



## **Stratification of climatic elements in the Czech Republic using atmospheric circulation patterns and within-type climatic trends**

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This work is concerned with the climatic properties of major circulation types in the area of Czech Republic and within-type climatic trends in the period 1961-1998. Atmospheric circulation is described by the German (Hess-Brezowsky) and Czech-Slovak (Brádka's) subjective catalogues of synoptic types. Daily data of eleven climatic elements from 21 stations are stratified using two cyclonicity-defined major types (cyclonic and anticyclonic) and four directional groups of types (independent of the cyclonicity assessment). Both catalogues proved useful in discerning the typical seasonal climatological features of all the main circulation types (e.g. the overall dryness and winter coldness of anticyclonic patterns). Within-type seasonal trends of surface climatic elements were compared to the observed seasonal trends. In most cases, the trends within the circulation-stratified data follow or even overestimate the real climatic trends (warming in winter, spring, and summer, whereas cooling in autumn connected with increasing cloudiness and humidity). However, under several major types, the trends are opposite to the observed changes. The research is conducted within the COST733 Action. The Czech participation in it is supported by the Ministry of Education, Youth, and Sports of the Czech Republic, contract OC115.