PRELIMINARY REPORT OF 050110

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

last update on Mon Jan 10 11:02:27 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 2005-01-09 00:00:00 to 2005-01-10 11:02:27

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	31	41	5	1	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	31	41	5	1	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	31	41	5	1	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	31	41	5	1	4

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	46	46	1	6	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	46	46	1	6	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	46	46	1	6	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	46	46	1	6	1

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

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	20050105 073837
H	20050108 060346

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒

MSM in H/H polarisation

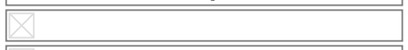
Pre-launch Reference	DDS-B (2003-06-12) reference
	
	
	
	

4 - Internal calibration Results

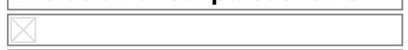
No anomalies observed.

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	-3.433543	0.006999	0.043717
7	P1	-3.088307	0.011015	0.021247
11	P1	-4.642881	0.020770	0.002507
15	P1	-5.654467	0.038320	0.023133
19	P1	-3.659552	0.005944	0.004601
22	P1	-4.572760	0.016838	0.019435
26	P1	-4.941334	0.025593	0.048698
30	P1	-7.122792	0.013624	-0.012091
3	P1	-15.936573	0.107411	0.022107
7	P1	-15.522836	0.098769	0.064167
11	P1	-20.797611	0.300351	-0.067319
15	P1	-11.631864	0.068034	0.059242
19	P1	-14.171605	0.032631	0.004652
22	P1	-16.044876	0.452042	0.145514
26	P1	-17.726458	0.248956	0.131080
30	P1	-17.869041	0.311625	0.082573

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.329103	0.087702	0.105088
7	P2	-22.532480	0.174067	0.116722
11	P2	-14.826150	0.185958	0.158326
15	P2	-7.152565	0.116661	0.080237
19	P2	-9.729929	0.210489	0.103843
22	P2	-17.140640	0.100274	0.119394
26	P2	-16.528975	0.115592	0.079850

30	P2	-18.952682	0.083848	0.056680

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.206585	0.007135	0.032851
7	P3	-8.206570	0.007136	0.032771
11	P3	-8.206594	0.007135	0.032891
15	P3	-8.206646	0.007138	0.033191
19	P3	-8.206635	0.007136	0.033107
22	P3	-8.206593	0.007135	0.032858
26	P3	-8.206575	0.007136	0.032780
30	P3	-8.206394	0.007147	0.034961

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
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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	-2.824143	0.011685	0.002595
7	P1	-2.958287	0.022956	0.012190
11	P1	-3.940298	0.024887	-0.005716
15	P1	-3.505395	0.029222	0.010012
19	P1	-3.610457	0.012923	-0.000306
22	P1	-5.632919	0.068742	-0.015769
26	P1	-6.526972	0.024335	-0.035203
30	P1	-6.299941	0.044657	0.033353
3	P1	-10.756964	0.051353	-0.152187
7	P1	-10.141445	0.136346	-0.036623
11	P1	-12.483543	0.110994	-0.080042

15	P1	-11.748980	0.054709	-0.005387
19	P1	-15.643628	0.047658	0.006529
22	P1	-24.107574	1.930672	0.021644
26	P1	-14.949519	0.372734	0.280490
30	P1	-20.094053	0.889126	0.095906

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.010530	0.037275	0.099997
7	P2	-22.577576	0.034078	0.124646
11	P2	-10.622375	0.037544	0.208807
15	P2	-5.051774	0.025629	0.040380
19	P2	-6.948906	0.037028	0.062876
22	P2	-7.279905	0.028914	0.095716
26	P2	-23.953903	0.019379	0.042845
30	P2	-21.999241	0.024127	0.069501

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.039354	0.003006	0.025681
7	P3	-8.039368	0.003009	0.025415
11	P3	-8.039305	0.003009	0.025355
15	P3	-8.039456	0.003008	0.025336
19	P3	-8.039330	0.003017	0.025732
22	P3	-8.039435	0.003011	0.025671
26	P3	-8.039377	0.003011	0.025885
30	P3	-8.039355	0.003000	0.025371

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS

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4.3.2 - Evolution for GM1

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5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000461857
	stdev	2.25730e-07
MEAN Q	mean	0.000536039
	stdev	2.37857e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127813
	stdev	0.000965110
STDEV Q	mean	0.128045
	stdev	0.000975055

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

Evolution Doppler error versus ANX
☒

6.4 - Unbiased Doppler Error for GM1

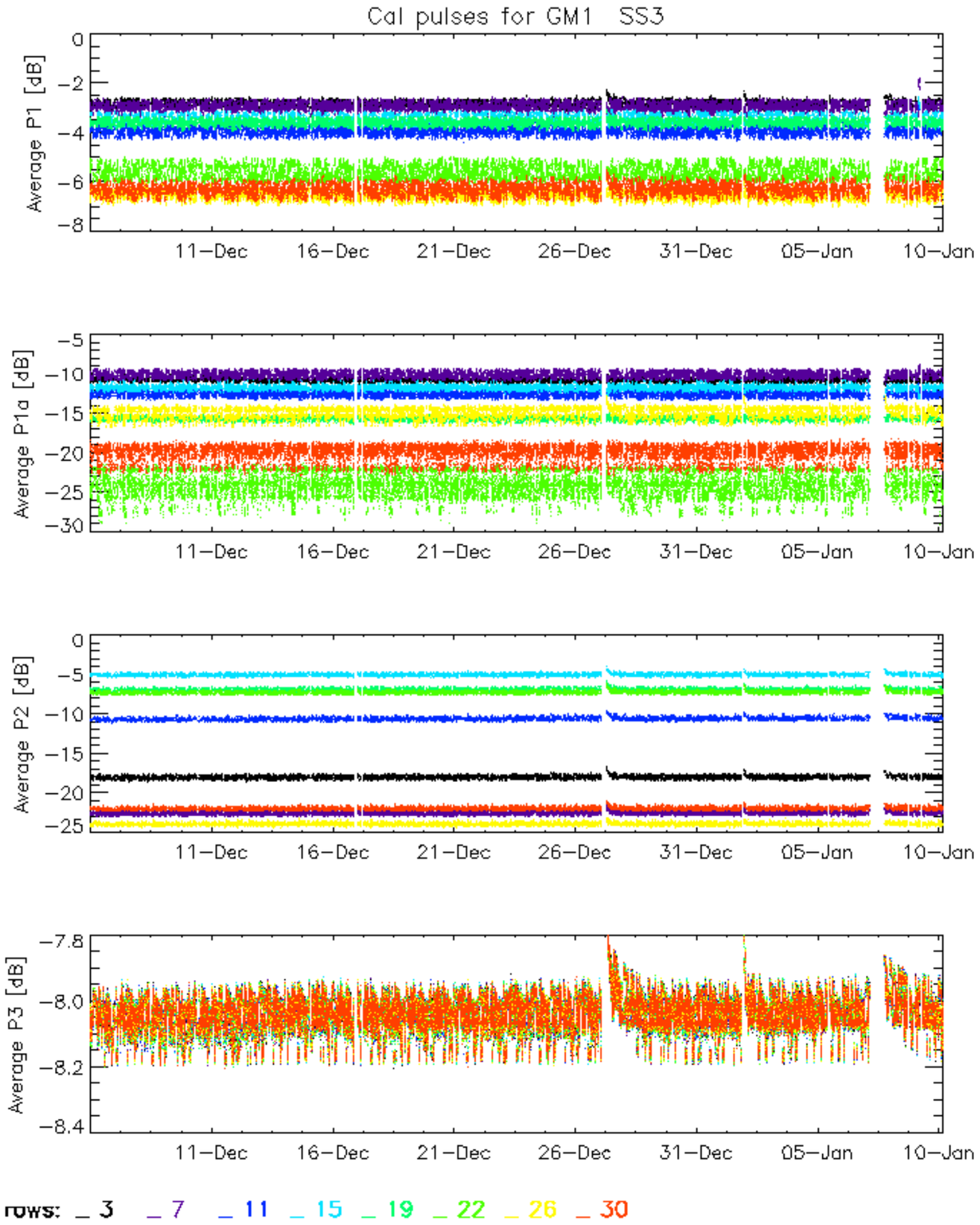
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

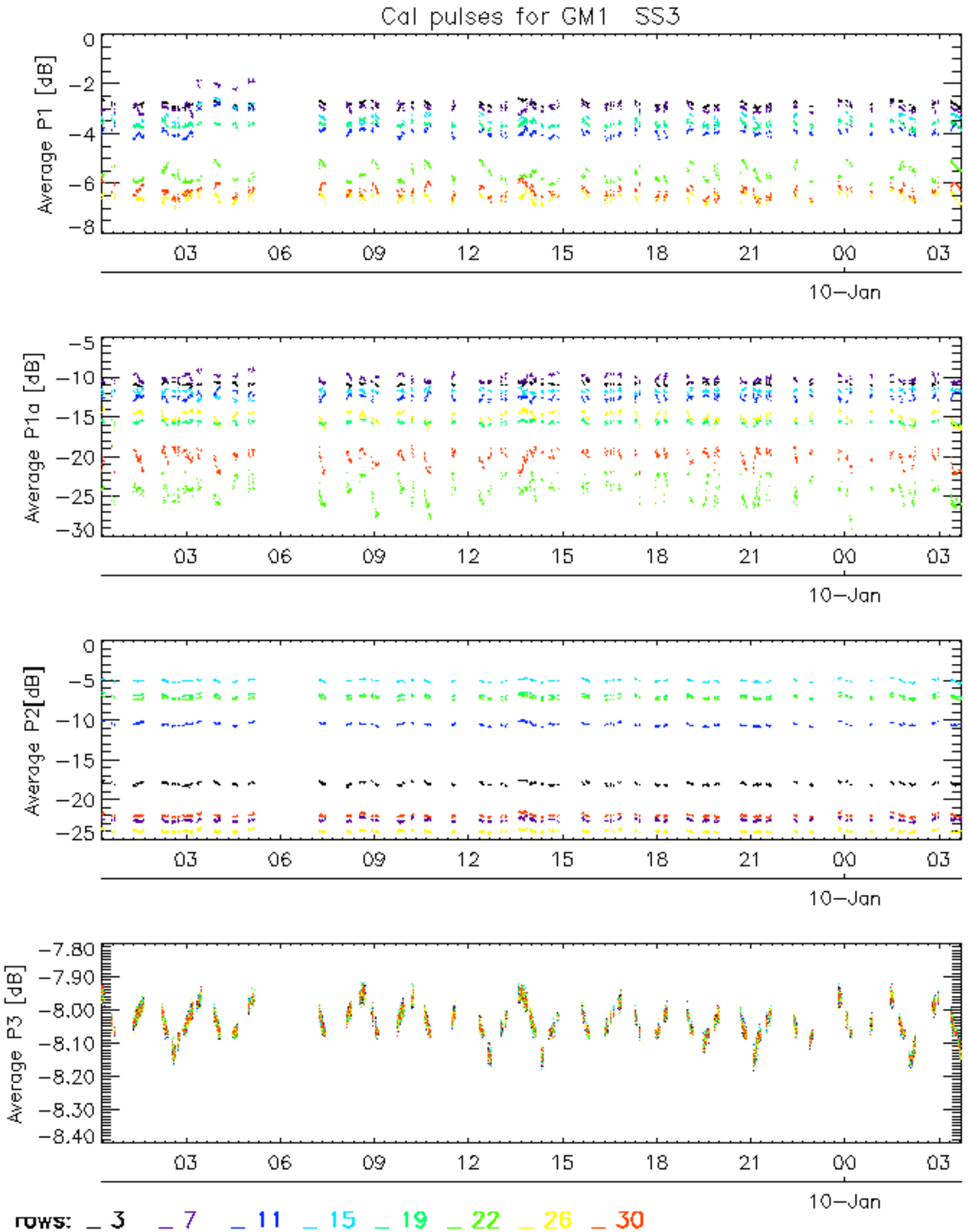
6.5 - Absolute Doppler for GM1

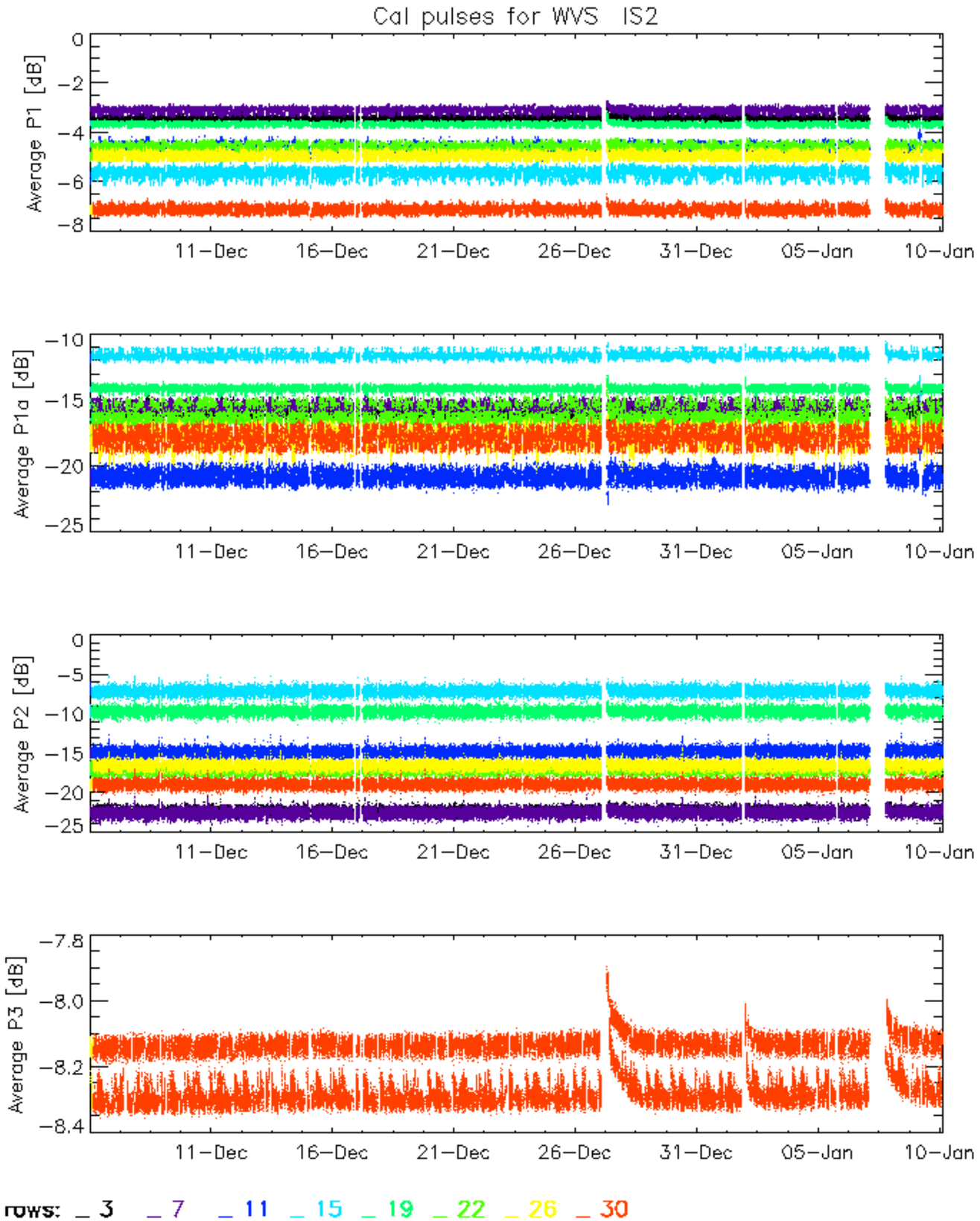
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

