

Abstract Submitted  
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**Liquid breakup under one-dimensional strain** ANDREW LLOYD,  
JOHN BORG, Marquette University — The fragmentation characteristics of liquid systems at atmospheric pressure has been investigated experimentally and compared to hydrodynamic calculations as well as theoretical predictions. The geometry is a one-dimensional nylon flat plate impacting a flat plate liquid system at a velocity of approximately 0.3 km/s. The experiments were carried out at the Marquette gas gun facility. Hydrocodes were used to investigate early time shock evolution and material deformation. Witness cards were used to assess the drop distributions. The variations in strain rate and viscosity are investigated in order to assess the effects of these variations on final drop size distribution. The drop distributions are compared theoretical models.

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