**Modeling of the vertical velocity of the acoustic disturbance of the atmosphere initiated by a movement of the lower boundary**

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The problem of generation and propagation of one-dimensional acoustic wave initiated by a source at the lower boundary of the atmosphere with a stratification parameter (atmospheric scale height) depending on the vertical coordinate H=H(z) is formulated as an initial-boundary value problem for the Klein-Gordon equation in the half-space *z > 0, t > 0*. The Klein-Gordon equation is obtained from an one-dimensional system of equations by the hydrothermodynamics, which is classically used to pose similar problems.