PRELIMINARY REPORT OF 041211

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

last update on Sat Dec 11 10:57:16 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 2004-12-10 00:00:00 to 2004-12-11 10:57:16

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	30	40	3	0	0
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	30	40	3	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	30	40	3	0	0
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	30	40	3	0	0

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	46	43	4	8	4
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	46	43	4	8	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	46	43	4	8	4
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	46	43	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	20041209 100809
H	20041210 143819

MSM in V/V polarisation

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

MSM in H/H polarisation

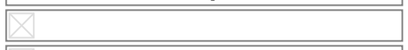
Pre-launch Reference	DDS-B (2003-06-12) reference
	
	
	
	

4 - Internal calibration Results

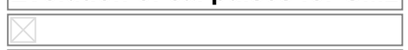
No anomalies observed.

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	-3.470181	0.029859	-0.036074
7	P1	-3.181317	0.040173	0.309434
11	P1	-4.626649	0.045692	-0.089418
15	P1	-5.660984	0.033610	-0.046313
19	P1	-3.630253	0.005187	-0.054965
22	P1	-4.580175	0.016134	0.003449
26	P1	-4.919761	0.016096	-0.033985
30	P1	-7.093083	0.014434	-0.047876
3	P1	-15.972437	0.117670	0.039991
7	P1	-15.074374	0.590413	-1.834096
11	P1	-20.686216	0.486502	0.003900
15	P1	-11.622509	0.089311	0.093952
19	P1	-14.116265	0.029734	-0.094422
22	P1	-16.162849	0.444430	0.114381
26	P1	-17.795984	0.258351	0.009548
30	P1	-17.920643	0.298709	0.064255

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.369562	0.086692	0.002271
7	P2	-22.611378	0.140867	0.016199
11	P2	-14.992511	0.134054	0.137641
15	P2	-7.170222	0.109484	-0.012043
19	P2	-9.720671	0.134936	0.014974
22	P2	-17.212389	0.100263	0.043573
26	P2	-16.520723	0.106895	-0.014246

30	P2	-19.011976	0.082972	0.101549

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.207986	0.006992	-0.016523
7	P3	-8.207981	0.006992	-0.016561
11	P3	-8.207969	0.006991	-0.016633
15	P3	-8.207972	0.006991	-0.016625
19	P3	-8.207980	0.006991	-0.016580
22	P3	-8.207993	0.006992	-0.016519
26	P3	-8.207995	0.006992	-0.016516
30	P3	-8.207881	0.006994	-0.016226

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	-2.836599	0.110783	-0.134318
7	P1	-2.980474	0.064756	-0.094015
11	P1	-3.927637	0.049209	-0.092811
15	P1	-3.507939	0.078359	-0.104451
19	P1	-3.598155	0.012699	-0.024939
22	P1	-5.600444	0.068317	-0.007029
26	P1	-6.488511	0.022848	-0.052946
30	P1	-6.285328	0.042241	-0.061561
3	P1	-10.618753	0.058467	-0.071229
7	P1	-10.105595	0.153896	0.009441
11	P1	-12.379538	0.200397	0.028282

15	P1	-11.719611	0.104580	0.049862
19	P1	-15.629790	0.050667	-0.031986
22	P1	-24.119329	2.214761	-0.207208
26	P1	-15.141177	0.415939	0.087245
30	P1	-20.226246	1.007500	0.138674

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.053757	0.038885	0.005311
7	P2	-22.663191	0.028783	0.047616
11	P2	-10.787045	0.034548	0.156491
15	P2	-5.065083	0.025962	-0.022558
19	P2	-6.971742	0.033999	-0.020785
22	P2	-7.336015	0.028307	0.030769
26	P2	-23.959213	0.019432	-0.037960
30	P2	-22.072031	0.018724	0.066506

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.043960	0.003125	-0.004920
7	P3	-8.043989	0.003135	-0.005151
11	P3	-8.044051	0.003124	-0.004838
15	P3	-8.043878	0.003135	-0.004929
19	P3	-8.044031	0.003134	-0.005000
22	P3	-8.043947	0.003127	-0.004655
26	P3	-8.044016	0.003121	-0.004933
30	P3	-8.043943	0.003126	-0.004861

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS

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4.3.2 - Evolution for GM1

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5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000439676
	stdev	2.41871e-07
MEAN Q	mean	0.000498856
	stdev	2.55740e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125244
	stdev	0.000996486
STDEV Q	mean	0.125480
	stdev	0.00100527

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
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6.4 - Unbiased Doppler Error for GM1

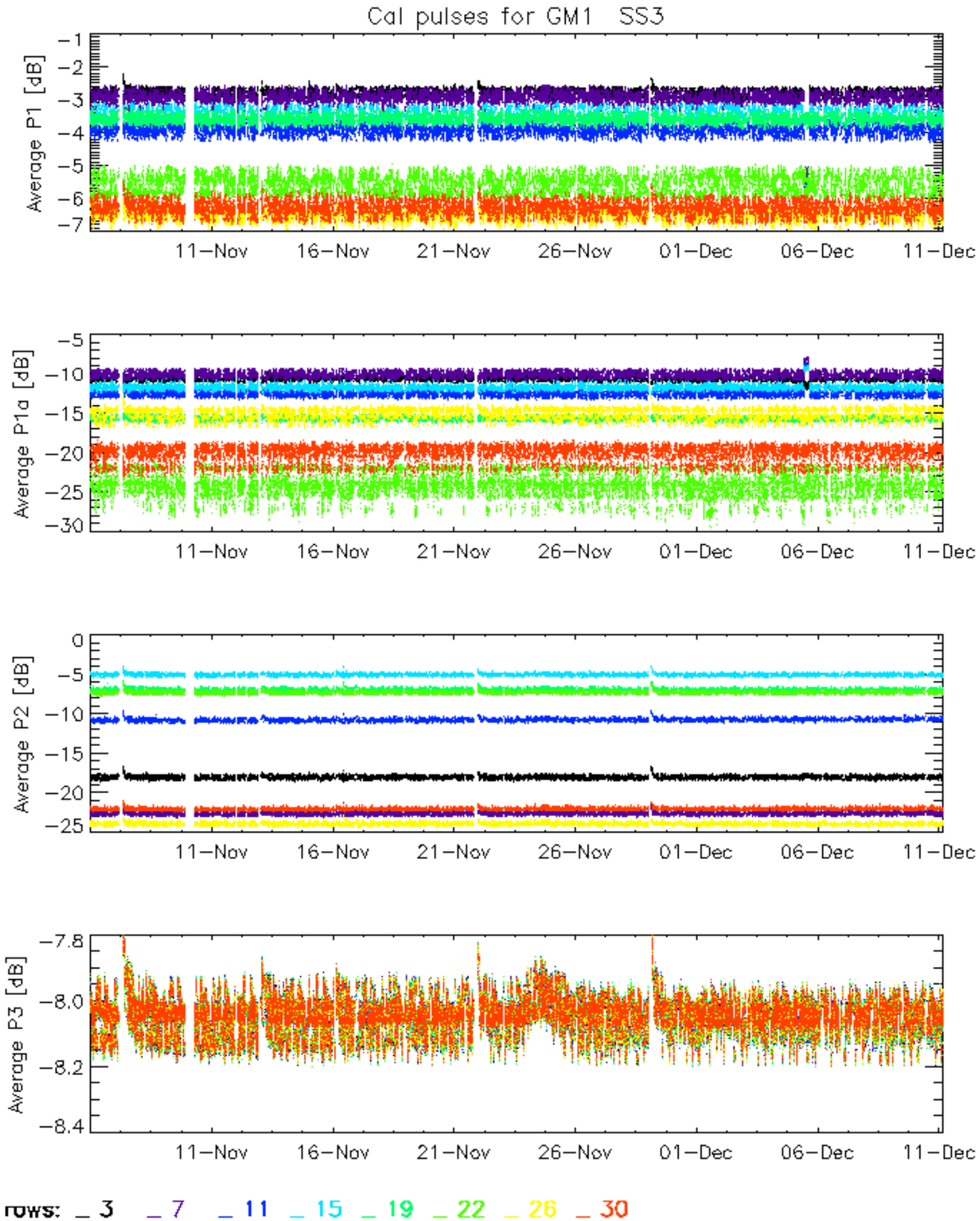
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

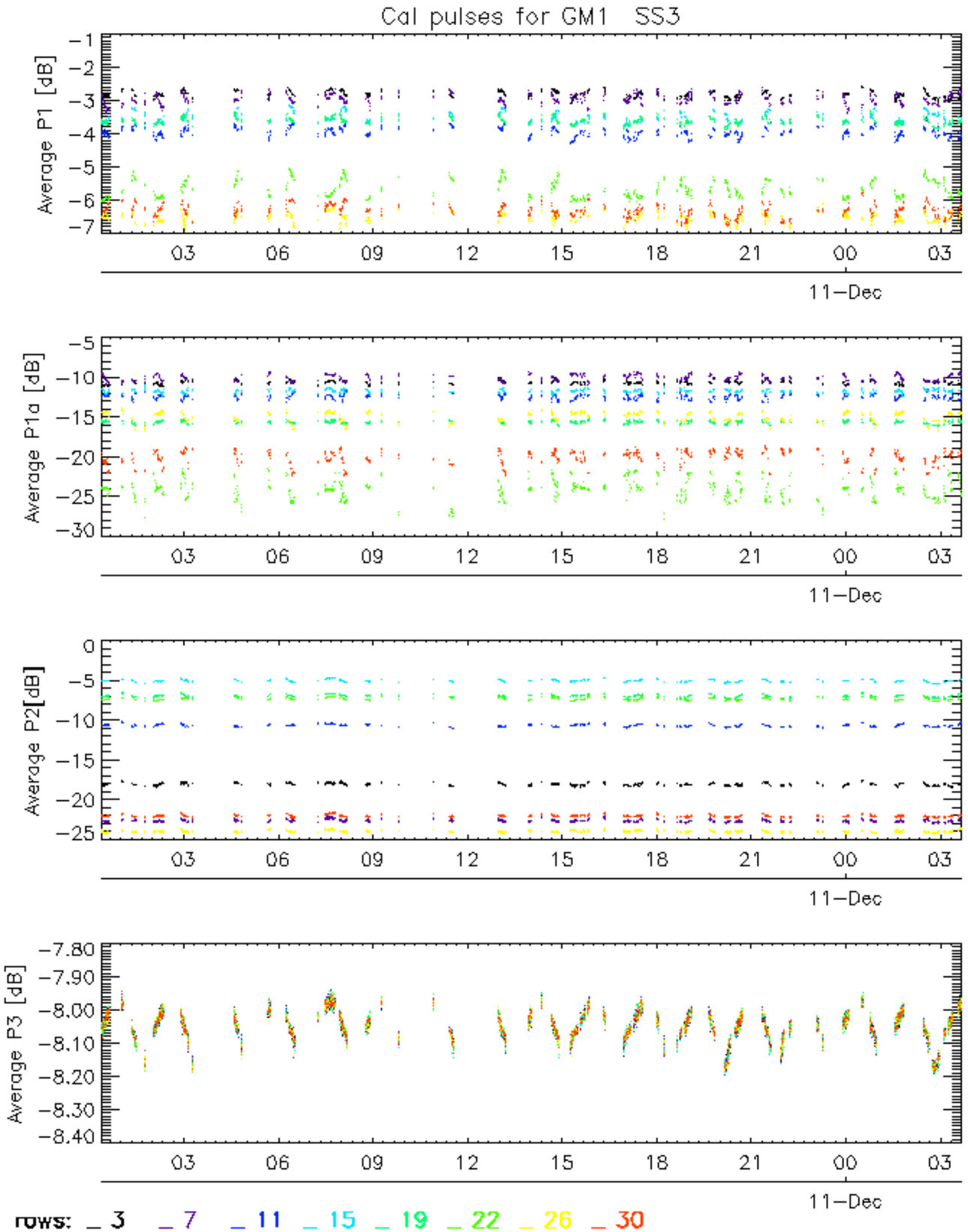
6.5 - Absolute Doppler for GM1

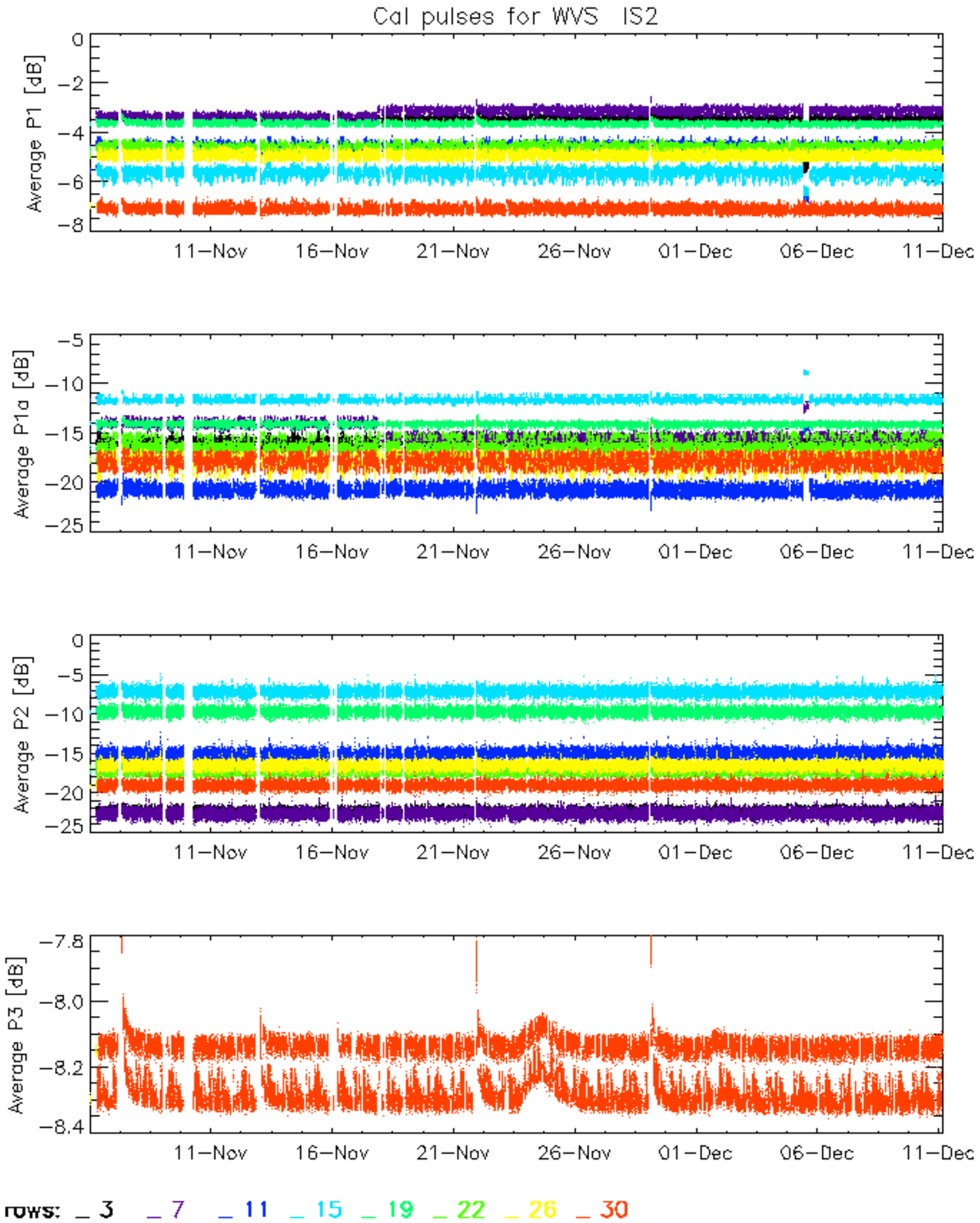
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

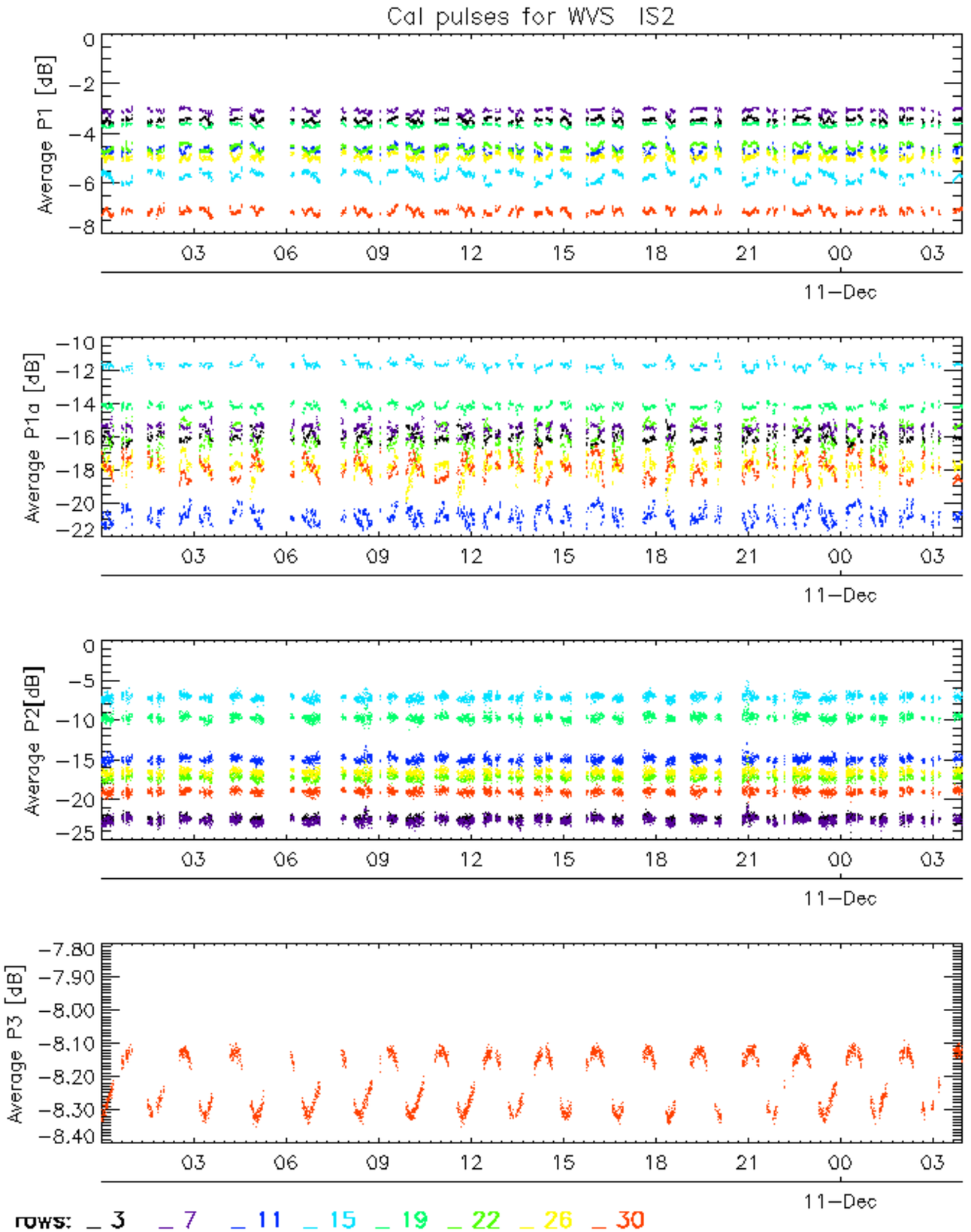
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

