

# 2022 Meeting on Lattice Parton Physics from Large Momentum Effective Theory (LaMET2022)



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## Lattice calculation of transverse momentum dependent wave function by large-momentum effective theory

*Saturday, December 3, 2022 10:15 AM (25 minutes)*

We present a state-of-the-art lattice QCD calculation of transverse momentum dependent wave function (TMDWF) of pion in large-momentum effective theory. The calculation is performed at clover fermion action ensembles with lattice spacing  $a=0.12\text{fm}$  generated by MILC Collaboration with and CLS ensembles with lattice spacing  $a=0.098\text{fm}$ . On each of the two ensembles we calculated three momentum up to 3.01 and 3.16 GeV. With the one-loop soft function and CS kernel, we extract the light cone TMDWF. Our results show agreement with the phenomenological result.

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**Session Classification:** Session I