

Line shape measurement of the $\chi_c(3872)$ with PANDA

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In the last two decades plenty of new so-called XYZ-states in the charmonium mass region have been discovered, many of which are still under investigation. Amongst those, the $\chi_{c1}(3872)$ a.k.a. $X(3872)$ is the oldest and one of the most puzzling states. To identify the nature, in particular the exact line shape of the object needs to be determined. While current experiments such as LHCb even with high statistics still fail to unambiguously distinguish between different line shape models, a precise energy scan with anti-protons envisaged by PANDA at FAIR will allow for a direct measurement and thus identify the nature.

Category

talk

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