PRELIMINARY REPORT OF 050515

last update on Sun May 15 10:50:01 GMT 2005

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 2005-05-14 00:00:00 to 2005-05-15 10:50:01

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	10	3	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	10	3	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	10	3	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	10	3	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	20	5	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	20	5	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	20	5	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	20	5	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	20050506 055519
H	20050505 062656

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	-3.347295	0.006903	-0.017879
7	P1	-3.110279	0.013628	-0.009829
11	P1	-4.659155	0.027434	0.021826
15	P1	-5.549282	0.045425	0.062832
19	P1	-3.719883	0.004016	-0.027171
22	P1	-4.589234	0.013026	-0.024544
26	P1	-4.882656	0.019129	0.027496
30	P1	-7.140505	0.028853	0.005160
3	P1	-15.719607	0.082721	0.081925
7	P1	-15.501296	0.095733	-0.008301
11	P1	-21.252792	0.231768	-0.208189
15	P1	-11.440725	0.032211	0.125903
19	P1	-14.331396	0.033775	-0.080382
22	P1	-15.934034	0.332812	-0.090787
26	P1	-17.625187	0.189990	-0.108063
30	P1	-17.862341	0.258868	-0.096549

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.053156	0.080572	-0.035605
7	P2	-22.232075	0.102598	-0.029676
11	P2	-14.142668	0.103209	0.174595
15	P2	-7.095044	0.088972	-0.069862
19	P2	-9.653354	0.092408	0.027028
22	P2	-16.887989	0.092722	-0.020010
26	P2	-16.485394	0.093758	-0.041593
30	P2	-18.823399	0.081697	0.016564

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.169071	0.003599	-0.004469

7	P3	-8.169071	0.003599	-0.004469
11	P3	-8.169070	0.003599	-0.004479
15	P3	-8.169070	0.003599	-0.004479
19	P3	-8.169070	0.003599	-0.004479
22	P3	-8.169070	0.003599	-0.004479
26	P3	-8.169070	0.003599	-0.004479
30	P3	-8.169071	0.003599	-0.004474

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	-2.768150	0.011910	-0.045126
7	P1	-2.993804	0.030550	0.051710
11	P1	-3.968398	0.017891	0.054692
15	P1	-3.526821	0.023361	-0.005078
19	P1	-3.629501	0.014699	0.006836
22	P1	-5.658403	0.049951	0.004166
26	P1	-7.313643	0.022806	-0.004433
30	P1	-6.278821	0.059355	0.036069
3	P1	-10.775551	0.045002	-0.147355
7	P1	-10.412382	0.152974	-0.008130
11	P1	-12.554419	0.103706	0.065199
15	P1	-11.640734	0.067695	0.034444
19	P1	-15.623188	0.064196	0.016826
22	P1	-25.372999	2.126110	-0.972661
26	P1	-15.669896	0.317008	-0.002983
30	P1	-20.216391	1.217373	-0.175960

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.771006	0.037135	-0.081818
7	P2	-22.272154	0.046312	0.108488
11	P2	-10.044284	0.053769	0.105418
15	P2	-5.080317	0.037558	-0.052981
19	P2	-6.901497	0.052239	-0.026928
22	P2	-7.105181	0.034974	-0.019781
26	P2	-23.915047	0.036383	-0.038689
30	P2	-21.940083	0.039719	-0.042079

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.005102	0.003504	0.006473
7	P3	-8.005128	0.003489	0.007001
11	P3	-8.005089	0.003500	0.006643
15	P3	-8.005227	0.003504	0.007450
19	P3	-8.005196	0.003502	0.007137
22	P3	-8.005145	0.003483	0.006802
26	P3	-8.005062	0.003498	0.006979
30	P3	-8.005116	0.003516	0.006353

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	0.000455488
	stdev	2.26675e-07
MEAN Q	mean	0.000475983
	stdev	2.41399e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.126905
	stdev	0.00105833
STDEV Q	mean	0.127156
	stdev	0.00106872

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2005051[345]
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_1PNPDK20050513_080407_000000682037_00150_16737_4253.N1	1	0

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

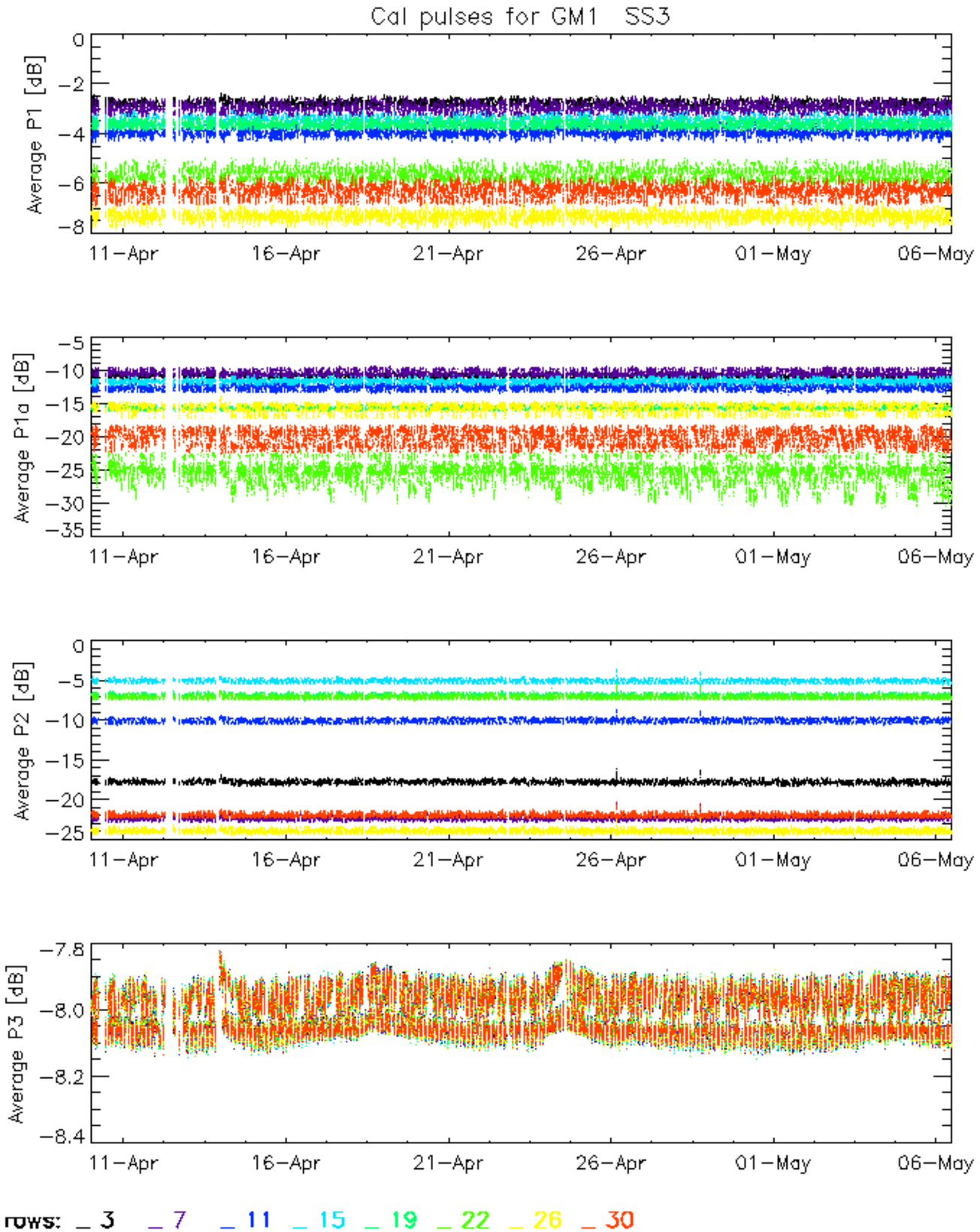
7.4 - Unbiased Doppler Error for GM1

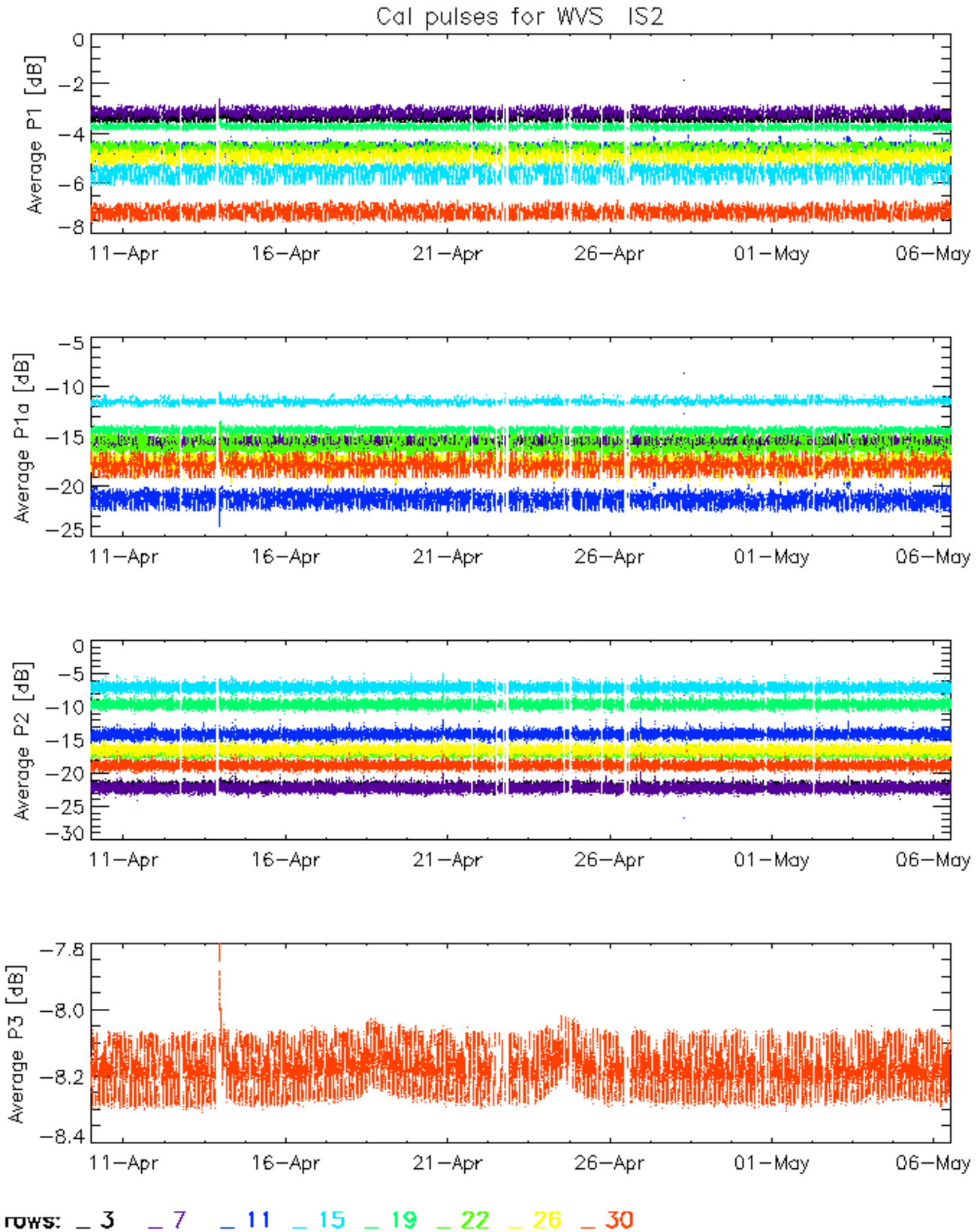
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

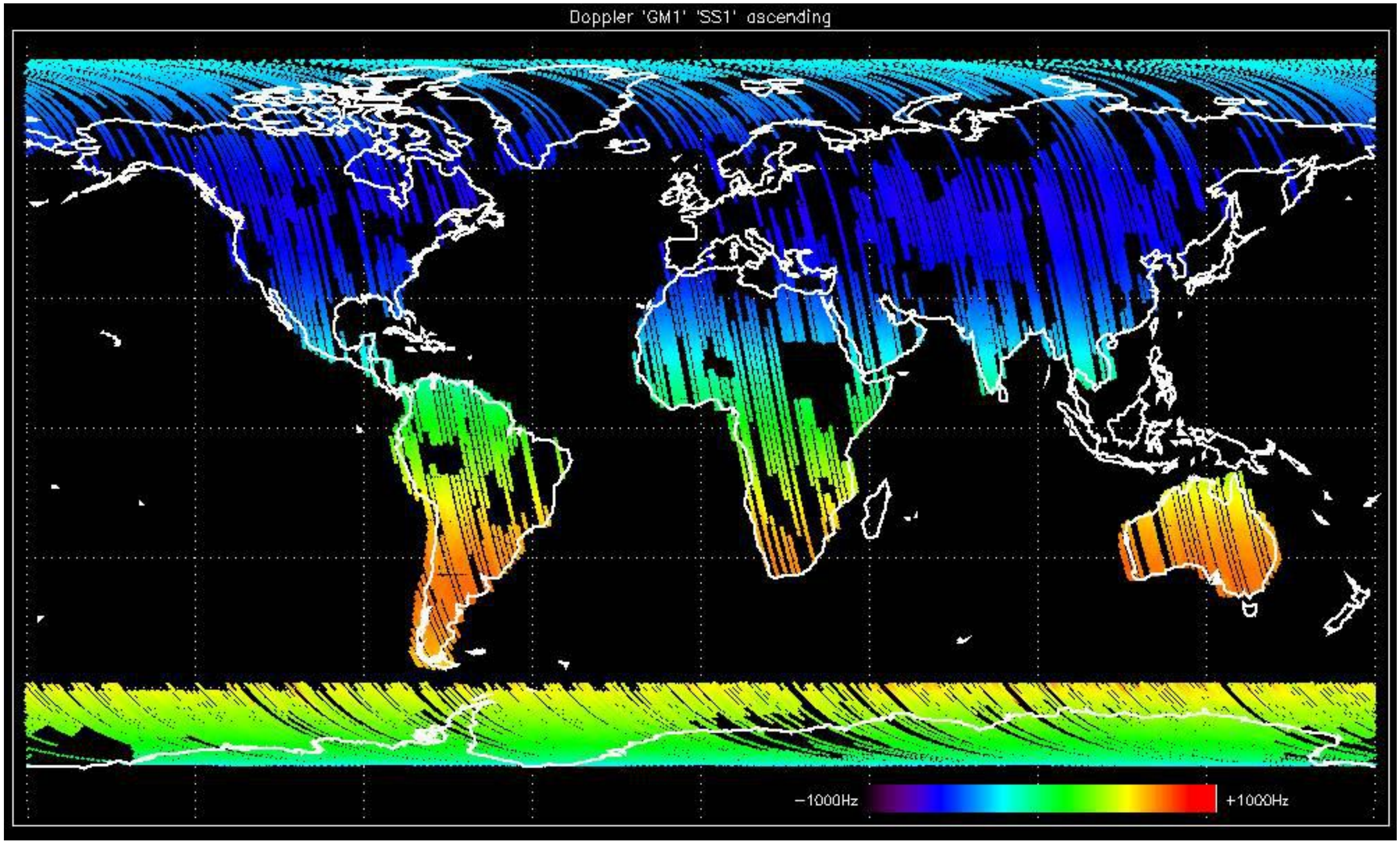

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
Average P1a [dB]
−5
−10
−15
−20
−25
−30
−35
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

