PRELIMINARY REPORT OF 041217

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

last update on Fri Dec 17 11:02:58 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 2004-12-16 00:00:00 to 2004-12-17 11:02:58

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	29	47	2	2	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	29	47	2	2	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	29	47	2	2	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	29	47	2	2	1

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	24	24	3	11	5
ASA_CON_AXVIEC20041027_165251_20021017_130000_20051231_000000	3	2	0	0	0
ASA_INS_AXVIEC20040521_160843_20030211_000000_20041231_000000	3	2	0	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	27	26	3	11	5
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	24	24	3	11	5
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	24	24	3	11	5
ASA_XCH_AXVIEC20031209_112947_20020301_000000_20041231_000000	3	2	0	0	0

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	20041215 170201
H	20041216 062648

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	-3.465807	0.029420	-0.007104
7	P1	-3.138955	0.033890	0.191545
11	P1	-4.633677	0.046187	-0.071128
15	P1	-5.663377	0.034933	-0.044291
19	P1	-3.638978	0.005093	-0.042223
22	P1	-4.579154	0.016555	0.014246
26	P1	-4.927678	0.017350	-0.030010
30	P1	-7.100176	0.014152	-0.047205
3	P1	-15.961208	0.117368	0.034420
7	P1	-15.304012	0.413468	-1.105294
11	P1	-20.707582	0.492771	-0.072302
15	P1	-11.623406	0.090621	0.045963
19	P1	-14.132695	0.029143	-0.081180
22	P1	-16.136978	0.455853	0.169168
26	P1	-17.789133	0.266846	0.026603
30	P1	-17.907711	0.302461	0.061731

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.367344	0.085388	0.021225
7	P2	-22.604755	0.142311	0.040822
11	P2	-14.966025	0.137622	0.150613
15	P2	-7.170775	0.110134	0.012296

19	P2	-9.724552	0.143655	0.038458
22	P2	-17.202469	0.099383	0.054870
26	P2	-16.524998	0.105811	-0.011247
30	P2	-19.000544	0.083445	0.092428

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210367	0.006926	-0.011644
7	P3	-8.210367	0.006926	-0.011638
11	P3	-8.210357	0.006925	-0.011719
15	P3	-8.210343	0.006925	-0.011828
19	P3	-8.210341	0.006925	-0.011832
22	P3	-8.210340	0.006925	-0.011828
26	P3	-8.210340	0.006925	-0.011818
30	P3	-8.210488	0.006921	-0.012161

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	-2.841285	0.110609	-0.087120
7	P1	-2.979498	0.064501	-0.038856
11	P1	-3.935327	0.048967	-0.071099
15	P1	-3.514411	0.078104	-0.073266
19	P1	-3.601010	0.012735	-0.026952
22	P1	-5.608230	0.068134	-0.040895
26	P1	-6.498569	0.023224	-0.042389
30	P1	-6.294645	0.042092	-0.054025

3	P1	-10.640750	0.059344	-0.165198
7	P1	-10.105795	0.153501	0.018363
11	P1	-12.398561	0.199674	-0.030441
15	P1	-11.724154	0.102470	0.022222
19	P1	-15.631820	0.049393	-0.030075
22	P1	-24.119768	2.196235	-0.105428
26	P1	-15.111003	0.400608	0.156332
30	P1	-20.177958	0.962663	0.151420

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.051531	0.035831	0.016889
7	P2	-22.651674	0.028226	0.079112
11	P2	-10.759031	0.033316	0.180908
15	P2	-5.066136	0.024230	-0.007469
19	P2	-6.971503	0.032761	0.000589
22	P2	-7.329621	0.026109	0.039017
26	P2	-23.960701	0.018298	-0.014931
30	P2	-22.059061	0.018328	0.083538

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044769	0.002714	-0.003422
7	P3	-8.044785	0.002719	-0.003321
11	P3	-8.044833	0.002711	-0.002977
15	P3	-8.044713	0.002722	-0.003278
19	P3	-8.044832	0.002722	-0.003076
22	P3	-8.044819	0.002718	-0.003242
26	P3	-8.044861	0.002716	-0.003167
30	P3	-8.044739	0.002709	-0.003237

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	0.000439601
	stdev	2.42026e-07
MEAN Q	mean	0.000497618
	stdev	2.54737e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125605
	stdev	0.00100820
STDEV Q	mean	0.125844
	stdev	0.00101748

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

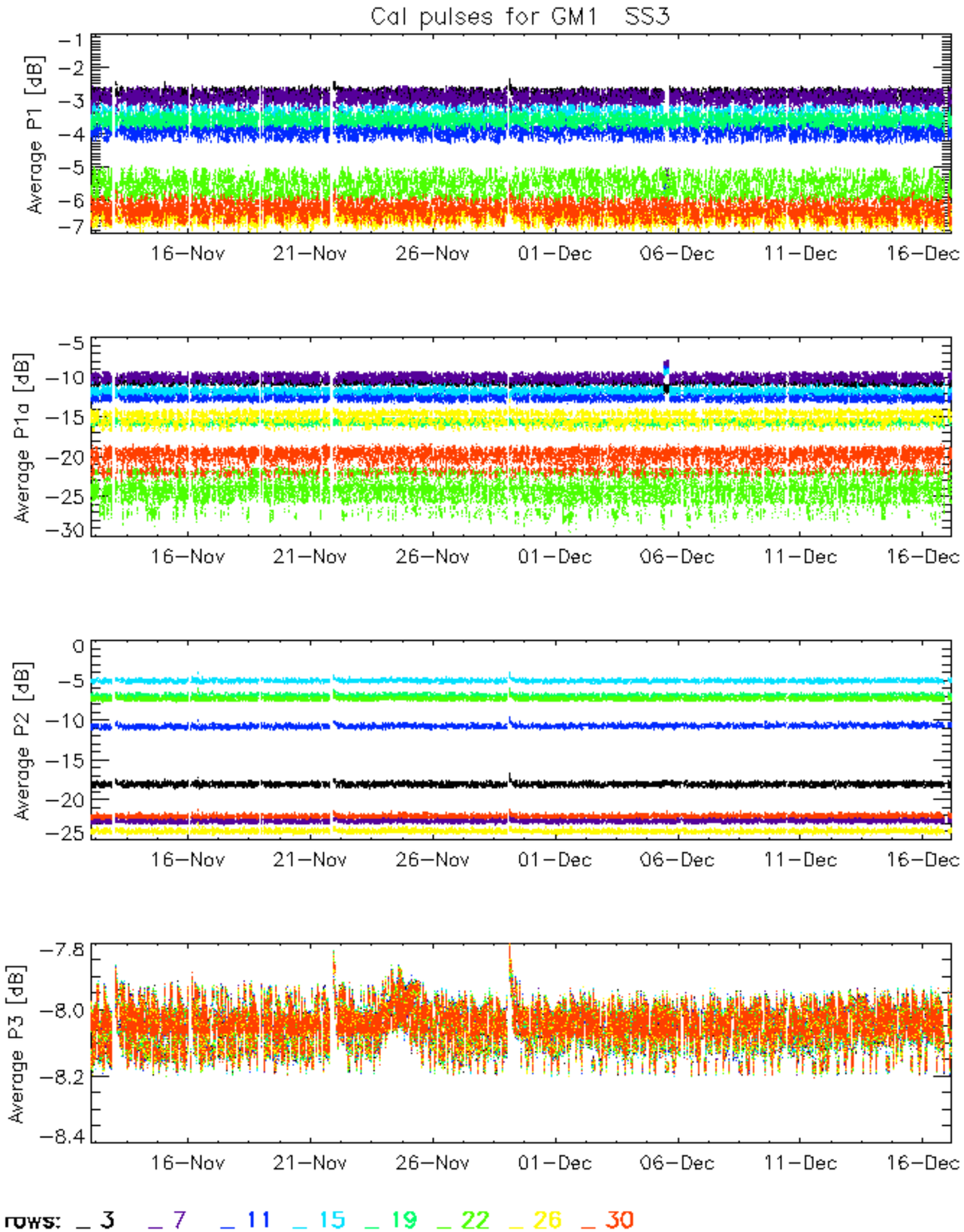
6.5 - Absolute Doppler for GM1

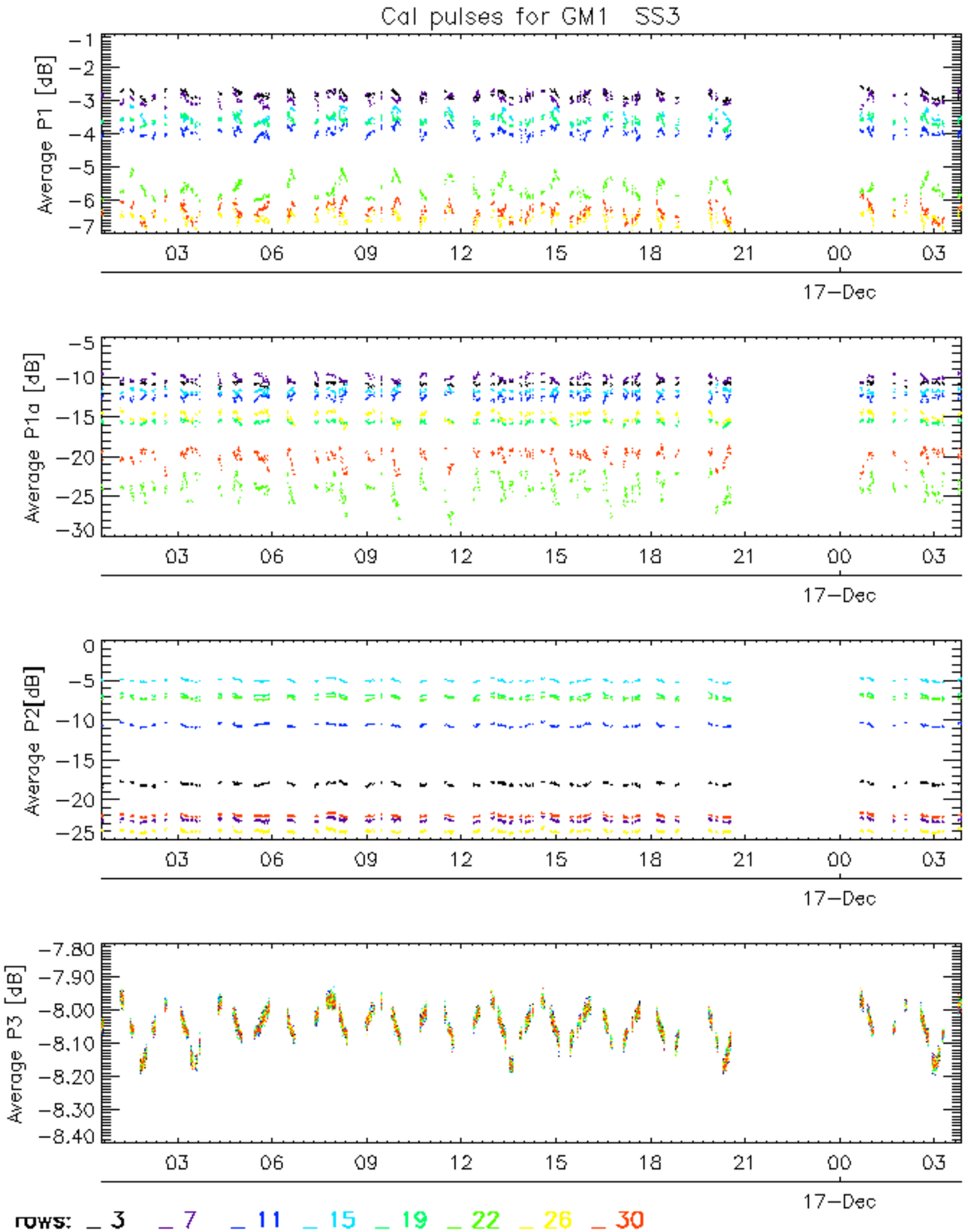
Evolution of Absolute Doppler

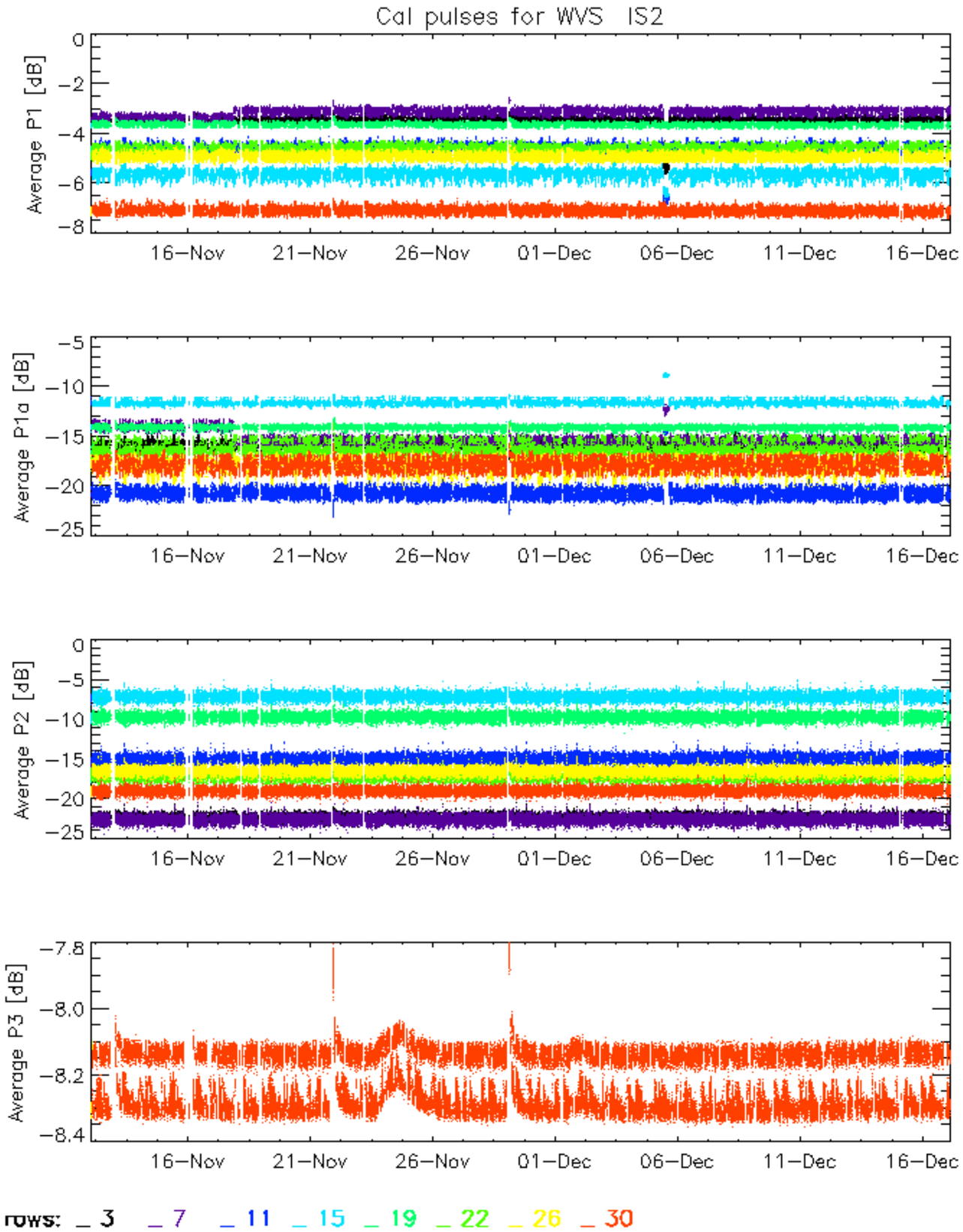

Acsending
☒
Descending

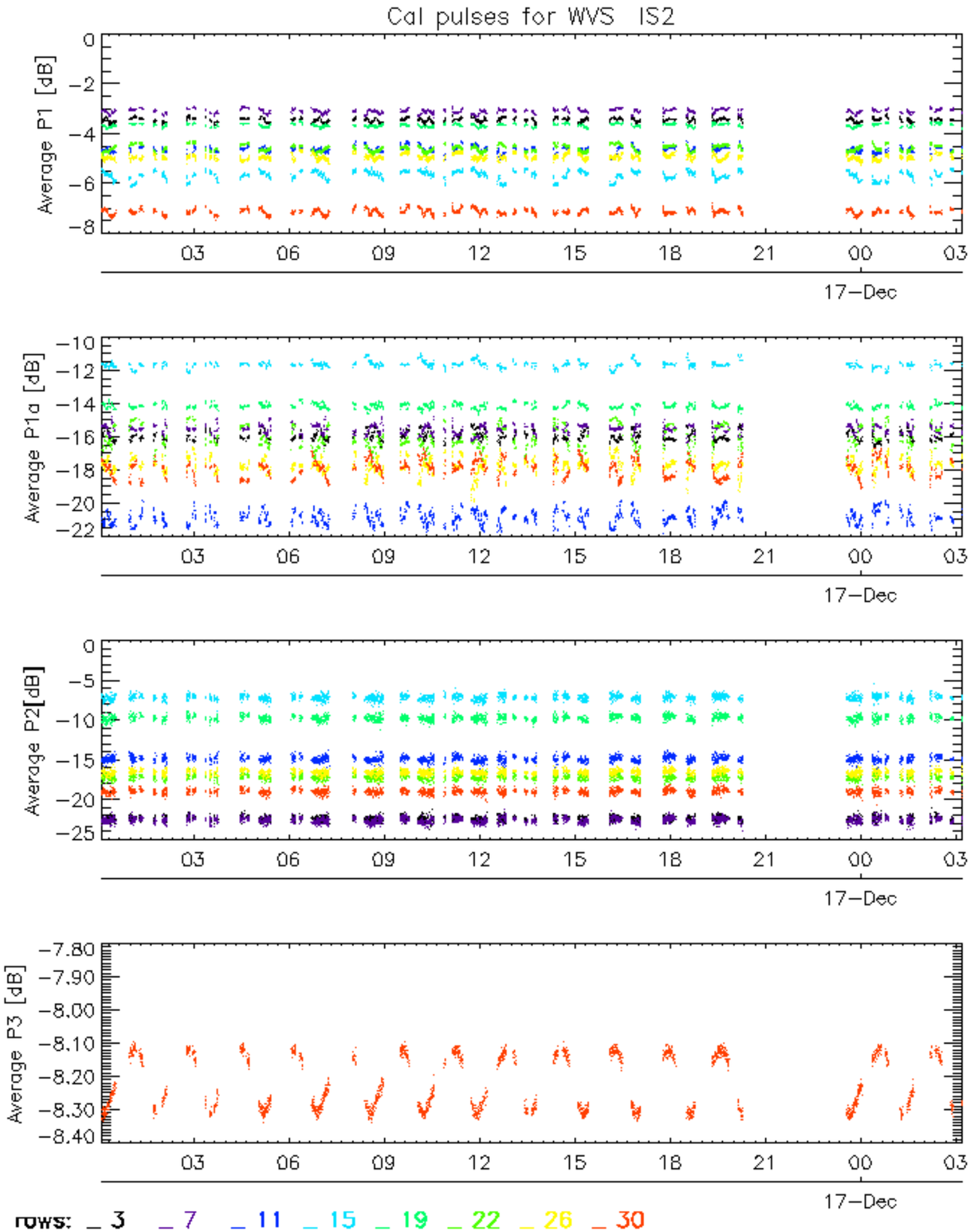
6.6 - Doppler evolution versus ANX for GM1

