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Applications of femtoscopy in studies of exotic hadrons

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Since 2003, many hadrons that do not fit into the conventional quark model of $q\bar{q}$ mesons and qqq baryons have been discovered experimentally. Because most (if not all) of these states are located at the thresholds of a pair of conventional hadrons, they have been conjectured to be hadronic molecules. There have been extensive theoretical and experimental studies to verify or refute the molecular picture from different perspectives. In the past few years, we have proposed using femtoscopy to directly extract the underlying hadron-hadron interactions, which are key for forming hadronic molecules. In this talk, I will provide a pedagogic introduction to femtoscopy and its recent applications in understanding the nature of a few key candidates of hadronic molecules, such as $Ds_0^*(2317)$, $P_c(4457/4440)$, and $Z_c(3900)/Z_{cs}(3985)$.

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