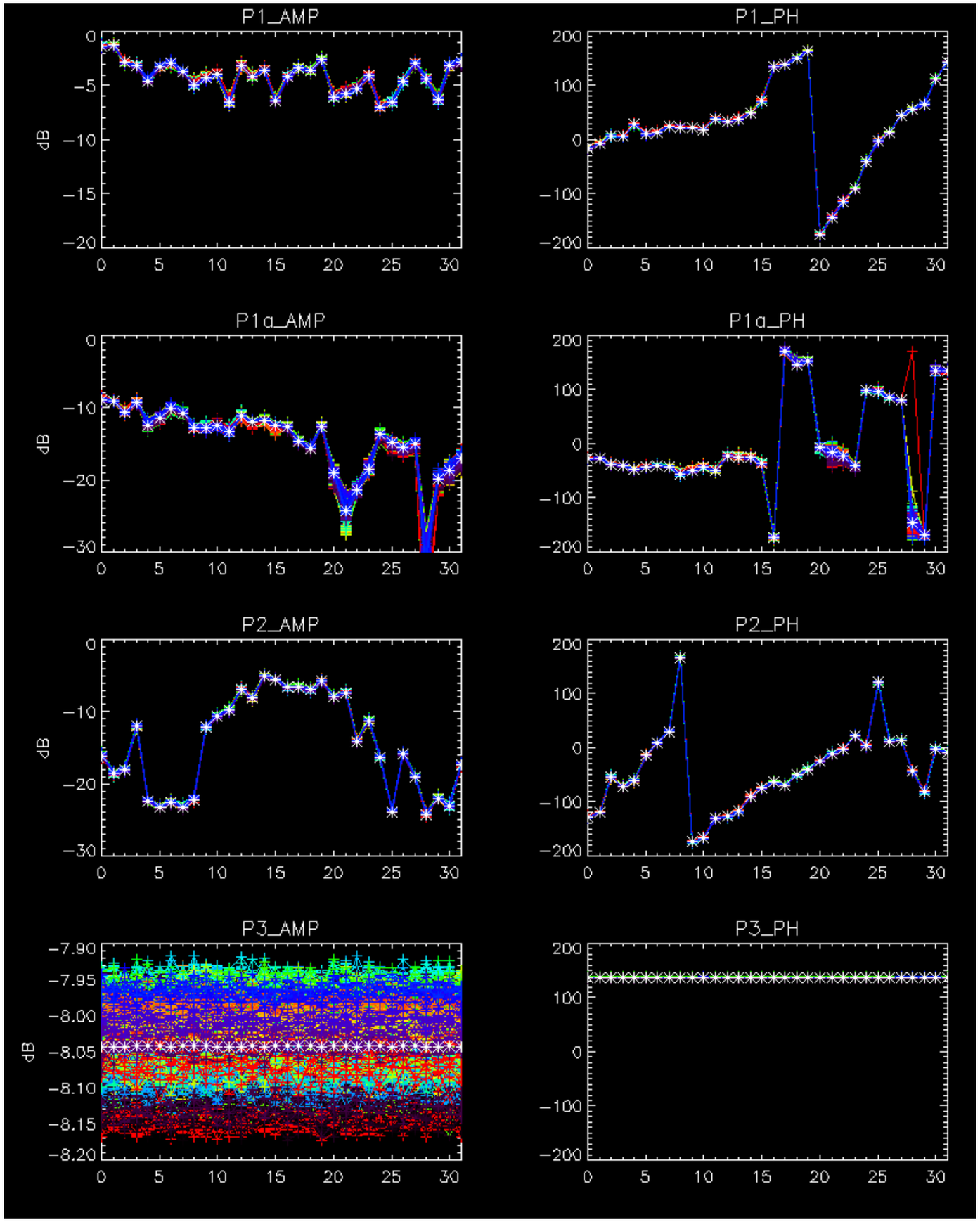

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P2 [dB]
0
−5
−10
−15
−20
−25
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P3 [dB]
−7.8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

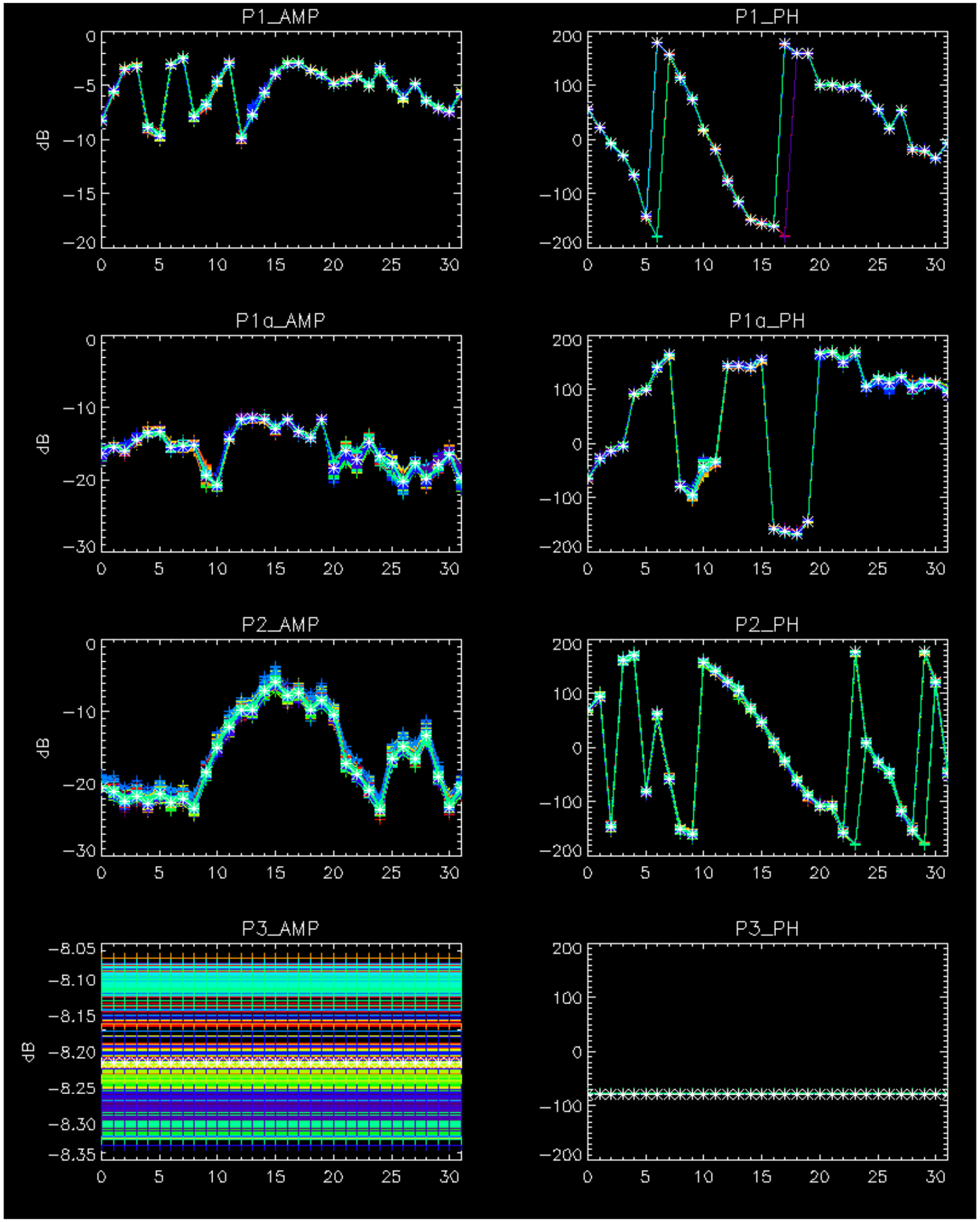

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
11−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
11−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
11−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

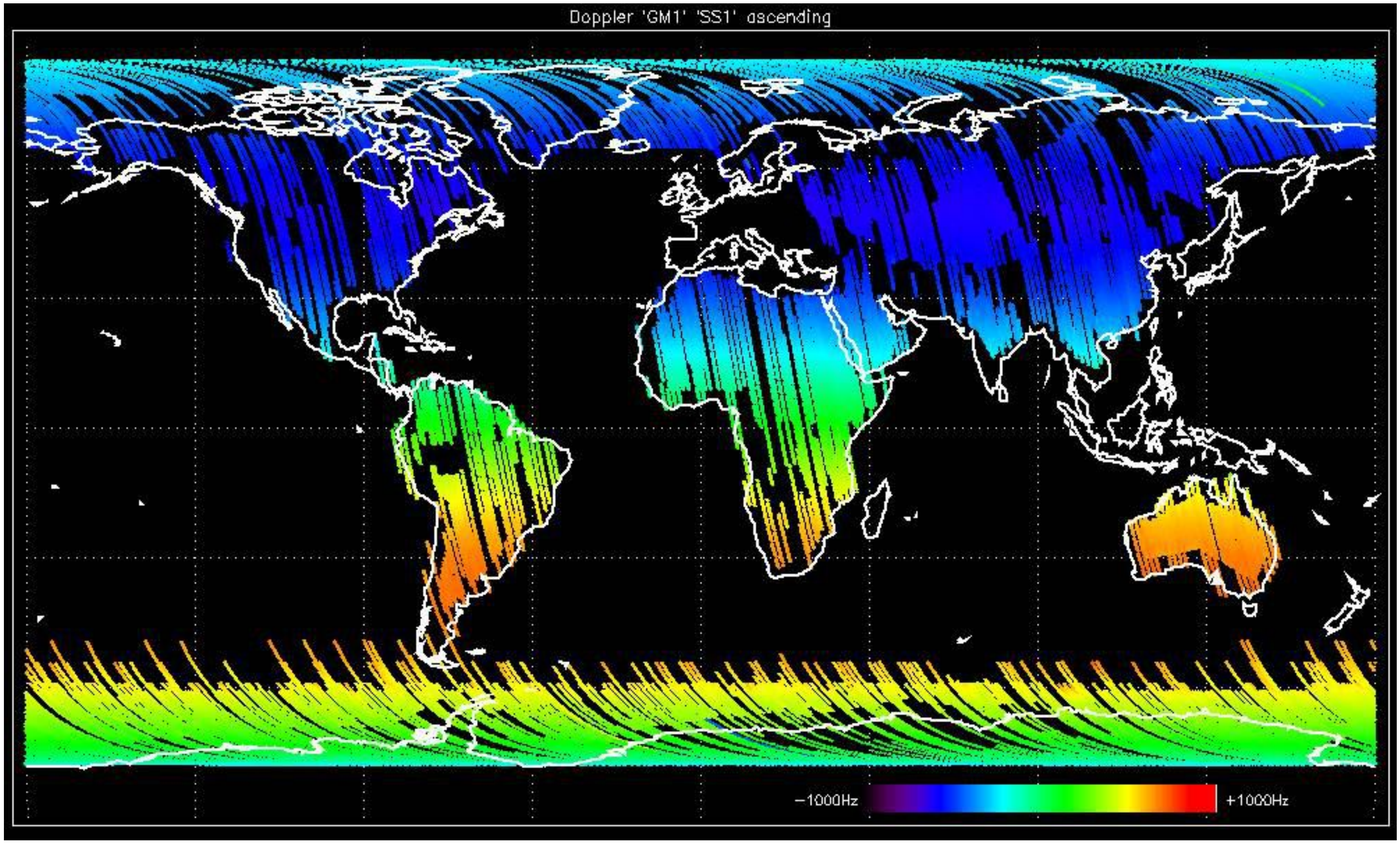
No anomalies observed.

