# $D^{*+/-}$ meson production and $F_2^{c\bar{c}}$ in deep inelastic scattering at HERA

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We analyse the newest deep inelastic scattering data for $D^{*+/-}(2010)$ mesons from HERA. We find good agreement with the data. We also calculate $F_2^{c\bar{c}}$ from the GBW and CGC model and compare with the last values determined by H1. In the GBW saturation model the heavy quark contribution to $F_2$ was considered in the form of the $c\bar{c}$ pair production. The charm contribution is very important for high values $Q^2$ and equals approximately 20%. We compared inclusive $F_2^{c\bar{c}}$ value with our results for the analysis of diffractive open charm production from dipole model [2]. The treatment of the effects related to the charm quark contribution, is an important issue in the determination of parton distribution functions (PDFs).

[1] H1 Collaboration, Phys. Lett. B686: 91-100, 2010.

[2] K.Golec-Biernat and A. Luszczak, Phys. Rev. D 79, 114010 (2009).

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