PRELIMINARY REPORT OF 061226

last update on Tue Dec 26 16:22:46 GMT 2006

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 2006-12-25 00:00:00 to 2006-12-26 16:22:46

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

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	0	0	31	13	57
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	0	0	31	13	57
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	0	0	31	13	57
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	0	0	31	13	57

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:

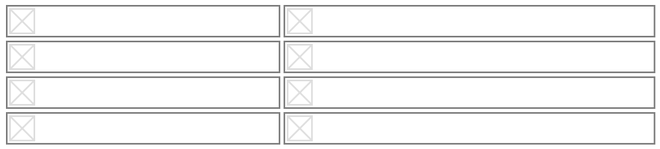
Polarisation	Start Time
V	20061220 170201
H	20061221 062648

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

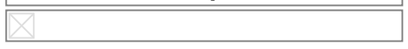
4.1.2 - Evolution for GM1

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	-3.965318	0.007936	-0.007242
7	P1	-3.143467	0.024759	0.025894
11	P1	-4.119087	0.026741	0.026030
15	P1	-6.326102	0.016105	-0.048993
19	P1	-3.650339	0.005900	-0.061383
22	P1	-4.655843	0.014141	-0.012218
26	P1	-3.957931	0.009386	-0.027794
30	P1	-5.891823	0.009397	-0.039937
3	P1	-16.555246	0.254246	-0.093767
7	P1	-17.289808	0.191173	0.035849
11	P1	-17.190079	0.479883	0.104613
15	P1	-13.057204	0.137592	0.042373
19	P1	-14.989990	0.095004	-0.061428
22	P1	-15.806736	0.556311	0.061004
26	P1	-15.076978	0.185476	-0.057967
30	P1	-17.505409	0.477021	0.004651

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.806217	0.094728	0.048417
7	P2	-21.725929	0.094478	0.058750
11	P2	-15.588055	0.104211	0.097774
15	P2	-7.114661	0.109581	0.028657
19	P2	-9.190565	0.105824	-0.009372
22	P2	-18.233389	0.099003	0.030009
26	P2	-16.586184	0.113655	-0.059303
30	P2	-19.461571	0.089710	0.012437

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.242636	0.009046	0.016864
7	P3	-8.242636	0.009046	0.016864
11	P3	-8.242636	0.009046	0.016864
15	P3	-8.242636	0.009046	0.016864
19	P3	-8.242636	0.009046	0.016864
22	P3	-8.242636	0.009046	0.016864

26	P3	-8.242670	0.009046	0.016675
30	P3	-8.242670	0.009046	0.016675

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	-3.919919	0.014569	-0.024318
7	P1	-2.477219	0.016818	0.008754
11	P1	-2.851648	0.017848	-0.016931
15	P1	-3.688638	0.032028	-0.048024
19	P1	-3.546207	0.018401	-0.018223
22	P1	-5.026110	0.023990	-0.019454
26	P1	-6.029928	0.028705	-0.019899
30	P1	-5.347483	0.039158	-0.005299
3	P1	-11.744848	0.082728	-0.020452
7	P1	-10.060256	0.087632	-0.069709
11	P1	-10.338475	0.134688	-0.080601
15	P1	-10.709748	0.118675	-0.084044
19	P1	-15.734232	0.125584	0.013578
22	P1	-21.593458	1.432140	0.099886
26	P1	-16.065939	0.339261	0.070017
30	P1	-17.883421	0.364898	-0.065317

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.468306	0.129565	-0.000397
7	P2	-22.227514	0.278006	0.062449

11	P2	-10.887085	0.136972	0.102813
15	P2	-4.988537	0.247740	0.021828
19	P2	-6.966858	0.288175	-0.027094
22	P2	-8.255128	0.135686	0.000925
26	P2	-24.320314	0.192923	-0.004477
30	P2	-21.947857	0.158600	-0.010957

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091718	0.004954	0.011924
7	P3	-8.091702	0.004933	0.011750
11	P3	-8.091766	0.004950	0.011775
15	P3	-8.091558	0.004940	0.012390
19	P3	-8.091689	0.004952	0.012129
22	P3	-8.091630	0.004943	0.012573
26	P3	-8.091766	0.004950	0.011959
30	P3	-8.091617	0.004931	0.011530

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	0.000558175
	stdev	1.69258e-07
MEAN Q	mean	0.000507865
	stdev	2.15393e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139101
	stdev	0.00119789
STDEV Q	mean	0.139492
	stdev	0.00121761

5.3 - Gain imbalance I/Q

6 - Telemetry analysis

Summary of analysis for the last 3 days 2006122[456]
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_WSM_1PNPDE20061224_143551_000000862054_00082_25186_4312.N1	0	14
ASA_WSM_1PNPDE20061225_022028_000001402054_00089_25193_5683.N1	0	40
ASA_WSM_1PNPDE20061225_035048_000002812054_00090_25194_5816.N1	0	1
ASA_WSM_1PNPDE20061225_145900_000002872054_00097_25201_6096.N1	0	41
ASA_WSM_1PNPDE20061225_182246_000000852054_00099_25203_6458.N1	0	20
ASA_WSM_1PNPDE20061225_182246_000000852054_00099_25203_6639.N1	0	20
ASA_WSM_1PNPDE20061226_000916_000005742054_00102_25206_6895.N1	0	36
ASA_WSM_1PNPDE20061226_014553_000002442054_00103_25207_6968.N1	0	30

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

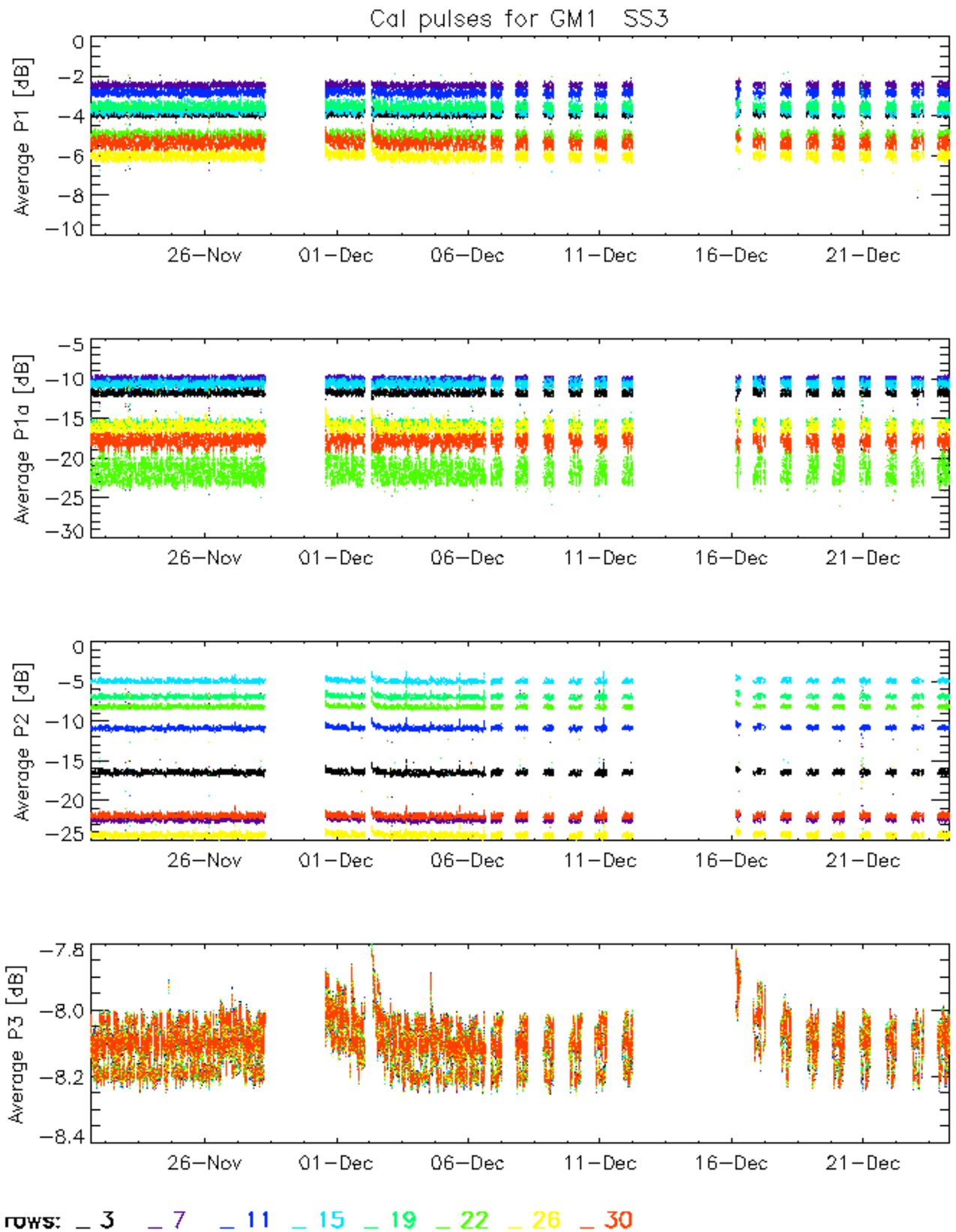
7.4 - Unbiased Doppler Error for GM1

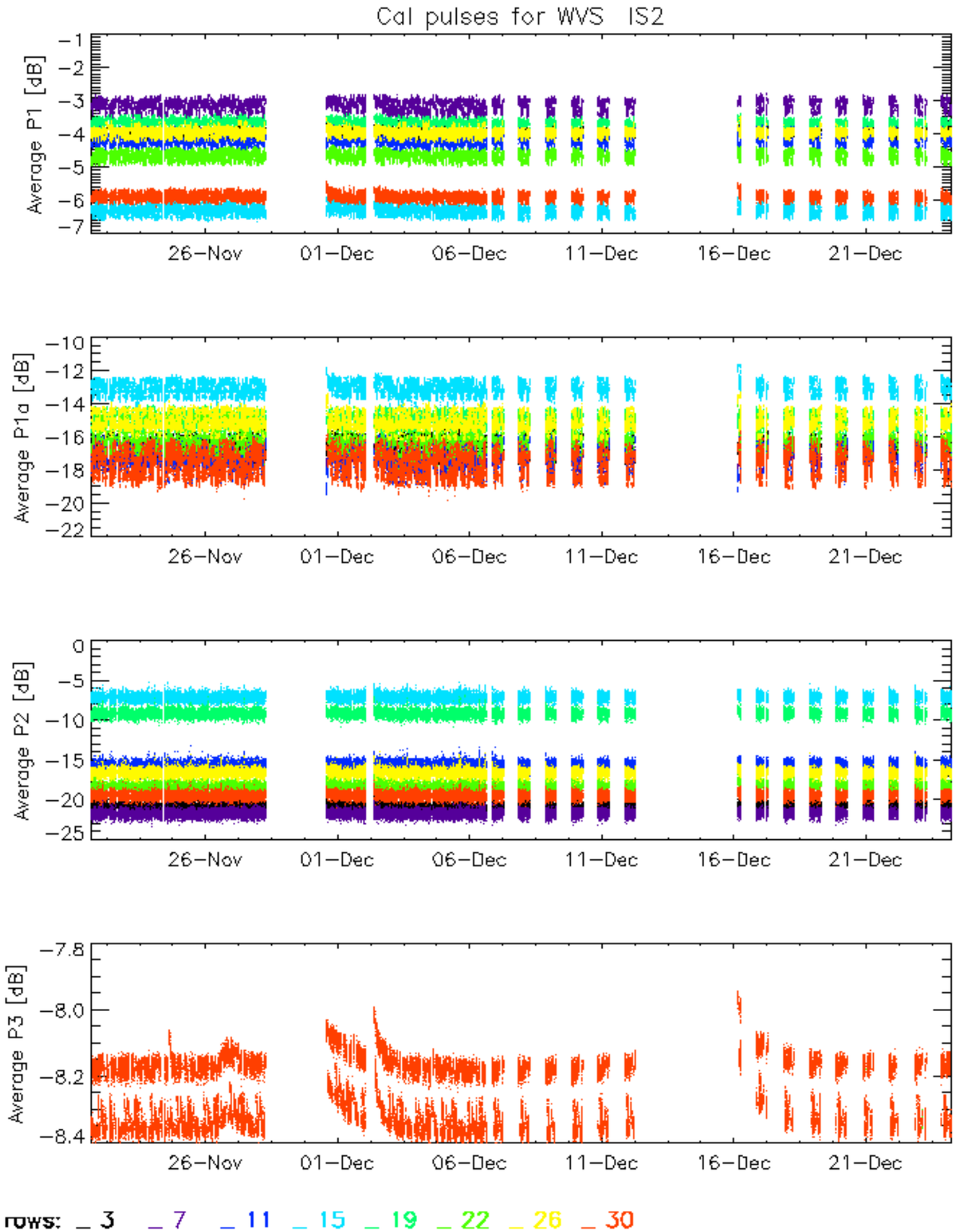
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
☒
Acsending
☒
Descending

7.6 - Doppler evolution versus ANX for GM1

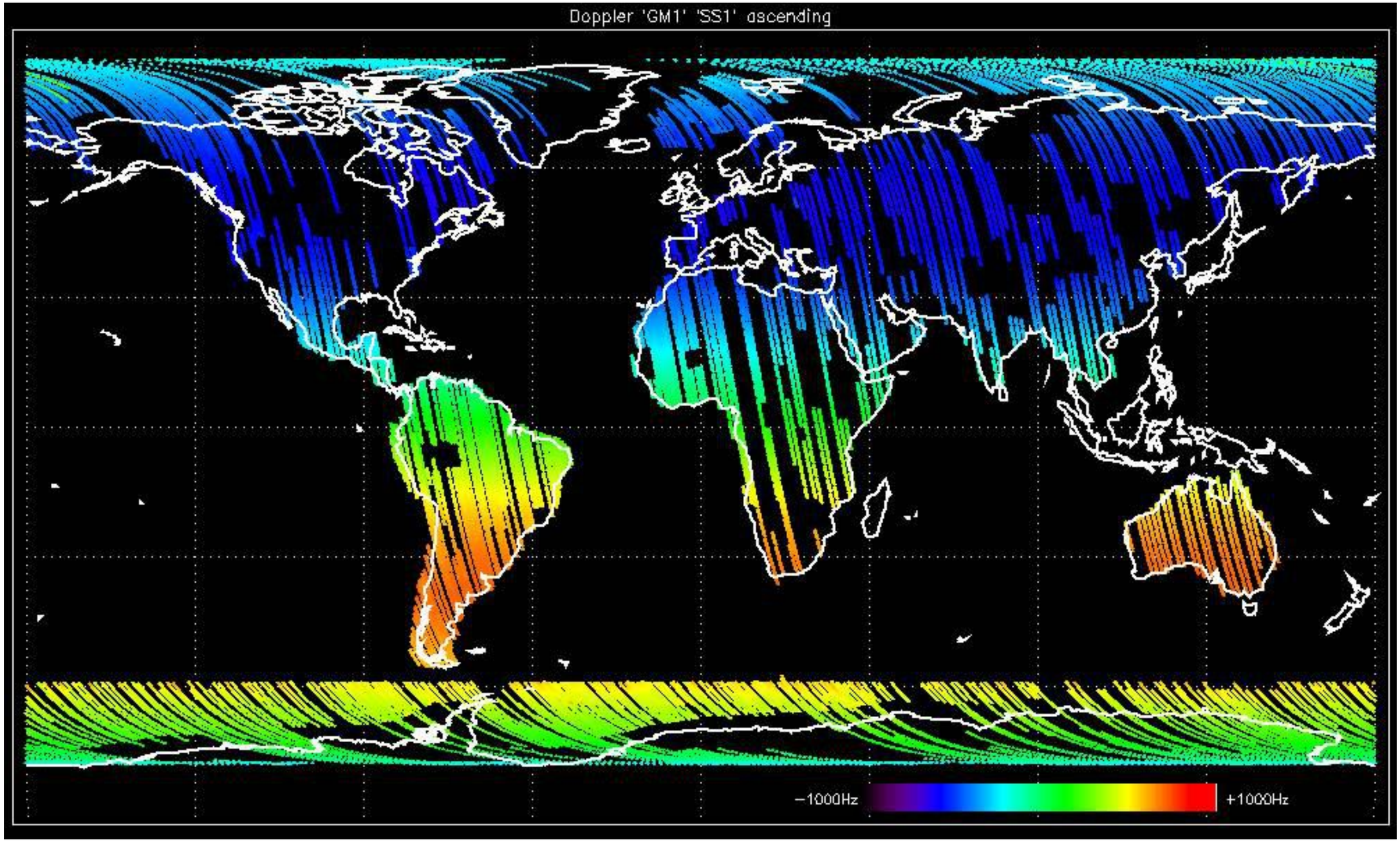

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
−10
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 26 30

