PRELIMINARY REPORT OF 050511

last update on Wed May 11 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 2005-05-10 00:00:00 to 2005-05-11 10:50:01

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

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	11	5	2
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	11	5	2
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	11	5	2
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	11	5	2

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	15	7	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	15	7	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	15	7	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	15	7	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	-3.347183	0.006917	-0.013322
7	P1	-3.111514	0.013333	-0.000179
11	P1	-4.660905	0.027350	0.025481
15	P1	-5.557474	0.045108	0.090737
19	P1	-3.717737	0.004122	-0.031696
22	P1	-4.583958	0.012997	-0.047531
26	P1	-4.885853	0.019542	0.036815
30	P1	-7.145607	0.028476	0.033096
3	P1	-15.733975	0.082694	0.141890
7	P1	-15.507992	0.093642	0.032874
11	P1	-21.245686	0.237316	-0.176207
15	P1	-11.447106	0.033830	0.119343
19	P1	-14.330135	0.033303	-0.062514
22	P1	-15.911966	0.336901	-0.194466
26	P1	-17.626568	0.191963	-0.067245
30	P1	-17.867159	0.271471	-0.041508

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.050339	0.081490	-0.042877
7	P2	-22.229027	0.102537	-0.038819
11	P2	-14.150565	0.104971	0.162314
15	P2	-7.090289	0.090429	-0.076059
19	P2	-9.650766	0.093384	0.000765
22	P2	-16.885515	0.094509	-0.028986
26	P2	-16.481230	0.094656	-0.053563
30	P2	-18.824247	0.082400	0.015782

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.167797	0.003841	-0.010915

7	P3	-8.167797	0.003841	-0.010915
11	P3	-8.167796	0.003841	-0.010921
15	P3	-8.167796	0.003841	-0.010921
19	P3	-8.167796	0.003841	-0.010921
22	P3	-8.167796	0.003841	-0.010921
26	P3	-8.167796	0.003841	-0.010921
30	P3	-8.167796	0.003841	-0.010917

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	-2.765066	0.011969	-0.049096
7	P1	-2.994883	0.030620	0.040832
11	P1	-3.970520	0.017746	0.048177
15	P1	-3.531709	0.023194	0.028649
19	P1	-3.626592	0.014688	-0.014711
22	P1	-5.664816	0.049218	0.044718
26	P1	-7.313831	0.024115	-0.002288
30	P1	-6.282565	0.059999	0.044666
3	P1	-10.770035	0.044492	-0.126816
7	P1	-10.403596	0.153362	-0.057801
11	P1	-12.554937	0.102678	0.044102
15	P1	-11.652103	0.069174	0.095628
19	P1	-15.620346	0.062687	-0.009301
22	P1	-25.302860	2.114654	-1.066529
26	P1	-15.655704	0.313477	-0.097206
30	P1	-20.189531	1.220892	-0.276828

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.768091	0.037800	-0.072372
7	P2	-22.274775	0.046730	0.082826
11	P2	-10.051052	0.055612	0.106731
15	P2	-5.074128	0.037939	-0.074915
19	P2	-6.897722	0.052742	-0.043014
22	P2	-7.103138	0.035921	-0.027869
26	P2	-23.910496	0.037148	-0.053810
30	P2	-21.937021	0.040510	-0.047570

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.005169	0.003563	0.003661
7	P3	-8.005222	0.003552	0.004020
11	P3	-8.005175	0.003562	0.003834
15	P3	-8.005264	0.003561	0.003976
19	P3	-8.005315	0.003562	0.004357
22	P3	-8.005189	0.003545	0.003748
26	P3	-8.005158	0.003558	0.004001
30	P3	-8.005209	0.003573	0.003672

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	0.000463784
	stdev	2.23048e-07
MEAN Q	mean	0.000483391
	stdev	2.39135e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127615
	stdev	0.00105286
STDEV Q	mean	0.127868
	stdev	0.00106362

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2005051[901]
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

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

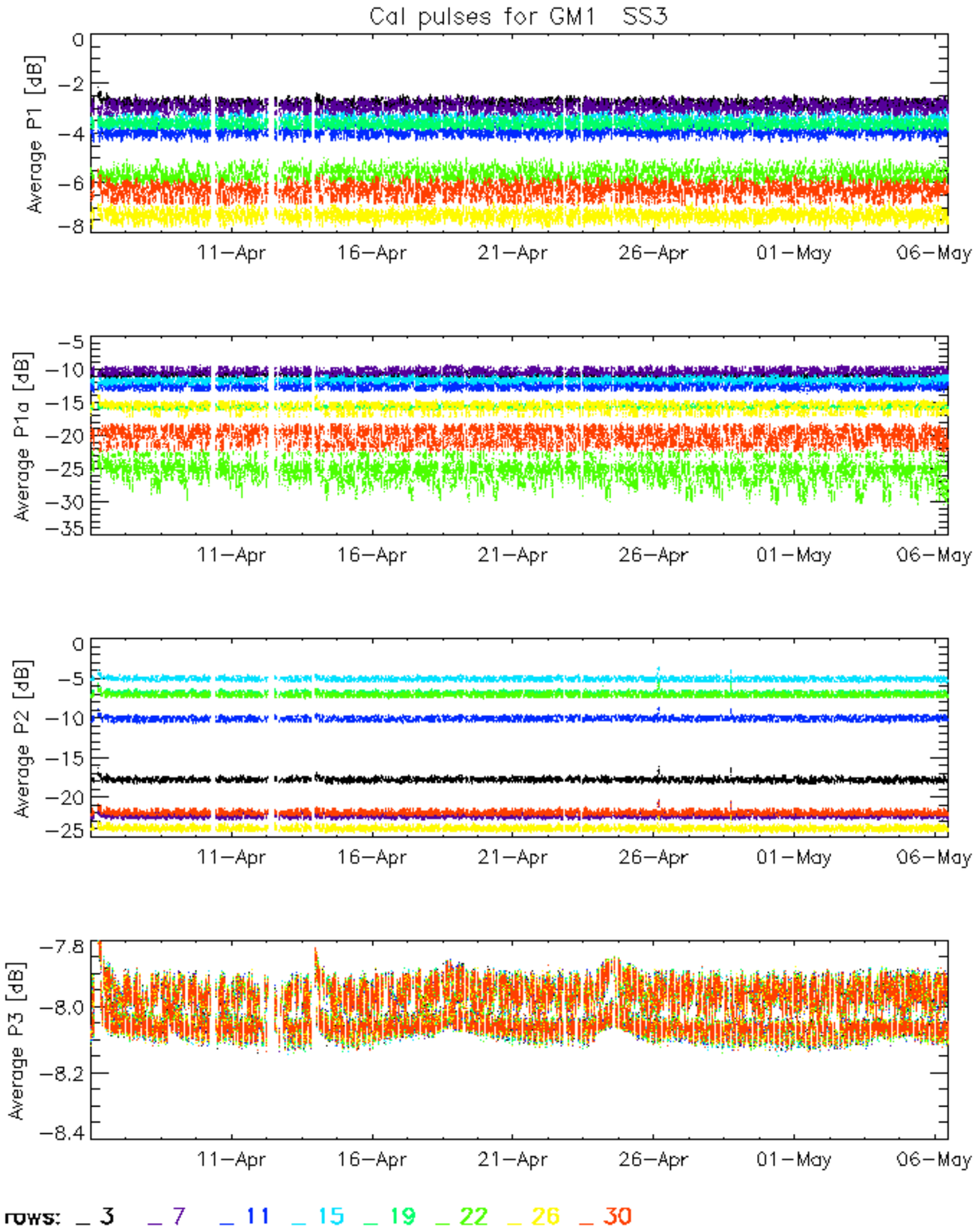
☒

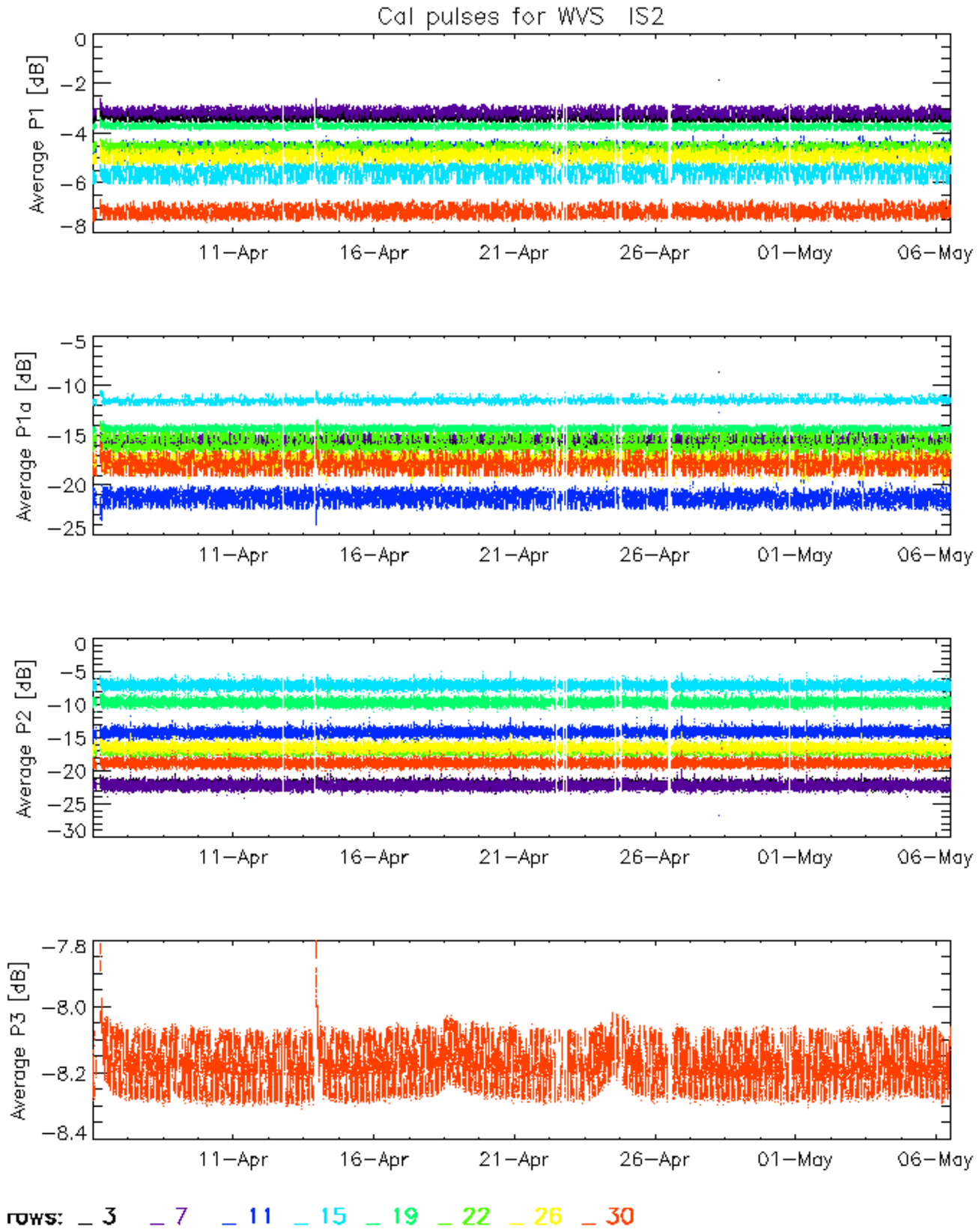
Acsending

☒

Descending

7.6 - Doppler evolution versus ANX for GM1

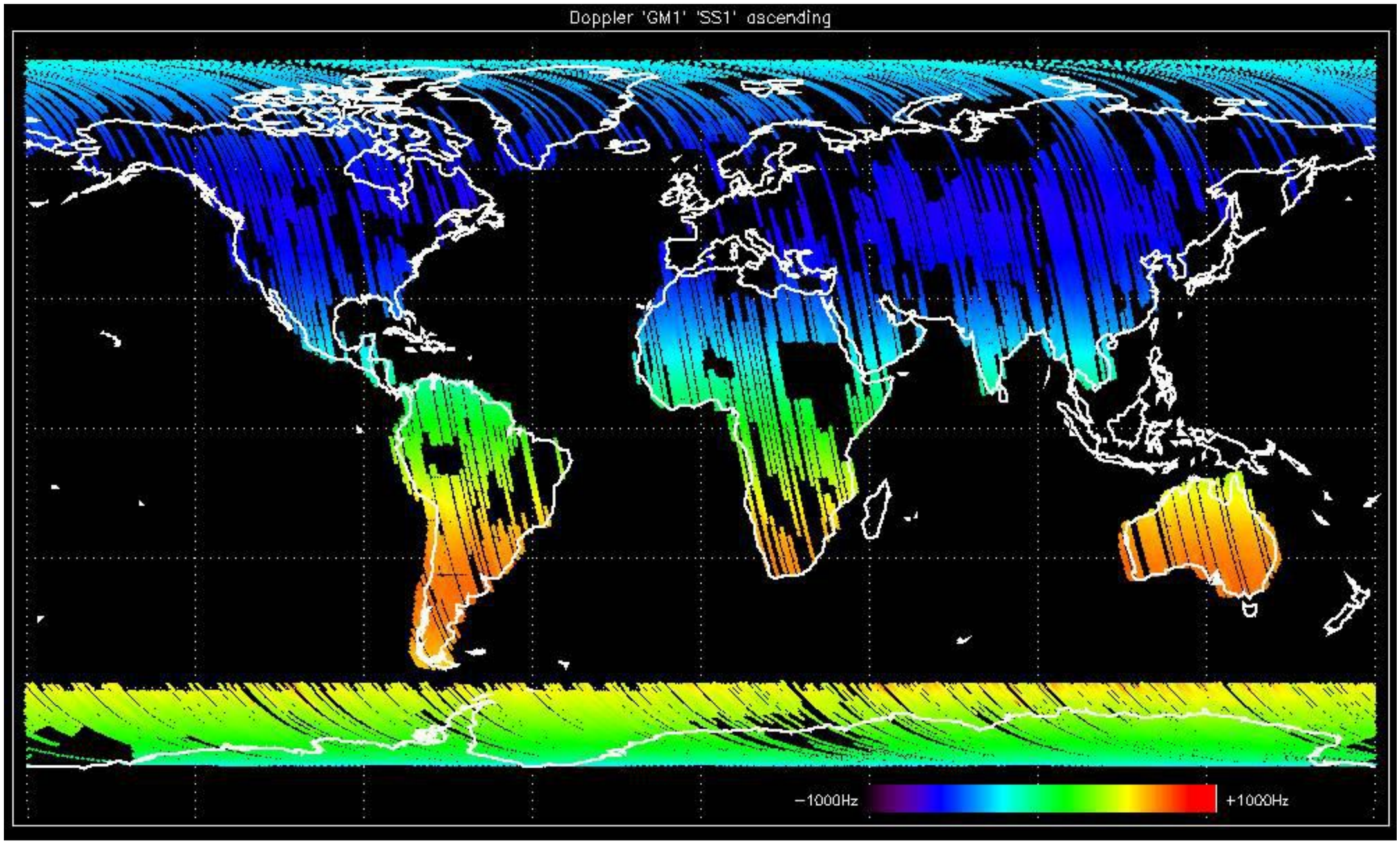

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average P1a [dB]
−5
−10
−15
−20
−25
−30
−35
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

