PRELIMINARY REPORT OF 061214

last update on Thu Dec 14 16:23:34 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 2006-12-13 00:00:00 to 2006-12-14 16:23:34

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	20061212 042859
H	20061211 050036

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	-3.964955	0.008104	0.003971

7	P1	-3.152580	0.024433	-0.006663
11	P1	-4.128160	0.025862	0.010385
15	P1	-6.318159	0.015718	-0.066262
19	P1	-3.638338	0.006253	-0.077666
22	P1	-4.654345	0.013478	-0.013475
26	P1	-3.954074	0.009987	-0.037535
30	P1	-5.885739	0.009454	-0.039854
3	P1	-16.541615	0.247019	0.023895
7	P1	-17.294910	0.183294	-0.086288
11	P1	-17.195890	0.466376	0.051113
15	P1	-13.068934	0.137294	-0.030916
19	P1	-14.965826	0.093047	-0.120363
22	P1	-15.831047	0.550419	-0.082223
26	P1	-15.062596	0.191031	-0.195447
30	P1	-17.508749	0.476177	-0.203638

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.821413	0.095379	0.040106
7	P2	-21.733782	0.097880	-0.009931
11	P2	-15.616501	0.106577	0.143730
15	P2	-7.121161	0.110953	-0.010576
19	P2	-9.192221	0.109339	-0.043060
22	P2	-18.239634	0.101652	-0.028935
26	P2	-16.576242	0.117173	-0.094645
30	P2	-19.467539	0.091903	0.019981

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.247008	0.008897	-0.004224
7	P3	-8.247008	0.008897	-0.004224
11	P3	-8.247008	0.008897	-0.004224
15	P3	-8.247008	0.008897	-0.004224
19	P3	-8.247008	0.008897	-0.004224
22	P3	-8.247008	0.008897	-0.004224
26	P3	-8.247057	0.008900	-0.003989
30	P3	-8.247057	0.008900	-0.003989

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	-3.915609	0.018025	-0.040669
7	P1	-2.487162	0.036594	0.037209
11	P1	-2.853605	0.019196	-0.016828
15	P1	-3.684577	0.033366	-0.009585
19	P1	-3.538960	0.017910	-0.065127
22	P1	-5.028039	0.023471	-0.017595
26	P1	-6.023335	0.027461	-0.091331
30	P1	-5.341504	0.039157	-0.078618
3	P1	-11.740896	0.088631	-0.059957
7	P1	-10.057867	0.111876	-0.054526
11	P1	-10.331478	0.141909	-0.037138
15	P1	-10.714327	0.126444	0.052233
19	P1	-15.721733	0.117440	-0.081759
22	P1	-21.585558	1.409817	-0.259027
26	P1	-16.076540	0.322989	-0.133159
30	P1	-17.879341	0.366320	0.054744

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.471119	0.124936	-0.067772
7	P2	-22.238617	0.271177	-0.079422
11	P2	-10.918970	0.149616	0.082939
15	P2	-4.989531	0.263933	-0.086584
19	P2	-6.964045	0.240824	-0.083125
22	P2	-8.259428	0.145188	-0.036649

26	P2	-24.327108	0.204686	-0.023356
30	P2	-21.953325	0.173223	-0.066910

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.095351	0.004146	-0.010548
7	P3	-8.095374	0.004138	-0.009991
11	P3	-8.095388	0.004144	-0.010240
15	P3	-8.095246	0.004140	-0.010229
19	P3	-8.095323	0.004142	-0.009923
22	P3	-8.095340	0.004134	-0.010198
26	P3	-8.095264	0.004147	-0.010503
30	P3	-8.095174	0.004140	-0.010520

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	0.000555424
	stdev	1.72528e-07
MEAN Q	mean	0.000513493
	stdev	2.16713e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138536
	stdev	0.00117414
STDEV Q	mean	0.138922
	stdev	0.00119359

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006121[234]
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

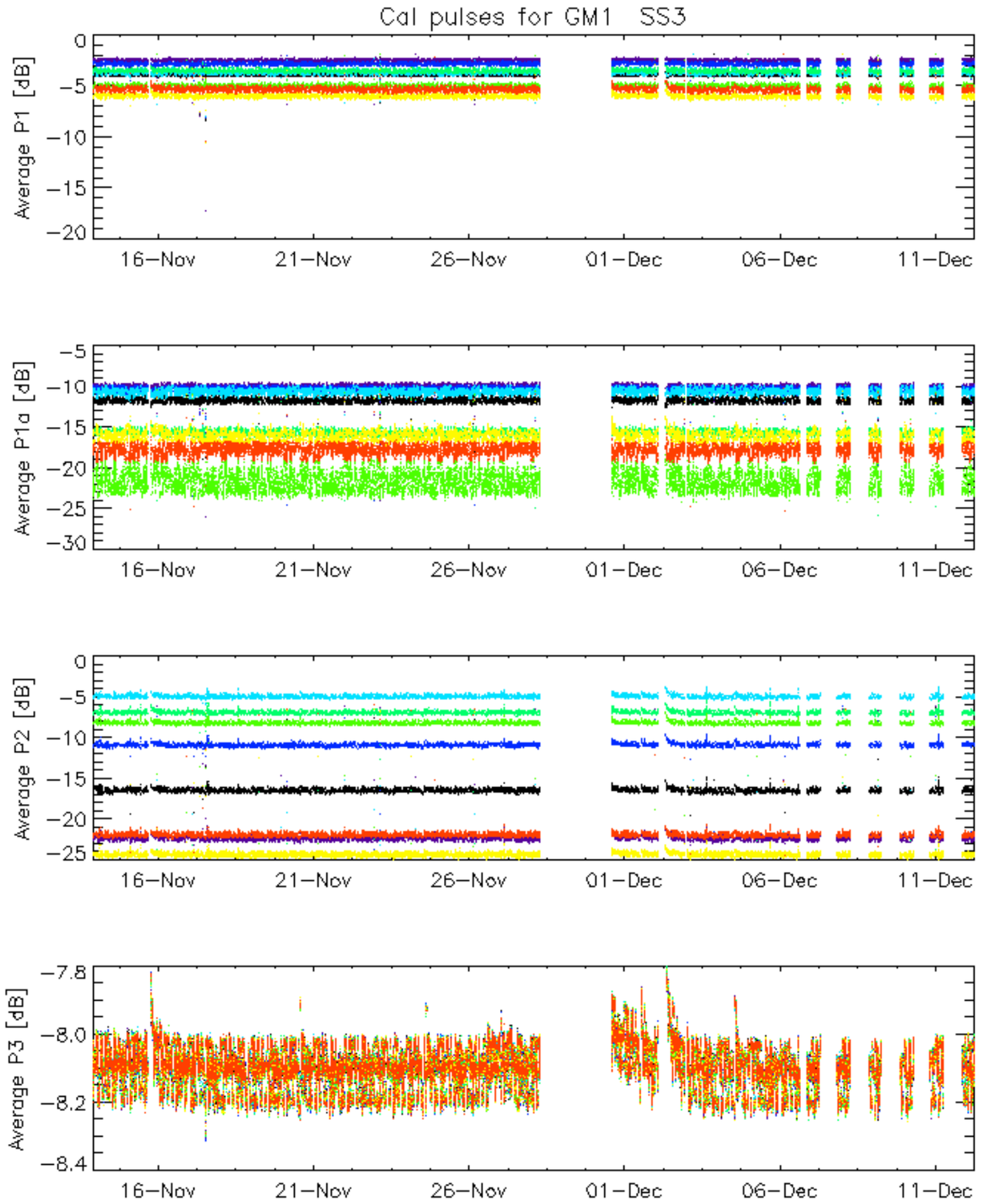
7.4 - Unbiased Doppler Error for GM1

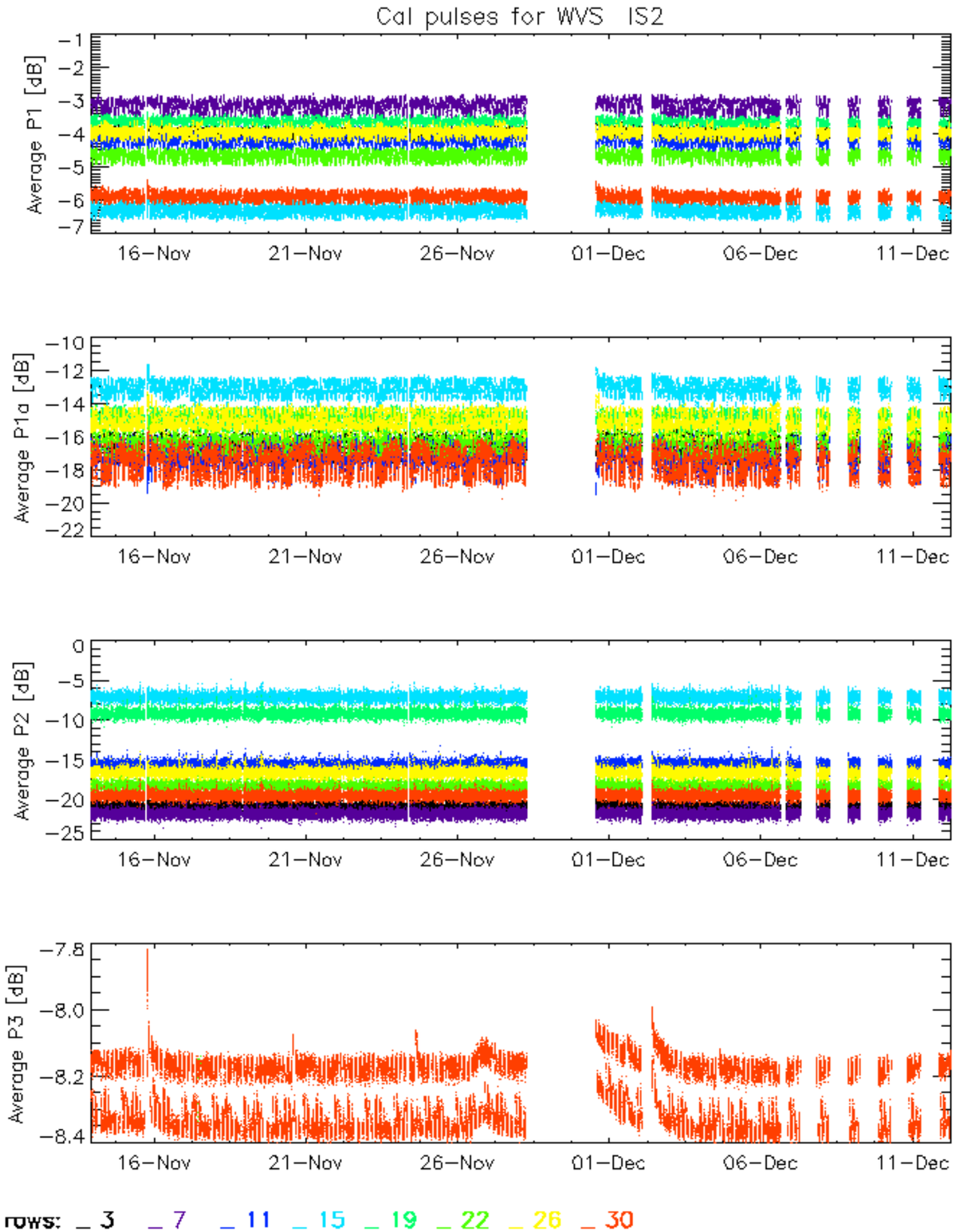
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

