

## ***Interactive comment on “Finite difference modelling to evaluate seismic $P$ wave and shear wave field data” by T. Burschil et al.***

**Anonymous Referee #2**

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This paper is well written and organized. Some points need to be clarified, however, before publishing in my opinion. 1) In the  $P$  wave imaging workflow (Table 1), what is the finite-difference migration? It seems it is a time migration, since there is time-to-depth conversion after. If so, some difference between the field  $P$  wave data image and the first synthetic  $P$  wave image may be caused by the time migration. Have you try depth migration? Please clarify this point. 2) It is a big jump in Figure 11. How to interpret the measured field data and then modify the input model? Do you use travel time tomography to update the model, or simply draw the lines by geological knowledge? It is mysterious to me. 3) Please spell out SOFI in the abstract. 4) section 6.1 could be shorter. Some paragraphs are too general, and not closely related.

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Interactive comment on Solid Earth Discuss., 6, 2169, 2014.

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