

Phenomenology 2022 Symposium: From Virtual to Real



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Search for Charmed Baryon-Antibaryon Oscillations and BNV with Belle

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We report on the first search for baryon-number-violating decay $B^- \rightarrow \Xi_c^0 \Lambda_c^-$ using data collected with the Belle detector at the KEKB asymmetric-energy e+e- collider. The results are also interpreted in terms of the previously-discovered Standard Model decay $B^- \rightarrow \Xi_c^0 \Lambda_c^-$ followed by possible $\Xi_c^0 - \bar{\Xi}_c^0$ oscillations. The measurements of charmed baryons-antibaryon oscillations in the heavy quark sector provide a new avenue to investigate the origin of matter-antimatter asymmetry of the universe.

Authors: GU, Tianping (University of Pittsburgh); SAVINOV, Vladimir (University of Pittsburgh (US))

Presenter: GU, Tianping (University of Pittsburgh)

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