

## ***Interactive comment on “The Effects of Ocean Surface Waves on Global Forecast in CFS Modeling System v2.0” by Ruizi Shi et al.***

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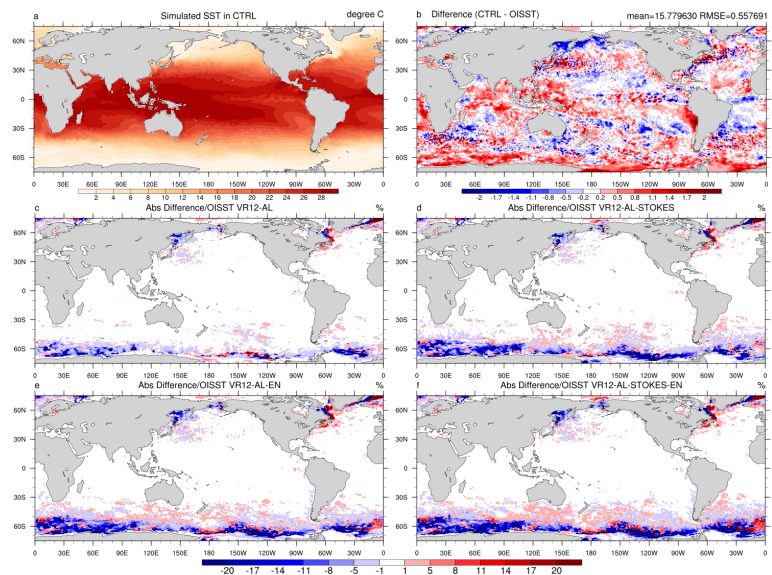
According to comments, we have improved the ocean mixing process related to the Stokes drift by adding Stokes-Coriolis force and entrainment. The preliminary results of SST from a series of 14-day forecasts were shown in Fig. 1&2 and the legends were consistent with Fig. 3 in the article. Compared with the original VR12-AL-ONLY experiment (Fig. 1c&2c), both Stokes-Coriolis force (Fig. 1d&2d) and entrainment (Fig. 1e&2e) can further improve the SST biases, and the combination effects (Fig. 1f&2f) were more obvious. Compared with the results on the 7th day (Fig. 1), on the 14th day (Fig. 2) the improvement was strengthened (blue area), but the increase of bias caused by excessive mixing was also strengthened (red area). Next, we will further discuss the z0-related parameterizations and conduct simulations with a longer time.

C1

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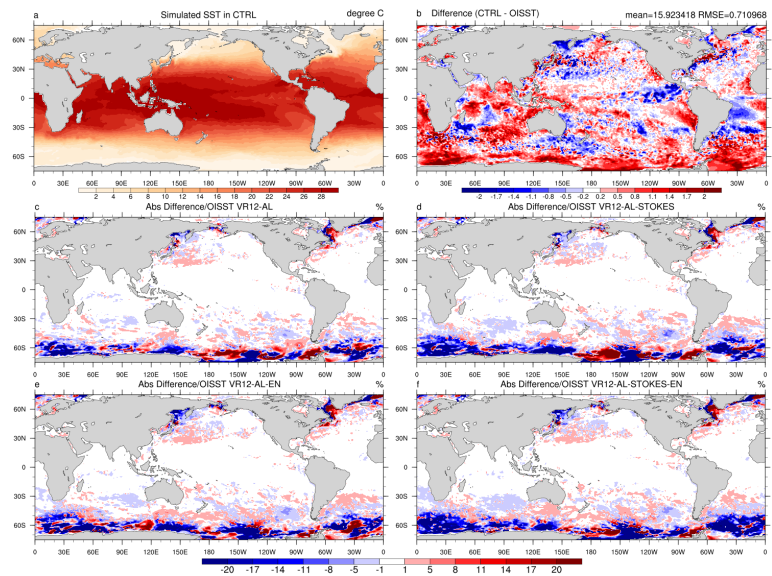
Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2020-327>, 2020.

C2



**Fig. 1.** The daily average SST in CTRL, its bias in CTRL and percentage absolute difference of bias on January 9, 2017 (the 7th day)

C3



**Fig. 2.** The daily average SST in CTRL, its bias in CTRL and percentage absolute difference of bias on January 16, 2017 (the 14th day)

C4