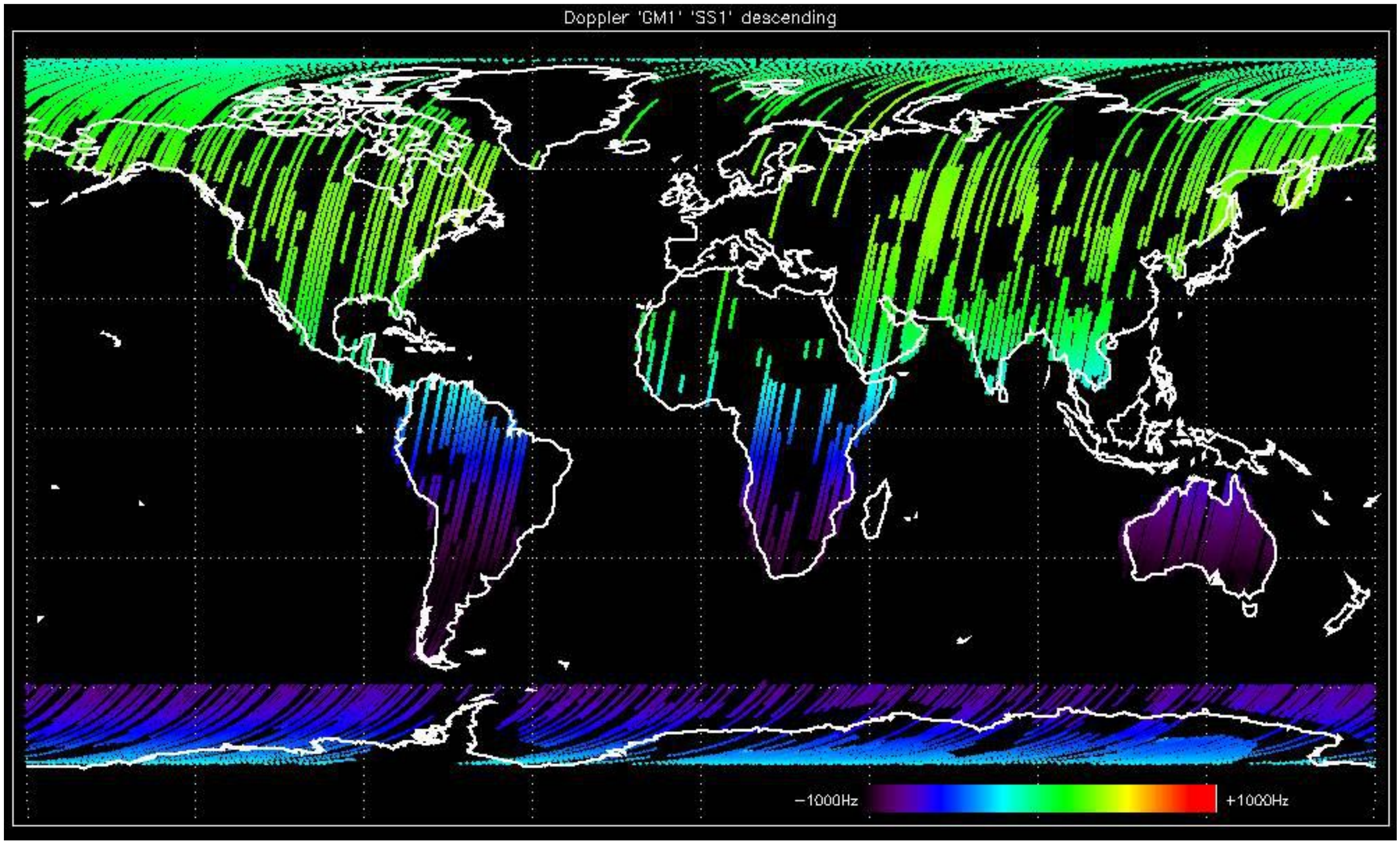

Cal pulses for WVS IS2
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

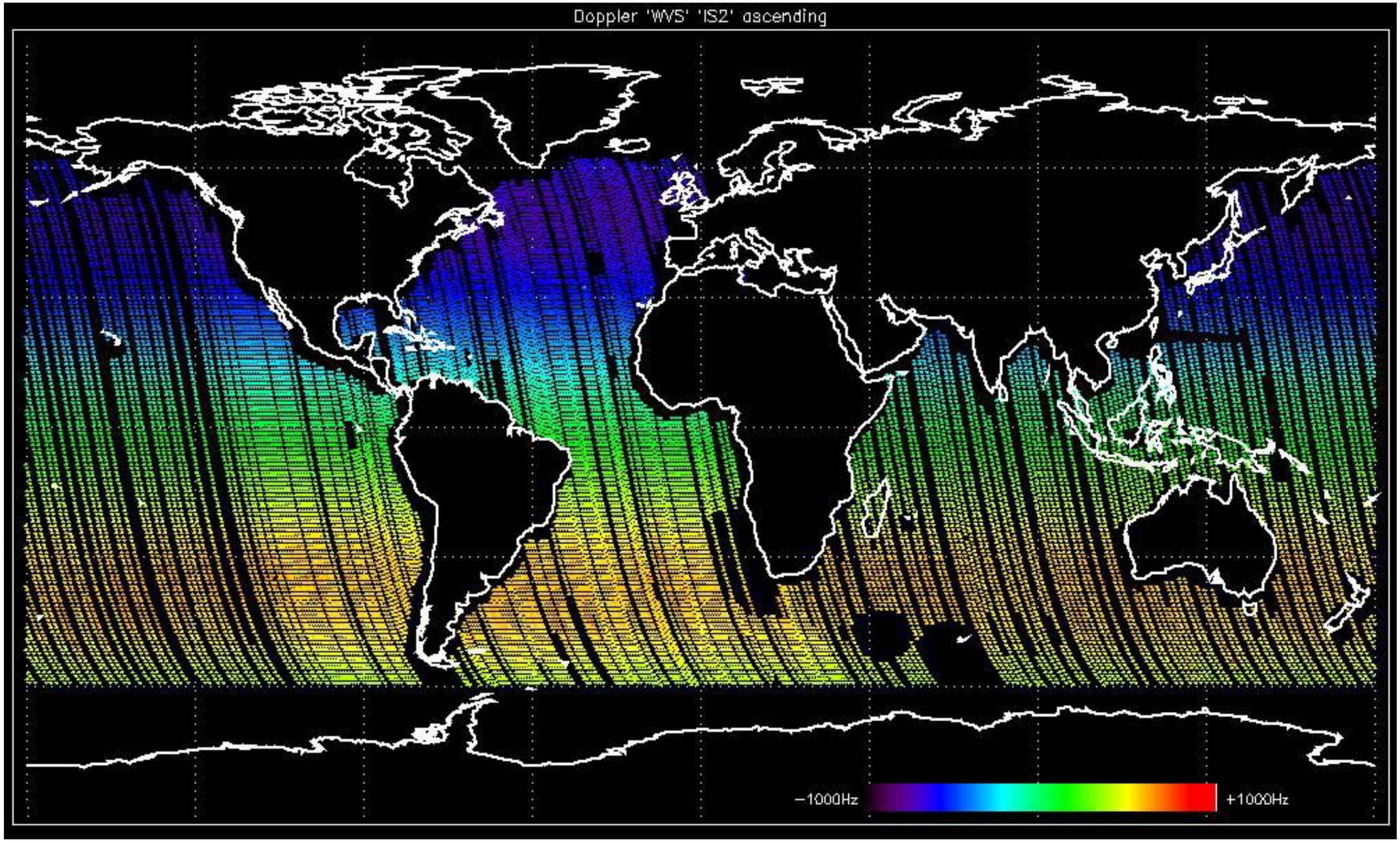
No anomalies observed.

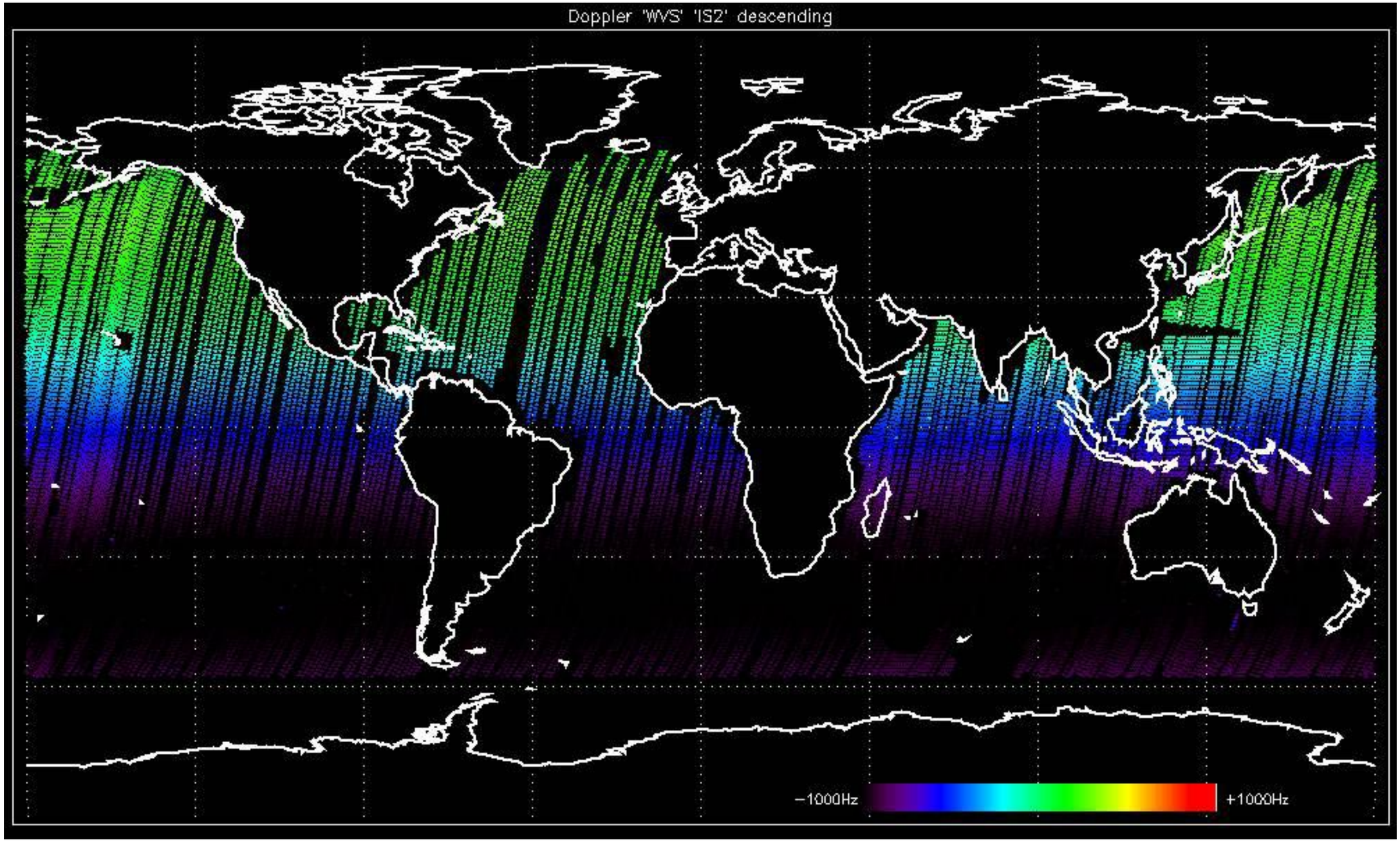
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

