PRELIMINARY REPORT OF 041225

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

last update on Sat Dec 25 10:59:26 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 2004-12-24 00:00:00 to 2004-12-25 10:59:26

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	29	45	4	1	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	29	45	4	1	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	29	45	4	1	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	29	45	4	1	4

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	44	47	4	8	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	44	47	4	8	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	44	47	4	8	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	44	47	4	8	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	20041223 074716
H	20041224 071539

MSM in V/V polarisation

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

MSM in H/H polarisation

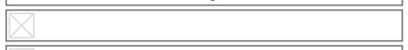
Pre-launch Reference	DDS-B (2003-06-12) reference
	
	
	
	

4 - Internal calibration Results

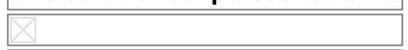
No anomalies observed.

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	-3.460375	0.028887	0.023934
7	P1	-3.099171	0.024948	0.012488
11	P1	-4.641943	0.046203	-0.030181
15	P1	-5.663955	0.038242	-0.021690
19	P1	-3.648380	0.005758	-0.037344
22	P1	-4.577373	0.016994	0.001128
26	P1	-4.937014	0.024134	0.004174
30	P1	-7.108470	0.013678	-0.041132
3	P1	-15.953017	0.114893	0.065733
7	P1	-15.510935	0.165588	0.024550
11	P1	-20.730059	0.535961	-0.226391
15	P1	-11.623566	0.094296	0.000705
19	P1	-14.149351	0.030657	-0.056779
22	P1	-16.106928	0.467831	0.112367
26	P1	-17.771313	0.261215	0.088833
30	P1	-17.901981	0.307125	0.013532

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.361479	0.085258	0.017493
7	P2	-22.584406	0.165981	0.028818
11	P2	-14.920026	0.176451	0.145290
15	P2	-7.169246	0.115676	0.026040
19	P2	-9.731929	0.203406	0.063000
22	P2	-17.185606	0.098323	0.051536
26	P2	-16.530958	0.114706	-0.001105

30	P2	-18.981245	0.082173	0.070156

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210859	0.006947	-0.017985
7	P3	-8.210845	0.006946	-0.018060
11	P3	-8.210815	0.006946	-0.018238
15	P3	-8.210793	0.006947	-0.018353
19	P3	-8.210796	0.006947	-0.018342
22	P3	-8.210835	0.006946	-0.018112
26	P3	-8.210845	0.006948	-0.018082
30	P3	-8.211120	0.006948	-0.019624

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	-2.847642	0.111731	-0.014402
7	P1	-2.979589	0.064778	0.014167
11	P1	-3.943588	0.048880	-0.015433
15	P1	-3.519315	0.079131	-0.000120
19	P1	-3.605119	0.012803	-0.024790
22	P1	-5.614700	0.069378	-0.024236
26	P1	-6.509326	0.023372	-0.043371
30	P1	-6.302711	0.042850	-0.039480
3	P1	-10.686336	0.059041	-0.201642
7	P1	-10.114563	0.156089	-0.065104
11	P1	-12.418427	0.199833	-0.095181

15	P1	-11.726487	0.099471	-0.020649
19	P1	-15.636713	0.048807	-0.038690
22	P1	-24.115416	2.123127	-0.075897
26	P1	-15.063643	0.385655	0.116850
30	P1	-20.137238	0.925664	0.118066

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.040457	0.035021	0.038460
7	P2	-22.628622	0.029460	0.085961
11	P2	-10.712254	0.032594	0.164233
15	P2	-5.063551	0.023628	-0.002259
19	P2	-6.966940	0.033232	-0.006498
22	P2	-7.314575	0.025758	0.055203
26	P2	-23.961617	0.018208	-0.023451
30	P2	-22.037565	0.019407	0.080493

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.043981	0.002597	-0.011823
7	P3	-8.044008	0.002609	-0.011475
11	P3	-8.043940	0.002593	-0.011288
15	P3	-8.043952	0.002603	-0.011943
19	P3	-8.044067	0.002607	-0.011624
22	P3	-8.044047	0.002608	-0.011759
26	P3	-8.044103	0.002597	-0.011740
30	P3	-8.043912	0.002589	-0.011701

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS

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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	0.000439361
	stdev	2.41431e-07
MEAN Q	mean	0.000503194
	stdev	2.53156e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125718
	stdev	0.000989674
STDEV Q	mean	0.125955
	stdev	0.000998739

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

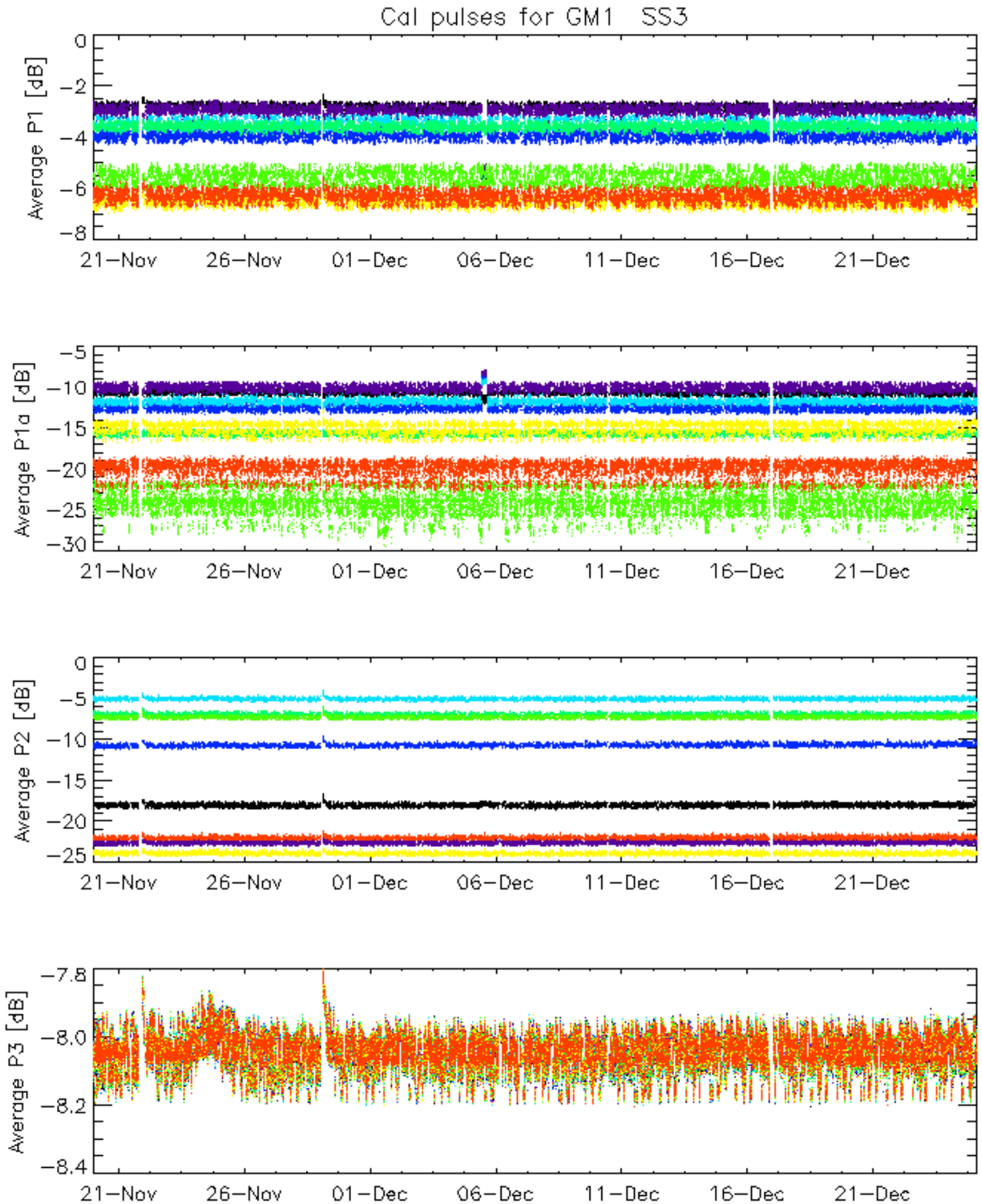
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

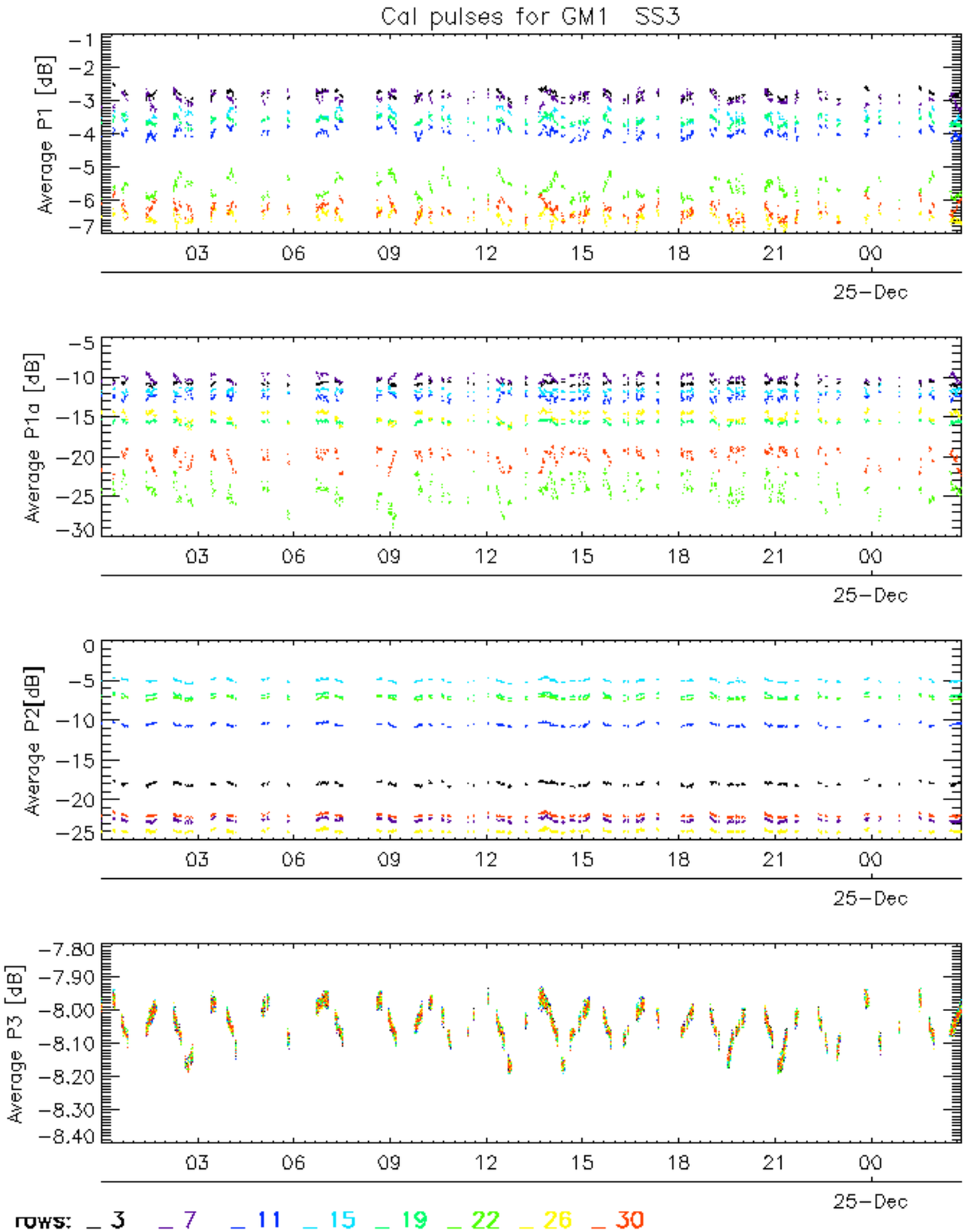
6.5 - Absolute Doppler for GM1

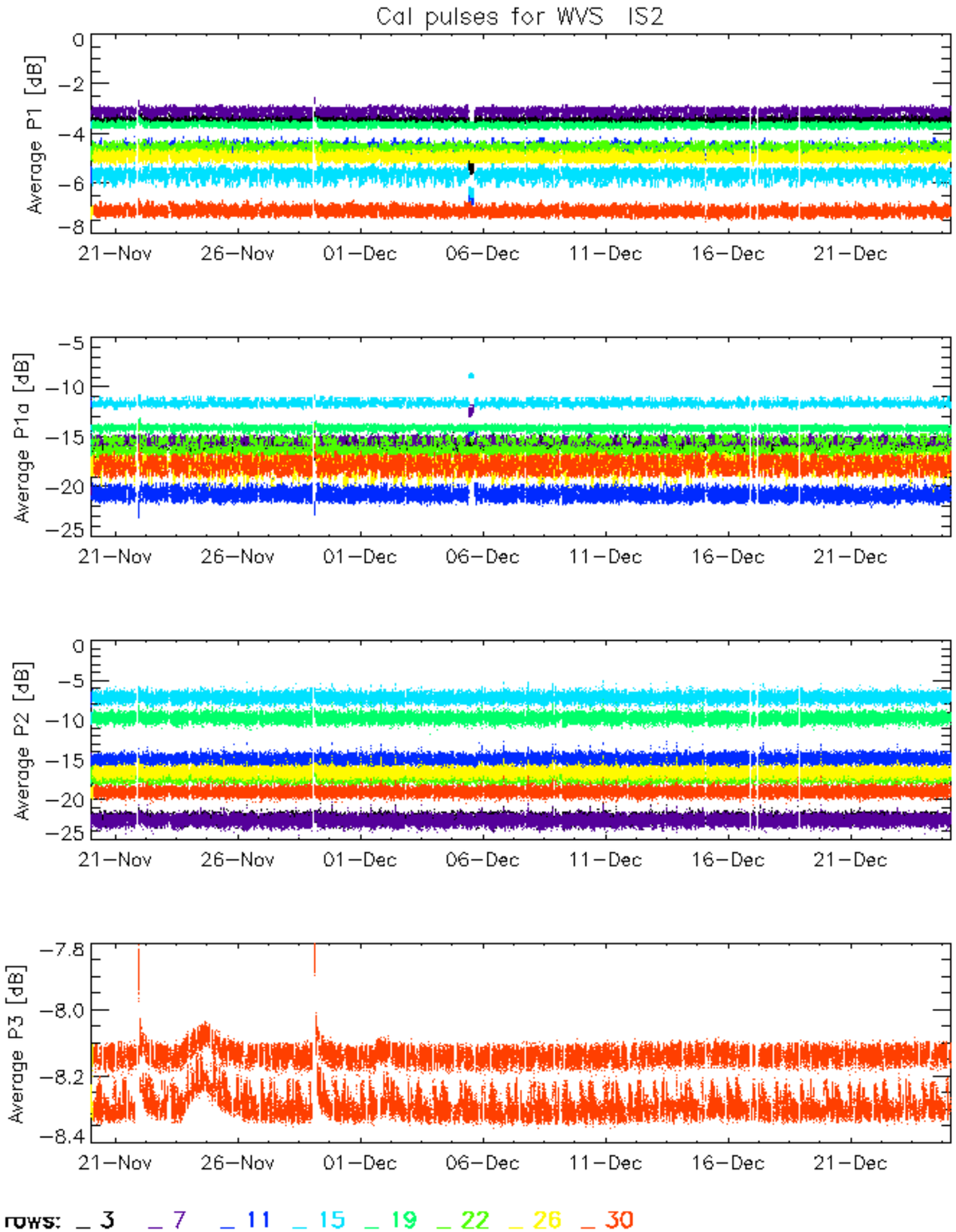
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

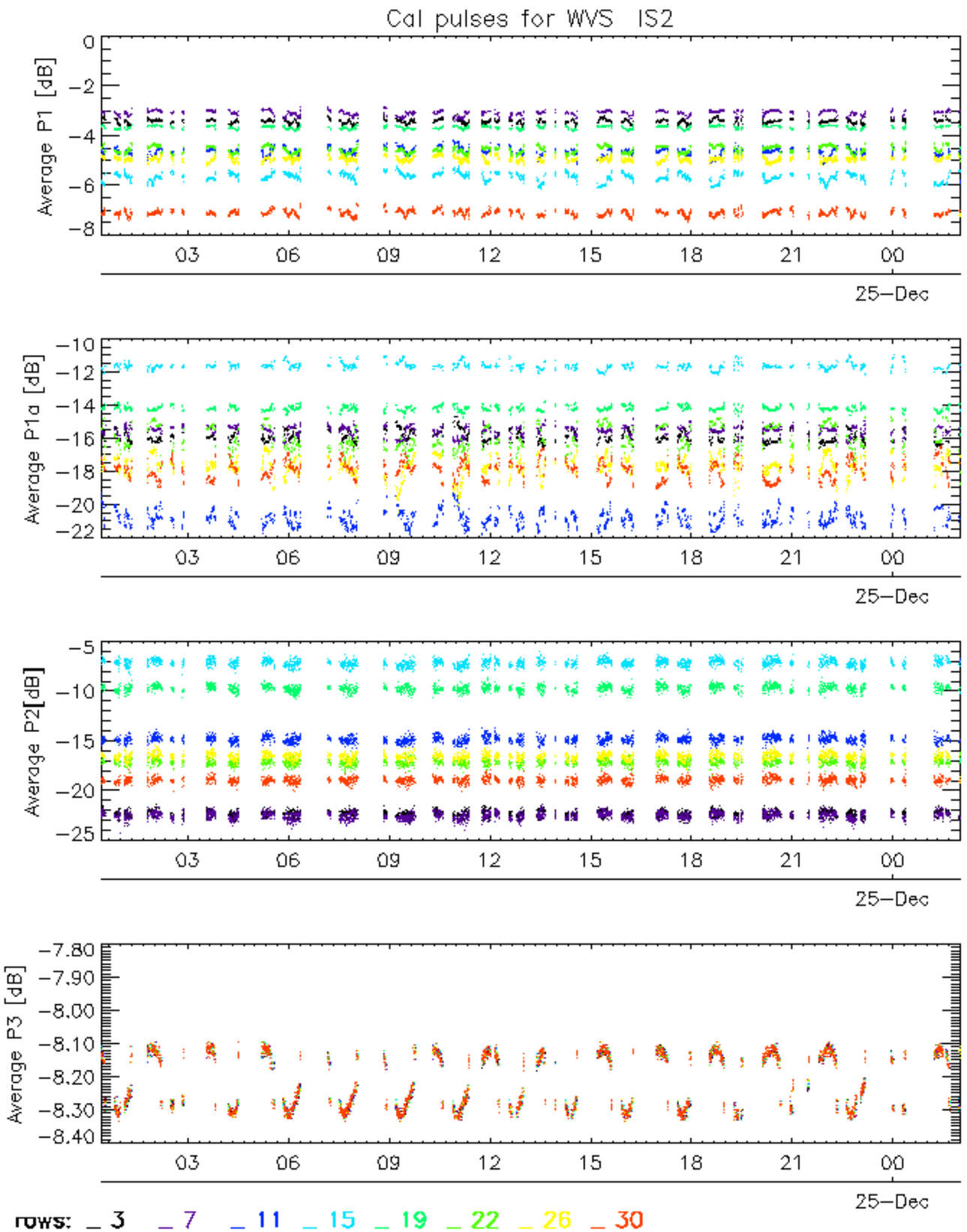
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

