PRELIMINARY REPORT OF 041222

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

last update on Wed Dec 22 11:01:17 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 2004-12-21 00:00:00 to 2004-12-22 11:01:17

PDHS-K					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	30	41	4	4	2
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	30	41	4	4	2
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	30	41	4	4	2
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	30	41	4	4	2

PDHS-E					
AUXILIARY FILE	**WVS**	**GM1**	**IMM**	**APM**	**WSM**
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	42	51	5	6	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	42	51	5	6	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	42	51	5	6	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	42	51	5	6	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	20041221 085030
H	20041220 092207

MSM in V/V polarisation

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

MSM in H/H polarisation

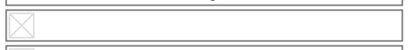
Pre-launch Reference	DDS-B (2003-06-12) reference
	
	
	
	

4 - Internal calibration Results

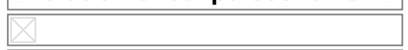
No anomalies observed.

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	-3.462686	0.028874	0.010239
7	P1	-3.106181	0.026732	0.039491
11	P1	-4.639995	0.045699	-0.039461
15	P1	-5.664277	0.037714	-0.022653
19	P1	-3.645455	0.006013	-0.036799
22	P1	-4.578129	0.016977	-0.003680
26	P1	-4.934629	0.023541	-0.000457
30	P1	-7.107408	0.013937	-0.049564
3	P1	-15.957767	0.115644	0.059815
7	P1	-15.473457	0.216256	-0.186742
11	P1	-20.719721	0.529675	-0.188854
15	P1	-11.625916	0.093357	0.030494
19	P1	-14.143490	0.032399	-0.051403
22	P1	-16.116009	0.463550	0.067711
26	P1	-17.775606	0.257167	0.042114
30	P1	-17.907372	0.305231	0.047730

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.364321	0.085179	0.018039
7	P2	-22.591129	0.162880	0.024016
11	P2	-14.935990	0.171088	0.141088
15	P2	-7.169828	0.115540	0.016677
19	P2	-9.731286	0.198126	0.061120
22	P2	-17.191652	0.098415	0.052040
26	P2	-16.529734	0.114979	0.000700

30	P2	-18.989834	0.082563	0.078314

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210951	0.006937	-0.016923
7	P3	-8.210951	0.006937	-0.016922
11	P3	-8.210941	0.006935	-0.016971
15	P3	-8.210936	0.006934	-0.017037
19	P3	-8.210908	0.006934	-0.017171
22	P3	-8.210888	0.006936	-0.017300
26	P3	-8.210918	0.006936	-0.017157
30	P3	-8.210958	0.006922	-0.018271

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	-2.845064	0.112324	-0.047783
7	P1	-2.978519	0.064877	-0.009356
11	P1	-3.941758	0.049349	-0.026018
15	P1	-3.518958	0.079306	-0.013577
19	P1	-3.602320	0.012705	-0.030105
22	P1	-5.614026	0.069256	-0.011193
26	P1	-6.505199	0.023270	-0.050247
30	P1	-6.300263	0.042278	-0.042338
3	P1	-10.669268	0.059244	-0.199306
7	P1	-10.107616	0.156144	-0.062543
11	P1	-12.413292	0.200391	-0.056162

15	P1	-11.727594	0.100102	0.010880
19	P1	-15.633063	0.048777	-0.049830
22	P1	-24.097872	2.139123	-0.177924
26	P1	-15.074701	0.388401	0.060267
30	P1	-20.142786	0.926814	0.063128

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.045139	0.034746	0.033512
7	P2	-22.636744	0.028790	0.085714
11	P2	-10.728812	0.032609	0.171246
15	P2	-5.062915	0.023209	-0.015028
19	P2	-6.967547	0.032565	-0.011847
22	P2	-7.320225	0.025451	0.049910
26	P2	-23.960875	0.018169	-0.025334
30	P2	-22.044687	0.018594	0.078652

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044489	0.002585	-0.009331
7	P3	-8.044565	0.002592	-0.009144
11	P3	-8.044578	0.002582	-0.009119
15	P3	-8.044474	0.002590	-0.009436
19	P3	-8.044624	0.002593	-0.009192
22	P3	-8.044532	0.002595	-0.009276
26	P3	-8.044652	0.002590	-0.009327
30	P3	-8.044517	0.002575	-0.009255

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	0.000441107
	stdev	2.41608e-07
MEAN Q	mean	0.000501327
	stdev	2.54566e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.125677
	stdev	0.00100220
STDEV Q	mean	0.125914
	stdev	0.00101137

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

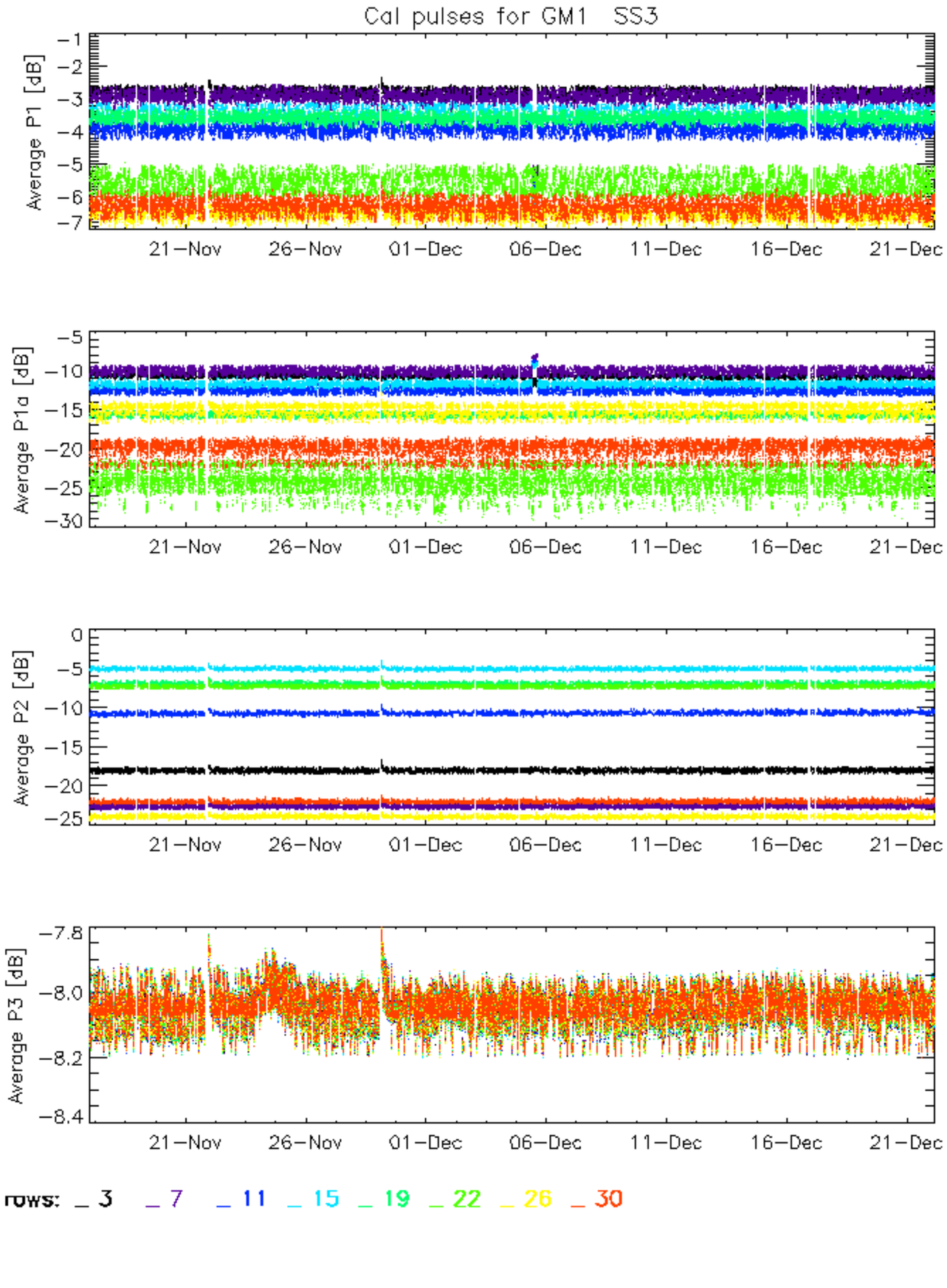
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

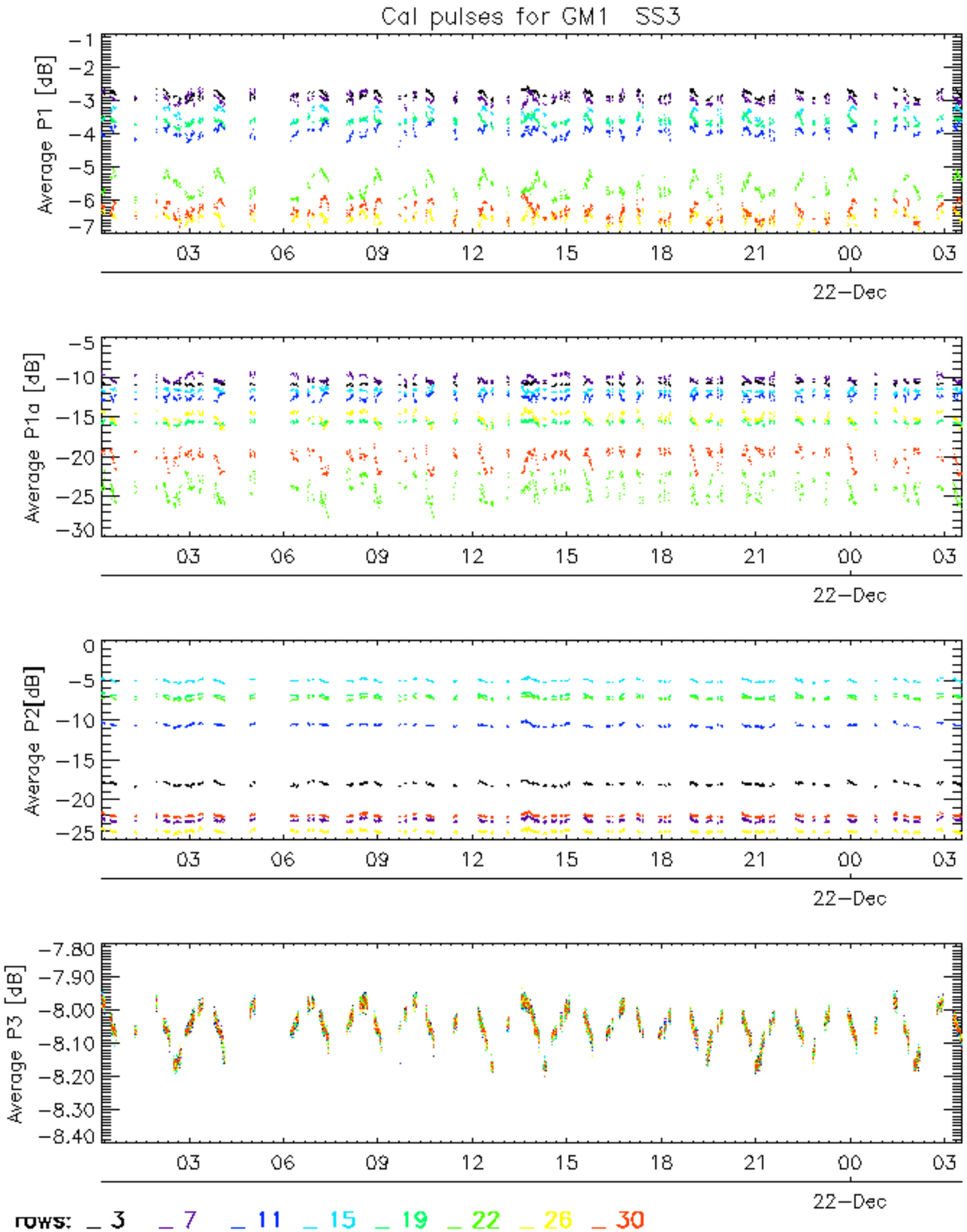
6.5 - Absolute Doppler for GM1

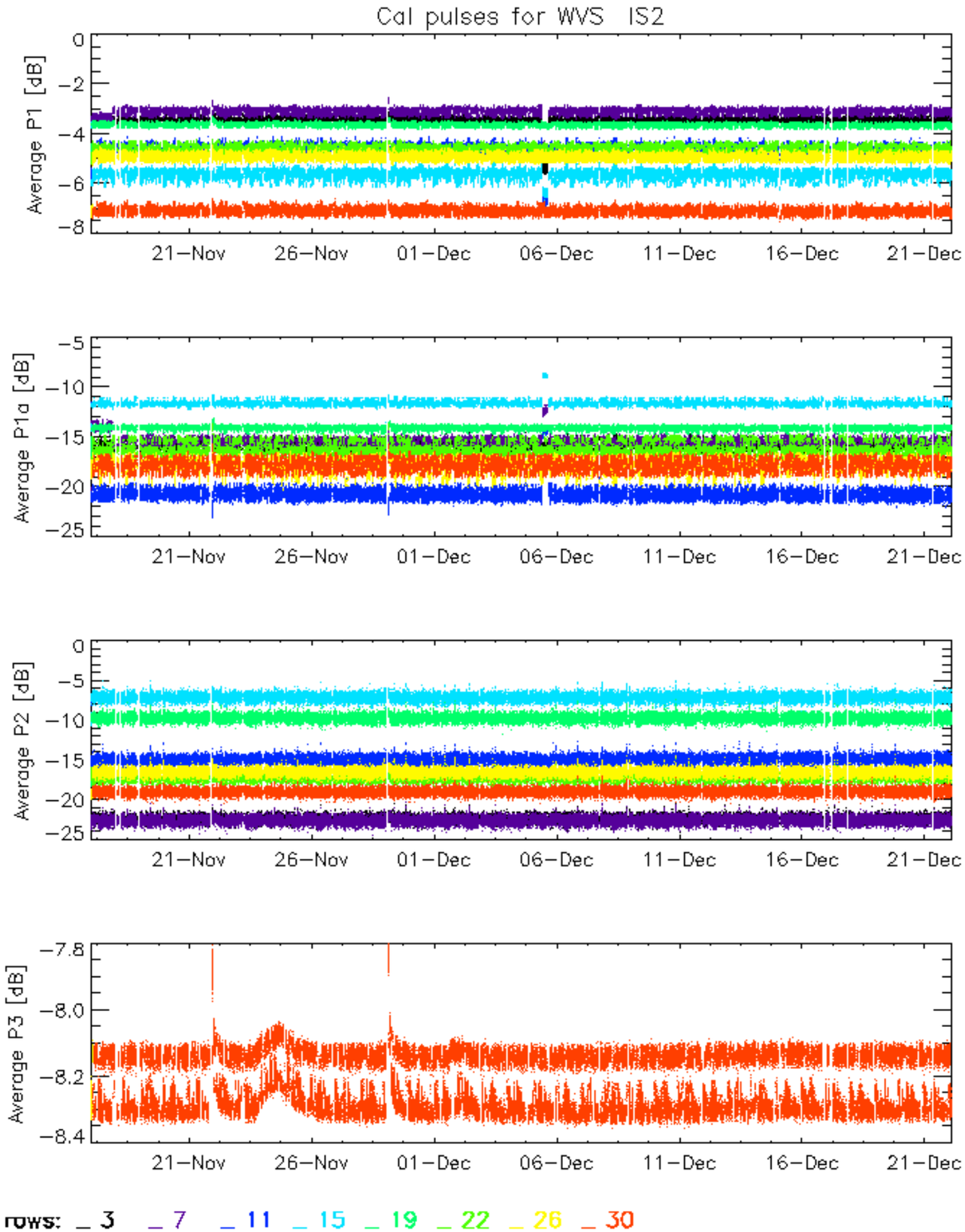
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

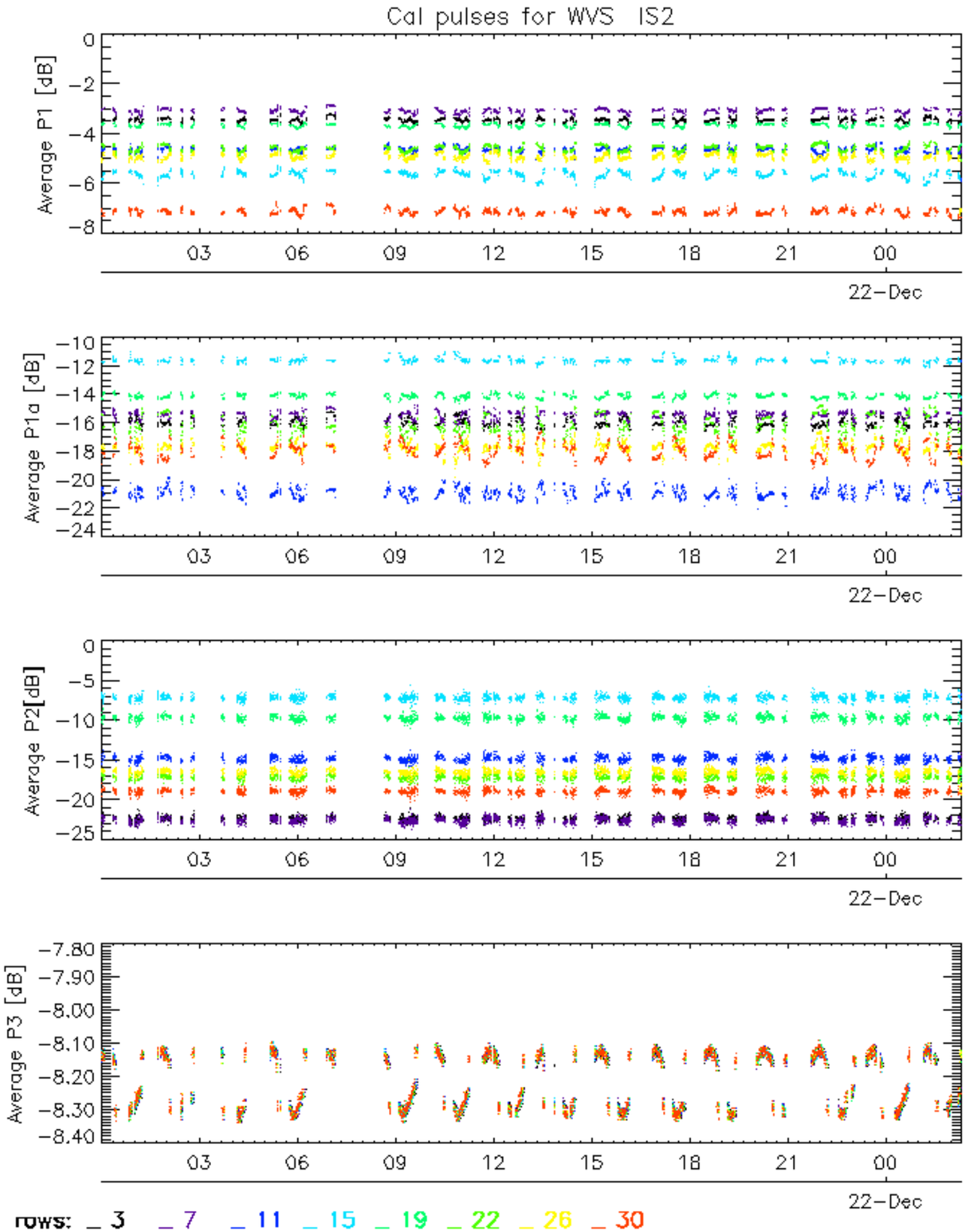
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

