Clarify on CC1
John Ding

I’d like to make use of this extended discussion period to clarify the one question I have of some co-authors’ previous statement, the latter part of which reads “This [LSTM] ..... (i.e., is it not a one-step-ahead forecast model).” (CC1, paragraph 2).

Among the autoregressive (AR) class of time series models for prediction, a simplest one being a one-step-ahead extrapolation/forecast model. This is a second-order one, written as AR(2, 2, -1), i.e. $y_{t+1} = 2y_{t} - y_{t-1}$.

The drawback of the AR(2) is to always overshoot by one time step the timing of peaks and troughs of an observed hydrograph (Mizukami et al., 2019, SC1 therein; Ding, 2018).

Isn’t AR(2, 2, -1) a special case of the LSTM network models?

References
