

Central exclusive photoproduction at the LHC

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Protons and antiprotons at collider energies are a source of high energy Weizsäcker-Williams photons. This opens up a possibility to study at the LHC exclusive photoproduction of heavy vector mesons at energies much larger than possible at the HERA accelerator.

We present the results of detailed studies of various distributions for the production of heavy quarkonia (e.g. rapidity, transverse momenta, azimuthal angles), including absorptive corrections. We give predictions for LHC energies. Our calculations are based on modelling the photoproduction amplitudes in a k_t -factorisation approach which is checked against HERA data. We also discuss the exclusive photoproduction of Z^0 bosons.

based in part on:

Exclusive photoproduction of Upsilon: From HERA to Tevatron.

A. Rybarska, W. Schafer (Cracow, INP) , A. Szczurek (Cracow, INP & Rzeszow U.) . May 2008. 12pp.

Published in Phys.Lett.B668:126-132,2008.

e-Print: arXiv:0805.0717 [hep-ph]

Exclusive photoproduction of J/ψ / ψ in proton-proton and proton-antiproton scattering.

W. Schafer (Cracow, INP) , A. Szczurek (Cracow, INP & Rzeszow U.) . May 2007. 18pp.

Published in Phys.Rev.D76:094014,2007.

e-Print: arXiv:0705.2887 [hep-ph]

Primary author: Dr SCHÄFER, Wolfgang (IFJ PAN)

Co-authors: Mrs CISEK, Anna (IFJ PAN); Prof. SZCZUREK, Antoni (IFJ PAN)

Presenter: Dr SCHÄFER, Wolfgang (IFJ PAN)

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