PRELIMINARY REPORT OF 050111

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

last update on Tue Jan 11 11:01:01 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 2005-01-10 00:00:00 to 2005-01-11 11:01:01

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	32	46	3	3	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	32	46	3	3	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	32	46	3	3	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	32	46	3	3	4

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	36	0	5	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	37	36	0	5	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	37	36	0	5	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	36	0	5	4

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	20050110 050033

MSM in V/V polarisation

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

MSM in H/H polarisation

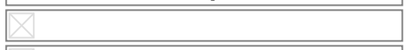
Pre-launch Reference	DDS-B (2003-06-12) reference
	
	
	
	

4 - Internal calibration Results

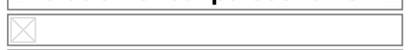
No anomalies observed.

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	-3.432539	0.006971	0.039539
7	P1	-3.087356	0.010634	0.017104
11	P1	-4.643184	0.020950	0.009735
15	P1	-5.652317	0.039507	0.039338
19	P1	-3.660344	0.006197	0.004078
22	P1	-4.572336	0.017033	0.015443
26	P1	-4.942161	0.024805	0.047278
30	P1	-7.124338	0.013927	-0.018278
3	P1	-15.935597	0.106876	0.025388
7	P1	-15.520184	0.101264	0.068174
11	P1	-20.794407	0.307903	-0.061465
15	P1	-11.634577	0.076693	0.047676
19	P1	-14.172911	0.032426	0.008851
22	P1	-16.038389	0.451068	0.105046
26	P1	-17.721081	0.246188	0.120737
30	P1	-17.870386	0.314298	0.056414

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.326908	0.087403	0.101607
7	P2	-22.528805	0.171879	0.108275
11	P2	-14.819507	0.181221	0.163040
15	P2	-7.151284	0.117235	0.069843
19	P2	-9.729310	0.211359	0.097967
22	P2	-17.137781	0.099693	0.114723
26	P2	-16.528608	0.116683	0.075589

30	P2	-18.953716	0.085311	0.039049

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.206327	0.007106	0.029681
7	P3	-8.206309	0.007104	0.029591
11	P3	-8.206273	0.007104	0.029365
15	P3	-8.206262	0.007105	0.029317
19	P3	-8.206331	0.007107	0.029716
22	P3	-8.206312	0.007104	0.029626
26	P3	-8.206269	0.007105	0.029373
30	P3	-8.206375	0.007091	0.028494

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	-2.824043	0.011697	0.000222
7	P1	-2.957015	0.023804	0.014450
11	P1	-3.941143	0.025816	0.000017
15	P1	-3.506308	0.029650	0.010074
19	P1	-3.610485	0.012905	-0.000112
22	P1	-5.636293	0.068376	-0.019205
26	P1	-6.528377	0.024631	-0.039766
30	P1	-6.299769	0.044631	0.026442
3	P1	-10.761447	0.050583	-0.140986
7	P1	-10.138975	0.136539	-0.033604
11	P1	-12.487105	0.110468	-0.069197

15	P1	-11.750306	0.055271	-0.012218
19	P1	-15.642488	0.047345	0.010517
22	P1	-24.096807	1.900220	0.008972
26	P1	-14.938210	0.368958	0.262403
30	P1	-20.086227	0.880177	0.084187

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.008362	0.037104	0.094593
7	P2	-22.574389	0.034261	0.120003
11	P2	-10.616095	0.037500	0.201879
15	P2	-5.050582	0.025713	0.035303
19	P2	-6.946688	0.037033	0.055909
22	P2	-7.277907	0.028953	0.090832
26	P2	-23.952198	0.019454	0.037537
30	P2	-21.997084	0.024379	0.065086

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.038894	0.003006	0.023797
7	P3	-8.038894	0.003010	0.023536
11	P3	-8.038873	0.003005	0.023350
15	P3	-8.038980	0.003007	0.023565
19	P3	-8.038852	0.003015	0.023819
22	P3	-8.038945	0.003009	0.023675
26	P3	-8.038930	0.003009	0.023907
30	P3	-8.038883	0.002998	0.023509

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	0.000463358
	stdev	2.24659e-07
MEAN Q	mean	0.000537805
	stdev	2.37434e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127917
	stdev	0.000963787
STDEV Q	mean	0.128148
	stdev	0.000973831

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

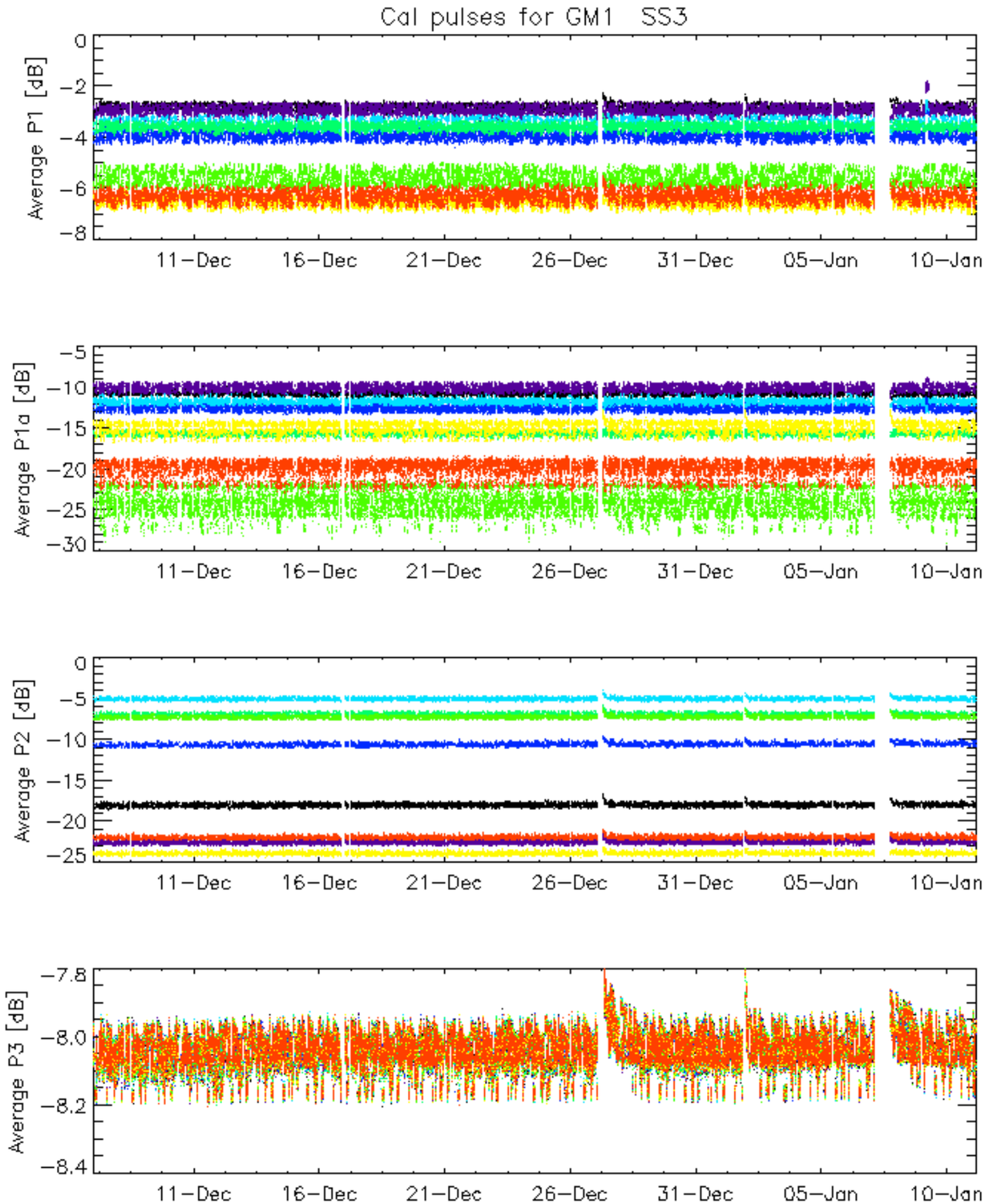
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

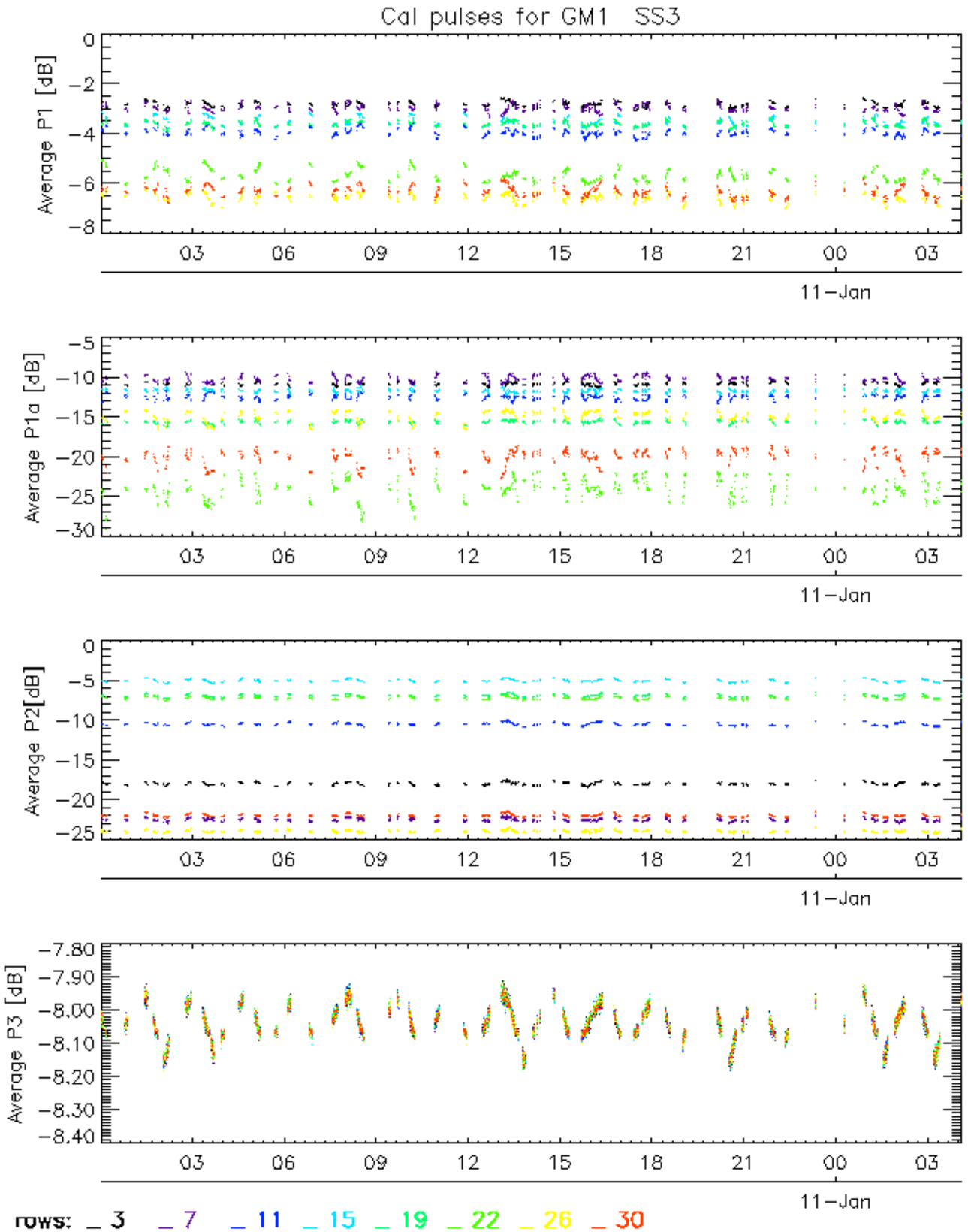
6.5 - Absolute Doppler for GM1

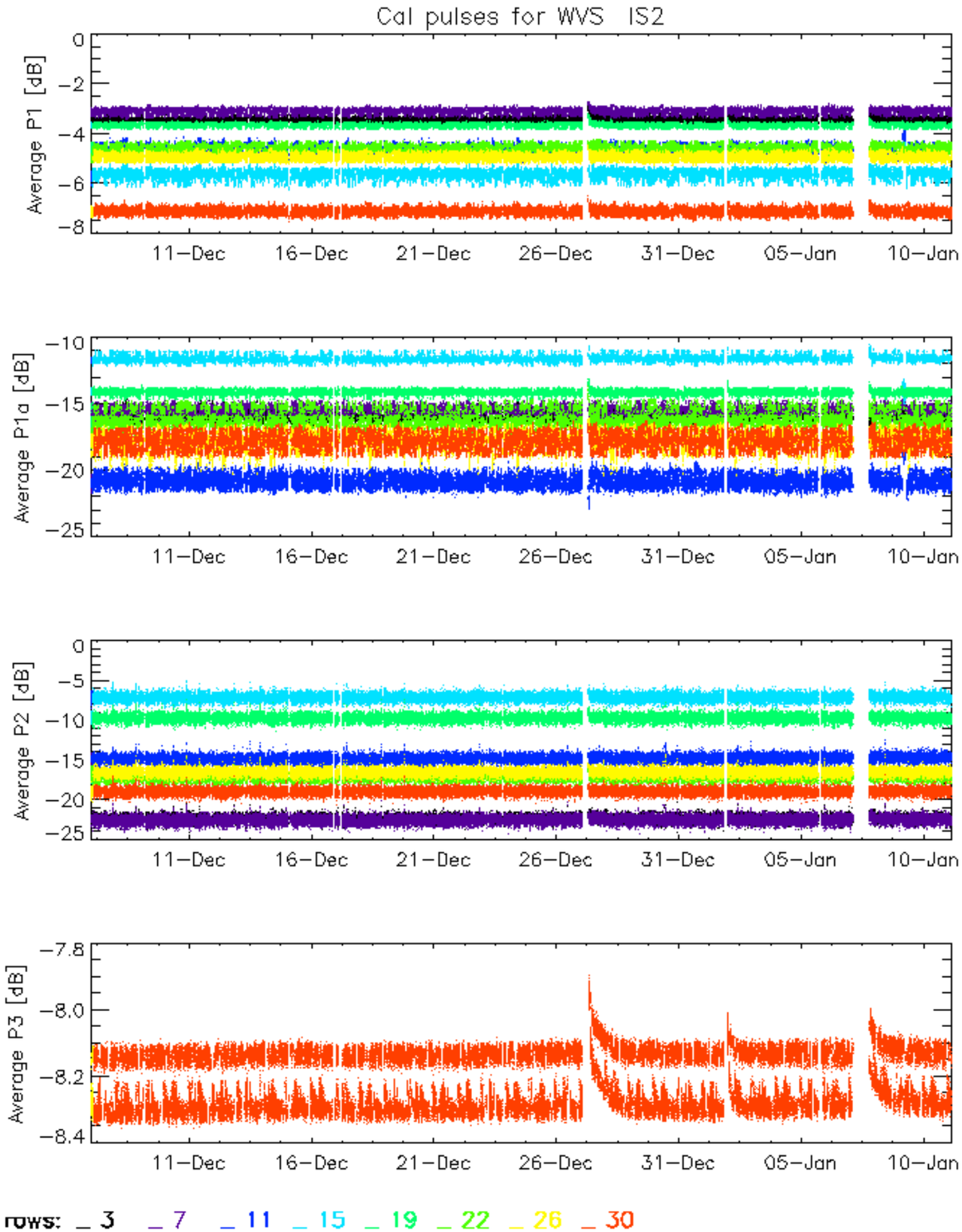
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

