PRELIMINARY REPORT OF 050717

last update on Sun Jul 17 10:55:11 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 2005-07-16 00:00:00 to 2005-07-17 10:55:11

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

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	24	42	16	2	23
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	24	42	16	2	23
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	24	42	16	2	23
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	24	42	16	2	23

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	41	60	42	9	55
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	41	60	42	9	55
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	41	60	42	9	55
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	41	60	42	9	55

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	20050713 170209
H	20050714 062657

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	-3.324788	0.006996	0.024634
7	P1	-3.140711	0.015265	0.019165
11	P1	-4.665944	0.033910	-0.071570
15	P1	-5.534936	0.046473	-0.074159
19	P1	-3.783277	0.047871	-0.066842
22	P1	-4.608928	0.069923	-0.053085
26	P1	-4.854804	0.073139	-0.014286
30	P1	-7.199934	0.166927	-0.130159
3	P1	-15.565654	0.090517	-0.033197
7	P1	-15.553451	0.113547	0.111895
11	P1	-21.544321	0.274765	-0.256785
15	P1	-11.289207	0.046004	-0.002848
19	P1	-14.490057	0.269046	-0.115241
22	P1	-15.821303	0.355759	0.233020
26	P1	-17.557398	0.273671	0.331776
30	P1	-17.763731	0.362810	0.132031

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.905455	0.082893	0.149476
7	P2	-22.087095	0.105446	0.208636
11	P2	-13.767632	0.102818	0.269698
15	P2	-7.112703	0.092962	0.094573
19	P2	-9.602710	0.093621	0.040474
22	P2	-16.865671	0.093822	0.038931
26	P2	-16.508341	0.095441	0.030031
30	P2	-18.791349	0.082140	0.000552

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.161144	0.002768	0.014333

7	P3	-8.161144	0.002768	0.014333
11	P3	-8.161144	0.002768	0.014333
15	P3	-8.161144	0.002768	0.014333
19	P3	-8.161144	0.002768	0.014333
22	P3	-8.161144	0.002768	0.014333
26	P3	-8.161144	0.002768	0.014333
30	P3	-8.161144	0.002768	0.014333

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	-2.790529	0.014098	0.020702
7	P1	-2.952626	0.032000	0.003468
11	P1	-3.987412	0.017722	-0.037579
15	P1	-3.552561	0.023866	-0.063080
19	P1	-3.676292	0.125946	-0.066823
22	P1	-5.671031	0.118397	-0.095000
26	P1	-7.377251	0.211480	-0.140591
30	P1	-6.316873	0.120662	-0.090469
3	P1	-10.828751	0.040617	0.014713
7	P1	-10.435289	0.159005	-0.028576
11	P1	-12.591230	0.111177	-0.058815
15	P1	-11.619147	0.078189	-0.010911
19	P1	-15.699985	1.470544	-0.162958
22	P1	-25.924356	3.730468	0.602731
26	P1	-15.476562	0.439574	0.265232
30	P1	-20.184614	1.289291	0.248504

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.653952	0.048231	0.151960
7	P2	-22.076361	0.039292	0.080153
11	P2	-9.761979	0.061019	0.177786
15	P2	-5.133723	0.046306	0.010128
19	P2	-6.912704	0.062184	0.015841
22	P2	-7.094271	0.039743	0.024133
26	P2	-23.969807	0.044226	-0.019182
30	P2	-21.961847	0.039804	0.017796

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.999131	0.004047	-0.003974
7	P3	-7.999225	0.004034	-0.003981
11	P3	-7.999210	0.004030	-0.003590
15	P3	-7.999213	0.004039	-0.003961
19	P3	-7.999258	0.004046	-0.004071
22	P3	-7.999284	0.004026	-0.004141
26	P3	-7.999330	0.004033	-0.003916
30	P3	-7.999261	0.004038	-0.004030

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	0.000462276
	stdev	2.17101e-07
MEAN Q	mean	0.000499673
	stdev	2.31969e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127529
	stdev	0.000978769
STDEV Q	mean	0.127763
	stdev	0.000989255

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2005071[567]
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

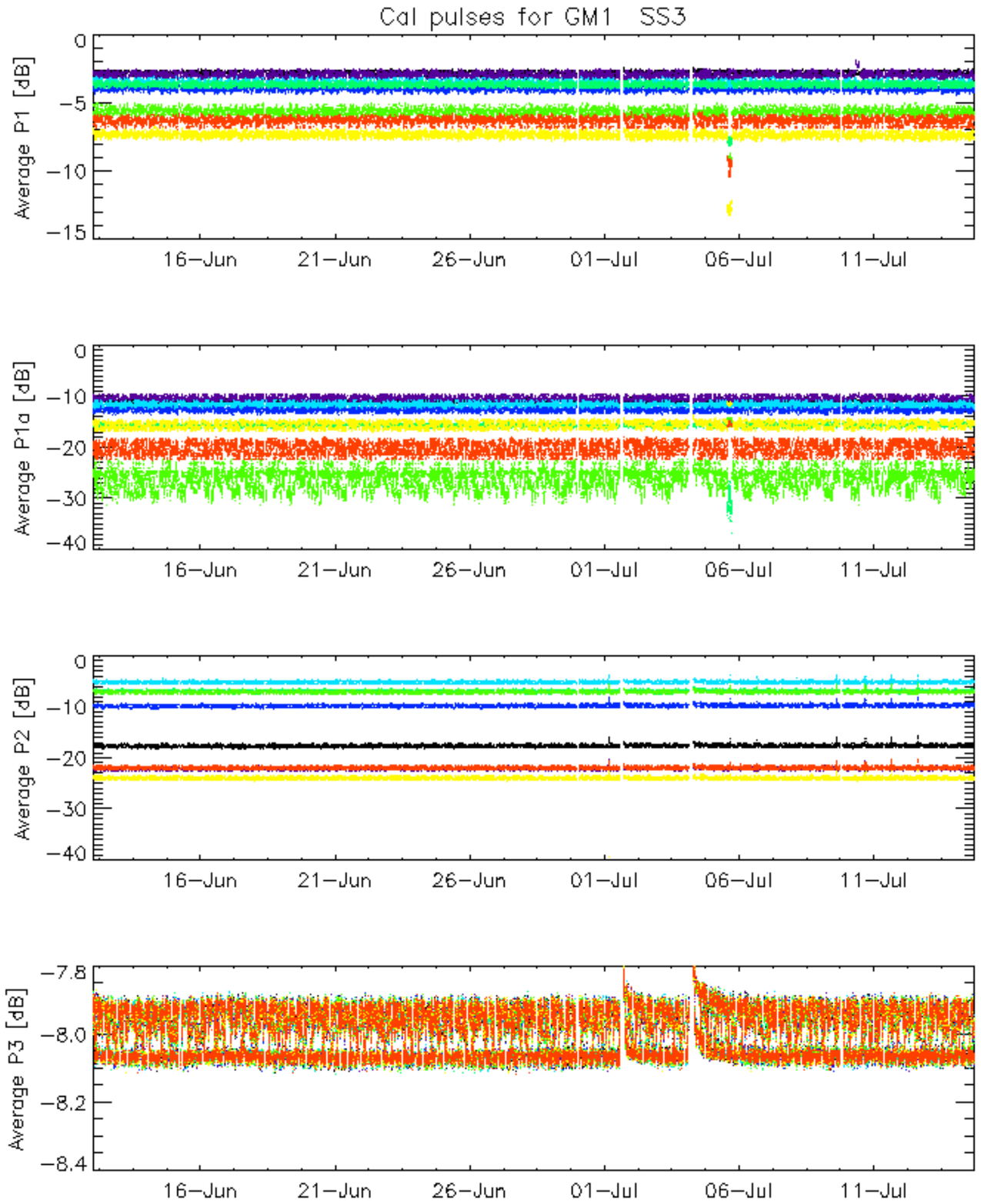
7.4 - Unbiased Doppler Error for GM1

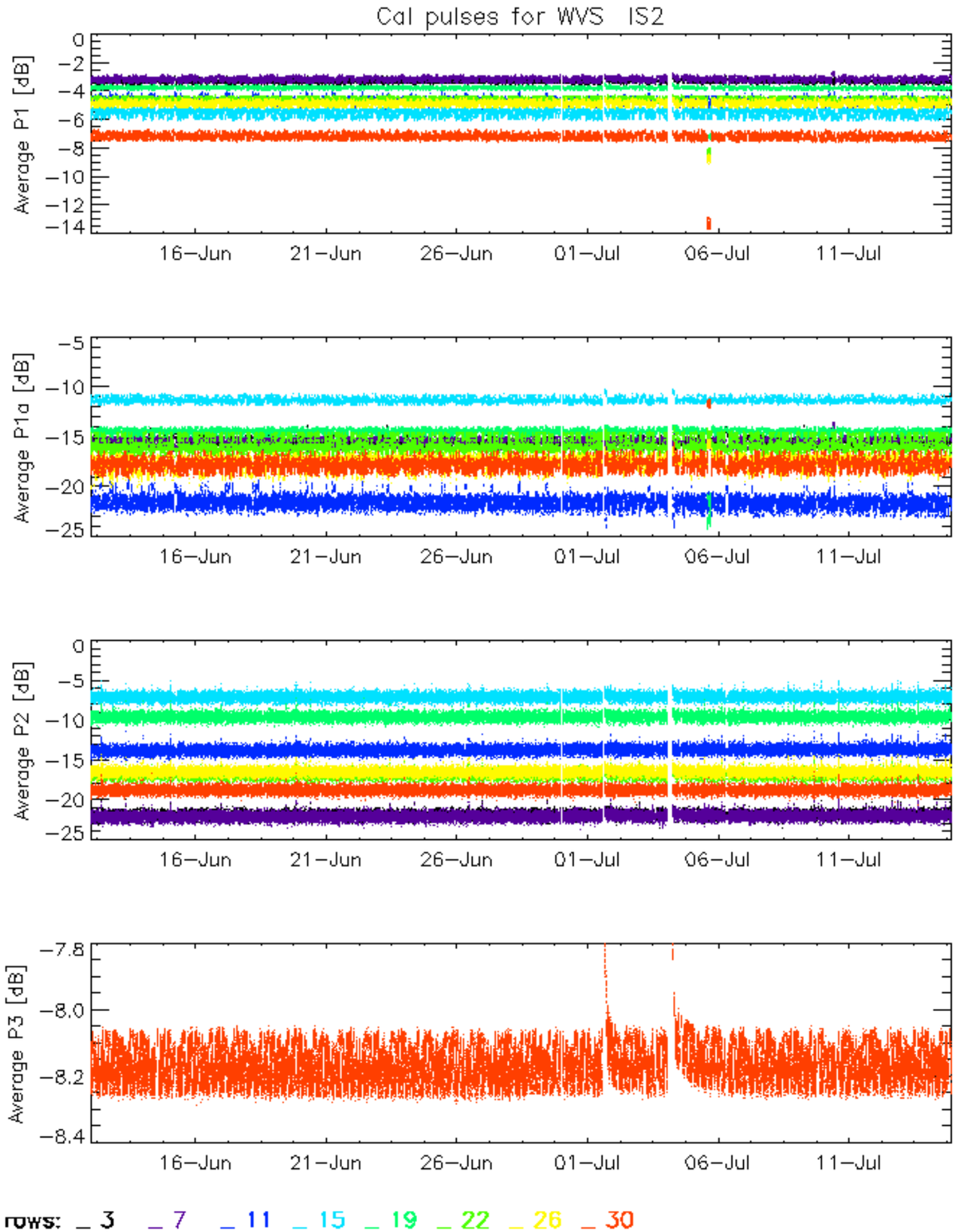
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

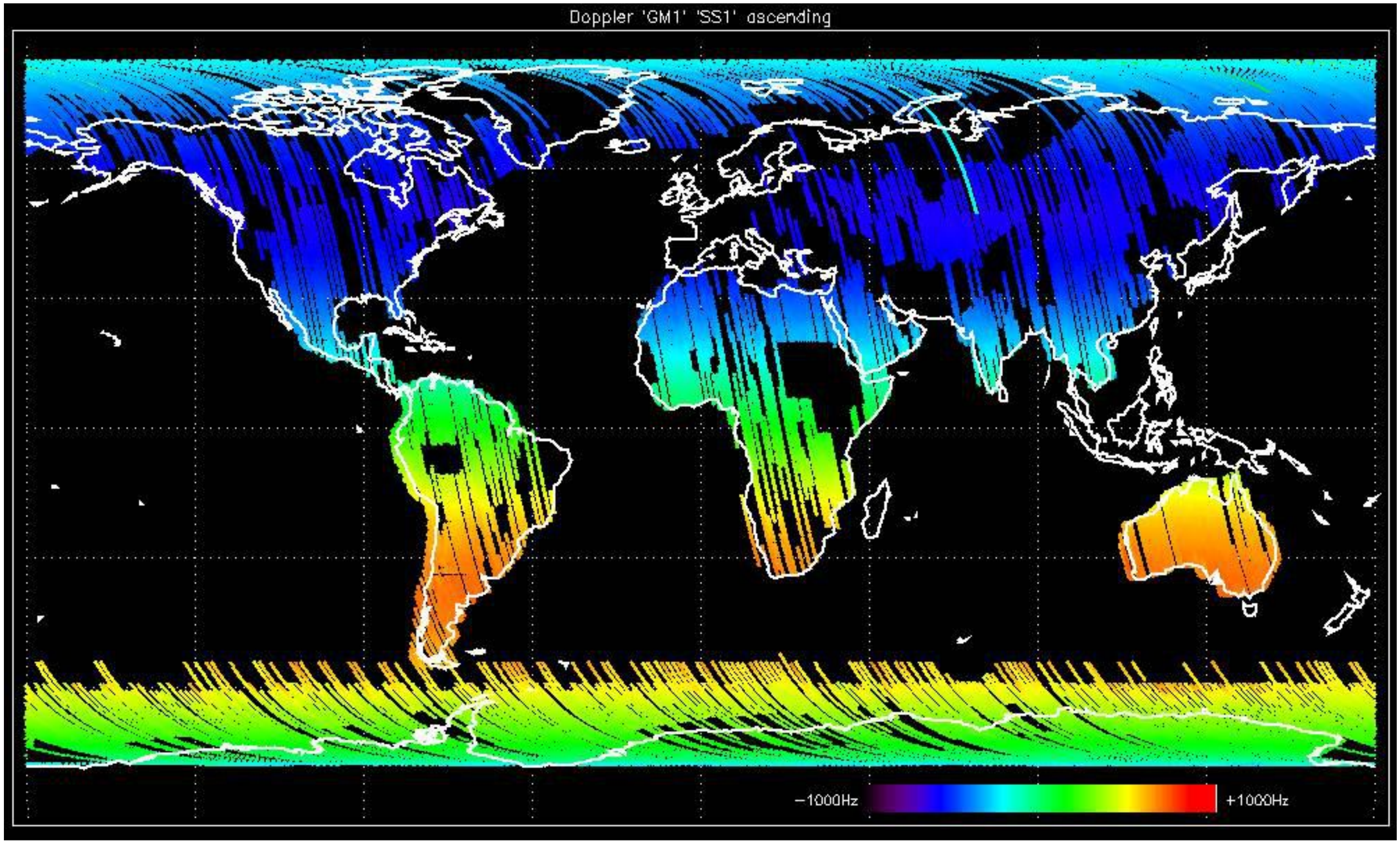

Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
Average P1a [dB]
0
−10
−20
−30
−40
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

