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Jet drops from bursting bubbles: the importance of bubble shape in producing droplets JAMES BIRD, PETER WALLS, LOUIS HENAUX, Boston University — When wave-entrained bubbles rupture at the air-sea interface, the collapsing cavity produces a central jet that can eject droplets into the atmosphere. Previous experiments and theory predict that the production of these jet drops will be limited by either viscous or gravitational effects. Yet, little is understood about the limits of production when both gravitational and viscous effects are significant. Here, we conduct systematic experiments to explore the conditions necessary for jet drops to form. We propose that the role of gravity is most important before rupture, and carry out simulations that demonstrate the importance of the equilibrium bubble shape in the production of jet drops.

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