Solid Earth Discuss.,
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Solid Earth
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Interactive comment on "A Python framework for efficient use of pre-computed Green's functions in seismological and other physical forward and inverse source problems" *by* S. Heimann et al.

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Dear authors,

We are still waiting for a second review of your paper. In the meantime, I received some comments from Dr. Martin van Driel. He was unable to write a full, detailed review, but I wanted to share the comments he sent me. See below:

From M. van Driel:

- There is a paper about IRIS's syngine service, not just a website, so it should be referenced: Krischer, L., Hutko, A., van Driel, M., Stähler, S., Bahavar, M., Trabant, C.,

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and NissenâĂŘMeyer, T. (2017). OnâĂŘdemand custom broadband synthetic seismograms, Seismol. Res. Lett. 88, no. 4, https://doi.org/10.1785/0220160210.

- P8, L13: 'The program INSTASEIS (Van Driel et al., 2015) is suited to calculate approximative wave solutions for a 3D Earth structure with radial symmetry' > This statement is completely wrong, instaseis (not fortran, hence no capitalization in the name), does not solve the wave equation and is hence also not limited to radial symmetry. We use AxiSEM to compute the databases, which is where the limitation to spherical symmetry comes from, but that is completely independent of instaseis, which could easily include any other database source.

- One of my main concerns when I wrote instaseis was to be accurate enough in space to place receivers anywhere and still get the phase correct so you can apply array methods. Similarly, we wanted to be accurate in the presence of discontinuities. This is in fact a non-trivial interpolation, and we approach it using the spectral element basis which we discus in some length in our paper. The statement on P10 L2 makes me very suspicious that this issue is treated appropriately here.

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