



Contribution ID: 163

Type: Talk

## 【334】 Search for the lepton-flavour-violating decay

$$B^+ \rightarrow K^+ \tau^\pm \mu^\mp$$

Wednesday 28 August 2019 15:15 (15 minutes)

Using data from the LHCb experiment at CERN, a search for the lepton-flavour-violating decay  $B^+ \rightarrow K^+ \tau^\pm \mu^\mp$  is being performed. This decay is forbidden in the standard model (SM) of particle physics because it violates the lepton-flavour conservation. However, it is known that the SM cannot account for dark matter, dark energy, the strong  $CP$  problem, the neutrino masses, etc. In particular, this decay is interesting since there is emerging evidence for lepton-flavour non-universality, which can be linked to lepton-flavour violation via the introduction of leptoquarks.

In this talk, I will discuss selected aspects of an analysis designed to search for  $B^+ \rightarrow K^+ \tau^\pm \mu^\mp$  decays using three-prong  $\tau$  decays.

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**Session Classification:** Nuclear, Particle- & Astrophysics

**Track Classification:** Nuclear, Particle- and Astrophysics (TASK)