PRELIMINARY REPORT OF 040901

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

last update on Wed Sep 1 13:09:06 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	20040830 180519
H	20040831 173342

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.

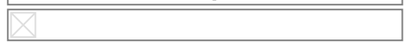
4.1 - Daily statistics

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	-3.469141	0.052043	0.089643
7	P1	-3.313494	0.056910	0.073409
11	P1	-4.654951	0.112843	0.075767
15	P1	-5.757538	0.120146	0.054875
19	P1	-3.466223	0.006079	-0.019033
22	P1	-4.541896	0.011000	0.037747
24	P1	-4.966047	0.020997	0.019551
30	P1	-6.944361	0.022158	-0.068796

3	P1	-15.913801	1.596143	0.420522
7	P1	-14.039002	0.172322	-0.035896
11	P1	-20.154320	0.421170	-0.302471
15	P1	-11.790537	0.167347	-0.002298
19	P1	-13.895676	0.040495	-0.047210
22	P1	-16.190165	0.335691	0.178893
24	P1	-14.540908	0.310477	0.159860
30	P1	-17.809772	0.451063	-0.290480

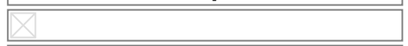
P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.302370	0.082800	0.007463
7	P2	-22.618353	0.137484	0.060546
11	P2	-15.324987	0.174926	0.139755
15	P2	-7.064863	0.097399	0.054735
19	P2	-9.562062	0.199490	0.078215
22	P2	-17.351437	0.120413	0.108382
24	P2	-20.745693	0.089235	-0.013351
30	P2	-19.257454	0.082596	0.137047

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.141371	0.002698	-0.003149
7	P3	-8.141385	0.002699	-0.003056
11	P3	-8.141378	0.002698	-0.003075
15	P3	-8.141371	0.002698	-0.003117
19	P3	-8.141381	0.002699	-0.003052
22	P3	-8.141377	0.002698	-0.003095
24	P3	-8.141367	0.002697	-0.003142
30	P3	-8.141386	0.002693	-0.004219

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	-2.699852	0.260796	0.137978
7	P1	-2.957686	0.214219	0.136810
11	P1	-3.888702	0.162515	0.053858
15	P1	-3.539311	0.131871	0.062549
19	P1	-3.482213	0.013910	-0.011897
22	P1	-5.692478	0.040137	-0.072821
24	P1	-3.902815	0.015486	-0.098715
30	P1	-6.171710	0.062742	-0.028965
3	P1	-10.382504	1.038226	0.106817
7	P1	-10.066113	0.169281	0.049844
11	P1	-12.137203	0.116171	-0.137620
15	P1	-11.648727	0.104048	-0.100903
19	P1	-15.623556	0.049498	0.009804
22	P1	-23.375654	1.139446	-0.089243
24	P1	-17.883644	0.231592	-0.273895
30	P1	-20.434097	1.210338	-0.117632

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.978168	0.058939	-0.019547
7	P2	-22.755753	0.049582	0.046938
11	P2	-10.989171	0.069284	0.104540
15	P2	-4.948482	0.037582	-0.015233
19	P2	-6.757571	0.054550	-0.006781
22	P2	-7.444064	0.046765	0.017161
24	P2	-11.039267	0.052679	-0.028363
30	P2	-22.198818	0.038462	0.081372

P3 Cyclic statistics

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

3	P3	-7.989962	0.003746	-0.018013
7	P3	-7.989959	0.003752	-0.018305
11	P3	-7.990049	0.003738	-0.018018
15	P3	-7.989957	0.003741	-0.018169
19	P3	-7.989978	0.003749	-0.018114
22	P3	-7.989919	0.003745	-0.017841
24	P3	-7.989985	0.003760	-0.018152
30	P3	-7.989946	0.003742	-0.017859

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	0.000486616
	stdev	2.14396e-07
MEAN Q	mean	0.000546427
	stdev	2.35874e-07

☒

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128914
	stdev	0.000974424

STDEV Q	mean	0.129142
	stdev	0.000985767

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

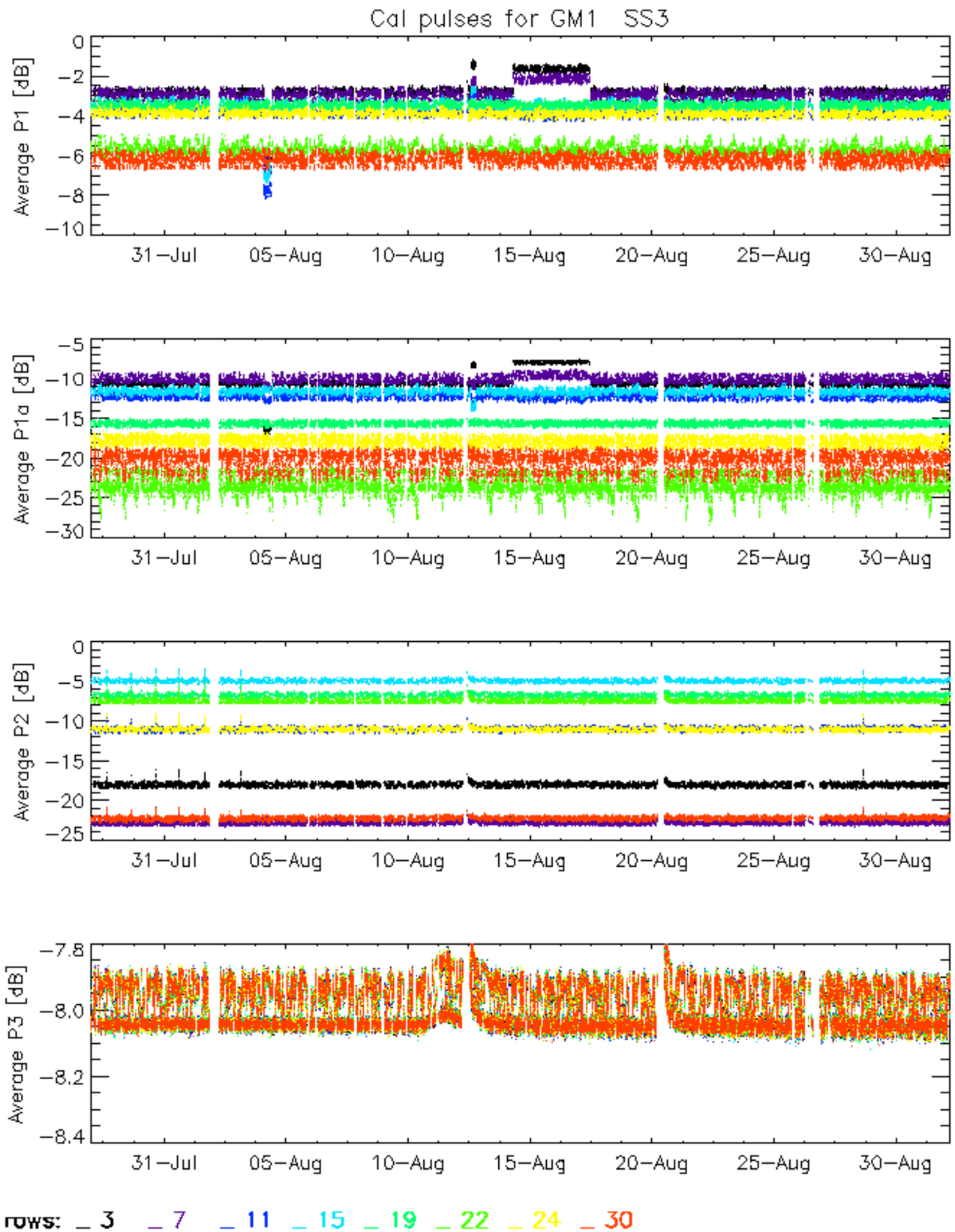
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

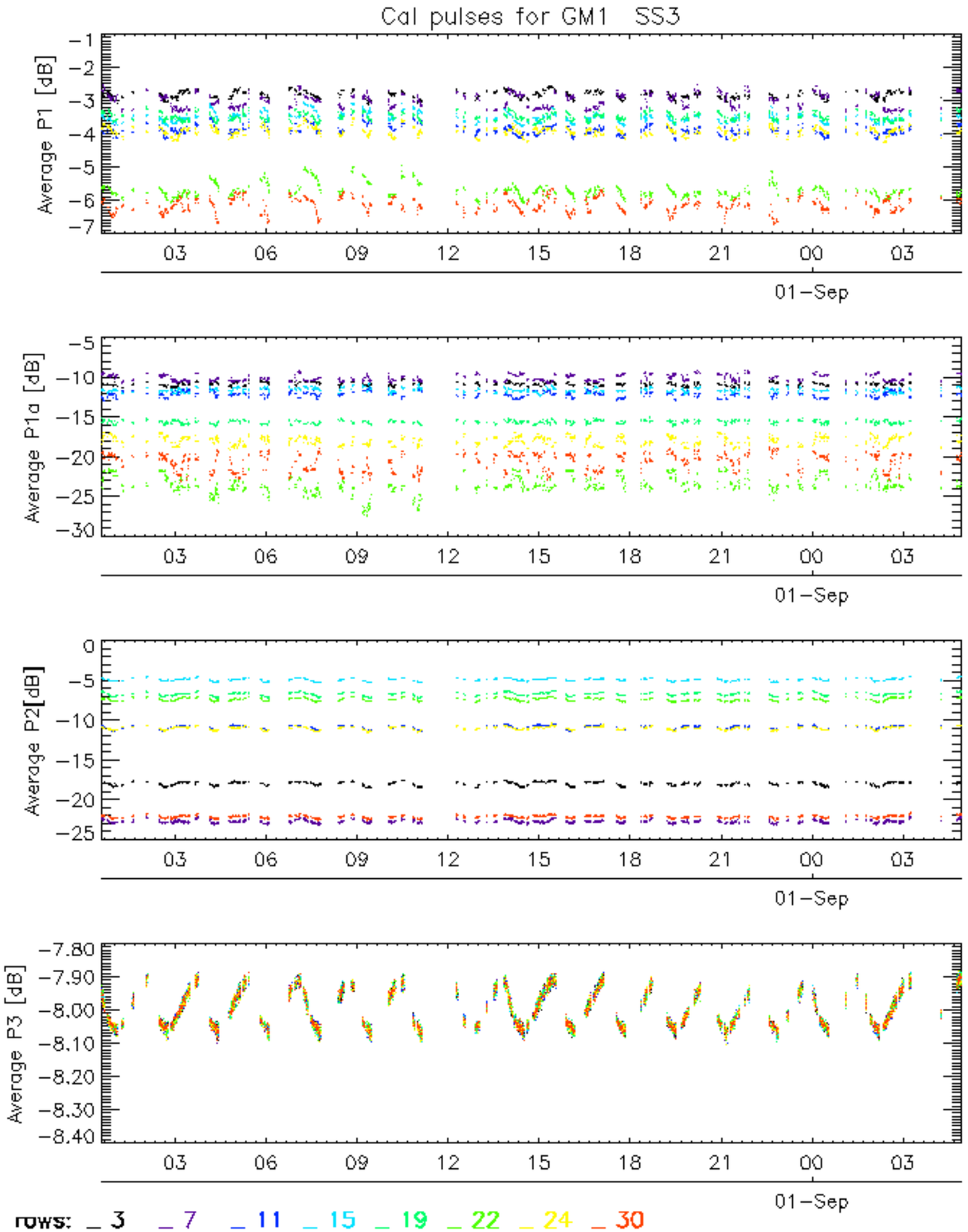
6.5 - Absolute Doppler for GM1

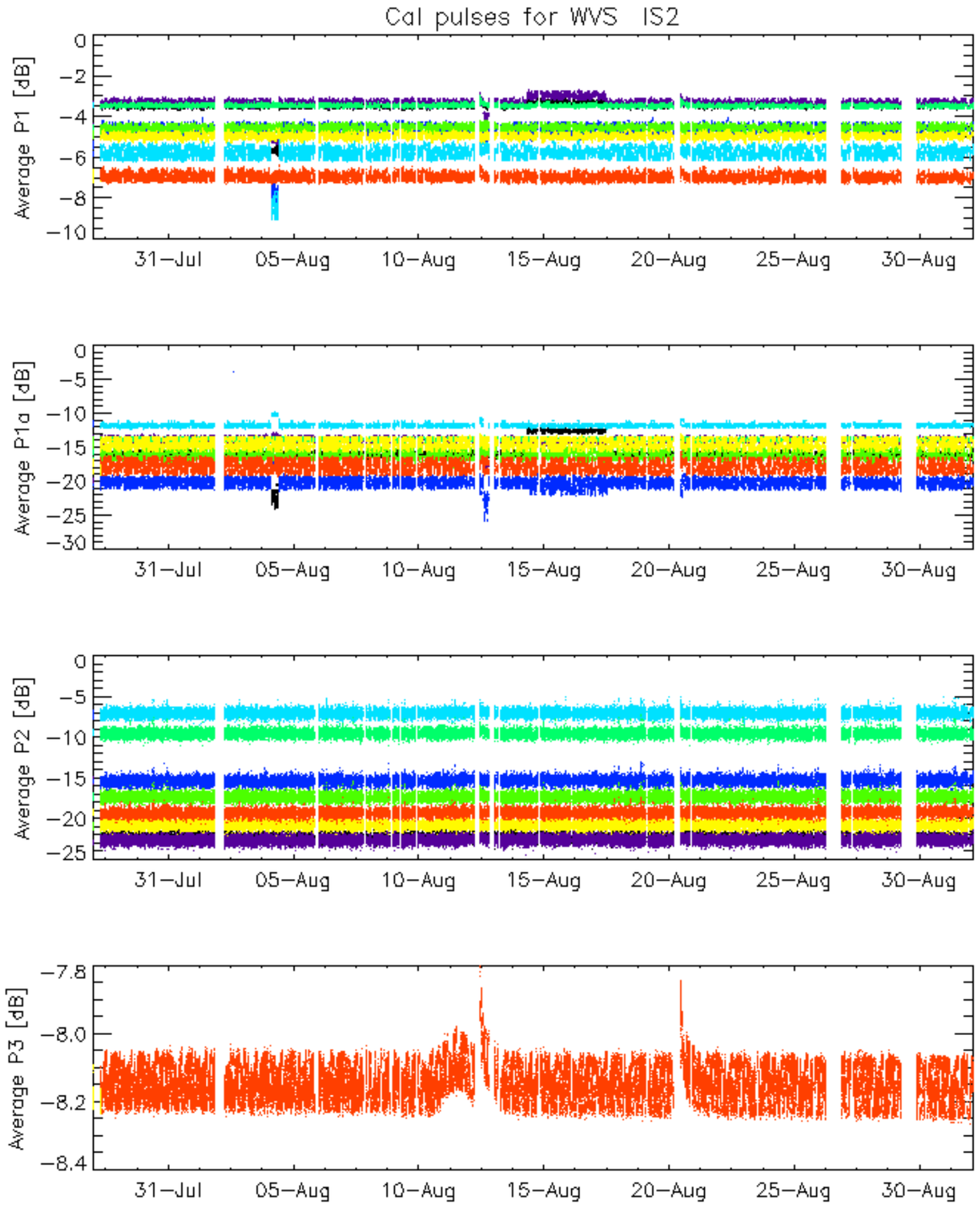
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

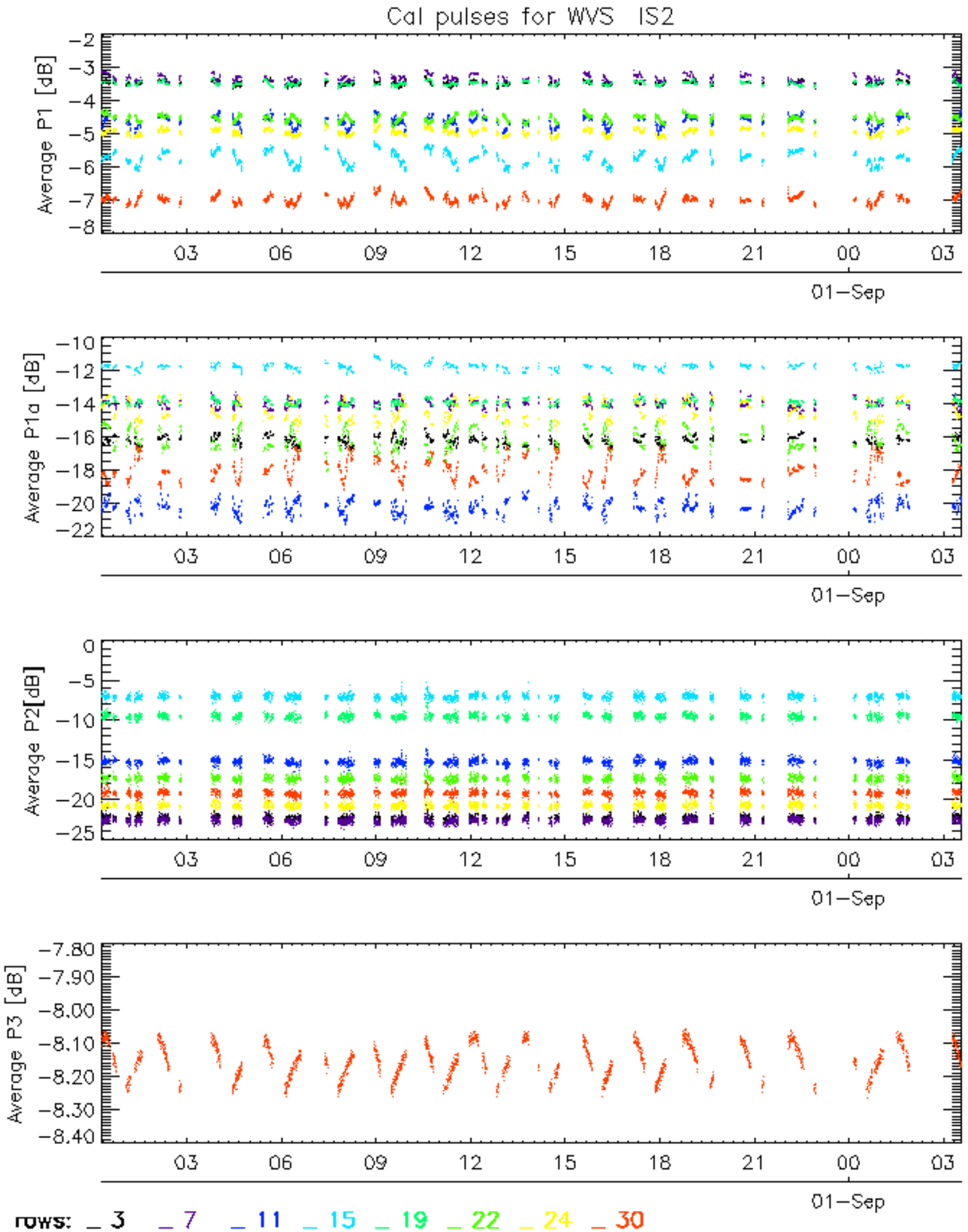
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

