

## ***Interactive comment on “Drifting snow climate of the Greenland ice sheet: a study with a regional climate model” by J. T. M. Lenaerts et al.***

### **Anonymous Referee #1**

Received and published: 5 June 2012

General The paper is well-written. It can be accepted after minor revision.

Specific remarks 1) Introduction and 2.1: How is runoff calculated? Do you consider percolation and refreezing? Is there any way to validate runoff (river runoff data)? The uncertainty of runoff in the mass balance of the ice sheet has to be discussed.

2) P1614, line 11: what does it mean that (background) albedo is prescribed by MODIS data? This should be computed by your albedo scheme.

3) Conclusions: Include a discussion of GRACE measurements. Are they consistent with your SMB?

4) Table 1: add a comparison for high wind speed (>10m/s).

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Figures Fig.5D: change scale for better visibility.

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Interactive comment on The Cryosphere Discuss., 6, 1611, 2012.