PRELIMINARY REPORT OF 041212

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

last update on Sun Dec 12 10:57:17 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 2004-12-11 00:00:00 to 2004-12-12 10:57:17

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	27	45	2	2	4
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	27	45	2	2	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	27	45	2	2	4
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	27	45	2	2	4

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	49	52	4	5	4
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	49	52	4	5	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	49	52	4	5	4
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	49	52	4	5	4

2.3 - Browse Visual Inspection

2.4 - Data Analysis

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

3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctionning modules and to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

Polarisation	Start Time
V	20041211 204906
H	20041210 143819

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	-3.469539	0.029739	-0.032009
7	P1	-3.175606	0.039378	0.294462
11	P1	-4.626664	0.045673	-0.076671
15	P1	-5.660206	0.033619	-0.041447
19	P1	-3.631754	0.005286	-0.053627
22	P1	-4.580421	0.016131	0.004124
26	P1	-4.920909	0.016578	-0.033422
30	P1	-7.093897	0.014416	-0.042110
3	P1	-15.970069	0.117893	0.053609
7	P1	-15.110882	0.571835	-1.762148
11	P1	-20.687834	0.487053	-0.001527
15	P1	-11.621130	0.089757	0.089710
19	P1	-14.118791	0.029506	-0.094808
22	P1	-16.161674	0.441347	0.106426
26	P1	-17.798731	0.260144	-0.006667
30	P1	-17.918461	0.300850	0.048993

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.369370	0.086316	-0.002479
7	P2	-22.610884	0.143034	0.011502
11	P2	-14.988683	0.136197	0.134281
15	P2	-7.171449	0.109618	-0.014313
19	P2	-9.721890	0.138129	0.018728
22	P2	-17.210978	0.100068	0.037014
26	P2	-16.521465	0.107247	-0.013613

30	P2	-19.009712	0.082998	0.101630

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.208489	0.007006	-0.018578
7	P3	-8.208496	0.007006	-0.018557
11	P3	-8.208514	0.007007	-0.018461
15	P3	-8.208516	0.007007	-0.018453
19	P3	-8.208520	0.007007	-0.018449
22	P3	-8.208521	0.007007	-0.018453
26	P3	-8.208522	0.007007	-0.018454
30	P3	-8.208373	0.007004	-0.018449

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	-2.837362	0.111050	-0.131375
7	P1	-2.981098	0.064775	-0.087912
11	P1	-3.928489	0.049349	-0.088711
15	P1	-3.508694	0.078404	-0.104716
19	P1	-3.598945	0.012809	-0.030968
22	P1	-5.601064	0.068144	-0.020555
26	P1	-6.490307	0.022904	-0.053584
30	P1	-6.287178	0.042483	-0.068612
3	P1	-10.620193	0.058433	-0.078310
7	P1	-10.107751	0.153659	0.011111
11	P1	-12.381015	0.200565	0.026798

15	P1	-11.720316	0.104879	0.048579
19	P1	-15.630402	0.050623	-0.035868
22	P1	-24.129713	2.236354	-0.218928
26	P1	-15.140033	0.416038	0.080602
30	P1	-20.223270	1.004610	0.137293

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.053762	0.038733	-0.008454
7	P2	-22.661766	0.028777	0.044955
11	P2	-10.782939	0.034412	0.153516
15	P2	-5.065942	0.025961	-0.030851
19	P2	-6.972929	0.034144	-0.030871
22	P2	-7.334839	0.028090	0.018561
26	P2	-23.960035	0.019366	-0.041577
30	P2	-22.070452	0.018727	0.063420

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044164	0.003123	-0.008225
7	P3	-8.044130	0.003131	-0.008350
11	P3	-8.044220	0.003122	-0.008057
15	P3	-8.044063	0.003133	-0.008238
19	P3	-8.044252	0.003131	-0.008284
22	P3	-8.044168	0.003126	-0.008018
26	P3	-8.044224	0.003121	-0.008214
30	P3	-8.044134	0.003125	-0.008177

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	0.000441012
	stdev	2.41198e-07
MEAN Q	mean	0.000499049
	stdev	2.55570e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125335
	stdev	0.00100144
STDEV Q	mean	0.125571
	stdev	0.00101041

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

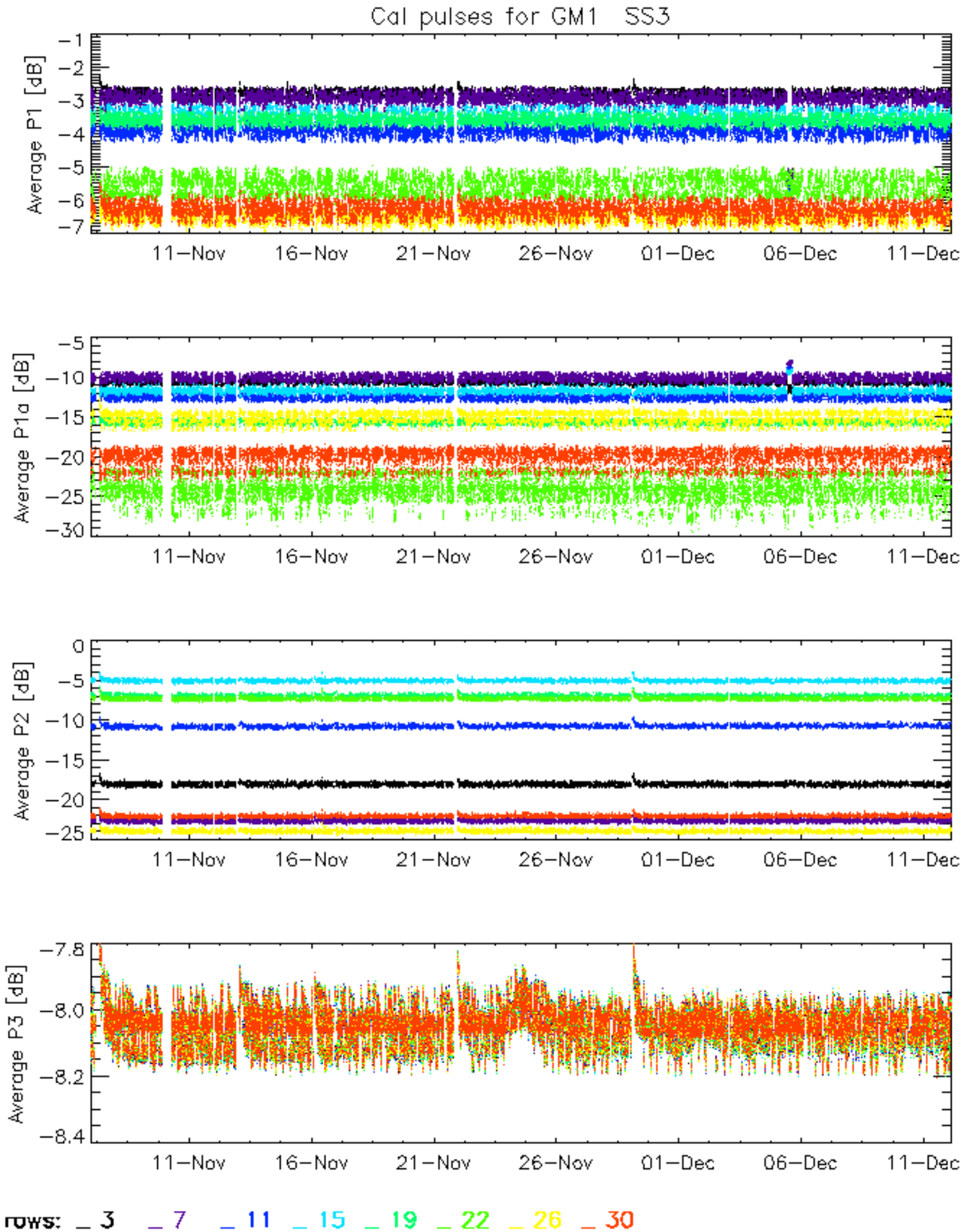
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

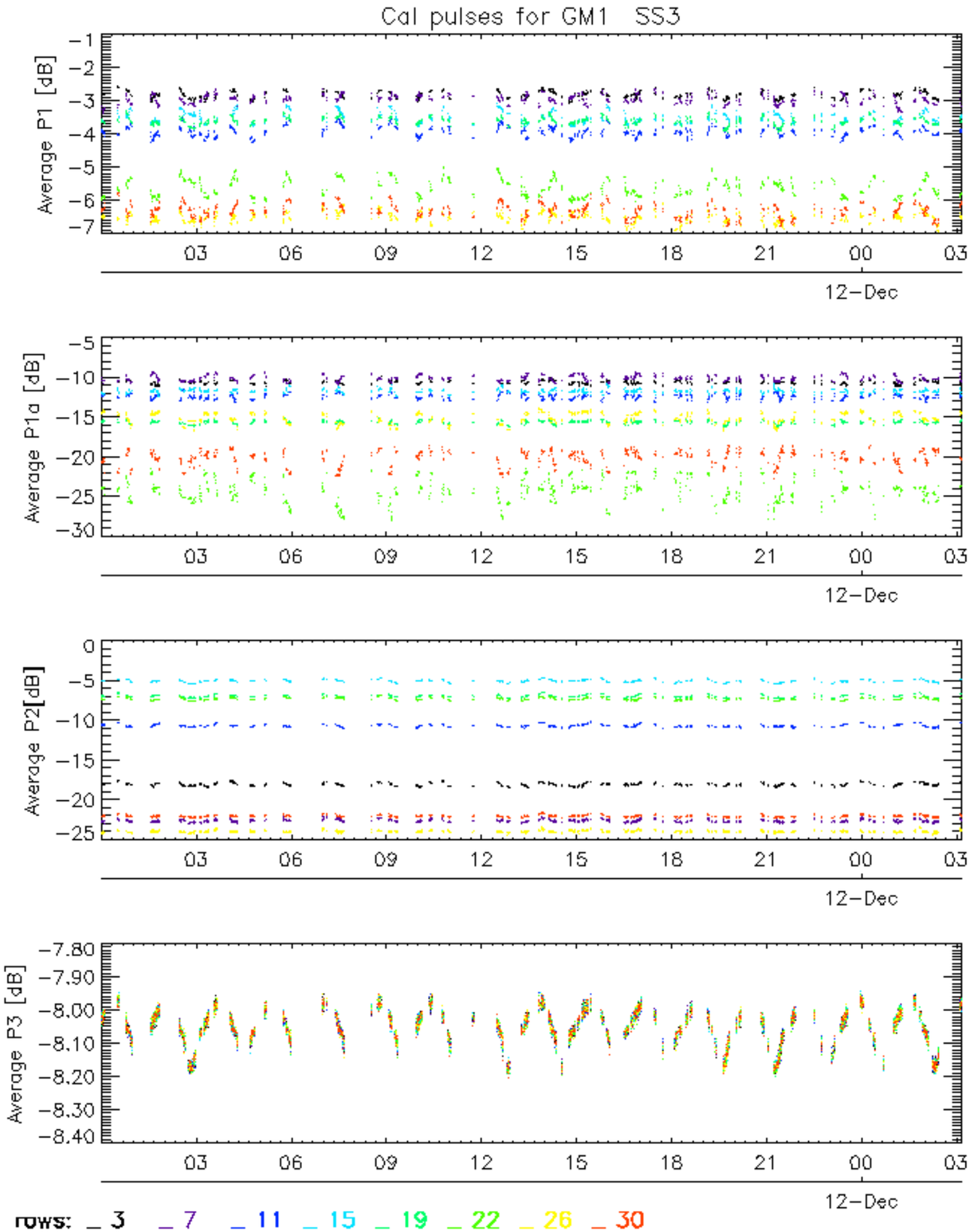
6.5 - Absolute Doppler for GM1

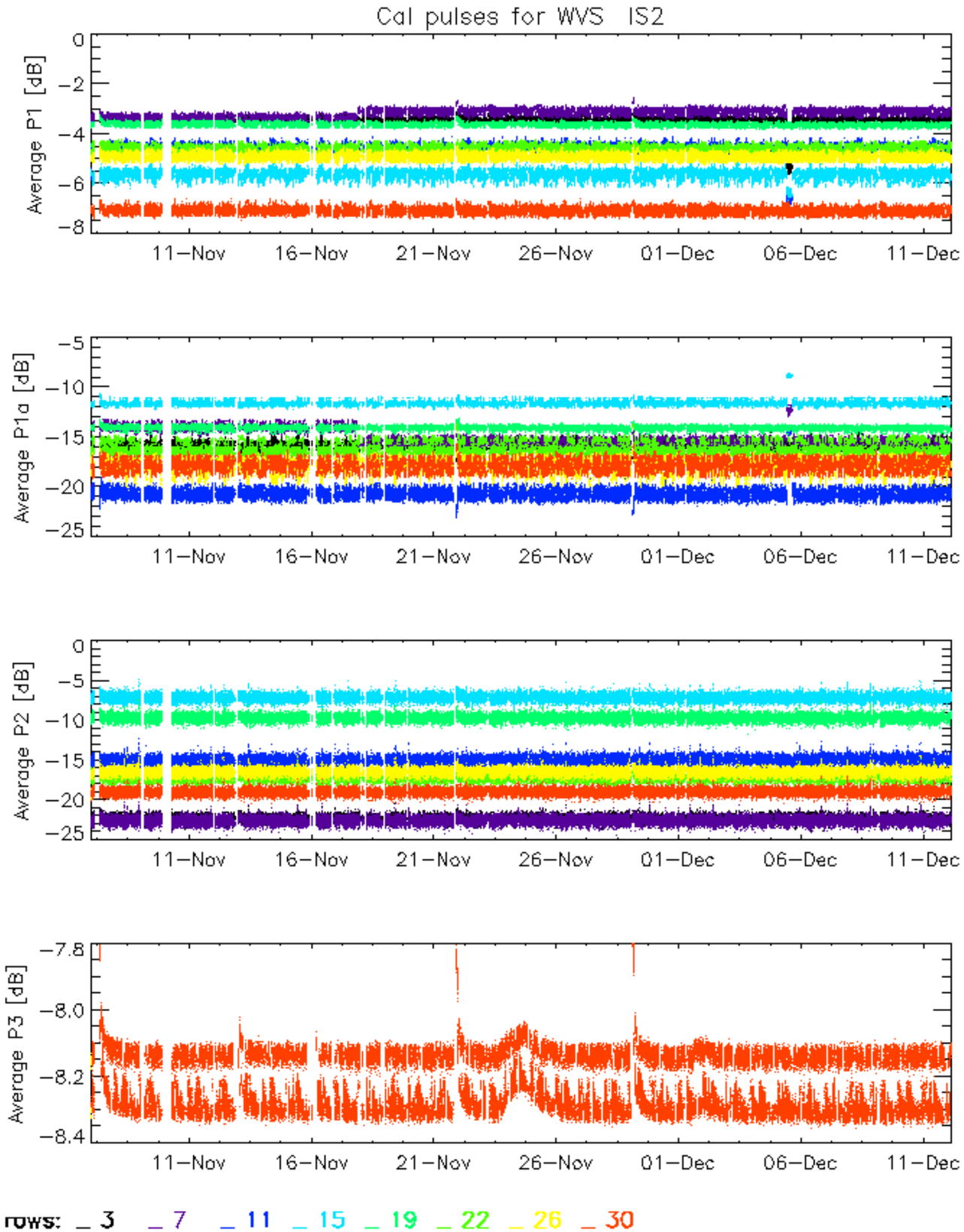
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

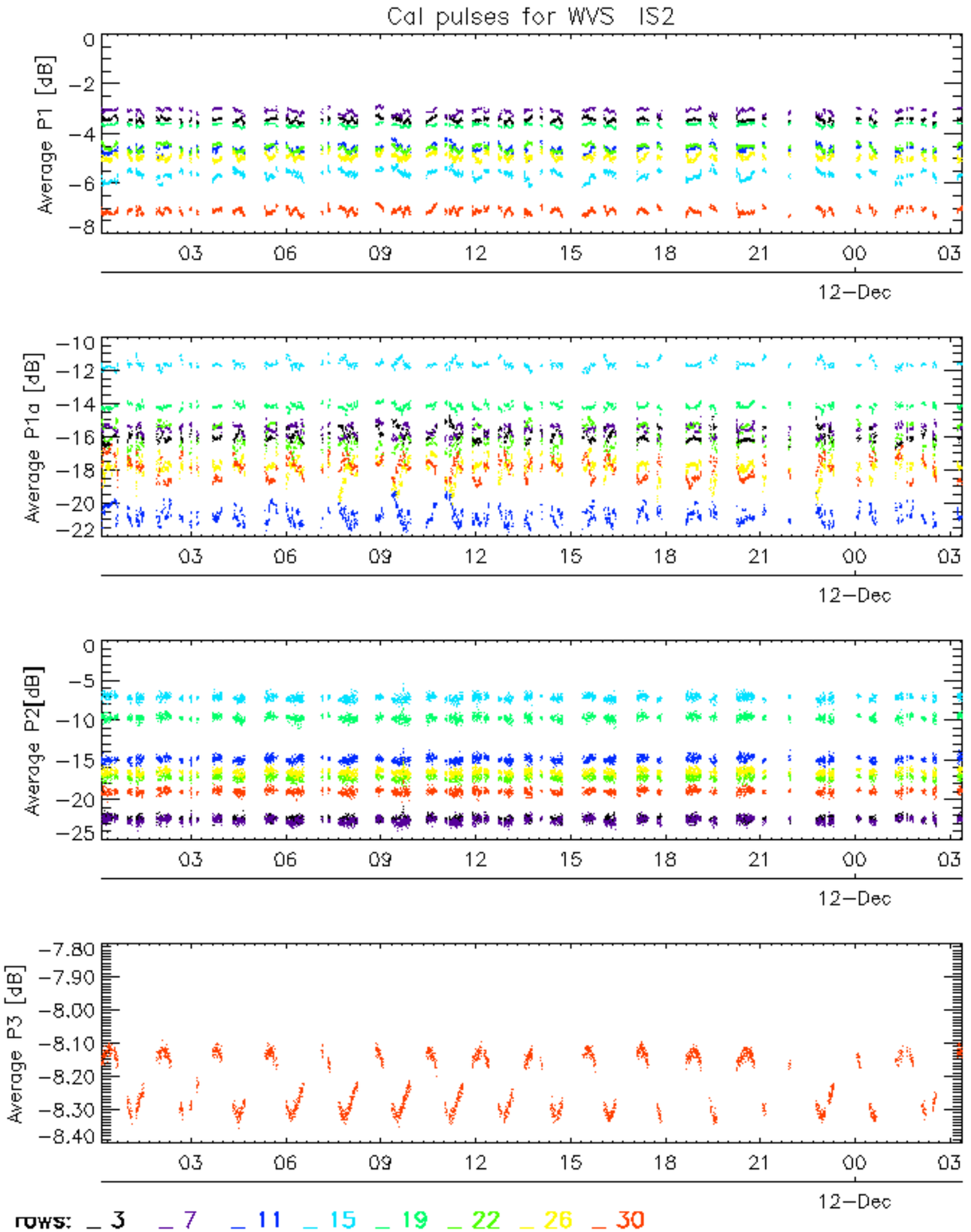
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