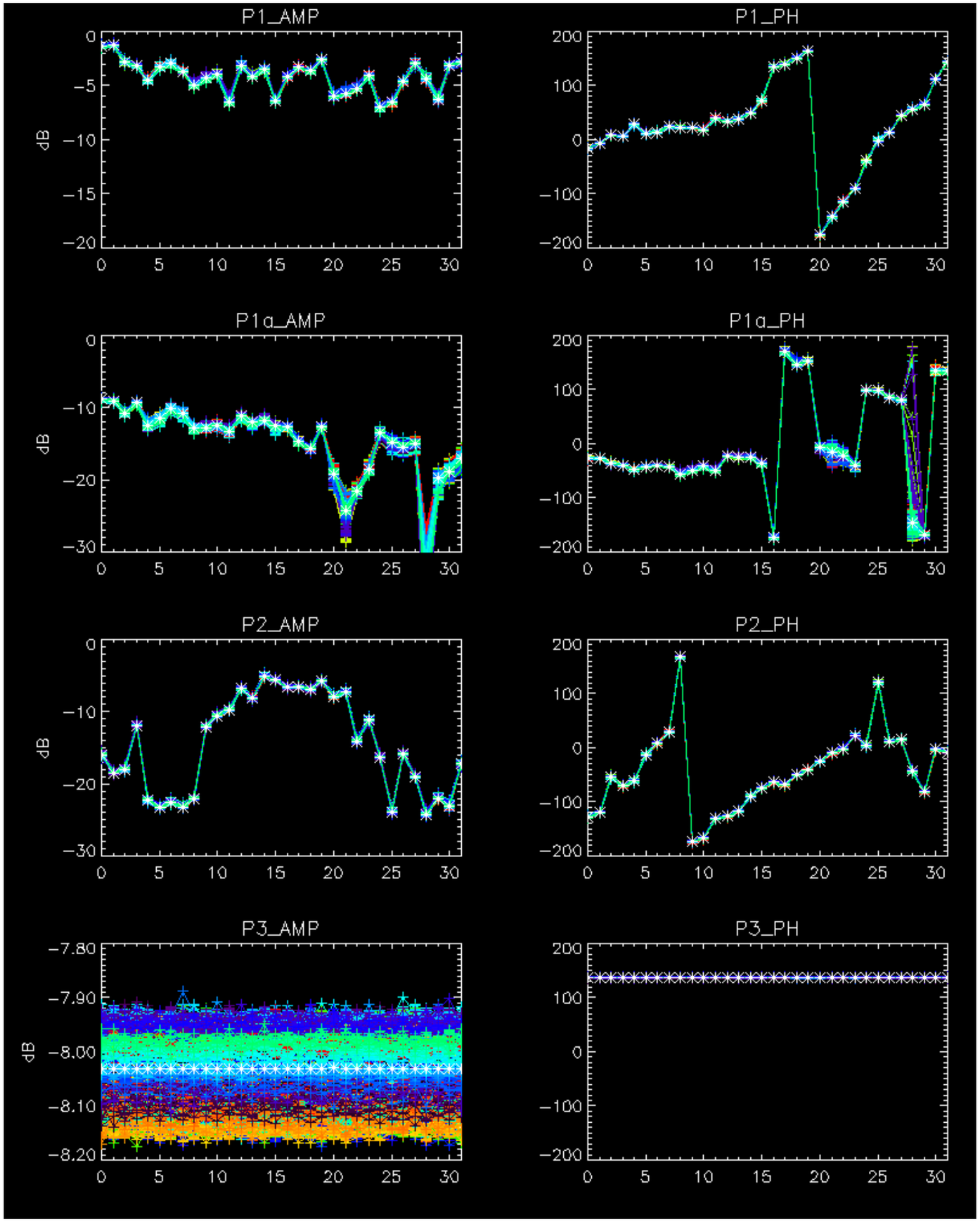

Cal pulses for GM1 SS3
Average P1 [dB]
0
−2
−4
−6
−8
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

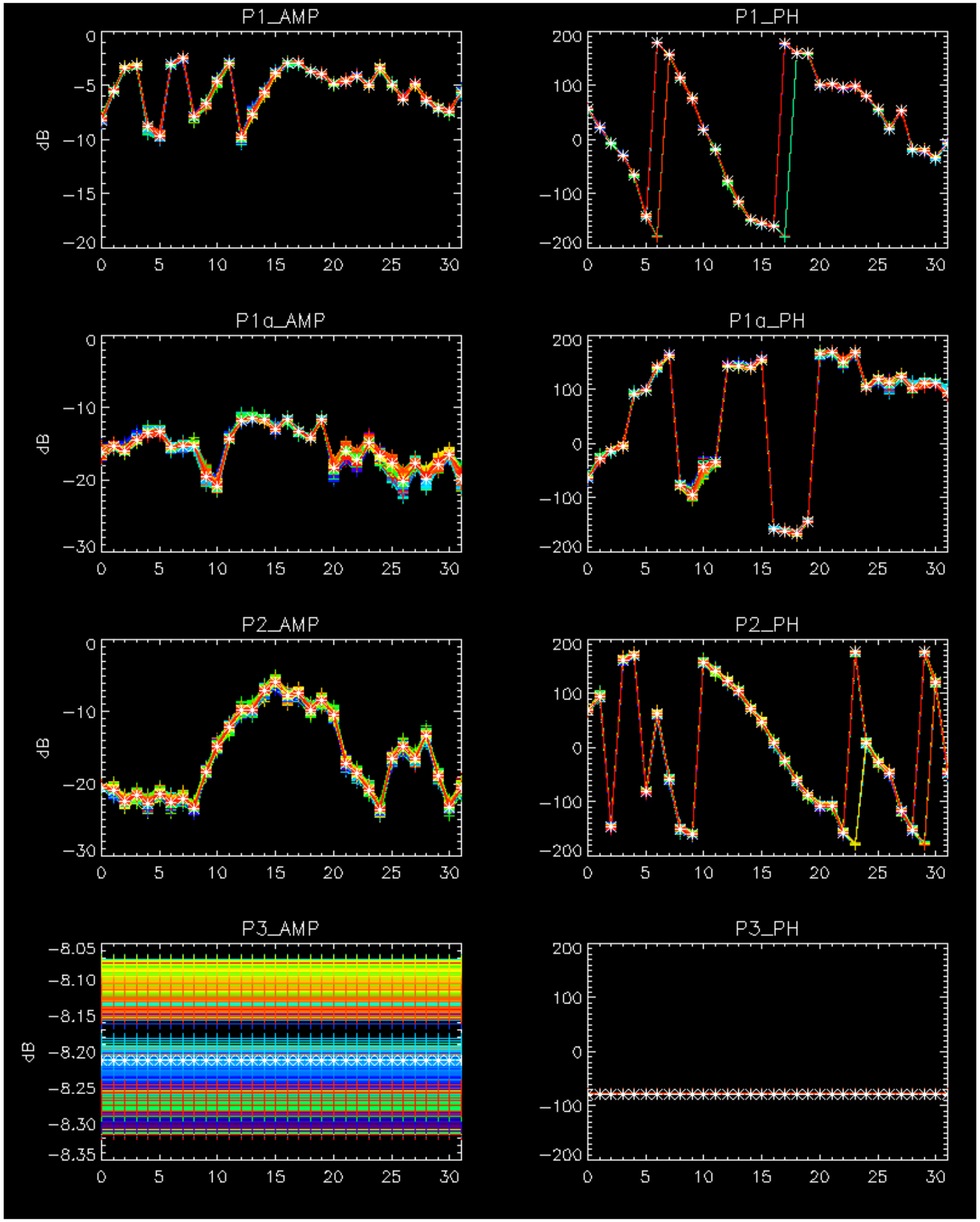

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
25−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
25−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
25−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06
09
12
15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


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

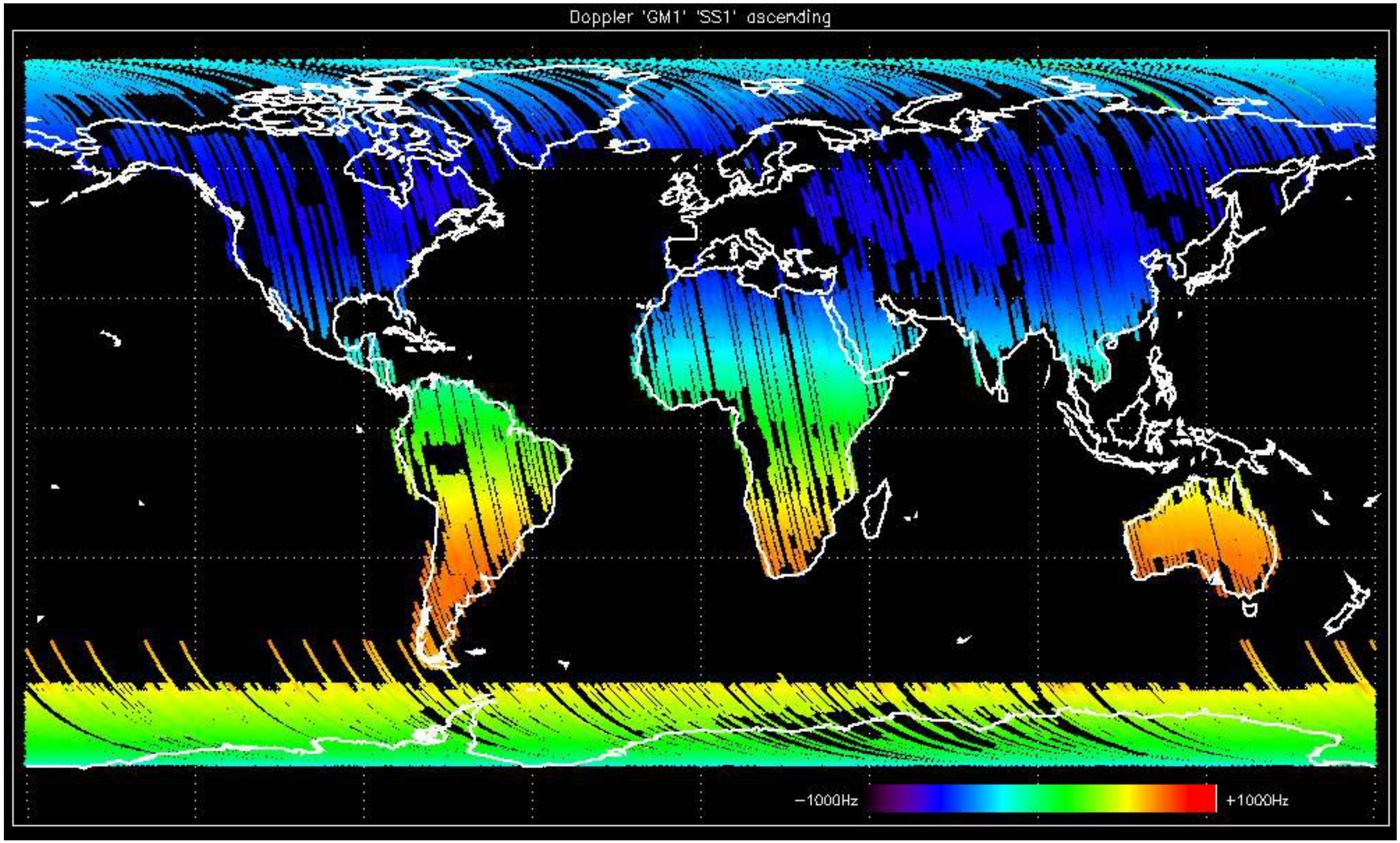
No anomalies observed.

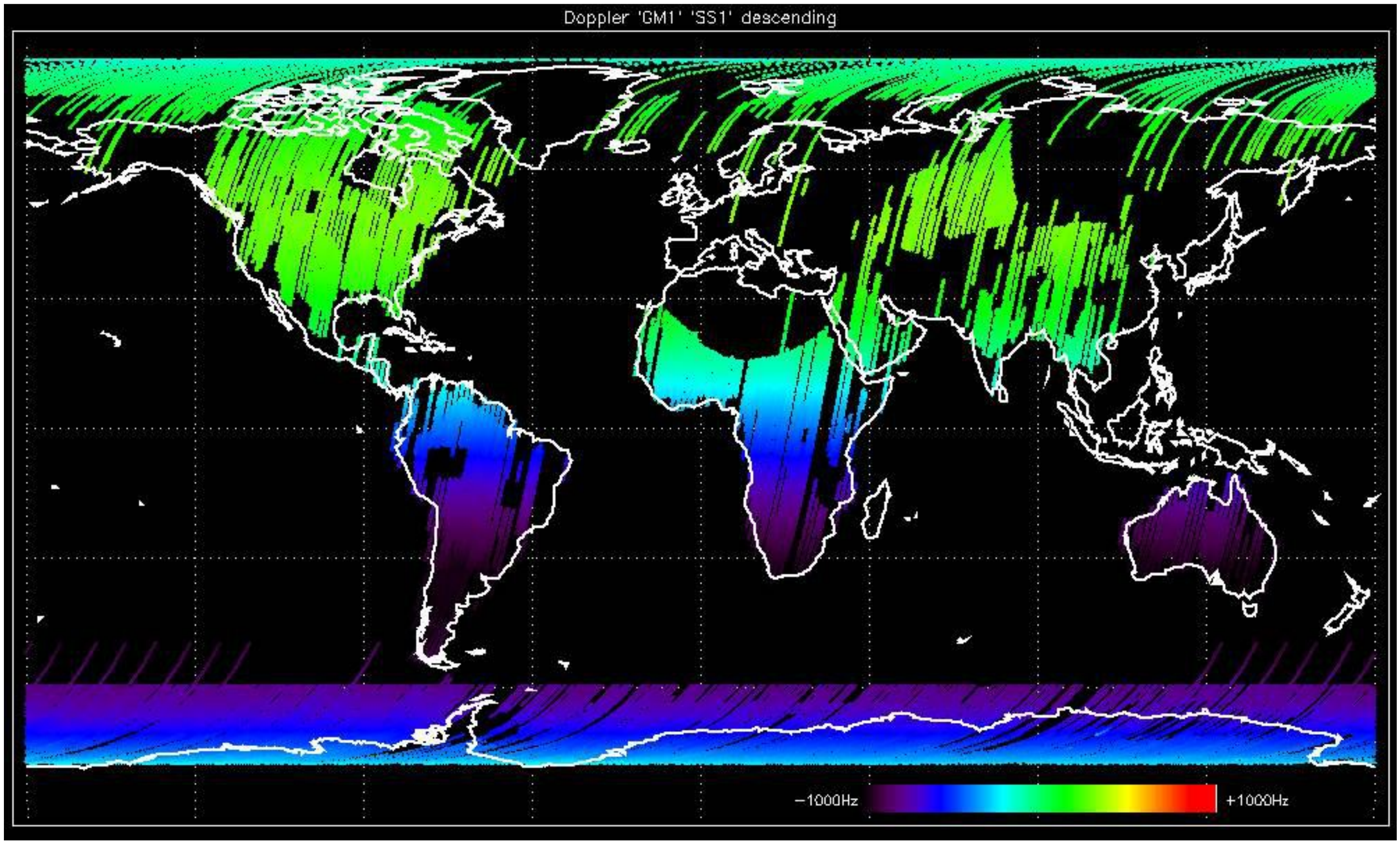

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.90
−8.00
−8.10
−8.20
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

