



ID de Contribution: 102

Type: Oral Presentation

## The photon polarisation in radiative B decay.

*lundi 9 mai 2016 14:45 (15 minutes)*

In rare B mesons decay such as  $b \rightarrow s\gamma$ , standard model predictions indicate that the photon should be mostly left-handed. And since the GIM mechanism allows this process to only occurs through loops, measurements of the photon polarisation can provide a good test of the standard model. Indeed, if new physics heavy particles contribute to the process the photon polarisation may change. Unfortunately the photon helicity cannot be directly measured, but this difficulty may be overcome through the determination of the polarisation of the s-quark. I will present a method, requiring three hadrons in the final state, which using angular analysis can give us information on the s-quark polarisation. We will mainly focus on the decay  $B \rightarrow K\pi\pi\gamma$  due to its relatively large branching ratio.

**Auteur principal:** M. HEBINGER, jeremy (lal)

**Orateur:** M. HEBINGER, jeremy (lal)

**Classification de Session:** High-energy physics

**Classification de thématique:** Particle Physics