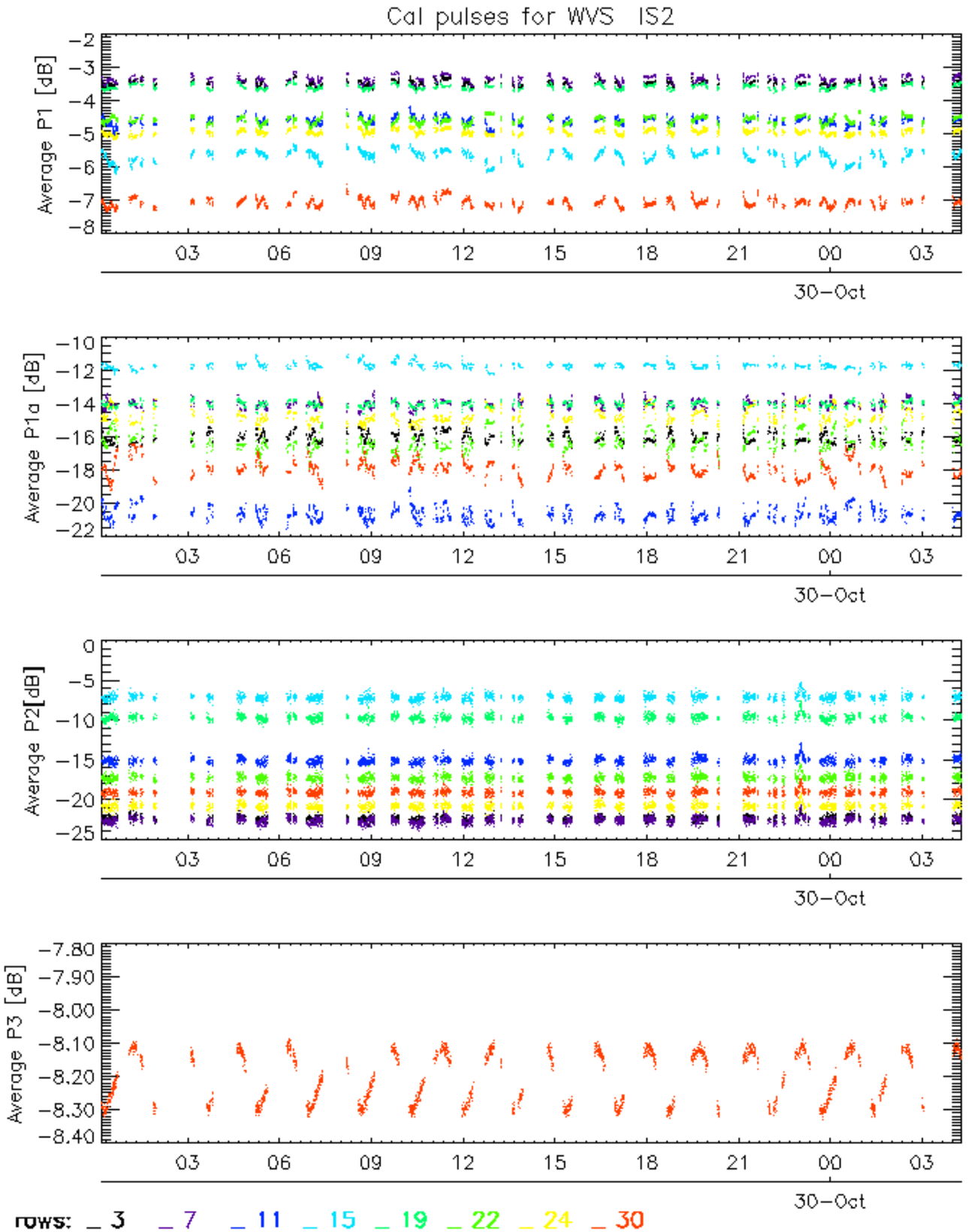
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

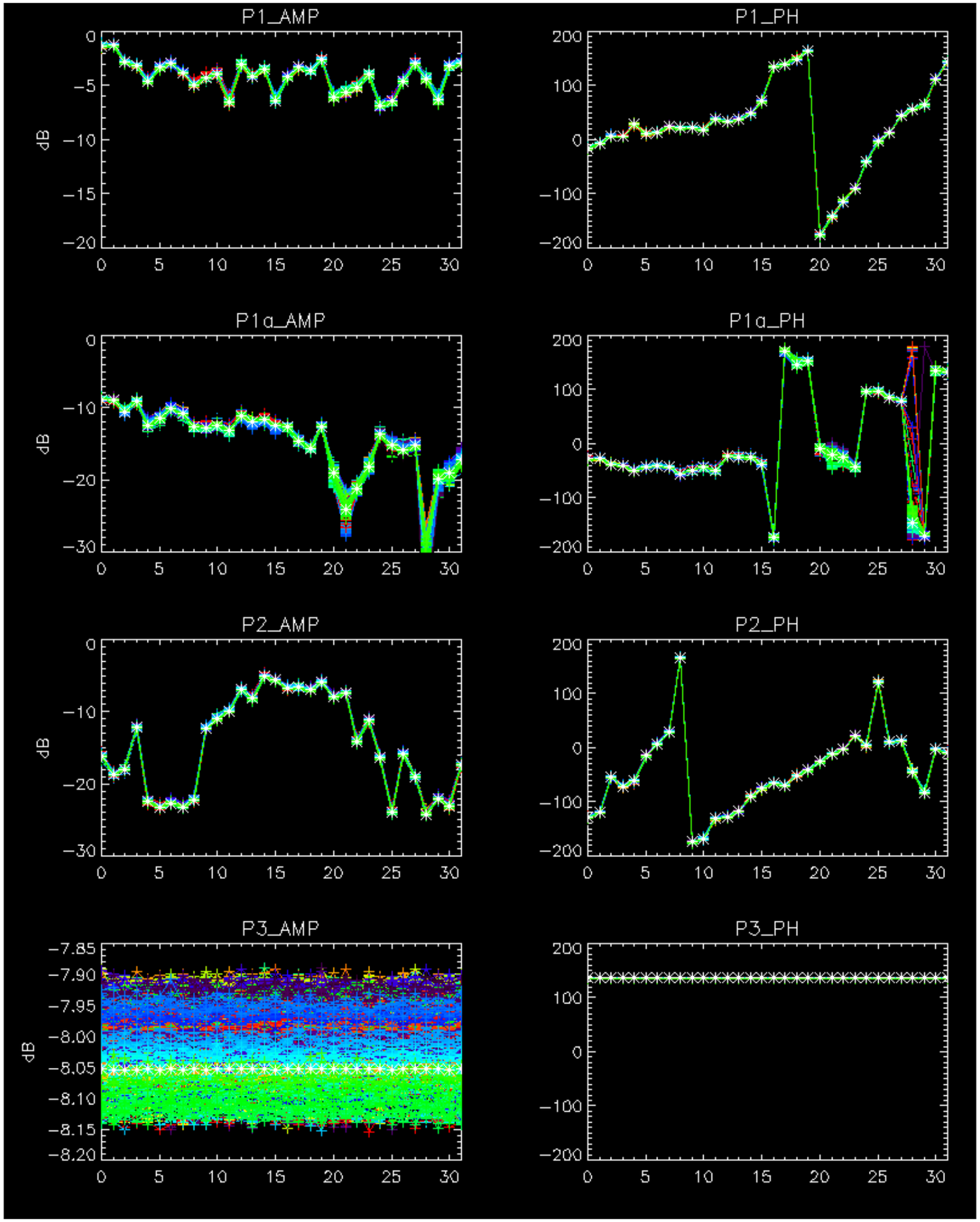

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

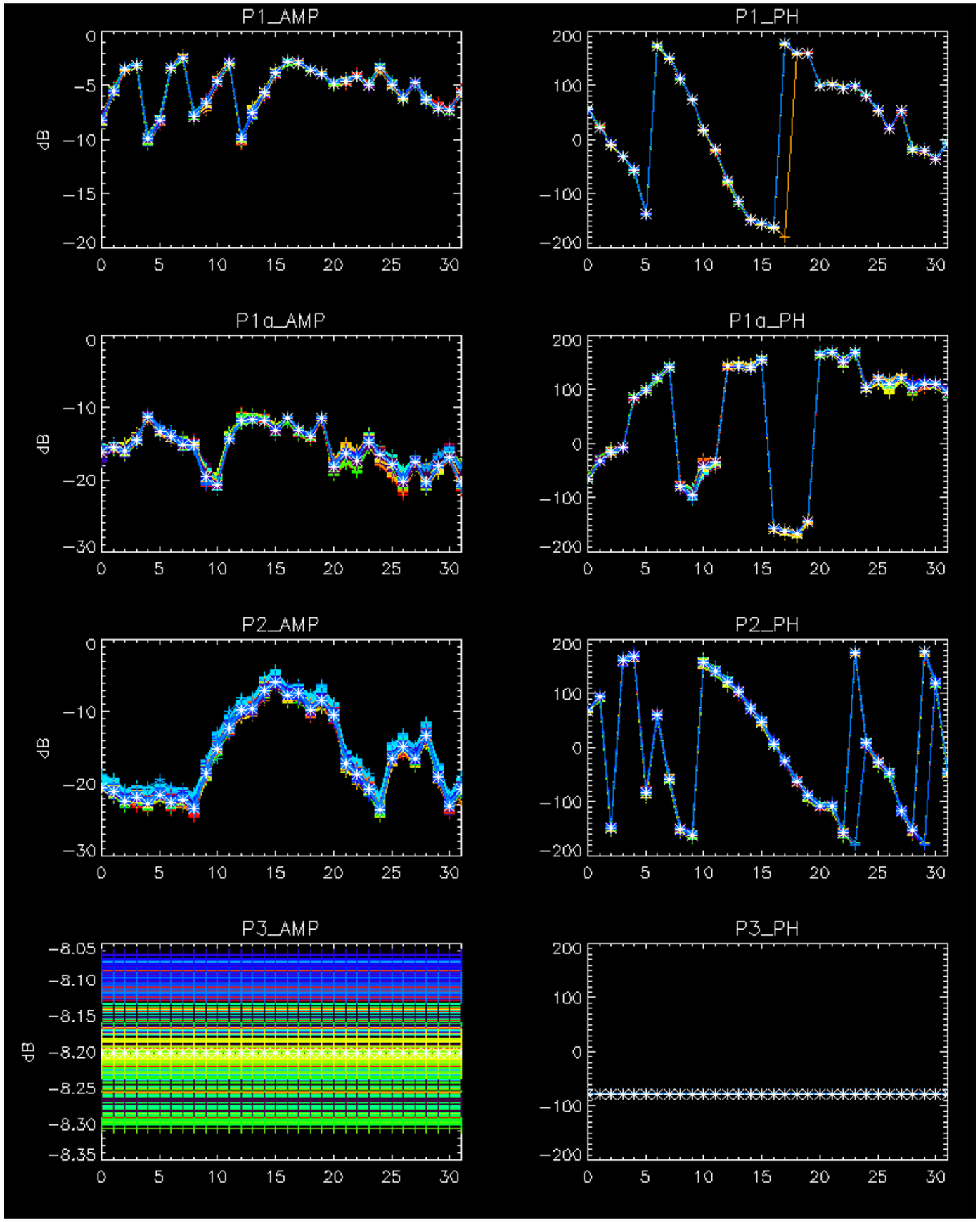

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
30−Oct
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
30−Oct
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
30−Oct
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
Average P1a [dB]
−10
−15
−20
−25
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
30−Oct
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
30−Oct
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
30−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
30−Oct
rows: 3 7 11 15 19 22 24 30

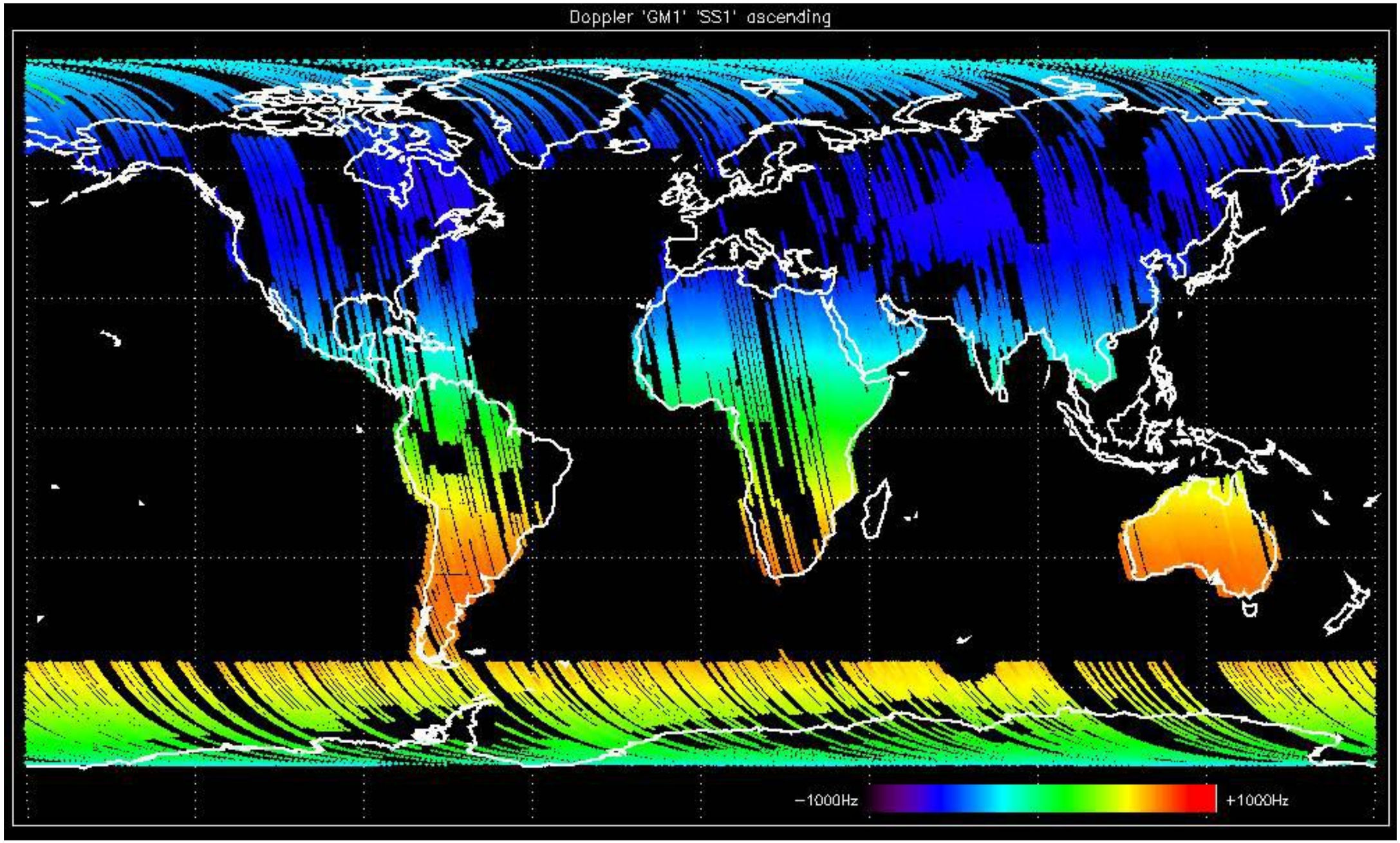
No anomalies observed.

