PRELIMINARY REPORT OF 041125

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Thu Nov 25 10:52:59 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

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

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 to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

Polarisation	Start Time
V	20041124 043738
H	20041123 050915

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	-3.470927	0.006538	0.032654
7	P1	-3.314994	0.024413	0.247306
11	P1	-4.603946	0.017058	-0.003121
15	P1	-5.660783	0.028990	0.031498
19	P1	-3.603772	0.005349	-0.050615
22	P1	-4.582492	0.015423	-0.003893
26	P1	-4.870419	0.064394	-0.056472
30	P1	-7.075204	0.014493	-0.025692

3	P1	-16.015230	0.107105	0.101790
7	P1	-14.294689	0.373265	-1.292625
11	P1	-20.658421	0.208097	-0.193152
15	P1	-11.669024	0.036868	0.080046
19	P1	-14.067762	0.028078	-0.078037
22	P1	-16.207983	0.410724	0.107936
26	P1	-17.695333	0.747012	-0.051057
30	P1	-17.968994	0.276432	0.114343

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.375536	0.088923	0.002730
7	P2	-22.615173	0.138245	-0.021705
11	P2	-15.059405	0.131627	0.083728
15	P2	-7.152688	0.110233	-0.029418
19	P2	-9.714015	0.135278	0.002644
22	P2	-17.241657	0.104101	0.060395
26	P2	-16.509981	0.113325	-0.004166
30	P2	-19.049259	0.084298	0.028634

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.203805	0.006430	-0.013515
7	P3	-8.203805	0.006430	-0.013512
11	P3	-8.203806	0.006430	-0.013519
15	P3	-8.203809	0.006430	-0.013522
19	P3	-8.203812	0.006430	-0.013519
22	P3	-8.203813	0.006430	-0.013522
26	P3	-8.203815	0.006430	-0.013522
30	P3	-8.203966	0.006434	-0.013643

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	-2.804972	0.010970	-0.002441
7	P1	-2.951945	0.022162	-0.017449
11	P1	-3.902218	0.022781	-0.014893
15	P1	-3.489670	0.027511	0.013147
19	P1	-3.589685	0.012086	-0.003157
22	P1	-5.613847	0.067078	0.054882
26	P1	-6.422218	0.086108	-0.119665
30	P1	-6.267606	0.040638	-0.025386
3	P1	-10.599030	0.051958	0.008905
7	P1	-10.078660	0.133365	-0.092179
11	P1	-12.371190	0.115699	-0.062770
15	P1	-11.716537	0.063312	-0.069134
19	P1	-15.618141	0.052727	-0.017080
22	P1	-23.959354	2.022408	-0.268781
26	P1	-15.112599	0.470013	-0.085518
30	P1	-20.252010	0.999370	0.061650

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.061396	0.040357	0.012669
7	P2	-22.675690	0.031165	-0.007635
11	P2	-10.850803	0.035750	0.075432
15	P2	-5.050056	0.028182	-0.043550
19	P2	-6.958216	0.035108	-0.048646
22	P2	-7.359946	0.029328	0.056439
26	P2	-23.942394	0.022438	-0.051896
30	P2	-22.090921	0.018877	0.009065

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

3	P3	-8.044334	0.003232	-0.009452
7	P3	-8.044301	0.003240	-0.009791
11	P3	-8.044338	0.003243	-0.009876
15	P3	-8.044207	0.003244	-0.009689
19	P3	-8.044354	0.003237	-0.010099
22	P3	-8.044366	0.003237	-0.009799
26	P3	-8.044337	0.003224	-0.009916
30	P3	-8.044289	0.003241	-0.009438

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	0.000458057
	stdev	2.27084e-07
MEAN Q	mean	0.000526431
	stdev	2.43110e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125968
	stdev	0.000967712
STDEV Q	mean	0.126192

stdev	0.000976171

5.3 - Gain imbalance I/Q

6 - Doppler Analysis

Preliminary report.The data is not yet controled

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

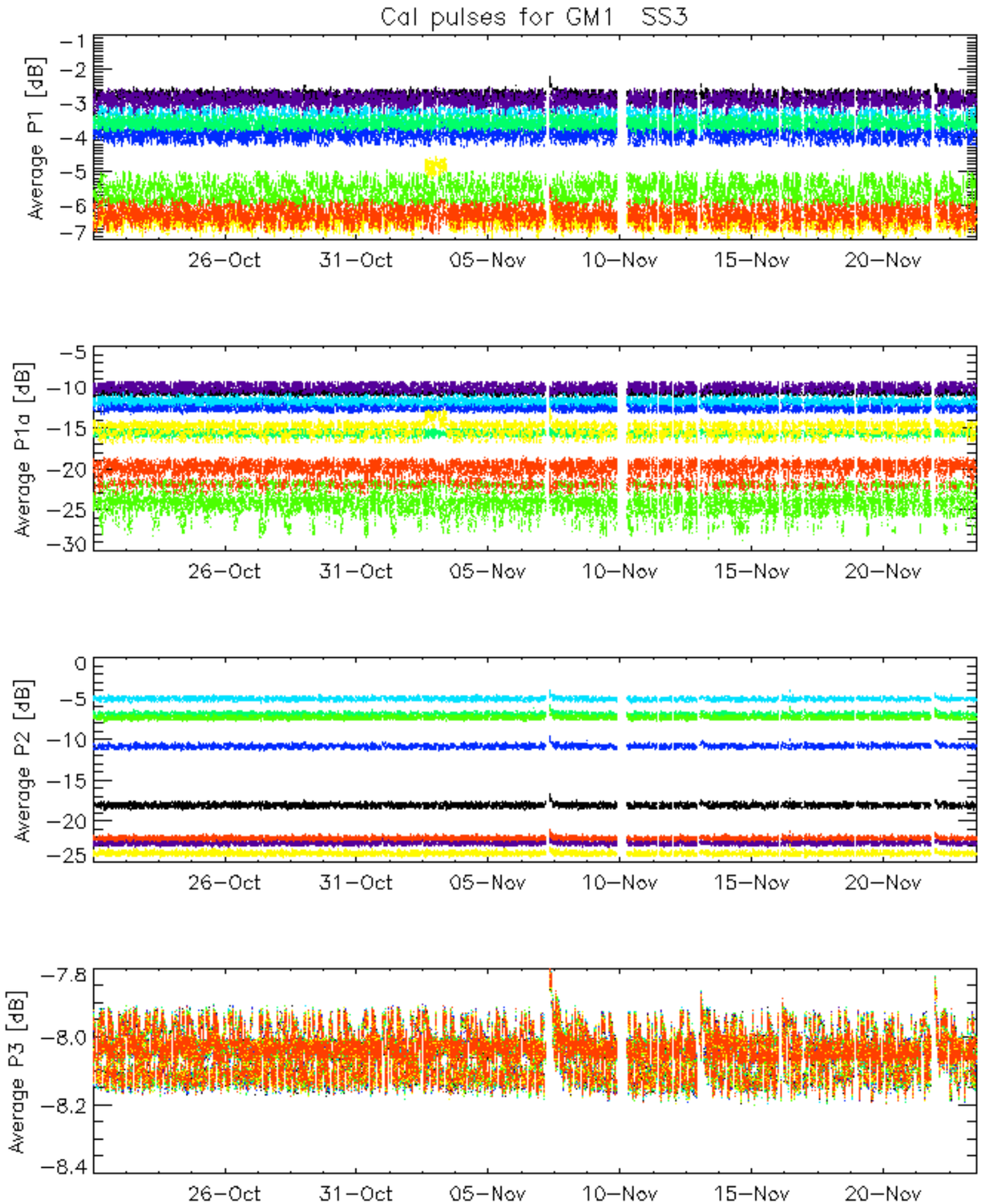
6.4 - Unbiased Doppler Error for GM1

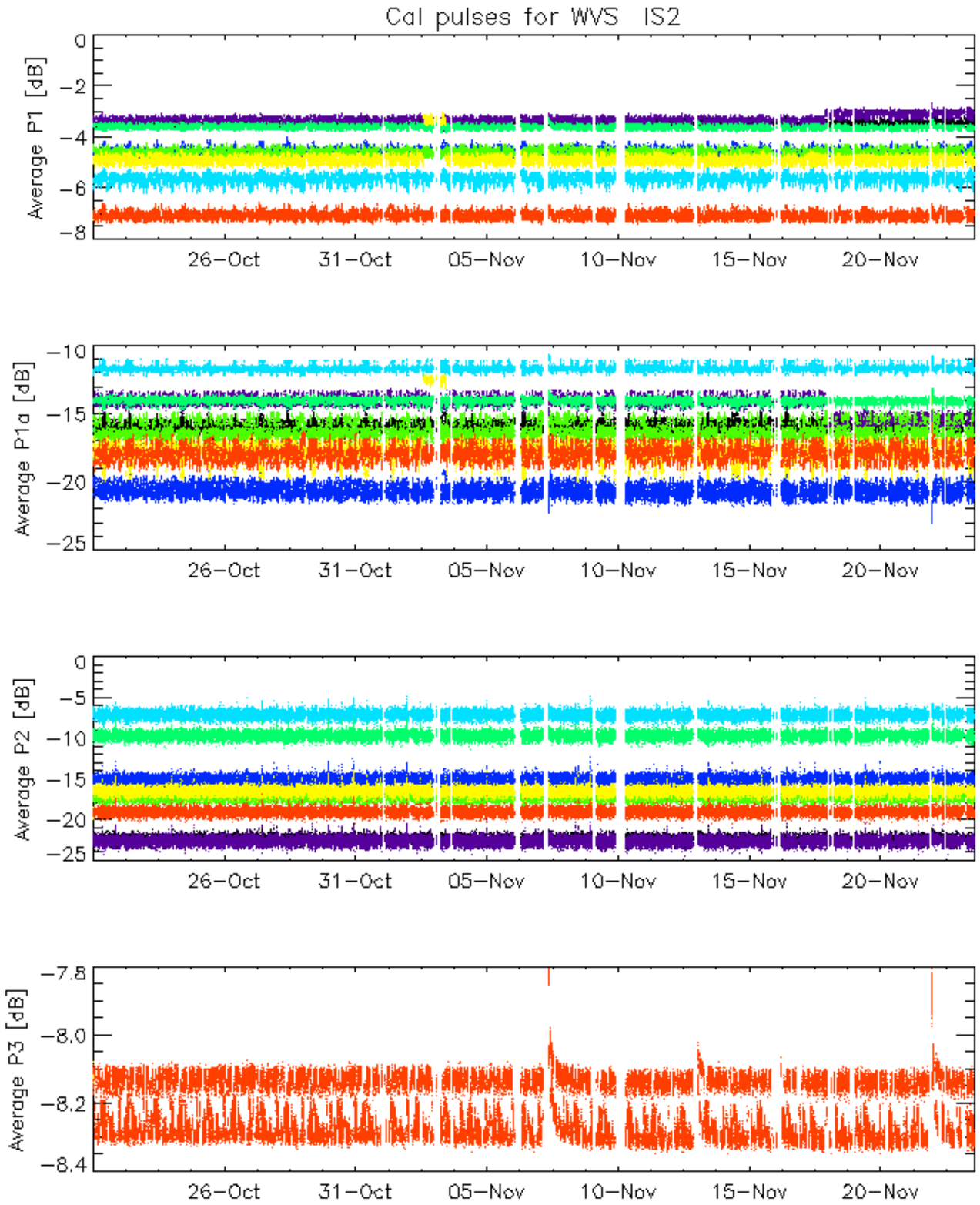
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

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]
−1
−2
−3
−4
−5
−6
−7
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
Average P1a [dB]
−5
−10
−15
−20
−25
−30
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

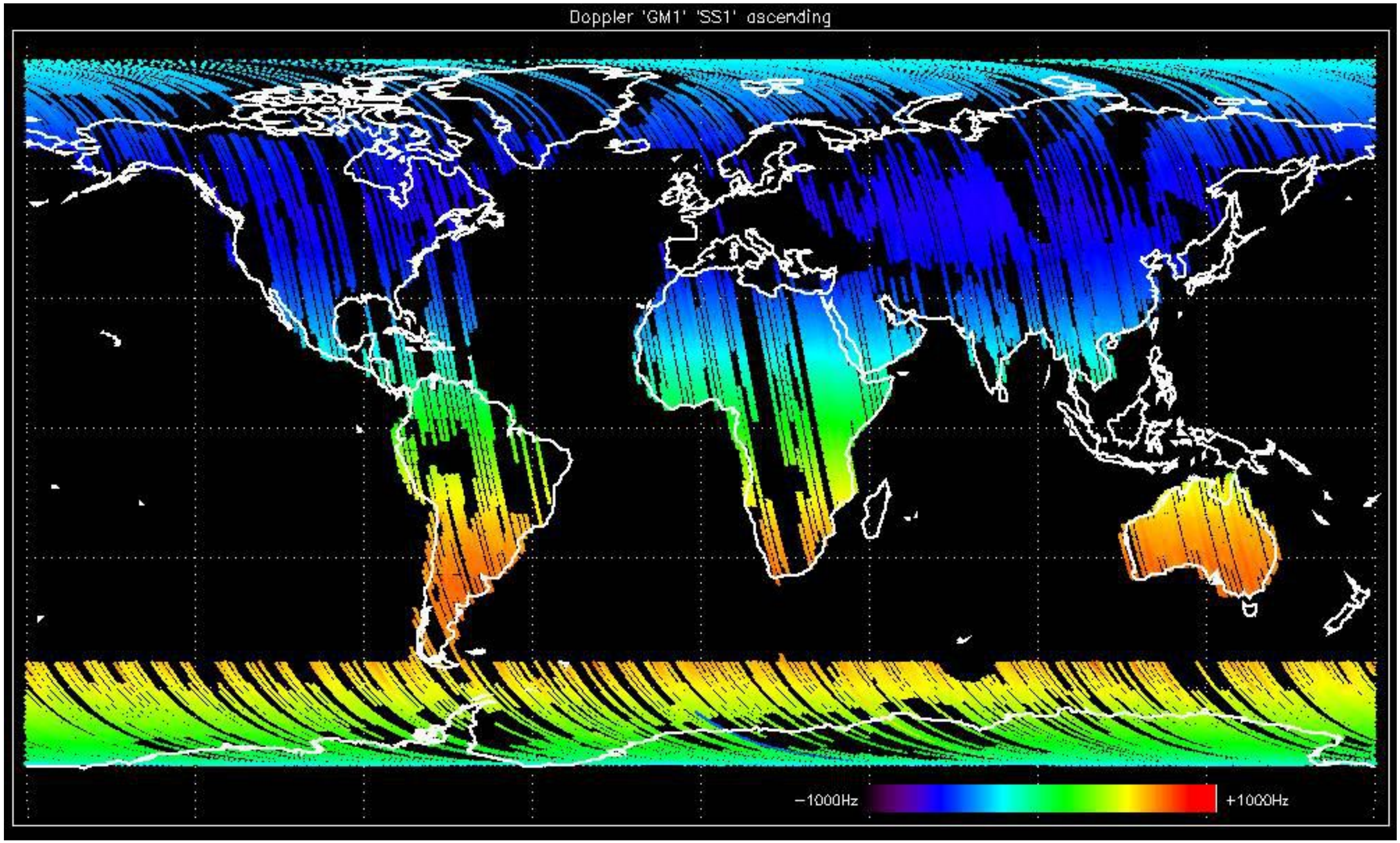

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov
Average P1a [dB]
−10
−15
−20
−25
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