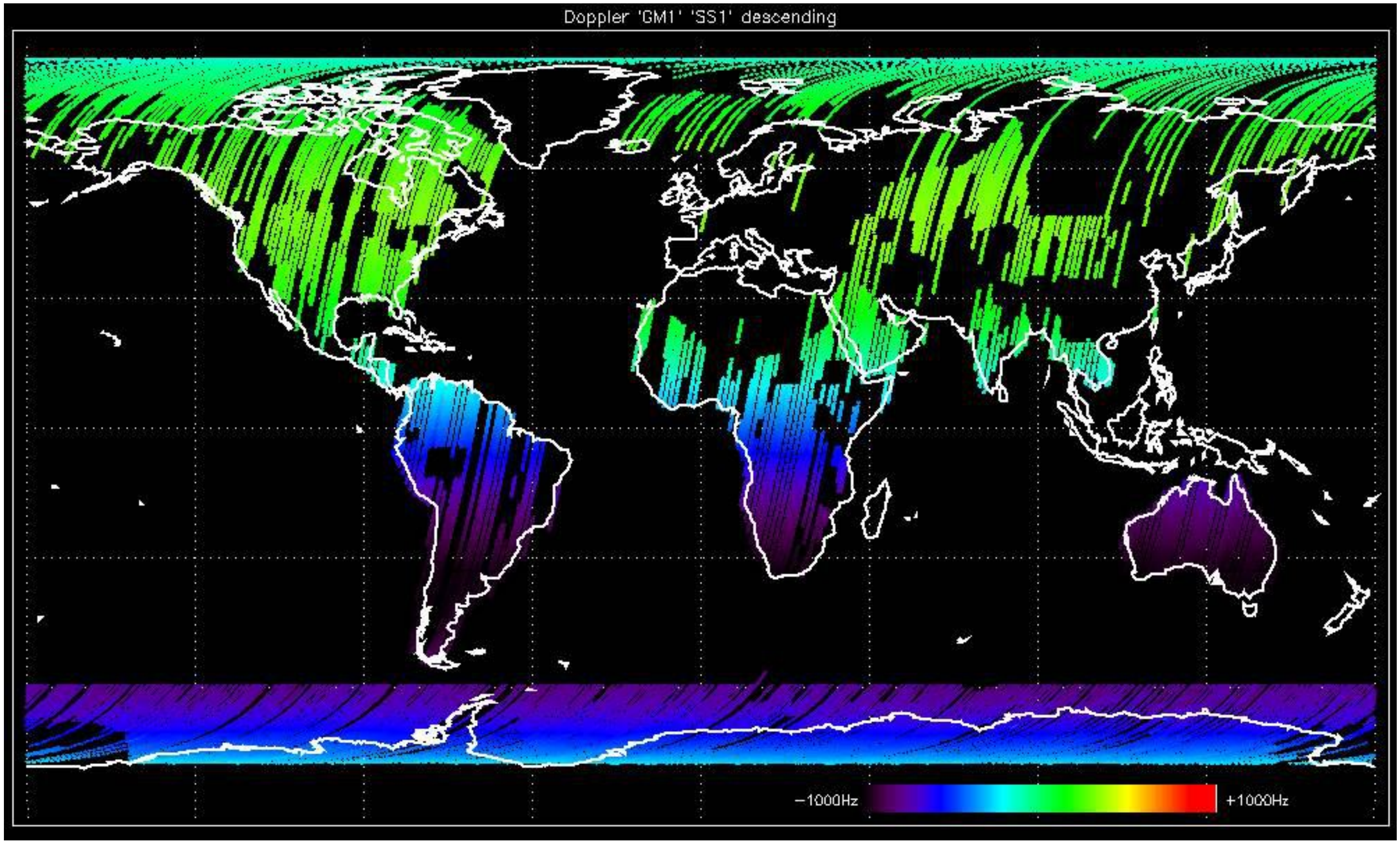

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
−30
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

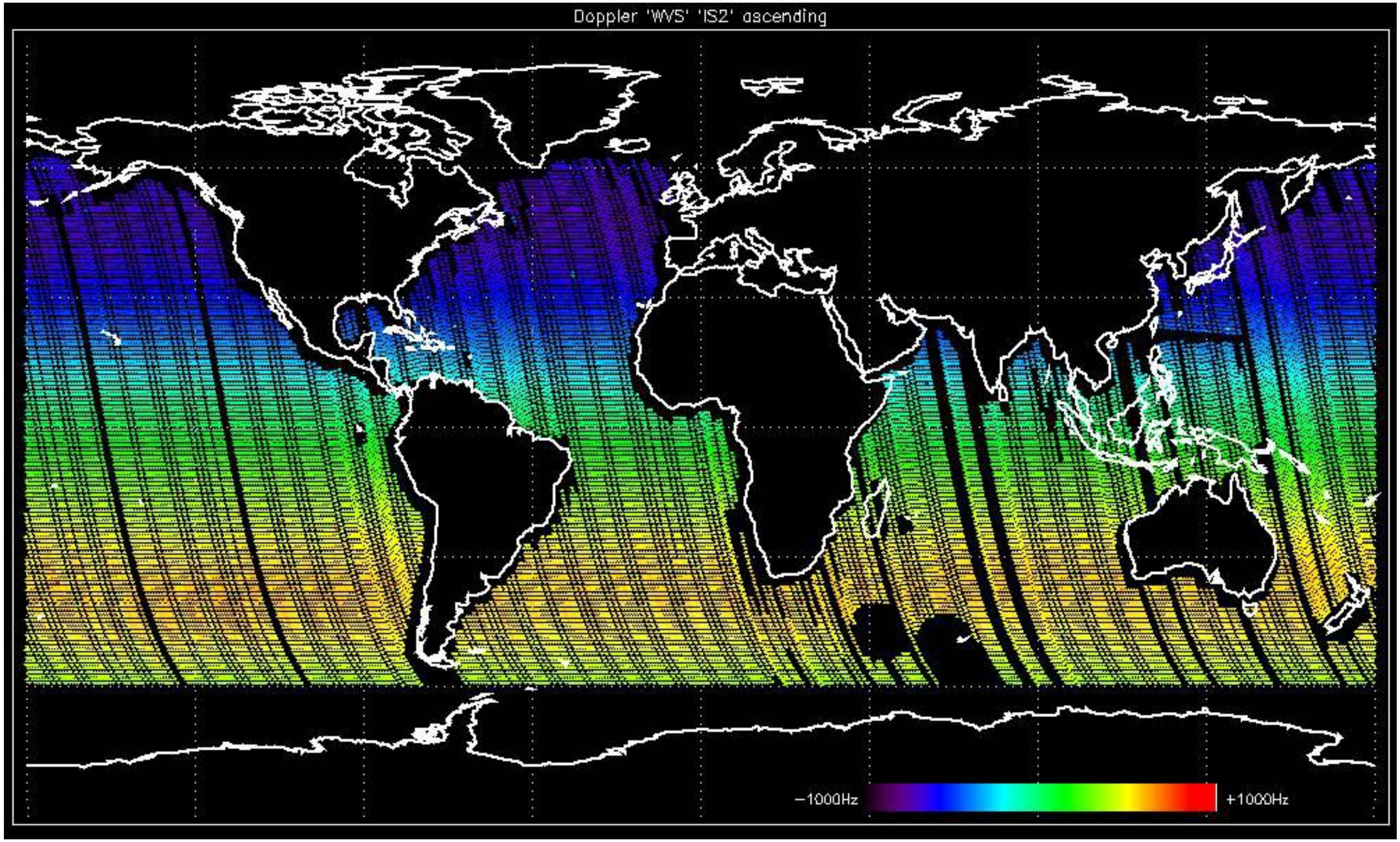
No anomalies observed.

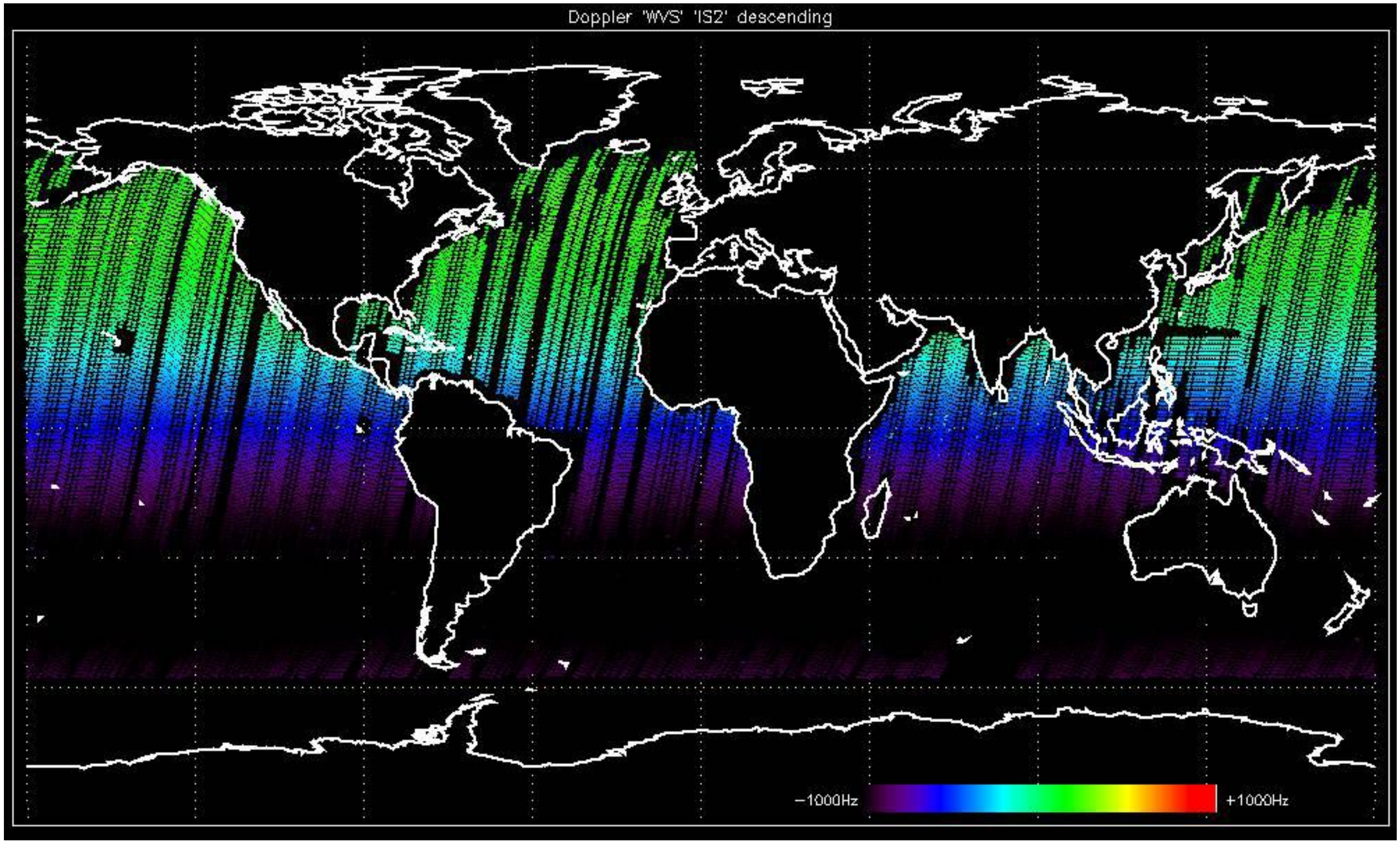
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

