PRELIMINARY REPORT OF 041220

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

last update on Mon Dec 20 10:58:39 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 2004-12-19 00:00:00 to 2004-12-20 10:58:39

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	29	46	4	2	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	29	46	4	2	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	29	46	4	2	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	29	46	4	2	4

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	38	46	5	8	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	38	46	5	8	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	38	46	5	8	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	38	46	5	8	4

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20041219 095344
H	20041218 084445

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	-3.463855	0.029162	0.004817
7	P1	-3.118239	0.029220	0.099309
11	P1	-4.637781	0.045914	-0.059676
15	P1	-5.665376	0.034689	-0.031812
19	P1	-3.642561	0.004918	-0.040931
22	P1	-4.578176	0.016729	0.003813
26	P1	-4.929897	0.015702	-0.027214
30	P1	-7.104946	0.013859	-0.046292
3	P1	-15.958903	0.115730	0.044651
7	P1	-15.410879	0.284736	-0.561450
11	P1	-20.718363	0.480138	-0.113617
15	P1	-11.623807	0.088947	0.020530
19	P1	-14.138519	0.027279	-0.072690
22	P1	-16.121979	0.459410	0.111393
26	P1	-17.781168	0.260917	0.034502
30	P1	-17.904848	0.304992	0.080825

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.365257	0.085338	0.017898
7	P2	-22.598936	0.139404	0.047936
11	P2	-14.951327	0.134335	0.163893
15	P2	-7.168543	0.109293	0.008543
19	P2	-9.723792	0.134966	0.020046
22	P2	-17.196159	0.098700	0.058905

26	P2	-16.526079	0.105757	-0.016015
30	P2	-18.993683	0.082540	0.088327

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210972	0.006936	-0.014190
7	P3	-8.210972	0.006936	-0.014194
11	P3	-8.210968	0.006937	-0.014204
15	P3	-8.210964	0.006937	-0.014205
19	P3	-8.210964	0.006937	-0.014213
22	P3	-8.210965	0.006937	-0.014214
26	P3	-8.210967	0.006937	-0.014218
30	P3	-8.210963	0.006936	-0.013250

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	-2.842727	0.111736	-0.068357
7	P1	-2.979204	0.064750	-0.017570
11	P1	-3.938598	0.049330	-0.053306
15	P1	-3.516864	0.078599	-0.051019
19	P1	-3.601201	0.012818	-0.027856
22	P1	-5.611491	0.068137	-0.042421
26	P1	-6.502912	0.023276	-0.046116
30	P1	-6.296700	0.042517	-0.056184
3	P1	-10.657140	0.059672	-0.202043
7	P1	-10.108555	0.155337	-0.002875

11	P1	-12.407308	0.200447	-0.044771
15	P1	-11.725999	0.101897	0.006277
19	P1	-15.632263	0.049177	-0.026085
22	P1	-24.107111	2.152554	-0.101038
26	P1	-15.087138	0.394036	0.128274
30	P1	-20.156998	0.947488	0.147008

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.046816	0.035328	0.022019
7	P2	-22.641359	0.028874	0.084153
11	P2	-10.739860	0.033282	0.175223
15	P2	-5.063687	0.023799	-0.009816
19	P2	-6.968333	0.033100	-0.006489
22	P2	-7.323297	0.025713	0.042316
26	P2	-23.960247	0.018581	-0.018653
30	P2	-22.049574	0.018689	0.080941

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044626	0.002652	-0.006203
7	P3	-8.044640	0.002656	-0.006002
11	P3	-8.044678	0.002643	-0.005783
15	P3	-8.044553	0.002657	-0.006262
19	P3	-8.044724	0.002660	-0.005910
22	P3	-8.044625	0.002659	-0.006255
26	P3	-8.044740	0.002656	-0.006103
30	P3	-8.044575	0.002642	-0.006238

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	0.000440710
	stdev	2.41880e-07
MEAN Q	mean	0.000500719
	stdev	2.54584e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125636
	stdev	0.00100266
STDEV Q	mean	0.125874
	stdev	0.00101177

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

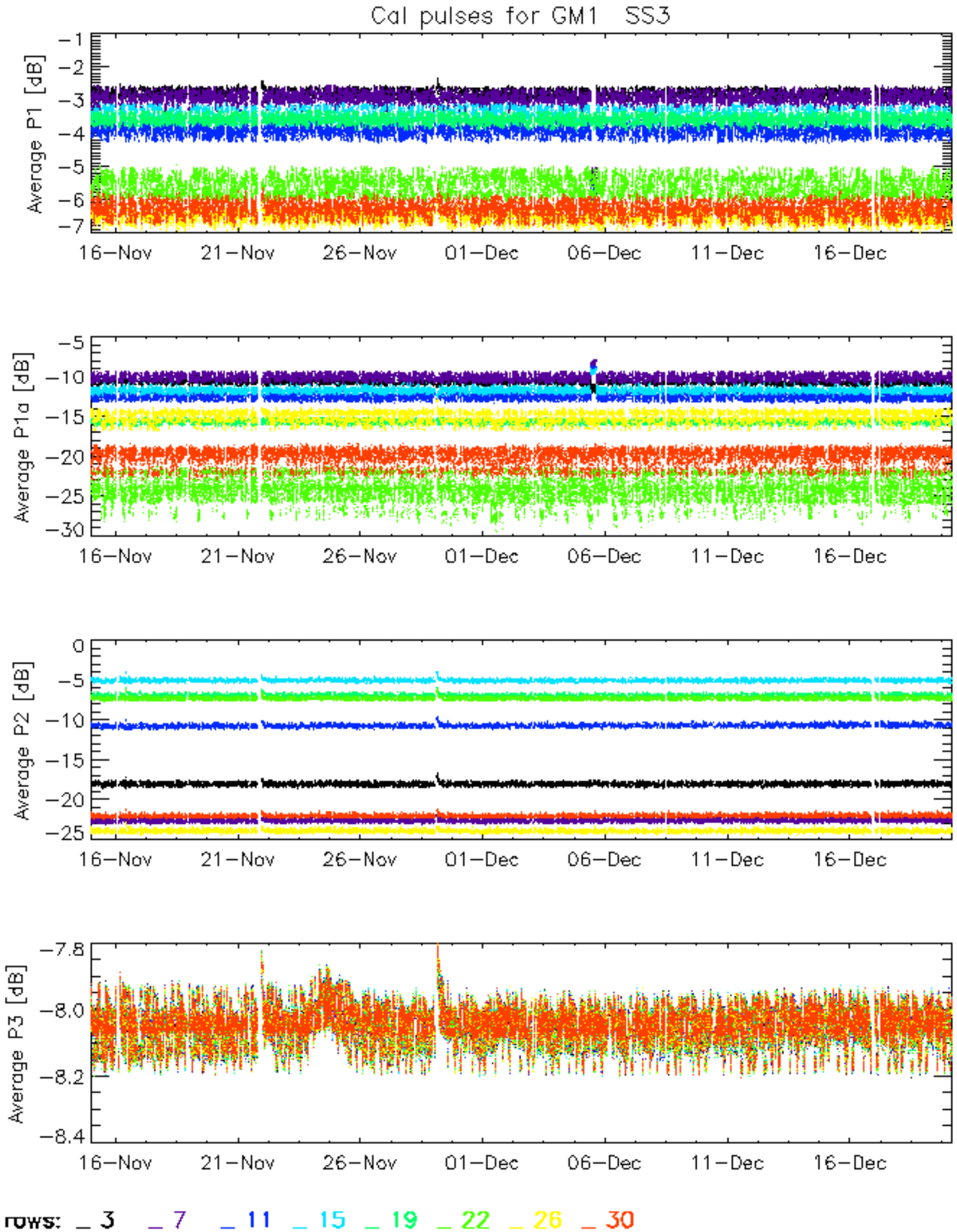
Evolution of Absolute Doppler

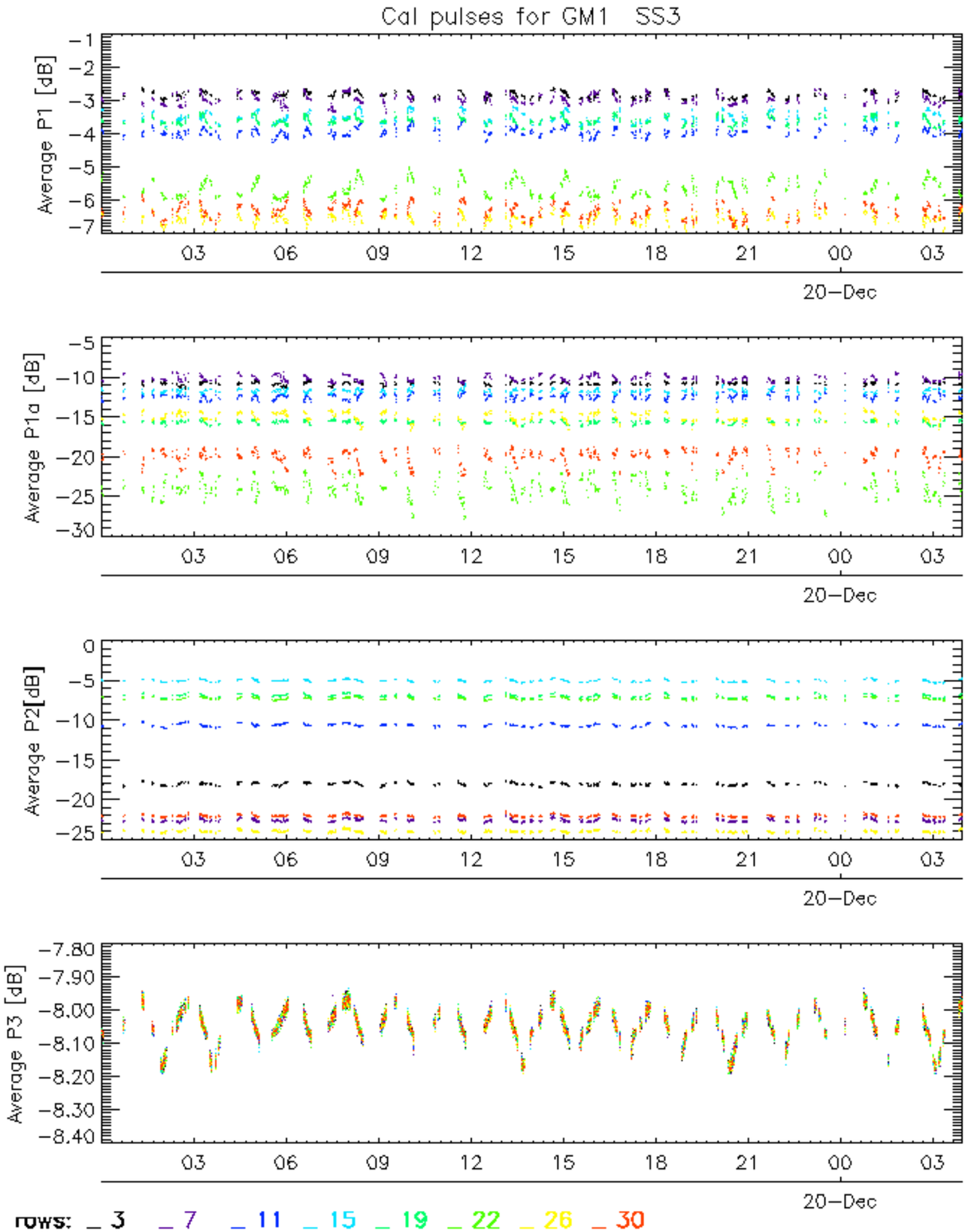
Acsending

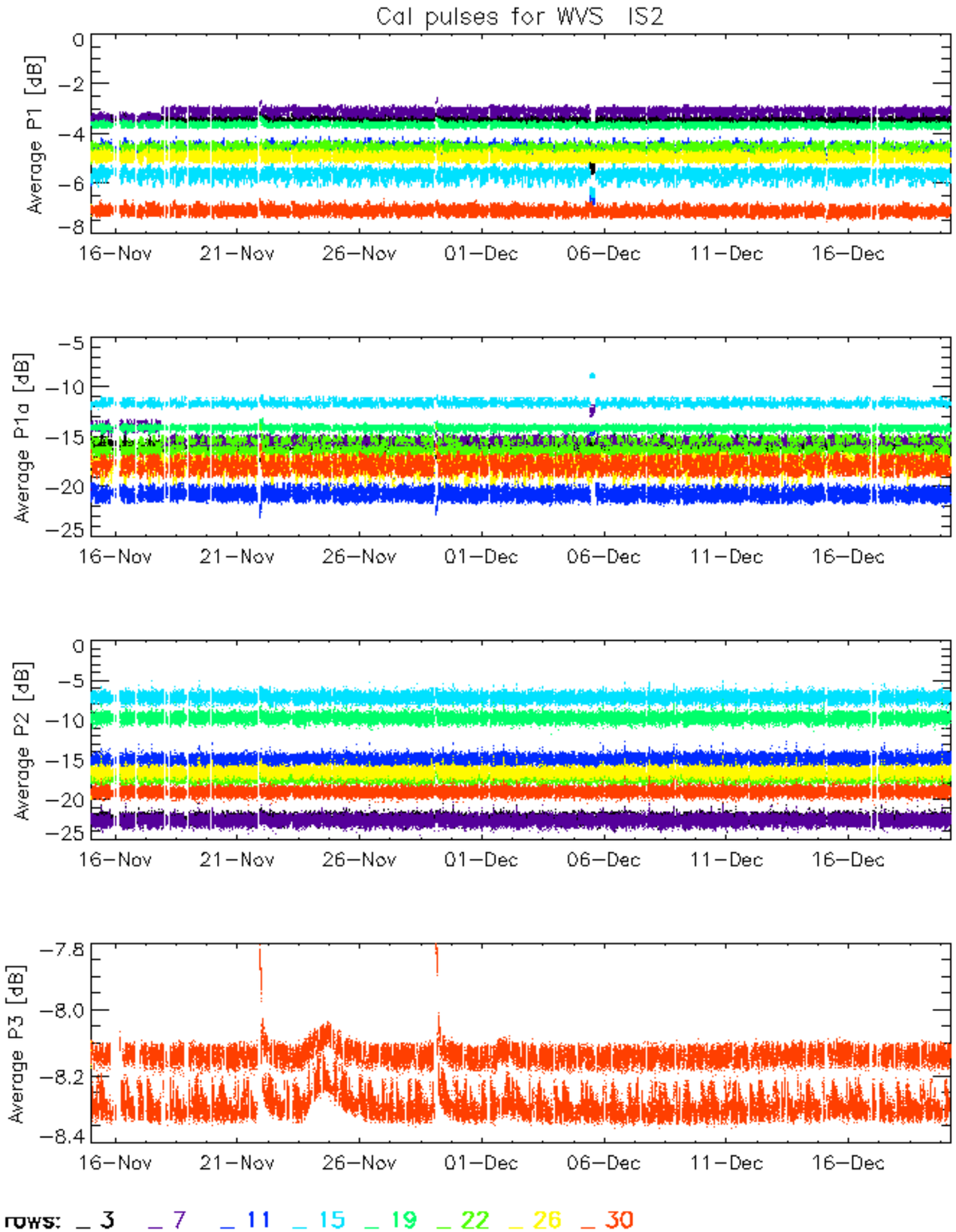

Descending

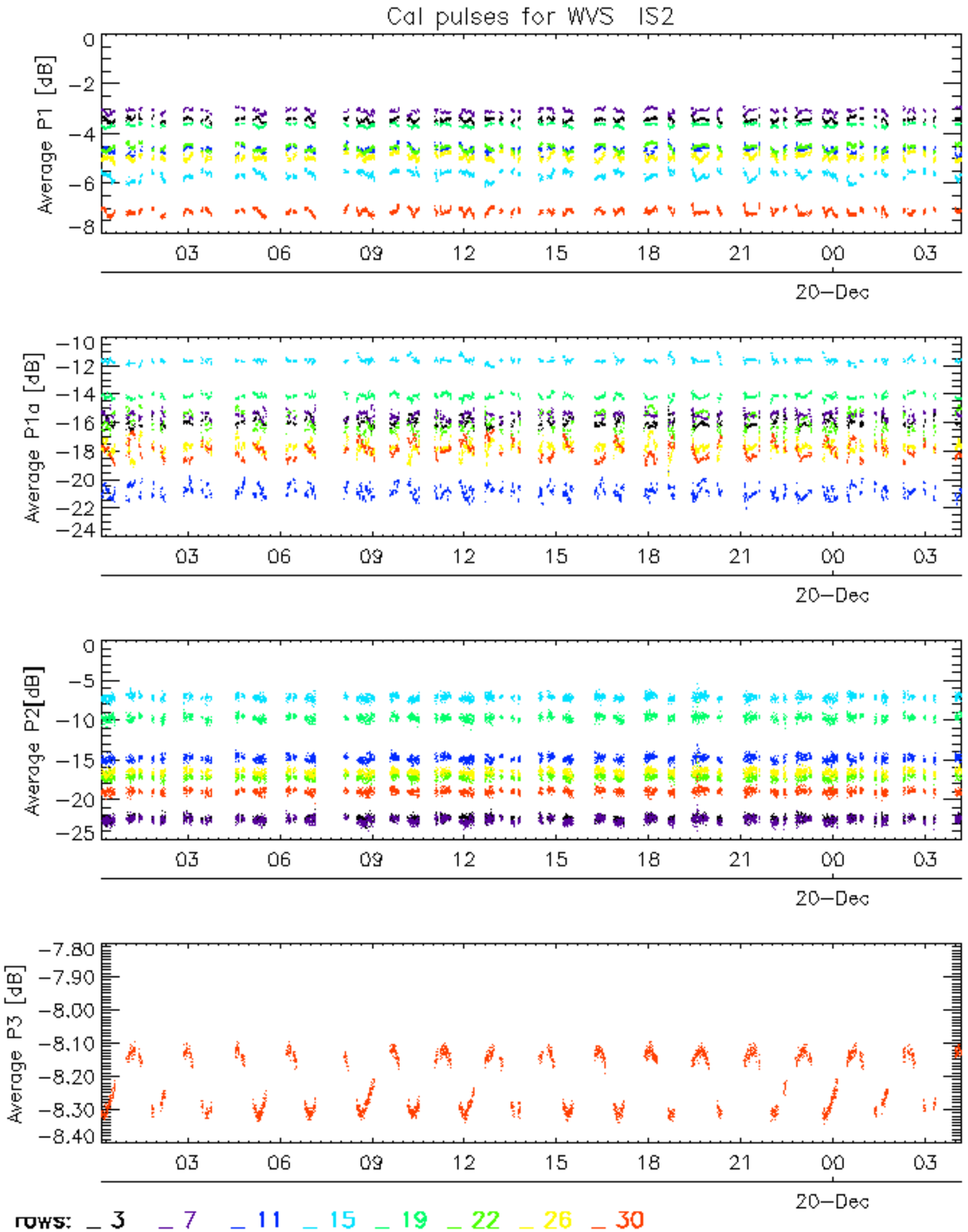
6.6 - Doppler evolution versus ANX for GM1