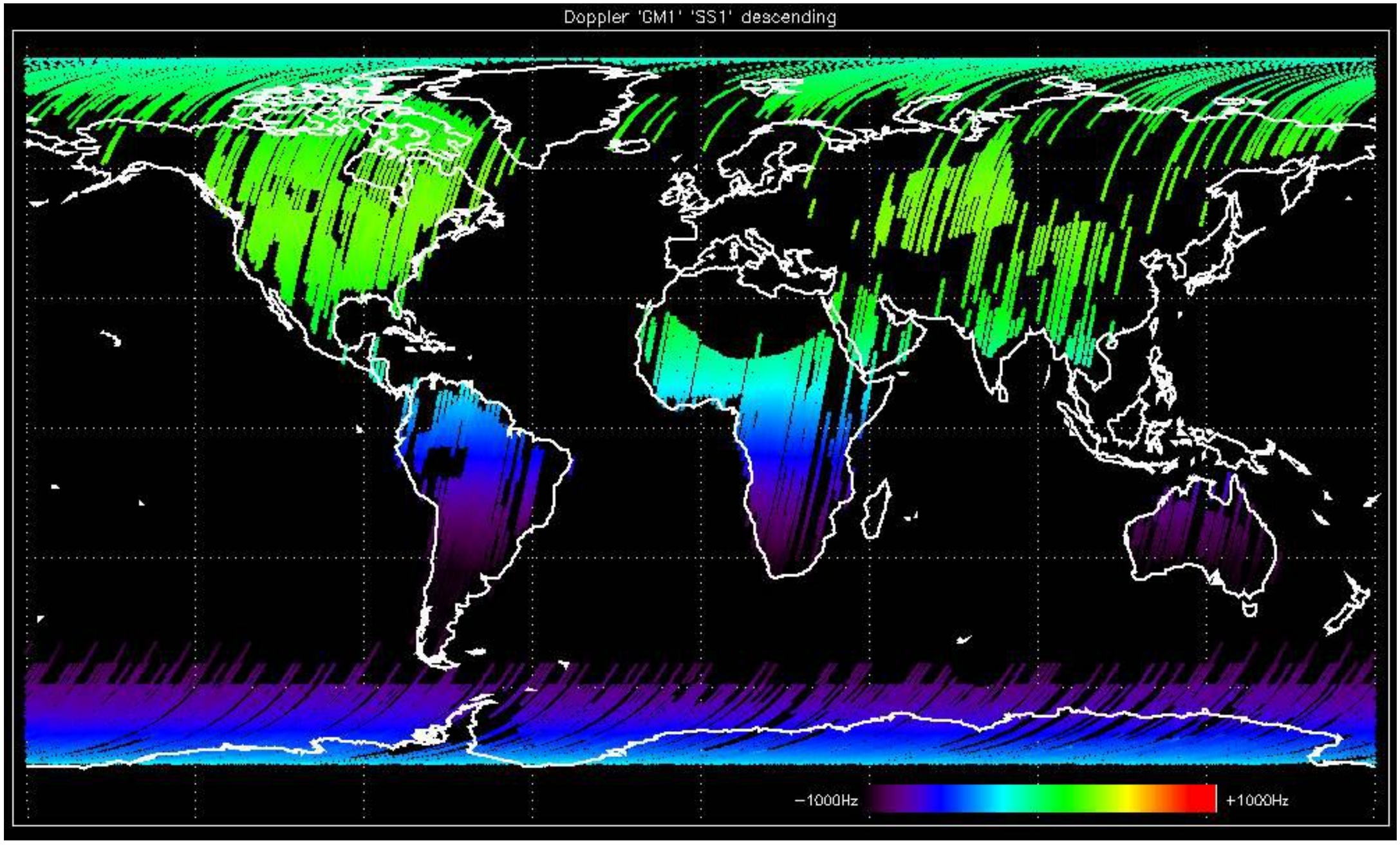

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

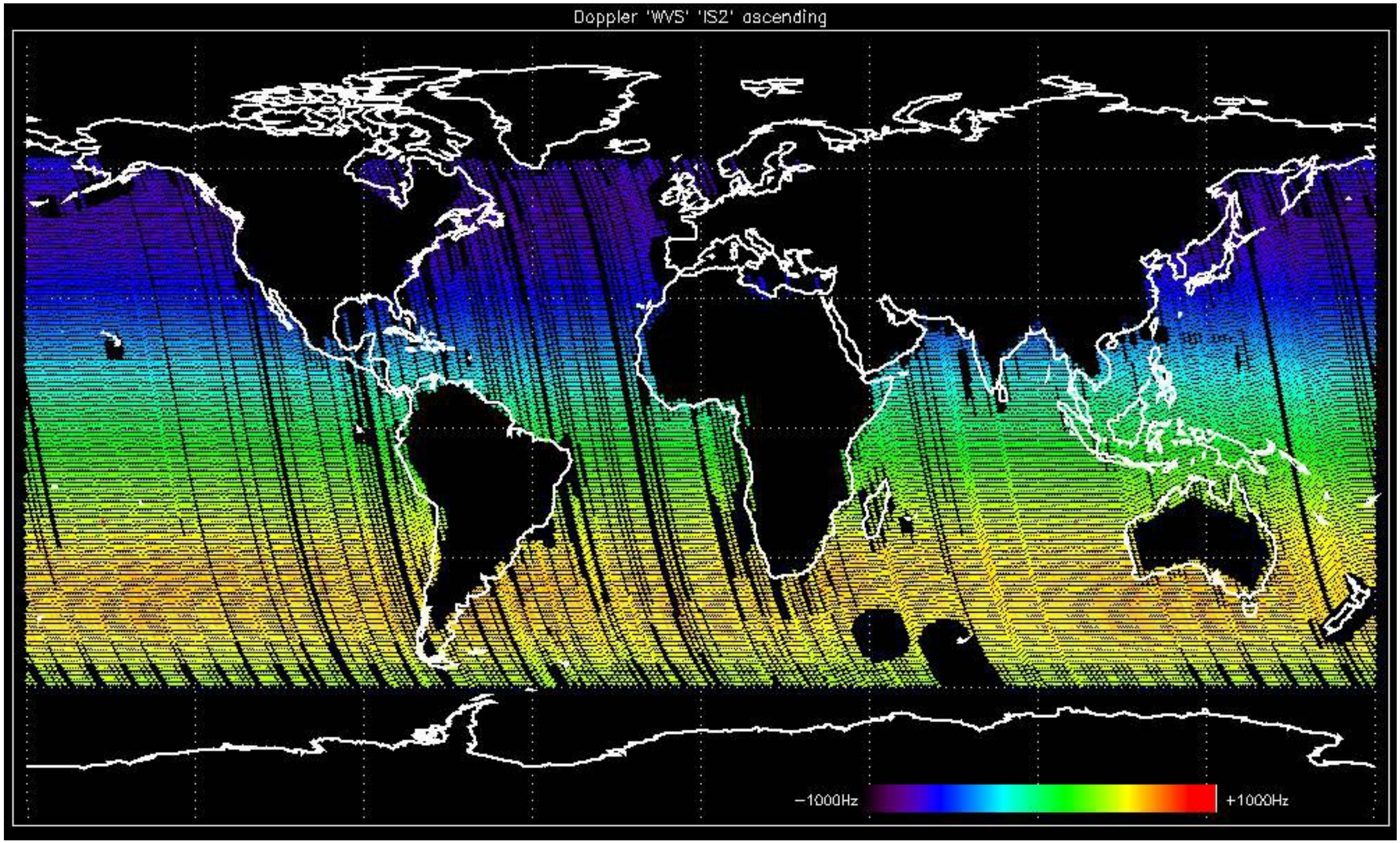

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

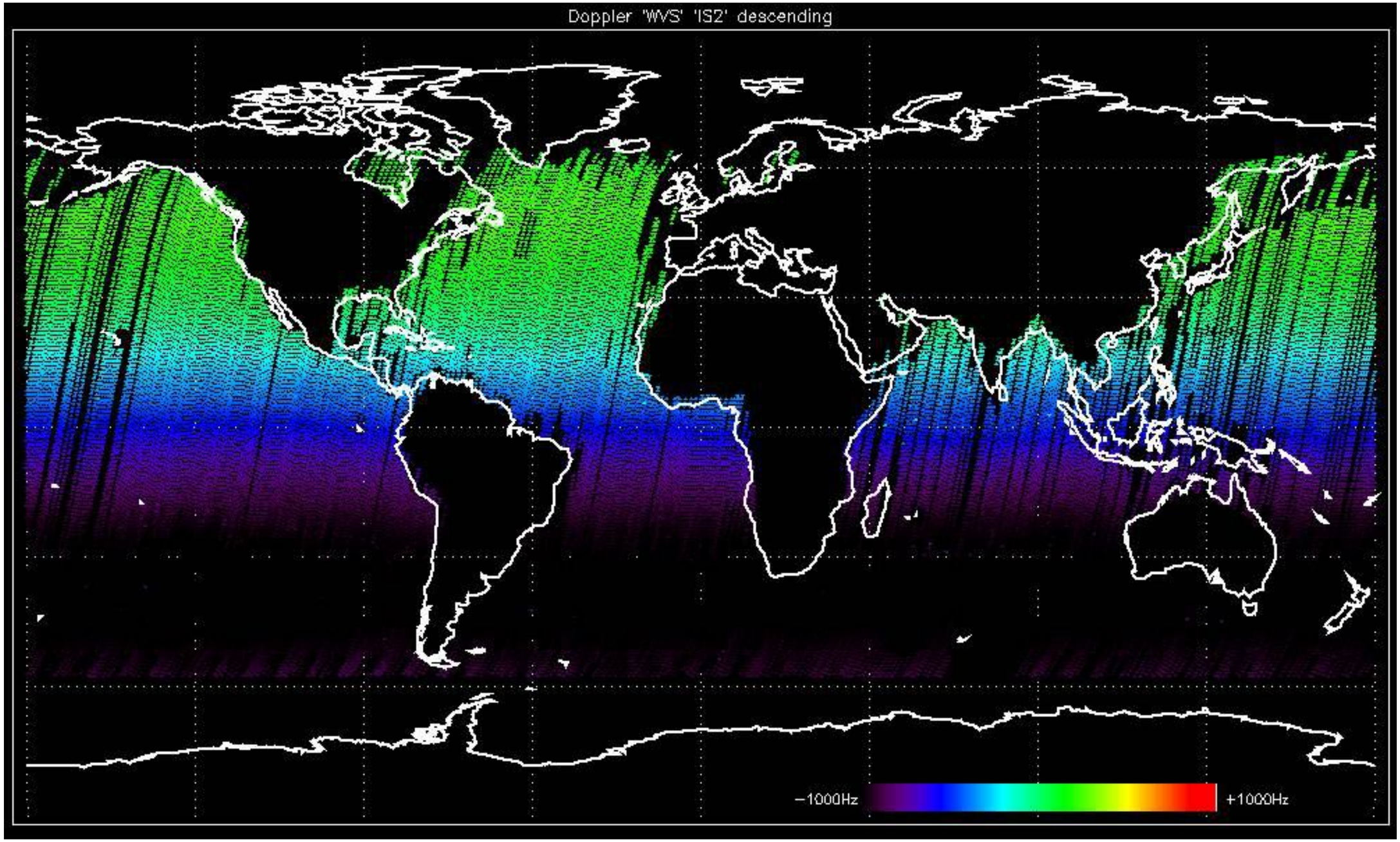
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

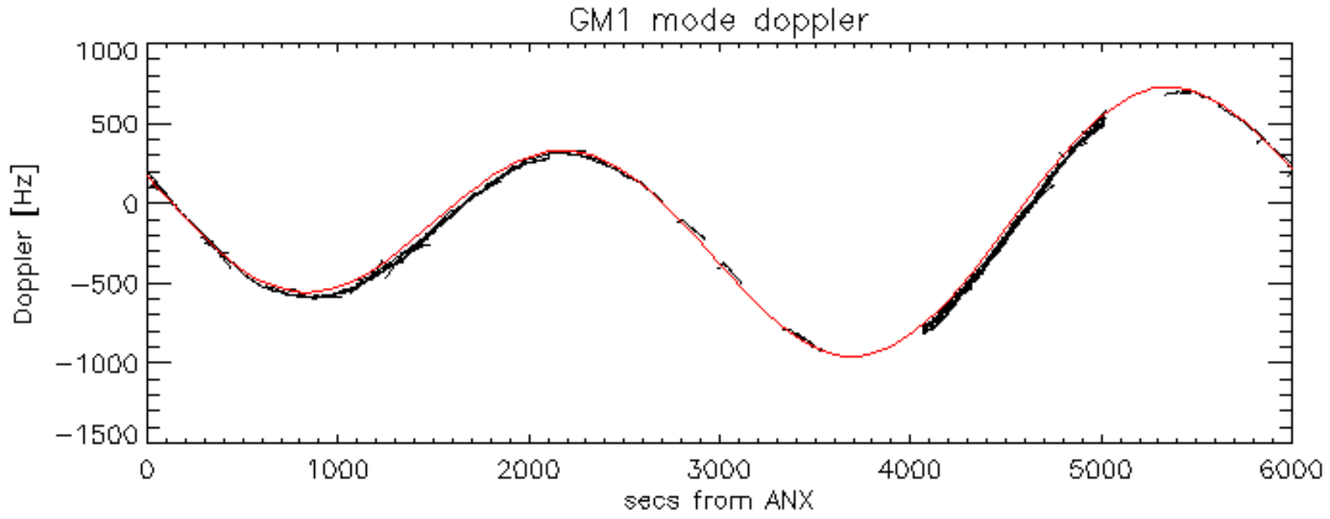
Preliminary report.The data is not yet controled

