



## **Strongly nonlinear steepening of long interfacial waves**

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The process of nonlinear deformation of an interfacial wave in a two-layer fluid is studied within the framework of the fully nonlinear dispersiveless model in the Boussinesq approximation. The evolution equation with exact nonlinear law is derived with the help of Riemann invariants. The sinusoidal wave steepening is studied for different ratio of the layers depths. Depending on the layers thicknesses the quadratic or cubic nonlinear term plays the major role. The spectral evolution of the steepening wave is studied as well.