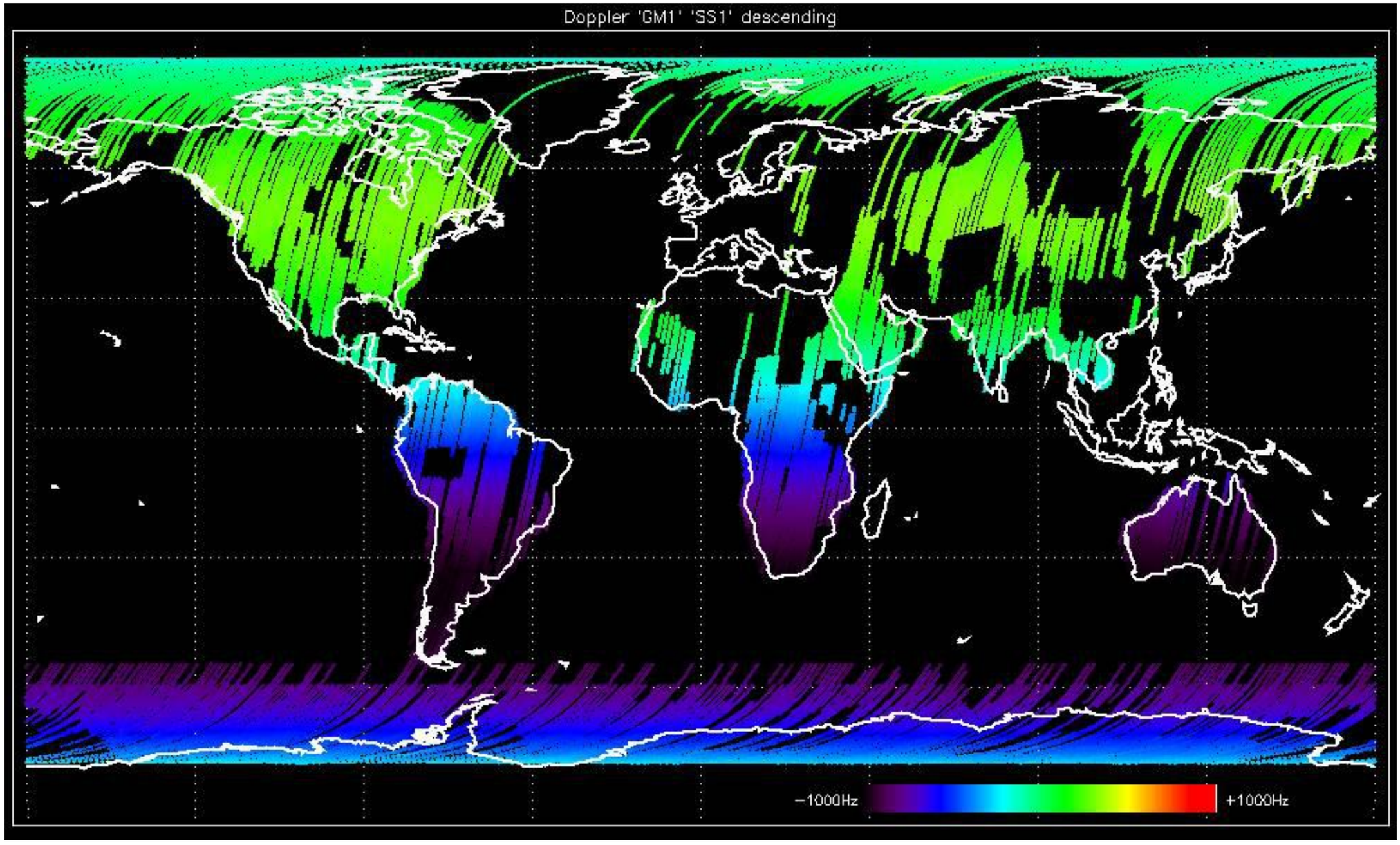

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
−10
−12
−14
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

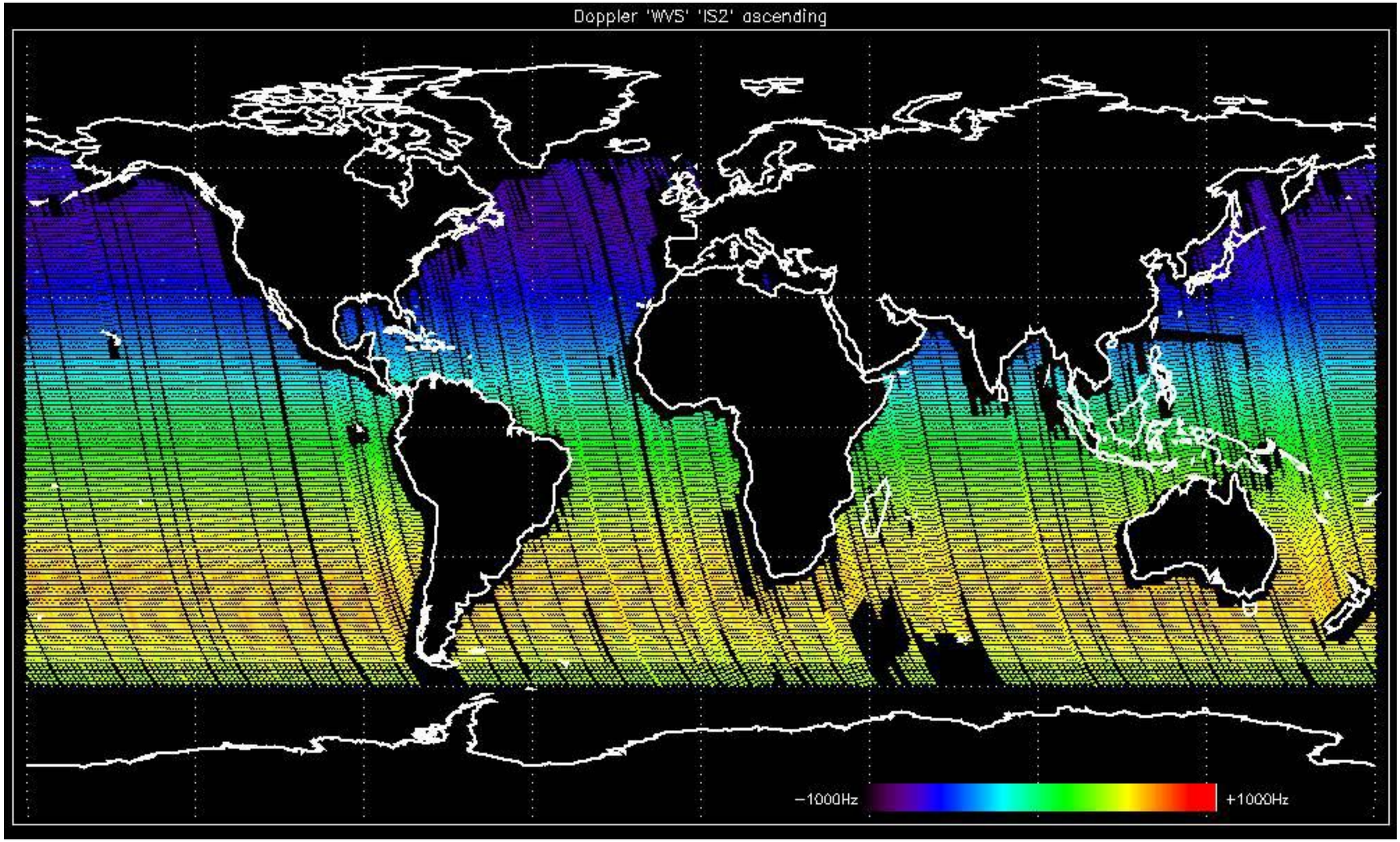
No anomalies observed.

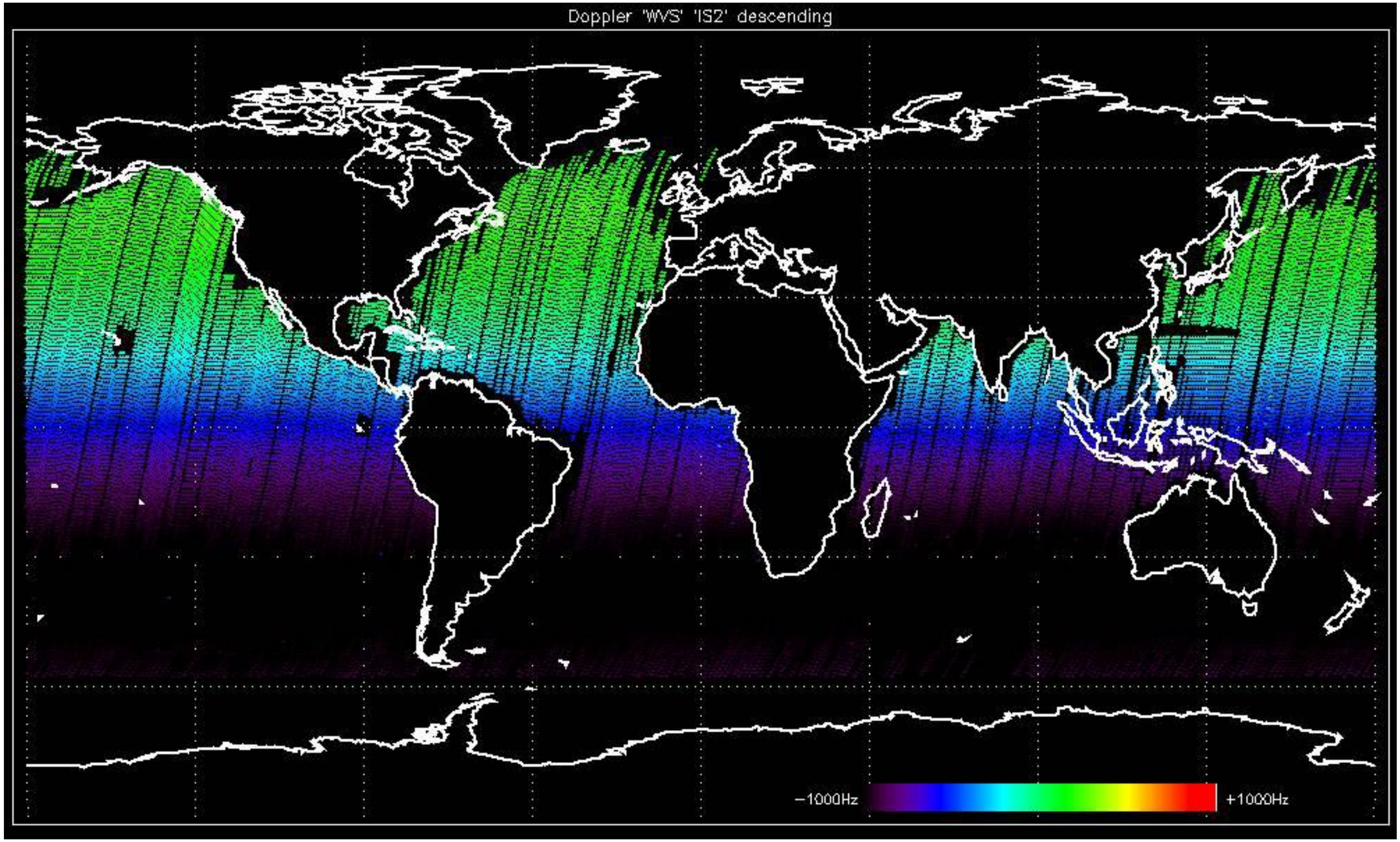
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

