

Search for the X(5568) state in the Bs pi decays

Wednesday 27 September 2017 12:40 (20 minutes)

The evidence for an unexpected narrow Bs pi structure claimed by the D0 Collaboration and named X(5568) has triggered its search in other hadron collider experiments including CMS. Its interest resides in its possible interpretation as a compact hadronic state composed of four different quark flavours (udsb). The CMS search is performed using an integrated luminosity of 19.7fb^{-1} of pp collisions at $\sqrt{s}=8\text{TeV}$ and provides the current most stringent Upper Limits on the ratio of the production rates of X(5568) and Bs multiplied by the unknown branching fraction of the Bs pi decay, given in two different kinematic regions defined on the basis of the transverse momentum of the Bs. The obtained CMS upper Limits contradict the D0 measurement and are in agreement with the results by the LHCb Collaboration.

Author: CMS COLLABORATION

Presenter: CHISTOV, Ruslan (National Research Nuclear University MEPhI (RU))

Session Classification: Exotic states and candidates

Track Classification: Exotic states and candidates