

Abstract Submitted
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Microscopic description of fission-fragment properties¹ WALID YOUNES, Lawrence Livermore Natl Lab — The development of a microscopic theory of fission remains one of the greatest challenges in nuclear physics. At the same time, recent advances in theoretical tools and computational power are bringing the goal of a predictive microscopic theory of fission within reach. In this talk, I will discuss the quantitative definition of scission, and the identification of scission configurations within the framework of Hartree-Fock-Bogoliubov (HFB) formalism with the Gogny effective interaction. I will present fission-fragment properties (shapes, kinetic and excitation energies) for low-energy fission of ^{240}Pu , obtained using static HFB calculations and discuss the prospects for future work within a time-dependent treatment of fission.

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