



Temperature waves in the rocks: wavelet analysis of the boreholes' temperature distributions

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The report focuses on the results of wavelet analysis of temperature distributions in the boreholes. Geothermal investigations were carried out in more than 500 long-standing boreholes of the East European platform, Volga-Urals anteklise, Moscow syneklise, North Caucasus and other regions. The most common feature of the experimental data is the presence of small amplitude periodic temperature waves overlapping boreholes' temperature distributions. The oscillation periods are from 100 to 600 m in length and as a rule spread through the entire thickness of the rocks penetrated by the boreholes. Assumptions were made about the oscillations' origin. Also wavelet analysis makes it easy to reveal small scale peculiarities in the temperature distributions and relate them to the certain dynamics processes in the rocks.