PRELIMINARY REPORT OF 040923

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

last update on Thu Sep 23 10:50:01 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	20040922 073840
H	20040918 030245

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.

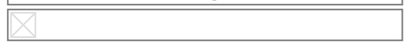
4.1 - Daily statistics

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	-3.468189	0.022591	-0.043781
7	P1	-3.338413	0.022365	-0.027161
11	P1	-4.646072	0.040457	-0.041917
15	P1	-5.761469	0.087795	-0.075904
19	P1	-3.510935	0.079565	-0.077437
22	P1	-4.558814	0.108485	-0.054026
24	P1	-5.000974	0.126728	-0.058164
30	P1	-7.028238	0.149698	-0.162666

3	P1	-16.231688	0.398657	-0.066867
7	P1	-14.011560	0.069968	-0.019810
11	P1	-20.241875	0.273003	-0.124471
15	P1	-11.774320	0.042679	0.016590
19	P1	-14.028855	1.108561	-0.256096
22	P1	-16.058407	0.354206	0.190119
24	P1	-14.477362	0.317318	0.119640
30	P1	-17.931347	0.632220	-0.139727

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.308643	0.085074	-0.010905
7	P2	-22.605282	0.129064	-0.006463
11	P2	-15.227204	0.155893	0.111550
15	P2	-7.062807	0.097802	-0.000922
19	P2	-9.570276	0.169530	0.031247
22	P2	-17.319319	0.115073	0.065154
24	P2	-20.758307	0.091083	-0.047588
30	P2	-19.182880	0.083061	0.116769

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.152496	0.002888	-0.023863
7	P3	-8.152498	0.002888	-0.023848
11	P3	-8.152509	0.002887	-0.023783
15	P3	-8.152523	0.002887	-0.023687
19	P3	-8.152528	0.002887	-0.023678
22	P3	-8.152513	0.002887	-0.023756
24	P3	-8.152509	0.002887	-0.023771
30	P3	-8.152601	0.002885	-0.024104

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	-2.828900	0.049217	-0.112869
7	P1	-3.028997	0.084377	-0.071948
11	P1	-3.889913	0.065473	-0.073442
15	P1	-3.538587	0.082045	-0.071447
19	P1	-3.520000	0.102262	-0.110825
22	P1	-5.730916	0.126779	-0.074677
24	P1	-3.954642	0.055914	-0.087912
30	P1	-6.214368	0.099421	-0.080296
3	P1	-10.796406	0.168592	-0.441996
7	P1	-10.110153	0.143387	-0.020639
11	P1	-12.166342	0.109332	-0.011010
15	P1	-11.680120	0.073754	-0.077215
19	P1	-15.750508	2.154284	-0.371981
22	P1	-23.331202	1.580440	0.265709
24	P1	-17.943113	0.356725	-0.006048
30	P1	-20.396233	1.266149	0.169961

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.990196	0.048807	0.014981
7	P2	-22.742643	0.039060	0.023981
11	P2	-10.935666	0.060028	0.106251
15	P2	-4.961195	0.030220	-0.013779
19	P2	-6.773605	0.045175	-0.024266
22	P2	-7.428168	0.037646	0.044583
24	P2	-11.060583	0.043403	-0.021466
30	P2	-22.154280	0.028548	0.086219

P3 Cyclic statistics

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

3	P3	-8.004129	0.003046	-0.024527
7	P3	-8.004195	0.003042	-0.024590
11	P3	-8.004205	0.003045	-0.024708
15	P3	-8.004200	0.003034	-0.024635
19	P3	-8.004143	0.003047	-0.024545
22	P3	-8.004177	0.003043	-0.024521
24	P3	-8.004263	0.003064	-0.024703
30	P3	-8.004130	0.003047	-0.024574

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	0.000469705
	stdev	2.17623e-07
MEAN Q	mean	0.000537134
	stdev	2.35435e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127475
	stdev	0.000959905

STDEV Q	mean	0.127698
	stdev	0.000969431

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

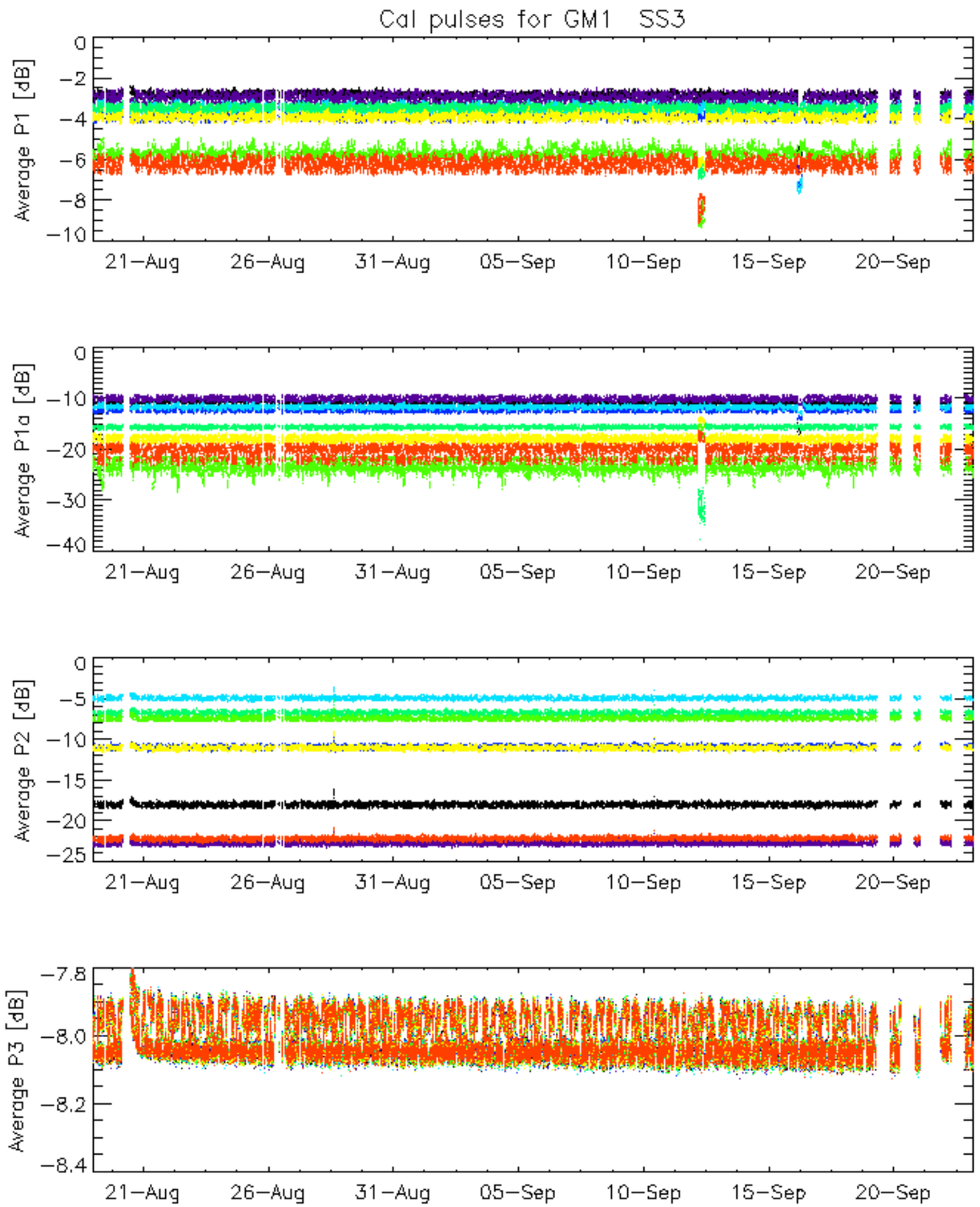
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

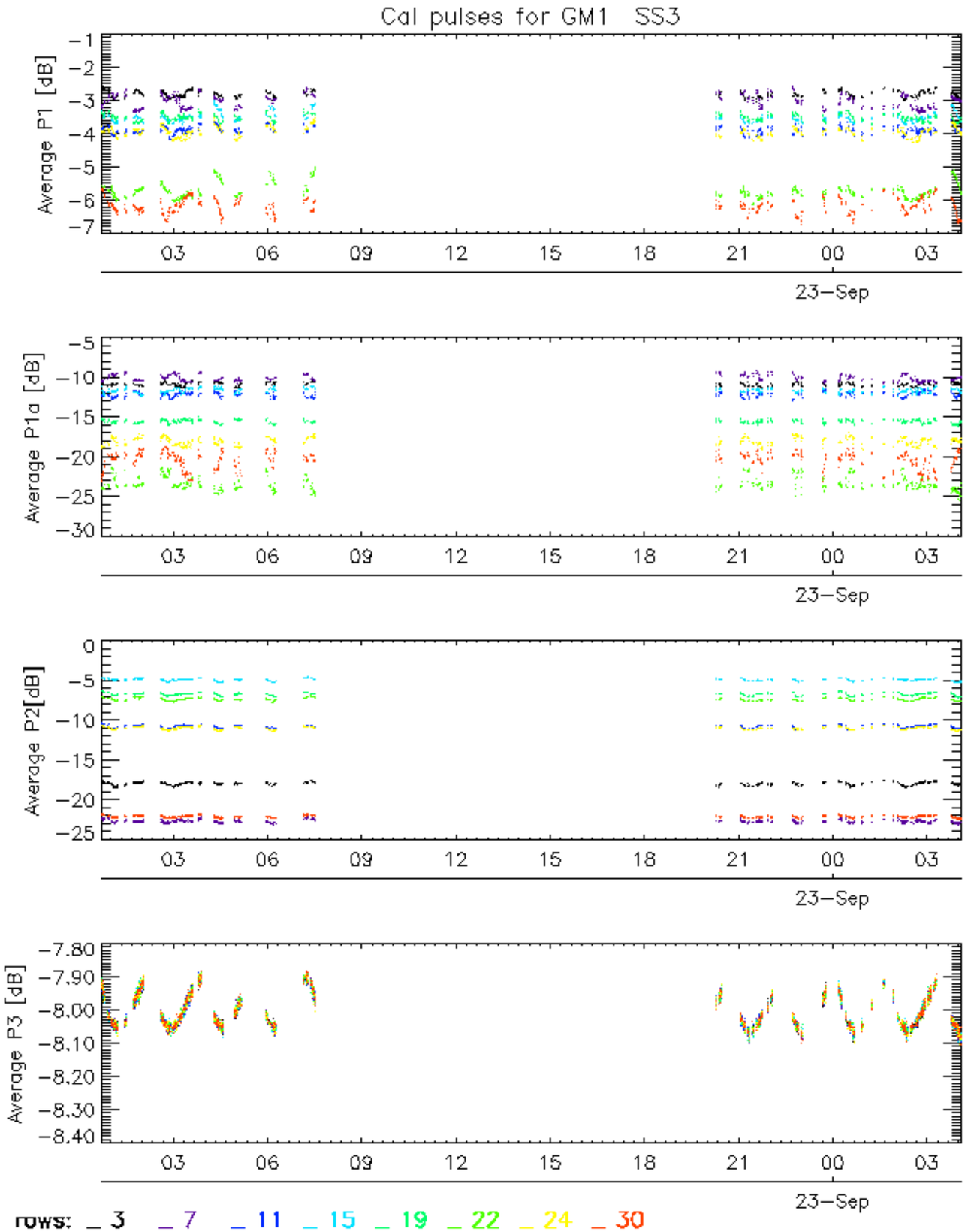
6.5 - Absolute Doppler for GM1

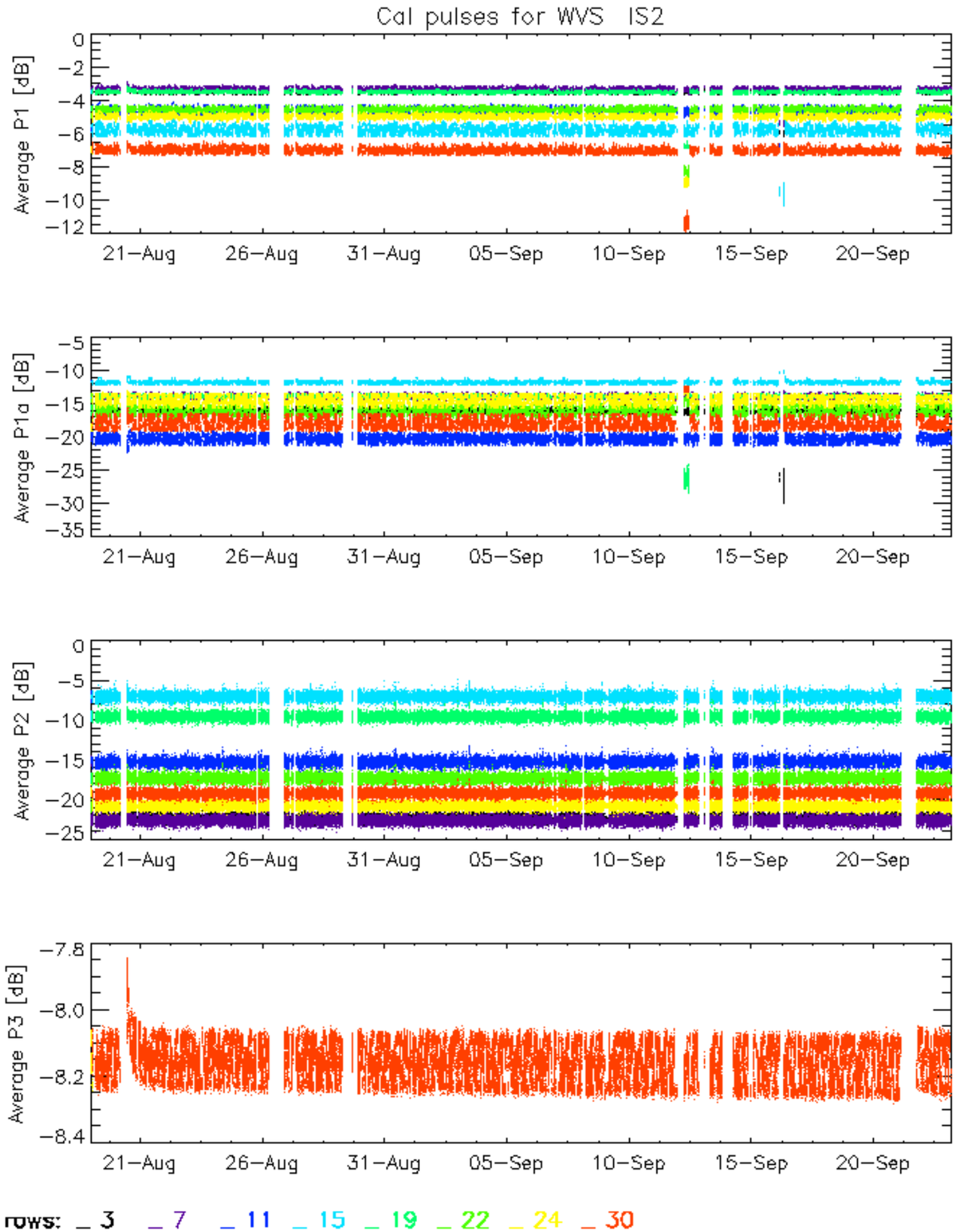
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

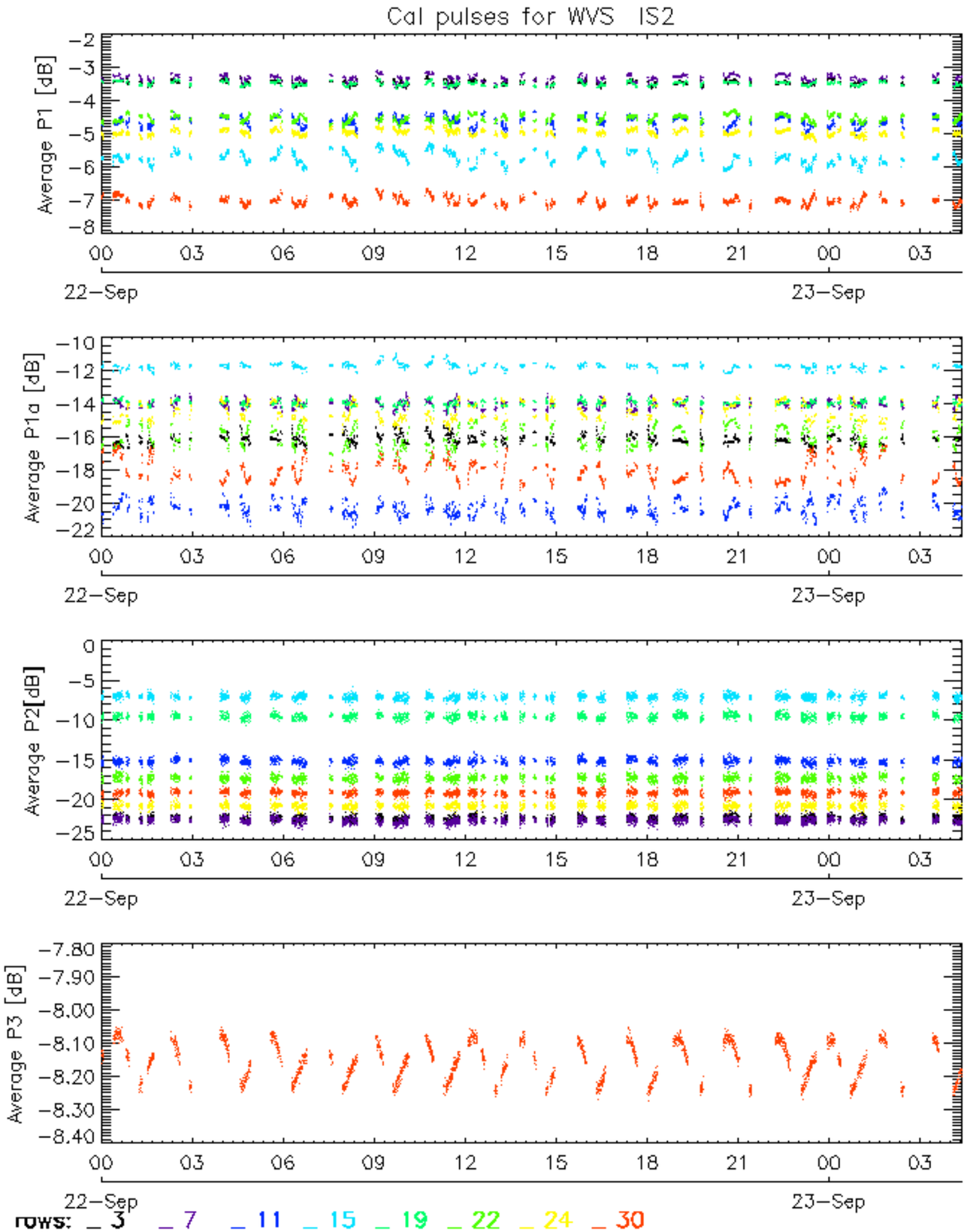
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