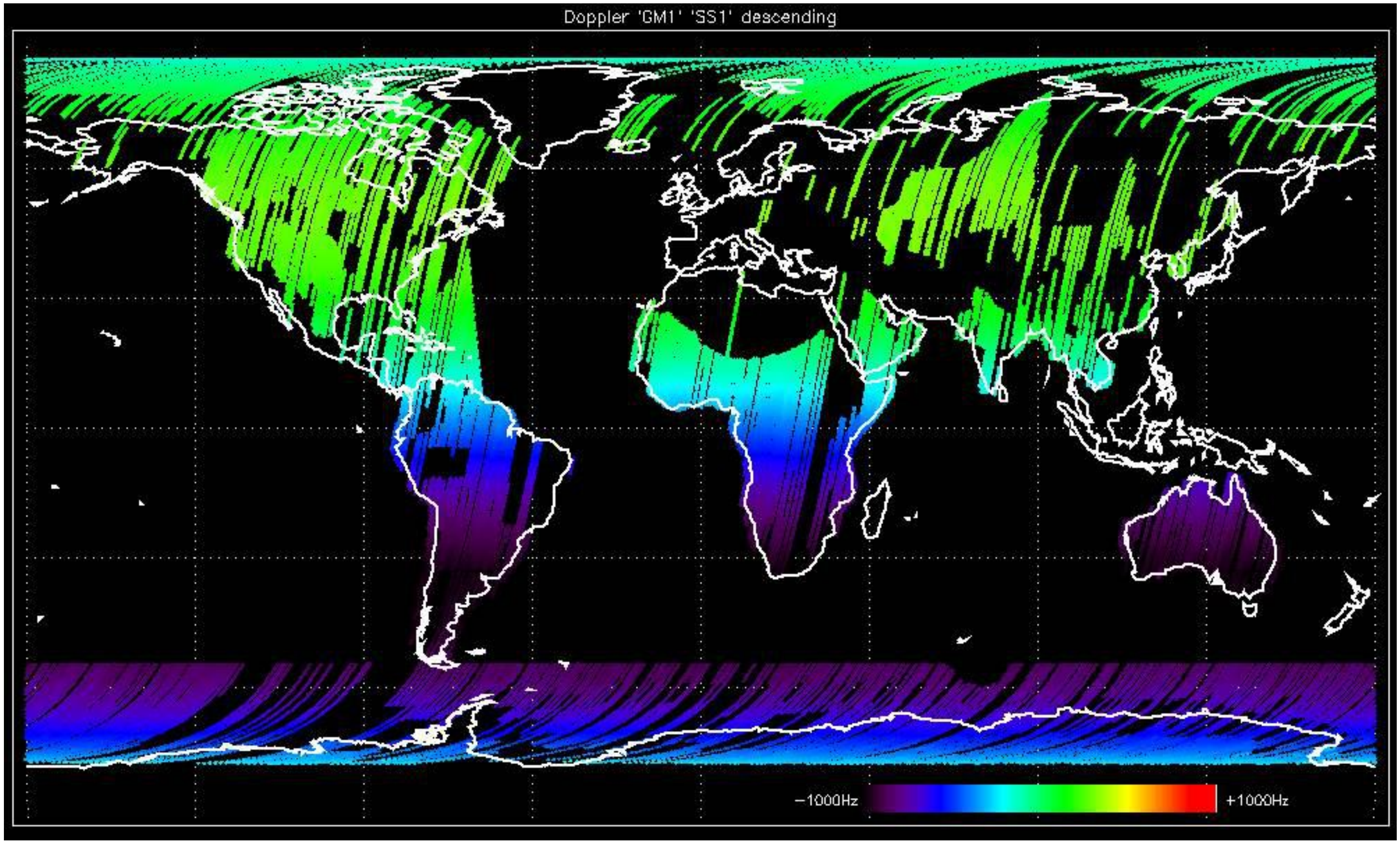

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
−8.15
−8.20
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

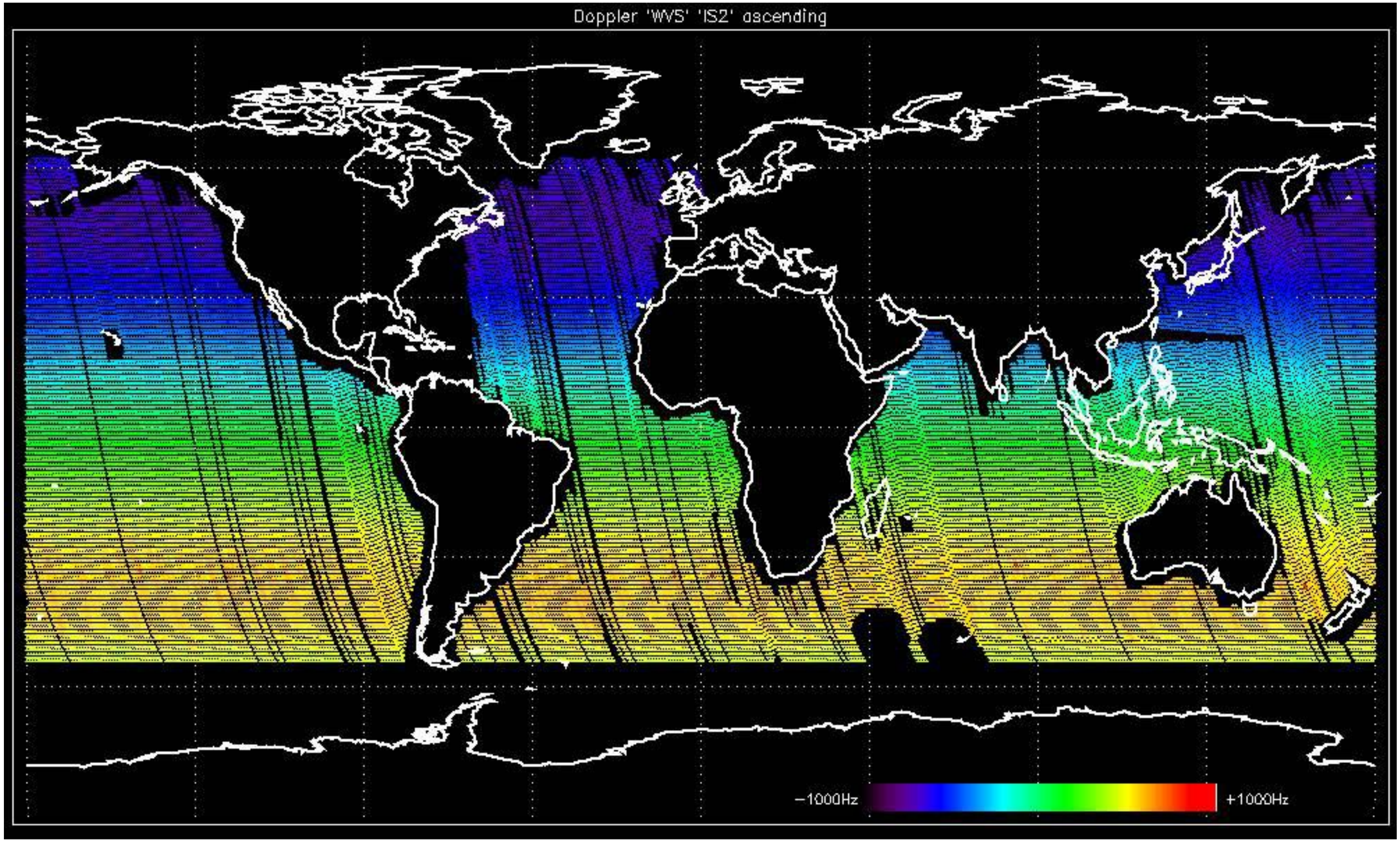

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
−8.35
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

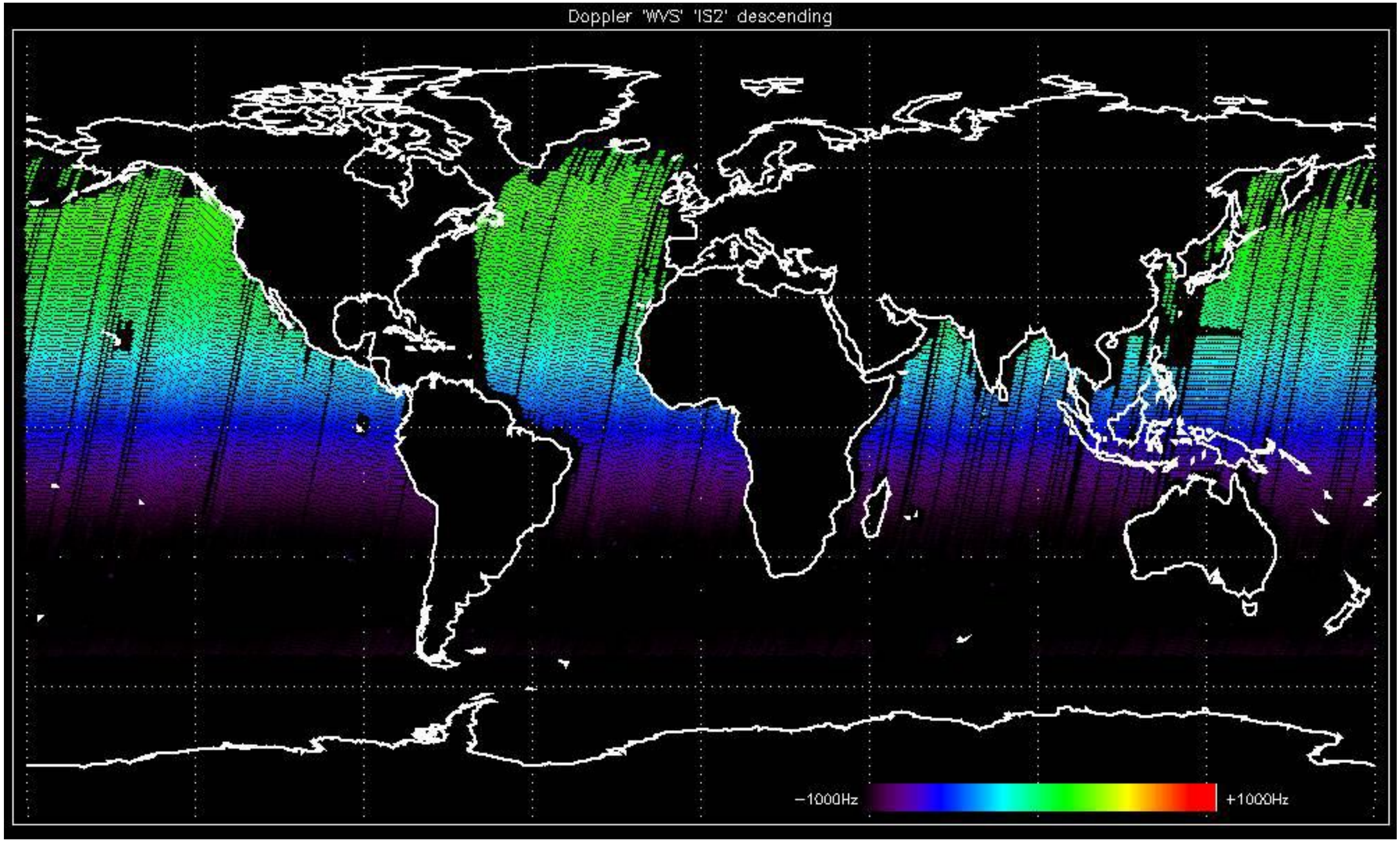
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

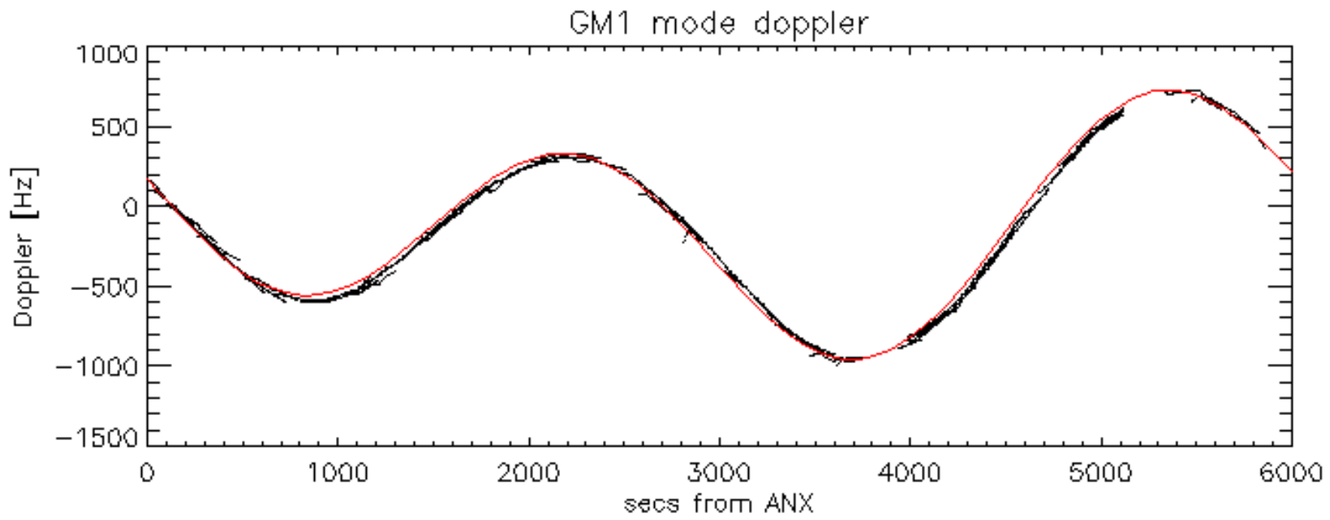
Preliminary report.The data is not yet controled

