



Contribution ID: 282

Type: **theoretical**

Pentaquark states at LHCb

Tuesday 5 June 2018 16:00 (1h 30m)

The LHCb collaboration has recently reported evidence of two pentaquark states [1]. We have constructed a classification scheme for pentaquark states and tried to describe them as compact objects [2]. The hidden-charm pentaquark states have been also described as meson-baryon molecules with coupled channels for $D^{(*)}\Lambda_c$ and $D^{(*)}\Sigma_c$ [3] and recently, for the first time, we have discussed the interplay between compact and molecular components [4]. Important predictions are also given for bottom meson-baryon molecules coupled with five-quark states [3].

[1] R. Aaij et al. [LHCb Collaboration], Phys. Rev. Lett. 115 (2015) 072001;

[2] Santopinto, Giachino, Phys.Rev. D96 (2017) no.1, 014014;

[3] Yasuhiro Yamaguchi, Elena Santopinto, Phys.Rev. D96 (2017) no.1, 014018;

[4] Yasuhiro Yamaguchi, Alessandro Giachino, Atsushi Hosaka, Elena Santopinto, Sachiko Takeuchi, Makoto Takizawa, Phys. Rev. D96 (2017) no. 11, 114031.

Author: GIACHINO, Alessandro (INFN)

Co-authors: YAMAGUCHI, Yasuhiro (RIKEN); HOSAKA, Atsushi (Osaka University); SANTOPINTO, Elena (INFN e Università Genova (IT)); TAKEUCHI, Sachiko; TAKIZAWA, Makoto

Presenter: GIACHINO, Alessandro (INFN)

Session Classification: Posters session