

## ***Interactive comment on “The use of regression for assessing a seasonal forecast model experiment” by R. E. Benestad et al.***

**R. E. Benestad et al.**

rasmus.benestad@met.no

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We are grateful for the comments raised by reviewer 2, which reveals the need for more careful explanation about the model outcome.

The initial conditions (IC) were based on standard initial conditions for the EC-Earth model that were perturbed as explained in Melsom (2010). The most important aspect of the IC involve the ocean state and SSTs, rather than the atmosphere.

“Well-suited” and “handy” have been dropped in the revised version.

Table 1 went missing during the process of formatting the paper (an unfortunate glitch) but will be added back in the revised version.

The purpose of our paper was to look for reasons why seasonal predictability is so low

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at mid- to high latitudes, and the figure was intended to show difference between results from L62 and L91 simulations, which limits the extent that can be shown. We hope that this will trigger further interests and more efforts into improving the understanding of exactly which mechanisms and processes are involved and how they are affected. Our study was limited in terms of resources provided, and we did not have the luxury to do this here. We agree that the strong response of the stratosphere is not surprising, and think it's nice to have some examples showing exactly this in the context of seasonal prediction.

There is not much difference between 70N and 60N, and the choice of 60N was motivated by the latitude of the largest Nordic capitals and the question whether the lack of predictability for these was due to incomplete understanding of the effects of subjective model settings.

We will revise the paper and pay attention to the past and present tenses. Thanks for pointing this out.

Description of Fig 2 will be fixed in the revised version.

The point of this paper is to demonstrate that subjective choices in terms of model set-up have an effect on the predictability. A more complete understanding of the dynamics of the wintertime northern hemisphere is outside the scope of this paper.

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