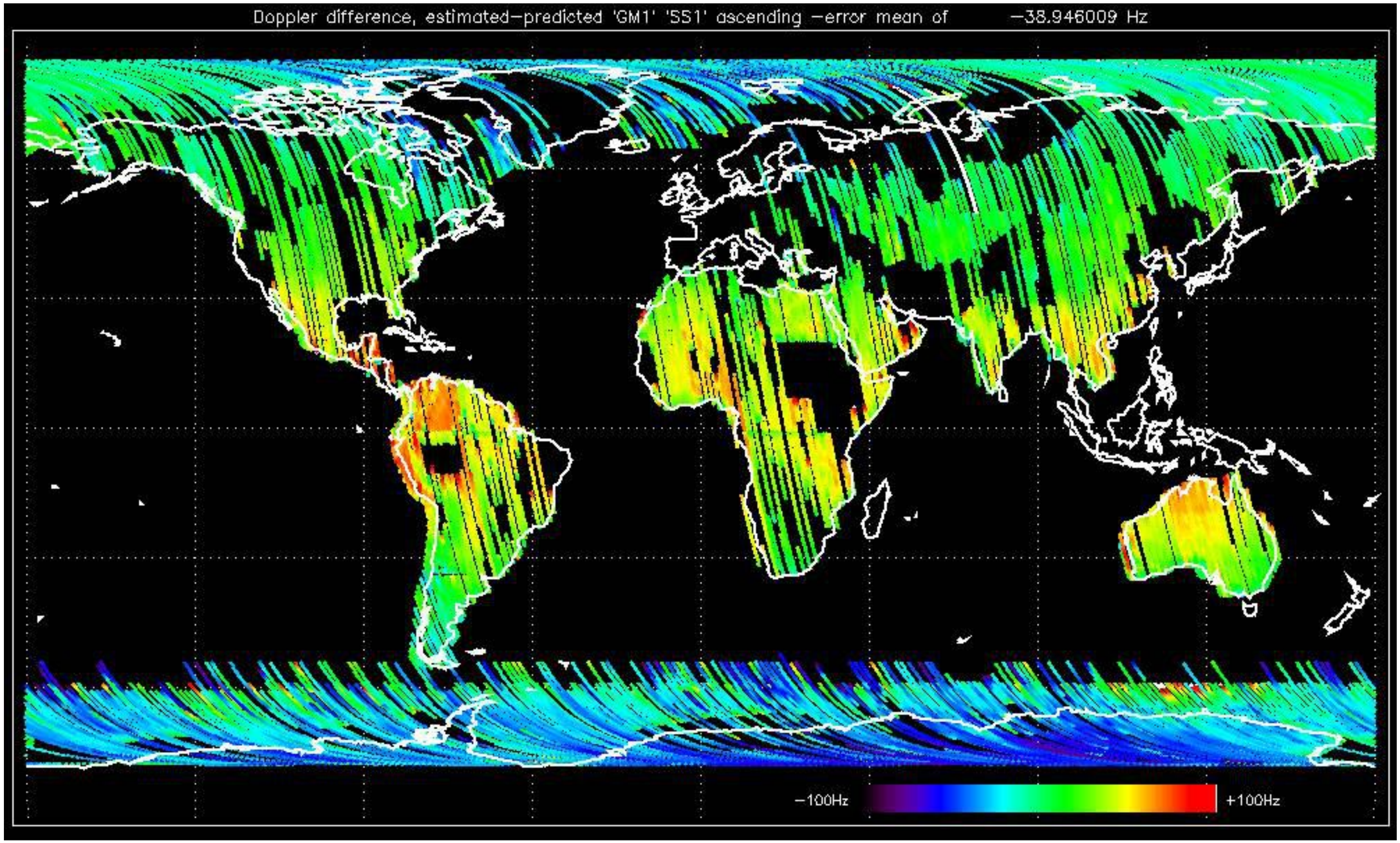
Preliminary report.The data is not yet controled

