PRELIMINARY REPORT OF 050827

last update on Sat Aug 27 10:50:01 GMT 2005

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 - Auxiliary files

Summary of the auxiliary files used from 2005-08-26 00:00:00 to 2005-08-27 10:50:01

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

2.3 - Browse Visual Inspection

2.4 - Data Analysis

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

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20050825 074720
H	20050826 071543

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	-3.313291	0.031106	0.043076

7	P1	-3.169714	0.028846	-0.039330
11	P1	-4.718598	0.032980	-0.033468
15	P1	-5.607083	0.049553	-0.076605
19	P1	-3.807410	0.004143	-0.044984
22	P1	-4.647466	0.110317	0.192706
26	P1	-4.854452	0.145275	0.195460
30	P1	-7.258488	0.145753	0.142240
3	P1	-15.539276	0.078267	0.019056
7	P1	-15.537675	0.157398	-0.144135
11	P1	-21.787106	0.281996	-0.169202
15	P1	-11.294563	0.072380	-0.027467
19	P1	-14.501885	0.035719	-0.081719
22	P1	-15.644961	0.340095	0.265686
26	P1	-17.300125	0.191511	0.094942
30	P1	-17.788933	0.443135	-0.332676

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.790609	0.085148	0.152426
7	P2	-21.937403	0.100702	0.184164
11	P2	-13.517672	0.107255	0.208178
15	P2	-7.059766	0.090622	0.065816
19	P2	-9.590174	0.095039	0.011144
22	P2	-16.825418	0.097877	0.062696
26	P2	-16.509760	0.097882	0.011503
30	P2	-18.803001	0.086195	-0.001112

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.157536	0.002812	0.002896
7	P3	-8.157536	0.002812	0.002896
11	P3	-8.157536	0.002812	0.002896
15	P3	-8.157536	0.002812	0.002896
19	P3	-8.157536	0.002812	0.002896
22	P3	-8.157536	0.002812	0.002896
26	P3	-8.157546	0.002812	0.002830
30	P3	-8.157546	0.002812	0.002830

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	-2.806758	0.097923	0.058198
7	P1	-2.969615	0.068090	0.046026
11	P1	-4.018785	0.025680	0.001464
15	P1	-3.624789	0.066191	0.005906
19	P1	-3.630112	0.014625	-0.014948
22	P1	-5.712000	0.103396	0.049515
26	P1	-7.396281	0.182498	0.188176
30	P1	-6.319112	0.103390	0.118941
3	P1	-10.935425	0.051670	-0.023379
7	P1	-10.479224	0.170242	-0.044336
11	P1	-12.646174	0.100807	0.016269
15	P1	-11.621552	0.123046	-0.165503
19	P1	-15.478963	0.061052	0.056088
22	P1	-25.485090	2.730717	0.099031
26	P1	-15.241233	0.294739	0.109801
30	P1	-20.059982	1.339523	-0.214141

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.499310	0.047844	0.191555
7	P2	-22.005772	0.037441	0.063045
11	P2	-9.549562	0.066371	0.185077
15	P2	-5.092083	0.040186	0.050302
19	P2	-6.867354	0.061149	0.065099
22	P2	-7.040827	0.040171	0.060421

26	P2	-23.960934	0.037423	0.033481
30	P2	-21.937494	0.043264	0.039719

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.997828	0.004177	-0.000612
7	P3	-7.997844	0.004170	-0.001240
11	P3	-7.997789	0.004173	-0.000956
15	P3	-7.997706	0.004177	-0.001299
19	P3	-7.997783	0.004173	-0.000986
22	P3	-7.997763	0.004173	-0.000703
26	P3	-7.997725	0.004167	-0.000491
30	P3	-7.997738	0.004162	-0.000909

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	0.000445698
	stdev	2.26838e-07
MEAN Q	mean	0.000475664
	stdev	2.37280e-07

☒

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127214
	stdev	0.00100253
STDEV Q	mean	0.127468
	stdev	0.00101247

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2005082[567]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines

7 - Doppler Analysis

Preliminary report.The data is not yet controled

7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.3 - Doppler evolution versus ANX for WVS

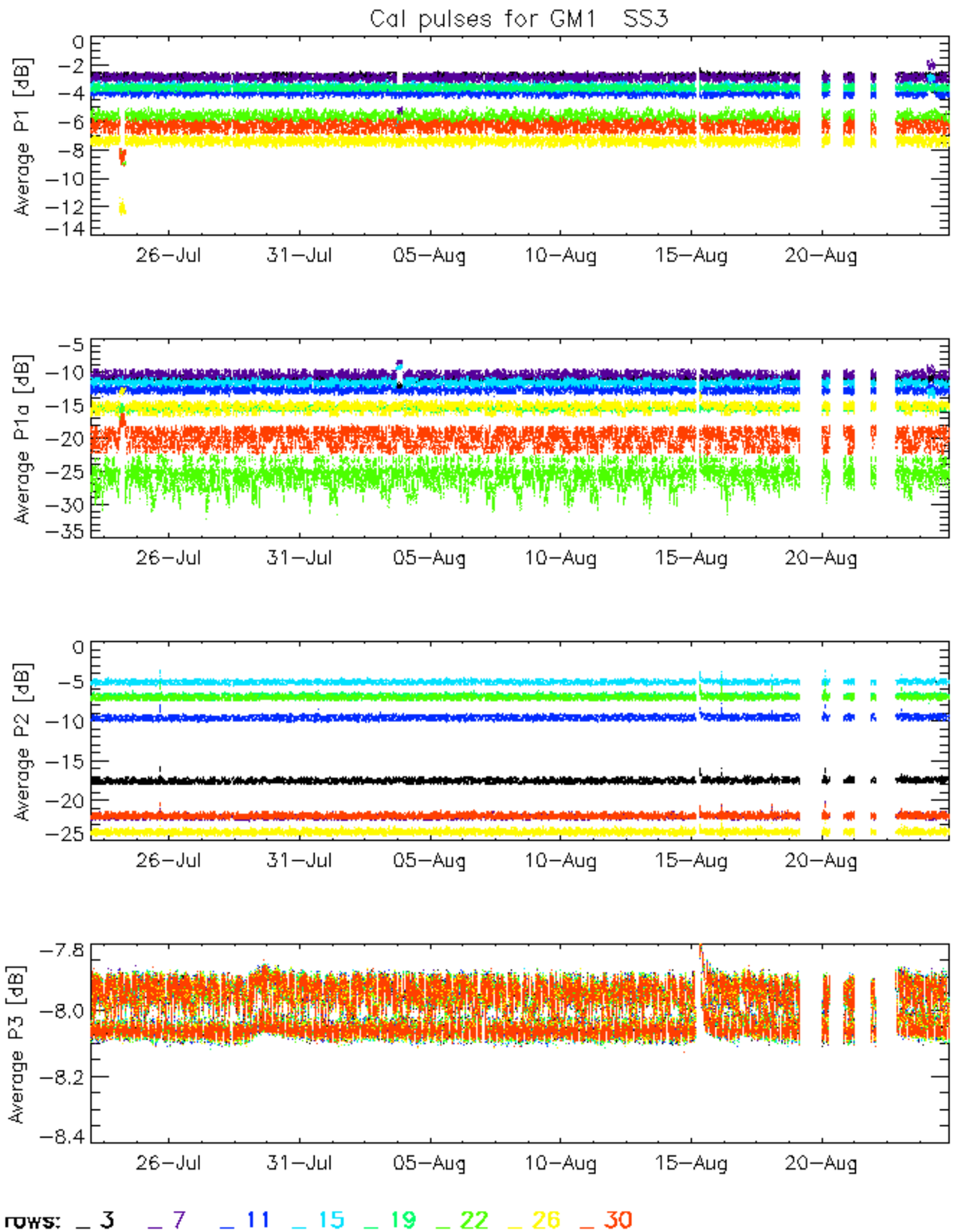
7.4 - Unbiased Doppler Error for GM1

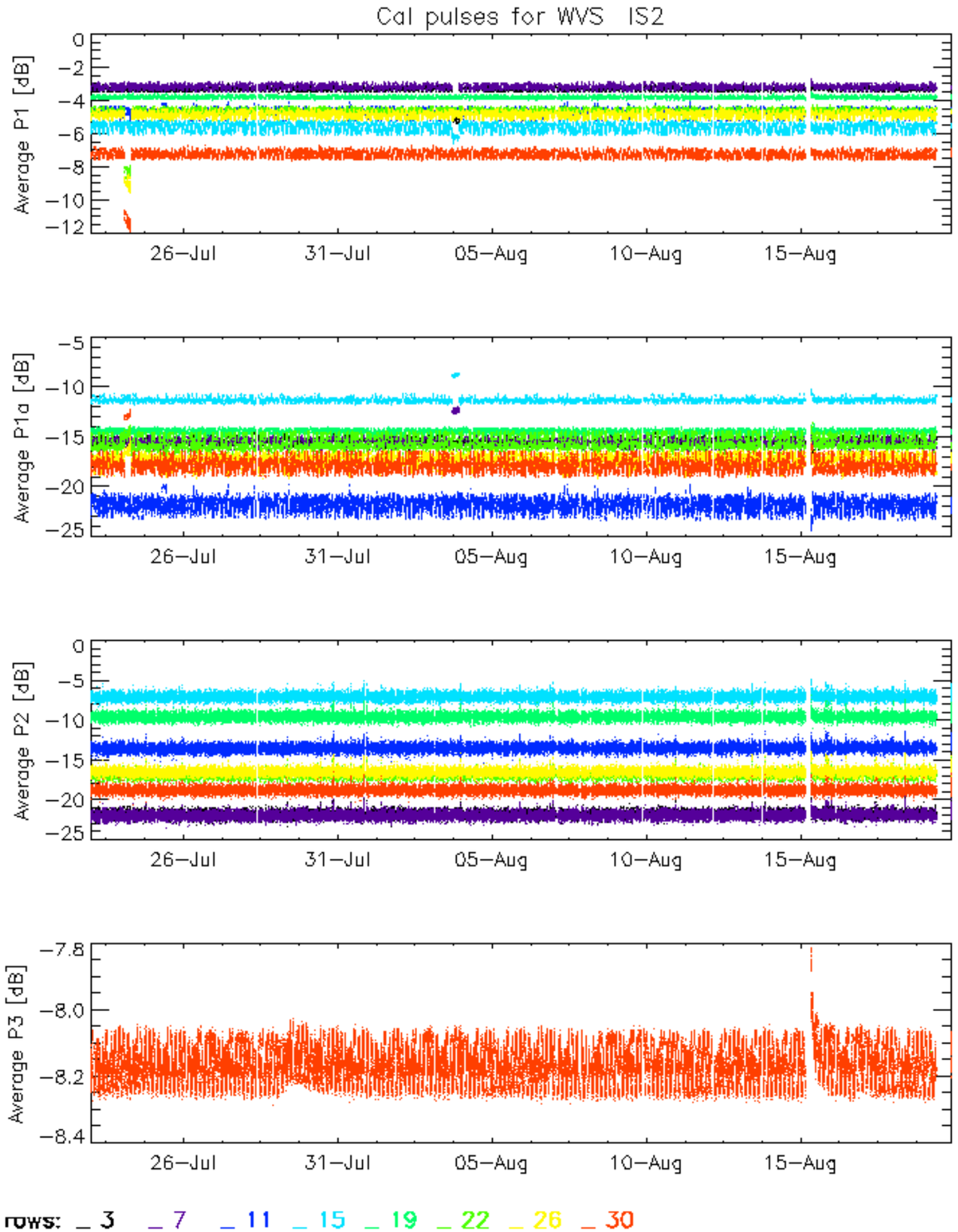
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

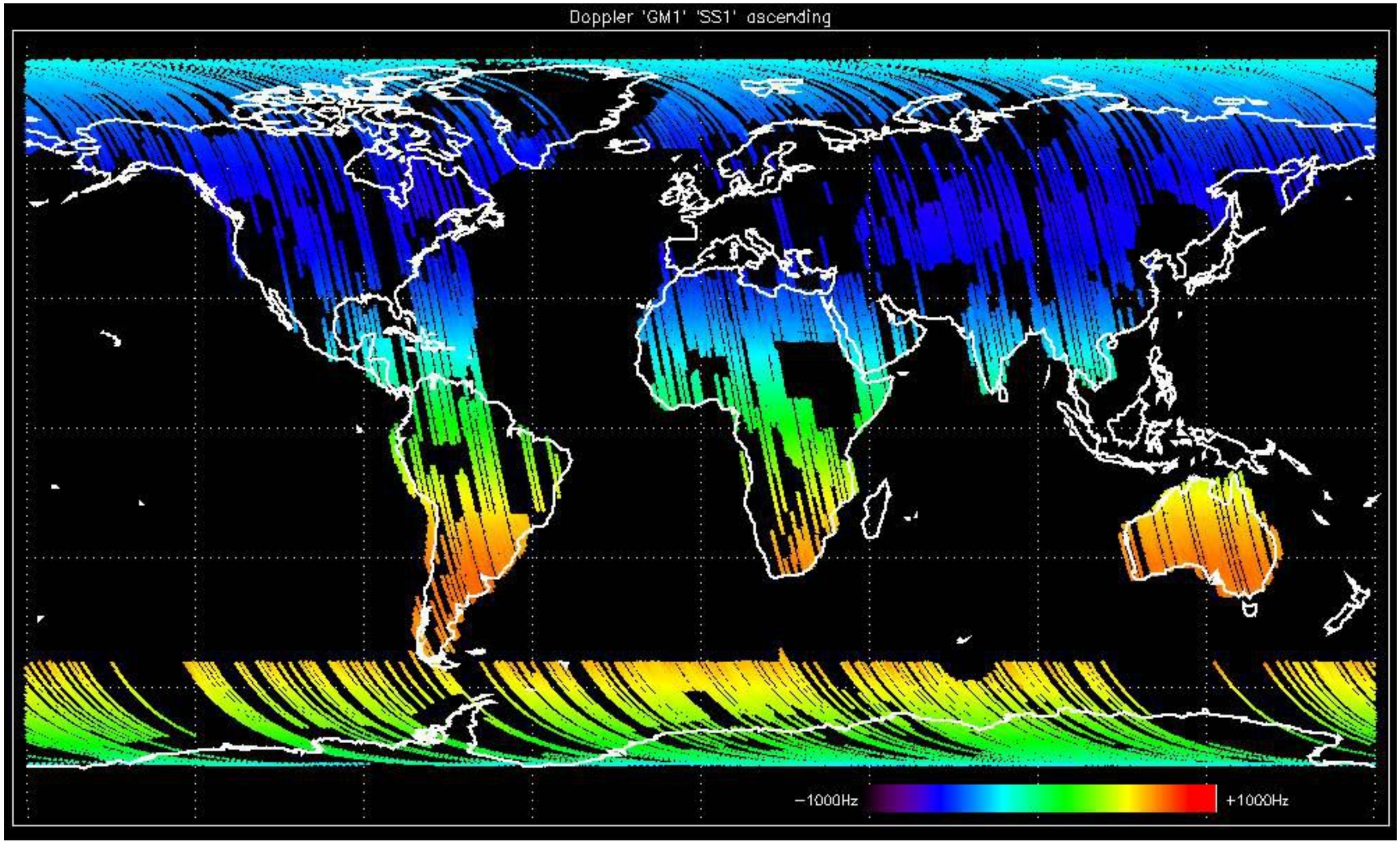

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
−14
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
20−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
−30
−35
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

