

Review of “On the forecast skills of a convection permitting ensemble” by SCHELLANDER-GORGAS et al.

This paper compares the performance of two limited-area ensemble prediction systems over central Europe. ALADIN-LAEF is a typical mesoscale regional ensemble at 11km resolution and the AROME-EPS a convective permitting model at 2.5km resolution. The focus of the study is on verifying surface weather variables, particularly precipitation, over the Austrian region during summer. The authors have access to dense observation datasets and are able to separate periods of weak and strong synoptic forcing. They are also able to compare model performance over mountainous regions and adjacent plains.

The methodology and data analysis is good. The paper is reasonably well-written, with occasional spelling/grammar errors which are noted below. The suggestions I have are largely cosmetic and would not require further data analysis, so I am recommending accept with minor revisions.

Major points:

1. It took a while to understand how the AROME-EPS is set up. Is the AROME-EPS a direct downscaler of ALADIN-LAEF with the same initial time or is there a lag before the start of AROME-EPS? Maybe a diagram showing the EPS setup could help?
2. Fig 4 is rather poor quality. Some of the axis labels have been cropped (well at least on my PDF viewer!) and the lines and legend appear rather faint. The y-axis should also include zero.
3. Section 4.1: Why is the verification of surface variables more significant than upper level variables? Is this because there are more surface observations? The text should explain this.
4. I'm not convinced that Table 2 adds much to the paper. Consider deleting it.

Minor points:

1. Title: May be better to say “On the forecast **skill** of a convection...”.
2. Fig 4 caption: Rather say which verification area separately “...August 15, 2011 of AROME-EPS (dotted line) and ALADIN-LAEF (solid line), both verified over the AROME-domain. ...”
3. Include “Strong/weak forcing” and “threshold” on axis labels in Figs 5-8. It is hard to follow which panel is which from the caption alone.
4. Typo on p12, line 13: “... on which rains **s** was...”
5. P13, lines 5-6: “...which is of most interest to **users of** convection permitting...”