PRELIMINARY REPORT OF 040619

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

last update on Sat Jun 19 13:04:38 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 - Browse Visual Inspection

2.3 - 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	20040618 195746
H	20040617 203023

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.

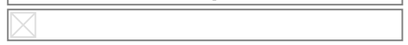
4.1 - Daily statistics

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	-3.518624	0.011185	0.057821
7	P1	-3.323880	0.015575	-0.009063
11	P1	-4.531934	0.038506	0.018226
15	P1	-5.687213	0.058745	0.041367
19	P1	-3.424101	0.004695	-0.026881
22	P1	-4.560929	0.011033	0.004905
24	P1	-4.916683	0.015065	0.026807
30	P1	-6.839867	0.023379	-0.014682

3	P1	-16.109772	0.226131	0.094435
7	P1	-13.988682	0.103132	-0.001792
11	P1	-19.821928	0.296127	-0.195781
15	P1	-11.789589	0.045090	0.056237
19	P1	-13.798665	0.032598	-0.066616
22	P1	-16.589077	0.426881	0.083120
24	P1	-14.704210	0.303543	0.048605
30	P1	-17.657156	0.377458	-0.084147

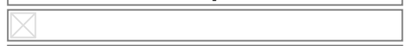
P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.429922	0.081818	0.060750
7	P2	-22.873470	0.117239	0.068311
11	P2	-15.661364	0.128021	0.129419
15	P2	-7.201789	0.095332	0.042205
19	P2	-9.568711	0.132541	0.048010
22	P2	-17.570503	0.100872	0.131421
24	P2	-20.889641	0.086667	0.063279
30	P2	-19.456923	0.079769	0.100315

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.144384	0.002030	0.006975
7	P3	-8.144382	0.002031	0.006975
11	P3	-8.144382	0.002030	0.006977
15	P3	-8.144384	0.002030	0.006985
19	P3	-8.144382	0.002030	0.006990
22	P3	-8.144386	0.002030	0.007003
24	P3	-8.144394	0.002030	0.007047
30	P3	-8.144503	0.002030	0.006964

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	-3.149266	0.136267	0.002986
7	P1	-2.811511	0.074546	0.035744
11	P1	-3.787527	0.021527	-0.018902
15	P1	-4.261487	1.025397	-0.001624
19	P1	-3.350992	0.048578	-0.022380
22	P1	-5.722441	0.044990	-0.001907
24	P1	-4.048058	0.080690	-0.019227
30	P1	-6.094310	0.059619	-0.041463
3	P1	-11.032408	0.431242	0.015457
7	P1	-9.765450	0.255027	0.039348
11	P1	-11.749538	0.165094	-0.095077
15	P1	-11.836229	0.281943	-0.030495
19	P1	-14.985633	0.821611	-0.035283
22	P1	-21.507660	8.956167	-0.000587
24	P1	-17.361570	0.286686	-0.074385
30	P1	-21.715393	4.130539	0.114182

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.170498	0.043016	0.012997
7	P2	-22.957829	0.028729	0.068170
11	P2	-11.067390	0.215688	0.131191
15	P2	-5.006405	0.043305	0.008330
19	P2	-6.932940	0.043641	-0.015174
22	P2	-7.698068	0.023263	0.065104
24	P2	-11.082699	0.071169	0.017198
30	P2	-22.417549	0.093339	0.076686

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)

3	P3	-7.984517	0.003301	0.003572
7	P3	-7.984447	0.003286	0.003607
11	P3	-7.984490	0.003293	0.003807
15	P3	-7.984659	0.003281	0.003886
19	P3	-7.984477	0.003298	0.003811
22	P3	-7.984665	0.003278	0.003677
24	P3	-7.984392	0.003310	0.003602
30	P3	-7.984573	0.003285	0.003781

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	0.000478818
	stdev	2.17655e-07
MEAN Q	mean	0.000533944
	stdev	2.40260e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128485
	stdev	0.00100494

STDEV Q	mean	0.128721
	stdev	0.00101614

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

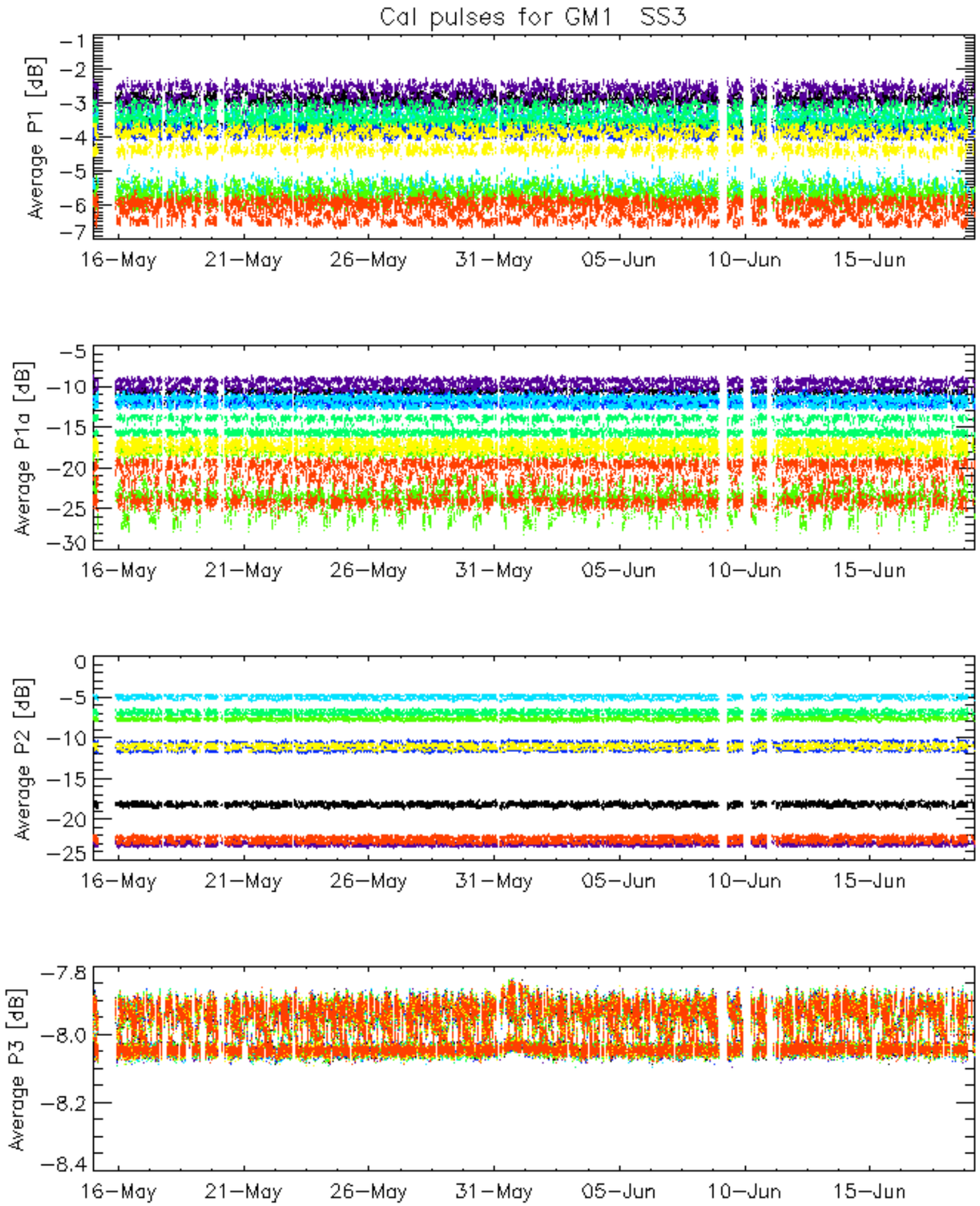
Evolution of unbiased Doppler error (Real - Expected)
☒
Acsending
☒
Descending

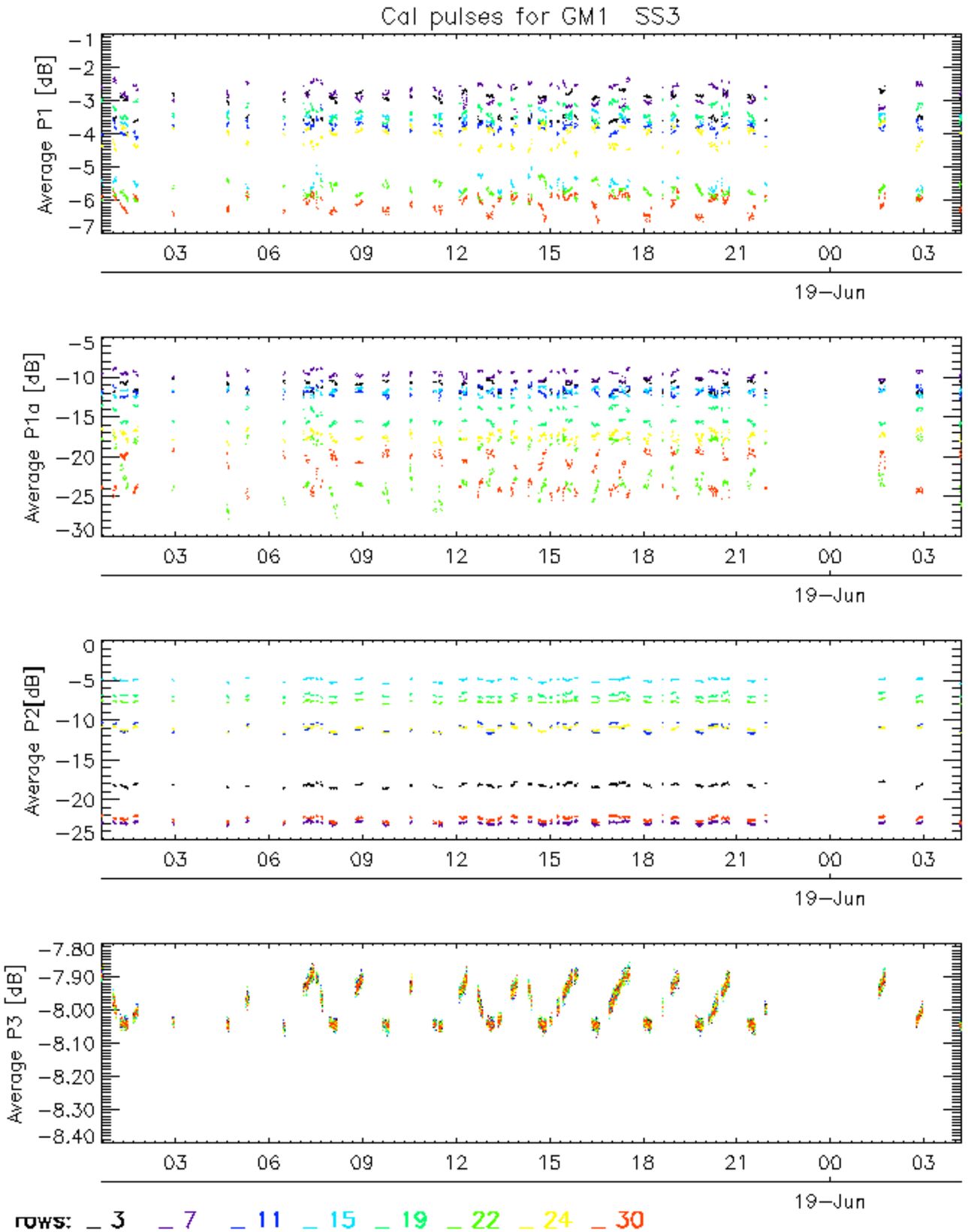
6.5 - Absolute Doppler for GM1

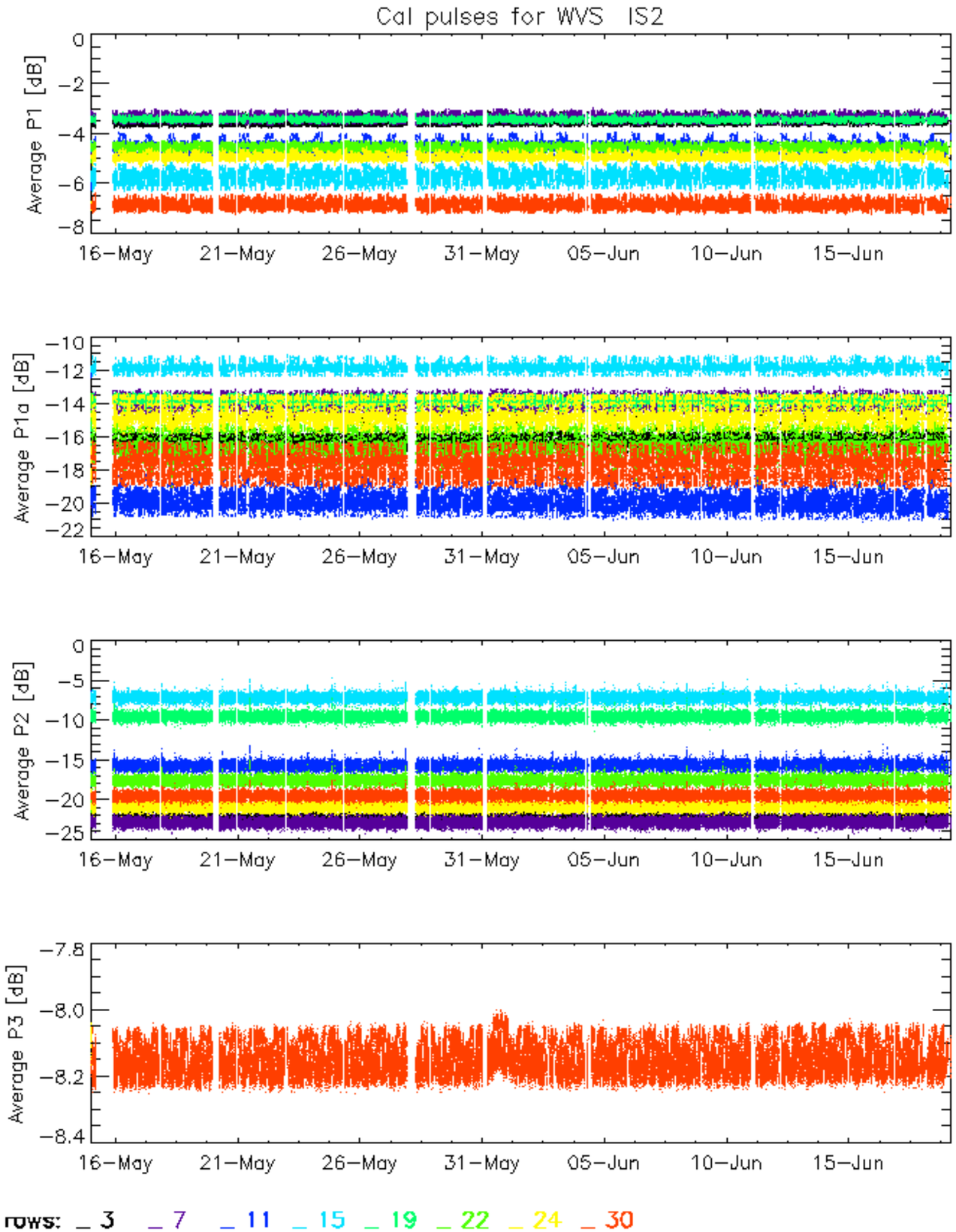
Evolution of Absolute Doppler
☒
Acsending
☒
Descending

