Abstract Submitted
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The Propagation of the Gravity Current of Viscoplastic Fluid[1] YE
LIU, UBC — We are studying the spreading of the viscoplastic fluid of Bingham
type over a horizontal plane, using both mathematical derivation and numerical
experiments. We are interested in its final shape and whether theory and numerics
correspond well. There are two theories for comparison: lubrication theory from
asymptotics, and slipline theory from plasticity. The numerical method we are using
is based on the volume-of-fluid method, with both regularization and Augmented
Lagrangian for the constitutive law of Bingham type fluid.

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