

General comments:

This study employs an idealized model to investigate the topographic modulation on the layered circulation in the South China Sea. The topic should be of interest to those who focus on the circulation dynamics in marginal sea. Overall, I think the authors have illuminated the key physics within the cross-layer interactions over continental slope. Therefore, I just have some suggestions and recommend a minor revision before it is published.

Specific comments:

1. Considering that the work is based on an idealized model, I think the authors should present the caveats in their manuscript to help the readers make a correct understanding of the linkage between the theoretical findings and observations or realistic simulations.

Technical corrections:

1. Eq. (1): the range of integration within the layer should be explicitly written as $\int_{H_i}^{H_j} dz$.
2. L348: the literature is repeated.