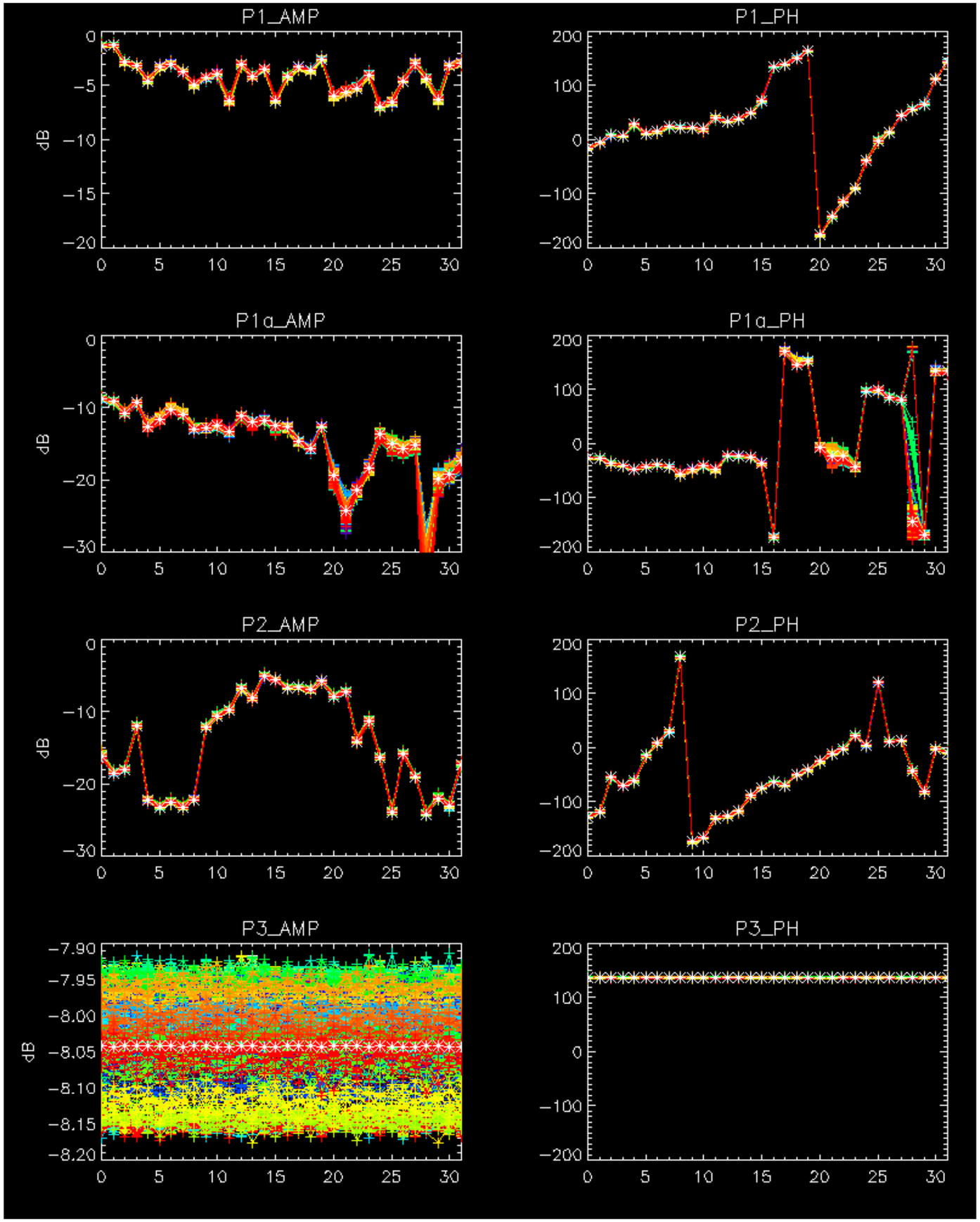

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
Average P2 [dB]
0
−5
−10
−15
−20
−25
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec
Average P3 [dB]
−7.8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

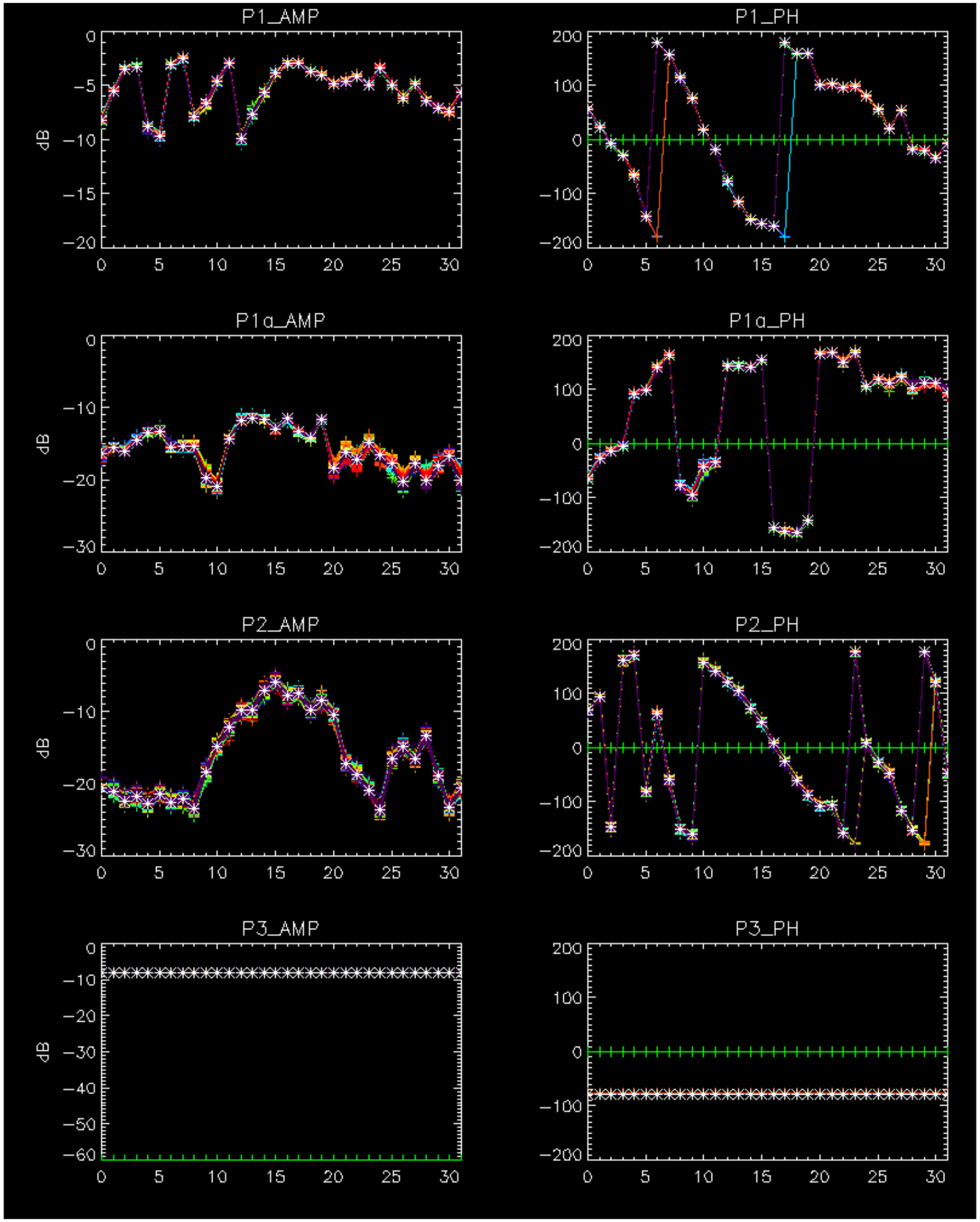

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
22−Dec
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
22−Dec
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
22−Dec
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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


Cal pulses for WVS IS2
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
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
22−Dec
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2[dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

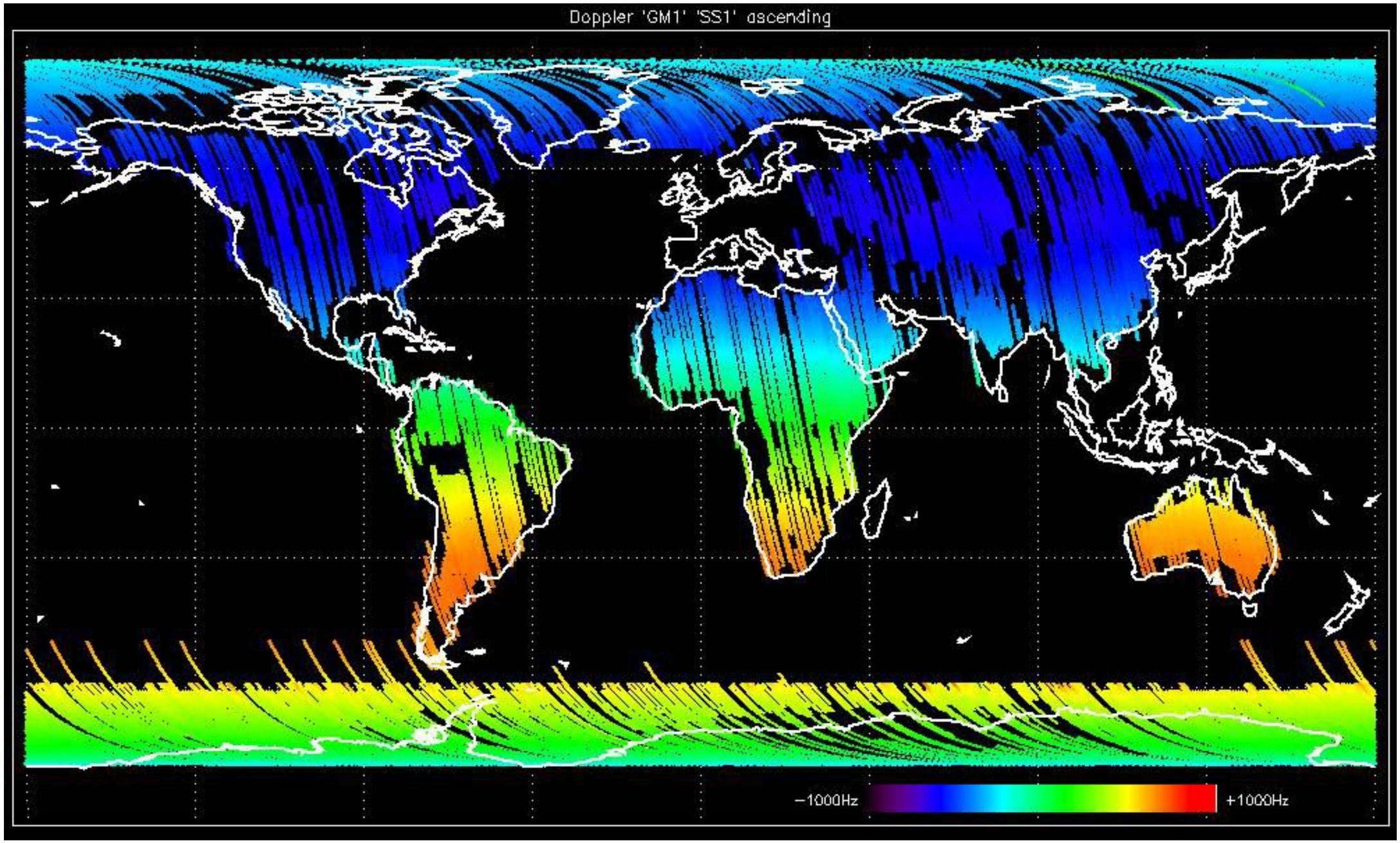
No anomalies observed.

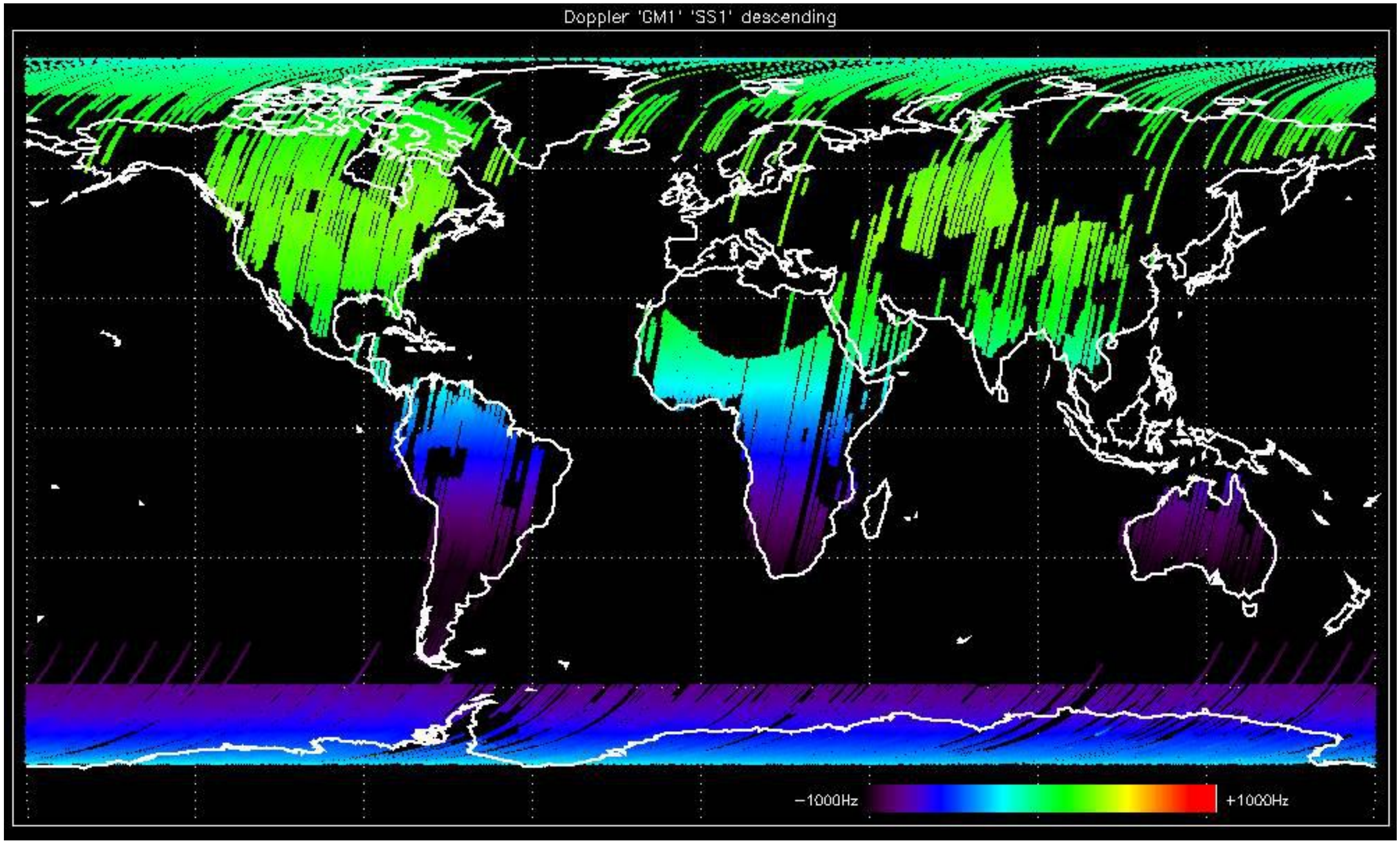

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.90
−7.95
−8.00
−8.05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

