

For the nEDM@SNS

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Ultracold neutrons (neutrons with energies below 300 neV) are useful probes for physics beyond the Standard Model. The nEDM (neutron electric dipole moment) collaboration at the Spallation Neutron Source (SNS) in Oak Ridge, Tennessee, aims to use them to investigate why the universe has a huge matter excess. With a lofty measurement goal on the order of 10^{-28} e cm, sources of error must be beaten down in creative ways – employing superconductors, engineered magnetic alloys, and even an 18th century electrostatic induction machine known as the Cavallo Multiplier.