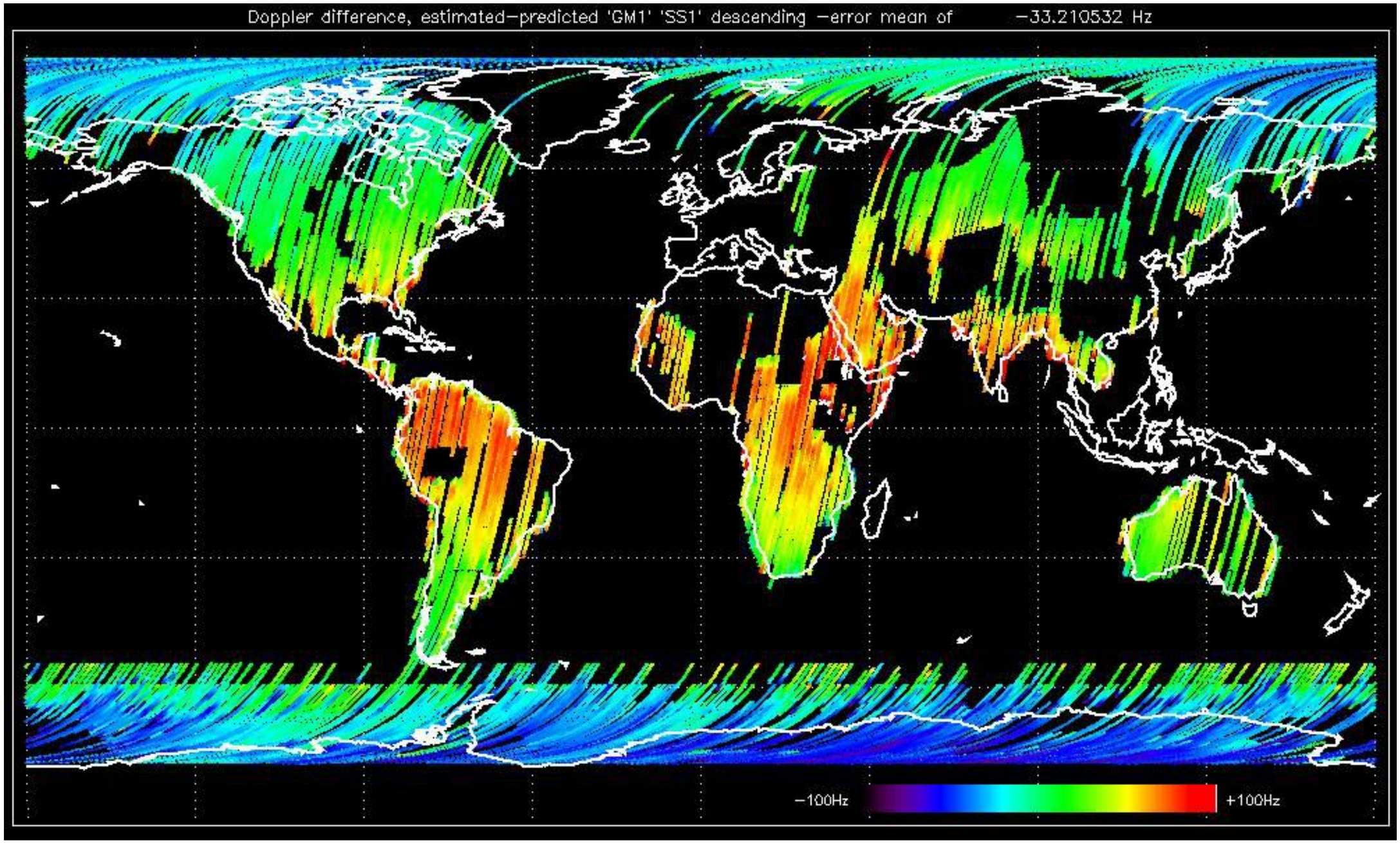

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

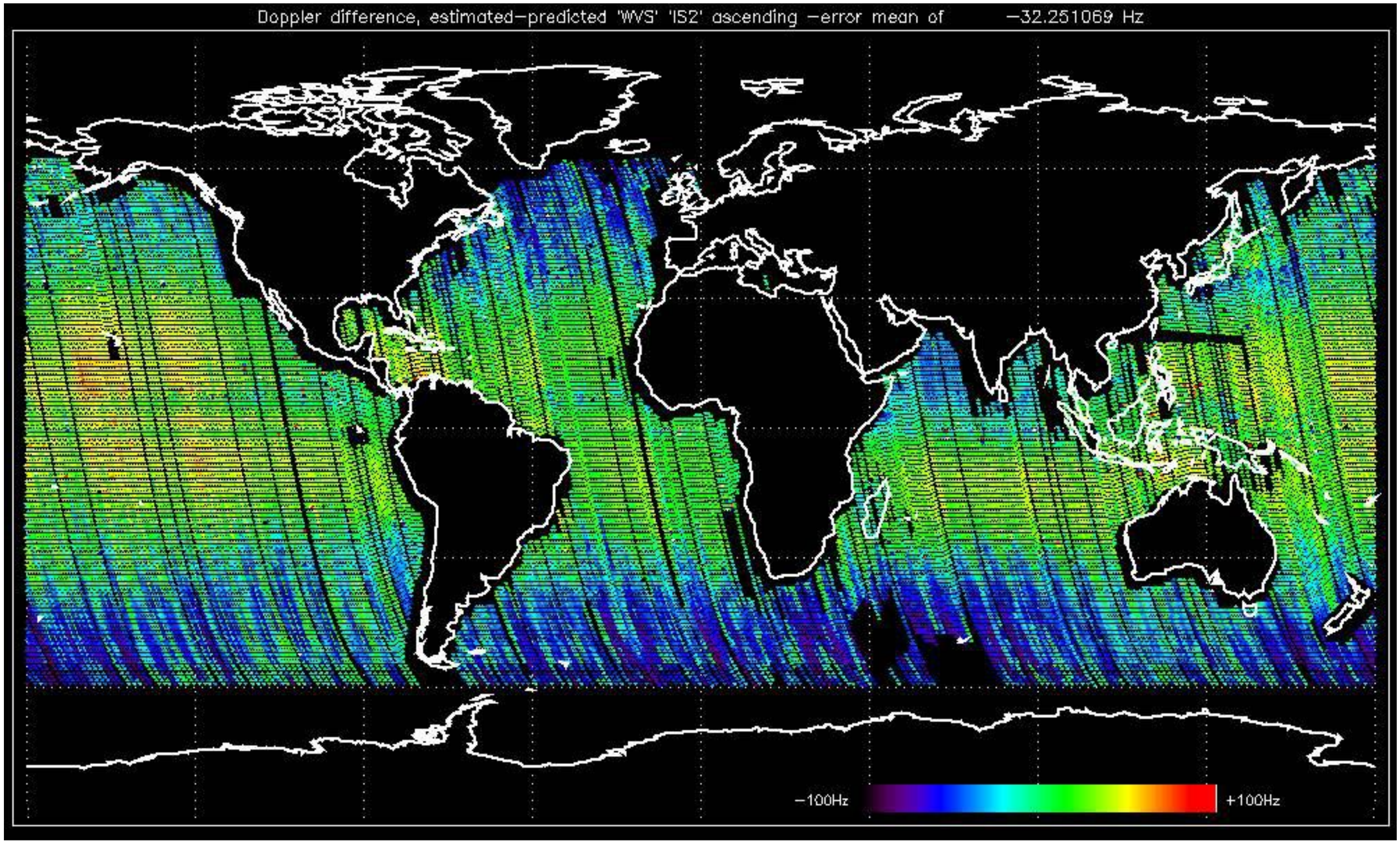

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

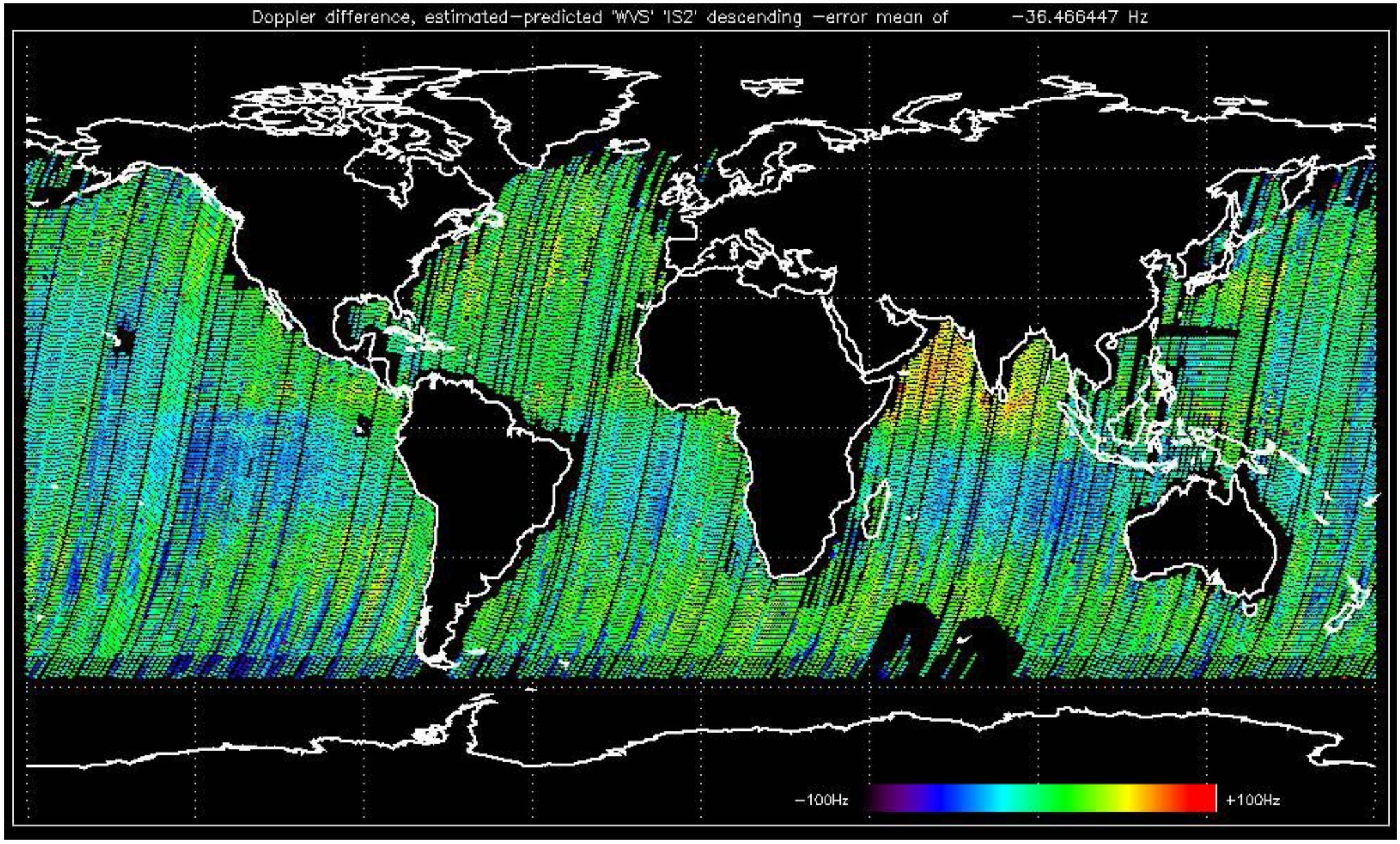

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −38.946009 Hz
−100Hz
+100Hz

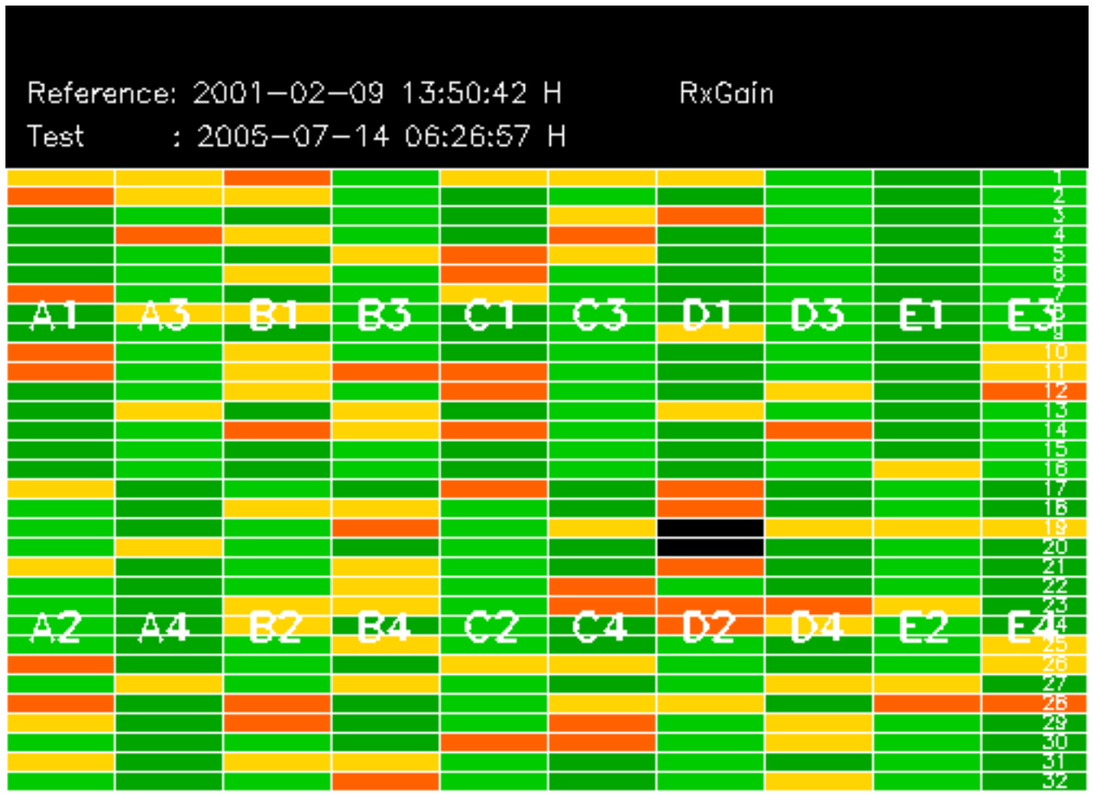

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −33.210532 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.251069 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.466447 Hz
−100Hz
+100Hz

No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
RxGain
Test : 2005-07-14 06:26:57 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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8
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Reference: 2003-06-12 14:08:52 H
Test : 2005-07-14 06:26:57 H
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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3
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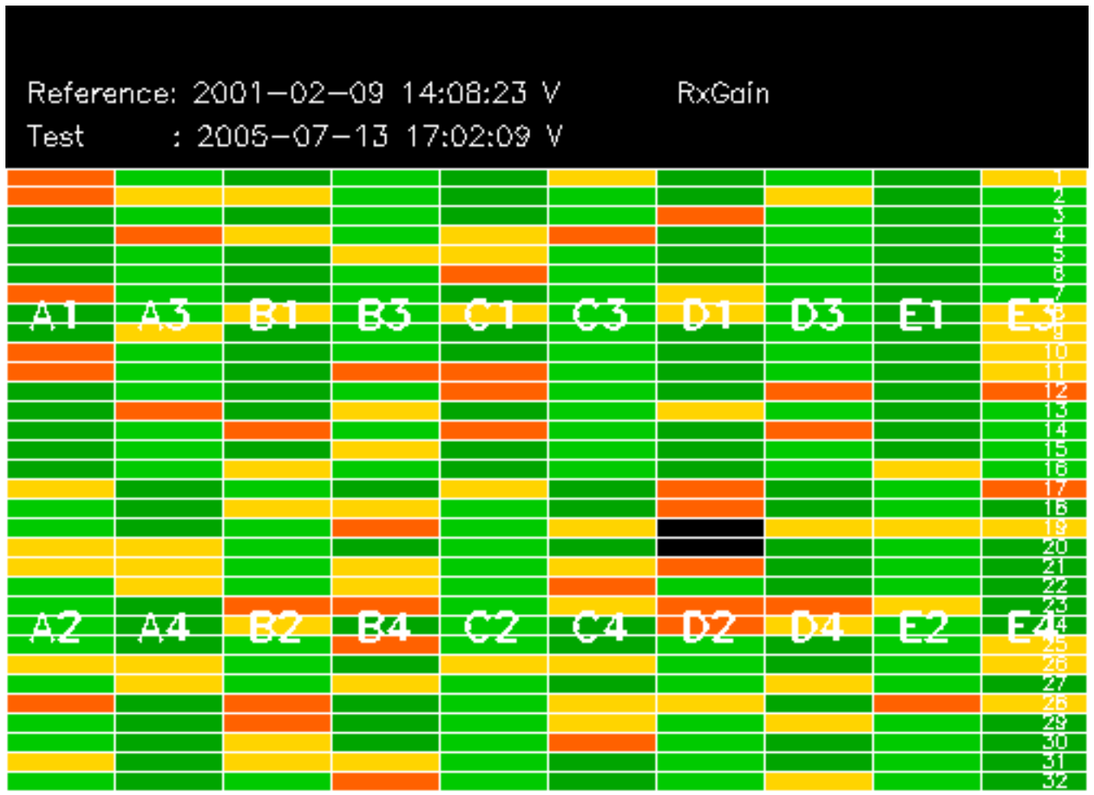
Reference: 2001-02-09 14:08:23 V
Test : 2005-07-13 17:02:09 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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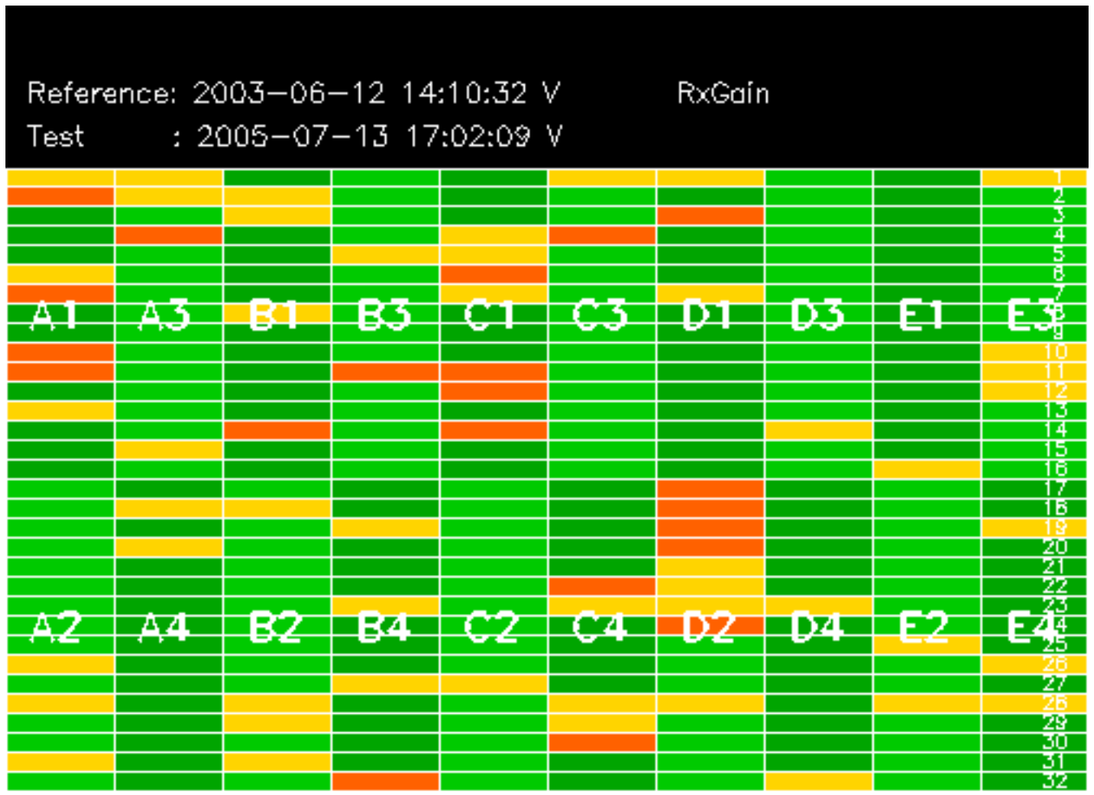
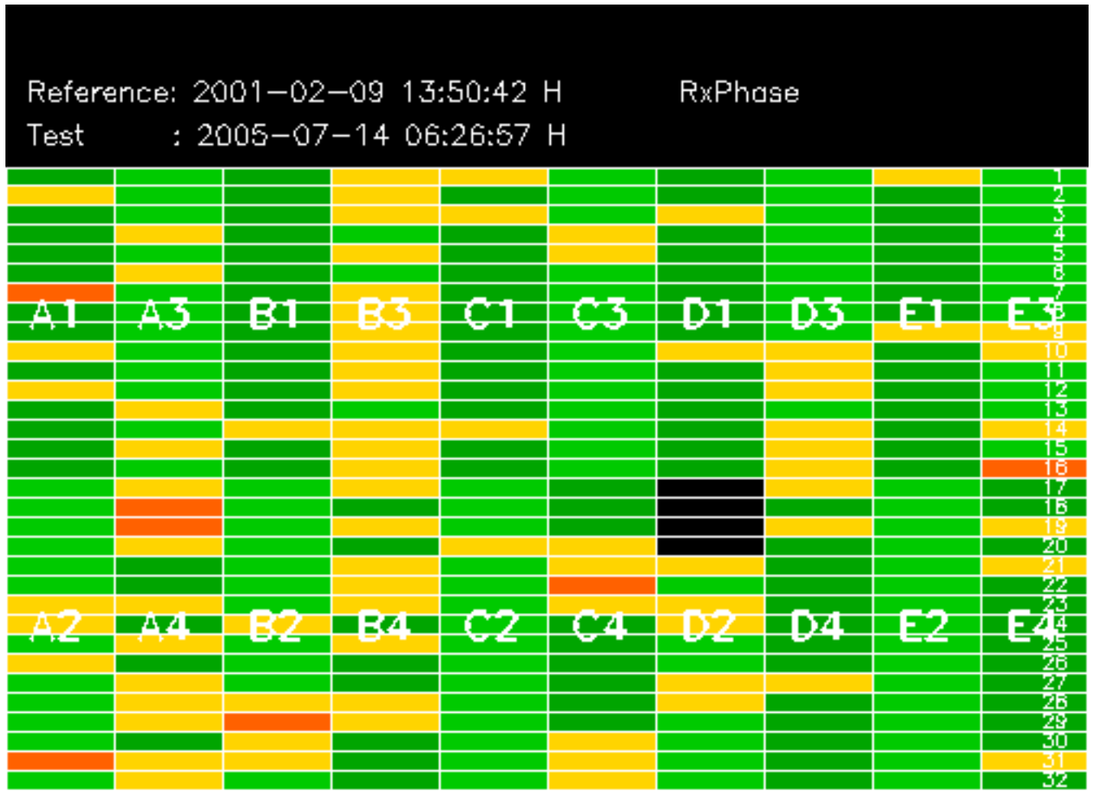

