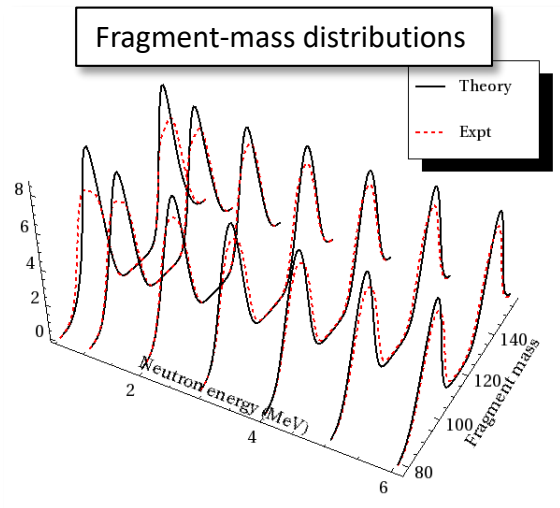
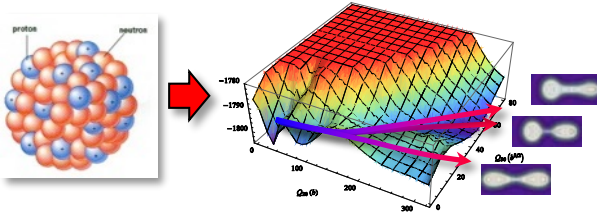


A Microscopic Theory of Fission



Research Overview

Develop a comprehensive and predictive theory of fission starting from protons, neutrons, and an effective interaction between them



Potential Collaborations

- Calculation of fission dynamics
 - non-adiabatic effects during fission
 - the emission of scission neutrons
 - how long does fission take?
- Cross-section calculations
 - level-densities and strength functions
 - fully microscopic approach
- New research direction: uncertainty quantification in high-precision cross section measurements

Previous Student Research

- Phenomenological fission models (M. Kelley, summer student, 2013)
- Calculation of excited states in nuclei (J. Brown, E. Matthews, NSSC, 2016)
- Calculation of level densities (T. Laplace, UCB Ph.D. student, 2015-)

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