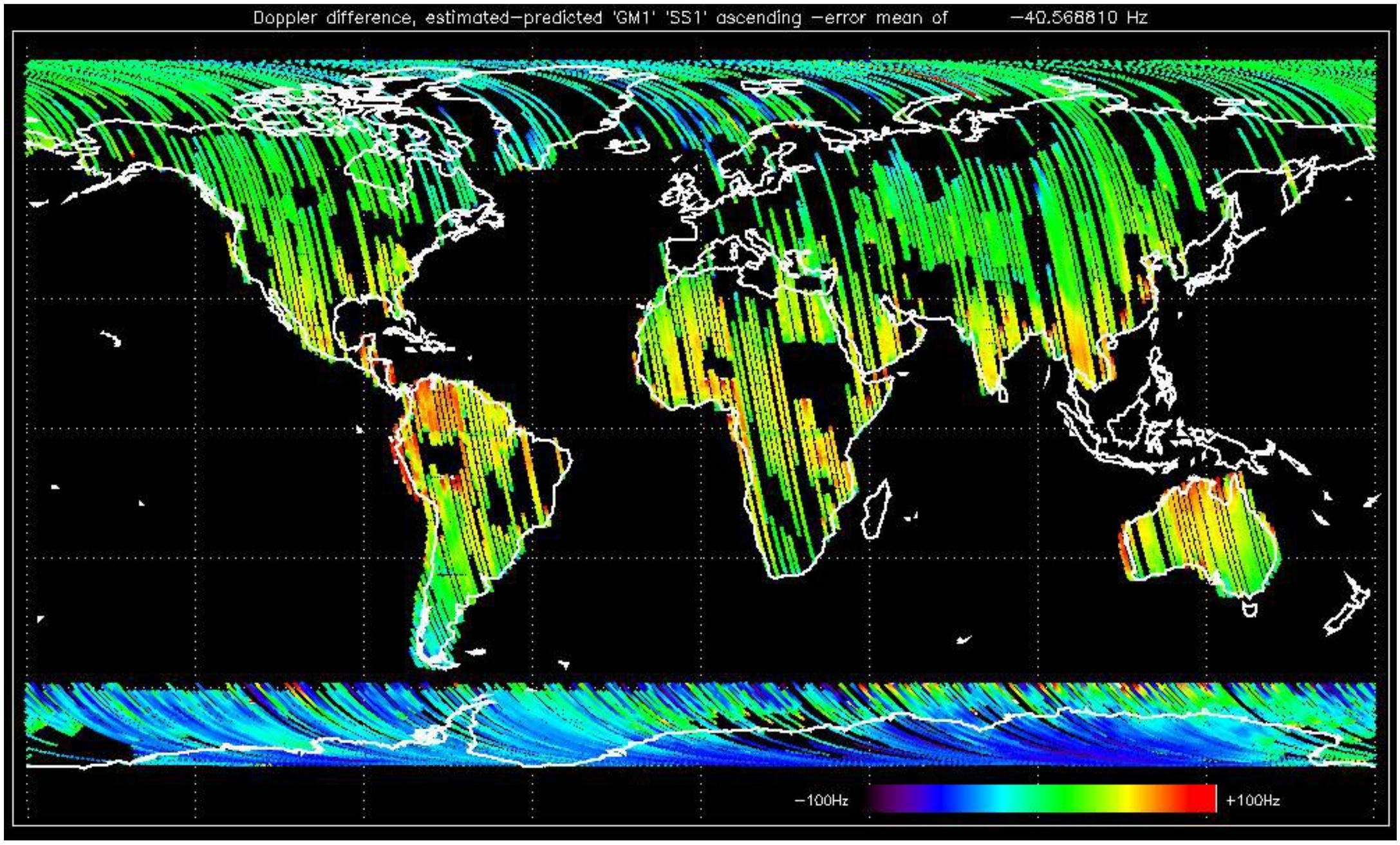
Preliminary report.The data is not yet controled

