

Abstract Submitted
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Axisymmetric Granular Collapse: a Transient 3D flow Test of Viscoplasticity RICH KERSWELL, LAURENT LACAZE, University of Bristol
— The collapse of a stationary cylinder of granular material onto a horizontal plan is a deceptively simple experiment rich in flow behaviour. Using 3-dimensional soft particle simulations, we reproduce the observed scaling laws for the maximum final runout and height of the deposit as a function of the initial aspect ratio. The flow simulations of this unsteady, largely axisymmetric flow are then used to confront a recently-introduced visco-plastic continuum theory (Jop, Forterre & Pouliquen, *Nature*, **441**,727,2006) which has seen some success modelling steady, unidirectional flows.

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