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Erosion of granular bed by a normal jet SARAH BADR, GEORGES GAUTHIER, PHILIPPE GONDRET, Laboratoire FAST, Université Paris Sud — We study the local erosion of a horizontal dry granular bed induced by an impinging vertical jet in both laminar and turbulent regimes. The critical velocity of erosion depends on the nature of the bed and on its distance to the jet nozzle. We show that the erosion threshold is governed by a Shields number of inertial origin based on a local velocity according to self-similar jet models. Above threshold, the crater shape is investigated with a laser profilometer for increasing Shields number. Three different crater morphologies are reported and we focus on the processes that made the crater switching from one to another morphology.

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