

Department of Physics and Astronomy Colloquium Series

Tuesday, November 14h, 2023, 2:30pm in PSE 317

Speaker: Savino Longo

Institution: University of Manitoba

Title: Searching for a Hidden Universe with the Belle II Experiment

Abstract:

The Belle II experiment, located at the SuperKEKB electron-positron collider in Japan, is a state-of-the-art upgrade to the previous generation Belle experiment. SuperKEKB is currently operating at the world's highest collision intensity as Belle II approaches a collision dataset that will be 50 times larger than the original Belle dataset. Enhanced by unique dark sector triggers, the accumulating Belle II dataset is rich with immediate and near-term opportunities for exciting dark sector physics through direct searches and precision measurements. Results will be presented from a recent Belle II search for Axion-Like Particles, which are theorized to potentially allow for interactions between the known fundamental particles and a hidden sector. I will also present the status of an ongoing search for dark photons at Belle II and our prospects to confirm the ATOMKI X17 anomaly.