



## **The Time Variations of the Relationships between Circulation Modes and Climatic Element in the Czech Republic**

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Modes of circulation variability are identified in monthly mean 500 hPa heights for all seasons by rotated principal component analysis. Modes are defined on the data over the whole Northern Hemisphere (north of 20°N). Only four modes (NAO, EA, EU1 and EU2) significantly influence climatic elements in the Czech Republic. The relationships between the modes and 11 climatic elements at 21 Czech stations are examined for period 1961-1998. The relationships differ among seasons, modes, and elements. Time variations are investigated by running correlations with the 15-year window. The time changes of the running correlations are evaluated by statistical tests. At the majority of stations, the correlations with circulation modes vary considerably in time for most of the climatic elements. Time variations can be explained by changes in the intensity and position of the circulation modes.