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Impact of liquid droplets on granular media GILES DELON, DENIS TERWAGNE, STEPHANE DORBOLO, NICOLAS VANDEWALLE, HERVE CAPS, GRASP, Physics department B5, Université de Liège, Belgium — The crater formation due to the impact of a water droplet onto a granular bed has been experimentally investigated. Three parameters have been tuned: the impact velocity, the size of the droplet and the size of the grains. The shape of the crater depends on the Weber number at the moment the droplet starts to impact the bed. From the dynamical point of view, the spreading and the receding of the liquid during the impact have been carefully analyzed using image analysis of high speed video recordings. The different observed regimes are characterized by the balance between the impregnation time of the granular bed by the water contained in the droplet and the capillary time responsible for the receding of the drop.

Giles Delon
GRASP, Physics department B5, Université de Liège, Belgium

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