

Heavy meson production at HERA

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Collaboration

H1 and ZEUS

Abstract content

The copious production of charm mesons at HERA has allowed QCD to be probed in open charm and charm vector meson production. Elastic and proton-dissociative photoproduction of J/ψ mesons have been measured at HERA. The data are compared to other measurements and the W and t dependences are parametrised using phenomenological fits. The $\psi(2S)$ state has also been measured exclusively and the ratio of its production rate to J/ψ mesons presented as a function of the kinematic variables. Inelastic production of J/ψ and $\psi(2S)$ mesons gives insight into non-relativistic QCD and final results are presented here. Open charm production has been measured in order to better understand the fragmentation process of charm mesons as well as giving insight into the structure of the proton.

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