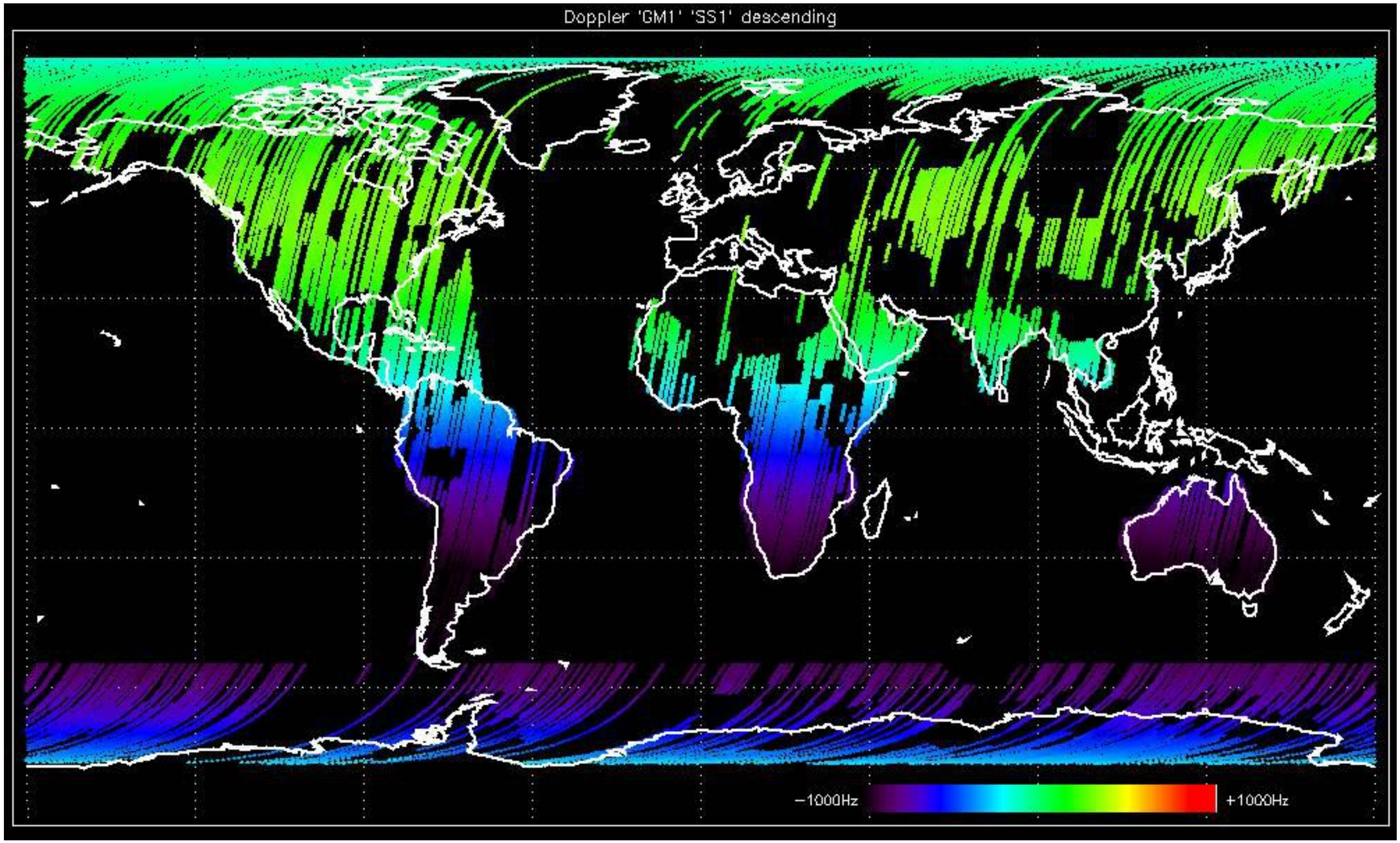

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

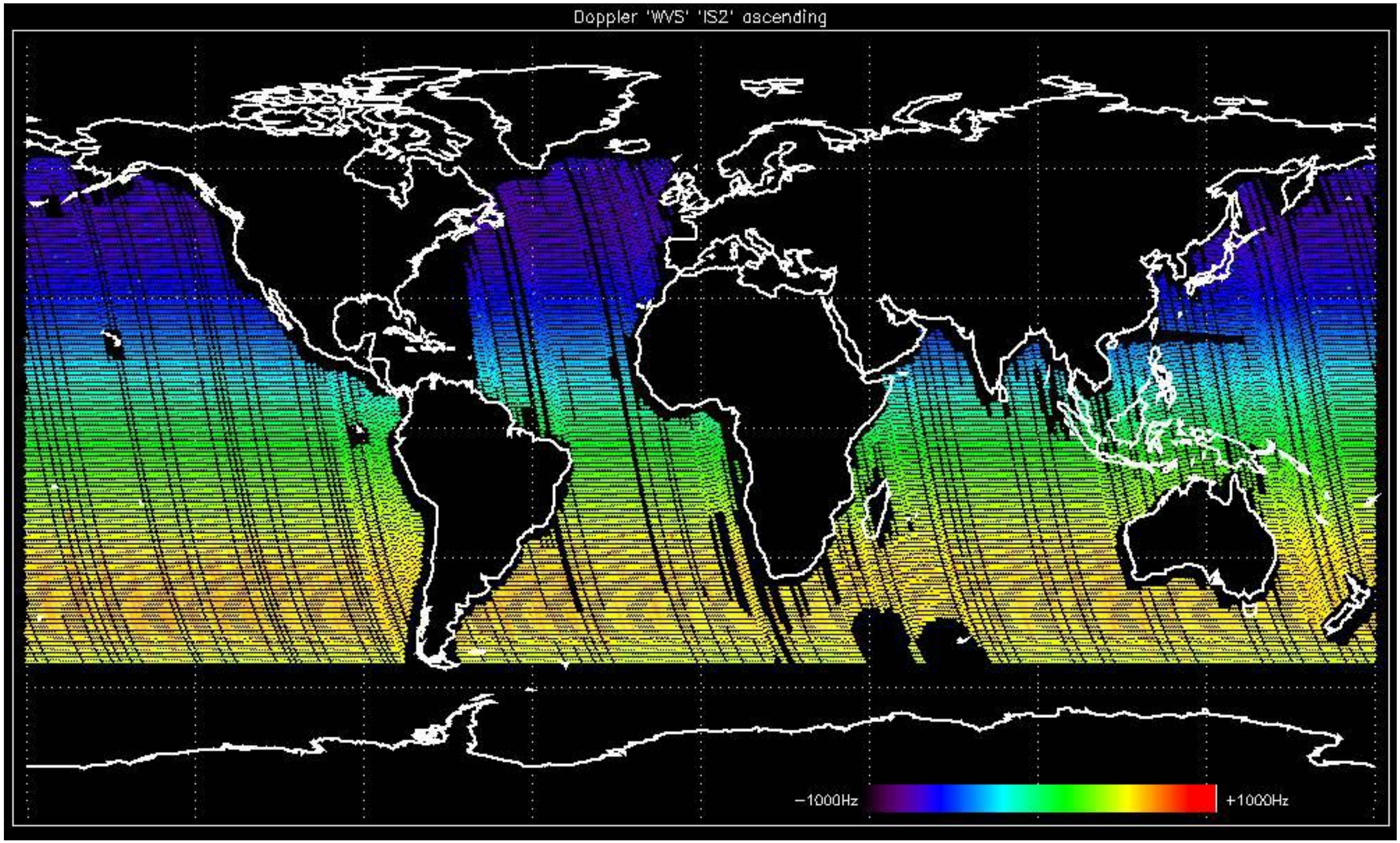
No anomalies observed.

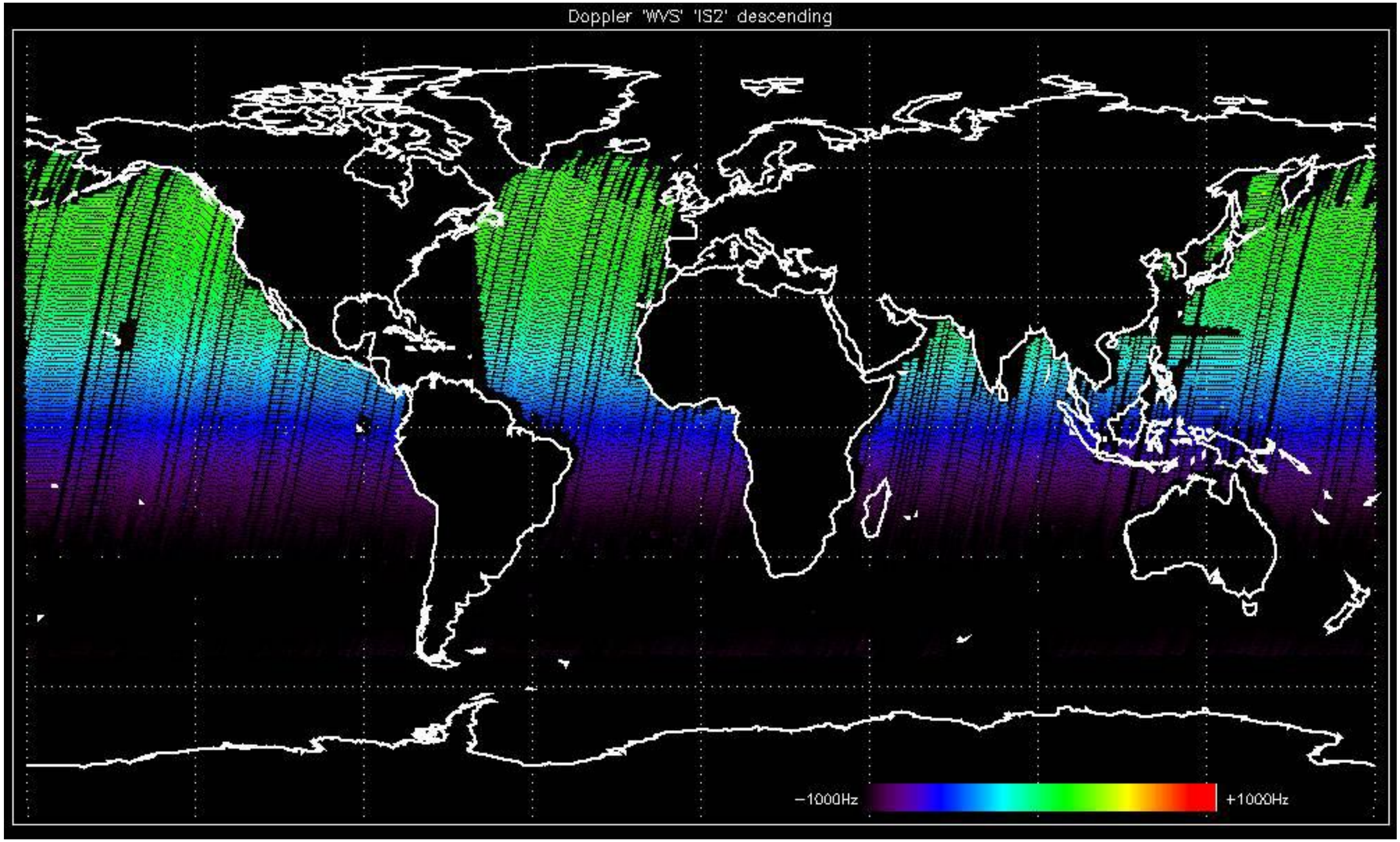
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