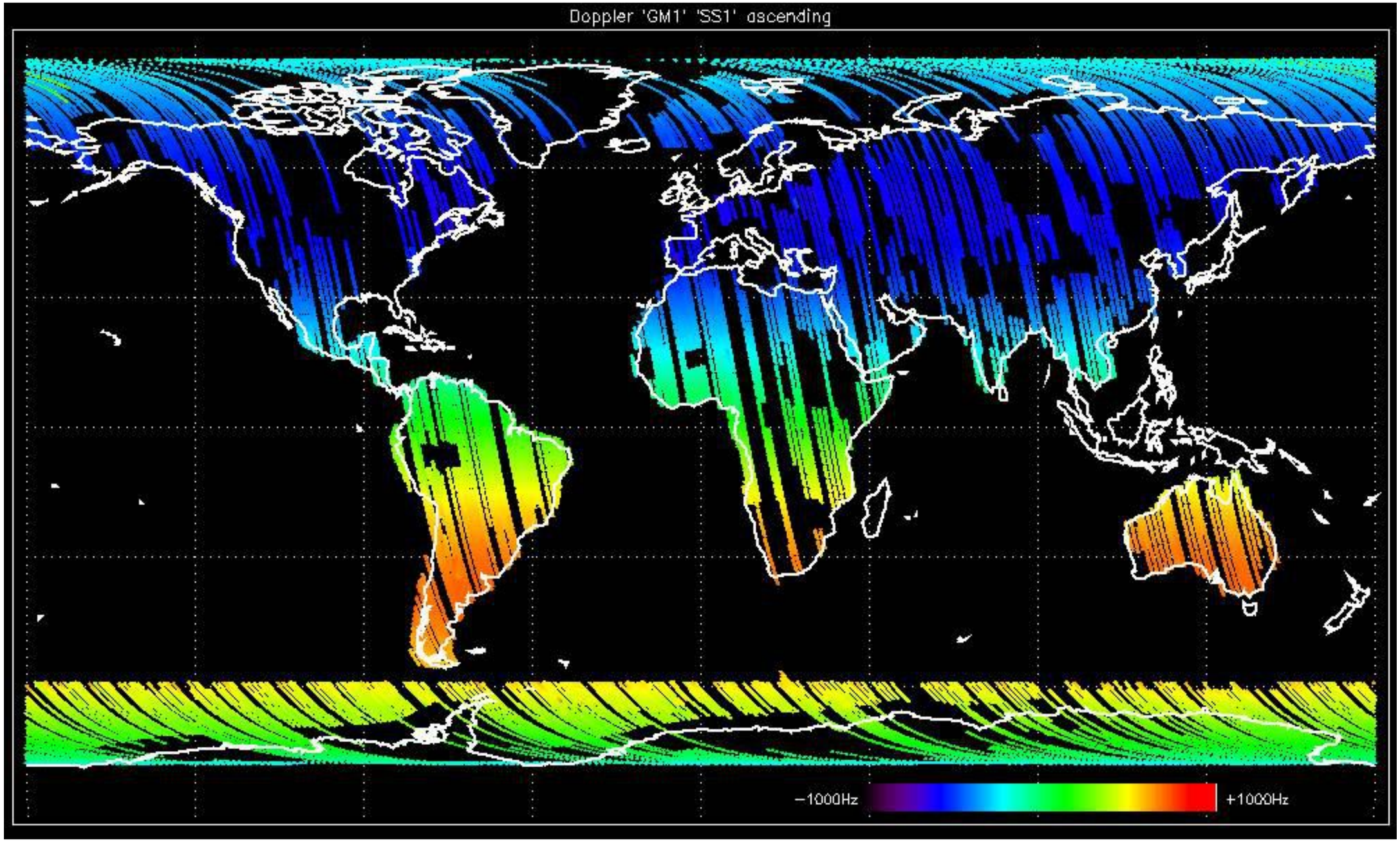

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

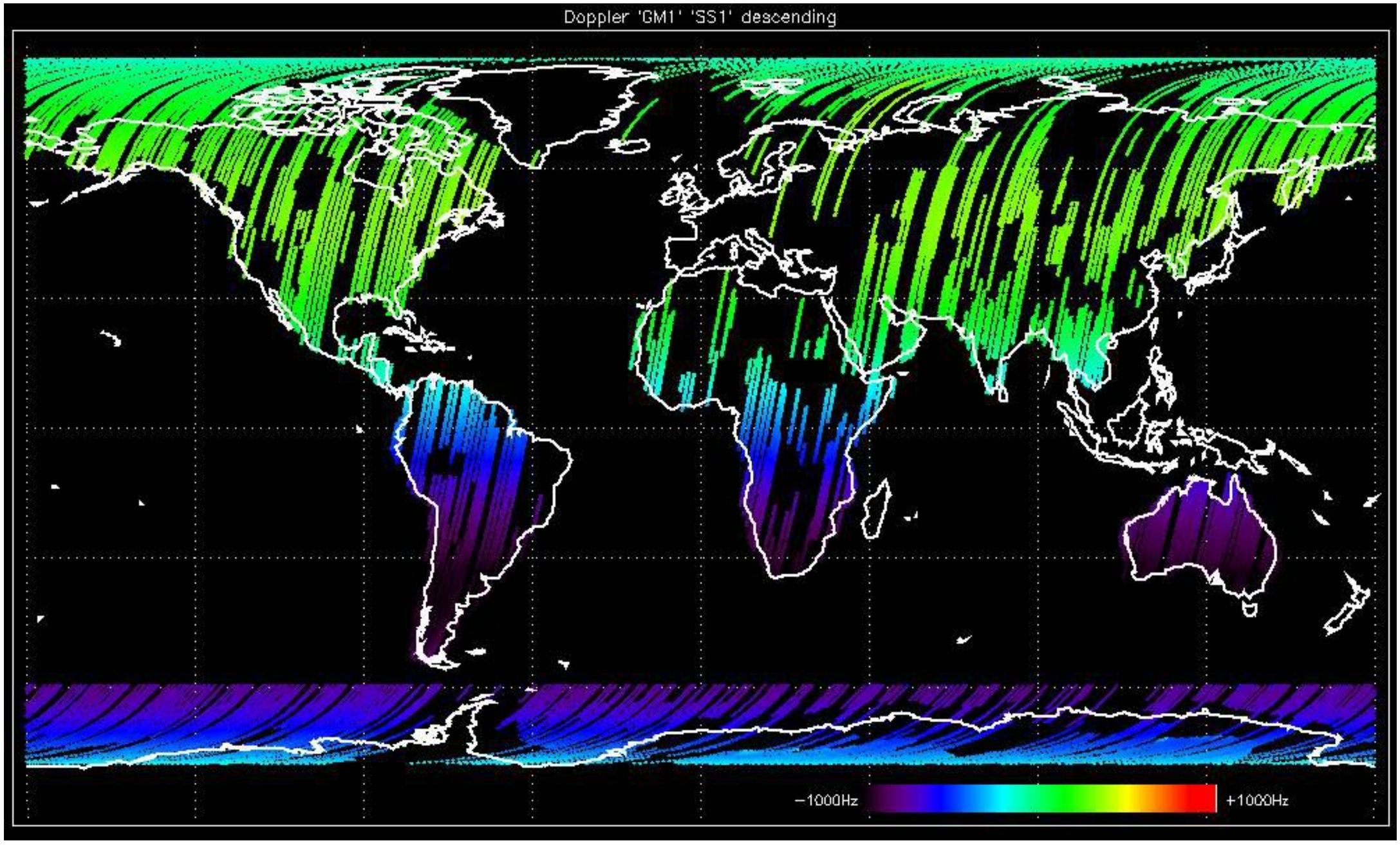

Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

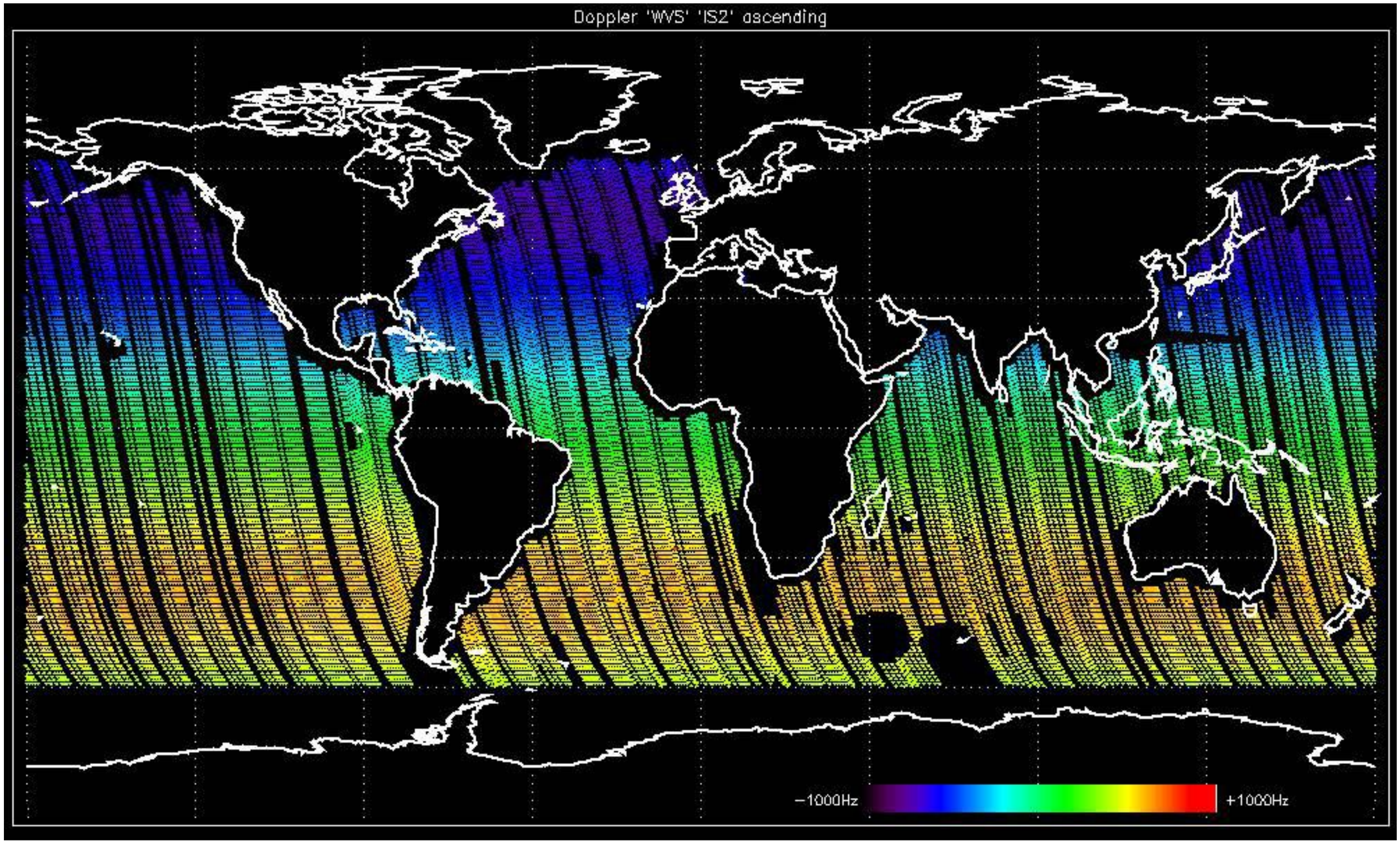
No anomalies observed.

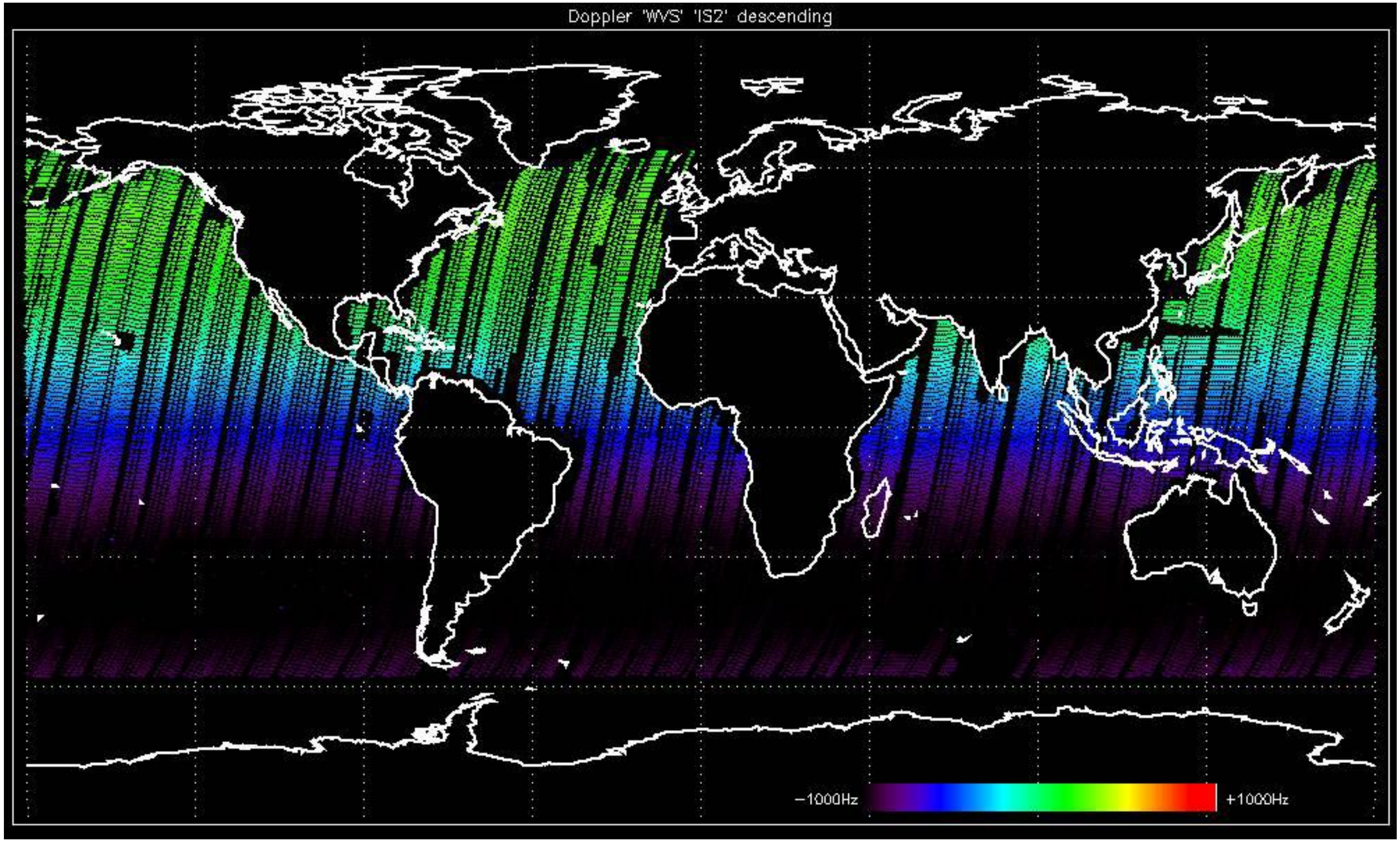
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

