

Abstract Submitted
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Bubble streams rising beneath an inclined surface¹ JAMES BIRD, FREDERIK BRASZ, DAYOUNG KIM, MARK MENESSES, Boston University, JESSE BELDEN, Naval Undersea Warfare Center — Bubbles released beneath a submerged inclined surface can tumble along the wall as they rise, dragging the surrounding fluid with them. This effect has recently regained attention as a method to mitigate biofouling in marine environment, such as a ship hull. It appears that the efficacy of this approach may be related to the velocity of the rising bubbles and the extent that they spread laterally as they rise. Yet, it is unclear how bubble stream rise velocity and lateral migration depend on bubble size, flow rate, and inclination angle. Here we perform systematic experiments to quantify these relationships for both individual bubble trajectories and ensemble average statistics.

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