In addition to being able to develop and advect convective precipitation with the model dynamics, better resolution of topography and snow cover have been proposed as benefits of modelling at "convection permitting" scales. Monteiro et al. investigate the benefits of improvements in the land surface and snow components of a convection-permitting regional climate model. The D95 configuration used as the baseline is far from the state of the art in climate and NWP models, but it is relevant as the land surface model in the current CNRM-AROME regional climate model.

Abstract
From the abstract alone, it is not clear what "multiple patches for land surface grid points" means.

Introduction
"the use of high-resolution models would minimize modeling uncertainties, by limiting the use of sub-grid parameterizations"; with the exception of convection, none of the subgrid phenomena listed earlier in this paragraph are parametrized in AROME.
"Assessing the representation of snow in coupled configurations is a necessary complementary approach to standalone model run". I would rather put it the other way round: coupled configurations are essential for NWP and climate applications, and it is standalone model runs that can be a useful complement to the evaluation. Raleigh et al. (2015) and Lapo et al. (2015) cited here do not consider coupled surface-atmosphere simulations.

2.2.1
A display equation should be integrated into the text as part of a sentence; equations (1) – (6) are not.
"latent L heat flux" should be LE to match equation (4.2).
LWu in equation (3) really is incorrect; it should include reflected LWd if the surface emissivity is not 1 (Kirchoff's law of thermal radiation).
"the atmospheric fluxes received … for all tiles and patches" means specifically the incoming radiation and precipitation fluxes.

2.3
The French "expérience" should be translated as "experiment"
"The density, an exponentially decreasing function, forced to 100 kg m^{-3} for fresh snow, limited to 300 kg m^{-3} for aged snow"; density is an increasing function. 300 kg m^{-3} can be low for aged snow and could contribute to overestimates of depth.

2.4
The horizontal resolution of ERA5 is 0.25°, not 50 km; was it regridded?

Figure 3
The distribution of elevation in the Alpine domain could be added to the bar chart as an indicator of representativeness.

2.6.2
State that the MODIS product used is MOD10A1F. How will gap filling and dense vegetation influence uncertainties in snow cover duration?
To determine snow cover duration, a threshold is put on observed snow cover fraction and modelled snow depth, but the model already calculates a snow cover fraction (equations 4 – 6); why not use that? Are the observation and model thresholds consistent?

2.7.4
"σ_x et σ_y" are not in the equations. x and y are a model variable and an observation in some order. r_{xy} here becomes R in 3.1.

3.1
Figure 6 suggest that ME and R^2 are poor indicators of model performance. A low value of ME can be obtained by averaging underestimates and overestimates at different times. The D95-3L simulations are very poor for the melt season, but are given R^2 values exceeding 0.8 in all cases.

3.2
Observed SCD per elevation band would be a useful complement to Figure 7. Errors can be larger at intermediate elevation simply because there is more room for error when SCD is not close to 0 or 365 days.

Discussion
The amount of the Discussion dedicated to discussing results in appendices that have not yet been presented to the reader is odd. If the results are important enough to discuss in detail, they should be presented in sequence in the main text.

4.2
ES-DIF R^2 is only degraded compared to D95-3L at 2100 m in Figure 6.
Evaluating the ES-DIF configuration that is not actually used in offline or coupled simulations is of limited value; it has already been effectively rejected.