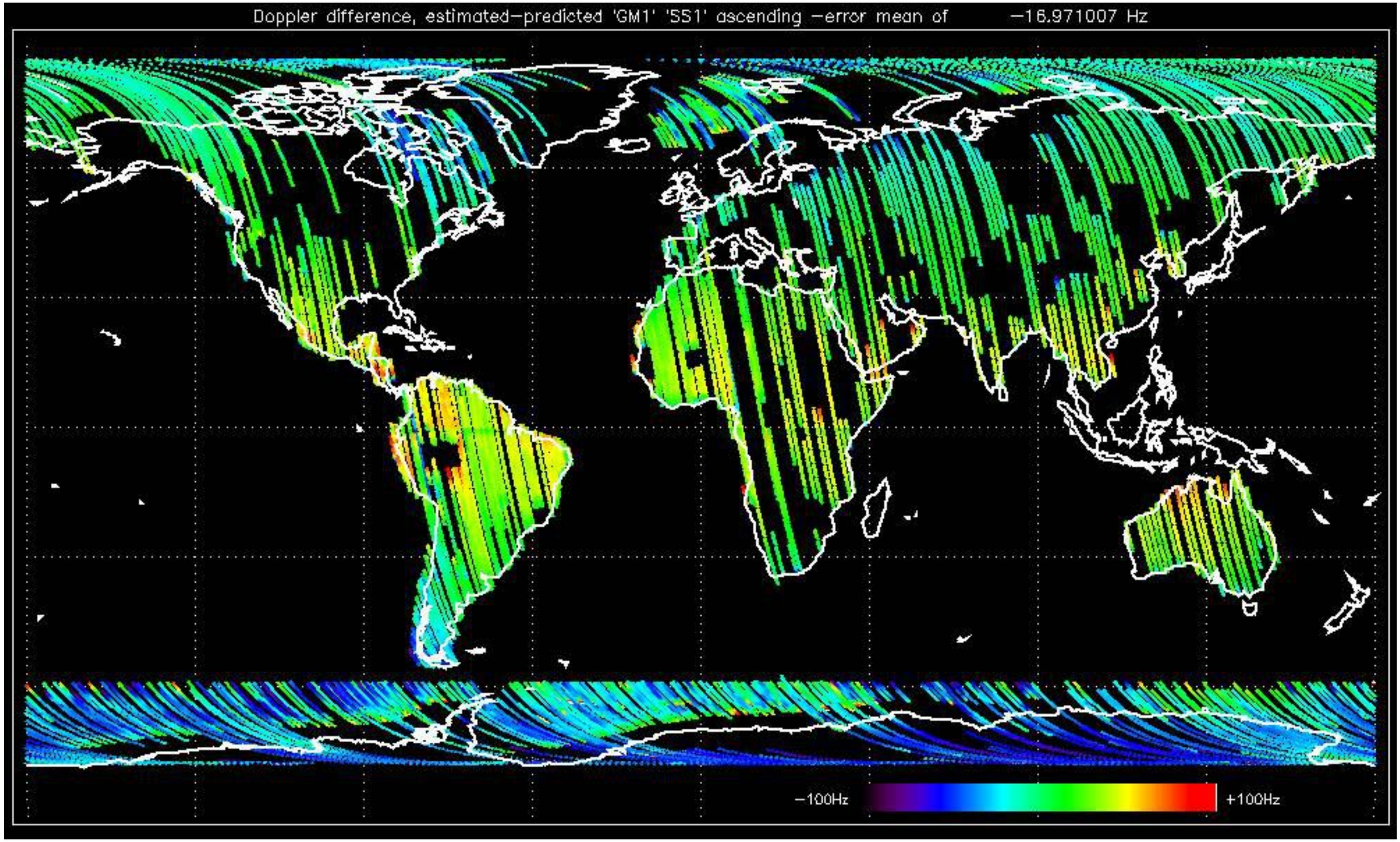
Preliminary report.The data is not yet controled

