REPORT OF 040803

last update on Tue Aug 3 14:30:52 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

No anomalies observed on available browse products

2.3 - Data Analysis

Analysis not performed due to system problems.

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 any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
MSM data not available at the moment due to sistem problems.

Polarisation	Start Time
V	20040801 095351
H	20040731 084452

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

Analysis cannot be performed due to system problems.

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	-3.476007	0.005125	0.021591
7	P1	-3.317610	0.012668	0.013720
11	P1	-4.605356	0.029057	-0.010841
15	P1	-5.724126	0.055781	-0.001734
19	P1	-3.447149	0.004142	-0.016678
22	P1	-4.563210	0.010760	-0.014067
24	P1	-4.950321	0.017104	-0.000334
30	P1	-6.892108	0.026104	-0.039804
3	P1	-16.195450	0.116573	0.032419
7	P1	-13.961642	0.074567	-0.001257
11	P1	-20.045322	0.253975	-0.160691
15	P1	-11.789082	0.041457	0.026136
19	P1	-13.843146	0.031625	-0.042722
22	P1	-16.322052	0.343671	-0.038253

24	P1	-14.601132	0.275494	0.010026
30	P1	-17.665886	0.419492	-0.021251

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.333422	0.078937	0.058758
7	P2	-22.715006	0.117446	0.077905
11	P2	-15.459351	0.140197	0.101451
15	P2	-7.108159	0.087293	0.055769
19	P2	-9.560009	0.148292	0.047107
22	P2	-17.417562	0.102116	0.123128
24	P2	-20.762266	0.083155	0.019099
30	P2	-19.357309	0.077967	0.115217

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143032	0.001901	-0.004066
7	P3	-8.143033	0.001901	-0.004060
11	P3	-8.143037	0.001901	-0.004042
15	P3	-8.143044	0.001900	-0.004006
19	P3	-8.143060	0.001900	-0.003952
22	P3	-8.143066	0.001901	-0.003934
24	P3	-8.143070	0.001901	-0.003921
30	P3	-8.143166	0.001899	-0.004263

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	-2.949182	0.106797	0.468900
7	P1	-2.939152	0.123807	-0.250074
11	P1	-3.834519	0.028990	0.030727
15	P1	-3.867216	0.647114	1.190109
19	P1	-3.419377	0.039566	-0.192314
22	P1	-5.690093	0.051052	0.154146
24	P1	-3.940701	0.063035	0.294178
30	P1	-6.163542	0.079398	-0.104906
3	P1	-10.759922	0.324430	0.665342
7	P1	-9.974054	0.279219	-0.449319
11	P1	-11.950363	0.215974	-0.319280
15	P1	-11.748783	0.255986	0.473444
19	P1	-15.319869	0.558242	-0.987856
22	P1	-22.322830	5.298831	-3.171745
24	P1	-17.504499	0.311544	-0.593072
30	P1	-20.891205	3.368567	1.974464

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.033821	0.080472	0.152348
7	P2	-22.824495	0.245541	0.084354
11	P2	-10.982999	0.187300	-0.263247
15	P2	-4.950726	0.042719	-0.033008
19	P2	-6.842029	0.056125	0.175625
22	P2	-7.528926	0.101818	0.161160
24	P2	-11.025556	0.150613	-0.077289
30	P2	-22.267365	0.126692	0.027444

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.983279	0.003631	-0.015415
7	P3	-7.983308	0.003629	-0.015469
11	P3	-7.983292	0.003633	-0.015563
15	P3	-7.983179	0.003638	-0.015462
19	P3	-7.983209	0.003641	-0.015854
22	P3	-7.983289	0.003615	-0.015889

24	P3	-7.983157	0.003652	-0.015695
30	P3	-7.983284	0.003626	-0.015658

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	0.000487141
	stdev	2.17561e-07
MEAN Q	mean	0.000525601
	stdev	2.49724e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128673
	stdev	0.00106091
STDEV Q	mean	0.128924
	stdev	0.00107264

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

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

6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

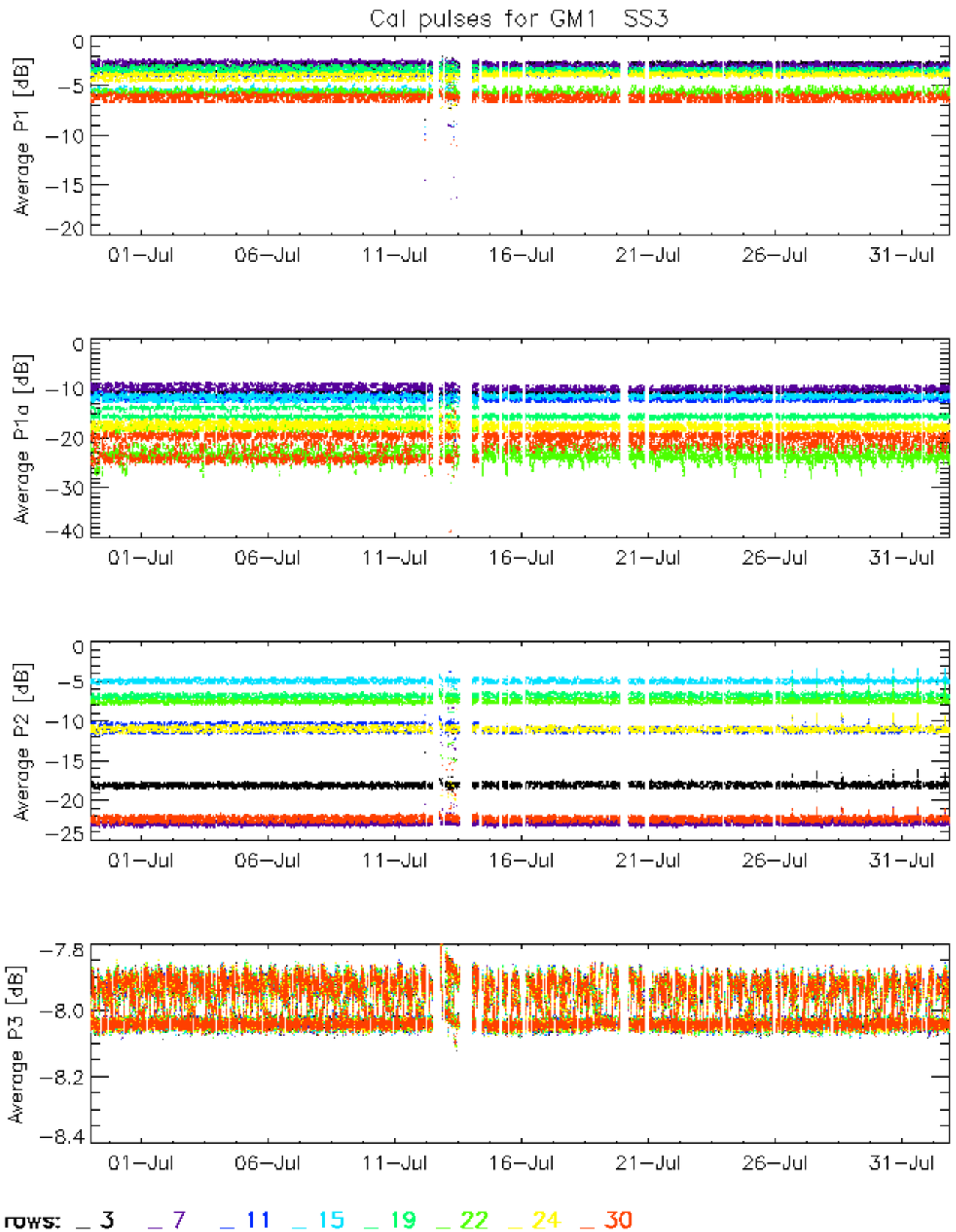
Acsending

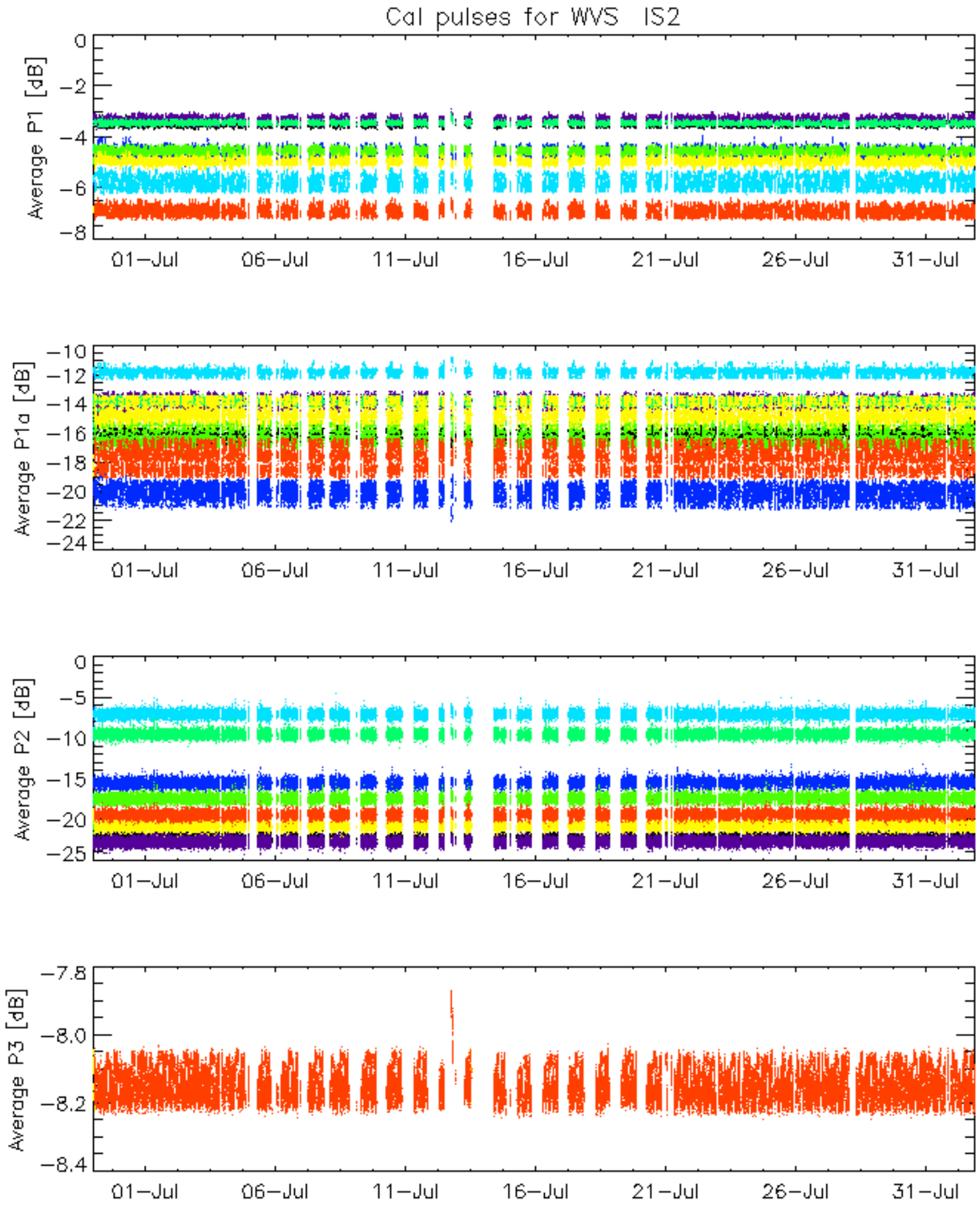
Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

6.6 - Doppler evolution versus ANX for GM1

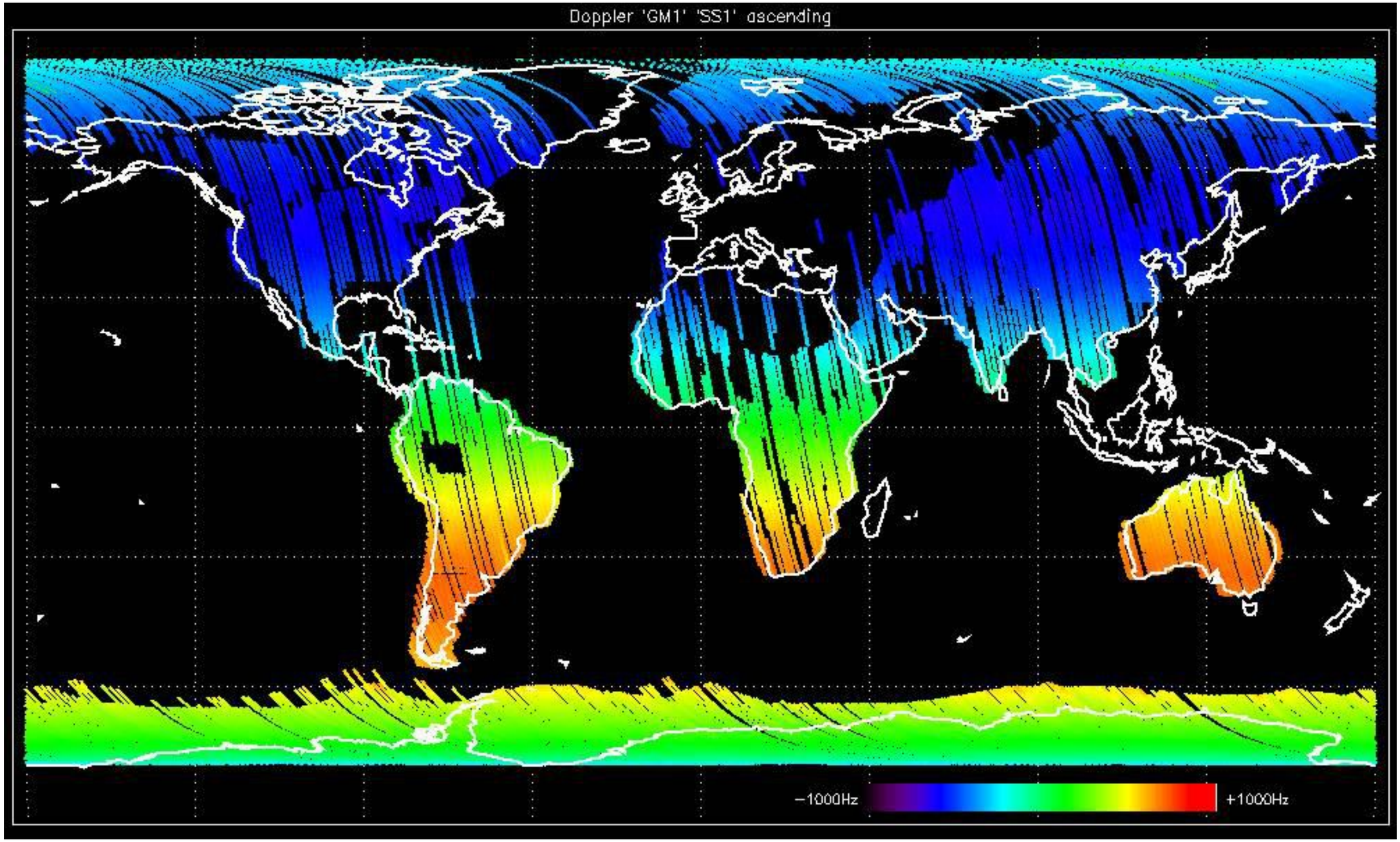

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
Average P1a [dB]
0
−10
−20
−30
−40
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 24 30

