

Coalescence as the origin of nuclear clusters

Tuesday 19 May 2020 11:00 (1 hour)

Measurements of the production of light nuclei in relativistic heavy-ion collisions present us with an apparent puzzle: While the momentum spectra of these nuclei indicate a low “kinetic freeze-out” temperature coupled with strong collective flow, their yields reflect a much higher “chemical freeze-out” temperature, consistent with the quark-gluon plasma hadronization temperature. How can these fragile nuclei “survive” the rescattering in the hadronic phase, cooling down in the process and picking up additional collective flow, without getting destroyed and depleted? I will explain how the coalescence model reconciles these observations and how recent kinetic simulations of the process support this model.

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