Contribution ID: **98** Type: **Poster**

Loop induced rare flavor-changing decays of the top quark in the Bestest Little Higgs Model

Thursday 18 July 2024 20:40 (20 minutes)

We investigate the effects of parameters in the Bestest Little Higgs Model (BLHM) on rare flavor-changing decays of the top quark. In this study, we incorporate new flavor mixing terms between the light quarks of the Standard Model (SM) and the fermions and bosons of the BLHM. We compute the one-loop contributions from the heavy quark (B) and the heavy bosons $(W'^{\pm}, \phi^{\pm}, \eta^{\pm}, H^{\pm})$. we observe that the processes with higher sensitivity are $Br(t \to cZ) \sim 10^{-5}$, $Br(t \to c\gamma) \sim 10^{-6}$ and $Br(t \to ch^0) \sim 10^{-8}$ within the appropriate parameter space.

Alternate track

1. Top Quark and Electroweak Physics

I read the instructions above

Yes

Primary author: Dr HERNÁNDEZ-RUÍZ, María A. (Universidad Autónoma de Zacatecas)

Co-authors: Dr GUTIÉRREZ-RODRÍGUEZ, Alejandro (Universidad Autónoma de Zacatecas); Dr CRUZ-ALBAARO, Eligio (Universidad Autónoma de Zacatecas); Dr CISNEROS-PÉREZ, Tzihue (Universidad Autónoma de Zacatecas)

Presenter: Dr HERNÁNDEZ-RUÍZ, María A. (Universidad Autónoma de Zacatecas)

Session Classification: Poster Session 1

Track Classification: 03. Beyond the Standard Model