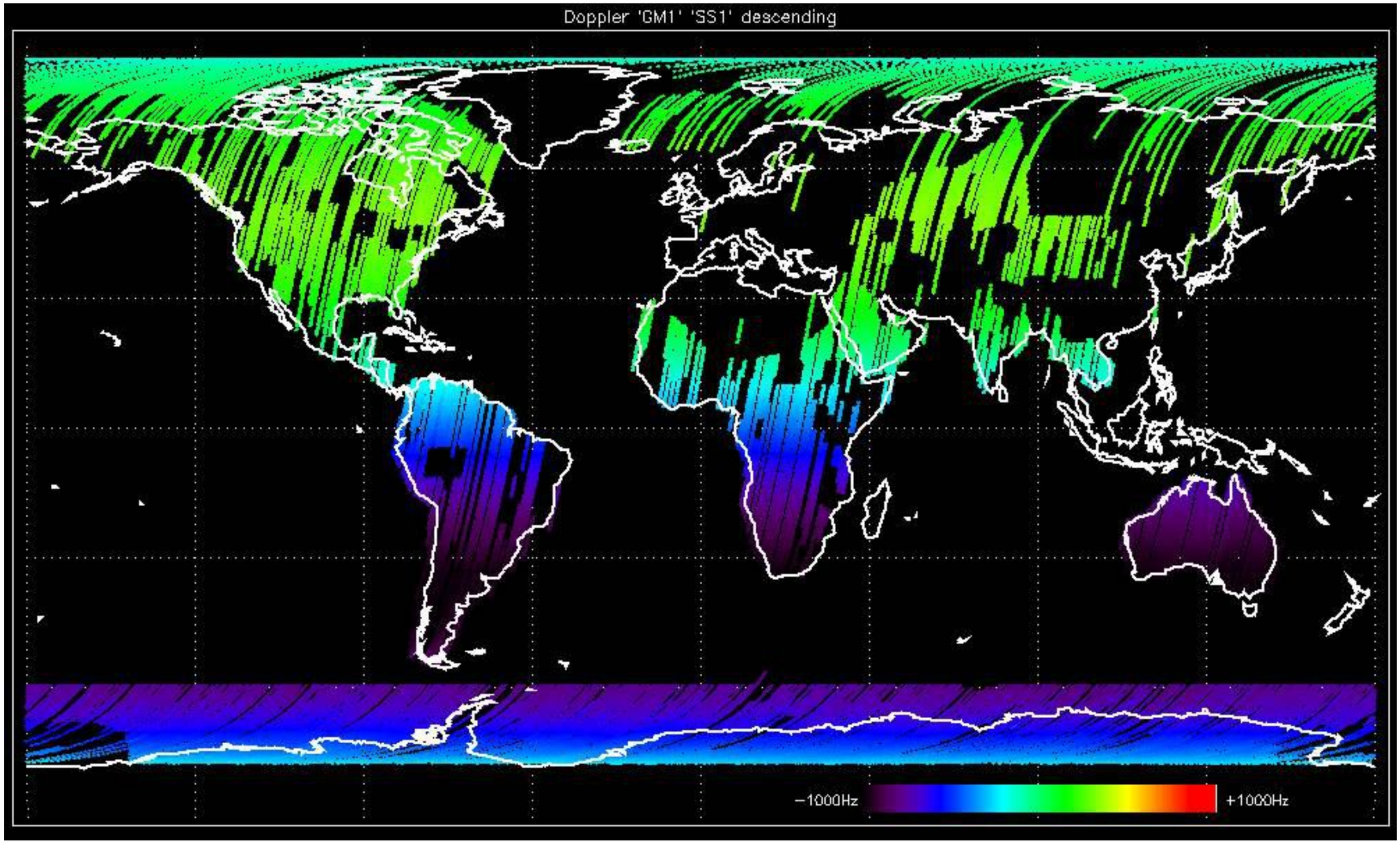

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
−30
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

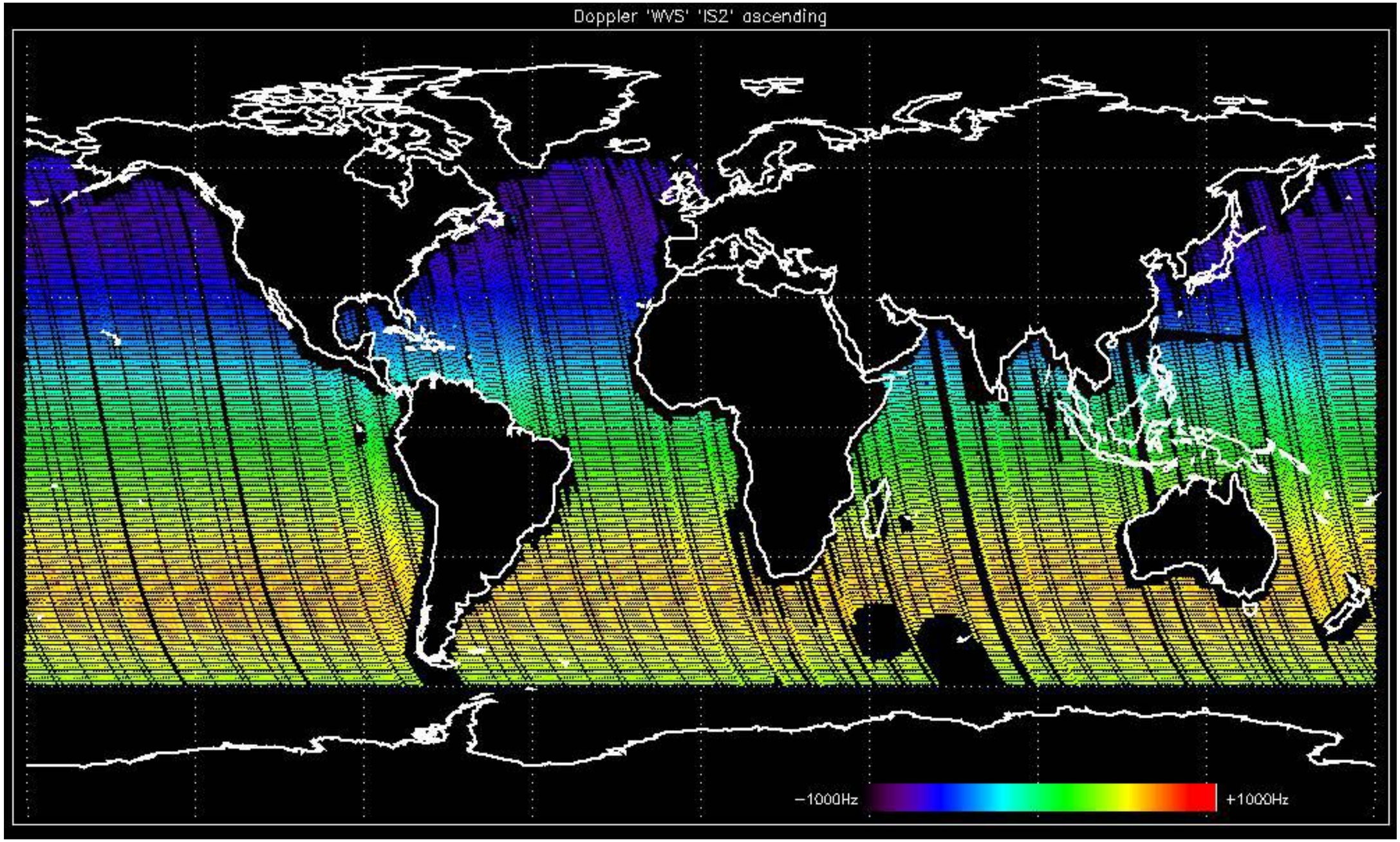
No anomalies observed.

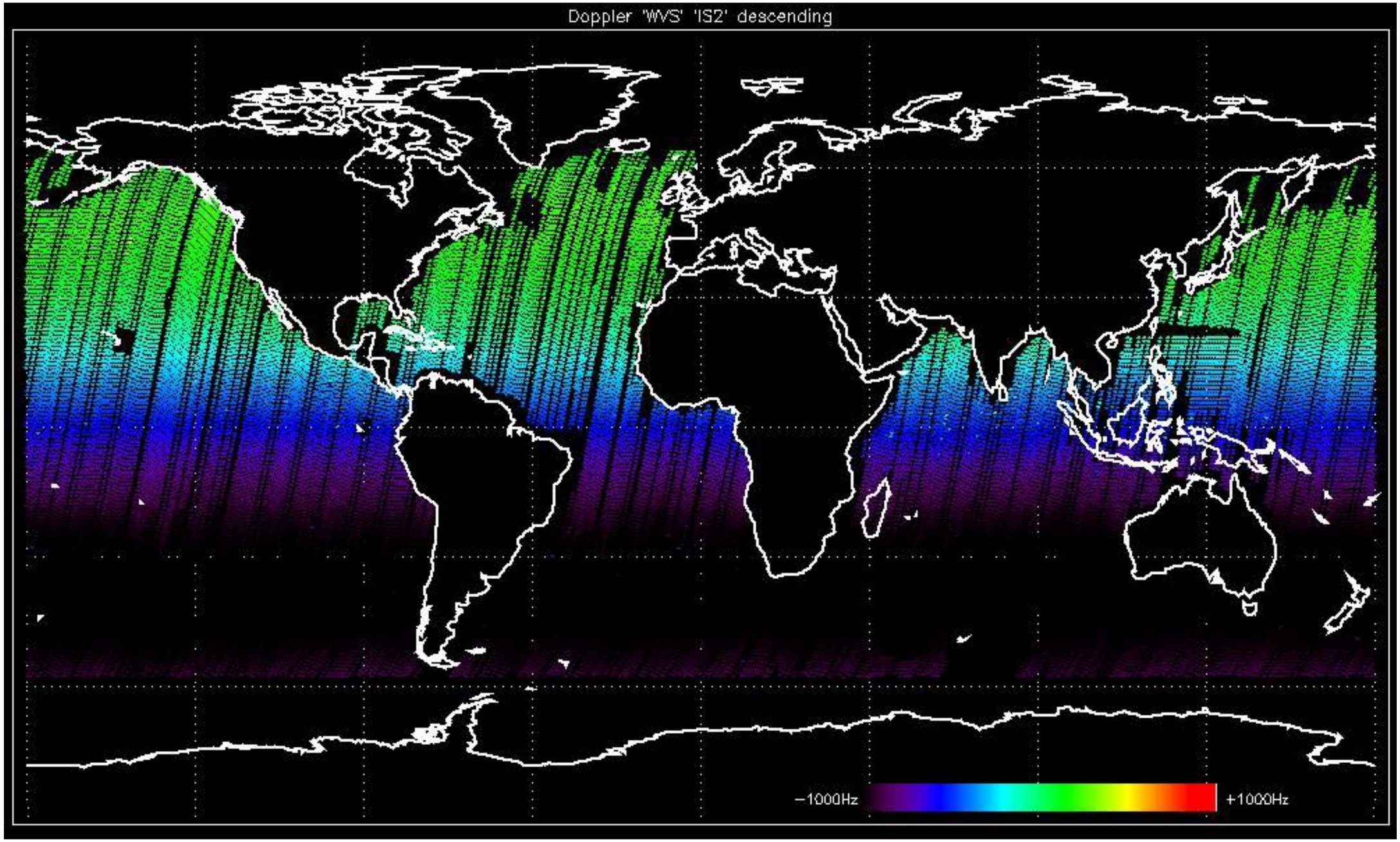
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

