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Oral
(Virtual Talk)
Online bias correction for MOM6, the ocean component of SPEAR, has been implemented in the SPEAR experimental real-time seasonal prediction system at NOAA/GFDL. The current corrections, in the form of ocean tendency adjustment (OTA) are empirically calculated from the climatological data assimilation (DA) increments of the SPEAR ocean DA system since the wide deployment of the Argo network. OTA has shown to greatly reduce the climatological drift of the ocean in the SPEAR seasonal predictions, which in turn provides the forcing and boundary conditions for atmospheric predictions.

Novel machine learning (ML) methods have been explored to further improve OTA by predicting the bias correction terms beyond empirical climatology. Neural networks are trained to predict the variability in the necessary corrections that could minimize ocean drift for predictions across timescales.
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