PRELIMINARY REPORT OF 060306

last update on Mon Mar 6 17:07:51 GMT 2006

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 2006-03-05 00:00:00 to 2006-03-06 17:07:51

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	0	34	0	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	0	34	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	0	34	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	0	34	0	0	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	44	0	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	44	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	44	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	44	0	0	0

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20060305 053205
H	20060304 060342

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	-4.001118	0.009836	-0.008870
7	P1	-2.998974	0.008606	-0.023673
11	P1	-4.073638	0.021197	0.065121
15	P1	-6.070364	0.022140	-0.043308
19	P1	-3.280798	0.006682	-0.041460
22	P1	-4.458928	0.014863	0.014843
26	P1	-4.220898	0.140974	-0.066633
30	P1	-5.816703	0.203729	-0.277012
3	P1	-16.972033	0.250556	-0.077996
7	P1	-16.684532	0.102360	-0.092490
11	P1	-16.516001	0.333303	0.190258
15	P1	-13.057163	0.095178	0.068197
19	P1	-13.909347	0.056303	-0.064180
22	P1	-15.599683	0.475220	0.145493
26	P1	-15.753672	0.351944	-0.041836
30	P1	-16.462578	0.353183	0.223946

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.430756	0.087194	0.154190
7	P2	-22.399807	0.094060	0.030687
11	P2	-16.237379	0.100300	0.032571
15	P2	-7.168533	0.099023	0.009946
19	P2	-9.134792	0.091642	0.021502
22	P2	-17.929466	0.091440	-0.016372
26	P2	-16.205318	0.094928	-0.004067
30	P2	-19.637917	0.085049	-0.033340

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.192793	0.006479	-0.009389

7	P3	-8.192793	0.006479	-0.009389
11	P3	-8.192793	0.006479	-0.009389
15	P3	-8.192793	0.006479	-0.009389
19	P3	-8.192793	0.006479	-0.009389
22	P3	-8.192793	0.006479	-0.009389
26	P3	-8.192793	0.006479	-0.009389
30	P3	-8.192793	0.006479	-0.009393

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	-3.904385	5.564688	-0.237866
7	P1	-2.910896	5.837783	-0.202255
11	P1	-3.094086	5.872832	-0.273093
15	P1	-3.743255	5.817172	-0.315618
19	P1	-3.527341	5.651460	-0.242926
22	P1	-5.319023	5.181594	-0.251849
26	P1	-6.063945	5.489535	-0.314976
30	P1	-5.374436	5.234517	-0.392209
3	P1	-11.697257	3.633243	-0.160558
7	P1	-10.092403	4.019871	-0.222718
11	P1	-10.375455	4.002016	-0.319848
15	P1	-10.923615	3.975362	-0.323934
19	P1	-15.496172	2.932012	-0.134467
22	P1	-20.356361	3.302675	-0.174611
26	P1	-16.358587	3.638495	0.158497
30	P1	-18.387981	2.565852	-0.241387

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.134567	3.827099	0.171752
7	P2	-22.538216	4.448637	0.151399
11	P2	-11.318099	4.163352	0.010794
15	P2	-4.977711	5.412089	-0.212180
19	P2	-6.981499	4.872245	-0.187568
22	P2	-8.256728	4.573190	-0.173877
26	P2	-23.834141	4.587697	0.124979
30	P2	-22.001688	4.341645	0.092289

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024246	0.002773	-0.007267
7	P3	-8.024287	0.002775	-0.007946
11	P3	-8.024343	0.002776	-0.007754
15	P3	-8.024363	0.002767	-0.007835
19	P3	-8.024305	0.002789	-0.006568
22	P3	-8.024343	0.002772	-0.007498
26	P3	-8.024431	0.002777	-0.007534
30	P3	-8.024261	0.002770	-0.007453

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	0.000553091
	stdev	1.76882e-07
MEAN Q	mean	0.000510647
	stdev	2.22082e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137989
	stdev	0.00120709
STDEV Q	mean	0.138349
	stdev	0.00122514

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006030[456]
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

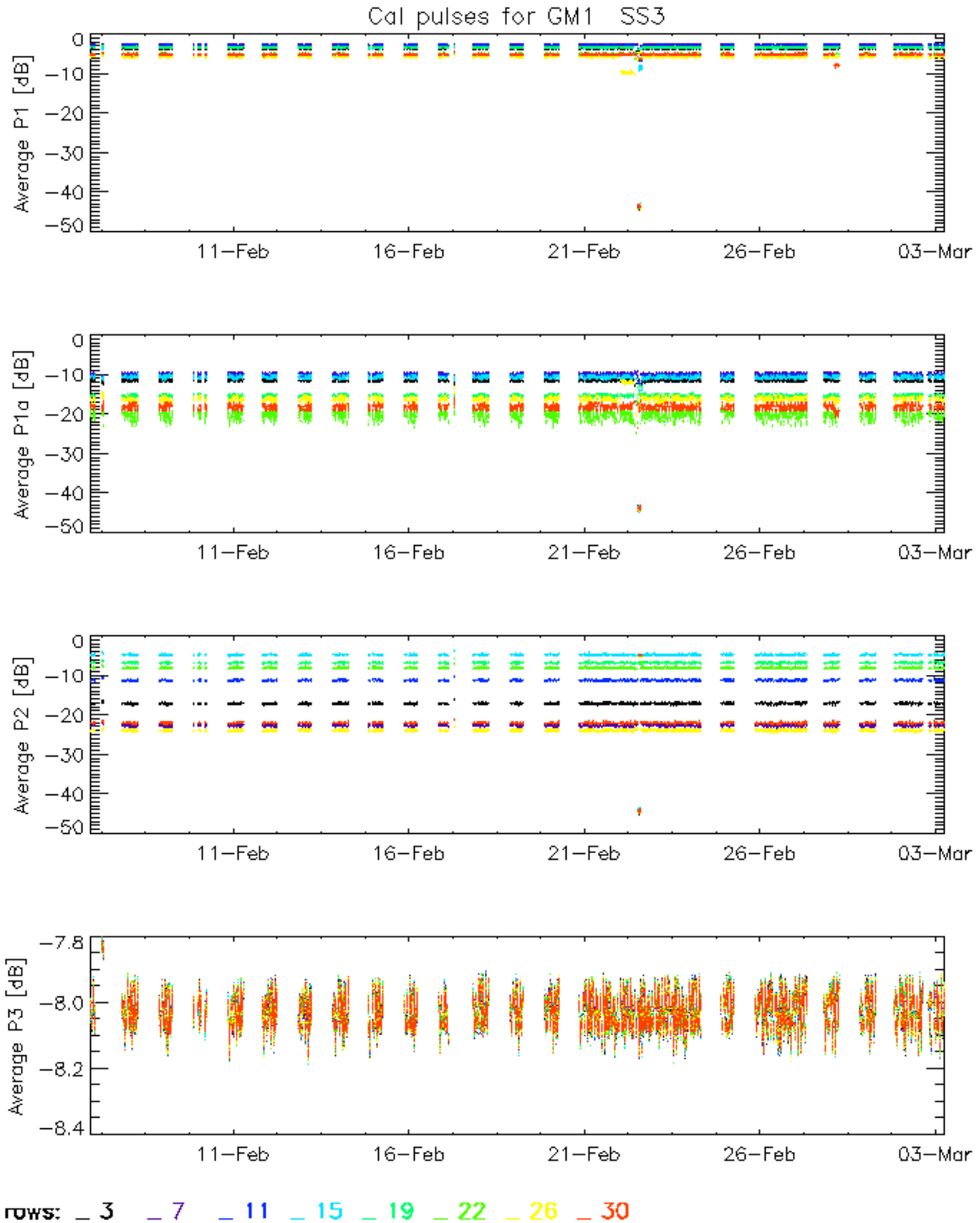
7.4 - Unbiased Doppler Error for GM1

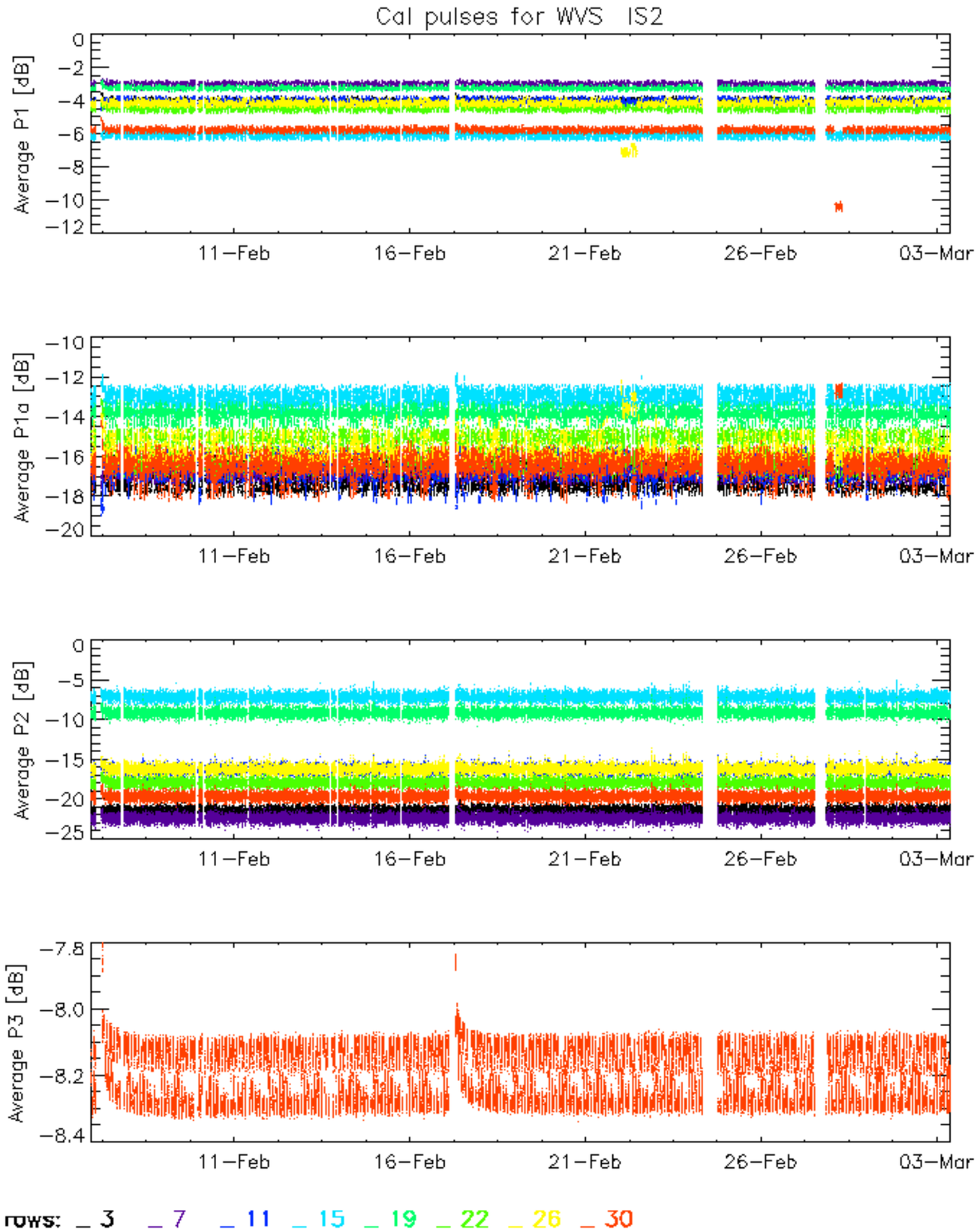
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

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
−10
−20
−30
−40
−50
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar
Average P1a [dB]
0
−10
−20
−30
−40
−50
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar
Average P2 [dB]
0
−10
−20
−30
−40
−50
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar
rows: 3 7 11 15 19 22 26 30

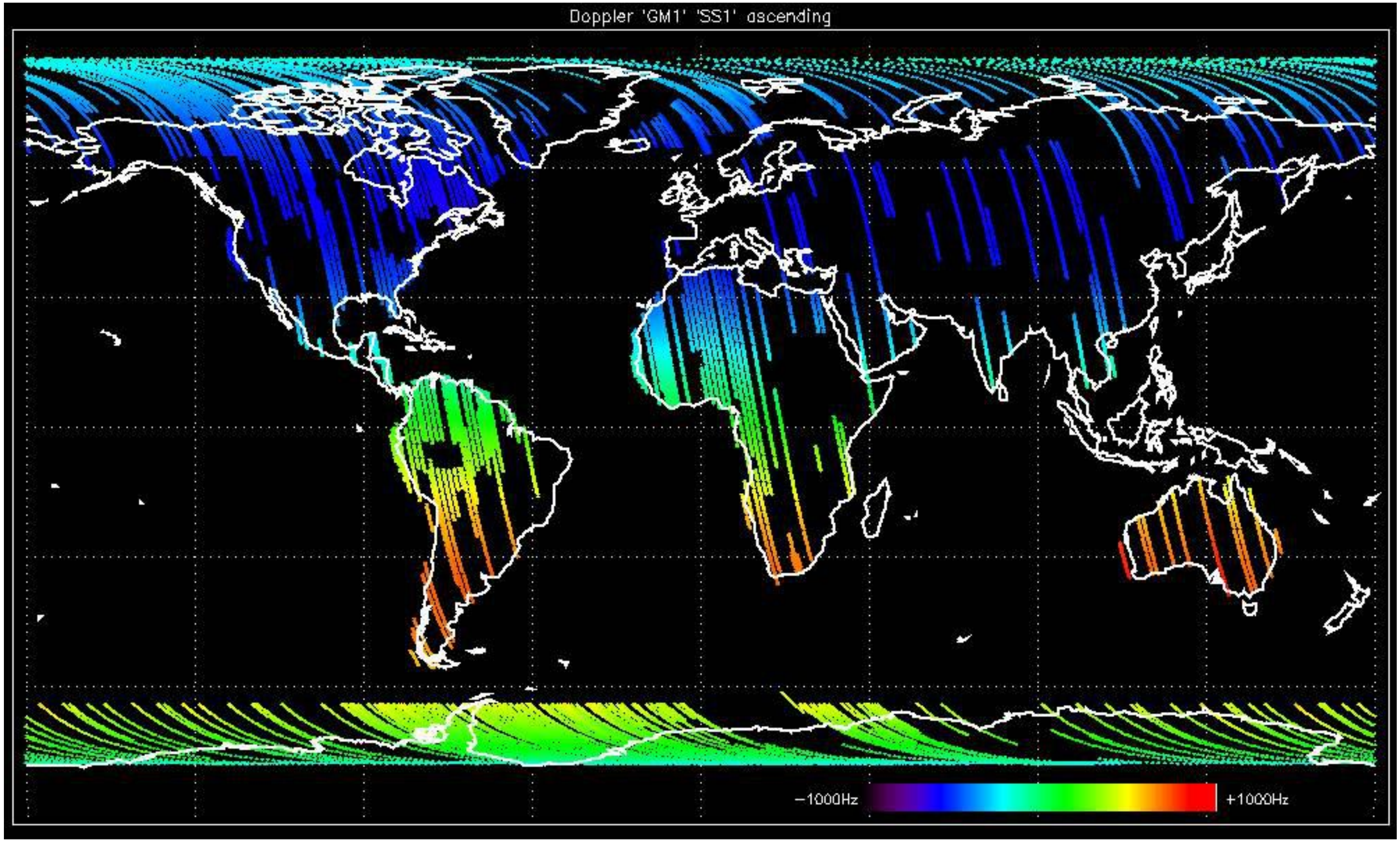

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar
Average P1a [dB]
−10
−12
−14
−16
−18
−20
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 26 30

