

Abstract Submitted  
for the SHOCK11 Meeting of  
The American Physical Society

**Scaled Long Rod Penetration Experiments: Tungsten - RHA**

WILLIAM PROUD, Institute of Shock Physics, Imperial College London — Scaled, reverse ballistic, long-rod experiments were performed at an impact velocity in the range of  $\sim 700$  m s<sup>-1</sup>. The targets were tungsten alloy rods and the projectiles either 3 or 6 mm thick rolled homogeneous armour (RHA) plates. The plate was inclined at  $30^\circ$  to the direction of travel and the interaction was recorded using high-speed photography, strain gauges and laser velocimetry. The pitch of the rod was varied in steps of  $3^\circ$  over a total range of  $15^\circ$ . In this range the rod deformation changed dramatically the bending process moved from a flexing of the tip away from the plate, to a marked motion into the surface. Cross comparison of the diagnostic outputs reveals the time windows for these process and also the varying sensitivity of the measurement system to that process. Post-impact recovery was also performed.

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Date submitted: 23 Feb 2011

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