

Abstract Submitted
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High field magnetization, specific heat and NMR of the two dimensional tetramer-cuprate $\text{Na}_5\text{RbCu}_4(\text{AsO}_4)_4\text{Cl}_2$ RAIVO STERN, NICPB, Akadeemia tee 23, EE12618 Tallinn, Estonia, A. KRIISA, I. HEINMAA, E. JOON¹, NICPB, Akadeemia tee 23, EE12618 Tallinn, Estonia, P. KUHNS, A. HARTEK, A. REYES, W. MOULTON², NHMFL, 1800 East Paul Dirac Dr., Tallahassee, FL 32310, M. JAIME, N. HARRISON, NHMFL-LANL, Los Alamos, NM 87544, J. A. CLAYHOLD, Physics Department, Miami University, Oxford, OH 45056, S.-J. HWU, M. KARTIN-ULUTAGAY, X. MO, W. QUEEN, Department of Chemistry, Clemson University, Clemson, SC 29634 — Complex novel 2D compound $\text{Na}_5\text{RbCu}_4(\text{AsO}_4)_4\text{Cl}_2$ is a unique magnetic material, which contains layers of Cu_4O_4 tetramers [S.-J. Hwu *et al.*, *J. Am. Chem. Soc.*, **124**, 12404 (2002)]. The ground state following a second order low entropy phase transition at 15(1) K is antiferromagnetically ordered one [J.A. Clayhold *et al.*, *Phys. Rev. B*, **66**, 052403 (2002)]. We have measured the ^{87}Rb and ^{35}Cl NMR spectra and high field magnetization and specific heat at low temperatures. We discuss the field dependence of T_N , hyperfine couplings at various nuclear sites, and characteristics of the ordered state as seen from Rb and Cl nuclear sites.

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