PRELIMINARY REPORT OF 041028

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

last update on Thu Oct 28 11:05:57 GMT 2004

1 - Introduction

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

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Browse Visual Inspection

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	20041027 073845
H	20041023 030250

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.

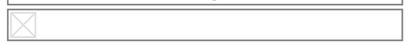
4.1 - Daily statistics

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	-3.473862	0.006936	-0.031888
7	P1	-3.347767	0.012250	-0.043683
11	P1	-4.618548	0.019472	0.056621
15	P1	-5.700925	0.033372	0.079710
19	P1	-3.546169	0.006322	-0.115556
22	P1	-4.563056	0.013848	-0.071134
24	P1	-4.967247	0.009440	0.032466
30	P1	-7.049769	0.016895	-0.038009

3	P1	-16.094286	0.089213	0.113969
7	P1	-14.038075	0.062657	-0.010662
11	P1	-20.452126	0.212676	-0.394590
15	P1	-11.715291	0.035211	0.068053
19	P1	-14.009684	0.025620	-0.073127
22	P1	-16.151588	0.404072	-0.362099
24	P1	-14.573258	0.259414	-0.254289
30	P1	-18.039875	0.319974	0.022693

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.345123	0.089435	-0.100585
7	P2	-22.599504	0.123249	-0.067470
11	P2	-15.118348	0.118582	0.052945
15	P2	-7.101301	0.106639	-0.119973
19	P2	-9.644168	0.125741	-0.196672
22	P2	-17.274515	0.106936	0.023284
24	P2	-20.790255	0.090959	-0.052645
30	P2	-19.084347	0.083722	0.084447

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.179248	0.005990	-0.059083
7	P3	-8.179246	0.005990	-0.059086
11	P3	-8.179244	0.005990	-0.059088
15	P3	-8.179243	0.005990	-0.059087
19	P3	-8.179244	0.005989	-0.059083
22	P3	-8.179242	0.005990	-0.059084
24	P3	-8.179241	0.005990	-0.059084
30	P3	-8.179275	0.005988	-0.058653

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	-2.818155	0.014202	0.030753
7	P1	-2.976172	0.050487	0.088049
11	P1	-3.891188	0.021716	-0.034514
15	P1	-3.492777	0.022774	0.004981
19	P1	-3.549561	0.013804	-0.129178
22	P1	-5.657983	0.059628	0.093054
24	P1	-3.971448	0.022611	-0.010633
30	P1	-6.217127	0.048691	-0.118324
3	P1	-10.752823	0.095187	0.458167
7	P1	-10.076454	0.171586	0.081218
11	P1	-12.269504	0.126192	-0.215627
15	P1	-11.682736	0.074170	0.012125
19	P1	-15.595572	0.060905	-0.069817
22	P1	-23.656794	1.502076	-0.447062
24	P1	-18.143457	0.233190	-0.048200
30	P1	-20.353357	1.089191	0.372226

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.021837	0.049345	-0.123779
7	P2	-22.691328	0.065143	-0.002317
11	P2	-10.867077	0.049344	-0.045809
15	P2	-5.004225	0.030668	-0.105266
19	P2	-6.853821	0.045201	-0.251227
22	P2	-7.389758	0.040881	-0.008528
24	P2	-11.121888	0.054729	-0.146537
30	P2	-22.101757	0.037898	0.010531

P3 Cyclic statistics

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

3	P3	-8.022649	0.003952	-0.053078
7	P3	-8.022619	0.003955	-0.053084
11	P3	-8.022720	0.003942	-0.052882
15	P3	-8.022655	0.003945	-0.052964
19	P3	-8.022651	0.003946	-0.052909
22	P3	-8.022628	0.003943	-0.052925
24	P3	-8.022809	0.003965	-0.053232
30	P3	-8.022730	0.003951	-0.052887

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	0.000478475
	stdev	2.14758e-07
MEAN Q	mean	0.000553250
	stdev	2.33375e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127099
	stdev	0.000920876

STDEV Q	mean	0.127312
	stdev	0.000929710

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

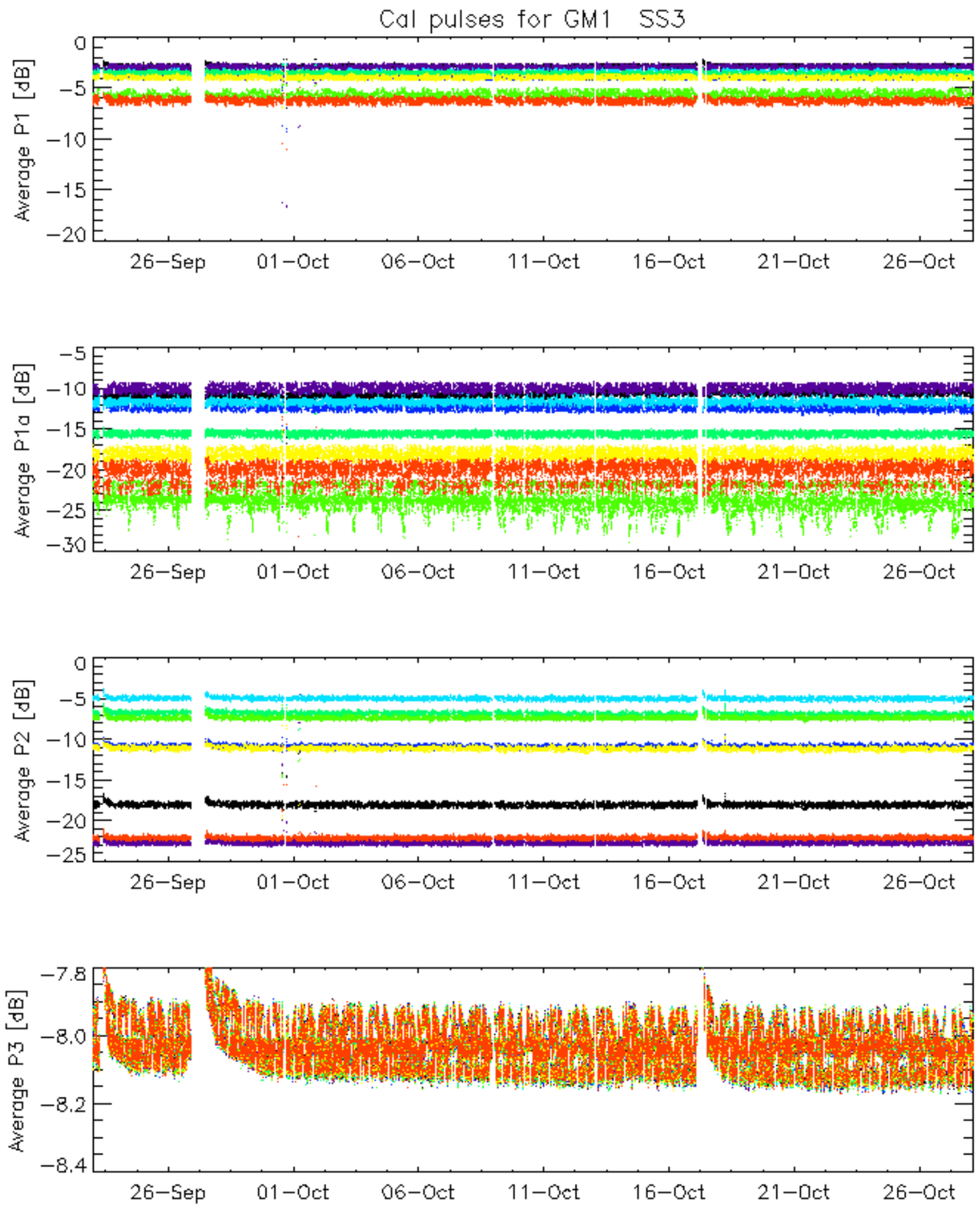
Evolution of Absolute Doppler

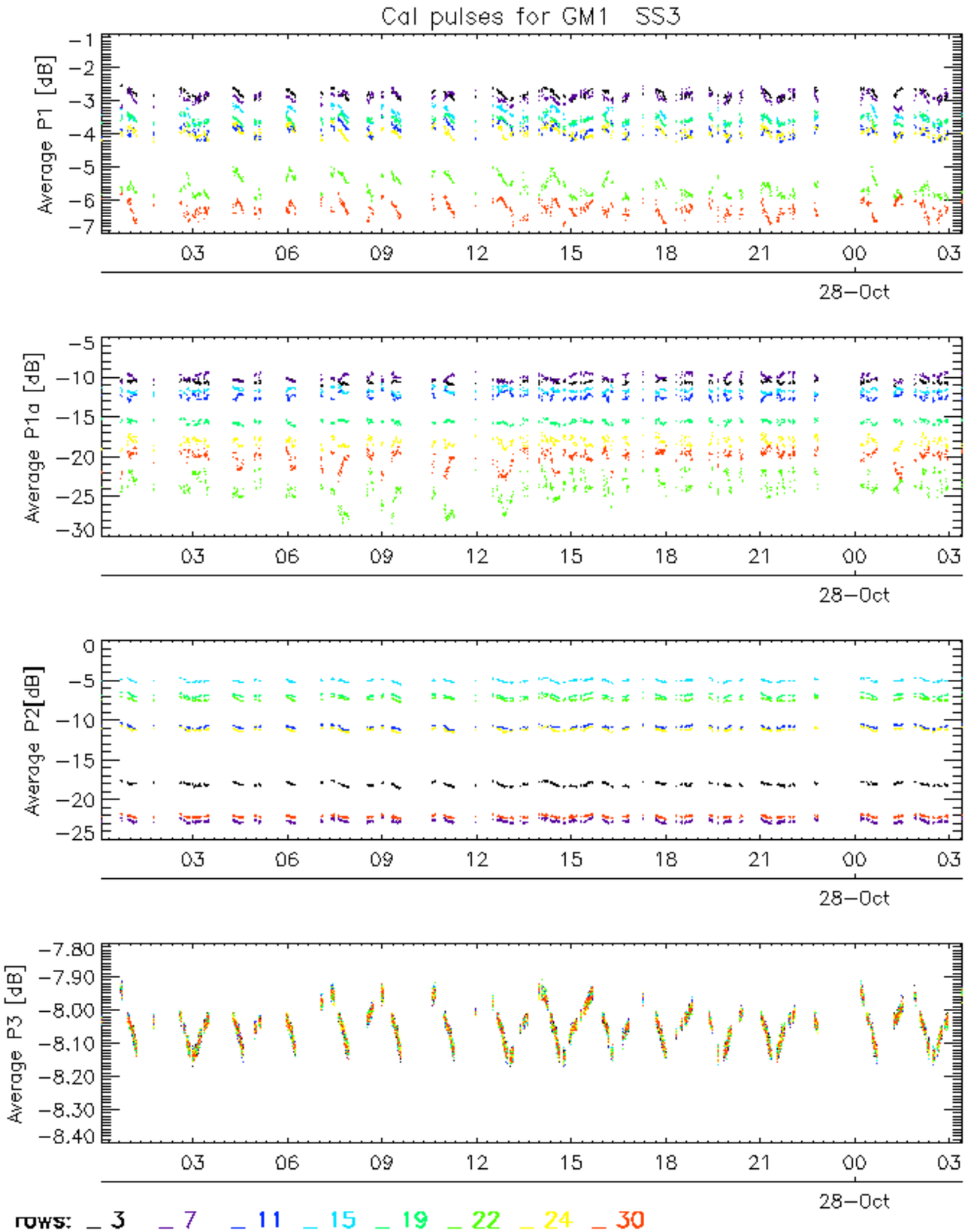
Acsending

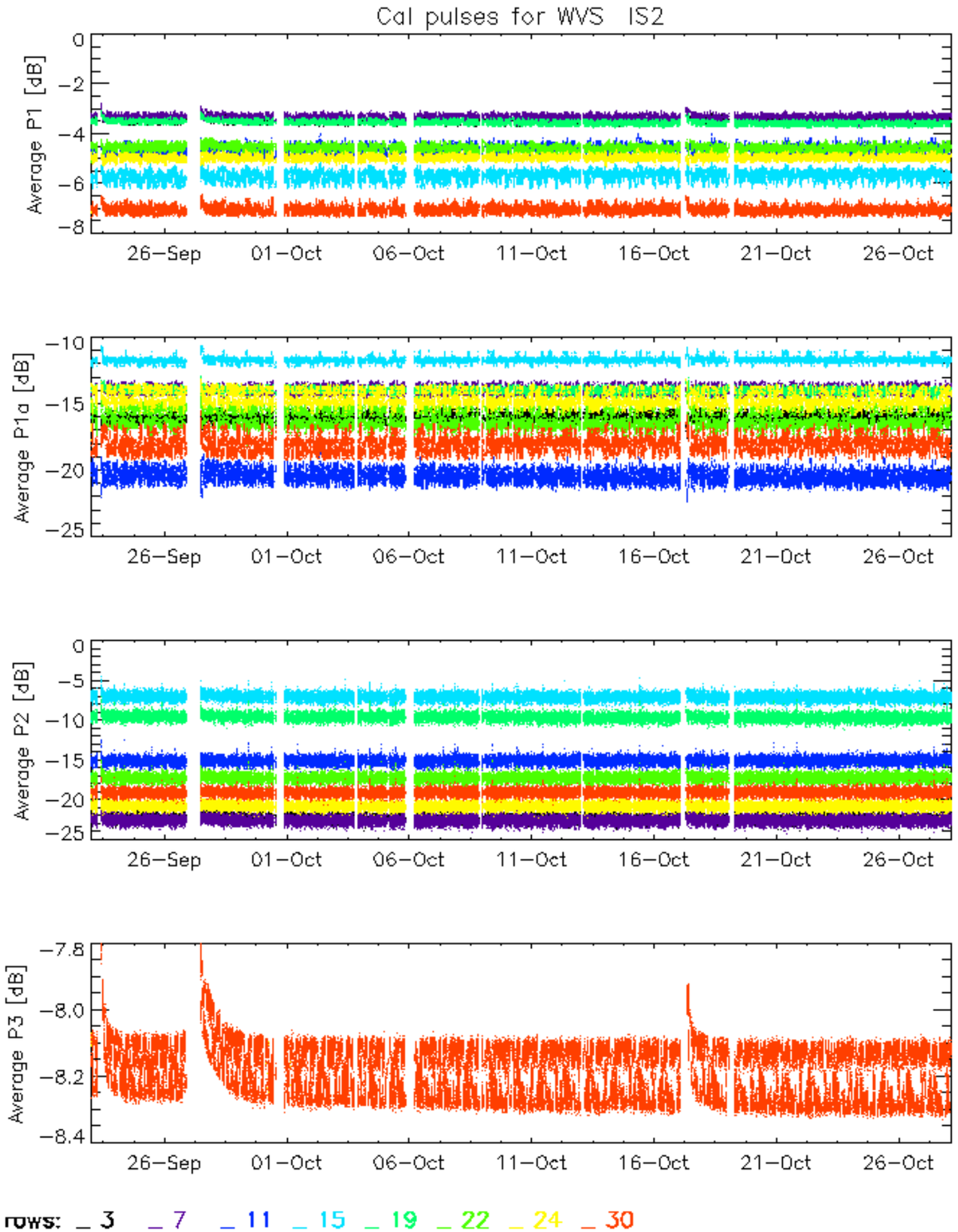
Descending

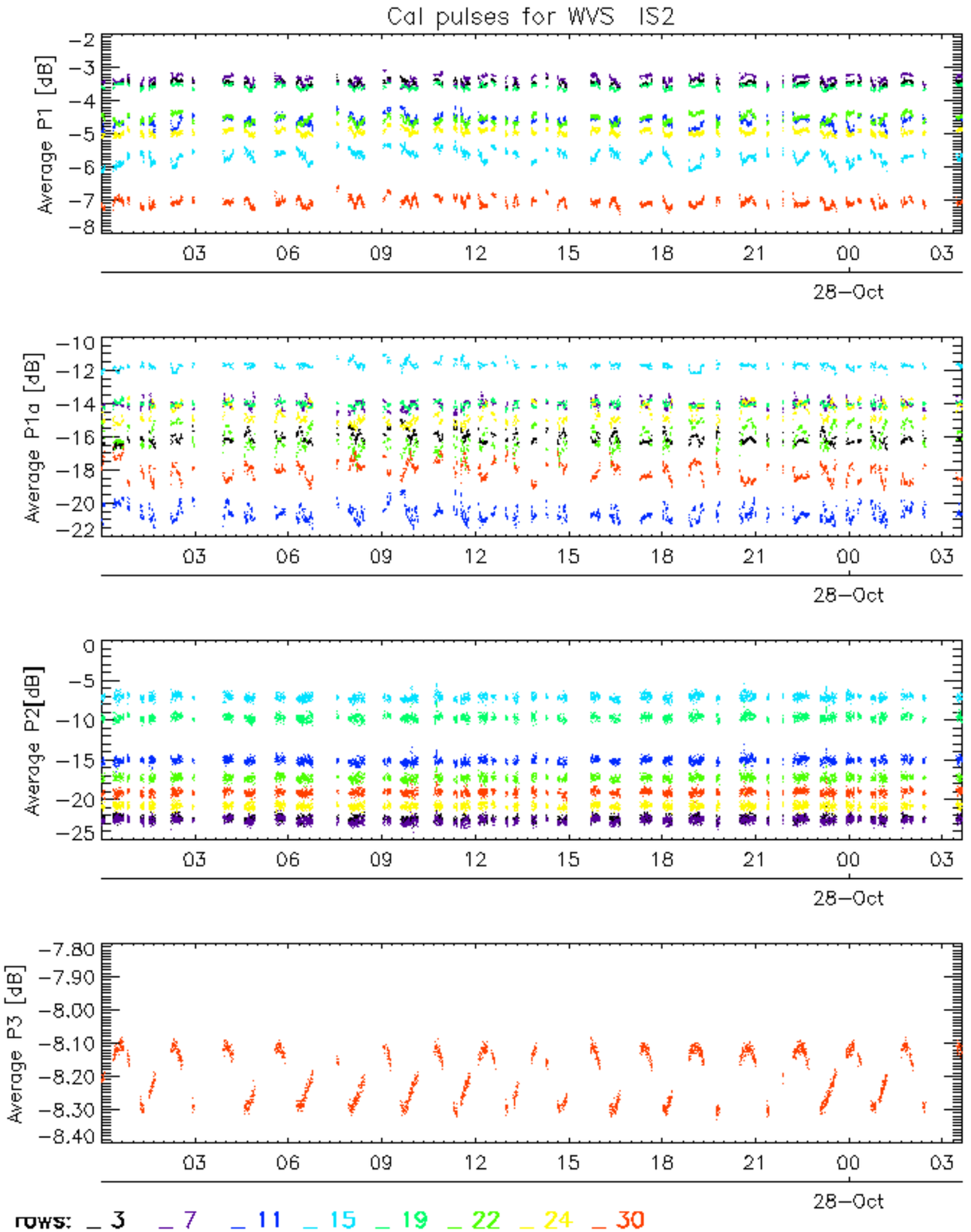
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