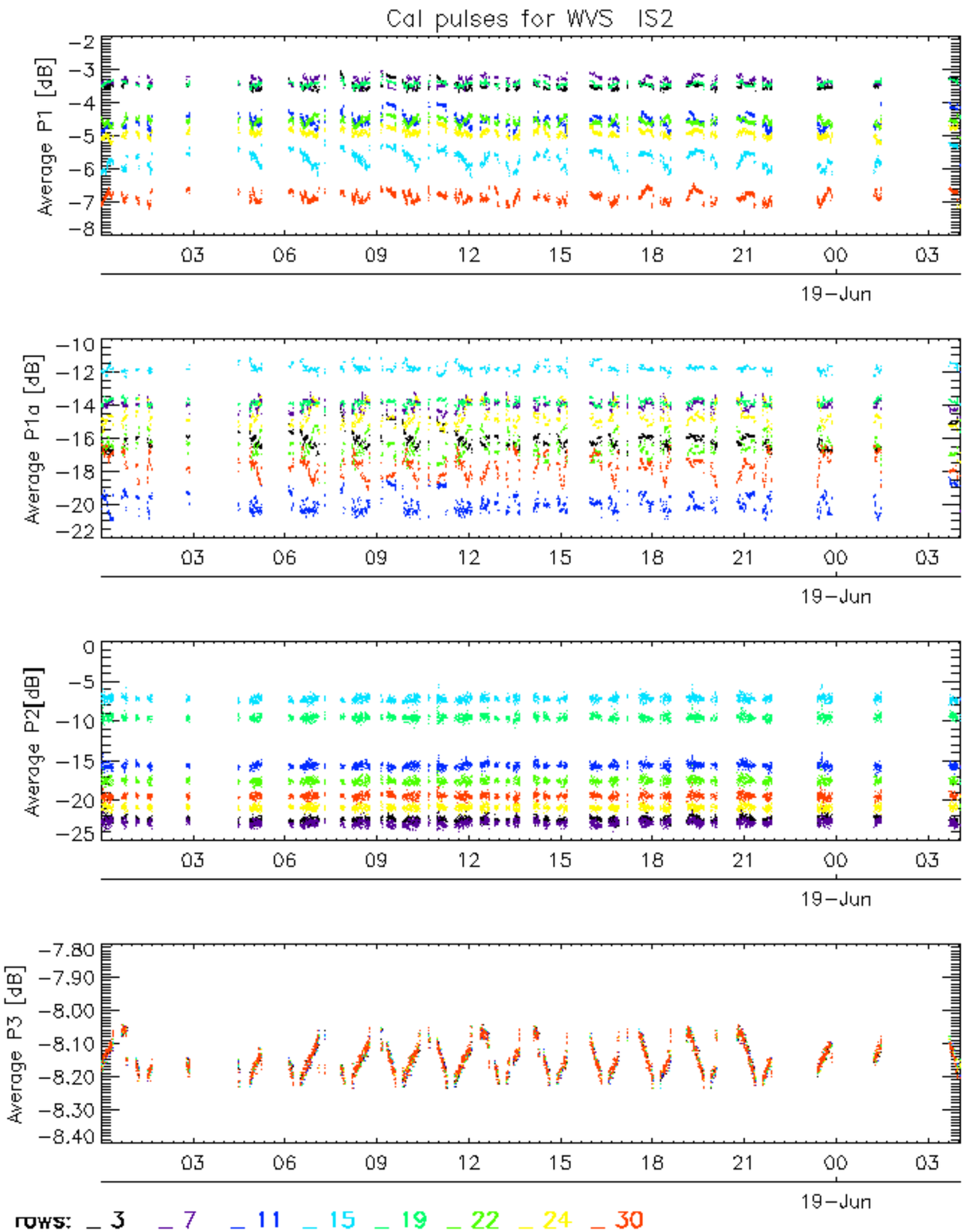
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
☒

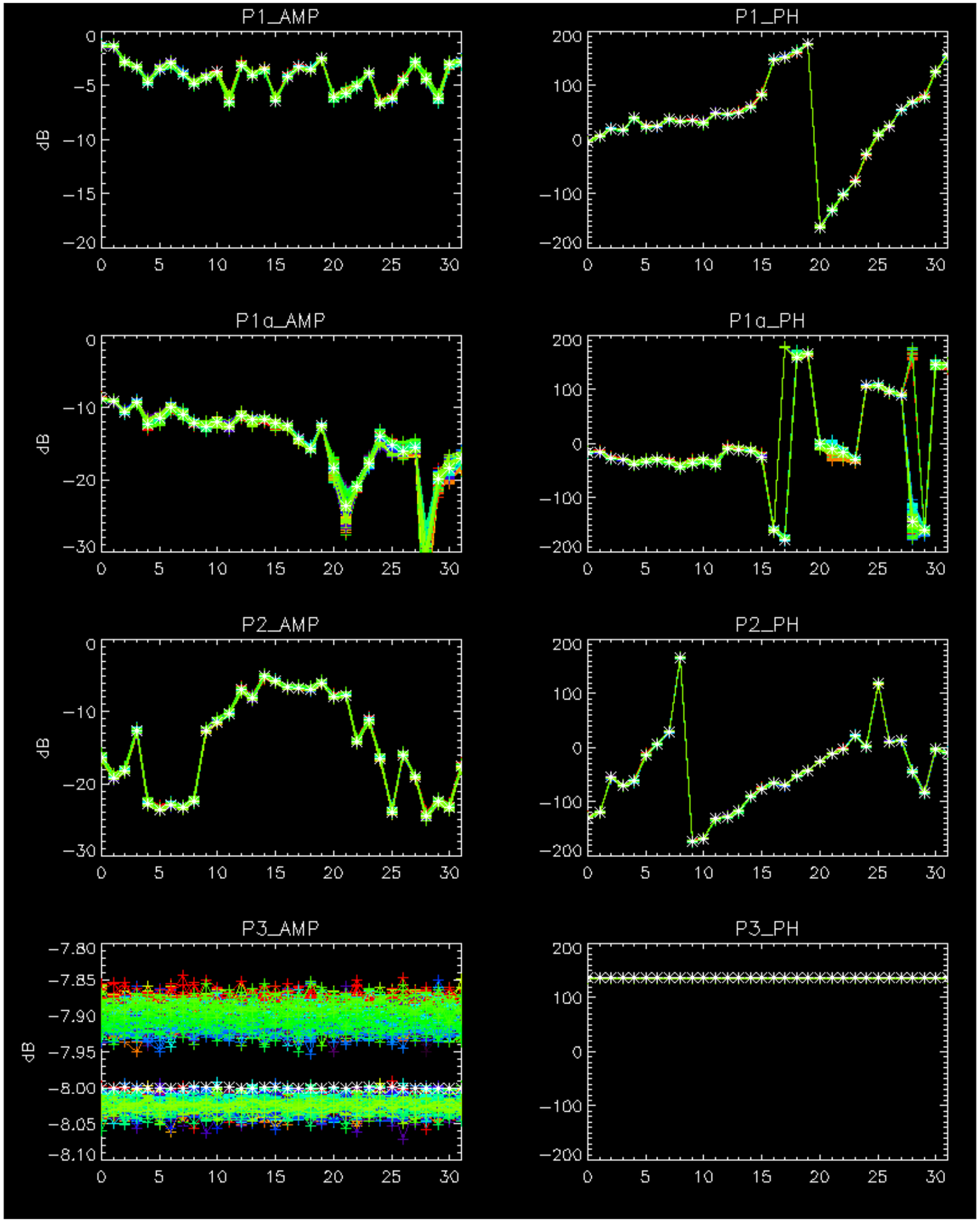

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2 [dB]
0
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: 3 7 11 15 19 22 24 30

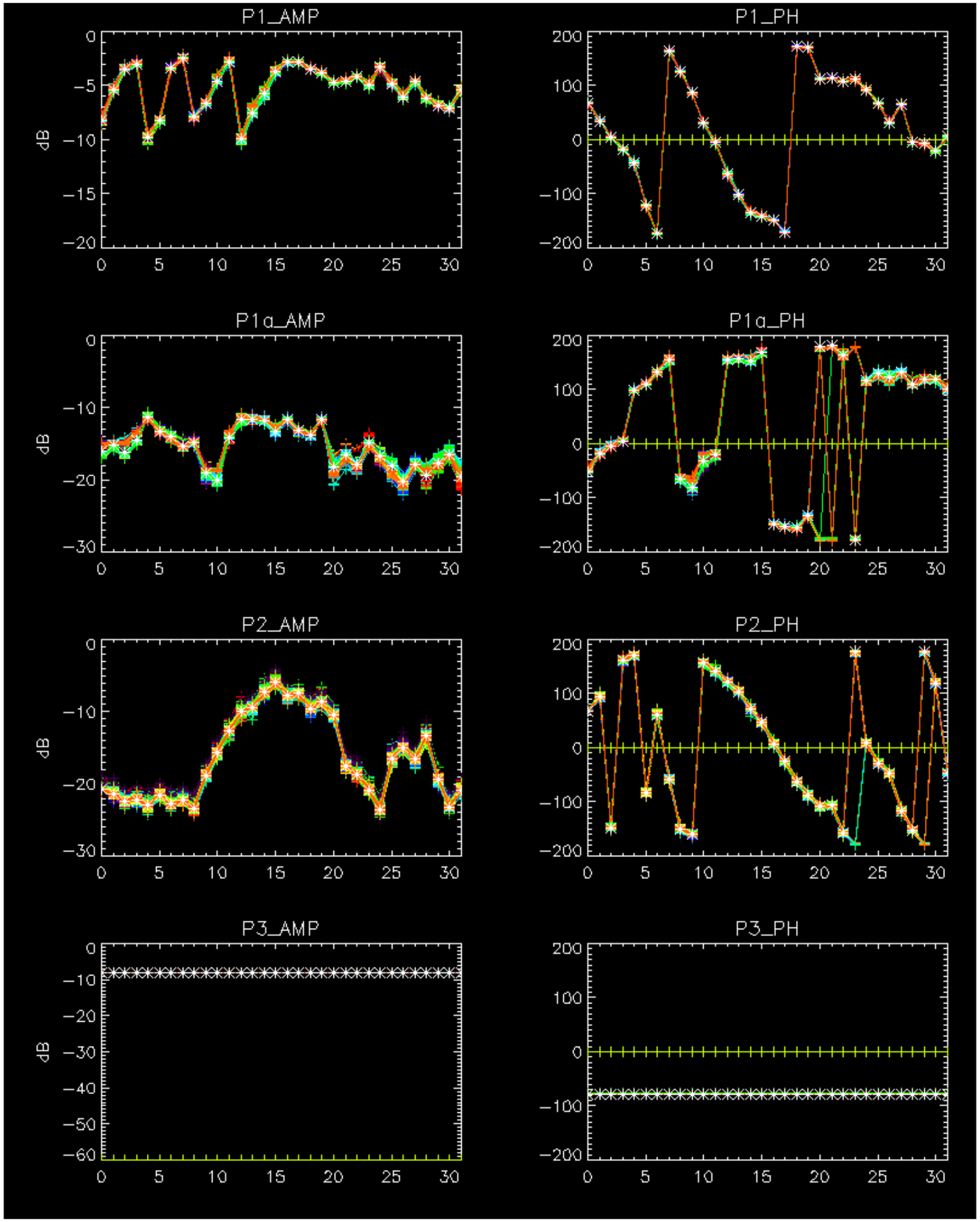

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
19−Jun
Average P1a [dB]
−5
−10
−15
−20
−25
−30
Average P2[dB]
0
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


Cal pulses for WVS IS2
Average P1 [dB]
−2
−3
−4
−5
−6
−7
−8
03
06
09
12
15
18
21
00
03
19−Jun
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
03
06
09
12
15
18
21
00
03
19−Jun
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
19−Jun
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
19−Jun
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

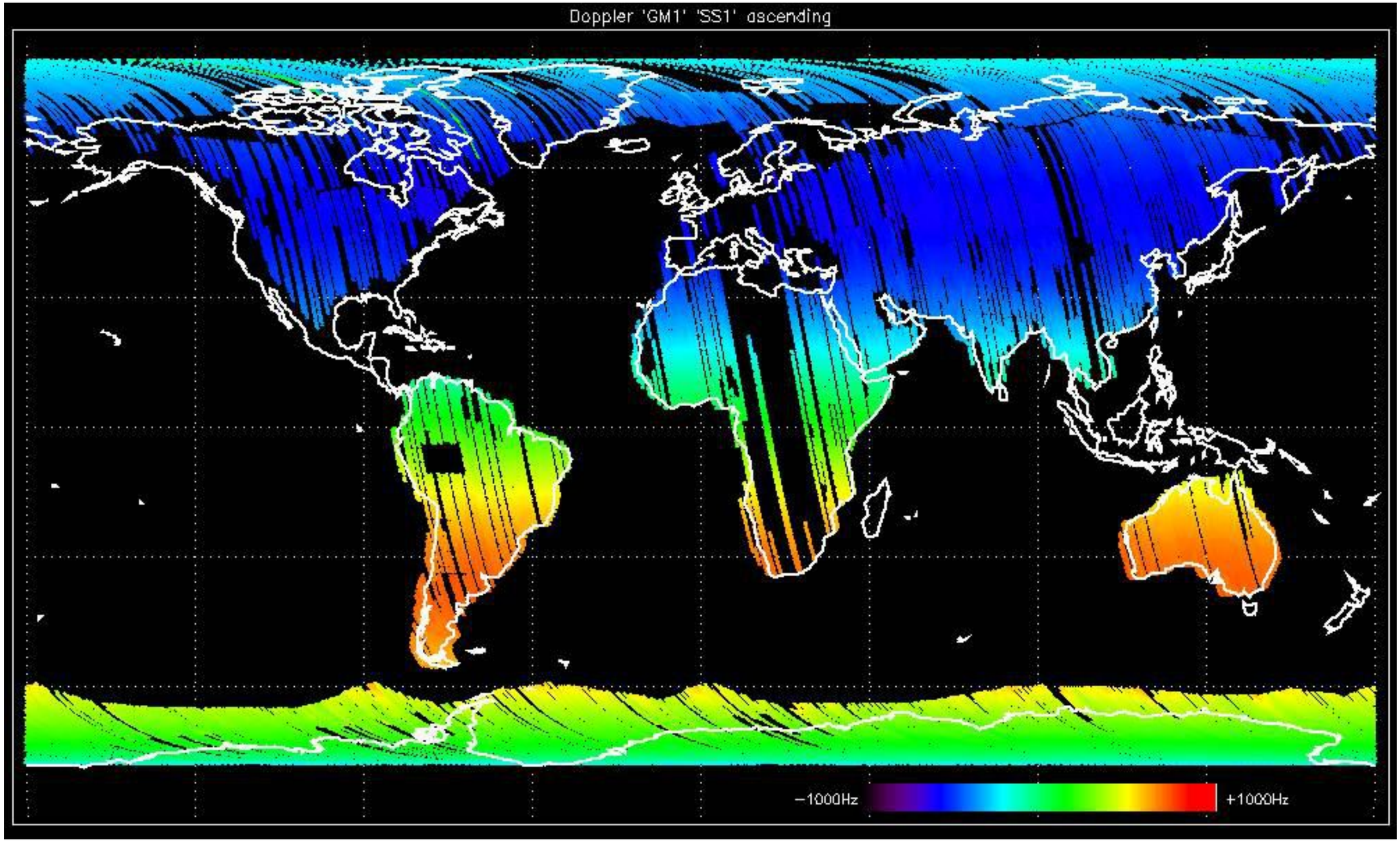
No anomalies observed.

