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Magnetotransport in $BaIrO_3$[1] JENNIFER TRINH, Univ of California-Santa Cruz, JOSHUA FLYNN, MAS SUBRAMANIAN, Oregon State University, ARTHUR RAMIREZ, Univ of California-Santa Cruz — The quasi-one-dimensional monoclinic semiconductor $BaIrO_3$ possesses a transition at 177 K characterized by both charge-ordering and ferromagnetism. We have measured the magneto-transport on single crystal samples in fields of up to 7T. We find that the strongly hysteretic positive magnetoresistance (MR) possesses both linear and quadratic contributions. The linear contribution is positive in the full temperature range studied, with a peak below the transition temperature at 150 K. The quadratic MR changes sign at T_C, from positive above to negative below. The Hall effect is non-monotonic as a function of field below T_C and we will relate this to the FM order parameter.

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