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

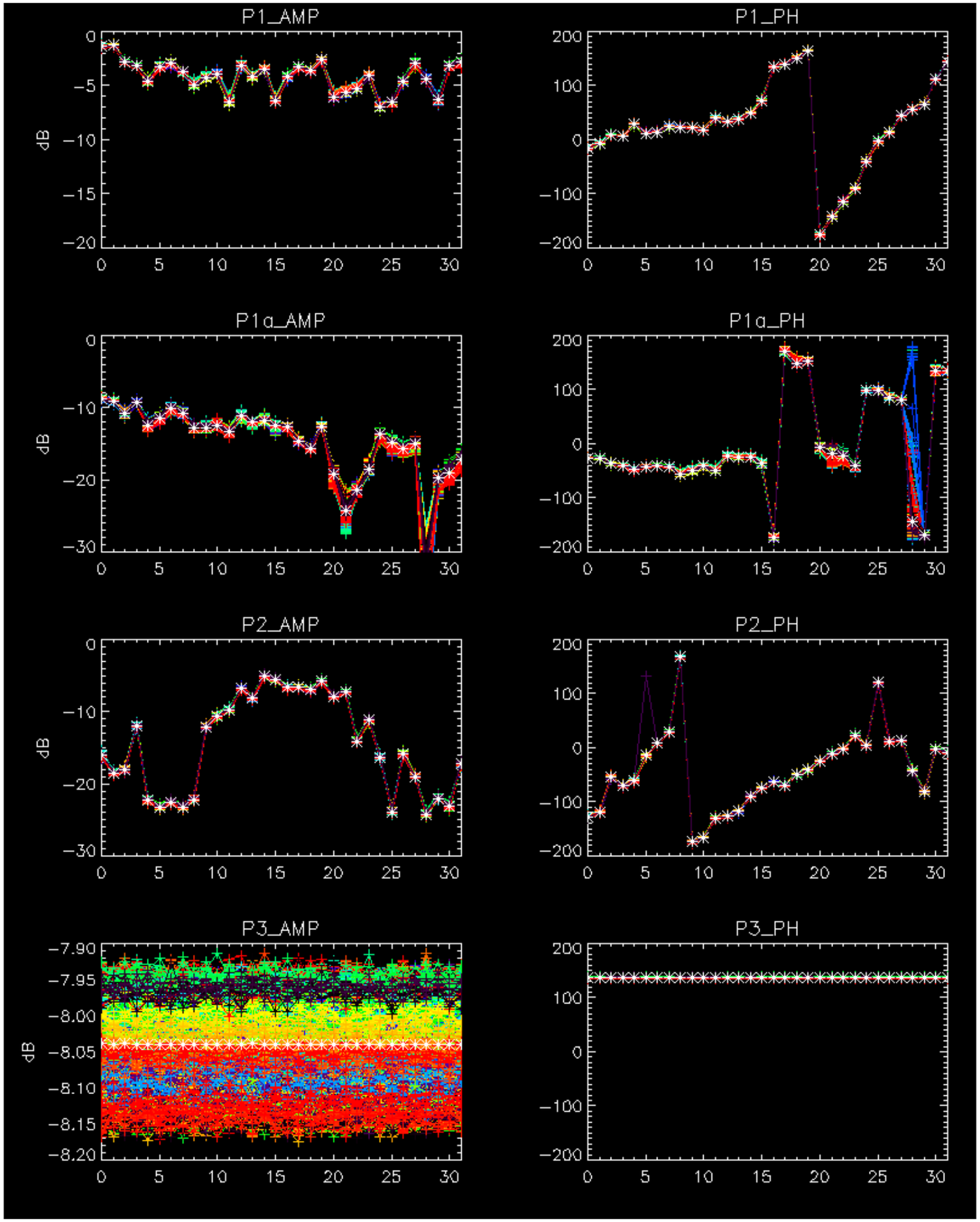

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
20−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
20−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
20−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

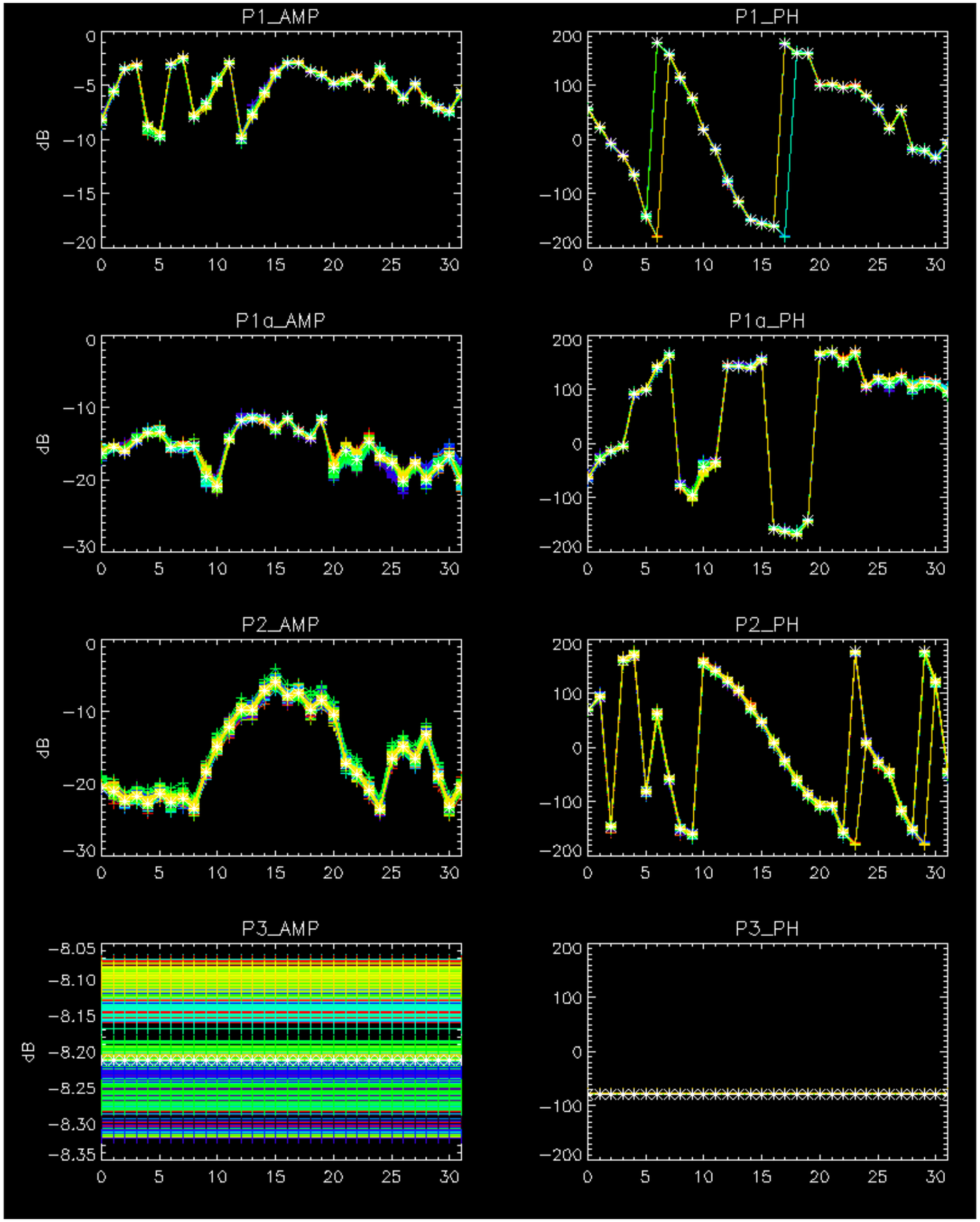

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


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

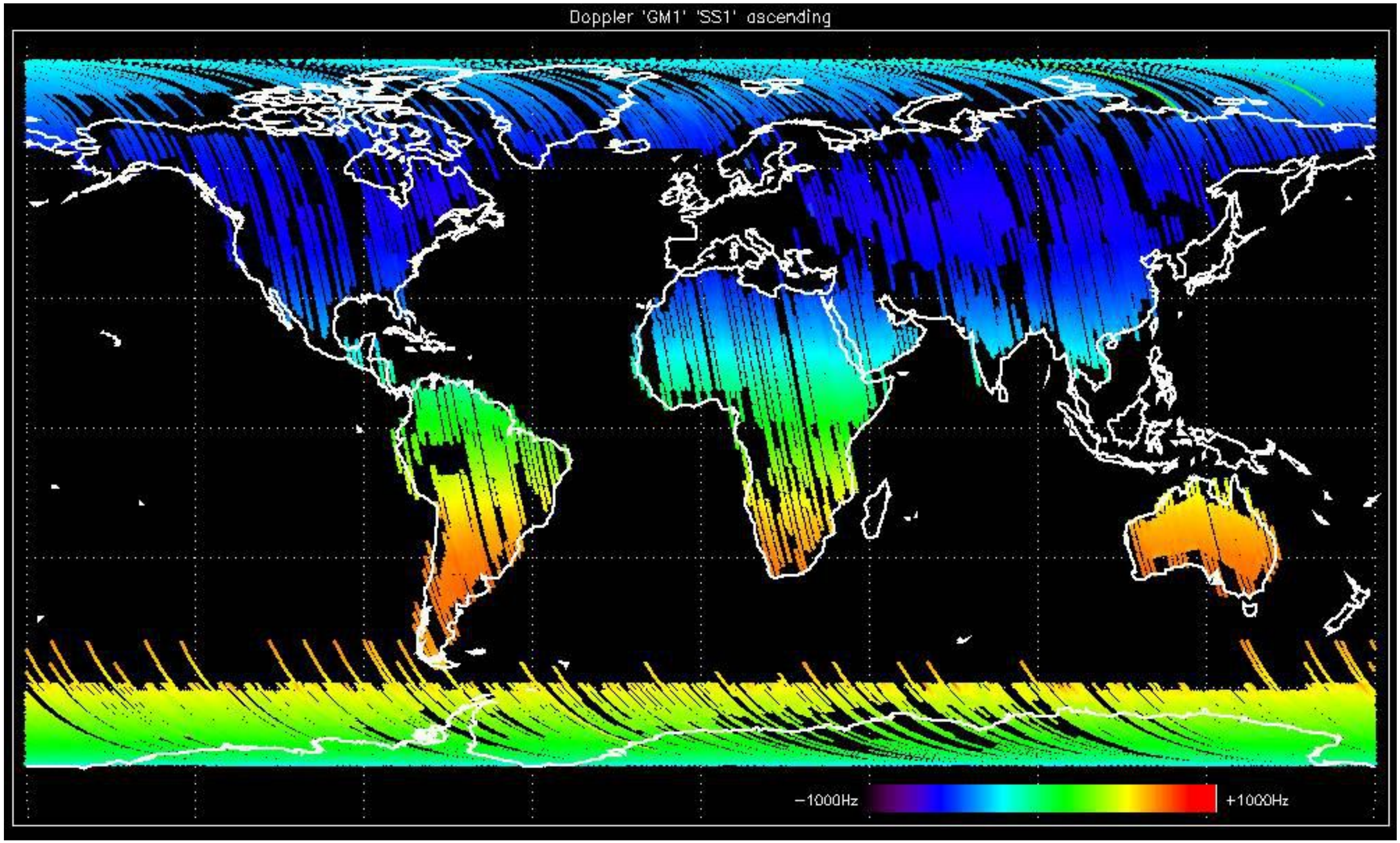
No anomalies observed.

