

Interactive comment on “Simulation Improvements of ECHAM5-NEMO3.6 and ECHAM6-NEMO3.6 Coupled Models Compared to MPI-ESM and the Corresponding Physical Mechanisms” by Shu Gui et al.

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Received and published: 2 August 2018

The paper is novel, interesting and creative. The authors tried to reveal the causes of the improvements of the latest GCGM (i.e., ECHAM6-NEMO3.6) in simulating the SST, precipitation, and ocean currents by going beyond simply parameterization schemes, thus the results have great scientific implications. My question is that how to explain the dominant role of the latent heat of evaporation in changing SST when regarding to the OGCM replacement, since our conventional opinion mainly focus on the differences in ocean dynamics and thermodynamical structure when we use discrepant ocean

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models.

Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2018-130>, 2018.

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