

An Introduction to the TUCAN EDM Measurement

Friday, 17 February 2023 21:00 (15 minutes)

The TUCAN collaboration aims to make a measurement of the neutron electric dipole moment (nEDM) with a precision of 10^{-27} e cm, an order of magnitude improvement over the current best limit. A non-zero nEDM would be explicit evidence for CP violation in the Standard Model. This, in turn, contributes to solving the longstanding baryon asymmetry problem. Such a measurement requires an immense effort with careful coordination between many different subsystems. This talk will introduce how the nEDM measurement is conducted, the challenges involved, how these subsystems work together to overcome these challenges, and the current state of these systems at TRIUMF.

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