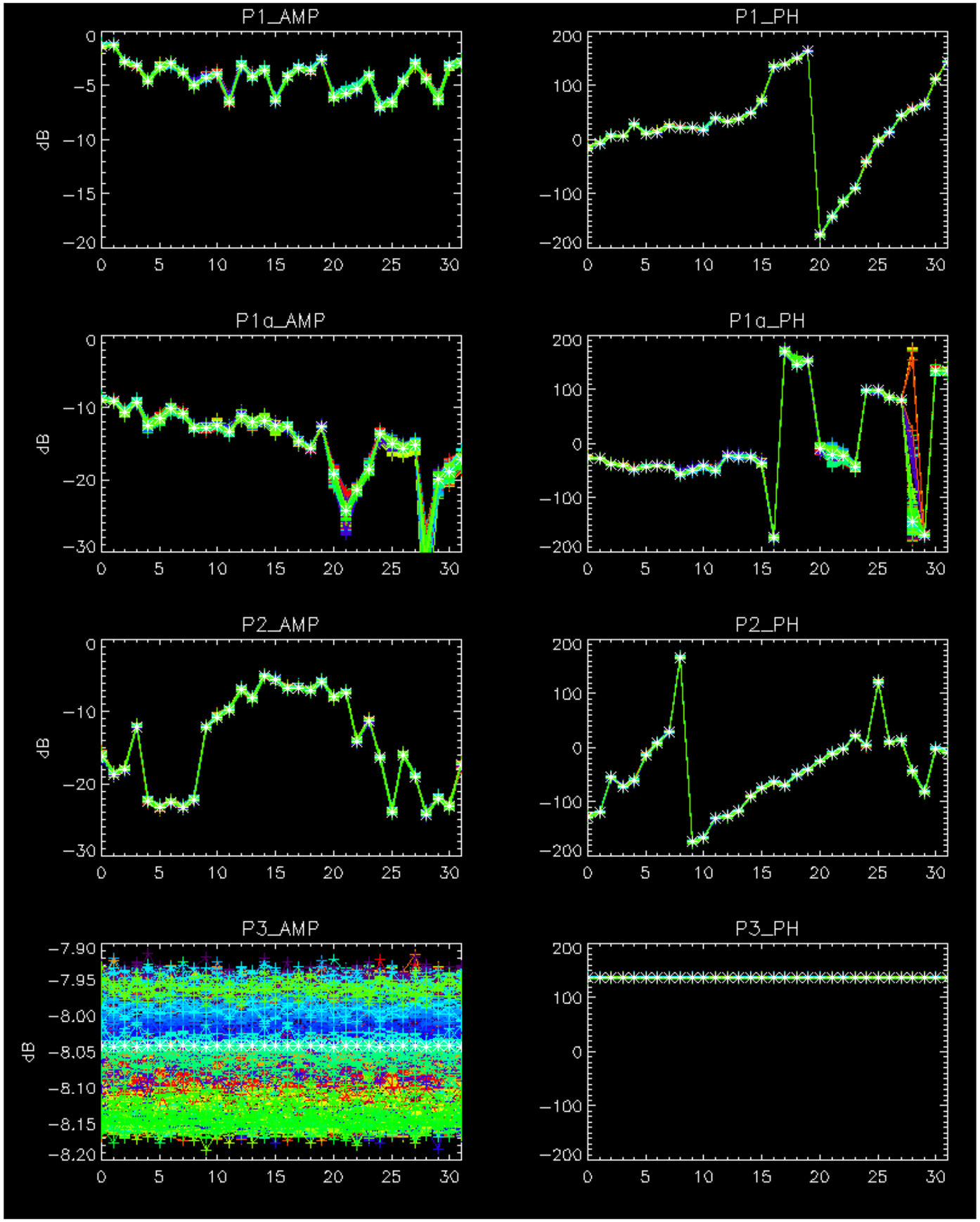

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

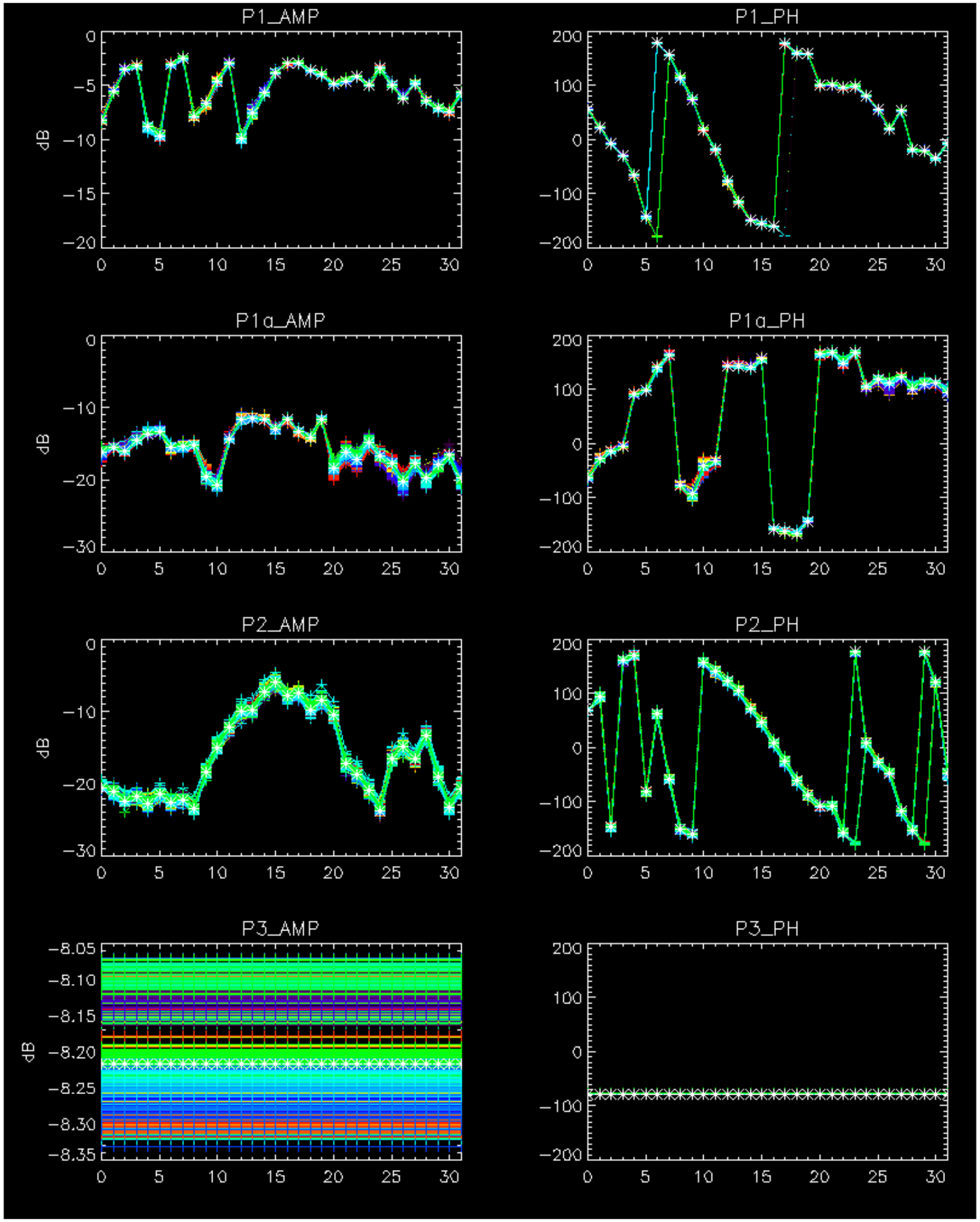

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
12−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−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
12−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

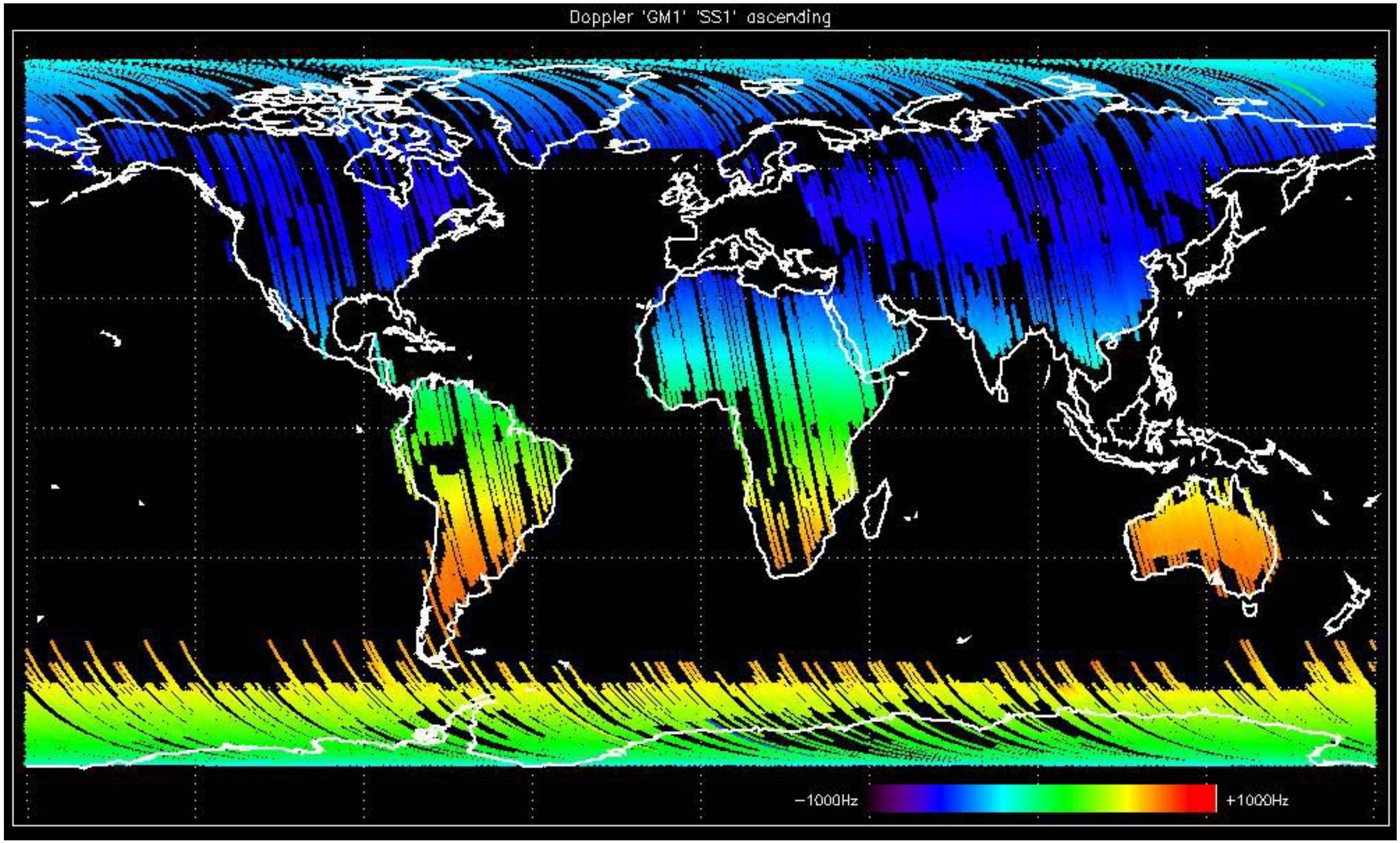
No anomalies observed.

