PRELIMINARY REPORT OF 061030

last update on Mon Oct 30 11:00:01 GMT 2006

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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 2006-10-29 00:00:00 to 2006-10-30 11:00:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	0	0	0	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	45	0	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	45	0	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	0	0	0	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	20	19	0	0	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	20	19	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	20	19	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	20	19	0	0	0

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	20061029 023109
H	20061028 030246

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

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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	-3.952291	0.009903	-0.021830
7	P1	-3.093822	0.014931	-0.076623
11	P1	-4.103813	0.024396	-0.049544
15	P1	-6.224219	0.015437	-0.086937
19	P1	-3.587205	0.075077	-0.148800
22	P1	-4.643654	0.148081	-0.200390
26	P1	-4.007917	0.142457	-0.070020
30	P1	-5.889046	0.272234	-0.167242
3	P1	-16.594213	0.215347	0.177612
7	P1	-17.136742	0.162652	-0.118237
11	P1	-17.047777	0.410876	-0.193398
15	P1	-12.894452	0.109146	-0.249816
19	P1	-14.770238	0.408027	-0.444043
22	P1	-15.649779	0.488160	-0.269606
26	P1	-15.086824	0.257073	0.008387
30	P1	-17.028965	0.672501	-0.397580

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.832838	0.088293	-0.041187
7	P2	-21.757763	0.097108	0.060763
11	P2	-15.711555	0.109583	0.095743
15	P2	-7.079468	0.109202	-0.062398
19	P2	-9.138379	0.101666	-0.077377
22	P2	-18.158501	0.096110	-0.106560
26	P2	-16.448452	0.106162	-0.120643
30	P2	-19.466240	0.093593	-0.024785

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.207015	0.007075	-0.045480

7	P3	-8.207015	0.007075	-0.045480
11	P3	-8.207015	0.007075	-0.045480
15	P3	-8.207015	0.007075	-0.045480
19	P3	-8.207015	0.007075	-0.045480
22	P3	-8.207015	0.007075	-0.045480
26	P3	-8.206942	0.007087	-0.045588
30	P3	-8.206942	0.007087	-0.045588

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	-3.933226	0.255928	0.158414
7	P1	-2.665916	1.645040	0.672587
11	P1	-2.919913	0.198297	0.277437
15	P1	-3.708286	0.174369	0.280167
19	P1	-3.526751	0.209774	-0.367063
22	P1	-5.078538	0.152290	-0.155758
26	P1	-6.006186	0.401813	-0.529461
30	P1	-5.298467	0.257830	-0.447278
3	P1	-11.773940	0.624153	0.438363
7	P1	-10.207839	2.079031	0.873137
11	P1	-10.466659	0.544869	0.691353
15	P1	-10.941831	0.703000	1.011595
19	P1	-15.793586	3.832550	-1.637146
22	P1	-21.047972	1.722998	-1.130484
26	P1	-15.879765	0.496933	-0.804589
30	P1	-18.019934	0.596086	0.634203

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.351196	0.360050	-0.540243
7	P2	-21.959255	2.122859	-1.286376
11	P2	-10.846125	0.310196	-0.455517
15	P2	-4.901086	0.036811	-0.271867
19	P2	-6.880703	0.073588	-0.242063
22	P2	-8.271451	0.648934	0.109238
26	P2	-24.093924	1.655150	-0.955334
30	P2	-21.841410	0.830970	-0.517586

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.062876	0.003091	-0.078823
7	P3	-8.062770	0.003067	-0.078695
11	P3	-8.062636	0.003060	-0.078705
15	P3	-8.062765	0.003062	-0.078164
19	P3	-8.062757	0.003056	-0.078503
22	P3	-8.062543	0.003065	-0.078837
26	P3	-8.062452	0.003038	-0.082175
30	P3	-8.062531	0.003047	-0.081332

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	0.000562532
	stdev	1.66042e-07
MEAN Q	mean	0.000520530
	stdev	2.15716e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138541
	stdev	0.00112843
STDEV Q	mean	0.138920
	stdev	0.00114653

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006102[890]
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
ASA_IMM_1PNPDE20061020_042634_000000762052_00147_24249_7183.N1	1	0
ASA_WVS_1PNPDK20061020_141556_000003002052_00153_24255_2893.N1	0	8
ASA_GM1_1PNPDK20061020_180334_000004162052_00156_24258_6944.N1	0	15
ASA_GM1_1PNPDK20061028_080312_000011352052_00264_24366_7493.N1	0	15
ASA_GM1_1PNPDK20061028_085551_000005252052_00265_24367_7492.N1	0	8
ASA_APM_1PNPDK20061020_143628_000000852052_00154_24256_1289.N1	0	9

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)

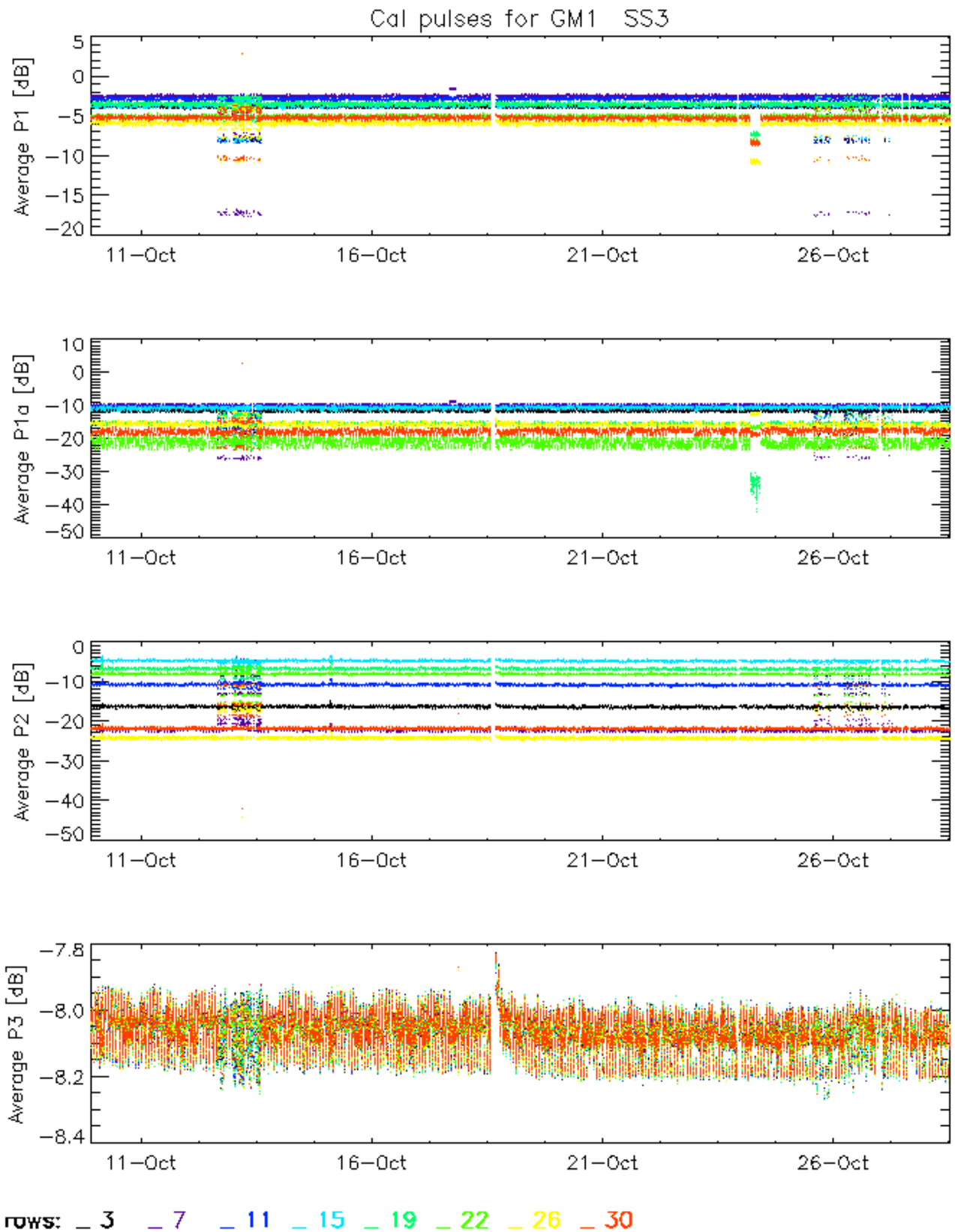
Acsending

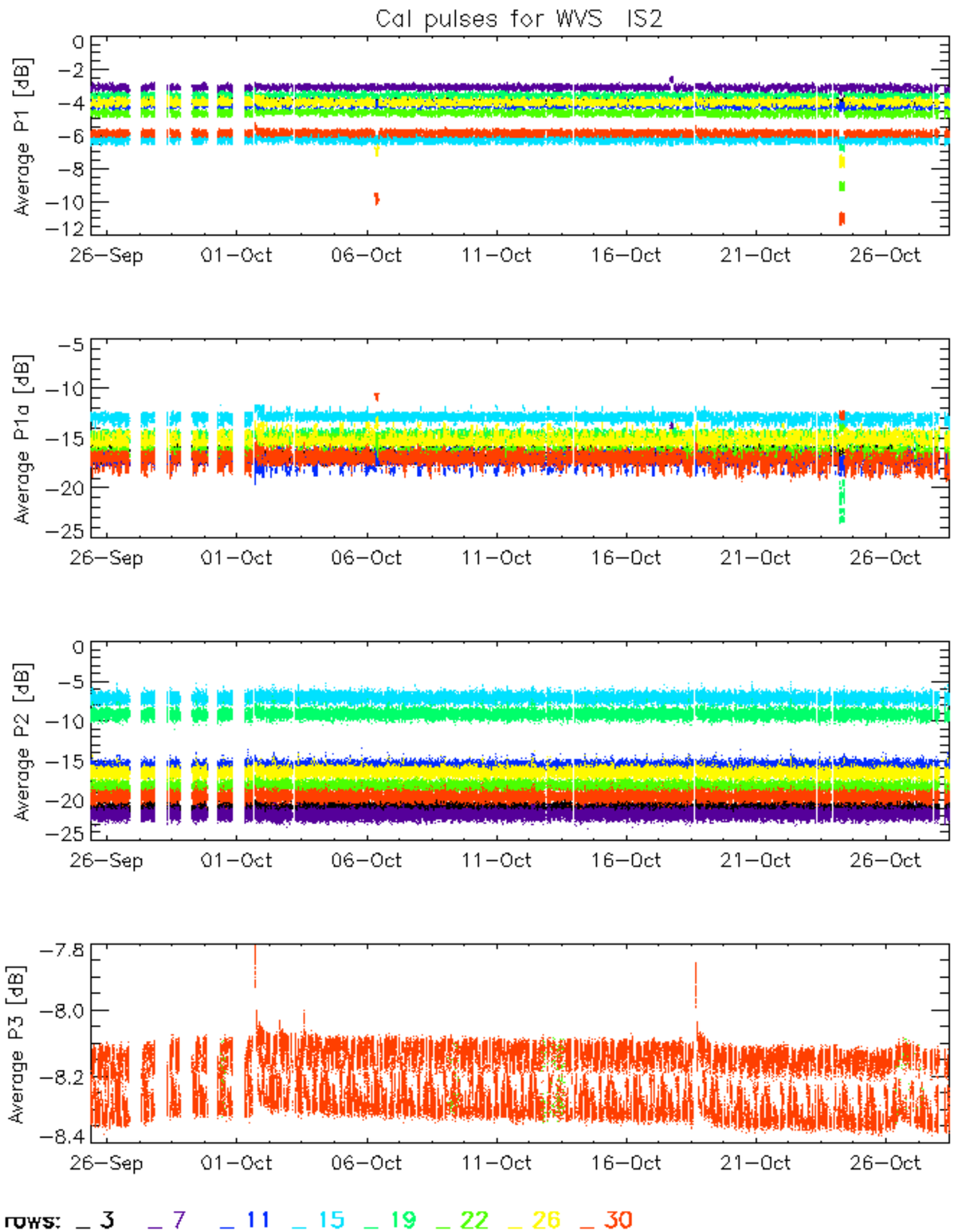
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

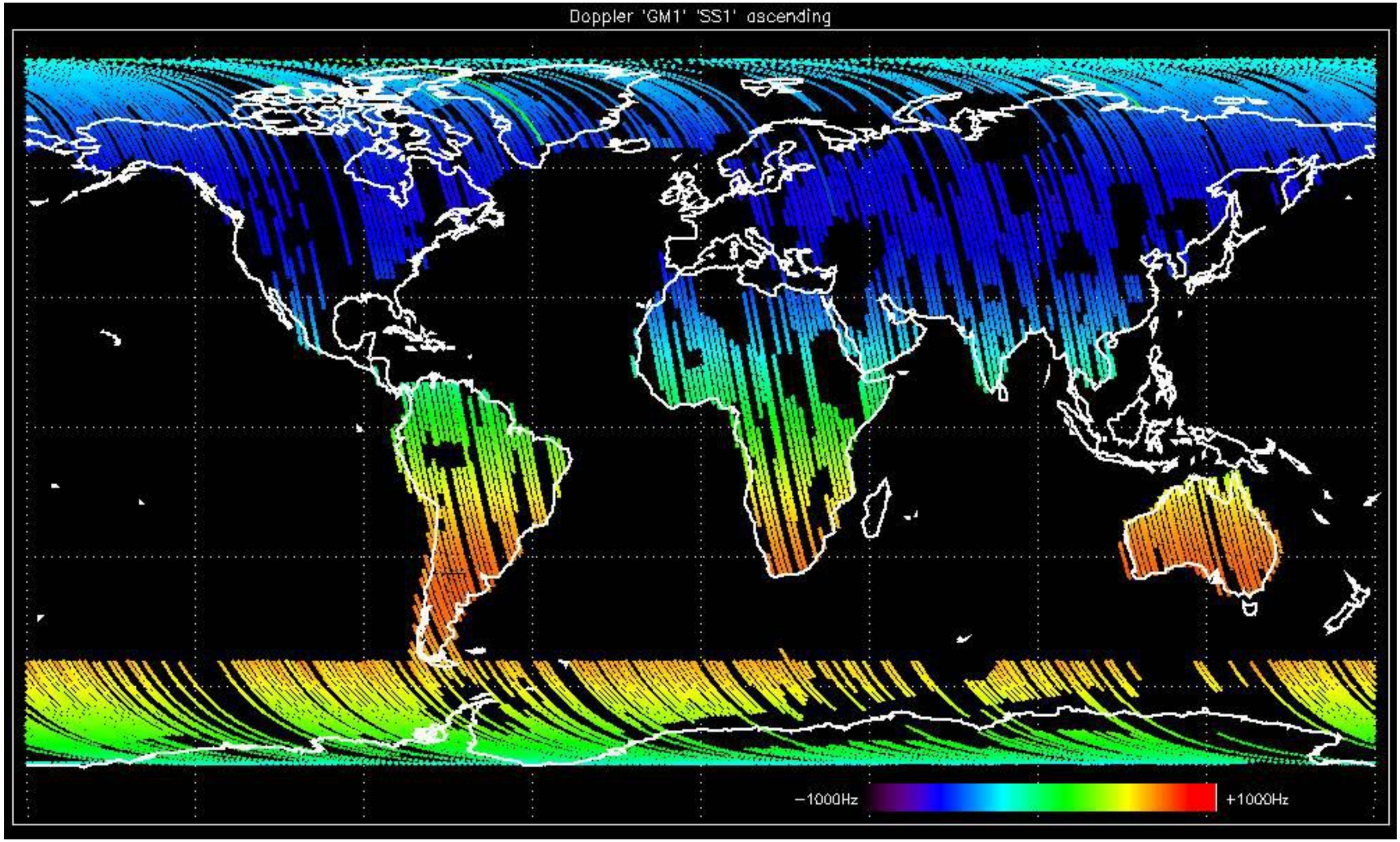

Cal pulses for GM1 SS3
Average P1 [dB]
5
0
−5
−10
−15
−20
11−Oct
16−Oct
21−Oct
26−Oct
Average P1a [dB]
10
0
−10
−20
−30
−40
−50
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

