

Abstract Submitted  
for the APR21 Meeting of  
The American Physical Society

**A Superconducting Mesh for Magnetic Field Stability** CORY SMITH, CHRISTOPHER CRAWFORD, University of Kentucky — Many fundamental symmetry experiments, such as measurements of static electrodynamic moments or neutron spin rotation depend on experimentalists' ability to tightly control the magnetic fields within their apparatus. One source of error in such experiments is transient magnetic fields that have not been effectively shielded. To minimize this error we propose surrounding the measurement volume of the apparatus with a superconducting mesh in order to freeze in the desired fields. The practical limits of this method and potential gains to error reduction will be discussed.

Cory Smith  
University of Kentucky

Date submitted: 08 Jan 2021

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