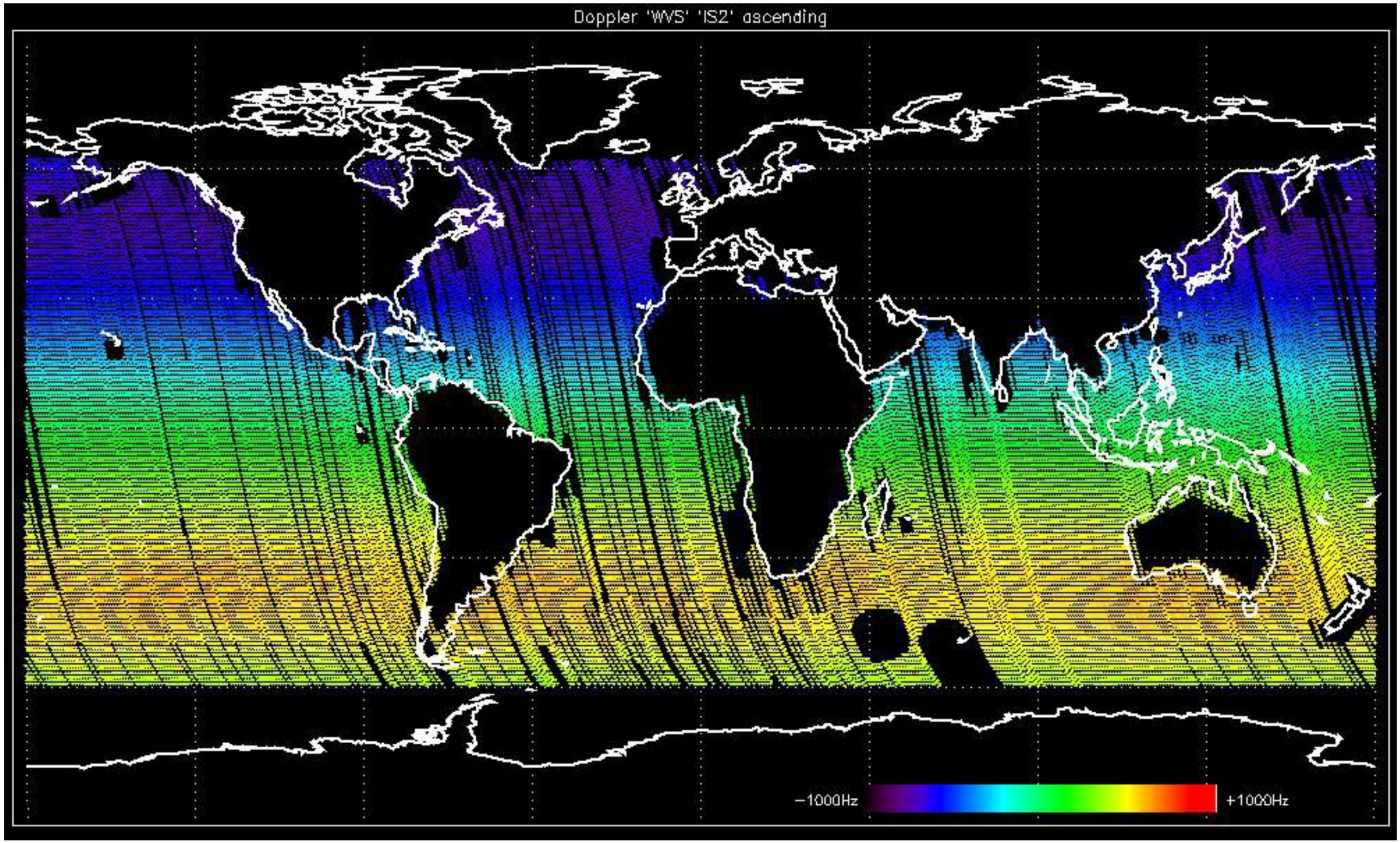

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
0
−10
−20
−30
−40
−50
−60
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

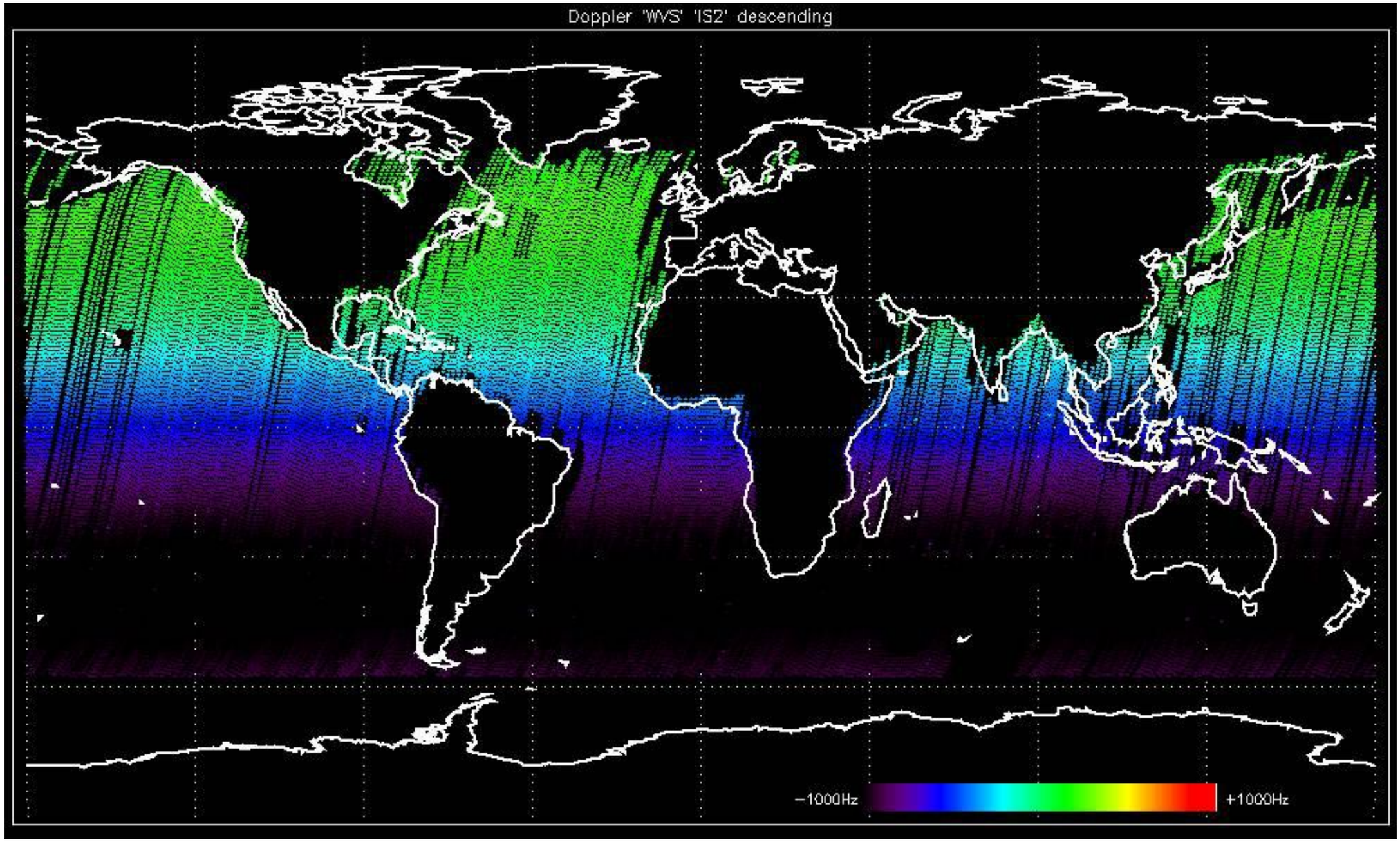
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

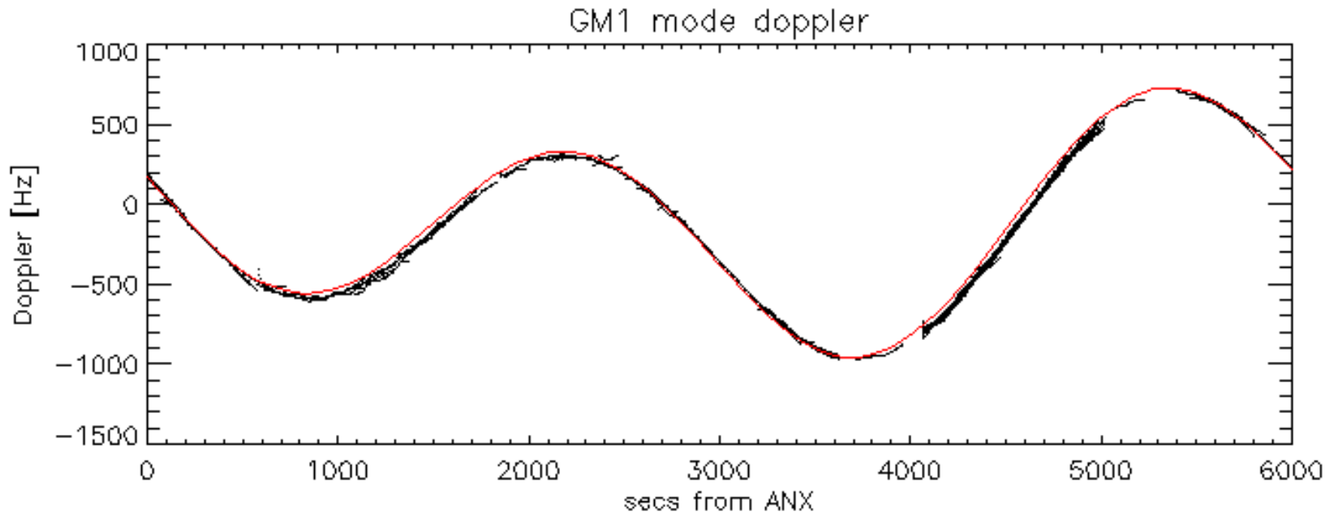
Preliminary report.The data is not yet controled

