Contribution ID: 4 Type: **not specified**

Probing the Higgs mechanism with flavour physics: status and perspectives

Wednesday, 23 October 2013 16:40 (40 minutes)

The flavour structure in the Standard Model (SM), and in many of its extensions, is completely determined by the mechanism that breaks the electroweak symmetry, i.e. the Higgs mechanism. The precision measurements in flavour changing neutral currents (FCNC) performed in the past at e+e- B-factories, today at LHCb and in a near future at the upgraded LHCb and Belle-II provide evidence for the Higgs mechanism as the correct solution. Moreover, in specific helicity suppressed FCNC decays, like Bs->mu+mu-, the agreement with the SM put strong constrains on new scalar particles beyond the SM Higgs boson.

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