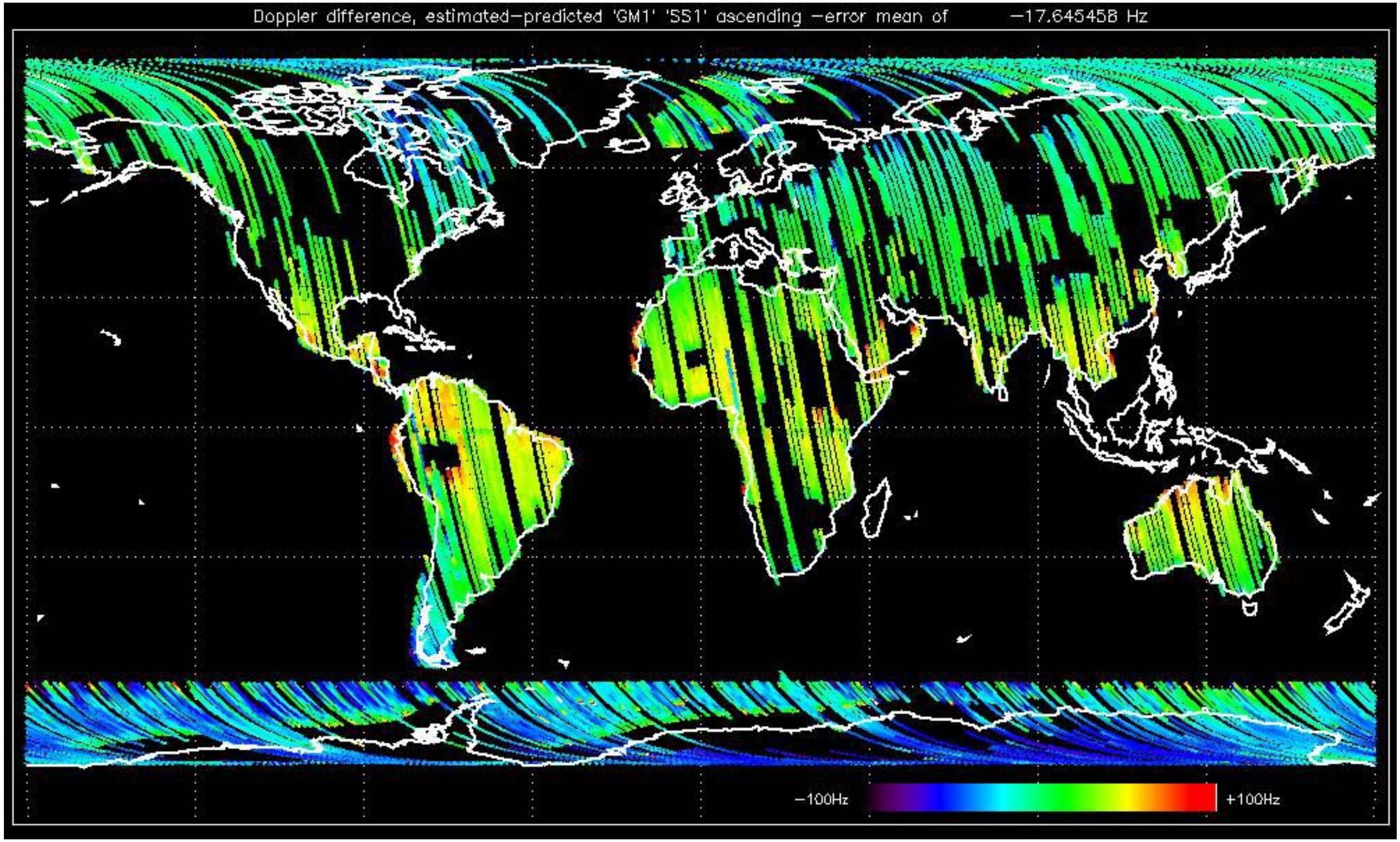
Preliminary report.The data is not yet controled

