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Interactive comment on "A wavefront orientation method for precise numerical determination of tsunami travel time" *by* I. V. Fine and R. E. Thomson

Anonymous Referee #2

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This paper treats a minor problem from a scientific point of view: it provides a simple algorithm to compute the tsunami travel time through the kinematic wavefront propagation method based on the Huygens' principle that is shown to be more accurate than the one currently used in the commercial software GEOWAVE. The subject is more technical than scientific. Having said that, the paper is well presented and well written. However, I would suggest to put it in the form of a brief communication, rather than a research paper. As far as I understand, the actual paper length is already more or less the one required for the brief communication manuscript type. I have no specific remarks on the paper apart from one concerning the simulations in the Pacific Ocean

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with realistic seafloor bathymetry. In all previous cases, the authors compare their method with the GEOWAVE method with different numbers of neighbouring points, but also with theoretical results, since they use constant-depth basin and the theoretical solution is straightforward. It would be interesting to make a similar comparison even in case of variable-depth basins. In this case as the reference solution one could assume the travel times resulting from numerical tsunami simulation codes. This would make the last section of the paper stronger.

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