Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Inter-chain transport in the quasi-one-dimensional metal, $\mathbf{Li_{0.9}Mo_6O_{17}}$[1] JOSHUA COHN, University of Miami, BENJAMIN D. WHITE, Montana State University, CARLOS A.M. DOS SANTOS, Escola de Engenharia de Lorena - USP, Brazil, JOHN J. NEUMEIER, Montana State University — We report measurements of electrical resistivity (ρ) and thermoelectric power (S) transverse to the conducting chains (crystallographic c axis) on single crystals of the quasi-one-dimensional metal, $Li_{0.9}Mo_6O_{17}$. While $\rho_c(T)$ exhibits metallic behavior at $T \leq T_{max} \sim 270$ K, it decreases with increasing T above this temperature similar to the behavior of ρ transverse to the conducting planes in a variety of two-dimensional metals.[2] We discuss the corresponding thermopower, S_c, which is relatively T-independent and a modest 30 μV/K at low T, increases sharply with increasing T near T_{max}, and exceeds 200 μV/K at $T > 400$ K.

[1]Work supported by the U.S. Department of Energy Office of Basic Energy Sciences (DE-FG02-12ER46888, Univ. Miami), the National Science Foundation (DMR-0907036, Mont. St. Univ.), and in Lorena by the CNPq (301334/2007-2) and FAPESP (2009/14524-6).
[2]See, e.g., D. B. Gutman and D. L. Maslov, Phys. Rev. Lett. **99**, 196602 (2007).

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Date submitted: 20 Nov 2012 Electronic form version 1.4