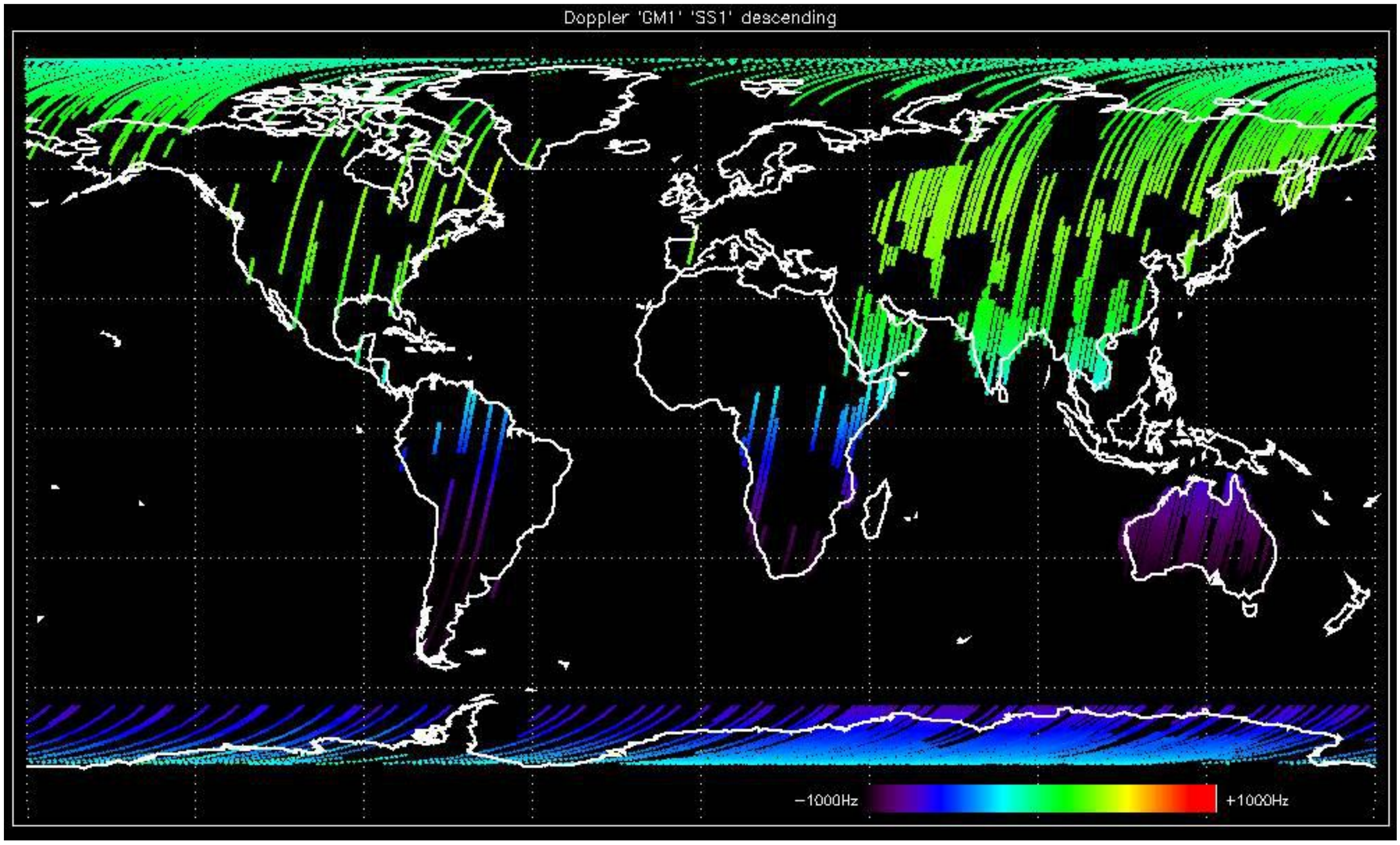
No anomalies observed on available browse products

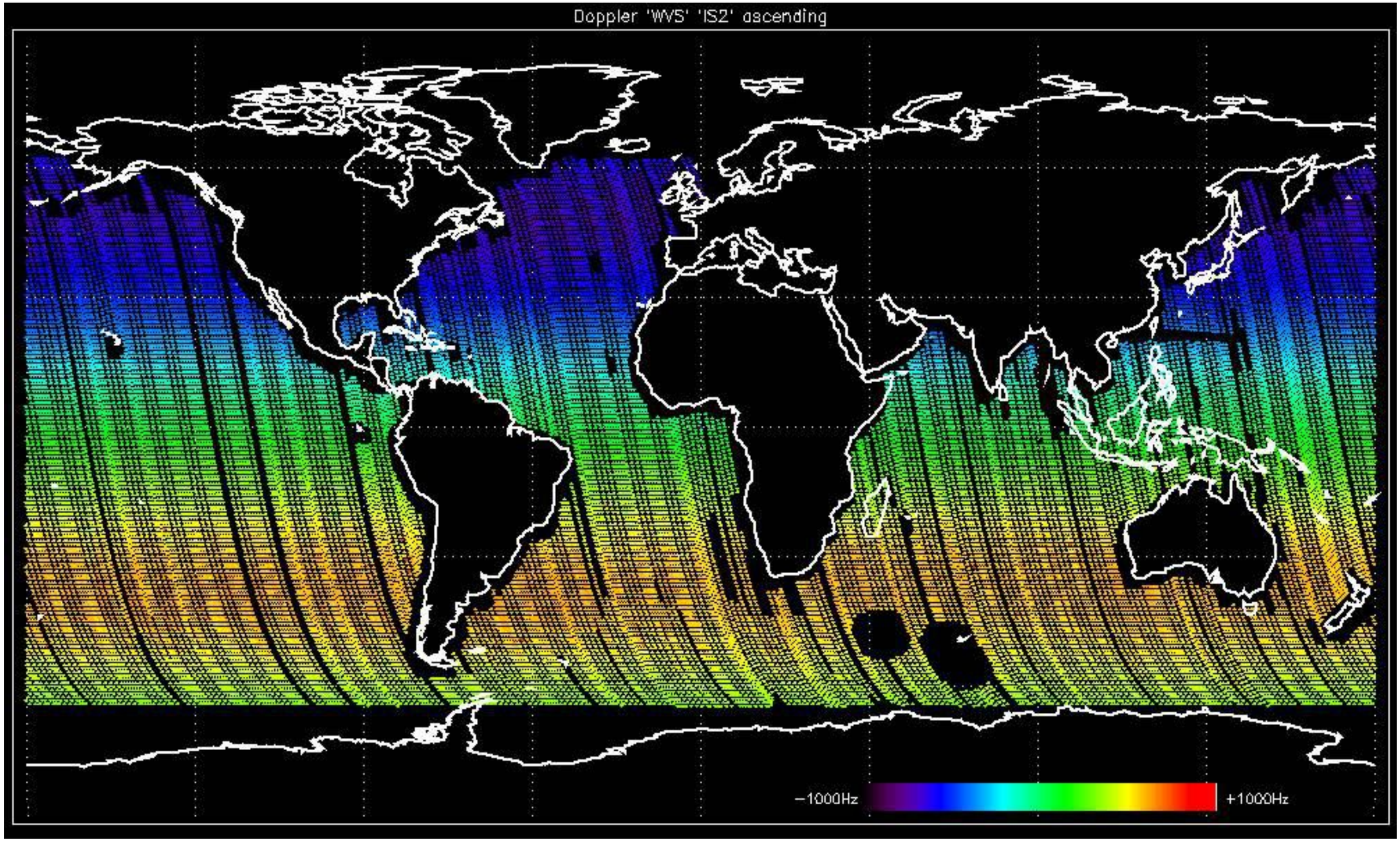
No anomalies observed.

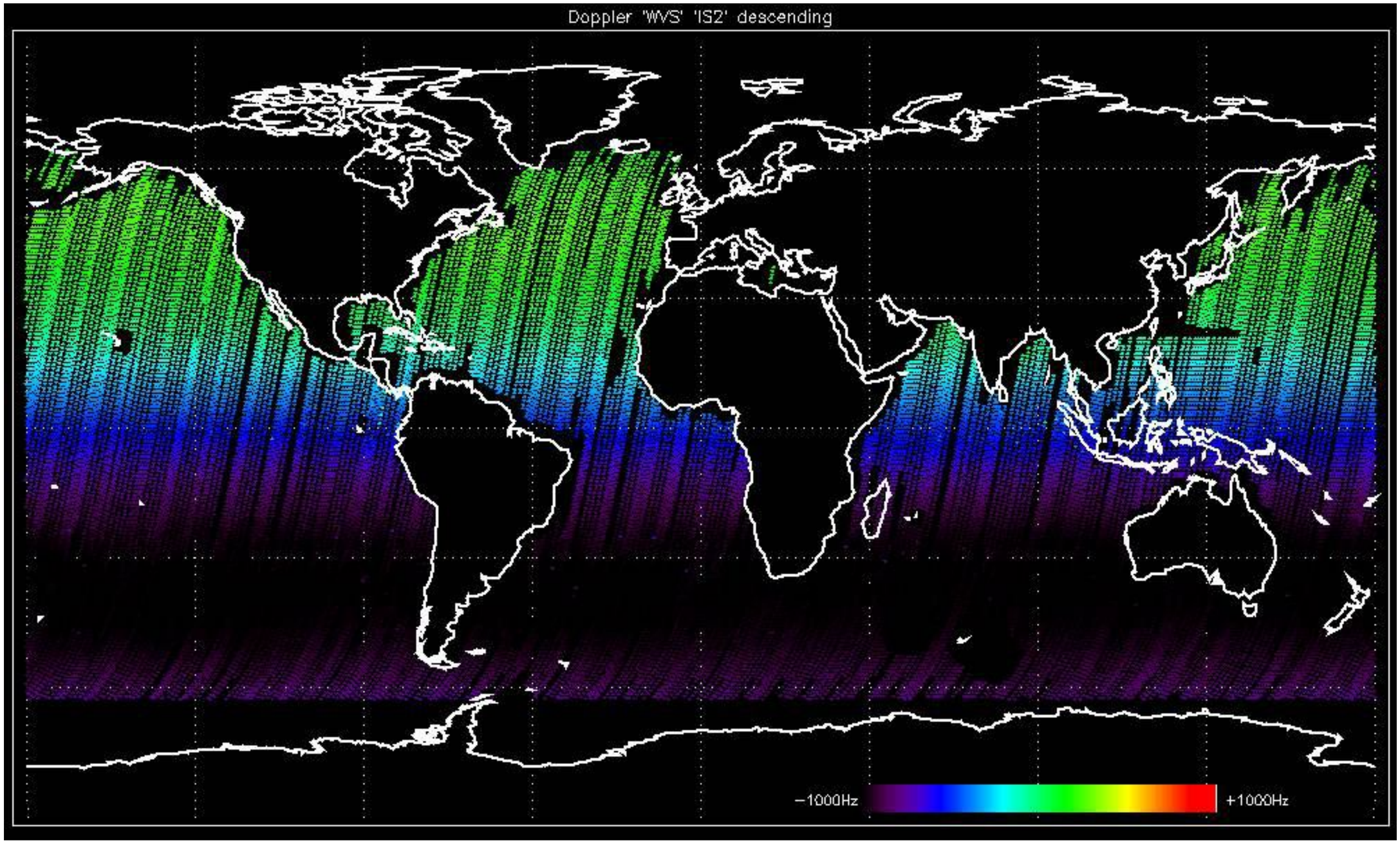
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