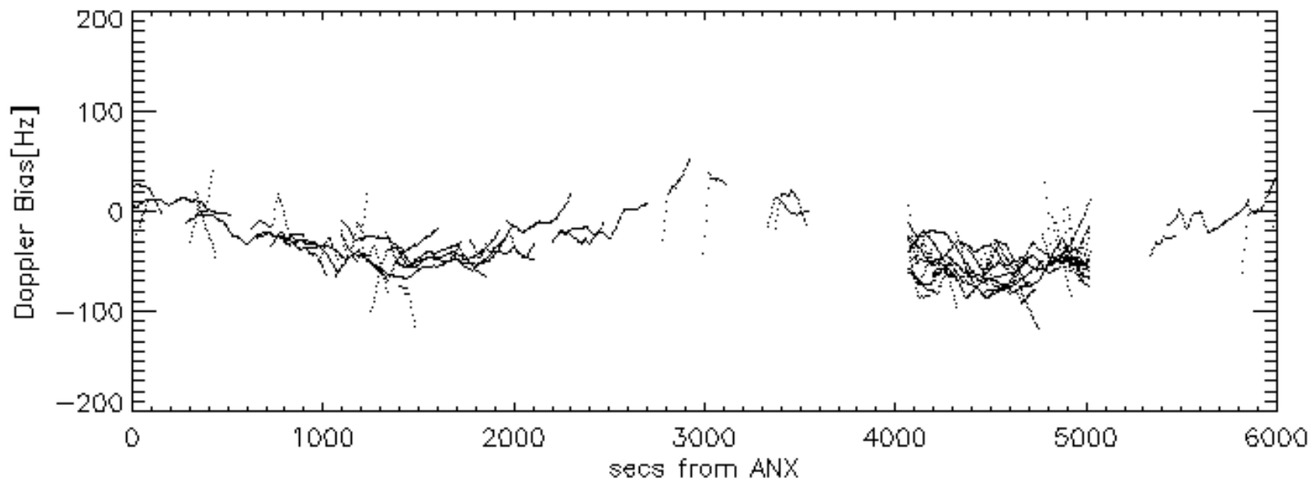

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

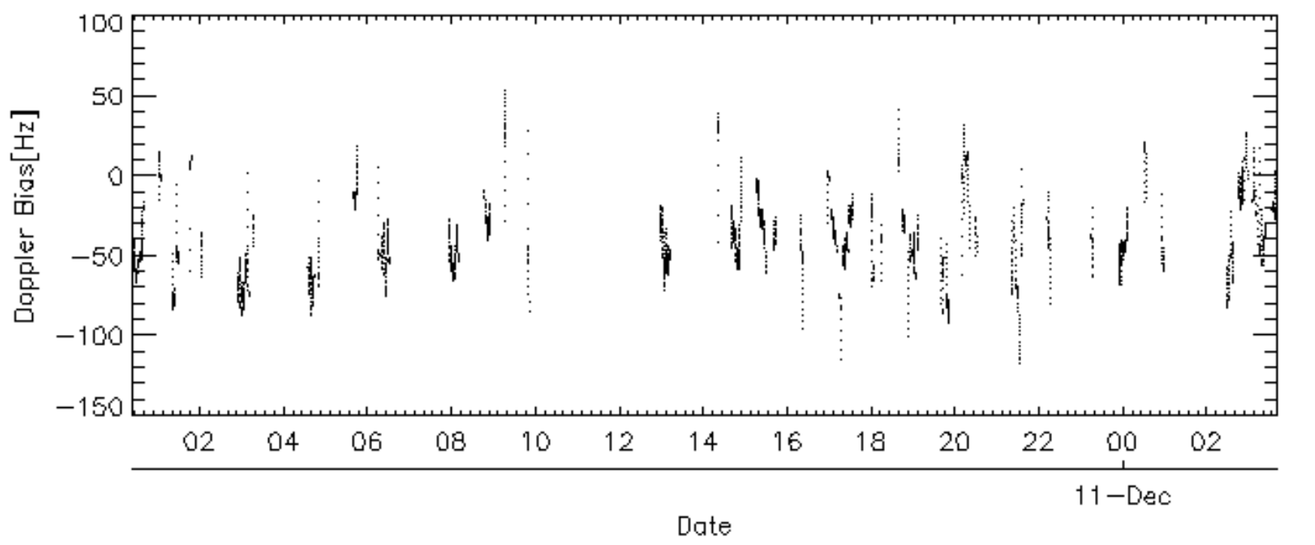

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

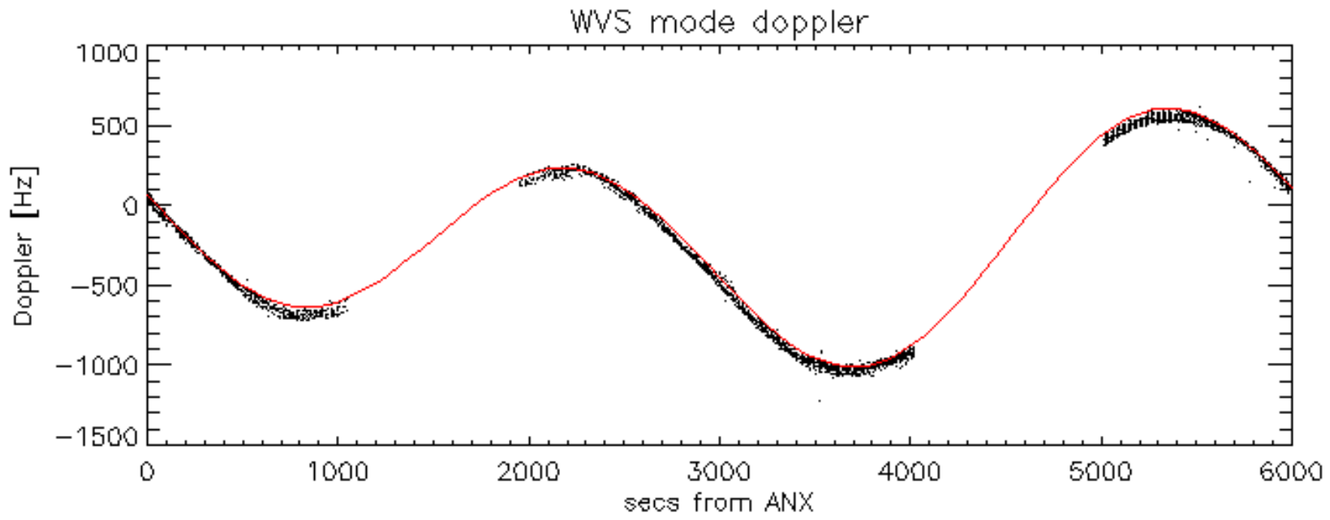

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

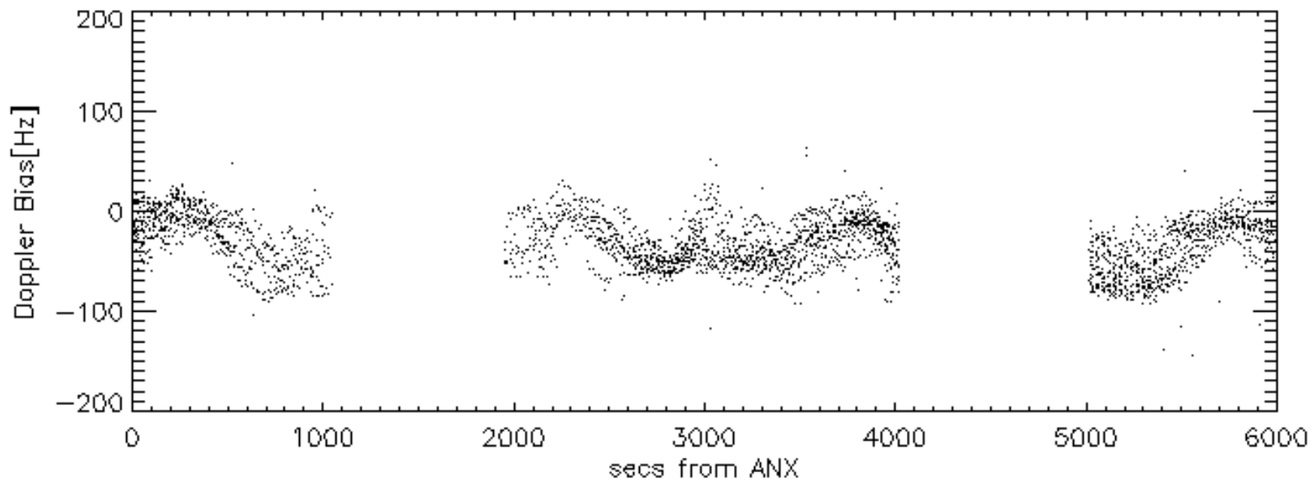

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

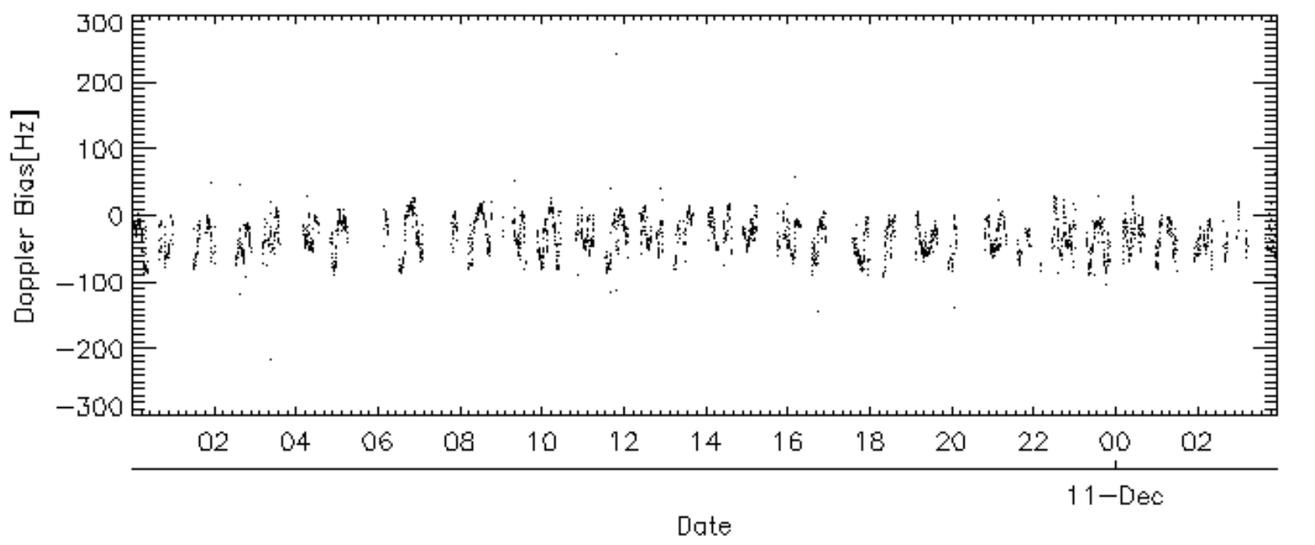

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

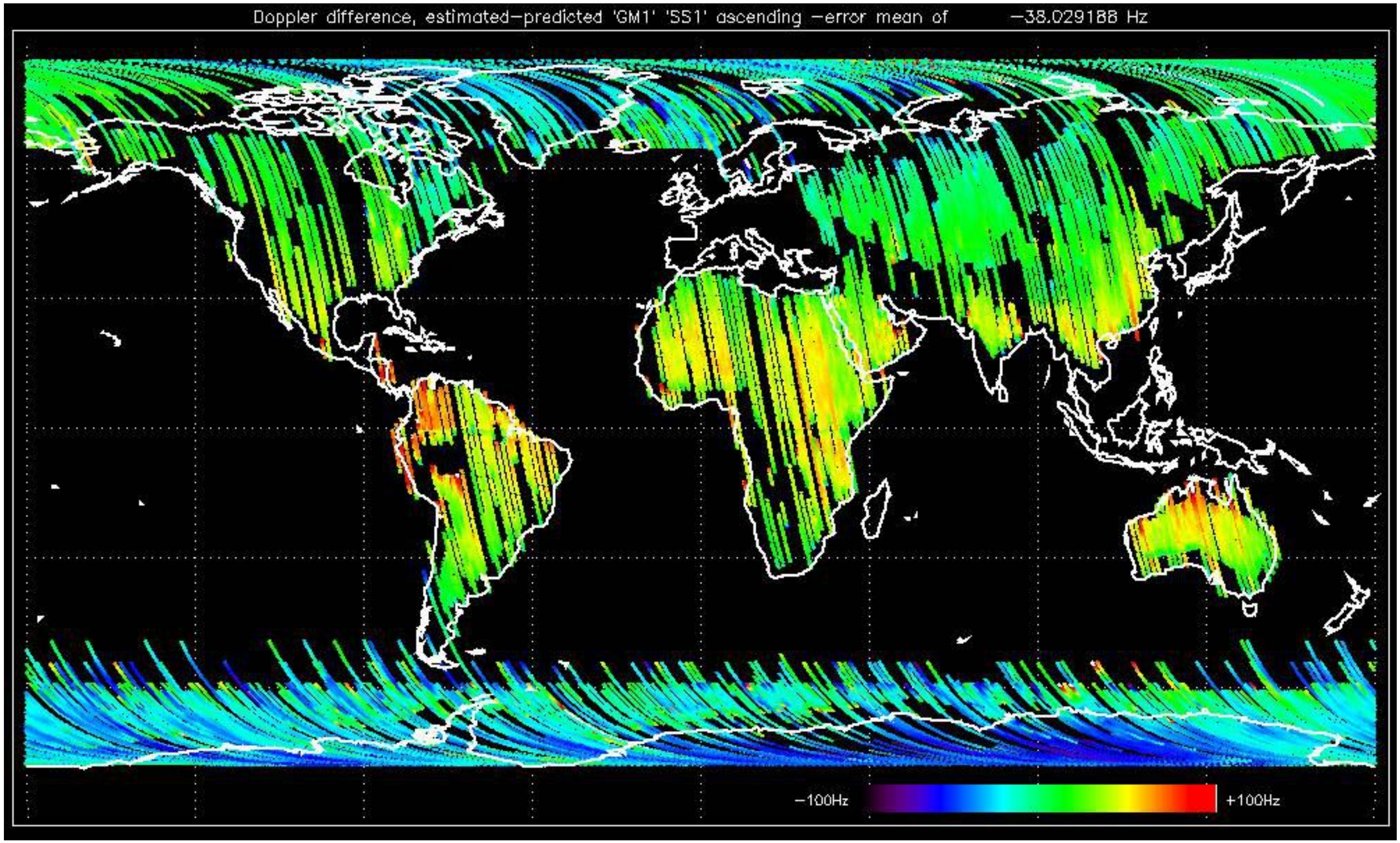

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

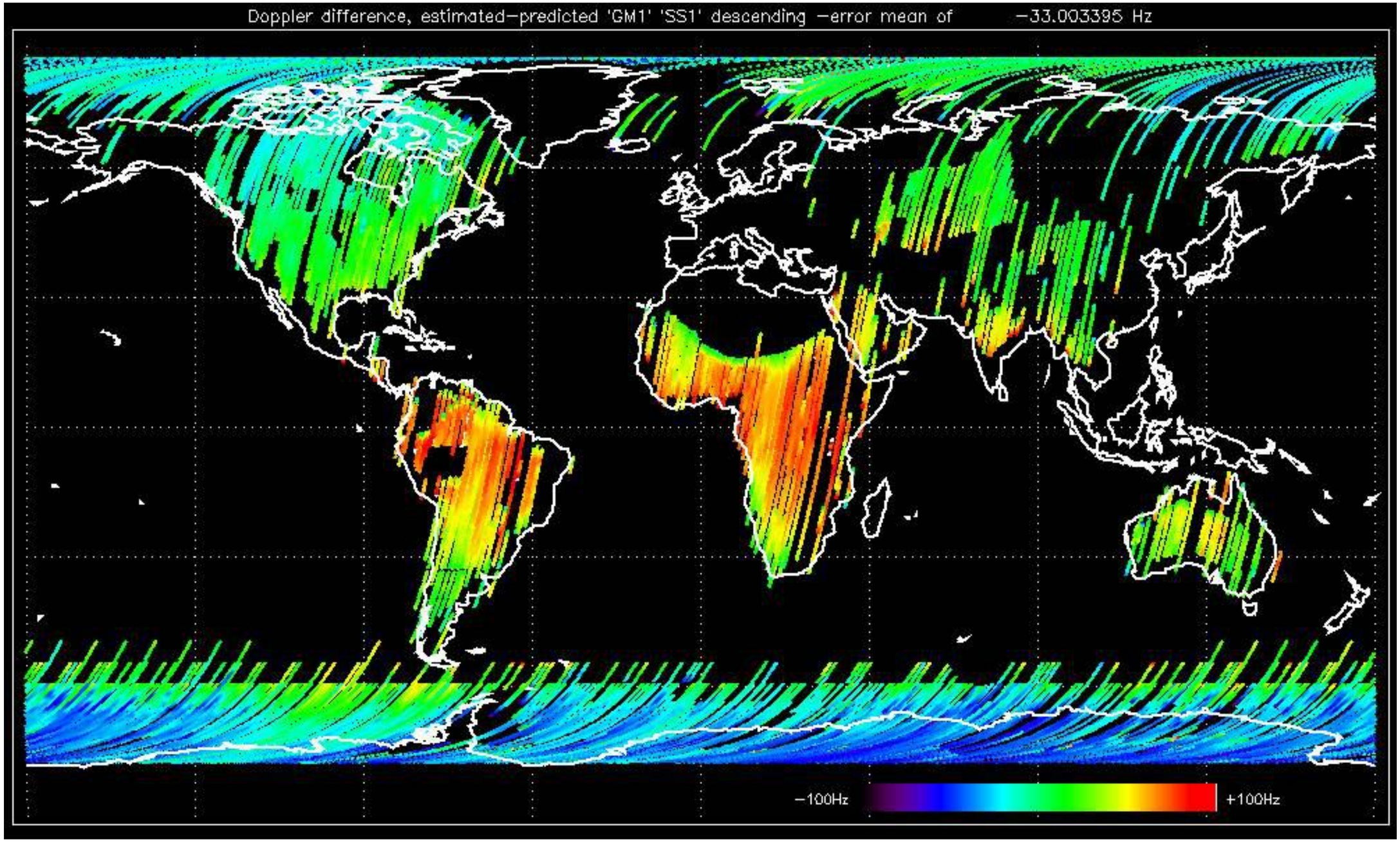

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
11−Dec
Date

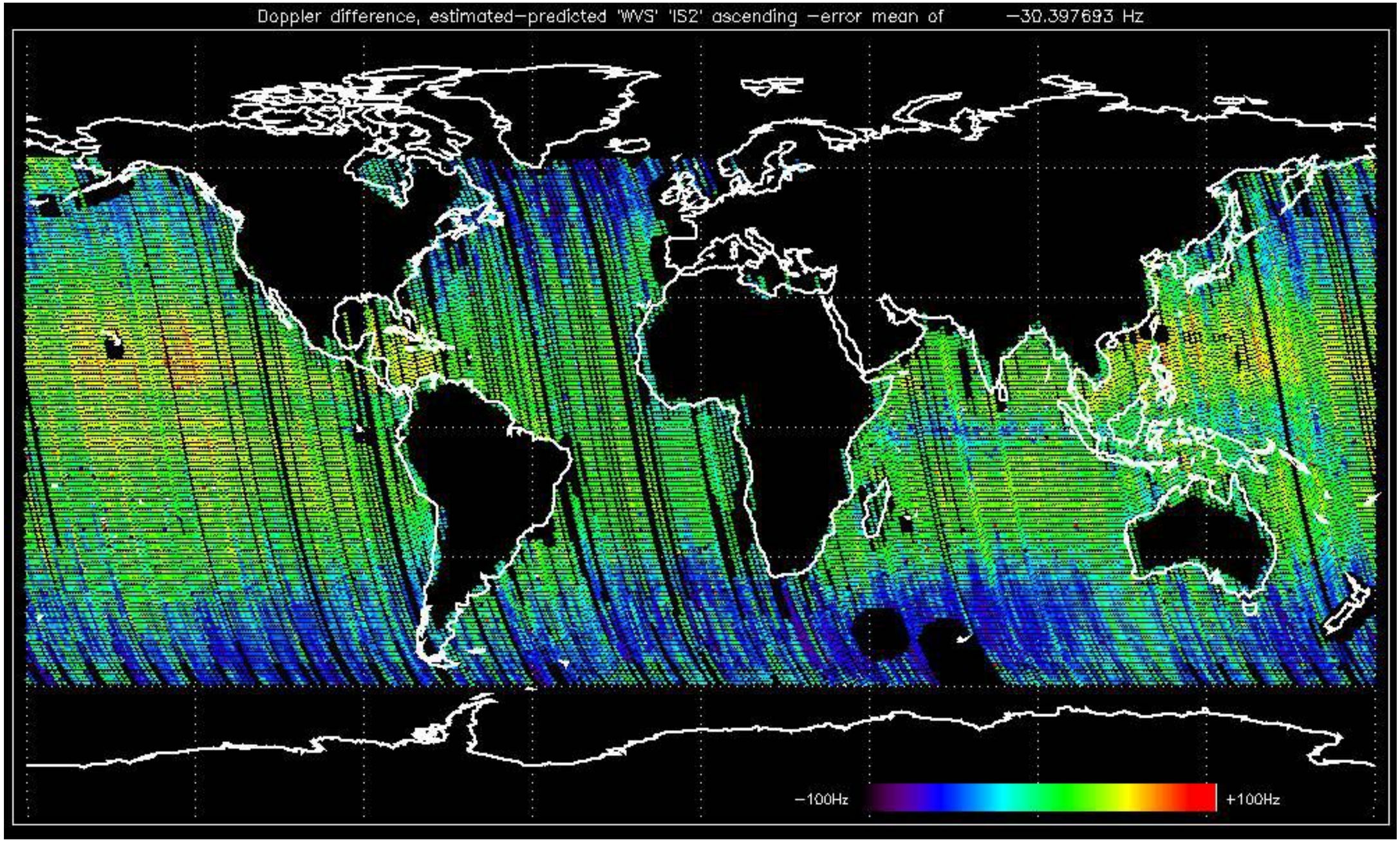

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

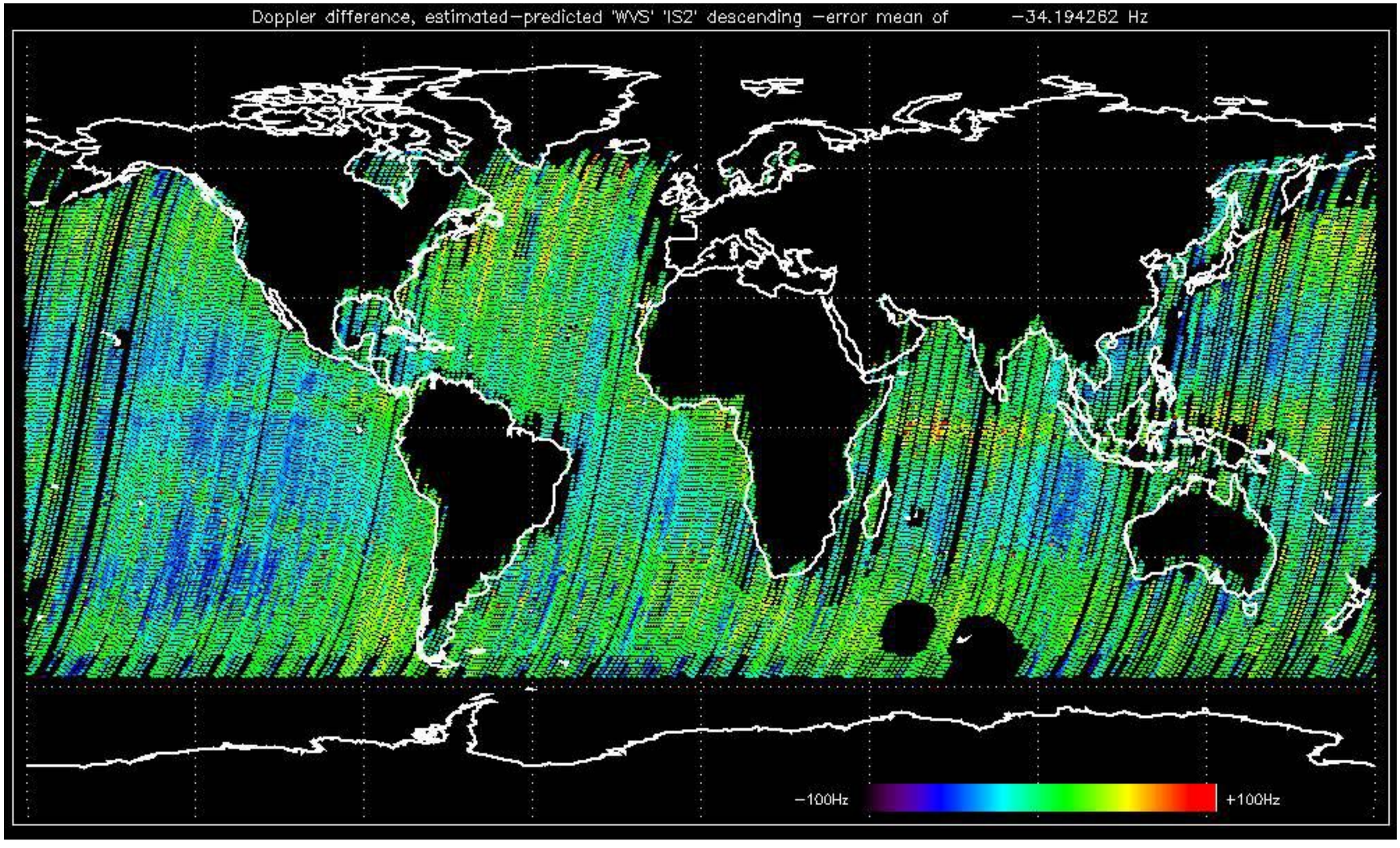

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −38.029188 Hz
−100Hz
+100Hz

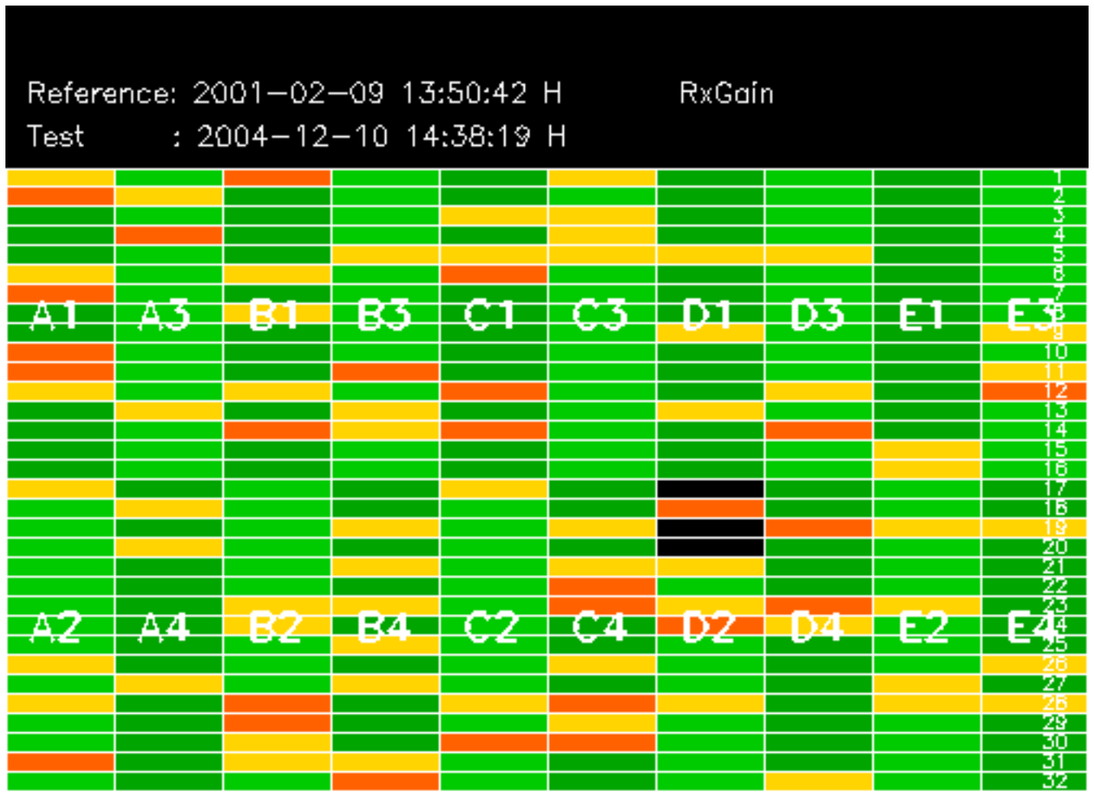

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -33.003395 Hz
