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The Cryosphere Discussions



# *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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Part 1 of this paper states that the optimal resolution of 1 km was based on a trade-off between resolution and interpolated cells. A 1 km resolution gave just under 35% of cells with an interpolated value.

This error paper (Part 2) now gives the errors so that the DEM user can judge whether what they are doing with the 1 km DEM is sensible. This paper shows that in areas of high slope the errors between cells can be greater than the actual slope, therefore

using the DEM to give slopes at or around its resolution is not sensible. In areas of low slope the DEM errors are less. In this case are the errors still greater than the average slopes? What I suppose I am saying is that some analysis of where the DEM can be used at the 1 km resolution could be useful and what resolution can it give sensible gradients at. Of course I realise that the user of the data will have to do this anyway and it is good that they will have the 1 km resolution data with errors to do this.

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