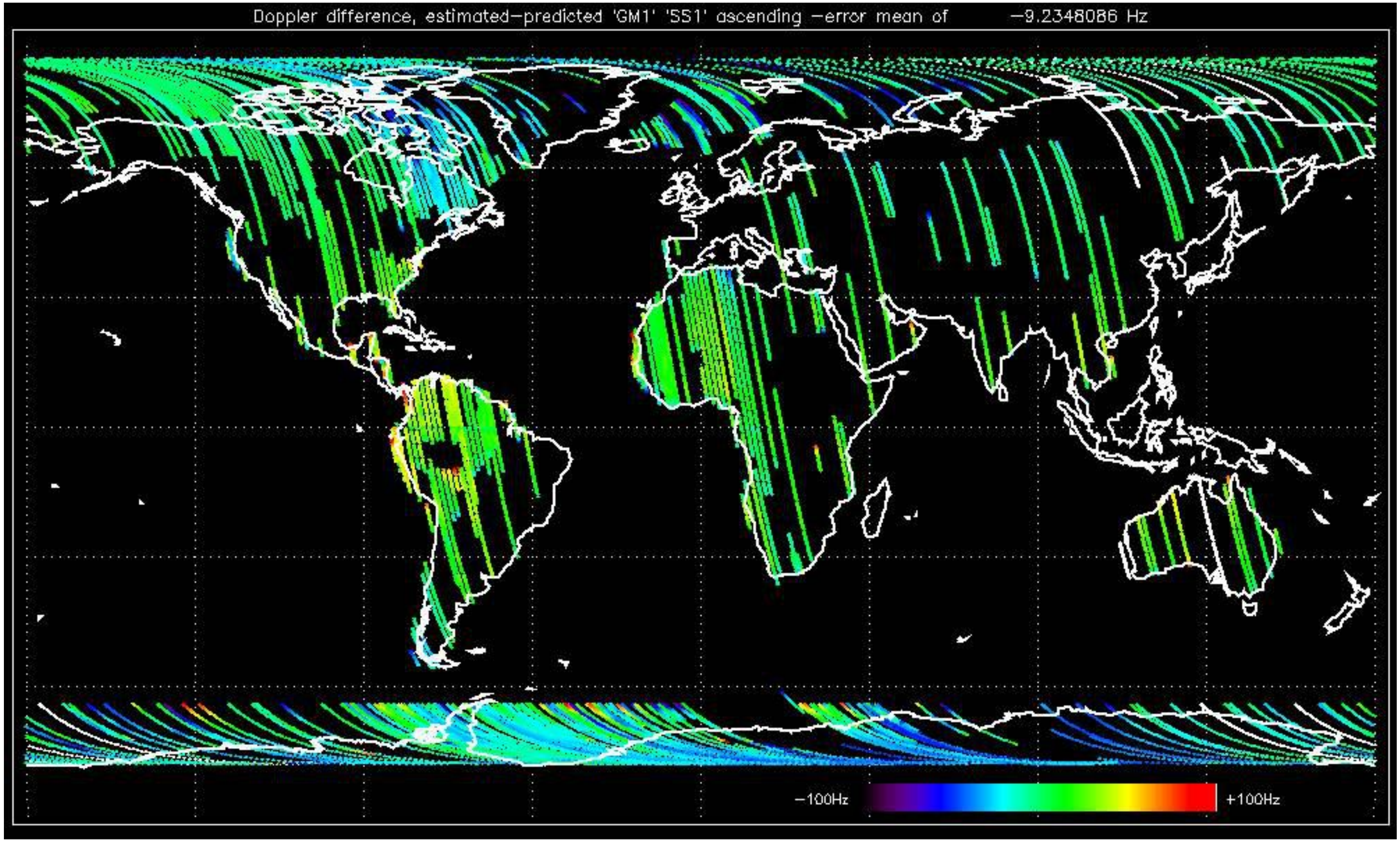
Preliminary report.The data is not yet controled

