



Saharan dust transport by Mediterranean cyclones causing dust rain in Istanbul

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North Africa is the largest dust source in the world and Mediterranean cyclones sometimes transport dust from Sahara to Turkey that cause dust rain in winters over Turkey. This usually happens when the low pressure system forms in a broader area, exceeding the African coast southwards, and the surface wind at the edge of the cold front and warm sector is strong. This study focuses on the meteorological analysis of two Mediterranean low pressure systems resulting dust rain in Istanbul on 11.02.2010 and 08.03.2010. WRF-ARW mesoscale model is used for the numerical simulation of the cases, verified with the observations. Satellite images from EUMETSAT's Meteosat Second Generation are also evaluated. Trajectory analysis make a good agreement with the observations.