PRELIMINARY REPORT OF 041111

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

last update on Thu Nov 11 10:52:23 GMT 2004

1. Introduction
2. Summary
    - Instrument Unavailability
    - Browse Visual Inspection
    - Module Stepping Results
    - Data Analysis
3. Module Stepping
4. Internal Calibration pulses
    - Daily statistics
    - Cyclic statistics
    - cal pulses monitoring (all rows)
5. Raw Data Statistics
    - raw data mean I and Q
    - raw data stdev I and Q
    - raw gain imbalance
6. Wave Doppler analysis
    - Unbiased Doppler Error for WVS
    - Absolute Doppler for WVS
    - Doppler evolution versus ANX for WVS
    - Unbiased Doppler Error for GM1
    - Absolute Doppler for GM1
    - Doppler evolution versus ANX for GM1

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	20041110 170203
H	20041109 173341

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	-3.477862	0.006450	0.010890
7	P1	-3.360020	0.012369	-0.004024
11	P1	-4.602987	0.016740	0.002984
15	P1	-5.673171	0.029413	0.022001
19	P1	-3.581281	0.005312	-0.057363
22	P1	-4.580971	0.013969	0.005880
26	P1	-4.859591	0.059677	0.071347

30	P1	-7.061451	0.015592	-0.044879
3	P1	-16.049038	0.097748	0.050934
7	P1	-14.041551	0.063369	0.006382
11	P1	-20.583153	0.190248	-0.250900
15	P1	-11.689801	0.032732	0.054663
19	P1	-14.037214	0.026620	-0.067259
22	P1	-16.237648	0.382012	0.119742
26	P1	-17.701717	0.693417	0.319465
30	P1	-18.005293	0.268948	0.083243

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.369930	0.089808	-0.019593
7	P2	-22.610004	0.128076	0.016891
11	P2	-15.091603	0.117892	0.075637
15	P2	-7.134801	0.107560	-0.030336
19	P2	-9.695226	0.119109	-0.041319
22	P2	-17.258860	0.104764	0.046244
26	P2	-16.500214	0.109289	-0.010508
30	P2	-19.060322	0.084923	0.032053

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.195110	0.005824	-0.019100
7	P3	-8.195111	0.005824	-0.019102
11	P3	-8.195110	0.005824	-0.019103
15	P3	-8.195112	0.005824	-0.019099
19	P3	-8.195111	0.005824	-0.019101
22	P3	-8.195111	0.005824	-0.019101
26	P3	-8.195112	0.005824	-0.019098
30	P3	-8.195063	0.005823	-0.019126

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	-2.806785	0.011396	0.027743
7	P1	-2.956377	0.024895	0.025527
11	P1	-3.893883	0.021448	-0.011097
15	P1	-3.486183	0.025719	-0.002238
19	P1	-3.582339	0.012260	-0.036698
22	P1	-5.624066	0.066359	0.035647
26	P1	-6.407658	0.078542	0.092909
30	P1	-6.249277	0.042062	-0.052428
3	P1	-10.630849	0.061835	0.167448
7	P1	-10.072593	0.138275	0.010540
11	P1	-12.324516	0.115972	-0.121018
15	P1	-11.687838	0.063763	-0.083872
19	P1	-15.616628	0.055801	-0.010175
22	P1	-23.849566	1.791493	-0.382101
26	P1	-15.108172	0.462512	0.095995
30	P1	-20.289940	1.019842	0.073890

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.050579	0.042914	-0.023862
7	P2	-22.684444	0.034398	0.053210
11	P2	-10.870405	0.040162	0.047355
15	P2	-5.034781	0.030497	-0.036822
19	P2	-6.927907	0.039187	-0.105797
22	P2	-7.377066	0.030751	0.060583
26	P2	-23.923607	0.026315	-0.048686
30	P2	-22.095308	0.020643	0.020309

P3 Cyclic statistics

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

3	P3	-8.036852	0.003514	-0.020203
7	P3	-8.036802	0.003523	-0.020281
11	P3	-8.036895	0.003517	-0.019991
15	P3	-8.036851	0.003511	-0.020116
19	P3	-8.036762	0.003510	-0.020328
22	P3	-8.036931	0.003518	-0.020456
26	P3	-8.036925	0.003502	-0.019898
30	P3	-8.036834	0.003526	-0.020334

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	0.000473111
	stdev	2.16847e-07
MEAN Q	mean	0.000550165
	stdev	2.34084e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126884
	stdev	0.000919866

STDEV Q	mean	0.127100
	stdev	0.000928137

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

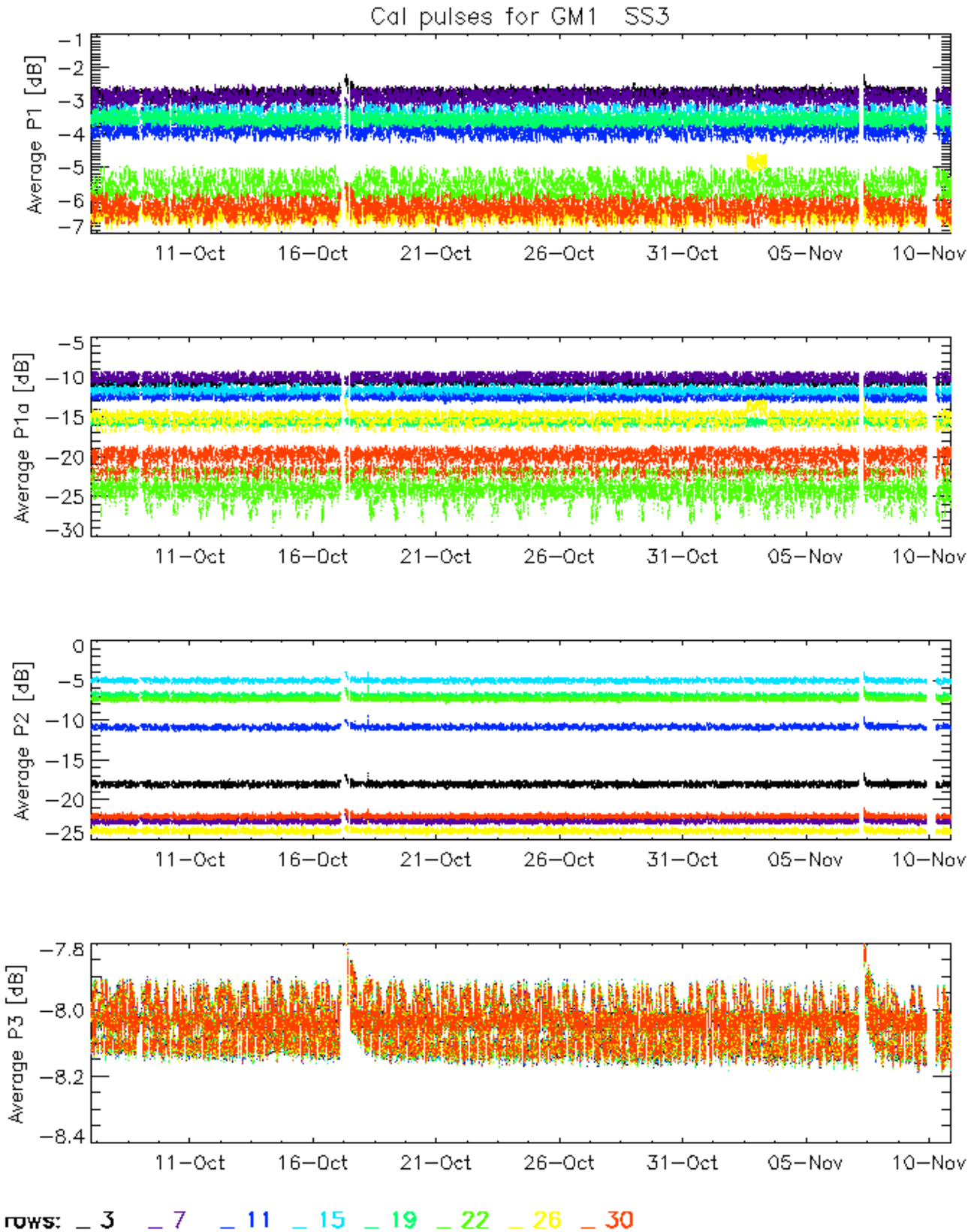
Evolution of Absolute Doppler

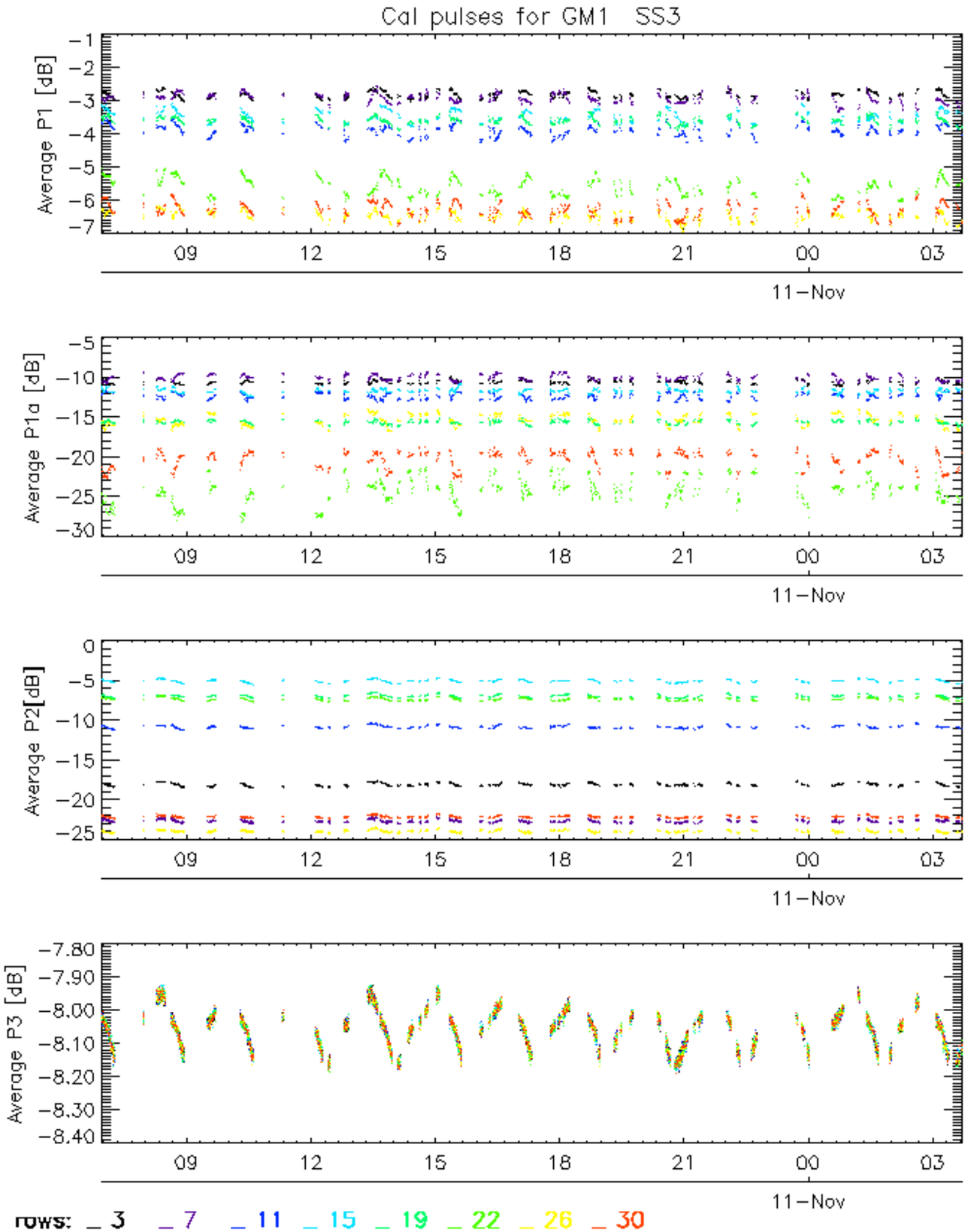
Acsending

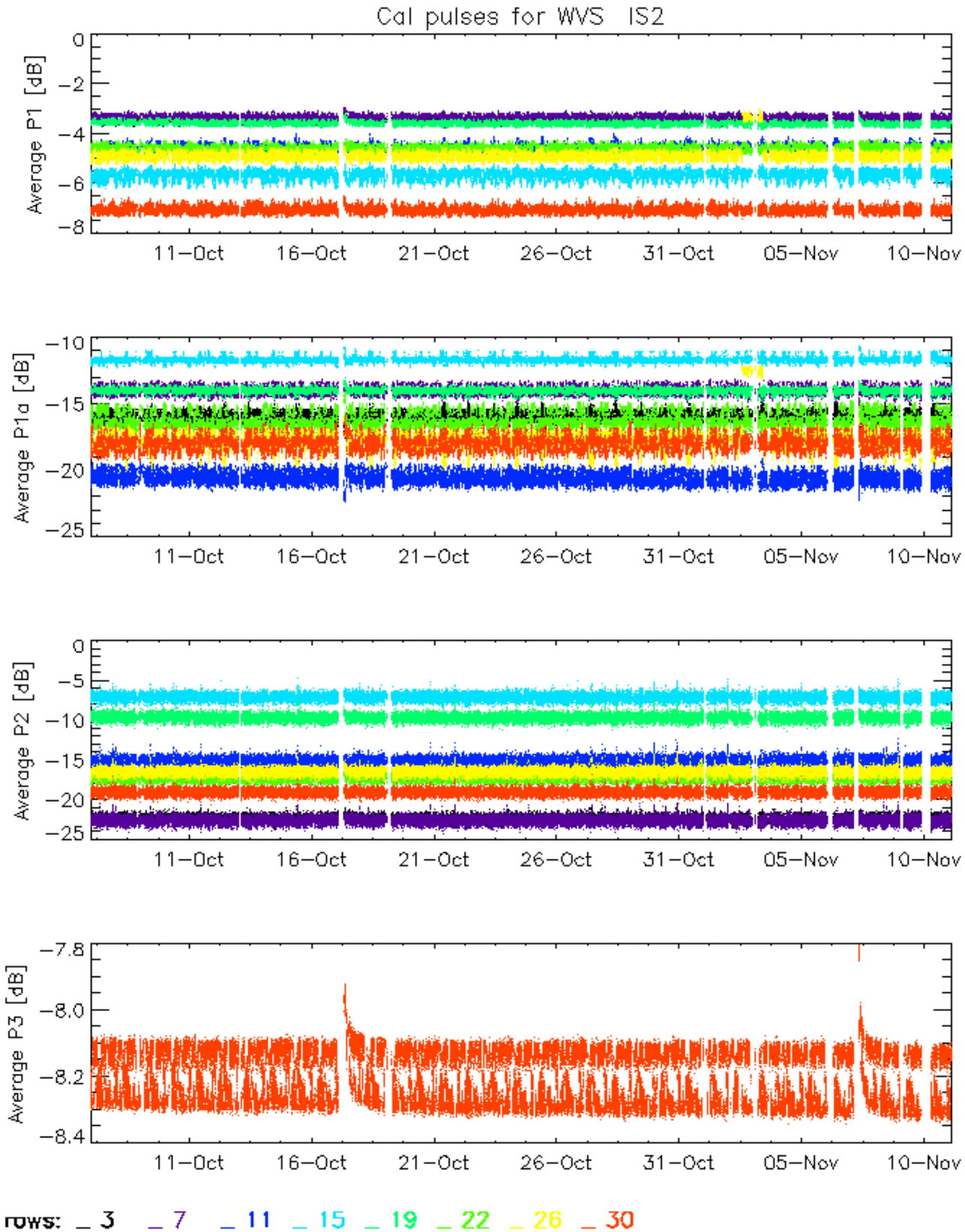
Descending

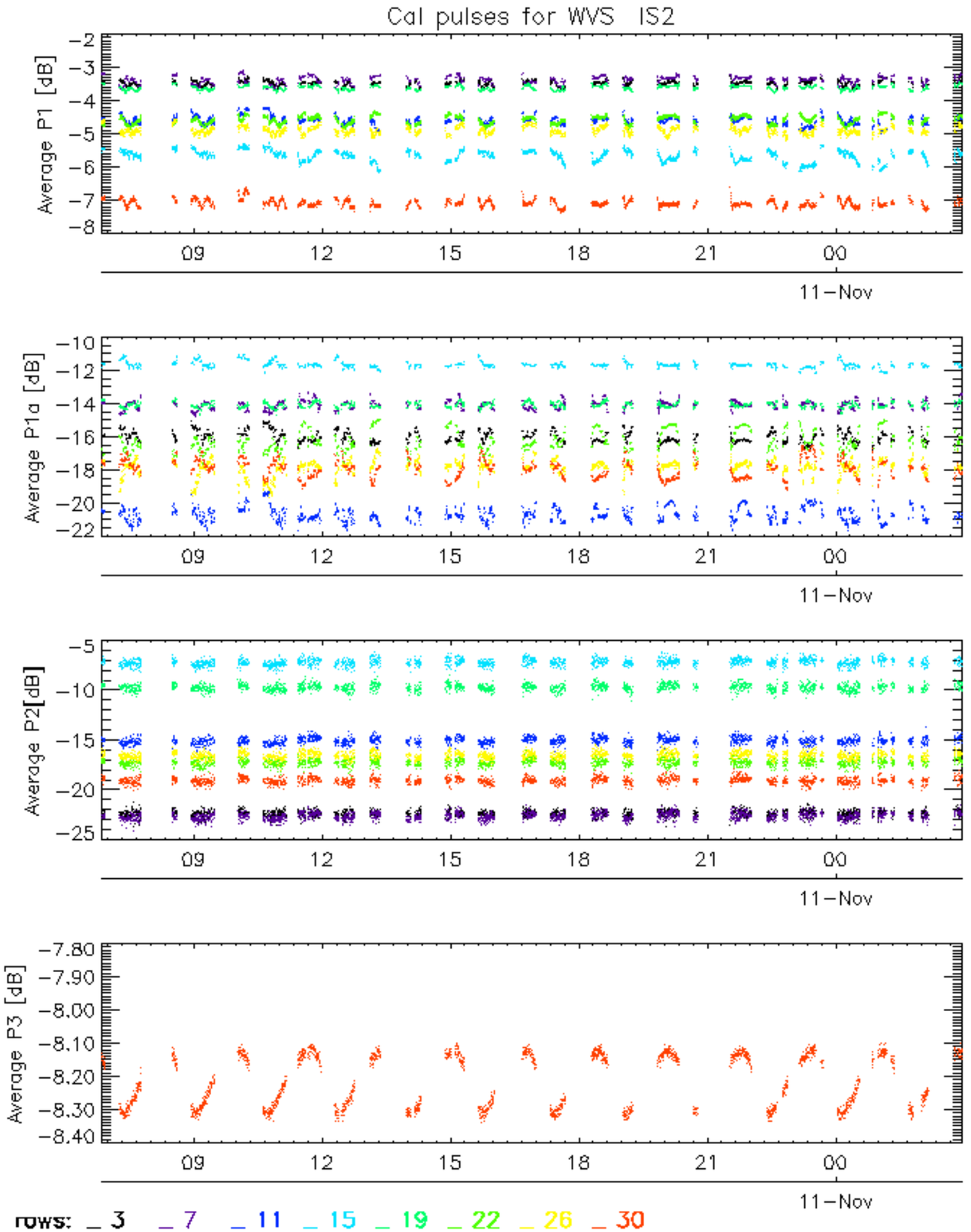
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