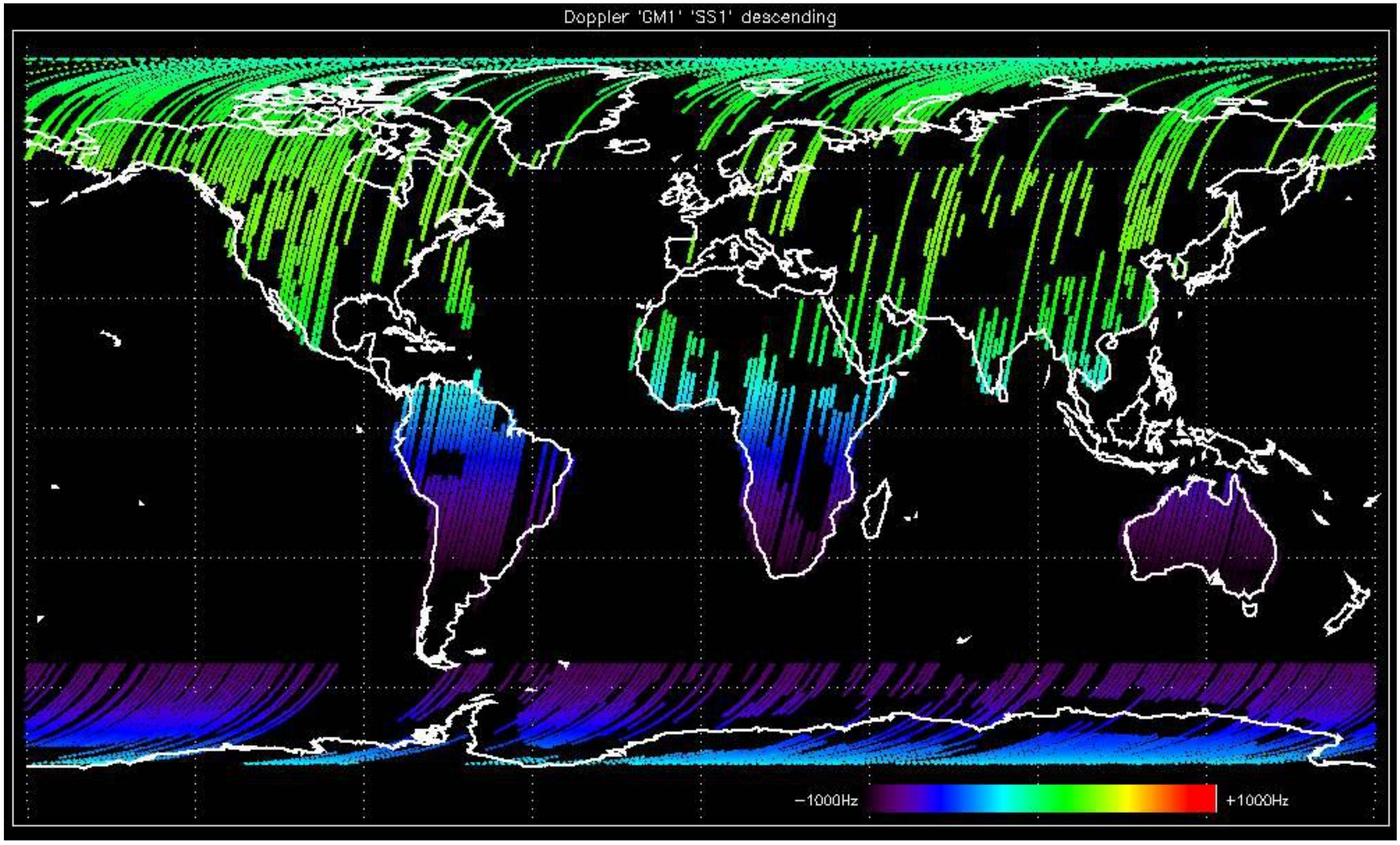

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct
rows: 3 7 11 15 19 22 26 30

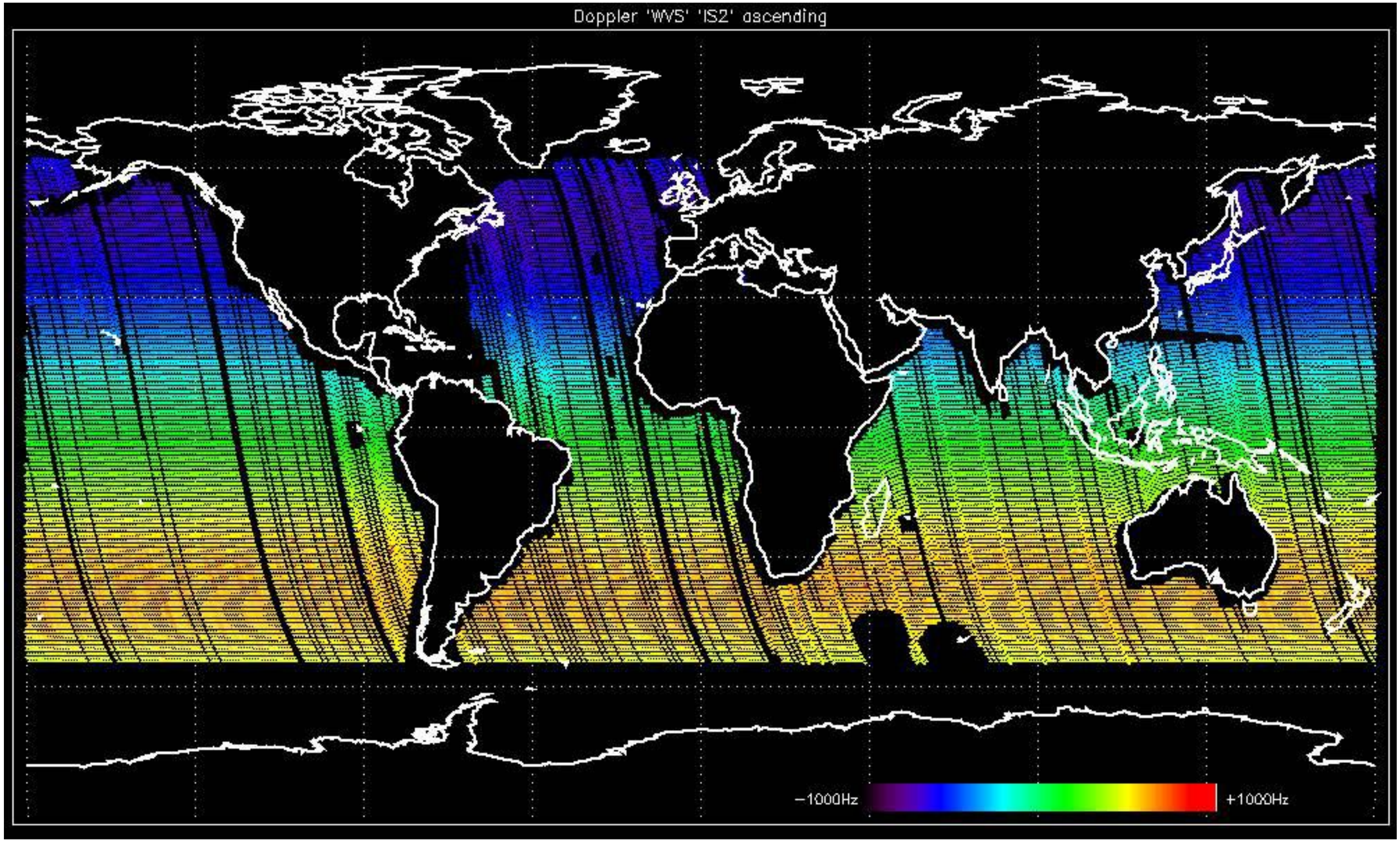
No anomalies observed.

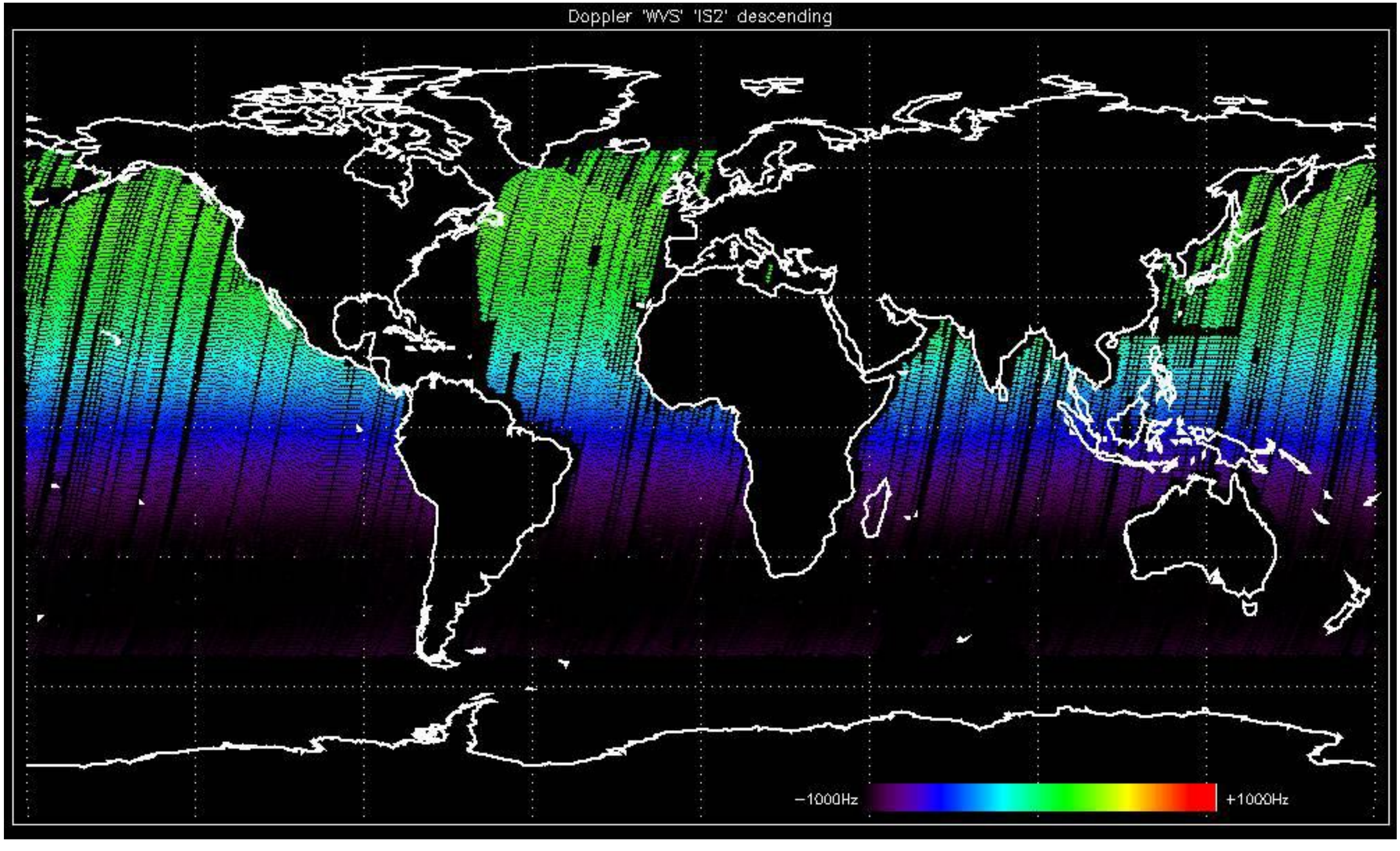
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

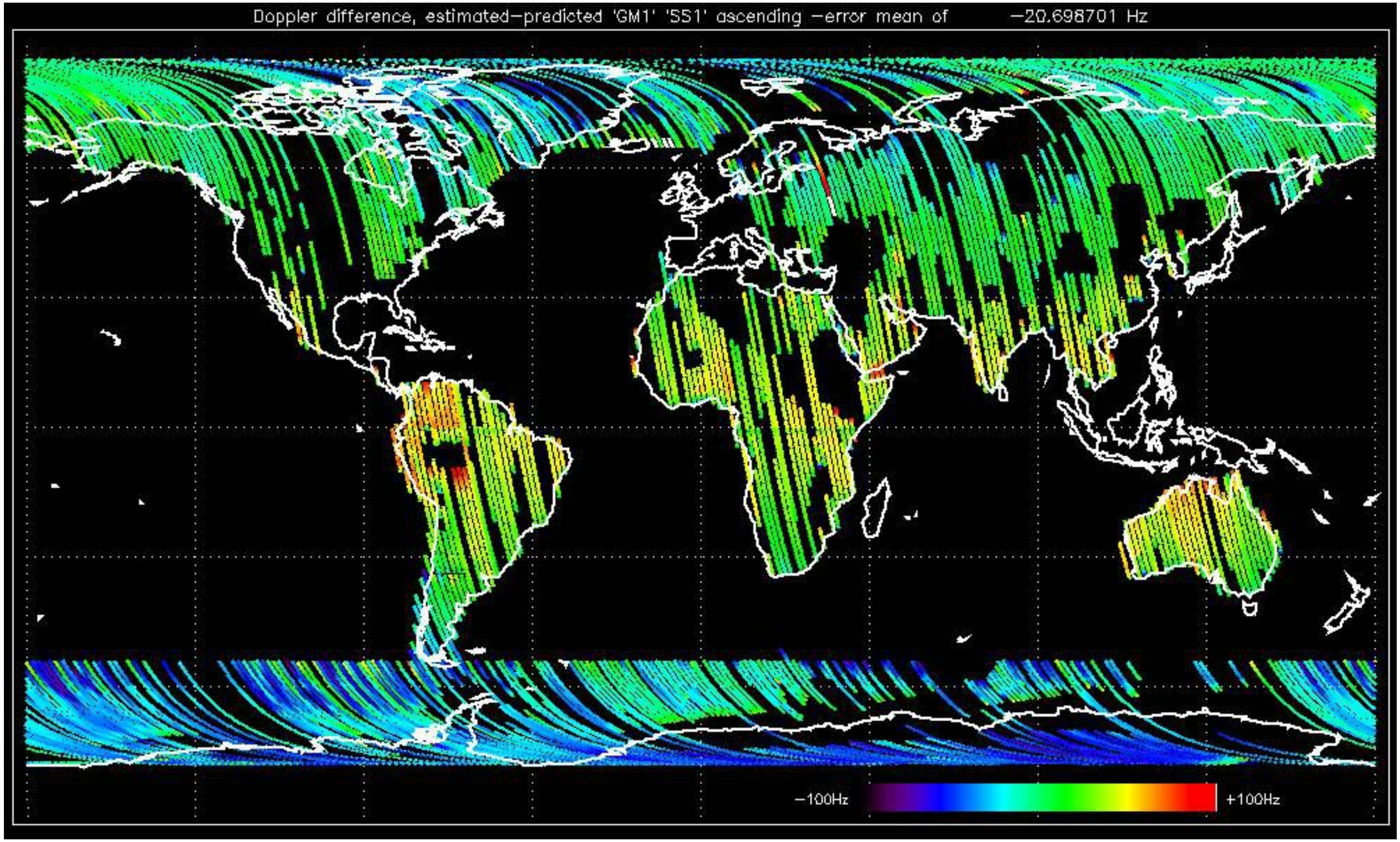
Preliminary report.The data is not yet controled

