



Contribution ID: 484

Type: **Oral (Non-Student)** / **orale (non-étudiant)**

## Isospin asymmetry in $B \rightarrow K^* \mu^+ \mu^-$ using AdS/QCD

*Thursday 18 June 2015 09:30 (15 minutes)*

We compute the isospin asymmetry distribution in the rare dileptonic decay  $B \rightarrow K^* \mu^+ \mu^-$ , in the dimuon mass squared ( $q^2$ ) region below the  $J/\Psi$  resonance, using nonperturbative inputs as predicted by the anti-de Sitter/quantum chromodynamics correspondence and by sum rules. We predict a positive asymmetry at  $q^2=0$  which flips sign in the region  $q^2 \in [1, 2]$  GeV<sup>2</sup> to remain small ( $\leq 2\%$ ) and negative for larger  $q^2$ . While our predictions are distinct as  $q^2 \rightarrow 0$ , they become hardly model-dependent  $q^2 \geq 4$  GeV<sup>2</sup>. We compare our predictions to the most recent LHCb data.

**Author:** Dr SANDAPEN, Ruben (Mount Allison University & Université de Moncton)

**Co-authors:** Prof. AHMADY, Mohammad (Mount Allison University); Mr LORD, Sebastien (Université de Moncton)

**Presenter:** Dr SANDAPEN, Ruben (Mount Allison University & Université de Moncton)

**Session Classification:** R1-3 Status and Future of Precision Frontier (PPD-DTP-DIMP) / État et avenir de la frontière de précision (PPD-DPT-DPIM)

**Track Classification:** Particle Physics / Physique des particules (PPD)