PRELIMINARY REPORT OF 040727

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

last update on Tue Jul 27 13:01:55 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

No anomalies observed on available browse products

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	20040725 183659
H	20040726 180522

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

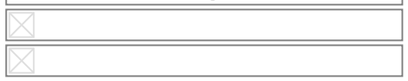
4.1.2 - Evolution for GM1

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	-3.480069	0.006055	0.019278
7	P1	-3.322756	0.013034	0.028593
11	P1	-4.589732	0.032050	-0.058335
15	P1	-5.717053	0.055963	-0.038391
19	P1	-3.444585	0.004167	-0.011497
22	P1	-4.558530	0.010993	-0.018614

24	P1	-4.940742	0.016886	-0.029540
30	P1	-6.881253	0.025650	-0.035392
3	P1	-16.172947	0.138664	-0.083819
7	P1	-13.971353	0.083612	0.051872
11	P1	-20.007265	0.263145	-0.155834
15	P1	-11.788864	0.042171	0.013367
19	P1	-13.840244	0.032935	-0.024383
22	P1	-16.347023	0.361464	0.101852
24	P1	-14.606824	0.282189	0.037086
30	P1	-17.685781	0.408609	0.086300

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.352678	0.080010	0.093631
7	P2	-22.747301	0.118885	0.116362
11	P2	-15.492764	0.135085	0.123889
15	P2	-7.125697	0.089725	0.085149
19	P2	-9.561013	0.141816	0.045588
22	P2	-17.444613	0.101408	0.140360
24	P2	-20.777824	0.084003	0.064076
30	P2	-19.378120	0.077434	0.086062

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.143235	0.001906	-0.001976
7	P3	-8.143237	0.001906	-0.001978
11	P3	-8.143243	0.001906	-0.001968
15	P3	-8.143245	0.001905	-0.001955
19	P3	-8.143249	0.001905	-0.001929
22	P3	-8.143267	0.001905	-0.001843
24	P3	-8.143264	0.001905	-0.001859
30	P3	-8.143394	0.001898	-0.001788

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	-3.010887	0.125979	0.441389
7	P1	-2.904574	0.128609	-0.274796
11	P1	-3.831082	0.029861	-0.003755
15	P1	-4.012070	0.810126	1.069793
19	P1	-3.397170	0.045315	-0.163269
22	P1	-5.707051	0.048525	0.127961
24	P1	-3.979976	0.073315	0.294700
30	P1	-6.149041	0.079076	-0.135466
3	P1	-10.848215	0.384554	0.622289
7	P1	-9.914643	0.297391	-0.463129
11	P1	-11.898443	0.225115	-0.336390
15	P1	-11.801322	0.282068	0.356596
19	P1	-15.201241	0.686288	-0.878288
22	P1	-21.965490	6.531578	-2.564628
24	P1	-17.447426	0.318748	-0.365452
30	P1	-21.155161	3.922642	2.080005

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.063421	0.075502	0.189723
7	P2	-22.847181	0.233266	0.125249
11	P2	-10.970087	0.211225	-0.182776
15	P2	-4.958046	0.041247	0.006518
19	P2	-6.871501	0.049626	0.168529
22	P2	-7.562799	0.093593	0.173779
24	P2	-11.027638	0.148971	-0.040064
30	P2	-22.285887	0.130634	0.079394

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.983198	0.003583	-0.004295
7	P3	-7.983255	0.003581	-0.004649
11	P3	-7.983162	0.003588	-0.004422
15	P3	-7.983097	0.003598	-0.004630
19	P3	-7.983100	0.003598	-0.004672
22	P3	-7.983196	0.003578	-0.004554
24	P3	-7.983130	0.003617	-0.004615
30	P3	-7.983205	0.003587	-0.004621

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	0.000490684
	stdev	2.15135e-07
MEAN Q	mean	0.000534282
	stdev	2.44788e-07

5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129233
	stdev	0.00105092
STDEV Q	mean	0.129485
	stdev	0.00106261

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

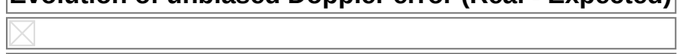
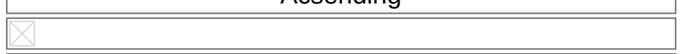
6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
Acsending
Descending

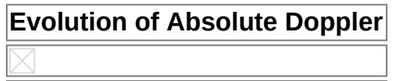
6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX


6.4 - Unbiased Doppler Error for GM1

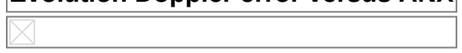
Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

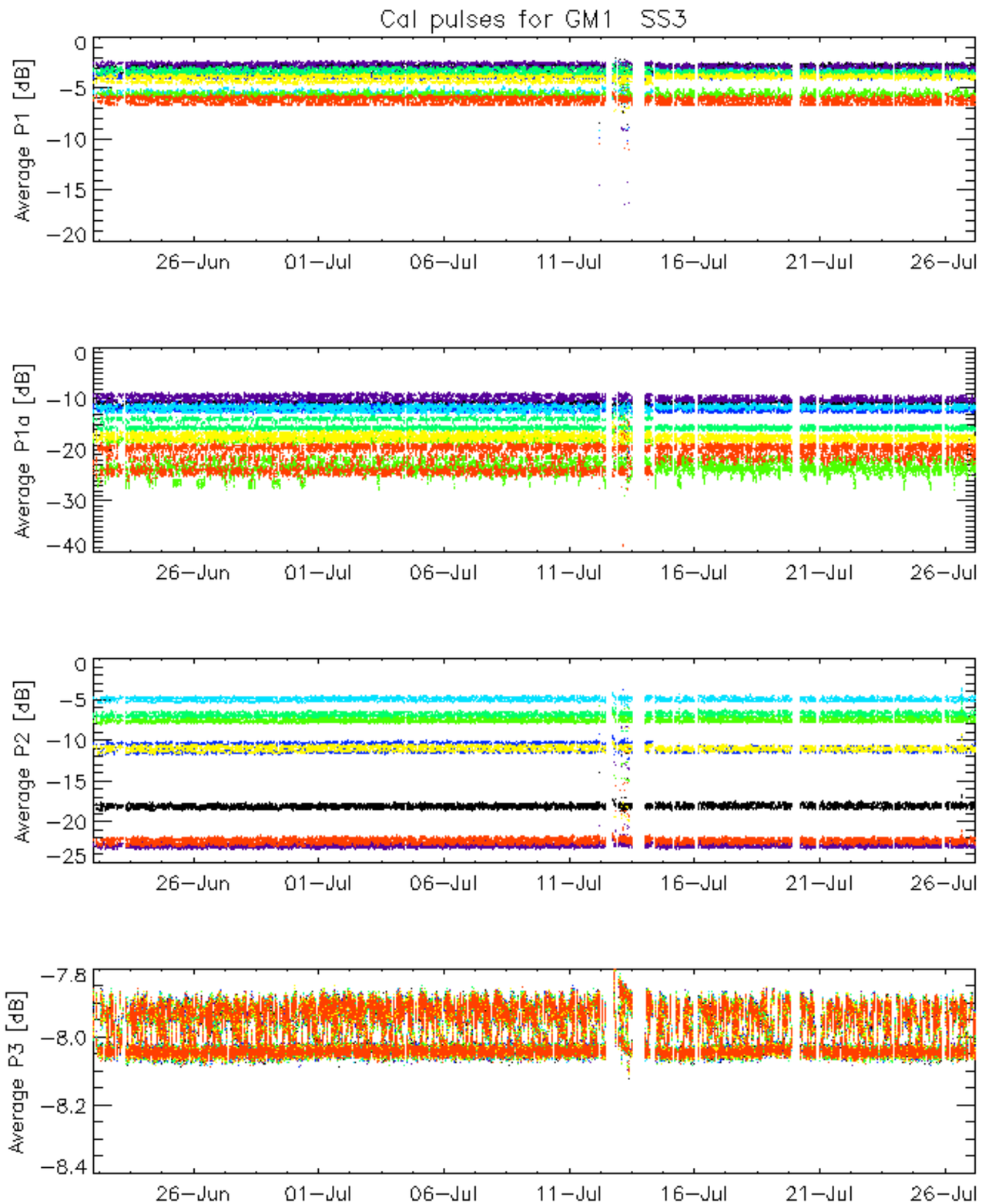
6.5 - Absolute Doppler for GM1

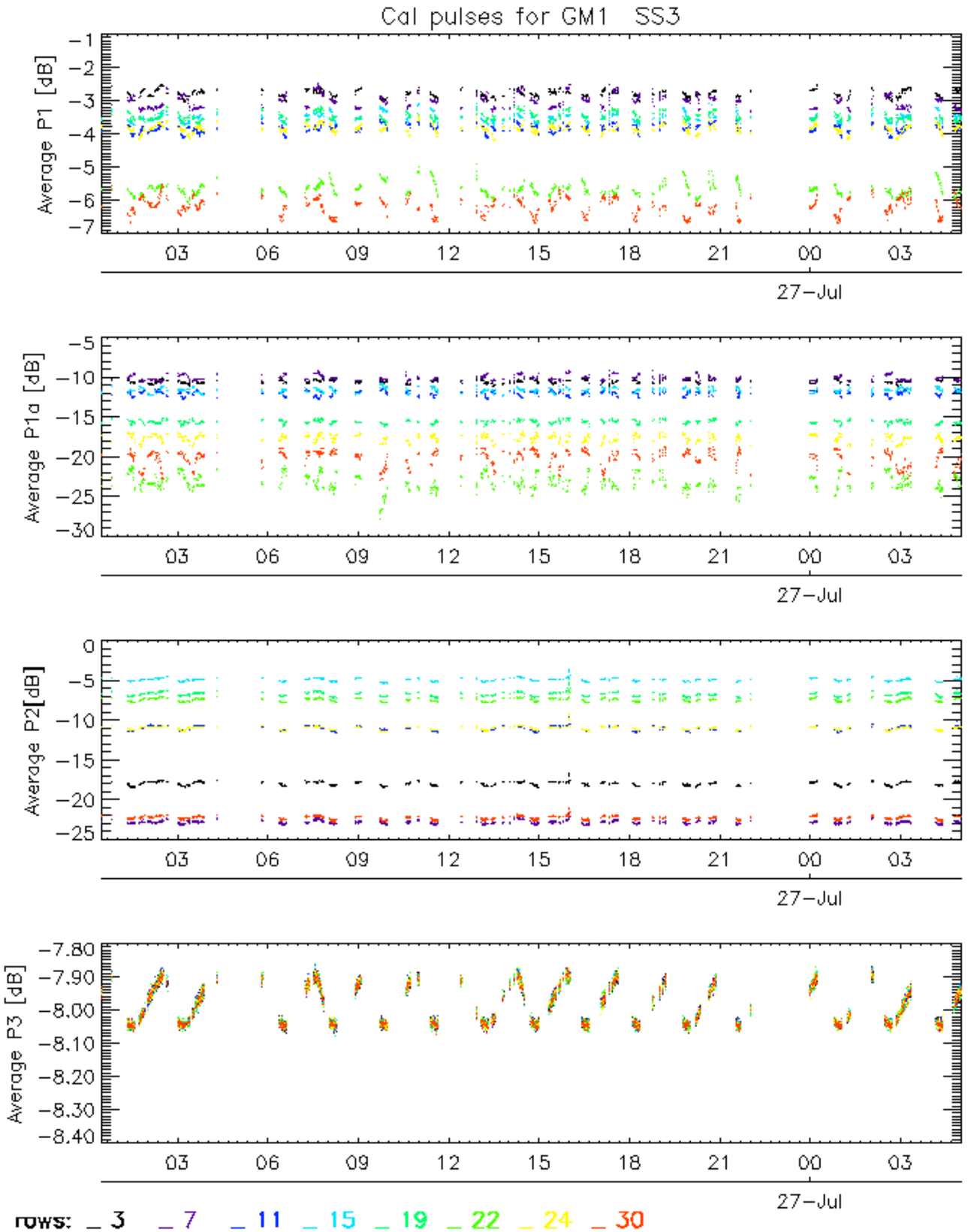
Evolution of Absolute Doppler

Acsending

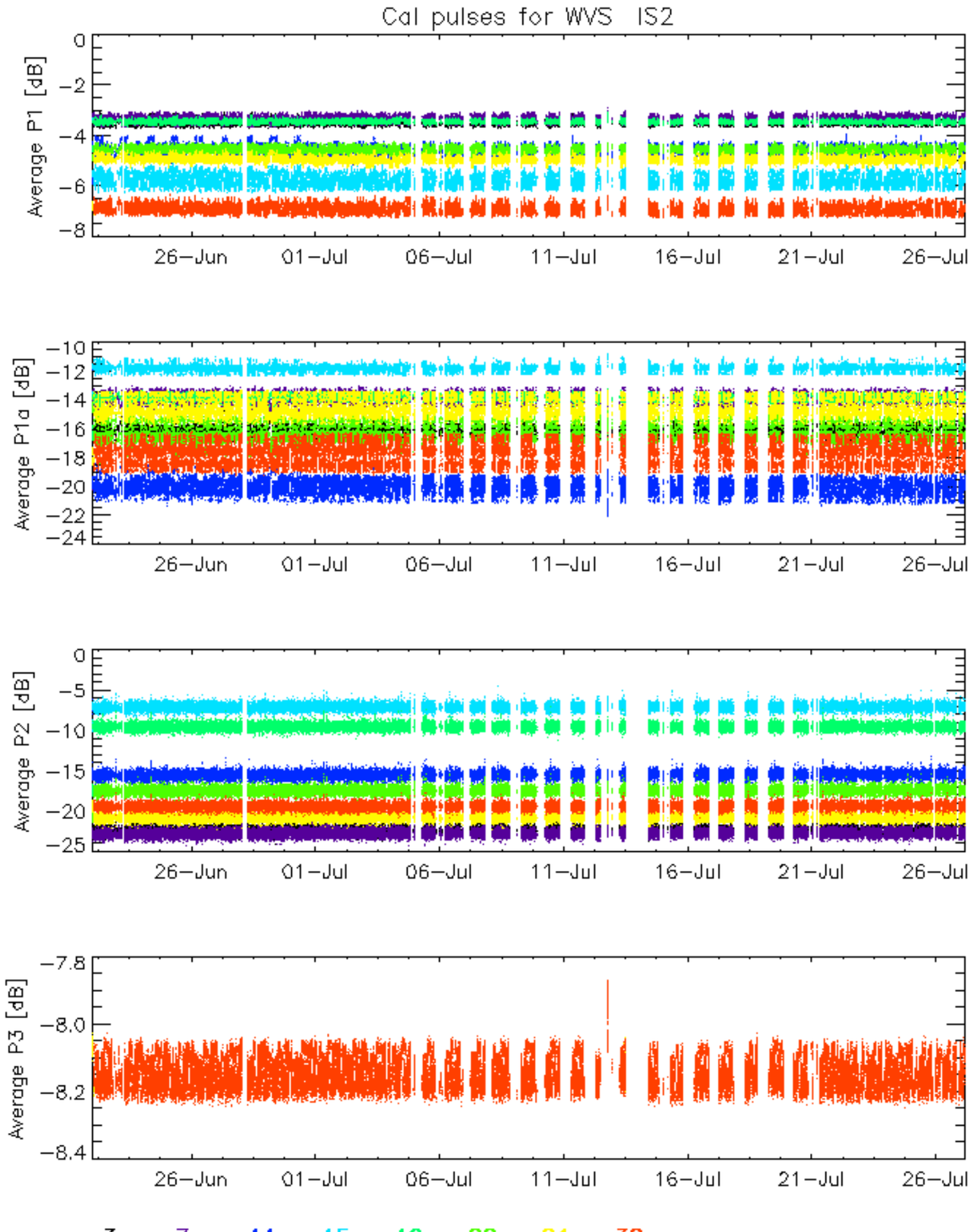
Descending

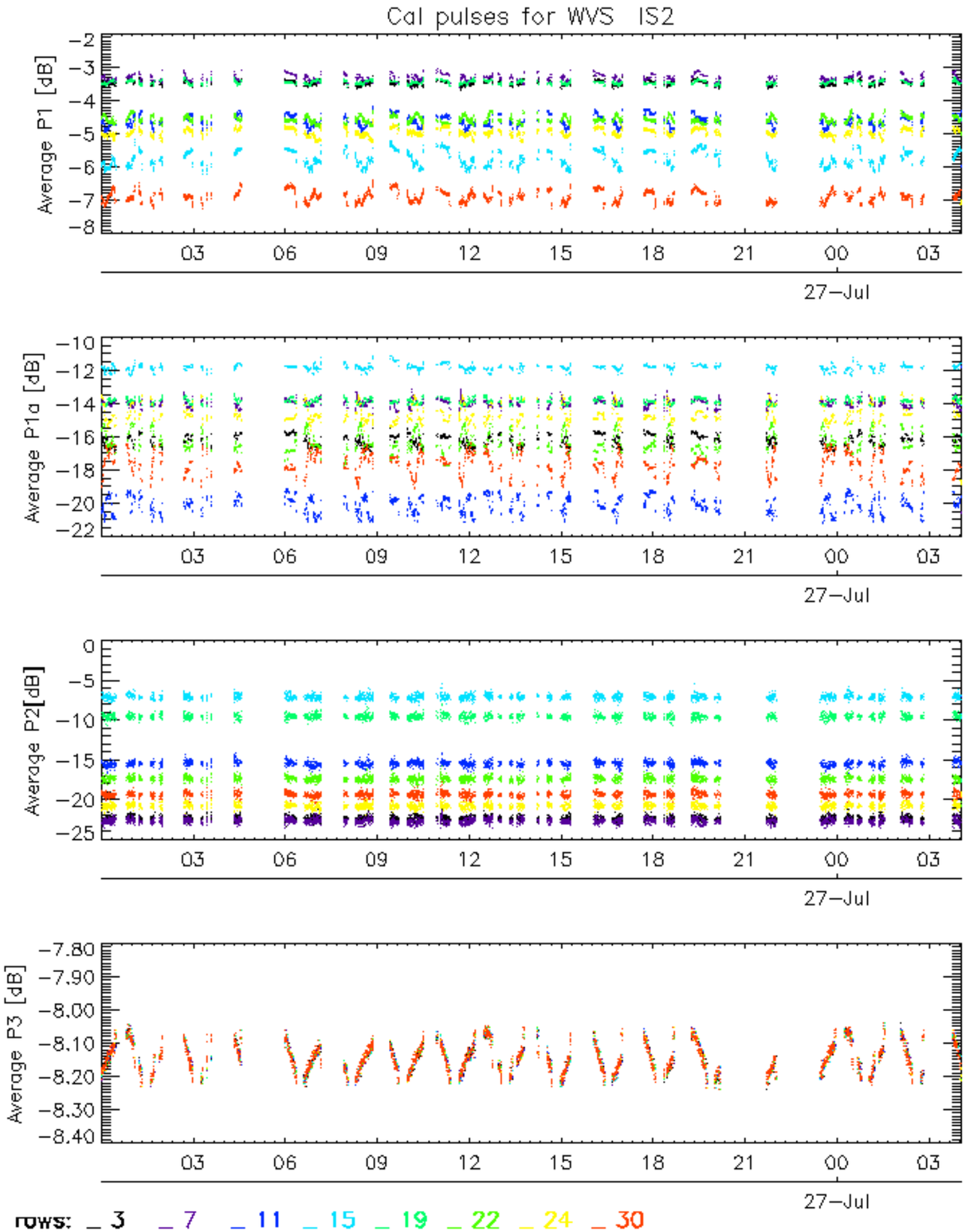
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX



