

## Implementation of a high-resolution atmosphere-ocean coupled model with an ensemble Kalman filter

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For the application of an ensemble Kalman filtering (EnKF) to limited-area models for regional numerical weather prediction, treating uncertainties of boundary conditions has been one of the major issues. Although there are some previous studies focusing on effectiveness of lateral boundary uncertainties, few studies investigated in detail the impact of perturbing the lower boundary conditions with an EnKF. In this study, a high-resolution atmosphere-ocean coupled model is implemented with the EnKF, so that the sensitivity of SST perturbations on an EnKF data assimilation cycles is evaluated.

Keywords: data assimilation, ensemble Kalman filter, atmosphere-ocean coupled model