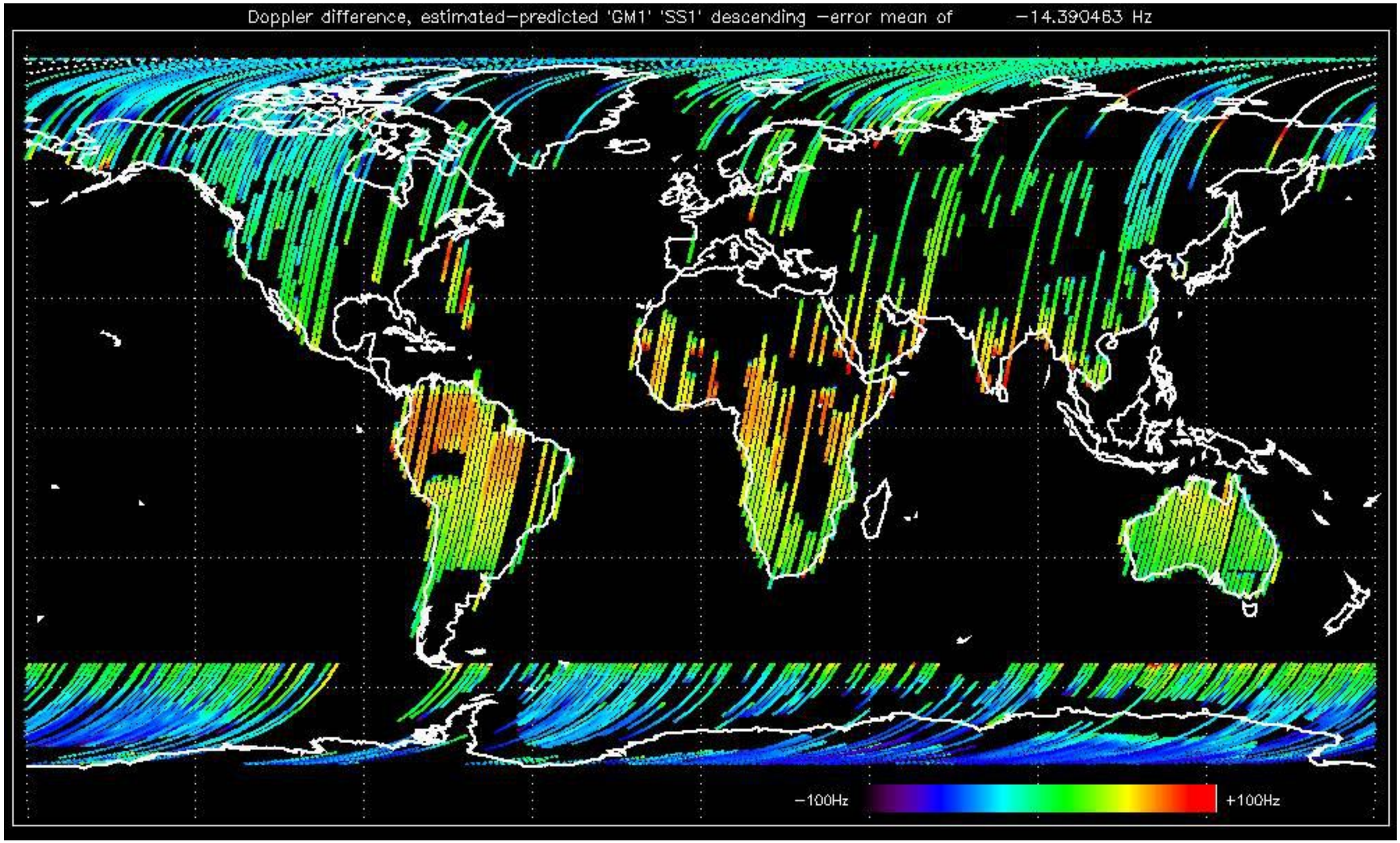

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

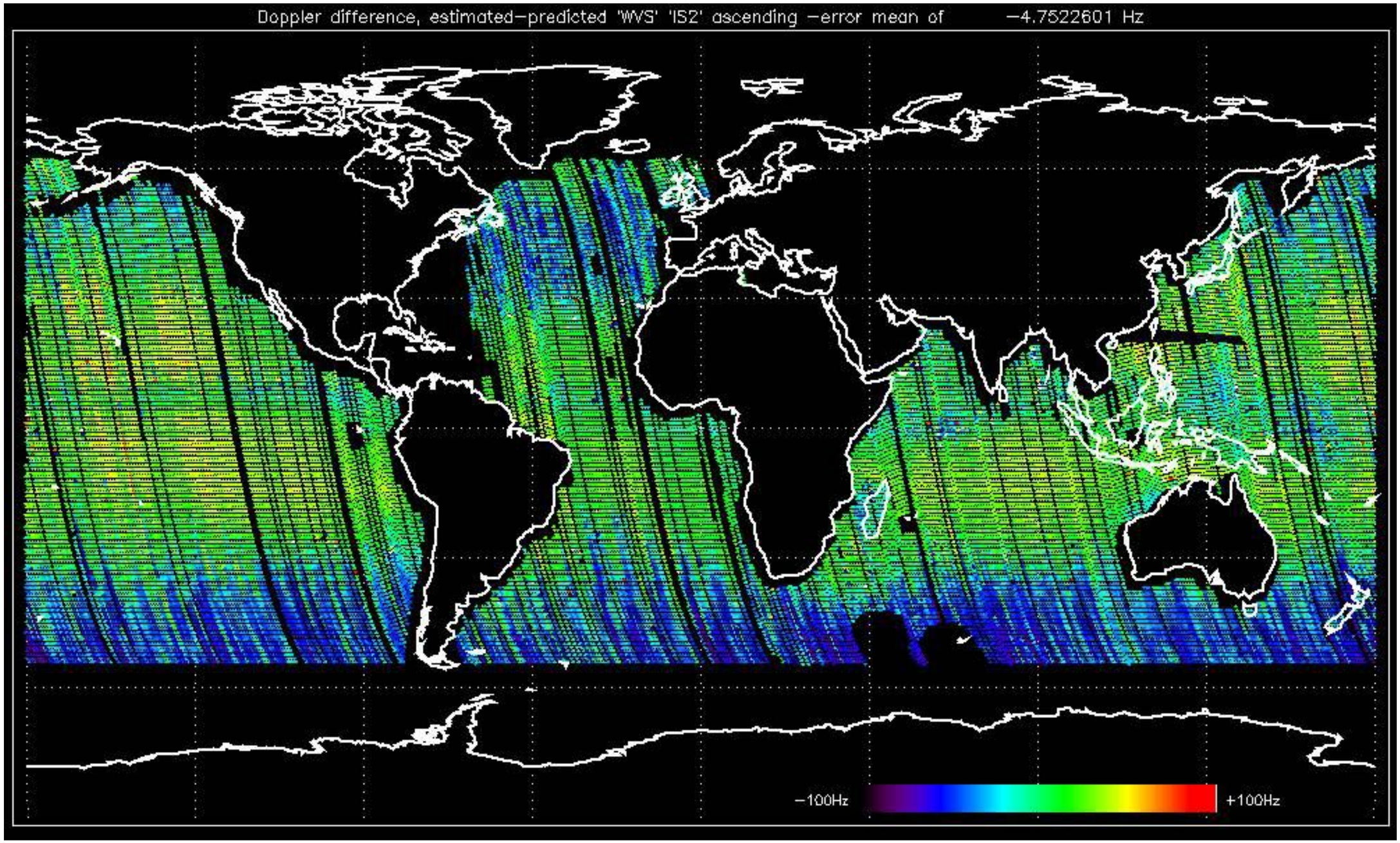

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

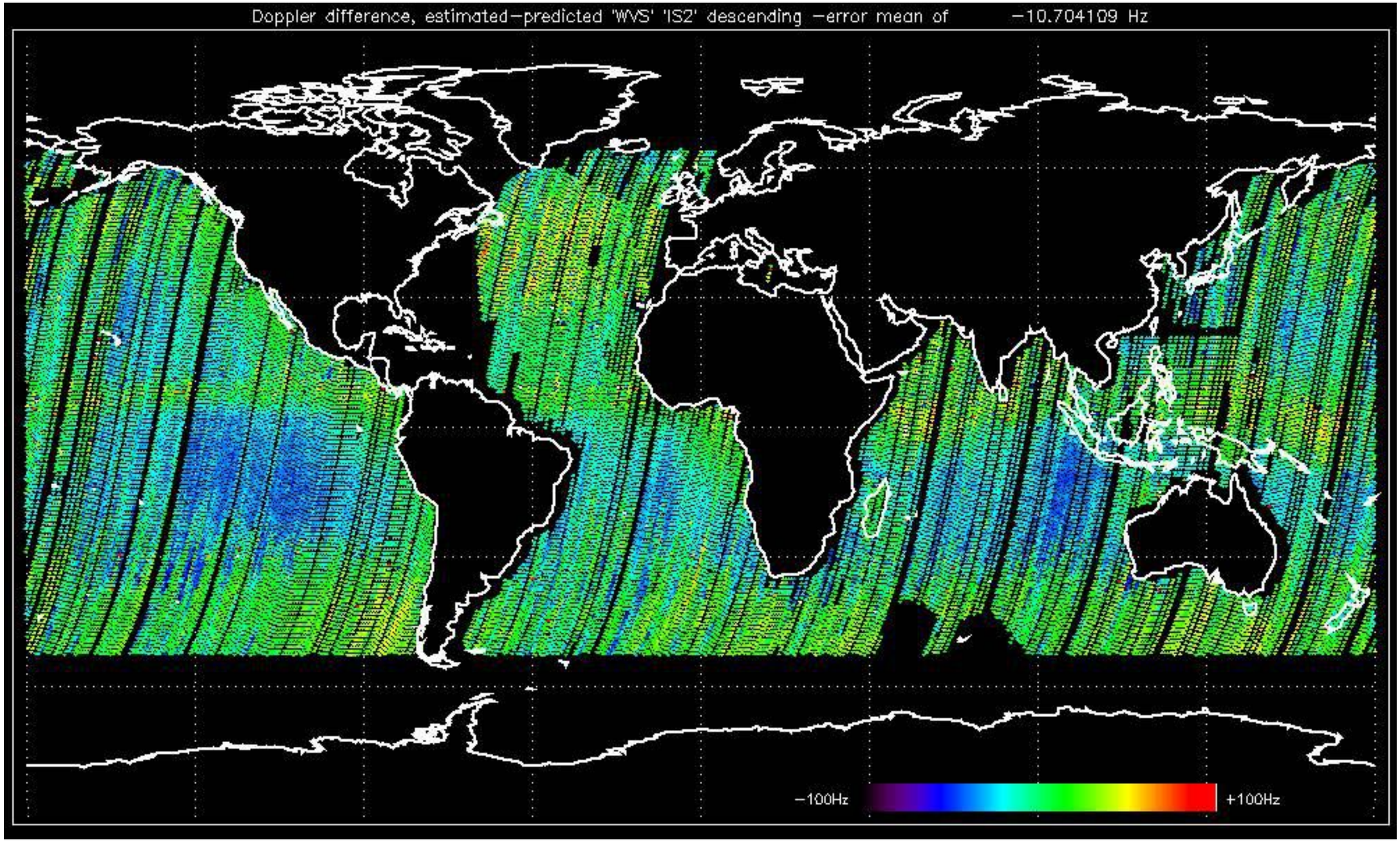

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −20.698701 Hz
−100Hz
+100Hz

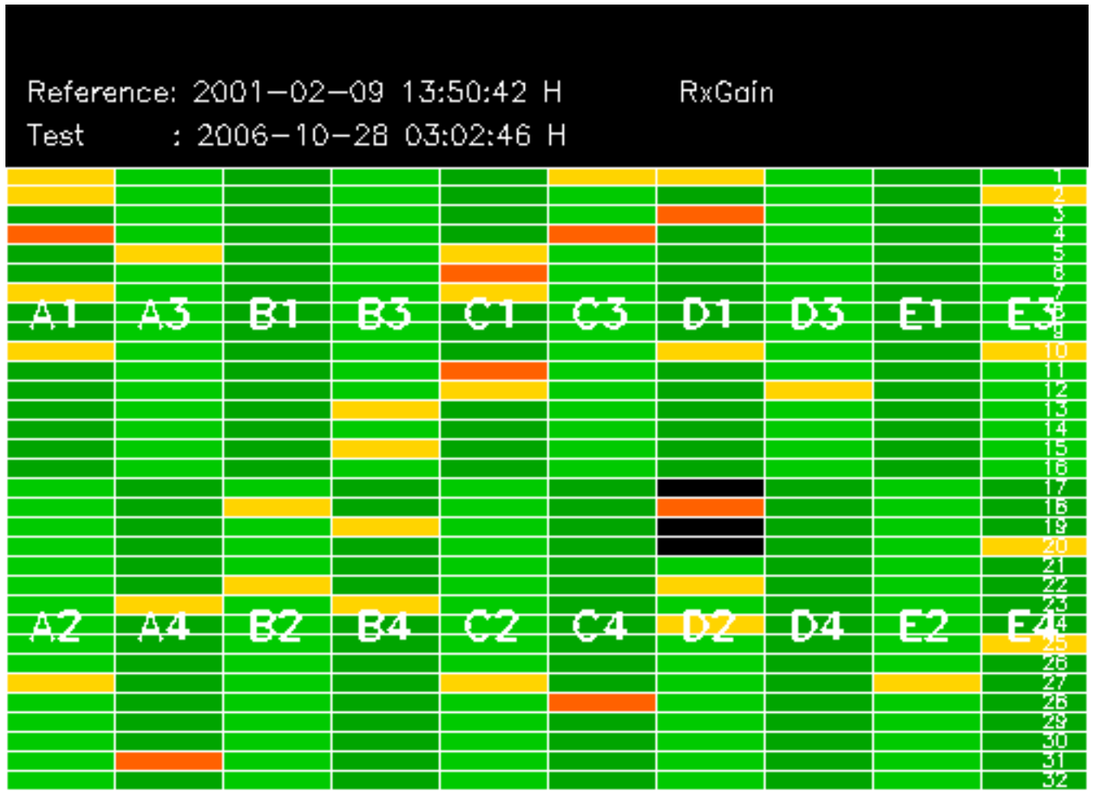

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −14.390463 Hz
−100Hz
+100Hz

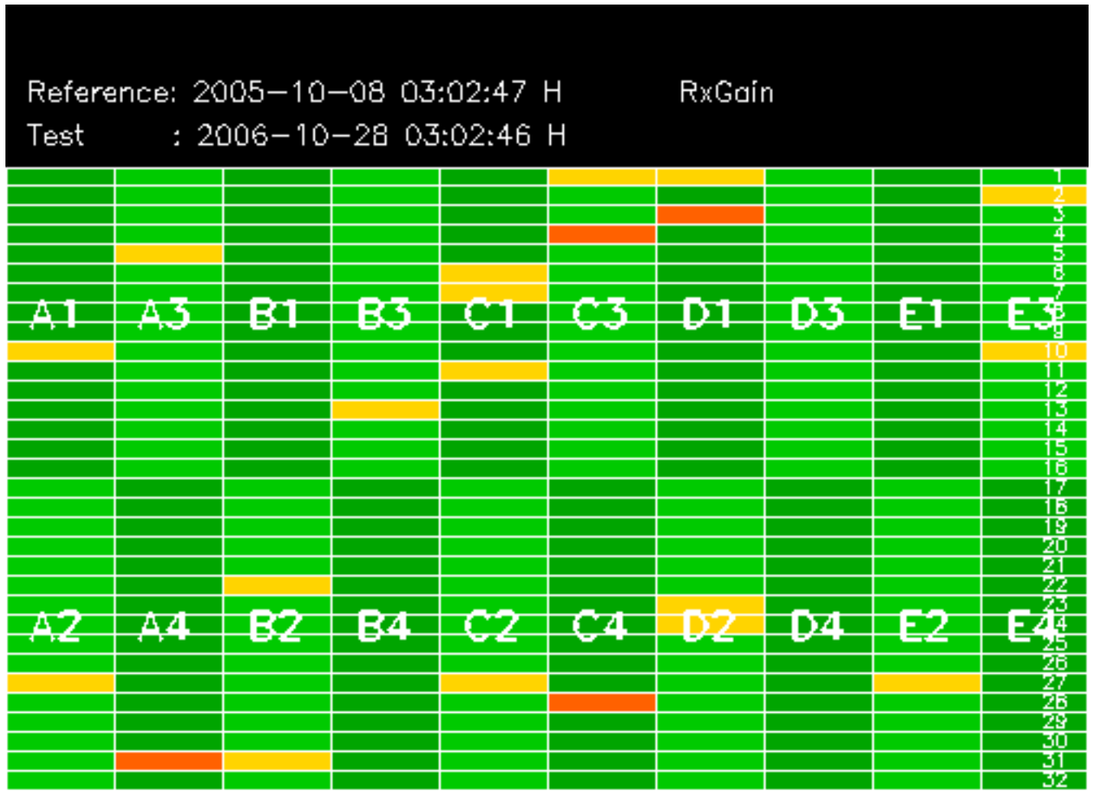

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −4.7522601 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −10.704109 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2006-10-28 03:02:46 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-10-08 03:02:47 H