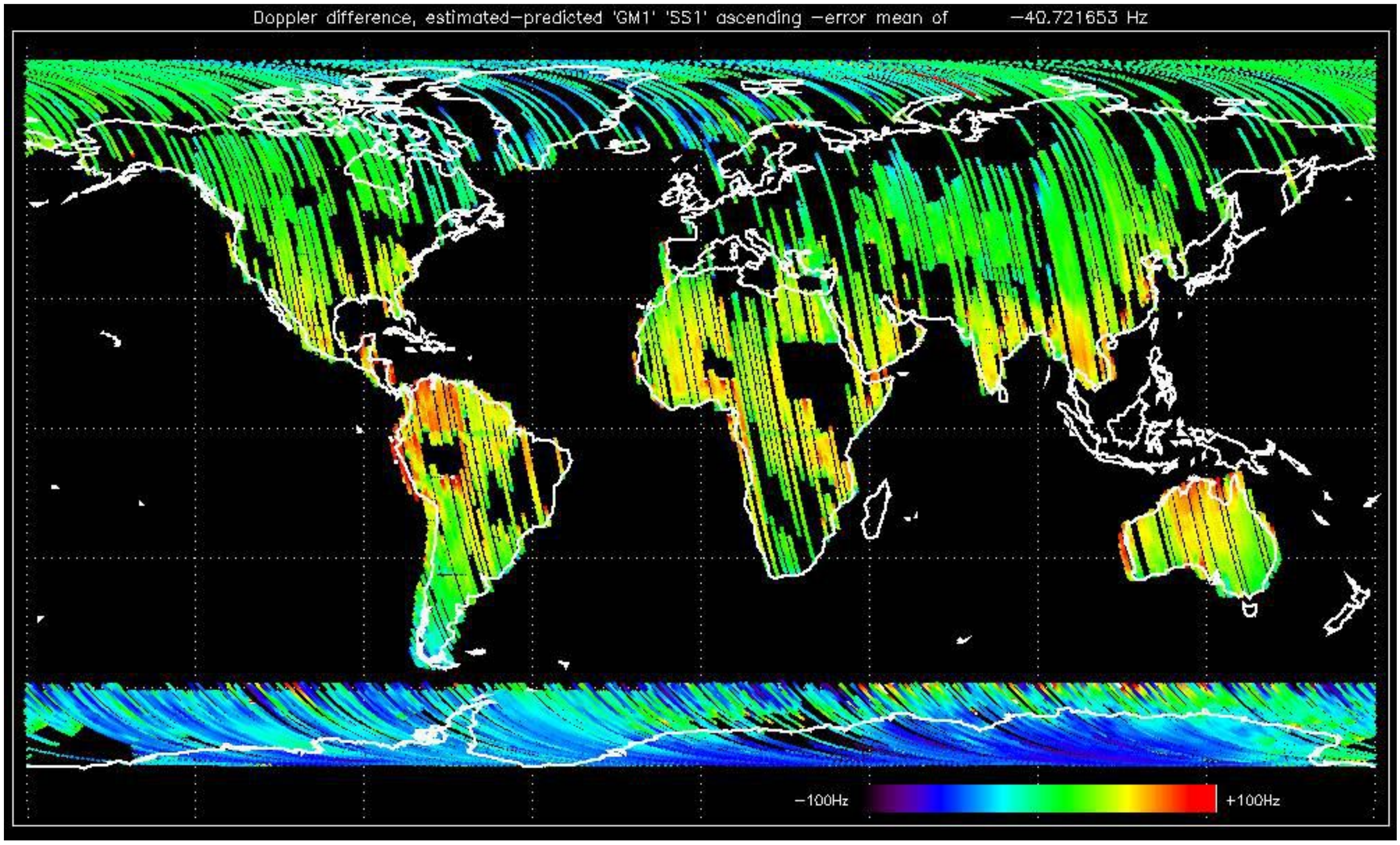
Preliminary report.The data is not yet controled