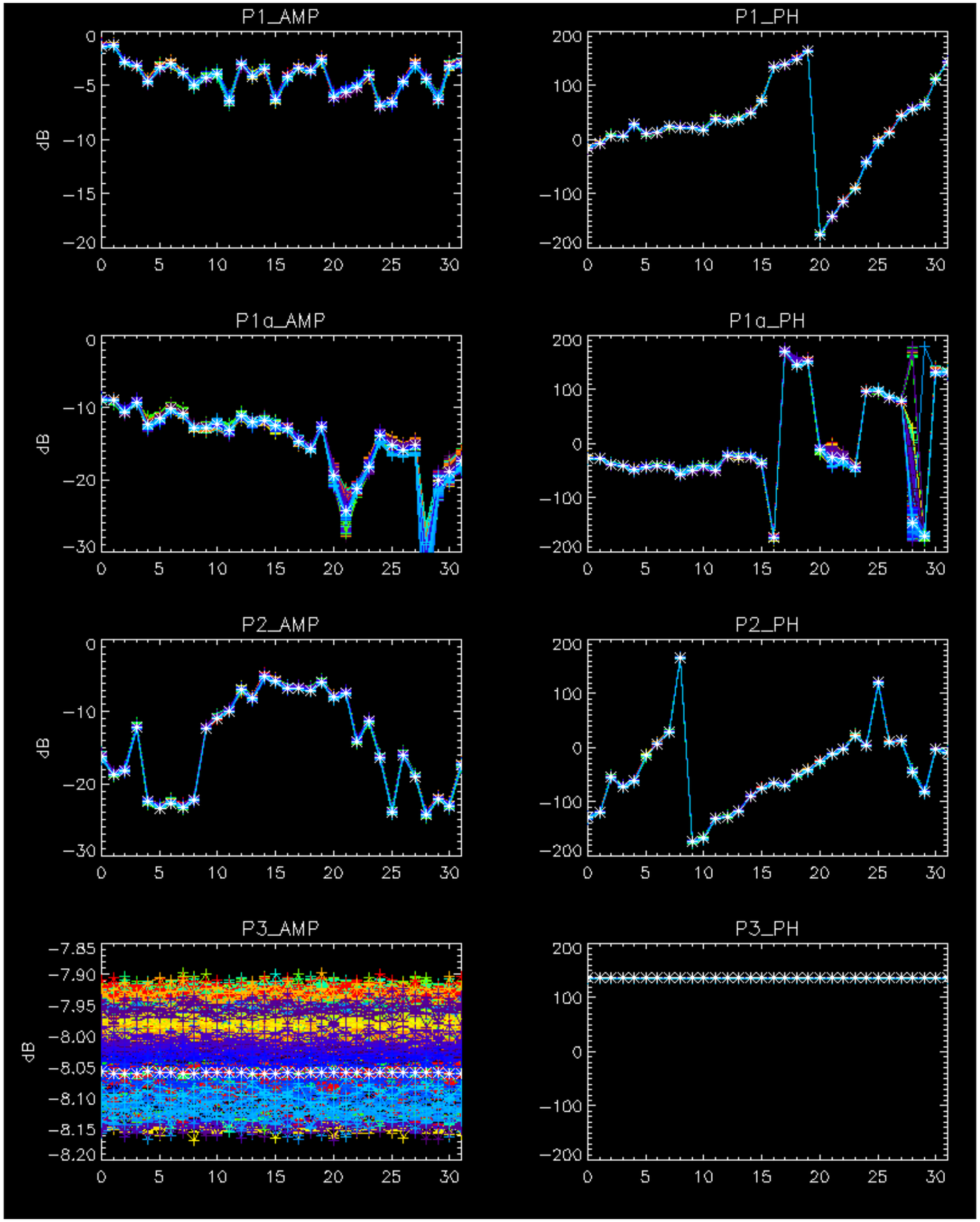


Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

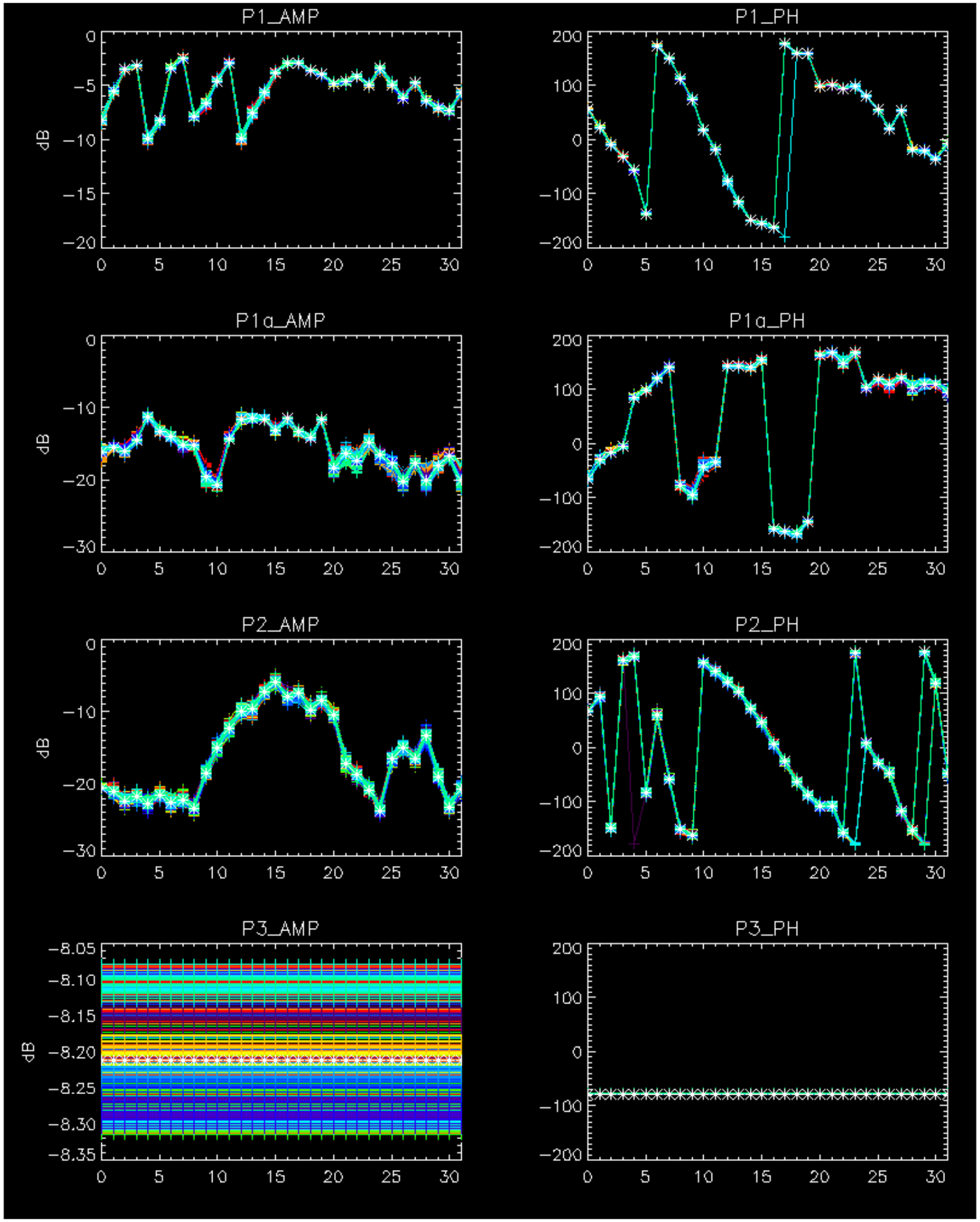

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
09
12
15
18
21
00
03
11−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
09
12
15
18
21
00
03
11−Nov
Average P2[dB]
0
−5
−10
−15
−20
−25
09
12
15
18
21
00
03
11−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
09
12
15
18
21
00
03
11−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


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


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
09
12
15
18
21
00
11−Nov
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
09
12
15
18
21
00
11−Nov
Average P2[dB]
−5
−10
−15
−20
−25
09
12
15
18
21
00
11−Nov
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
09
12
15
18
21
00
11−Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

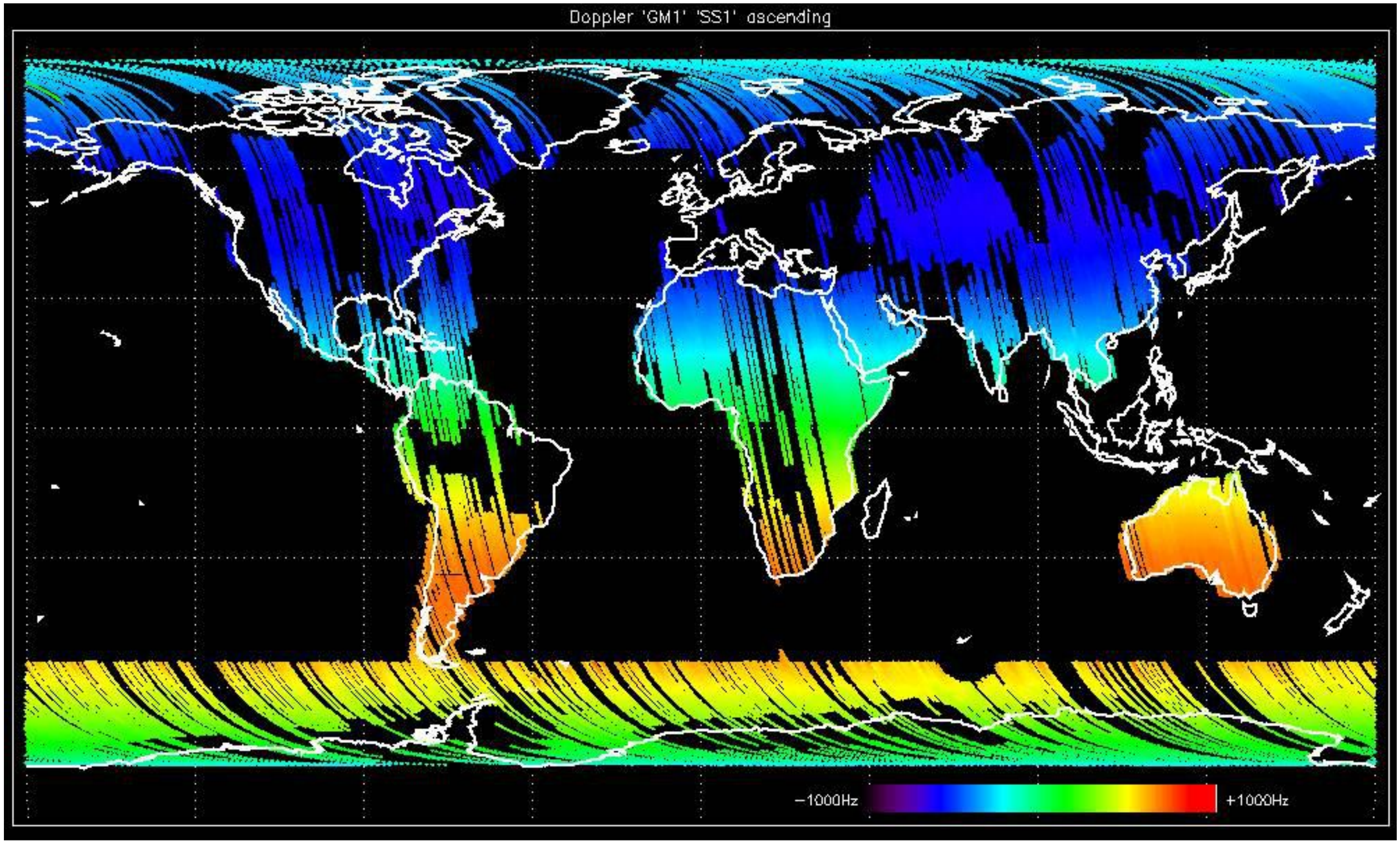
No anomalies observed.

