

***Interactive comment on “A new 1 km digital elevation model of the Antarctic derived from combined satellite radar and laser data – Part 1: Data and methods” by J. L. Bamber et al.***

**J. L. Bamber et al.**

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This referee made positive remarks about the general nature of the paper and included a number of specific recommendations which we address below. We would like to thank them for their comments and input.

1) Liu 2001. This is a good point and in our comparisons and the analysis referred to in an earlier paper it was, in fact, the 2001 DEM which we used. We will correct this point in the final m/s and make sure it is clear.

2) Davis vs. Zwally  $dh/dt$  correction. In areas of large  $dh/dt$  (where it is greater than  $\sim 1$  m/yr) we do not believe that the differences between Zwally and Davis are significant. At most, they will result in a difference of around 1 m in DEM elevation using one rather

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than the other and this is error is smaller than the standard deviation of our height estimate over the ice sheet. We do not believe, therefore, that differences between different  $dh/dt$  estimates (and there are several available) are significant in a statistical sense.

3) P816, line 18-19, no we mean the second derivative of the surface: i.e. the first derivative of slope, or the curvature of the surface.

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Interactive comment on The Cryosphere Discuss., 2, 811, 2008.

## TCD

2, S492–S493, 2009

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