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High field magnetization of Half-Heusler compound LuPdBi BENJAMIN LAWSON, GANG LI, COLIN TINSMAN, FAN YU, TOMOYA ASABA, Univ of Michigan - Ann Arbor, XIANGFENG WANG, JOHNPIERRE PAGLIONE, University of Maryland, LU LI, Univ of Michigan - Ann Arbor — Topological insulators and topological superconductors are a novel phases of matter that have been an area of rich new physics in recent years. Half-Heusler compound LuPdBi has been suggested to have a topologically nontrivial phase by theoretical calculations and has been shown to have superconductivity and weak antilocalization in magnetotransport measurements. Given the promise of this compound, we preformed and report here preliminary results of magnetization measurements in LuPdBi at high magnetic fields up to 45T.

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