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Investigation of Saharan Cyclogenesis with the LM

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ABSTRACT: In this study, the properties of Saharan cyclones which form in the lee of the Atlas Mountains – commonly known as Atlas-Lee Cyclones, Sharav cyclones or khamsin depressions – are investigated using the non hydrostatic numerical weather prediction model *Lokalmodell* (LM) of the German Weather Service. Although an important part of the Northwest-African climate, not very much studies were carried out on the origin and impact of Saharan cyclones. In order to identify steering processes which lead to the generation of intense Saharan cyclones, some simulations with artificial initial data have been carried out as well as case studies with varying boundary conditions, different parameterizations of convection and orography.