

# Hard exclusive $\pi^0$ muoproduction cross-section at COMPASS

*Saturday 20 July 2024 16:45 (15 minutes)*

Hard exclusive meson production and deeply virtual Compton scattering are common processes to constrain generalised parton distributions. The measurement of exclusive reactions, notably the exclusive  $\pi^0$  production, were conducted at COMPASS in 2016 and 2017 using the 160 GeV/c muon beam scattering off a 2.5 m long liquid hydrogen target equipped with time-of-flight detector to record the recoiling target proton. We will report on the preliminary results on exclusive  $\pi^0$  production cross-section from 2016 data dependent on the squared four-momentum transfer  $|t|$  and on the azimuthal angle  $\phi$  between the scattering plane and the  $\pi^0$  production plane. The results will provide a further input to phenomenological models for constraining flavour dependent generalised parton distributions, in particular chiral-odd ("transversity") ones.

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**Author:** PESKOVA, Marketa (Charles University (CZ))

**Co-authors:** Mrs LAVICKOVA, Karolina (Czech Technical University in Prague); Mrs D'HOSE, Nicole (CEA Université Paris-Saclay, IRFU/DPhN)

**Presenter:** PESKOVA, Marketa (Charles University (CZ))

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