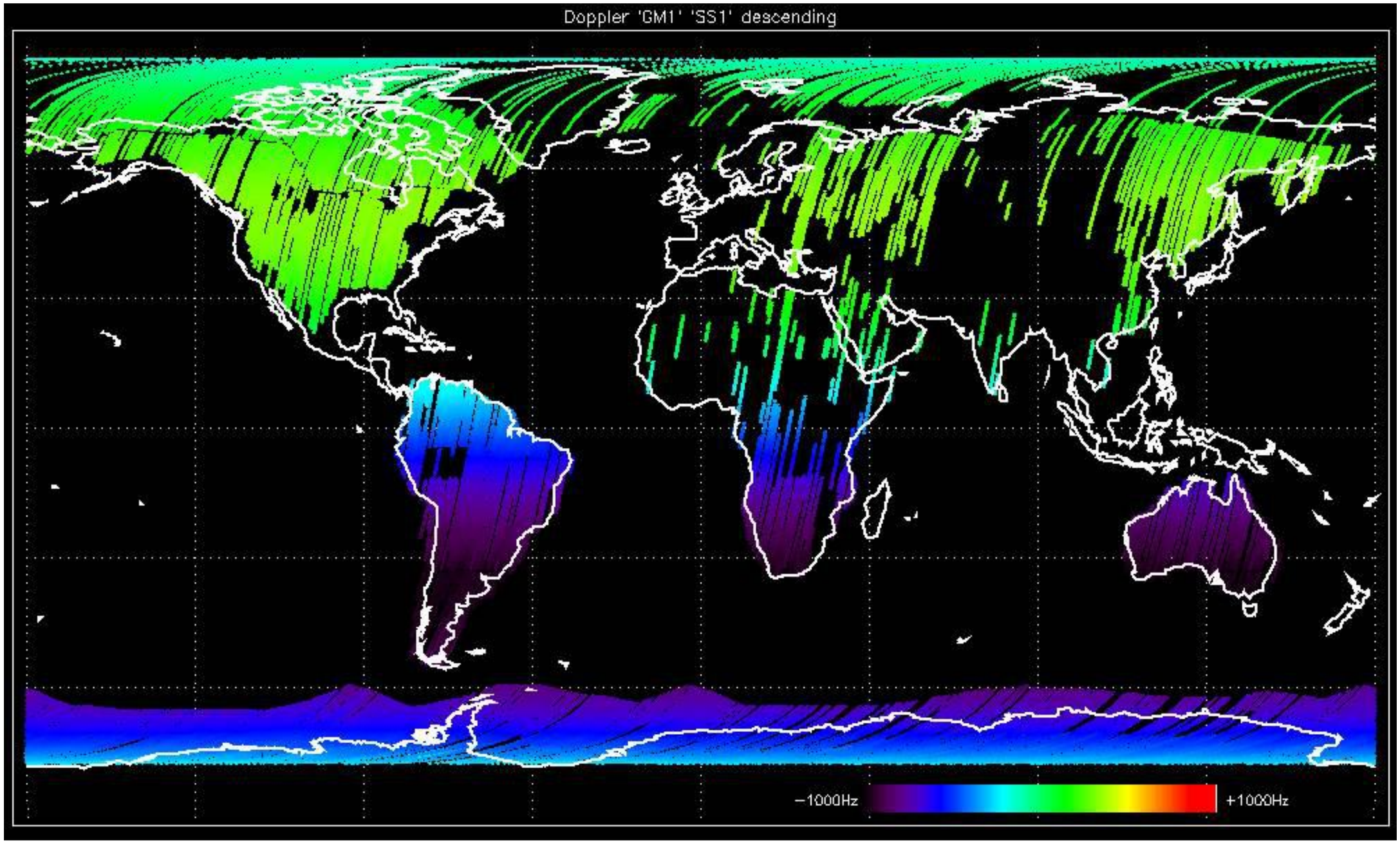

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95
−8.00
−8.05
−8.10
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

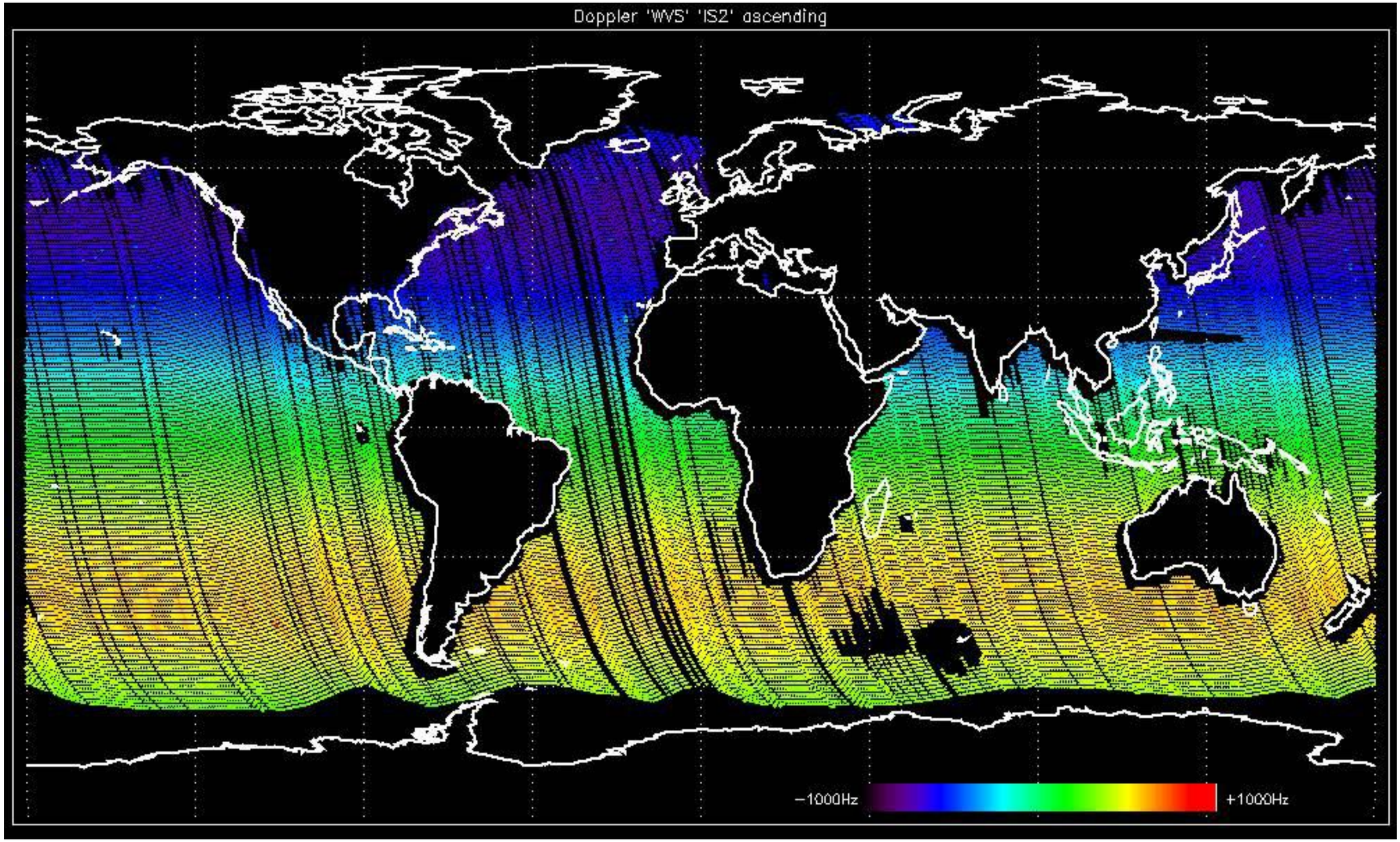

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
0
−10
−20
−30
−40
−50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

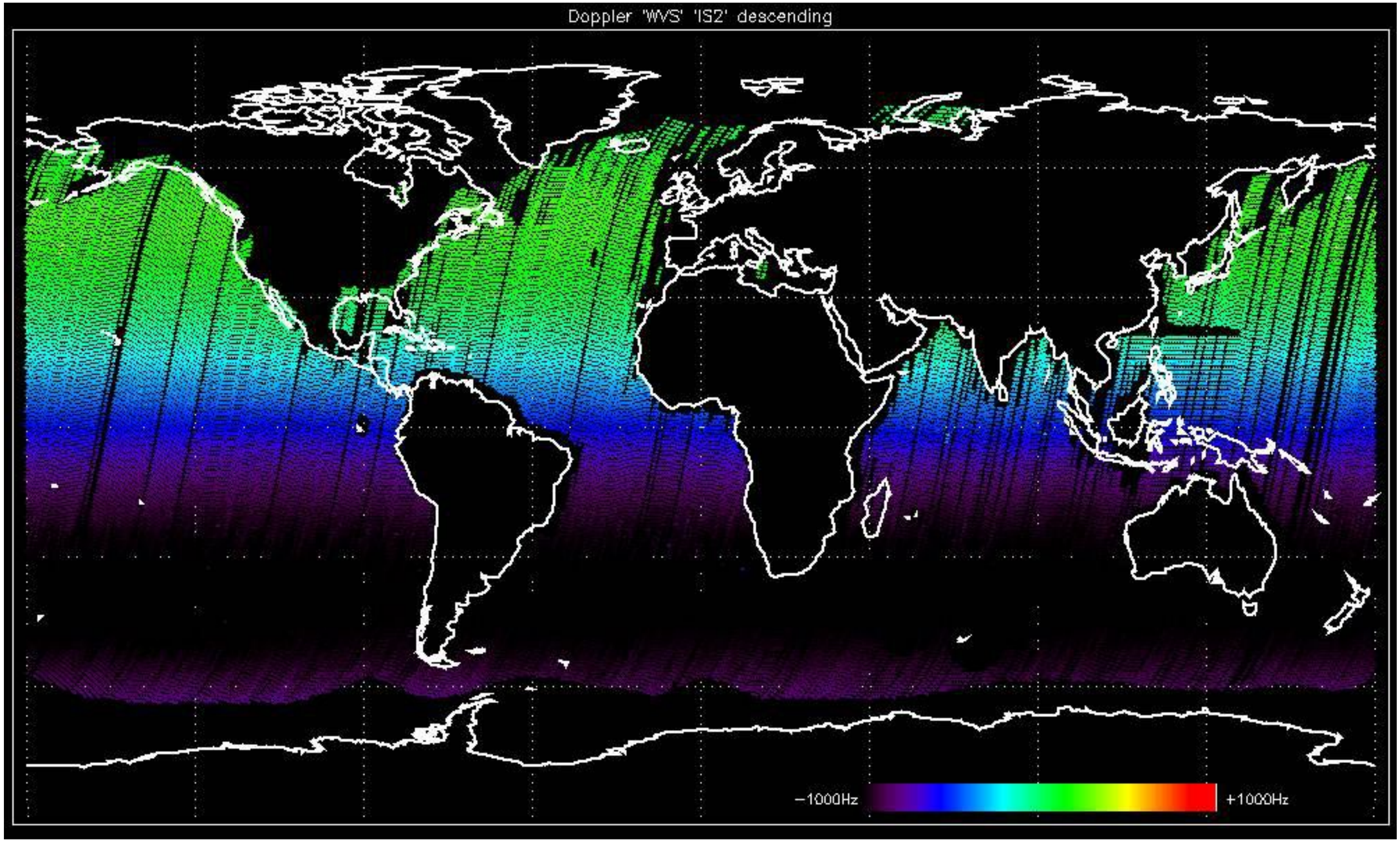
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

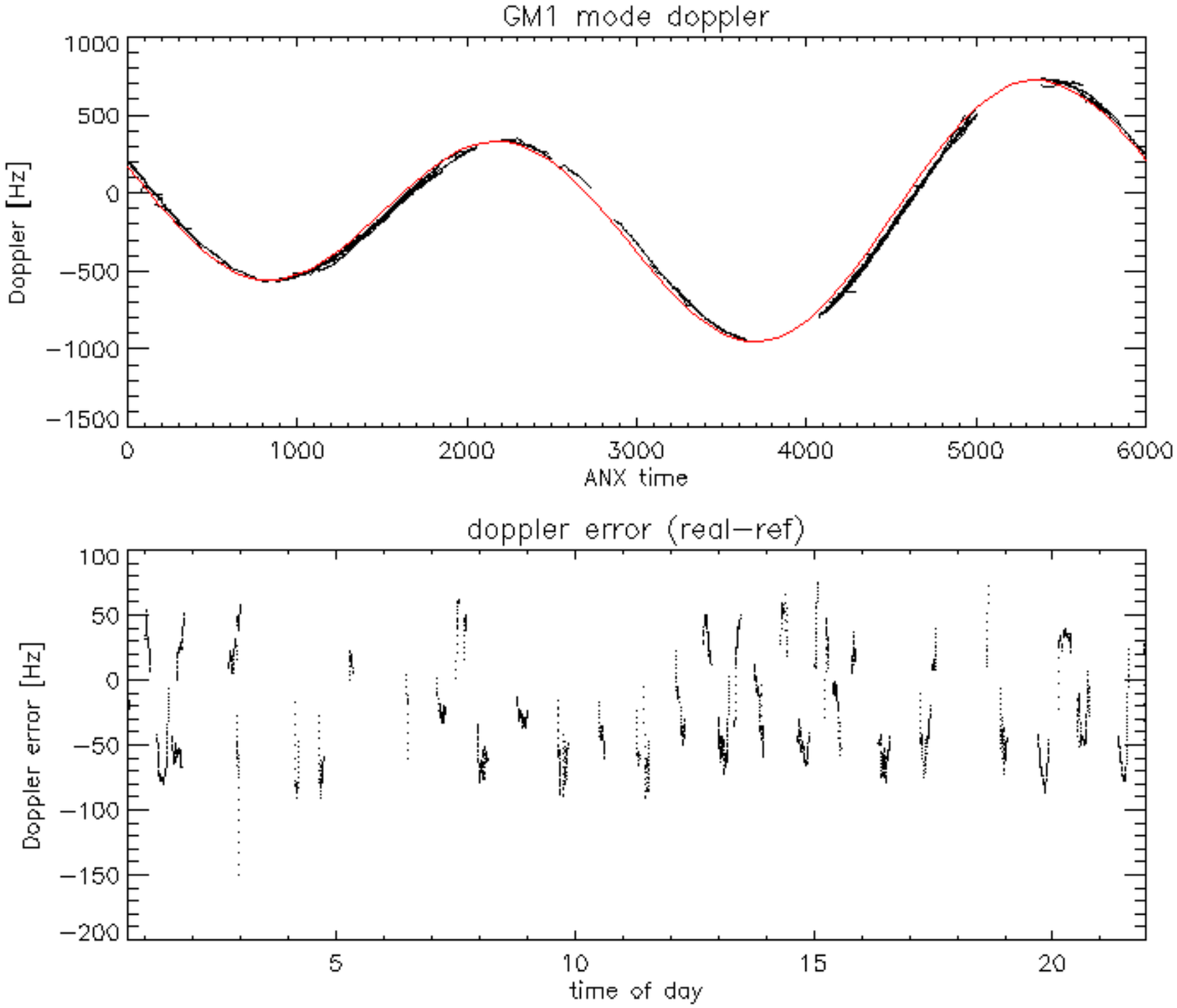
Preliminary report.The data is not yet controled