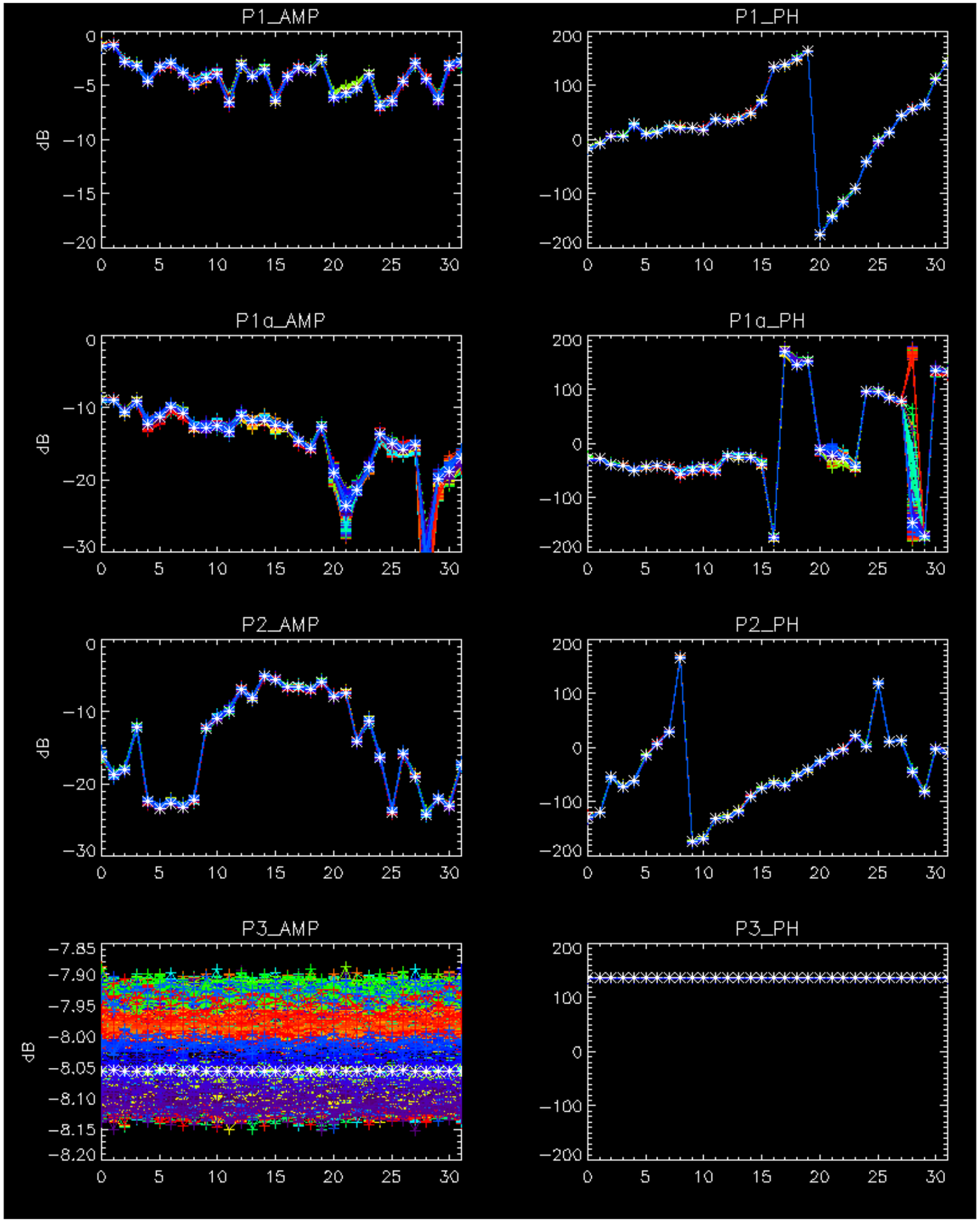


Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

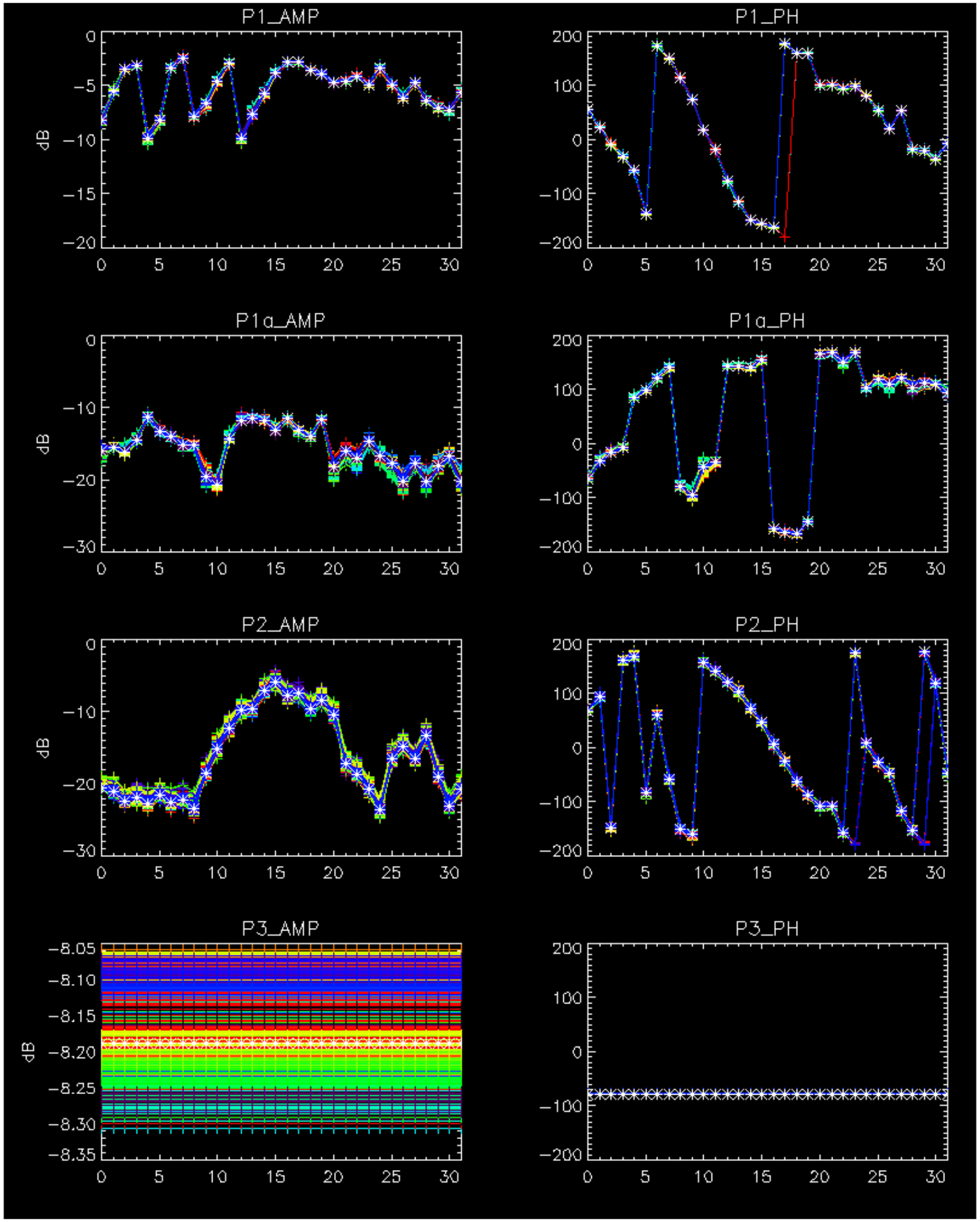

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
28−Oct
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: 3 7 11 15 19 22 24 30


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
28−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

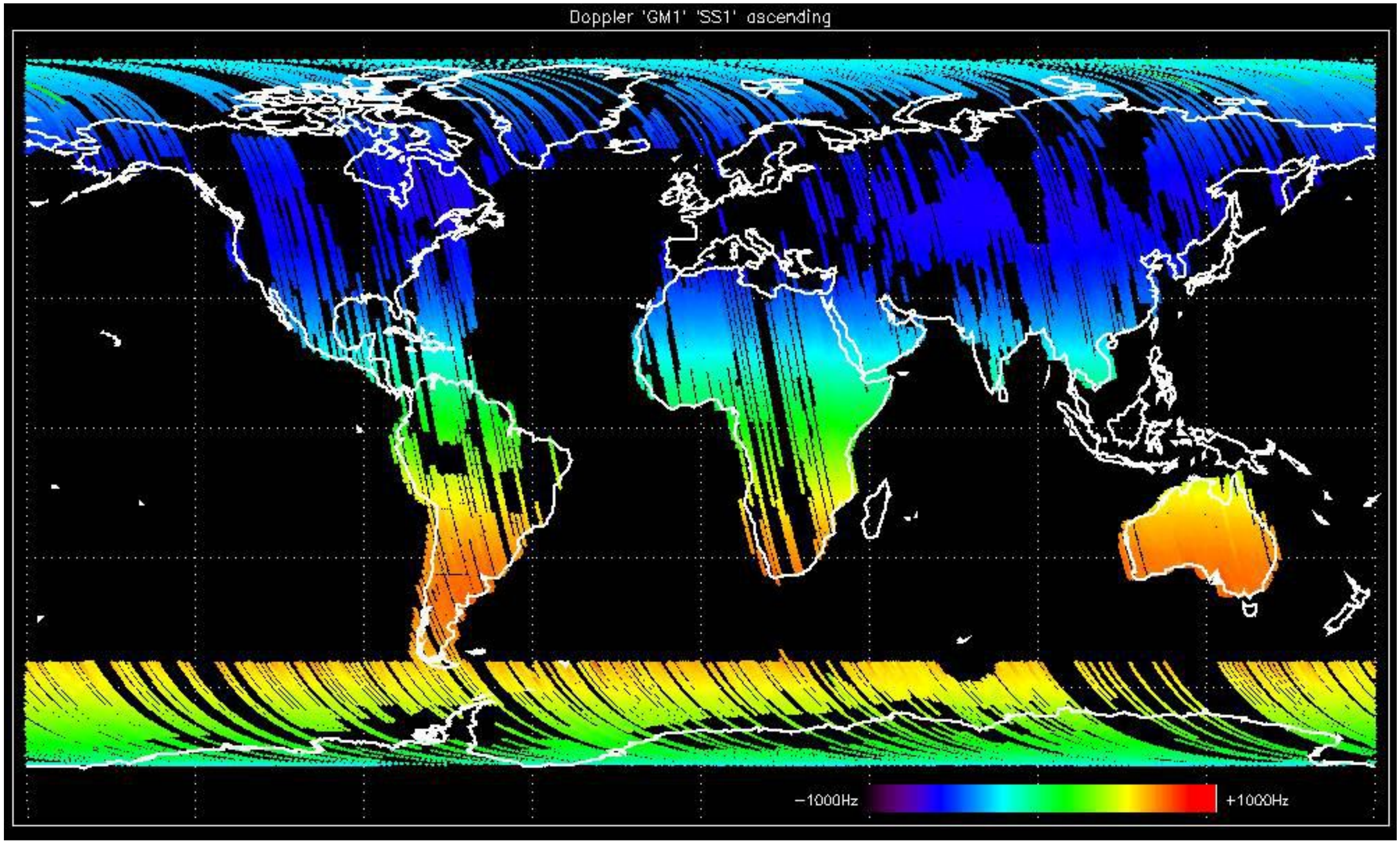
No anomalies observed.

