Contribution ID: **24** Type: **not specified**

Rare top quark decays at a 100 TeV proton-proton collider

Wednesday 11 April 2018 14:45 (15 minutes)

Investigating the physics of the top quark at the Future Circular hadron-hadron Collider (FCC-hh) is a very exciting prospect. Considering that at the FCC-hh the QCD top-quark production cross section will be 40 times larger than in the LHC, there is a lot of potential for unveiling possible connections with Beyond-the-Standard Model phenomena. In this talk we will discuss the sensitivity of the FCC-hh towards very rare top decays, strongly suppressed within the SM. In the first part, we will focus on the feasibility of measuring the branching ratio for the "radiative" process t -> bWZ within the SM and extended Higgs scenarios. In the second part, we will elaborate on the prospect of measuring the decay t -> hc showing that the potential for improvement with respect to the LHC.

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Session Classification: FCC-hh physics & experiments

Track Classification: FCC-hh Phy/Exp