-100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −30.397693 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.194262 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 : 2004-12-10 14:38:19 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
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8
9
10
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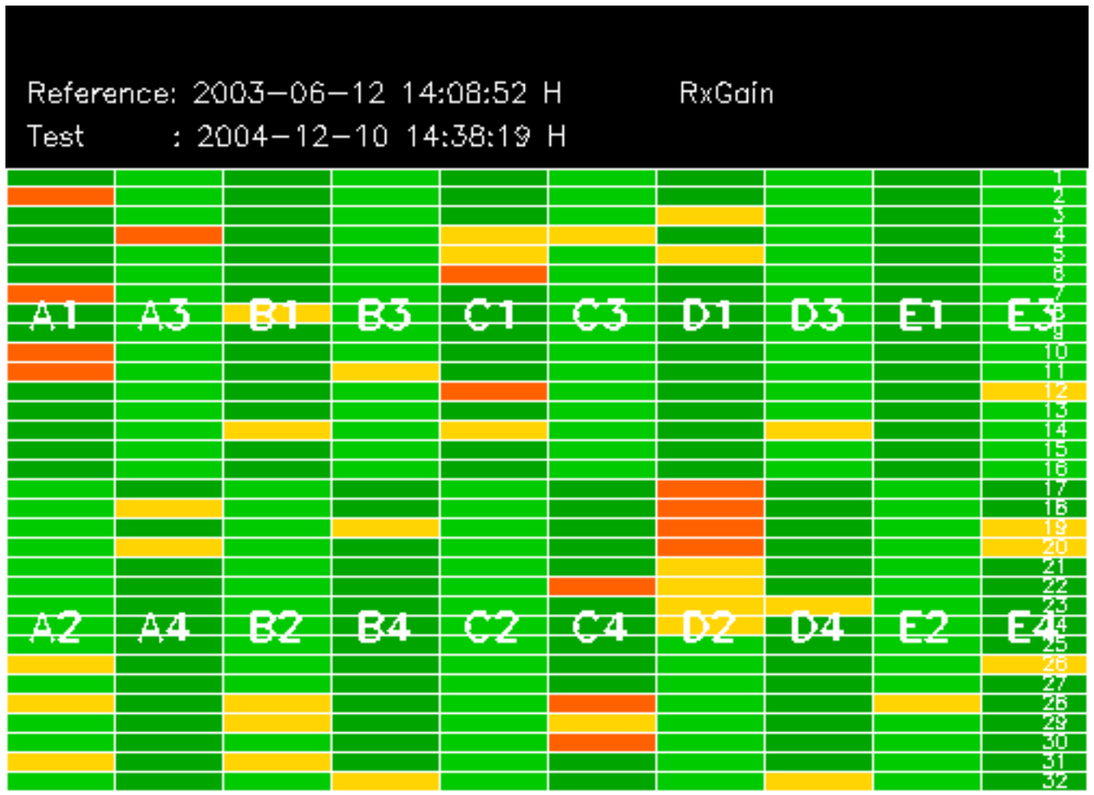
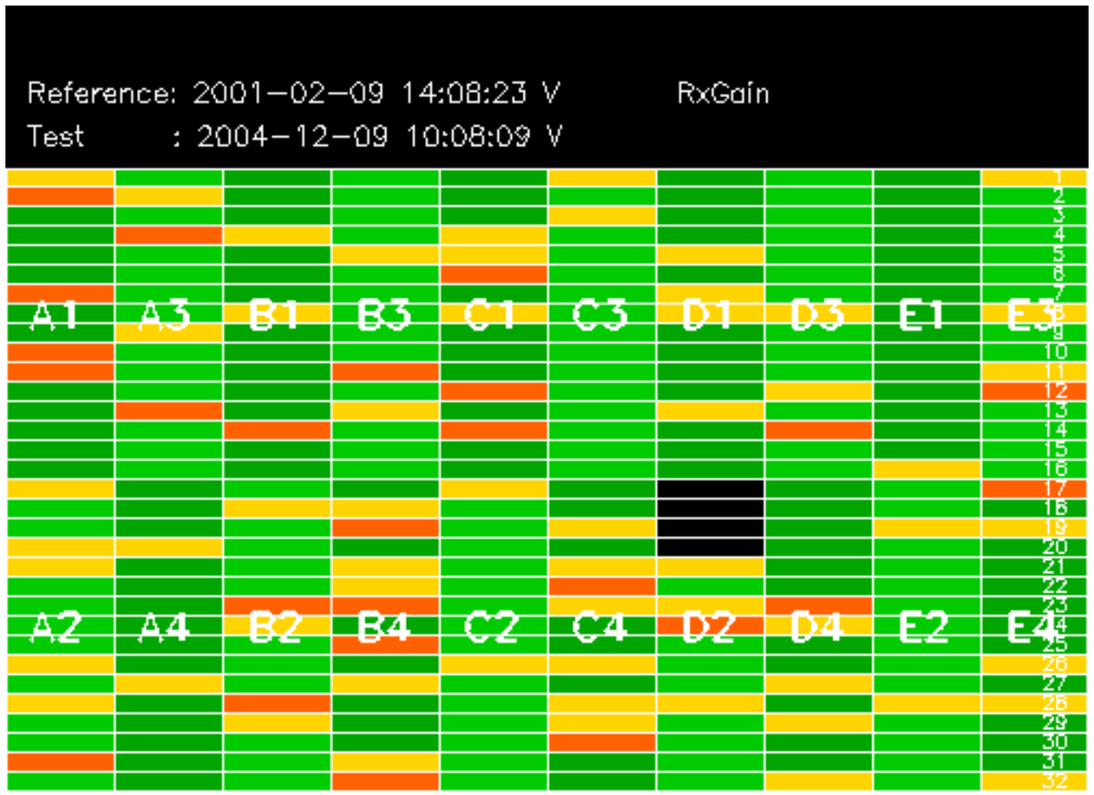
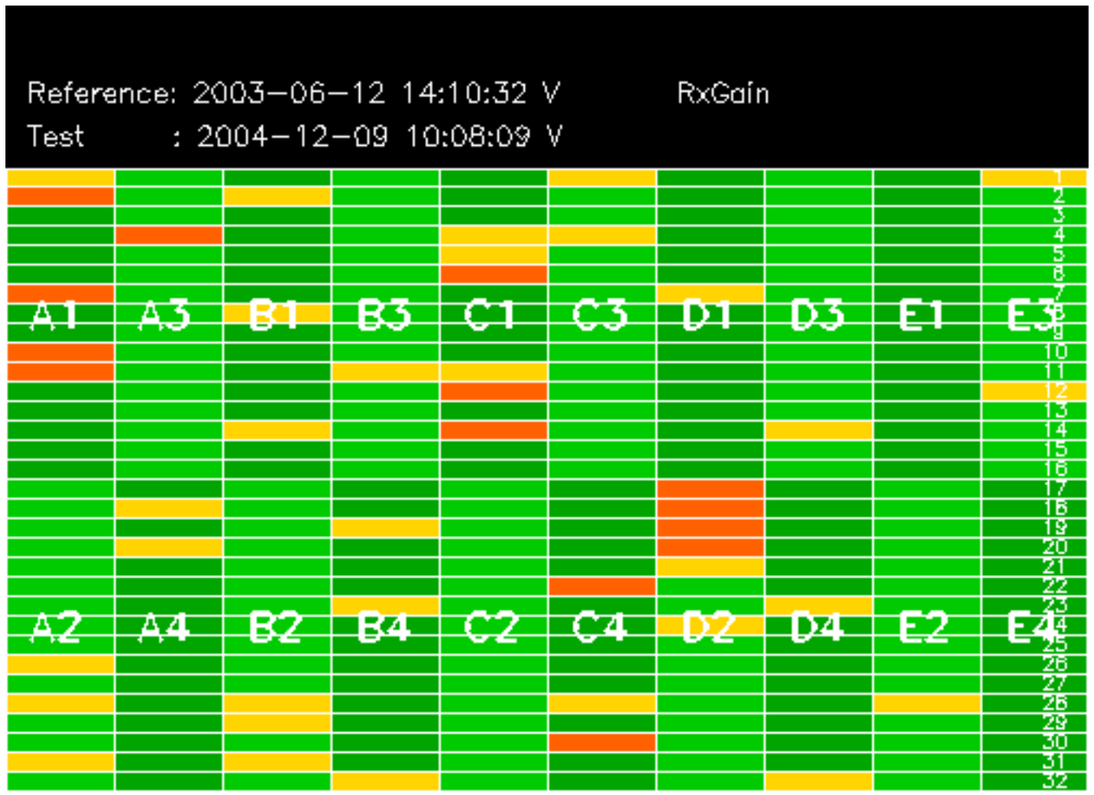
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-10 14:38:19 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 : 2004-12-09 10:08:09 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-09 10:08:09 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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9
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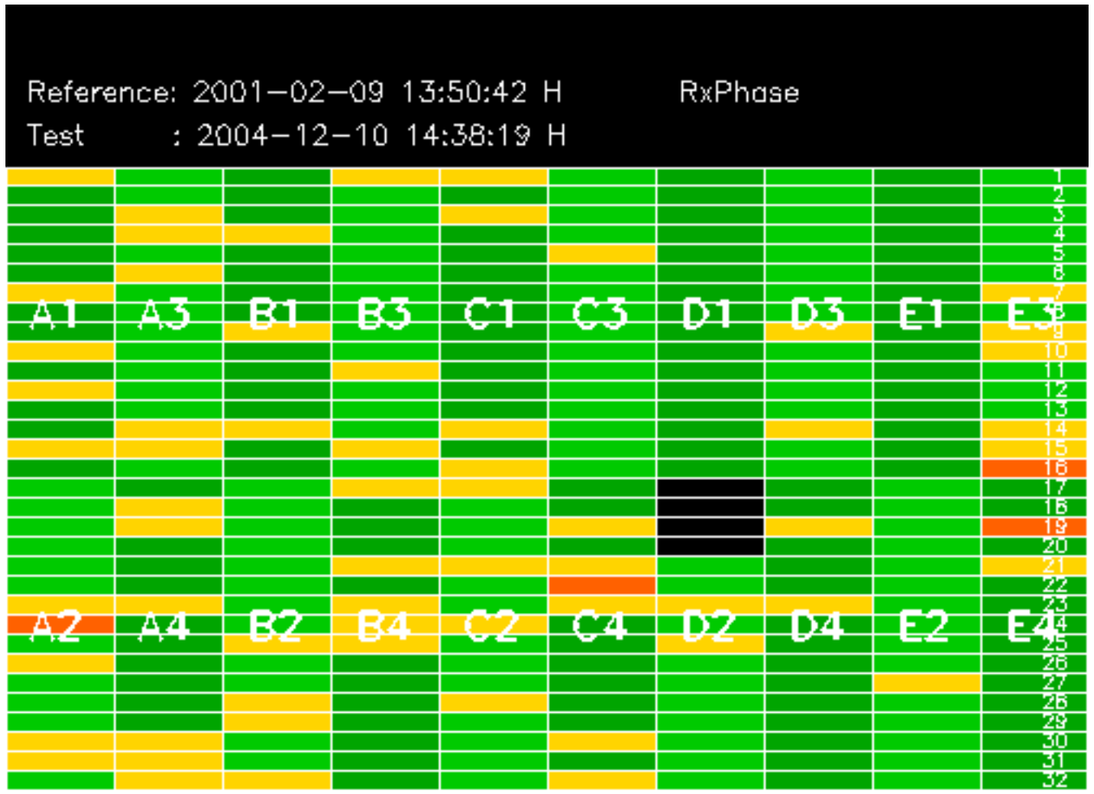
32


Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-10 14:38:19 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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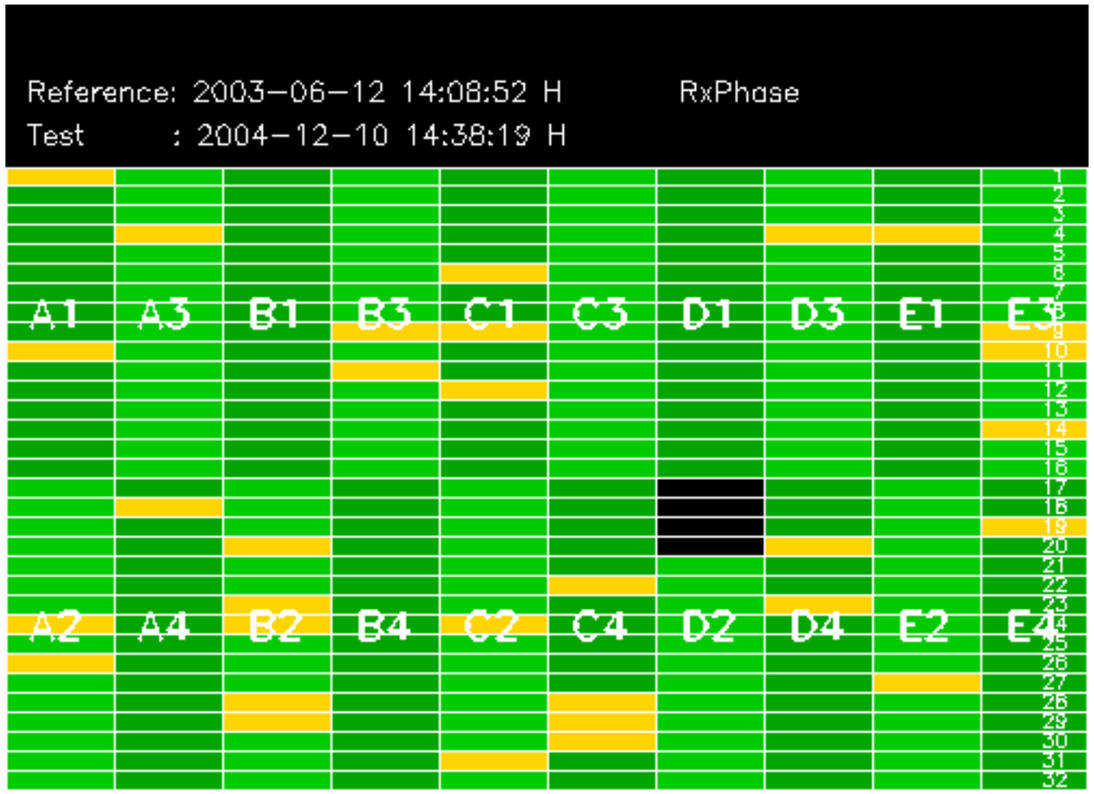
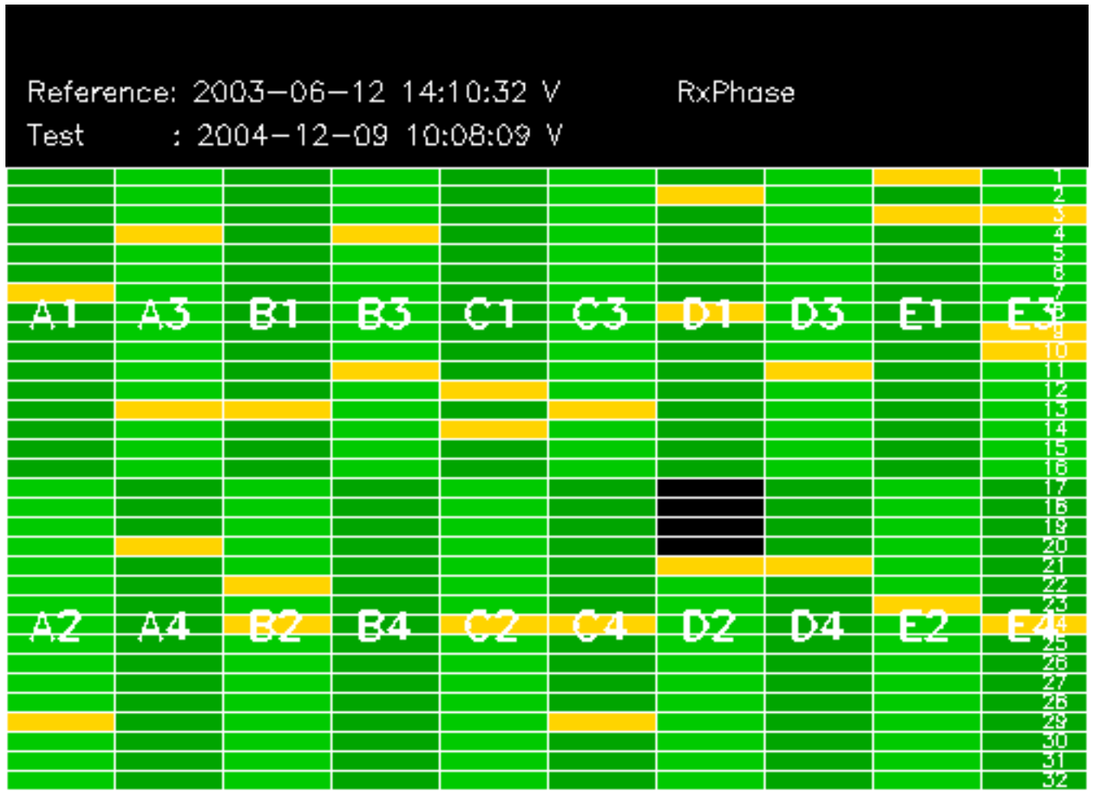

