Hydrology and Earth System Sciences Discussions

Hydrol. Earth Syst. Sci. Discuss., community comment CC1
https://doi.org/10.5194/hess-2021-333-CC1, 2021

Comment on hess-2021-333

James Knighton

Community comment on "Revealing a significant isotopic offset between plant water and its sources using a global meta-analysis" by Javier de la Casa et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2021-333-CC1, 2021

There is a typo in table 1, ID 46. The number of sites was 6, not 8. Issues with the original repository necessitated that the raw data be relocated here: https://www.hydroshare.org/resource/1bf8b01413e841439c762a9ec291b932/

I would also point out that the purpose of Knighton et al (2020) was to show that isotopic lags induced by water storage inside of vegetation was a plausible explanation for the isotopic offsets between soil and stem xylem water in this forest. When a plant reservior was included in our model, the calibration yielded much stronger agreement. In this ecosystem particularly outside of the peak growing season, I expect that same-day soil and xylem water isotopic compositions will often deviate considerably because of this effect. Because of this, I would caution against making plant source water inferences from the raw observations without using a process-based model.