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Transport Measurements on Icosahedrally Packed Crystals. M. J. Burns, A. Behrooz, X. Yan, P. M. Chaikin*, P. Bancel, P. Heiney Univ. Of Penna., *Exxon Research -- We have measured the resistance, and thermoelectric power as a function of temperature and magnetic field for a series of Al based icosahedral phase crystals of the approximate stoichiometry Al_xTm , where x is from 4 to 6 and the transition metal Tm is Mn or one of several non magnetic elements. The temperature range covered is 300K-0.5K and magnetic fields to 8 Tesla. The measurements were repeated on the same materials after annealing to the crystalline state. Differences between the as quenched and annealed samples will be discussed, as well as the implications for the electronic states of icosahedrally packed crystals.

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