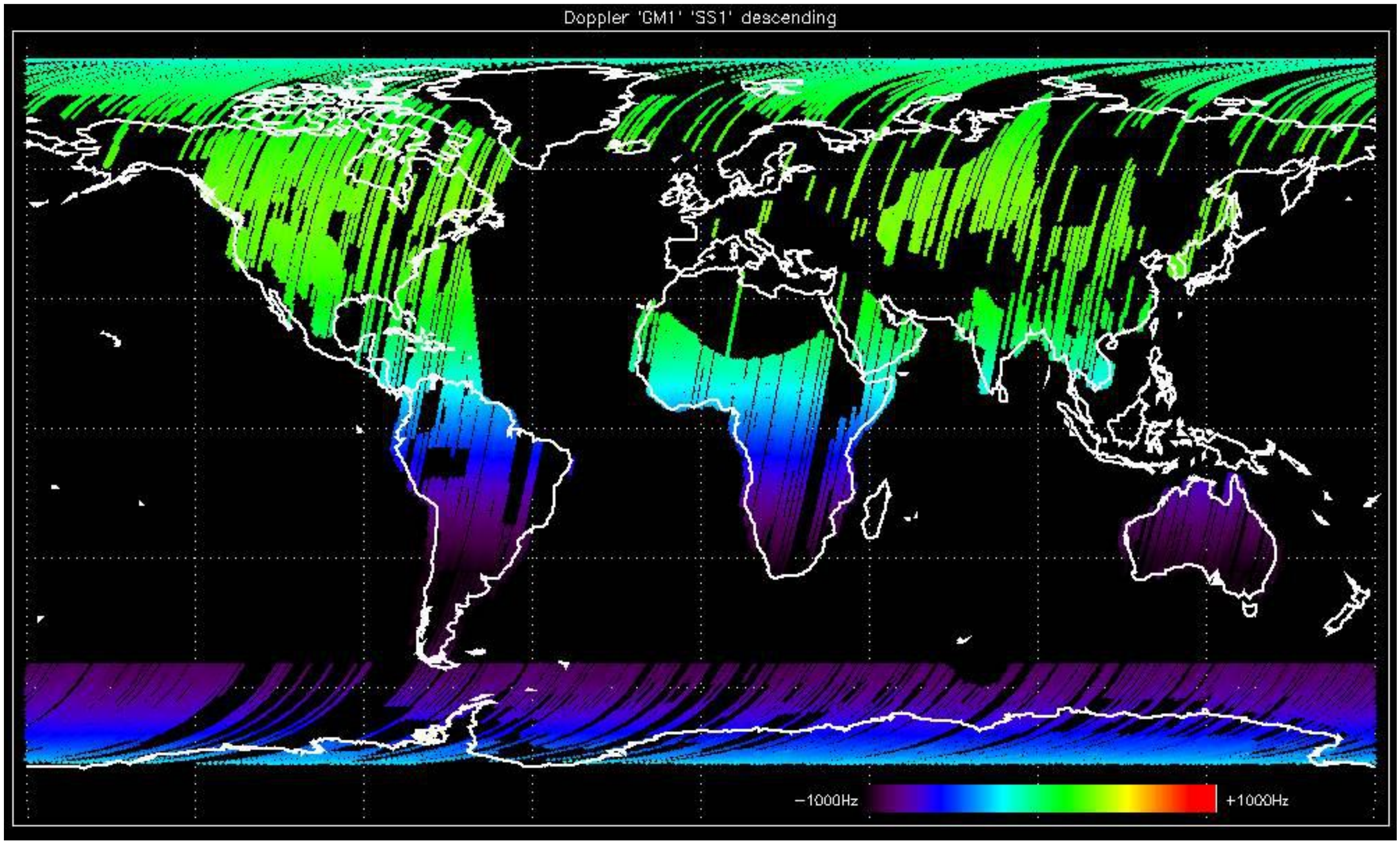

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

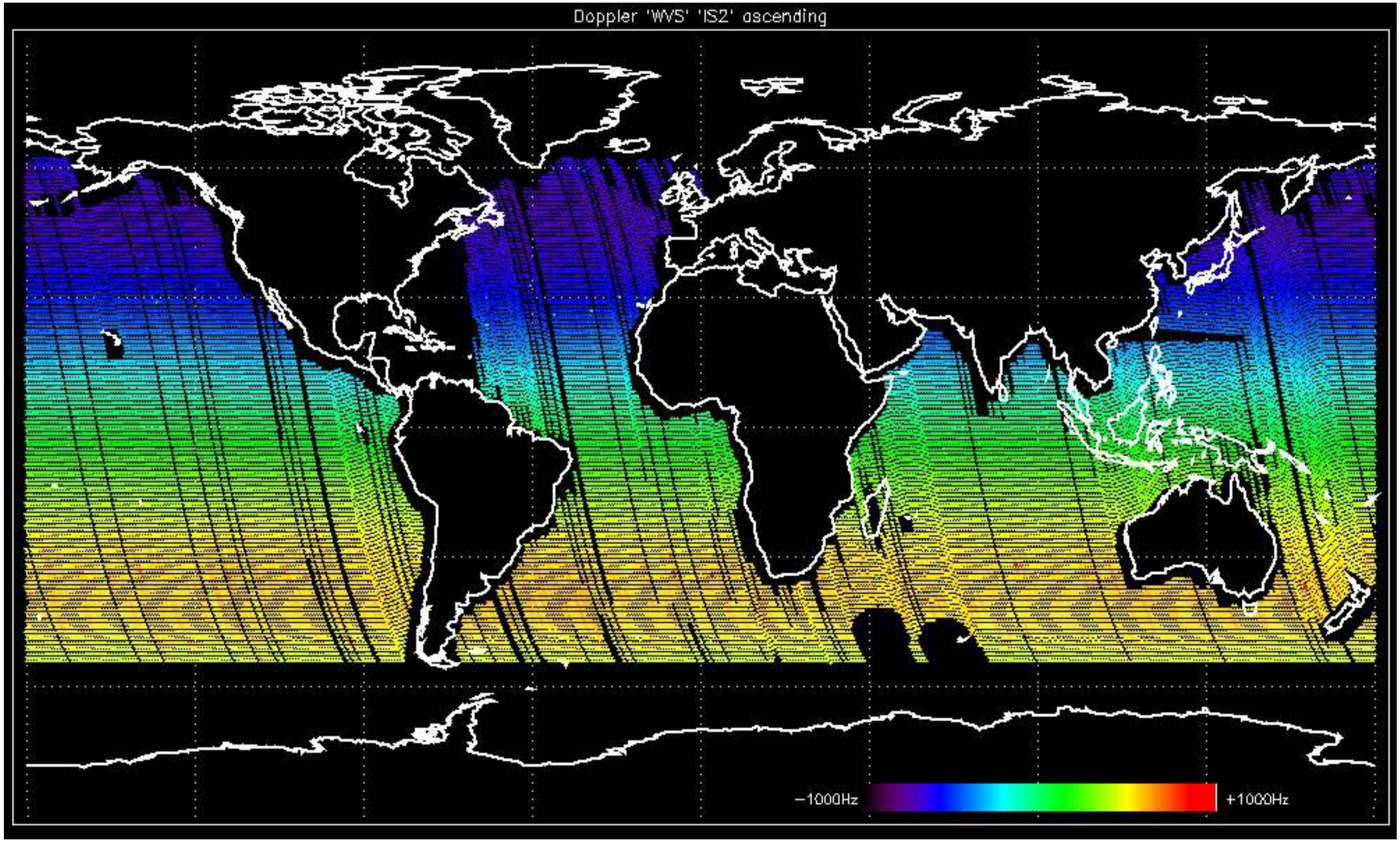

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

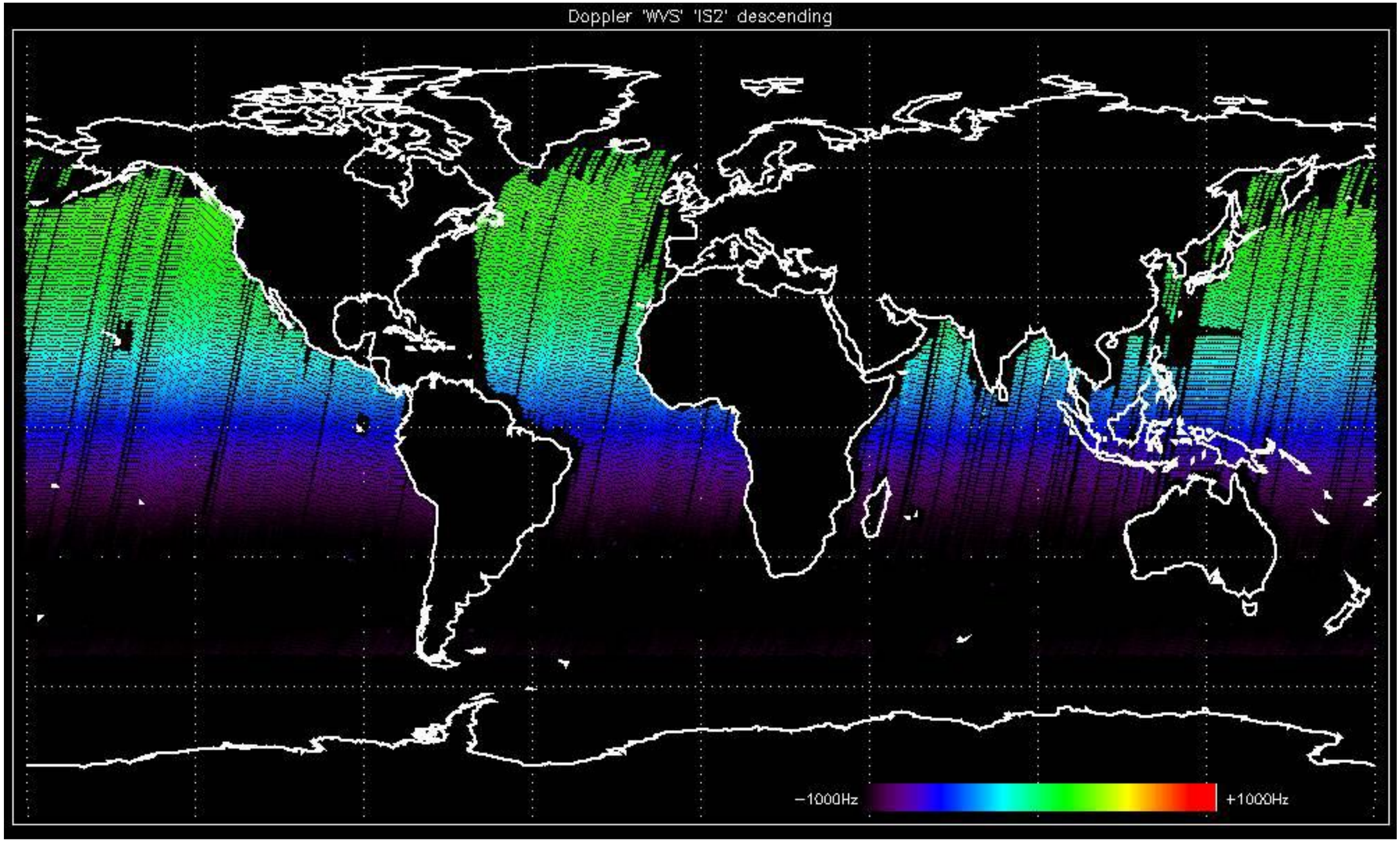
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

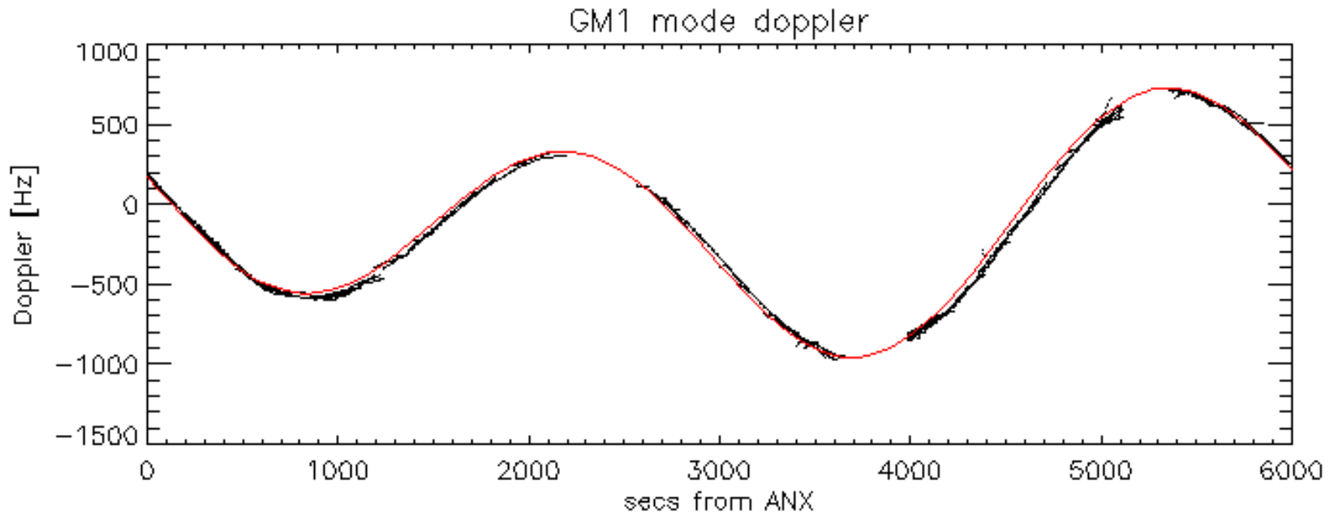
Preliminary report.The data is not yet controled