Reference: 2003-06-12 14:10:32 V
Test : 2005-07-13 17:02:09 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-07-14 06:26:57 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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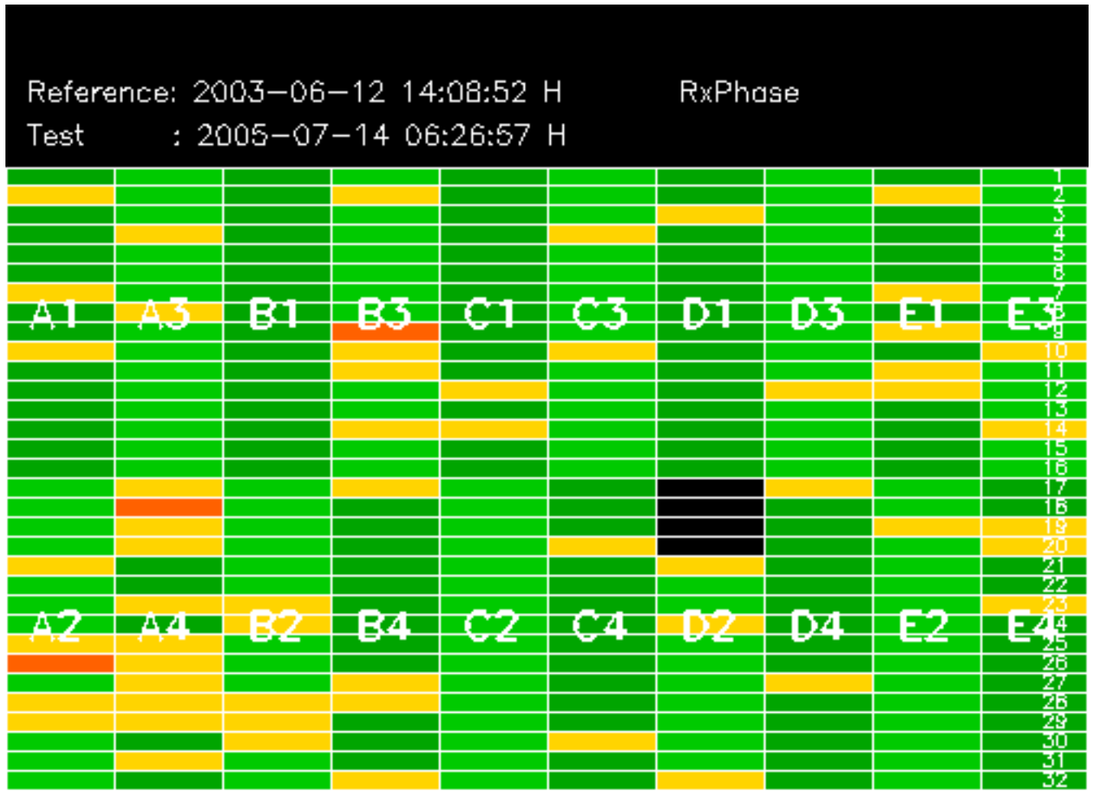
Reference: 2003-06-12 14:08:52 H
Test : 2005-07-14 06:26:57 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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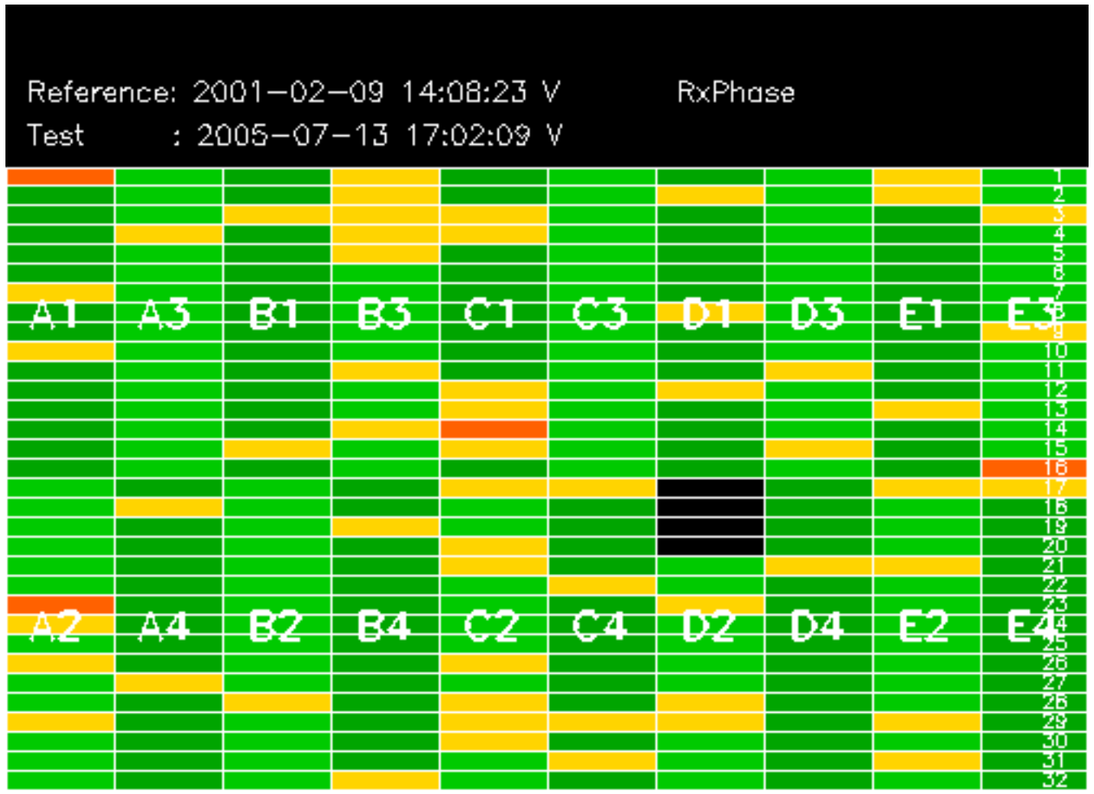
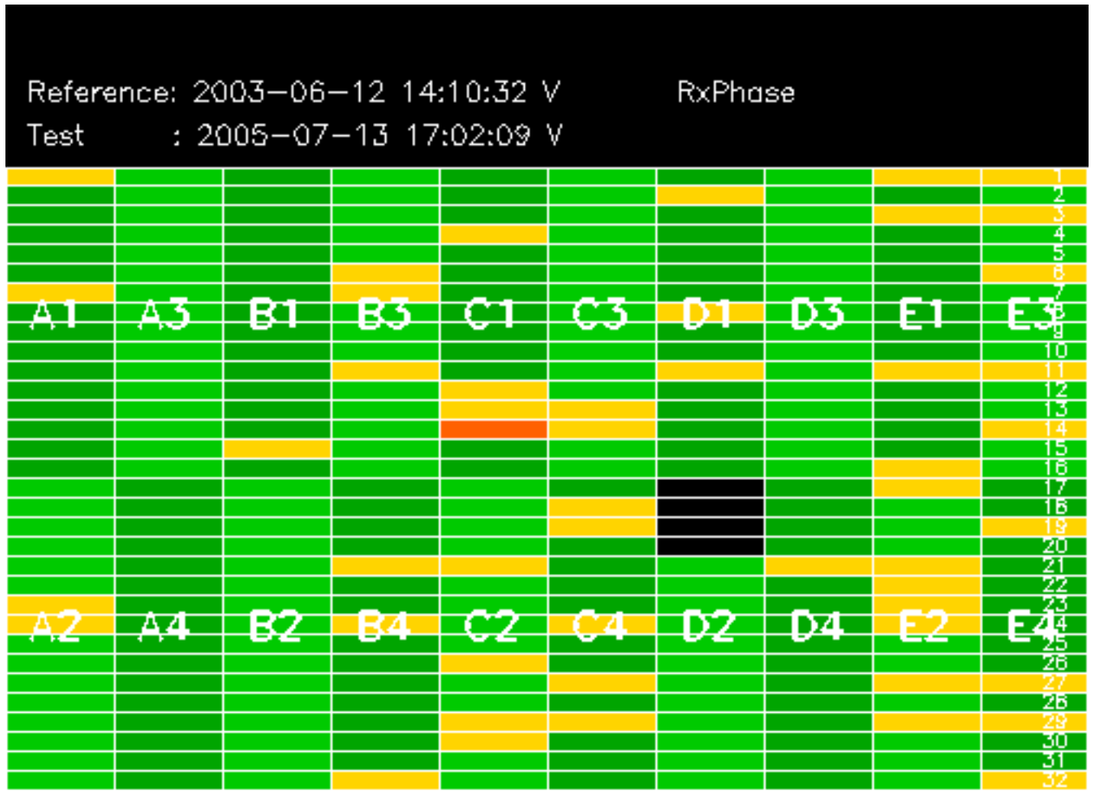
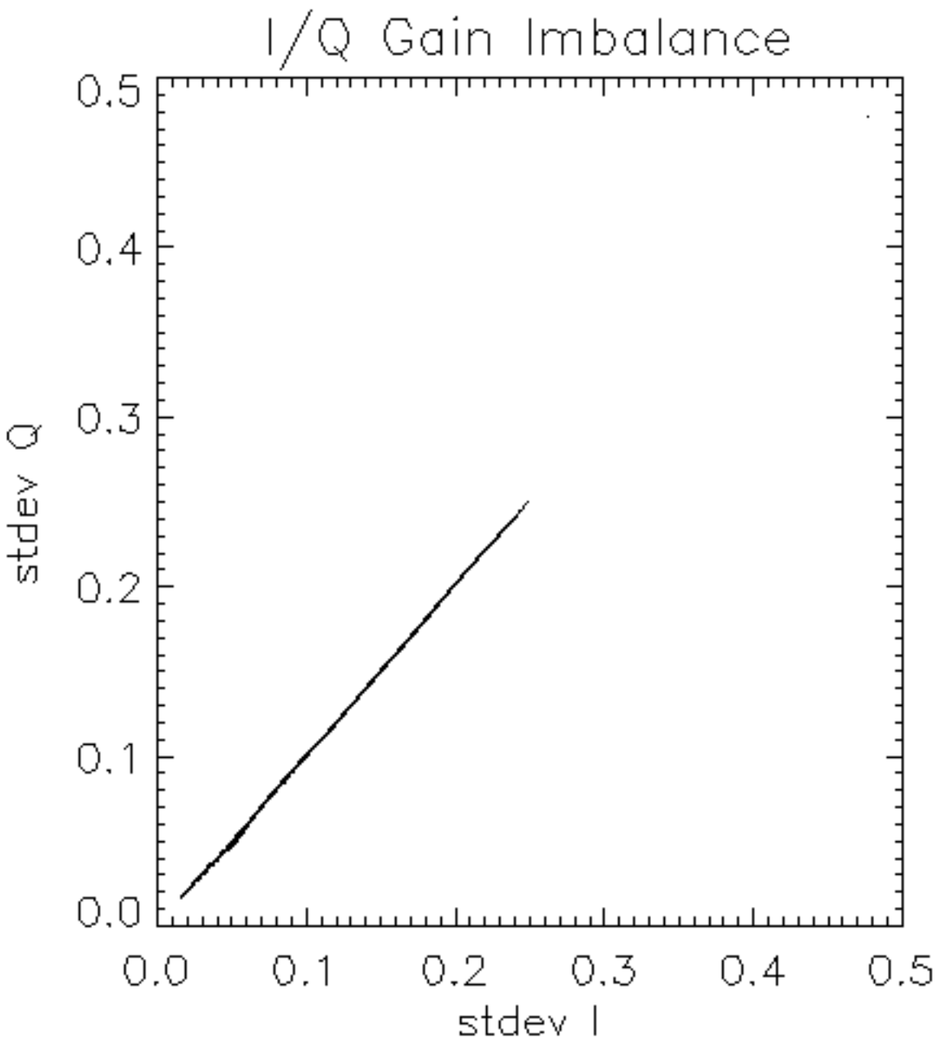
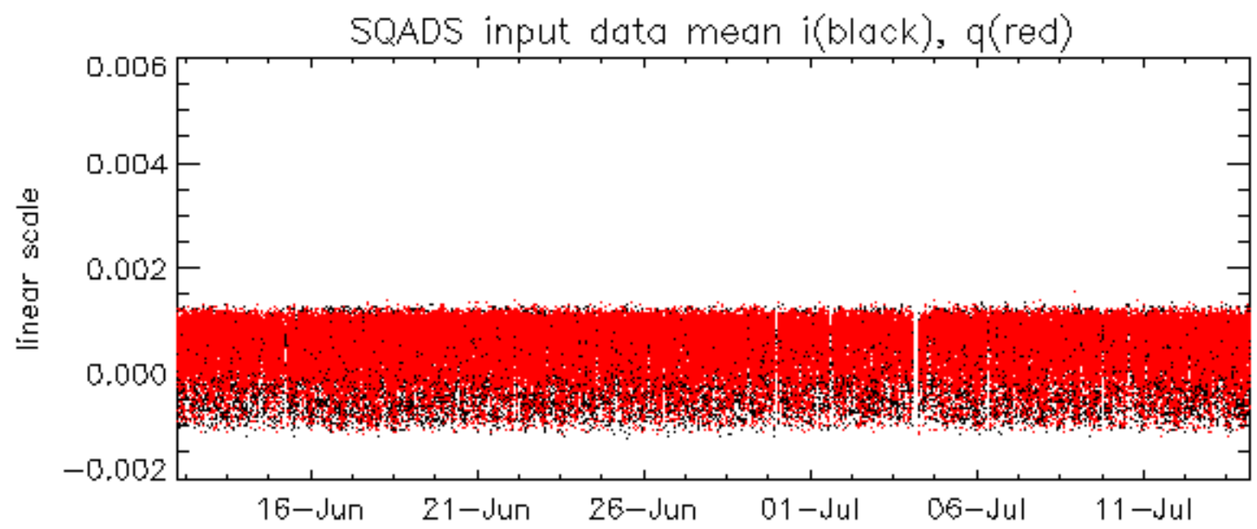
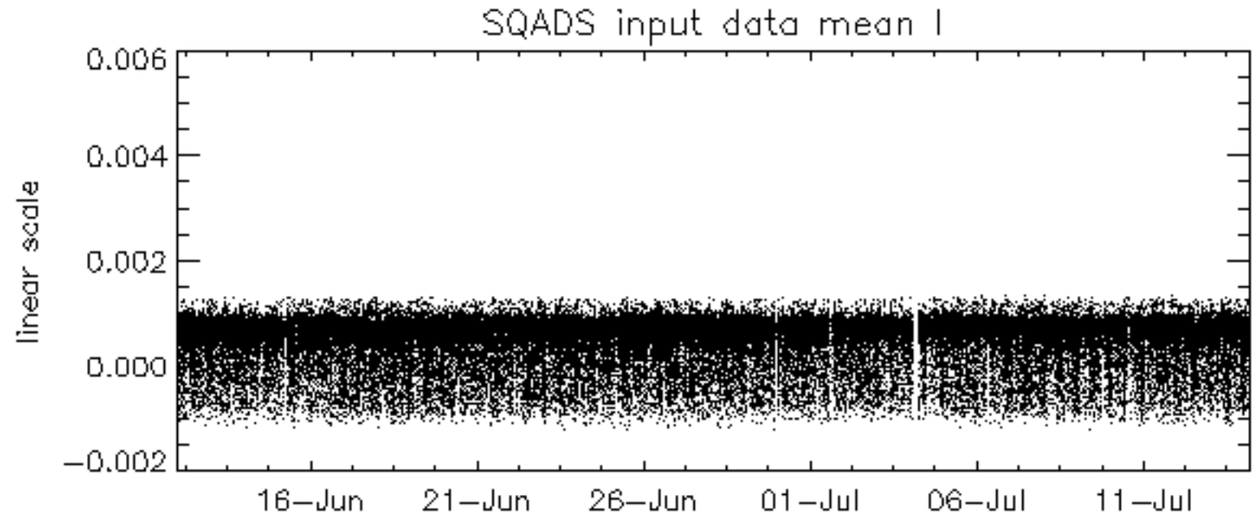
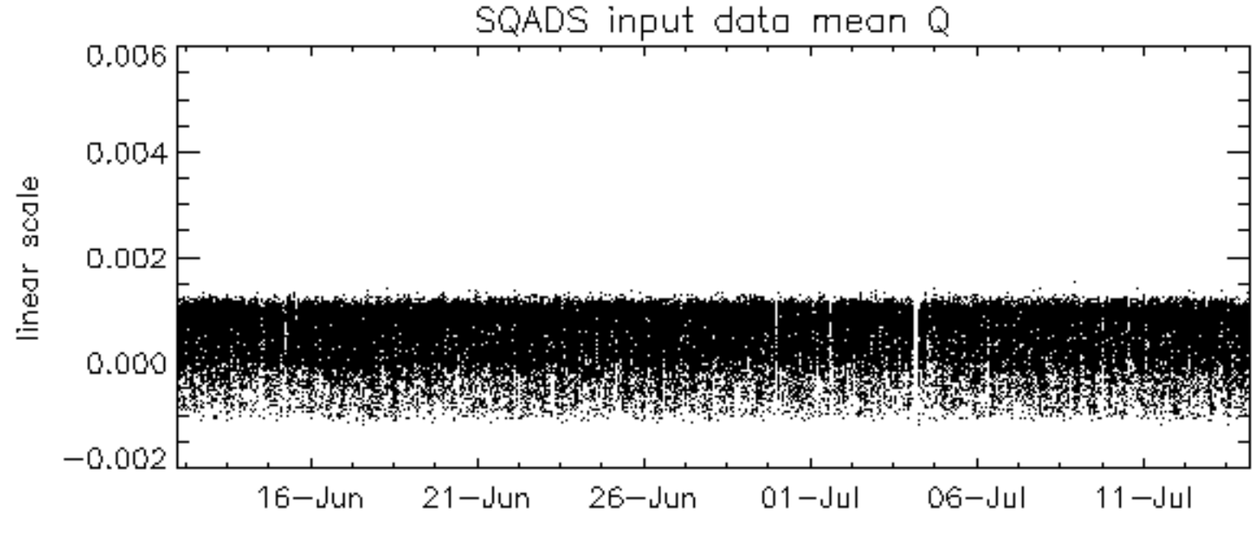