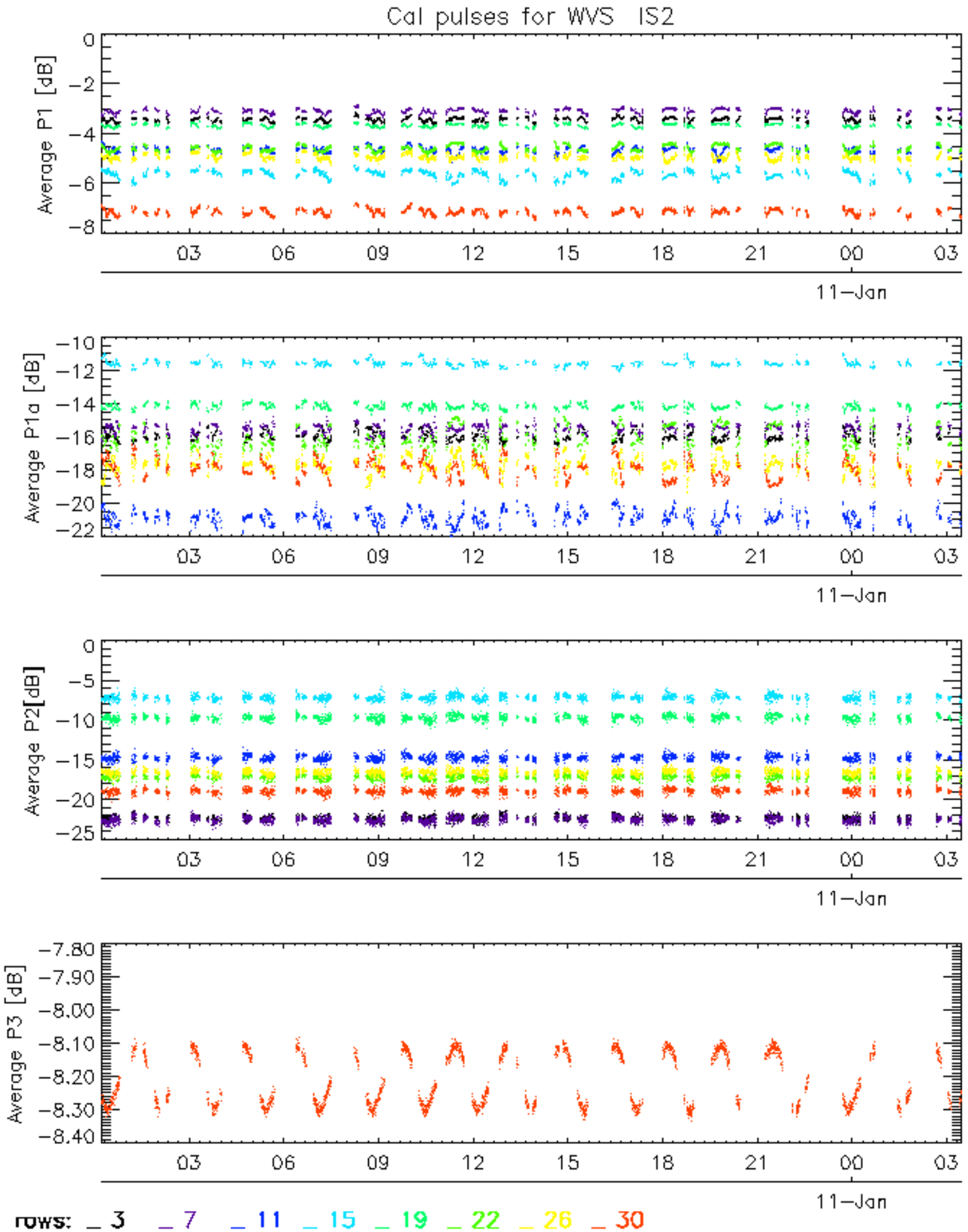
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

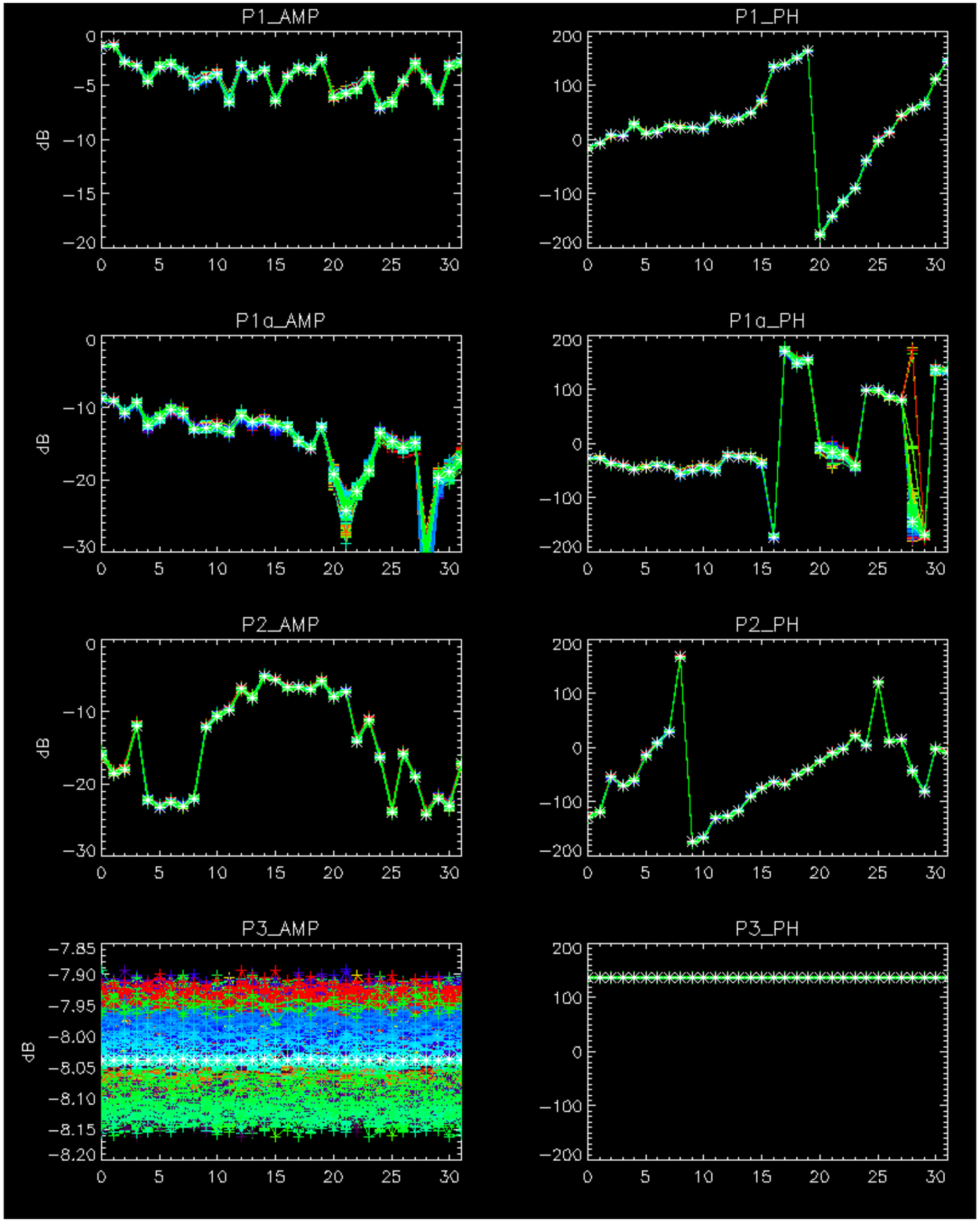

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

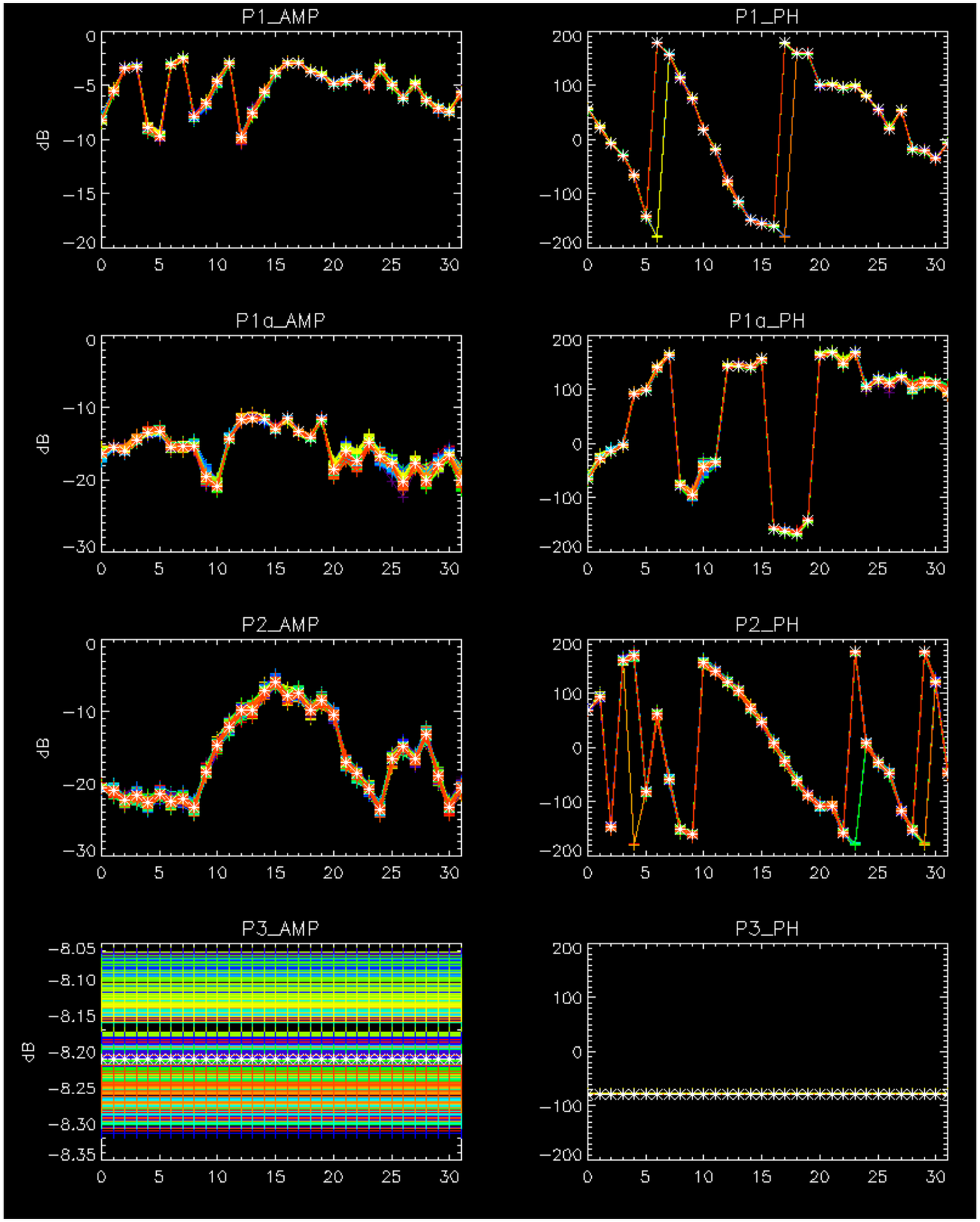

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
00
03
11−Jan
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


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
11−Jan
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
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

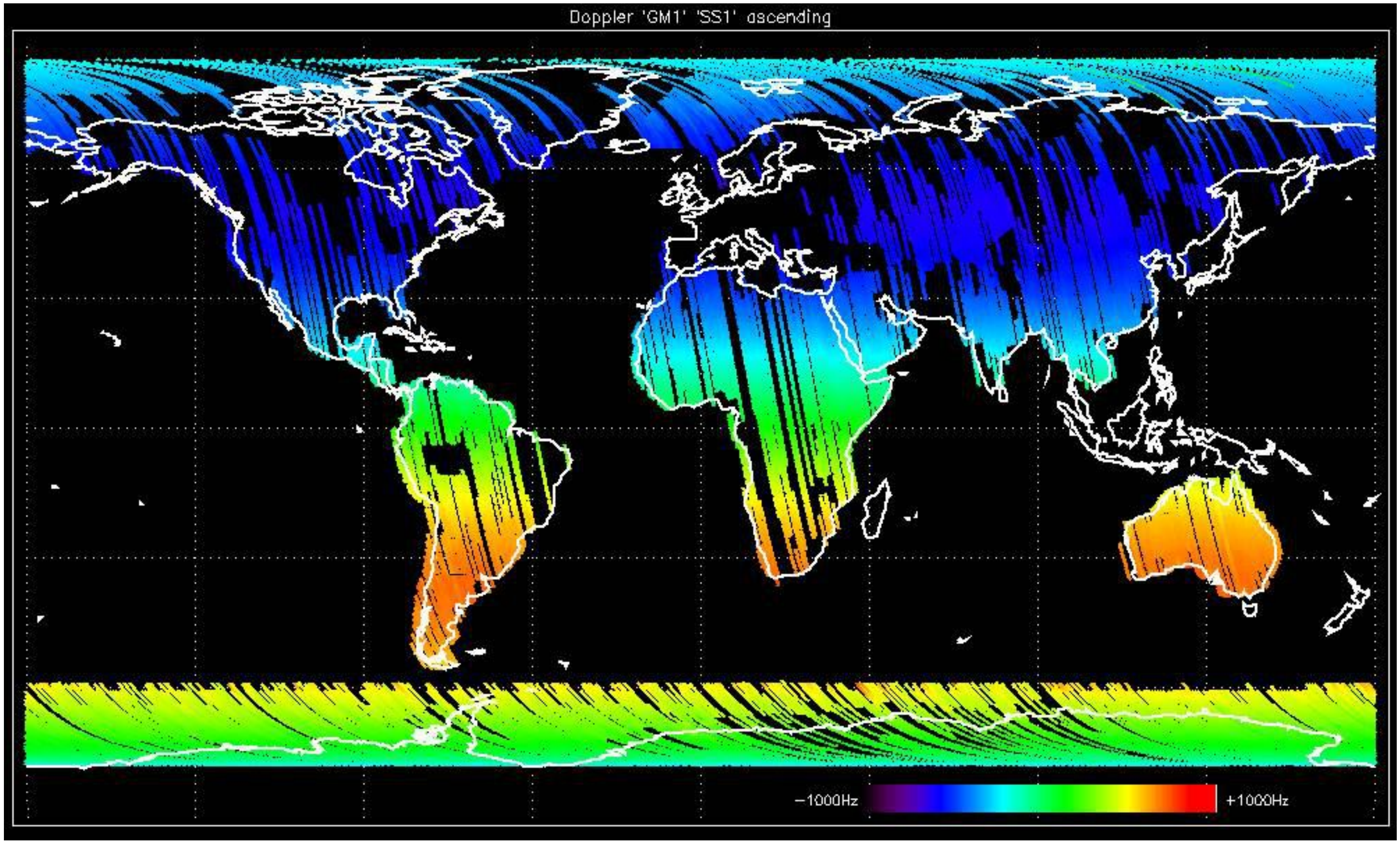
No anomalies observed.

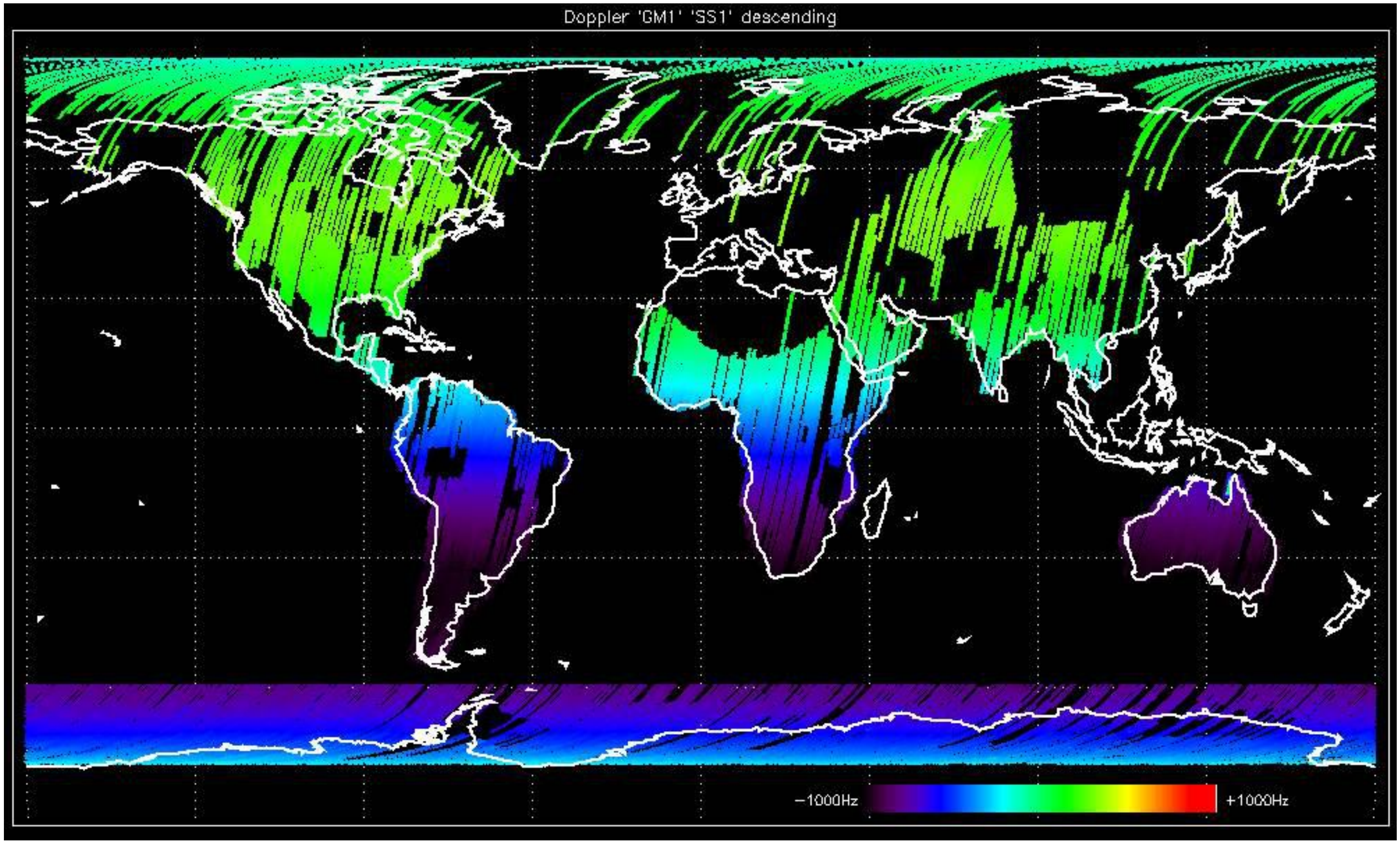

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.85
−7.90
−7.95
−8.00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

