The 38th International Symposium on Lattice Field Theory

LATTICE 21

JULY 26-30 2021, ZOOM/GATHER@MIT

Contribution ID: **546** Type: **Oral presentation**

Accessing scattering amplitudes using quantum computers

Monday 26 July 2021 22:30 (15 minutes)

Future quantum computers may serve as a tool to access non-perturbative real-time correlation functions. In this talk, we discuss the prospects of using these to study Compton scattering for arbitrary kinematics. In particular, the need to restrict the size of the spacetime in quantum computers prohibits a naive determination of such amplitudes. However, we present a practical solution to this challenge that may allow for future determinations of deeply virtual Compton scattering amplitudes, as well as many other reactions that are presently outside the scope of standard lattice QCD calculations.

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Session Classification: Algorithms (including Machine Learning, Quantum Computing, Tensor Networks)

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