Reference: 2001-02-09 14:08:23 V
RxPhase
Test : 2005-07-13 17:02:09 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

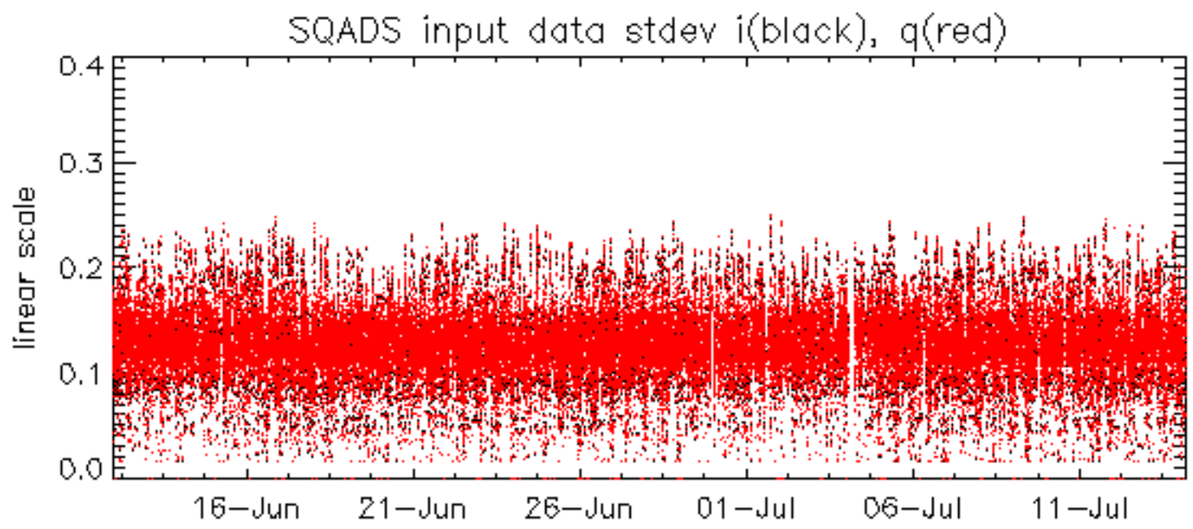

Reference: 2003-06-12 14:10:32 V
Test : 2005-07-13 17:02:09 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

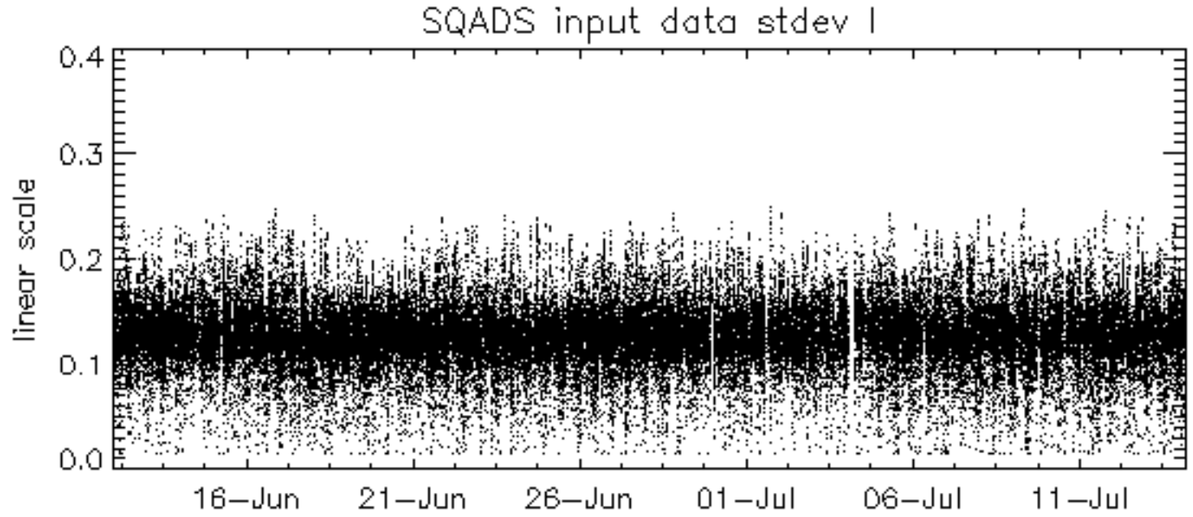

I/Q Gain Imbalance
stdev Q
stdev I
0.0
0.1
0.2
0.3
0.4
0.5

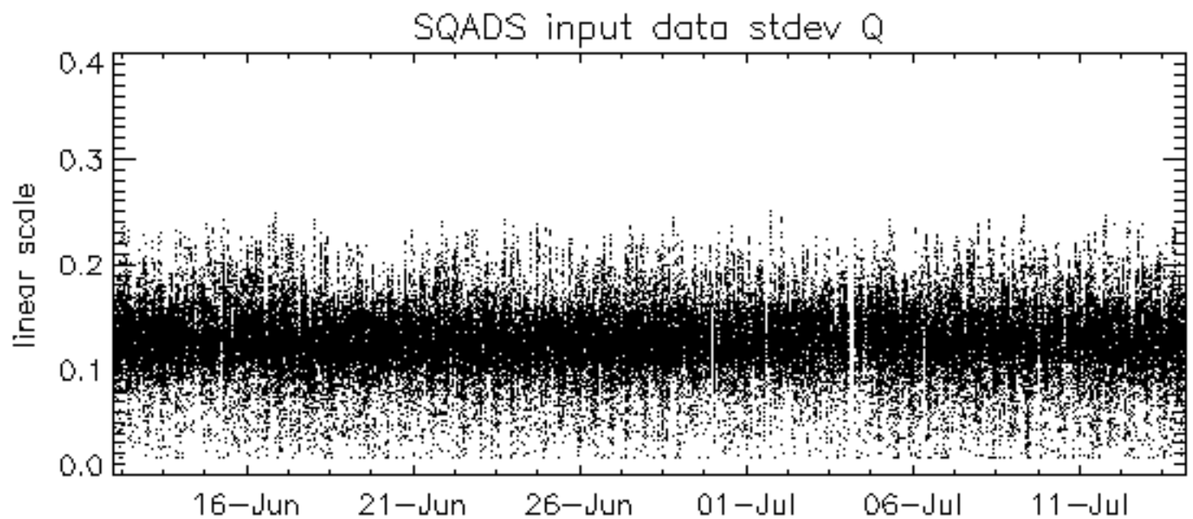

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul

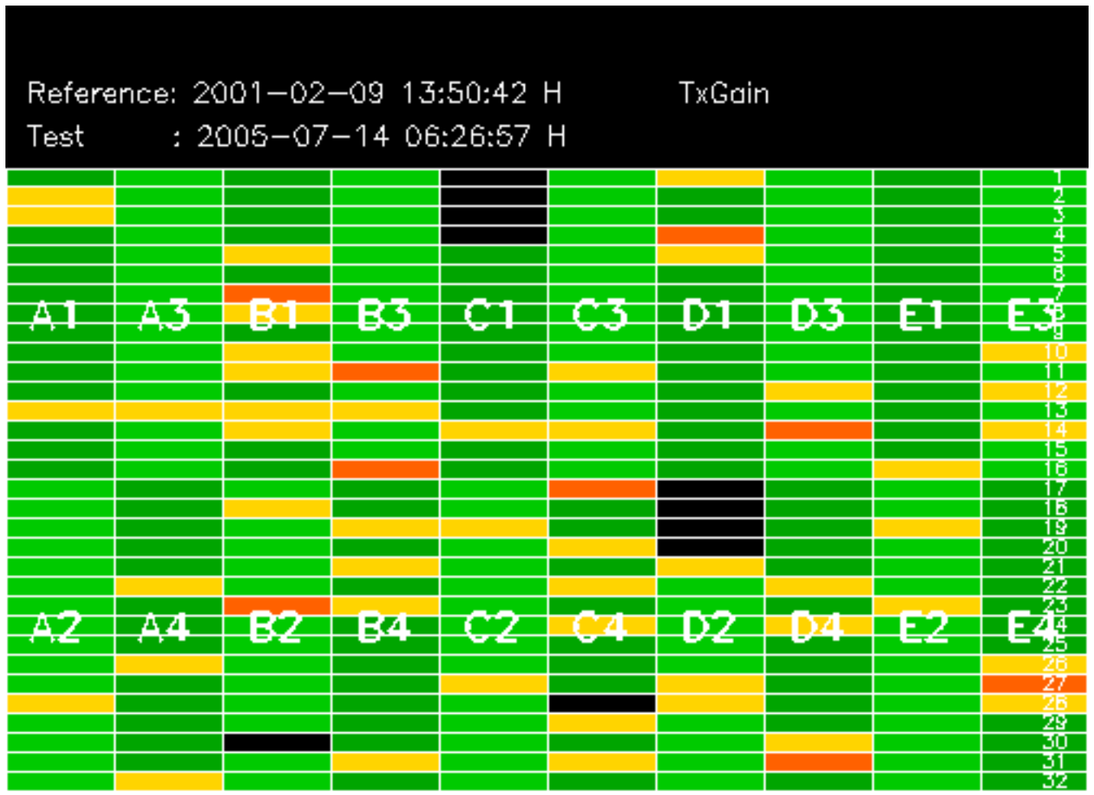

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Jun
21−Jun
26−Jun
01−Jul
06−Jul
11−Jul