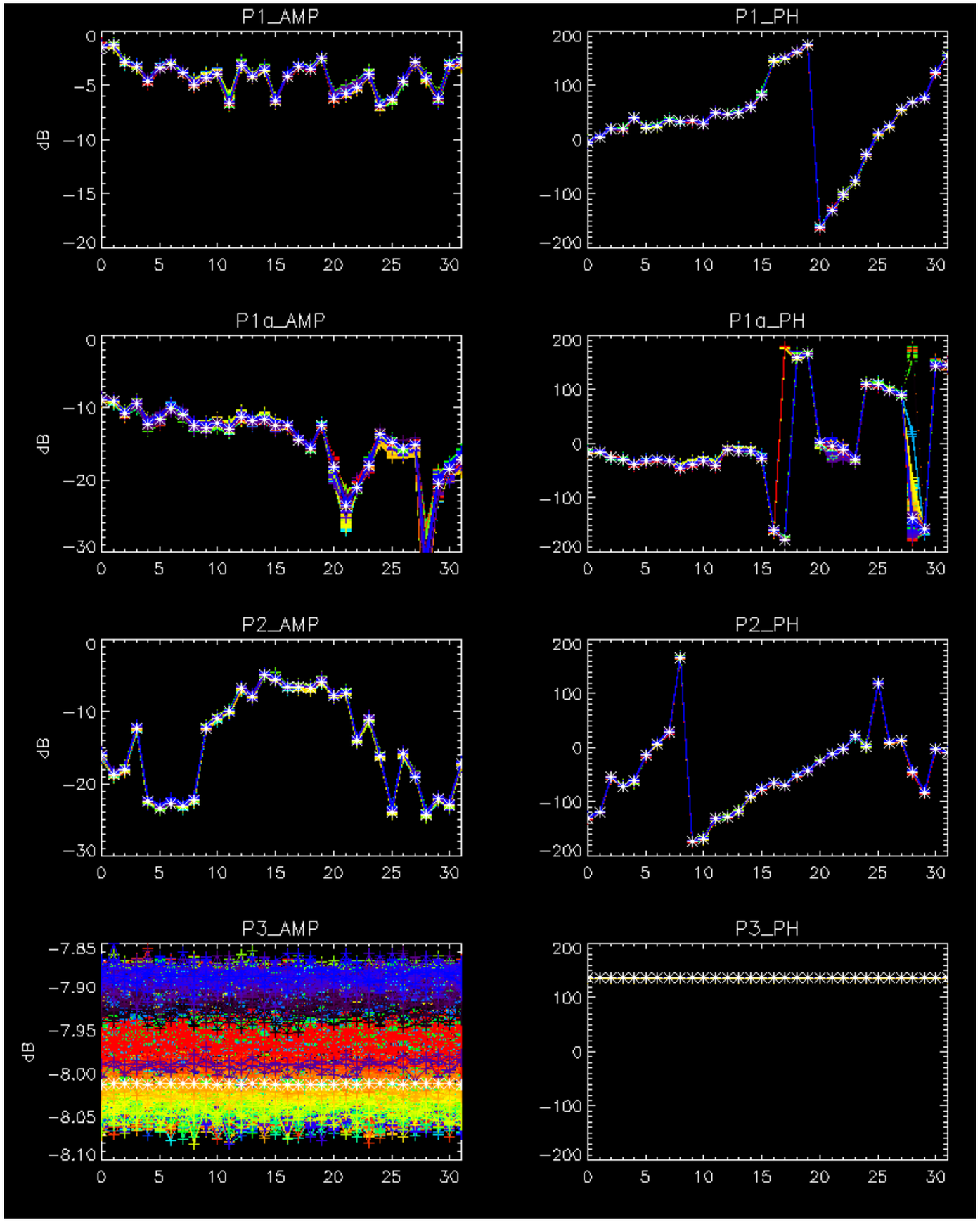

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

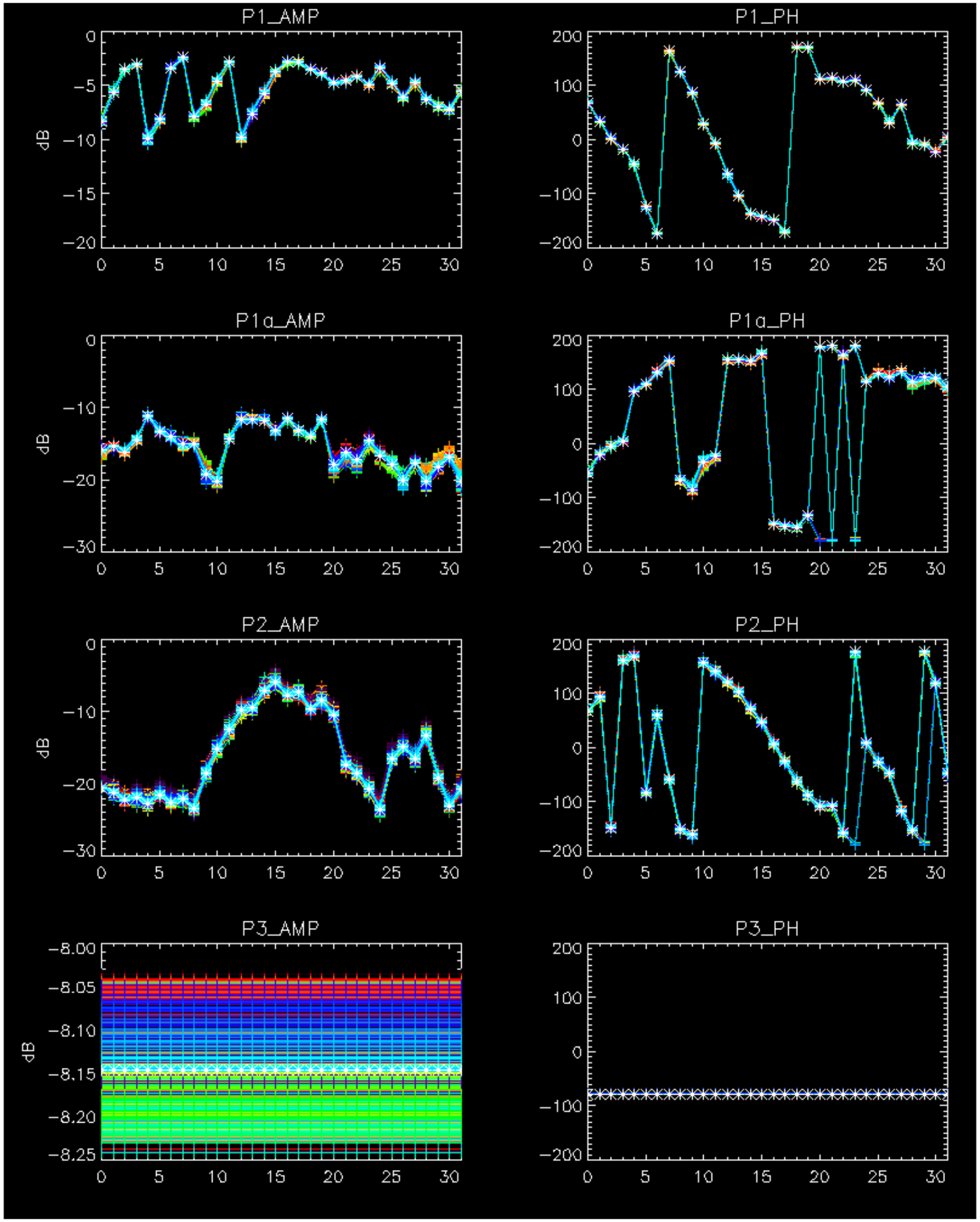

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
01−Sep
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
01−Sep
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
01−Sep
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug
Average P1a [dB]
0
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
01−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

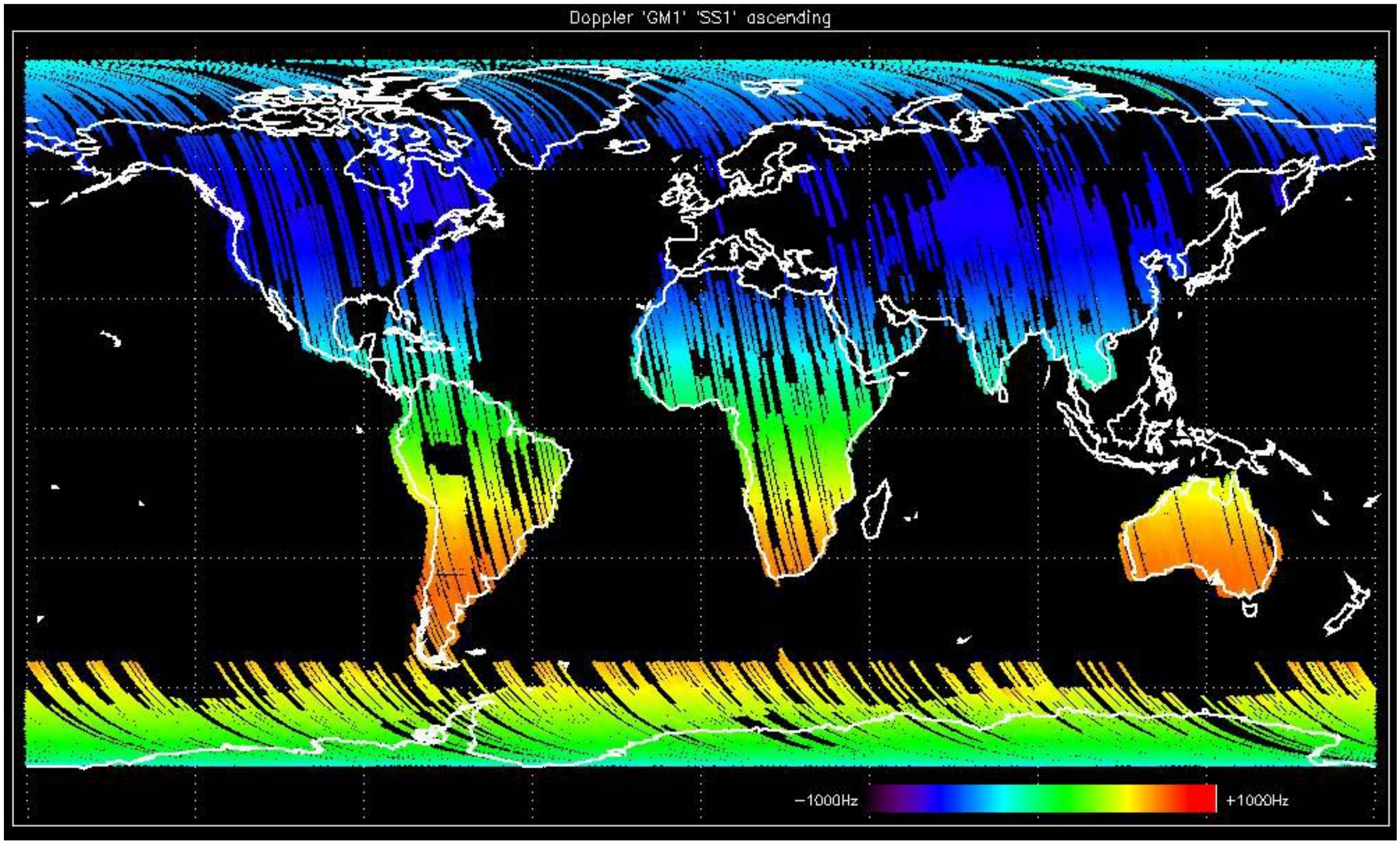
No anomalies observed.

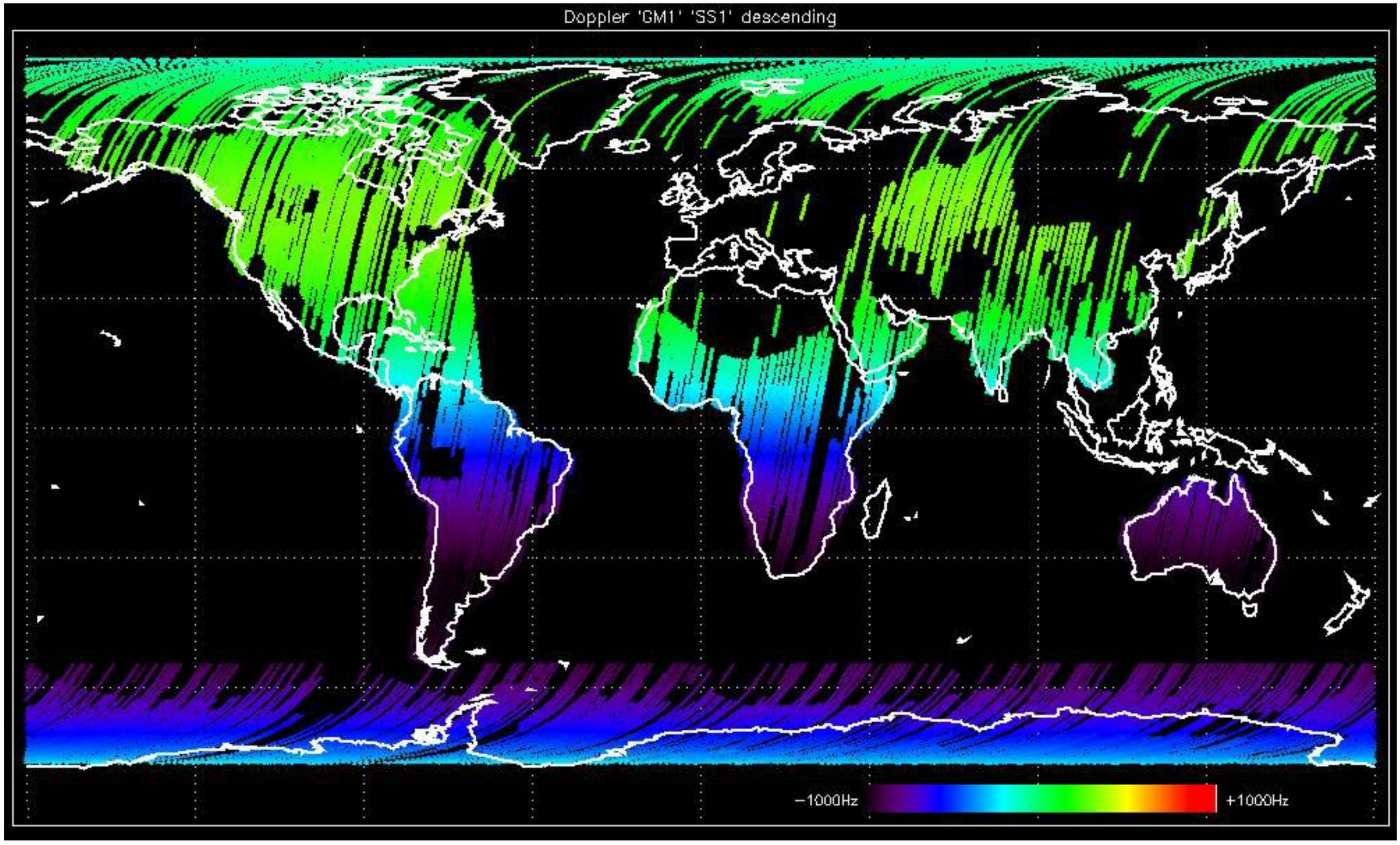

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

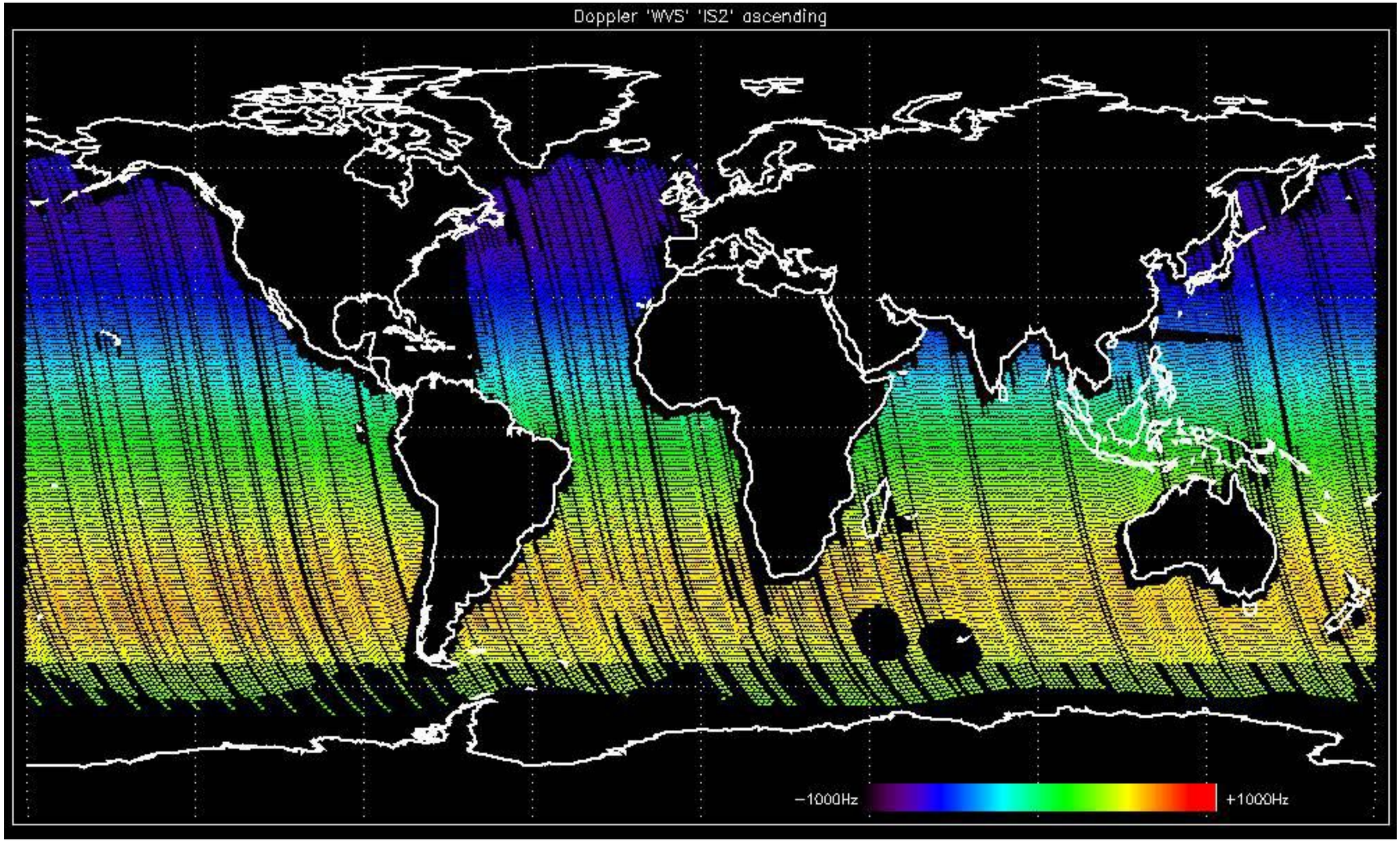

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15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

