

4th Jagiellonian Symposium on Advances in Particle Physics and Medicine



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The charm of charm

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The existence of CP violation in charm particle decays has been elusive for a long time for experimentalists and has been observed for the first time in 2019 in the LHCb experiment. During the LHC Run 1 and Run 2, the LHCb collaboration collected huge data samples on a scale never seen before. These data enable the most sensitive searches for CP violation ever performed. These measurements are interpreted as precise tests of the Standard Model. In the presentation, the latest results achieved in charm decays will be reviewed and two innovative model-independent techniques (Kernel Density Estimation and Energy test) for searching for CP violation in charm baryons will be discussed.

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