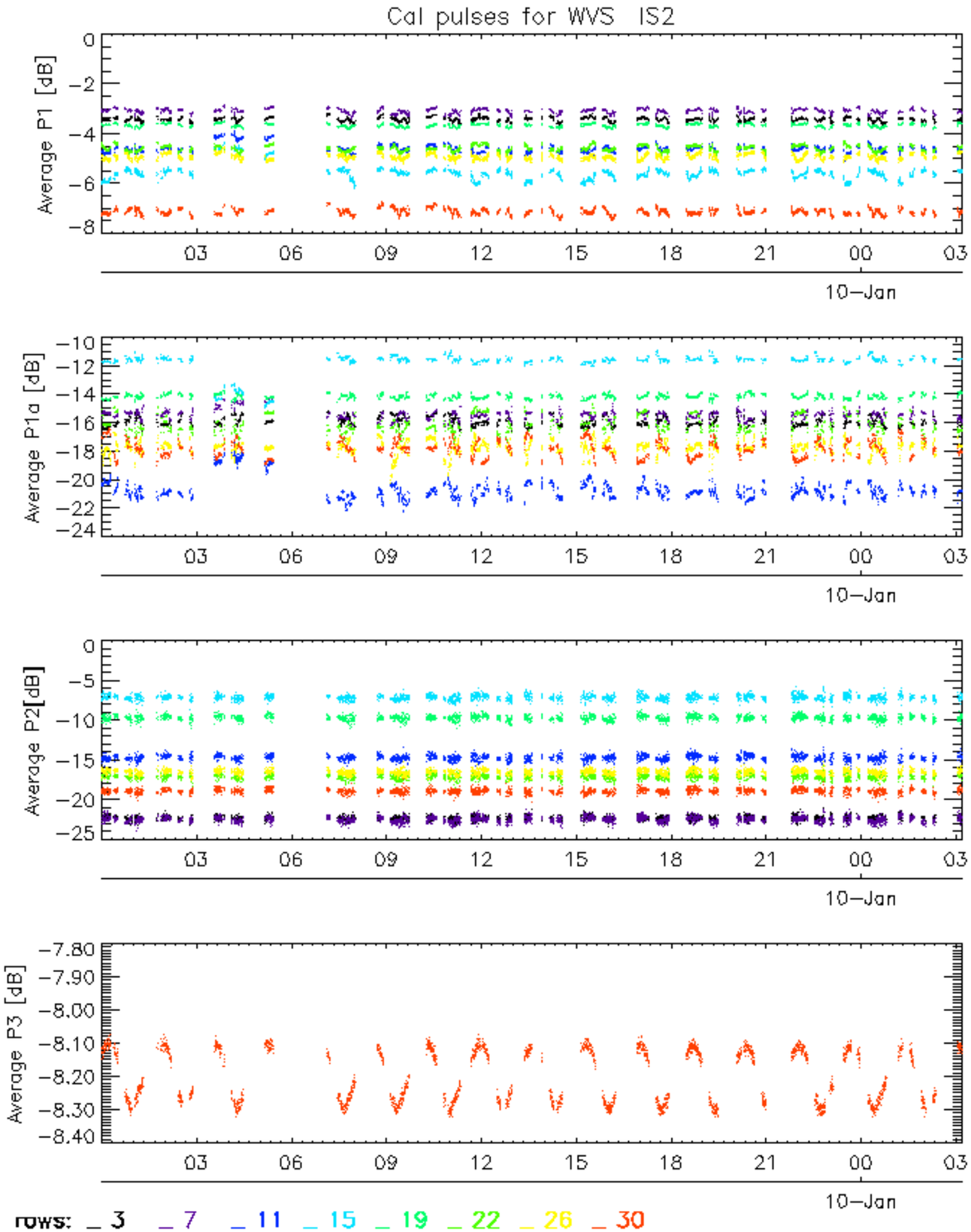
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

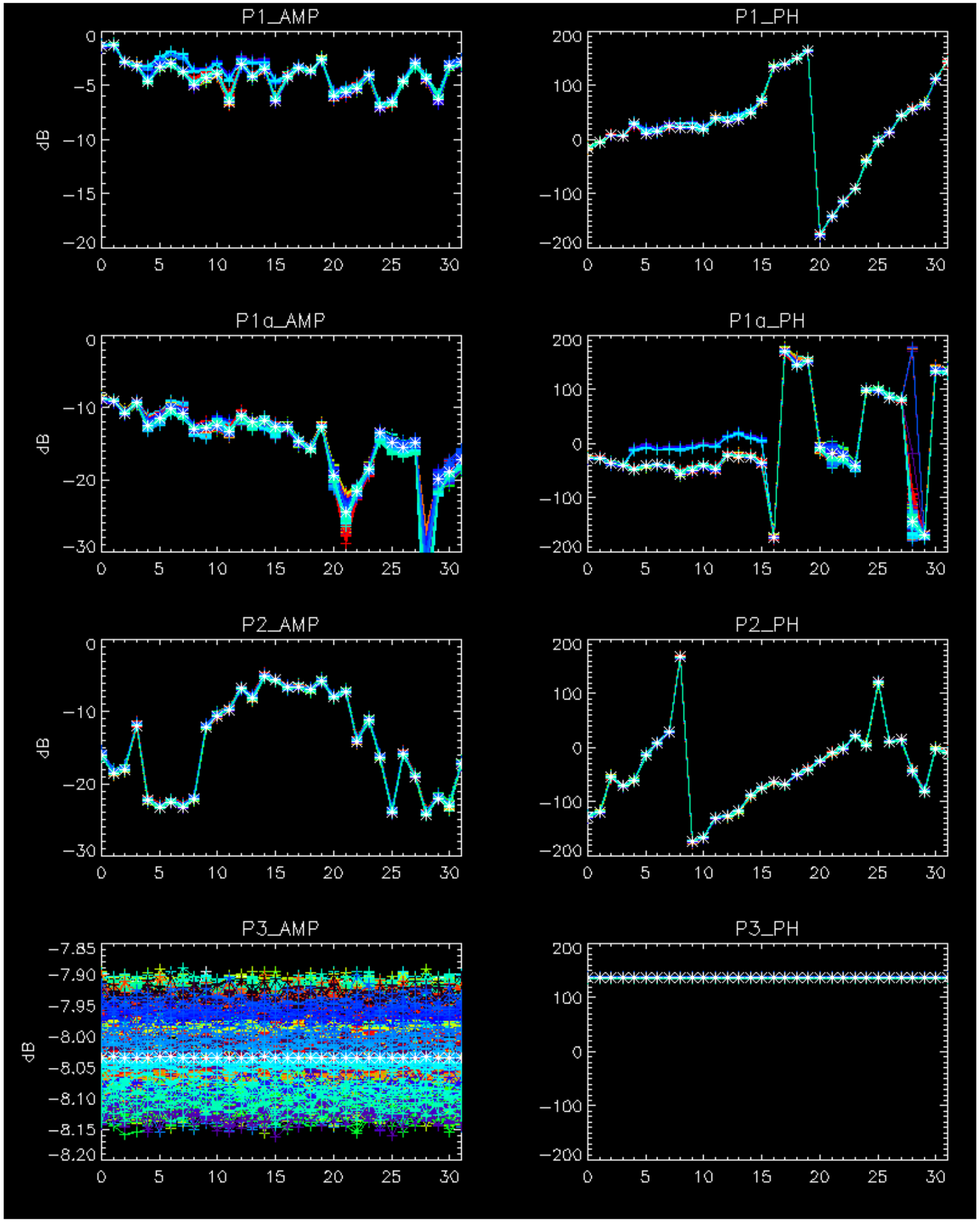

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

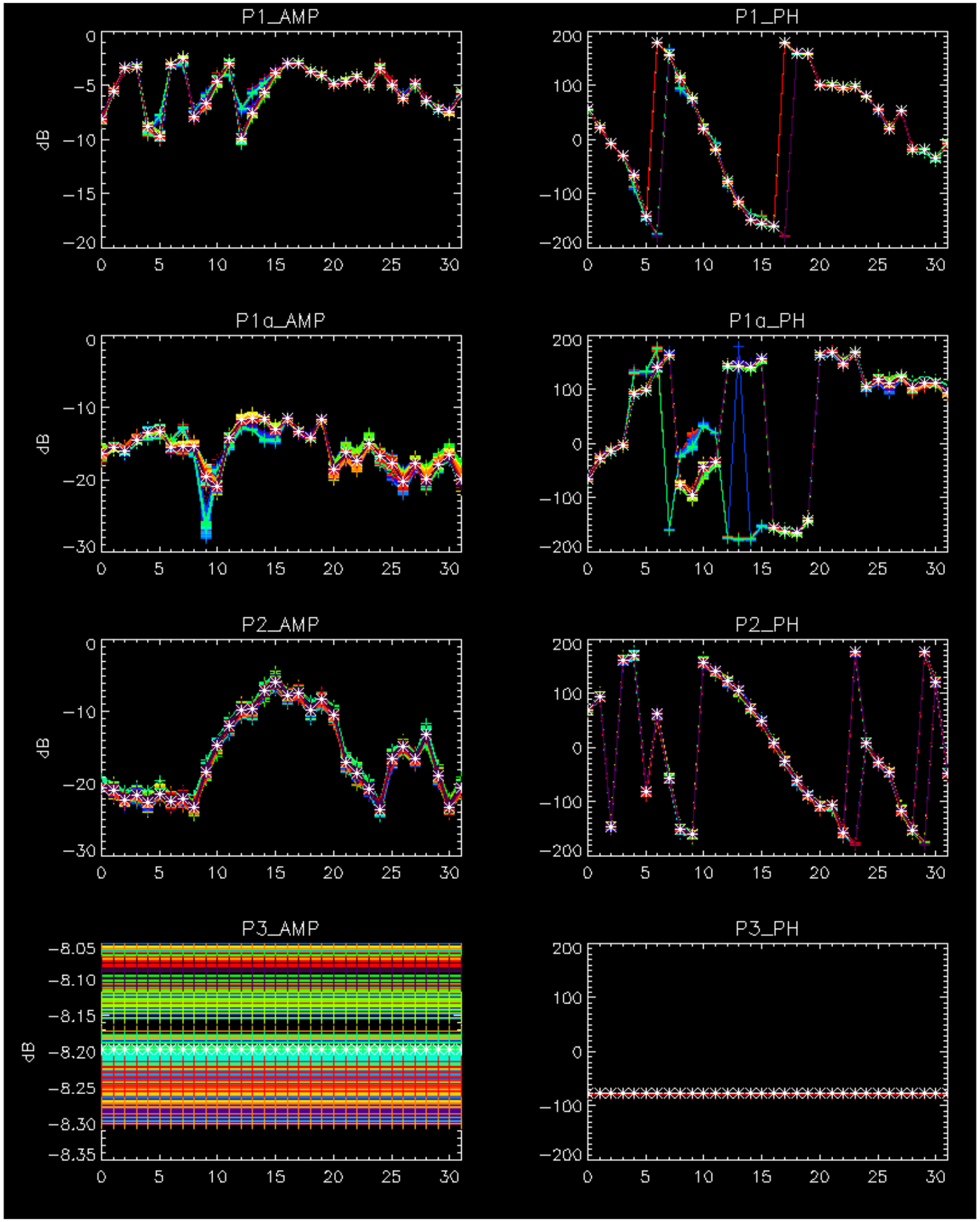

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
00
03
10−Jan
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan
Average P1a [dB]
−10
−15
−20
−25
Average P2 [dB]
−5
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
03
06
09
12
15
18
21
00
03
10−Jan
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2[dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: 3 7 11 15 19 22 26 30

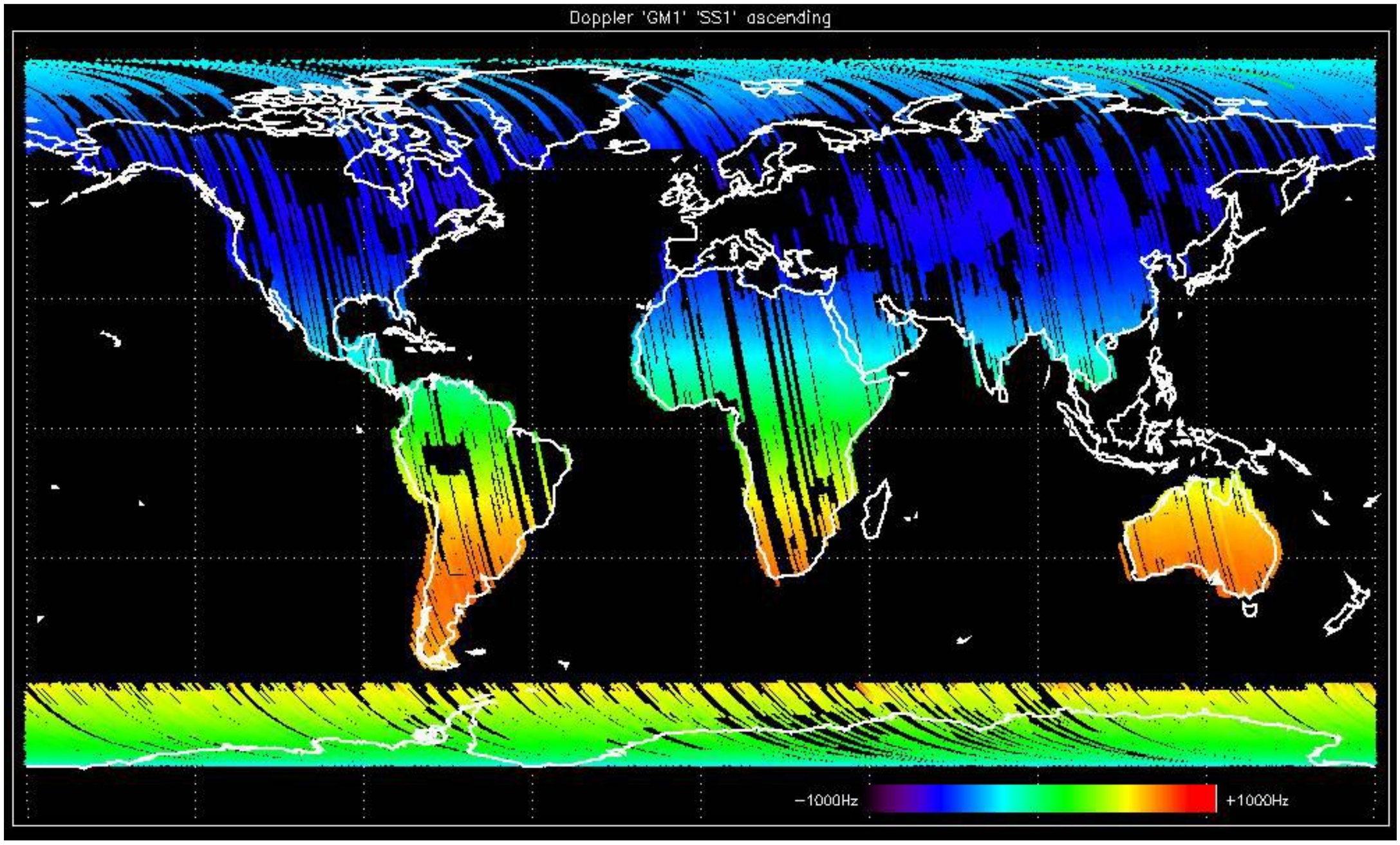
No anomalies observed.

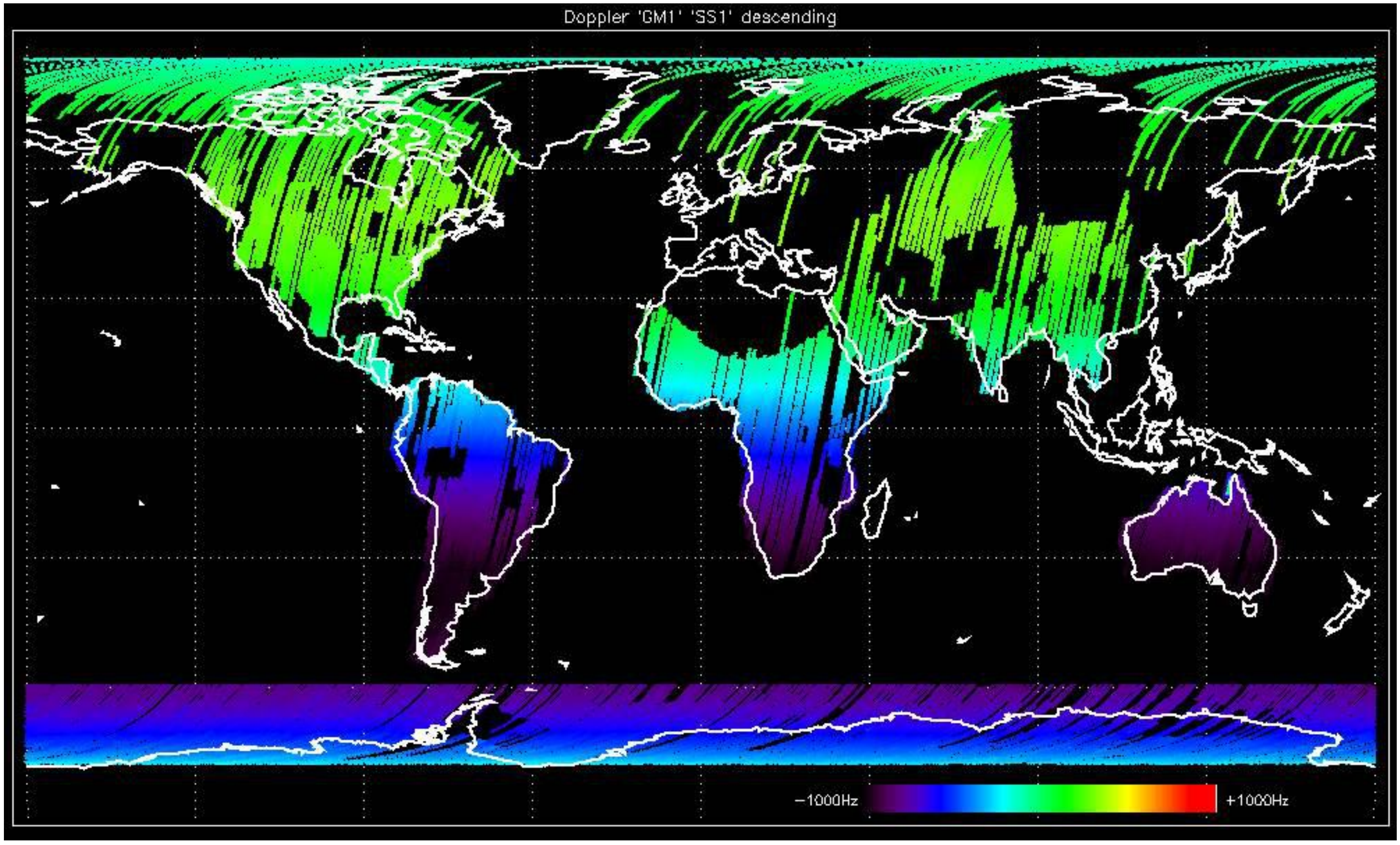

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
−8.15
−8.20
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

