**On the problem of modeling of the 3D evolution of atmospheric disturbance initiated by an impulse at the ground**

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The problem of propagation of three-dimensional atmospheric disturbance initiated by a source at the lower boundary of the atmosphere is formulated as an initial-boundary value problem for the three-dimensional Klein-Gordon equation. Such a problem follows from the corresponding formulation of the initial-boundary value problem for the 3D hydrodynamics system, which is classically used to describe the dynamics of atmospheric gas. The modeling based on the analytical and asymptotic solutions to the described mathematical problems. These three-dimensional solutions are constructed on the basis of already proven (E.Smirnova, Math. Notes, 2023; S.Dobrokhotov and E.Smirnova, RJMP, 2024) solutions of similar initial-boundary value problems but for the one-dimensional Klein-Gordon equation.