

Interactive comment on “Velocity structure and the role of fluids in the West Bohemia Seismic Zone” by C. Alexandrakis et al.

Anonymous Referee #3

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Objectives and originality of the study

In this paper the authors investigate the Novy Kostel seismic zone structure applying the double-difference tomography to the P- and S-wave arrival time related to microearthquake. In particular the authors retrieved the Vp/Vs 3D models and interpret it in term of lithological changes and fluid concentration. The submitted paper is well written and organized. Although not original in a methodology sense, the results are interesting for the studied area.

Data quality and analysis There is no information on data quality and error associated with manual pick. Validity of interpretations and results of work It’s important to show the results of the velocity model S, also in the Appendix. P- and S final velocities models are not showed. In order to validate the final model, I think it’s better to compare

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first the P velocity model with the geological section and then compare them to the V_p/V_s model. It 'well known that the ratio V_p/V_s is controlled by the presence of fluids and their degree of saturation.

Final evaluation

The paper can be accepted for publication after minor modifications.

Detailed Corrections and Comments to text and figures

I suggest to indicate in Figure 2 what is described in the text on page 516 line 5-9 and on page 517 line 1-3 with an arrow or box to help the reader's understanding.

Interactive comment on Solid Earth Discuss., 6, 511, 2014.

SED

6, C550–C551, 2014

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