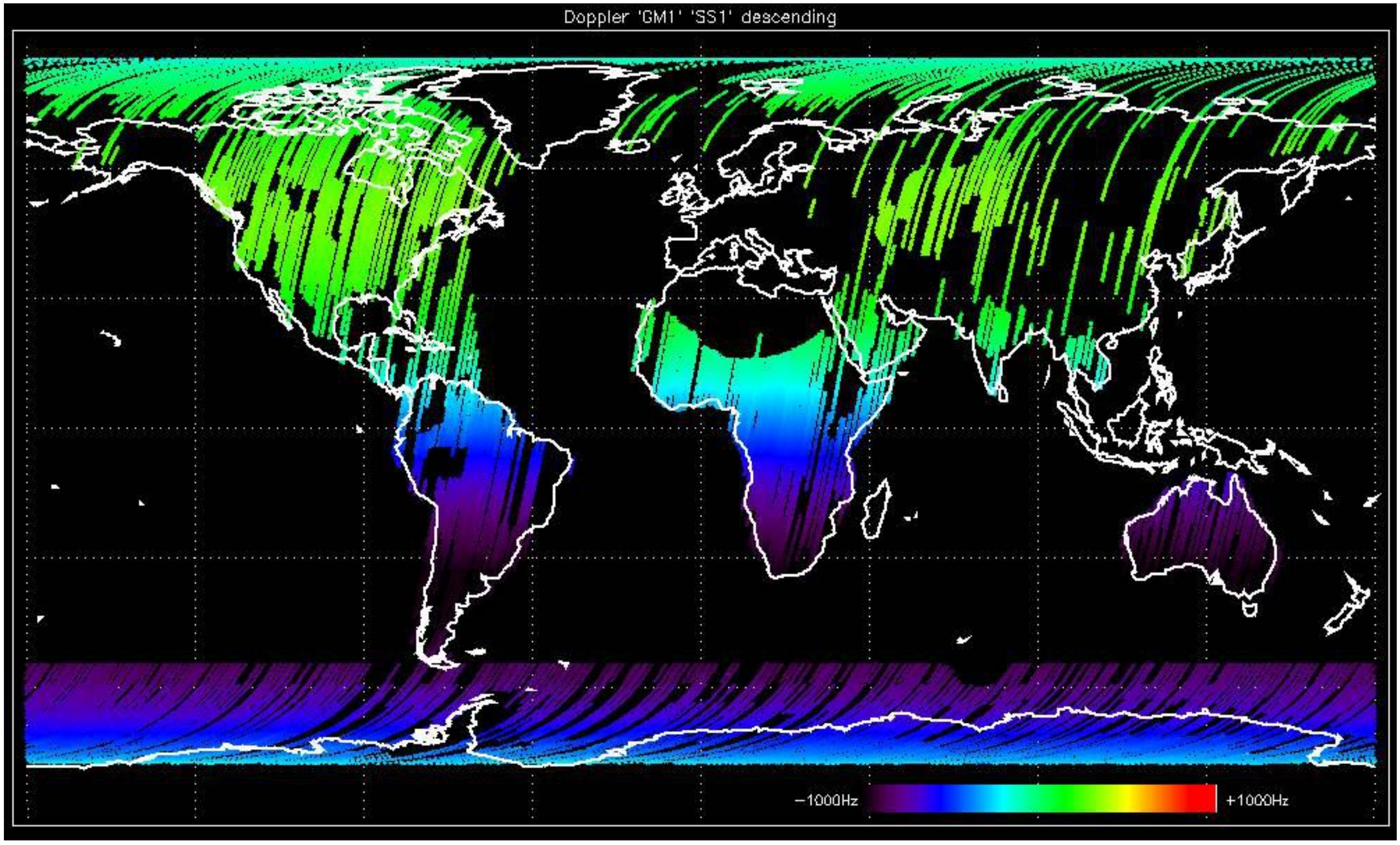
No anomalies observed on available browse products

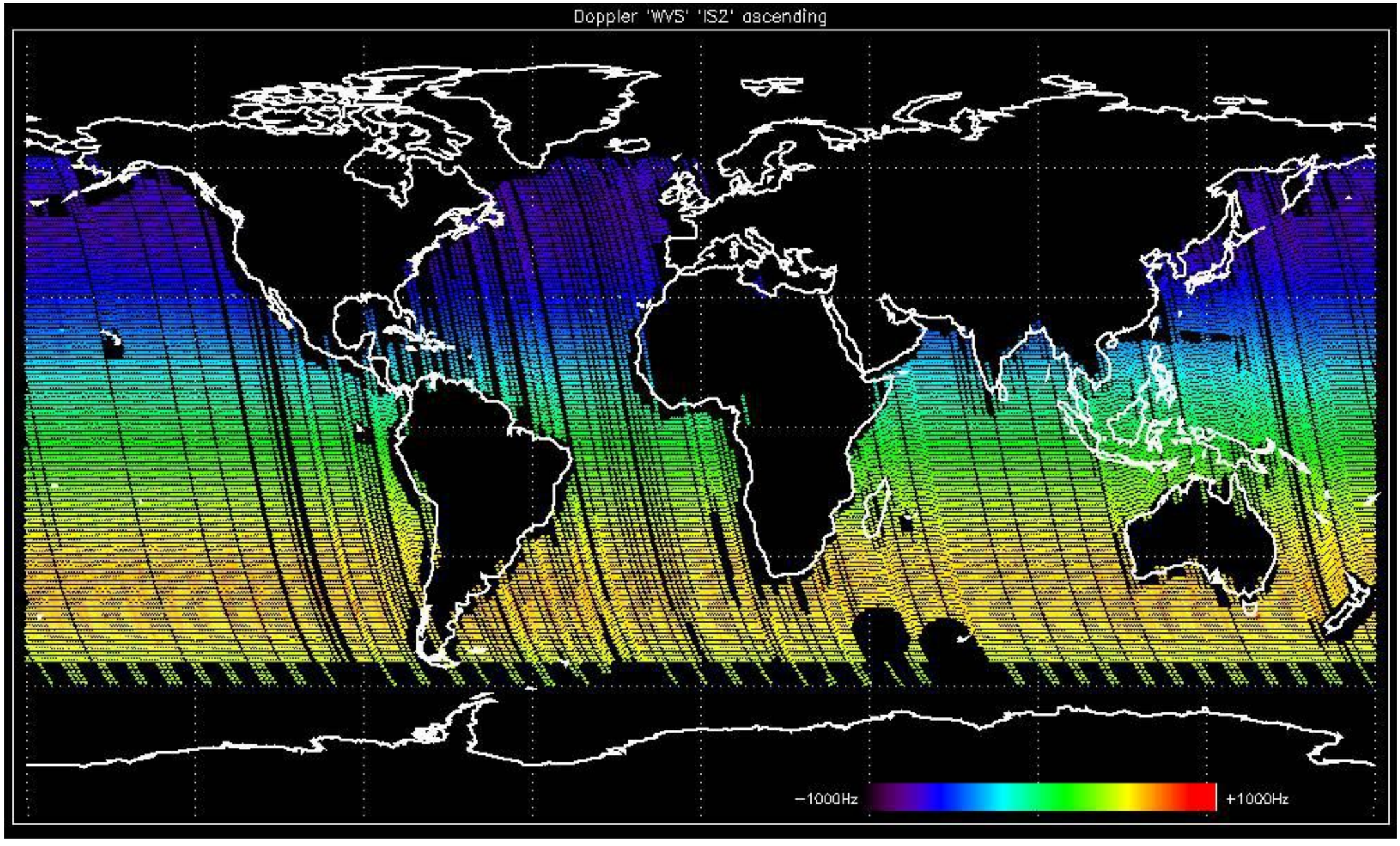
No anomalies observed.

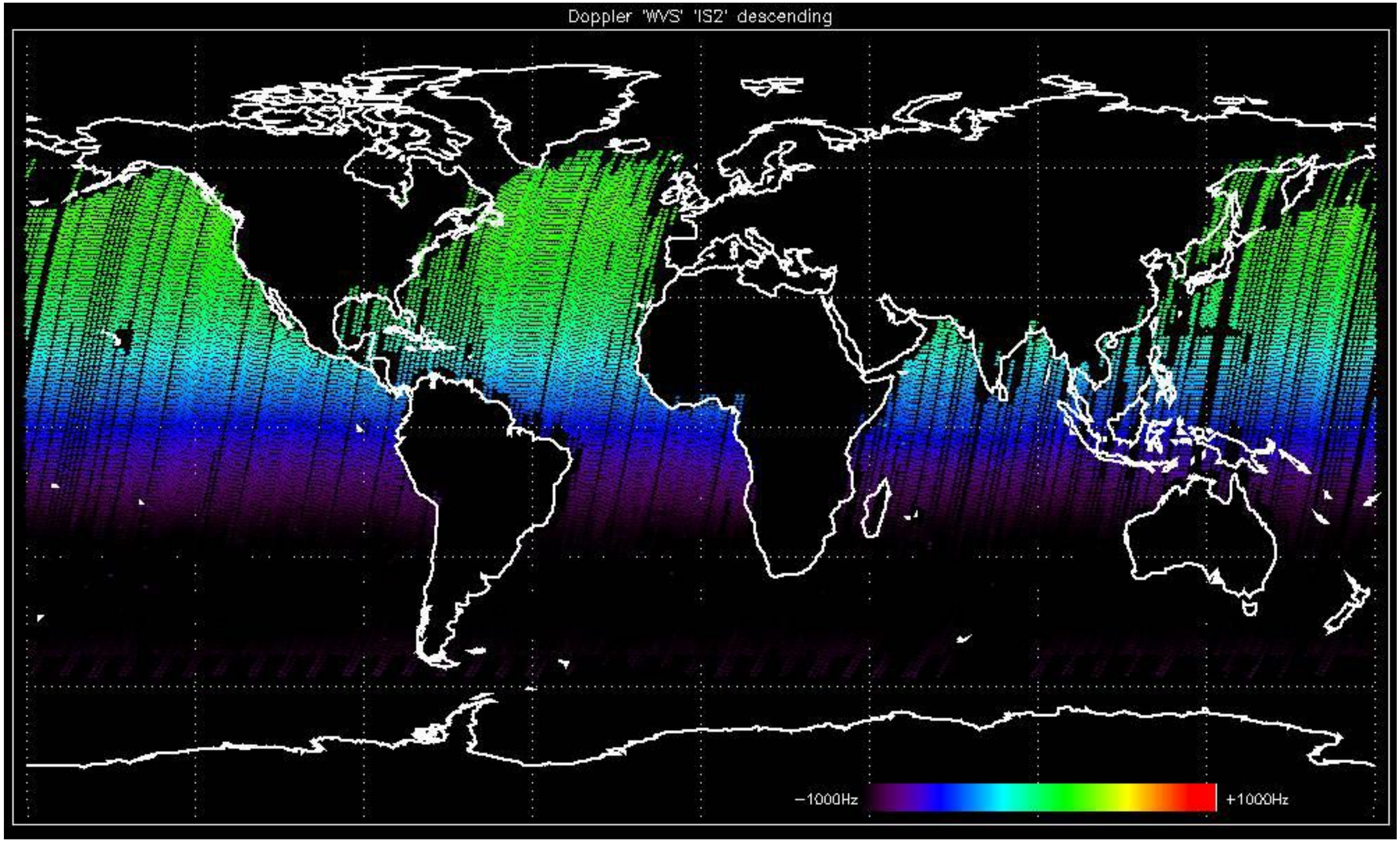
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