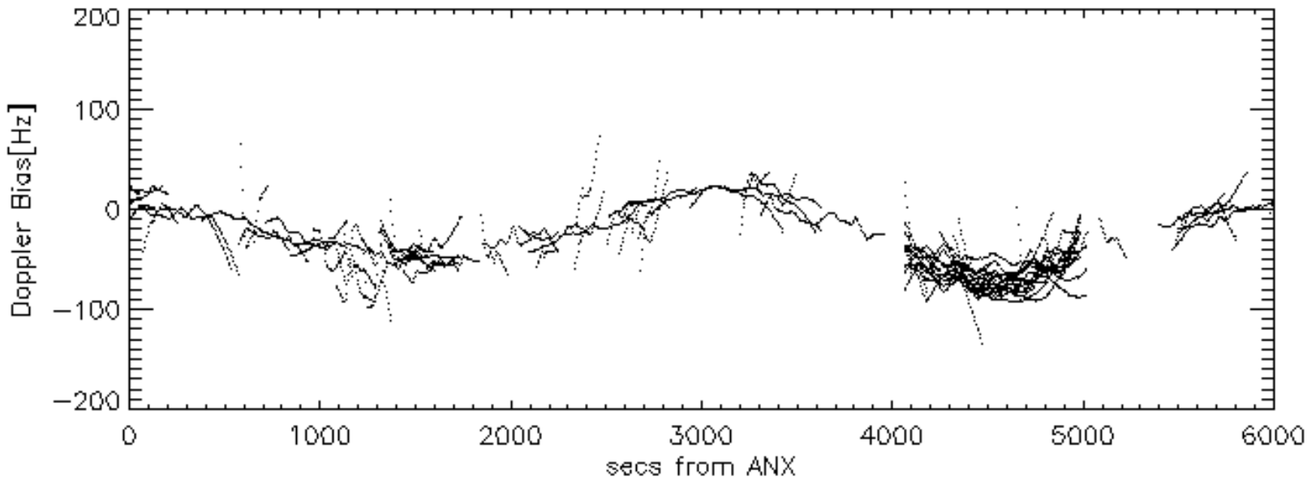

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

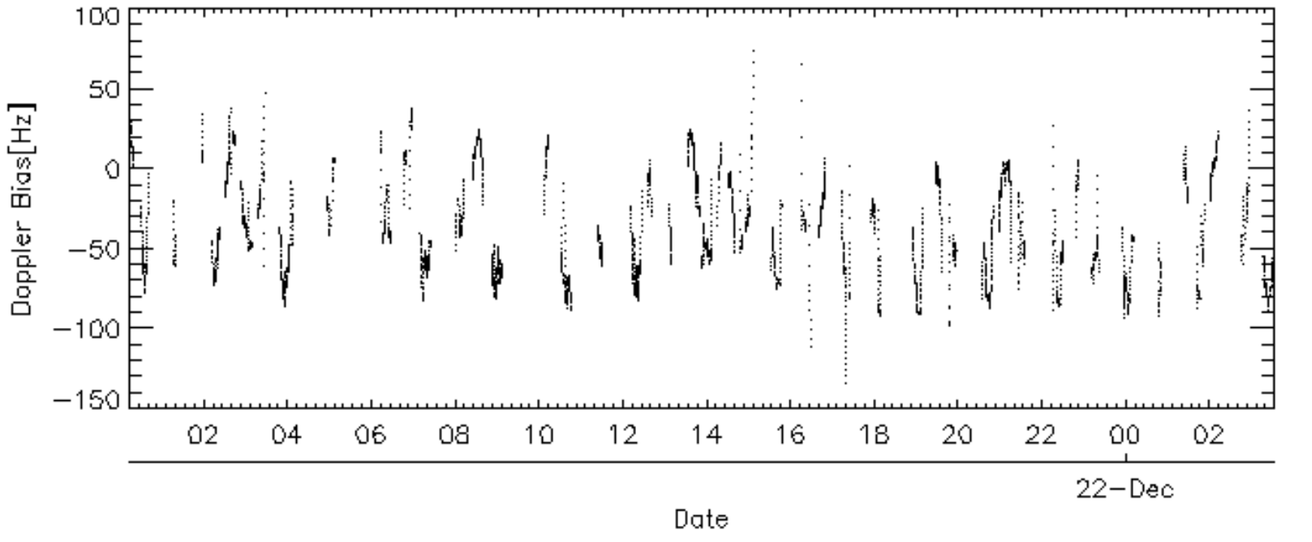

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

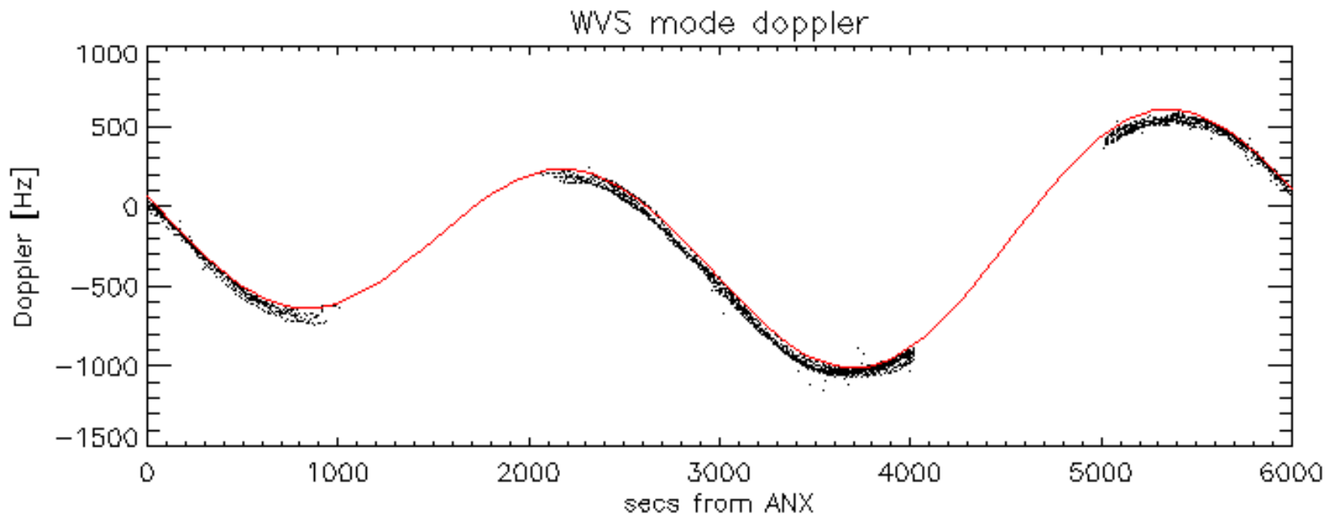

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

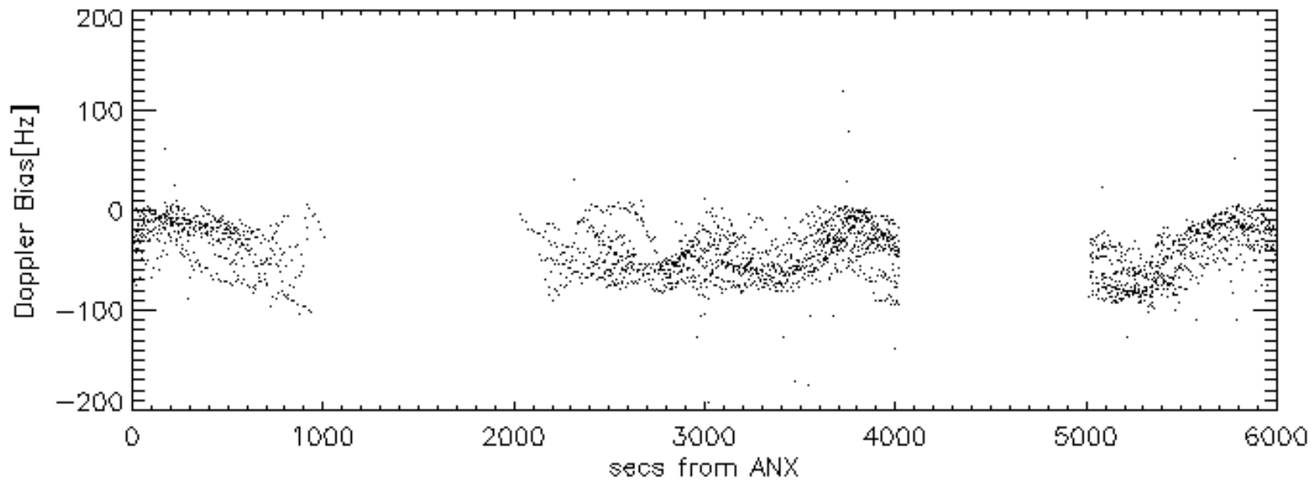

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

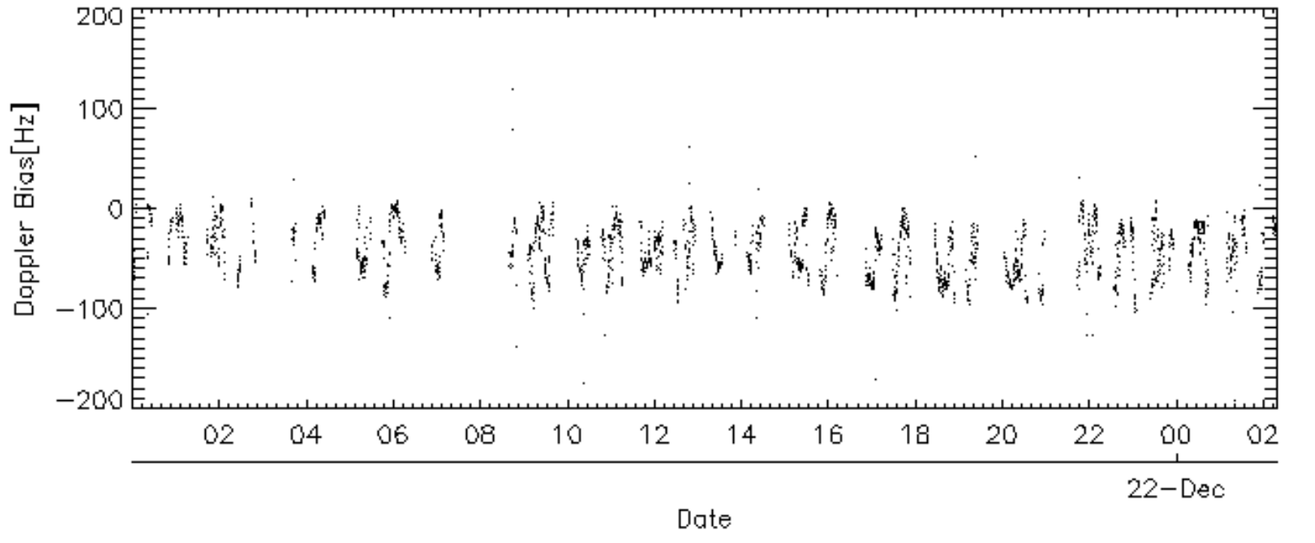

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

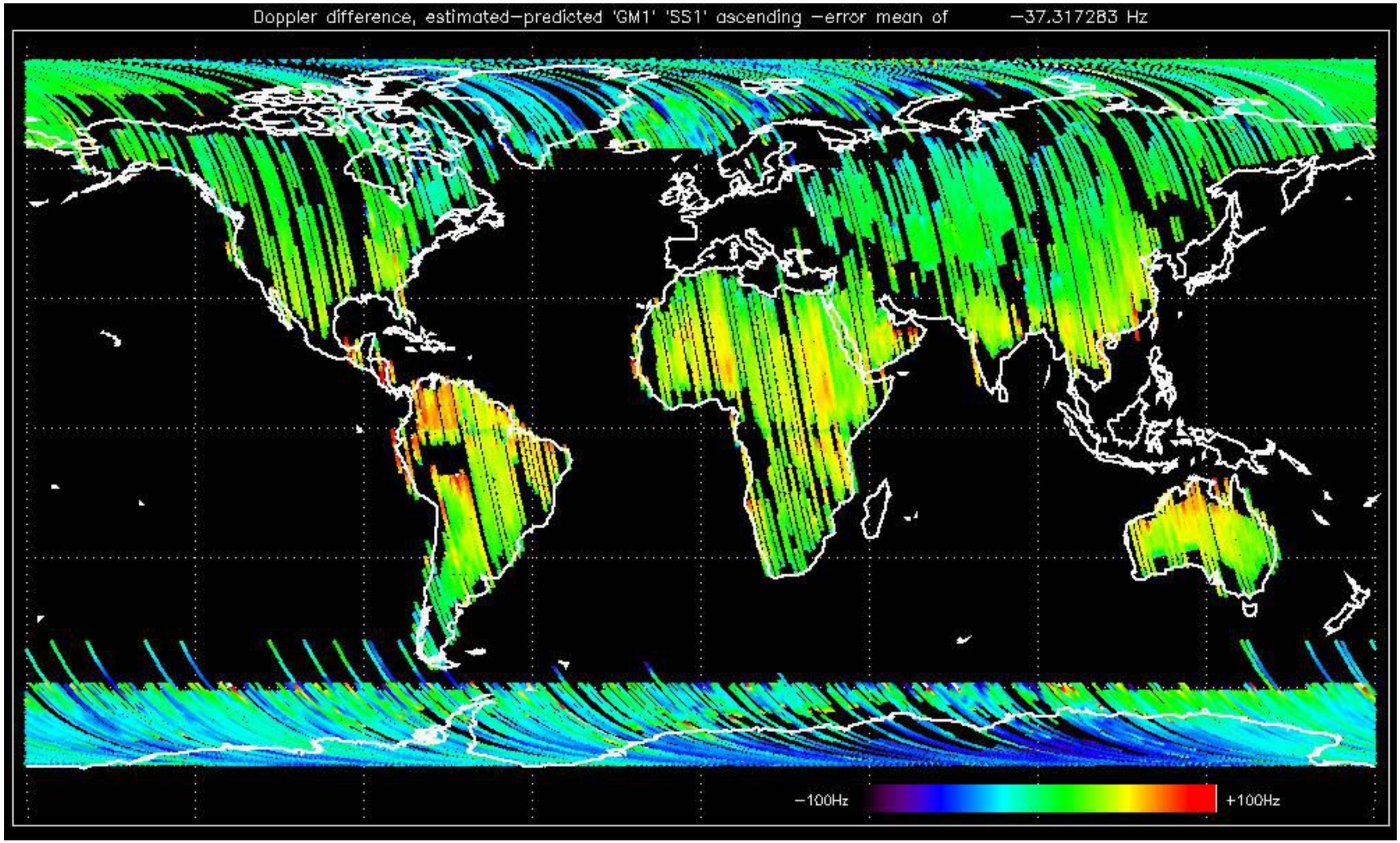

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

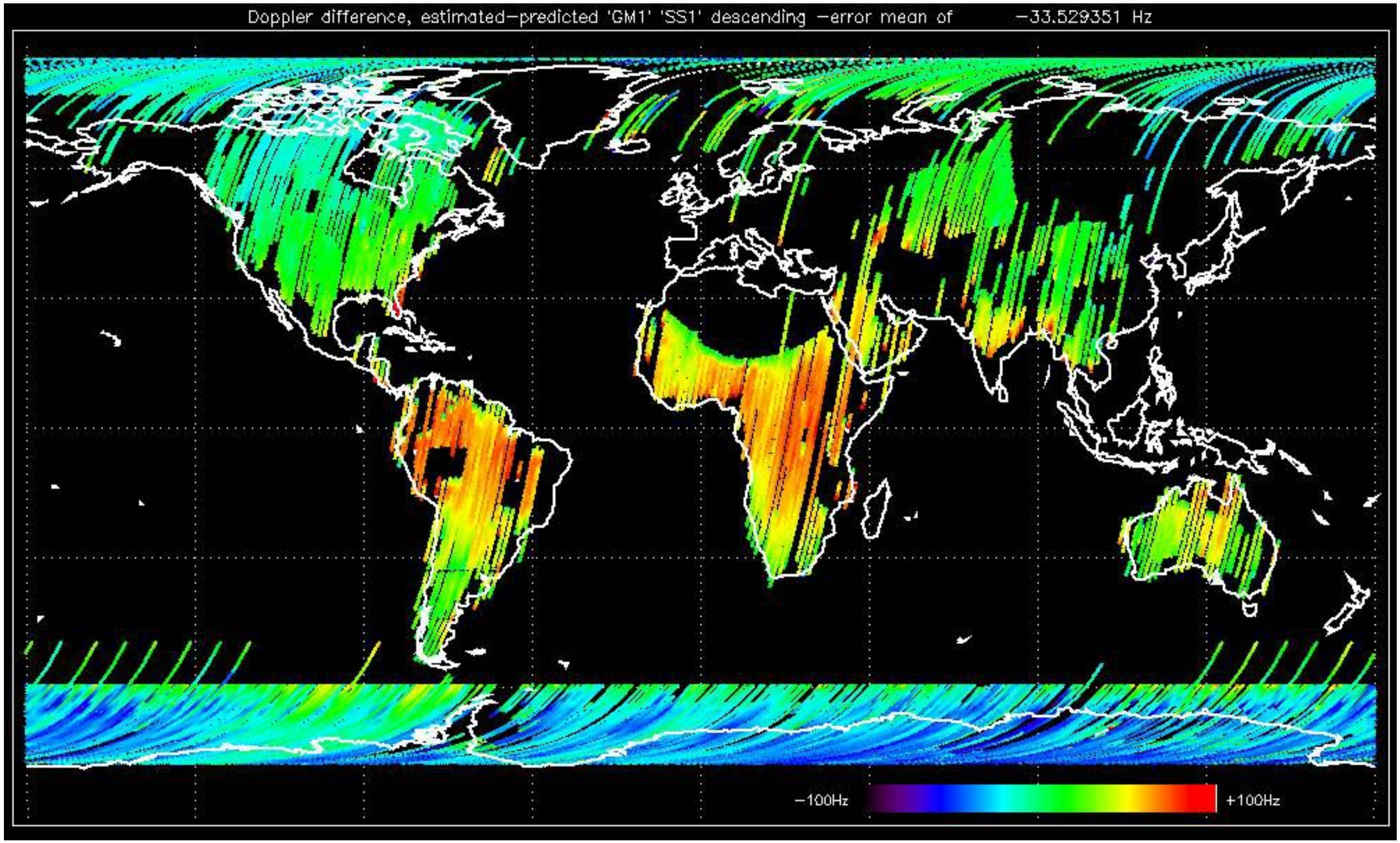

Doppler Bias[Hz]
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
22−Dec
Date

