Precision magnetic field characterization for a neutron electric dipole moment search MICHAEL MILLER, University of British Columbia, UNIVERSITY OF BRITISH COLUMBIA ENGINEERING CAPSTONE TEAM TEAM, TUCAN COLLABORATION, TRIUMF COLLABORATION — A non-zero neutron electric dipole moment (nEDM) violates CP-symmetry and is thus closely related to the Baryon Asymmetry in the Universe. It is the goal of the TUCAN collaboration to search for an nEDM with a sensitivity of $10^{-27}ecm. This experiment is conducted using ultracold neutron (UCN) spectroscopy. A static magnetic holdin$

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$art harmonic polynomial magnetic field decomposition to gain improved insight into the role magnetic field inh$

Michael Miller
University of British Columbia