



The blocking air circulation and the intense local pollution episodes

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Many studies have shown that blocking circulation leads to a stagnation of weather aspects into the blocked region. Researches made on blocking circulation climatology displayed that the blocking, in Northern Hemisphere, in Euro-Atlantic region, presents an enhanced activity over 60-70N, the blocking frequencies being higher during the winter. The presence of blocking over a determined region influences many meteorological variables and air quality. Such weather conditions reduce precipitation and wind speed and consequently, the Particulate Matter (PM) concentration in atmosphere increases. The aim of this paper is to analyze the pollution with Particulate Matters (PM) that affect the quality of the air and human health and air circulation. We investigated for a period of four years (2004-2007), the correlation between the blocking events and the PM10 concentrations in Bucharest urban area, from Romania. The study has shown that the local intense pollution episodes were correlated to a blocking circulation over Romania.