Cal pulses for GM1 SS3
Average P1 [dB]
0
−5
−10
−15
−20
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
Average P1a [dB]
0
−10
−20
−30
−40
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
Average P2 [dB]
0
−5
−10
−15
−20
−25
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

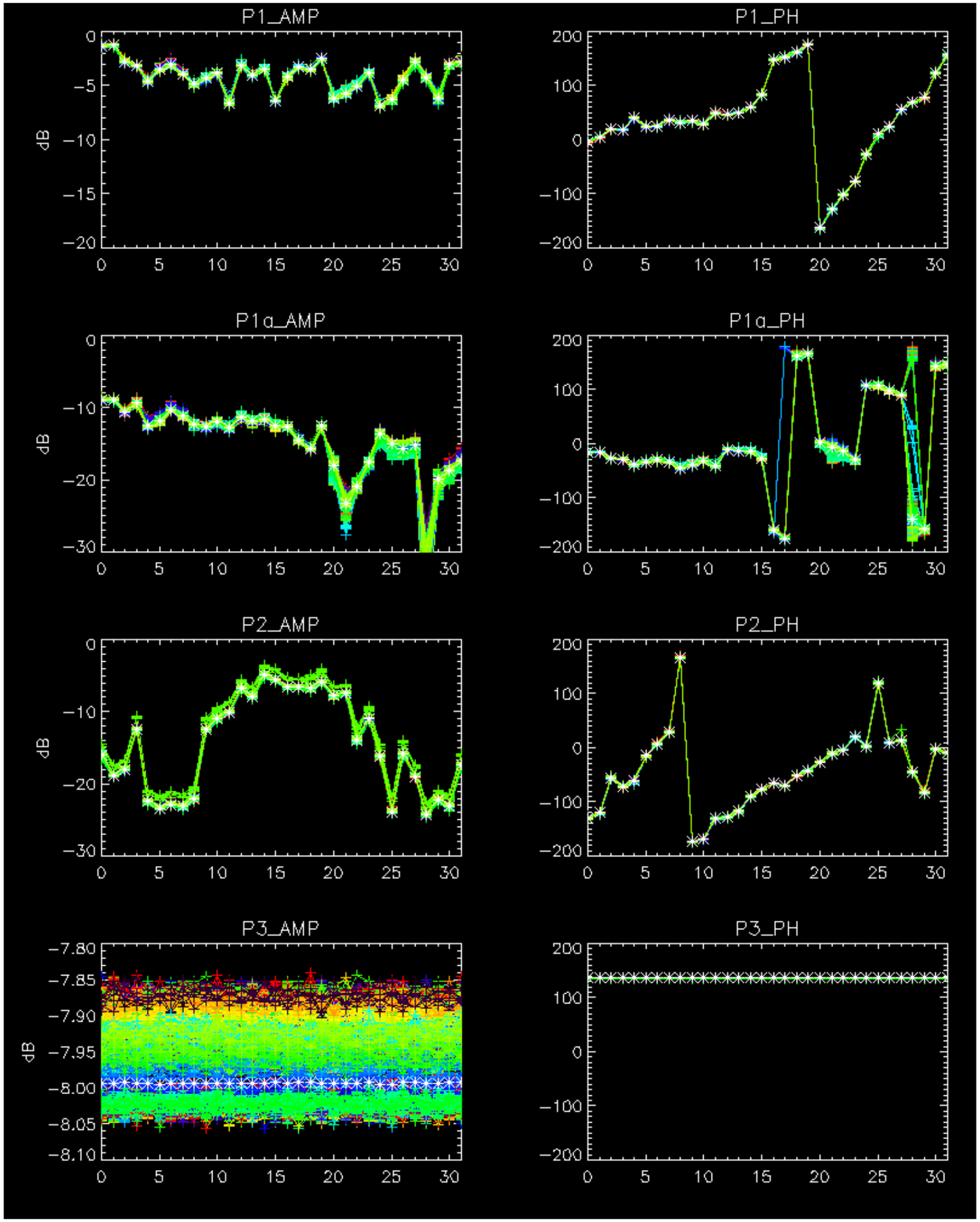

Cal pulses for GM1 SS3
Average P1 [dB]
−1
−2
−3
−4
−5
−6
−7
03
06
09
12
15
18
21
00
03
27−Jul
Average P1a [dB]
−5
−10
−15
−20
−25
−30
03
06
09
12
15
18
21
00
03
27−Jul
Average P2[dB]
0
−5
−10
−15
−20
−25
03
06
09
12
15
18
21
00
03
27−Jul
Average P3 [dB]
−7.80
−7.90
−8.00
−8.10
−8.20
−8.30
−8.40
03
06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

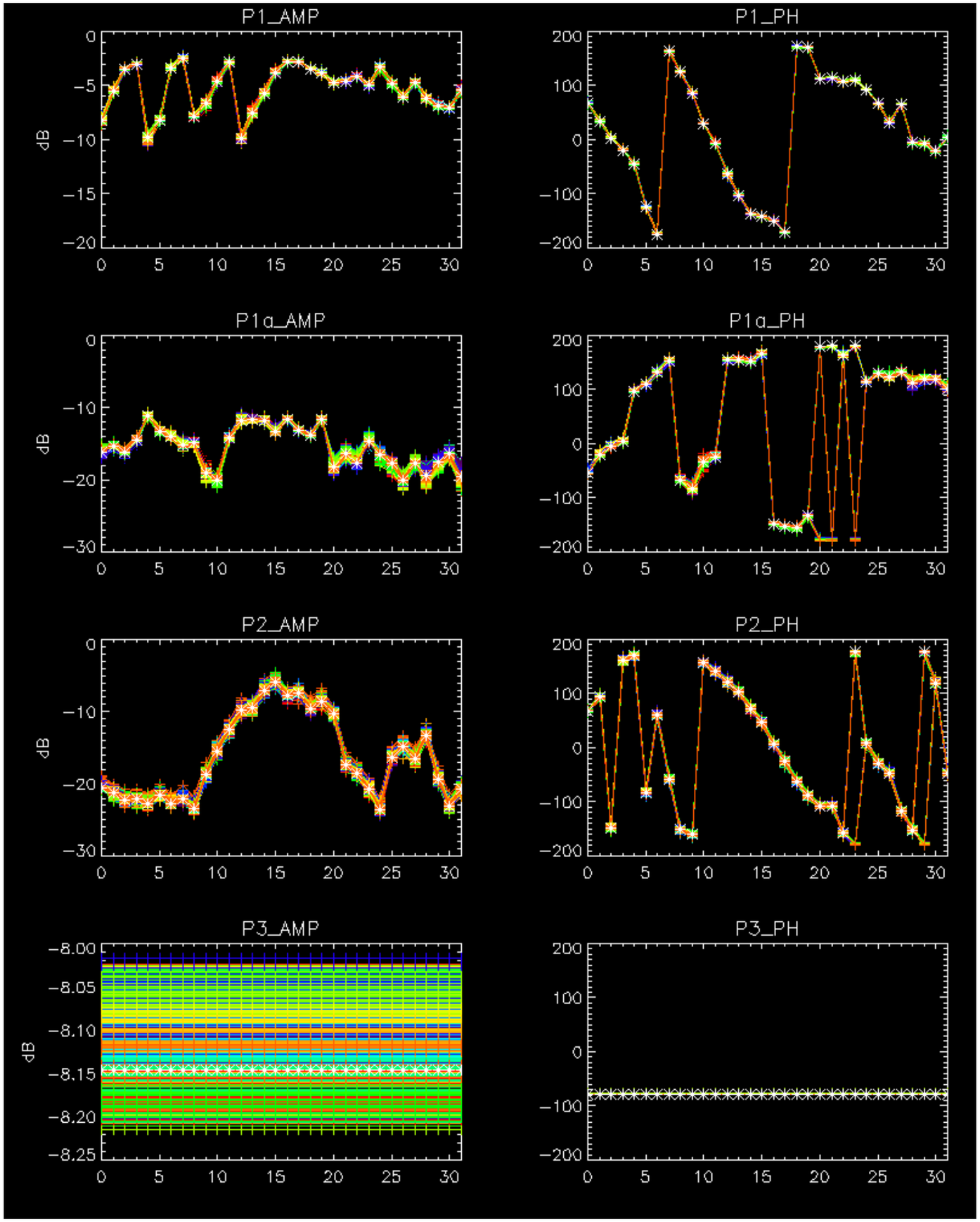

Cal pulses for WVS IS2
Average P1 [dB]
0
−2
−4
−6
−8
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul
Average P1a [dB]
−10
−12
−14
−16
−18
−20
−22
−24
Average P2 [dB]
−5
−10
−15
−20
−25
Average P3 [dB]
−7.8
−8.0
−8.2
−8.4
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30


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

No anomalies observed on available browse products

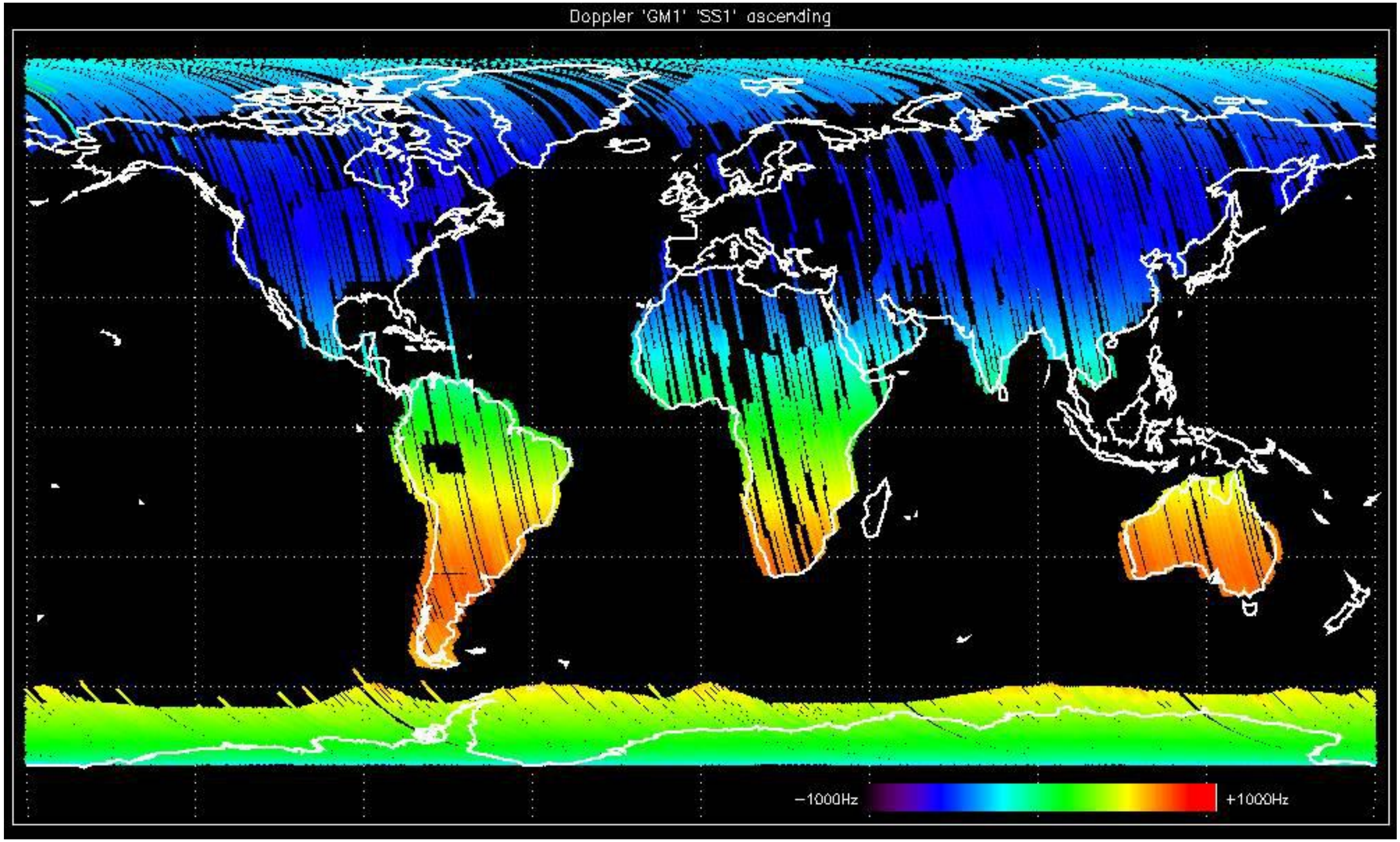
No anomalies observed.

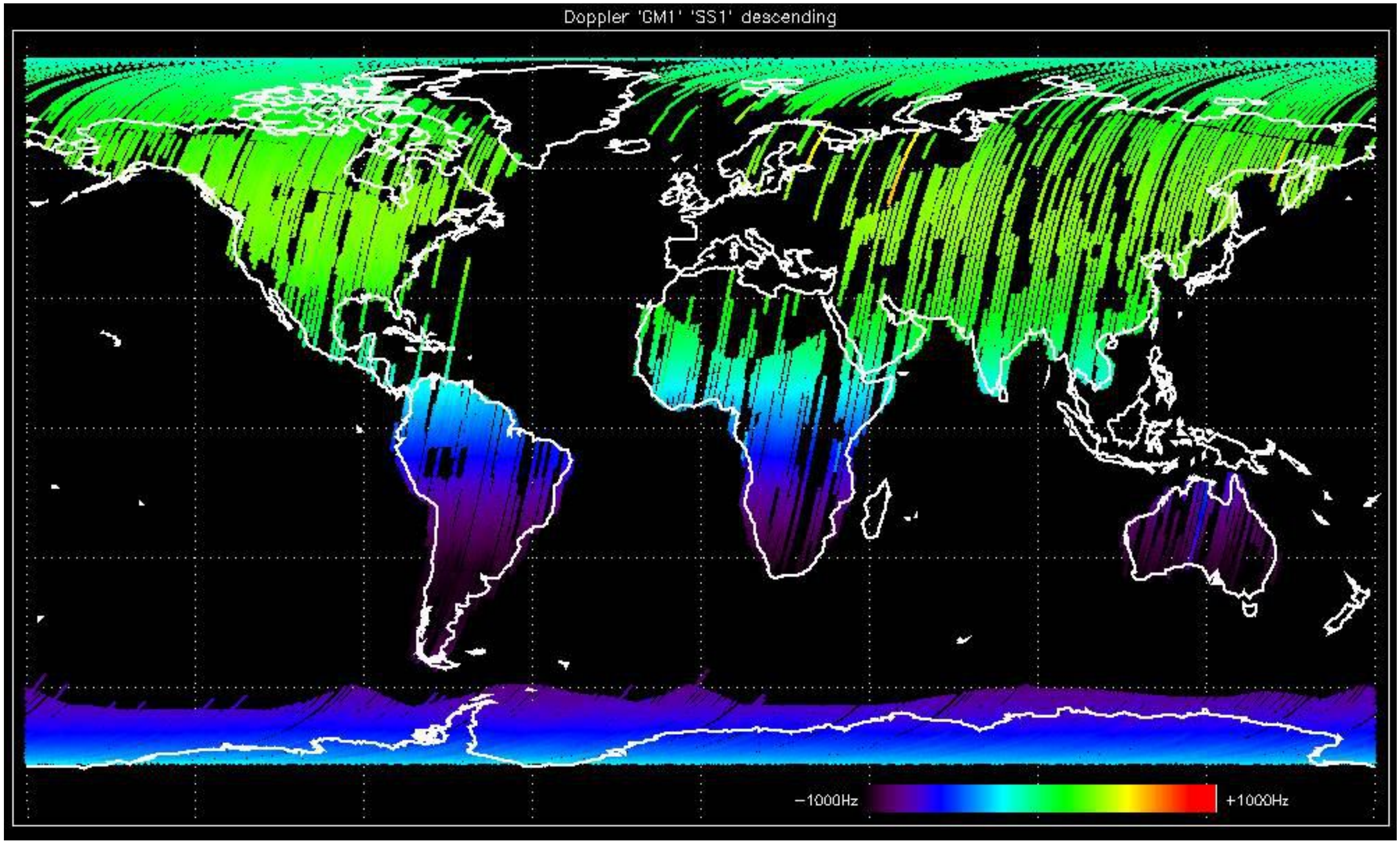

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−7.80
−7.85
−7.90
−7.95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