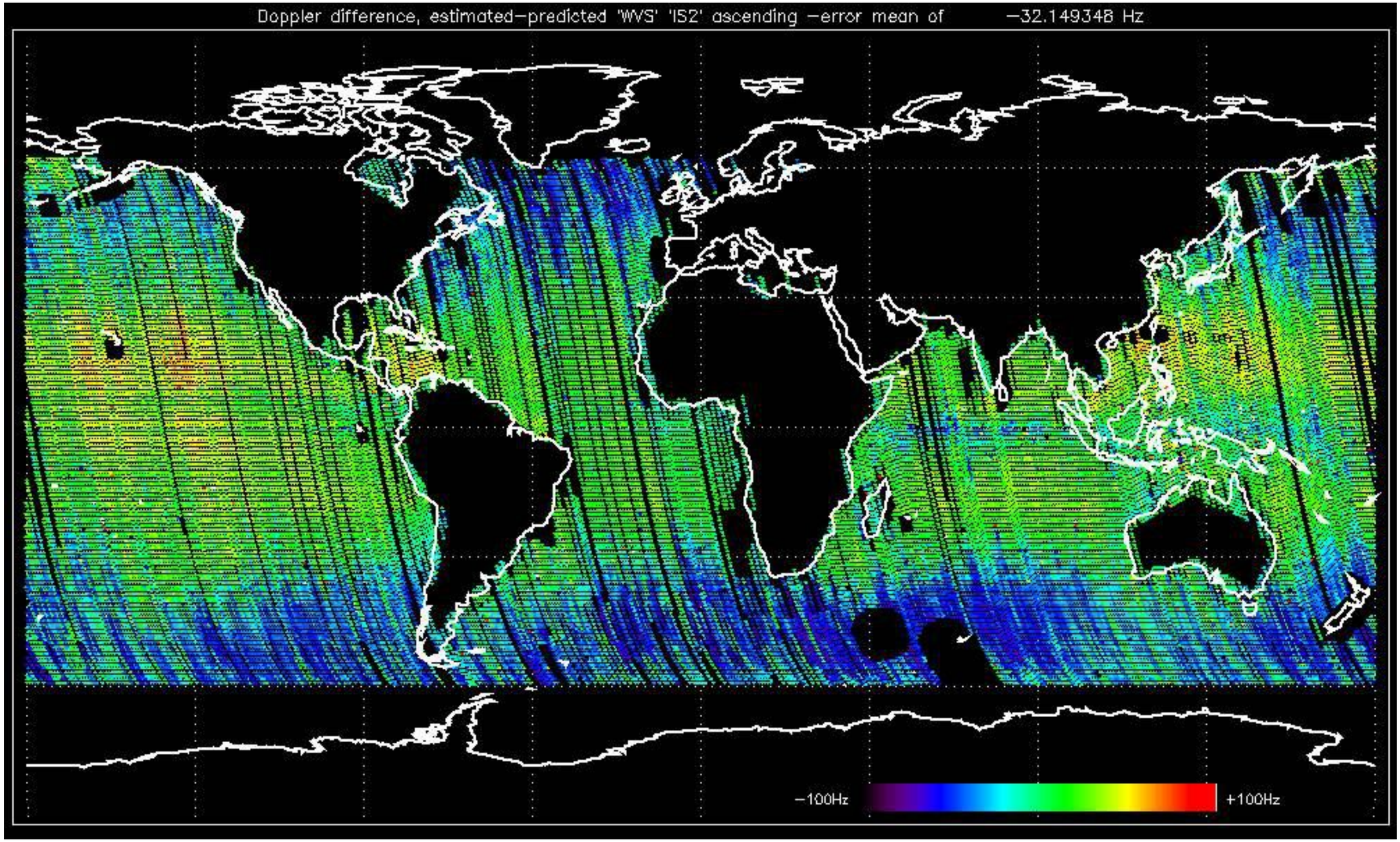

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

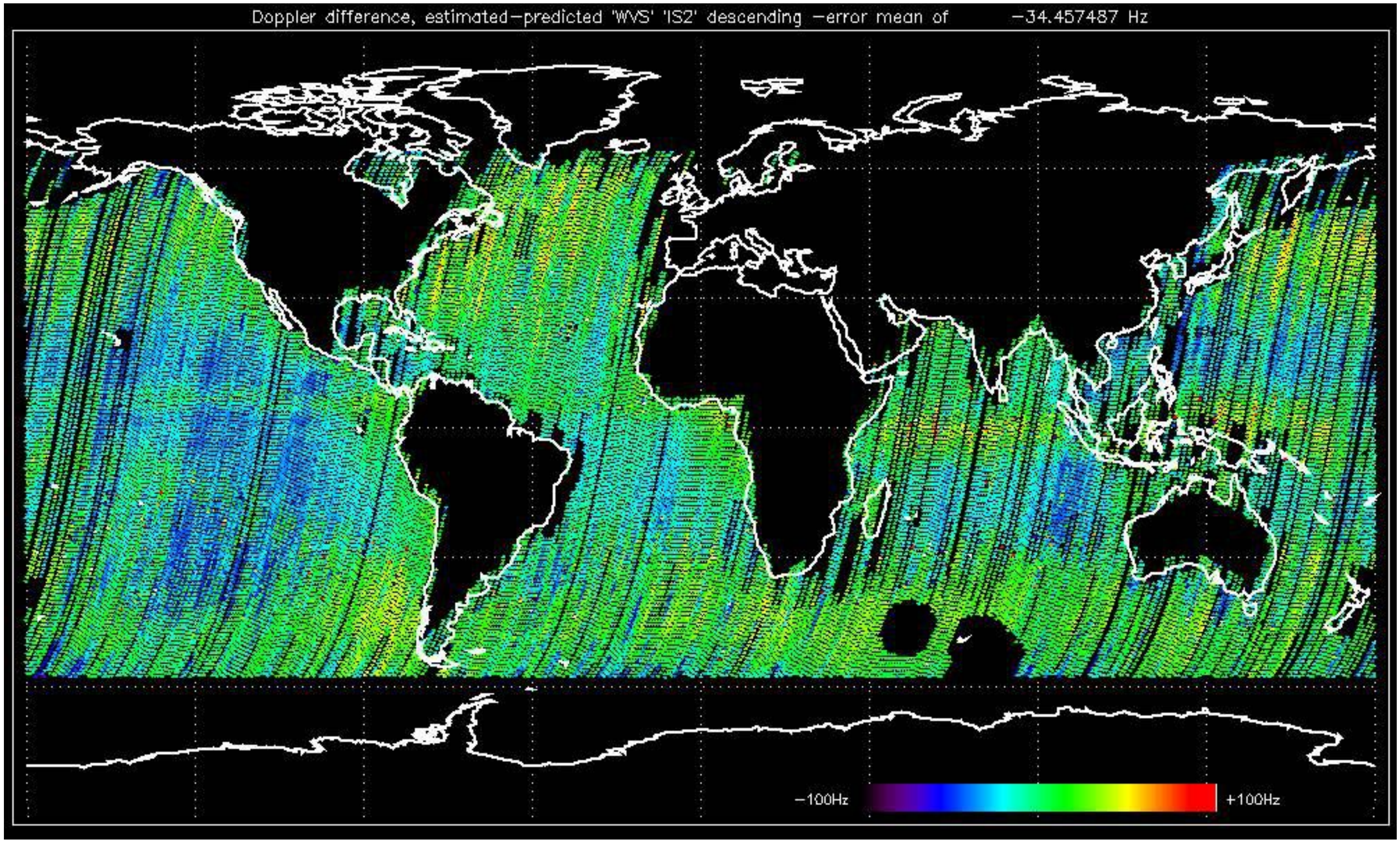

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −37.317283 Hz
−100Hz
+100Hz

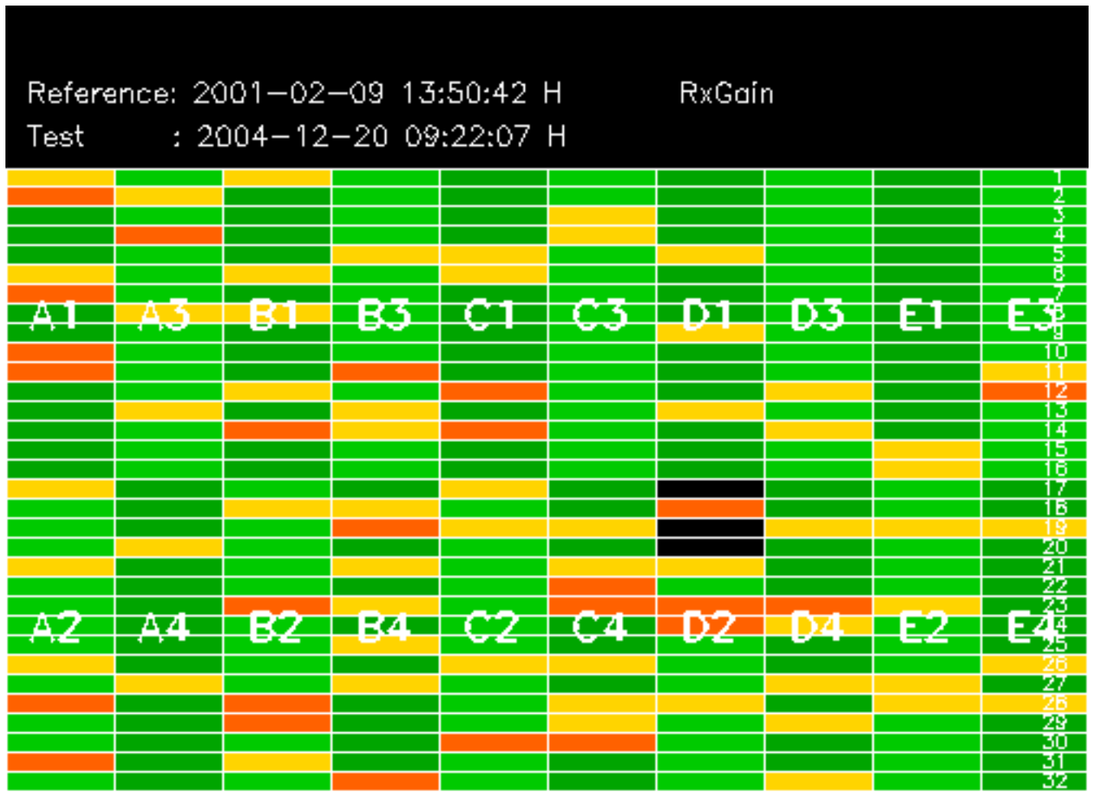

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −33.529351 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −32.149348 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −34.457487 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 : 2004-12-20 09:22:07 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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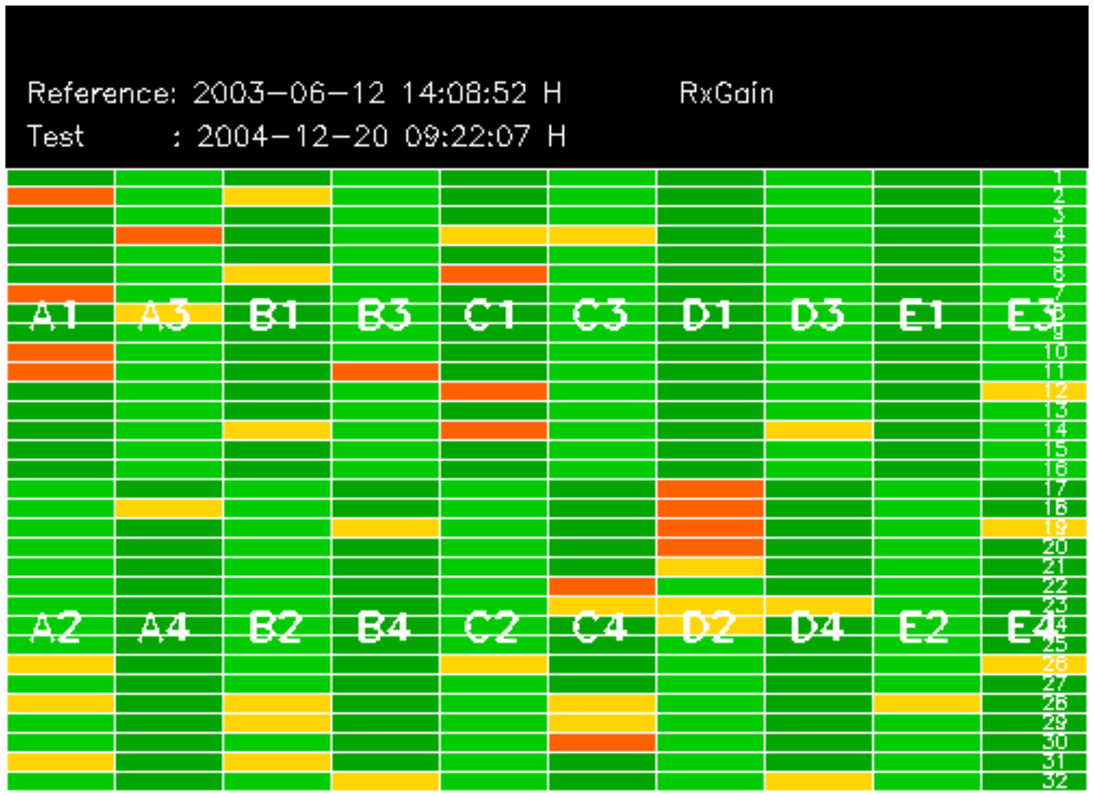
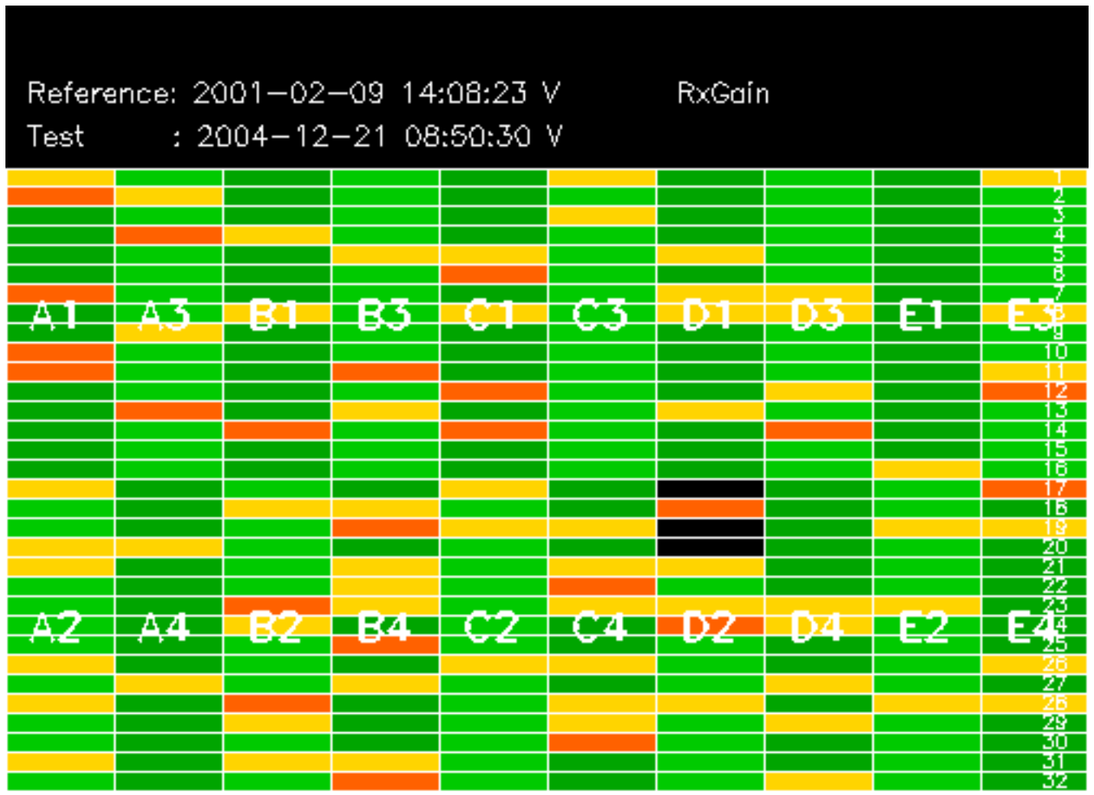

Reference: 2003-06-12 14:08:52 H
Test : 2004-12-20 09:22:07 H
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2001-02-09 14:08:23 V
Test : 2004-12-21 08:50:30 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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9
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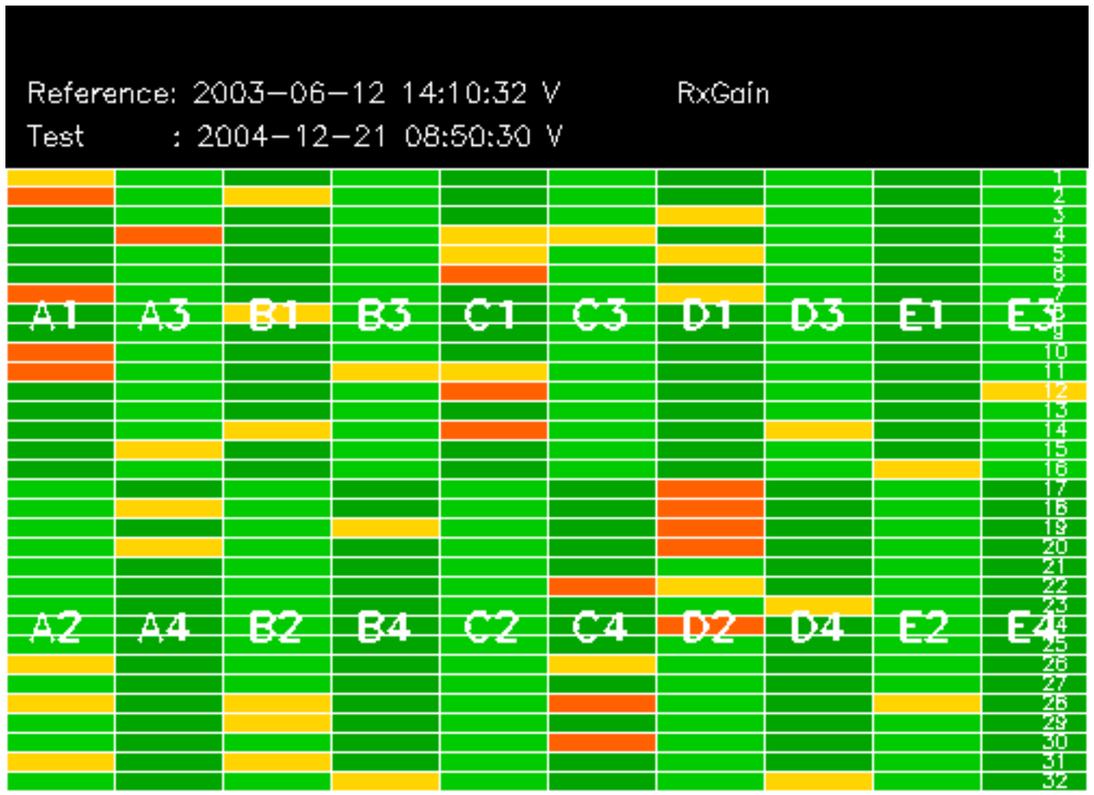
Reference: 2003-06-12 14:10:32 V
Test : 2004-12-21 08:50:30 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
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8
9
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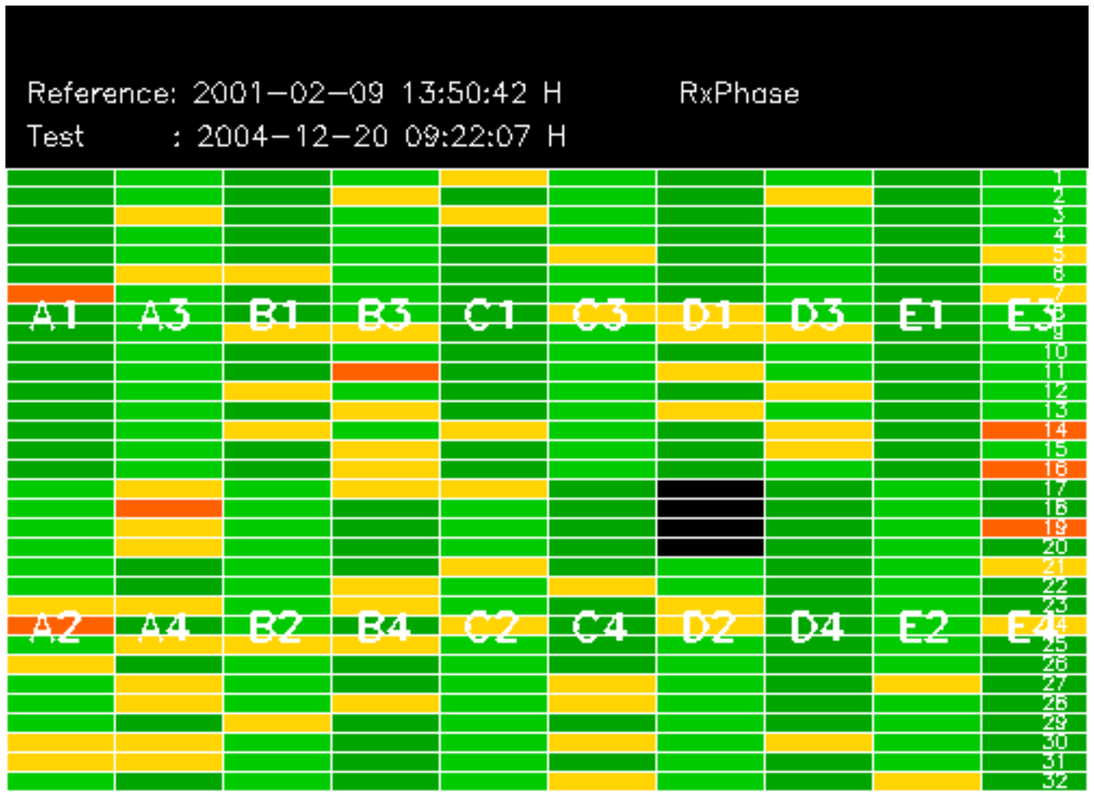
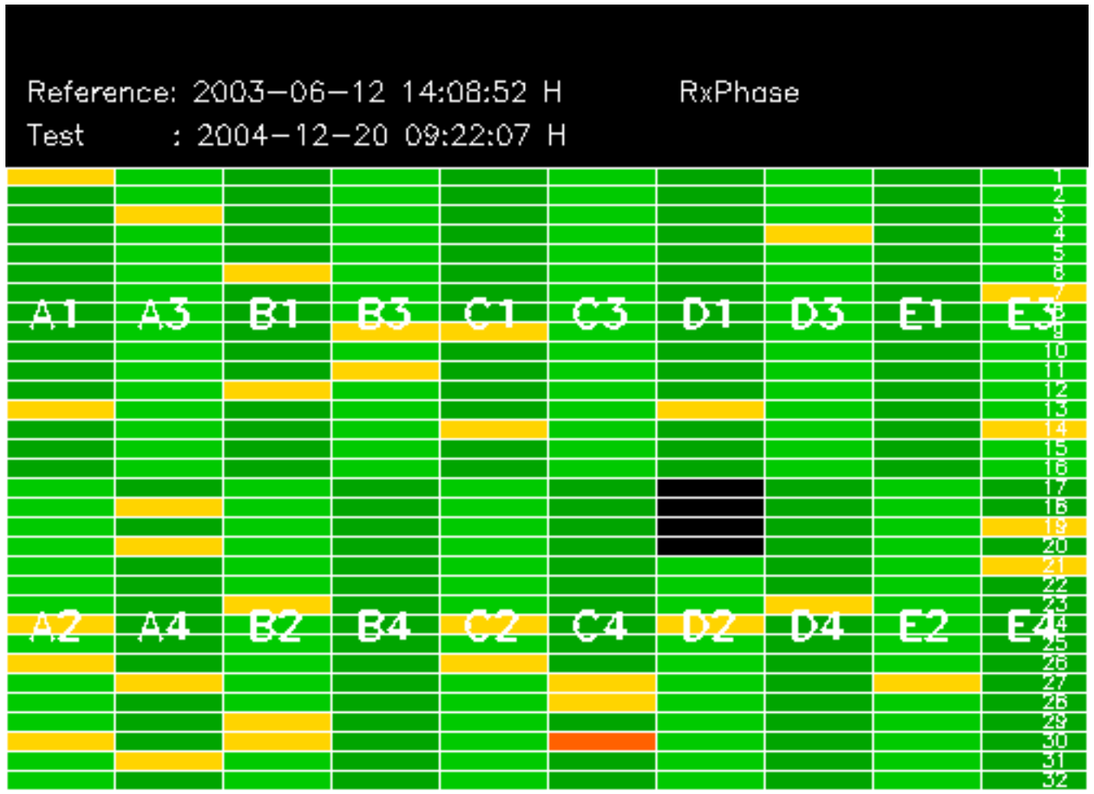
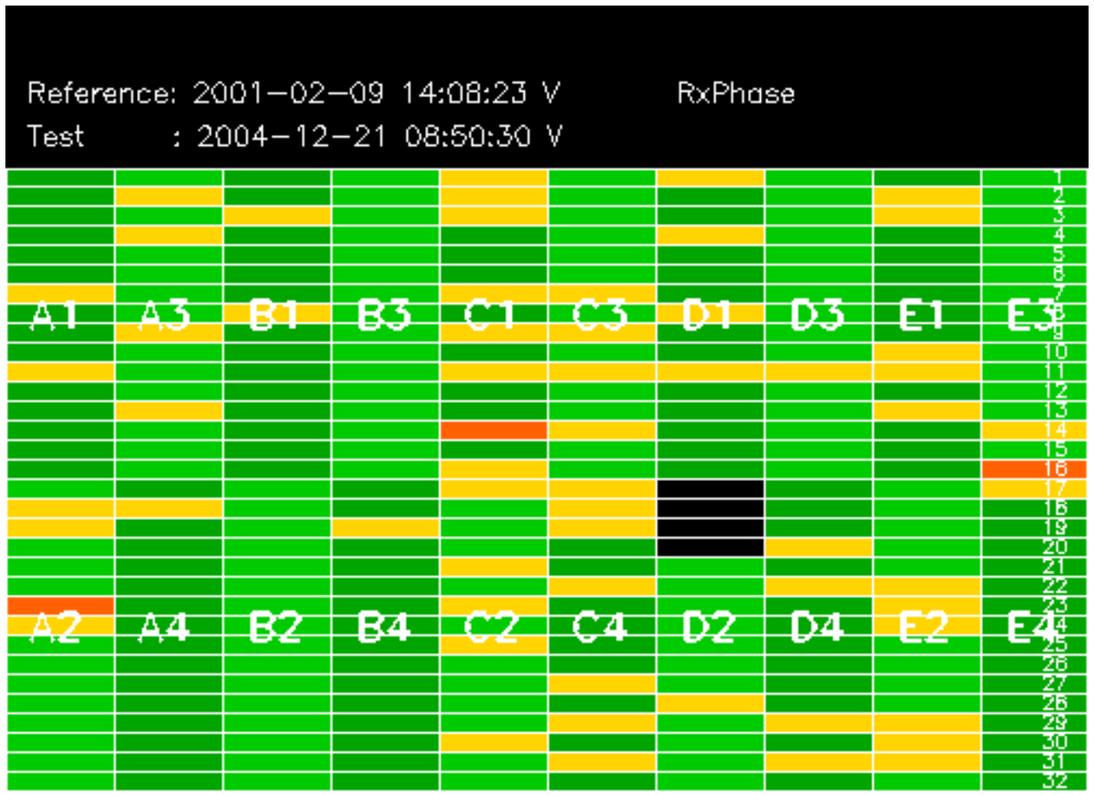