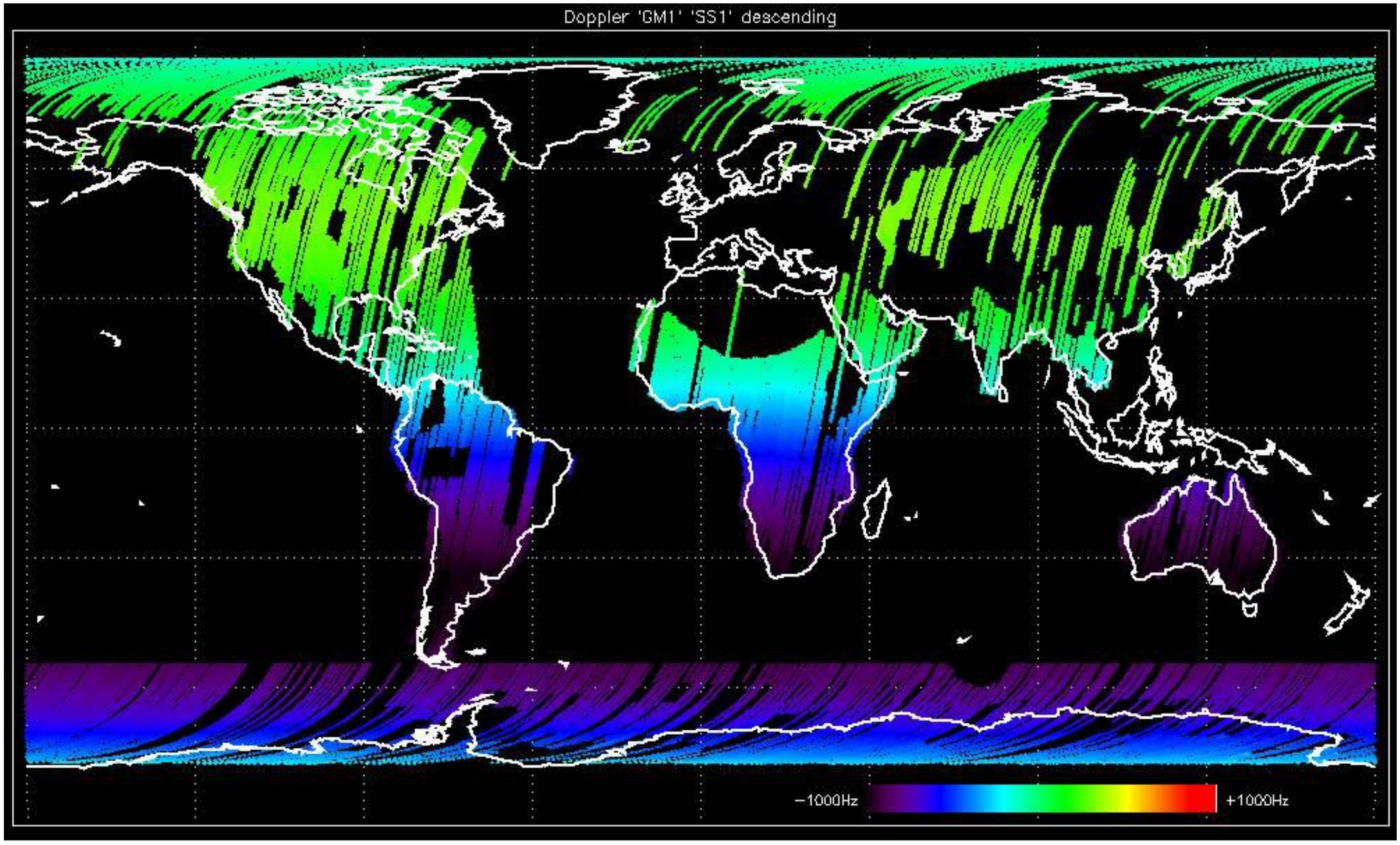

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

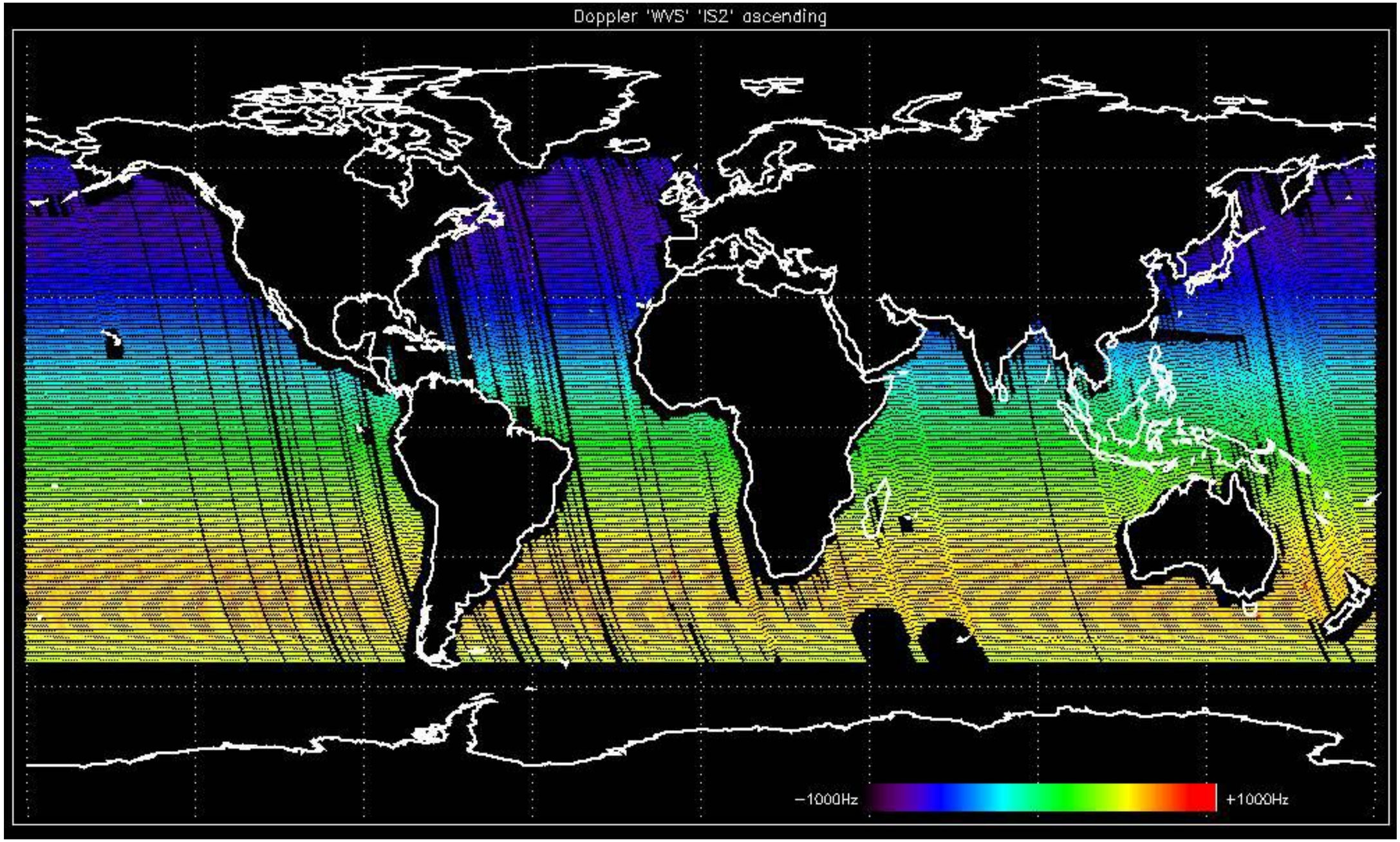

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

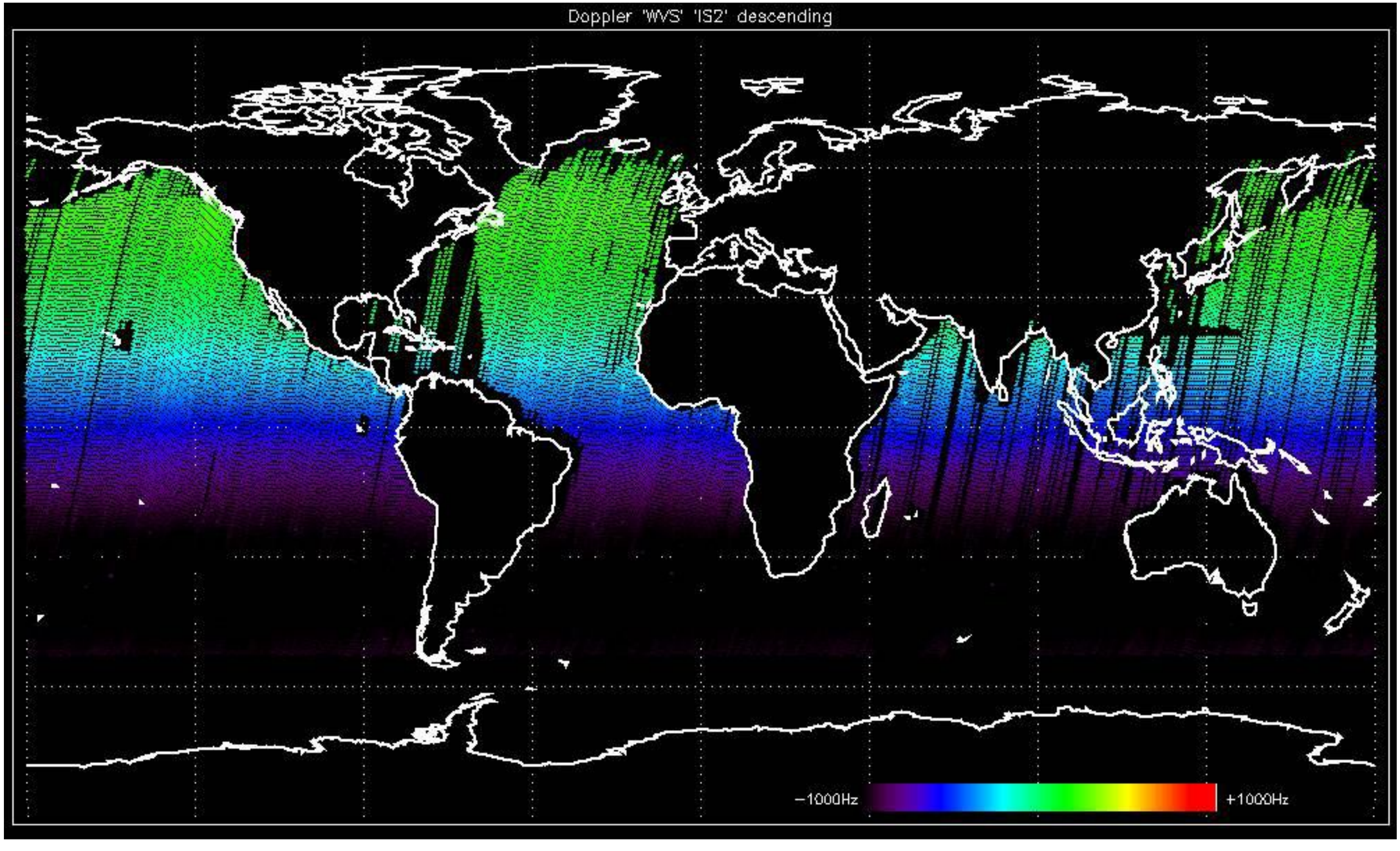
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

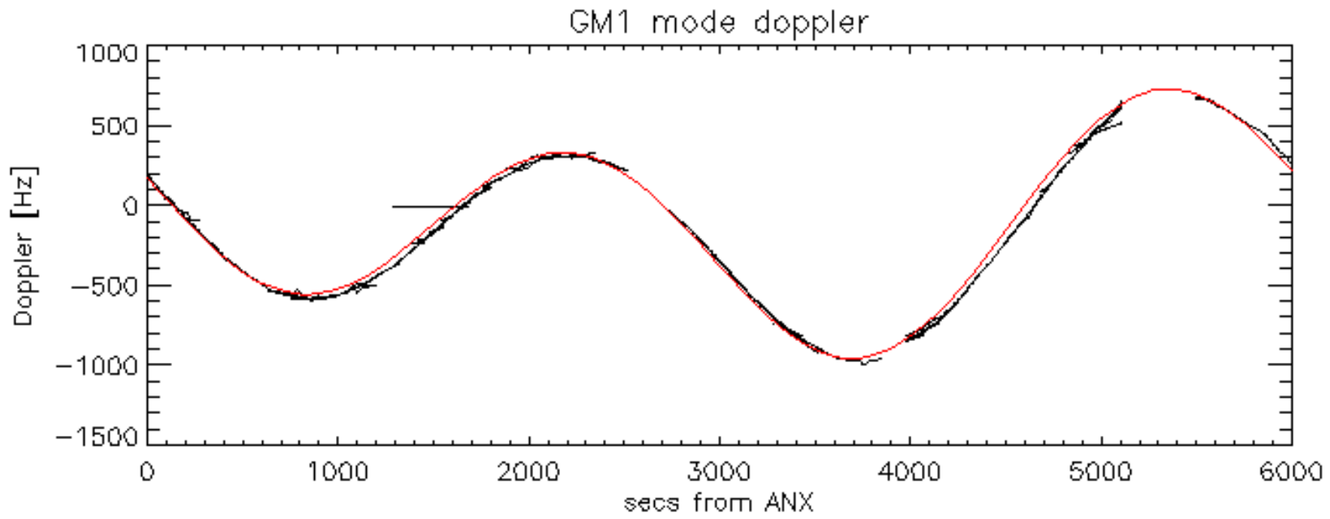
Preliminary report.The data is not yet controled

