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Air-sea exchange from bubble-induced jetting: How viscous forces suppress droplet production from small bubbles[1] ELENA FLYNN, PETER WALLS, JAMES BIRD, Boston Univ — When a bubble ruptures in the ocean, it frequently produces a jet that releases aerosols into the atmosphere. The number of jet drops ejected is important because droplets may contain sea salt and other cloud condensation nuclei. It is generally accepted that the smallest bubbles produce the largest number of jet drops. However, if the bubble is sufficiently small, viscosity prevents droplet production altogether. Here we investigate the number of jet drops produced by small bubbles. Using a combination of high-speed microscopy, similitude, and numerical simulations, we quantify the extent that viscous forces inhibit this droplet production.

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