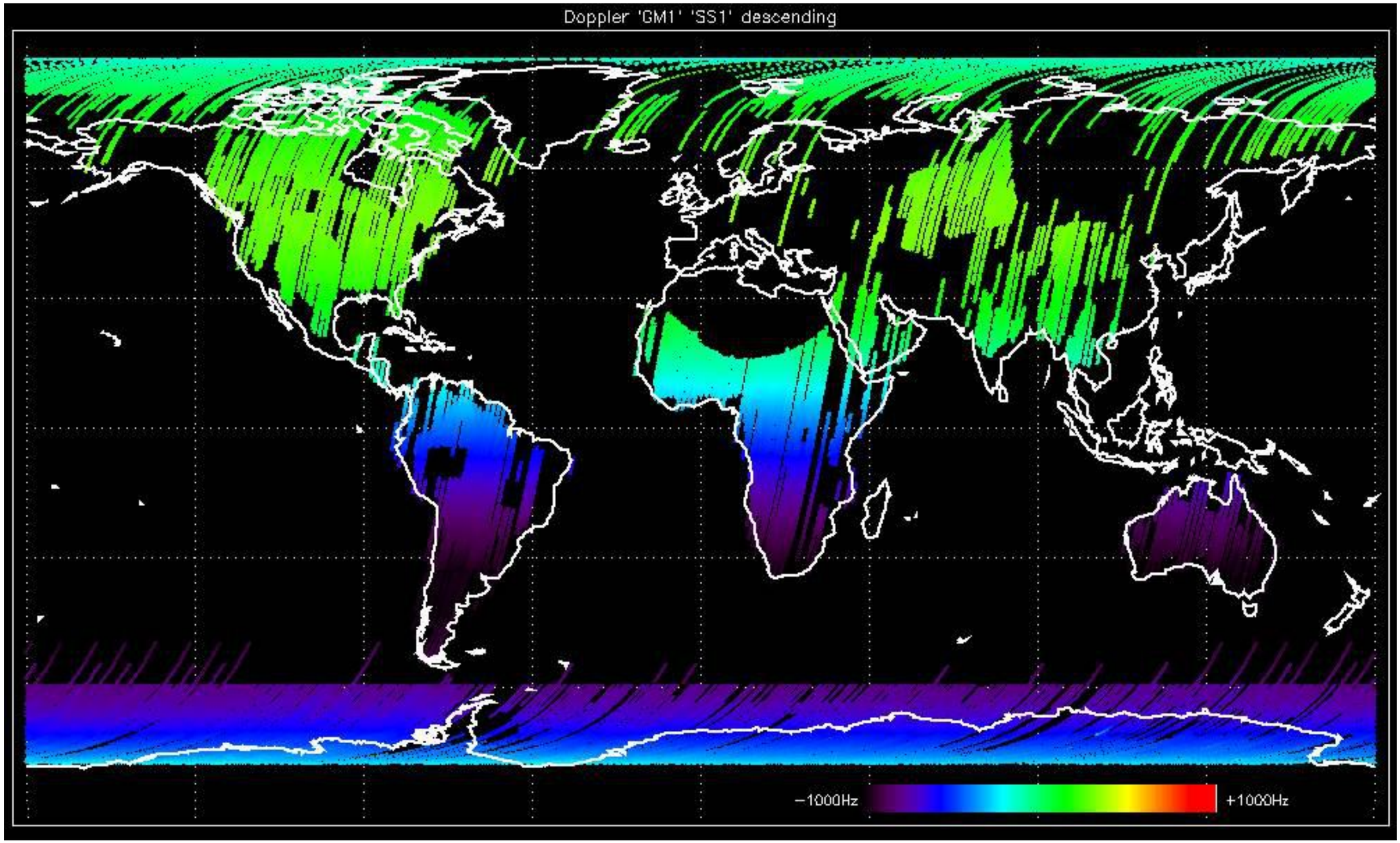

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

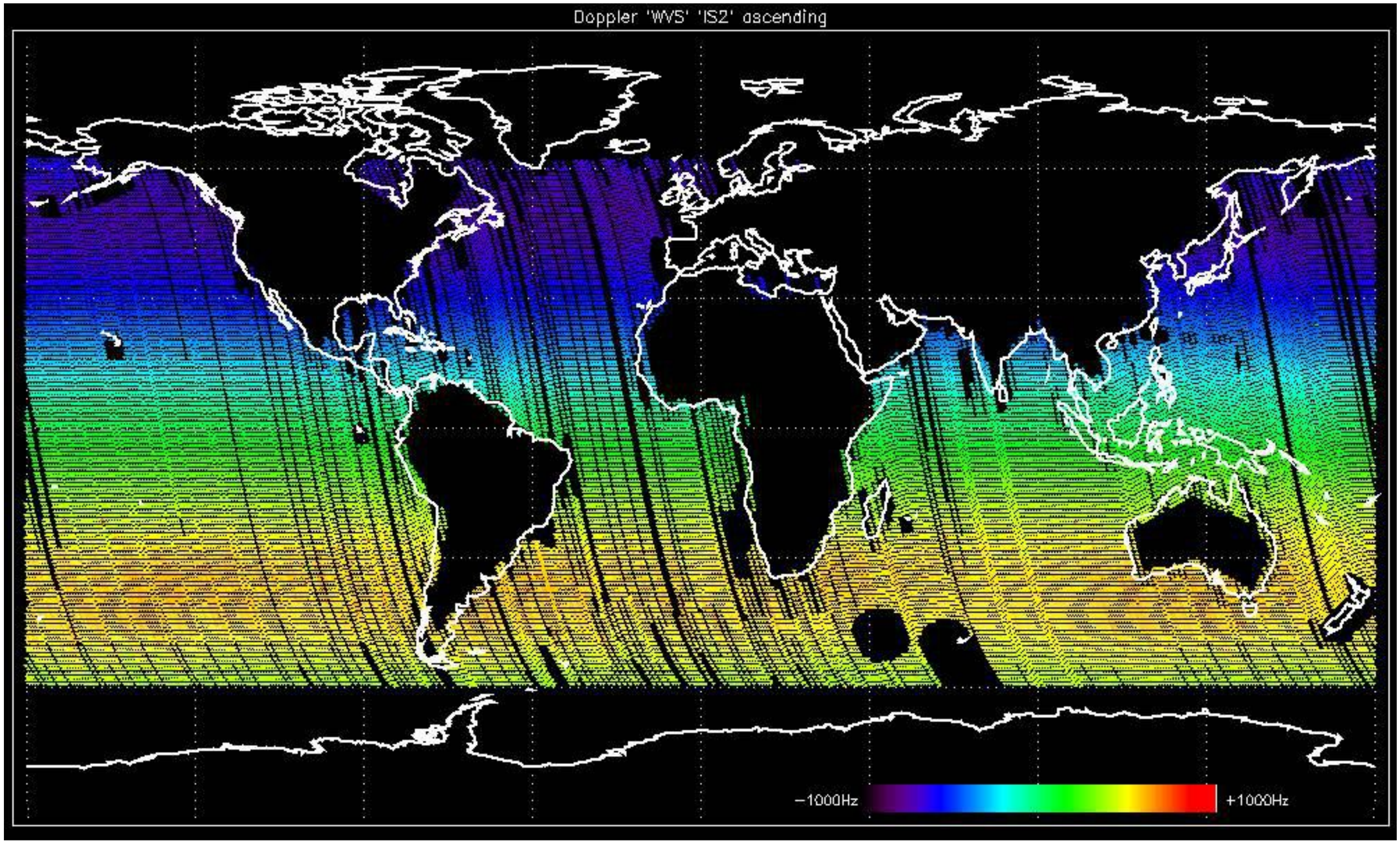

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

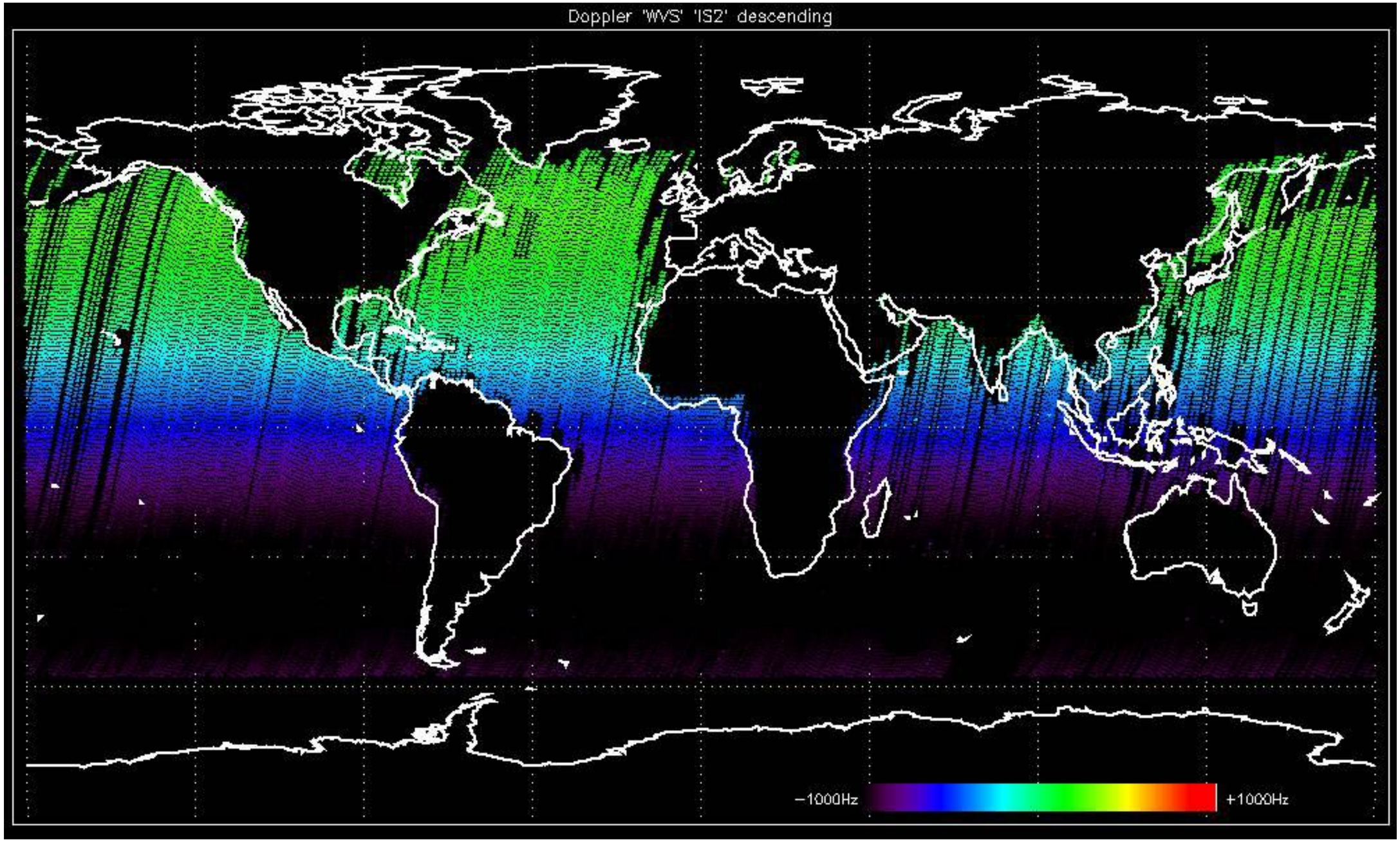
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

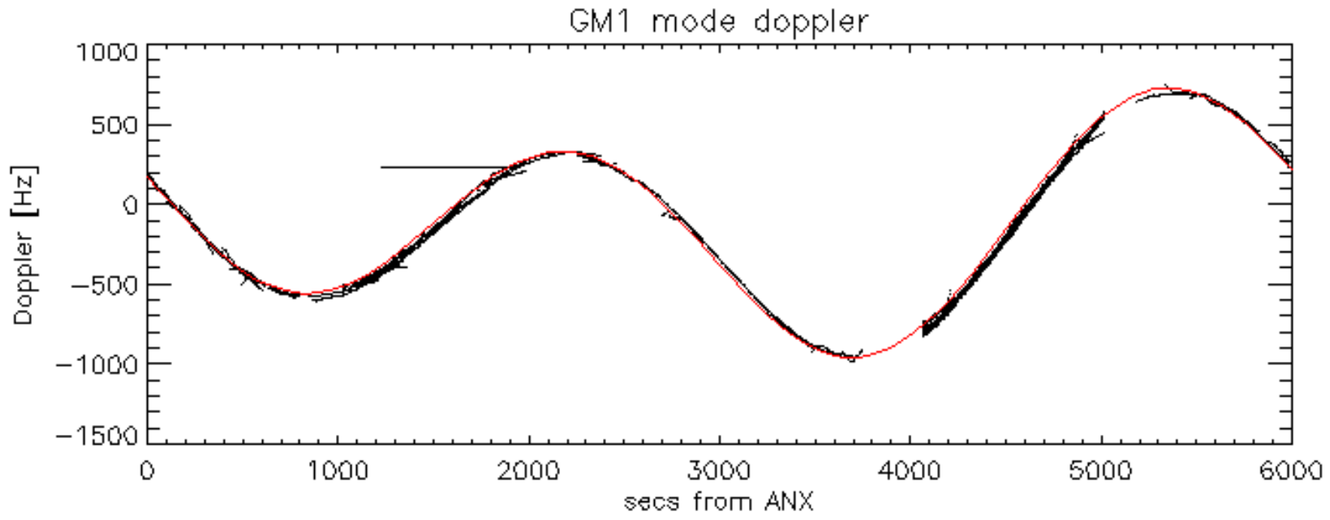
Preliminary report.The data is not yet controled