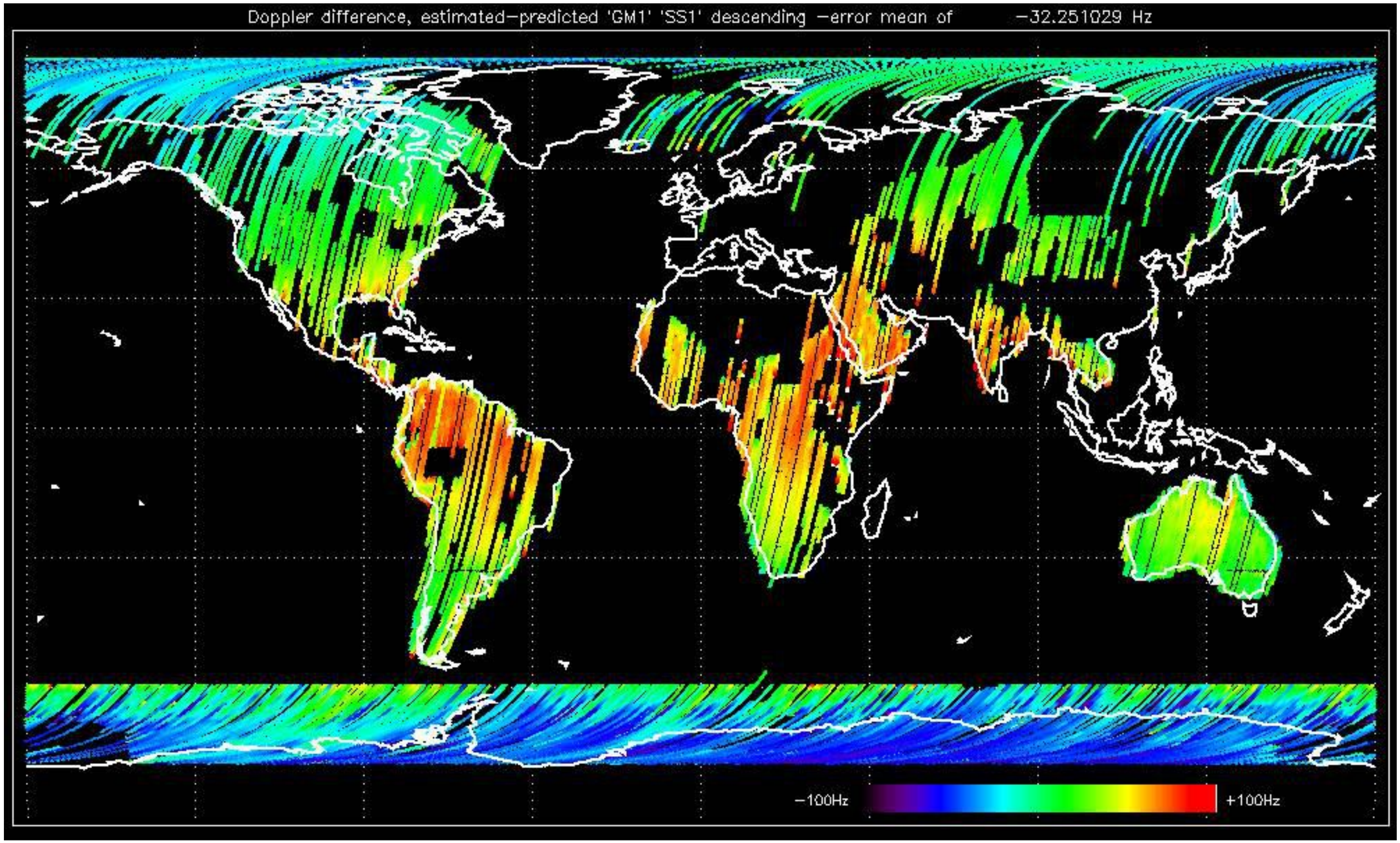

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

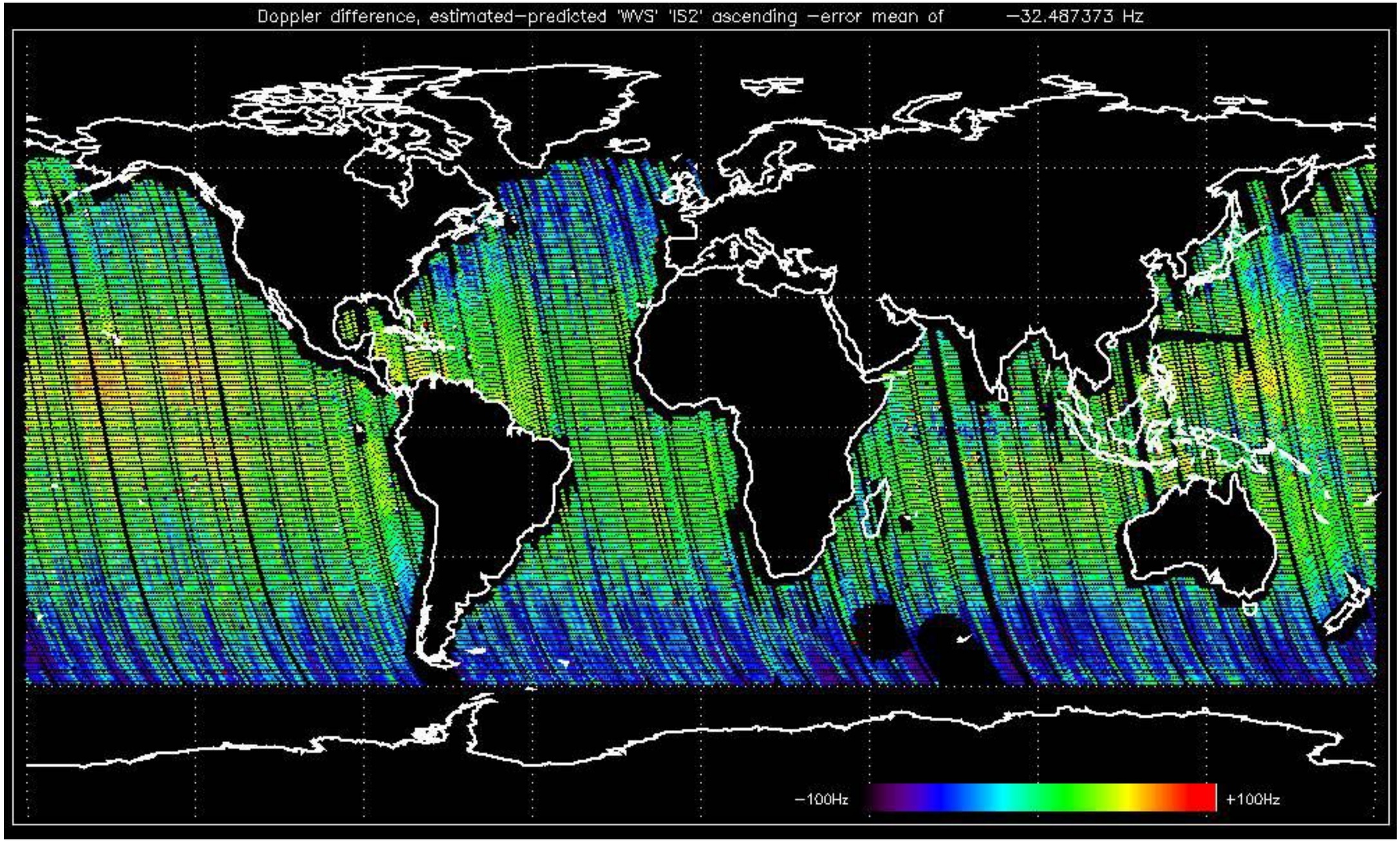

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

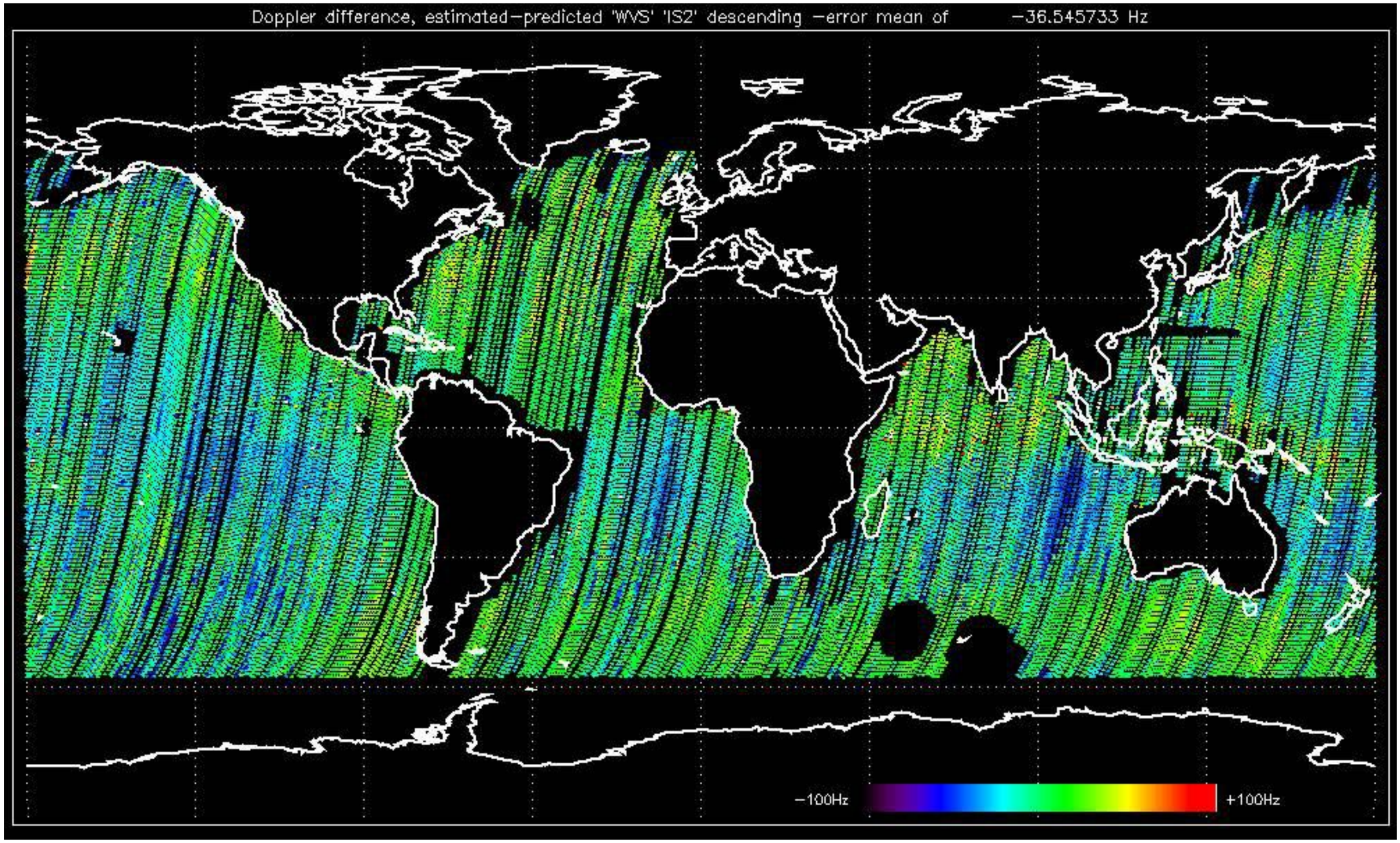

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −40.721653 Hz
−100Hz
+100Hz

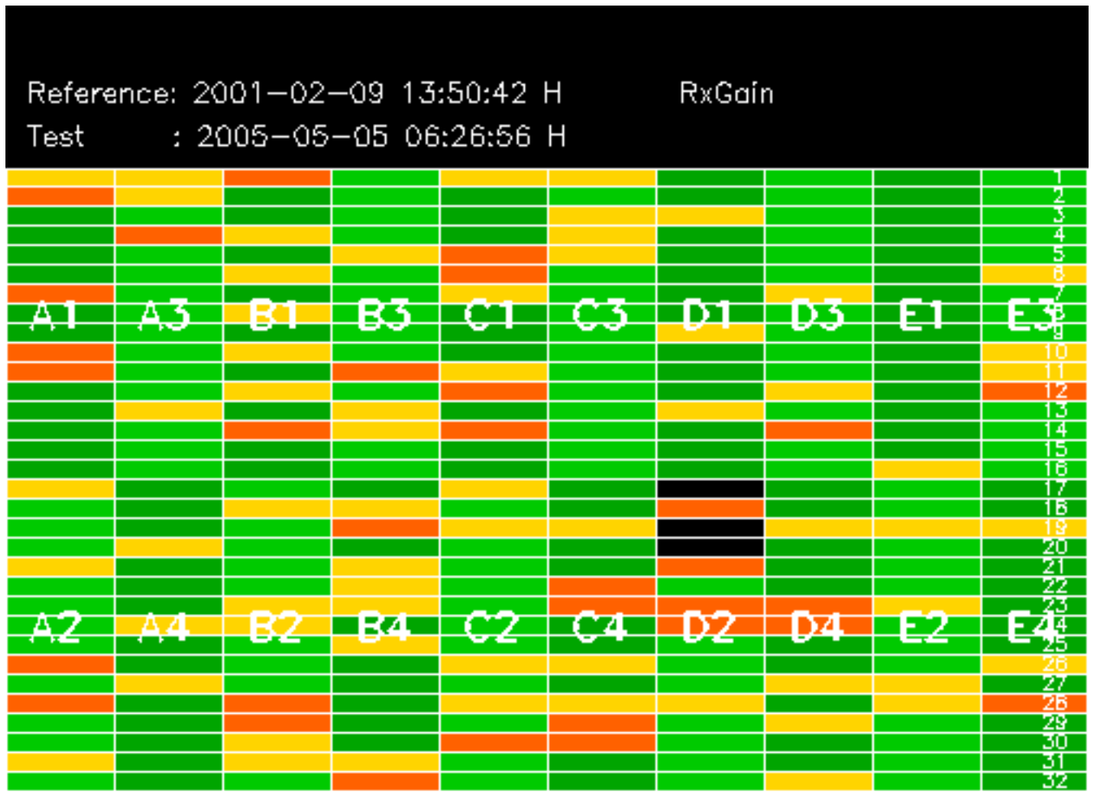

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -32.251029 Hz
-100Hz
+100Hz

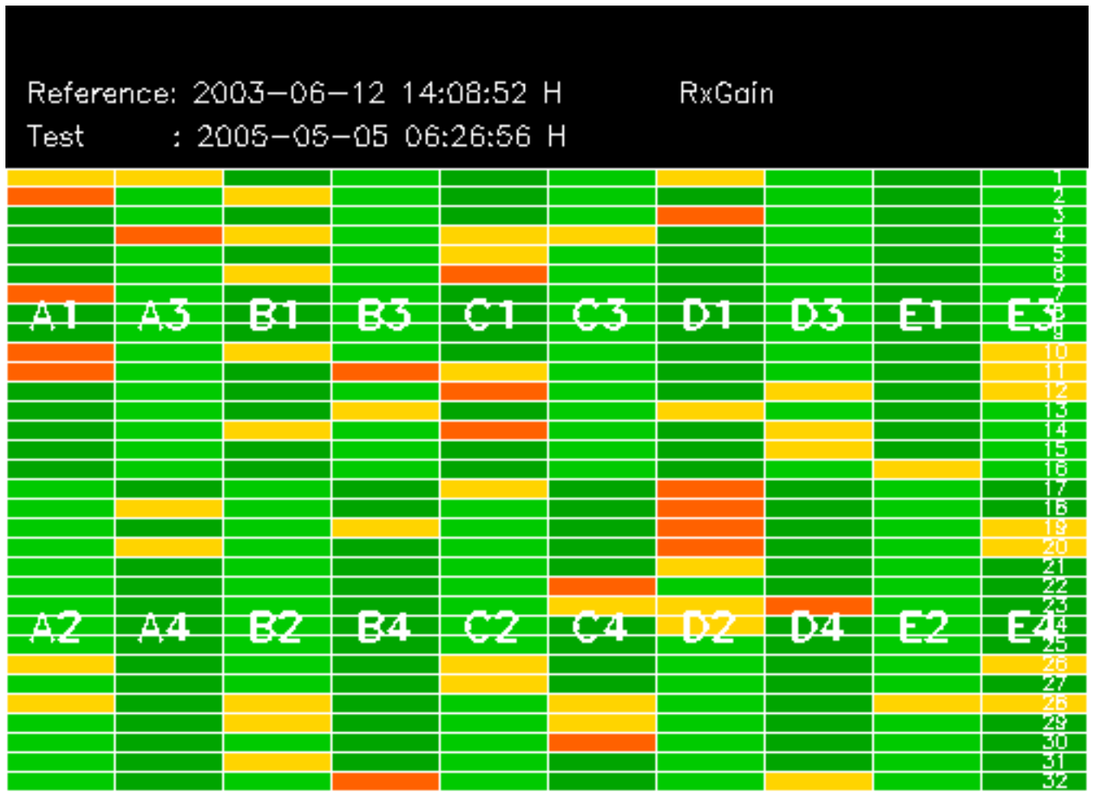

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.487373 Hz
−100Hz
+100Hz

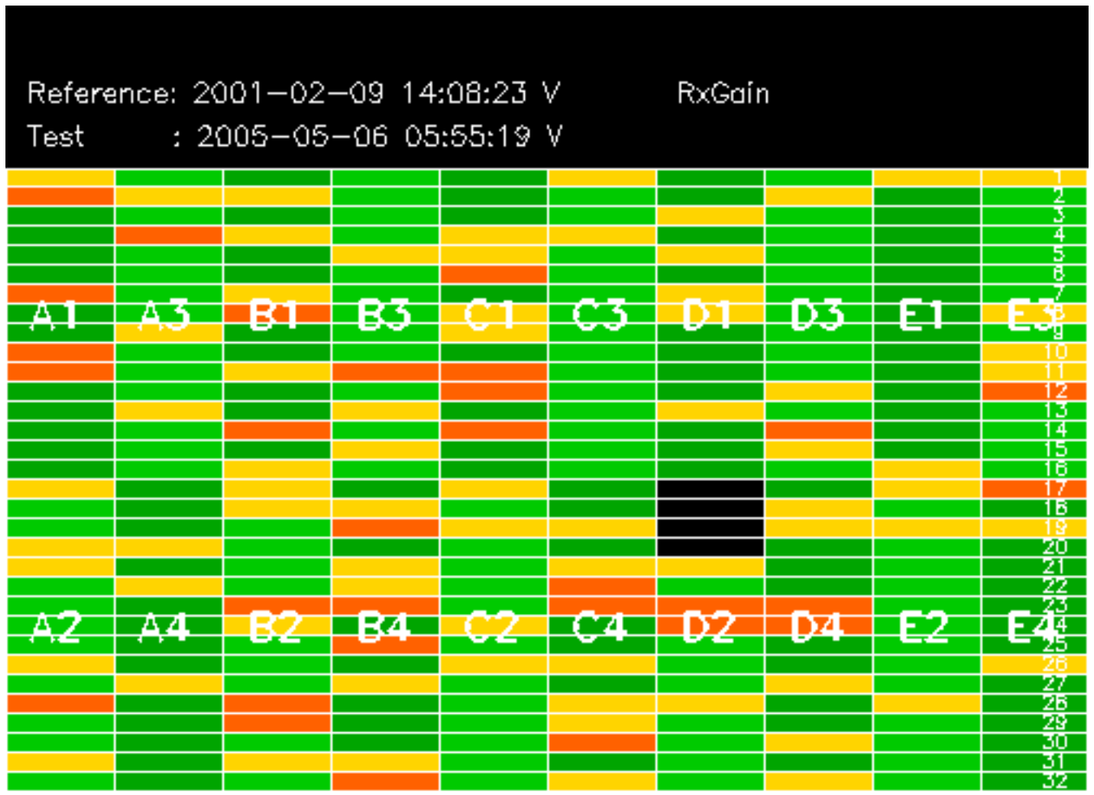

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.545733 Hz
−100Hz
+100Hz

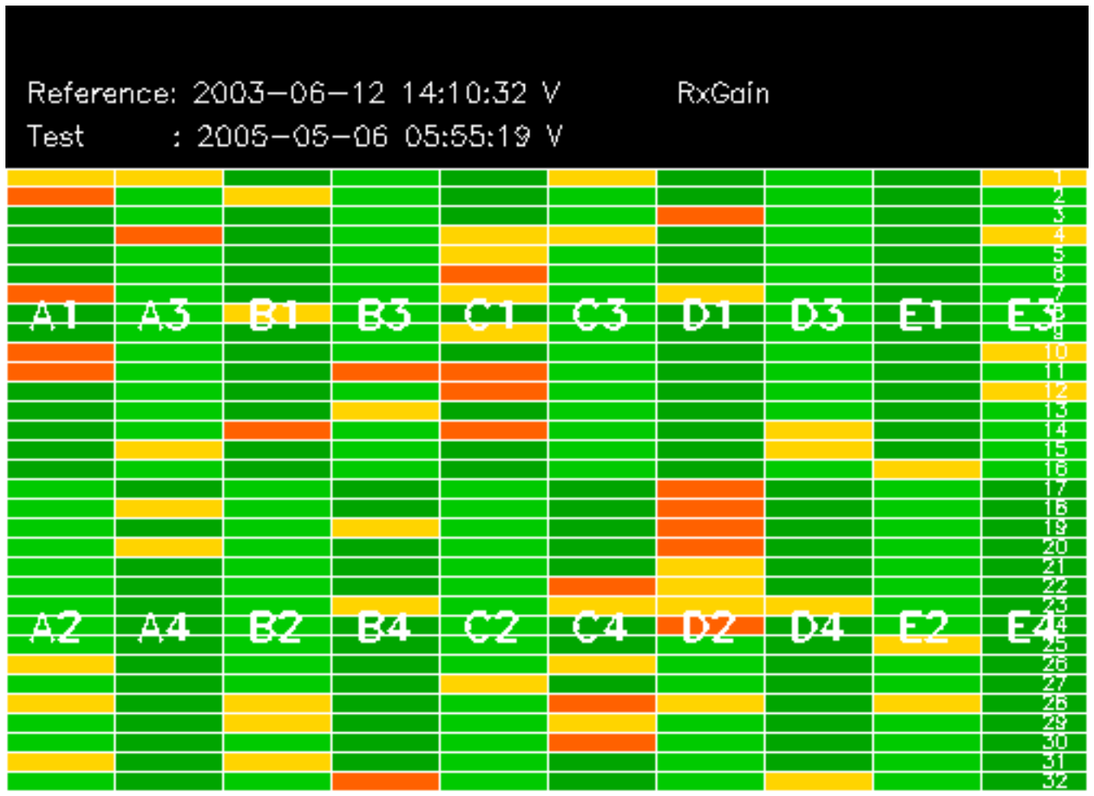
No anomalies observed on available MS products:

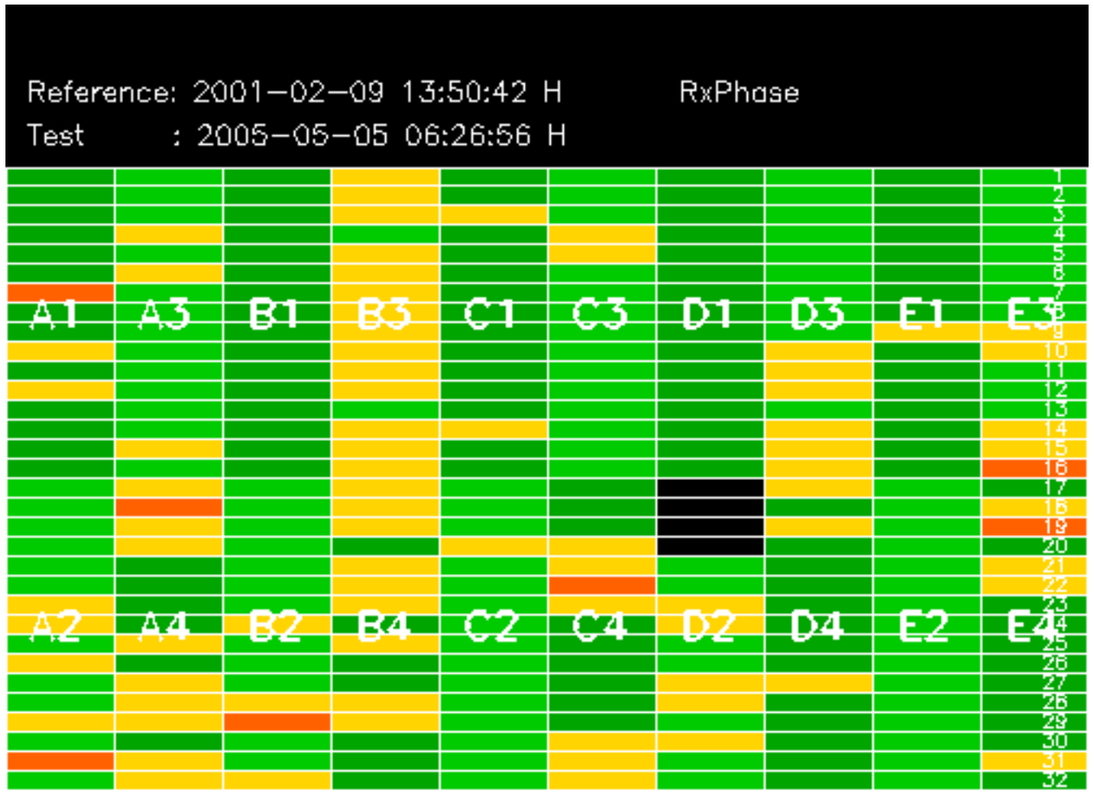
No anomalies observed.