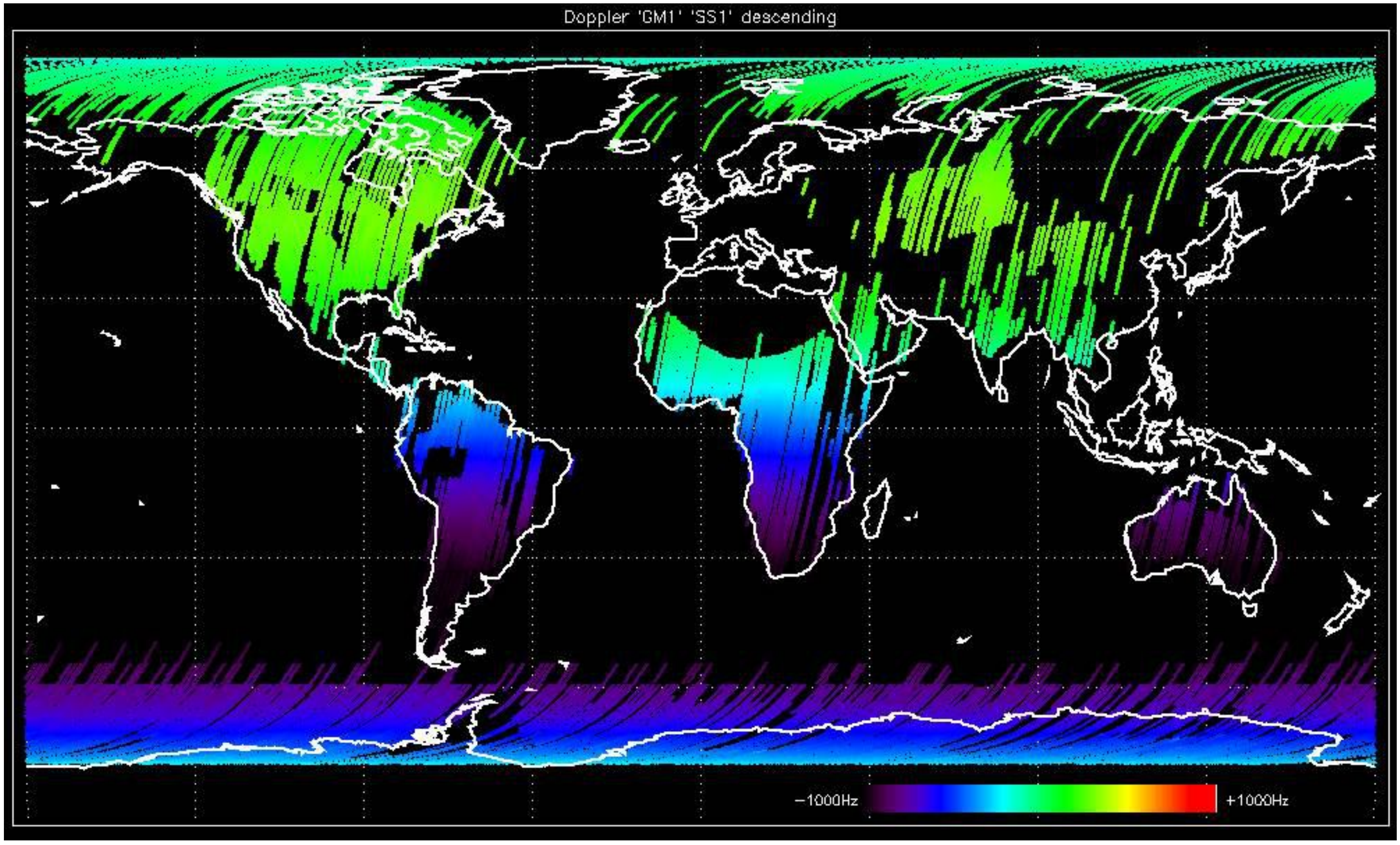

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

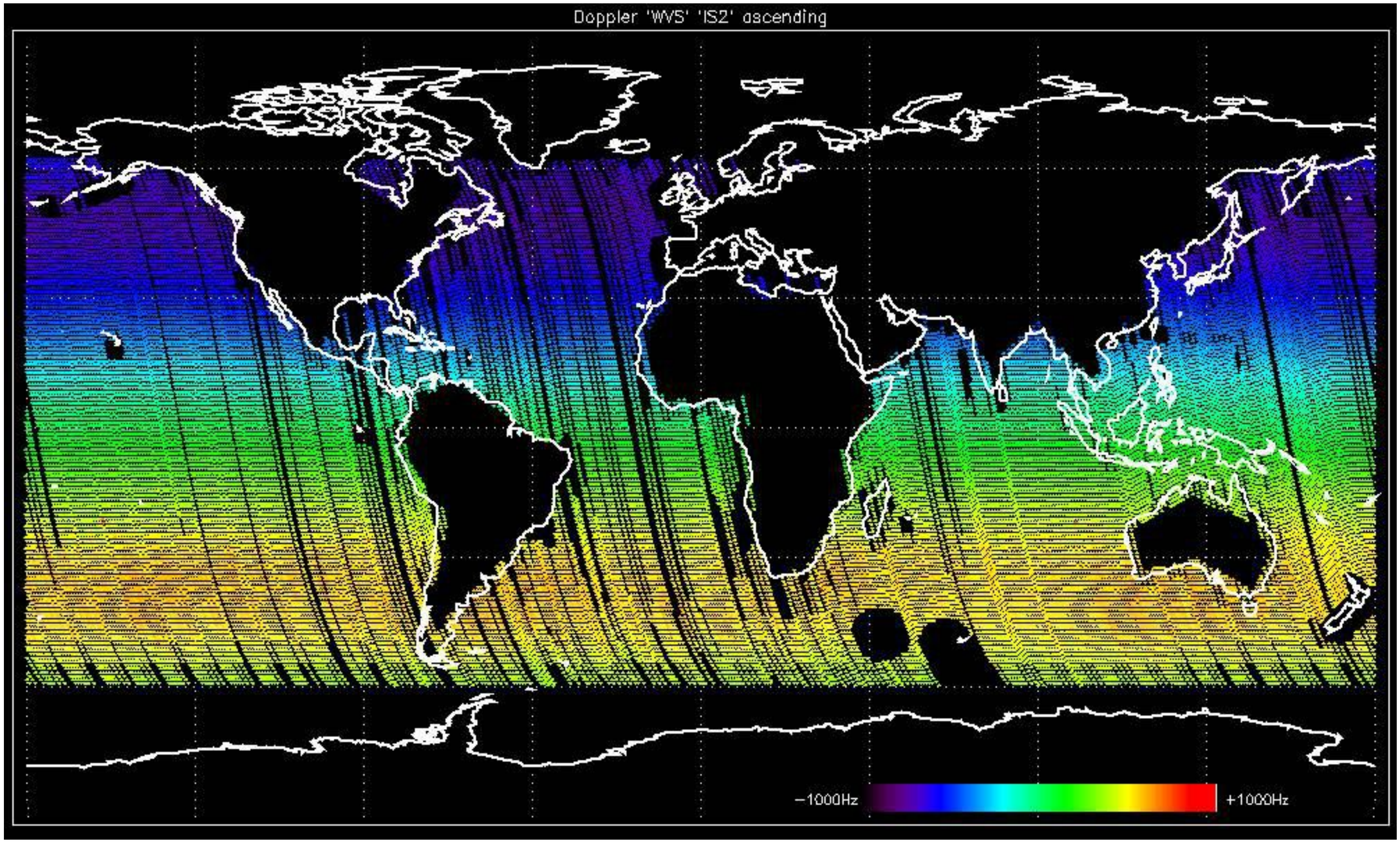

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

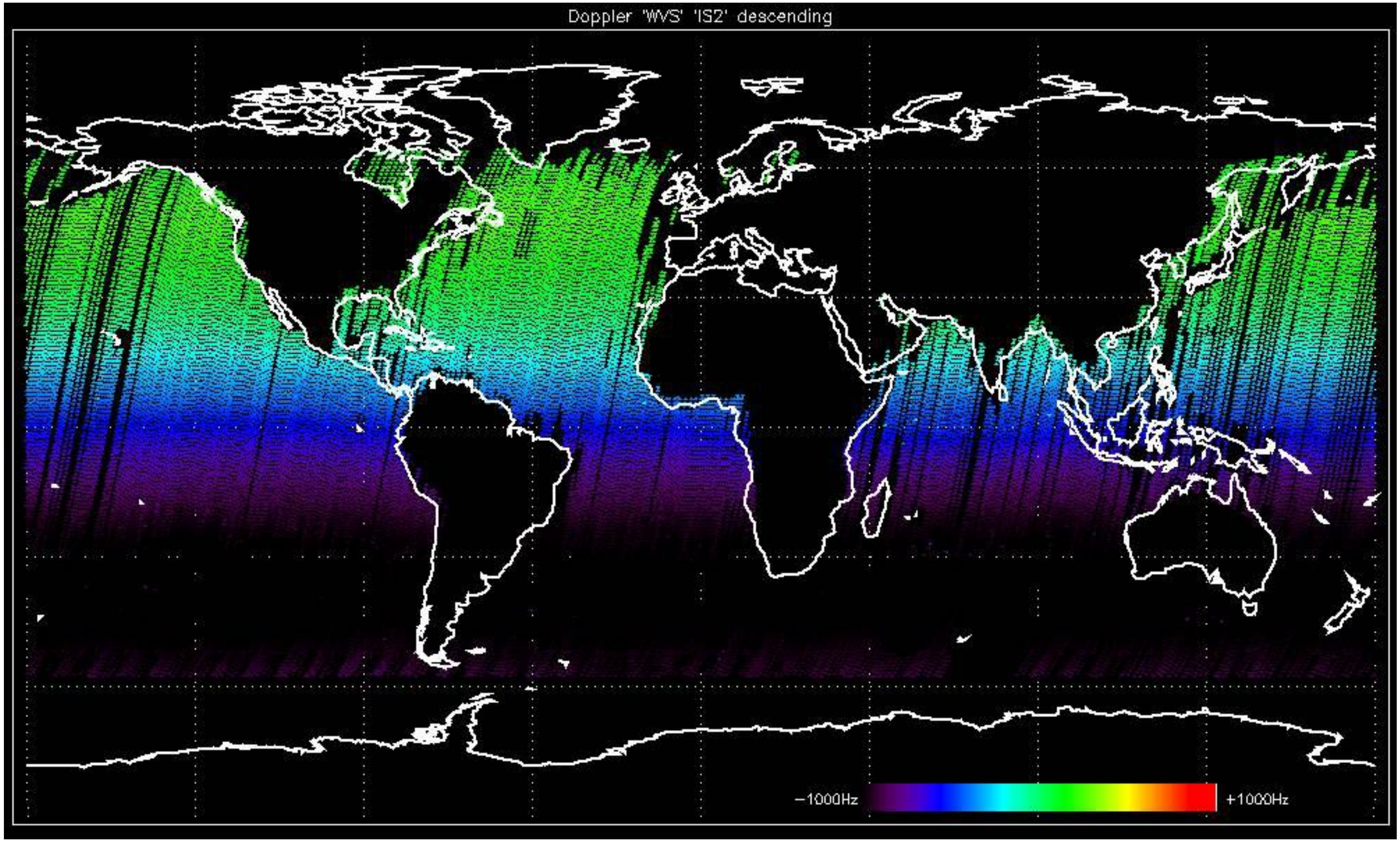
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

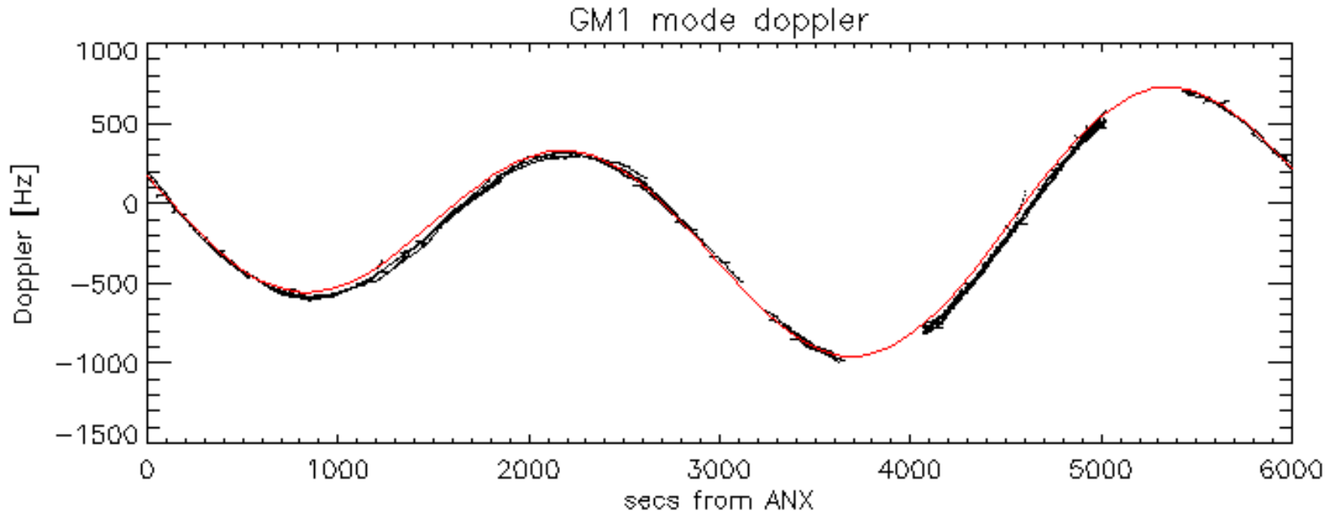
Preliminary report.The data is not yet controled