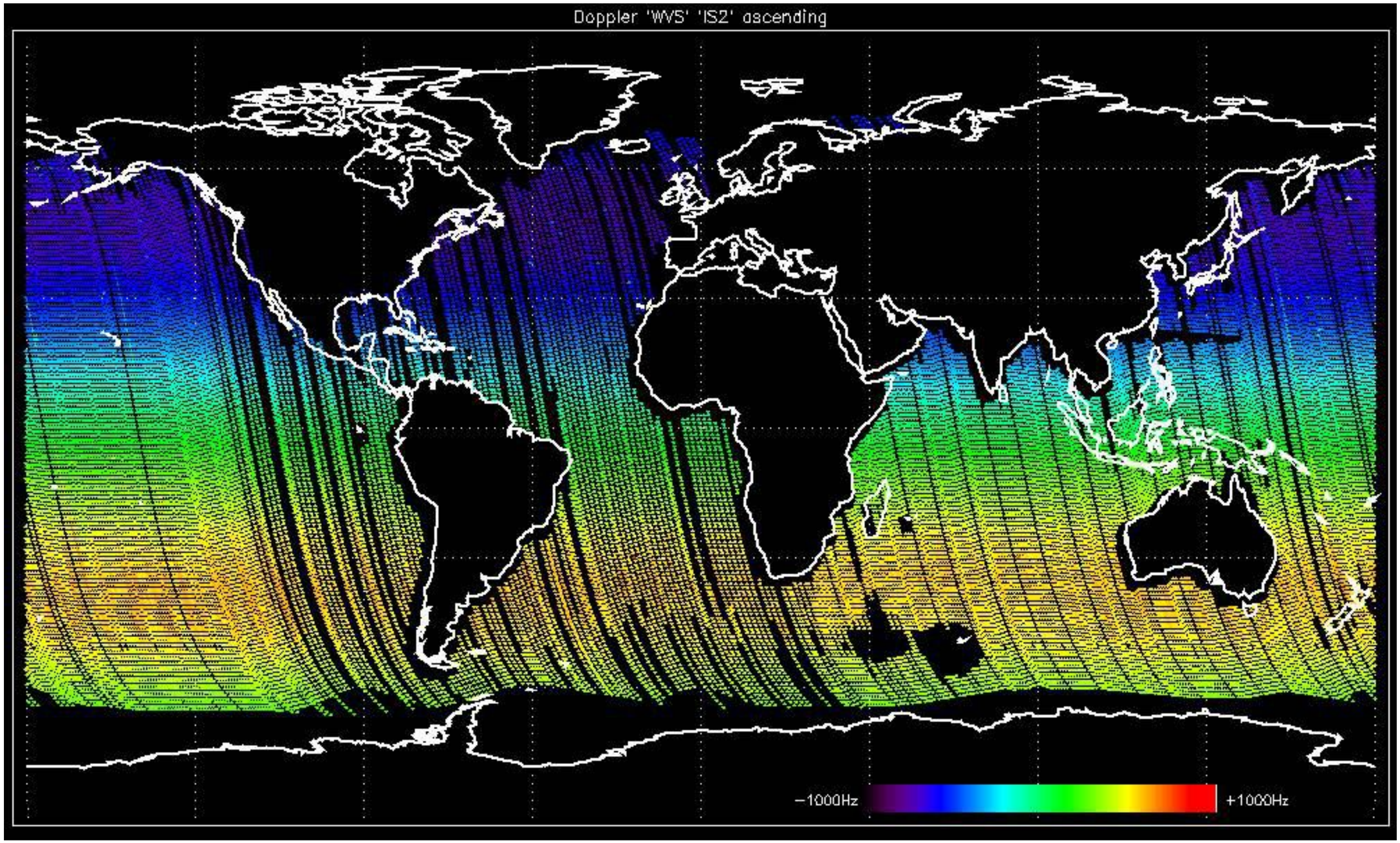

P1_AMP
dB
0
−5
−10
−15
−20
0 5 10 15 20 25 30
P1_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P1a_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P1a_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P2_AMP
dB
0
−10
−20
−30
0 5 10 15 20 25 30
P2_PH
200
100
0
−100
−200
0 5 10 15 20 25 30
P3_AMP
dB
−8.00
−8.05
−8.10
−8.15
−8.20
−8.25
0 5 10 15 20 25 30
P3_PH
200
100
0
−100
−200
0 5 10 15 20 25 30

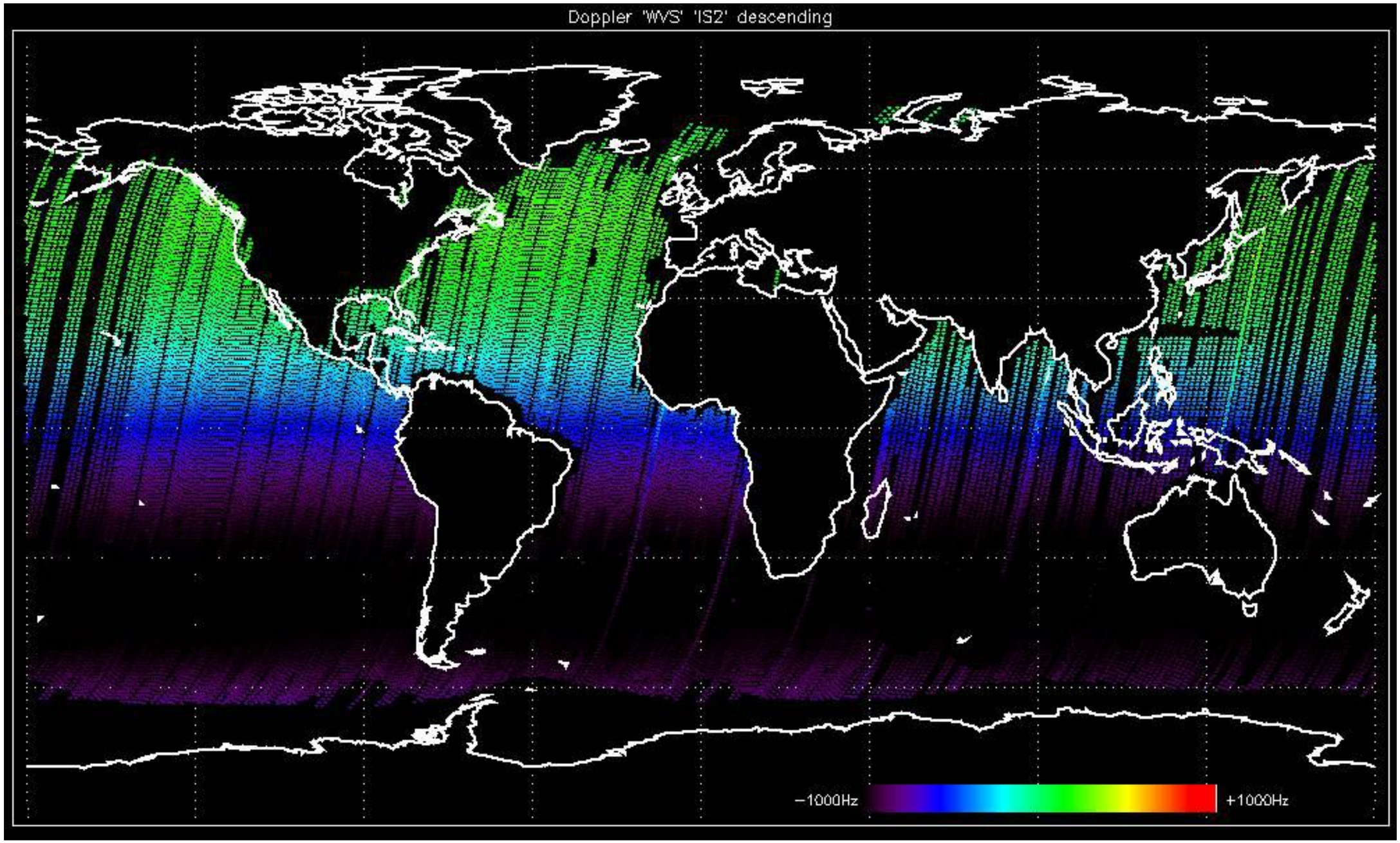
-Stable wave internal calibration pulses gain and phase.
-Stable raw data statistics.
-Nominal Doppler behavior.

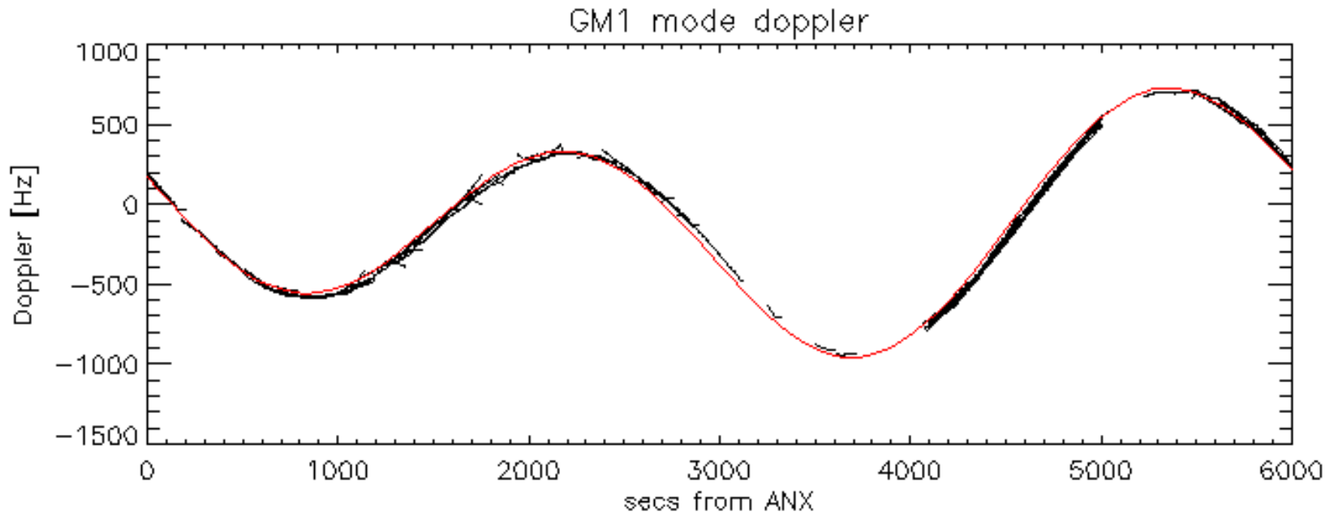
Preliminary report.The data is not yet controled