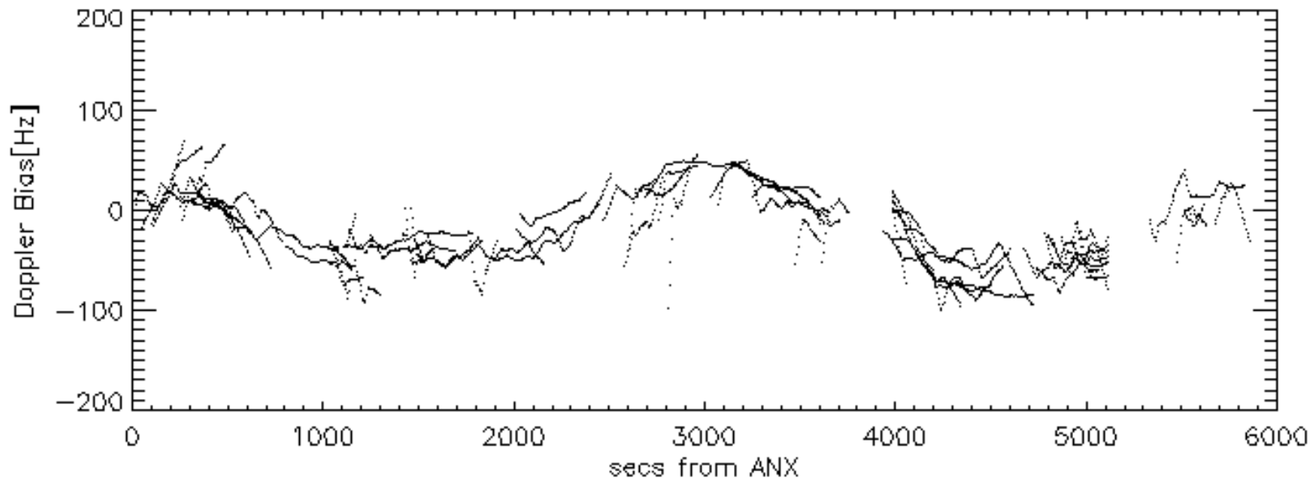

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

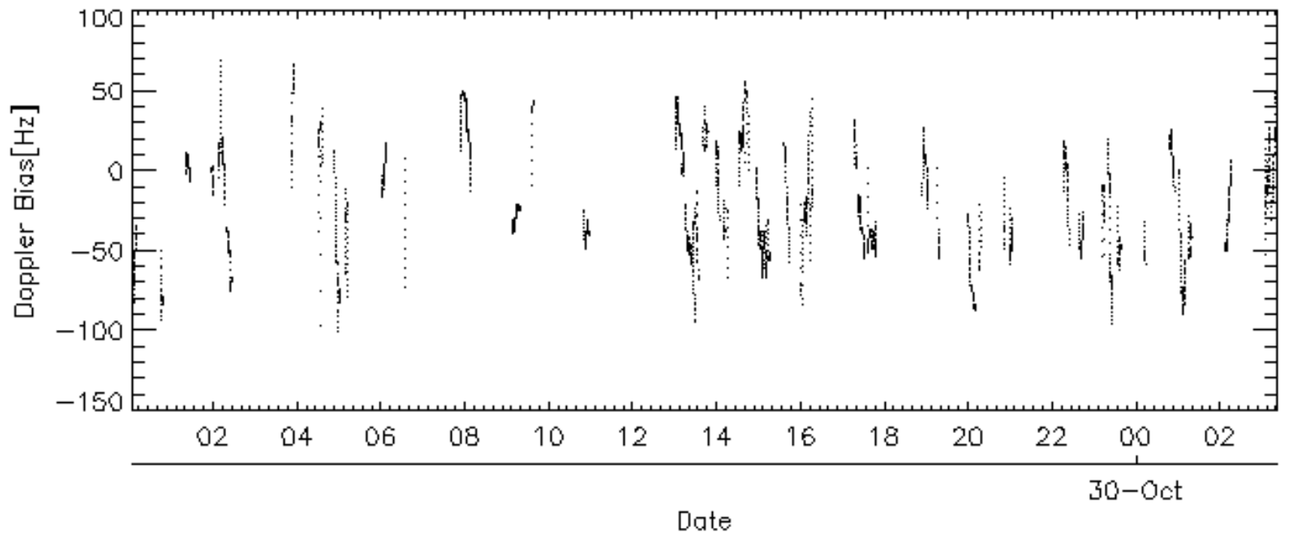

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

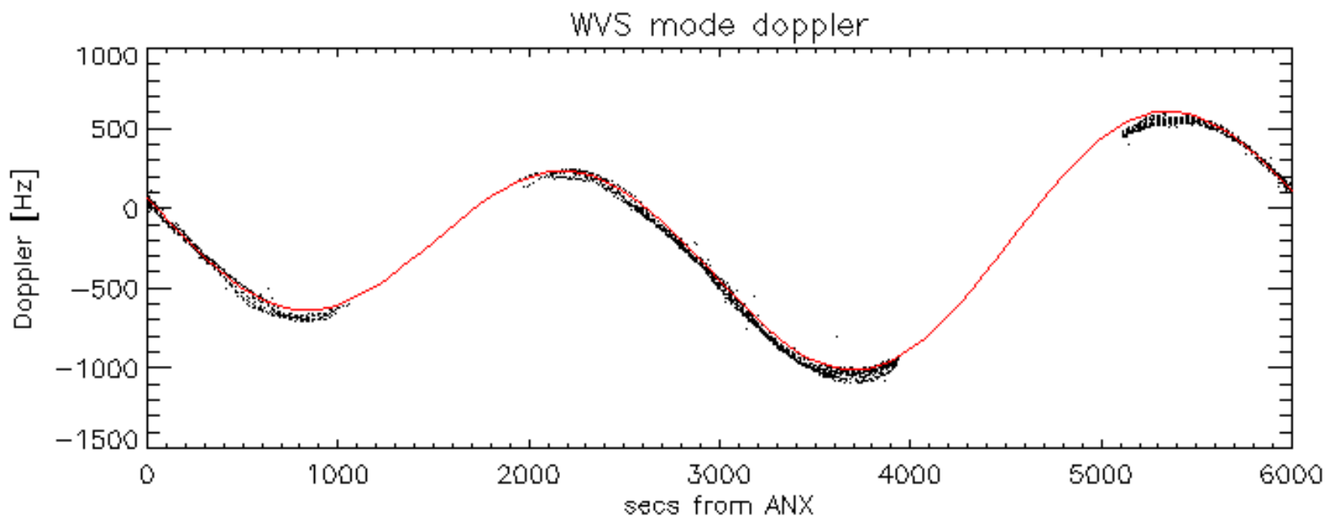

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

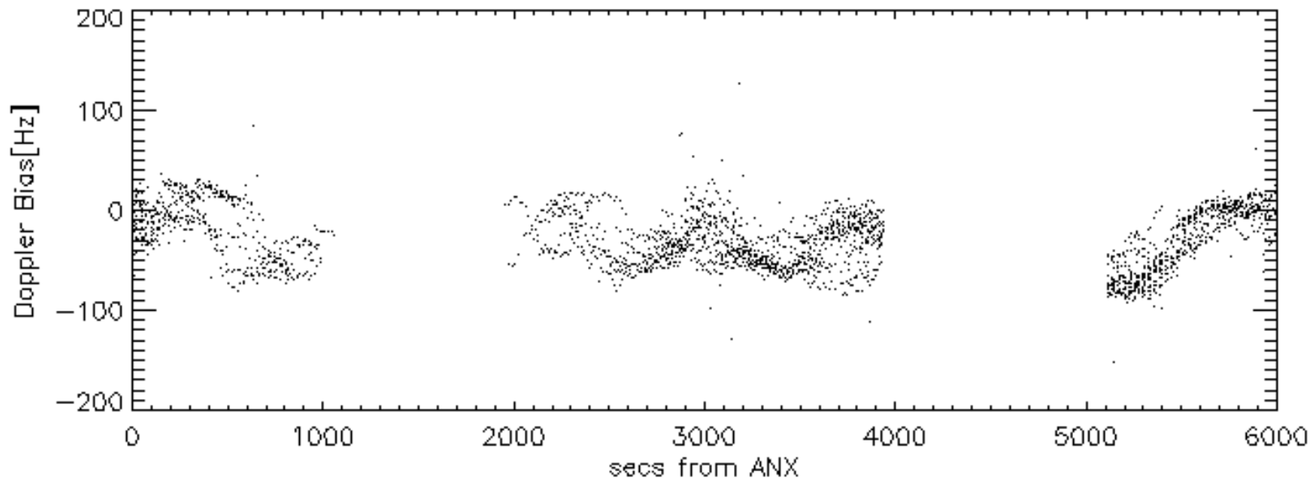

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

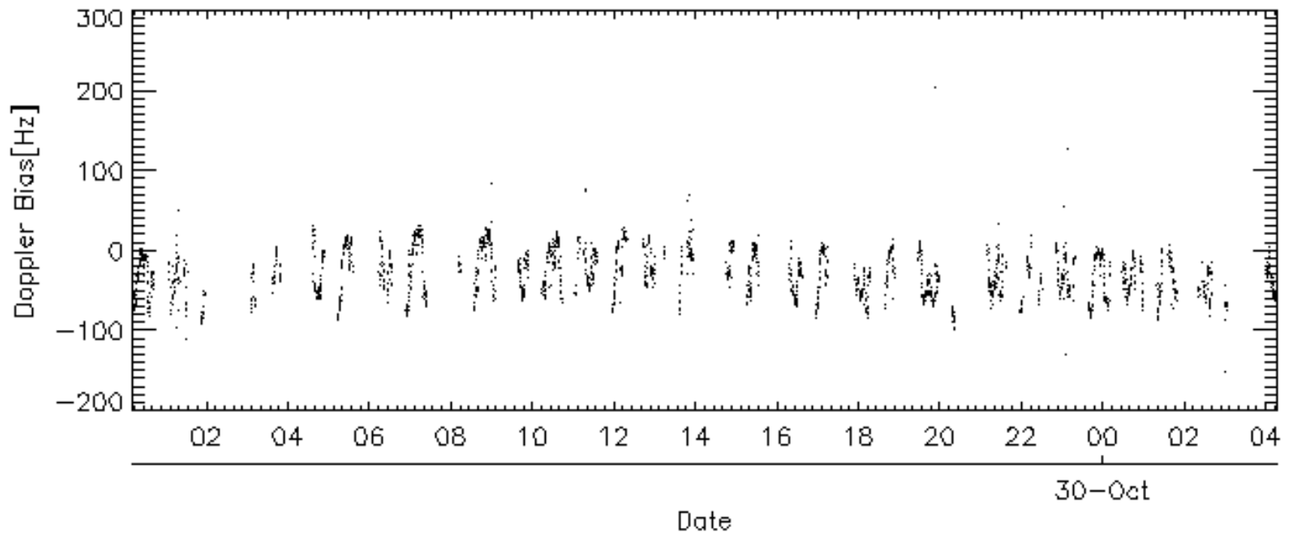

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

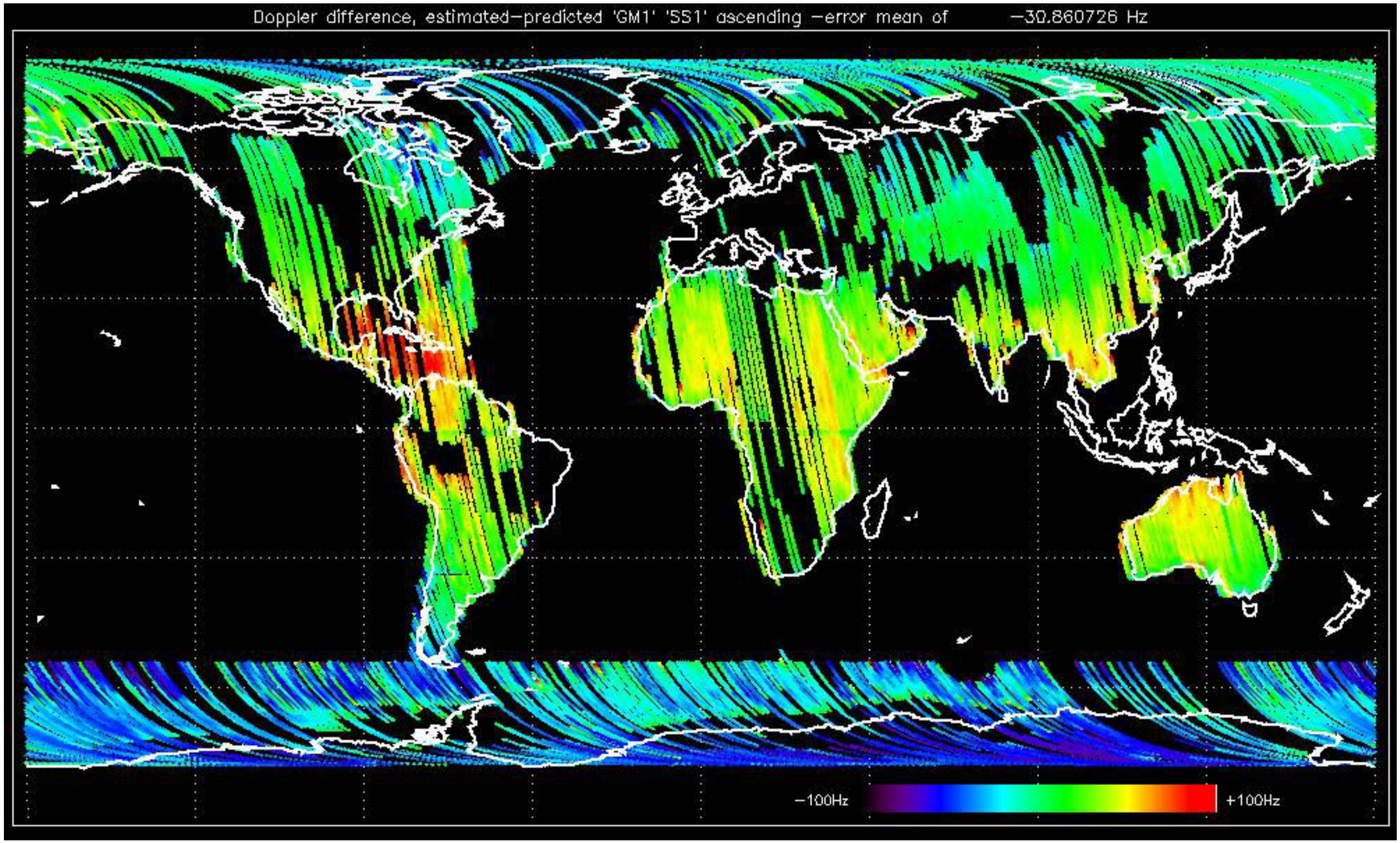

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

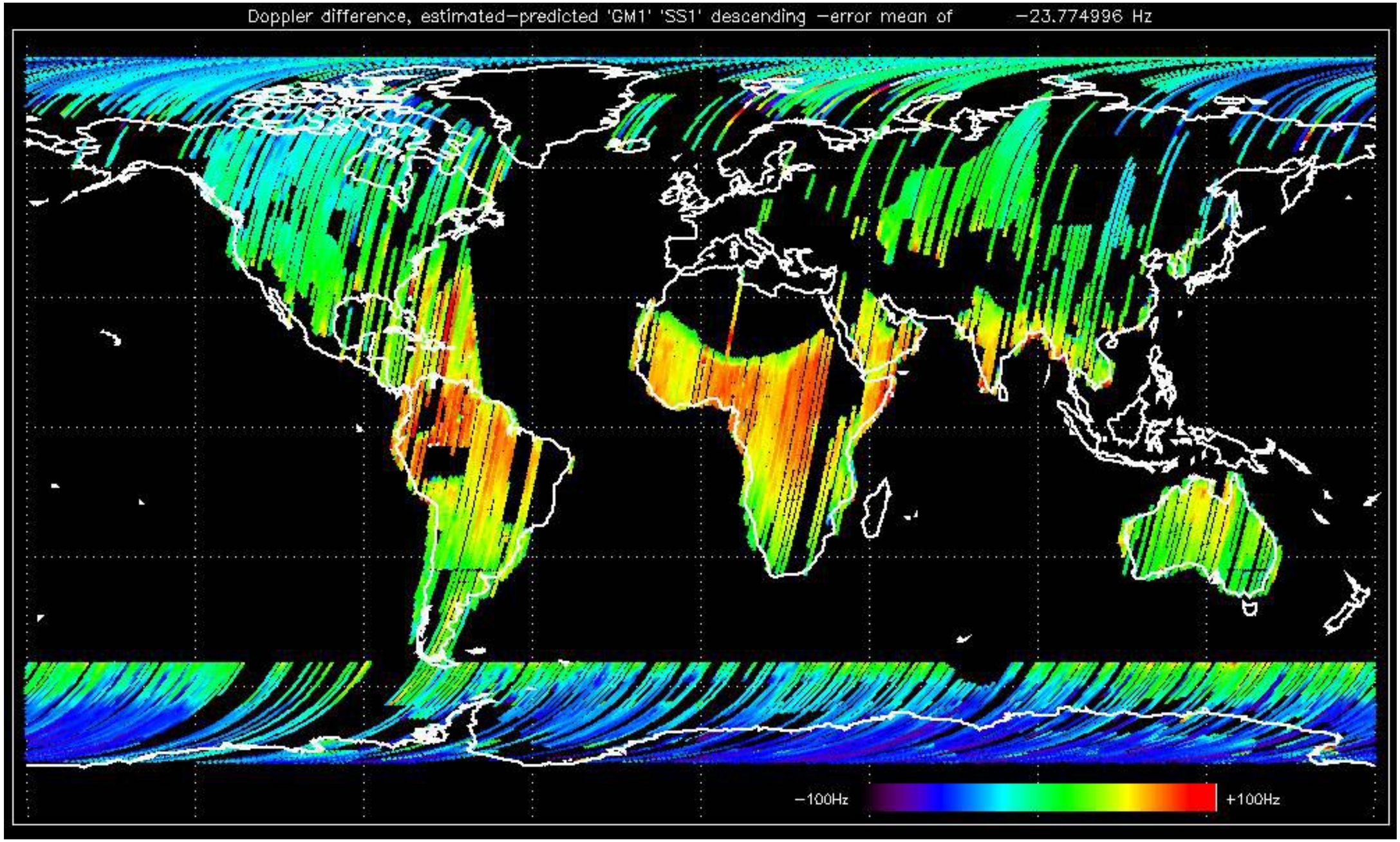

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
30−Oct
Date

