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Torrential rain forecast using the mesoscale model WRF-ARW

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Abstract

Annotation. Using a mesoscale model WRF-ARW we made a torrential rain episode forecast on January 5-6, 2014 in the province of Khuzestan (Iran) with an advance time of 24, 48 and 72 hours. To find an optimal scheme of forecast we made numerical experiments with six sets of physical parameterizations. During the numerical experiments we were able to identify that the model showed the most sensitivity to cloudiness parameterization. The rating of a forecast made on an independent material showed that the used set of parameterizations of the model WRF-ARW allows to give satisfactory forecasts of heavy rainfall with an advance time of 24 hours.

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Keywords

Mesoscale model, Parameterization of physical processes, Weather forecast