

Abstract Submitted  
for the MAR09 Meeting of  
The American Physical Society

**Specific Heat Spectroscopy of Simple Chain Models** JONATHAN R. BROWN, JOHN D. MCCOY, New Mexico Institute of Mining and Technology, DOUGLAS ADOLF, Sandia National Laboratories, BRIAN BORCHERS, New Mexico Institute of Mining and Technology — Molecular dynamics simulations were run on bead-spring polymer models. Small amplitude temperature variations were imposed, and energy response was monitored. The real and imaginary components of the frequency dependent specific heat were extracted. A low frequency peak is seen to develop at high packing fractions. The non-Debye parameter  $\beta$  is seen to decrease as the glass transition is approached. Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract No. DE-AC04-94AL85000.

Jonathan R. Brown  
New Mexico Institute of Mining and Technology

Date submitted: 07 Dec 2008

Electronic form version 1.4