PRELIMINARY REPORT OF 041216

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

last update on Thu Dec 16 10:56:31 GMT 2004

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 2004-12-15 00:00:00 to 2004-12-16 10:56:31

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	3	6	0	0	0
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	23	43	4	3	5
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	23	43	4	3	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	26	49	4	3	5
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	3	6	0	0	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	3	6	0	0	0
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	23	43	4	3	5

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	13	12	0	3	0
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	15	28	5	2	4
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	15	28	5	2	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	28	40	5	5	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	13	12	0	3	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	13	12	0	3	0
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	15	28	5	2	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	20041215 170201

H	20041214 173338

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	-3.466516	0.029403	-0.009274
7	P1	-3.146934	0.035443	0.224073
11	P1	-4.631967	0.046086	-0.077826
15	P1	-5.661922	0.034644	-0.051841
19	P1	-3.637521	0.005216	-0.042010
22	P1	-4.579597	0.016503	0.019278
26	P1	-4.925974	0.017114	-0.035507
30	P1	-7.098585	0.014274	-0.048244
3	P1	-15.961029	0.117642	0.025872
7	P1	-15.262072	0.452588	-1.269244
11	P1	-20.705839	0.494507	-0.049181
15	P1	-11.623351	0.091040	0.050886
19	P1	-14.130505	0.031256	-0.084943
22	P1	-16.145464	0.456246	0.205546
26	P1	-17.791143	0.267678	0.028665
30	P1	-17.909937	0.302164	0.045980

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.368013	0.085424	0.019988
7	P2	-22.607615	0.143189	0.045051

11	P2	-14.971442	0.136886	0.148465
15	P2	-7.172010	0.110402	0.016946
19	P2	-9.724224	0.145588	0.044941
22	P2	-17.204683	0.099387	0.054379
26	P2	-16.524662	0.107380	-0.004282
30	P2	-19.001513	0.082951	0.101995

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210256	0.006924	-0.009329
7	P3	-8.210258	0.006924	-0.009322
11	P3	-8.210258	0.006924	-0.009319
15	P3	-8.210259	0.006924	-0.009323
19	P3	-8.210260	0.006924	-0.009336
22	P3	-8.210259	0.006923	-0.009345
26	P3	-8.210257	0.006923	-0.009353
30	P3	-8.210194	0.006916	-0.010373

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	-2.840985	0.110494	-0.090960
7	P1	-2.979575	0.064463	-0.050809
11	P1	-3.933282	0.049097	-0.075735
15	P1	-3.512764	0.078300	-0.079025
19	P1	-3.600642	0.012625	-0.026175
22	P1	-5.605476	0.068425	-0.040043

26	P1	-6.496398	0.023297	-0.044275
30	P1	-6.293574	0.042017	-0.050575
3	P1	-10.635925	0.059173	-0.147494
7	P1	-10.106596	0.153569	0.015538
11	P1	-12.394256	0.200135	-0.021516
15	P1	-11.723225	0.102725	0.026540
19	P1	-15.631861	0.049344	-0.026934
22	P1	-24.130884	2.216022	-0.111100
26	P1	-15.123240	0.405027	0.158683
30	P1	-20.188841	0.973395	0.147740

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.053417	0.036126	0.023719
7	P2	-22.654398	0.027896	0.077893
11	P2	-10.765657	0.033587	0.187015
15	P2	-5.067083	0.024244	-0.005901
19	P2	-6.973205	0.032640	0.005184
22	P2	-7.331130	0.026061	0.040321
26	P2	-23.961390	0.018298	-0.013055
30	P2	-22.062098	0.018143	0.086747

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.045155	0.002732	-0.001407
7	P3	-8.045171	0.002738	-0.001485
11	P3	-8.045236	0.002729	-0.001111
15	P3	-8.045036	0.002738	-0.001269
19	P3	-8.045204	0.002741	-0.001243
22	P3	-8.045199	0.002735	-0.001392
26	P3	-8.045242	0.002735	-0.001347
30	P3	-8.045107	0.002725	-0.001291

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	0.000439696
	stdev	2.42477e-07
MEAN Q	mean	0.000496931
	stdev	2.55490e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125541
	stdev	0.00100925
STDEV Q	mean	0.125780
	stdev	0.00101852

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

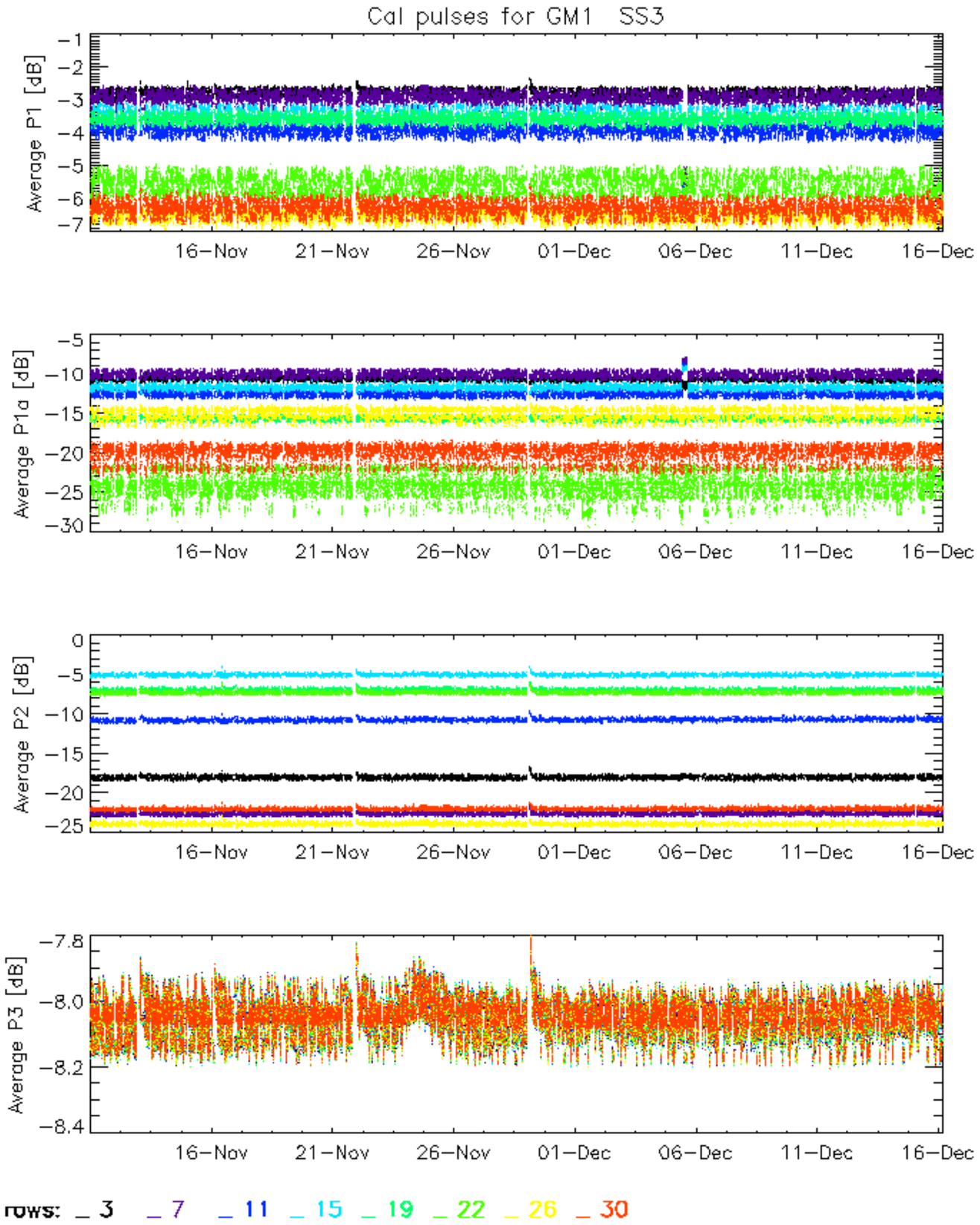
Descending

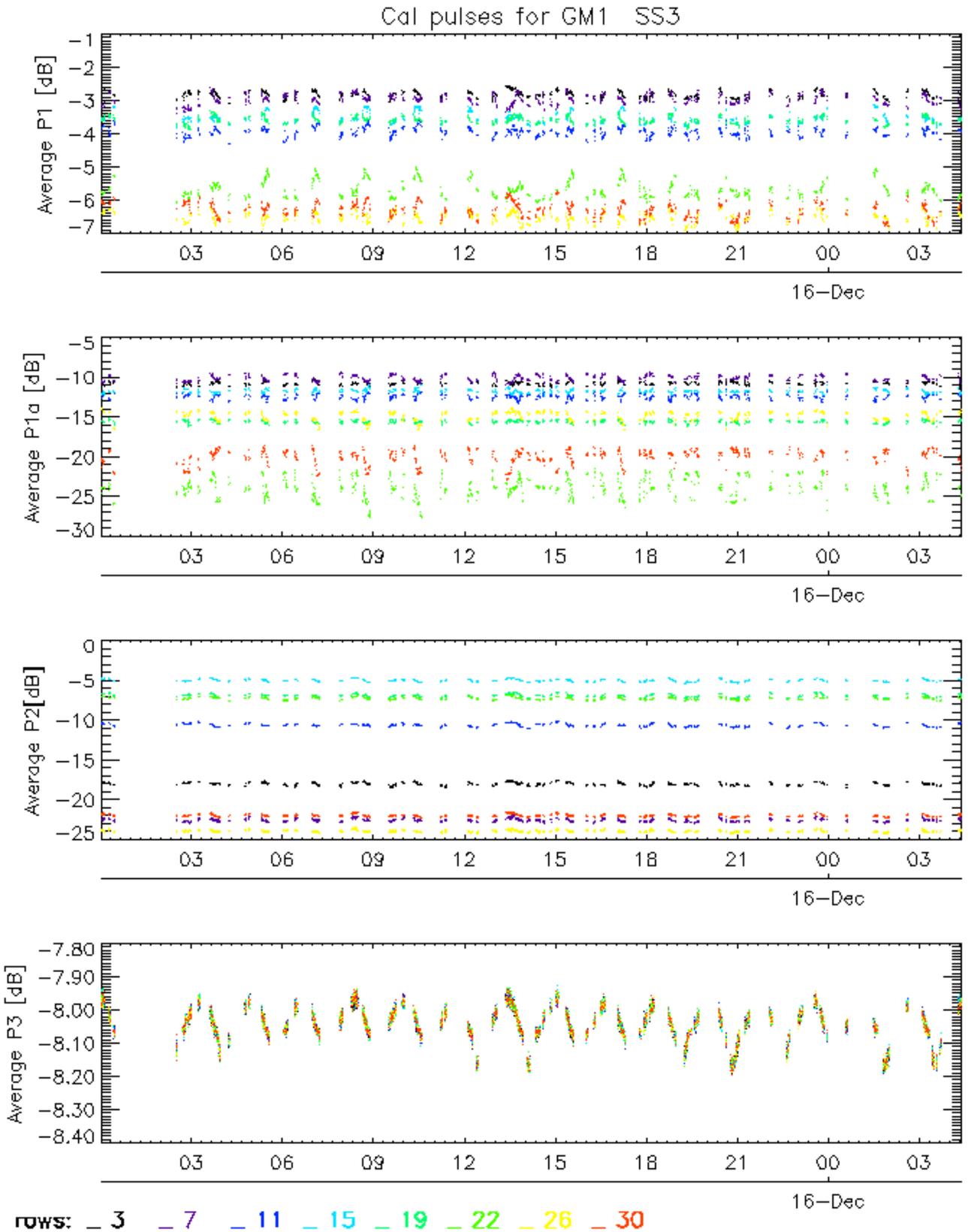
6.5 - Absolute Doppler for GM1

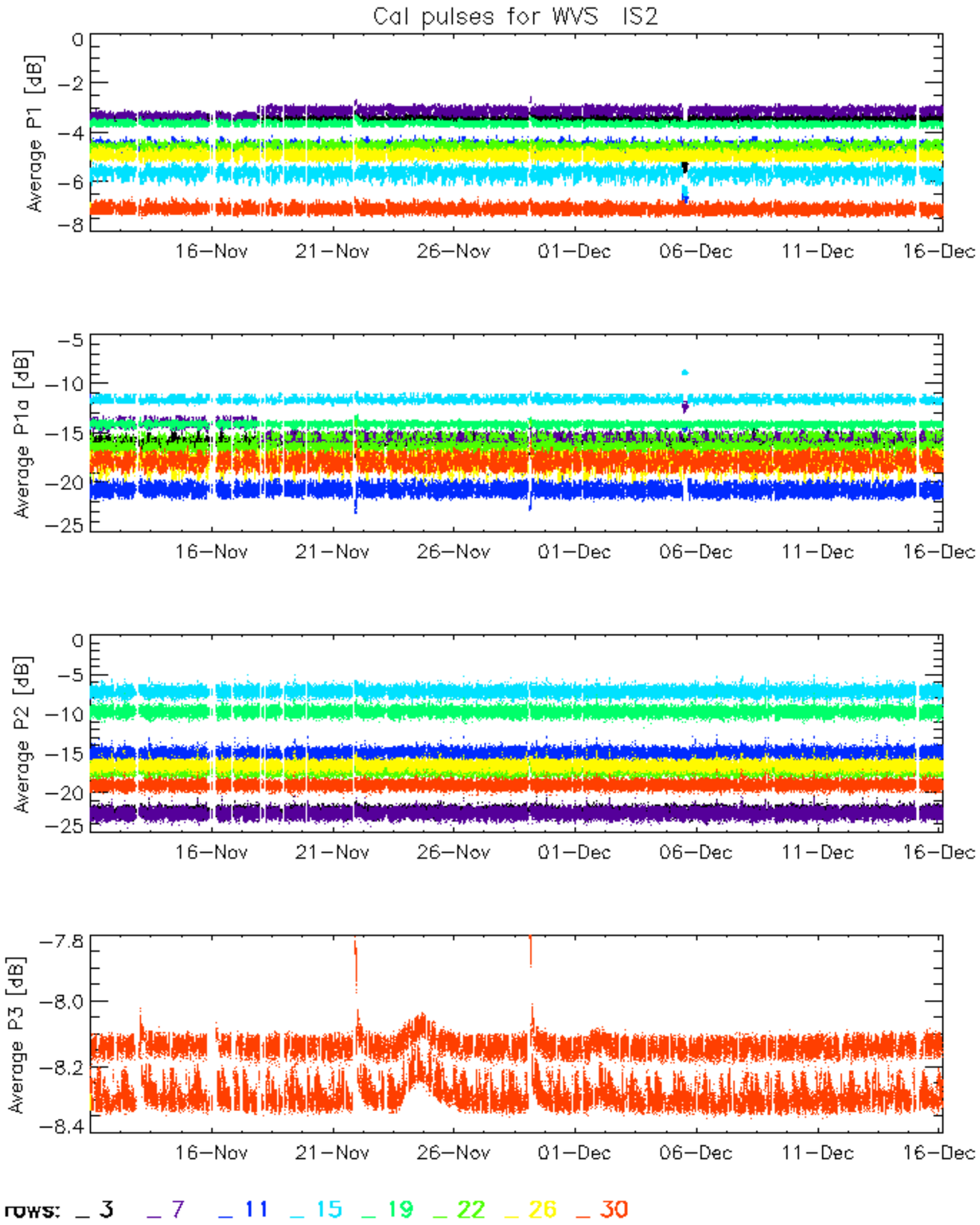
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

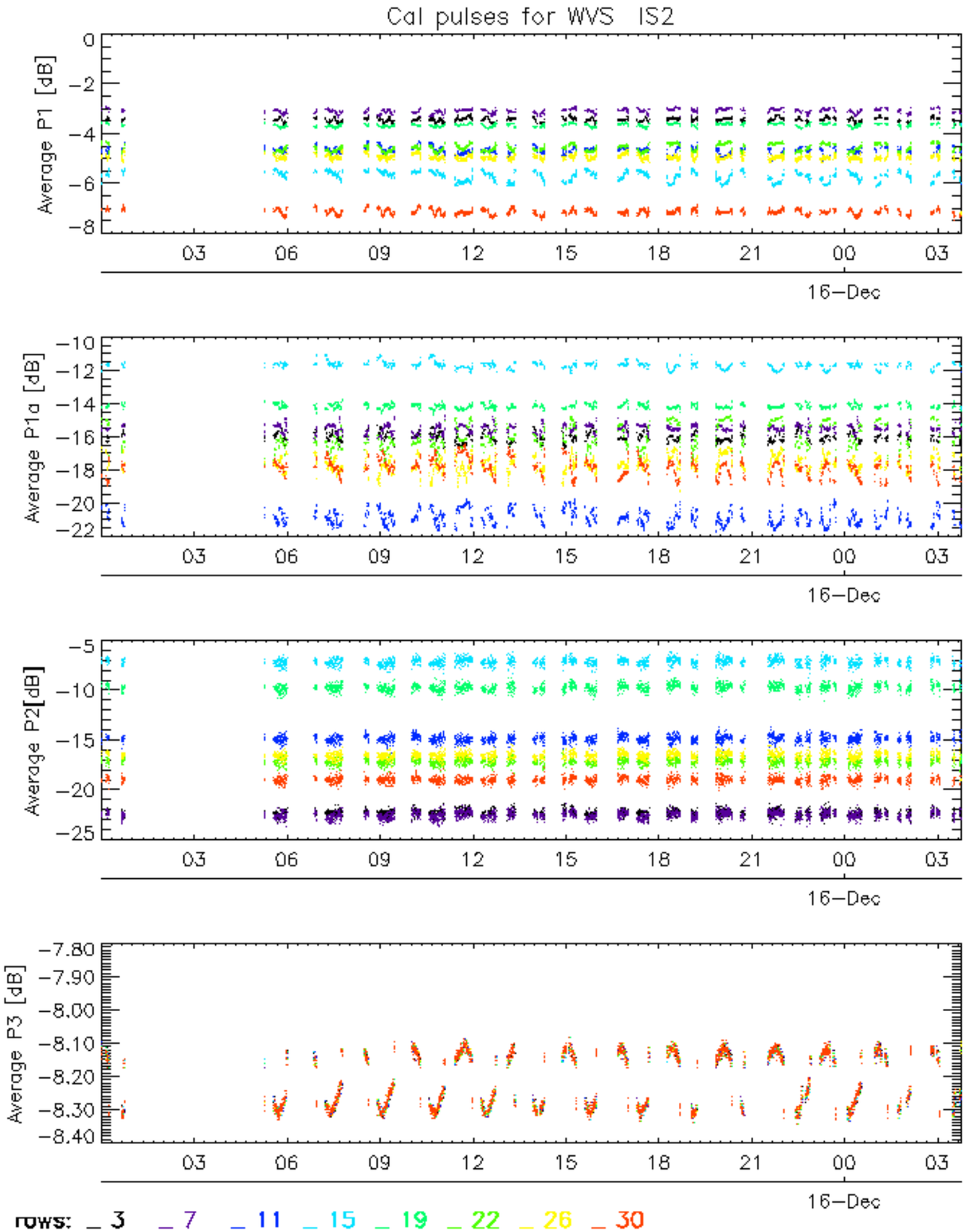
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