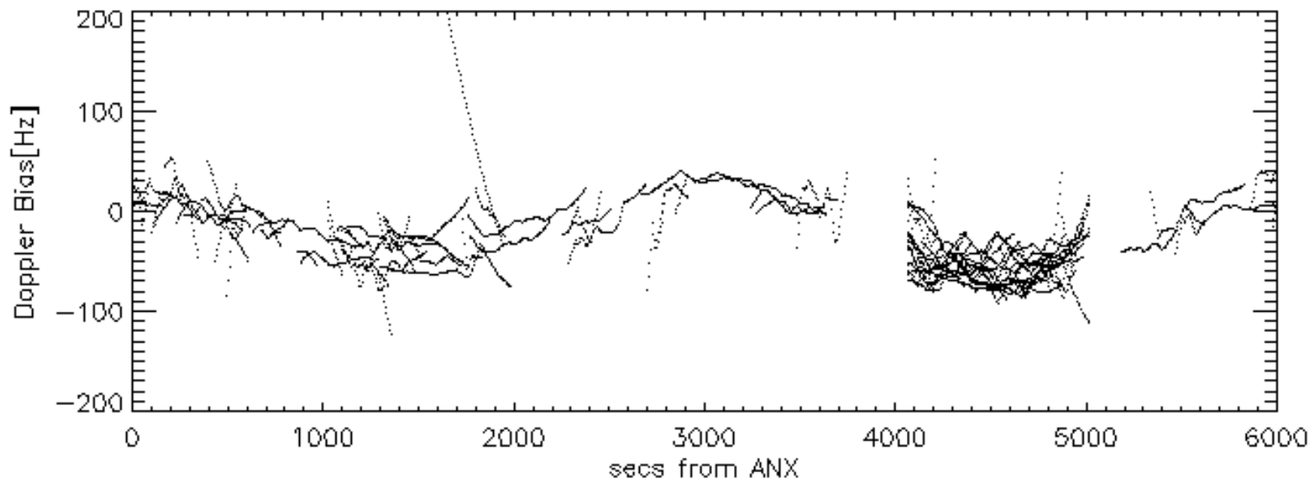

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

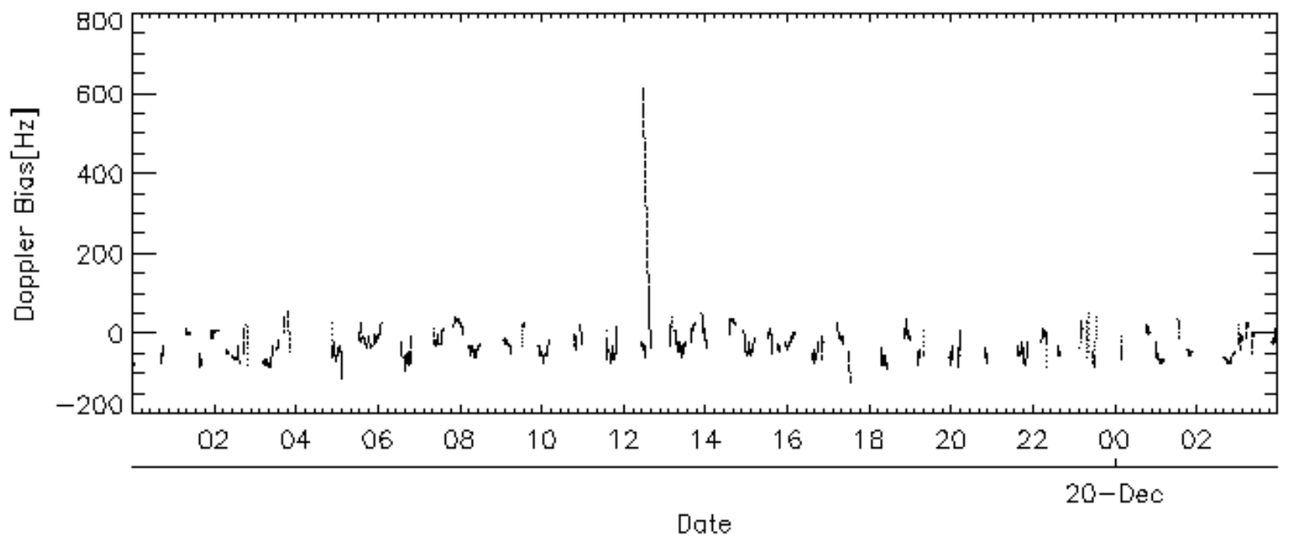

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

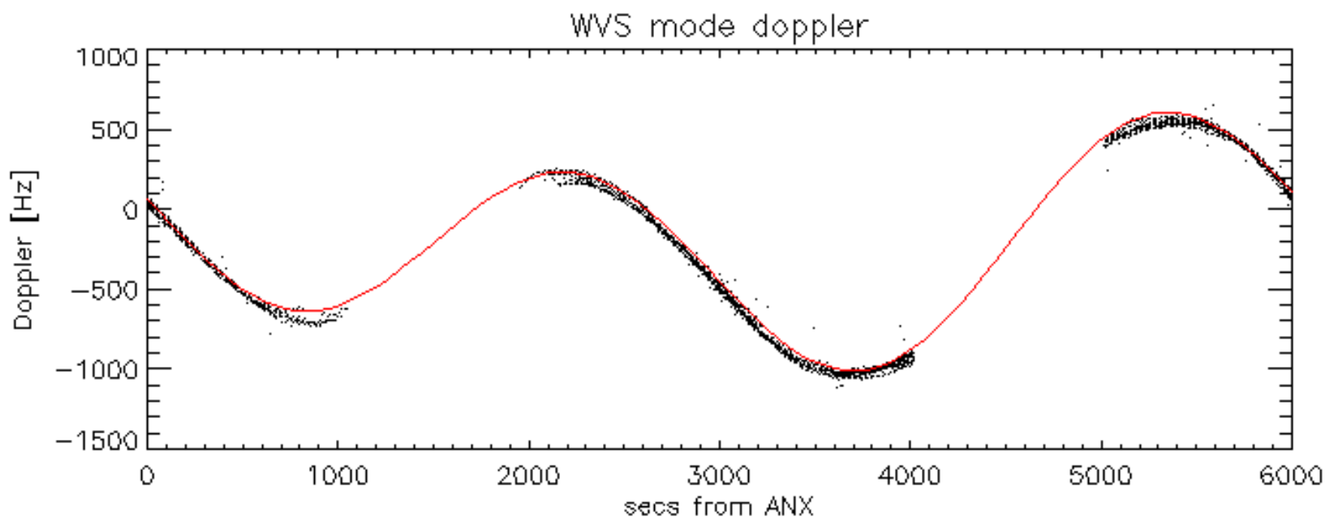

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

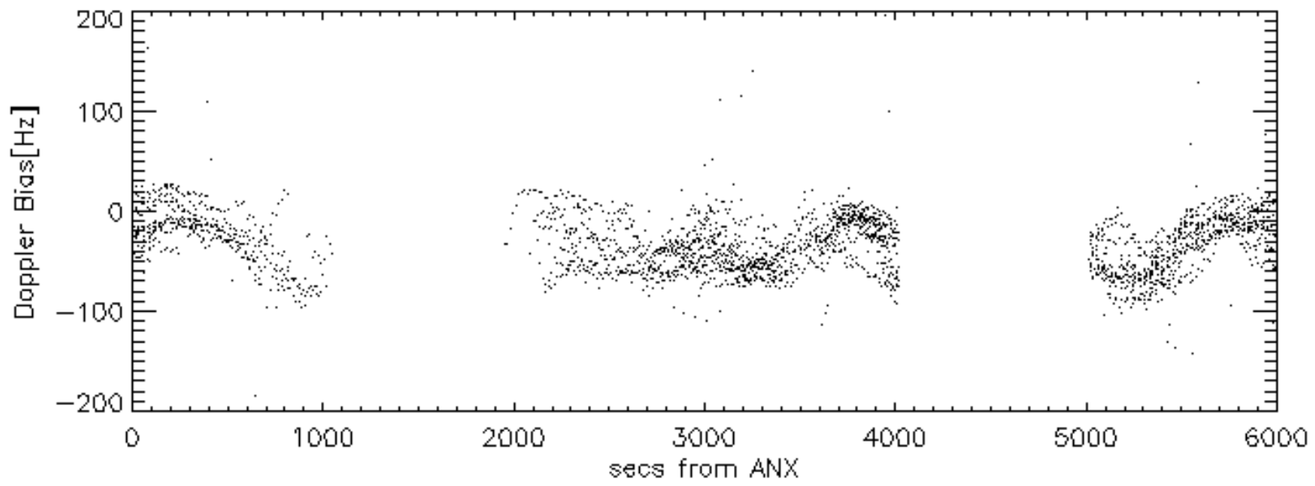

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

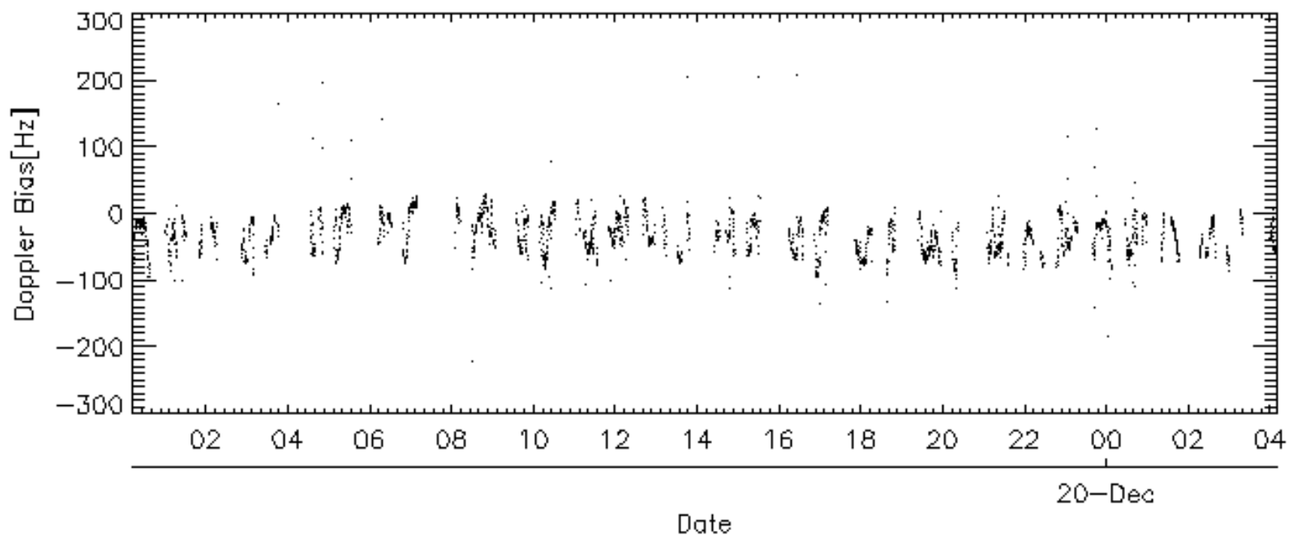

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

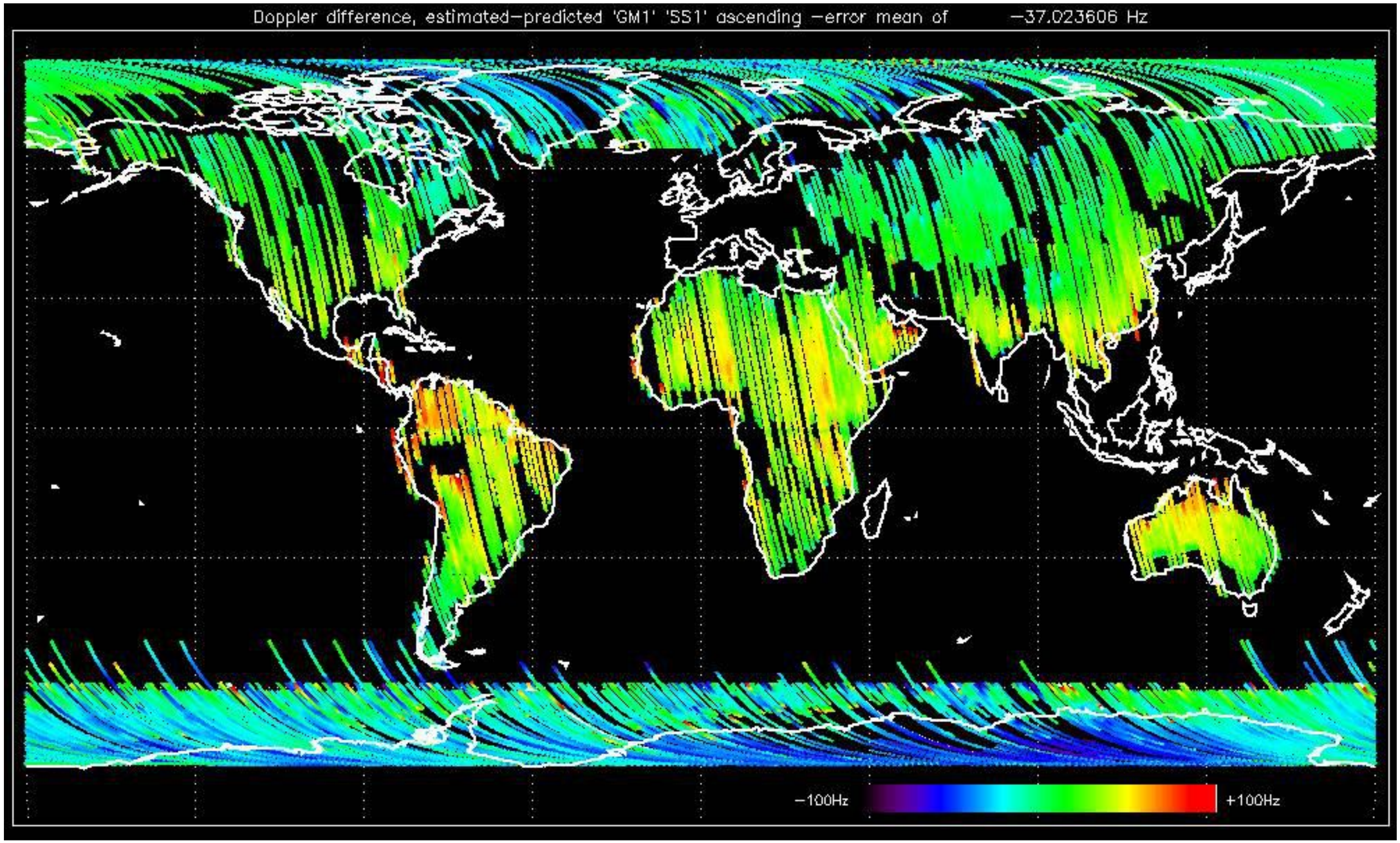

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

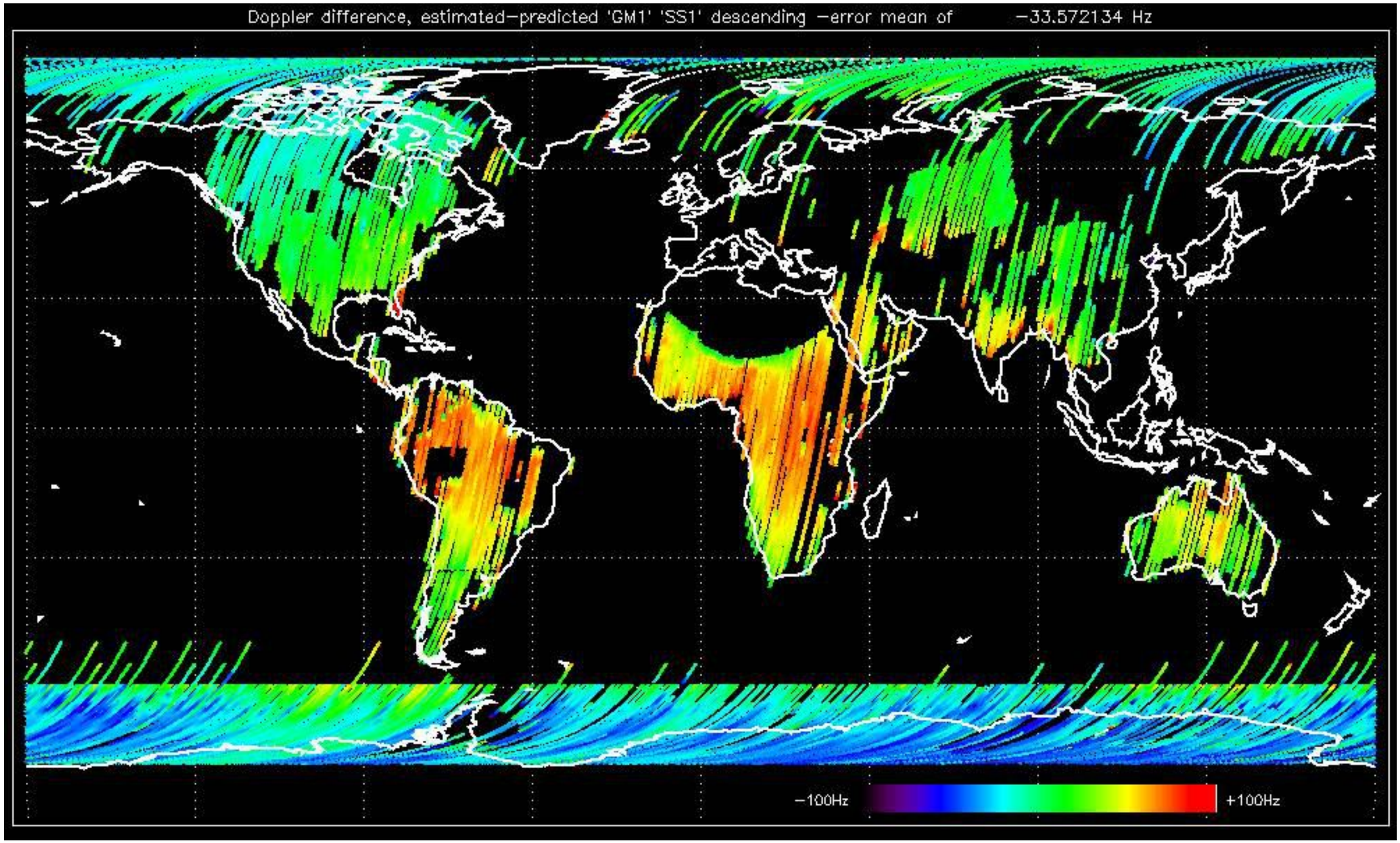

Doppler Bias[Hz]
800
600
400
200
0
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
20−Dec
Date

