Abstract Submitted
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Neutron Scattering Study of the Magnetic Structure of NdFeAsO[1] YIMING QIU, NIST Center for Neutron Research and Univ. of Maryland, WEI BAO, QINGZHEN HUANG, MARK GREEN, T. WU, G. WU, XIANHUI CHEN — We report the neutron scattering studies of the non-superconducting NdFeAsO. In NdFeAsO, there is a tetragonal to orthorhombic structural transition at Ts≈150 K, where an anomaly in resistivity also occurs. A long range magnetic order with the wave-vector $(1/2, 1/2, 0)_T$ forms below T_N=1.96 K. This long range order is dominated by the rare earth Nd ions, however, both the Nd and smaller Fe moments contribute to the antiferromagnetic structure. No LaFeAsO-like SDW ordering below Ts was observed in the initial study[1]. We will address the difference in magnetic structures.

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