

***Interactive comment on “A hierarchical mesh refinement technique for global 3-D spherical mantle convection modelling” by D. R. Davies et al.***

**Anonymous Referee #1**

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This is an excellent manuscript, presenting some important results on the use of mesh refining techniques in a global, 3-D spherical mantle convection model. The results should be of interest to a broad audience wishing to reduce computational cost of convection simulations through the use of variable mesh resolution throughout the mantle domain. The results are presented clearly and the reference list is current. I suggest publication as is.

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Interactive comment on Geosci. Model Dev. Discuss., 6, 2249, 2013.