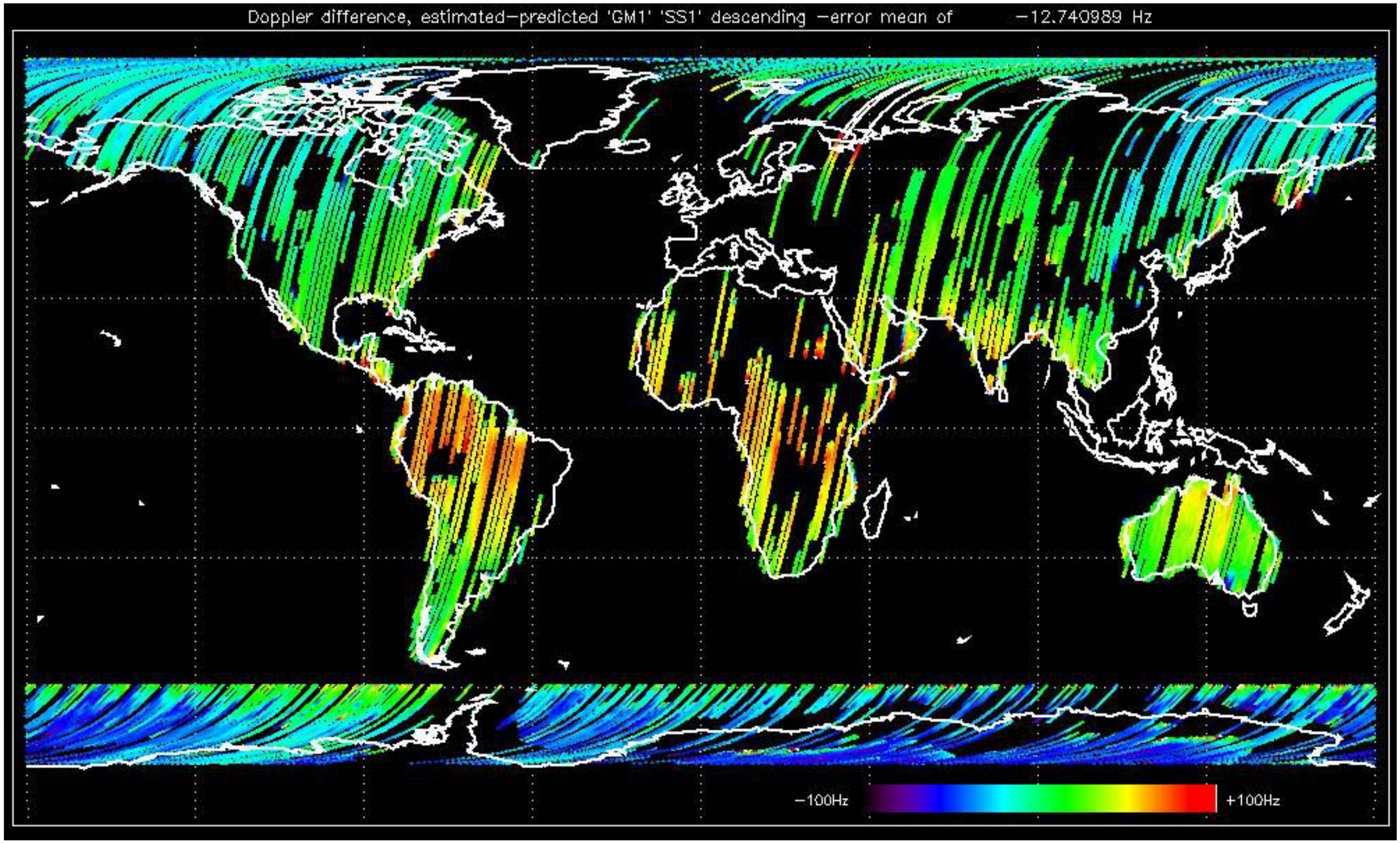

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

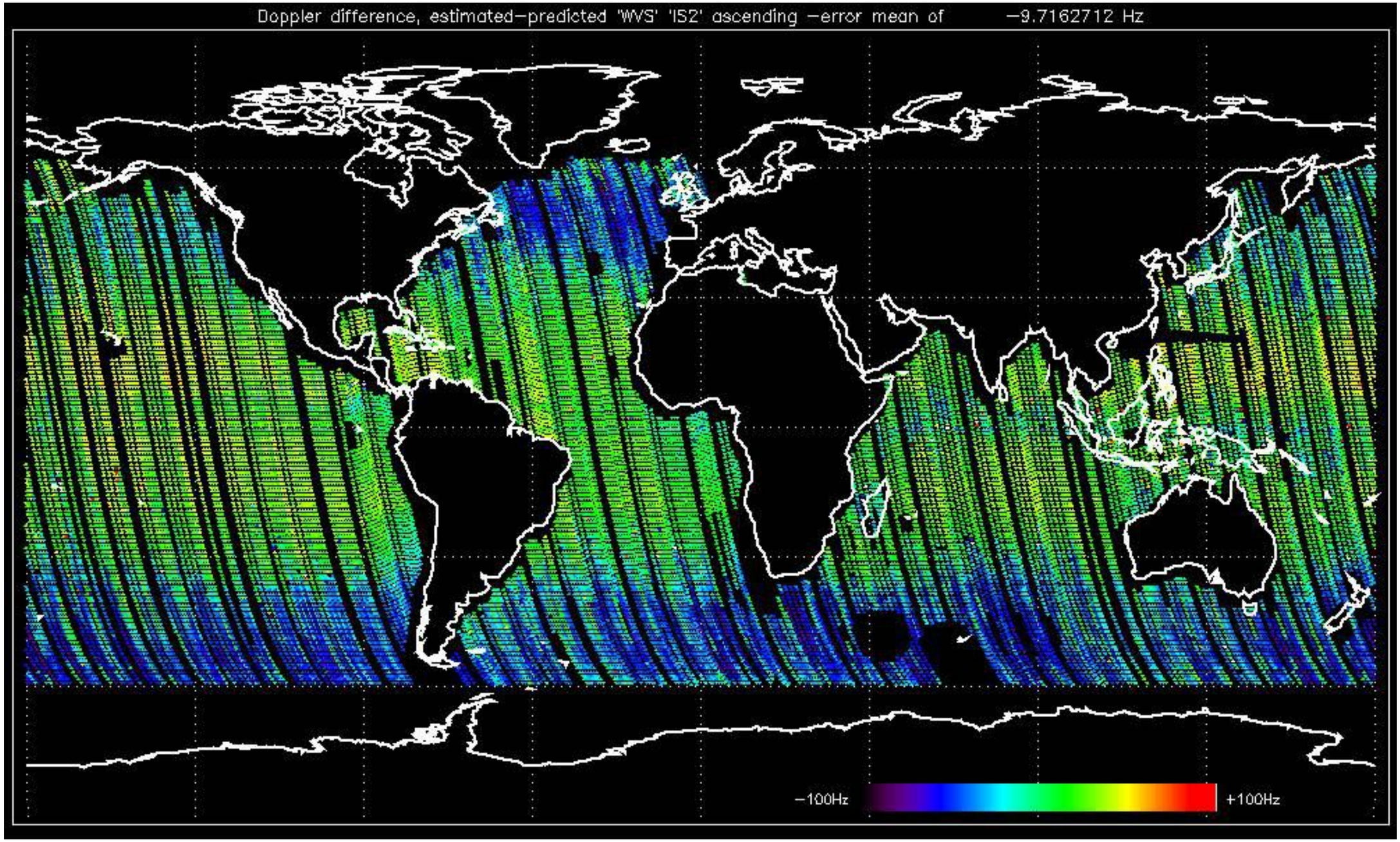

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

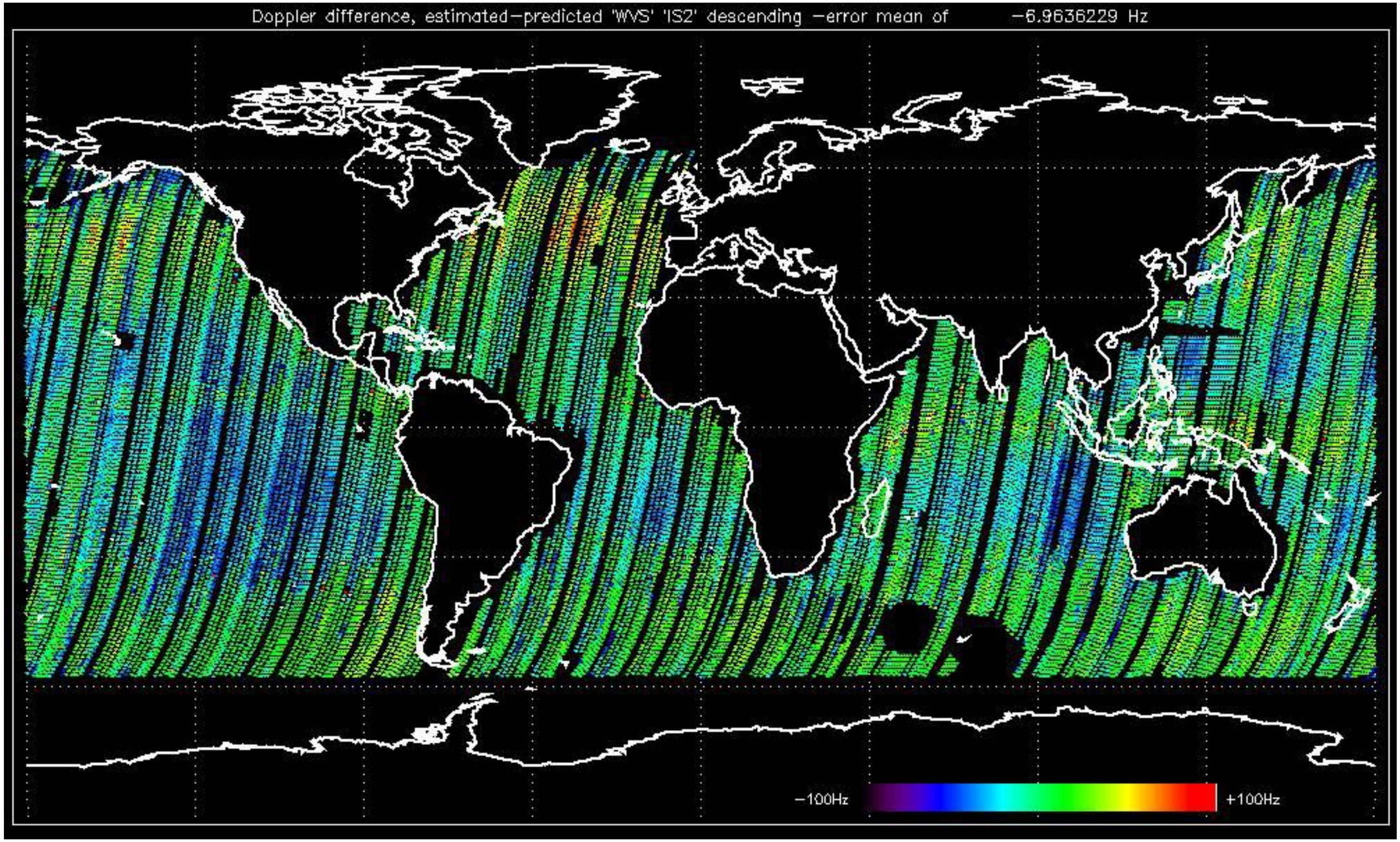

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −17.645458 Hz
−100Hz
+100Hz

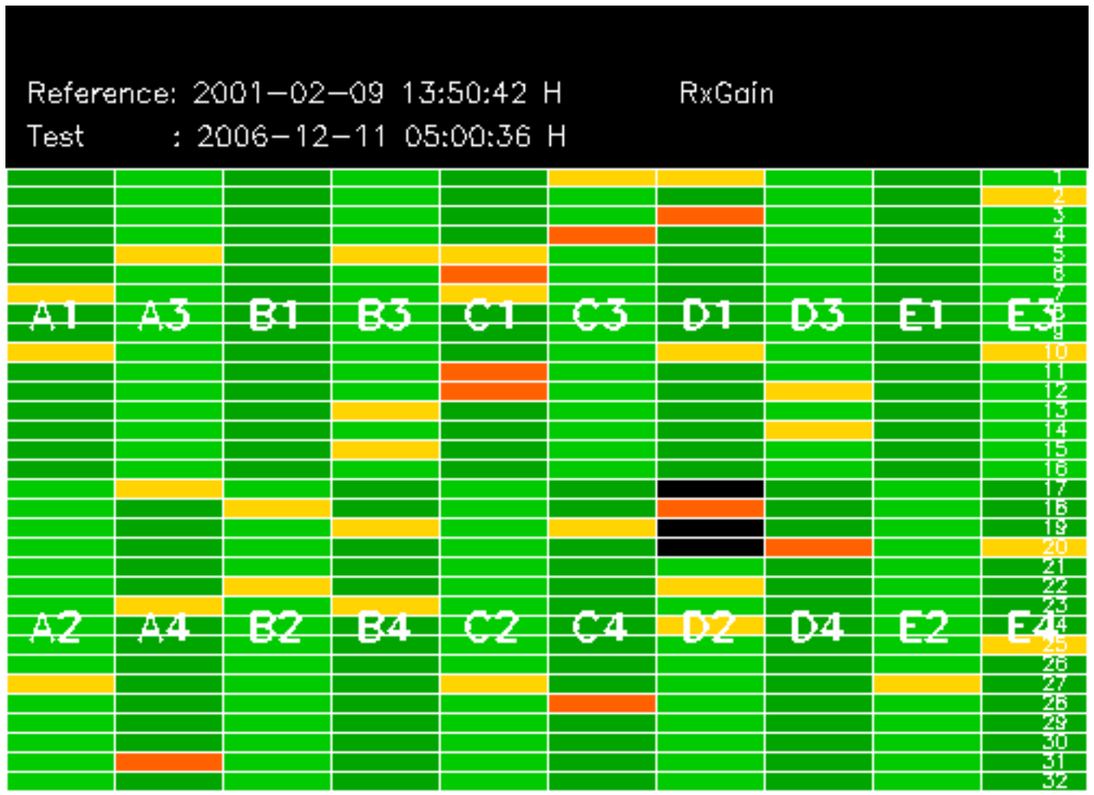

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −12.740989 Hz
−100Hz
+100Hz

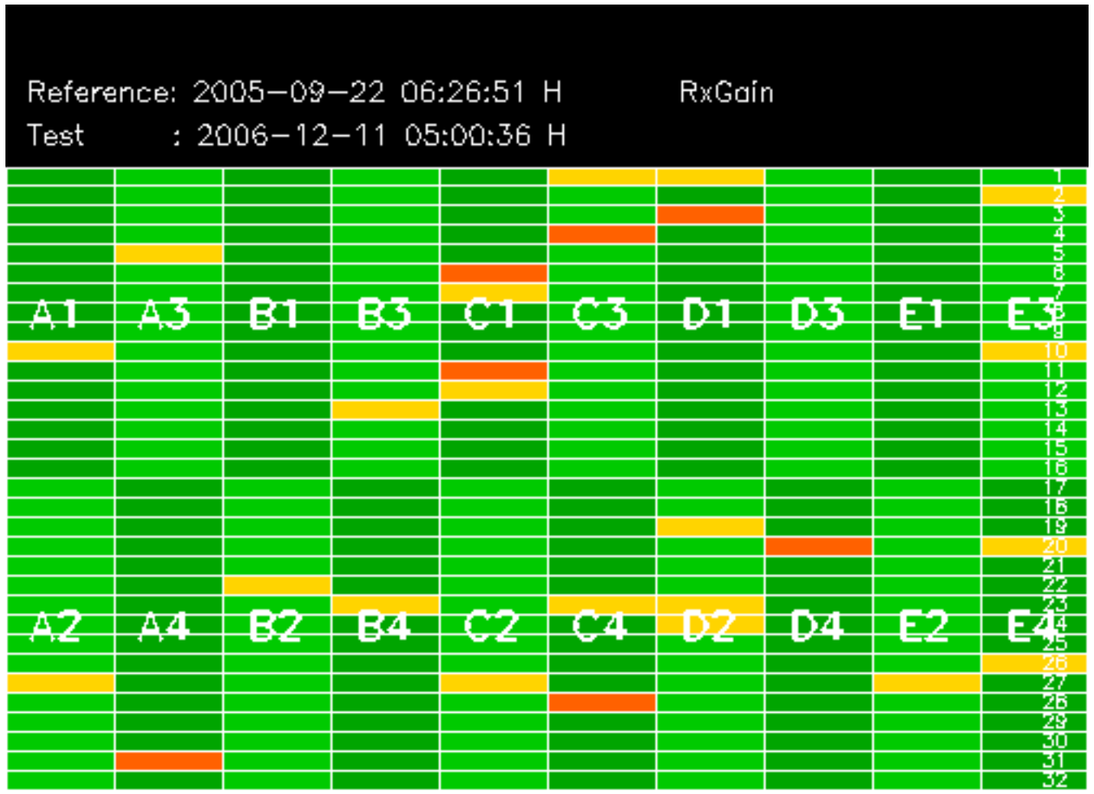

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −9.7162712 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −6.9636229 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2006-12-11 05:00:36 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-22 06:26:51 H
Test : 2006-12-11 05:00:36 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
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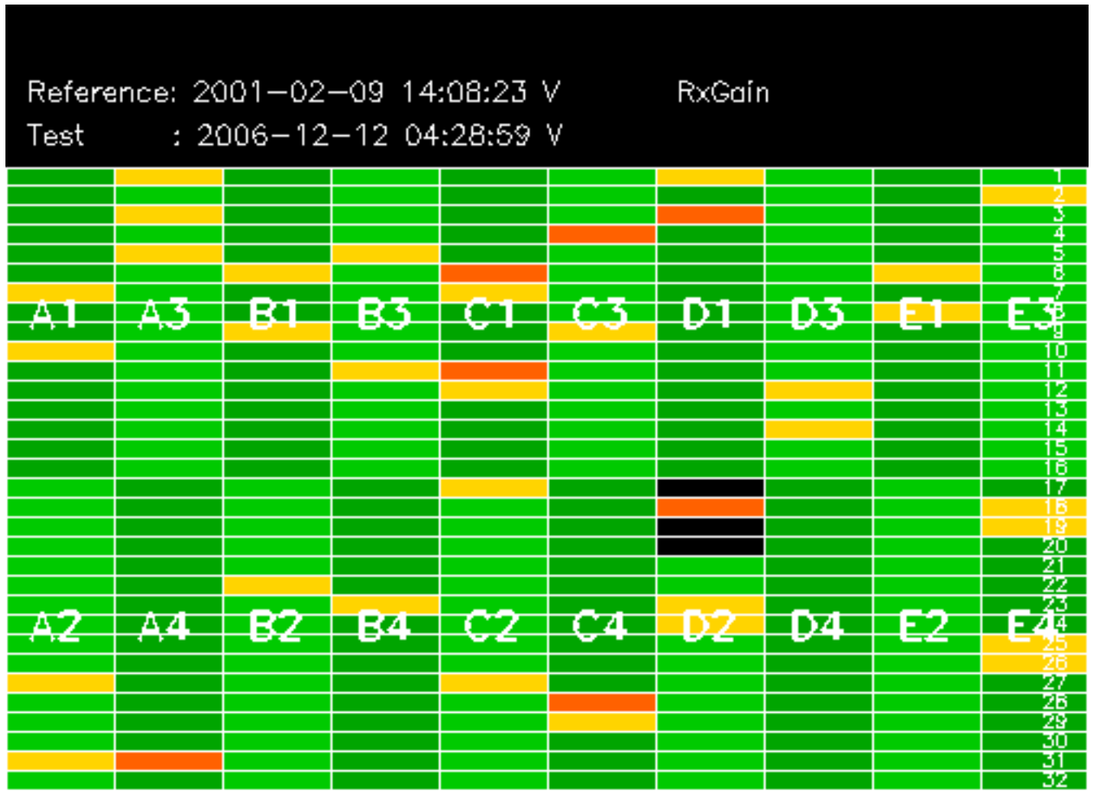
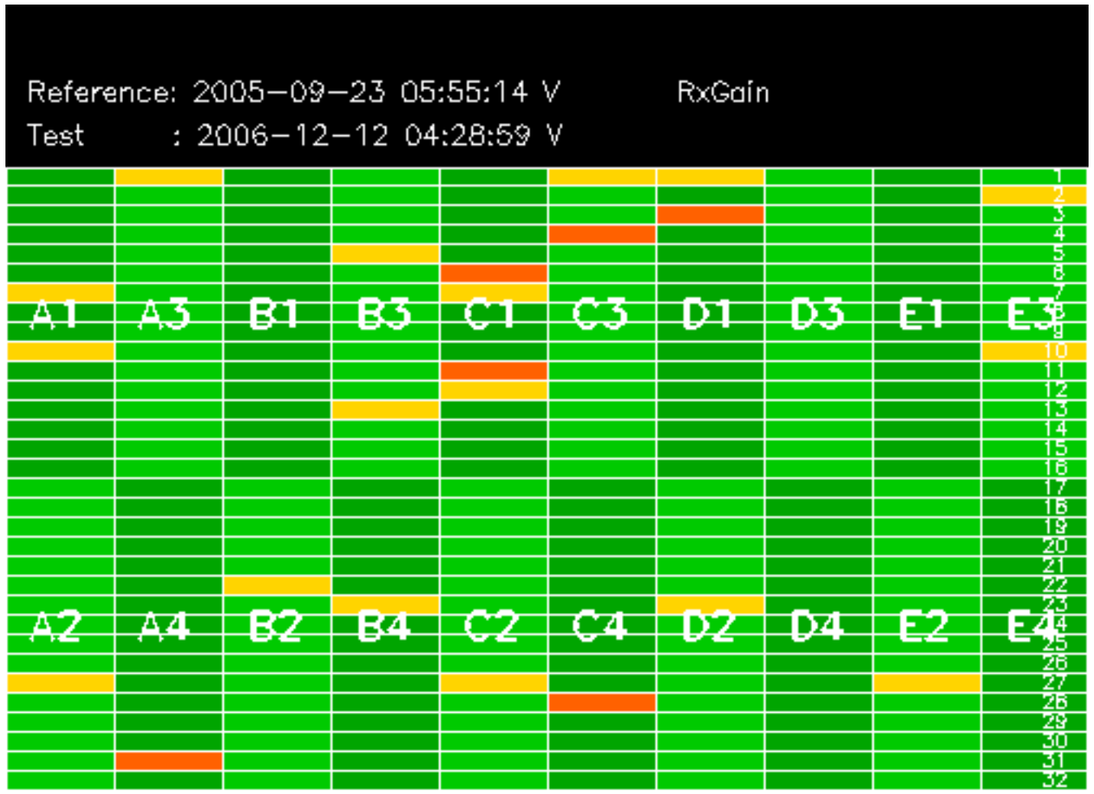