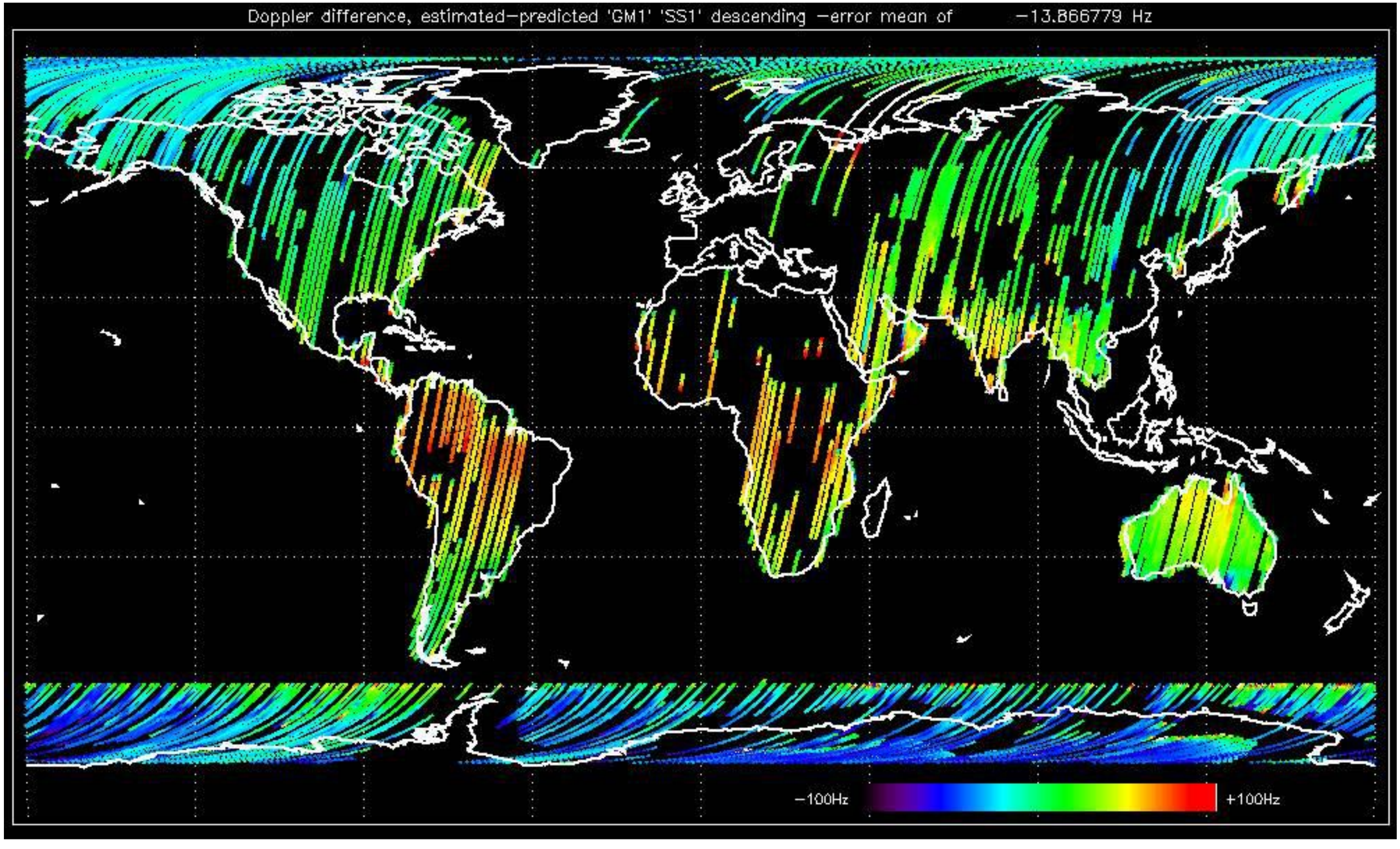

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

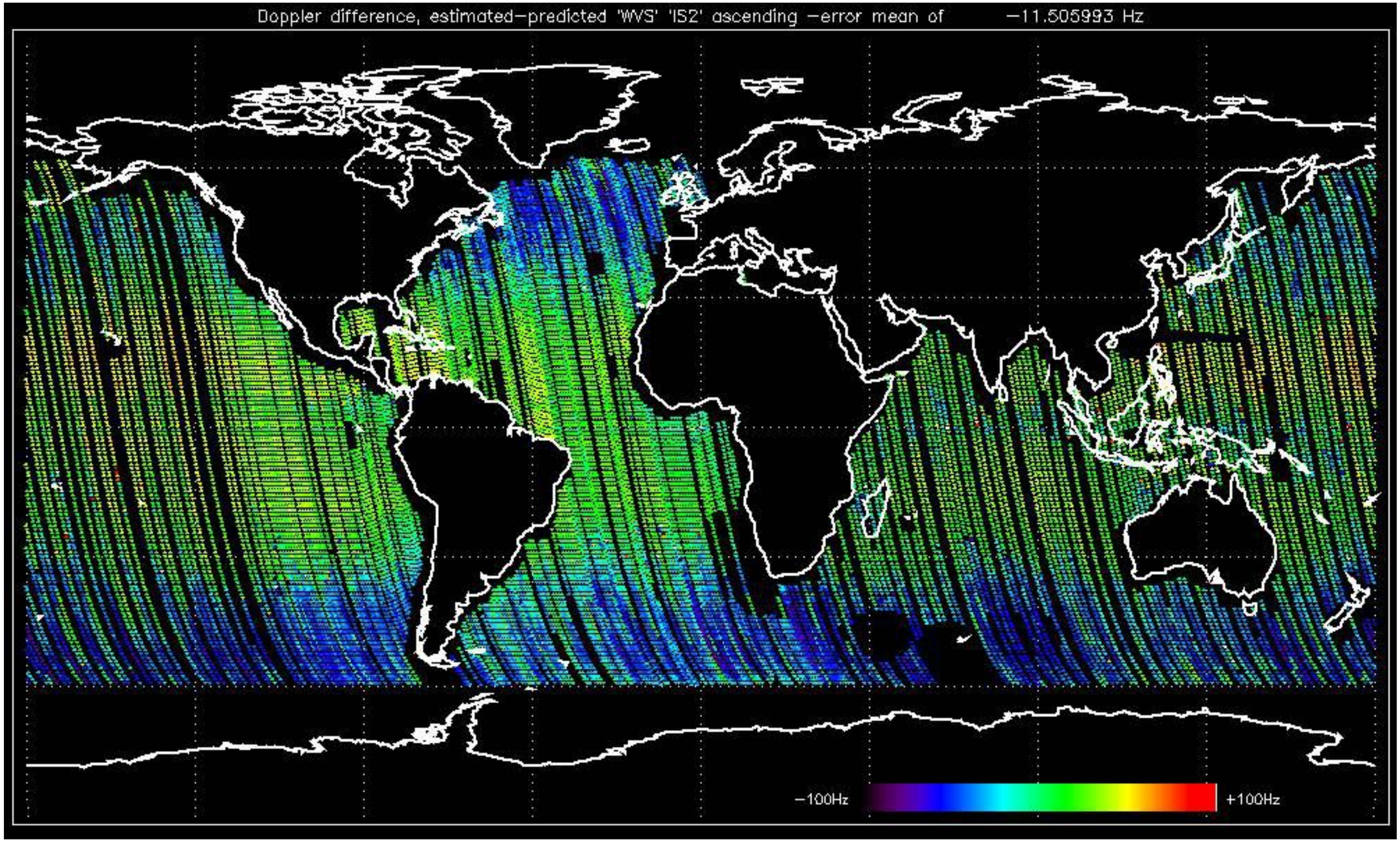

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

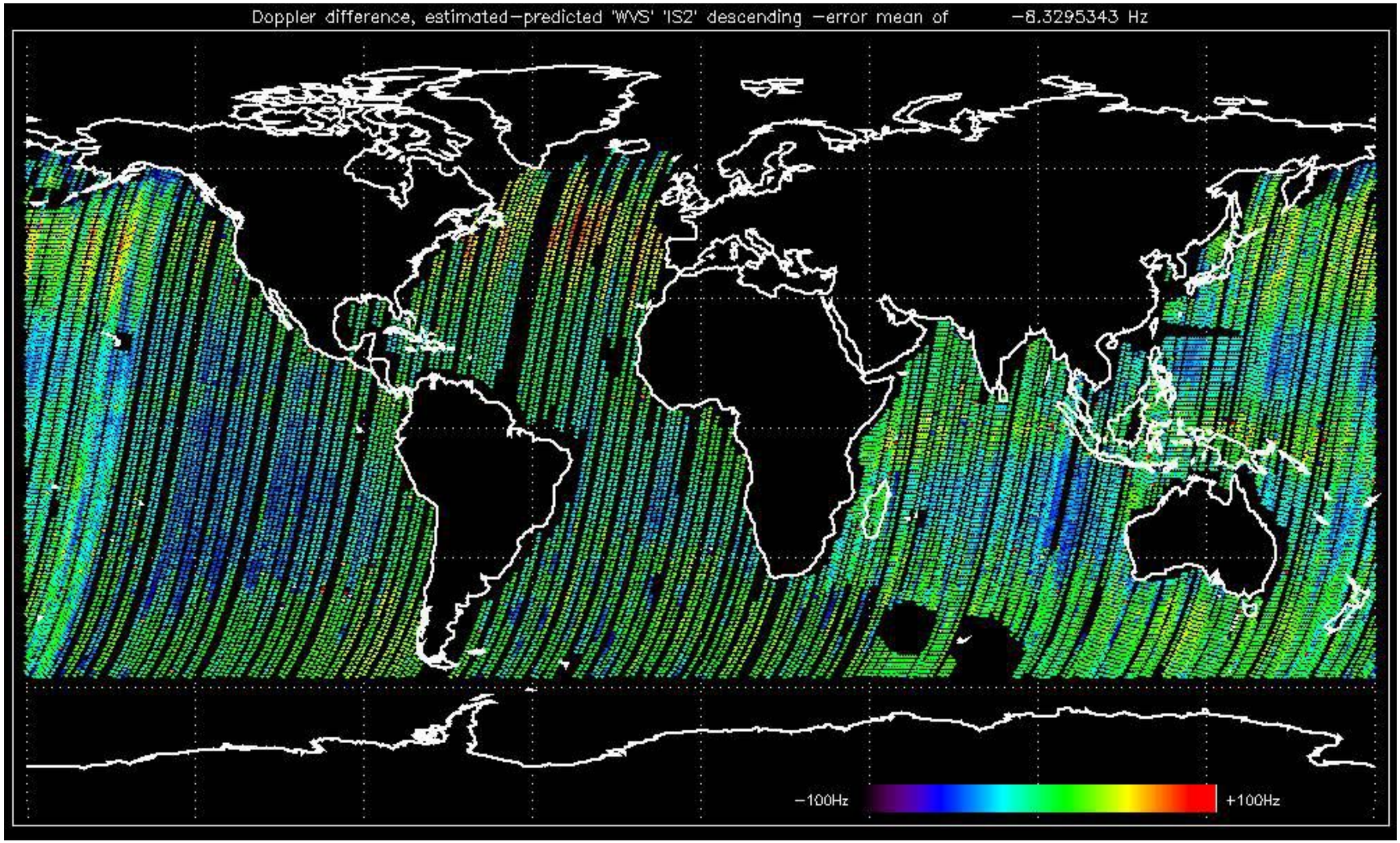

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −16.971007 Hz
−100Hz
+100Hz

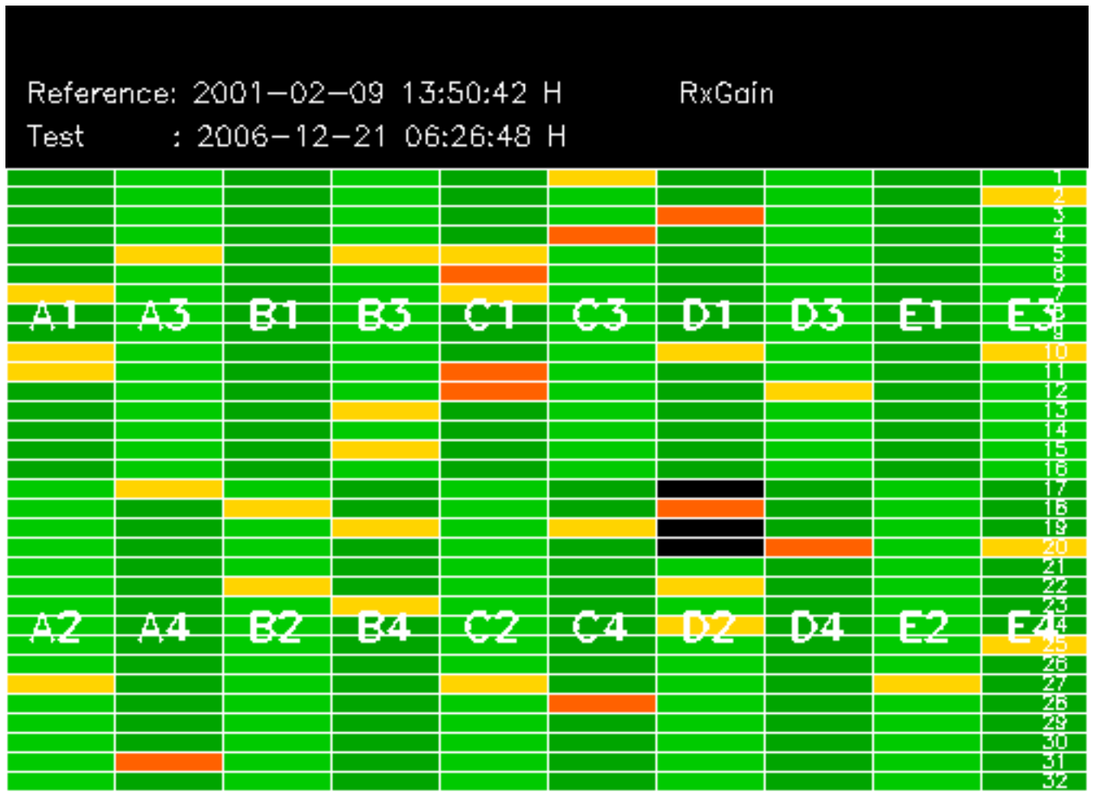

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −13.866779 Hz
−100Hz
+100Hz

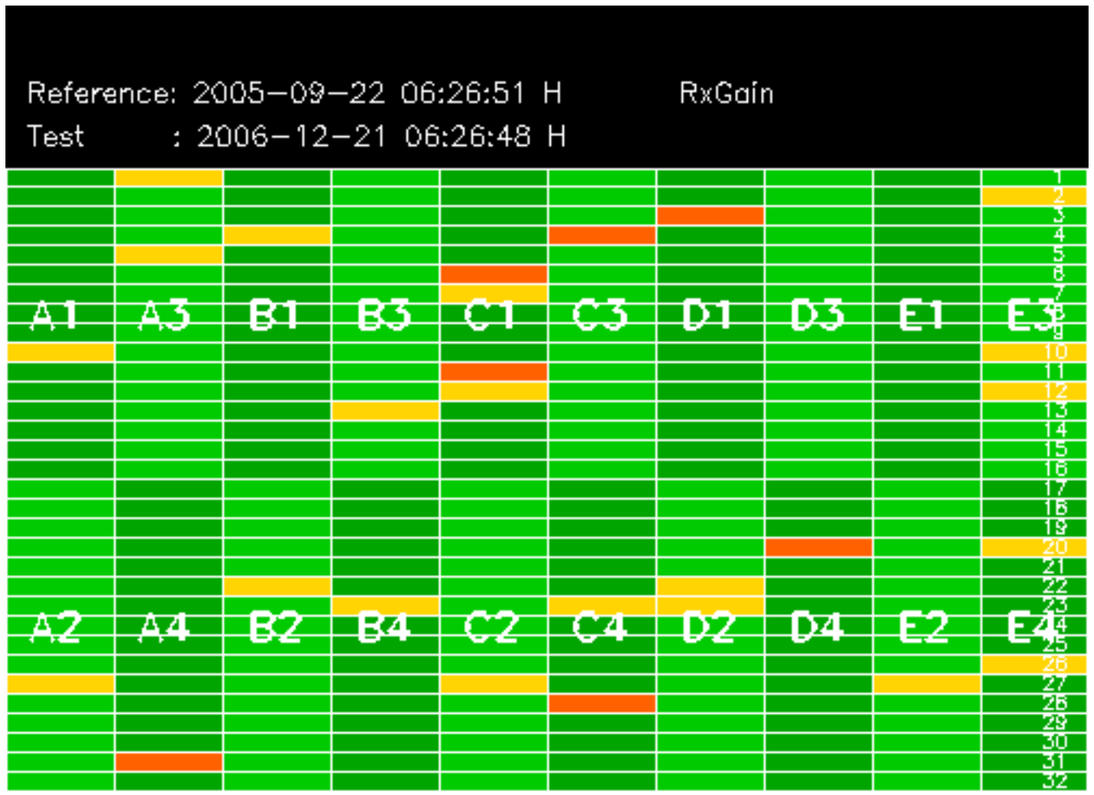

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −11.505993 Hz
−100Hz
+100Hz

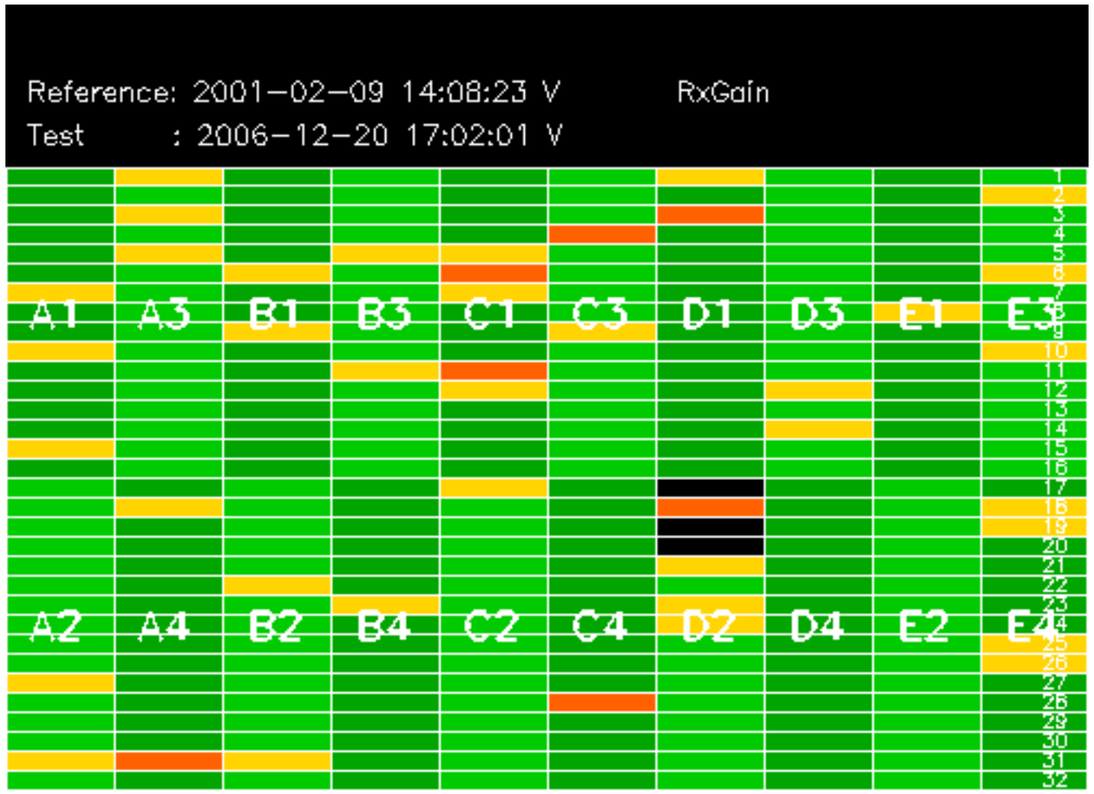

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −8.3295343 Hz
−100Hz
+100Hz

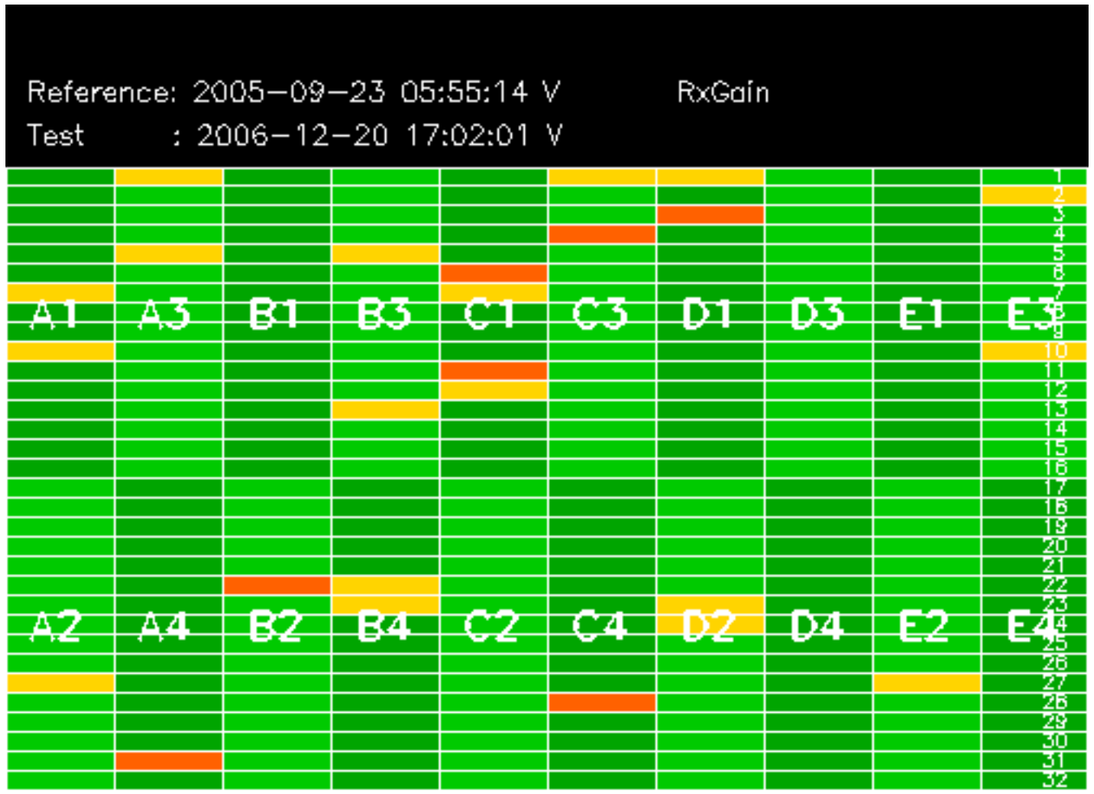
No anomalies observed on available MS products:

No anomalies observed.


Reference: 2001-02-09 13:50:42 H
Test : 2006-12-21 06:26:48 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-22 06:26:51 H
Test : 2006-12-21 06:26:48 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 : 2006-12-20 17:02:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-23 05:55:14 V
Test : 2006-12-20 17:02:01 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
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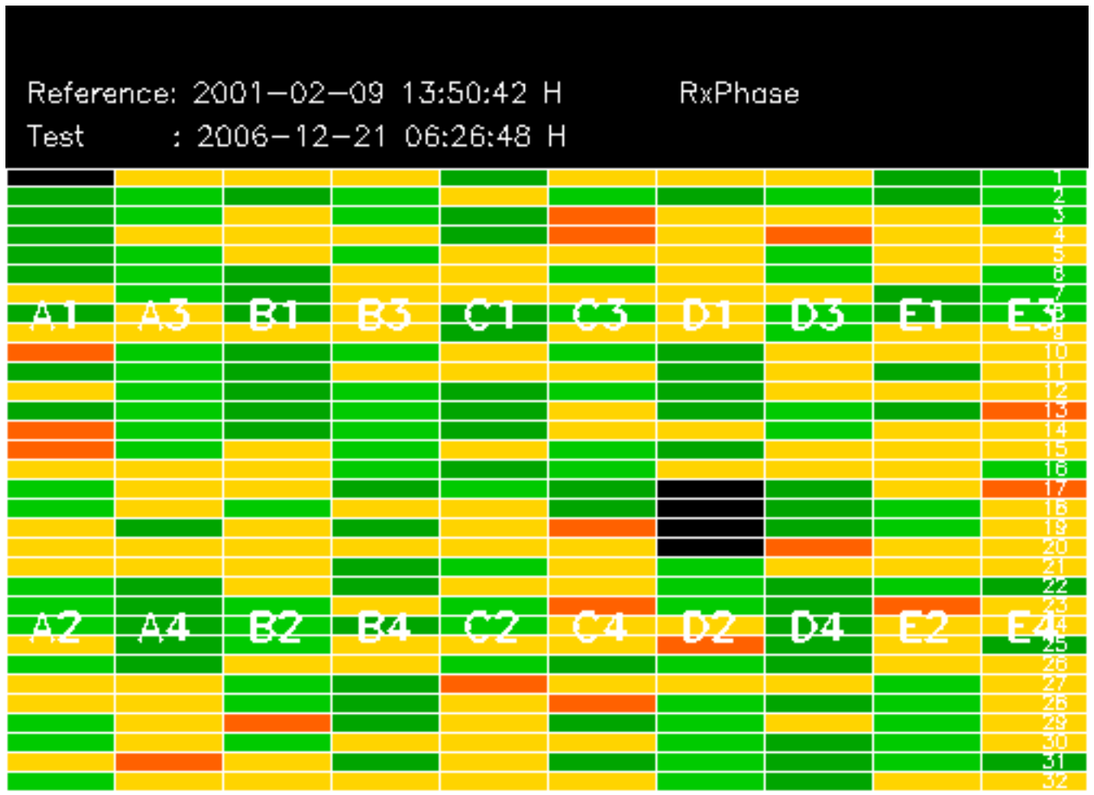
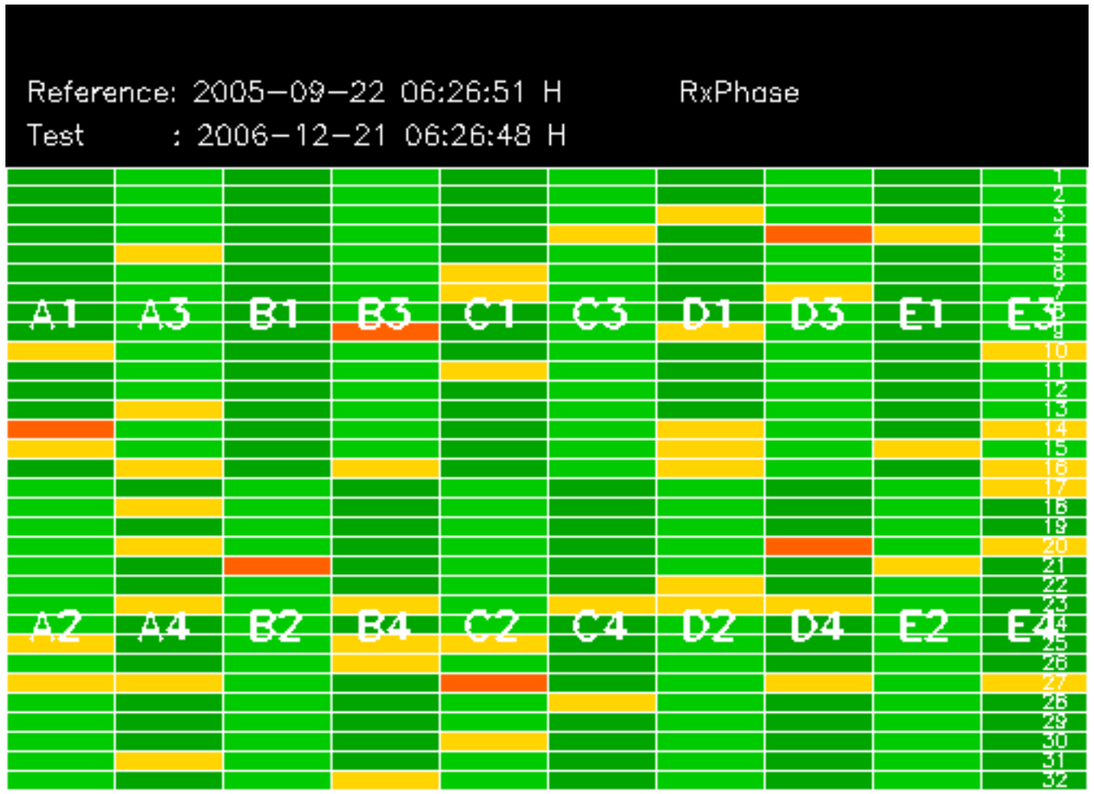