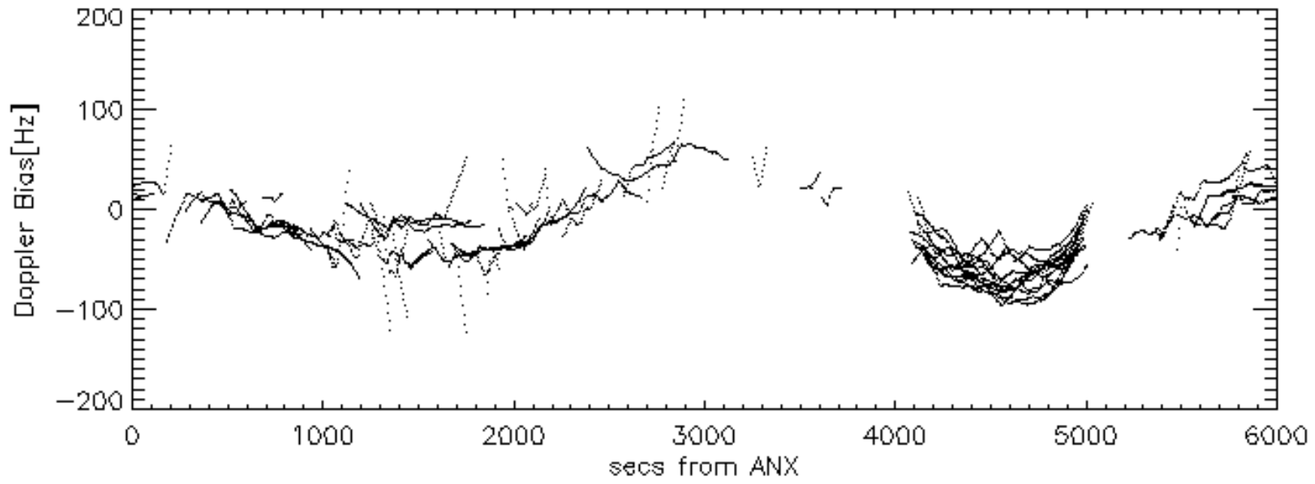

Doppler 'GM1' 'SS1' ascending
−1000Hz
+1000Hz

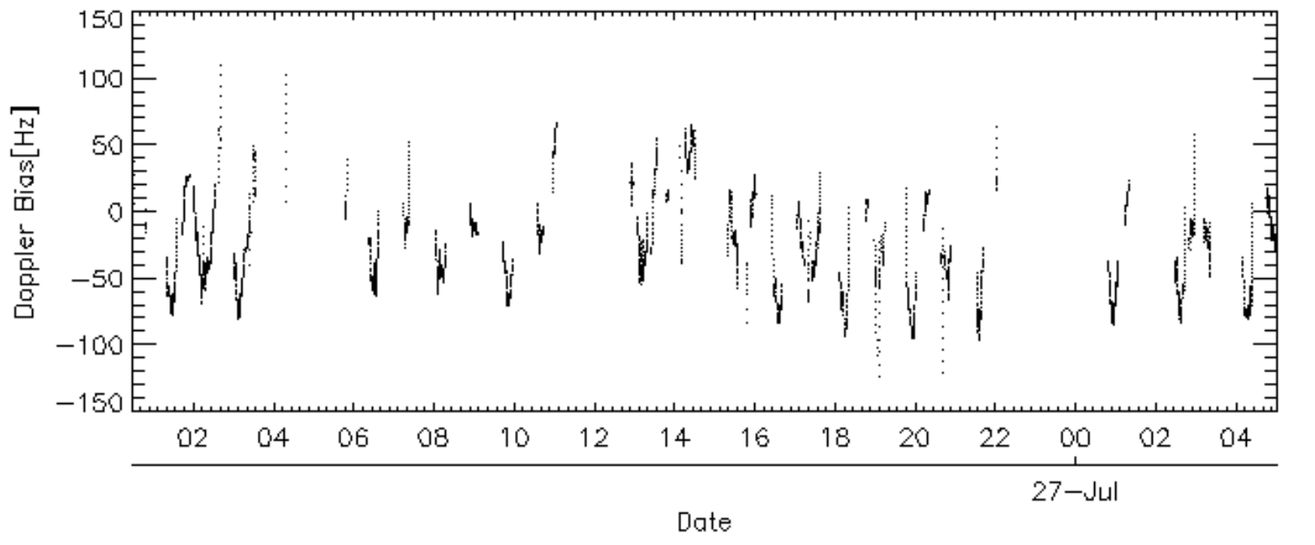

Doppler 'GM1' 'SS1' descending
−1000Hz
+1000Hz

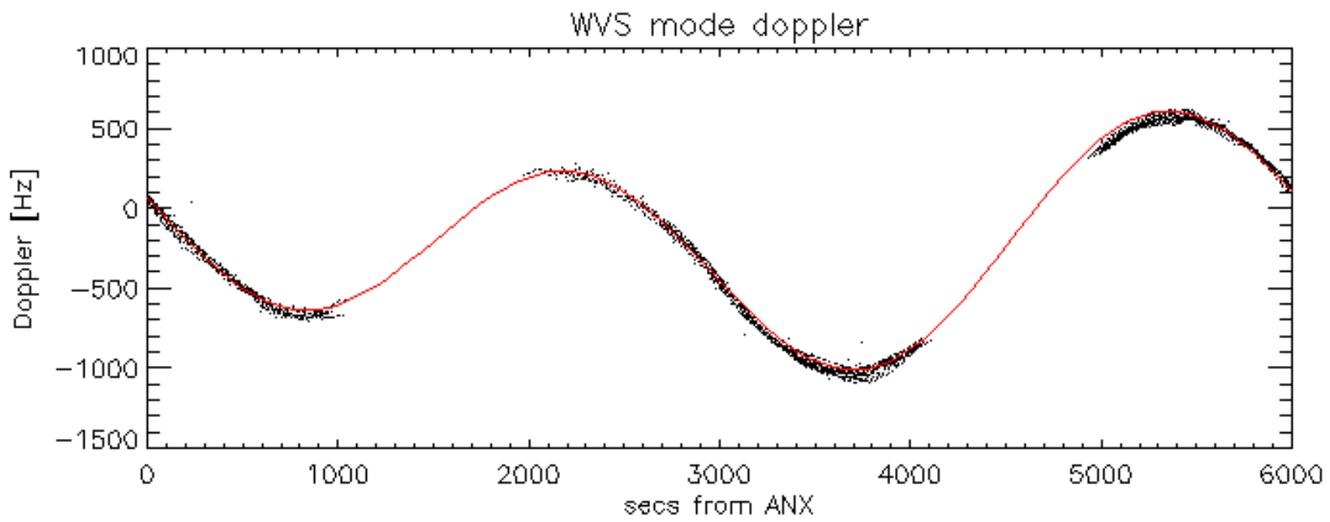

Doppler 'WVS' 'IS2' ascending
−1000Hz
+1000Hz

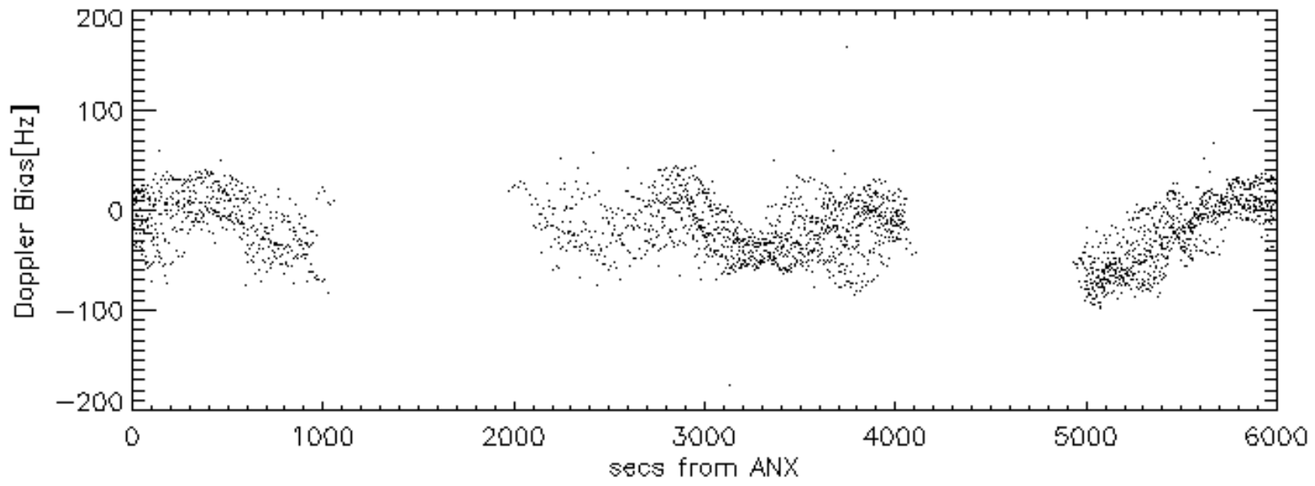

Doppler 'WVS' 'IS2' descending
−1000Hz
+1000Hz

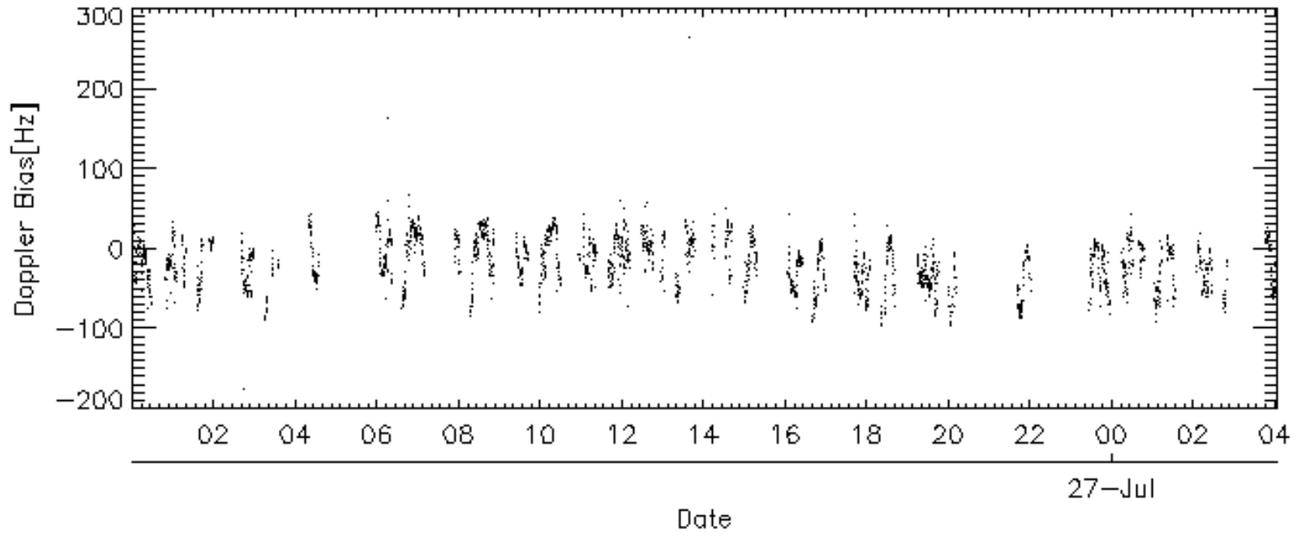

GM1 mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

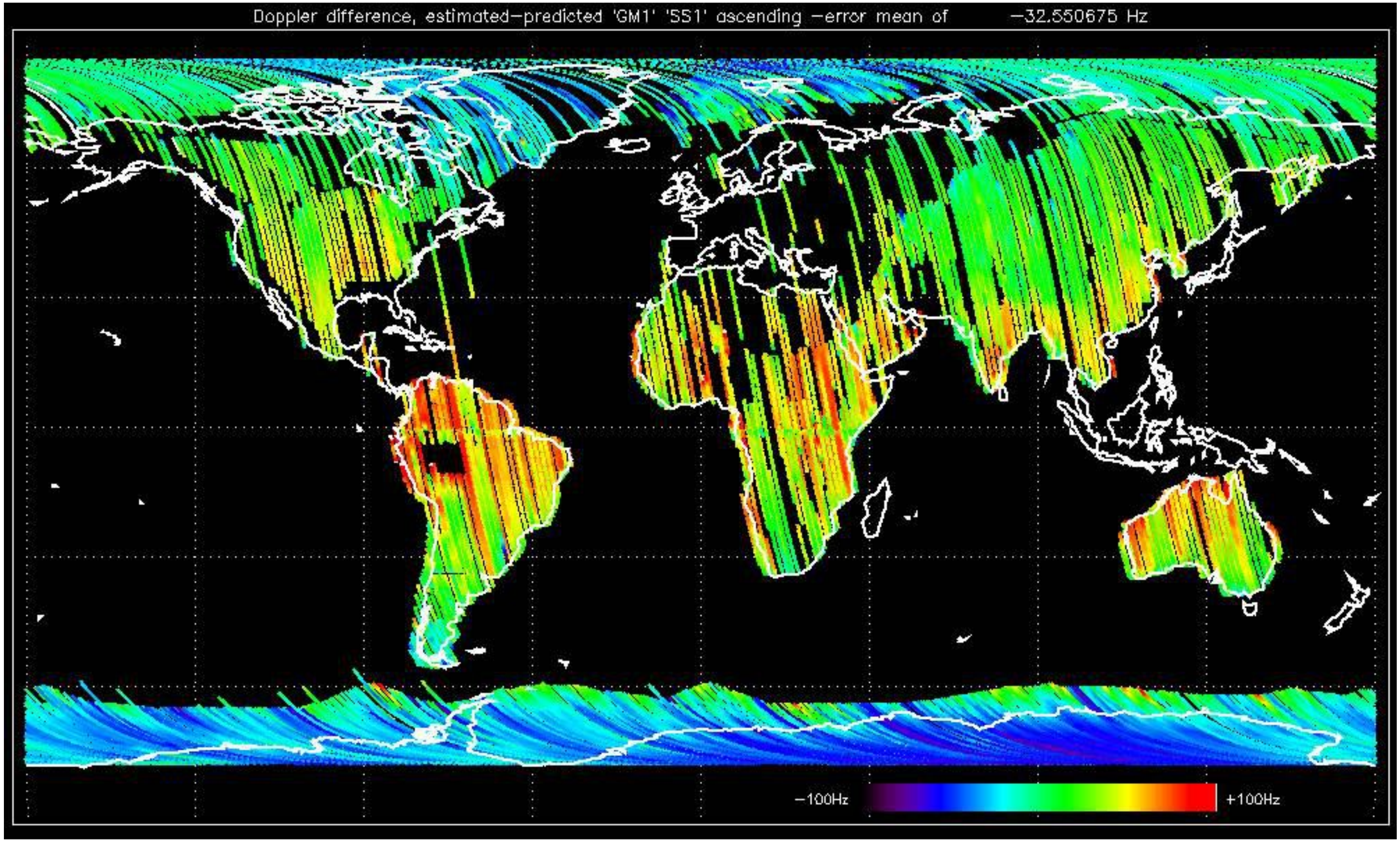

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX

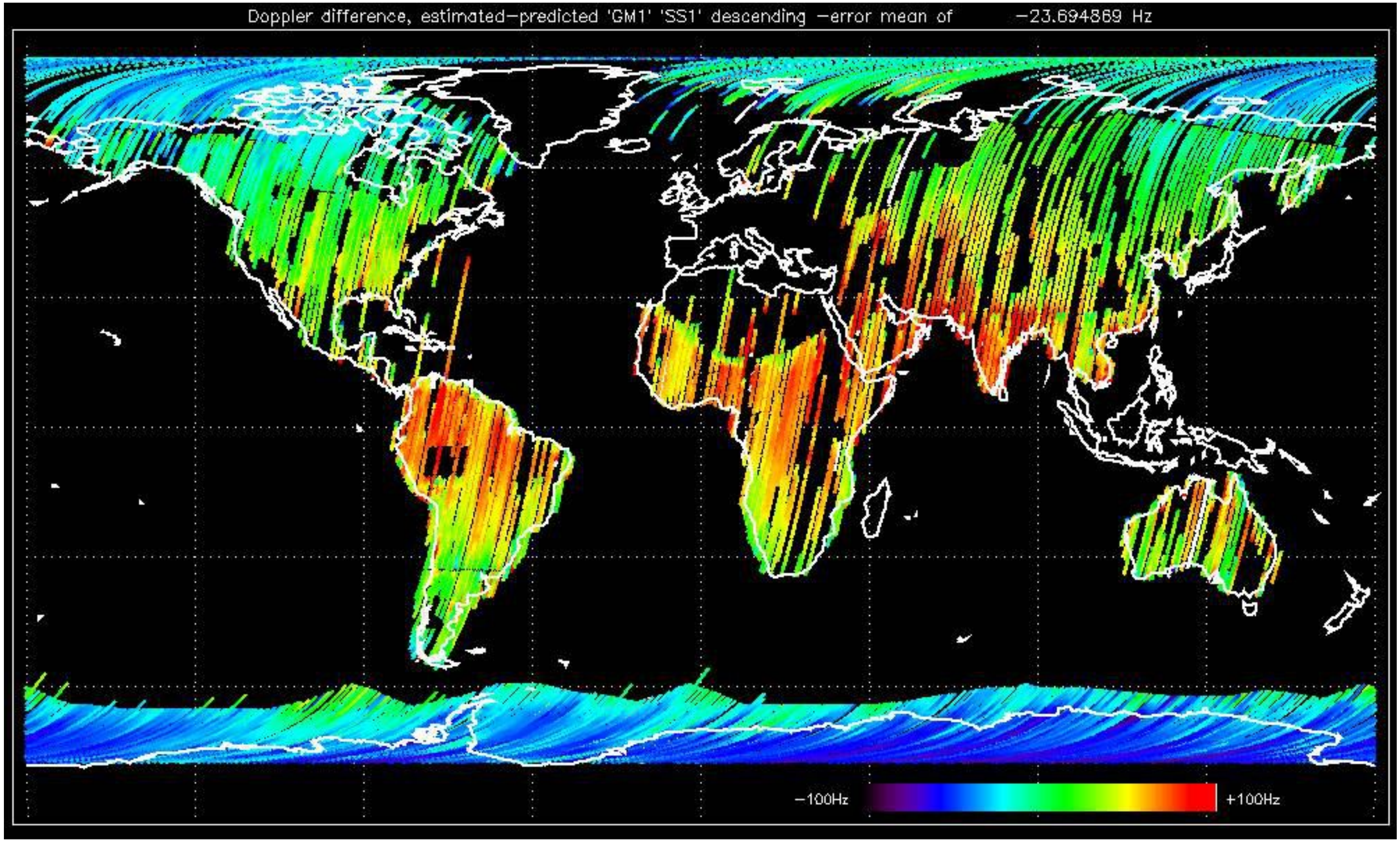

Doppler Bias[Hz]
150
100
50
0
−50
−100
−150
02
04
06
08
10
12
14
16
18
20
22
00
02
04
27−Jul
Date

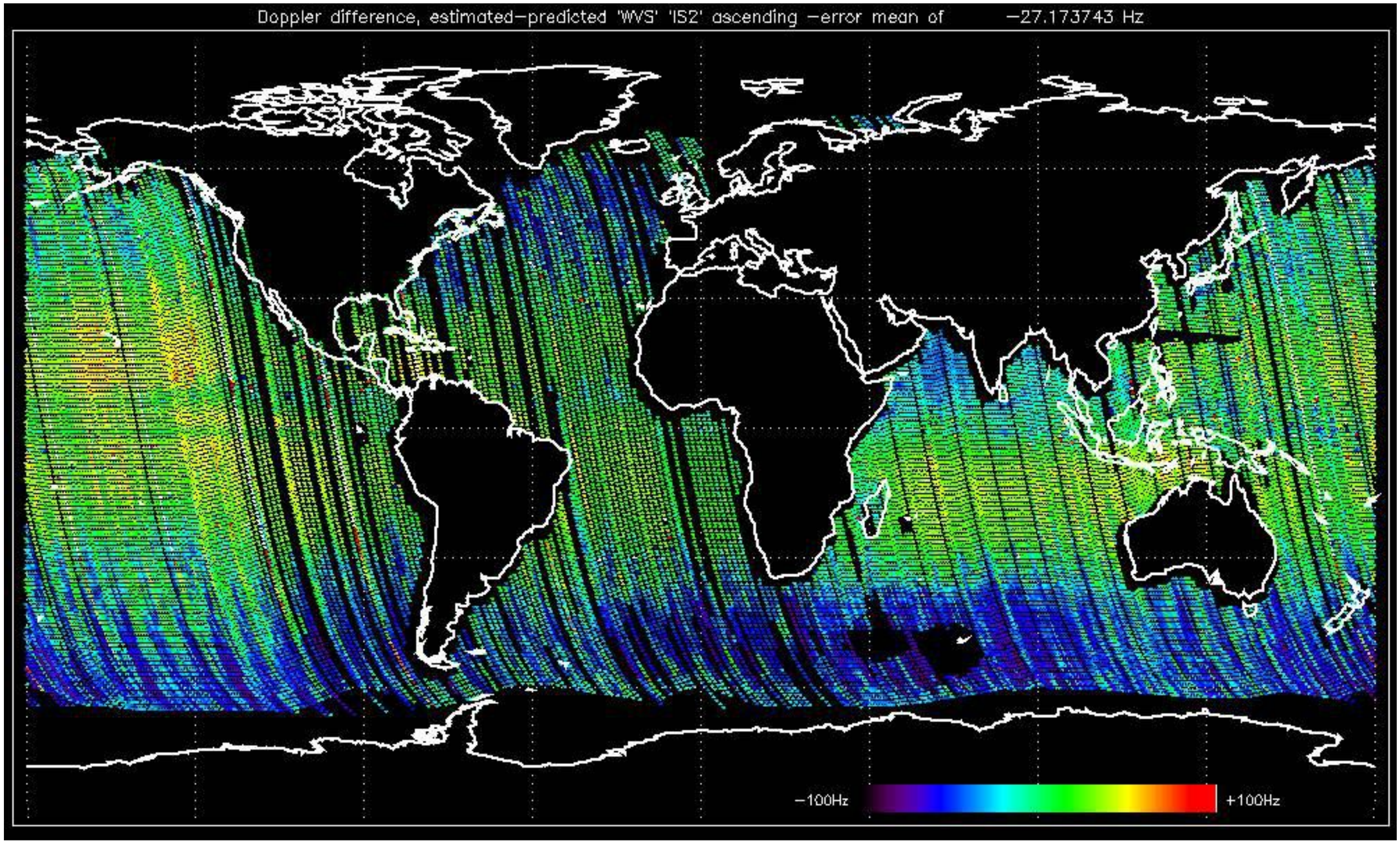

WVS mode doppler
Doppler [Hz]
1000
500
0
−500
−1000
−1500
0
1000
2000
3000
4000
5000
6000
secs from ANX

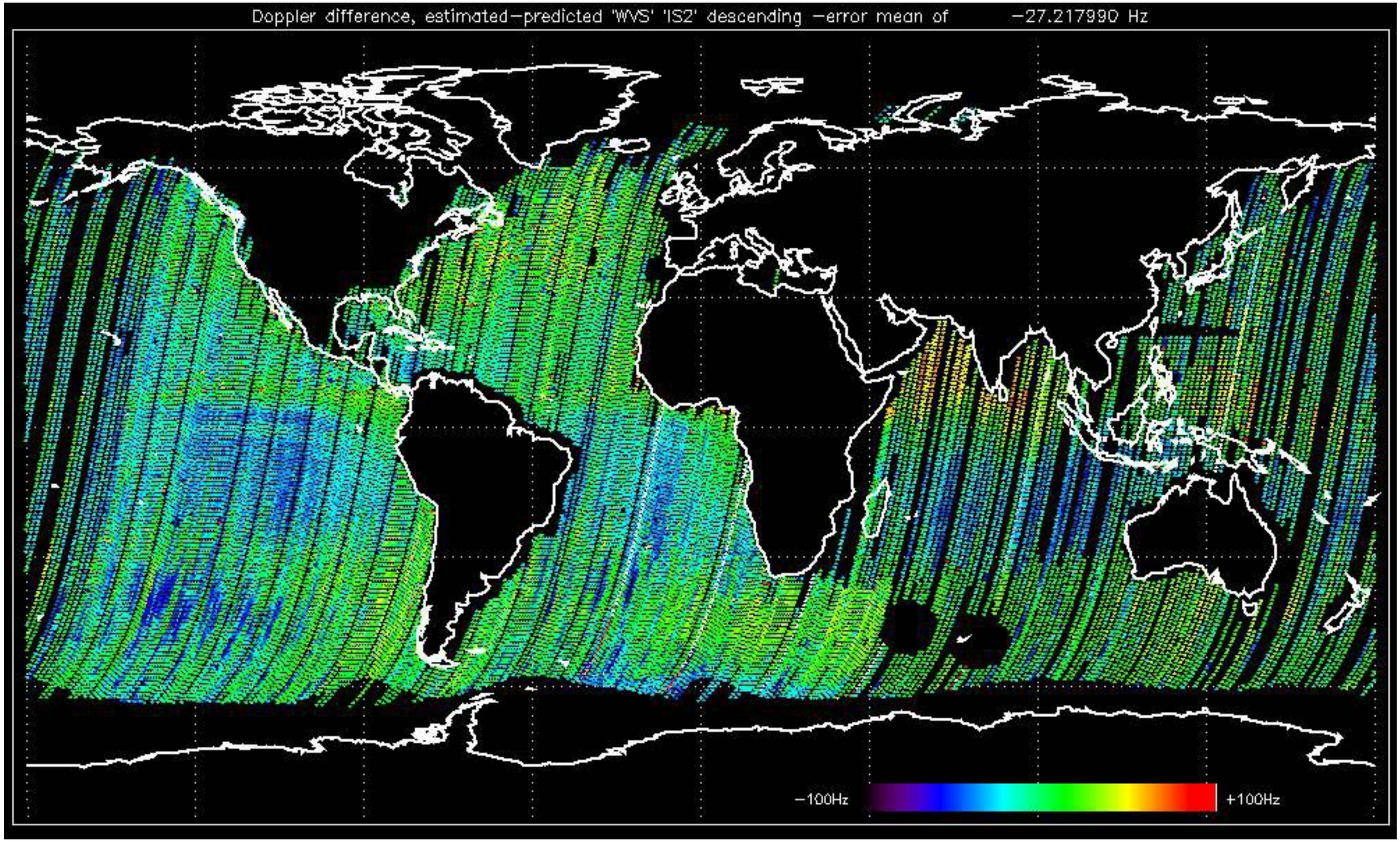

Doppler Bias[Hz]
200
100
0
−100
−200
0
1000
2000
3000
4000
5000
6000
secs from ANX


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


Doppler difference, estimated−predicted 'GM1' 'SS1' ascending −error mean of −32.550675 Hz
−100Hz
+100Hz

