

Abstract Submitted
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Equation of state modeling improvements in the low pressure regime¹ JOHN CARPENTER, Sandia National Laboratories — In an equation of state (EOS) the high pressure regime typically receives much attention so as to ensure good agreement with data, such as shock experiments. However, the low pressure regime is equally important. The liquid-vapor critical region as well as the tensile region both play important roles in a range of situations, from wire explosions to spalling. These two areas can be difficult to model in a wide-range EOS due to unsatisfactory models, unphysical states, or numerical issues. Recent improvements to models and tabulation techniques are presented which aim at reducing these difficulties so as to provide robust and highly accurate EOS tables for simulation codes.

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