PHOTON 2019 - International Conference on the Structure and the Interactions of the Photon. Satellite Workshop: Photon Physics and Simulation at Hadron Colliders.

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Photoproduction of penta-quark states: a theoretical perspective

Tuesday, 4 June 2019 14:45 (30 minutes)

The 2015 LHCb discovery of an exotic structure (denoted by P_c^+) decaying in $J/\psi\,p$ and conjectured to be a penta-quark state has triggered a renewed interest in the possible existence of multiquark states not predicted by the naive quark model. In this talk we present some considerations on P_c photo-production experiments, aimed at testing its multi-quark interpretation in the framework of a 40-years-old ''string-junction" picture that allows a unified description of baryons, tetra-, and penta-quark states.

Summary

The 2015 LHCb discovery of an exotic structure (denoted by P_c^+) decaying in $J/\psi\,p$ and conjectured to be a penta-quark state has triggered a renewed interest in the possible existence of multiquark states not predicted by the naive quark model. In this talk we present some considerations on P_c photo-production experiments, aimed at testing its multi-quark interpretation in the framework of a 40-years-old "string-junction" picture that allows a unified description of baryons, tetra-, and penta-quark states.

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