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Radiative decays of B hadrons at LHCb

Tuesday 18 August 2009 14:00 (1 minute)

Please give a brief summary of your poster

Flavour physics is an excellent probe of New Physics, as it offers the possibility to measure effects from virtual heavy particles, much above the current experimental reach in terms of direct production. Radiative penguin decays take place due to the b to s quark transition along with the emission of a photon. Various measurements, like decay rates, asymmetries and angular distributions can be made, and compared with theory predictions. Also of interest are measurements which are sensitive to the contribution of a right handed coupling in the b to sgamma transition.
LHCb is well positioned to exploit the high luminosity and large statistics of B hadrons available at LHC, to make very competitive measurements in various radiative decays like B0 -> K*0 gamma, Bs -> phi gamma, lambda_b -> labmda_0 gamma and B+ -> phi K+ gamma. For example, the direct CP asymmetry in K*gamma decay can be measured to the level of 1.8%, much better than the current experimental accuracy, with only 100 inverse pb.

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