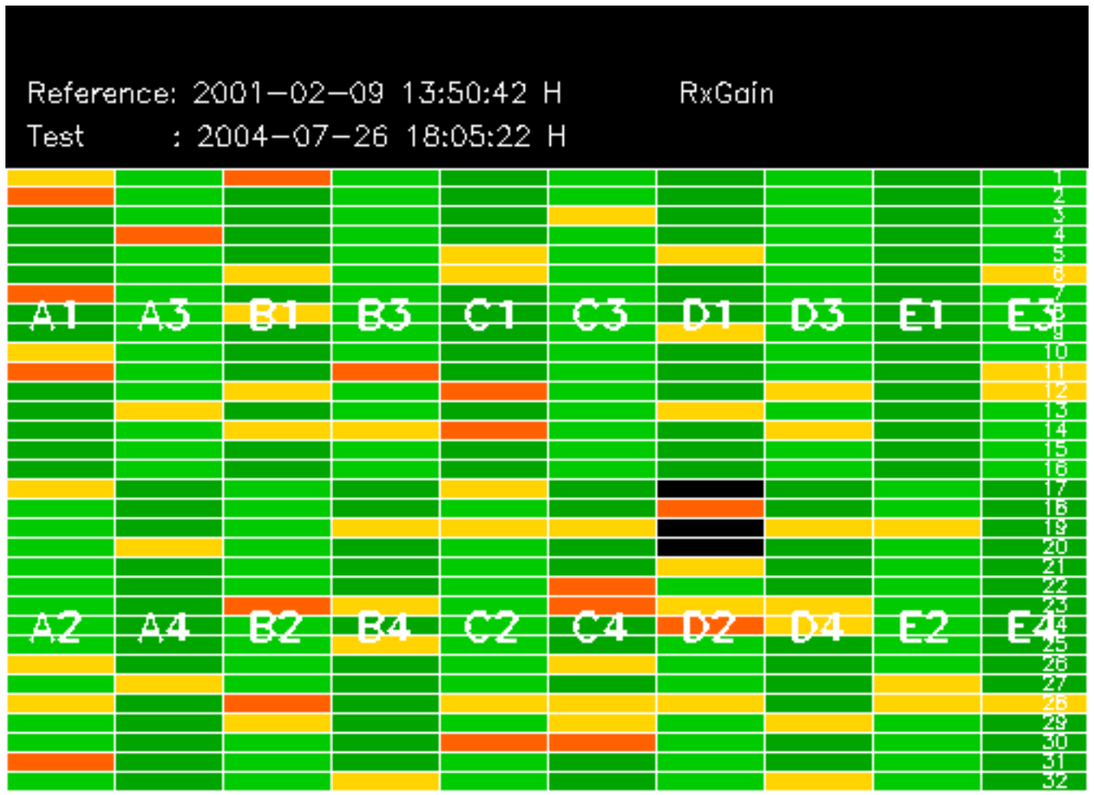

Doppler difference, estimated−predicted 'GM1' 'SS1' descending −error mean of −23.694869 Hz
−100Hz
+100Hz

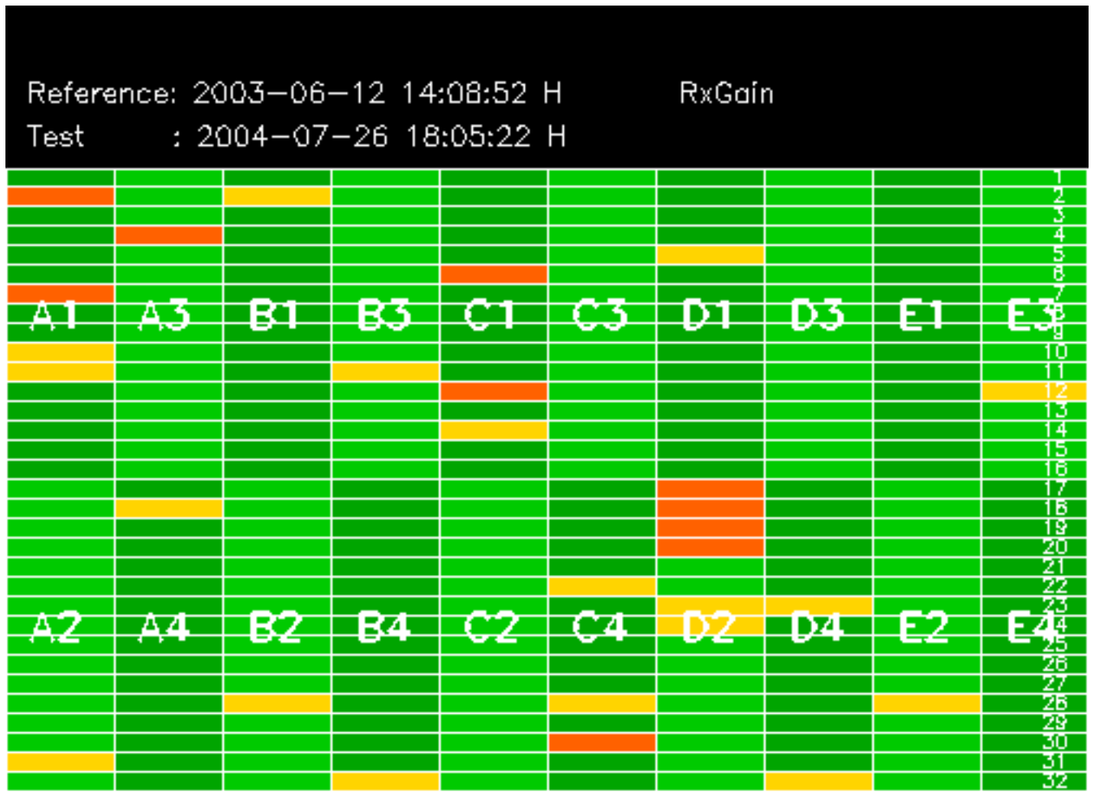

Doppler difference, estimated−predicted 'WVS' 'IS2' ascending −error mean of −27.173743 Hz
−100Hz
+100Hz

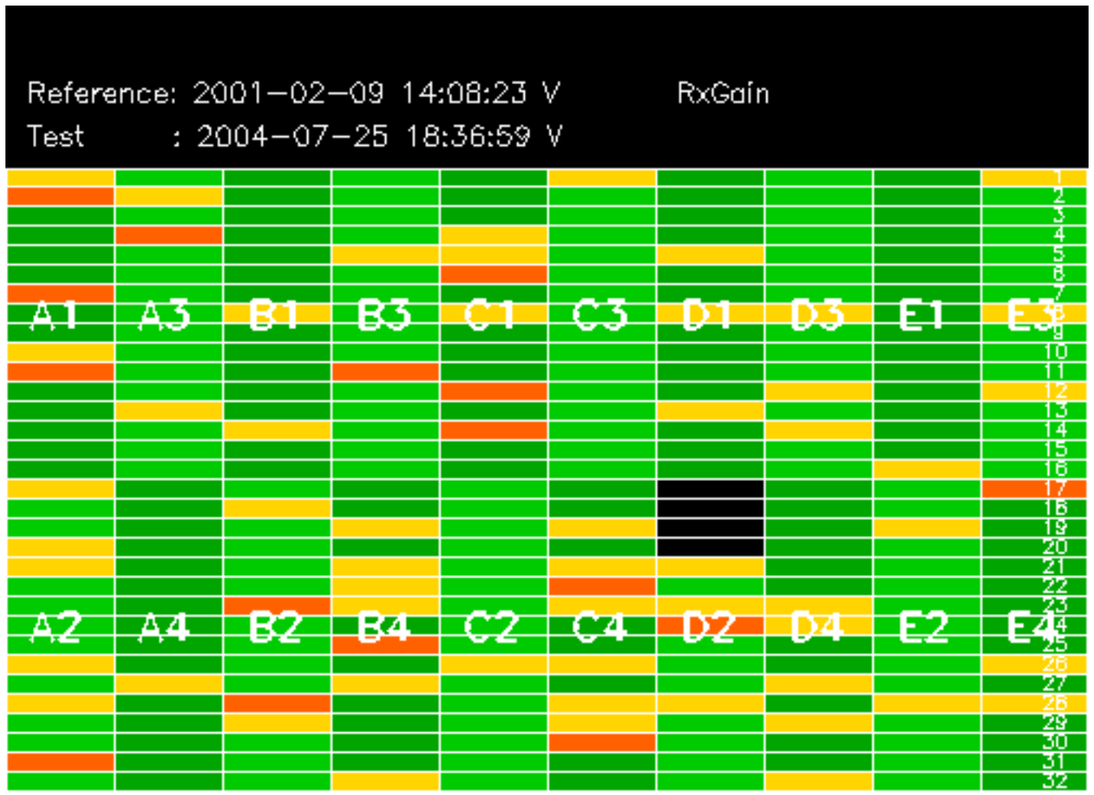

Doppler difference, estimated−predicted 'WVS' 'IS2' descending −error mean of −27.217990 Hz
−100Hz
+100Hz

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 : 2004-07-26 18:05:22 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 : 2004-07-26 18:05:22 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 : 2004-07-25 18:36:59 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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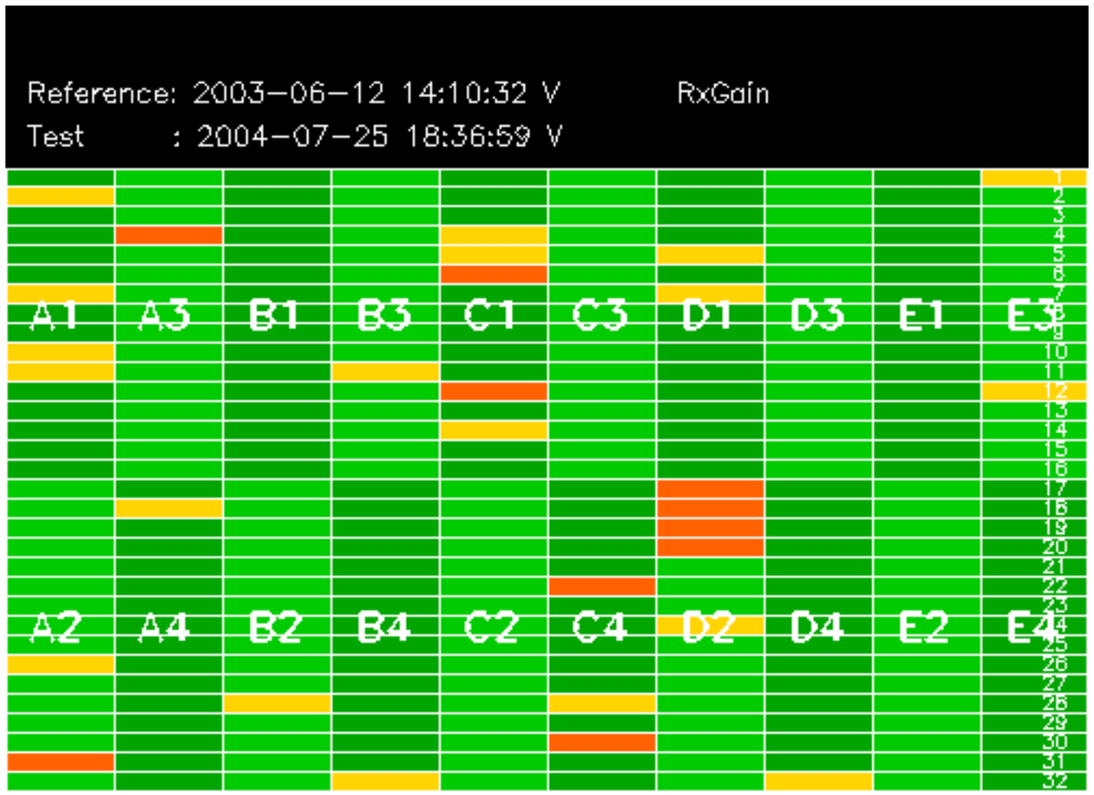
Reference: 2003-06-12 14:10:32 V
Test : 2004-07-25 18:36:59 V
RxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
1
2
3
4
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8
9
10
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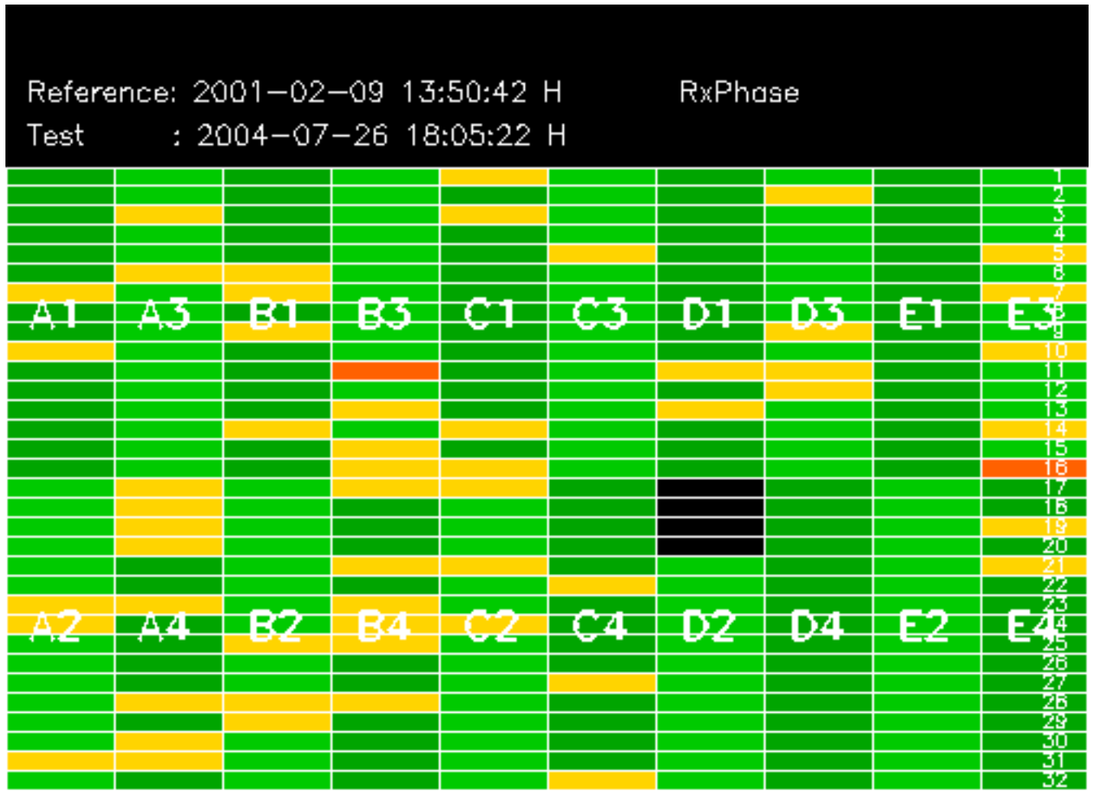
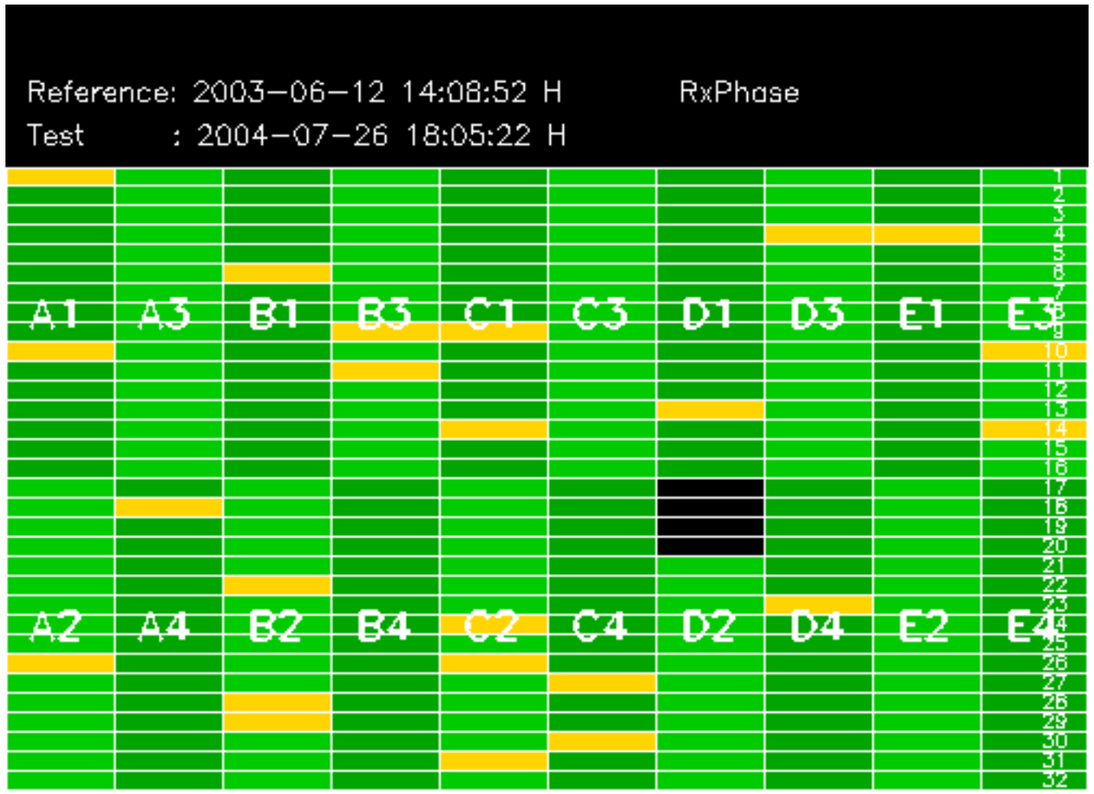
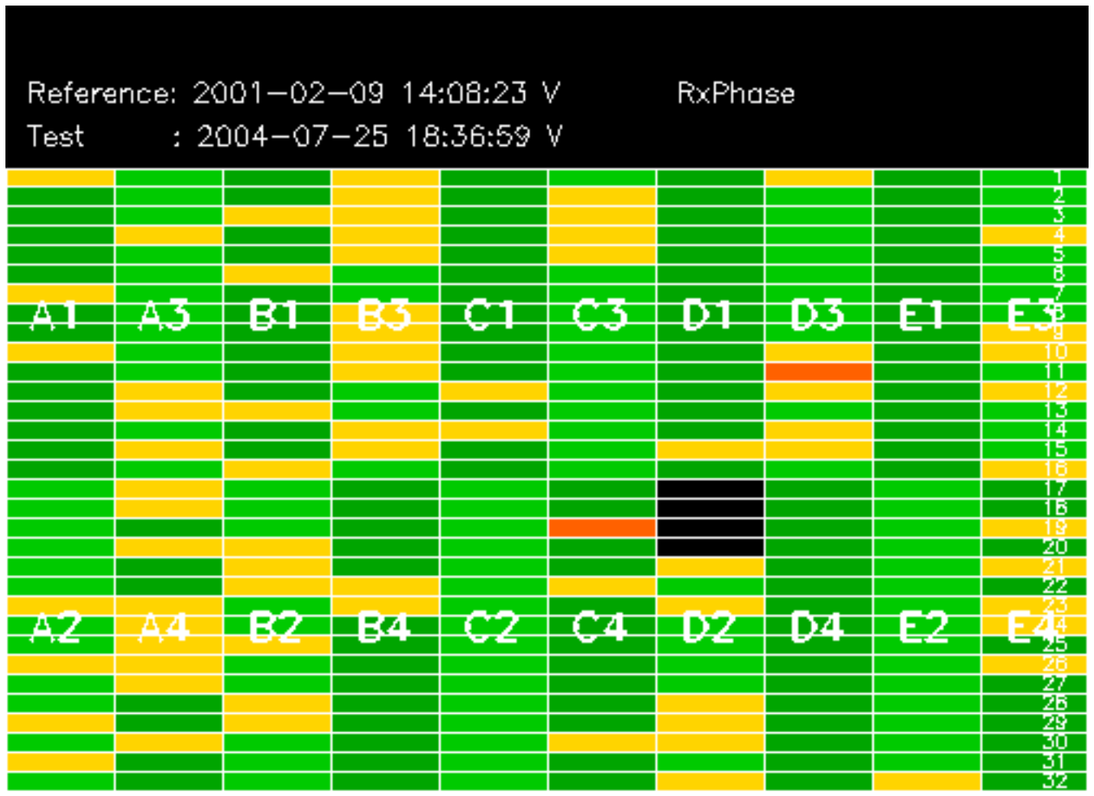