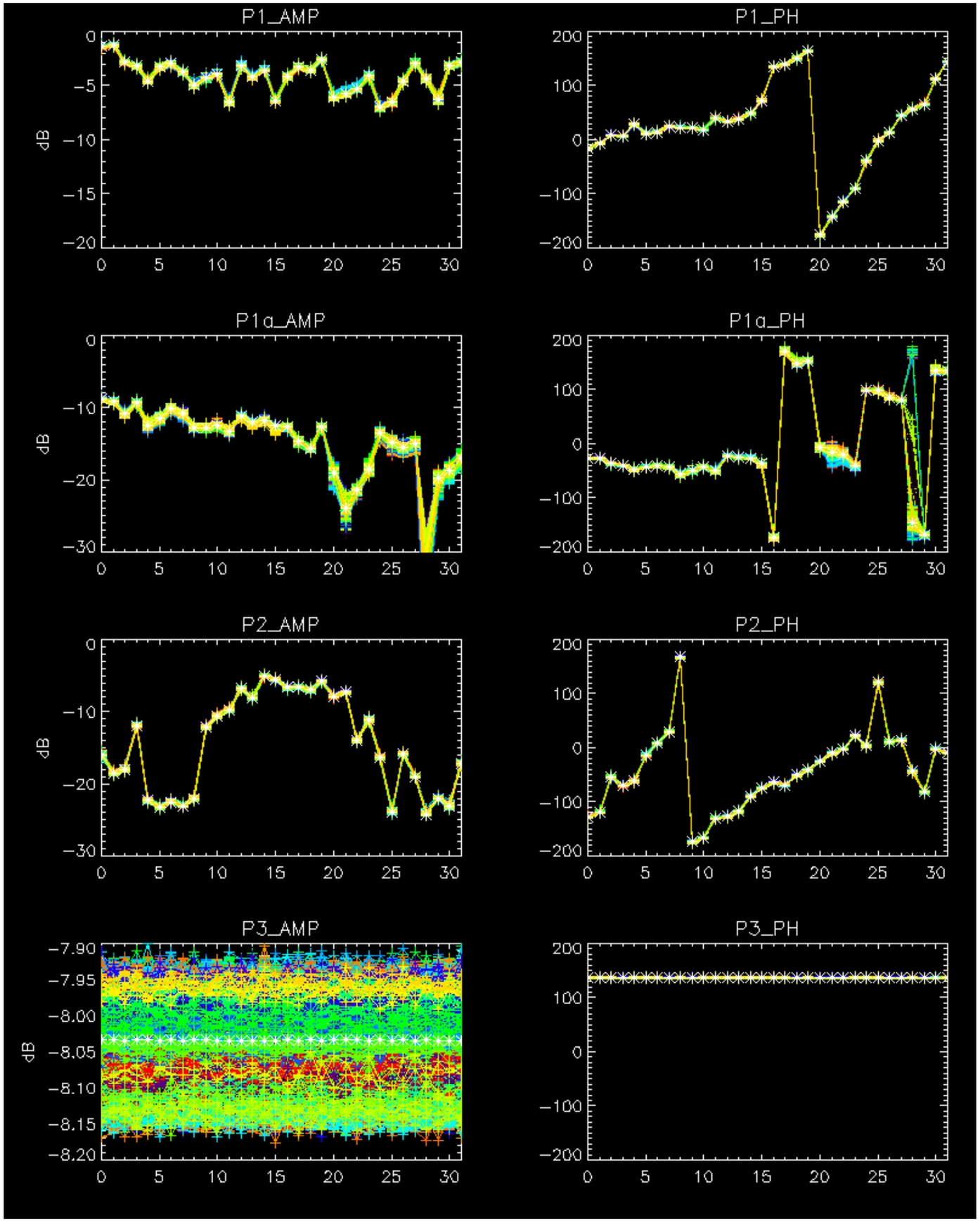

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

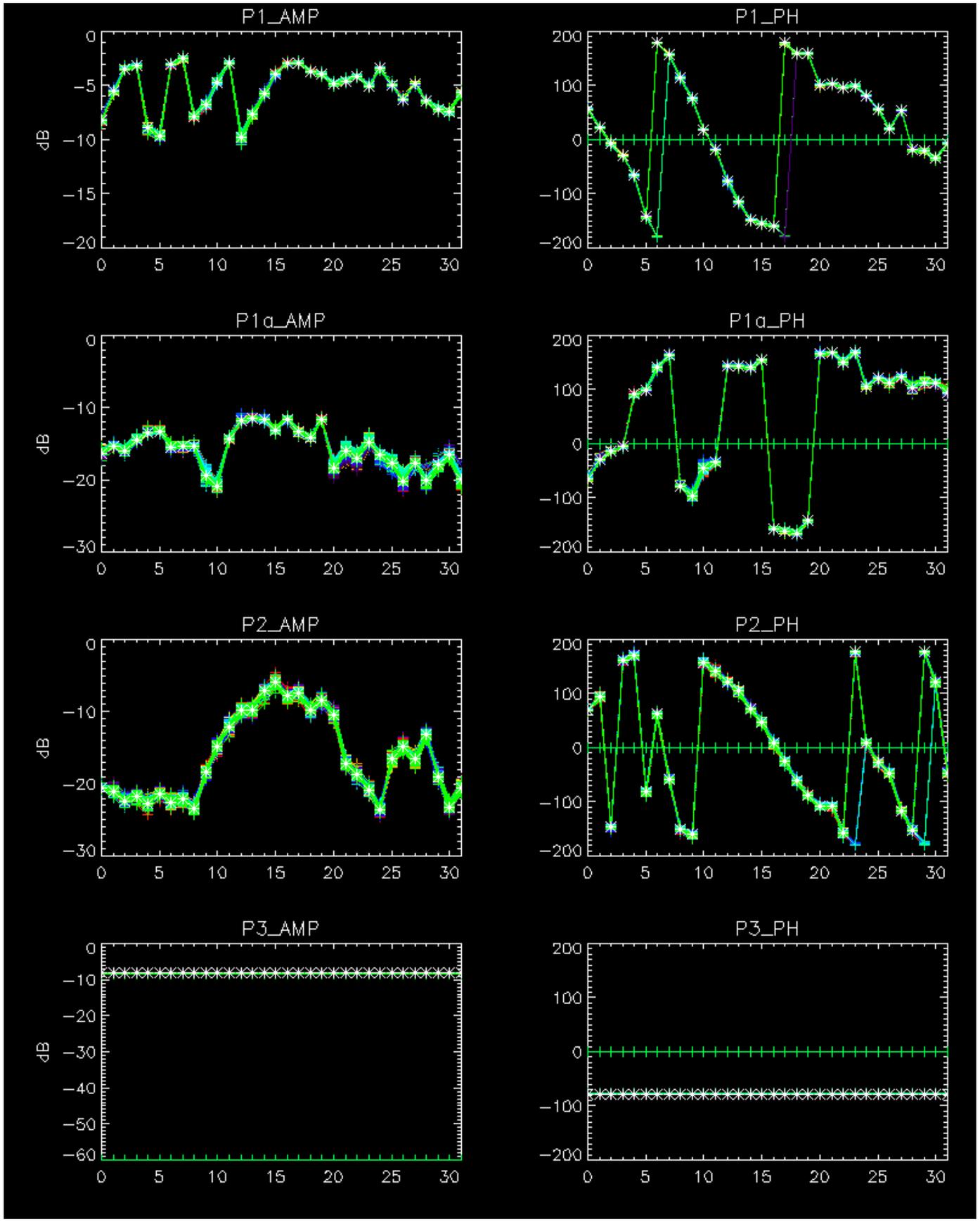

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
16−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
16−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
16−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15
18
21
00
03
16−Dec
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
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


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
03
06
09
12
15
18
21
00
03
16−Dec
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

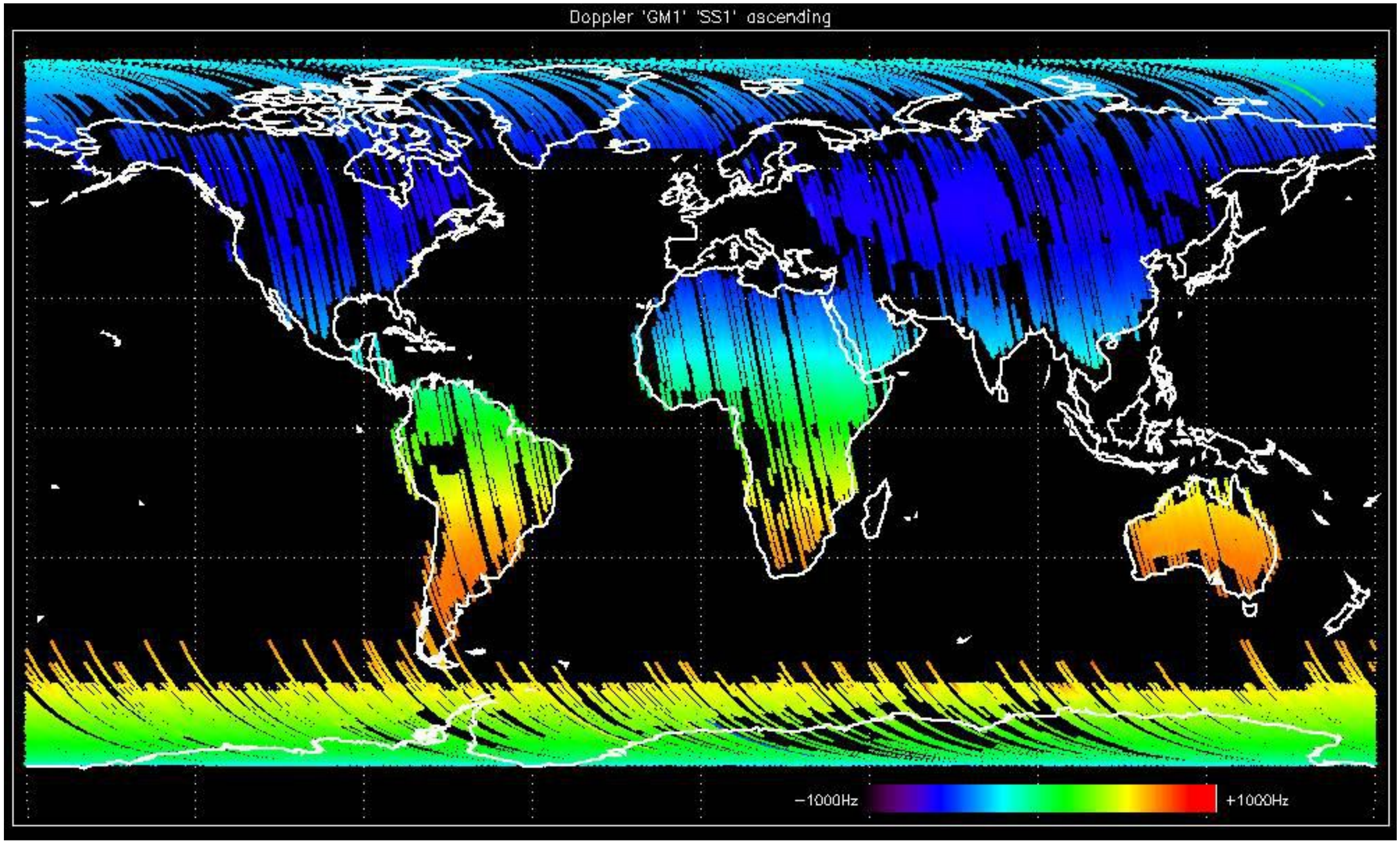
No anomalies observed.

