Interactive comment on “Element-by-element parallel spectral-element methods for 3-D acoustic-wave-equation-based teleseismic wave modeling” by Shaolin Liu et al.

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Reducing computational cost is a very important issue. The authors construct an high efficiency method named as EBE-SEM, and give the examples to demonstrate the efficiency and the validity. There is no doubt that the authors give a very effective method for teleseismic wavefield modeling and the misfit kernel calculation in 3D, but there are some questions to be requested. 1. Is there a better way to deal with rough boundaries than traditional methods? 2. In theory, when storage is reduced, the data exchange time should be reduced, and it will reduce the computational time greatly in large-scale problems, won’t it?