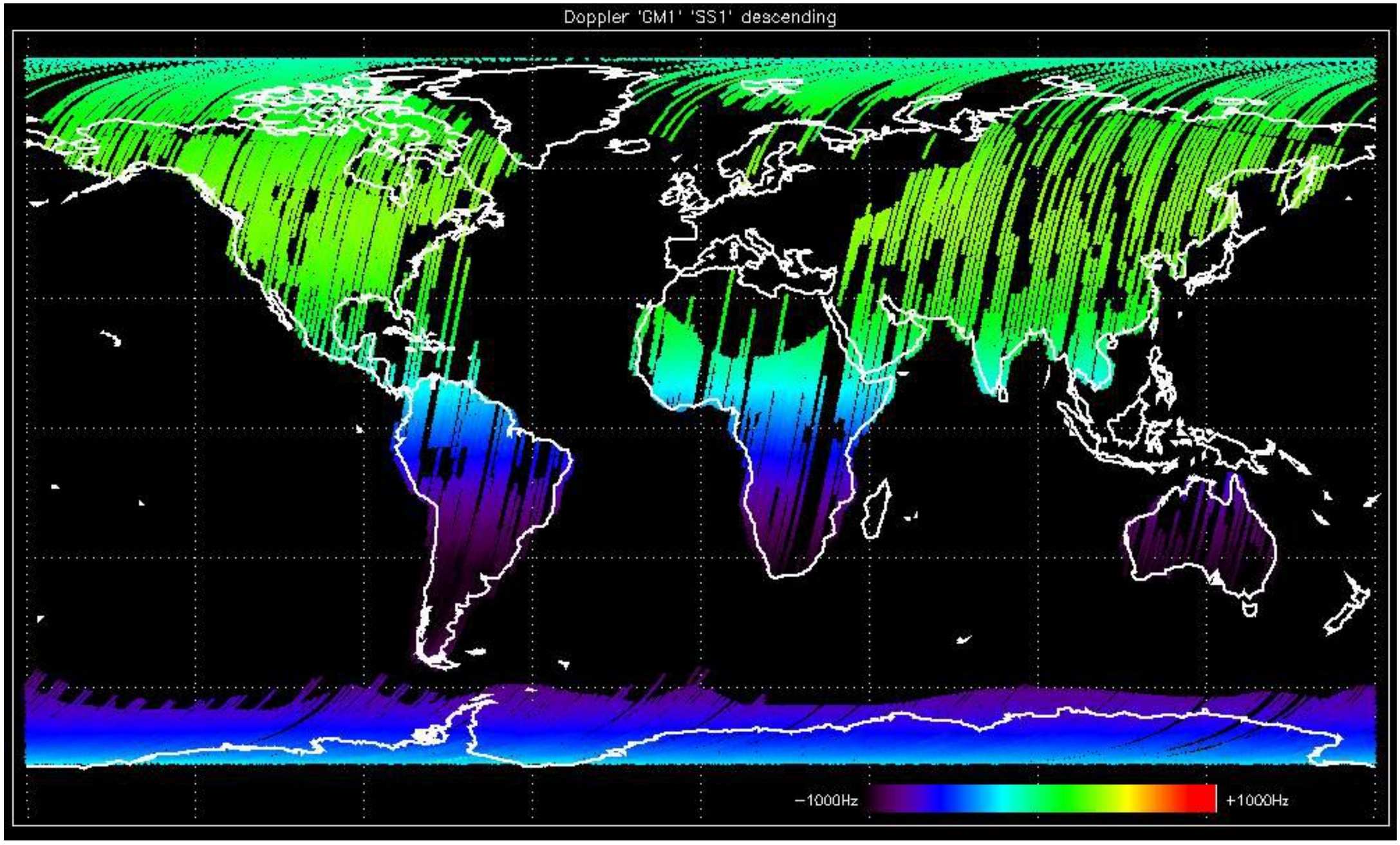

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

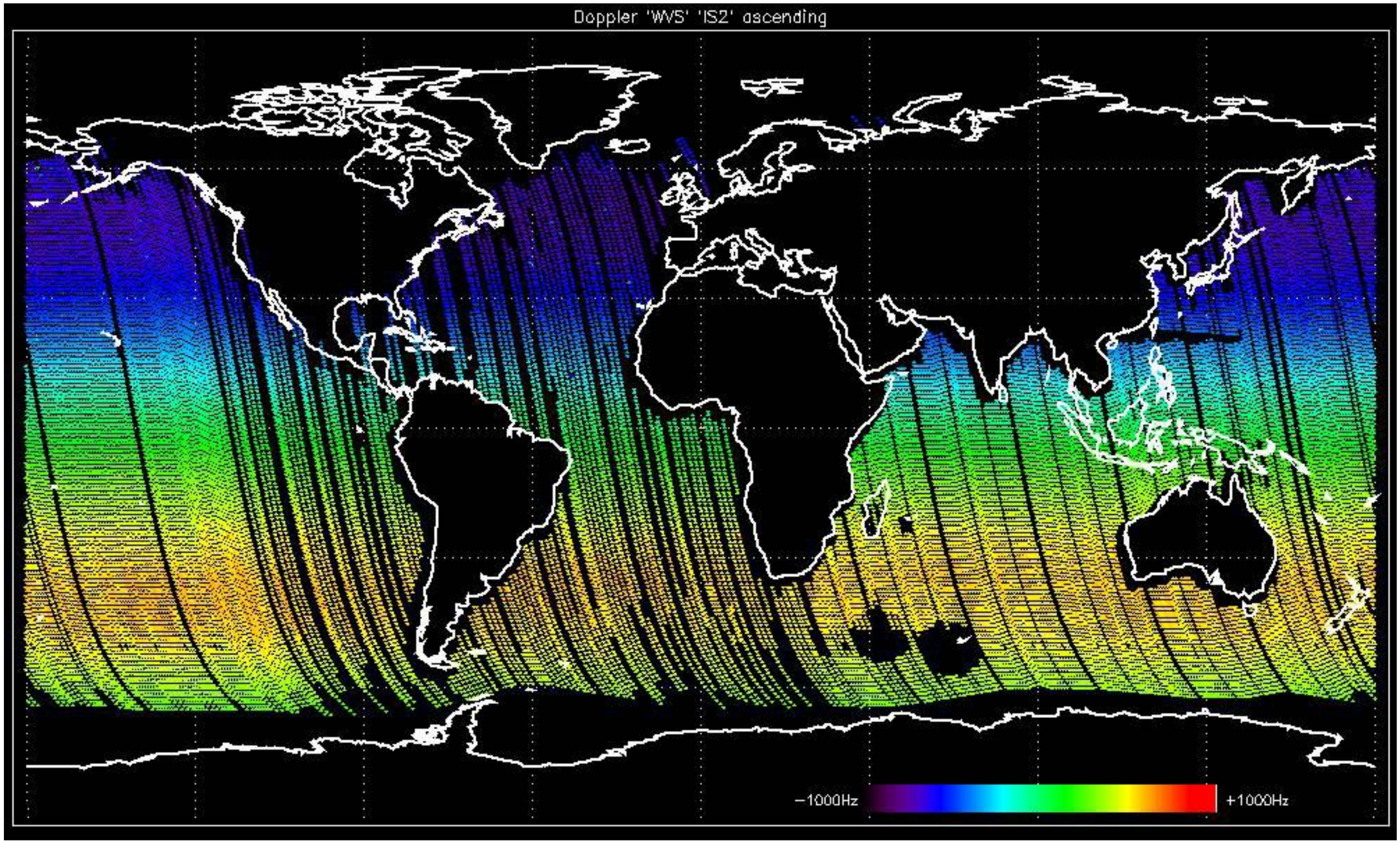
No anomalies observed on available browse products

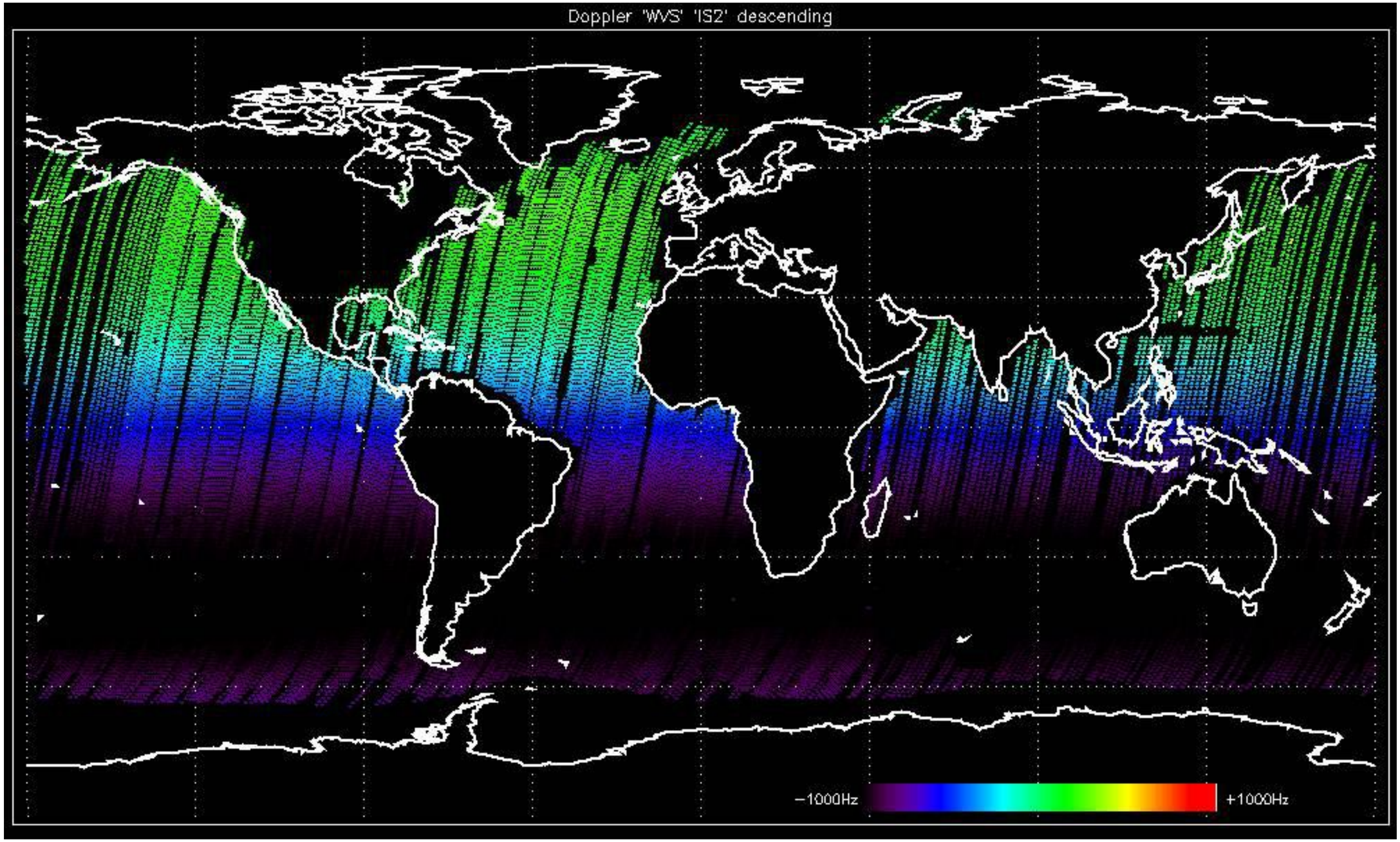
Analysis cannot be performed due to system problems.