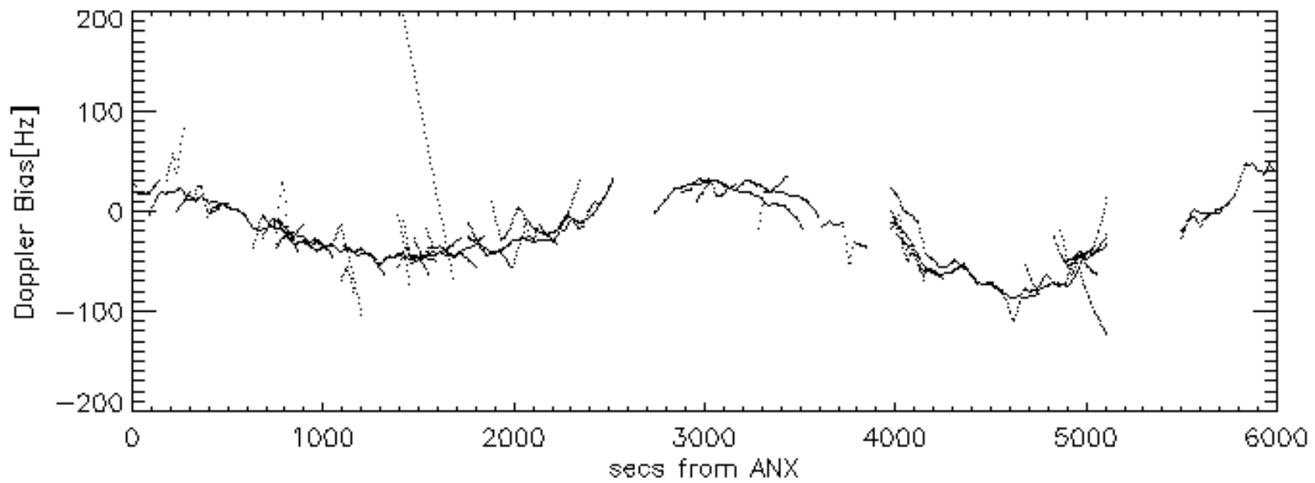

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

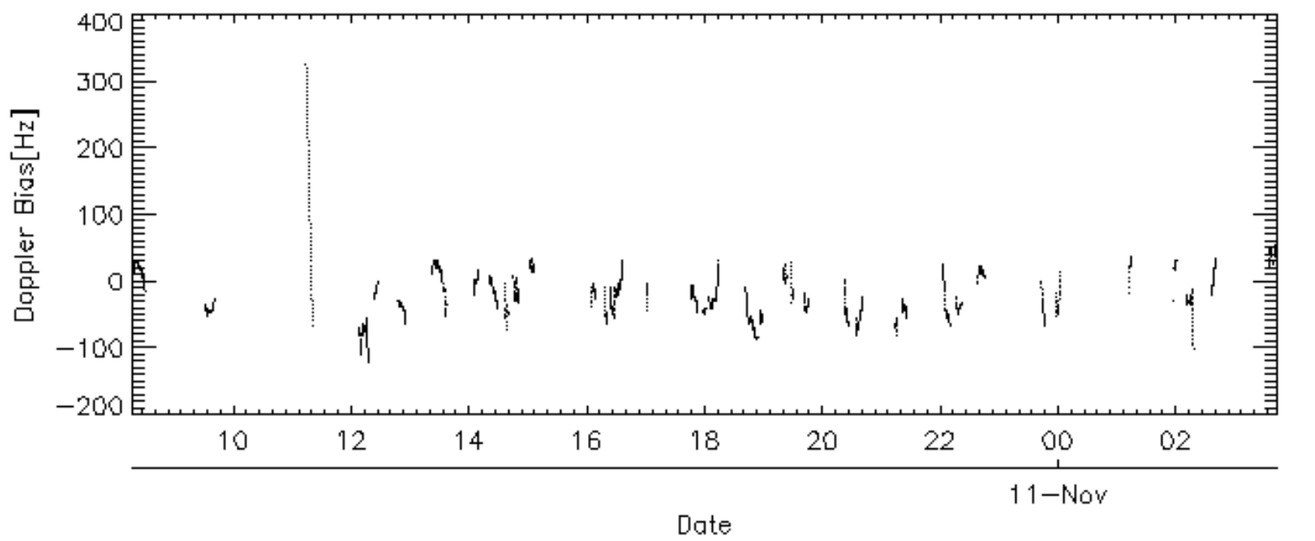

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

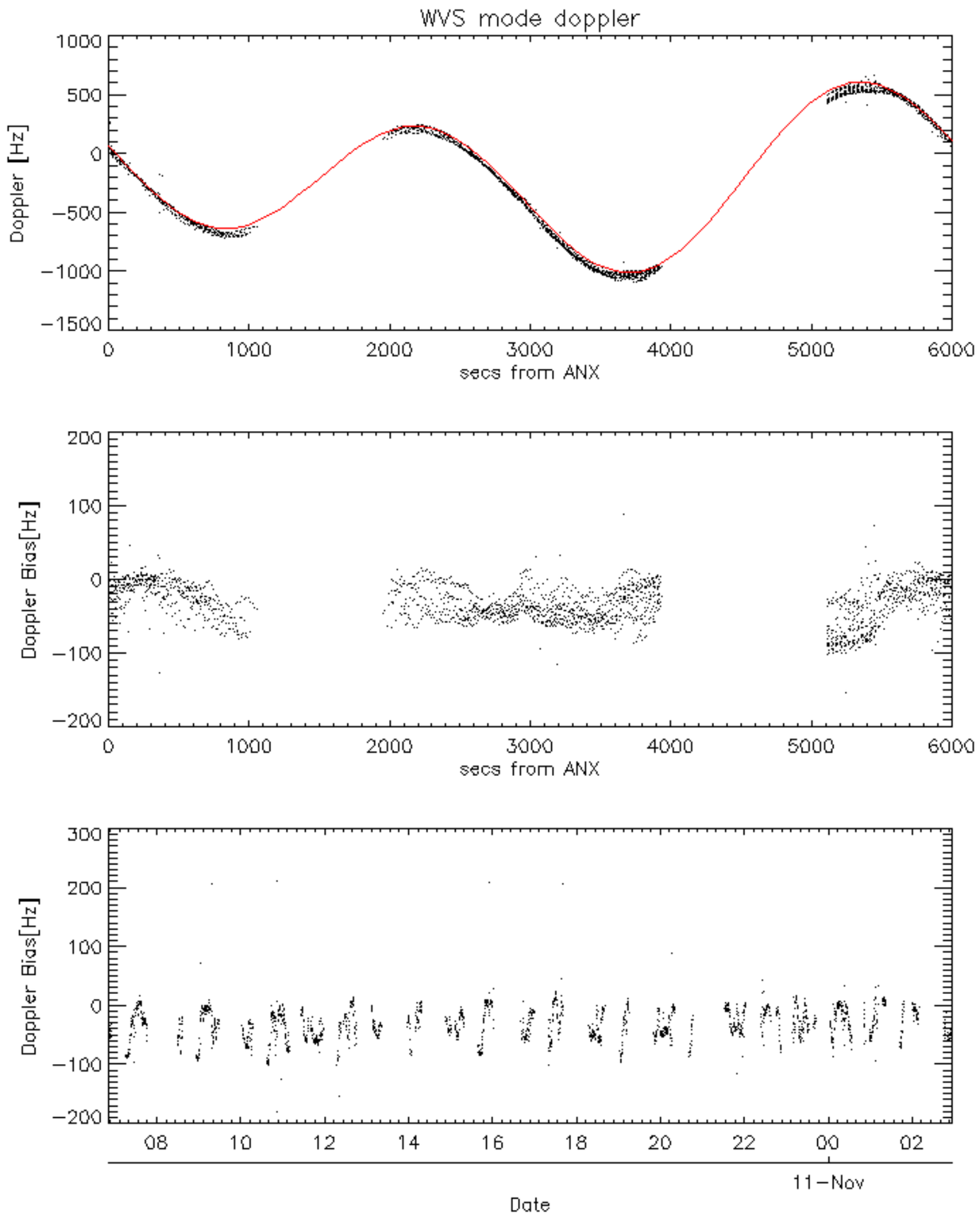

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

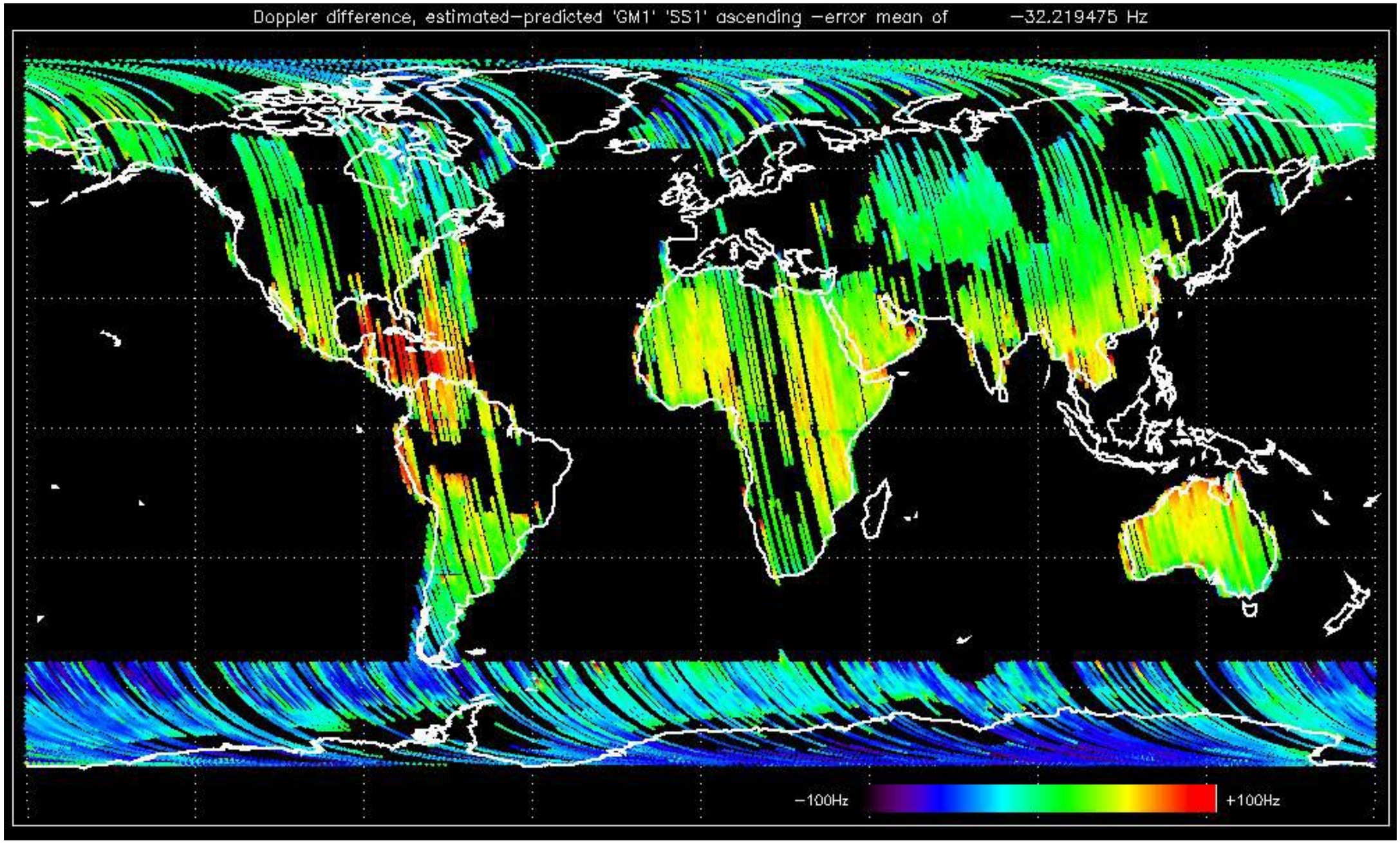

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

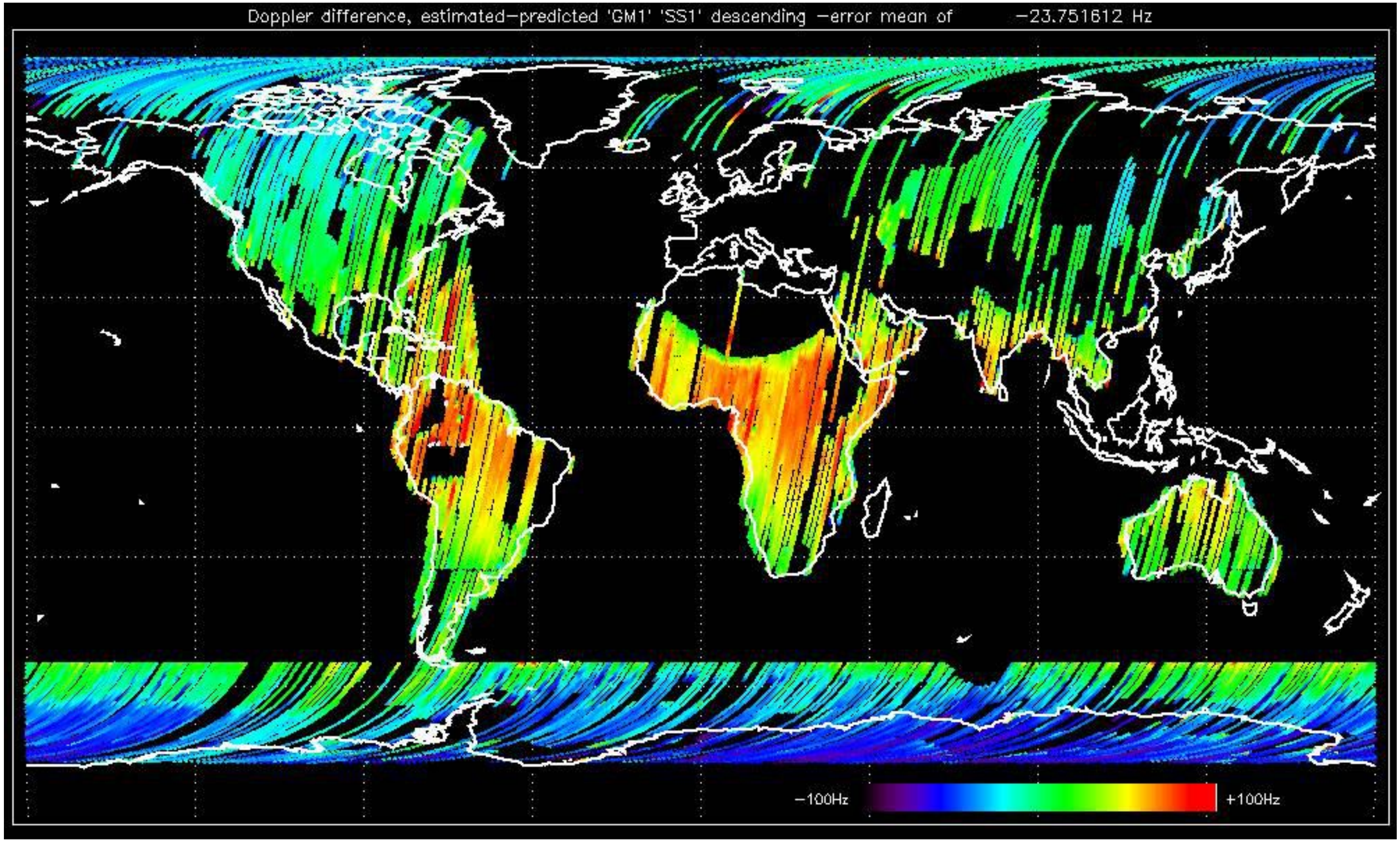

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

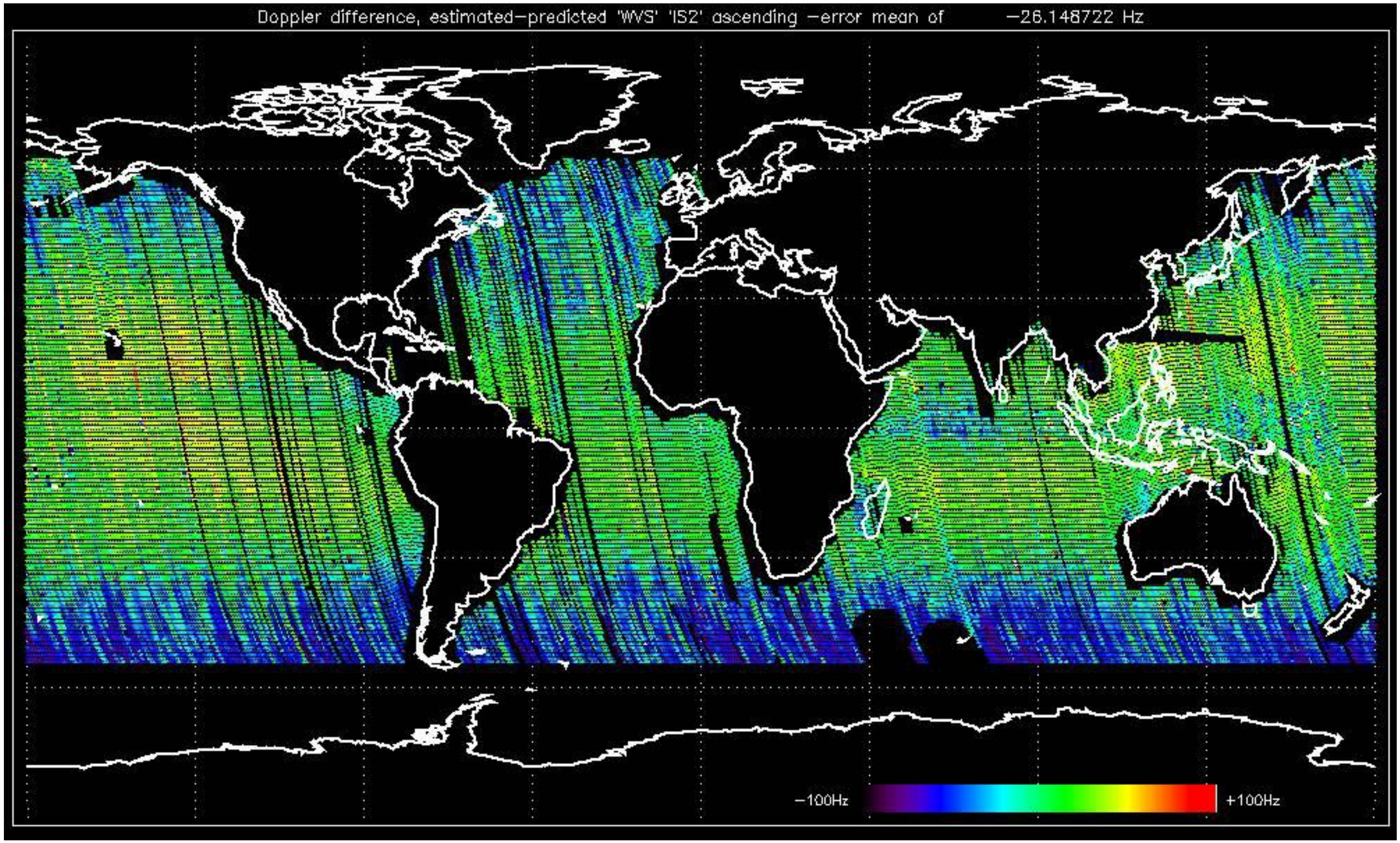

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

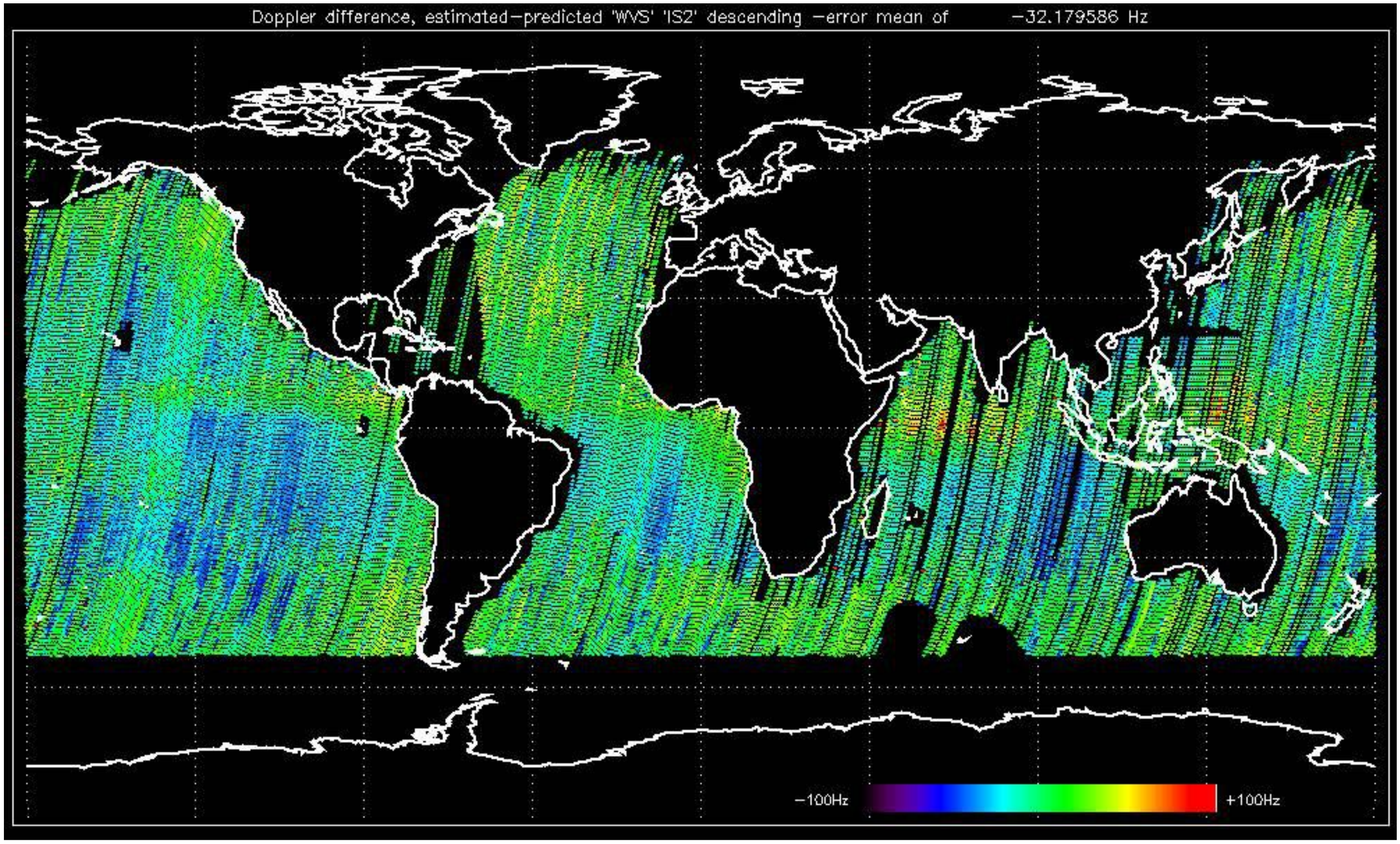

Doppler Bias[Hz]
400
300
200
100
0
−100
−200
10
12
14
16
18
20
22
00
02
11−Nov
Date


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
08
10
12
14
16
18
20
22
00
02
11−Nov
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −32.219475 Hz
−100Hz
+100Hz