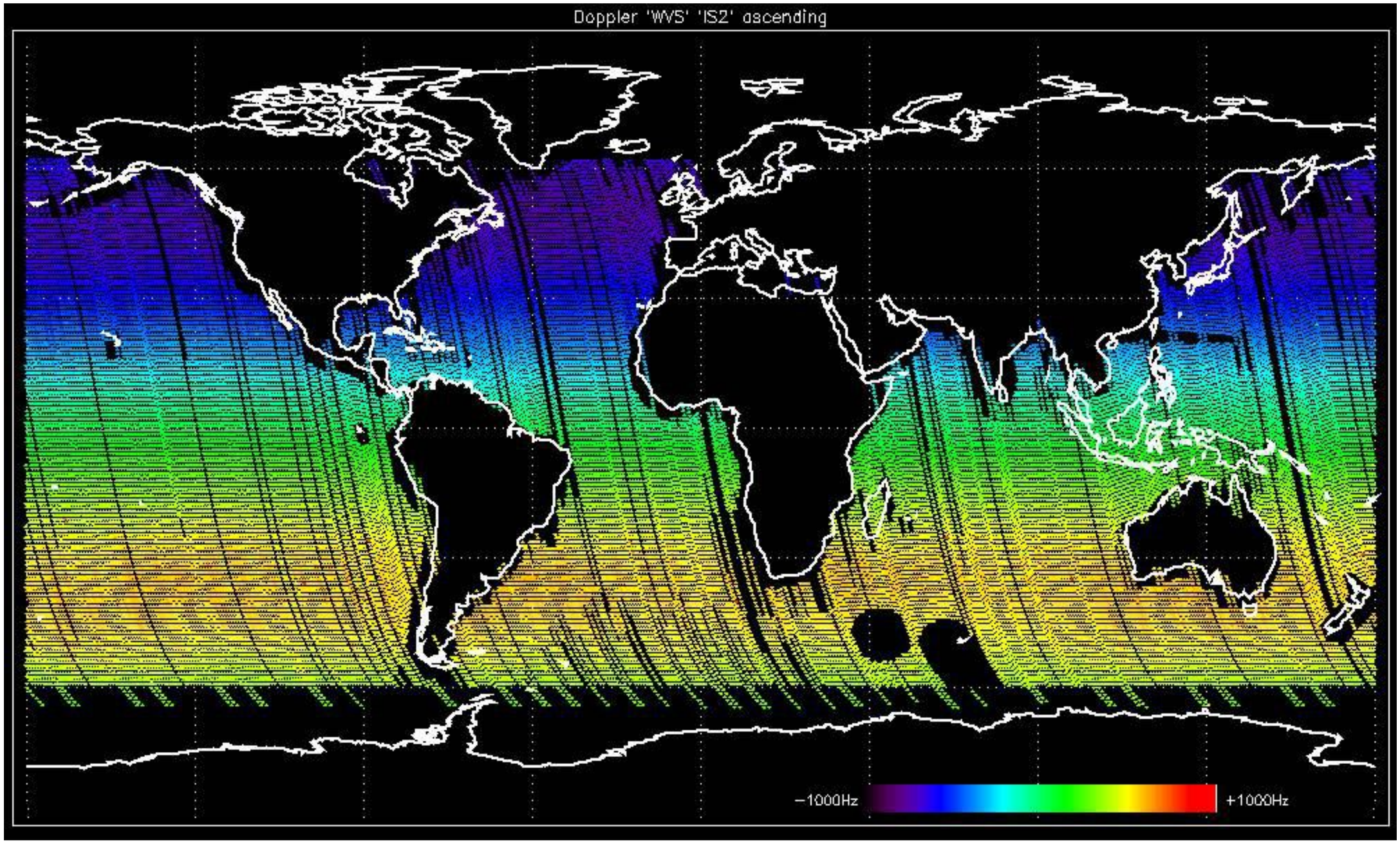

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

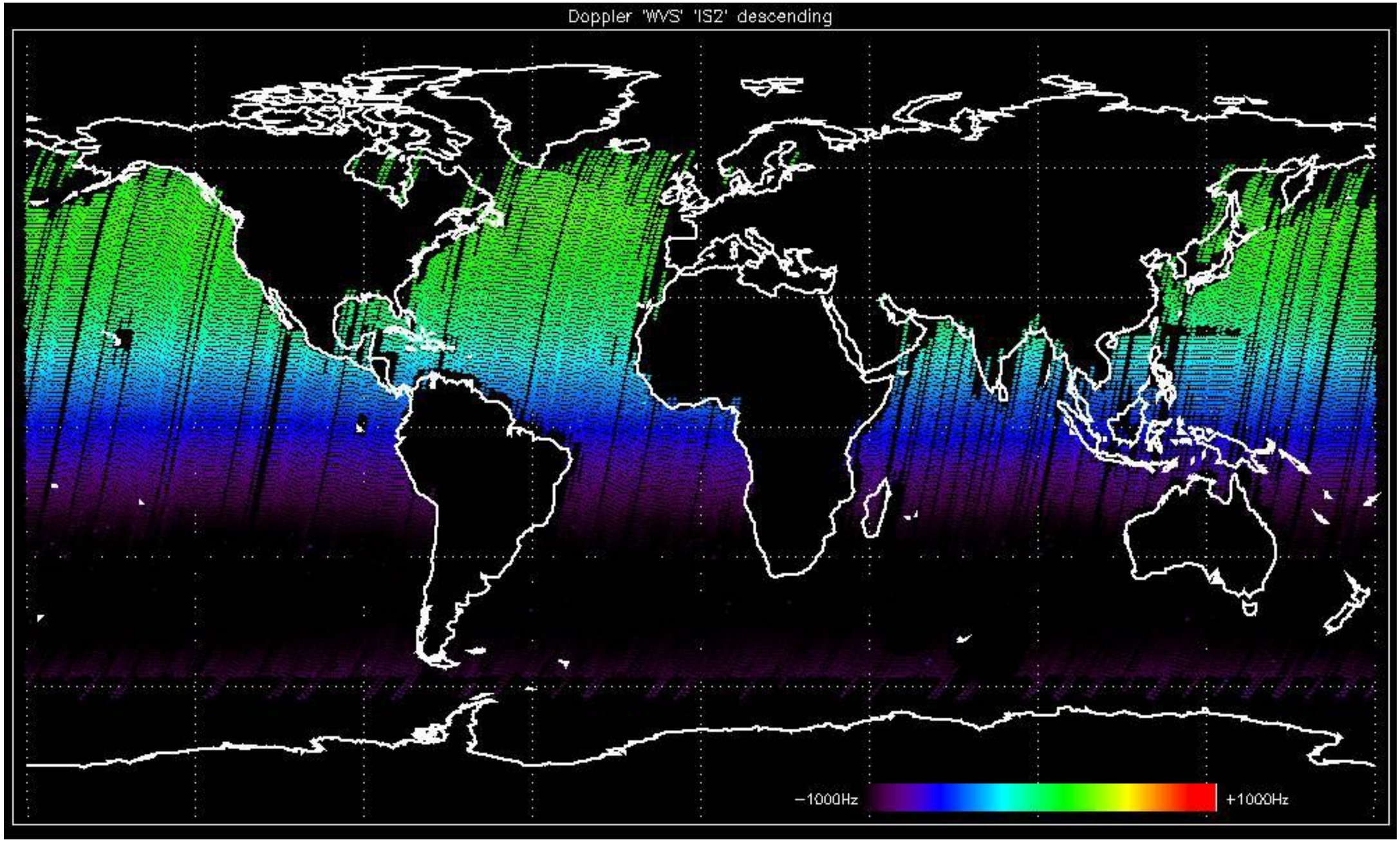
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

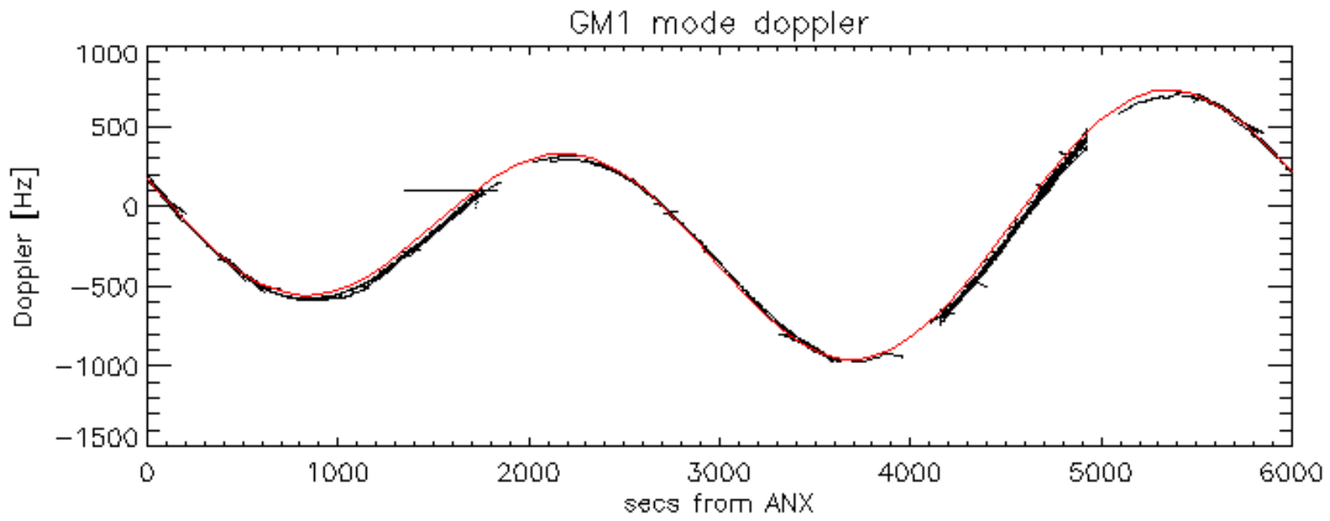
Preliminary report.The data is not yet controled

