

This manuscript presents a comprehensive evaluation of a multi-season convection-permitting regional climate simulation for the Maritime Continent, using the Met Office Unified Model with a fine 2.2-km grid spacing. This work incorporates atmosphere-ocean coupling with the K profile parametrization mixed layer ocean model. The study contrasts this simulation with a convection-parametrized model, deriving insights from ERA5 reanalysis. The paper outlines the configuration and performance of both models, noting minor biases in sea surface temperature and precipitation. The convection-permitting model shows improvements in the diurnal cycle and equatorial waves representation. The paper is generally well written, organized and analyzed. I recommend publication after the authors have addressed the comments below.

General comments:

1. The authors emphasized the importance of the air-sea interaction. However, the air-sea coupling is just tested for one single season. I wonder whether the testing is reliable. Does the result depend on the case/season you chose?
2. In this paper, the biases are generally shown in the distribution plots except for Figure 3g. It is better if the comparisons between the two models can be quantitate. I recommend the authors giving the root mean square error of each model compared to the reference dataset for each variable in Figures 4-6 and 9-12.
3. Air temperature and cloud fractions are also important variables for climate analysis. How do the performances for both mean states and variability of these two variables?
4. The writing style leans toward descriptiveness and narrative. While this is not inherently wrong or inappropriate. I believe that the GMD journal also encourages further exploration and digging beyond the mere description of data results. For example, the MC2 SST biases are generally weaker than the MC12 (Figures 3 and 10). In contrast, the wet bias over the ocean seems be stronger in MC2 than MC12 (Figures 4 and 10). How do the changes in resolution impact SST and precipitation?