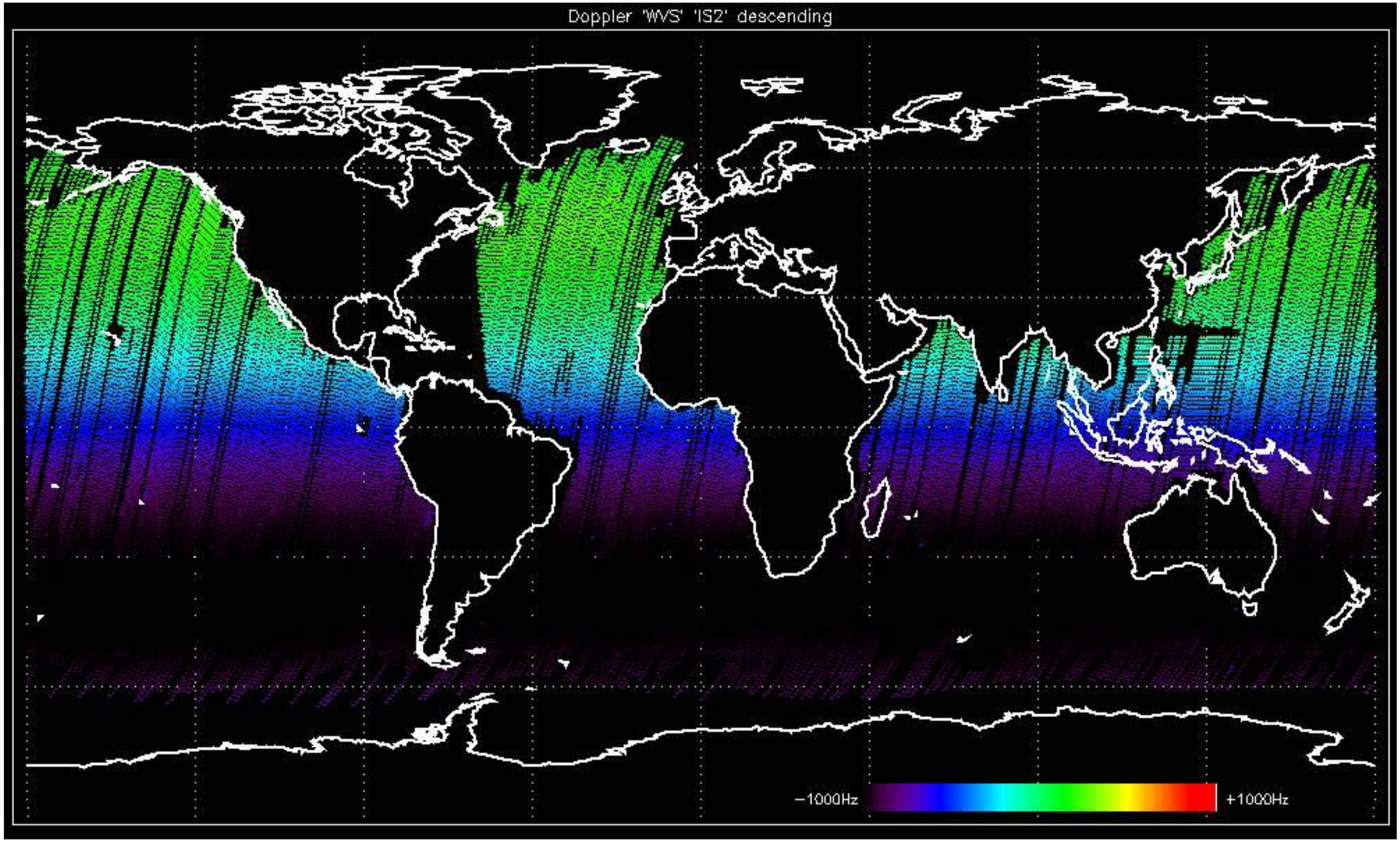
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

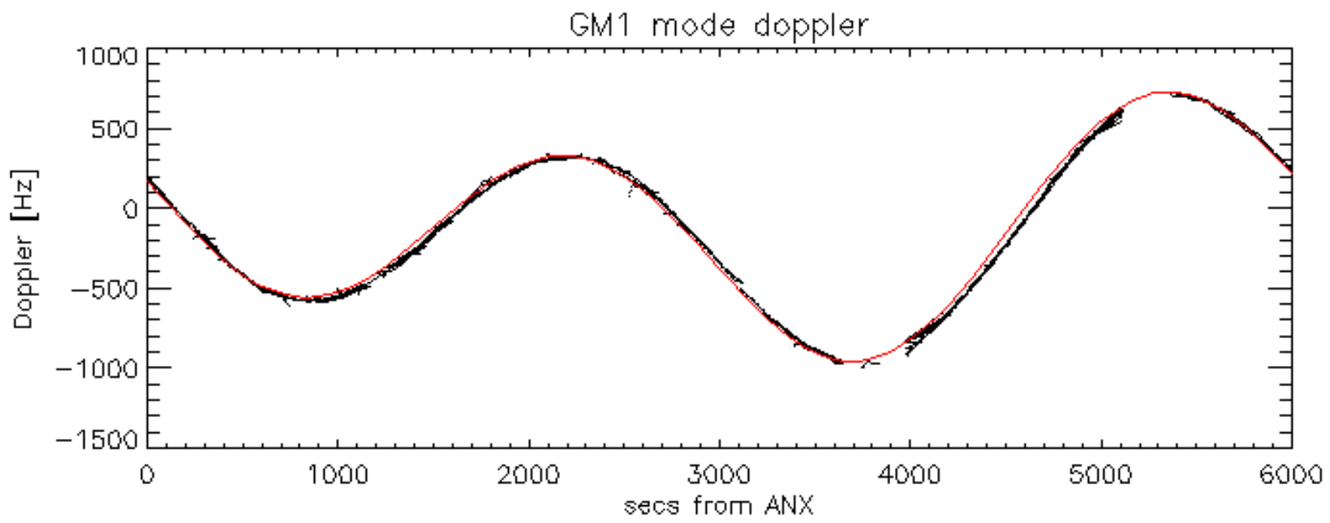
Preliminary report.The data is not yet controled

