



## **Rapid changes of air temperature and their statistical and synoptical analysis in cold period 1951-2006.**

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There has been registered significant warming in Northern Europe last decades. Also in Estonia the air temperature has risen, especially in cold period of year.

The daily mean temperature shows rising trend and specially a significant rise of daily mean air temperature (1.8...2.3°C) during cold period 1951-2006.

Rapid changes of daily mean air temperature has shown negative correlation with warming. But significant decrease of rapid daily mean air temperature changes is seen in March.

A strong correlation between different types of winter seasons and rapid changes in daily mean air temperatures have detected. During cold winter seasons have been registered up to 20 and during warm winter seasons about 4 rapid changes between daily mean air temperatures.

The main factor in the formation of climatic conditions is atmospheric circulation. Also rapidly daily mean air temperature changes happen due to atmospheric circulation.

From all changes are approximately equally divided between mixed (41%) and zonal (37%) group. From mixed group dominates north-westerly weather type with 29% in all rapid daily mean air temperature changes and westerly type from zonal group causes 22% rapid changes.