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Model of drop impact on hydrophobic surface. CHRISTOPHE JOSSERAND, STEPHANE ZALESKI, Institut JLR D'Alembert, CNRS/UPMC, ROBERT SCHROLL, WENDY ZHANG, University of Chicago — We study drop impact on a hydrophobic surface for high Reynolds numbers, using numerical simulations and thin film analysis. We particularly investigate the role of the pressure field for short time and the velocity profiles in the region near the surface. A thin film model is deduced for the large time dynamics, inspired by recent experimental results and numerical computations. Finally the numerical retraction dynamics of the drop is compared with this simplified model.

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