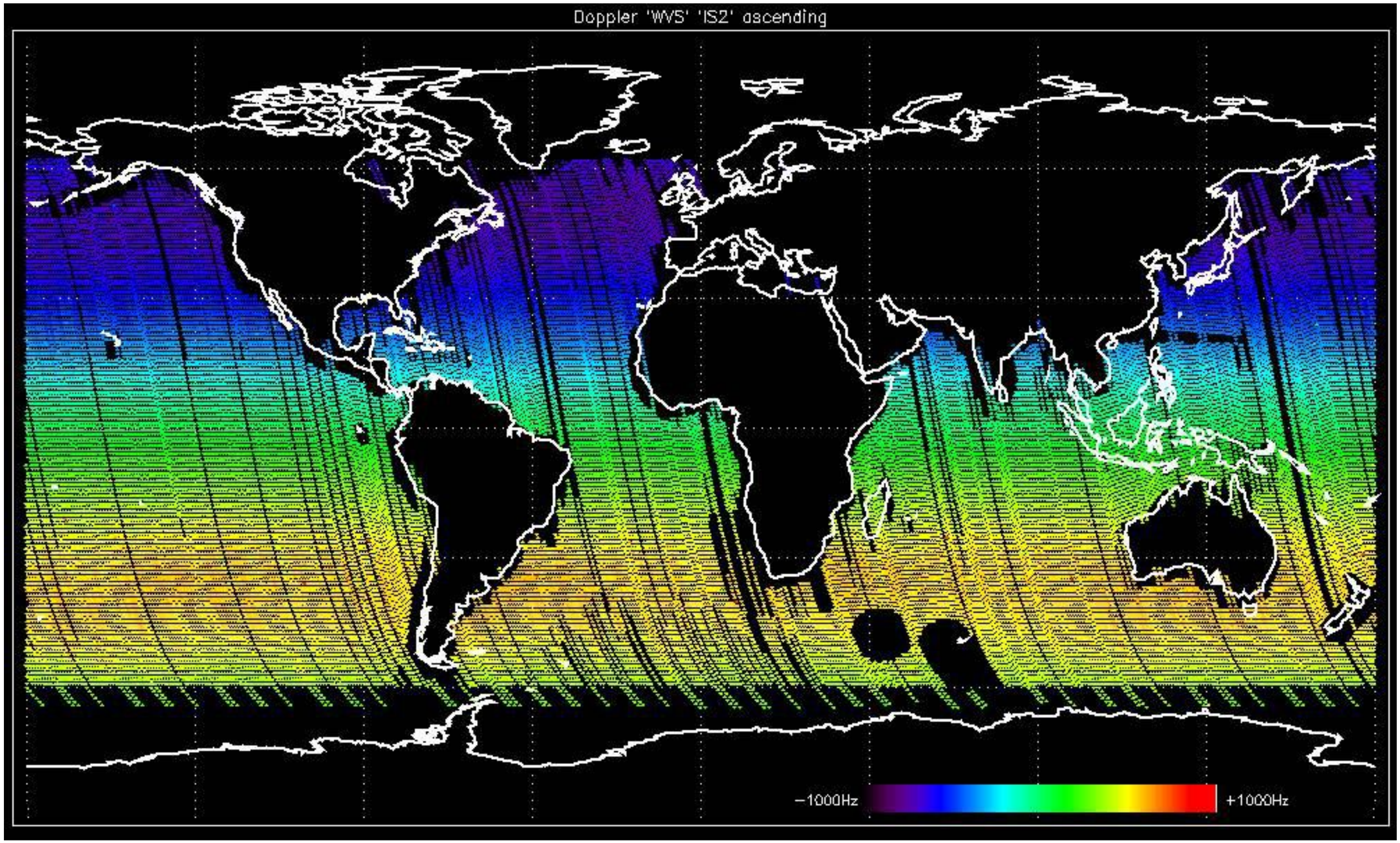

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20
−8.25
−8.30
−8.35
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

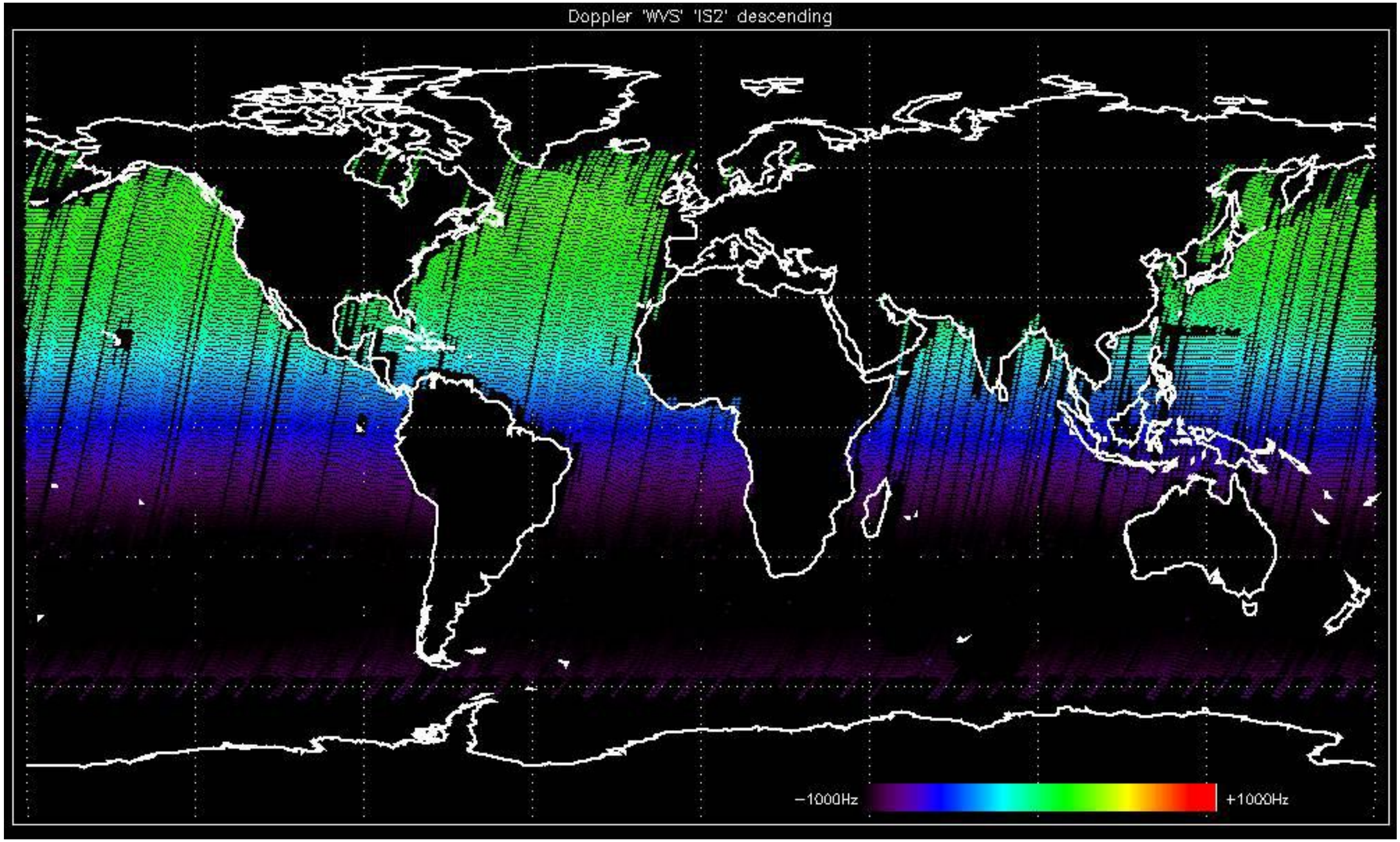
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

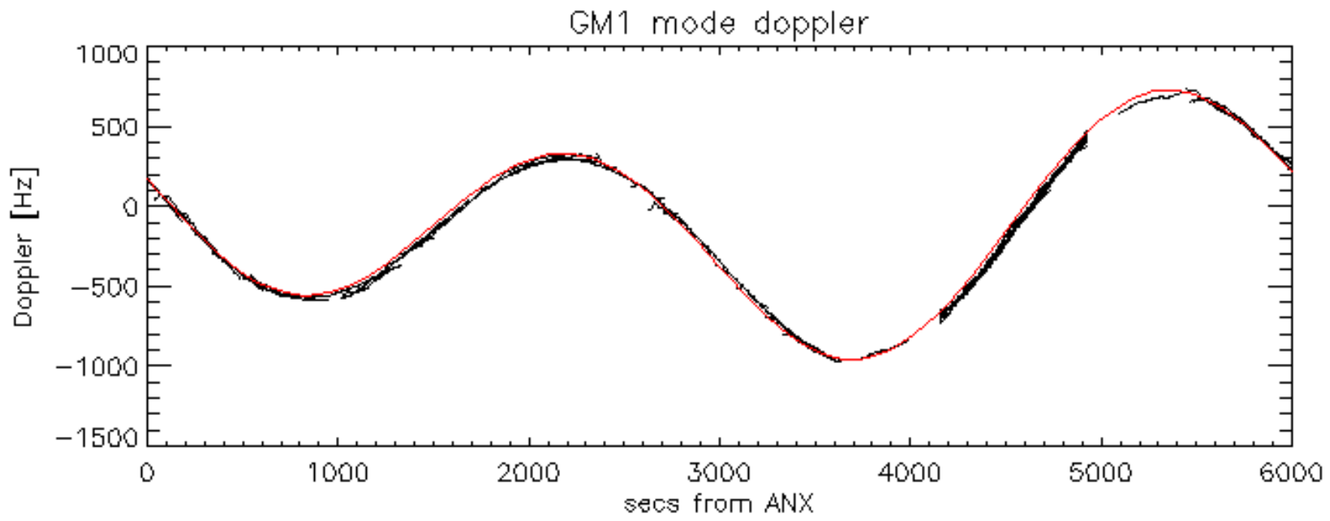
Preliminary report.The data is not yet controled