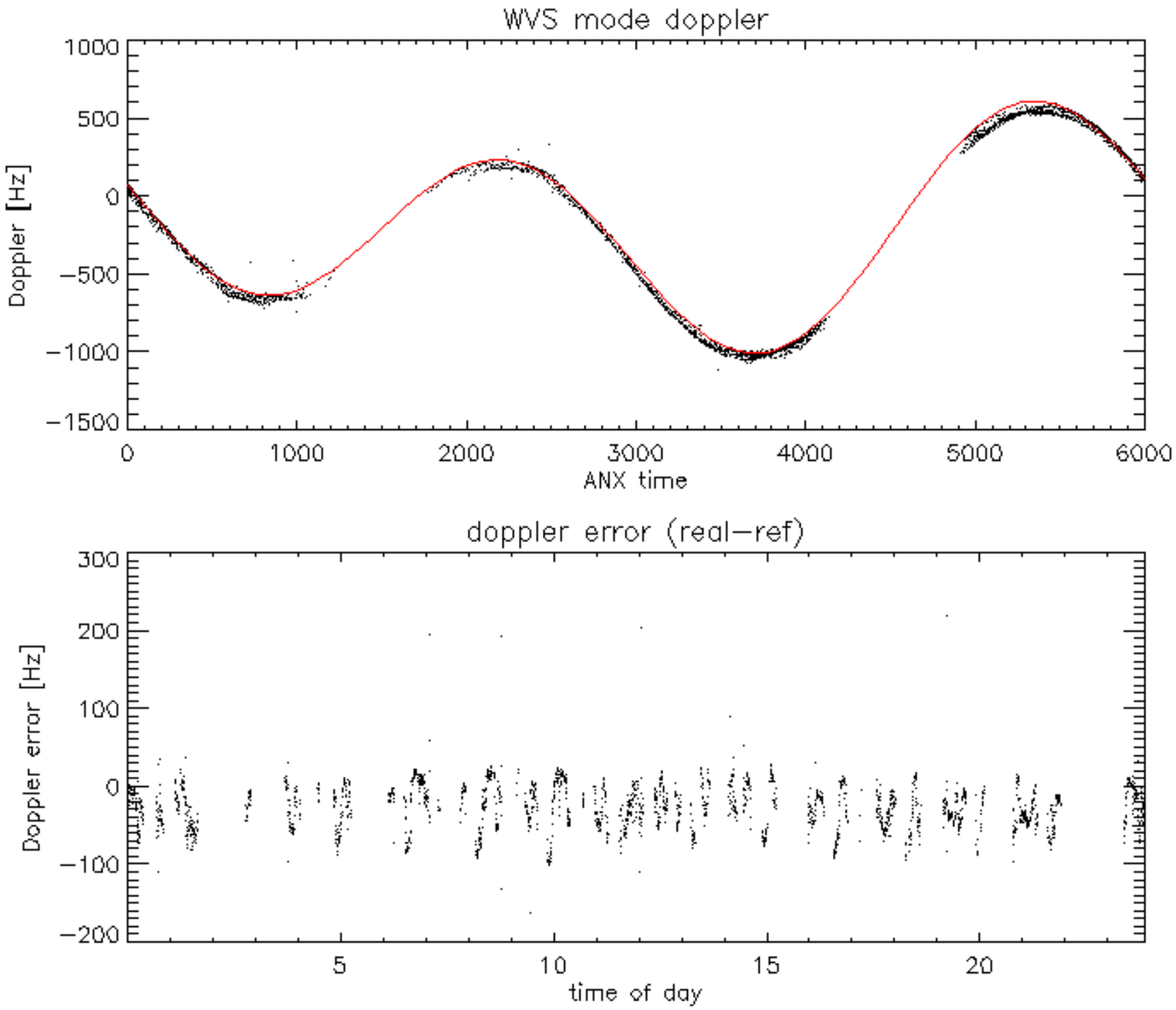

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

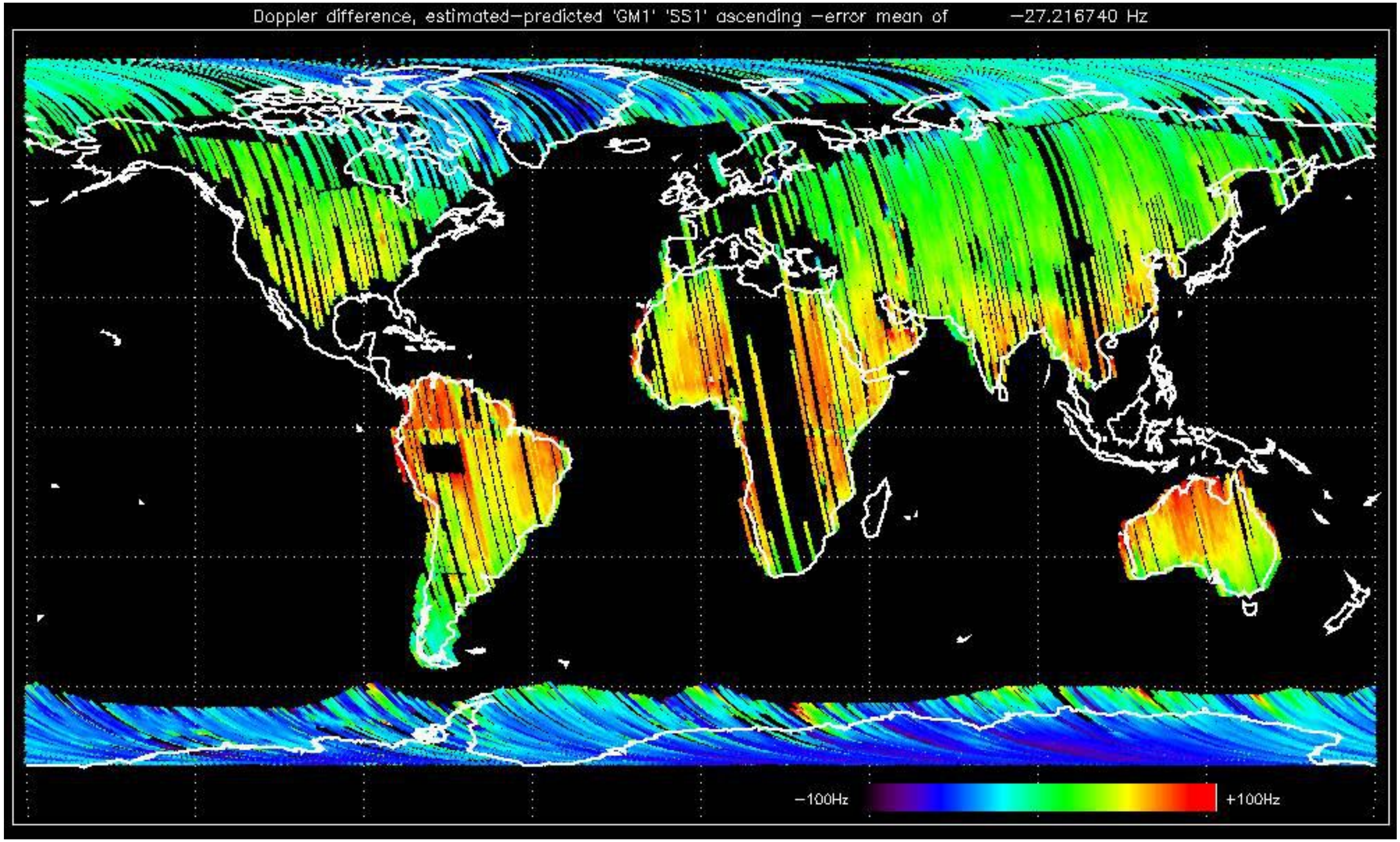

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

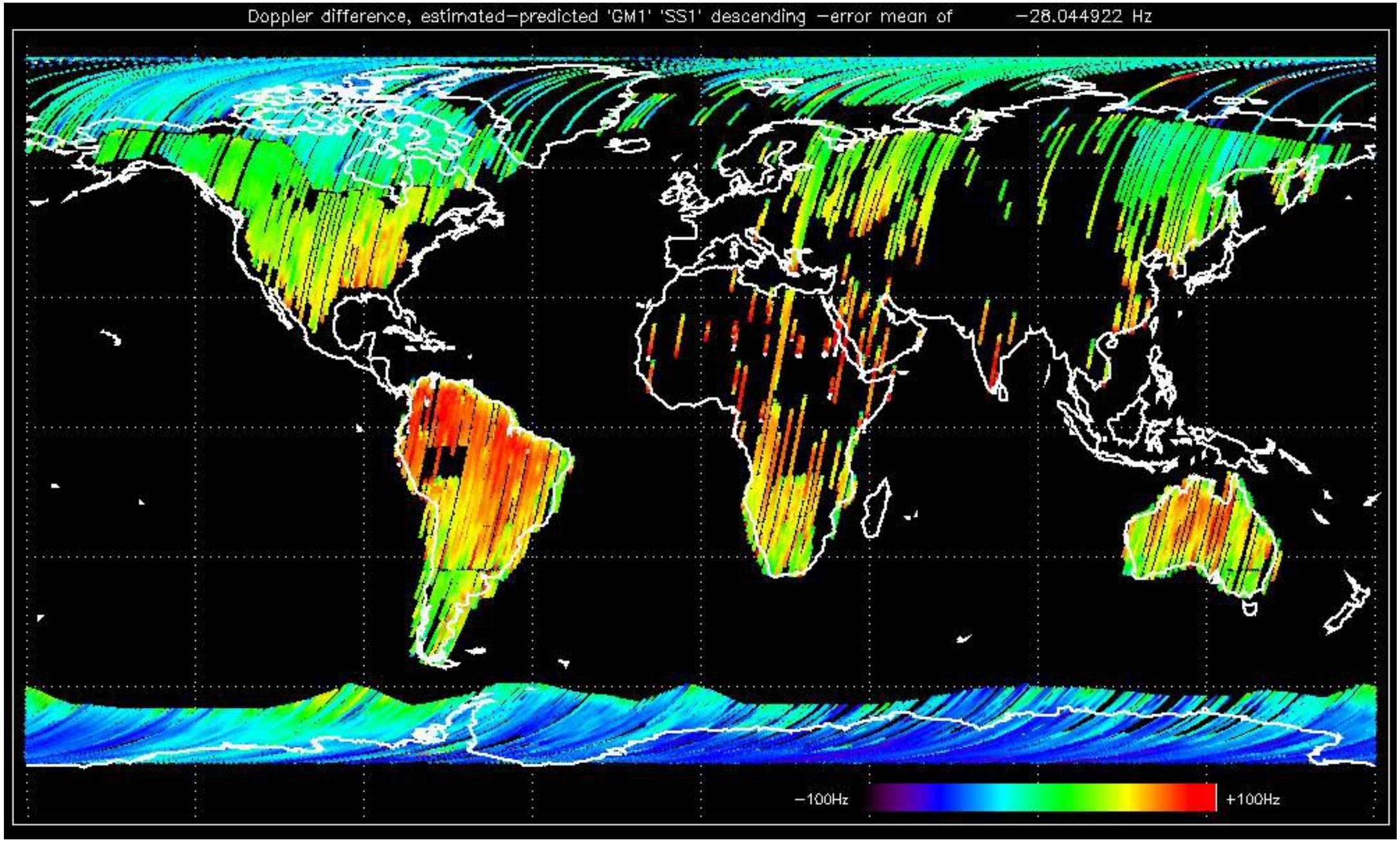

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

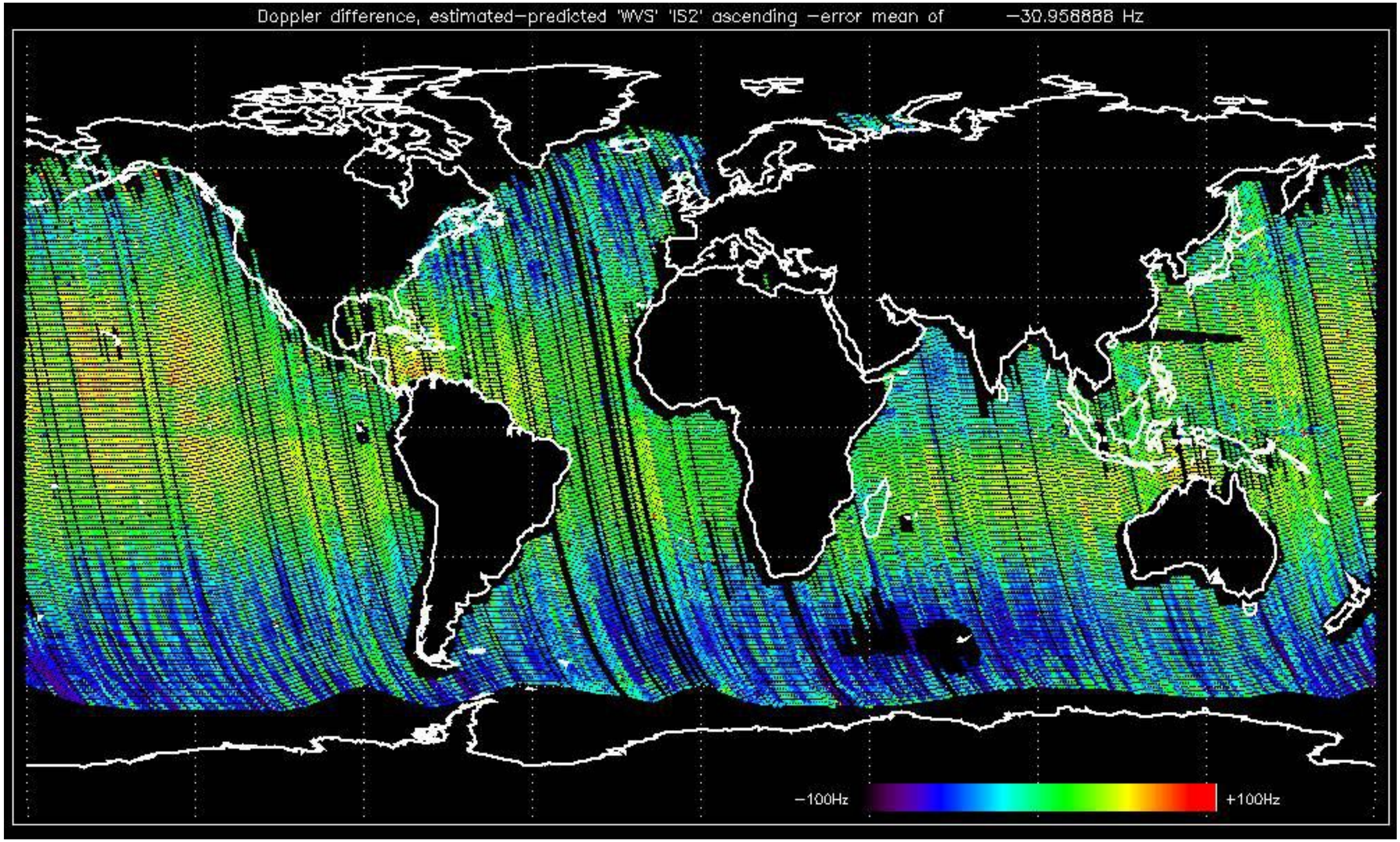

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

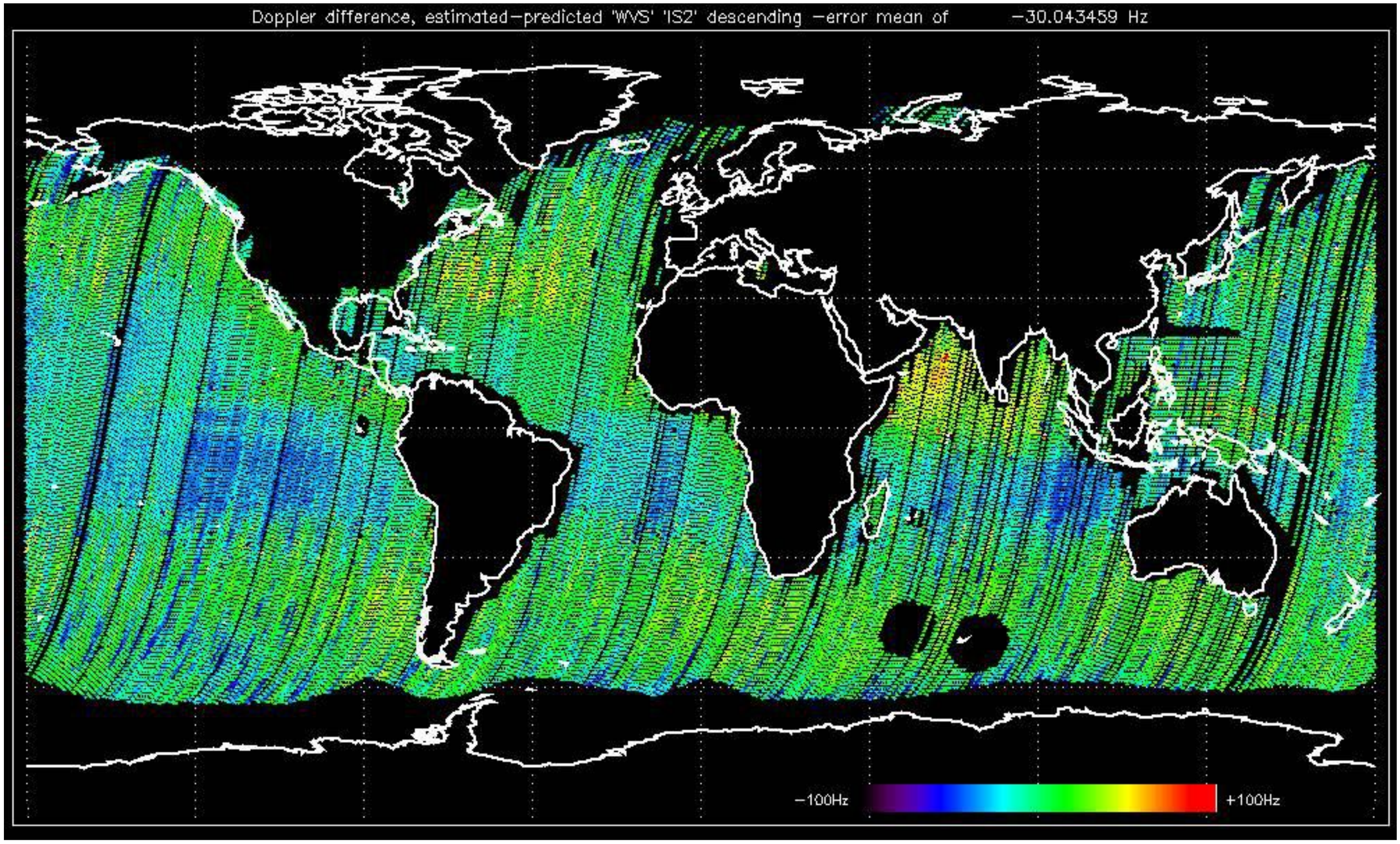

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
100
50
0
−50
−100
−150
−200
5
10
15
20
time of day


WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
ANX time
doppler error (real−ref)
Doppler error [Hz]
300
200
100
0
−100
−200
5
10
15
20
time of day


