



Contribution ID: 15

Type: **not specified**

## Search for CPV in charmless decays of beauty baryons at LHCb

*Thursday 24 October 2024 09:00 (20 minutes)*

While CP violation (CPV) has been firmly established in the decays of strange, charm, and beauty mesons, it has not been observed in the baryon sector yet. The charmless decays of beauty baryons offer a promising avenue for investigation, as significant CPV effects could emerge from the interference between tree and penguin topologies, which contribute comparably to the decay amplitudes of these modes. The LHCb experiment is uniquely suited to study these decays thanks to the high production cross-section of beauty baryons in proton-proton collisions at the LHC. This talk presents and discusses the latest LHCb results in the search for CPV in the charmless decays of beauty baryons.

**Author:** VILLA, Andrea (Universita e INFN, Bologna (IT))

**Presenter:** VILLA, Andrea (Universita e INFN, Bologna (IT))

**Session Classification:** Parallel Session 8