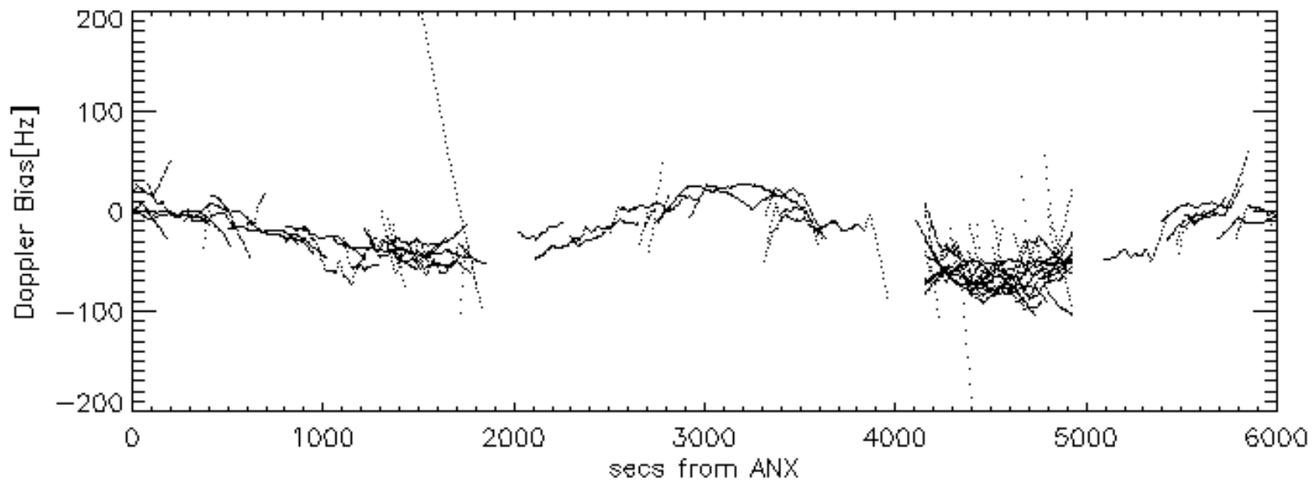

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

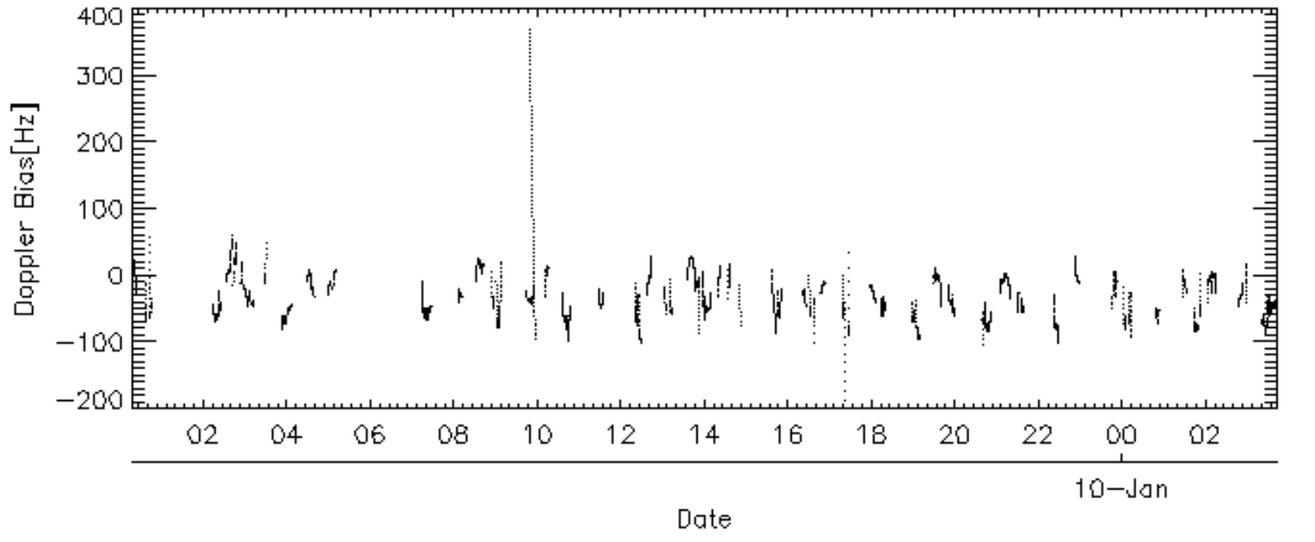

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

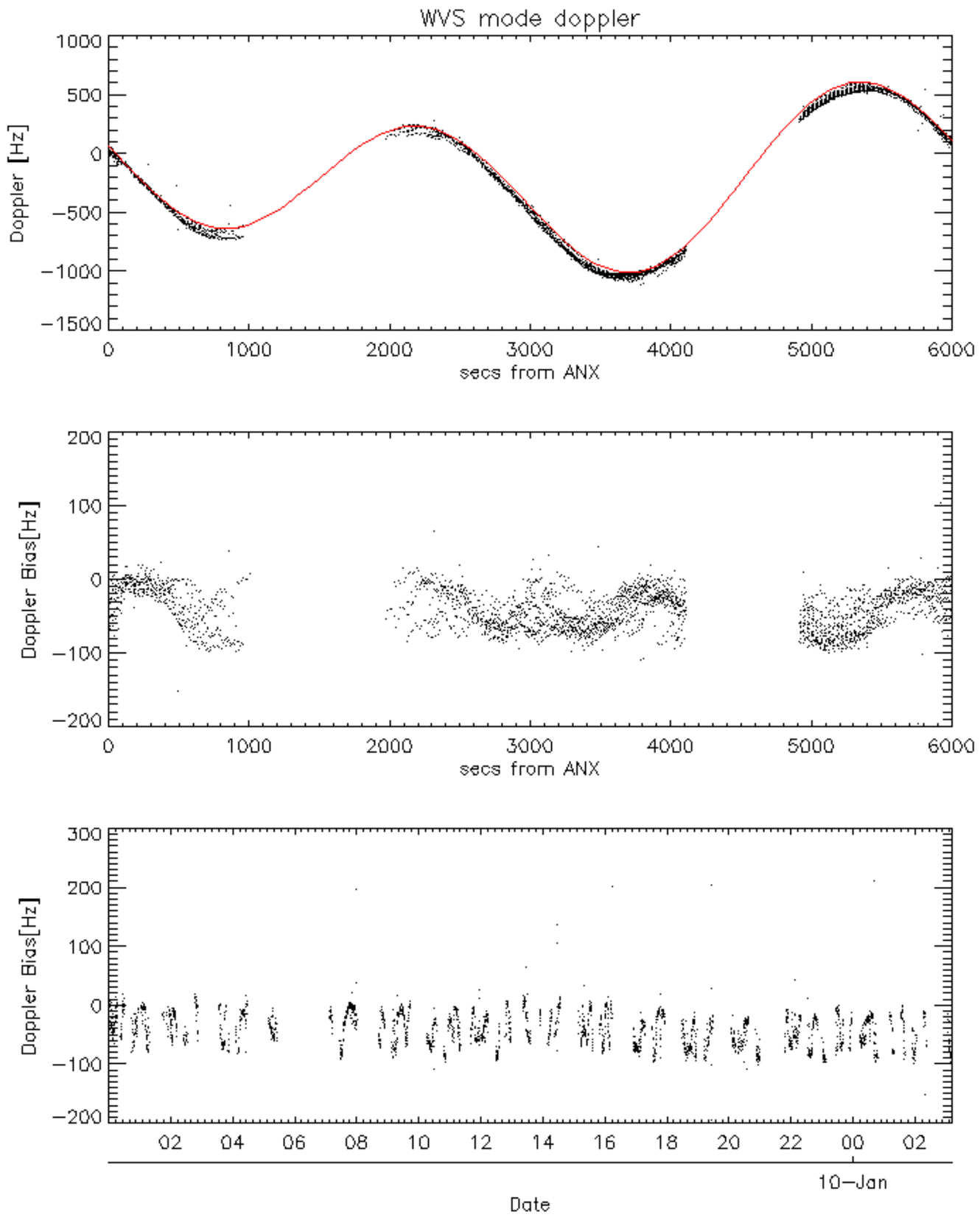

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

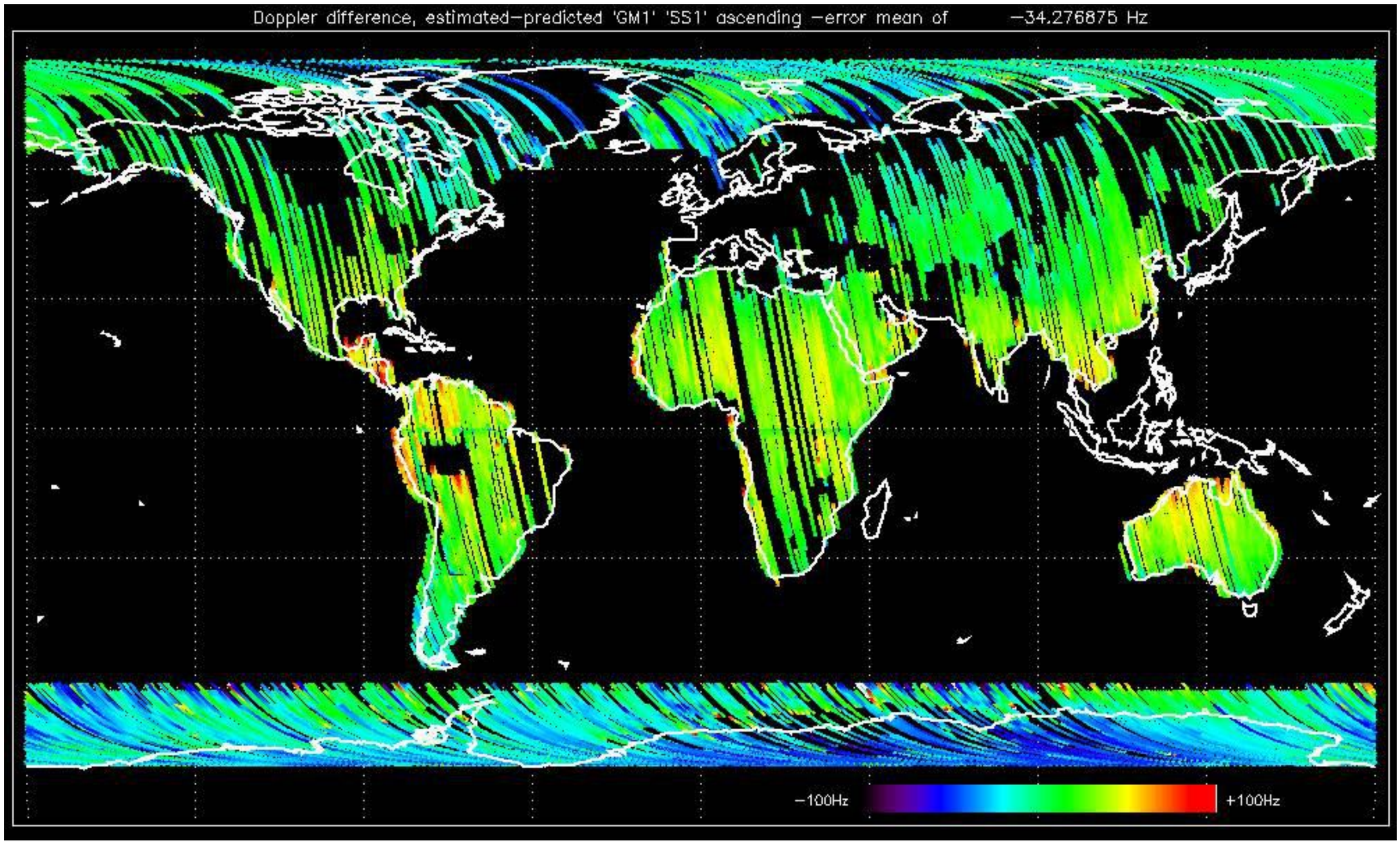

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

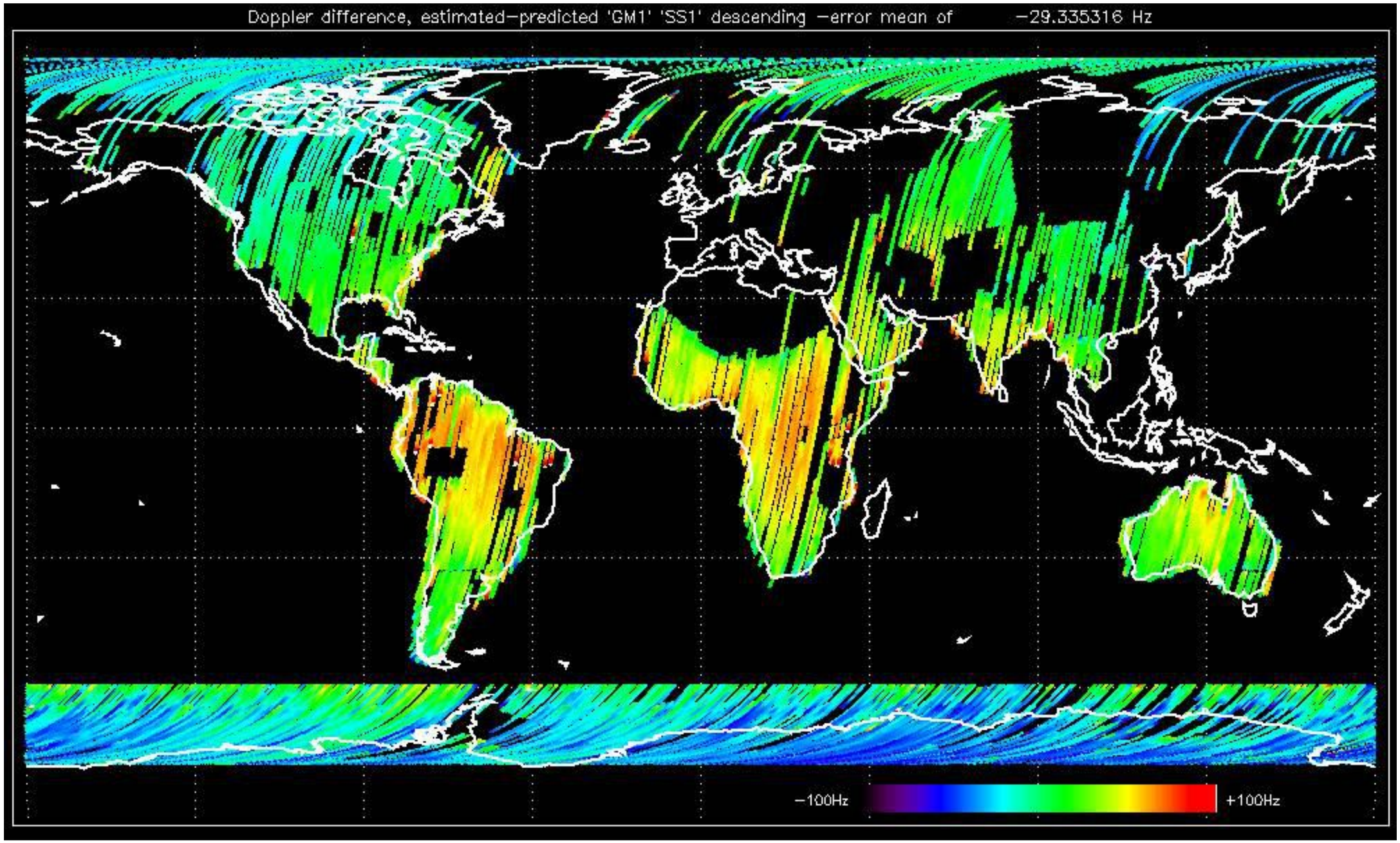

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

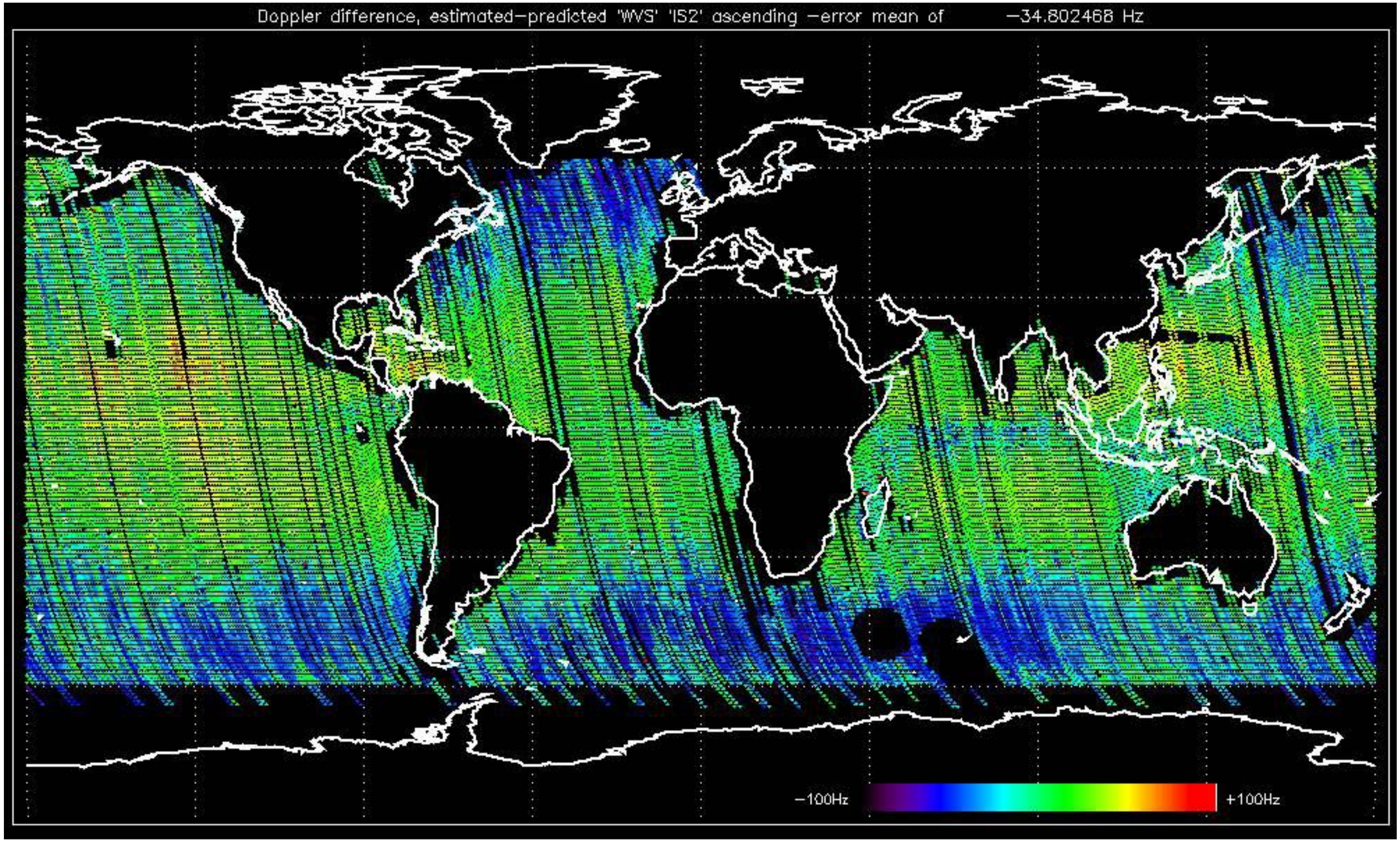

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

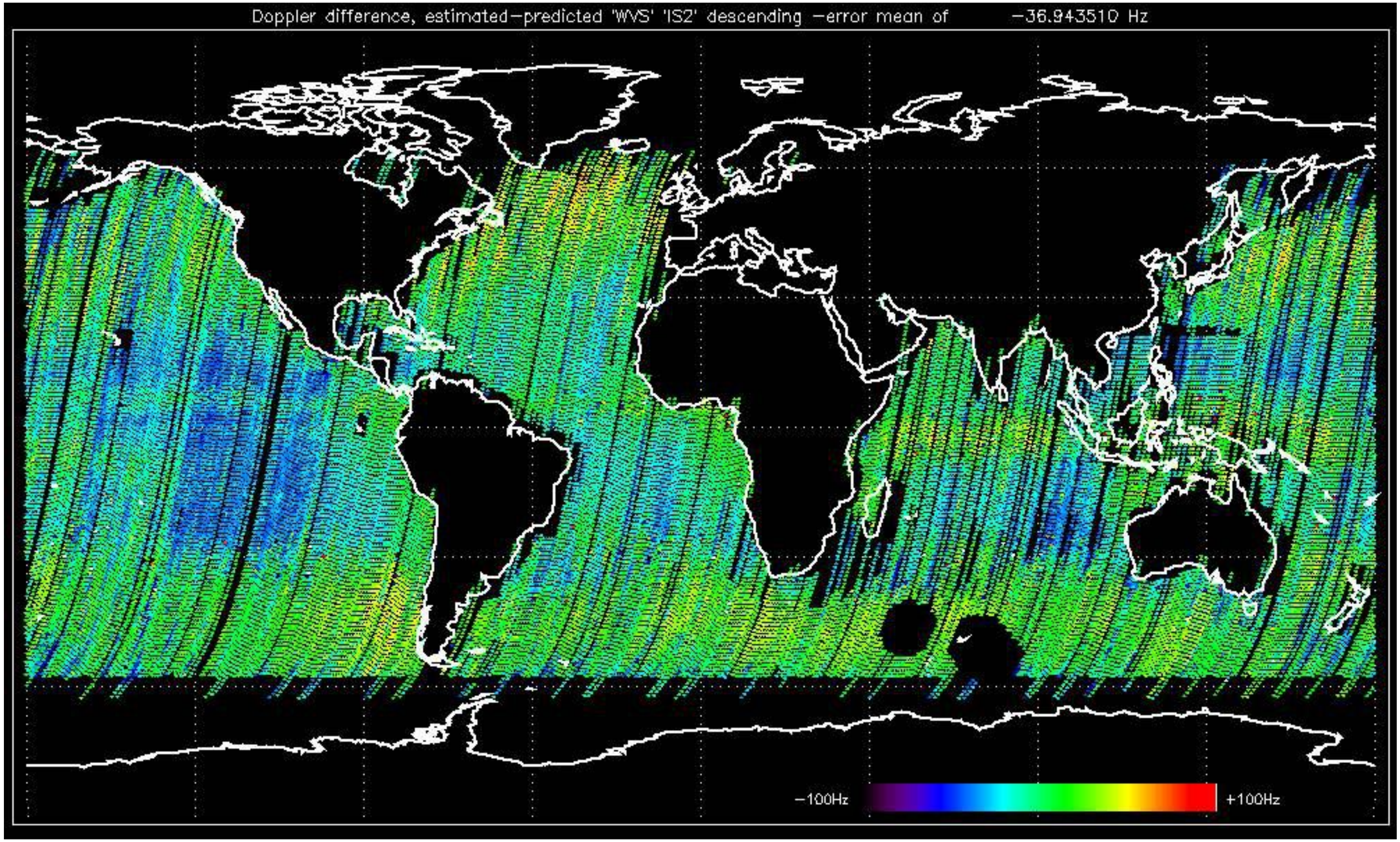

Doppler Bias[Hz]
400
300
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
10−Jan
Date


WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX
Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX
Doppler Bias[Hz]
300
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
10−Jan
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −34.276875 Hz
−100Hz
+100Hz

