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Three-body bound state of $DD^*\bar{K}$ system in lattice effective field theory

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Currently, the DD^* , $D\bar{K}$ and $D^*\bar{K}$ systems are studied from both theoretical and experimental sides. The three hadronic molecules T_{cc}^+ , $D_{s0}^*(2317)$ and $D_{s1}(2460)$ are found in the above three two-body systems. We consider chiral effective field theory, get the interactions of DD^* , $D\bar{K}$, $D^*\bar{K}$ systems on lattice, find a model-independent three-body bound state in $DD^*\bar{K}$ system.

Primary author: ZHANG, Zhenyu (South China Normal University)

Co-authors: HE, Guang-zhao (South China Normal University); HU, Xin-yue (South China Normal University); Prof. LU, Bingnan (Institute of theoretical physics, Chinese Academy of Sciences); Prof. WANG, Qian (South China Normal University)

Presenter: ZHANG, Zhenyu (South China Normal University)

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