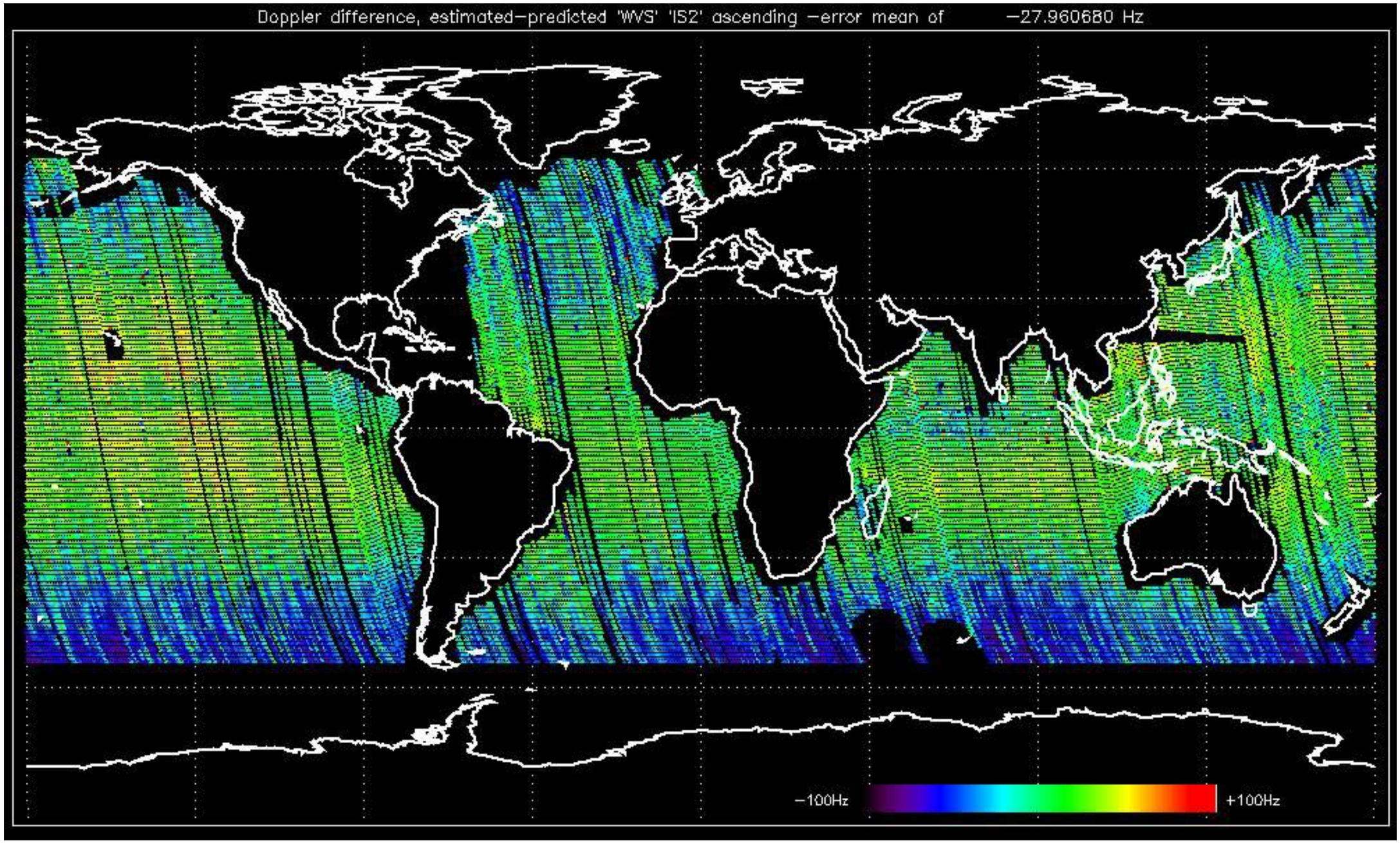

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

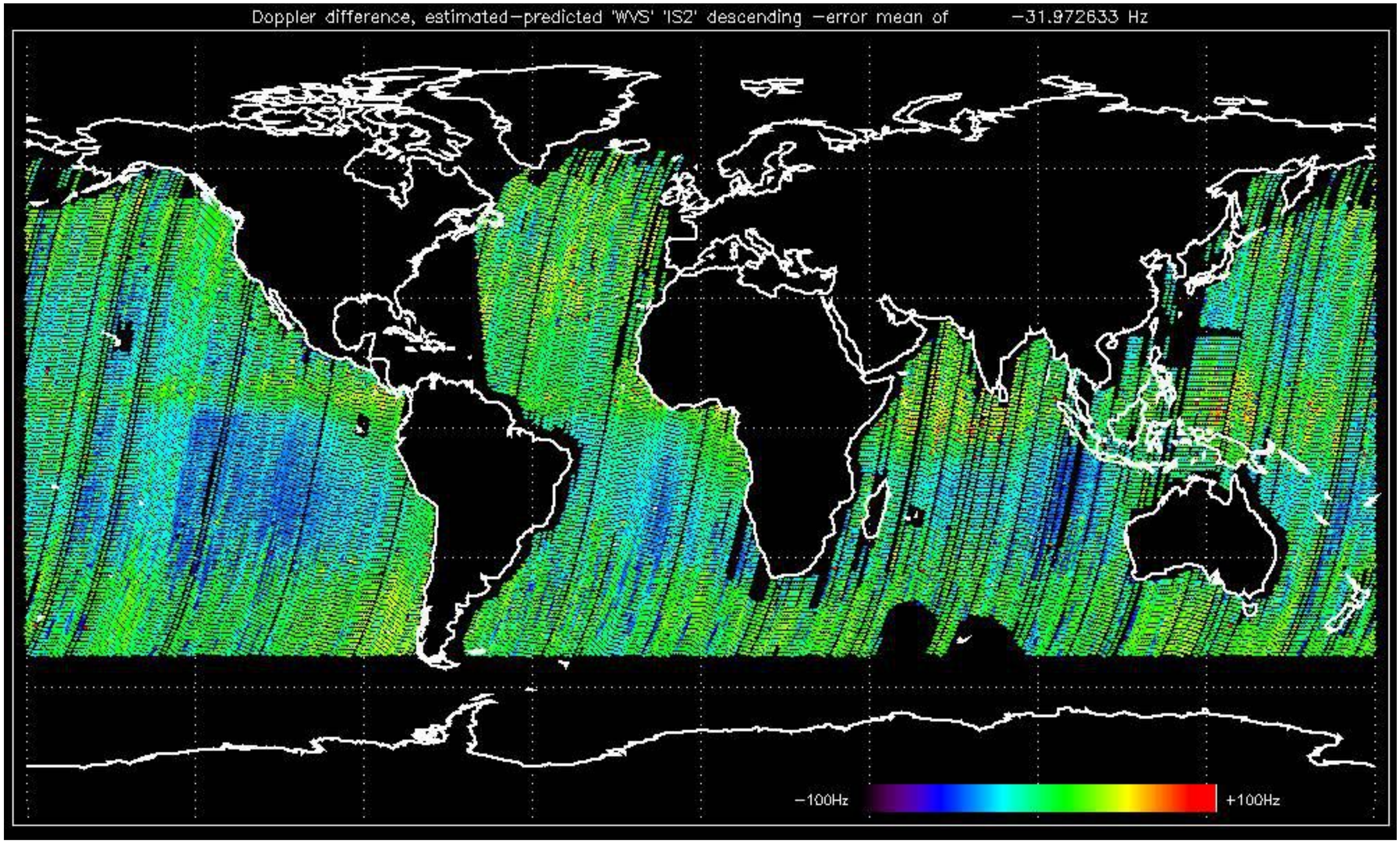

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −30.860726 Hz
−100Hz
+100Hz

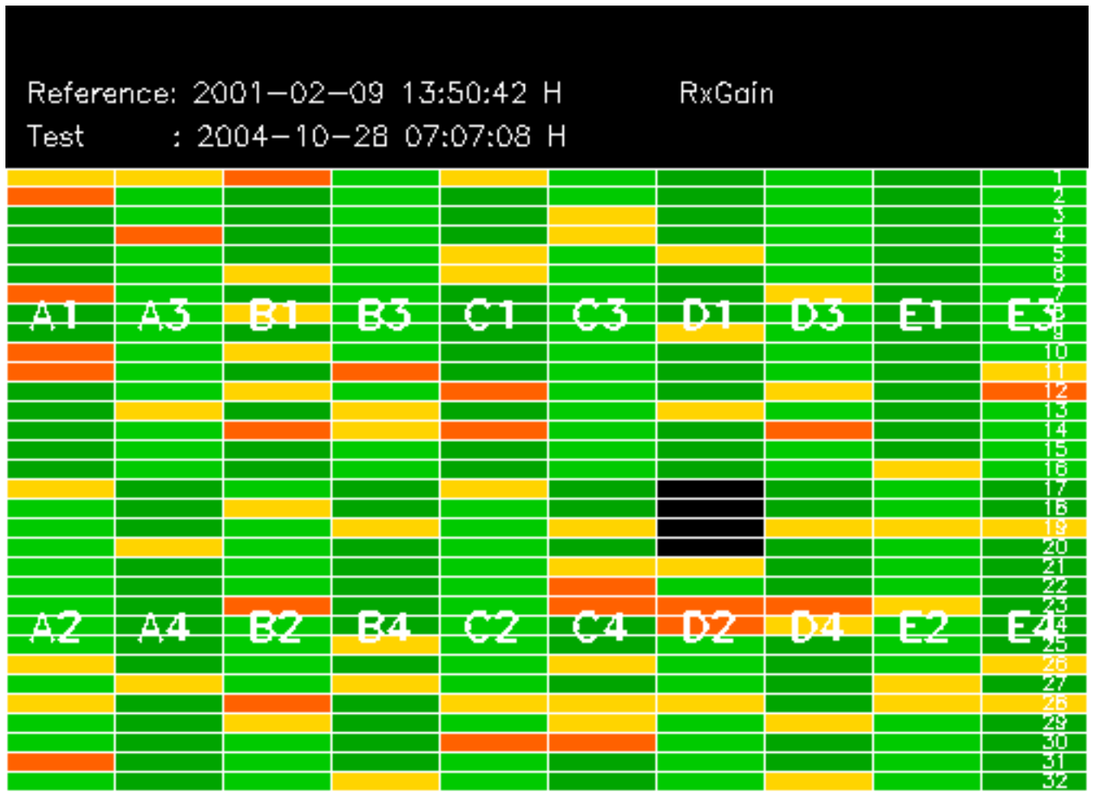

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.774996 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −27.960680 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −31.972633 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 : 2004-10-28 07:07:08 H
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
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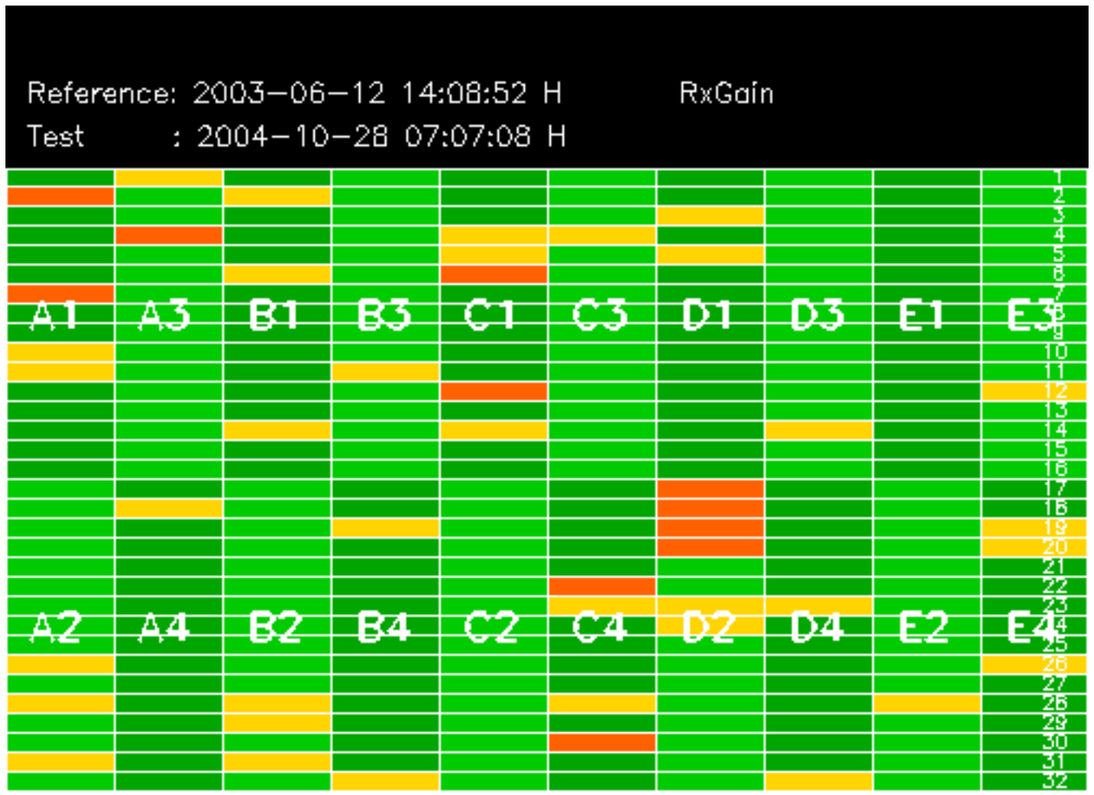
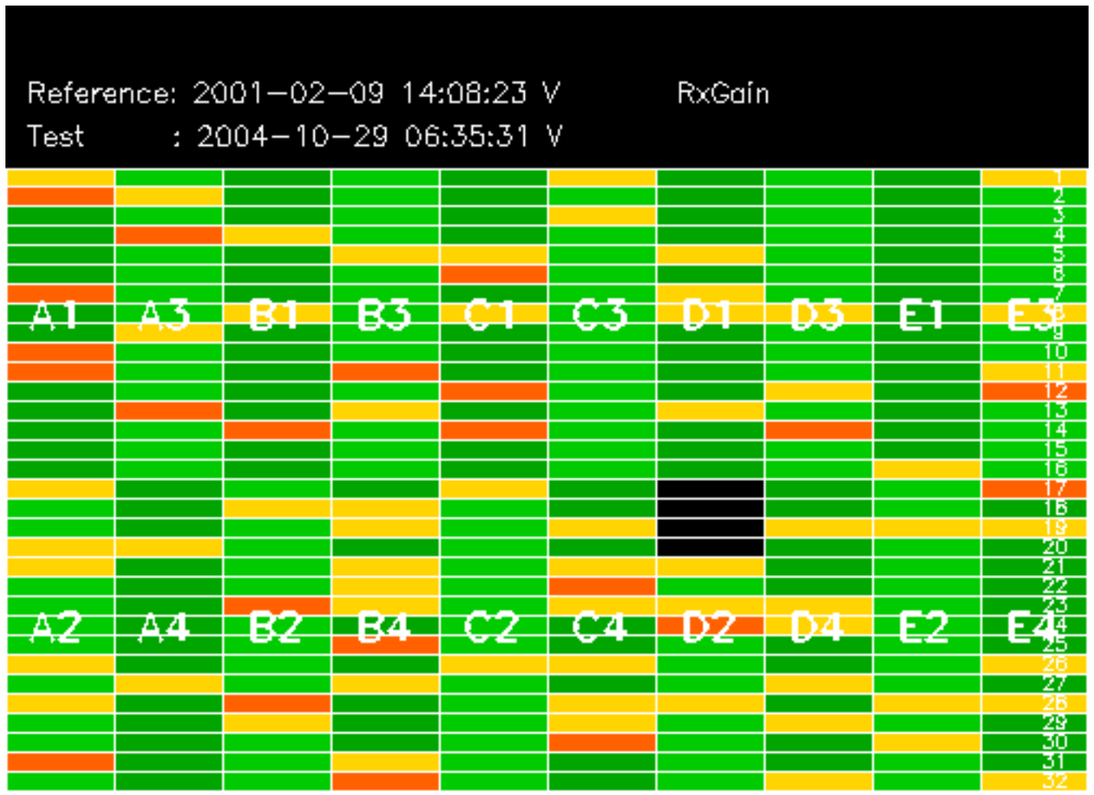

