

Abstract Submitted  
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**The physics of bubble bursting followed by jet ejection**<sup>1</sup> JOSE M. LOPEZ-HERRERA, ALFONSO M. GANAN-CALVO, Universidad de Sevilla, ETSI, 41092 Sevilla, Spain — Under the light of recent research on this phenomenon, and performing exhaustive simulations, dimensional and similarity analysis, the collapse of a superficial bubble and the subsequent ejection of a microjet are studied here in great detail. The different models proposed, their description of the physics involved, their degree of innovation and their predictive abilities comparing with experiments are put into perspective. In particular, the conditions under which the phenomenon can be described around an elusive temporal singularity, and the resulting self-similar flow configuration are carefully analyzed. Using high resolution numerical simulation techniques of free-surface flows, this study demonstrates the existence of said singularity and the value of the critical parameter for which it appears, showing the natural change in the time scaling law of the self-similar flow sufficiently close to the singularity. This self-similar flow shows a rich topology that is discussed in this work.

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