



## **Extreme high temperature events in the Czech Republic in the period 1961-2010: frequency, intensity and climatological characteristics.**

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Recently, a lot of attention has been paid to future climate changes, possible shifts in weather extremity and resulting increased risk in many sectors. However, before one can make any conclusions about future changes, it is necessary to study the occurrence of weather extremes in present and recent past. Therefore our research is aimed at analysis of extreme high temperature events in the Czech Republic in the period of 1961-2010, their spatio-temporal extent and evaluation of extremity. The extreme air temperature events are detected using the Weather Extremity Index (WEI) combining return periods and the extent of affected area. The generalized extreme value (GEV) parameters are used to estimate return periods of daily observations. Individual extreme events are studied in terms of duration, areal extent, localization, distribution of intensity and climatological characteristics. Further, the temporal evolution of frequency of occurrence and changes in high temperature events characteristics during the period of 1961-2010 is analyzed. The work has been supported by the grant P209/11/1990 funded by the Czech Science Foundation.