

SEMINAIRE CNRM-GAME
N° 2014_20*mardi 25 novembre 2014 à 14h***THE ROLE OF CONVECTION IN THE WATER CYCLE OF THE
WEST AFRICAN MONSOON****par Cathryn BIRCH (University of Leeds)****en salle de conférences Joël Noilhan**Abstract :

The representation of tropical convection in models remains one of the major challenges in atmospheric science and is a key uncertainty in future climate predictions. In recent years we have gained the ability to run convection-permitting simulations over relatively large domains for periods of time that allow a statistical (rather than case study) analysis of convective behaviour. This talk will provide an overview of several pieces of work that utilise 40-day continental-scale convection-permitting simulations run over summertime West Africa as part of the UK 'Cascade' consortium. The simulations are able to reproduce important mechanisms for the initiation of convection and can be used to demonstrate the influence of convection on the water cycle and the larger-scale circulation. It is shown that improvements to the diurnal cycle of convection and convective triggering should reduce the precipitation dry bias that commonly occurs in global models in the Sahel region of West Africa.