Reference: 2003-06-12 14:08:52 H
Test : 2004-10-28 07:07:08 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-10-29 06:35:31 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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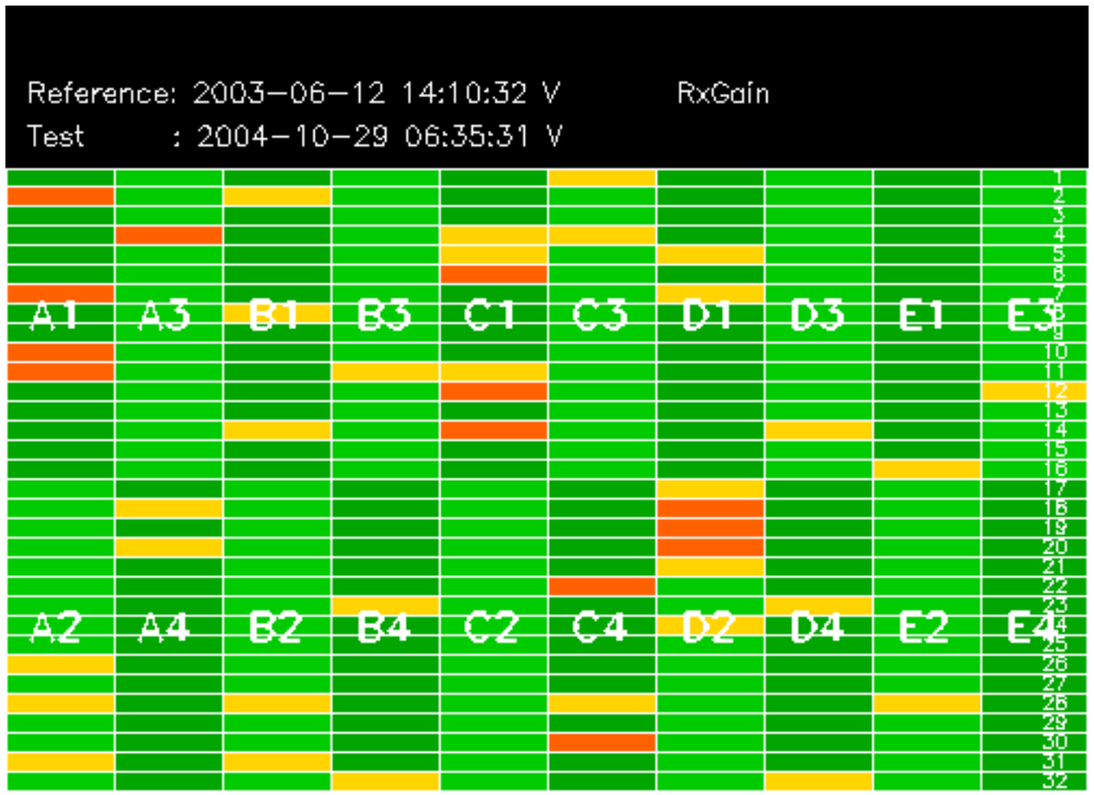
Reference: 2003-06-12 14:10:32 V
Test : 2004-10-29 06:35:31 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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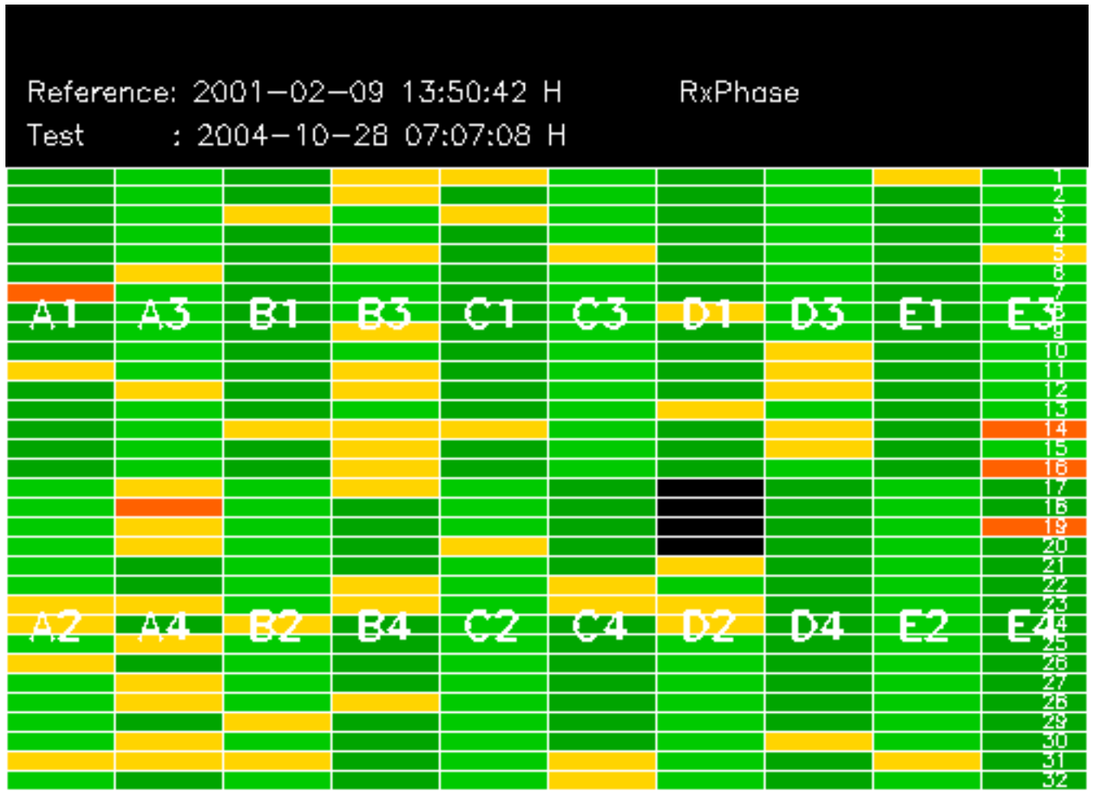
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-10-28 07:07:08 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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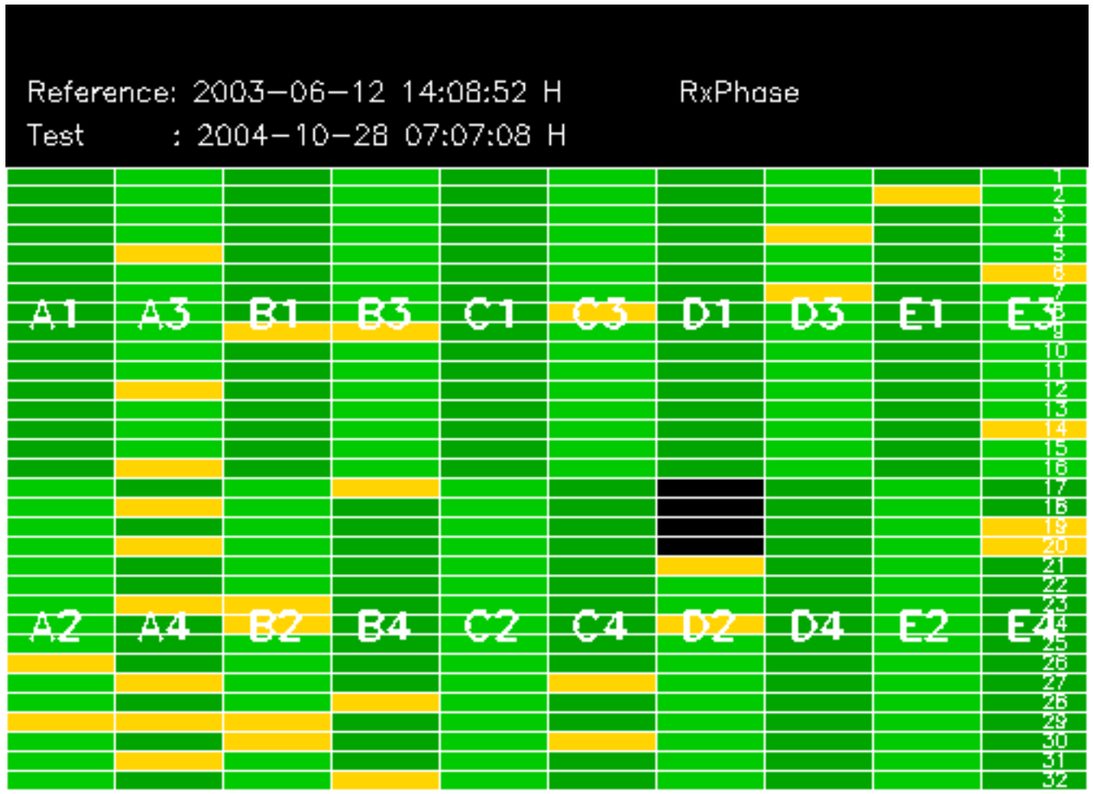
Reference: 2003-06-12 14:08:52 H
Test : 2004-10-28 07:07:08 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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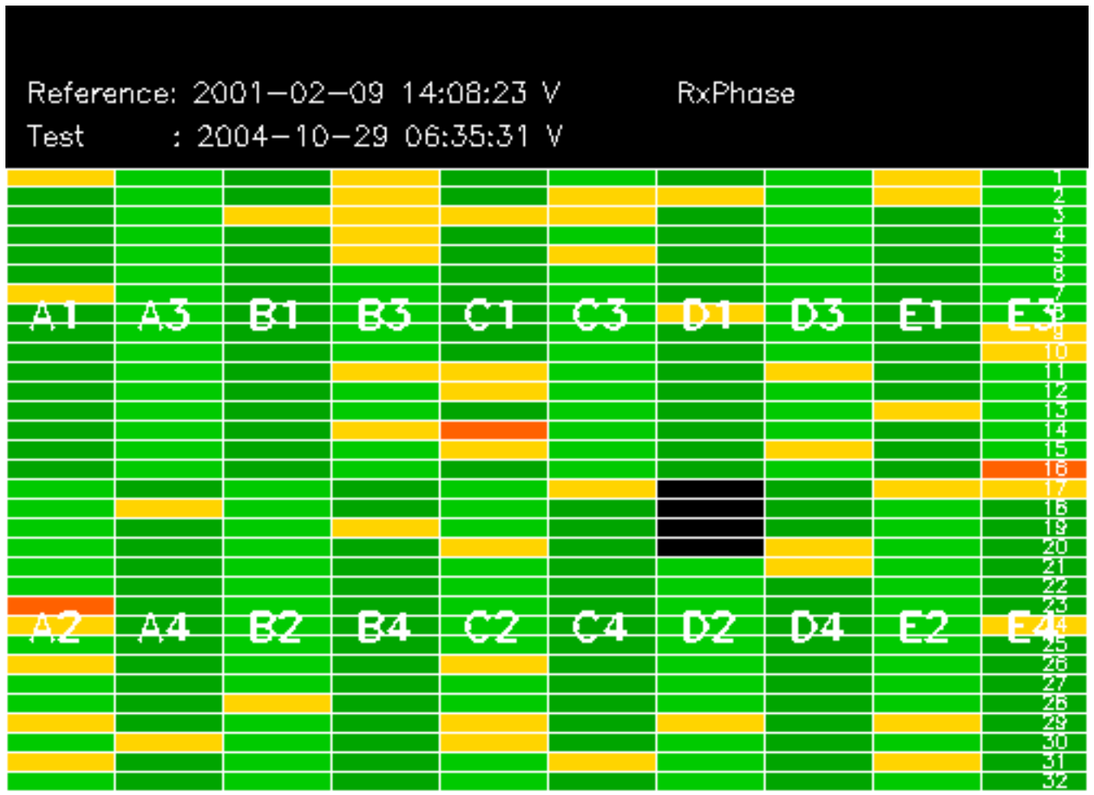
Reference: 2001-02-09 14:08:23 V
Test : 2004-10-29 06:35:31 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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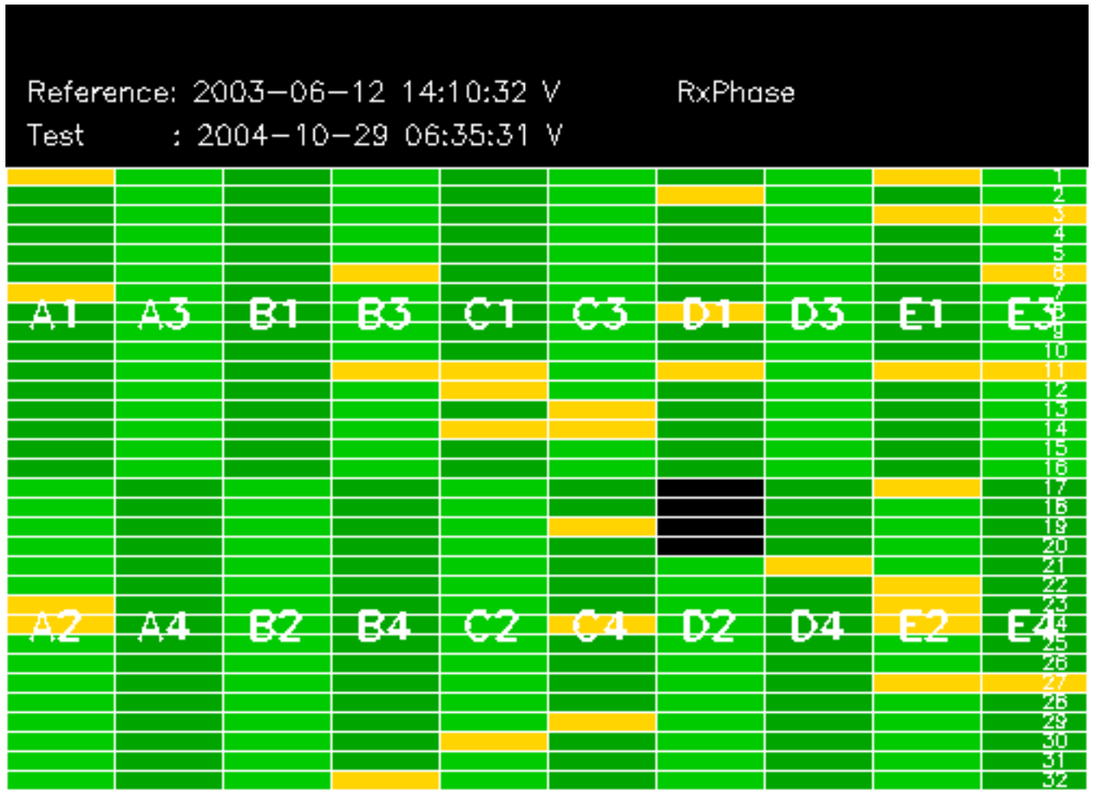
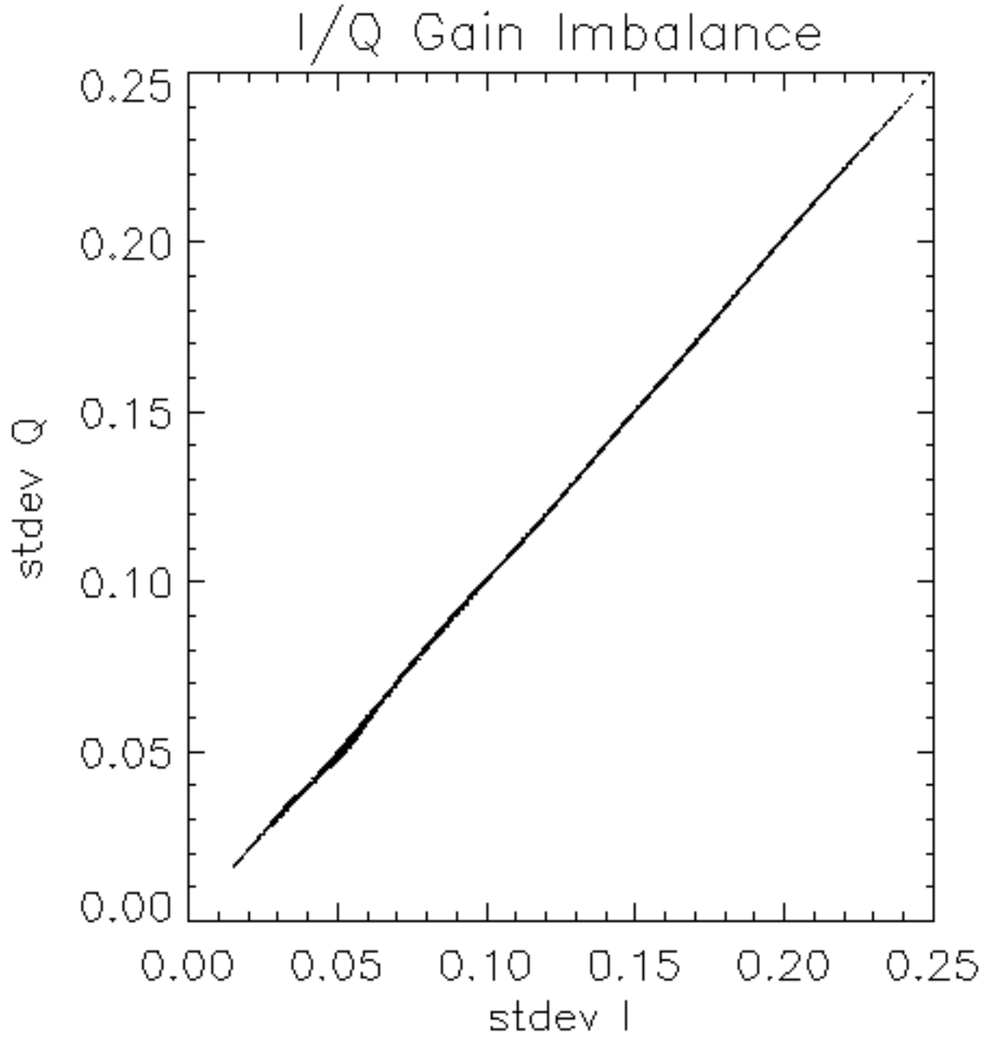
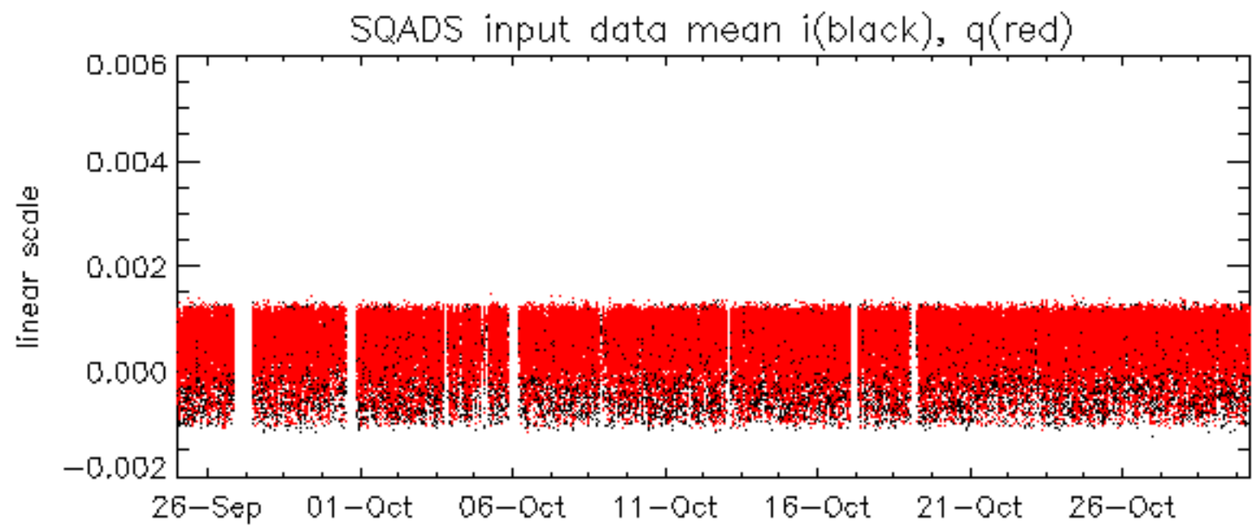
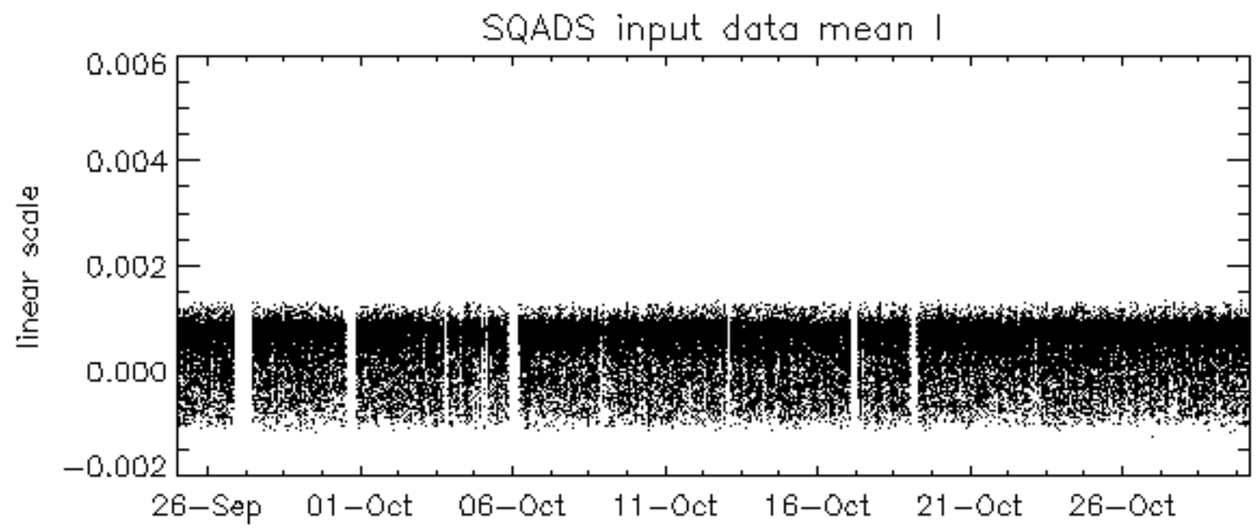
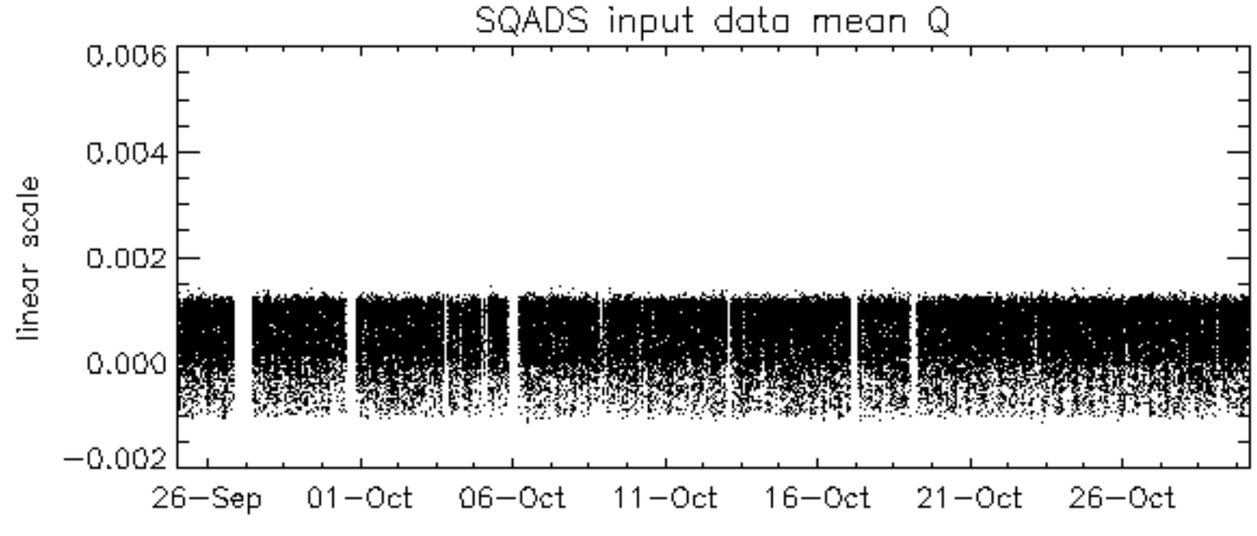
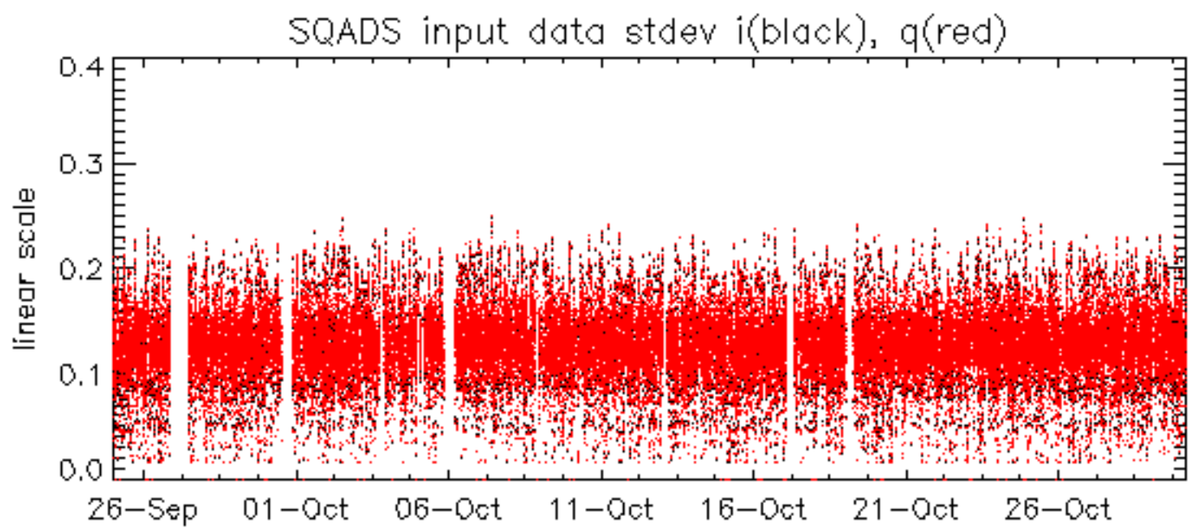