Reference: 2001-02-09 13:50:42 H
RxPhase
Test : 2004-07-26 18:05:22 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-07-26 18:05:22 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 : 2004-07-25 18:36:59 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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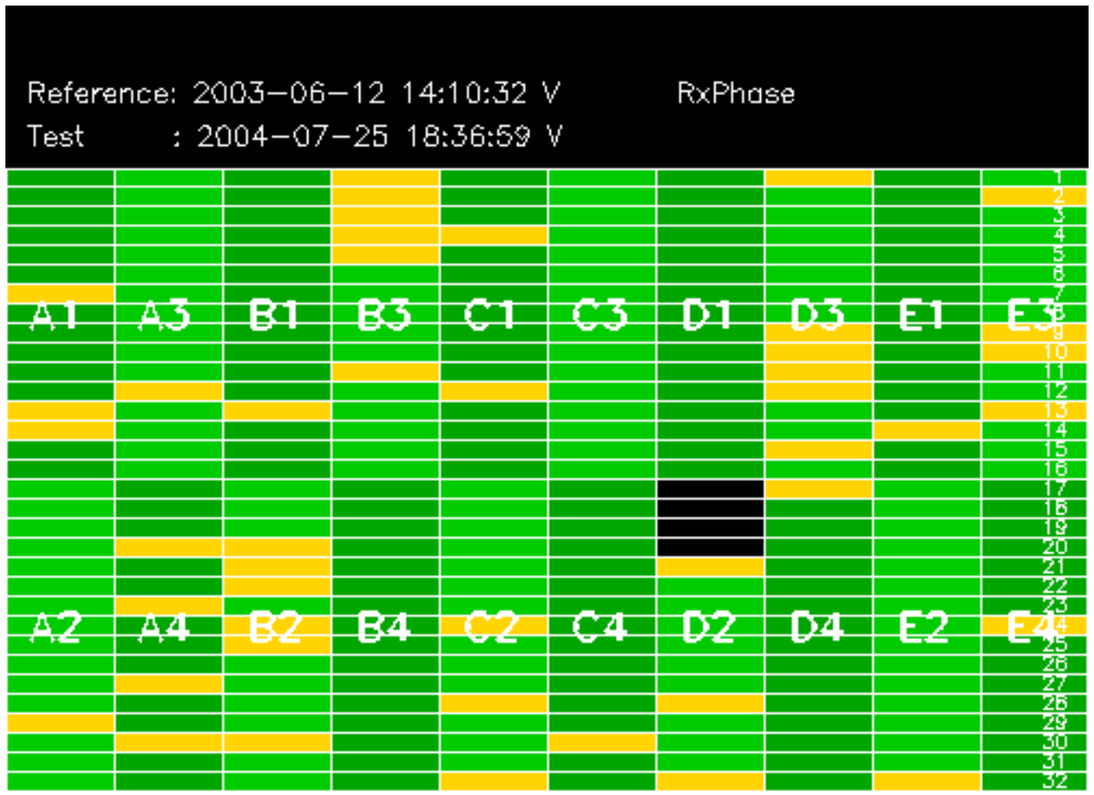
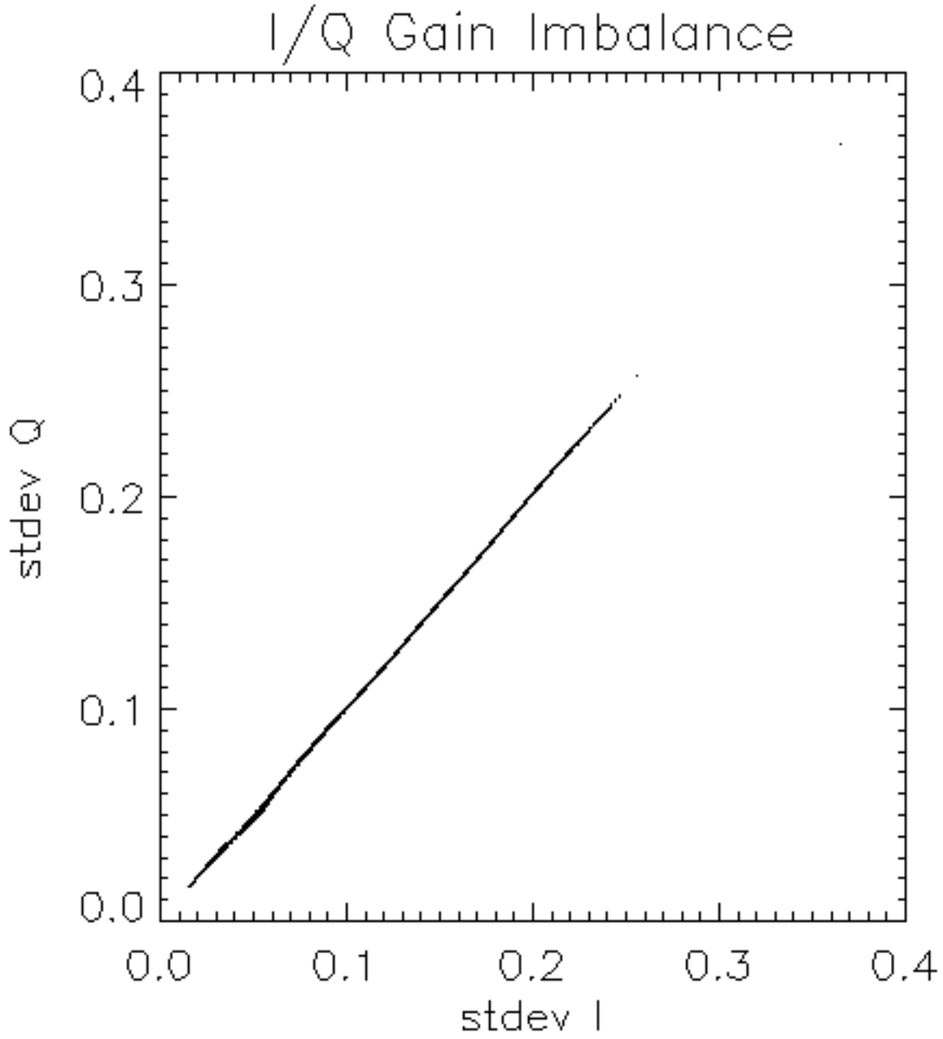
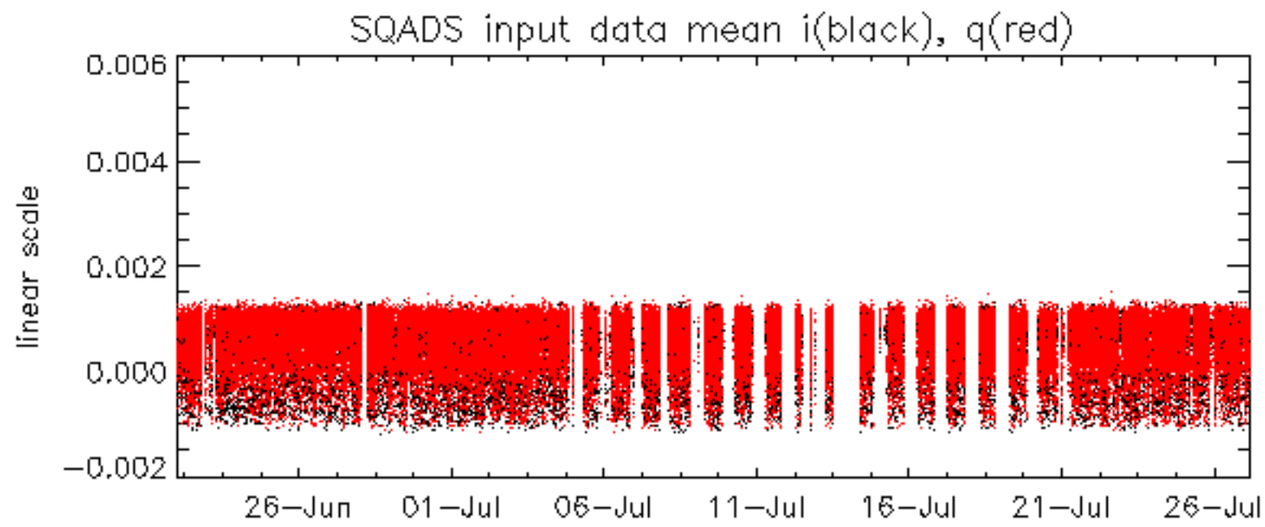
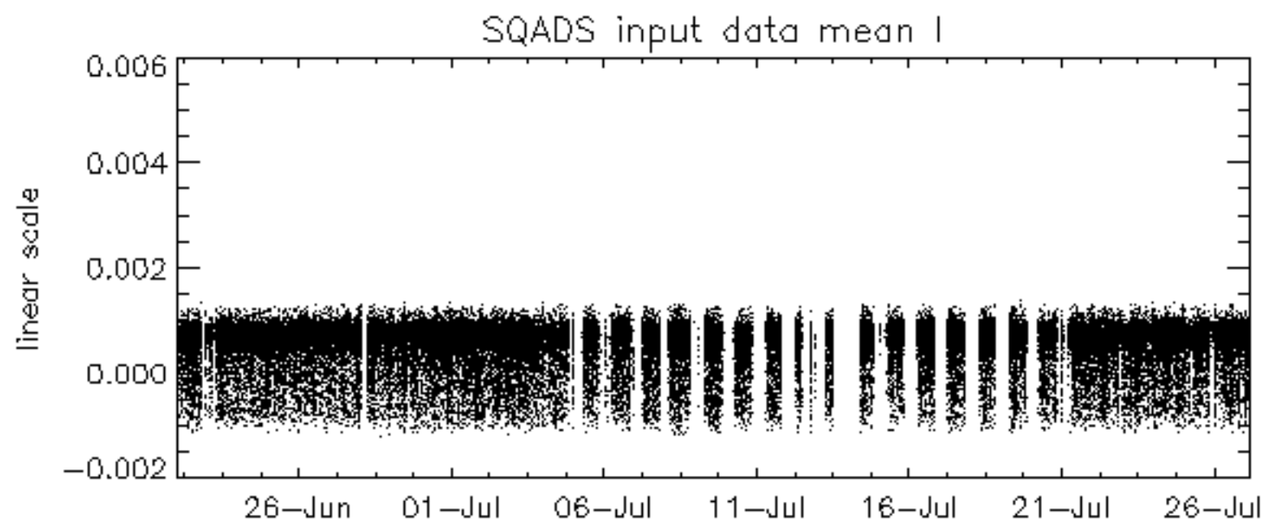
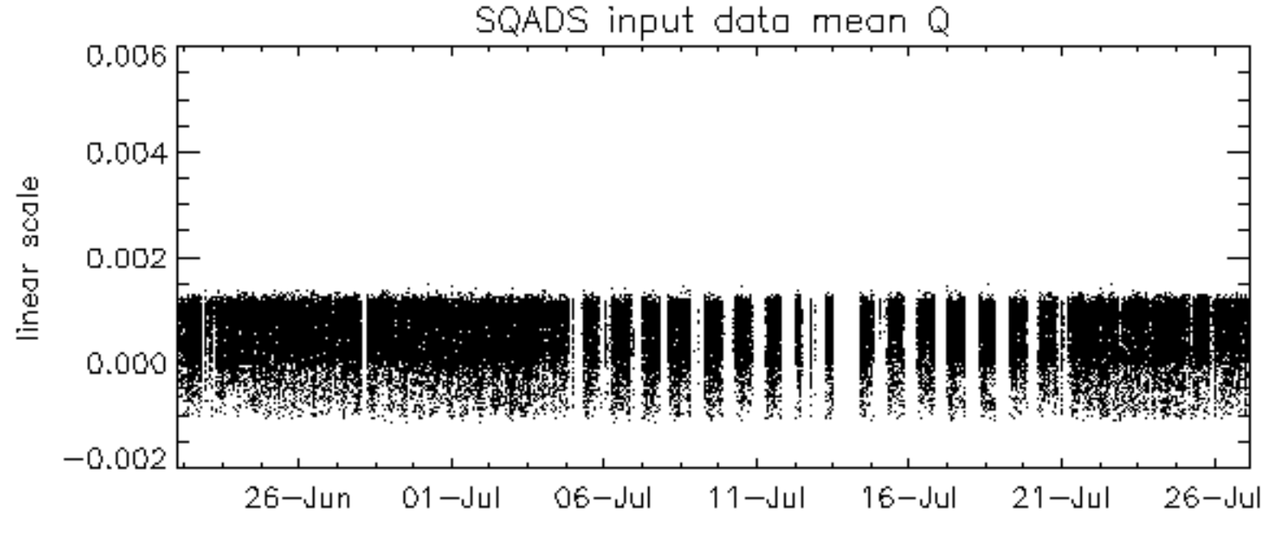
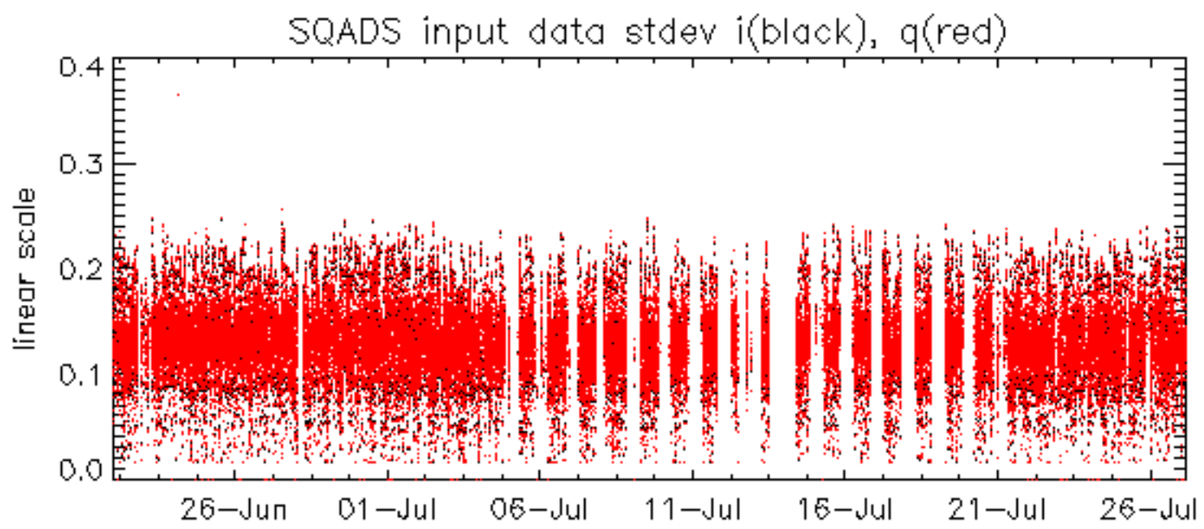

Reference: 2003-06-12 14:10:32 V
Test : 2004-07-25 18:36:59 V
RxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4

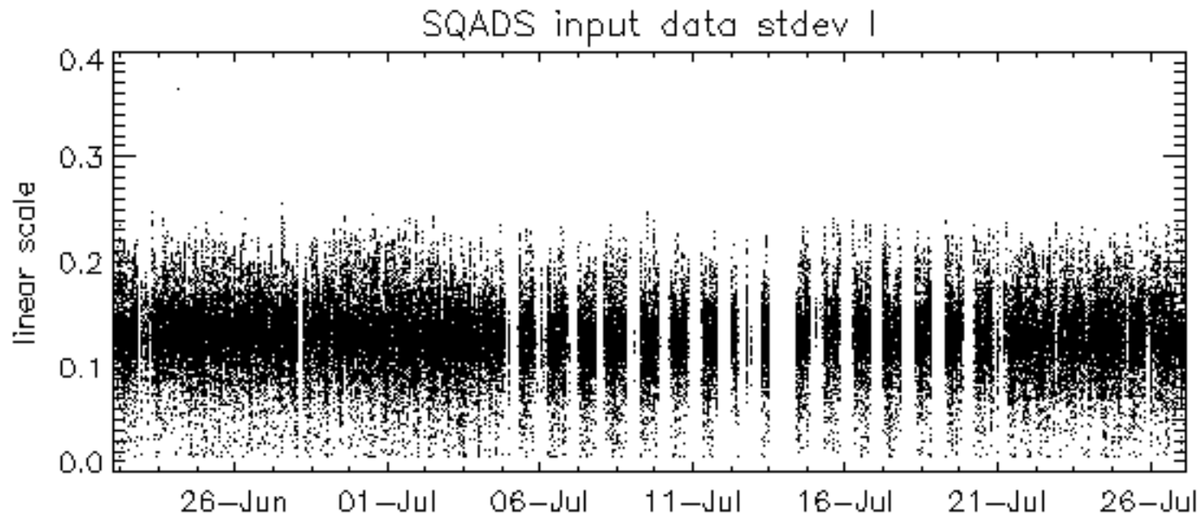

I/Q Gain Imbalance
0.4
0.3
0.2
0.1
0.0
stdev Q
0.0
0.1
0.2
0.3
0.4
stdev I

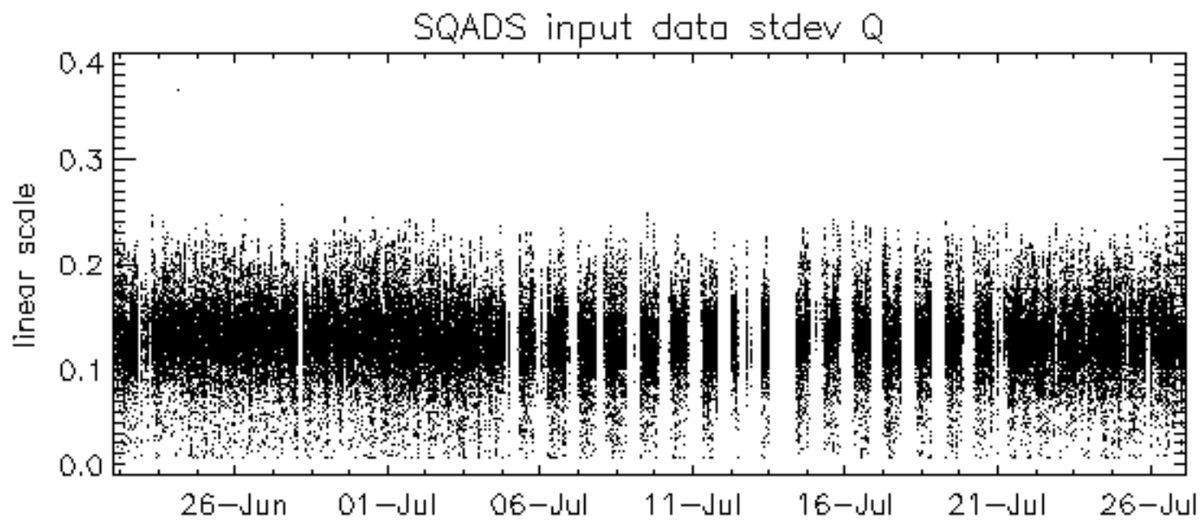

SQADS input data mean i(black), q(red)
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul

