

Abstract Submitted
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Neutron Scattering Experiment on Magnetic Field Effect in Under-doped Superconducting $\text{BaFe}_{1.915}\text{Ni}_{0.085}\text{As}_2$ MIAOYIN WANG, PENGCHENG DAI, Department of Physics and Astronomy, University of Tennessee, Knoxville, MENG WANG, HUIQIAN LUO, Institute of Physics, Chinese Academy of Sciences, JEFFREY LYNN, SUNG CHANG, SONGXUE CHI, DEEPAK SINGH, JOSE RODRIGUEZ, NIST Center for Neutron Research, National Institute of Standards and Technology — In under-doped $\text{BaFe}_{2-X}(\text{Ni},\text{Co})_X\text{As}_2$, superconductivity coexist with the anti-ferromagnetic (AFM) order. By applying a ~ 10 Tesla magnetic field parallel to a-b plan, we performed a series of elastic and inelastic neutron scattering measurement on BT-7 instrument in NCNR, NIST. We measured how magnetic bragg-peaks and spin excitation in $\text{BaFe}_{1.915}\text{Ni}_{0.085}\text{As}_2$ will change upon the change of the field.

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