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Retardation of the field in a weakly compressible fluid ILDOO KIM,
None — We discuss the retardation of the velocity field in a weakly two-dimensional
fluid channel, in specific the flowing soap film channel. It is previously known that in
this system the velocity field is strongly correlated to the thickness field and that the
thickness field propagate at the Marangoni wave speed. We produce simple vortex
streets in flowing soap films to show that the vortex structure changes depending on
the speed of the mean flow u and the speed of Marangoni wave v_M. The spacing ratio
of the vortex street decreases as $u/v_M \to 1$, and the dependence is characterized by
the factor $1/(1 + u/v_M)$.

Ildoo Kim
None

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