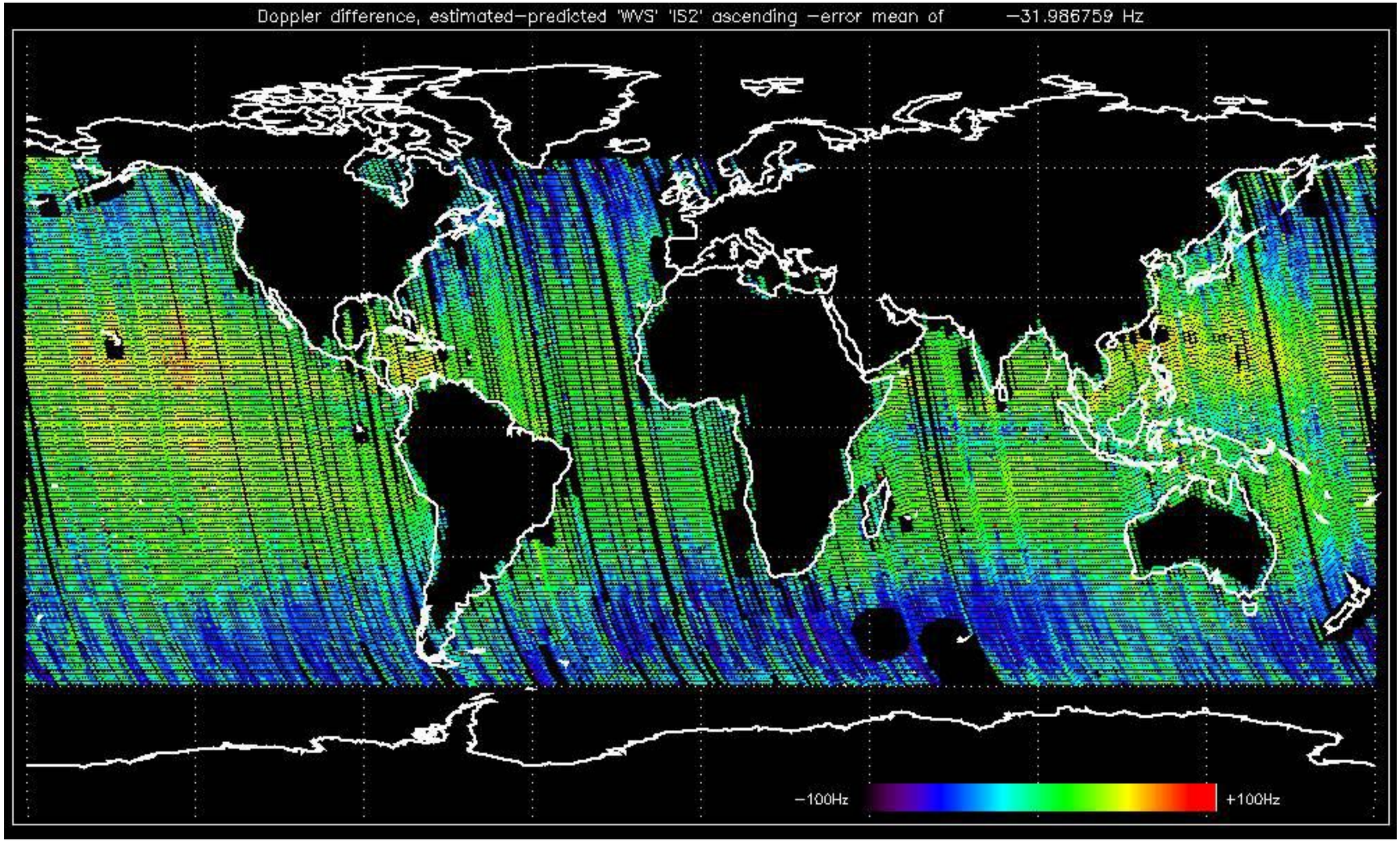

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

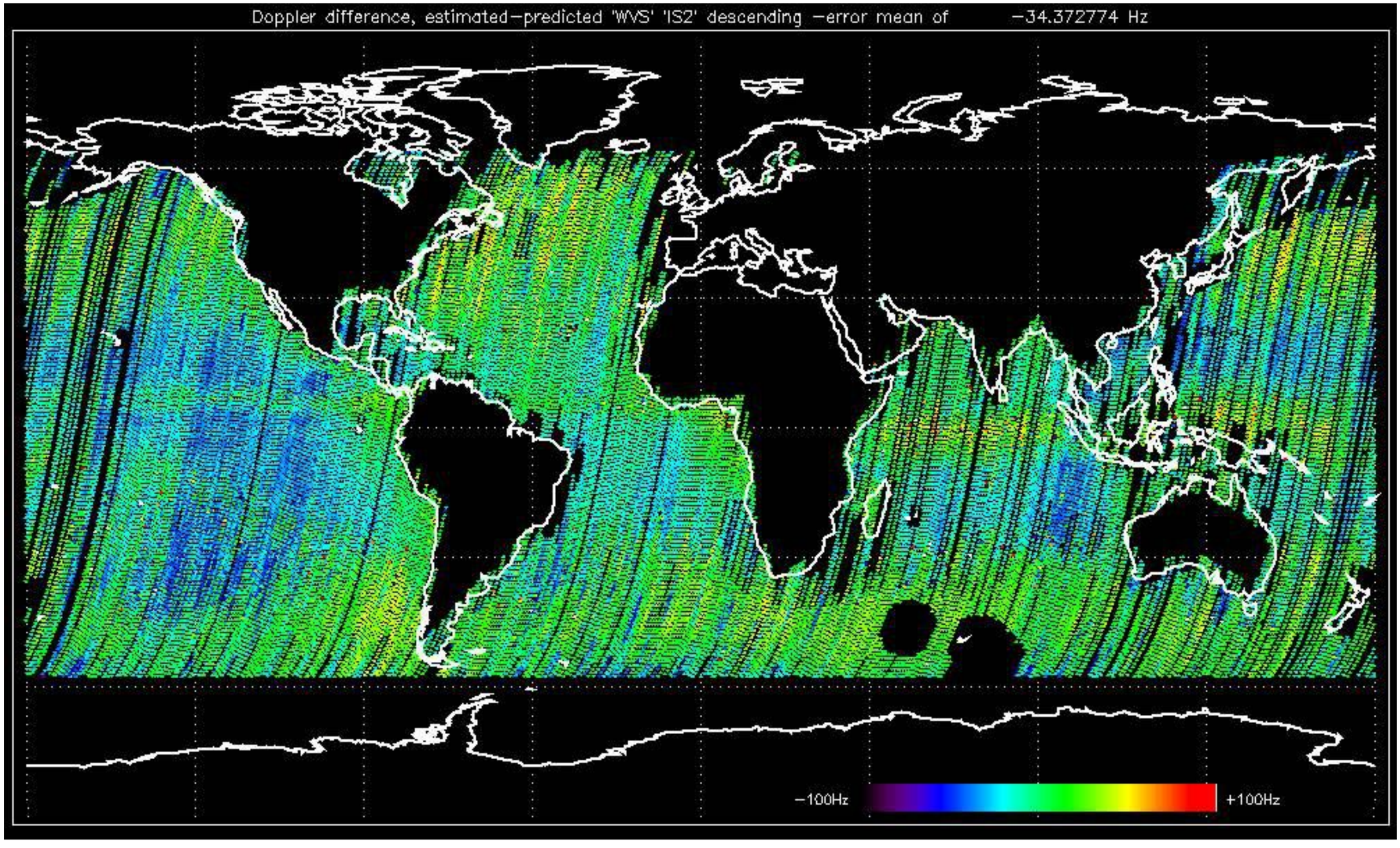

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −37.023606 Hz
−100Hz
+100Hz

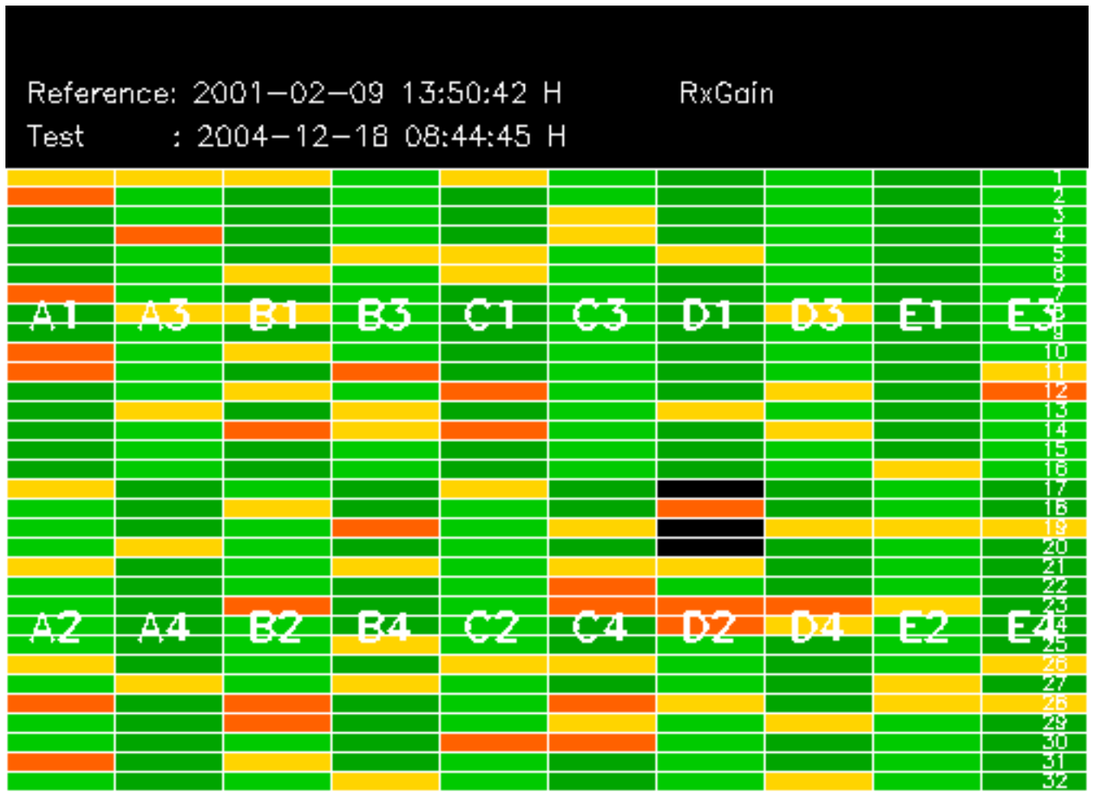

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −33.572134 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −31.986759 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.372774 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 : 2004-12-18 08:44:45 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
13
14
15
16
17
18
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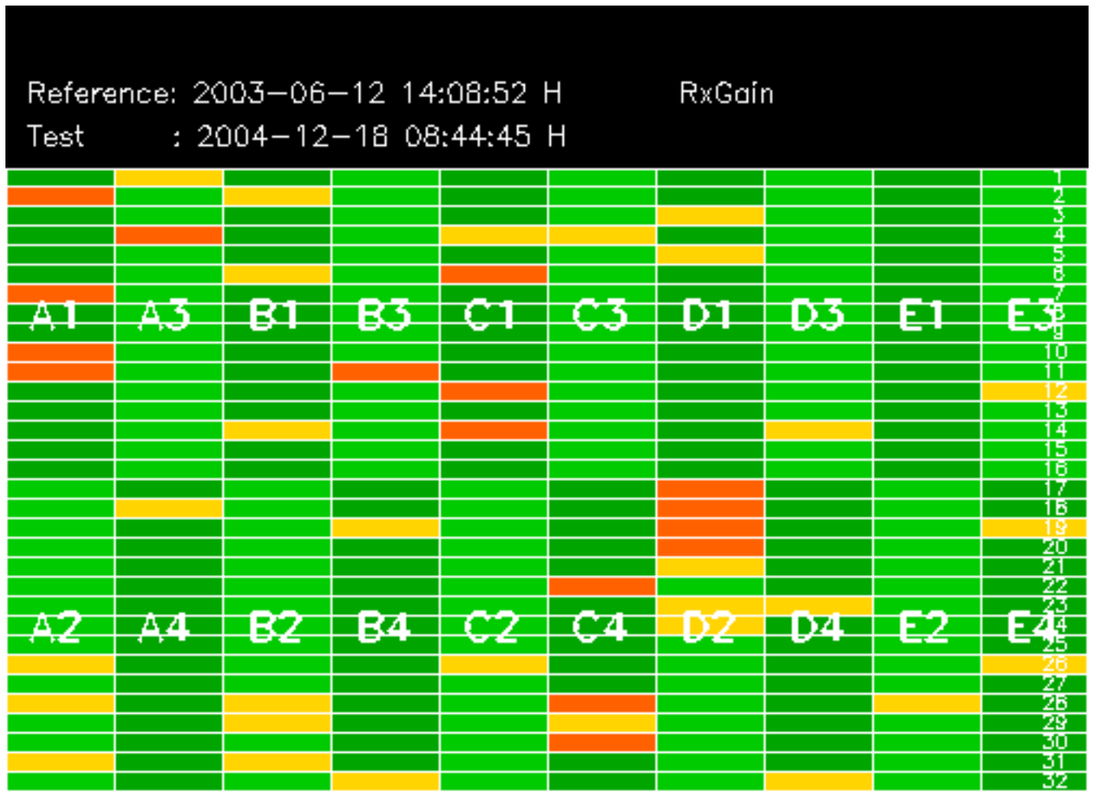
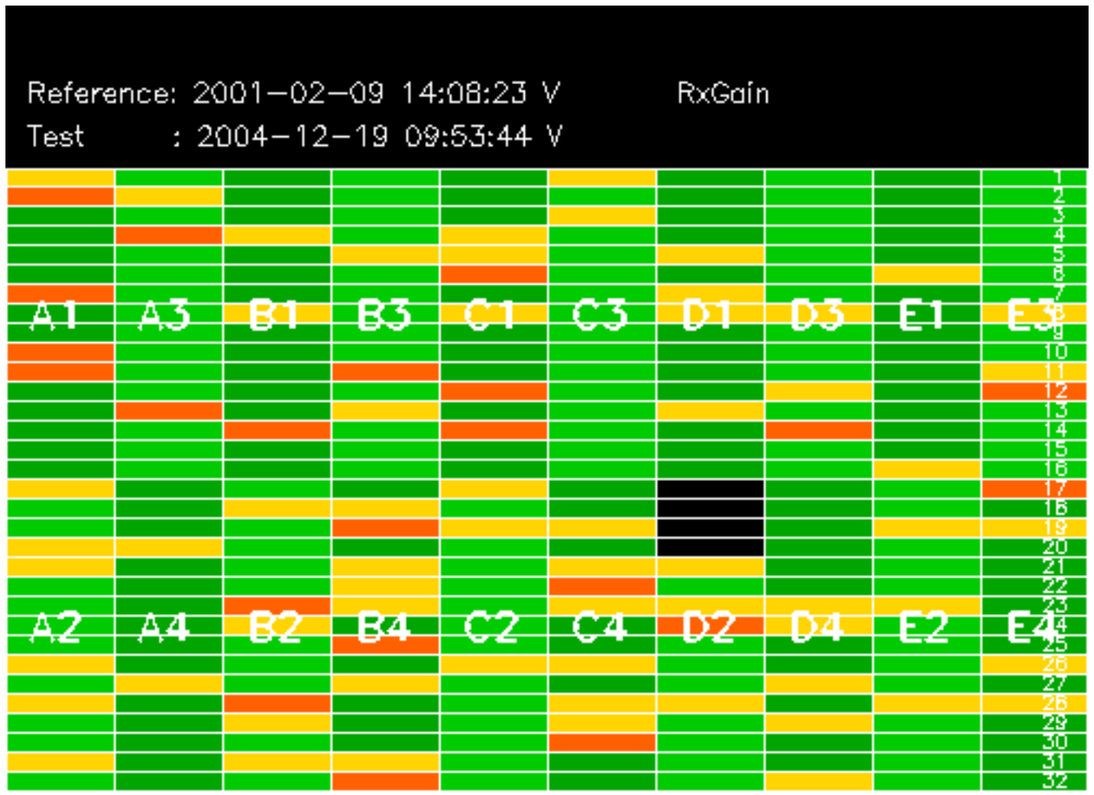

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-18 08:44:45 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-19 09:53:44 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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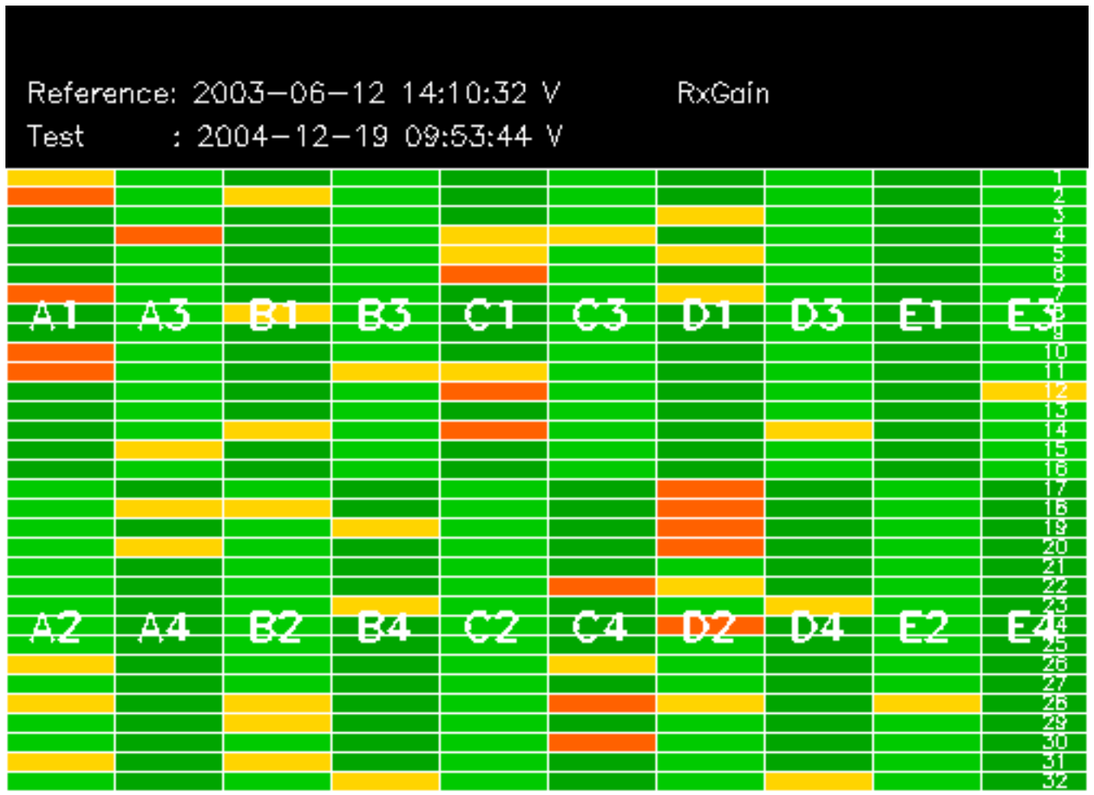
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-19 09:53:44 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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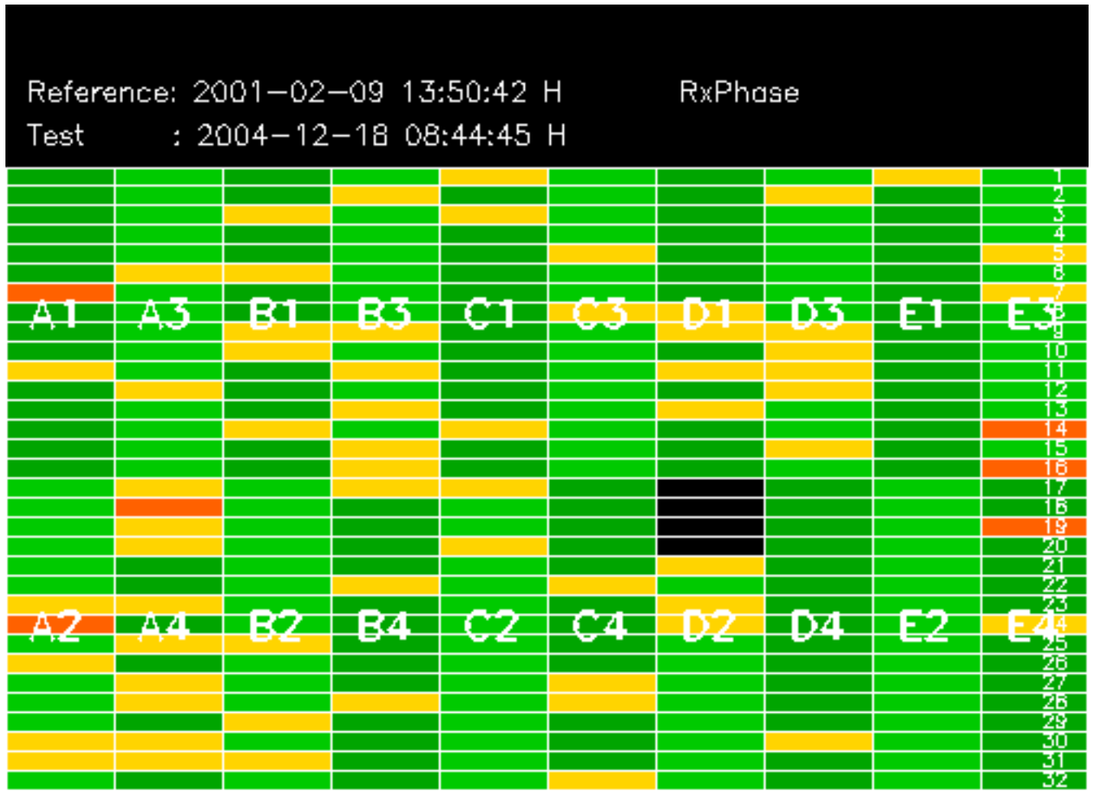
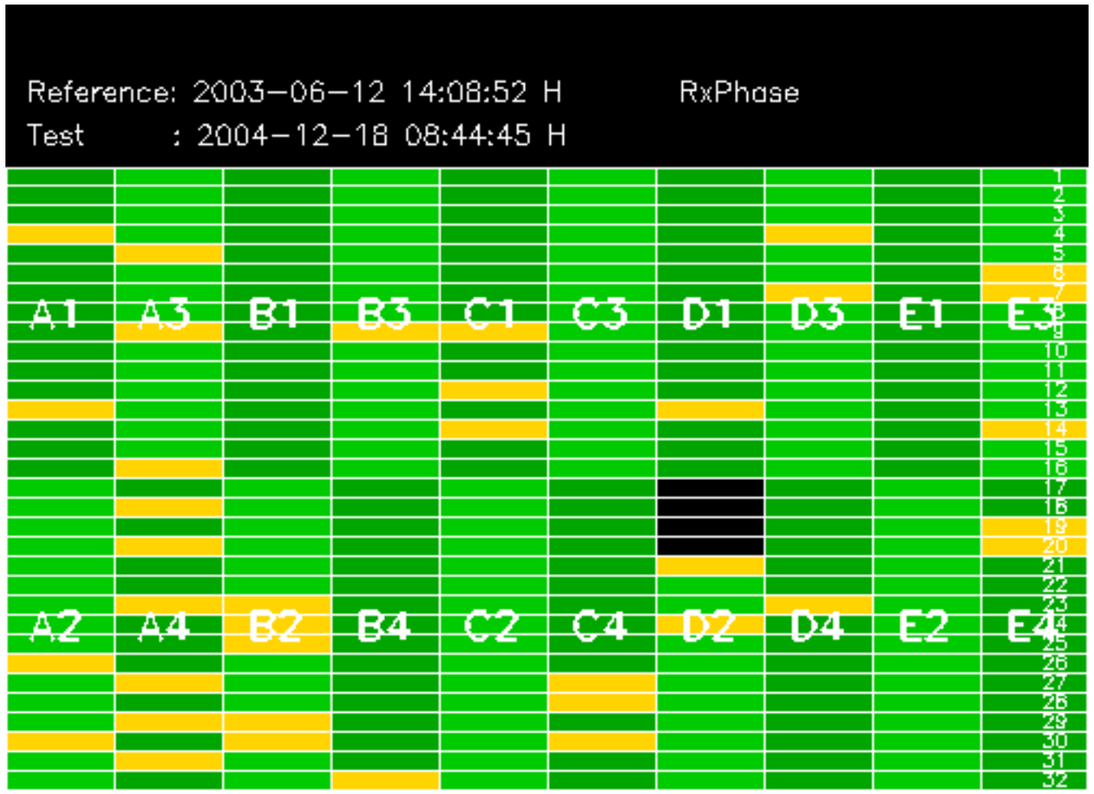

