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**Dynamic Response of PBX-9501 through the HMX Beta-Delta Phase Transition** BRAD CLEMENTS, ERIC MAS, JEEYEON PLOHR, AX-INTE IONITA, FRANK ADDESSIO, Los Alamos National Laboratory — The Gibbs free energy of the beta and delta phases of HMX are constructed from zero pressure heat capacity data, specific volume measurements, numerical simulations, and diamond anvil cell experiments. The free energies are then provided as input into our dynamic phase transition model developed for heterogeneous materials undergoing dynamically driven phase. This model, which uses the Method of Cells analysis to treat the HMX- polymer binder composite, is used to study dynamically loaded PBX-9501 as the HMX transforms from the beta to the delta phase.

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