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-10 14:38:19 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-09 10:08:09 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 : 2004-12-09 10:08:09 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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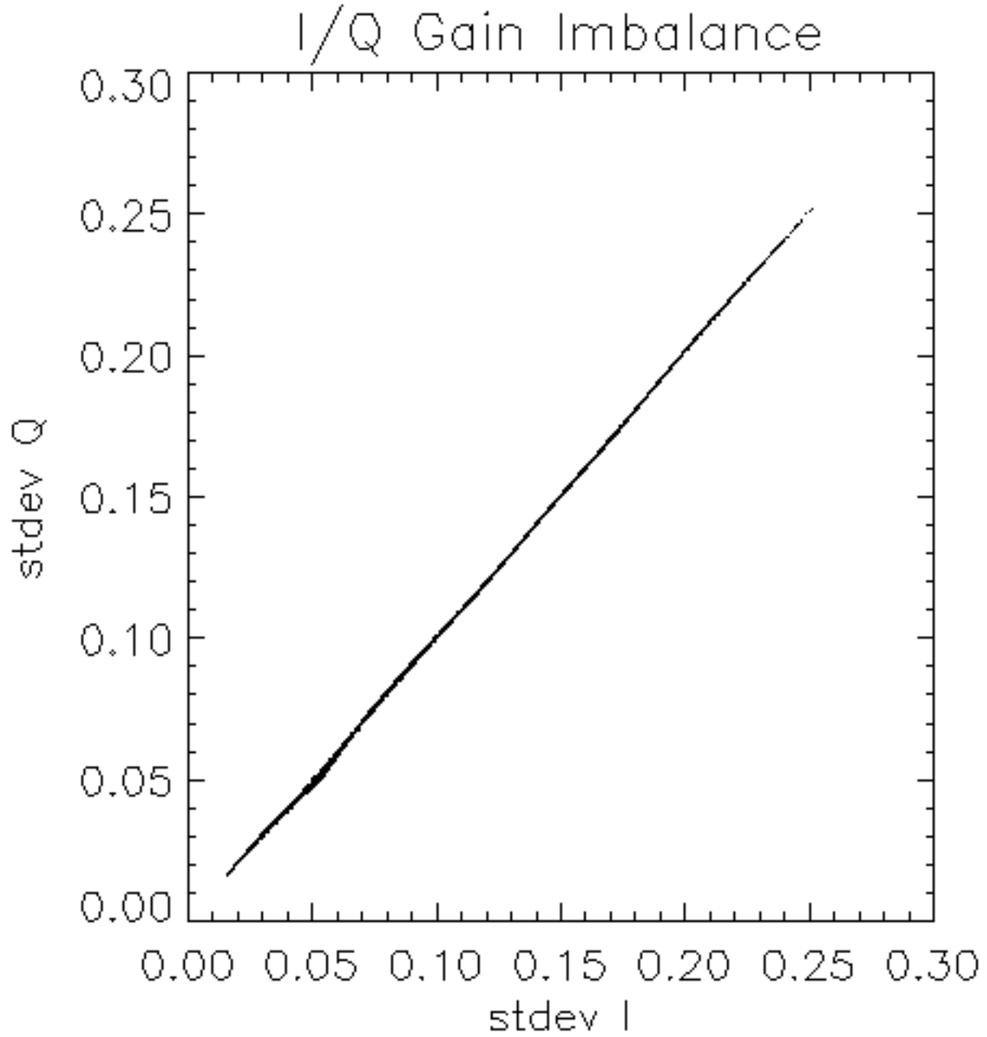
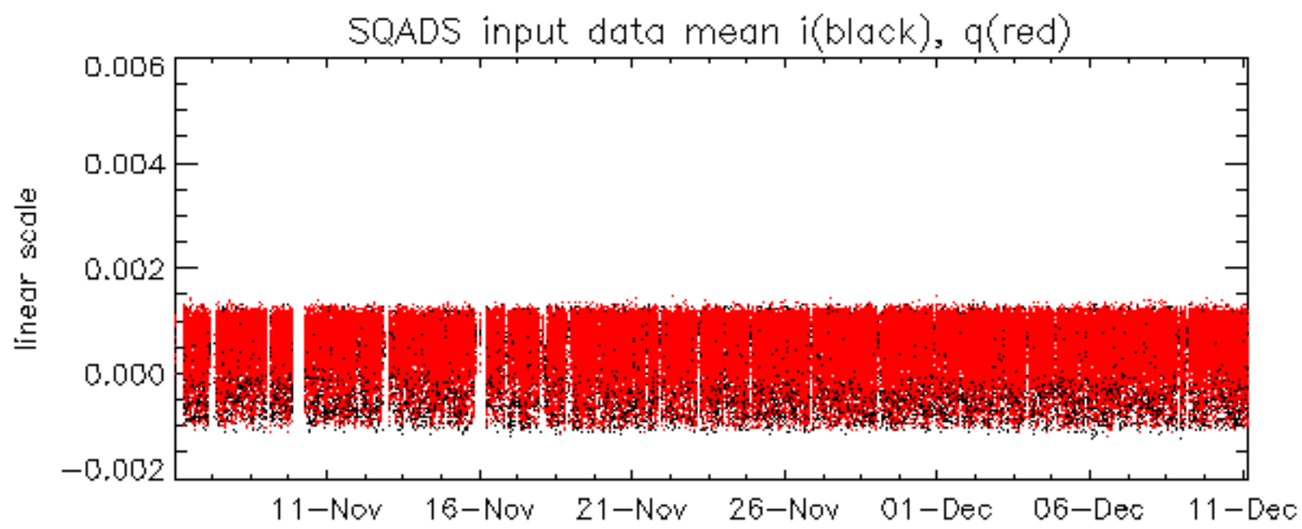
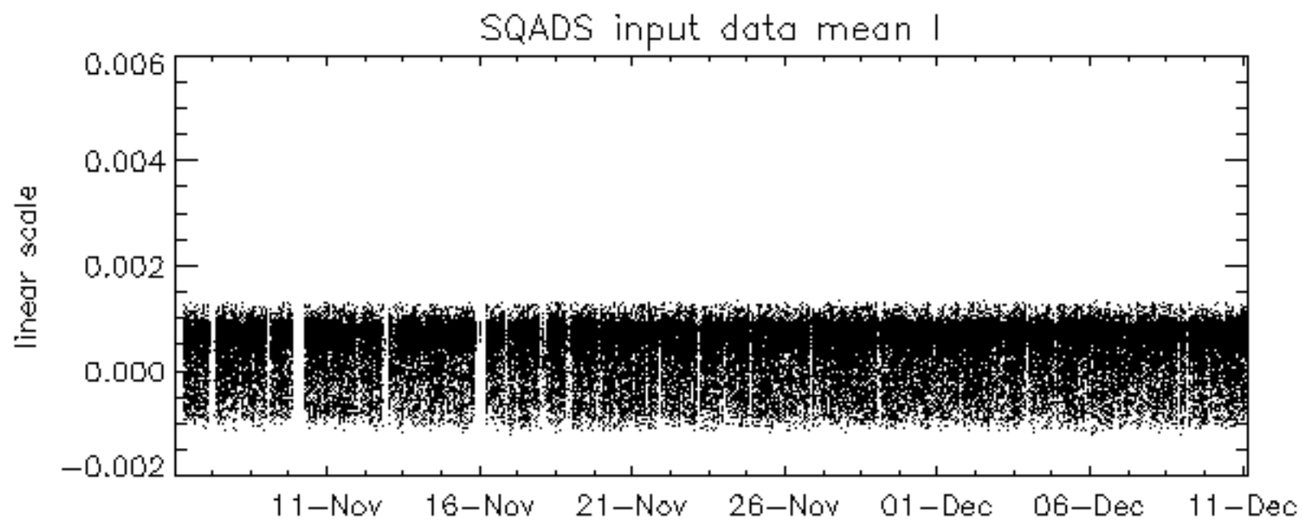
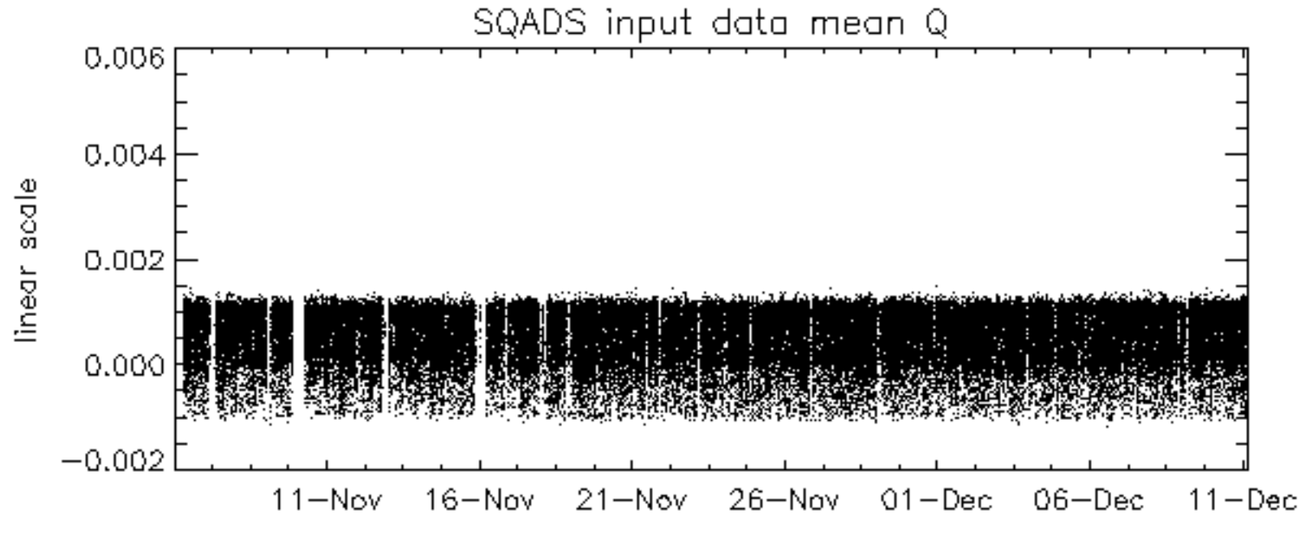
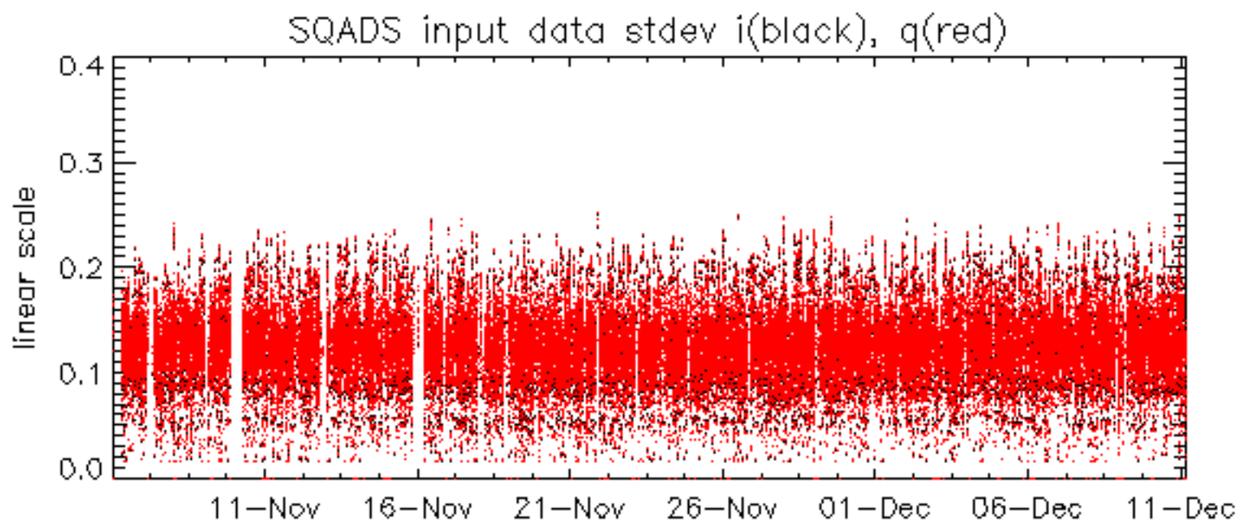
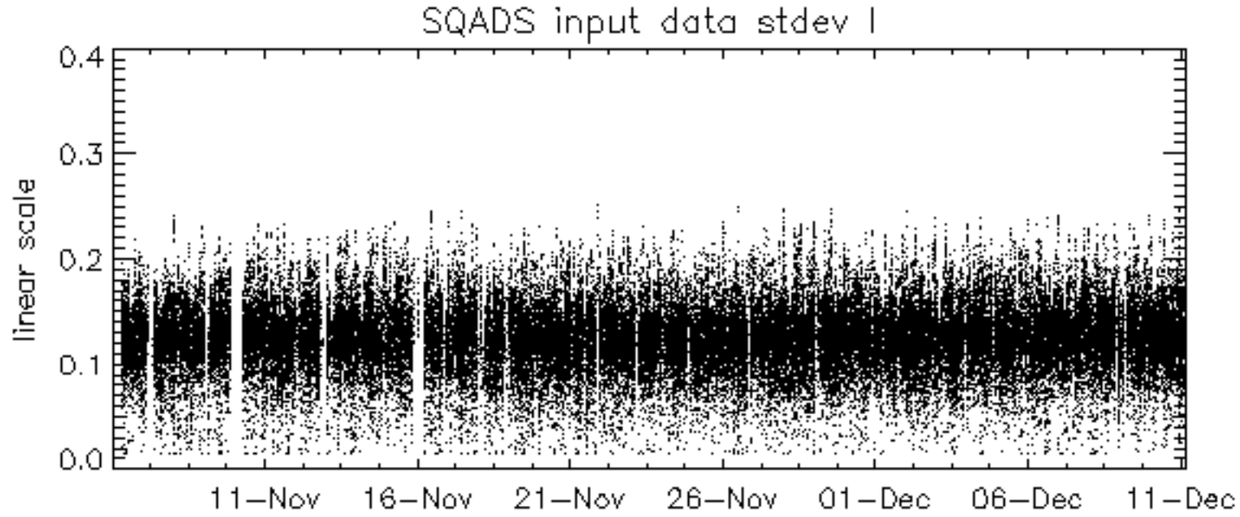