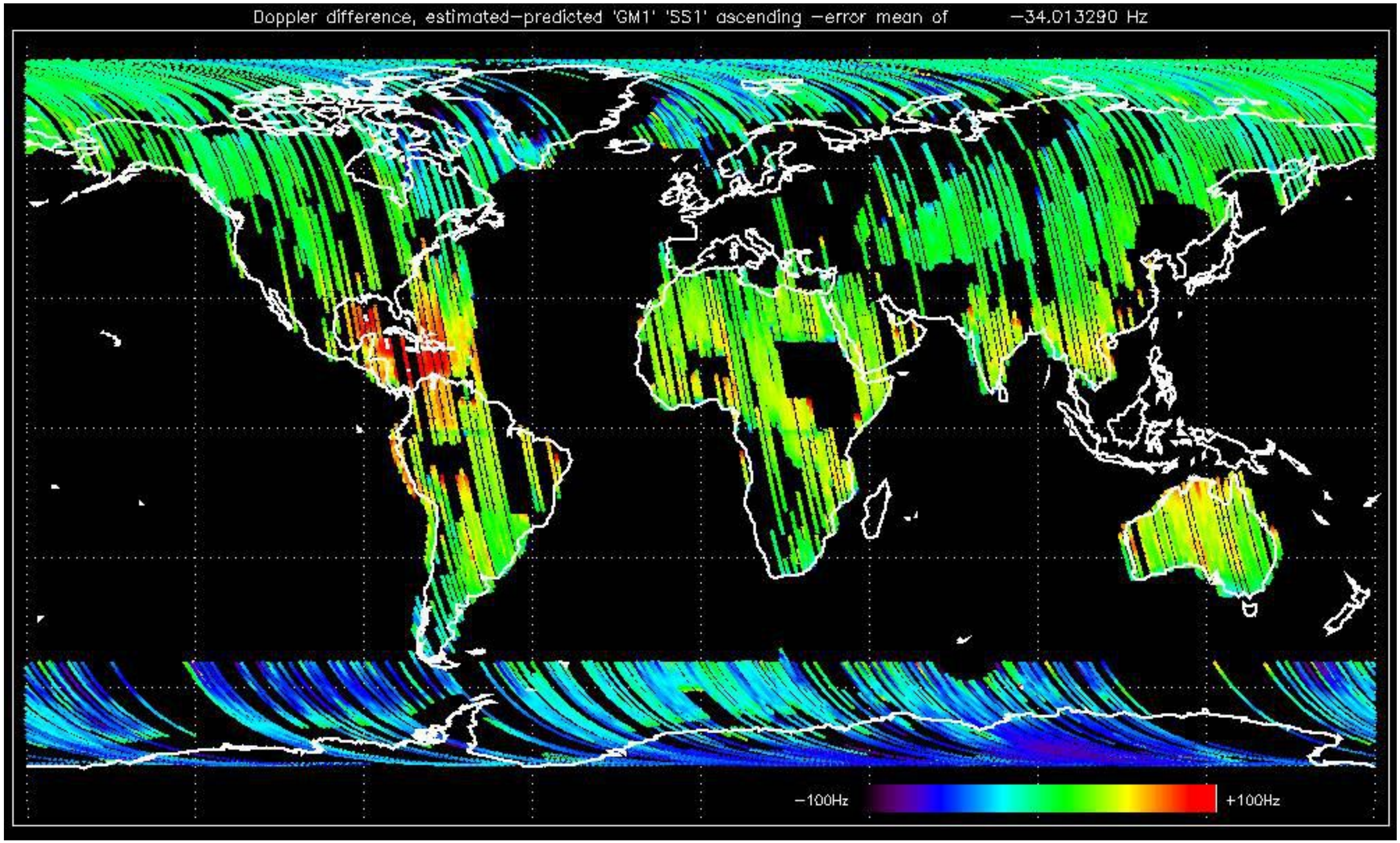
Preliminary report.The data is not yet controled