Test : 2006-10-28 03:02:46 H
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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8
9
10
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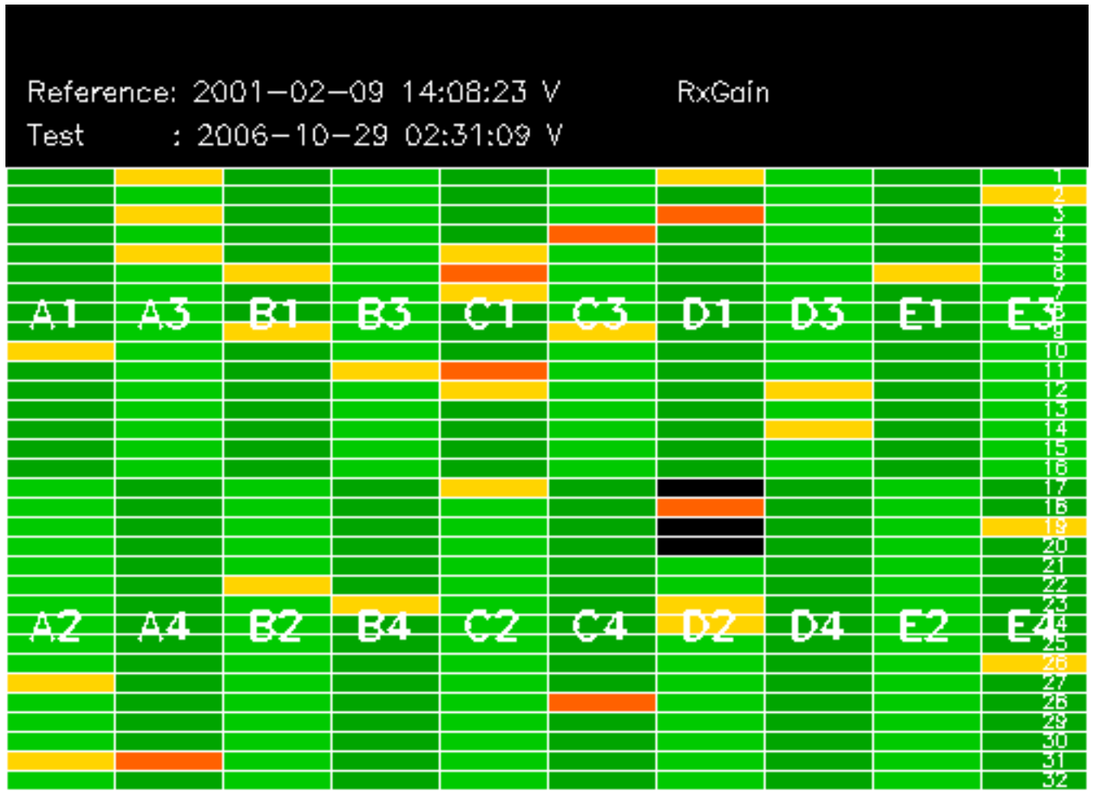
Reference: 2001-02-09 14:08:23 V
RxGain
Test : 2006-10-29 02:31:09 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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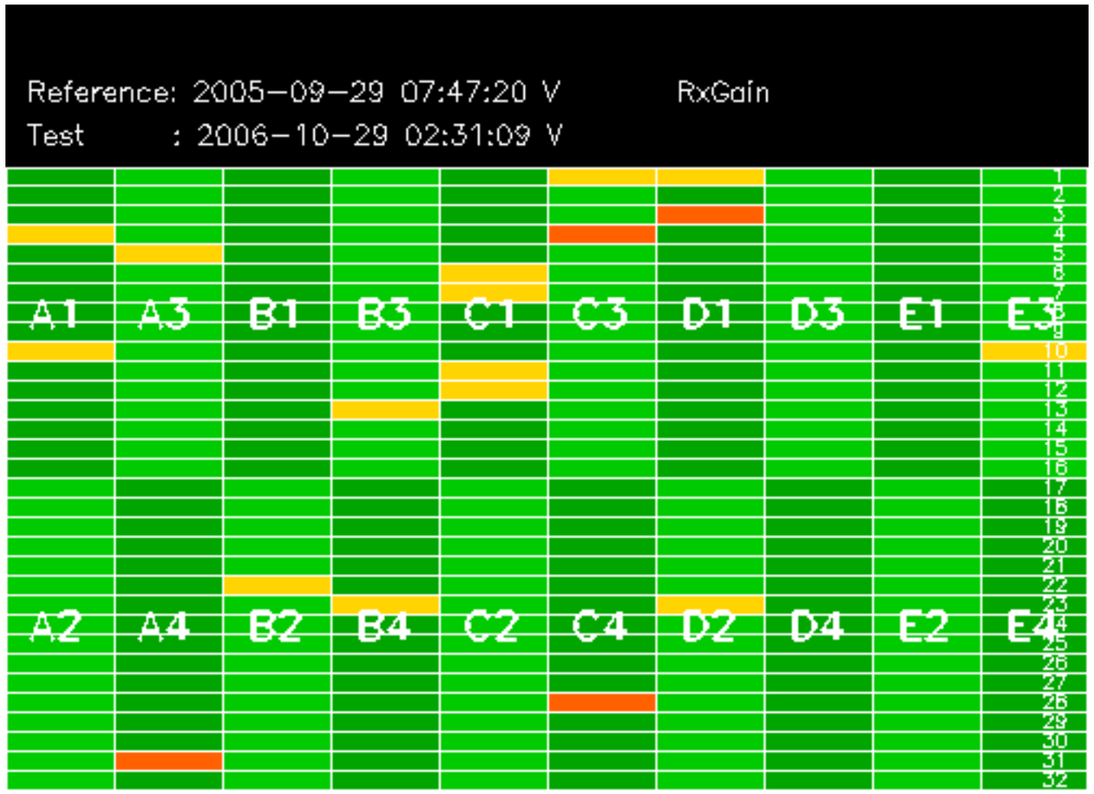
Reference: 2005-09-29 07:47:20 V
Test : 2006-10-29 02:31:09 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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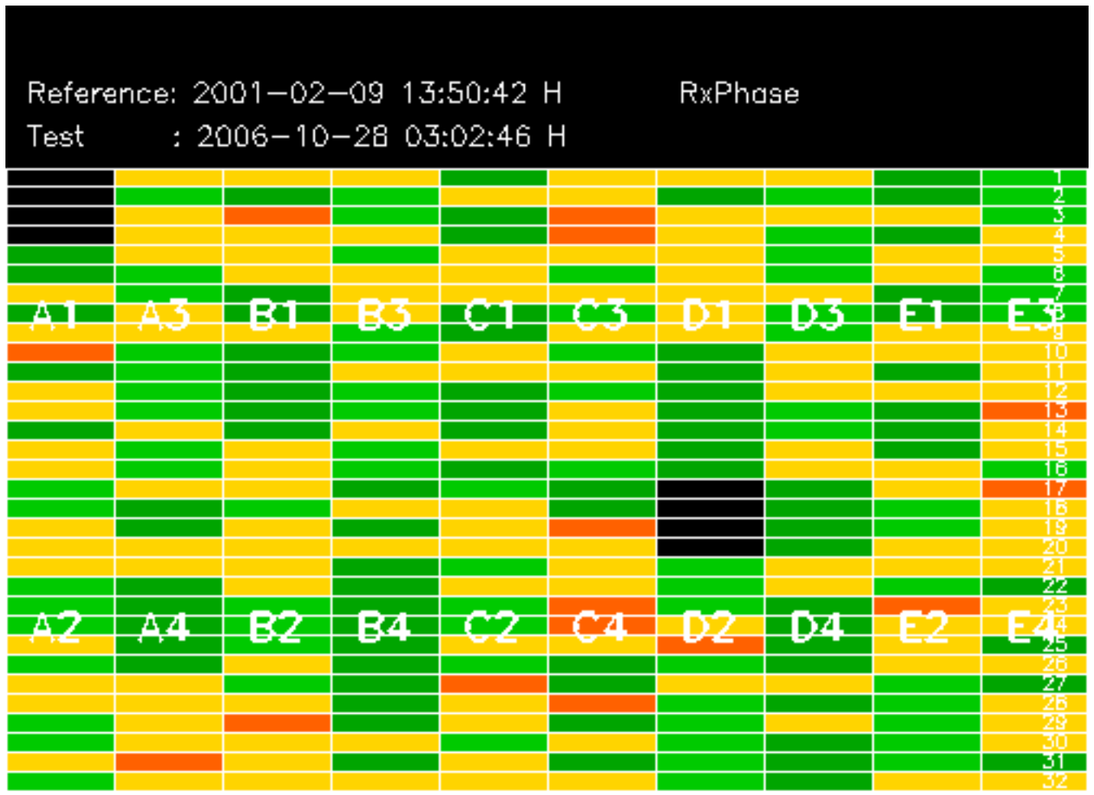
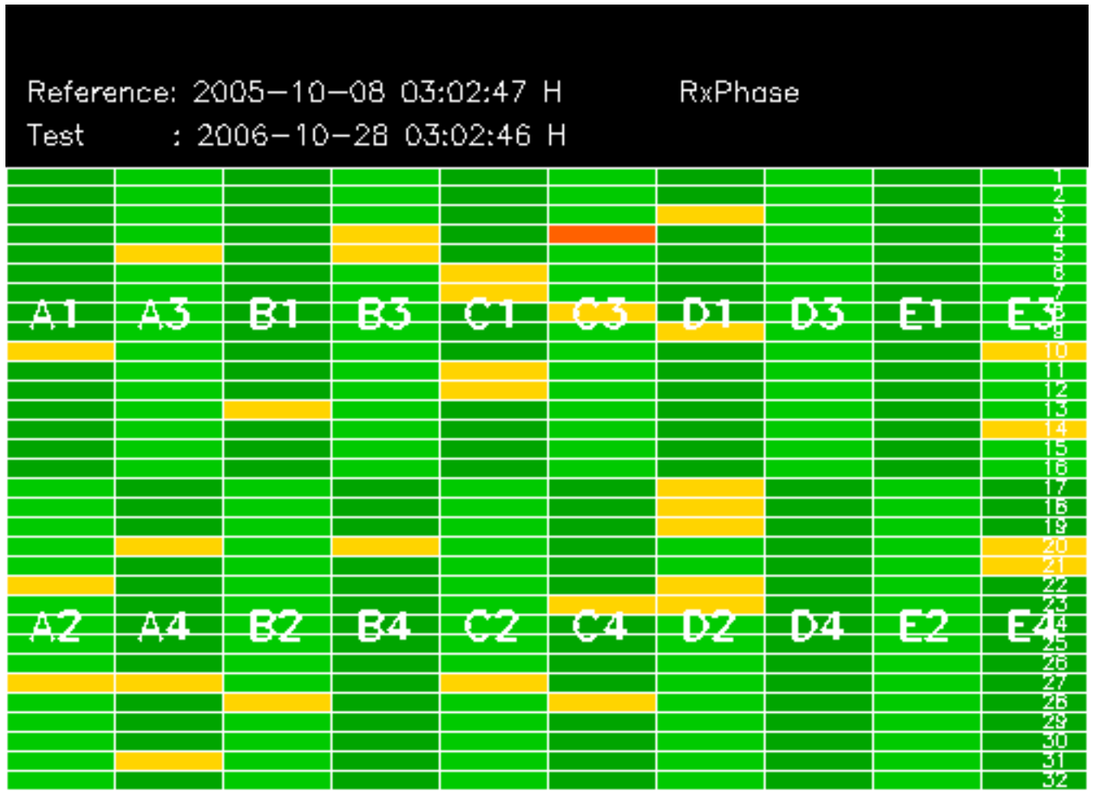