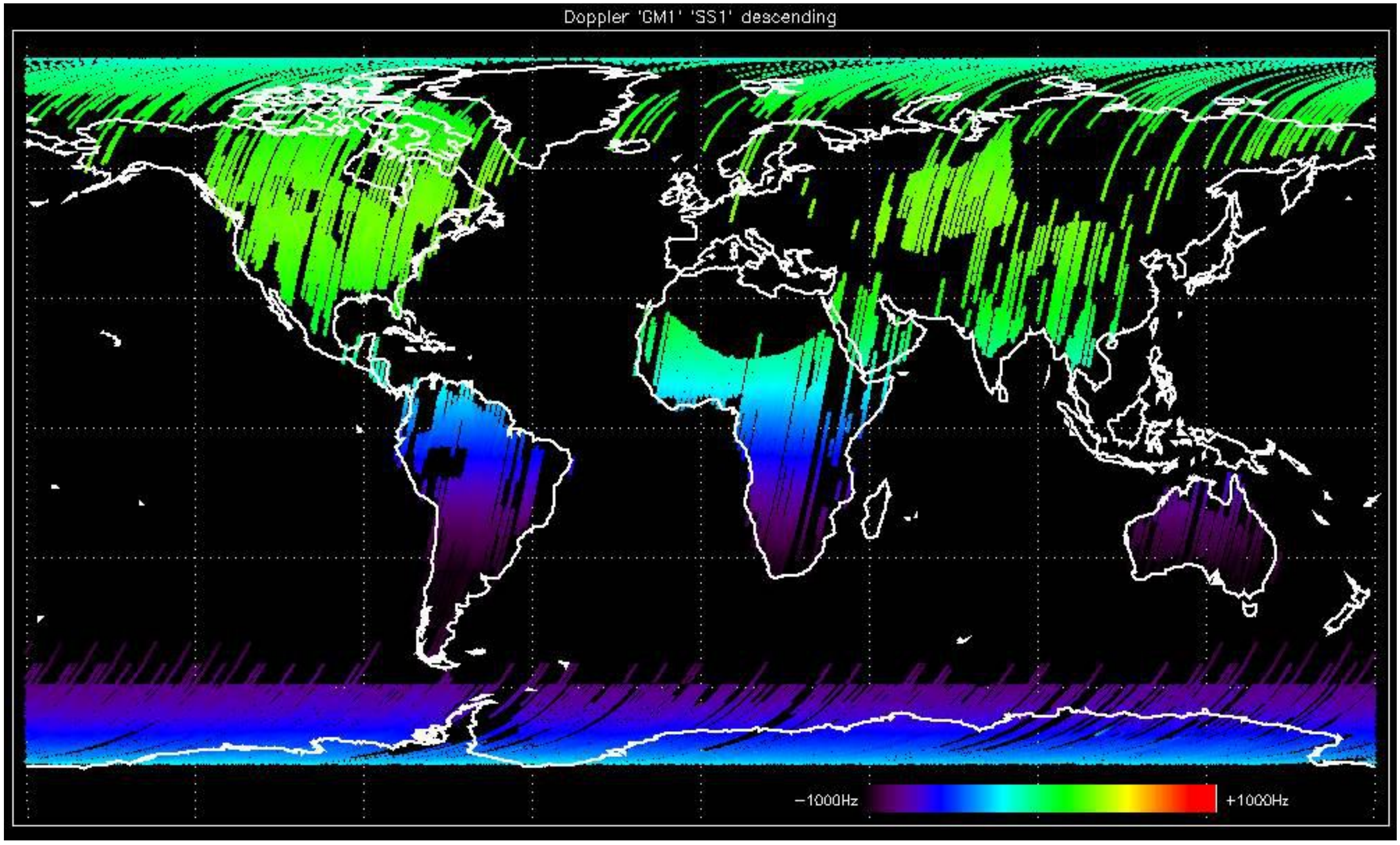

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

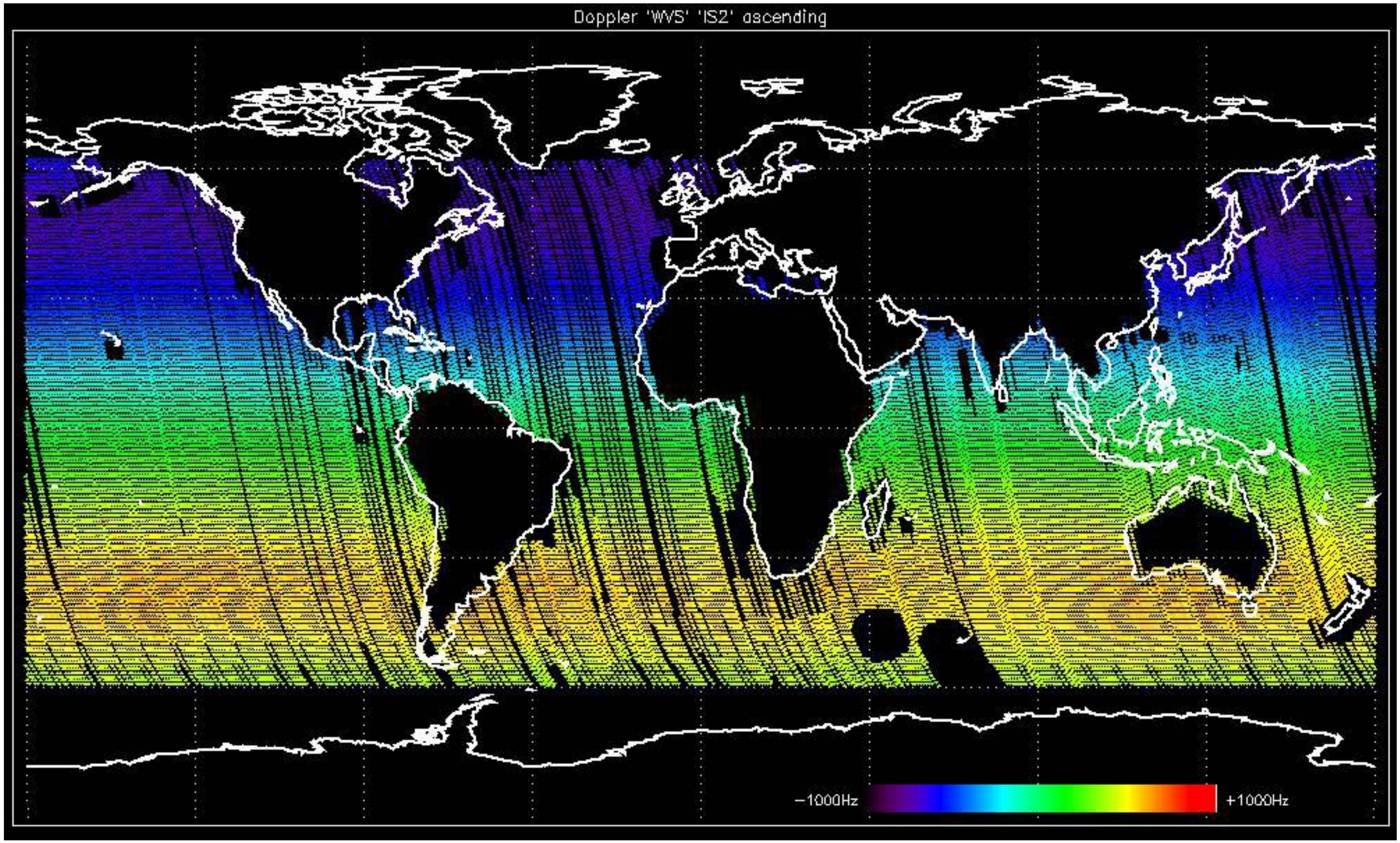

P1_AMP
P1_PH
P1a_AMP
P1a_PH
P2_AMP
P2_PH
P3_AMP
P3_PH
dB

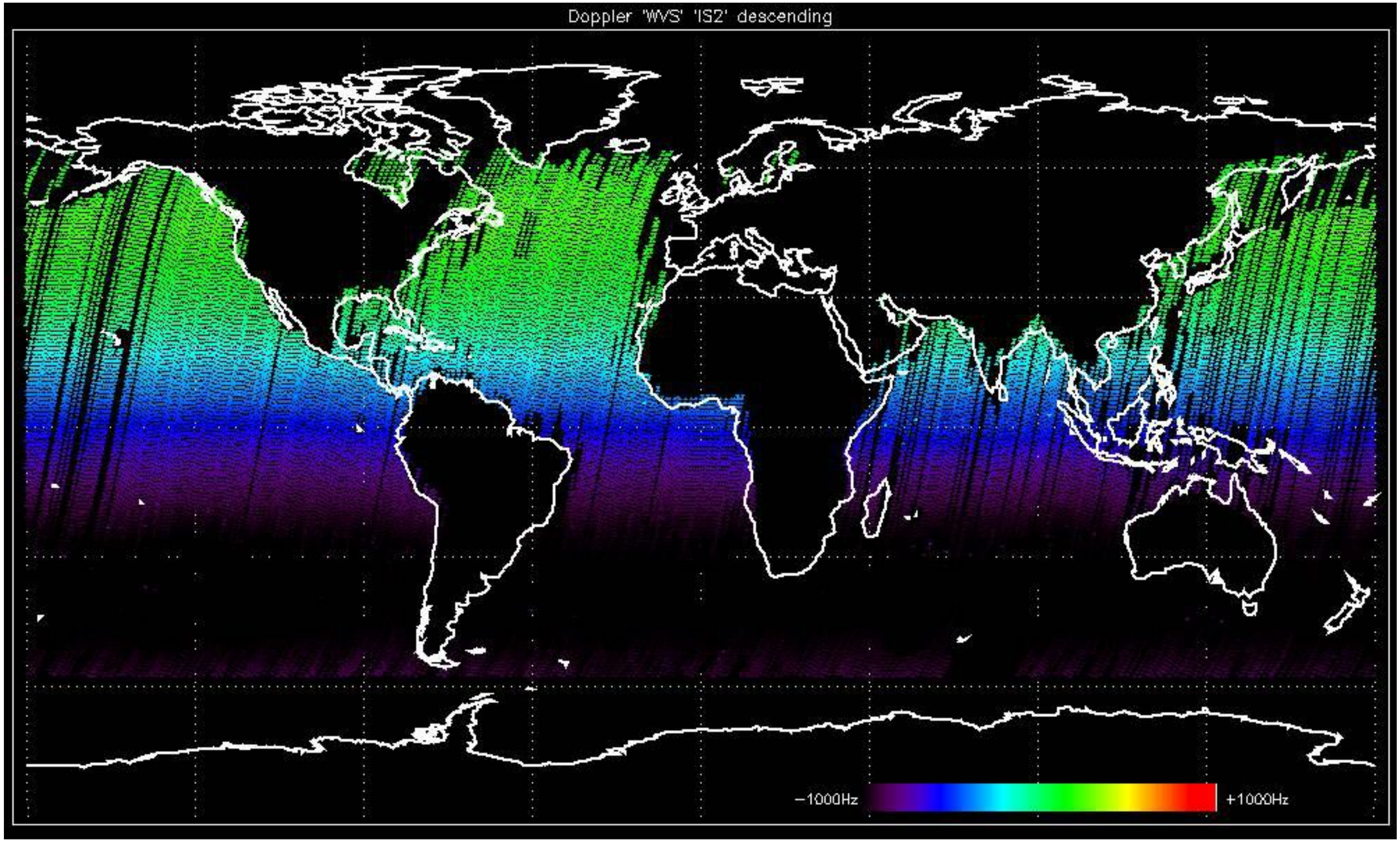
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

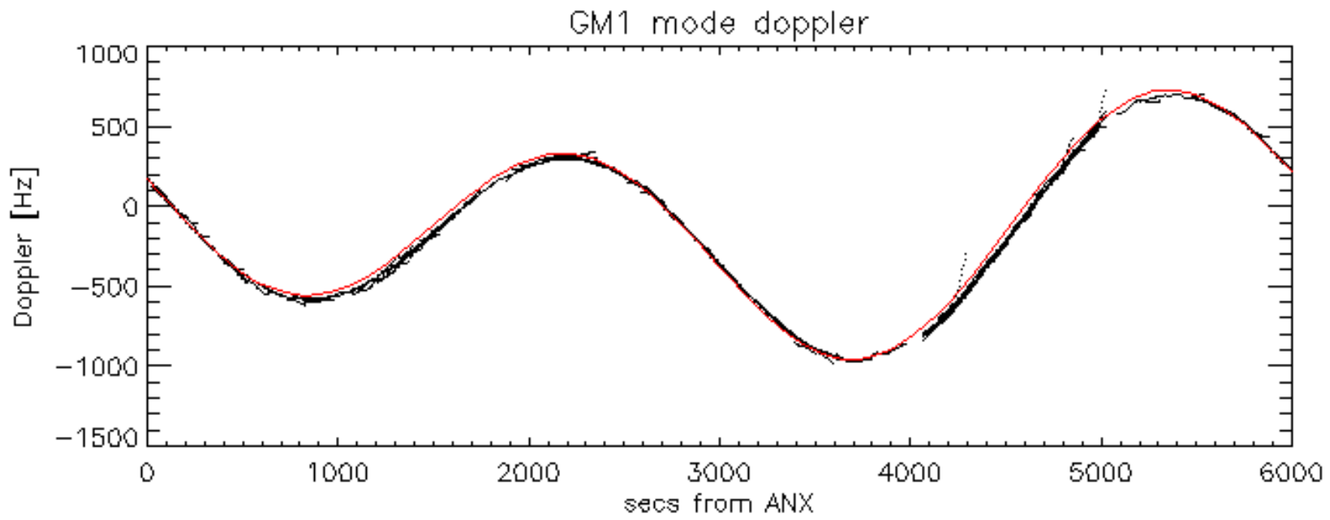
Preliminary report.The data is not yet controled

