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# Double handbag description of proton-antiproton annihilation into a light meson pair

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We propose to describe the process $p\bar{p} \to \pi^- pi^+$ in a perturbative QCD motivated framework where a double-handbag hard process $ud\bar{u}\bar{d} \to d\bar{d}$ factorizes from transition distribution amplitudes (TDAs). A TDA describes the non-perturbative transition of the proton to the meson by emission of 2 quarks and absorption of an antiquark (analogously for the $\bar{p} \to \pi^-$). We advocate that the scale allowing this factorization is the large transverse momentum transfer. We calculate this process in a simplified framework in which the proton is considered as a quark-(scalar) diqark. We model the TDAs as overlaps of ight-cone wave functions and present the expected cross sections for the PANDA experiment at GSI-FAIR.

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