

Abstract Submitted
for the DAMOP19 Meeting of
The American Physical Society

Does warming a magnetic shield change its properties? BENE-
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We have previously reported (AIP Advances **8**, 035303 [2018]) that delayed changes
in magnetization cause the magnetic flux density inside a Permalloy (mu-metal)
shielded volume to decrease over hours and days. To test if this effect changes with
temperature, we are performing similar measurements on a warmed shield. In a
magnetically nulled region, the shield, wrapped with heating tapes and insulation,
is heated to about 45 °C. The heaters are then turned off, and the shield demagne-
tized by passing a 60 Hz current through a toroidal winding. After a short wait, an
external magnetic field is applied and the magnetic flux density in the center of the
shielded volume is monitored over the next few hours. Preliminary results will be
presented.

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Date submitted: 19 Jan 2019

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