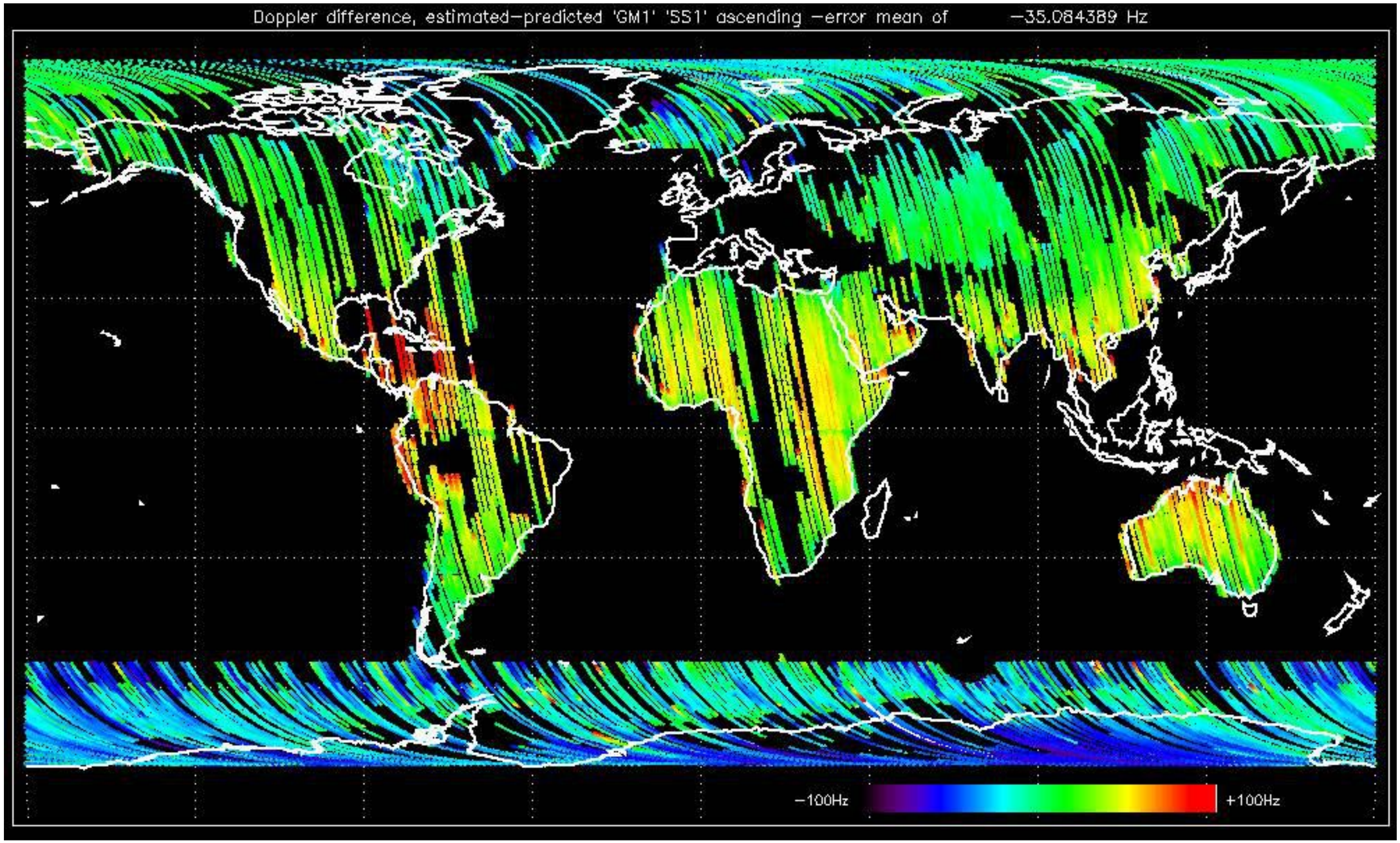
Preliminary report.The data is not yet controled

