

Response to Reviewers:

We thank again the Reviewers for their comments and suggestions to improve this manuscript. We address their comments below. Reviewer comments are in italics, and our responses are in normal font below.

Reviewer 2 : Veijo Pohjola

Comments from a referee:

The new version of the MS and the response to reviewers by Vincent et al fully satisfies the questions raised by me in the previous review.

Although satisfied, I do have a few editorial suggestions of lesser significance:

Li 83 "Horizontal velocities have been obtained from the position of the bottom tip of accumulation stakes,"; rephrase, since it is not clear what bottom tip is. Is it the lowest part of the stake buried deep in snow, or the lowest part of the stake sticking up from the snow surface at the time the survey was done?

Thanks a lot. It has been done.

Li 96 "GLONAS" should probably be GLONASS

It has been done.

Li 330 "correspond to an increase of 0.004 in density". What is the unit, % or mwe or kgm-3?

In our manuscript and calculations, we used the dimensionless quantity "relative density". In the manuscript, we replaced "density" by "relative density" to avoid any ambiguity.

Li 331 "It is therefore unlikely that melting increase is responsible for the", consider to change this to "It is therefore unlikely that an increase in melting is responsible for the.."

It has been done.

Li 332 "..observed slight density increase that is may be rather linked to reduced snow accumulation.", consider to change this to "observed slight density increase which instead may be related to reduced snow accumulation."

It has been done.

Annex S1. Give units on the X-axis of the two graphs.

We used the dimensionless quantity "relative density". In the caption of Figure S1, we replaced "density" by "relative density" to avoid any ambiguity.