

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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We greatly appreciate the comment from Prof. Wang. For large scale seismic wave modeling, our method can save nearly 24 times of computer memory compared with conventional SEM. The float point multiply only increase by 11.26%. The discussion of computation costs can be found in Section 4. The computational costs are mainly from the matrix-vector product. In deed, our method may increase the communication cost, but in our numerical tests. the communication time is less than 8% of the total computational time. We do not consider the slightly increased communication affect the efficiency of our method.

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Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2017-38>, 2017.

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