

Abstract Submitted
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Bouncing droplets on a vibrated liquid/gaz interface STEPHANE DORBOLO, DENIS TERWAGNE, TRISTAN GILET, NICOLAS VANDEWALLE, ULg, GRASP TEAM — The coalescence of a droplet onto a planar liquid/air interface can be delayed by vertically vibrating the bath. Mechanisms that make the droplet bounce on the interface are investigated experimentally, by observing vertical trajectories of the droplet and interference fringes due to the air film between the droplet and the bath. A finite lifetime is generally observed. A dynamical model based on surface deformations and viscous dissipations is proposed. It is able to reproduce the main features of droplet bouncing, and states when coalescence can be significantly delayed or not.

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