Reference: 2003-06-12 14:10:32 V
Test : 2004-10-29 06:35:31 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

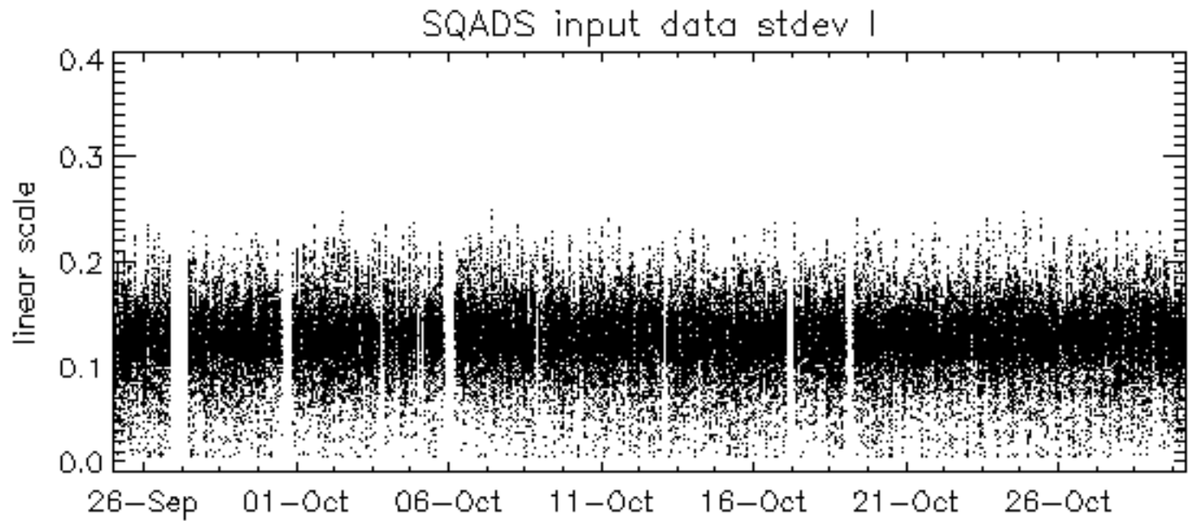

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

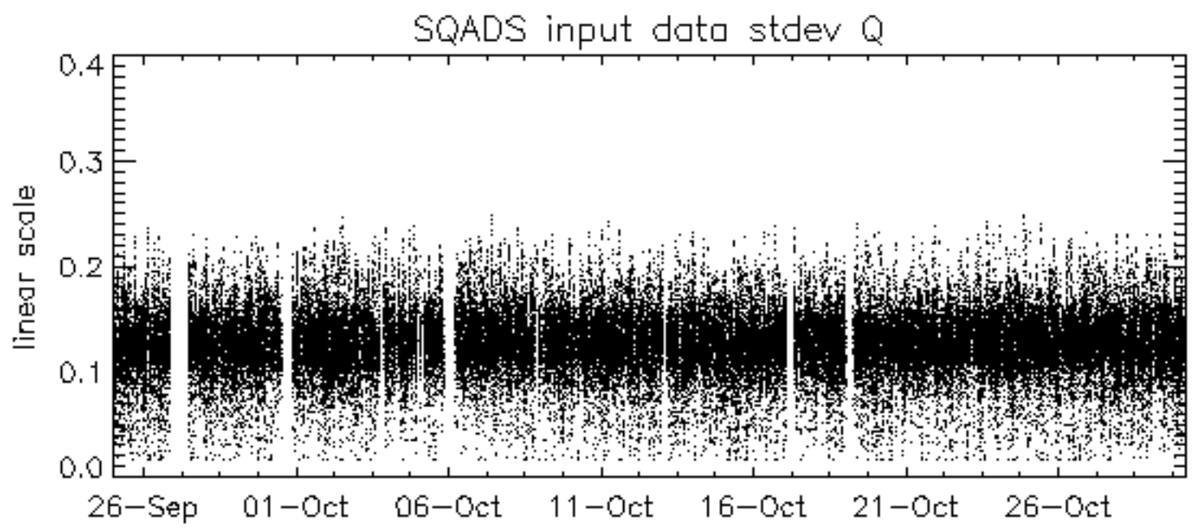

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct

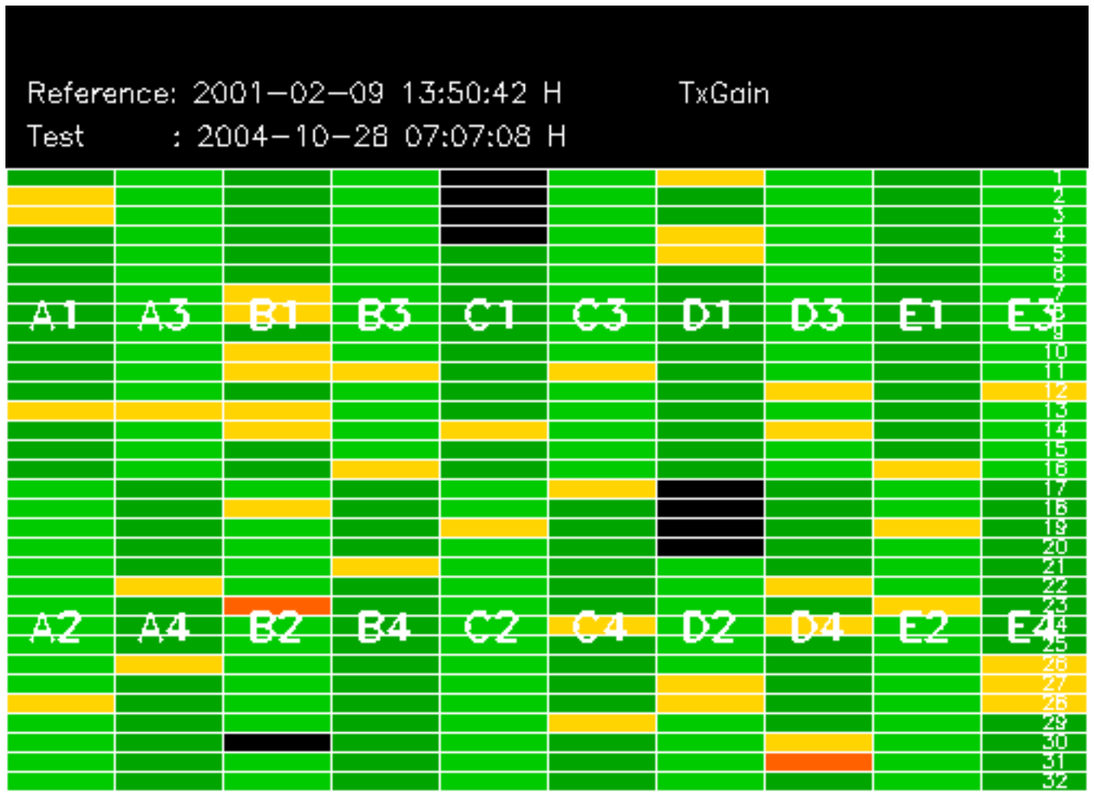

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct

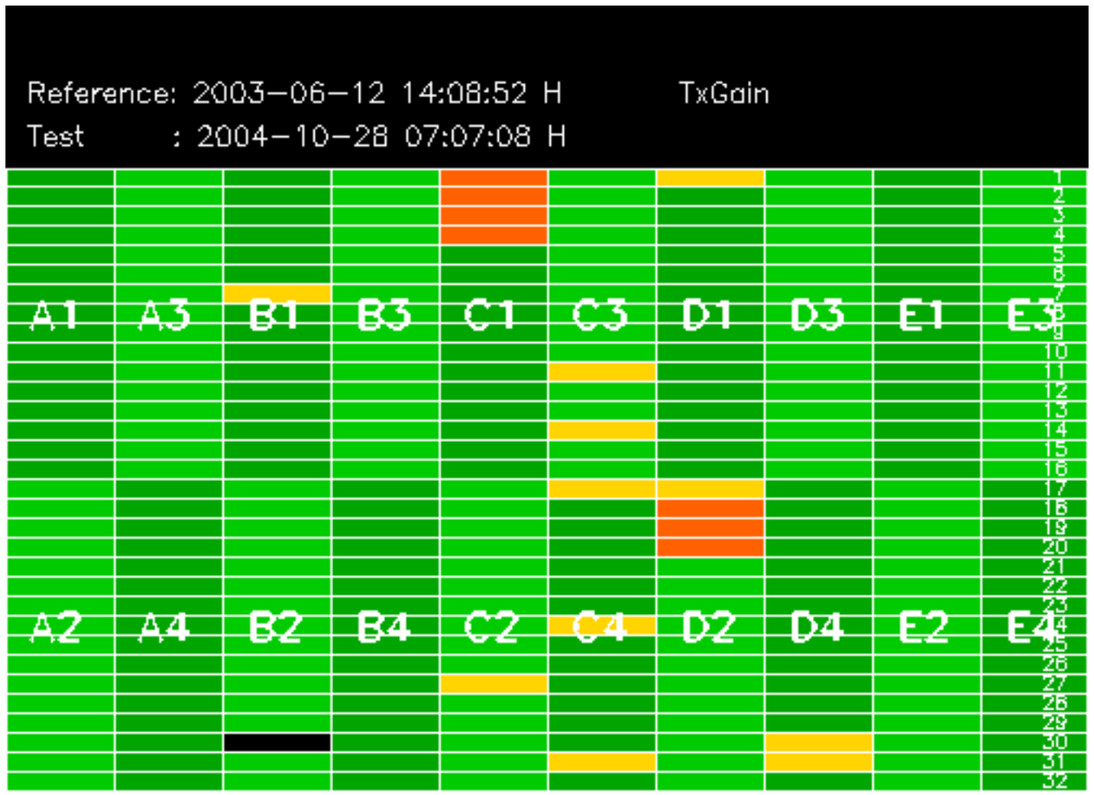

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct


Reference: 2001-02-09 13:50:42 H
Test : 2004-10-28 07:07:08 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 : 2004-10-28 07:07:08 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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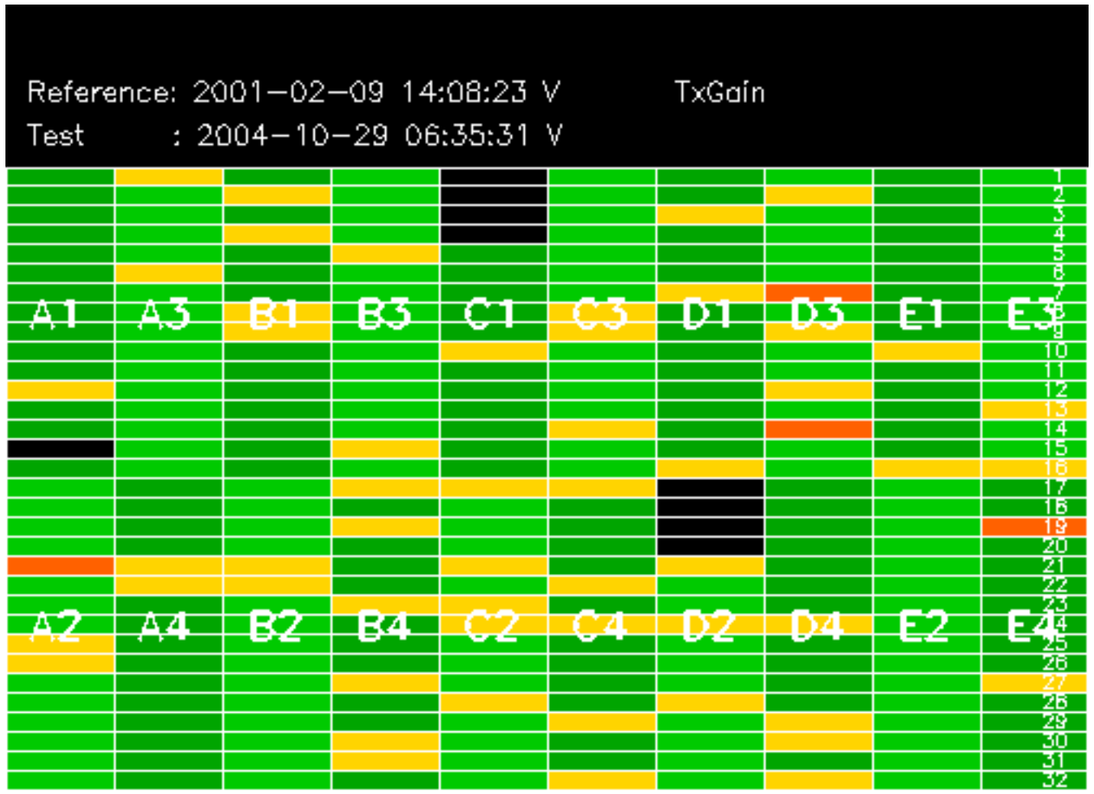
