Contribution ID: **20** Type: **Parallel**

Revised phenomenology of new physics particles in GeV mass range

Wednesday 9 July 2025 16:30 (12 minutes)

In this talk, I explore minimal extensions of the Standard Model that introduce new particles in the GeV mass range, with a particular focus on how they can be probed at proton accelerator experiments such as the recently approved SHiP. I present a comprehensive analysis of the phenomenology of new particles, highlighting overlooked inconsistencies in the literature as well as key theoretical uncertainties. I then show how these uncertainties substantially impact both the existing constraints on the parameter space and the reach of future experimental searches.

Secondary track

T13 - Accelerators for HEP

Author: OVCHNYNIKOV, Maksym (CERN)

Presenter: OVCHNYNIKOV, Maksym (CERN)

Session Classification: Joint T02+T09

Track Classification: T02 - Dark Matter