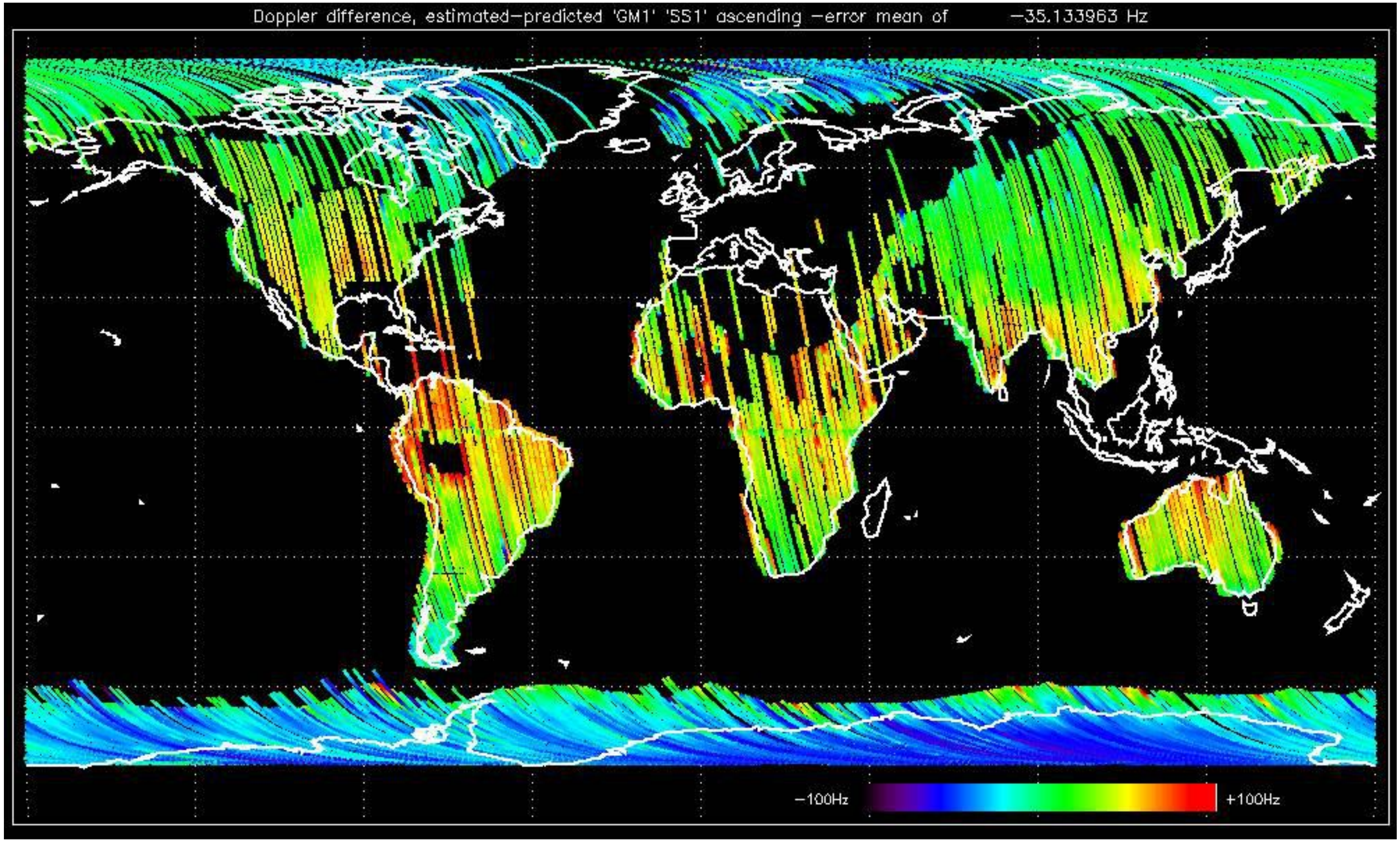
Analysis not performed due to system problems.