Reference: 2001-02-09 14:08:23 V
Test : 2006-12-12 04:28:59 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-23 05:55:14 V
Test : 2006-12-12 04:28:59 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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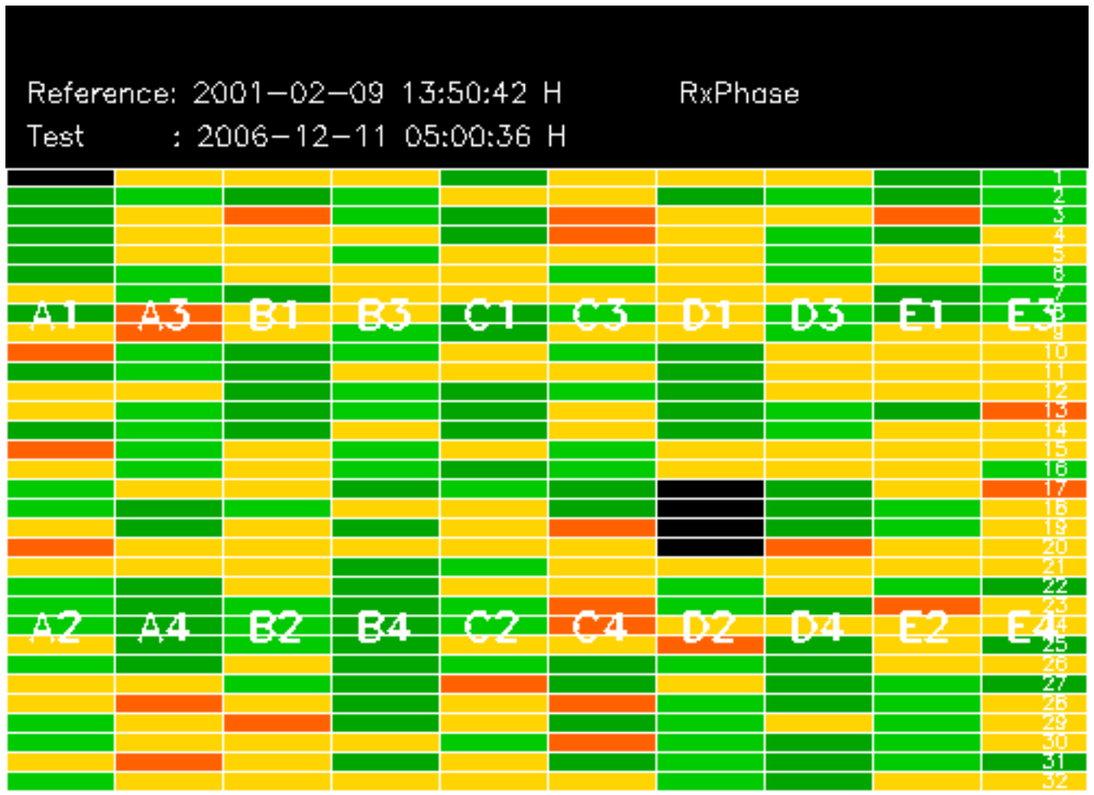
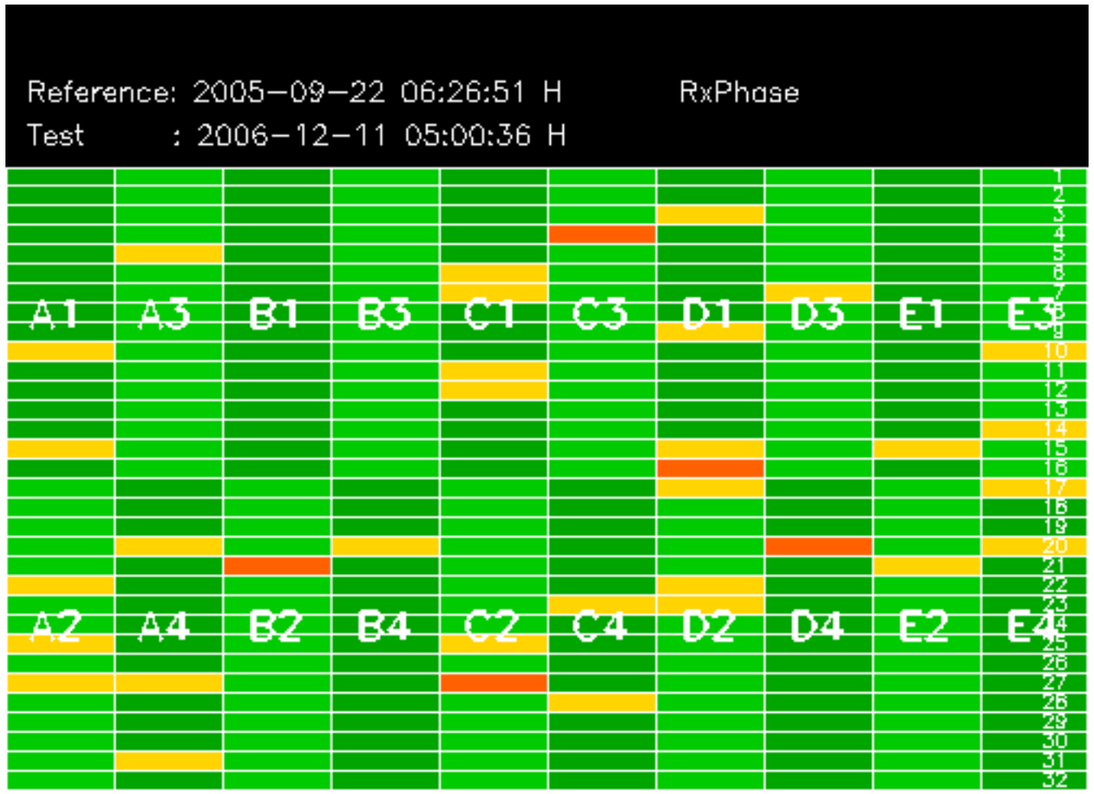

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2006-12-11 05:00:36 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-22 06:26:51 H
RxPhase
Test : 2006-12-11 05:00:36 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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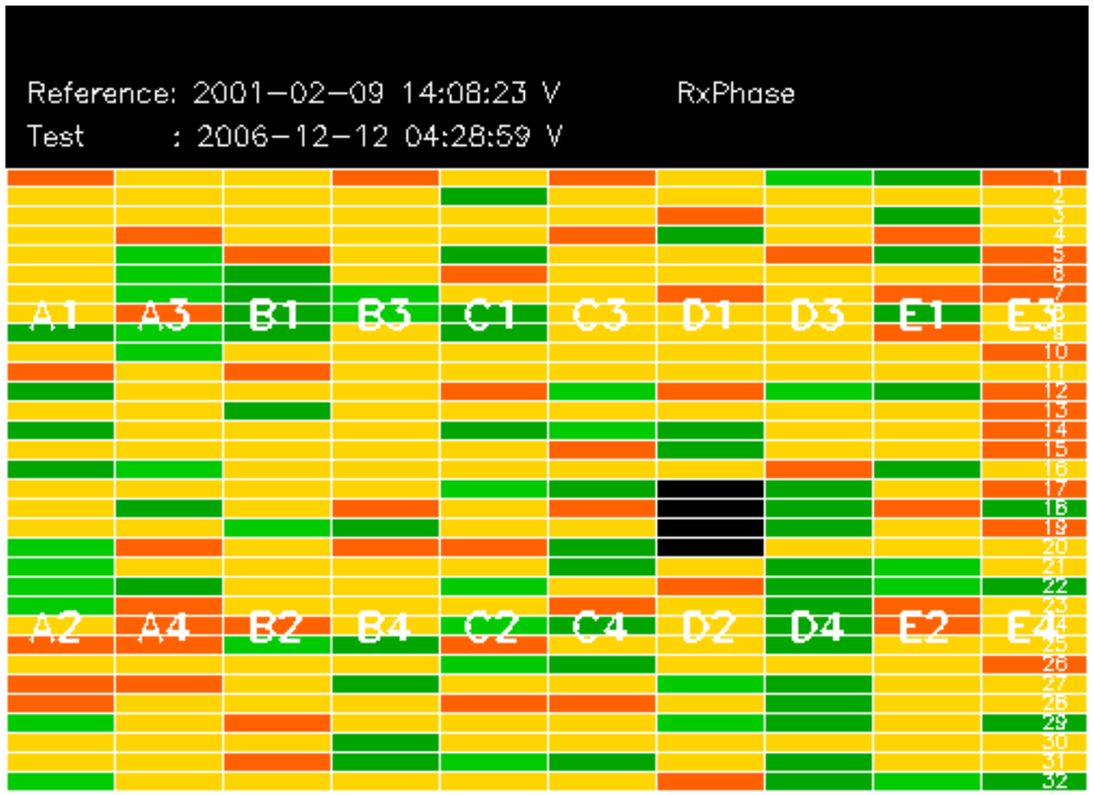
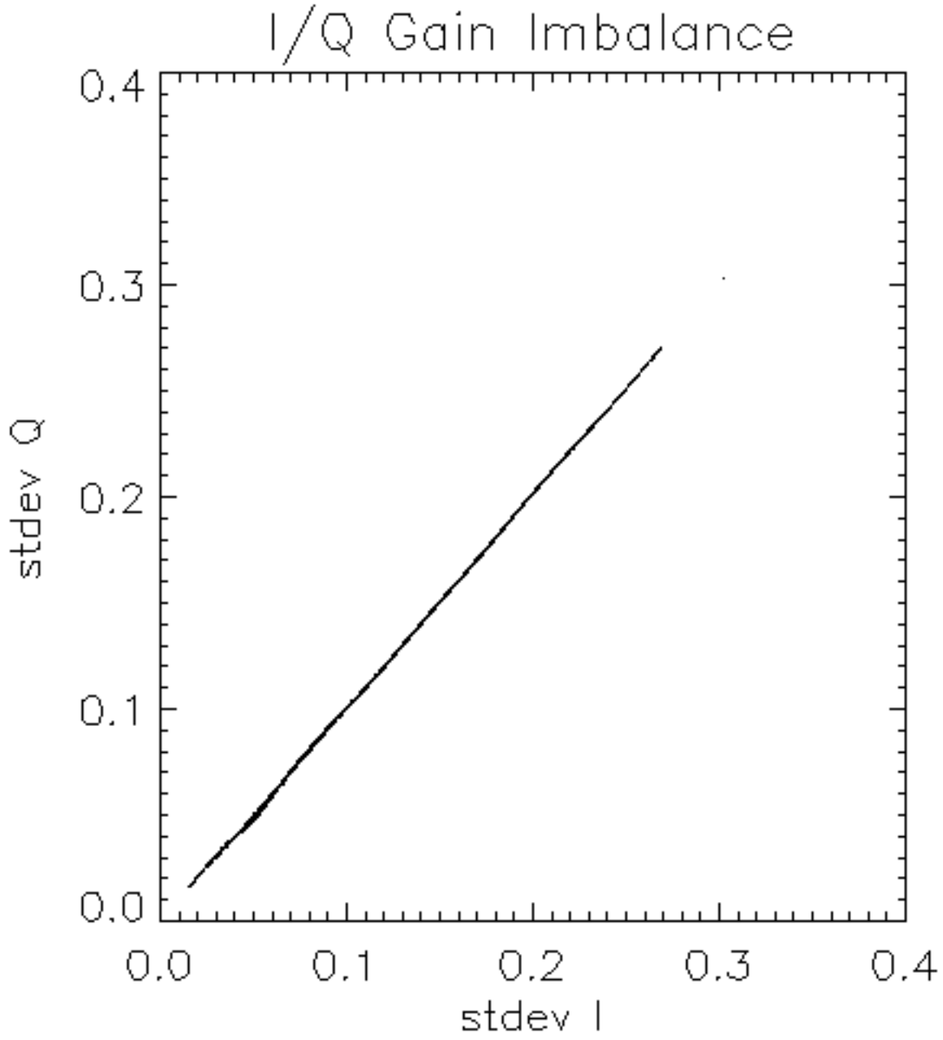
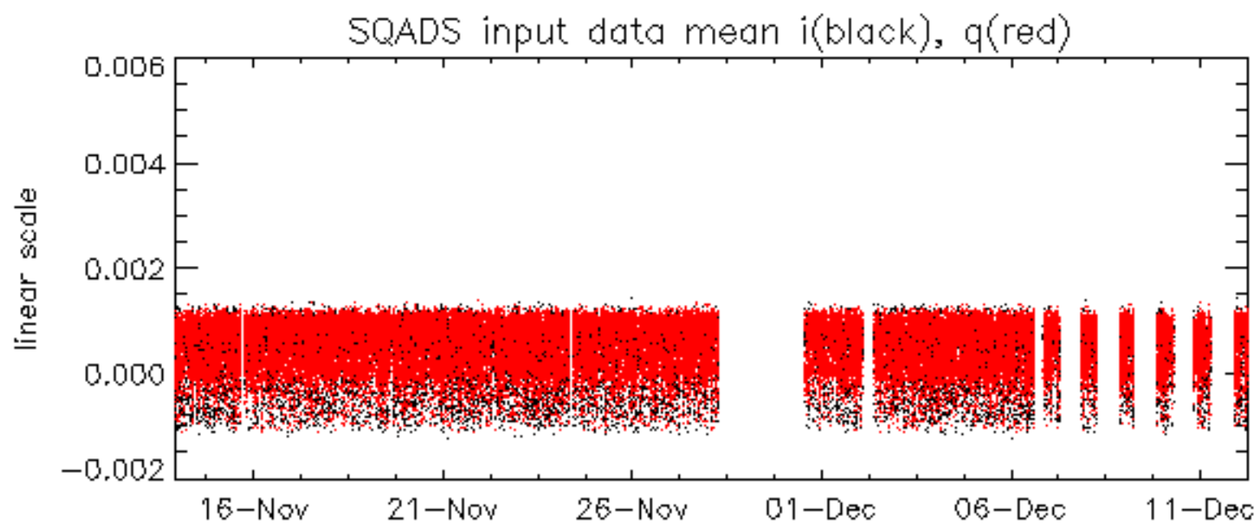
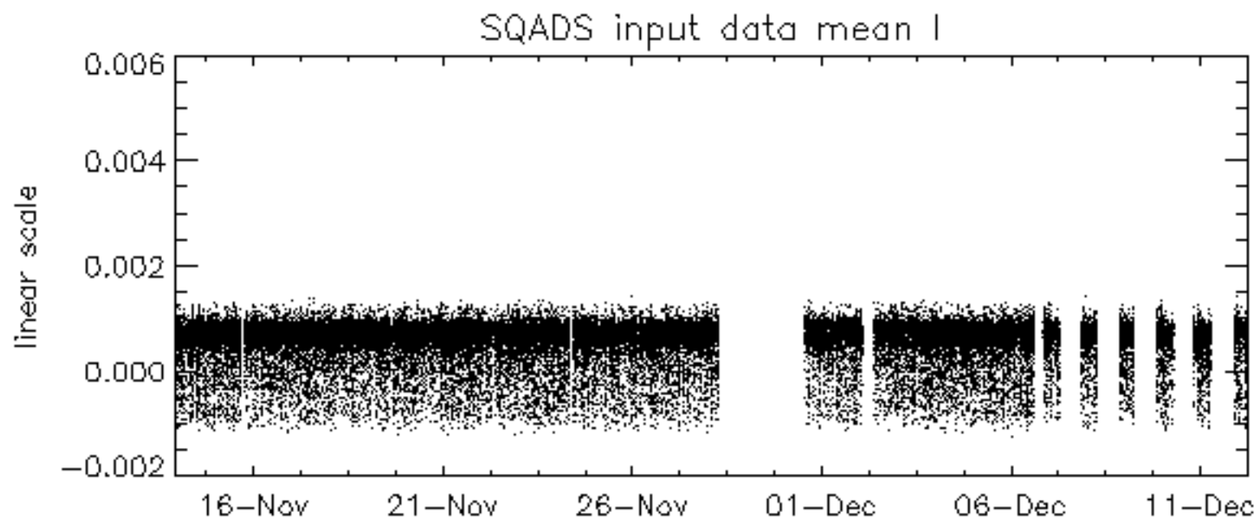
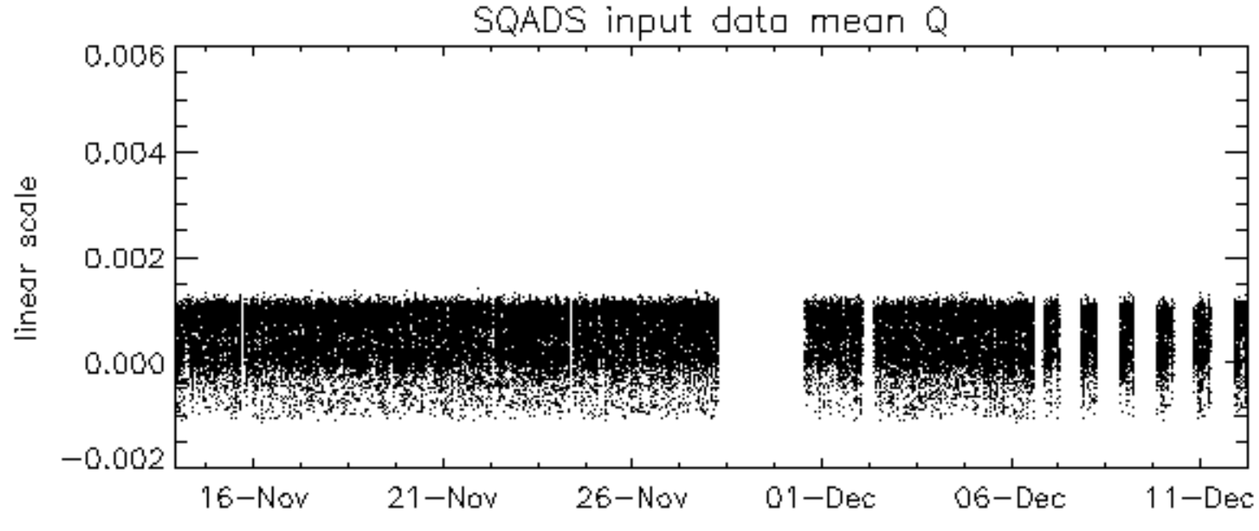

