

Contribution ID: **36** Type: **Parallel Talk**

Impact of Isospin-Violating Dark Matter interactions on the neutrino fog

Monday, 30 November 2026 15:30 (20 minutes)

As dark matter direct detection experiments reach sensitivities at which solar neutrinos begin to be observed, understanding and investigating the "neutrino fog" is becoming increasingly important. This background is not fixed and is strongly linked to the assumed properties of dark matter. In this work, we study the neutrino fog by considering Isospin-Violating Dark Matter (IVDM) models. We will discuss how these non-standard couplings of dark matter to protons and neutrons can cause shifts in the expected limits of these backgrounds through different detection materials. Furthermore, we will study specific dark matter models to illustrate some conditions that might be required to suppress this background. The impact of systematic errors is also discussed

Academic position of the presenting author

Ph.D. Student

Primary authors: DUQUE HERRERA, Laura (Cinvestav); Dr MIRANDA ROMAGNOLI, Omar (Cinvestav); Dr LAMPREA, Mario (Cinvestav)

Presenter: DUQUE HERRERA, Laura (Cinvestav)

Session Classification: Parallel Talks-SD:802

Track Classification: Dark Matter