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −27.216740 Hz
−100Hz
+100Hz

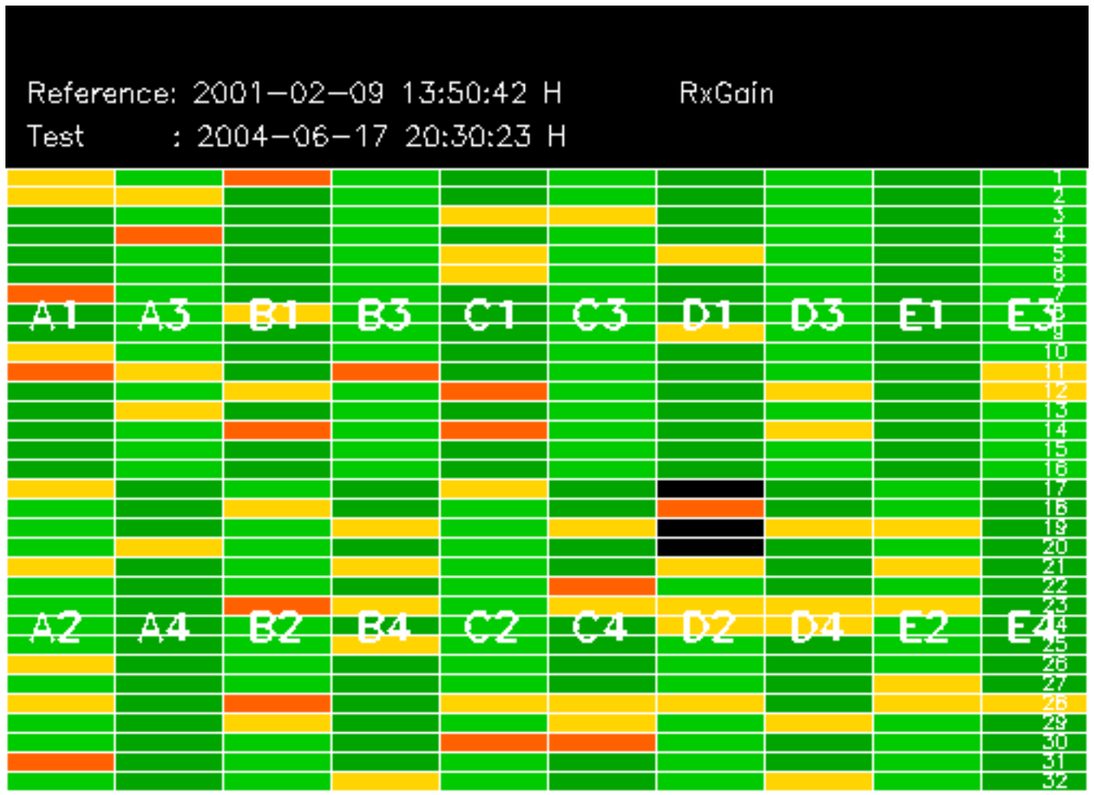

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −28.044922 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −30.958888 Hz
−100Hz
+100Hz


Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −30.043459 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 : 2004-06-17 20:30:23 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
13
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17
18
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21
22
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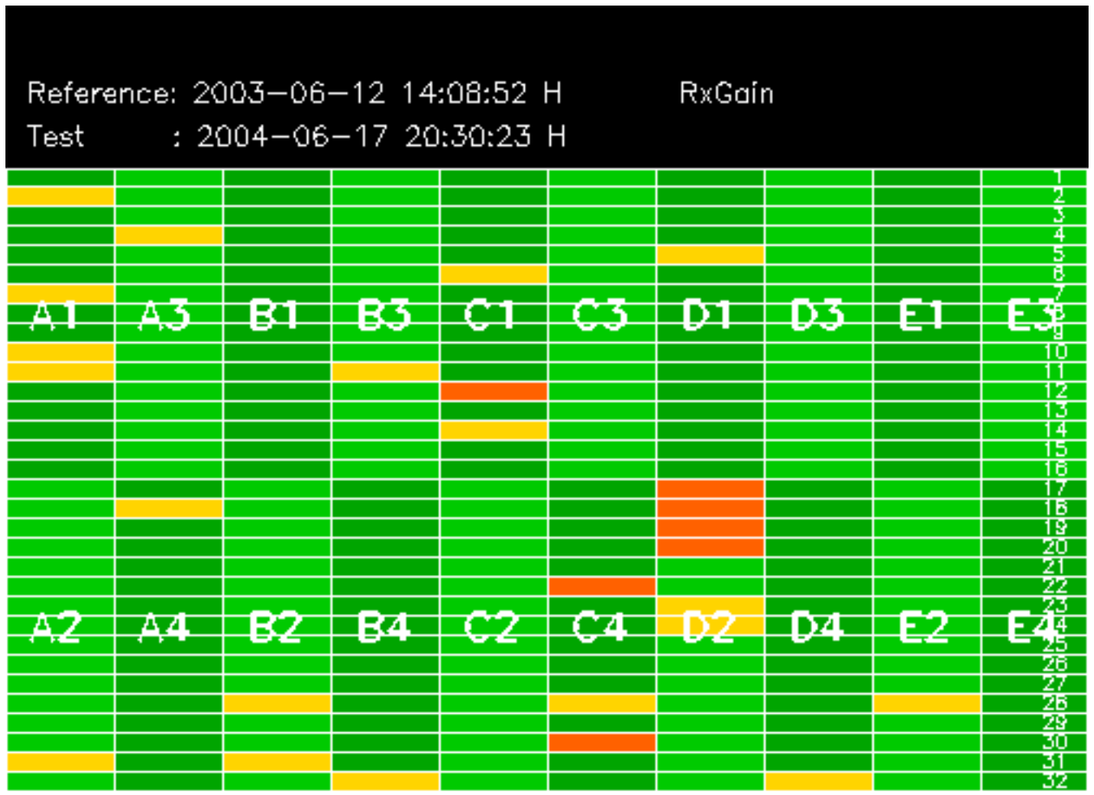
30
31
32


Reference: 2003-06-12 14:08:52 H
Test : 2004-06-17 20:30:23 H
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
5
6
7
8
9
10
11
12
13
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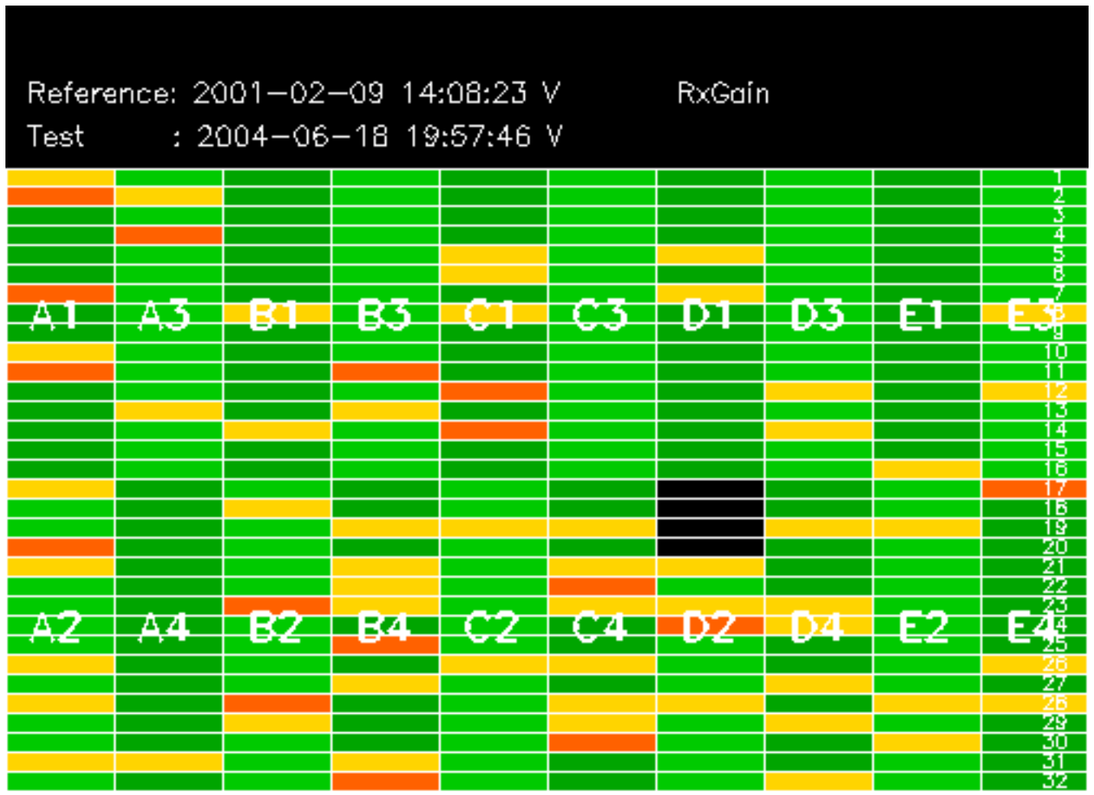
31
32


Reference: 2001-02-09 14:08:23 V
RxGain
Test : 2004-06-18 19:57:46 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
5
6
7
8
9
10
11
12
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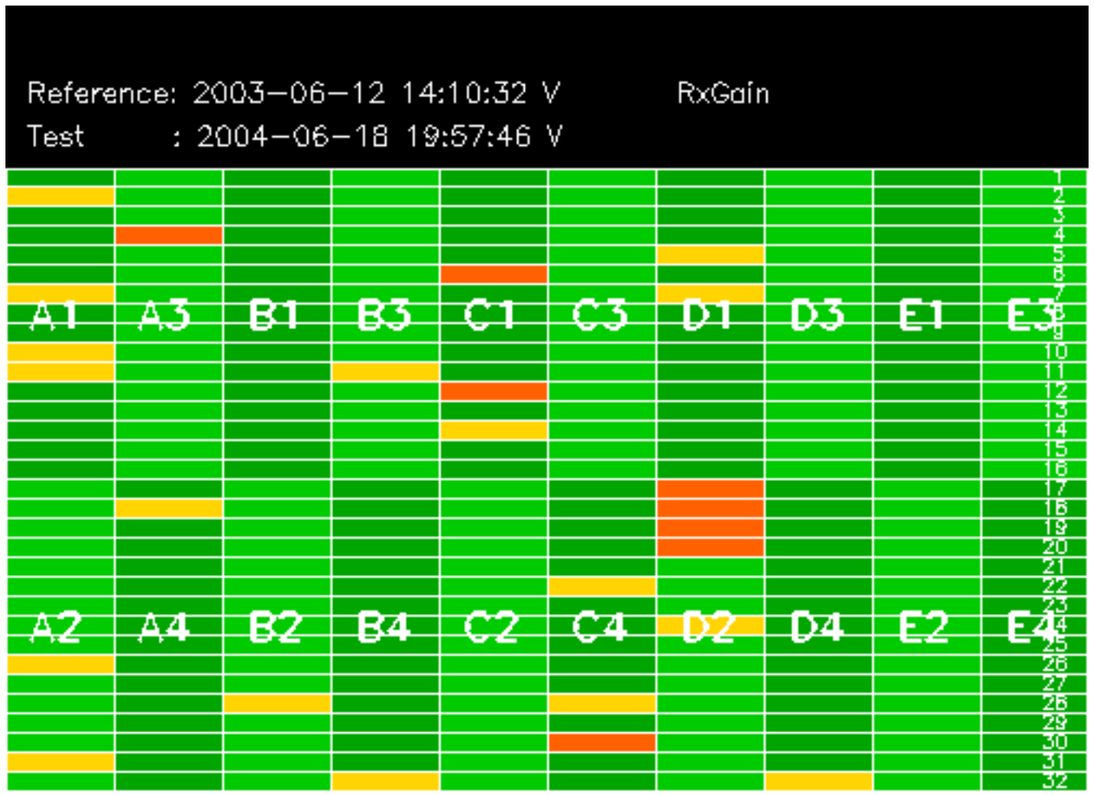
Reference: 2003-06-12 14:10:32 V
Test : 2004-06-18 19:57:46 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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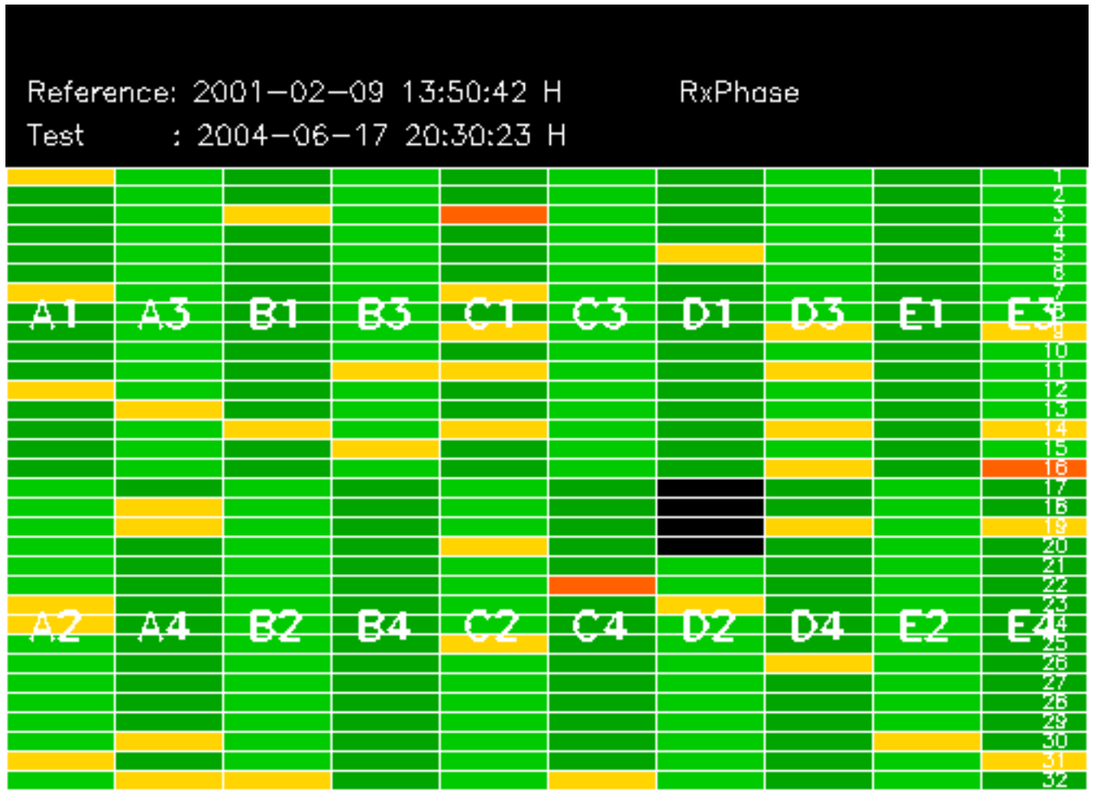
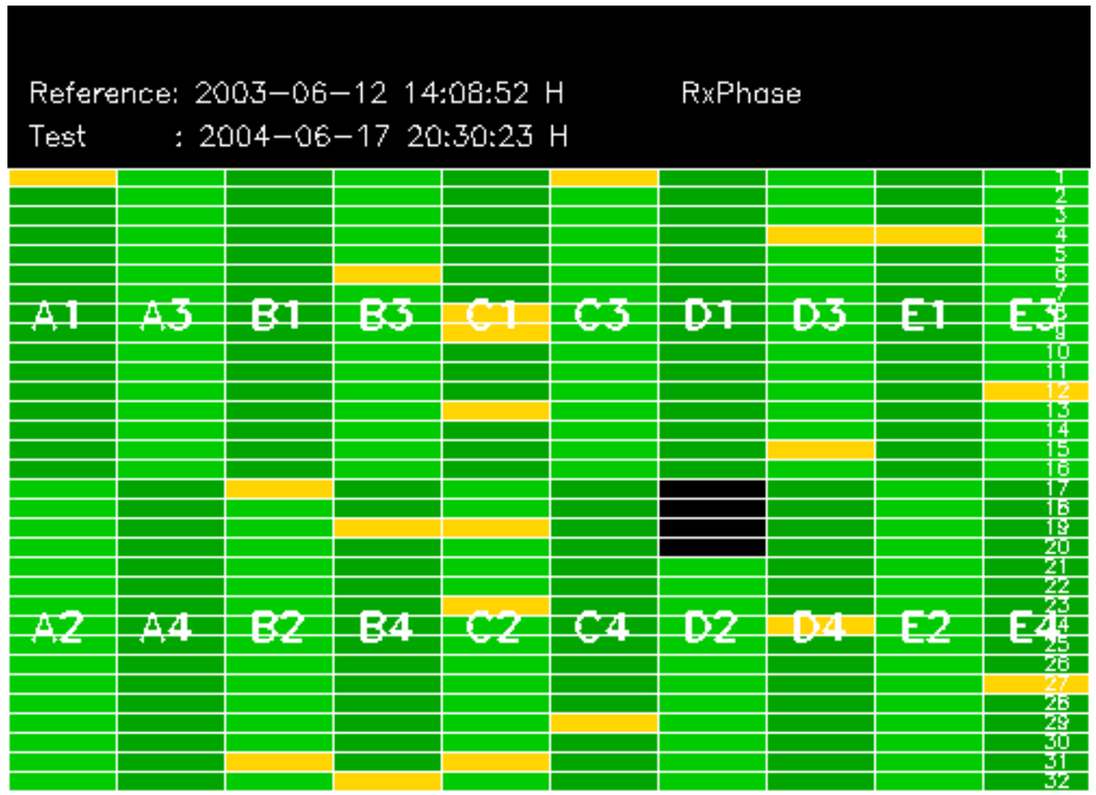

