

## ***Interactive comment on “Statistical post-processing of ensemble forecasts of the height of new snow” by Jari-Pekka Nousu et al.***

### **Anonymous Referee #1**

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This manuscript describes the application of a parametric, statistical postprocessing method - originally developed for precipitation amounts - to ensemble forecasts of height of new snow. A number of experiments are performed to explore the benefits and drawbacks of local-scale vs. regional-scale parameter estimation and training with reforecasts or realtime forecasts. The paper is well written and interesting. All conclusions are supported by the presented results. I only have a few minor comments and suggestions to improve language. After these are addressed I recommend the paper for publication with NPG.

Minor comments:

Eq. (3): Is this a typo, or is the ensemble mean indeed divided by  $\mu_{cl}$  here? I'm asking because  $\mu_{cl}$  is a parameter describing the observation climatology, so it is

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not obvious that it can also be used to normalize the forecasts. Please clarify.

p13, l16: So stratification is w.r.t. ensemble mean? Just checking because above you said stratification will be done w.r.t. ensemble median.

p25, l13: I would use the phrase 'was significant' only if statistical tests for significant are performed

Language and typos:

p8, l2: -> is currently not performed within the computing facilities of any national weather service  
p11, l20: -> tools  
p12, l20: -> conditioning  
p12, l27: -> they allow one to  
p13, l14: -> relatively

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Interactive comment on Nonlin. Processes Geophys. Discuss., <https://doi.org/10.5194/npg-2019-27>, 2019.