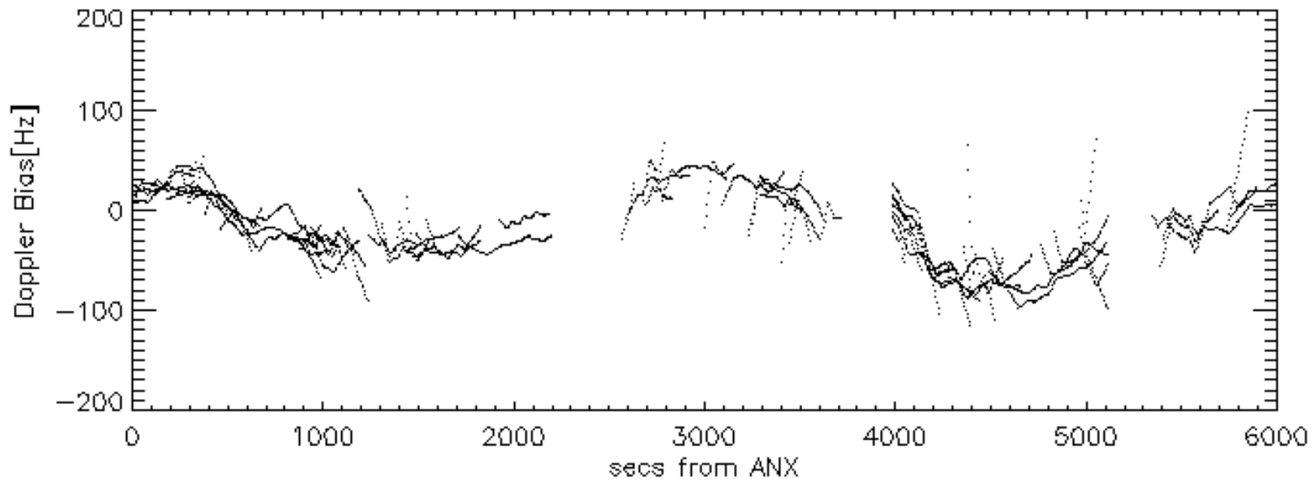

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

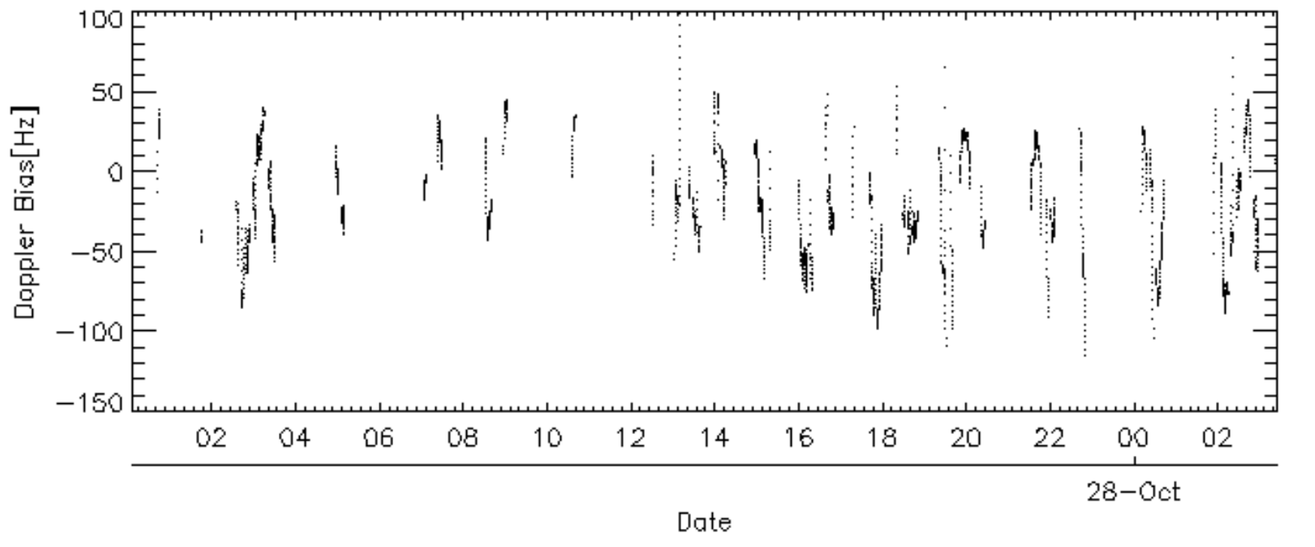

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

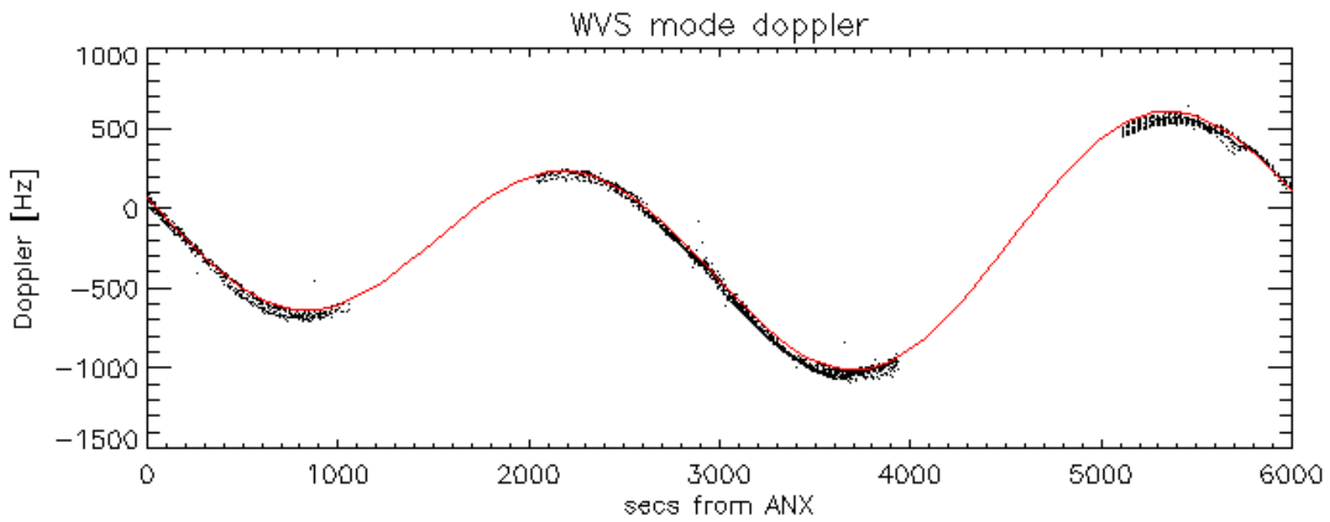

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

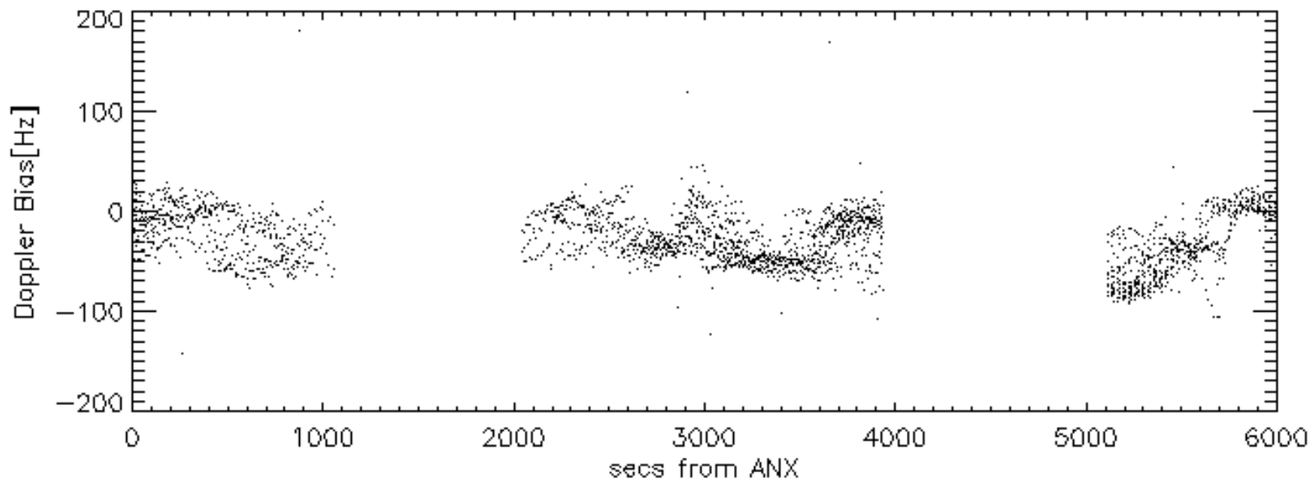

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

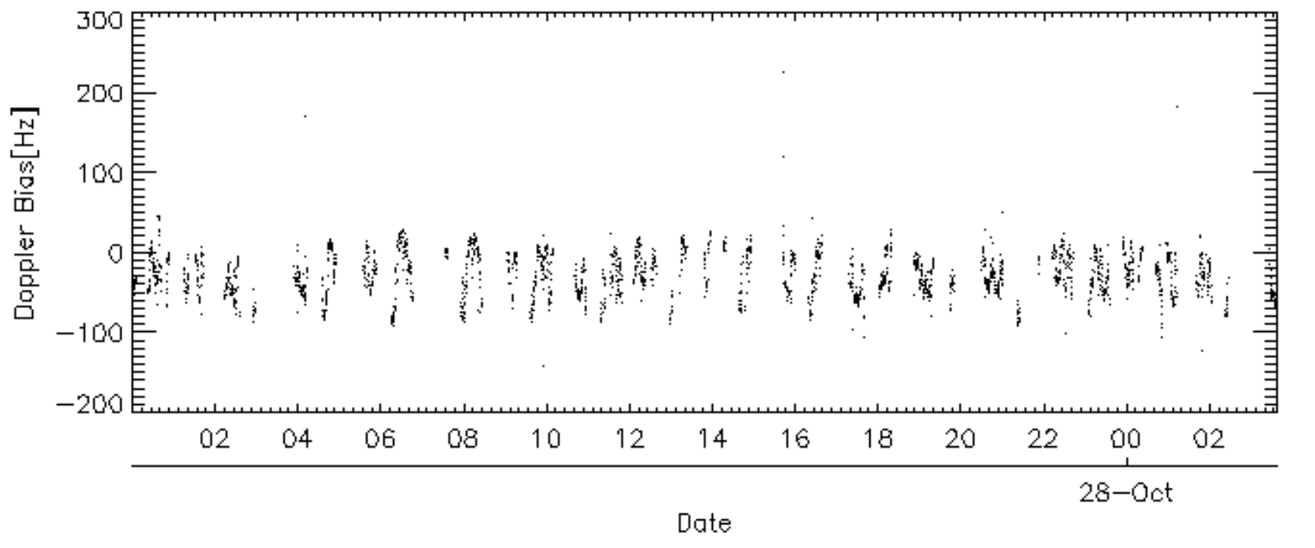

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

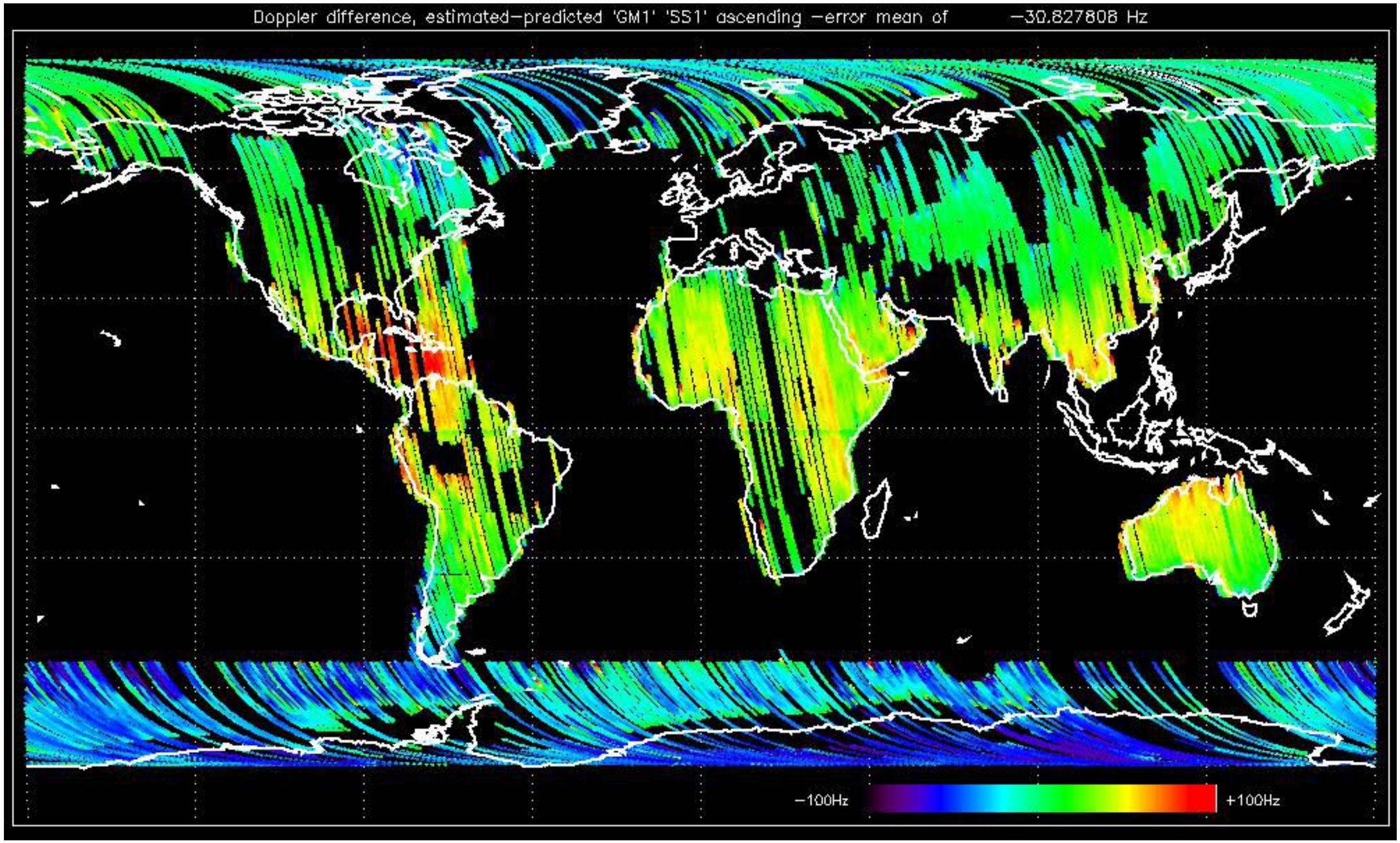

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

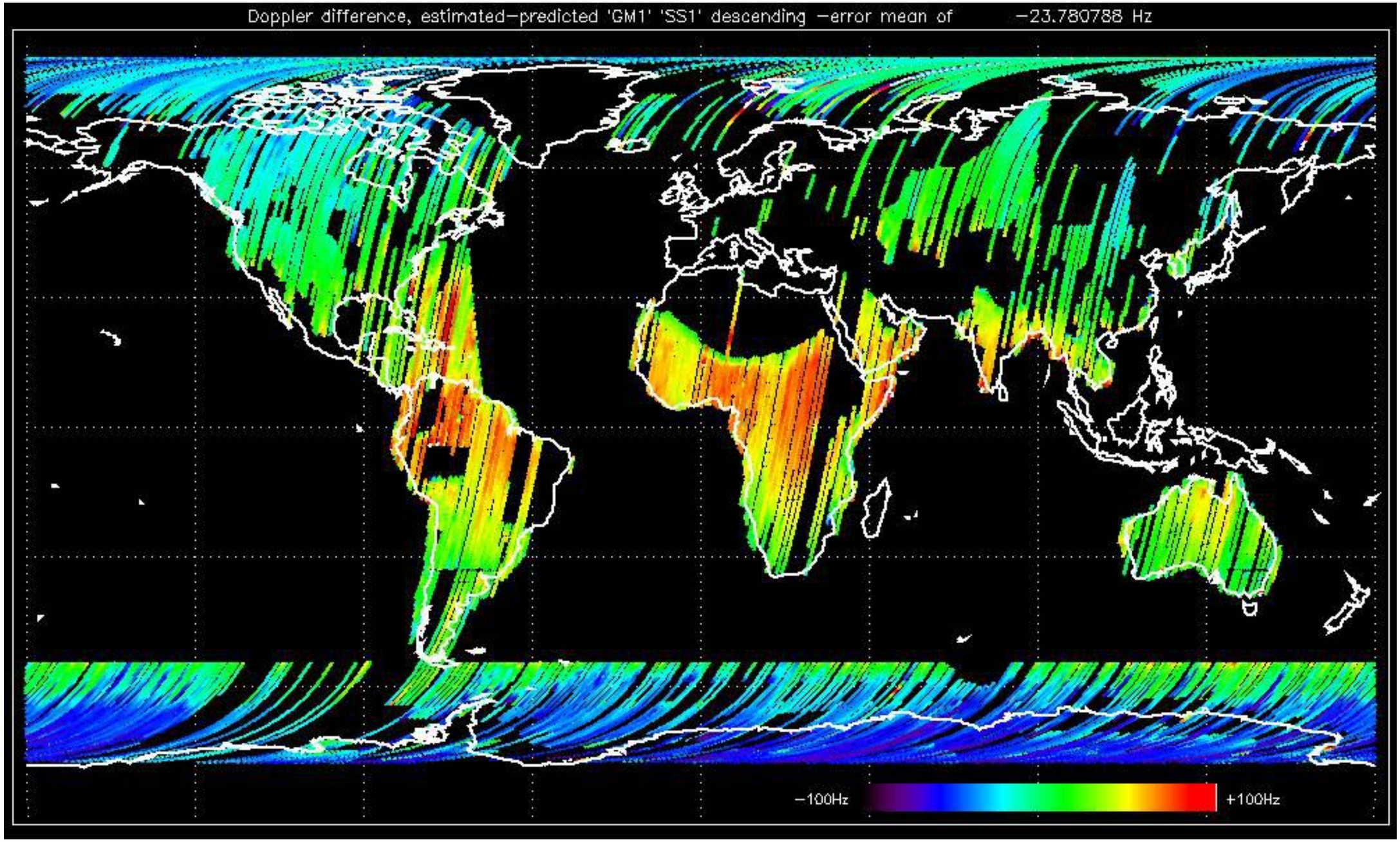

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
28−Oct
Date

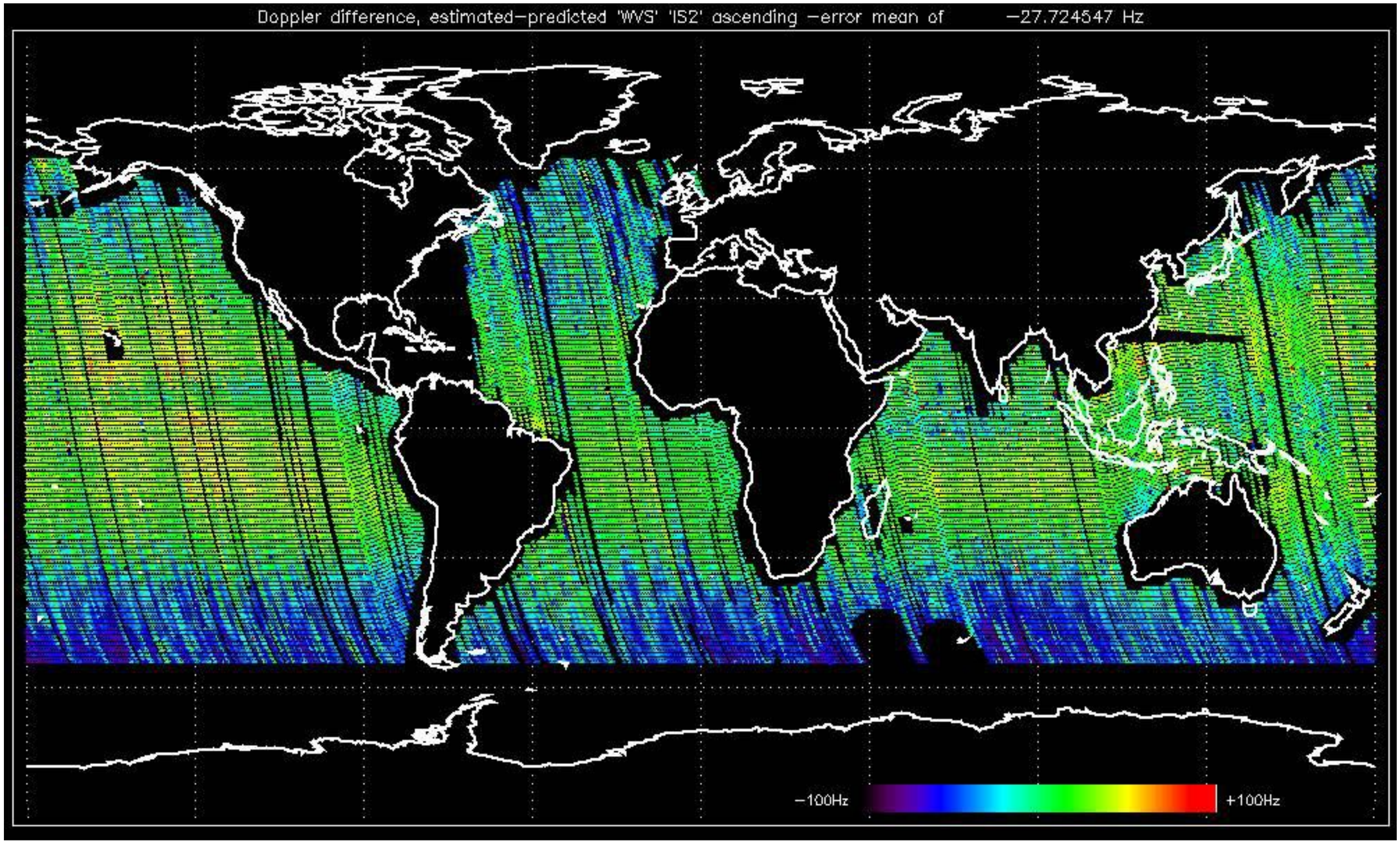

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

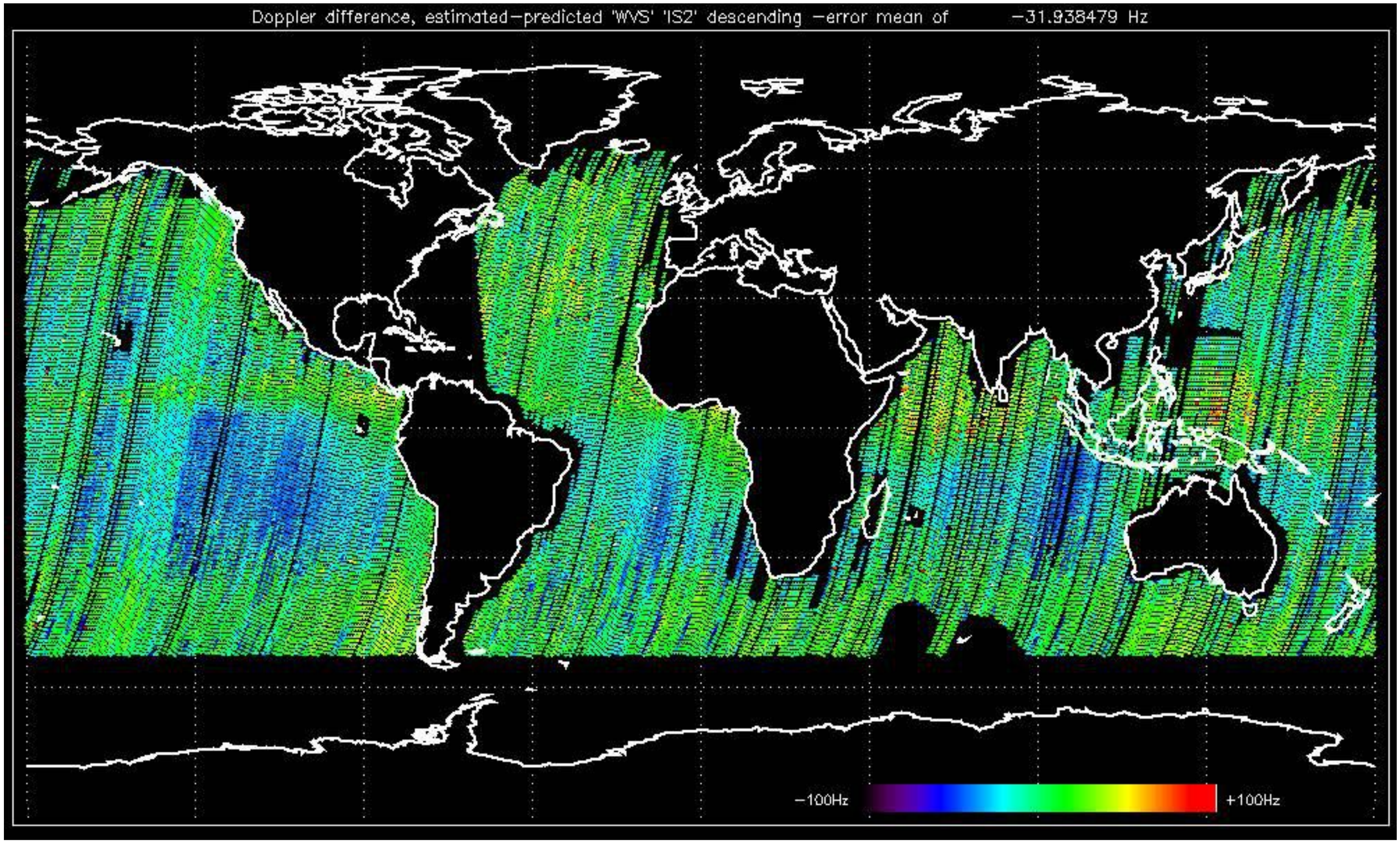

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −30.827808 Hz
−100Hz
+100Hz

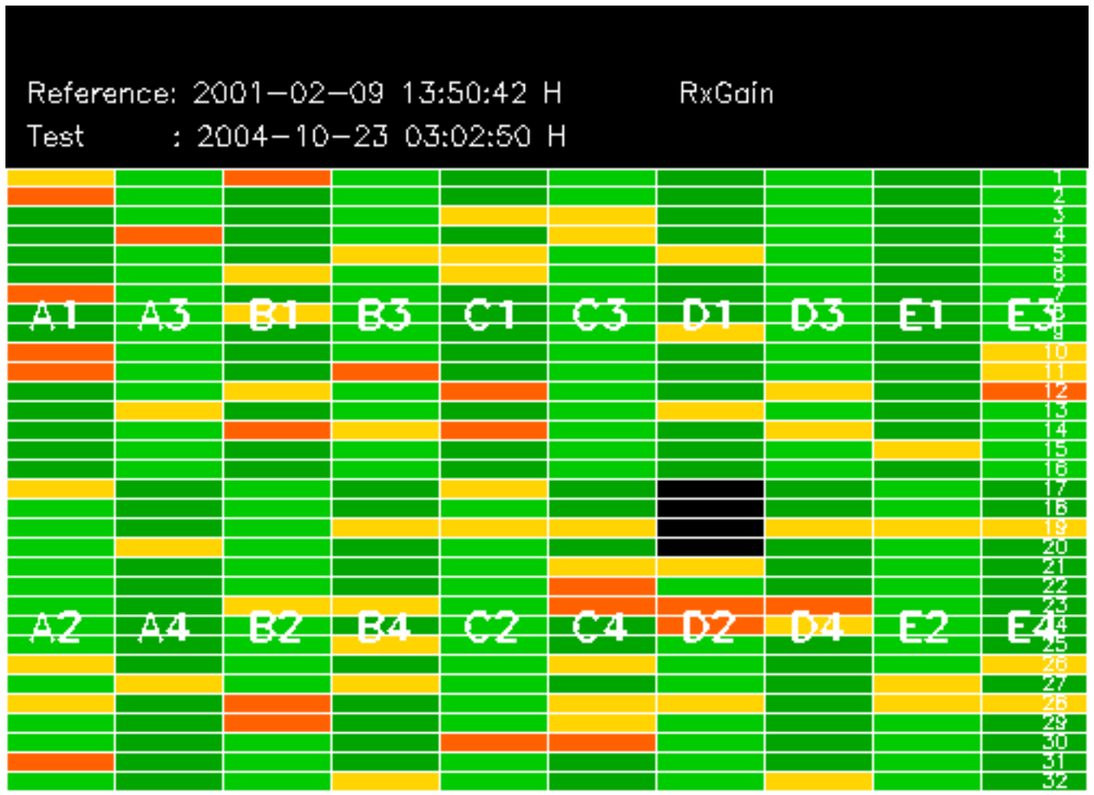

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.780788 Hz
−100Hz
+100Hz

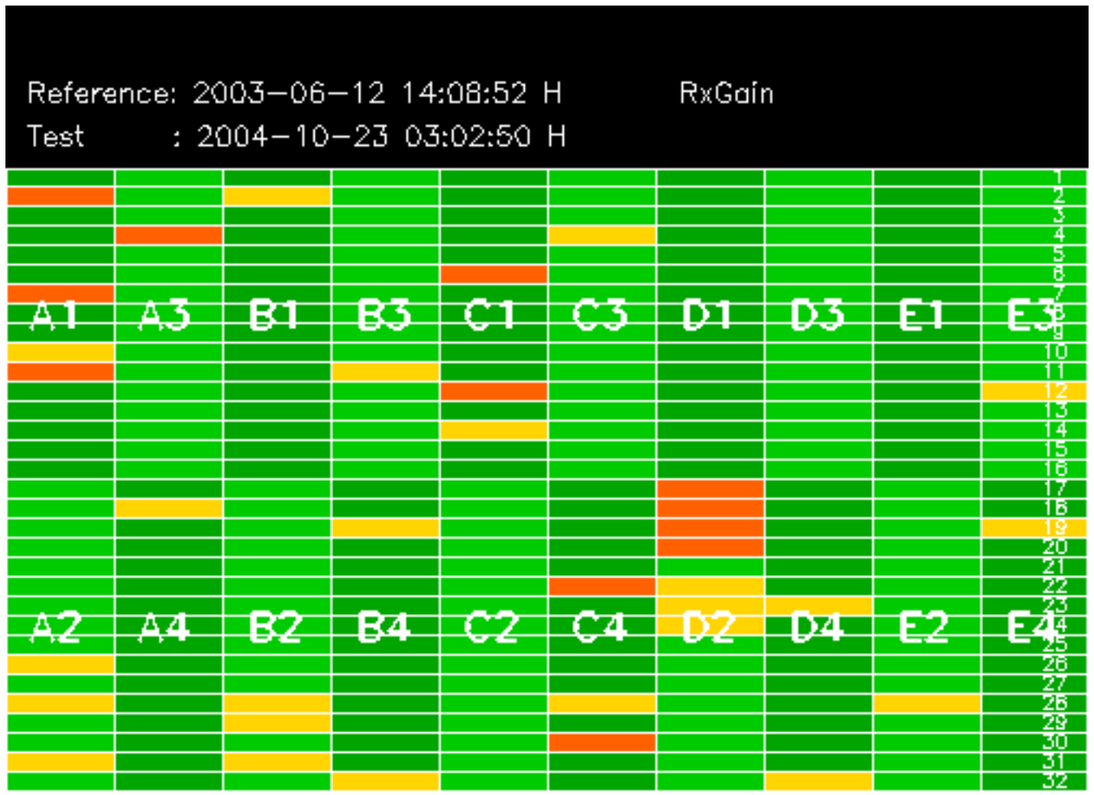