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-06-17 20:30:23 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-06-17 20:30:23 H
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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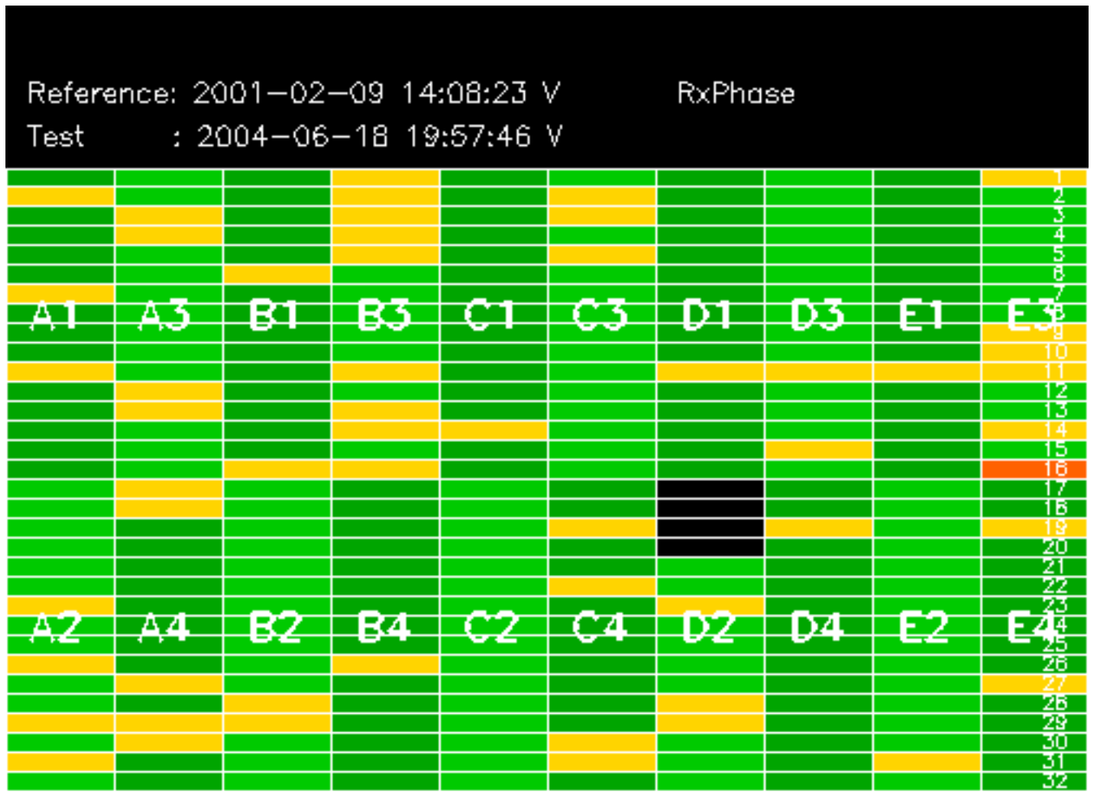
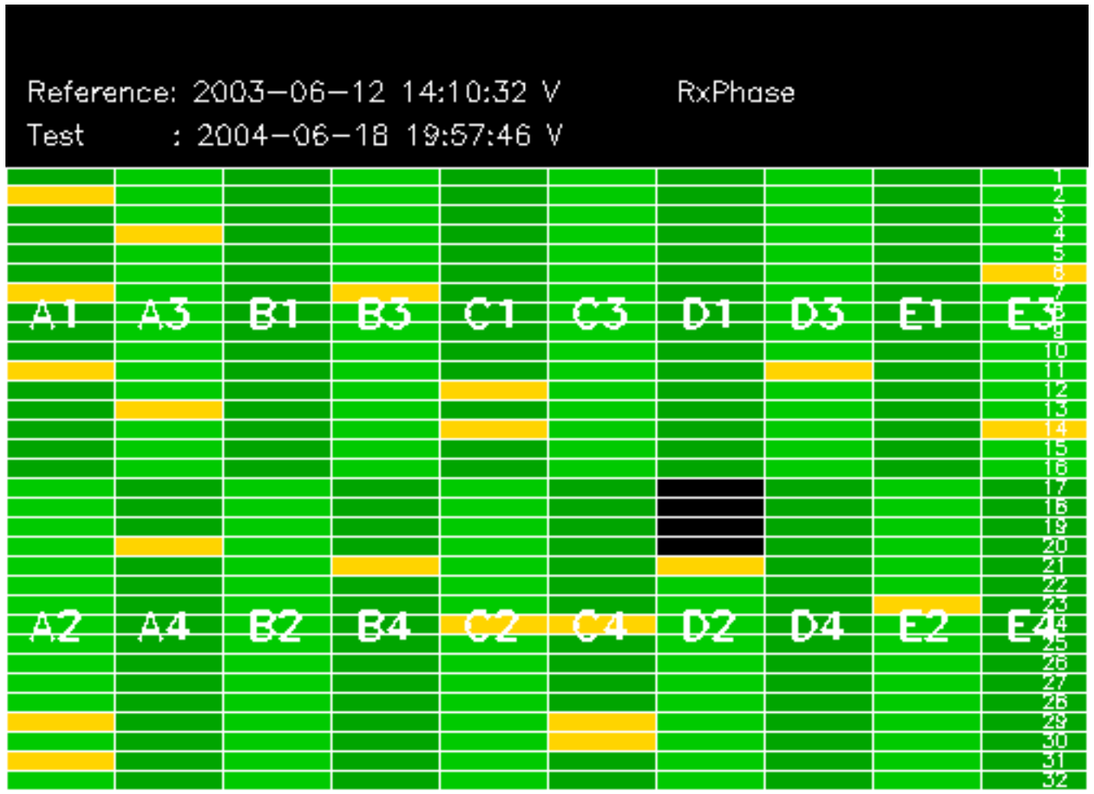

Reference: 2001-02-09 14:08:23 V
Test : 2004-06-18 19:57:46 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-06-18 19:57:46 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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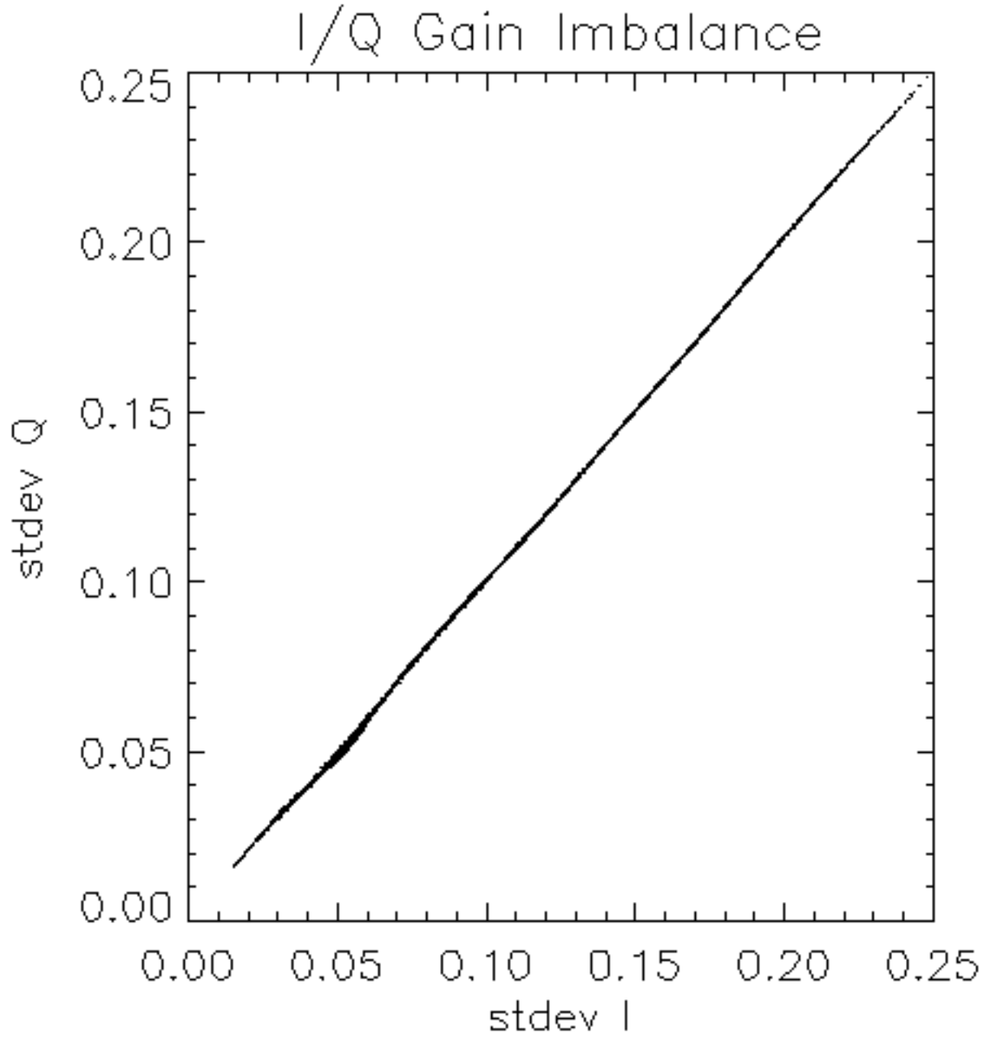
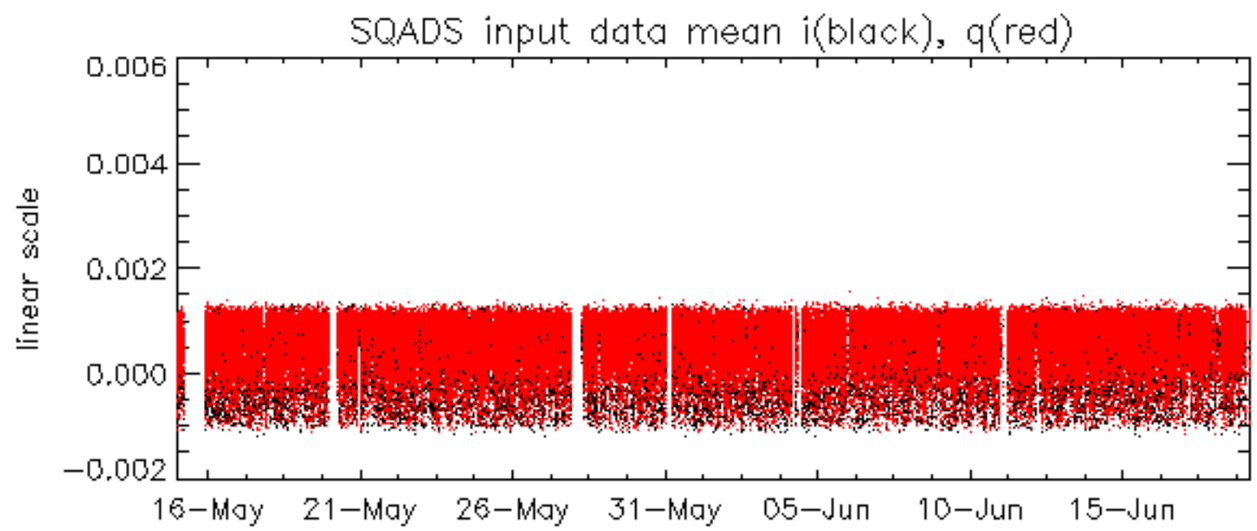
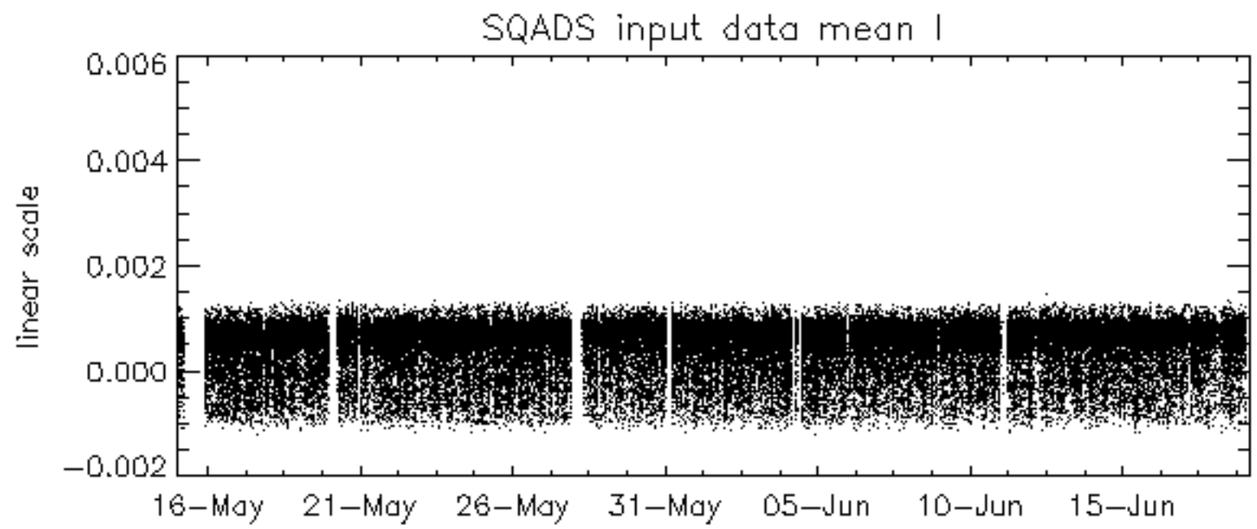
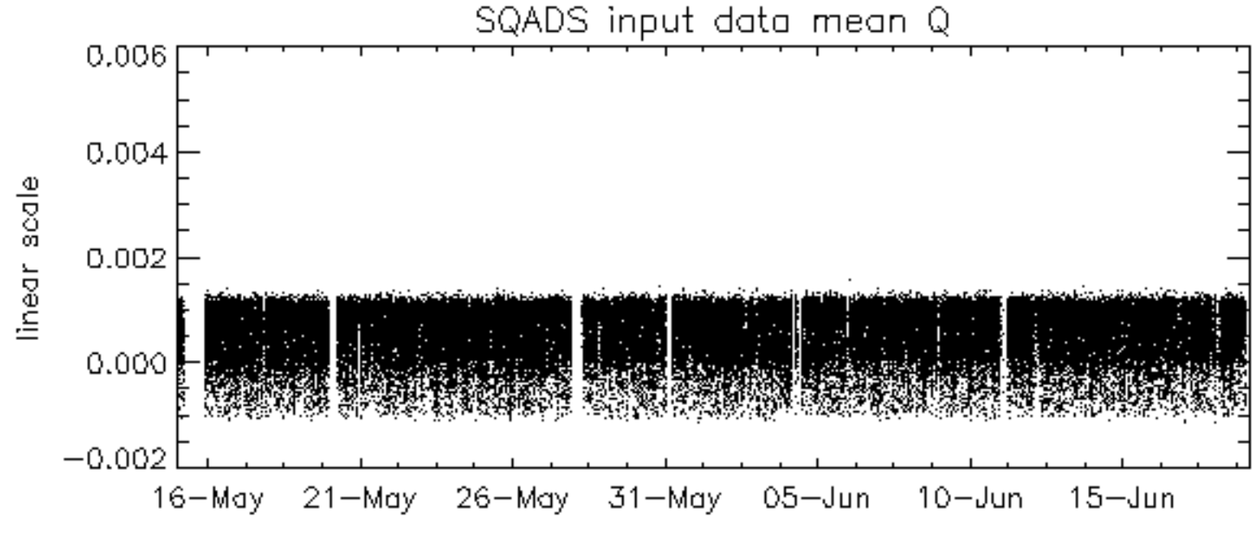
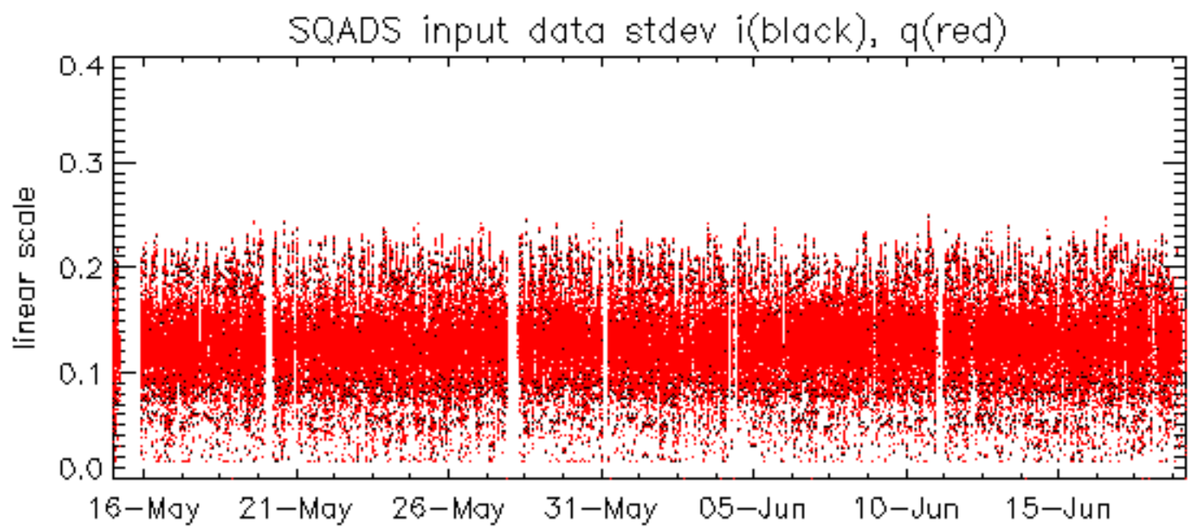
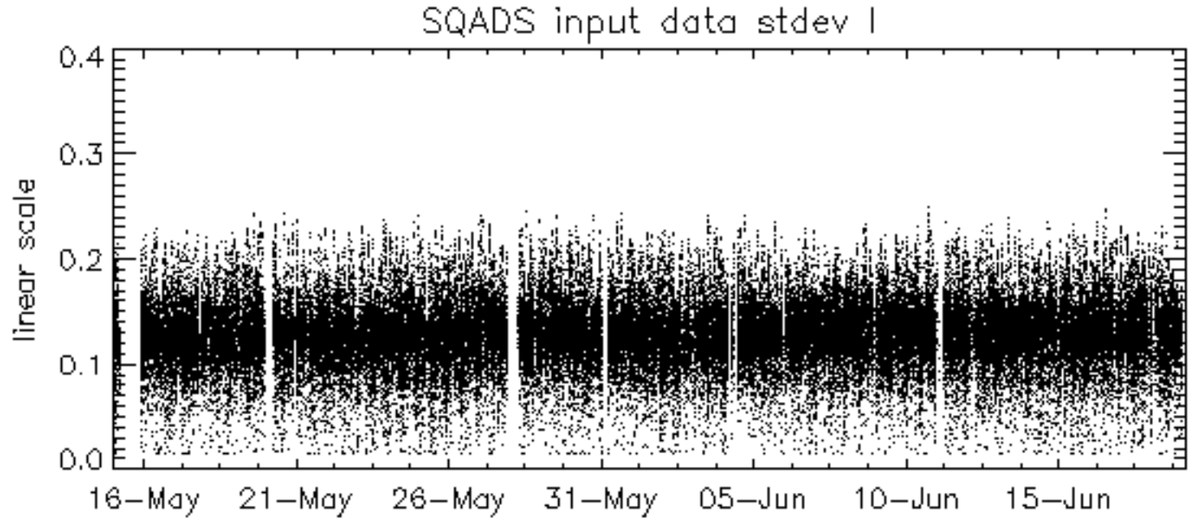

