Contribution ID: **30** Type: **not specified**

Opportunities for probing $U(1)_{T3R}$ with light mediators

Monday 9 November 2020 19:40 (10 minutes)

We consider strategies for using new datasets to probe scenarios in which light right-handed SM fermions couple to a new gauge group, $U(1)_{T3R}$. This scenario provides a natural explanation for the light flavor sector scale, and a motivation for sub-GeV dark matter. There is parameter space which is currently allowed, but we find that much of it can be probed with future experiments. In particular, experiments which search for displaced visible decay or invisible decay, cosmological and astrophysical observations, neutrino experiments can all play a role. Still, there is a small region of parameter space which even these upcoming experiments will not be able to probe.

Author: GHOSH, Sumit (Texas A & M University)

Co-authors: DUTTA, Bhaskar (Texas A&M University); KUMAR, Jason (University of Hawaii)

Presenter: GHOSH, Sumit (Texas A & M University)

Session Classification: Long-Lived Particles