

Hydrol. Earth Syst. Sci. Discuss., referee comment RC1
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Comment on hess-2022-209

Anonymous Referee #1

Referee comment on "Characterization of the highly fractured zone at the Grimsel Test Site based on hydraulic tomography" by Lisa Maria Ringel et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2022-209-RC1>, 2022

Characterization of the highly fractured zone at the Grimsel test site

based on hydraulic tomography: Lisa Maria Ringel, Mohammadreza Jalali, and Peter Bayer.

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.

- 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.
- 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.

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>