I/Q Gain Imbalance
0.25
0.20
0.15
0.10
0.05
0.00
stdev Q
0.00
0.05
0.10
0.15
0.20
0.25
stdev I

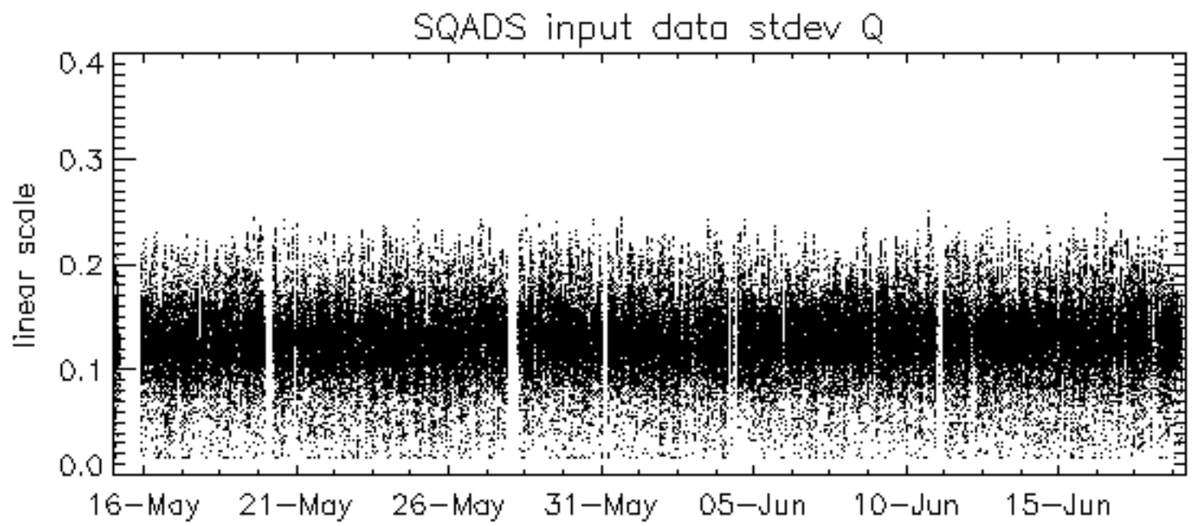

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun

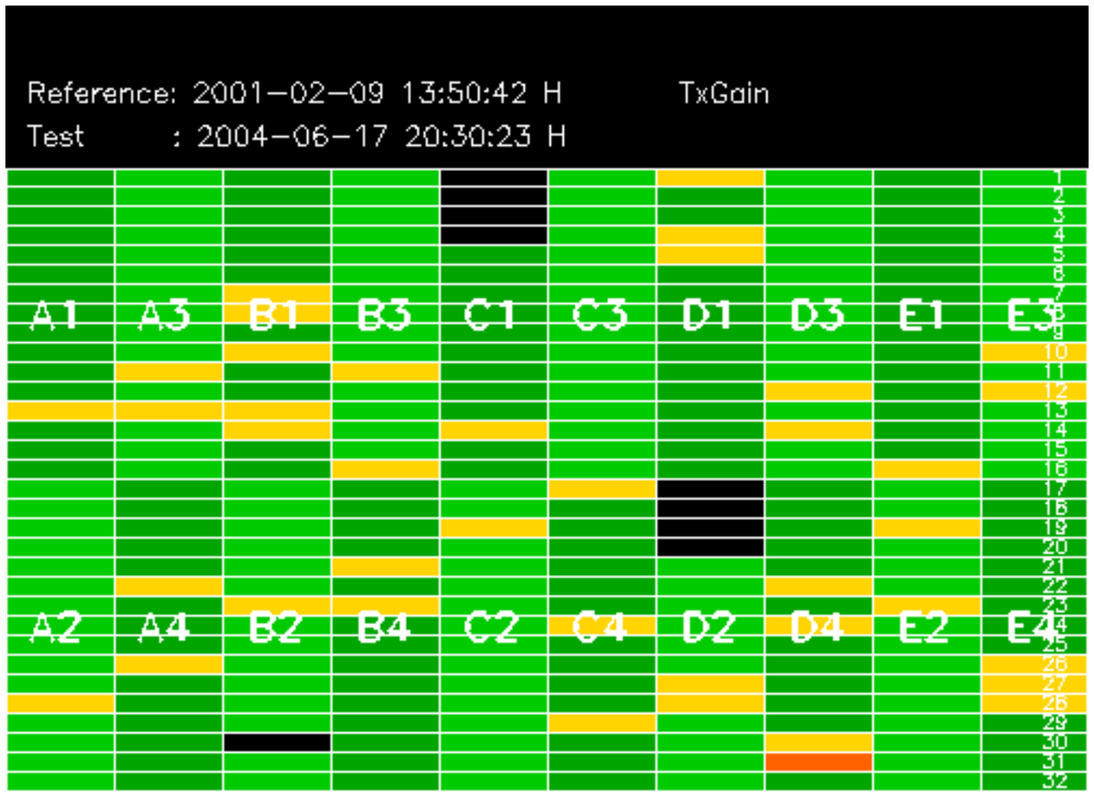

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun

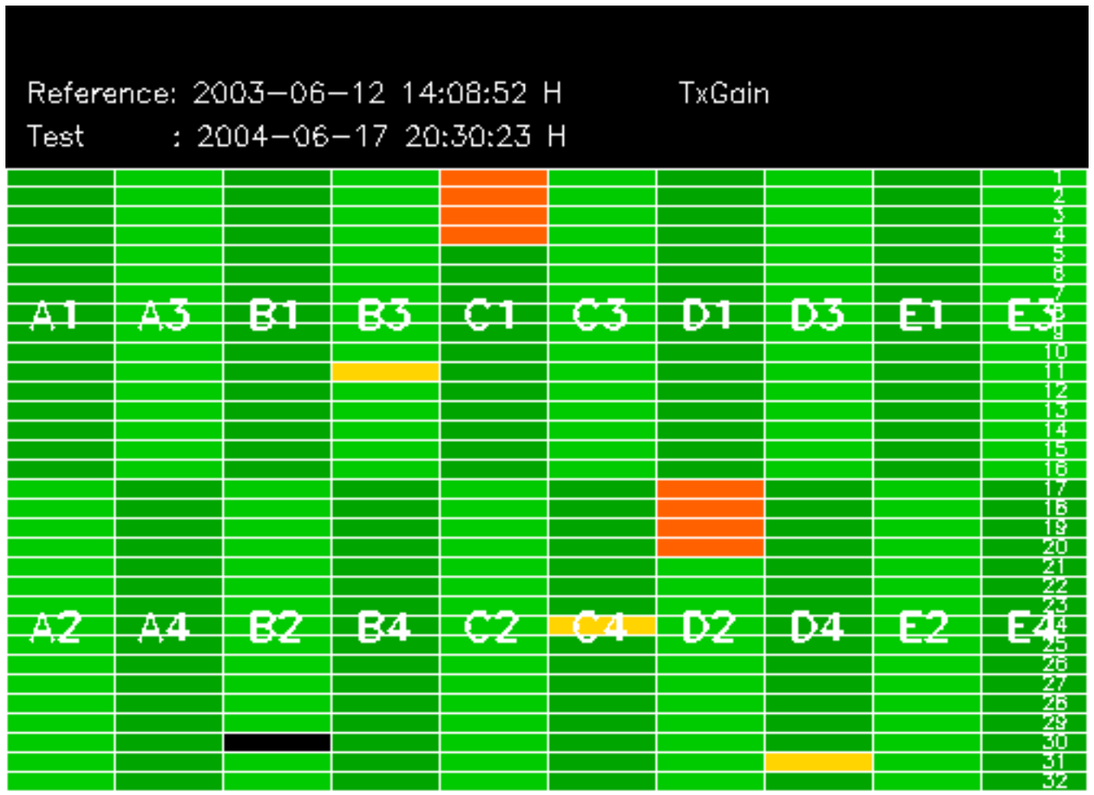

SQADS input data mean Q
linear scale
0.006
0.004
0.002
0.000
−0.002
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun


SQADS input data stdev i(black), q(red)
linear scale
0.4
0.3
0.2
0.1
0.0
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
16−May
21−May
26−May
31−May
05−Jun
10−Jun
15−Jun


Reference: 2001-02-09 13:50:42 H
Test : 2004-06-17 20:30:23 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 : 2004-06-17 20:30:23 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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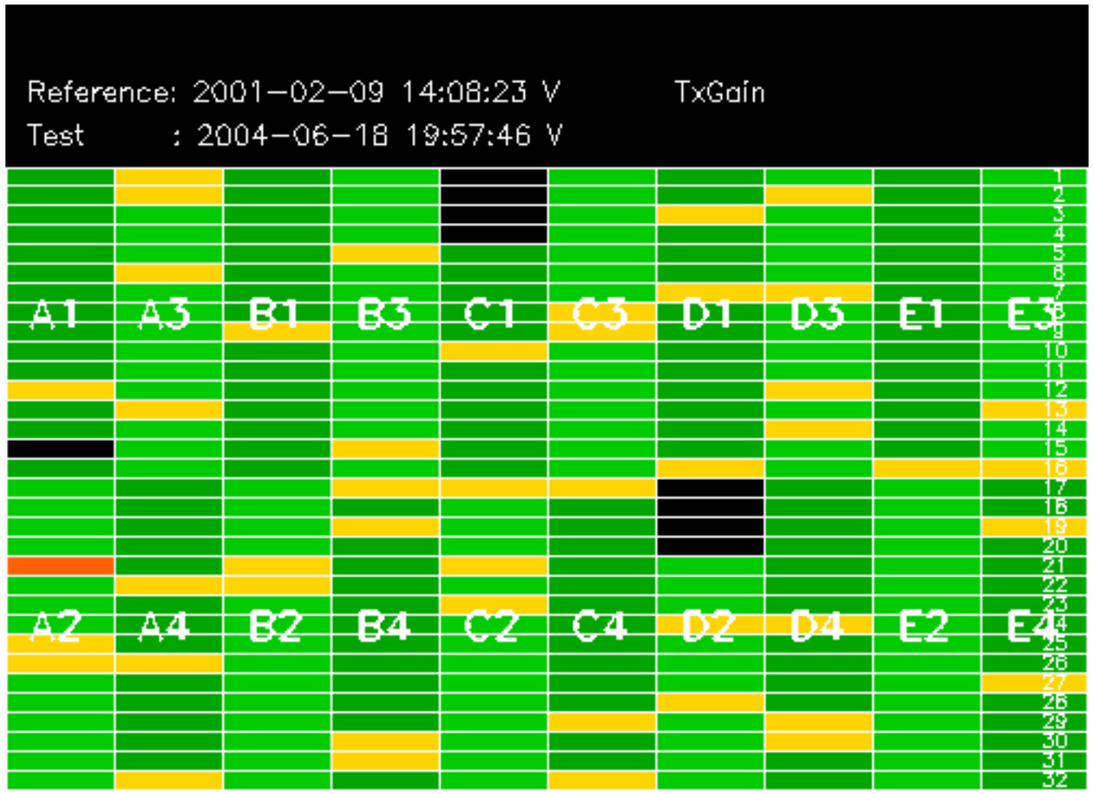
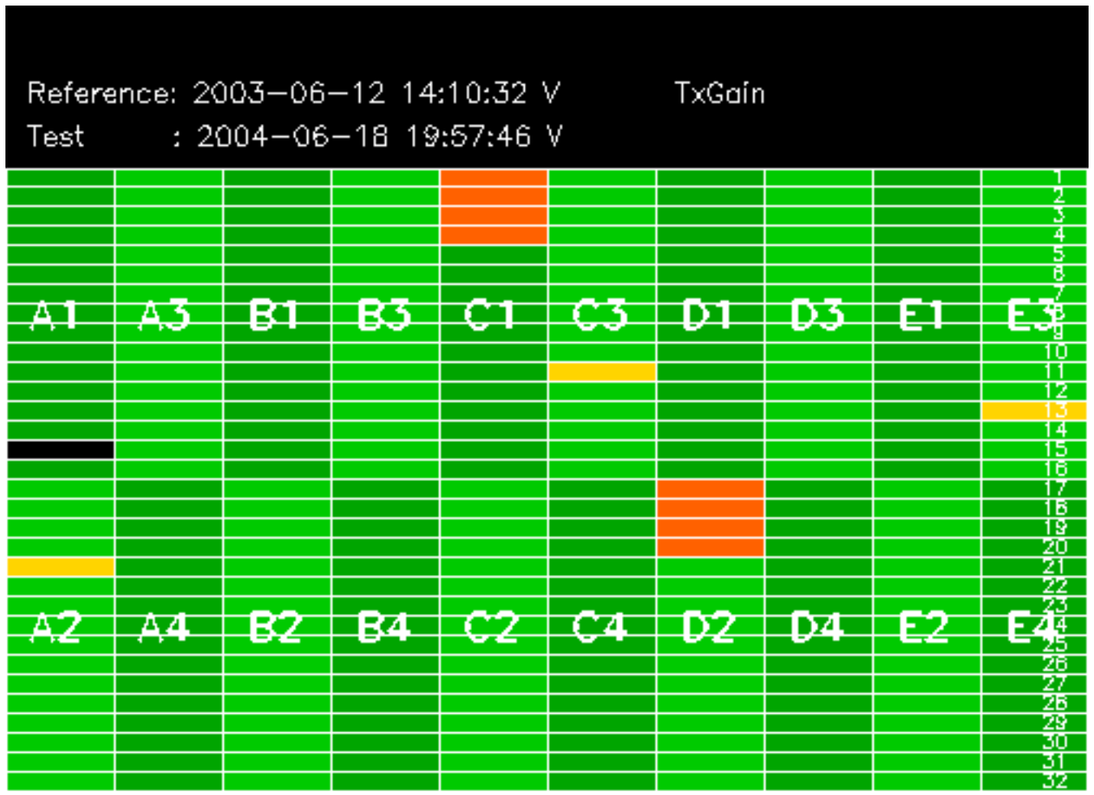