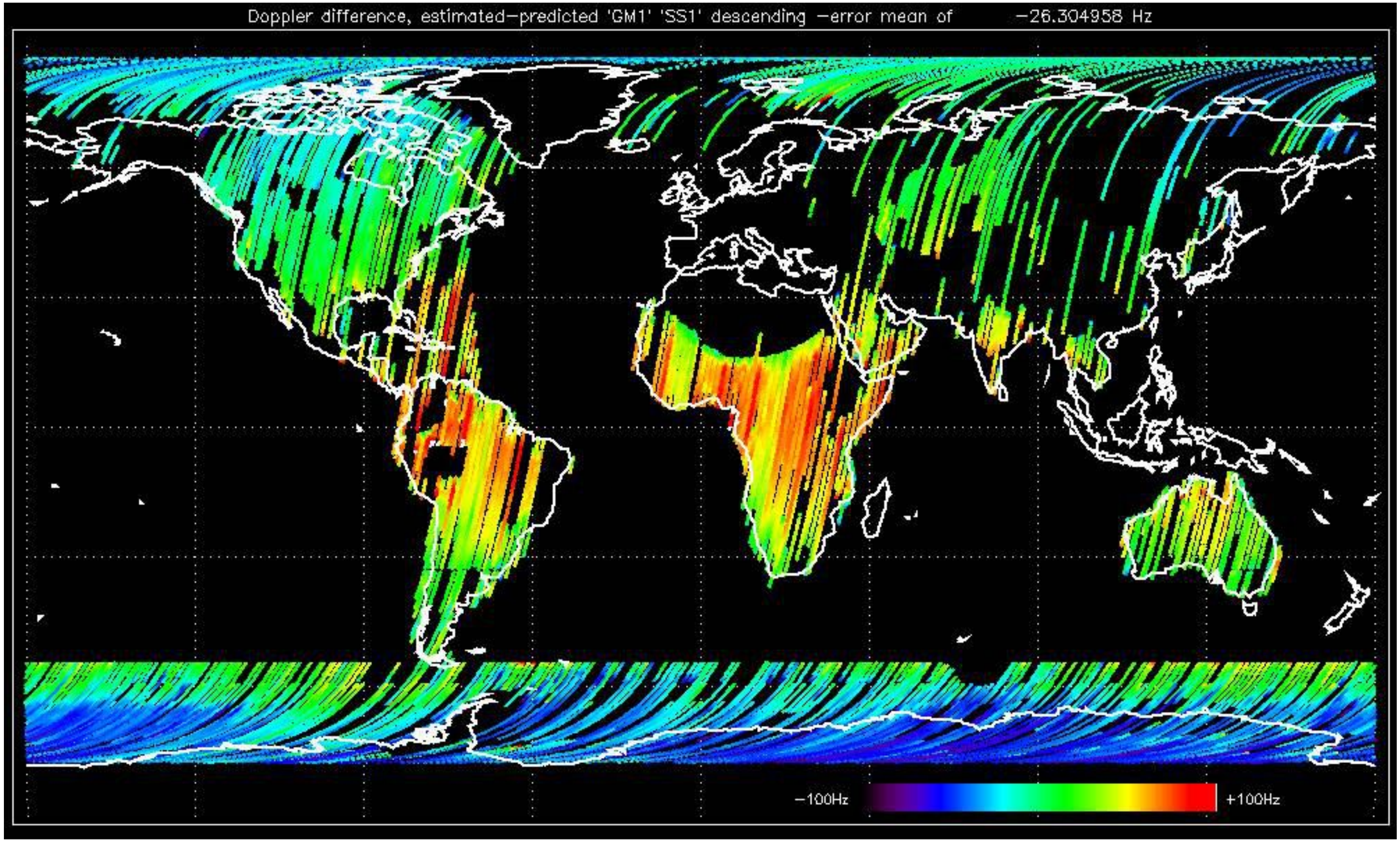

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

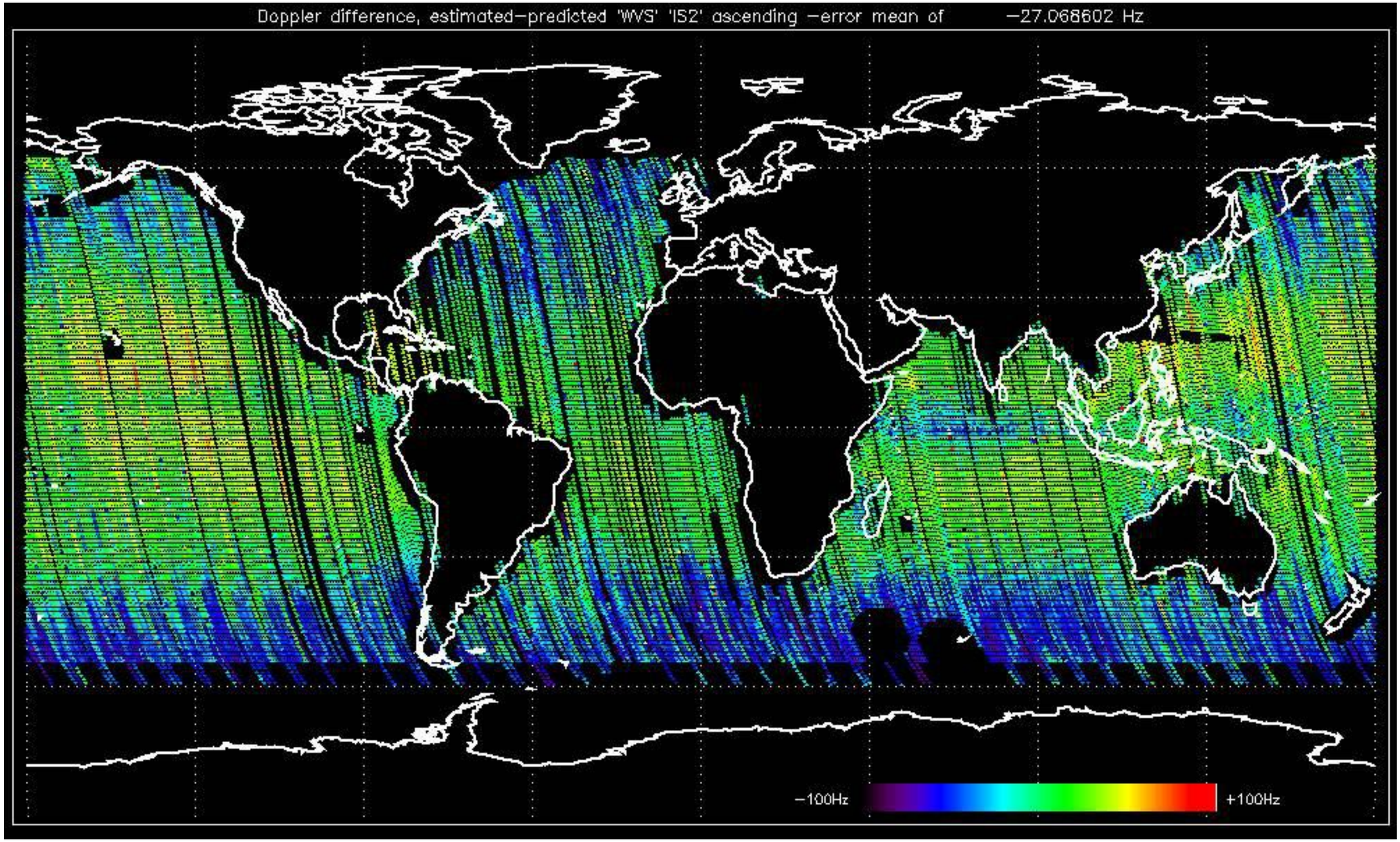

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

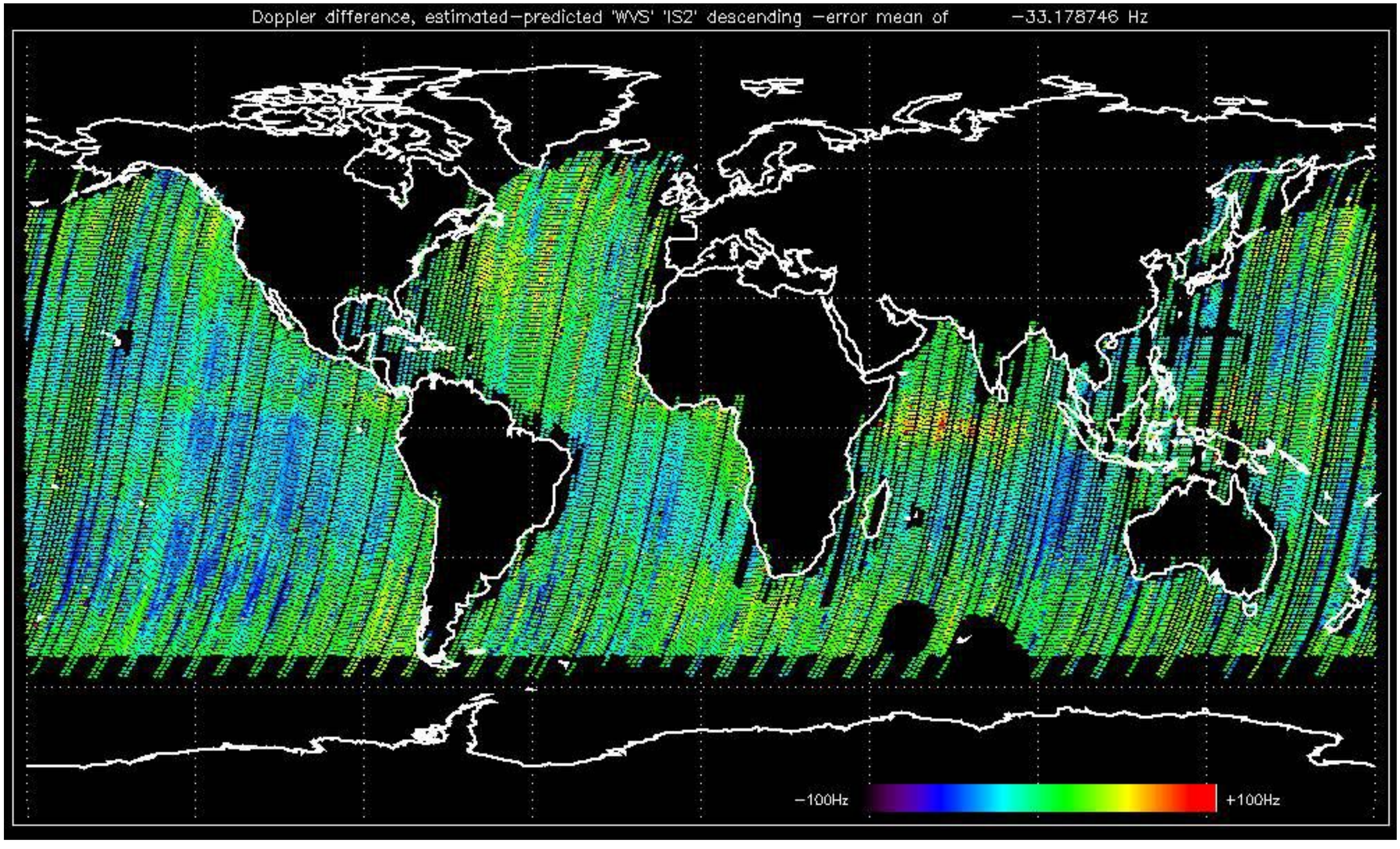

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −35.084389 Hz
−100Hz
+100Hz

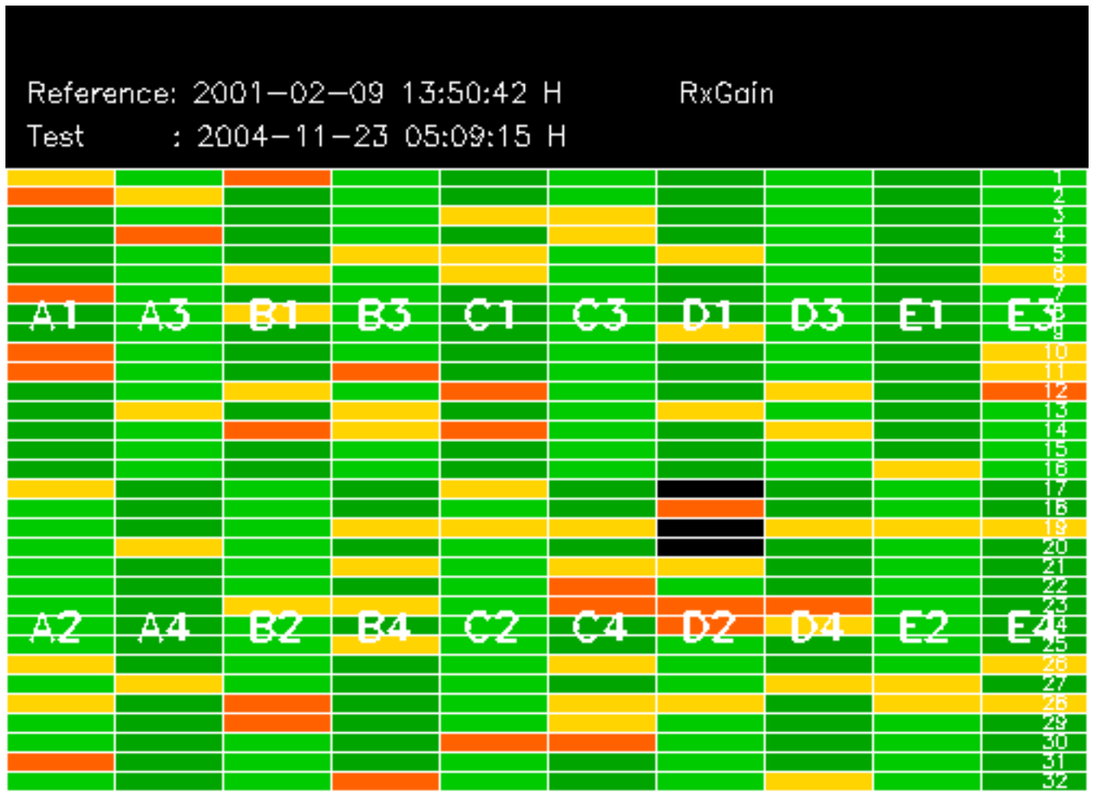

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −26.304958 Hz
−100Hz
+100Hz

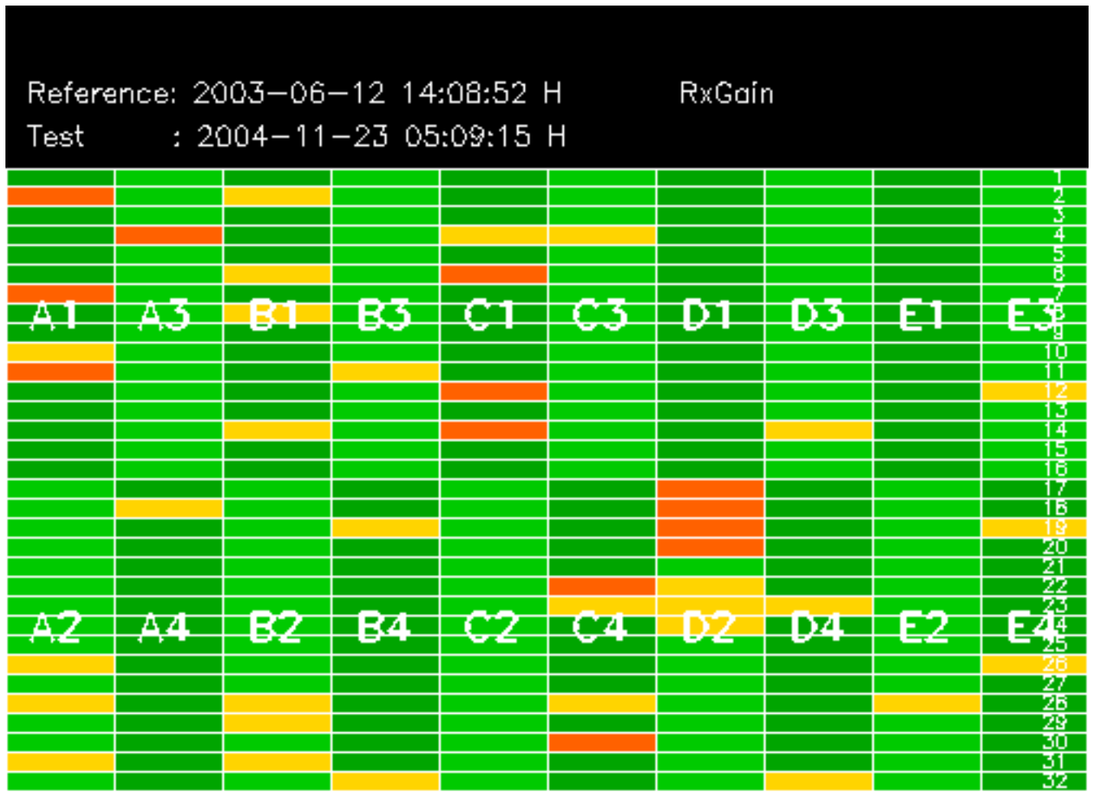

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −27.068602 Hz
−100Hz
+100Hz

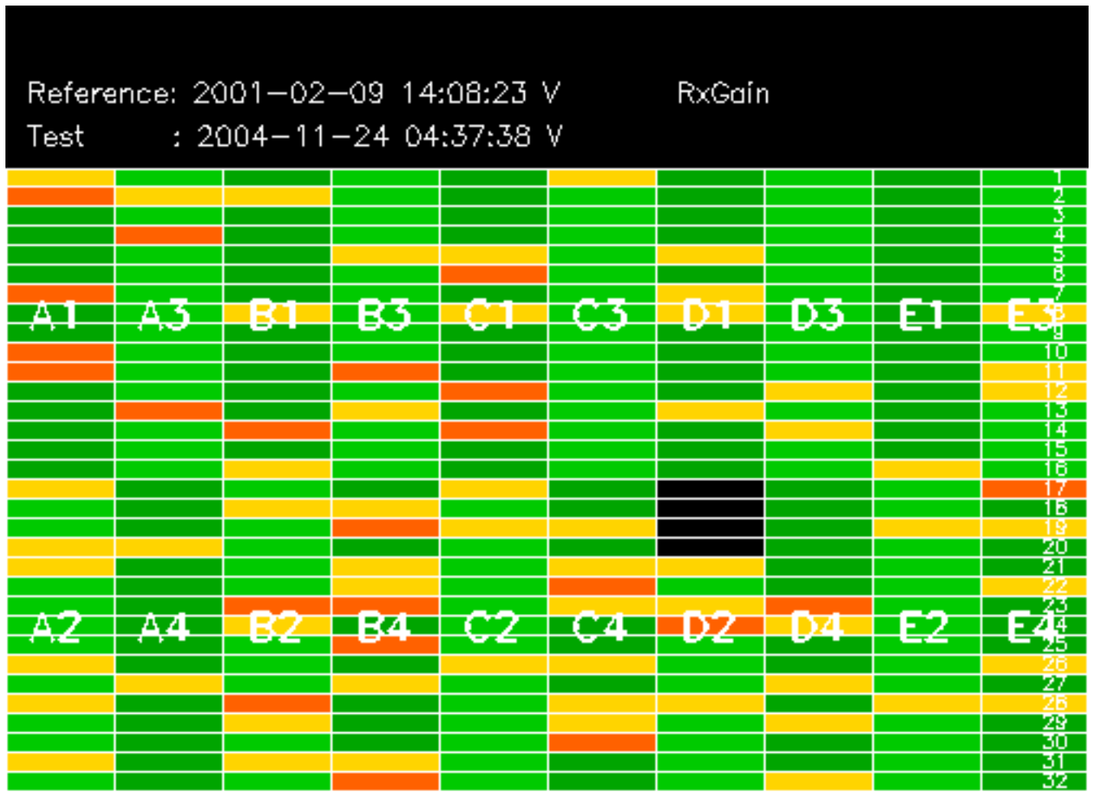

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −33.178746 Hz