Reference: 2001-02-09 14:08:23 V
Test : 2004-10-29 06:35:31 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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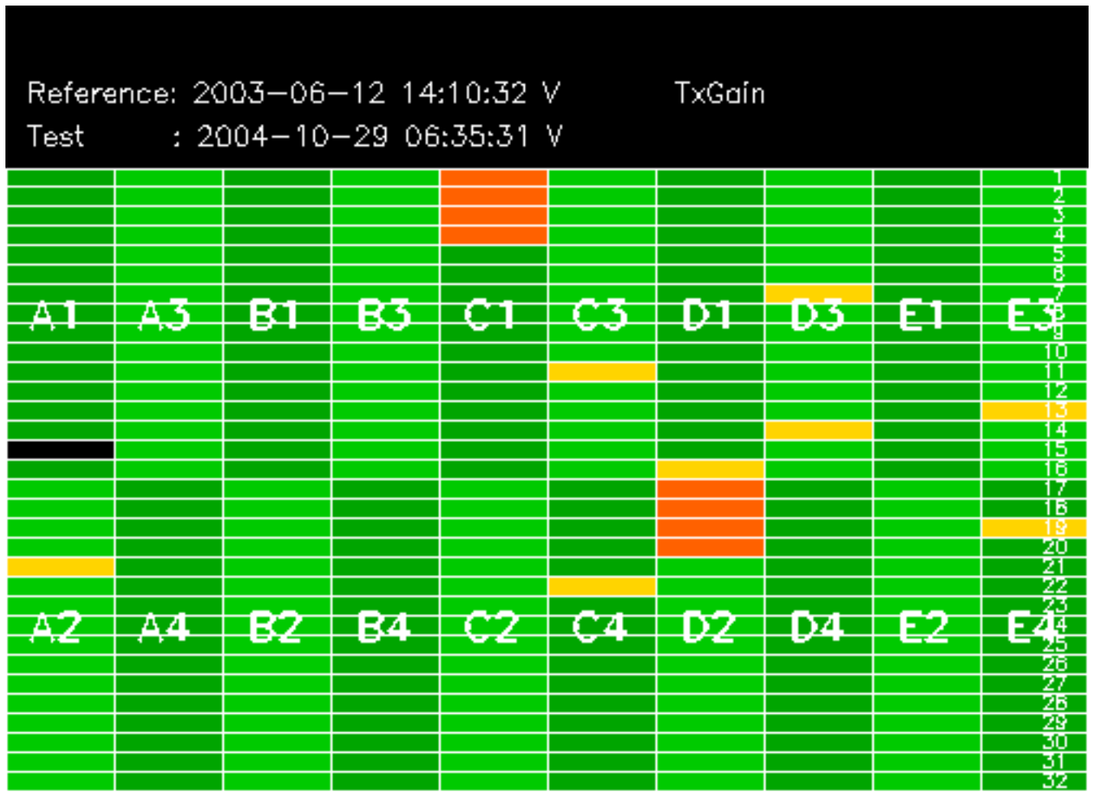
Reference: 2003-06-12 14:10:32 V
Test : 2004-10-29 06:35:31 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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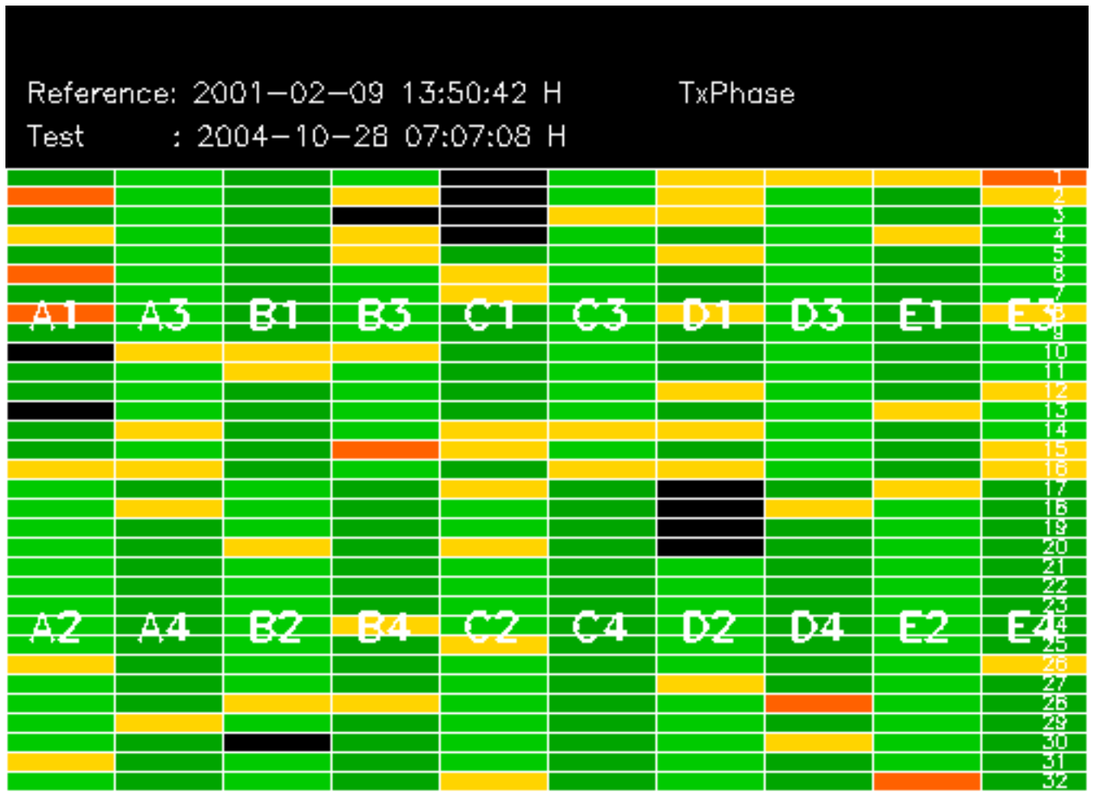
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-10-28 07:07:08 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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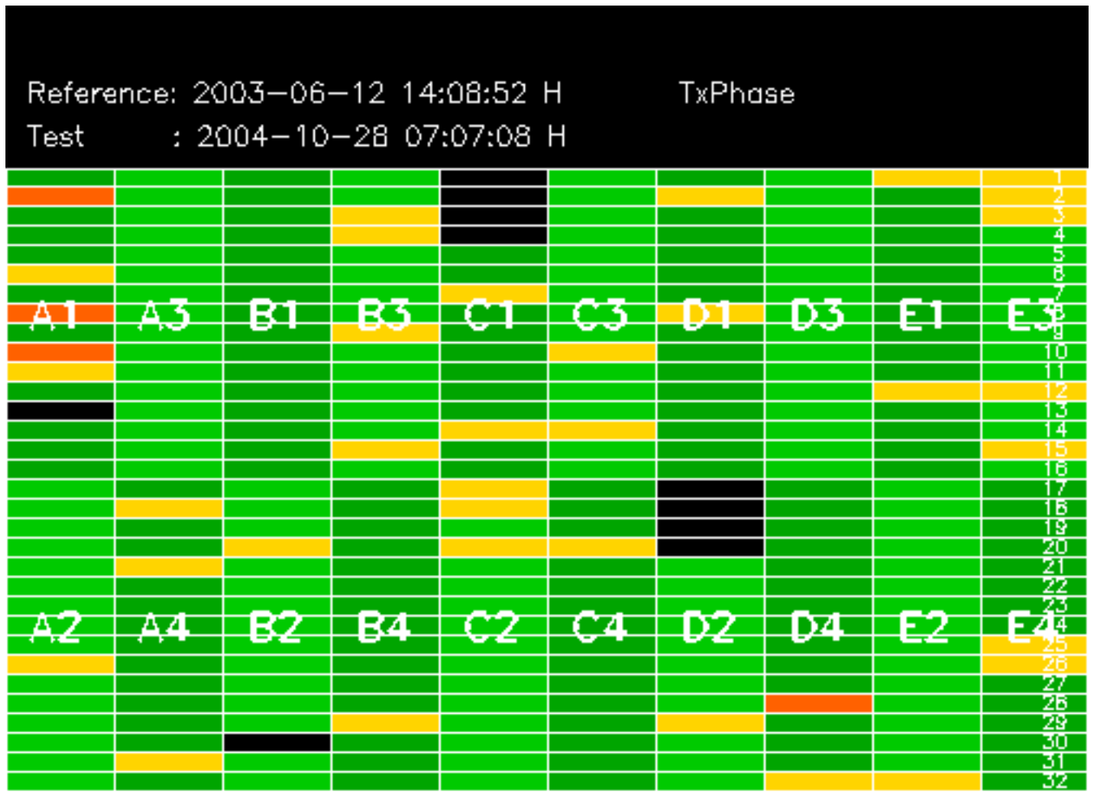
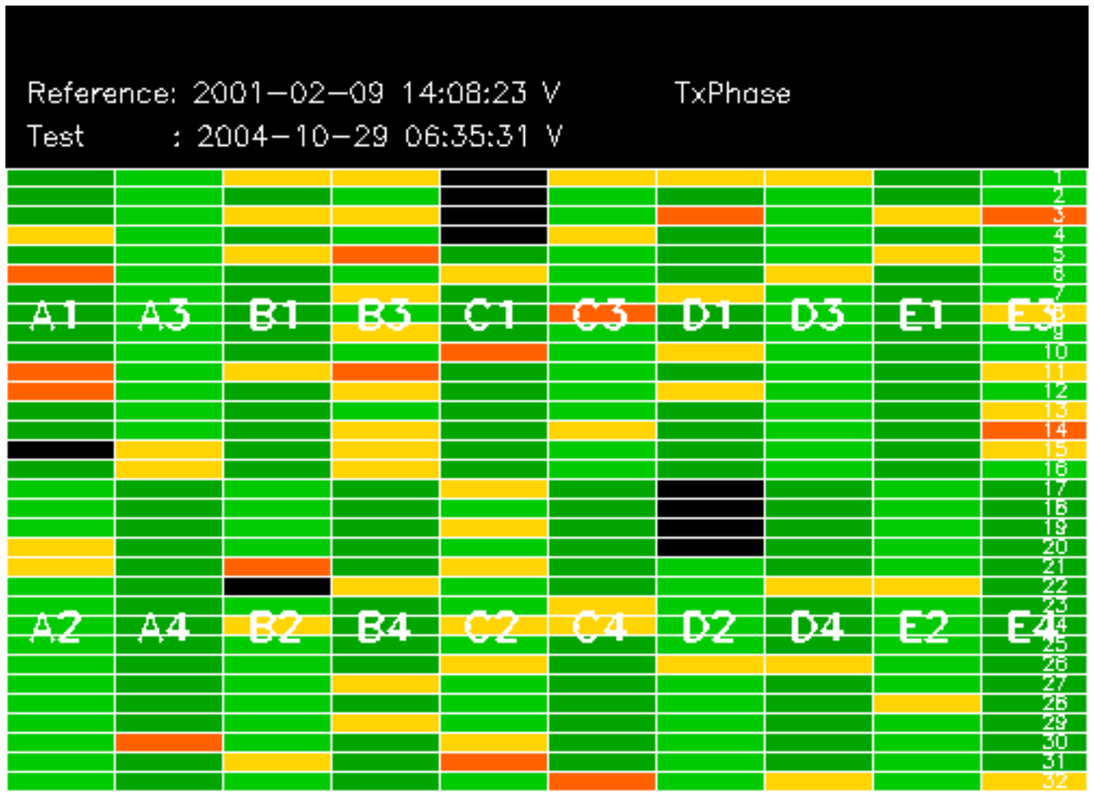
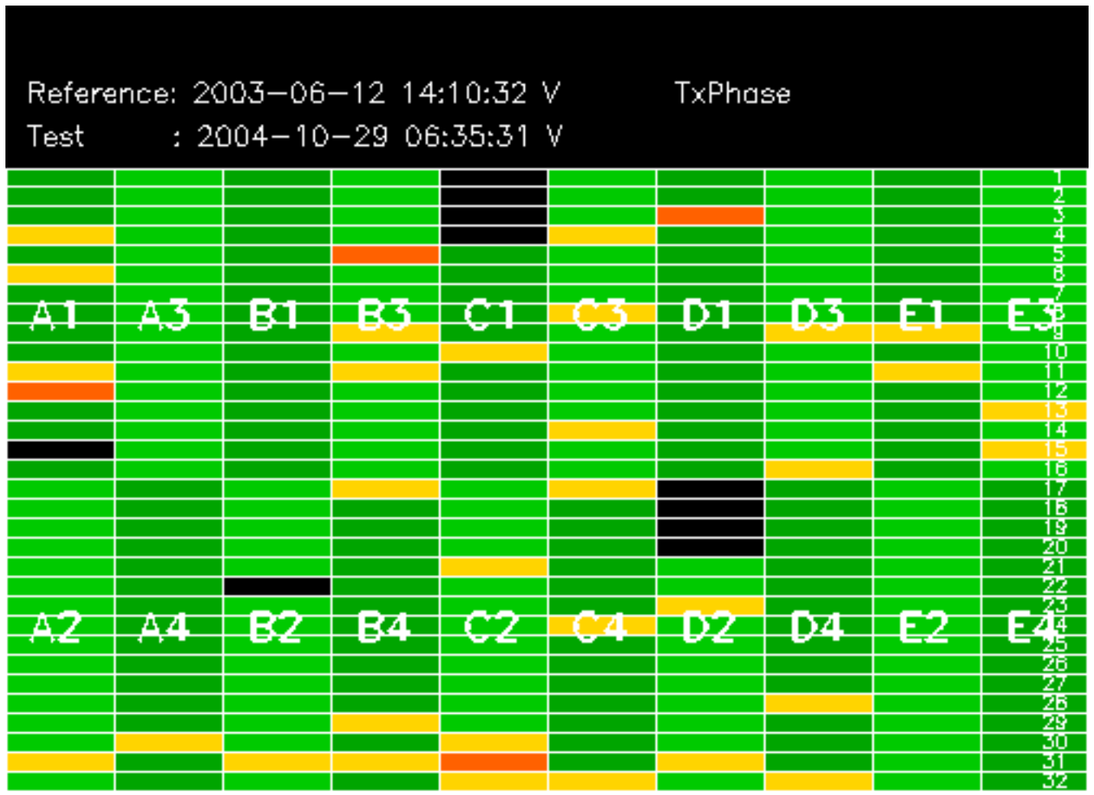