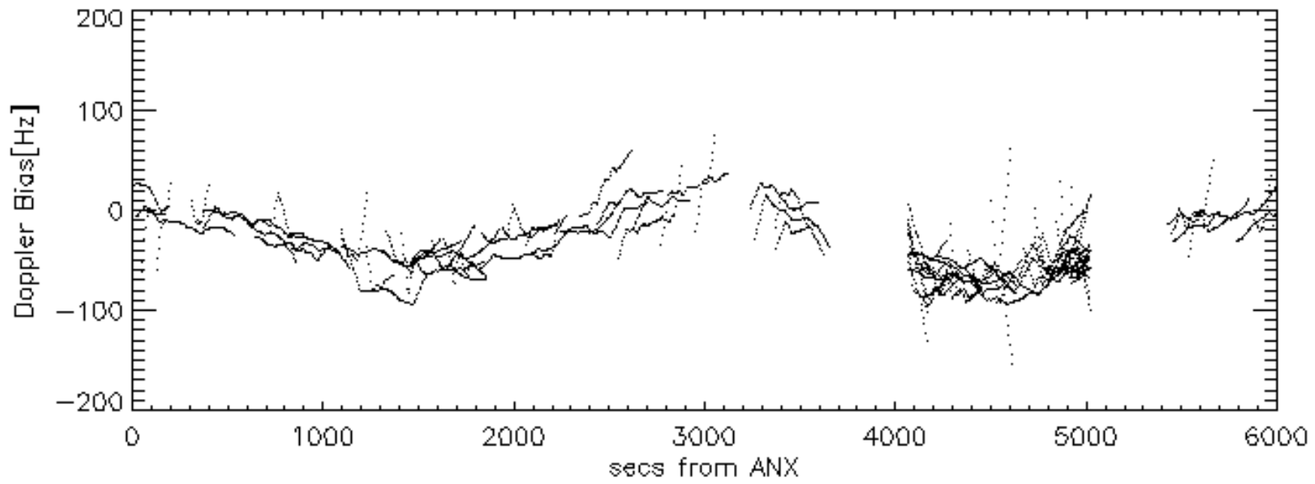

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

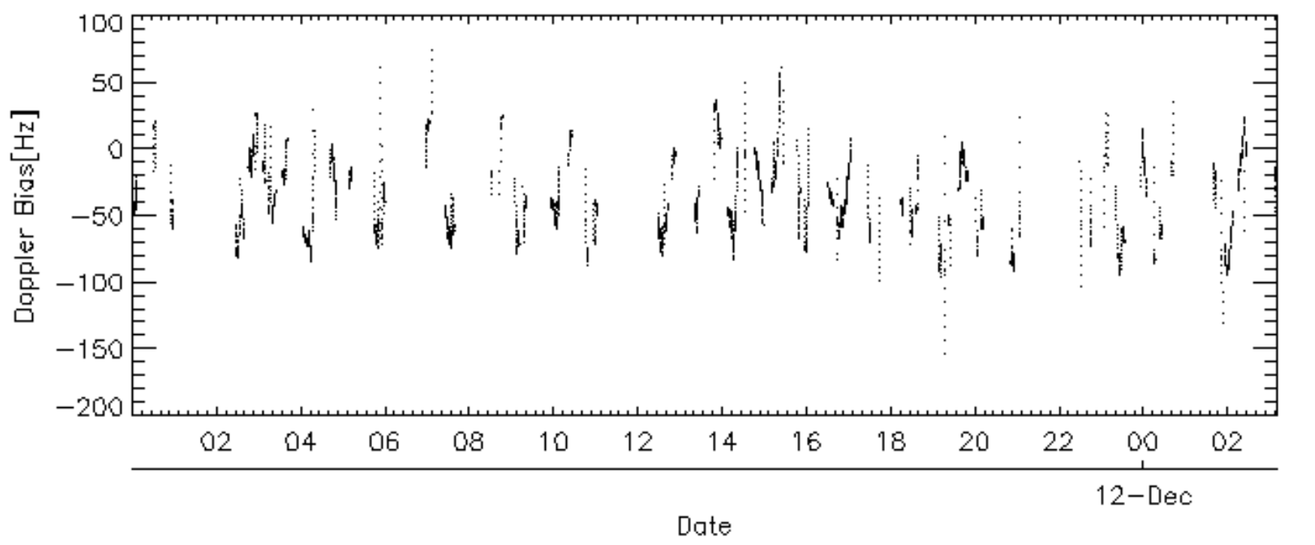

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

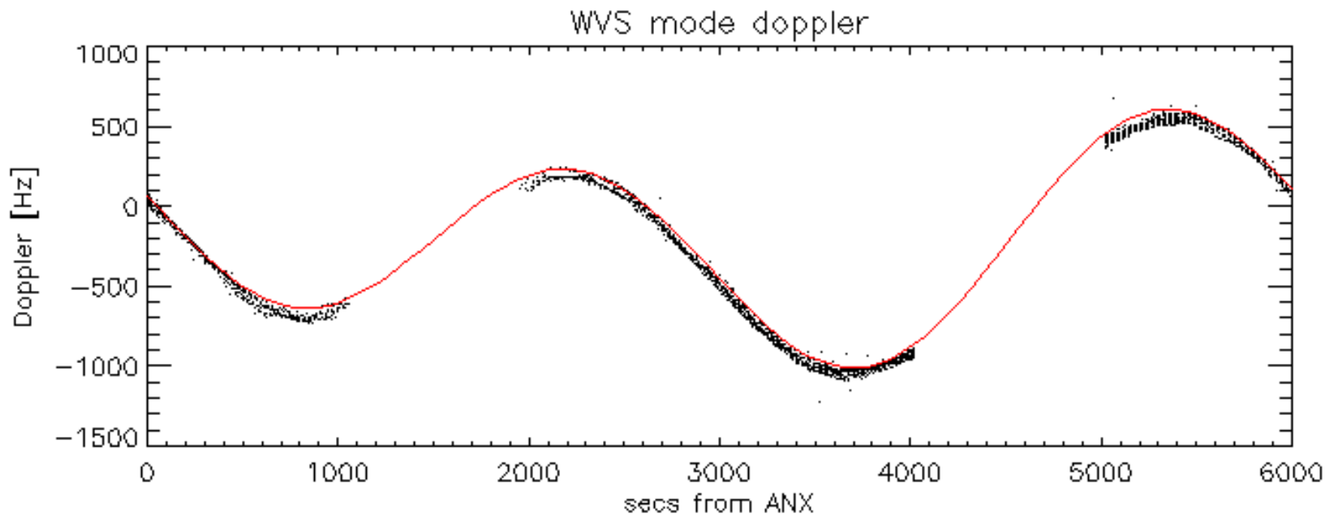

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

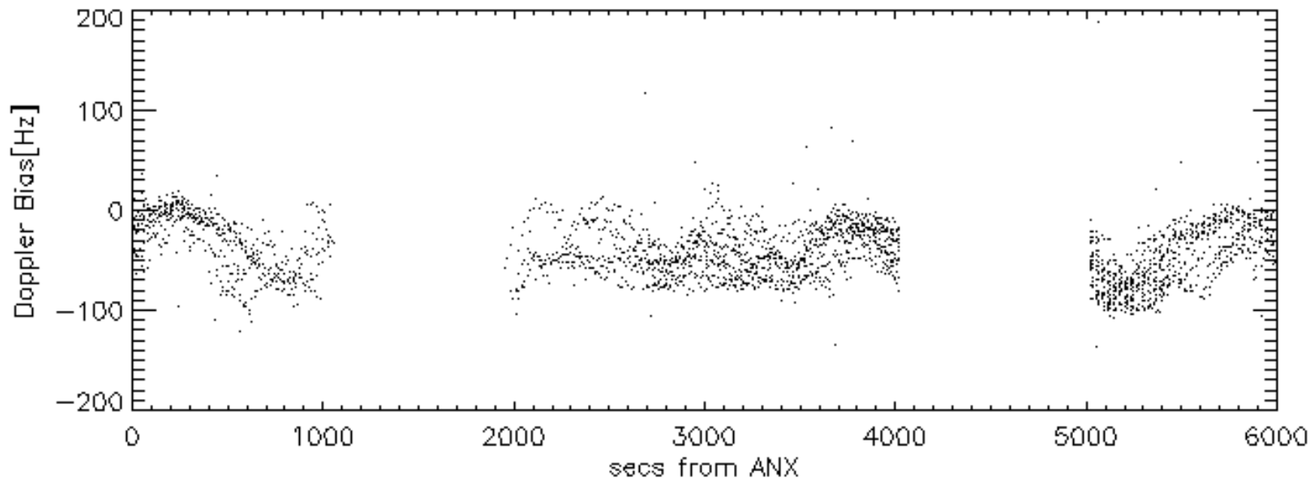

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

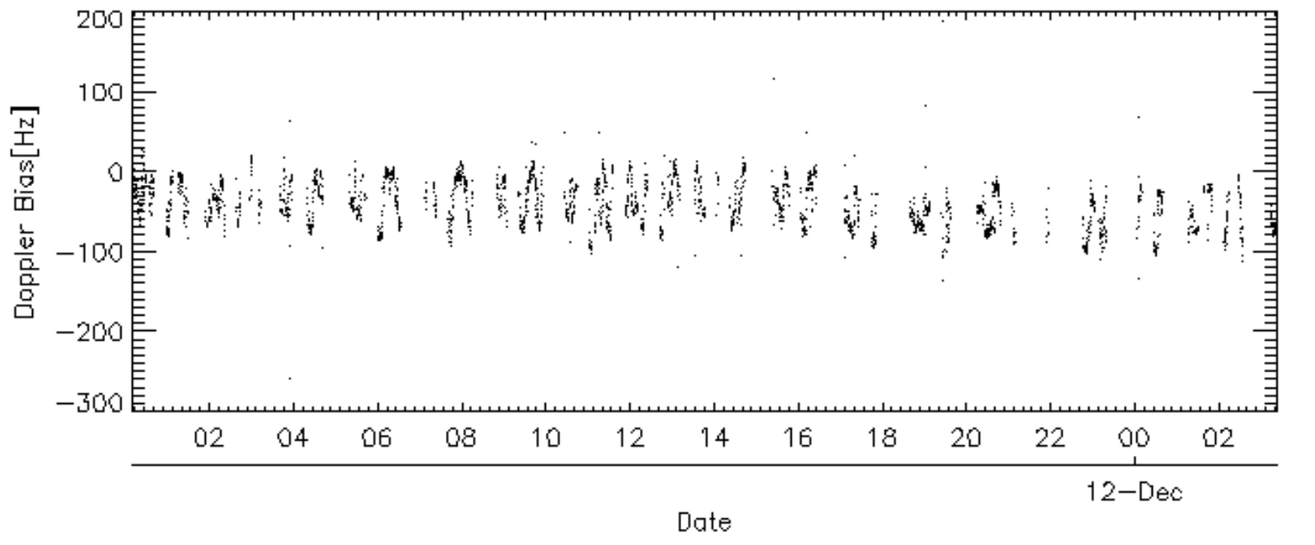

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

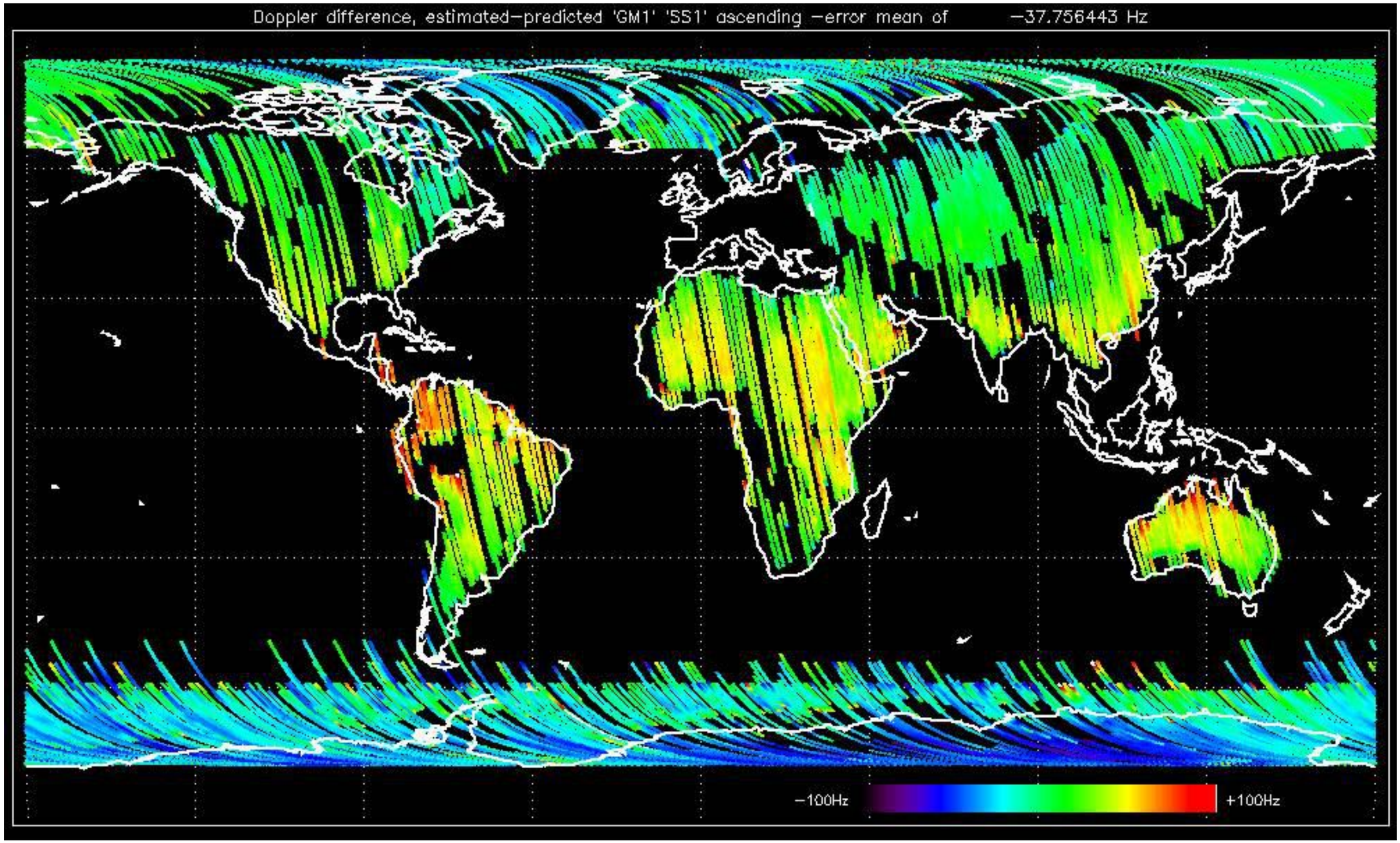

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

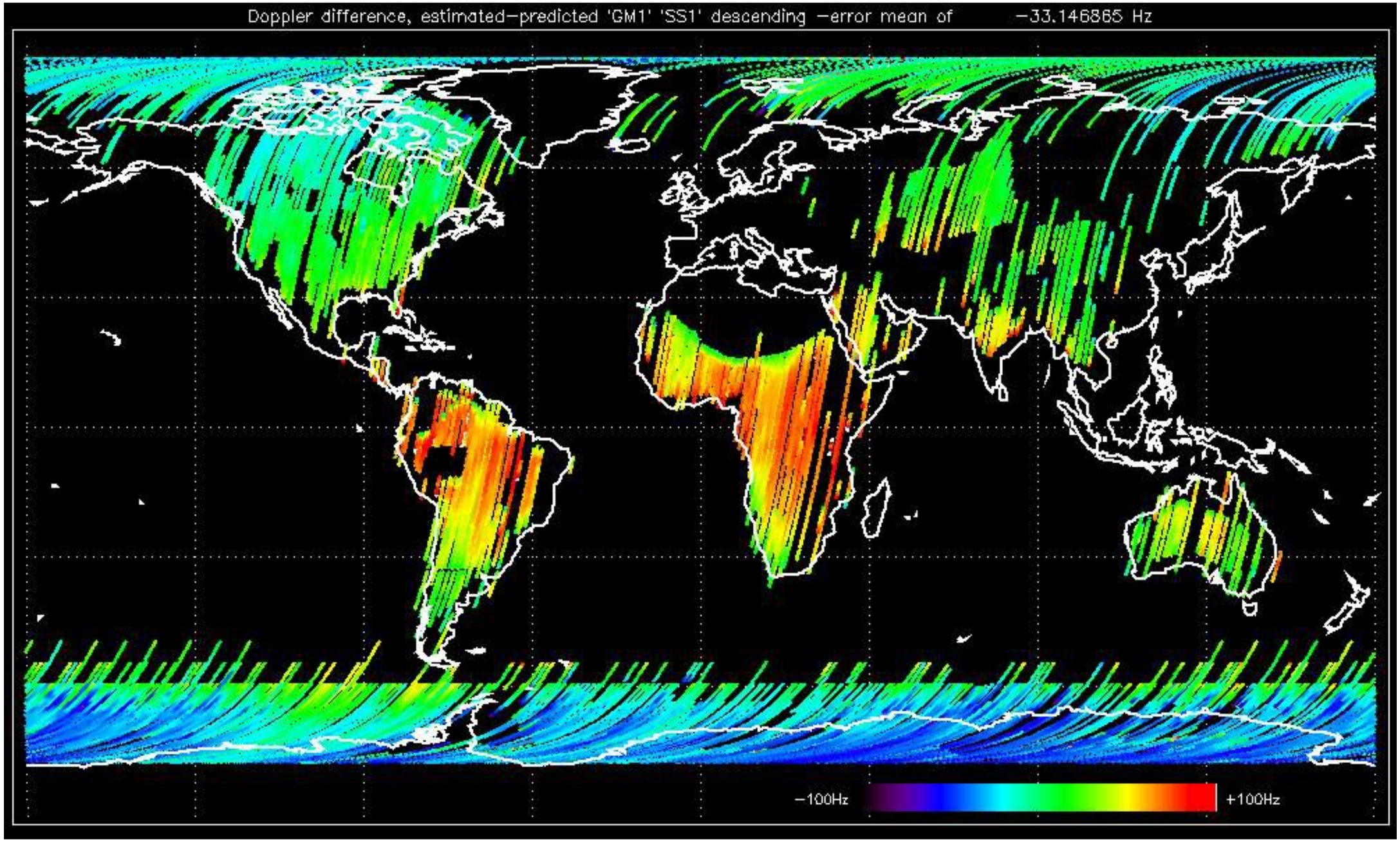

Doppler Bias[Hz]
100
50
0
−50
−100
−150
−200
02
04
06
08
10
12
14
16
18
20
22
00
02
12−Dec
Date