−100Hz
+100Hz

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-23 05:09:15 H
RxGain
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 : 2004-11-23 05:09:15 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 : 2004-11-24 04:37:38 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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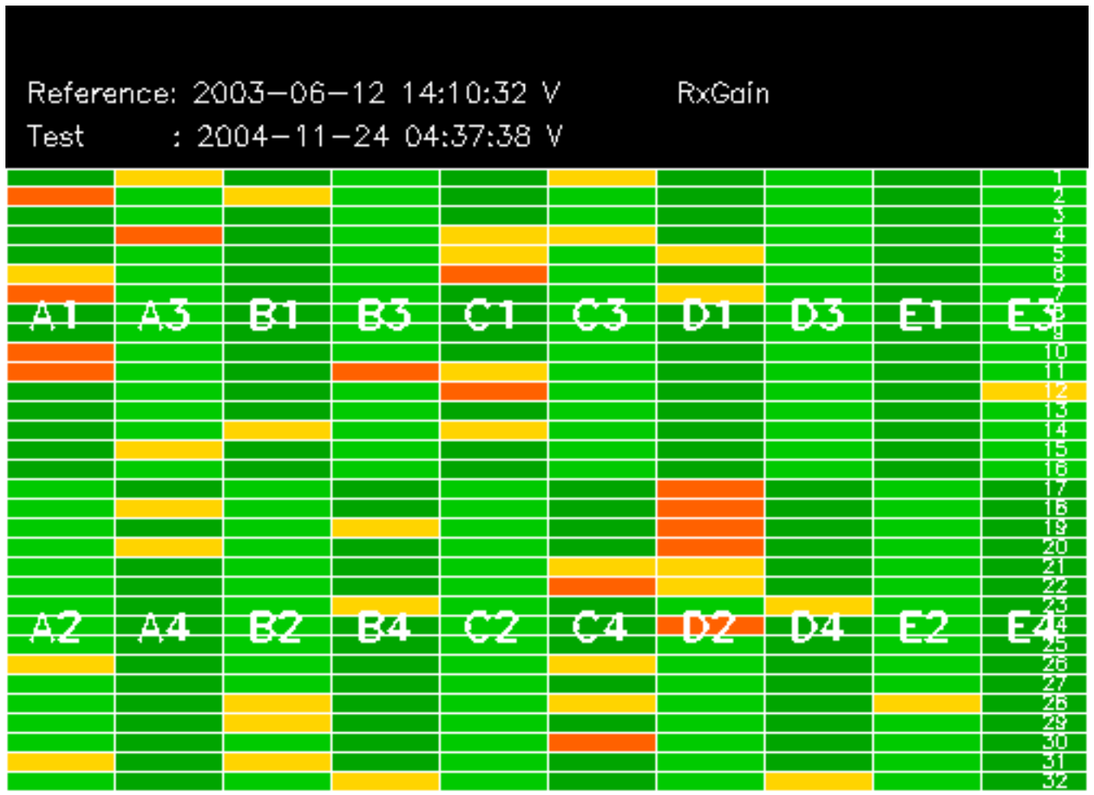
Reference: 2003-06-12 14:10:32 V
Test : 2004-11-24 04:37:38 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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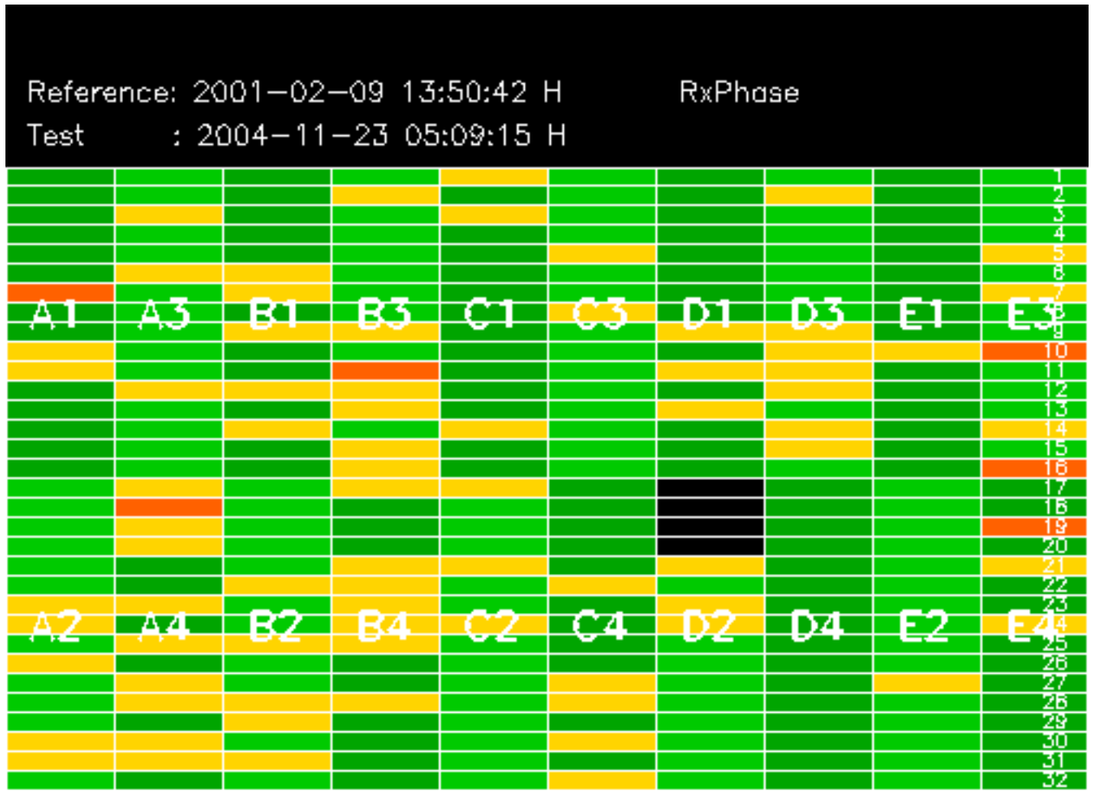
