Contribution ID: **261** Type: **Oral**

High order fluctuations of conserved charges in the continuum limit

Tuesday 5 September 2023 14:50 (20 minutes)

Sixth and higher order fluctuations of the baryon number are linked to signals of criticality in heavy ion collisions. The grand canonical result for these can be obtained from lattice simulations. The extrapolation to the continuum limit is essential for phenomenologically relevant results. In fact, higher order coefficients of the Taylor expansion of the QCD free energy appear to be more sensitive to discretization effects than lower orders. We meet the challenge in a modest volume using the new 4HEX fermion action and calculate the sixth order cumulants in a continuum extrapolation.

Category

Theory

Collaboration (if applicable)

Authors: BORSANYI, Szabolcs Istvan; FODOR, Zoltan; GUENTHER, Jana N. (University of Wuppertal); PAROTTO, Paolo; PASZTOR, Attila (Eötvös University); Dr WONG, Chik Him

Presenter: BORSANYI, Szabolcs Istvan

Session Classification: QCD at finite T and density

Track Classification: QCD at finite density and temperature