

Abstract Submitted
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Short timescale behavior of colliding heavy nuclei at intermediate energies¹ SYLVIE HUDAN, ROMUALDO DESOUZA, Dept. of Chemistry, Indiana Univ./IUCF, AKIRA ONO, Tohoku University — Mid-peripheral collisions of two heavy-ions at intermediate energy are used to study the short-time scale behavior of colliding nuclei. The characteristics of clusters emitted by the excited projectile-like fragment (PLF*) formed in such collisions allow the characterization of the system at relatively early times. In particular, alpha particles emitted from the PLF* exhibit a strong preference for emission towards the target-like fragment. The interplay of the initial deformation of the PLF* caused by the reaction, Coulomb proximity, and the rotation of the PLF* can result in the observed anisotropic angular distribution. A description of the collisions in the framework of antisymmetrized molecular dynamics calculations will be shown.

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Sylvie Hudan
Dept. of Chemistry, Indiana Univ./IUCF

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