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Regional climate downscaling over Africa: comparisons between two reanalyses

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CORDEX (COordinated Regional climate Downscaling Experiment) is an initiative of the World Climate Research Project (WCRP) of the UN. The RM3 regional climate model (GISS/Columbia University) is used to downscale climate evolution represented by two reanalysis data sets over Africa as part of CORDEX. The RM3 is run on a 0.44^{o} (~50 km) grid over Africa from January 1989 and for at least one year, driven by ECMWF interim reanalysis (ERA-I) gridded at 0.75^{o} latitude/longitude. Forcing from a second reanalysis data set (NCEP reanalysis gridded at 2.5^{o} latitude/longitude) will drive a parallel simulation. The poster will evaluate and compare simulation results during 1989 for the two downscaling experiments. Time series of regional precipitation rates and temperatures will be analyzed and monthly and/or seasonal mean latitude/longitude distributions of precipitation and temperature for the two simulations will be compared to each other and to independent validation from CRU and CMAP. The analysis will discuss the realism of both regional model simulations, their differences and what spatial detail is achieved by dynamic downscaling. The onset of the West African monsoon is of special interest to the analysis.