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2006-12-21 06:26:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-22 06:26:51 H
RxPhase
Test : 2006-12-21 06:26:48 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
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6
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8
9
10
11
12
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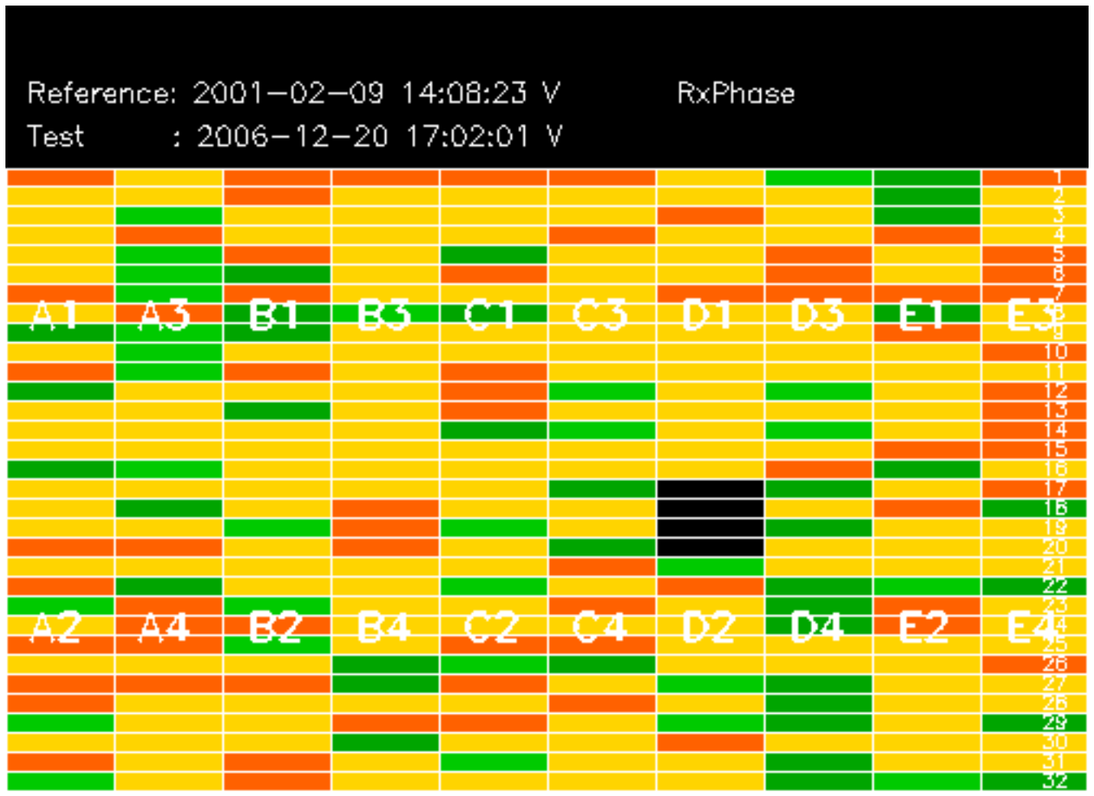
Reference: 2001-02-09 14:08:23 V
Test : 2006-12-20 17:02:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
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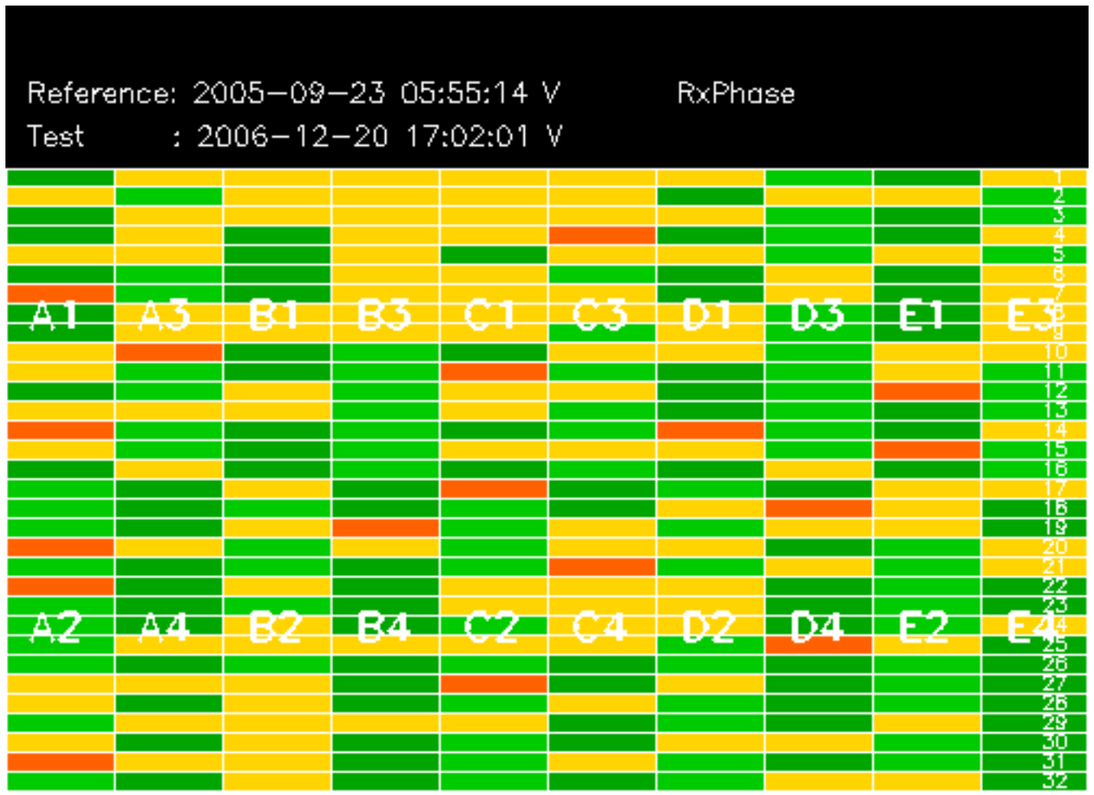
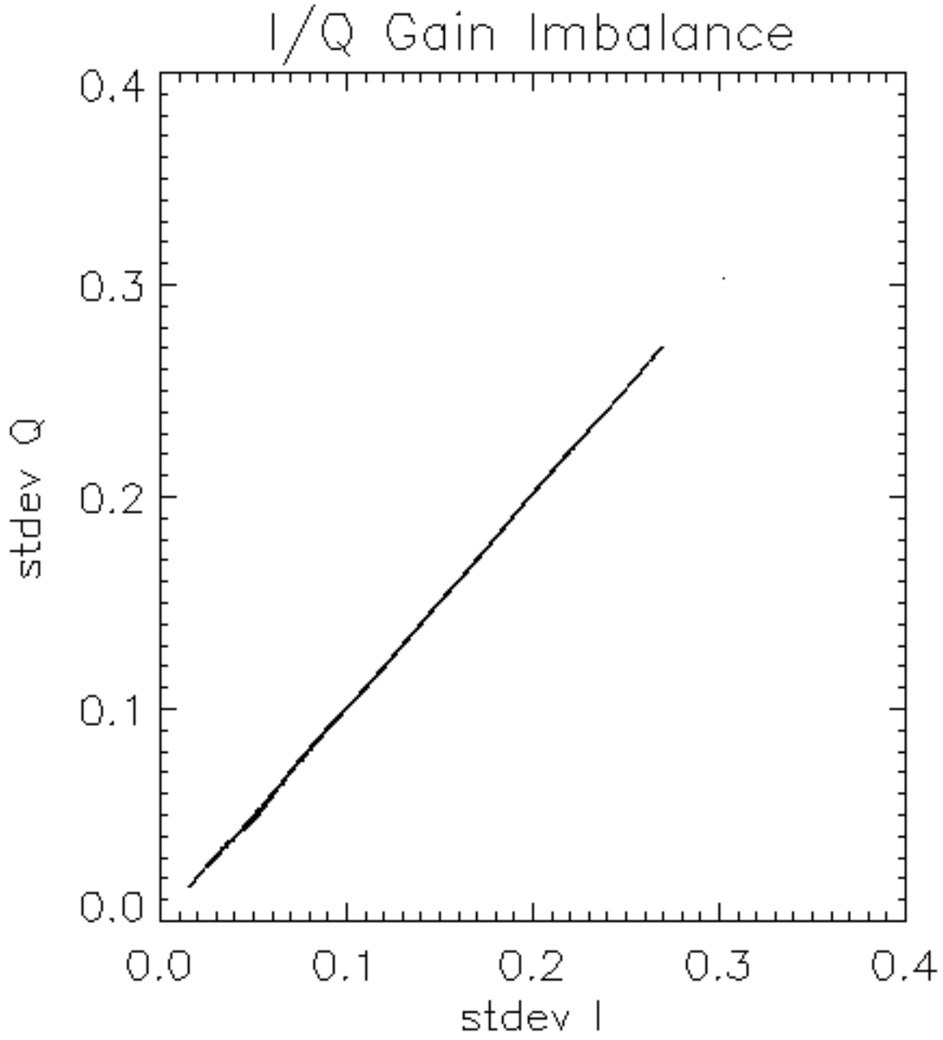
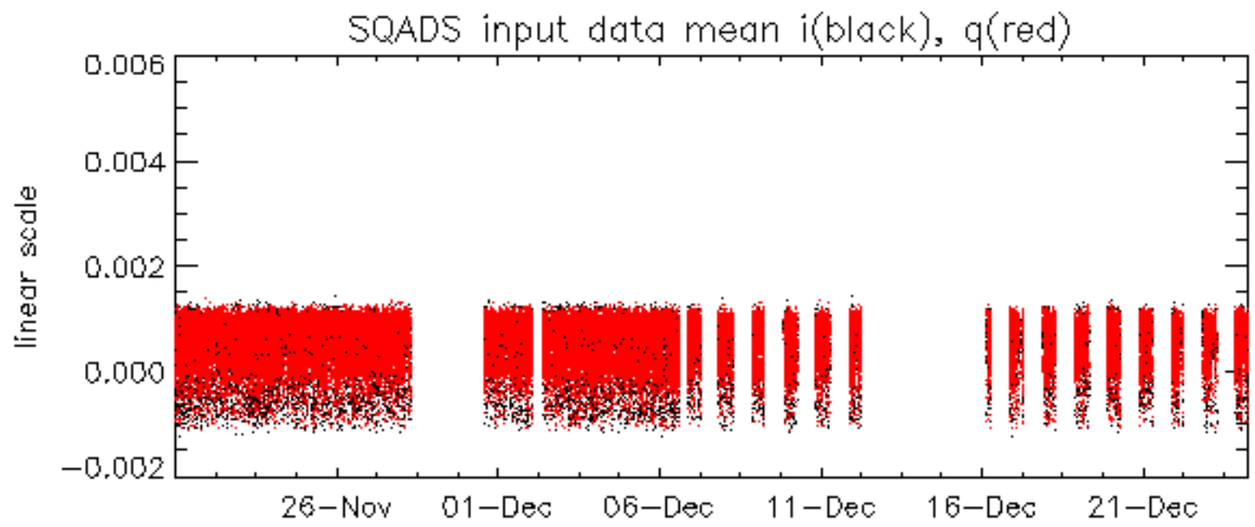
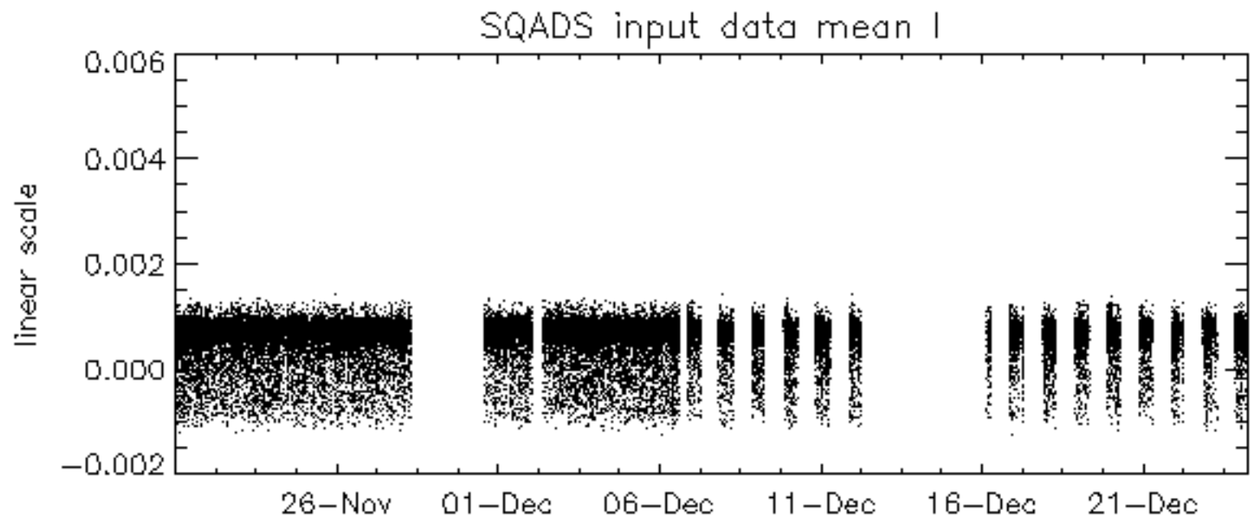
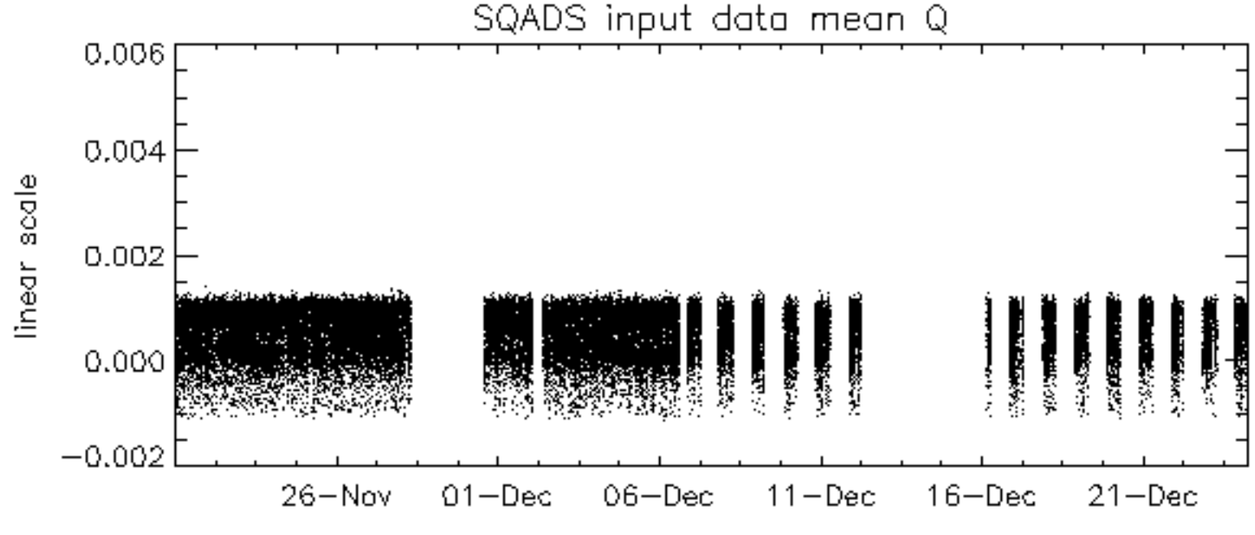
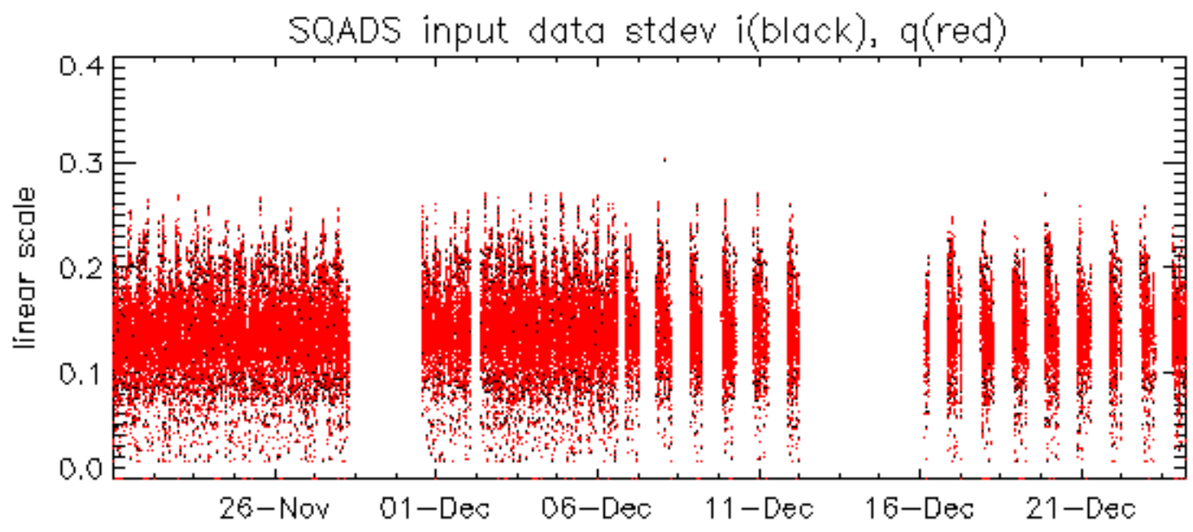