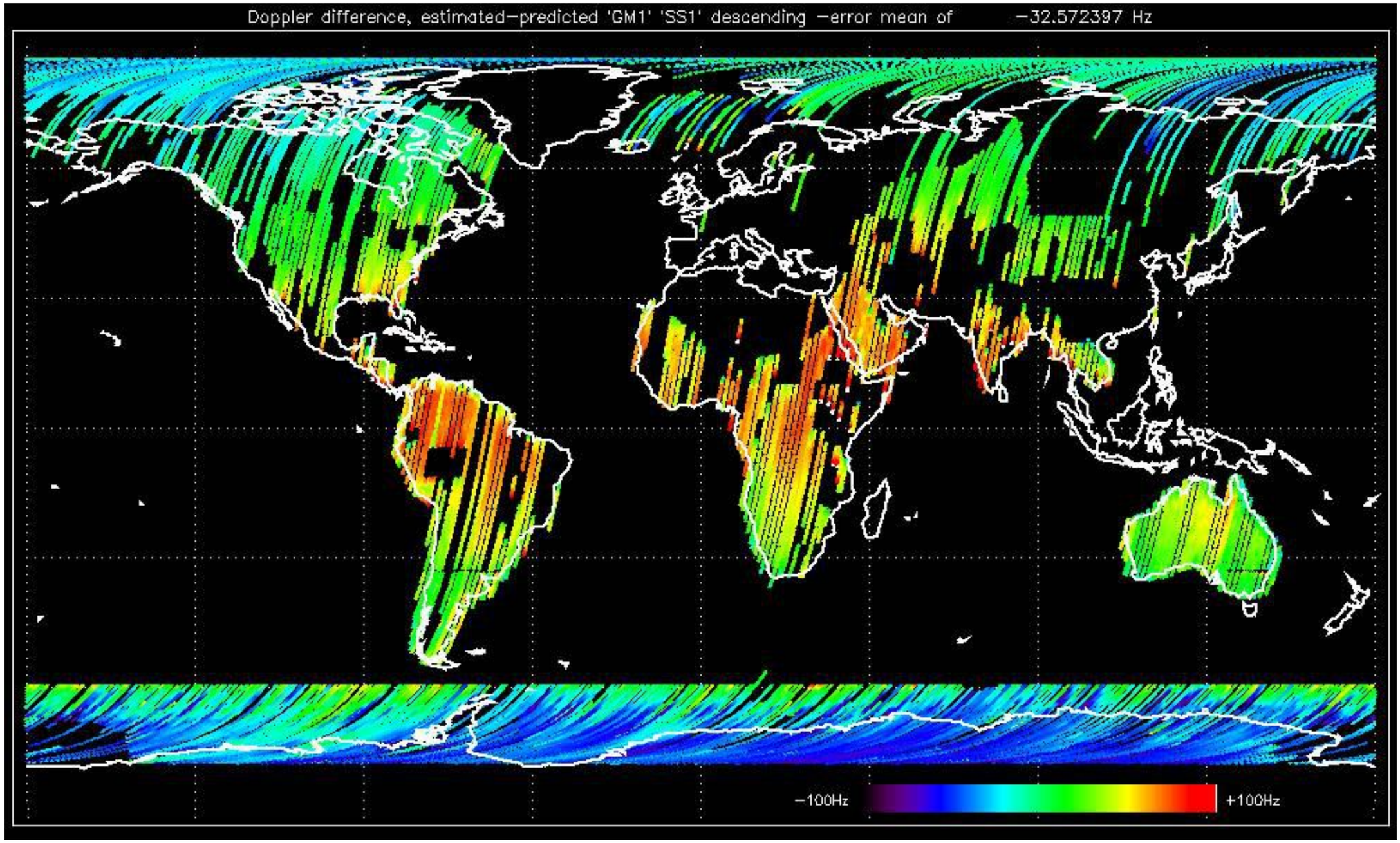

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

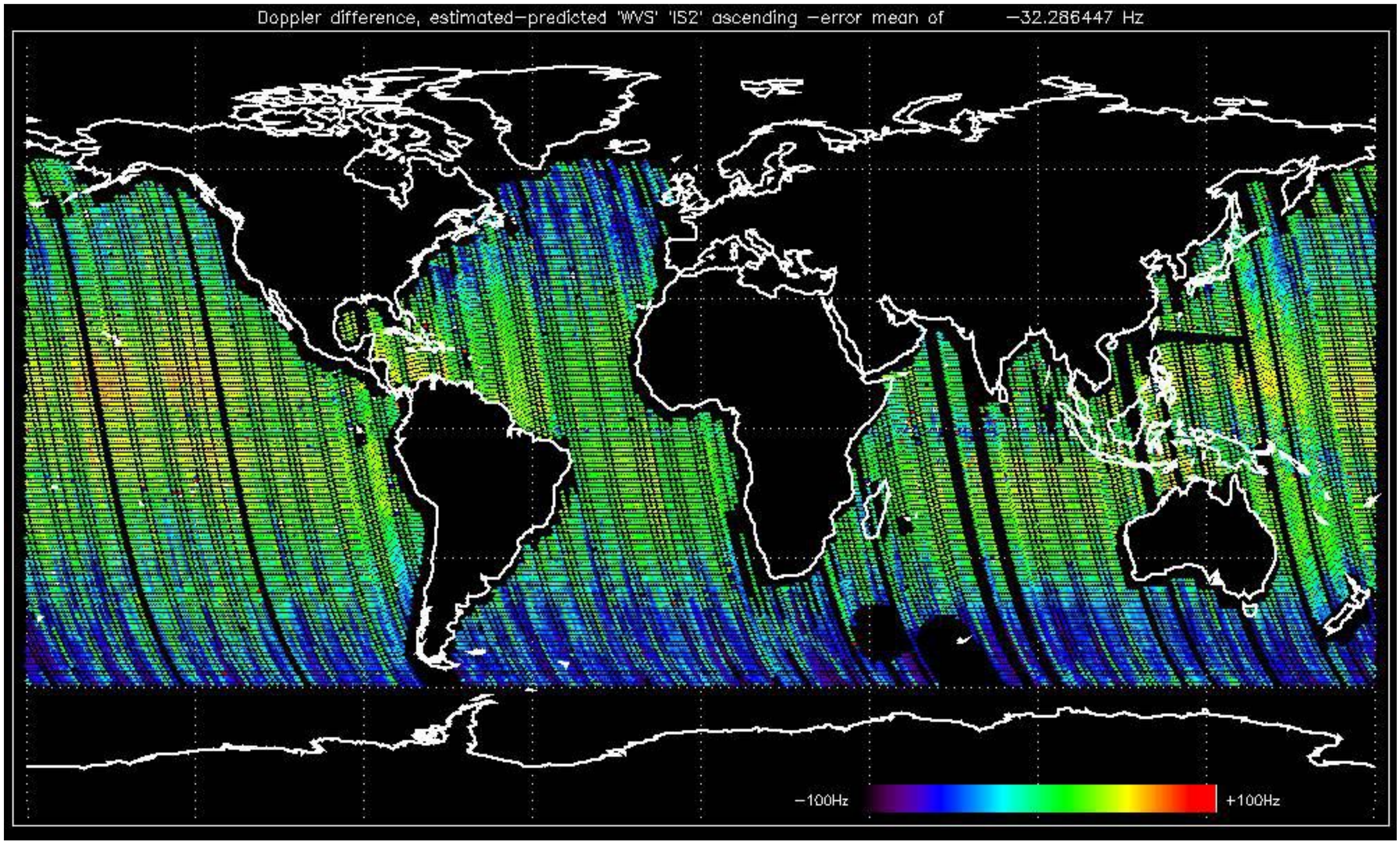

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

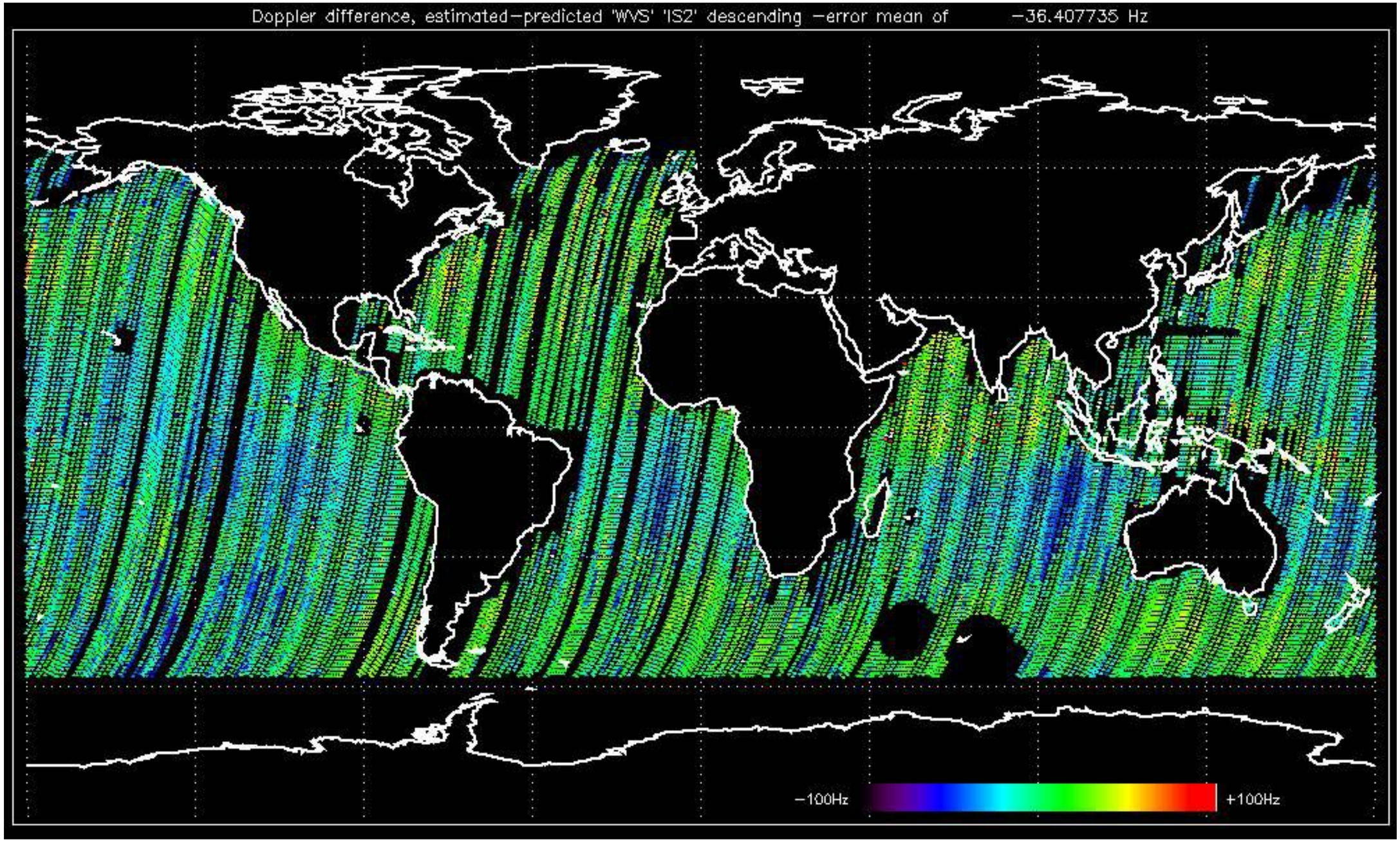

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −40.568810 Hz
−100Hz
+100Hz

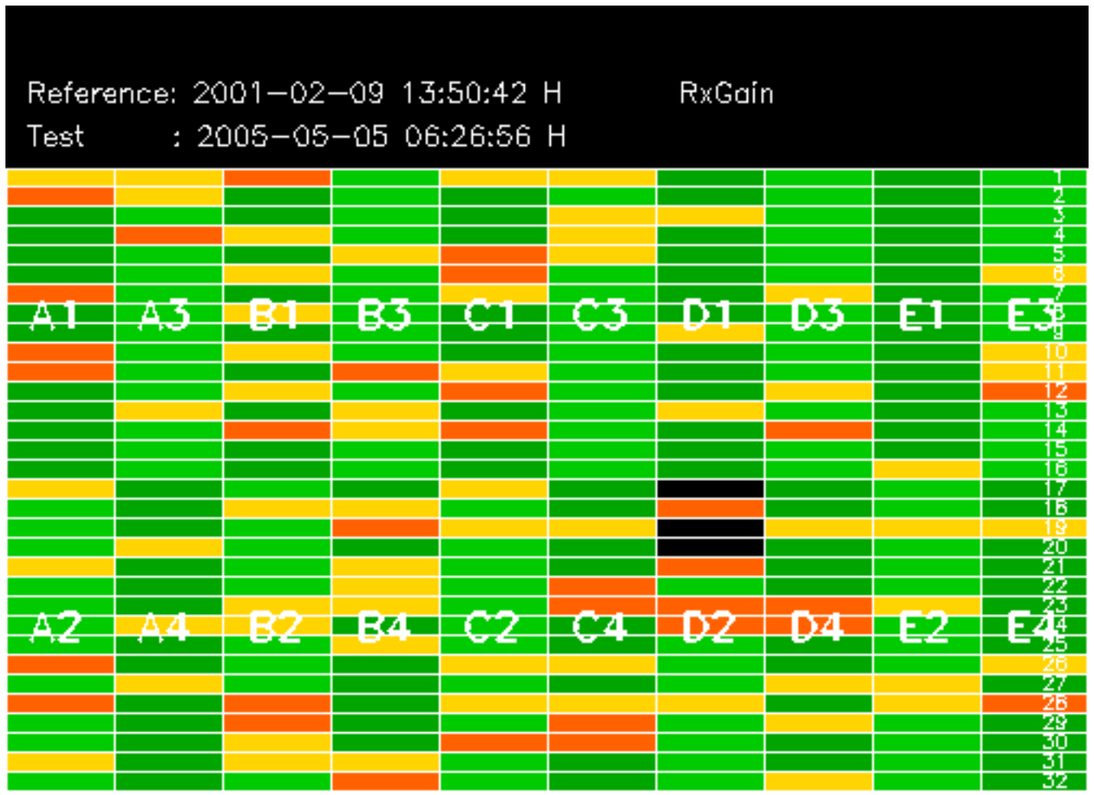

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -32.572397 Hz
-100Hz
+100Hz

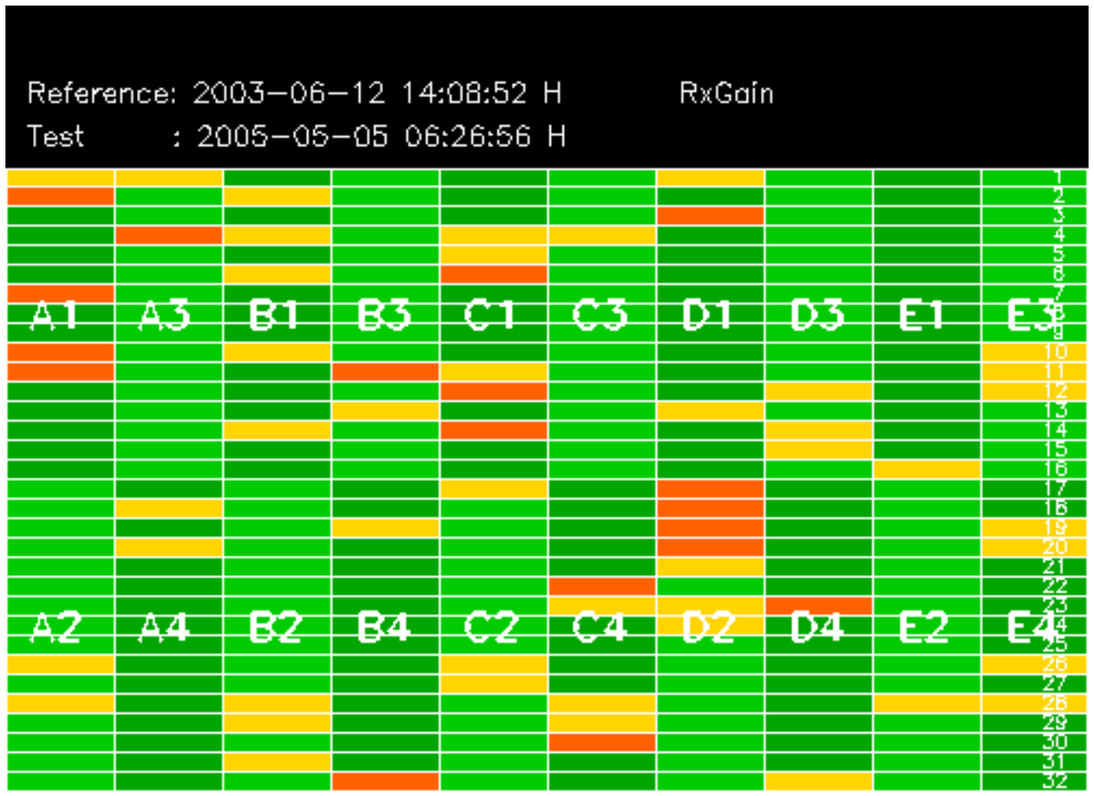

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.286447 Hz
−100Hz
+100Hz

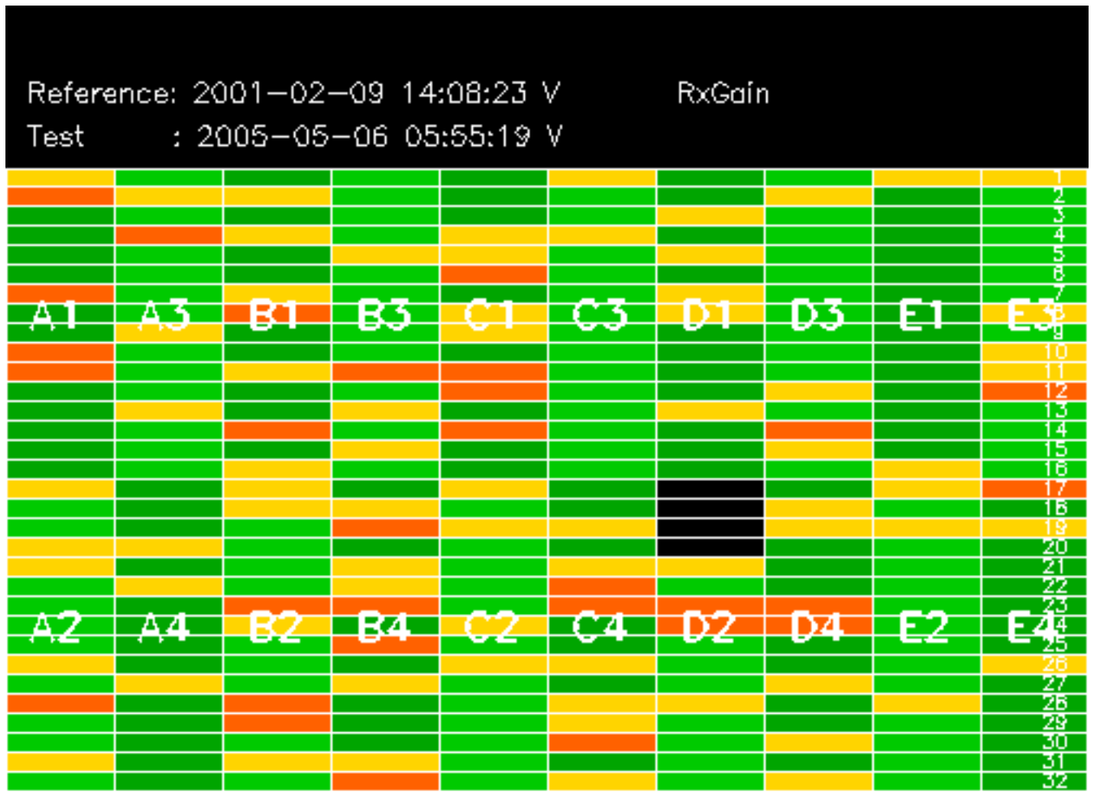

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.407735 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2005-05-05 06:26:56 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 : 2005-05-05 06:26:56 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 : 2005-05-06 05:55:19 V
RxGain