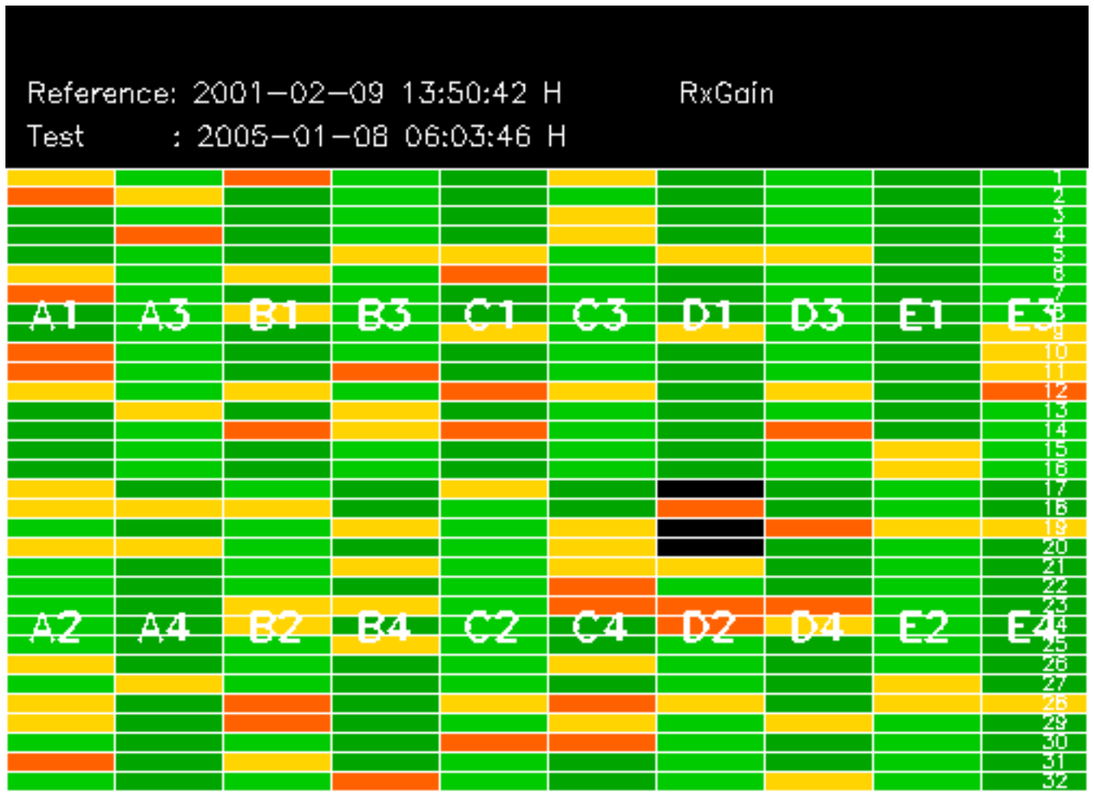

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −29.335316 Hz
−100Hz
+100Hz

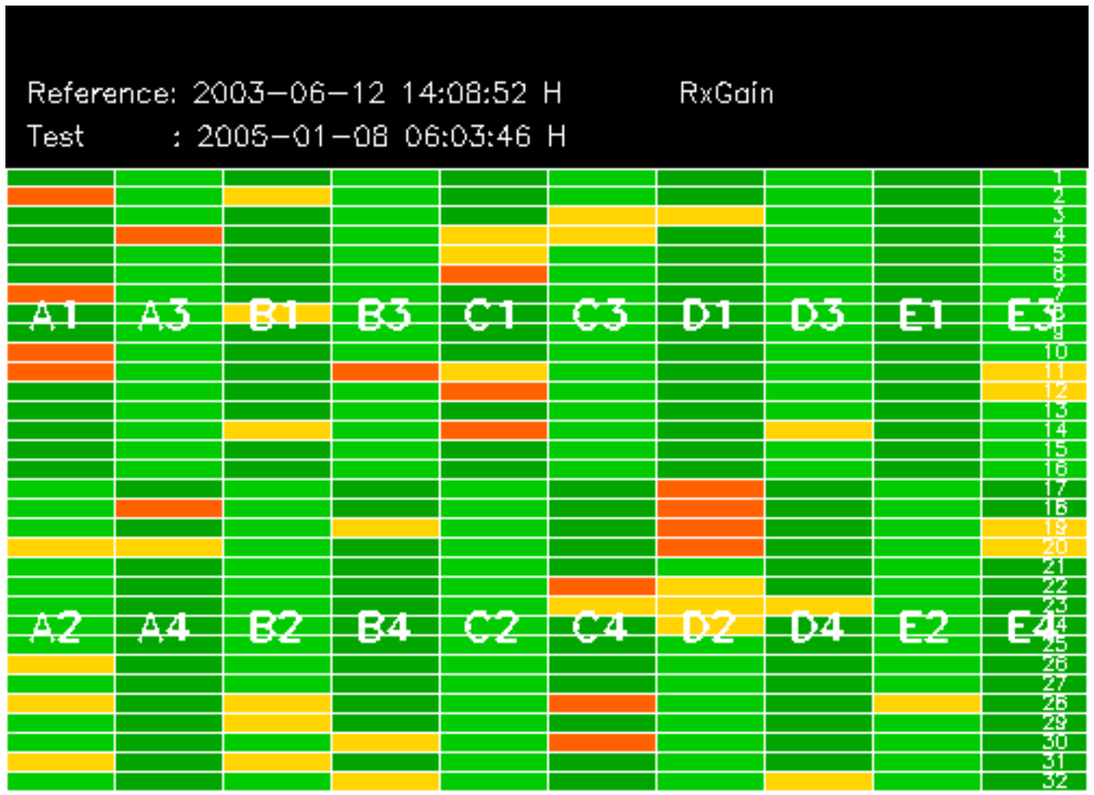

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −34.802468 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.943510 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 : 2005-01-08 06:03:46 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 : 2005-01-08 06:03:46 H
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
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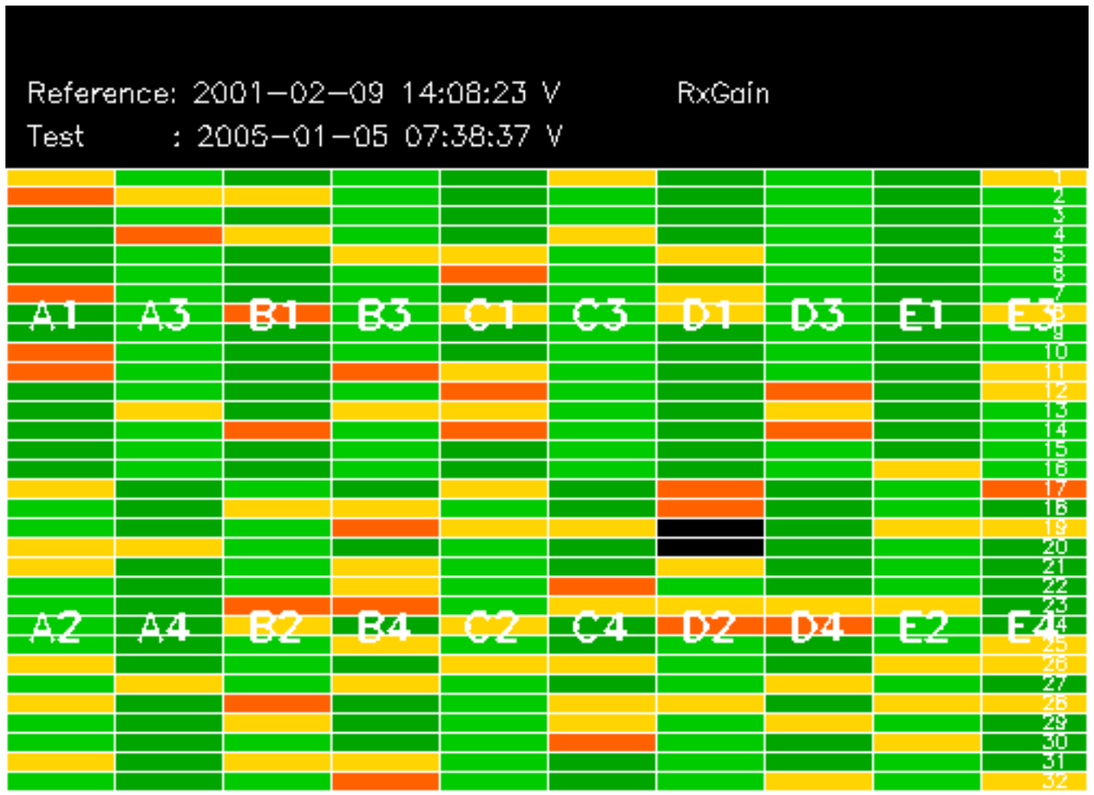
Reference: 2001-02-09 14:08:23 V
Test : 2005-01-05 07:38:37 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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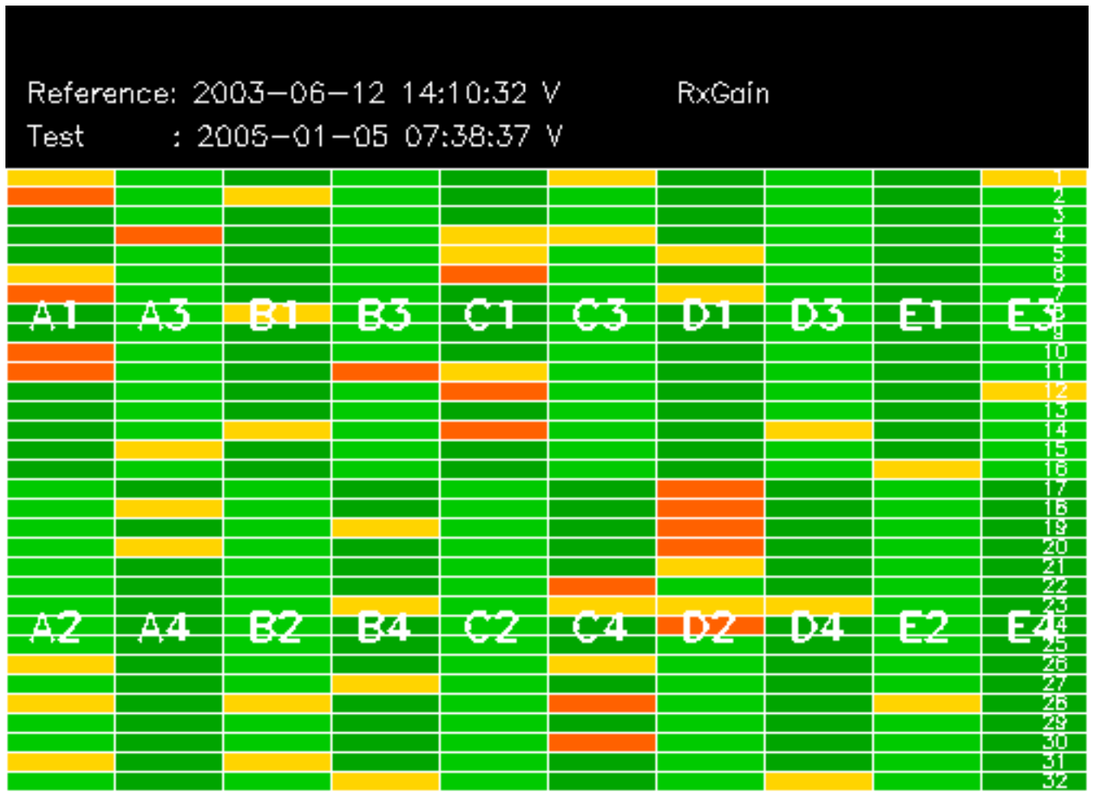
Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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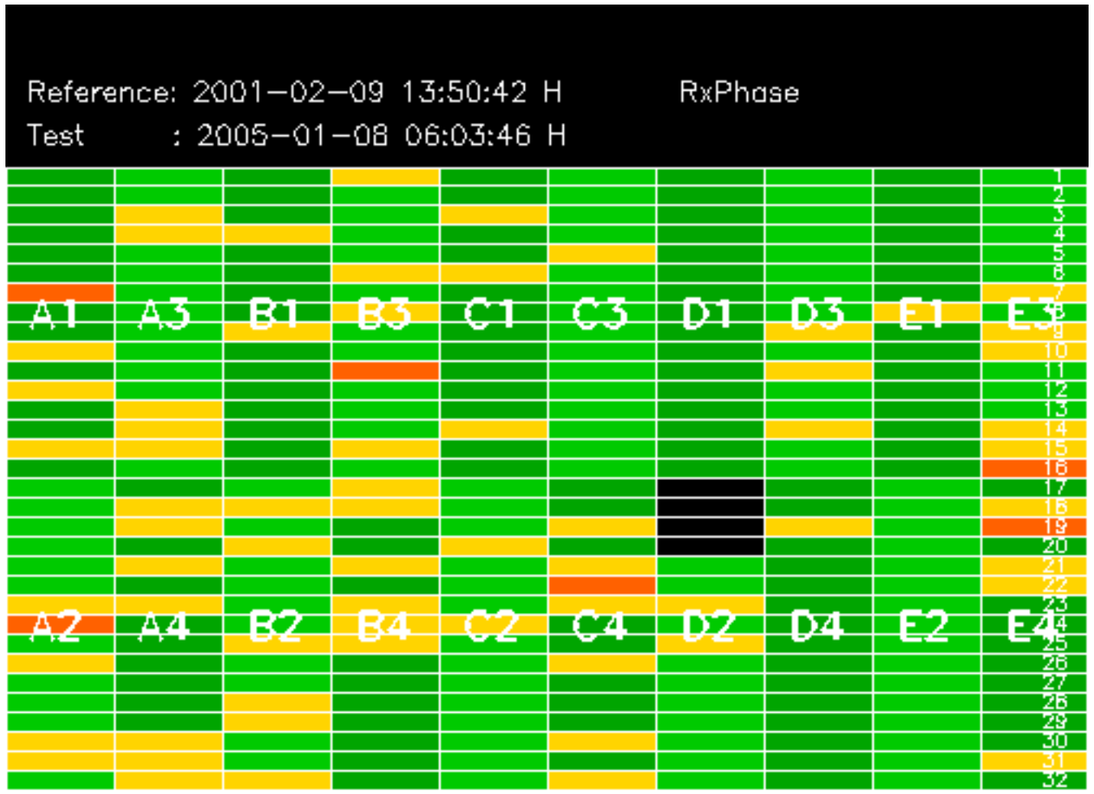
