



# LHC Seminar

SPEAKER: Marco Pappagallo (University of Glasgow (GB))  
TITLE: **Latest results on b-hadron spectroscopy at LHCb**  
DATE: Tue 10/02/2015 11:00  
PLACE: Council Chamber

## ABSTRACT

Hadrons are systems bound by the strong interaction, which is described at the fundamental level by Quantum Chromodynamics (QCD). While QCD is well understood at high energy in the perturbative regime, low-energy phenomena such as the binding of quarks and gluons within hadrons are more difficult to predict. High precision measurements are most useful to test the reliability of several models and techniques, such as constituent-quark models or lattice-QCD calculations, into predicting the mass spectrum and the properties of the hadrons.

Using 3.0/fb of integrated luminosity recorded by the LHCb experiment, we report precise measurements of the  $B_1(5721)^{\{0,+ \}}$  and  $B_2^*(5747)^{\{0,+ \}}$  states and the observation of  $B^{\{+,0 \}}$   $\pi^{\{-,+ \}}$  mass structures. The observations of two new Xib baryons are presented as well.