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

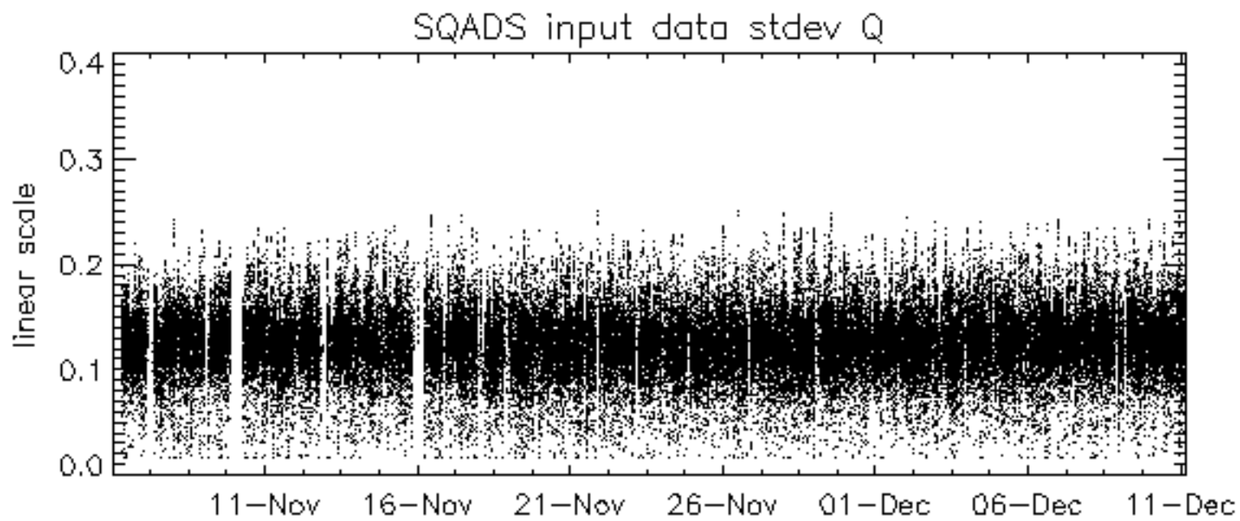

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

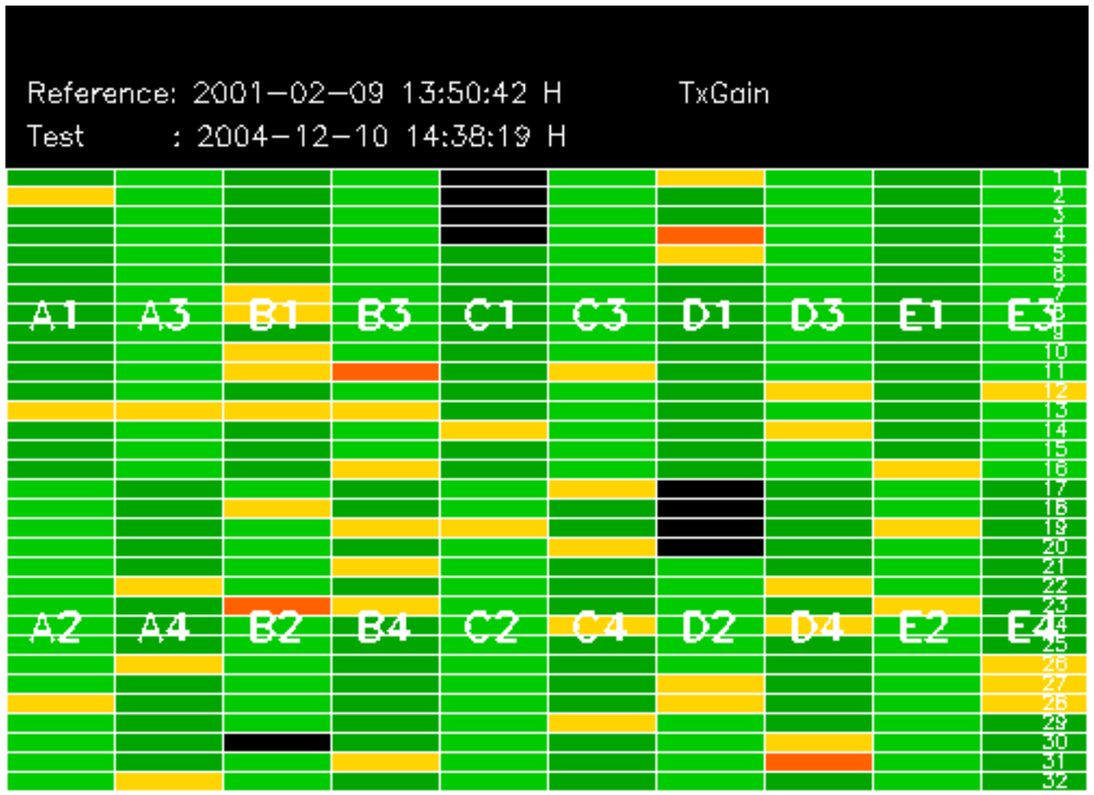

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

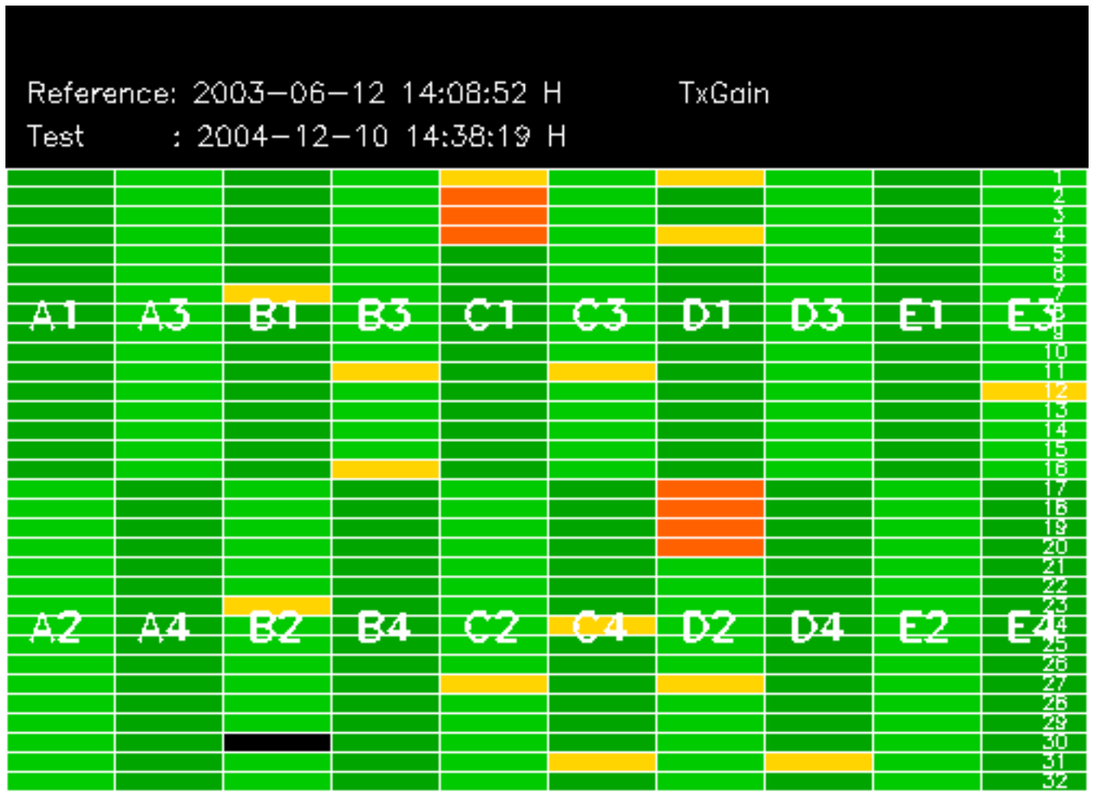

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

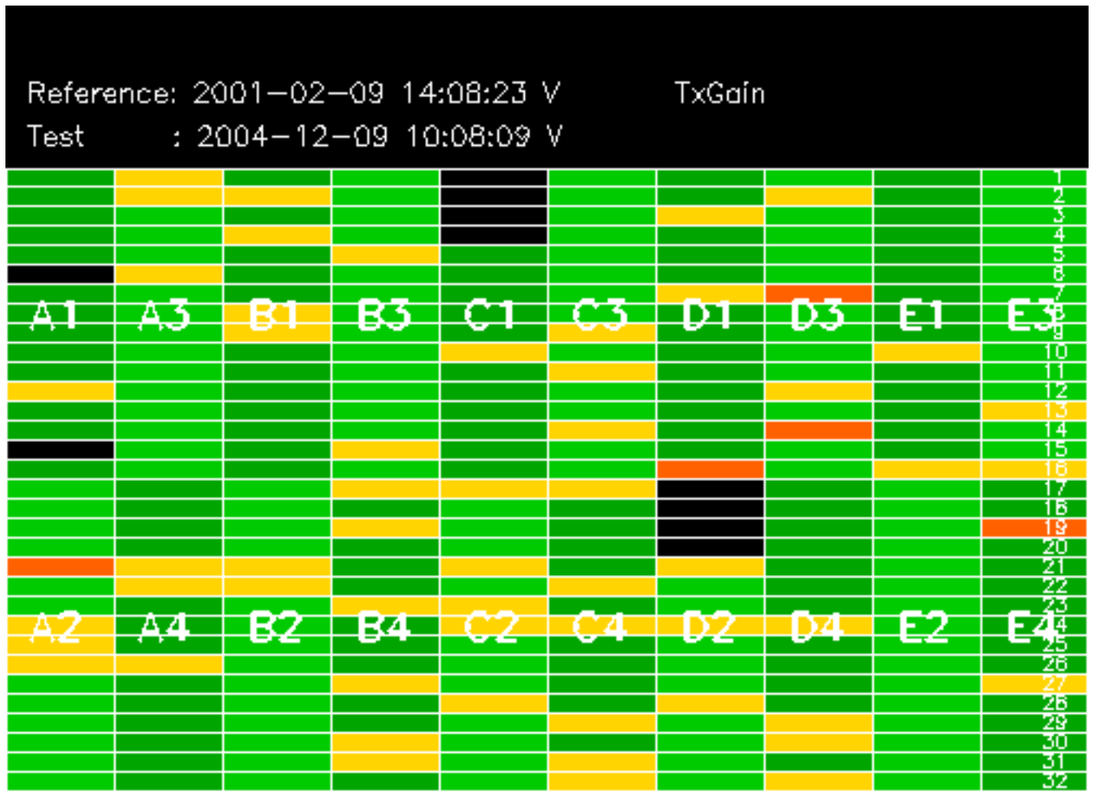

SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

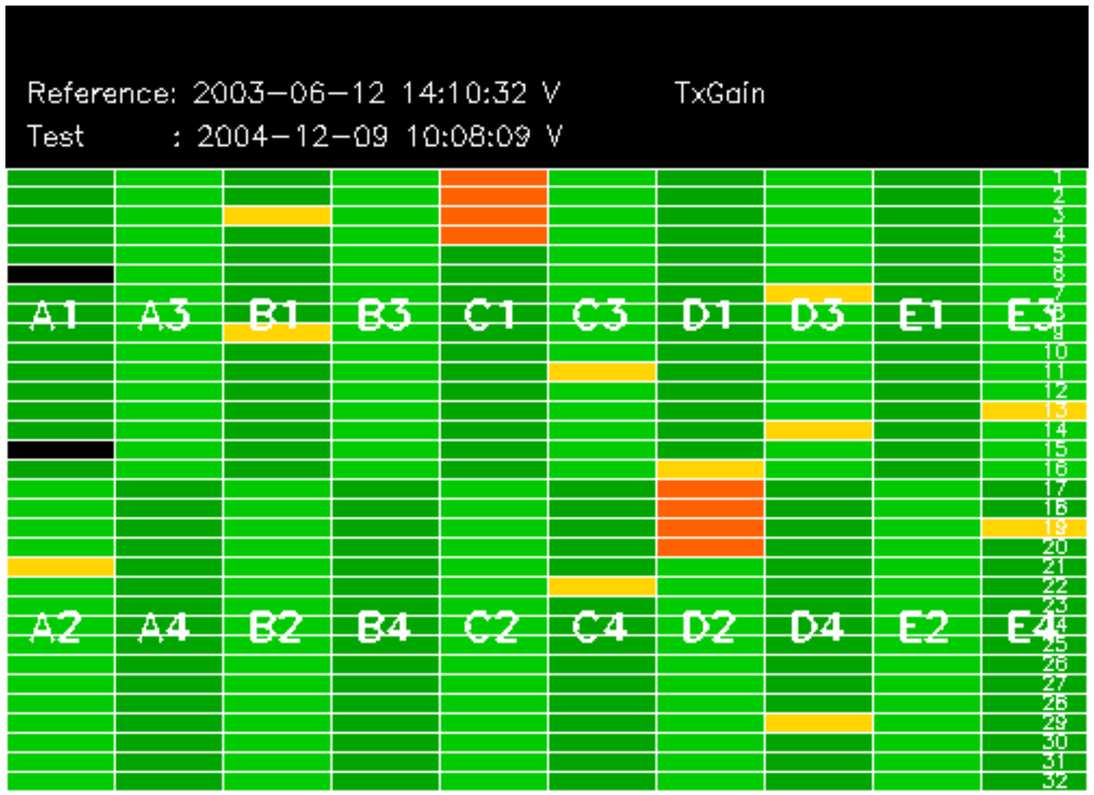

SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

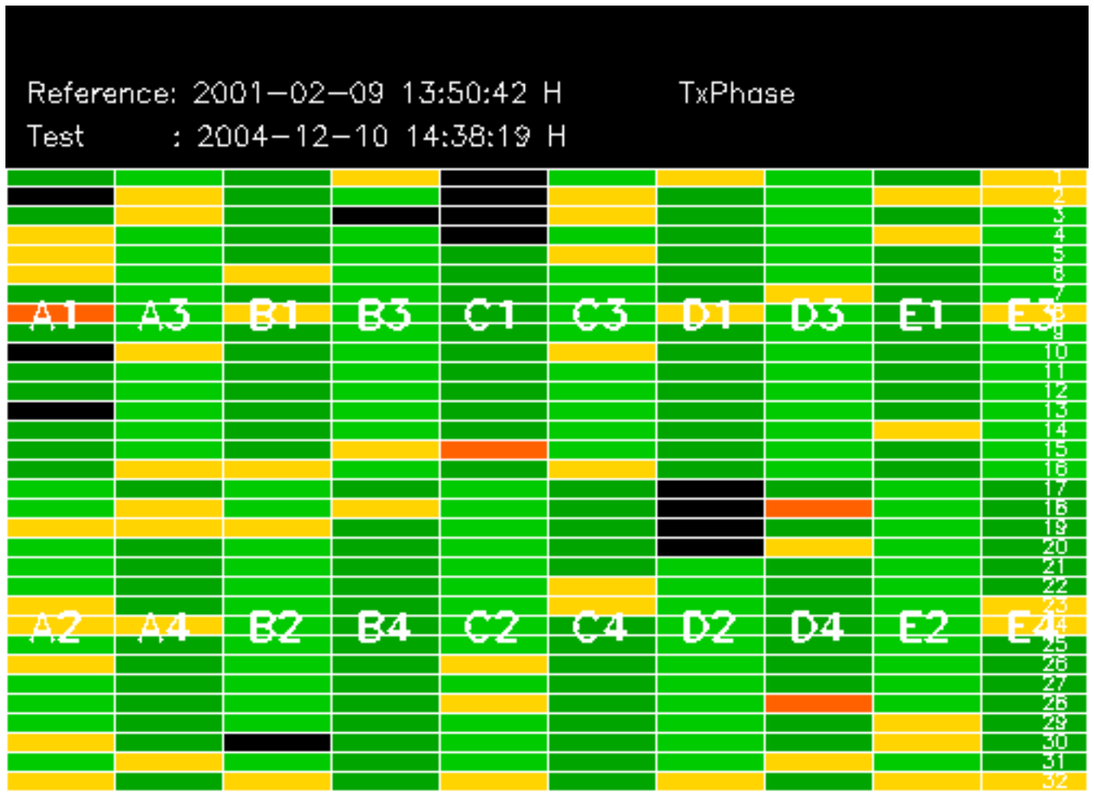

SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

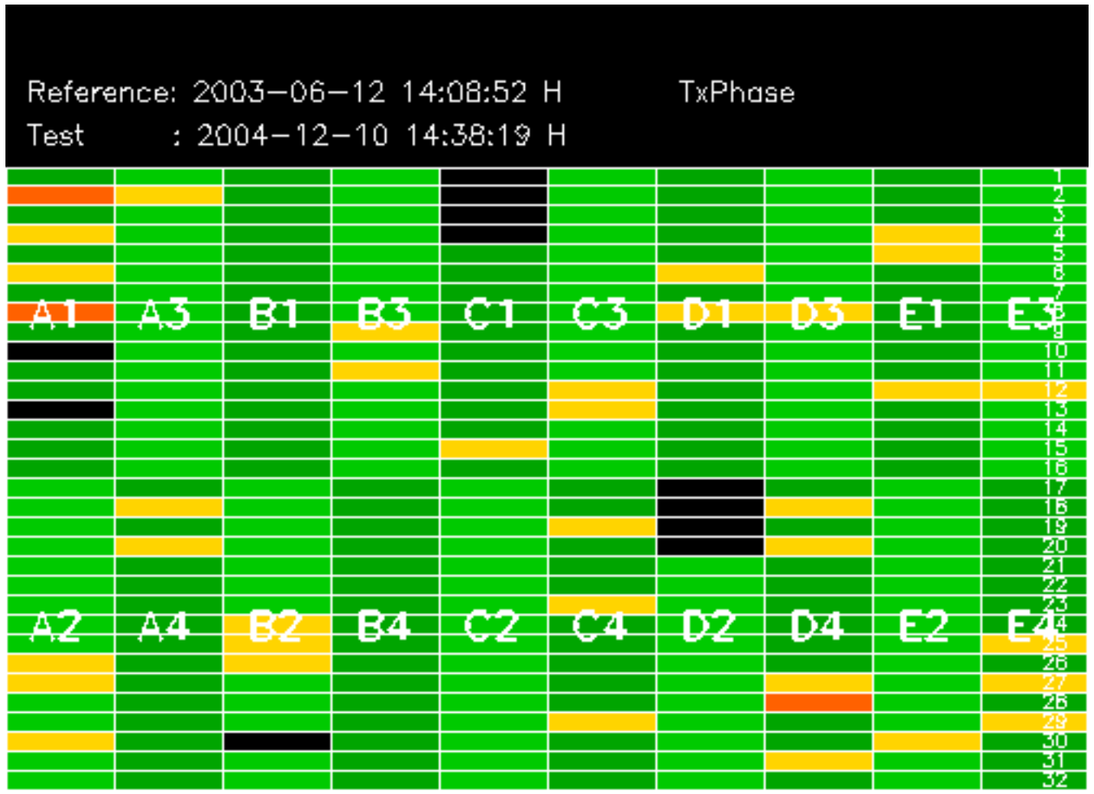

Reference: 2001-02-09 13:50:42 H
Test : 2004-12-10 14:38:19 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

