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How wettability affects sand cratering after drop impact RIANNE DE JONG, SONG-CHUAN ZHAO, DEVARAJ VAN DER MEER, Physics of Fluid group, University of Twente — We experimentally investigate droplet impact on a bed of grains using high-speed profilometry and imaging during the impact itself and obtain a 3D profile scan of the formed crater afterwards. Our interest lies in the interplay between the droplet and the granular substrate as both intruder and target can deform and mix. We try to unravel the relevant physics for various packing densities of the grains ϕ_0 and impact velocities U_0 , for example by distinguishing the energy that is transferred to the sand from that going into droplet deformation. Moreover, in this talk we will compare craters from impact on hydrophilic and hydrophobic grains.

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