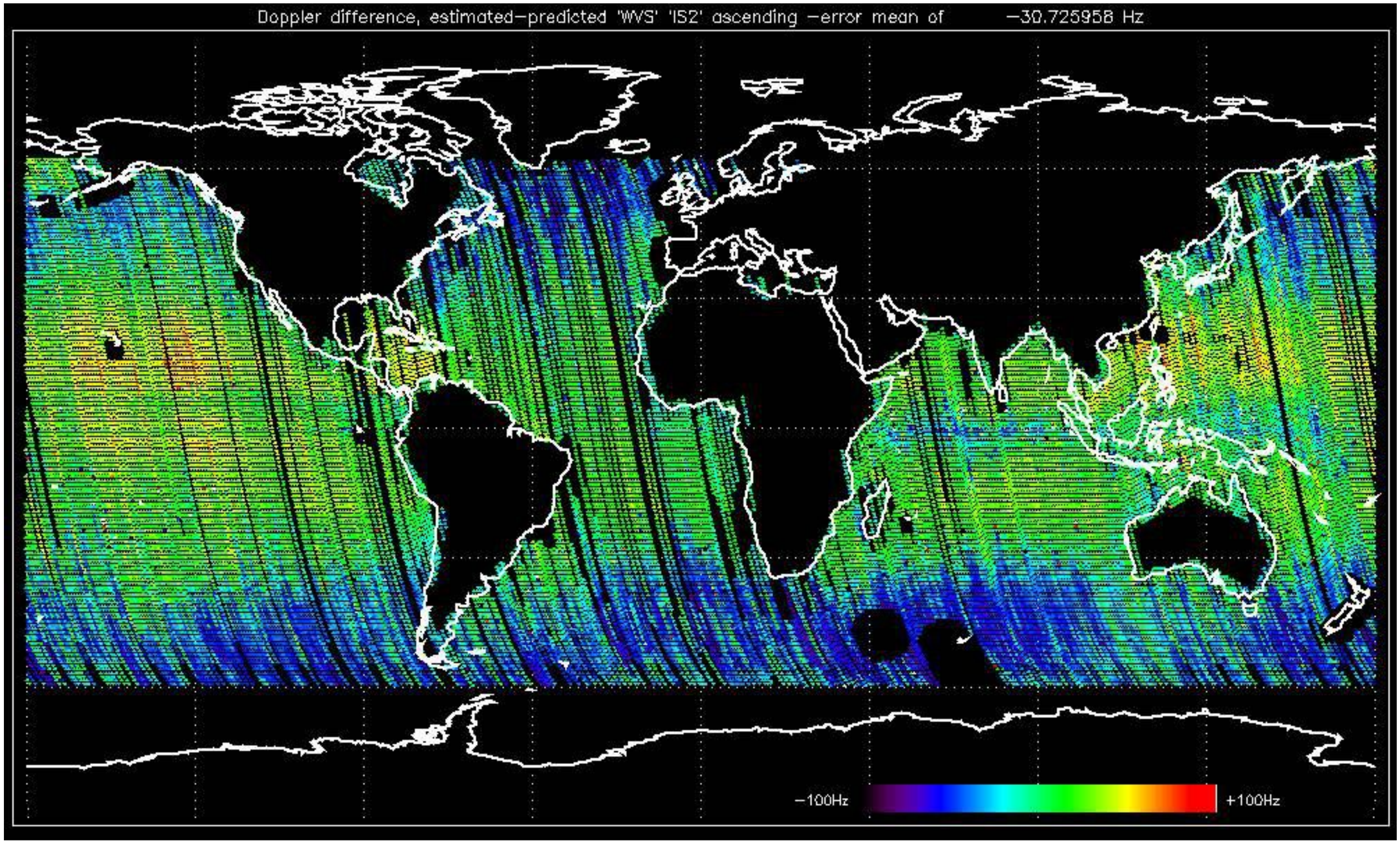

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

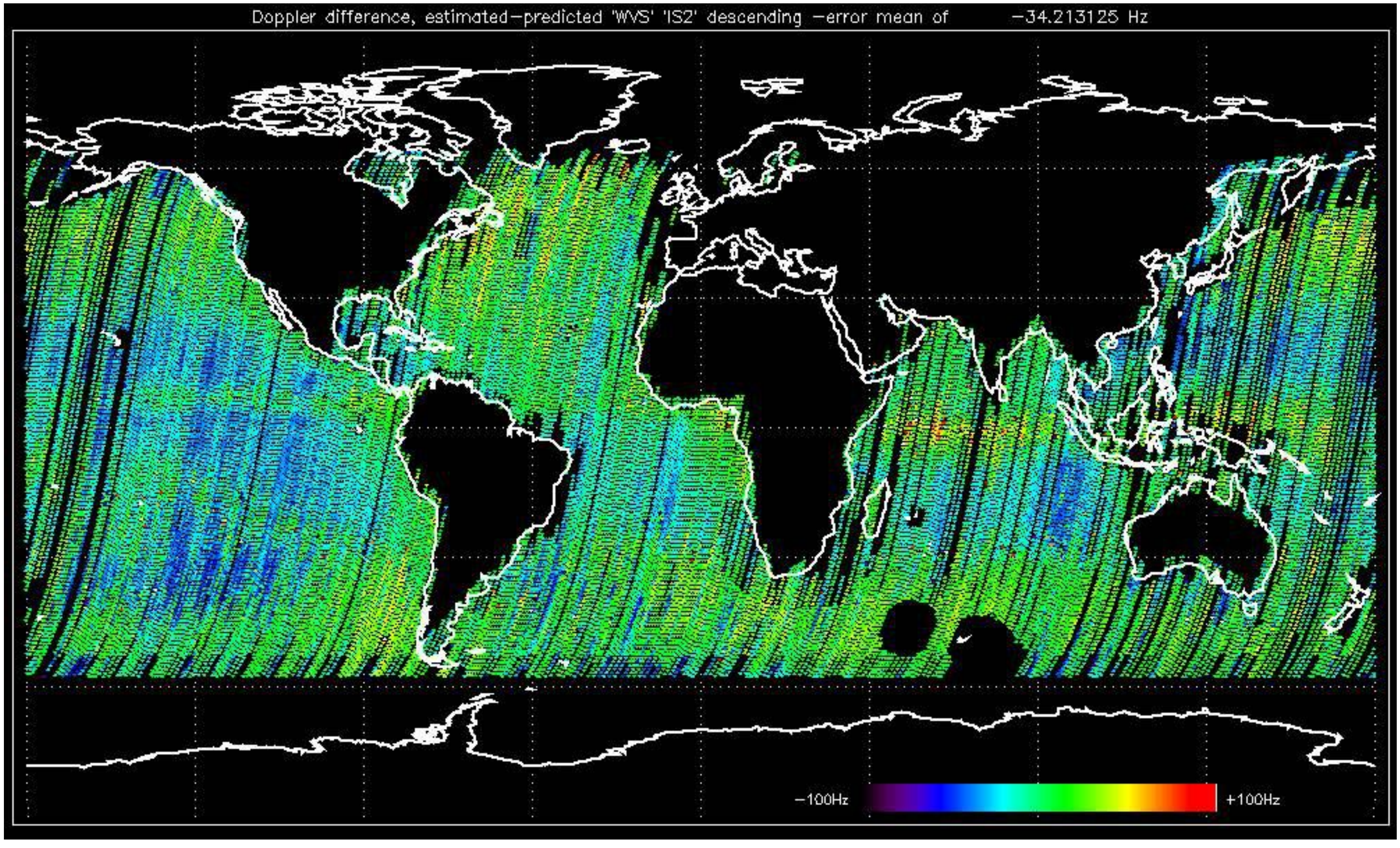

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −37.756443 Hz
−100Hz
+100Hz

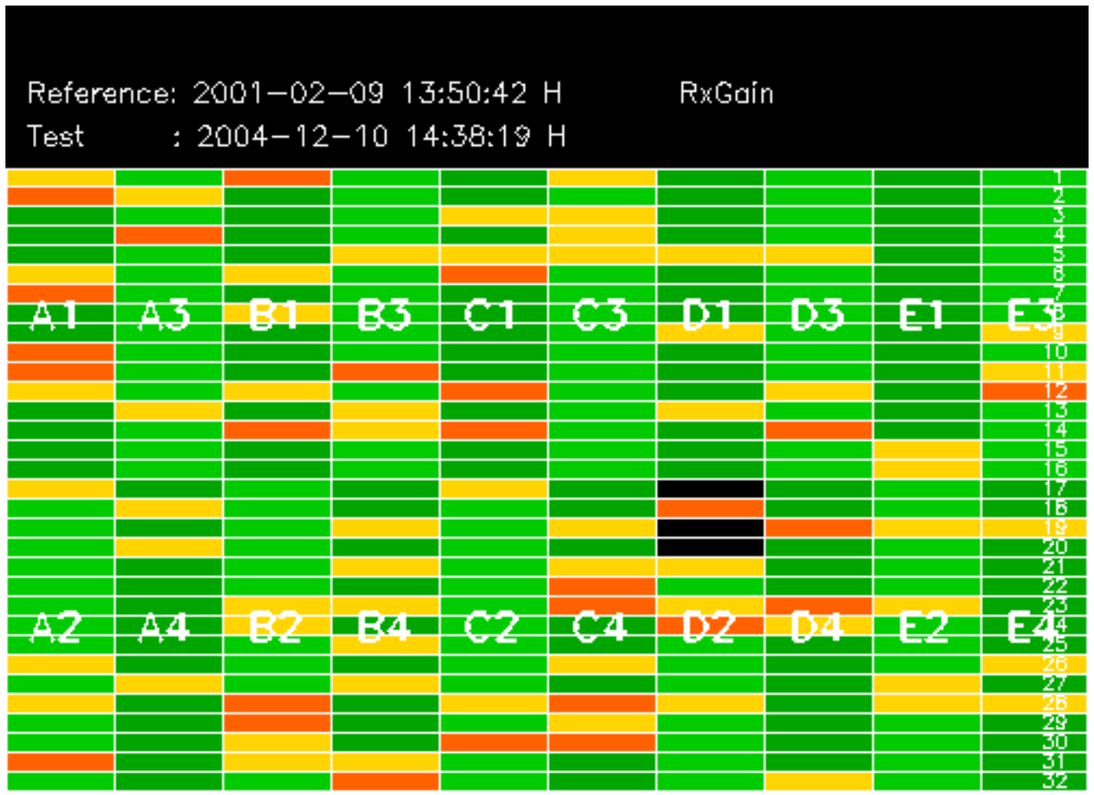

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -33.146865 Hz
-100Hz
+100Hz

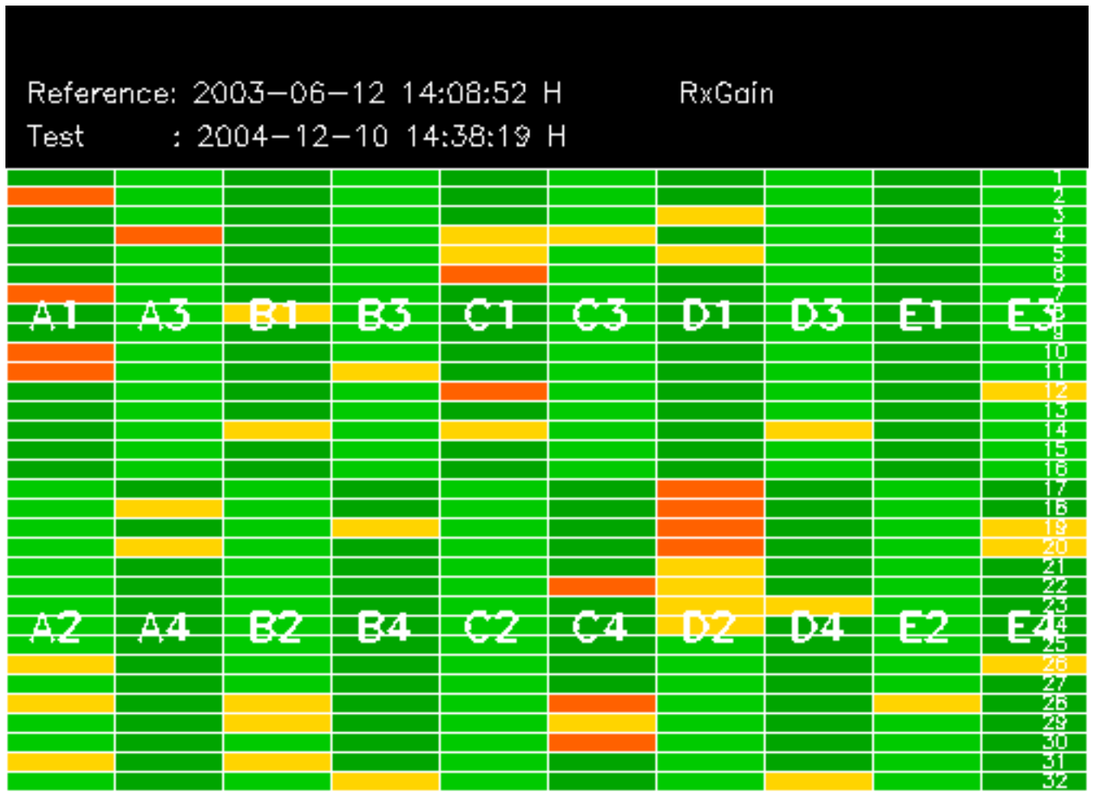

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −30.725958 Hz
−100Hz
+100Hz

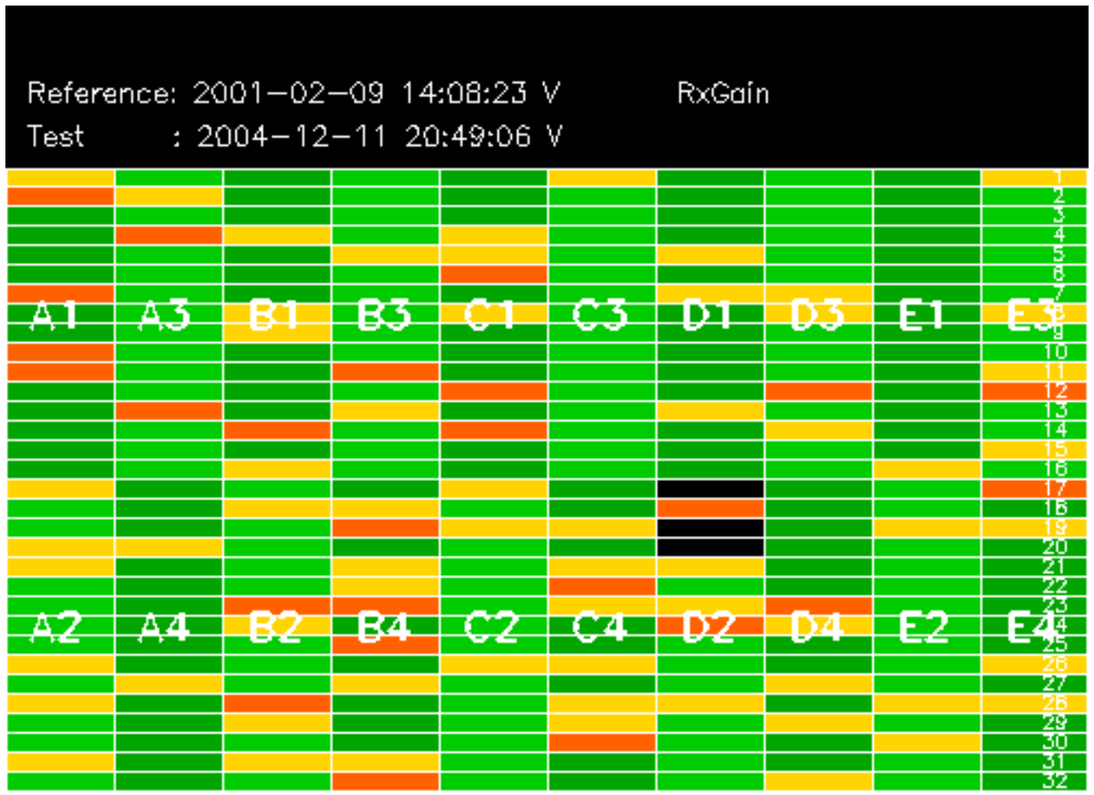

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.213125 Hz
−100Hz
+100Hz

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 : 2004-12-10 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: 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 : 2004-12-11 20:49:06 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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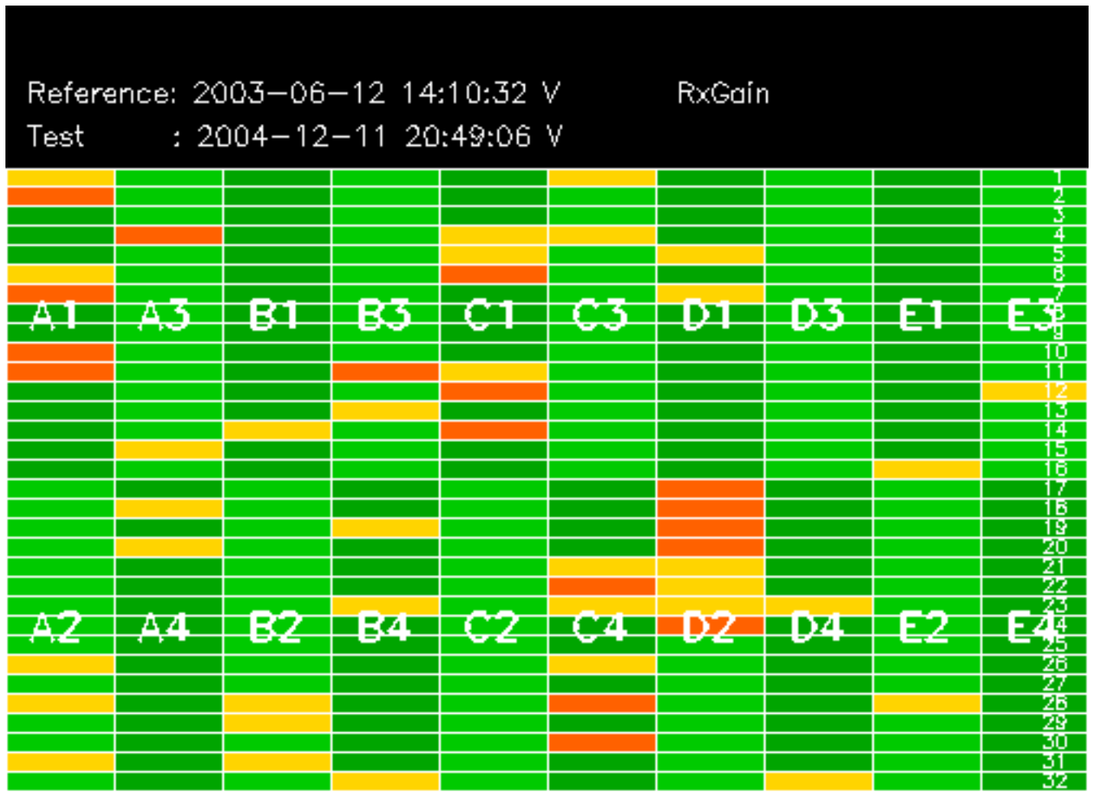
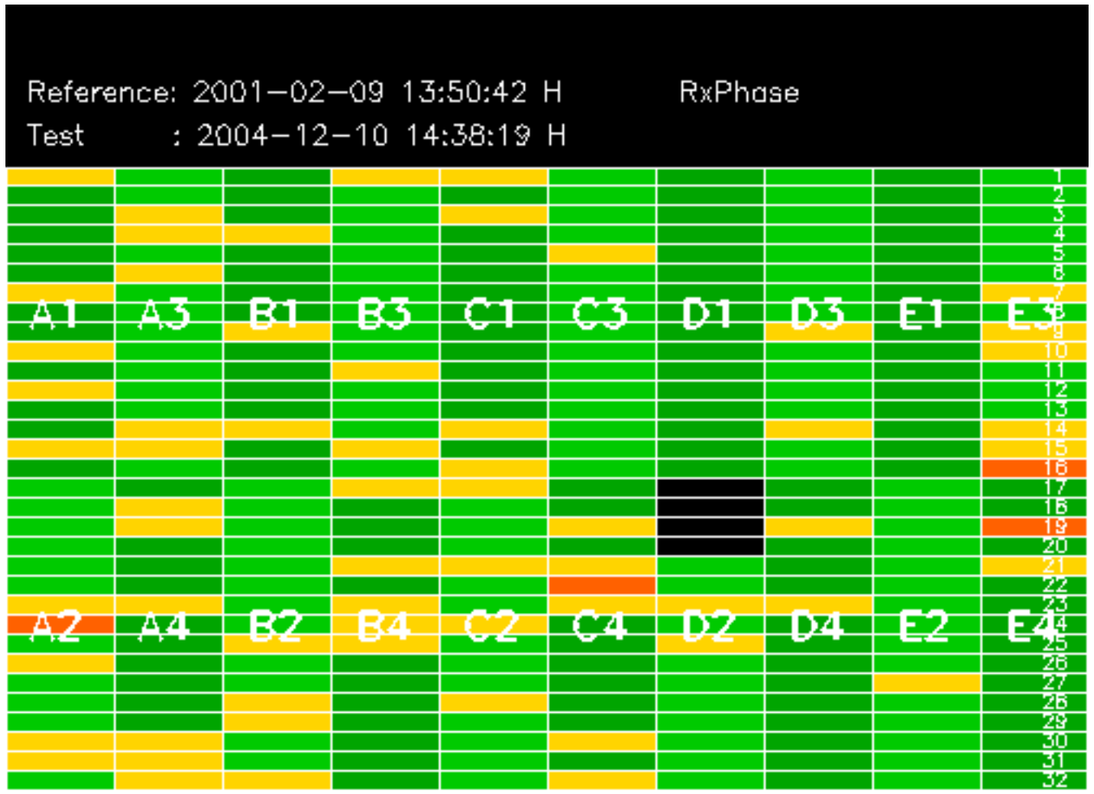

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 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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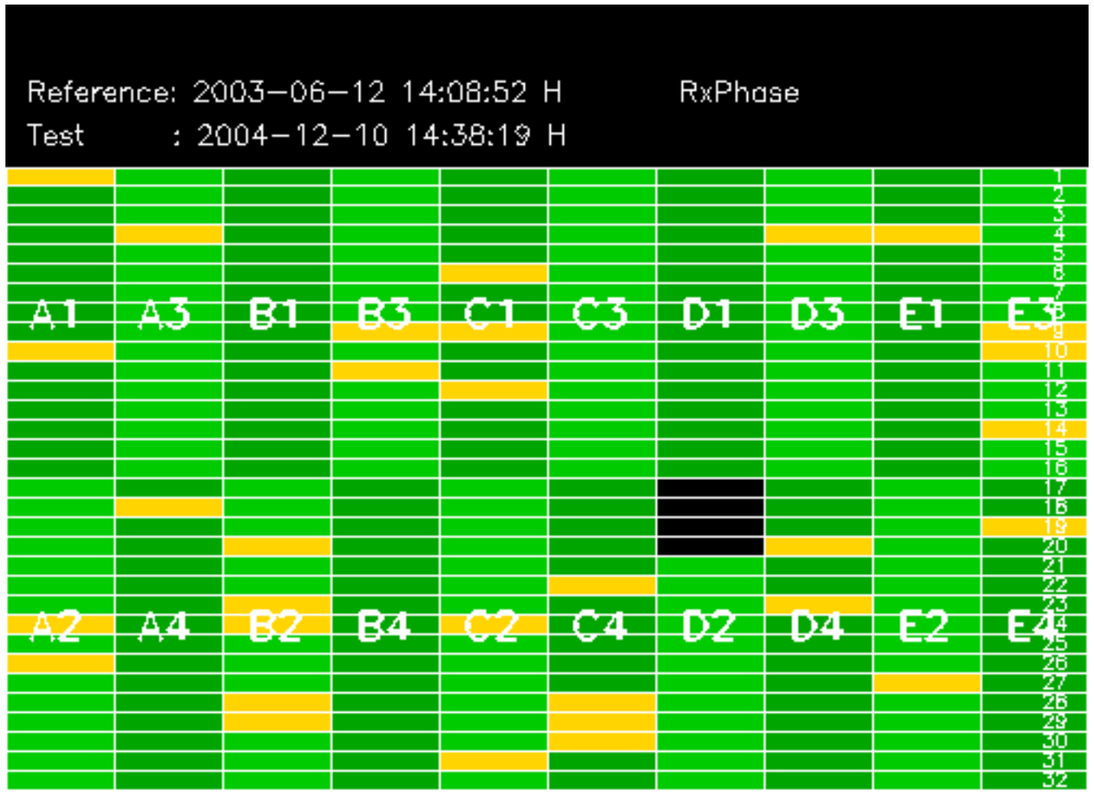
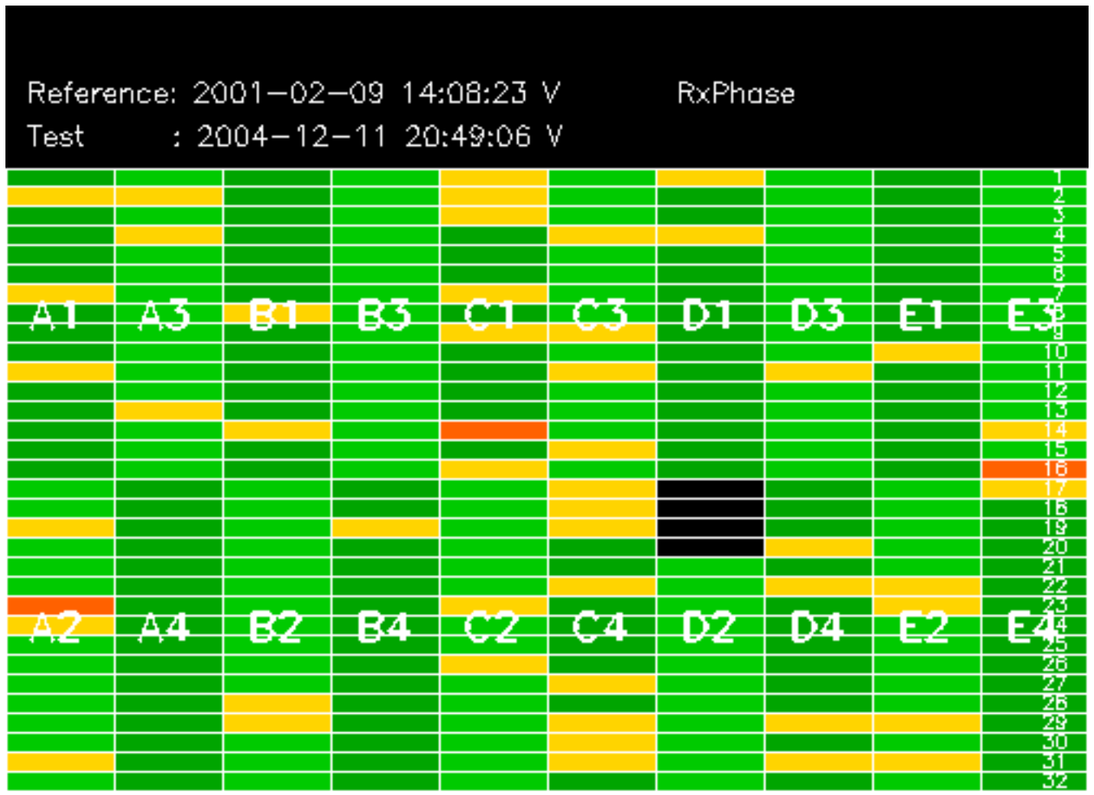