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-12-20 09:22:07 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-12-20 09:22:07 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 : 2004-12-21 08:50:30 V
RxPhase
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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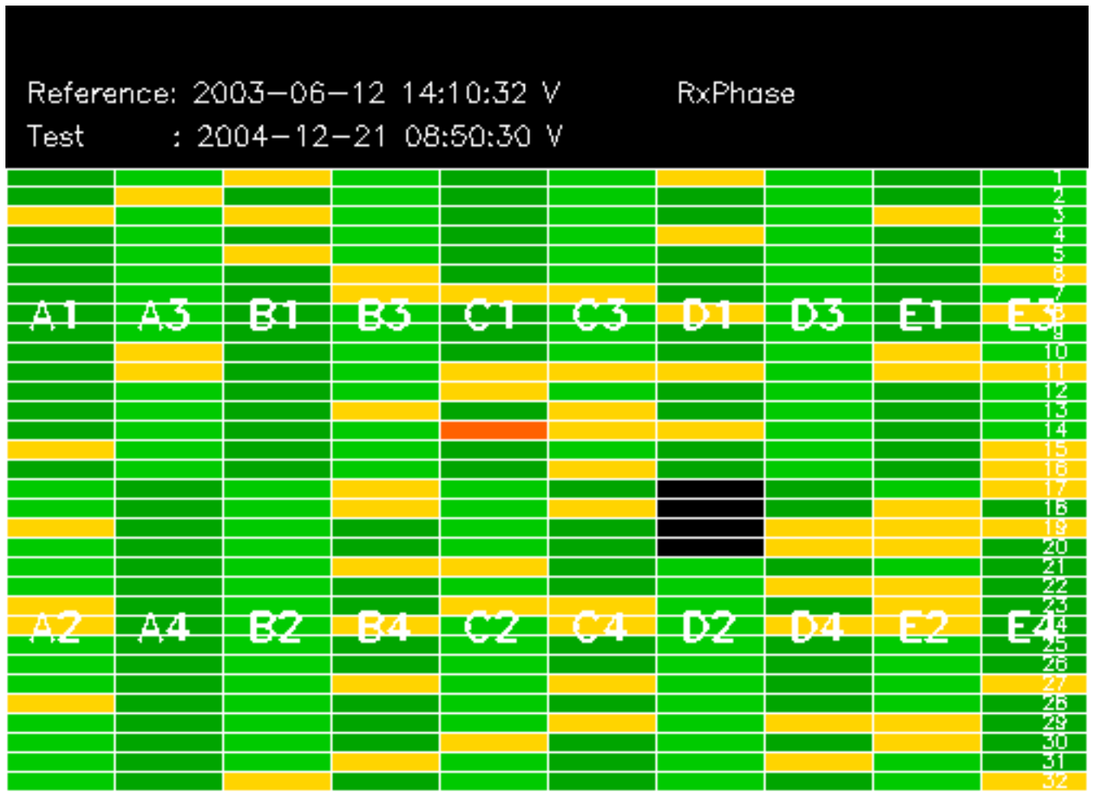
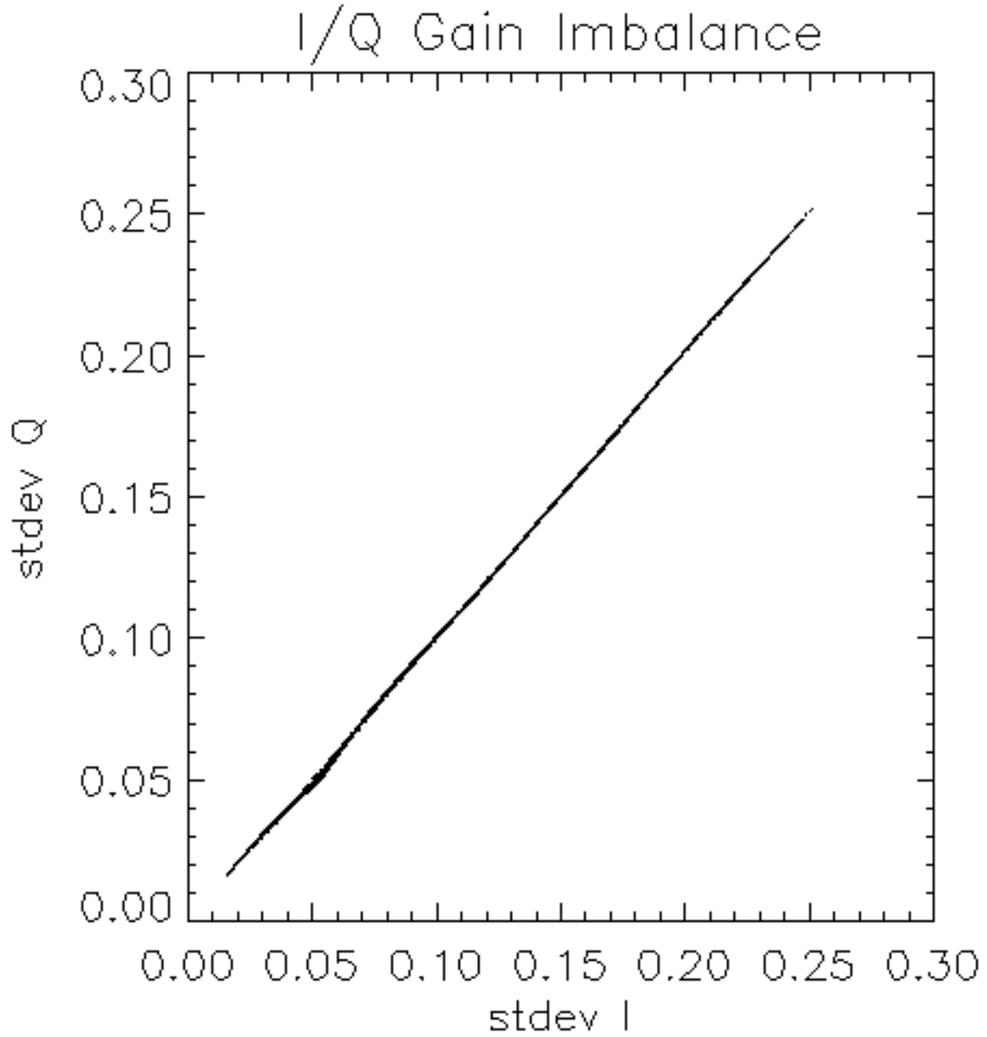
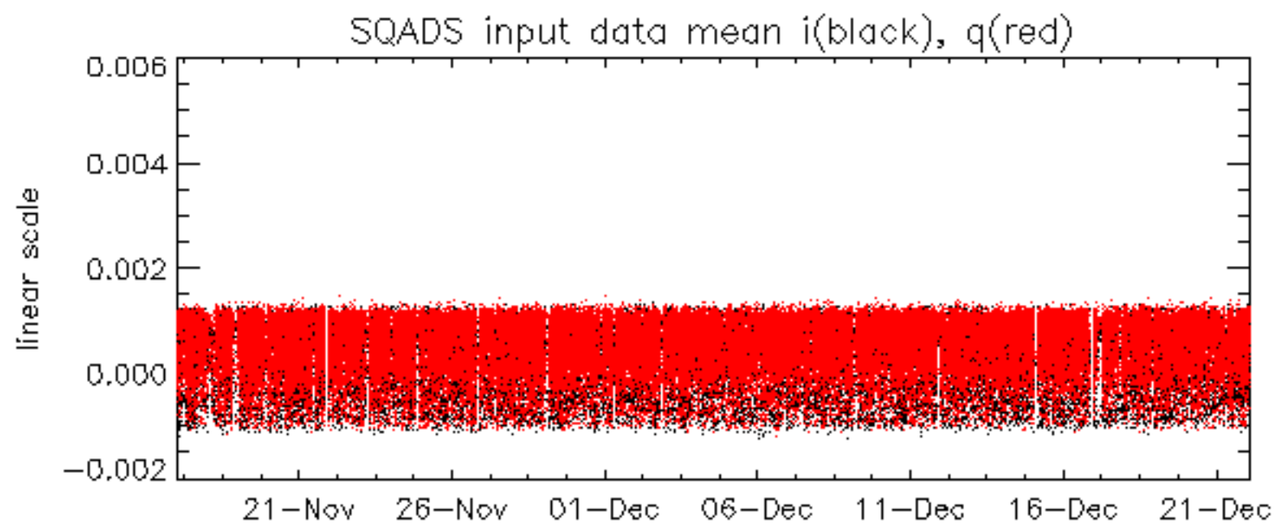
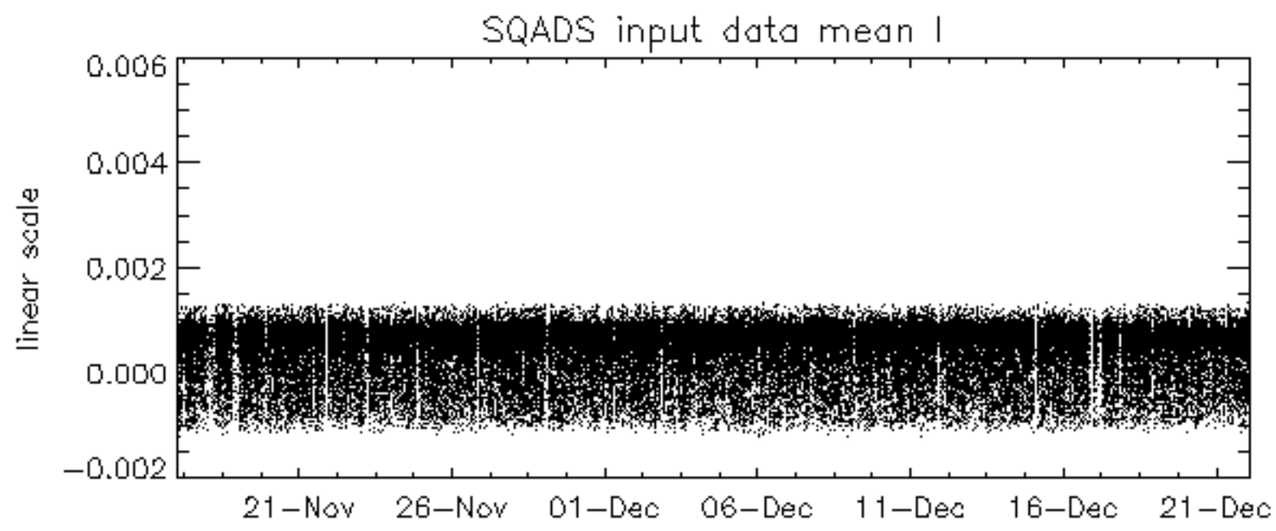
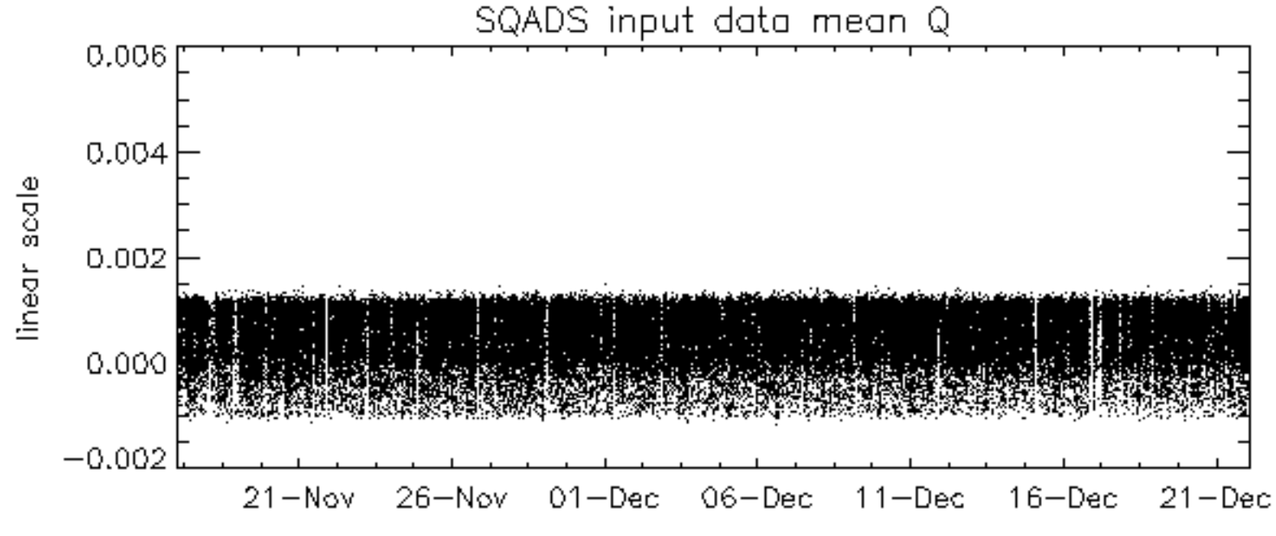
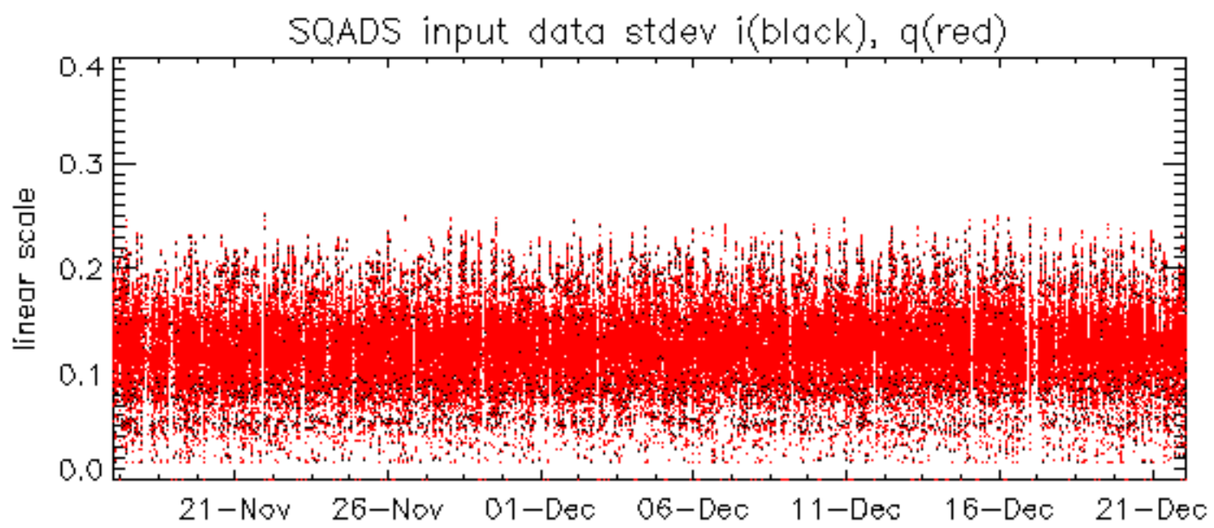

Reference: 2003-06-12 14:10:32 V
Test : 2004-12-21 08:50:30 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

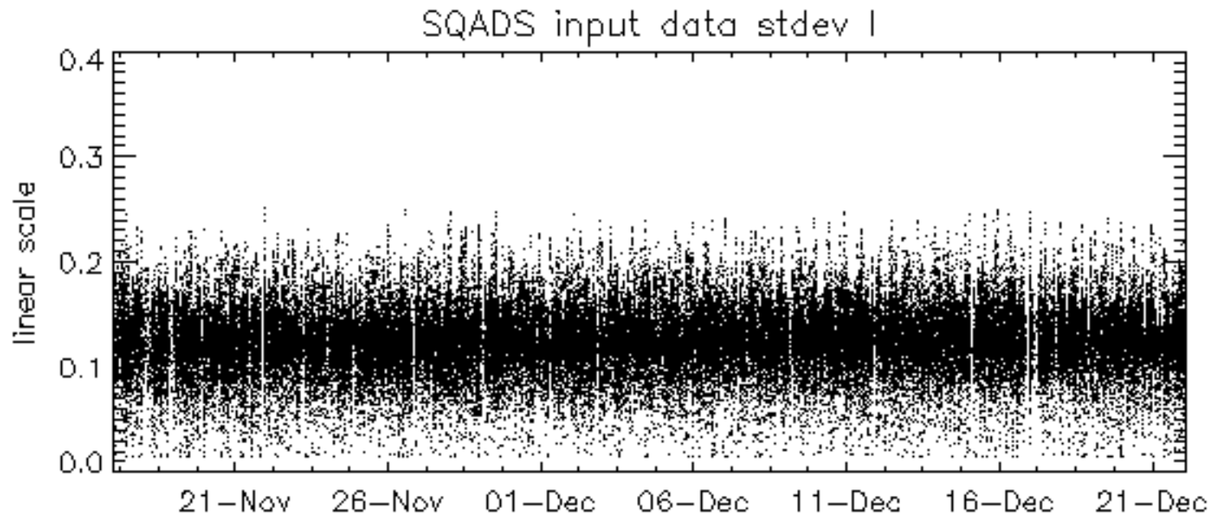

I/Q Gain Imbalance
0.30
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00 0.05 0.10 0.15 0.20 0.25 0.30
stdev I

