Abstract Submitted
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A high-resolution x-ray resaonant exchange scattering study of the magnetic structure of $PrNi_2Ge_2$[1] J. C. LANG, Z. ISLAM, G. SRAJER, Argonne National Laboratory, P. C. CANFIELD, L. BOUCHANOIRE, S. BROWN, XMaS, ESRF — The zero-field magnetic structure of $PrNi_2Ge_2$ has been determined using high-resolution x-ray resonant magnetic scattering at the Pr L_2 edge. Magnetic susceptibility measurements had previously indicated the presence of two distinct ordering transitions at T_N=20.4K and T_t=7.7K respectively. Below TN, magnetic Bragg peaks were observed of the form q=(0,0,q_z) consistent with Fermi-surface nesting vector in RNi_2Ge_2 series compounds. q_z reaches a value of 0.8128±0.0002 c^* for temperatures below ∼12K. Intensity measurements as a function of scattering wave vector Q are consistent with moments aligned along the c axis for all temperatures. No obvious changes in intensity or wave vector were observed at the T_t transition.

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