



The relationship between atmospheric circulation and air temperature at different isobaric levels over Europe

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The main goal of the study is to estimate the relation between the directions of air advection and the temperature at particular isobaric levels. Such analysis allows to interpret the influence of the airflow as well as active surface on thermal conditions at different vertical resolutions.

The area of interest covers Europe with a particular focus even on its central part. Gridded data with spatial resolution of 2.5x2.5 from the NCEP/NCAR Reanalysis were used as the basic research material. Geopotential height data for 1000, 850, 700, 500 hPa from 12 UTC for entire period were the basis for all calculations. Some other supplementary data and materials such as synoptic maps and results of the aerological soundings/profiles from the selected stations have been used. All analyses have been performed for the period of 50 years (1961-2010).