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2006-10-28 03:02:46 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-10-08 03:02:47 H
Test : 2006-10-28 03:02:46 H
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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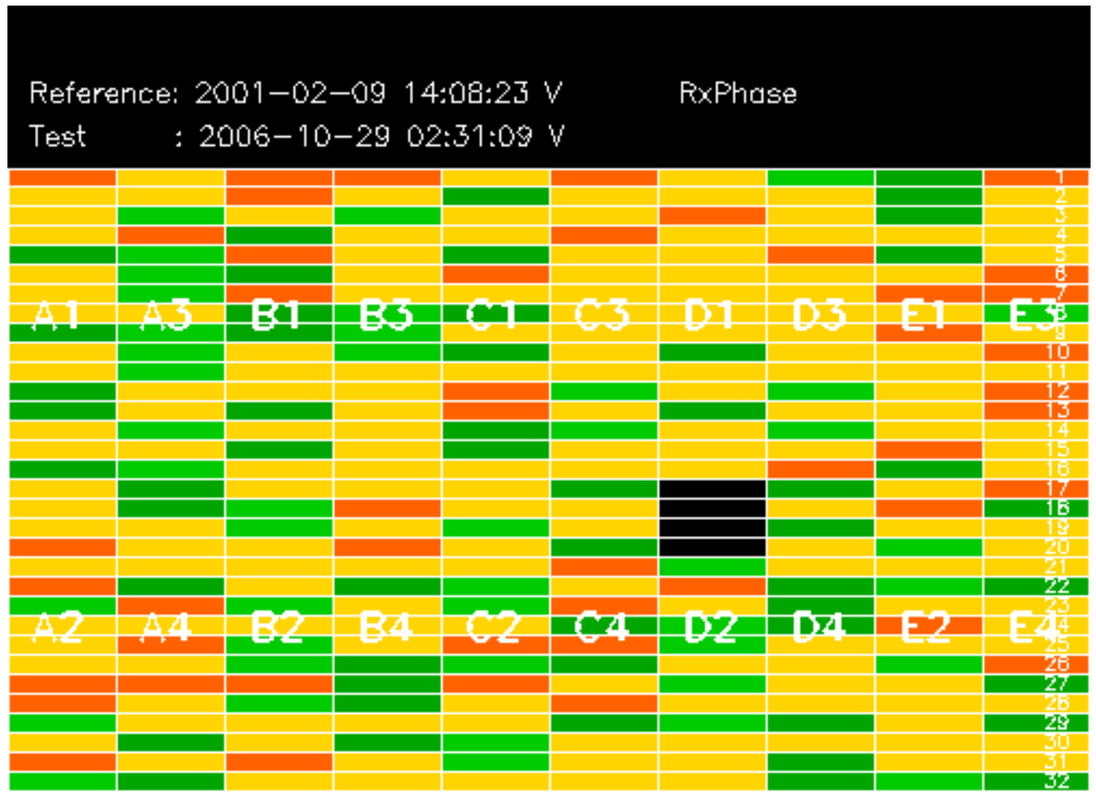
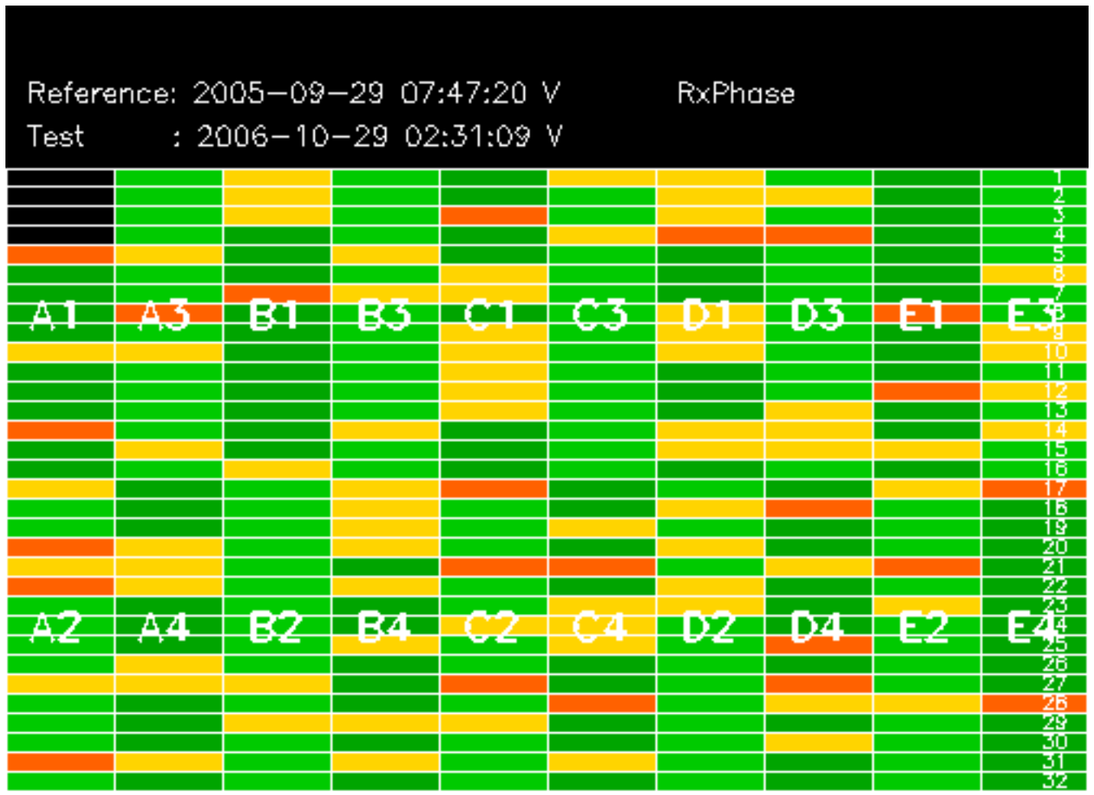

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2006-10-29 02:31:09 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-10-29 02:31:09 V
RxPhase
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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29
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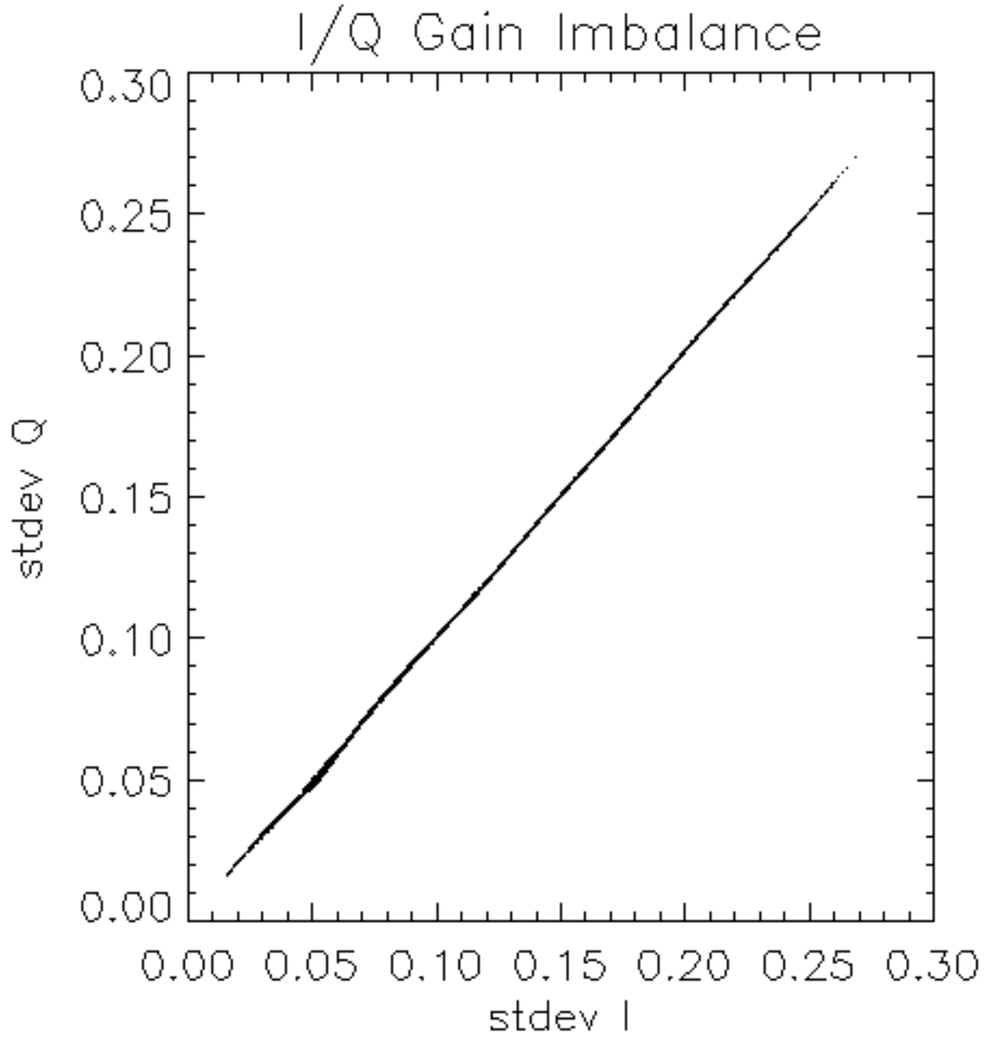
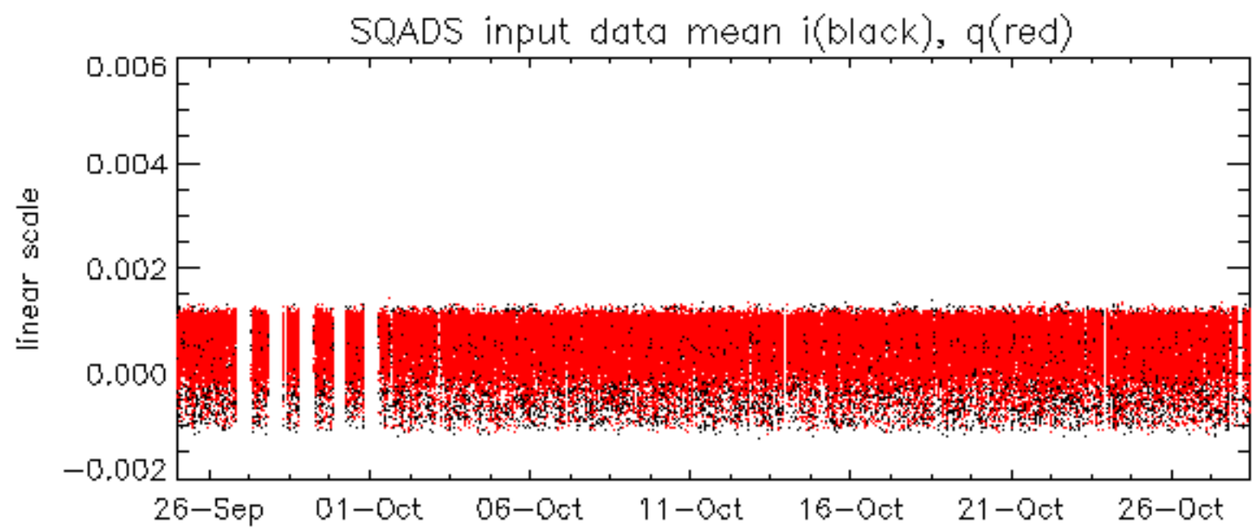
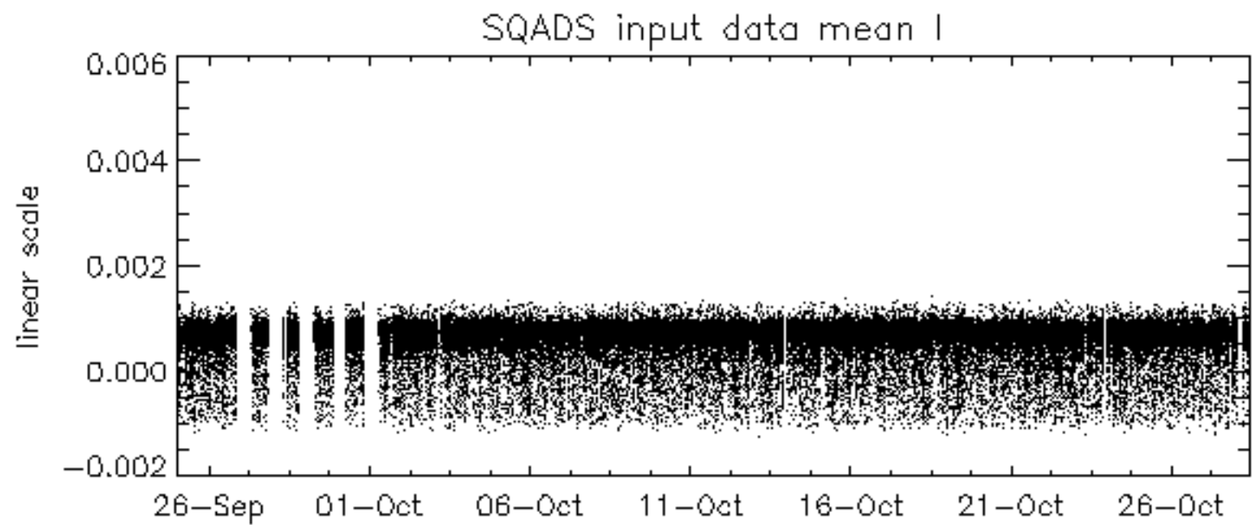
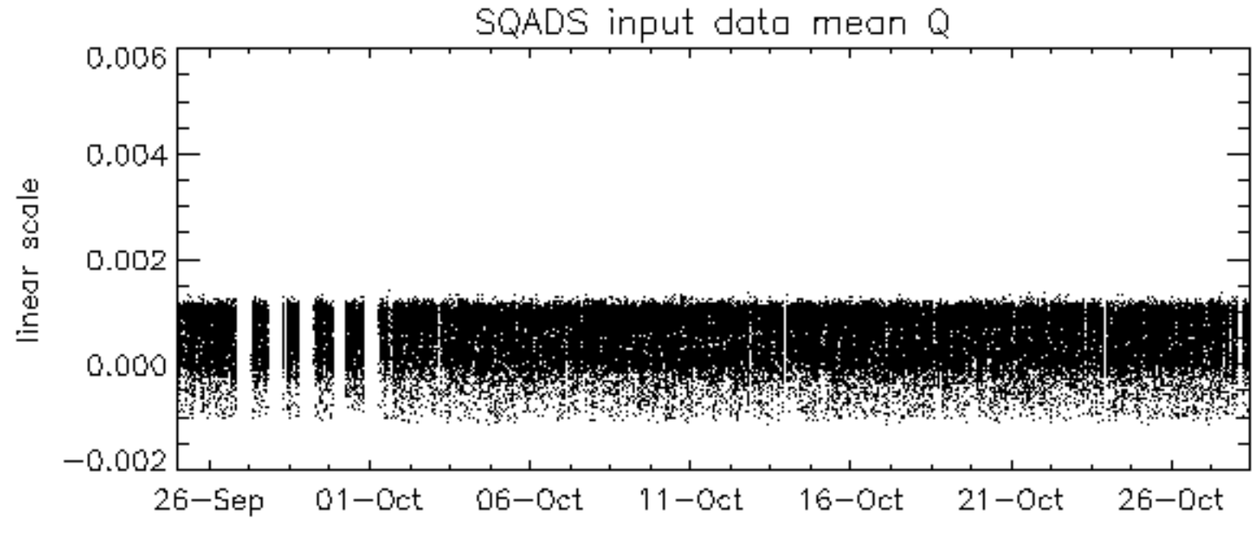
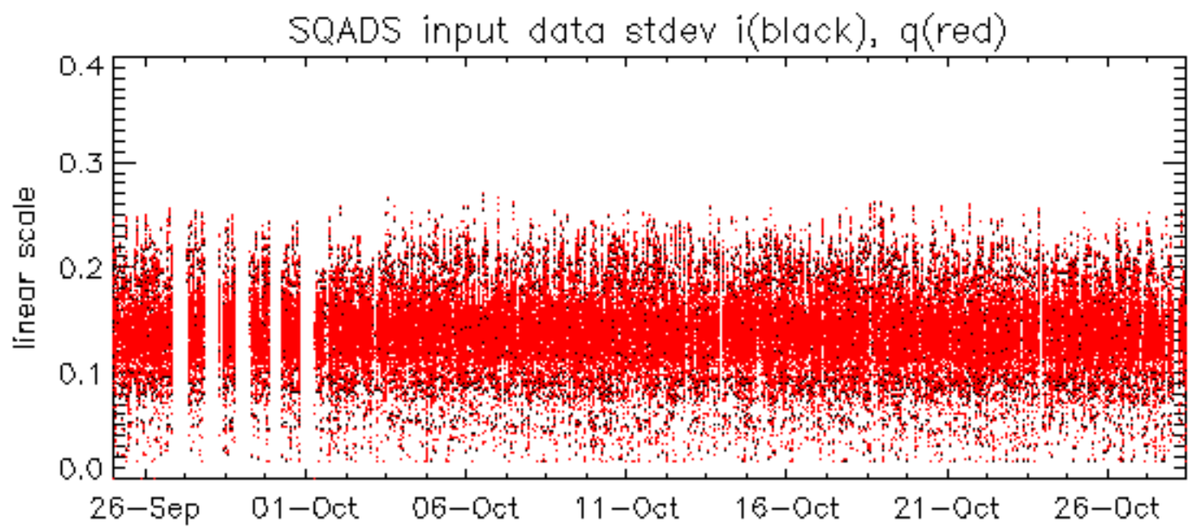
31
32