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

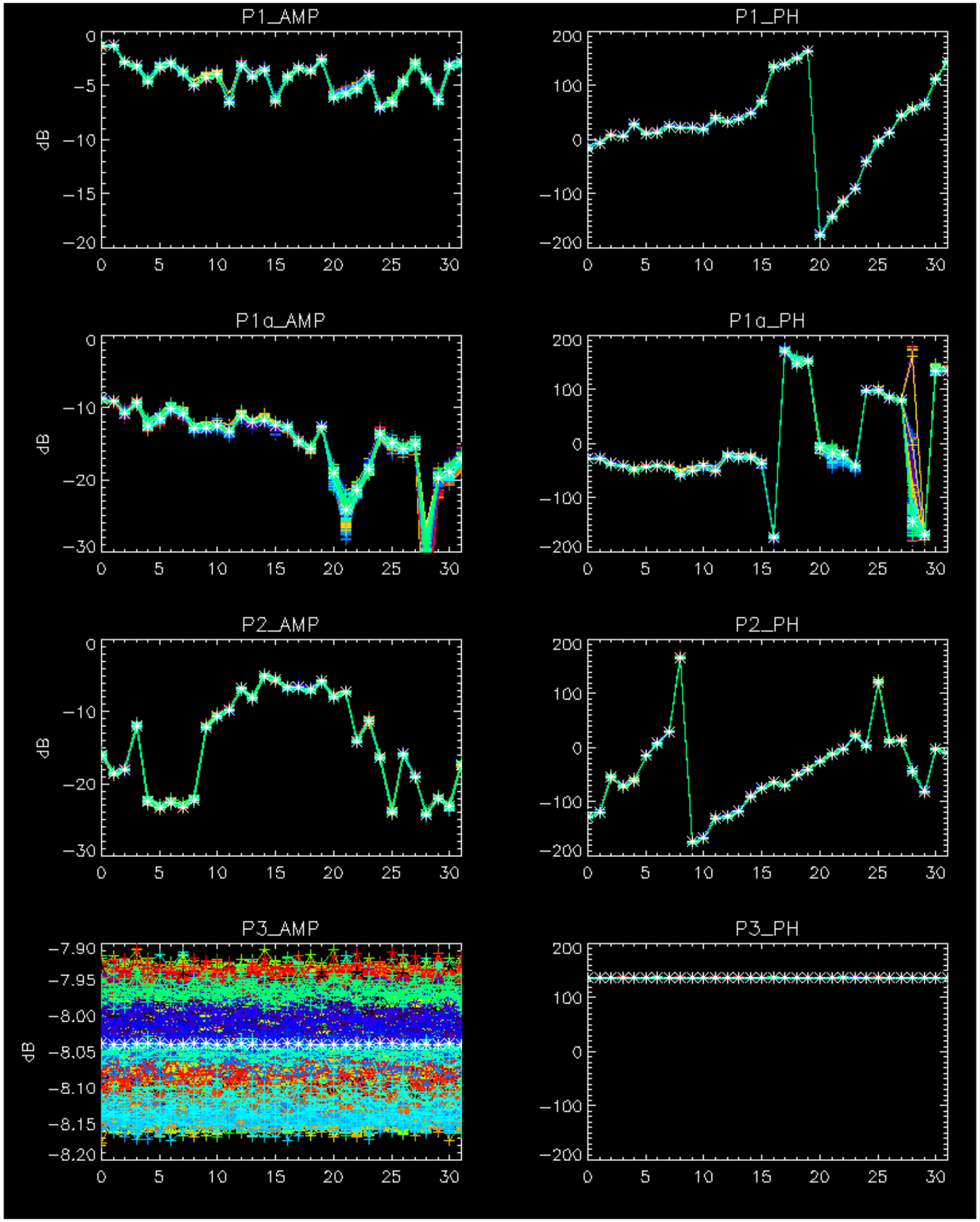

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
17−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
17−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
17−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

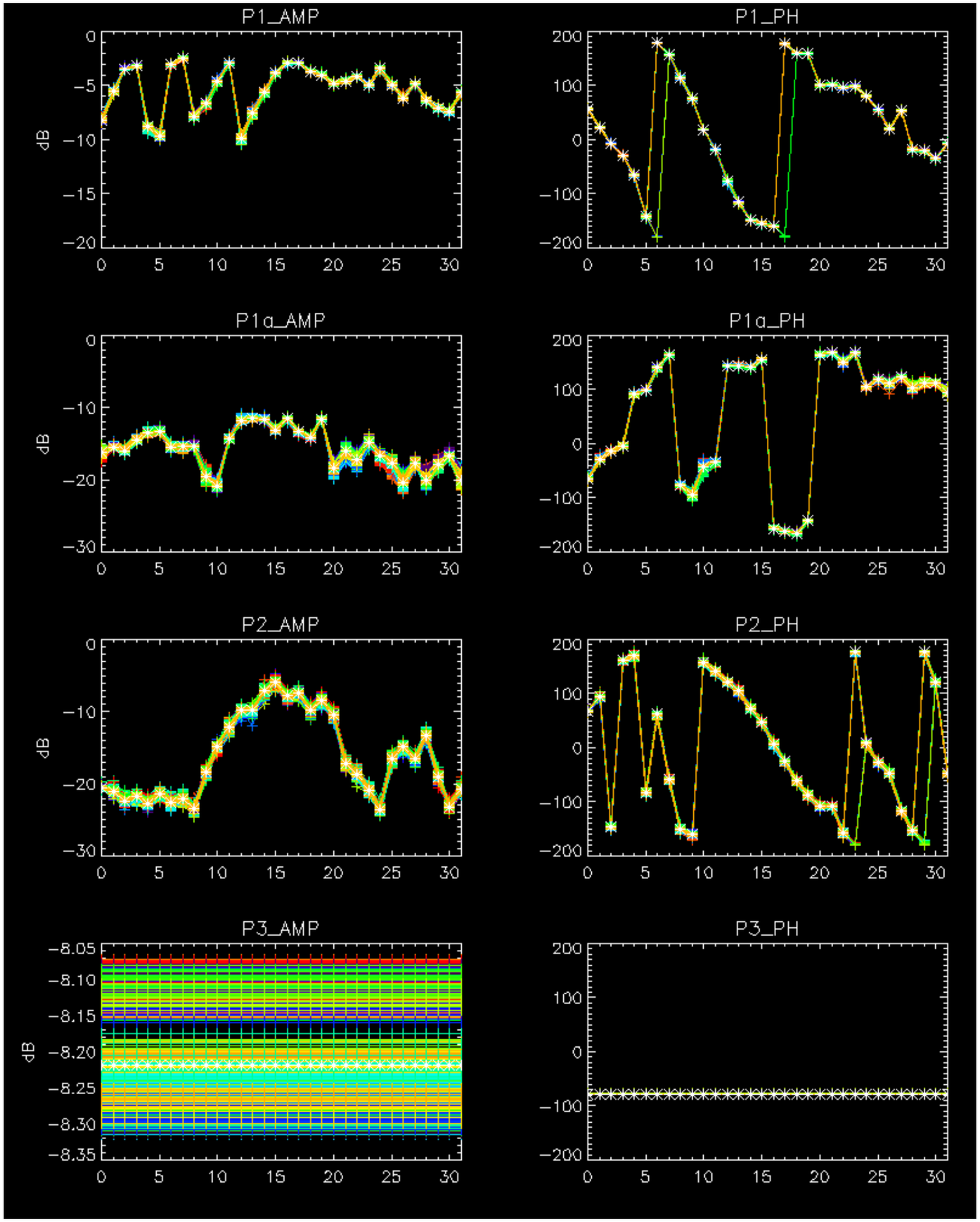

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
Average P2 [dB]
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30


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

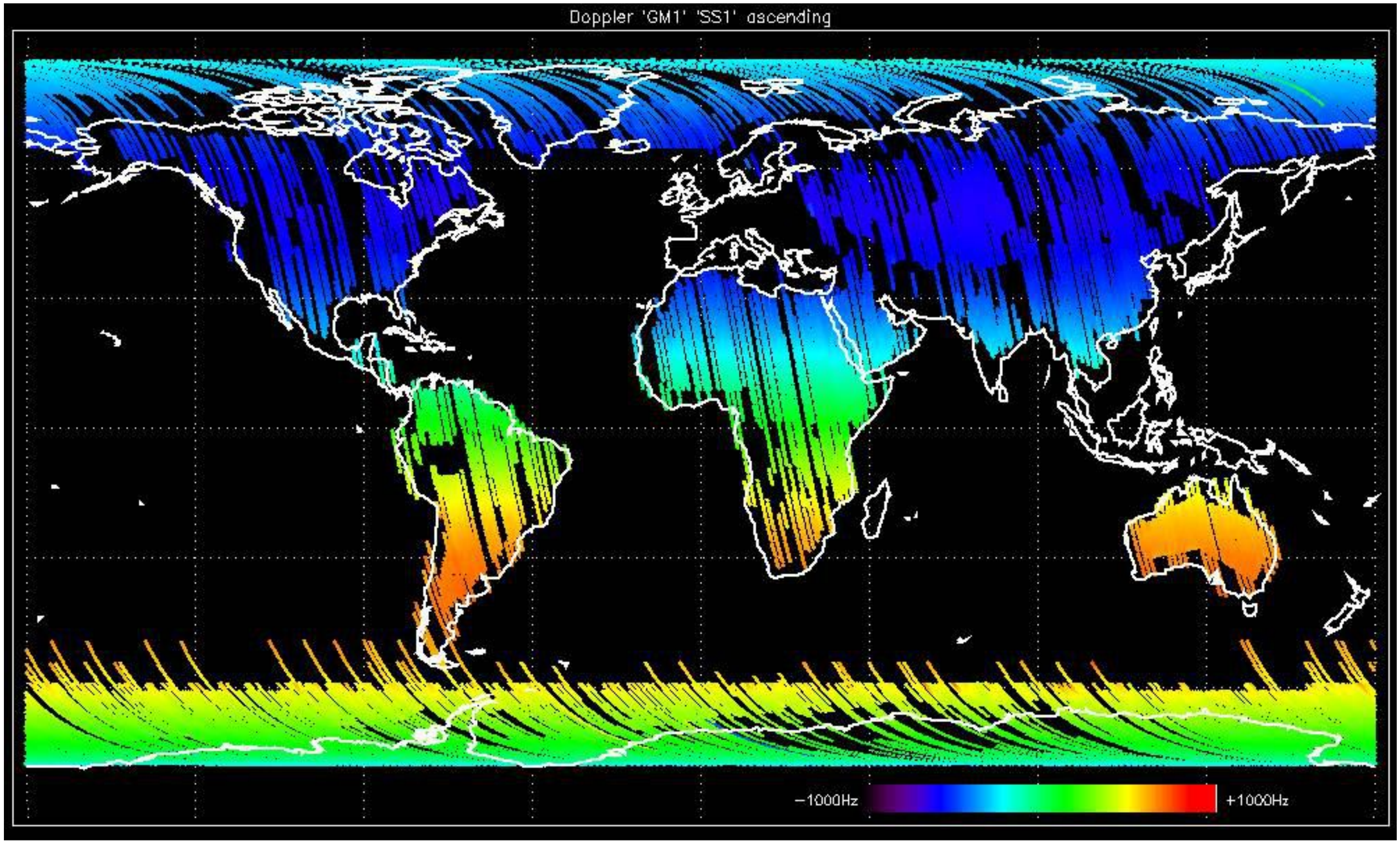
No anomalies observed.

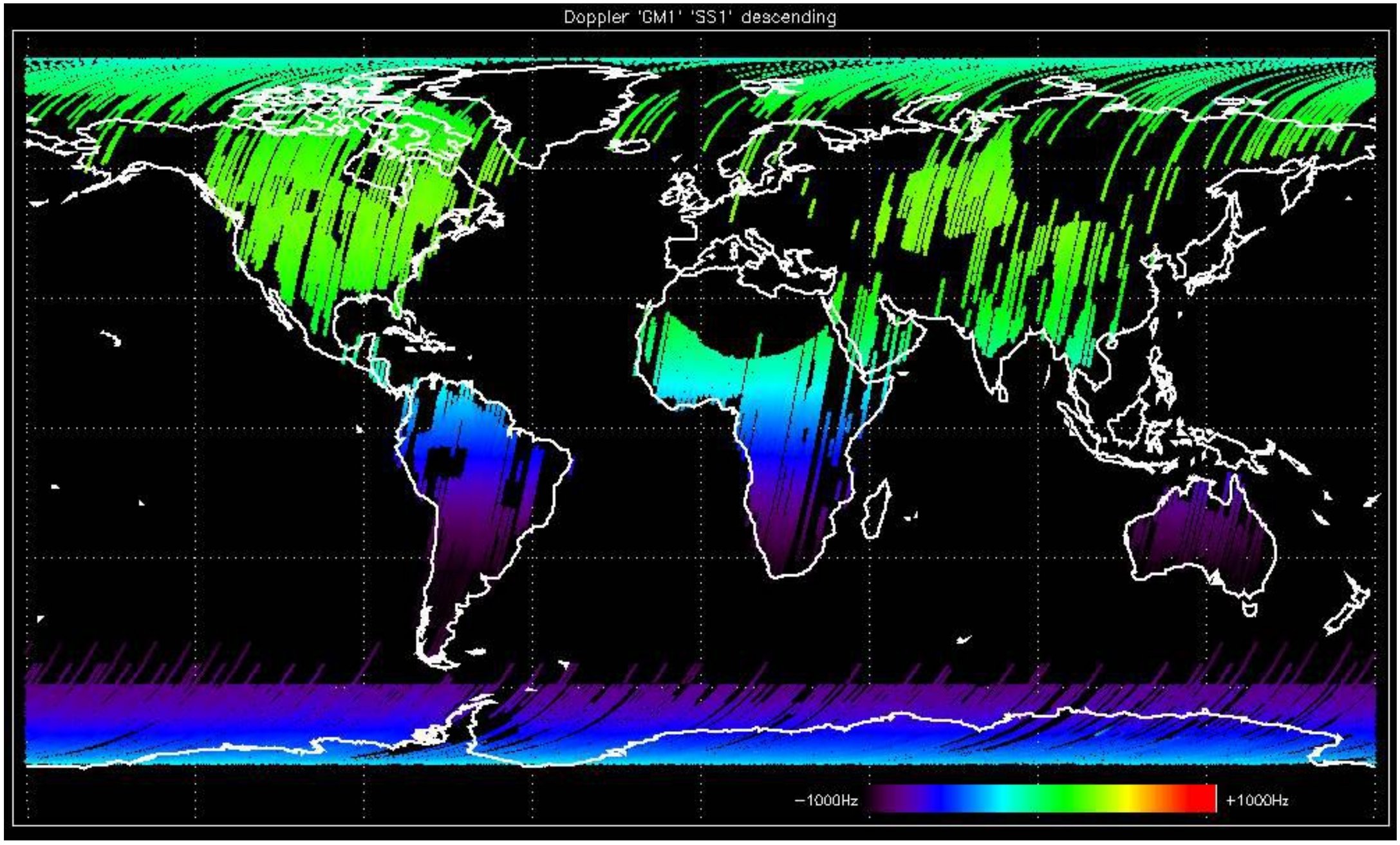

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

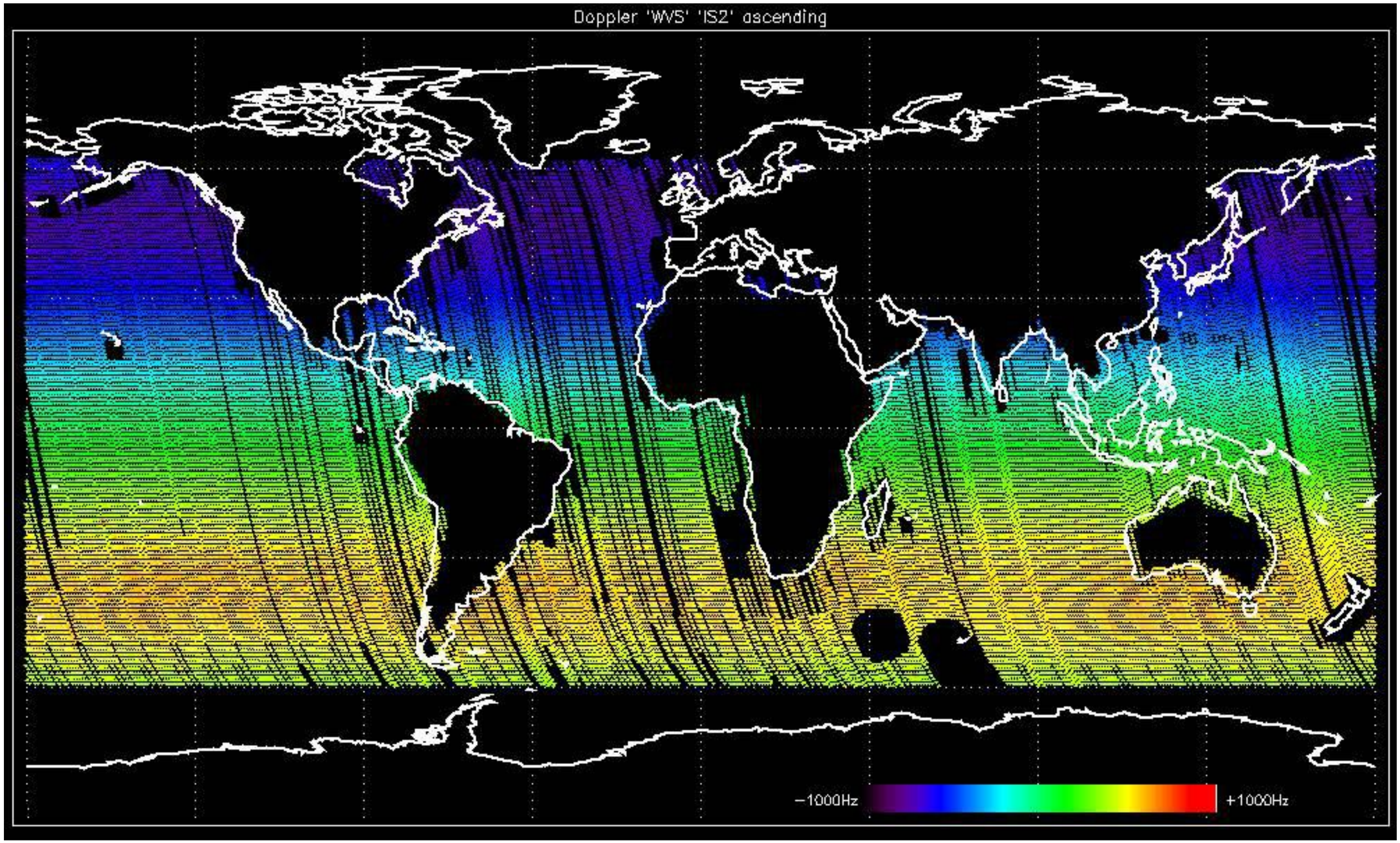

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.05
−8.10
−8.15
−8.20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