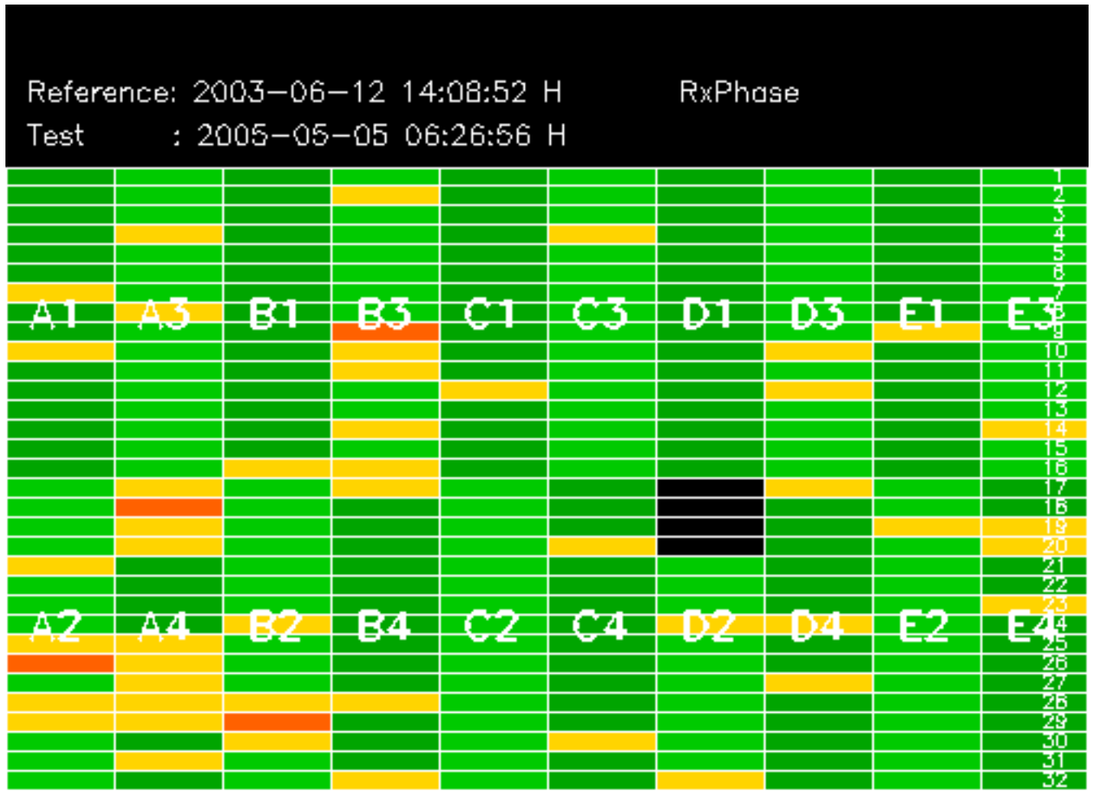

Reference: 2001-02-09 13:50:42 H
Test : 2005-05-05 06:26:56 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

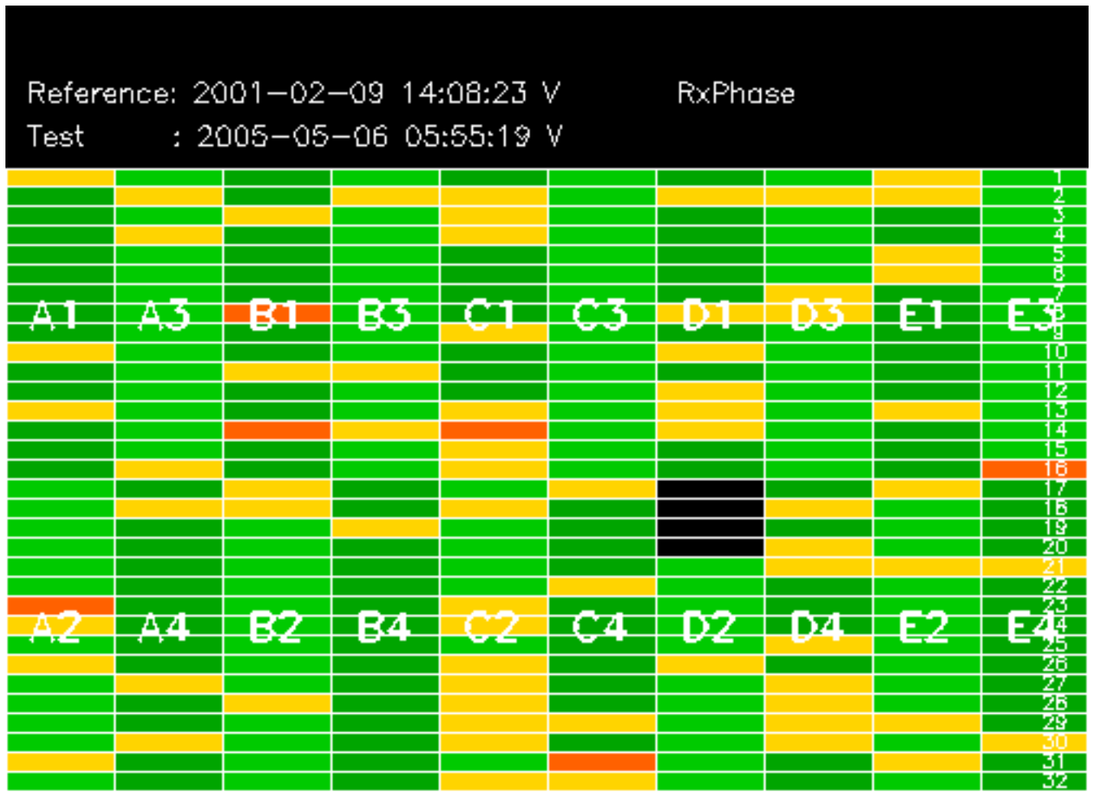

Reference: 2003-06-12 14:08:52 H
Test : 2005-05-05 06:26:56 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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
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

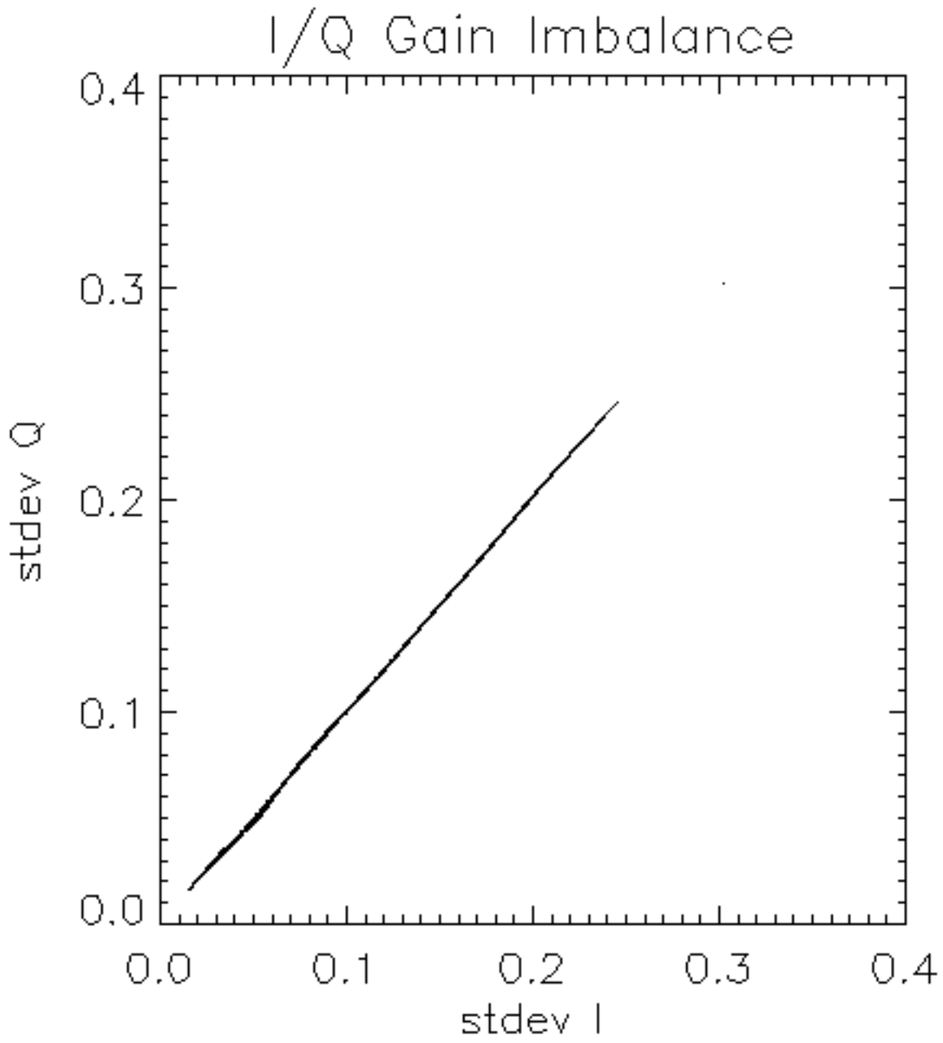

Reference: 2003-06-12 14:10:32 V
Test : 2005-05-06 05:55:19 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

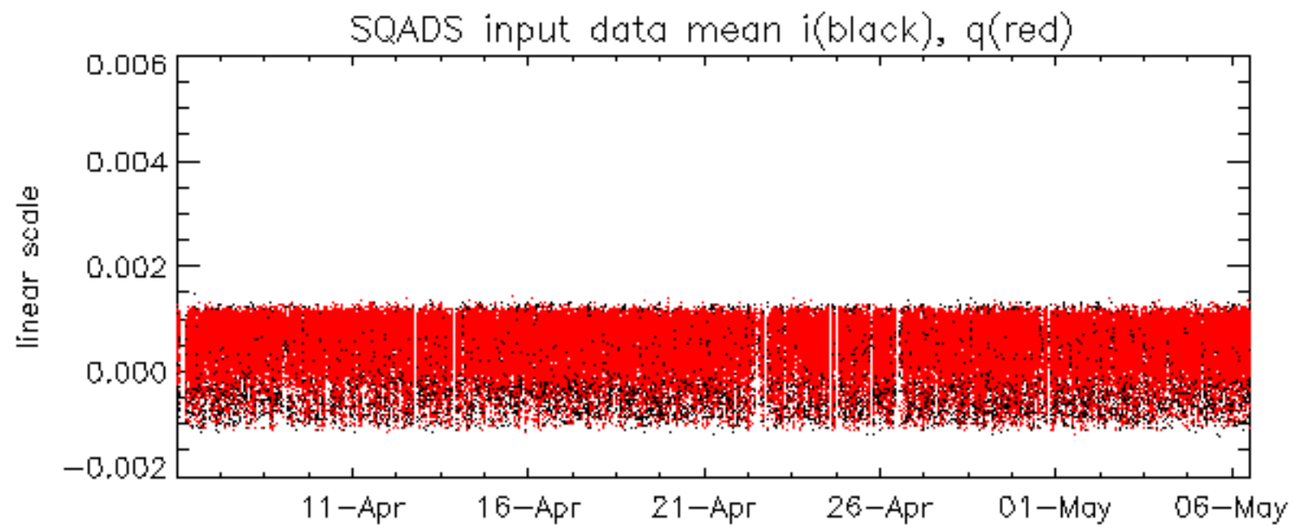

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-05-05 06:26:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