Reference: 2003-06-12 14:08:52 H
Test : 2004-10-28 07:07:08 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-10-29 06:35:31 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 : 2004-10-29 06:35:31 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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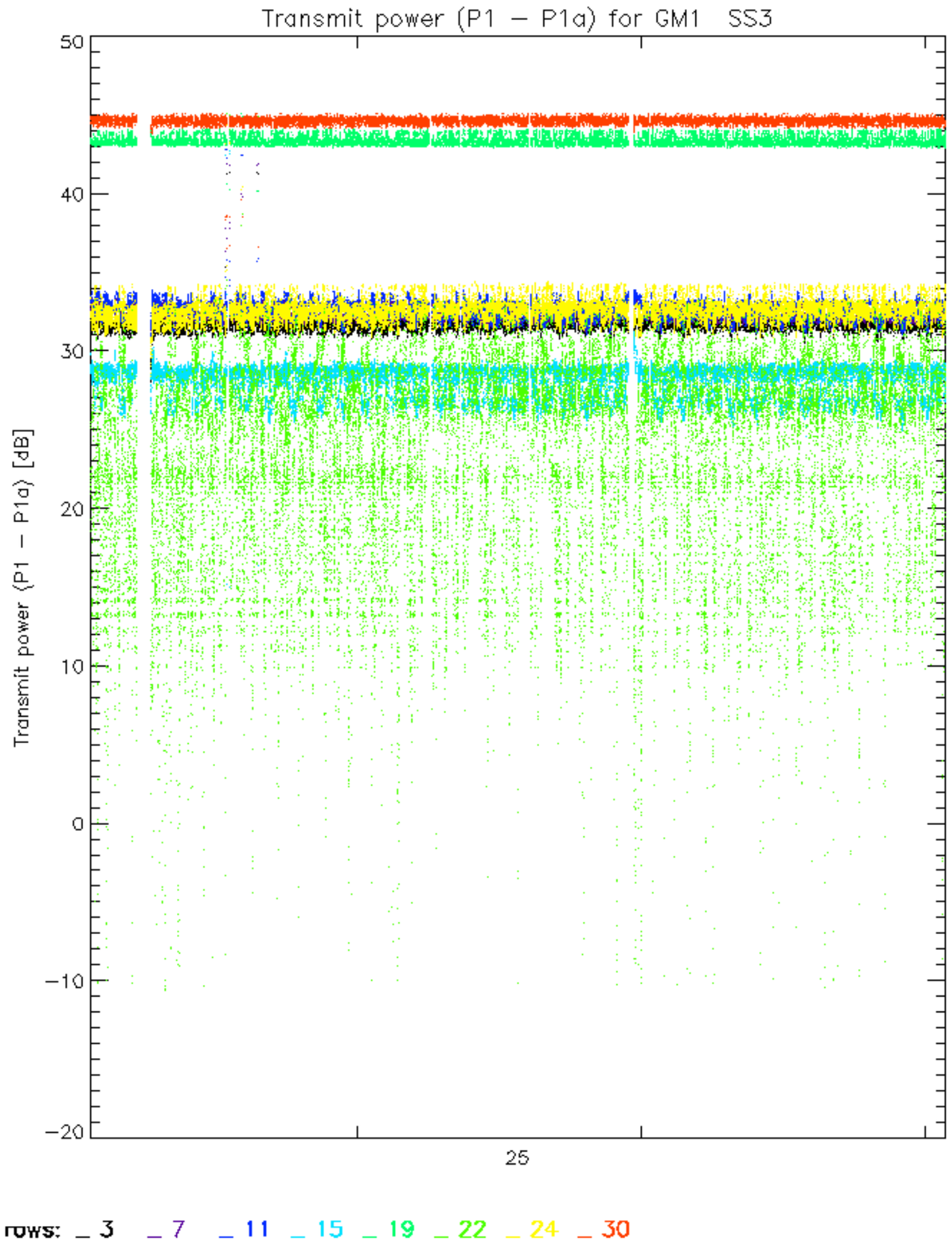
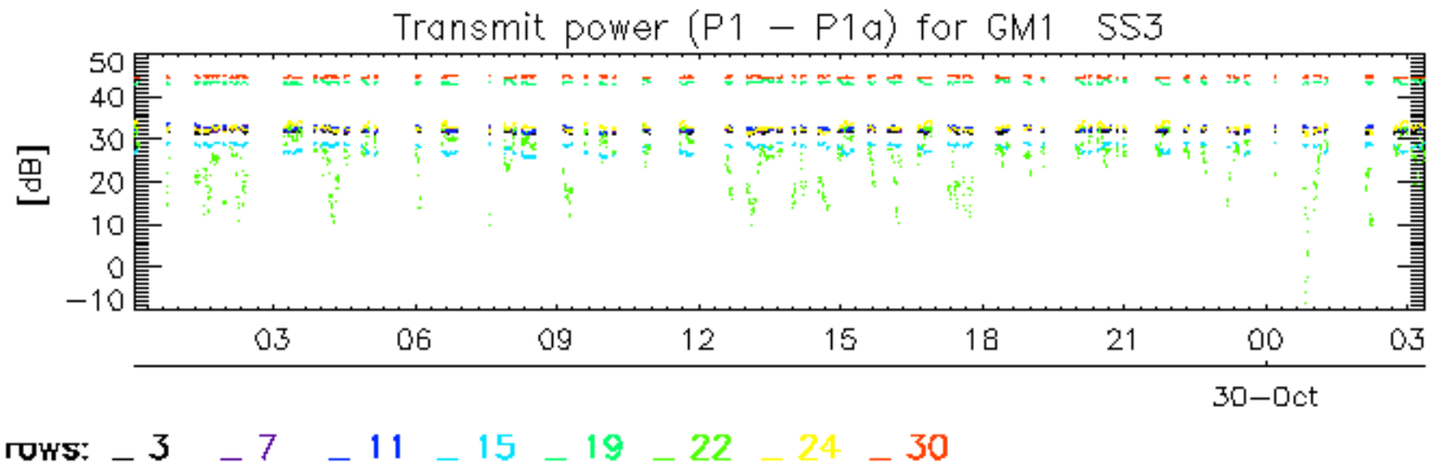
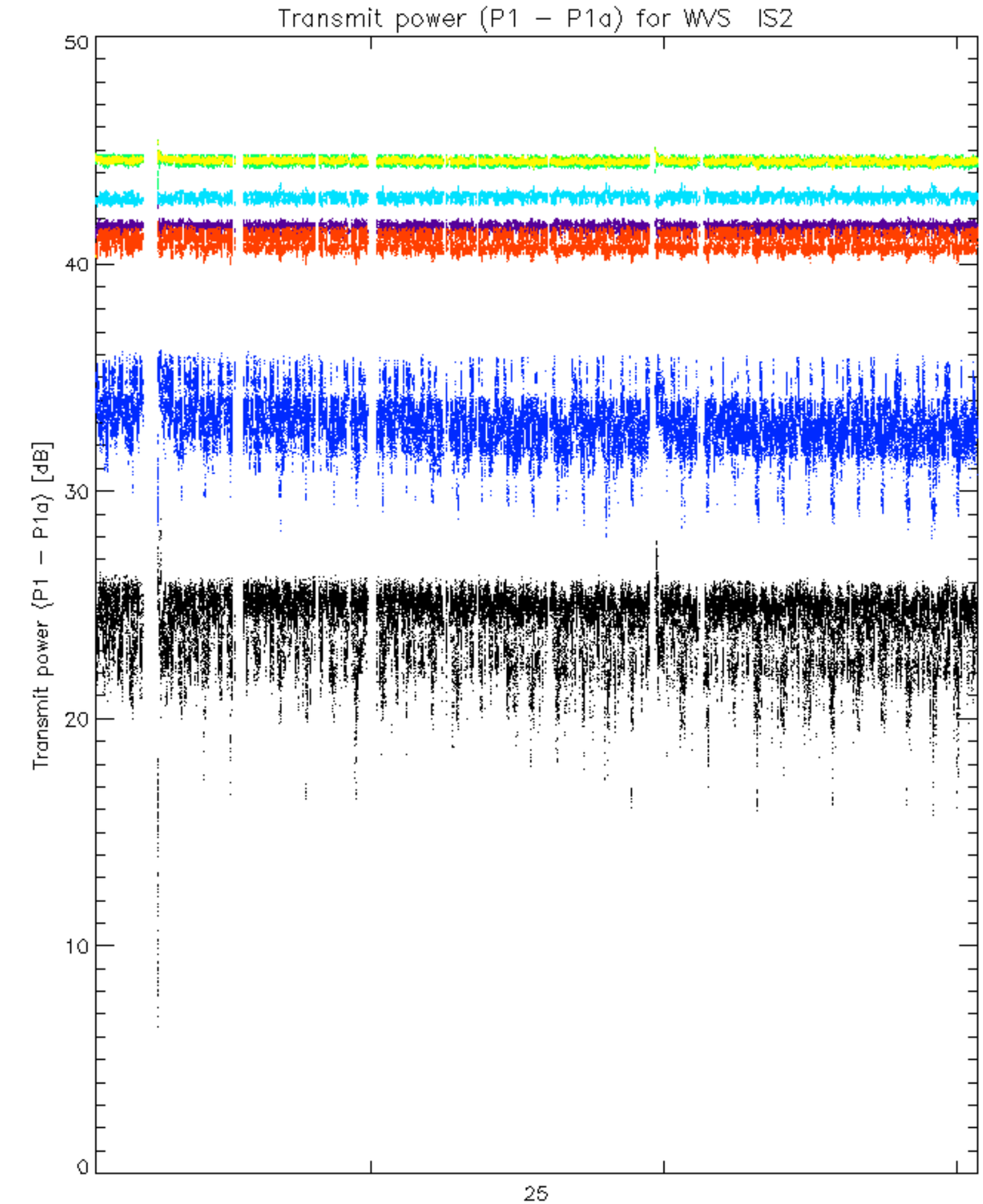
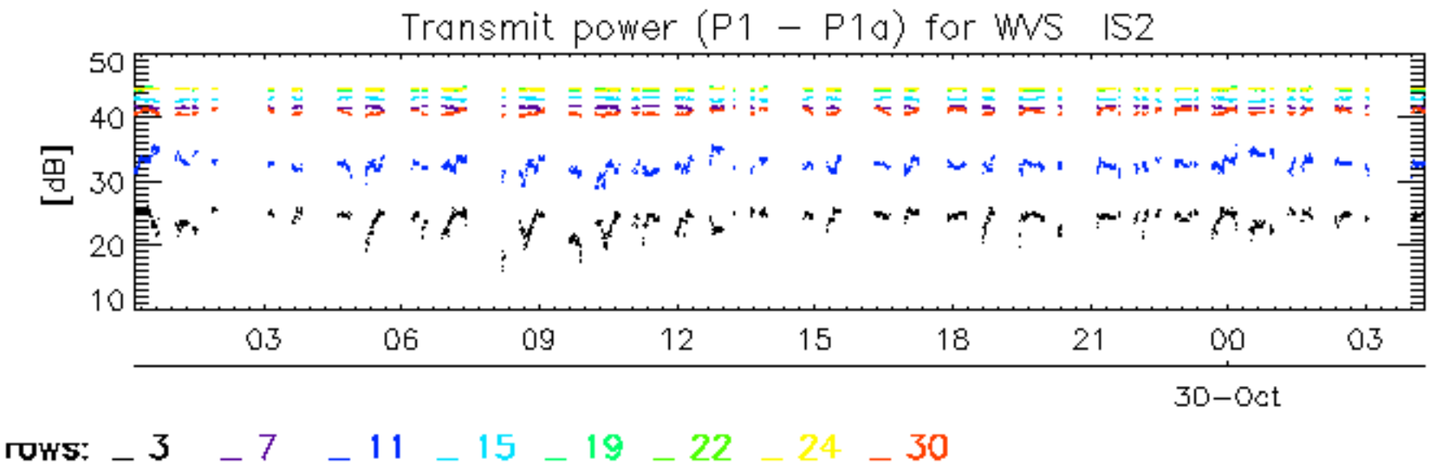

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
25
rows: 3 7 11 15 19 22 24 30


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


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
25
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
50
40
30
20
10
03
06
09
12
15
18
21
00
03
30–Oct
rows: 3
7
11
15
19
22
24
30

No unavailabilities during the reported period.