

Abstract Submitted
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Breaking beer bottles with cavitation SUNNY JUNG, Department of Mathematics, MIT, JAKE FONTANA, PETER PALFFY-MUHORAY, Liquid Crystal Institute, Kent State University, MICHAEL SHELLEY, Courant Institute, New York University — Hitting the top of a beer bottle, nearly full of water, with an open hand can cause the bottle to break, with the bottom separating from upper section. We have studied this phenomenon using a high-speed camera, and observed the formation, coalescence and collapse of bubbles. The breaking of glass is due to cavitation, typically occurring near the bottom edge. We make numerical estimates of the relevant physical parameters, and compare these with experimental observations.

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