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Non-Fermi liquid behavior in overdoped iron-pnictides JOHN-PIERRE PAGLIONE, KEVIN KIRSHENBAUM, SHANTA SAHA, TYLER DRYE, University of Maryland — Electrical transport, magnetic susceptibility and heat capacity data are presented on a series of single-crystal iron-based intermetallic compounds with the $ThCr_2Si_2$ structure with transition metal substitution used to heavily over-dope the system. We will present observations of unusual temperature dependences in transport, susceptibility and electronic specific heat that indicate an unexpected deviation from Fermi liquid behavior that persists to milliKelvin temperatures.

Johnpierre Paglione
University of Maryland

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