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**Stretching Hollow Jets in Potential Flow** JOHN CURTIS, AWE Aldermaston RG74PR UK, FRANK SMITH, ALEXANDER WHITE, Department of Mathematics, University College London, Gower Street, London UK — Why model hollow elongating jets? As well as offering some interesting new mathematics, the dynamics of such jets are of potential interest in the consideration of methods of creating circular penetration cuts into targets, in understanding better the coherency of solid shaped charge jets, and possibly as a means of engendering cracking in targets over a wider target area than can be accomplished with a solid shaped charge jet. This paper presents and solves numerically the boundary-value problem of a stretching hollow jet in potential flow. The behaviour of the hollow cylindrical jet is analysed as a function of the initial inner and outer radii, the rate of stretching, and the initial radial velocity component associated with the inner radius. It is shown that under different initial conditions the hollow can close up or expand. The evolution of the associated pressure field is determined.

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