

Re-discovery of the X(3872) at Belle II

Content

The Belle II experiment has accumulated data corresponding to 89.99 fb⁻¹ integrated luminosity in the past 2 years, and is performing very good. Waiting that the full planned data set will be recorded (50 ab⁻¹), which will allow search for rare processes and will have a tremendous impact in the spectroscopy field, the Phase 3 data set allows to already perform analysis with high precision. We present here the analysis of B → K J/ψ π π and B → K ψ(2S): in the former for the first time the evidence for the X(3872) → Jψ π π has been found at Belle II, which is consistent with the observation at Belle of the same resonant state, performed in 2003. The re-discovery of the X(3872) based on the early Phase3 data includes the efficiency and resolution study, calibration with B → K ψ(2S), and background check. When higher statistics will be available, Belle II is planning the even more interesting analysis of B → DDK, and search for X(3872) → DD

Summary

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