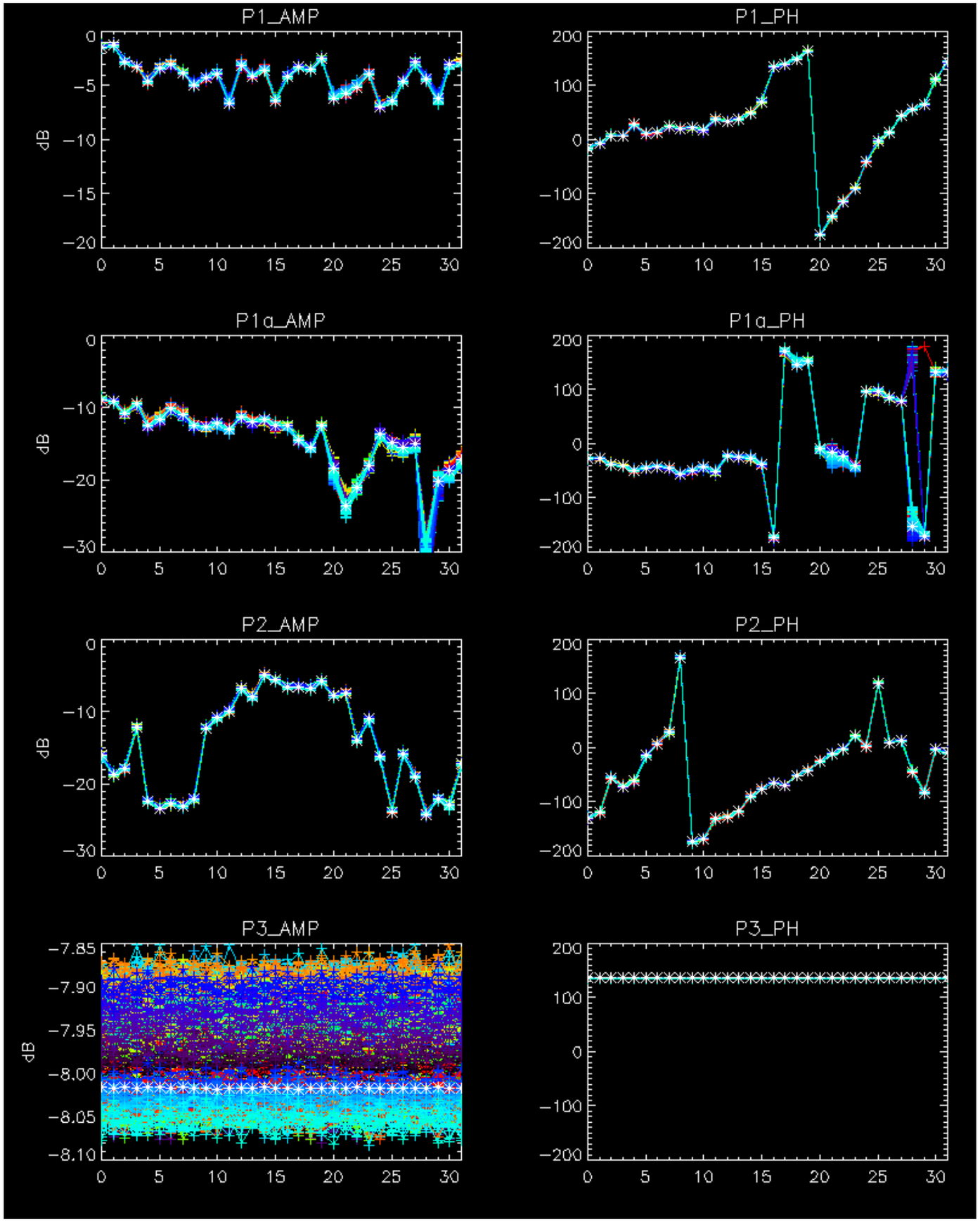

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
Average P1a [dB]
0
−10
−20
−30
−40
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
Average P2 [dB]
0
−5
−10
−15
−20
−25
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

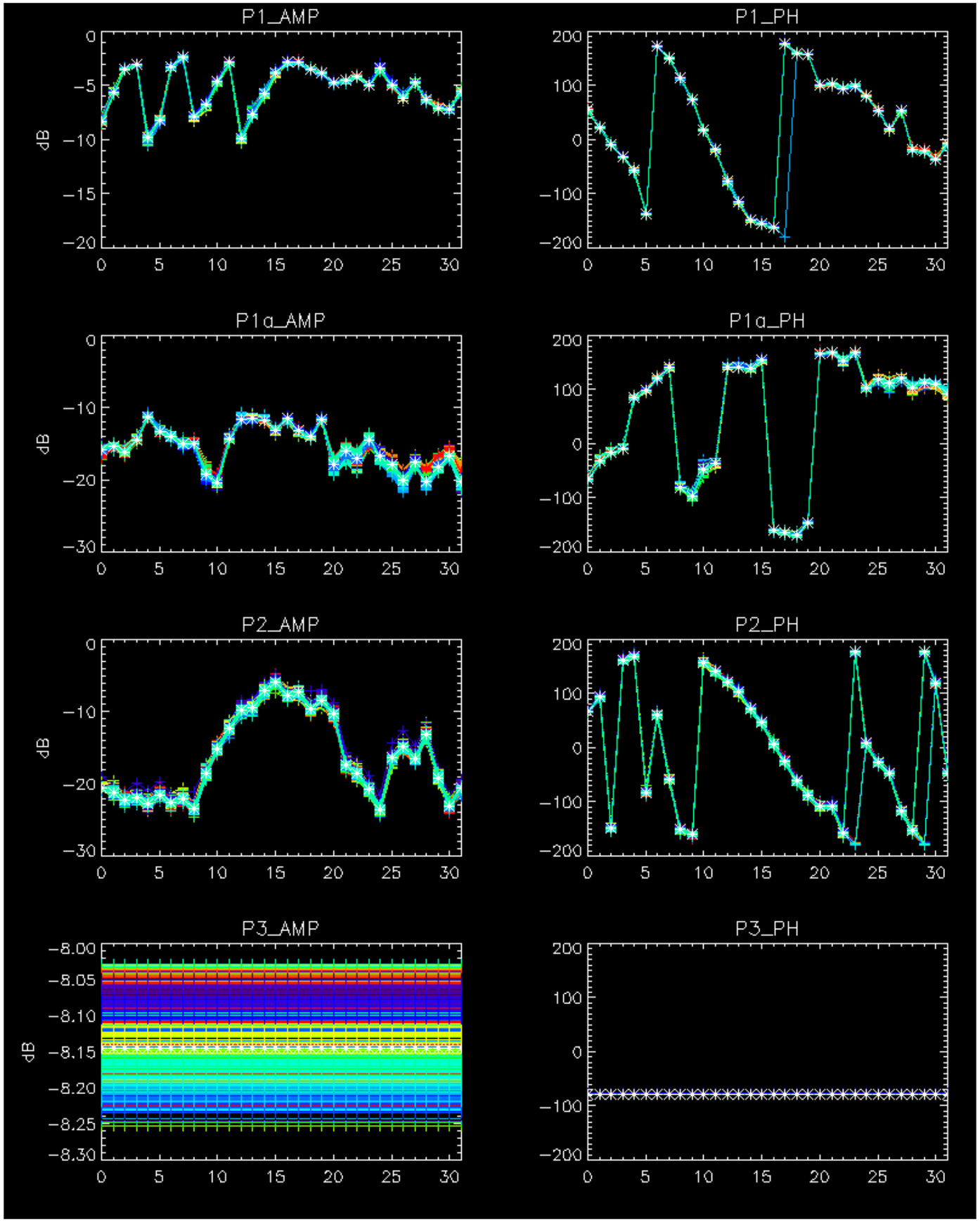

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
23−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−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
00
03
06
09
12
15
18
21
00
03
22−Sep
23−Sep
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

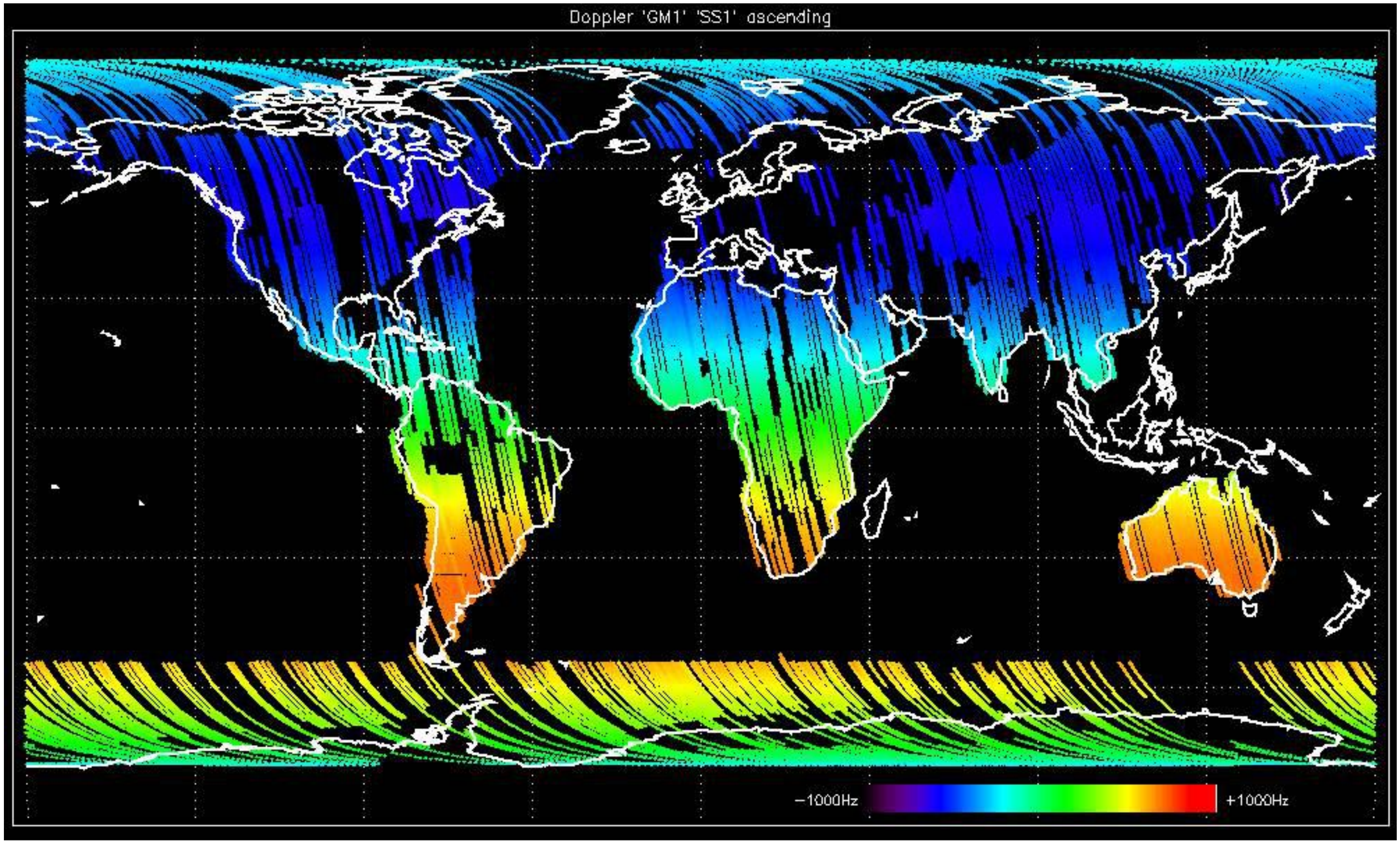
No anomalies observed.