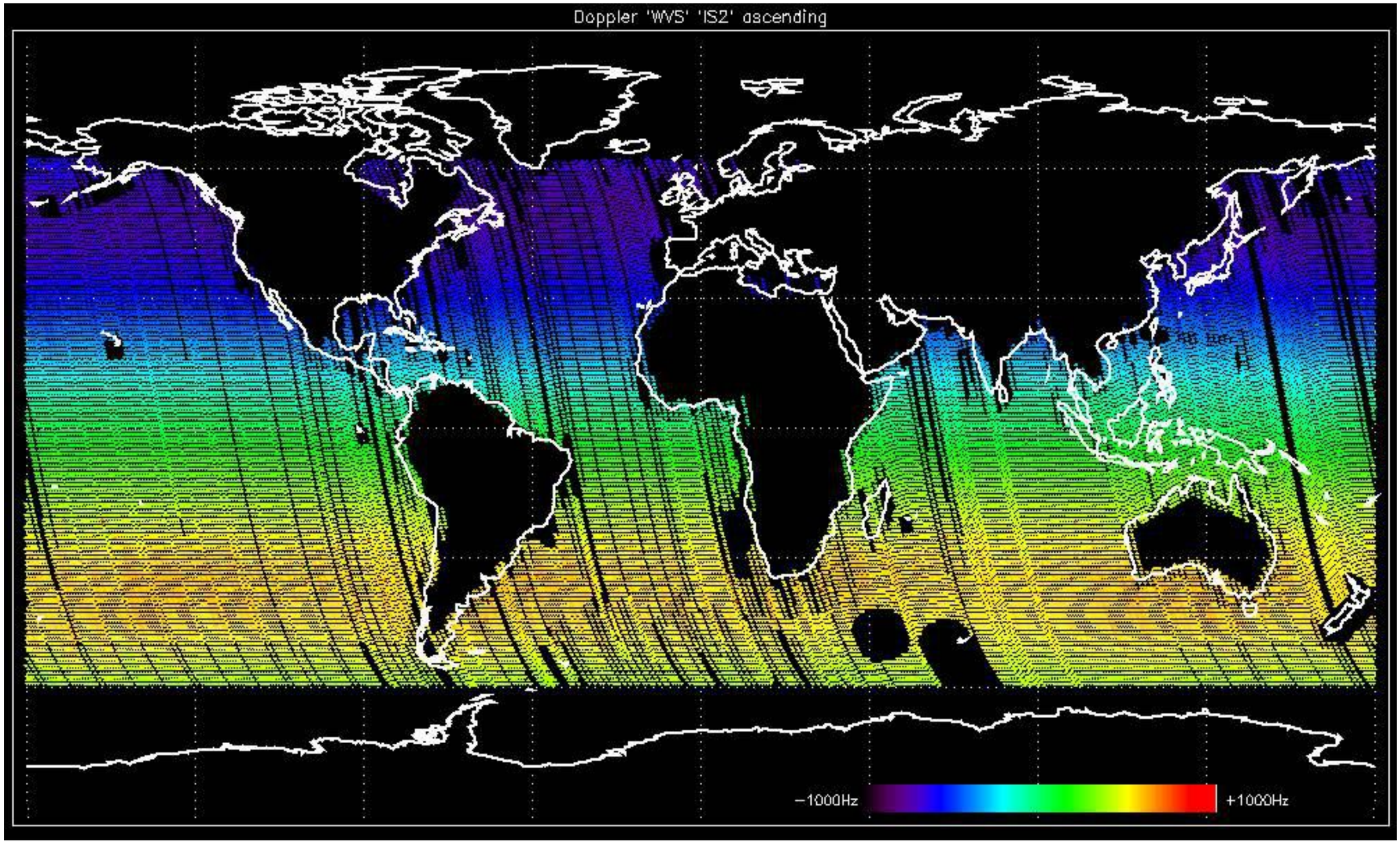

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

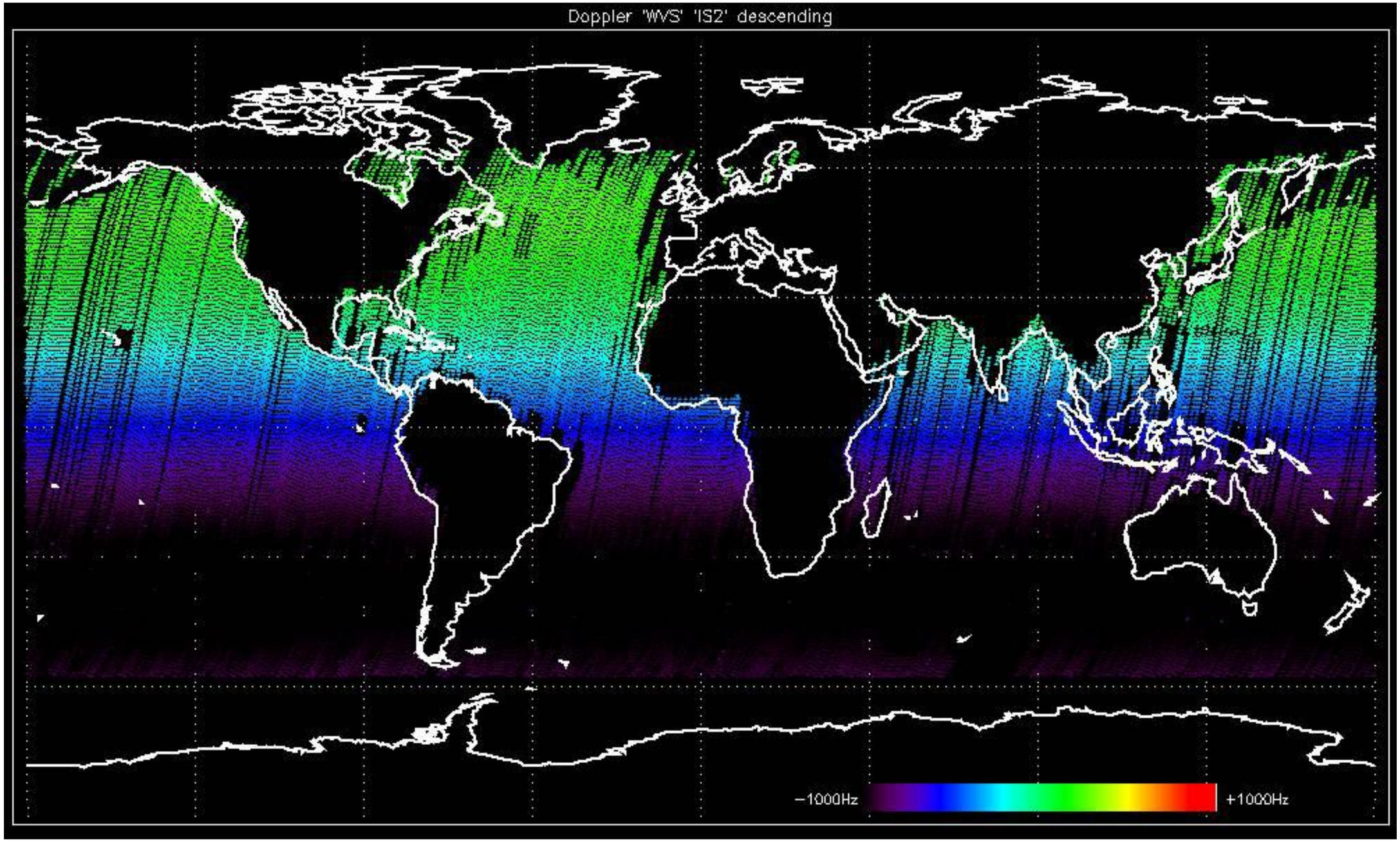
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

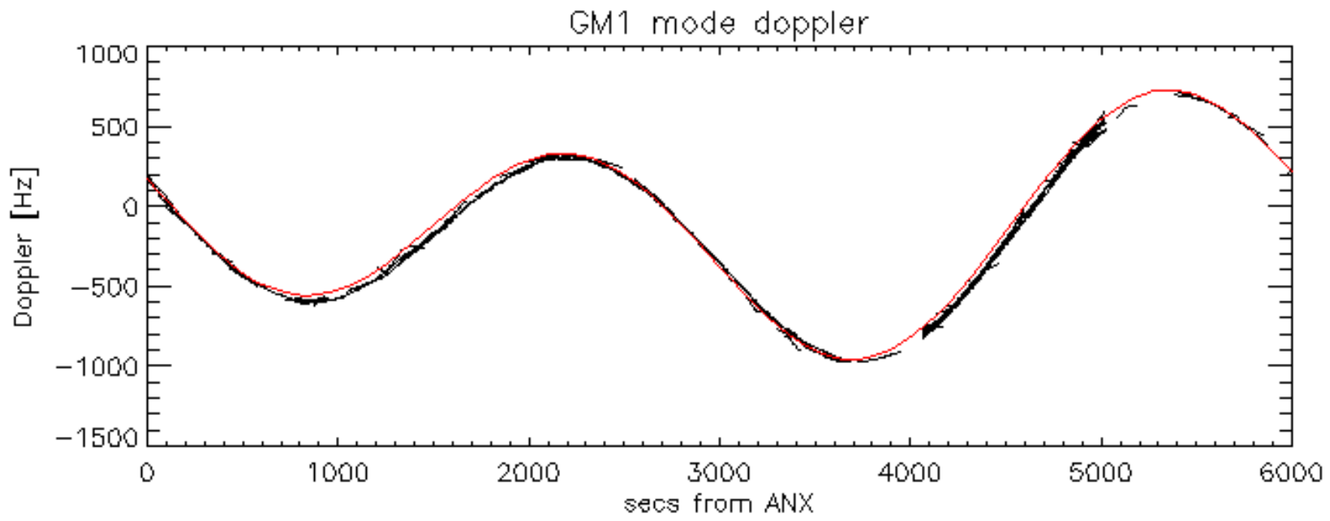
Preliminary report.The data is not yet controled

