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Estimation of fission from proton-induced uranium-238 using the Langevin method

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RAON aims to produce rare isotope beams through proton-induced fission of uranium-238. In this study, we utilize the Langevin method to predict the mass distribution by plotting trajectories based on the potential surface of compound nuclei, integrating the Liquid Drop Model (LDM) and the Shell model (SM). To enhance the shell effect at high excitation energy, we employ a multi-chance fission (MCF) approach. Our predictions provide valuable insights and bridge the gaps in experimental data, contributing to our understanding of isotope production.

Primary authors: Mr SONG, Chang-hoon (Pusan National University); SHIN, Ik Jae (RISP/IBS); Mr TAKAGI, Shinya (Kindai University, Japan); ARITOMO, Yoshihiro (Kindai University, Japan); KIM, Youngman (Institute for Basic Science); LEE, Chang-Hwan (Pusan National University)

Presenter: Mr SONG, Chang-hoon (Pusan National University)

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