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −27.724547 Hz
−100Hz
+100Hz

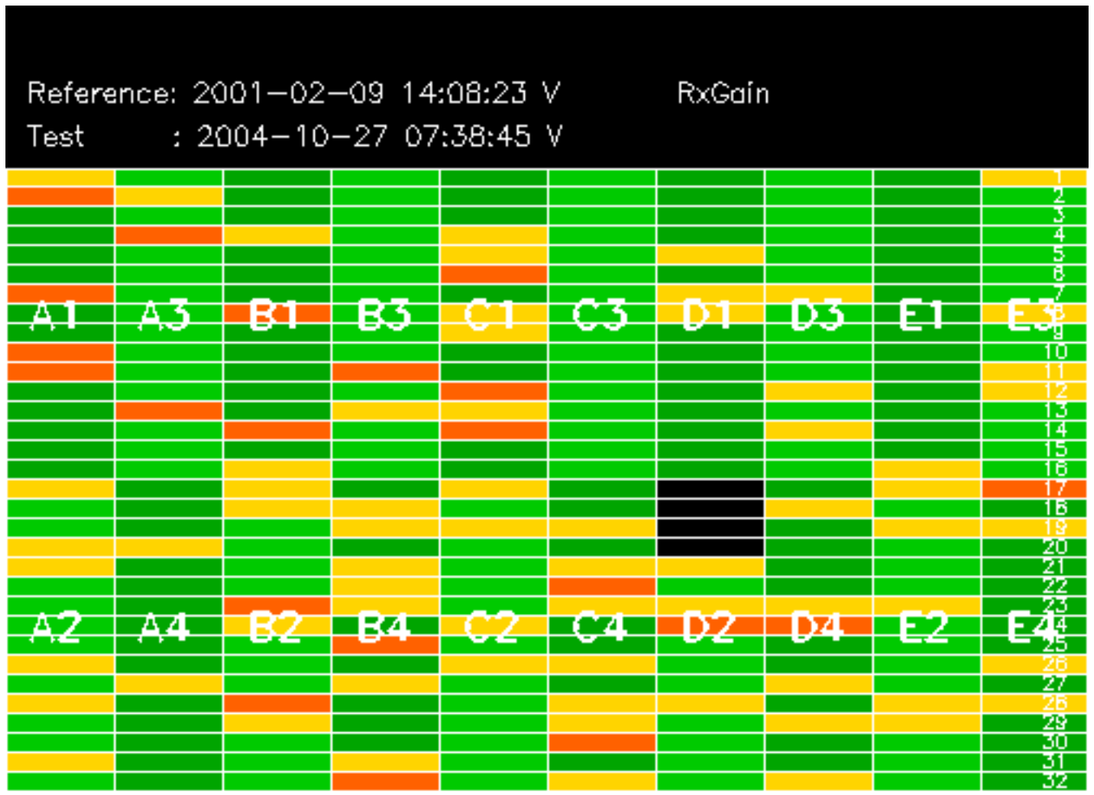

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −31.938479 Hz
−100Hz
+100Hz

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 : 2004-10-23 03:02:50 H
RxGain
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 : 2004-10-23 03:02:50 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 : 2004-10-27 07:38:45 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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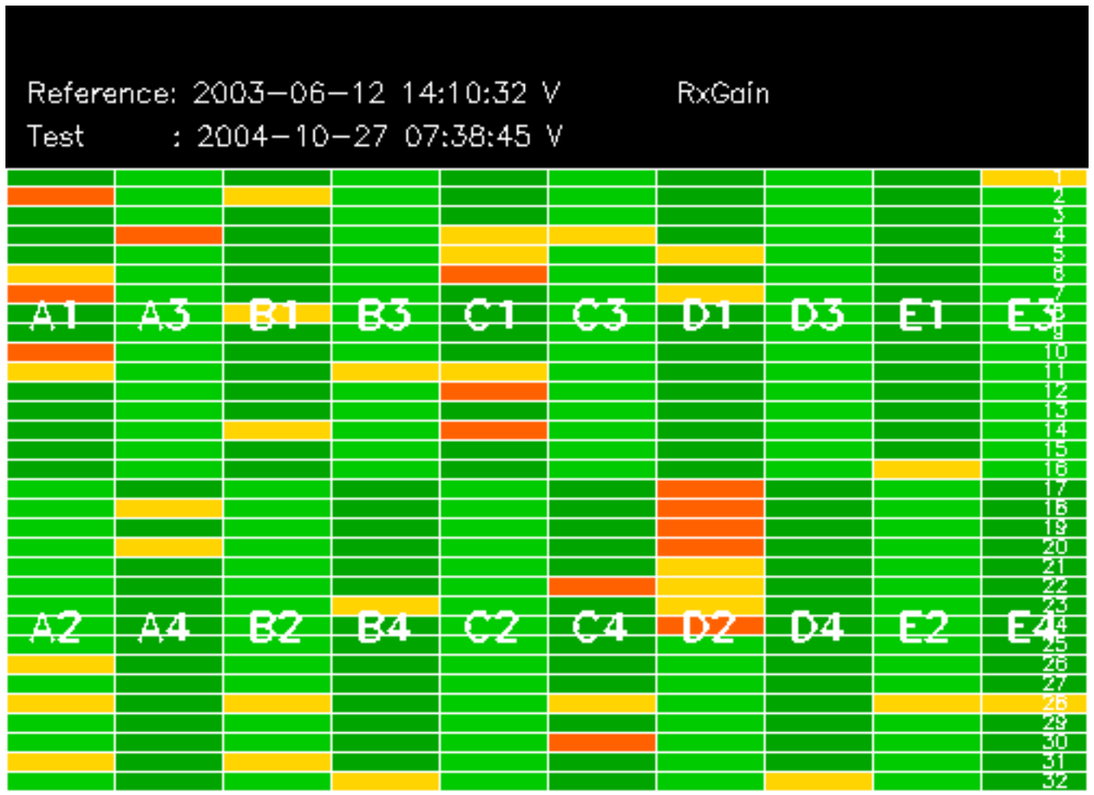
Reference: 2003-06-12 14:10:32 V
Test : 2004-10-27 07:38:45 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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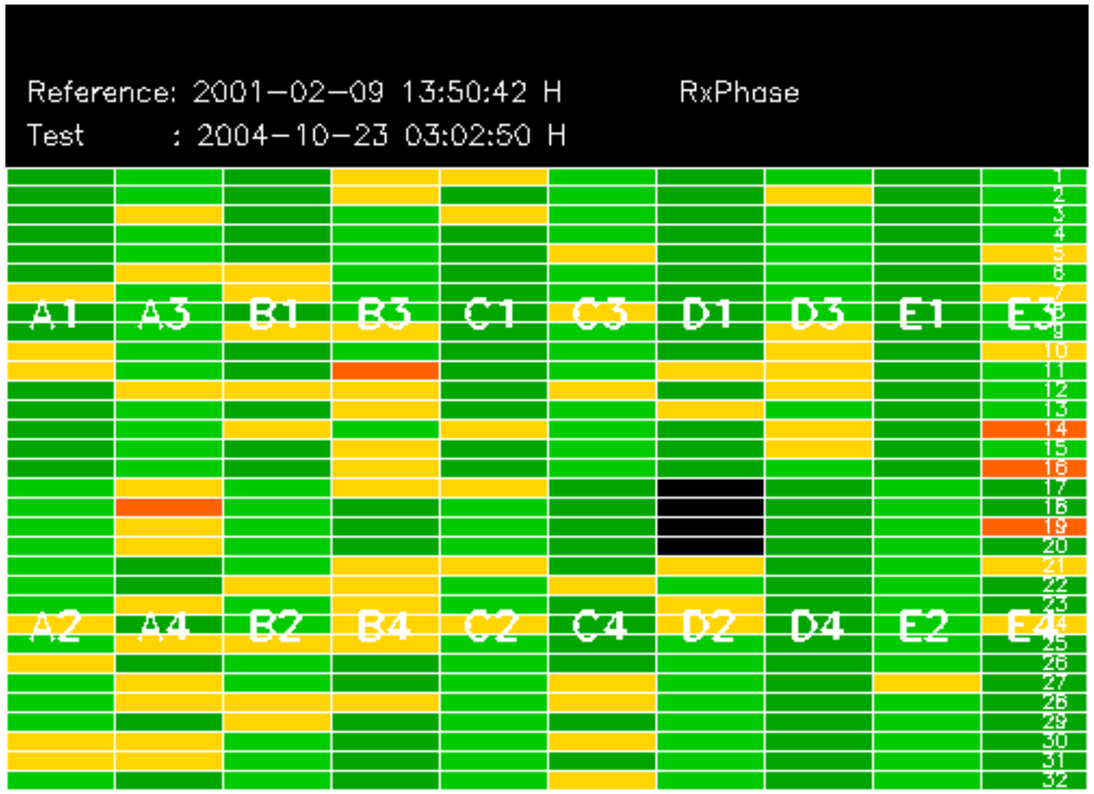
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-10-23 03:02:50 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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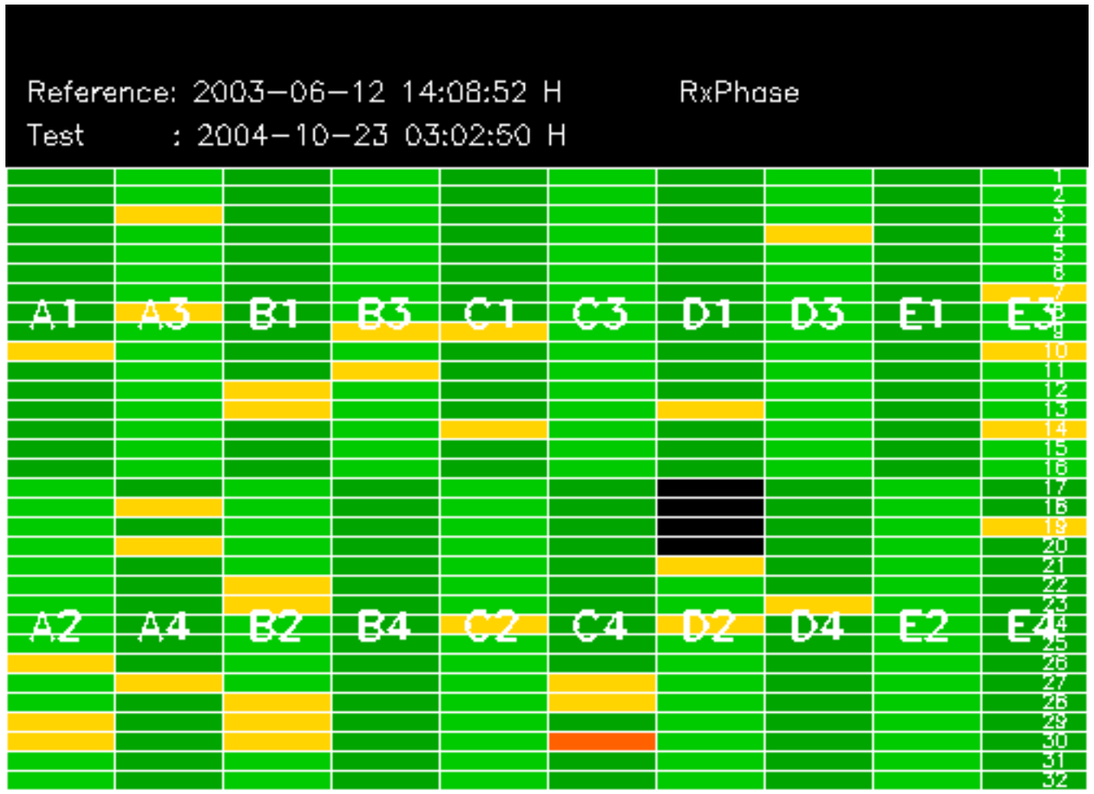
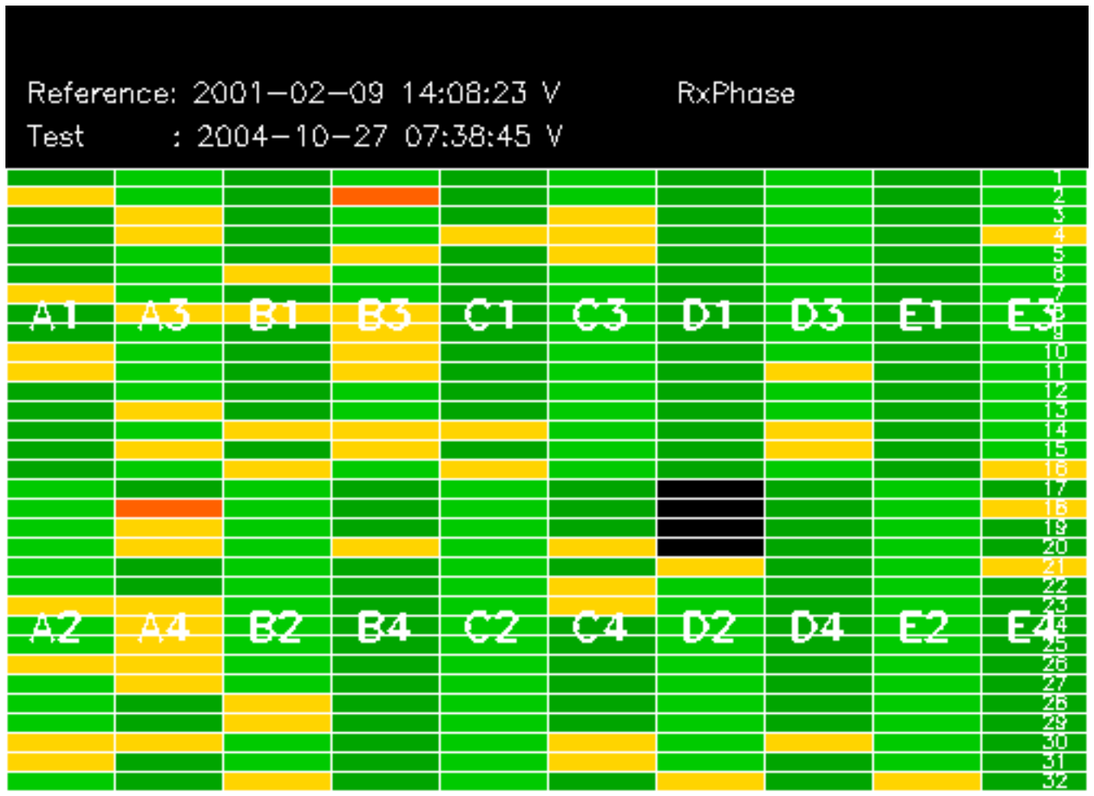
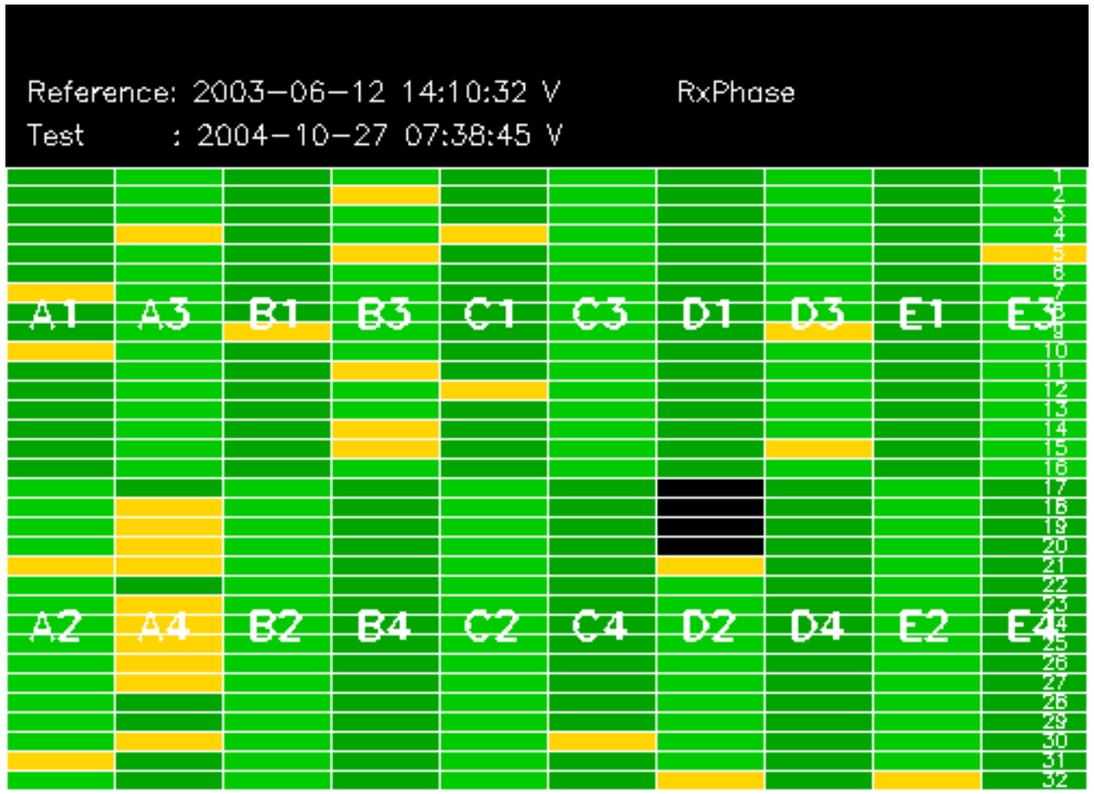