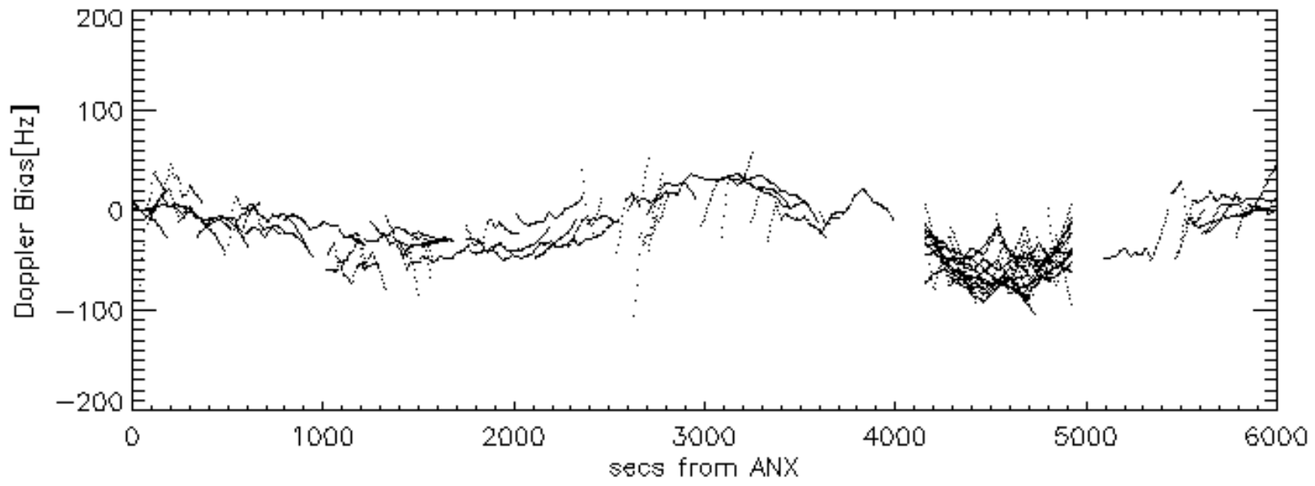

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

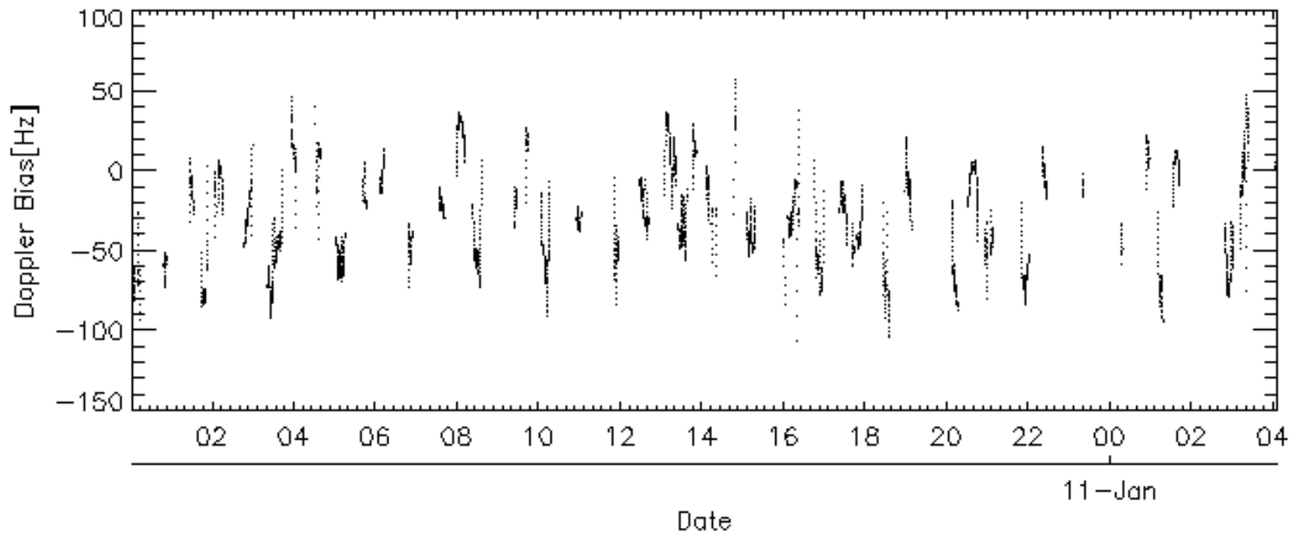

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

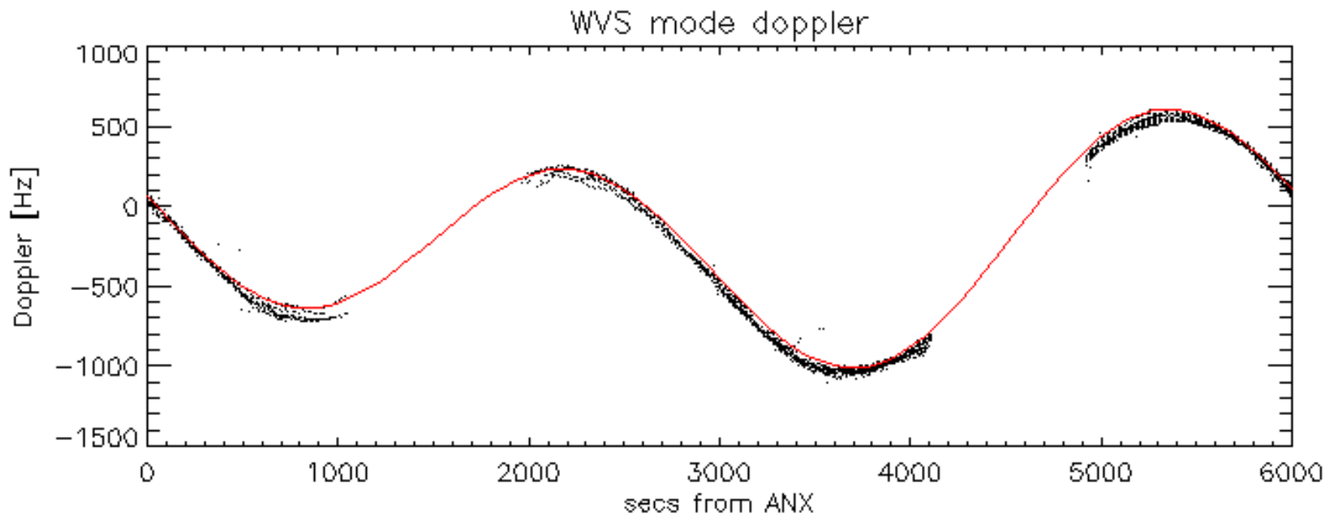

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

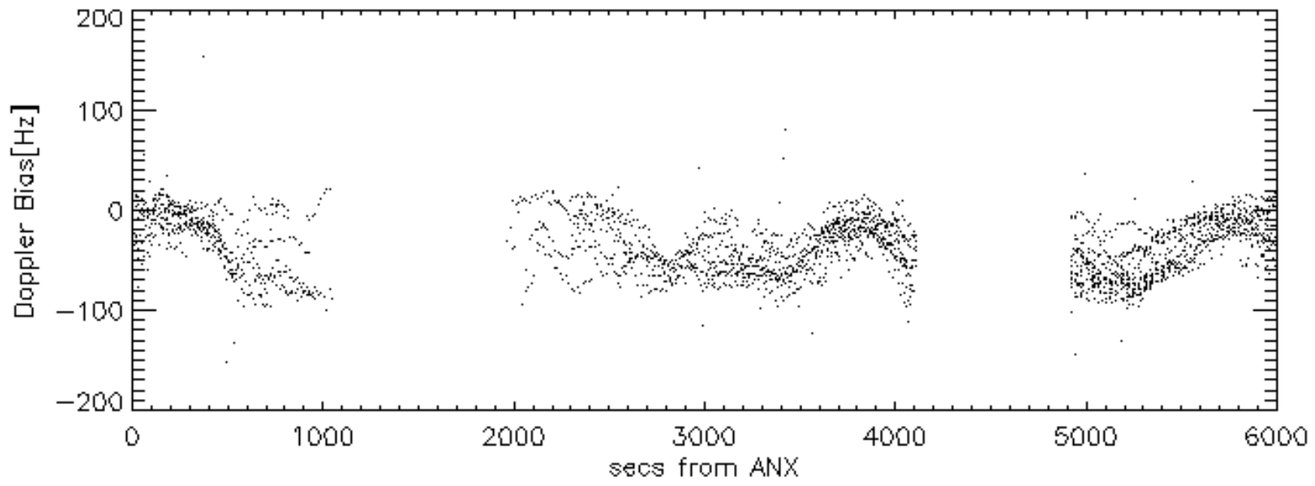

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

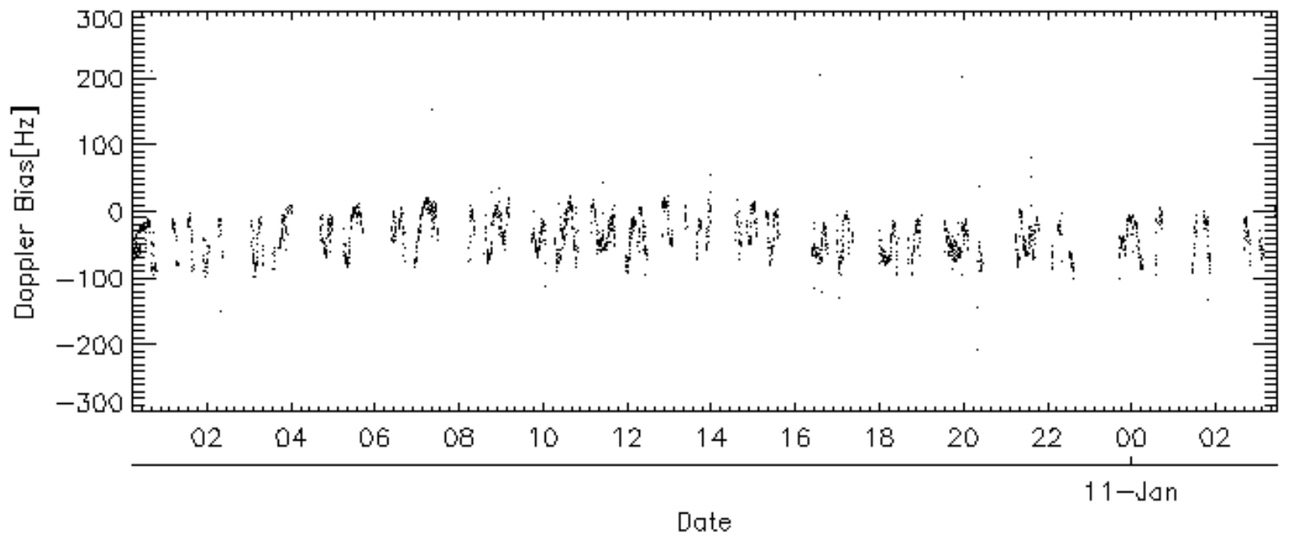

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

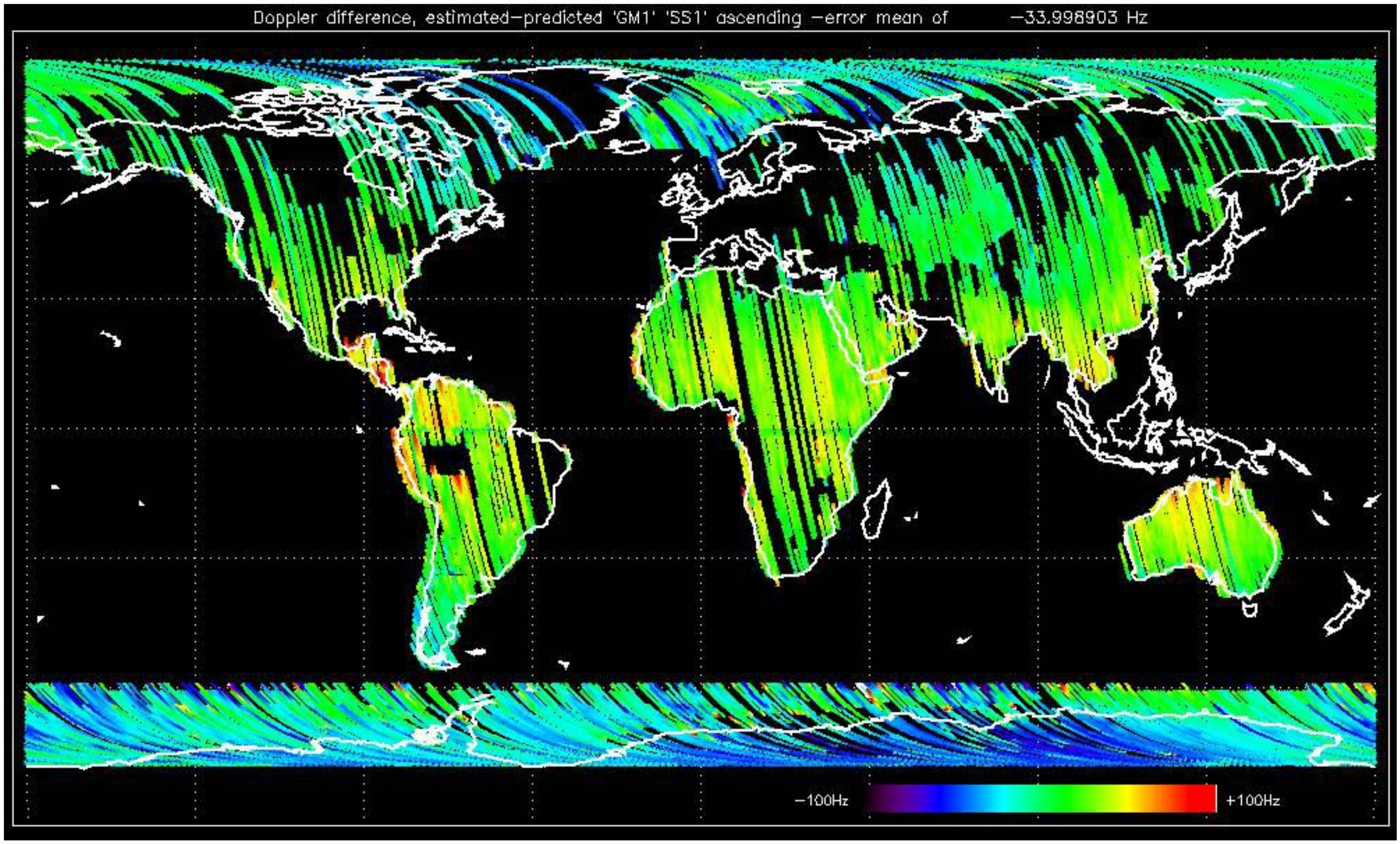

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

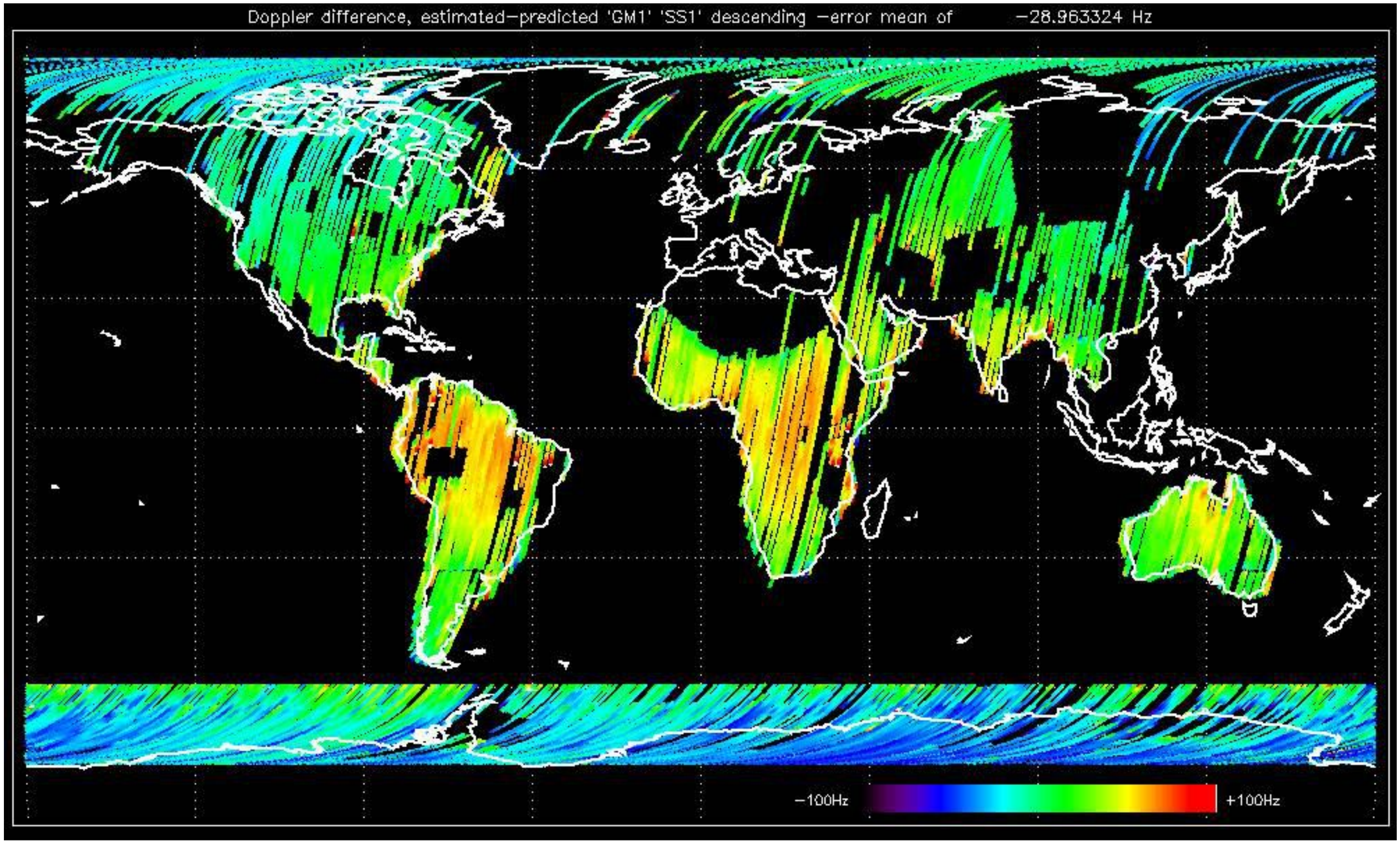

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
11−Jan
Date

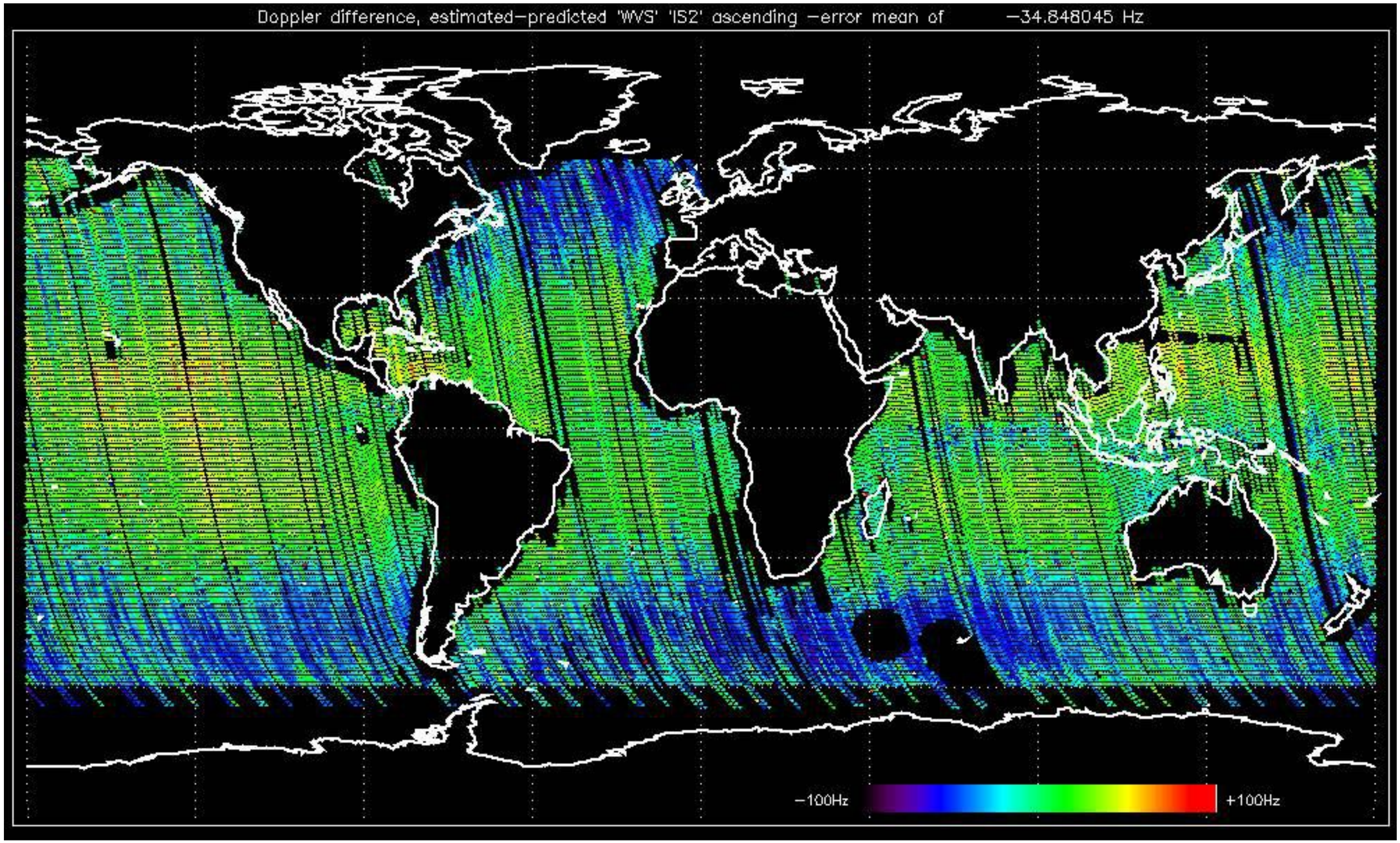

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

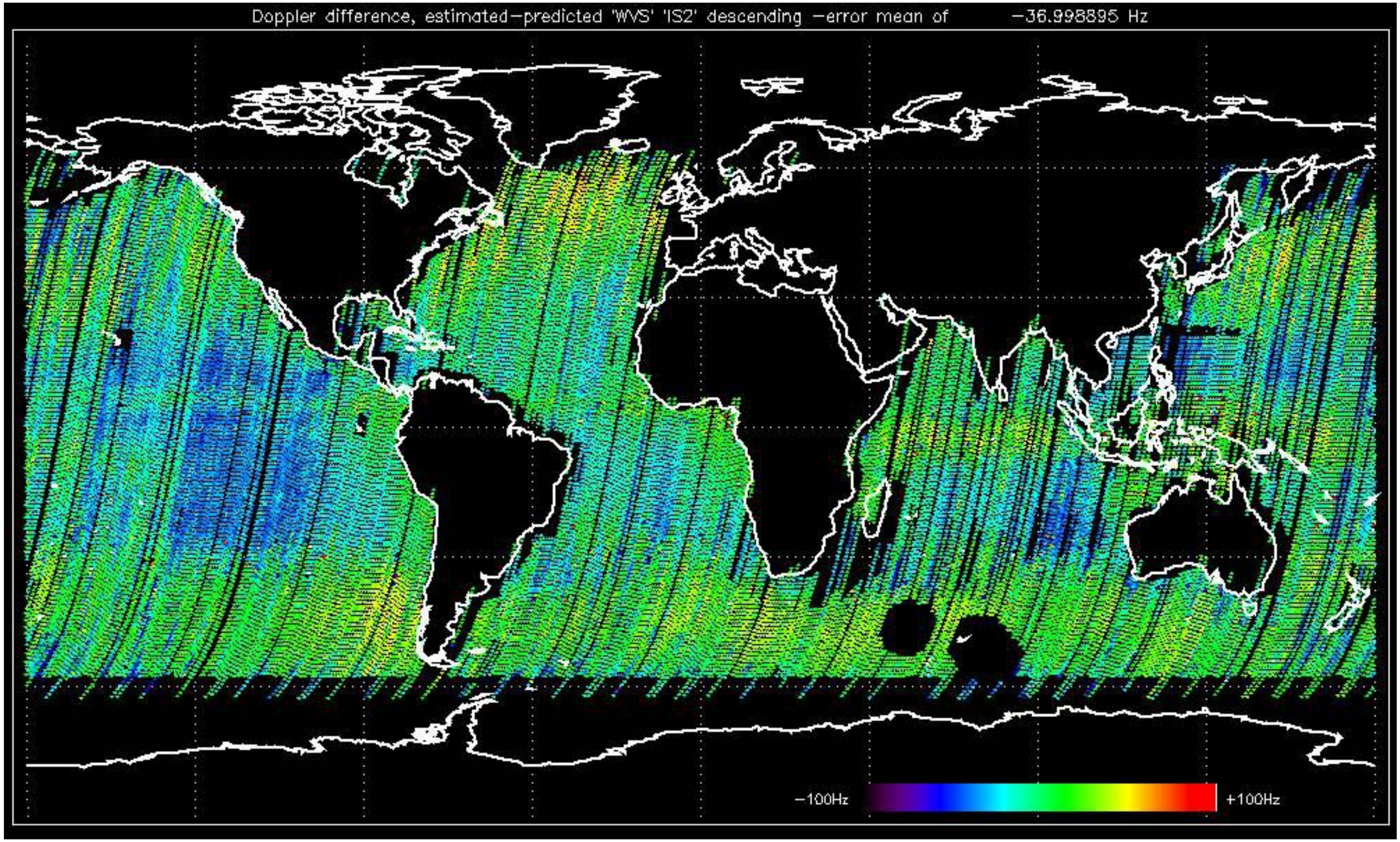

