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Pressure-induced antiferromagnetism in pure CeFe2 JIYANG WANG, THOMAS ROSENBAUM, U. of Chicago, YEJUN FENG, Argonne National laboratory, RAFAEL JARAMILLO, Harvard University, SARA HARAVIFARD, Argonne National laboratory — CeFe2 is a ferromagnet that exhibits antiferromagnetic fluctuations in its ground state at low temperature. We use x-ray diffraction to measure directly the emergence of antiferromagnetic order in pure CeFe2 at high pressure. We present an analysis of both the magnetic and lattice symmetries in the newly discovered high pressure phase, and compare our results to those from doped CeFe2 systems. This comparison provides insights into the roles of pressure and chemical doping in driving the magnetic quantum phase transition.

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