

Interactive comment on “Observationally constrained surface mass balance of Larsen C Ice Shelf, Antarctica” by Peter Kuipers Munneke et al.

Anonymous Referee #2

Received and published: 26 May 2017

This paper goes to a lot of trouble to explain how the different data sources with their various strengths and weaknesses are used to estimate surface mass balance (SMB) over Larsen C Ice Shelf (LCIS). There are other scientists who can assess this part of the work much better than I can. From a practical point of view however, the qualitative conclusion that SMB increases from north to south overprinted with a gradient of increasing SMB to the west is a major disappointment and fails the stated aim on line 20 to provide a coherent picture of SMB for LCIS. Surely the goal should be a grid of SMB values in mm of water equivalent for a particular set of years, and even better broken into winter and summer. The paper is on the verge of doing this but doesn't deliver. The authors should perform such an analysis as part of this manuscript.

Interactive comment on The Cryosphere Discuss., doi:10.5194/tc-2017-44, 2017.