



Contribution ID: 41

Type: **Talk**

## **Complementarity between CEvNS and dark matter direct searches experiments for light gauge mediators**

*Tuesday 10 June 2025 14:22 (18 minutes)*

Searching for dark matter and new light mediators enters a precision era driven by rapid advances in coherent elastic neutrino-nucleus scattering (CEvNS) experiments and direct detection of dark matter. This talk will focus on  $U(1)'$  extensions of the Standard Model. We will explore how CEvNS experiments constrain this sector and how this complements the direct detection results when the light gauge boson is the portal between the dark sector and the Standard Model. We will examine how complementary constraints from beam dump experiments, LHCb, and BABAR further shape the viable parameter space.

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**Session Classification:** Phenomenology 3