

Abstract Submitted
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Ru L_2 edge X-ray resonant magnetic scattering from Ba(Fe_{0.795}Ru_{0.205})₂As₂ compound¹ MIN GYU KIM, Lawrence Berkeley National Laboratory, J. SOH, Ames Laboratory and Dept. of Physics and Astronomy, Iowa State University, J.C. LANG, Y. CHOI, Advanced Photon Source, Argonne National Laboratory, A. THALER, Ames Laboratory and Dept. of Physics and Astronomy, Iowa State University, E. BOURRET-COURCHESNE, Lawrence Berkeley National Laboratory, S.L. BUD'KO, P.C. CANFIELD, A. KREYSSIG, A.I. GOLDMAN, Ames Laboratory and Dept. of Physics and Astronomy, Iowa State University, R.J. BIRGENEAU, Lawrence Berkeley National Laboratory — We have investigated the magnetic polarization of the Ru 4*d* dopant states in Ba(Fe_{0.795}Ru_{0.205})₂As₂ using Ru L_2 edge x-ray resonant magnetic scattering (XRMS). We observed a XRMS signal at $Q = (1/2, -1/2, 3)$, which is consistent with the magnetic propagation vector for the stripe AFM ordering found in the parent BaFe₂As₂ compound. We find that the temperature dependence of the XRMS signal follows closely the temperature dependence of the Fe order as determined by our previous neutron diffraction measurement. Our observations show evidence that the Ru 4*d* states may be spin-polarized.

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