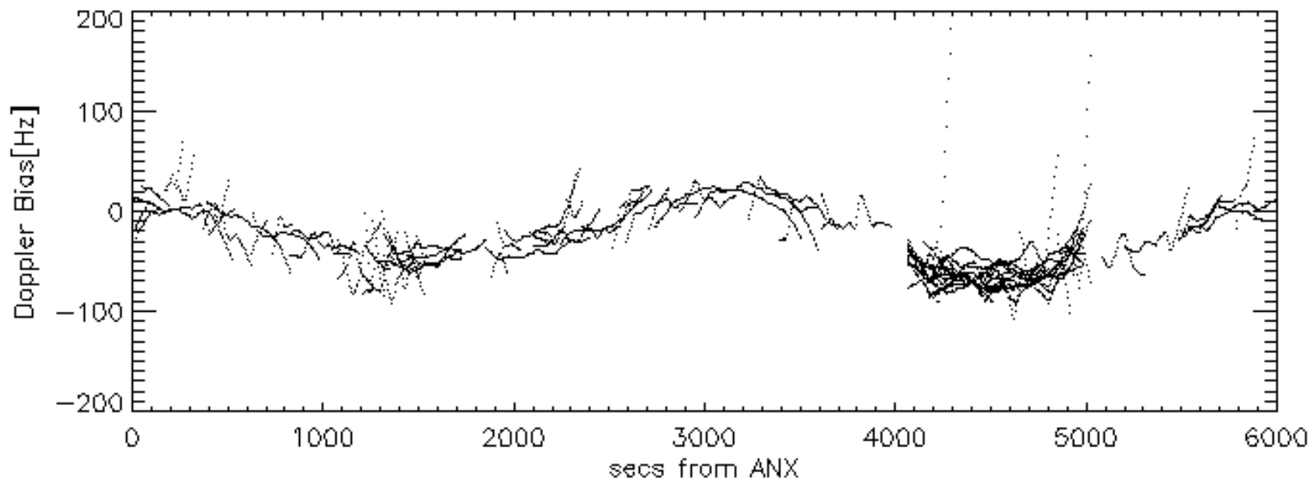

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

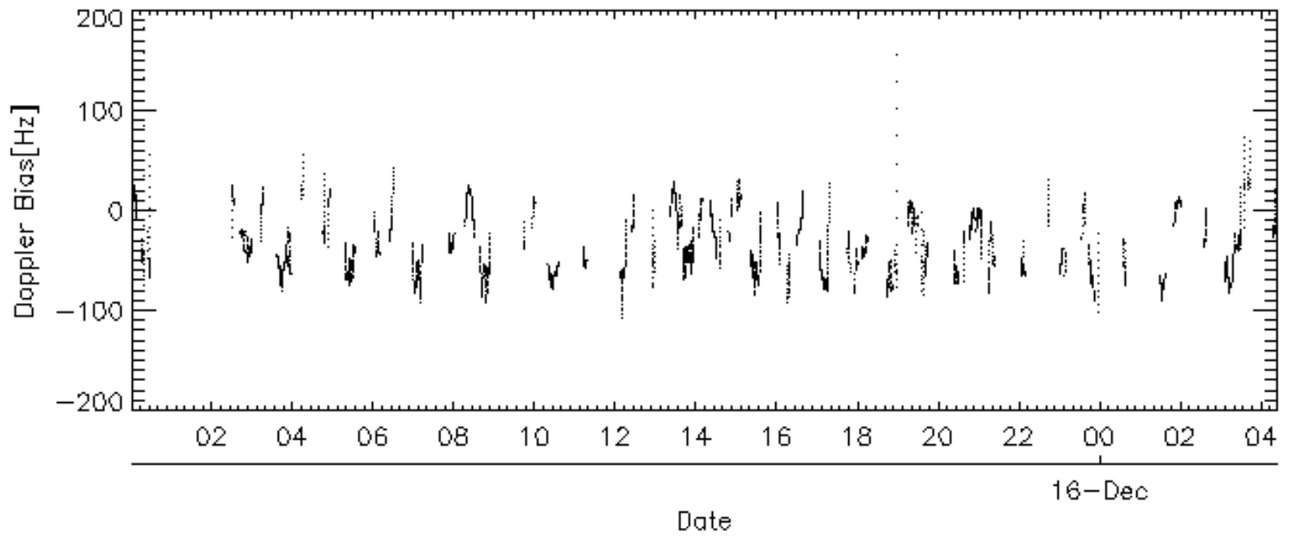

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

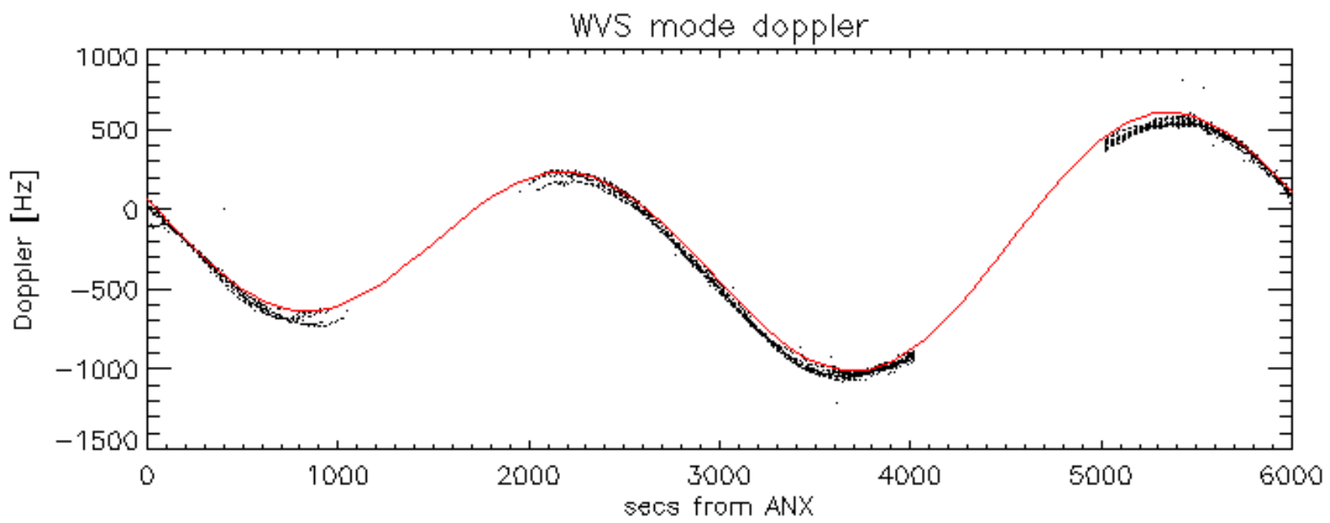

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

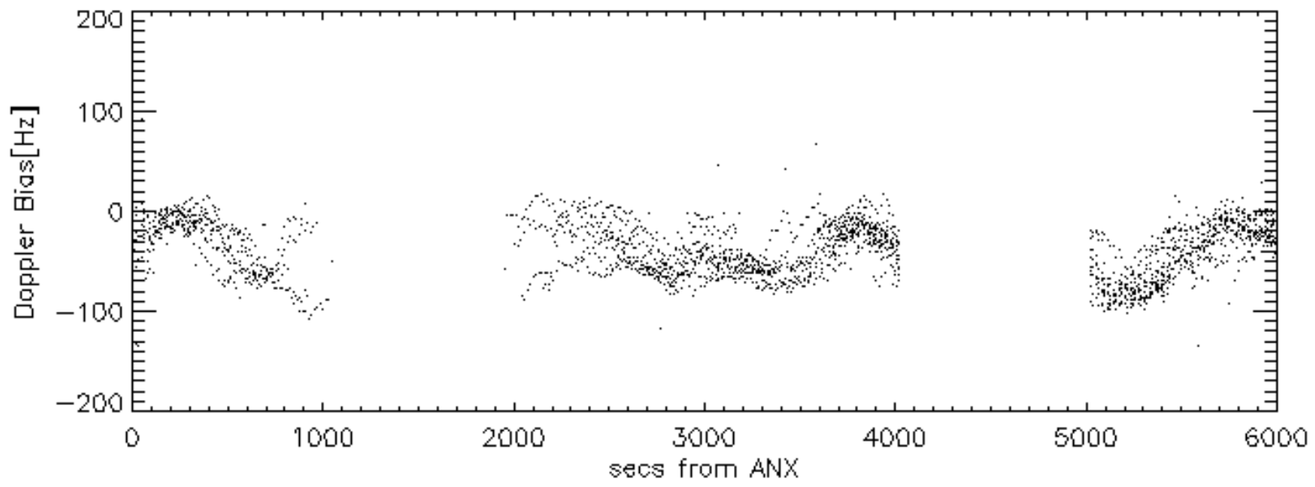

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

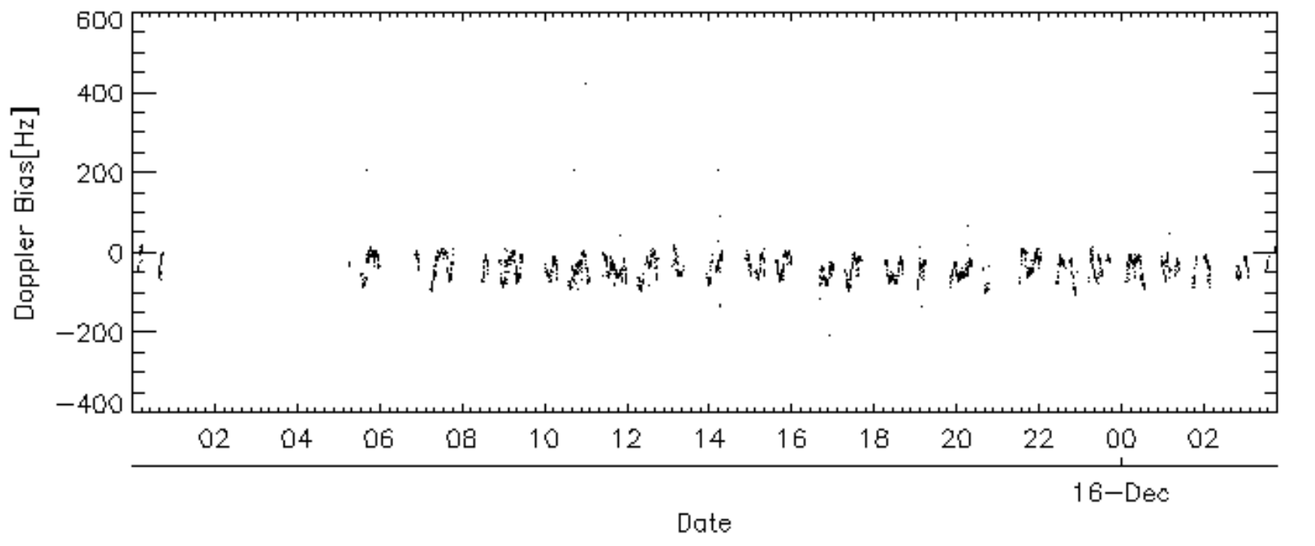

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

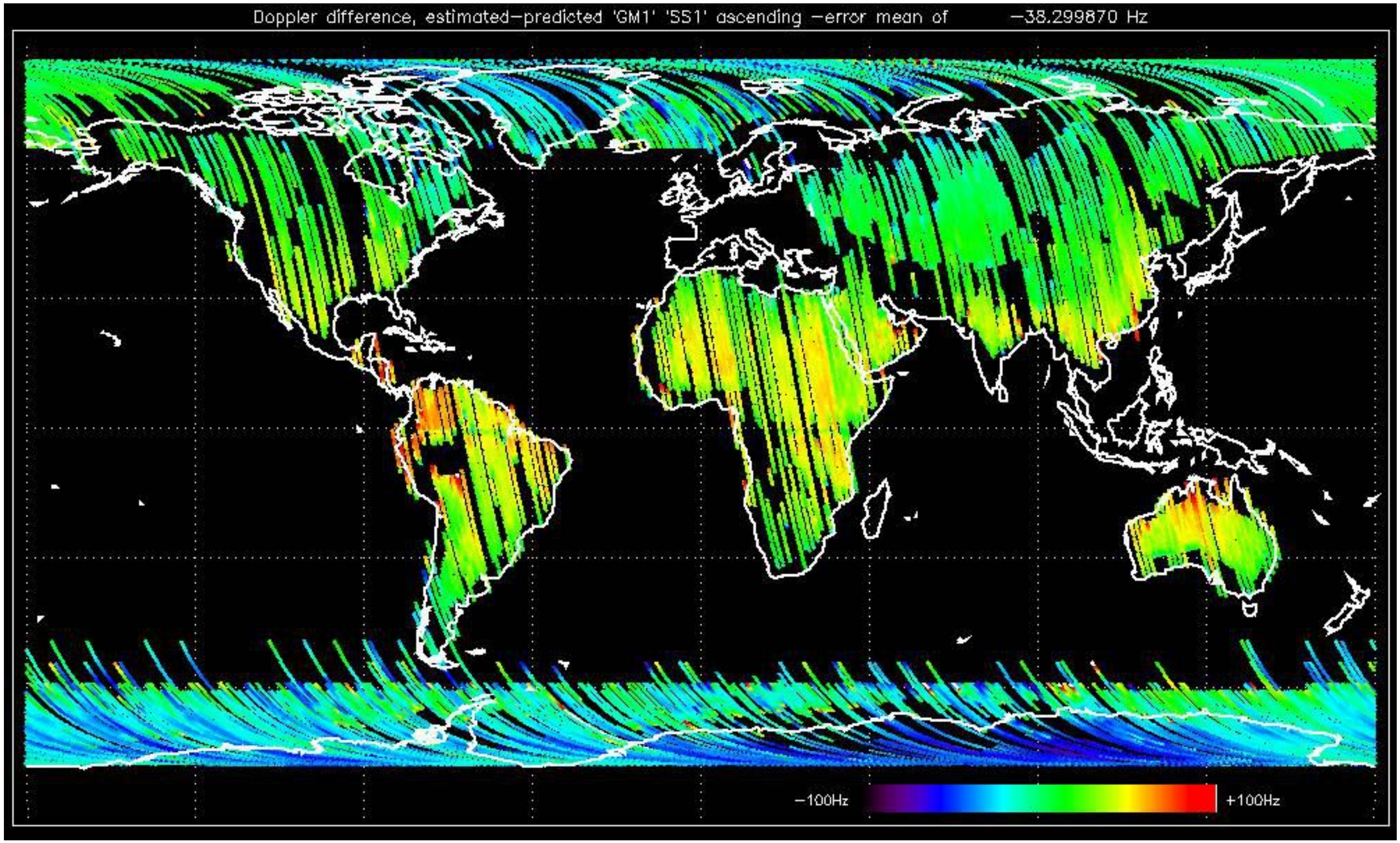

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

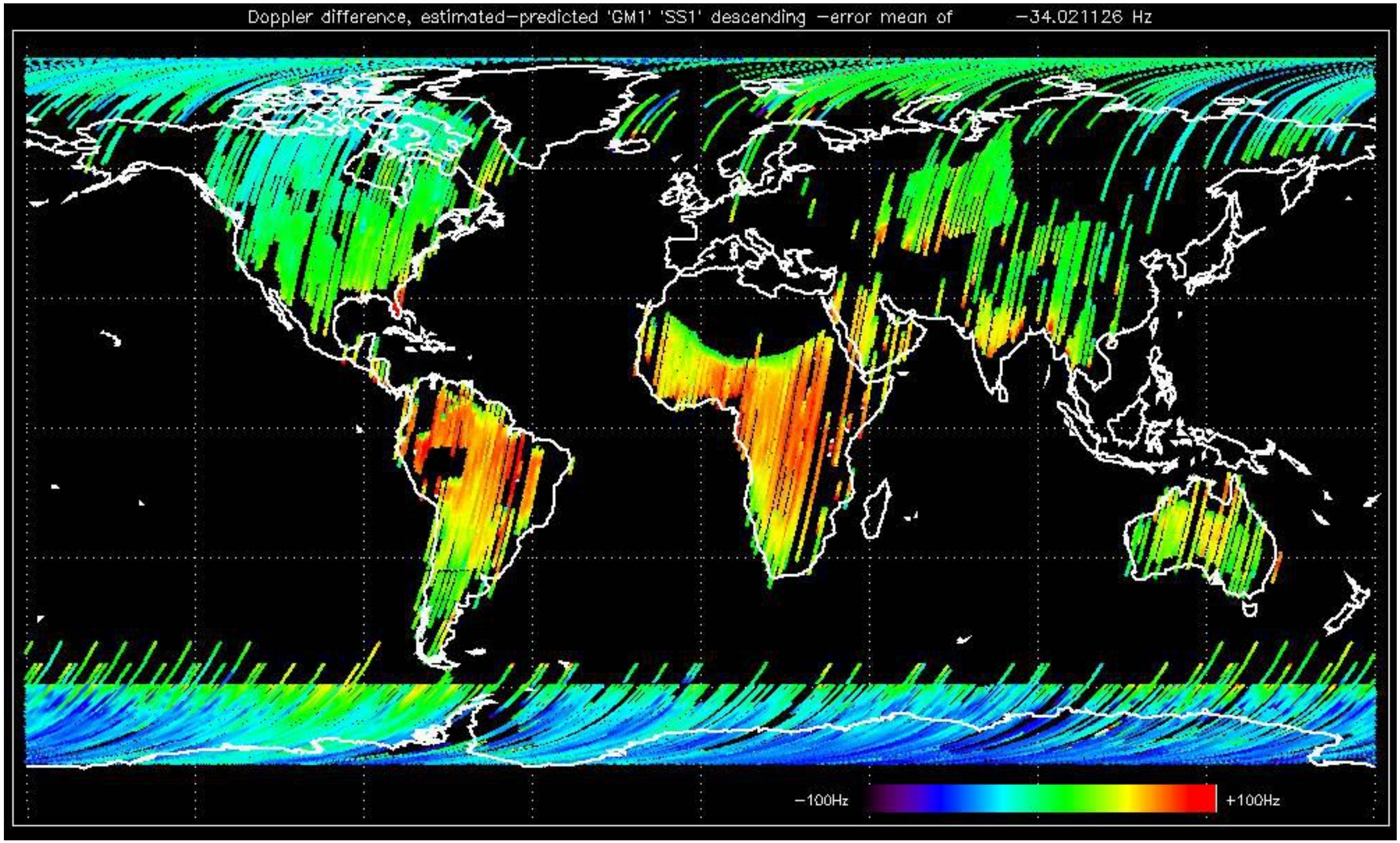

Doppler Bias[Hz]
200
100
0
−100
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
04
16−Dec
Date

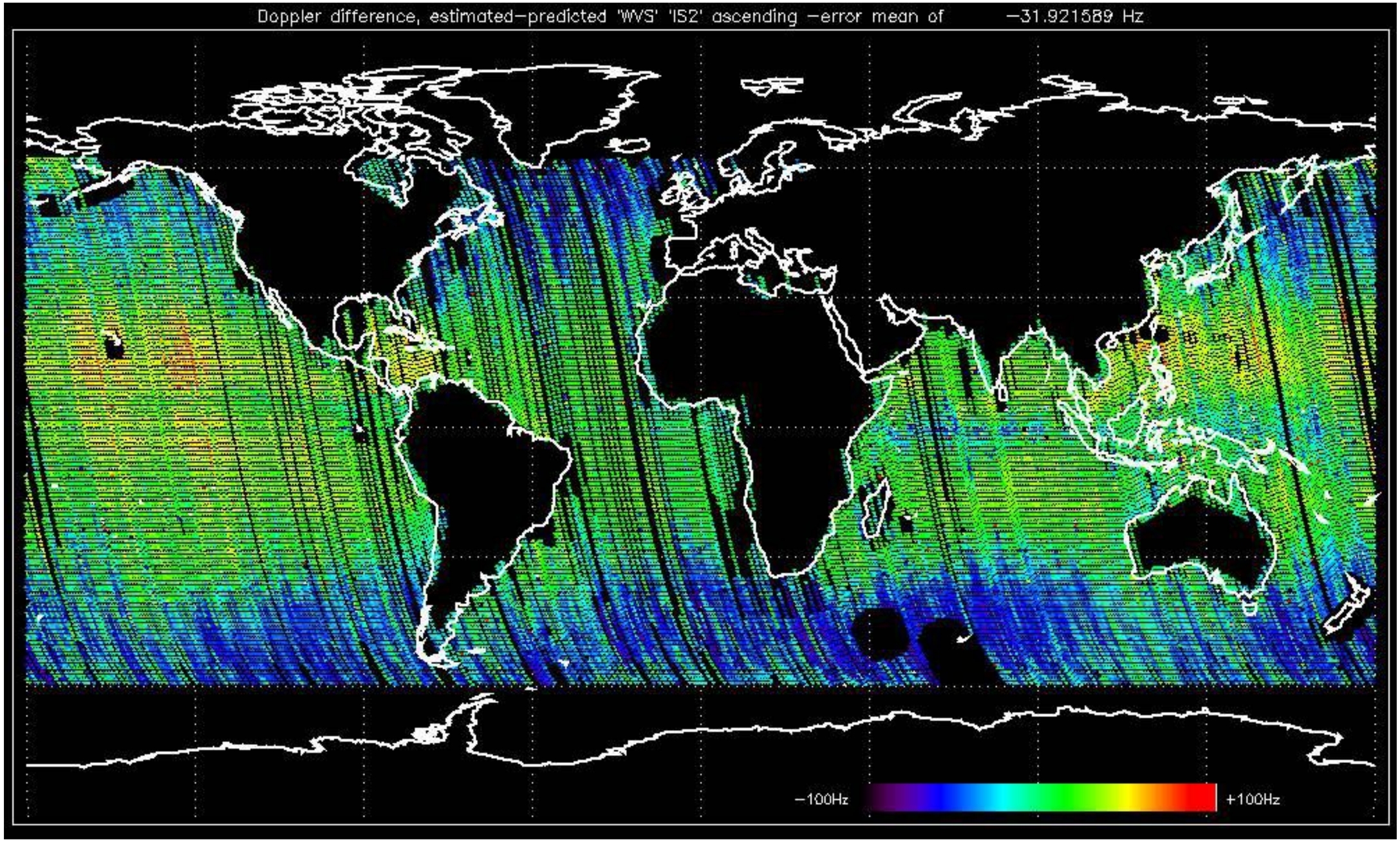

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

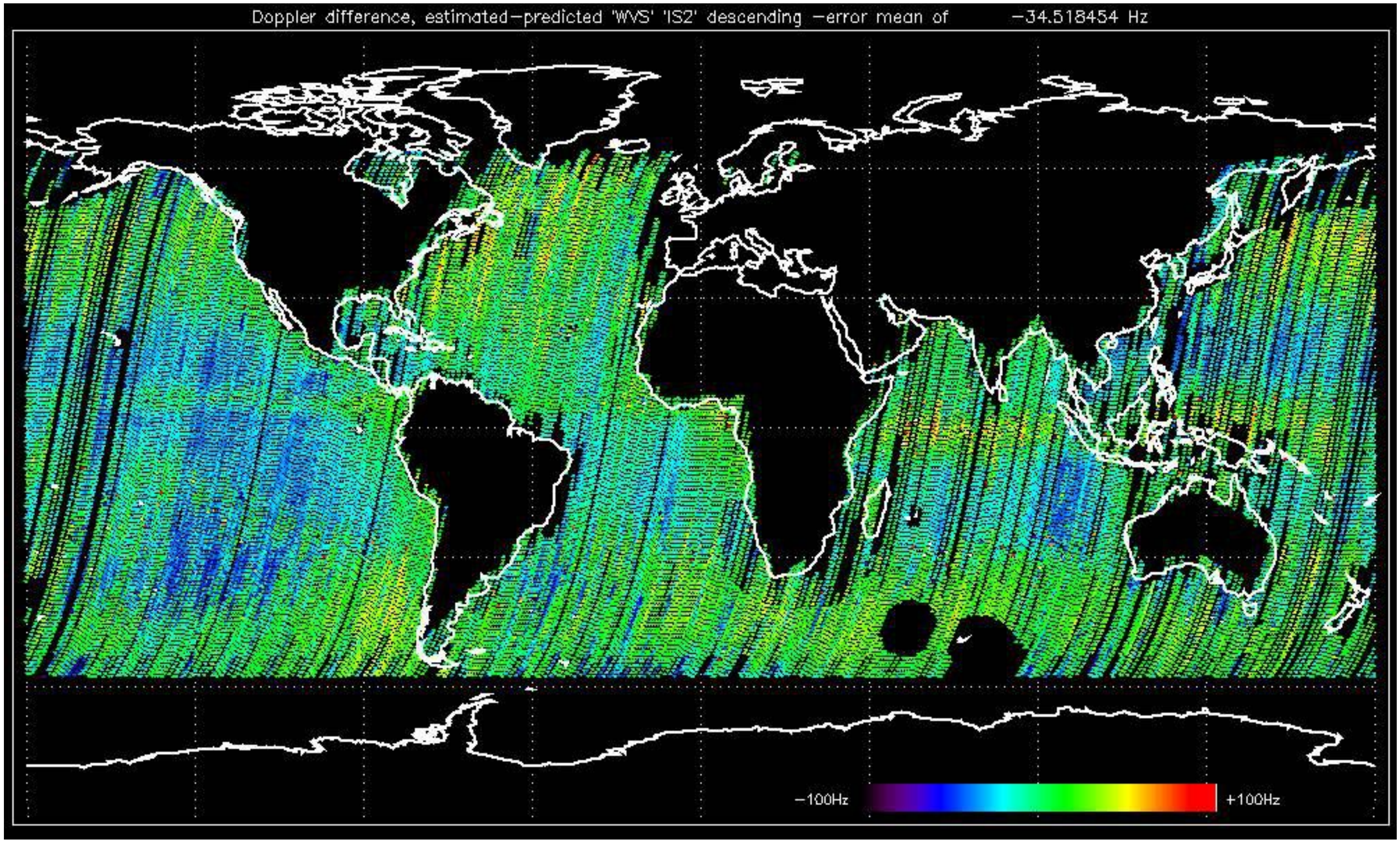

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


Doppler Bias[Hz]
600
400
200
0
−200
−400
02
04
06
08
10
12
14
16
18
20
22
00
02
16−Dec
Date


