



Contribution ID: 518

Type: **not specified**

Opening up baryon number violating operators

Monday 13 May 2024 17:00 (15 minutes)

Baryon number violation is our most sensitive probe of physics beyond the Standard Model. Its realization through heavy new particles can be conveniently encoded in higher-dimensional operators that allow for a model-agnostic analysis. The unparalleled sensitivity of nuclear decays to baryon number violation makes it possible to probe effective operators of very high mass dimension, far beyond the commonly discussed dimension-six operators. To facilitate studies of this ginormous and scarcely explored testable operator landscape we provide the exhaustive set of UV completions for baryon-number-violating operators up to mass dimension 15, which corresponds roughly to the border of sensitivity. In addition to the known Standard Model fields we also include right-handed neutrinos in our operators.

Mini Symposia (Invited Talks Only)

Author: SOKHASHVILI, Diana

Co-authors: THAPA, Anil (University of Virginia); HEECK, Julian

Presenter: SOKHASHVILI, Diana

Session Classification: Physics Beyond the Standard Model

Track Classification: Other BSM