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## Critical point particle number fluctuations from molecular dynamics

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We study fluctuations of particle number in the presence of critical point by utilizing molecular dynamics simulations of a classical Lennard-Jones fluid in a periodic box. The numerical solution of the  $N$ -body problem naturally incorporates all the relevant effects like physics of the correlation length, exact conservation laws, and finite size effects, allowing us to study the fluctuation signatures of the critical point in a dynamical setup. We find that large fluctuations associated with the critical point are observed when measurements are performed in the coordinate subspace, but, in the absence of collective flow and expansion, are essentially washed out when momentum cuts are imposed instead. We put our findings in the context of event-by-event fluctuations in heavy-ion collisions.

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