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −38.299870 Hz
−100Hz
+100Hz

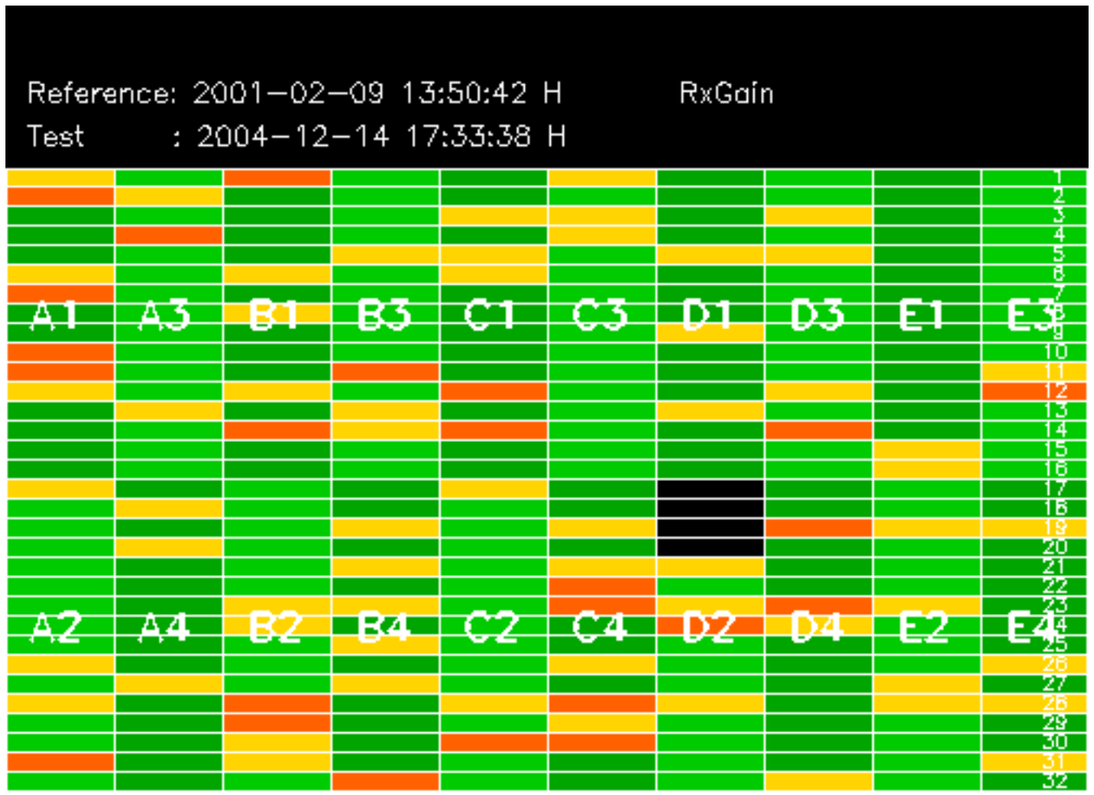

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -34.021126 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −31.921589 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.518454 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 : 2004-12-14 17:33:38 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
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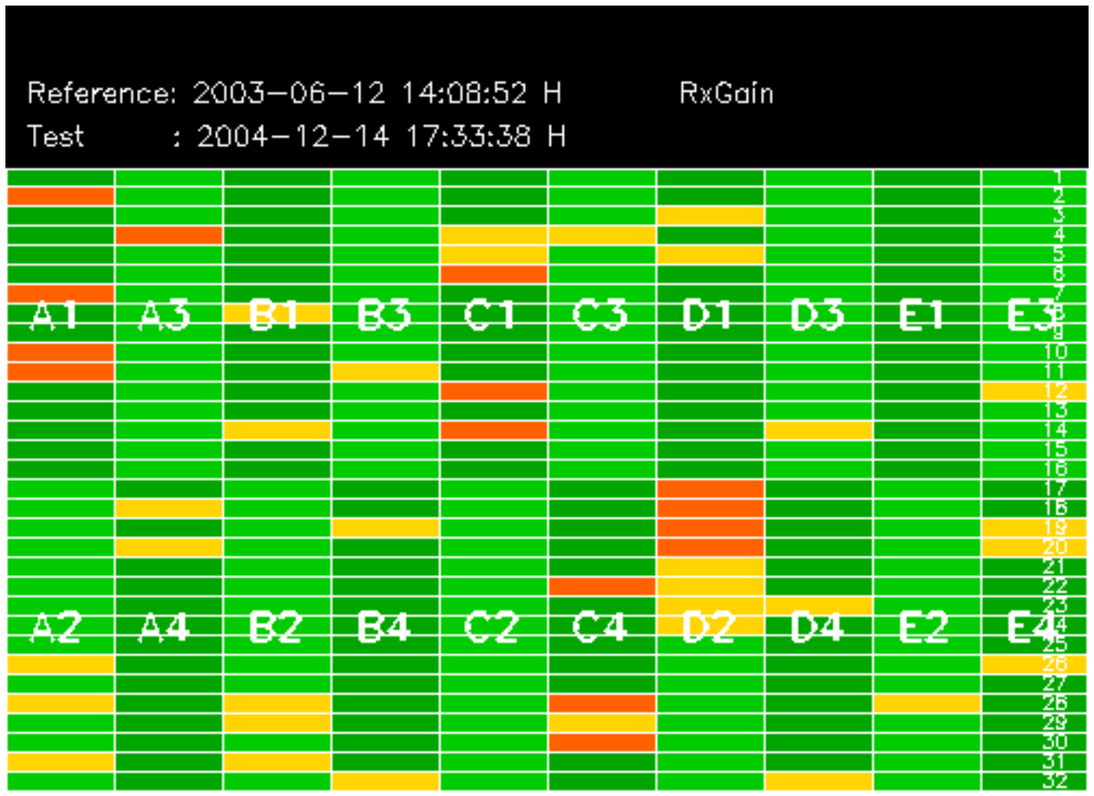
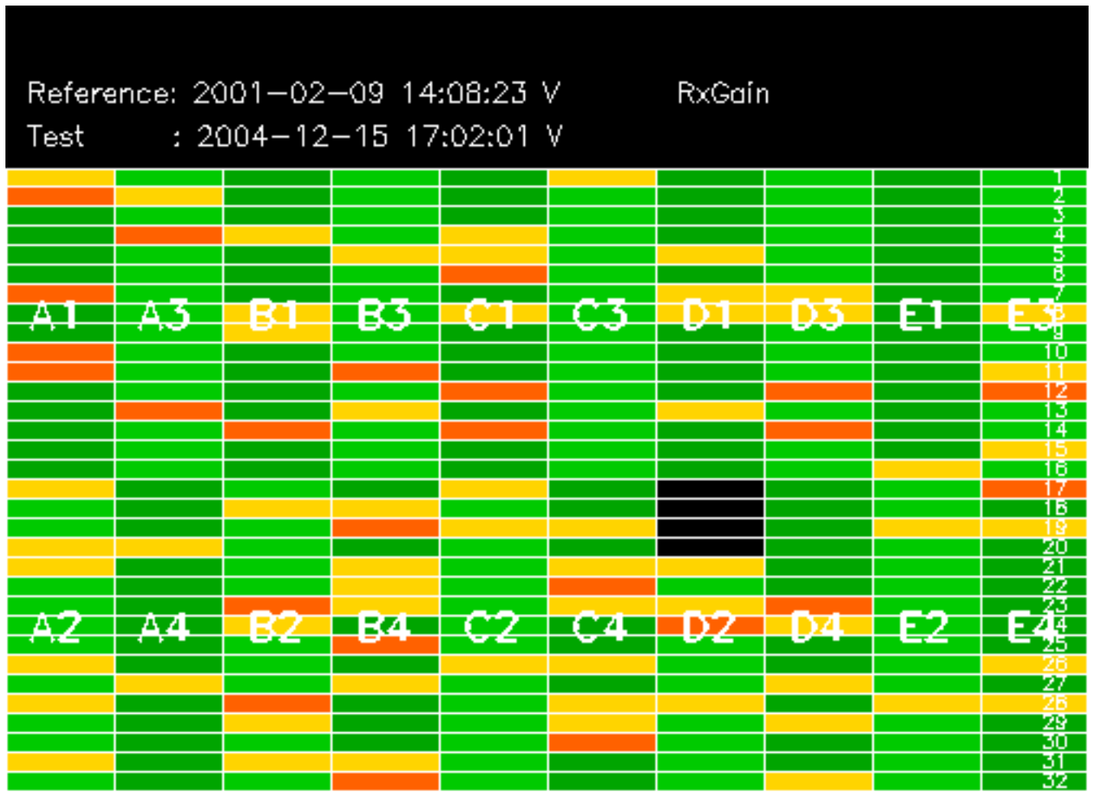

