# Stratified medium wave dynamics: effects on nonlinearity, compressibility, viscosity, Earth's rotation

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*In this paper the problems of modeling the dynamics of the wave of stratified medium, taking into account the nonlinearity, compressibility, viscosity, and the rotation of the Earth are considered. The limits of applicability of the linear theory describing the wave dynamics of stratified medium are estimated. It is shown that in the wavelength range that is typical for the real ocean, the study of the far fields internal gravity waves dynamics can use the linear approximation.*

***Keywords:*** *internal gravity waves, stratified medium, far fields, nonlinearity, viscosity, compressibility, Earth's rotation*

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