## PANIC2021 Conference



Contribution ID: 500 Type: Poster

## The TUCAN EDM Experiment

Tuesday 7 September 2021 11:38 (1 minute)

The goal of the TUCAN EDM experiment (TRIUMF Ultra-Cold Advanced Neutron Electric Dipole Moment experiment) is to make a new precise measurement of the neutron EDM, with uncertainty of  $1 \times 10^{-27}$  ecm, a one order of magnitude improvement compared to the current world's best limit. The experiment is unique in using a spallation-driven superfluid helium (He-II) source of ultracold neutrons (UCN). We have been operating a prototype UCN source at TRIUMF since 2017. We are now at the stage of upgrading this source to produce world-leading UCN densities, using a new He-II cryostat that has undergone cryogenic testing at KEK in 2020-21. We are also assembling the experimental components of the EDM experiment, including a magnetically shielded room, coils, and atomic magnetometers. This presentation will report on the data from our prototype UCN source acquired at TRIUMF, and on our recent progress upgrading the UCN source and preparing the EDM experiment.

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Session Classification: Poster Session I

Track Classification: Tests of symmetries and conservation laws