

Abstract Submitted  
for the SHOCK07 Meeting of  
The American Physical Society

**Analysis of Cold Curve Forms for High-Pressure Physics** JOHN CARPENTER, Sandia National Laboratories, IGOR LOMONOSOV, Institute of Problems of Chemical Physics RAS — An extensive collection of cold curve forms is analyzed using aluminum as a representative material. The cold pressure curves are compared with theoretical calculations up to 100 fold compressions. Furthermore, the effect of the curves on the Al Hugoniot at pressures of up to 100 Mbar is compared with a sampling of the available experimental data. An optimal cold curve form for equation of state applications is developed which describes the correct behavior near normal density and also in the asymptotic compression limit.

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Date submitted: 20 Feb 2007

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