Department of Physics
Particle Physics
The Denys Wilkinson Building, Keble Road, Oxford OX1 3RH

UNIVERSITY OF OXFORD

Experimental Particle Physics Seminar

at 2.15 pm
Dennis Sciama Lecture Theatre

Tuesday 11th June 2019

Dr Kristof De Bruyn
CERN

In Search for Flavour Anomalies with tau Decays

Abstract

High precision measurements of B meson decays offer some of the most powerful tests of the Standard Model paradigm. They allow us to indirectly search for manifestations of physics beyond the SM, up to energy scales well exceeding the direct searches at the Large Hadron Collider. Over the past years some puzzling tensions have appeared between the experimental measurements and the theoretical predictions for B meson decays into final states including leptons. Put together, these tensions point to a violation of lepton flavour universality, forbidden in the SM. The emerging picture, however, still remains highly debated. Updating the existing measurements with more data, and confirming the deviations through complementary decay channels and observables is thus crucial to clear up the situation. In this talk I will give an overview of the results from the LHCb experiment regarding B meson decays involving tau. Measurements of these tauonic modes offer complementary information and valuable insights into the nature of these potential new physics effects.