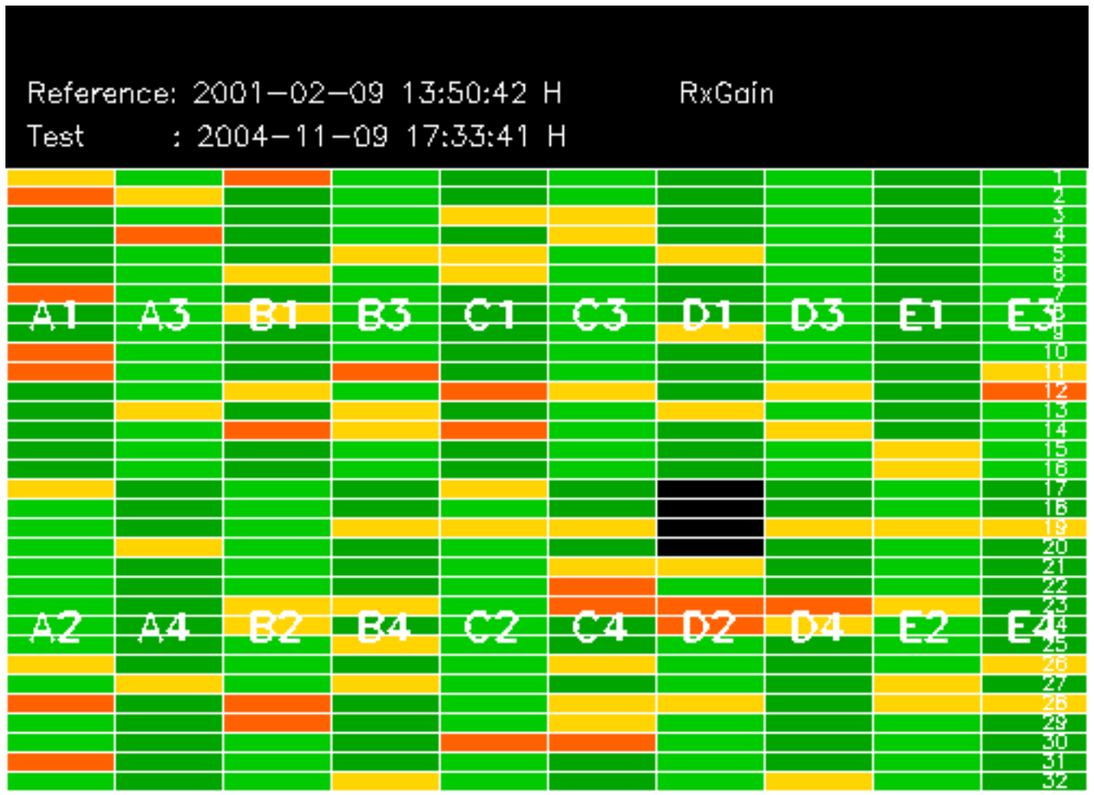

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.751612 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −26.148722 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −32.179586 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 : 2004-11-09 17:33:41 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
6
7
8
9
10
11
12
13
14
15
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17
18
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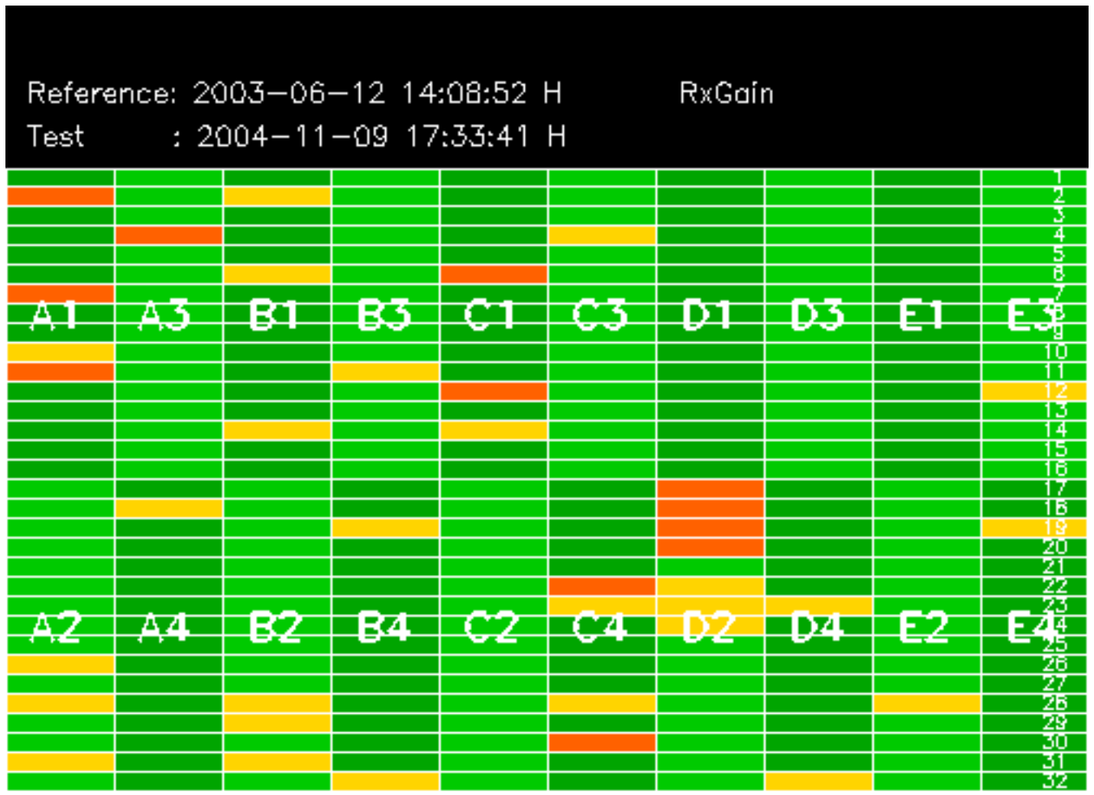
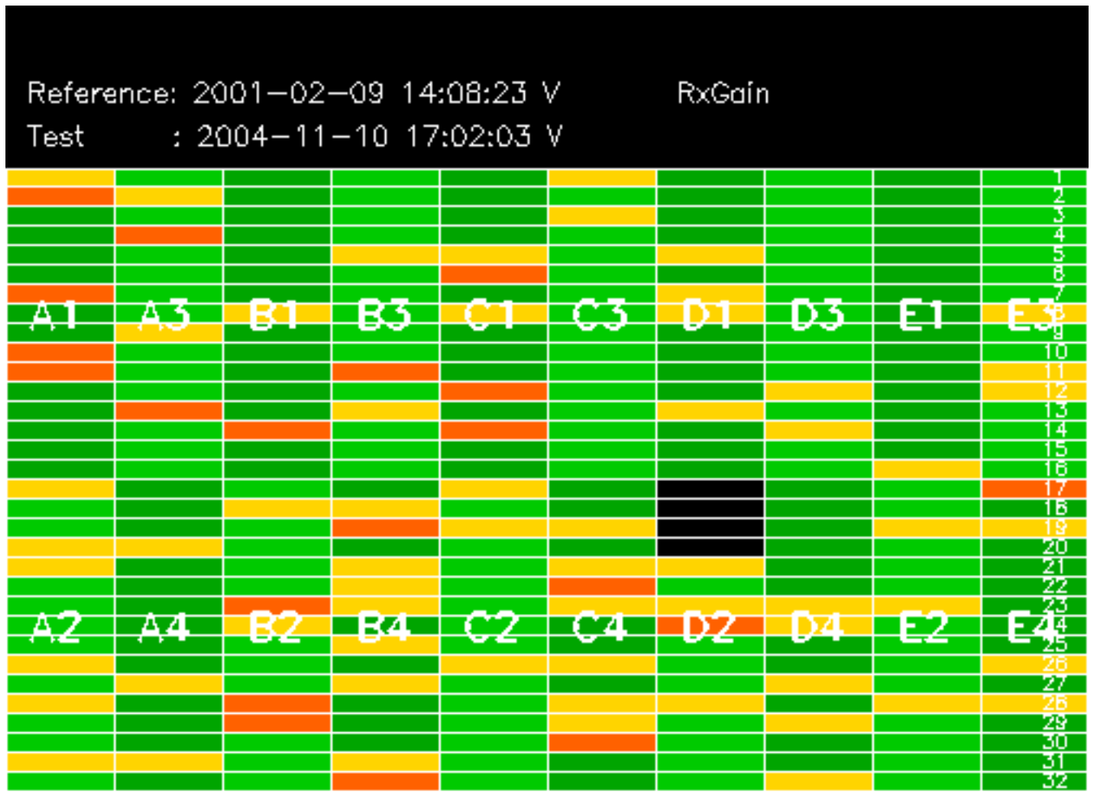
22
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-11-09 17:33:41 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 : 2004-11-10 17:02:03 V
RxGain
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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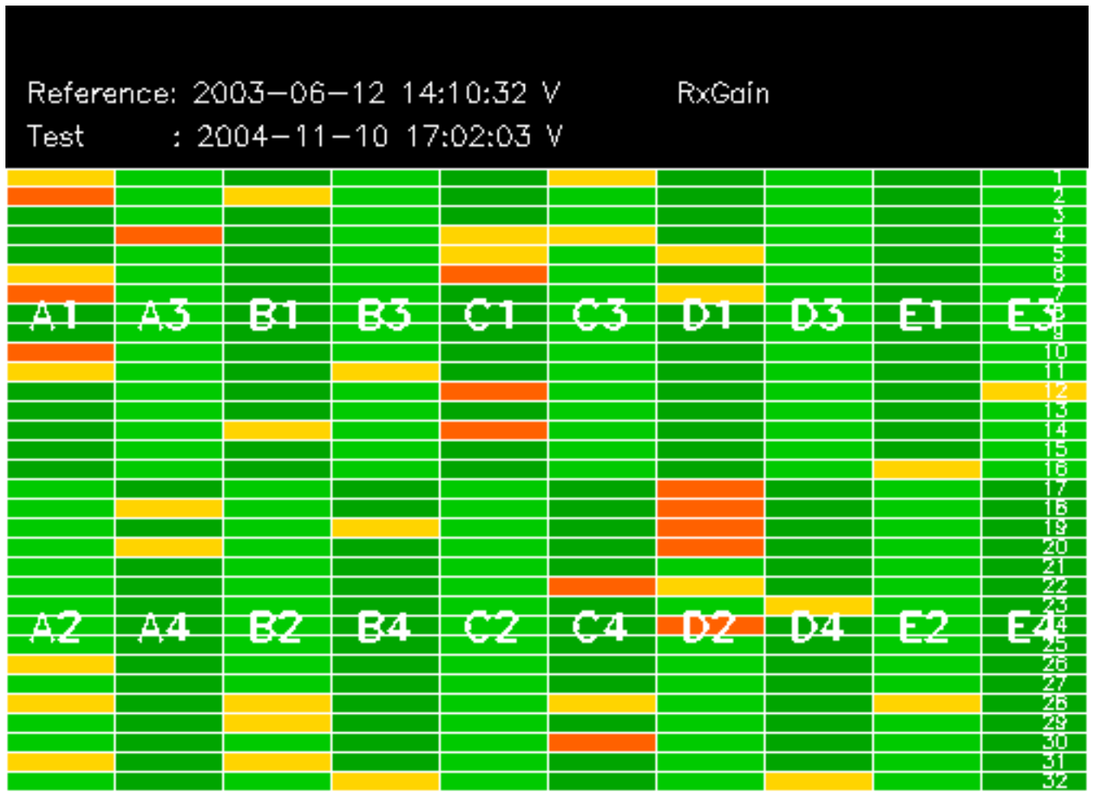
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-10 17:02:03 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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9
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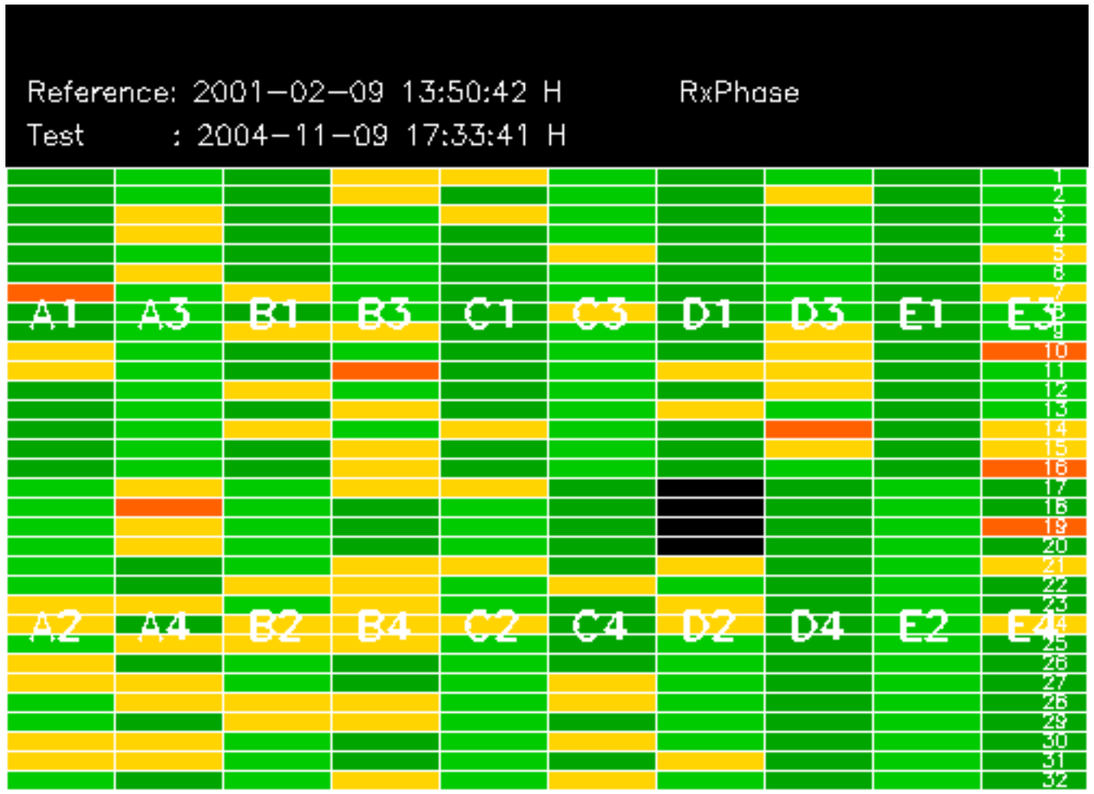
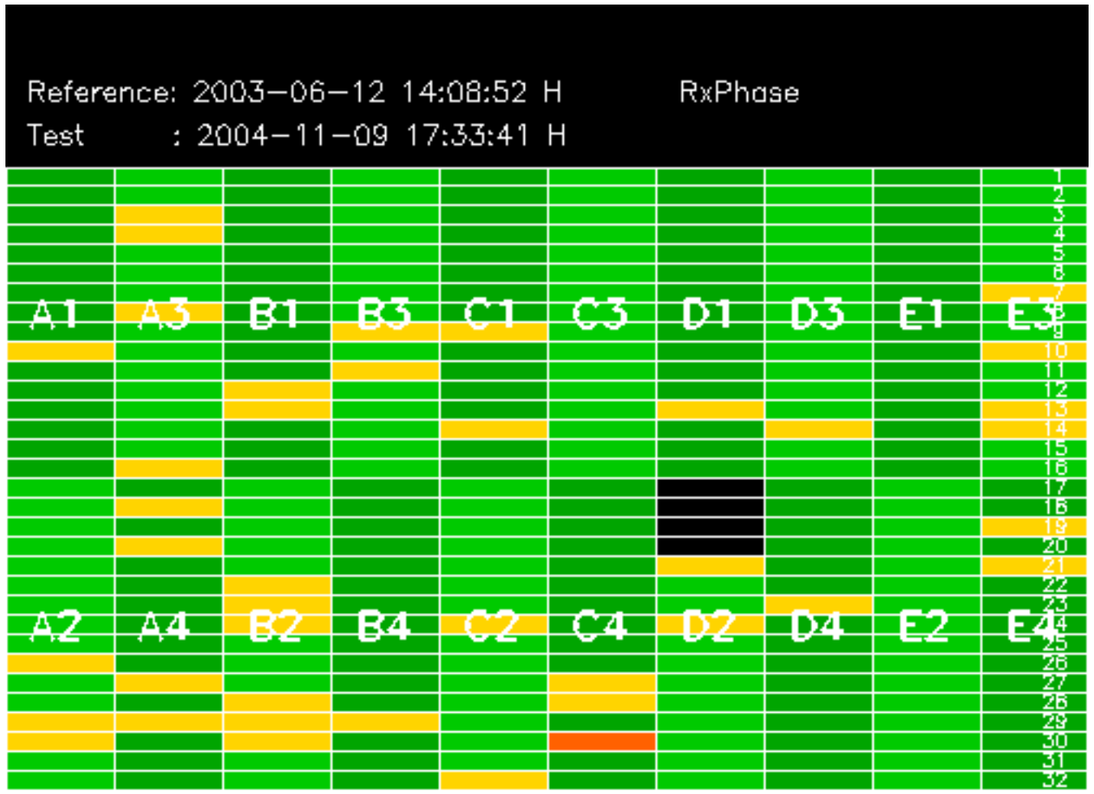
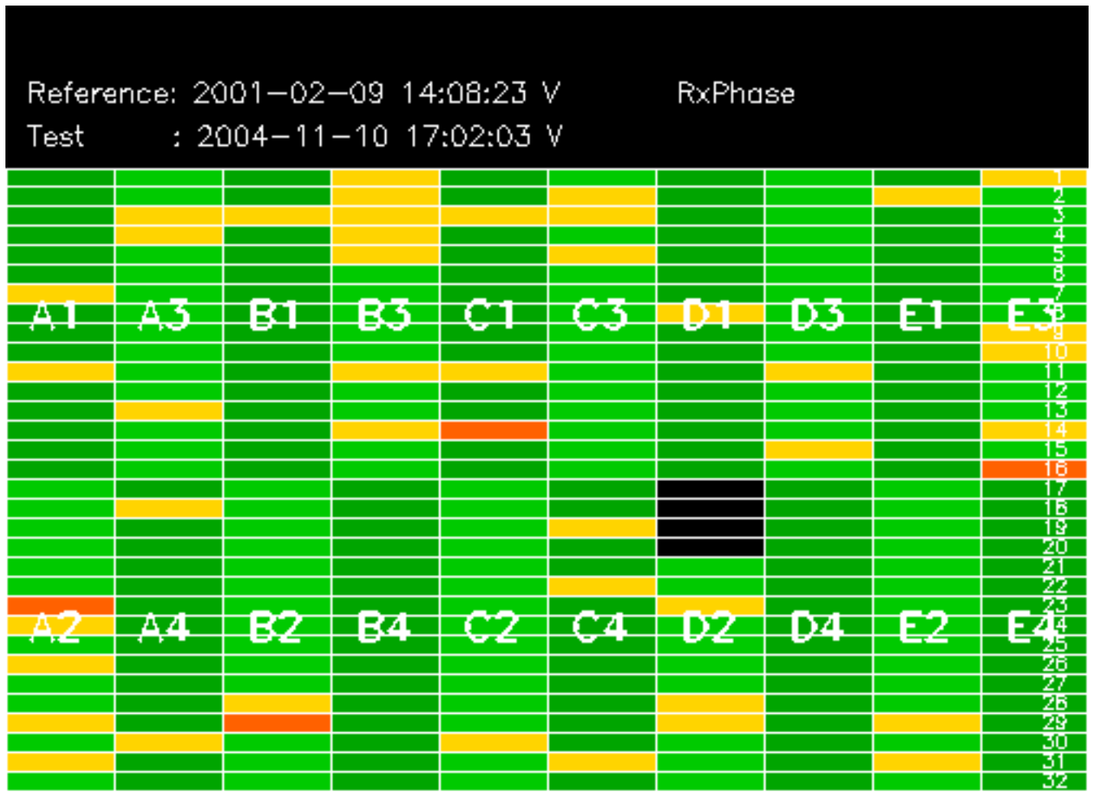
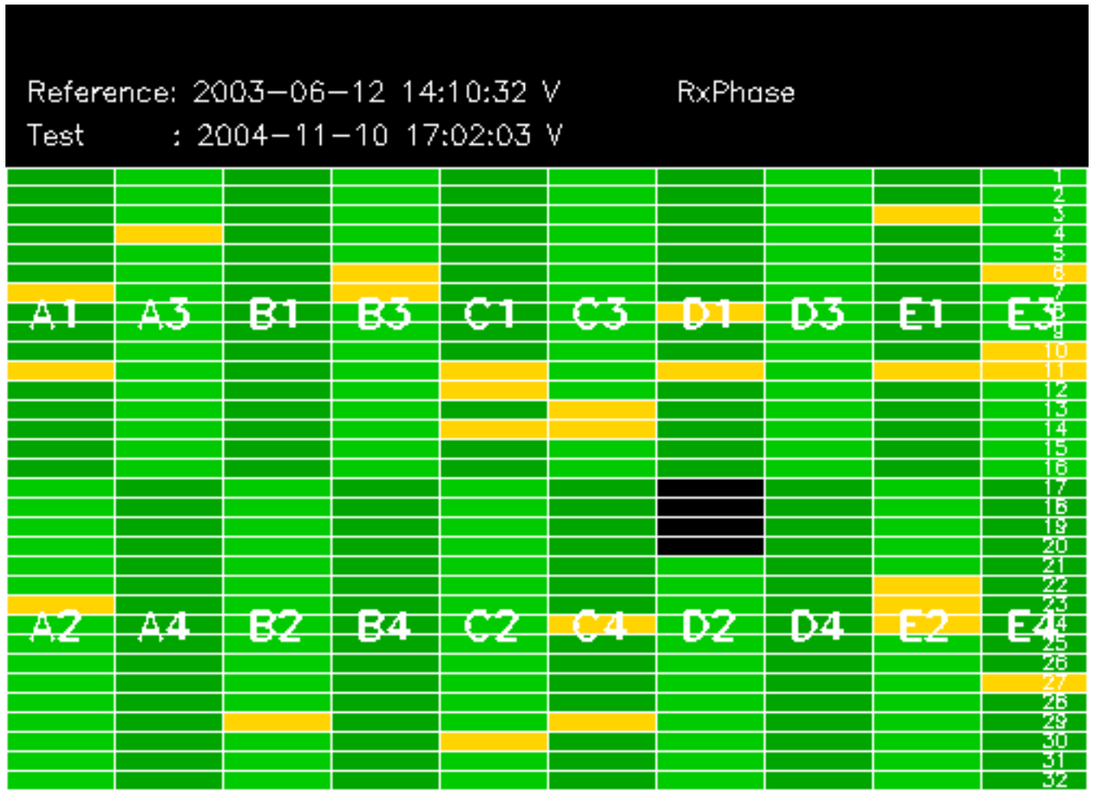
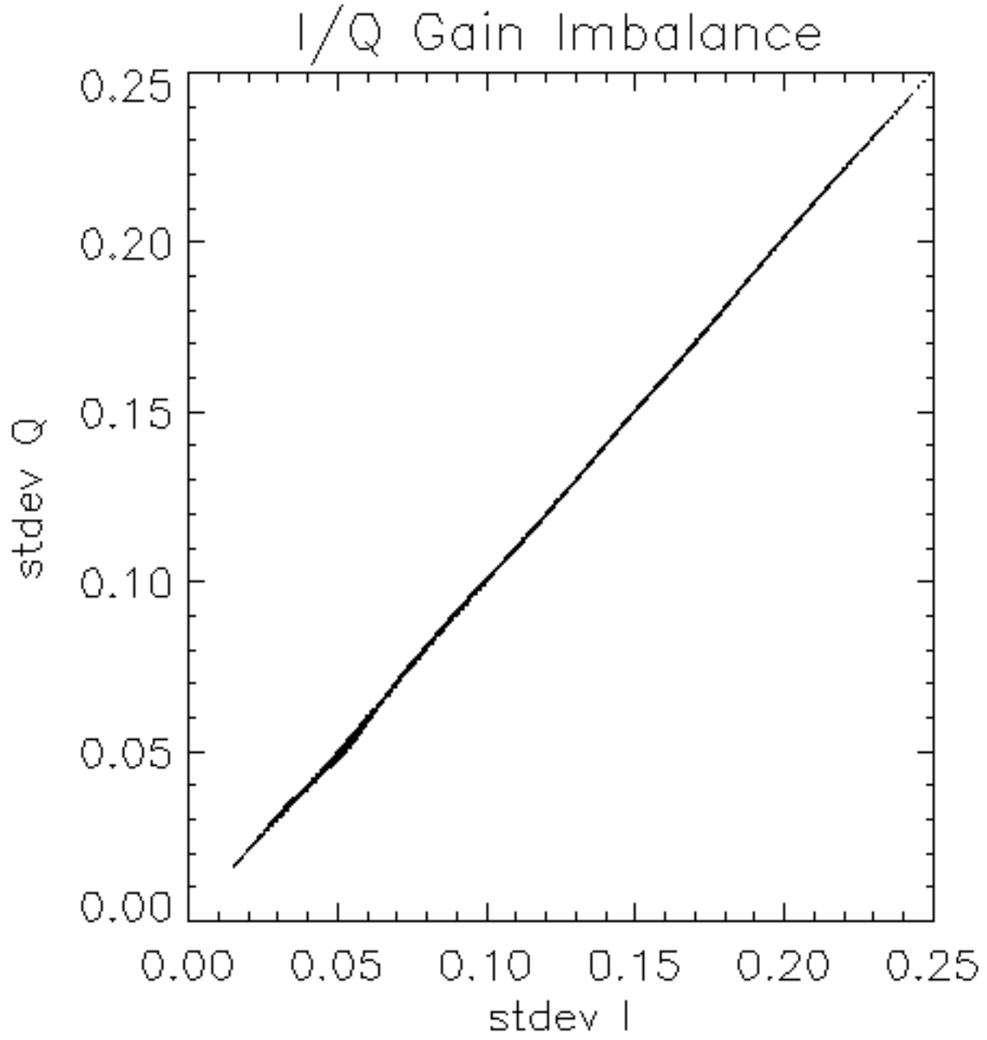
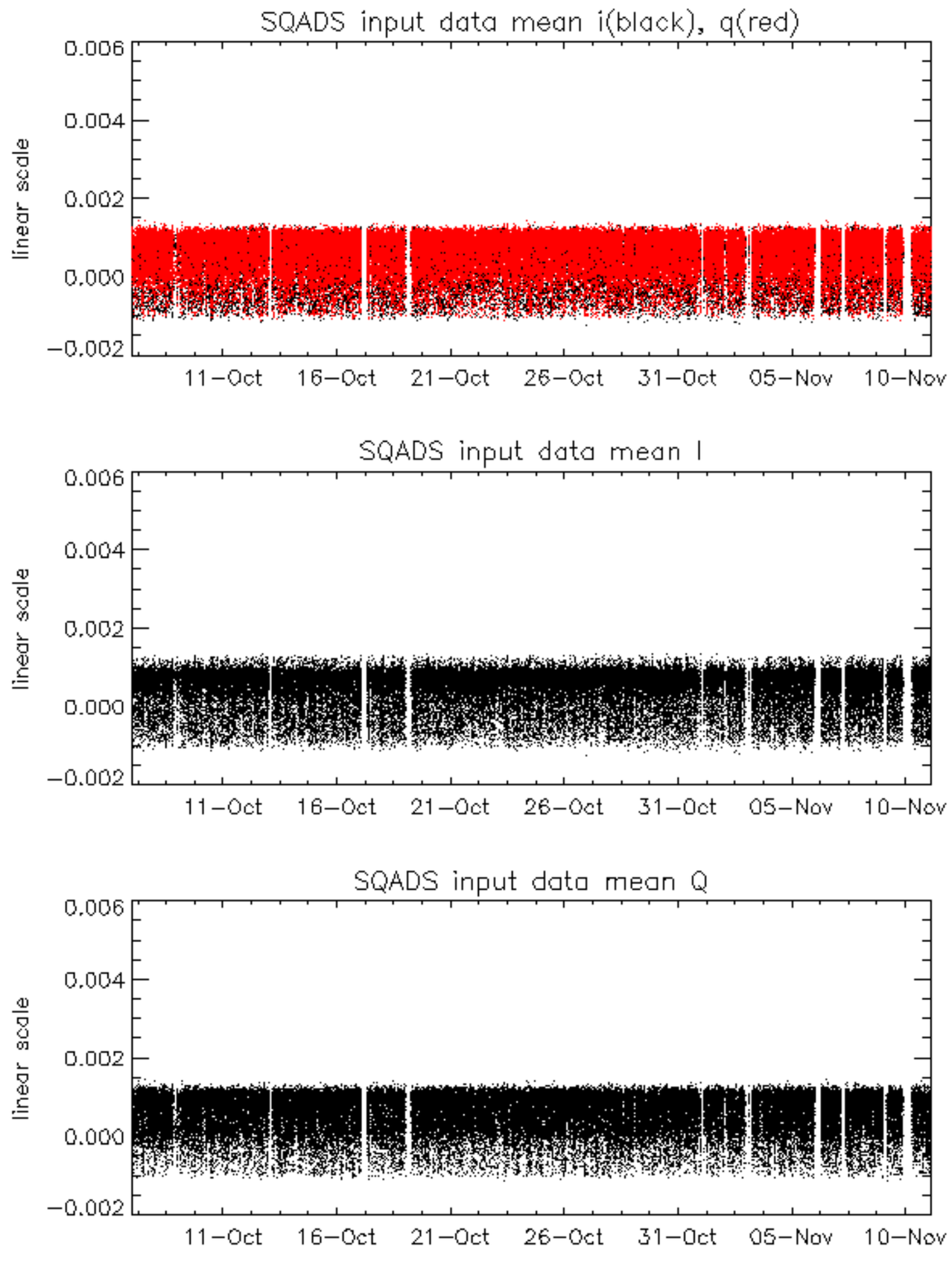

