

Intrinsic Charm in Proton

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Despite rather long-term theoretical and experimental study, the hypothesis of the nonzero intrinsic (valence like) heavy quark component of the proton distribution functions has not yet been resolved. The LHC with its \sqrt{s} collisions at $\sqrt{s} = 7 - 14$ TeV offers new insights into the structure of the proton. Using the first ATLAS data on the associated production of prompt photons and charm-quark jets in \sqrt{s} collisions at $\sqrt{s} = 8$ TeV the constrain on possible intrinsic charm is determined. The upper limit on intrinsic charm probability $\chi < 1.97\%$ is obtained at the 68% confidence level along with predictions for the possible $\sqrt{s} = 13$ TeV measurement.

Primary author: SMIESKO, Juraj (Comenius University (SK))

Presenter: SMIESKO, Juraj (Comenius University (SK))