

Interpretation of the LHCb $P_c(4312)$ signal

Content

We study the nature of the new signal reported by LHCb in the $J/\psi p$ spectrum. Based on the S-matrix principles, we perform a minimum-bias analysis of the underlying reaction amplitude, focusing on the analytic properties that can be related to the microscopic origin of the $P_c(4312)^+$ peak. By exploring several amplitude parameterizations, we find evidence for the attractive effect of the $S_c^+ \bar{D}^0$ channel, that is not strong enough, however, to form a bound state.

Summary

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