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-10-23 03:02:50 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-10-27 07:38:45 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 : 2004-10-27 07:38:45 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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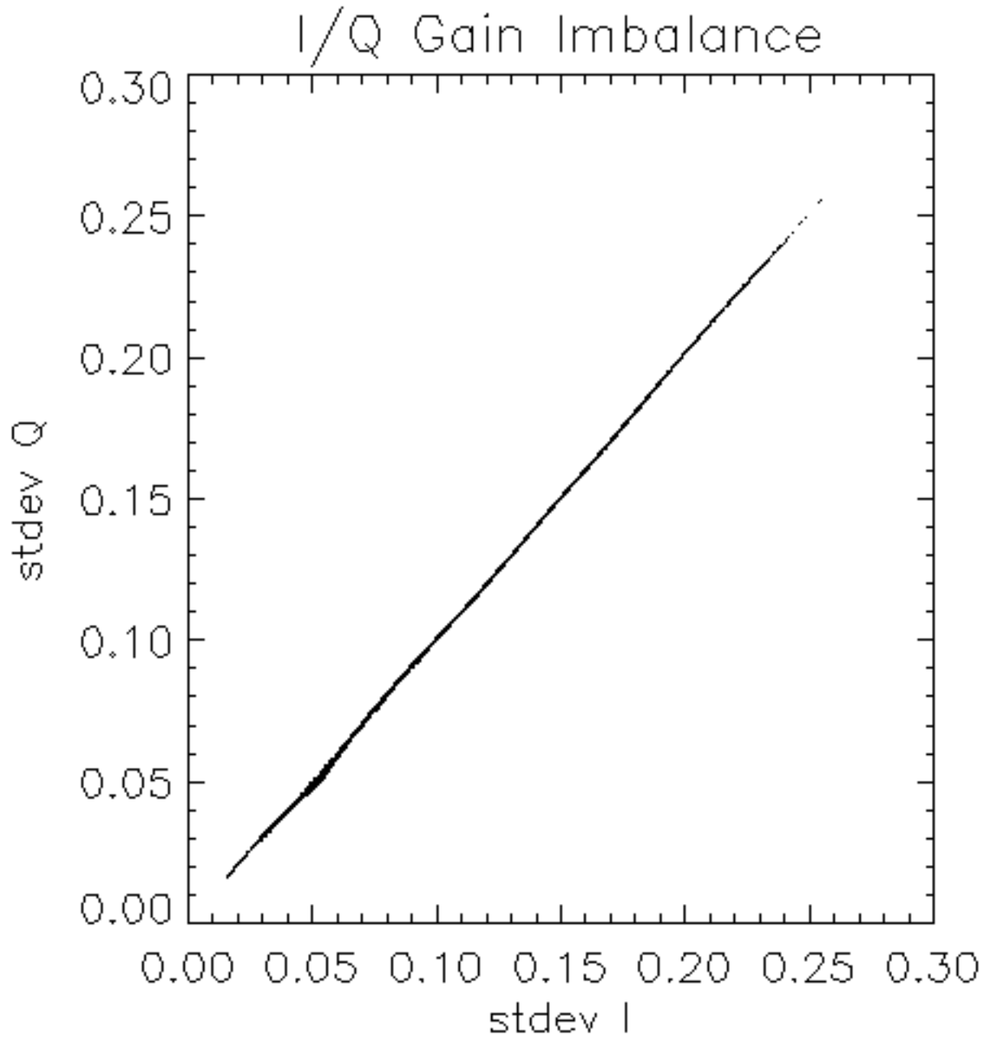
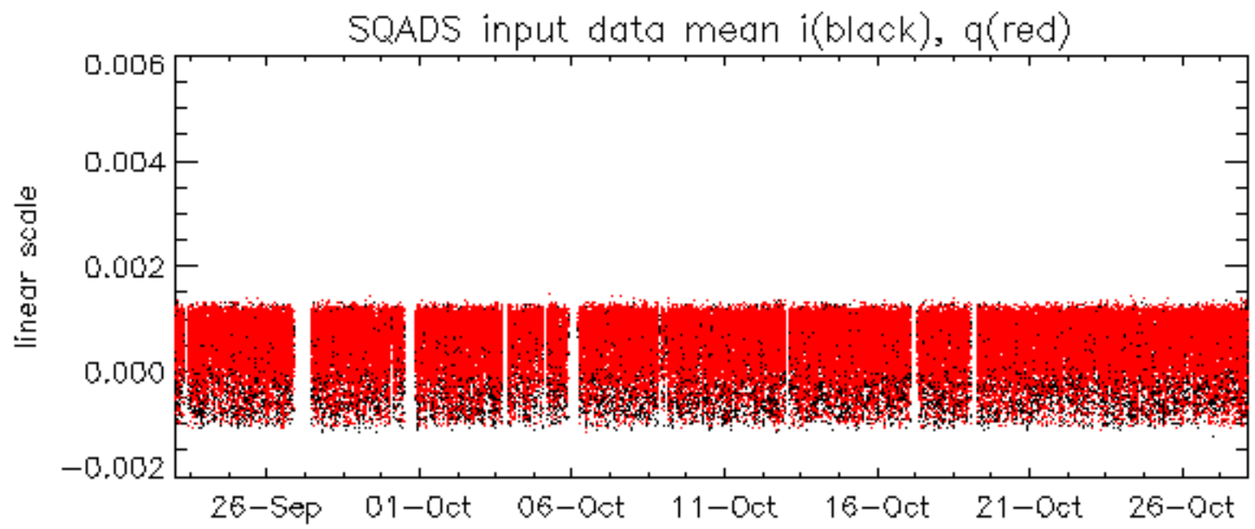
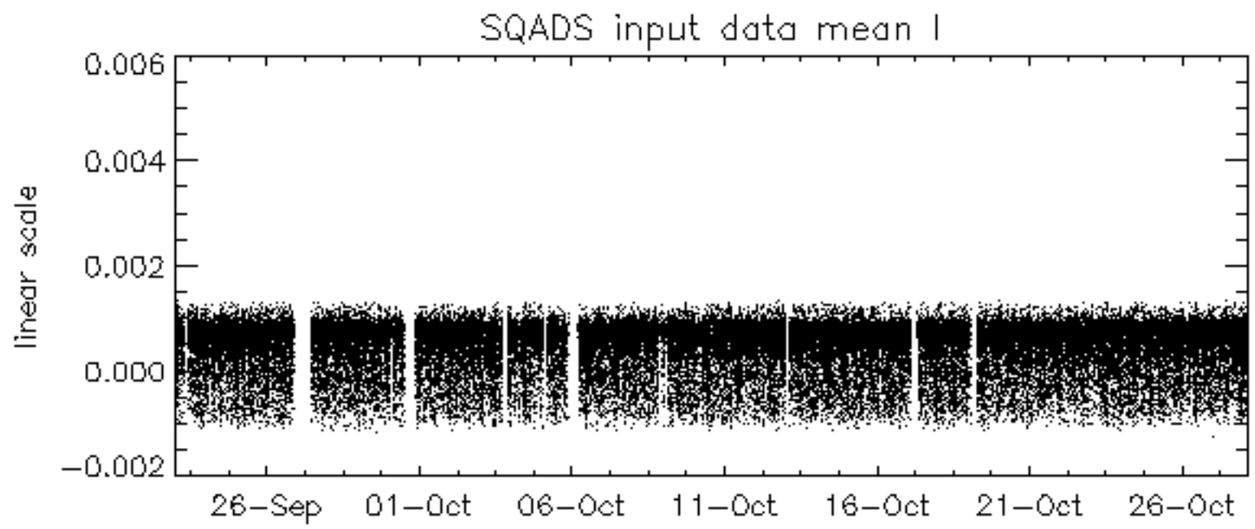
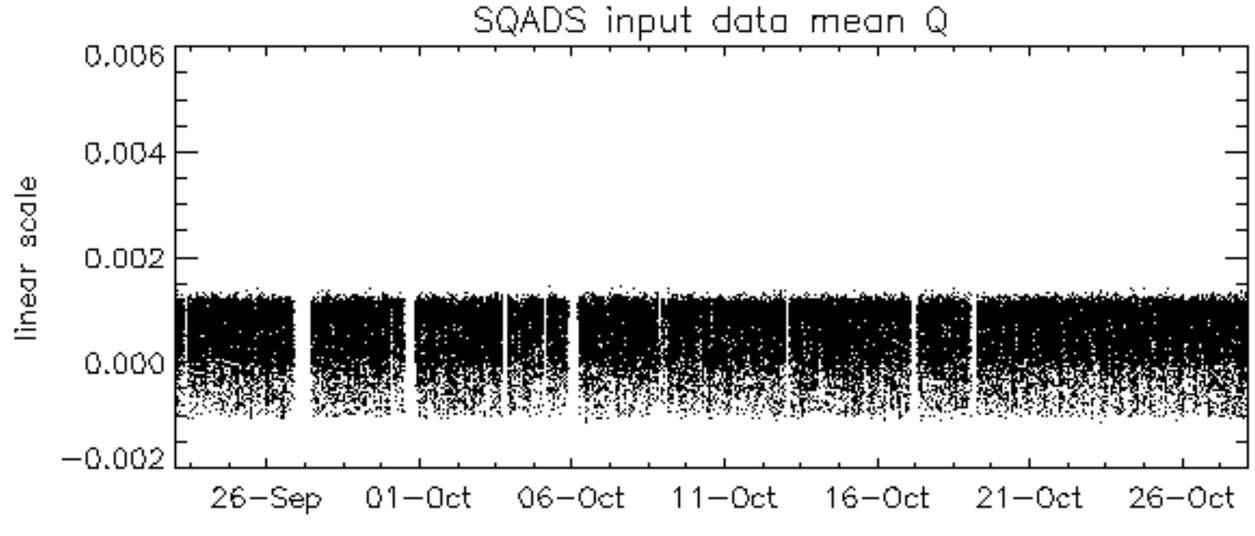
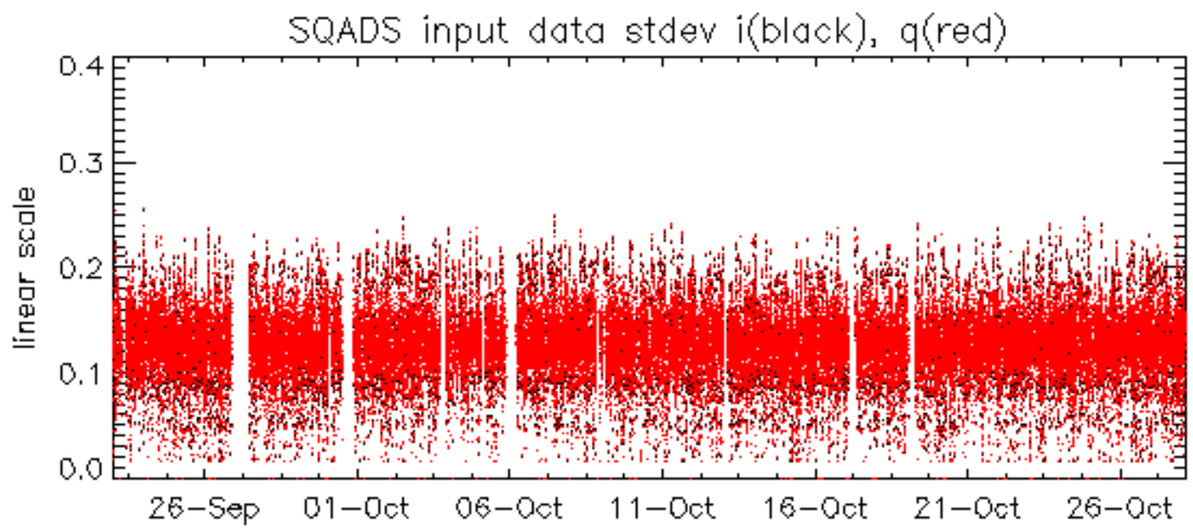
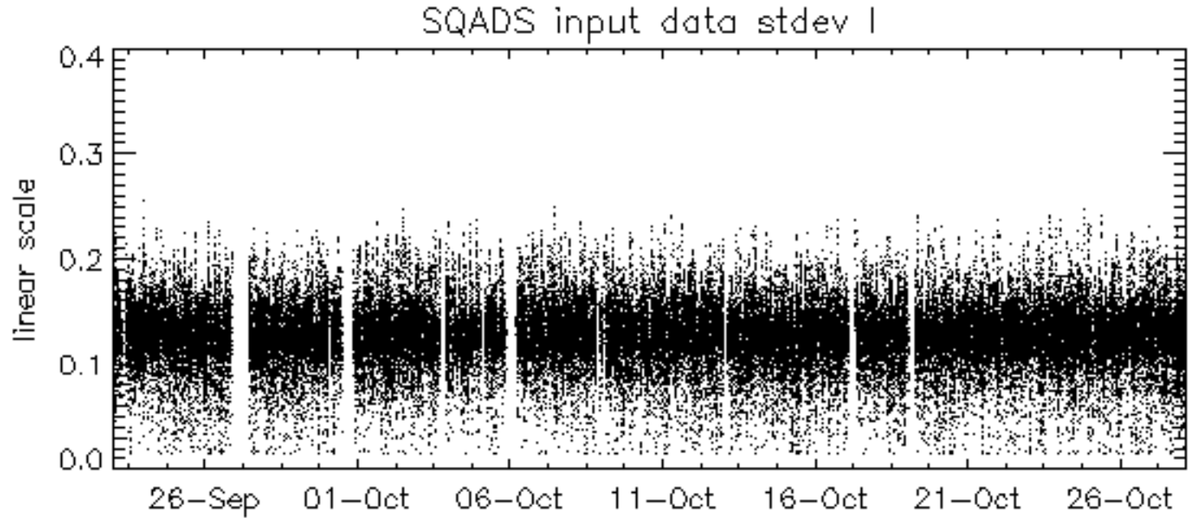

