Comment on hess-2021-48
Anonymous Referee #2

Referee comment on "Climatic expression of rainfall on soil moisture dynamics in drylands" by Isaac Kipkemoi et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2021-48-RC2, 2021

This research is interesting, but at the same time this was a very mature research area. It does not make much sense to continue to use this HYDRUS model for research on HAD, for there are lots of related studies.

1. There are some errors in Figure 2, generally speaking, the roots can absorb water approximately below the root layer with a capillary water holding height depth, it seems that the authors do not understand the basic principles of ecological hydrology in arid areas.

2. The author did not consider the runoff confluence process during precipitation.

3. The results of using Penman’s formula to calculate ET have not been verified by measured plot data, which may lead to the converse results.