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-01-08 06:03:46 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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8
9
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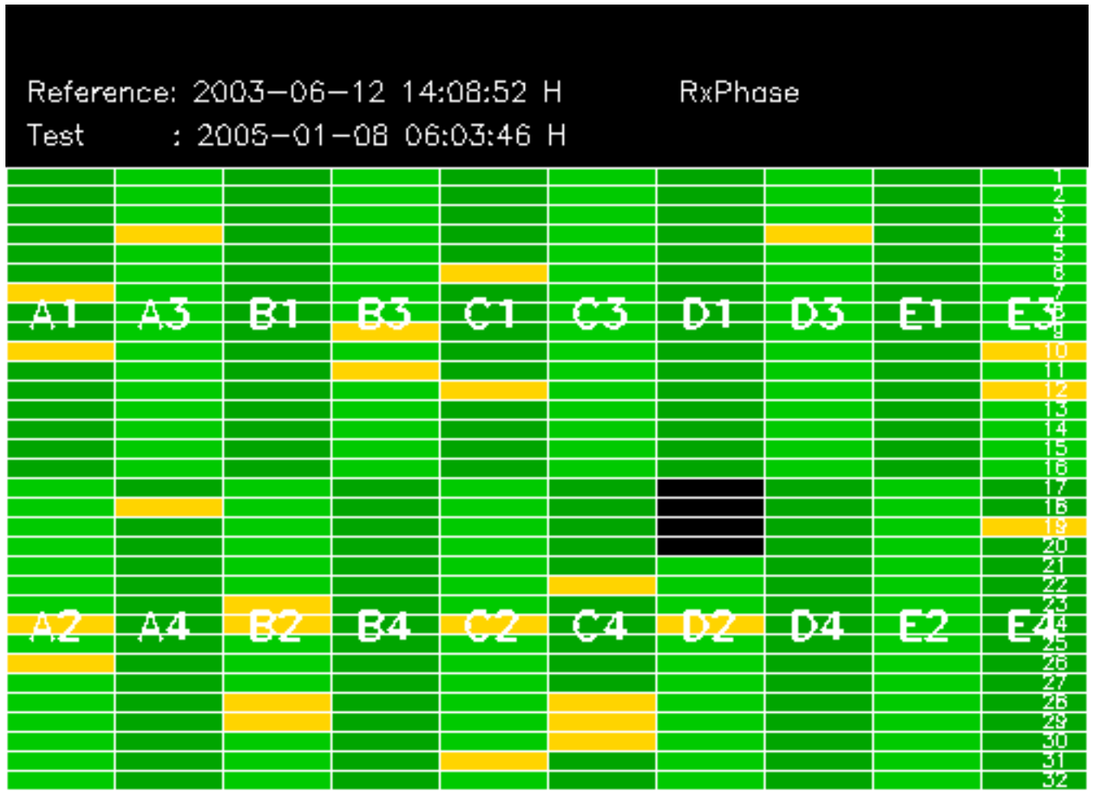
Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2005-01-08 06:03:46 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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9
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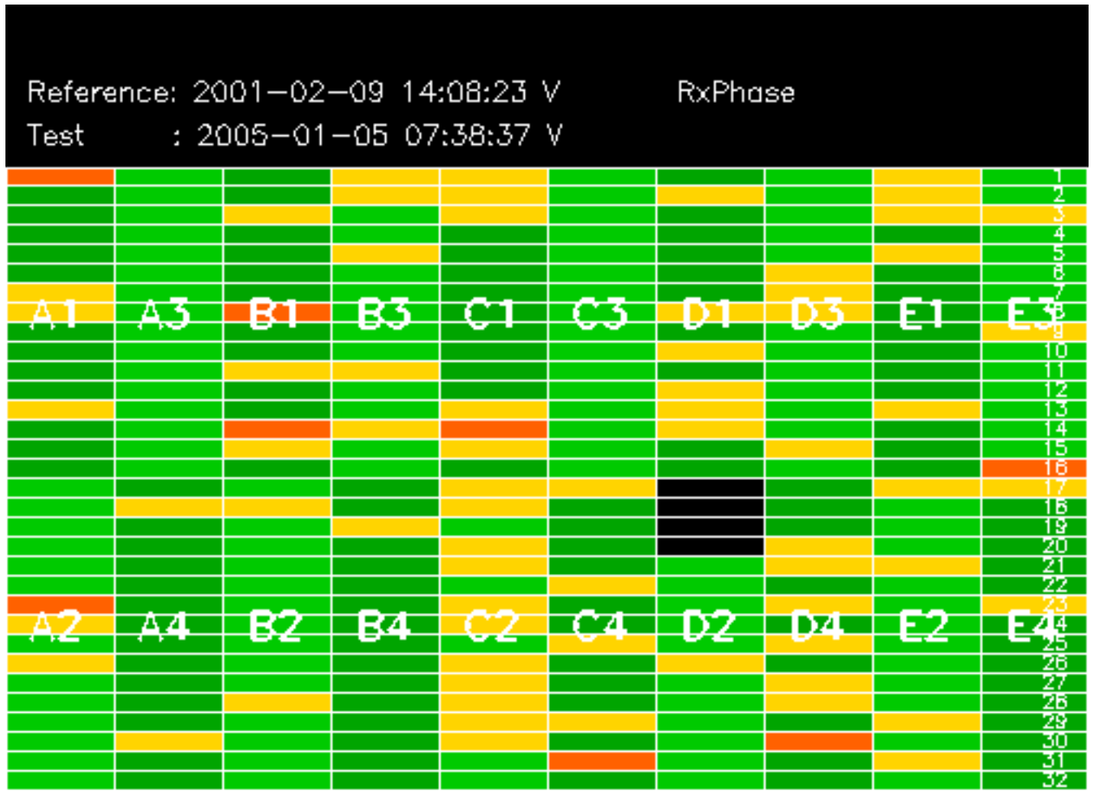
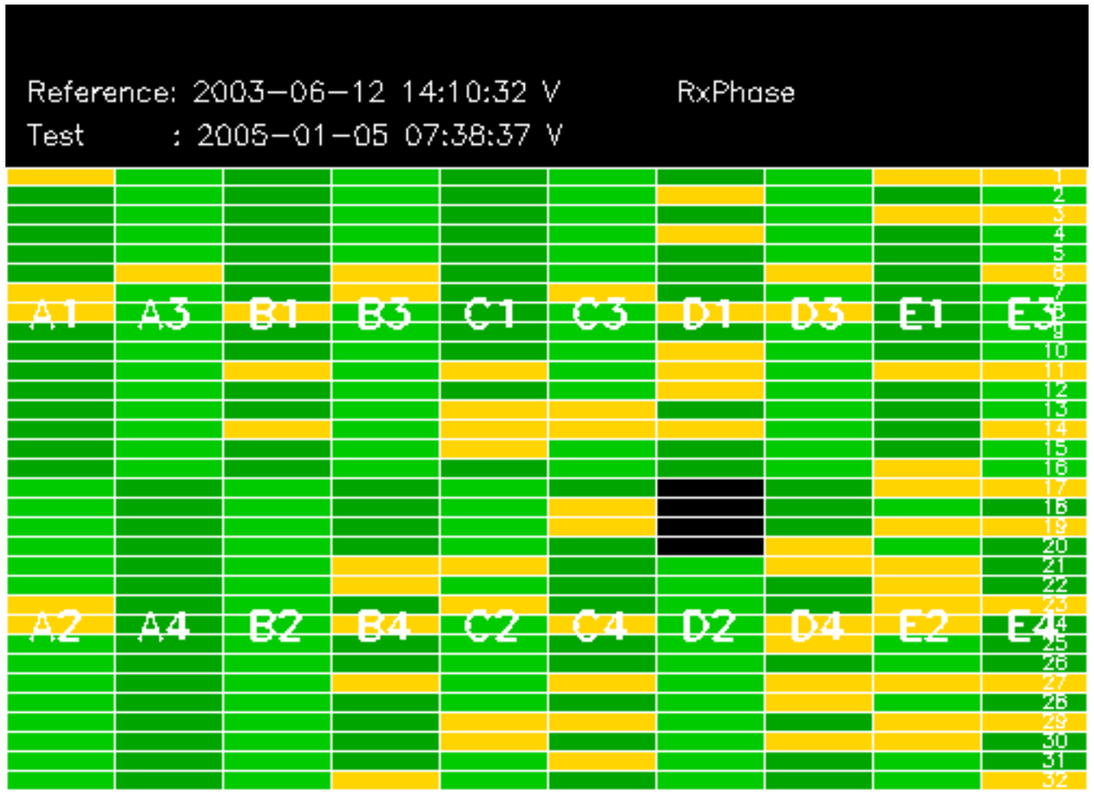
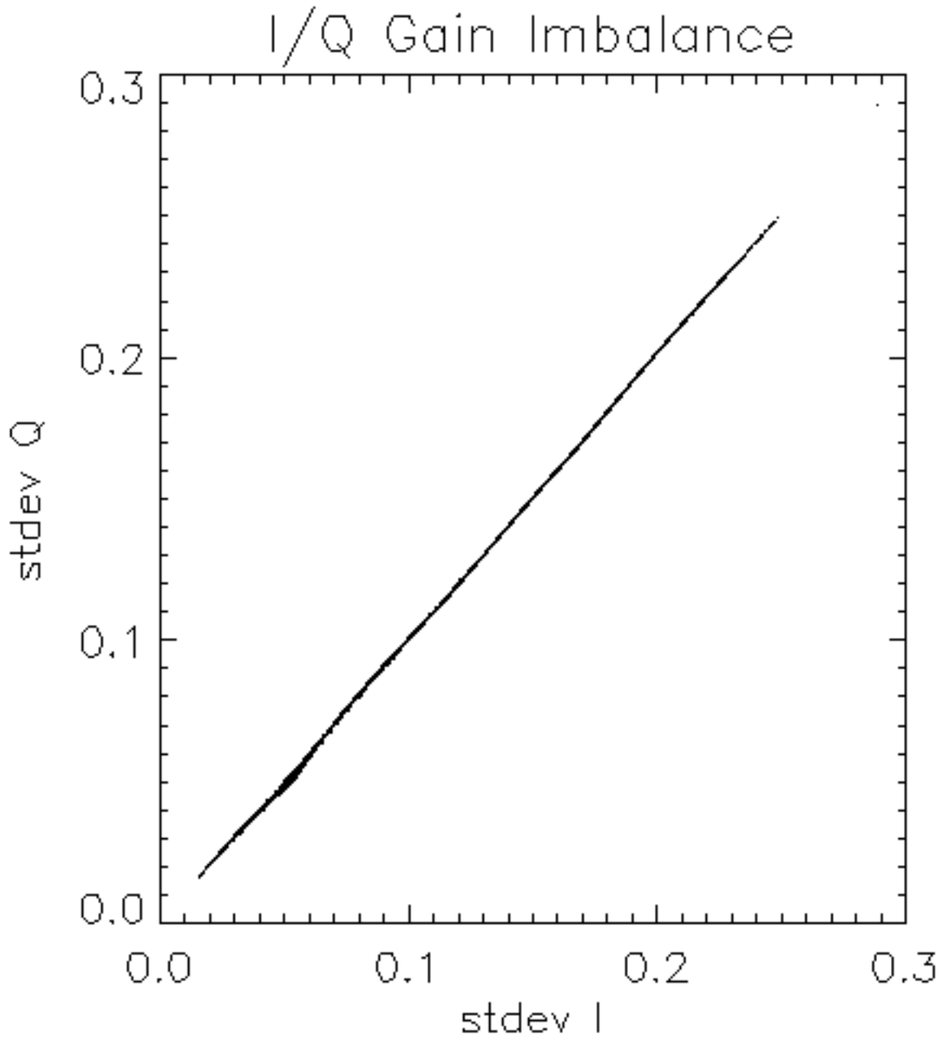
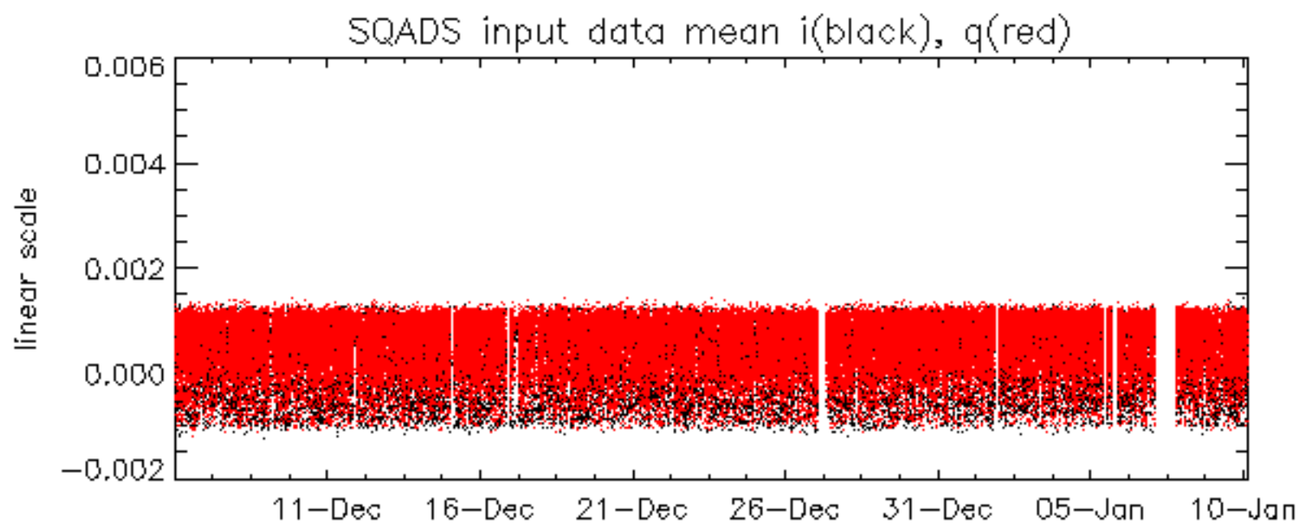
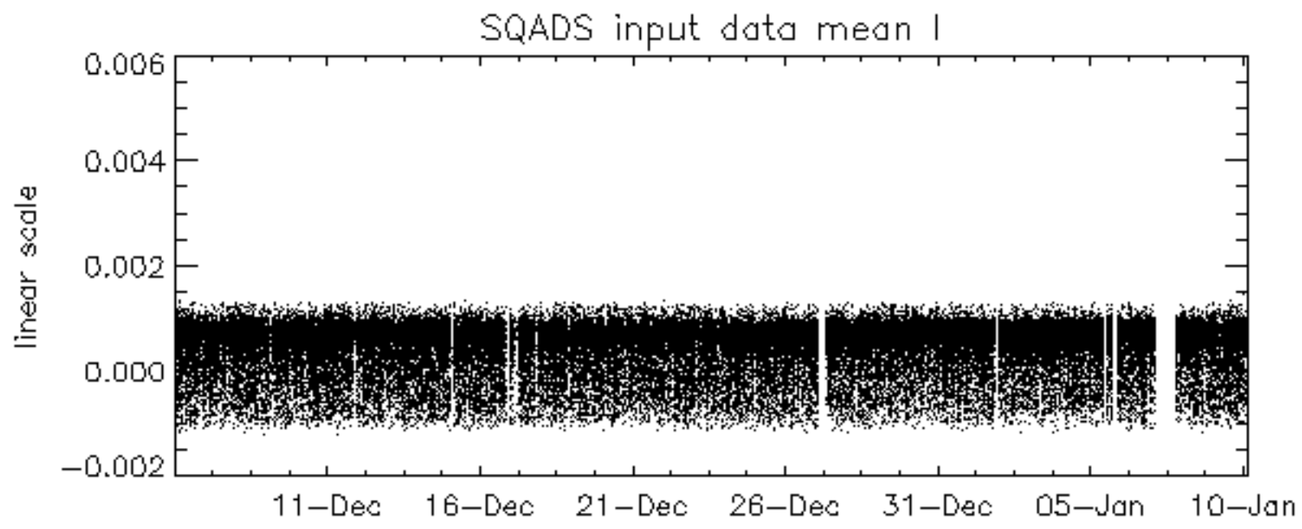
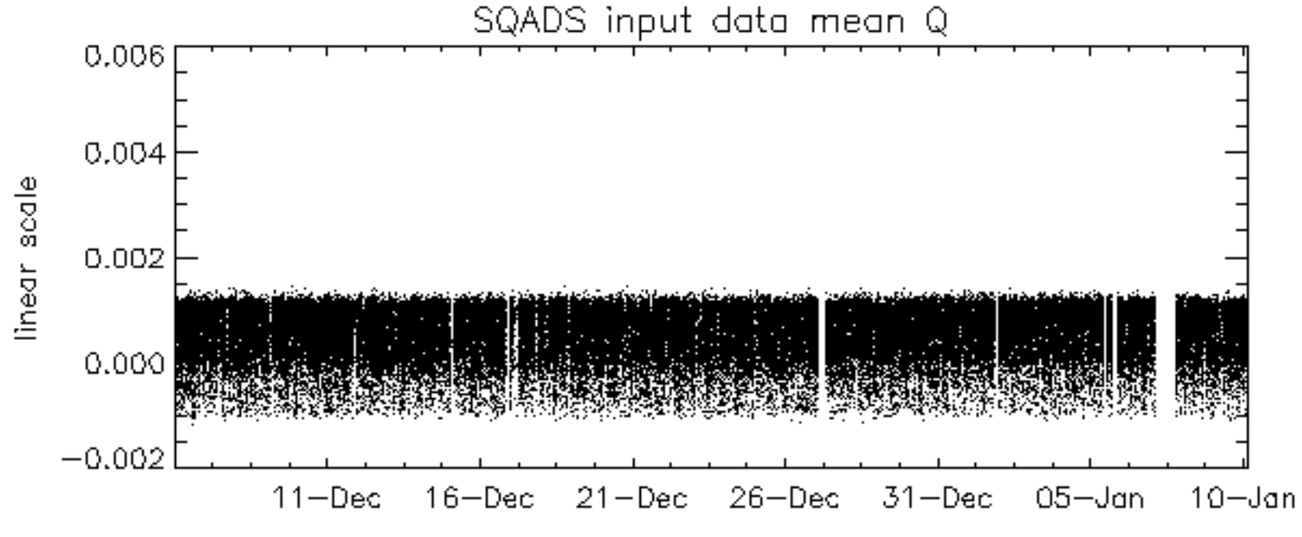

Reference: 2001-02-09 14:08:23 V
Test : 2005-01-05 07:38:37 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

