



A bias correction scheme in an ensemble-based land data assimilation system

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This study comprises three experiments using an ensemble-based land data assimilation method that takes into account a bias correction scheme.

A perturbed ensemble of model forecasts can produce a systematic bias in the background predictions due to nonlinear hydrologic processes. Biases may persist in the deeper soil moisture layers even after the assimilation update. The mean perturbation bias is partly corrected by running a deterministic realization of the model in parallel with the perturbed ensembles.