Reference: 2001-02-09 14:08:23 V
Test : 2004-06-18 19:57:46 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-06-18 19:57:46 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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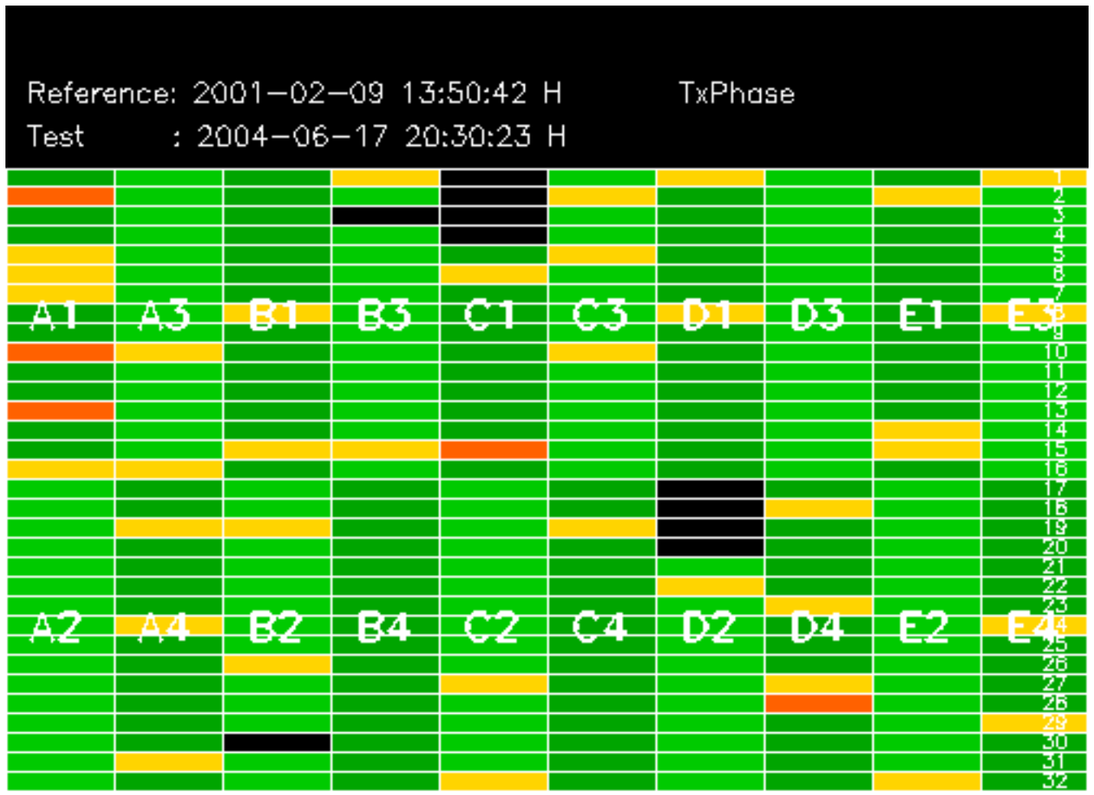
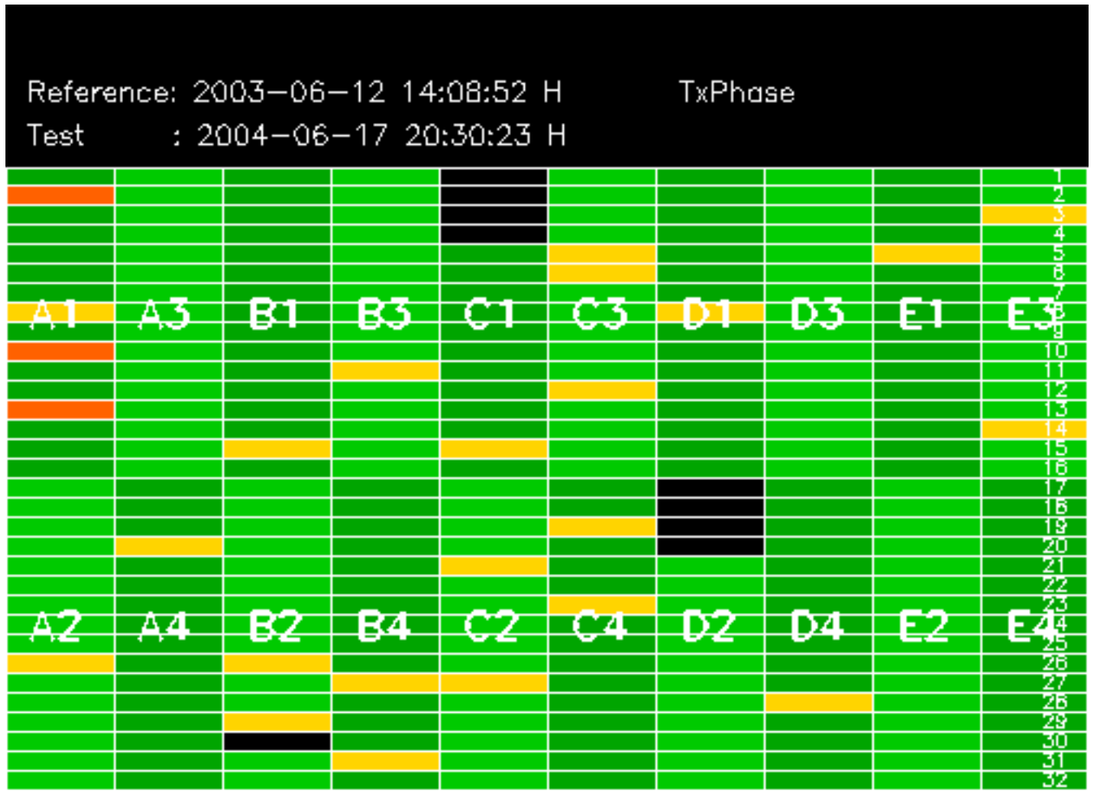

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-06-17 20:30:23 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-06-17 20:30:23 H
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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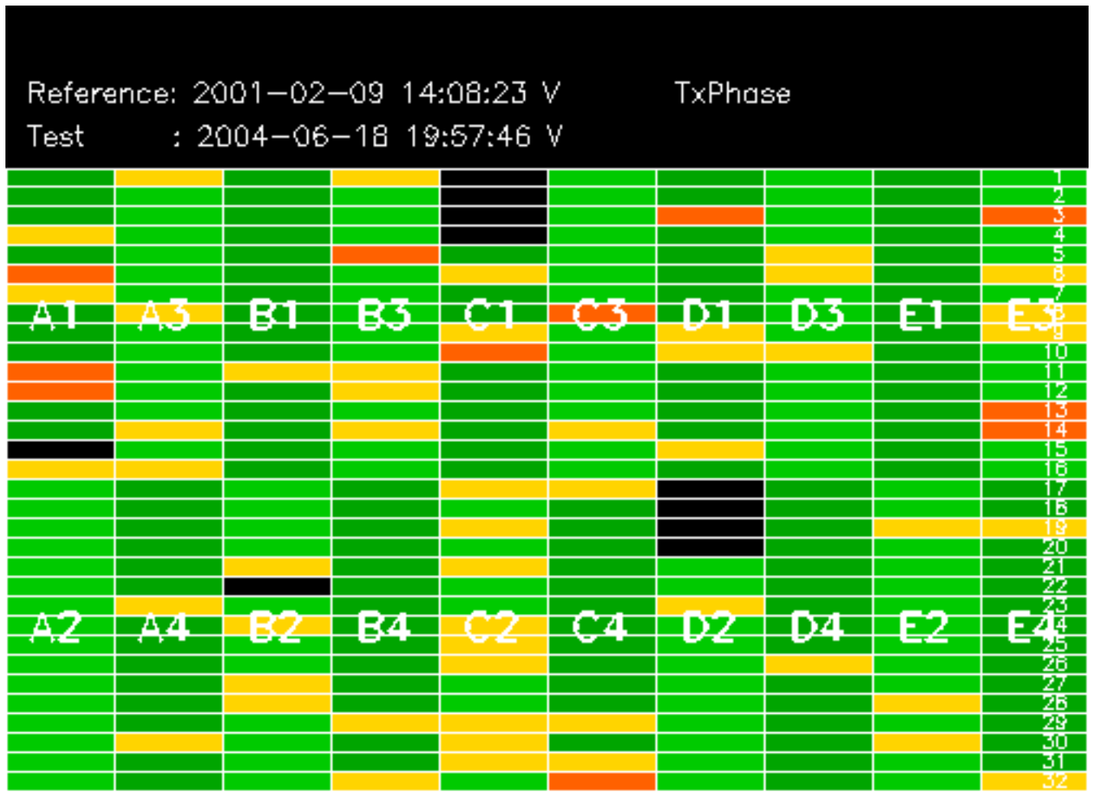
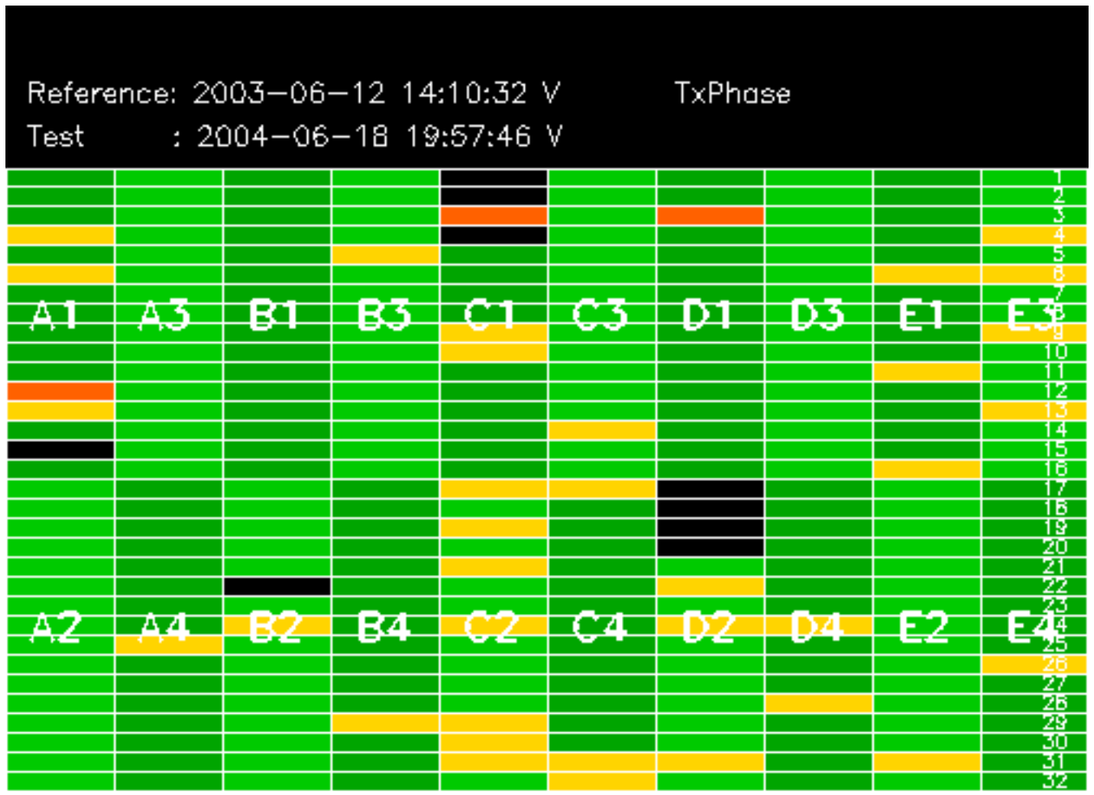
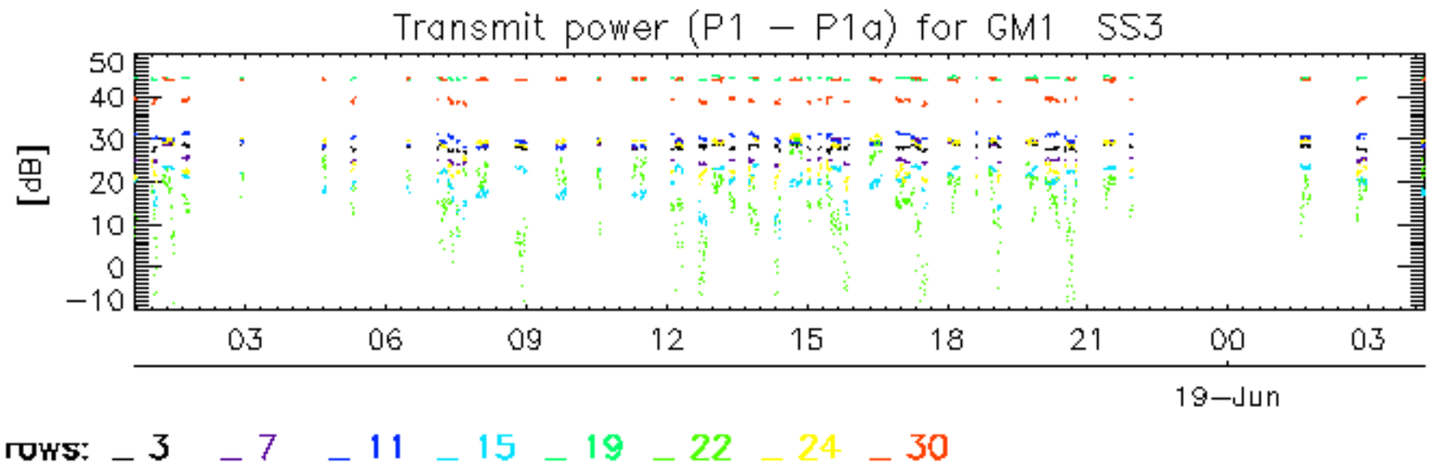
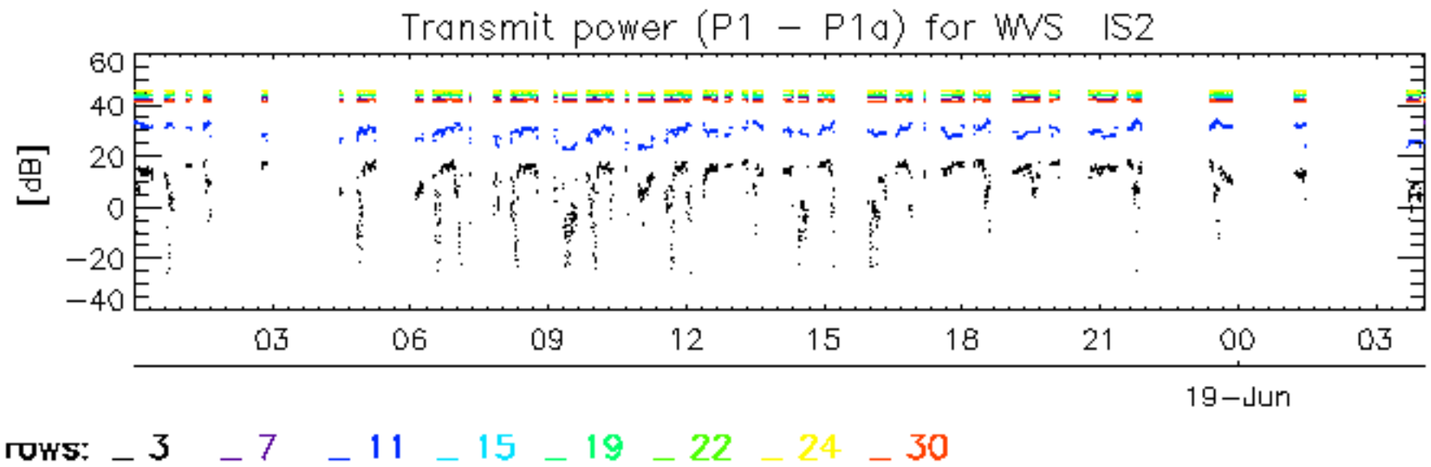

Reference: 2001-02-09 14:08:23 V
TxPhase
Test : 2004-06-18 19:57:46 V
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-06-18 19:57:46 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
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
19–Jun
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
[dB]
60
40
20
0
−20
−40
03
06
09
12
15
18
21
00
03
19–Jun
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.