Reference: 2001-02-09 13:50:42 H
Test : 2004-11-09 17:33:41 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

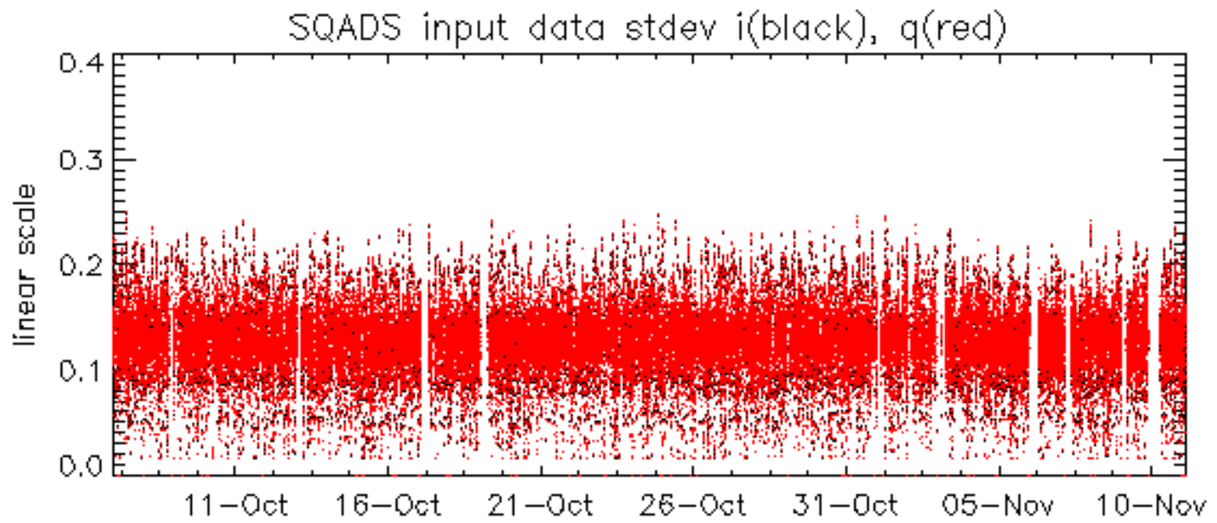

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-09 17:33:41 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

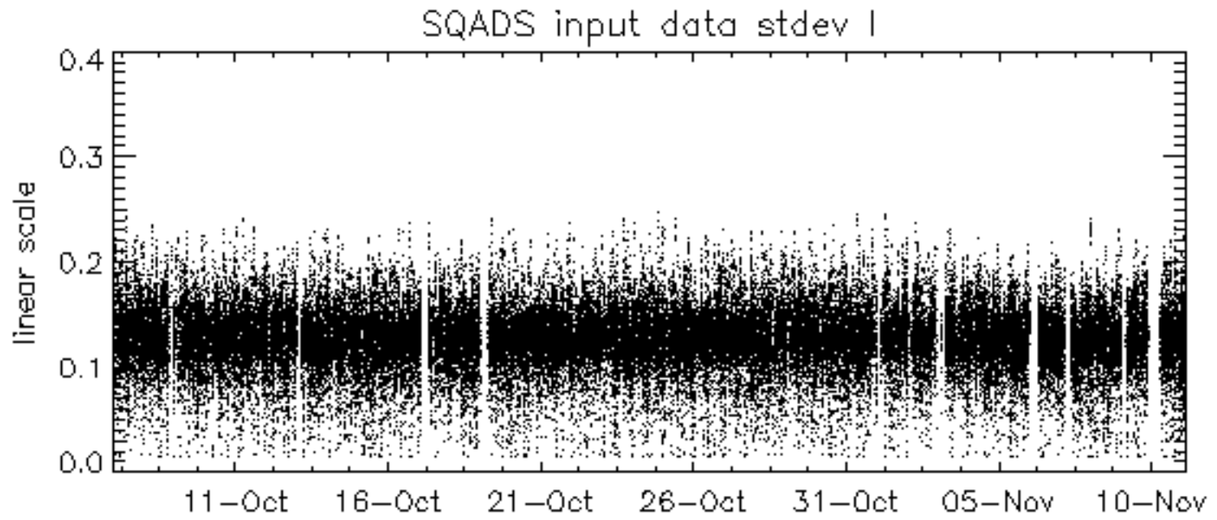

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-10 17:02:03 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

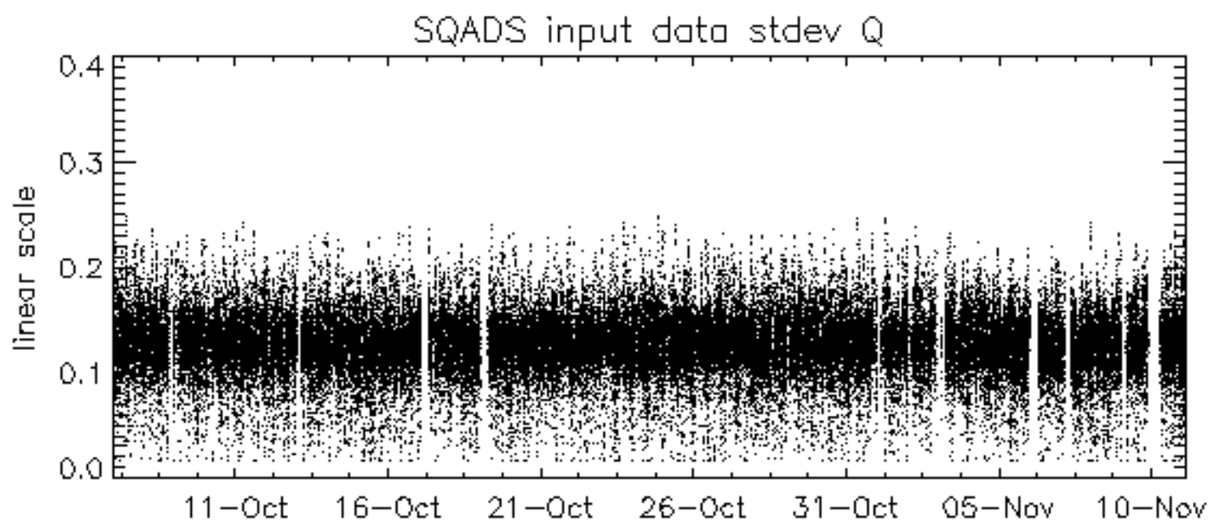

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-10 17:02:03 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

