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Anomalous Hall Effect in a Kagome Ferromagnet[1] LINDA YE, CHRISTINA WICKER, TAKEHITO SUZUKI, JOSEPH CHECKELSKY, Massachusetts Inst of Tech-MIT, JOSEPH CHECKELSKY TEAM — Theferromagnetic kagome lattice is theoretically known to possess topological band structures [1,2]. We have synthesized large single crystals of a kagome ferromagnet Fe_3Sn_2 which orders ferromagnetically well above room temperature [3].We have studied the electrical and magnetic properties of these crystals over a broad temperature and magnetic field range.Both the scaling relation of anomalous Hall effect and anisotropic magnetic susceptibility show that the ferromagnetism of Fe_3Sn_2 is unconventional.We discuss these results in the context of magnetism in kagome systems and relevance to the predicted topological properties in this class of compounds. [1]*Phys. Rev. B* 87 144101 (2013) [2]*Phys. Rev. Lett.* 106 236802 (2011) [3]*J. Phys: Cond. Mat.* 21 452202 (2009)

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