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-11-23 05:09:15 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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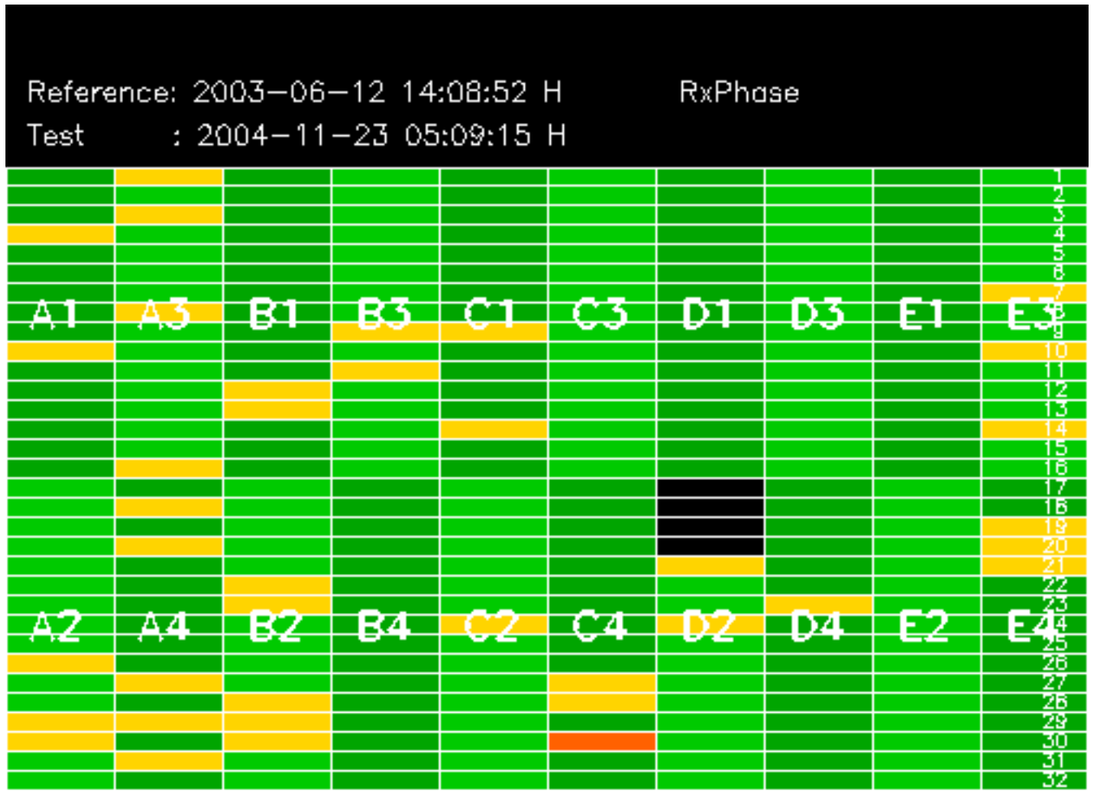
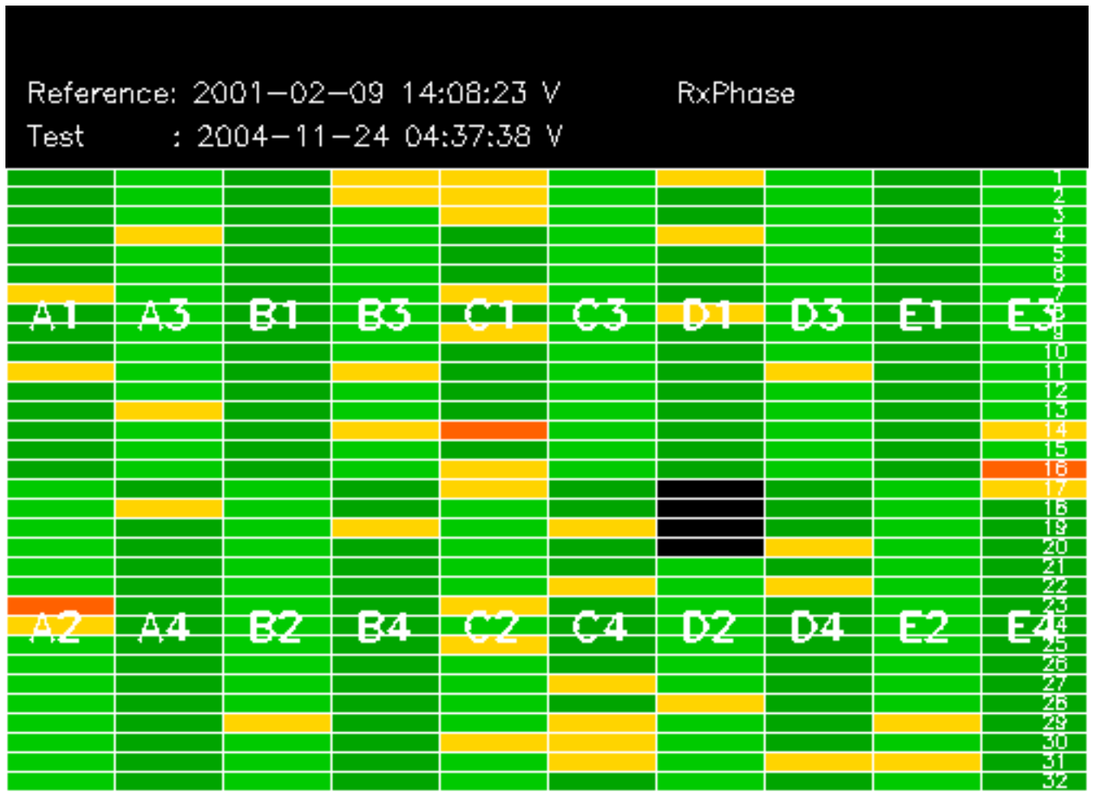

Reference: 2003-06-12 14:08:52 H
Test : 2004-11-23 05:09:15 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-11-24 04:37:38 V
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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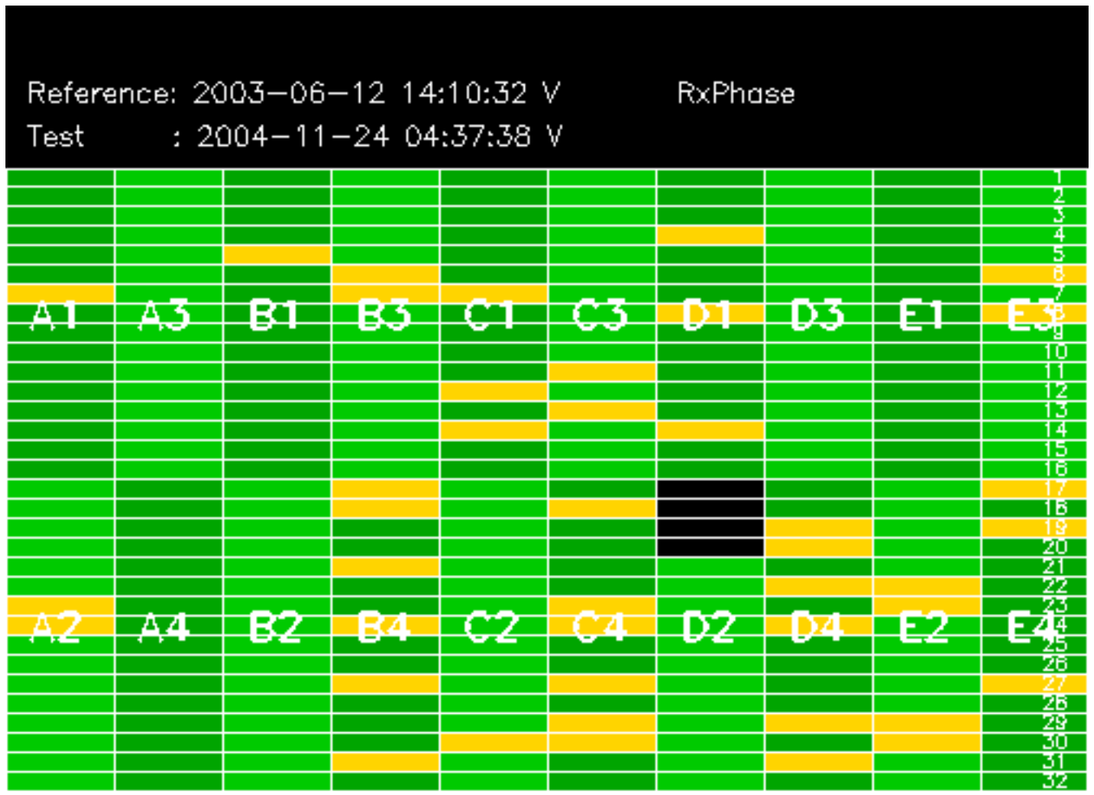
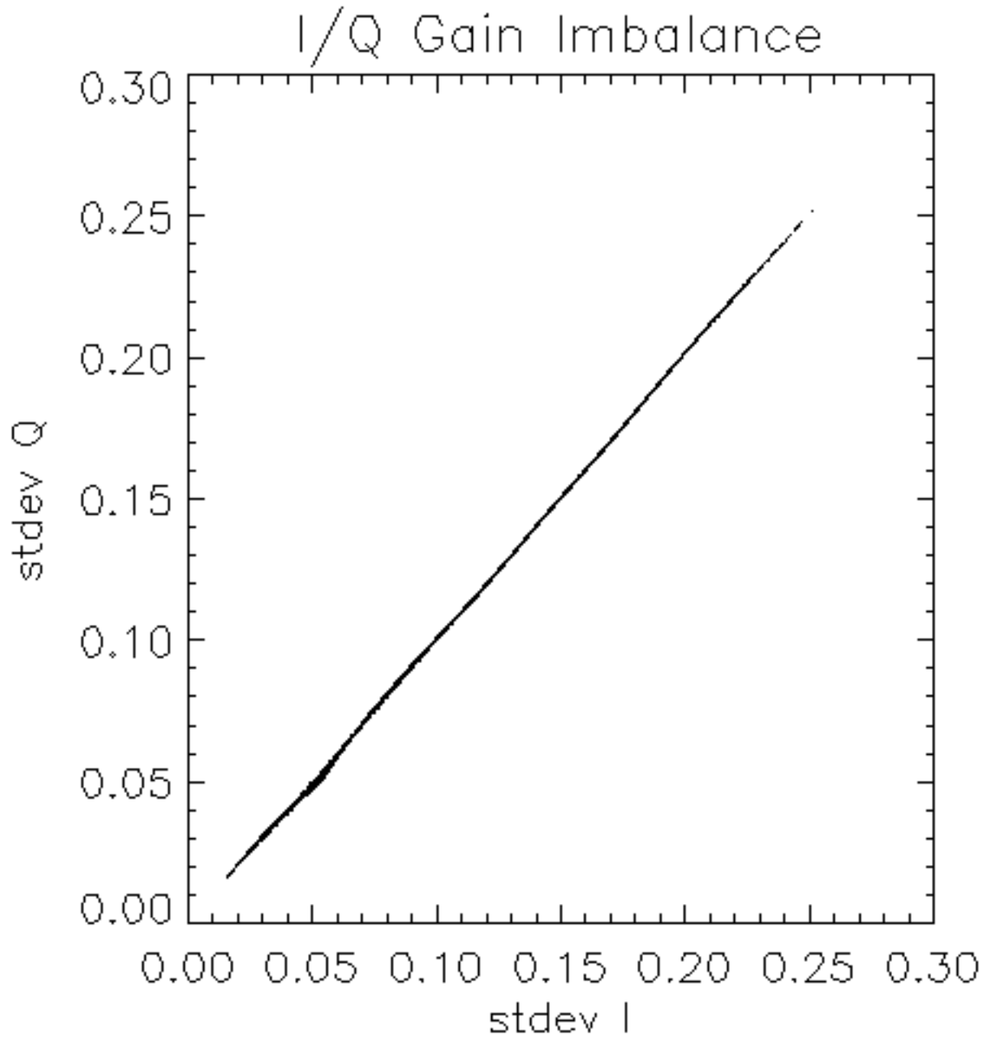
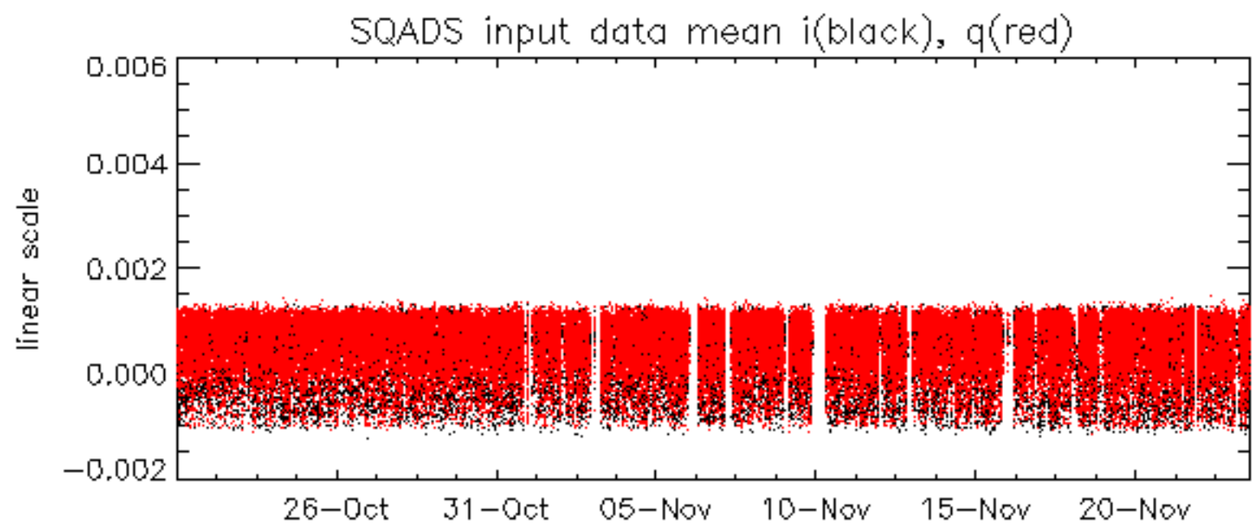
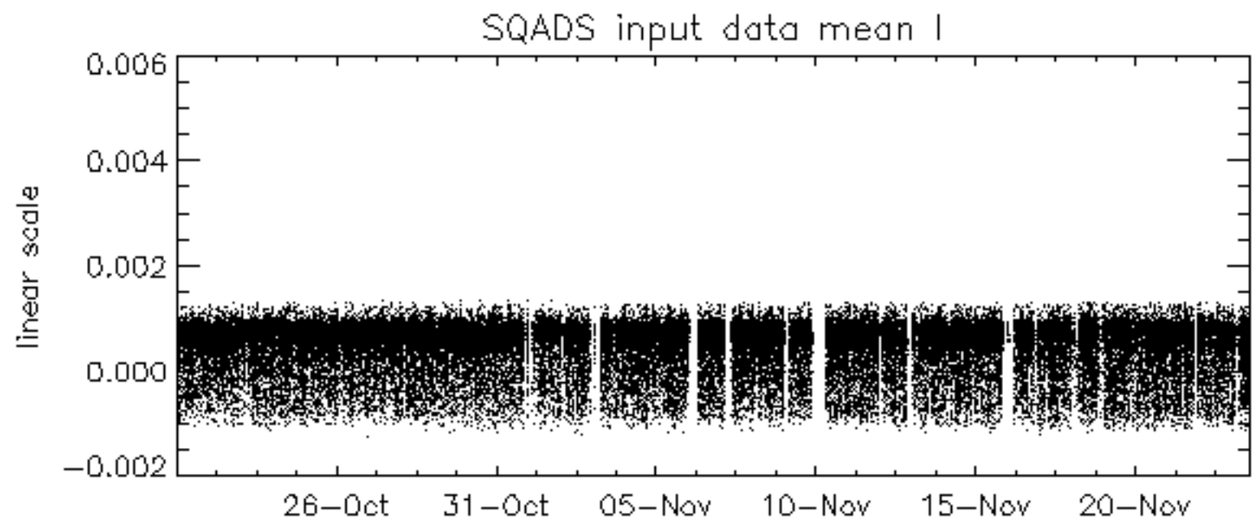
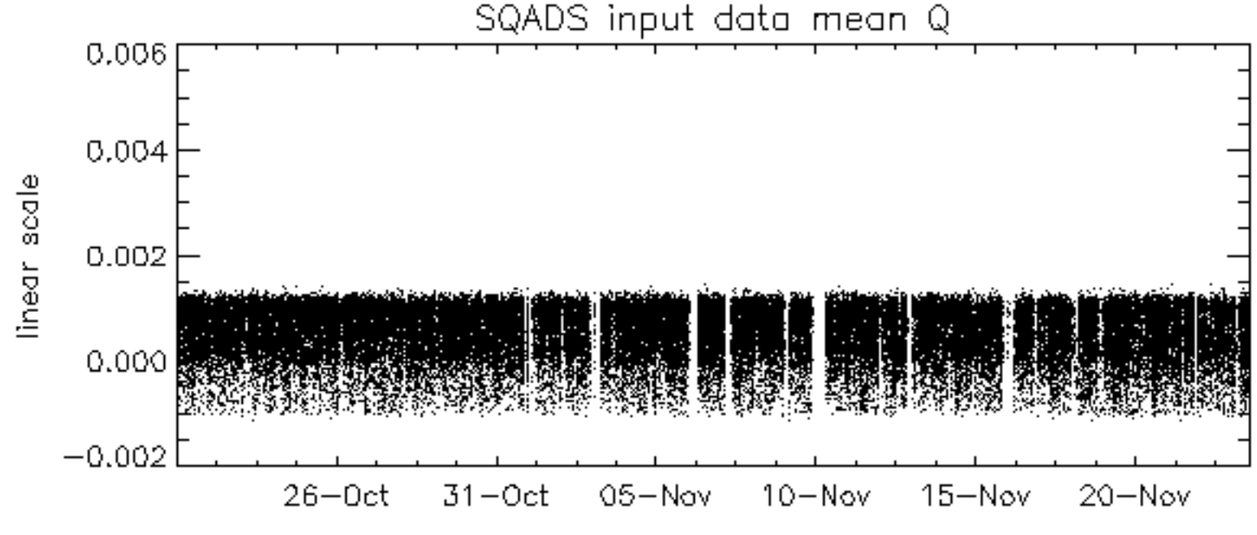
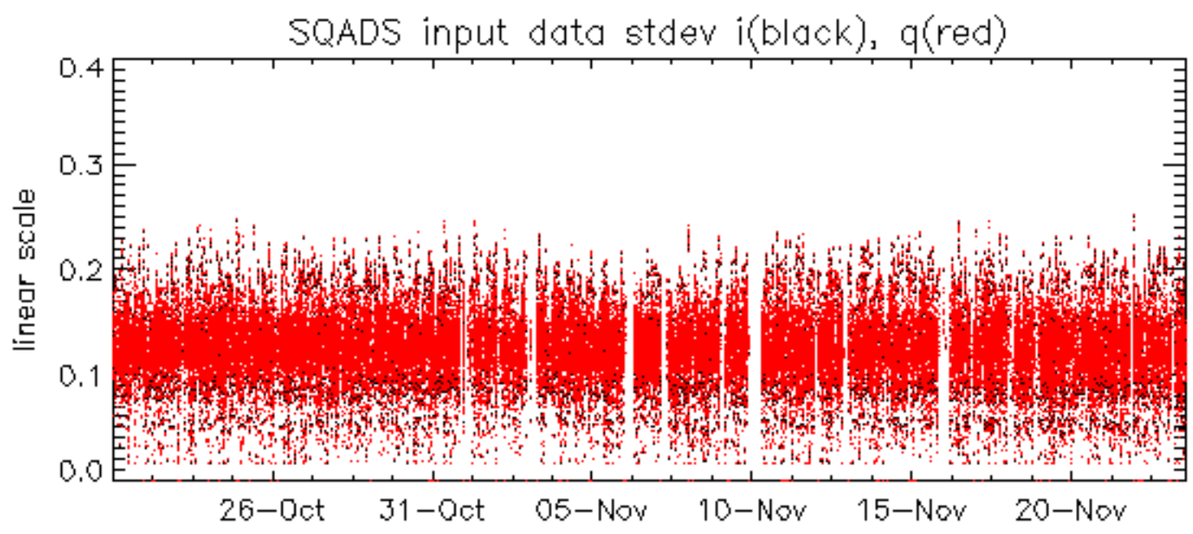