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-14 17:33:38 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 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
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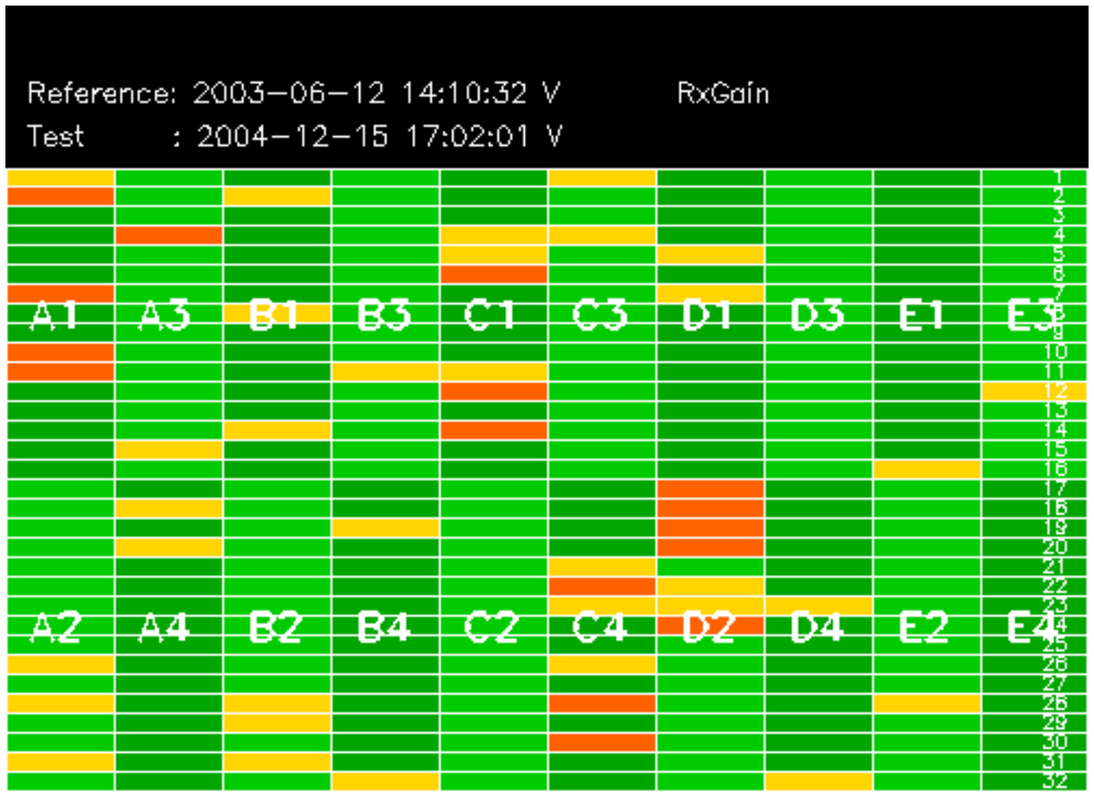
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-15 17:02:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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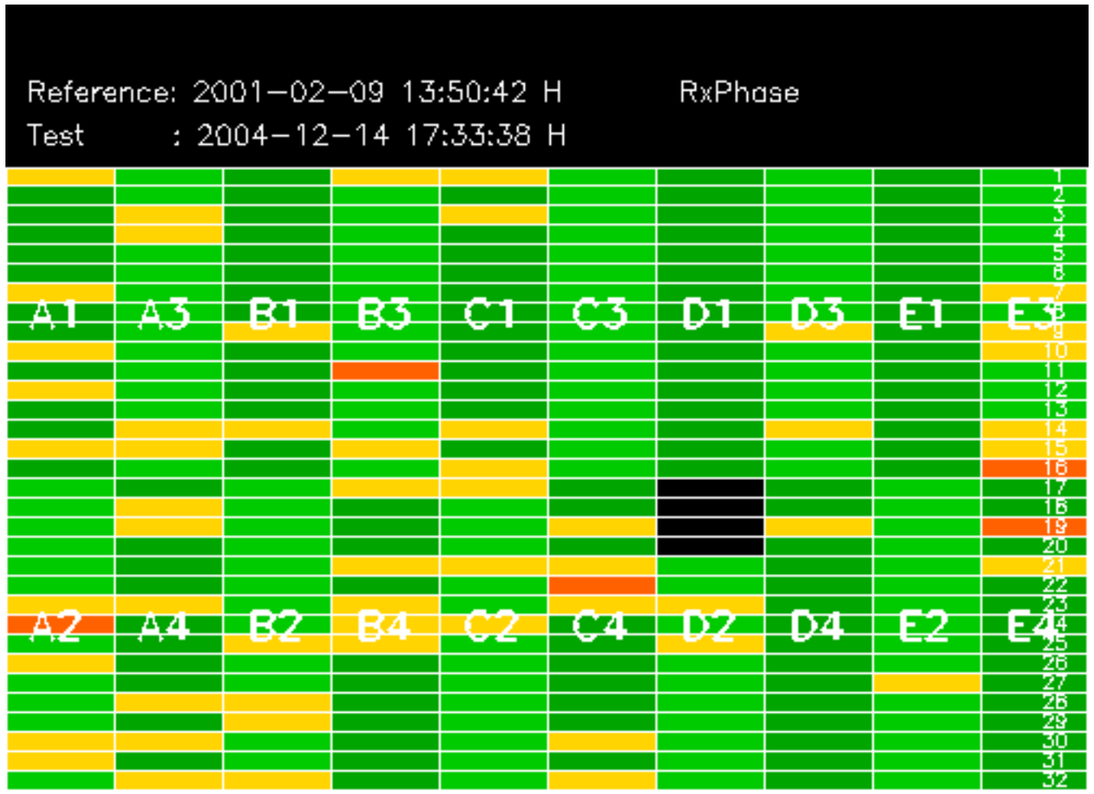
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-14 17:33:38 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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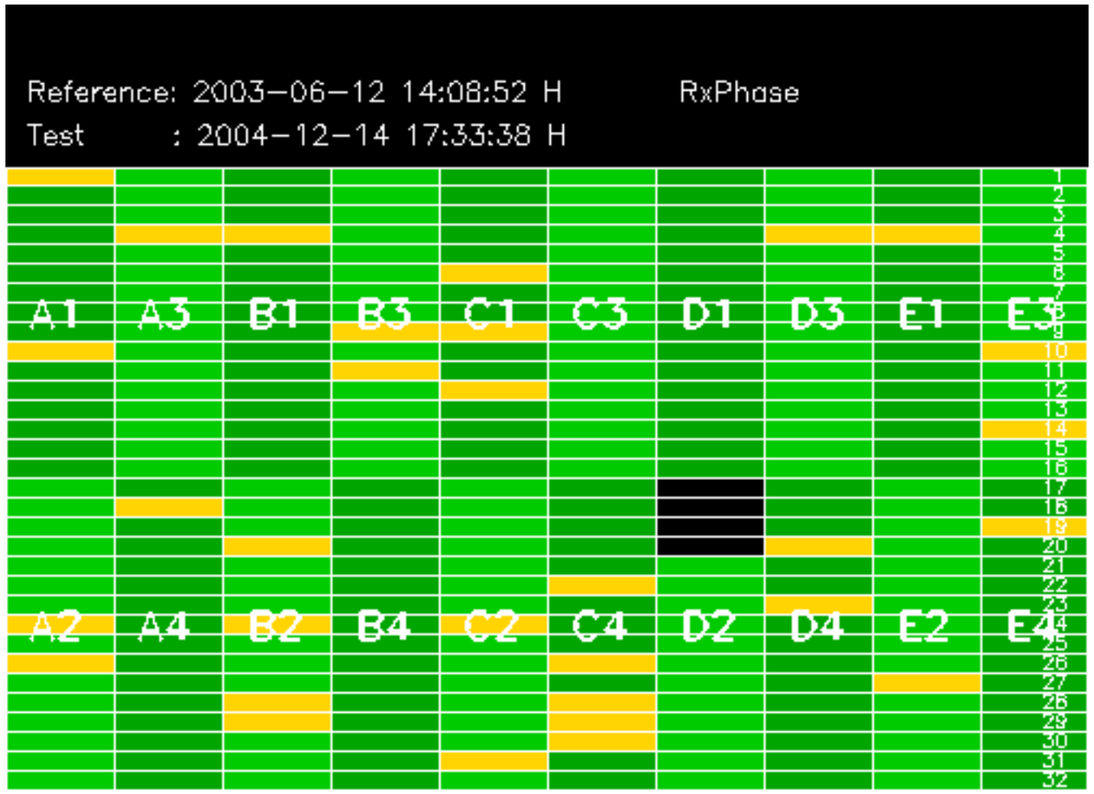
Reference: 2003-06-12 14:08:52 H
Test : 2004-12-14 17:33:38 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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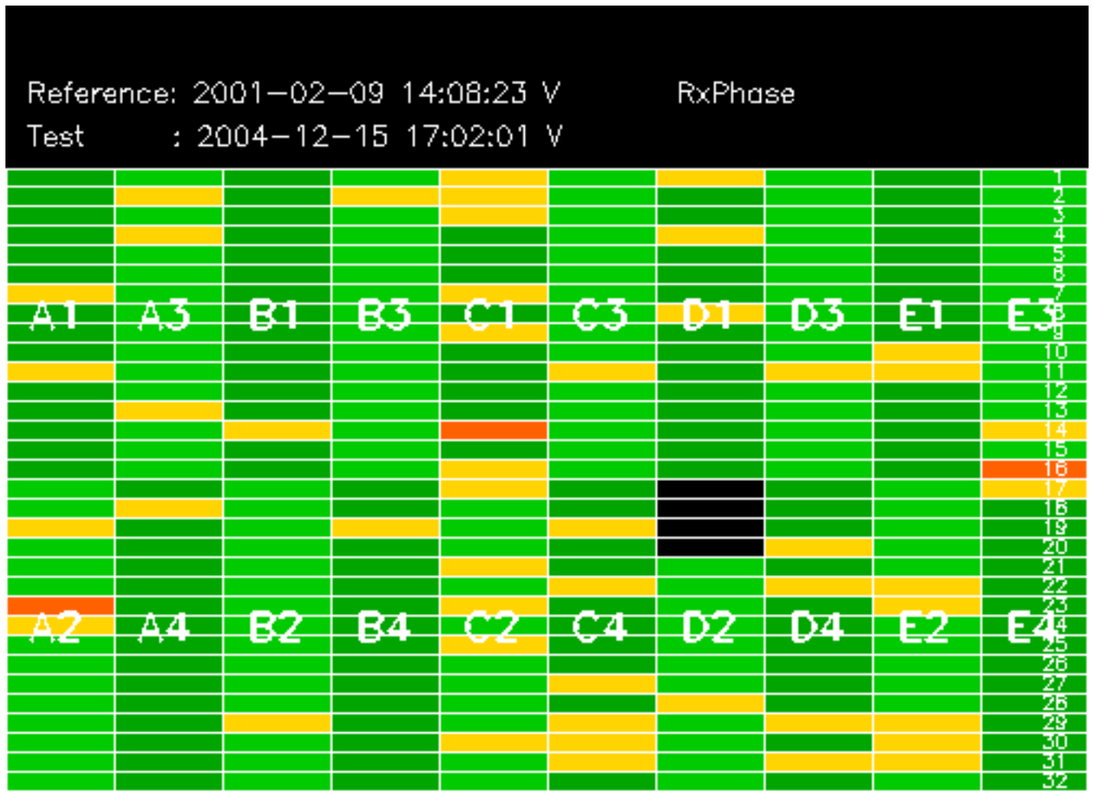
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 17:02:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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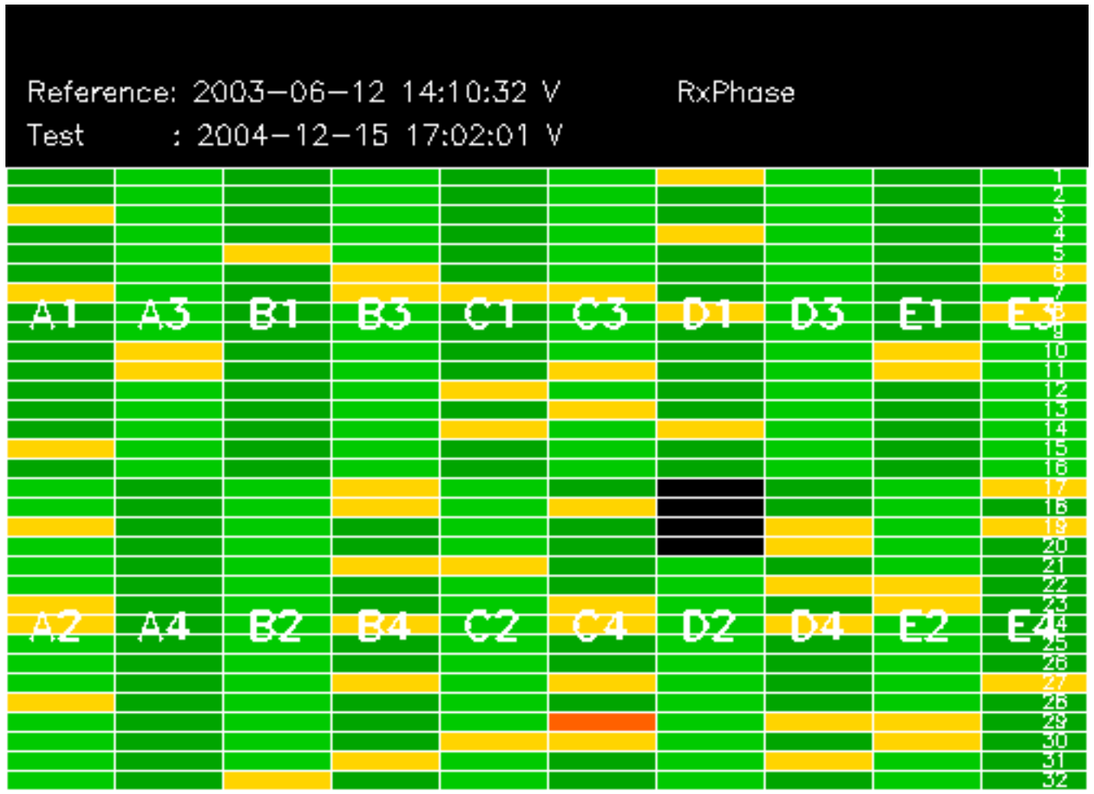
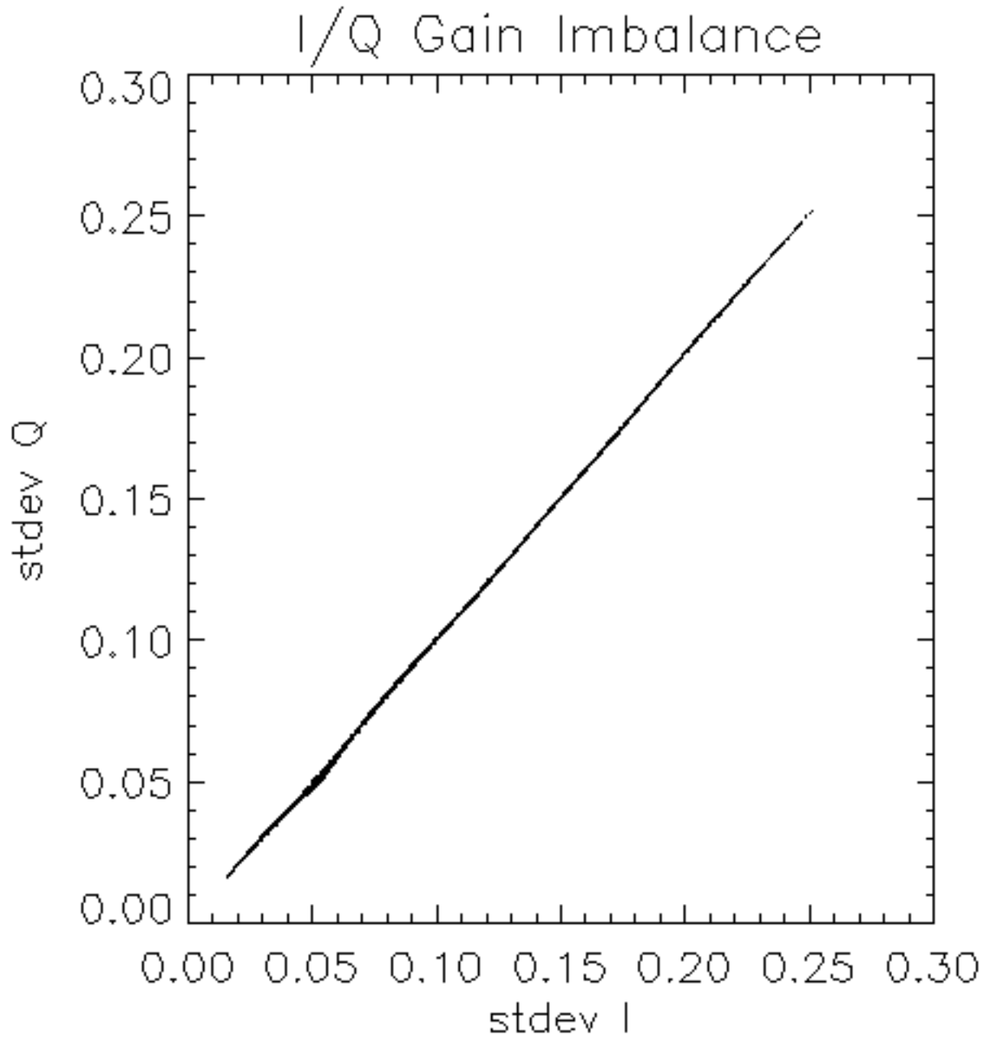
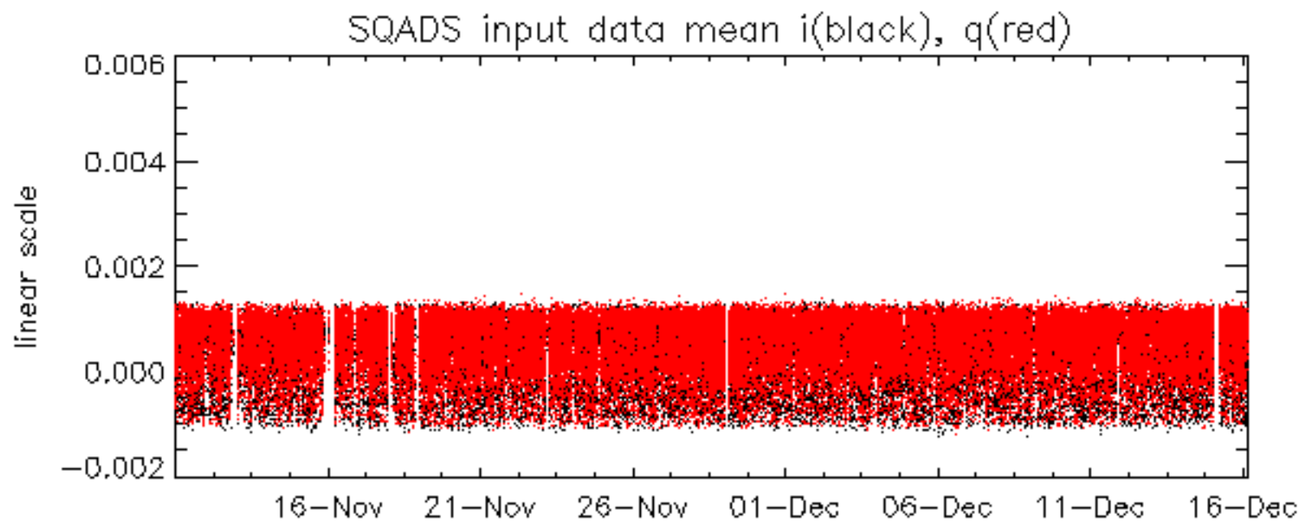
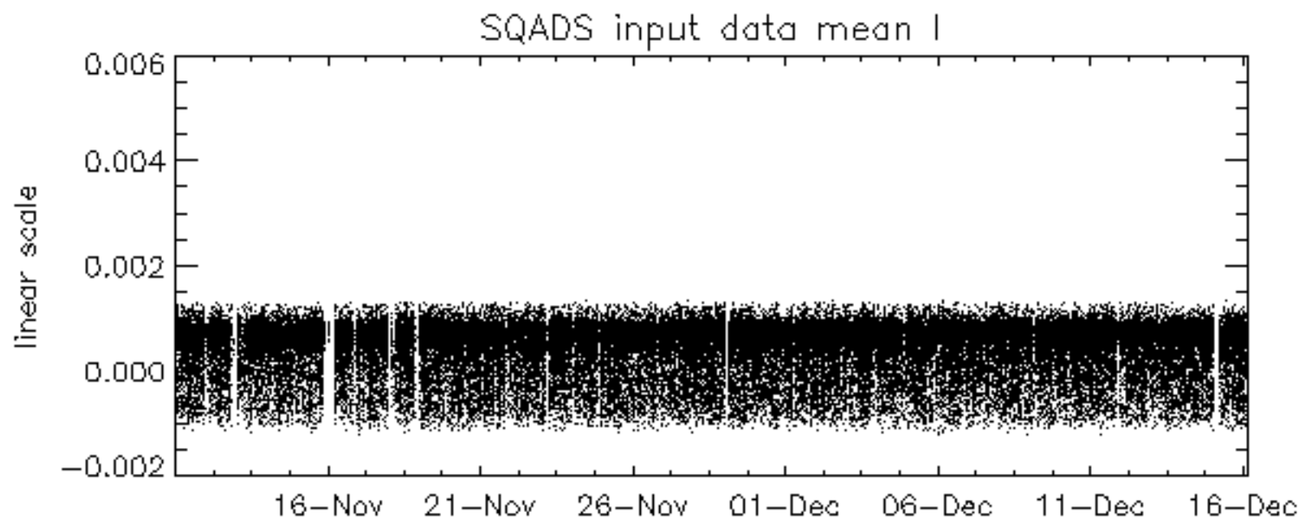
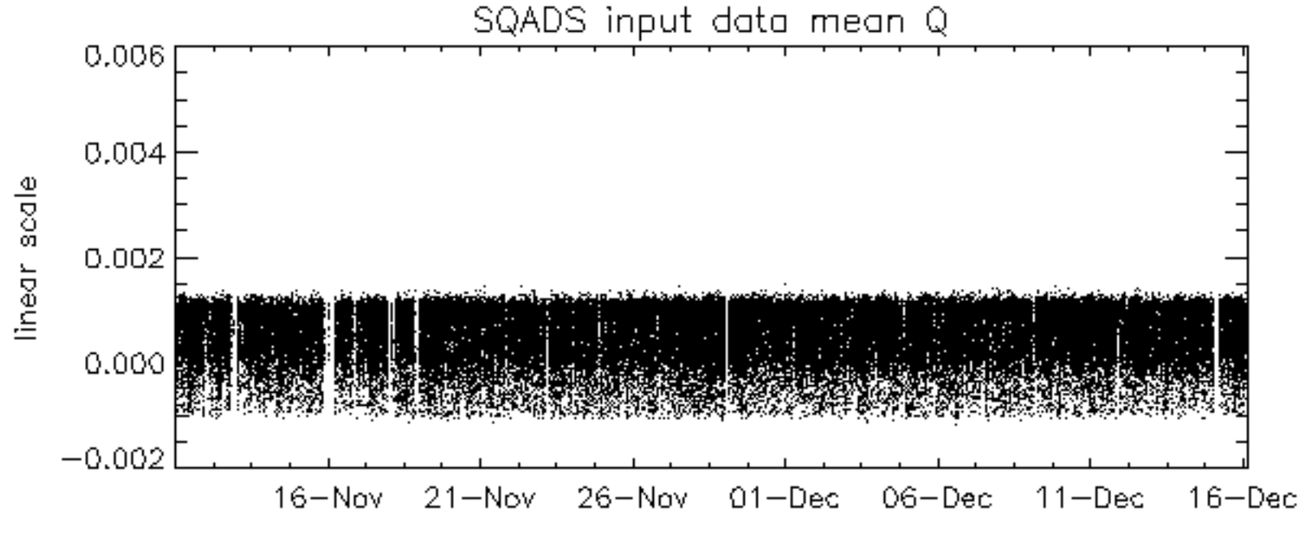
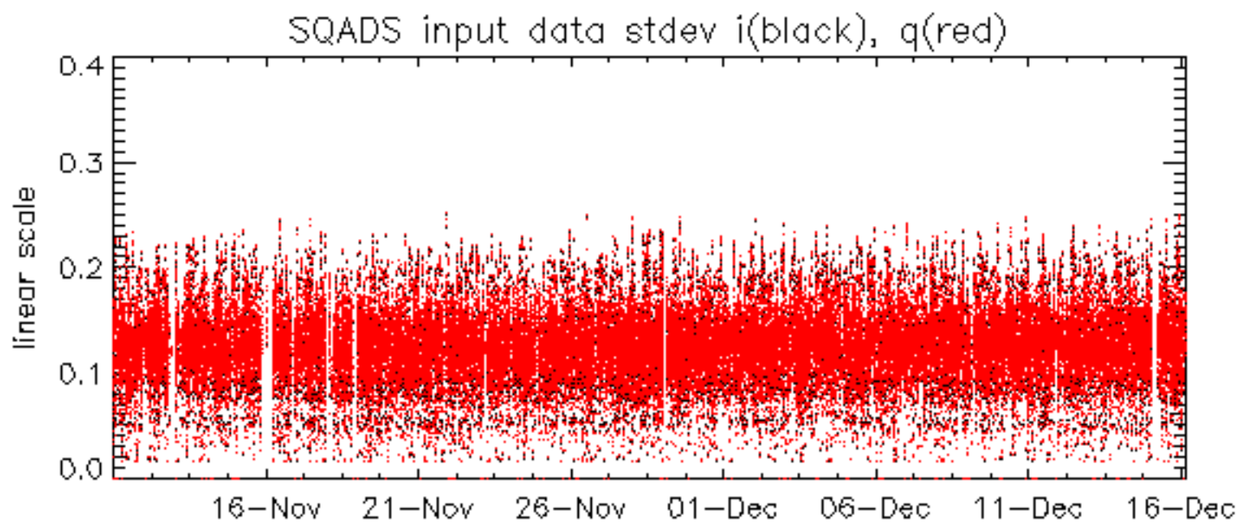

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-15 17:02:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