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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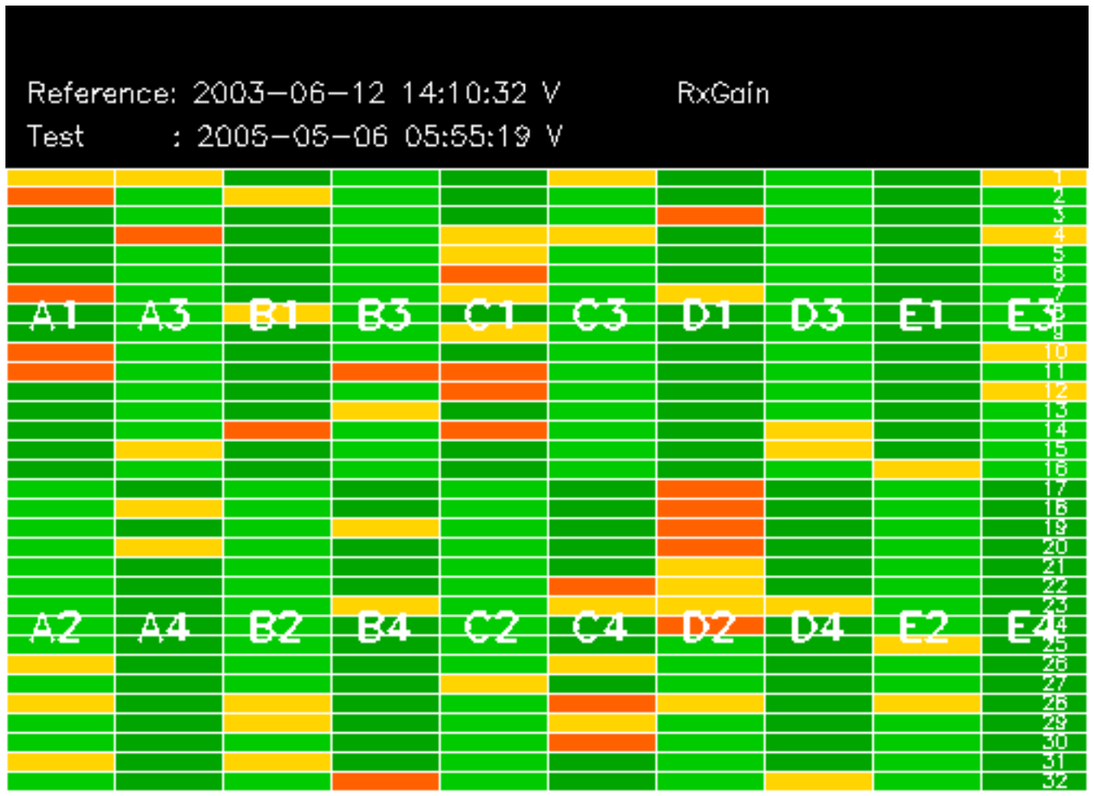
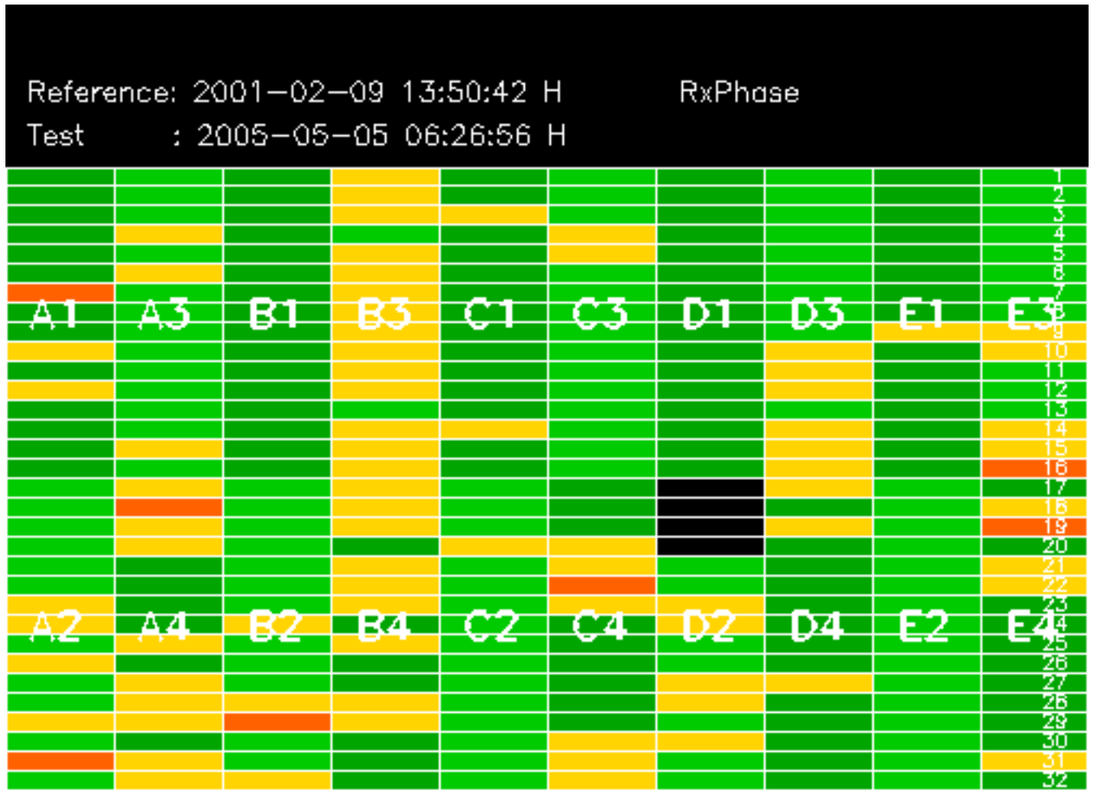
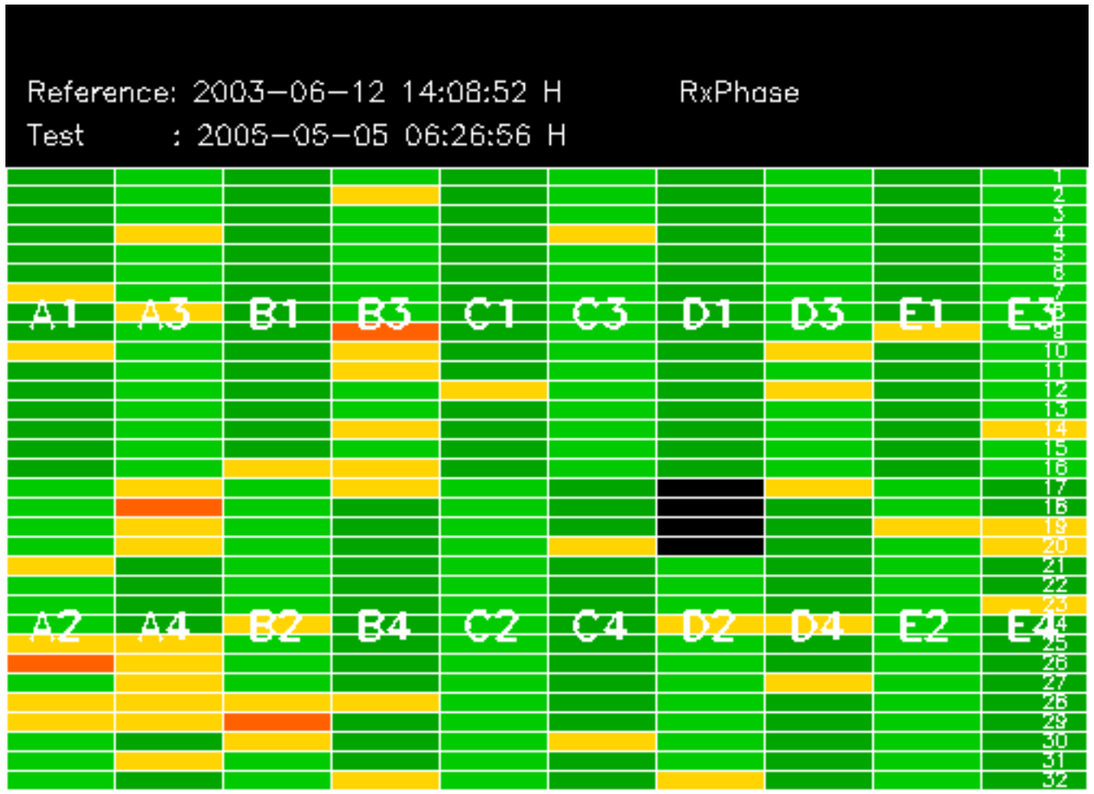

Reference: 2003-06-12 14:10:32 V
Test : 2005-05-06 05:55:19 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-05-05 06:26:56 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
RxPhase
Test : 2005-05-05 06:26:56 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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10
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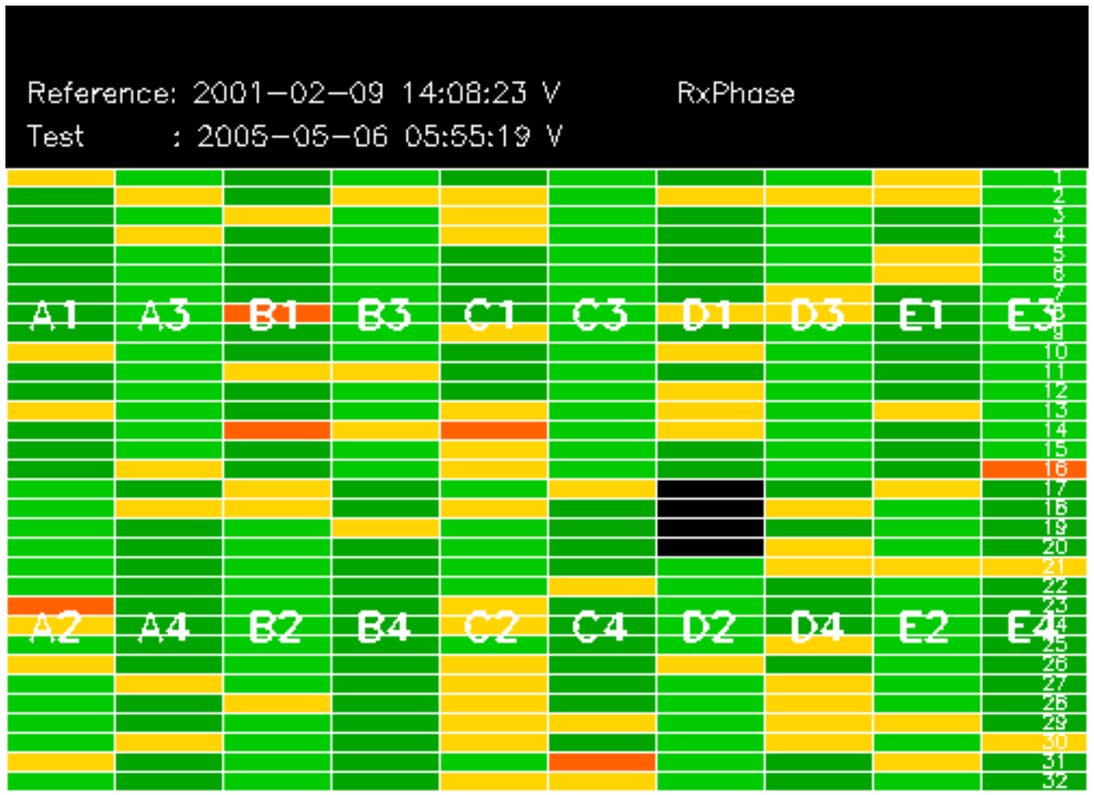
32


Reference: 2001-02-09 14:08:23 V
Test : 2005-05-06 05:55:19 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
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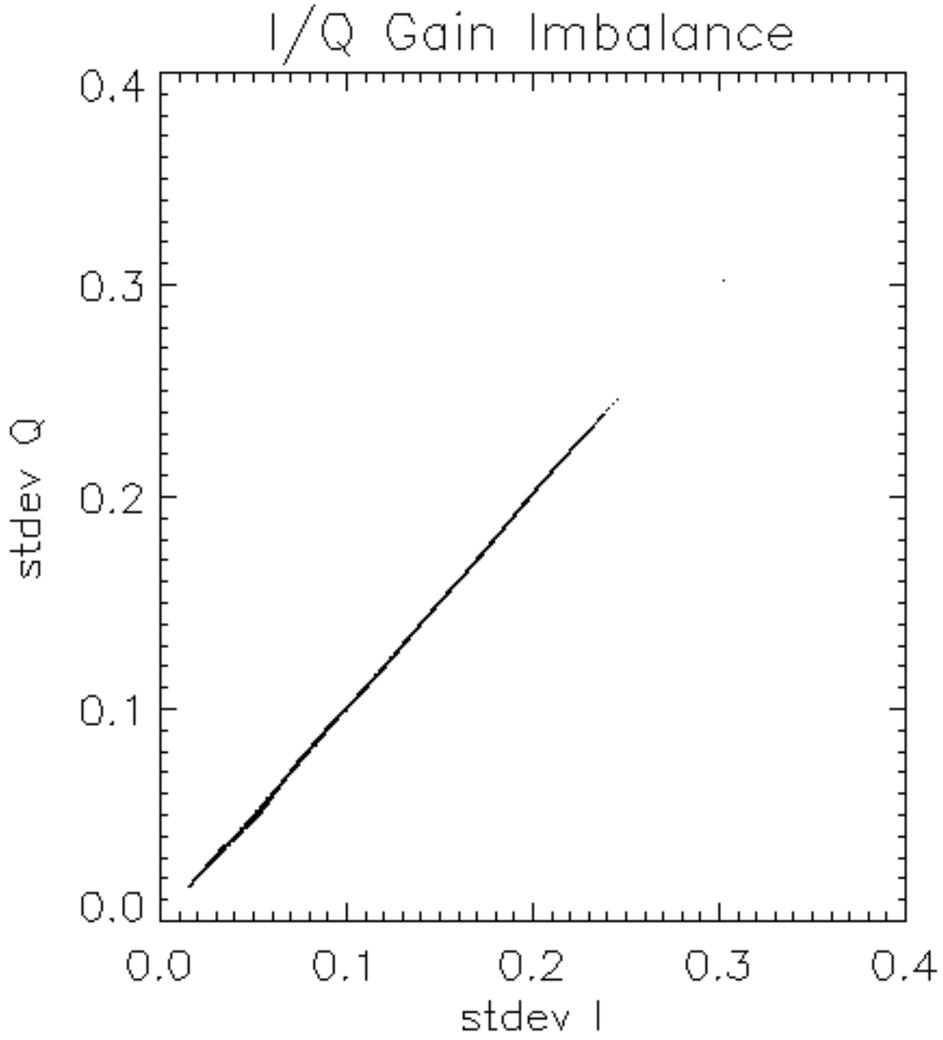
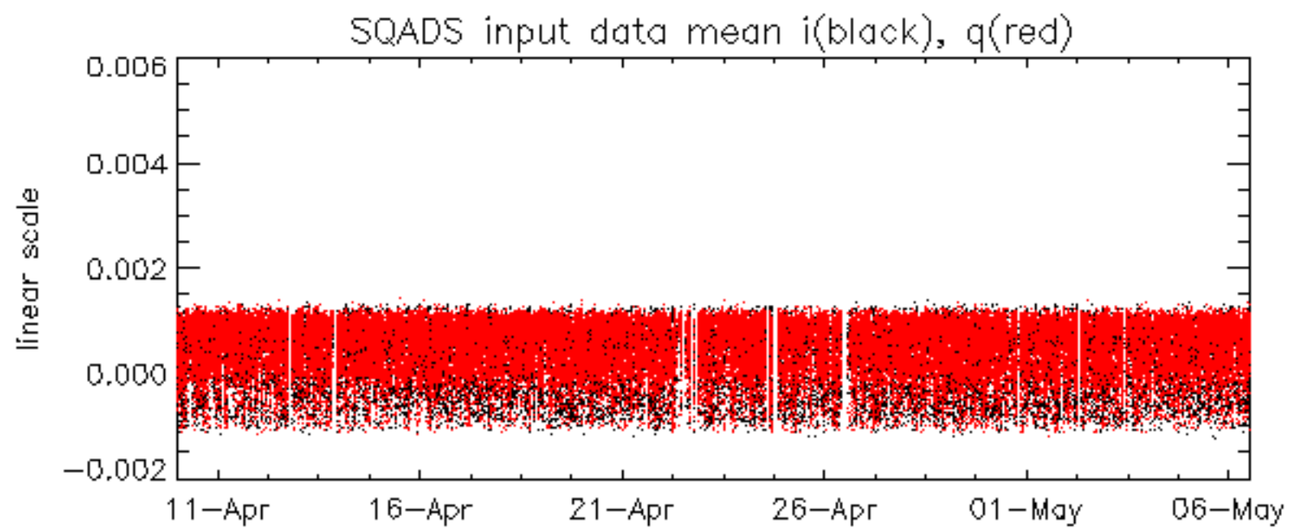
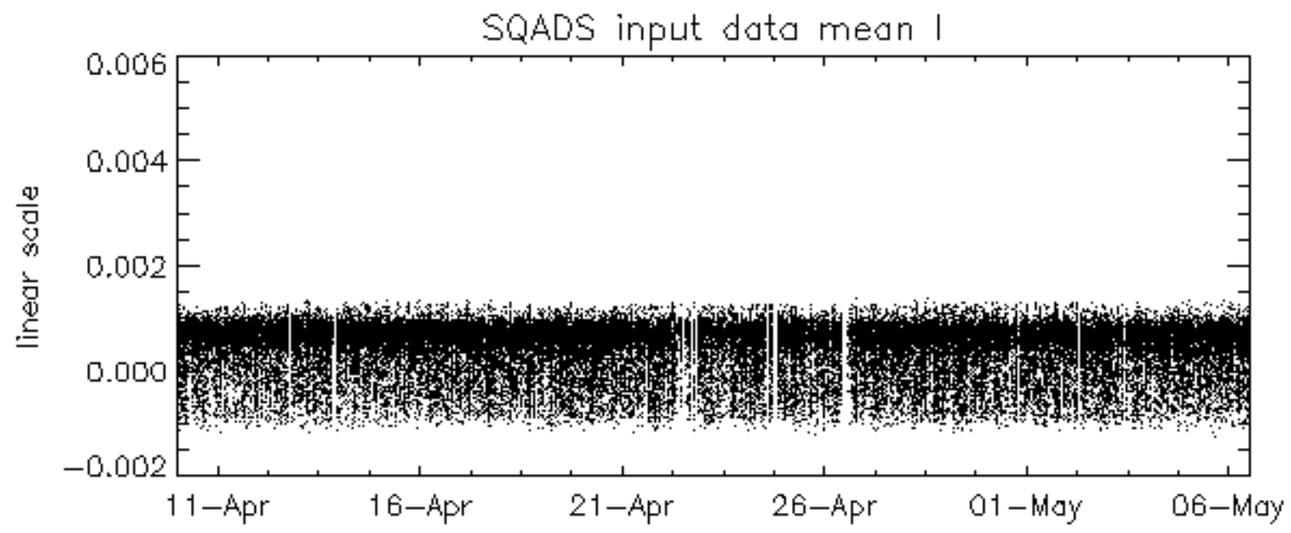
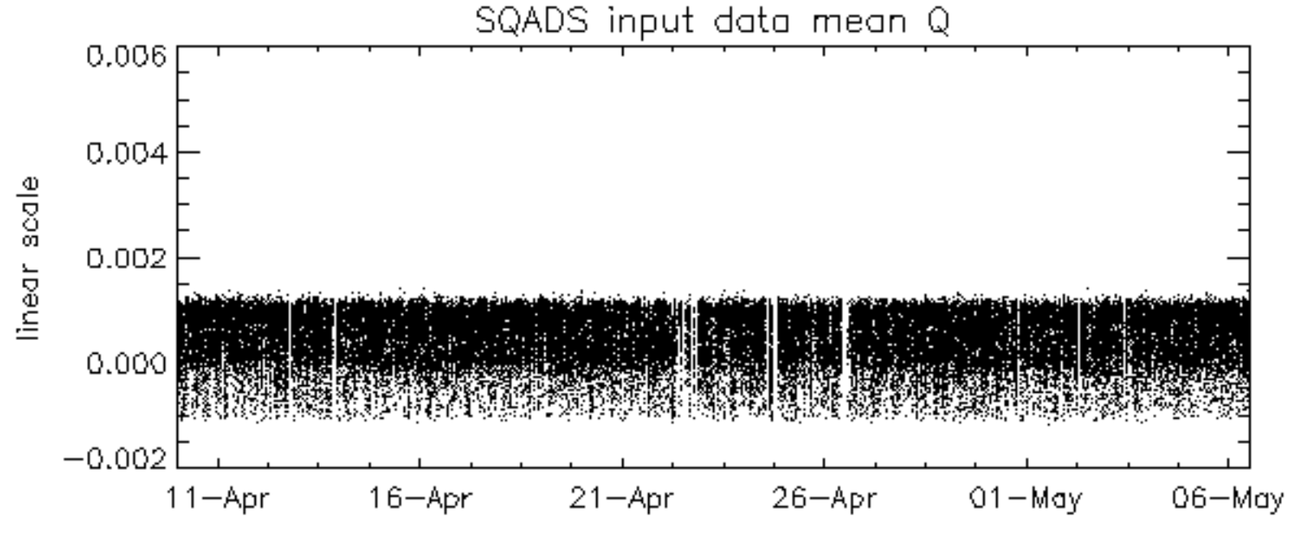
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