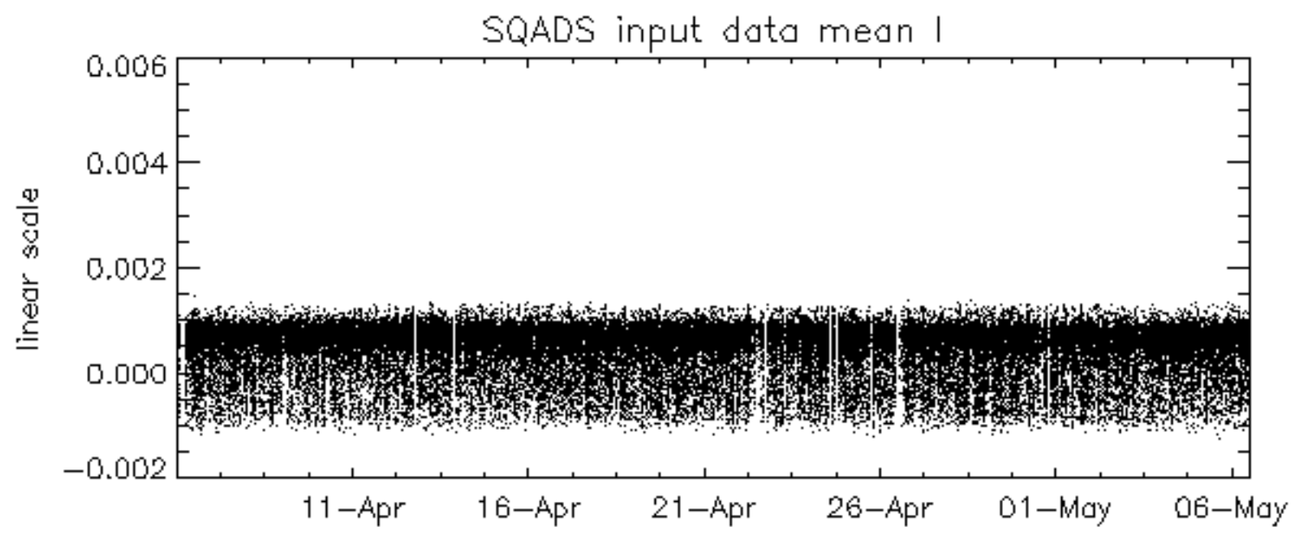

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2005-05-05 06:26:56 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

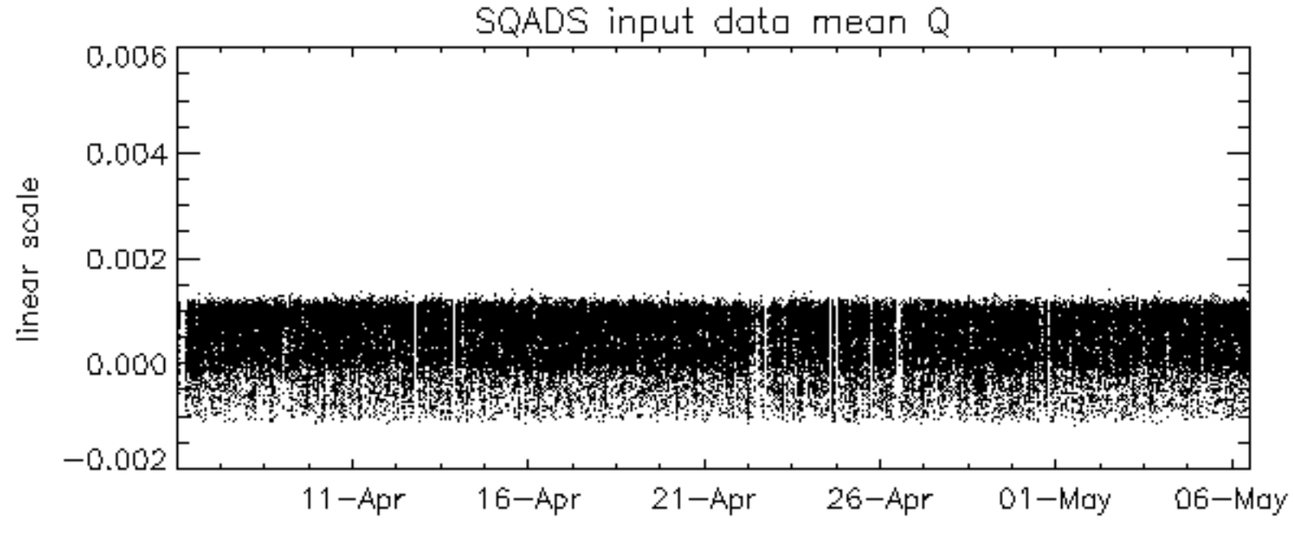

Reference: 2001-02-09 14:08:23 V
Test : 2005-05-06 05:55:19 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

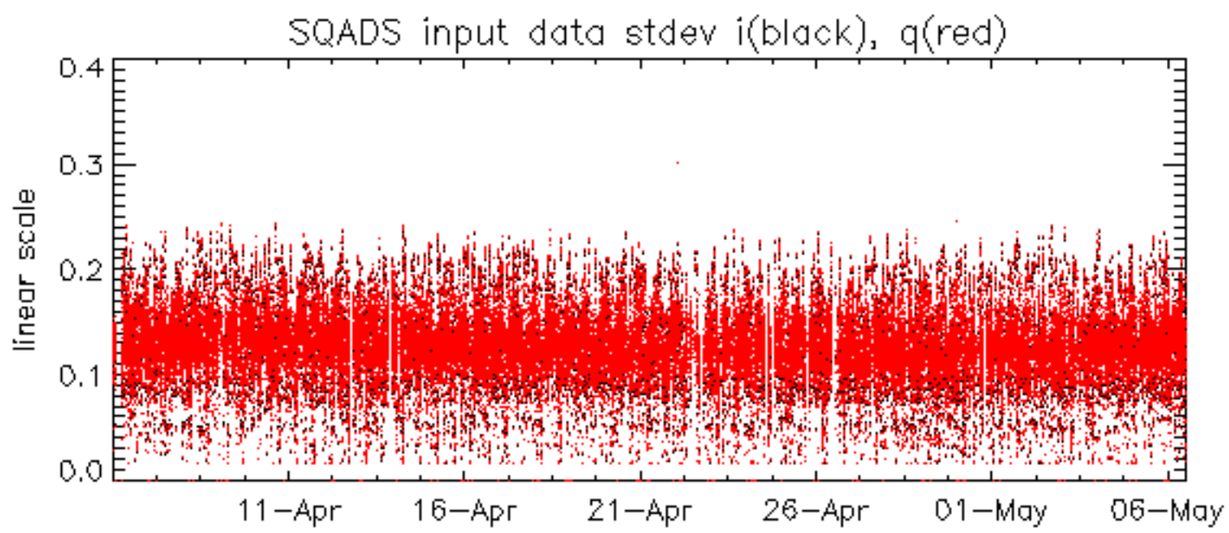

Reference: 2003-06-12 14:10:32 V
Test : 2005-05-06 05:55:19 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

