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The Cryosphere Discussions

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.

Anonymous Referee #3

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A new digital elevation model (DEM) for Antarctica is presented that has the high horizontal spatial resolution of 1 km. It is derived by optimally combining the strengths in the space-time domain of satellite radar altimetry and satellite laser altimetry while compensating for their shortcomings. Importantly more accurate elevation information is derived between 81.5 and 86žS using GLAS data. Not being knowledgeable in this topic area but recognizing the importance of accurate DEMs for climatic observational and modeling studies, publication is recommended subject to modest changes.

Specific Comments:

1. The authors make no statement as to the unrestricted availability of their digital

elevation model. This should be rectified. Actually it is somewhat surprising the DEM has been fairly widely used but not documented in detail previously.

2. The interesting Fig. 9 is alluded to in the abstract but not discussed in the body of the text.

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