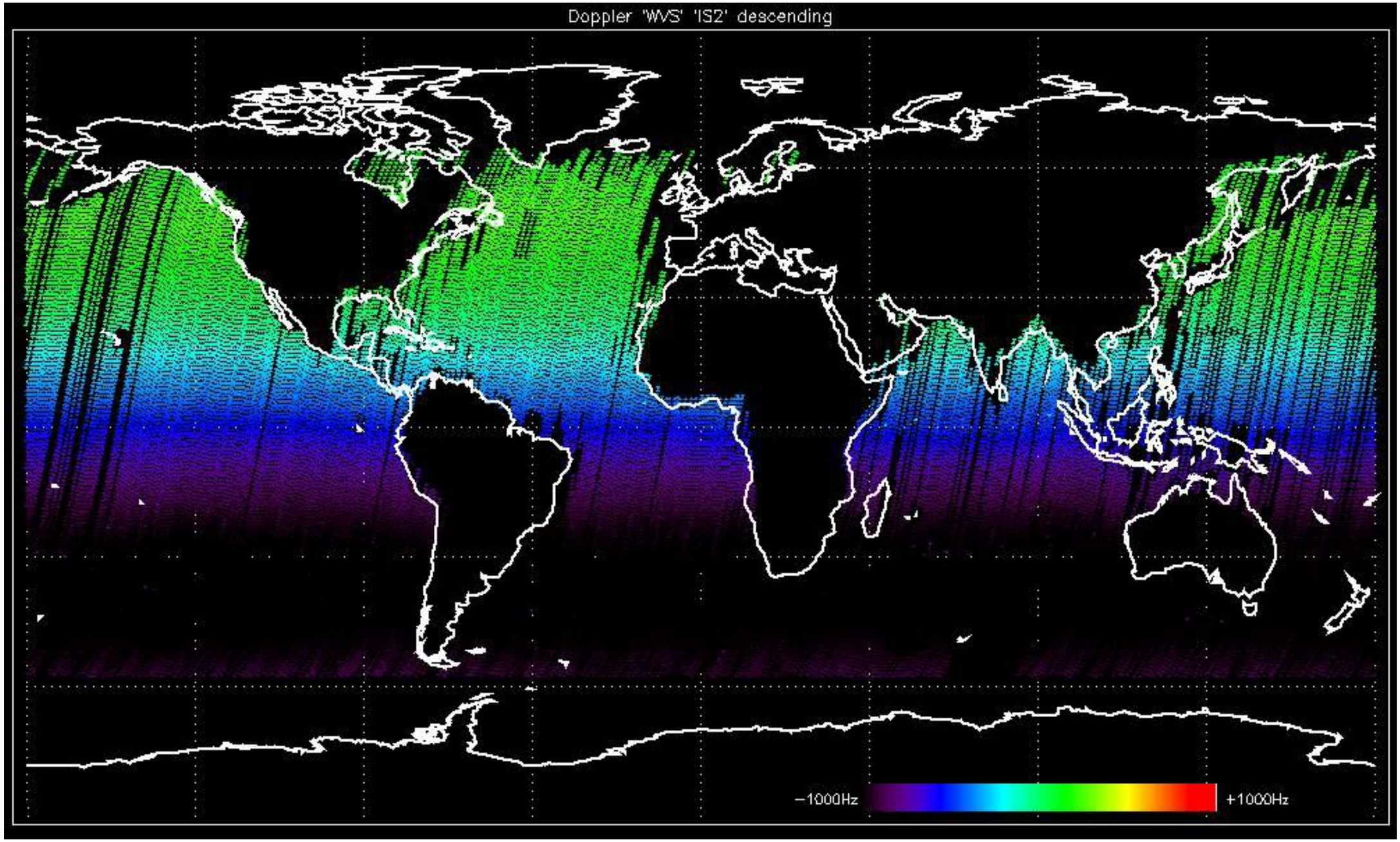
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

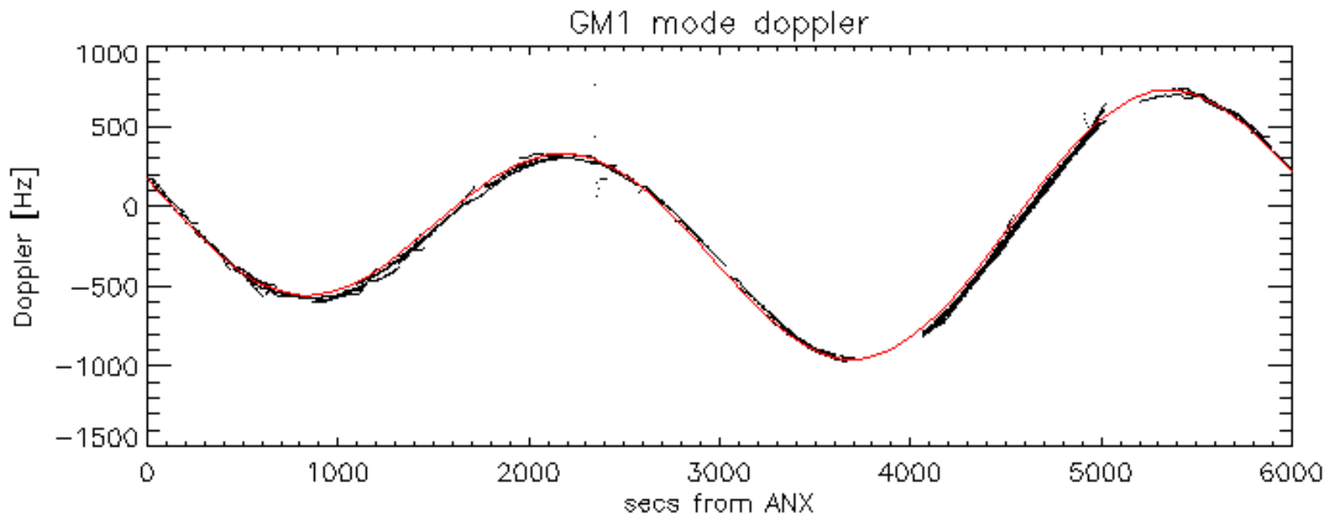
Preliminary report.The data is not yet controled

