

Abstract Submitted  
for the SHOCK07 Meeting of  
The American Physical Society

**Hopkinson Bar Studies of a PBX Simulant** DANIEL DRODGE,  
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bridge — A Split Hopkinson Pressure Bar system was equipped with an environ-  
mental chamber for high and low temperature studies of a HTPB/sugar propellant  
simulant. Experiments were carried out, at a strain rate of  $\sim 1600\text{s}^{-1}$ , to char-  
acterise the material response above and below the glass transition temperature.  
Other techniques were deployed, including high-speed photography with Digital  
Image Cross-Correlation analysis for flow visualisation, and a line-laser occlusion  
method, to determine the dynamic Poisson's ratio. This paper outlines the current  
state of research and details the important observations to date.

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Date submitted: 21 Feb 2007

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