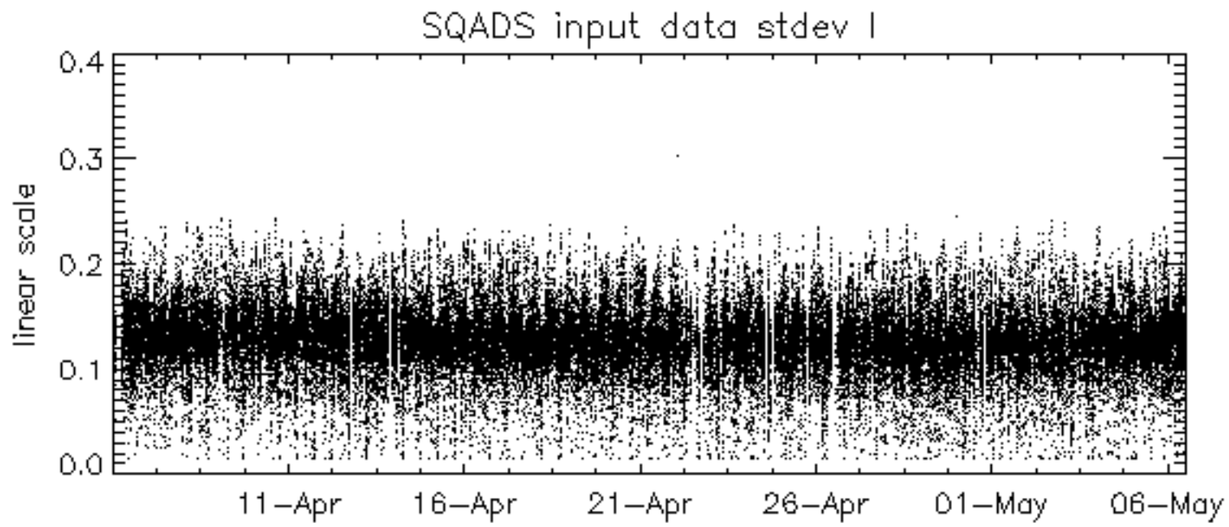

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

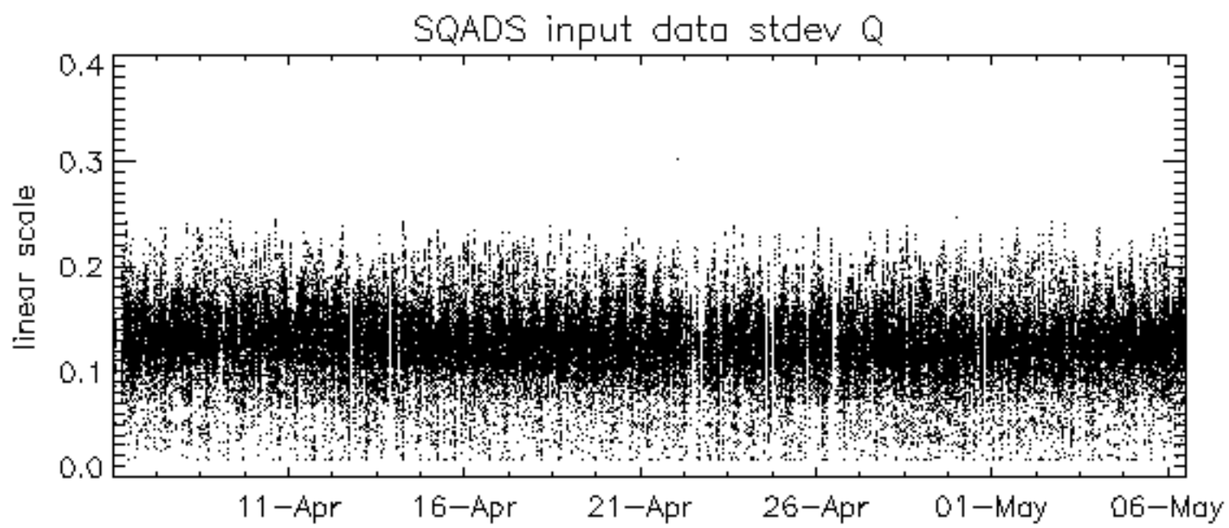

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

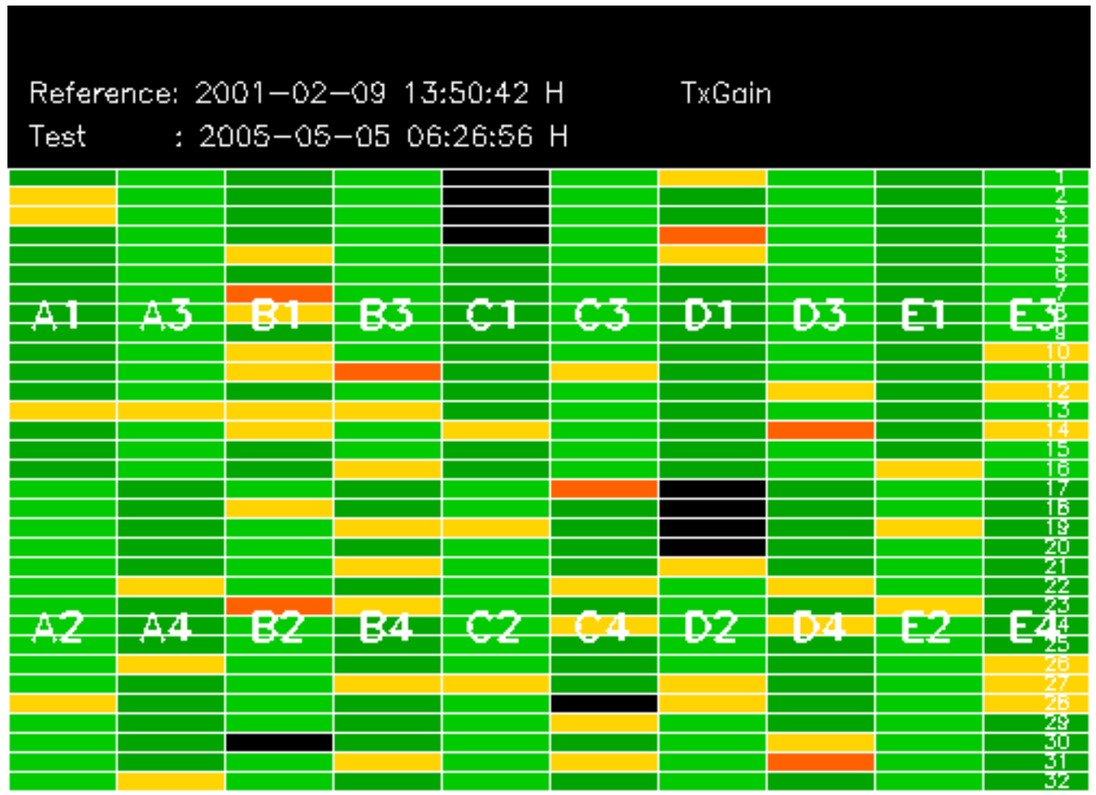

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May

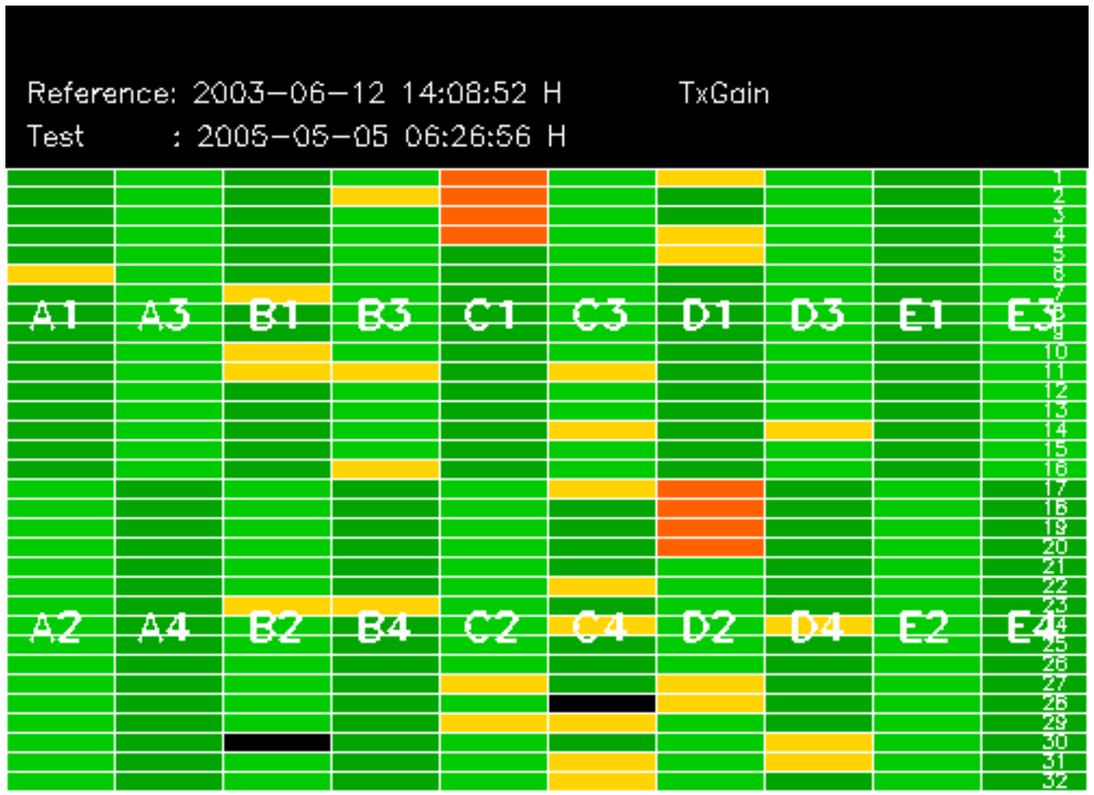

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Apr
16−Apr
21−Apr
26−Apr
01−May
06−May


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

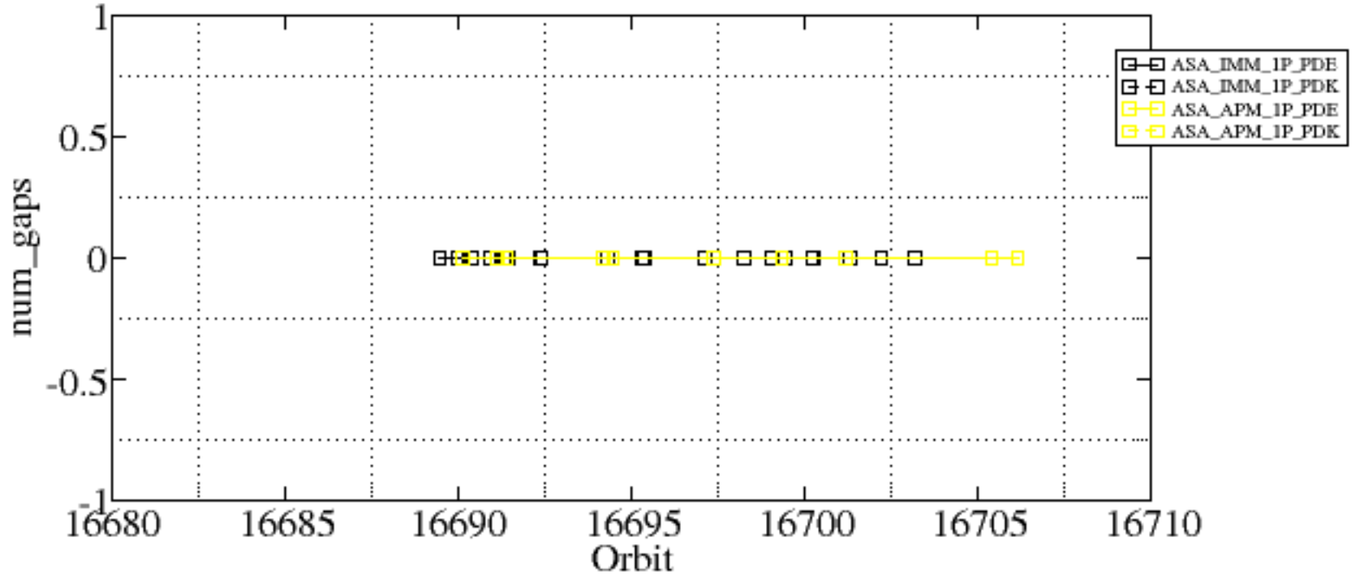

Reference: 2001-02-09 13:50:42 H
Test : 2005-05-05 06:26:56 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

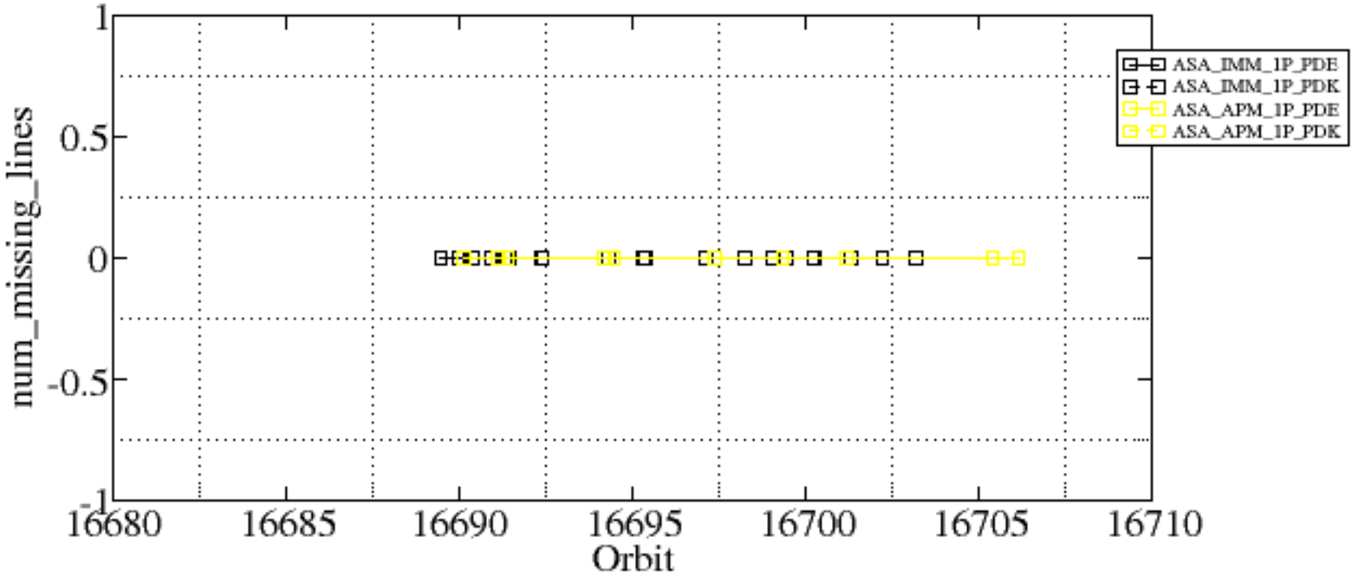

Reference: 2003-06-12 14:08:52 H
Test : 2005-05-05 06:26:56 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

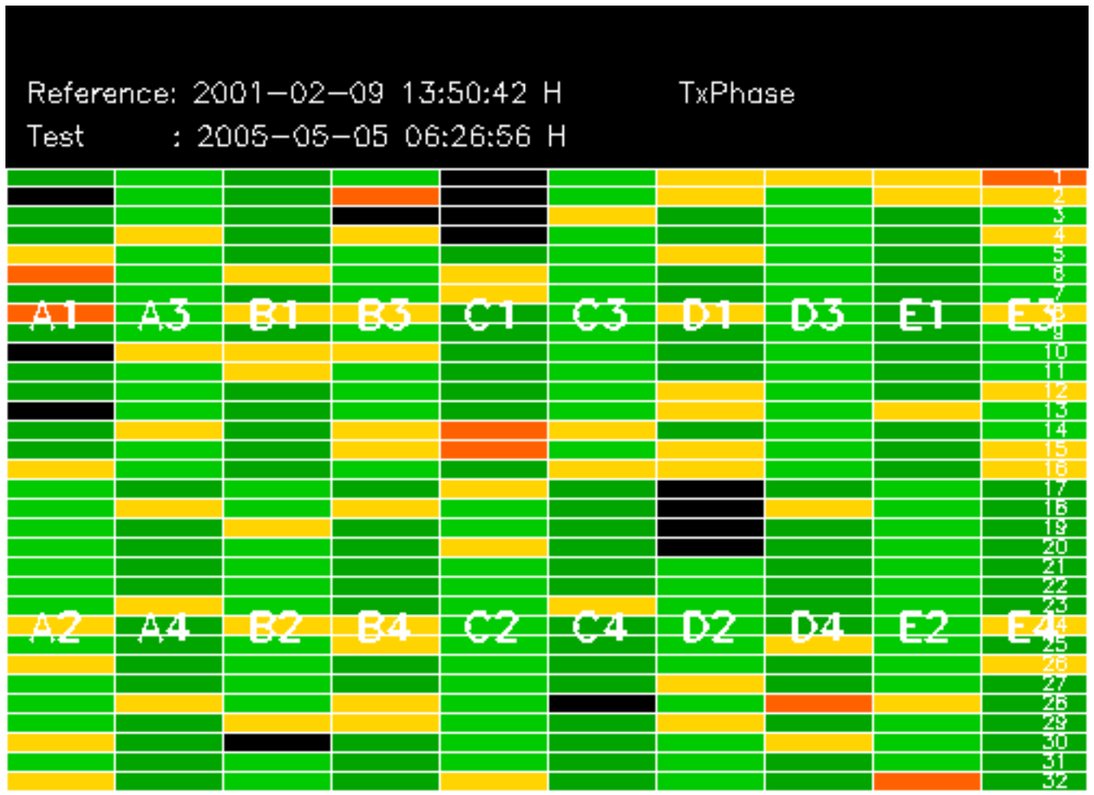

Reference: 2001-02-09 14:08:23 V
Test : 2005-05-06 05:55:19 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

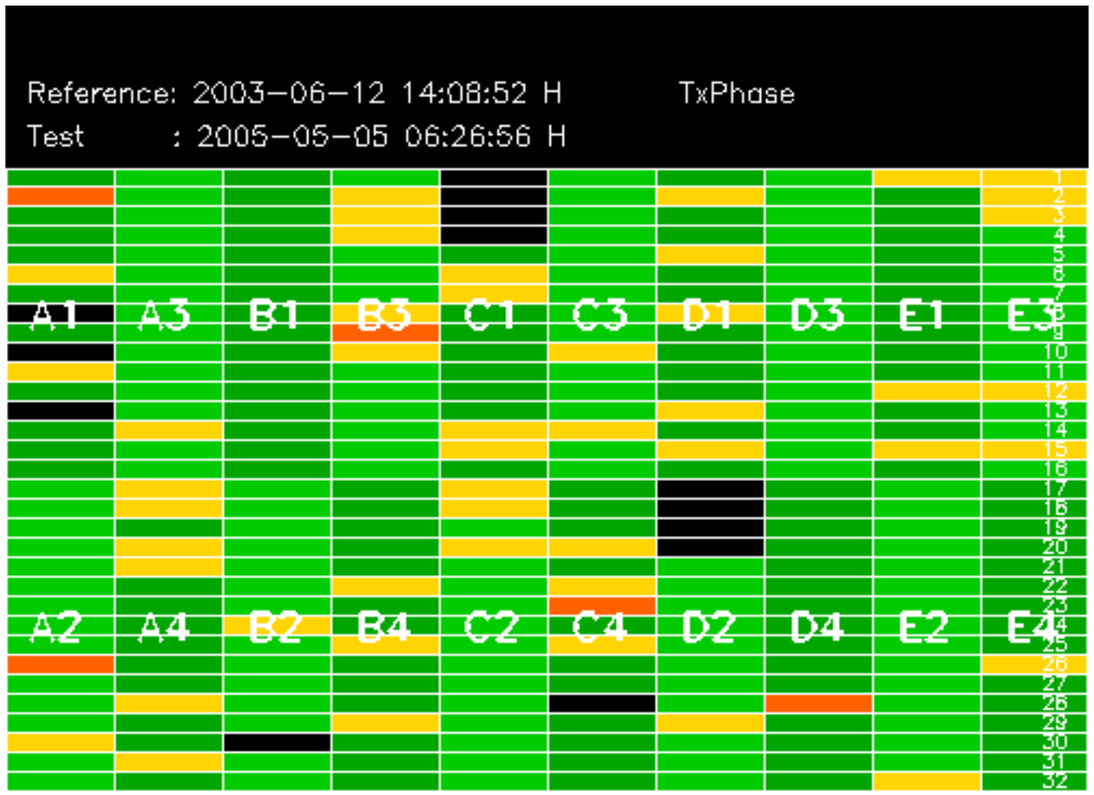

Reference: 2003-06-12 14:10:32 V
Test : 2005-05-06 05:55:19 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