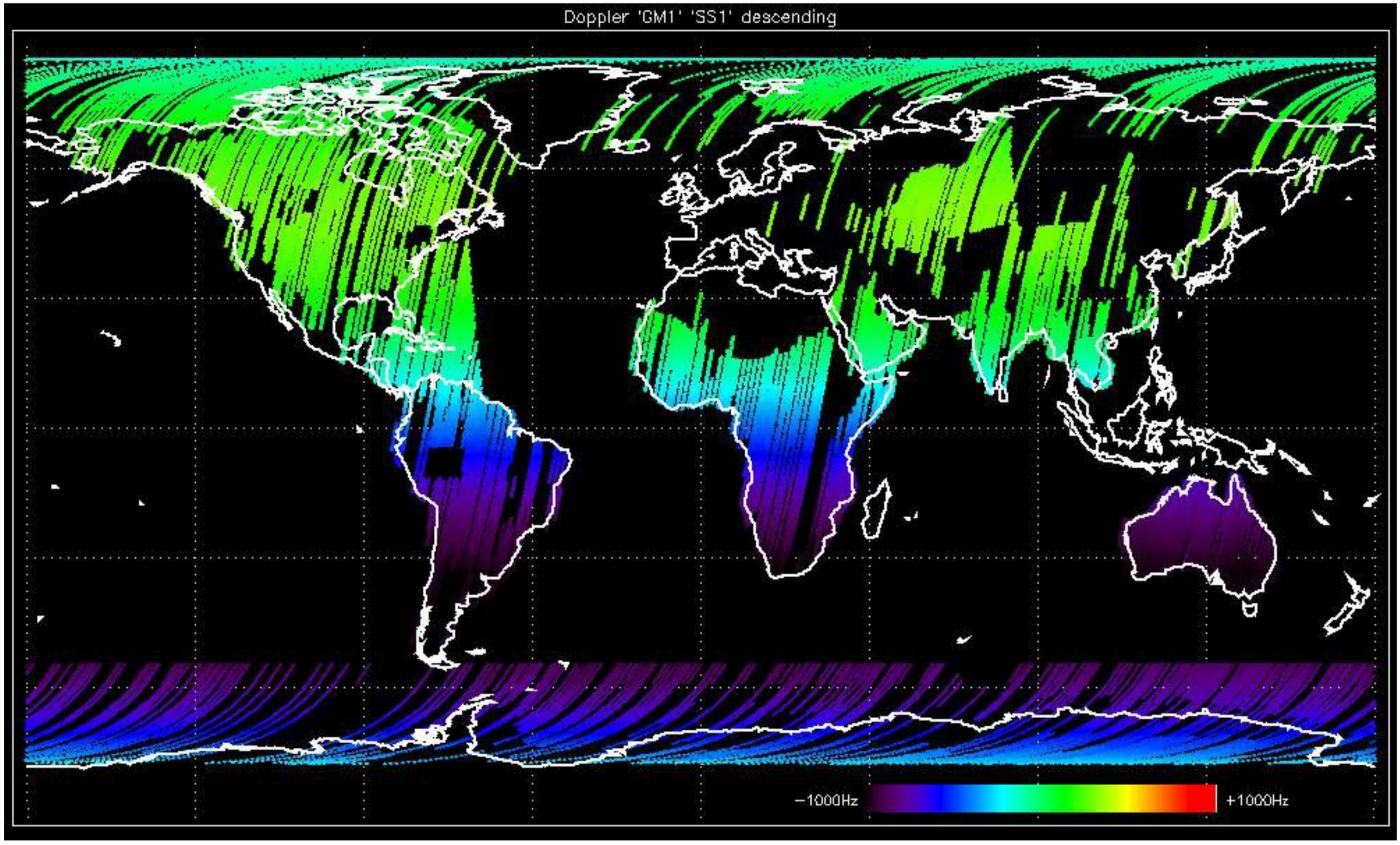

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

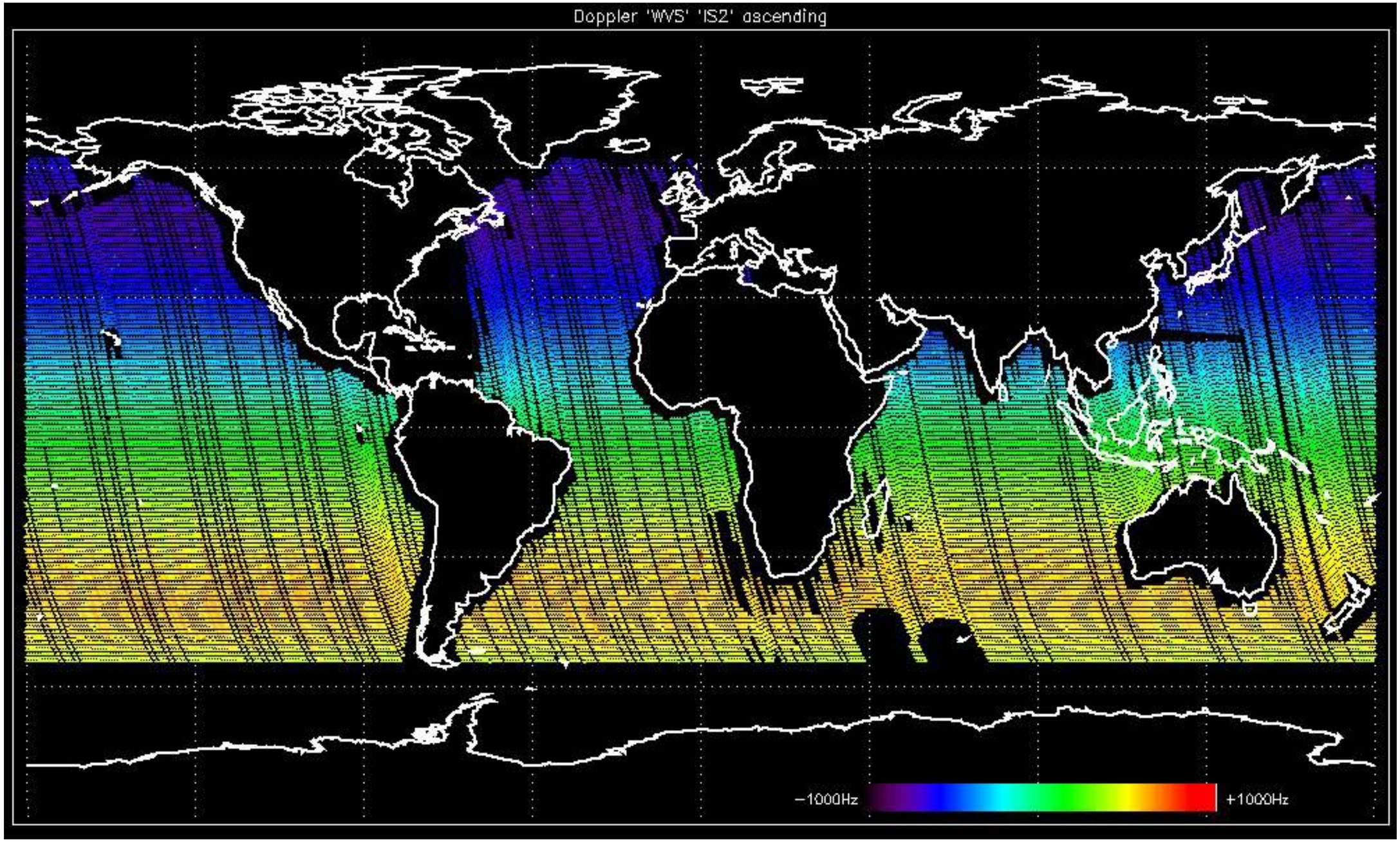

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

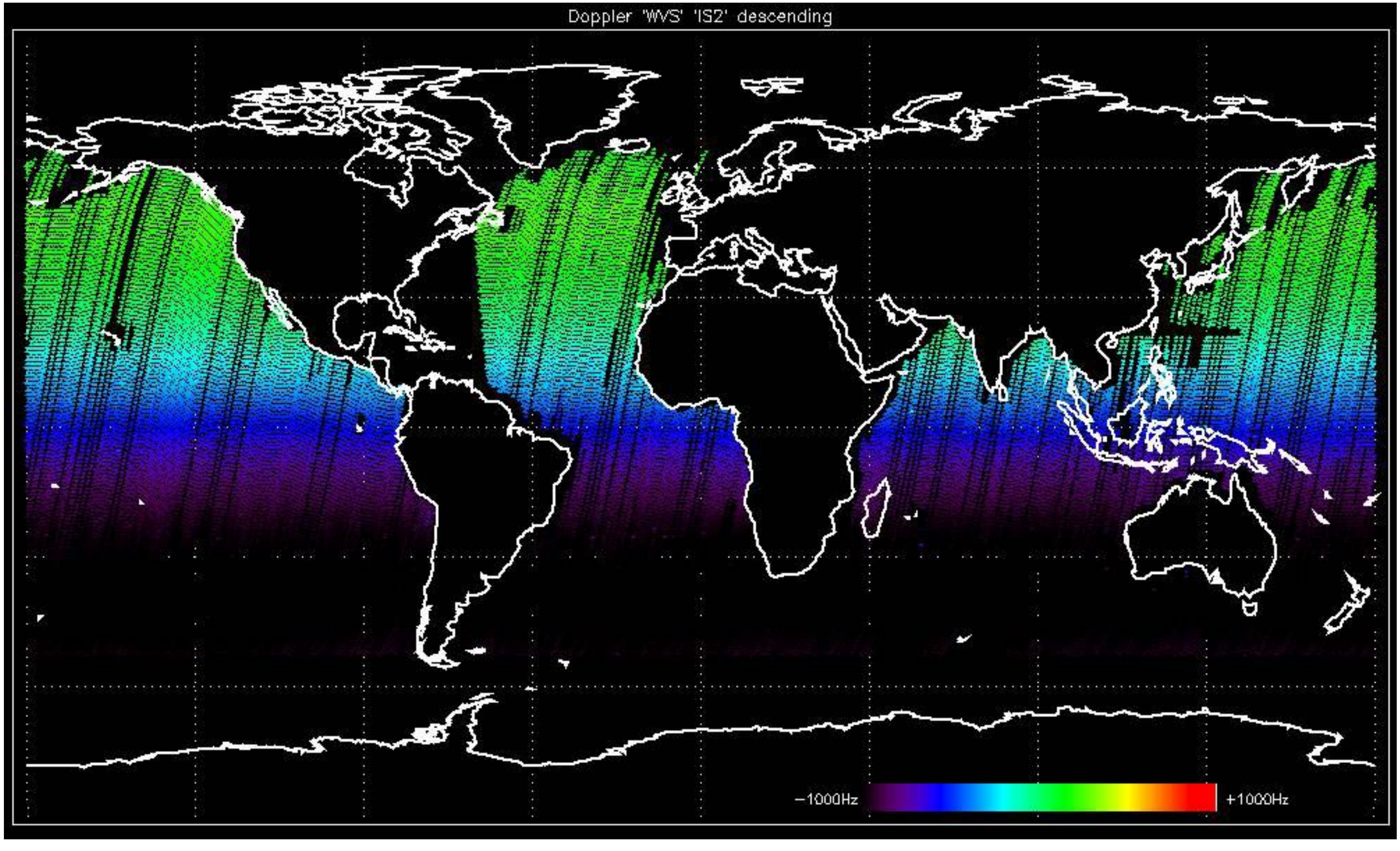
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

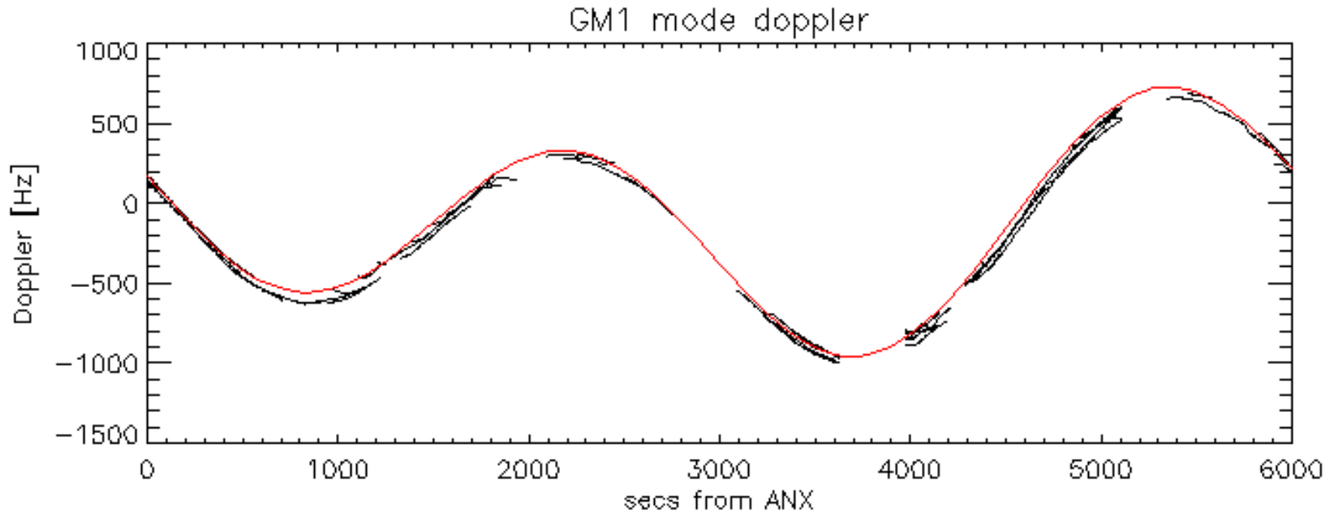
Preliminary report.The data is not yet controled

