

Interactive comment on “A new 1 km digital elevation model of Antarctica derived from combined radar and laser data – Part 2: Validation and error estimates” by J. A. Griggs and J. L. Bamber

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We are grateful to Julian for his comments on the resolution of the DEM. Our aim throughout this study was to produce a DEM of the Antarctic which has the best compromise on decisions such as resolution and smoothing distances for all applications. Producing a DEM with variable resolution would be unwieldy and very difficult for the user to interpret.

One of many reasons to distribute the error map with the DEM was that it will allow the user to best assess when the DEM can be used off-the-shelf and when some post-processing should be applied. We agree that in highly sloping areas, for some

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applications such as extracting slope, the resolution distributed may be too high but this is easily remedied with a small amount of post-processing of the product by the user. This will be the case in all areas where the height change across one gridbox implied by the slope calculated is smaller than the error on the error map. This is easily calculated from the products provided.

Both the DEM and the error map will be distributed through NSIDC who will also provide the contact details of the authors. We are happy to be contacted by any user who requires assistance in determining whether post-processing of the DEM should be used for their application.

Interactive comment on The Cryosphere Discuss., 2, 843, 2008.

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