

Interactive comment on “Quantitative experimental monitoring of molecular diffusion in clay with positron emission tomography” by Johannes Kulenkampff et al.

Anonymous Referee #2

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The paper "quantitative experimental monitoring...with PET" presents an interesting and relevant analytical advancement and hence should be published. The English is written clearly and the structure is reasonable. However, the focus of the study apparently is on the analytical part but explanations of the results presented could be improved. I was not able to understand the difference of Fig. 5 and Fig. 7. In case of clays one would suspect the planes to correspond to bedding planes. Therefore, it is difficult to understand why the planes are horizontal in Fig. 5 and vertical in Fig. 7. The reviewer suggests to add the following informations to the Figs: bedding plane clay, inflow of tracer fluid, gas bubble (couldn't see it). Also an explanation of the occurrence of the different planes in Fig. 5 would be interesting. Were these planes rich in swelling

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clay minerals? I realized that more explanation is planned in a follow up study but I think that more information about the results has to be presented. Also I feel that the CT technique need not be disregarded in the introduction. It would rather be important to stress advantages and disadvantages of both methods.

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