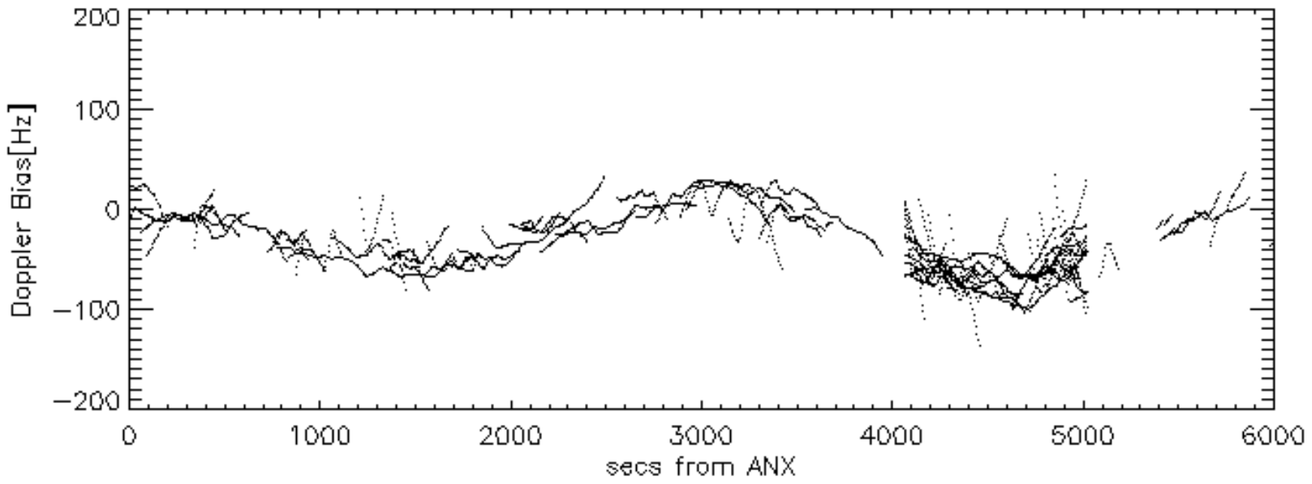

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

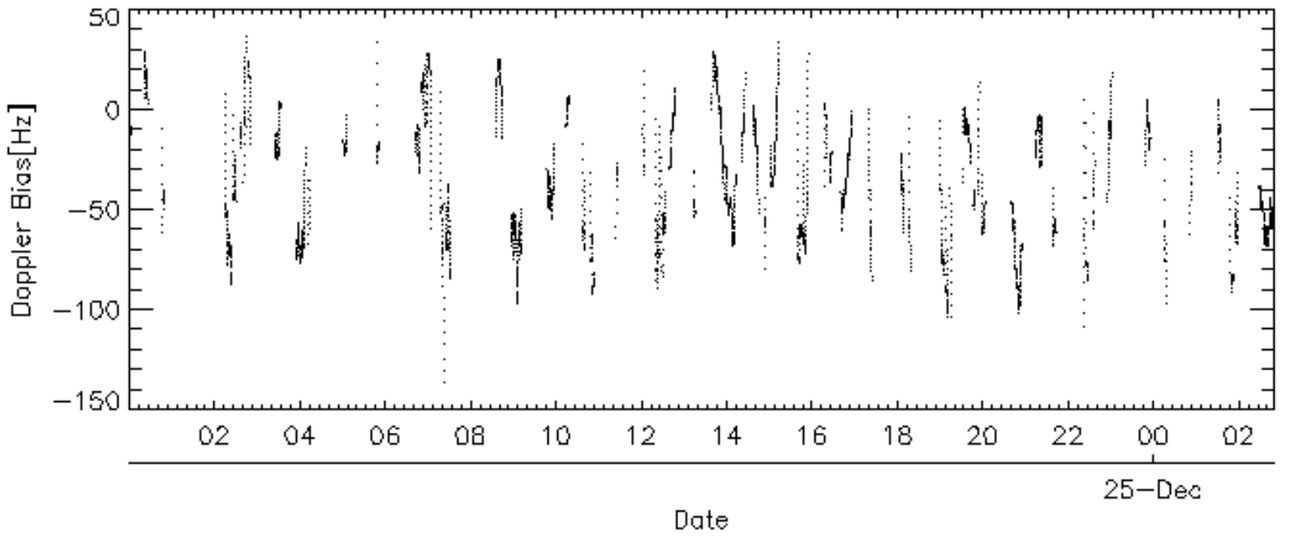

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

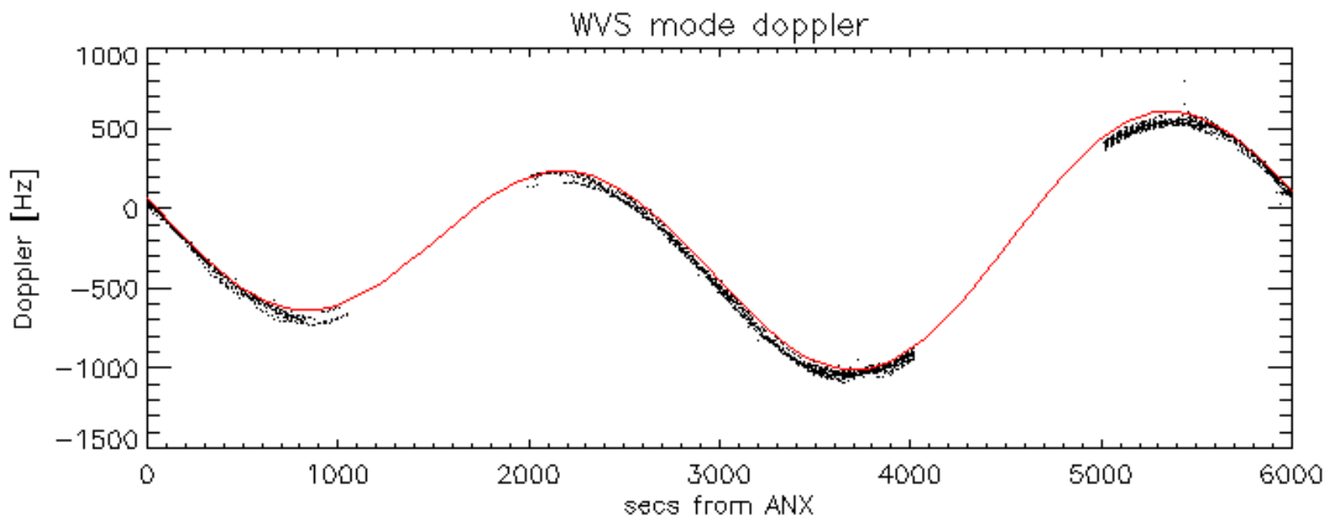

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

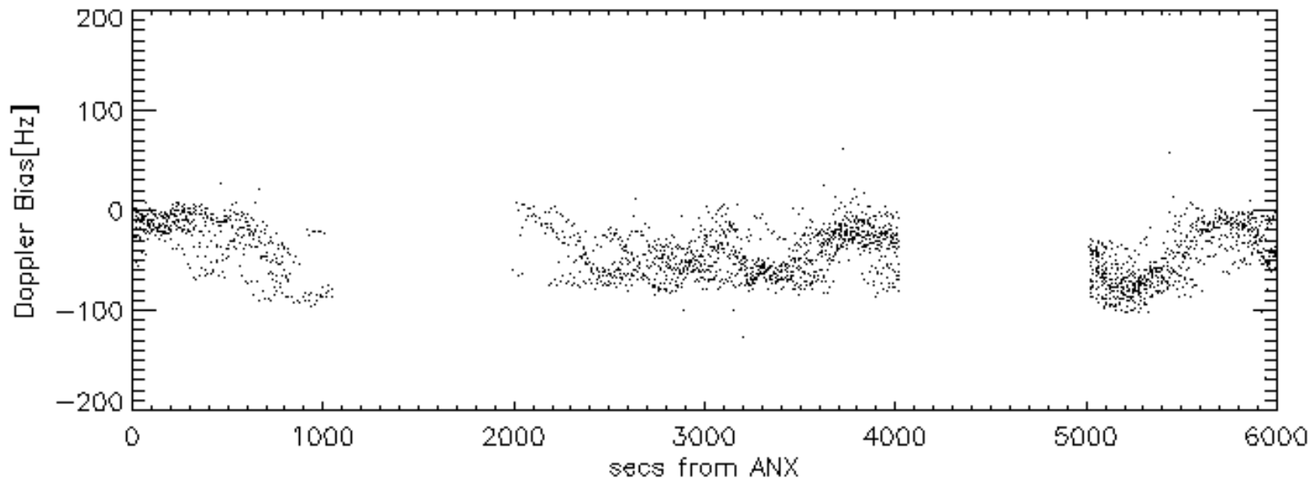

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

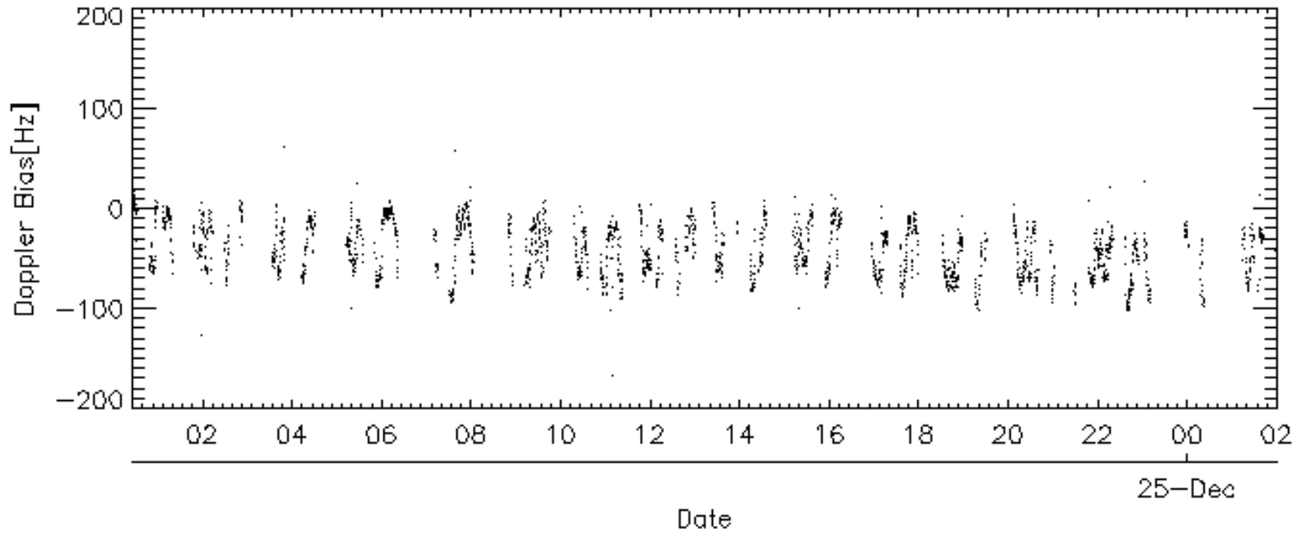

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

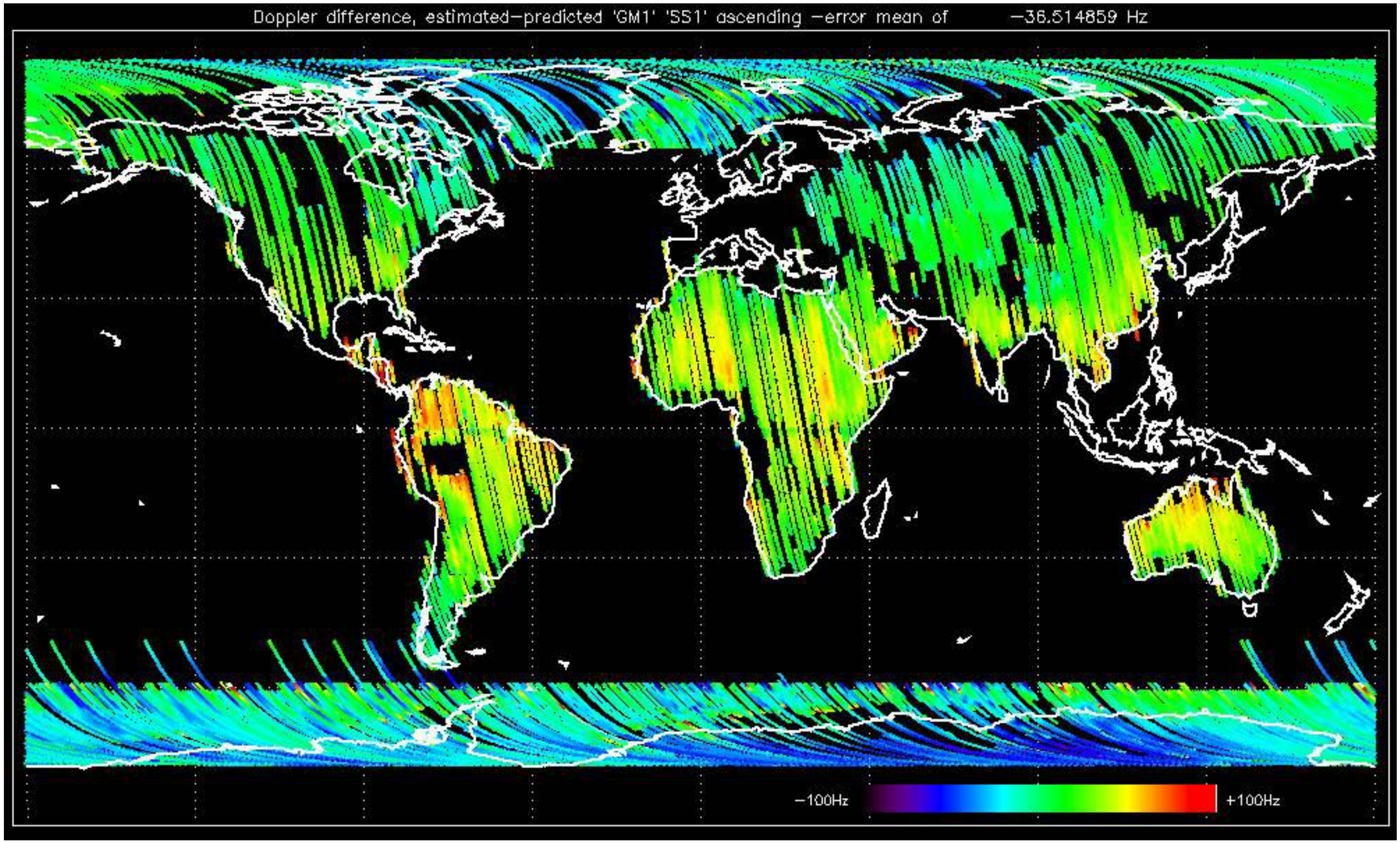

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

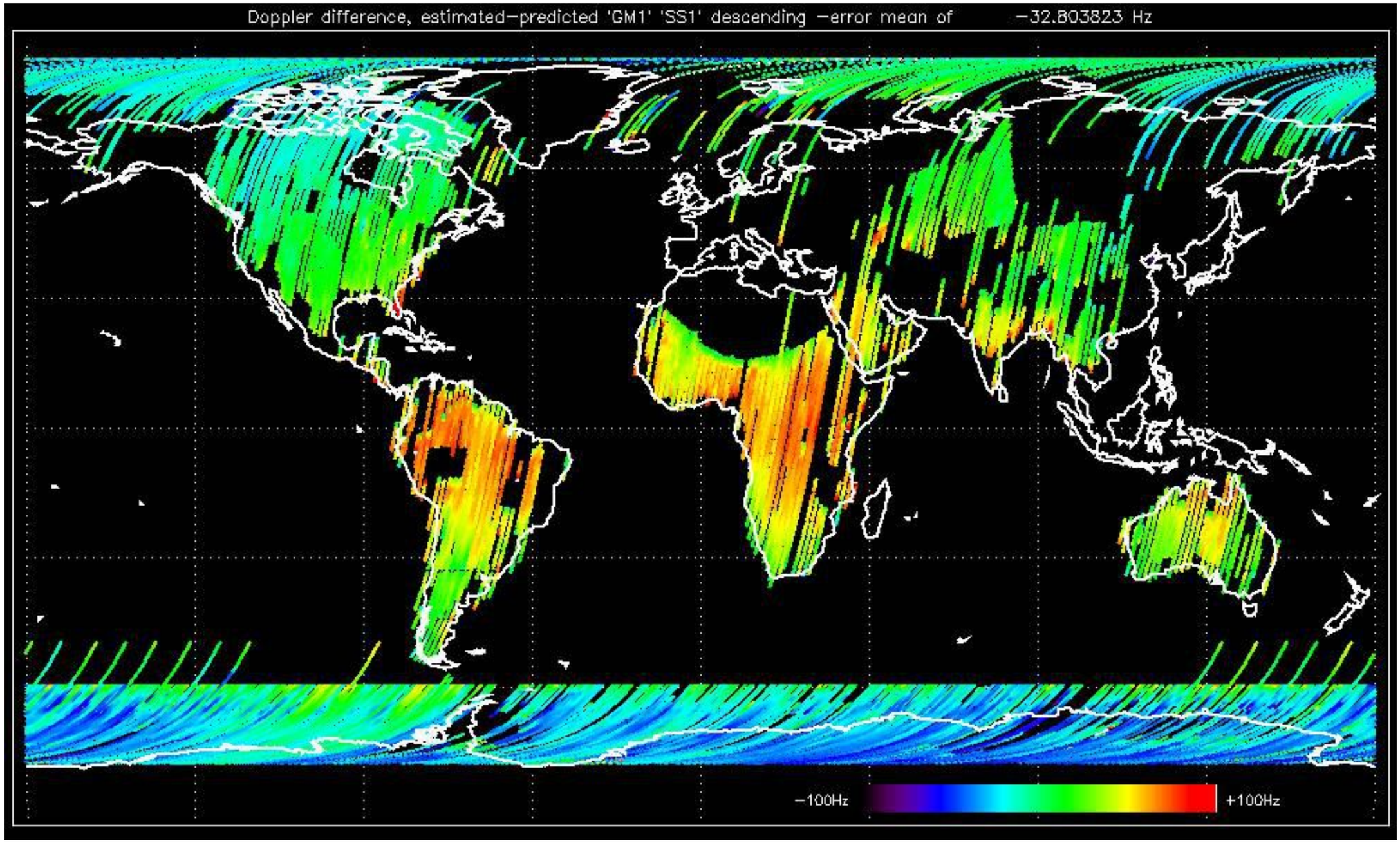

Doppler Bias[Hz]
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
25−Dec
Date