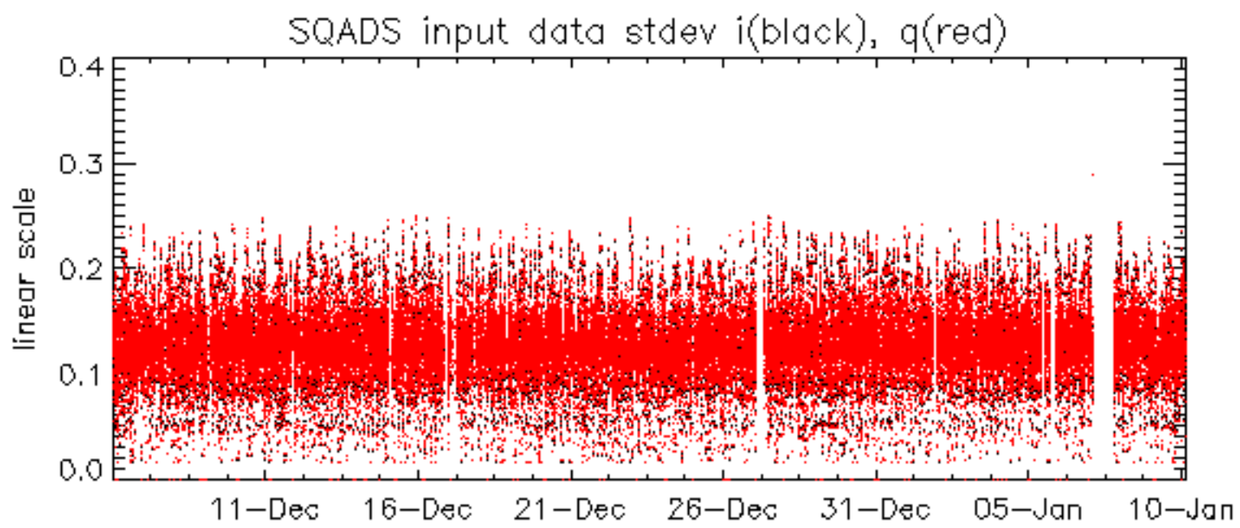

Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

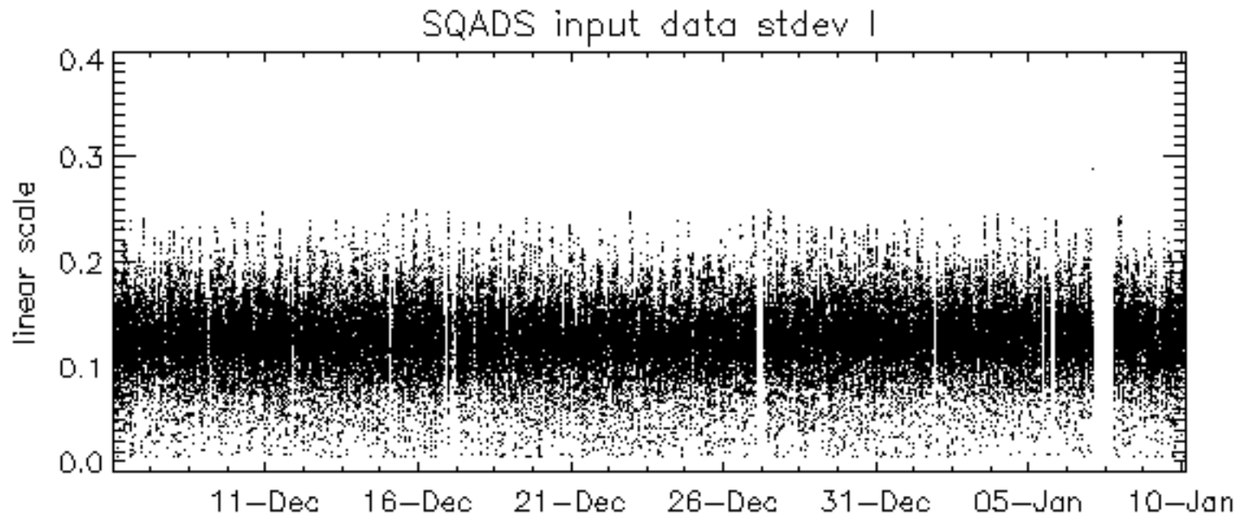

I/Q Gain Imbalance
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
stdev I

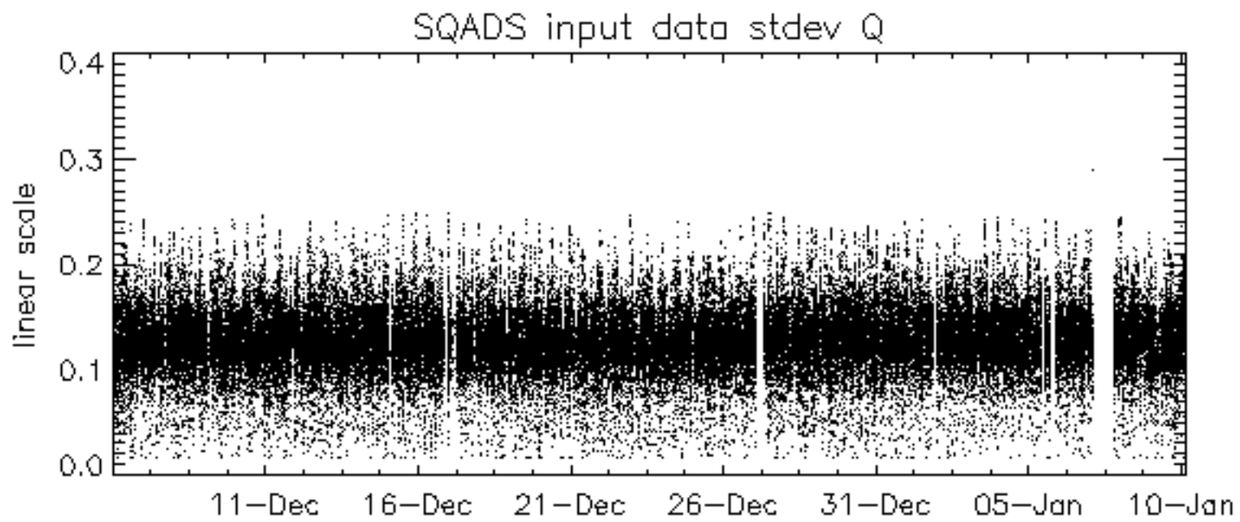

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan

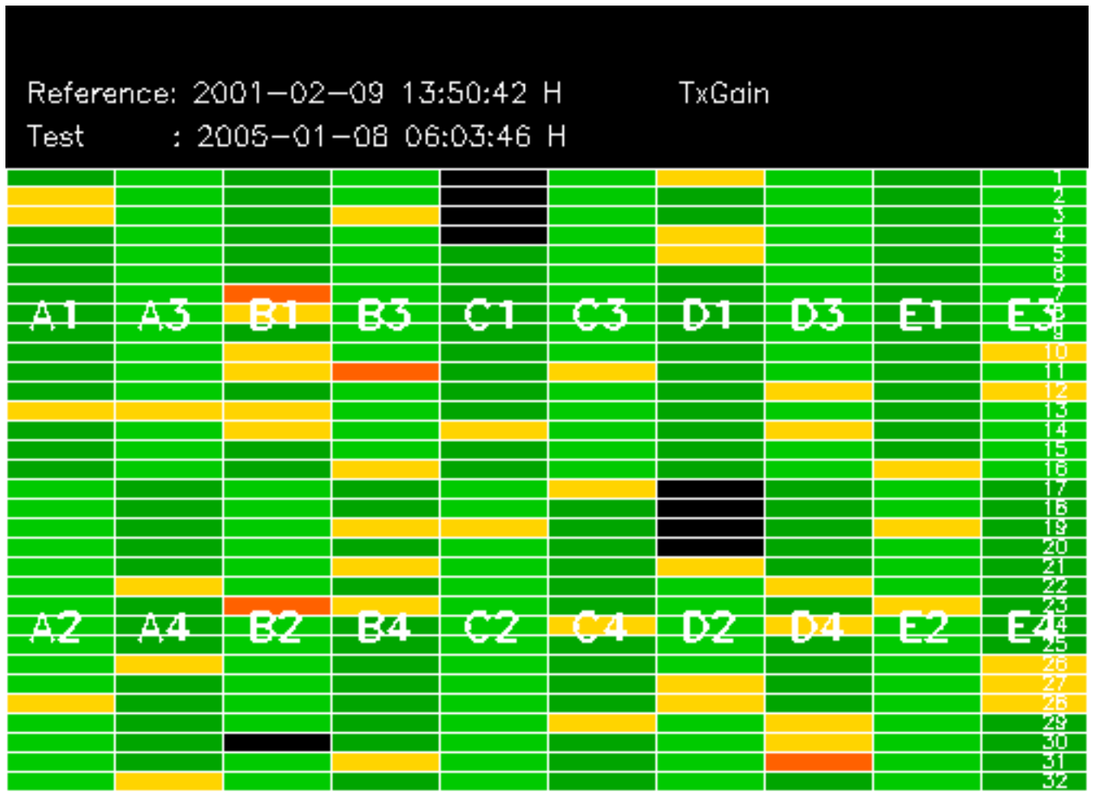

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan

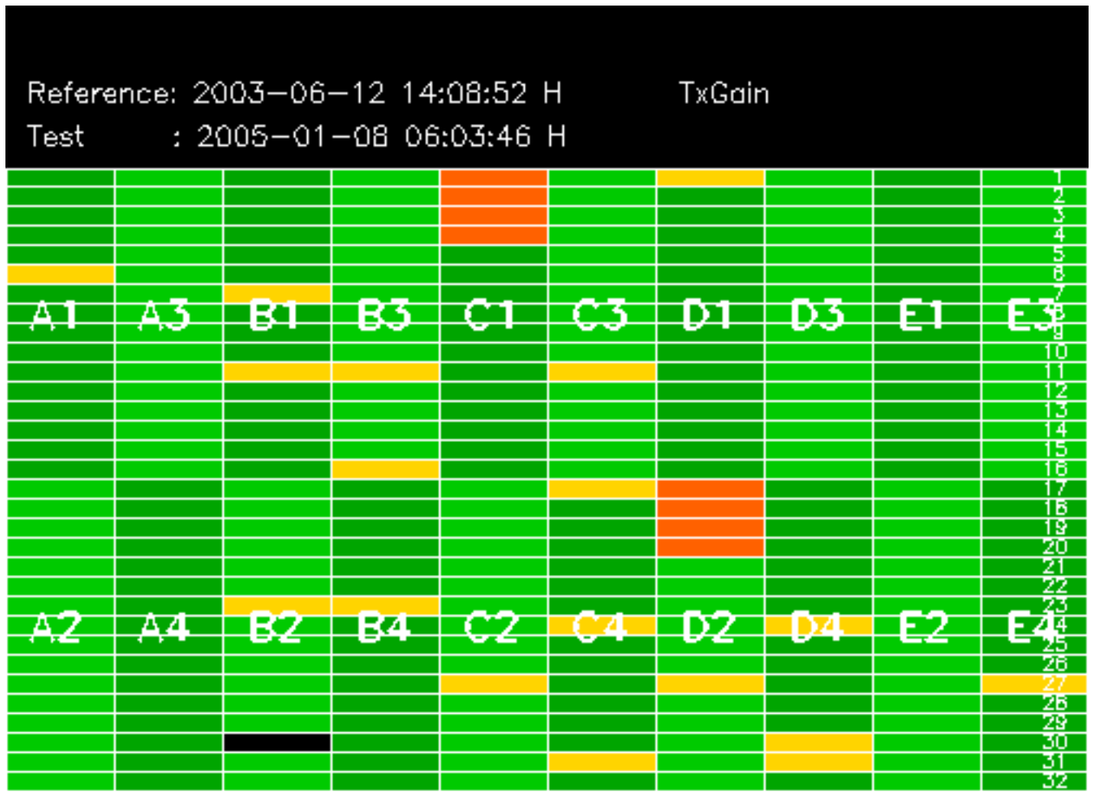

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan


Reference: 2001-02-09 13:50:42 H
Test : 2005-01-08 06:03:46 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 : 2005-01-08 06:03:46 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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31
32


Reference: 2001-02-09 14:08:23 V
Test : 2005-01-05 07:38:37 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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28
29
30
31
32


Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 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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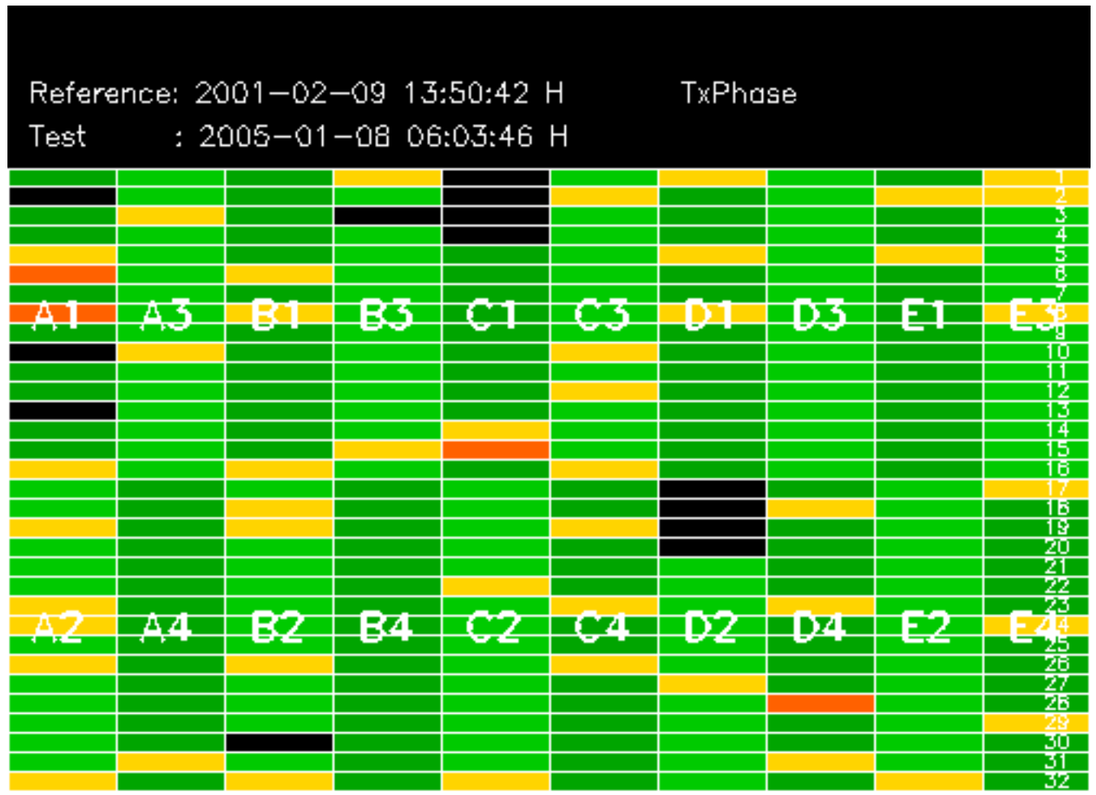
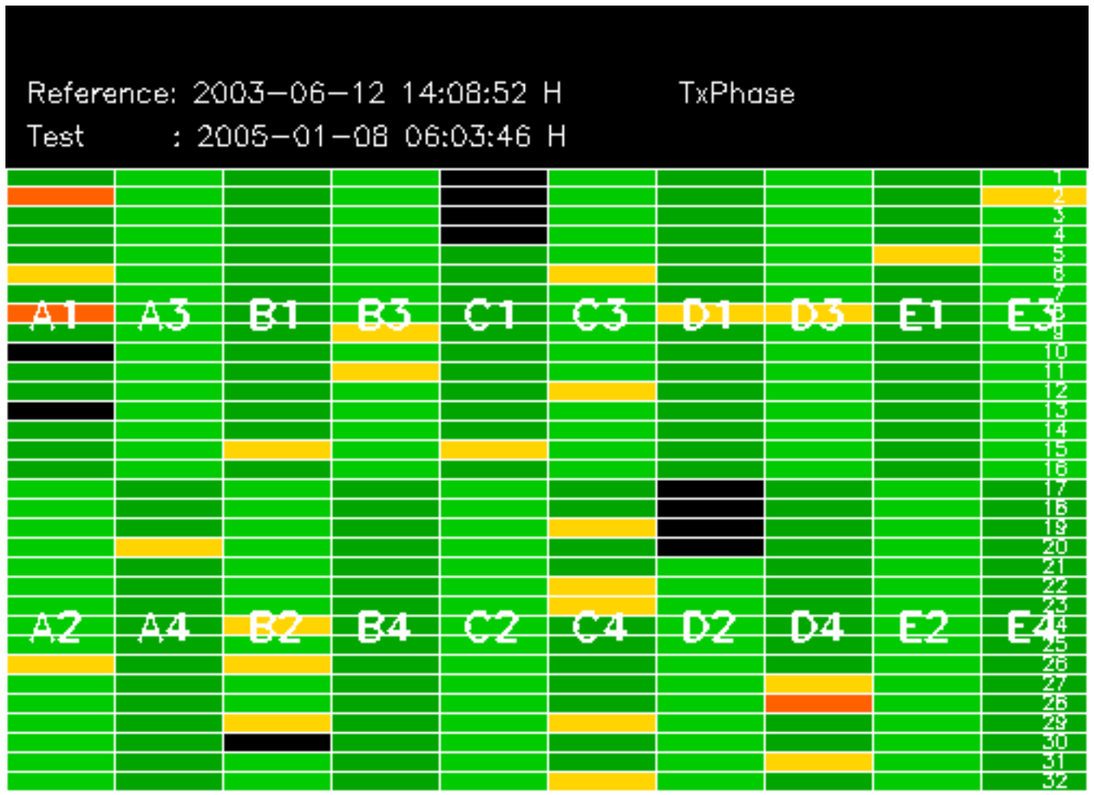
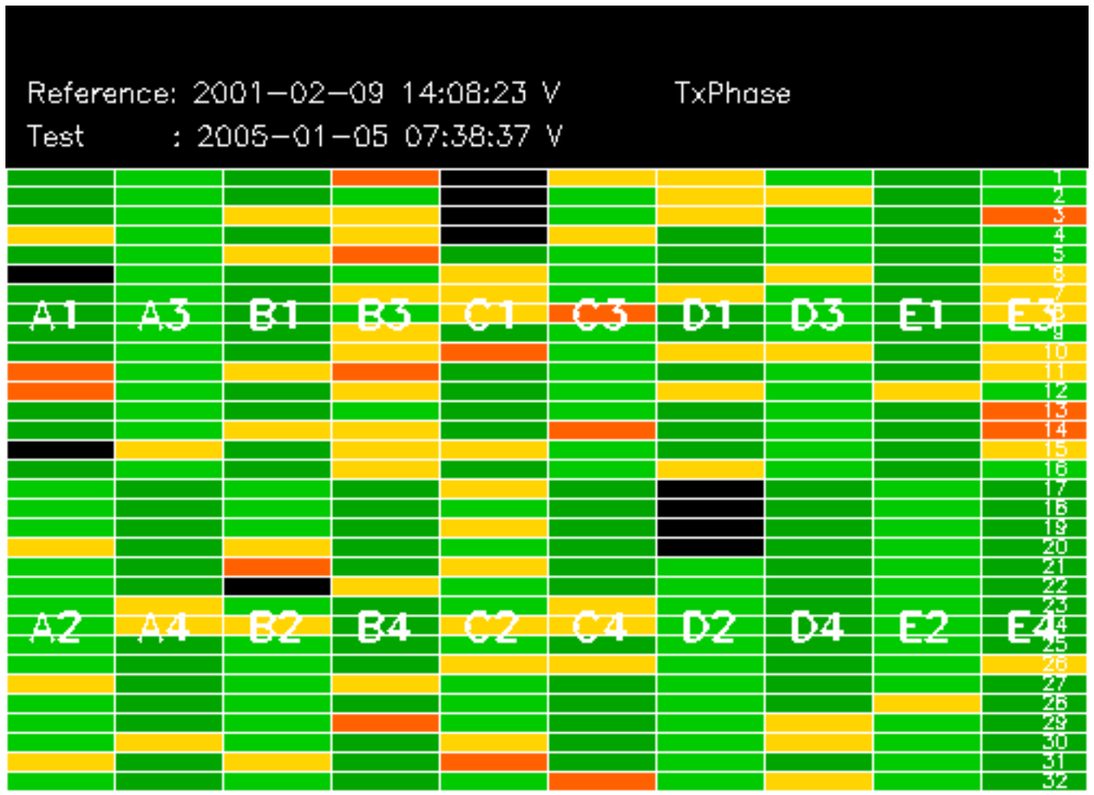

