



## **Is there a warm bias in the late winter and early spring Uppsala air temperature 1722-1750?**

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The climate of the Baltic Sea region has experienced prolonged cold and warm spells over the past century, even though anthropogenic influence is thought to have been large. Instrumental time series commencing prior to the 20<sup>th</sup> century is important to study to understand the natural variability on regional scales. In the city of Uppsala, Sweden, air temperature has been measured since 1722 making this time series one of the longest in the Baltic Sea region. The temperature series has been homogenized but a few issues remain to be solved. In late winter and early spring the temperature record display unusual warmth over the years 1722–1750. The warmth is comparable to today's warm period. Due to the placing of the thermometer at that time, the general conclusion has been that the Uppsala temperature record should be regarded as somewhat unreliable prior to 1750.

By using temperature sensitive records we have re-estimated the Uppsala air temperature record for late winter and early spring over the period 1722–1750. We have also investigated if there is some truth or not to the warm period as suggested by the early Uppsala record. The results clearly show a warm bias in the temperature record. Although the year-to-year variability is great, the long term difference indicates a warm bias of 0.5 degrees Celsius or more. Despite this, there probably was a warm period in the 1720s and 1730s but not as pronounced.