Electronic Supplementary Information

Airflows generated by an impacting drop

Irmgard Bischofberger\textsuperscript{a}, * Bahni Ray\textsuperscript{b}, Jeffrey F. Morris\textsuperscript{c,d}, Taehun Lee\textsuperscript{b} and Sidney R. Nagel\textsuperscript{a}

The Electronic Supplementary Information consists of two movies showing the airflows generated by a liquid drop impacting a dry substrate.

Movie 1:
Impact of a 1.25 mm radius water-ethanol drop at Re\textsubscript{air} = 612 on a smooth substrate. The liquid viscosity is $\nu\textsubscript{liq} = 2.4 \text{ mm}^2/\text{s}$, the impact velocity is $u_0 = 3.8 \text{ m/s}$ and the pressure is $P = 101 \text{ kPa}$.

Movie 2:
Impact of a 1.4 mm radius silicone oil drop at Re\textsubscript{air} = 685 on a rough substrate with root-mean-square roughness $R_{rms} \approx 1 \mu\text{m}$. The liquid viscosity is $\nu\textsubscript{liq} = 20 \text{ mm}^2/\text{s}$, the impact velocity is $u_0 = 3.8 \text{ m/s}$ and the pressure is $P = 101 \text{ kPa}$.

\textsuperscript{a} The James Franck and Enrico Fermi Institutes and The Department of Physics, The University of Chicago, Chicago, Illinois 60637, USA; \textsuperscript{b} Department of Mechanical Engineering, City College of City University of New York, New York, 10031, USA; \textsuperscript{c} Department of Chemical Engineering, City College of City University of New York, New York, 10031, USA; \textsuperscript{d} Benjamin Levich Institute, City College of New York, New York, NY 10031, USA. E-mail: irmgard.bischofberger@gmail.com