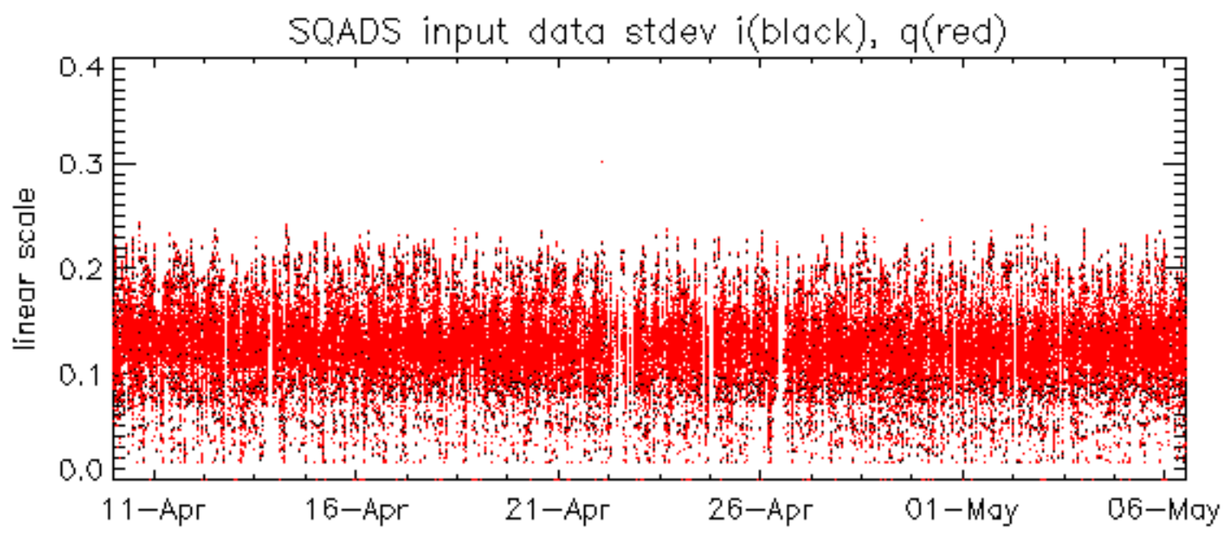

Reference: 2003-06-12 14:10:32 V
Test : 2005-05-06 05:55:19 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

