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Alpha-clustering effect in relativistic heavy-ion collisions by AMPT model

Summary

Initial geometrical distribution and fluctuation can affect the collective expansion in relativistic heavy-ion collisions. This effect may be more in small collision system (such as C+C) than in large one (Pb+Pb). And it was considered that some light nuclei maybe made of α -clusters, such as three- α s in Carbon and four- α s in Oxygen. These exotic nuclear structure also maybe detected by final state undergoing the expansion. This talk will present the collision system dependence of collective flow by using AMPT model and discussion about effect on flow from α -clustered nuclear structure, which sheds light on system scan on experiment to detect exotic nuclear structure and small system physics.

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