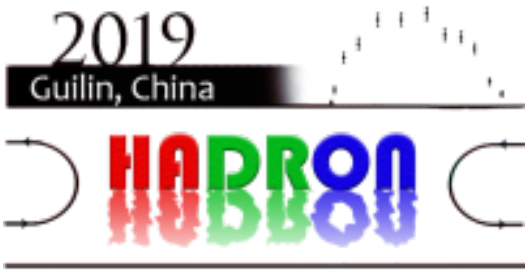

Contribution ID: **1** Type: **Parallel**

Heavy excited baryons with heavy-quark spin symmetry

Tuesday, 20 August 2019 14:00 (25 minutes)

The LHCb Collaboration has discovered five excited Ω_c states with masses between 3 and 3.1 GeV [1], four of them recently corroborated by the Belle Collaboration [2]. Moreover, the LHCb Collaboration has recently reported one $\Xi_b(6227)$ state [3], whereas several Ξ_c states are described in the PDG. Indeed, one Ξ_c at 2930 MeV was first reported by the BaBar Collaboration [4] and recently confirmed by the Belle Collaboration [5].

We analyze the dynamical generation of Ω_c as well as Ξ_c and Ξ_b states within a molecular baryon-meson model that is consistent with both chiral and heavy-quark spin symmetries. Earlier predictions within this model found several Ω_c, Ξ_c and Ξ_b states with masses below the experimental observations [6,7]. Thus, in order to study the possible identification of any of these states with the experimental ones in the correct energy region, we explore the effect of the renormalization scheme. We analyze which states could be dynamically generated and identified with the experimental ones while having spin-parity $J = 1/2^-$ or $J = 3/2^-$ [8,9].

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