Reference: 2001-02-09 13:50:42 H
Test : 2005-01-08 06:03:46 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2005-01-08 06:03:46 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 : 2005-01-05 07:38:37 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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31
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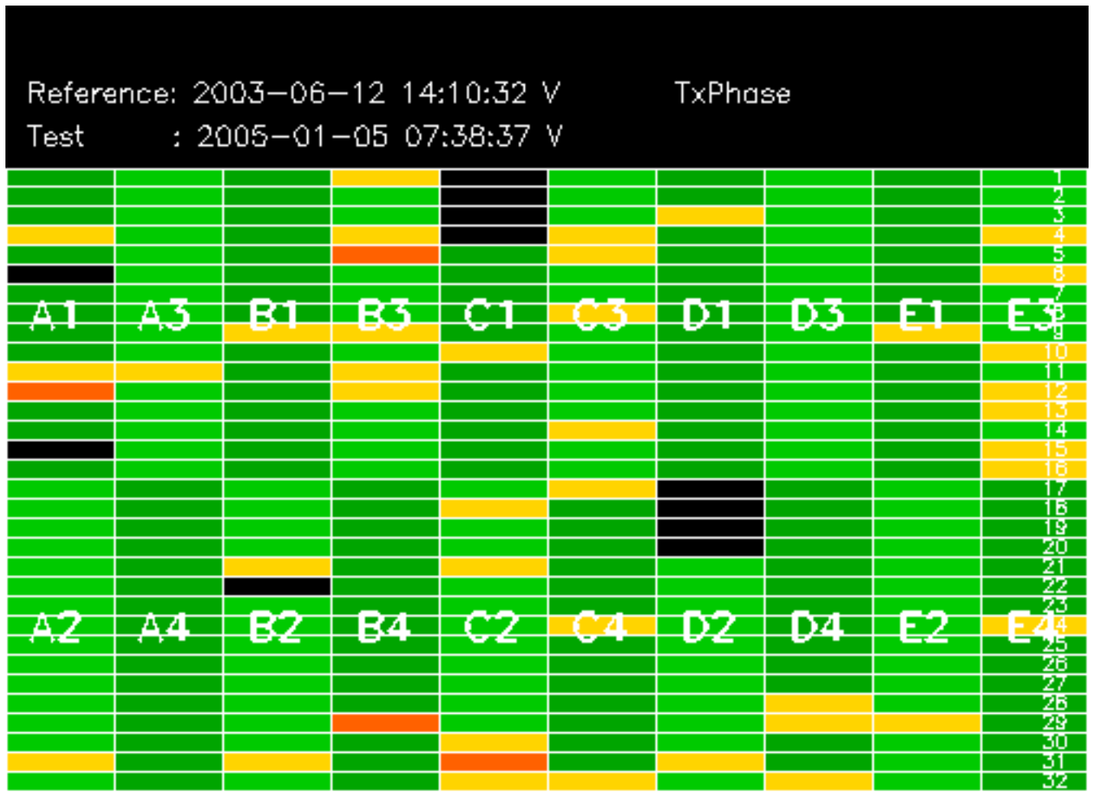
Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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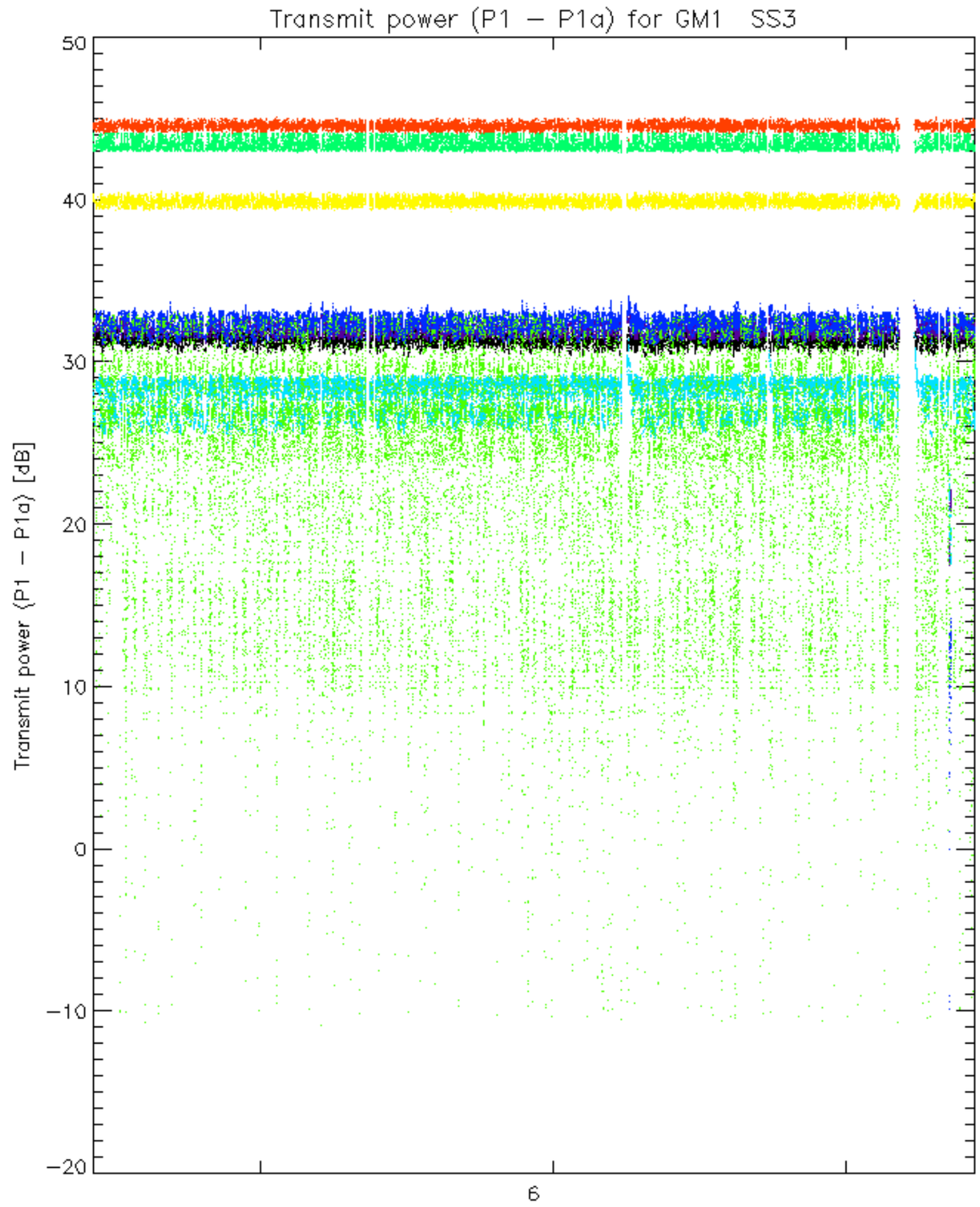
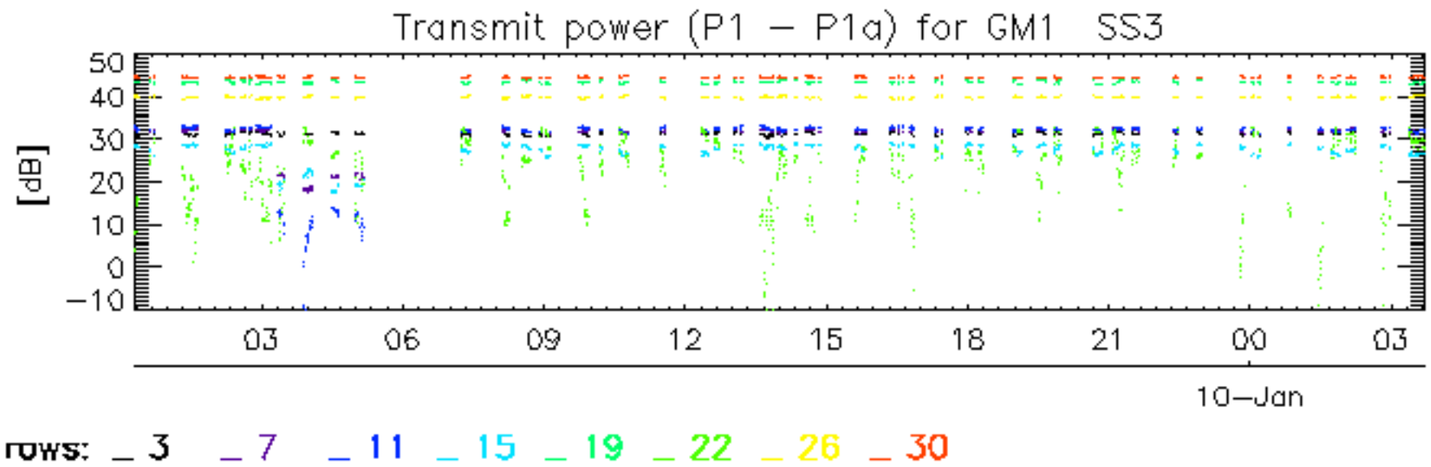
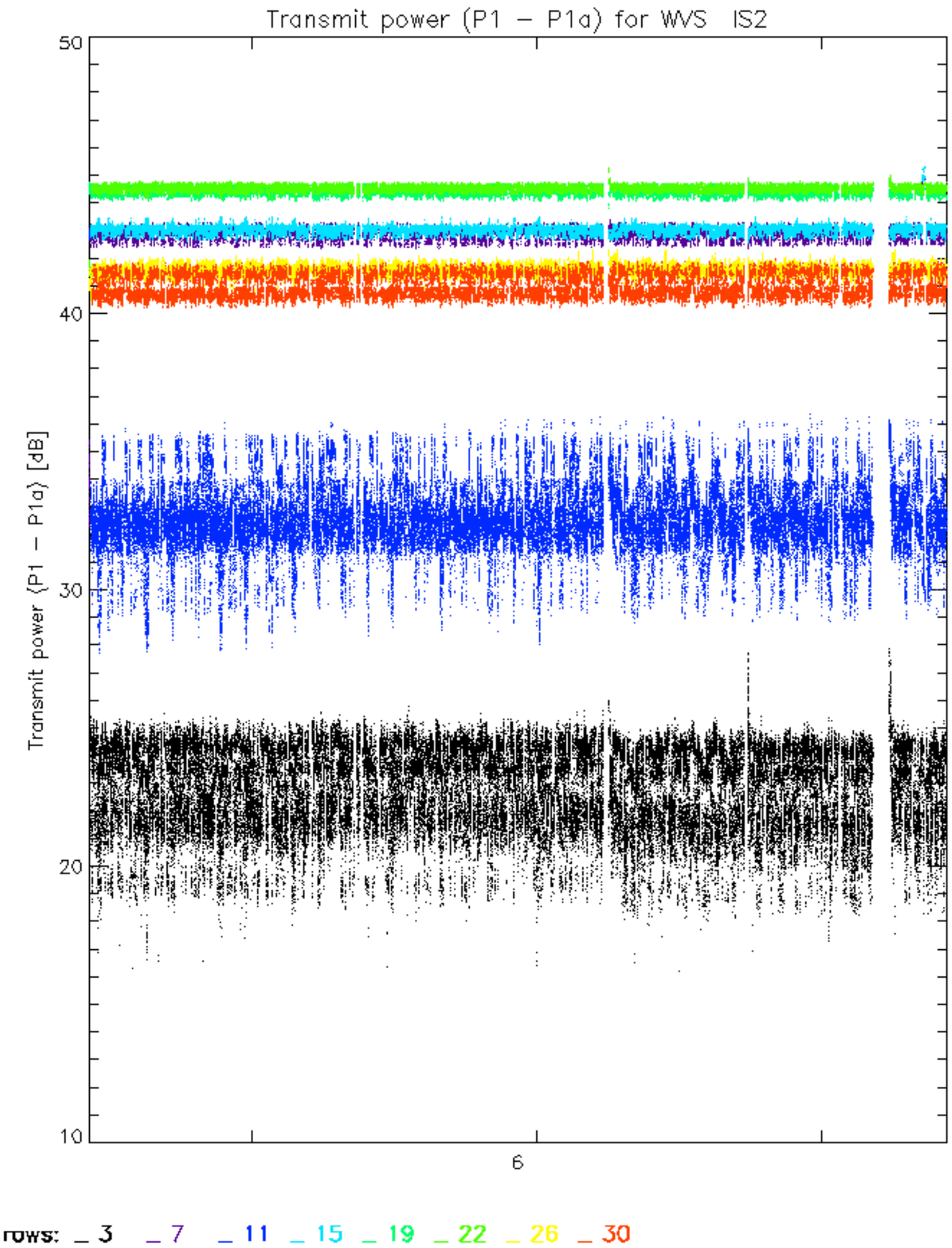
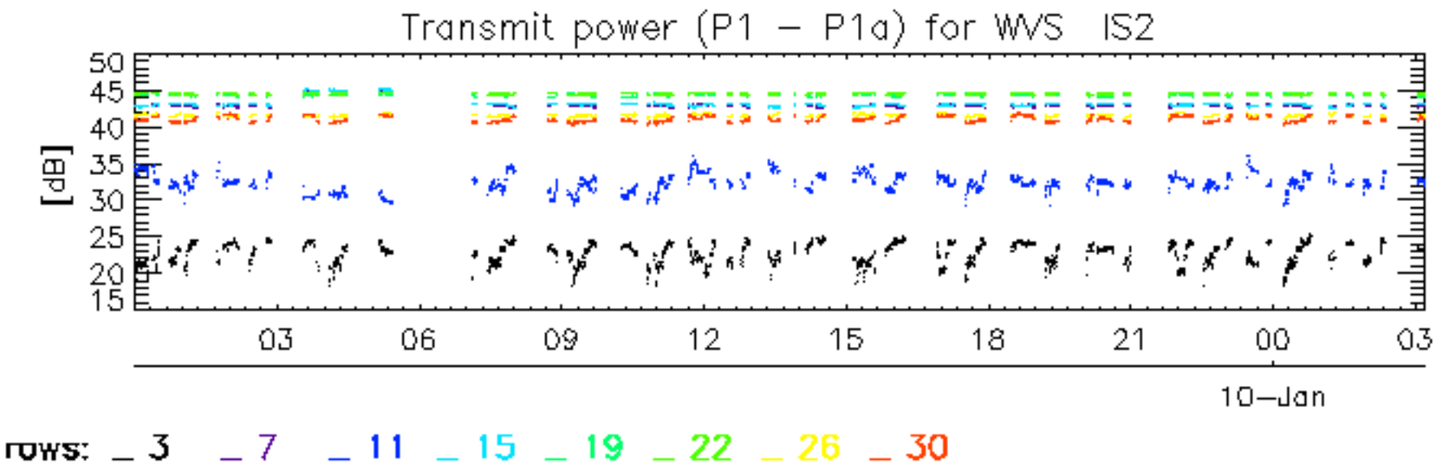

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
6
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
10–Jan
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
6
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
50
45
40
35
30
25
20
15
03
06
09
12
15
18
21
00
03
10–Jan
rows: 3
7
11
15
19
22
26
30

No unavailabilities during the reported period.