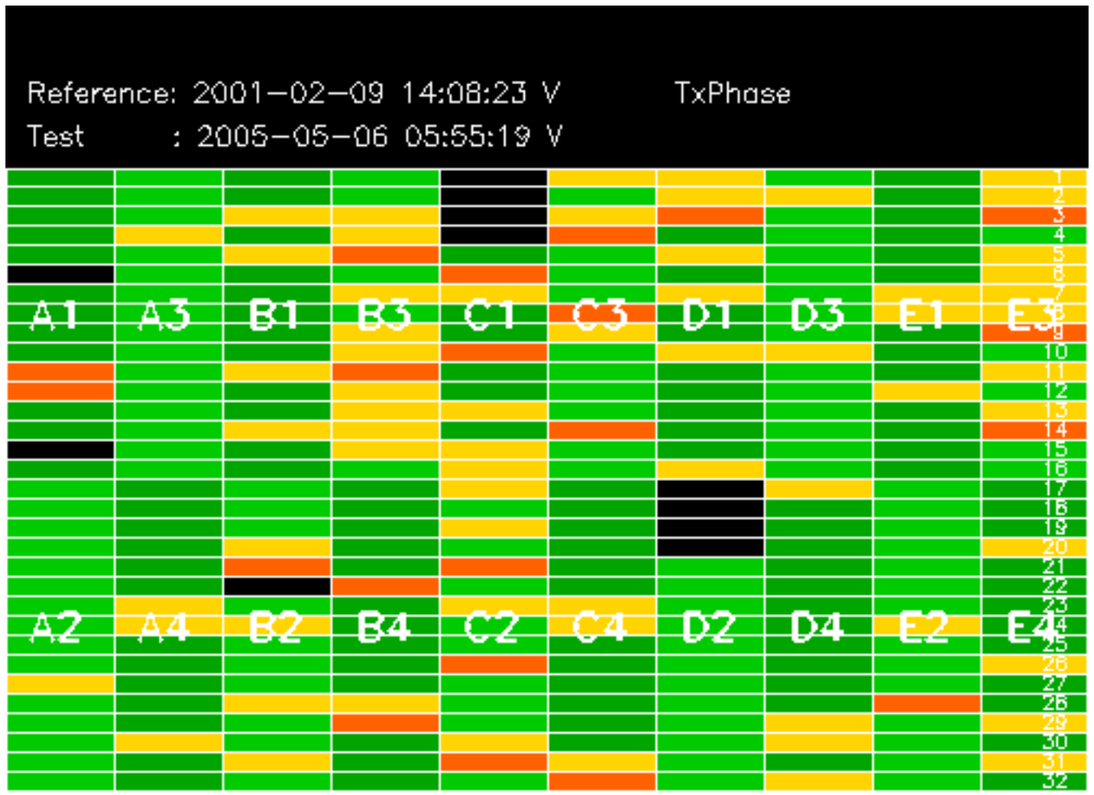
Summary of analysis for the last 3 days 2005051[901]
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems
<table border=1>
<tr> <th>Filename </th><th> num_gaps</th><th>num_missing_lines</th></tr>
</table>

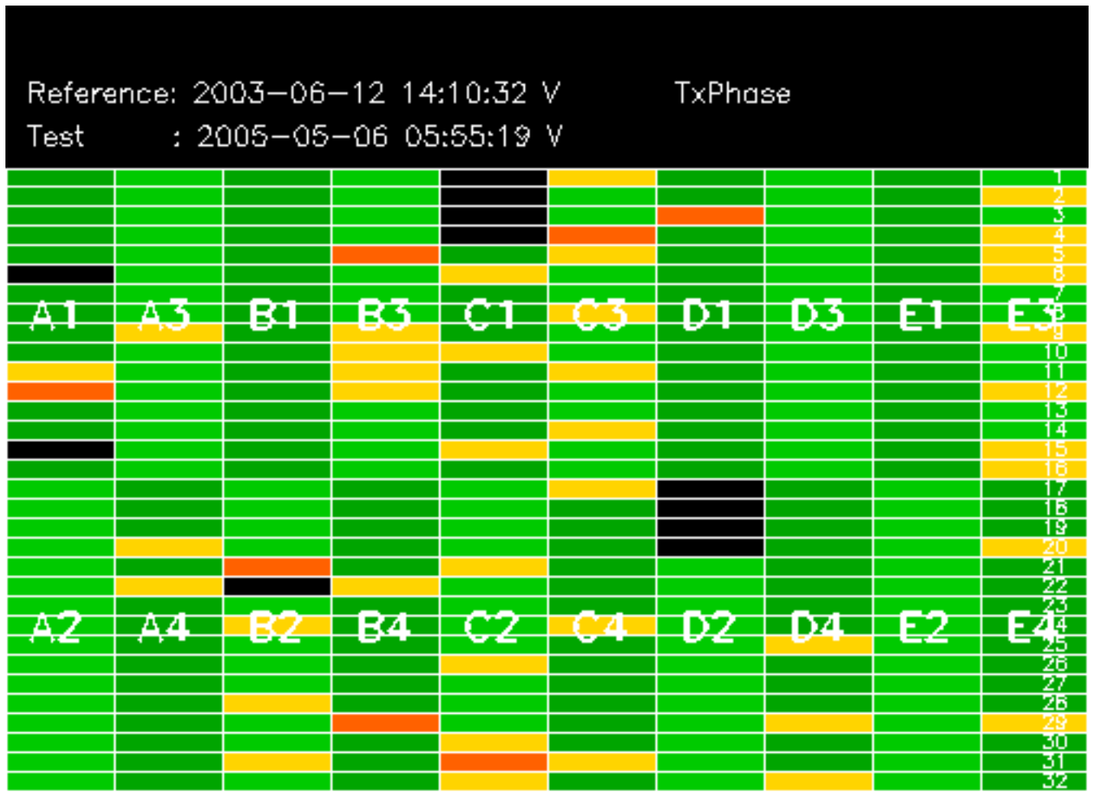

num_gaps
1
0.5
0
-0.5
-1
16680
16685
16690
16695
16700
16705
16710
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK

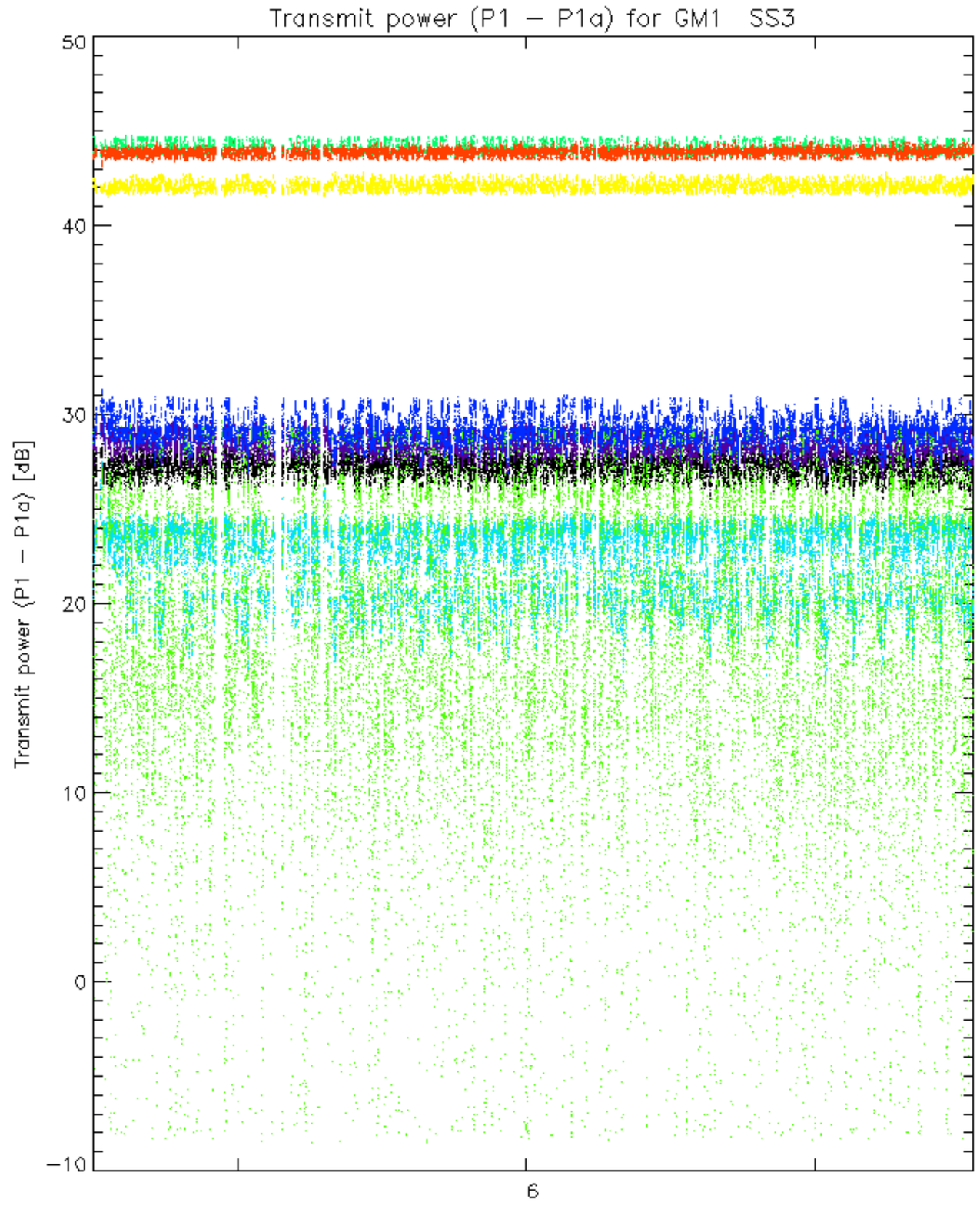

num_missing_lines
1
0.5
0
-0.5
-1
16680
16685
16690
16695
16700
16705
16710
Orbit
ASA_IMM_1P_PDE
ASA_IMM_1P_PDK
ASA_APM_1P_PDE
ASA_APM_1P_PDK

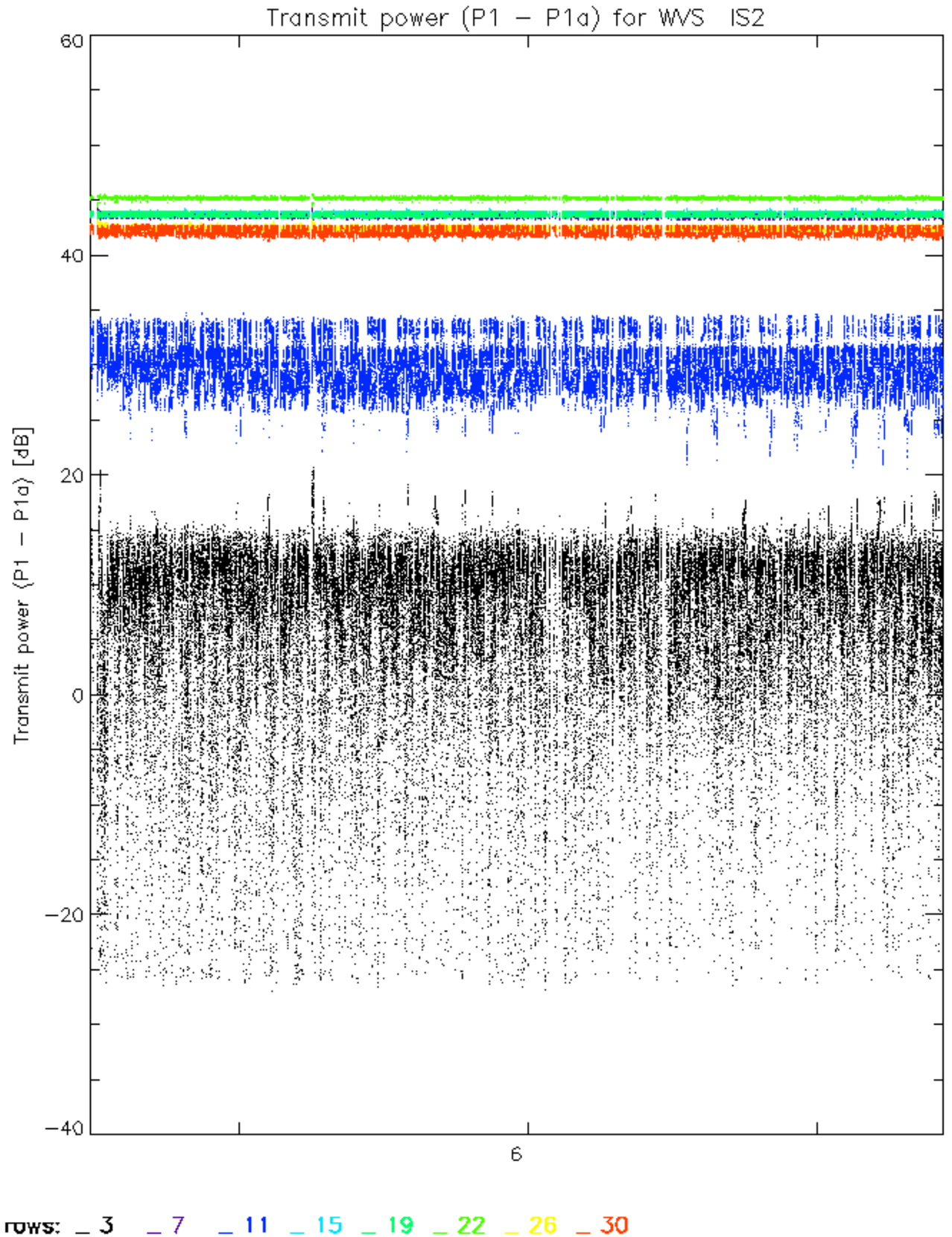

Reference: 2001-02-09 13:50:42 H
Test : 2005-05-05 06:26:56 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32


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
6
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]
6
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.