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −33.998903 Hz
−100Hz
+100Hz

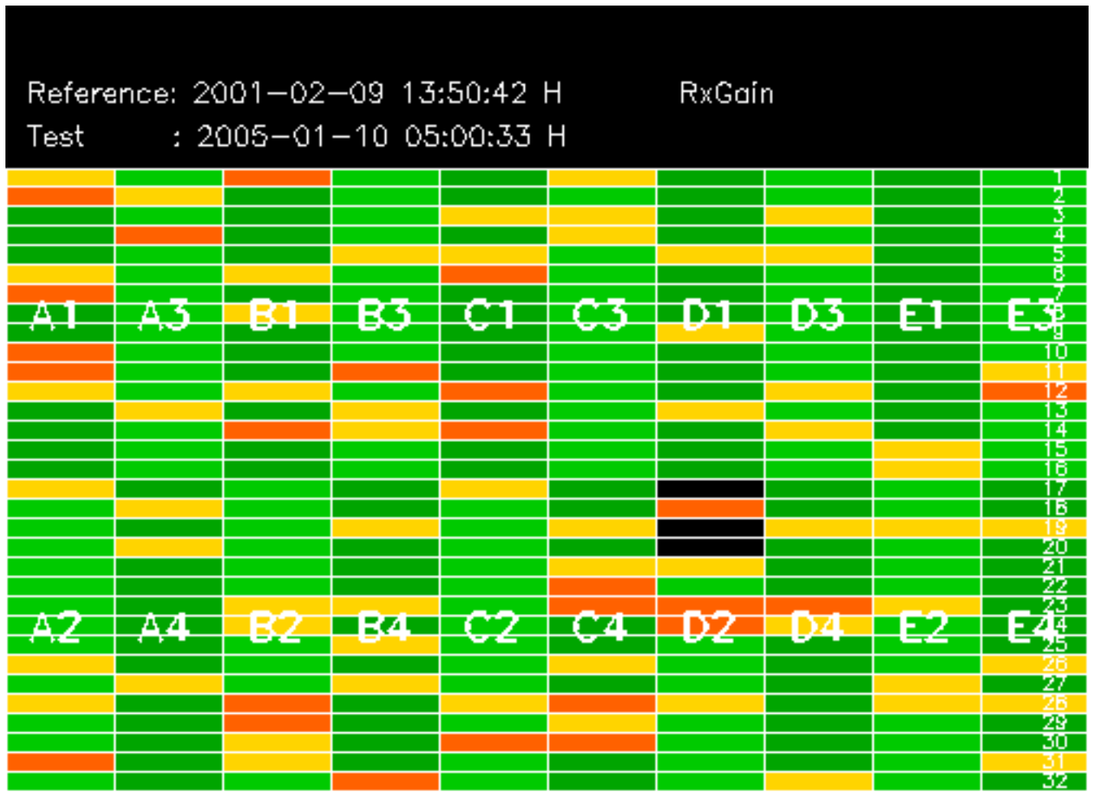

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −28.963324 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −34.848045 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −36.998895 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
RxGain
Test : 2005-01-10 05:00:33 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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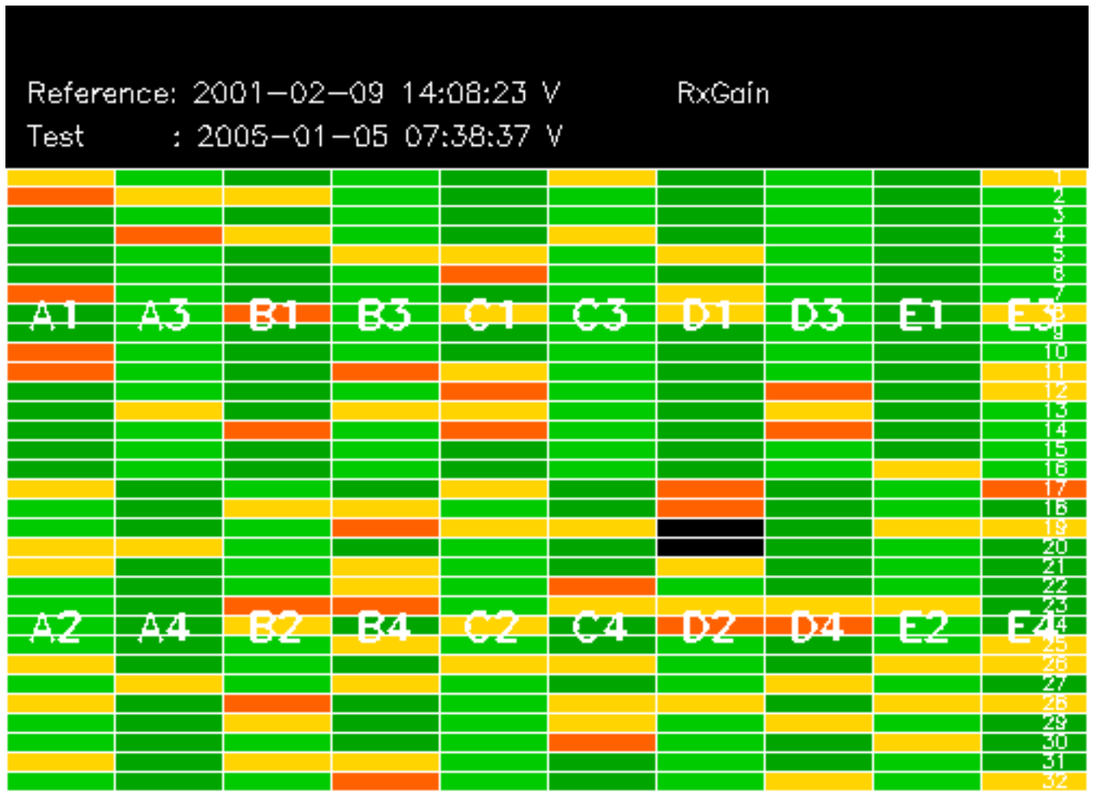
Reference: 2003-06-12 14:08:52 H
Test : 2005-01-10 05:00:33 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2005-01-05 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
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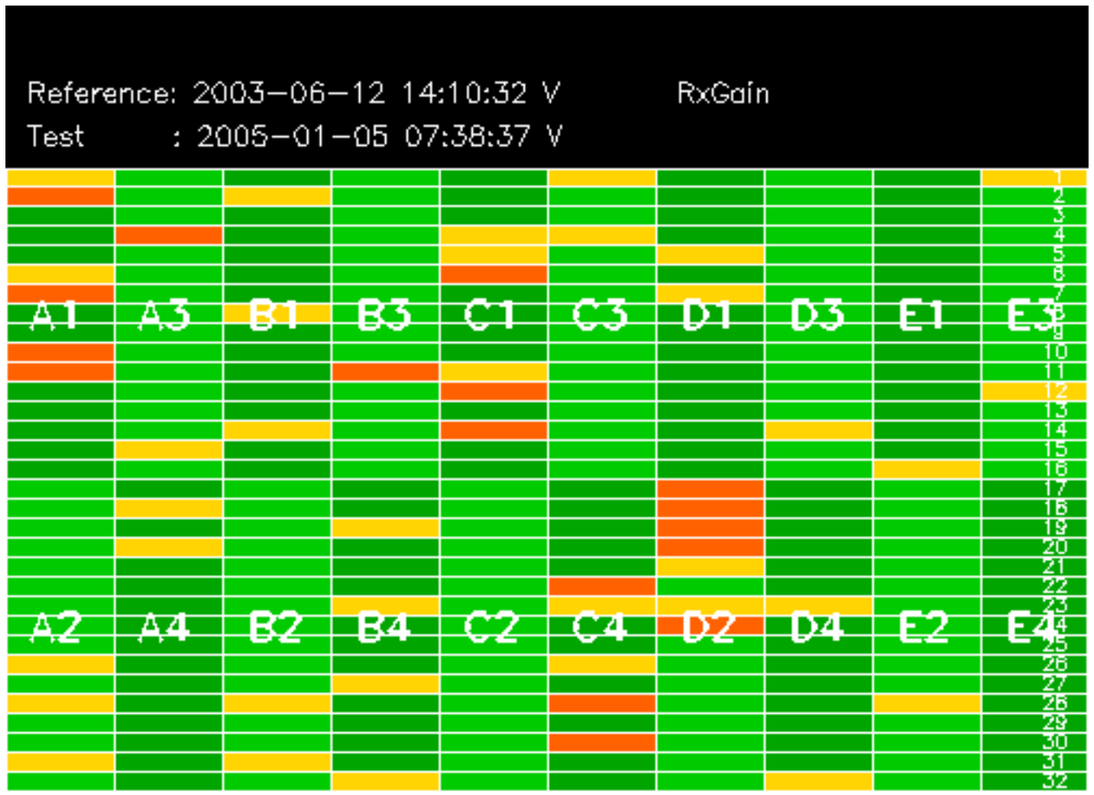
Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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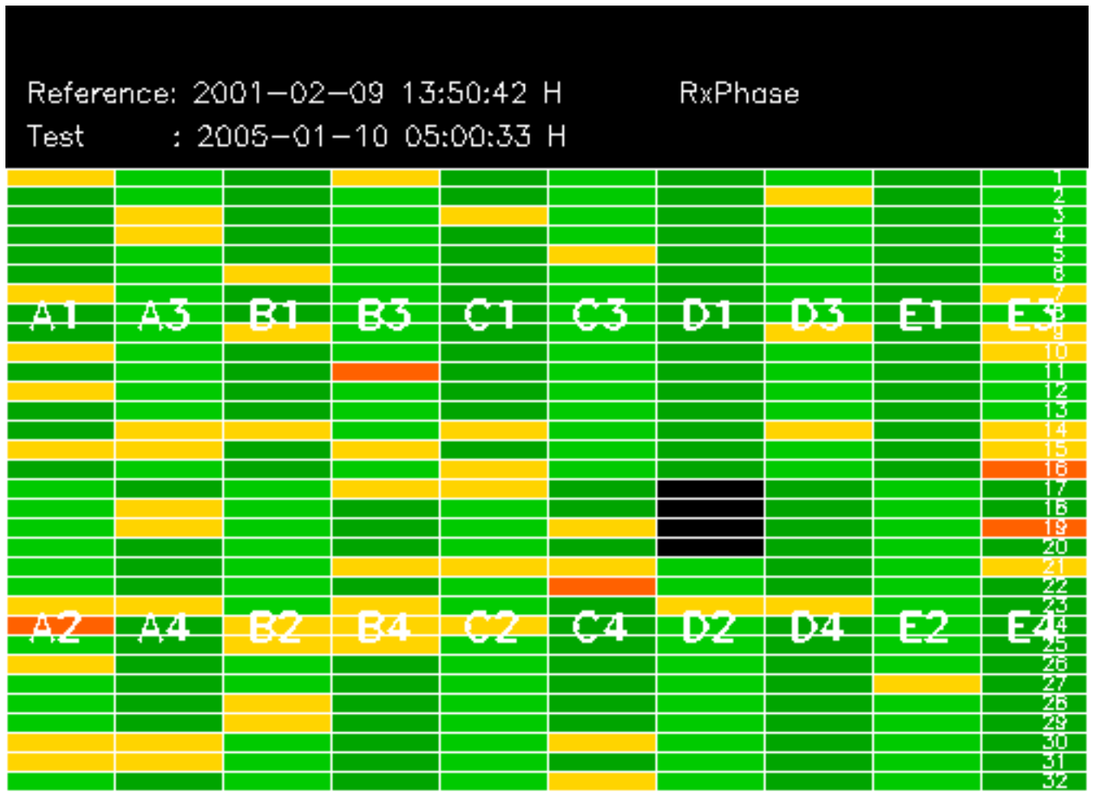
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2005-01-10 05:00:33 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
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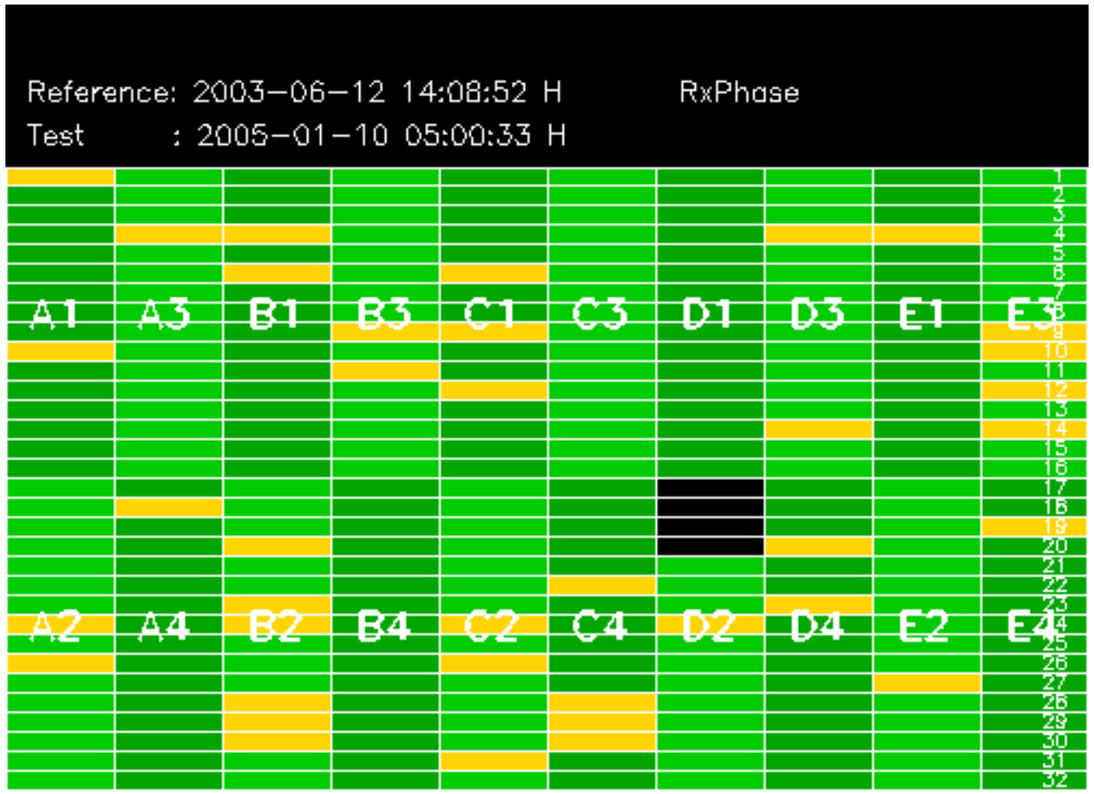
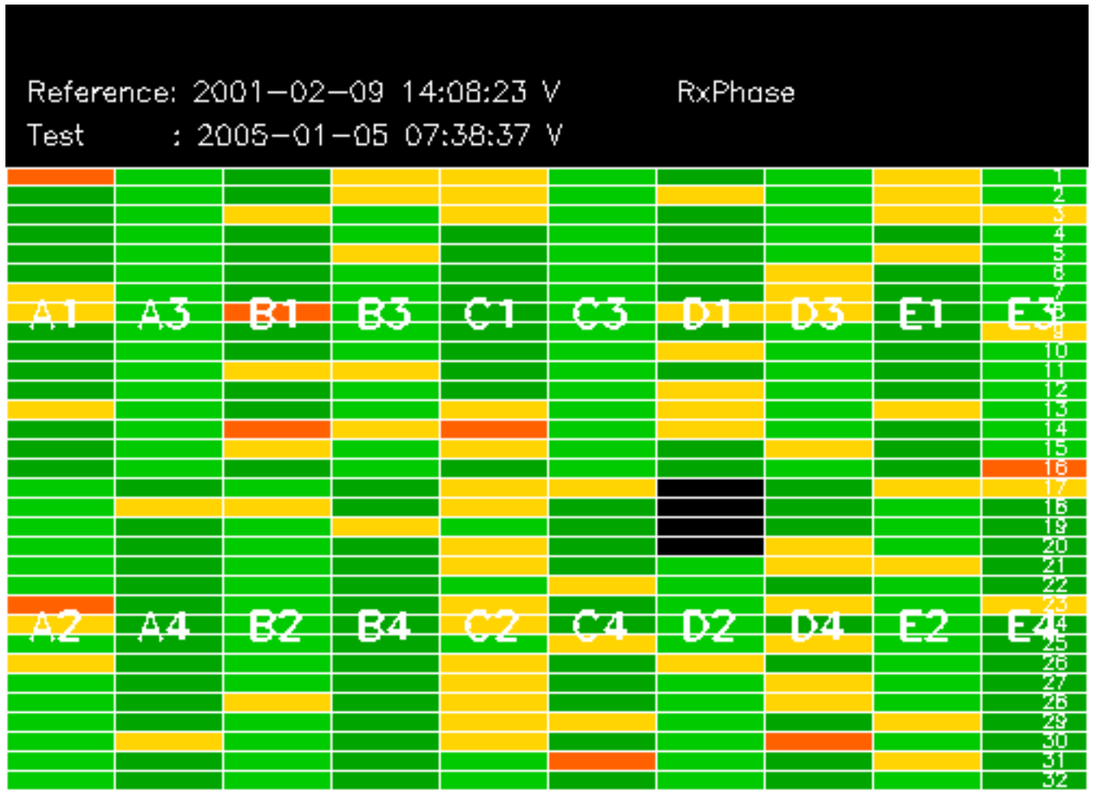
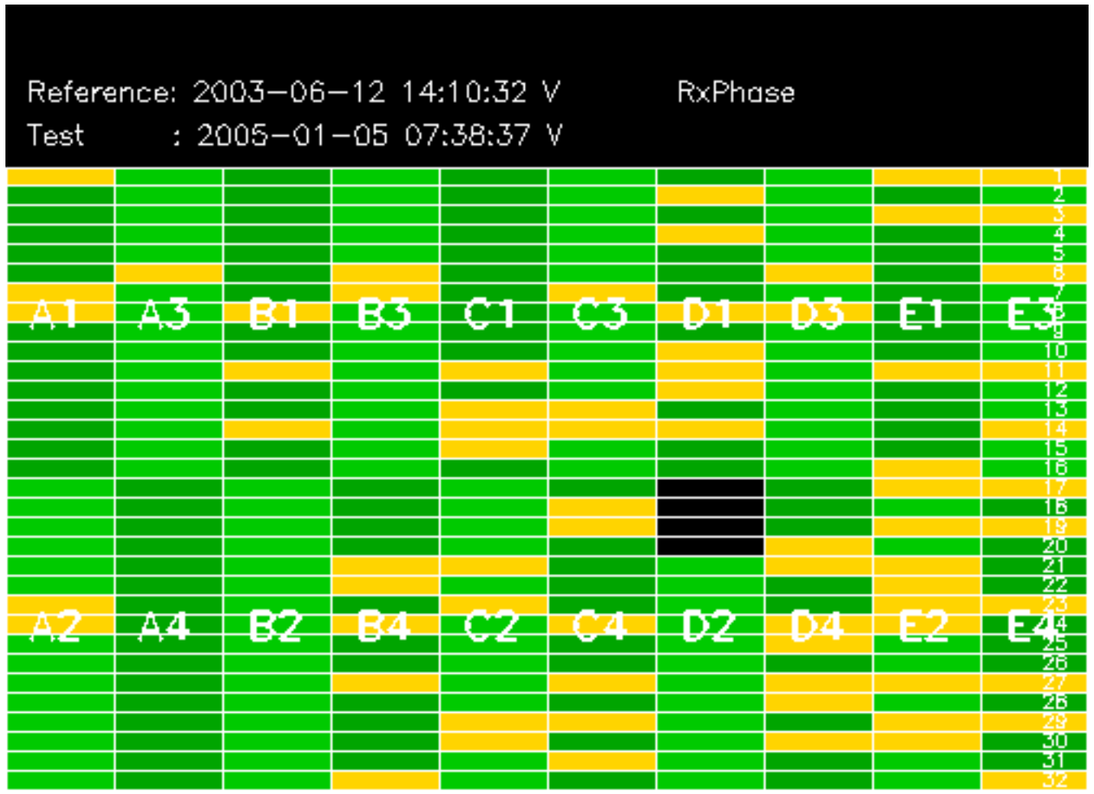
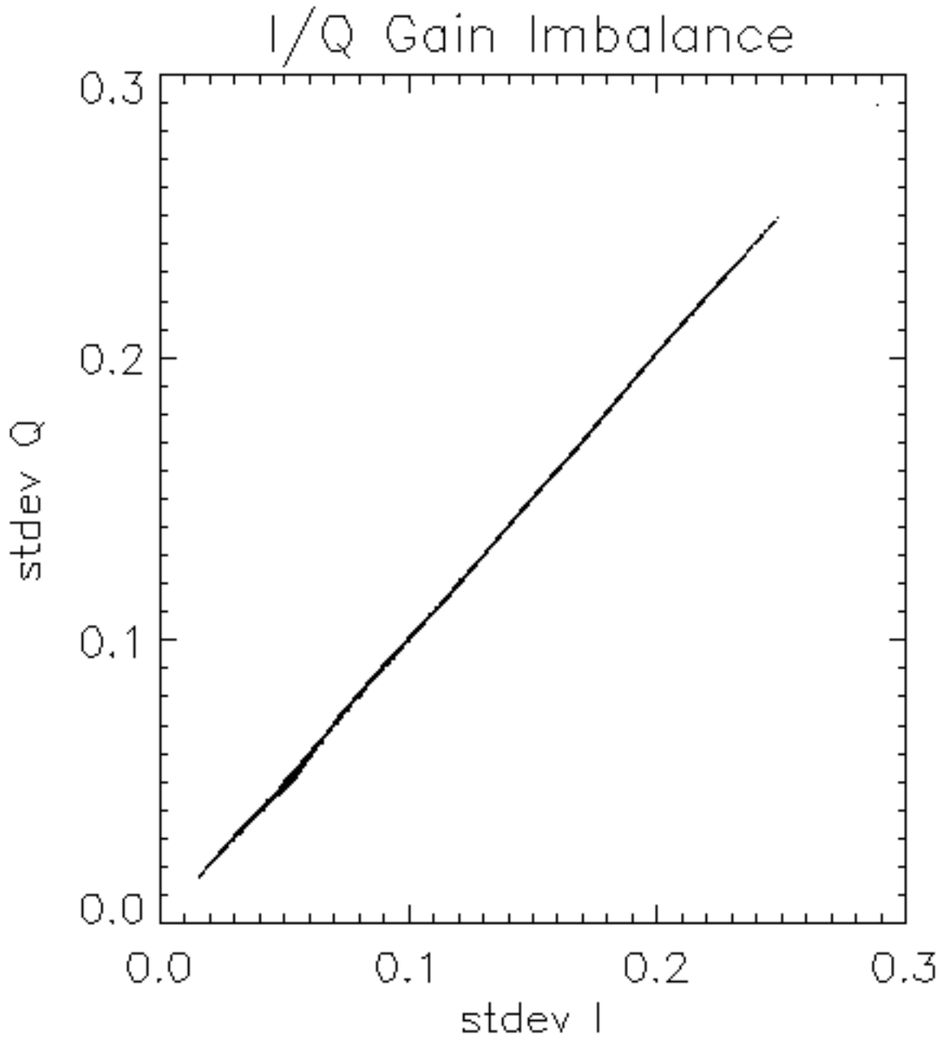
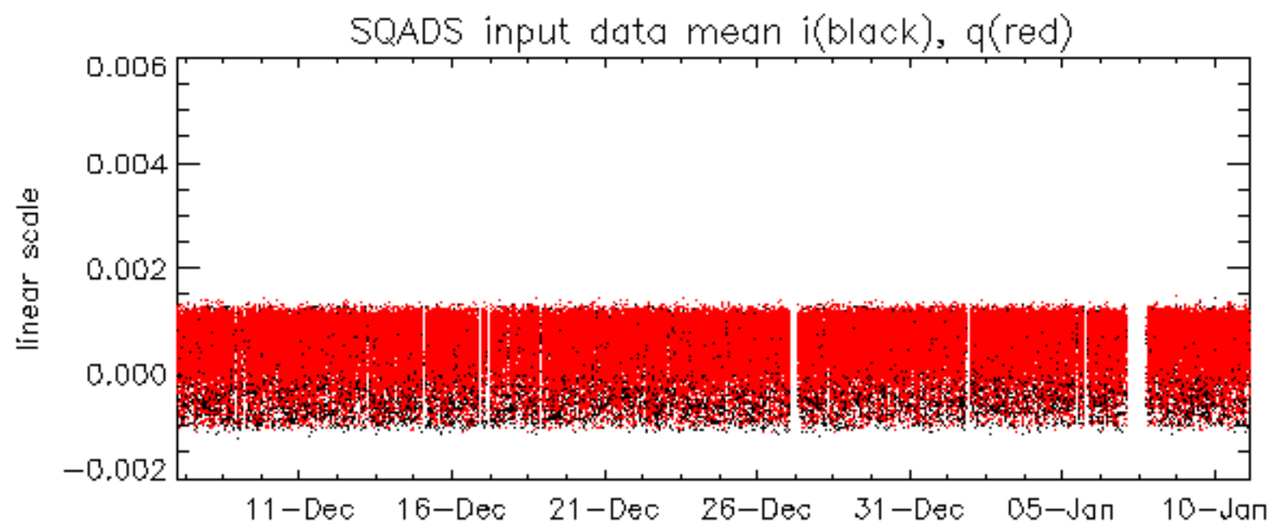
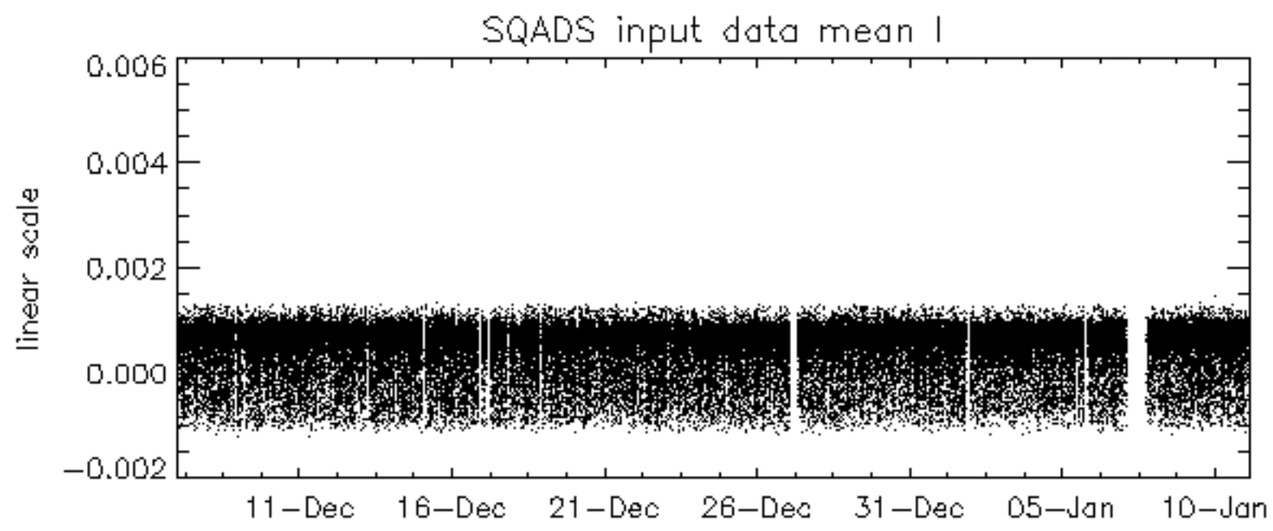

Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2005-01-10 05:00:33 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

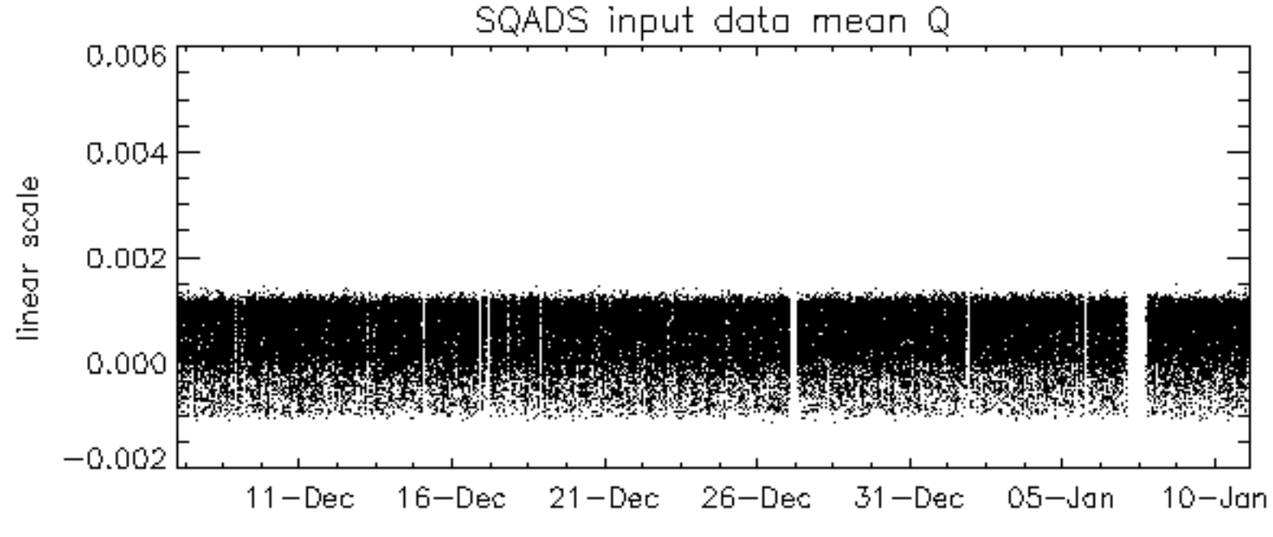

Reference: 2001-02-09 14:08:23 V
Test : 2005-01-05 07:38:37 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