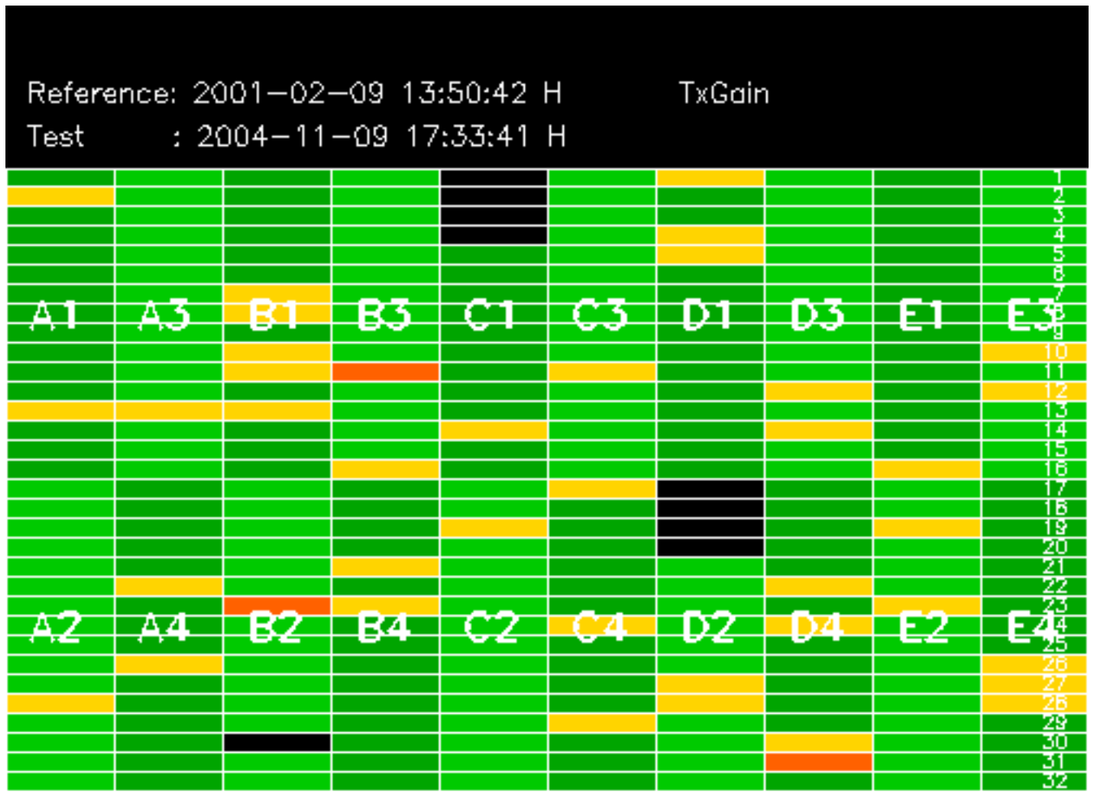

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

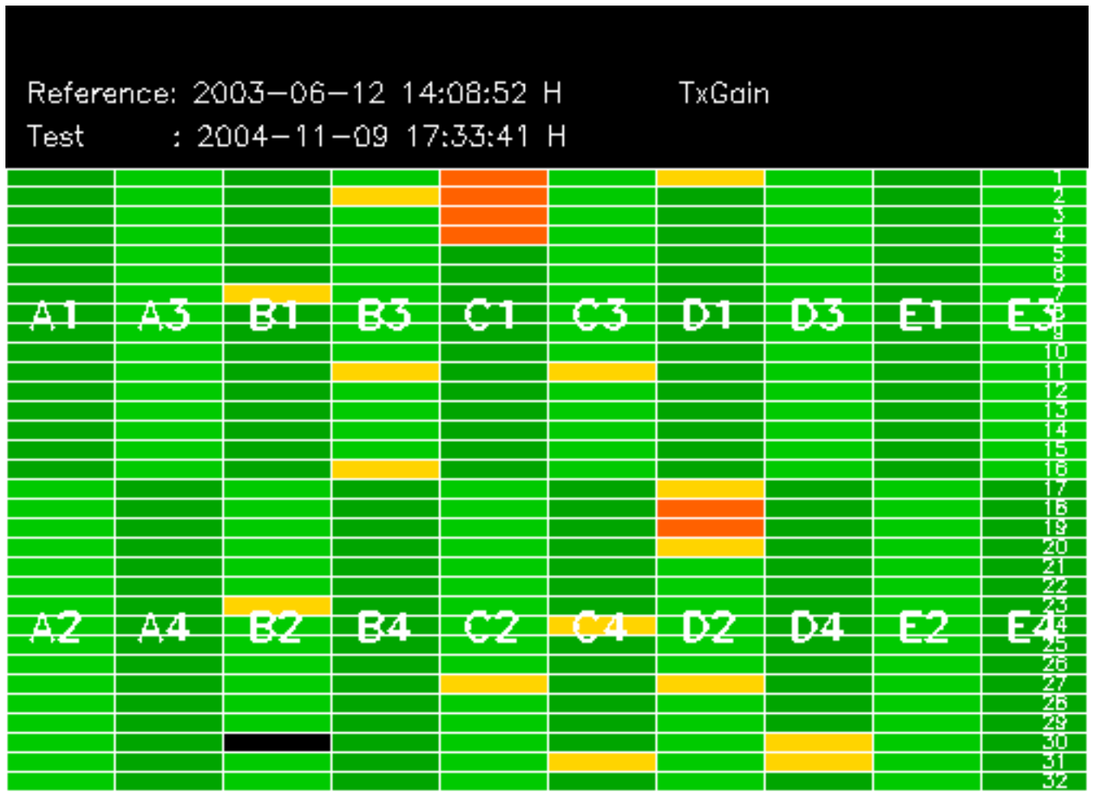

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov
SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Oct
16−Oct
21−Oct
26−Oct
31−Oct
05−Nov
10−Nov


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-09 17:33:41 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 : 2004-11-09 17:33:41 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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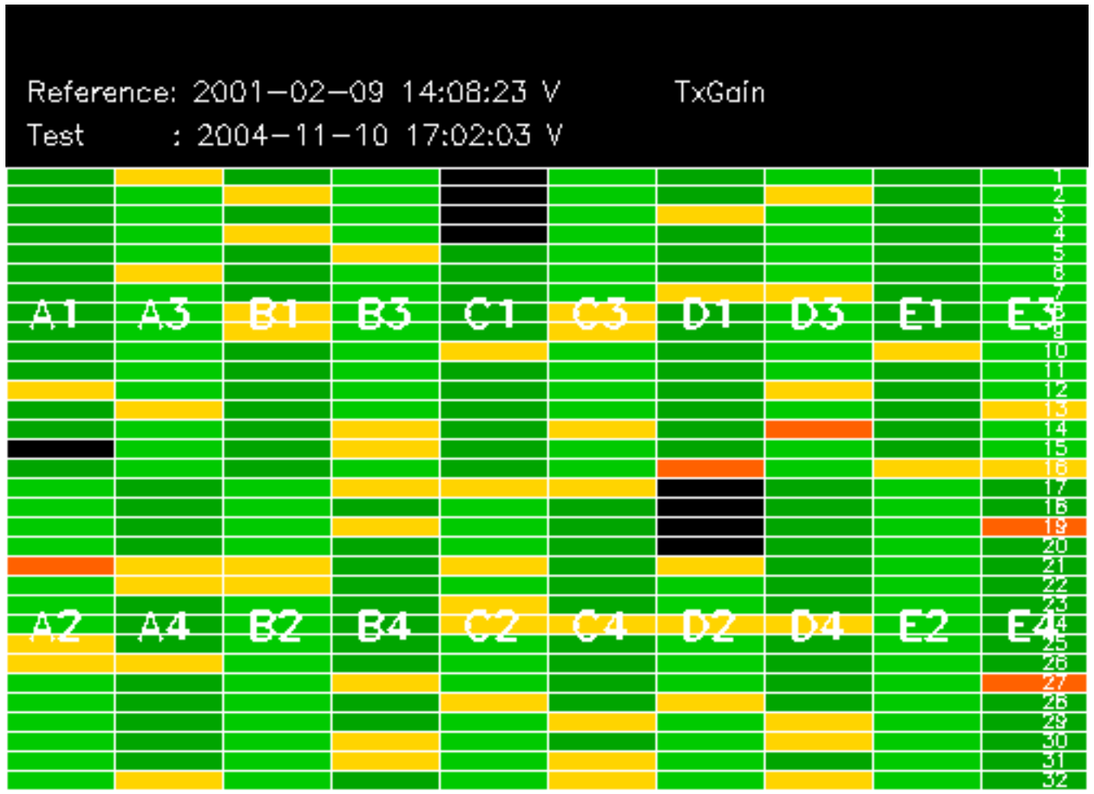
Reference: 2001-02-09 14:08:23 V
Test : 2004-11-10 17:02:03 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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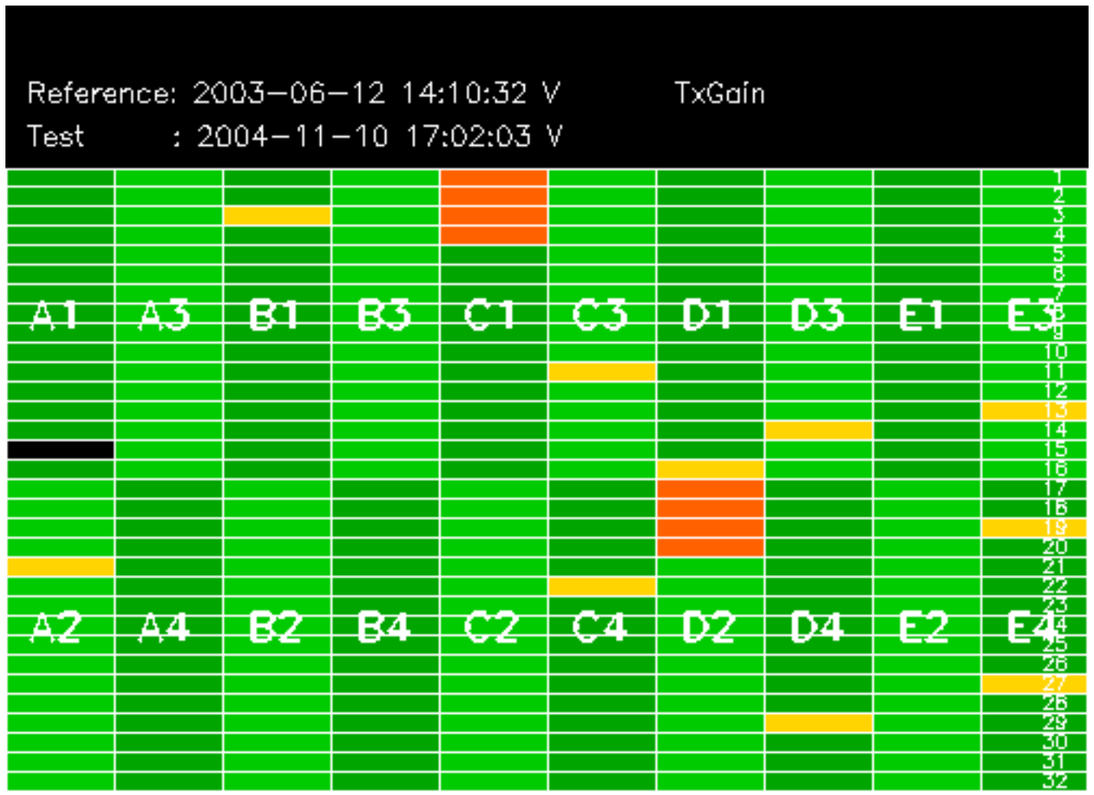
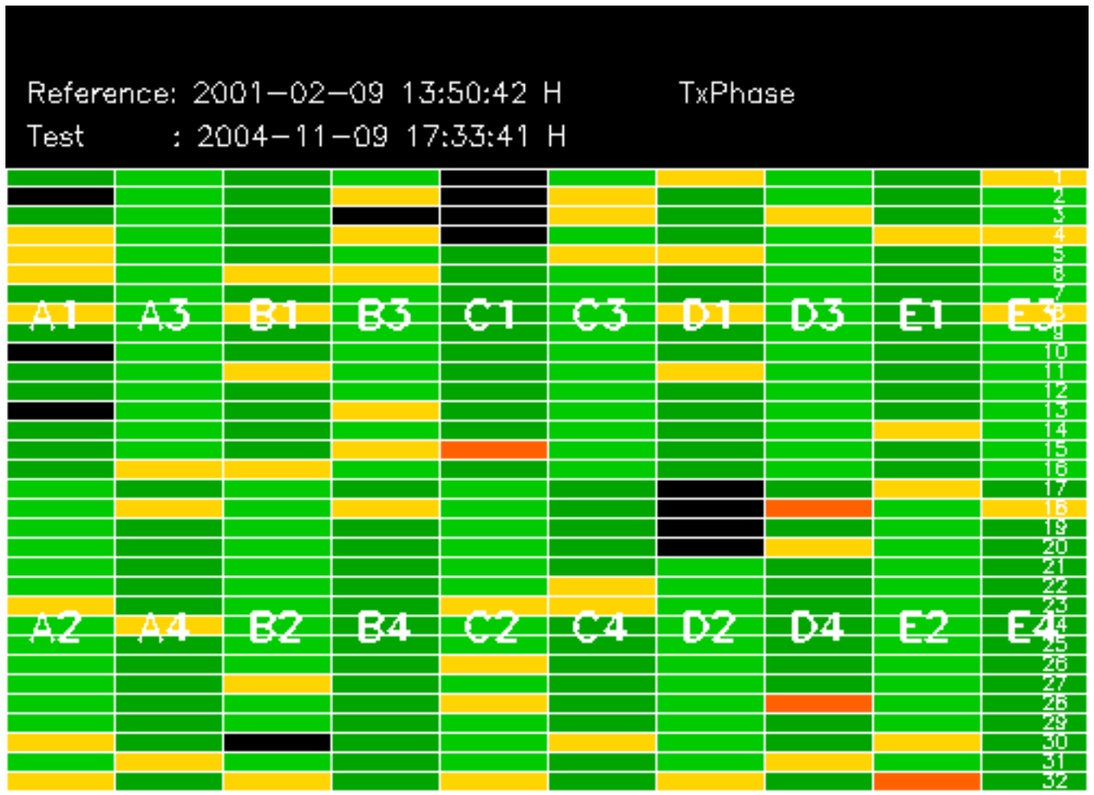
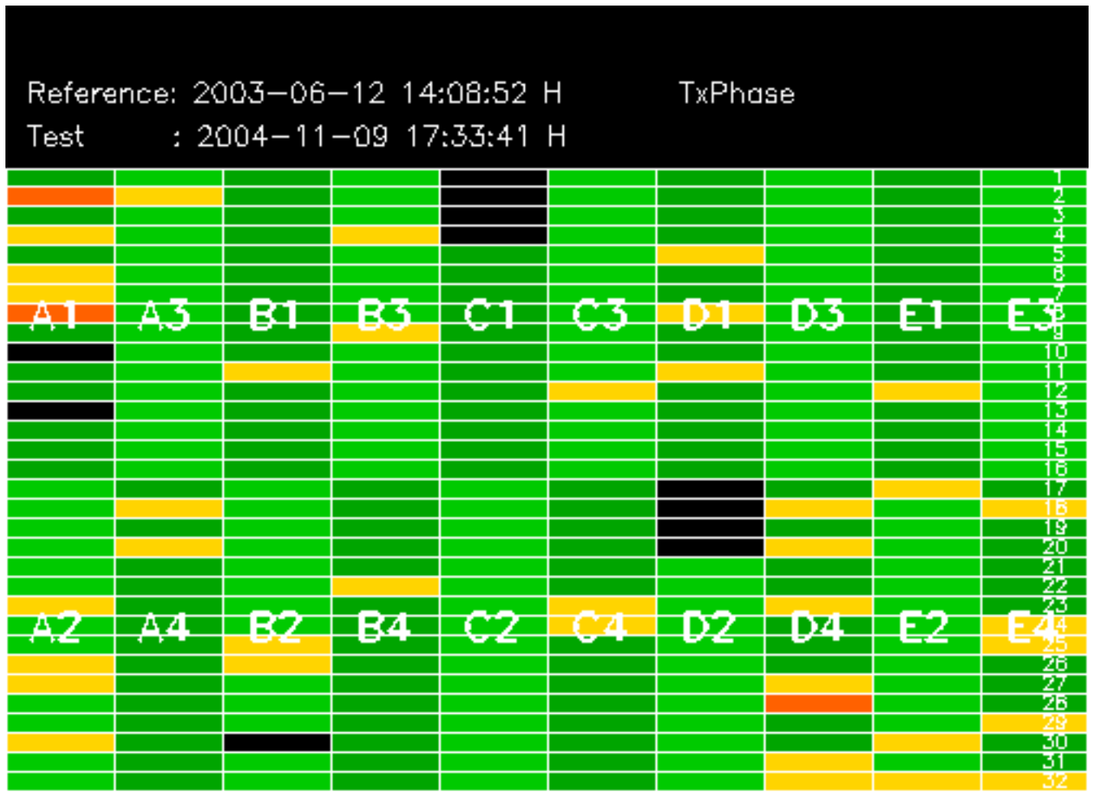

