Matter, Antimatter & CP Violation

CPV Discovered first in weak interactions of kaons in 1964 by Cronin, Fitch et al.

LHCb searches for new CPV sources using very large amounts of charm and beauty particles and anti-particles, created in proton-proton collisions at the LHC

The amount of CP violation (CPV) in the Standard Model is not sufficient to explain the observed prevalence of matter over antimatter in the Universe. **New sources of CPV must exist!**