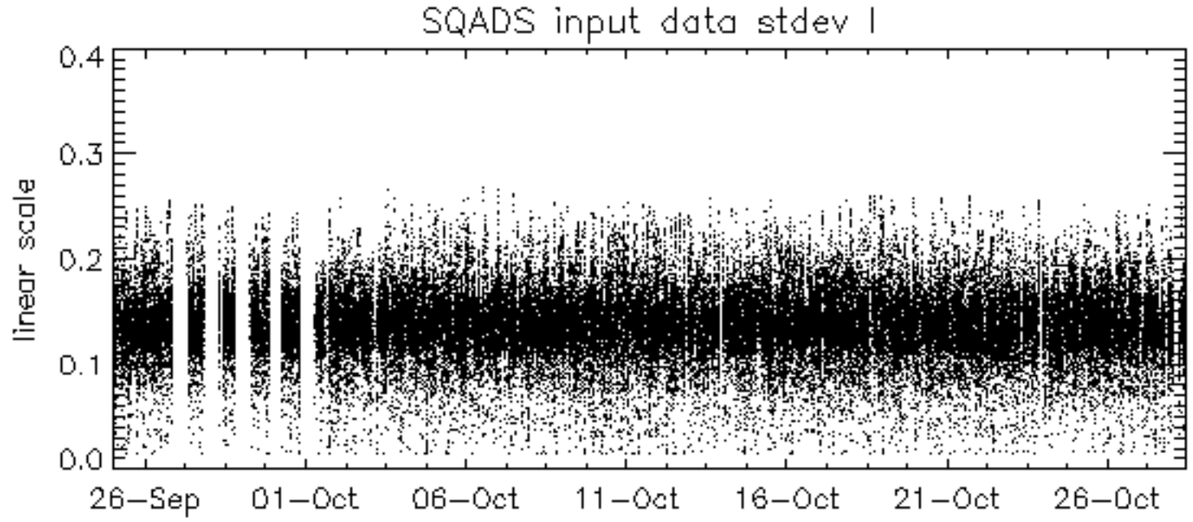

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

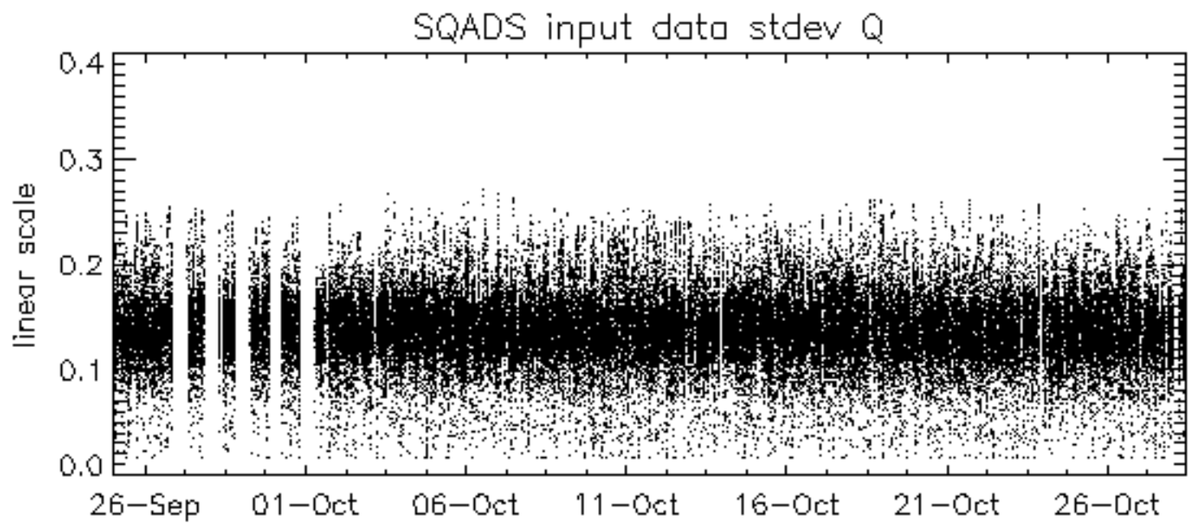

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct

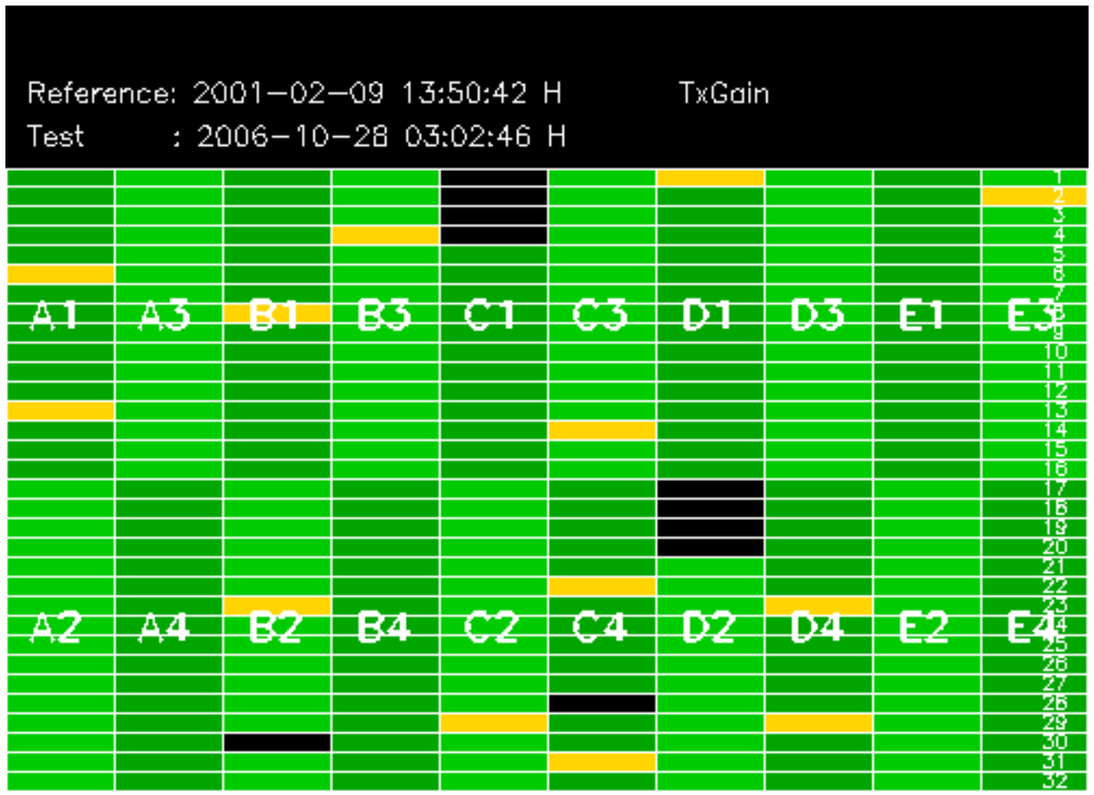

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Sep
01−Oct
06−Oct
11−Oct
16−Oct
21−Oct
26−Oct


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 : 2006-10-28 03:02:46 H
TxGain
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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8
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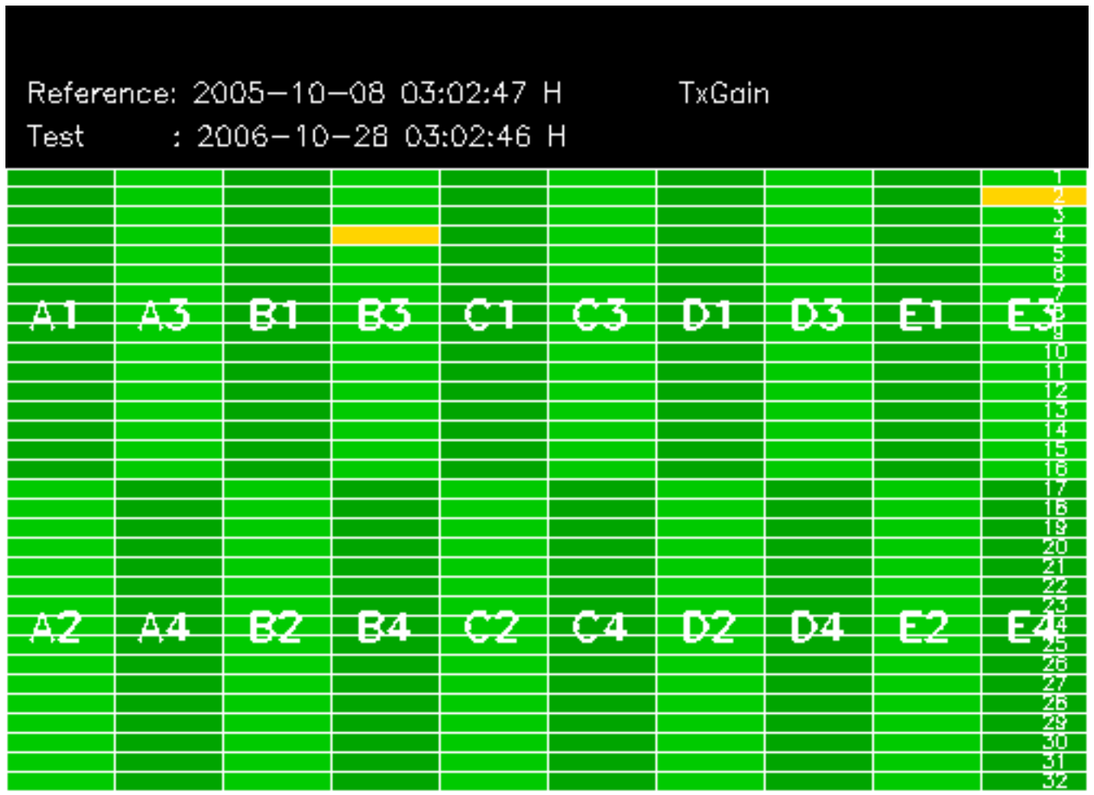
32