Reference: 2001-02-09 13:50:42 H
Test : 2004-12-18 08:44:45 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-18 08:44:45 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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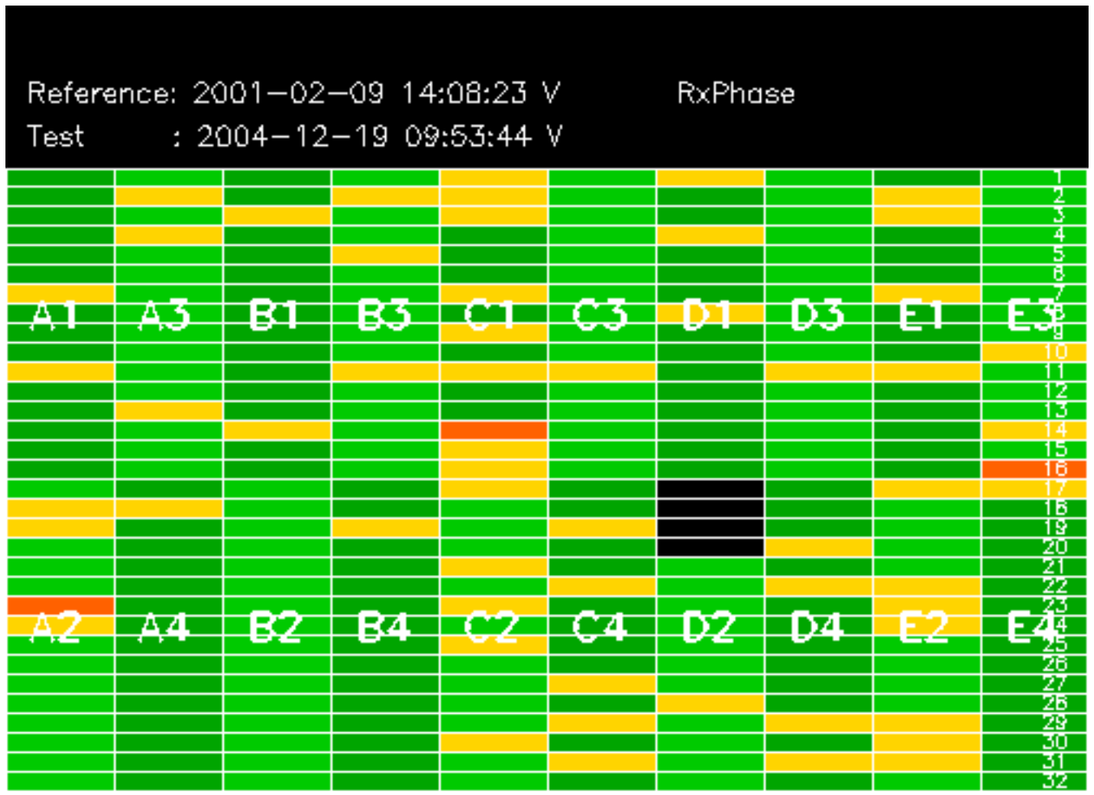
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-19 09:53:44 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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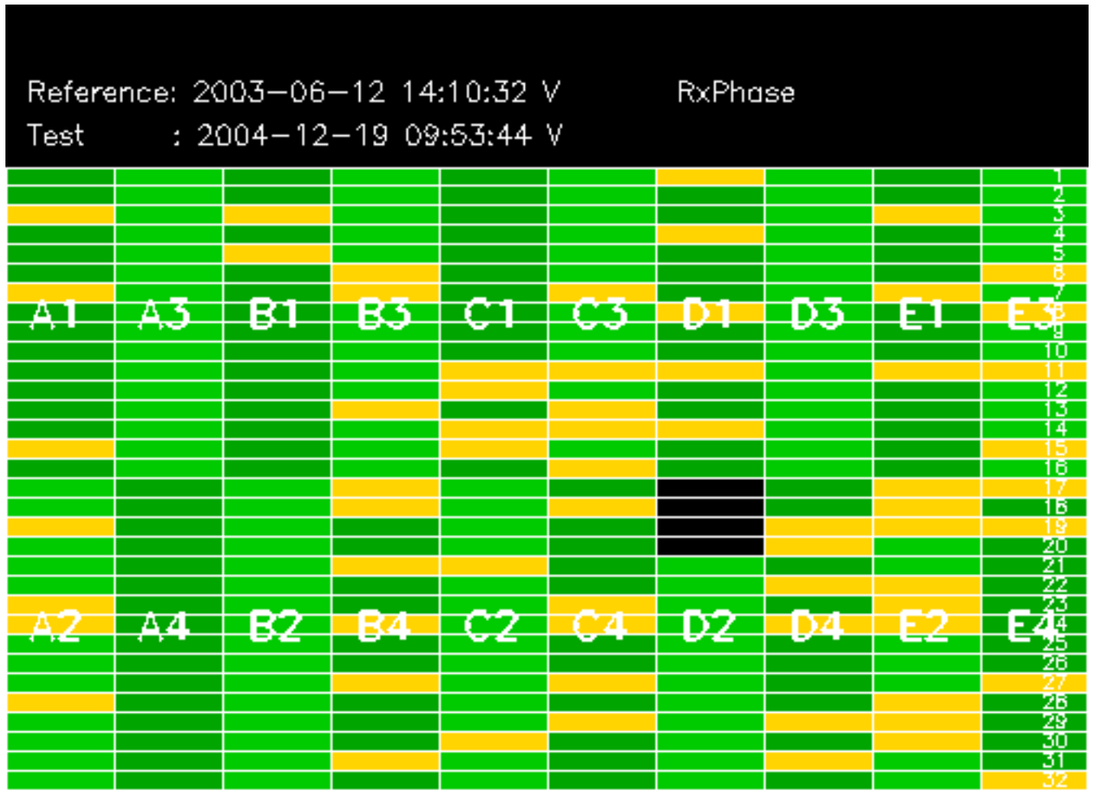
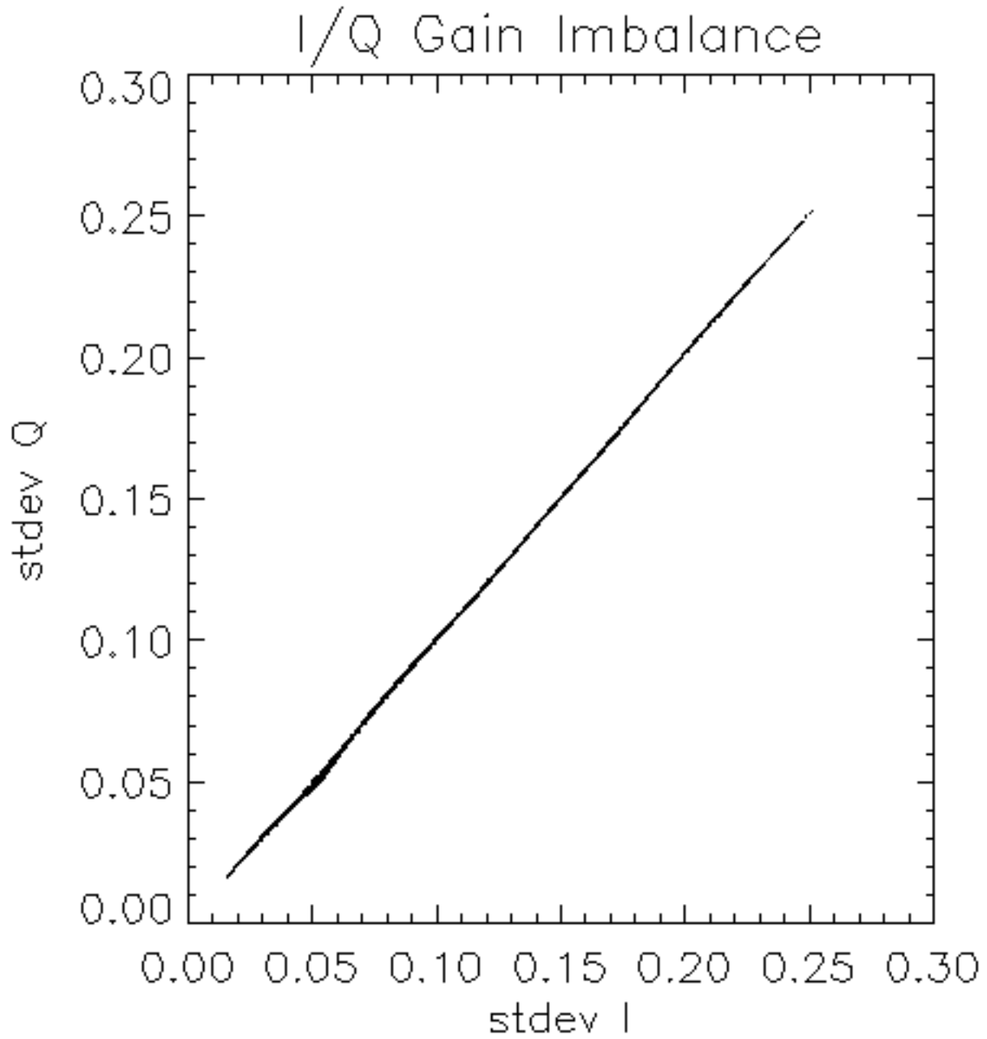
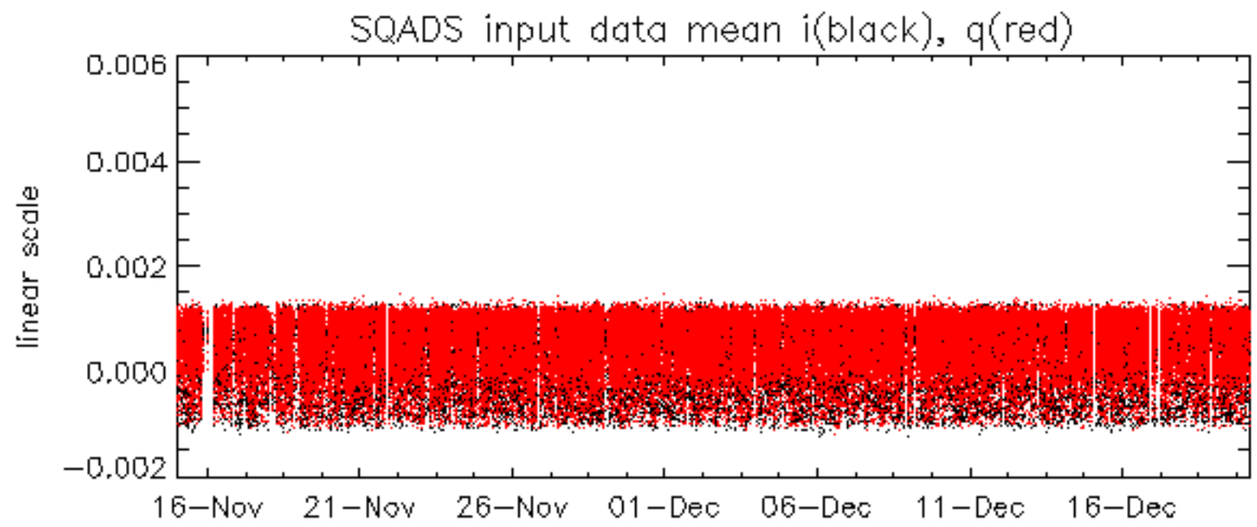
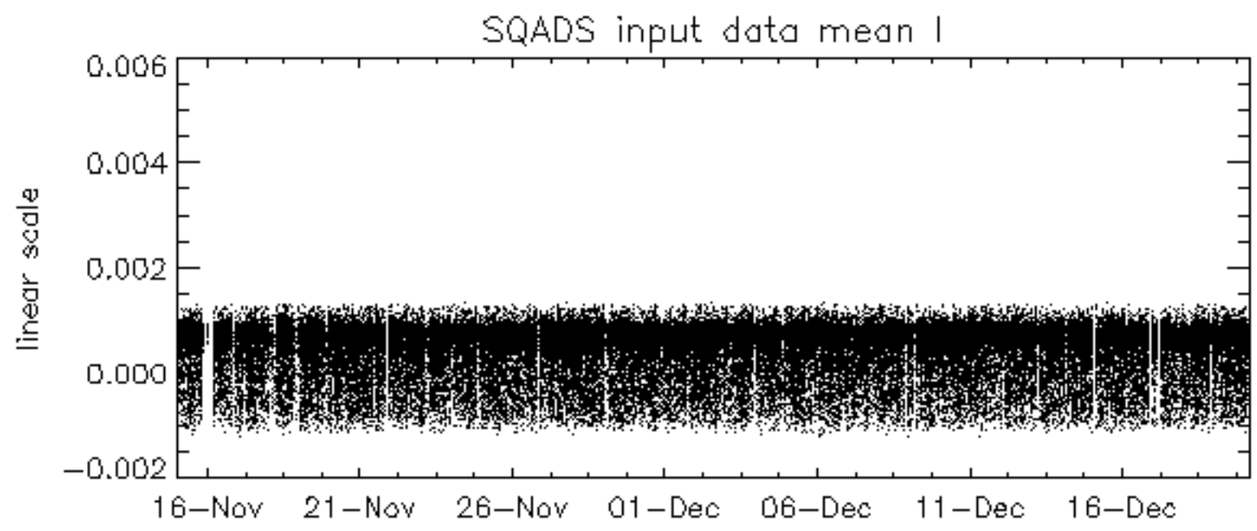
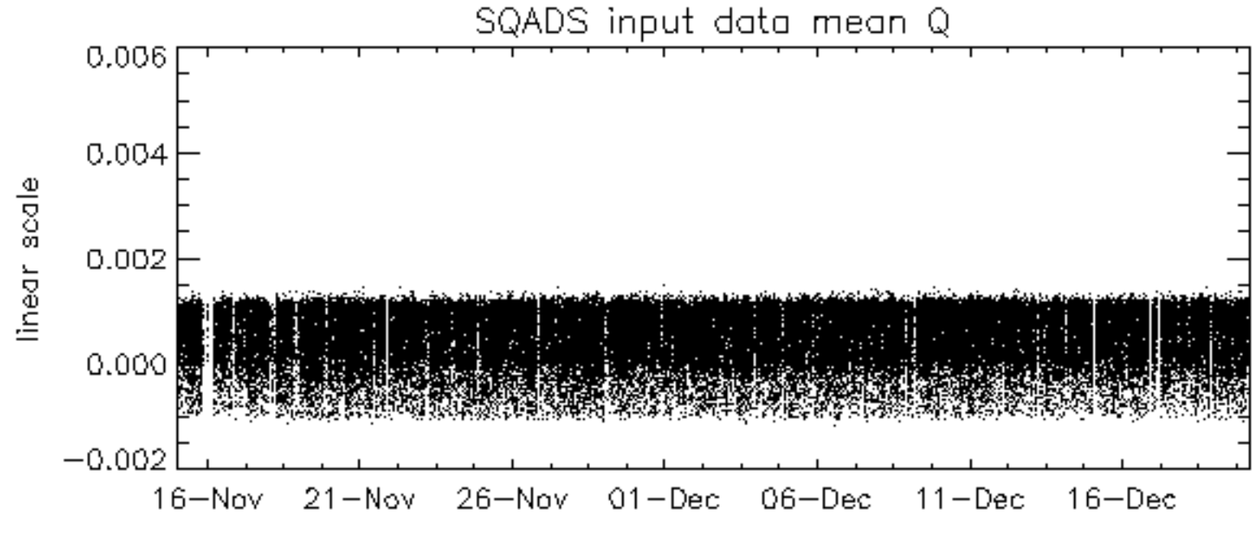
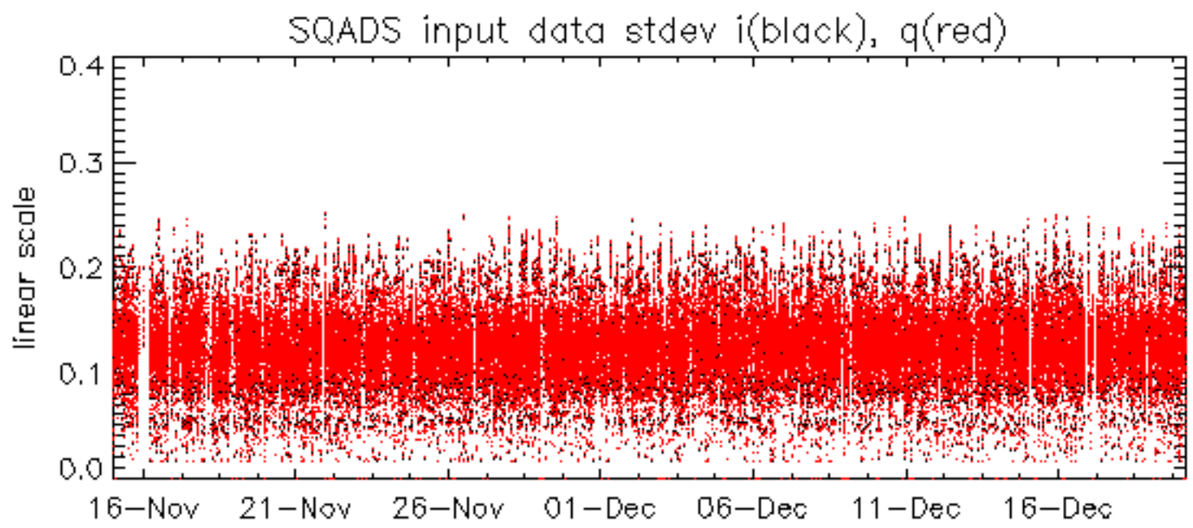

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-19 09:53:44 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

