

Interactive comment on “An orthogonal curvilinear terrain-following coordinate for atmospheric models” by Y. Li et al.

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Your response to reviewer #1 comment 5 is important:

"The differences among these experiments are at their slopes of vertical levels and orthogonality of vertical coordinate, and thus the reduction of the errors by the OS coordinate is mainly due to the combined effect of the smoothed vertical levels and the orthogonal grids..."

This is exactly one of the things that the reviewers are concerned about. We would like to know how much of the error reduction is due to the orthogonality and how much is due to the smoothed vertical levels. Previous studies, eg on SLEVE coordinates, have obtained vast error reductions by using smoother vertical levels. How much in

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addition do you gain from making them orthogonal? This is one of the crucial questions to answer with new experiments

Interactive comment on Geosci. Model Dev. Discuss., 6, 5801, 2013.

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