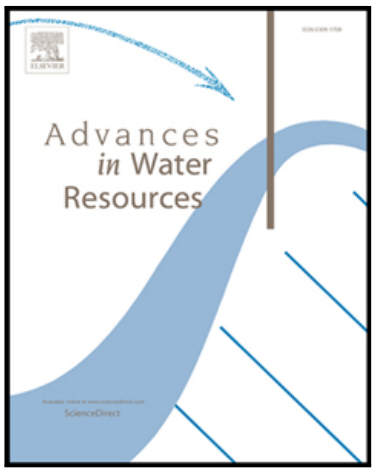

On the assimilation set-up of ASCAT soil moisture data for improving streamflow catchment simulation

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Highlights

- ASCAT soil moisture data were assimilated into a conceptual and a physically-based model.
- Optimal EnKF assimilation set-ups improved streamflow simulation in Mediterranean catchments.
- Improvements varied from 6 to 45% from the validation run.
- Linear re-scaling method outperformed variance matching and cumulative distribution function.
- Largest improvements were achieved assuming observation errors within 1-6%.