

Abstract Submitted  
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**The dynamics of jets produced by bursting bubbles** STEPHANE POPINET, Institut d'Alembert, CNRS UPMC, Paris, LUC DEIKE, Department of Mechanical and Aerospace Engineering, Princeton Environmental Institute, Princeton University, STPHANE ZALESKI, THOMAS SEON, Institut d'Alembert, CNRS UPMC, Paris — Sea spray is the main source of aerosols above the ocean. One of the pathways for sea spray production is through bubble bursting and ejecting myriads of droplets. We present a detailed description of the velocity of jets formed by bubble bursting, obtained through extensive comparison between experimental results and numerical simulations for a wide range of physical parameters. We discuss the importance of the shape of the cavity on the jet velocity and the regime of parameters for which drop ejection is observed. We present a phenomenological formula that predicts the jet velocity for the full range of parameters. The results are then discussed in light of both their fundamental applications in the understanding of the phenomena and their quantitative implications in air–sea interactions.

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