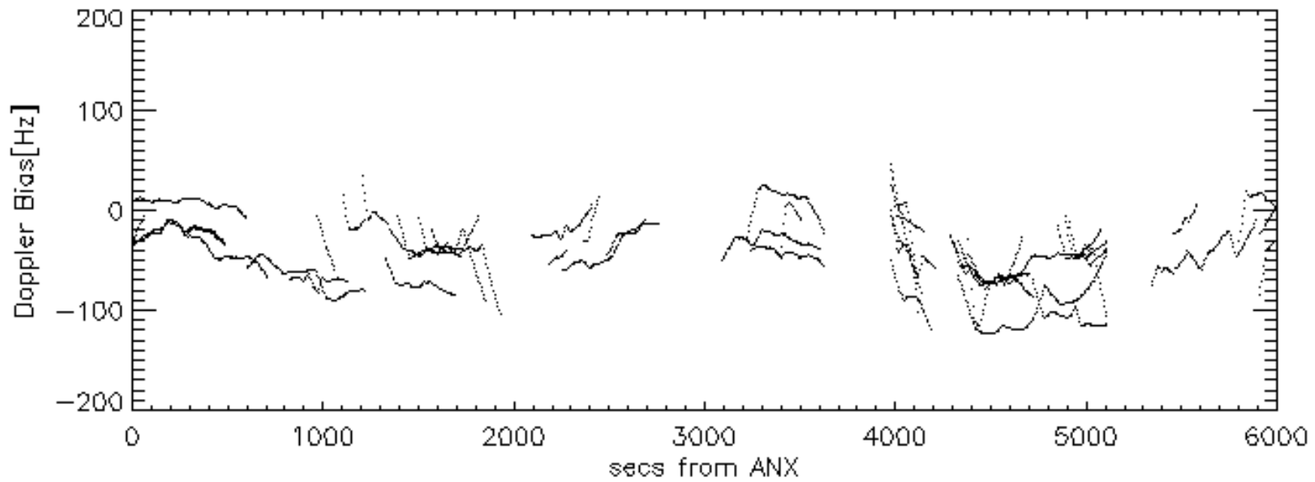

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

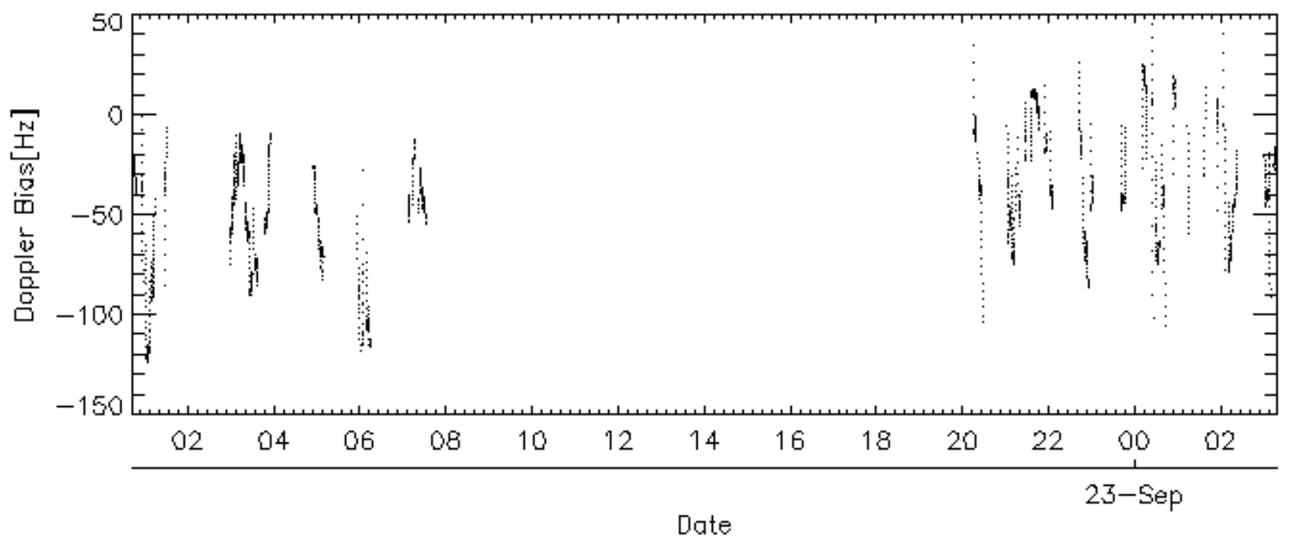

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

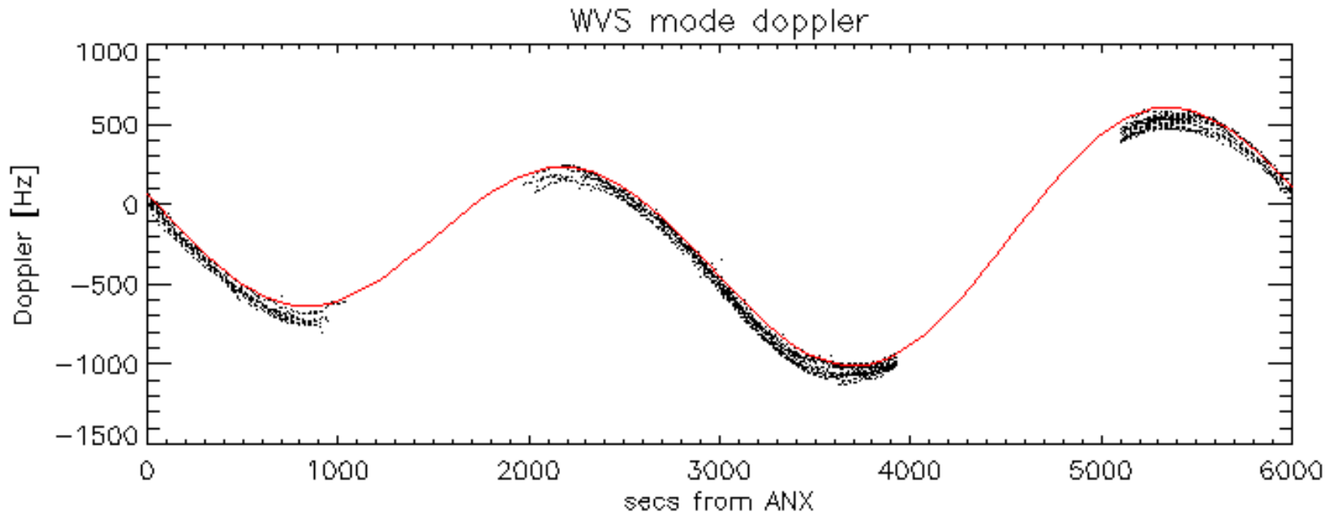

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

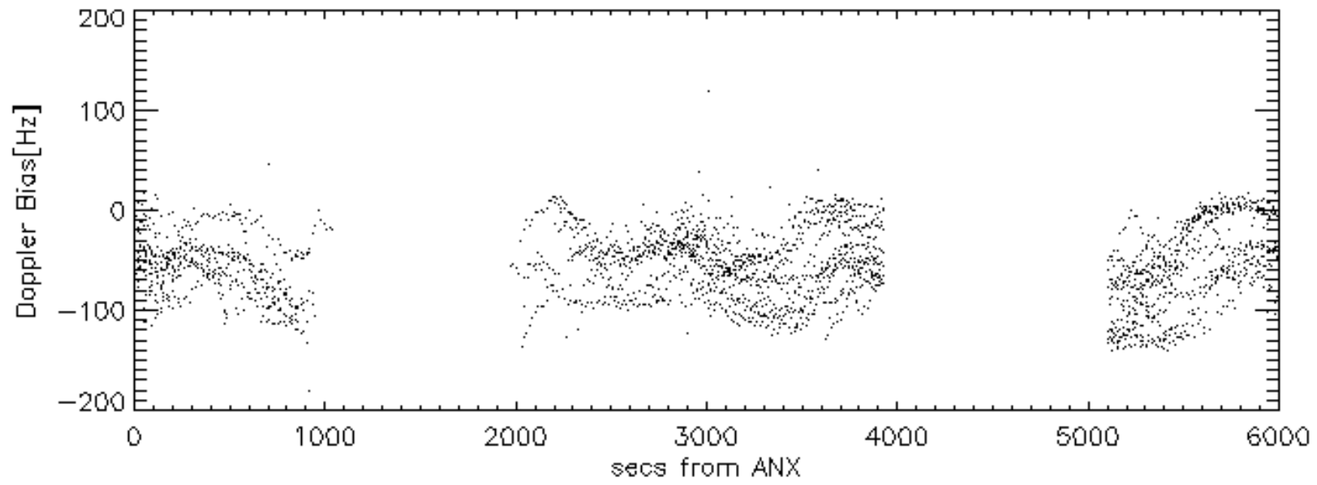

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

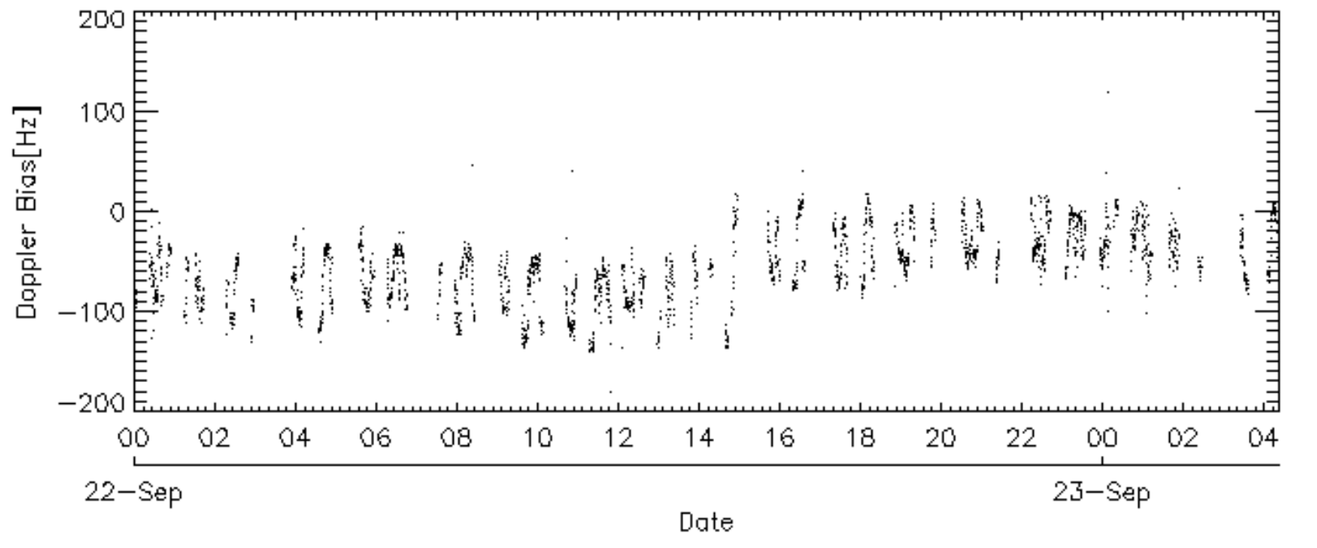

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

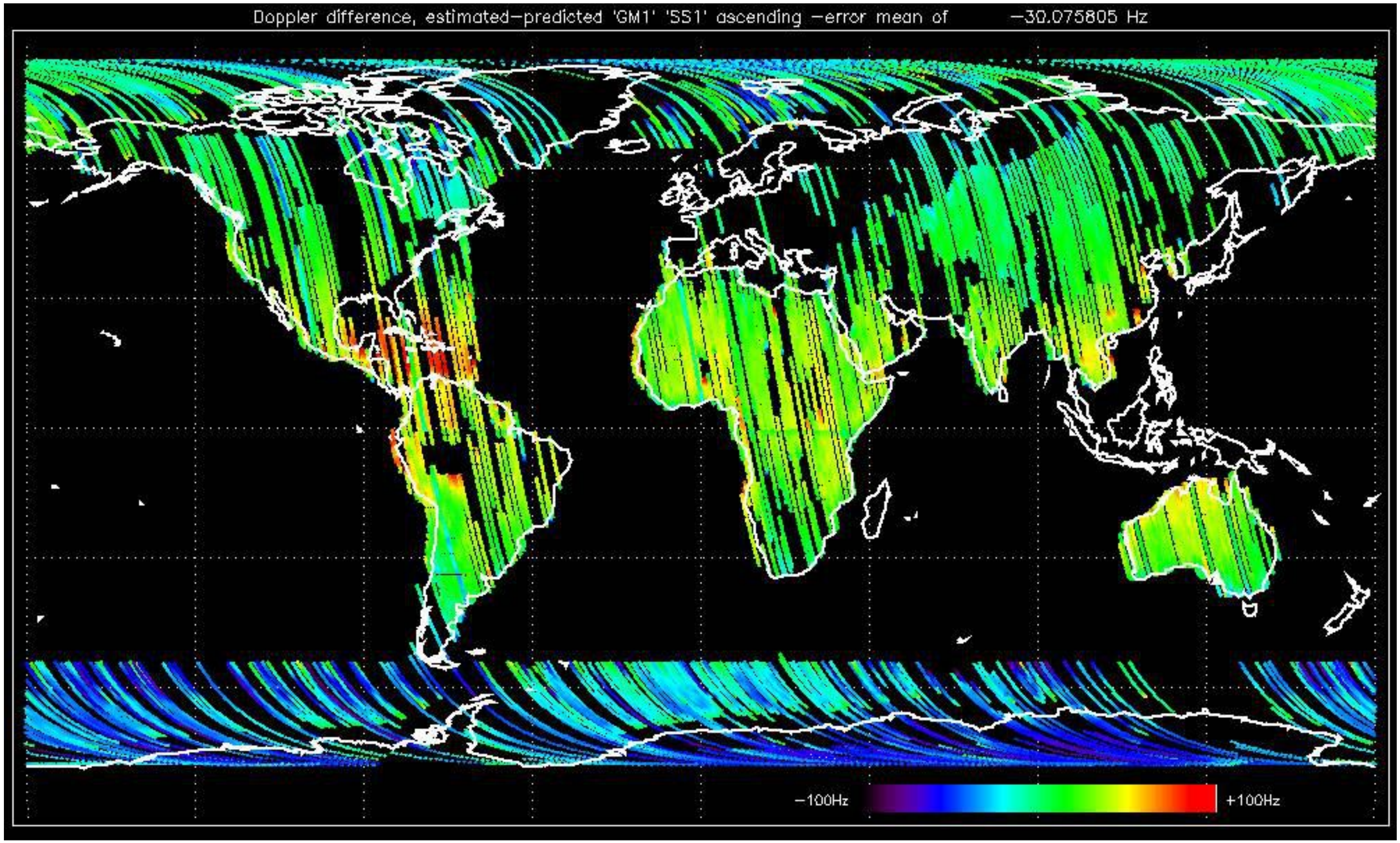

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

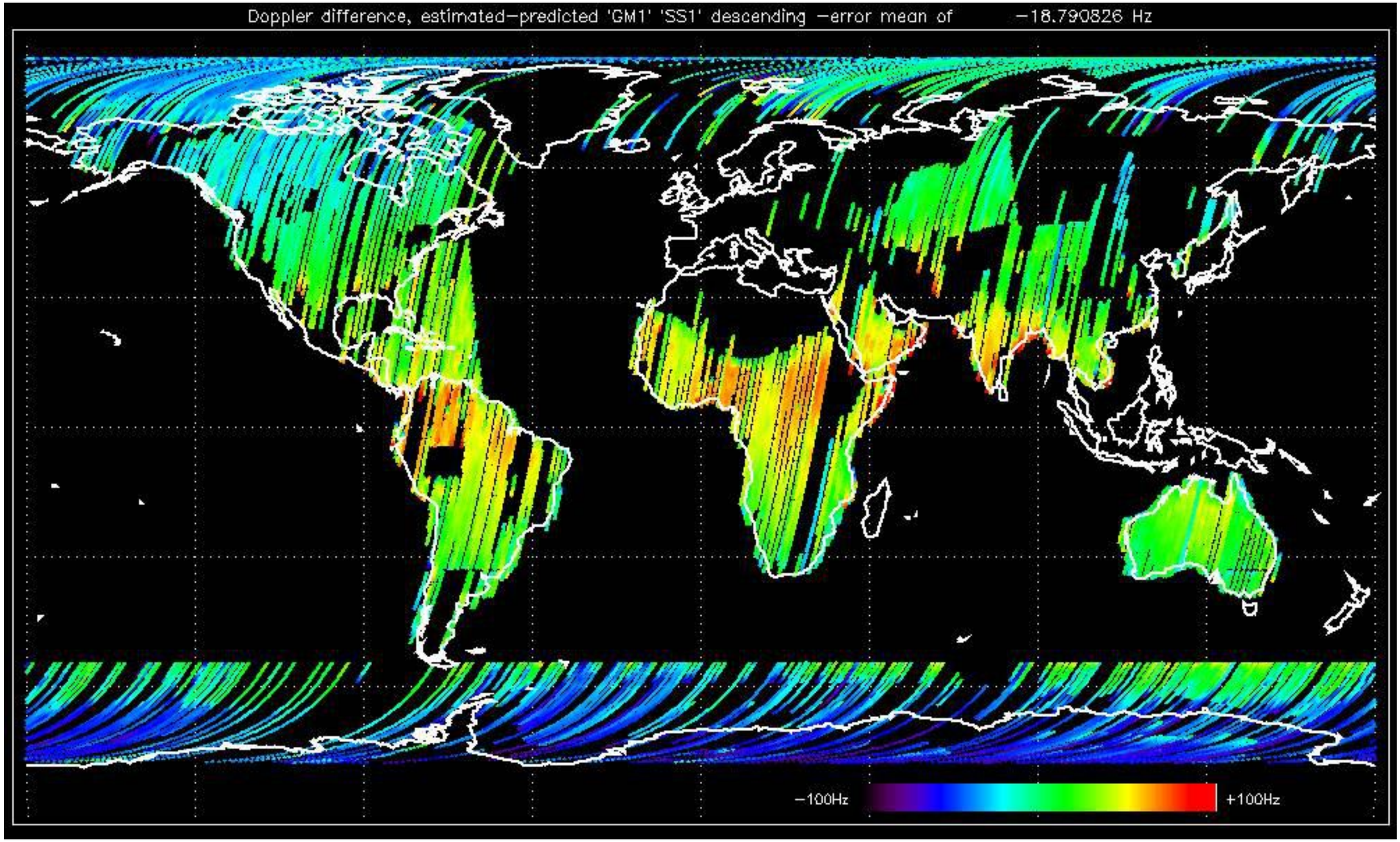

Doppler Bias[Hz]
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
23−Sep
Date

