

# **NCC, THE NEW 50 YEAR FORCING DATASET FOR LAND-SURFACE MODELS**

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As most variables describing the state of the surface are not directly observable, we have to use land-surface models in order to reconstruct an estimate of the evolution of these variables. These large scale land-surface models have been developed for the coupling to the atmosphere but in the last few years, they have shown their potentials and thus been applied also in an off-line mode. In order to be used in this mode a high quality forcing data with a sub-diurnal sampling is required. Building these data sets is a major challenge but an essential step for estimating the land-surface water budget.

In order to study the inter-annual variability of surface conditions over the last 50 years, we have built such a forcing data set, named NCC (NCEP corrected by CRU). NCC is based on a reanalysis project and a number of independent in-situ observations.

In this presentation, we will show the corrections which need to be applied to the reanalysis and how they impact the simulated continental water balance by our land-surface model ORCHIDEE. The results are validated with the observed river discharge.