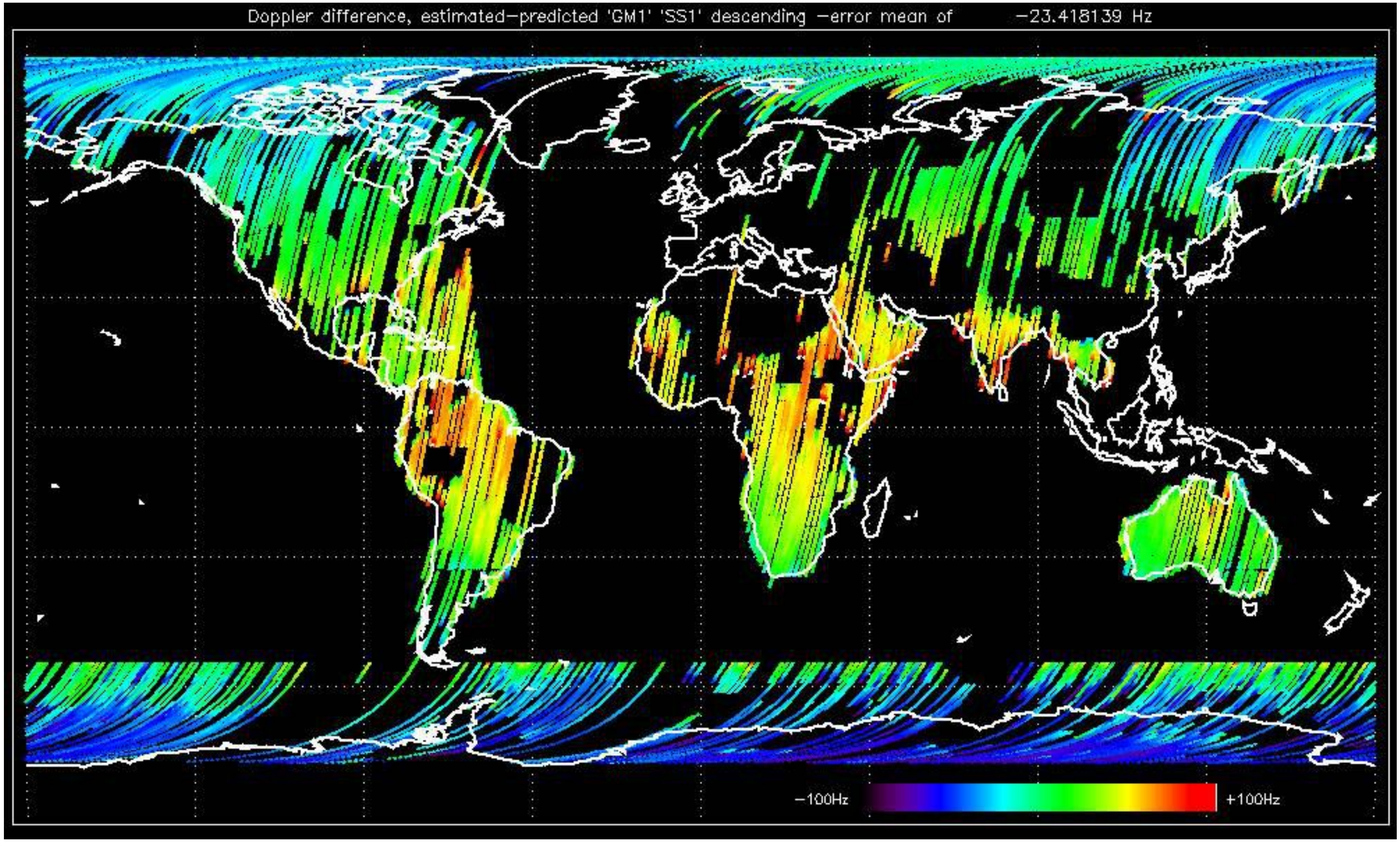

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

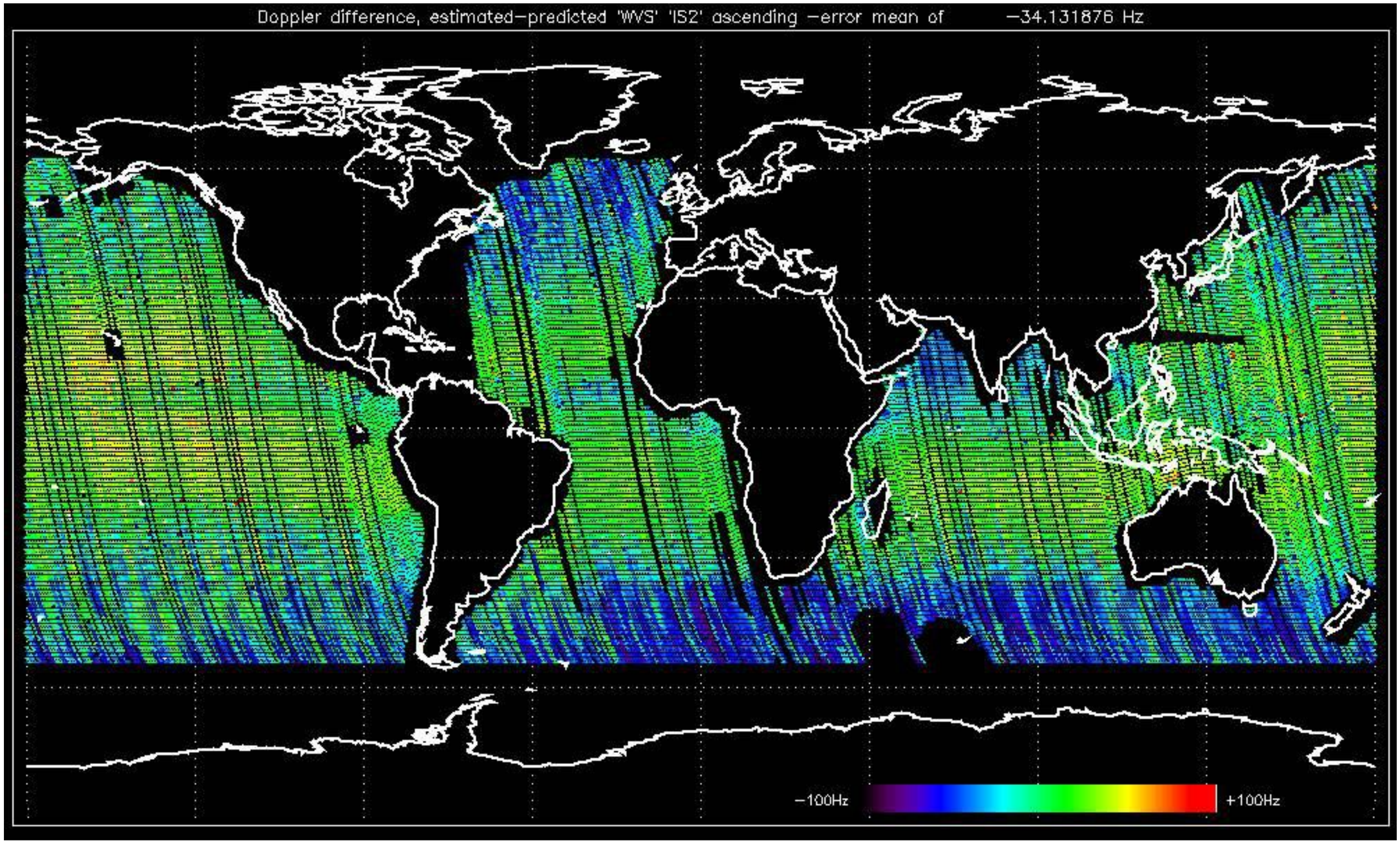

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

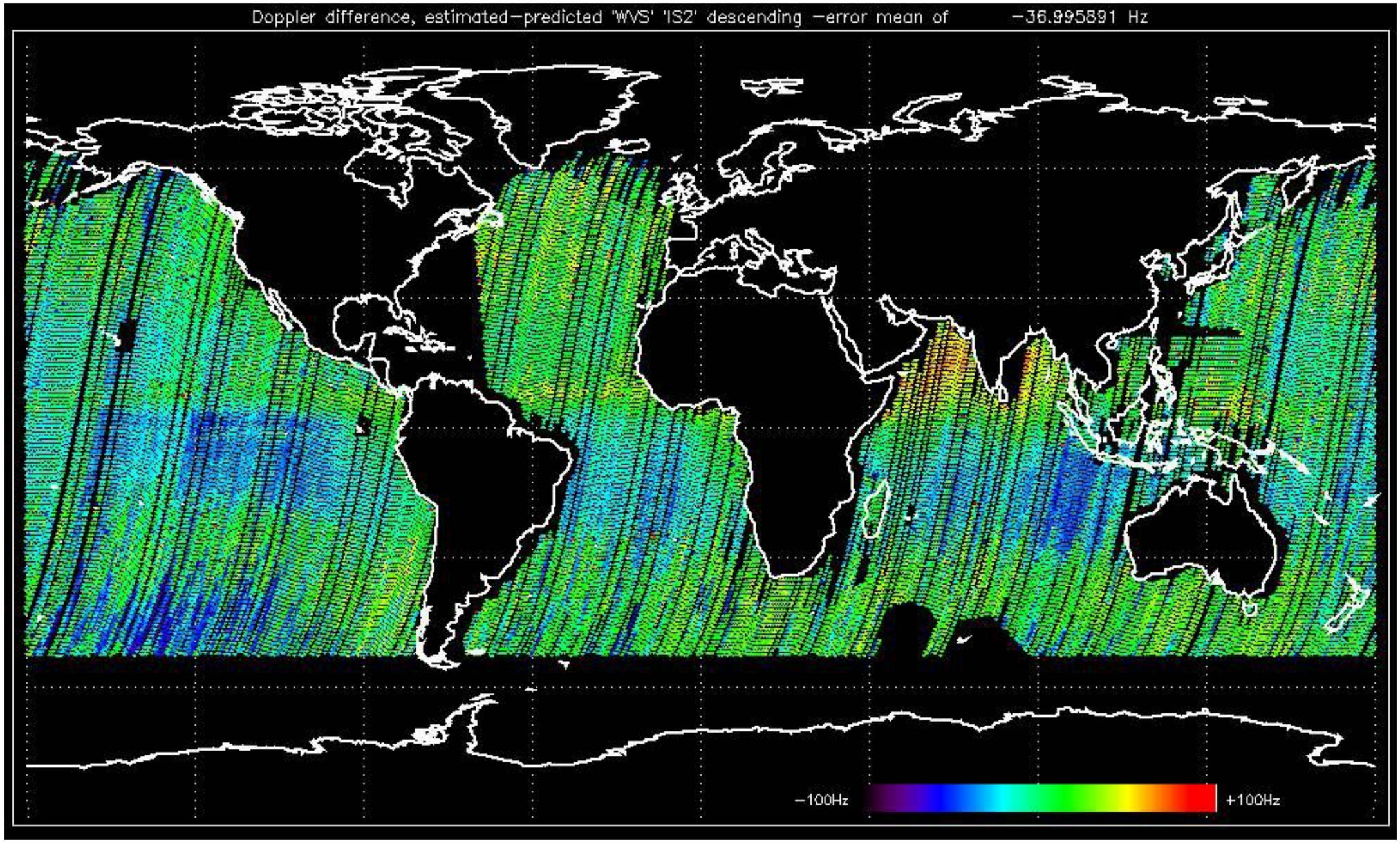

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −34.013290 Hz
−100Hz
+100Hz

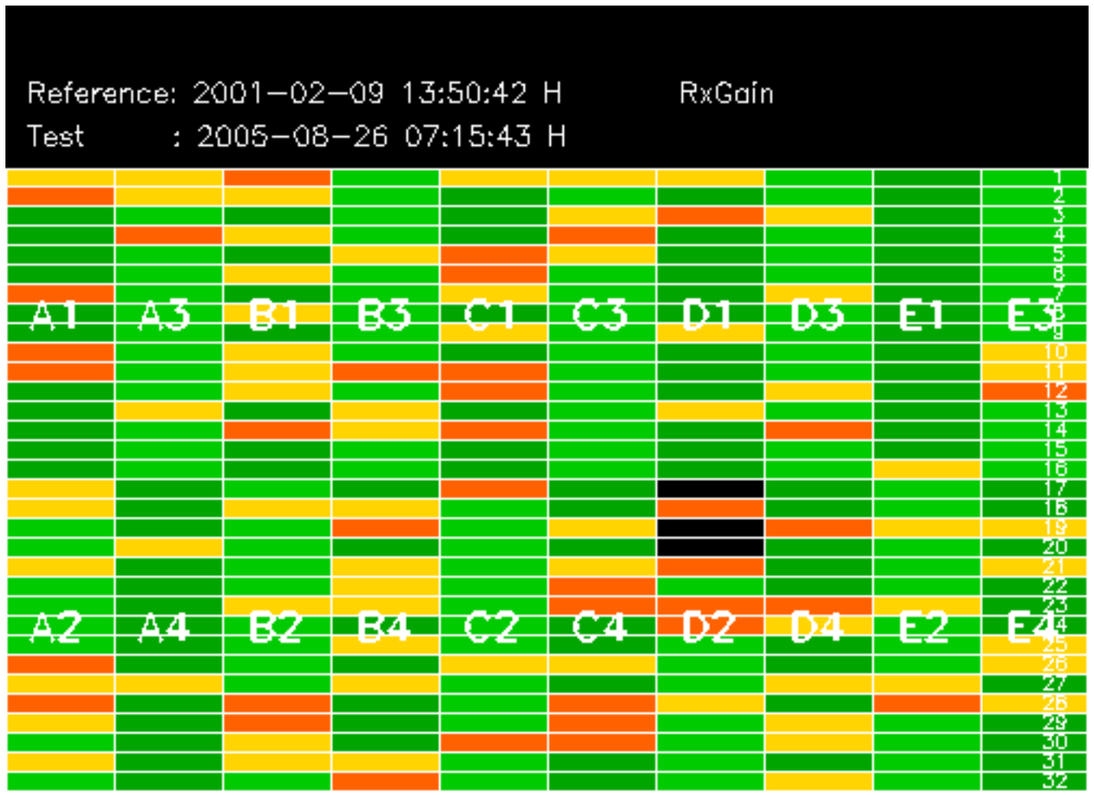

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.418139 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −34.131876 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.995891 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2005-08-26 07:15:43 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
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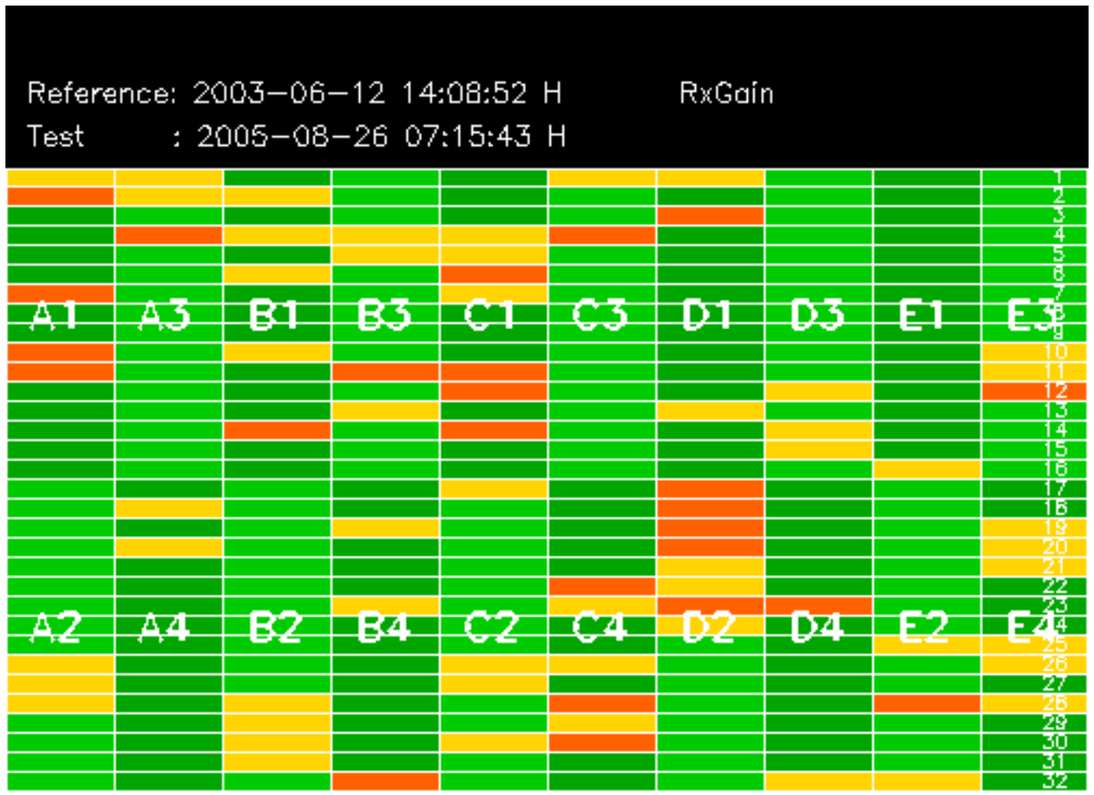
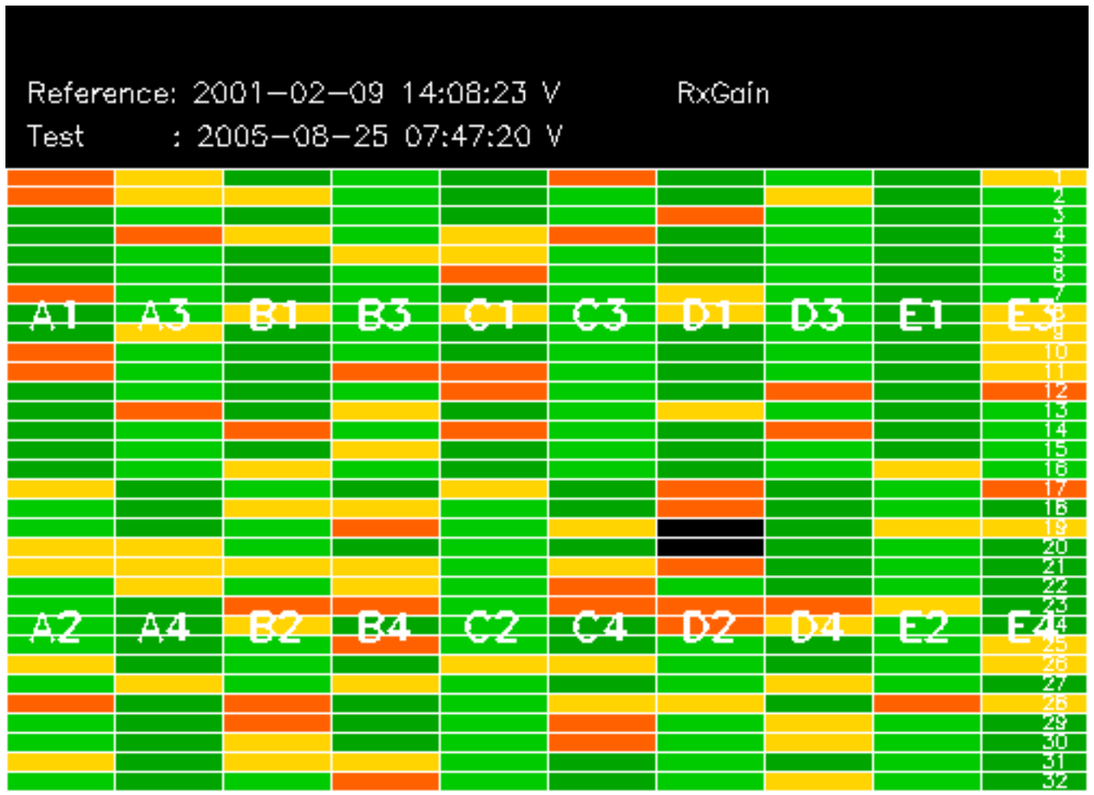
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-08-26 07:15:43 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 : 2005-08-25 07:47:20 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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9
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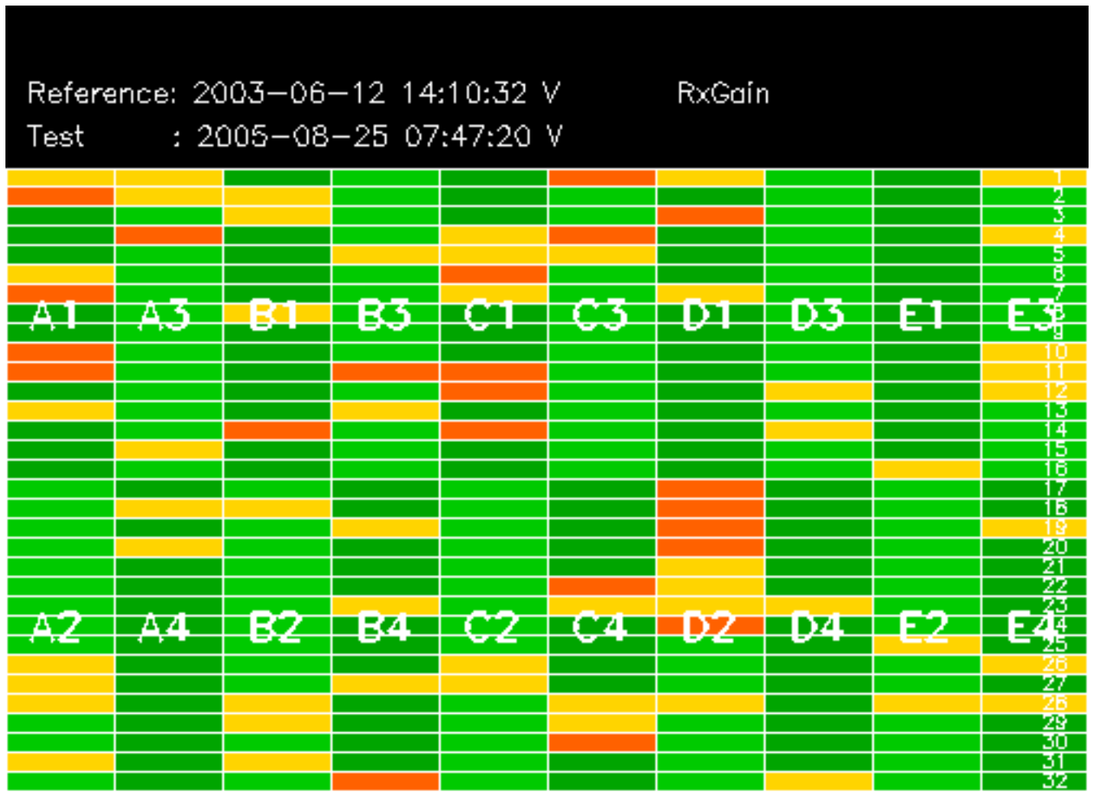
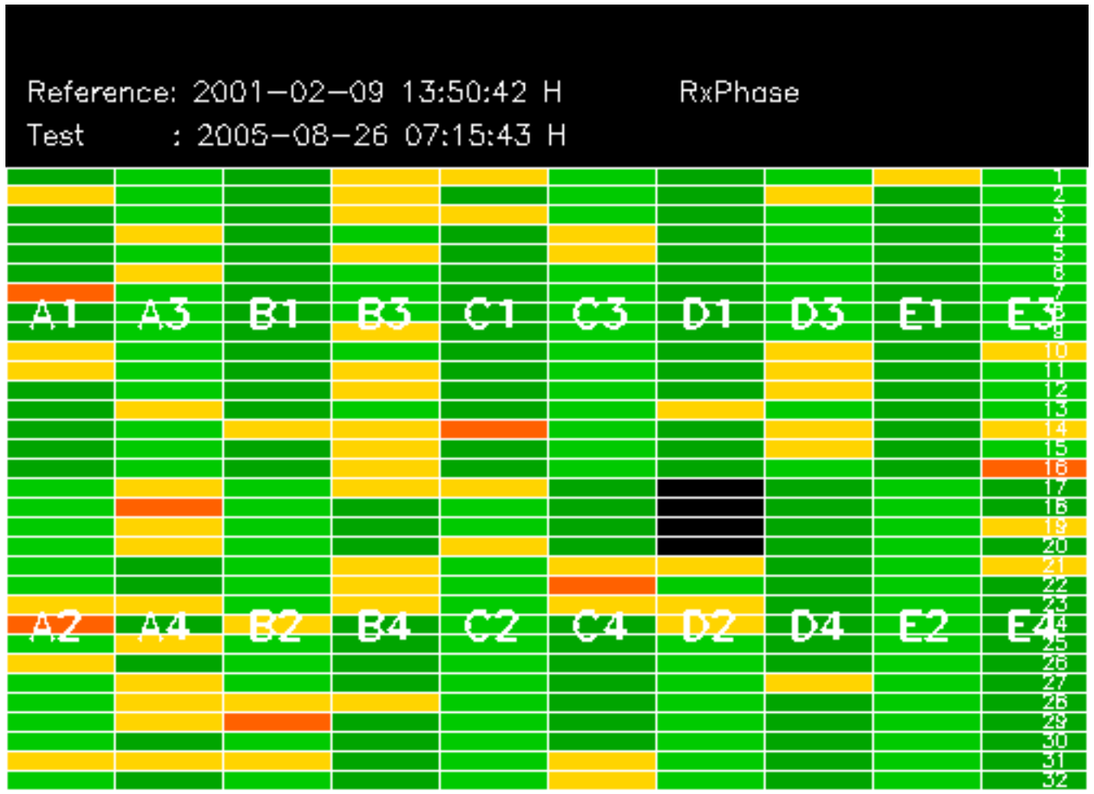

