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Convective parameterization tests in simulations by RegCM - Comparison to CLWRF

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Based on some experience from RegCM use in rather lower resolution of 45km and very high resolution of 10km in Central Europe domain we moved to simulations for Africa continent to join the CORDEX activity. A set of simulations for Africa CORDEX domain has been performed using RegCM3 and RegCM4 with convective parameterization tests using Grell, Emanuel, and Kuo scheme. Short experiments without any further significant tuning show the best performance of RegCM3 using Grell parameterization, other two suffering from more significant bias either in temperature or precipitation. Full ERA-interim period simulations using selected settings are validated in more details. Within locally funded project the implementation of very high resolution downscaling technique has started. In addition to main effort of parameterization development for ALARO-Climate by CHMI tests of nonhydrostatic CLWRF version are prepared to assess the possible effects of non-hydrostatic processes for regional climate downscaling.