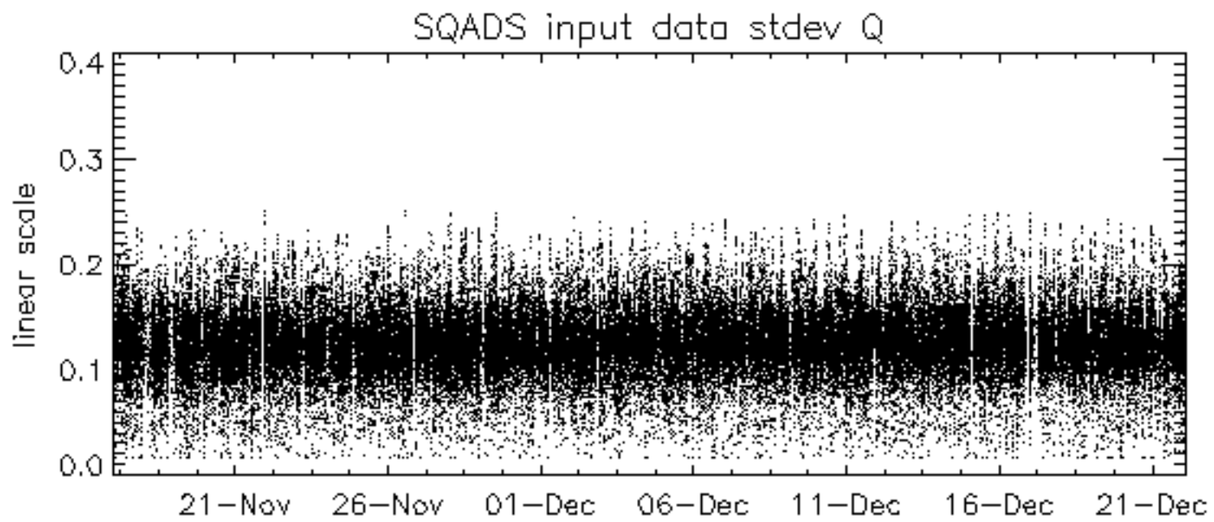

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec

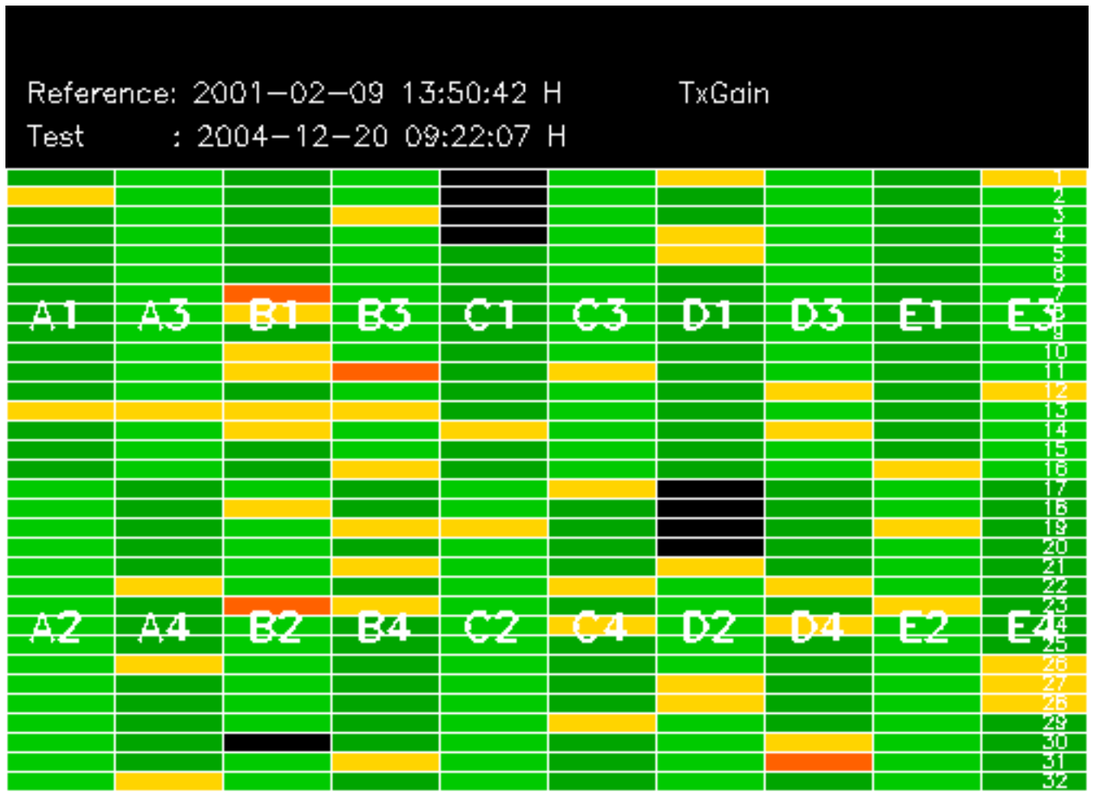

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec

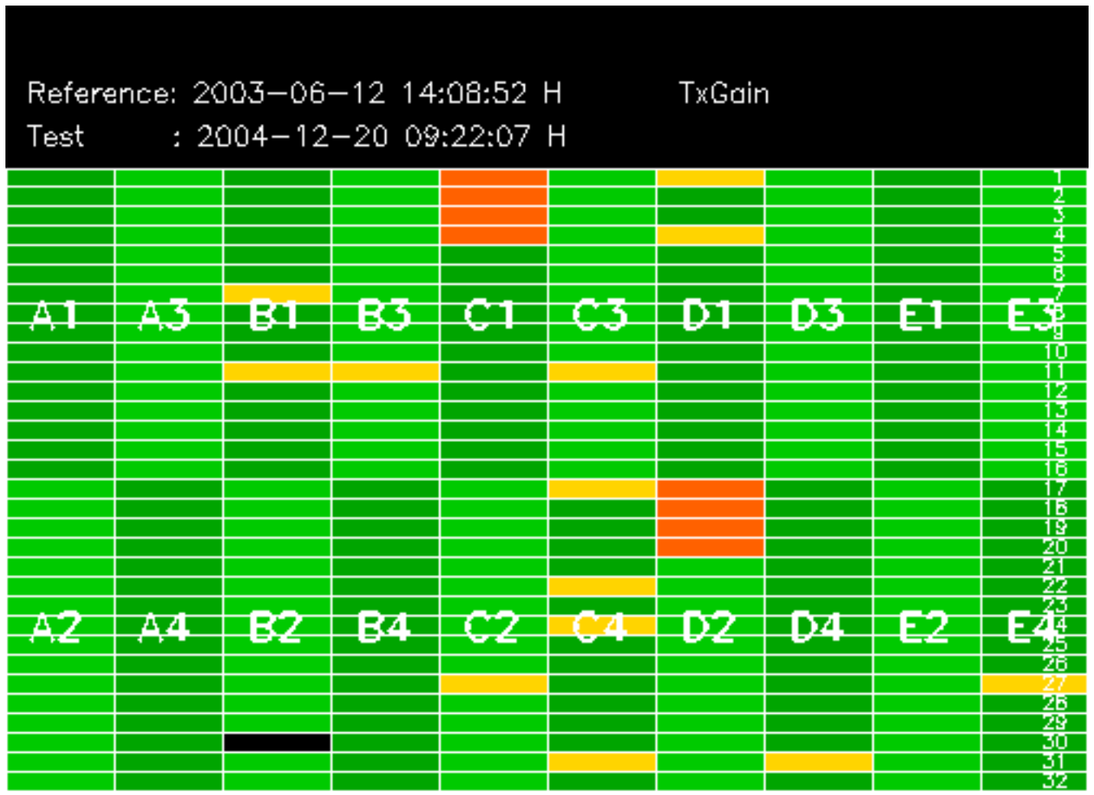

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
21−Nov
26−Nov
01−Dec
06−Dec
11−Dec
16−Dec
21−Dec


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 : 2004-12-20 09:22:07 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 : 2004-12-20 09:22:07 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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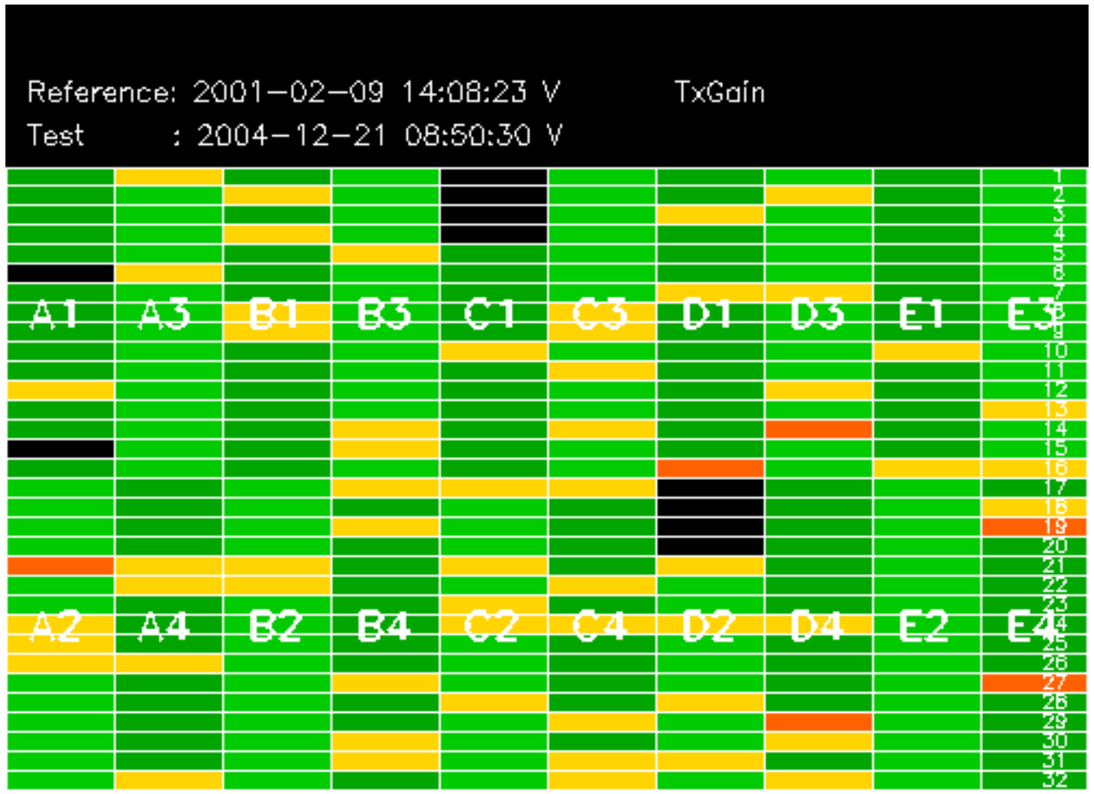
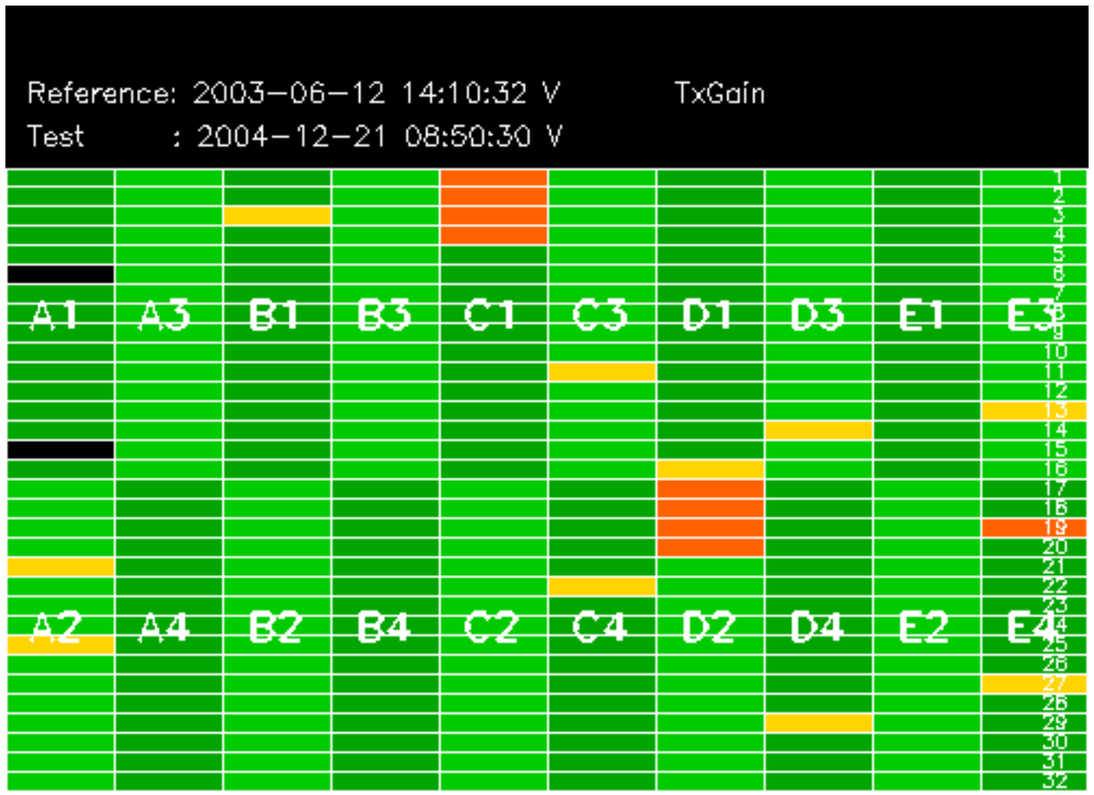

