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Study the structure of X(3872) from its lineshape

We fit the invariant mass distribution of $X(3872) \rightarrow J/\psi \pi^+ \pi^-$ from LHCb and $X(3872) \rightarrow D^0 \overline{D}^{0*}$ from Belle using the propagator for S-wave threshold states in effective field theory. In this way, we can directly determine the Z which is the probability of finding the compact component in X(3872). We find that Z is a non-vanishing value within error, which strongly supports that X(3872) has a compact short-distant core.

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