Reference: 2003-06-12 14:10:32 V
Test : 2005-08-25 07:47:20 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-08-26 07:15:43 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
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8
9
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22
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24
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26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-08-26 07:15:43 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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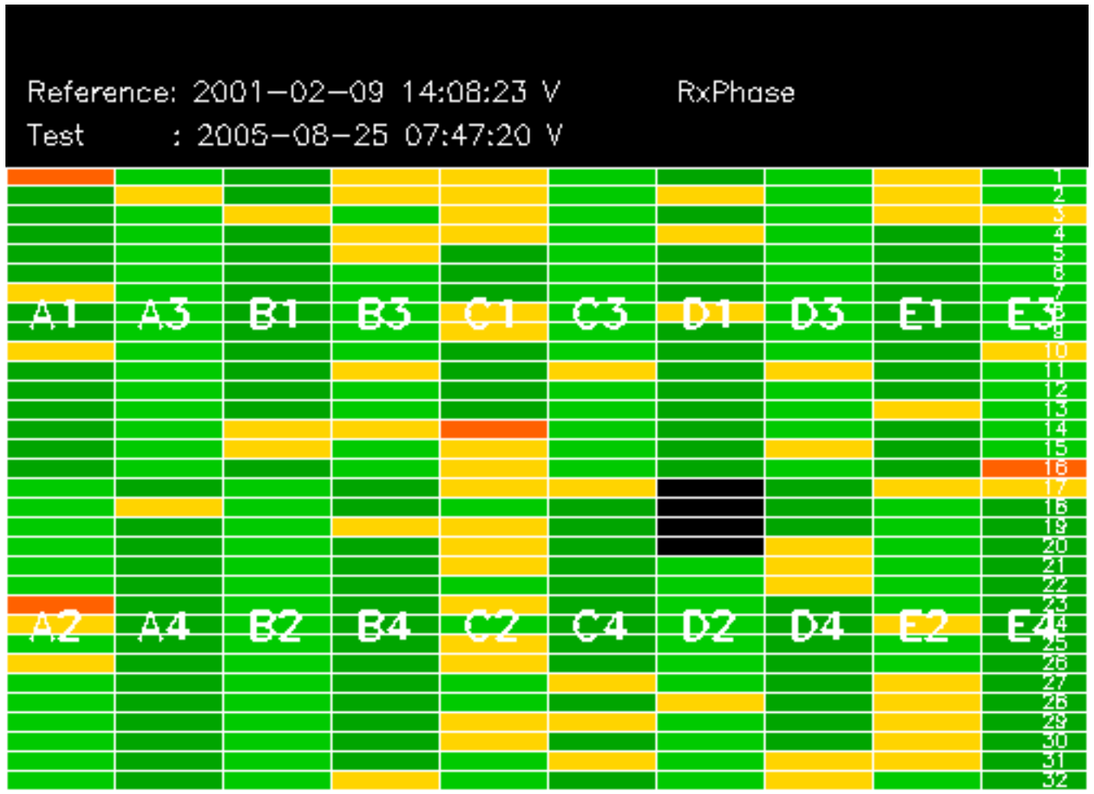
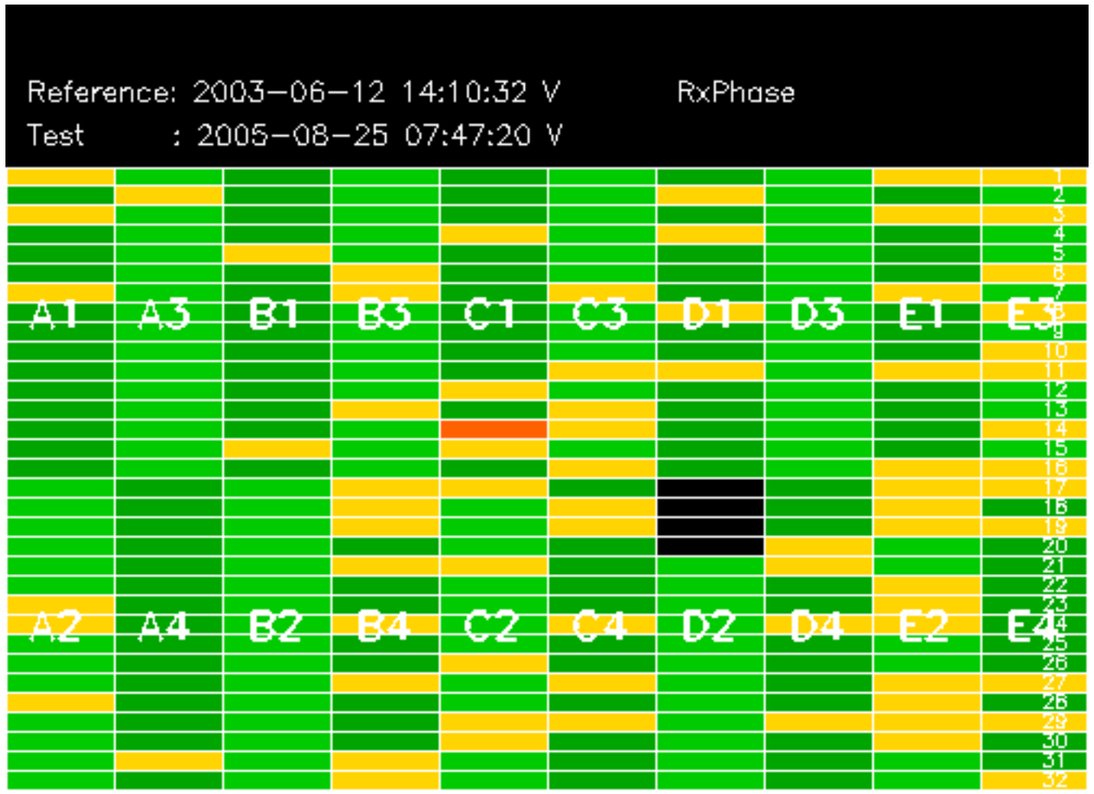
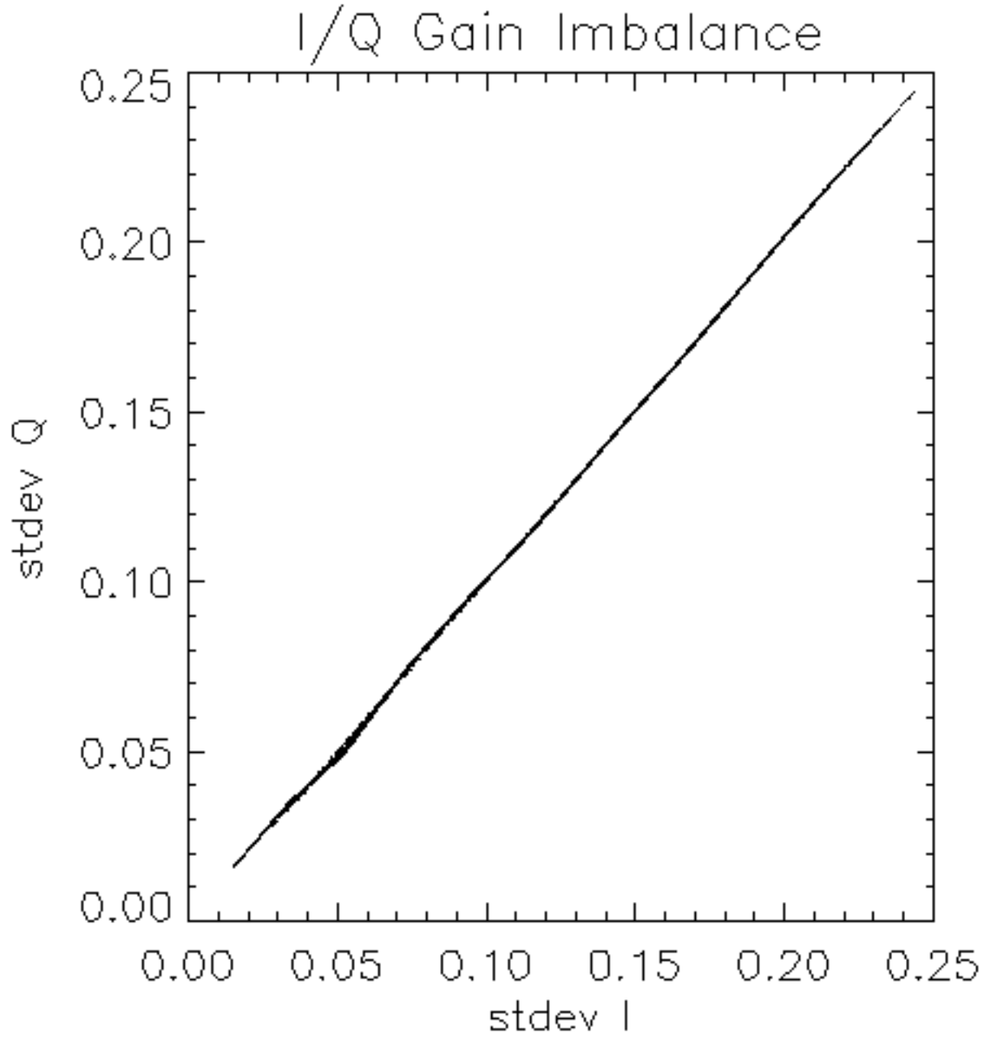
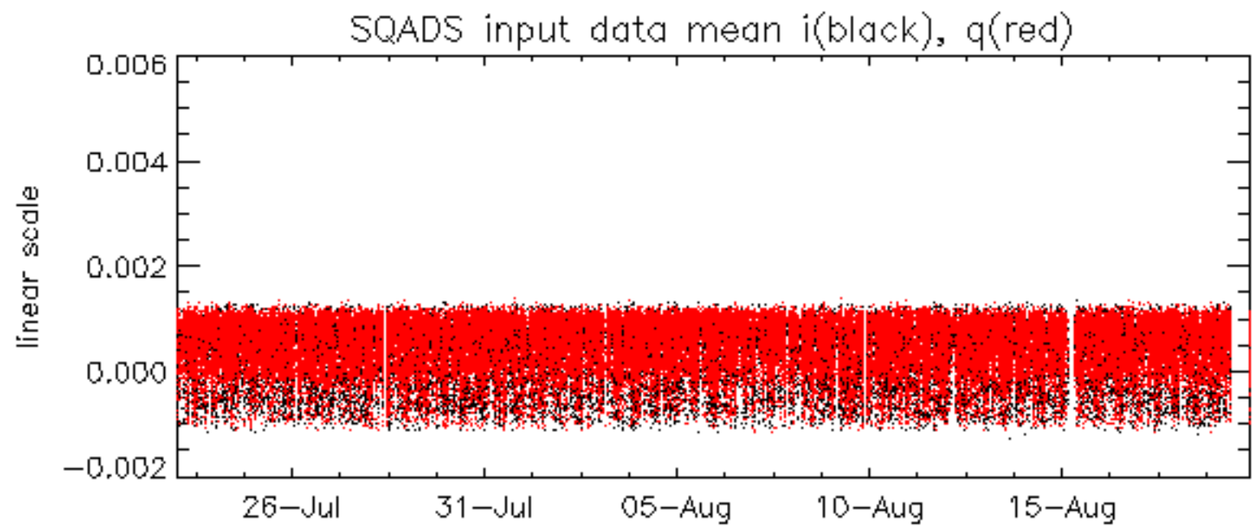
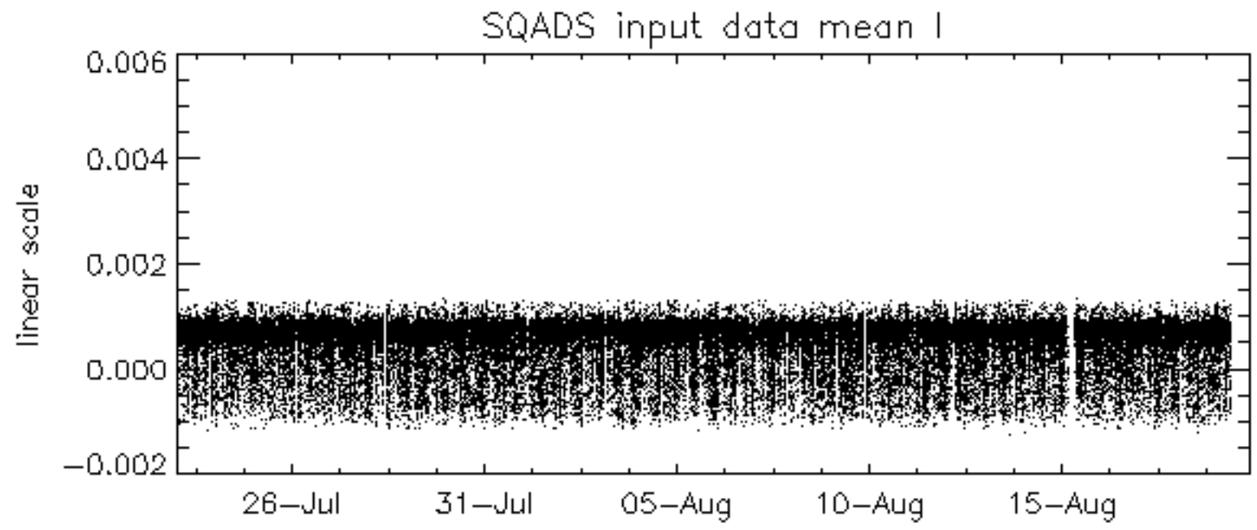
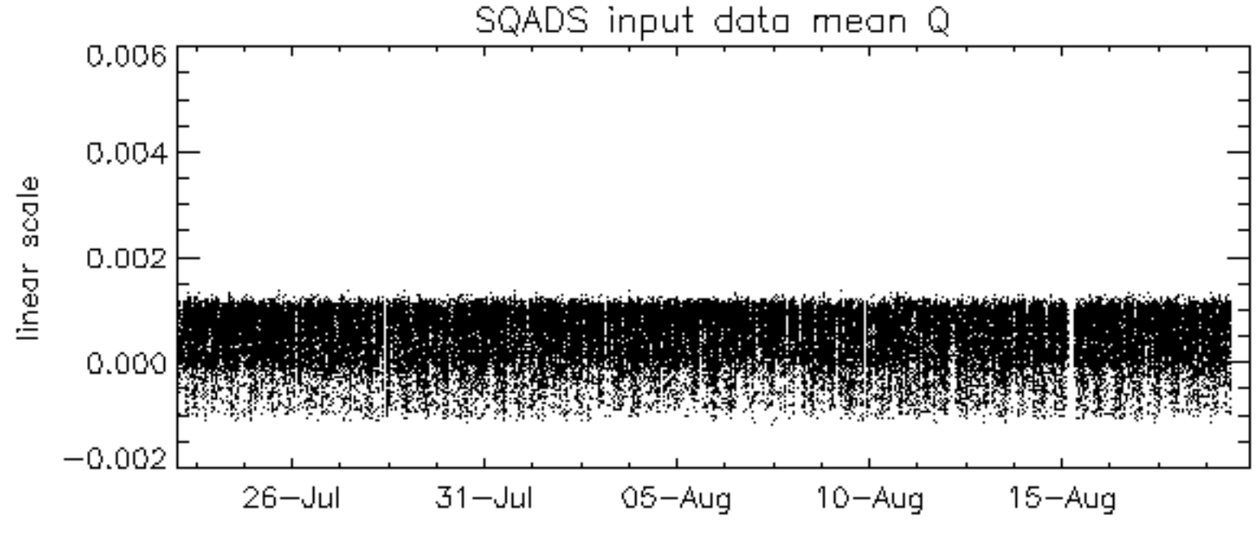

