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Drop interactions on a viscous film MAXIME COSTALONGA, MICHIEL HACK, JACCO SNOEIJER, Physics of Fluids, University of Twente, The Netherlands — Every morning at their breakfast, cereal eaters can see that floating objects on a liquid bath attracts to form clusters: this is the so-called *Cheerios* effect. It has been shown recently that droplets on elastic substrates also interact, either attracting or repelling each other depending on the local slope of the substrate where they lie. Here we present an experiment extending these results to the interaction of droplets deposited on a thin viscous film. By measuring independently the velocity of the droplets and the surface topography of the film, we identify non-monotonic interactions that are due to waves appearing on the film. The drag force exerted onto the droplets is also investigated. We show that the thickness of the film below the drop is intrinsically selected by the velocity of the drop, by a mechanism similar to Bretherton's bubble rising in a confining tube.

Maxime Costalonga
Physics of Fluids, University of Twente, The Netherlands

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