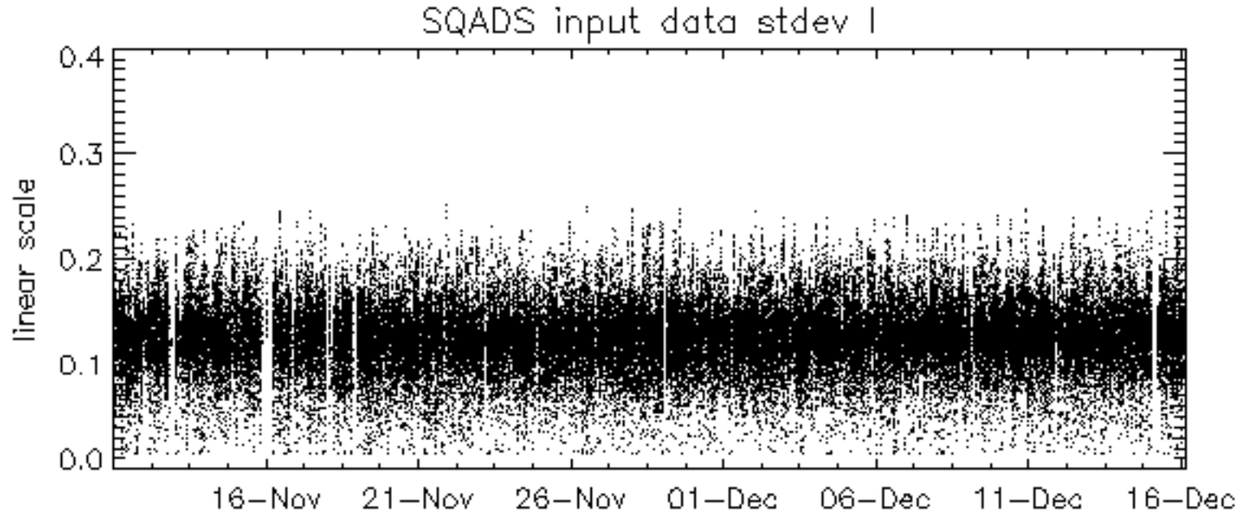

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

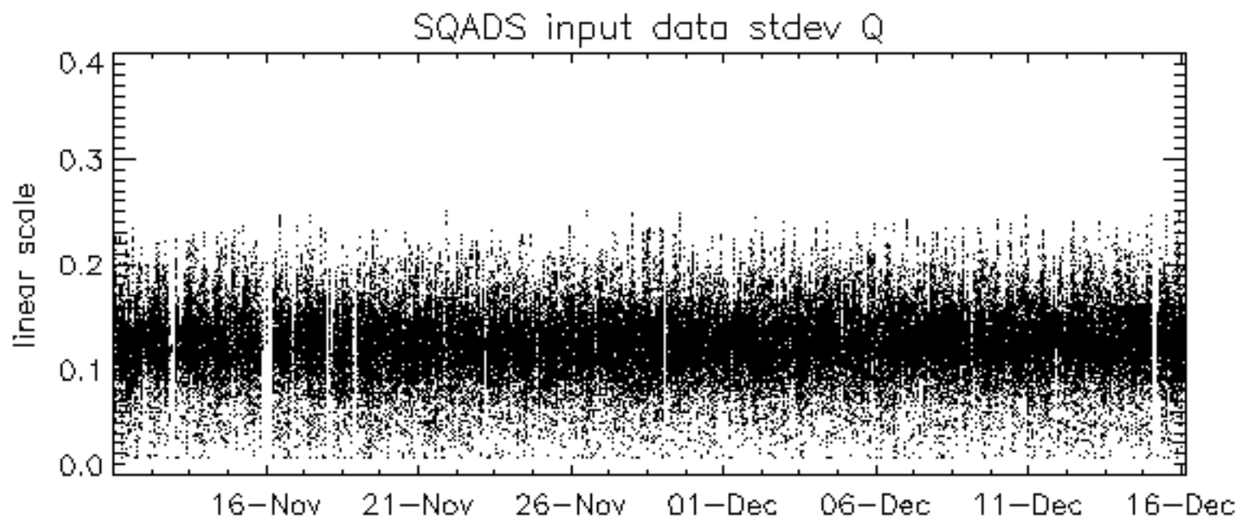

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

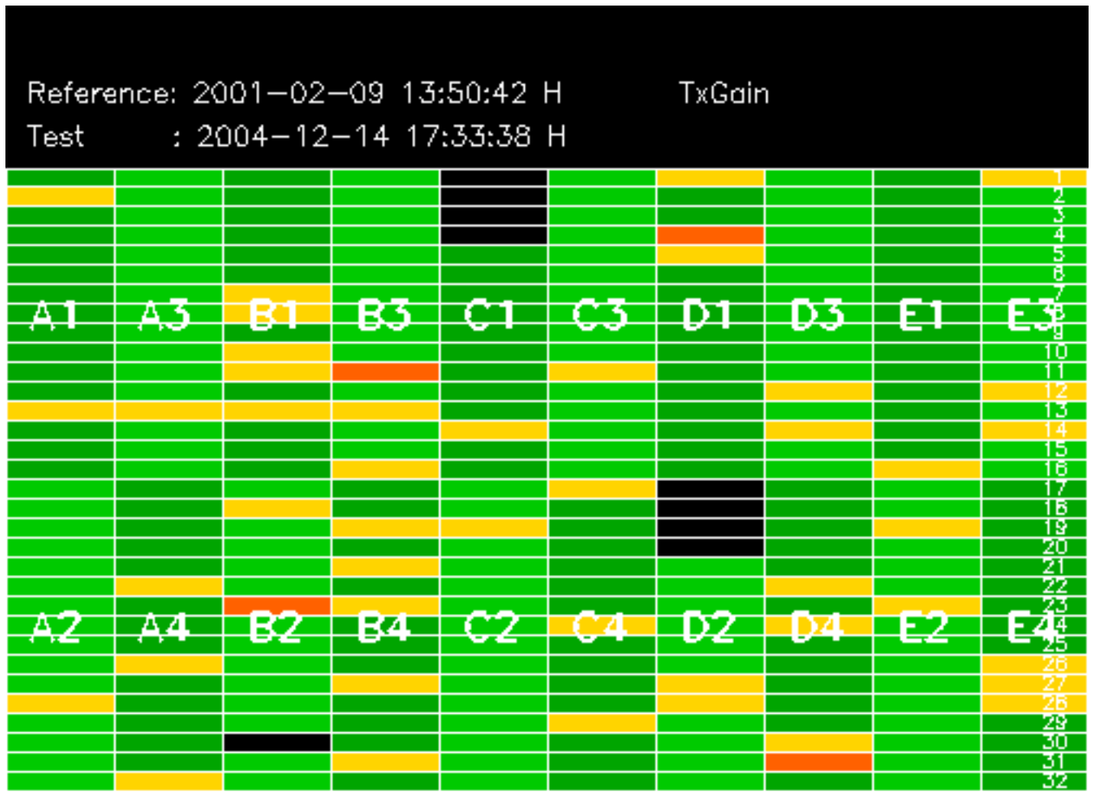

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec


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


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-14 17:33:38 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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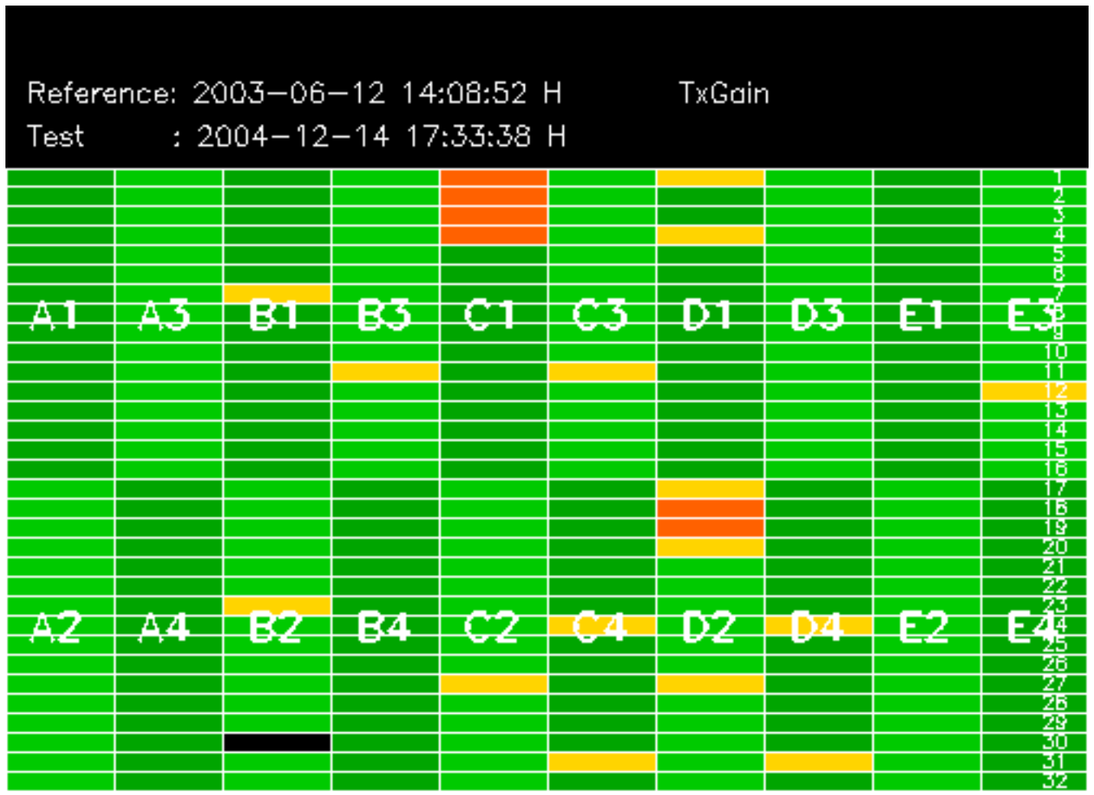
Reference: 2003-06-12 14:08:52 H
Test : 2004-12-14 17:33:38 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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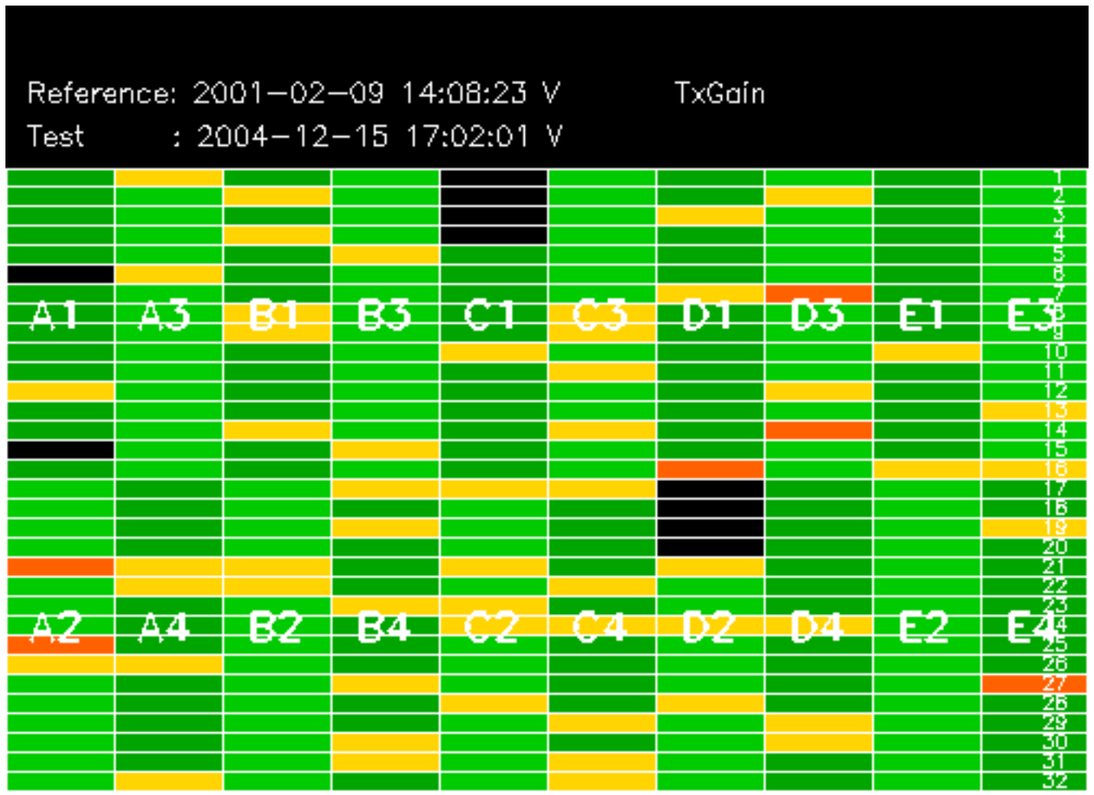
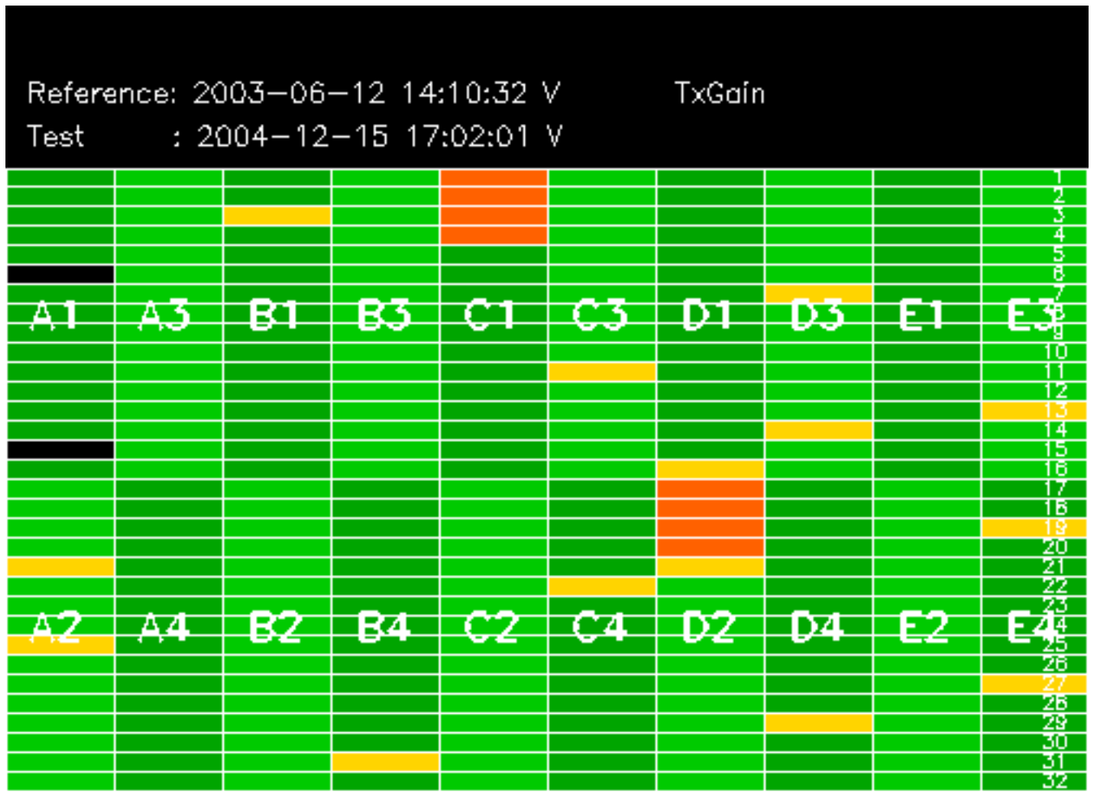
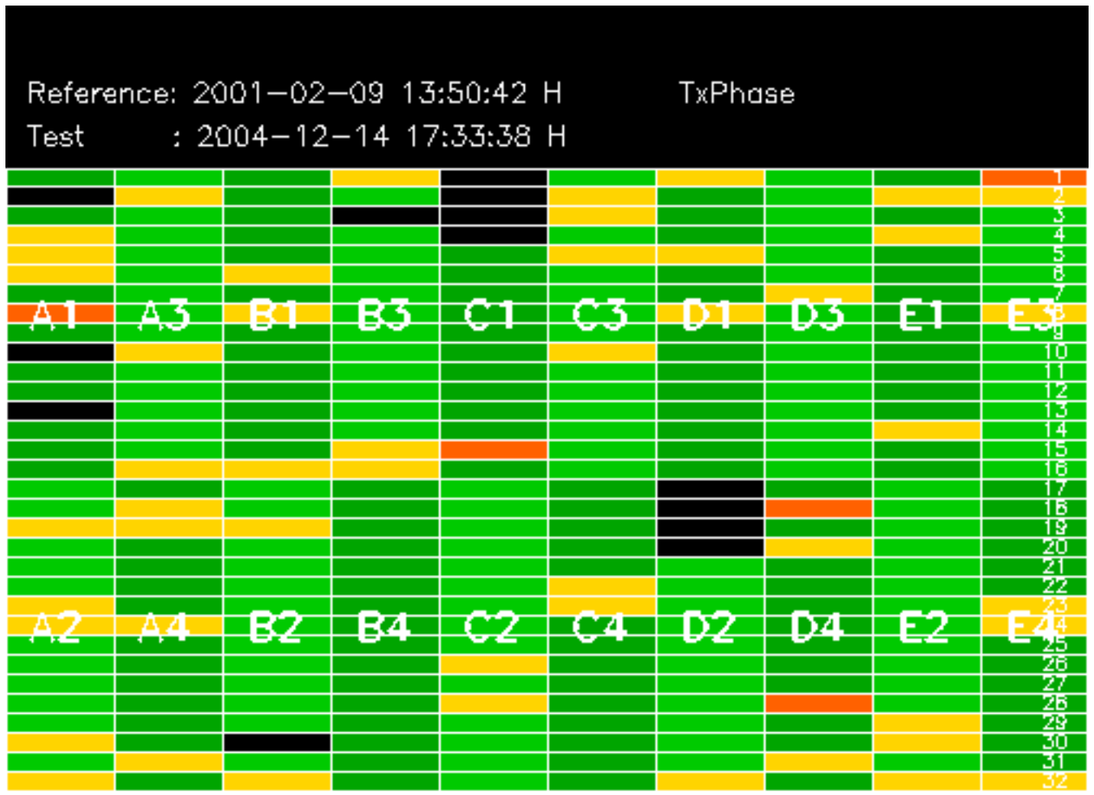
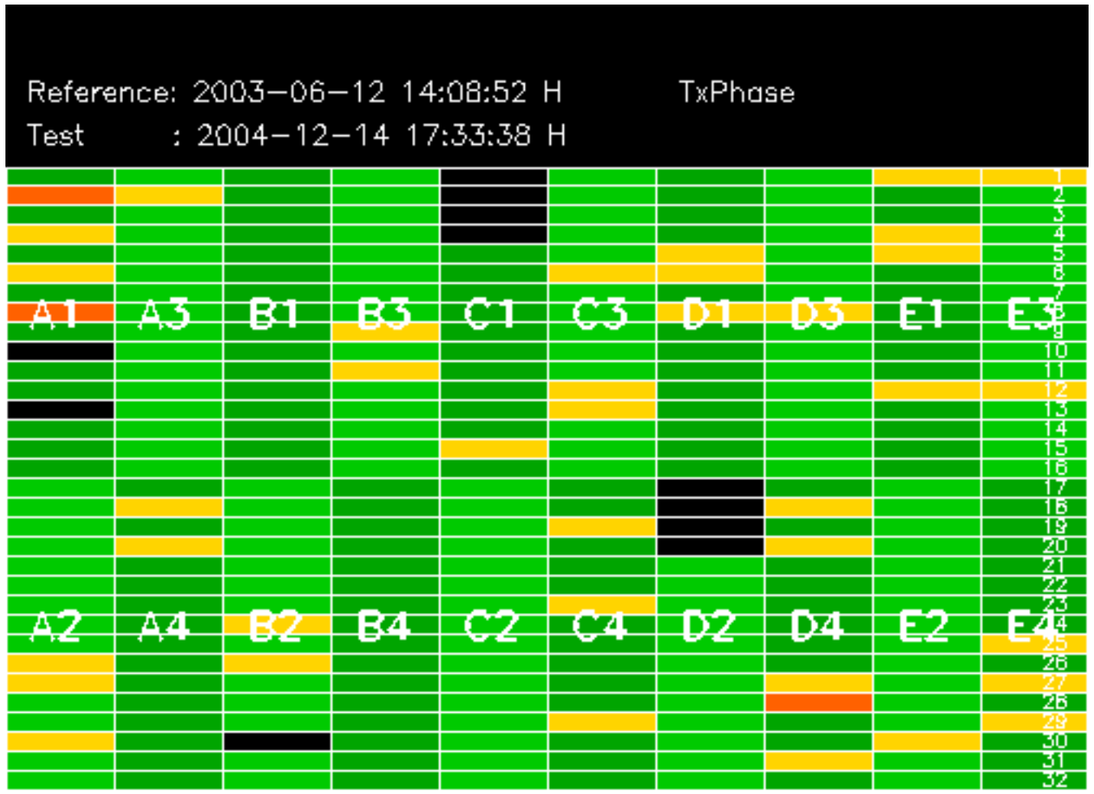
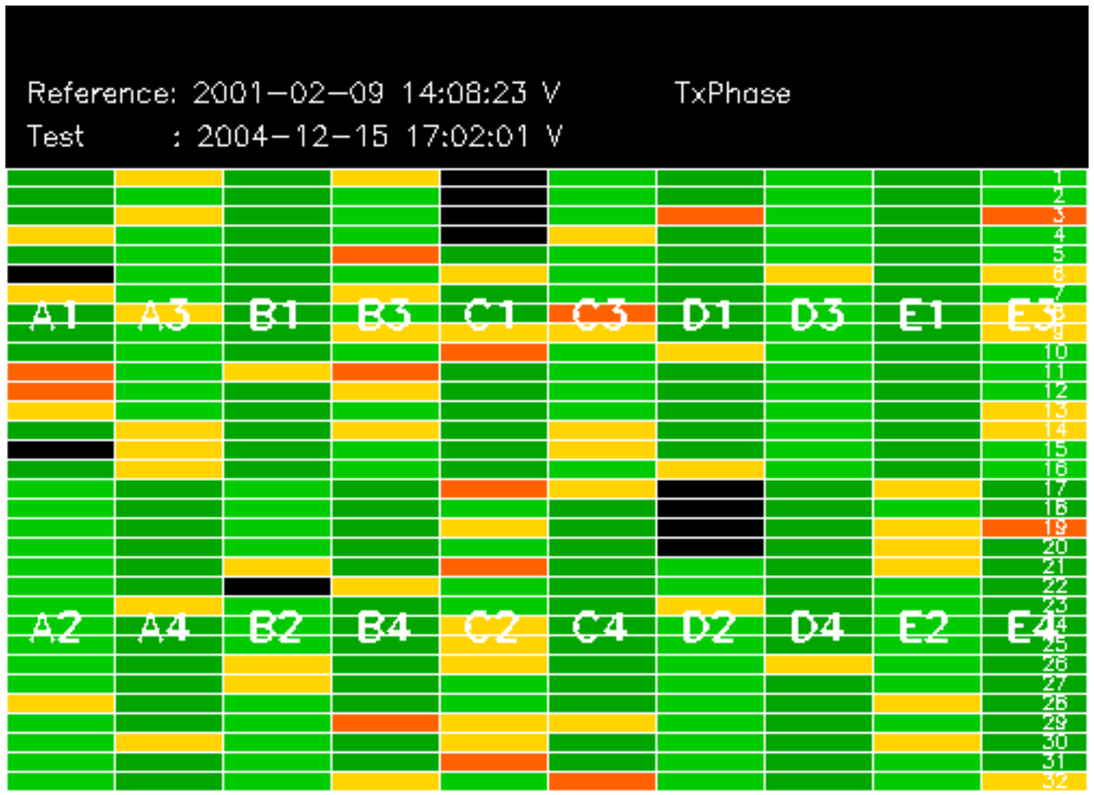
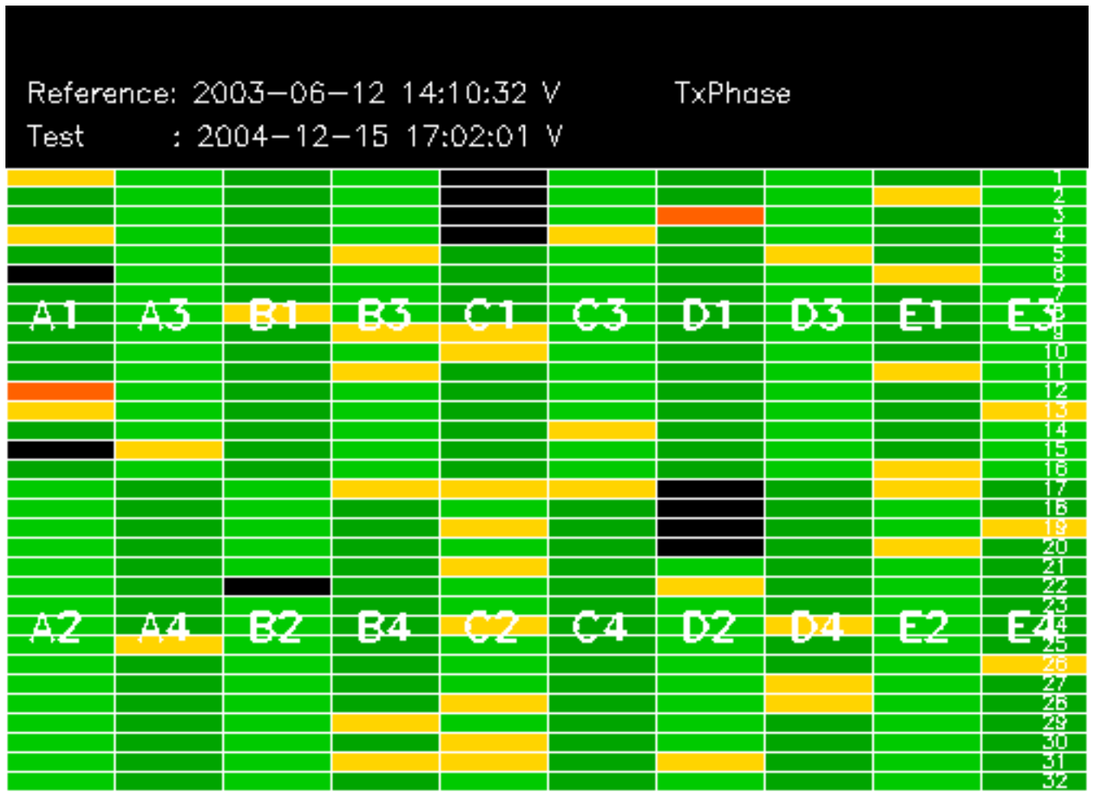

