

# The $B^{(*)}\bar{K}^{(*)}$ -coupled-channel system in the hidden-gauge approach

Thursday, 25 June 2026 17:35 (20 minutes)

In this work we provide predictions for bottom-strange molecular states within the Hidden Gauge Formalism. We study the coupled-channel scattering of  $B^{(*)}\bar{K}^{(*)}$  states and, by fixing only one free parameter to obtain the mass of a new excited  $B_s^0$  state seen by the LHCb, we predict the pole parameters of six states in this sector. Concretely, we get that the masses of the flavor partners of the  $D_{s0}(2317)$  and  $D_{s1}(2460)$  states in the bottom sector are 5760 and 5802 MeV for the  $B\bar{K}$  ( $J^P = 0^+$ ) and  $B^*\bar{K}$  ( $1^+$ ) states, respectively. Moreover, the recently seen states by the LHCb with masses around 6100 and 6160 MeV can be interpreted as  $B\bar{K}^*$  and  $B^*\bar{K}^*$  molecular states, according to reasonable values of the pole parameters and the splitting between these two states obtained in our calculation.

## Collaboration

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**Session Classification:** Parallel session A2

**Track Classification:** Heavy Flavour (production, spectroscopy)