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**Inclined impact of drops** PAULA GARCíA-GEIJO, GUILLAUME RIBOUX, JOSÉ MANUEL GORDILLO, Universidad de Sevilla — Here we extend the theory for the case of normal impact of drops[1] to predict the time-varying flow field and the thickness of the liquid film created when a spherical drop of a low viscosity fluid, like water or ethanol, spreads over a smooth dry surface at arbitrary values of the angle formed between the drop impact direction and the substrate. Our theoretical results accurately predict the time evolving asymmetric shape of the border of the thin liquid film extending over the substrate during the initial instants of the drop spreading process. In addition, the particularization of the ordinary differential equations governing the unsteady flow when the rim velocity vanishes provides an algebraic equation for the asymmetric final shapes of the liquid stains remaining after the impact, valid for low values of the inclination angle. For larger values of the inclination angle, the final shape of the drop can be approximated by an ellipse whose major and minor semiaxes can also be calculated by making use of the present theory. The predicted final shapes agree with the observed remaining stains, excluding the fact that a liquid rivulet develops from the bottom part of the drop.

[1]Gordillo et al. *J. Fluid Mech.* **866**, 298 (2019).

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