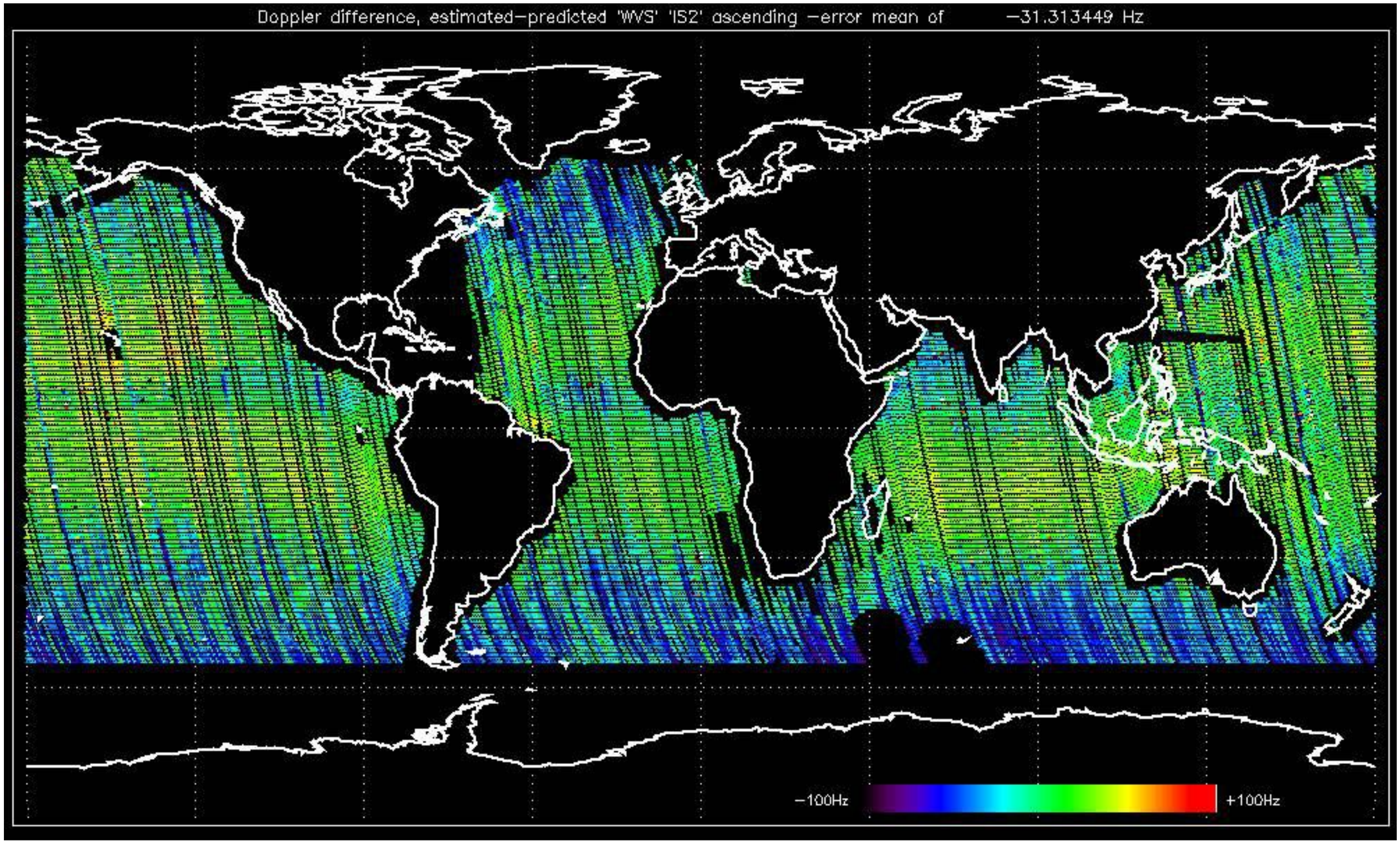

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

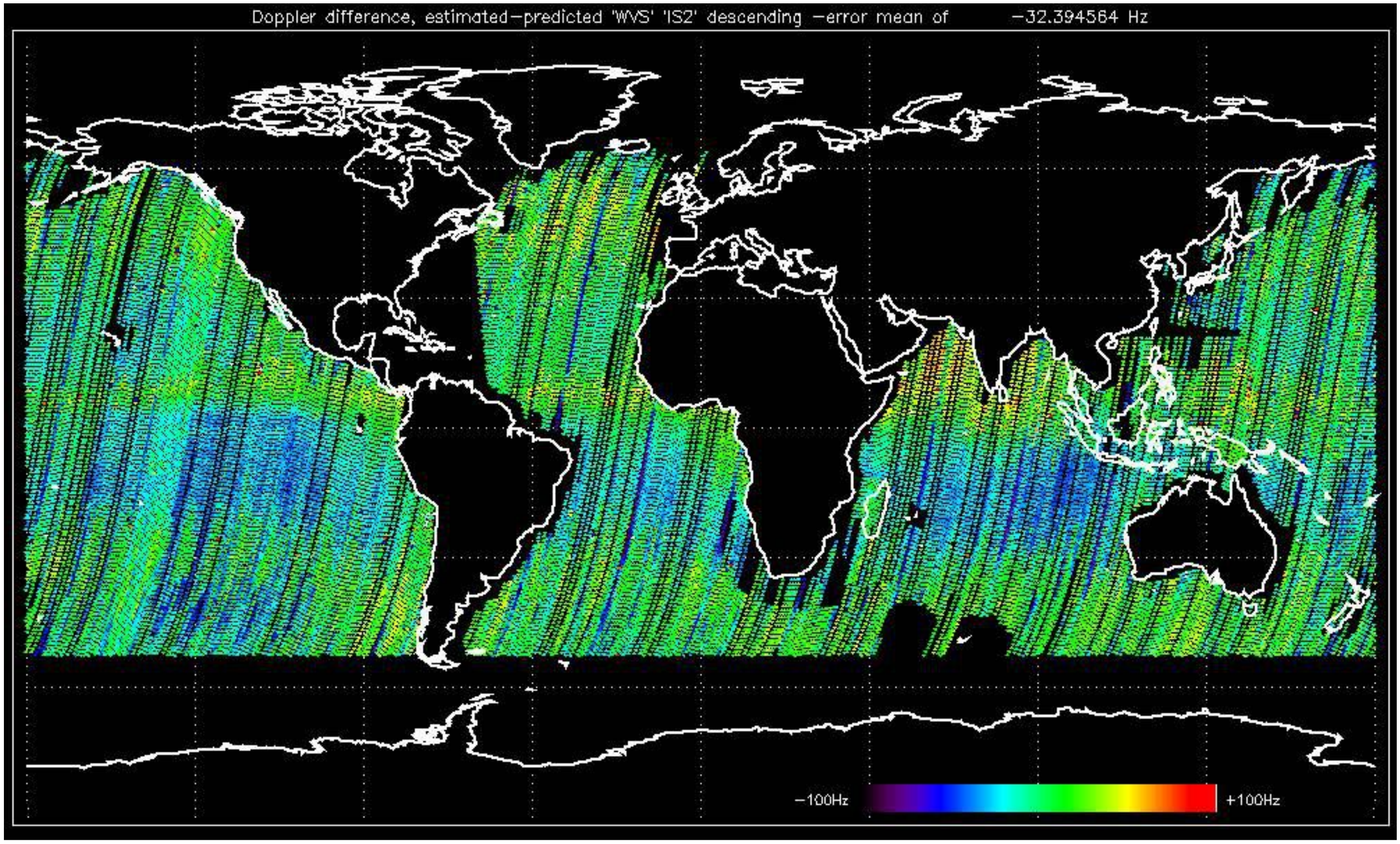

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −30.075805 Hz
−100Hz
+100Hz

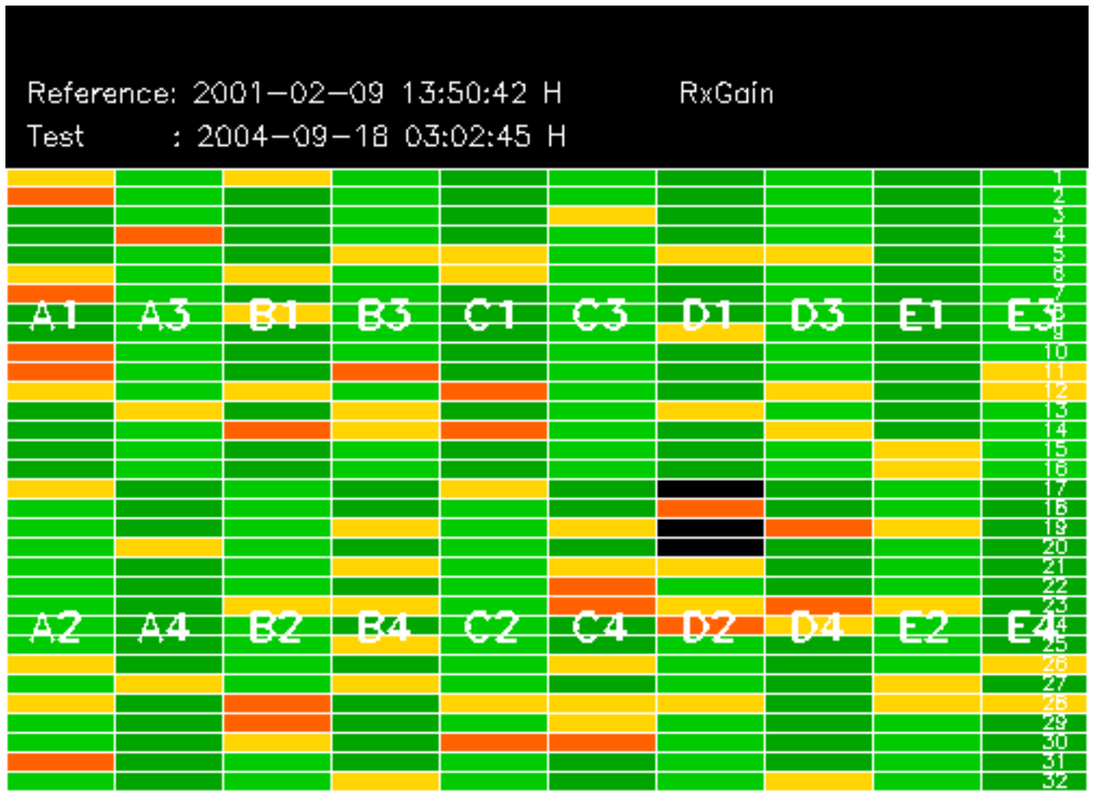

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −18.790826 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −31.313449 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −32.394564 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 : 2004-09-18 03:02:45 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
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16
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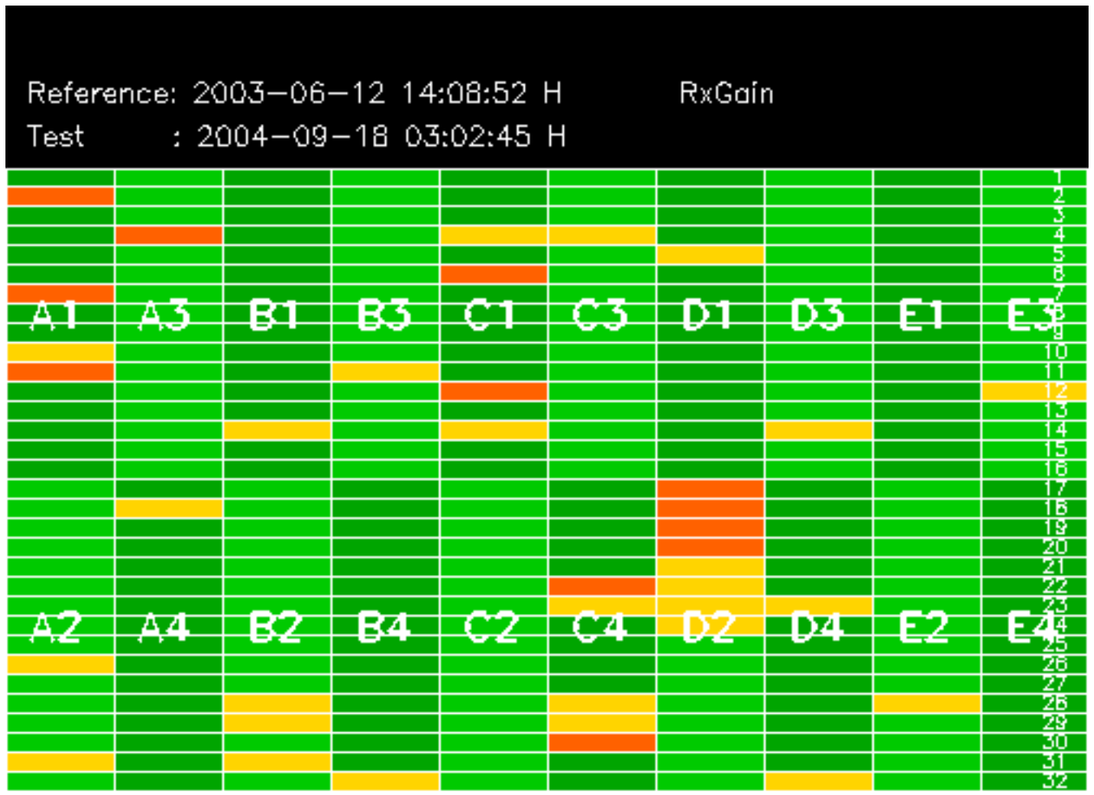
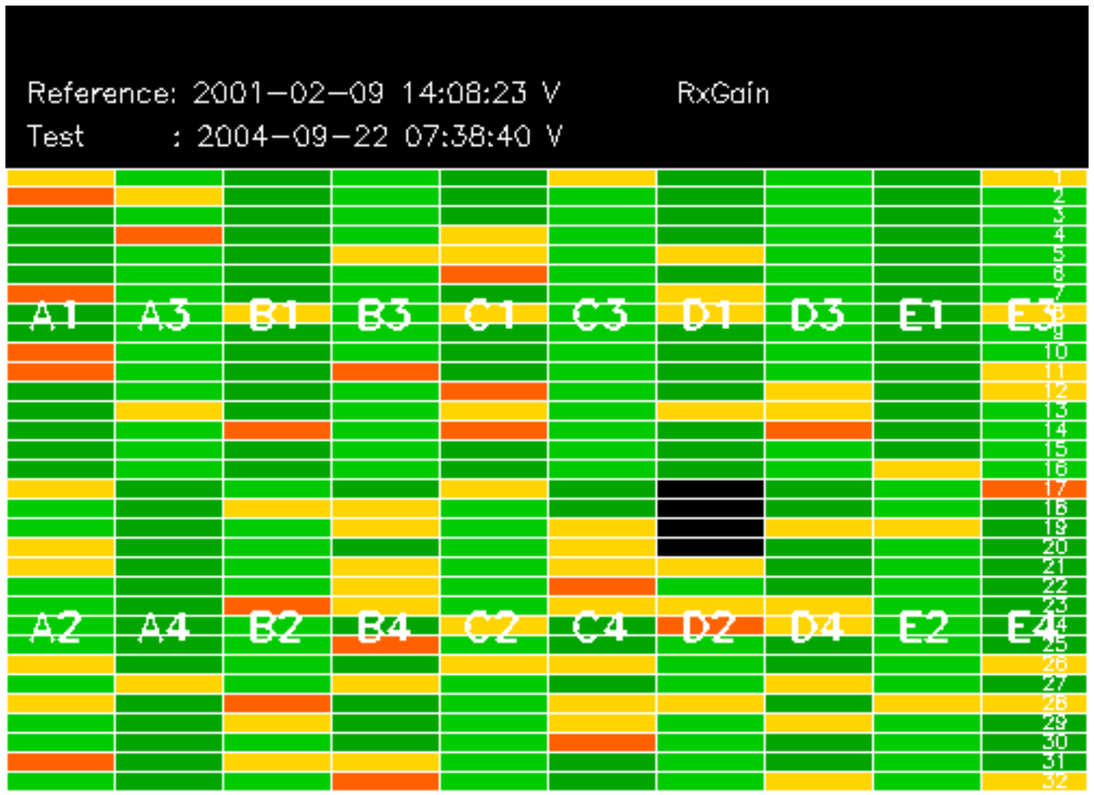
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-09-18 03:02:45 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 : 2004-09-22 07:38:40 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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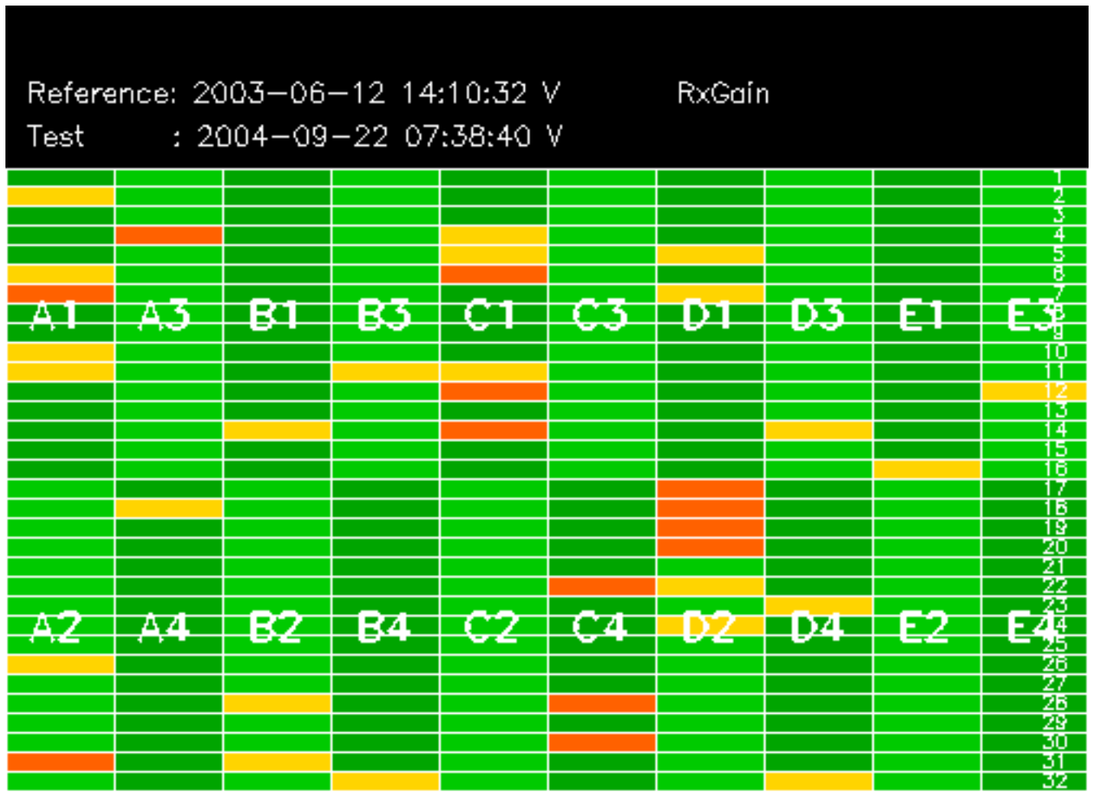
Reference: 2003-06-12 14:10:32 V
