

Interactive comment on “Soil water migration in the unsaturated zone of semi-arid region in China from isotope evidence” by Yonggang Yang and Bojie Fu

E. Oerter

erikjoerter@gmail.com

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The literature search is not current enough and misses some important recent papers:

L44: This is completely wrong. Read and include the references of Gaj et al., 2017; Oerter et al., 2014, Meißner et al., 2014; Lin and Horita, 2016.

L45-46: Need to include references to support this claim. I suggest the authors read and include citations from Sprenger et al. 2016.

L115: This needs some justification. There must be some discussion (somewhere in the paper, but probably not in the methods section) of the many papers that cite problems with the vacuum extraction process and variability in its results, see Araguas-

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Araguas et al., 1995; Orlowski et al., 2016a; Orlowski et al., 2016b. Details on the vacuum distillation methods need to be included.

References that need to be included:

Araguas-Araguas, L., Rozanski, K., Gonfiantini, R., Louvat, D., 1995. Isotope effects accompanying vacuum extraction of soil water for stable isotope analyses. *J Hydrol*, 168: 159-171.

Gaj, M. et al., 2017. Mineral mediated isotope fractionation of soil water. *Rapid Communications in Mass Spectrometry*, 31(3): 269-280.

Lin, Y., Horita, J., 2016. An experimental study on isotope fractionation in a mesoporous silica-water system with implications for vadose-zone hydrology. *Geochimica et Cosmochimica Acta*, 184: 257-271.

Meißner, M., Köhler, M., Schwendenmann, L., Hölscher, D., Dyckmans, J., 2014. Soil water uptake by trees using water stable isotopes ($\delta^{2}\text{H}$ and $\delta^{18}\text{O}$) – a method test regarding soil moisture, texture and carbonate. *Plant and Soil*, 376(1-2): 327-335.

Oerter, E. et al., 2014. Oxygen isotope fractionation effects in soil water via interaction with cations (Mg, Ca, K, Na) adsorbed to phyllosilicate clay minerals. *J Hydrol*, 515: 1-9.

Orlowski, N., Breuer, L., McDonnell, J.J., 2016a. Critical issues with cryogenic extraction of soil water for stable isotope analysis. *Ecohydrology*, 9: 3-10.

Orlowski, N., Pratt, D.L., McDonnell, J.J., 2016b. Intercomparison of soil pore water extraction methods for stable isotope analysis. *Hydrol Process*, 30(19): 3434-3449.

Sprenger, M., Leistert, H., Gimbel, K., Weiler, M., 2016. Illuminating hydrological processes at the soil - vegetation - atmosphere interface with water stable isotopes. *Reviews of Geophysics*.

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