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2005-08-25 07:47:20 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

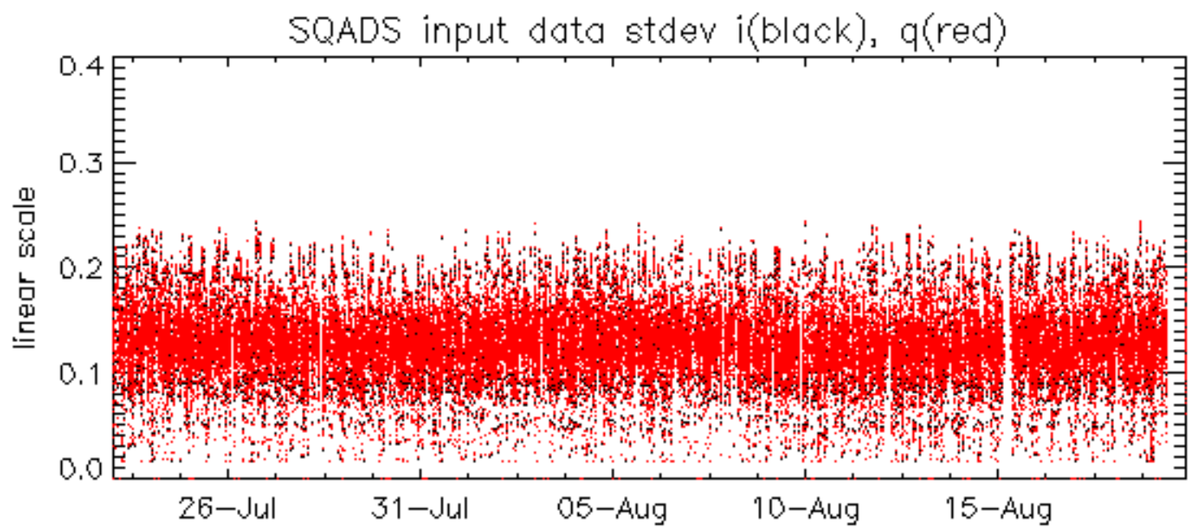

Reference: 2003-06-12 14:10:32 V
Test : 2005-08-25 07:47:20 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

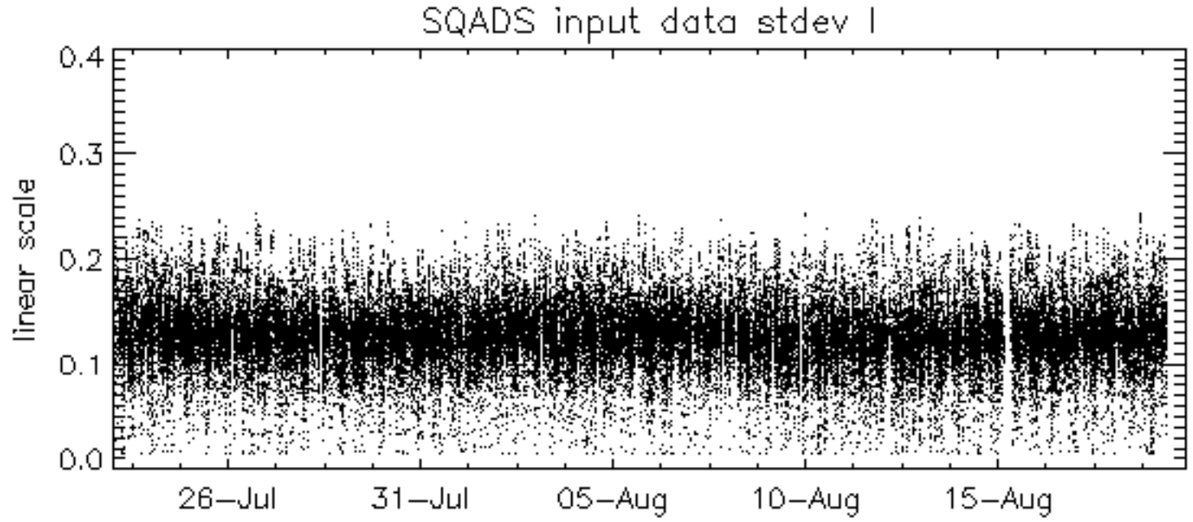

I/Q Gain Imbalance
stdev Q
0.25
0.20
0.15
0.10
0.05
0.00
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

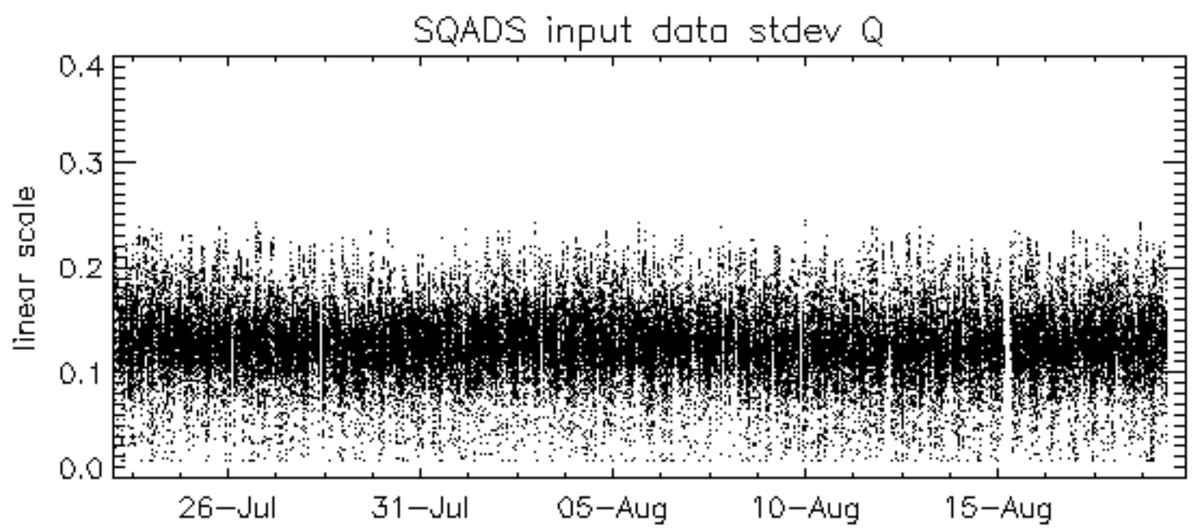

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug

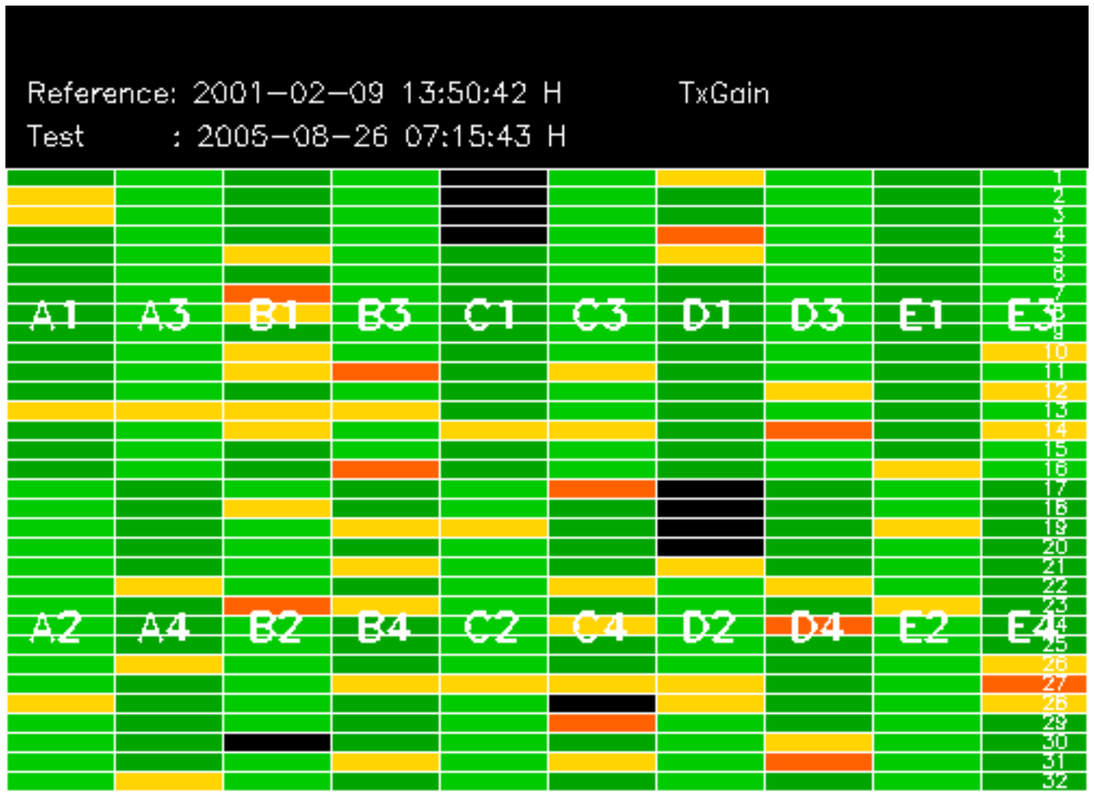

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jul
31−Jul
05−Aug
10−Aug
15−Aug


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


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jul
31–Jul
05–Aug
10–Aug
15–Aug