Reference: 2001-02-09 14:08:23 V
Test : 2006-12-12 04:28:59 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

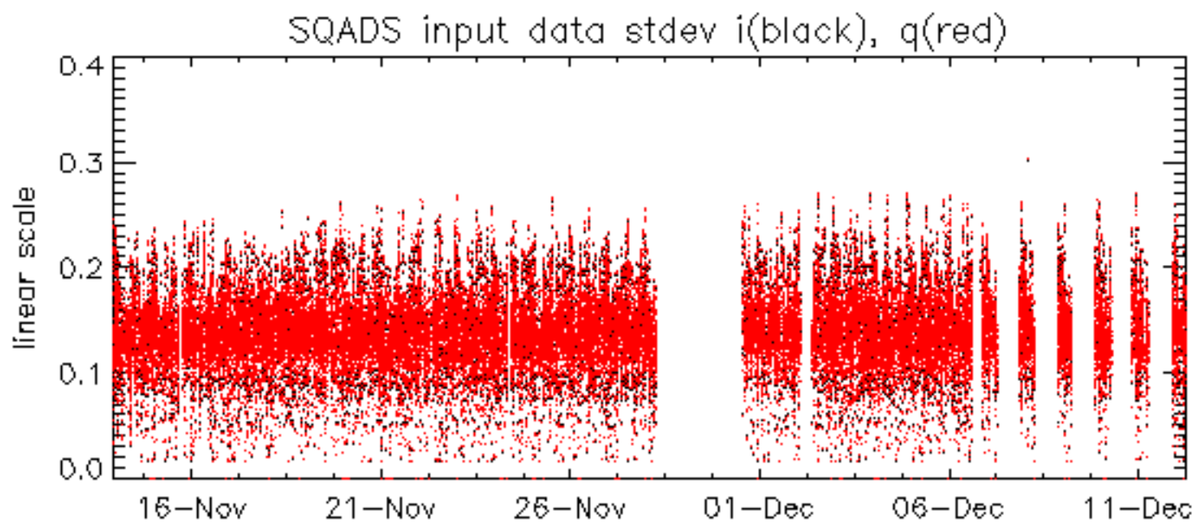

Reference: 2005-09-23 05:55:14 V
Test : 2006-12-12 04:28:59 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

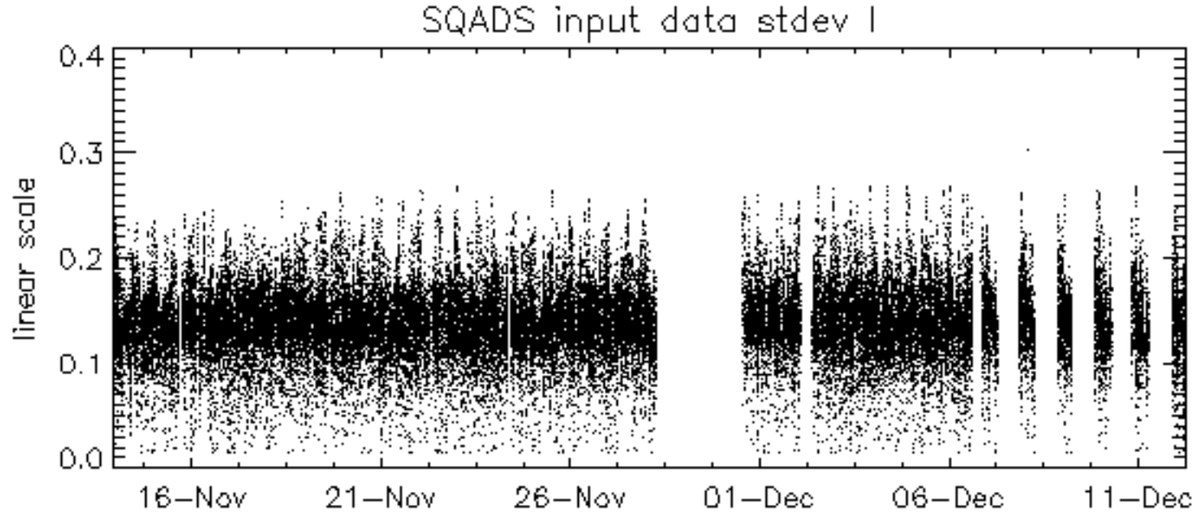

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

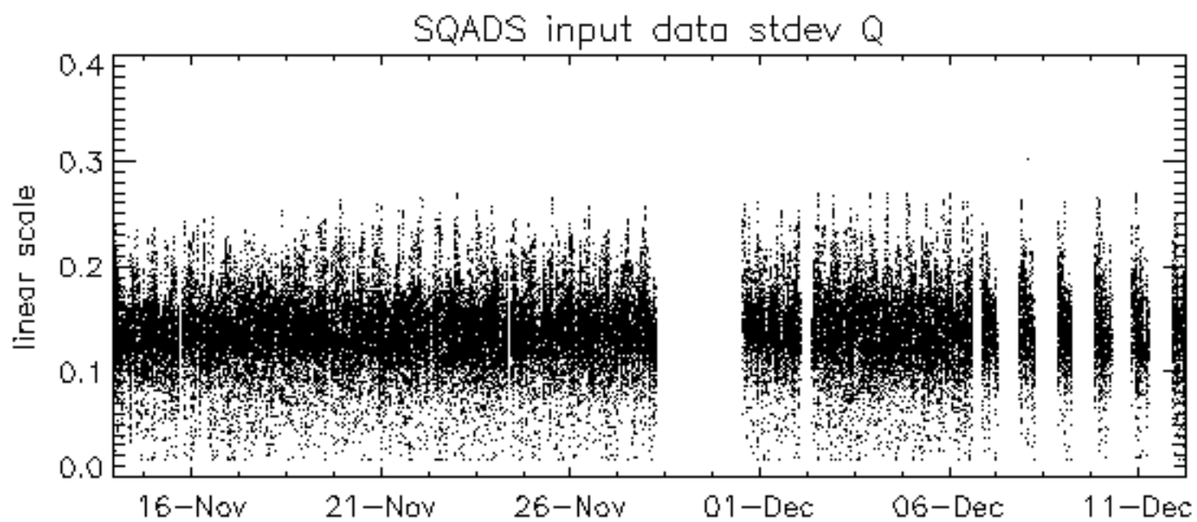

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

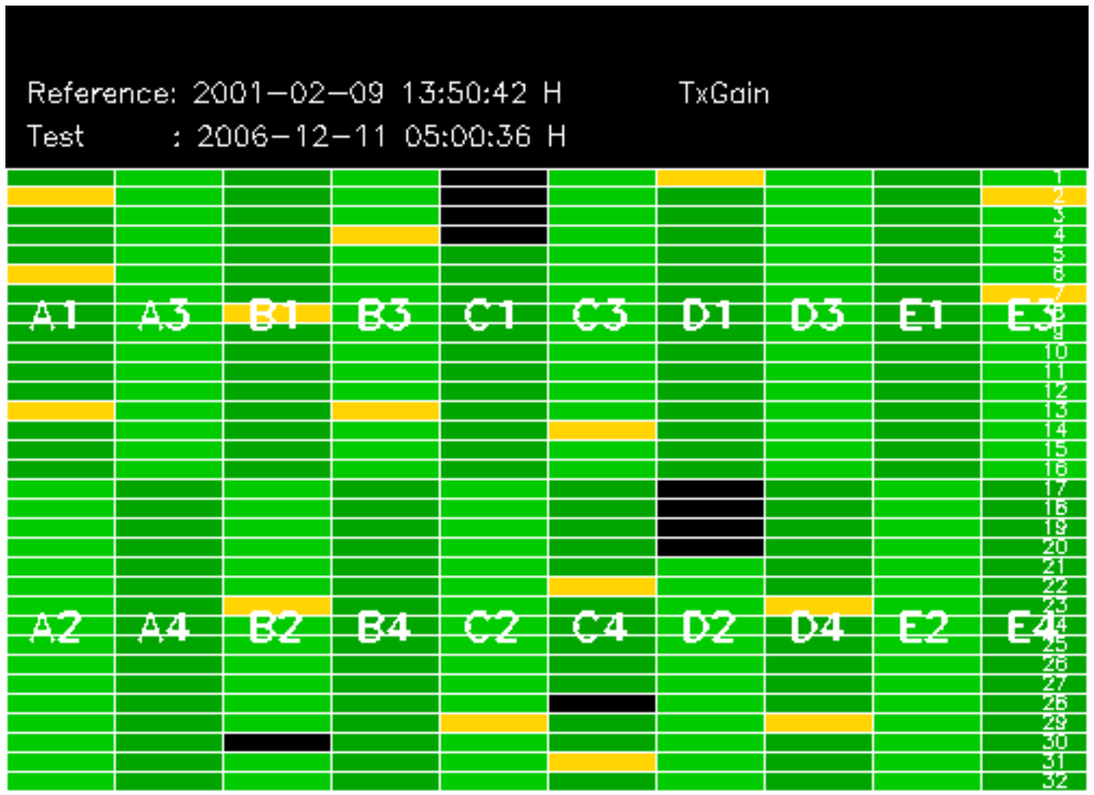

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

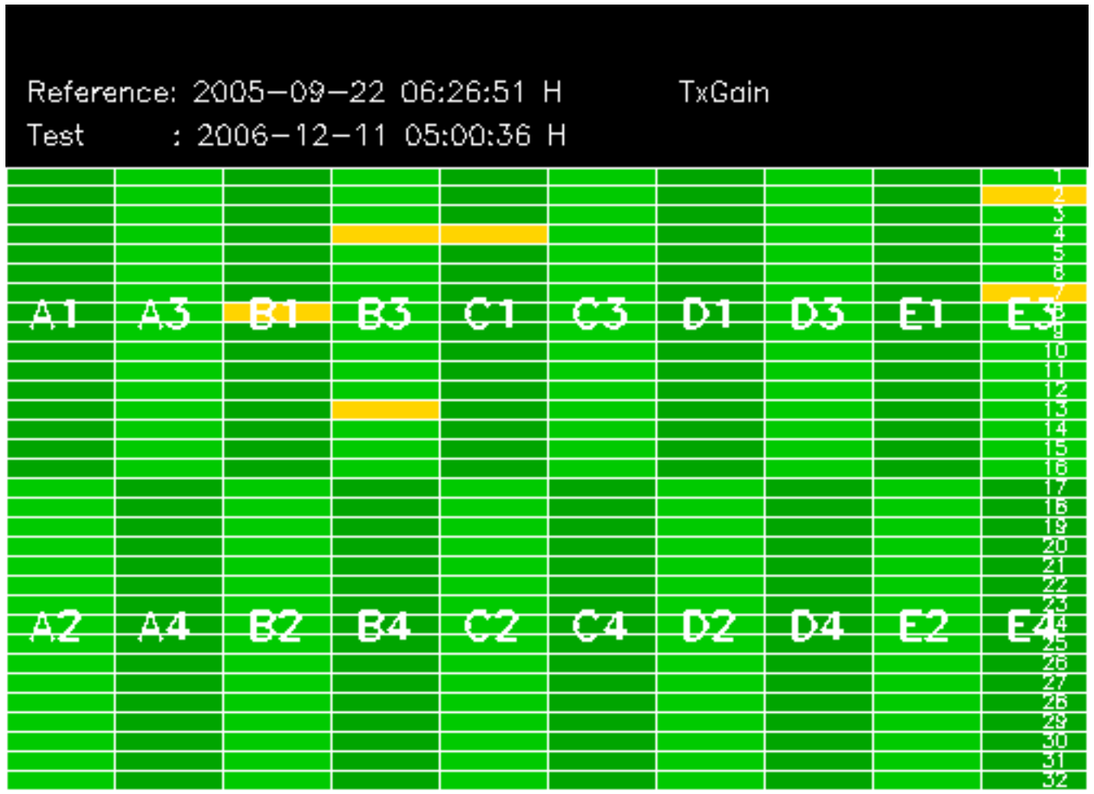

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16-Nov
21-Nov
26-Nov
01-Dec
06-Dec
11-Dec


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16-Nov
21-Nov
26-Nov
01-Dec
06-Dec
11-Dec


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
16-Nov
21-Nov
26-Nov
01-Dec
06-Dec
11-Dec