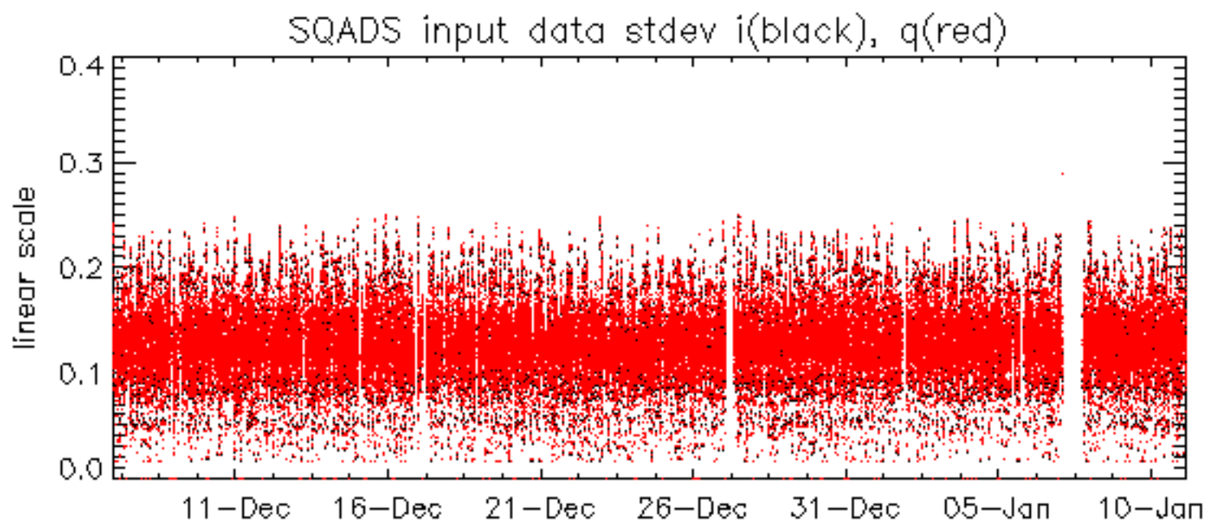

Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

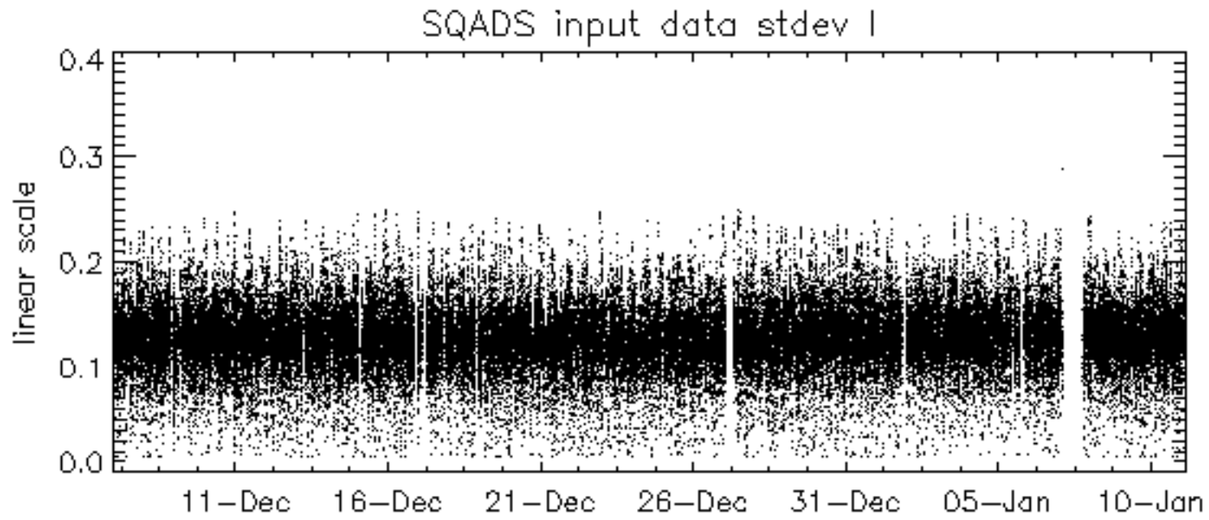

I/Q Gain Imbalance
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
stdev I

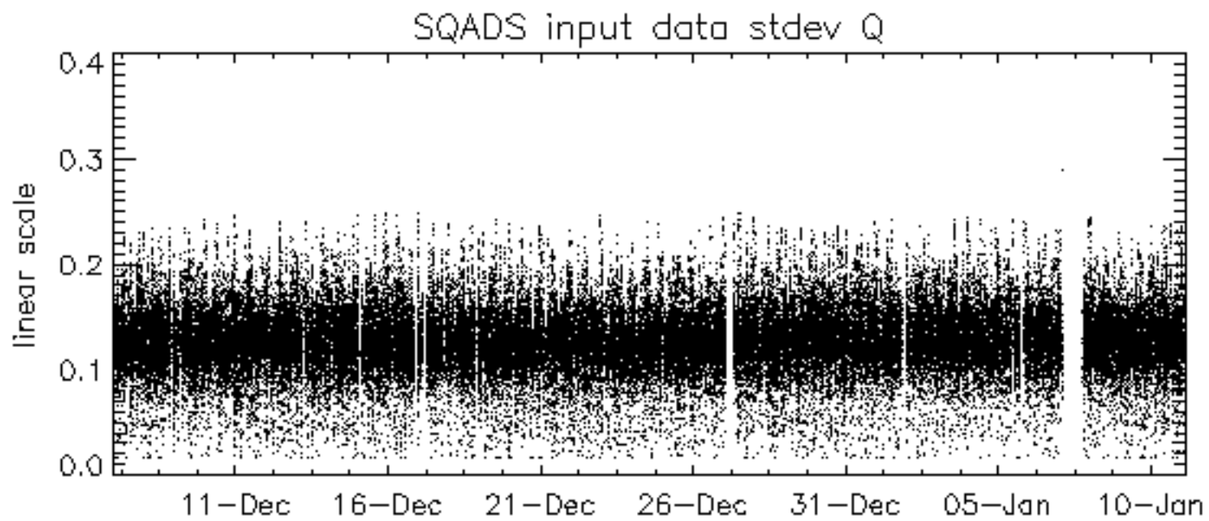

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan

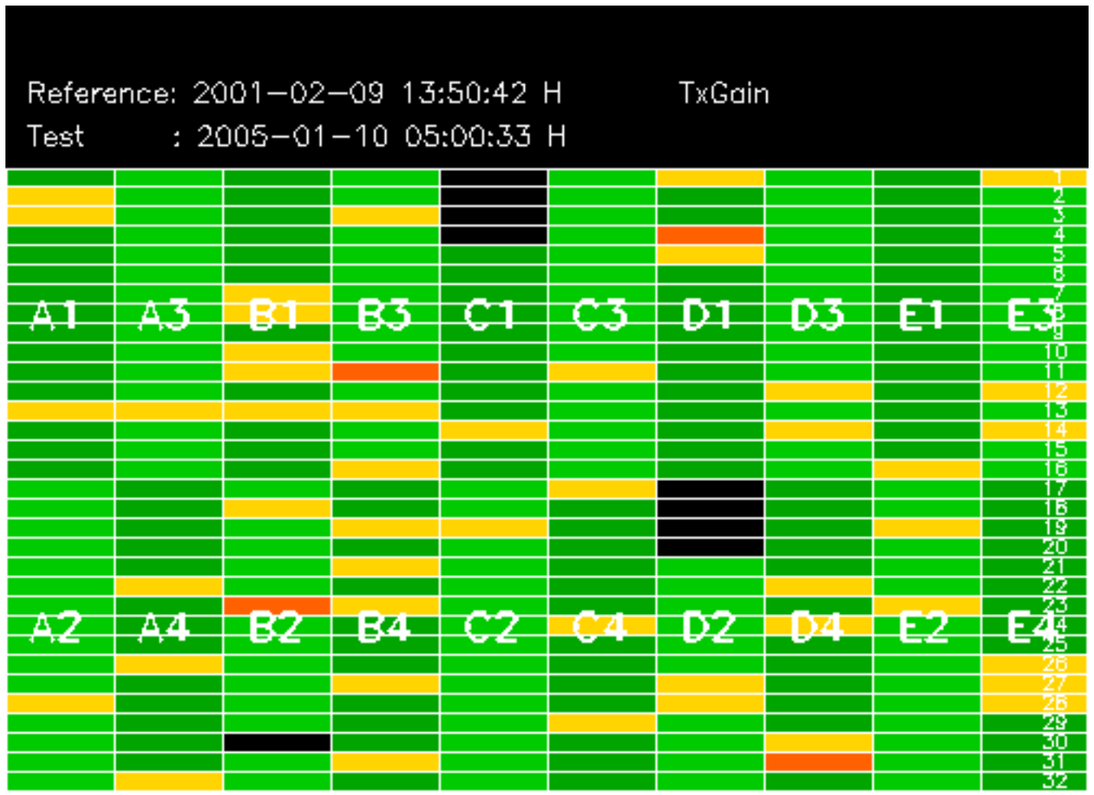

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Dec
16−Dec
21−Dec
26−Dec
31−Dec
05−Jan
10−Jan


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 : 2005-01-10 05:00:33 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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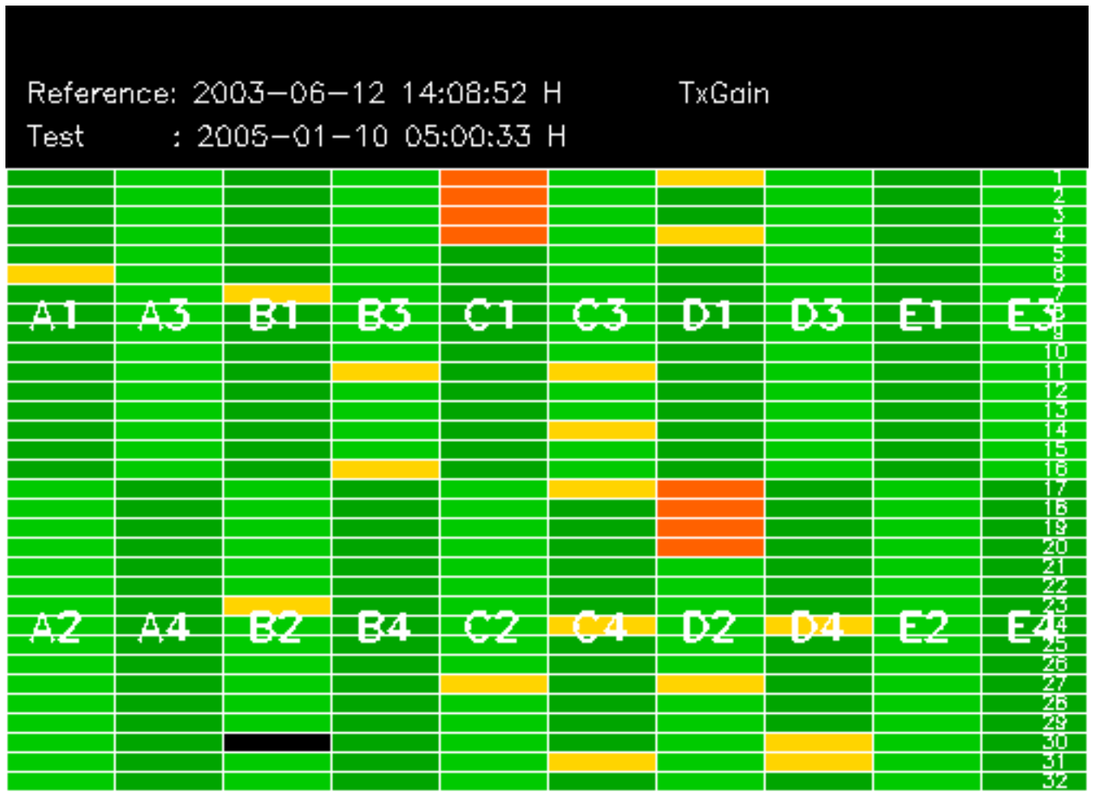
Reference: 2003-06-12 14:08:52 H
Test : 2005-01-10 05:00:33 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2005-01-05 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
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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
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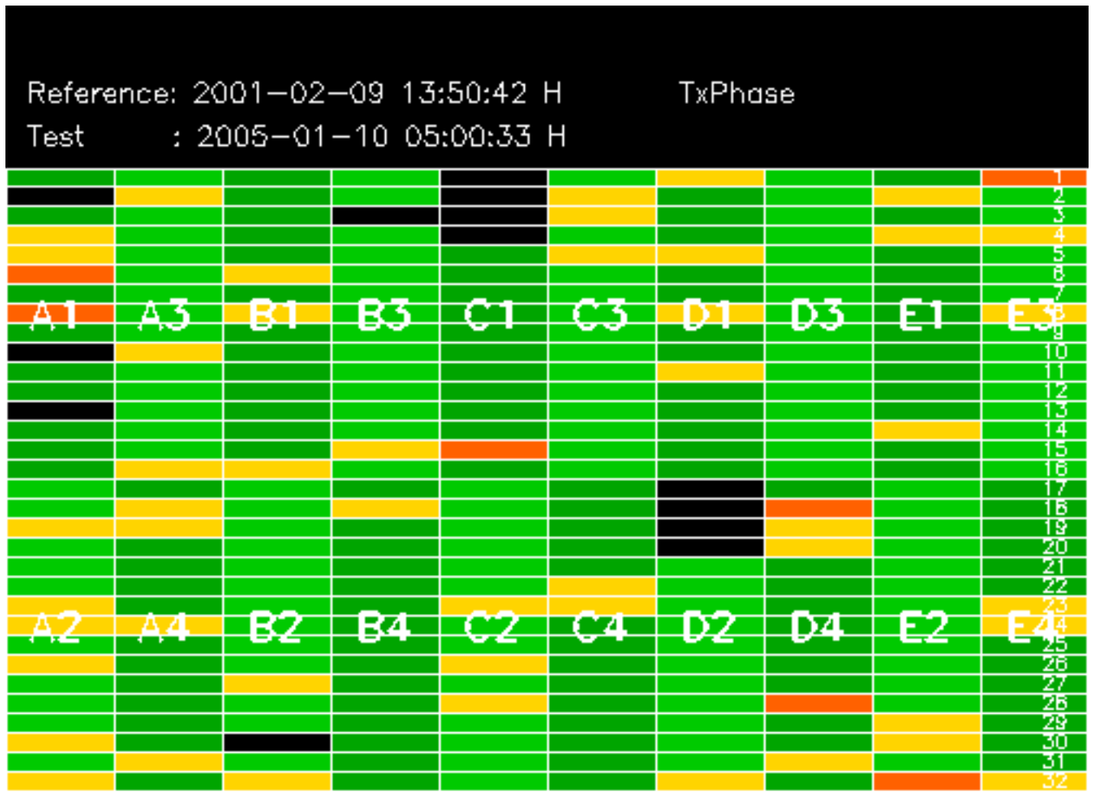
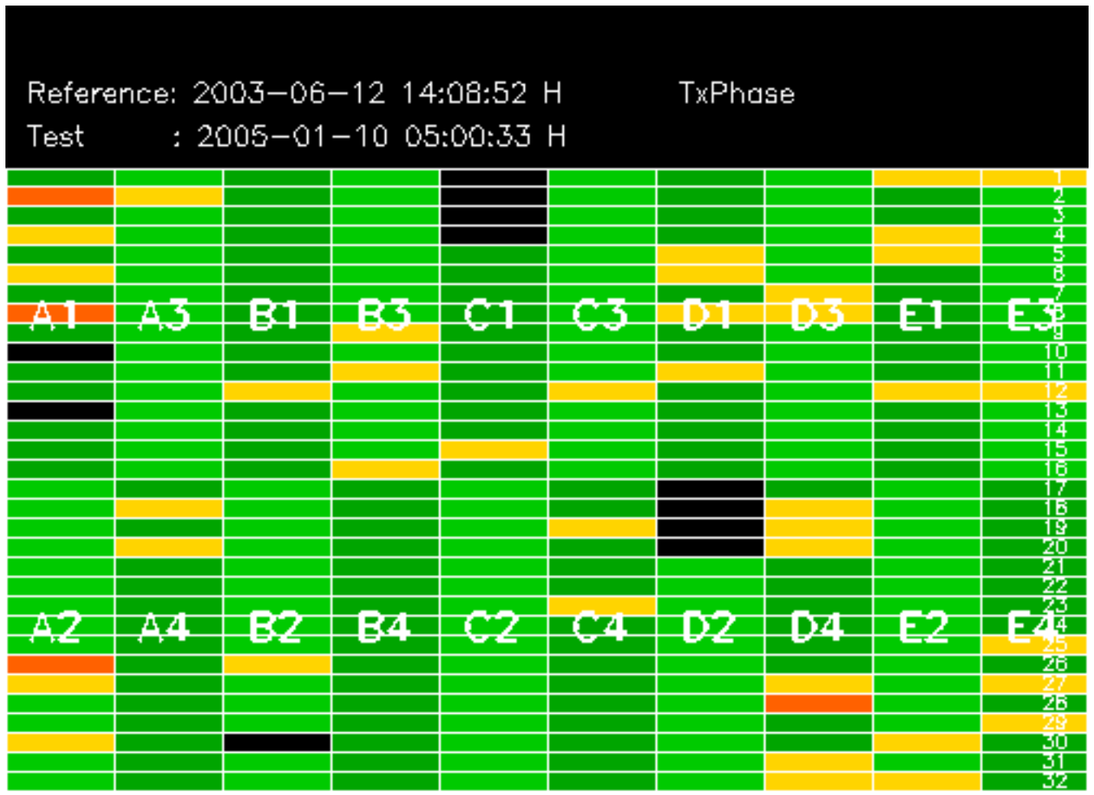
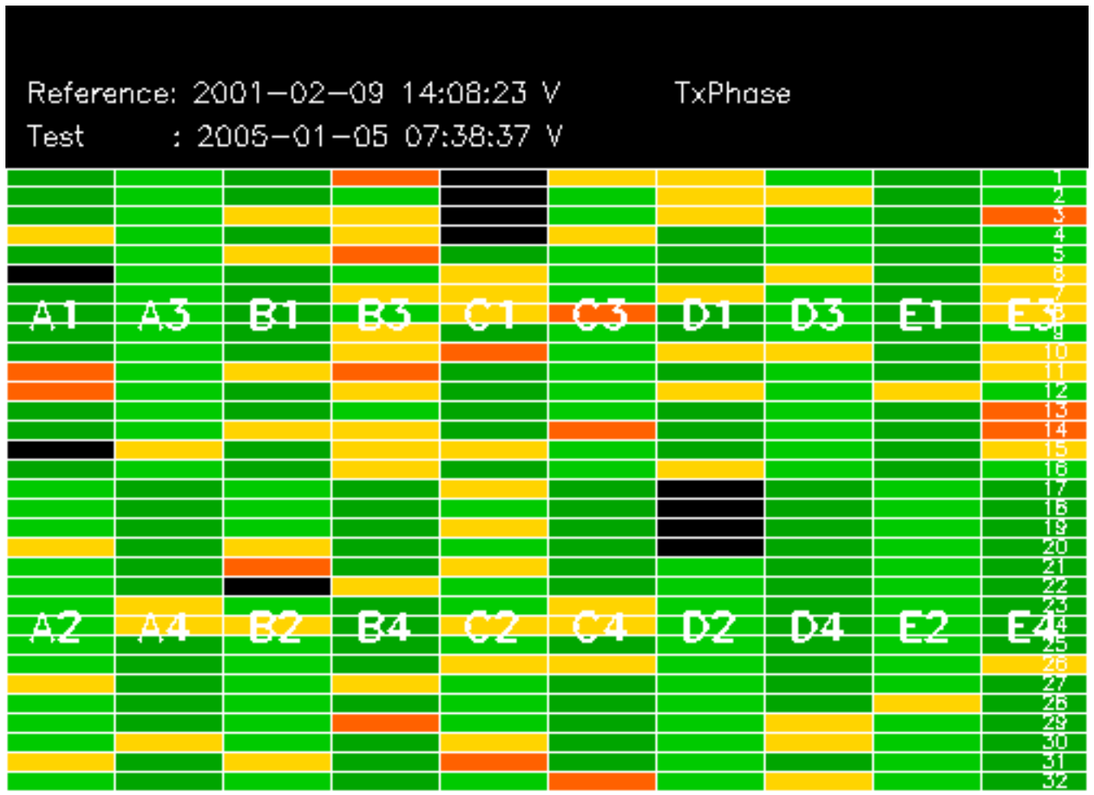