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2005-07-14 06:26:57 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
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8
9
10
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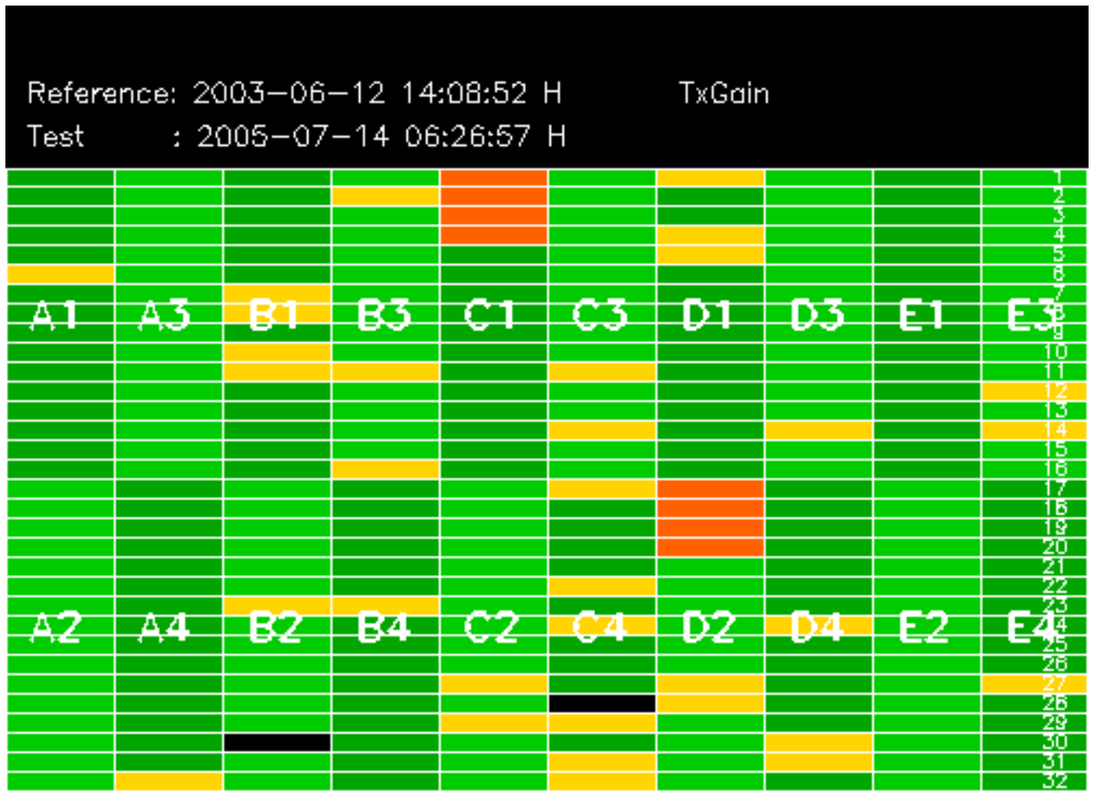
32


Reference: 2003-06-12 14:08:52 H
Test : 2005-07-14 06:26:57 H
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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3
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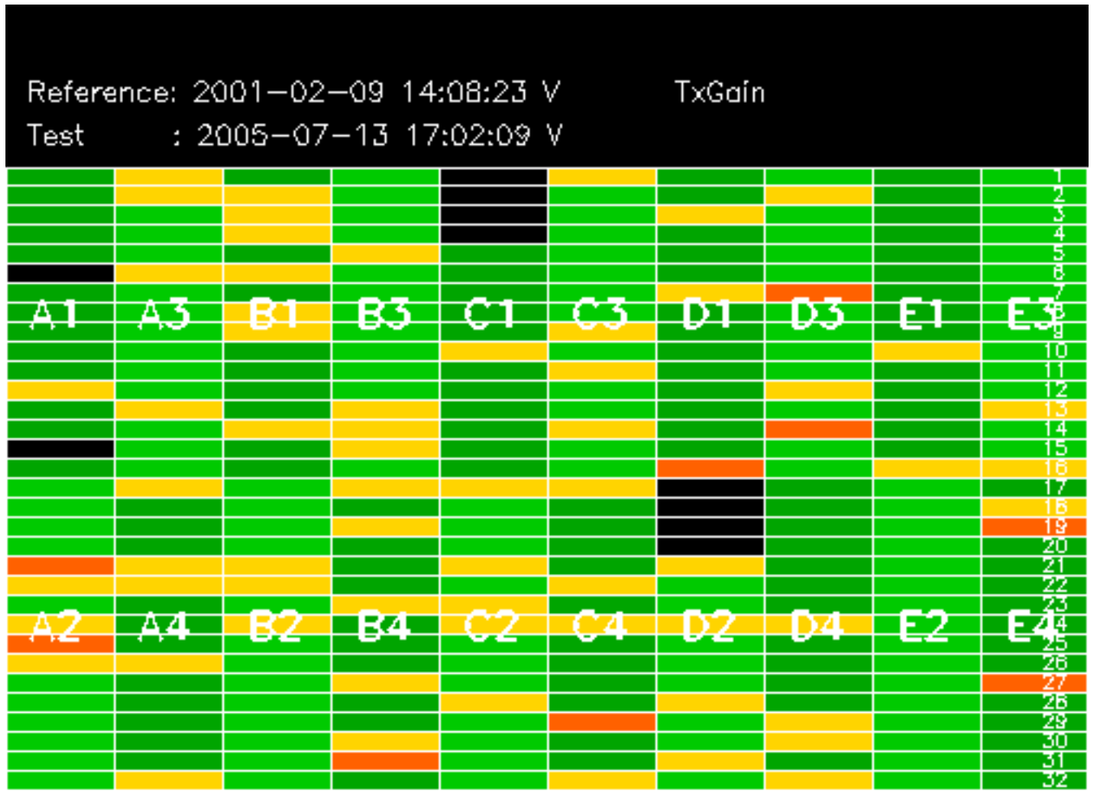
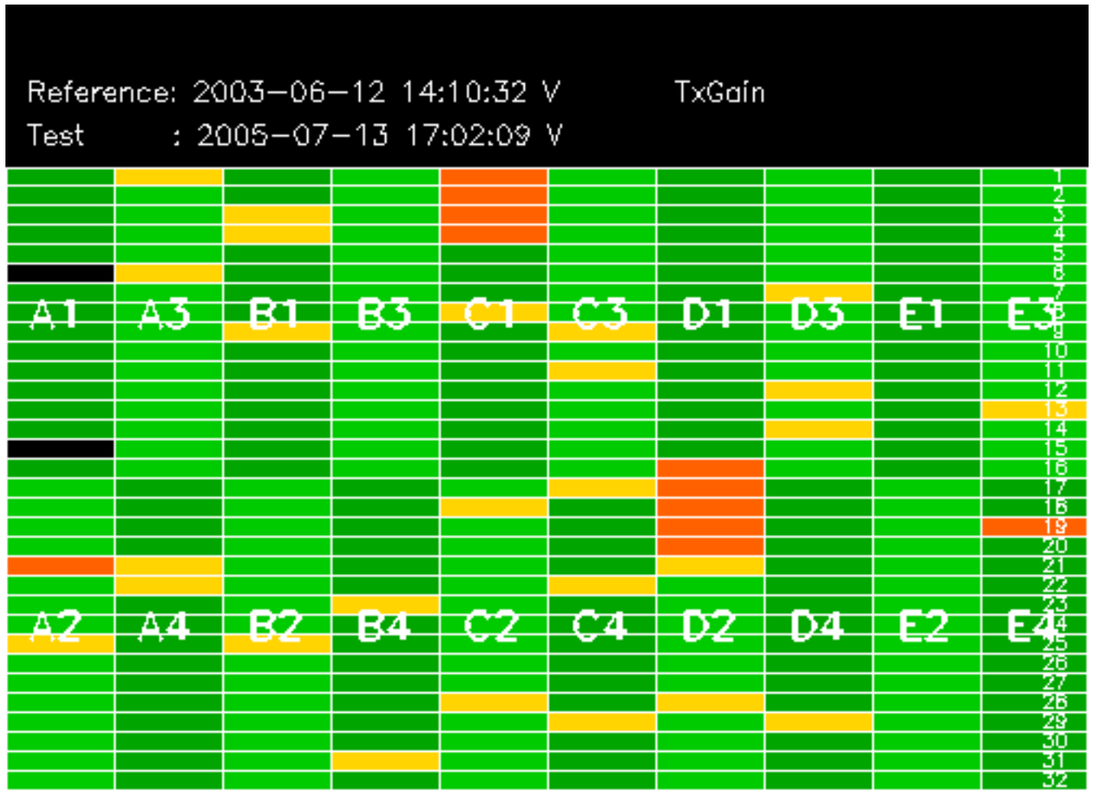

Reference: 2001-02-09 14:08:23 V
Test : 2005-07-13 17:02:09 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2005-07-13 17:02:09 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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9
10
11
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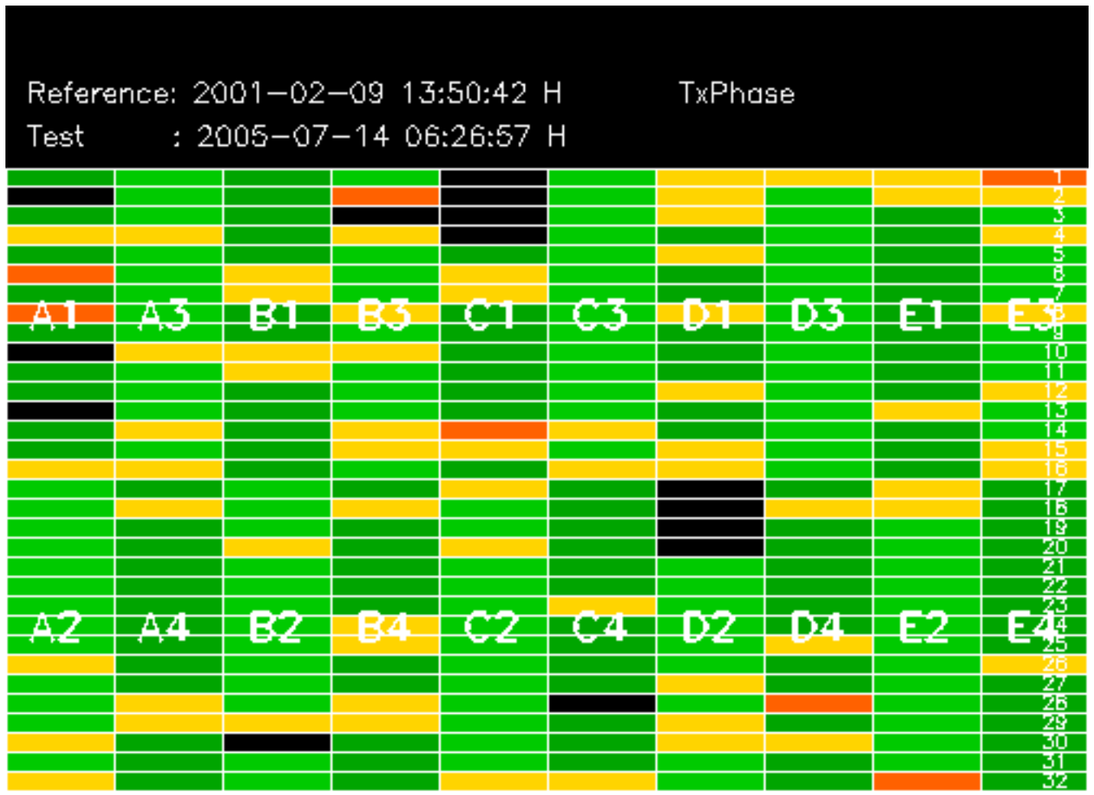
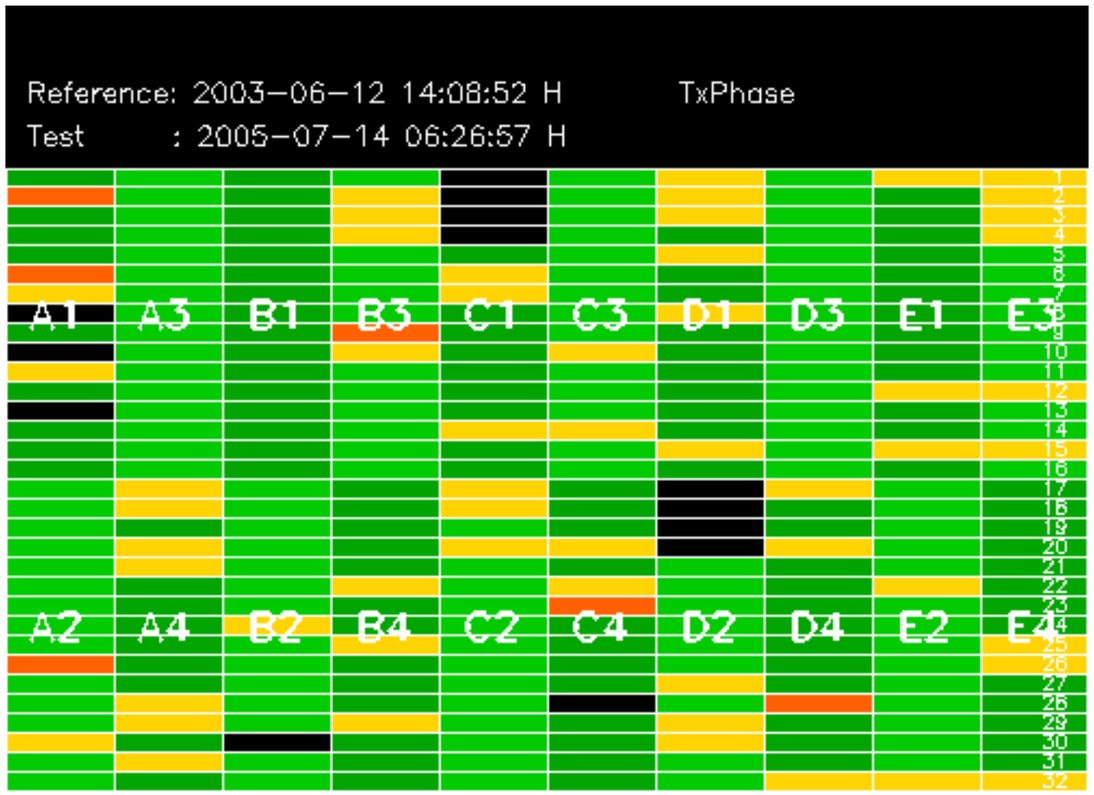
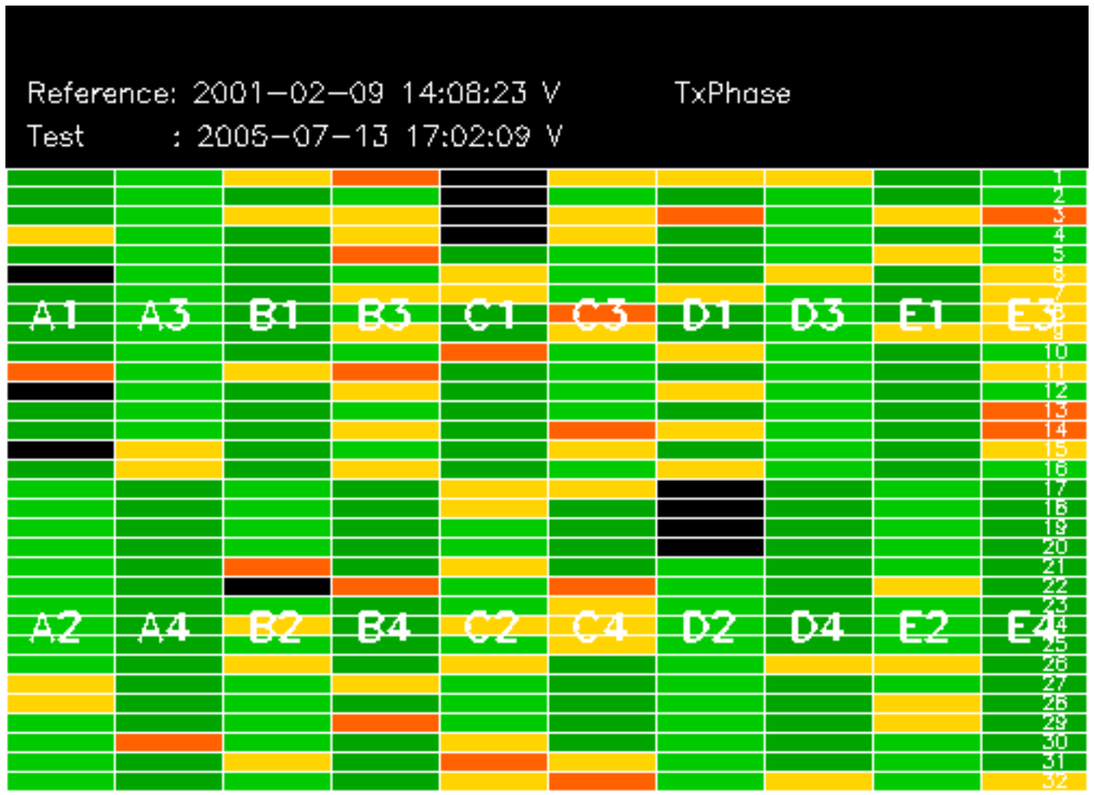
32