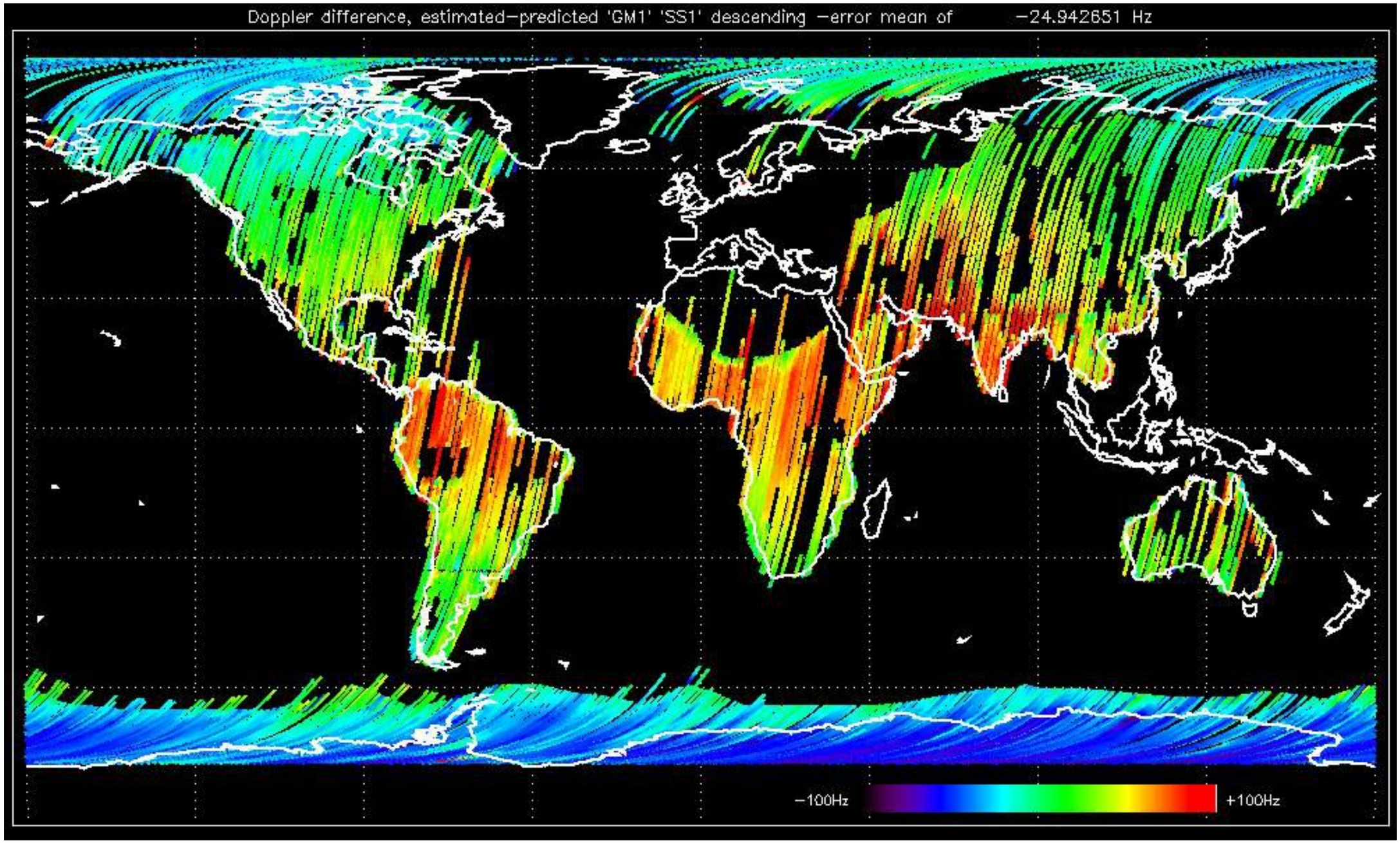

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

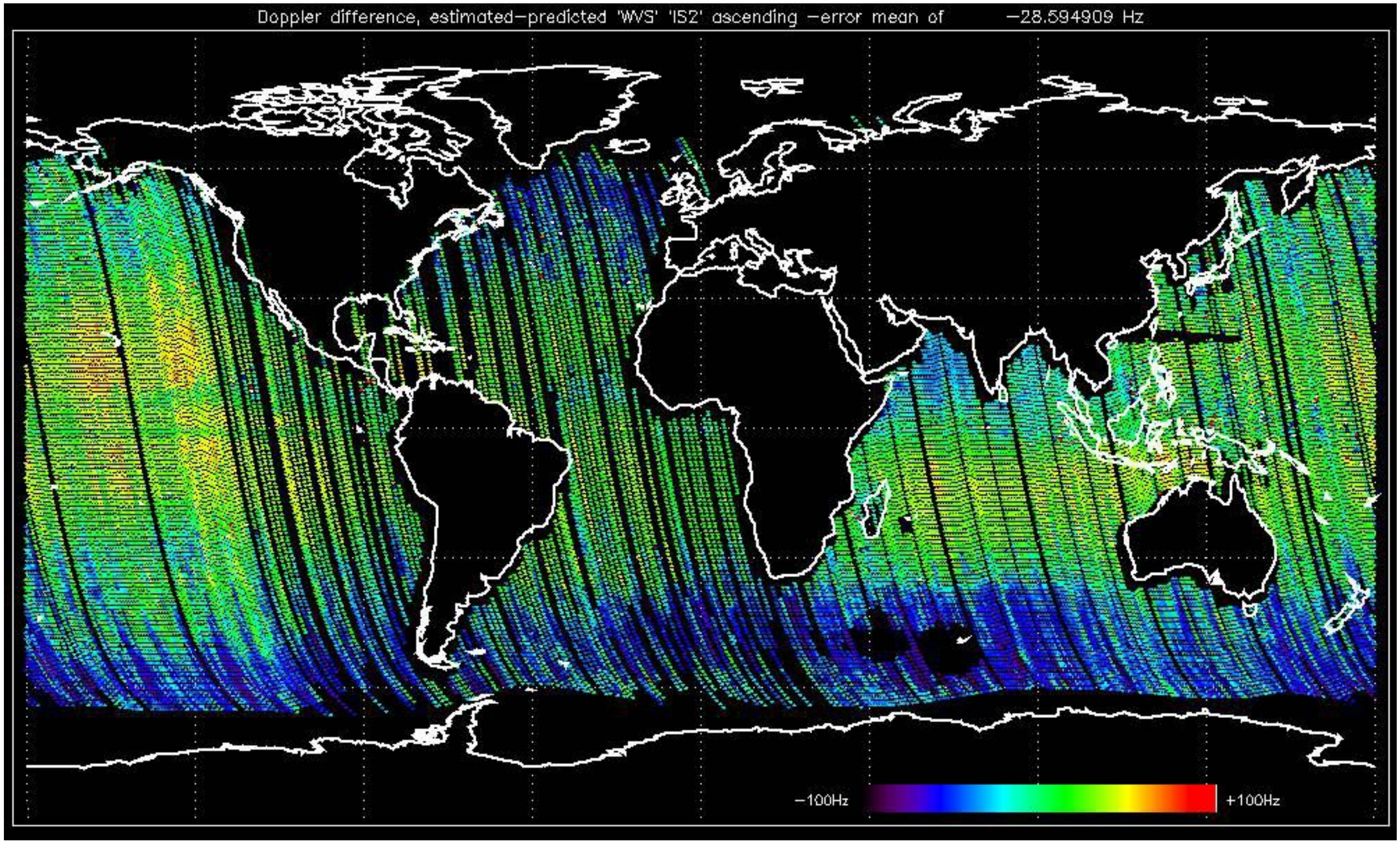

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

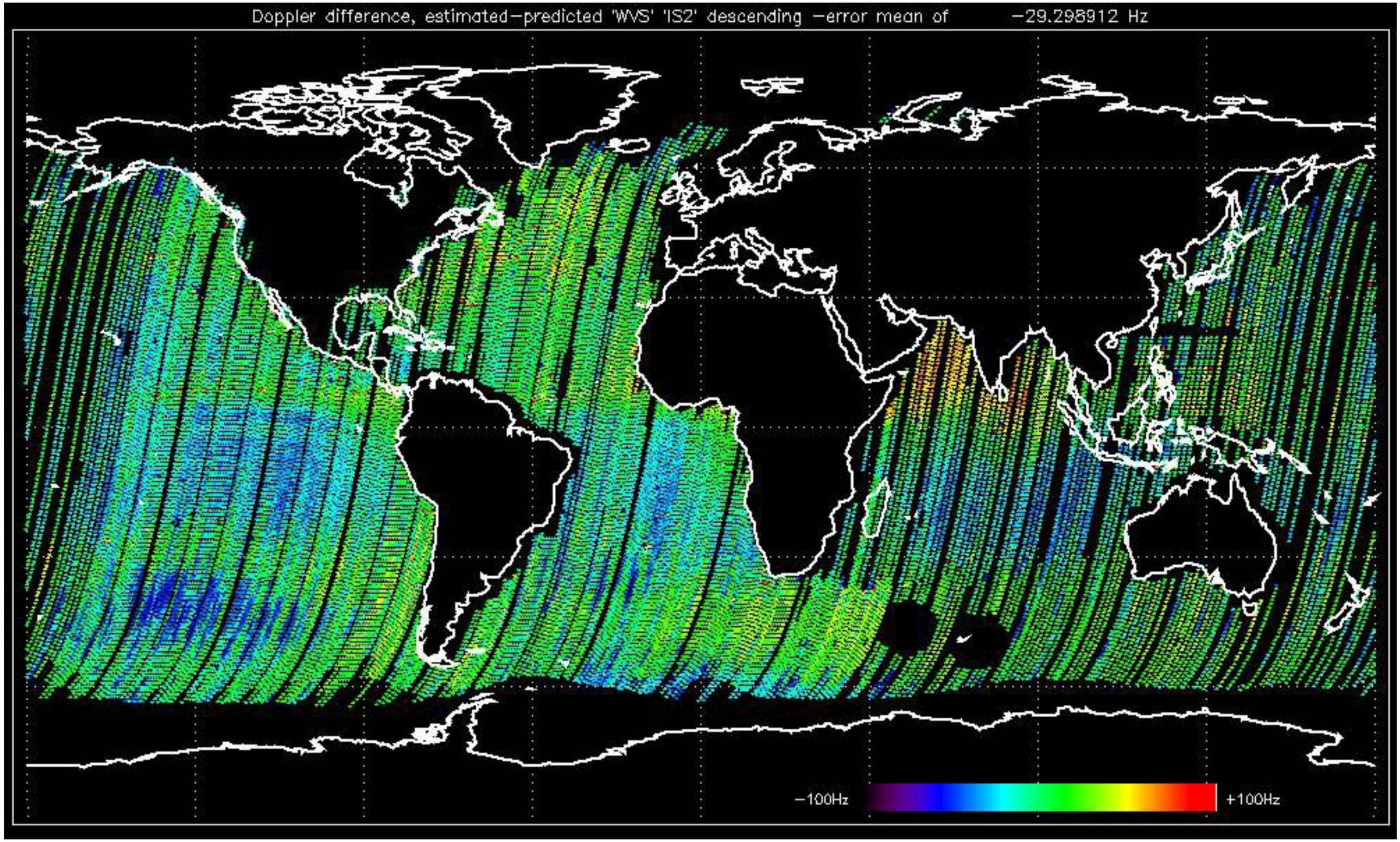

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.133963 Hz
−100Hz
+100Hz

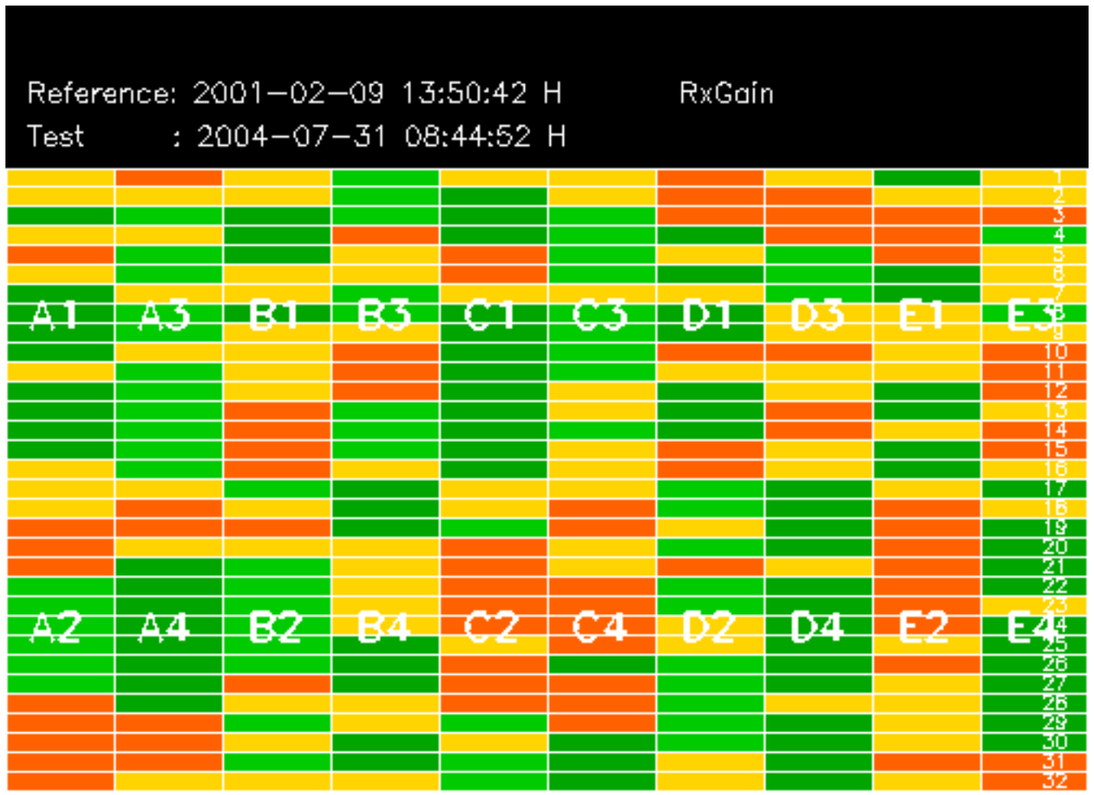

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.942651 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −28.594909 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −29.298912 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
MSM data not available at the moment due to sistem problems.

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-07-31 08:44:52 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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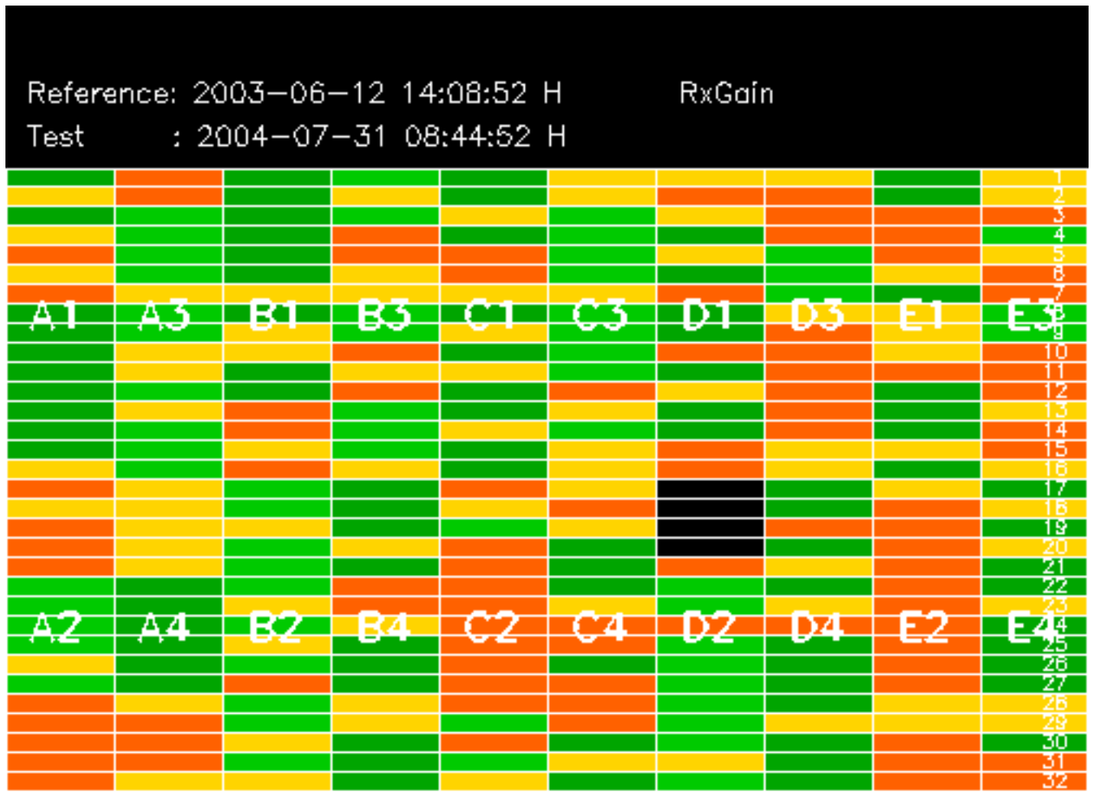
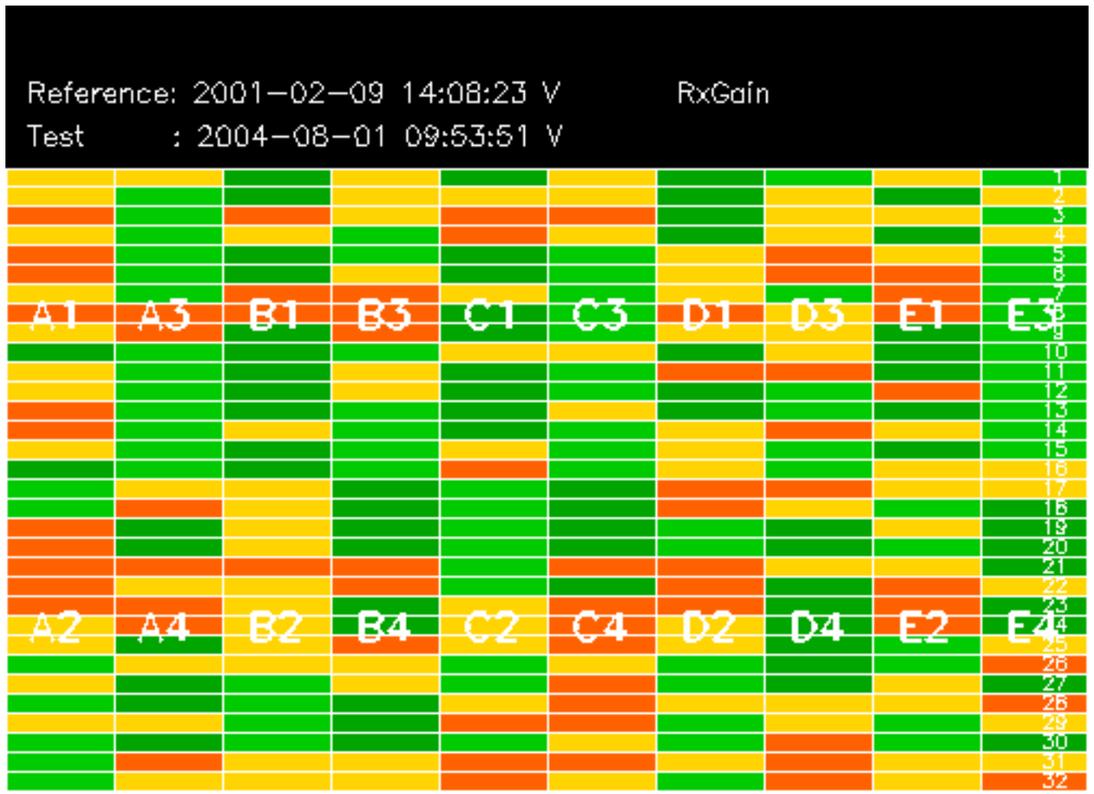

Reference: 2003-06-12 14:08:52 H
Test : 2004-07-31 08:44:52 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-08-01 09:53:51 V
RxGain
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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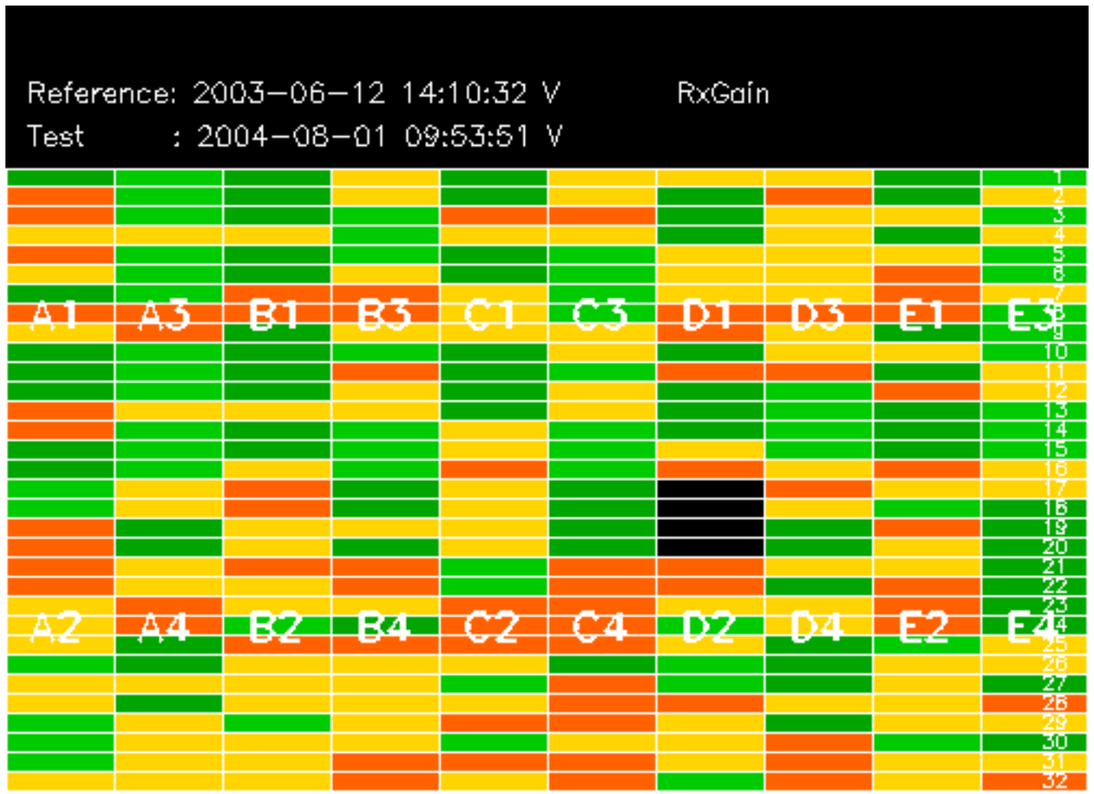
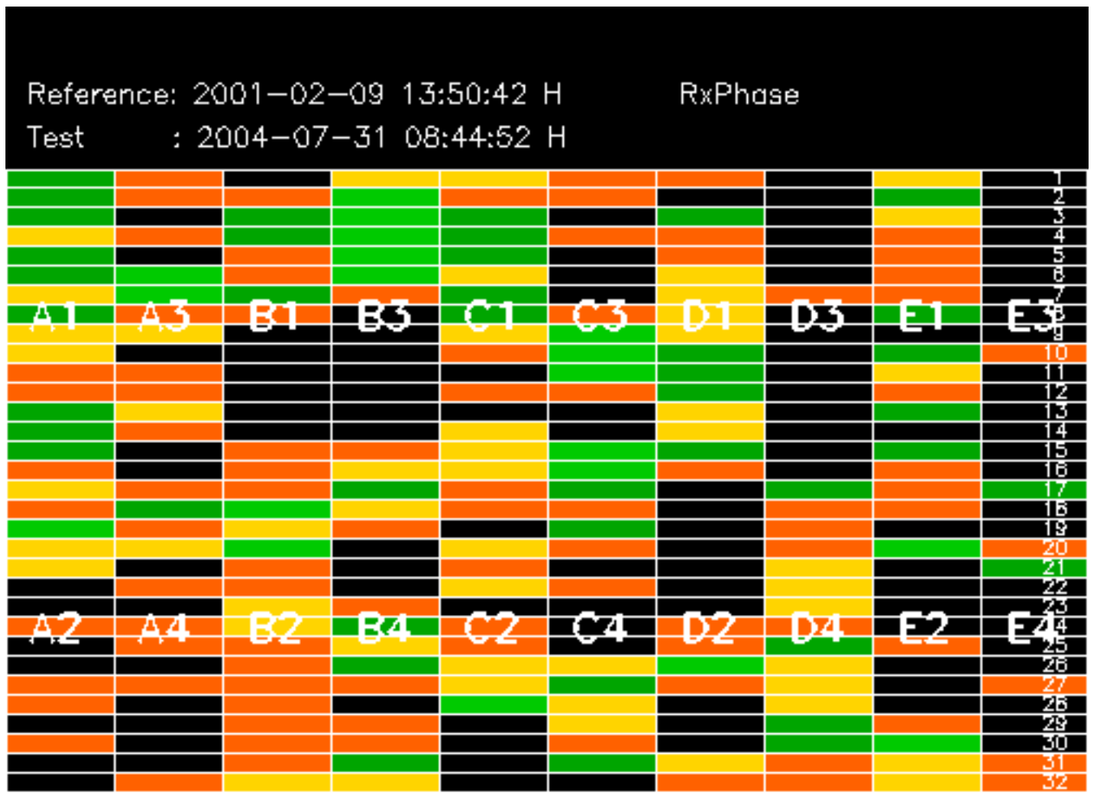

