Hamburg COMMODORE conference



Contribution ID: 20

Type: Talk

Variable-Resolution Ocean Modeling with E3SM and MPAS-Ocean

Tuesday 28 January 2020 11:30 (30 minutes)

The Energy Exascale Earth System Model (E3SM), developed by the US Department of Energy, was first released in 2018, and has completed a suite of DECK/CMIP6 simulations and subsequent publications. The components of E3SM are all variable resolution and include the Model for Prediction Across Scales (MPAS) ocean and sea ice, which are based on unstructured horizontal meshes using Voronoi tessellations. E3SM-version 1 performs well overall with biases typical of other CMIP-class models, although the simulated Atlantic Meridional Overturning Circulation is weaker than many CMIP-class models, and its equilibrium climate sensitivity is high at 5.3K. Here we provide an overview of E3SM progress, results from new regionally-refined simulations, and details of our algorithms and continued development of MPAS-Ocean.

Do you need an official invitation letter?

No

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Track Classification: COMMODORE conference