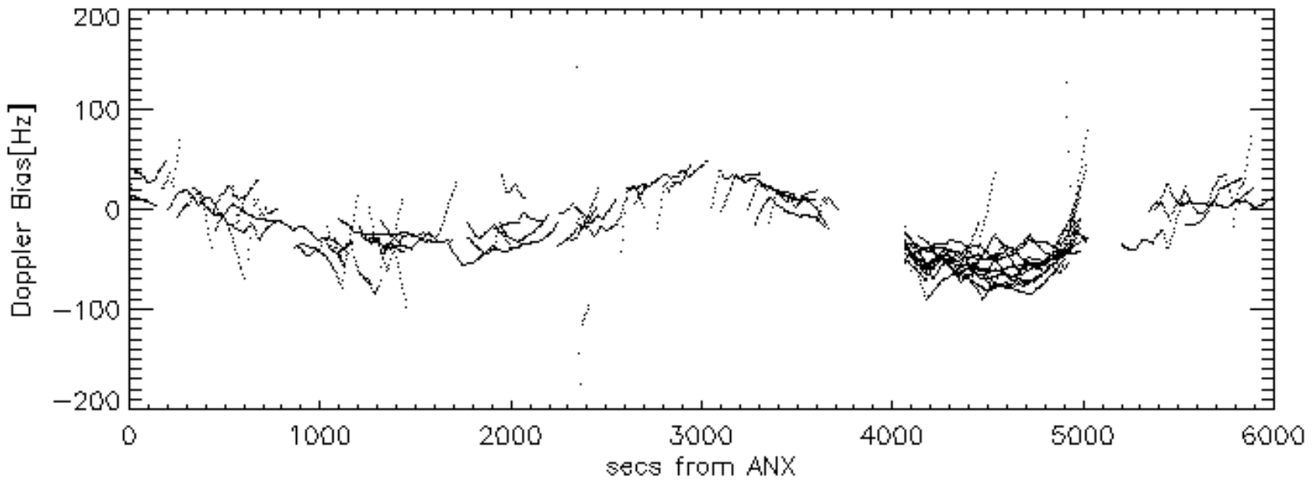

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

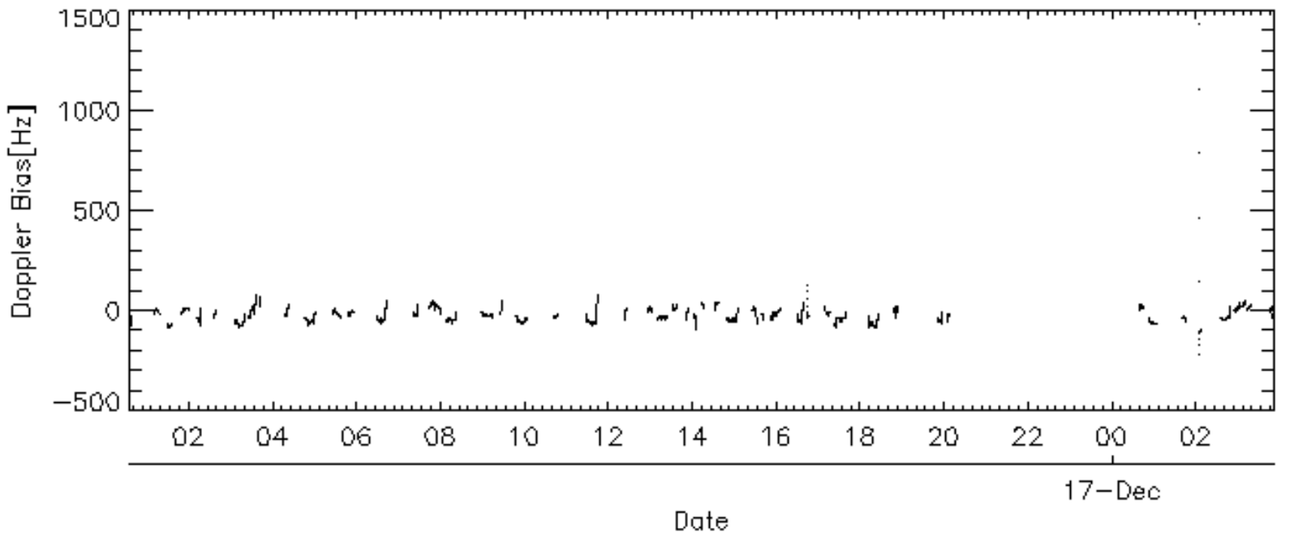

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

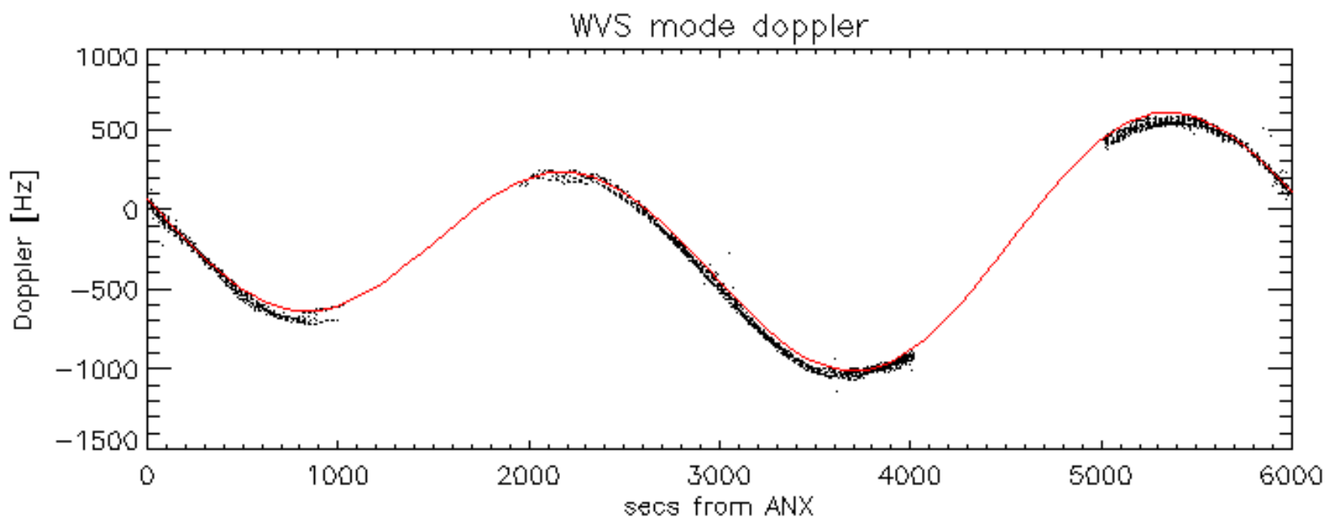

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

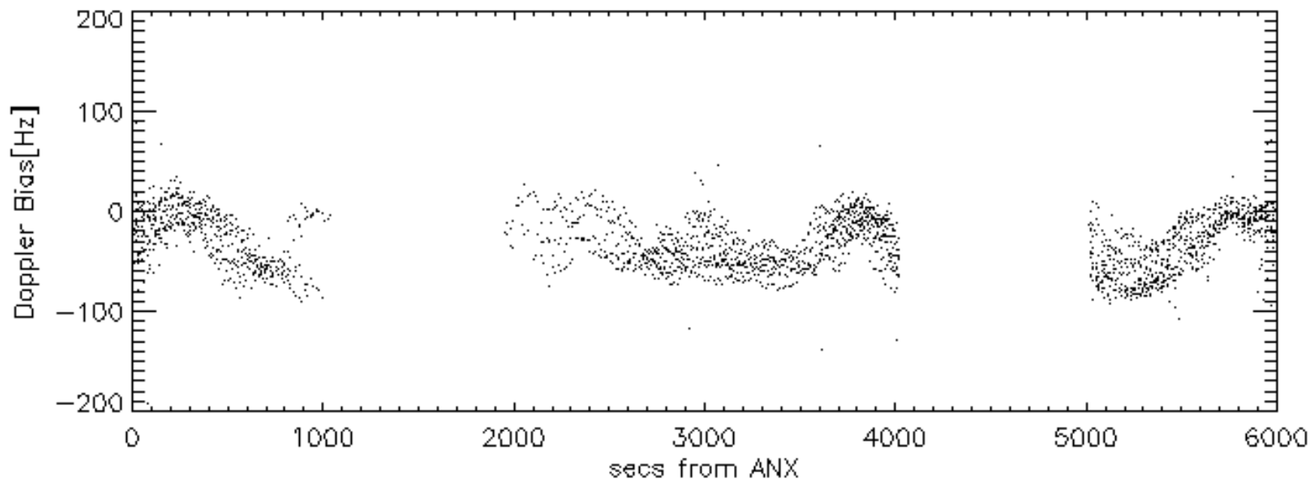

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

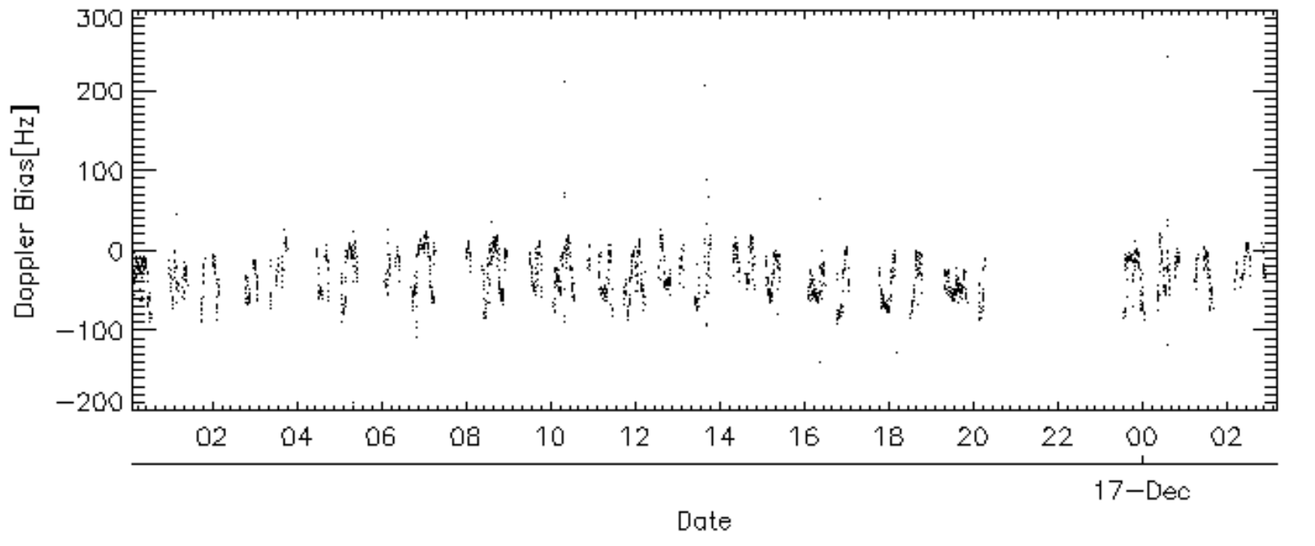

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

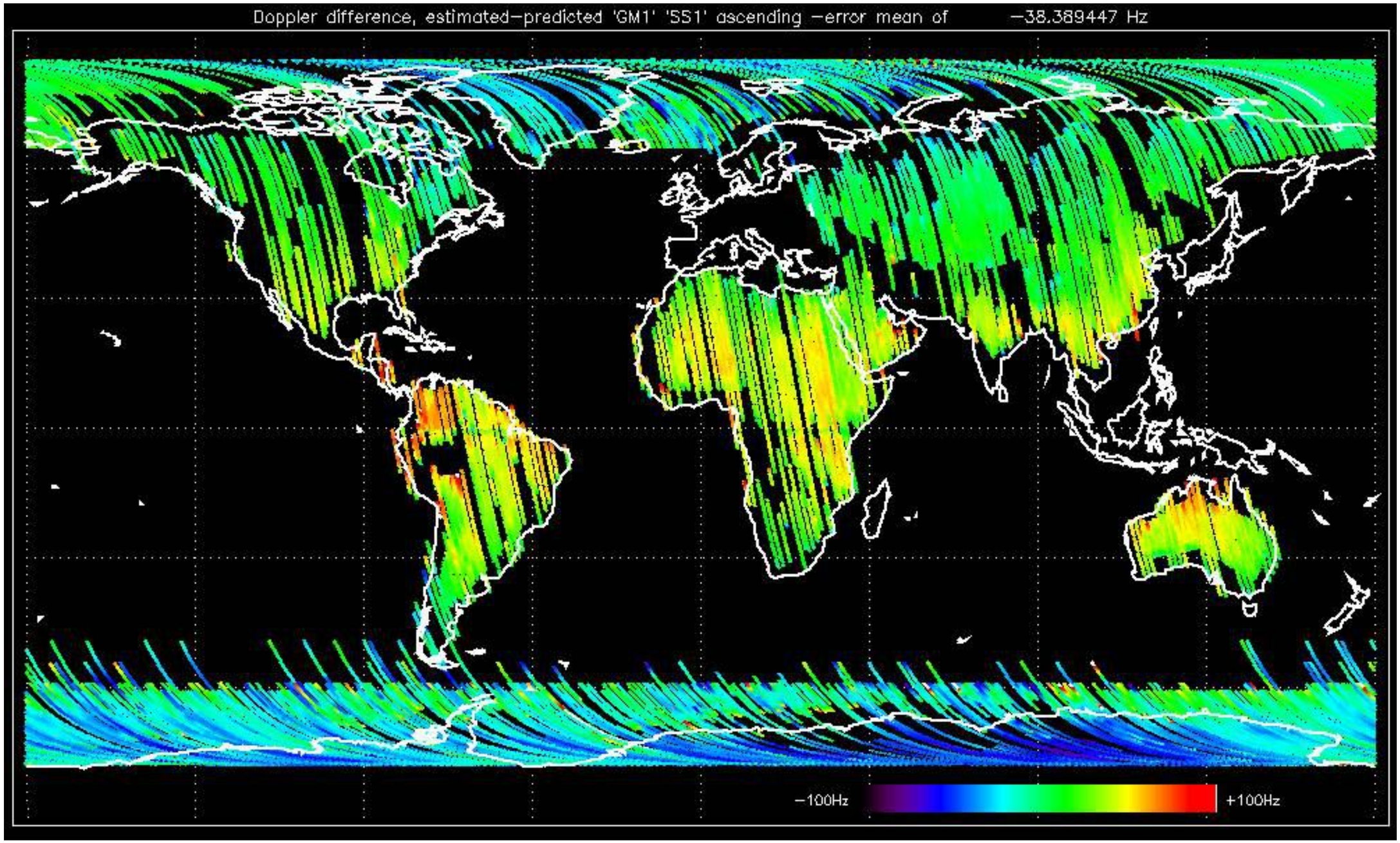

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

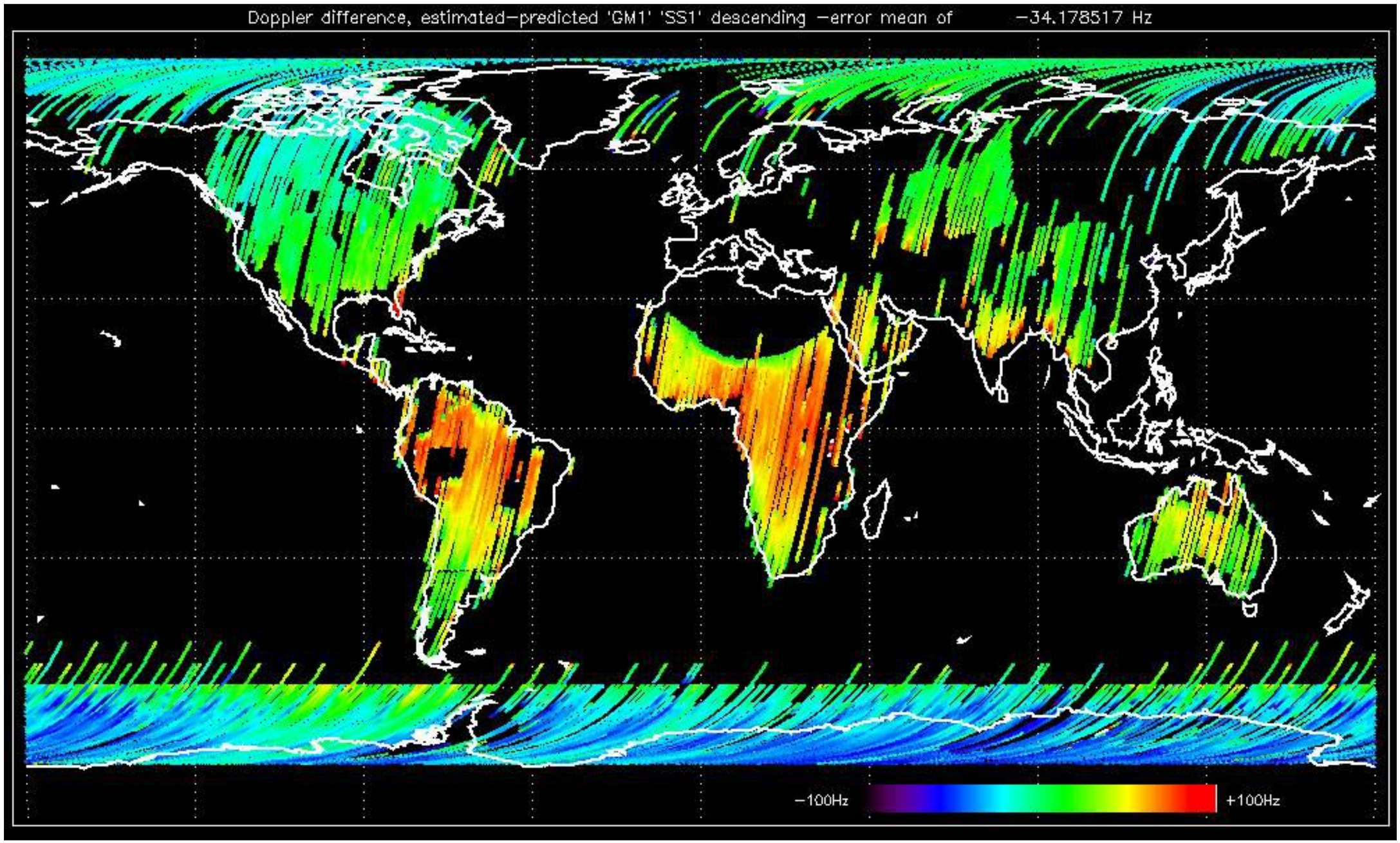

Doppler Bias[Hz]
1500
1000
500
0
−500
02
04
06
08
10
12
14
16
18
20
22
00
02
17−Dec
Date