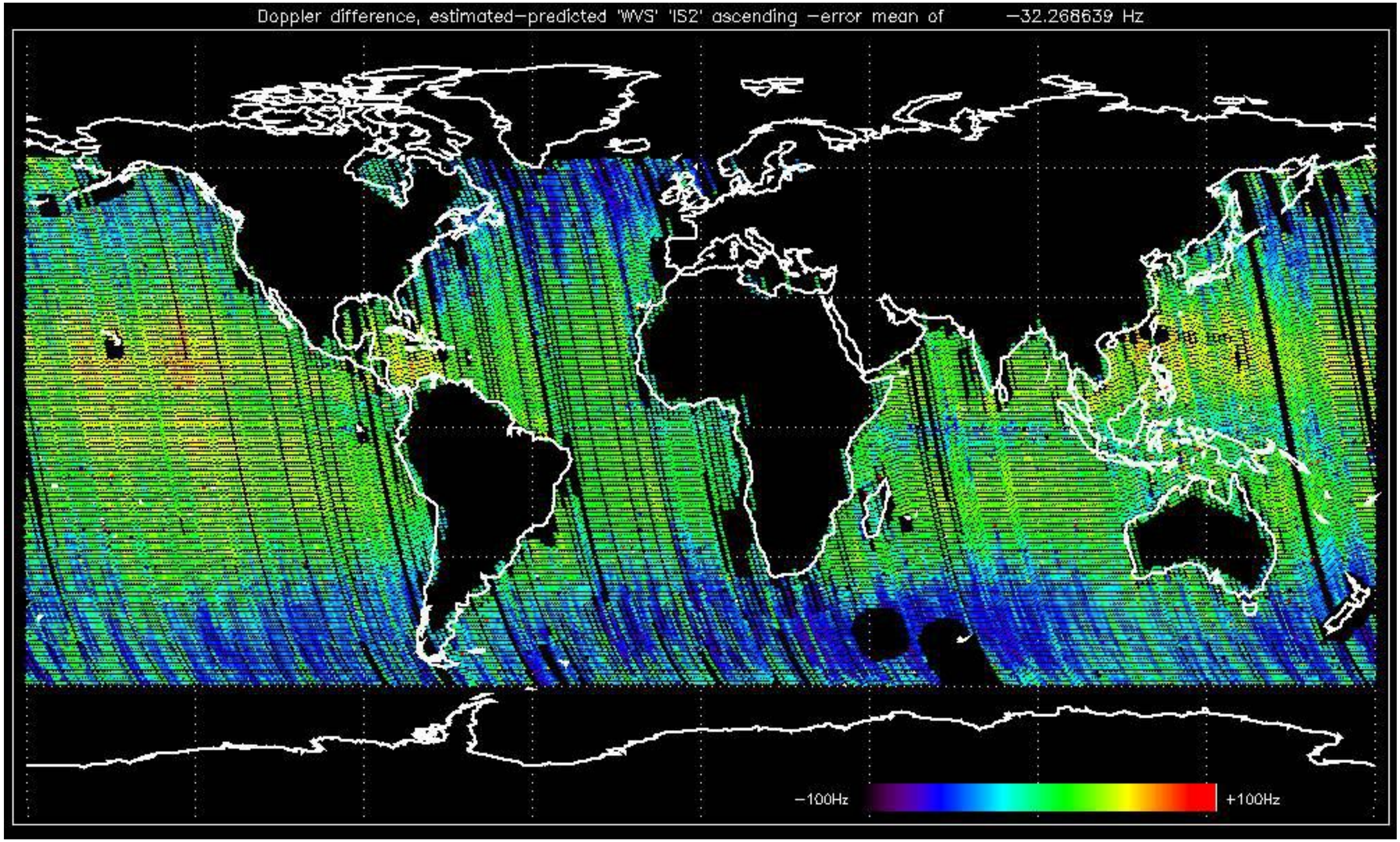

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

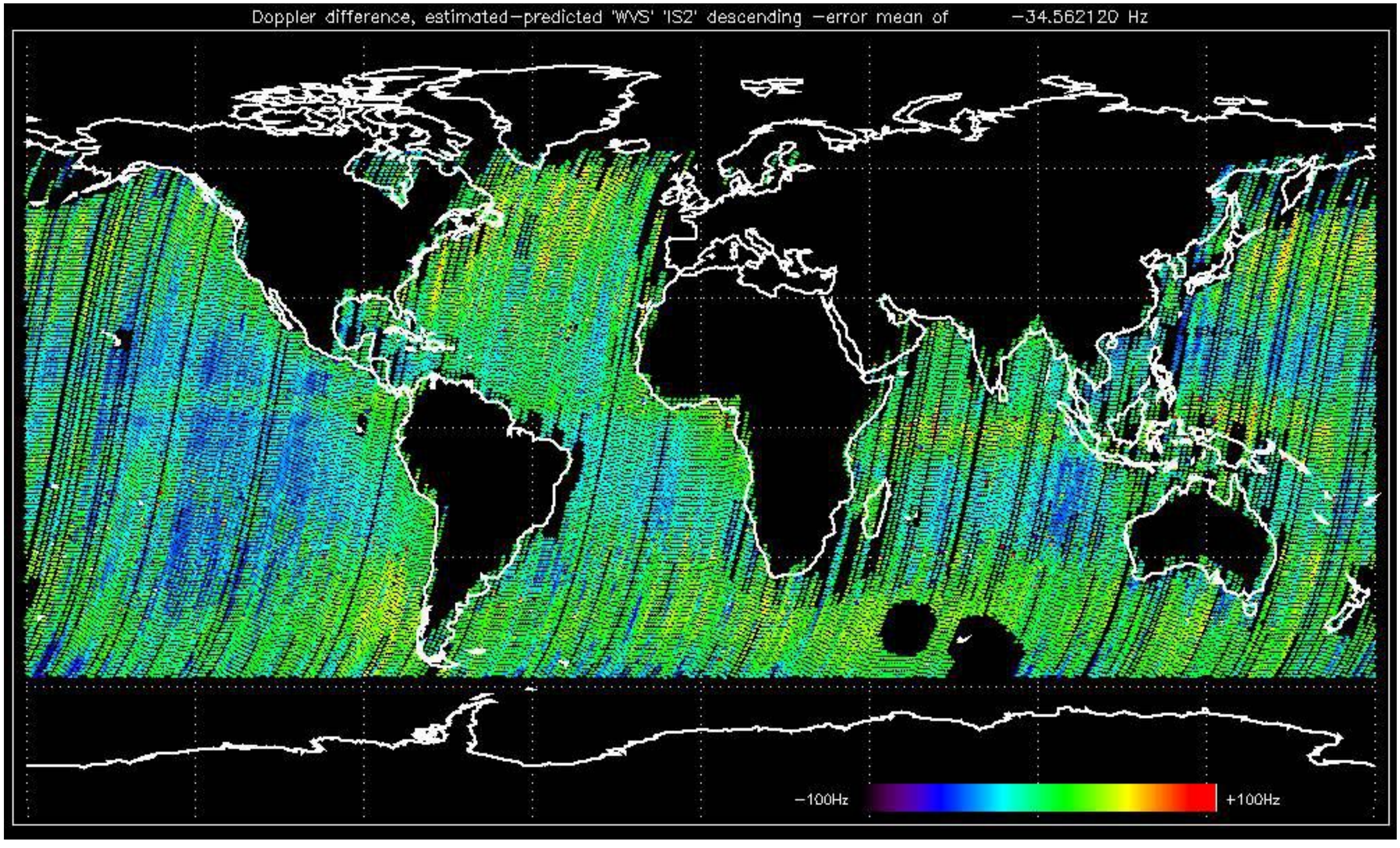

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −36.514859 Hz
−100Hz
+100Hz

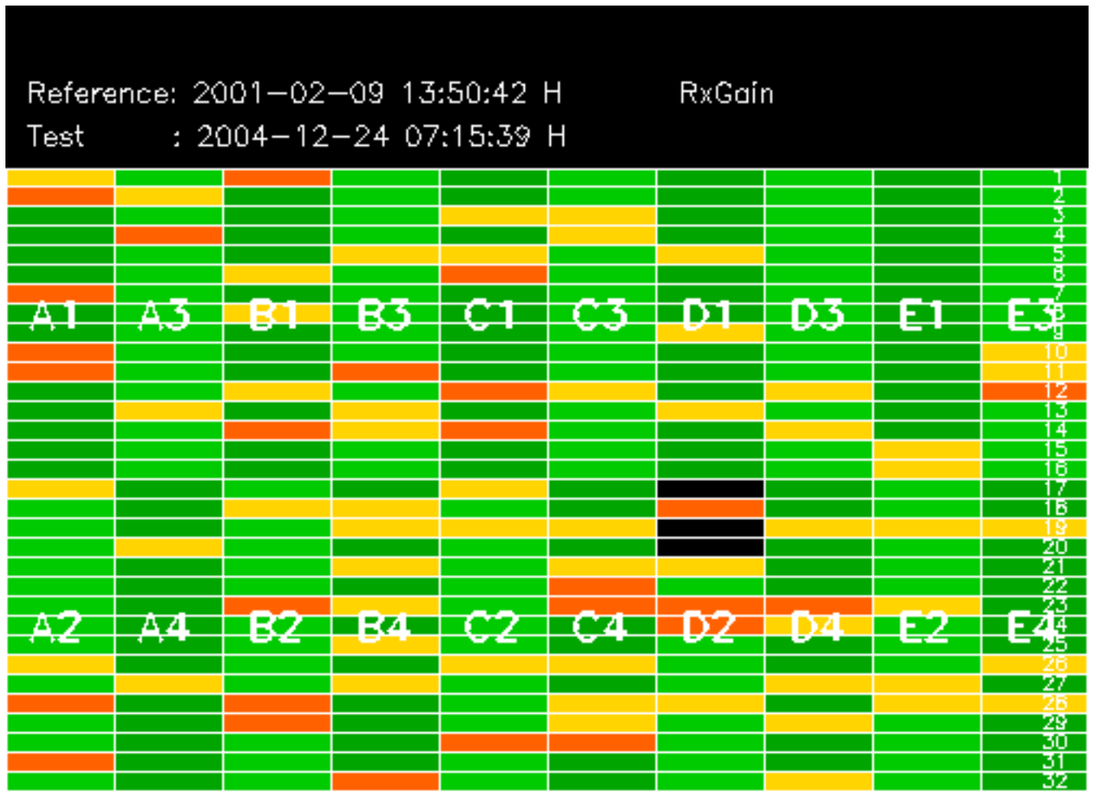

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −32.803823 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.268639 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.562120 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 : 2004-12-24 07:15:39 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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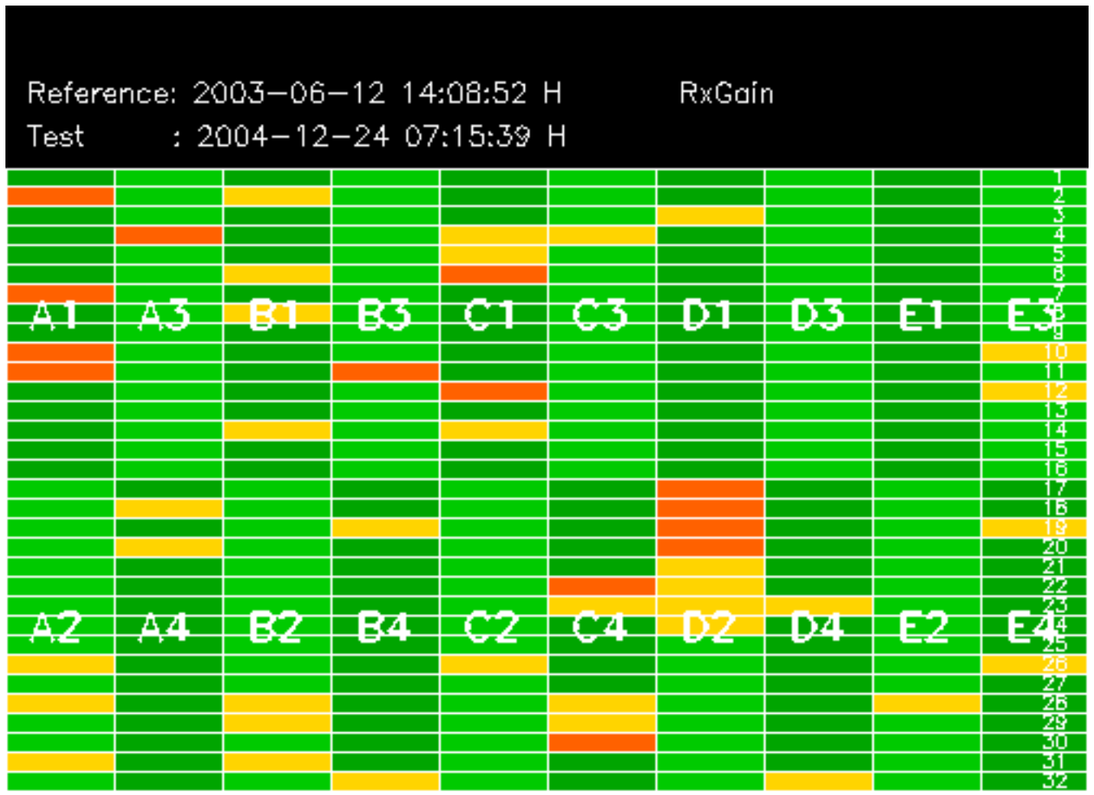
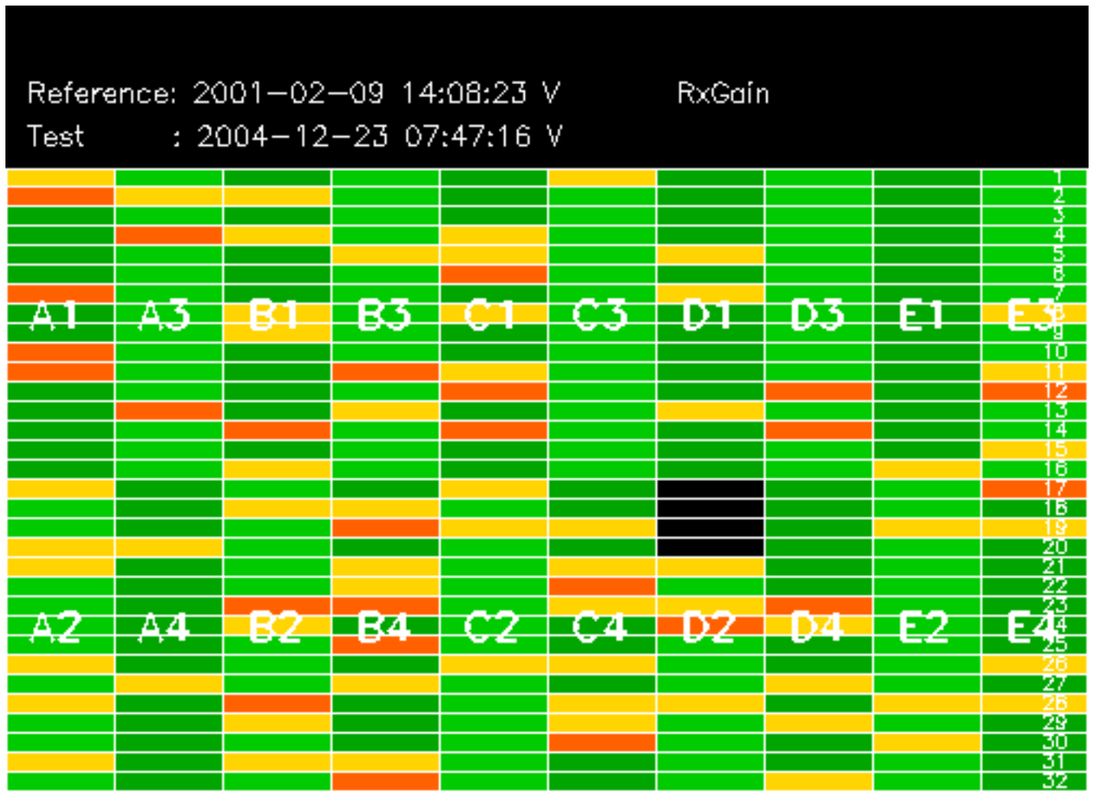

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-24 07:15:39 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-23 07:47:16 V
RxGain
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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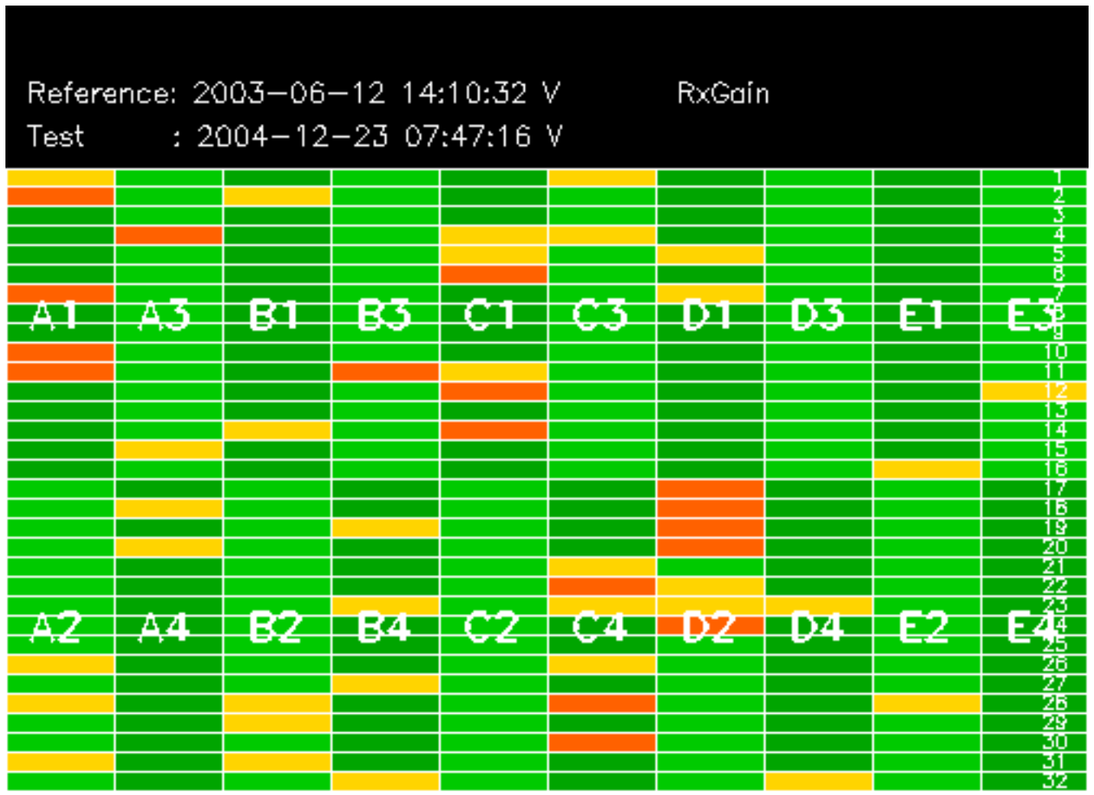
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-23 07:47:16 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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8
9
10
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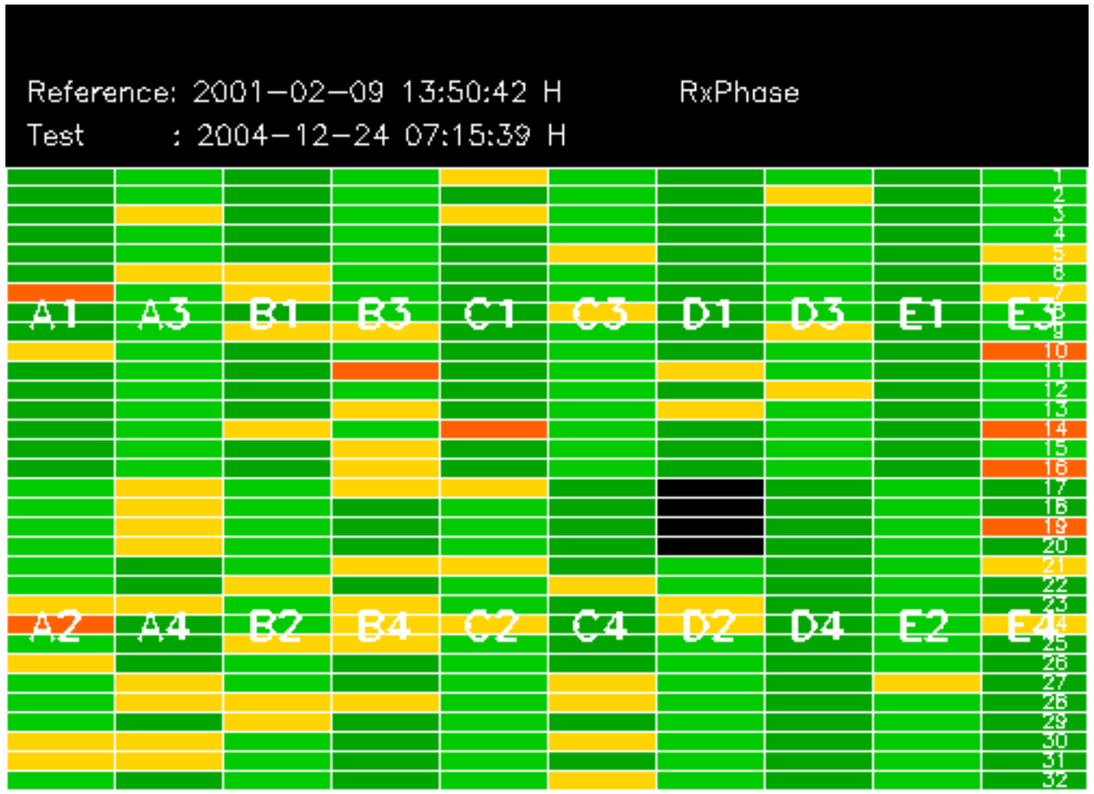
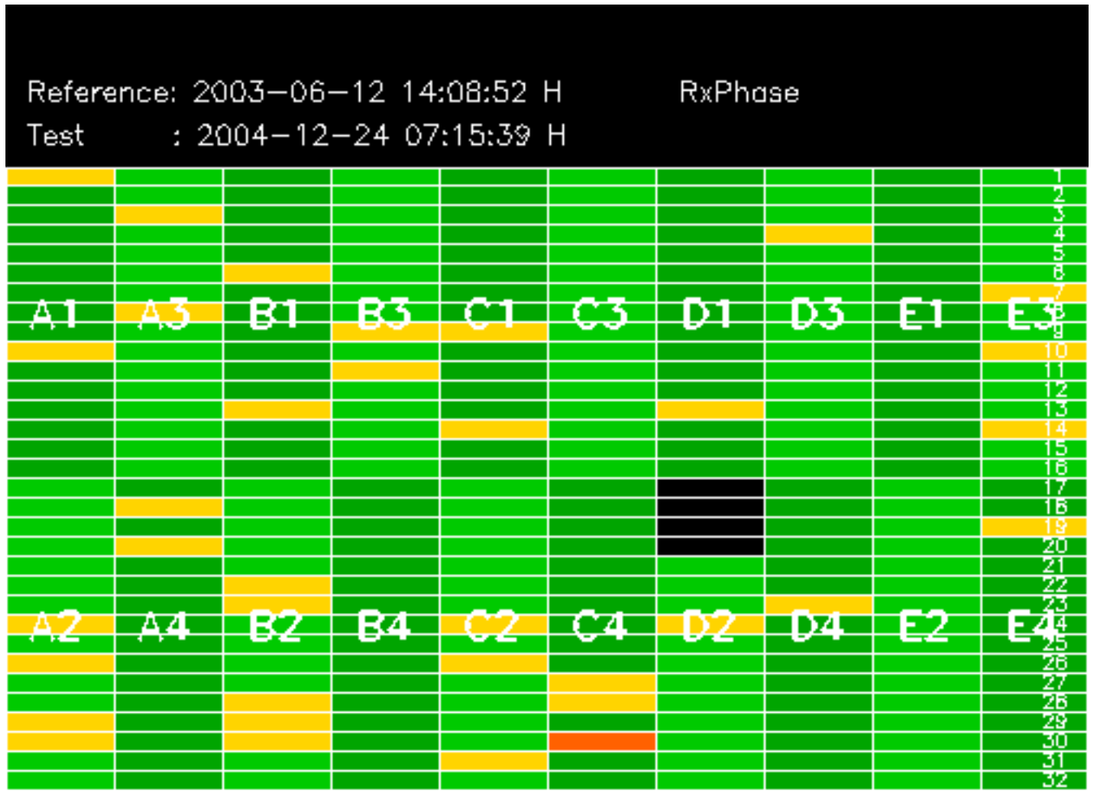
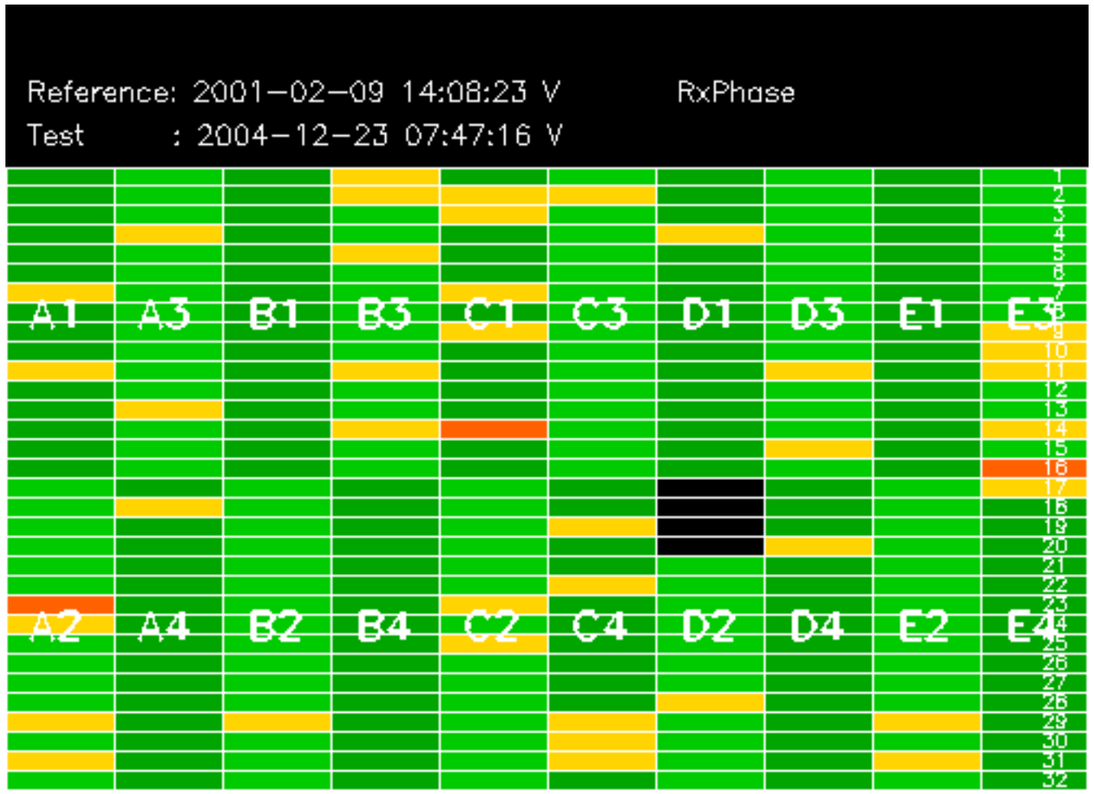
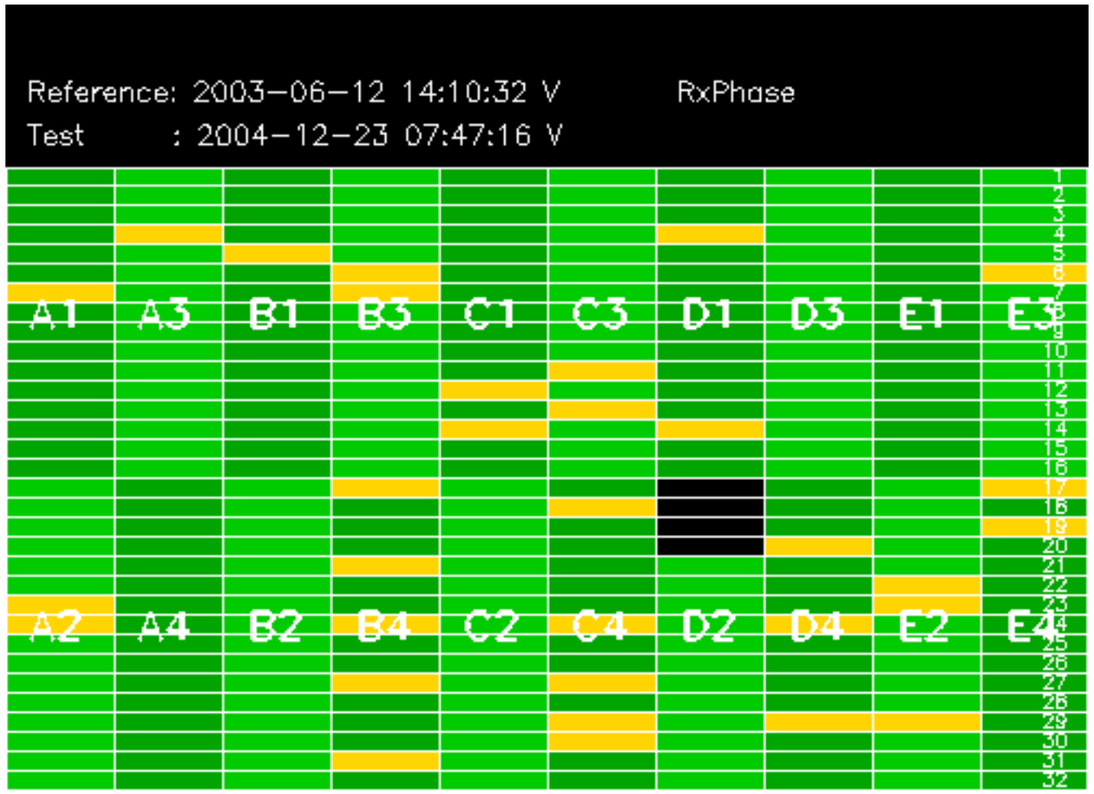
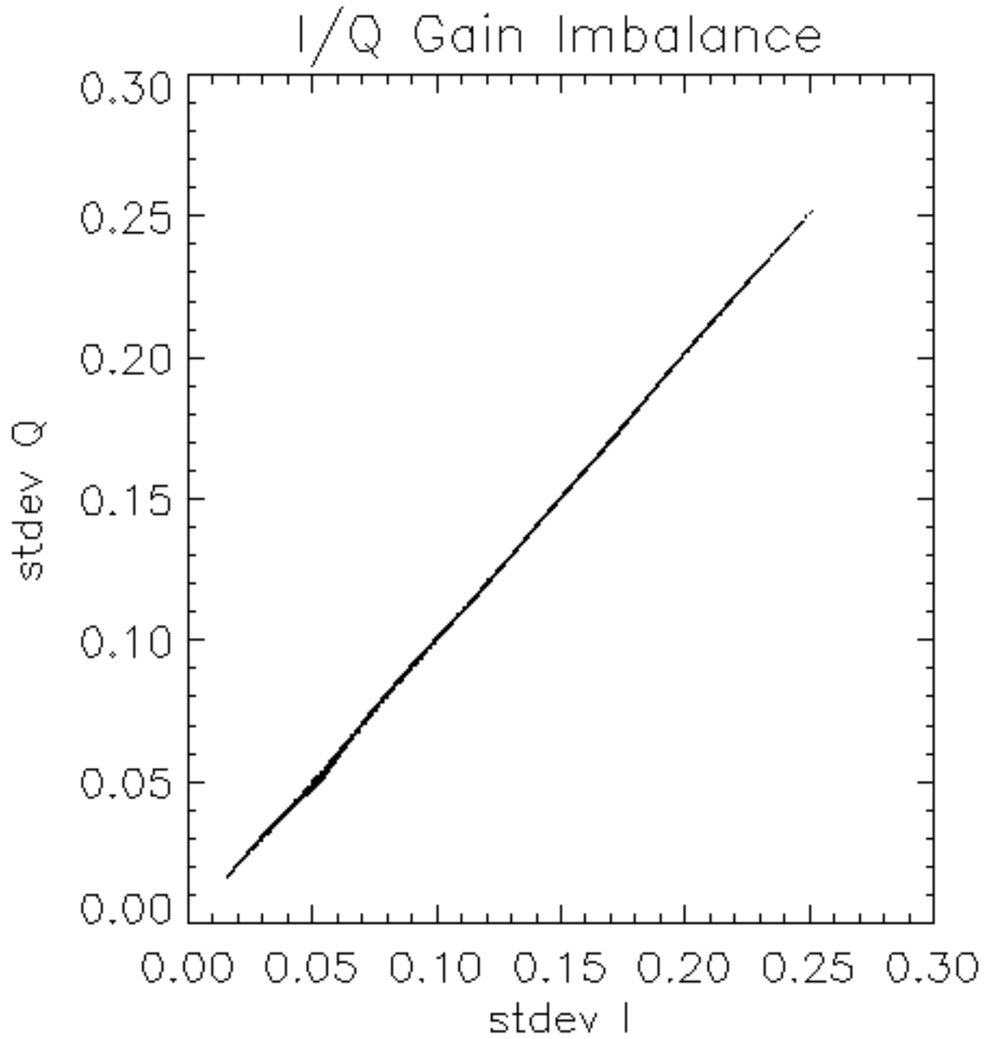
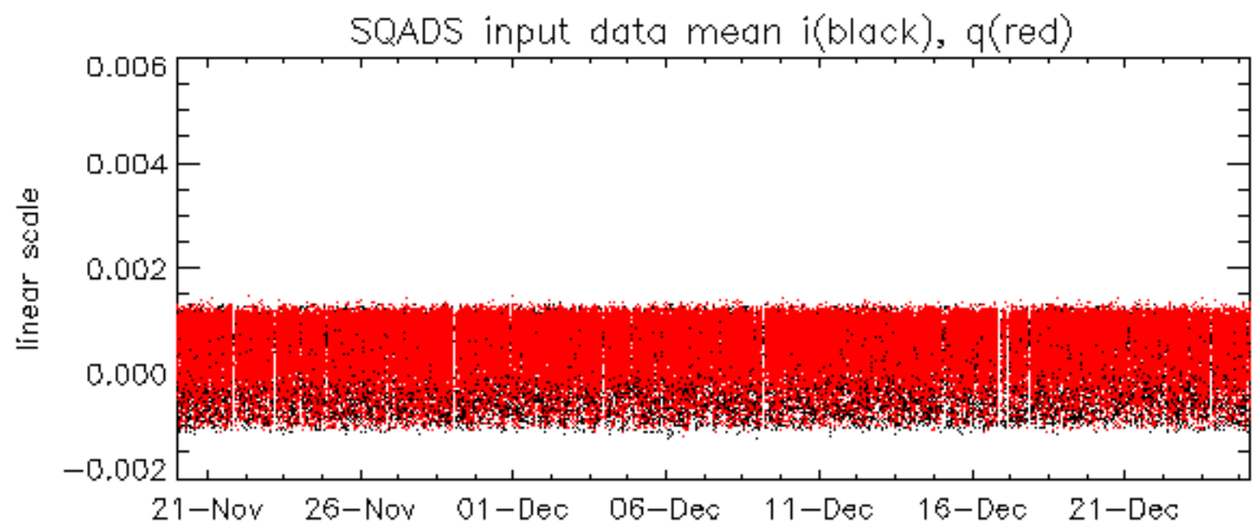

