



Global evaluation of the SURFEX land surface model-reanalysis driven by ERA-Interim.

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Land surface processes are important for climate and/or forecast studies . These processes are simulated using land surface models (LSM), which are evaluated in offline mode driven by near-surface observation-based atmospheric forcing data. In this study, three different versions of the SURFEX land surface model are driven by the 3-hourly ERA-Interim near-surface atmospheric forcing data covering the period 1979-2012 at 0.5x0.5 degree resolution. The ERA-Interim monthly precipitation have been corrected using the GPCC monthly observation. The vegetation map is provided by the ECOCLIMAP2 database. Simulations of surface fluxes, soil moisture, snow pack, terrestrial water storage, surface albedo and river discharge are evaluated against in-situ and satellite observations. Finally, using the operational numerical weather prediction model of Météo-France, the impacts of these SURFEX simulations used as improved land-surface initial conditions for short-range forecasts have also been verified.