Reference: 2005-10-08 03:02:47 H
Test : 2006-10-28 03:02:46 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
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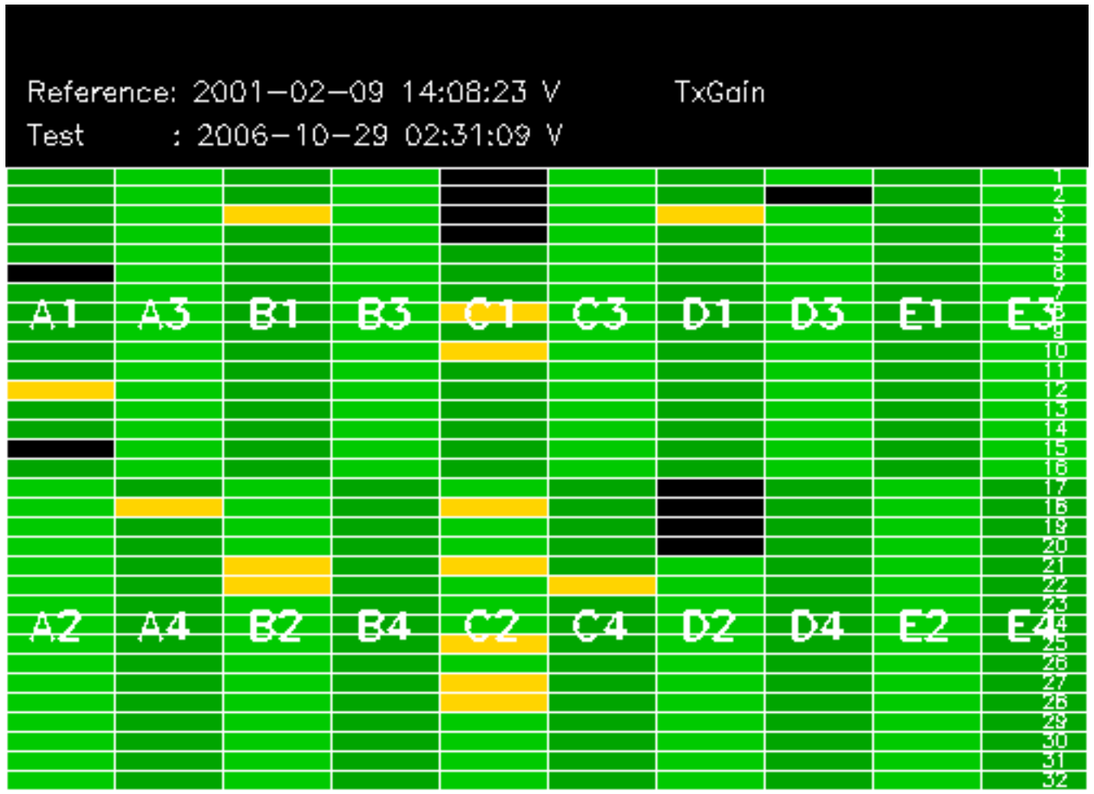
Reference: 2001-02-09 14:08:23 V
Test : 2006-10-29 02:31:09 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
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14
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16
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27
28
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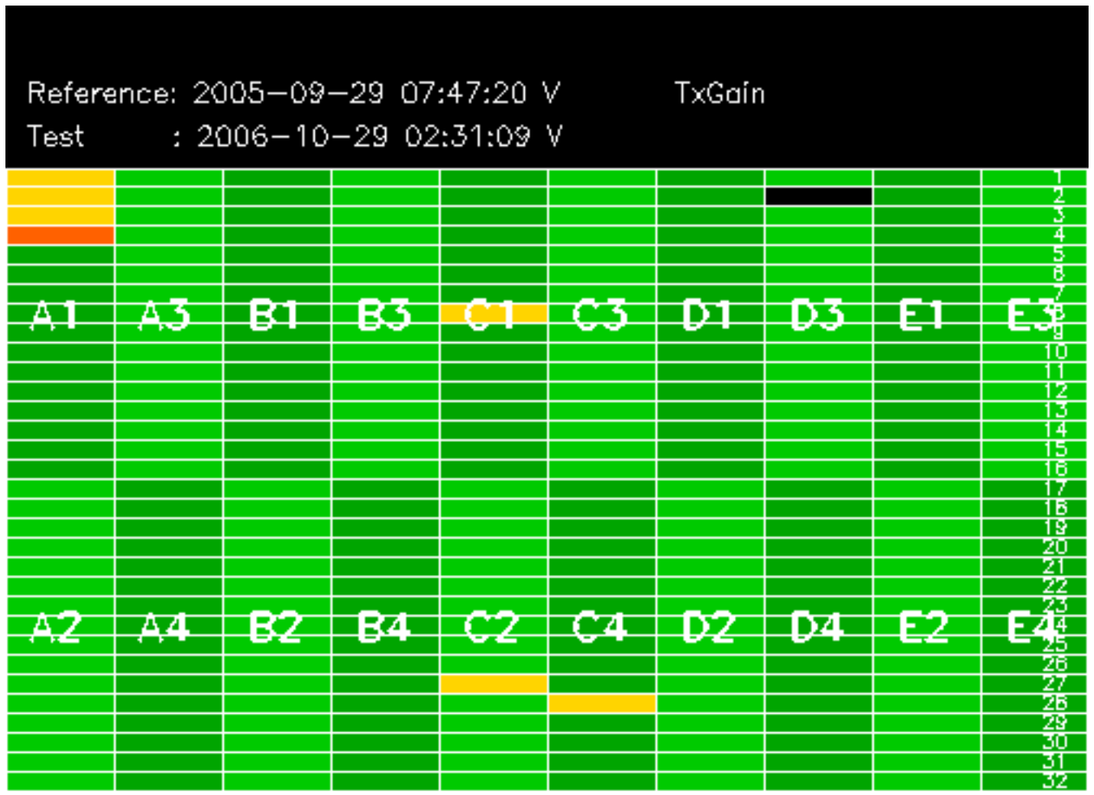
31
32


Reference: 2005-09-29 07:47:20 V
Test : 2006-10-29 02:31:09 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
12
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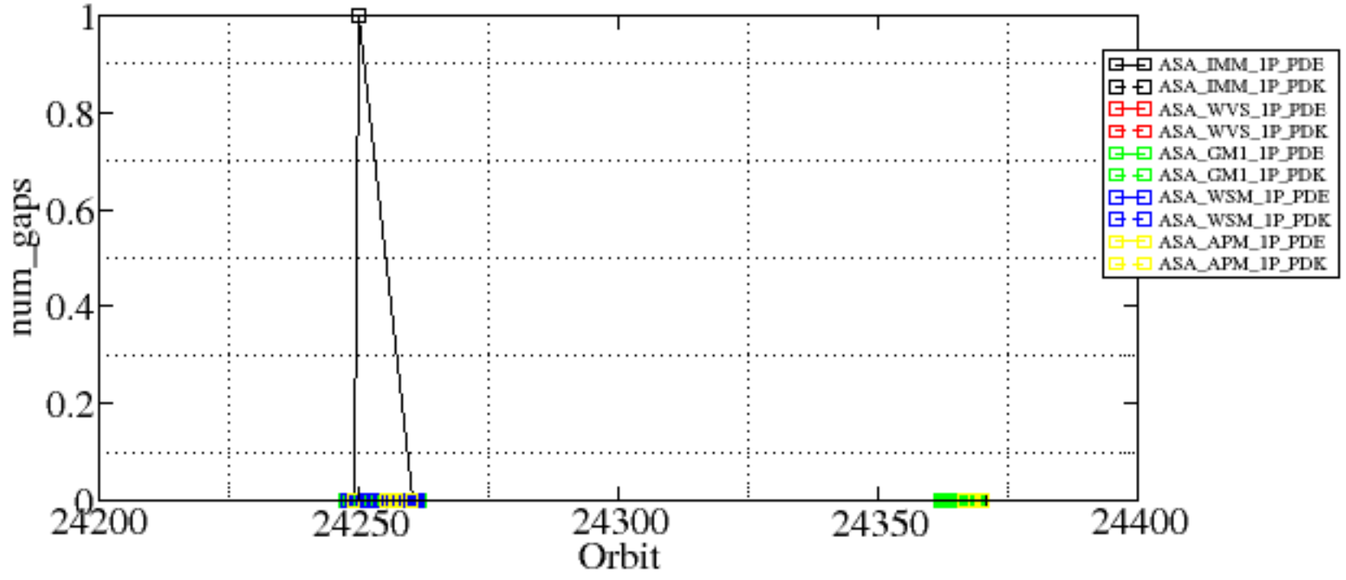
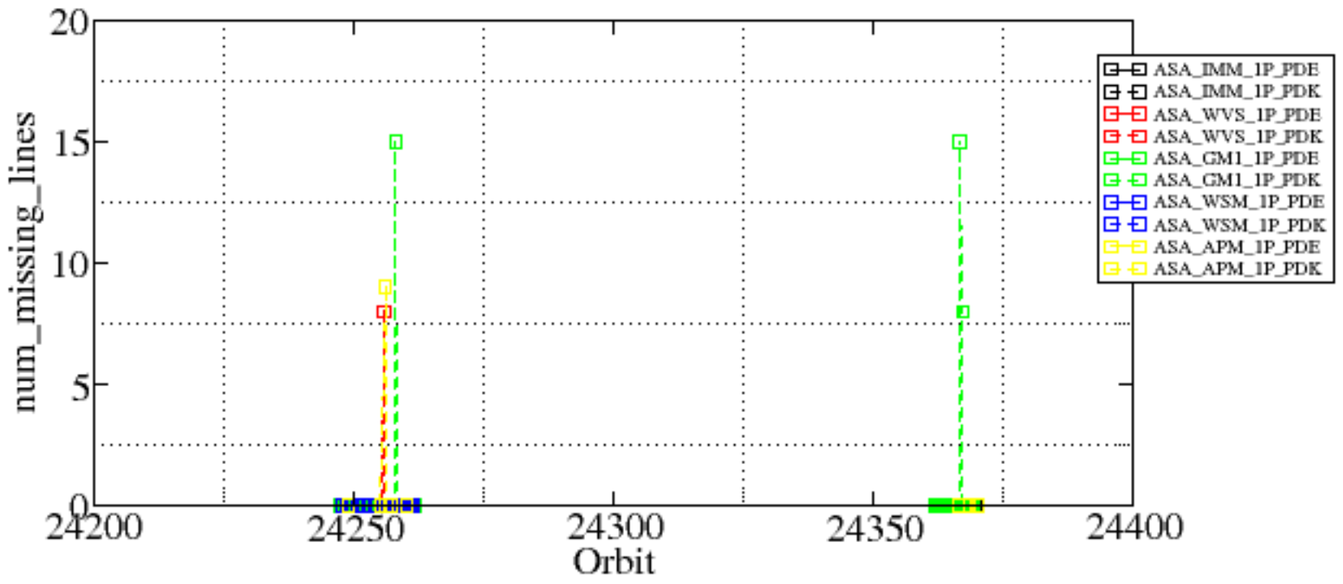
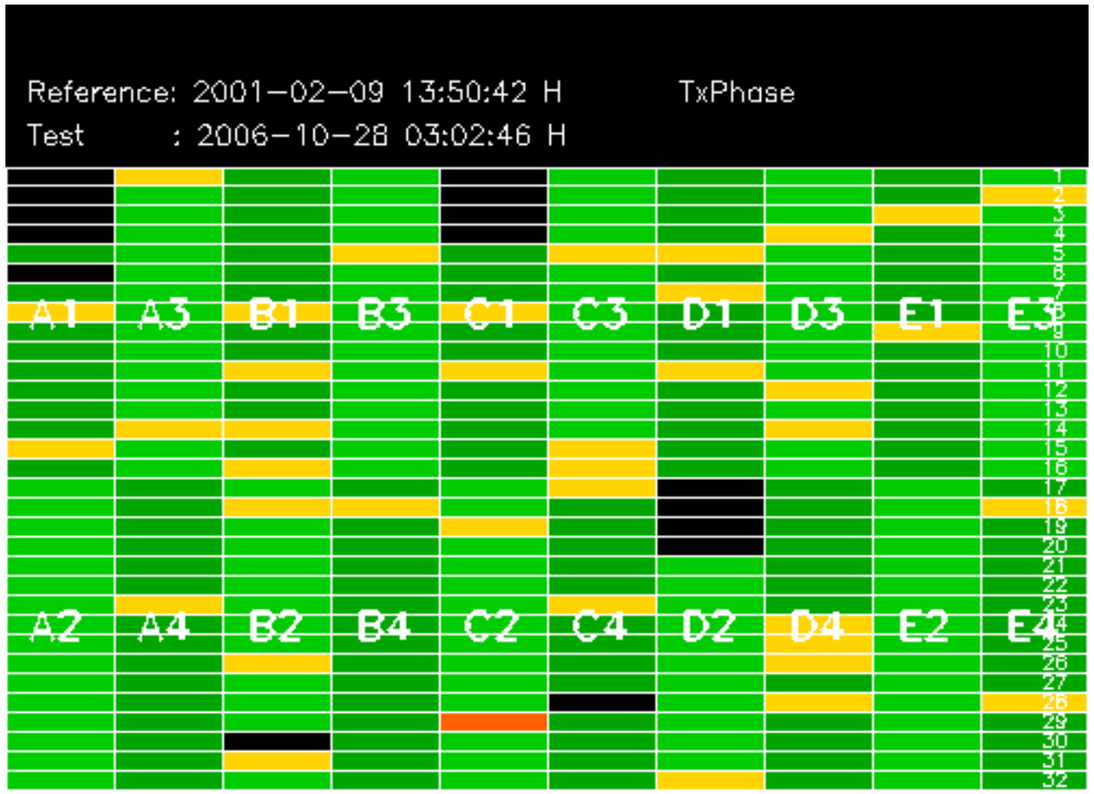
Summary of analysis for the last 3 days 2006102[890]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
<tr> <td>ASA_IMM_1PNPDE20061020_042634_000000762052_00147_24249_7183.N1 </td> <td>1 </td> <td>0 </td></tr>
<tr> <td>ASA_WVS_1PNPDK20061020_141556_000003002052_00153_24255_2893.N1 </td> <td>0 </td> <td>8 </td></tr>
<tr> <td>ASA_GM1_1PNPDK20061020_180334_000004162052_00156_24258_6944.N1 </td> <td>0 </td> <td>15 </td></tr>
<tr> <td>ASA_GM1_1PNPDK20061028_080312_000011352052_00264_24366_7493.N1 </td> <td>0 </td> <td>15 </td></tr>
<tr> <td>ASA_GM1_1PNPDK20061028_085551_000005252052_00265_24367_7492.N1 </td> <td>0 </td> <td>8 </td></tr>
<tr> <td>ASA_APM_1PNPDK20061020_143628_000000852052_00154_24256_1289.N1 </td> <td>0 </td> <td>9 </td></tr>
</table>


num_gaps
1
0.8
0.6
0.4
0.2
0
24200
24250
24300
24350
24400
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