Reference: 2003-06-12 14:10:32 V
Test : 2004-11-24 04:37:38 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

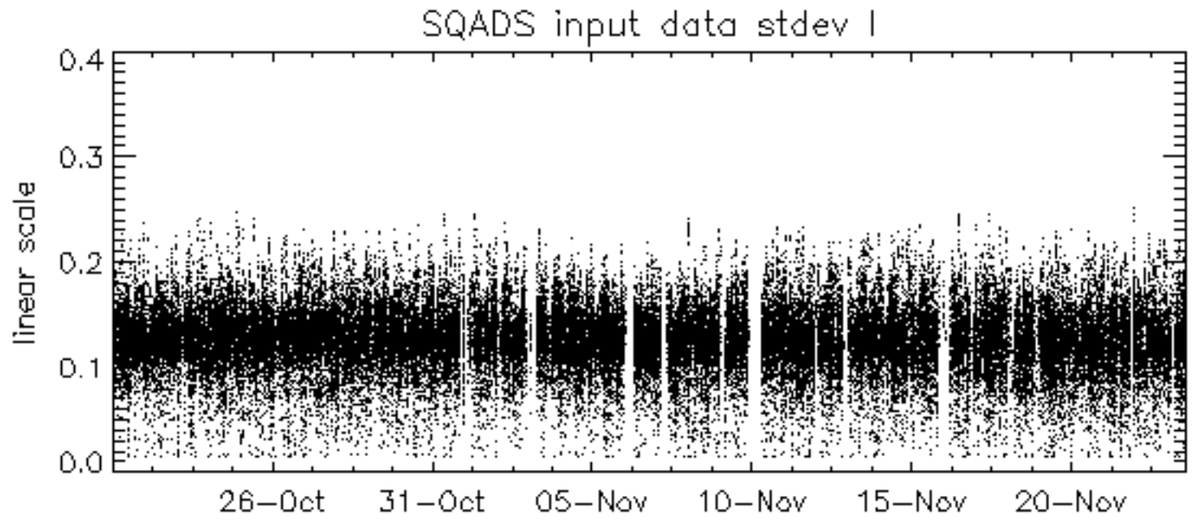

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

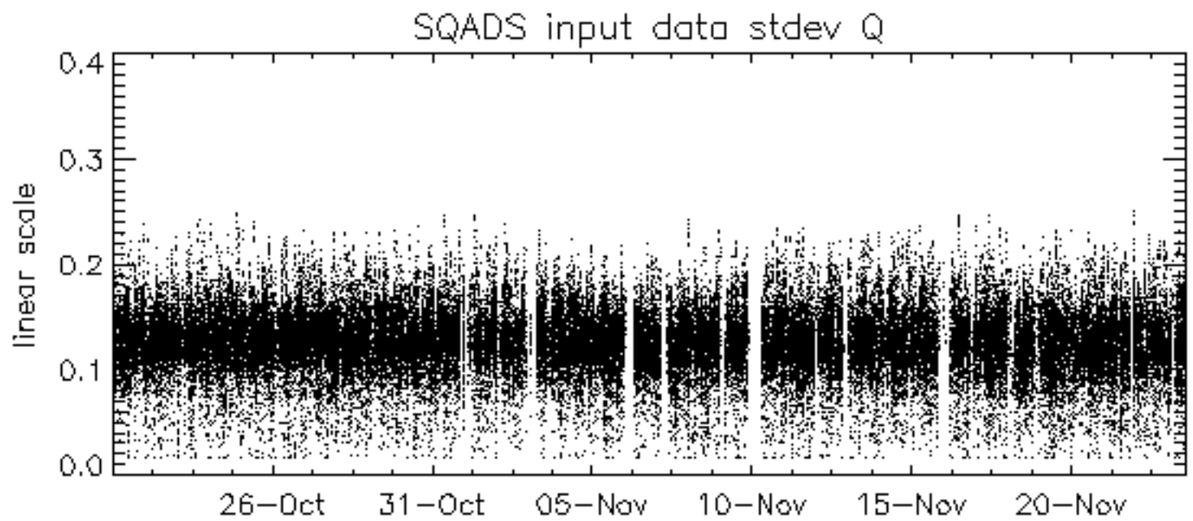

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov

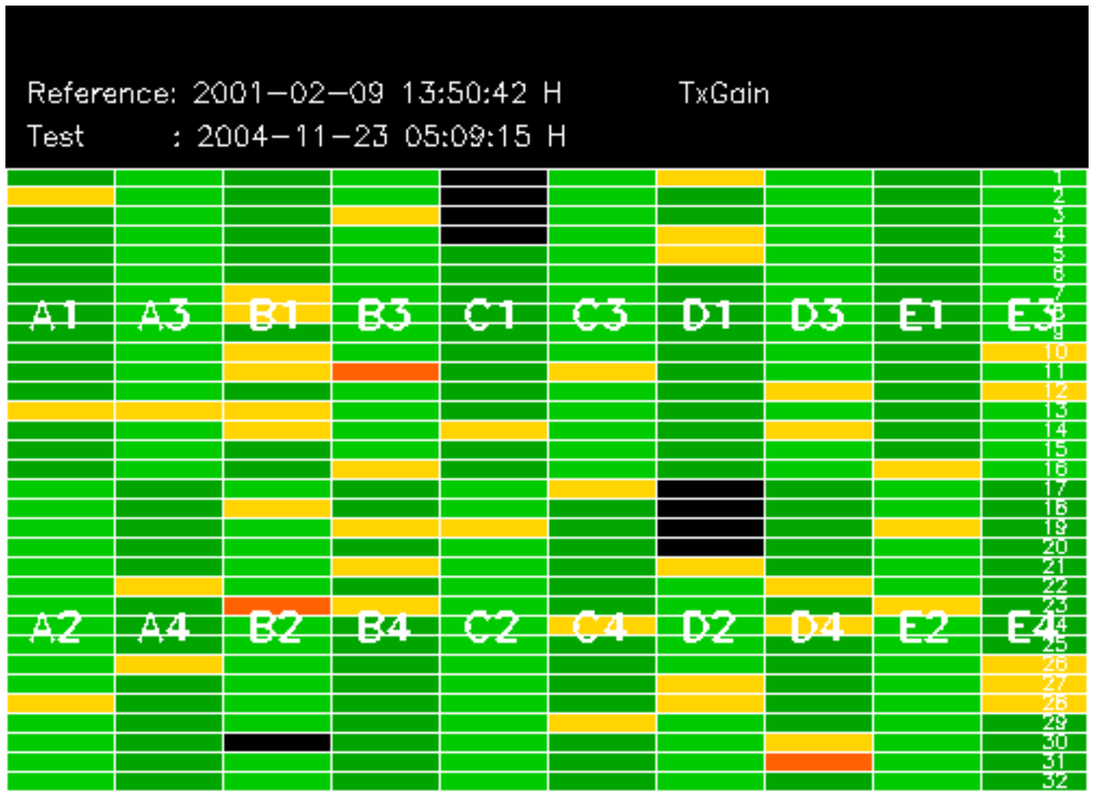

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov

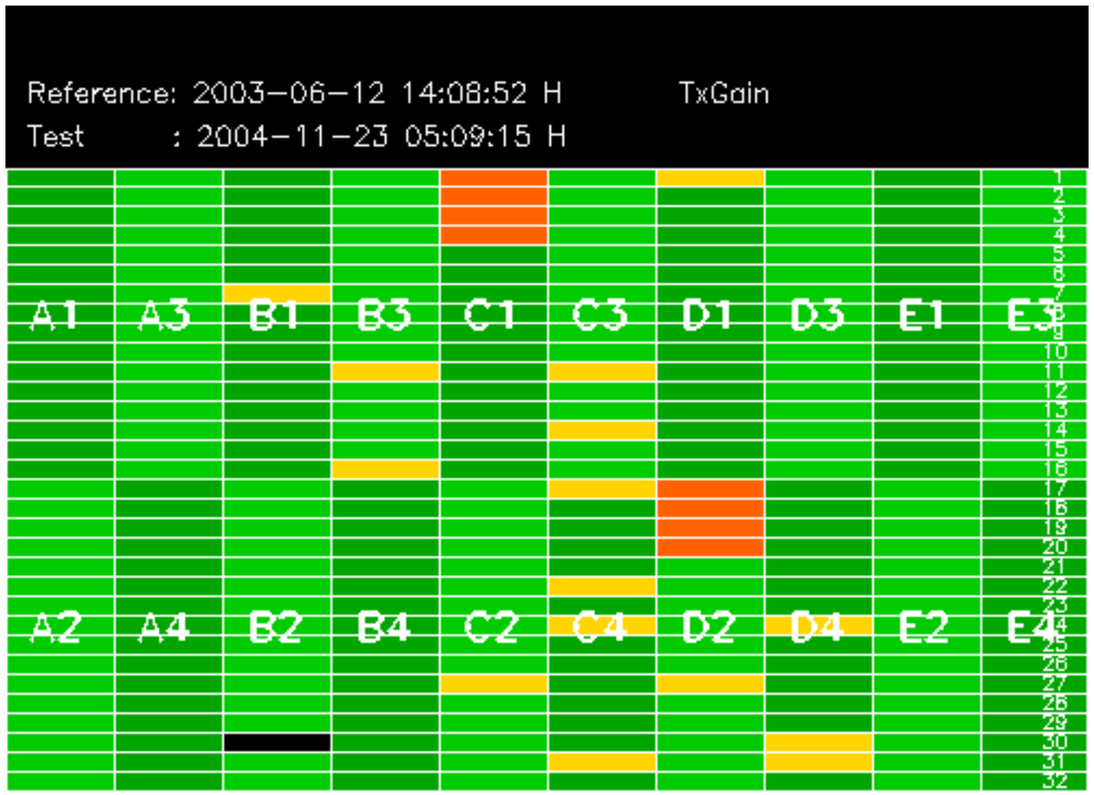

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
26−Oct
31−Oct
05−Nov
10−Nov
15−Nov
20−Nov


Reference: 2001-02-09 13:50:42 H
Test : 2004-11-23 05:09:15 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 : 2004-11-23 05:09:15 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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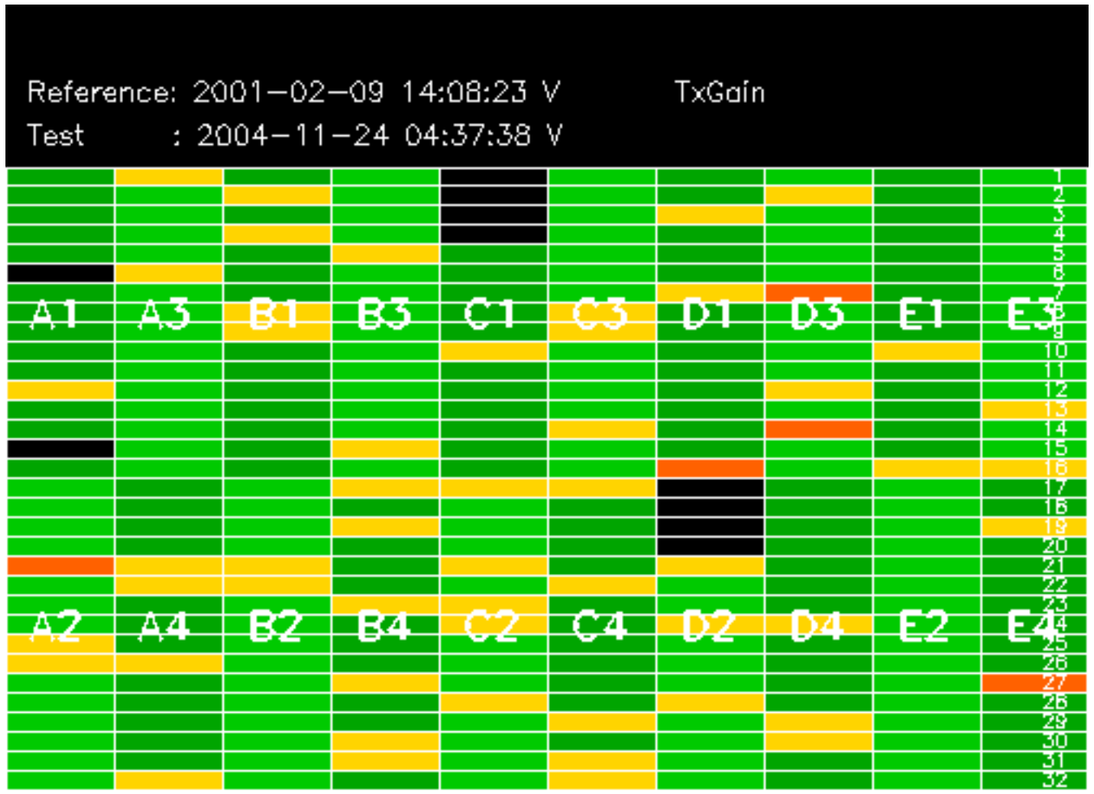
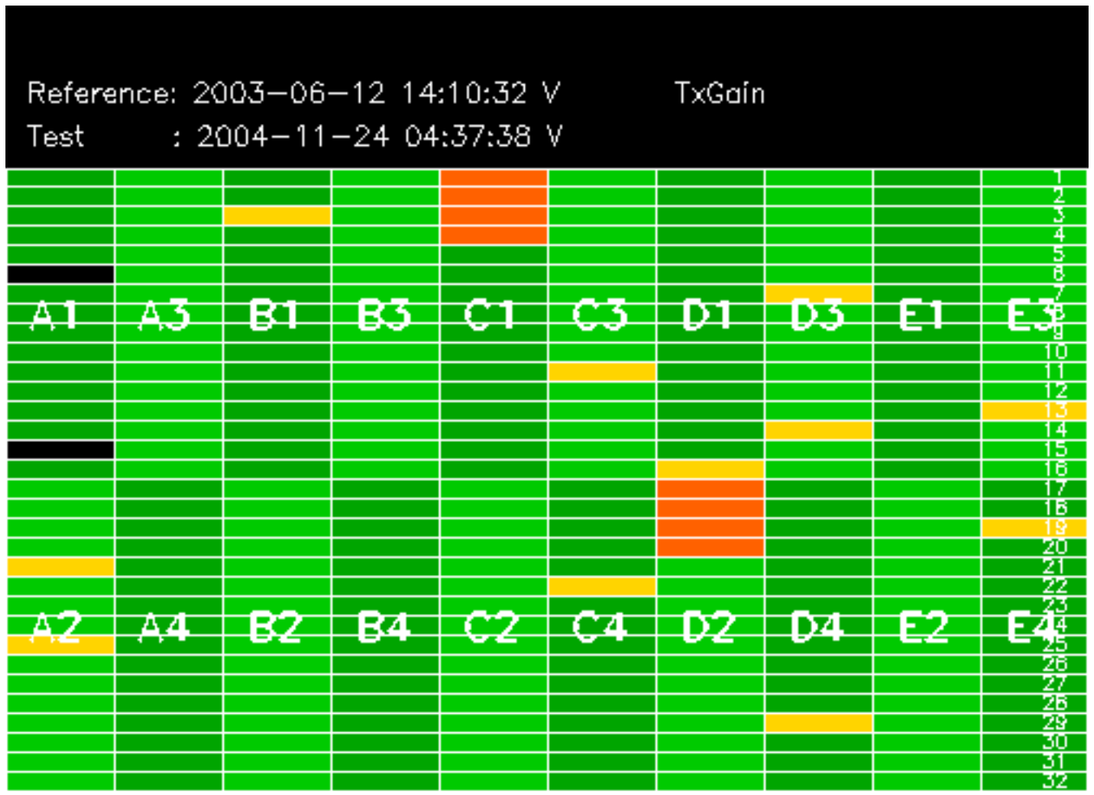

