

Abstract Submitted
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An aerodynamic mechanism for the splashing-up of the ejecta sheet in high-velocity impacts GILOU AGBAGLAH, CHRISTOPHE JOSSERAND, Institut d'Alembert CNRS-UPMC, ANDRÉA PROSPERETTI¹, Johns Hopkins University, STÉPHANE ZALESKI, Institut d'Alembert CNRS-UPMC, INSTITUT D'ALEMBERT CNRS-UPMC TEAM, DEPARTMENT OF MECHANICAL ENGINEERING, JOHNS HOPKINS UNIVERSITY COLLABORATION² — In this work, the deformation of a 2D liquid jet by aerodynamic stresses has been investigated by numerical simulations with the flow solver Gerris and a dynamic model was proposed to predict the shape of the jet. This is similar to the initial stages of the formation of the corolla upon impact of a drop on a solid. A self-similar behavior is observed in the simulations and the jet profile is in good agreement with the model prediction in exponential of the square root of time.

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