



The influence of persistence of atmospheric circulation on temperature anomalies revisited

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In this study we focus on the effect of persistence of circulation types on the occurrence of high and low temperatures in summer and winter, respectively, at several stations in Central Europe in the second half of the 20th century. The key question is to compare the subjective Hess-Brezowsky catalogue with its "objectivized" version, because serious concern has arisen on the credibility of the mid-1980s enhancement of persistence of the Hess-Brezowsky circulation types.

For a direct comparison we have chosen an objective (automated) circulation catalogue that is based on the definition of Hess-Brezowsky types, and that also reproduces the minimum 3-day duration of circulation types. In this catalogue there is no significant upward trend in the persistence of types.

We identify "hot" and "cold" circulation types and examine if there is a trend within these types, either in their frequency or temperature severity. We then determine whether the persistence of circulation types plays a role in these trends, e.g. whether the warming of "hot" types is caused rather by their longer duration or by the overall rise of their extremeness.

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