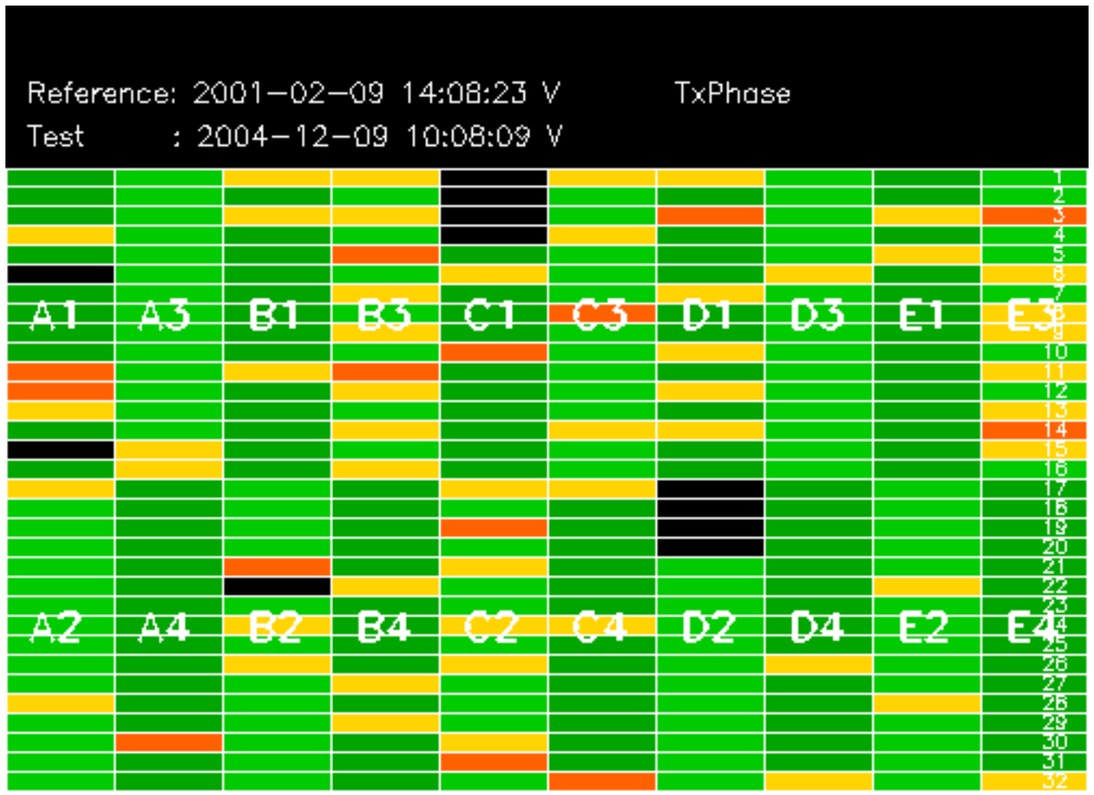

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-10 14:38:19 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-09 10:08:09 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 : 2004-12-09 10:08:09 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 : 2004-12-10 14:38:19 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 : 2004-12-10 14:38:19 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 : 2004-12-09 10:08:09 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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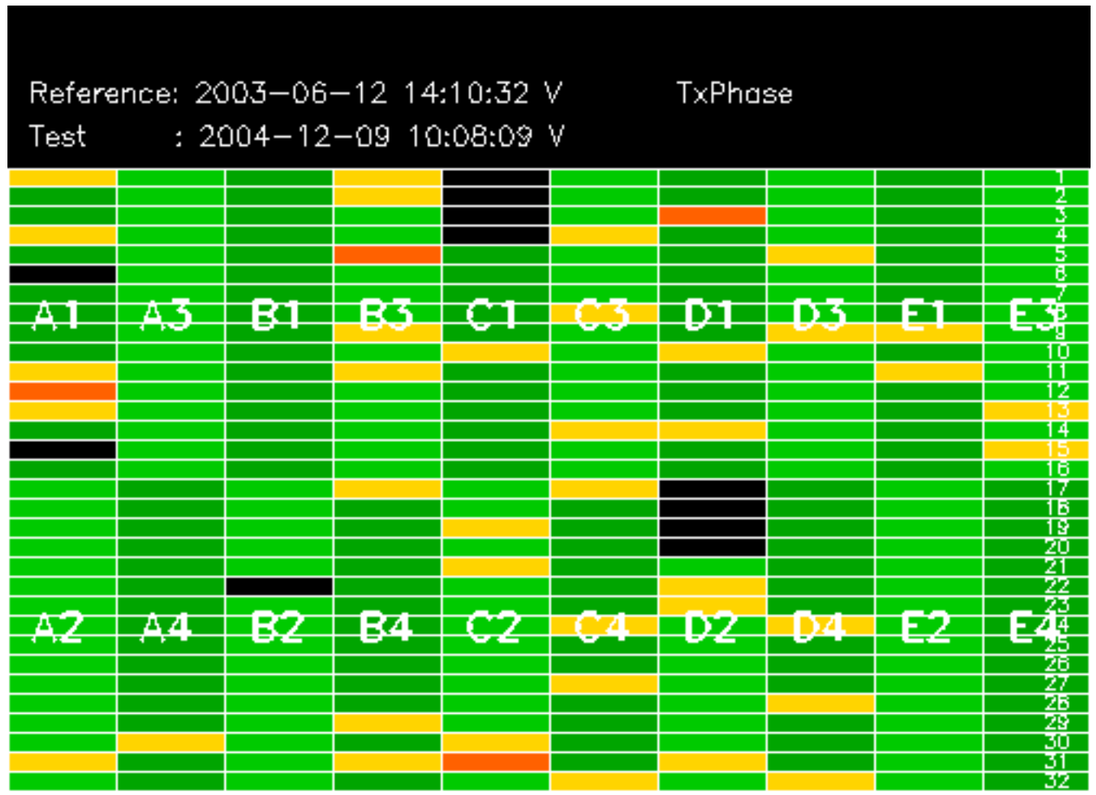
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-09 10:08:09 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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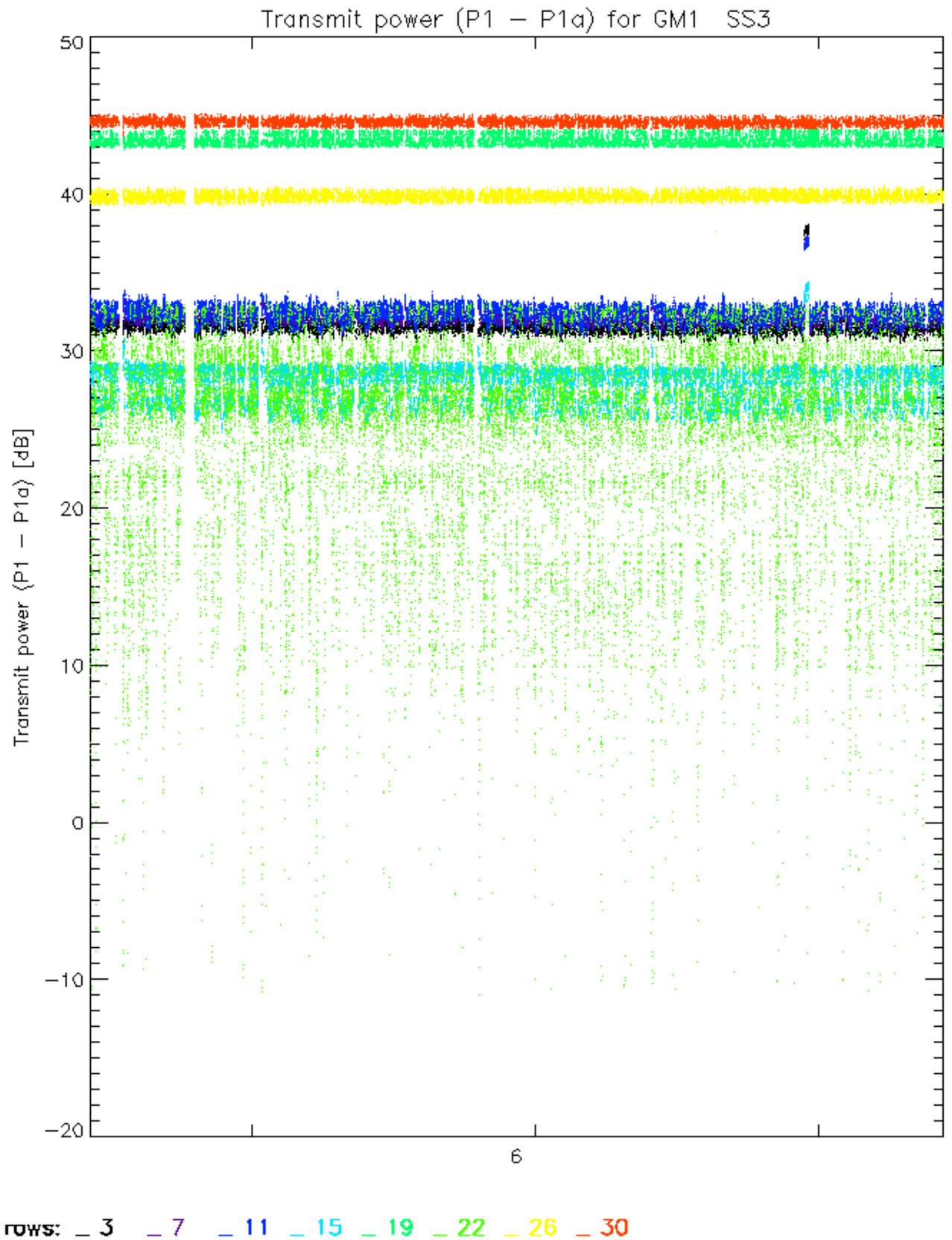
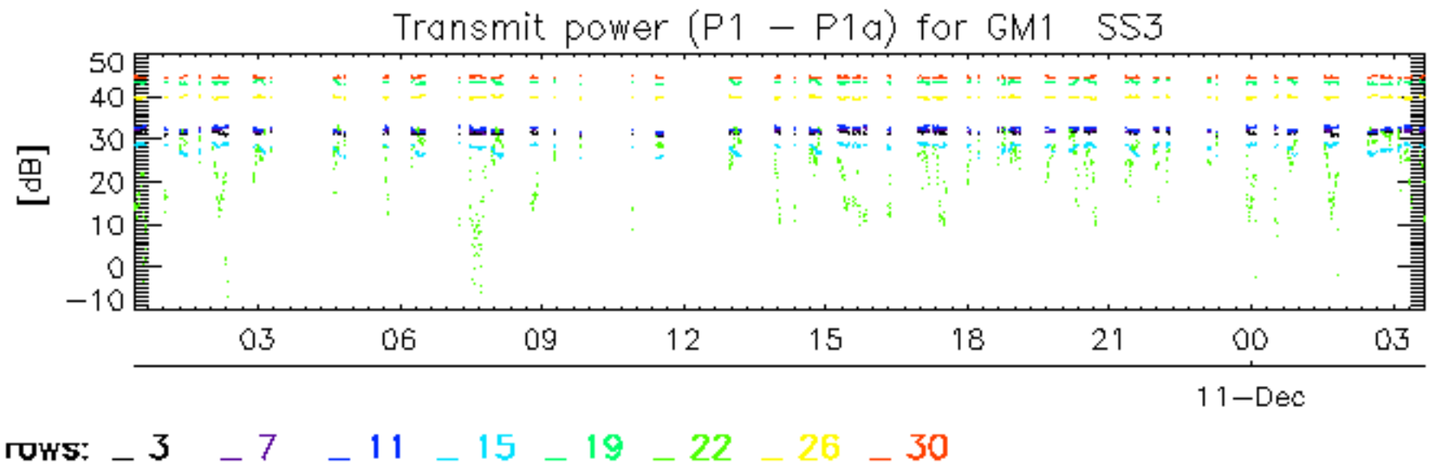
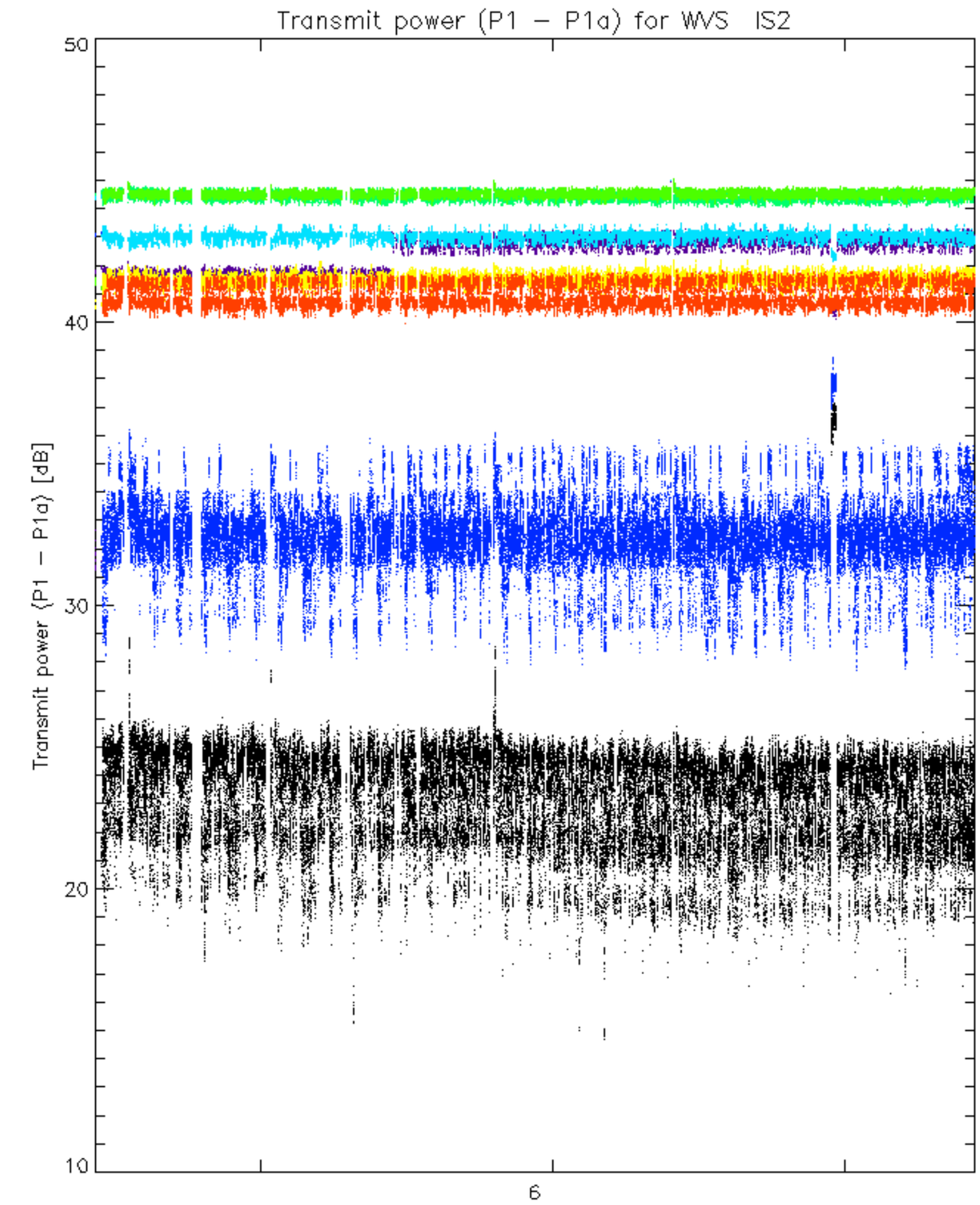
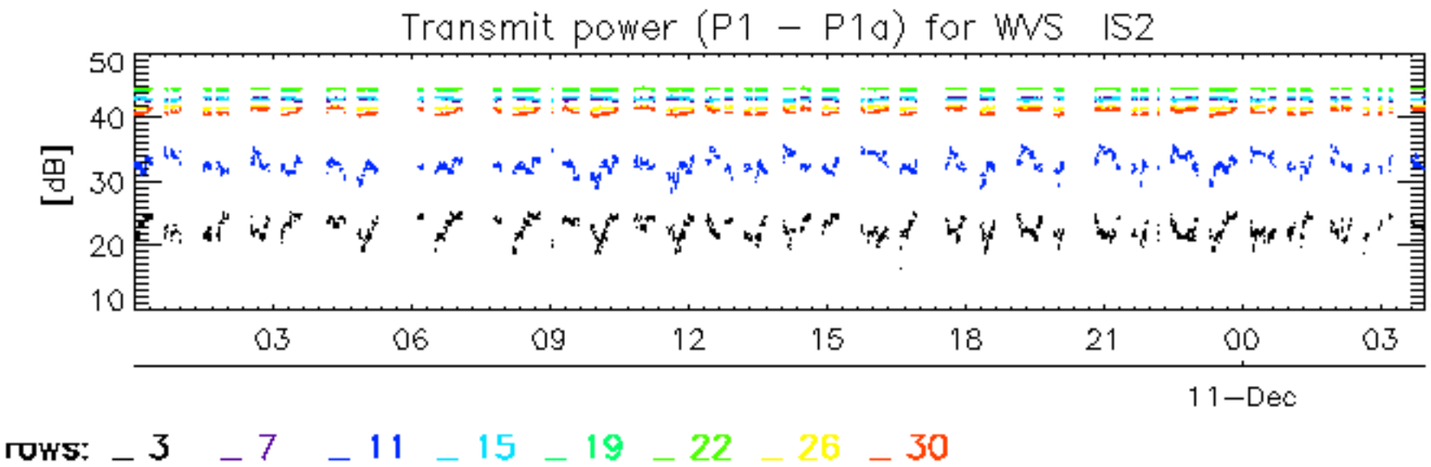

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
6
rows: 3 7 11 15 19 22 26 30


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

No unavailabilities during the reported period.