Reference: 2001-02-09 14:08:23 V
Test : 2004-12-21 08:50:30 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-12-21 08:50:30 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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27
28
29
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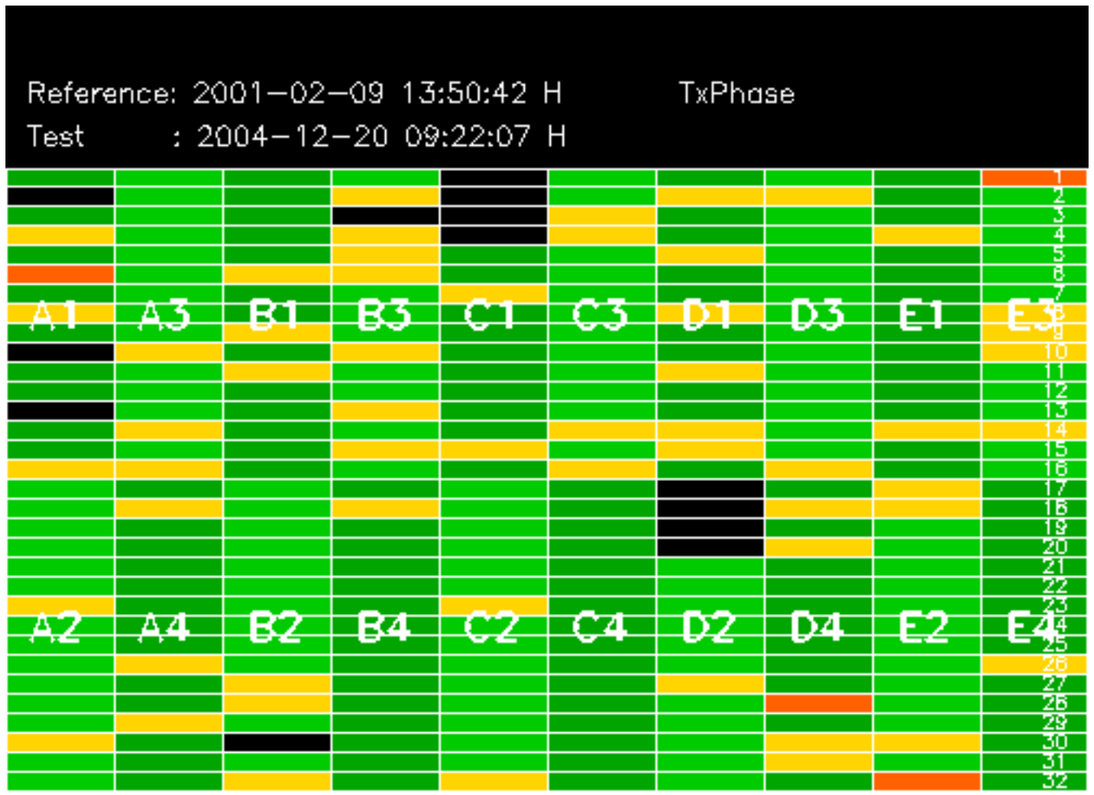
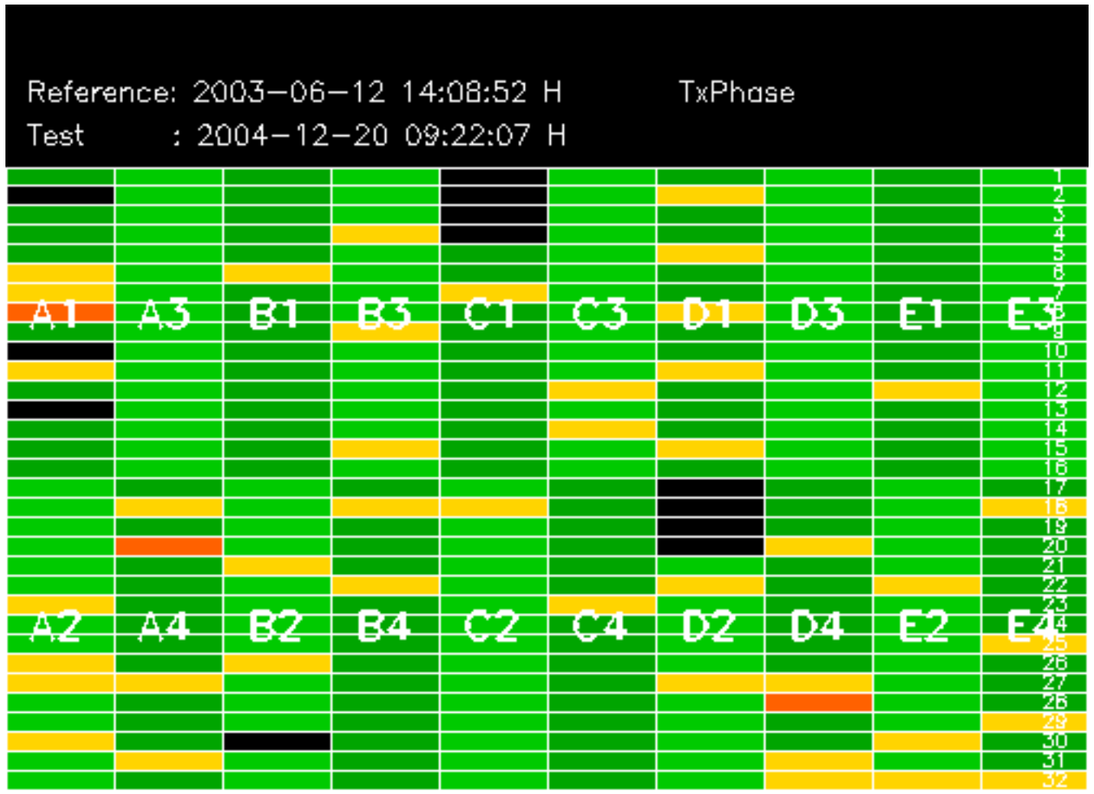
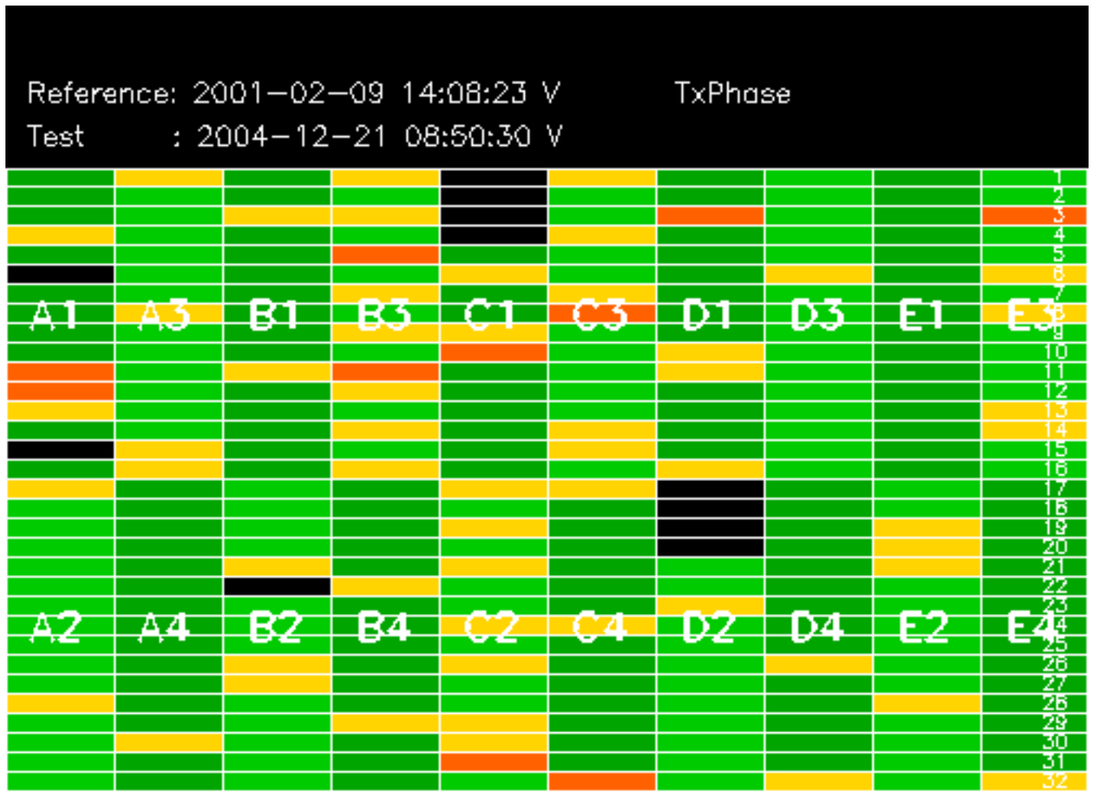
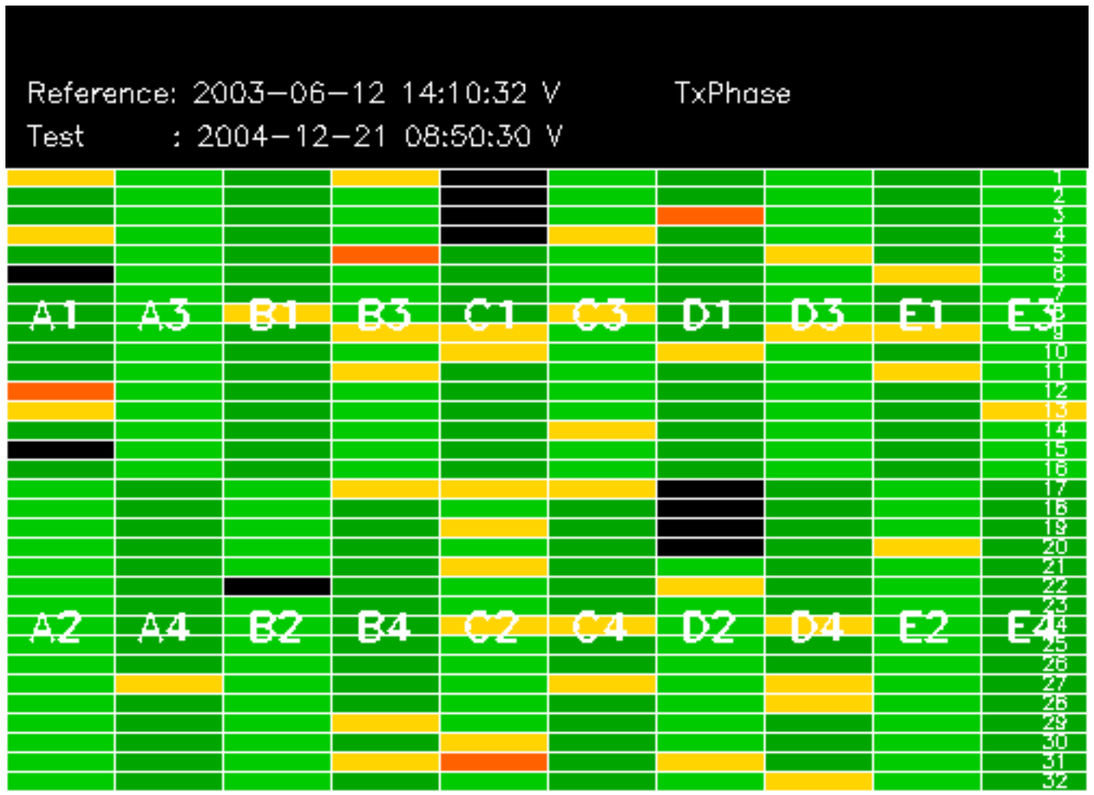
31
32


Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-12-20 09:22:07 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 : 2004-12-20 09:22:07 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 : 2004-12-21 08:50:30 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 : 2004-12-21 08:50:30 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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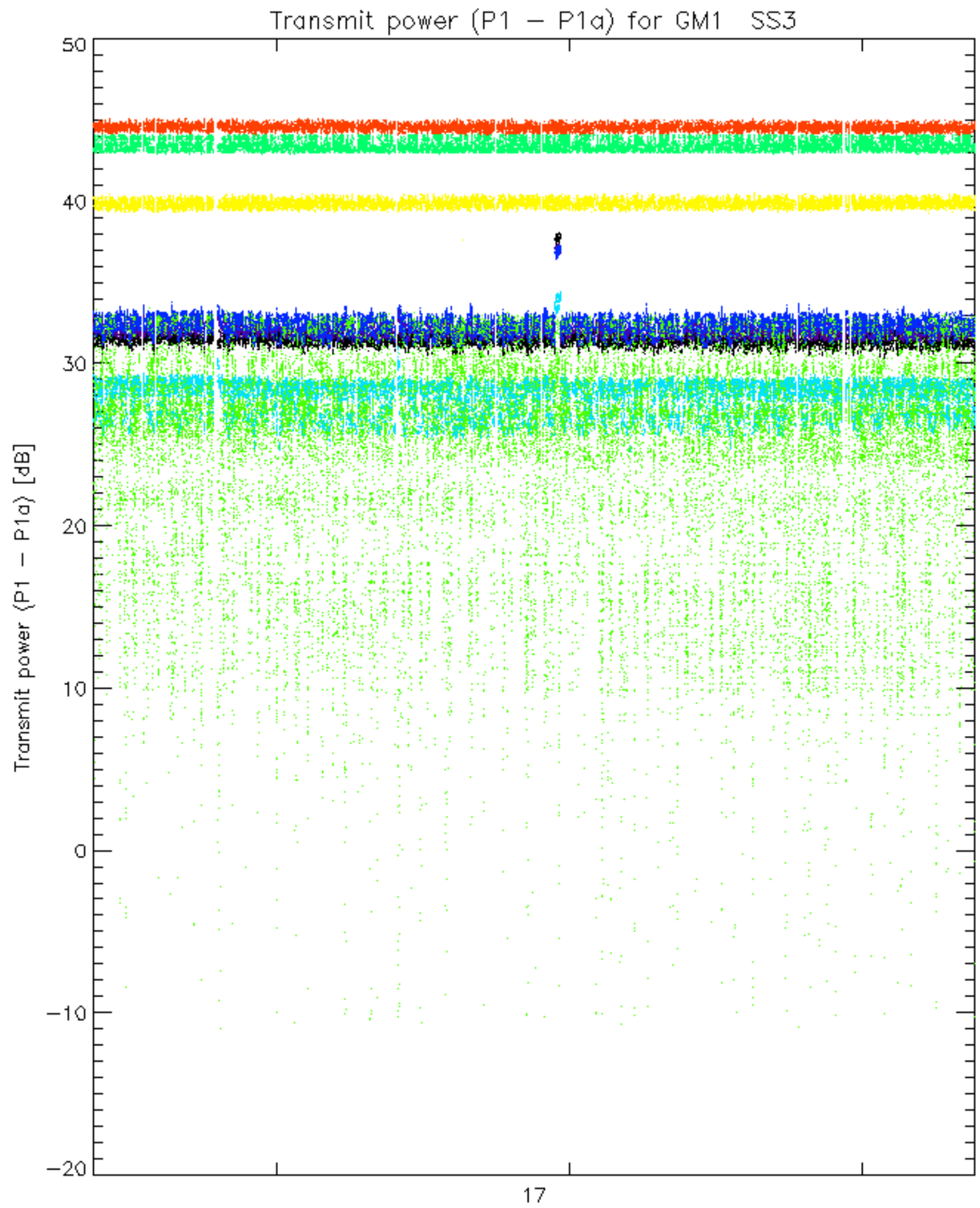
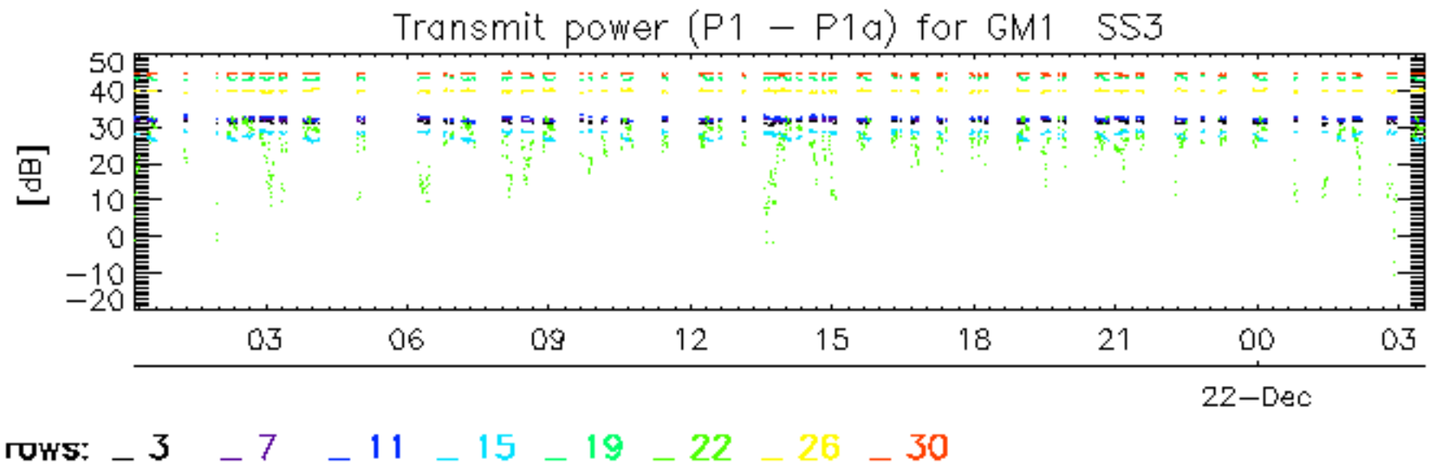
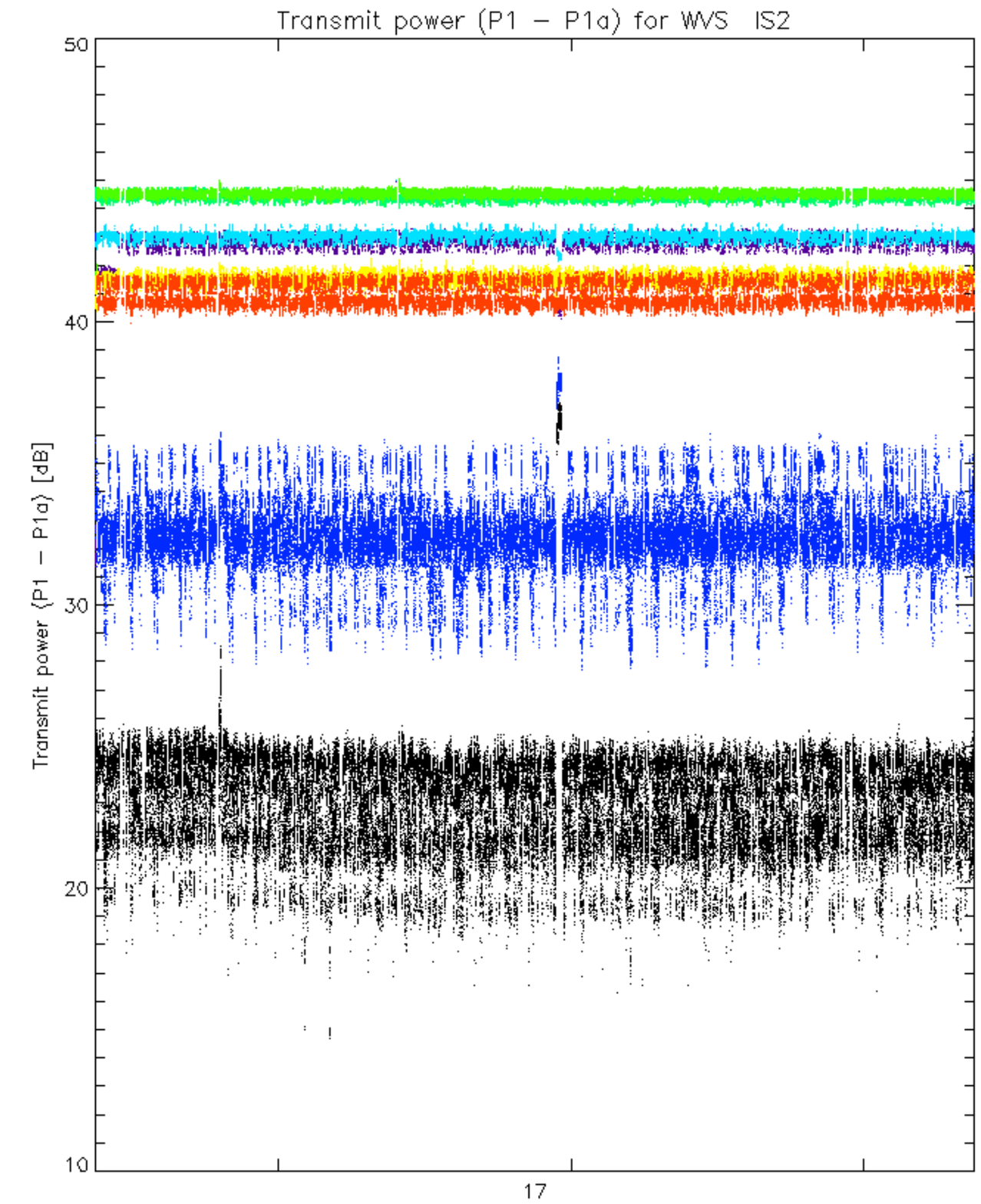
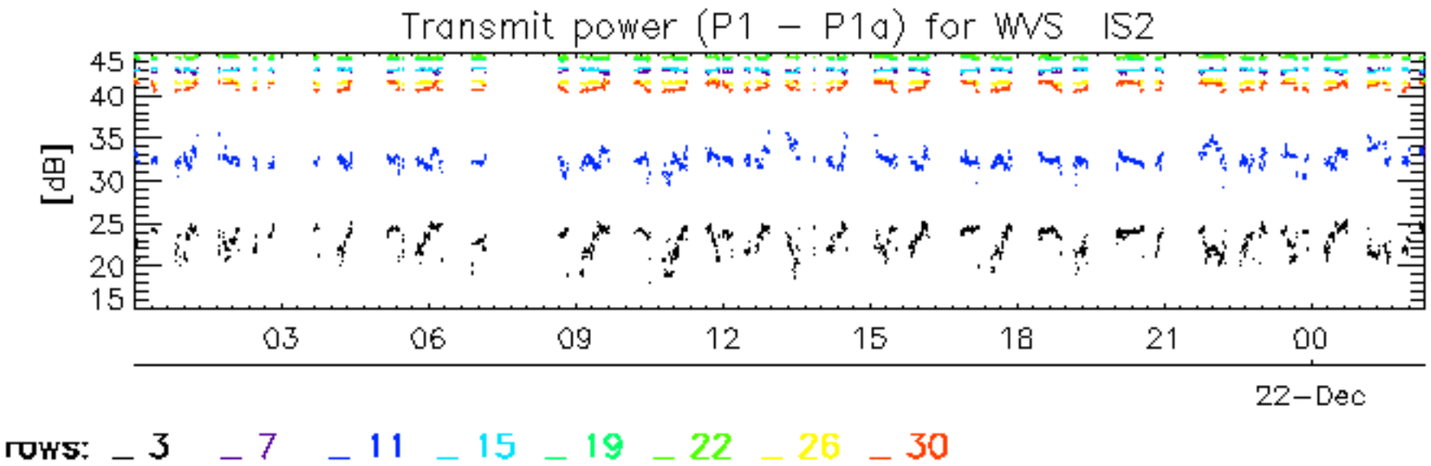

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
−20
17
rows: 3 7 11 15 19 22 26 30


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
22–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]
17
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
22–Dec
rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.