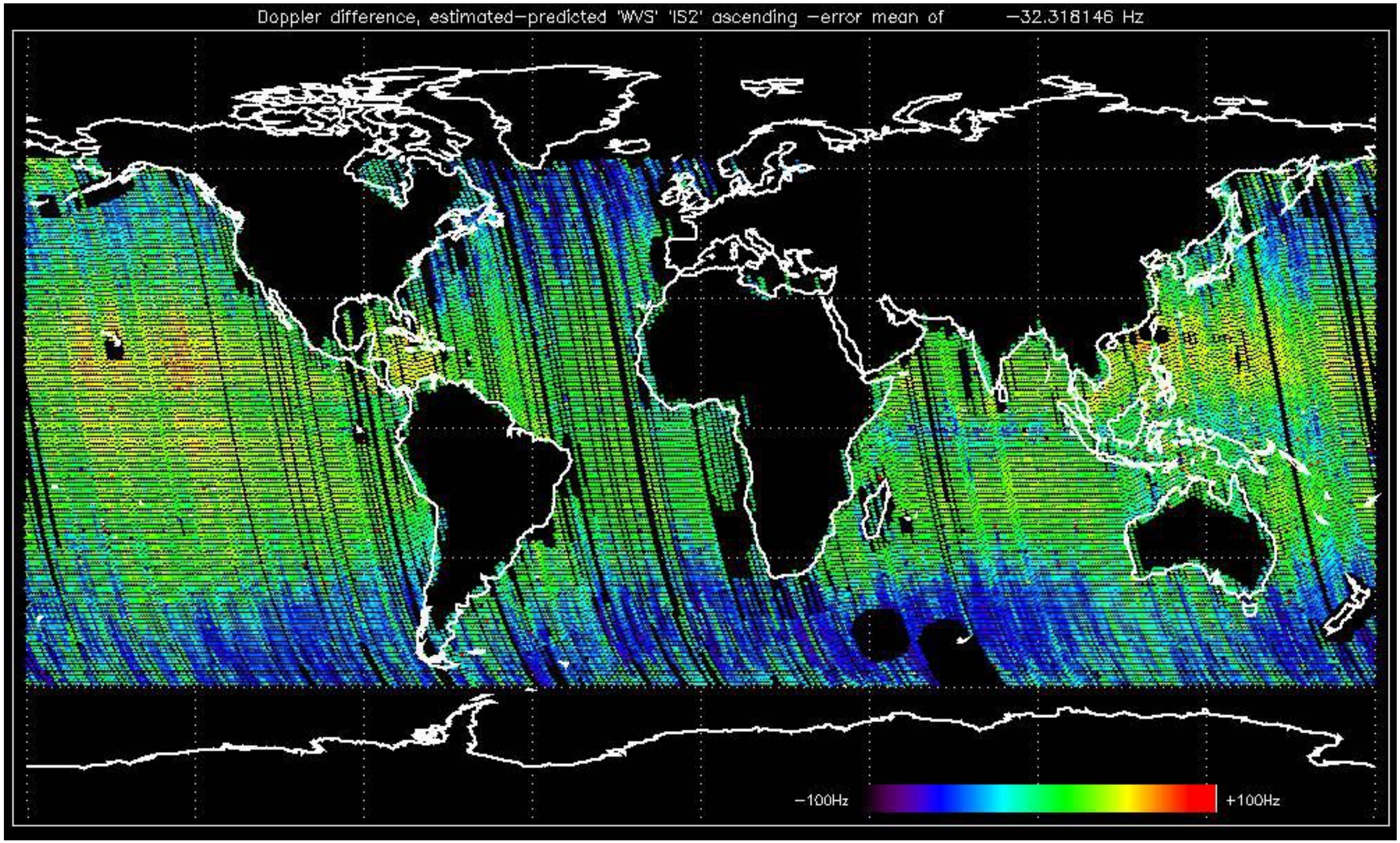

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

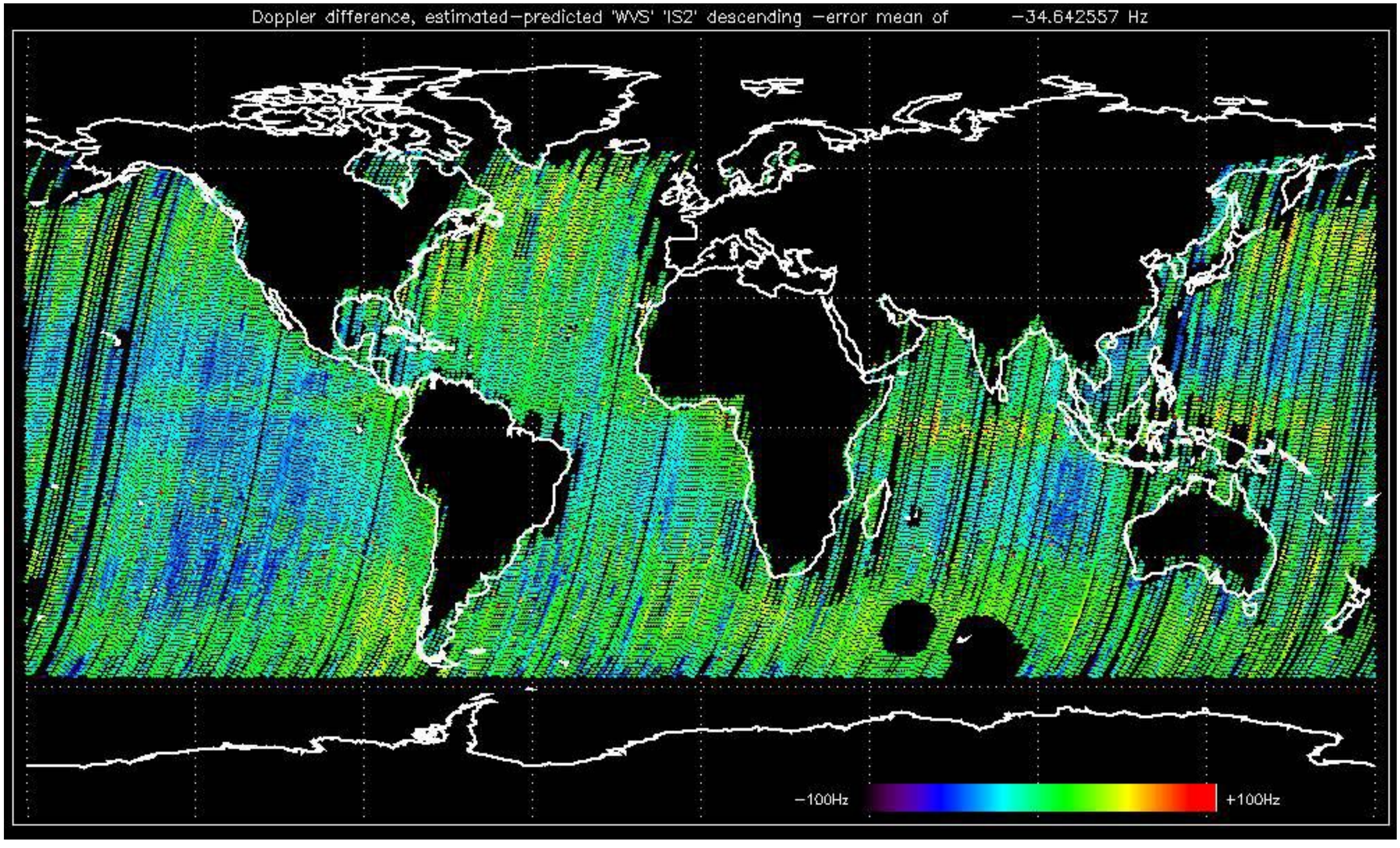

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −38.389447 Hz
−100Hz
+100Hz

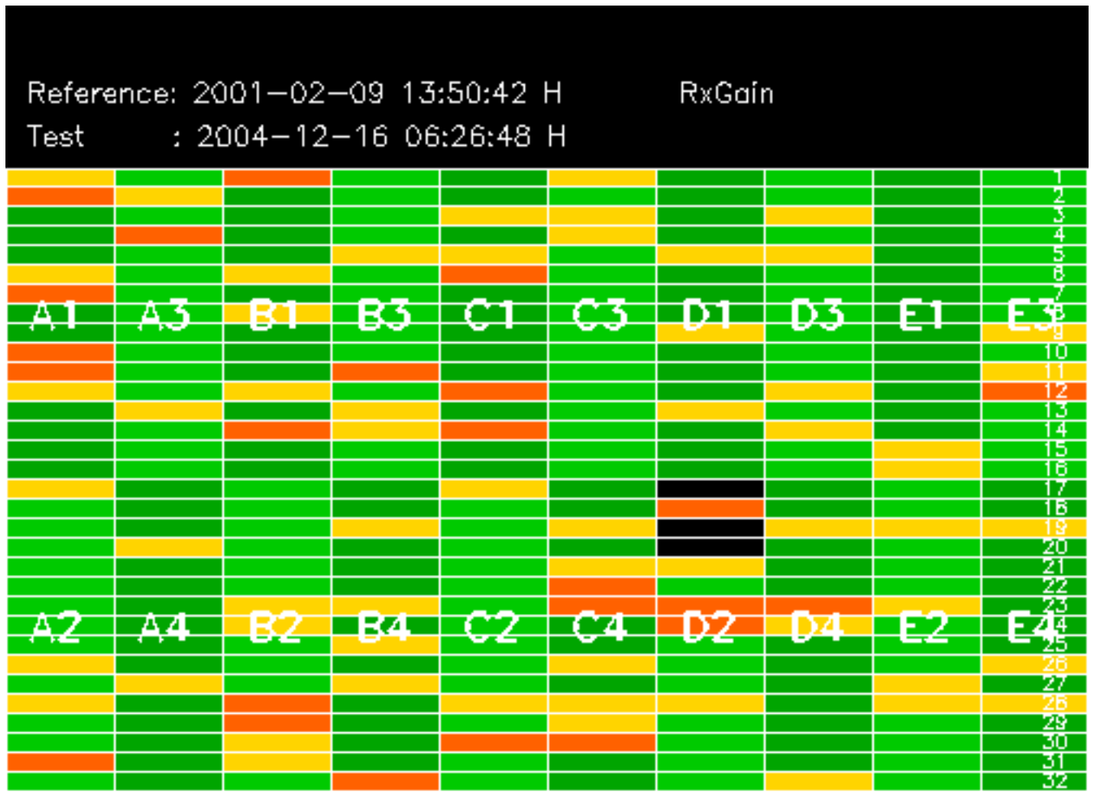

Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -34.178517 Hz
-100Hz
+100Hz

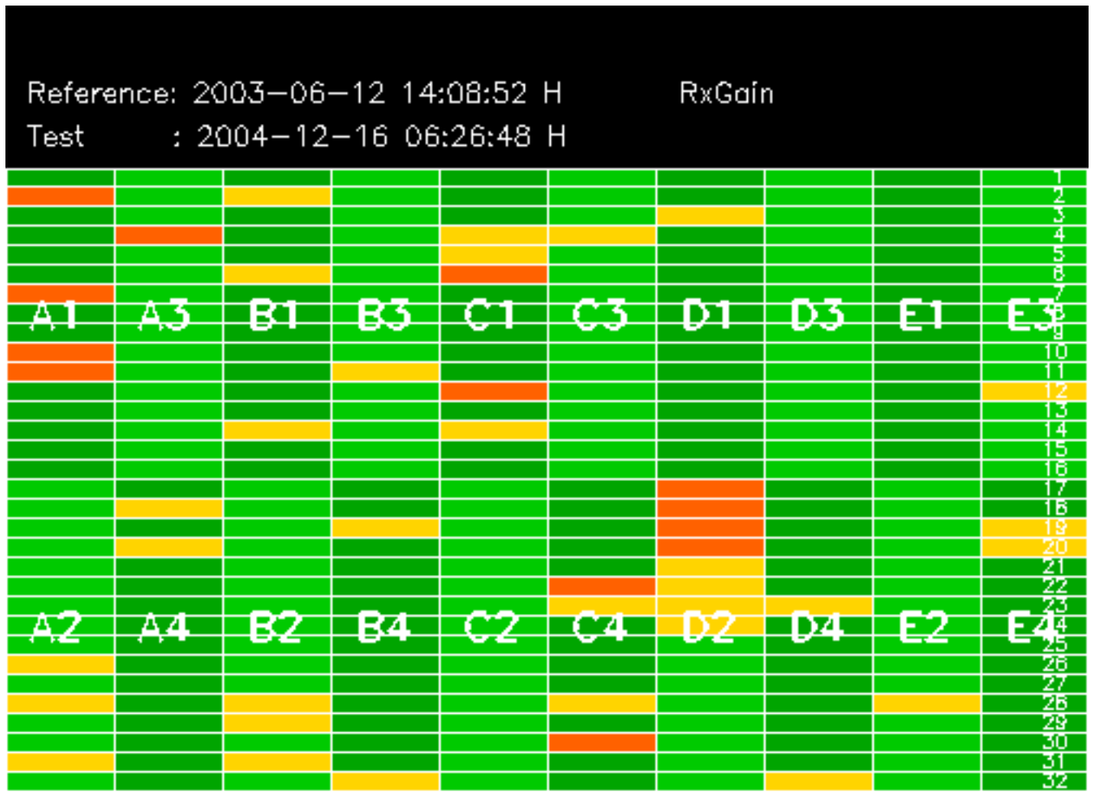

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.318146 Hz
−100Hz
+100Hz

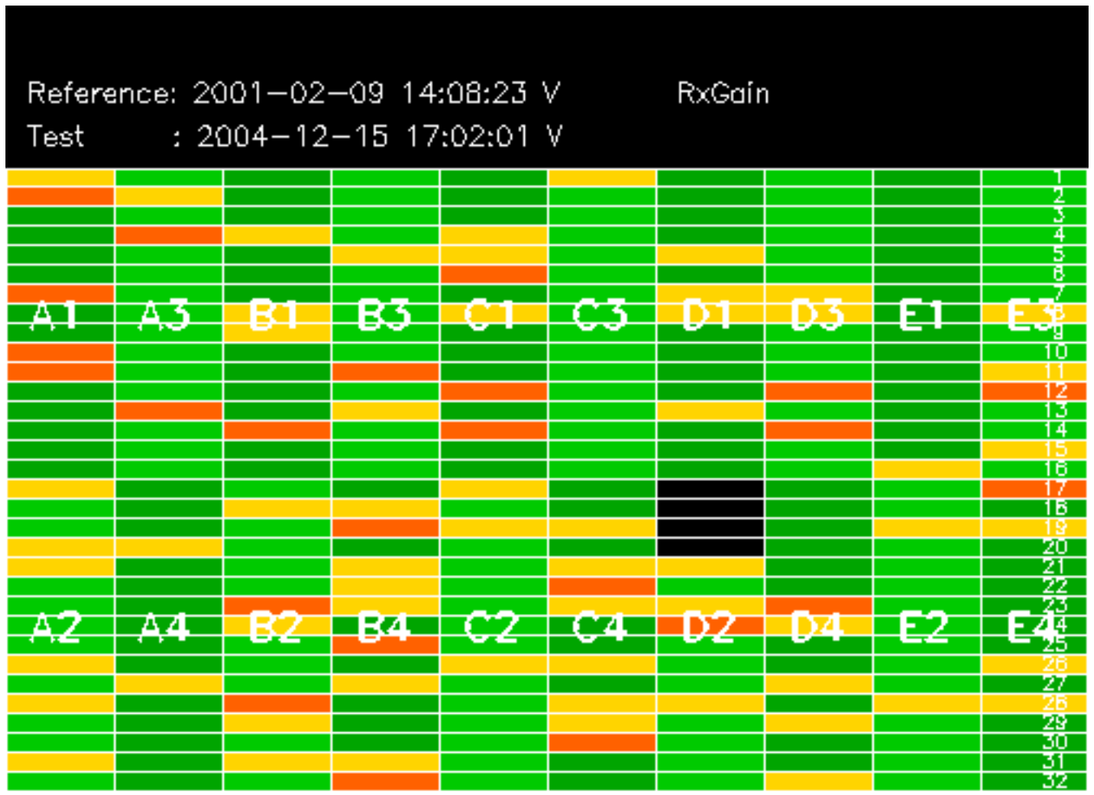

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.642557 Hz
−100Hz
+100Hz

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 : 2004-12-16 06:26:48 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 : 2004-12-16 06:26:48 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 17:02:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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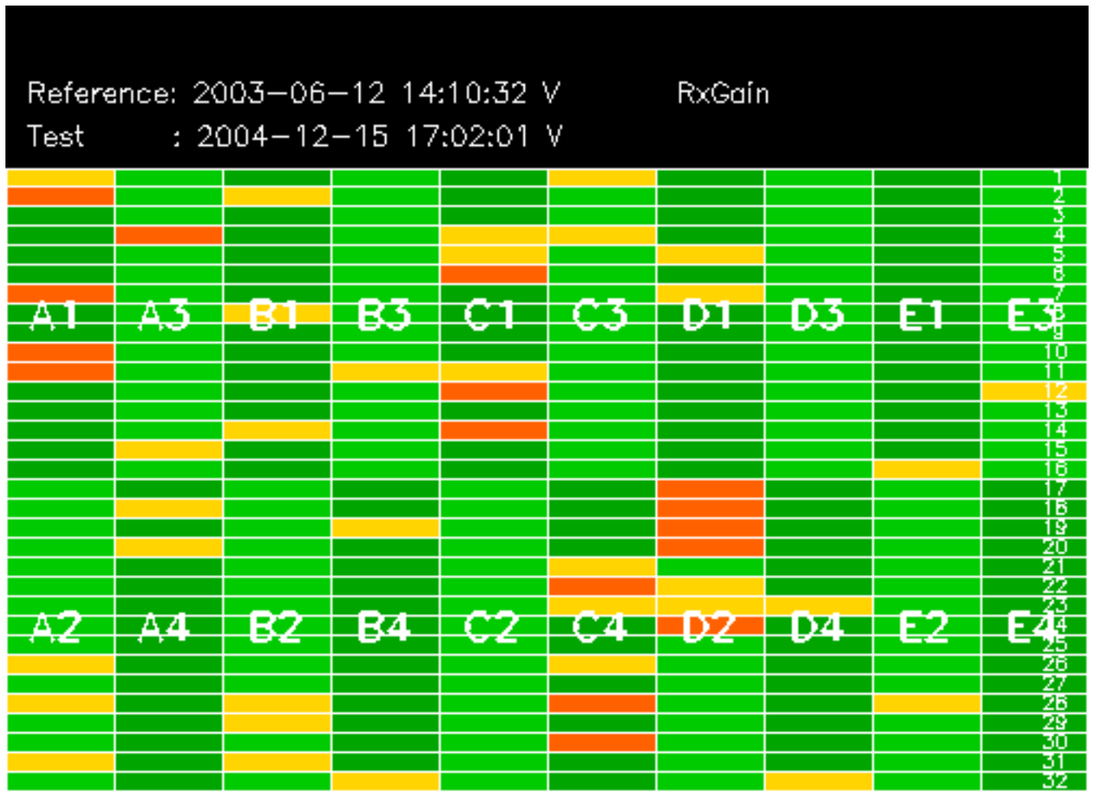
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-15 17:02:01 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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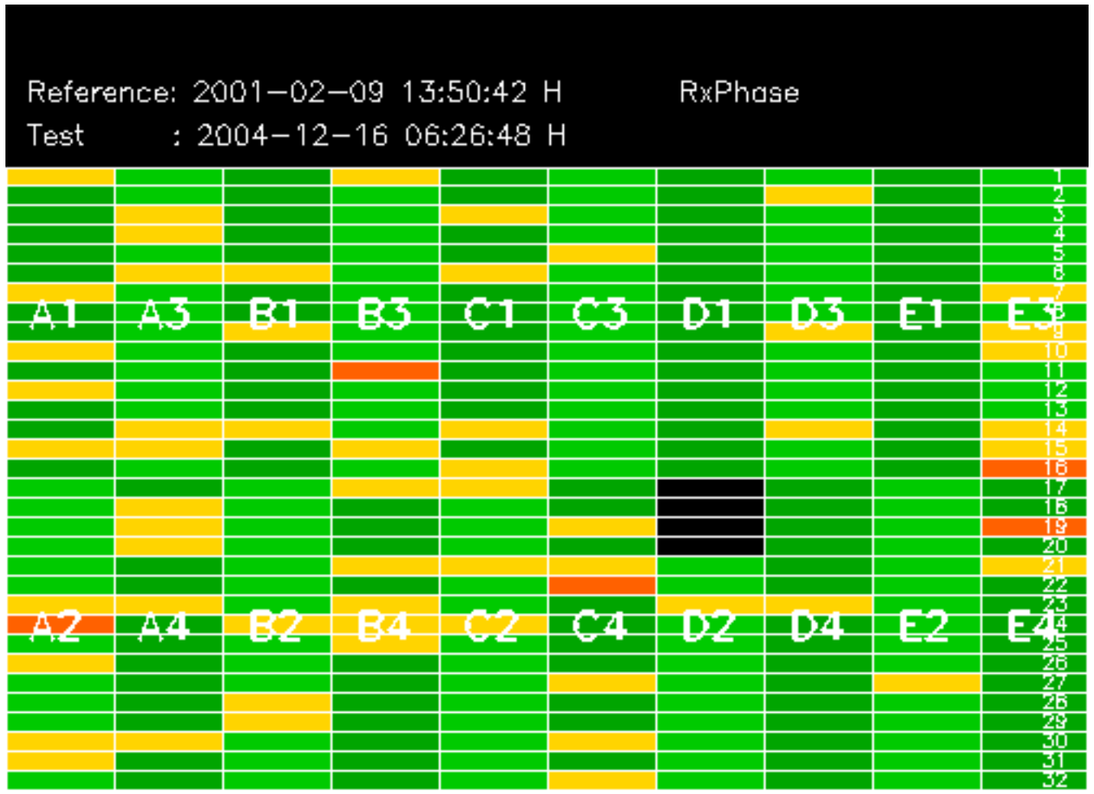
Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-16 06:26:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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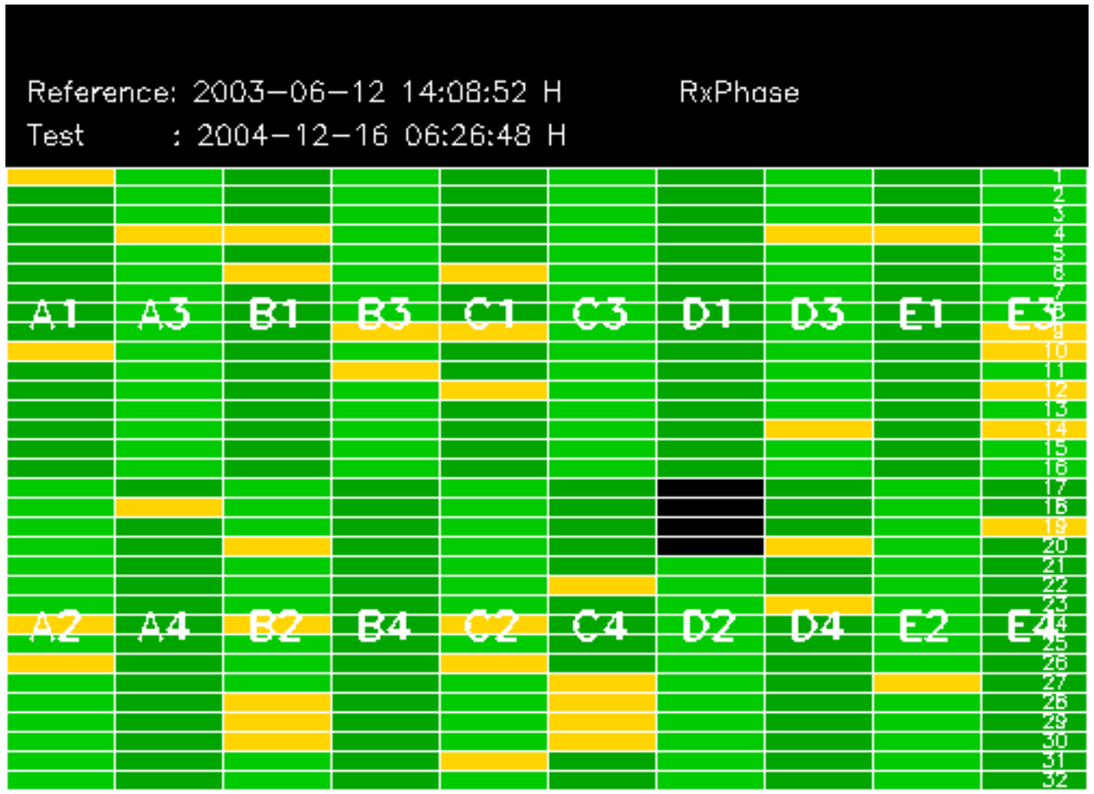
Reference: 2003-06-12 14:08:52 H
RxPhase
Test : 2004-12-16 06:26:48 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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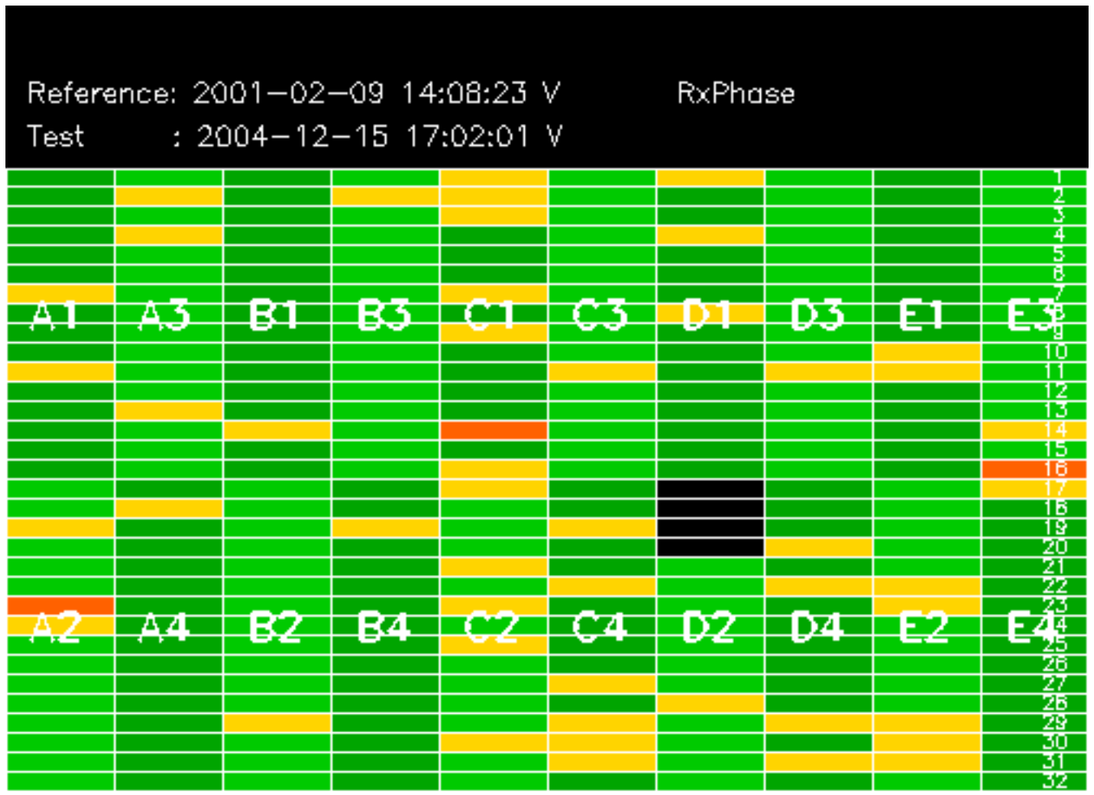
Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 17:02:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
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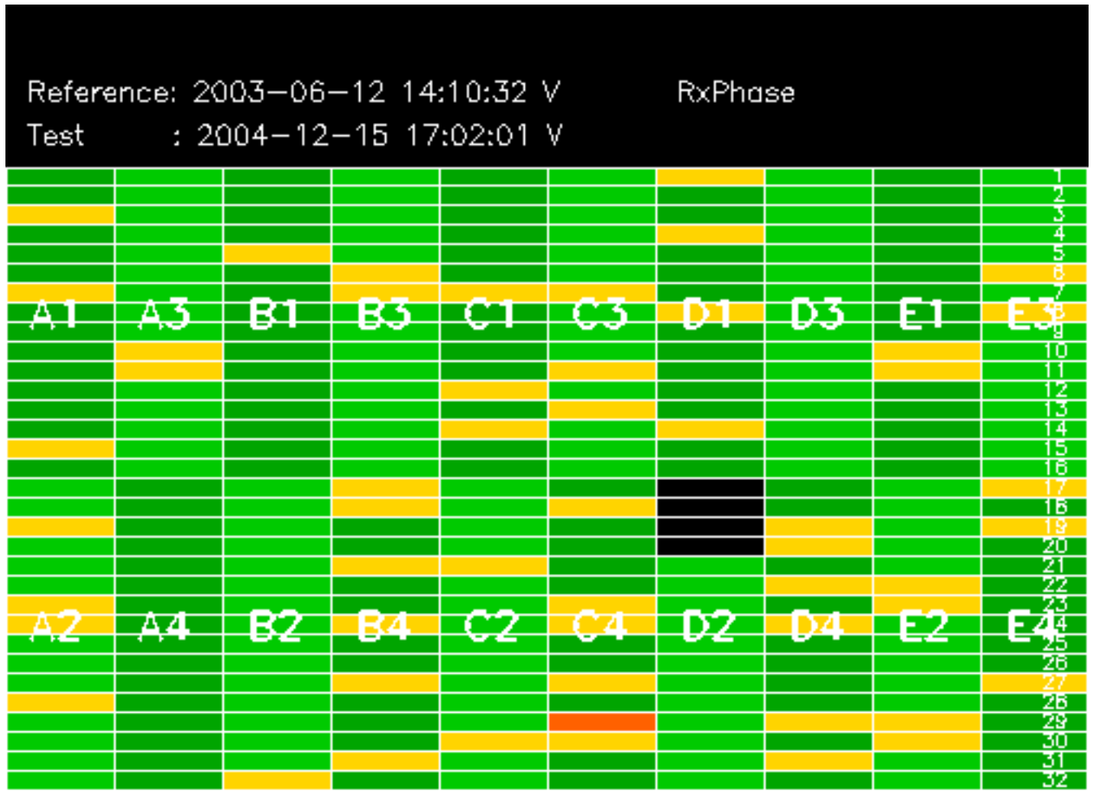
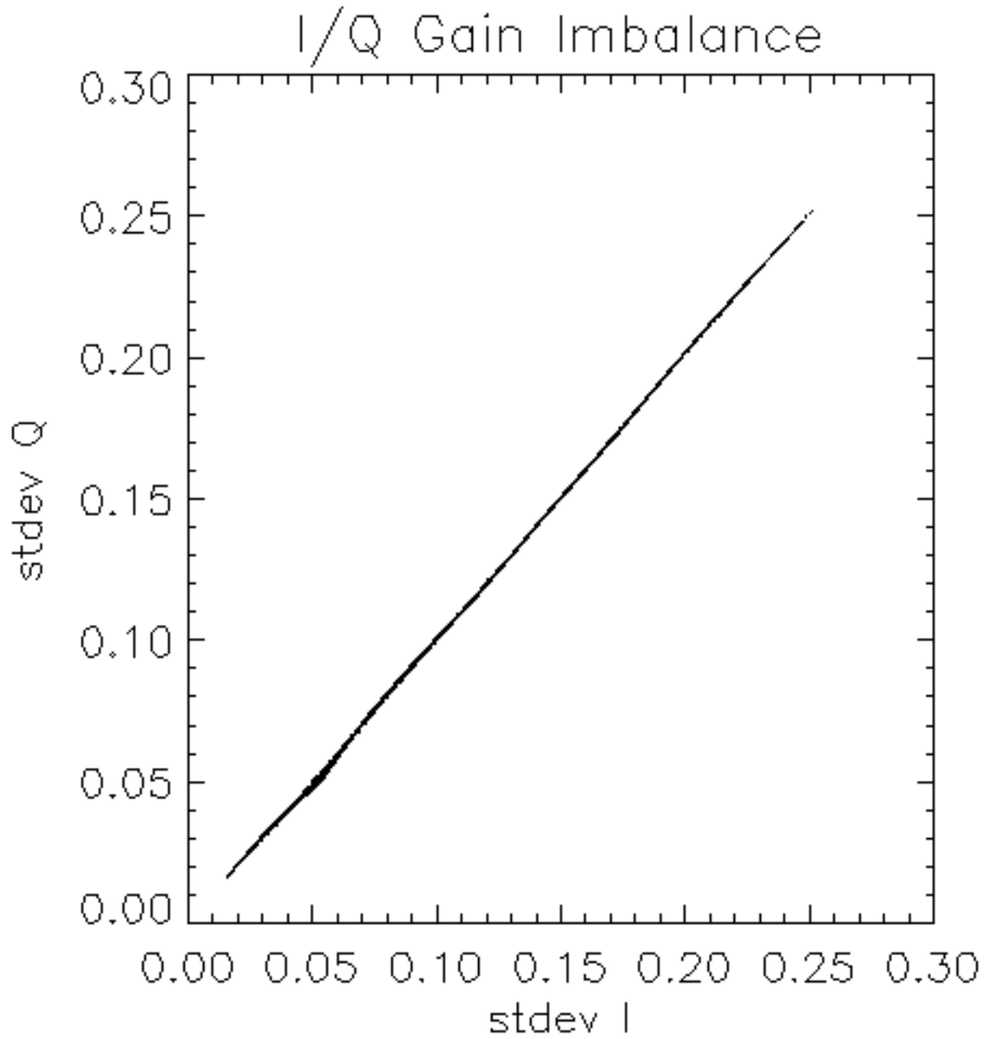
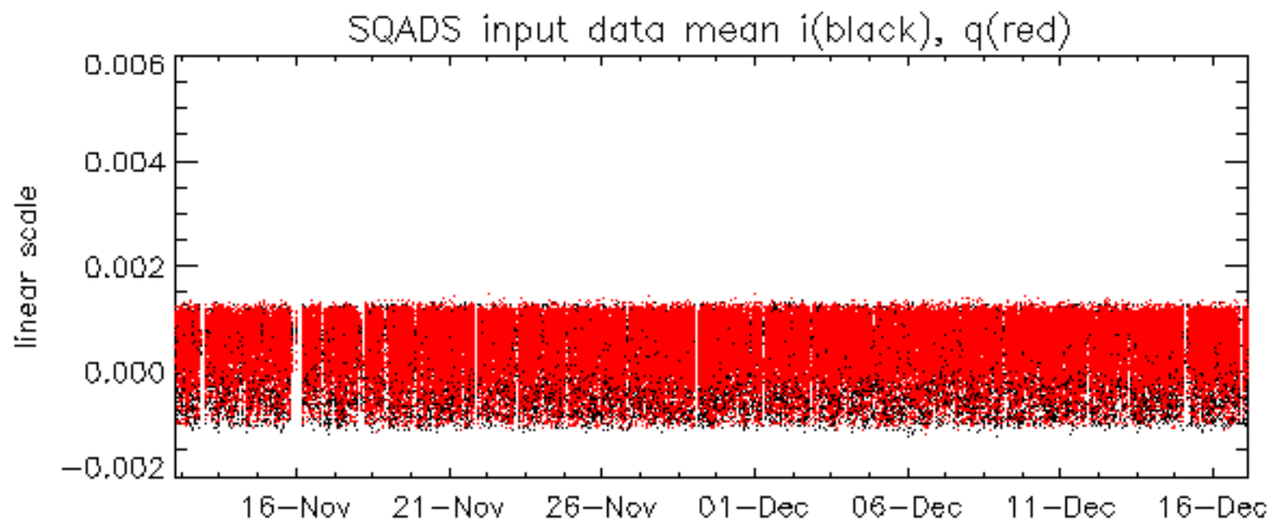
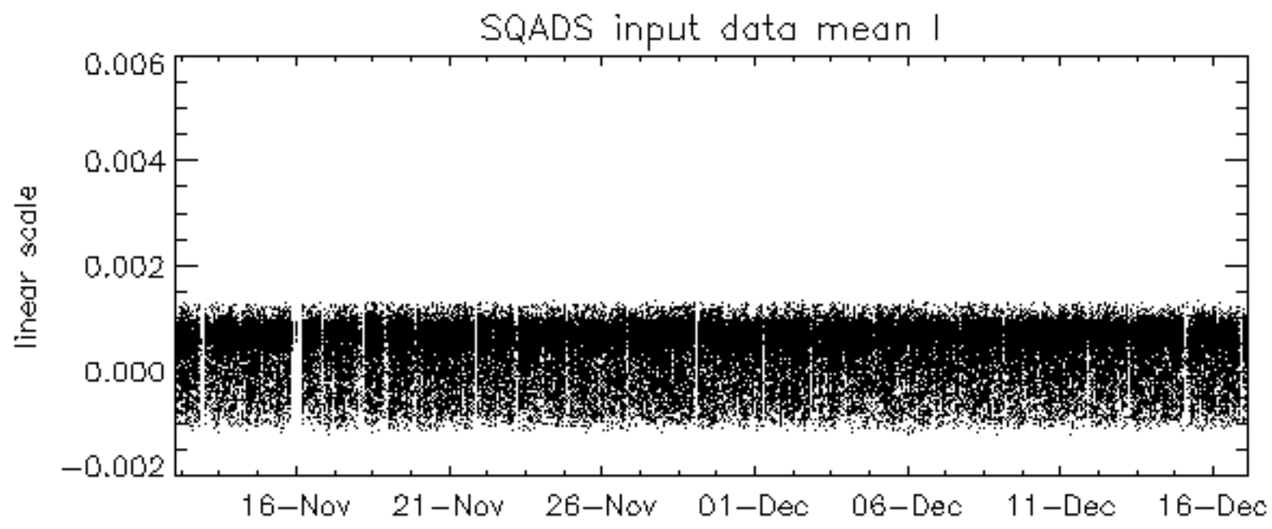
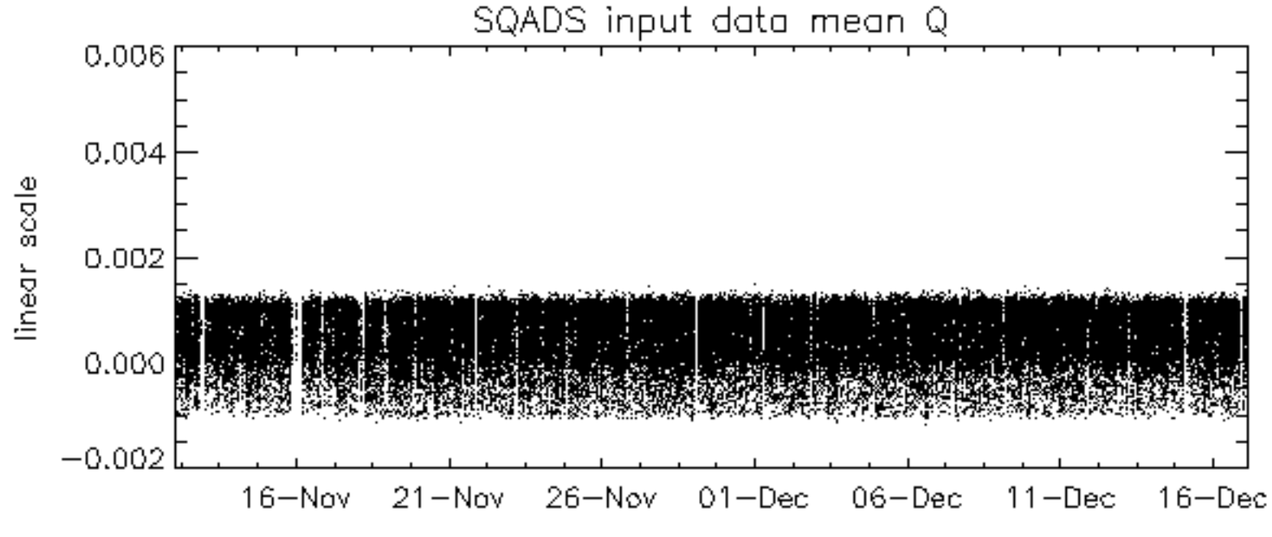
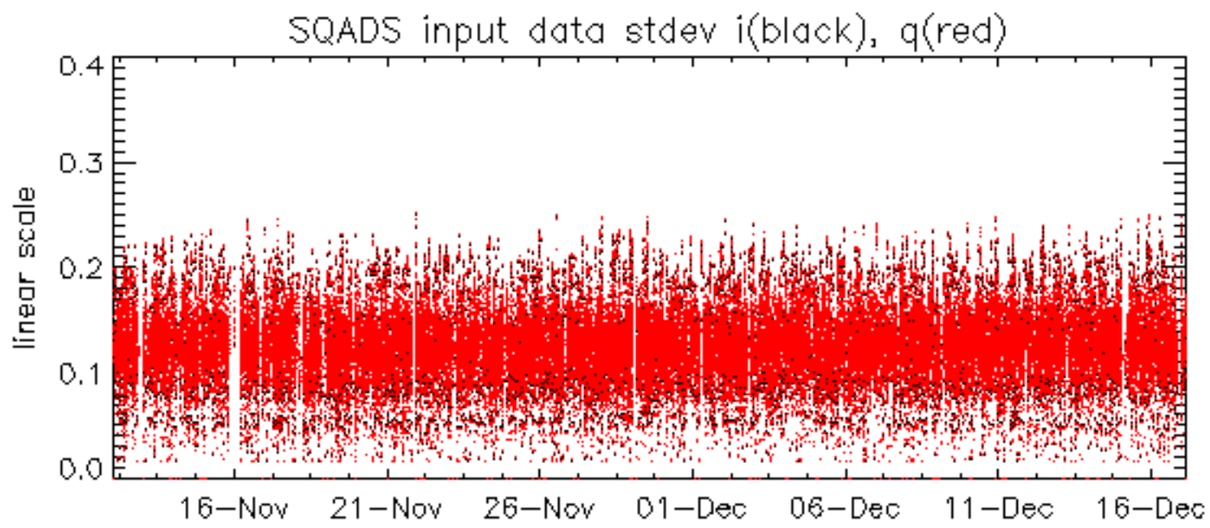

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-15 17:02:01 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