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-10 17:02:03 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-09 17:33:41 H
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 14:08:52 H
Test : 2004-11-09 17:33:41 H
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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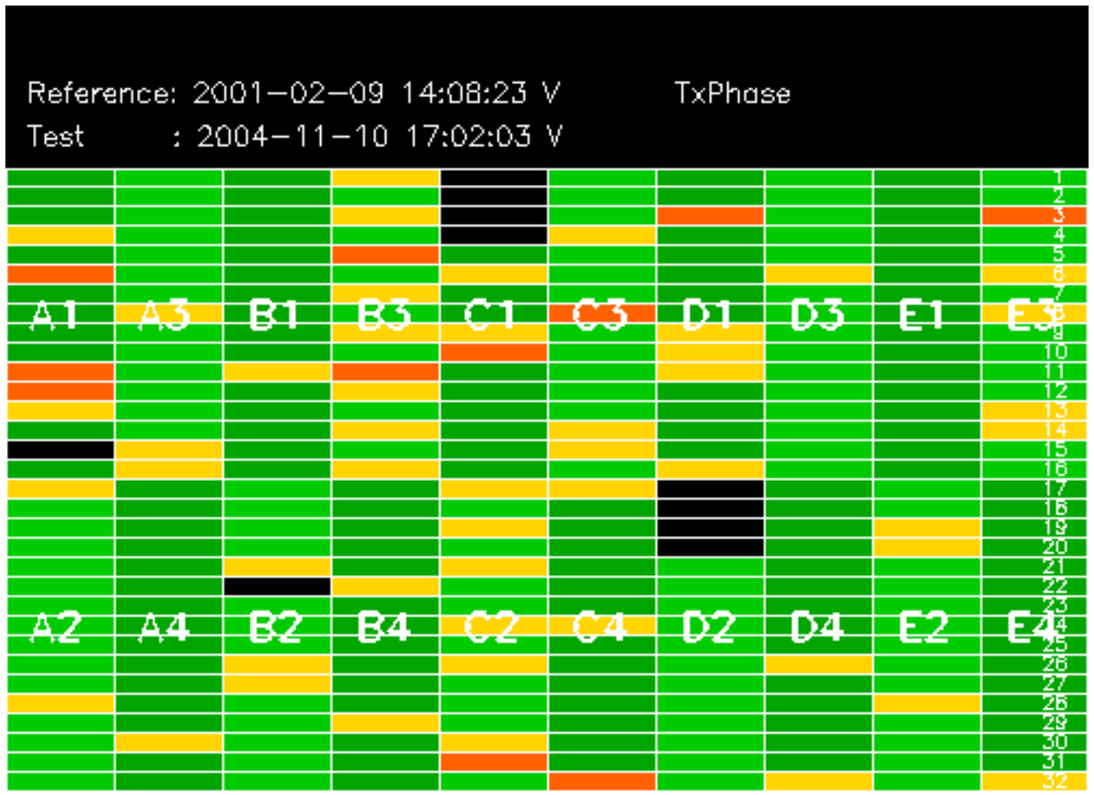
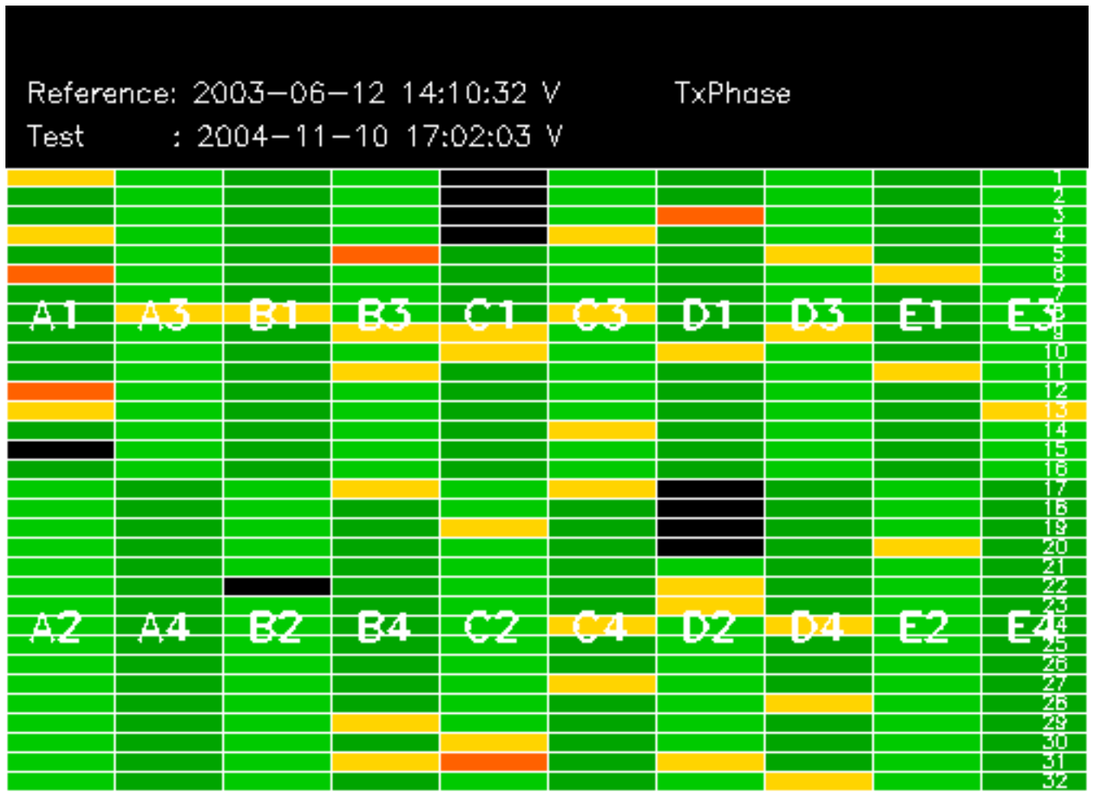

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-11-10 17:02:03 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-10 17:02:03 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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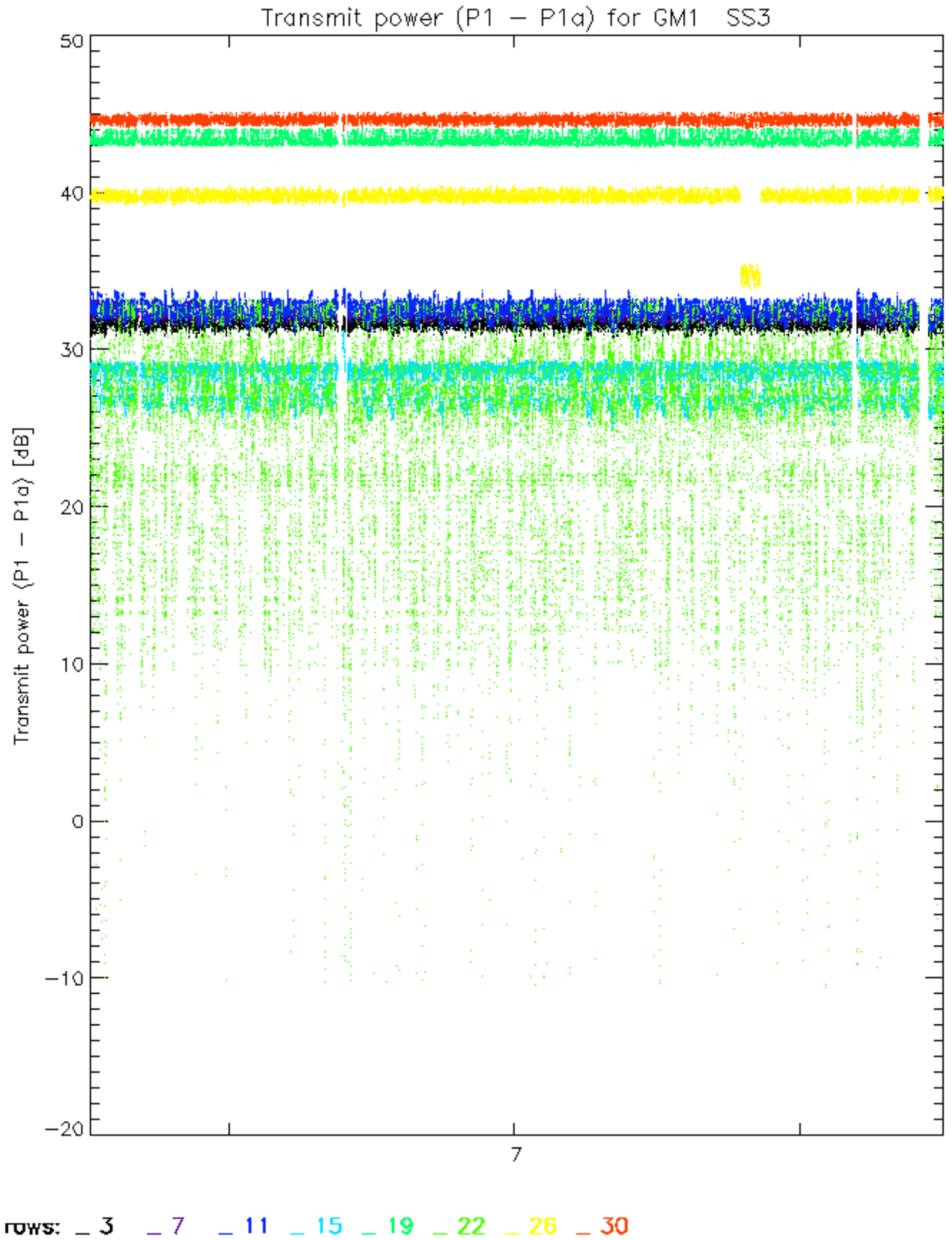
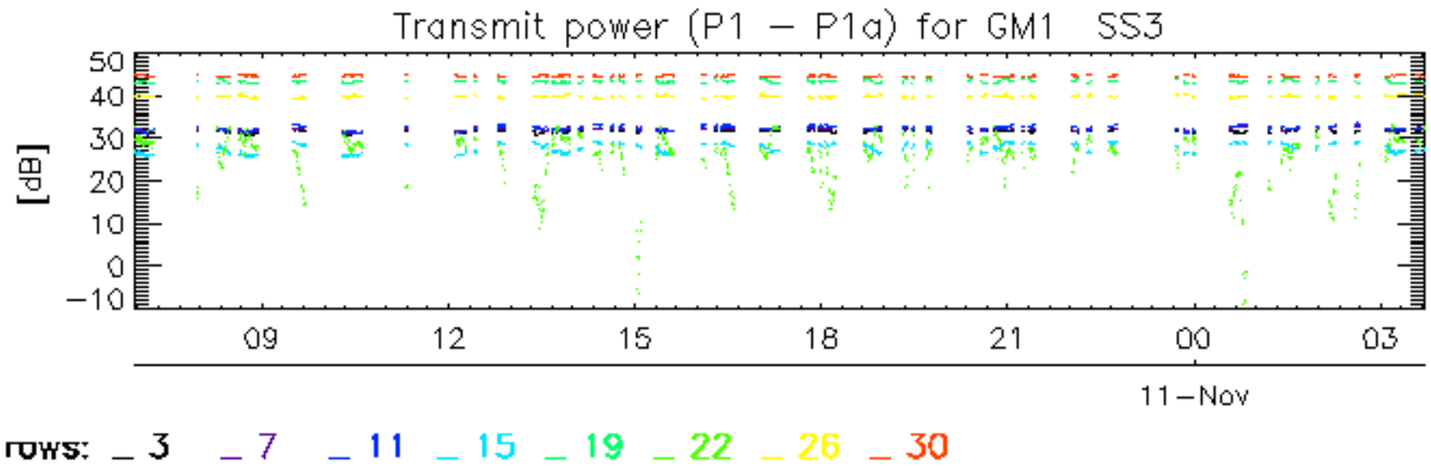
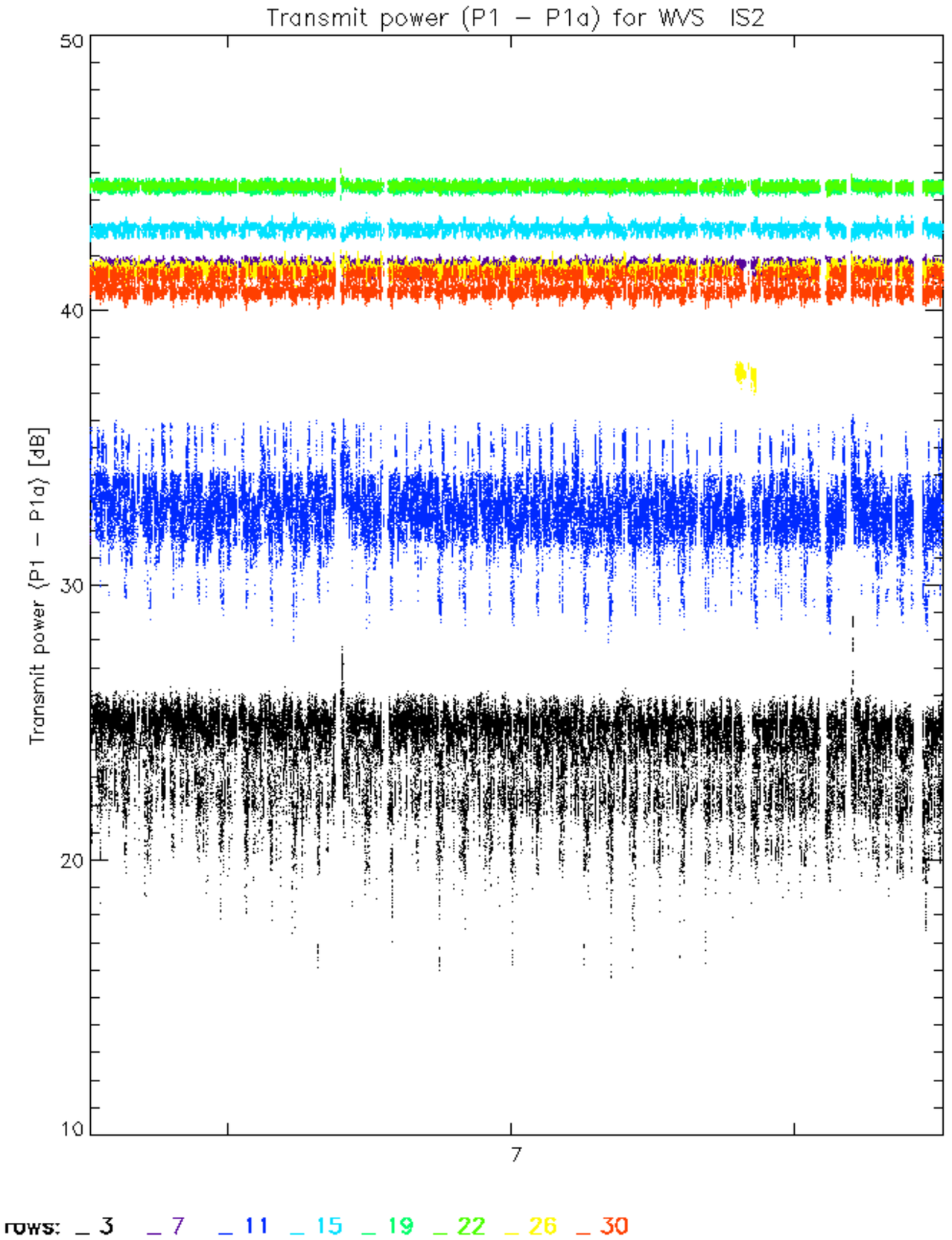
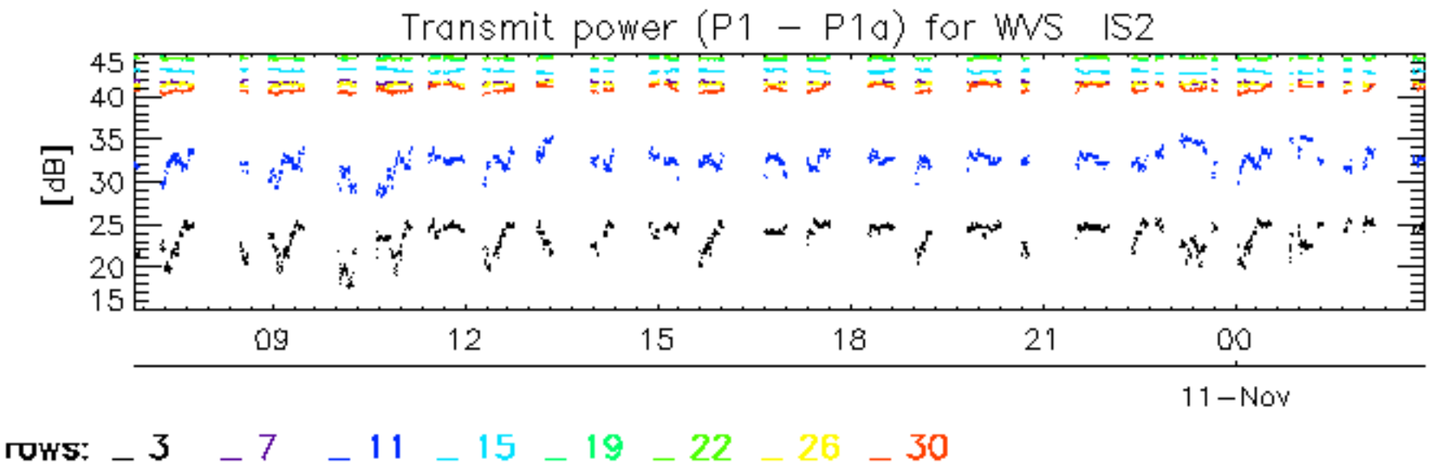

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
7
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
09
12
15
18
21
00
03
11–Nov
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
7
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
45
40
35
30
25
20
15
09
12
15
18
21
00
11–Nov
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.