

7th December 2017, 15:00 s.t.

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AG Elementary Particle Physics

Measuring Charge-Parity Violation at the LHCb

One of the big and yet not answered questions in physics is the small matter-antimatter asymmetry of the universe.

Whereas this effect is known in particle physics as CP violation and is measured with high accuracy, the extrapolation from the microscopic scale of particle accelerators to cosmic scales fails and underestimates the observed asymmetry by orders of magnitude.

Currently, the LHCb experiment (CERN) attacks this problem by probing the standard model of particle physics for deviations in its CP violating sector.

The outstanding environment during the high energetic pp collisions at the LHC promises new perceptions about this and other questions.

An introduction to parity-charge violation and how it manifests in particle physics is given, as well as a short overview about the LHCb experiment and one typical analysis.

Talk: English

Slides: English

Location: Institute of Physics, Albert-Einstein-Str. 24, HS1