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-10 14:38:19 H
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-11 20:49:06 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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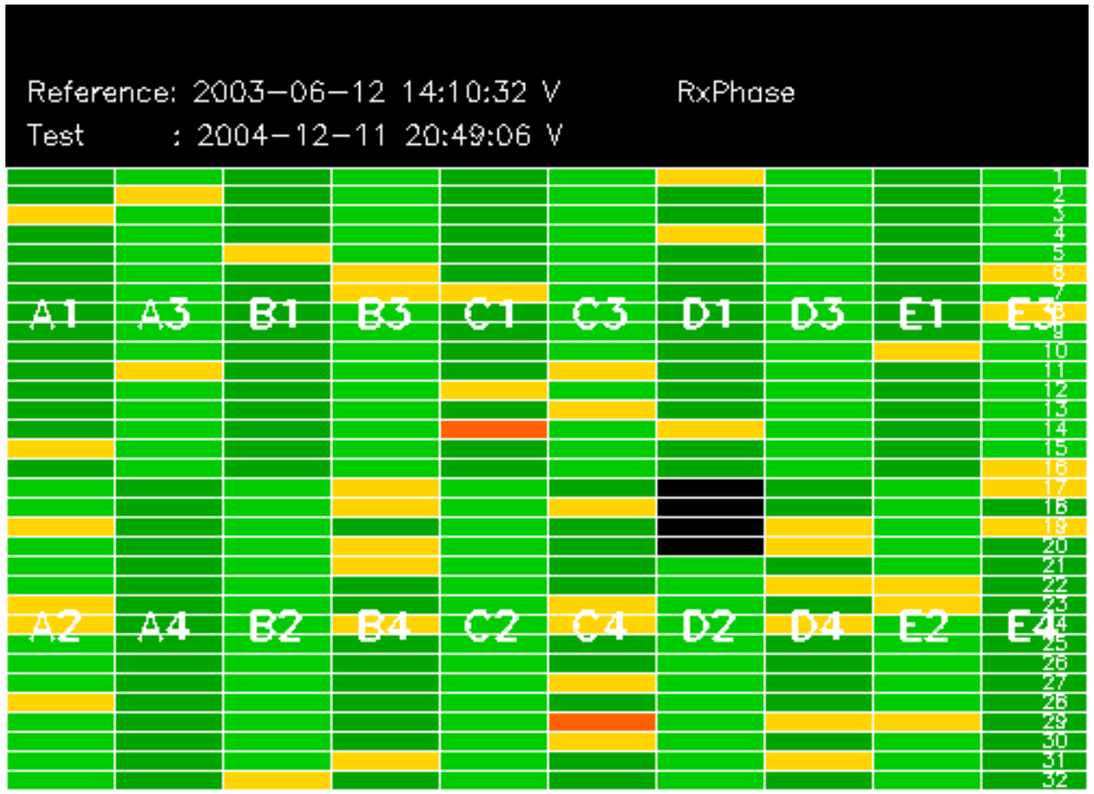
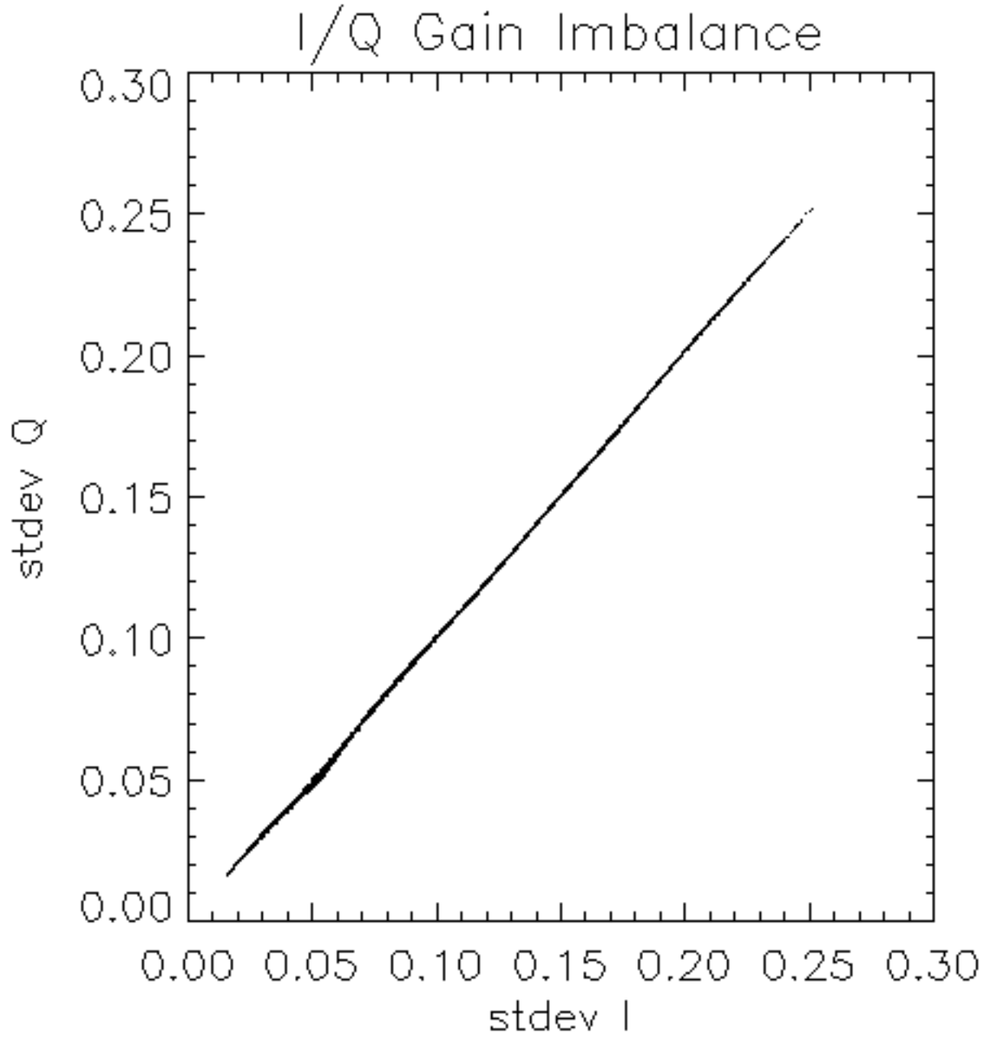
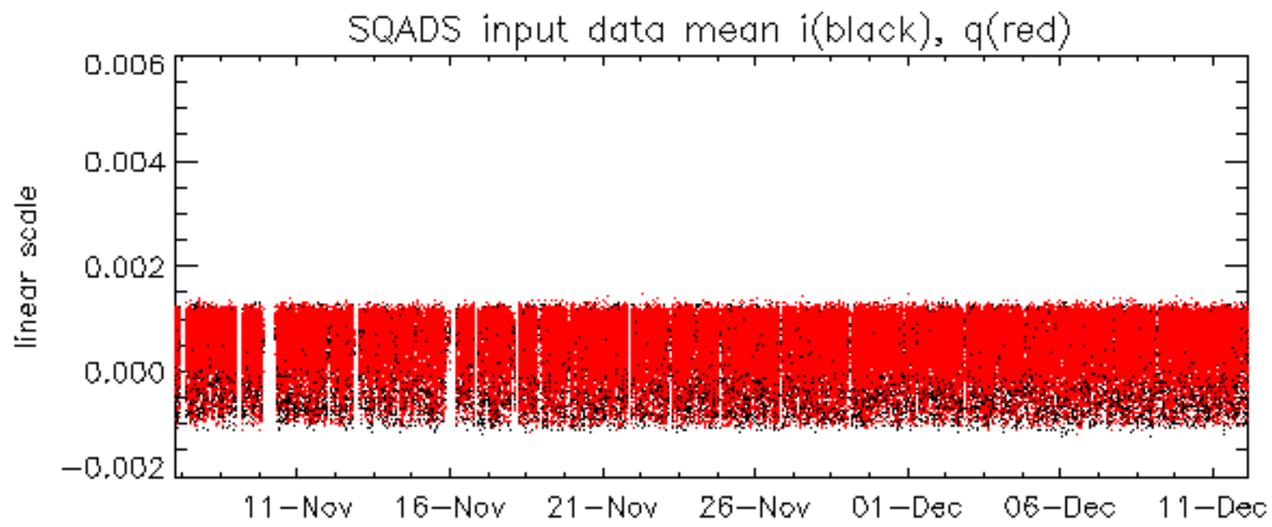
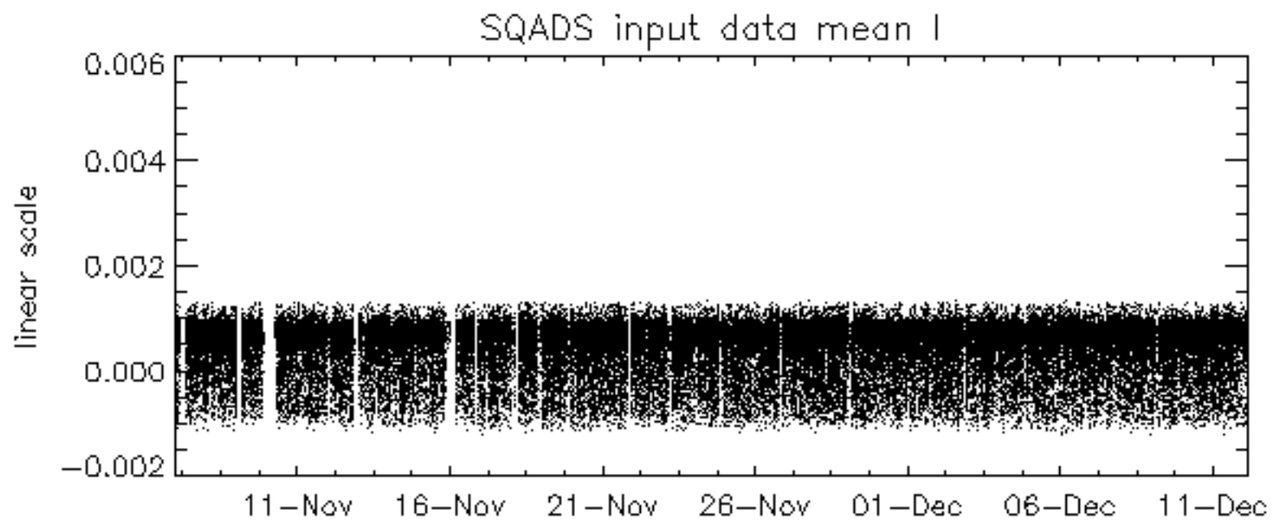
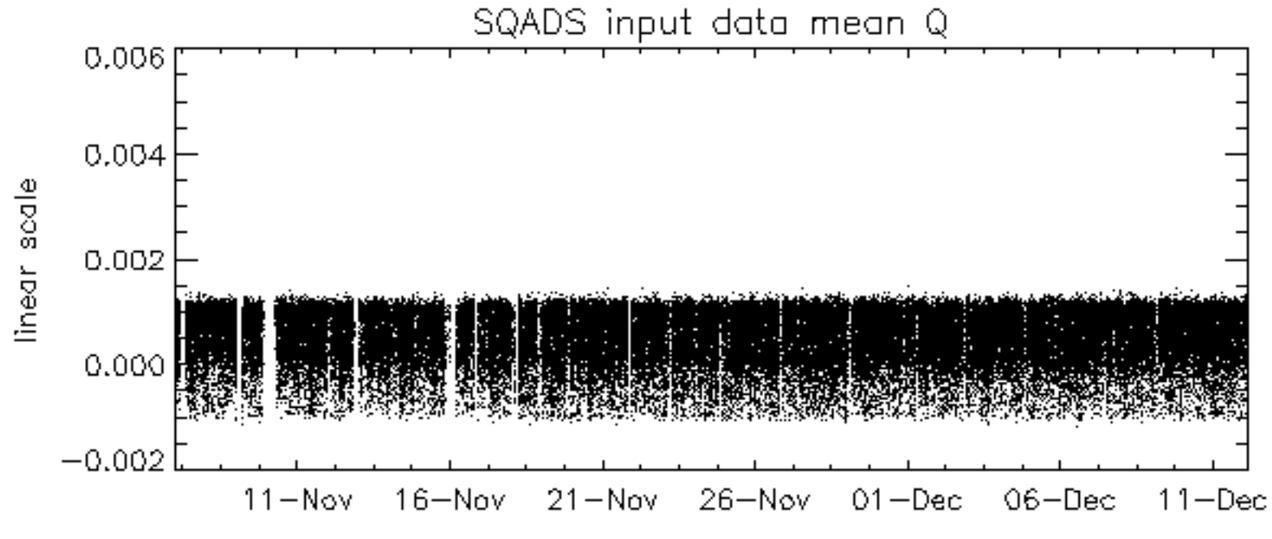
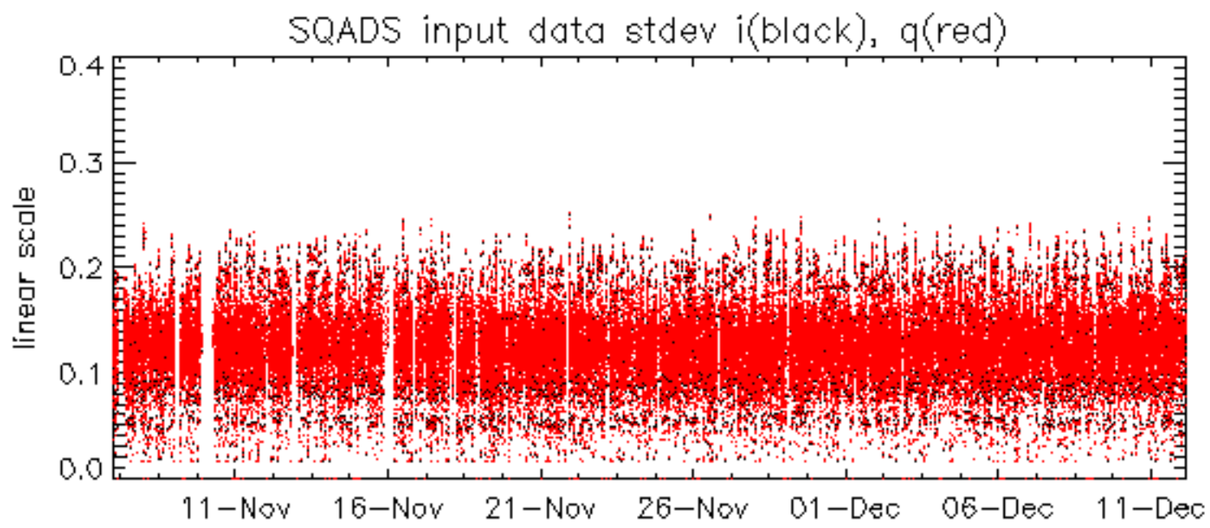