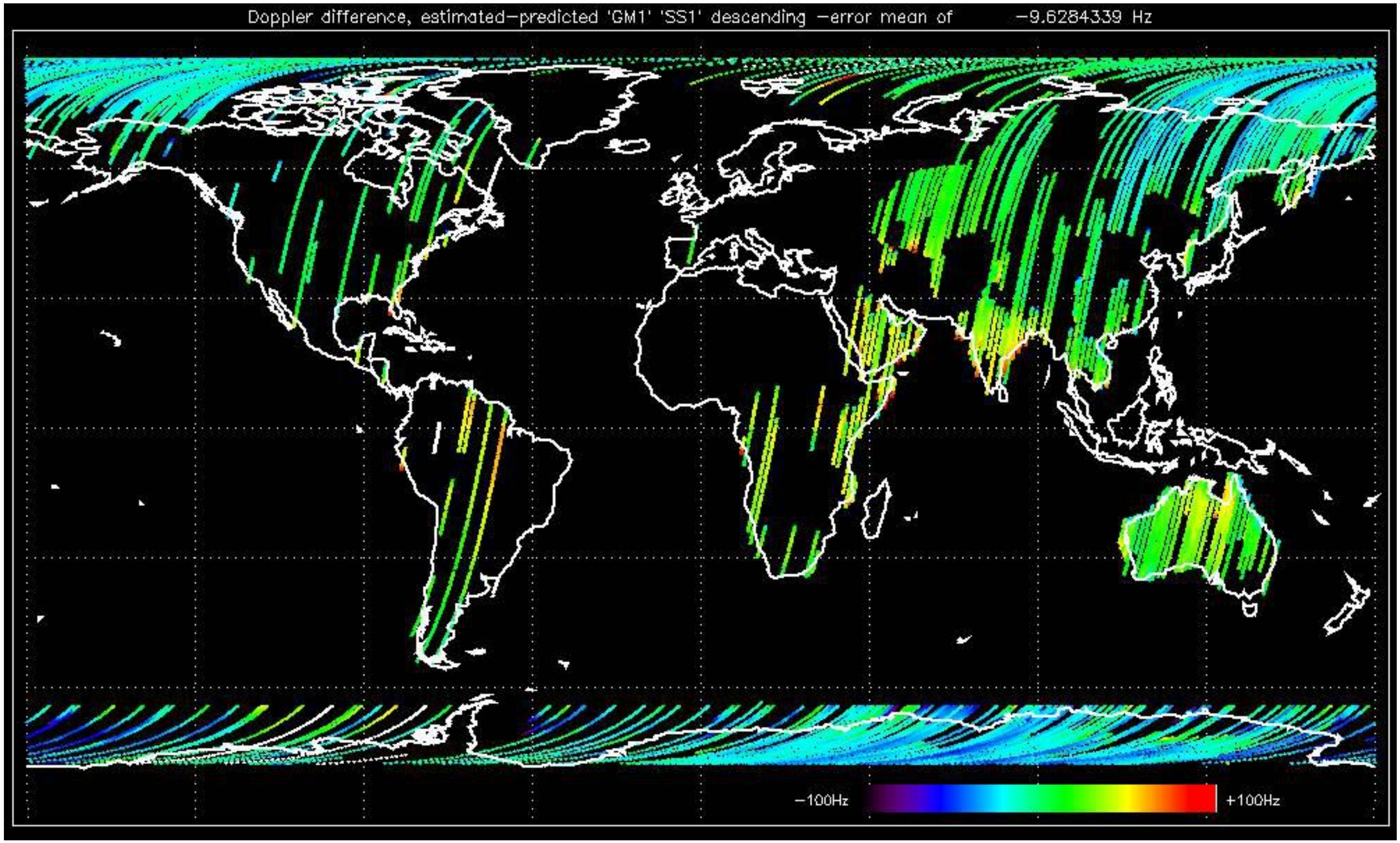

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

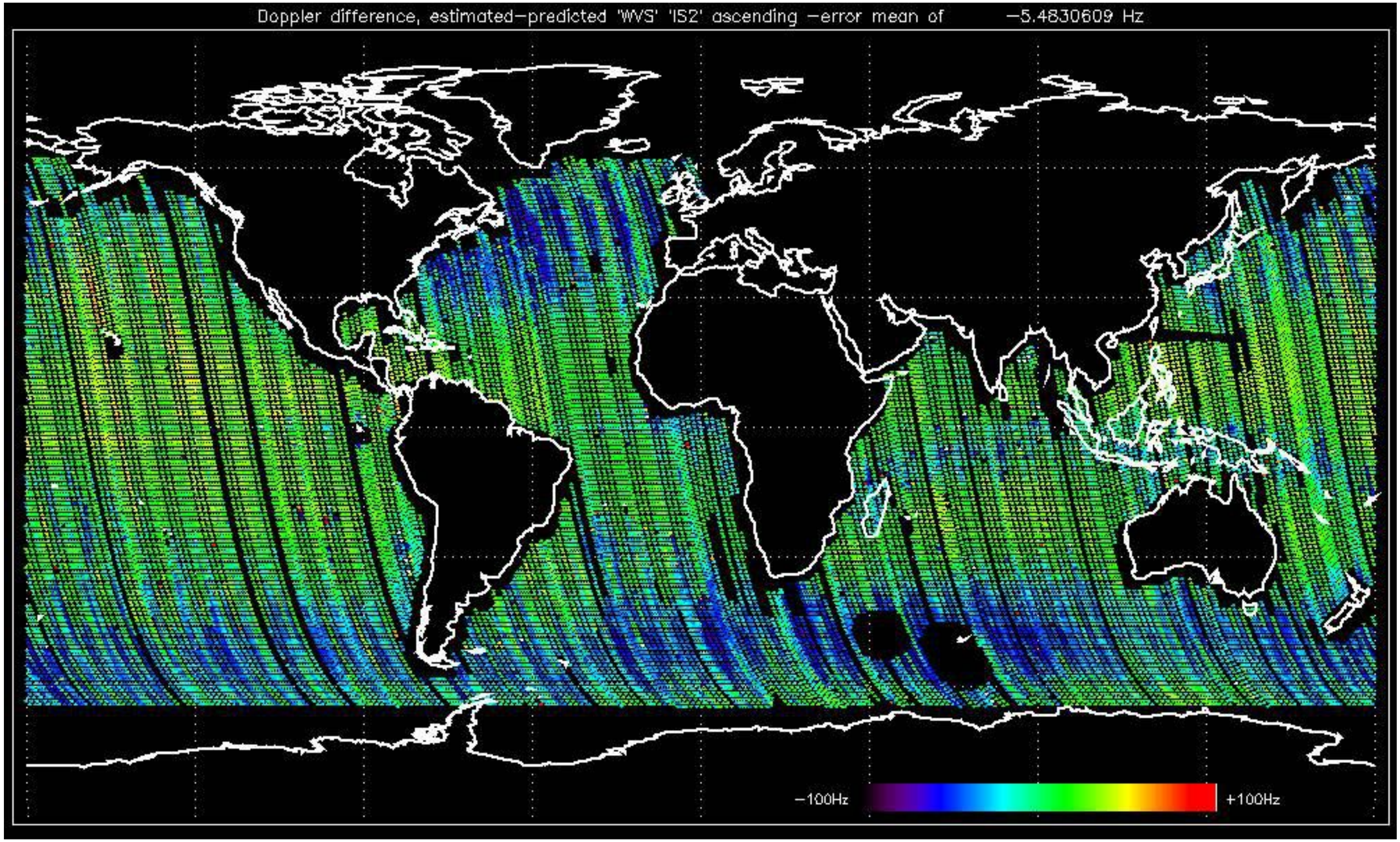

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

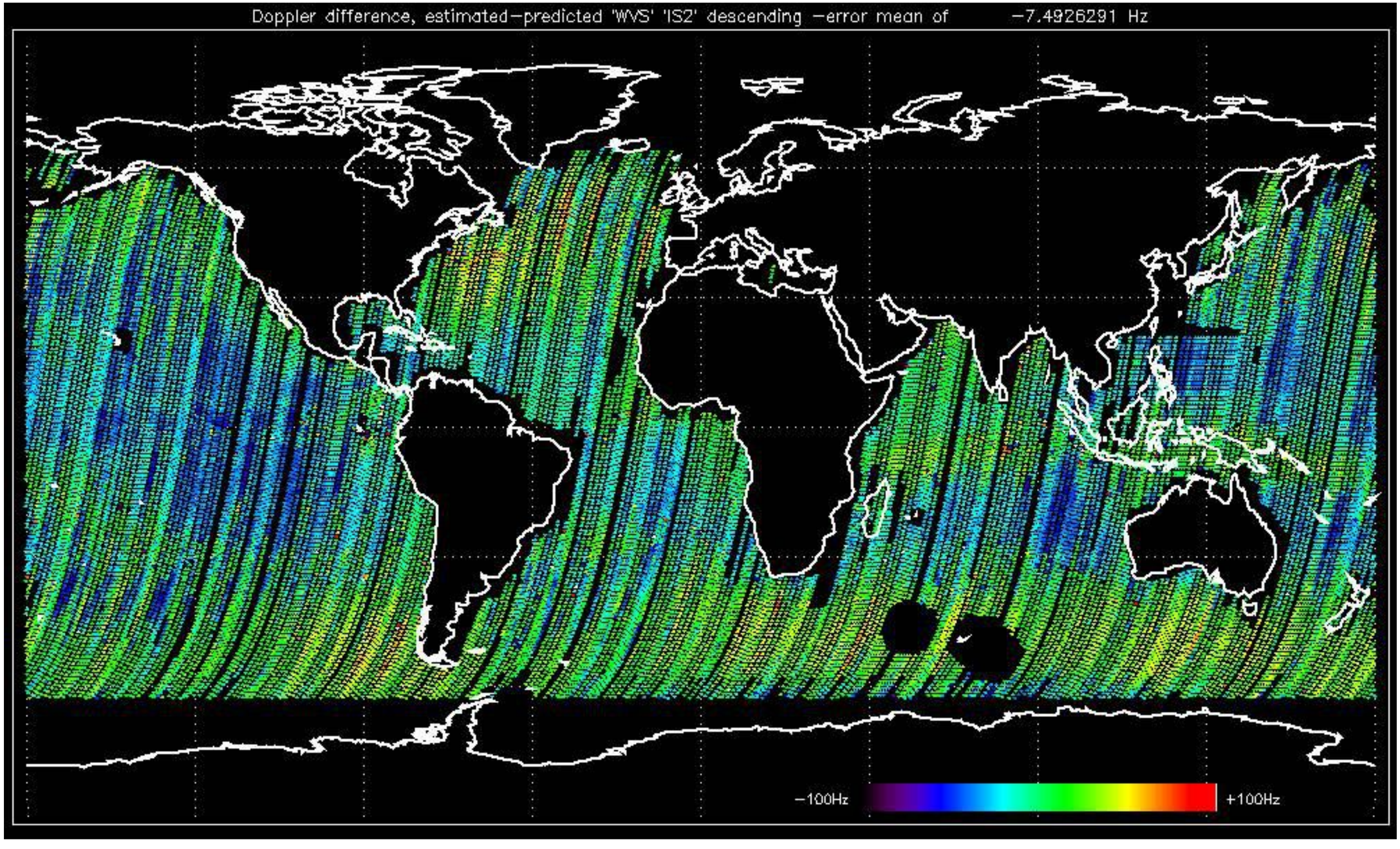

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −9.2348086 Hz
−100Hz
+100Hz

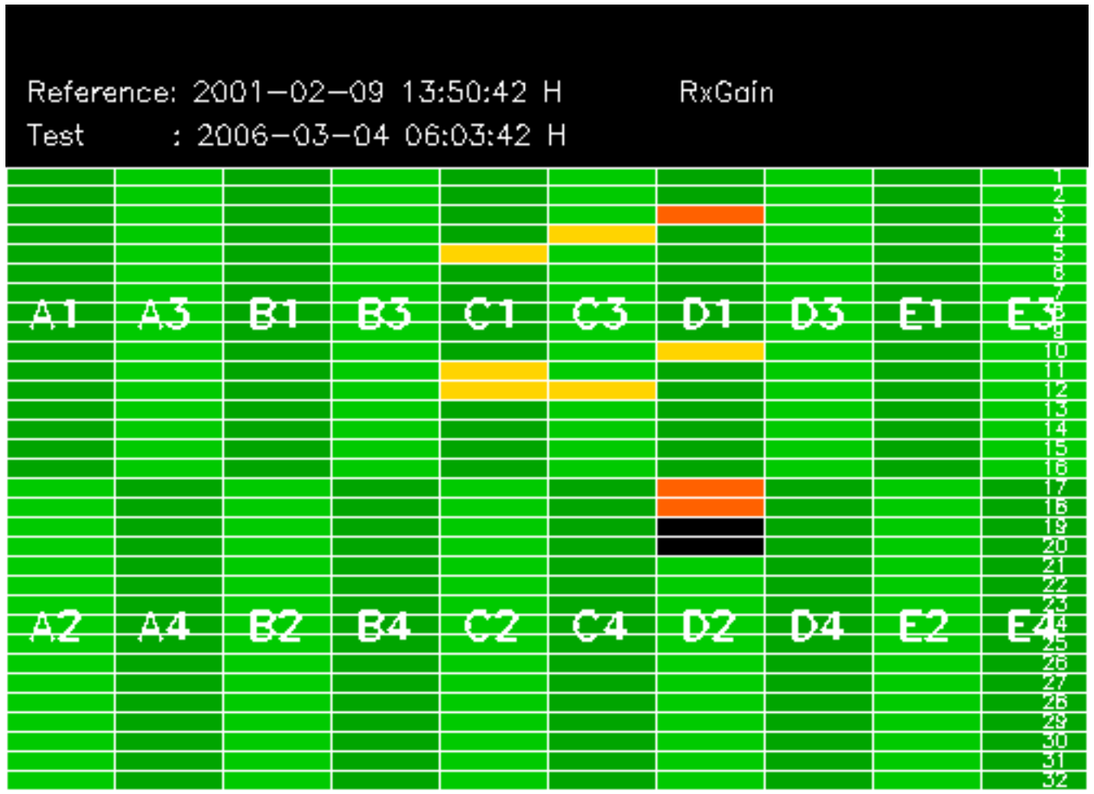

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −9.6284339 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −5.4830609 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −7.4926291 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2006-03-04 06:03:42 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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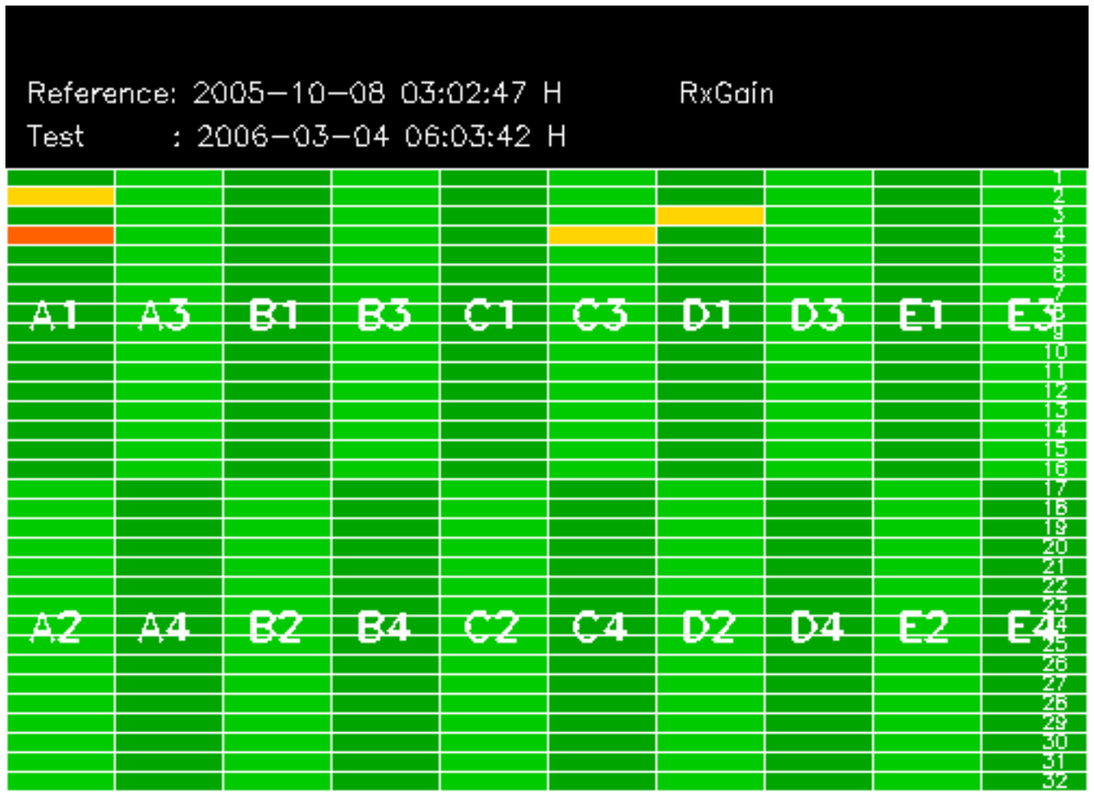
Reference: 2005-10-08 03:02:47 H
Test : 2006-03-04 06:03:42 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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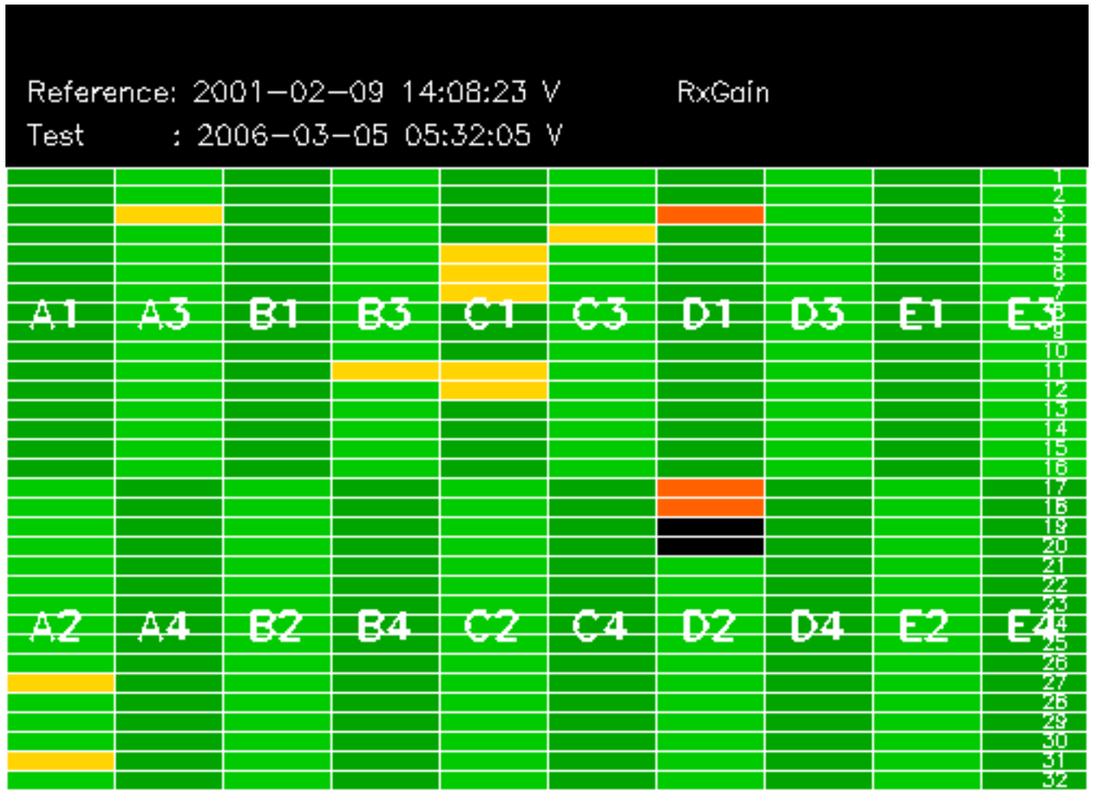
Reference: 2001-02-09 14:08:23 V
Test : 2006-03-05 05:32:05 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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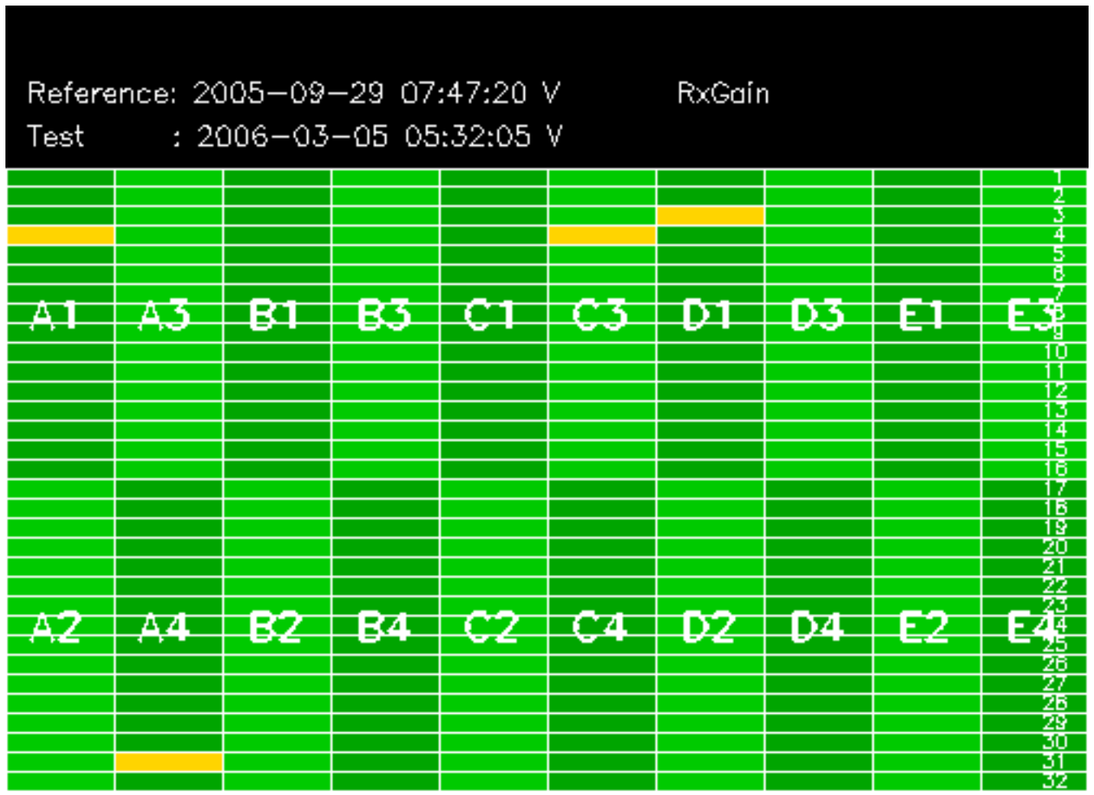
Reference: 2005-09-29 07:47:20 V
Test : 2006-03-05 05:32:05 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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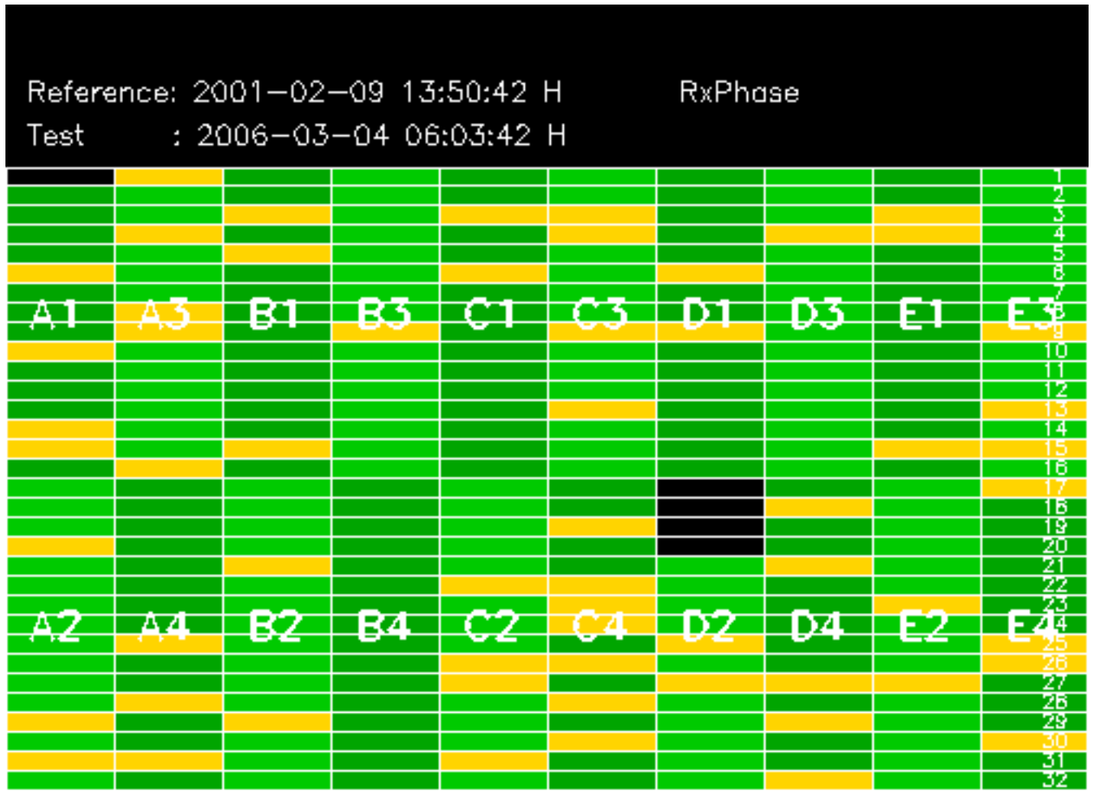
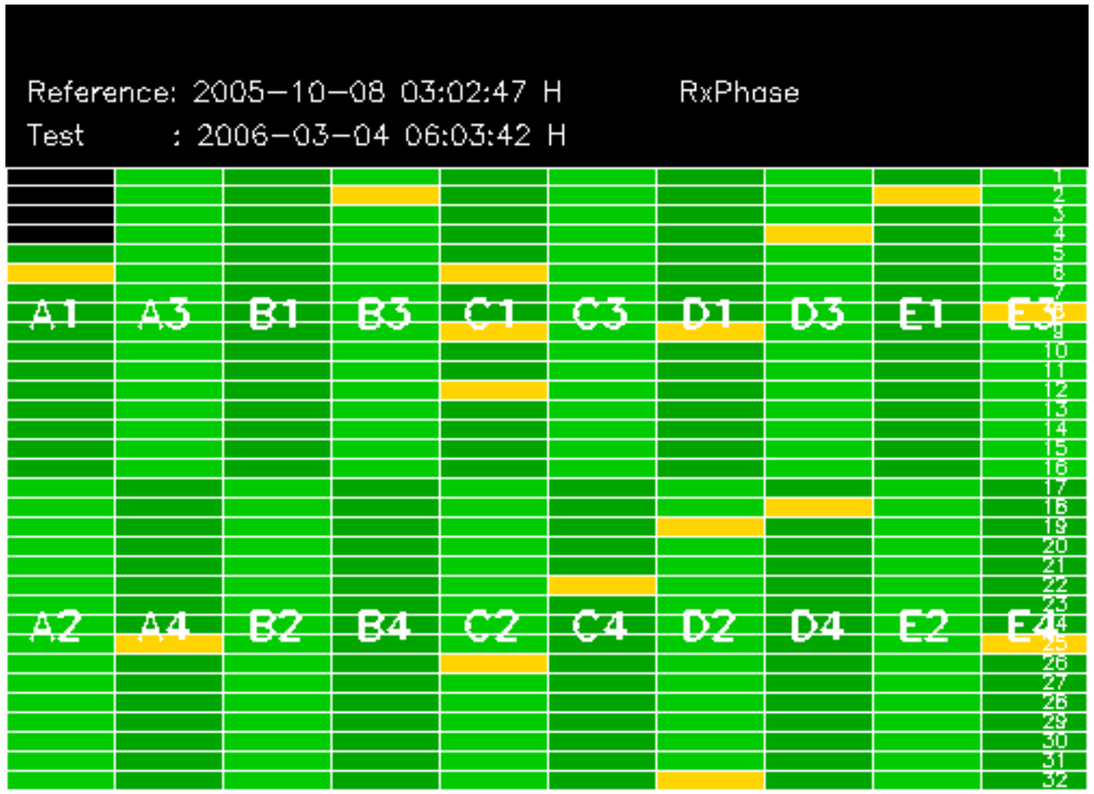