Reference: 2005-09-23 05:55:14 V
Test : 2006-12-20 17:02:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

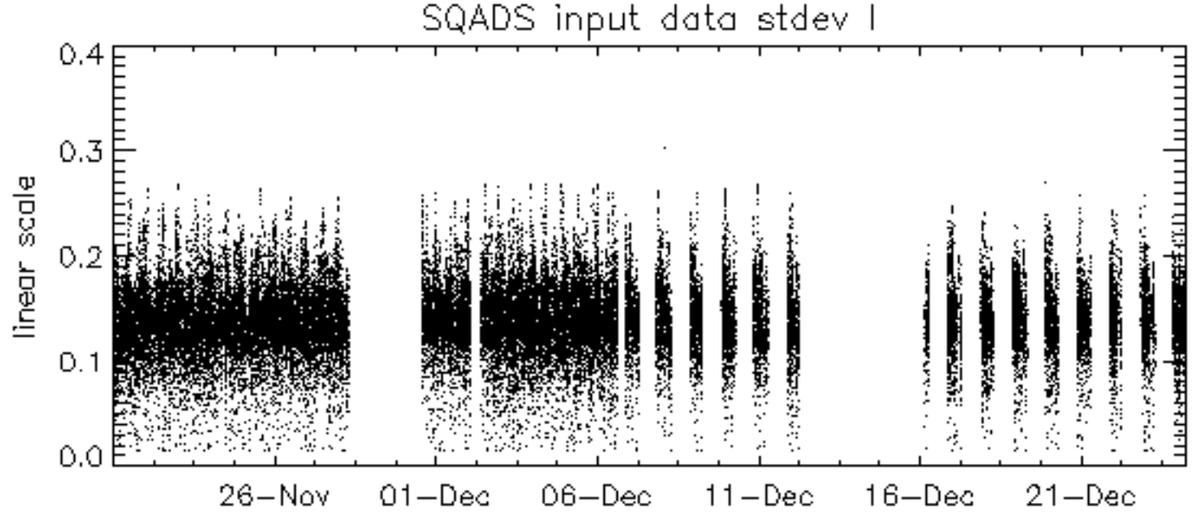

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

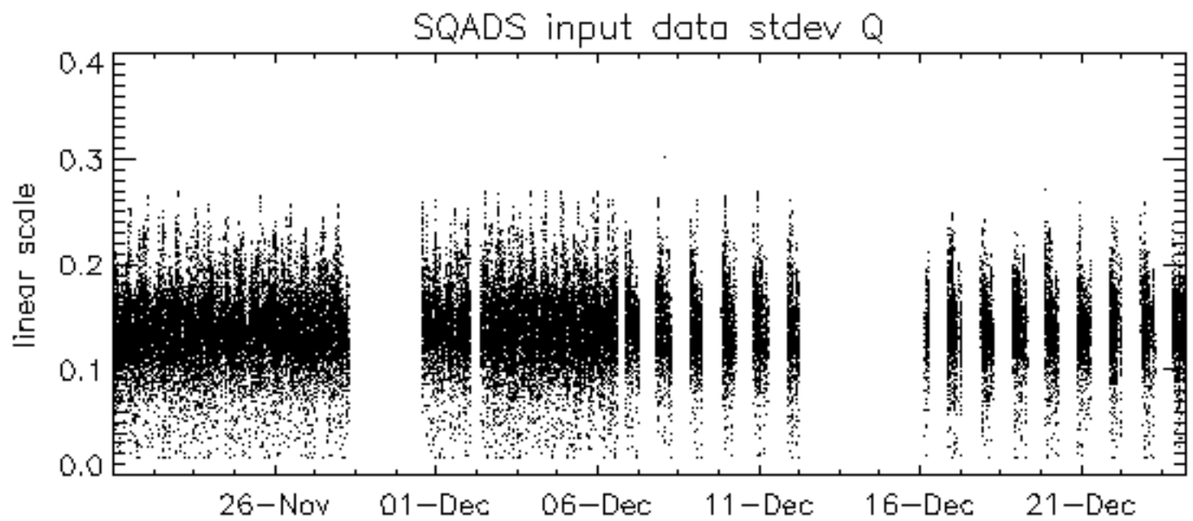

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec

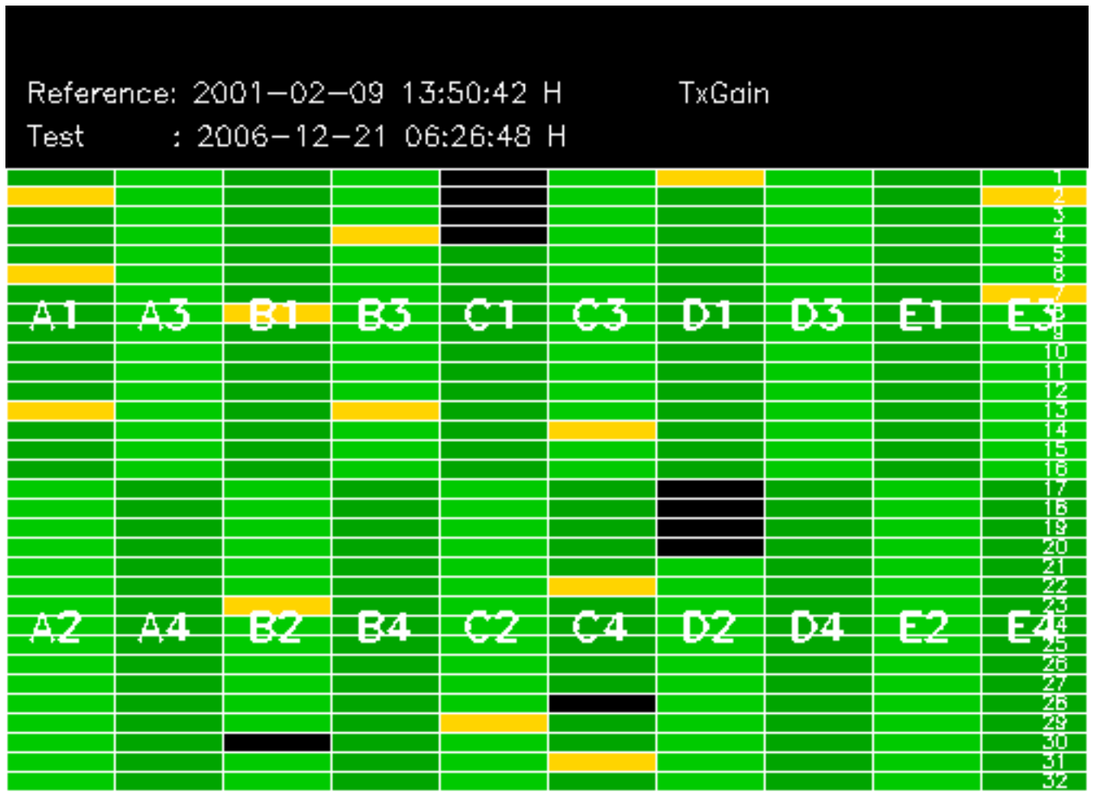

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2006-12-21 06:26:48 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
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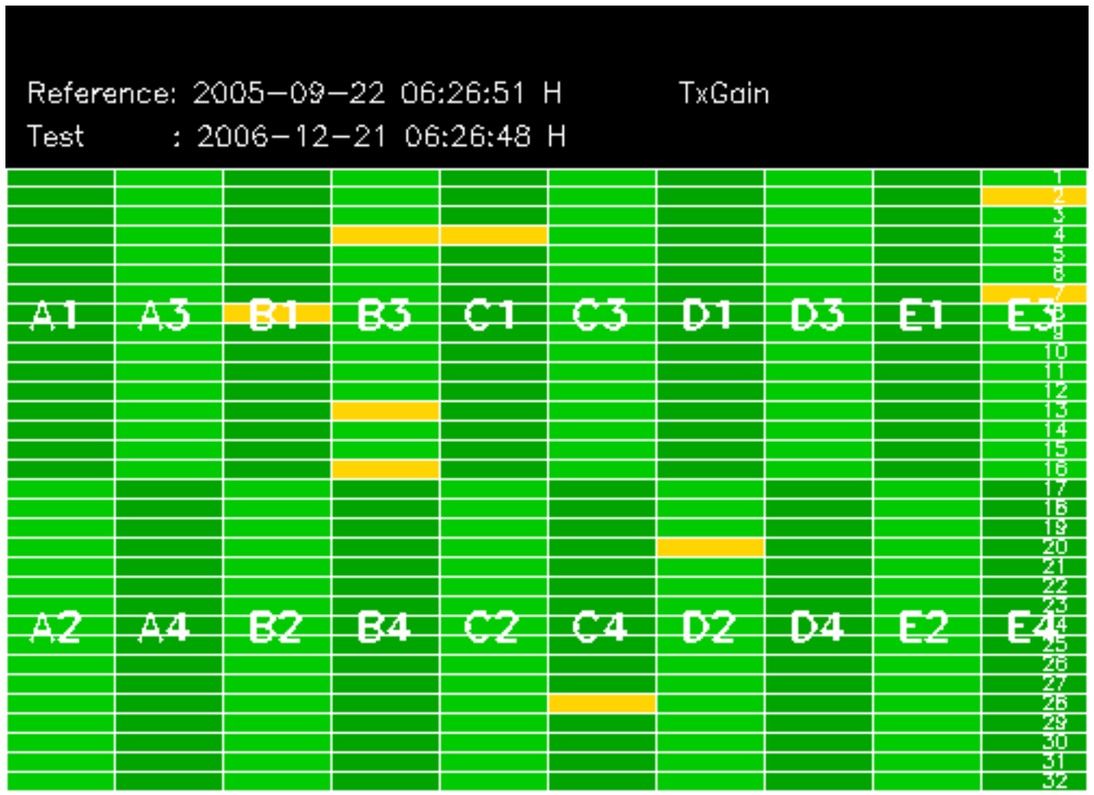
Reference: 2005-09-22 06:26:51 H
Test : 2006-12-21 06:26:48 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
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8
9
10
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12
13
14
15
16
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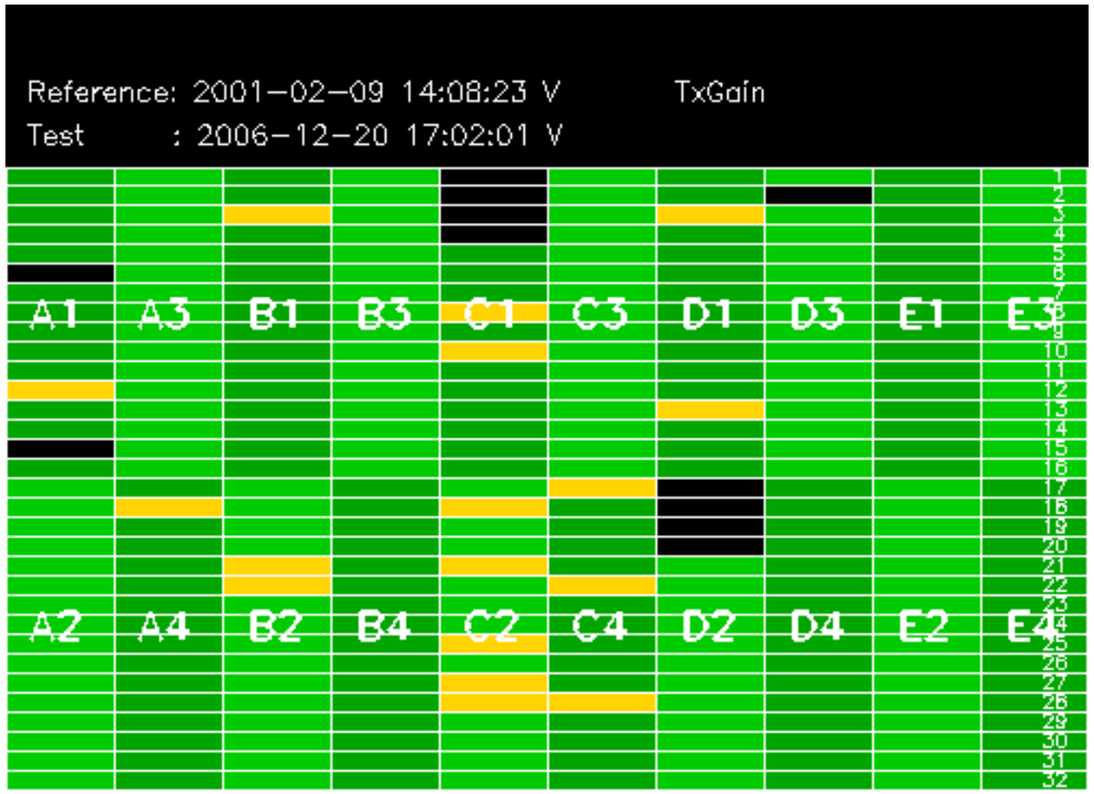
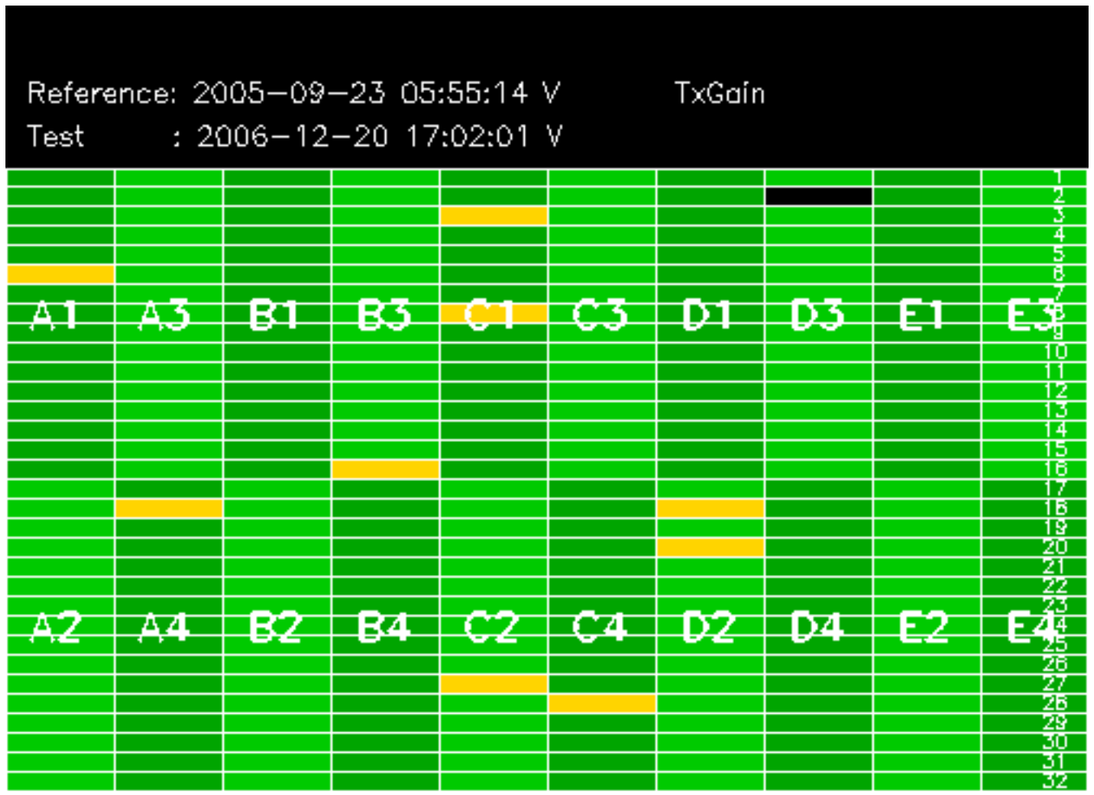