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-24 07:15:39 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

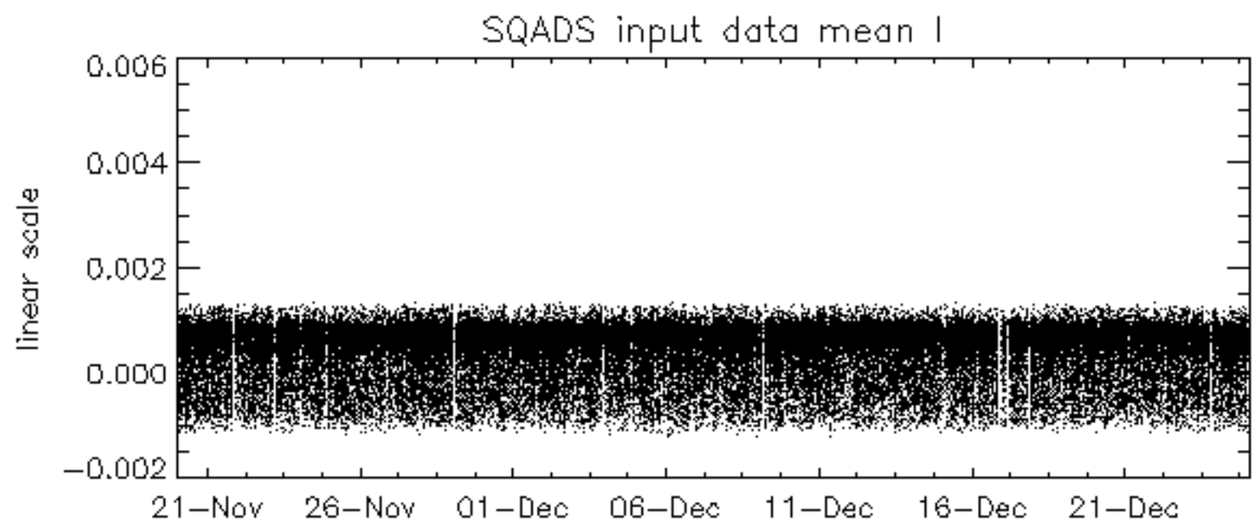

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-24 07:15:39 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

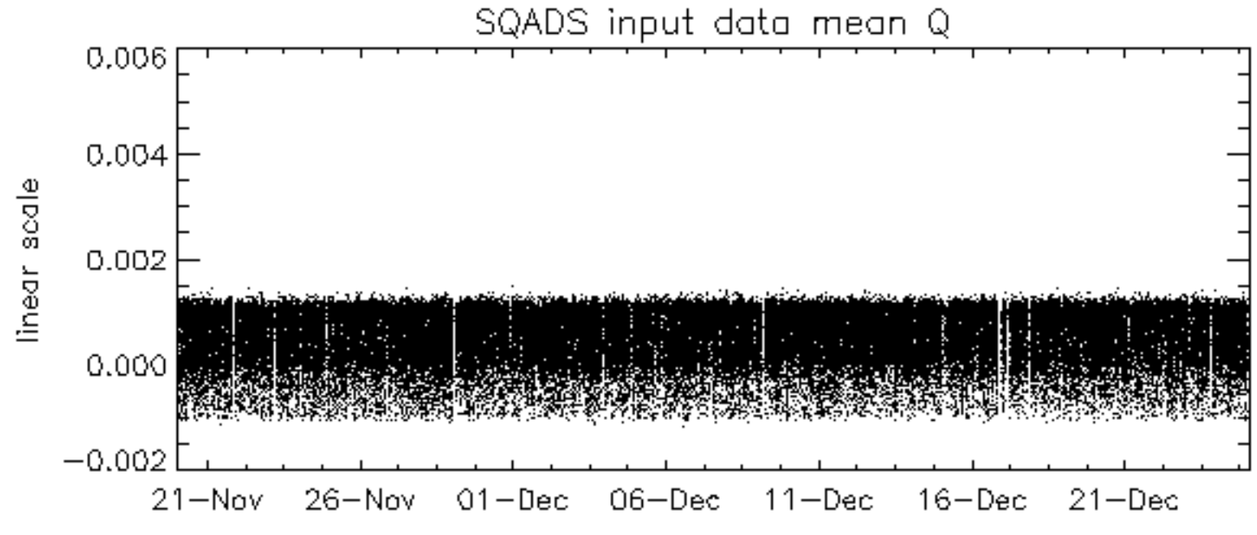

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-23 07:47:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

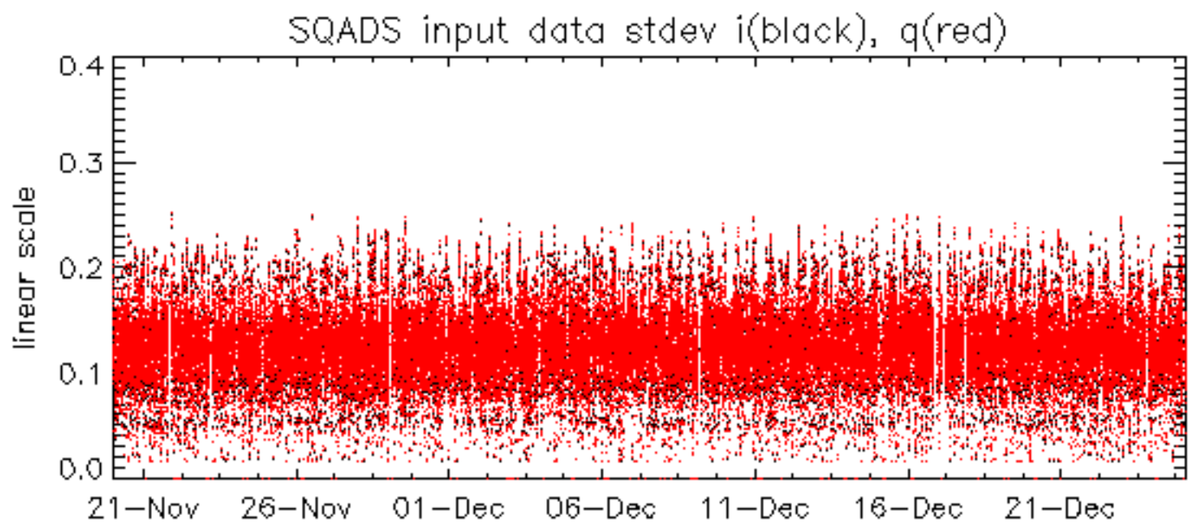

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-23 07:47:16 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

