



Contribution ID: 339

Type: **Parallel session talk**

Sensitivities to feebly interacting particles: public and unified calculations

Thursday 24 August 2023 10:30 (15 minutes)

The idea that new physics could take the form of feebly interacting particles (FIPs) - particles with a mass below the electroweak scale, but which may have evaded detection due to their tiny couplings or very long lifetime - has gained a lot of attraction in the last decade, and numerous experiments have been proposed to search for such particles. It is important, and now very timely, to consistently compare the potential of these experiments for exploring the parameter space of various well-motivated FIPs. In the talk, I address this pressing issue by presenting an open-source tool to estimate the sensitivity of many experiments - located at Fermilab or the CERN's SPS, LHC, and FCC-hh - to various models of FIPs in a unified way: the Mathematica-based code SensCalc.

Collaboration / Activity

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Session Classification: T10 Searches for New Physics

Track Classification: Searches for New Physics