

Abstract Submitted
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Hall Effect in LaCrSb₃ TUAN HOANG, MYRON SALAMON, Univ. of Illinois, Urbana-Champaign, DAMON JACKSON, Lawrence Livermore National Lab — Measurements of the Hall effect in LaCrSb₃ are reported. LaCrSb₃ is a quasi-two-dimensional system, where a-axis is highly resistive while b and c-axes are conducting [1]. Measurements were carried out with the current along the b, and c-axis in the temperature range 4-300K. The anomalous Hall effect dominates at low fields. After the magnetization saturated, we observed a T-dependent deviation from the expected behavior of the ordinary Hall coefficient. The existence of two types of carriers has been suggested by Granado *et al.* [2] to explain this deviation. Our data for the current along c suggested that the first type of carriers, which arises from the isotropic Sb plane, is electron-like. The data for the current along b implied that the b-axis conductivity is dominated by hole-like carriers. These hole-like carriers originate from the DE interaction within the Cr chains, which line up along the b-axis, and contribute to the b-axis conductivity mainly at temperatures lower than T_C .

[1] D. D. Jackson *et al.*, Phys. Rev. B **65**, 014421 (2001).

[2] E. Granado *et al.*, Phys. Rev. Lett. **89**, 107204 (2002).

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