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Collisions between an incident particle and a vibrated granular packing

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During aeolian transport of sand, transported particles are constantly colliding with the granular bed. These collisions can be so violent that bed particles are ejected into motion, a process known as "splash". Previous studies that experimentally investigated the splash only considered the collision with a static bed. However, for sufficiently intense transport, particles collide with the bed in so short succession that the bed does no longer fully recover between successive collisions. For this reason, we experimentally investigated the collision between an incident particle and a vibrated granular packing for different vibration frequencies. I will present first preliminary results obtained from these experiments.