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The Algiers Flash Flood November 2001: A frontal cyclogenesis in the vicinity of the Atlas Mountains or an Atlas Lee Cyclogenesis?

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ABSTRACT: On November 11, 2001, a disastrous flash flood killed about 600 people in the suburb Bab-el Oued in Algiers. A cyclone at the coast of Algeria was responsible for the severe rainfall – 99 mm/3h – which caused the flood. Using the *Lokalmodell* of the DWD, the influence of different forcing factors, grid spacings and forecast times of the model predictions on the cyclone development was investigated. It turned out that most of the water vapour and energy, which feeded the cyclone, was inherent to an approaching extra tropical front. Upper air mountain overflow amplified the cyclogenesis, thus, at least a part of the development was intensified by Mountain Lee effects. Another finding was that the rainfall prediction could be improved substantially with the application of a very simple statistical post processing of the model data, which takes care of the partly non-deterministic behaviour of a mesoscale meteorological model.