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Test of proton intrinsic charm in $\gamma(Z) + c(b)$ production at LHC (REMOTE)

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We consider an observable very sensitive to the non-zero intrinsic charm (IC) contribution to the proton density.

It is the ratio between the differential cross sections of the photon or Z -boson and c -jet production in the pp collision, $\gamma(Z) + c$, and the $\gamma(Z)$ and the b -jet production.

It is shown that this ratio can be approximately flat or increasing at large $\gamma(Z)$ transverse momenta p_T and their pseudo-rapidities $1.5 < \eta < 2.4$ if the IC contribution is taken into account.

On the contrary, in the absence of the IC this ratio decreases as p_T grows.

We also present the ratios of the cross sections integrated over p_T as a function of the IC probability w .

It is shown that these ratios are mostly independent on the theoretical uncertainties, and such predictions could

therefore be much more promising for the search for the intrinsic charm signal at the LHC compared to the predictions

for p_T -spectra, which significantly depend on these uncertainties.

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