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2006-03-04 06:03:42 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-10-08 03:02:47 H
RxPhase
Test : 2006-03-04 06:03:42 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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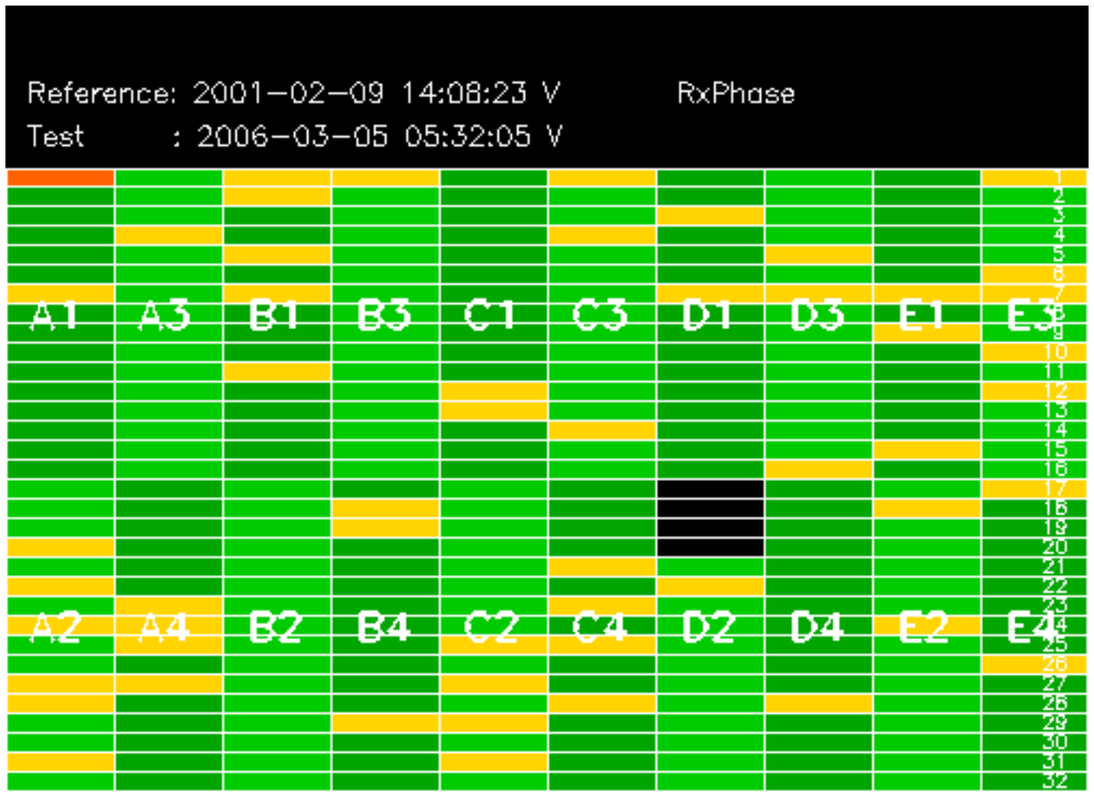
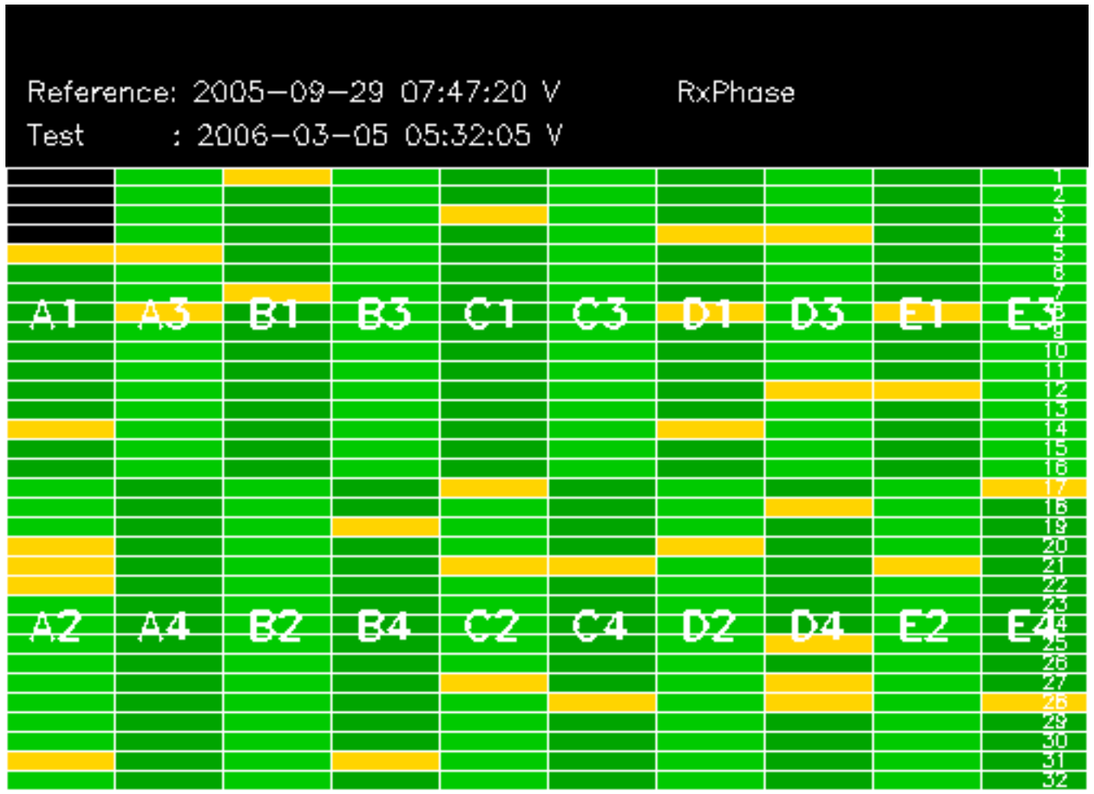