Test : 2004-09-22 07:38:40 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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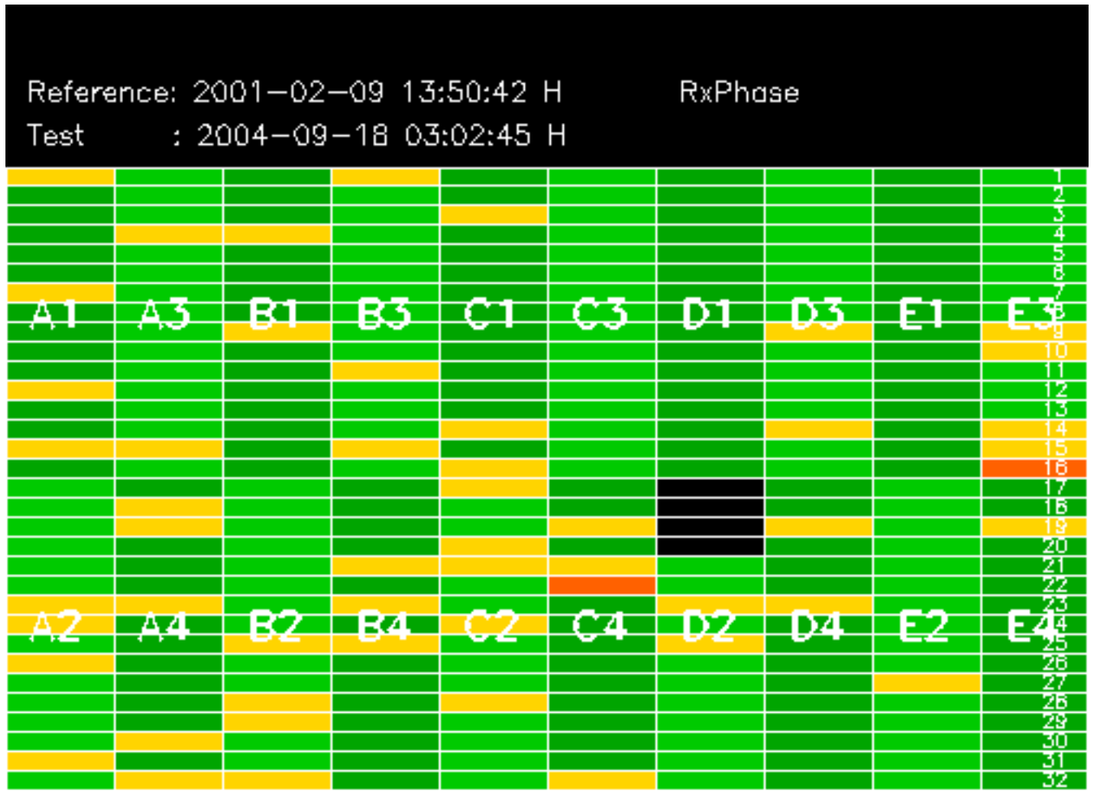
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-09-18 03:02:45 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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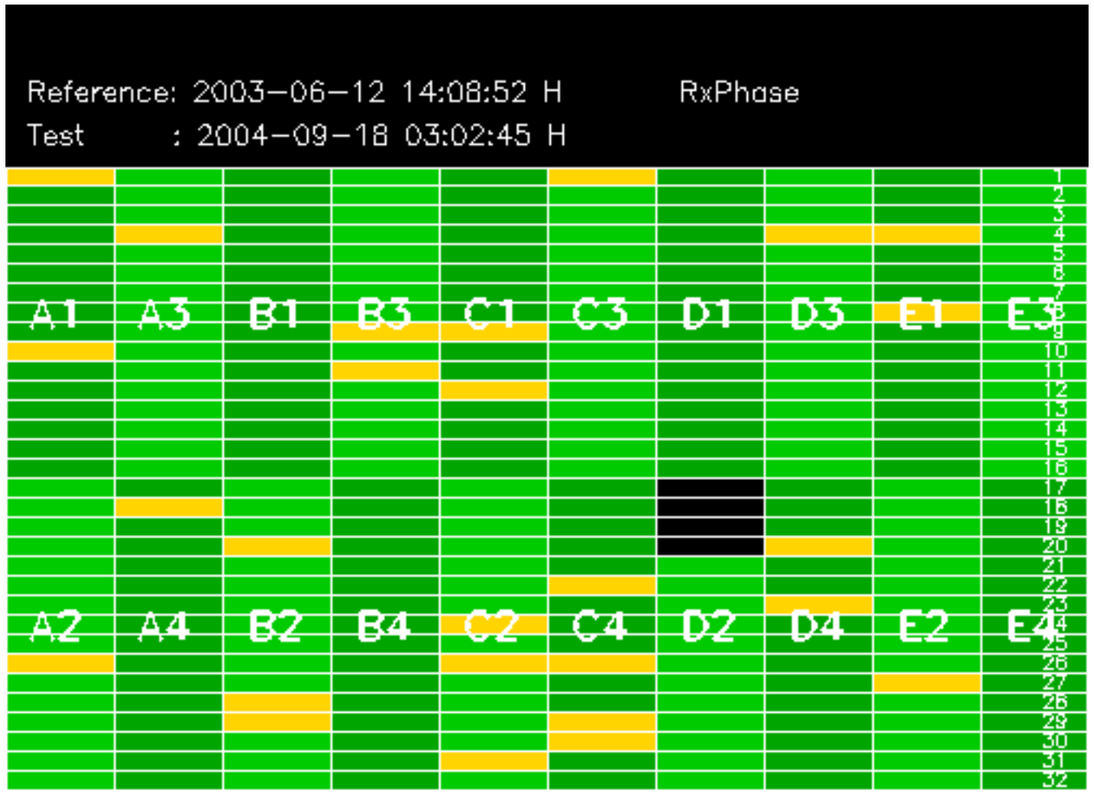
Reference: 2003-06-12 14:08:52 H
Test : 2004-09-18 03:02:45 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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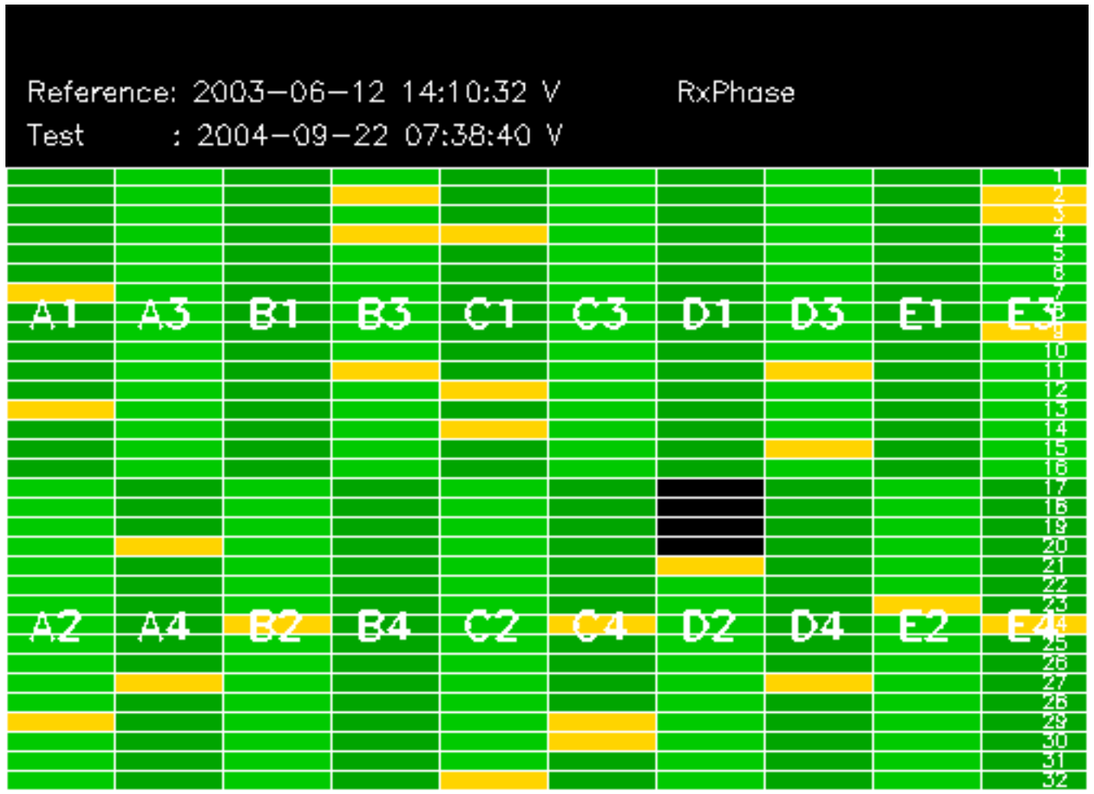
Reference: 2001-02-09 14:08:23 V
Test : 2004-09-22 07:38:40 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-22 07:38:40 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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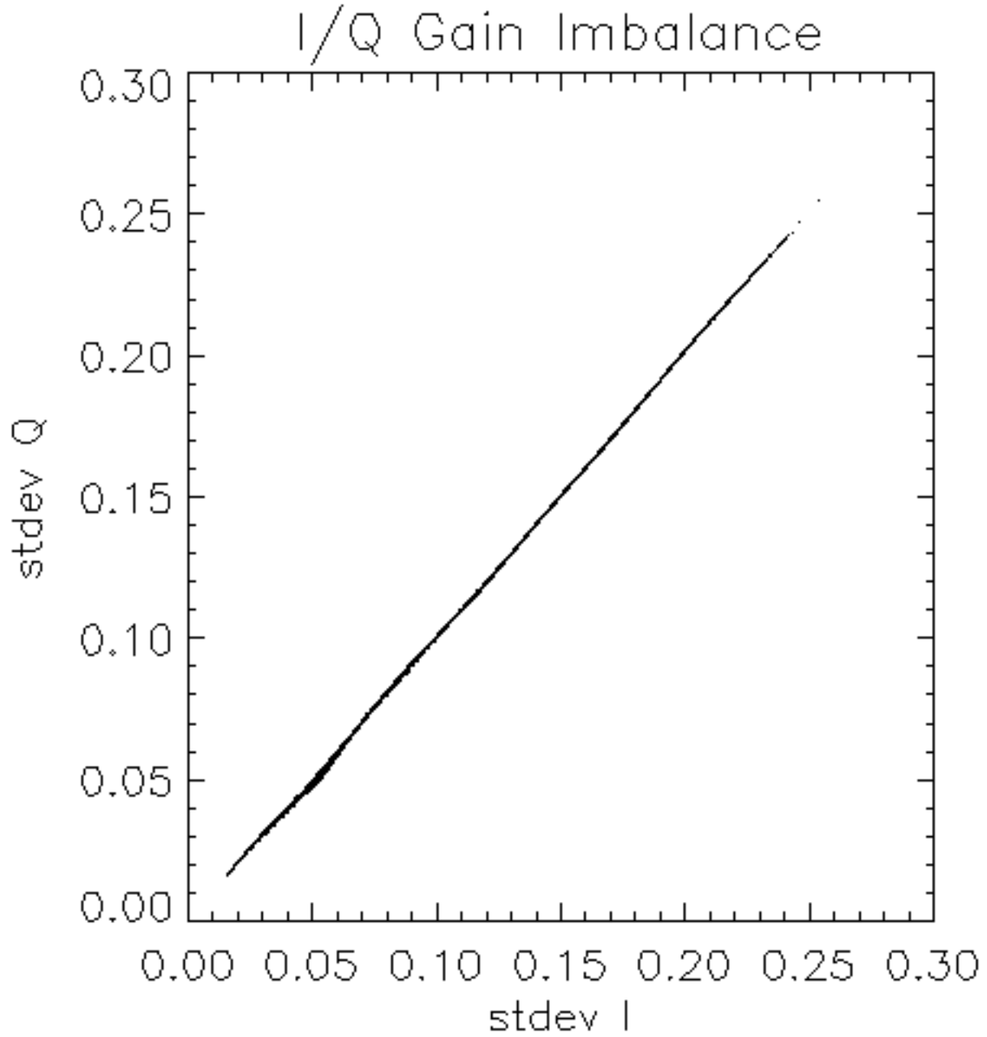
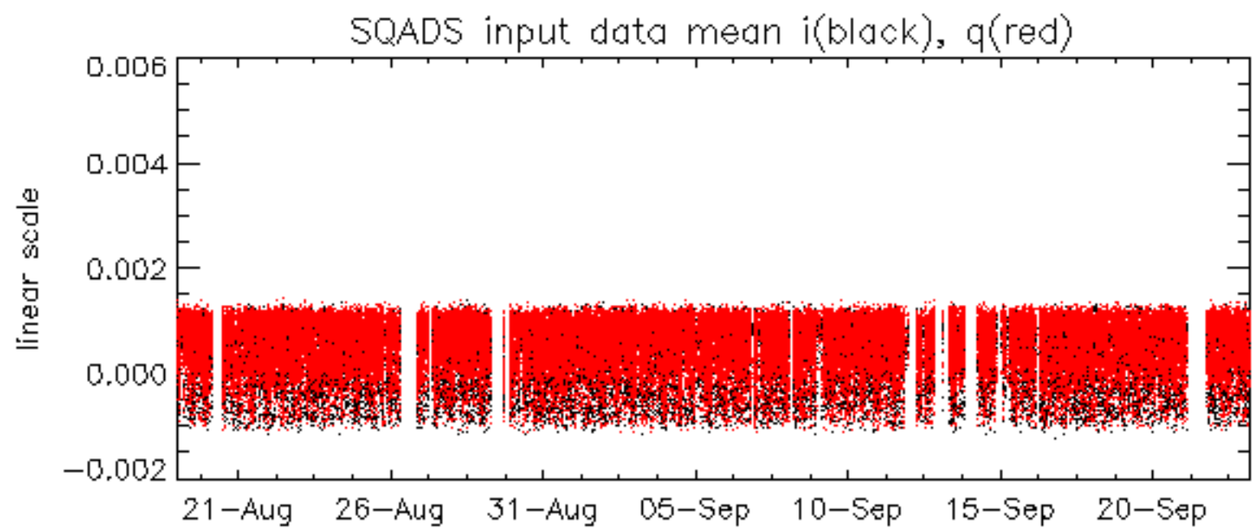
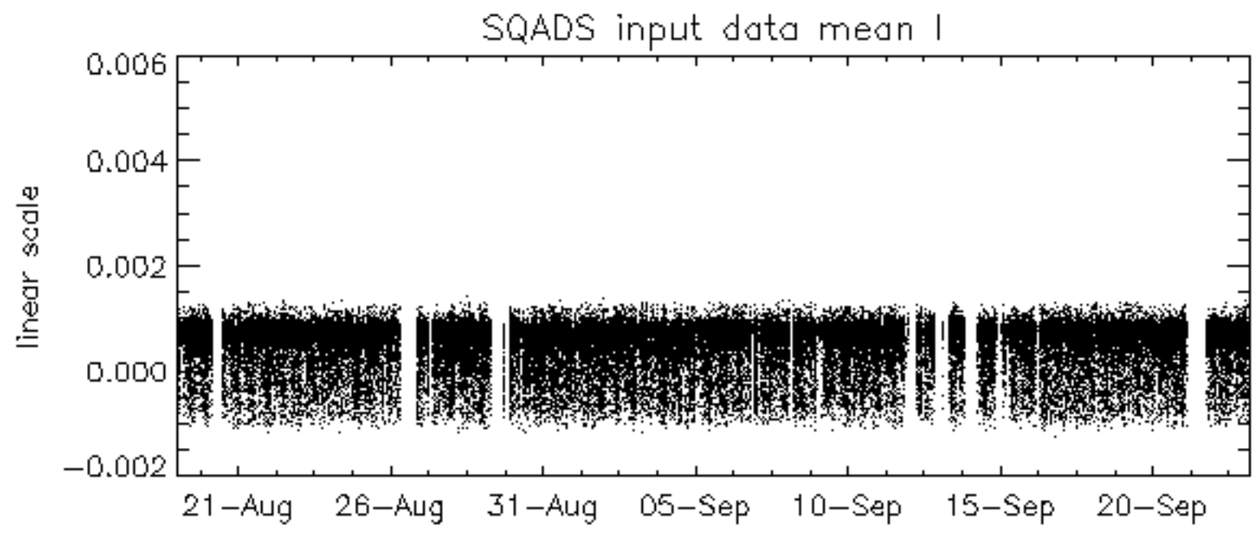
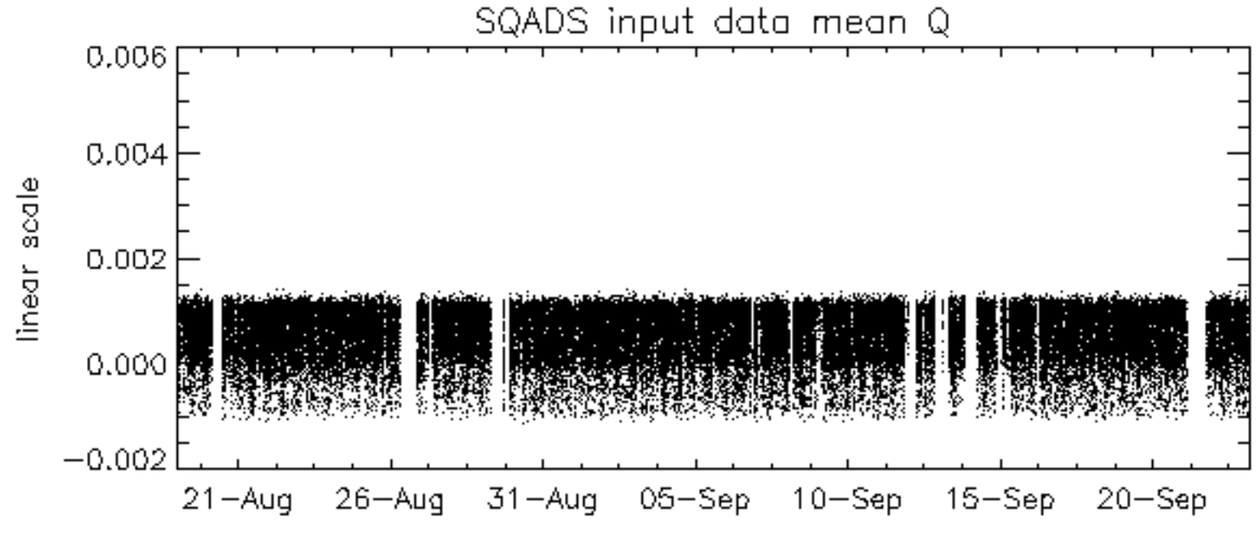
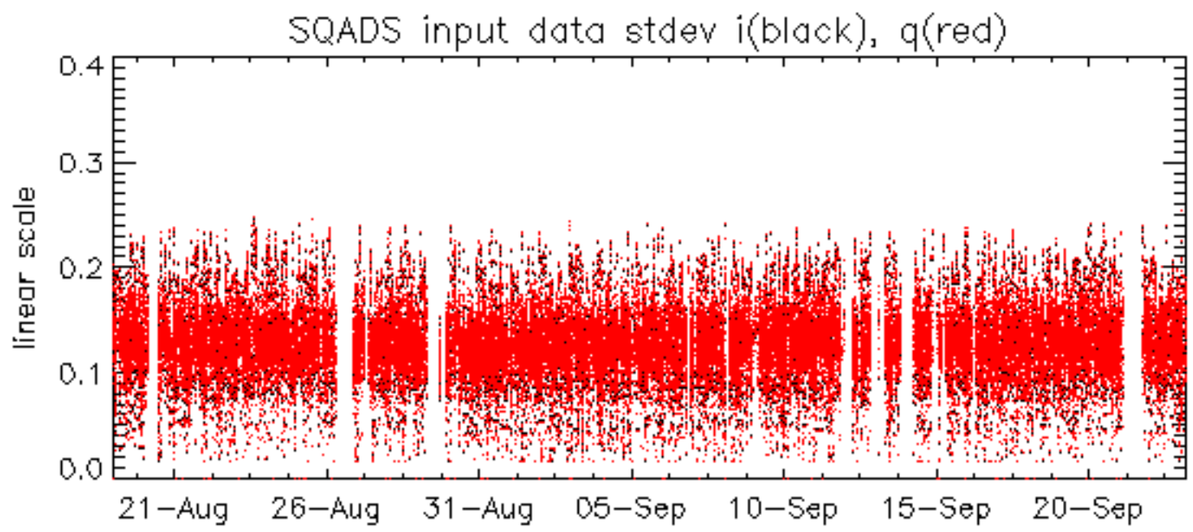
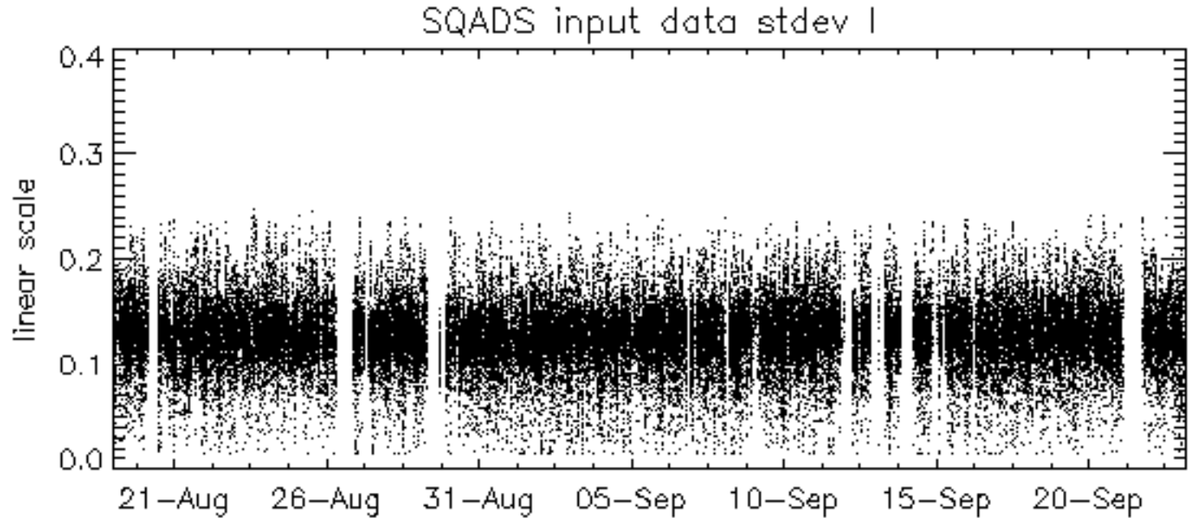