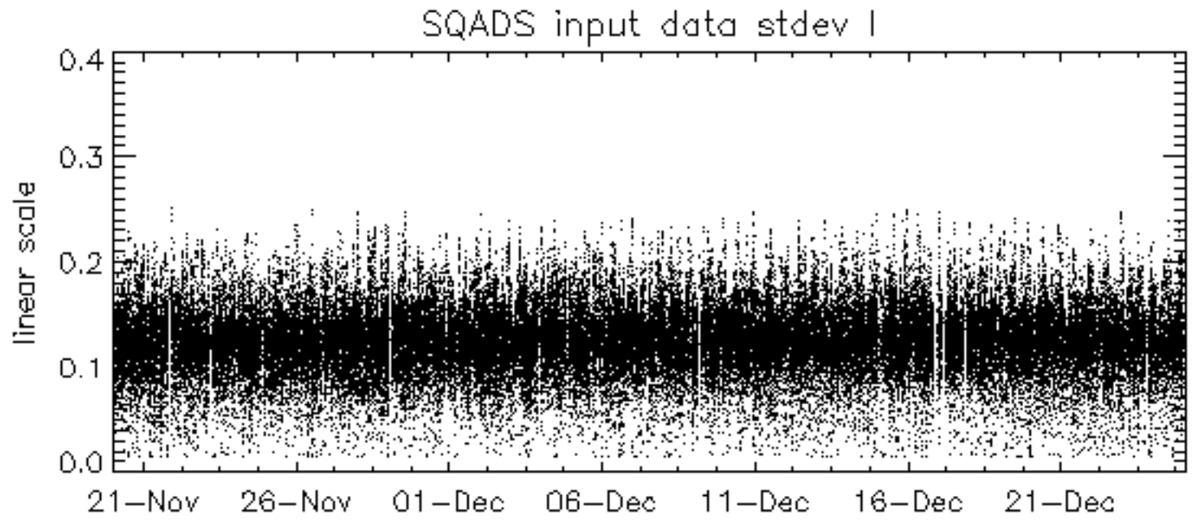

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

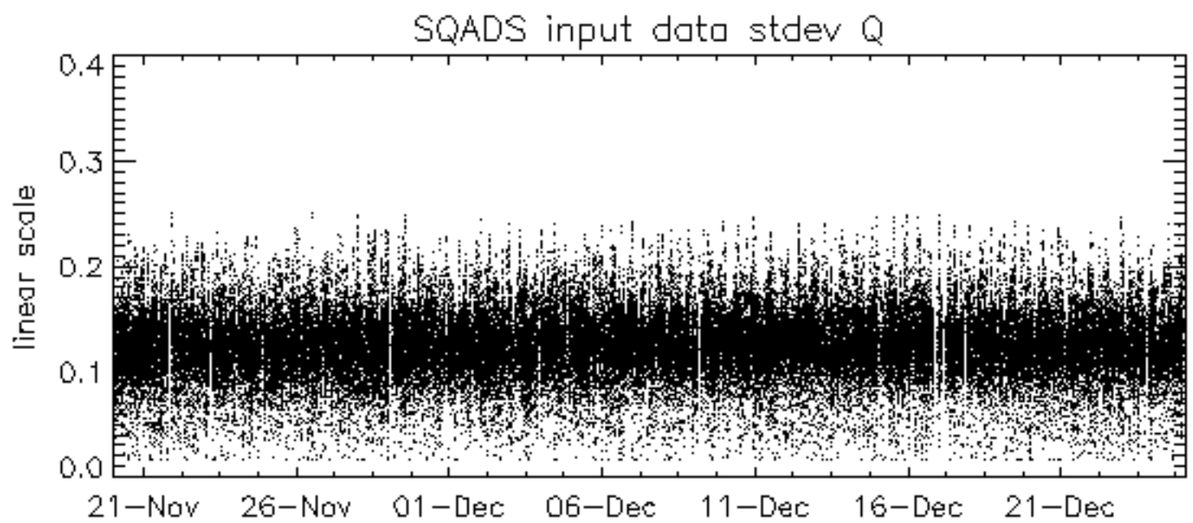

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec

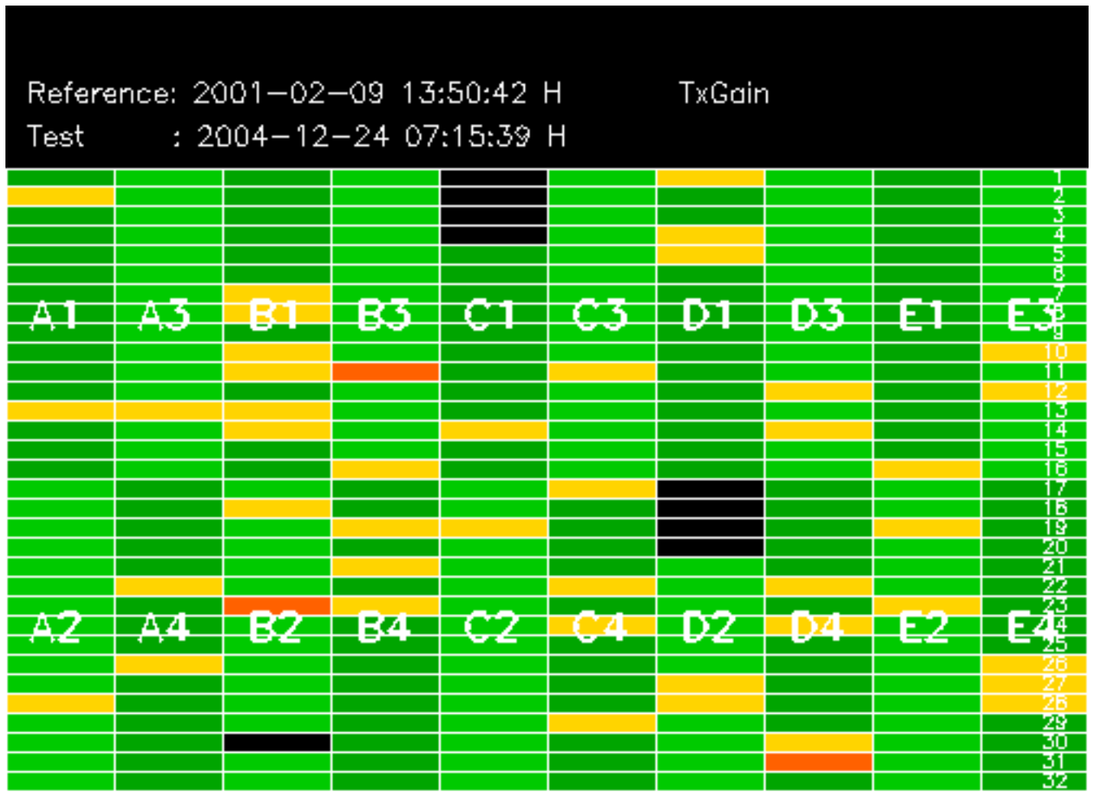

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec

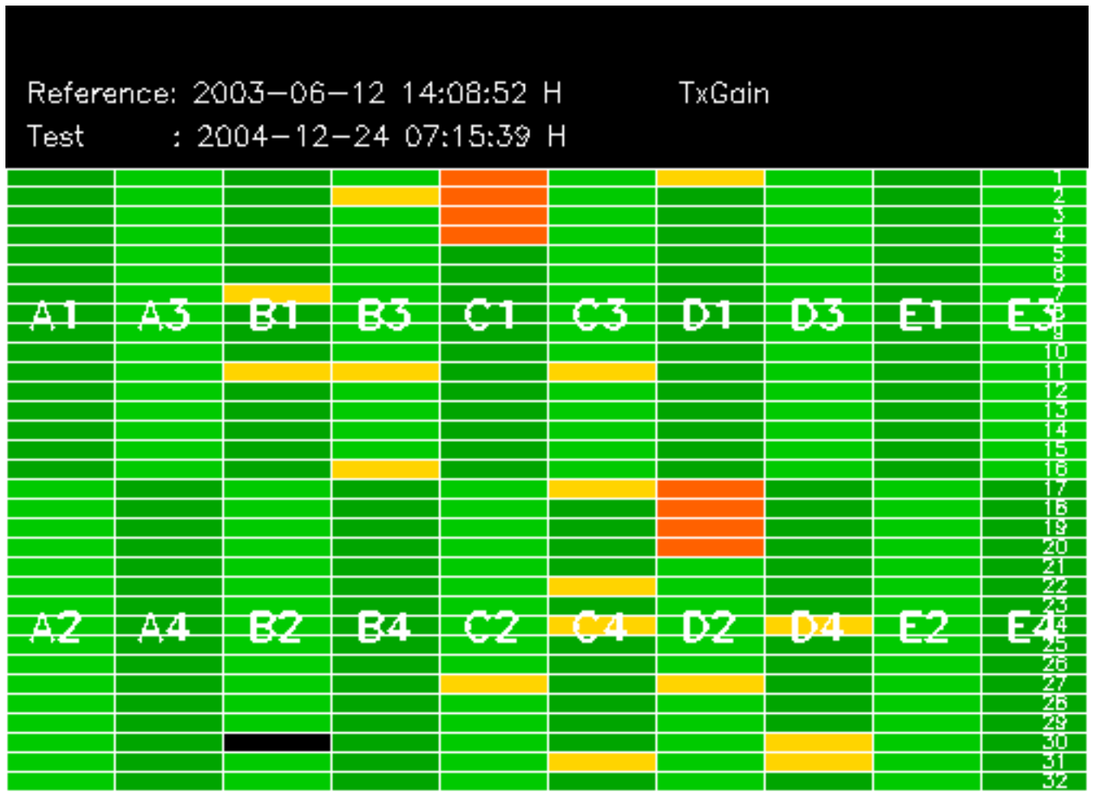

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-24 07:15:39 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 : 2004-12-24 07:15:39 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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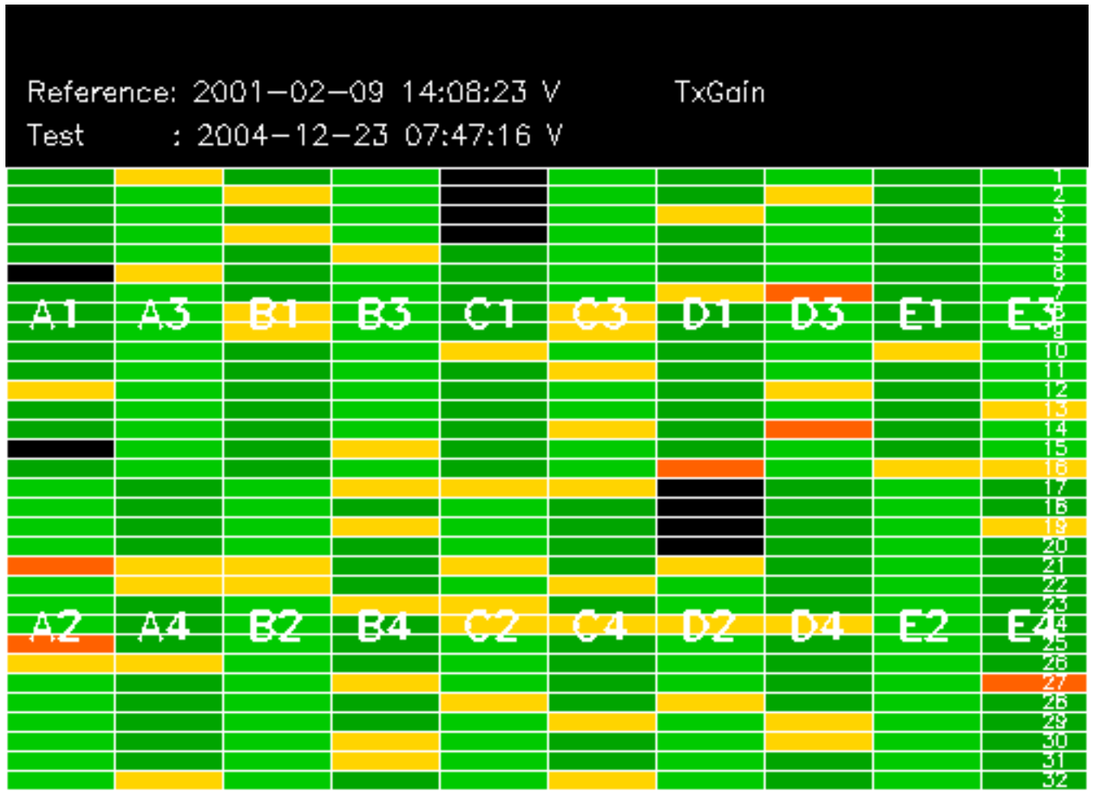
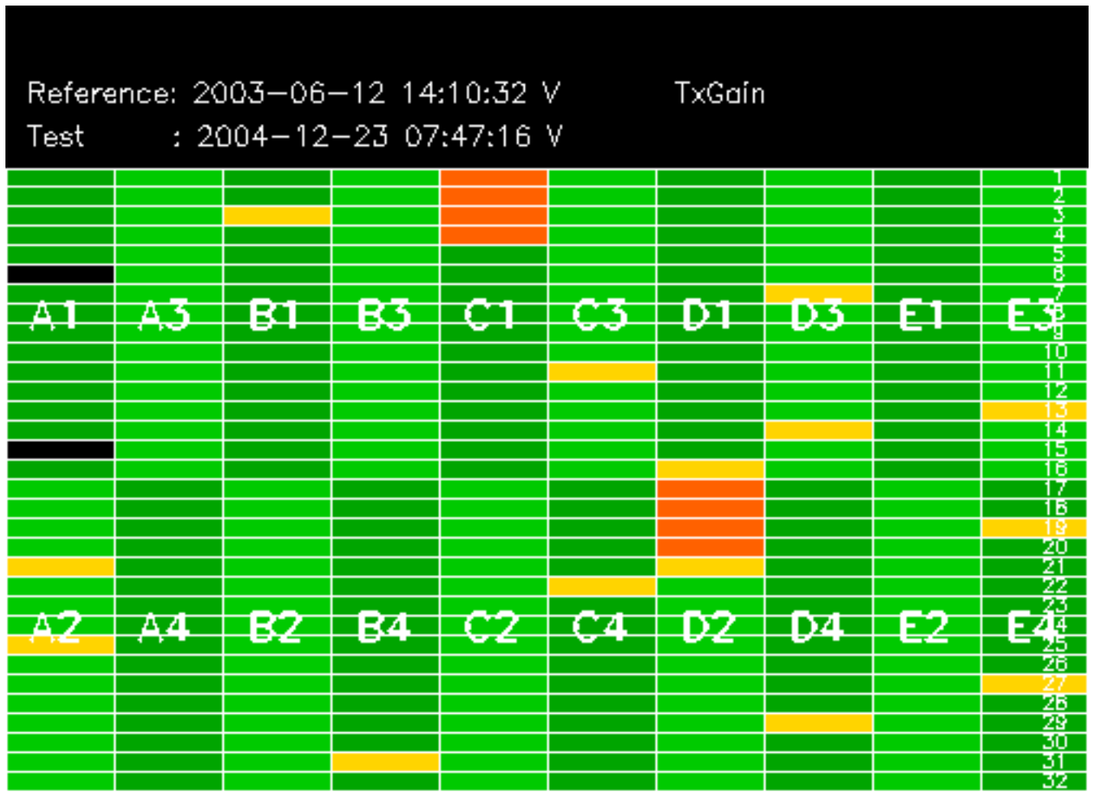
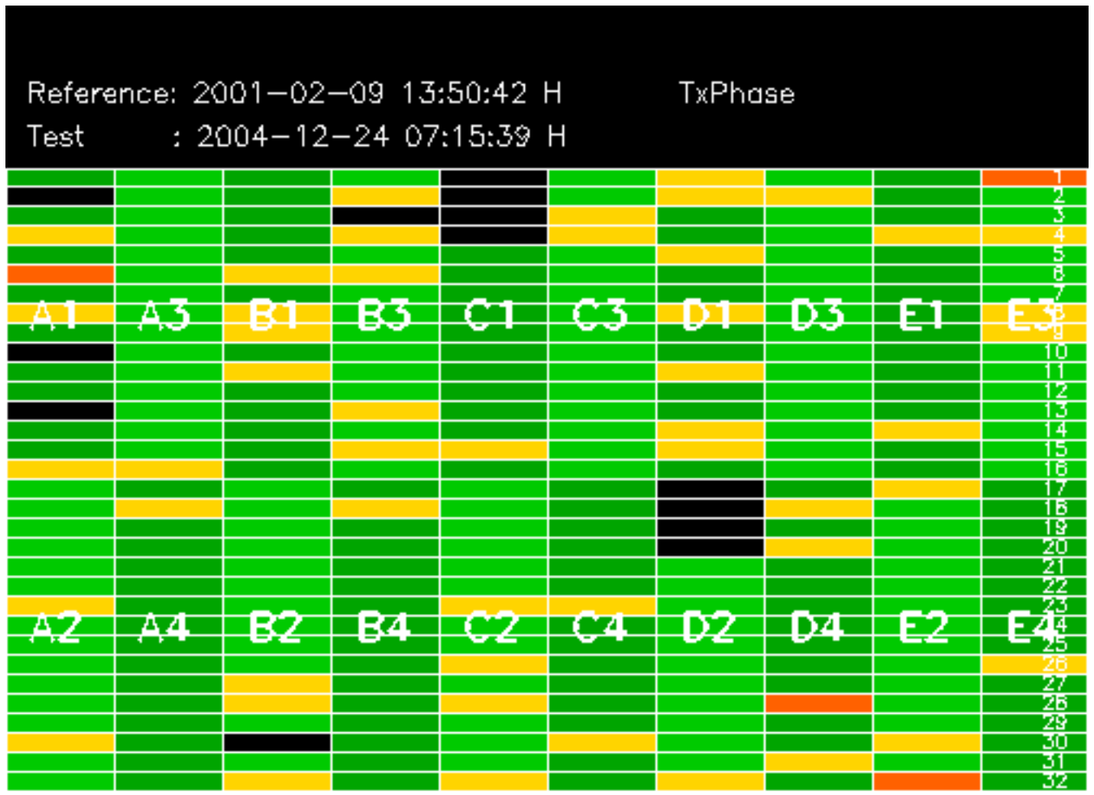