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2006-03-05 05:32:05 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-29 07:47:20 V
Test : 2006-03-05 05:32:05 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
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8
9
10
11
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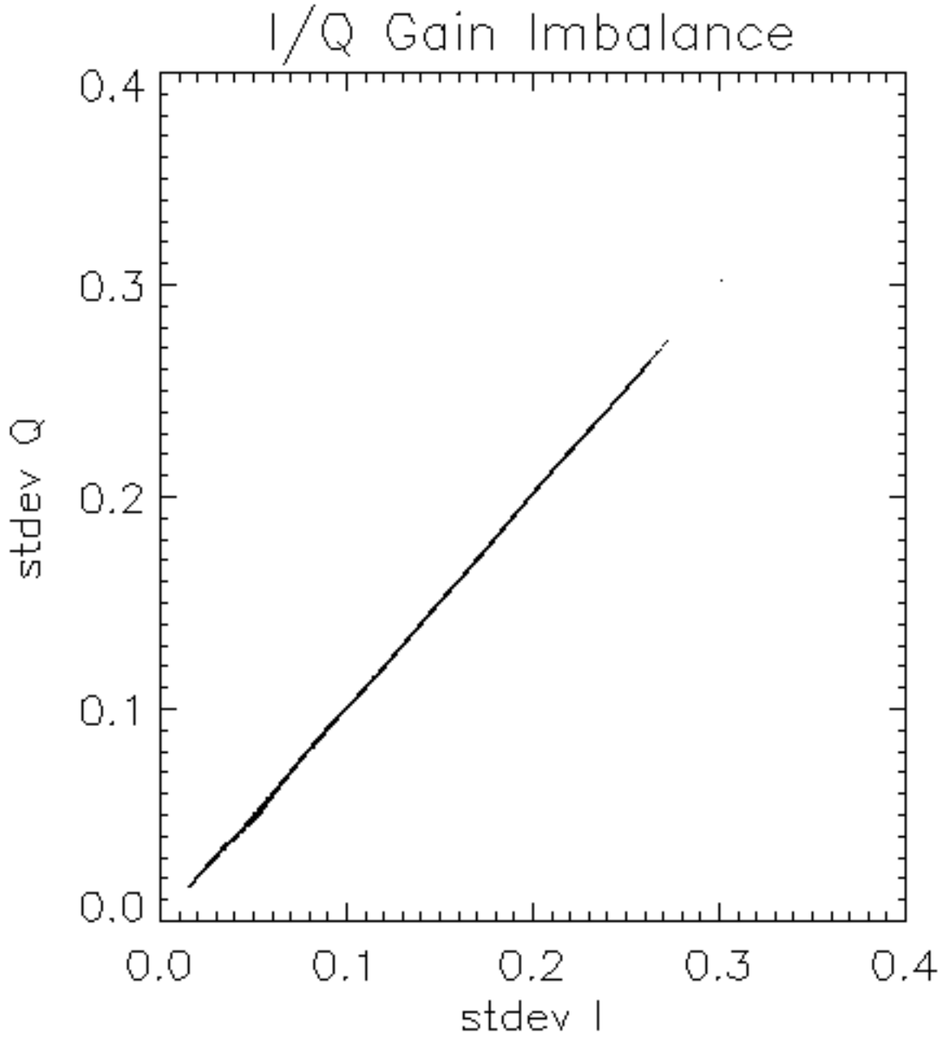
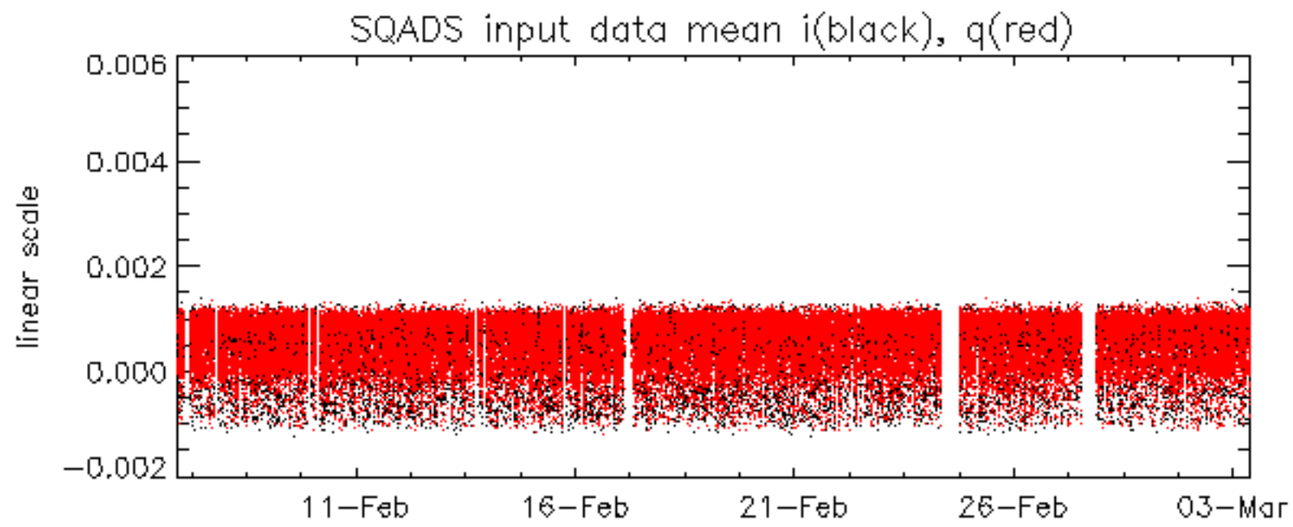
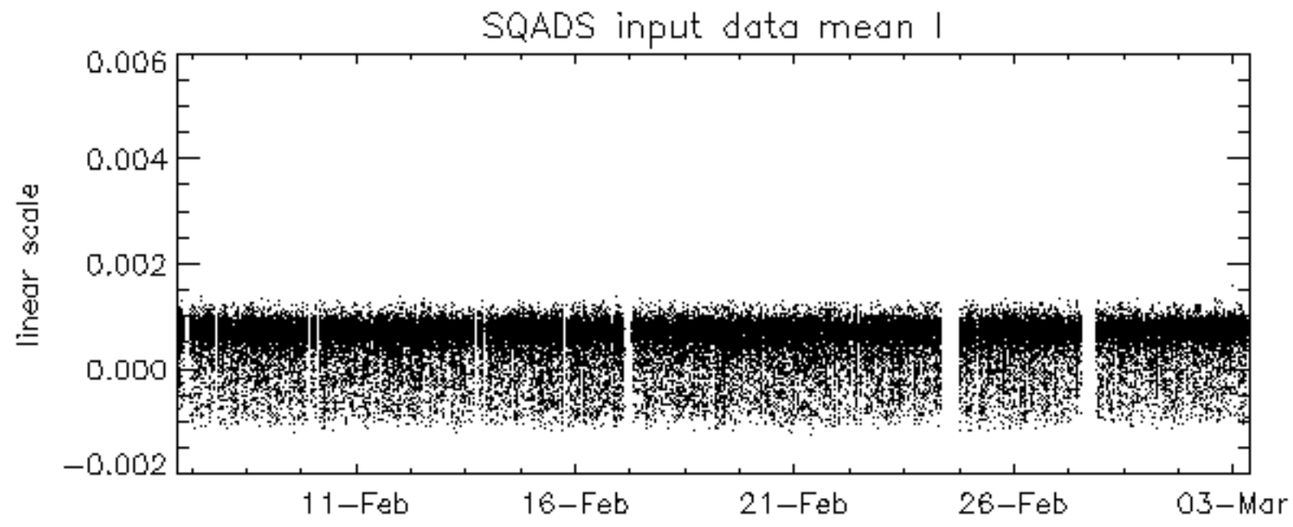
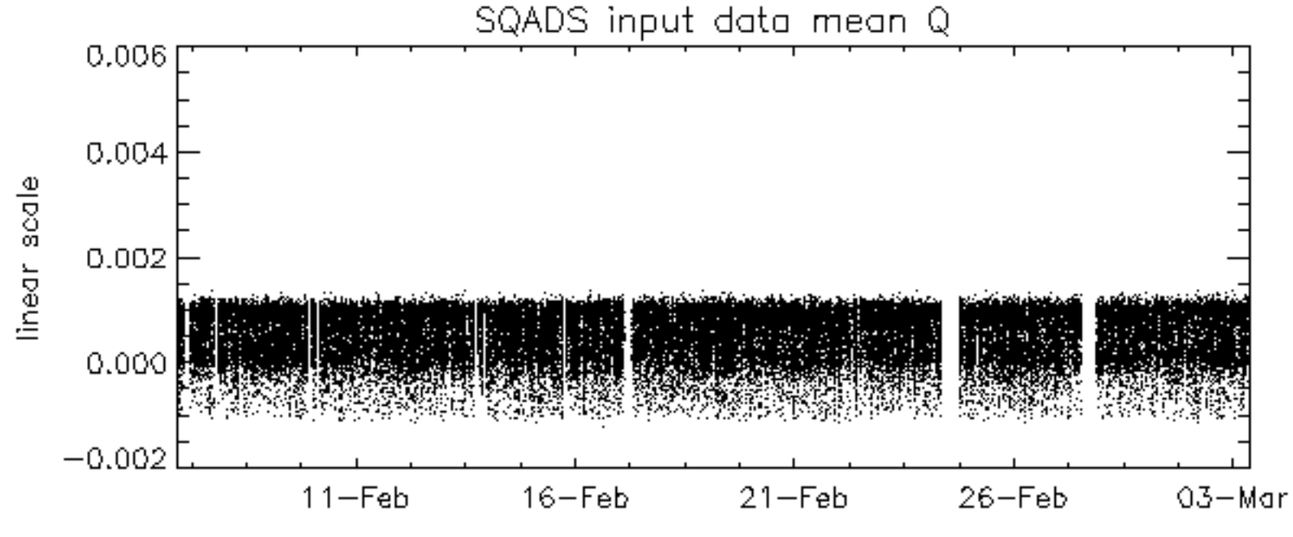
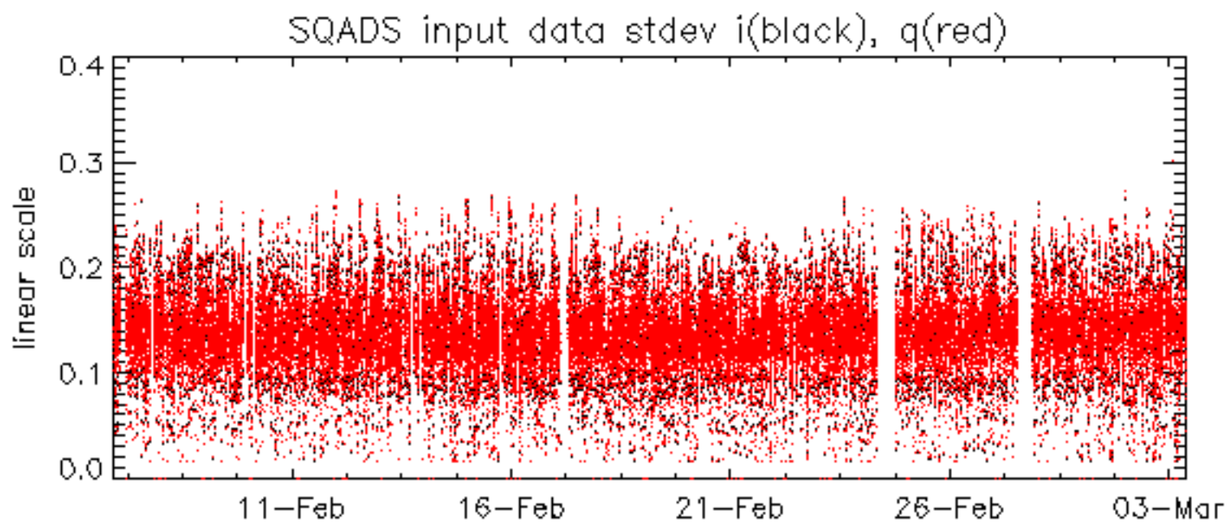
32

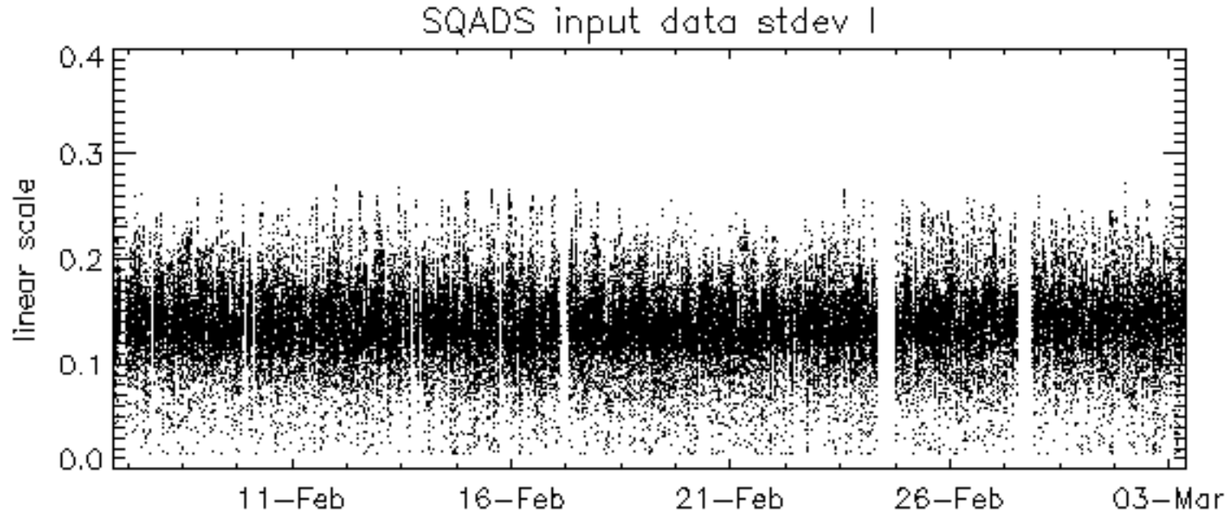

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

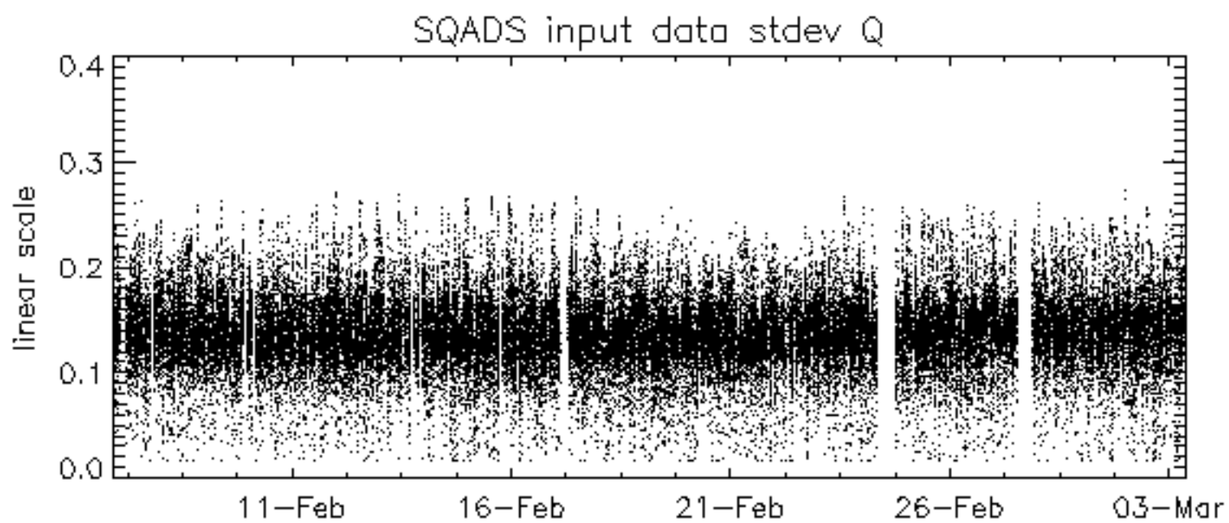

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar

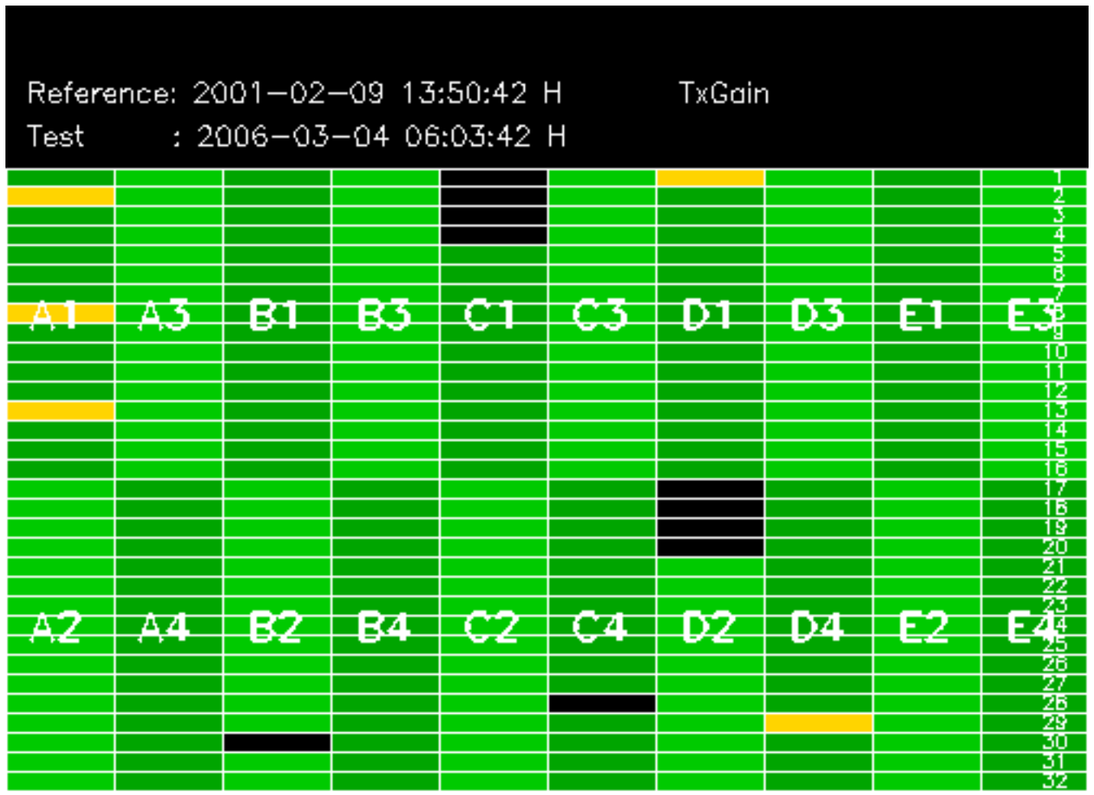

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar


SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Feb
16−Feb
21−Feb
26−Feb
03−Mar


