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Nucleation and cluster formation in low-density nucleonic matter: A mechanism for ternary fission SARA WUENSCHEL, HUA ZHENG, KRIS HAGEL, Texas A&M University Cyclotron Institute, BRAD MEYER, Clemson University, MARINA BARBUI, Texas A&M University Cyclotron Institute, E.J. KIM, Chonbuk National University, GERD ROPKE, University of Rostock, J.B. NATOWITZ, Texas A&M University Cyclotron Institute — Ternary fission yields from the reaction of 241Pu(nth,f) are studied in the context of nucleation moderated equilibrium. The temperature, density, proton fraction and fission time required to fit the experimental data will be discussed. This model provides natural explanations of some known problematic features of ternary fragment yield distributions. In addition, the systematic behavior of this model across several fissioning nuclei will be presented.

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