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Dry quick sand DETLEF LOHSE, RAYMOND BERGMANN, DEVARAJ VAN DER MEER, REMCO RAUHE, University of Twente — Sand supports weight. Force chains are known to play a prominent role therein. We considerably weaken the force chain structure by letting air flow through very fine sand. Even when the air is turned off and the bed has settled, the prepared sand does not support weight: Balls sink into the sand up to five diameters deep. We call this state of sand dry quick sand. The final depth of the ball scales linearly with its mass and above a threshold mass, a sand jet is formed which shoots sand straight and violently into the air.
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