Reference: 2001-02-09 13:50:42 H
Test : 2006-12-11 05:00:36 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-22 06:26:51 H
Test : 2006-12-11 05:00:36 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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8
9
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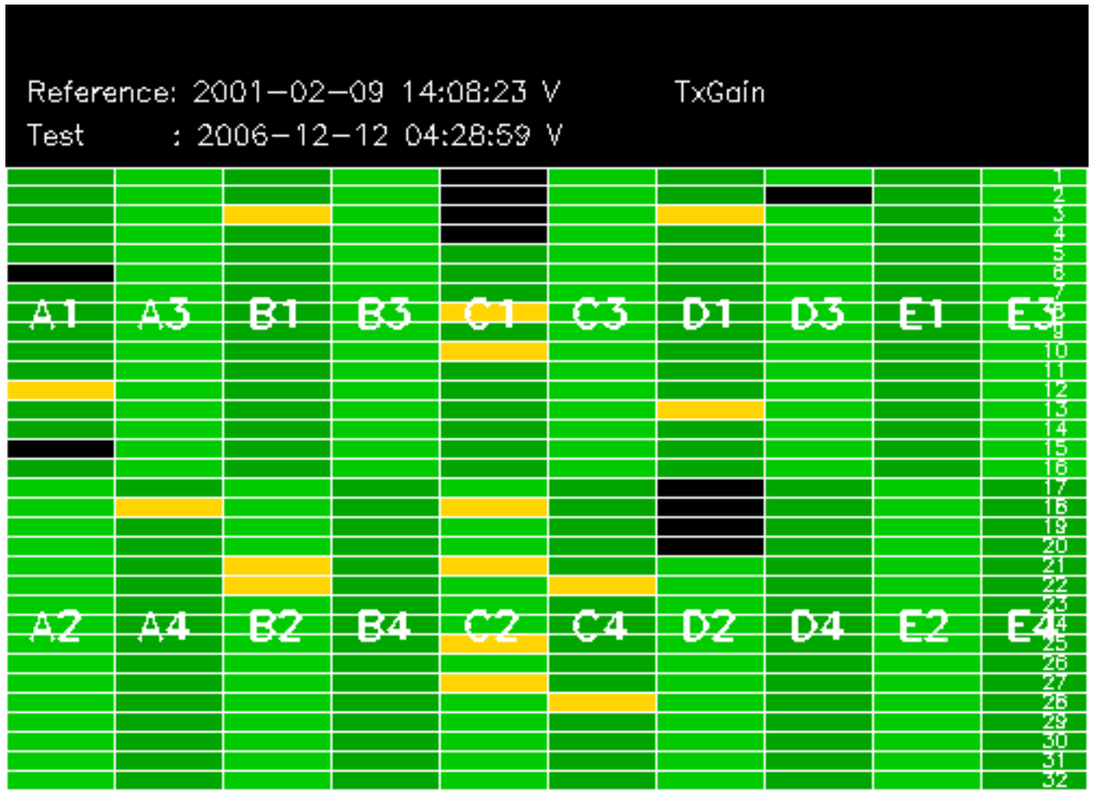
Reference: 2001-02-09 14:08:23 V
Test : 2006-12-12 04:28:59 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
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8
9
10
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12
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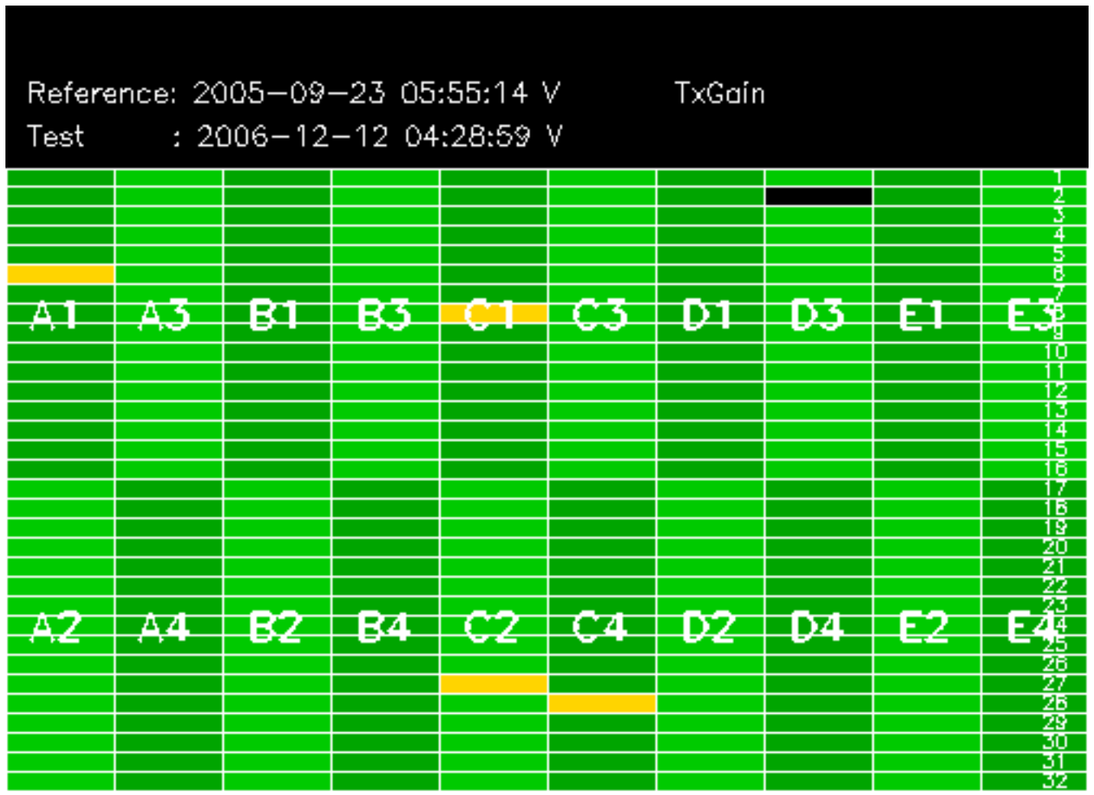
31
32


Reference: 2005-09-23 05:55:14 V
Test : 2006-12-12 04:28:59 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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9
10
11
12
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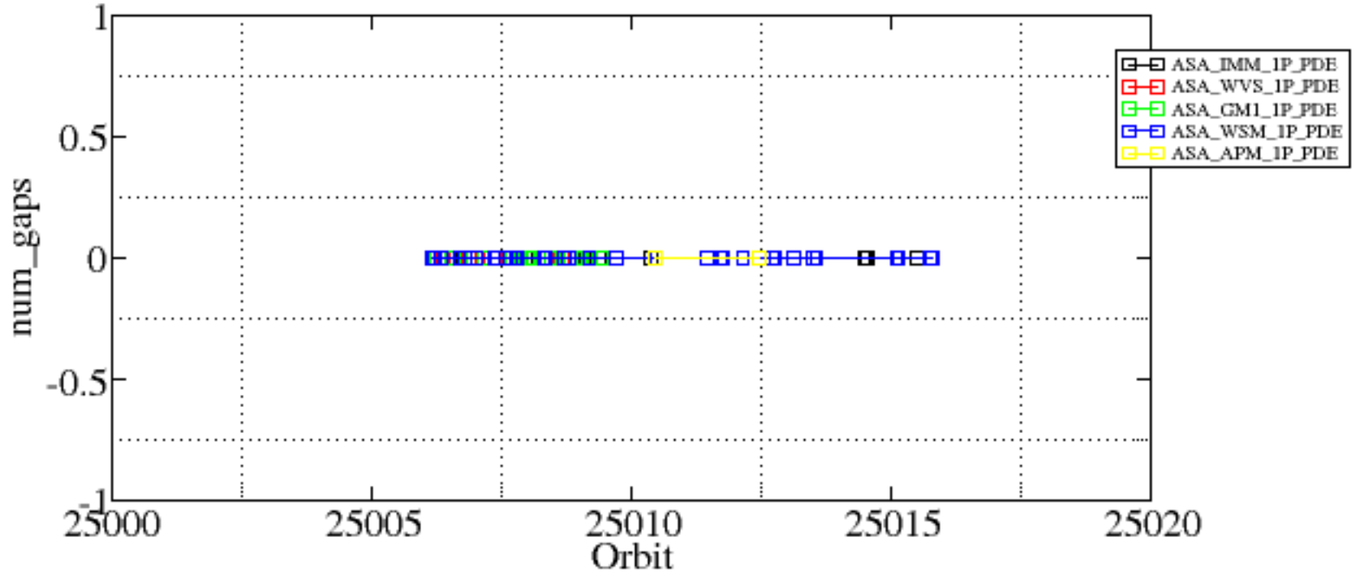
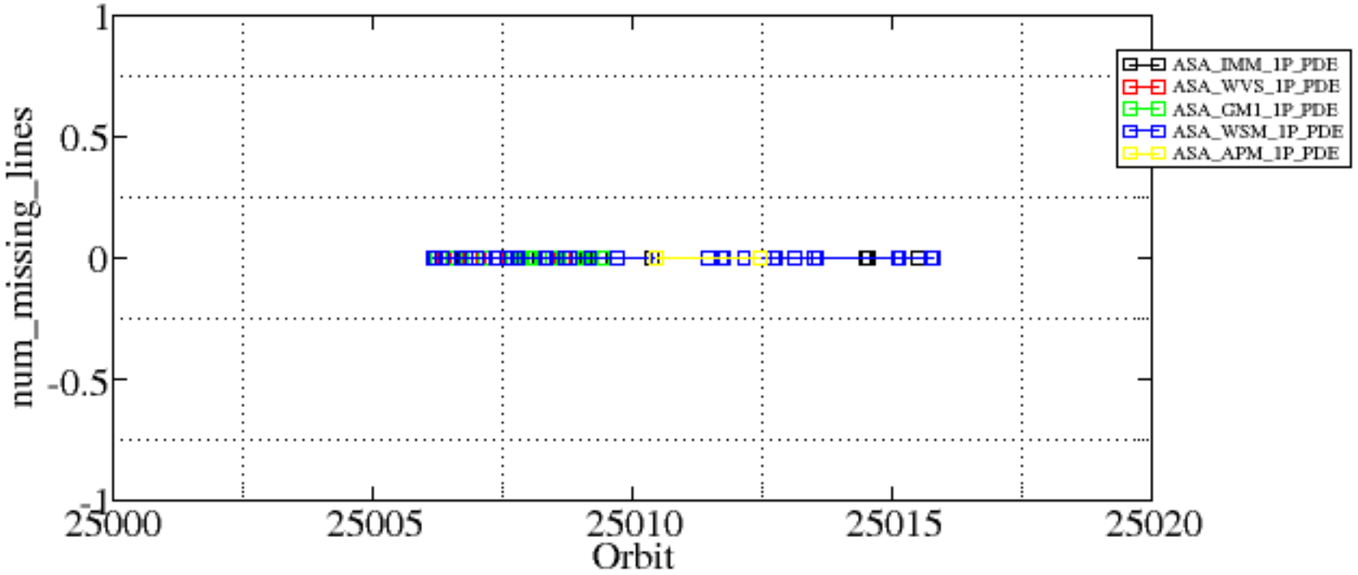
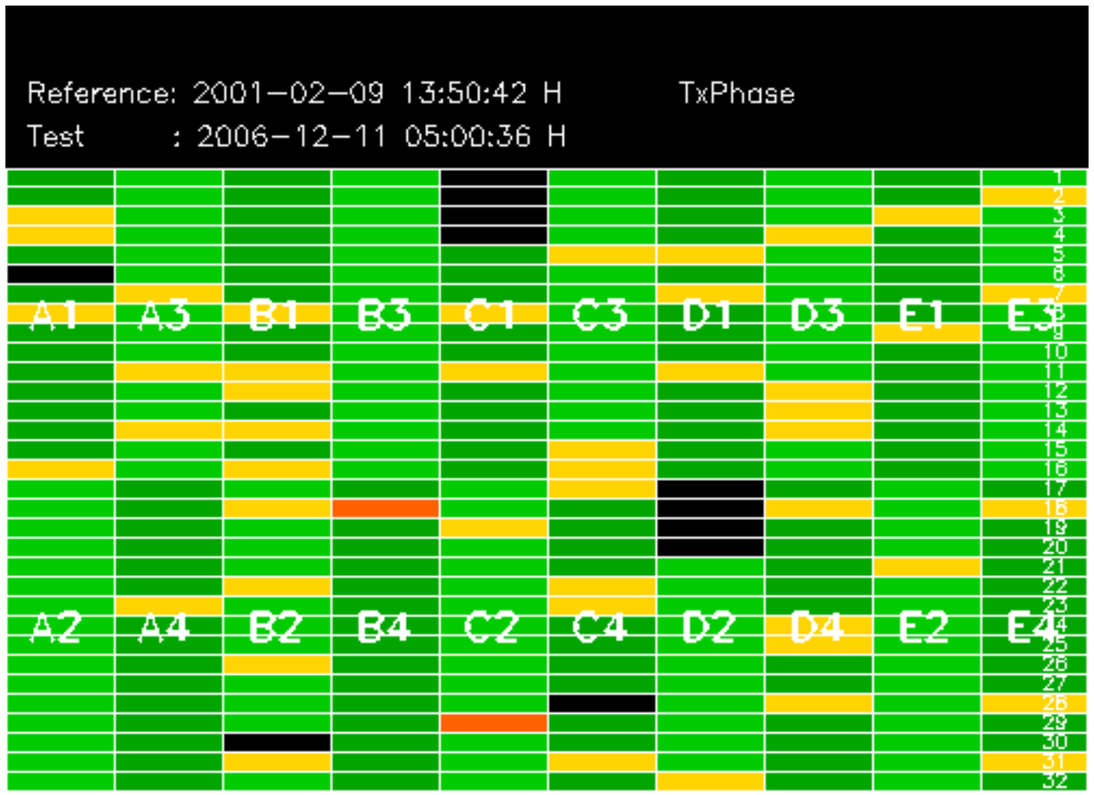
Summary of analysis for the last 3 days 2006121[234]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
</table>


num_gaps
1
0.5
0
-0.5
-1
25000
25005
25010
25015
25020
Orbit
ASA_IMM_1P_PDE
ASA_WVS_1P_PDE
ASA_GM1_1P_PDE
ASA_WSM_1P_PDE
ASA_APM_1P_PDE


num_missing_lines
1
0.5
0
-0.5
-1
25000
25005
25010
25015
25020
Orbit
ASA_IMM_1P_PDE
ASA_WVS_1P_PDE
ASA_GM1_1P_PDE
ASA_WSM_1P_PDE
ASA_APM_1P_PDE


