
STRUCTURAL EFFECTS THROUGH NUCLEAR CHARGE RADIUS IN MASS ASYMMETRIC COLLISIONS

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The nuclear reaction dynamics critically depends on various entrance channel conditions; therefore, this contribution presents the structural effects through nuclear charge radius on the multifragmentation and nuclear stopping for mass asymmetric reactions over the entire collision geometry using isospin-dependent quantum molecular dynamics (IQMD) model [1]. We perform our calculations for four different nuclear charge radii parameterizations [2]. Our analysis shows that the role of increase in radius is more pronounced in mass asymmetric collisions compared to symmetric collisions. Moreover, the percentage change in radius is different for different nuclei and therefore we explicitly study the influence of radius on the contribution of projectile and target nuclei in the collision dynamics.

REFERENCES

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