Abstract Submitted
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Hybrid Magnetic Shielding[1] KEVIN ROYAL, CHRISTOPHER CRAWFORD, ANDREW MULLINS, GREG PORTER, HUNTER BLANTON, CONNOR JOHNSTONE, BEN KISTLER, University of Kentucky, DANIELA OLIVERA, Berea College — The search for the electric dipole moment of the neutron requires the ambient magnetic field to be on the pT scale which is accomplished with large magnetic shielding rooms. These rooms are fitted with large mu-metal sheets to allow for passive cancellation of background magnetic fields. Active shielding technology cannot uniformly cancel background magnetic fields. These issues can be remedied by combining the methods into a hybrid system. The design used is composed of panels that have an active layer of cancellation between two sheets of mu-metal. The panels form a cube and draw in magnetic fields perpendicular to the surface which can then be reduced using active shielding.

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