Contribution ID: **15** Type: **Oral**

R&D on field stability and uniformity for the TRIUMF nEDM experiment

Thursday, 19 October 2017 09:25 (25 minutes)

The TRIUMF nEDM experiment employs a magnetically shielded Ramsey Resonance based EDM apparatus employing ultracold neutrons from a spallation based isopure Helium-II UCN source that is currently under construction at TRIUMF. Fluctuations and inhomogeneities of the roughly 1-uT measurement field are expected to be one of the leading sources of systematic errors in the experiment. This presentation will discuss recent R&D efforts toward the generation of a highly stable and uniform magnetic field inside a passively shielded volume. This work includes magnetic shield degaussing/idealization apparatus, self-shielded coil designs, and NMOR-based magnetometry.

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Funding Agency

Natural Sciences and Engineering Research Council (NSERC) of Canada

Consider for Poster

No

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Session Classification: ThMo1

Track Classification: Magnetic field control (passive and active shielding, coil design, current sources)