Reference: 2001-02-09 13:50:42 H
Test : 2006-03-04 06:03:42 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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8
9
10
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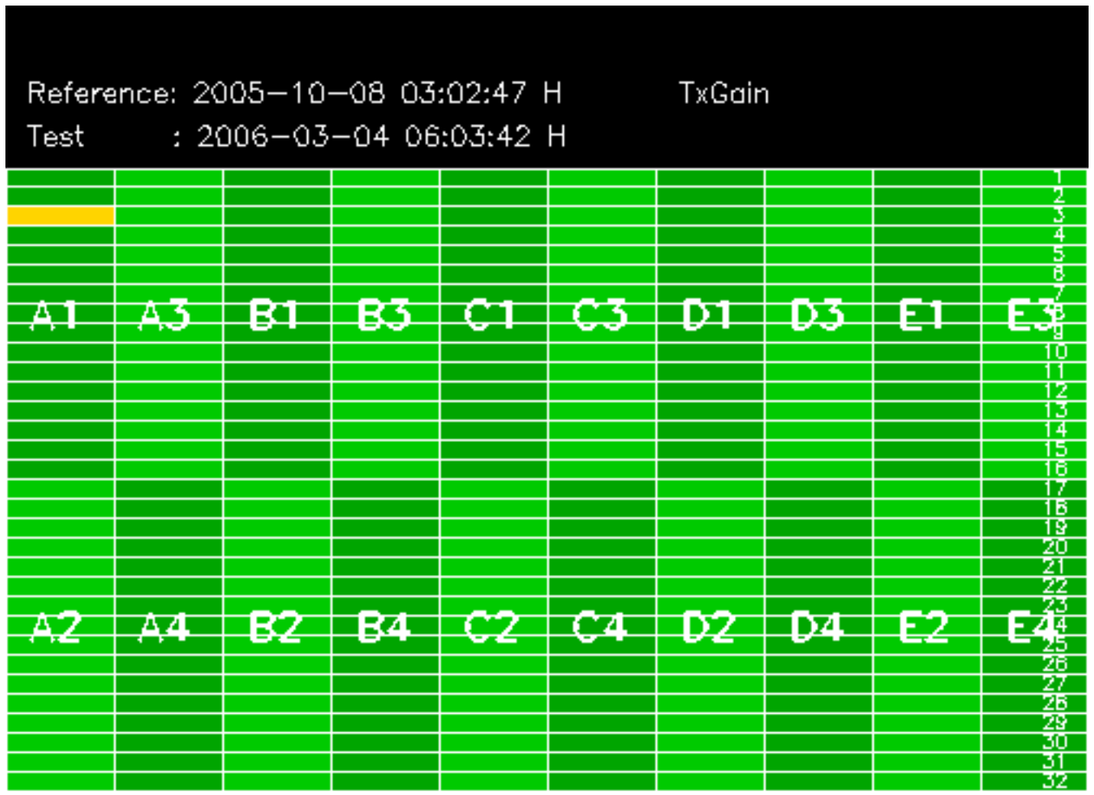
Reference: 2005-10-08 03:02:47 H
Test : 2006-03-04 06:03:42 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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8
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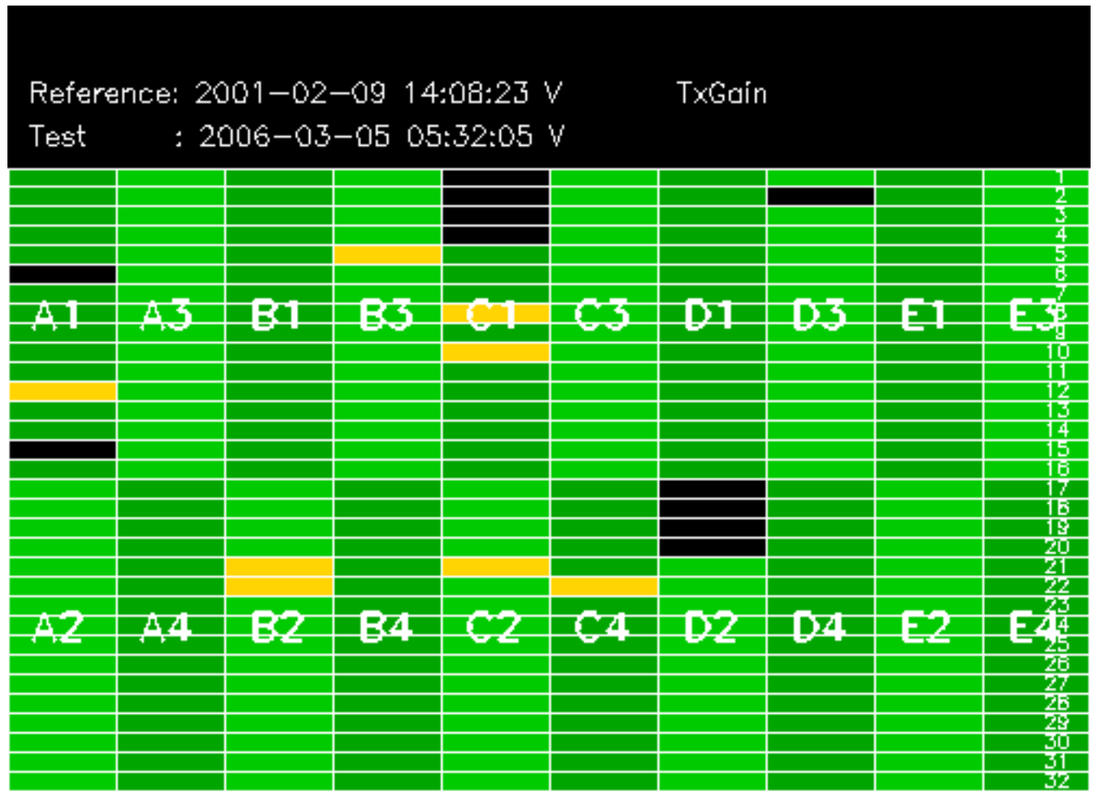
32


Reference: 2001-02-09 14:08:23 V
Test : 2006-03-05 05:32:05 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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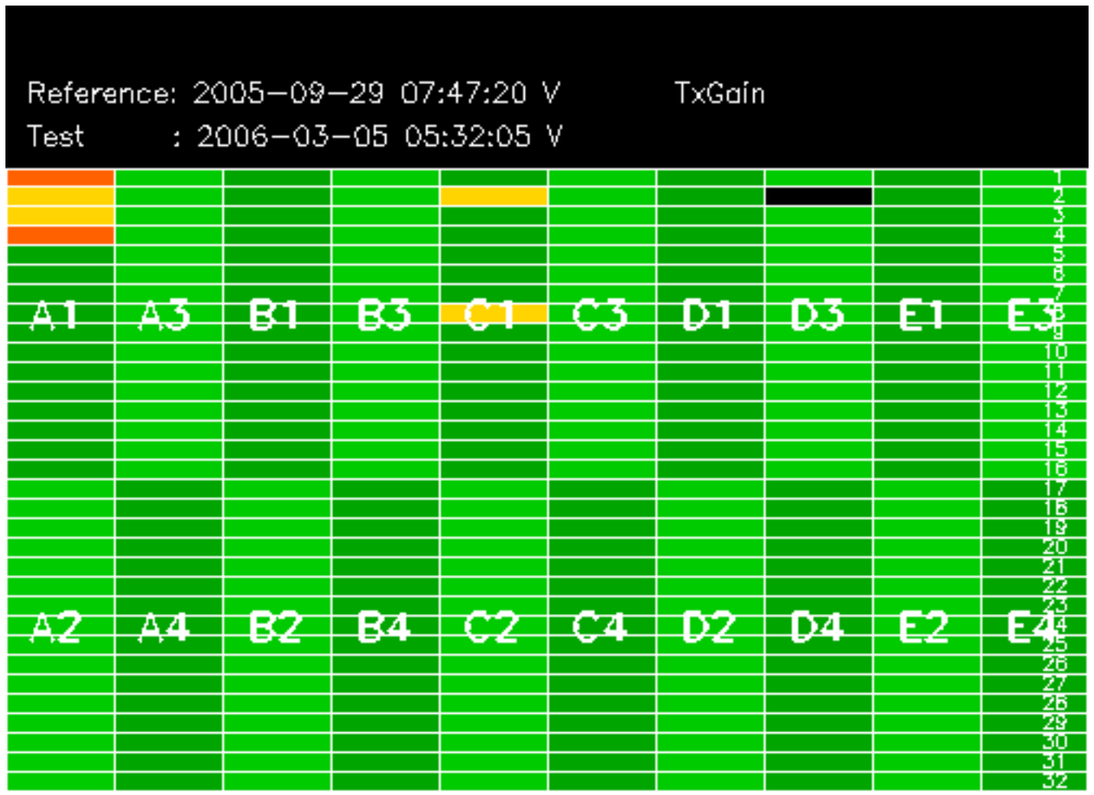
Reference: 2005-09-29 07:47:20 V
Test : 2006-03-05 05:32:05 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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9
10
11
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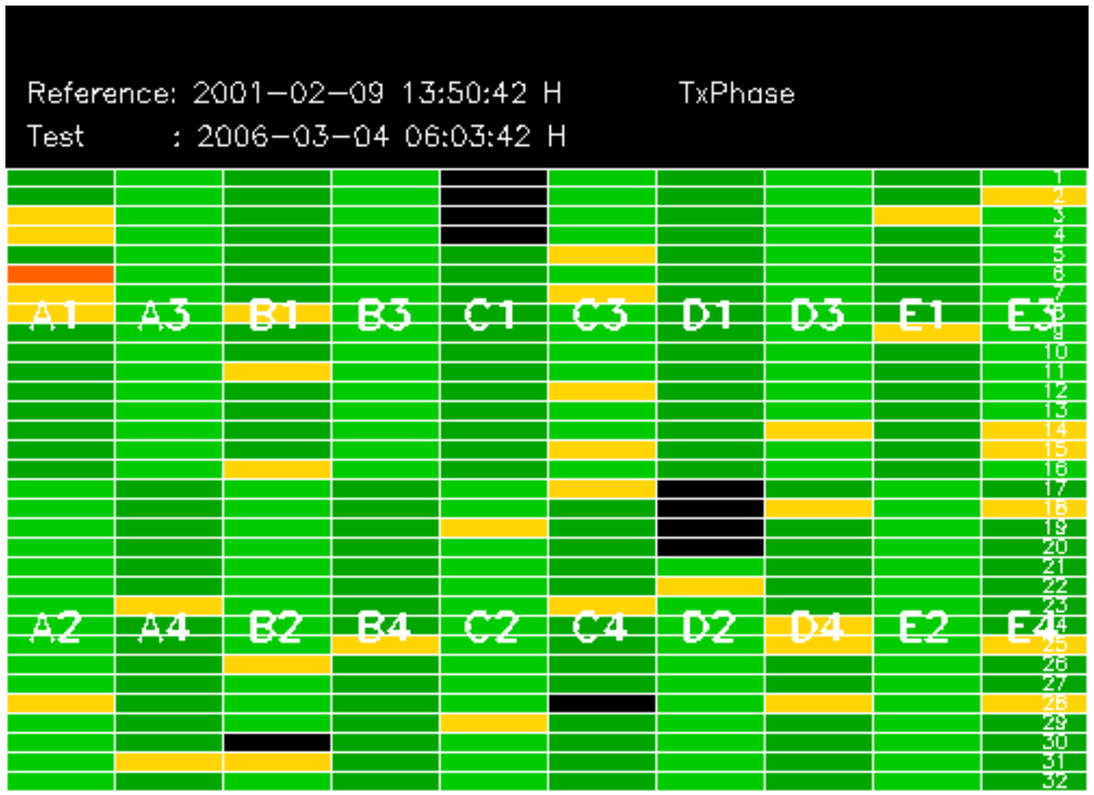
Summary of analysis for the last 3 days 2006030[456]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
</table>


