

Reply to comments by anonymous referee #1:

Explanation on replies:

Text	<i>Comment from referee</i>
Text	Comment from authors
Text	Original manuscript text
Text	Proposed revised/new manuscript text
Text	To be deleted text of the original manuscript

Line numbers refer to the initially submitted version of the manuscript.

This exciting manuscript applies hydraulic tomography to delineate fractures in the geologic media. I would recommend a minor revision and publishing this manuscript. The followings are my suggestions for minor revisions.

1. *Line 46. The manuscript should have reviewed the work by Yeh and Liu (2002), Illman et al, 2008; and Zha et al. (2016), and Dong et al. (2020), which applied hydraulic tomography to delineate fractures in geological media.*

We will include the suggested references in the revised version of the manuscript.

Line 46-52:

“The response is recorded at different adjacent boreholes at different depth intervals. In most cases, the pressure signals or tracer arrival curves are evaluated by a continuous hydraulic conductivity distribution based on an equivalent porous media (EPM) concept (Yeh and Liu, 2000, Illman et al., 2008, Illman et al., 2009, Sharmeen et al., 2012, Zha et al., 2015, Zha et al., 2016, Zhao et al., 2017, Dong et al., 2019, Zhao et al., 2019, Kittilä et al., 2020, Tiedeman & Barrash, 2020, Poduri et al., 2021, Zhao et al., 2021, Jiang et al., 2022, Liu et al., 2022). Thereby, detected high conductivity zones correspond with the locations of fractures or faults.”

2. *Line 120. You should have applied HT to equivalent porous media to find the likely connected fractures first as Dong et al. (2022) did. Afterward, generate DFN to fine-tune your HT results.*

An EPM was evaluated for the investigated region based on travel time tomography (Kittilä et al., 2020), however, the results are only 2D and not sufficient to estimate likely connected fractures. We will add your suggestion to the conclusion to consider that for further research.

Line 287-289:

“A further option is utilizing continuous inversion results, such as continuous hydraulic conductivity transmissivity distributions, or geophysical measurements for highlighting a priori regions with a higher probability for the insertion of fractures or to define zones that are likely connected by fractures to reduce the number of necessary inversion iterations (Dong et al., 2019).”

Dong, Y., Fu, Y., Yeh, T.-C. J., Wang, Y.-L., Zha, Y., Wang, L., & Hao, Y. (2019). Equivalence of discrete fracture network and porous media models by hydraulic tomography. Water Resources Research, 55. <https://doi.org/10.1029/2018WR024290>