

## **Pre-clustering near the QCD critical point: nuclear correlations and light-nuclei production**

*Friday, November 13, 2020 10:30 AM (30 minutes)*

I will discuss some consequences of the proposed modification of the nuclear force due to the QCD critical end point (CEP). A simple model for the internucleon potential close to the CEP suggests that attraction among nucleons is likely to dominate over repulsion. The net effect would result in sizable nuclear correlations, and the possible formation of pre-clusters of nucleons. In this scenario one can expect an eventual overproduction of light nuclei compared to thermal expectations. I will describe how certain light-nuclei yield ratios, in particular those involving Helium 4, can be used to test these effects in heavy-ion collisions, and the presence of the CEP.

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**Session Classification:** Session 10: Theoretical ideas and experimental searches of the critical point (NOTE! Early starting time)

**Track Classification:** Theoretical ideas and experimental searches of the critical point