

Abstract Submitted
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Placed in static magnetic fields, Permalloy (mumetal) shields produce time-varying magnetic fields. BENEDICT FEINBERG, HARVEY GOULD, Lawrence Berkeley National Laboratory — Delayed changes in magnetization cause the magnetic field inside a Permalloy shielded volume to decrease by approximately 20 percent over hours to days. The shields tested were 3 mm thick 25- and 30- cm diameter HyMu “80”TM, cylinders, with and without end caps. They were demagnetized and then subjected to a uniform, constant, external magnetic field of 0.48 A/m to 16 A/m, the latter being comparable to the Earth’s magnetic field at its weakest point. This effect has implications for precision measurements where constant magnetic fields are needed. Further details may be found at www.eedm.info.

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