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Regional climate simulations over Africa and India using the new

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We present the new regional climate simulations over Africa and India made with the latest version of the Regional Climate Model RegCM4 developed in ICTP of Trieste (Giorgi et al, 2011). We completed two simulations at 50 km of resolution and the ERA- Interim boundary conditions were used from 1990 up to 2009. With this new version of the model it is possible to use different convection scheme over the ocean and over land, this combination has been used for the Africa domain, where we used Grell scheme over land and MIT-Emanuel over ocean, to be able to have a better representation of the ITCZ for its position and strength. We analyzed two seasons: April-May-June-July-August-September (A-S) and October-November-December-January-February (O-F). The rainy season over West Africa (Guinea coast and Sahel) shows a bigger improvement when the double scheme is used. For the India we used Grell scheme everywhere but with different convection parameters over land and over ocean to reduce the precipitation bias over the Indian Ocean. The model shows a slightly cold bias for the African domain for all the two seasons. The precipitation spatial patters and intensity is reasonably represented for all the seasons with a wet bias over Sahel and Guinea coast and a dry bias over the Congo basin during A-S. The monsoon precipitation over the Indian continent is reasonably represented and a higher bias is observed over the coastline during A-S . The model shows a slightly cold bias for the JJA season always over the continent.