Contribution ID: **101** Type: **Parallel talk**

Generalized Parton Distributions in a multichannel experimental approach

Tuesday, 28 March 2023 14:00 (20 minutes)

The so-called Generalized Parton Distribution (GPDs) contain information about the parton's transverse position versus their longitudinal momentum, and can be accessed in hard exclusive reactions (where all products are known). Most of the current models rely on Deeply Virtual Compton Scattering (DVCS) measurements in their parametrization. However, extracting GPDs from other channels will provide us with unique and new information that can't be accessed with solely one channel. For instance, GPDs extracted from Timelike Compton Scattering (TCS), the "timelike equivalent" of DVCS, is enabling study of GPD's universality and of NLO effects. Double Deeply Virtual Compton Scattering (DDVCS) allows to extract GPDs in a broad range of kinematic points, not accessible with DVCS and TCS, which are essential for some of the GPD's interpretations, such as obtaining tomographic pictures of the nucleon. In this presentation, we would like to present our experimental program for Jefferson Lab Hall C aiming at the measurement of TCS and DDVCS in a complementary approach to DVCS, and possible extension to hard exclusive vector mesons measurements. We will discuss interpretations and physics outcome, as well as our efforts in developing a new muon detector for DDVCS measurements.

Submitted on behalf of a Collaboration?

No

Participate in poster competition?

Primary author: BOER, Marie (Virginia Tech)

Co-author: BISWAS, Debaditya

Presenter: BOER, Marie (Virginia Tech)

Session Classification: WG5

Track Classification: WG5: Spin and 3D Structure