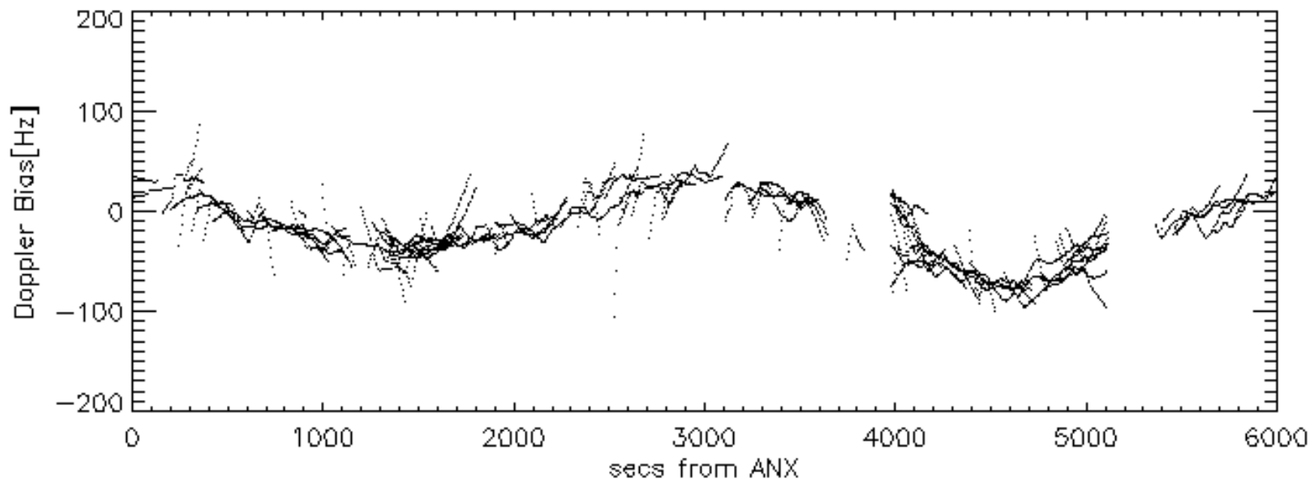

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

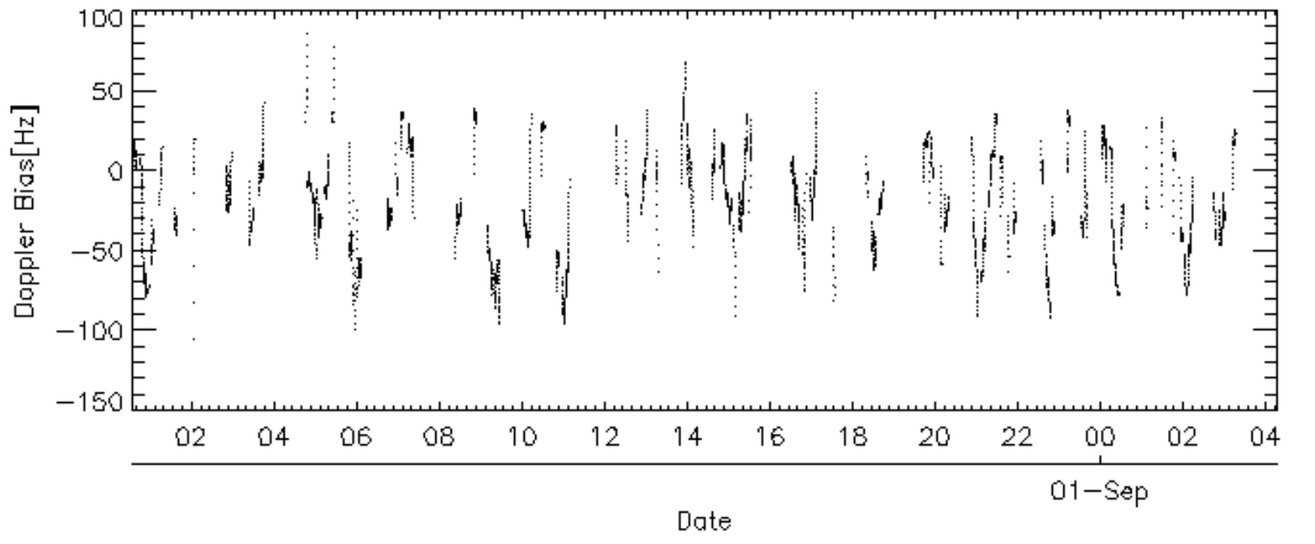

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

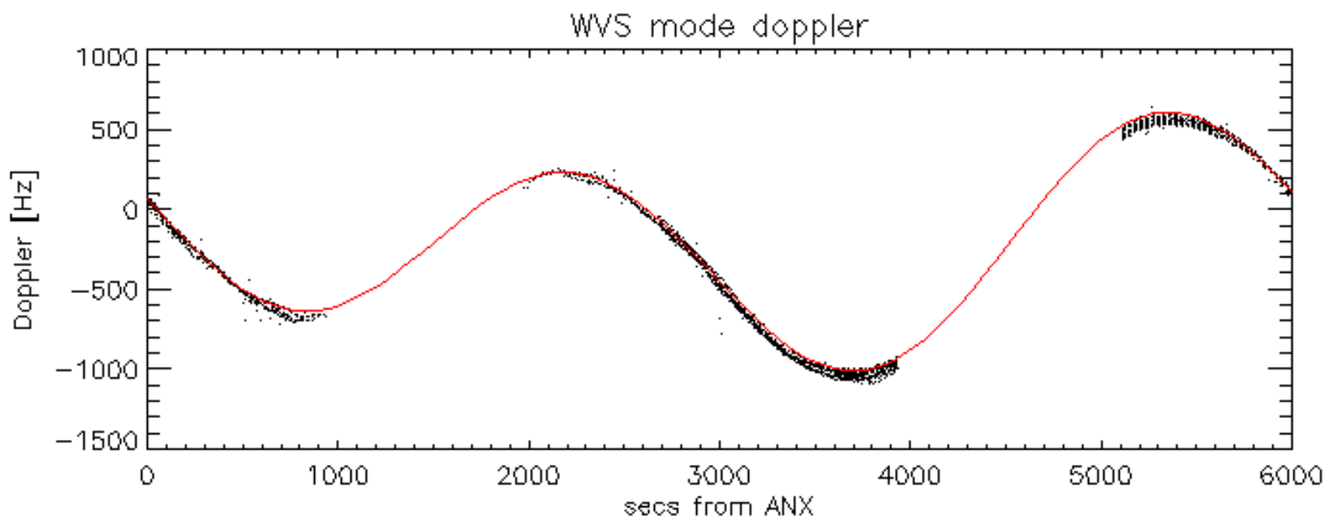

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

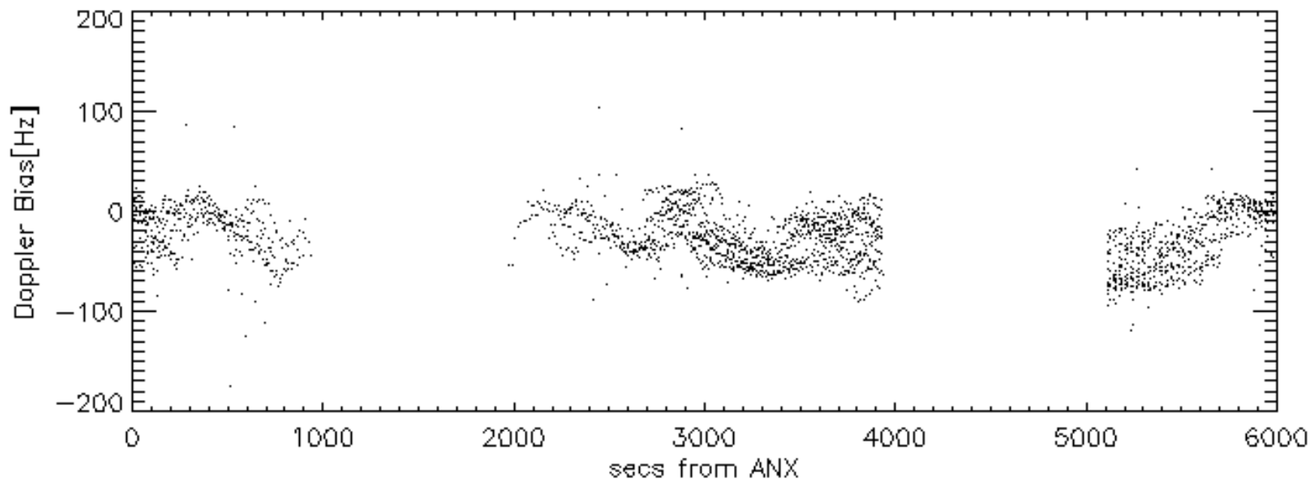

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

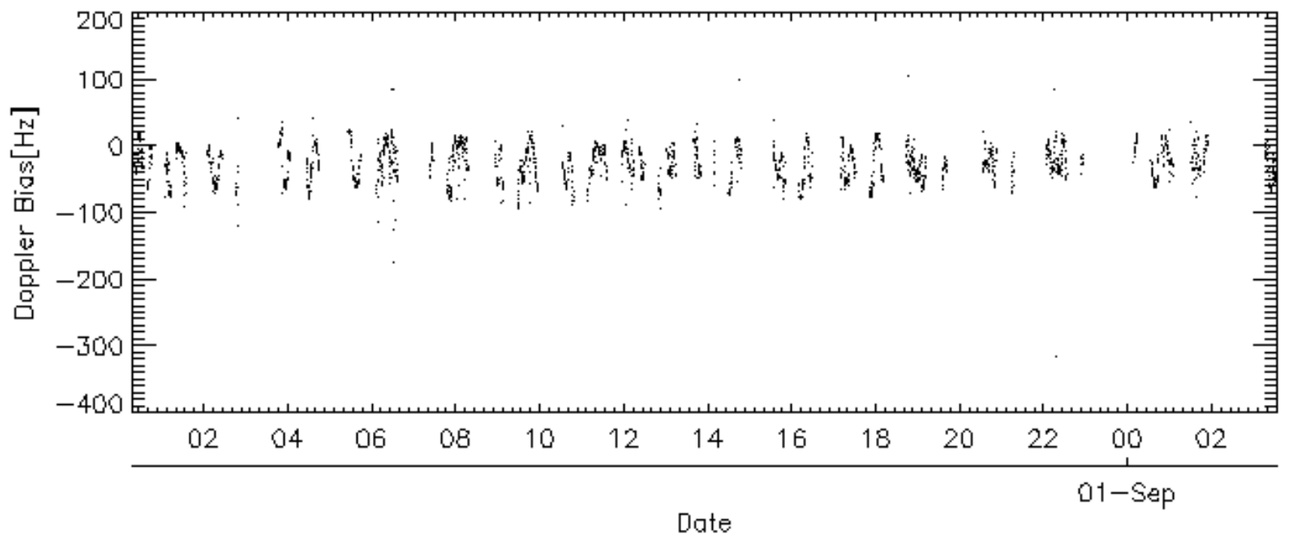

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

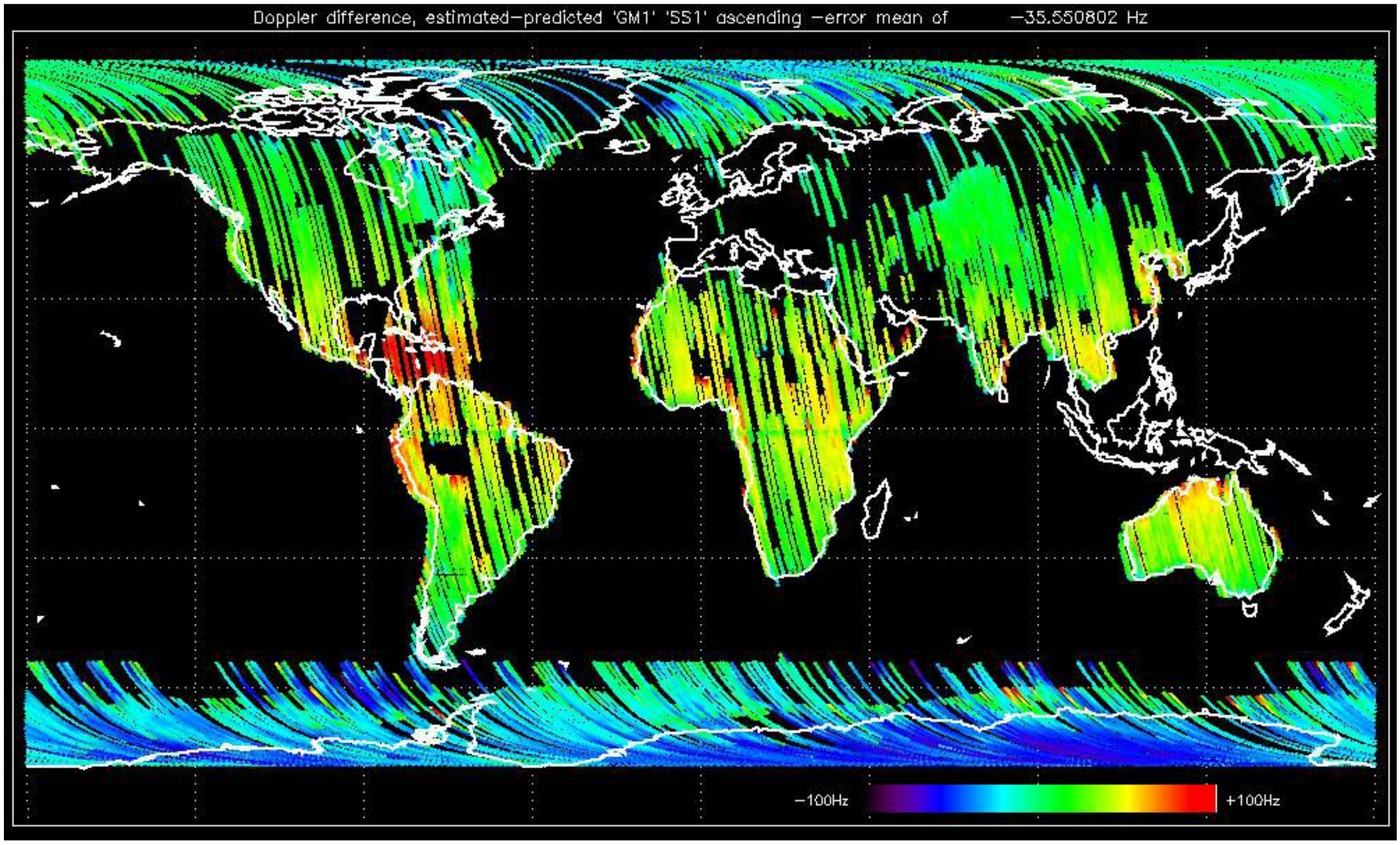

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

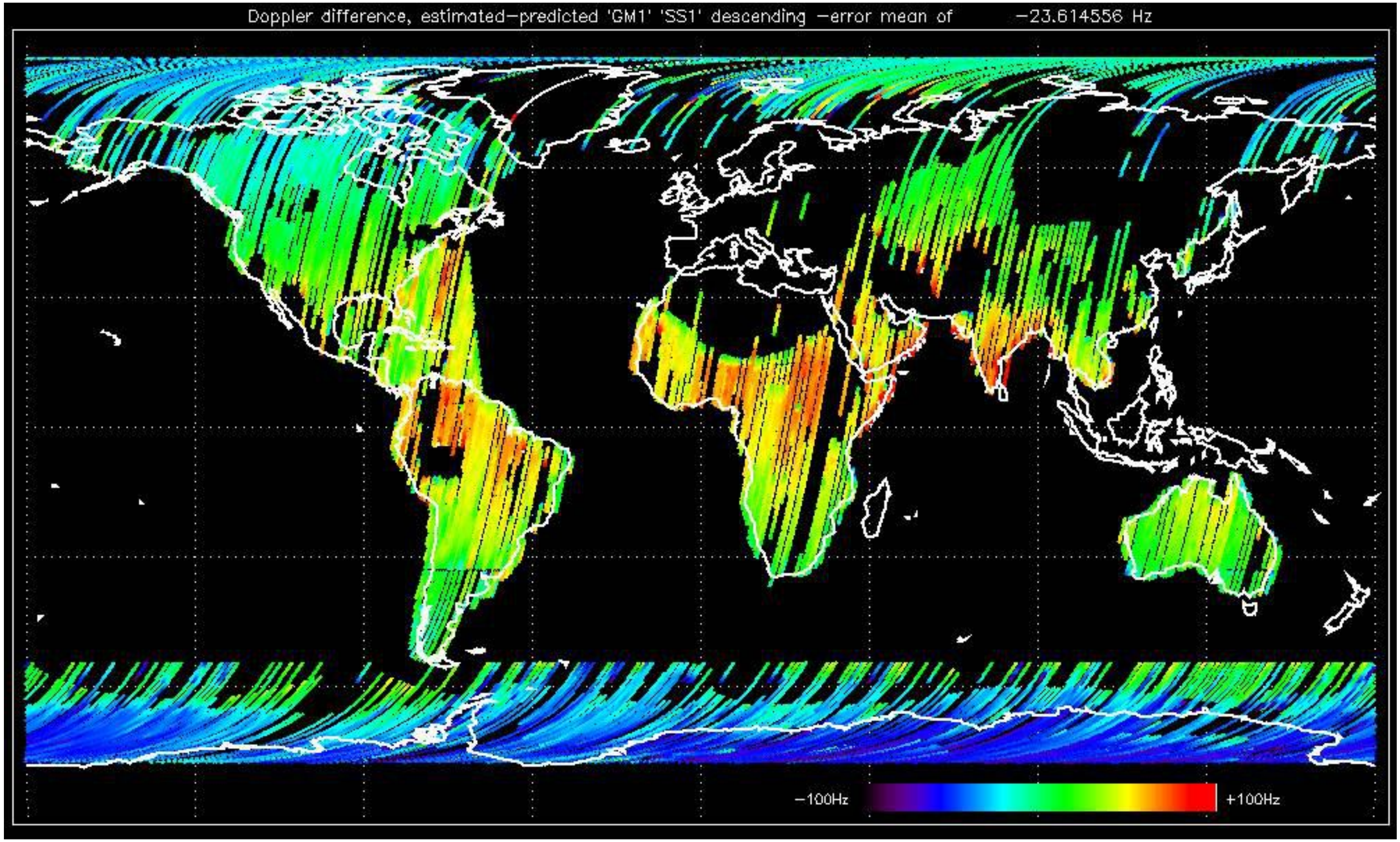

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
01−Sep
Date

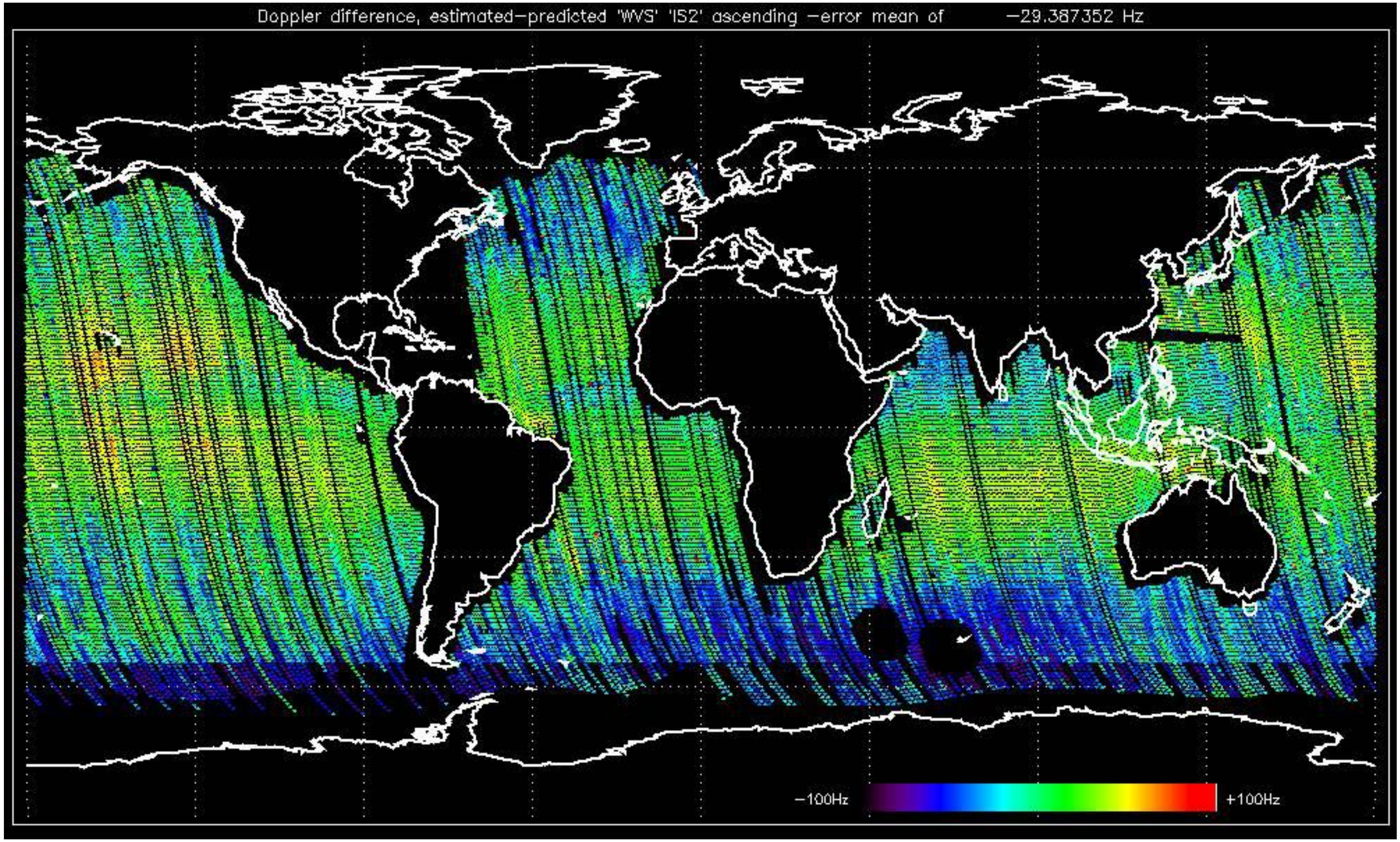

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

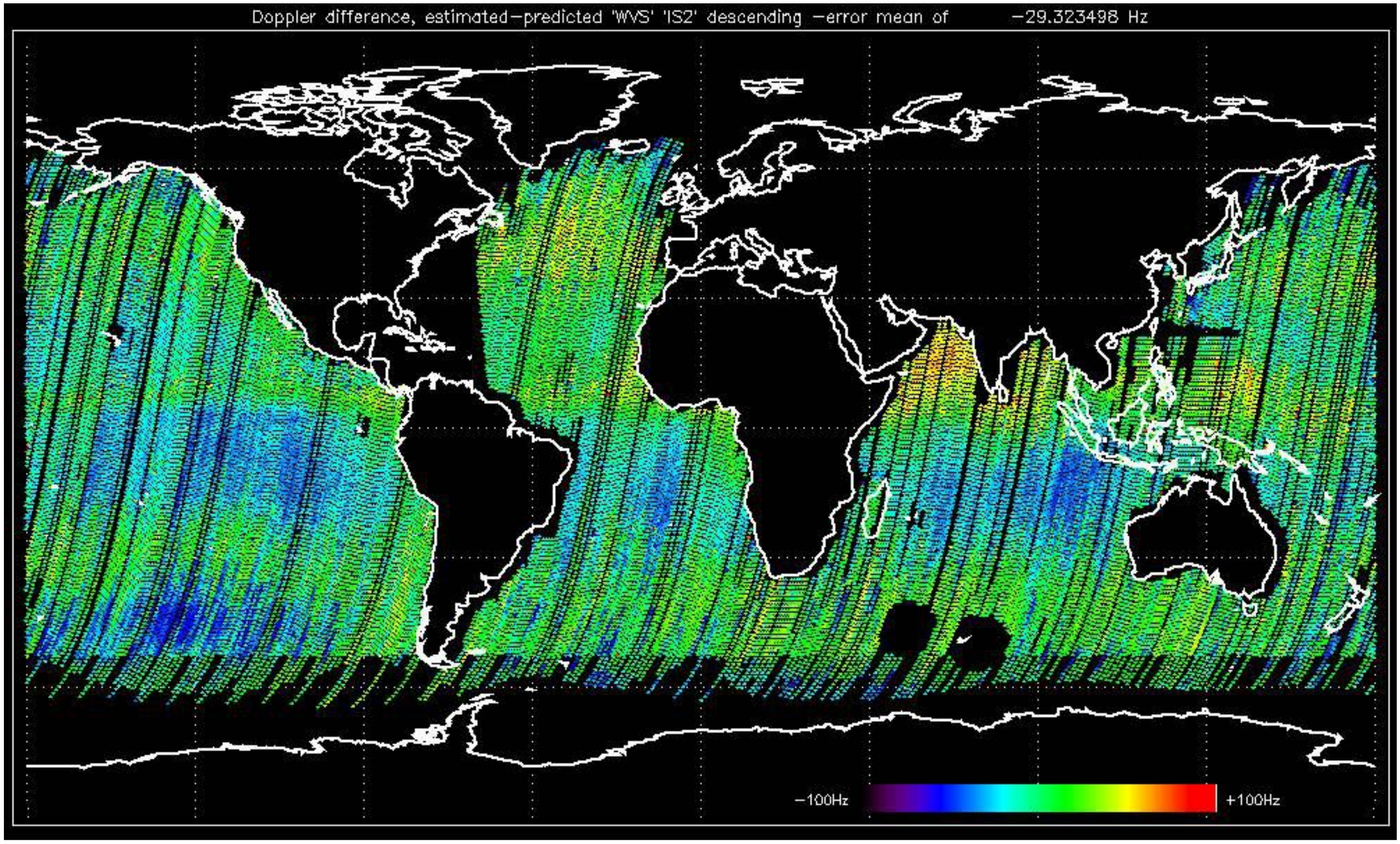

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
200
100
0
−100
−200
−300
−400
02
04
06
08
10
12
14
16
18
20
22
00
02
01−Sep
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.550802 Hz
−100Hz
+100Hz

