Contribution ID: **252** Type: **Talk**

$\gamma^* N \to \pi N$ on Lattice

Monday 29 July 2024 14:35 (20 minutes)

In this talk, I will report on the lattice QCD calculation of pion electroproduction on the nucleon. This process describes how pions are produced when nucleons are struck by electrons and provides insights into the internal structure of nucleon. At pion-production threshold, we extract the multipole amplitudes E_{0+} and L_{0+} from the $N + \gamma^* \to N\pi$ matrix element. The rescattering effects between the nucleon and the pion are also evaluated, and the Lellouch-Luscher factor is properly included to convert the $N\pi$ state in the finite volume to that in the infinite volume. processes involving pions.

Author: GAO, Yusheng (Peking University)

Co-authors: Prof. LUCHANG, Jin (Department of Physics, University of Connecticut, Storrs, Connecticut 06269, USA); Prof. FENG, Xu (Peking University); Mr ZHANG, Zhaolong (Peking University)

Presenter: GAO, Yusheng (Peking University)

Session Classification: Structure of hadrons and nuclei

Track Classification: Structure of Hadrons and Nuclei