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

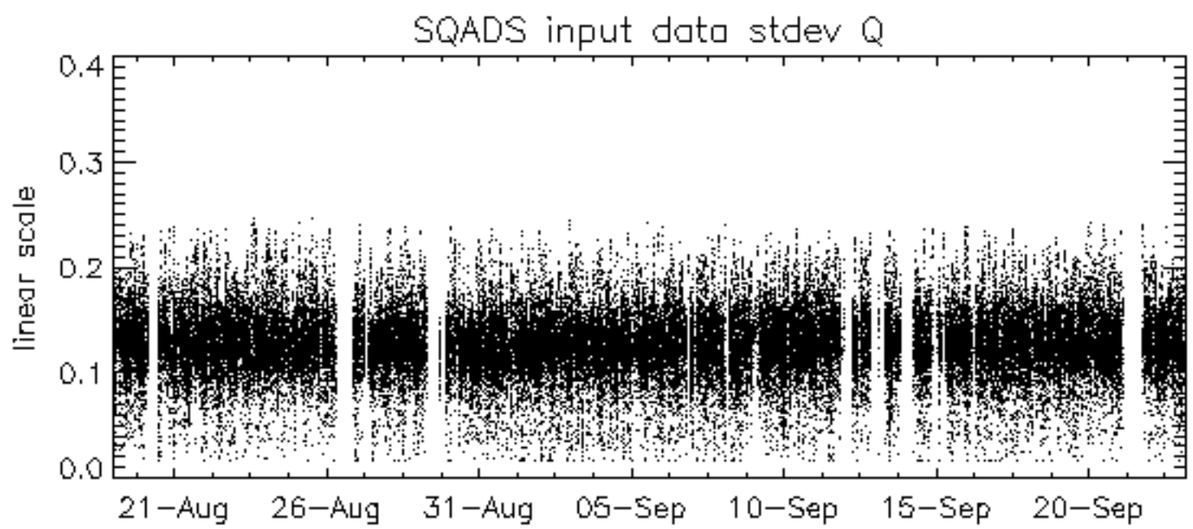

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep

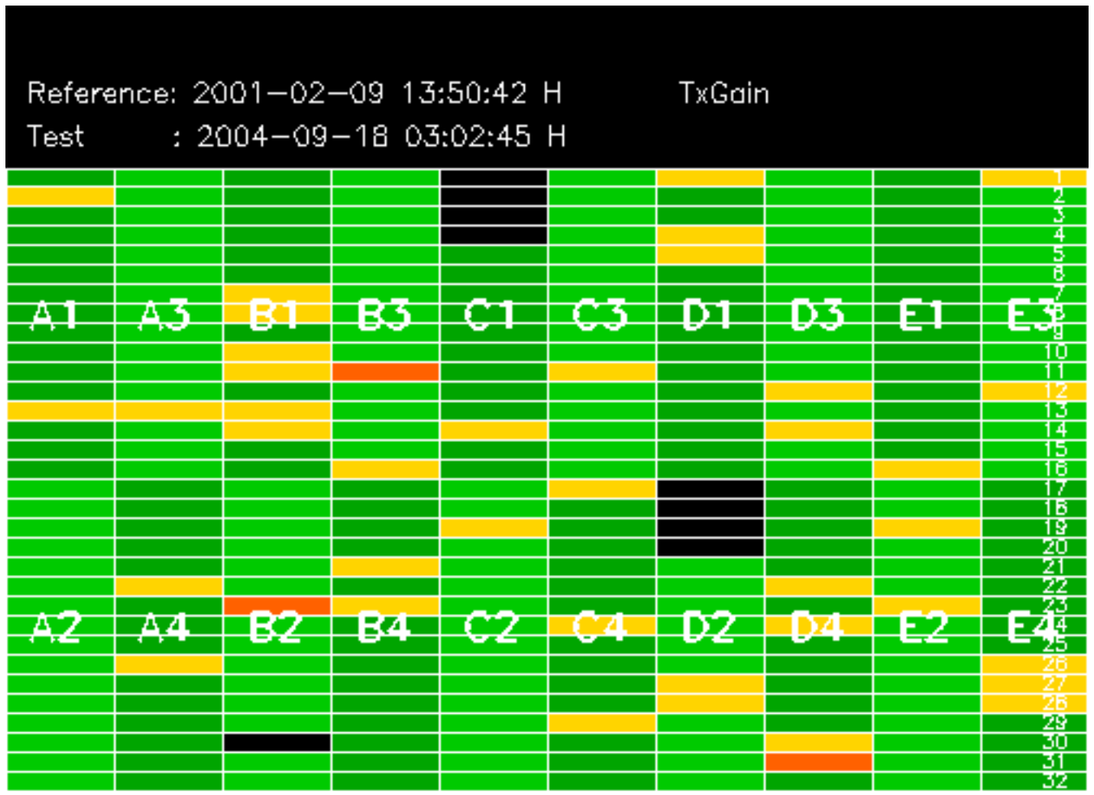

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep

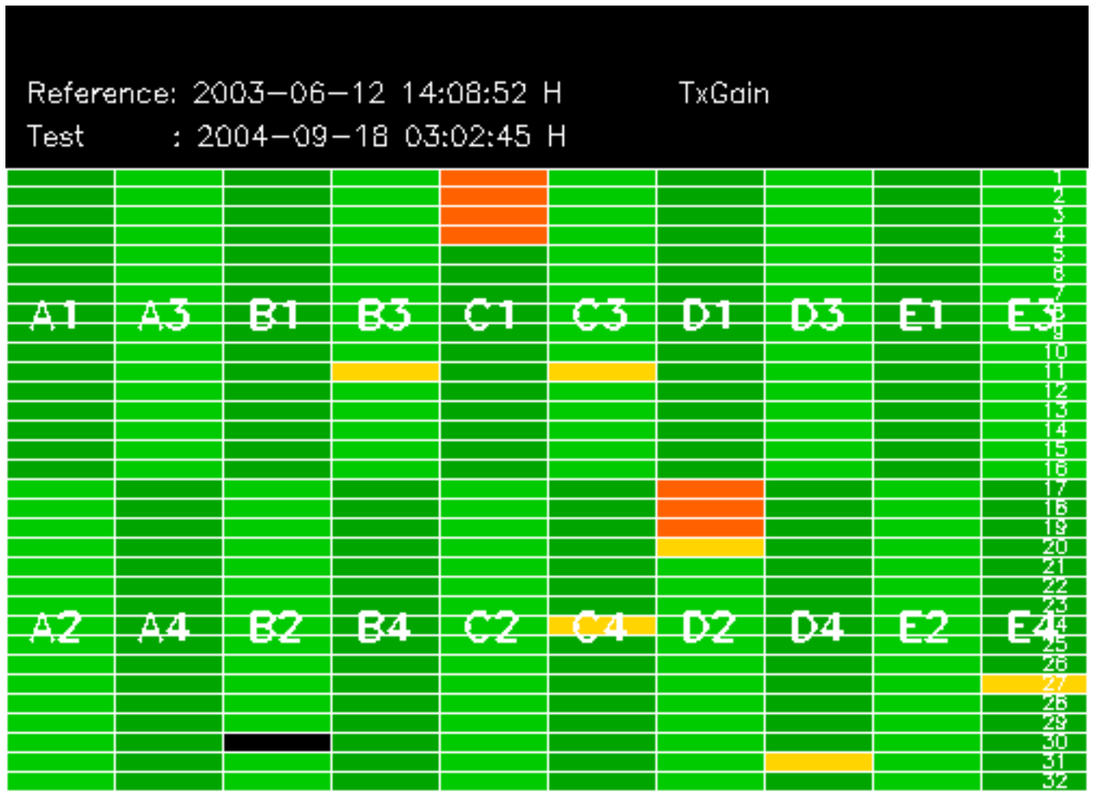

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Aug
26−Aug
31−Aug
05−Sep
10−Sep
15−Sep
20−Sep


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-18 03:02:45 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 : 2004-09-18 03:02:45 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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Reference: 2001-02-09 14:08:23 V
Test : 2004-09-22 07:38:40 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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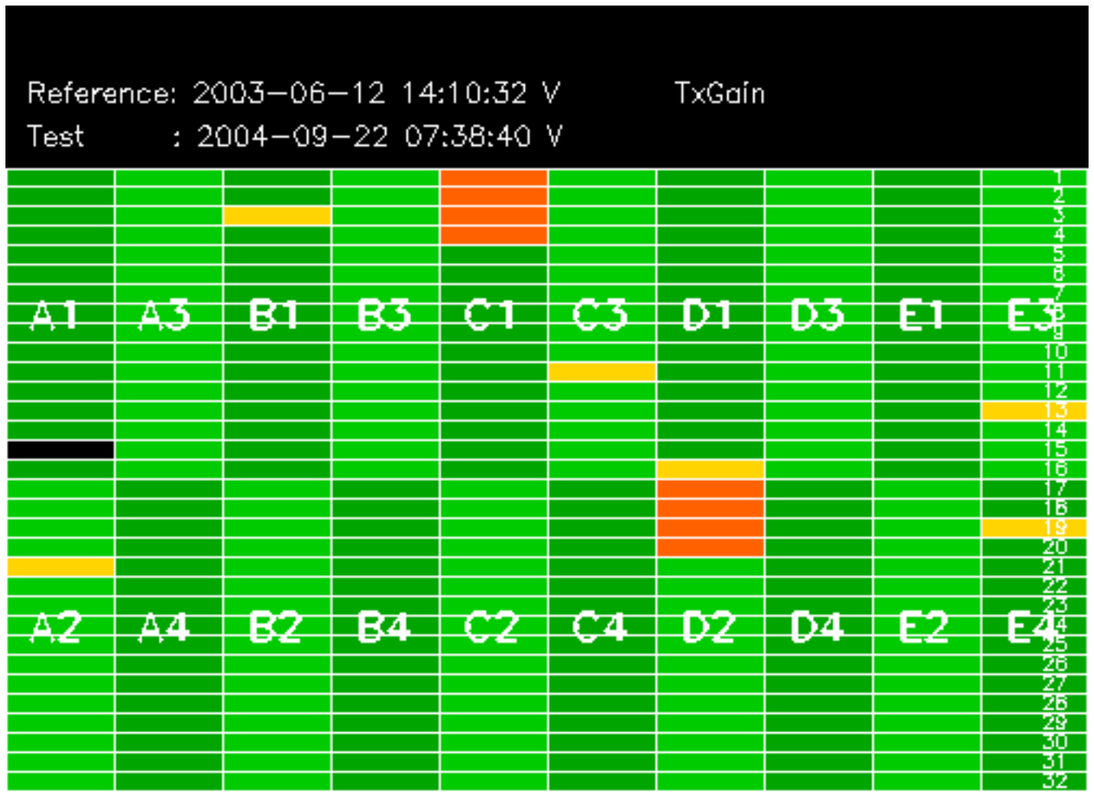
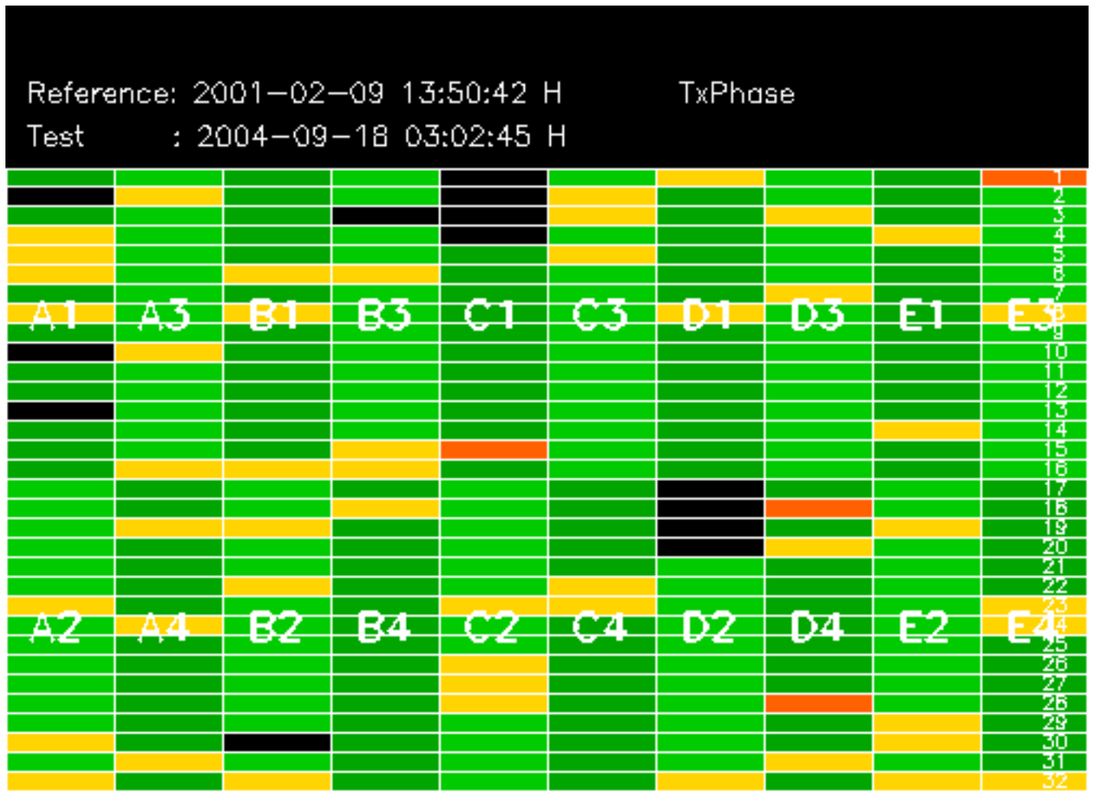
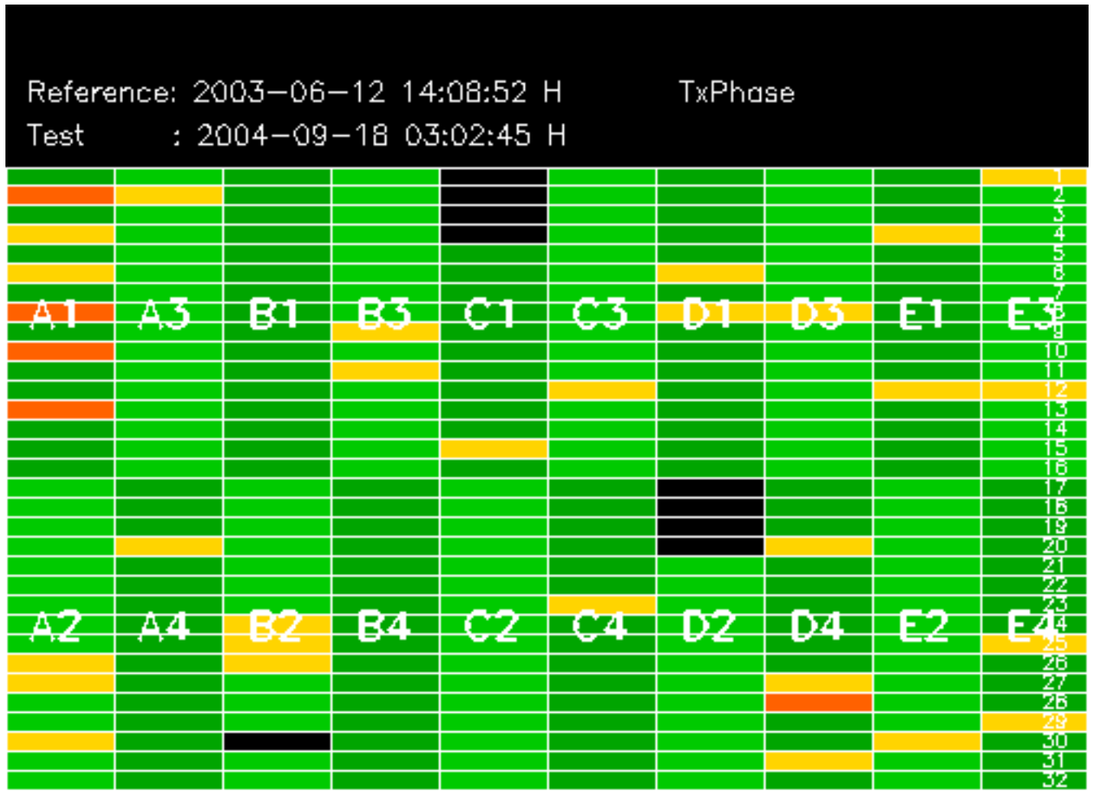

