

Pion screening mass at finite density

Exploring the QCD phase diagram in the finite density region suffers from the well-known issue of the sign problem. One way to avoid this issue is by expanding the observables in a Taylor series in the chemical potential. We use this approach for the calculation of observables such as screening correlators and screening masses at the finite chemical potential. We will show our calculation of the screening mass of the pion at finite temperatures and chemical potential by expanding the screening mass in a Taylor series to obtain the second derivative of the screening mass w.r.t. the chemical potential. We used (2+1) HISQ action for our analysis.

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