HEP 2013
Stockholm
18-24 July 2013

Contribution ID: **650** Type: **Poster Presentation**

The rare B–>pi mu mu decay

The rarest decay Bˆ+->piˆ+ muˆ+ muˆ- has been observed for the first time in 2012 with an integrated luminosity of 1.0 fbˆ{−1} by the LHCb experiment. A more precise measurement may appear before or during the 13 TeV run in 2015. Driven by the new data and the lack of updated SM prediction, we provide a new estimation of this rare decay process based on the QCD factorization (QCDF) approach. Explicitly, We give branching ratios of all four modes of B->pi muˆ+ muˆ- at large recoil energy region, as well as the associated CP asymmetry and isospin asymmetry among these modes, which should be testable in near future by LHCb and Bell II.

Primary author: Dr XU, Fanrong (National Tsing Hua University)

Co-authors: Dr KOHDA, Masaya (National Taiwan University); Prof. HOU, Wei-Shu (National Taiwan University)

Track Classification: Flavour Physics and Fundamental Symmetries