Reference: 2001-02-09 14:08:23 V
Test : 2004-11-24 04:37:38 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-11-24 04:37:38 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
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9
10
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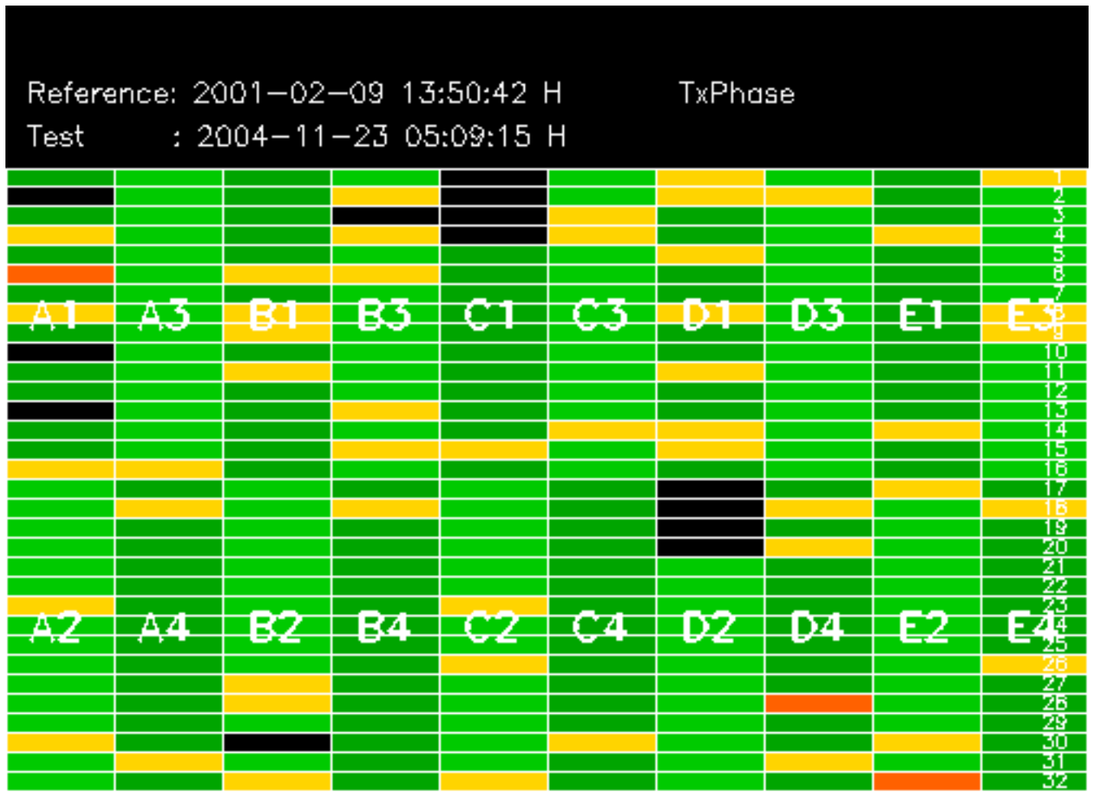
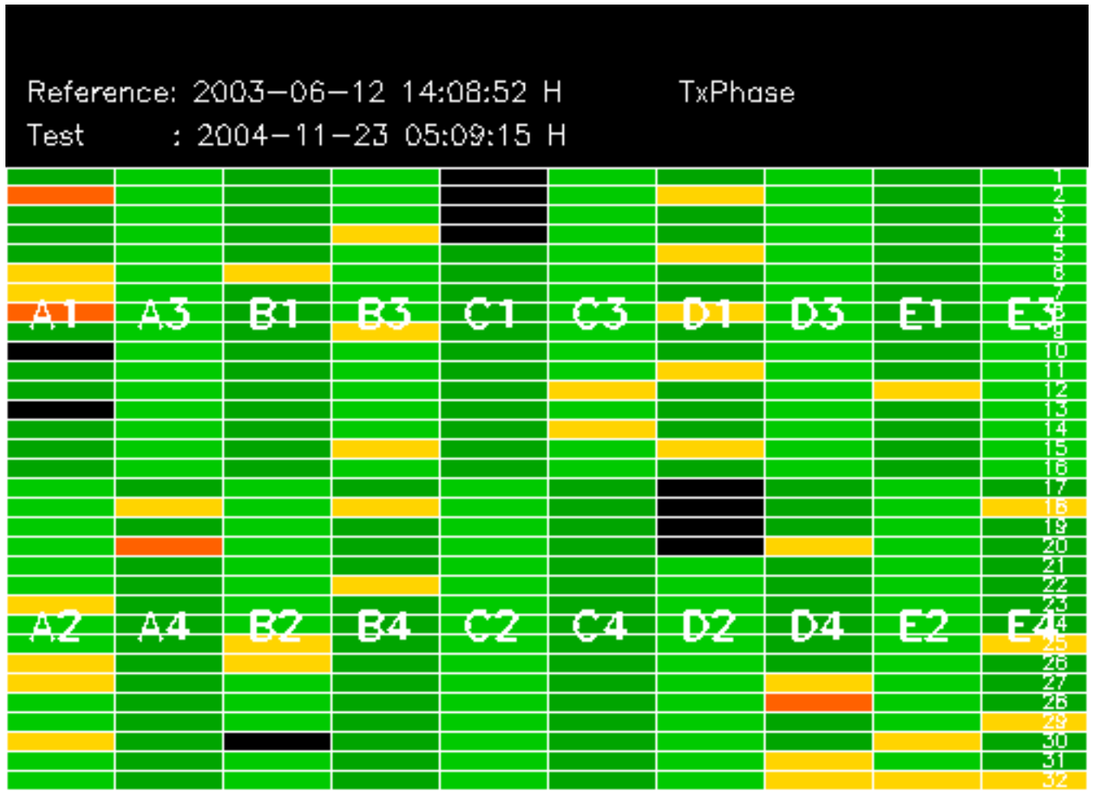
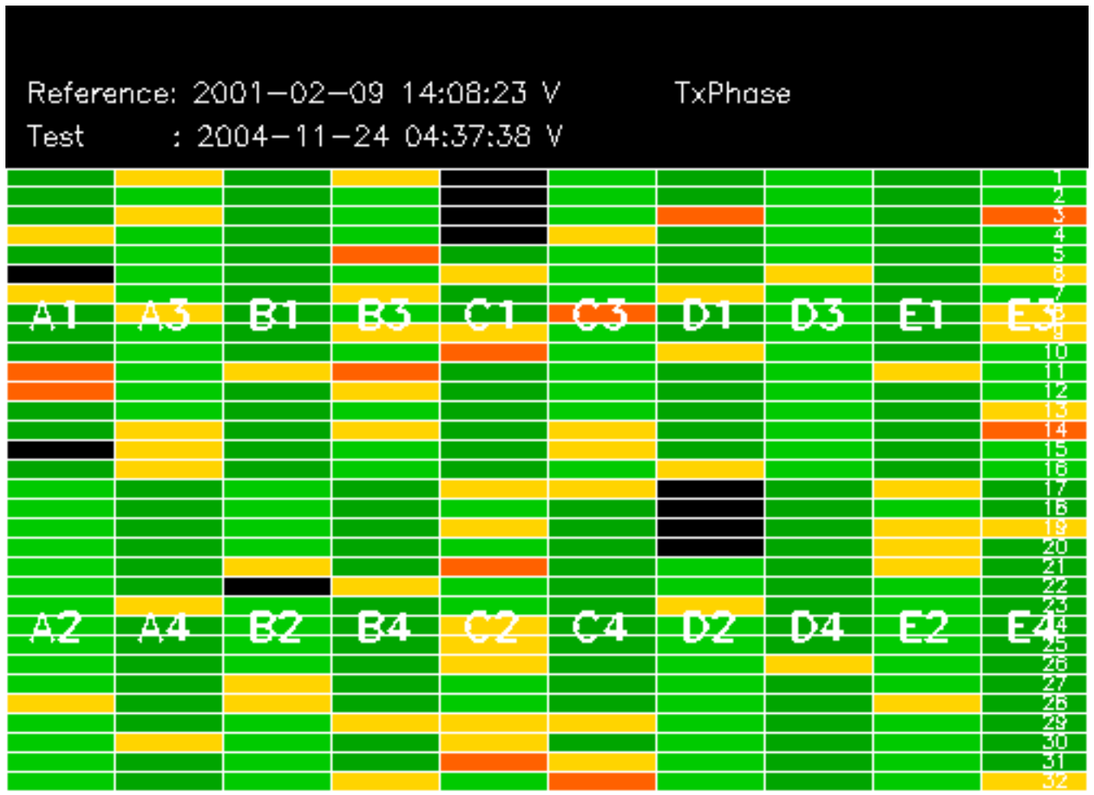
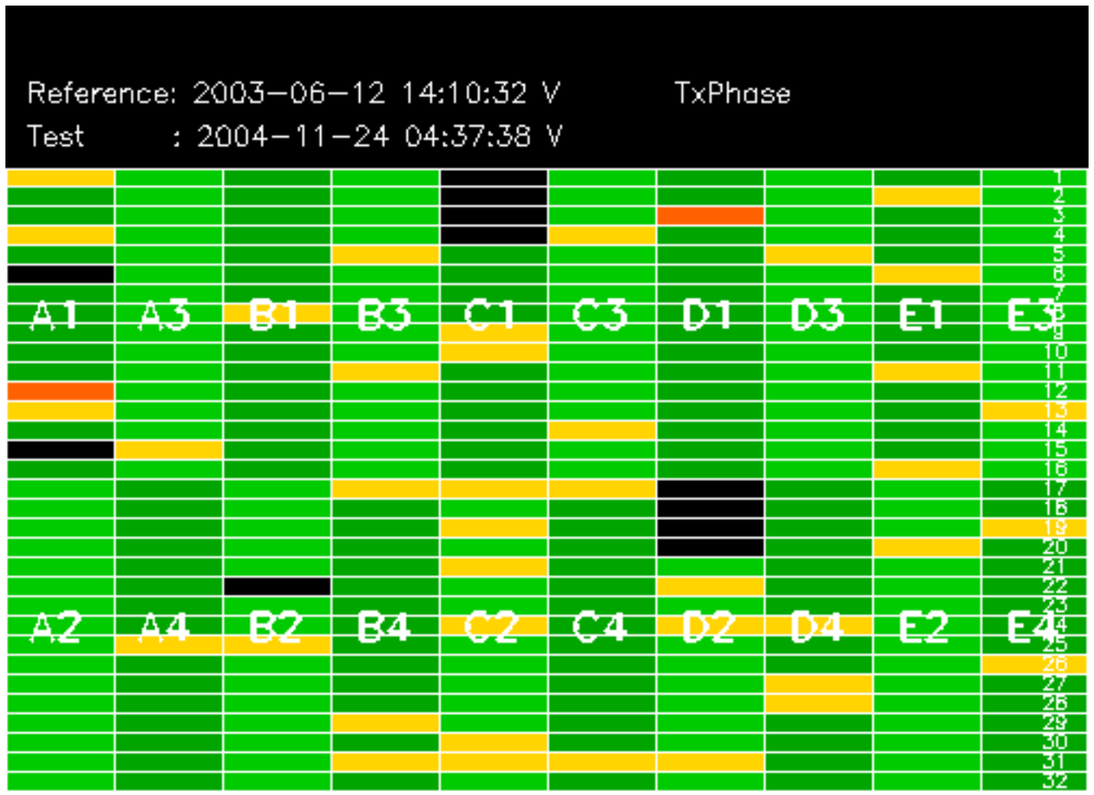

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-11-23 05:09:15 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-11-23 05:09:15 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 : 2004-11-24 04:37:38 V
TxPhase
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 : 2004-11-24 04:37:38 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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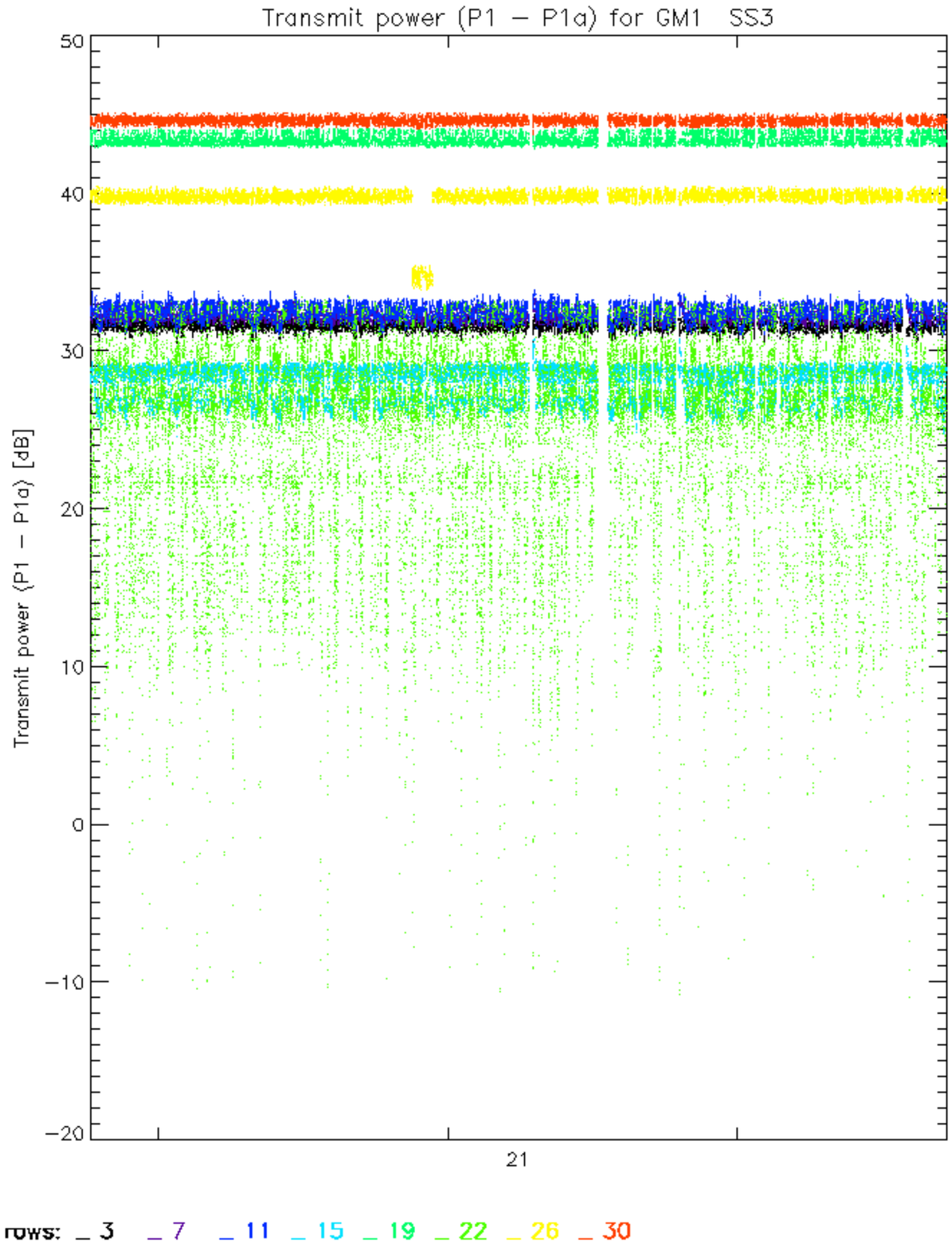
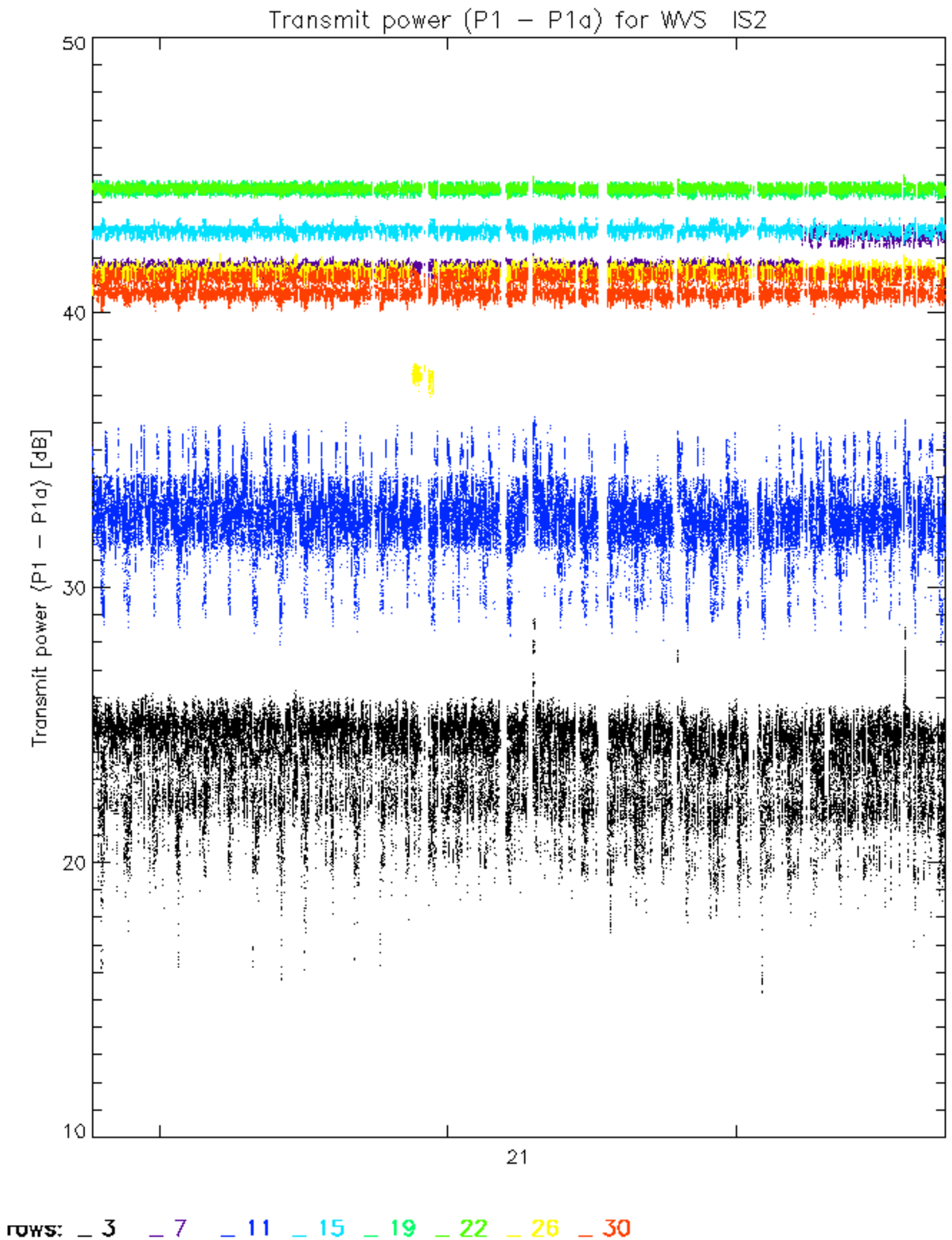

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
21
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
21
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.