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Magnetic and electrical transport study of single crystal YbAu₂¹ H. RYU, E.D. MUN, S.L. BUD'KO, P.C. CANFIELD, Ames Lab / Iowa State University — Single crystals of YbAu₂ grown by flux method are studied by low temperature and high magnetic field measurements of the electrical resistivity and magnetization. For zero field, three magnetic transitions at 1 K, 1.5 K and 2.8 K are observed in the resistivity data, the lower two transitions are suppressed by an applied magnetic field. At low temperatures metamagnetism is observed in the magnetization and magnetoresistance data. Strong anisotropy between the tetragonal ab plane and c-axis, is revealed in both magnetization and transport measurements. The H - T phase diagram for applied field along the *ab* plane is constructed by electrical transport measurements. The anisotropy can be explained with a crystalline electric field (CEF) model. YbAu₂ can be characterized as Kondo lattice compound with strong CEF splitting.

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