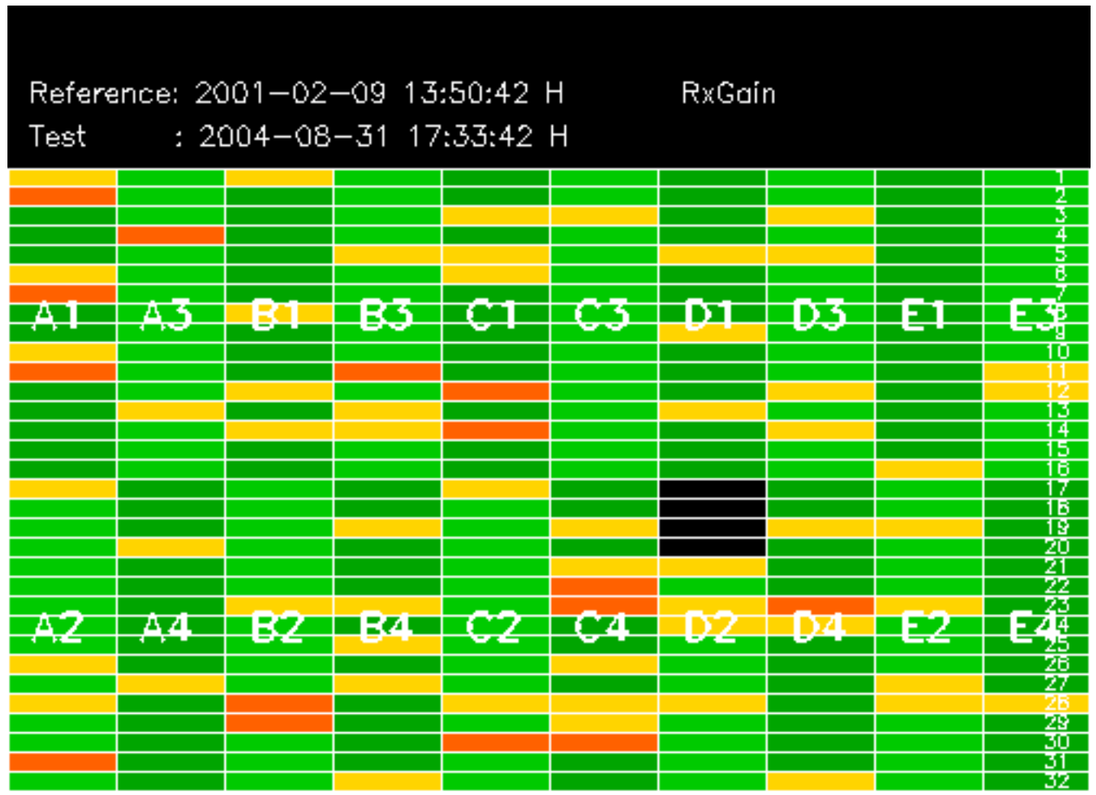

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.614556 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −29.387352 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.323498 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 : 2004-08-31 17:33:42 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
15
16
17
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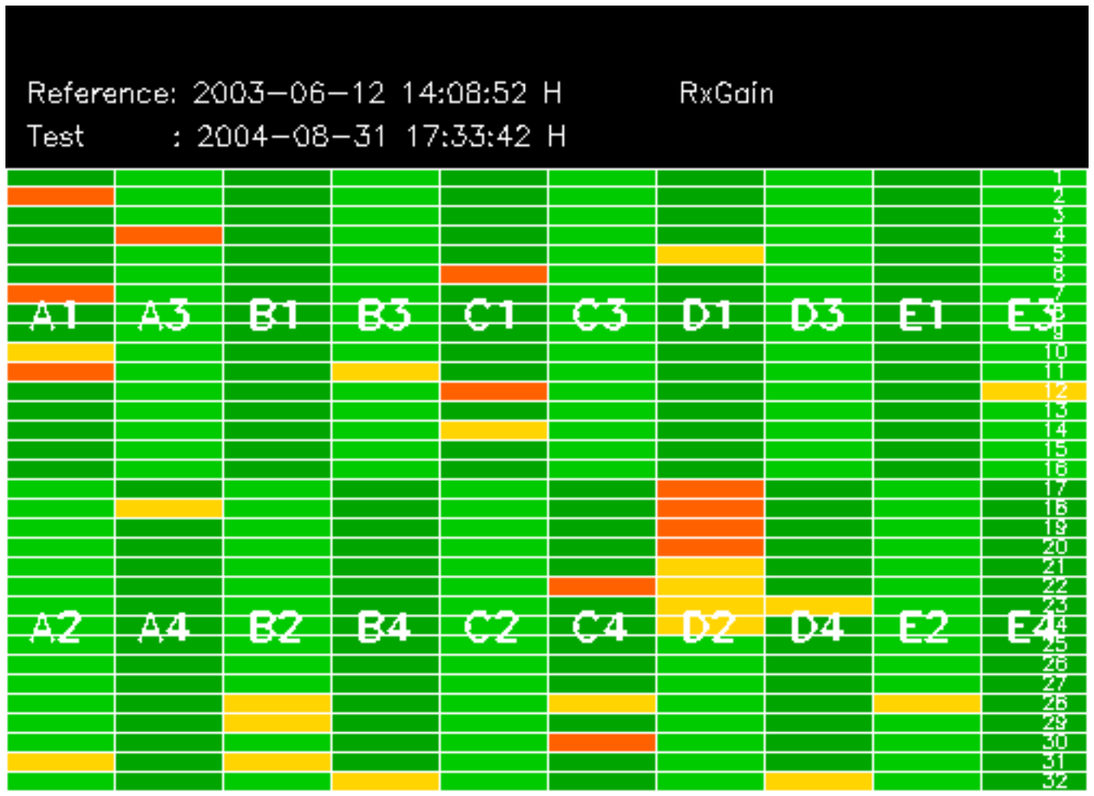
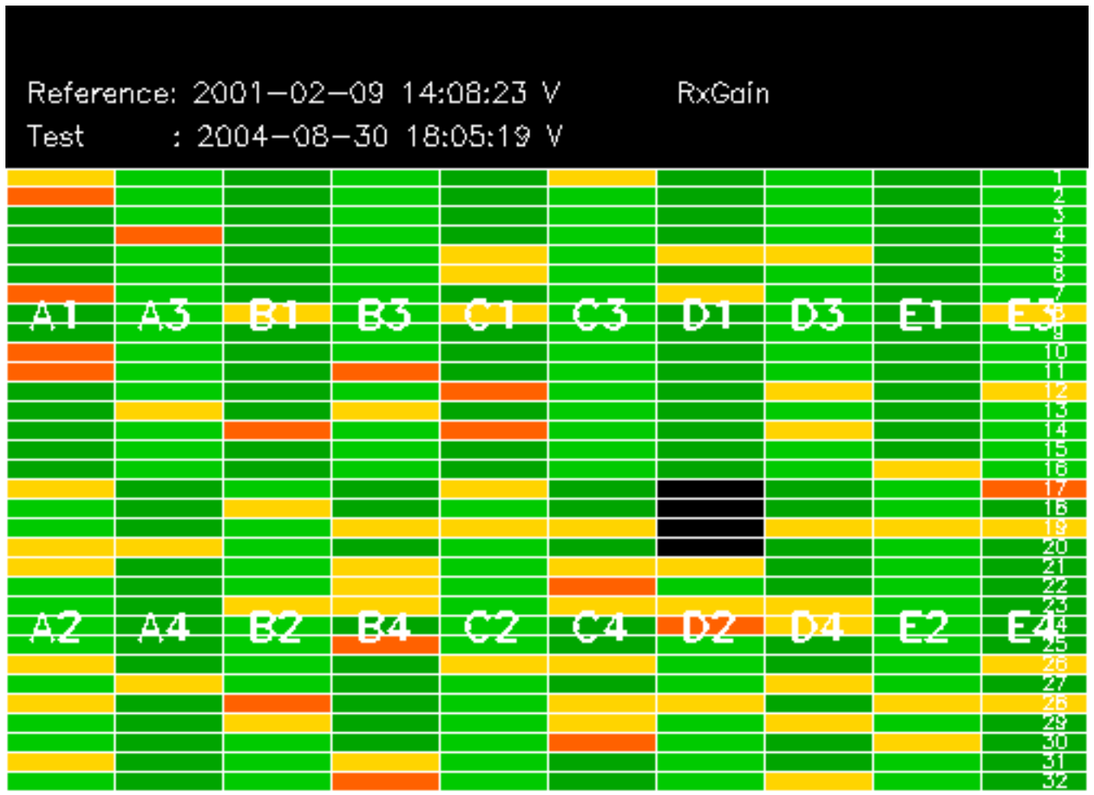

Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-30 18:05:19 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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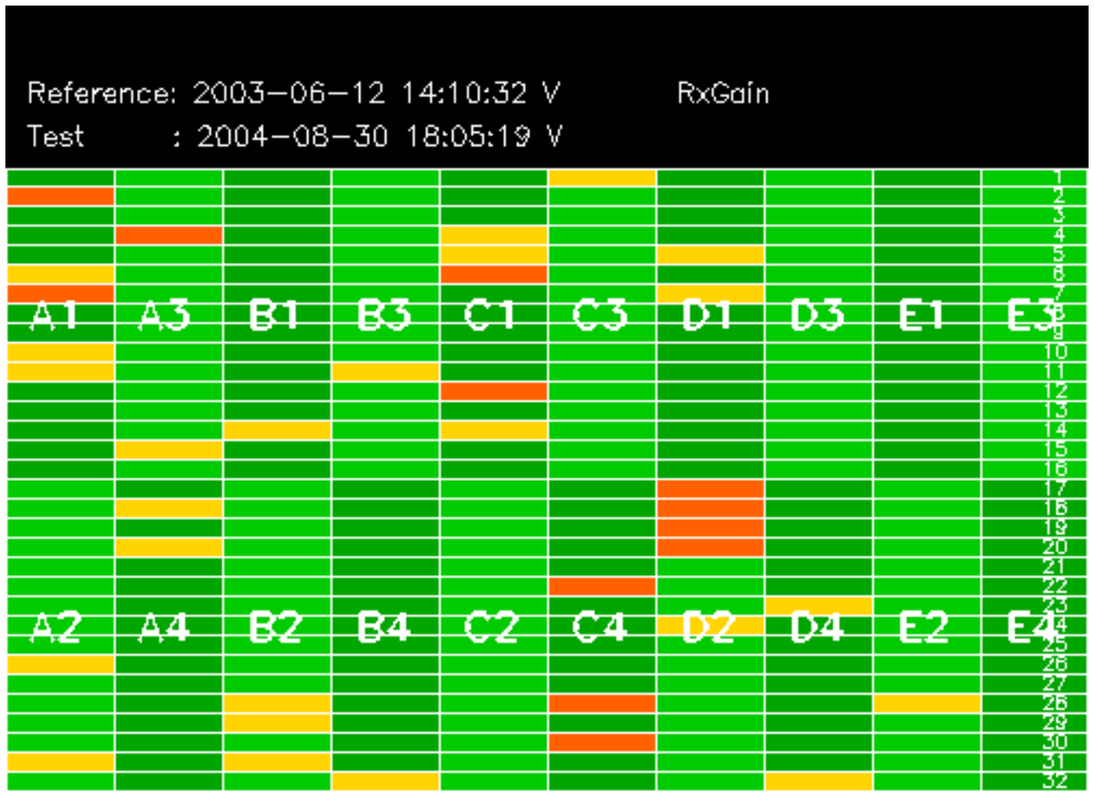
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-30 18:05:19 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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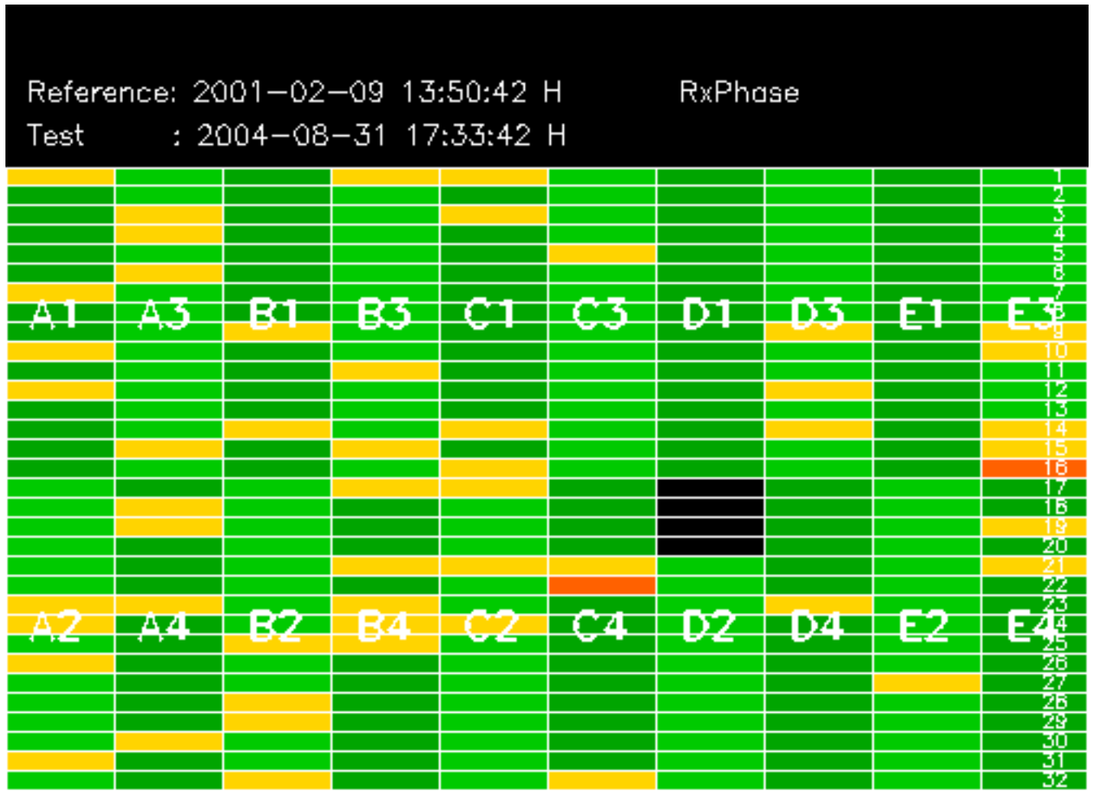
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-08-31 17:33:42 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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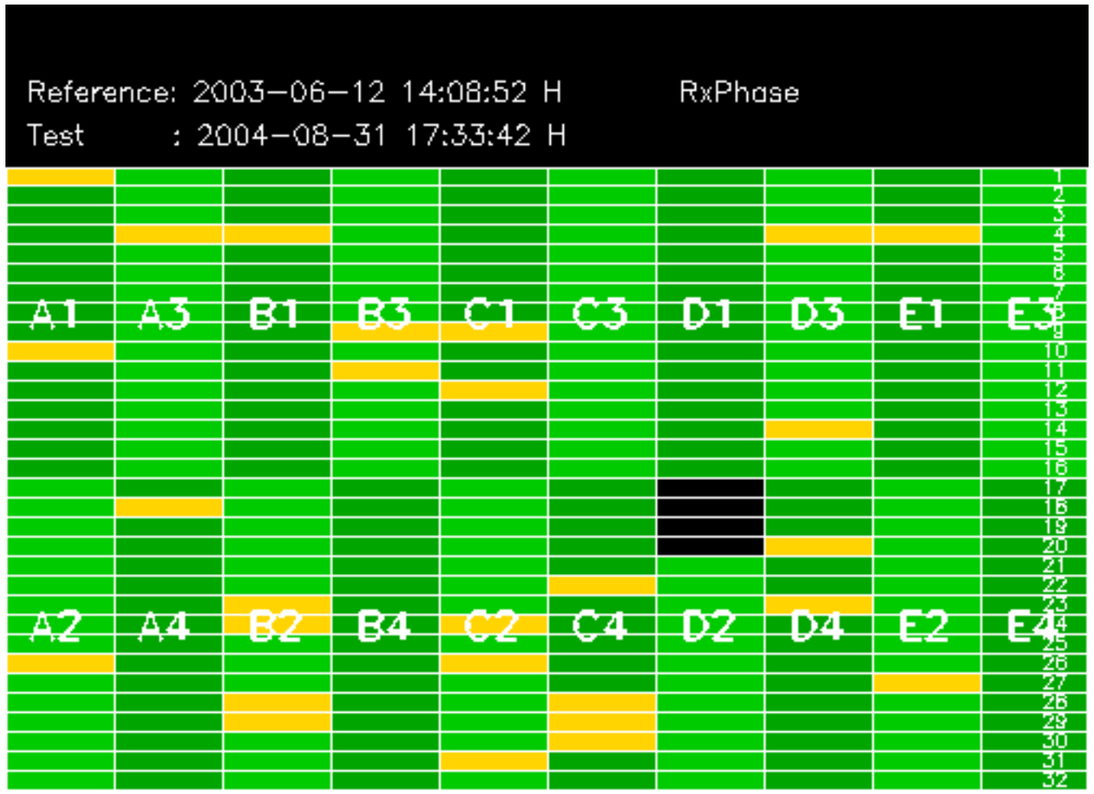
Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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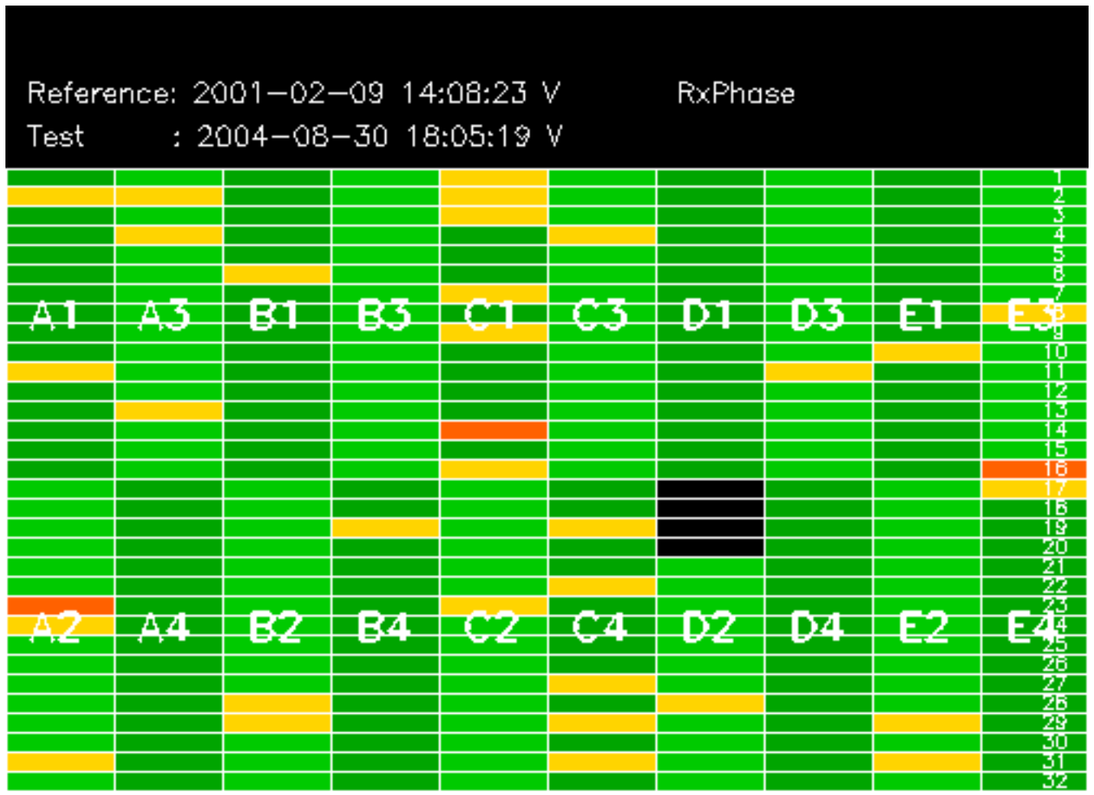
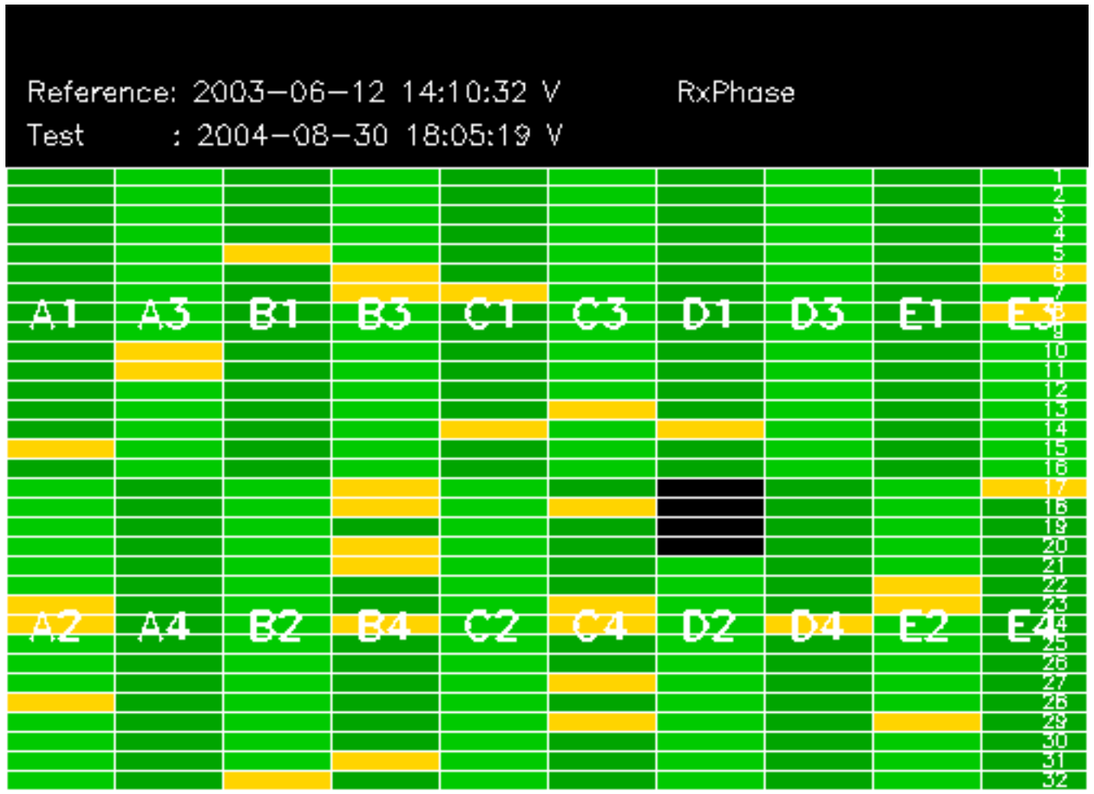
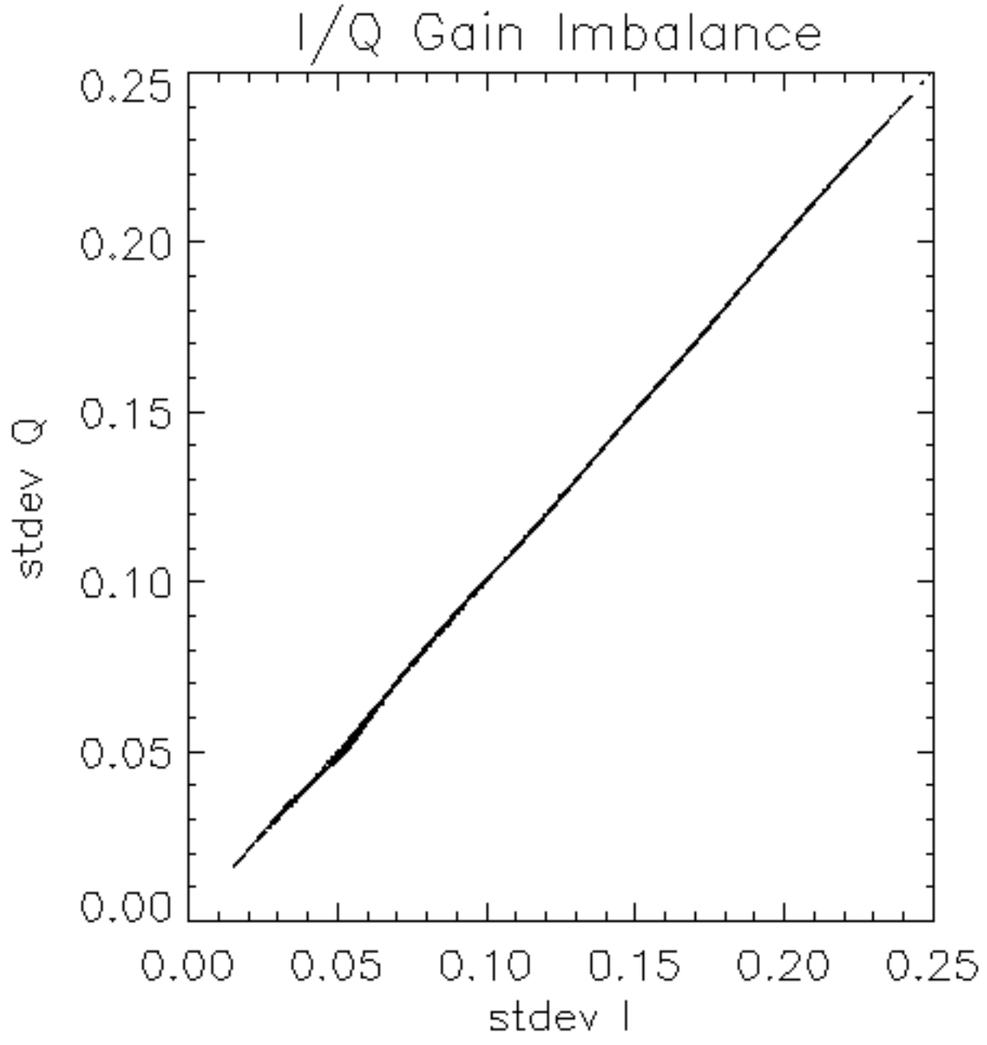
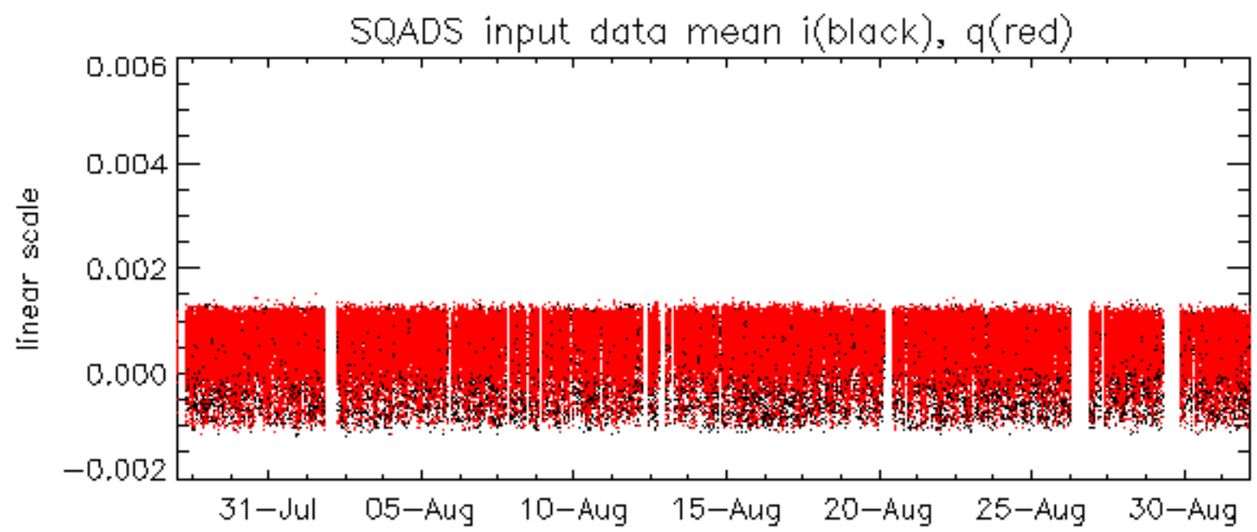
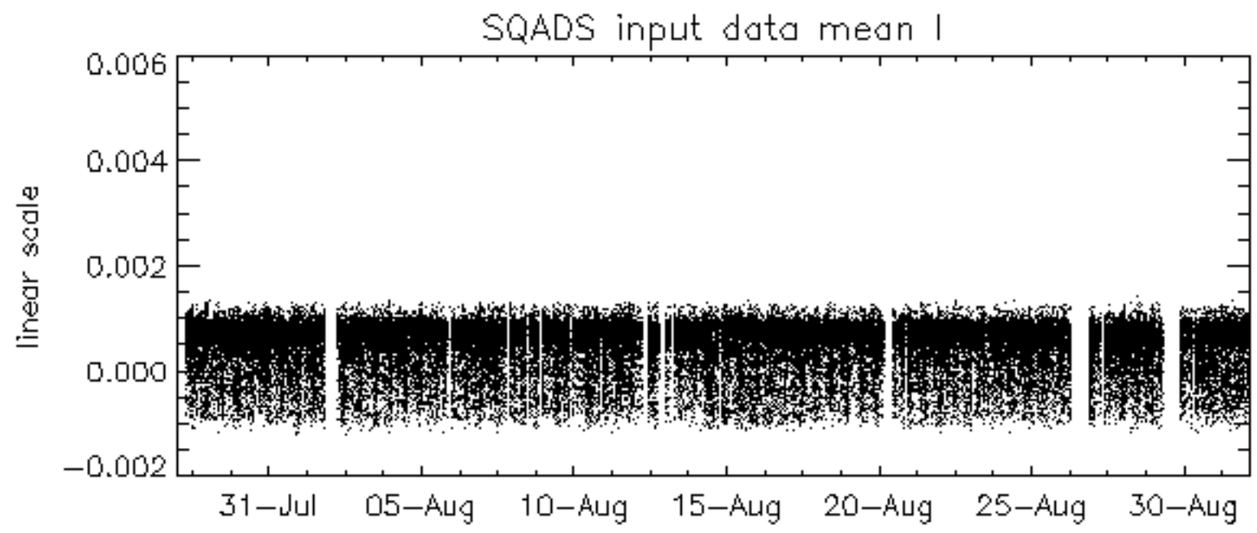
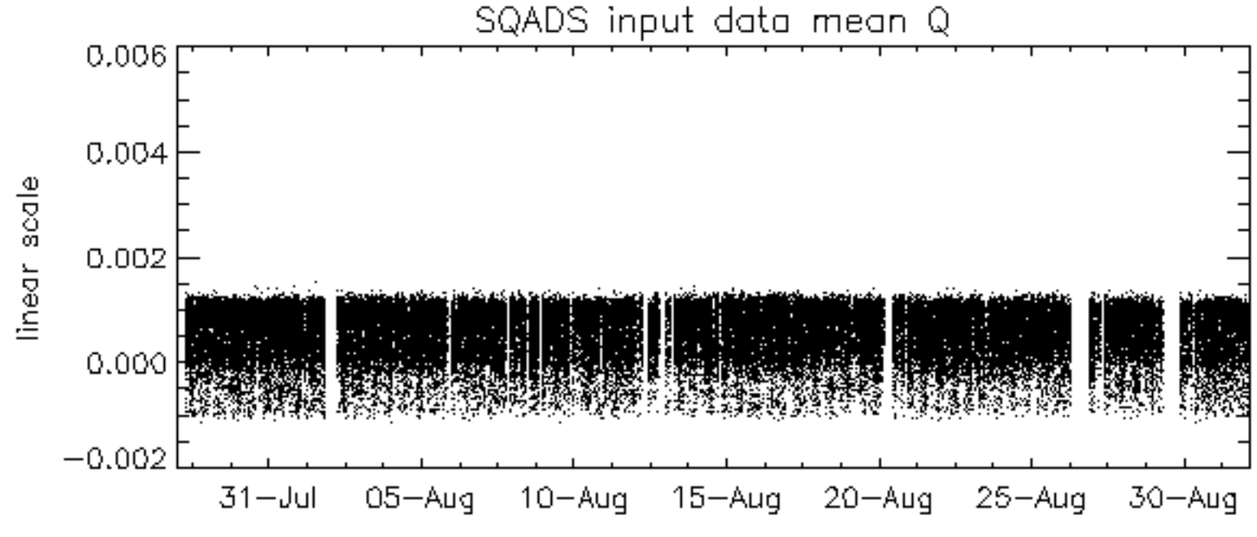

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-30 18:05:19 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

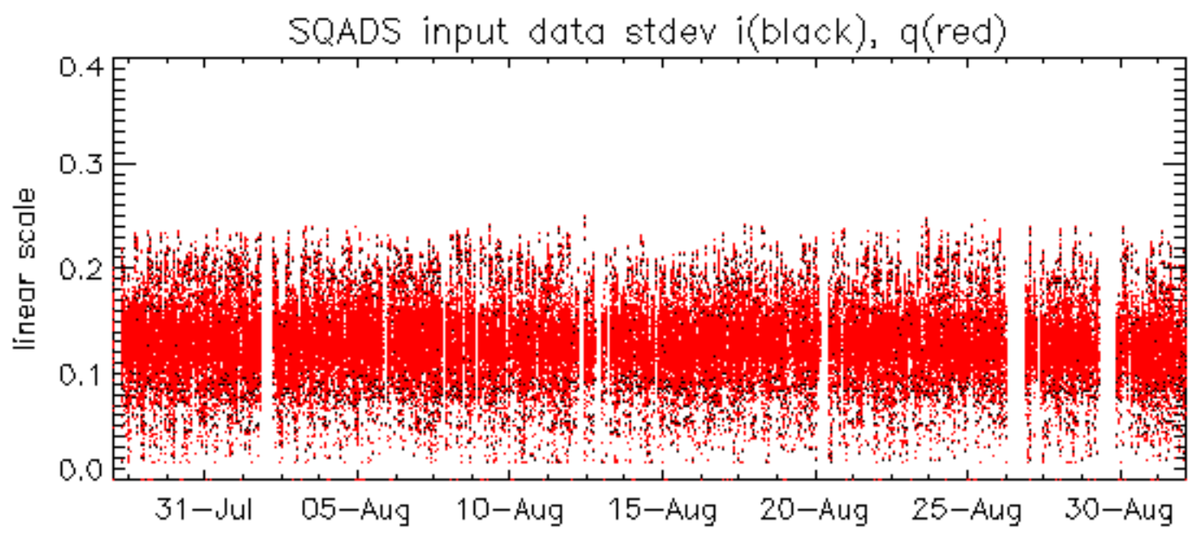

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-30 18:05:19 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