Reference: 2001-02-09 13:50:42 H
Test : 2005-08-26 07:15:43 H
TxGain
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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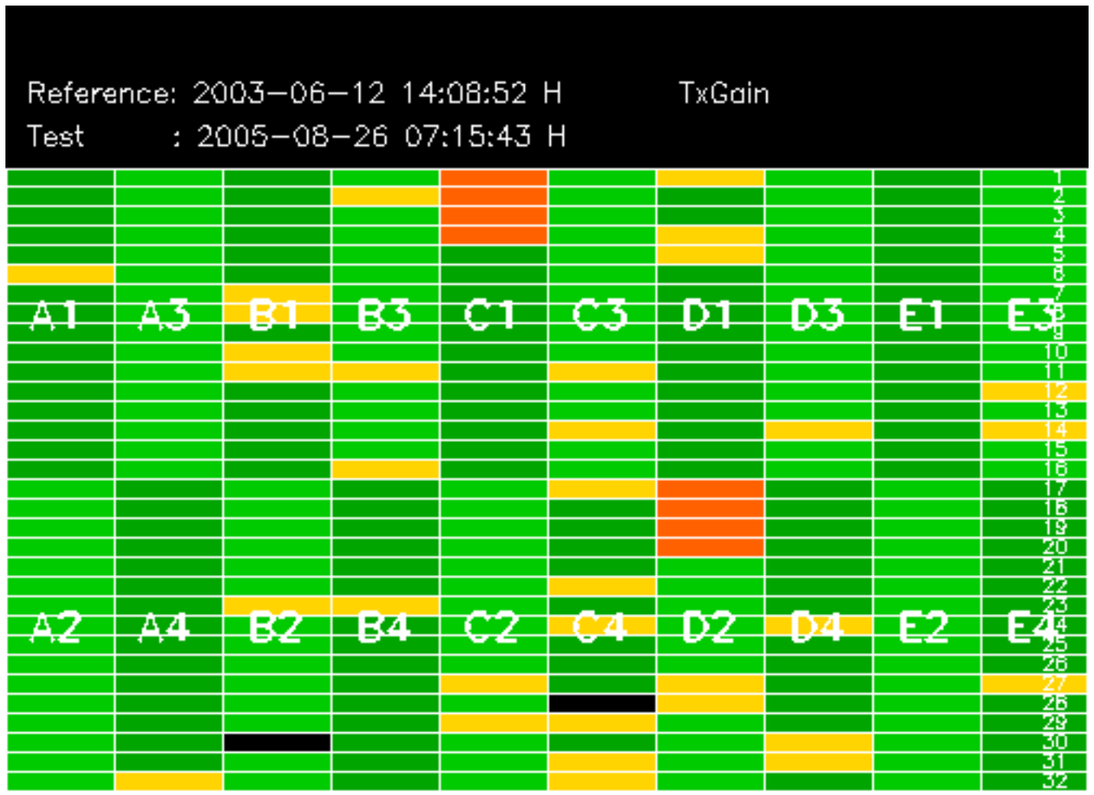
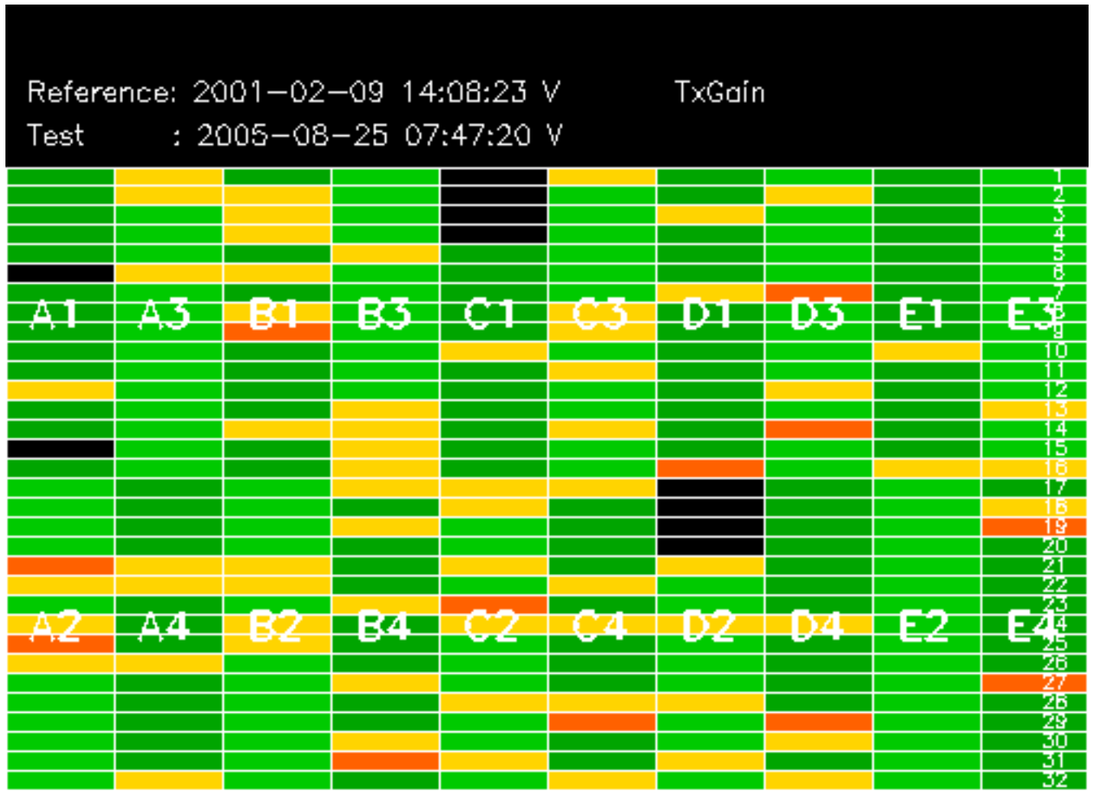
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-08-26 07:15:43 H
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 14:08:23 V
Test : 2005-08-25 07:47:20 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
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8
9
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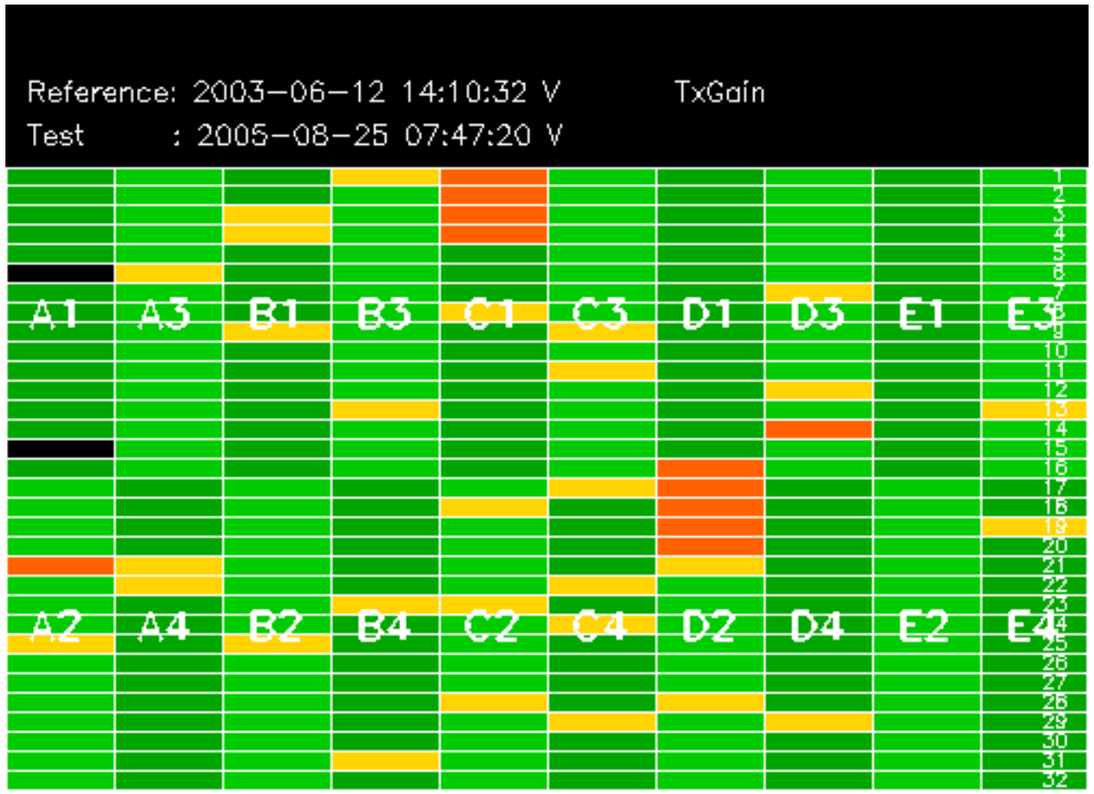
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2005-08-25 07:47:20 V
TxGain
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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8
9
10
11
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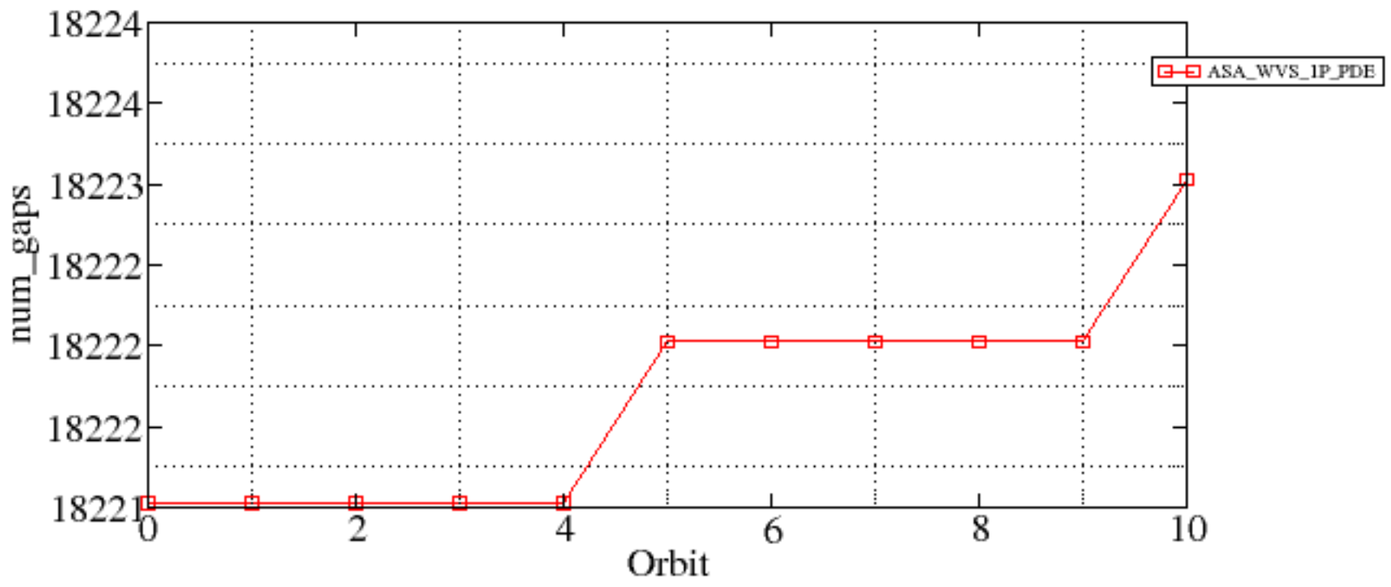
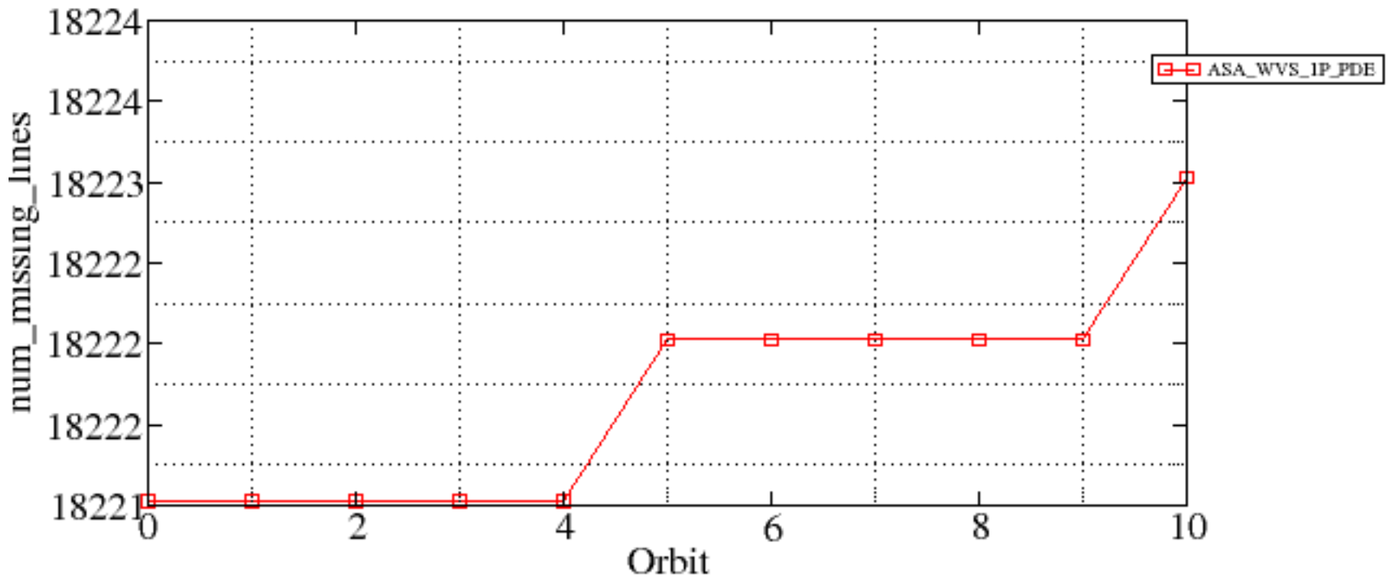
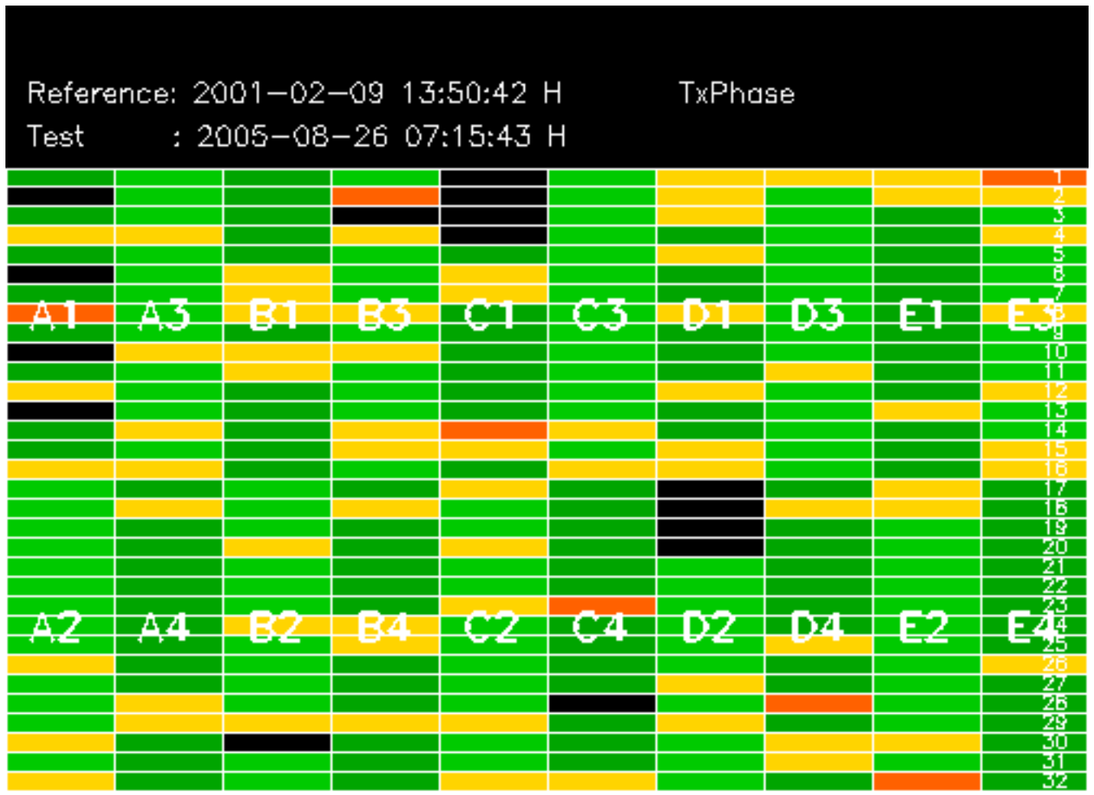
32

Summary of analysis for the last 3 days 2005082[567]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
</table>


ASA_WVS_IP_PDE
num_gaps
Orbit
18224
18224
18223
18222
18222
18222
18221
0
2
4
6
8
10


18224
18224
18223
18222
18222
18222
18221
num_missing_lines
0
2
4
6
8
10
Orbit
ASA_WVS_1P_PDE


