

## ***Interactive comment on “Direct numerical simulations of particle-laden density currents with adaptive, discontinuous finite elements” by S. D. Parkinson et al.***

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Received and published: 6 June 2014

Apologies for the confusion. Of course, in finite differences, one grid point = one degree of freedom (per variable), independent of the order of accuracy used, but higher order methods require larger stencils.

The cost of the simulation is dependent upon many factors. The use of a sixth-order scheme will be more expensive than a second-order scheme on the same mesh. However, we are quite happy to concede that other methods may be cheaper. As stated, this models strengths lie in being able to easily handle complex geometries.

We agree that adjusting "traditional FE model" to "fixed, uniform mesh FE model" would  
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make this statement more precise.

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Interactive comment on Geosci. Model Dev. Discuss., 7, 3219, 2014.