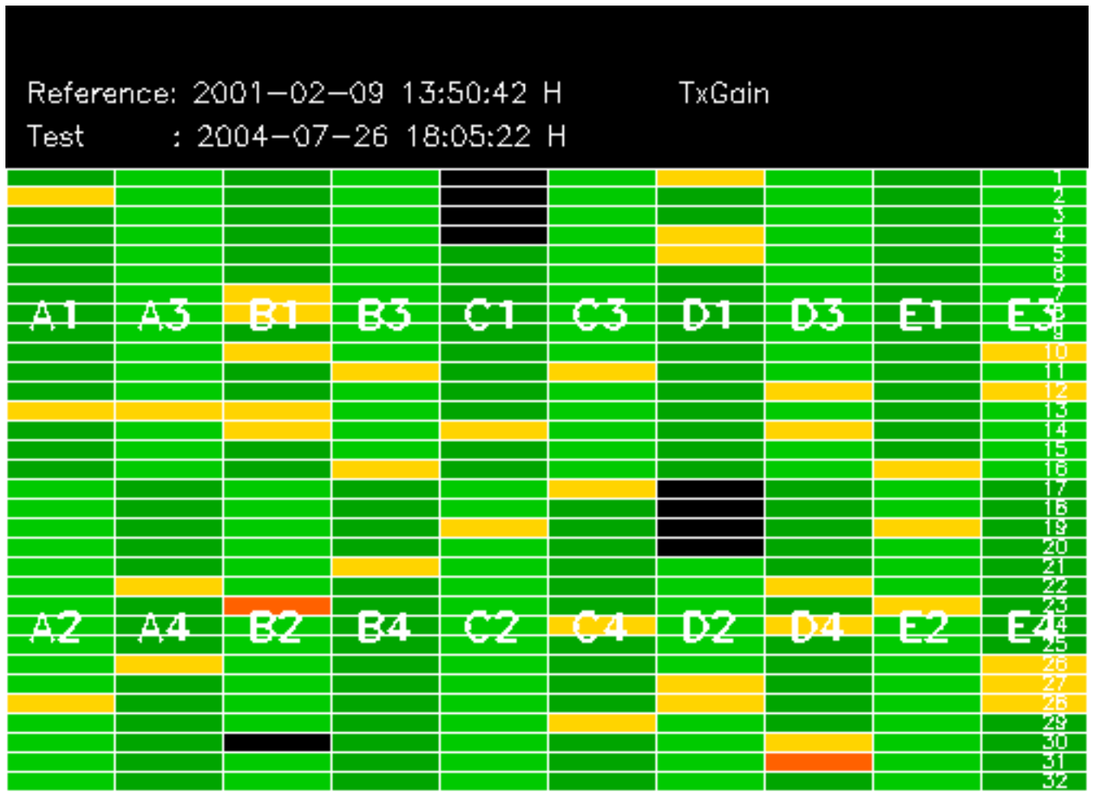

SQADS input data mean I
linear scale
0.006
0.004
0.002
0.000
−0.002
26−Jun
01−Jul
06−Jul
11−Jul
16−Jul
21−Jul
26−Jul


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


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


SQADS input data stdev I
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul


SQADS input data stdev Q
linear scale
0.4
0.3
0.2
0.1
0.0
26–Jun
01–Jul
06–Jul
11–Jul
16–Jul
21–Jul
26–Jul


Reference: 2001-02-09 13:50:42 H
Test : 2004-07-26 18:05:22 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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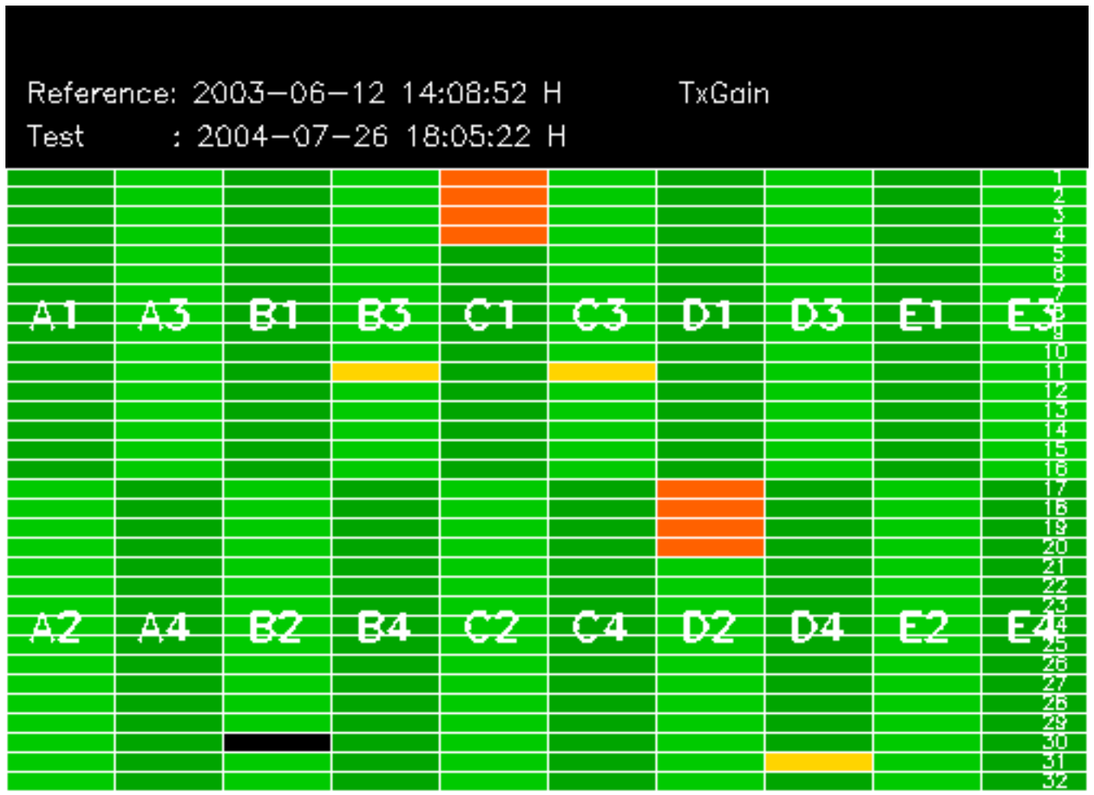
Reference: 2003-06-12 14:08:52 H
Test : 2004-07-26 18:05:22 H
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4
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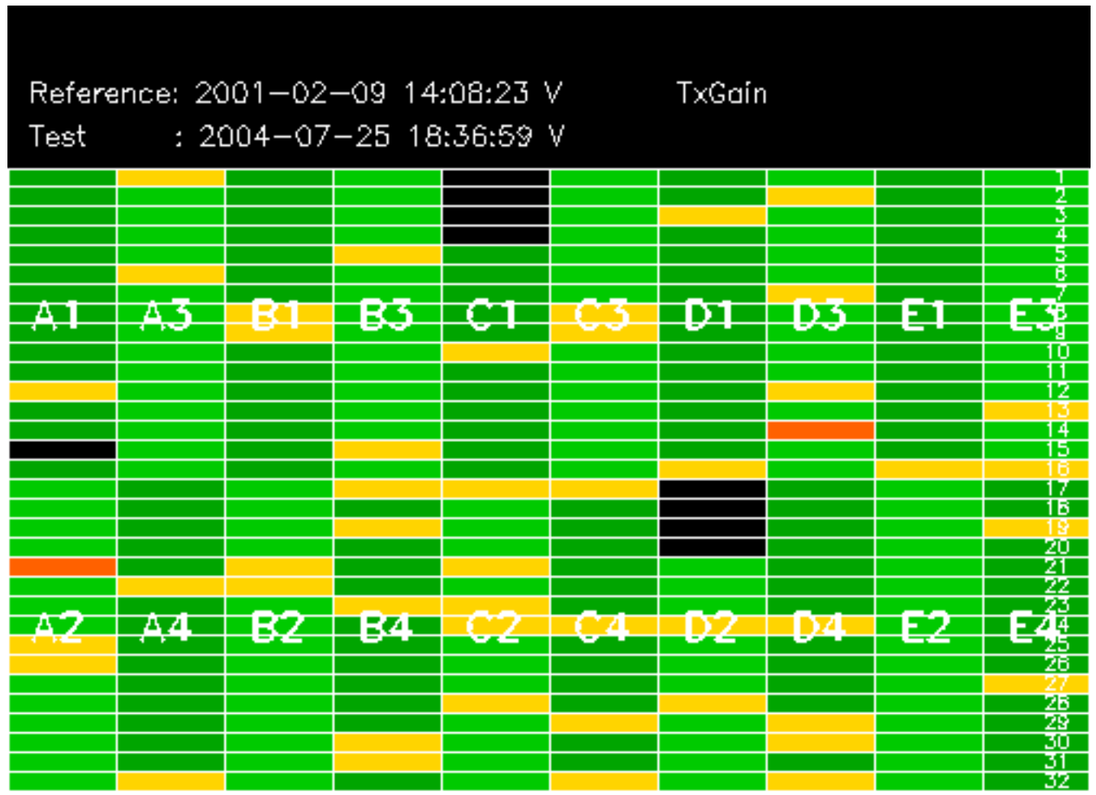
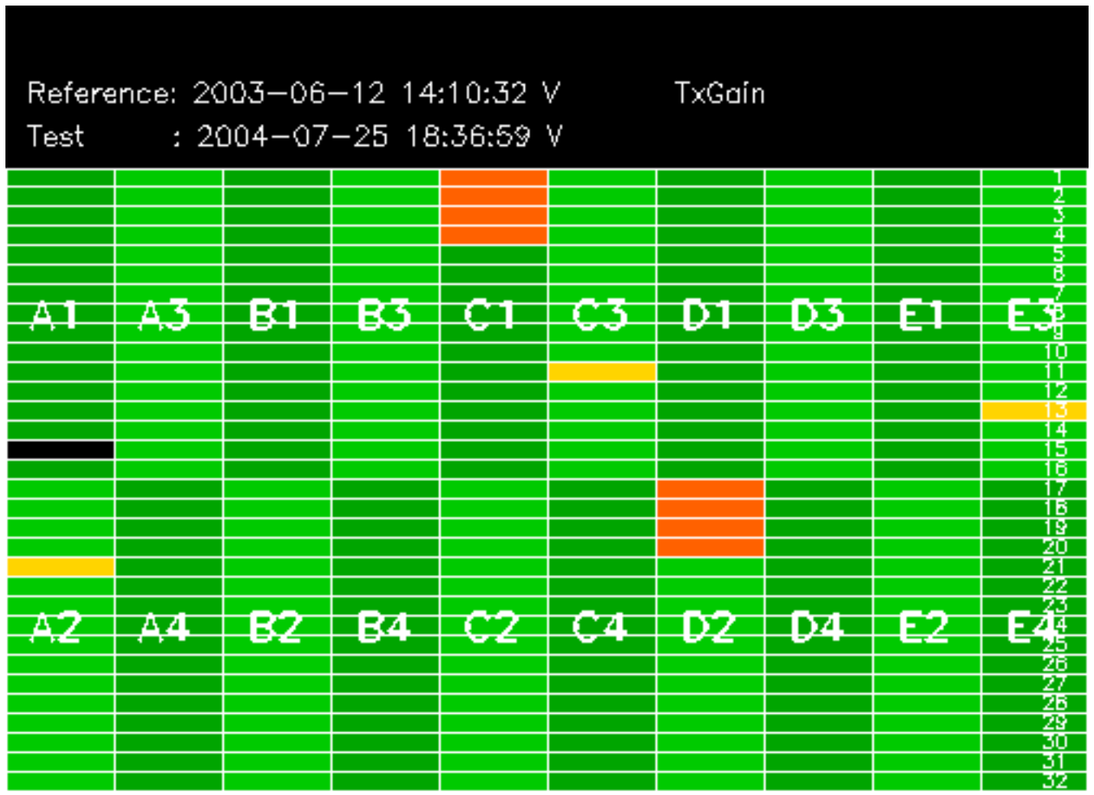

