

A conservative and consistent remapping of moisture on the icosahedral mesh

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A novel remapping scheme is developed as a basis of the seamless integration of a multi-scale atmosphere model on the icosahedral mesh. The remapping scheme enables a conservative, consistent, and third-order accurate two-way remapping between coarser and finer icosahedral meshes. A two-dimensional quadratic profile is reconstructed locally. The scheme can be used for the variables defined for the hexagonal/pentagonal cells such as density and moisture.

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