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# Measurement of the charm fragmentation function in $D^*$ photoproduction at HERA

## Content :

The charm fragmentation function has been measured in  $D^*$  photoproduction with the ZEUS detector at HERA using an integrated luminosity of  $120 \text{ pb}^{-1}$ . The fragmentation function is measured versus  $z$ , the ratio of  $E+p_{\text{parallel}}$  for the  $D^*$  meson and that for the associated jet, where  $E$  is the energy and  $p_{\text{parallel}}$  the longitudinal momentum relative to the jet axis. Jets were reconstructed using the  $k_T$  clustering algorithm and required to have transverse energy greater than 9 GeV. The  $D^*$  meson associated with the jet was required to have a transverse momentum greater than 2 GeV. The measured function is compared to different fragmentation models incorporated in leading-logarithm Monte Carlo simulations and a next-to-leading-order calculation. The results are similar to those from  $e^+e^-$  experiments.

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## Comments :

These results are presented on behalf of the ZEUS Collaboration