

Hadronic production of radial and orbital excitations of doubly heavy baryon Ξ_{cc}

Friday, 26 October 2018 17:15 (15)

In view of the recent discovery of Ξ_{cc} by the LHCb collaboration the study of doubly heavy baryons is becoming relevant. In this work we discuss the prospects of the observation of such states with excited cc -diquark (S and P excitations) by the LHCb experiment. P-wave excitations of a diquark in Ξ_{cc} are expected to be quite narrow since their decay into the ground state is suppressed as Λ_{QCD}^2/m_c^2 . The relative yield of S-wave and P-wave excitations for the LHCb kinematics has been estimated as 50% and 5% respectively.

Primary author(s) : Prof. BEREZHNOY, Alexander (SINP of Moscow State University); Mr. BELOV, Ilia (Moscow State University)

Presenter(s) : Mr. BELOV, Ilia (Moscow State University)

Session Classification : Particle Physics

Track Classification : Particle physics