

# PROMPT MUON-INDUCED FISSION: A PROBE FOR NUCLEAR FRICTION IN LARGE-AMPLITUDE COLLECTIVE MOTION<sup>1</sup>

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Excited muonic atoms in the actinide region may induce prompt fission by inverse internal conversion, i.e. the excitation energy of the muonic atom is transferred to the nucleus. The time-dependent Dirac equation is solved for the muonic spinor wave function in the Coulomb field of the fissioning nucleus on a three-dimensional lattice. It is demonstrated that the muon attachment probability to the light fission fragment is a measure of the nuclear energy dissipation between the outer fission barrier and the scission point.

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