Reference: 2001-02-09 14:08:23 V
Test : 2006-12-20 17:02:01 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-23 05:55:14 V
Test : 2006-12-20 17:02:01 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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9
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11
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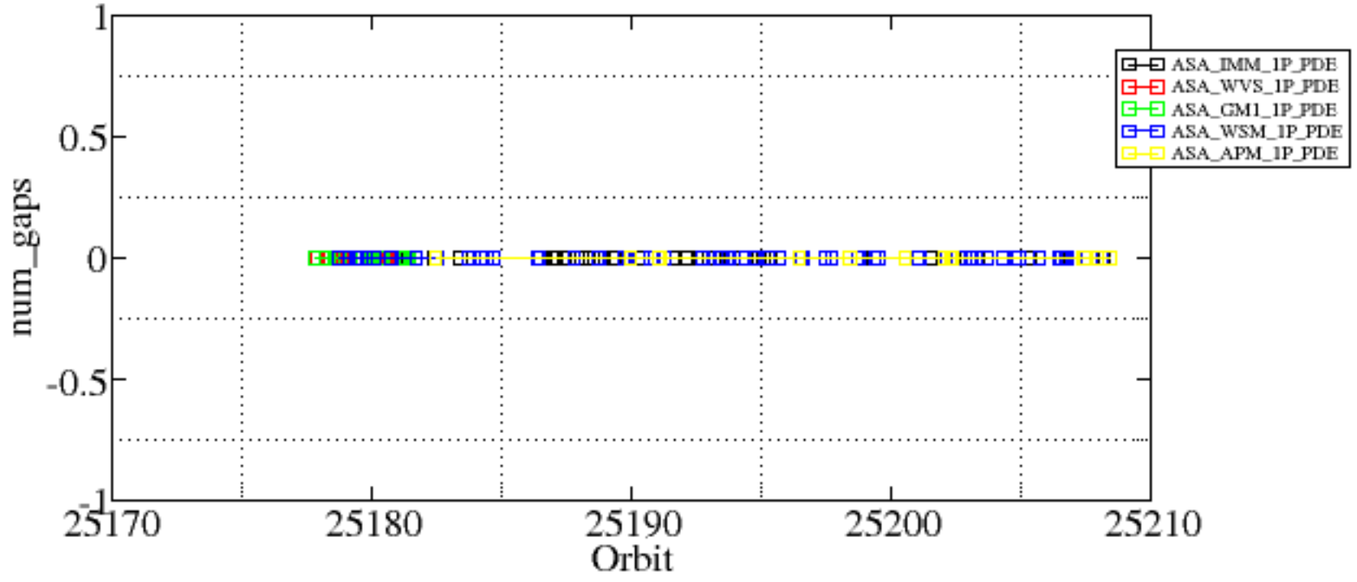
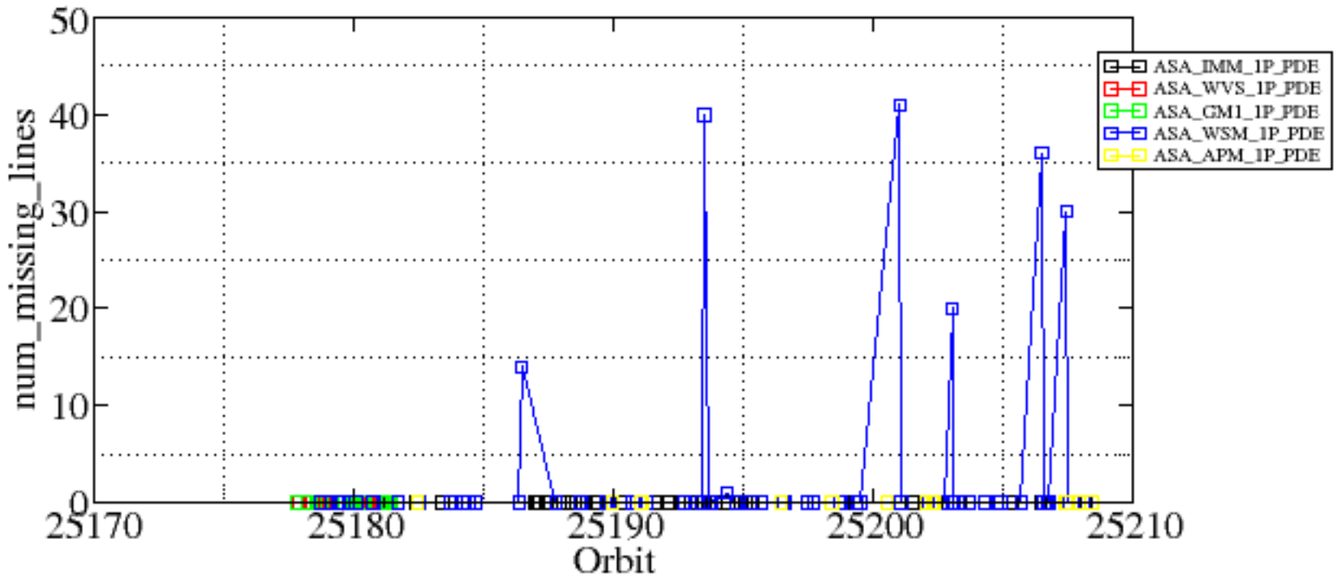
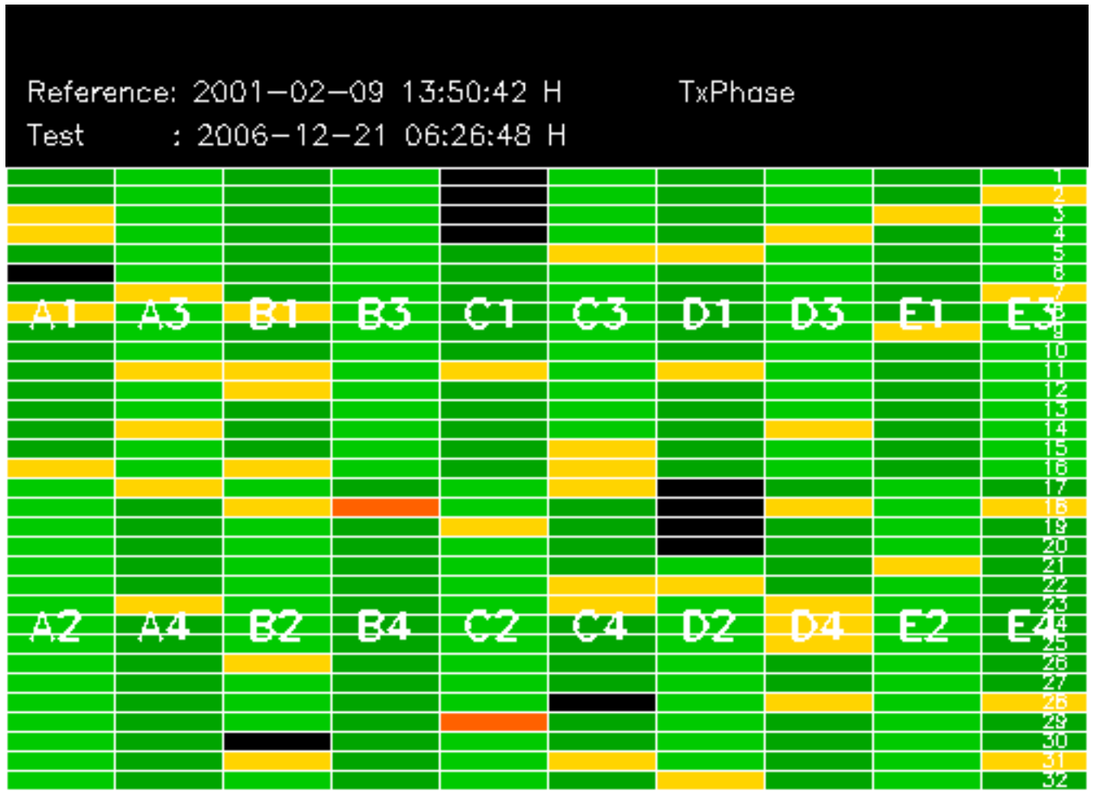
32

Summary of analysis for the last 3 days 2006122[456]
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_WSM_1PNPDE20061224_143551_000000862054_00082_25186_4312.N1 </td> <td>0 </td> <td>14 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061225_022028_000001402054_00089_25193_5683.N1 </td> <td>0 </td> <td>40 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061225_035048_000002812054_00090_25194_5816.N1 </td> <td>0 </td> <td>1 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061225_145900_000002872054_00097_25201_6096.N1 </td> <td>0 </td> <td>41 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061225_182246_000000852054_00099_25203_6458.N1 </td> <td>0 </td> <td>20 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061225_182246_000000852054_00099_25203_6639.N1 </td> <td>0 </td> <td>20 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061226_000916_000005742054_00102_25206_6895.N1 </td> <td>0 </td> <td>36 </td></tr>
<tr> <td>ASA_WSM_1PNPDE20061226_014553_000002442054_00103_25207_6968.N1 </td> <td>0 </td> <td>30 </td></tr>
</table>


num_gaps
1
0.5
0
-0.5
-1
25170
25180
25190
25200
25210
Orbit
ASA_IMM_1P_PDE
ASA_WVS_1P_PDE
ASA_GM1_1P_PDE
ASA_WSM_1P_PDE
ASA_APM_1P_PDE


num_missing_lines
50
40
30
20
10
0
25170
25180
25190
25200
25210
Orbit
ASA_IMM_1P_PDE
ASA_WVS_1P_PDE
ASA_GM1_1P_PDE
ASA_WSM_1P_PDE
ASA_APM_1P_PDE