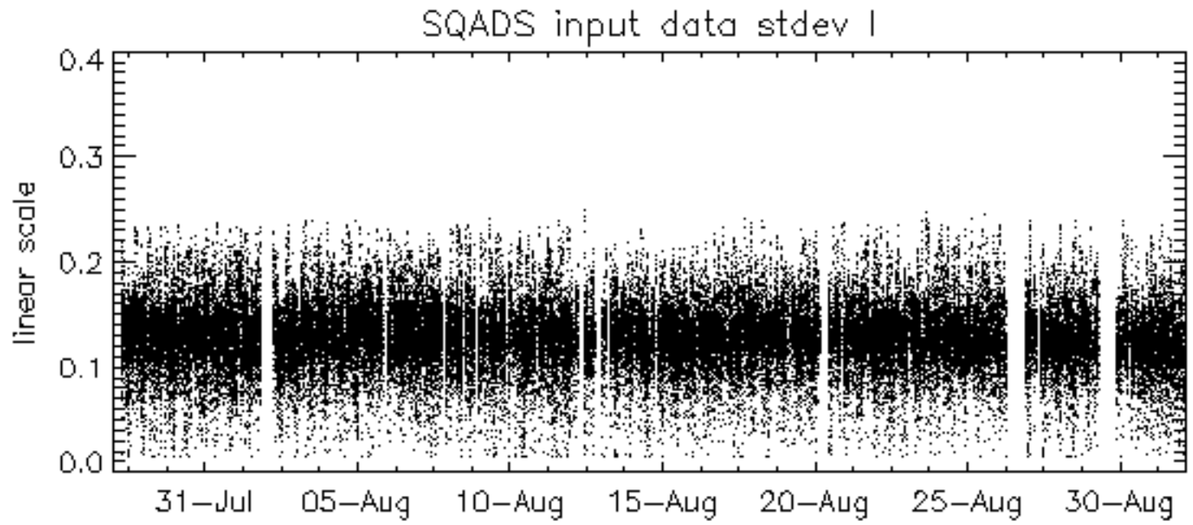

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

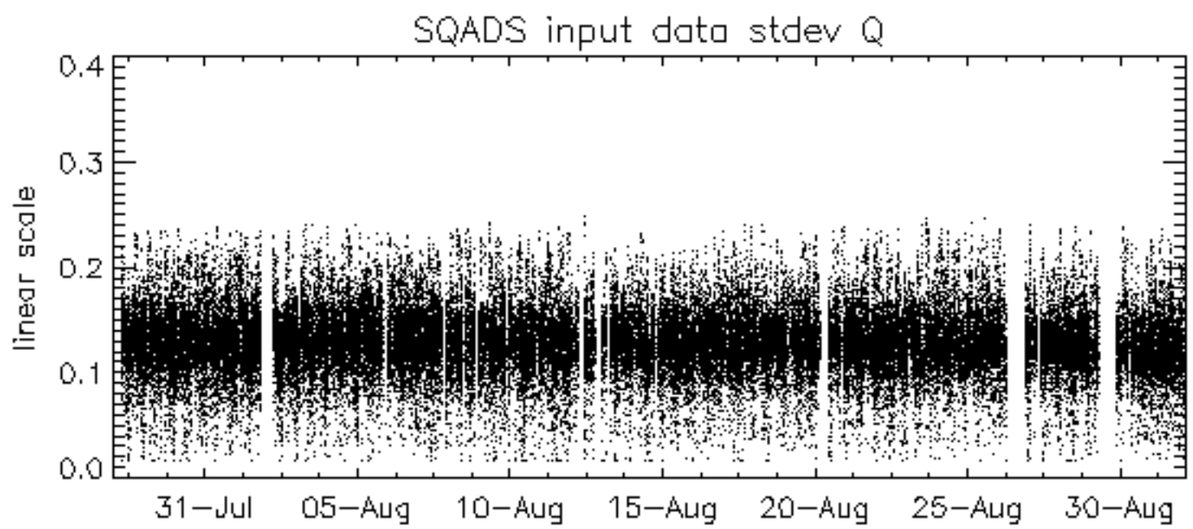

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug

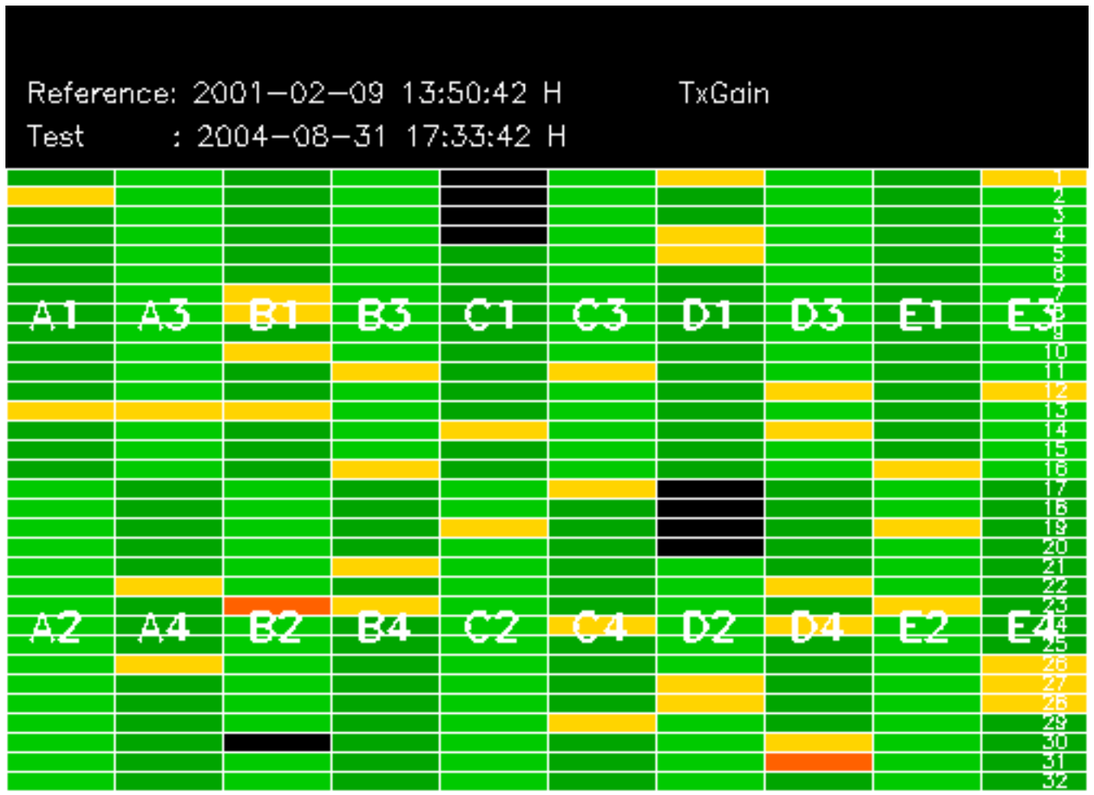

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
25−Aug
30−Aug


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-08-31 17:33:42 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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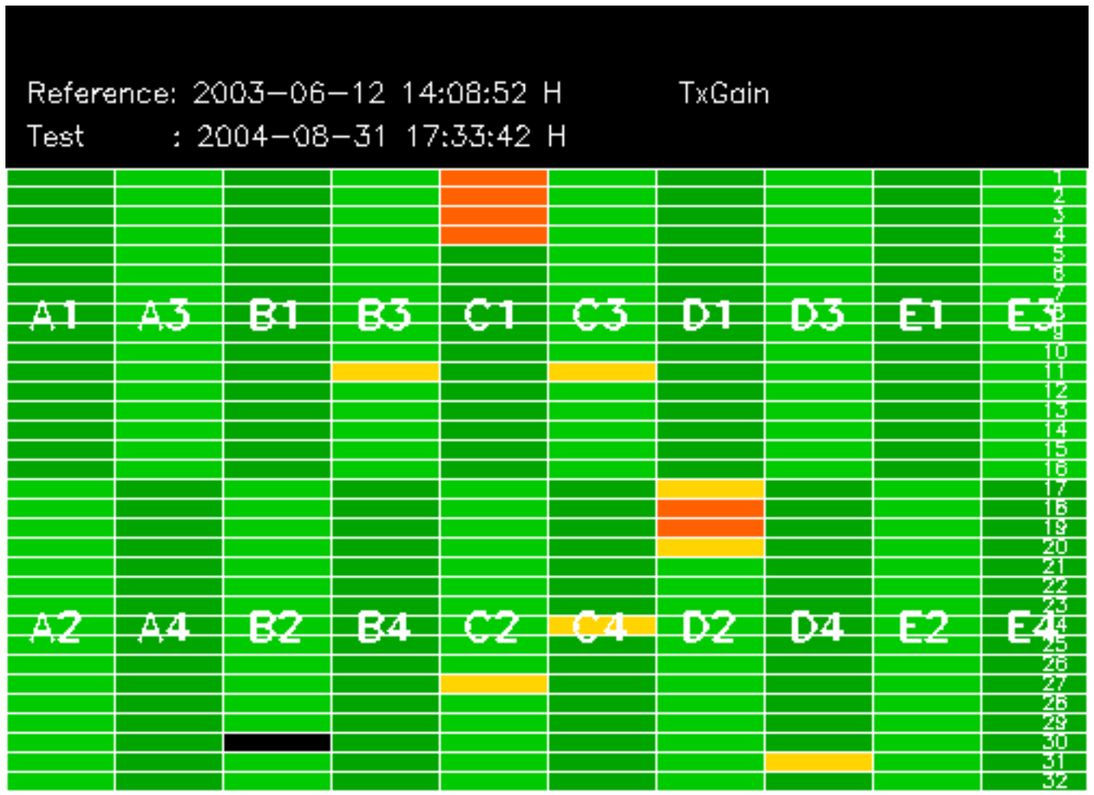
Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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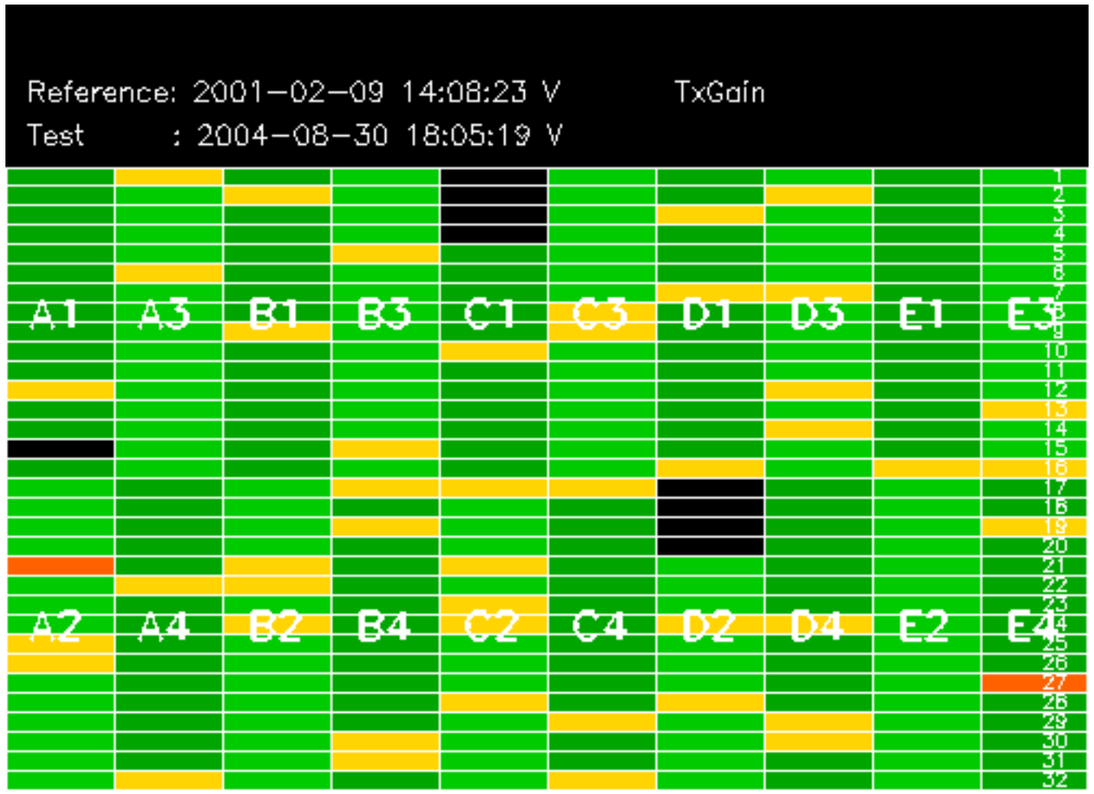
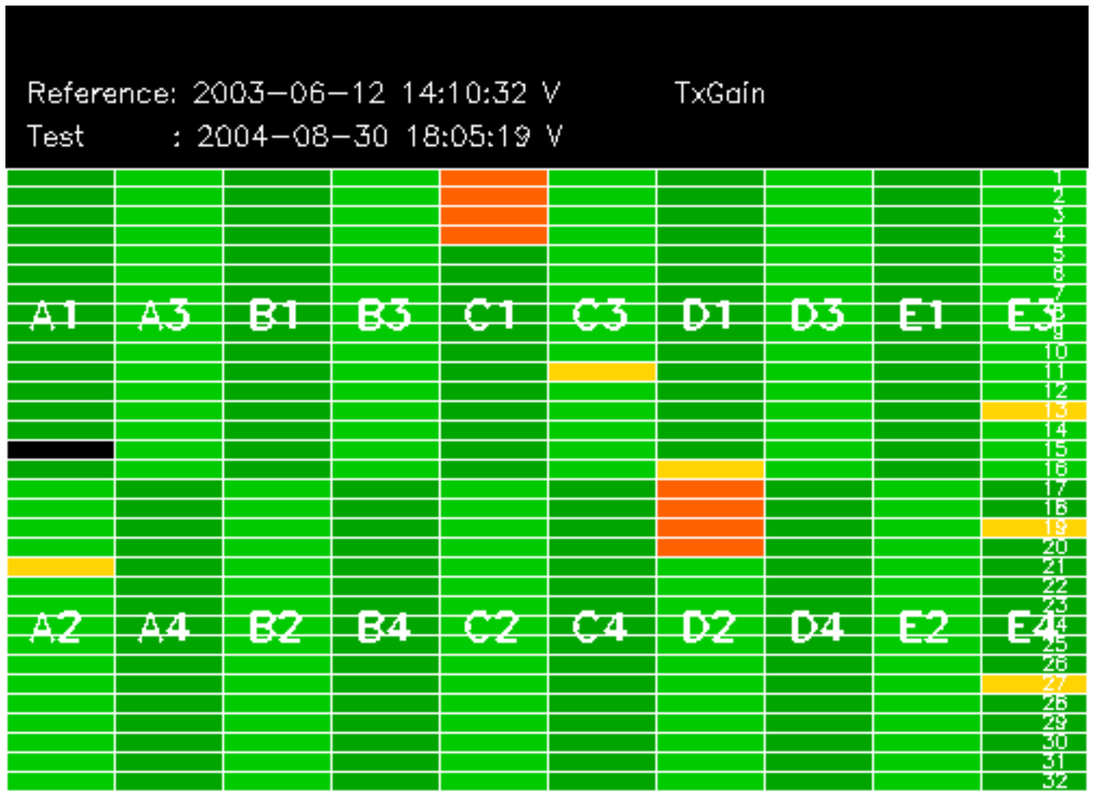

