

Exclusive D^+D^- pair productions in the $AA \rightarrow AA D^+D^-$ reaction

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We have calculated the cross sections for exclusive D^+D^- pair production in the $AA \rightarrow AAD^+D^-$ reaction. The subprocess $\gamma\gamma \rightarrow D^+D^-$ cross section is calculated within the pQCD form factor. We compare the results for the cross sections calculated with monopole (commonly used in the literature) and realistic form factors. The realistic form factor is the Fourier transform of realistic charge density of the nucleus. We show the distributions in the DD invariant mass as well as in the rapidity of the DD system. The absorption effects are discussed and quantified.

[1] “Charmed meson production in proton-(anti)proton collisions”

M. Łuszczak and A. Szczurek, *Int. J. Mod. Phys. A* **22**, 555-560 (2007).

[2] “Nonphotonic electrons at BNL RHIC within k_t -factorization approach and with experimental semileptonic decay functions”

M. Łuszczak, R. Maciuła and A. Szczurek, *Phys. Rev. D* **10**, 262 (2009).

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