Reference: 2001-02-09 13:50:42 H
Test : 2006-03-04 06:03:42 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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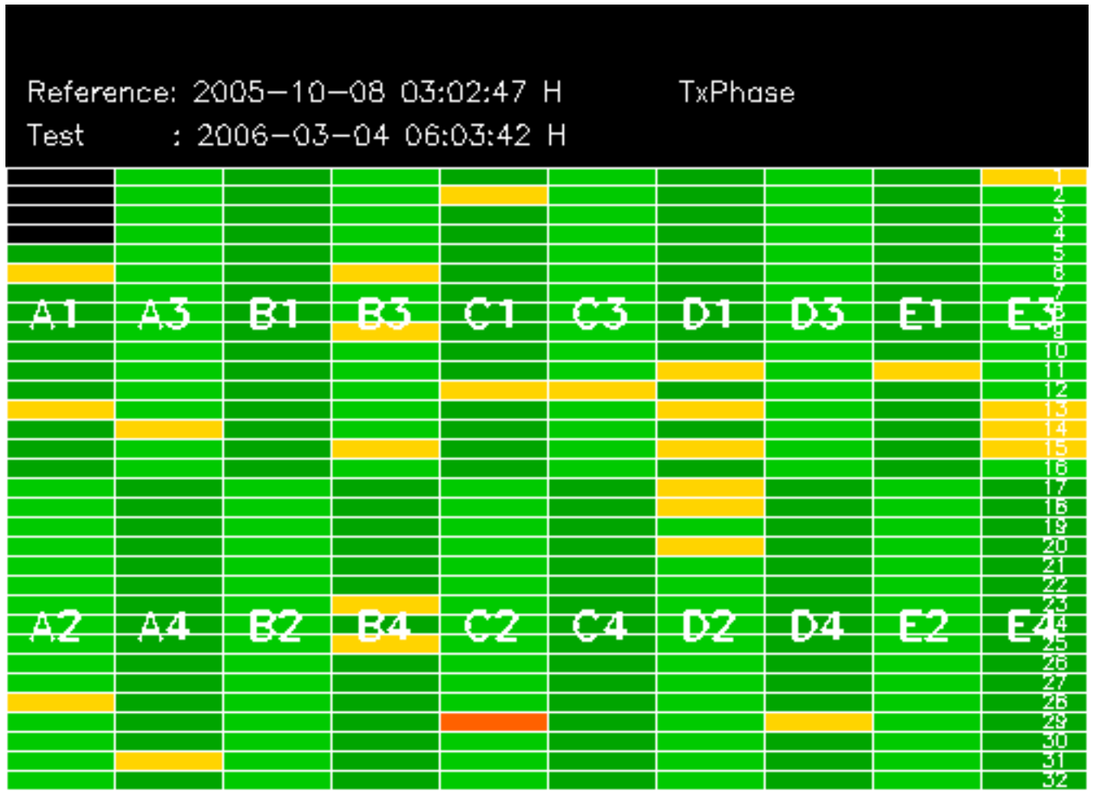
Reference: 2005-10-08 03:02:47 H
TxPhase
Test : 2006-03-04 06:03:42 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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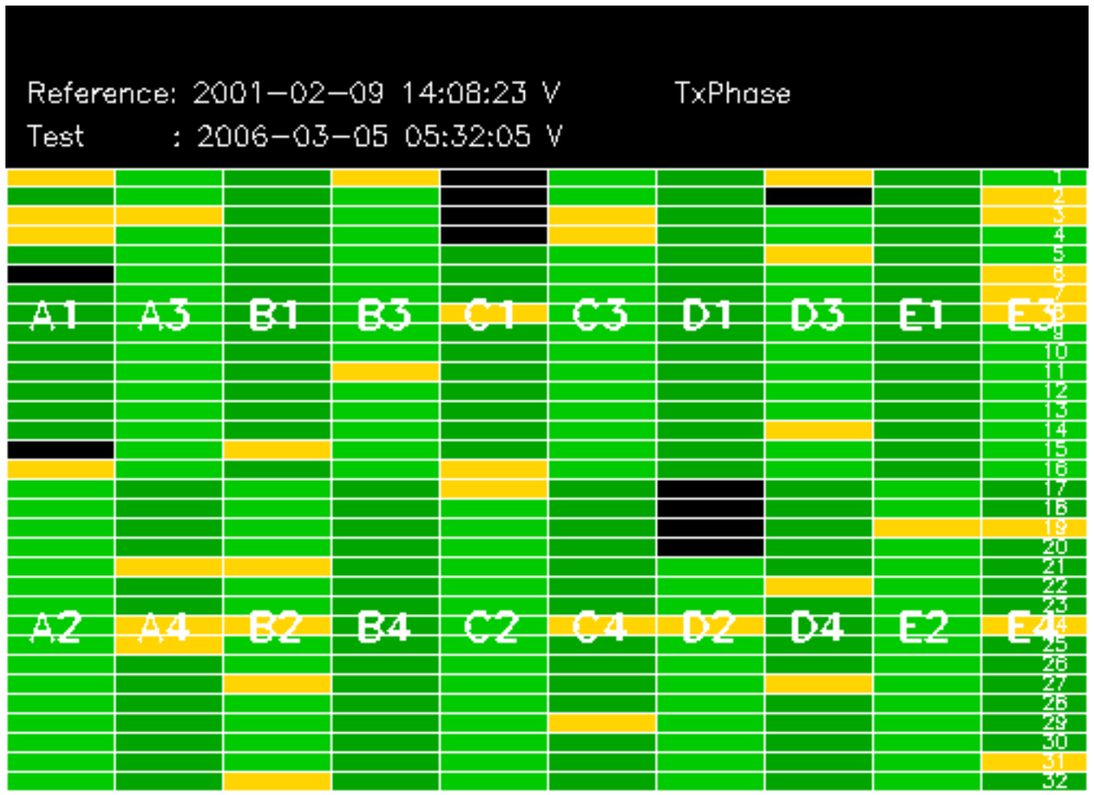
Reference: 2001-02-09 14:08:23 V
Test : 2006-03-05 05:32:05 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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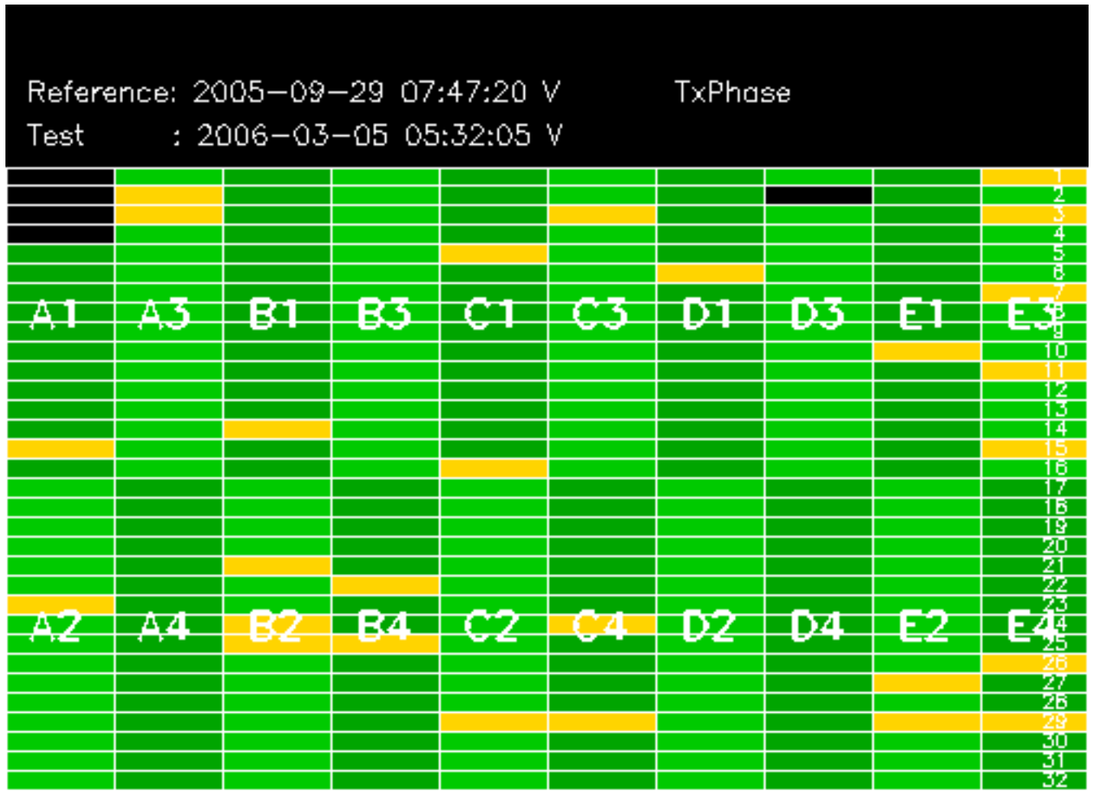
Reference: 2005-09-29 07:47:20 V
Test : 2006-03-05 05:32:05 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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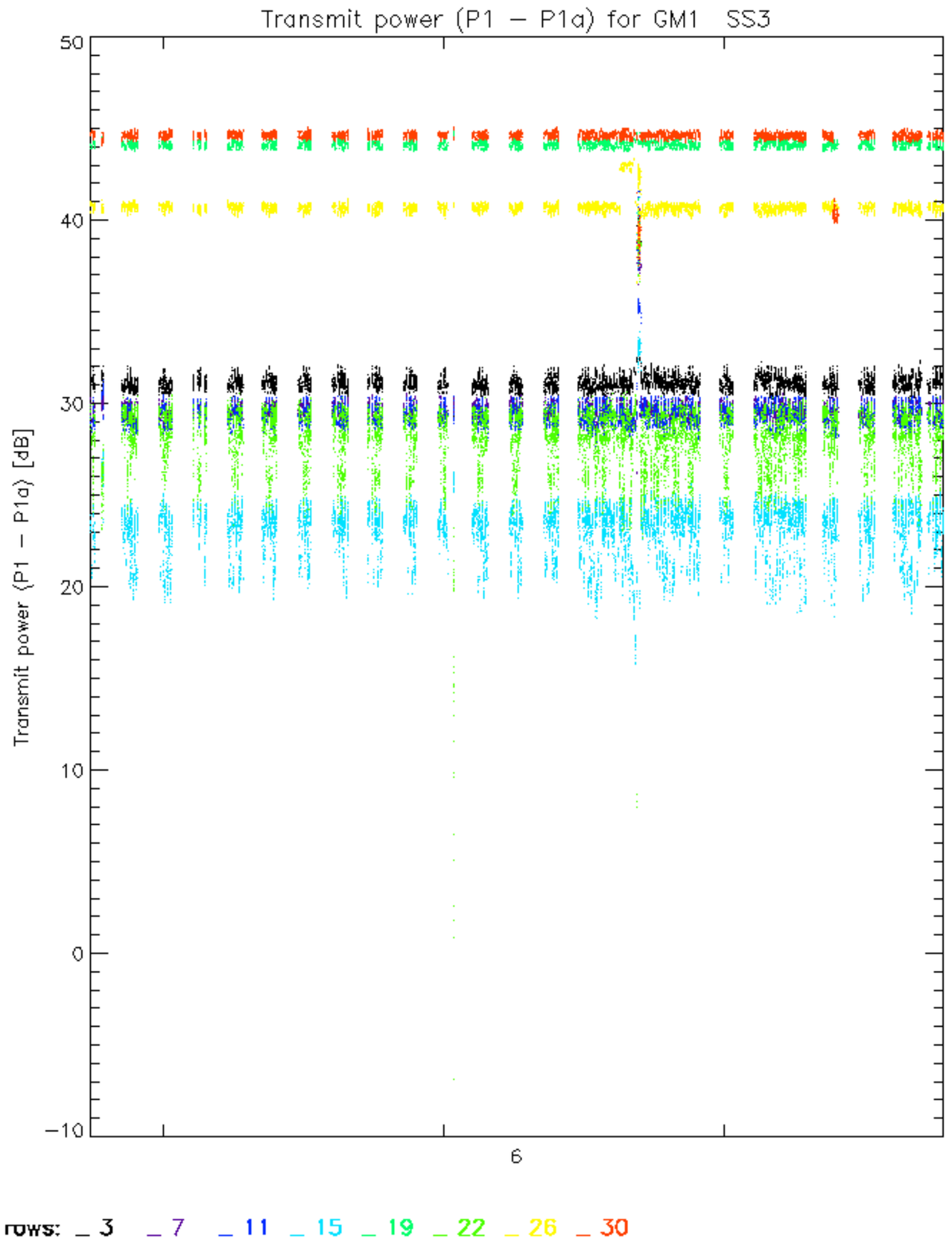
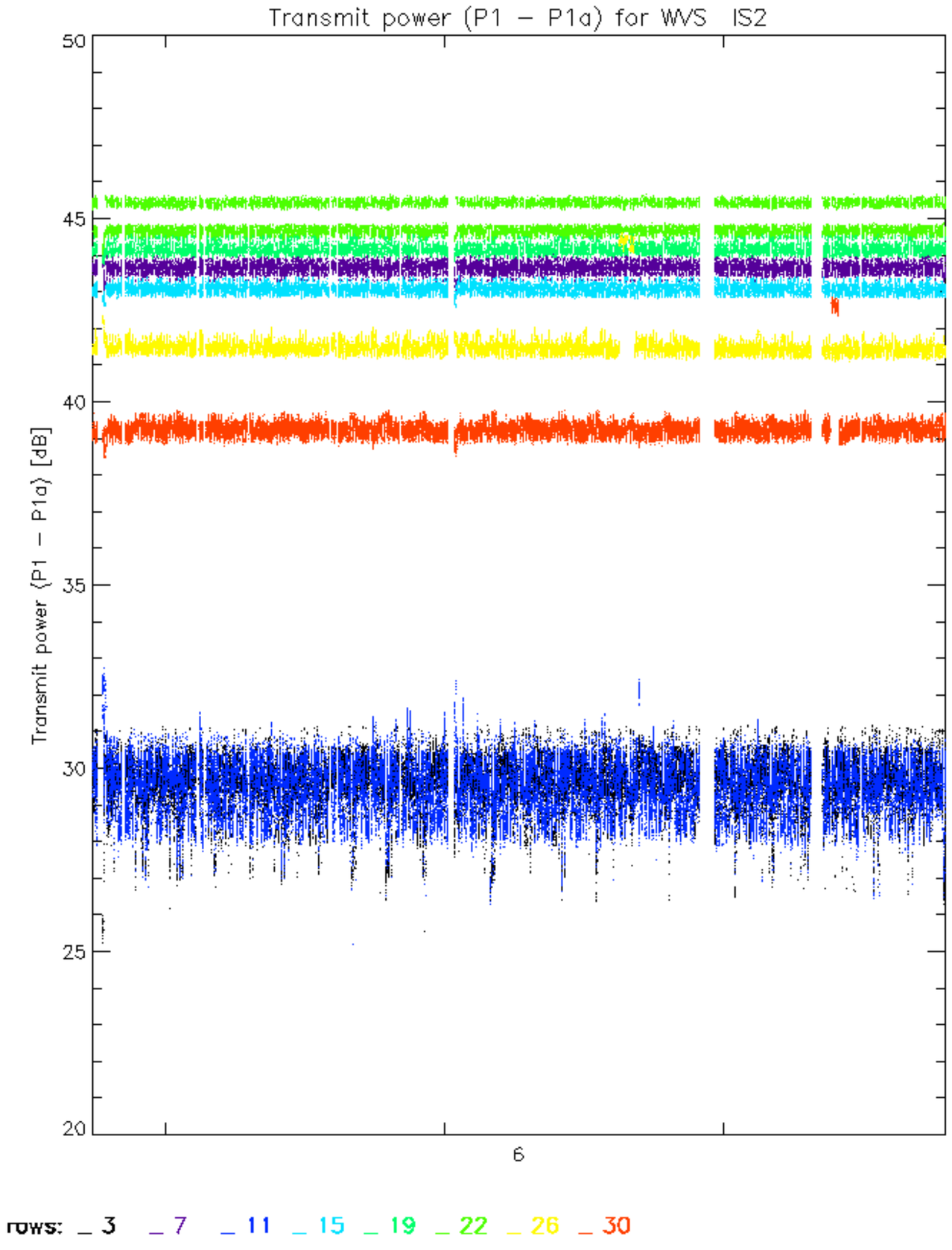

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
6
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
45
40
35
30
25
20
6
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.