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-01 09:53:51 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-07-31 08:44:52 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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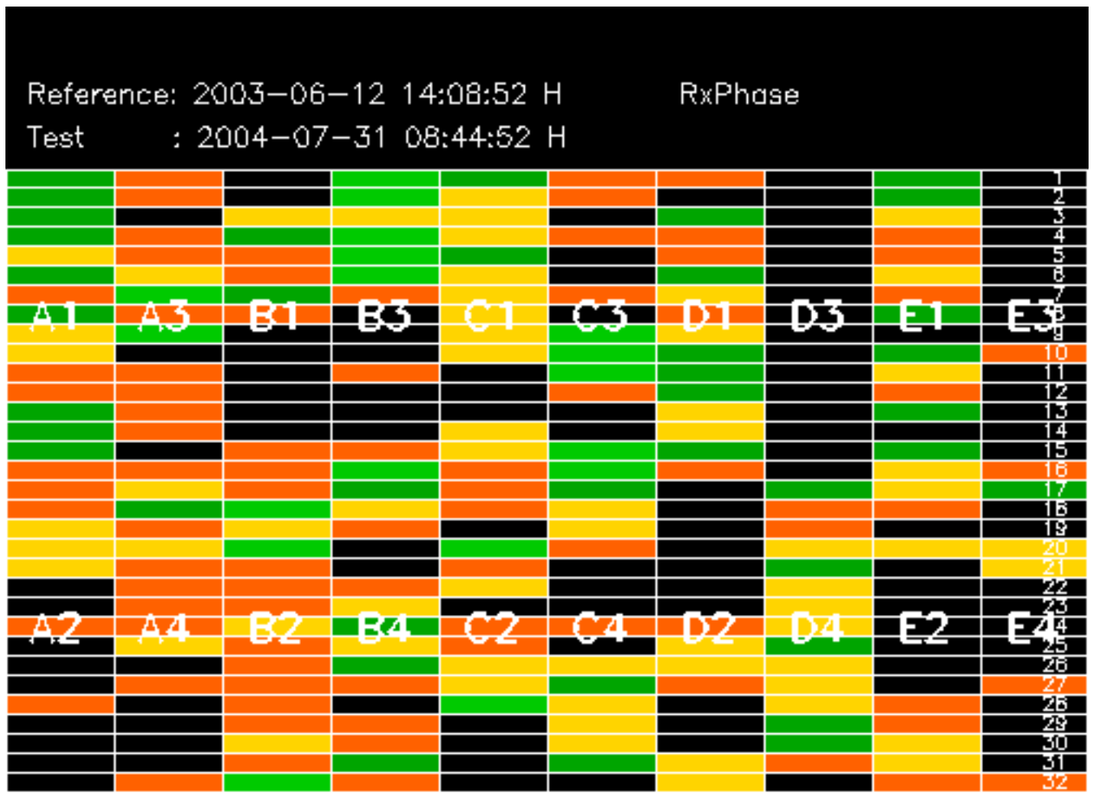
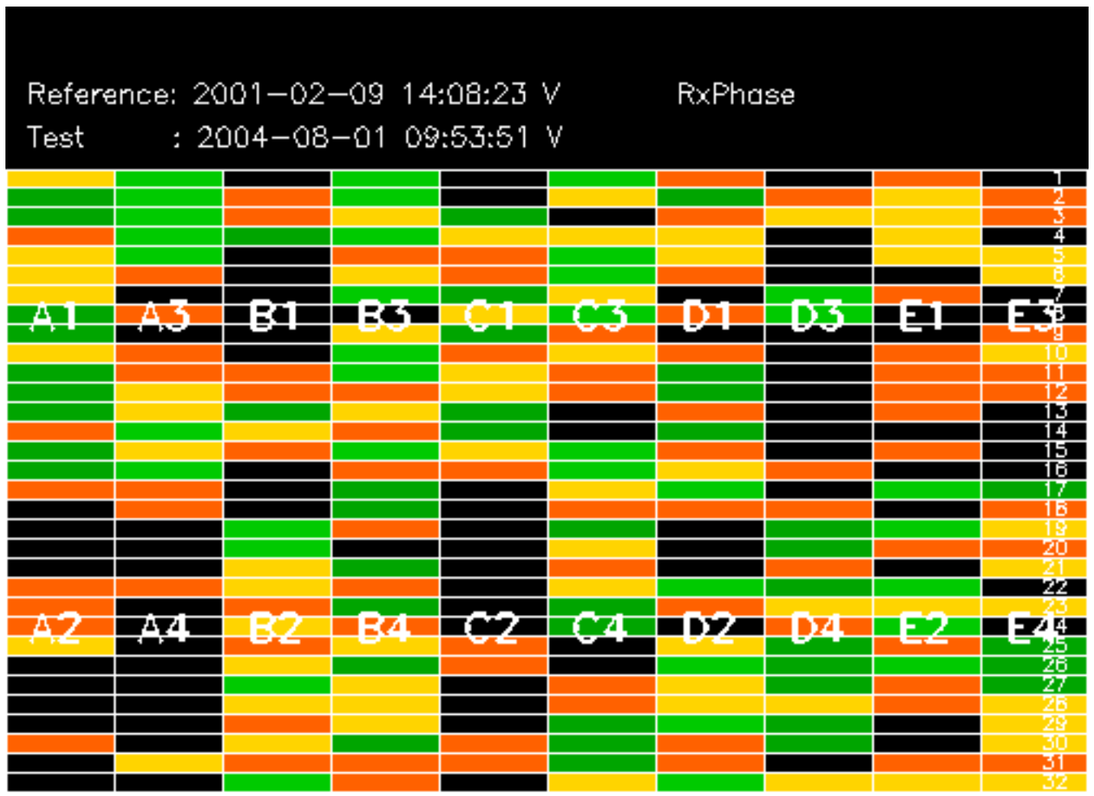
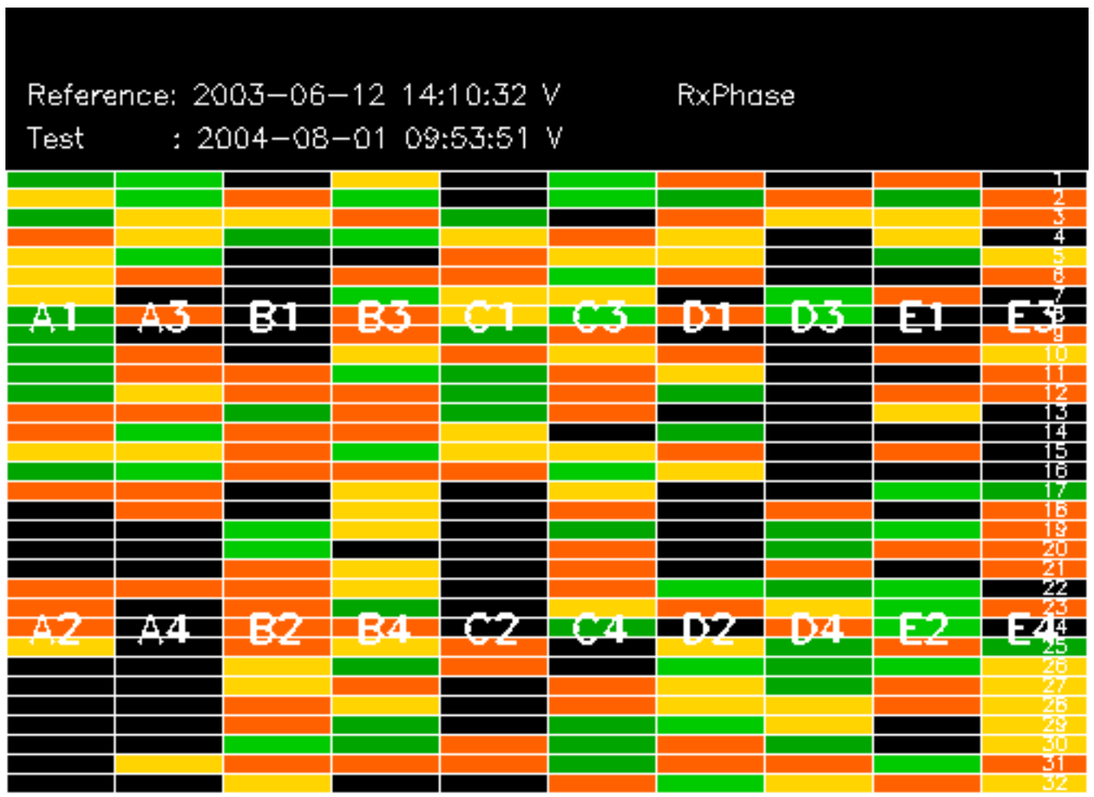
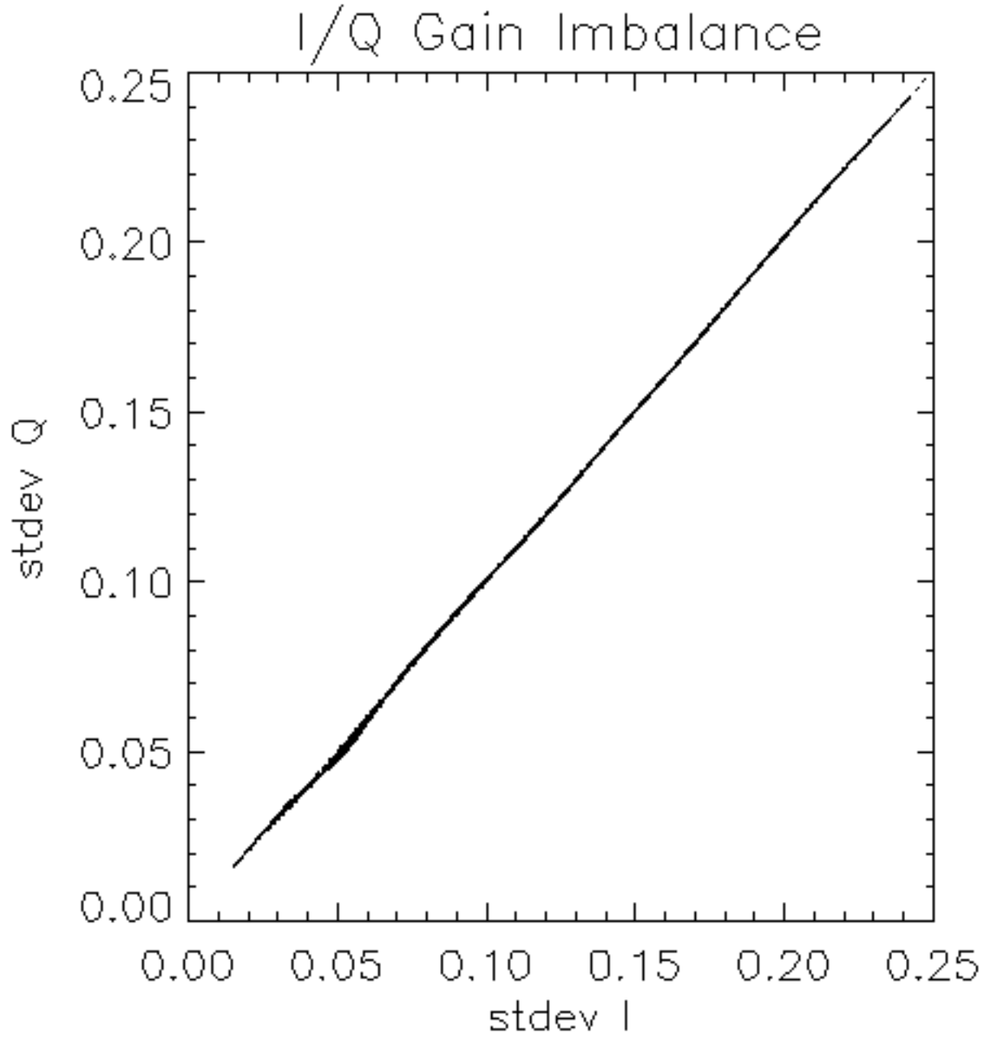
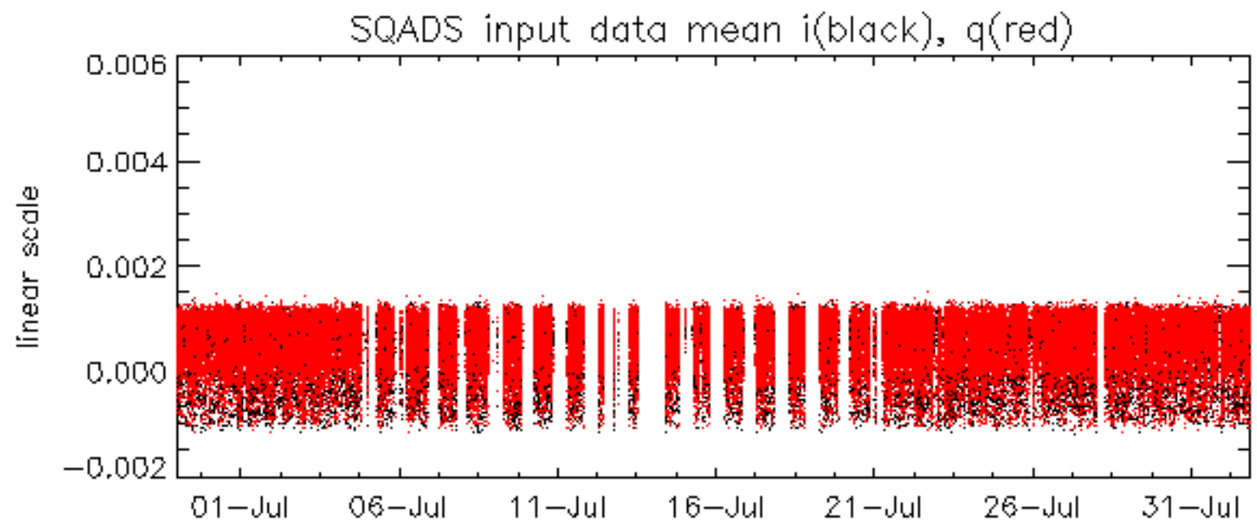
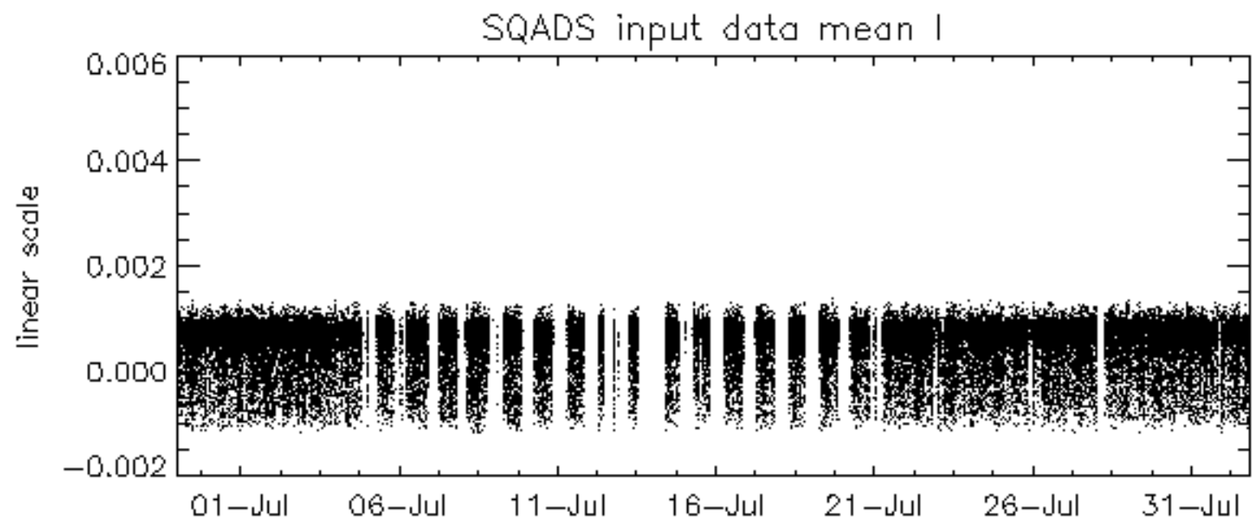