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

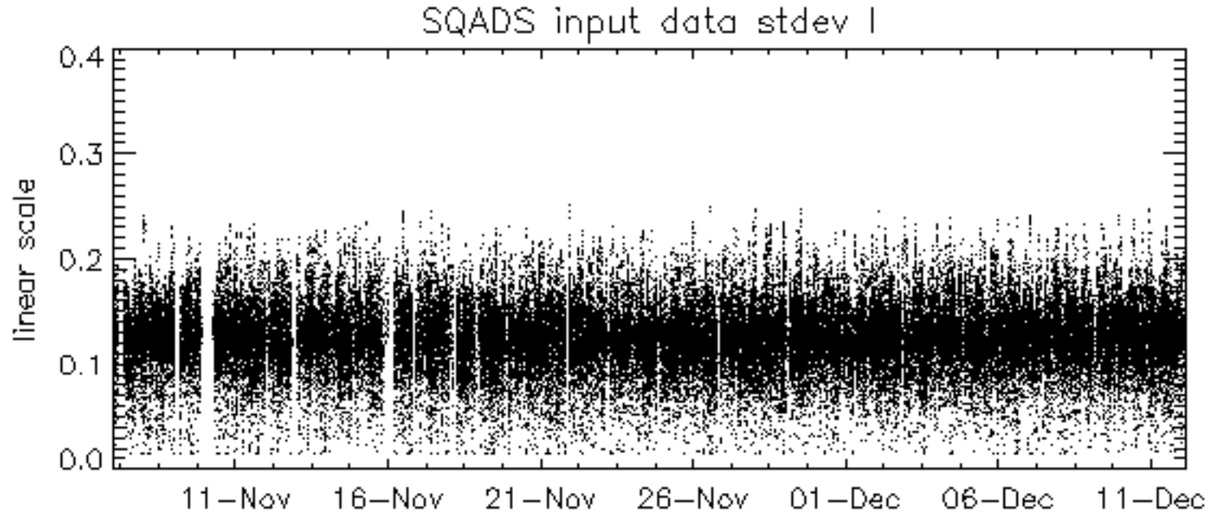

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

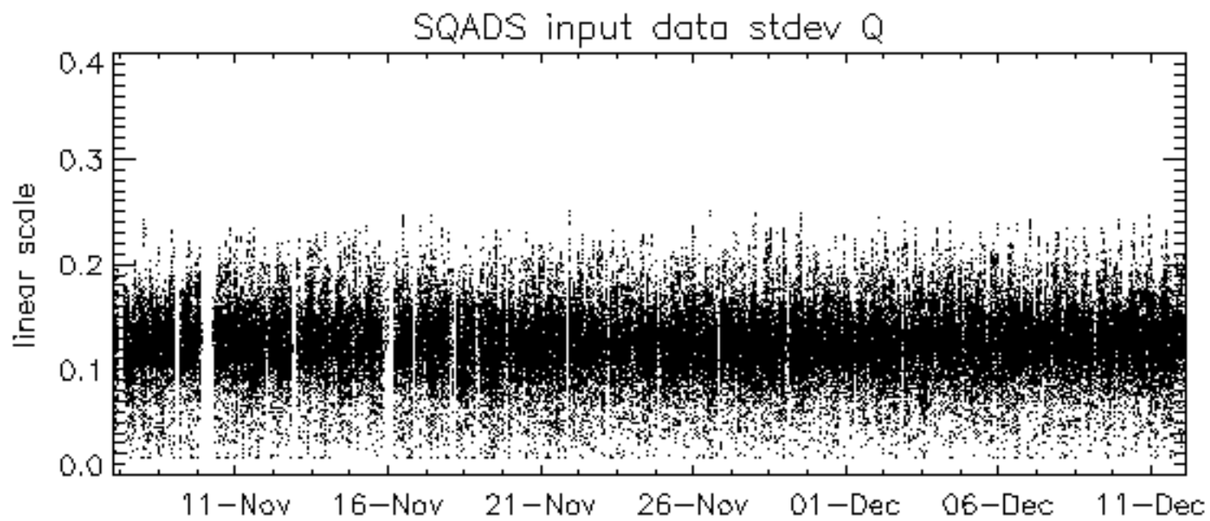

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec

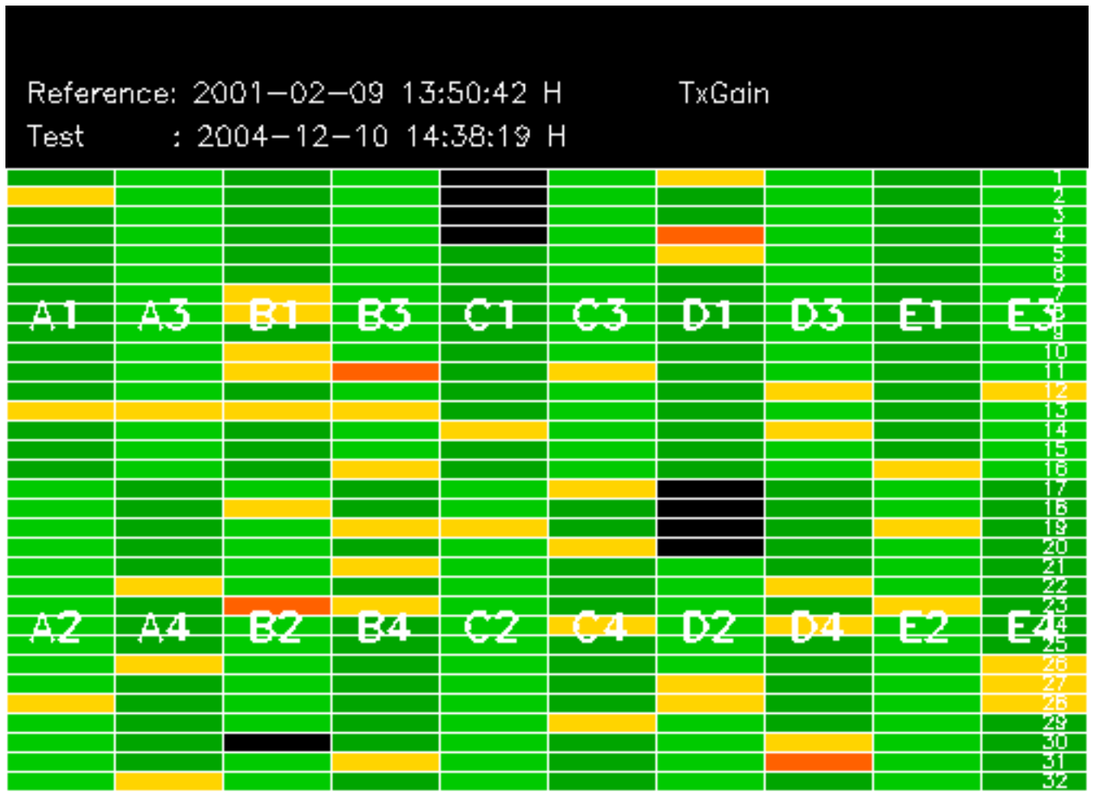

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
11−Nov
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec


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
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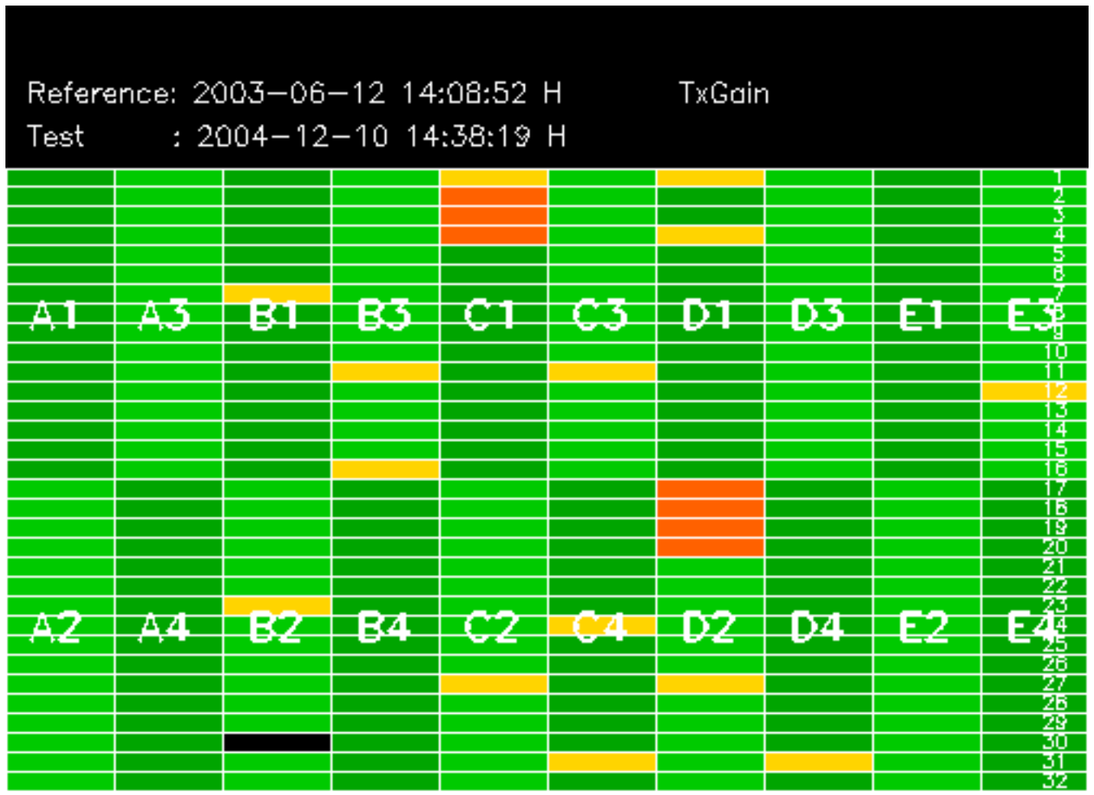
Reference: 2003-06-12 14:08:52 H
Test : 2004-12-10 14:38:19 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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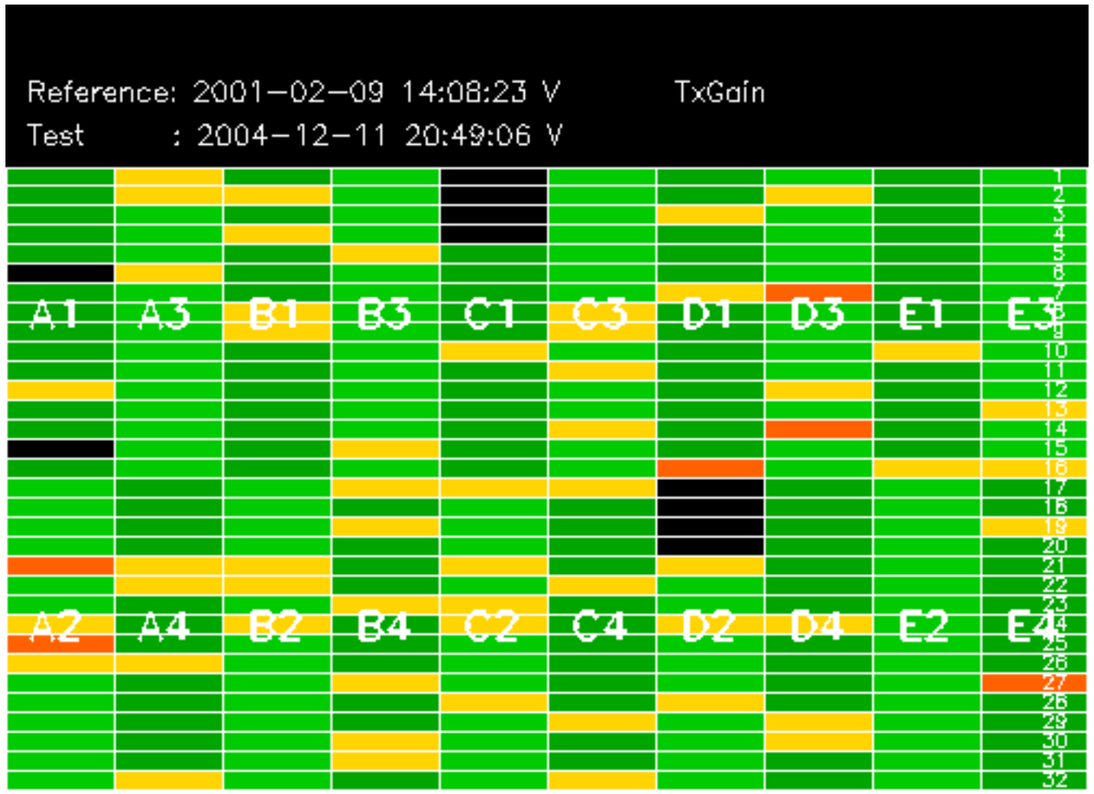
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-11 20:49:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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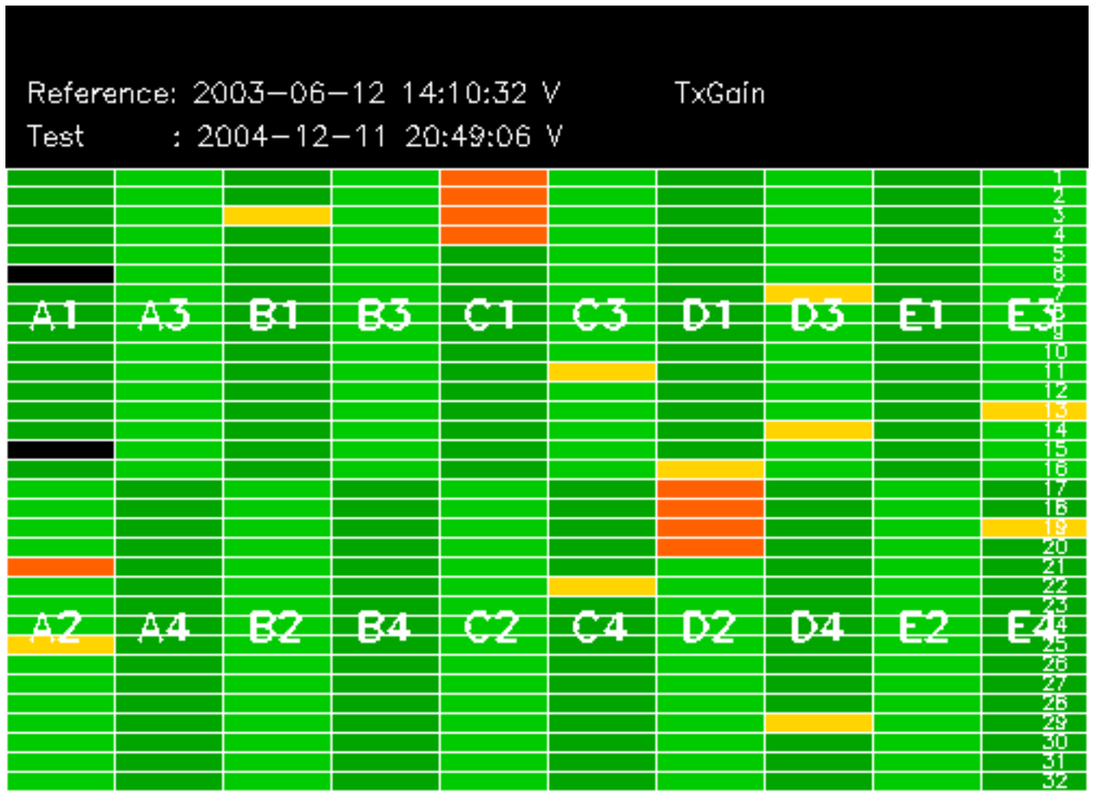
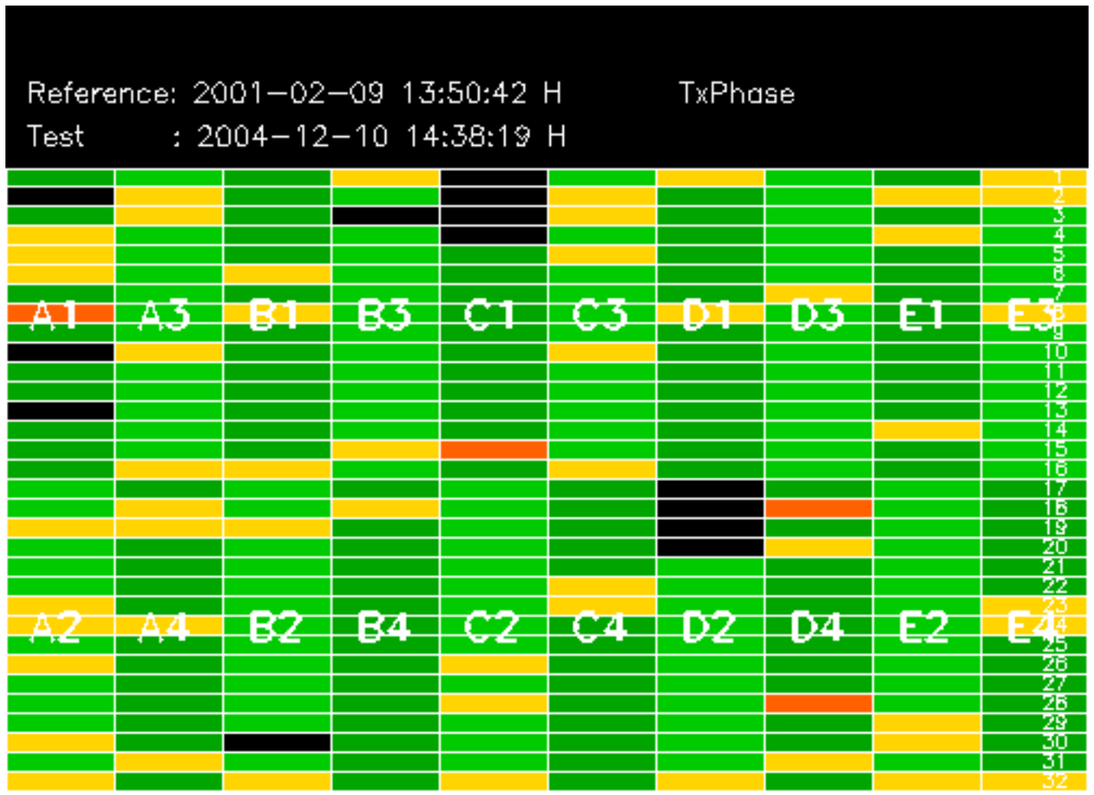
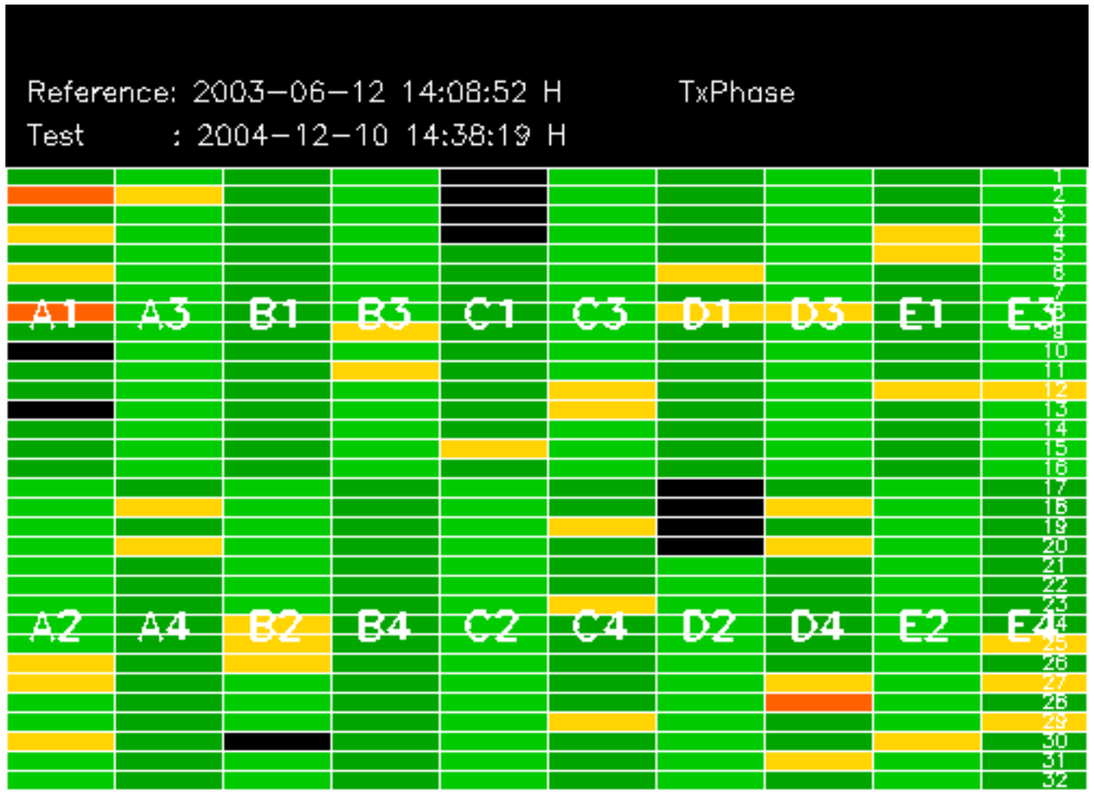
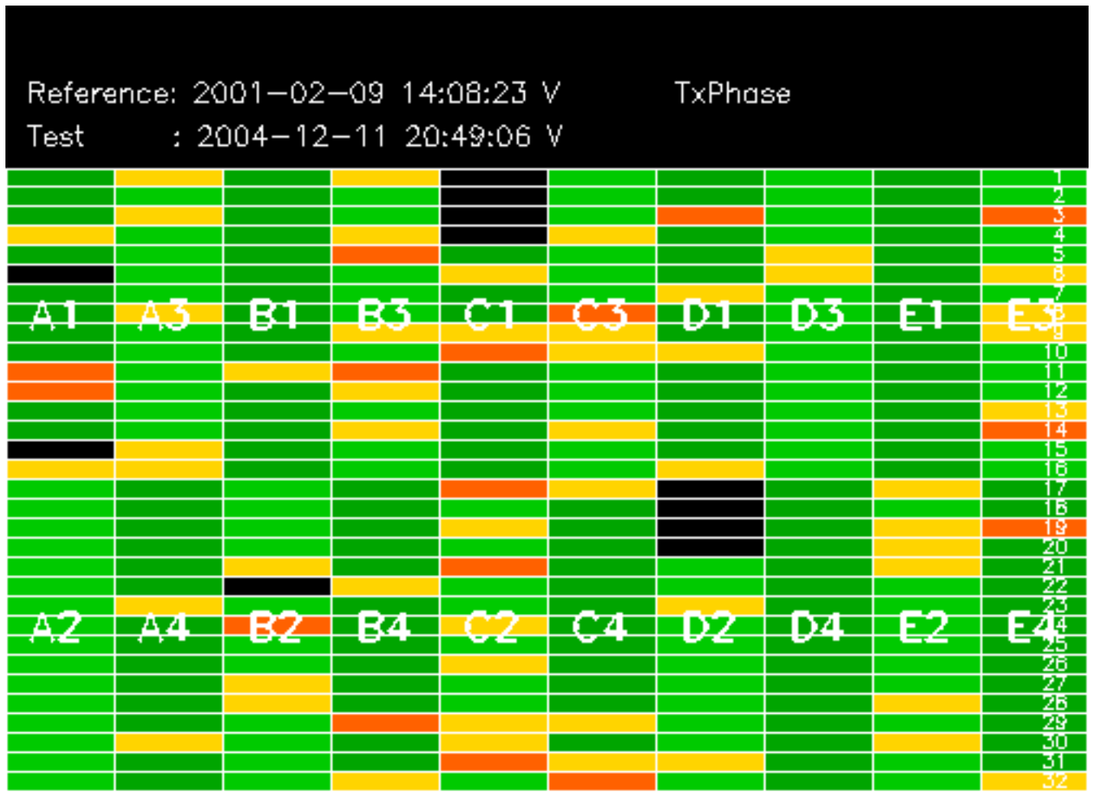
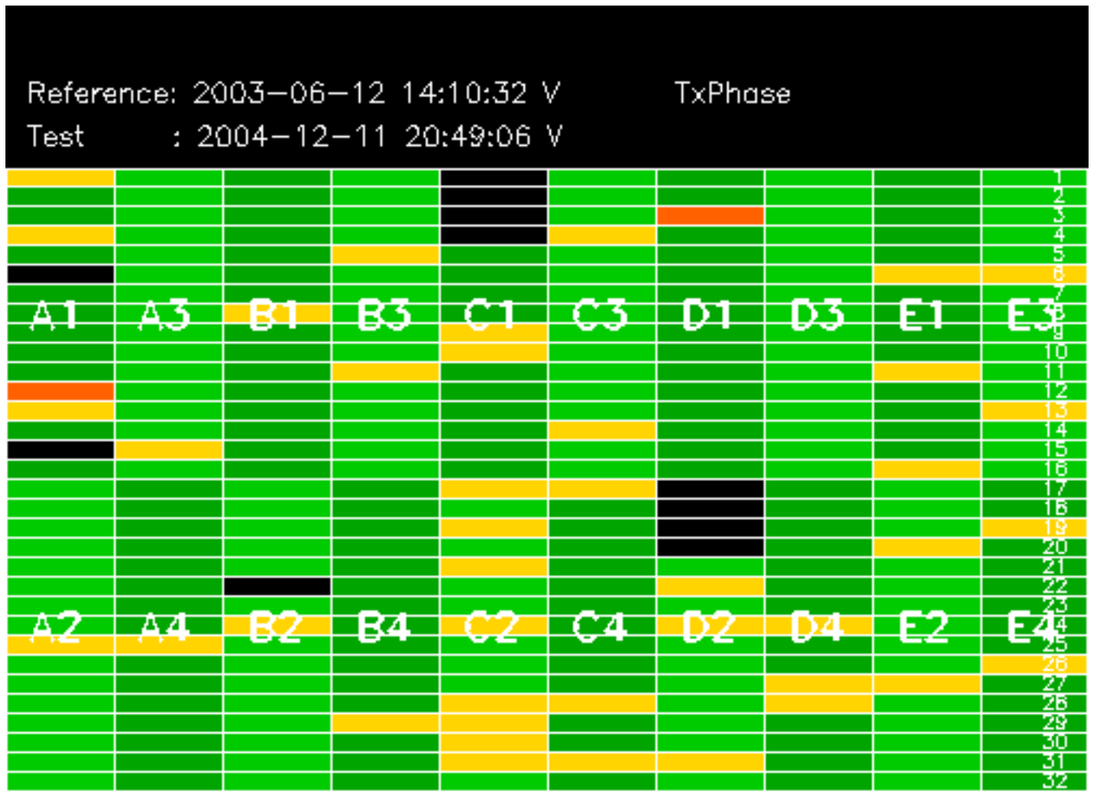
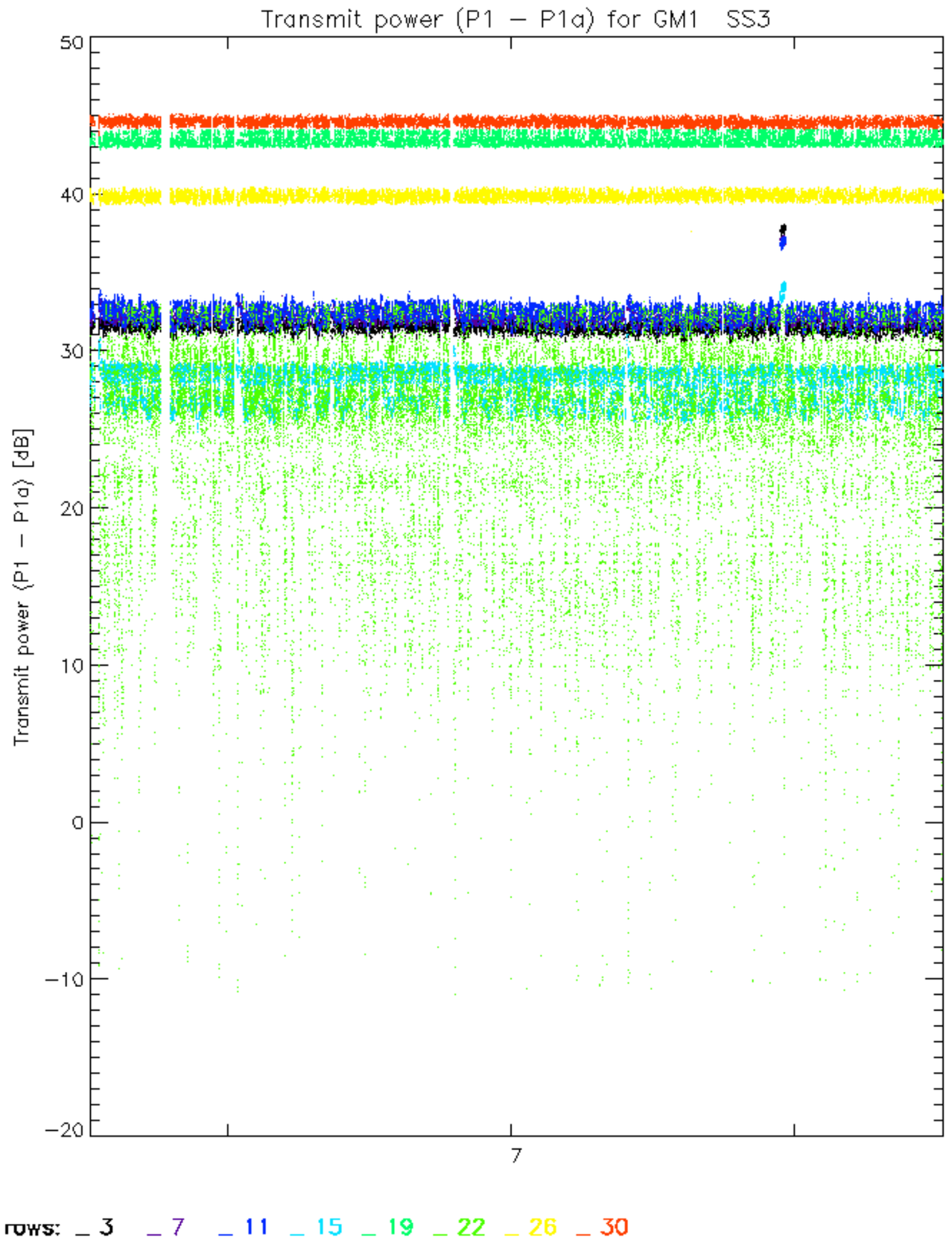

