



Contribution ID: 129

Type: Oral presentation

## Study of the $\Lambda_b$ decay properties with the ATLAS experiment

*Wednesday, 30 April 2014 18:06 (24 minutes)*

The ATLAS detector at the LHC is collecting - among others - a large statistics of  $\Lambda_b$  decays, allowing the study of production and decay properties of this b-flavored hadron. This statistics is what allowed one of the most precise measurements of the  $\Lambda_b$  lifetime. We will review ATLAS' latest results on the decay properties of this baryon, including the measurement of the parity violating asymmetry parameter  $\alpha_b$  in  $\Lambda_b \rightarrow \Lambda J/\psi$ , obtained from the study of angular correlations in the  $p \pi^+ \mu^- \mu^-$  final state. The measurement is compared to predictions based on perturbative QCD and heavy quarks effective theory.

**Primary author:** BARONCELLI, Toni (Roma Tre Universita Degli Studi (IT))

**Presenter:** AGATONOVIC-JOVIN, Tatjana (University of Belgrade (RS))

**Session Classification:** WG5: Heavy Flavours

**Track Classification:** WG5: Heavy Flavours