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

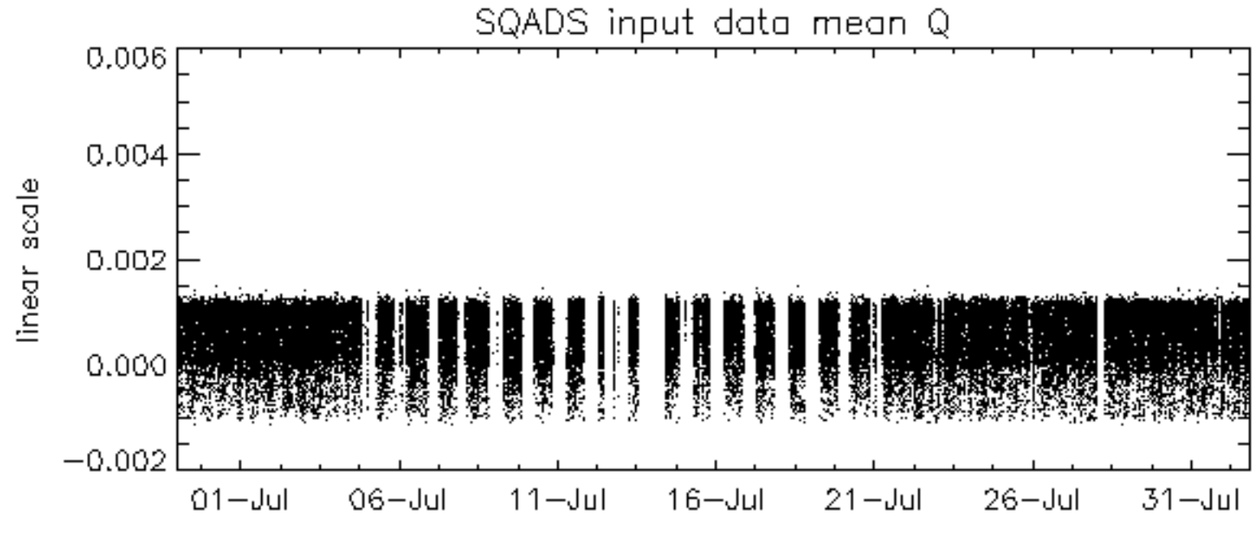

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2004-08-01 09:53:51 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

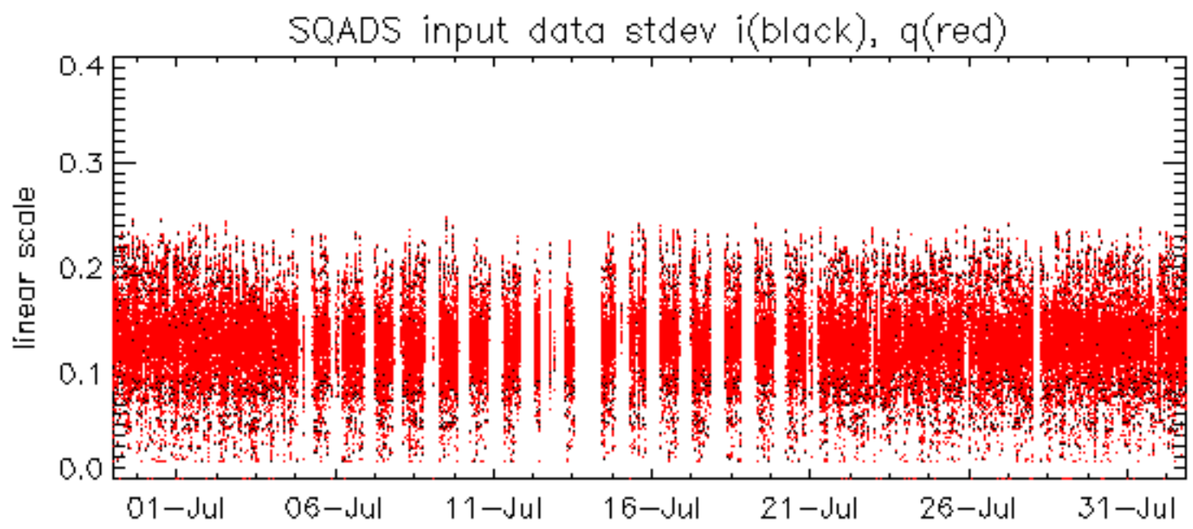

Reference: 2003-06-12 14:10:32 V
Test : 2004-08-01 09:53:51 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

