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Experiments on the onset of motion of sliding drops SIMEON VOELKEL, JONAS LANDGRAF, KAI HUANG, University of Bayreuth — Liquid drops sitting on or running down an inclined plane are ubiquitous in our daily lives. Their sliding can be triggered by tilting the surface at a fixed drop volume or by increasing the drop volume at a fixed inclination angle. A recent numerical investigation [1] revealed that the two triggering protocols lead to different depinning processes of the drops. Here, we address this phenomenon experimentally with a conventional inkjet printhead, which provides a volume resolution of 22 picoliters, high repeatability [2], as well as the flexibility of following the drop's development by selecting different nozzles. Based on an analysis of both top view and side view images, we explore the evolution of the drop shape with time in the vicinity of the depinning transition and compare our results with numerical simulations.
[1] Semprebon and Brinkmann, Soft Matter, 10, 3325 (2014)
[2] Völkel and Huang, EPJ Web of Conferences, 140, 09035 (2017)

Simeon Voelkel
University of Bayreuth

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