COMMODORE

Community for the numerical modeling
of the global, regional and coastal ocean

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Global ocean modeling on unstructured meshes with FESOM2

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Many regions of the world ocean require very high horizontal resolution to simulate mesoscale eddy activity due to relatively small Rossby radius. Recently developed large-scale ocean circulation models, formulated on unstructured meshes, such as FESOM2, make it possible to utilize more flexible meshes with variable resolution. By increasing resolution only in energetically active regions, this allows resolving ocean eddies in global setups at a small computational cost. We will report on recent developments of the Finite-volumE Sea ice-Ocean circulation Model, Version 2.0 (FESOM2) and discuss its performance in the global coupled and stand-alone eddy-resolving simulations and regional simulations down to 1 km scale. We will also present the analysis of the model performance with a focus on bottlenecks in parallel scalability.

Do you need an official invitation letter?

No

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