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-23 07:47:16 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-23 07:47:16 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 : 2004-12-24 07:15:39 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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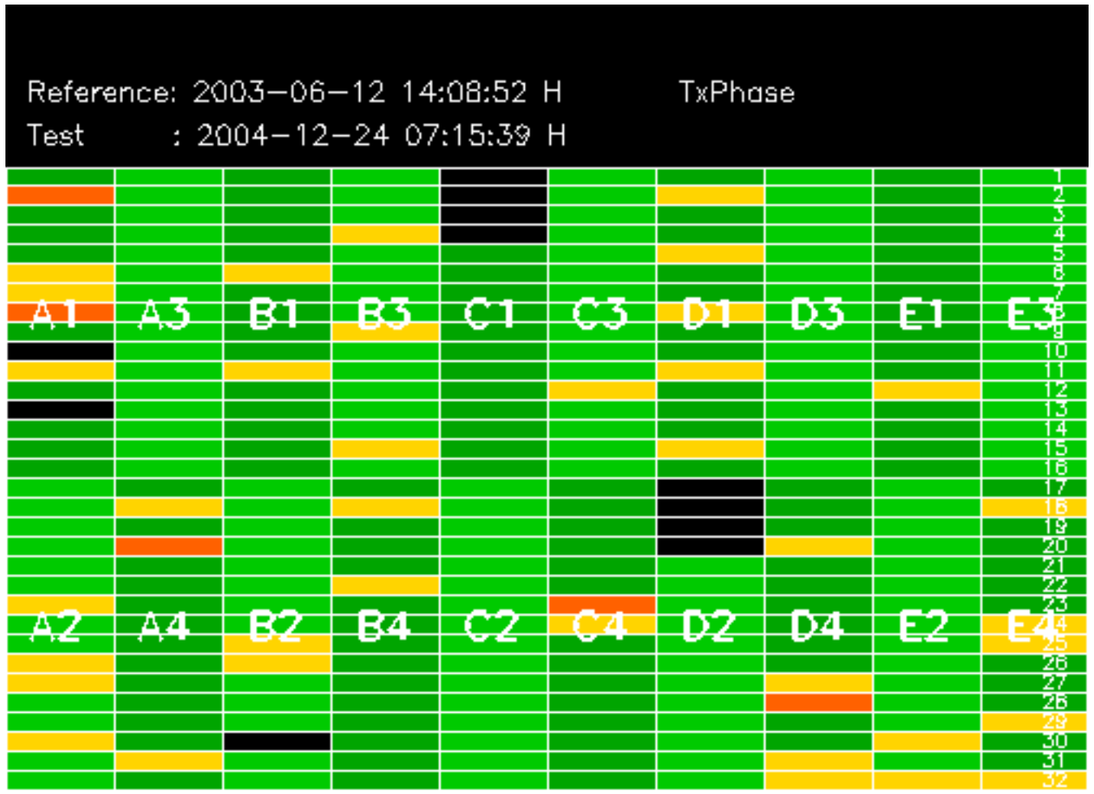
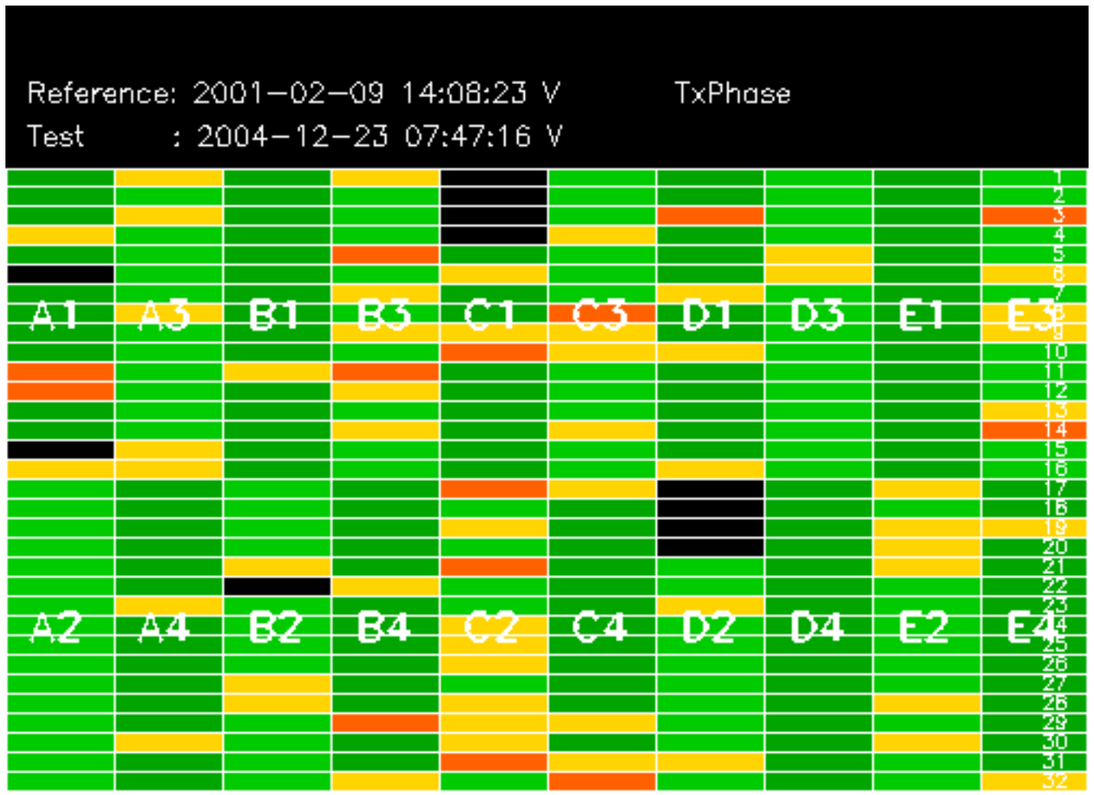
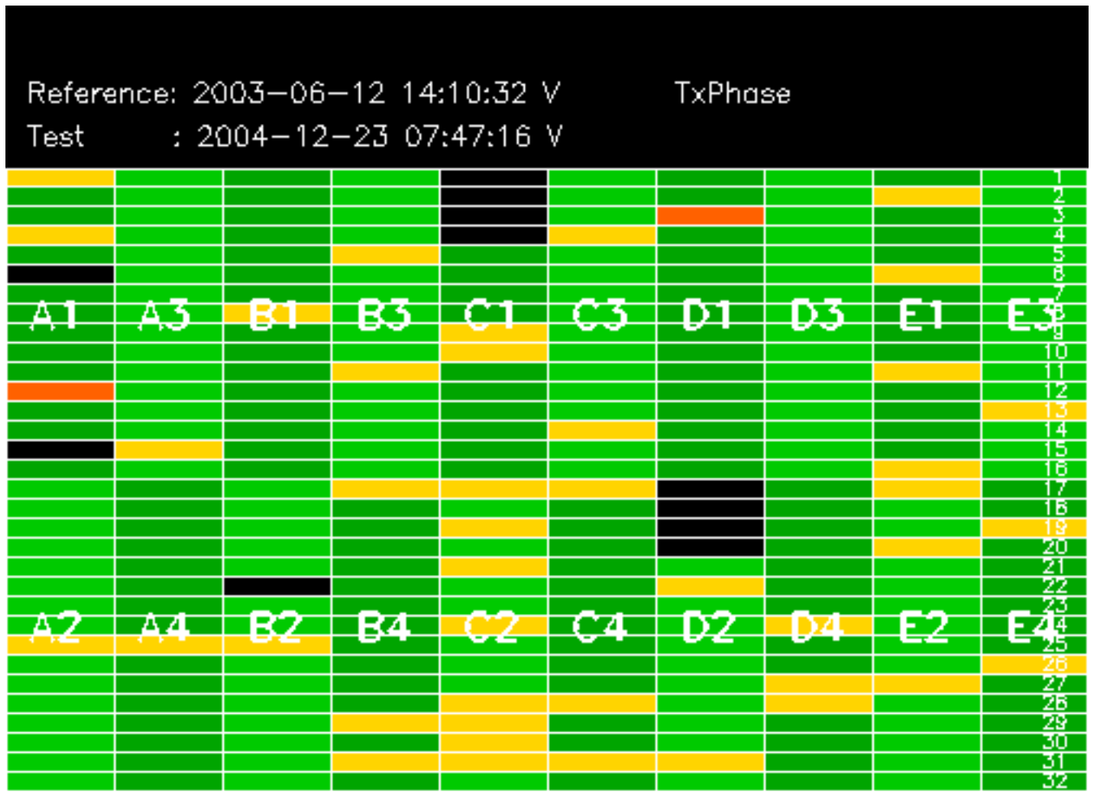

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-24 07:15:39 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-23 07:47:16 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 : 2004-12-23 07:47:16 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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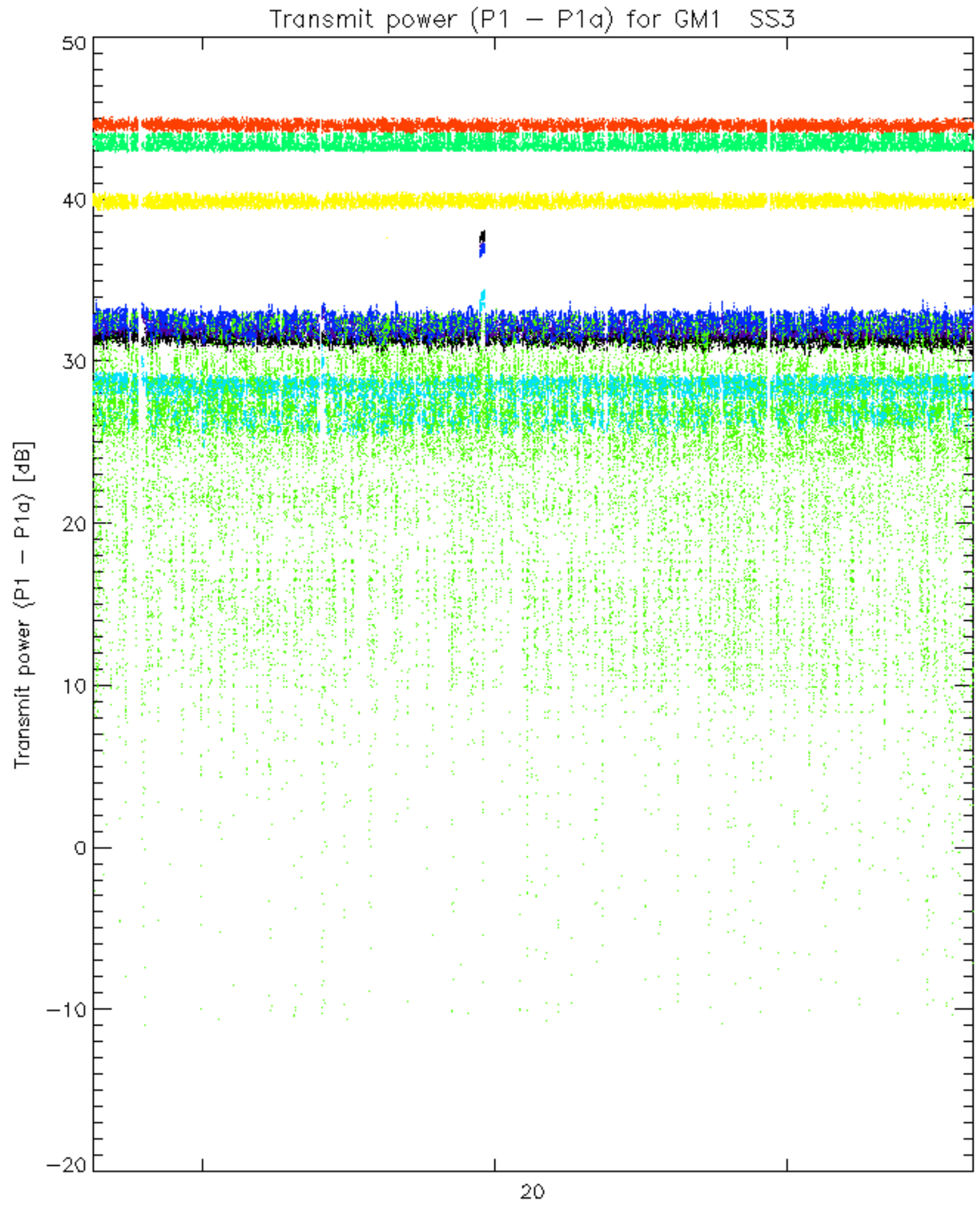
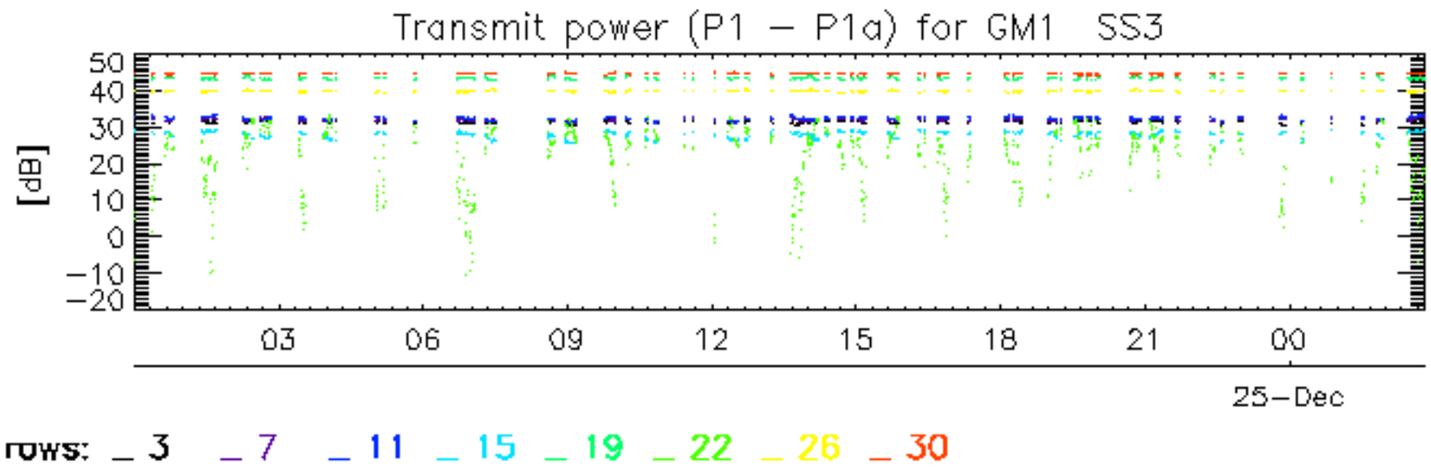
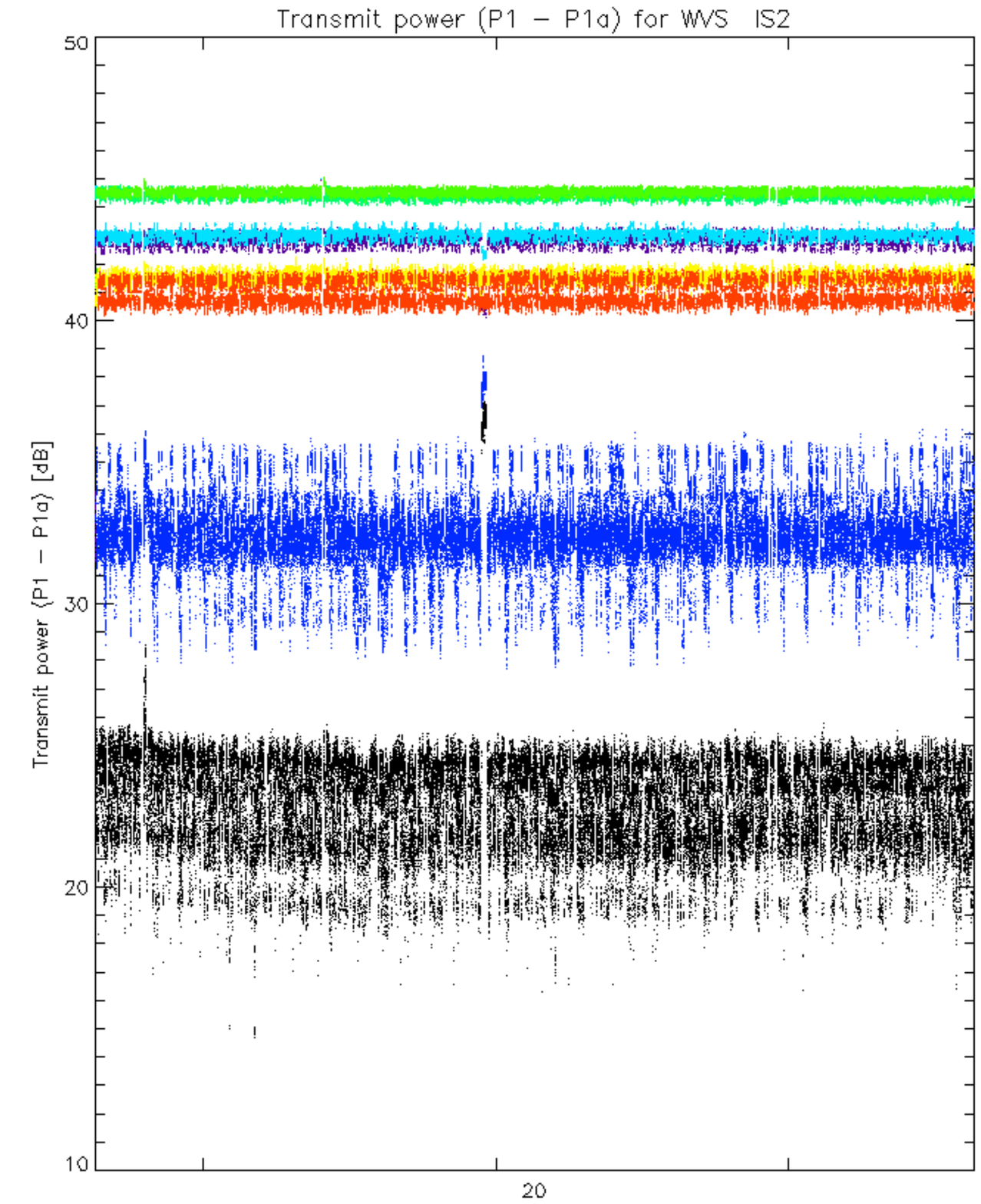
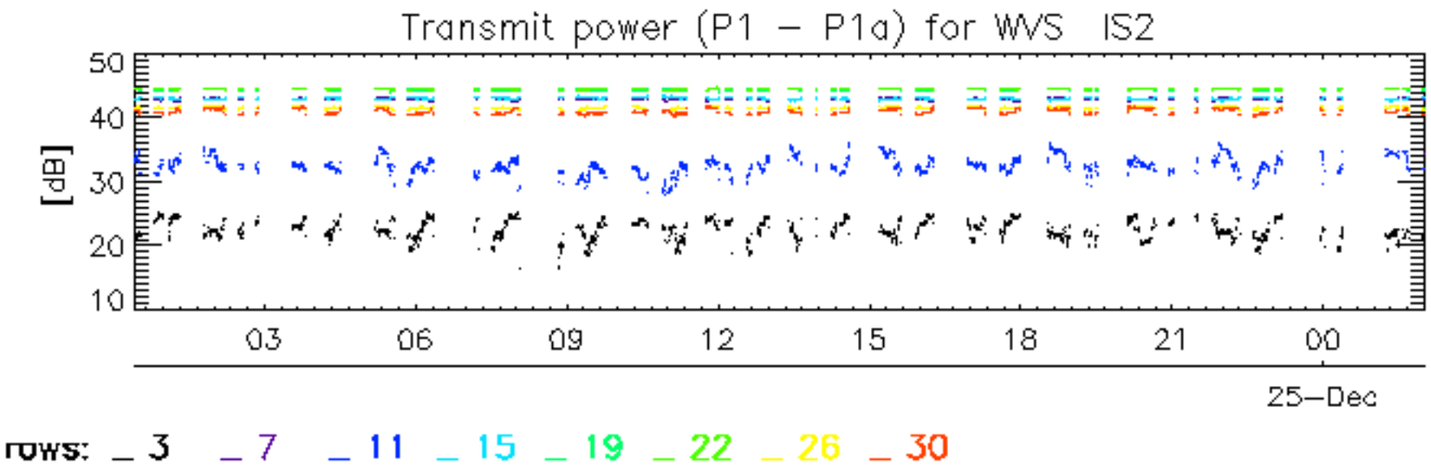

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
20
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
−20
03
06
09
12
15
18
21
00
25−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
20
rows: 3 7 11 15 19 22 26 30


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

No unavailabilities during the reported period.