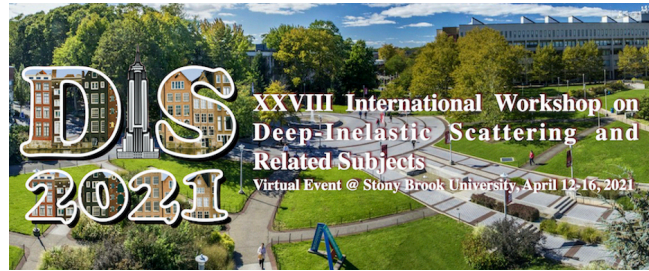


XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 559

Type: **Contributed Talk**

The deconvolution problem of deeply virtual Compton scattering

Wednesday, 14 April 2021 11:26 (18 minutes)

Generalised parton distributions are a key tool to study the three-dimensional structure of the nucleon. They shed light on its spin structure and energy-momentum tensor properties, and motivate numerous experimental programs involving hard exclusive experiments. Based on a next-to-leading order analysis, we exhibit non-trivial generalised parton distributions with arbitrarily small imprints on deeply virtual Compton scattering observables. This means that in practice the reconstruction of generalised parton distributions from measurements, known as the deconvolution problem, does not possess a unique solution for this channel. We discuss the consequences on the extracting strategies of generalised parton distributions from experimental data. We also advocate the necessity of a multi-channel analysis and emphasize the need for future electron-ion colliders.

Primary author: DUTRIEUX, Hervé (CEA/Irfu/DPhN)

Co-authors: Dr BERTONE, Valerio (IRFU, CEA, Université Paris-Saclay); Dr MEZRAG, Cédric (CEA/Irfu/DPhN); Dr MOUTARDE, Hervé (CEA/Irfu/DPhN); SZNAJDER, Pawel (National Centre for Nuclear Research); WAGNER, Jakub (National Centre for Nuclear Research)

Presenter: DUTRIEUX, Hervé (CEA/Irfu/DPhN)

Session Classification: Future Experiments

Track Classification: Future Experiments