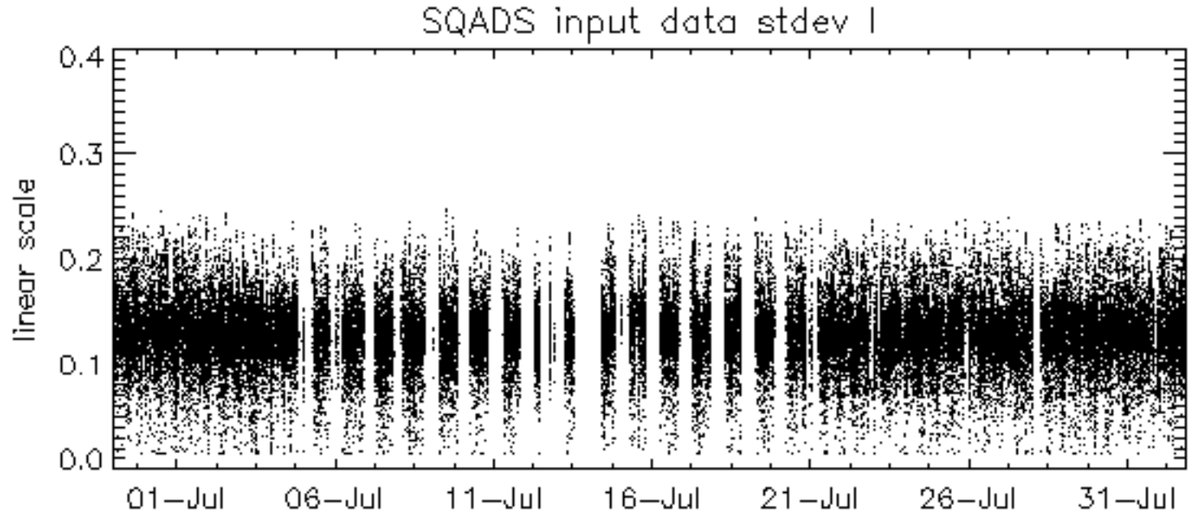

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

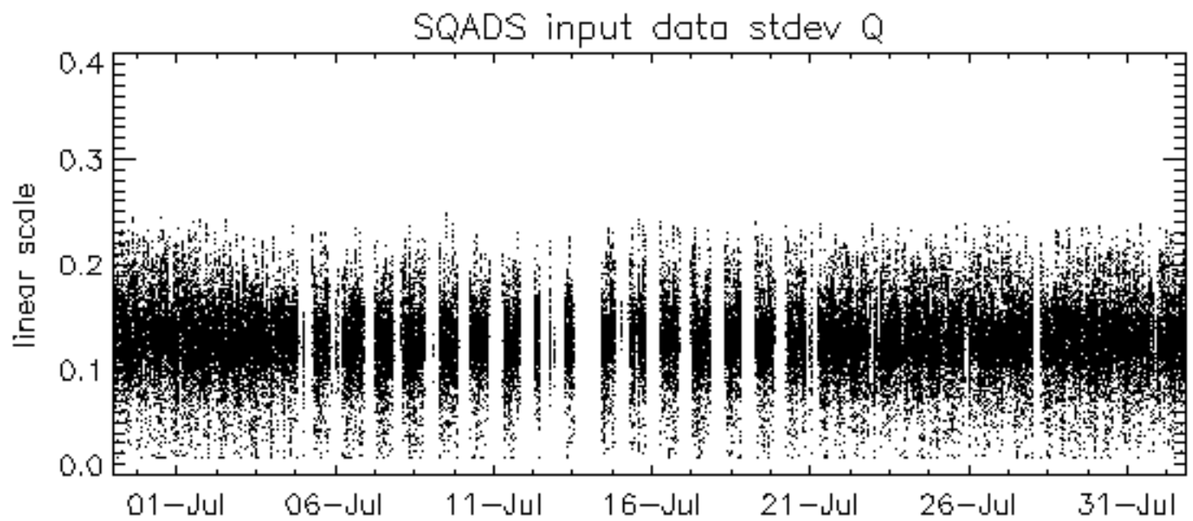

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul

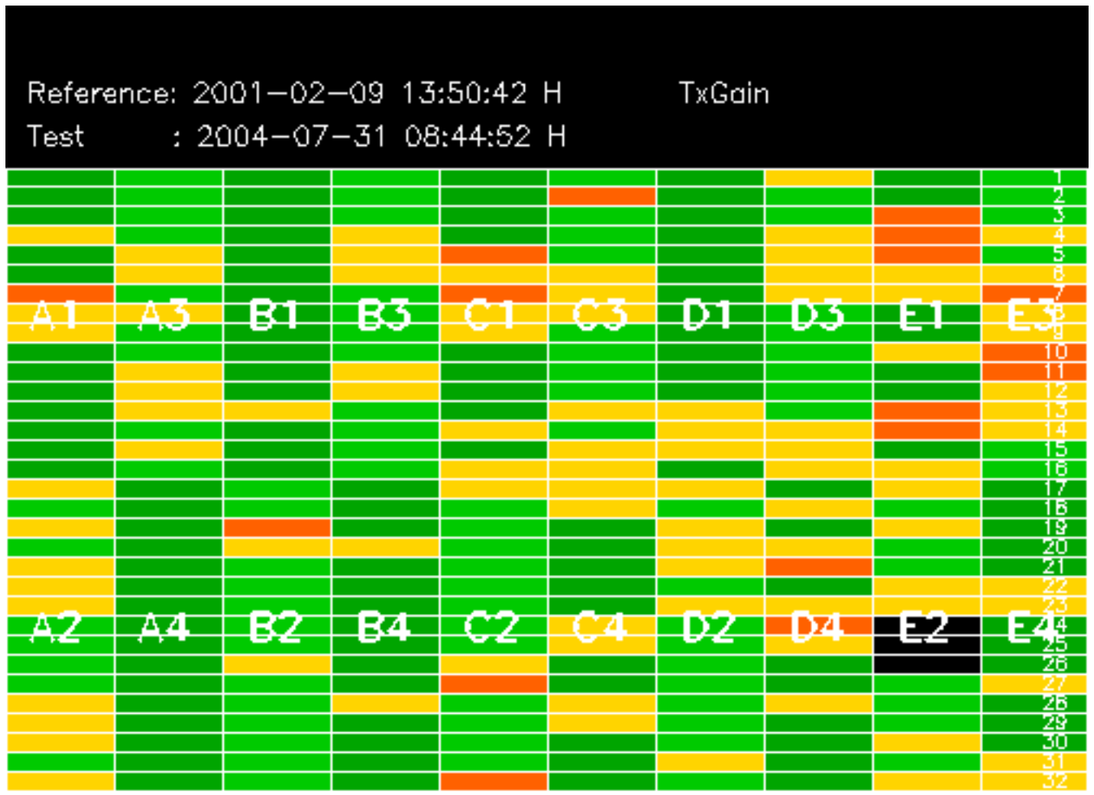

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul

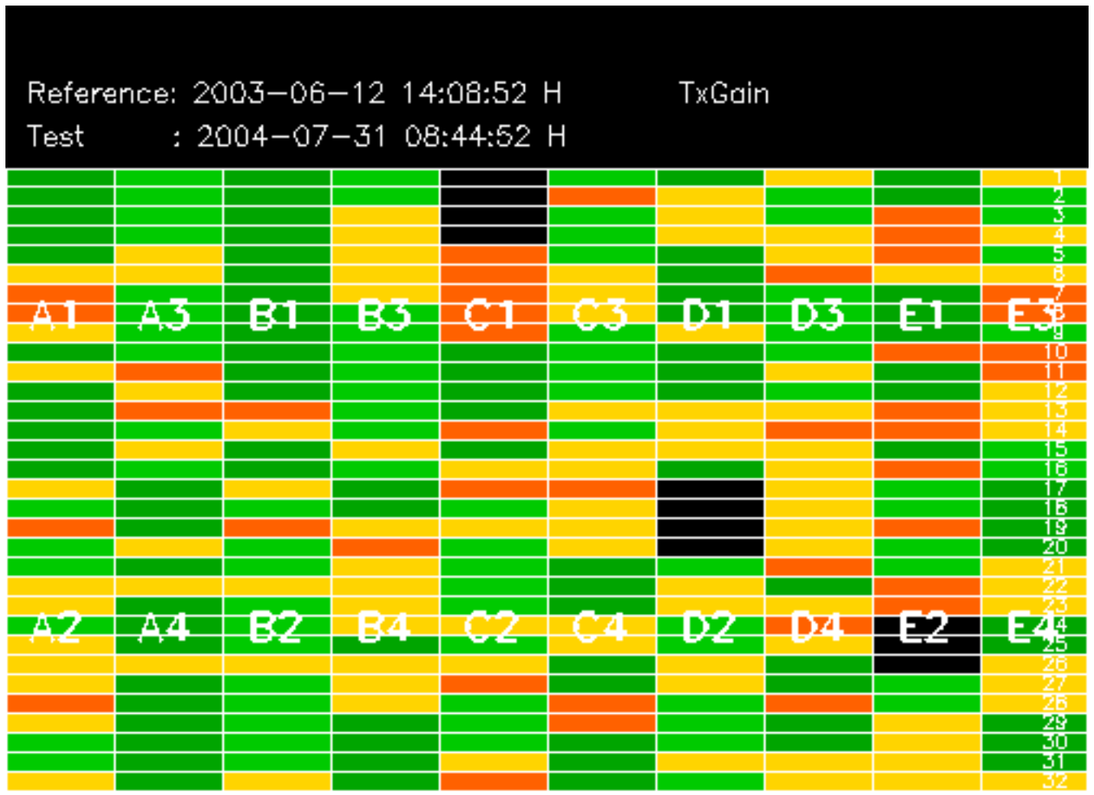

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
31−Jul

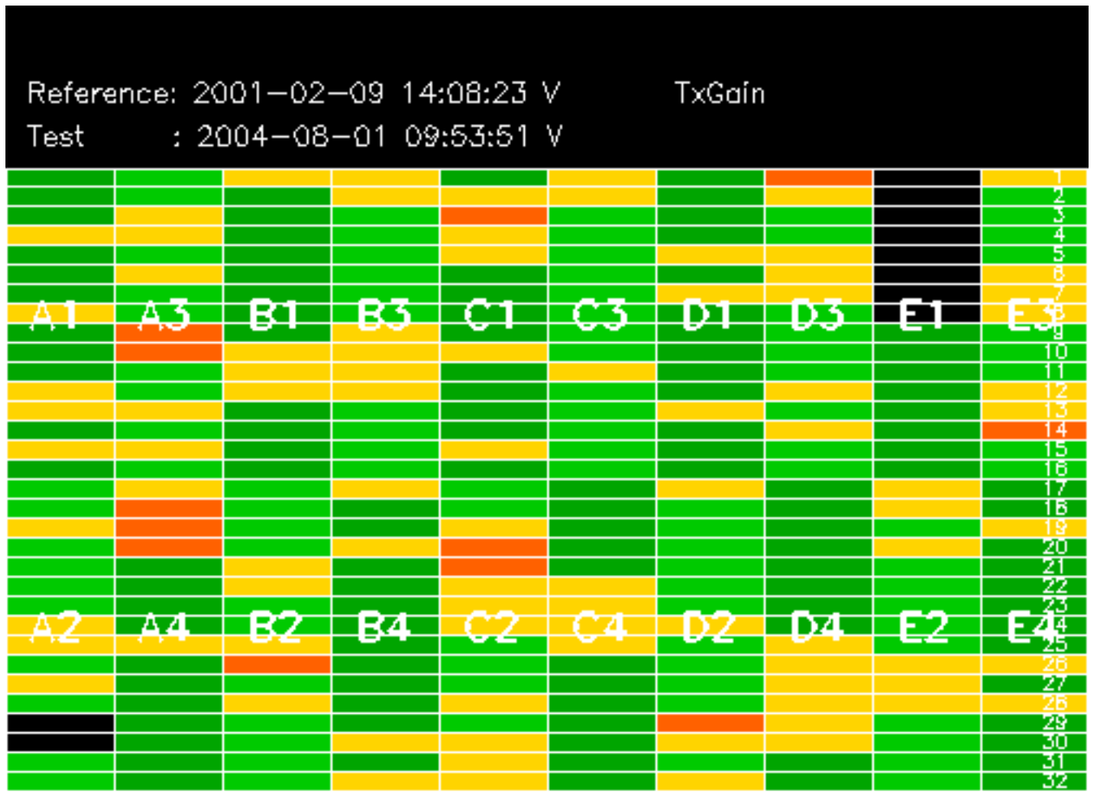

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul
31–Jul


Reference: 2001-02-09 13:50:42 H
Test : 2004-07-31 08:44:52 H
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 14:08:52 H
Test : 2004-07-31 08:44:52 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 : 2004-08-01 09:53:51 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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8
9
10
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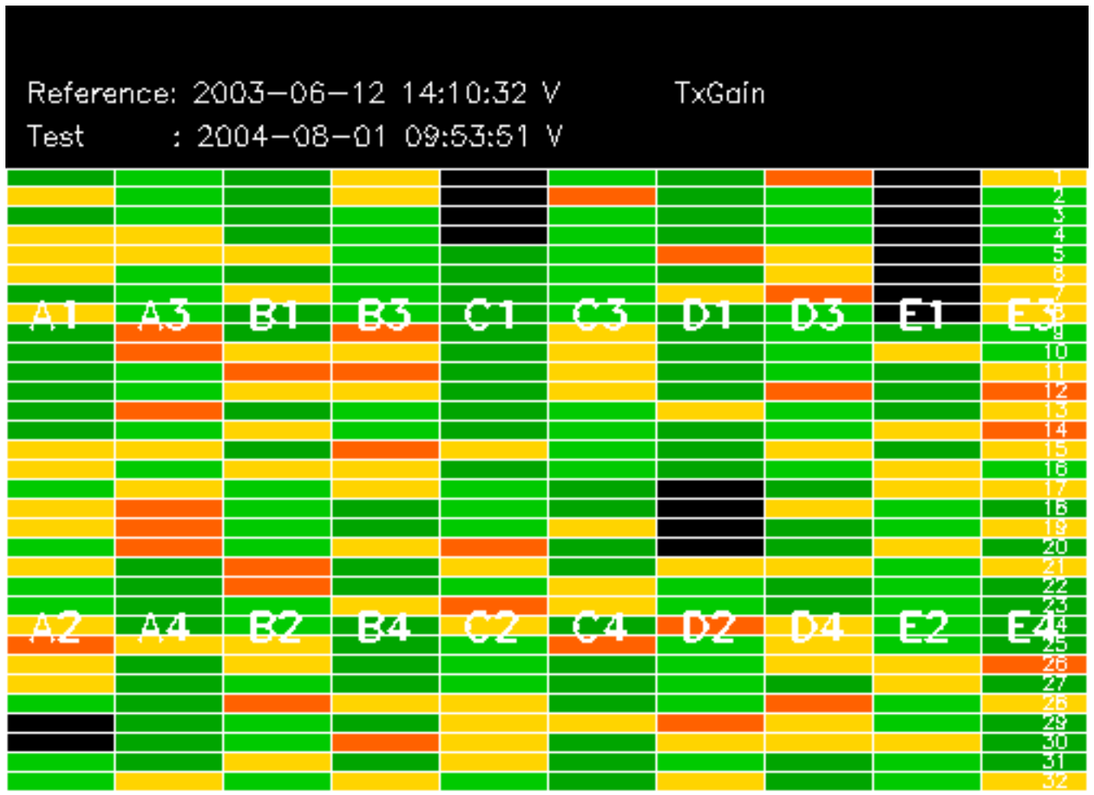
Reference: 2003-06-12 14:10:32 V
Test : 2004-08-01 09:53:51 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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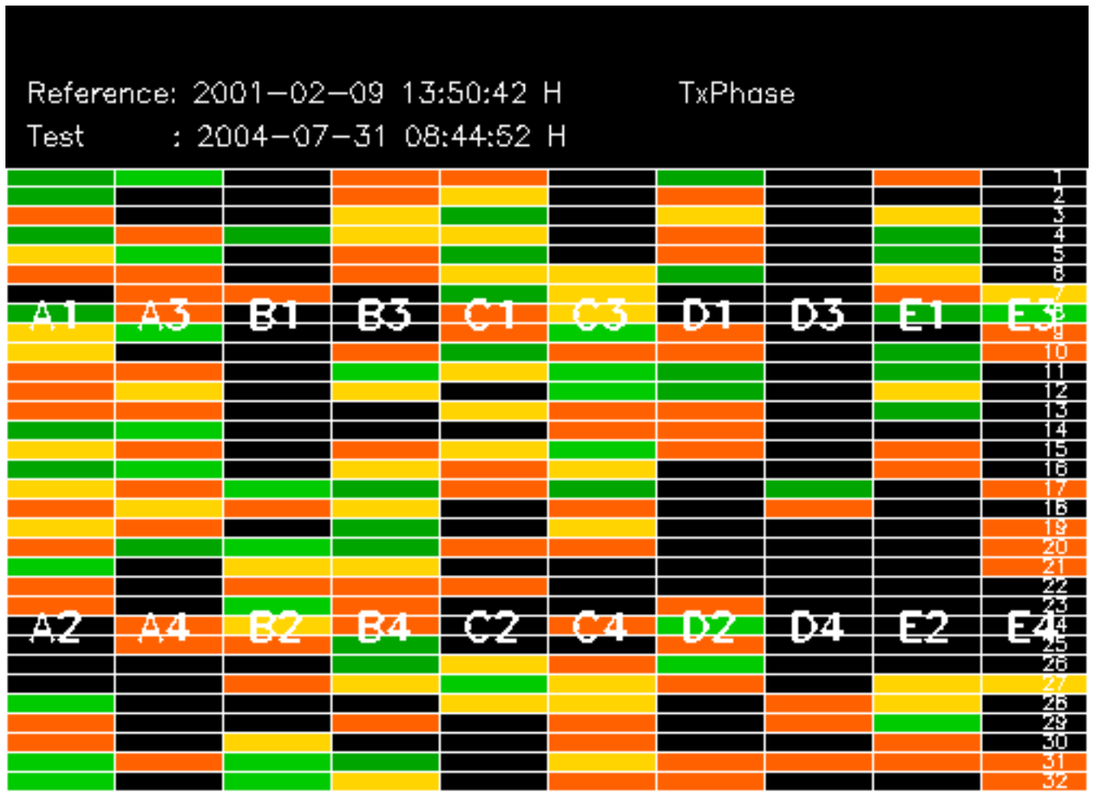
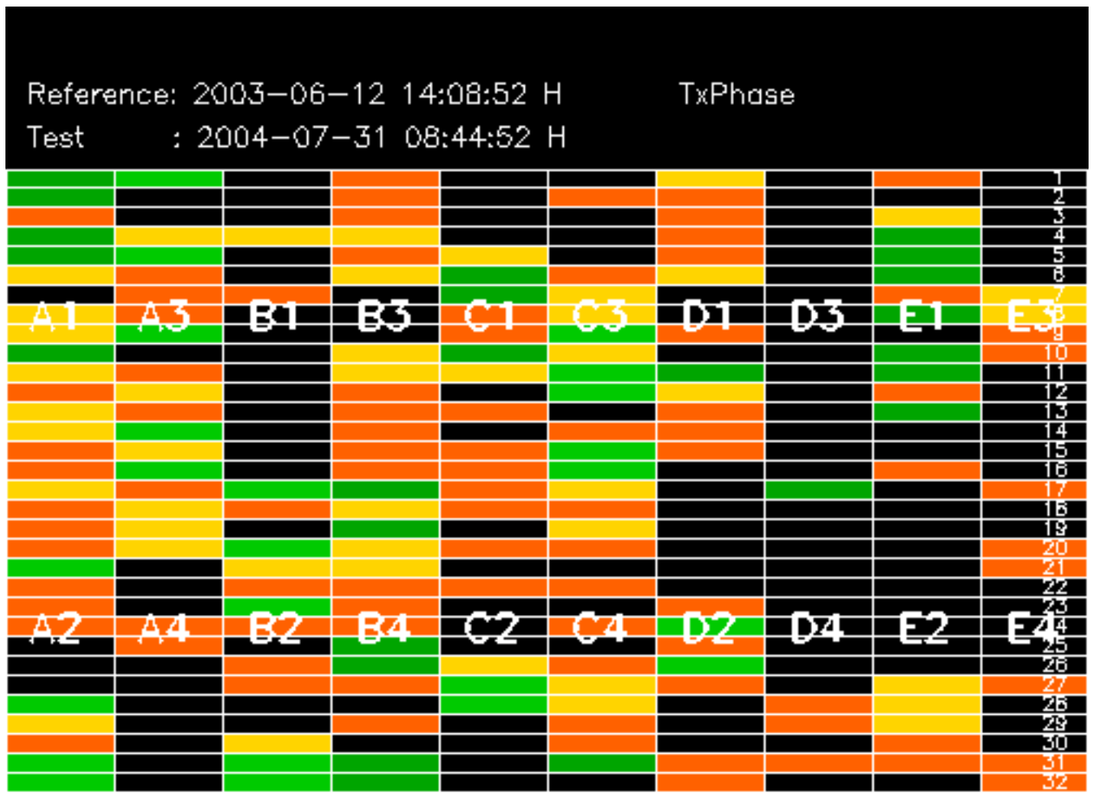

