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Analysis of $\pi^+\pi^-$ mass spectrum in $\chi_{c1}(3872) \rightarrow \pi^+\pi^- J/\psi$ decays¹

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The $\pi^+\pi^-$ mass spectrum in $\chi_{c1}(3872) \rightarrow \pi^+\pi^- J/\psi$ decays is analyzed to probe for its resonant content. This can shed light at the nature of this exotic hadron candidate. The data sample of $B^\pm \rightarrow K^\pm \chi_{c1}(3872)$ events is selected for a good control of the backgrounds and for the optimal mass resolution. The data were obtained with the LHCb detector, and corresponds to 9 fb^{-1} of the integrated luminosity in pp collisions at the LHC.

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