Reference: 2001-02-09 13:50:42 H
Test : 2006-12-21 06:26:48 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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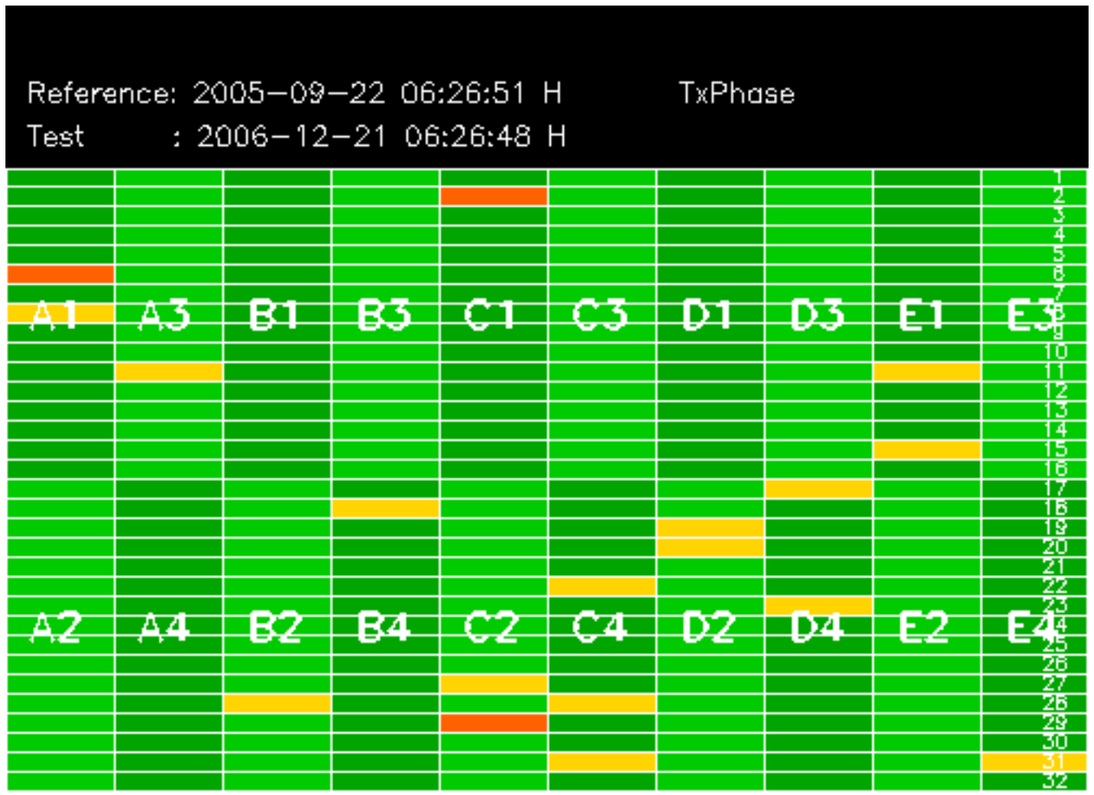
Reference: 2005-09-22 06:26:51 H
Test : 2006-12-21 06:26:48 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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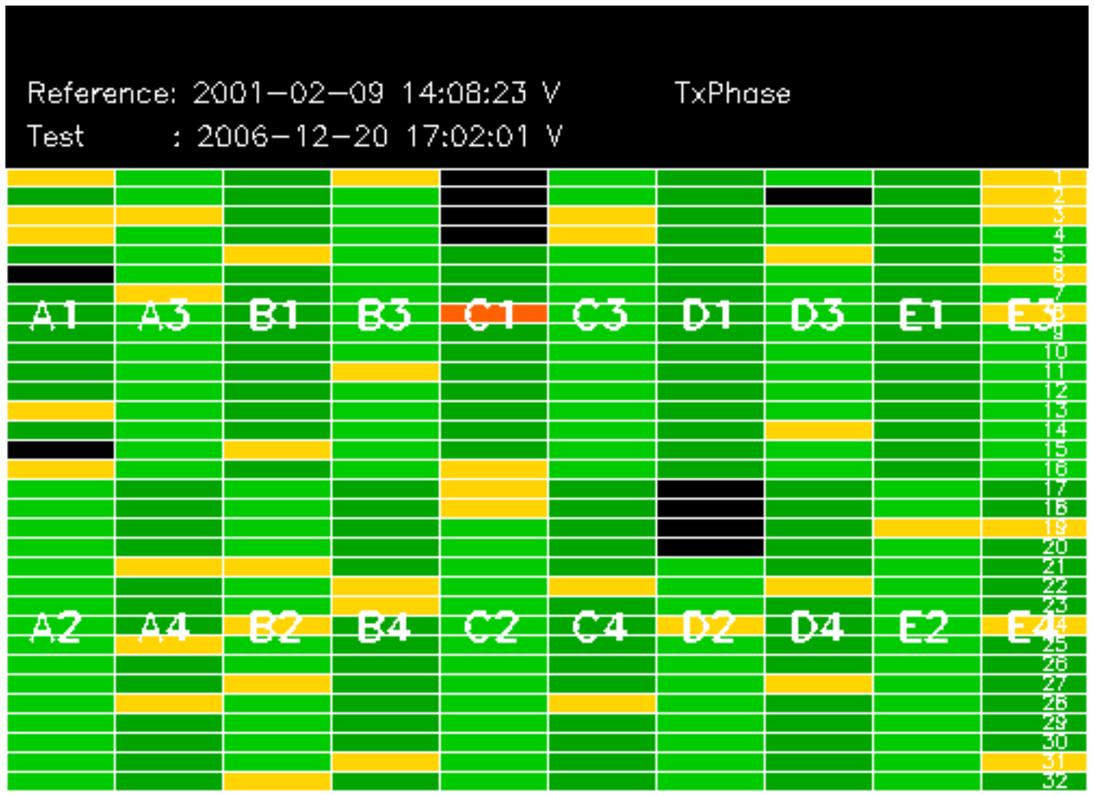
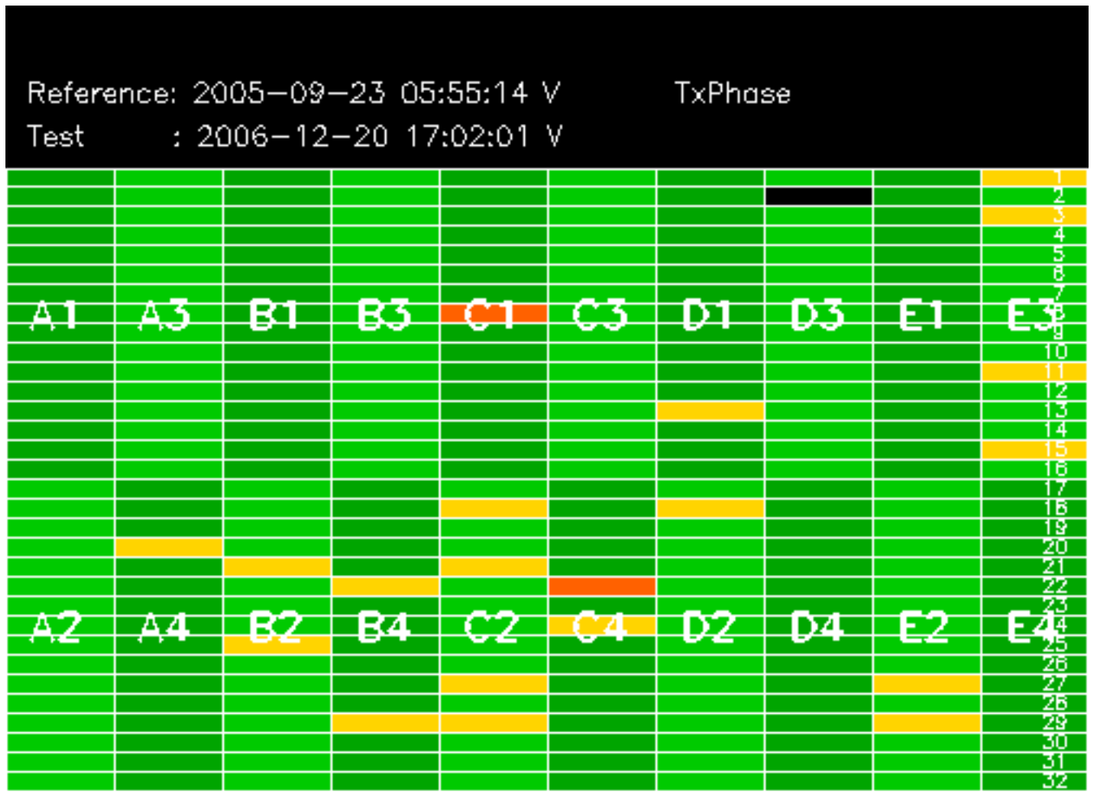

Reference: 2001-02-09 14:08:23 V
Test : 2006-12-20 17:02:01 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2005-09-23 05:55:14 V
Test : 2006-12-20 17:02:01 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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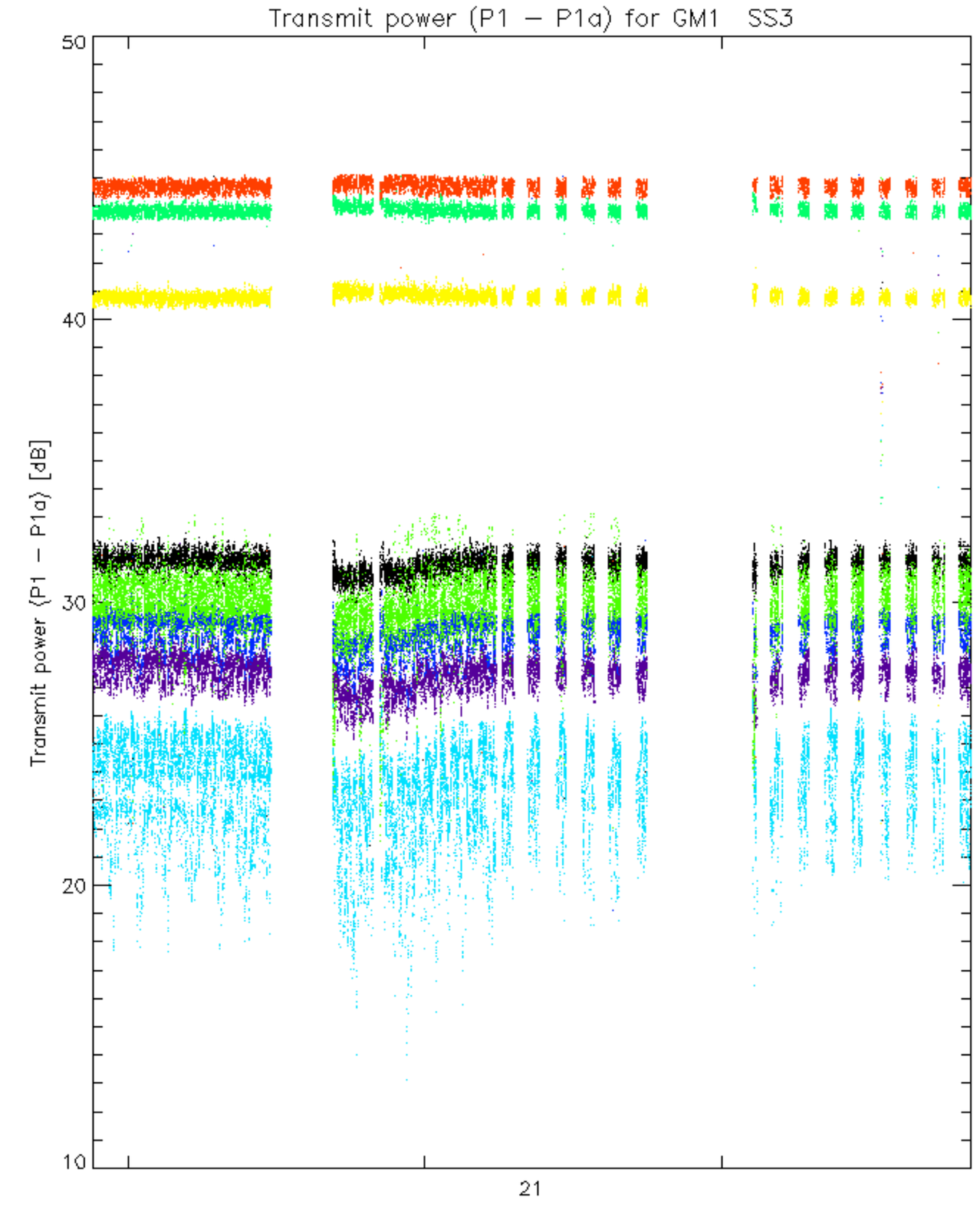
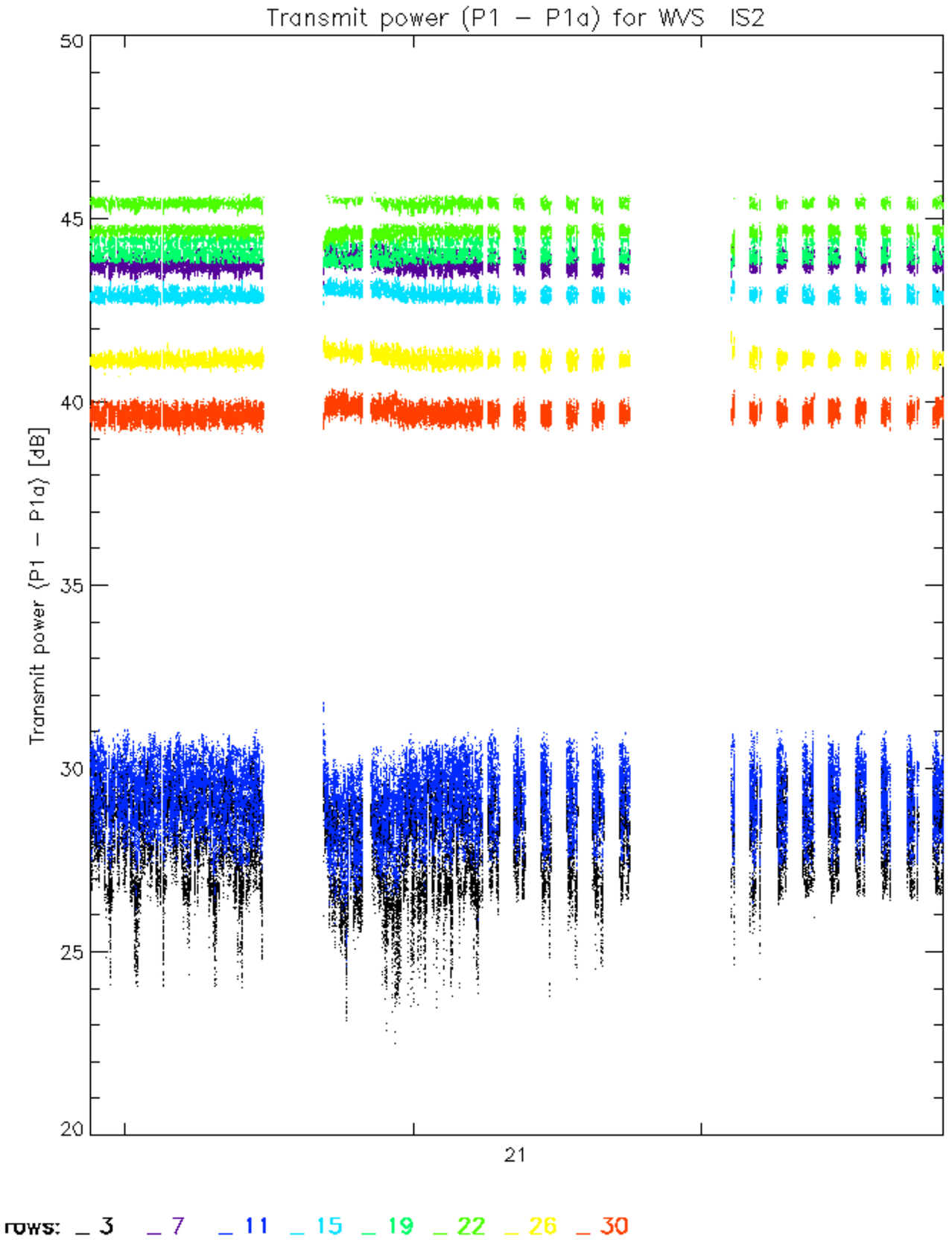

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
21
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
50
45
40
35
30
25
20
21
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.