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Heat waves and weather types persistency over Italy

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This work is focused on long lasting heat waves over Italy in relation to the persistency of weather types, and in relation to the large scale indices, such as the North Atlantic Oscillation (NAO) and the Mediterranean Oscillation (MO). The identification of the events and their analysis is based on the last thirty years of climatological data over Italy.

From the analysis of air temperature observations a series of summer heat waves that had an adverse impact on human health, i.e. with a large number of hospitalizations, has been produced. The heat waves events have been analysed in relation to the persistency of the weather types and their recurrence has been examined in relation to the large scale dynamical configurations. The weather types considered in this study have been elaborated in the framework of the COST 733 action which permitted to identify eight different weather types and to build their daily occurrence over the central Mediterranean region.