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-07-31 08:44:52 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-07-31 08:44:52 H
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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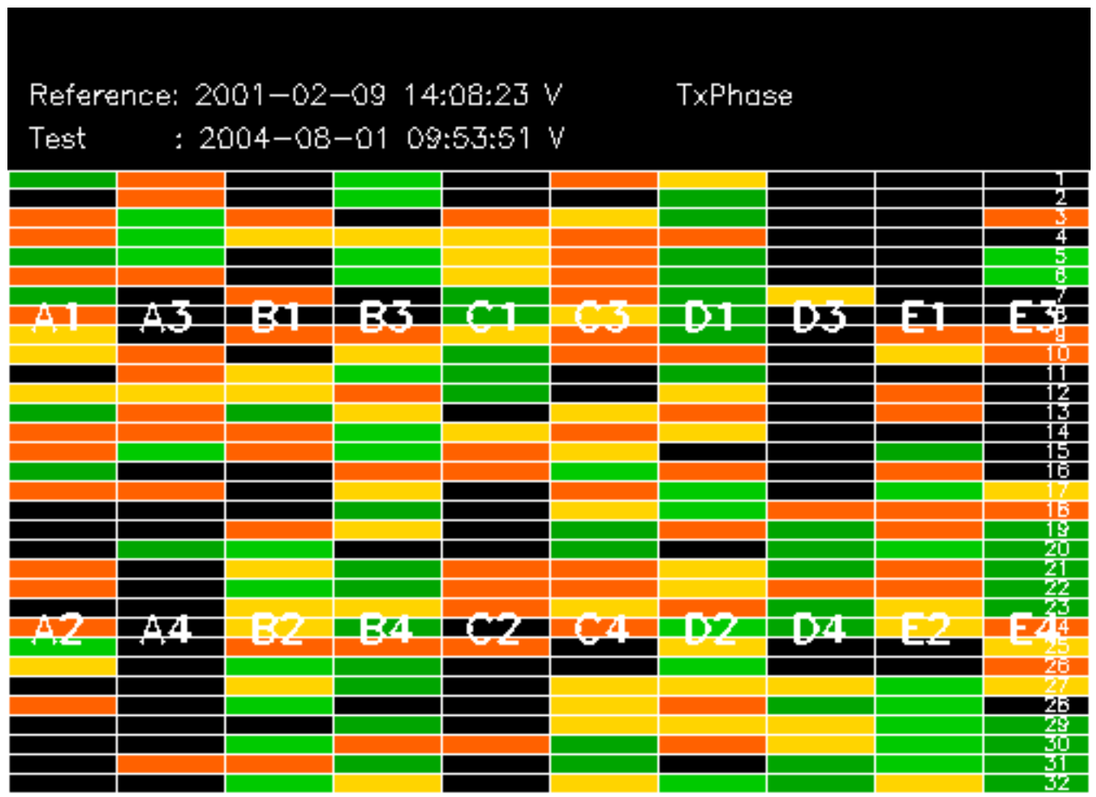
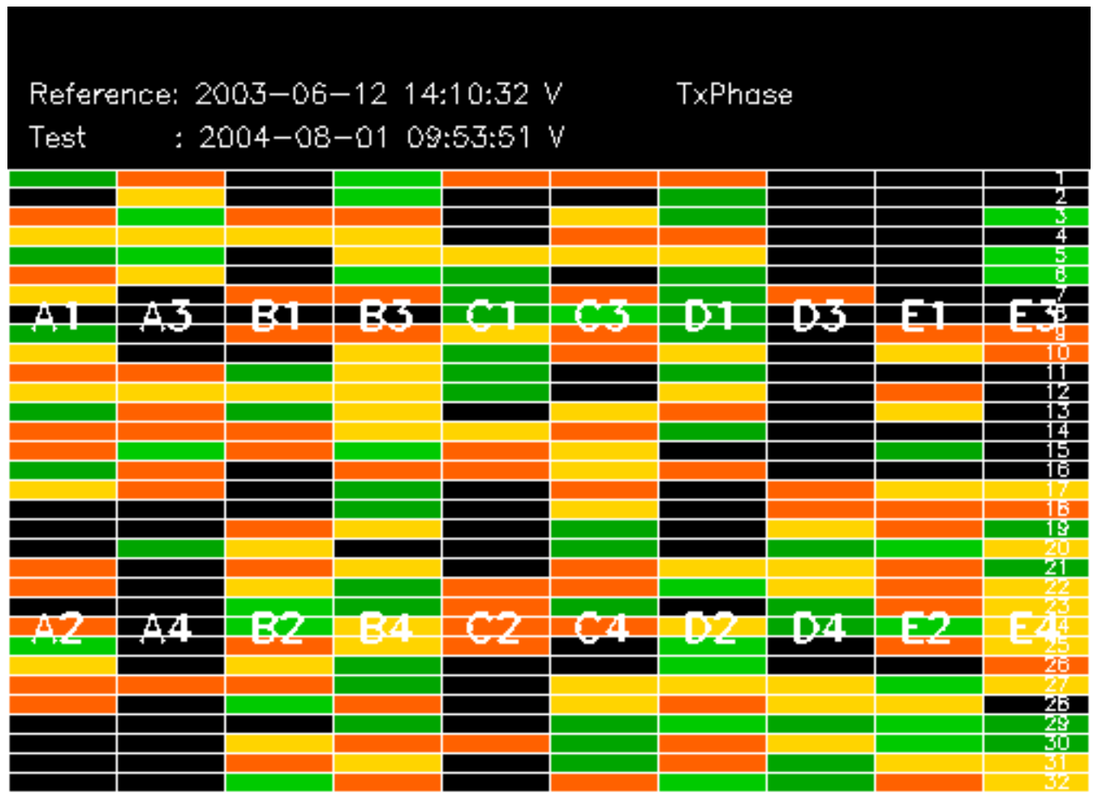

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-08-01 09:53:51 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
TxPhase
Test : 2004-08-01 09:53:51 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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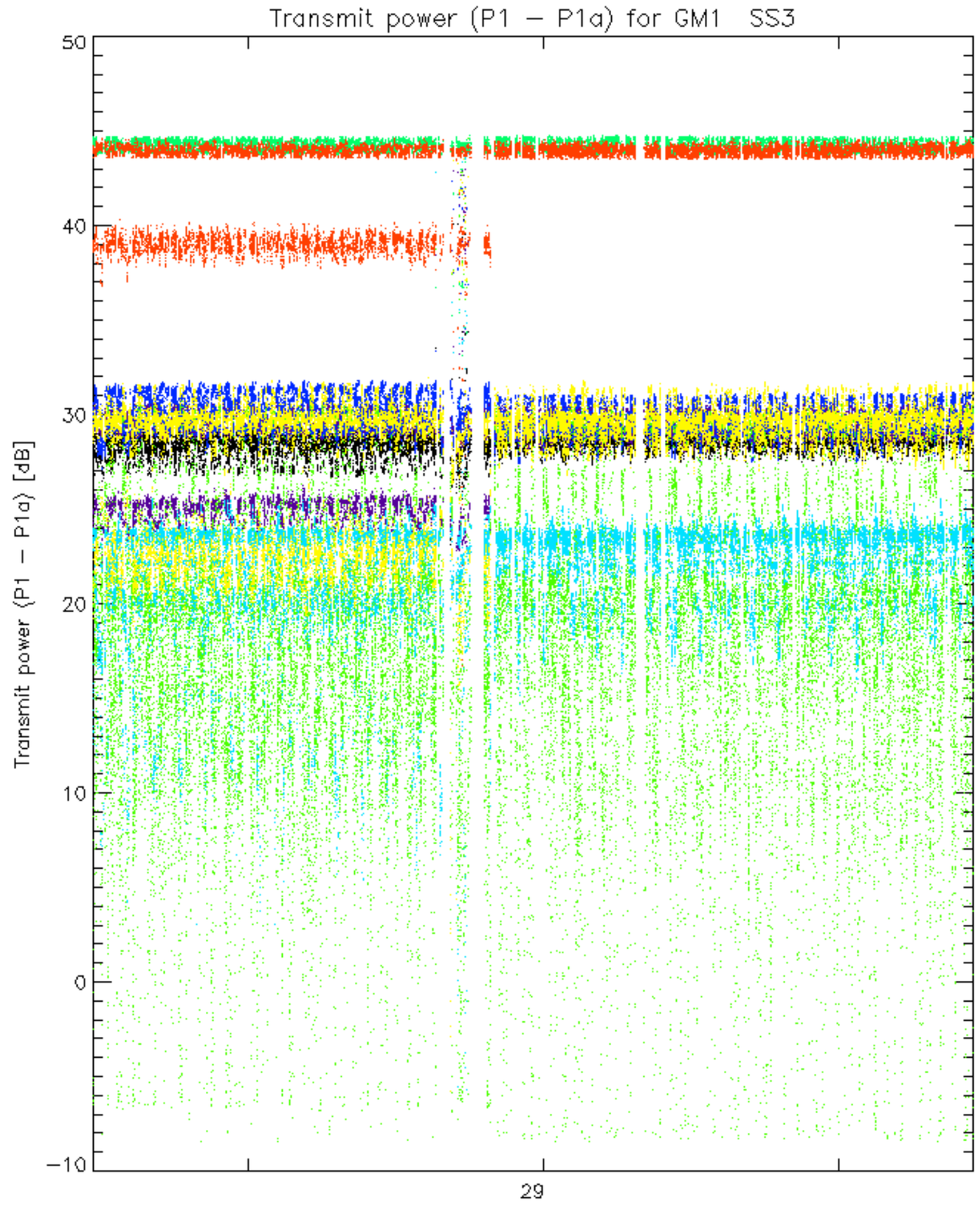
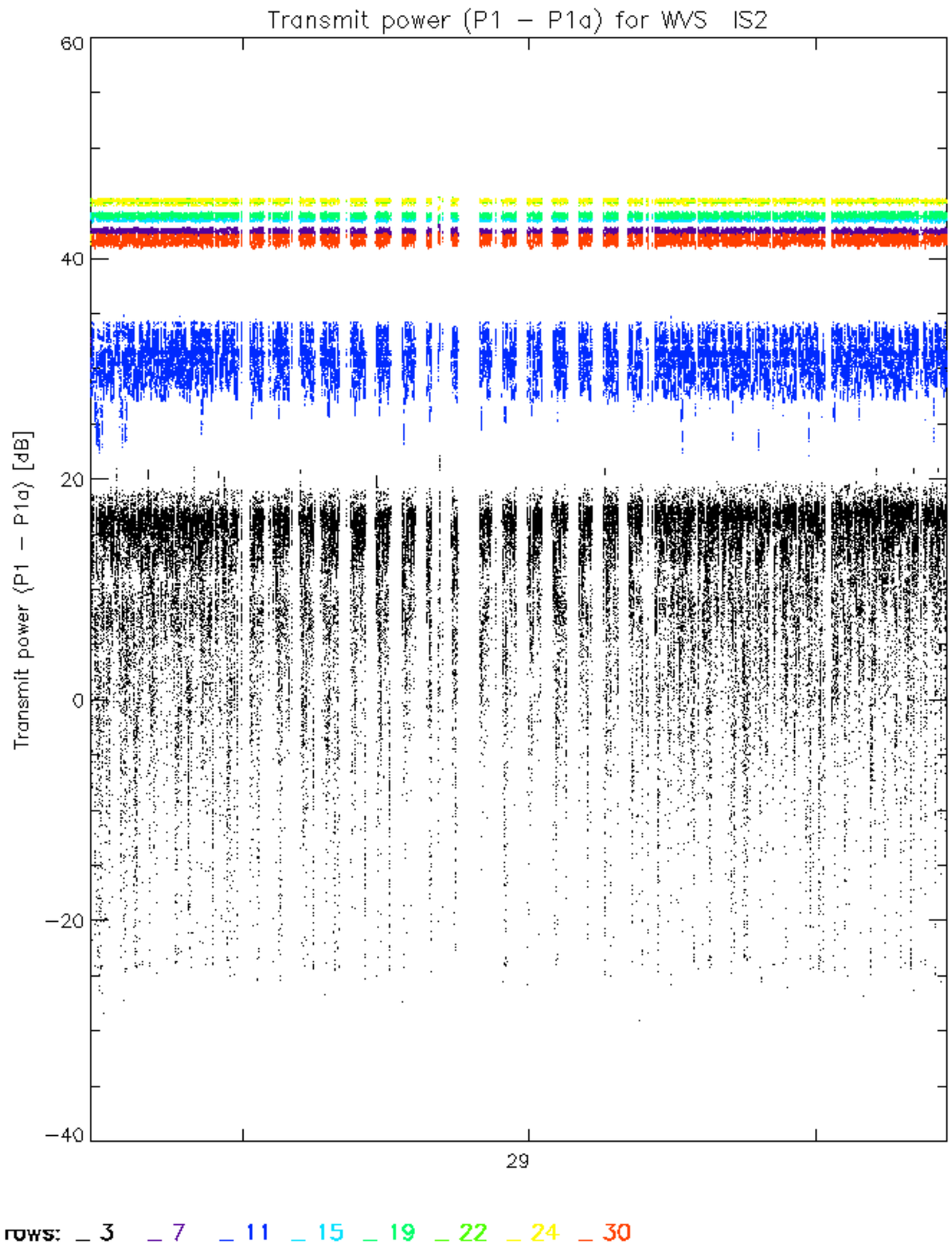

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
29
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power ⟨P1 – P1a⟩ [dB]
29
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.