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【348】 Search for axion-like particles at LHCb

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Axion-like particles (ALPs) are hypothetical particles predicted in many extensions of the Standard Model (SM). ALPs can mediate the interactions between dark and ordinary matter, coupling to the different SM bosons. Thanks to its full software trigger and excellent vertex resolution, the LHCb experiment has excellent sensitivity for different ALPs, even at low masses, thus playing a unique role in the search for ALPs at LHC. Some results from searches for ALPs will be presented. An outlook on searches for ALPs coupling to gluons, such as axion-like particles decaying into pions, will be discussed.

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