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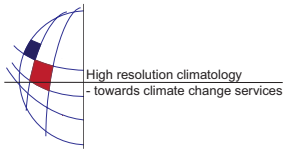

Data quality control for daily and subdaily series of various meteorological elements in the area of the Czech Republic

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In this work, data quality control using several methods was carried out and the results were compared: (i) by applying limits derived from interquartile ranges (applied either to individual series, i.e. absolutely or, better, to difference series between candidate and reference series, i.e. relatively), (ii) by analyzing difference series between candidate and neighbouring stations, and (iii) by comparing tested series values with "expected" values – technical series created by means of statistical methods for spatial data (e.g. krigging).
Reference series (method i) or neighbouring stations (method ii) were selected either by means of correlations or distances (in case of temperature the results are different, opposite to e.g. precipitation). Correlation coefficients were applied either on normal series or on the series of the first differences.
The method and comparison was applied on meteorological elements in the Czech Republic (air temperature, precipitation, relative humidity, sunshine duration and wind speed) in daily and subdaily scale (3 observations hours per day). Regarding wind speed, beside daily averages and daily maximum we analyzed also three hour values and made a comparison between results form one-element approach and joint analysis with wind direction.