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

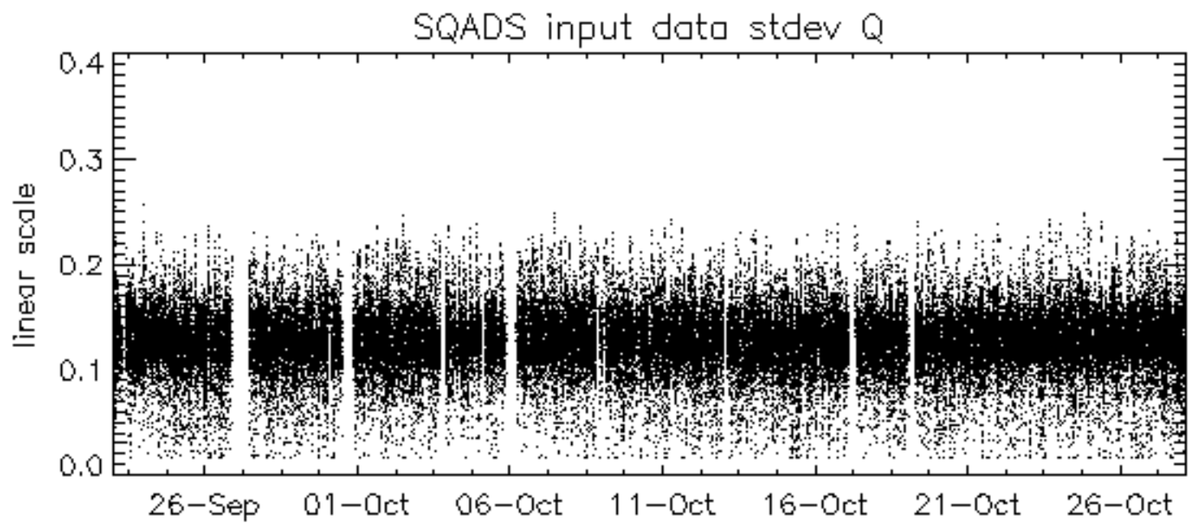

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct

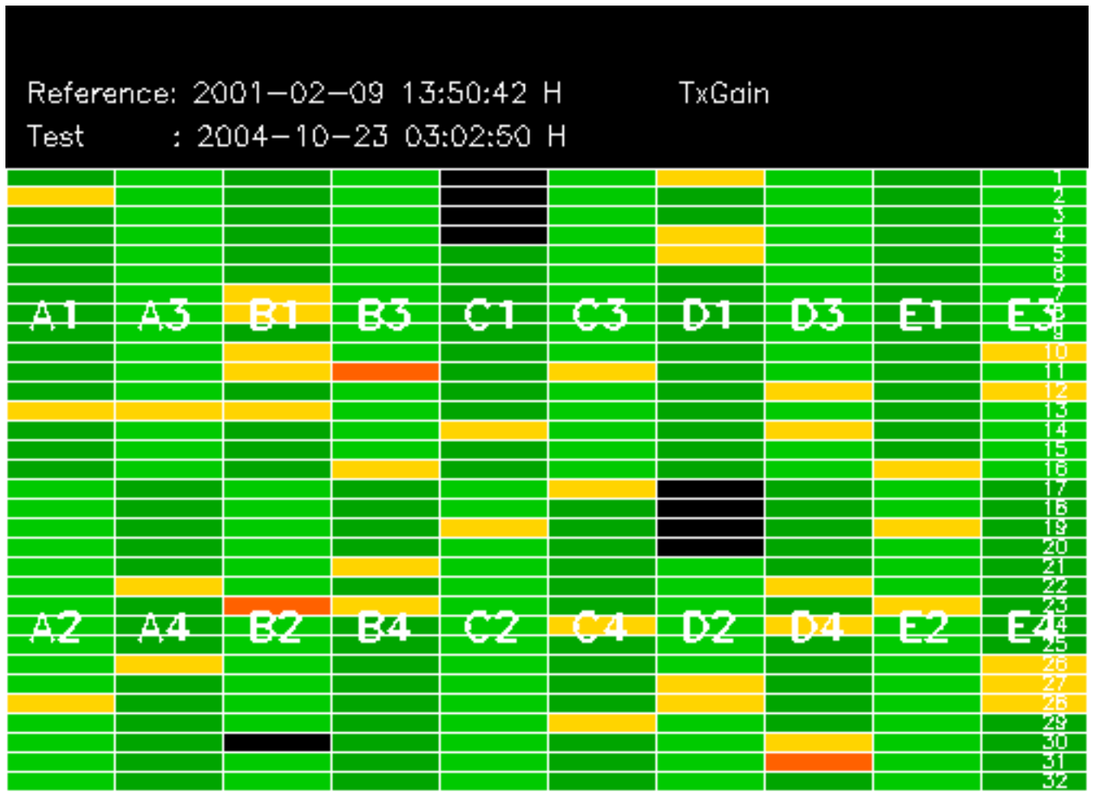

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct

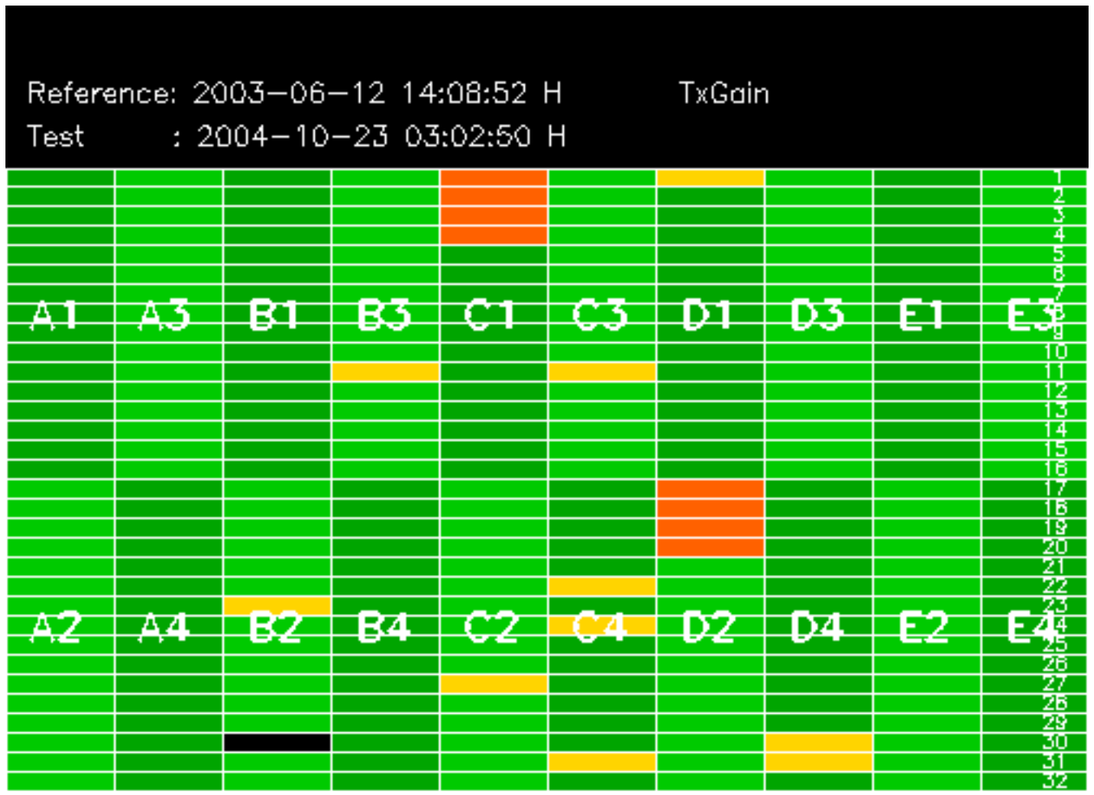

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct


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 : 2004-10-23 03:02:50 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 : 2004-10-23 03:02:50 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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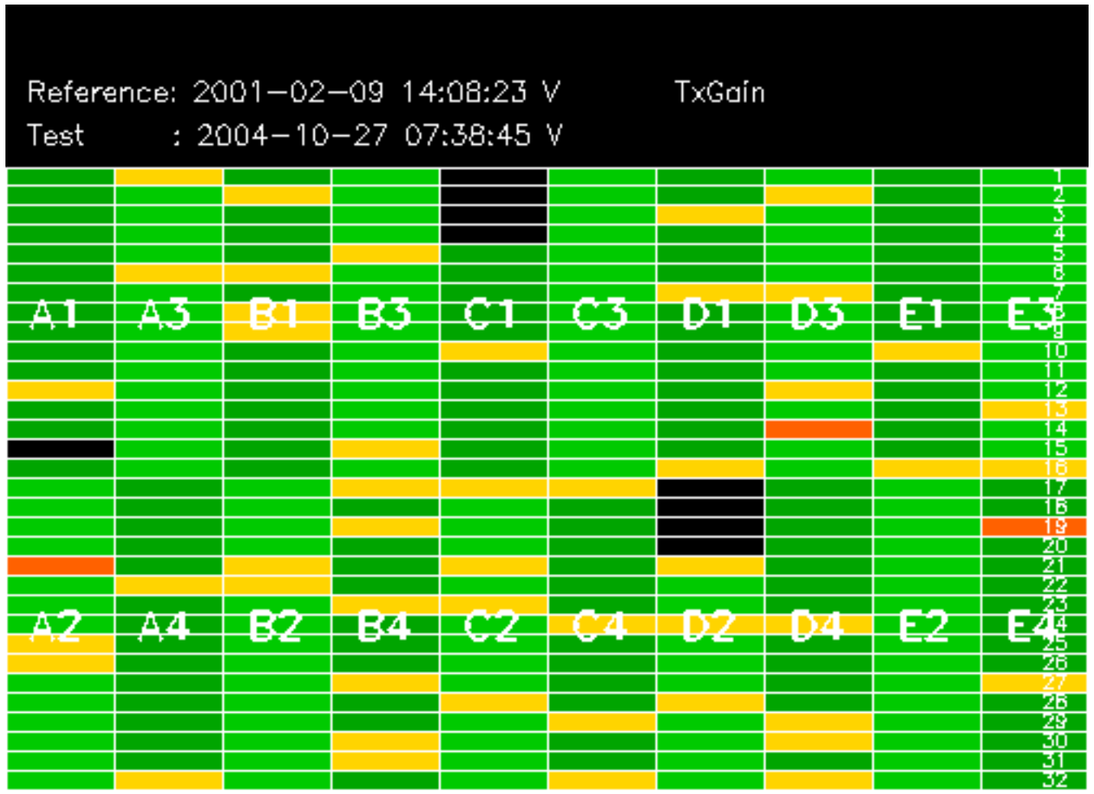
Reference: 2001-02-09 14:08:23 V
Test : 2004-10-27 07:38:45 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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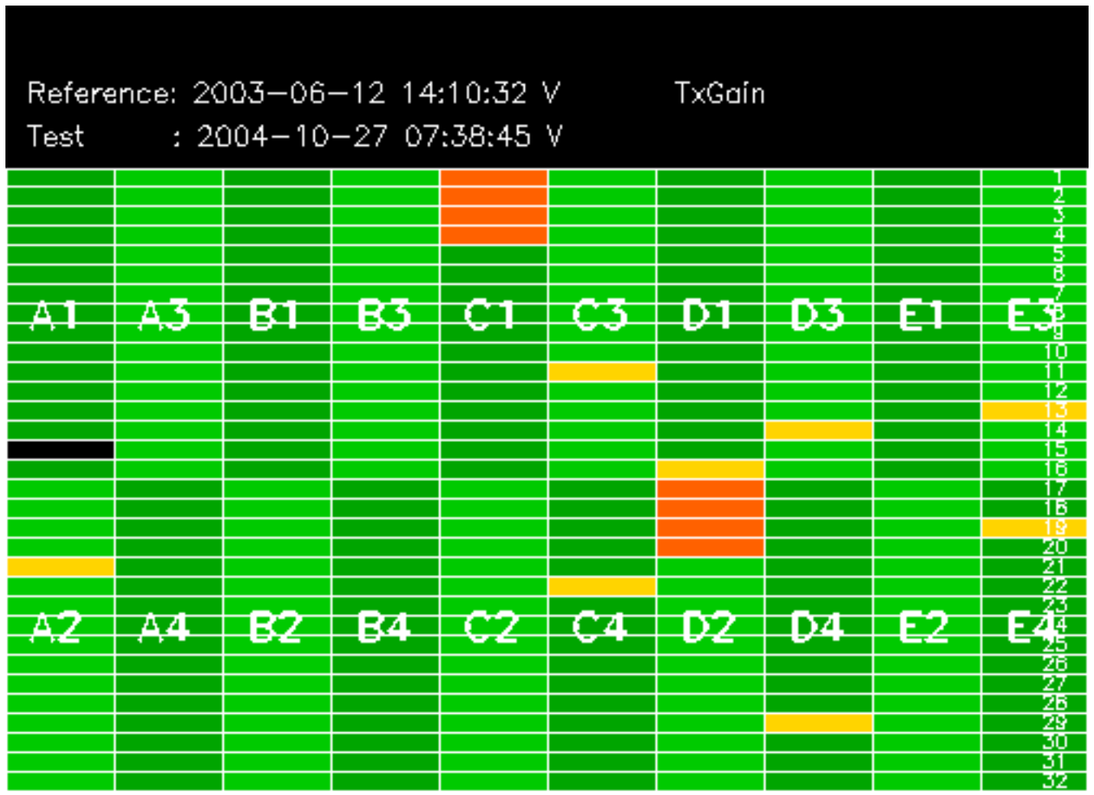
Reference: 2003-06-12 14:10:32 V
Test : 2004-10-27 07:38:45 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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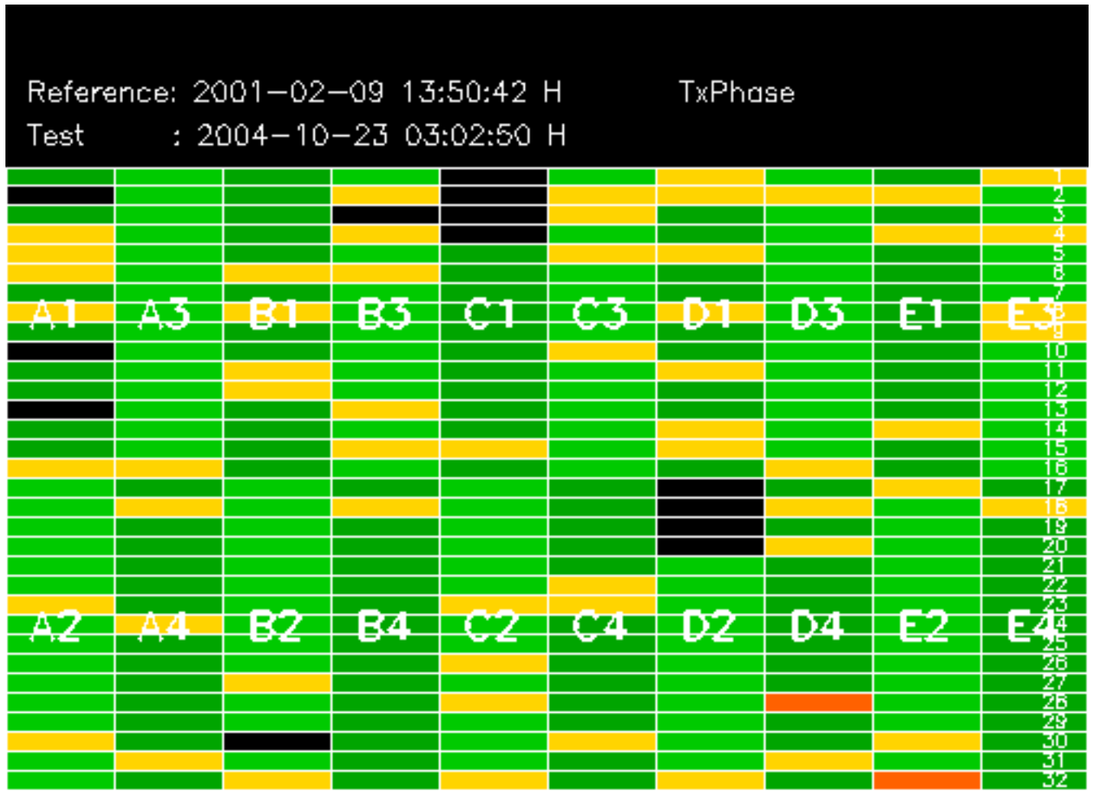
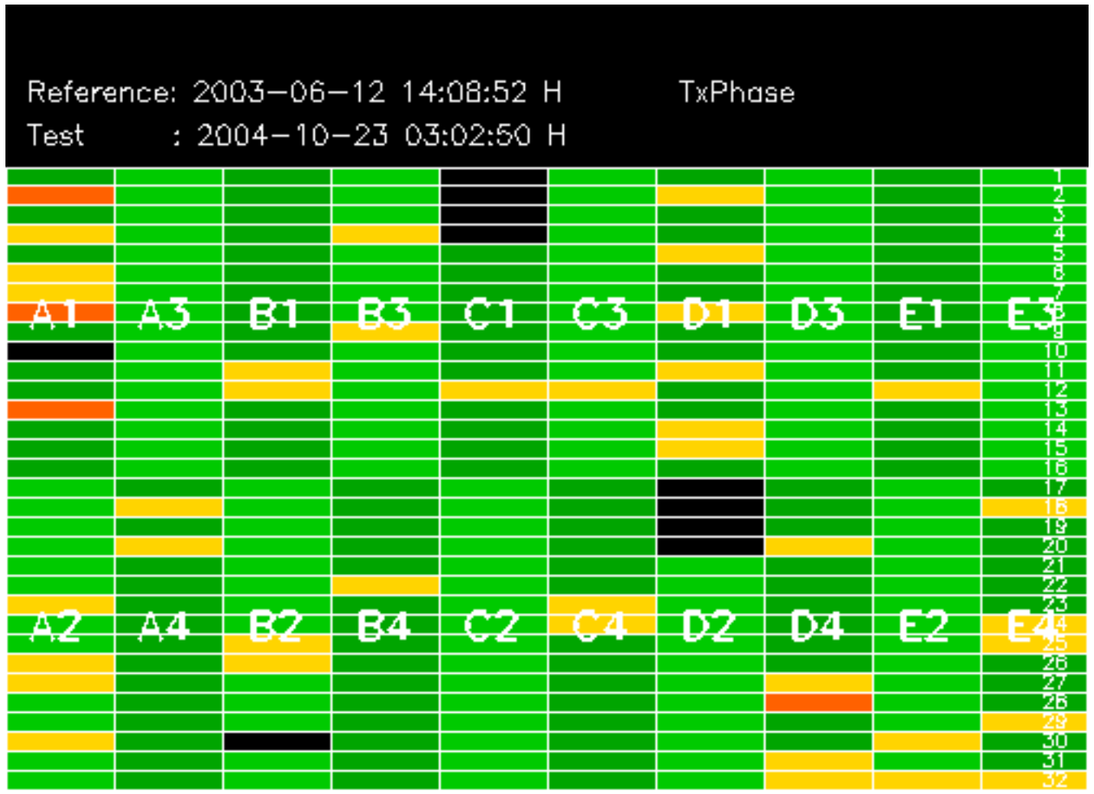
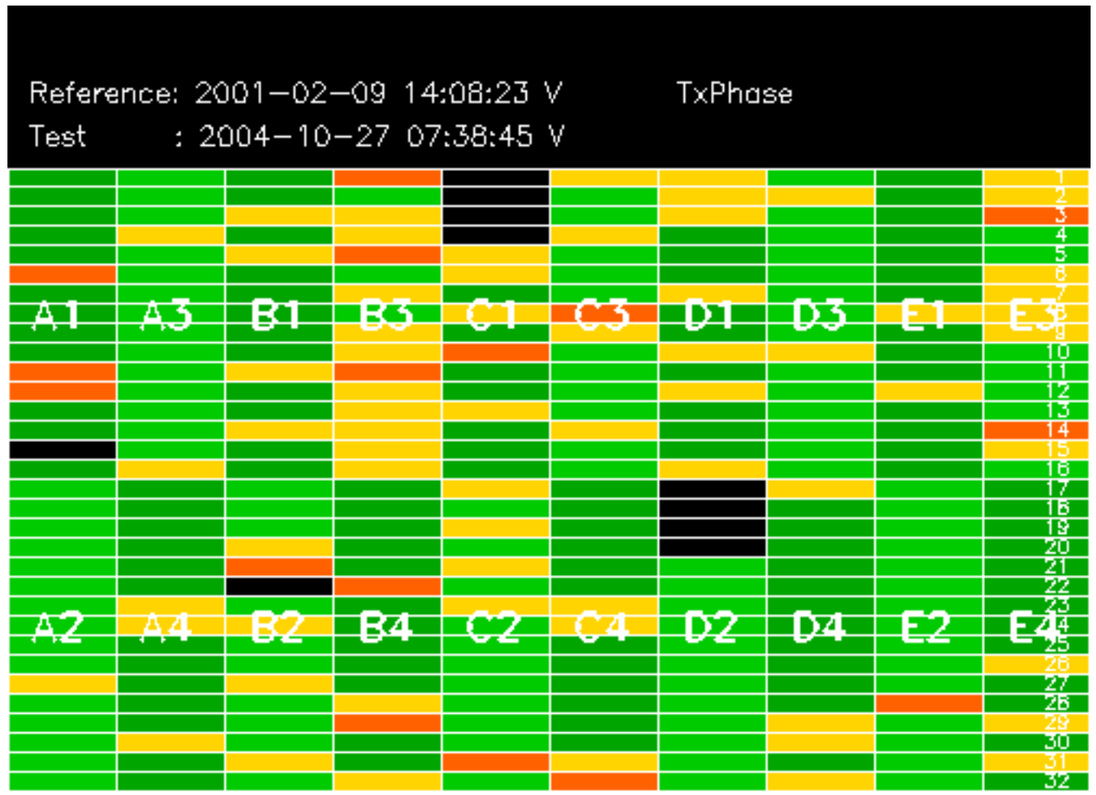