Reference: 2001-02-09 13:50:42 H
Test : 2005-01-10 05:00:33 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2005-01-10 05:00:33 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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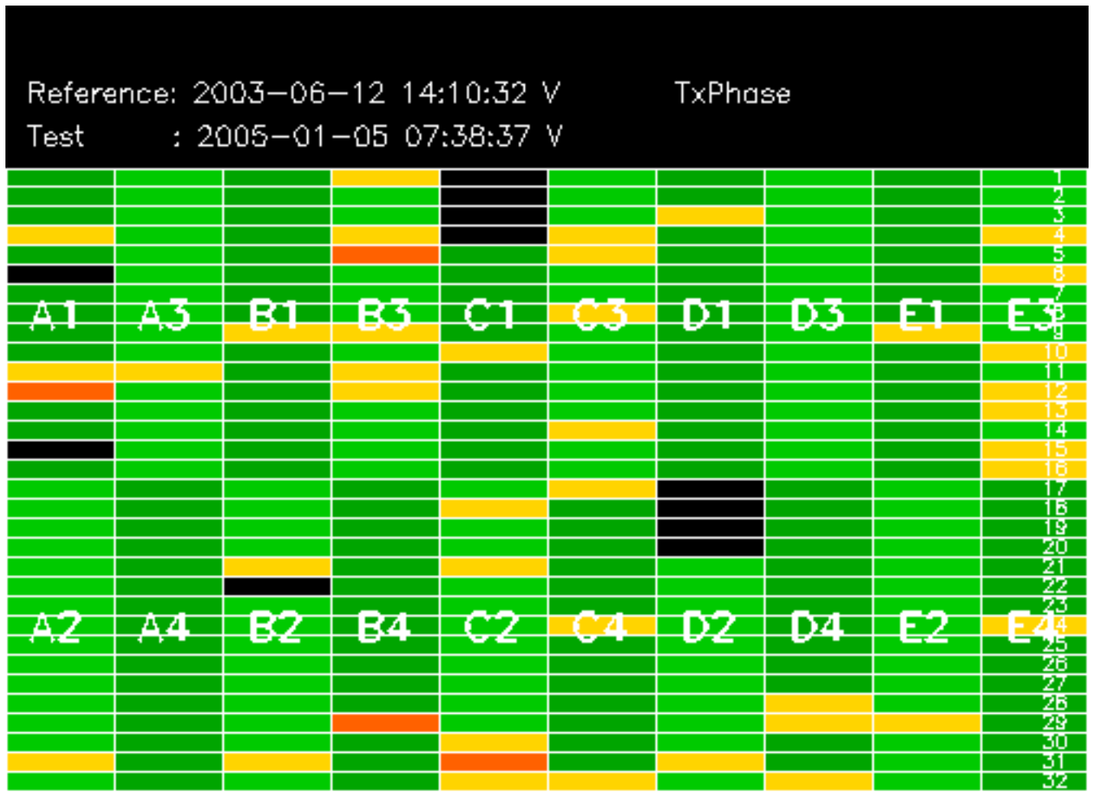
Reference: 2003-06-12 14:10:32 V
Test : 2005-01-05 07:38:37 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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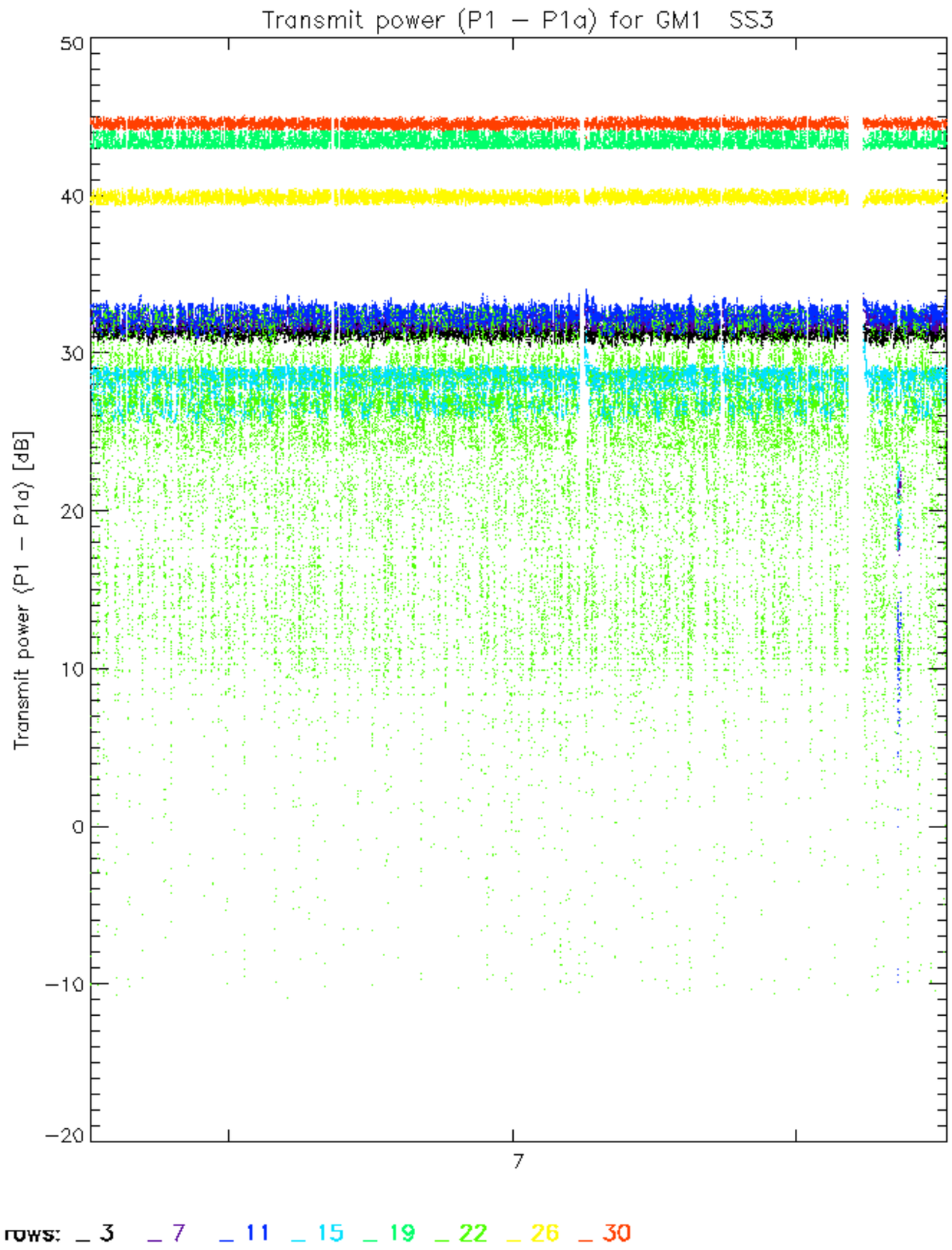
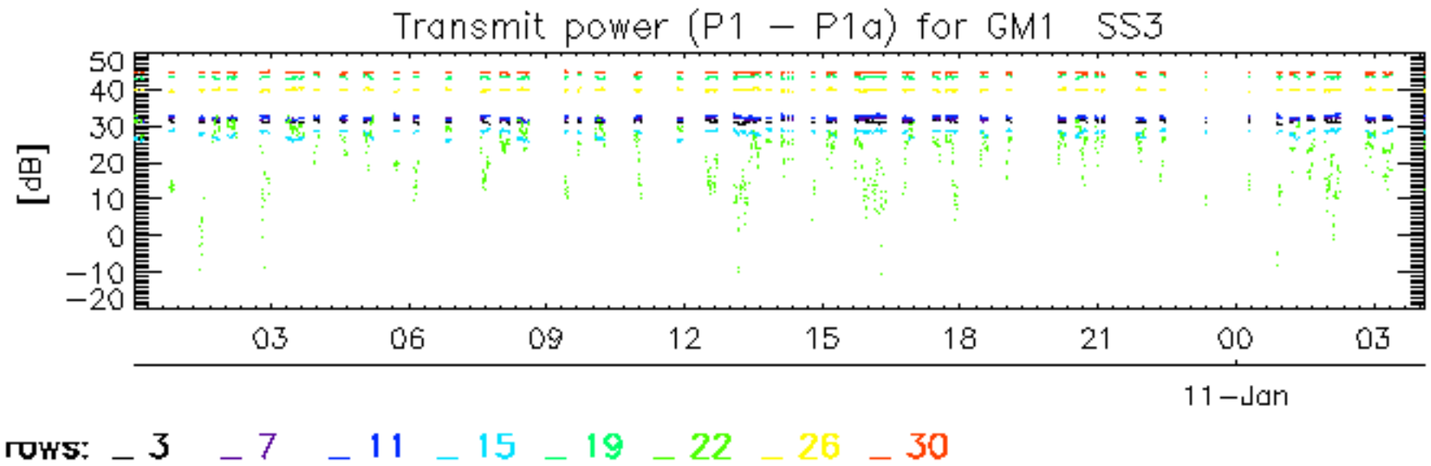
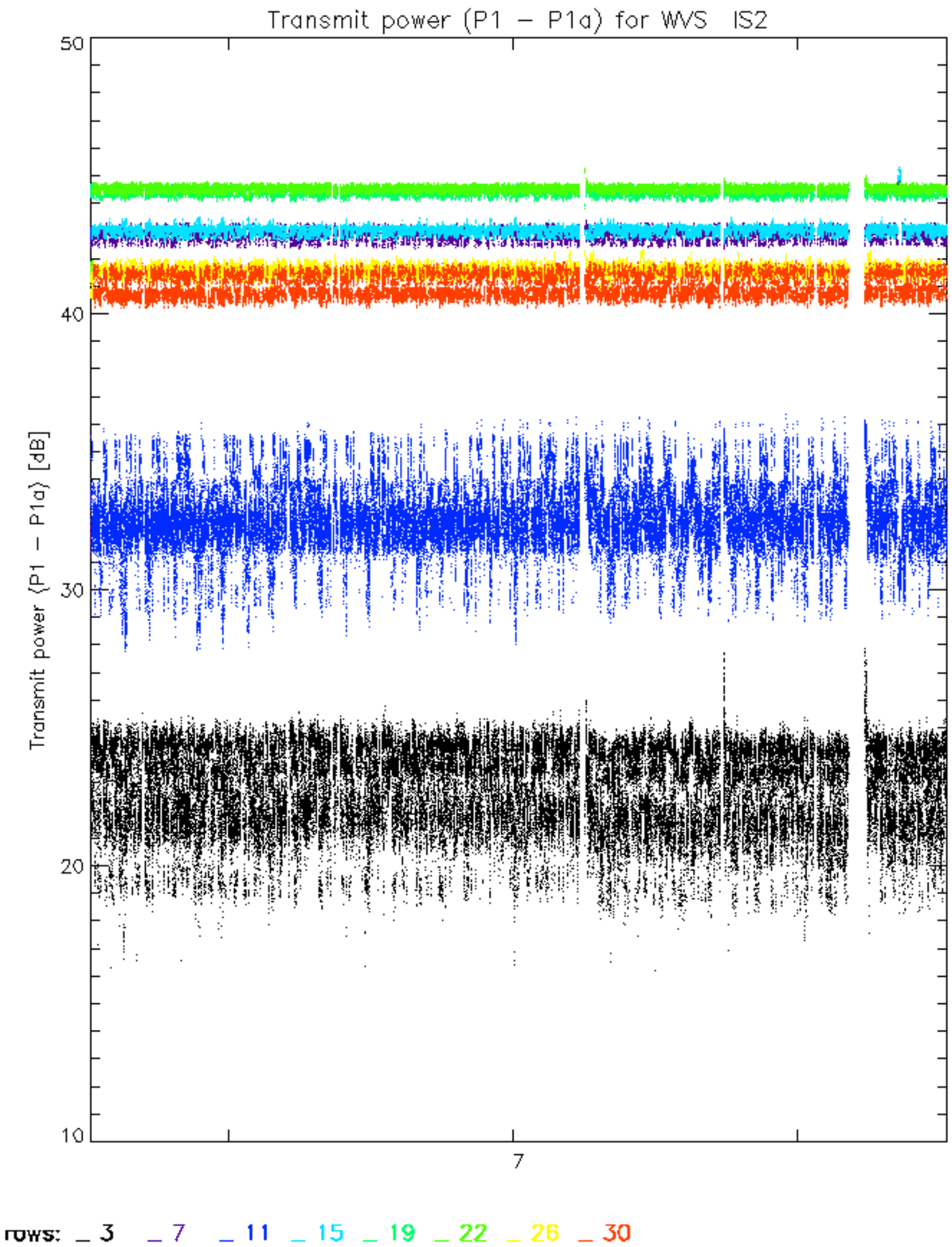
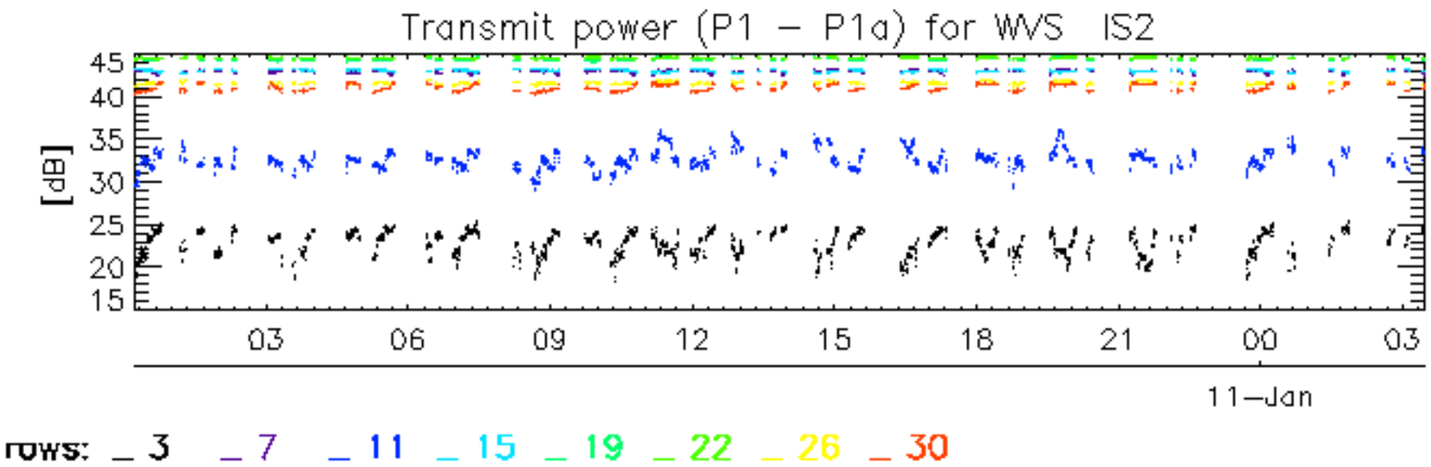

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
7
rows: 3 7 11 15 19 22 26 30


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


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

No unavailabilities during the reported period.