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

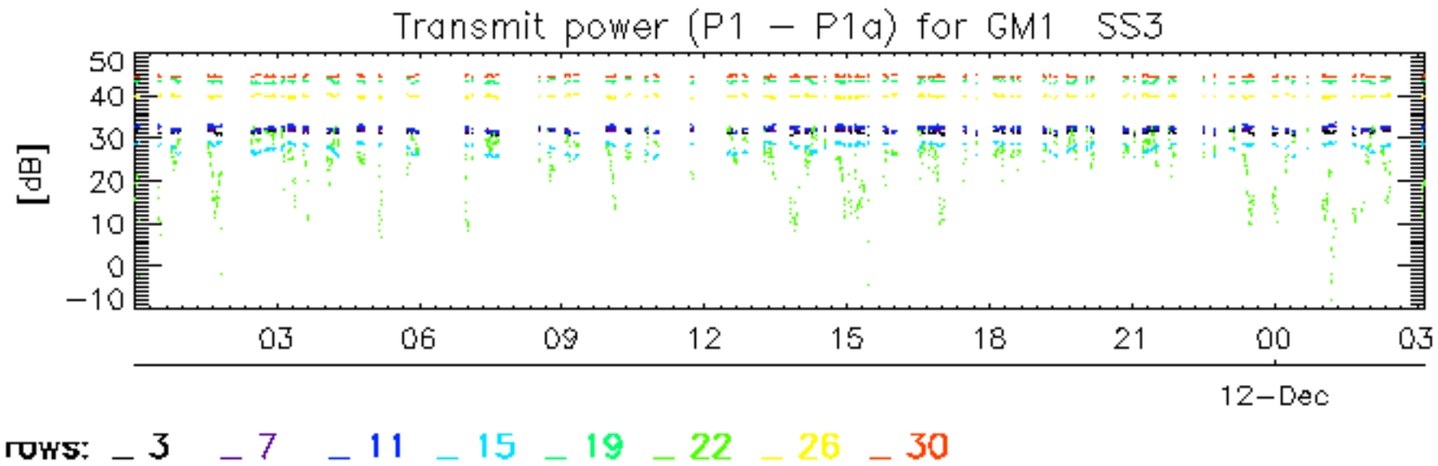

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-12-10 14:38:19 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

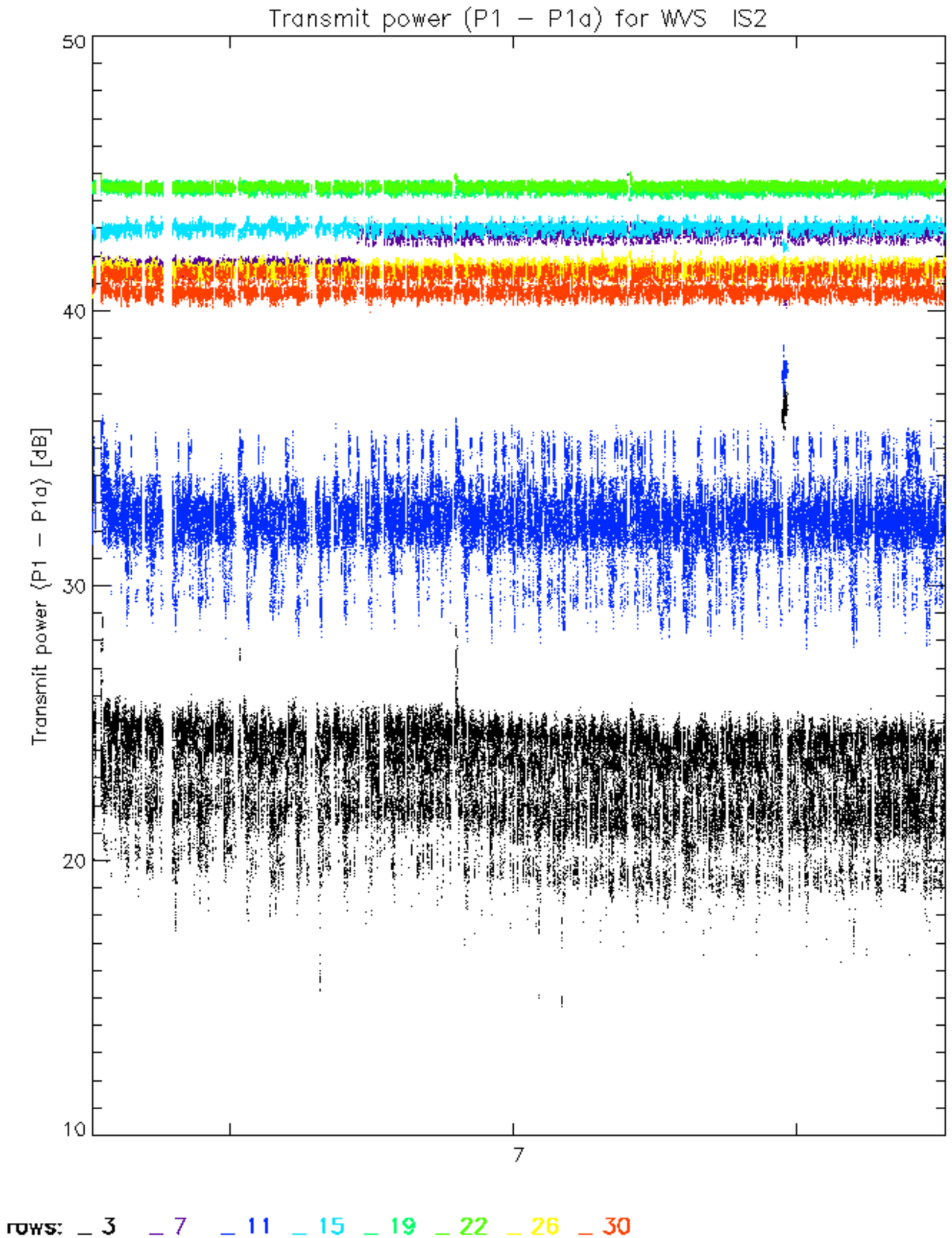

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-10 14:38:19 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

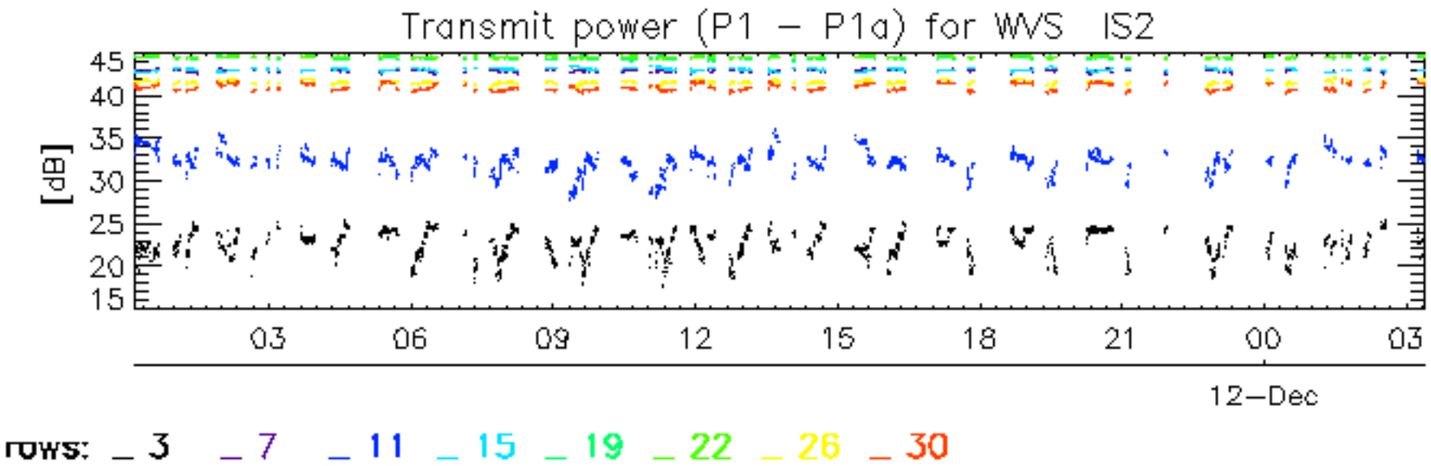

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-12-11 20:49:06 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-11 20:49:06 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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


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


Transmit power (P1 – P1a) for WVS IS2
50
40
30
20
10
Transmit power (P1 – P1a) [dB]
7
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


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

No unavailabilities during the reported period.