Nuclear Pasta: Topology and Defects

ANDRE DA SILVA SCHNEIDER, Caltech, CHARLES HOROWITZ, DON BERRY, MATT CAPLAN, CHRISTIAN BRIGGS, Indiana University — A layer of complex non-uniform phases of matter known as nuclear pasta is expected to exist at the base of the crust of neutron stars. Using large scale molecular dynamics we study the topology of some pasta shapes, the formation of defects and how these may affect properties of neutron star crusts.