Reference: 2001-02-09 13:50:42 H
Test : 2004-10-23 03:02:50 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-10-23 03:02:50 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 : 2004-10-27 07:38:45 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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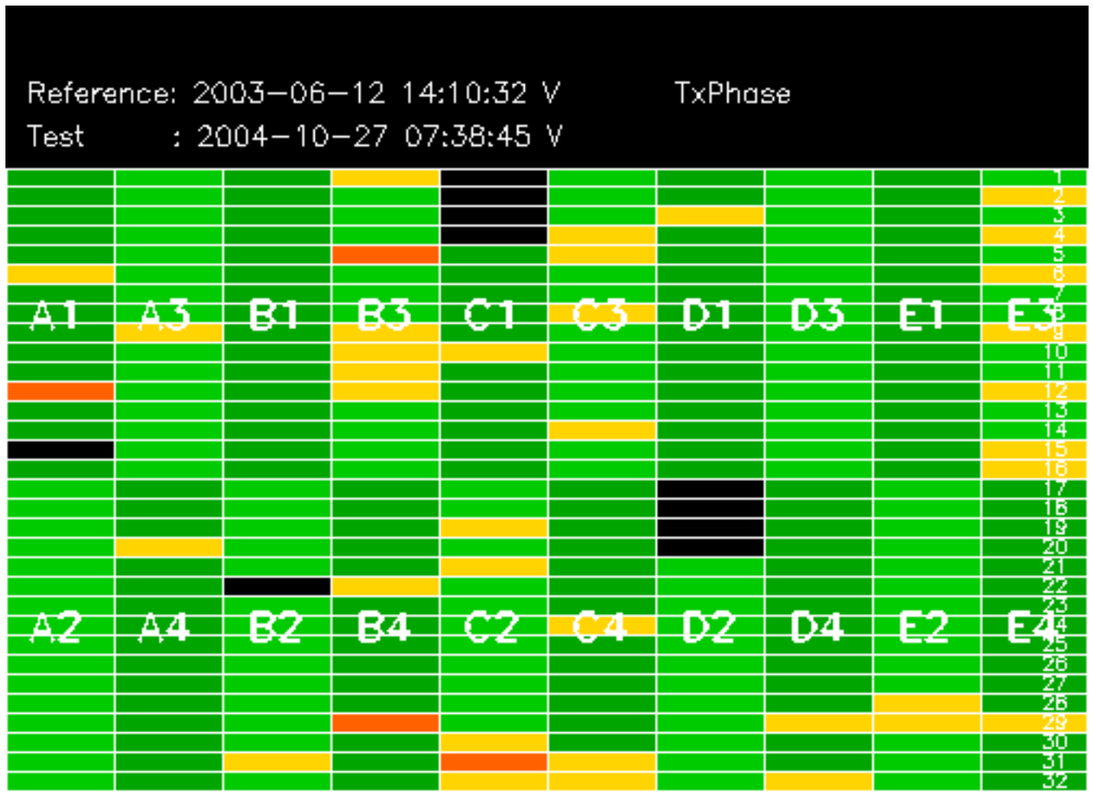
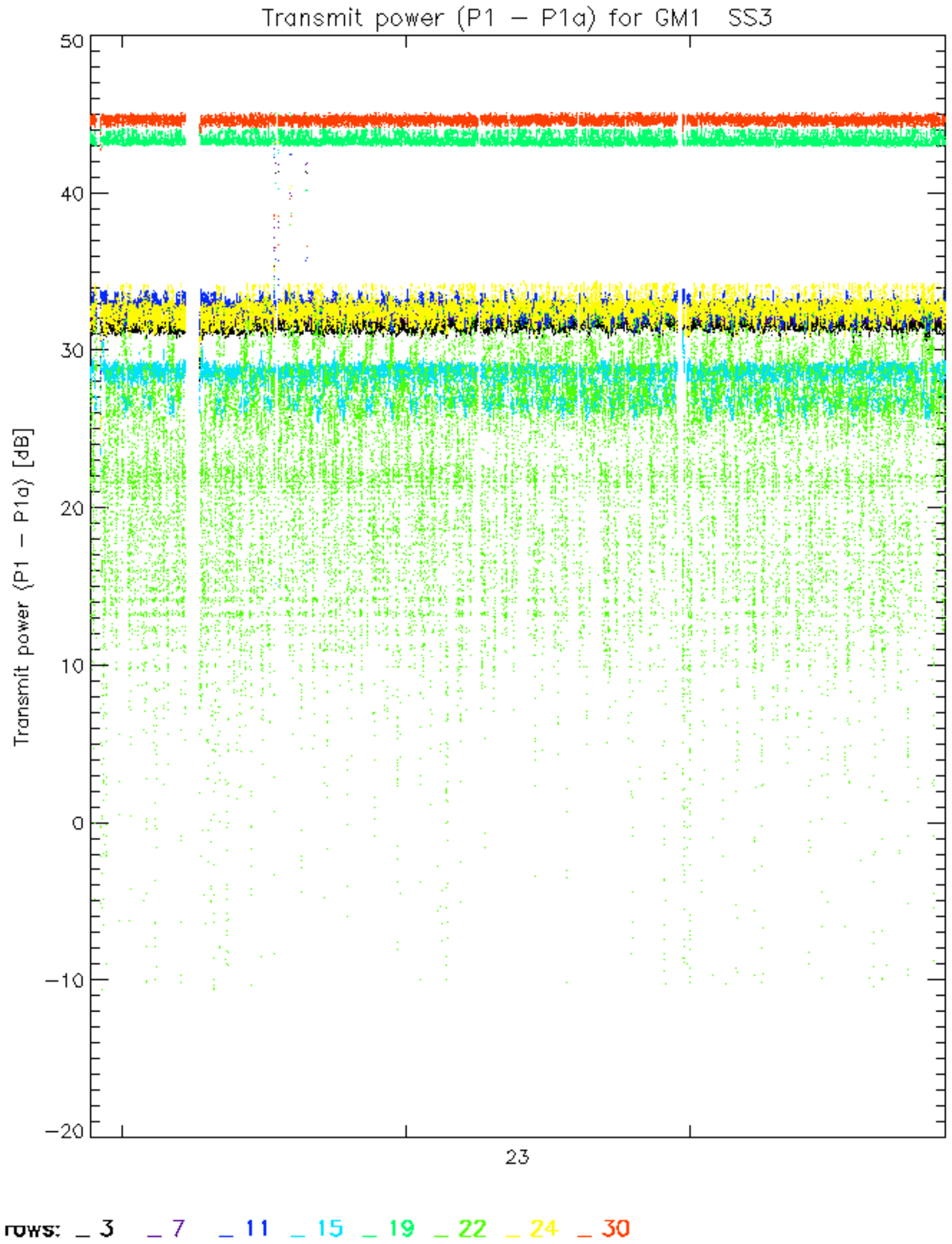
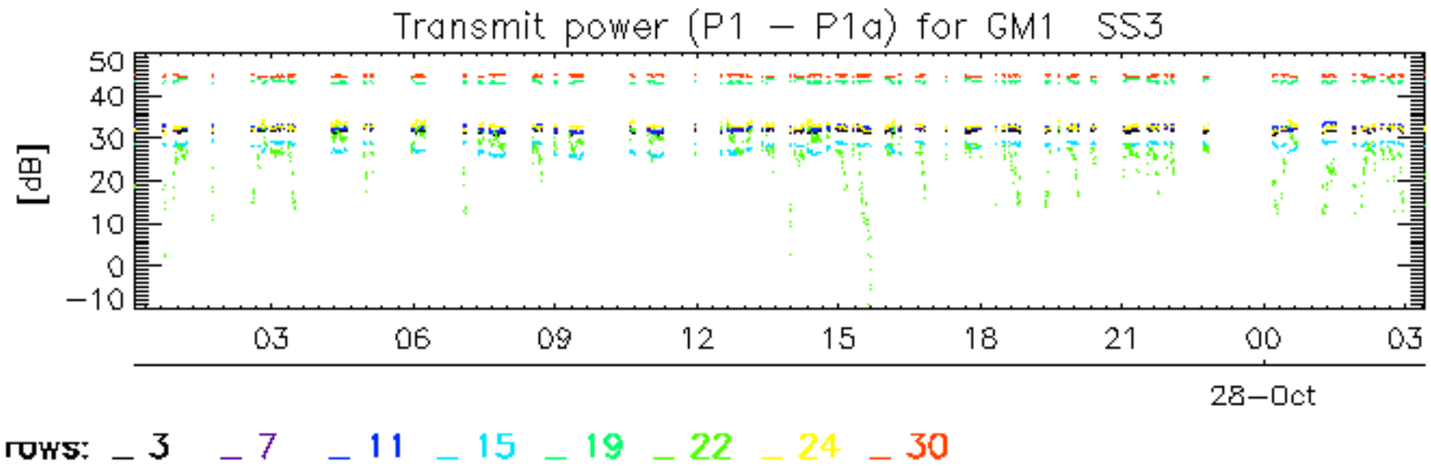
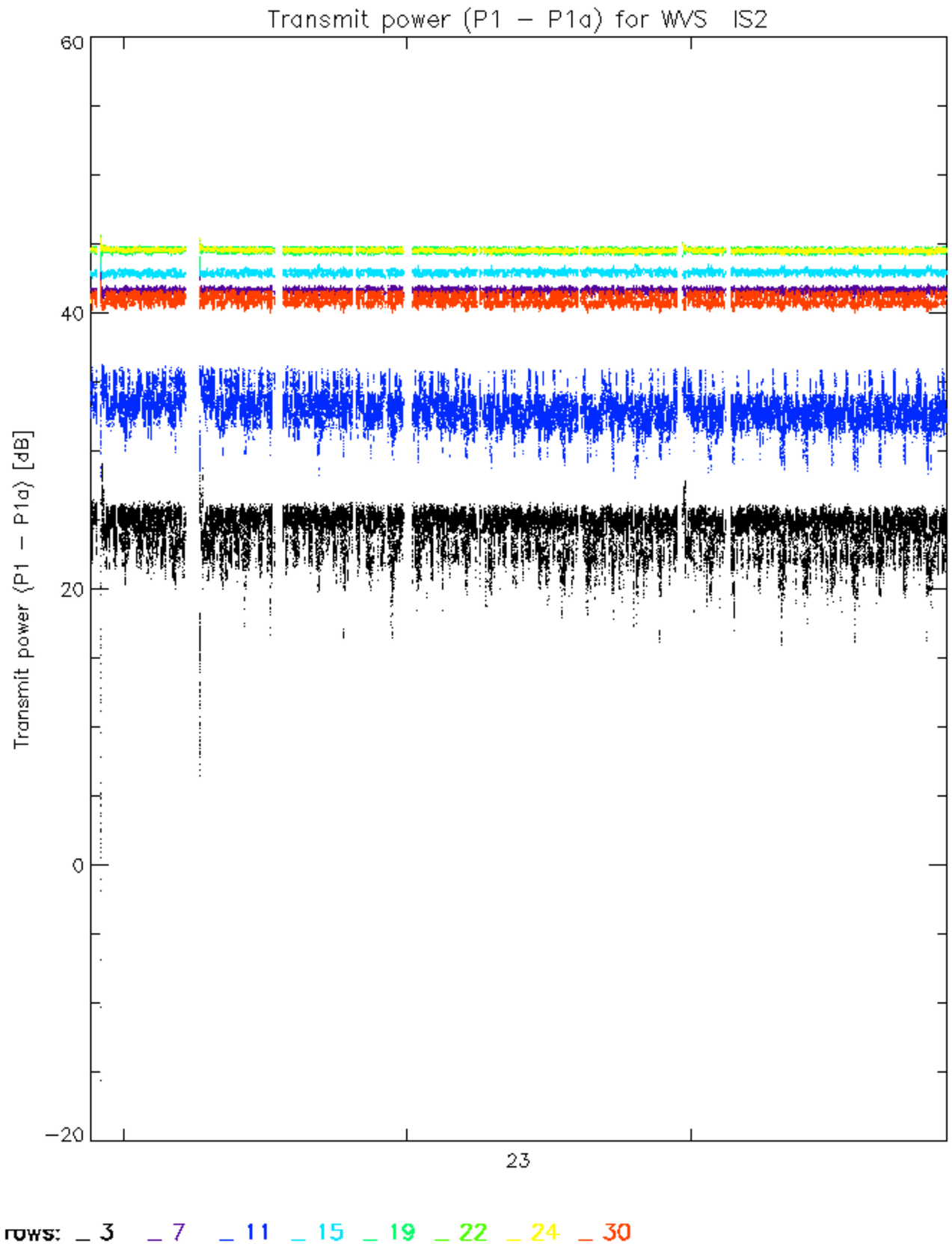
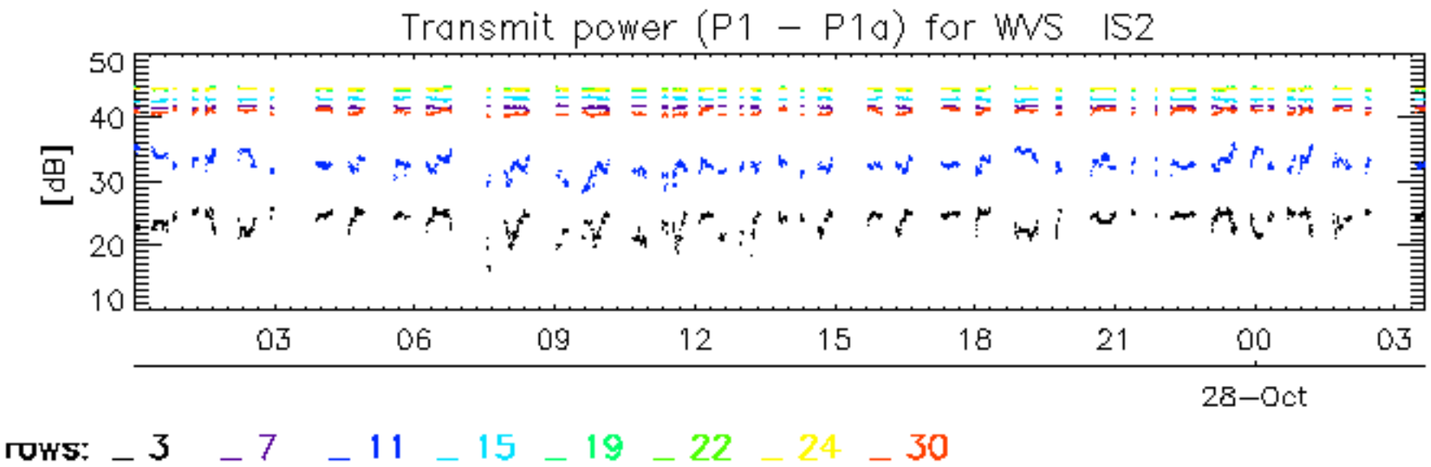

Reference: 2003-06-12 14:10:32 V
Test : 2004-10-27 07:38:45 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
−20
23
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
28–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
23
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
28–Oct
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.