Reference: 2001-02-09 14:08:23 V
Test : 2004-08-30 18:05:19 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-08-30 18:05:19 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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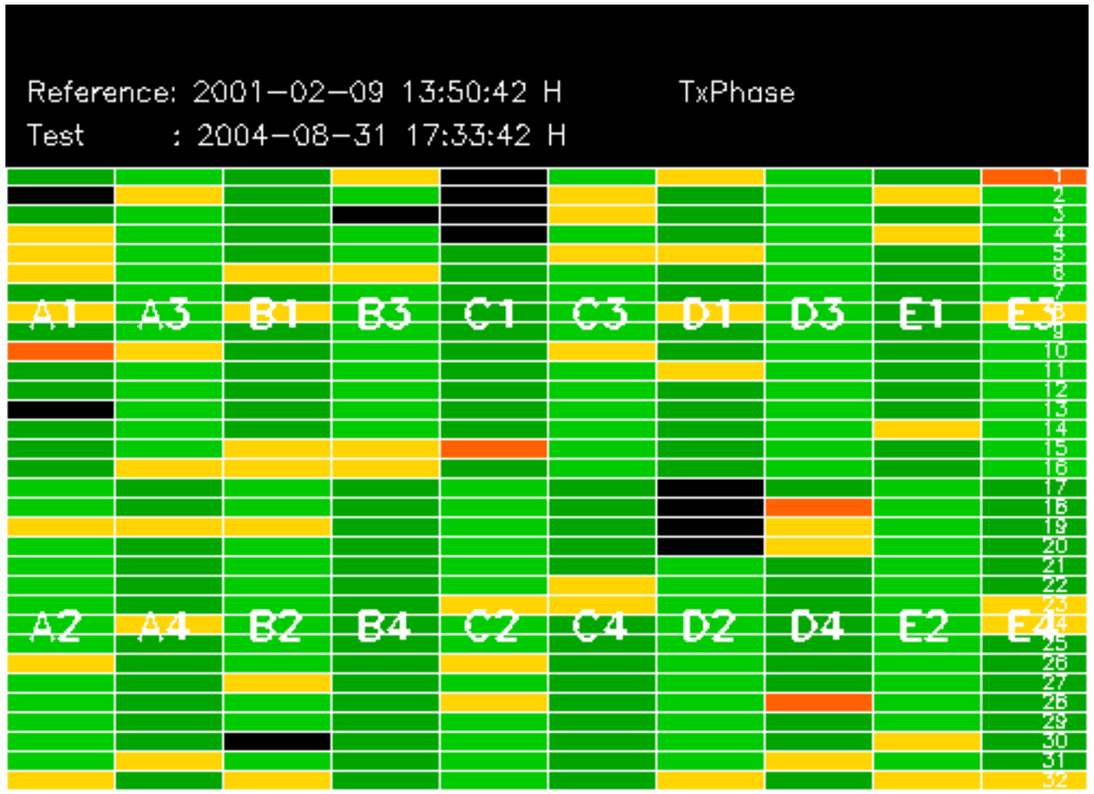
Reference: 2001-02-09 13:50:42 H
Test : 2004-08-31 17:33:42 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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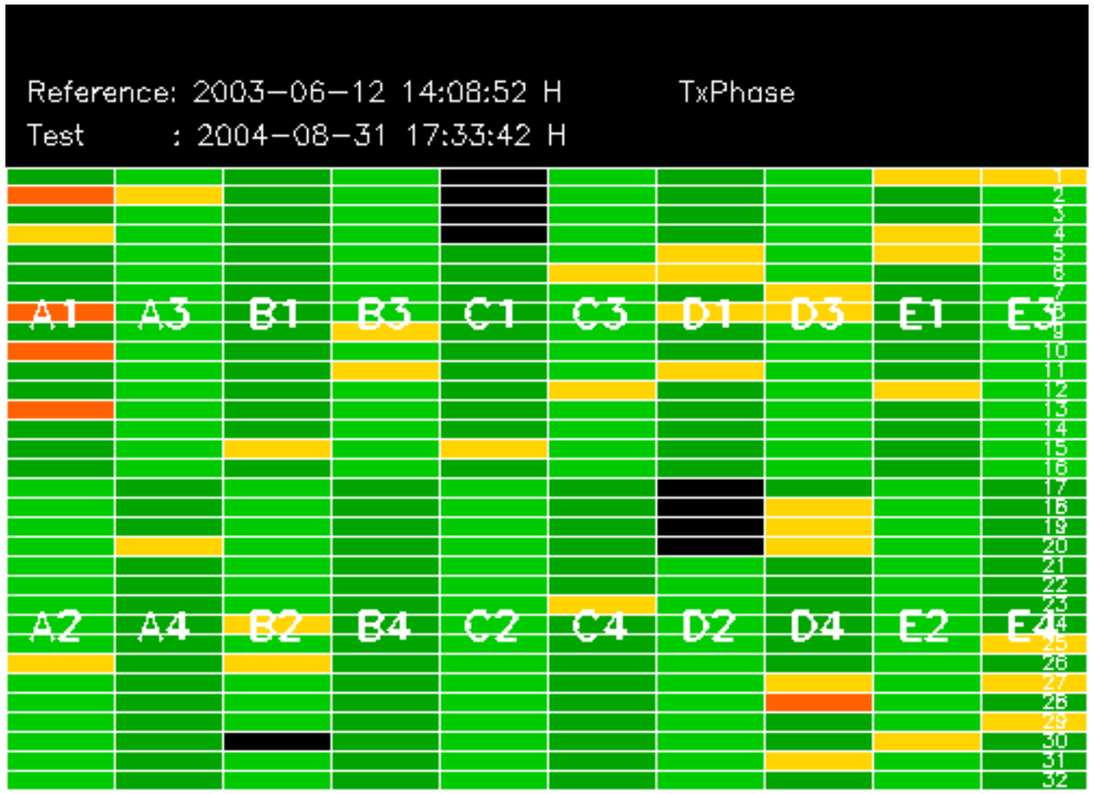
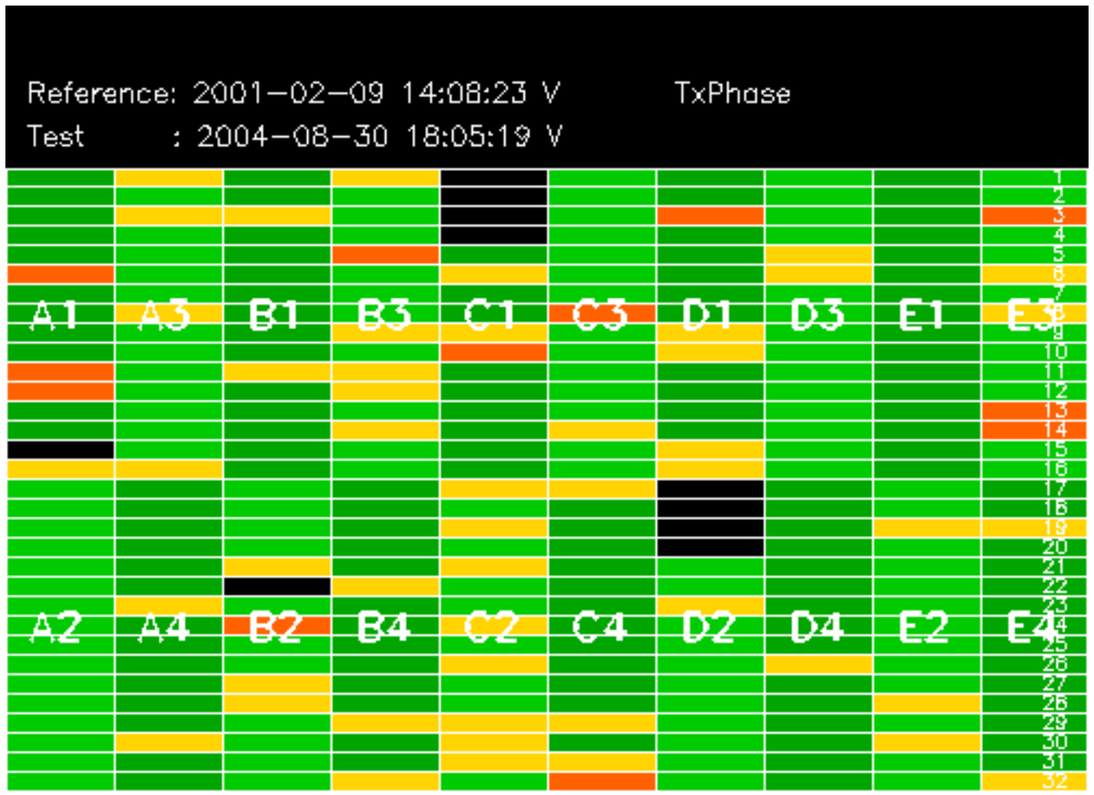
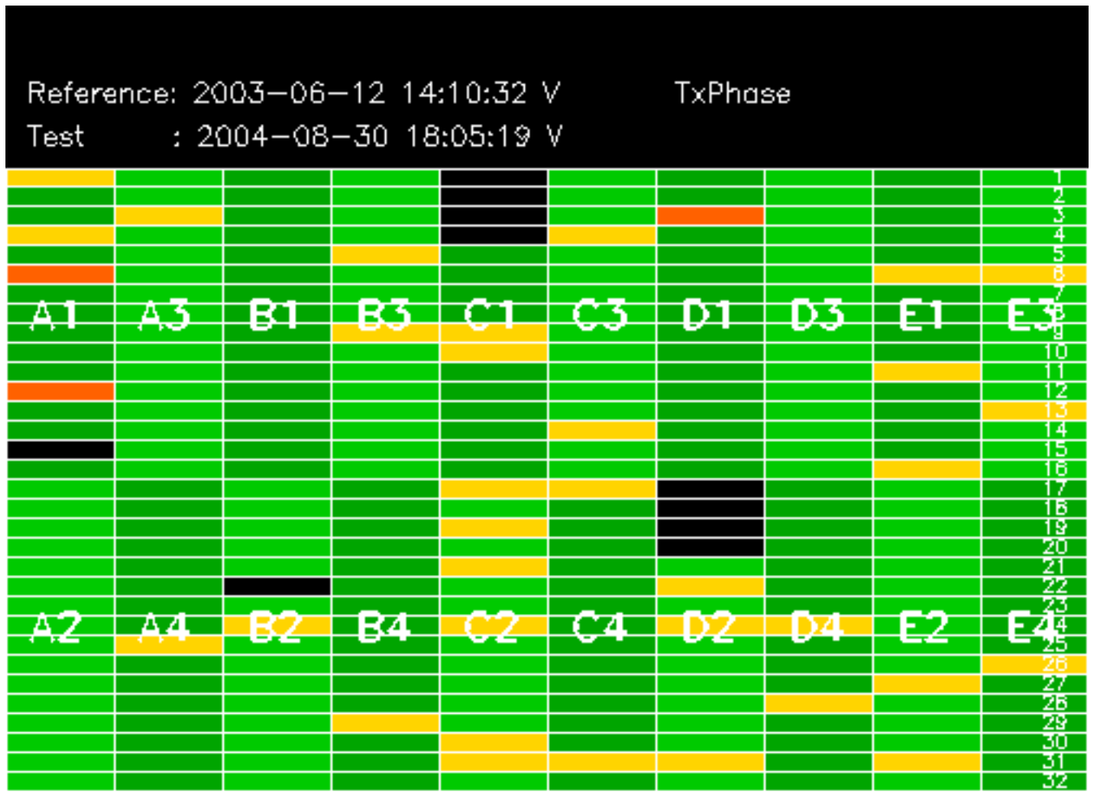

Reference: 2003-06-12 14:08:52 H
Test : 2004-08-31 17:33:42 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-30 18:05:19 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 : 2004-08-30 18:05:19 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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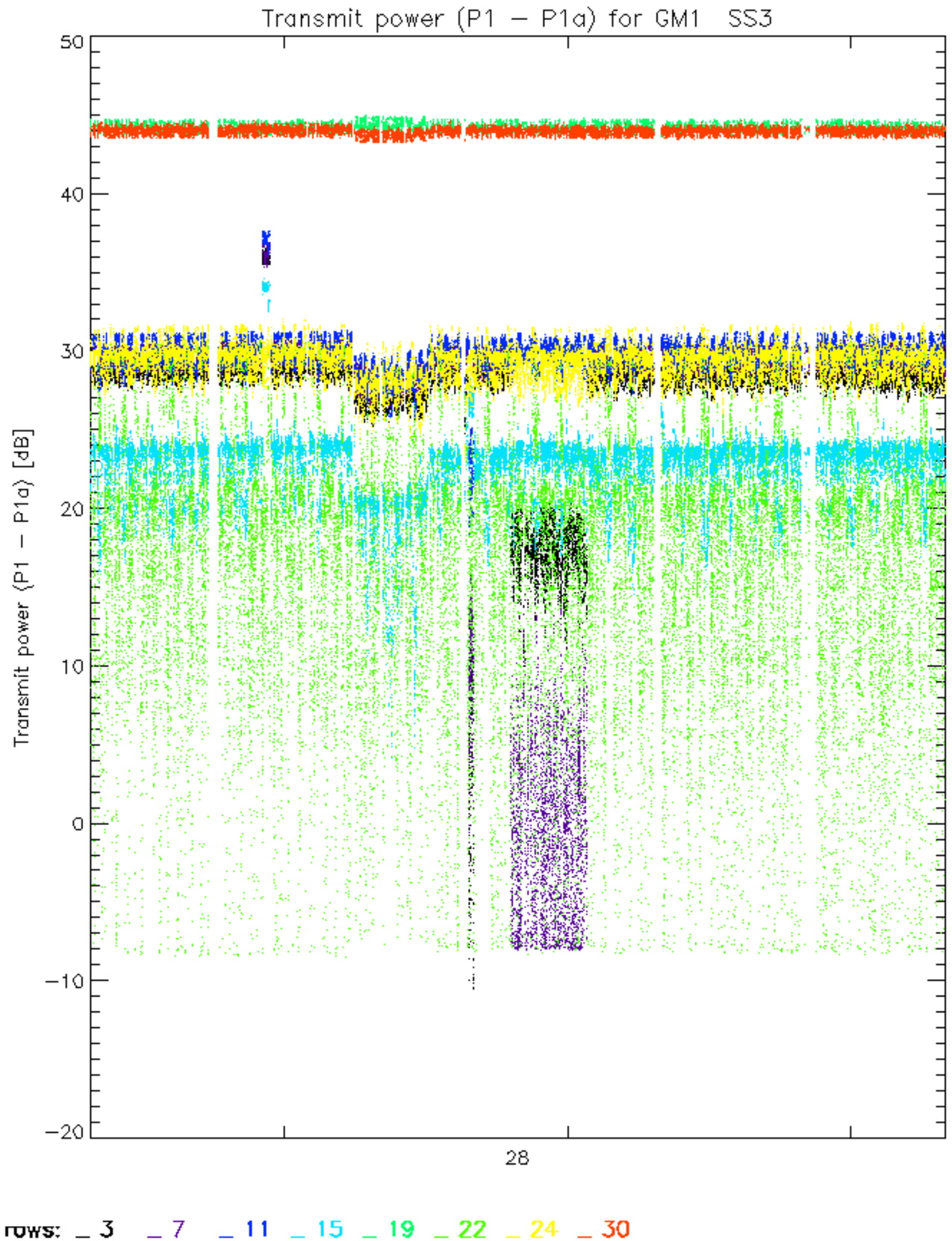
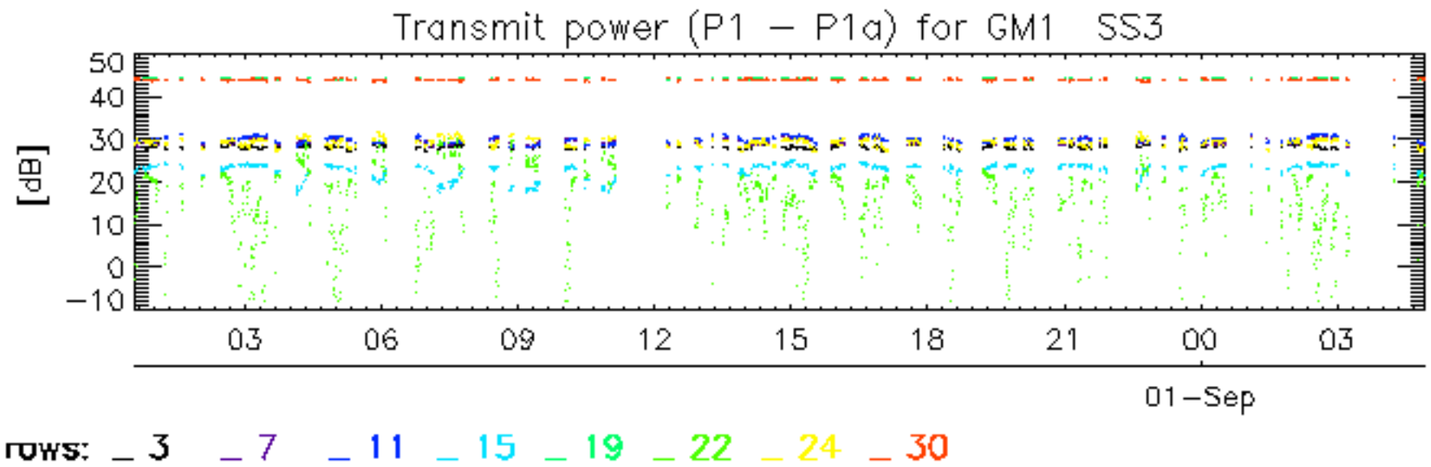
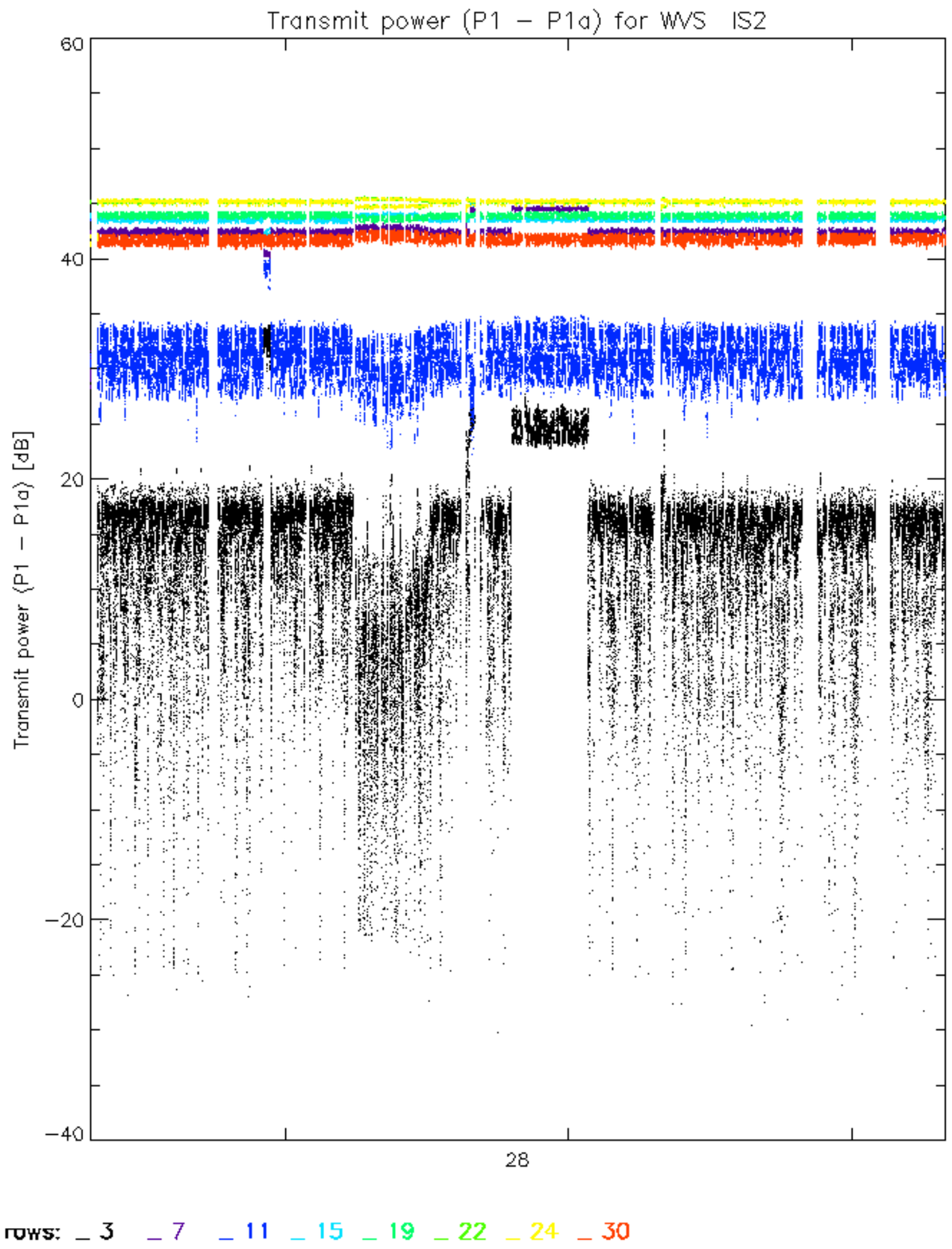
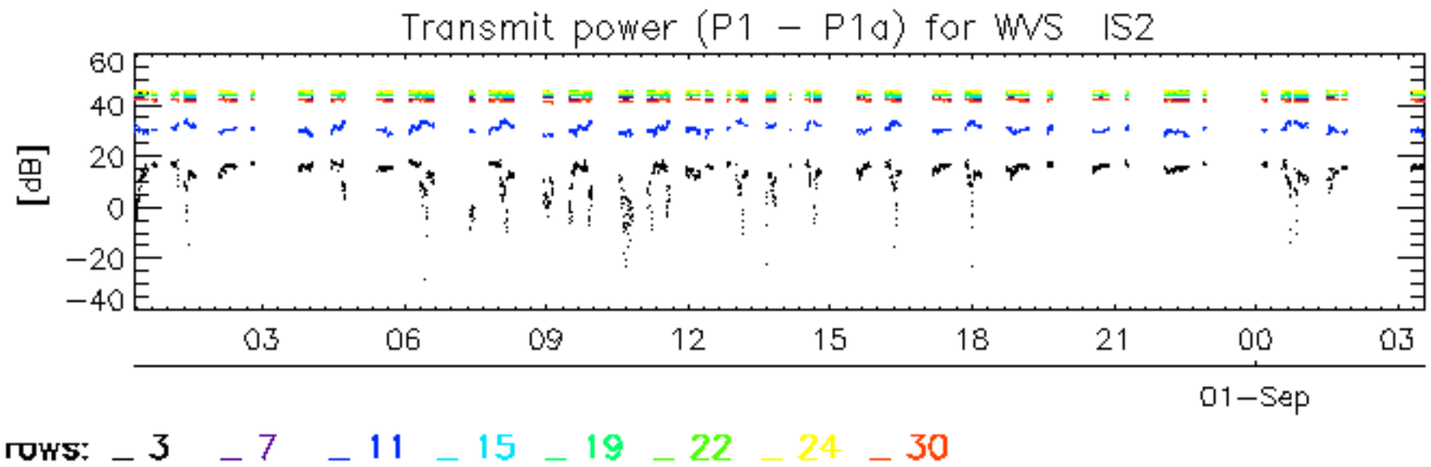

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
28
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
01−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
28
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
60
40
20
0
−20
−40
03
06
09
12
15
18
21
00
03
01–Sep
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.