Summary of analysis for the last 3 days 2005071[567]
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
TxPhase
Test : 2005-07-14 06:26:57 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 : 2005-07-14 06:26:57 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
TxPhase
Test : 2005-07-13 17:02:09 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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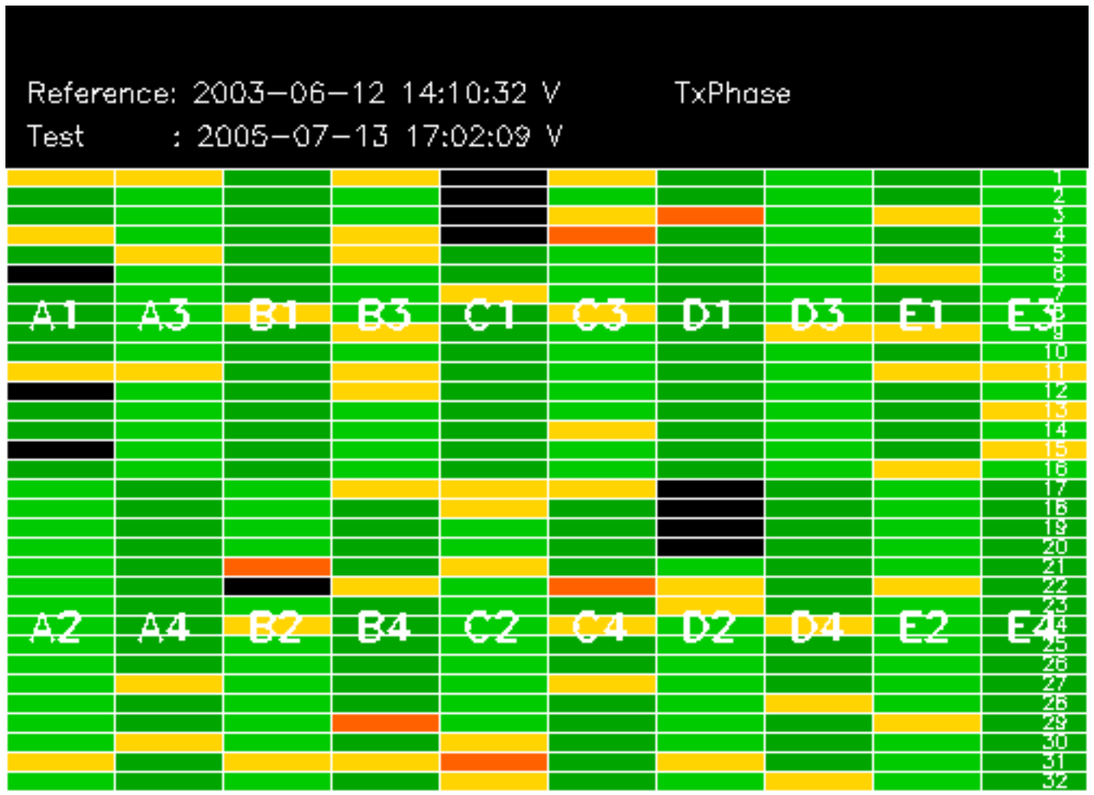
Reference: 2003-06-12 14:10:32 V
Test : 2005-07-13 17:02:09 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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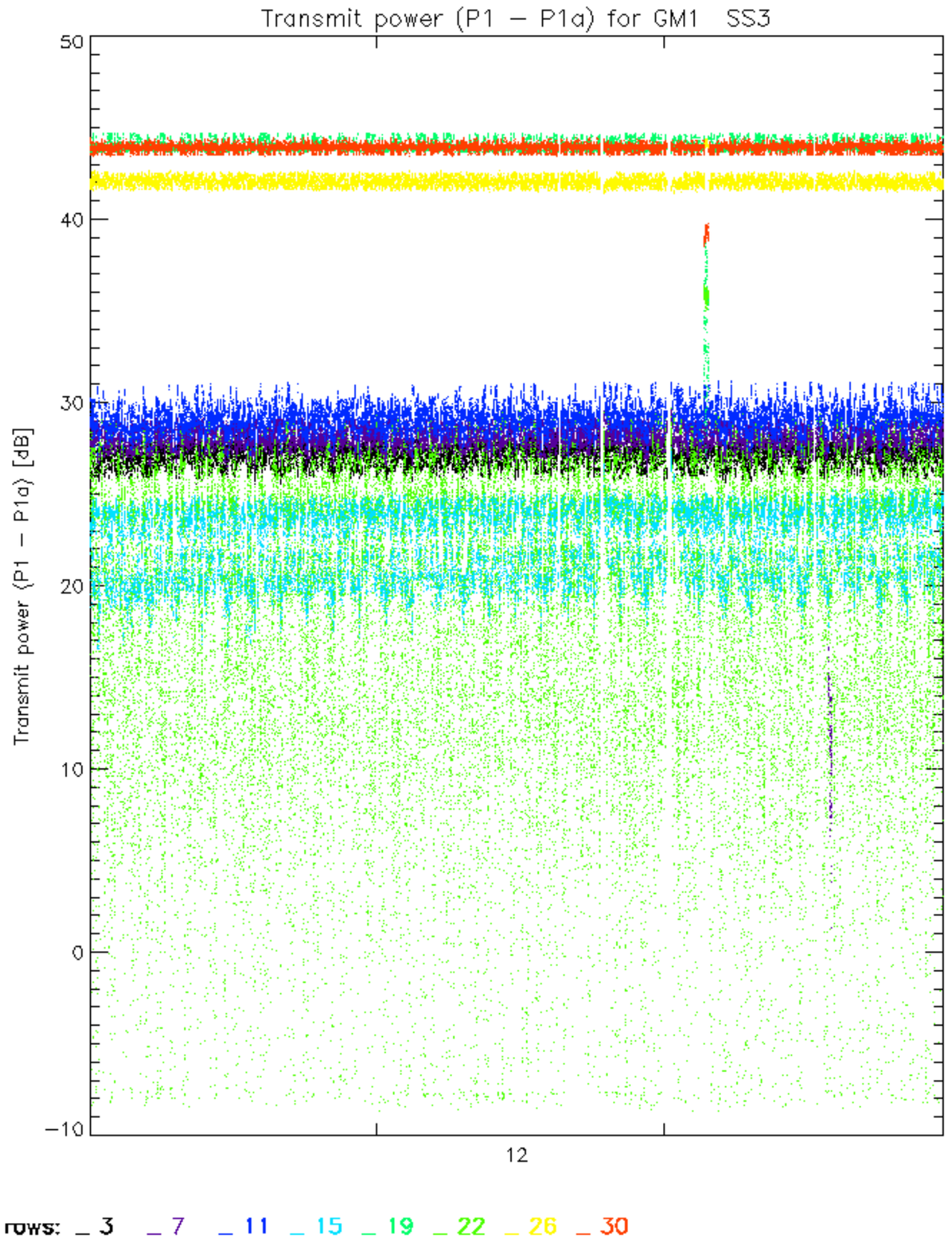
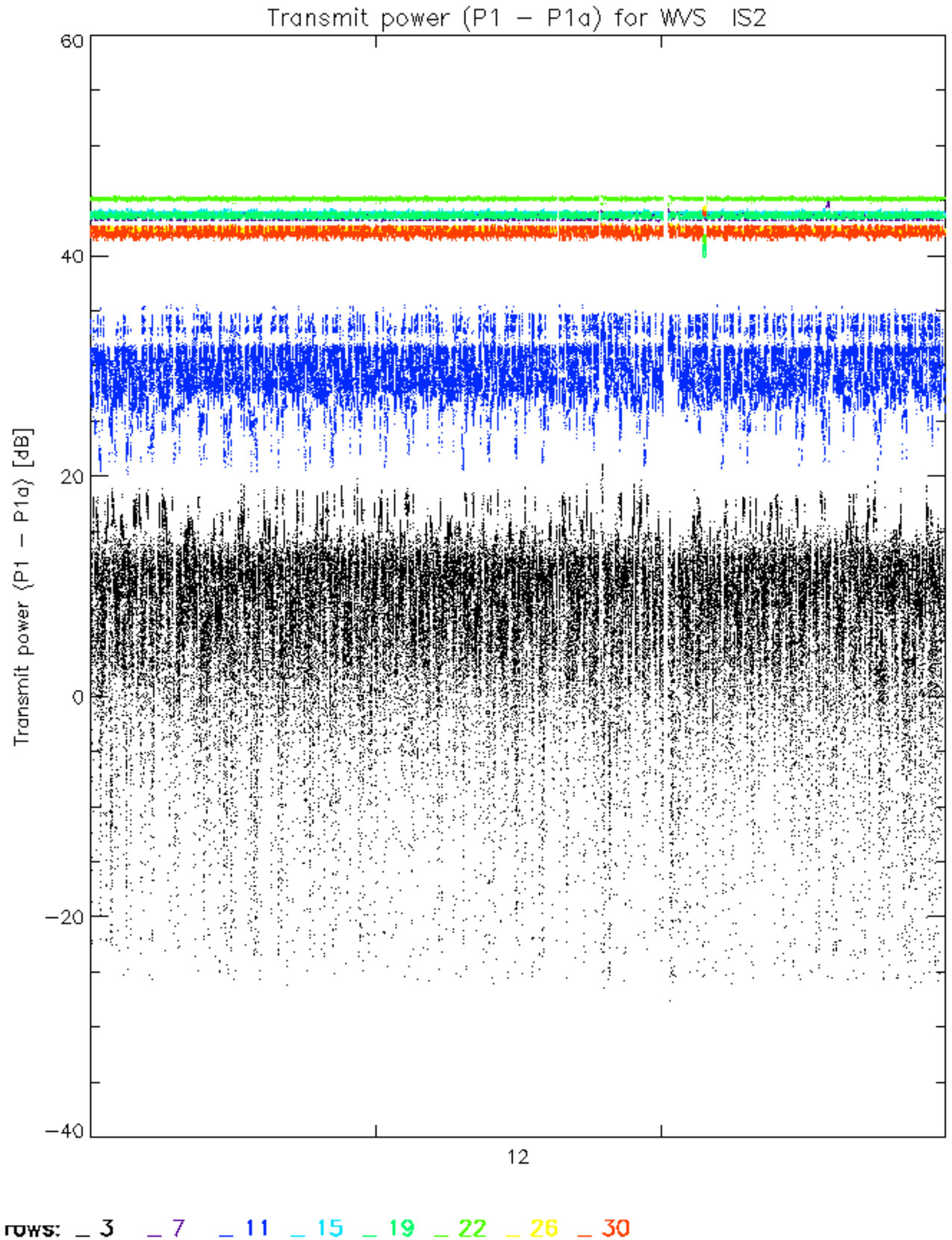

Transmit power (P1 – P1a) for GM1 SS3
Transmit power ⟨P1 – P1a⟩ [dB]
50
40
30
20
10
0
−10
12
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
60
40
20
0
−20
−40
Transmit power ⟨P1 – P1a⟩ [dB]
12
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.