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2005-08-26 07:15:43 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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9
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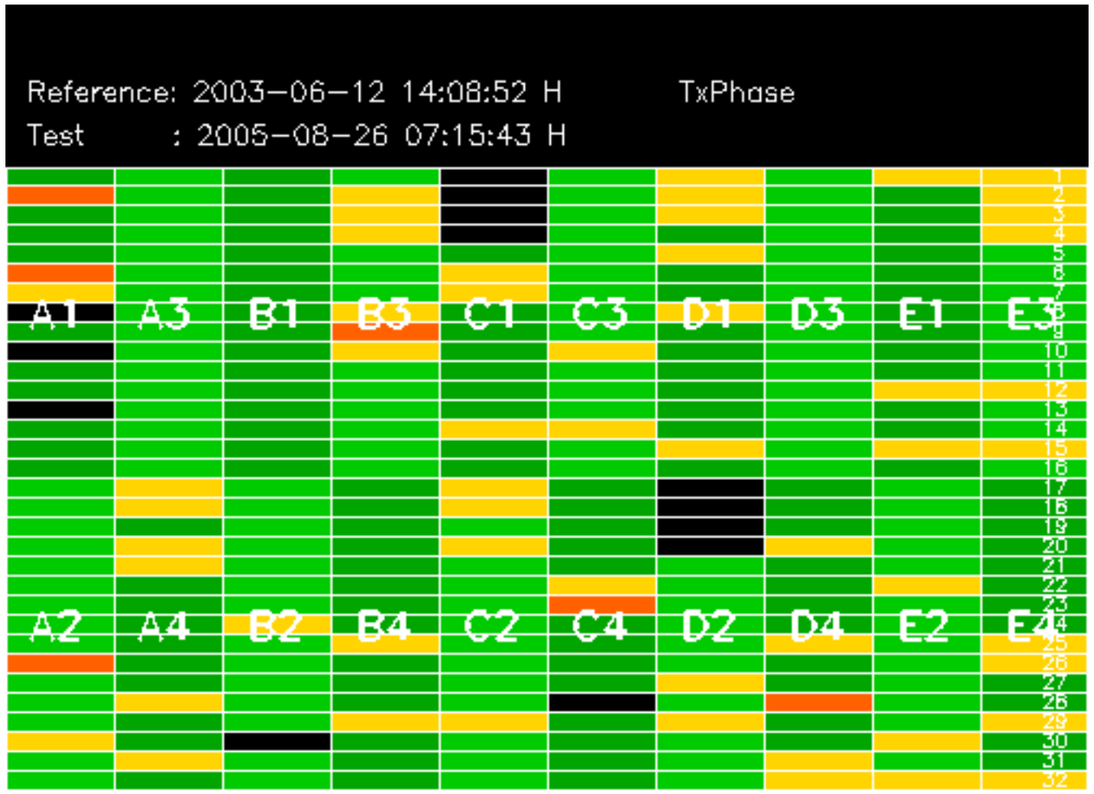
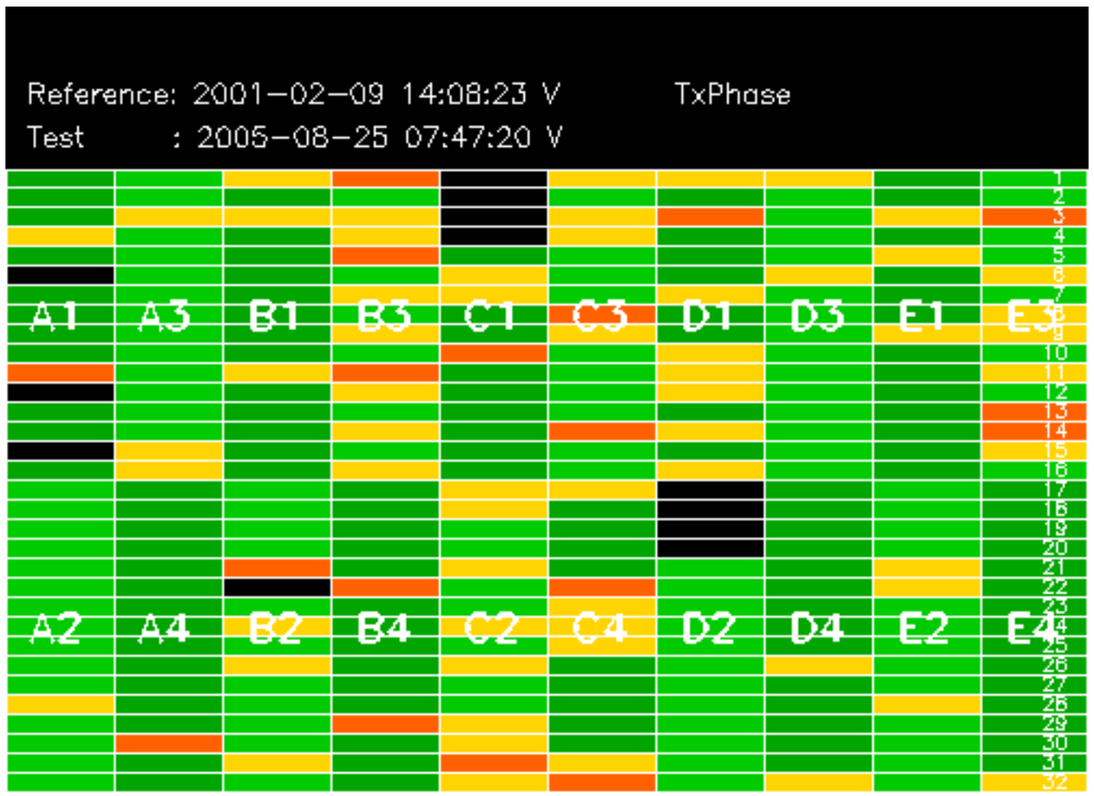

Reference: 2003-06-12 14:08:52 H
Test : 2005-08-26 07:15:43 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2005-08-25 07:47:20 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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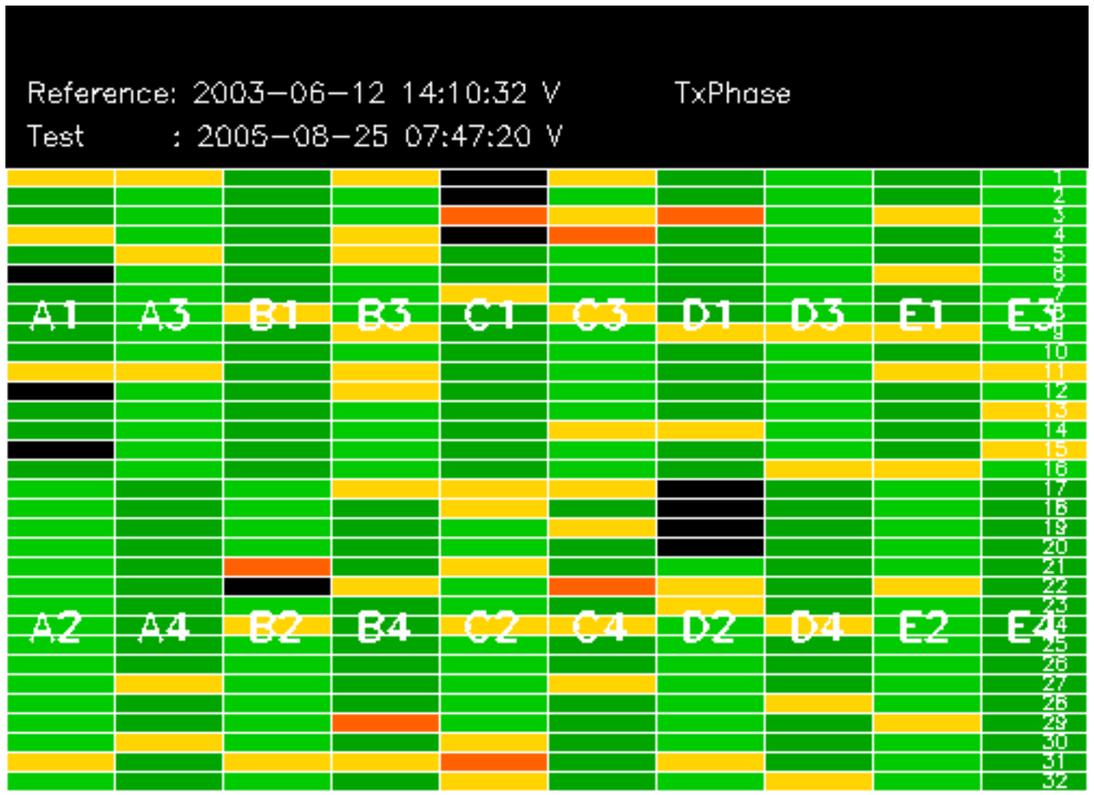
Reference: 2003-06-12 14:10:32 V
Test : 2005-08-25 07:47:20 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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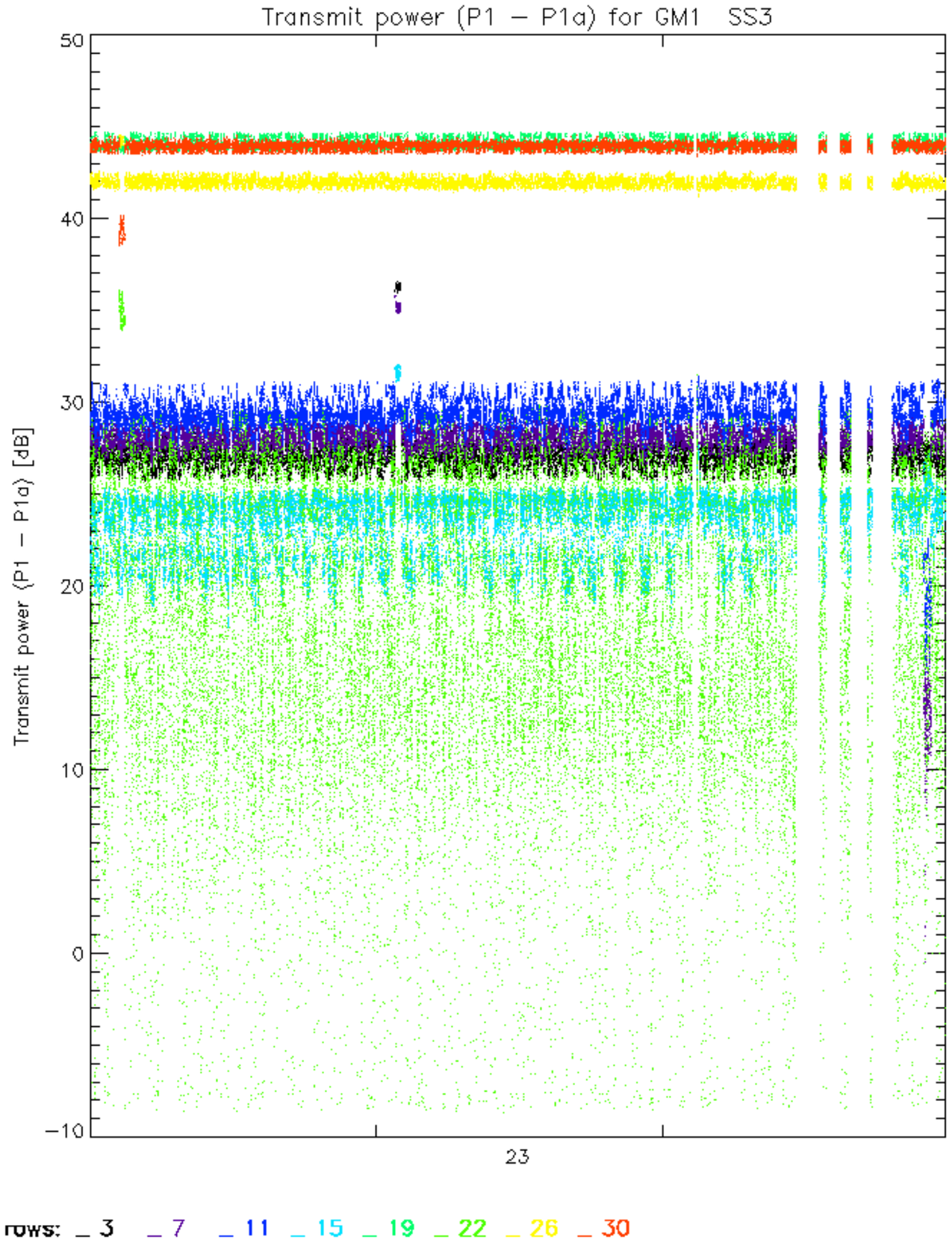
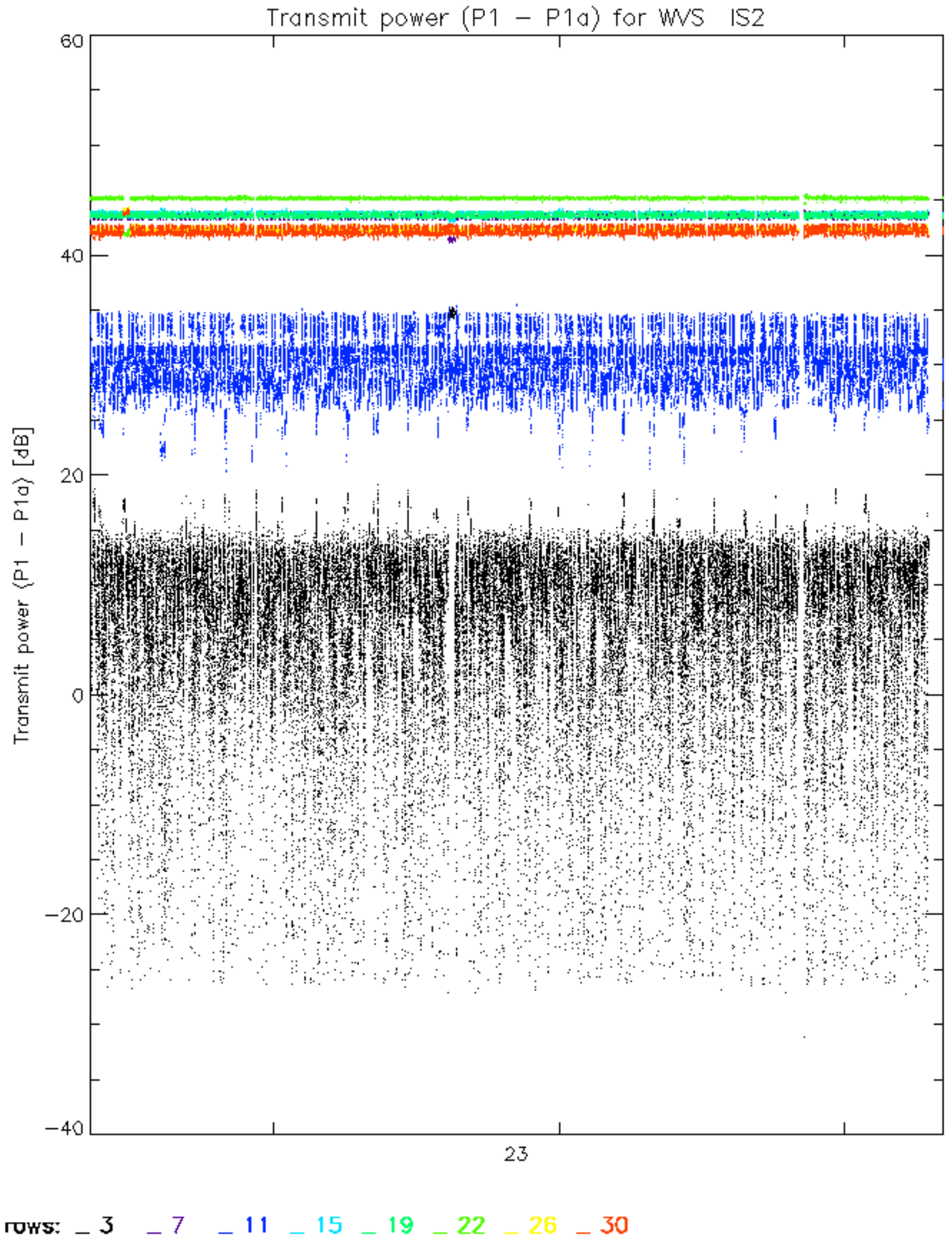

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
23
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power ⟨P1 – P1a⟩ [dB]
23
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.