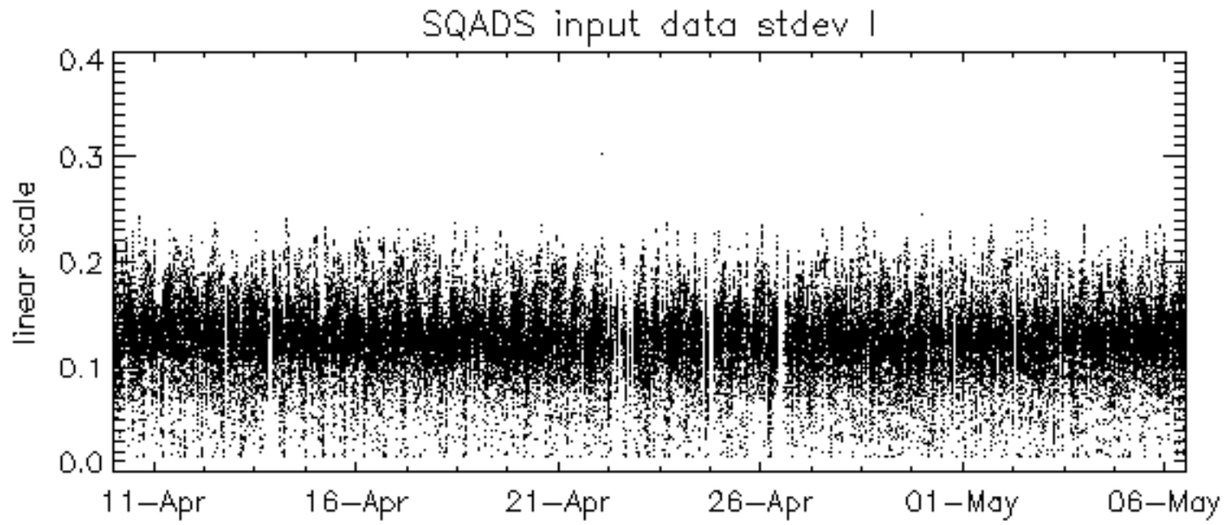

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

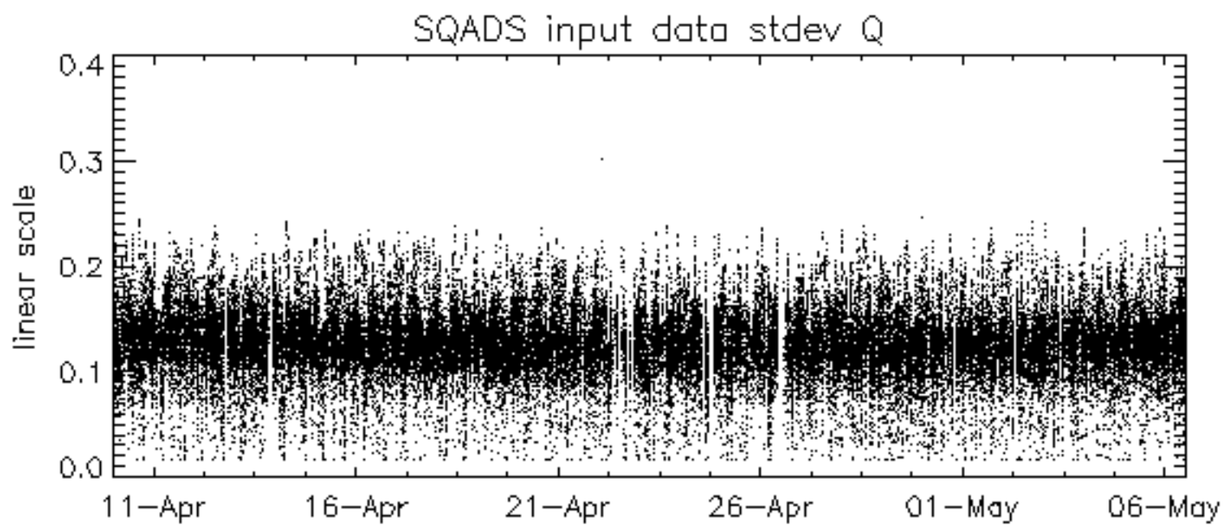

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

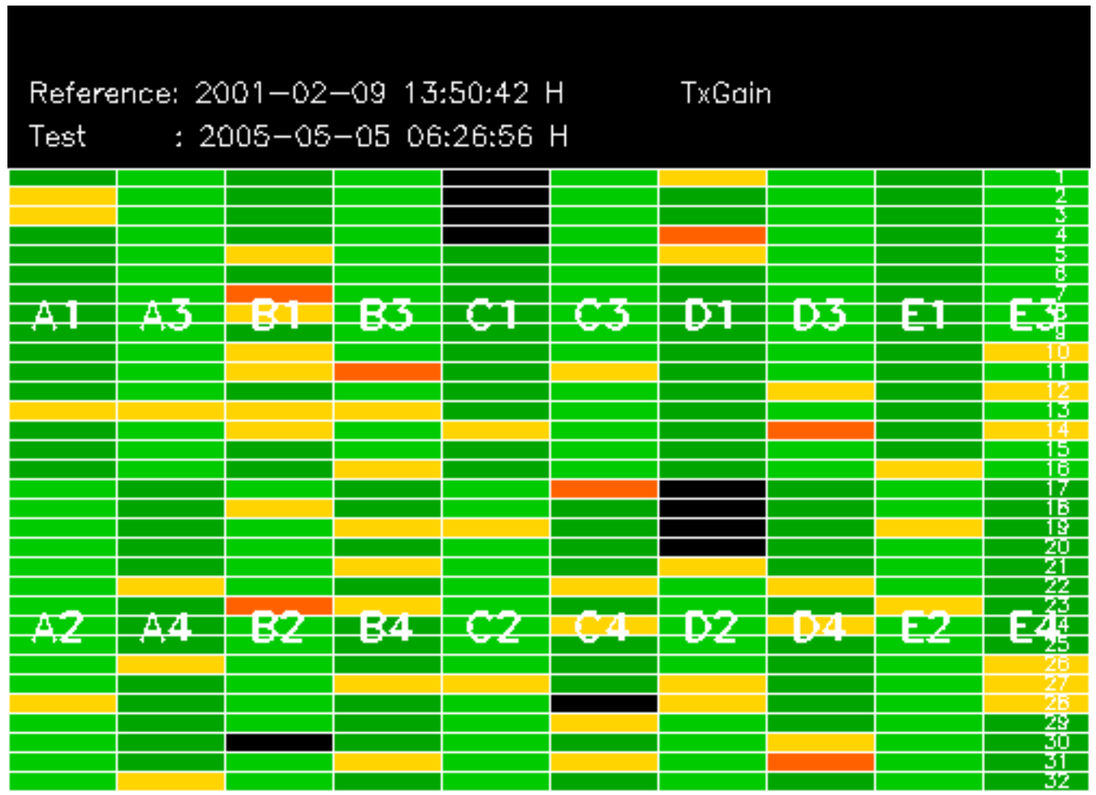

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May


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


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May


Reference: 2001-02-09 13:50:42 H
Test : 2005-05-05 06:26:56 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
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
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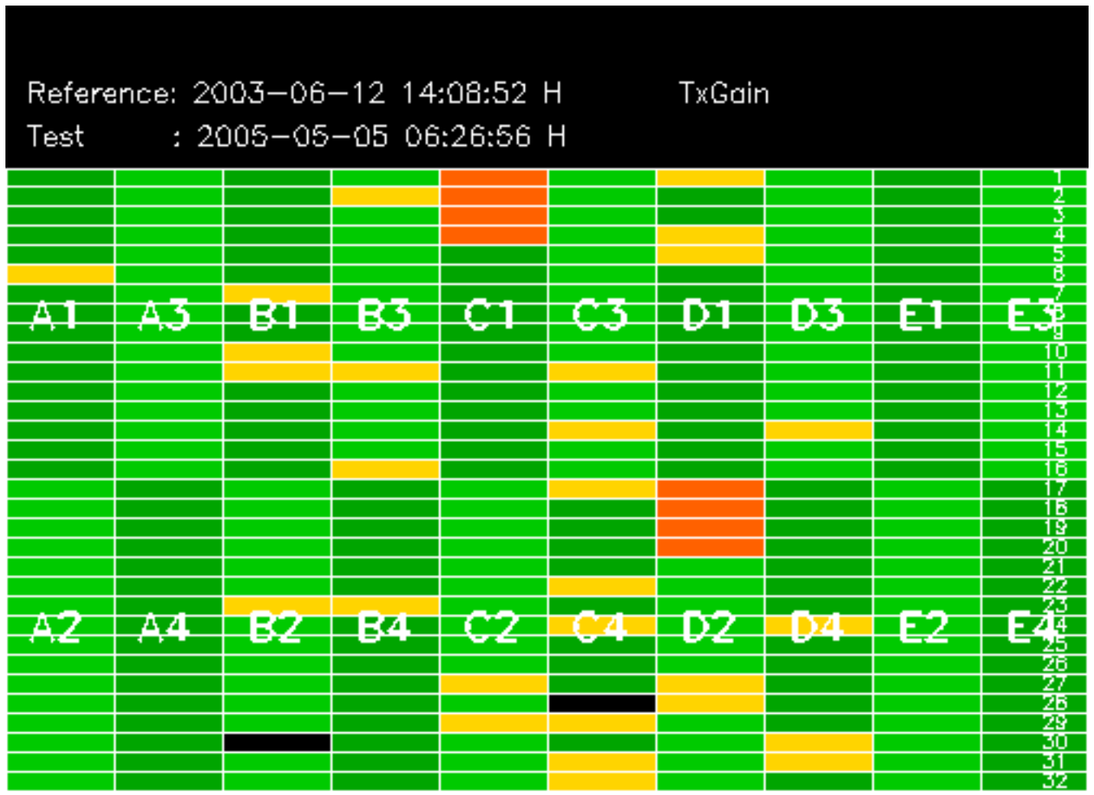
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-05-05 06:26:56 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
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


Reference: 2001-02-09 14:08:23 V
Test : 2005-05-06 05:55:19 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
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14
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22
23
24
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2005-05-06 05:55:19 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
13
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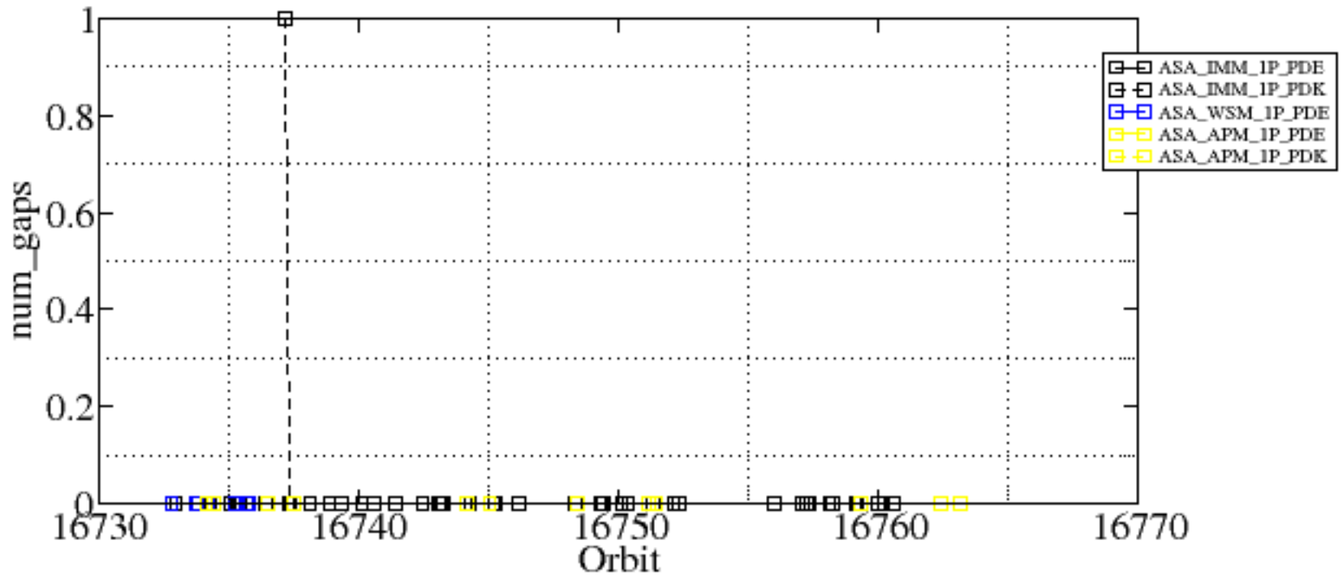
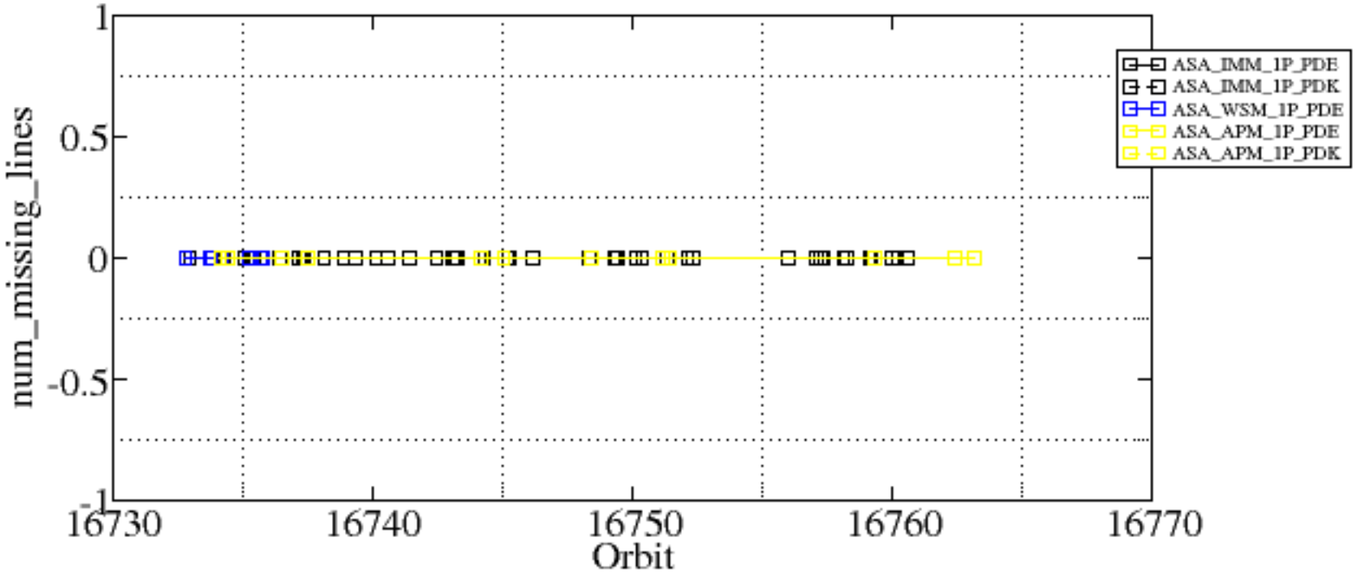
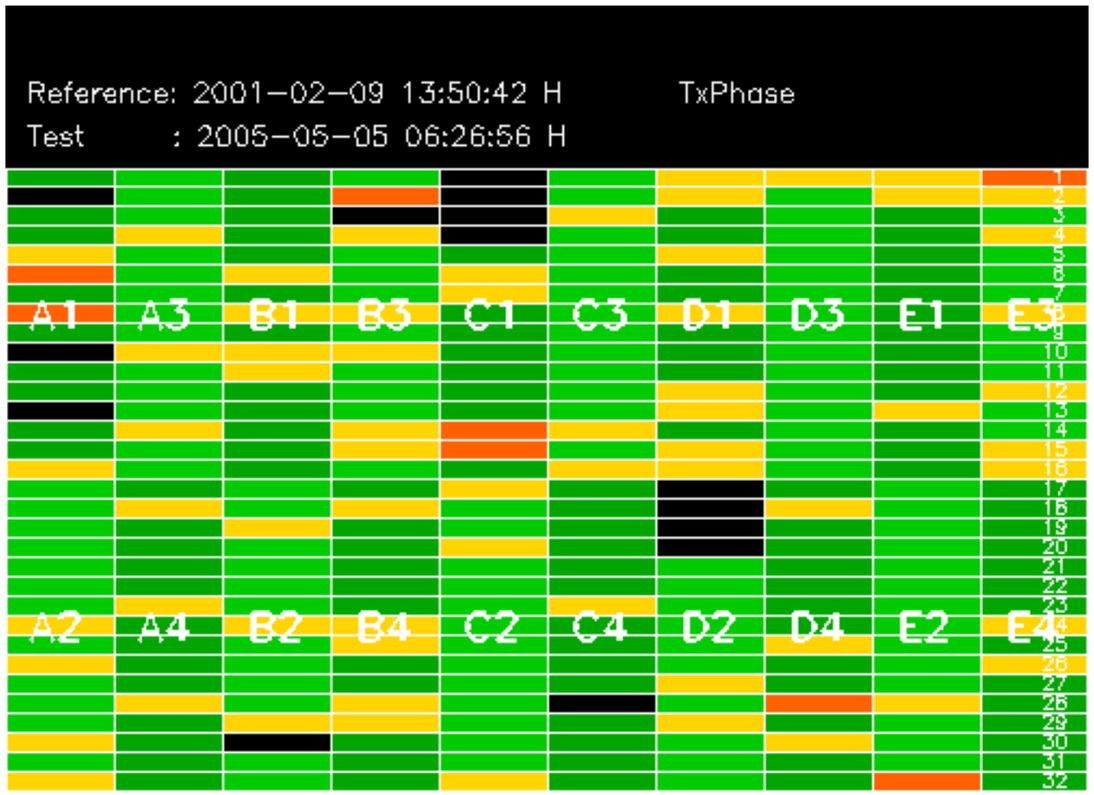
31
32

Summary of analysis for the last 3 days 2005051[345]
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_1PNPDK20050513_080407_000000682037_00150_16737_4253.N1 </td> <td>1 </td> <td>0 </td></tr>
</table>


num_gaps
1
0.8
0.6
0.4
0.2
0
16730
16740
16750
16760
16770
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WSM_1P_PDE
ASA_APM_1P_PDE
ASA_APM_1P_PDK


num_missing_lines
1
0.5
0
-0.5
-1
16730
16740
16750
16760
16770
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_WSM_1P_PDE
ASA_APM_1P_PDE
ASA_APM_1P_PDK