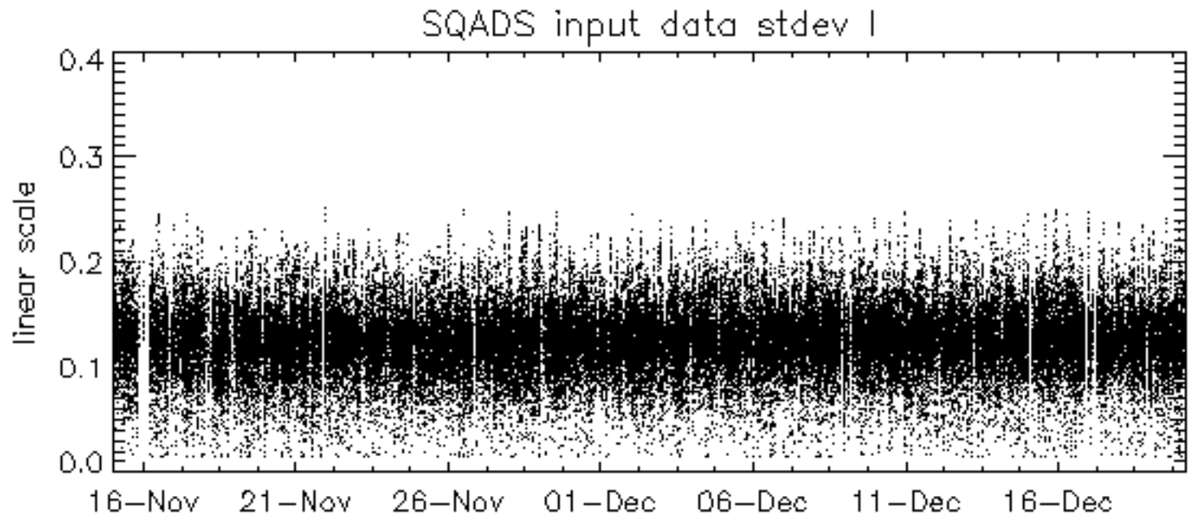

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

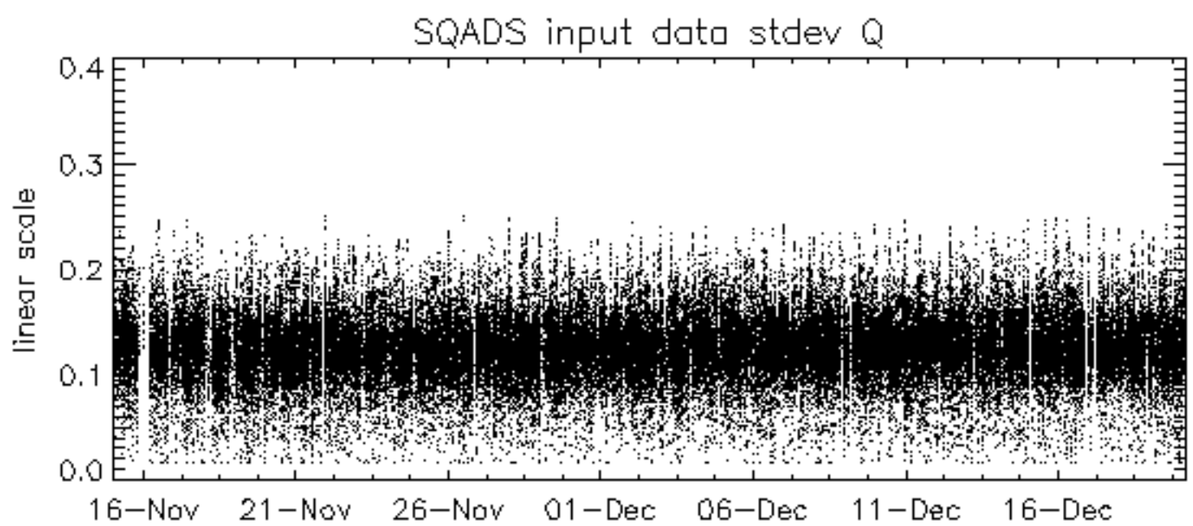

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

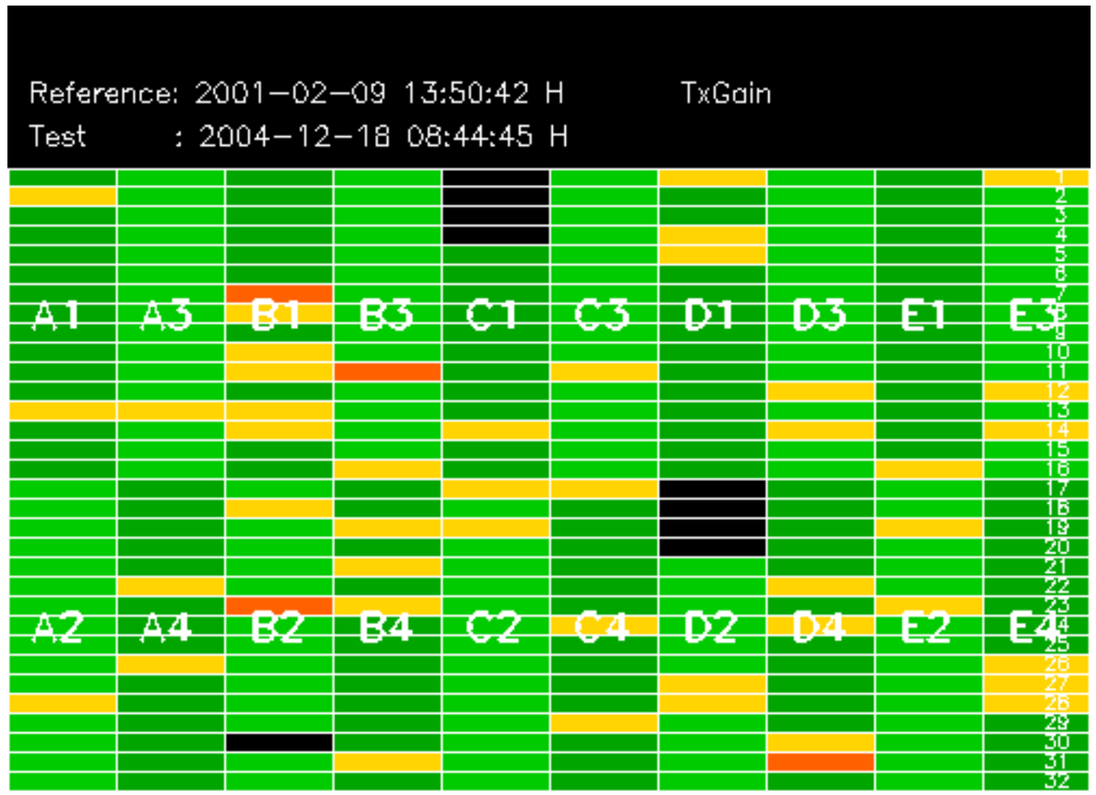

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec


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 : 2004-12-18 08:44:45 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
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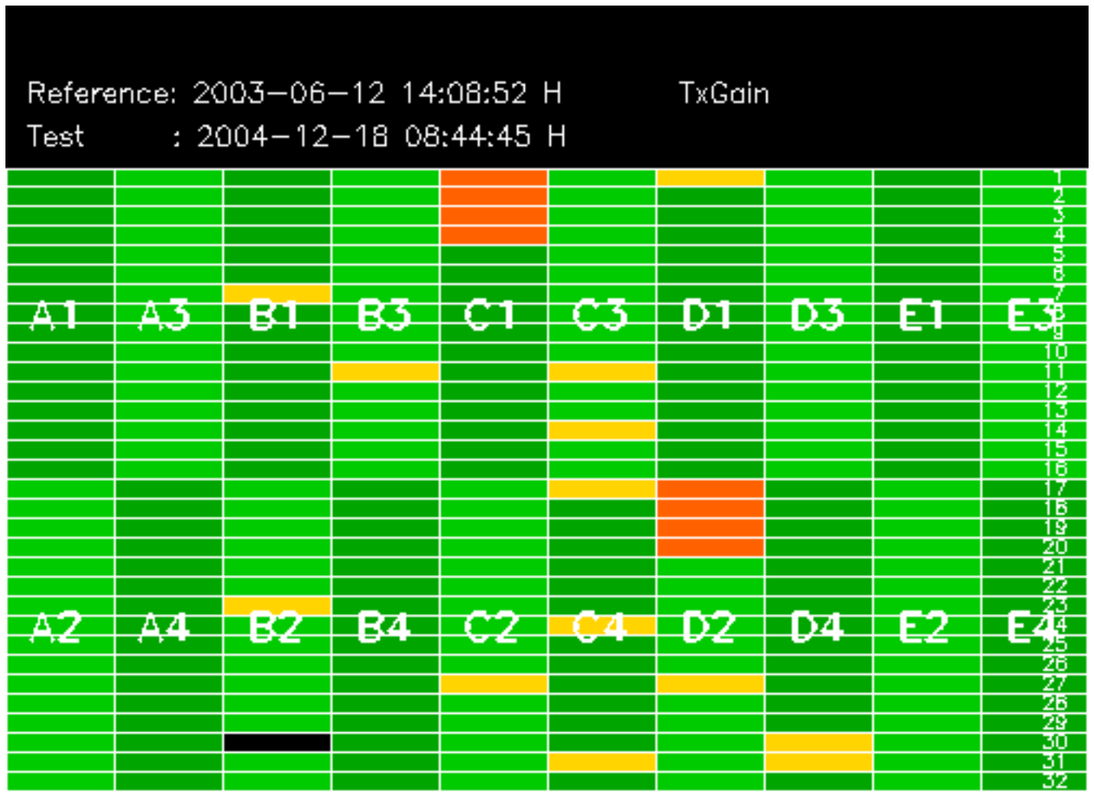
Reference: 2003-06-12 14:08:52 H
Test : 2004-12-18 08:44:45 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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D4
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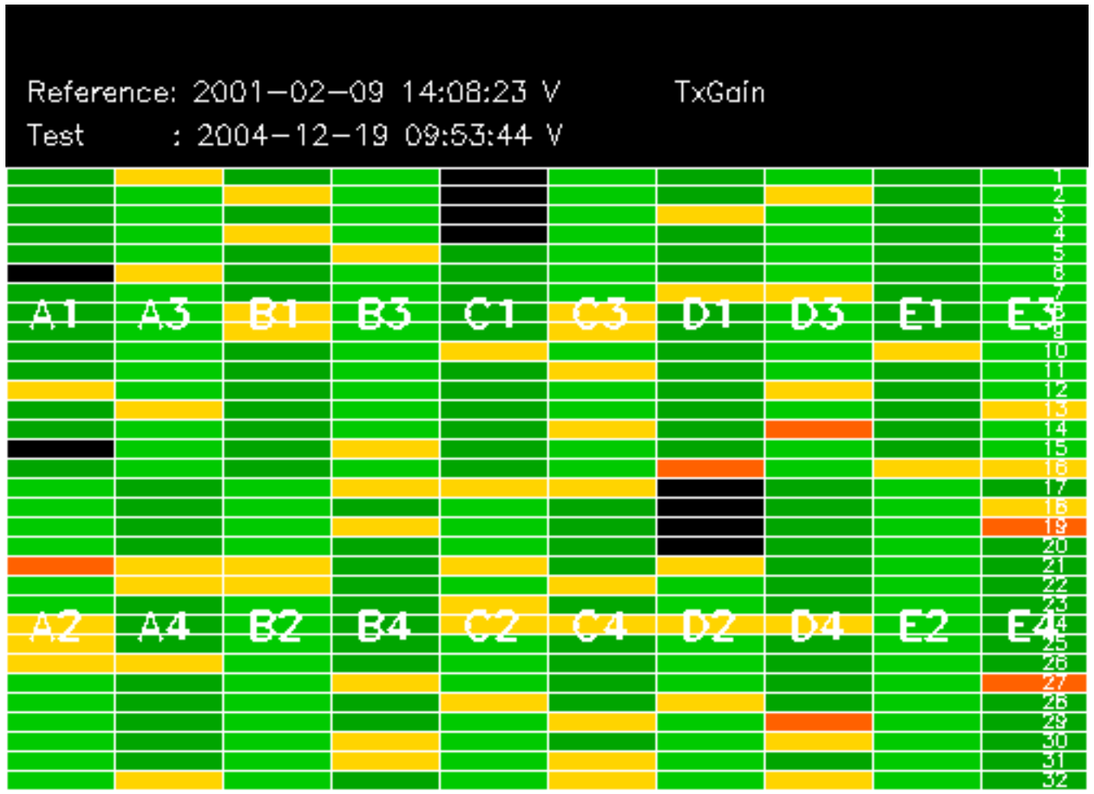
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-19 09:53:44 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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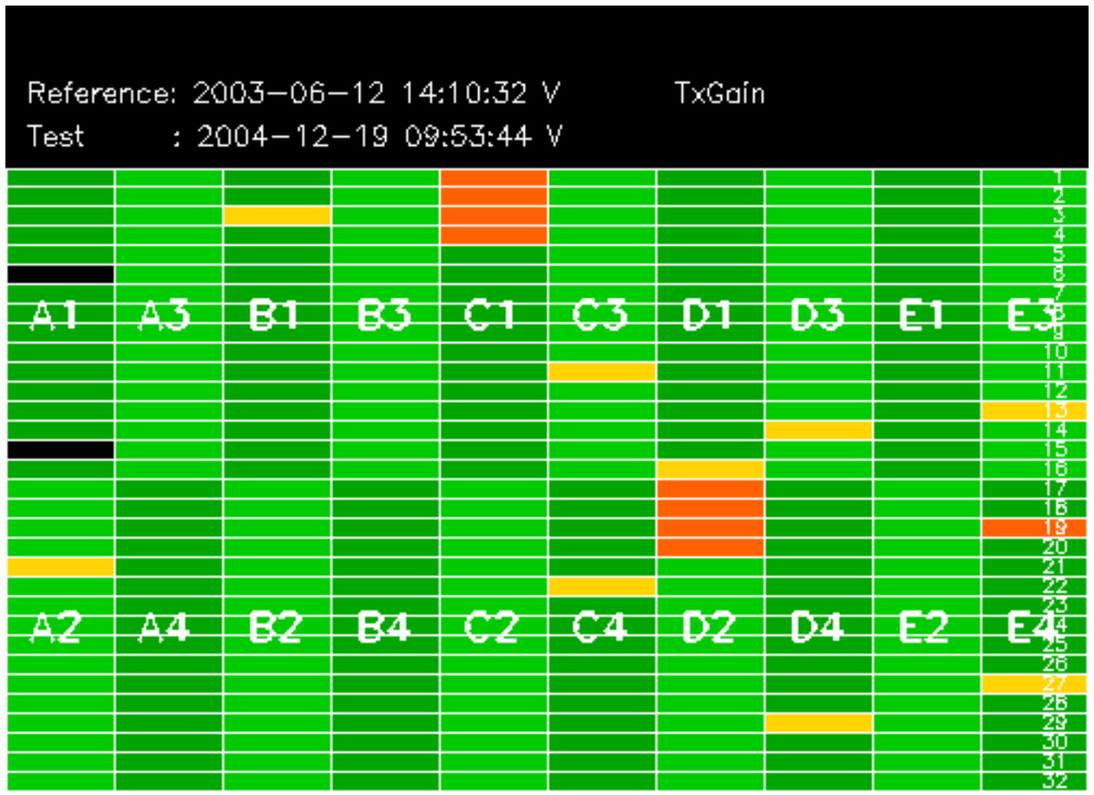
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-19 09:53:44 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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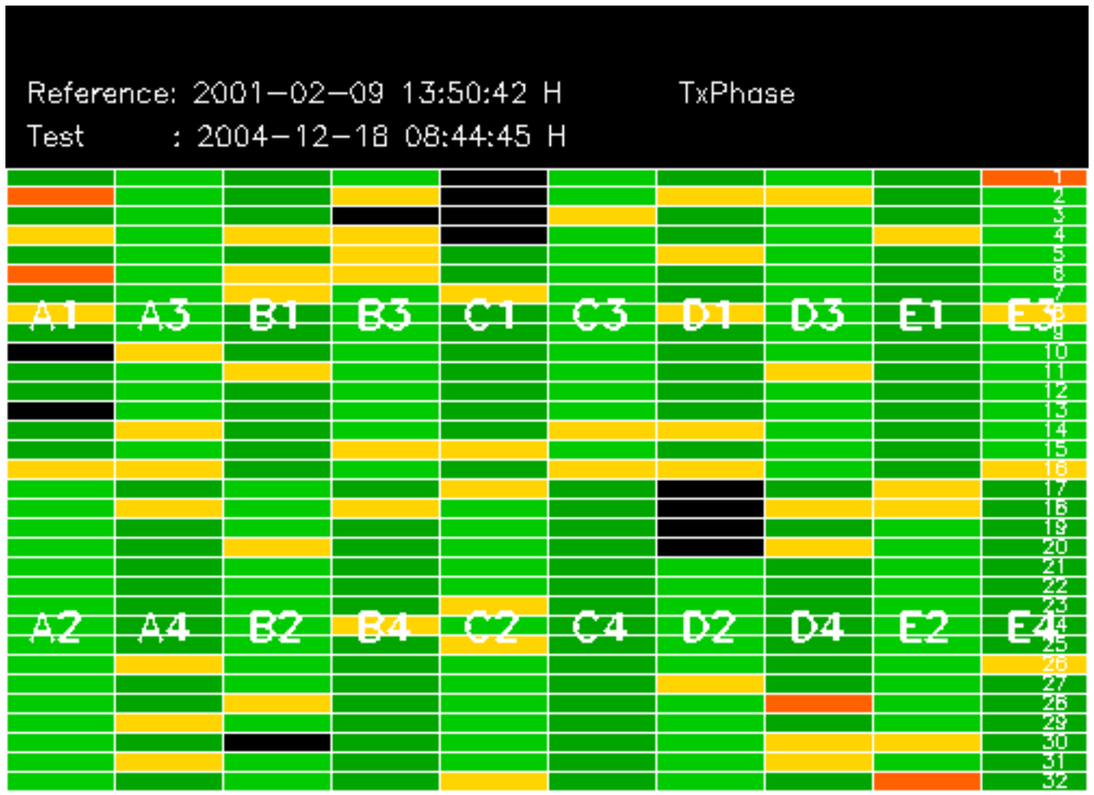
Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-12-18 08:44:45 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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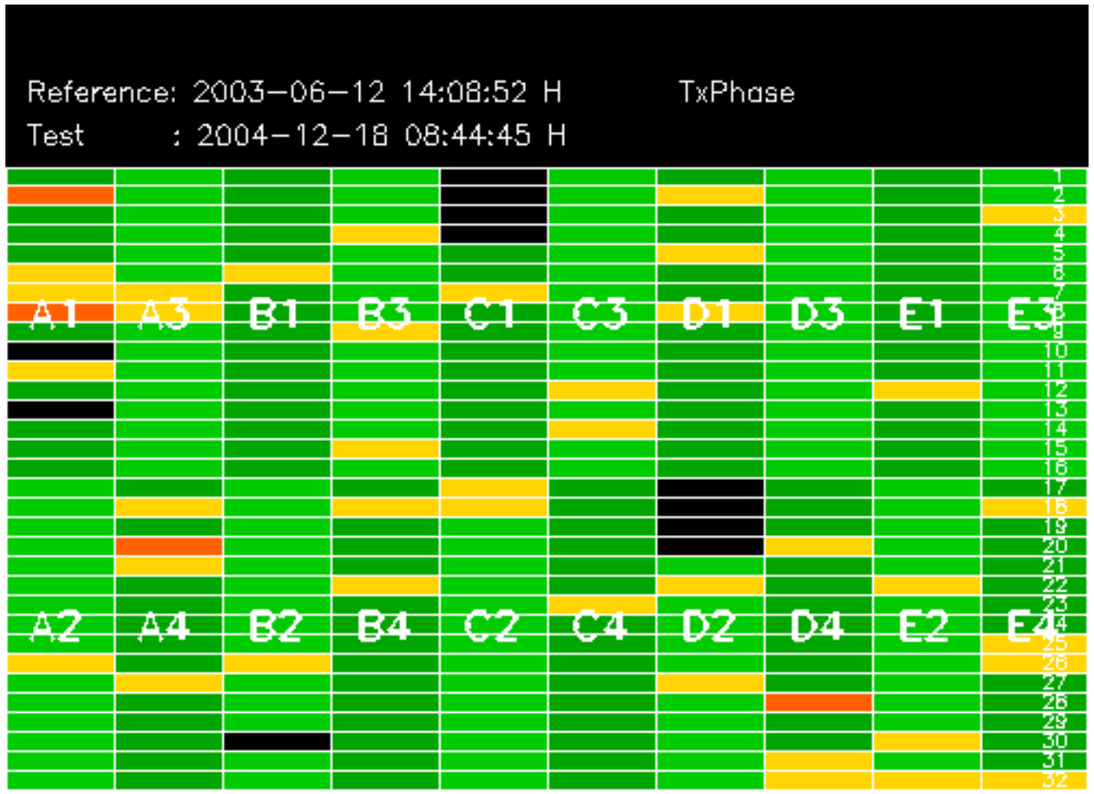
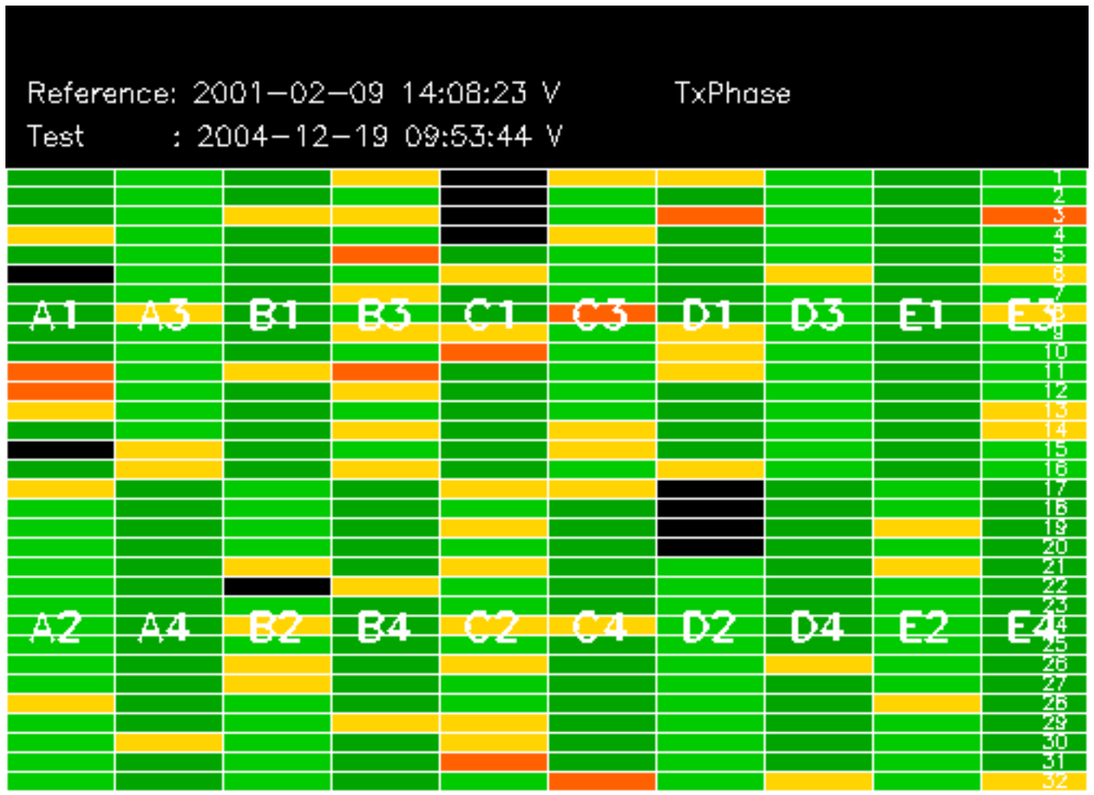
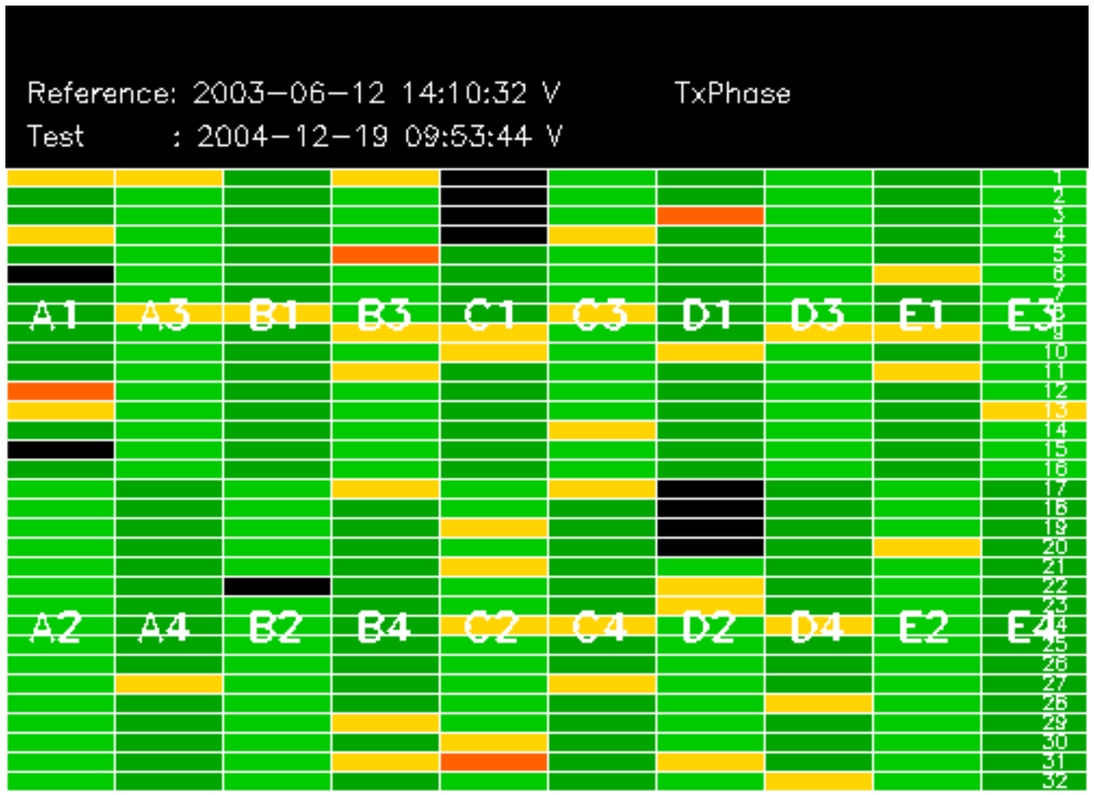

