

Spatial analysis of extreme wind gusts in the area of the Czech Republic since 1961

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In past years, data quality control and homogenization has been carried out for series of daily wind speed data since 1961. The obtained series were further analyzed, in both temporal and spatial aspects. Recently, a series of annual extreme wind gust speeds were also obtained (digitized, passed QC and homogenization) for such analysis. In this work, we process the extreme wind gust data and evaluate how it changes, in both time and space in the area of the Czech Republic. For the evaluation, generalized extreme value distribution (GEV) and Pareto distribution are applied. The changes found are put into context with the average wind speed results. In the last years of the series, when more stations have been available, analysis of the influence of the number of stations in the areal averages and other characteristics are studied.