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A mechanism of the WAM onset

R. Ramel, **H. Gallée**, C. Messager LGGE, CNRS, gallee@lgge.obs.ujf-grenoble.fr

A simulation of the regional climate model MAR is performed over West Africa. The grid size is 40 km and the model is forced by the european reanalyses ERA-15 for 1992. The simulation allows to analyse the mechanisms responsible for the onset of the West African monsoon. In particular the forcing of the saharan heat low is analyzed by emphasizing the role of the absorbed solar radiation at the surface. It is found that the saharan heat low influences significantly the behaviour of the monsoon layer, inducing a weakening of the precipitation during the period just before the onset.