

Interactive comment on “Simulating stress-dependent fluid flow in a fractured core sample using real-time X-ray CT data” by Tobias Kling et al.

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Dear reviewer,

We found a further error in our manuscript which has to be mentioned and corrected.

Unfortunately, we interpreted the experimental results assuming an incorrect viscosity of the applied fluid so that determined permeabilities (between 10^{-12} and 10^{-13} m²) do not represent actual permeabilities of the core sample which should be between 10^{-14} and 10^{-15} m². Correspondingly, we also assumed the same (wrong) viscosity as a boundary condition for our simulation so that simulated permeabilities also should be significantly lower.

We will revise the simulations and experimental results to fix that problem for the revised manuscript and will reconsider related parts of the discussion. First adjustments indicate that revisions indeed will change the absolute values of simulated and experimental results, however will barely affect their relative behavior so that it will not affect the central conclusions of the paper.

We deeply apologize for this mistake and try to fix it as fast as possible.

With kind regards T. Kling

Interactive comment on Solid Earth Discuss., doi:10.5194/se-2016-41, 2016.

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Discussion paper

