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

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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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Consider for Poster

No

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