num_missing_lines
20
15
10
5
0
24200
24250
24300
24350
24400
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WVS_1P_PDE
ASA_WVS_1P_PDK
ASA_GM1_1P_PDE
ASA_GM1_1P_PDK
ASA_WSM_1P_PDE
ASA_WSM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2006-10-28 03:02:46 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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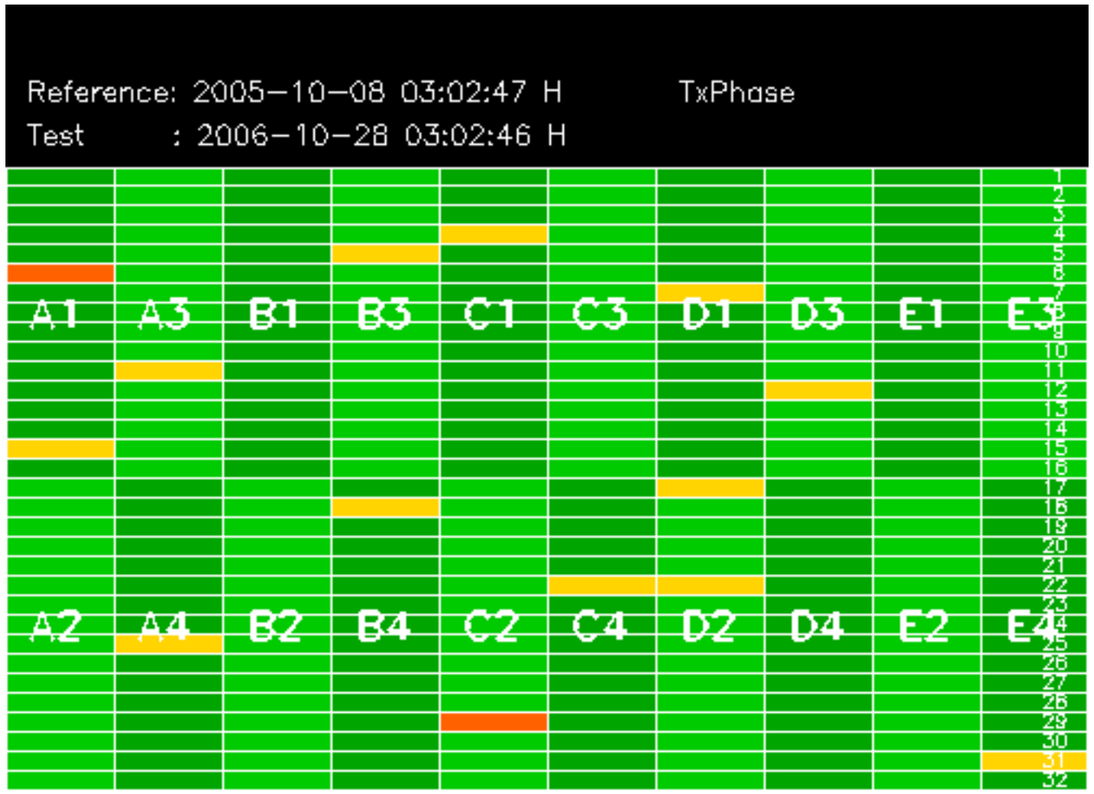
Reference: 2005-10-08 03:02:47 H
Test : 2006-10-28 03:02:46 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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E4
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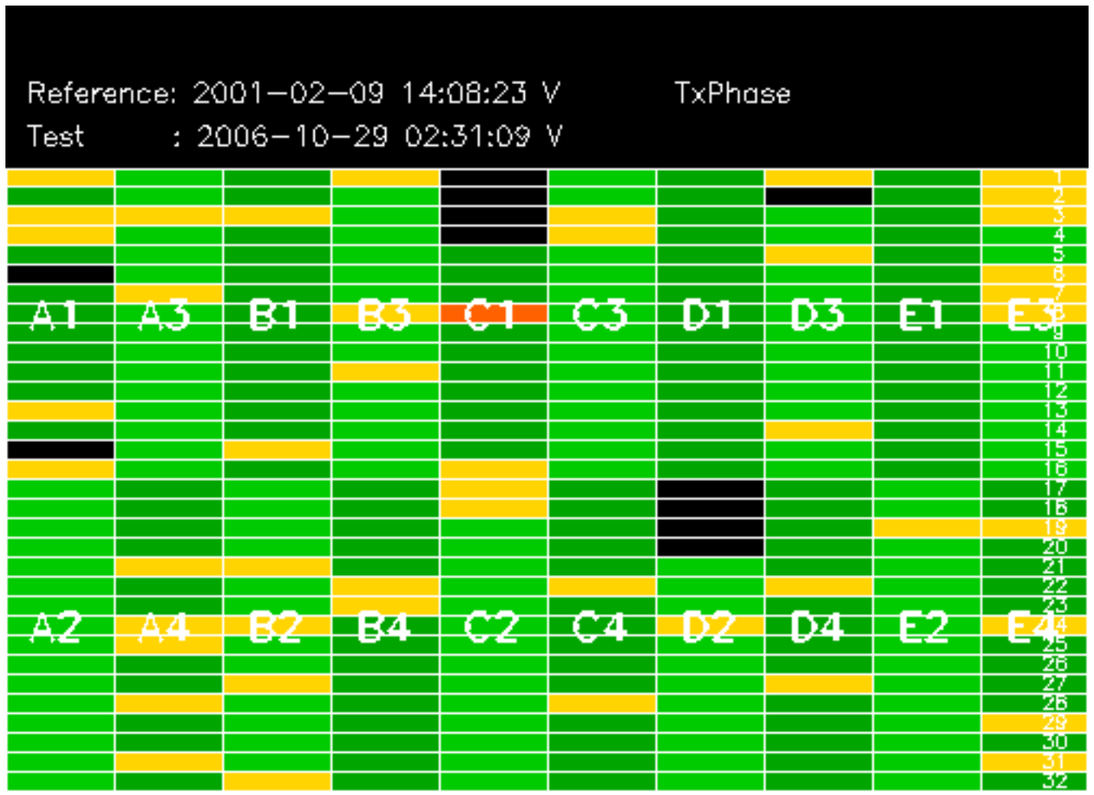
Reference: 2001-02-09 14:08:23 V
Test : 2006-10-29 02:31:09 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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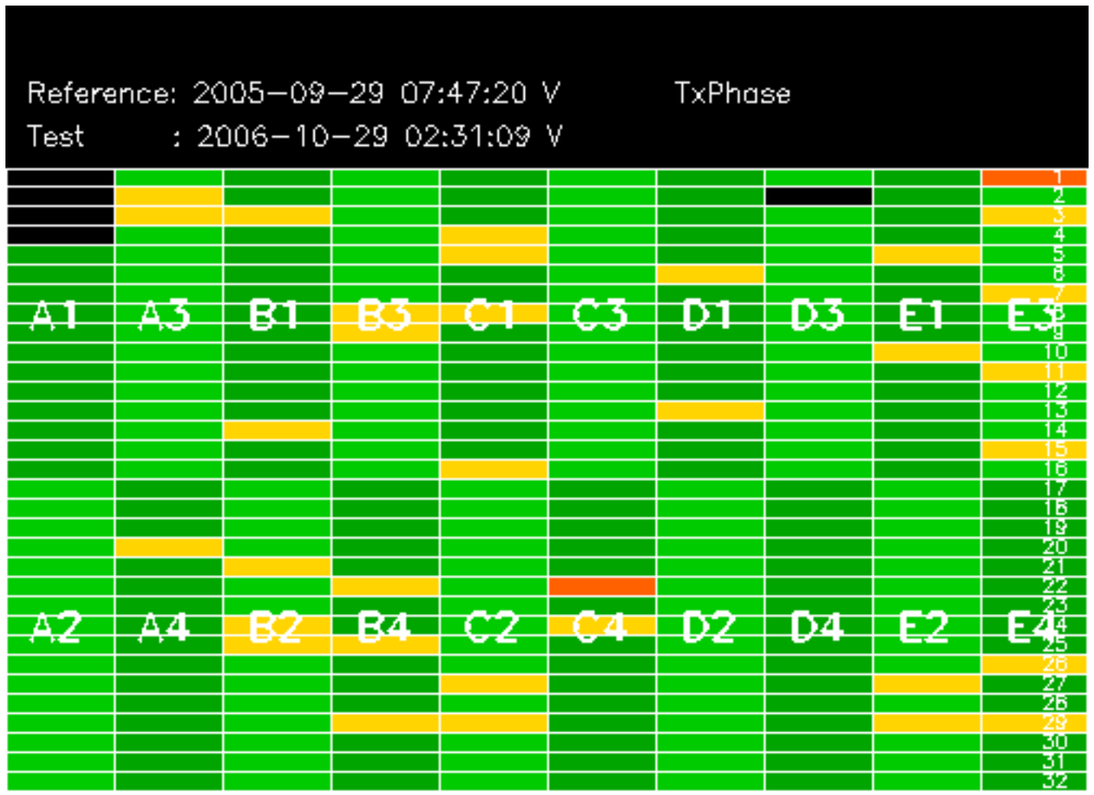
Reference: 2005-09-29 07:47:20 V
Test : 2006-10-29 02:31:09 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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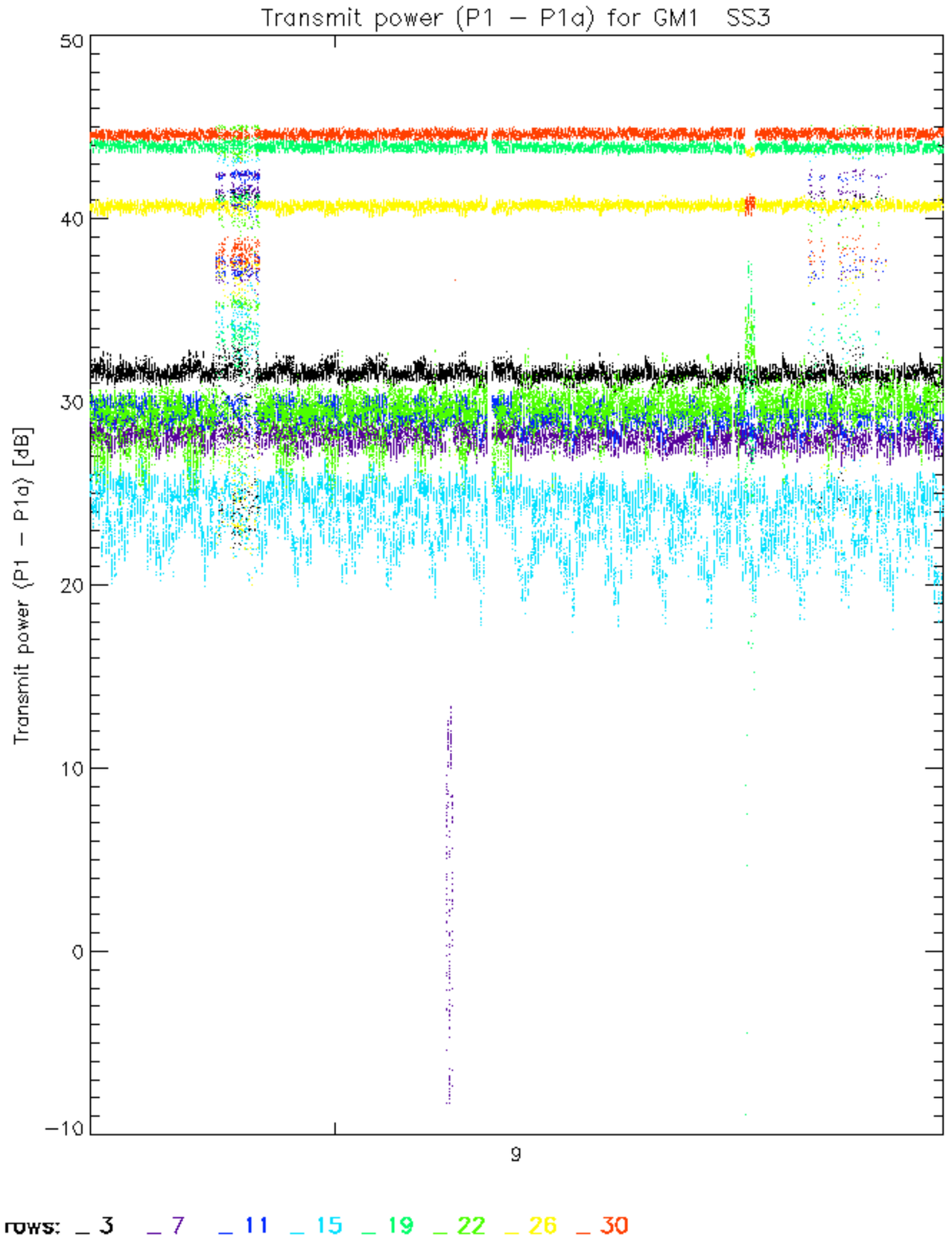
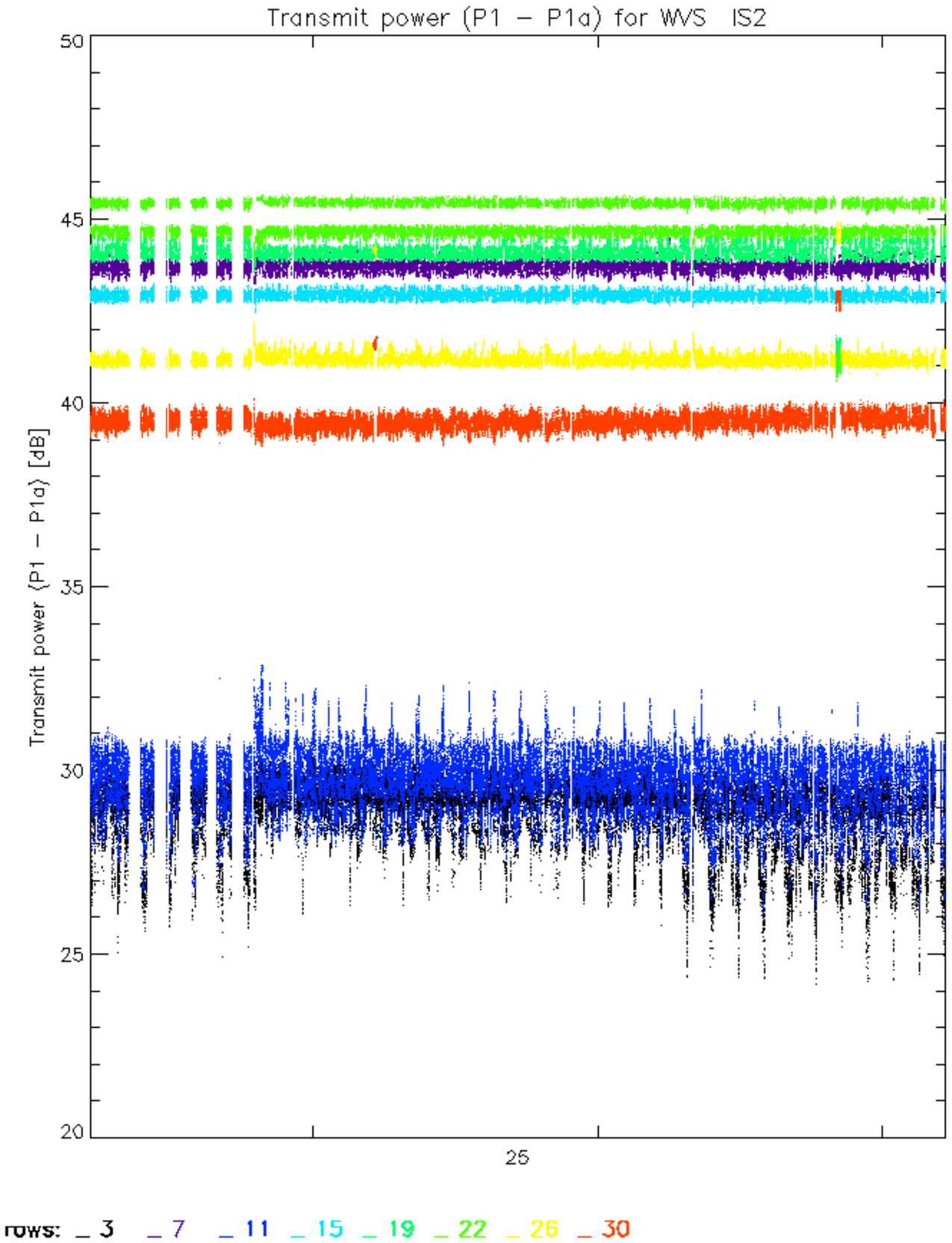

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
9
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
45
40
35
30
25
20
25
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.