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 17:02:01 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-15 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: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-12-14 17:33:38 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 : 2004-12-14 17:33:38 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 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: 2003-06-12 14:10:32 V
Test : 2004-12-15 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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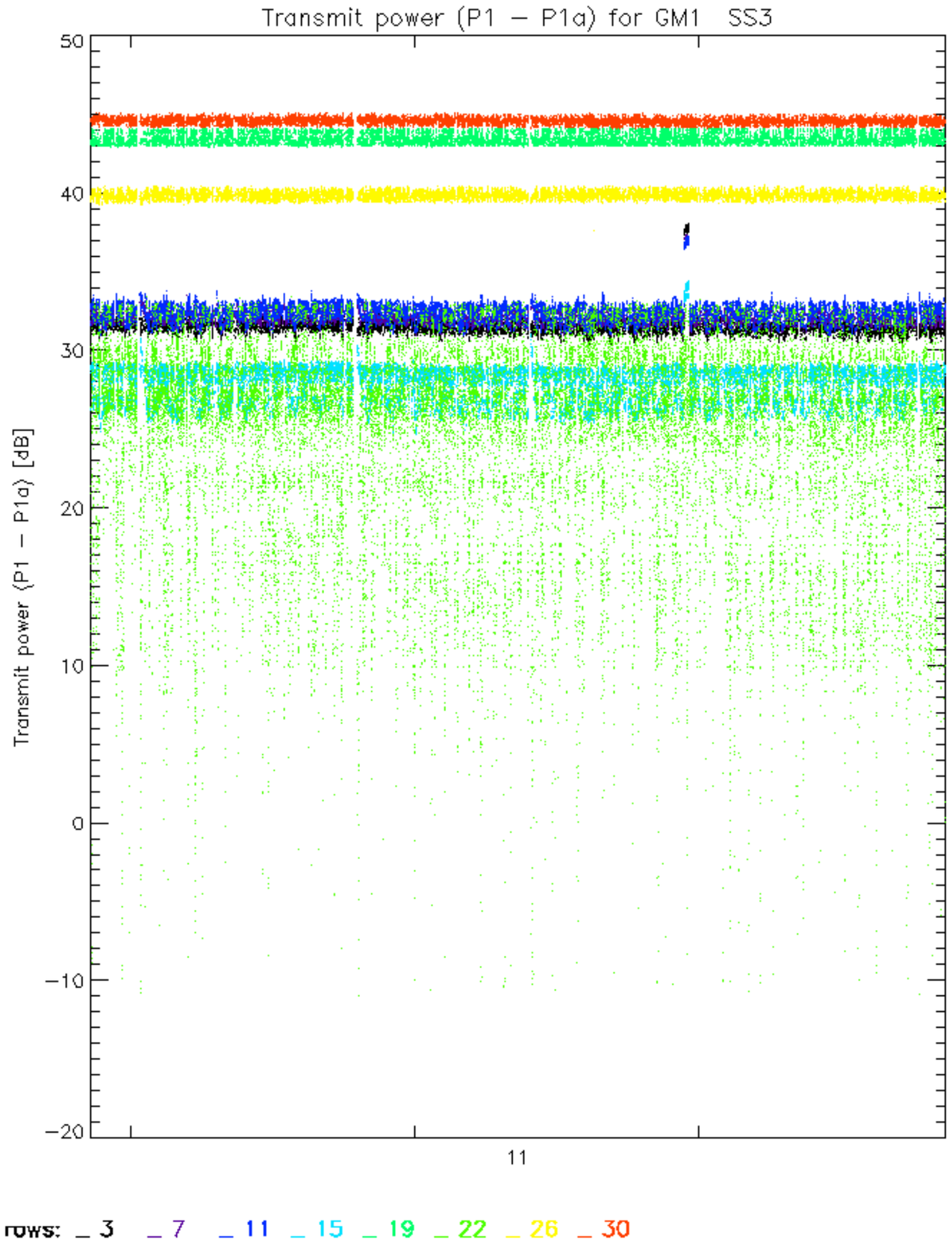
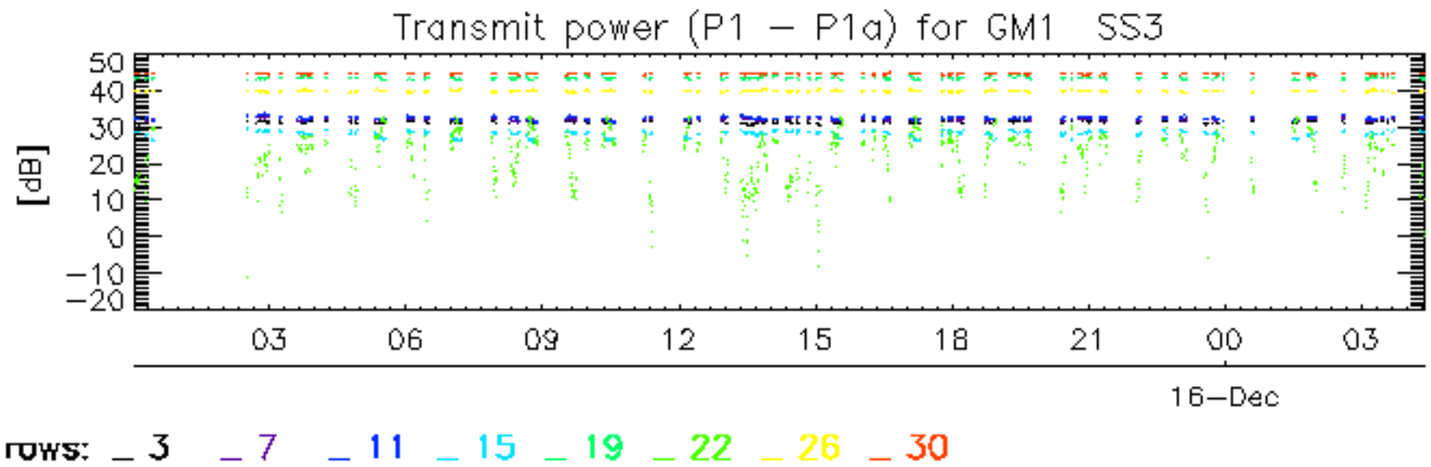
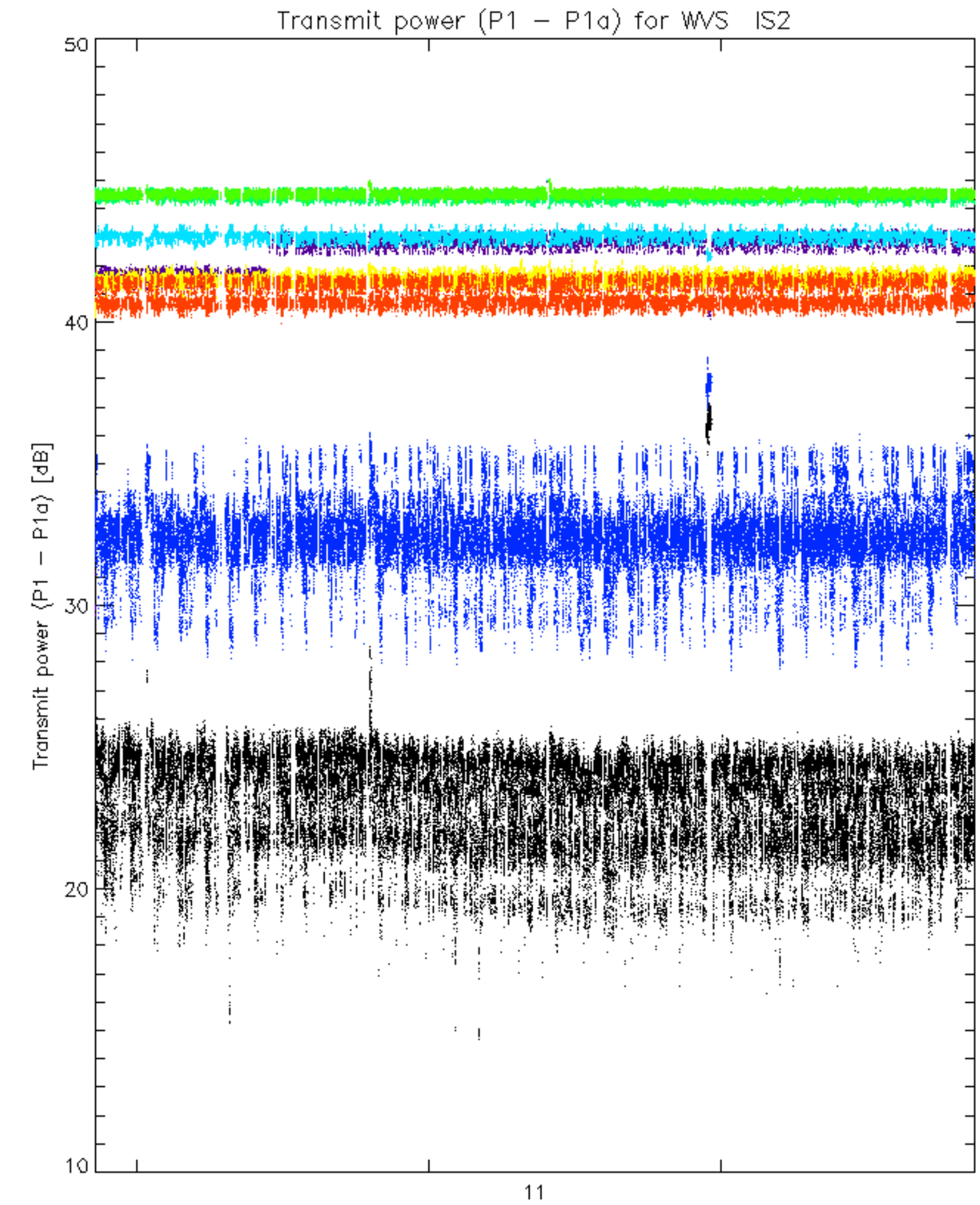
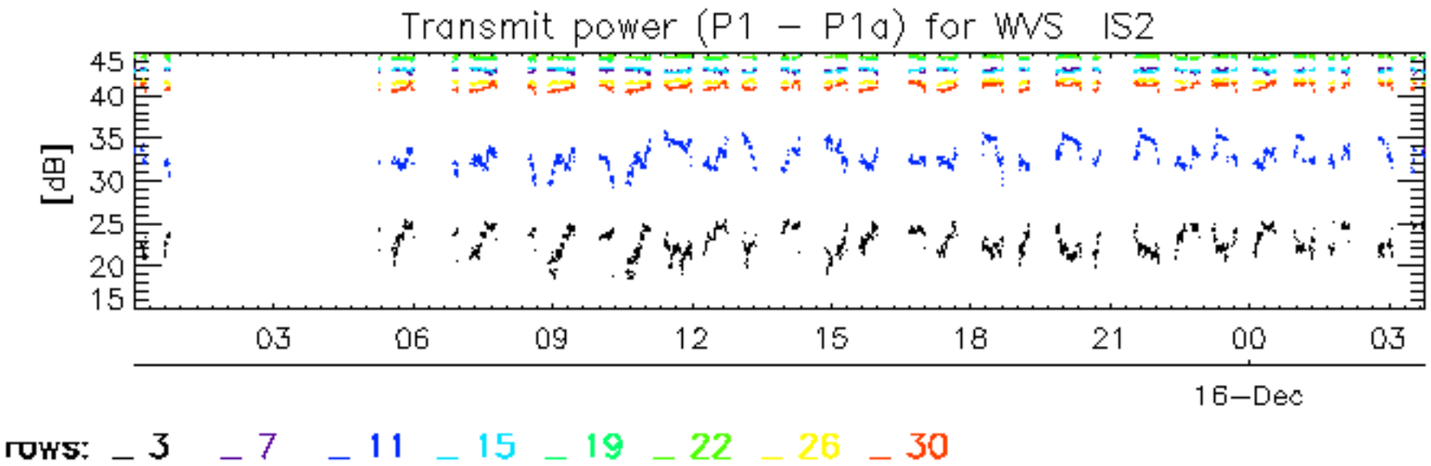

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
11
rows: 3 7 11 15 19 22 26 30


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
16–Dec
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
11
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
16–Dec
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.