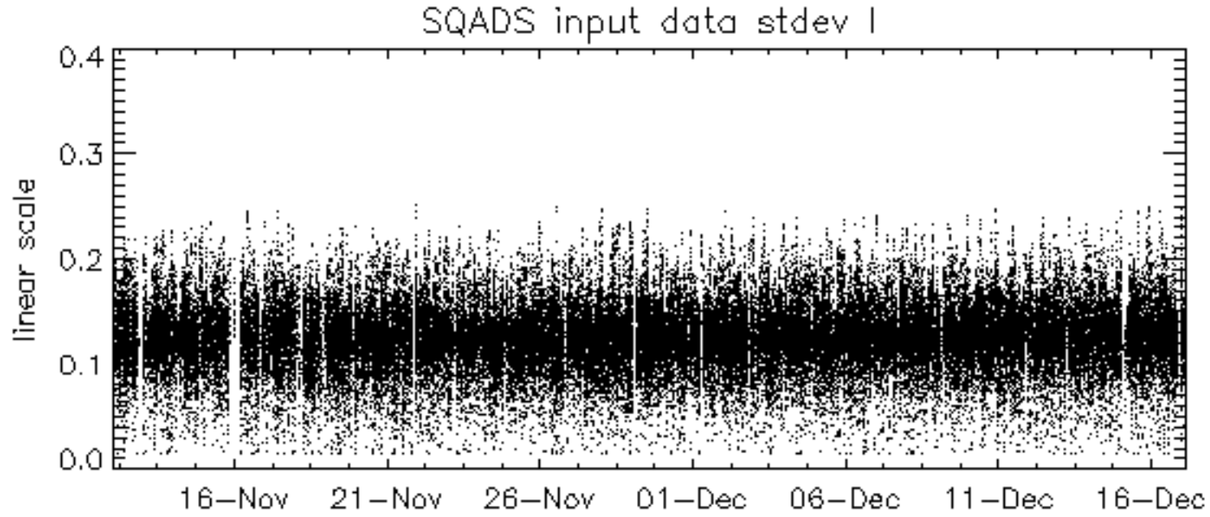

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

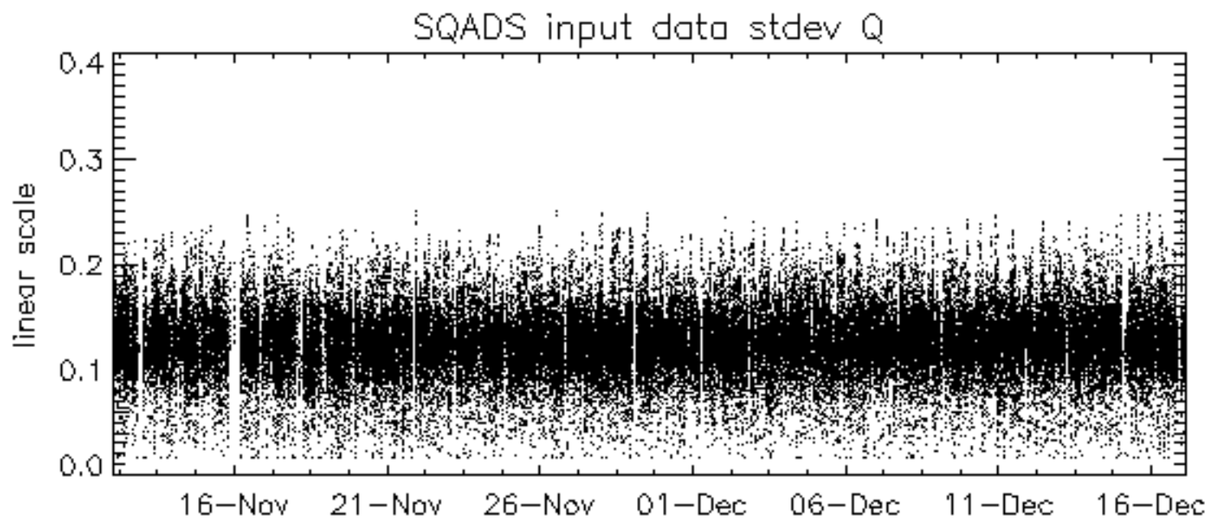

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

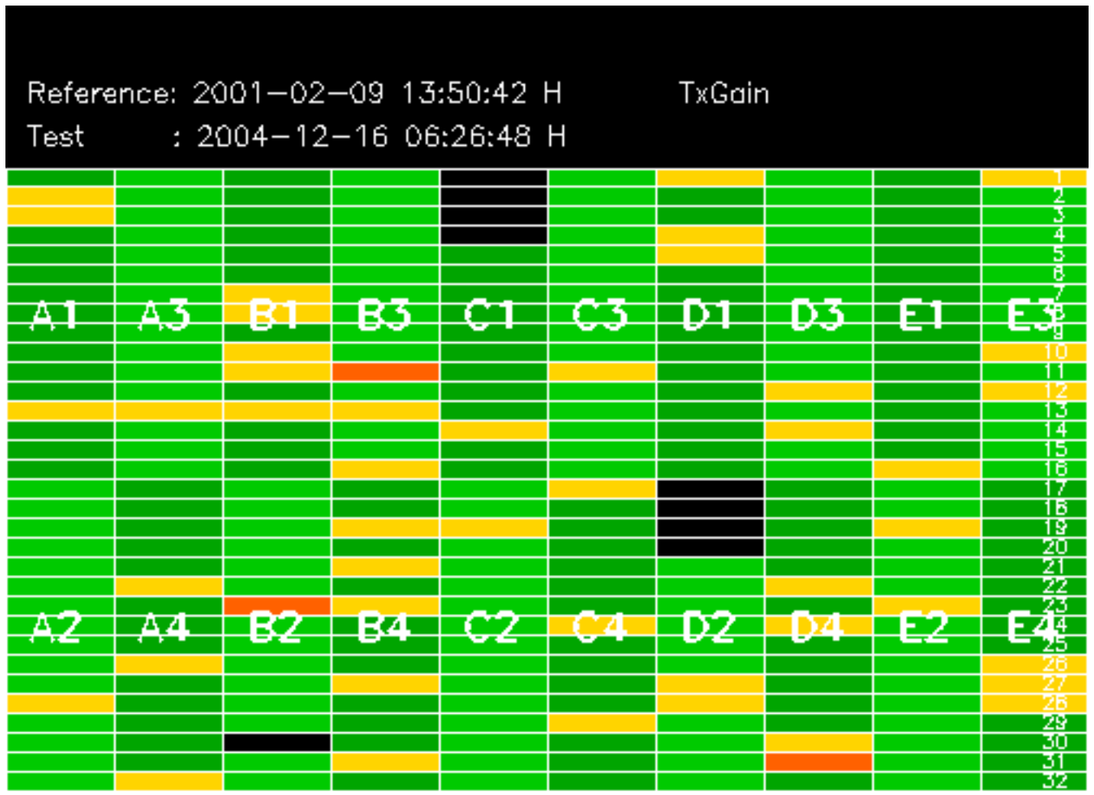

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec

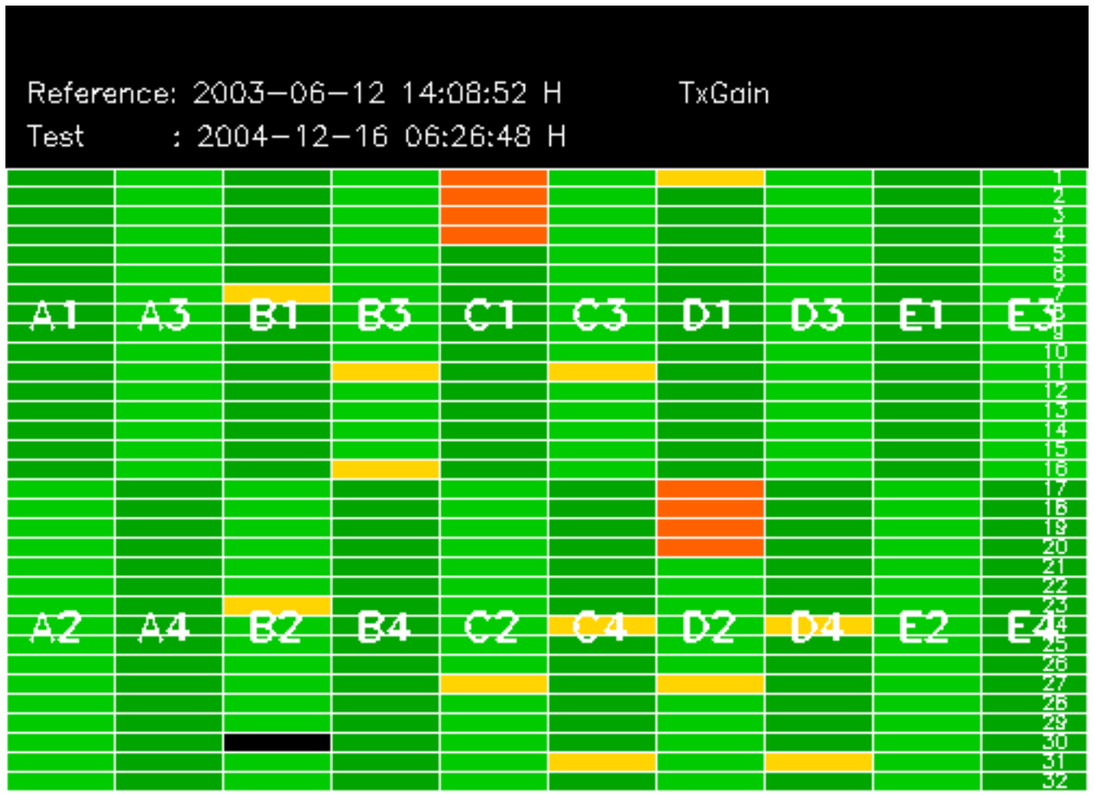

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−Nov
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec


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


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


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-16 06:26:48 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 : 2004-12-16 06:26:48 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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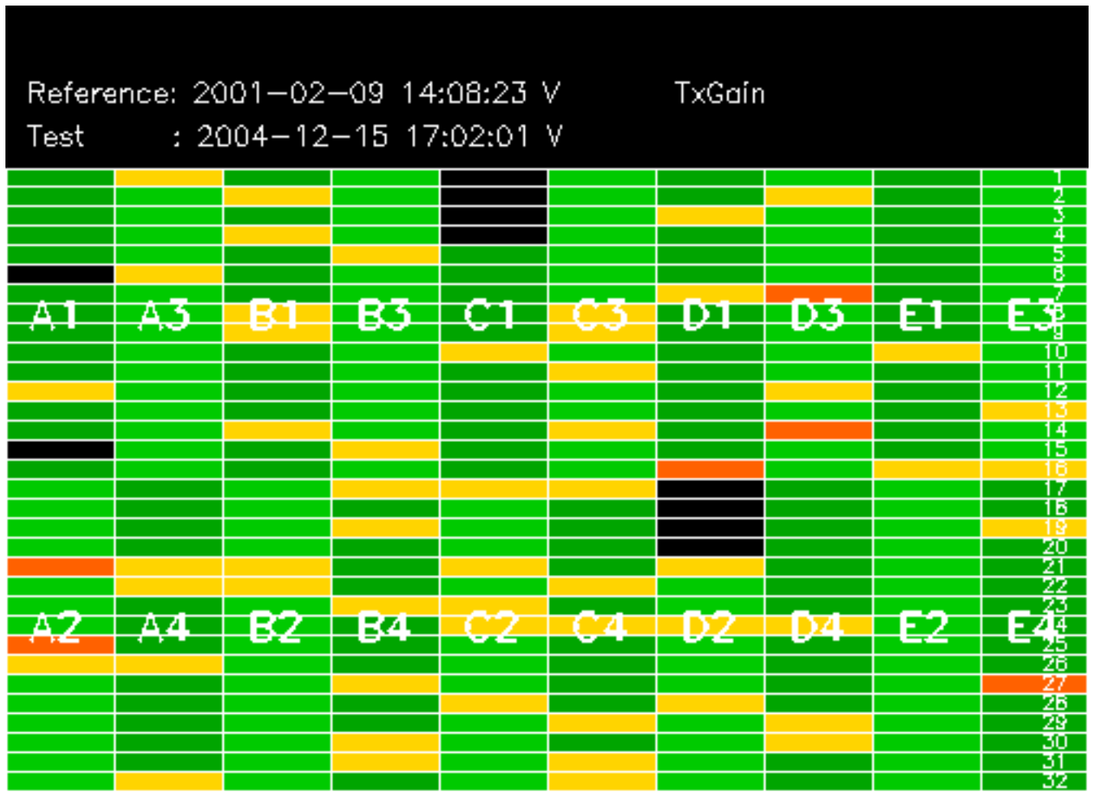
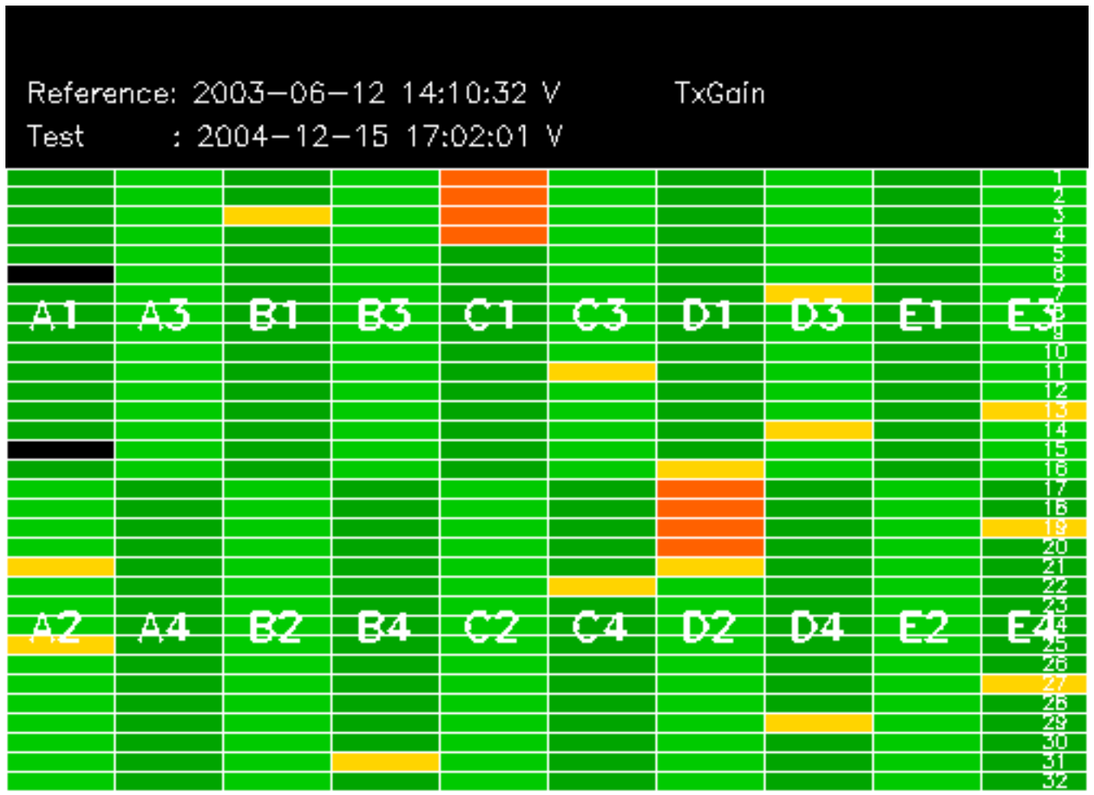
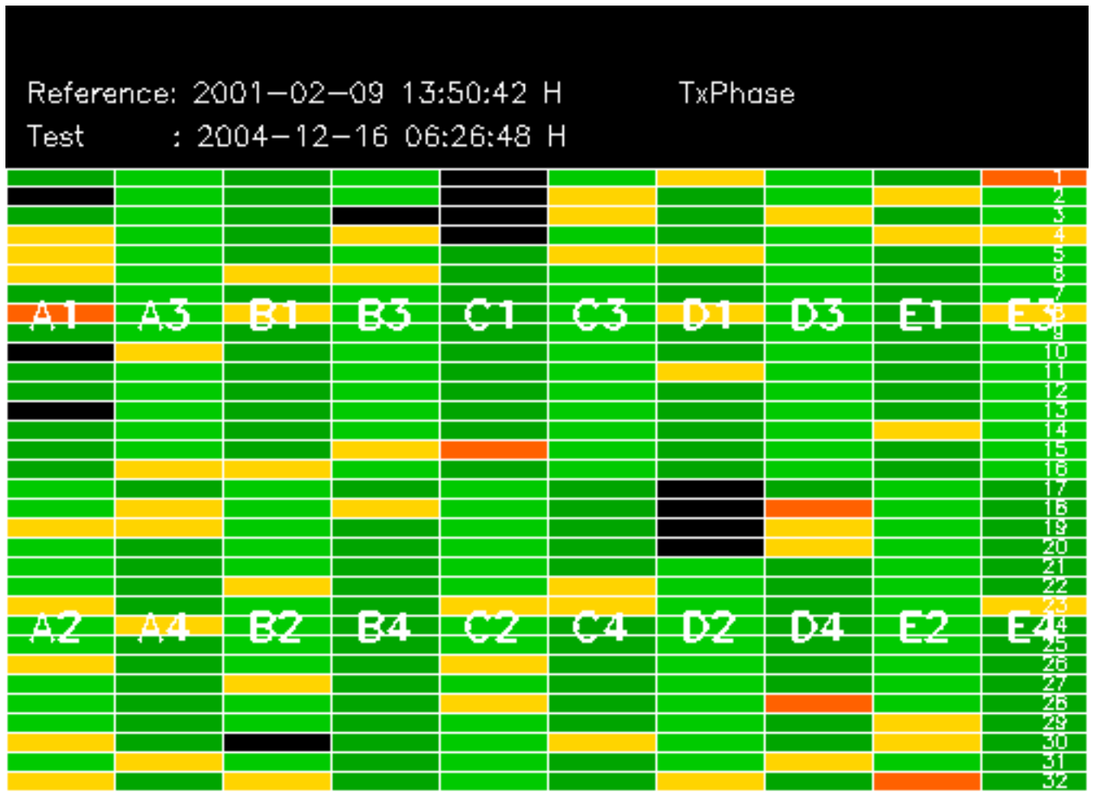

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-15 17:02:01 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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