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-18 08:44:45 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-19 09:53:44 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 : 2004-12-19 09:53:44 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
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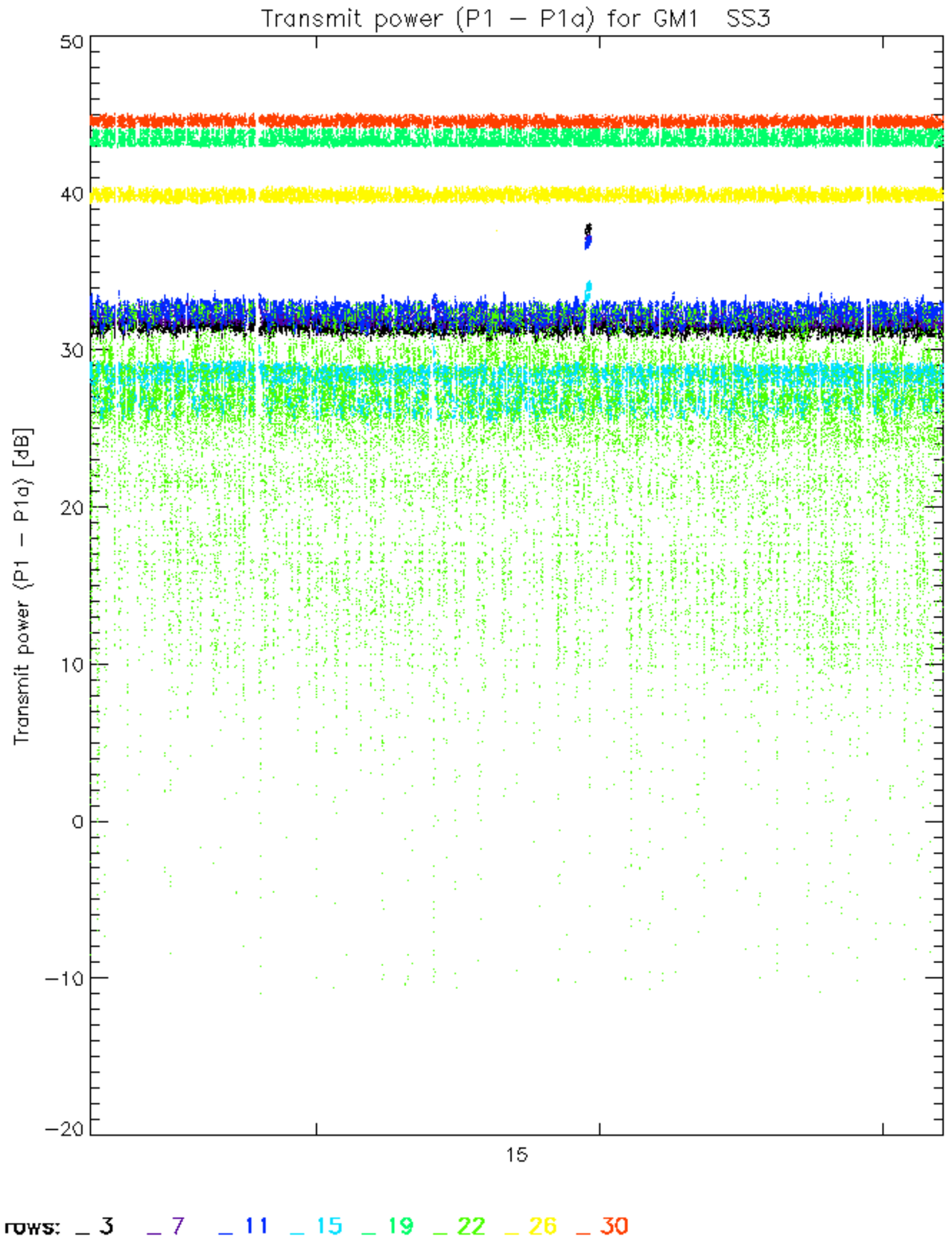
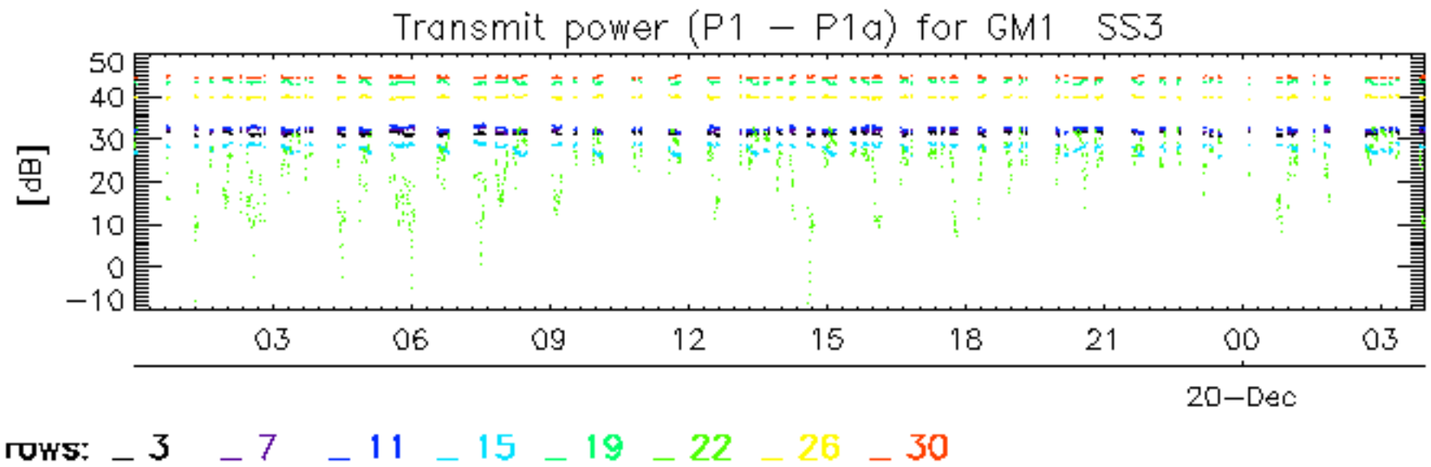
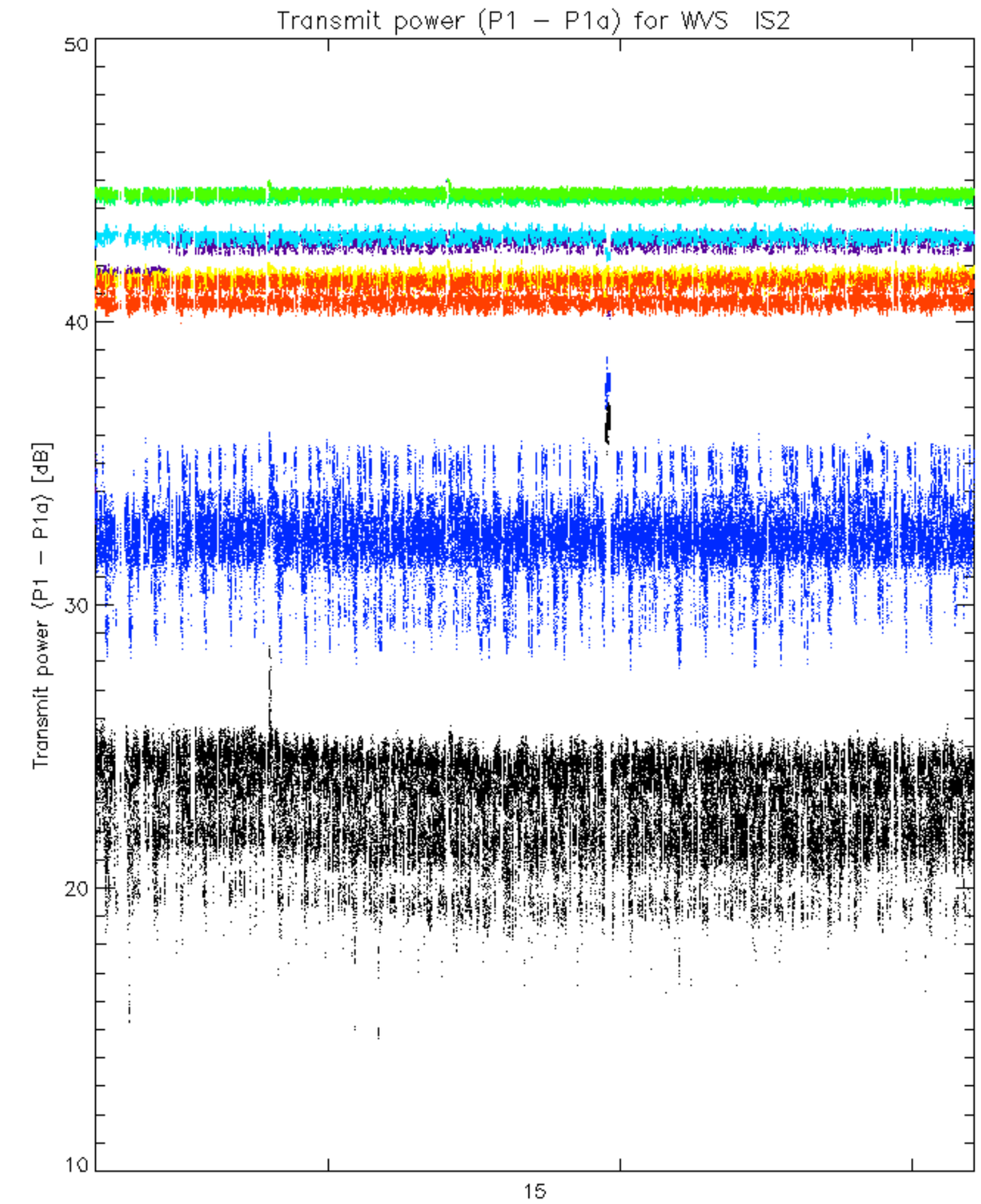
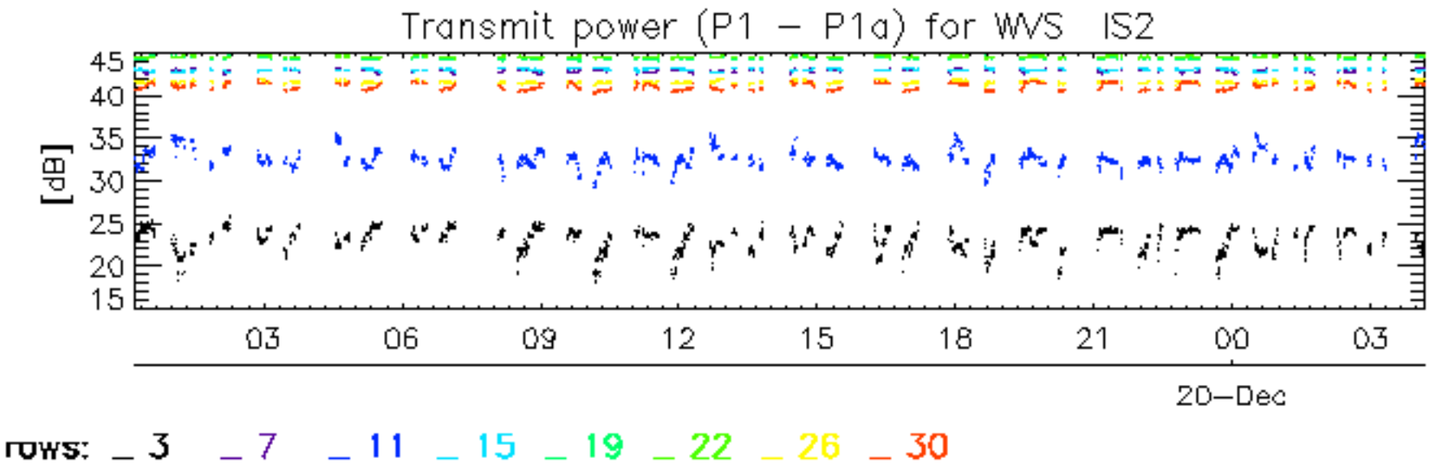

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
15
rows: 3 7 11 15 19 22 26 30


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

No unavailabilities during the reported period.