# Anomalously elastic, intermediate phase in randomly layered superfluids, superconductors, and planar magnets

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We show that layered quenched randomness in planar magnets leads to an unusual intermediate phase between the conventional ferromagnetic low-temperature and paramagnetic high-temperature phases. In this intermediate phase, which is part of the Griffiths region, the spin-wave stiffness perpendicular to the random layers displays anomalous scaling behavior, with a continuously variable anomalous exponent, while the magnetization and the stiffness parallel to the layers both remain finite. Analogous results hold for superfluids and superconductors. We study the two phase transitions into the anomalous elastic phase, and we discuss the universality of these results, and implications of finite sample size as well as possible experiments.