Reference: 2001-02-09 13:50:42 H
Test : 2004-12-16 06:26:48 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
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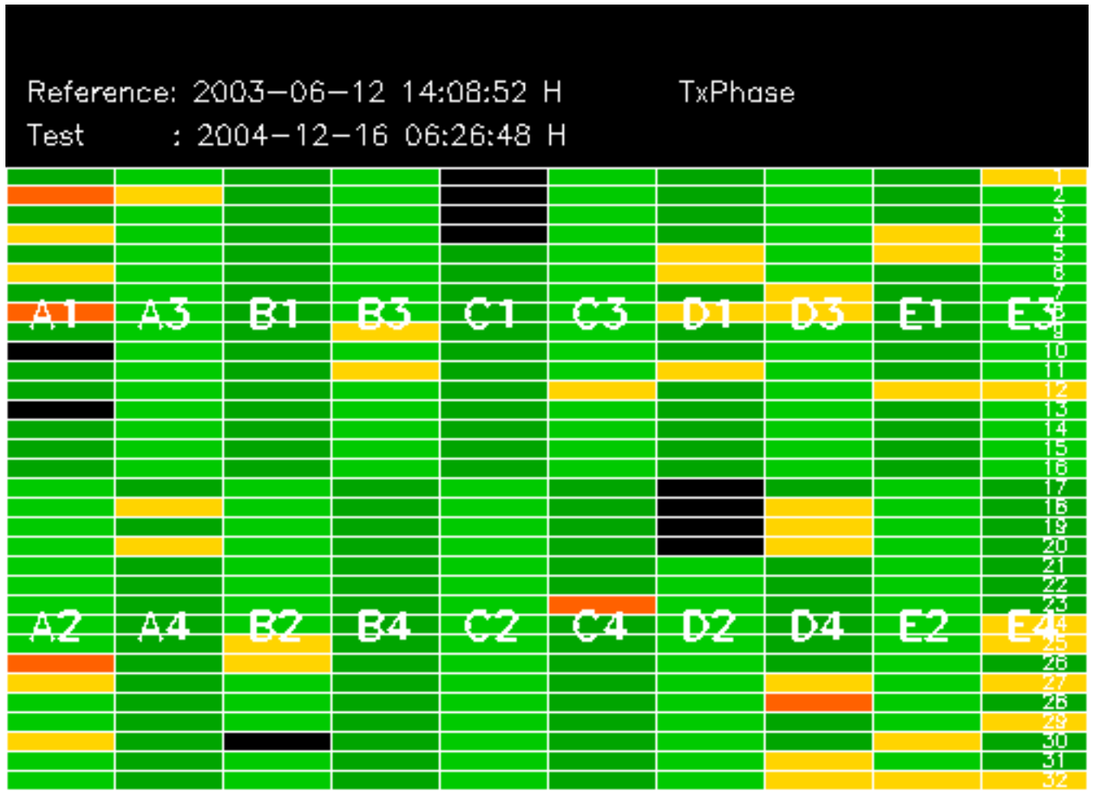
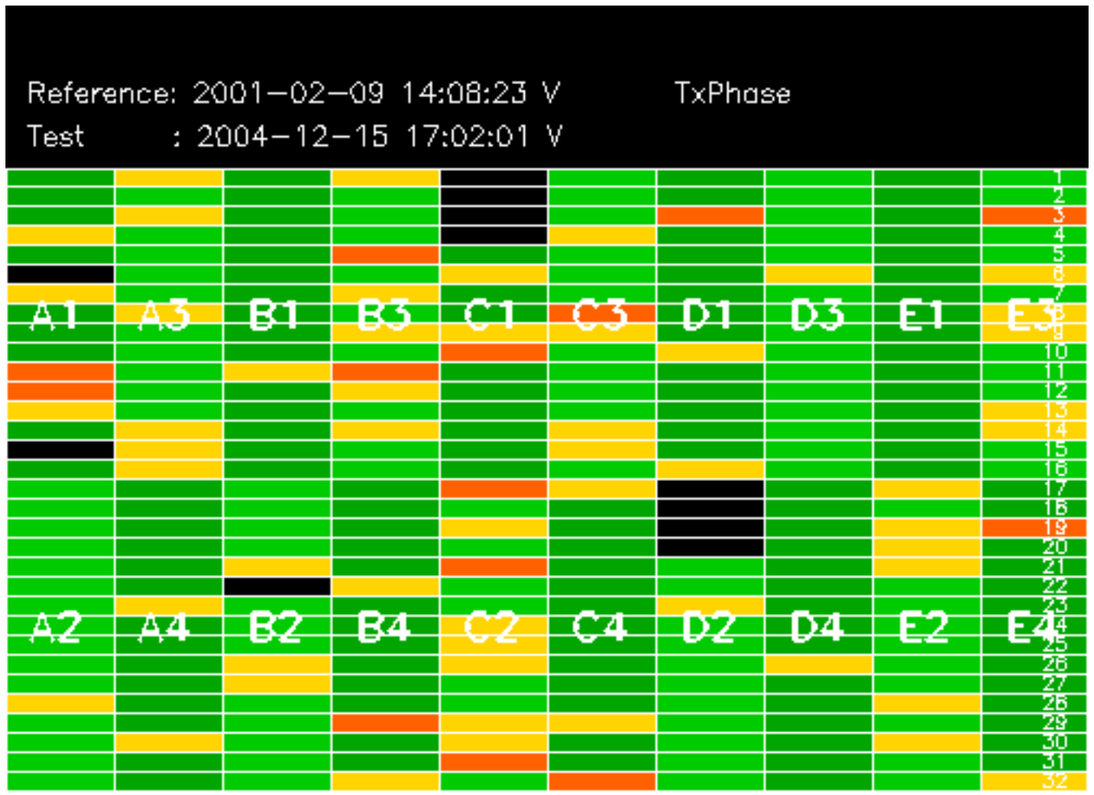
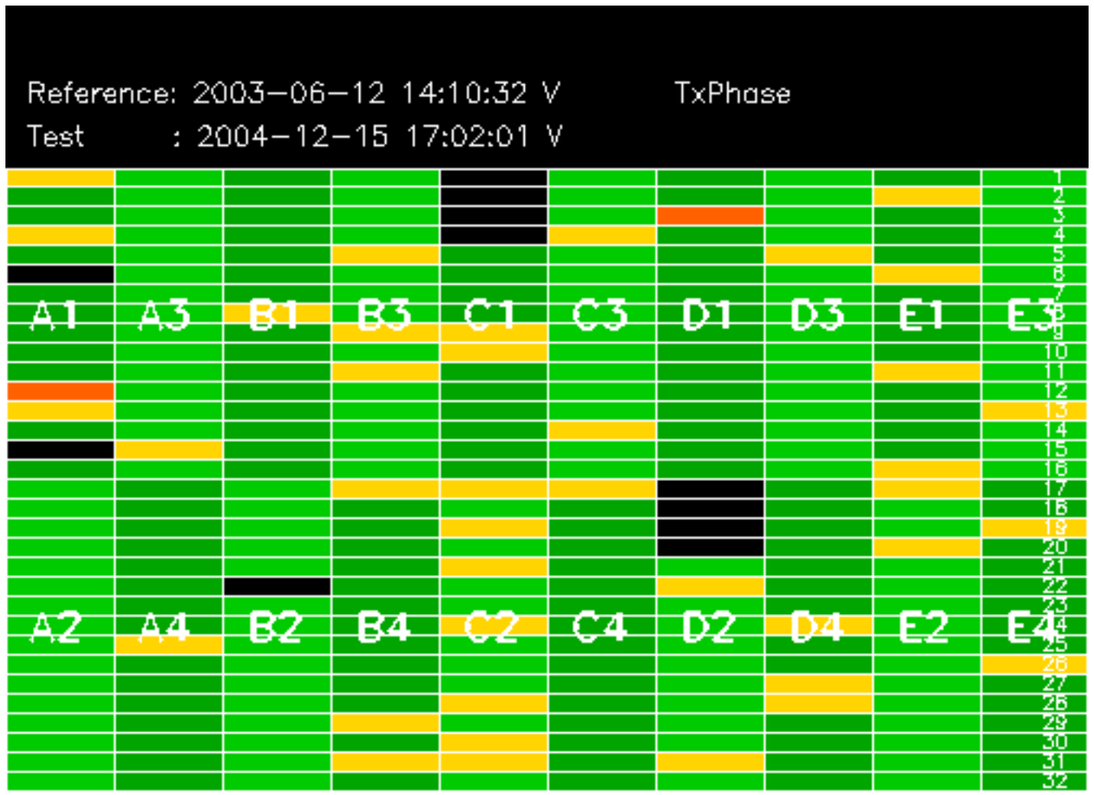

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-16 06:26:48 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


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


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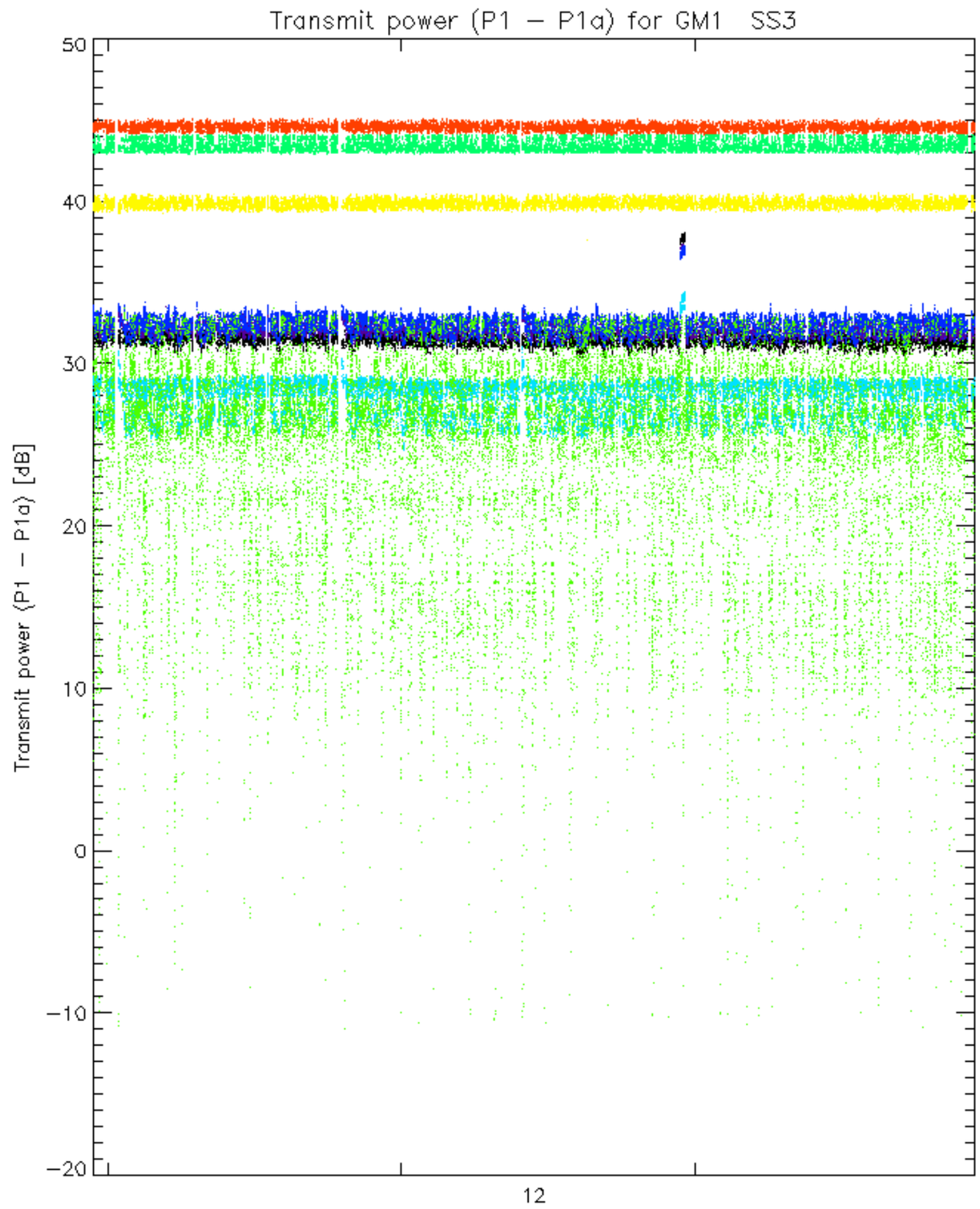
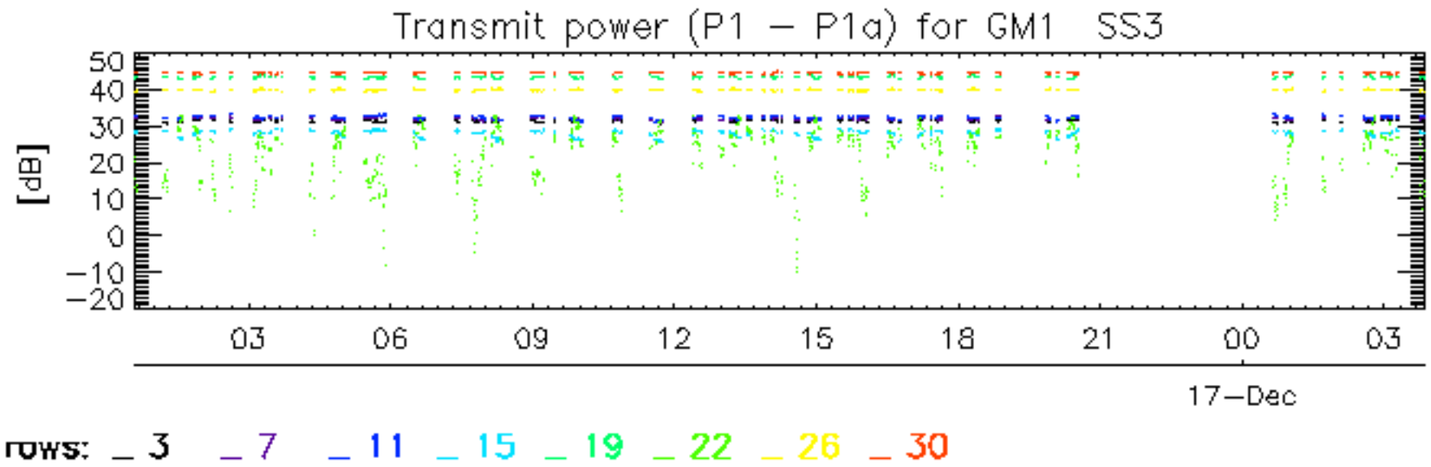
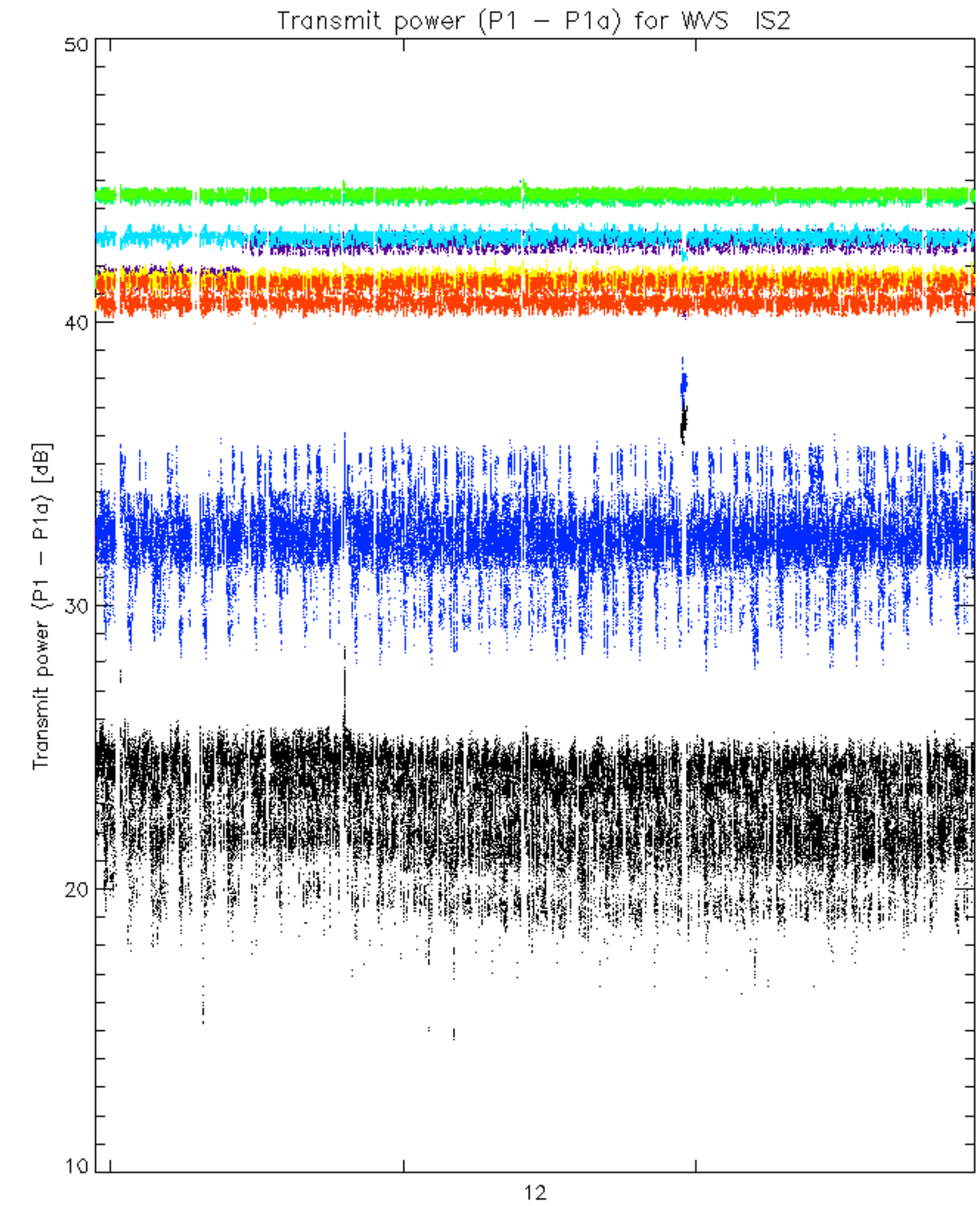
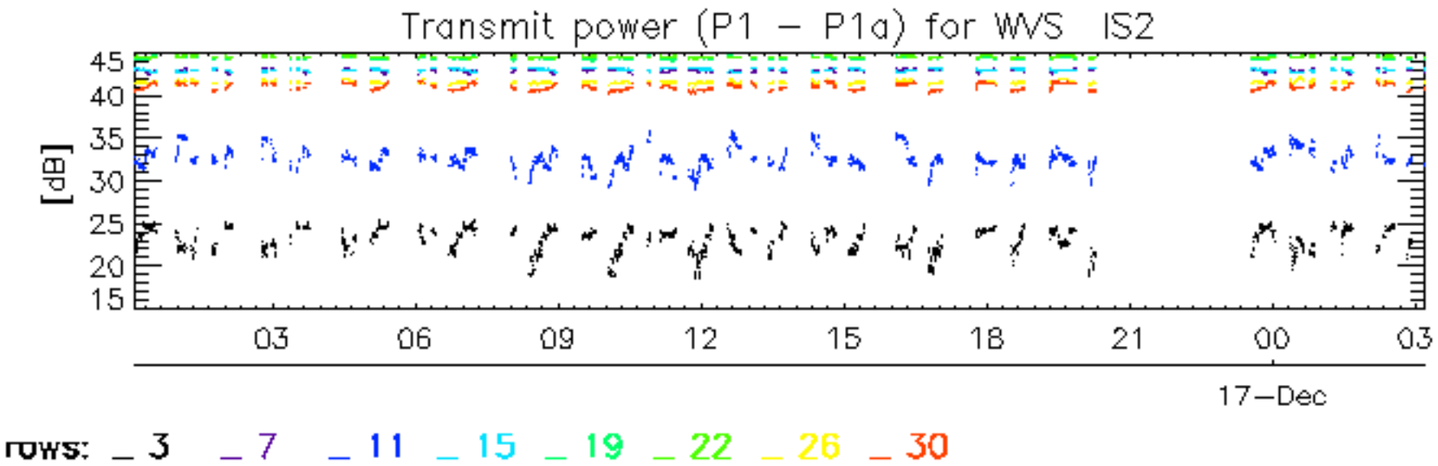

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
12
rows: 3 7 11 15 19 22 26 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
−20
03
06
09
12
15
18
21
00
03
17–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
12
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
17–Dec
rows: 3
7
11
15
19
22
26
30

No unavailabilities during the reported period.