

# Global existence and asymptotic behavior for a generalized Boussinesq type equation without dissipation

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## Abstract

In this paper, we study the Cauchy problem for a generalized Boussinesq type equation in  $\mathbb{R}^n$ . We establish a dispersive estimate for the linear group associated with the generalized Boussinesq type equation. As applications, the global existence, decay and scattering of solutions are established for small initial data.

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