



Long-wave shear instability of fluid interfaces

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The earlier oceanographic works largely focused on the case of very large density differences between the two fluids separated by an interface. The aim of this investigation is to extend the shear-flow analysis to more wide range of density ratios for the log profile of the “wind”. Long wave asymptotic leads to the analytic determination of the stability characteristics of the flow. The present work is originally motivated by a laboratory experiment and can be useful for an astrophysical problem.