Reference: 2001-02-09 13:50:42 H
Test : 2006-12-11 05:00:36 H
TxPhase
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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9
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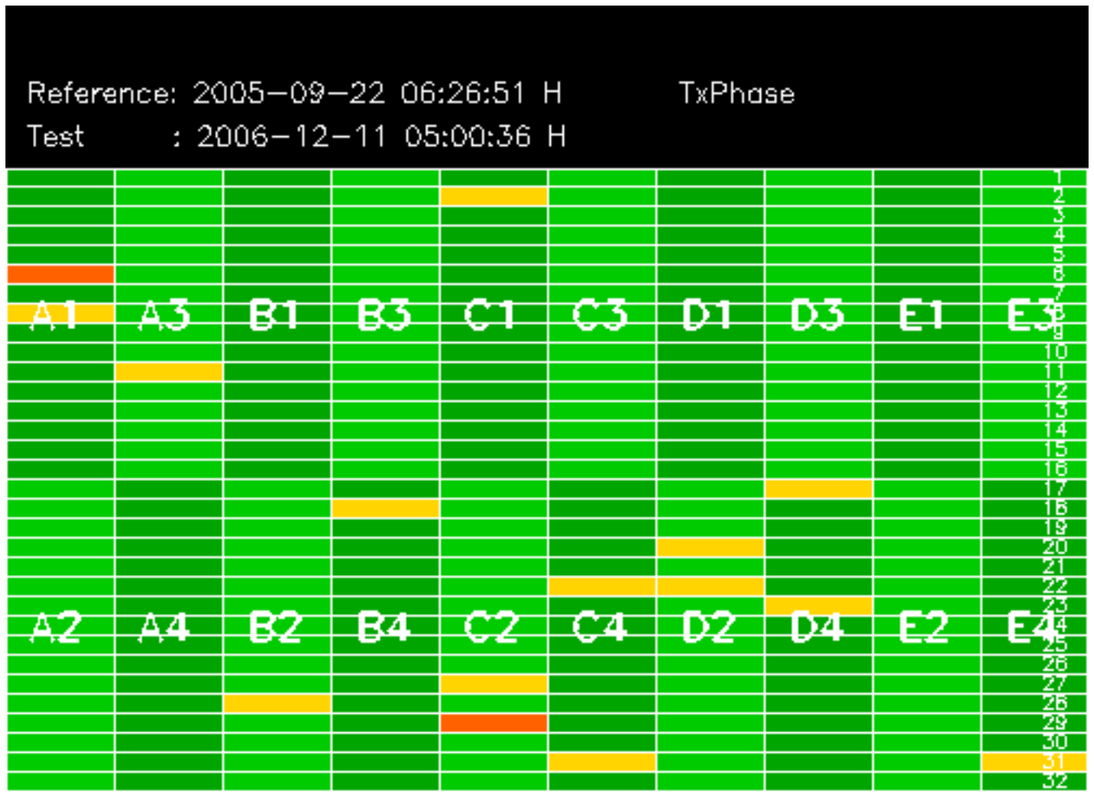
Reference: 2005-09-22 06:26:51 H
Test : 2006-12-11 05:00:36 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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27
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Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2006-12-12 04:28:59 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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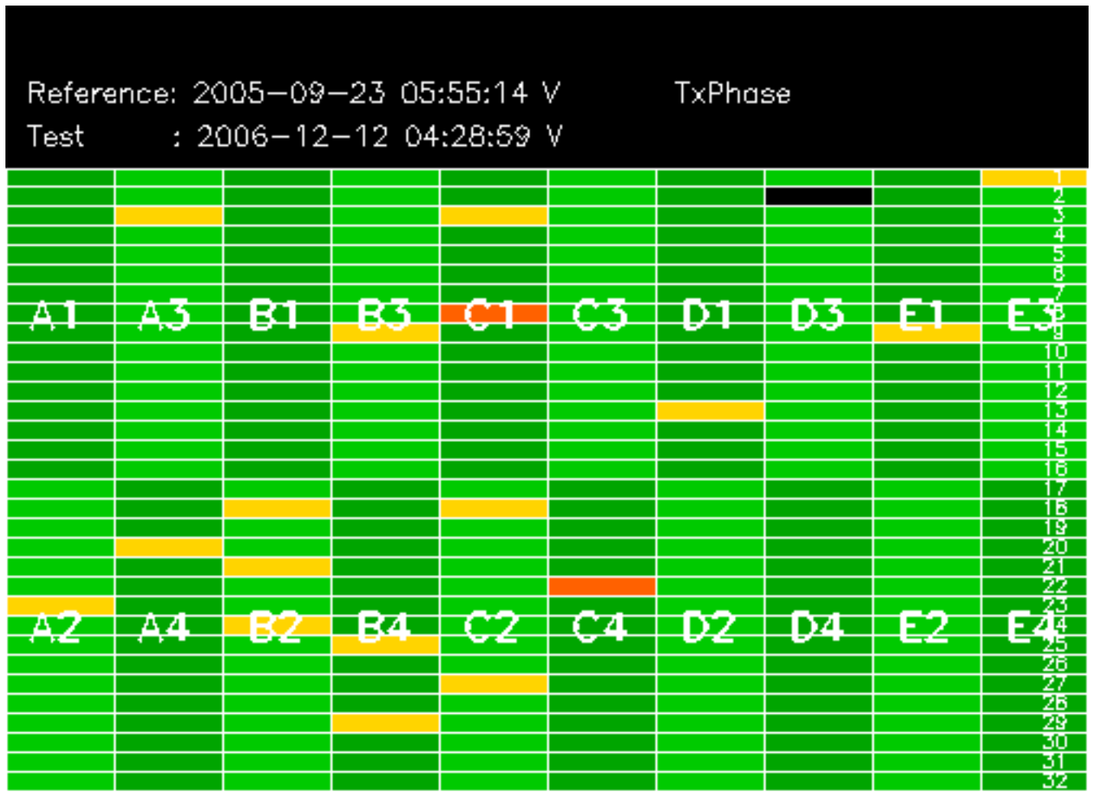
Reference: 2005-09-23 05:55:14 V
Test : 2006-12-12 04:28:59 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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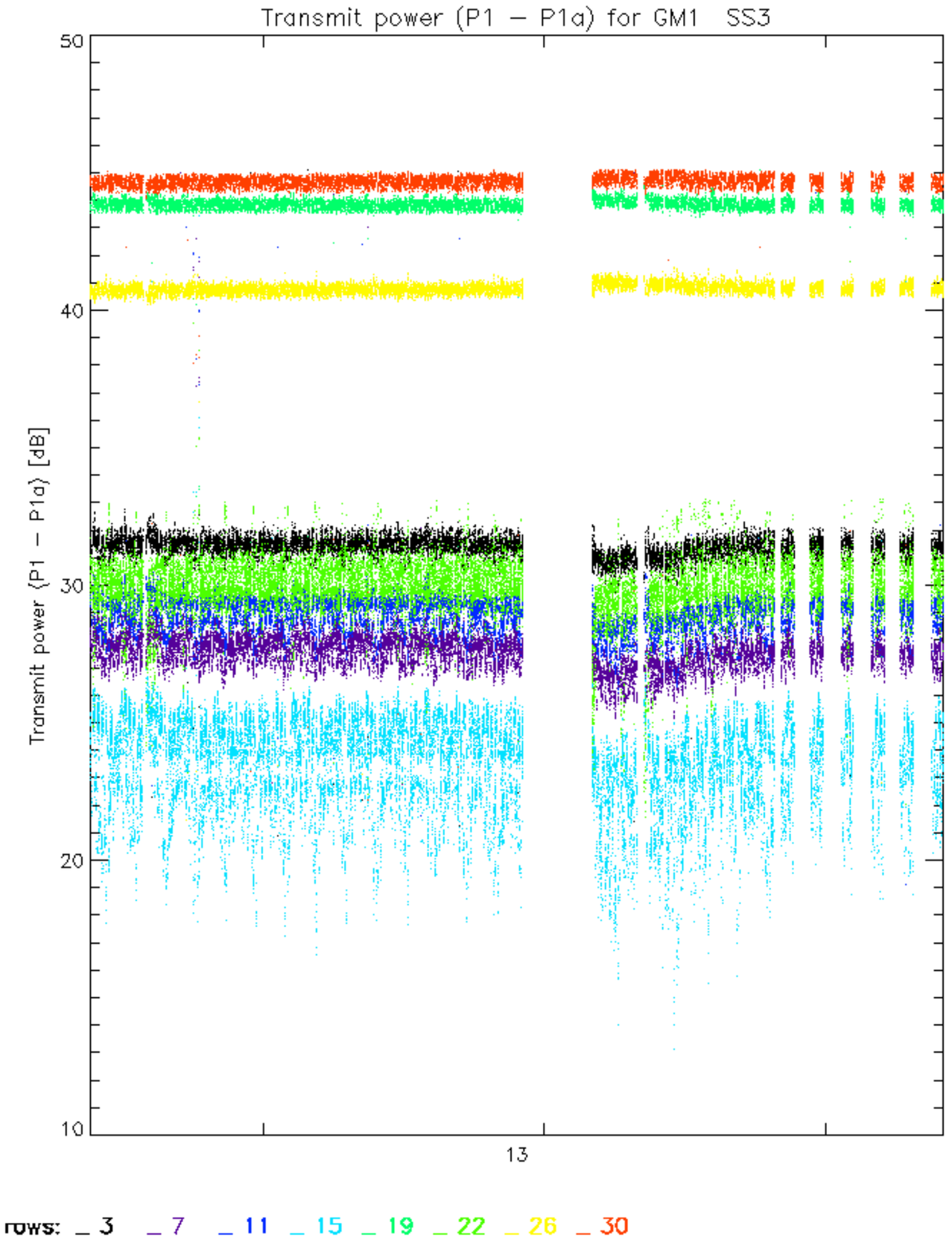
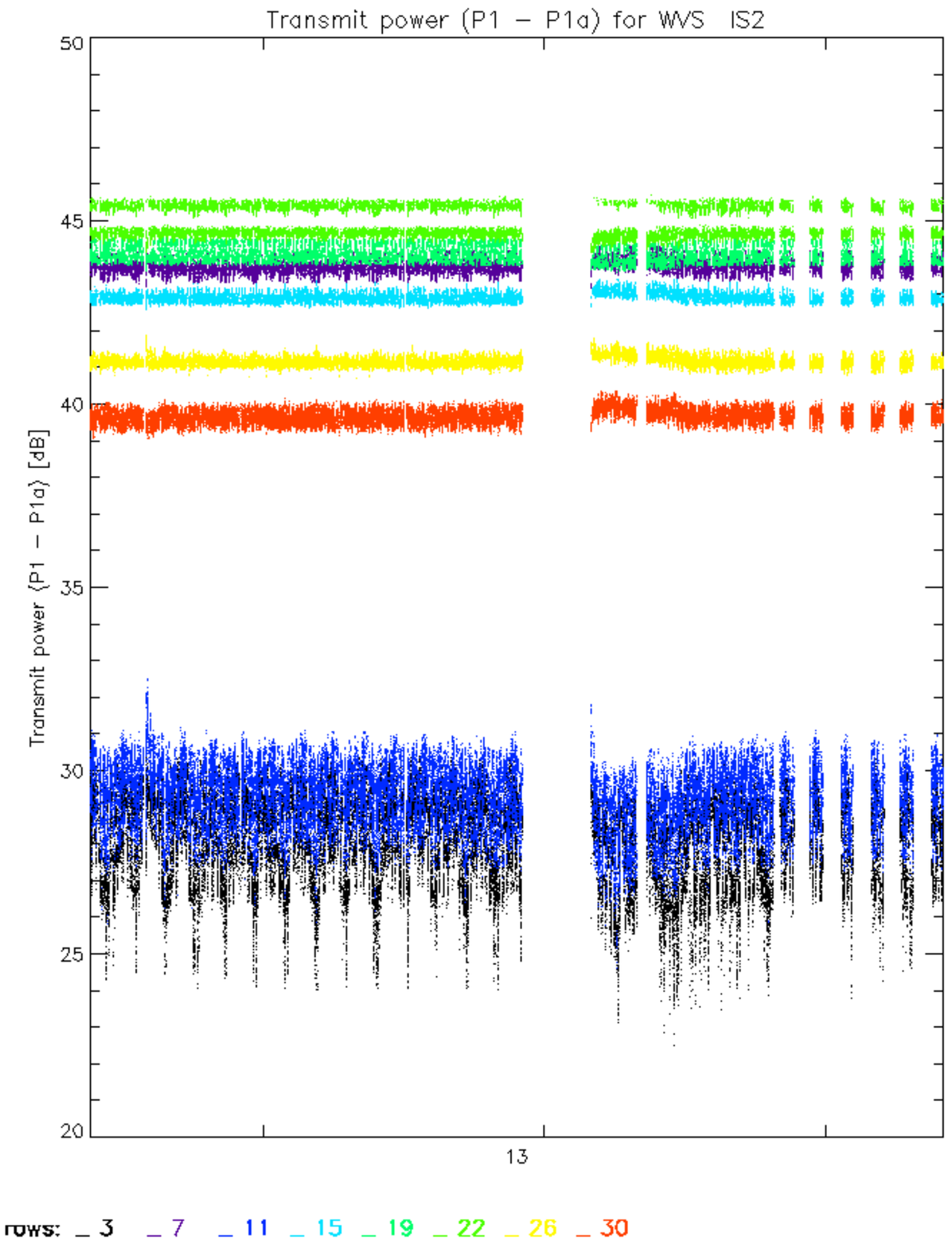

Transmit power (P1 – P1a) for GM1 SS3
50
40
30
20
10
Transmit power (P1 – P1a) [dB]
13
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
45
40
35
30
25
20
13
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.