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Applying the Worldvolume Hybrid Monte Carlo method to the (1+2)-dim Hubbard model

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The Worldvolume Hybrid Monte Carlo (WV-HMC) method [arXiv:2012.08468] is a low-cost algorithm for solving the sign and the ergodicity problems simultaneously. We apply the WV-HMC method to the (1+2)-dim Hubbard model, which can be regarded as a prototype of QCD at finite density. We investigate the computational scaling and compare the results of observables with those obtained by a non-thimble method using the ALF code.

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