Reference: 2001-02-09 13:50:42 H
Test : 2005-05-05 06:26:56 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
5
6
7
8
9
10
11
12
13
14
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16
17
18
19
20
21
22
23
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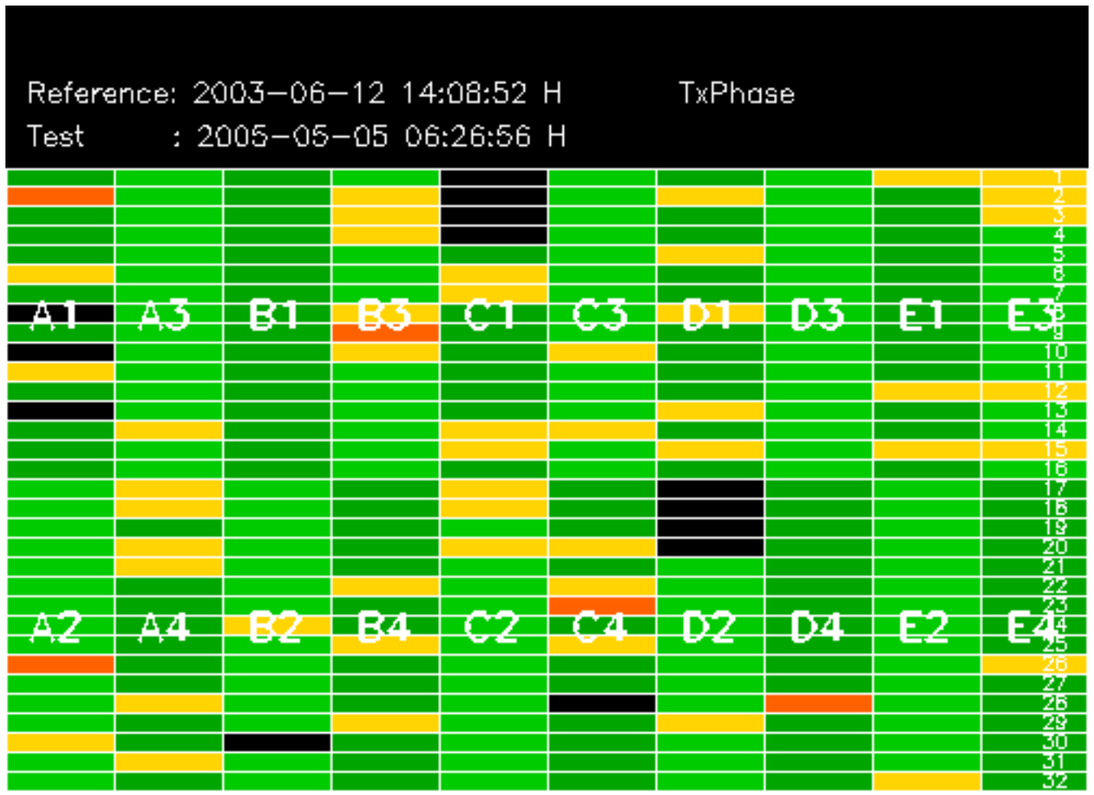
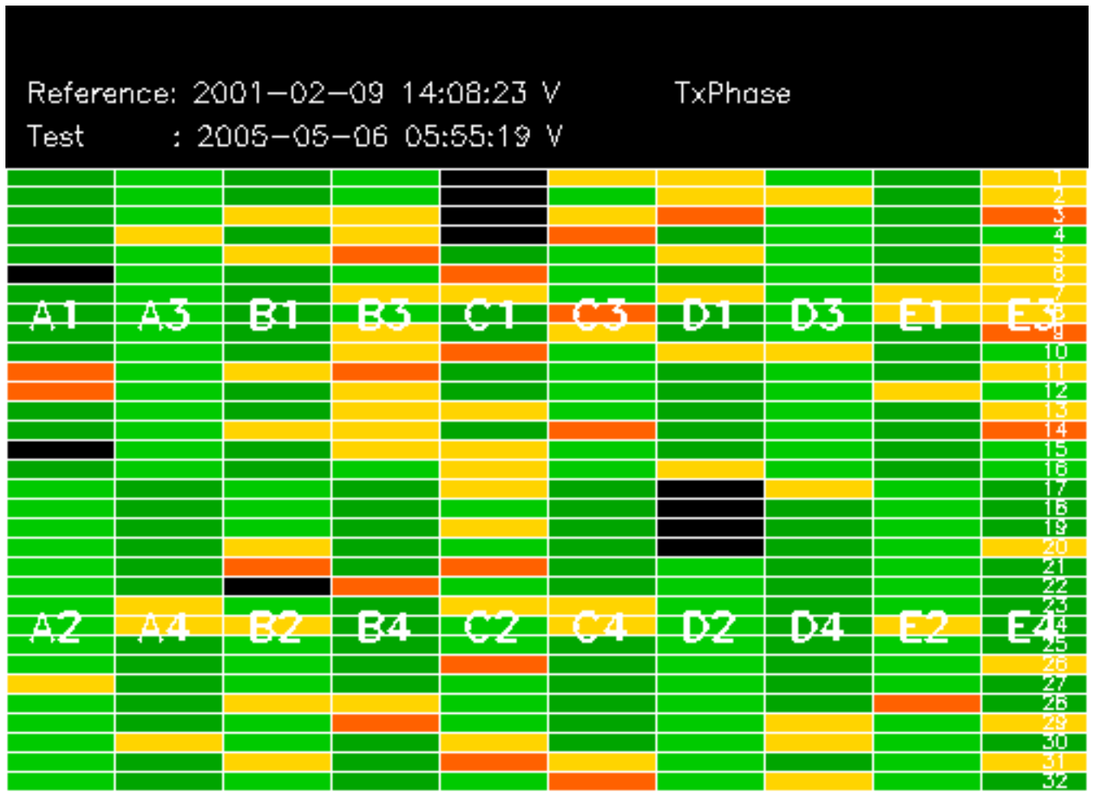
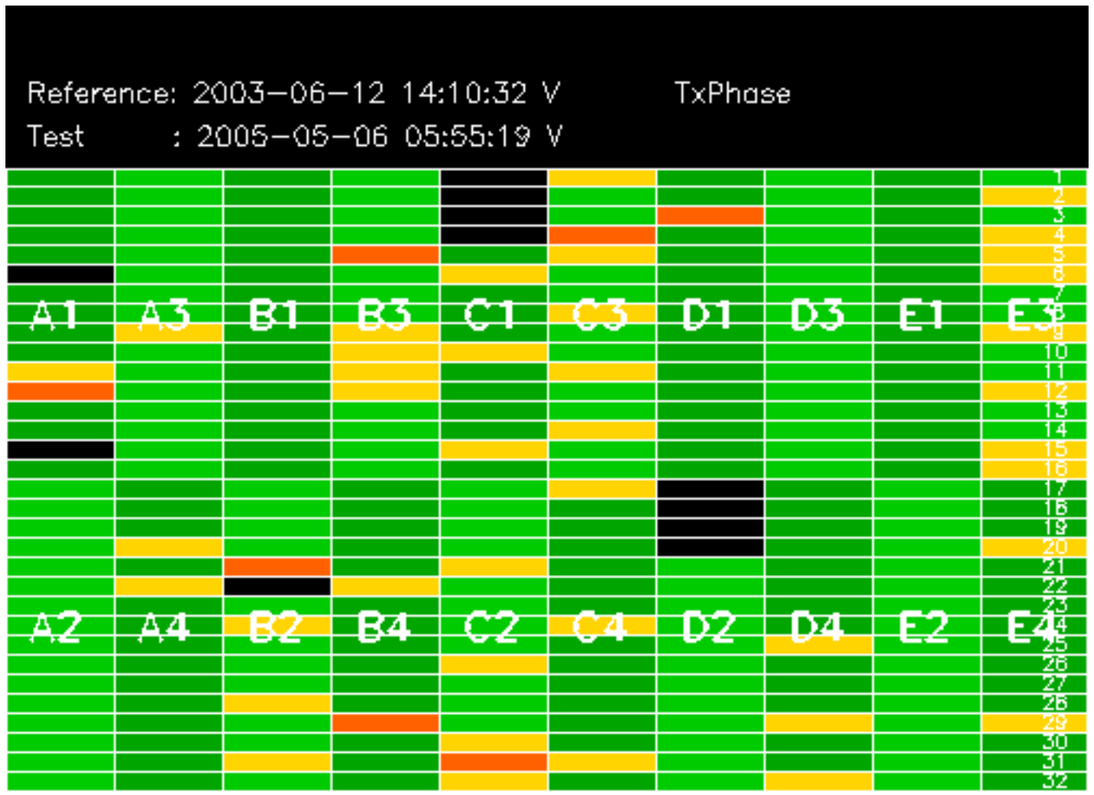
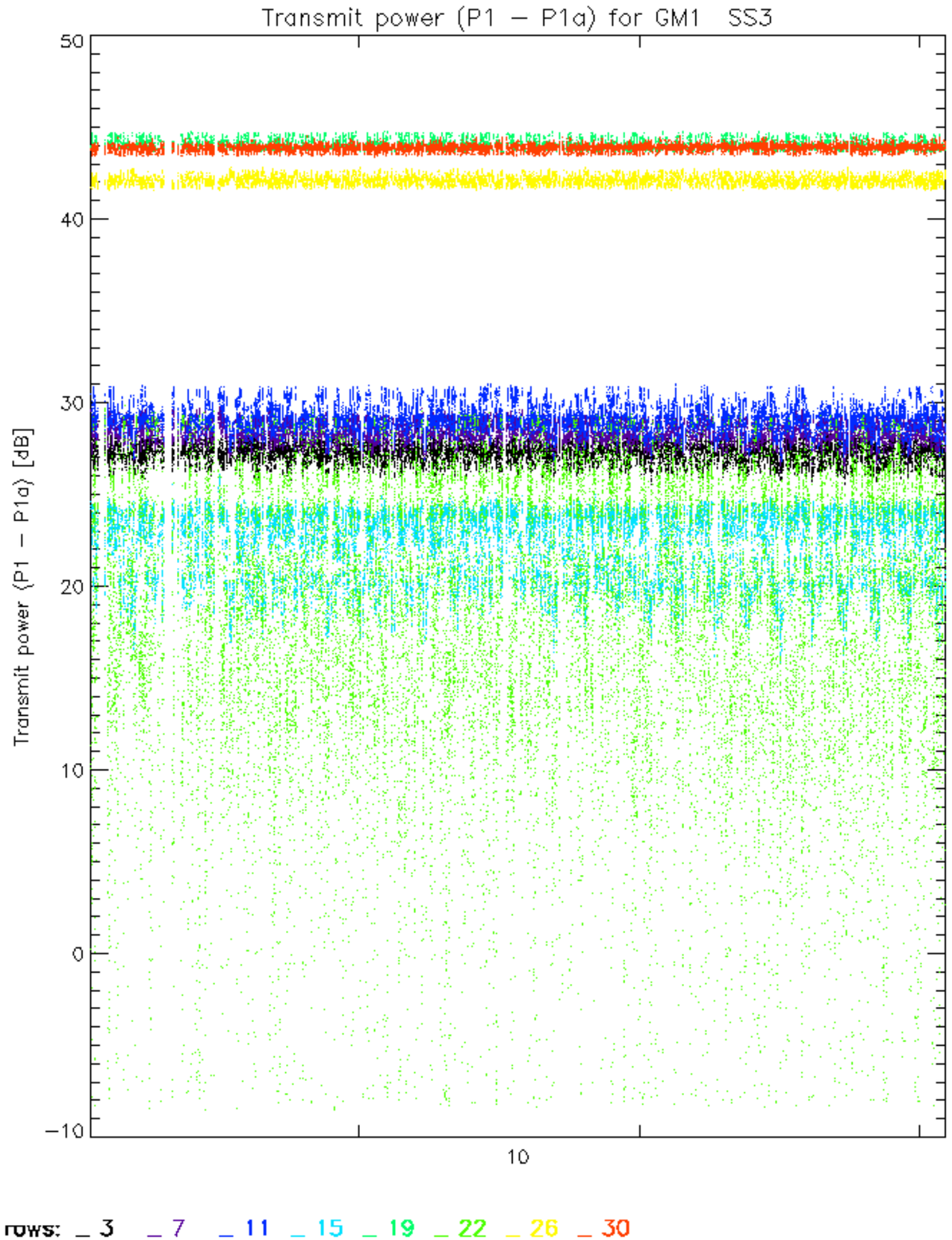
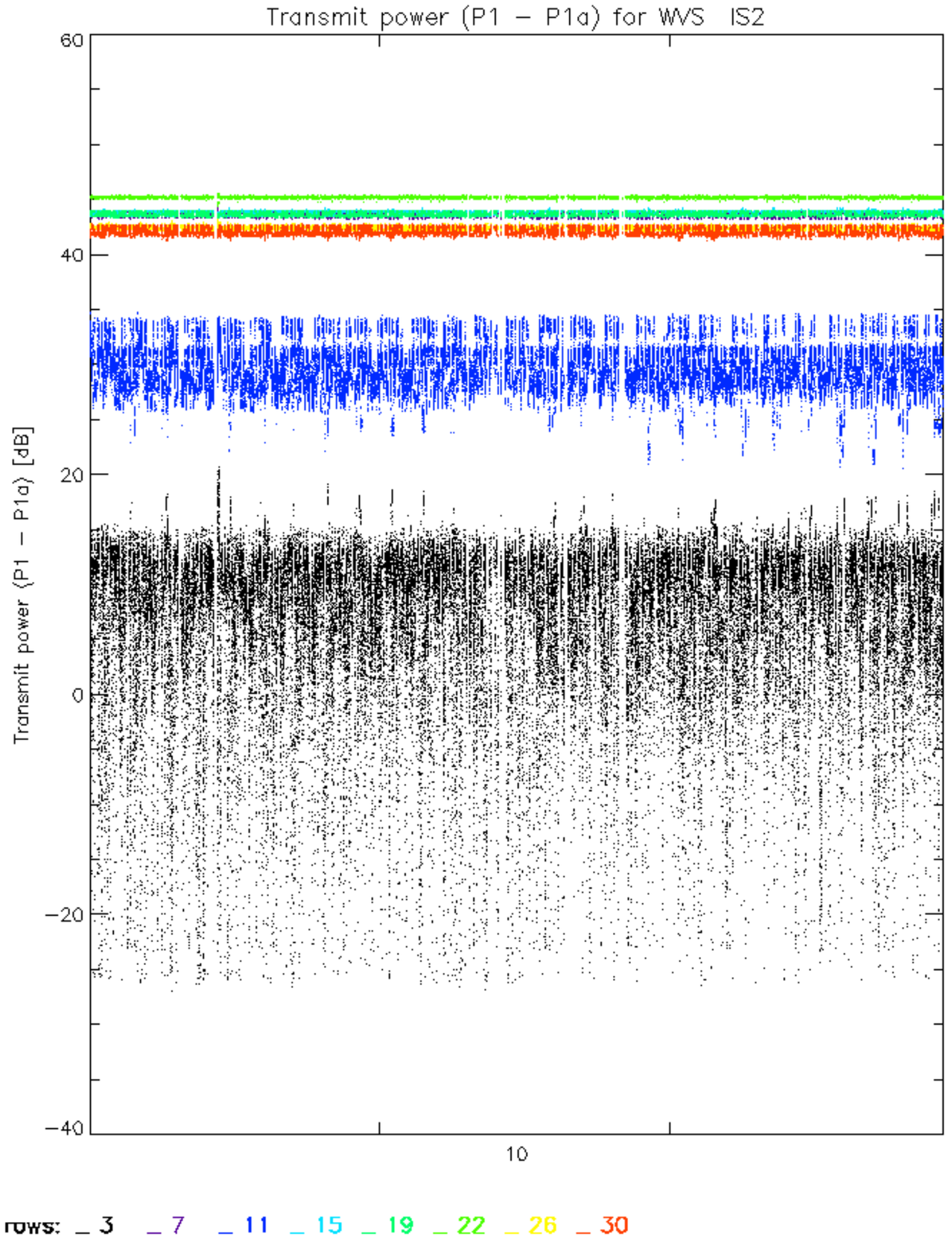
25
26
27
28
29
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-05-05 06:26:56 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 : 2005-05-06 05:55:19 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 : 2005-05-06 05:55:19 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power (P1 – P1a) [dB]
10
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.