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Searching for signatures of the $X(3700)/D\bar{D}$ bound state in femtoscopic correlations

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The femtoscopic $D\bar{D}$ correlations are investigated in order predict the signature of the X(3700) $(D\bar{D})$ bound state in the isoscalar channel. This bound state is generated by solving the coupled-channel Bethe-Salpeter equations with the local hidden-gauge formalism. The momentum correlation functions of the $D^0\bar{D}^0$ and D^+D^- pairs and the low-energy observables are calculated and discussed. I analyze how the features of the X(3700) state might be encoded in the behavior of the correlation functions.

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