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Analysis of temperature trends in Northern Serbia

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An analysis of air temperature trends in Northern Serbia for the annual and seasonal time series is performed for two periods: 1949–2013 and 1979–2013. Three data sets of surface air temperatures: monthly mean temperatures, monthly maximum temperatures, and monthly minimum temperatures are analyzed at 9 stations that have altitudes varying between 75 m and 102 m. Monthly mean temperatures are obtained as the average of the daily mean temperatures, while monthly maximum (minimum) temperatures are the maximum (minimum) values of daily temperatures in corresponding month.

Positive trends were found in 29 out of 30 time series, and the negative trend was found only in winter during the period 1979–2013. Applying the Mann-Kendall test, significant positive trends were found in 15 series; 7 in the period 1949–2013 and 8 in the period 1979–2013; and no significant trend was found in 15 series. Significant positive trends are dominated during the year, spring, and summer, where it was found in 14 out of 18 cases. Significant positive trends were found 7, 5, and 3 times in mean, maximum and minimum temperatures, respectively. It was found that the positive trends are dominated in Northern Serbia.