Reference: 2003-06-12 14:10:32 V
Test : 2004-09-22 07:38:40 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
Test : 2004-09-18 03:02:45 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 : 2004-09-18 03:02:45 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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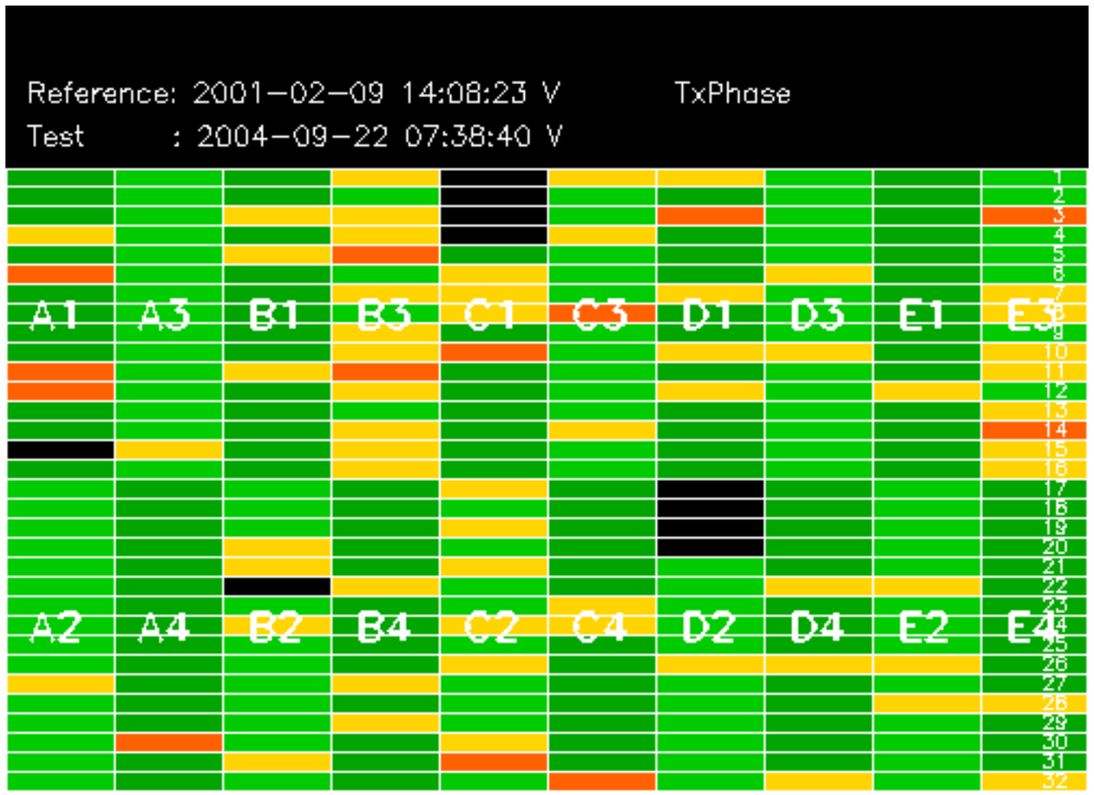
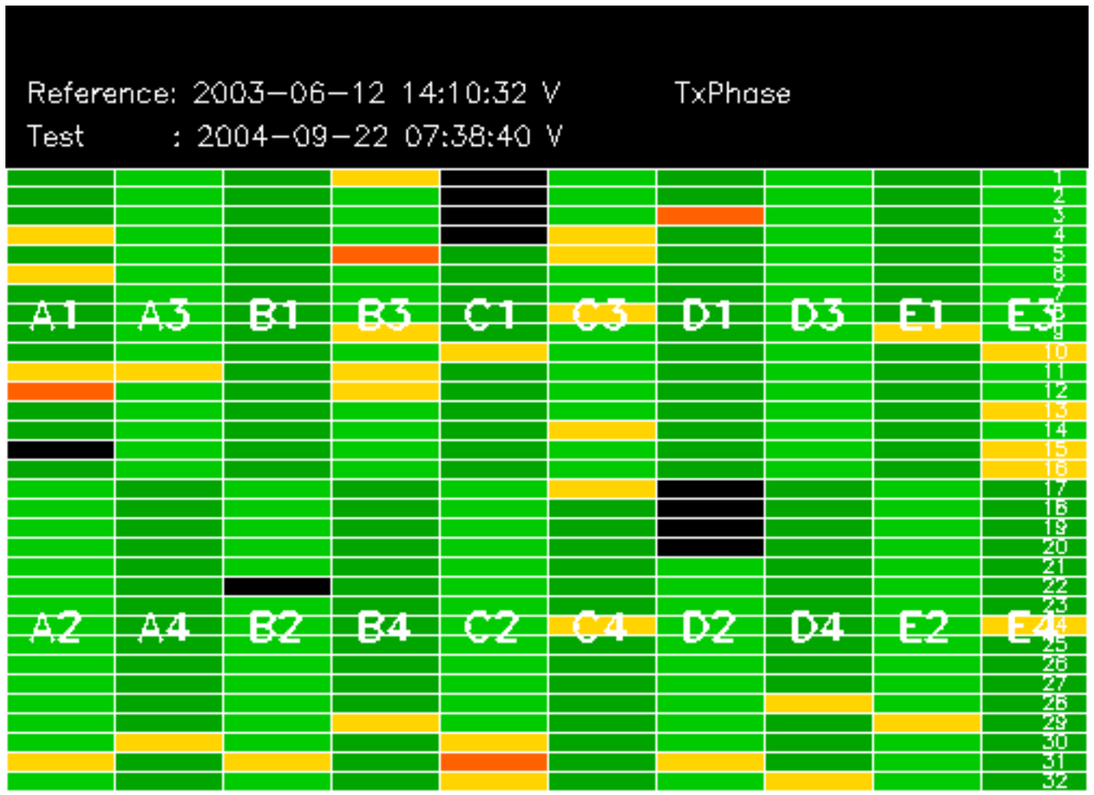

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-09-22 07:38:40 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-09-22 07:38:40 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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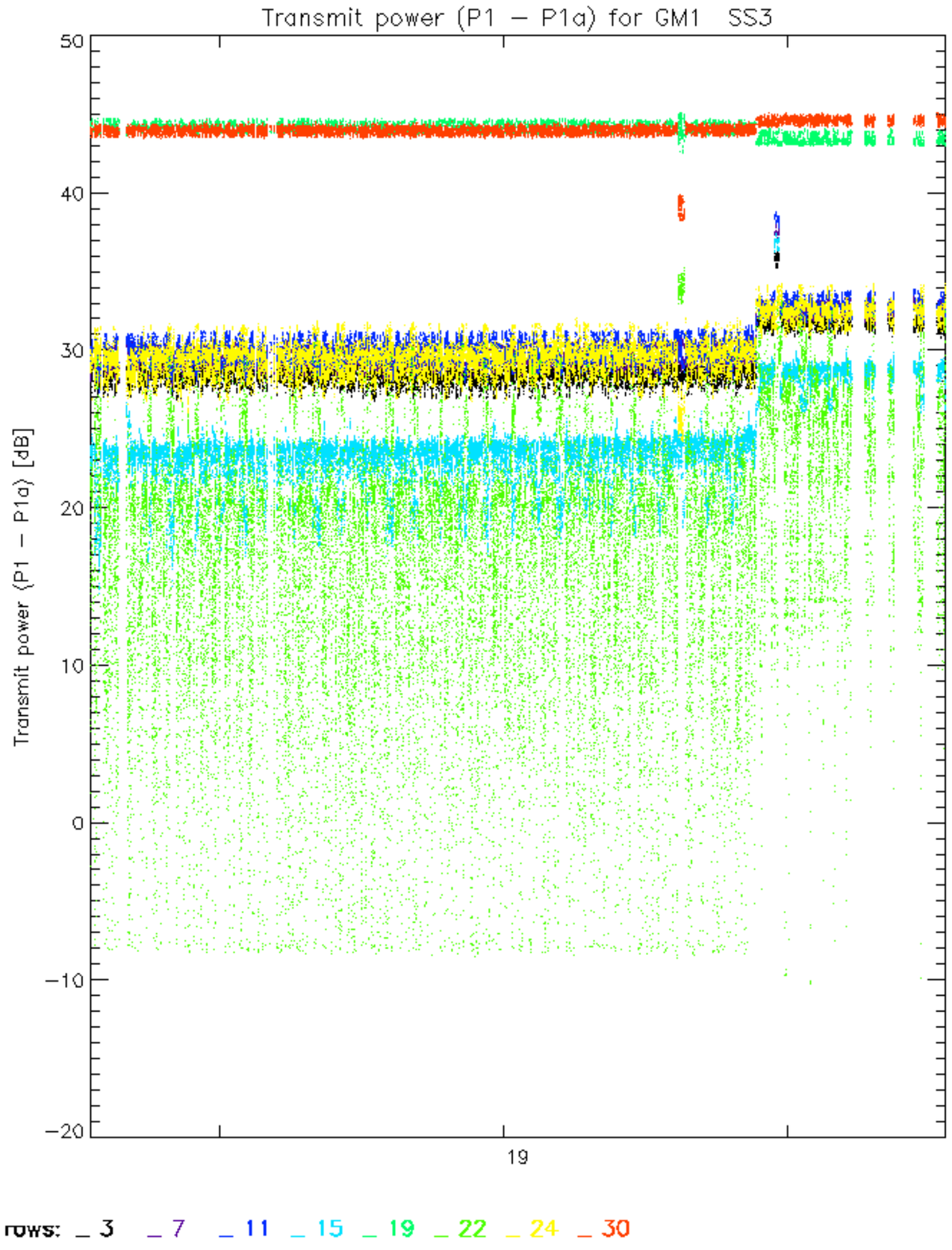
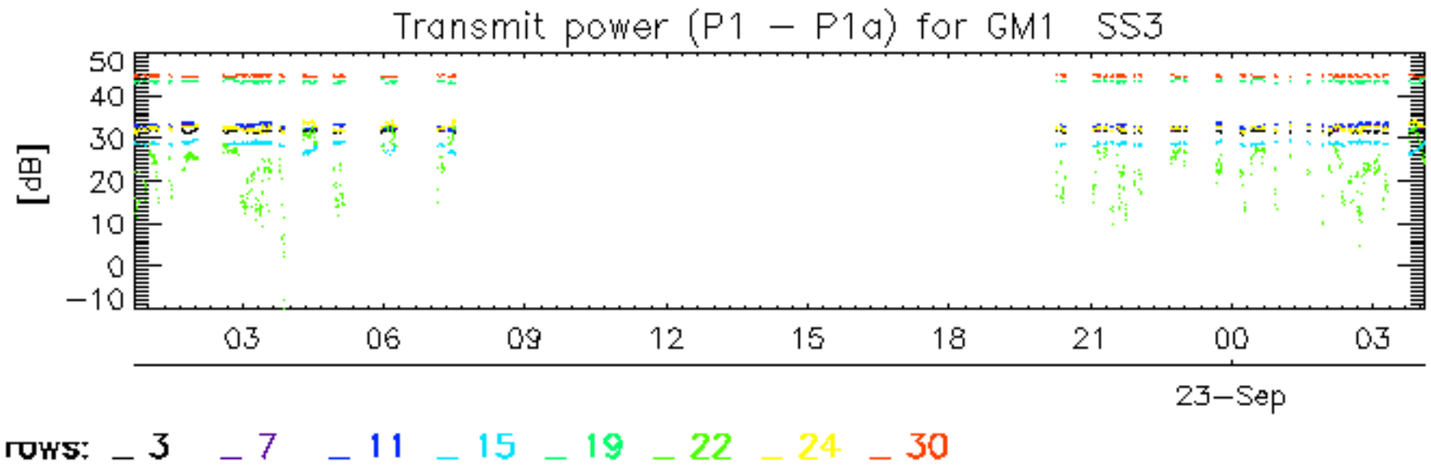
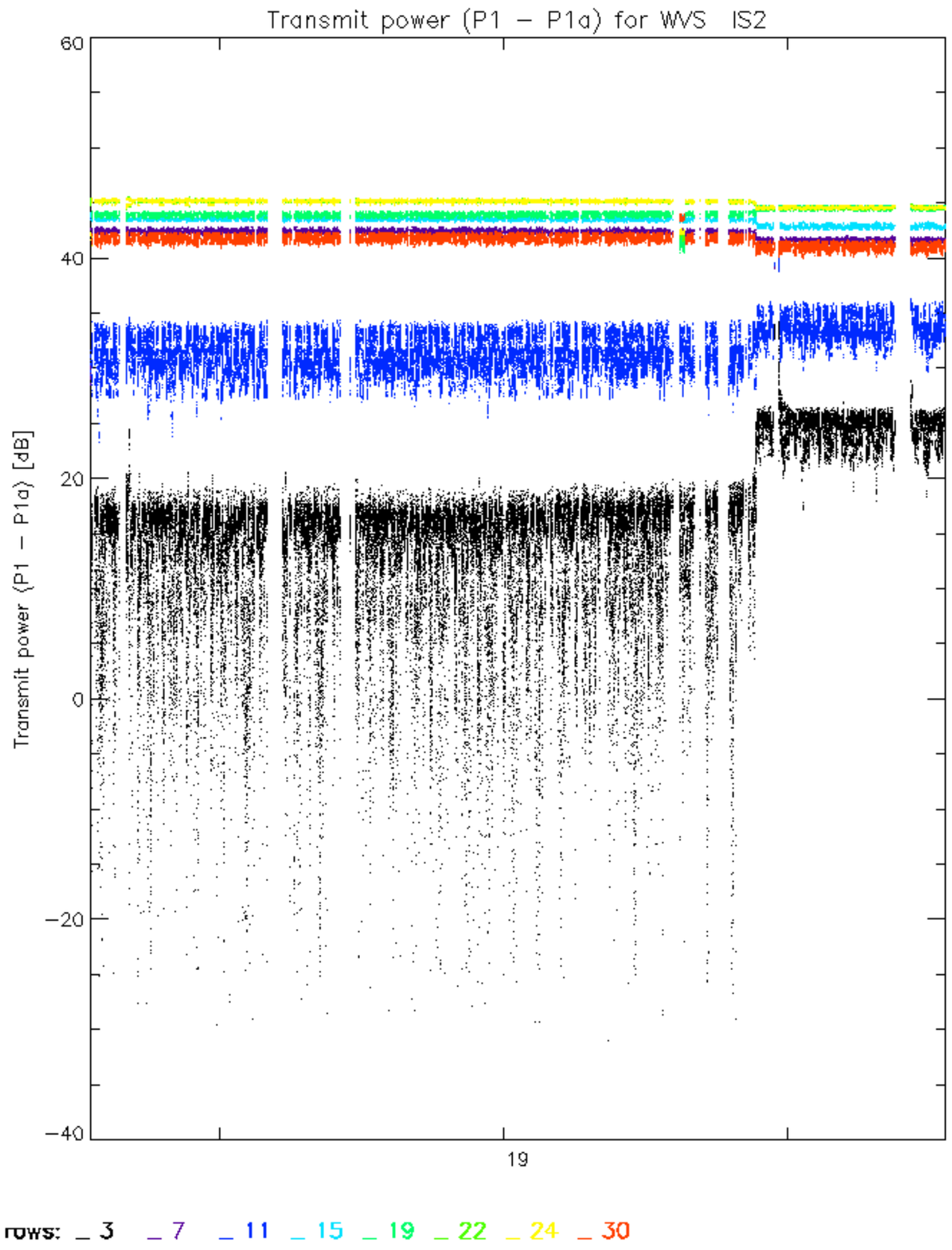
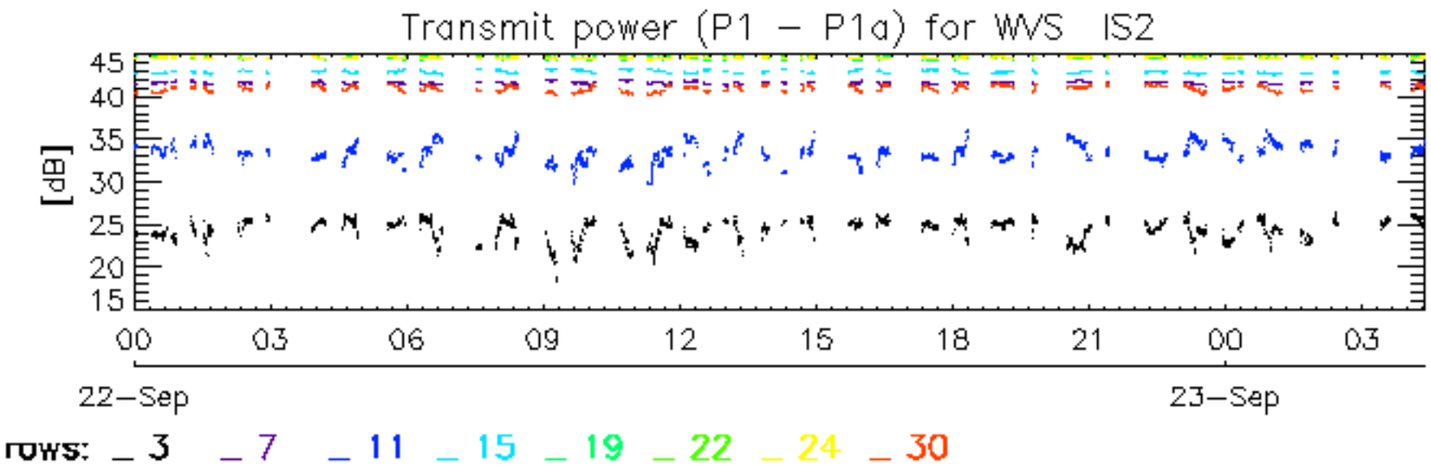

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
19
rows: 3 7 11 15 19 22 24 30


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


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

No unavailabilities during the reported period.