Reference: 2001-02-09 14:08:23 V
Test : 2004-07-25 18:36:59 V
TxGain
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:10:32 V
Test : 2004-07-25 18:36:59 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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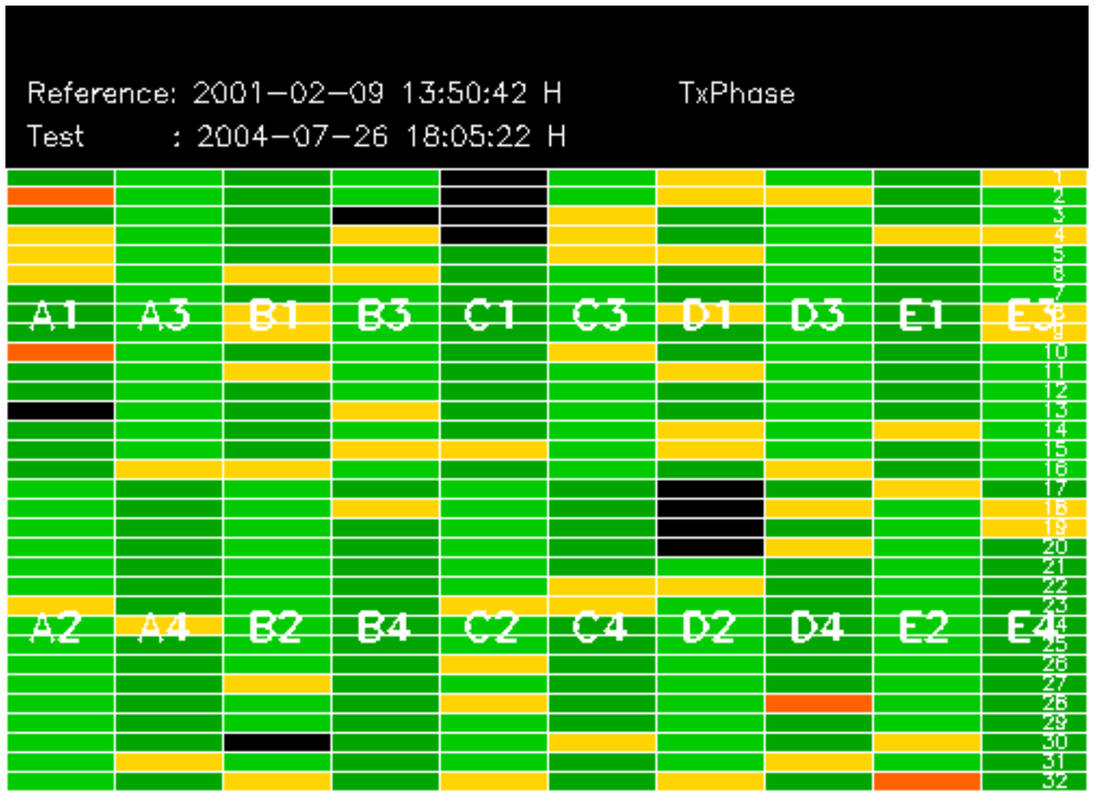
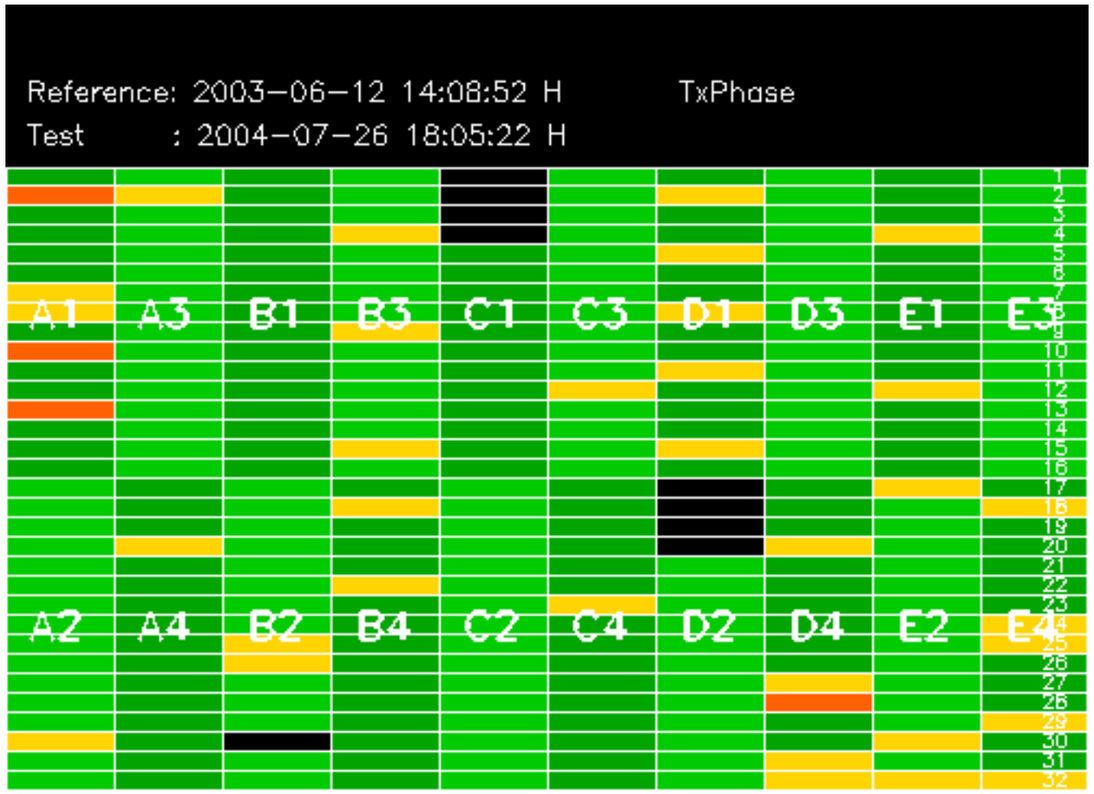
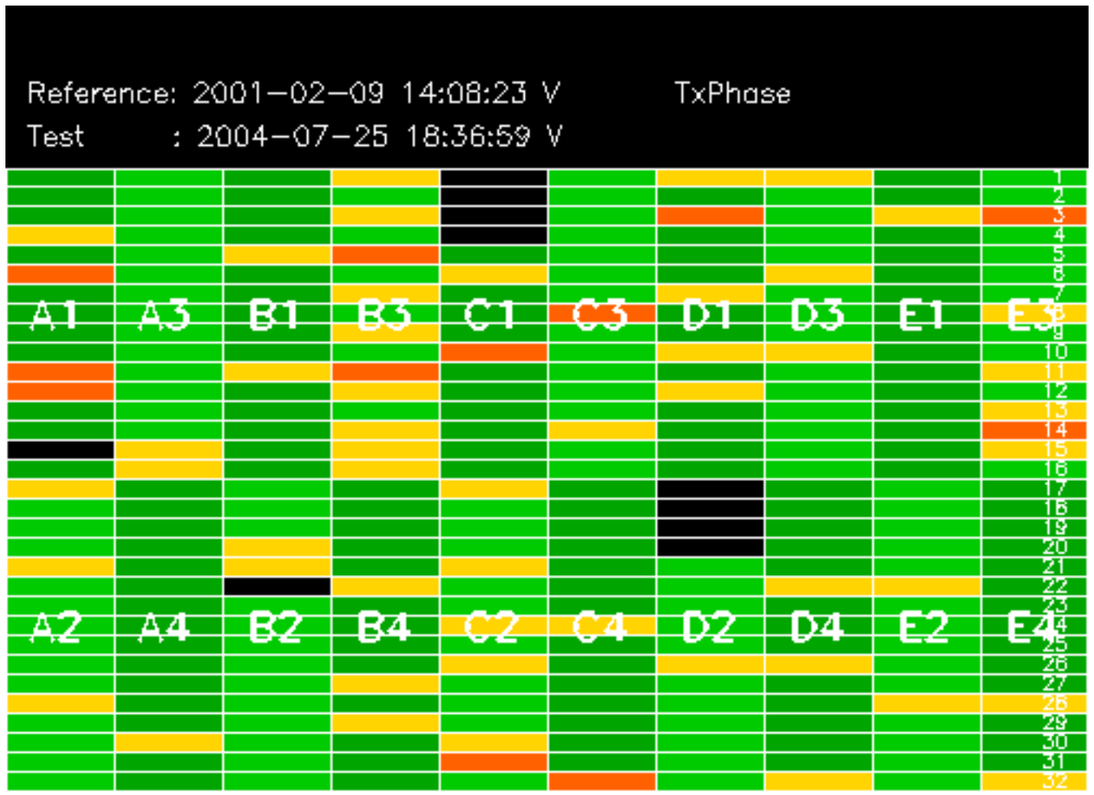
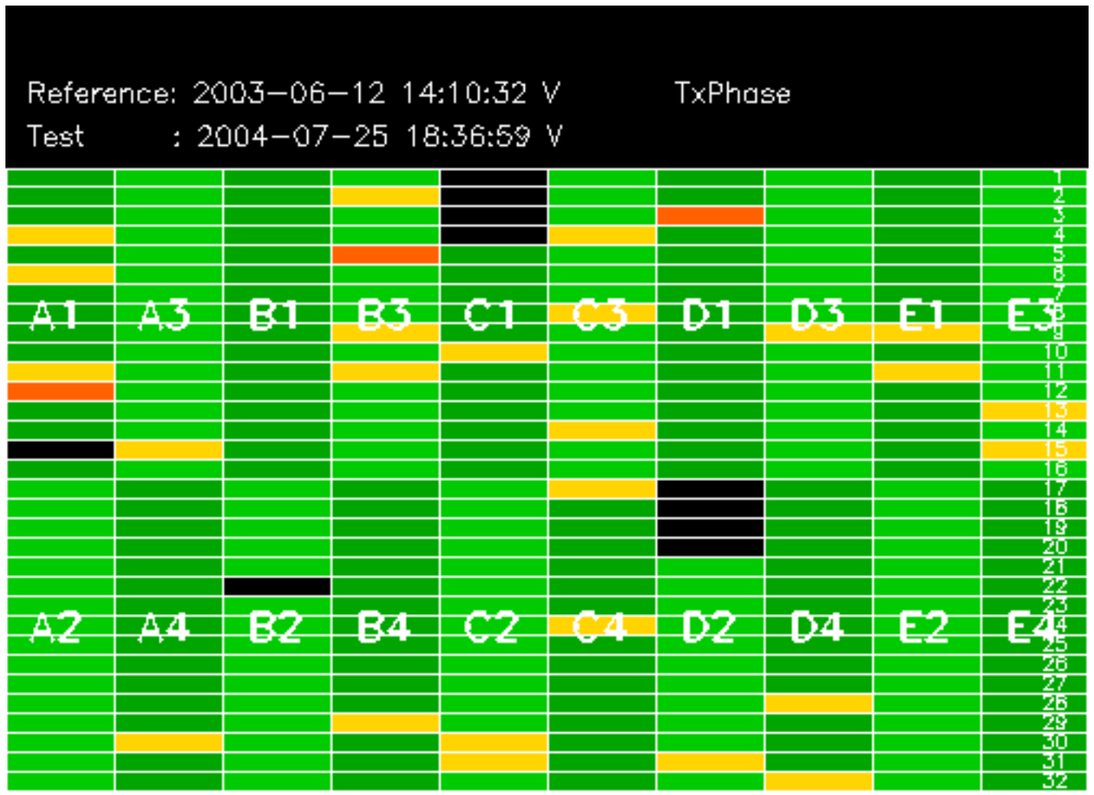

Reference: 2001-02-09 13:50:42 H
TxPhase
Test : 2004-07-26 18:05:22 H
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
D2
D4
E2
E4


Reference: 2003-06-12 14:08:52 H
Test : 2004-07-26 18:05:22 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 : 2004-07-25 18:36:59 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 : 2004-07-25 18:36:59 V
TxPhase
A1
A3
B1
B3
C1
C3
D1
D3
E1
E3
A2
A4
B2
B4
C2
C4
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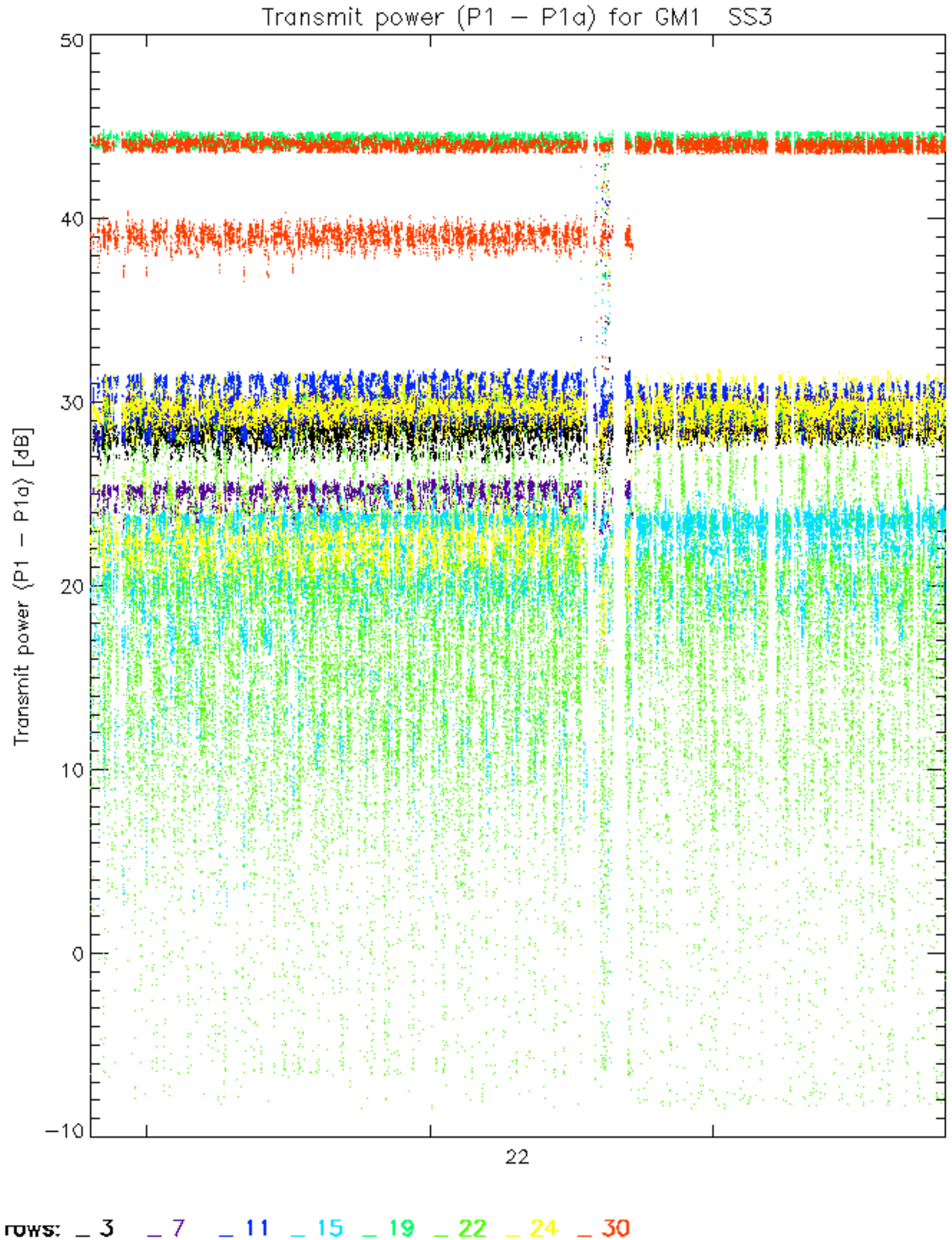
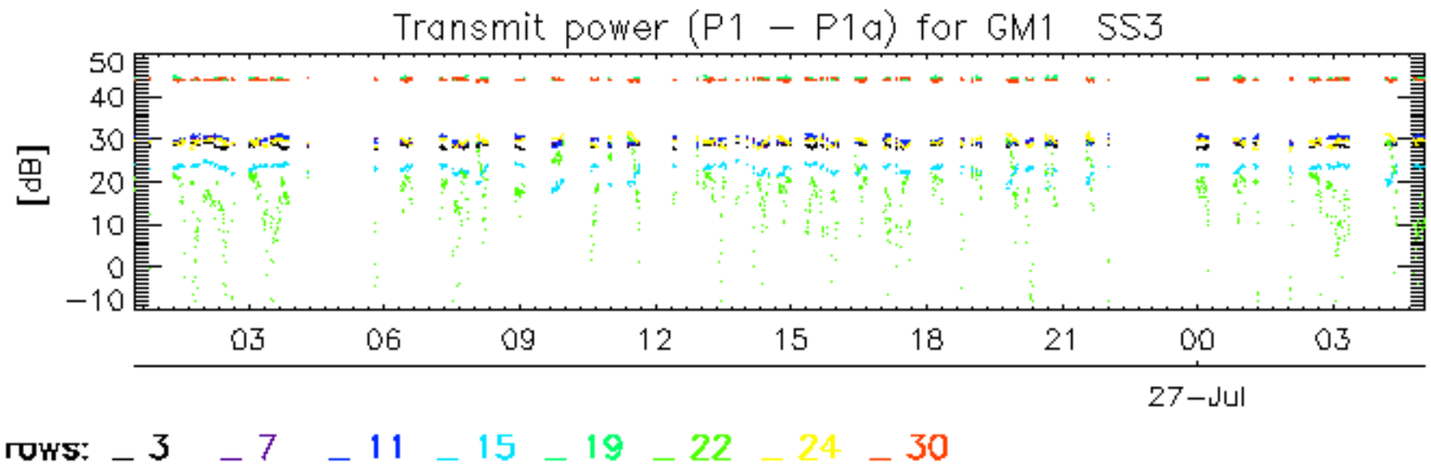
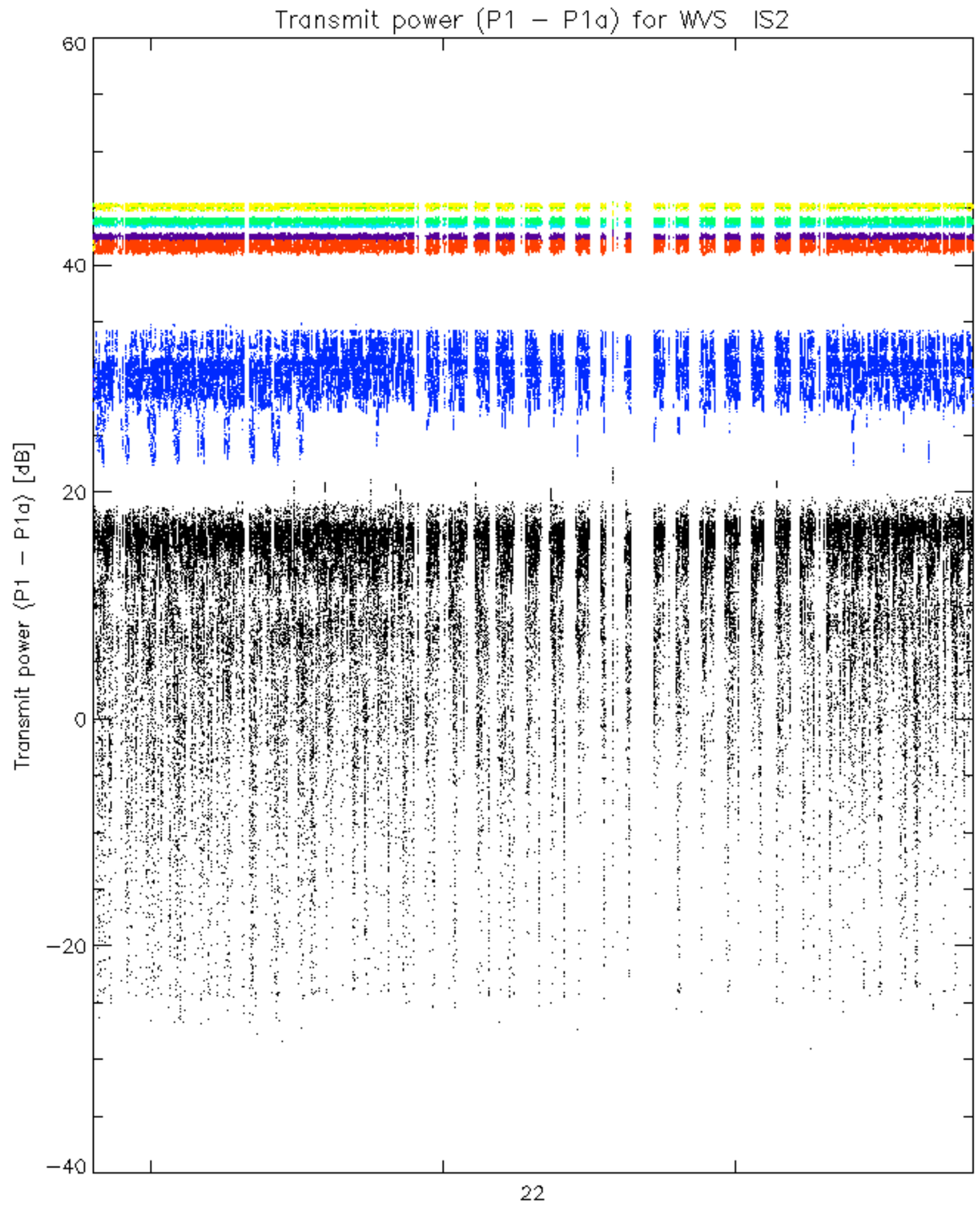
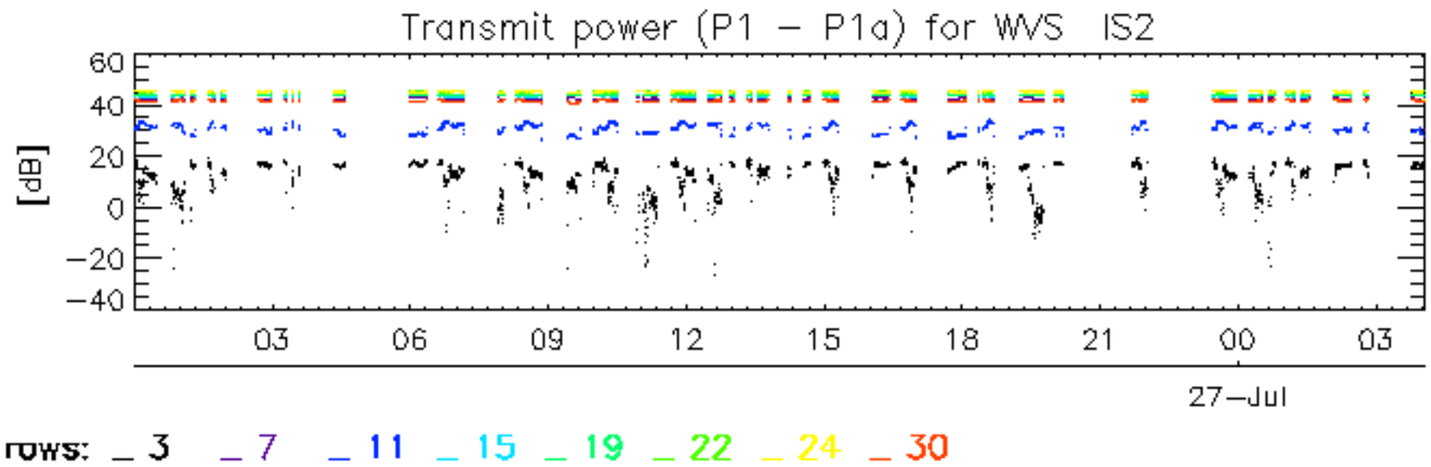

Transmit power (P1 – P1a) for GM1 SS3
Transmit power (P1 – P1a) [dB]
50
40
30
20
10
0
−10
22
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for GM1 SS3
[dB]
50
40
30
20
10
0
−10
03
06
09
12
15
18
21
00
03
27–Jul
rows: 3 7 11 15 19 22 24 30


Transmit power (P1 – P1a) for WVS IS2
Transmit power (P1 – P1a) [dB]
60
40
20
0
−20
−40
22
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
27–Jul
rows: 3 7 11 15 19 22 24 30

No unavailabilities during the reported period.