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Surface Deformation in a Liquid Environment Resulting from Single Particle-Wall Collisions A. RUIZ-ANGULO, M.L. HUNT — For dry systems (gas-particle) prior studies have investigated the effects of inelasticity on particle rebound and deformation. In wet systems (liquid-particle) the viscous forces can complicate the collision process. For elastic conditions, a range of particle Stokes number where lubrication forces are non-negligible has been previously found. The present work presents experiments on particle-wall collisions where small deformations are allowed, attempting to find the limits of viscous effects by comparing dry and wet systems. Under dry and wet conditions (varying the fluid viscosity), a particle strikes a specimen attached to a long rod. The results show a significant decrease on the coefficient of restitution for both systems and a slight decrease in deformation depth for wet systems.

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