Canadian Association of Physicists
Association canadienne des physiciens et physiciennes

Contribution ID: **3465** Type: **Invited Speaker / Conférencier(ère) invité(e)**

(I) Global Extraction of Nucleon Generalized Parton Distributions from Deeply Virtual Compton scattering

Thursday 9 June 2022 09:45 (30 minutes)

Generalized parton distribution functions (GPDs) hold unprecedented information about the structure of hadrons. One prime example of what they can tell us is how the proton and neutron acquire their observable spin of 1/2, through what are known as spin sum rules. In the first part of this talk, I will discuss these spin sum rules, including one which is most accessible experimentally. These GPDs however, can only be probed from a relatively new line of exclusive scattering experiments. One such flagship process for doing so is Deeply Virtual Compton scattering (DVCS). I will highlight the relationship between this cross section and the GPDs. This will include a deep phenomenological look at how one can attain GPDs from DVCS. The greater scheme of the global extraction of GPDs will also heavily rely on lattice data, making it unique to the global analysis seen in the extraction of parton distribution functions from deep inelastic scattering processes.

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Session Classification: R1-6 Testing the Standard Model and Searches for New Physics at Intermediate Energies (DNP) | Tests du modèle standard et recherche de nouvelle physique aux énergies intermédiaires (DPN)

Track Classification: Technical Sessions / Sessions techniques: Nuclear Physics / Physique nucléaire (DNP-DPN)