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Ordered Magnetic State in $PrFe_4Sb_{12}$ Single Crystals N.P. BUTCH, W.M. YUHASZ, P.-C. HO, J.R. JEFFRIES, N.A. FREDERICK, T.A. SAYLES, X.G. ZHENG, M.B. MAPLE, University of California, San Diego, J.B. BETTS, A.H. LACERDA, NHMFL-LANL, F.M. WOODWARD, J.W. LYNN, NIST Center for Neutron Research, P. ROGL, G. GIESTER, Universität Wien — Single crystals of the filled skutterudite compound $PrFe_4Sb_{12}$ were prepared and characterized via X-ray and neutron diffraction, specific heat, electrical resistivity, and magnetization measurements. Long range magnetic ordering occurs at $T_c \approx 4.1$ K. The magnetic structure consists of ordered moments on both Pr and Fe sites and may be ferrimagnetic. The electrical resistivity exhibits a very weak dependence on both applied magnetic field and pressure. Specific heat measurements indicate an enhanced effective mass. This work was supported by the DOE, NSF, and NNSA through SSAA. NHMFL is supported by the DOE, NSF, and State of Florida.

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