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Inelastic process at finite temperature in 2D mutil-band systems JACOB GAYLES, HUAWEI GAO, JAIRO SINOVA, Department of Physics and Astronomy, Texas A&M University, TX 77843 — Despite the recent progress in the understanding of the contributions to the anomalous Hall effect, however there is still a lacking in understanding the role of inelastic processes at finite temperatures and the role of strong disorder. We use numerical methods and the Kubo Formalism to explore this regime multiband systems with spin-orbit coupling. Some experiments with the use of residual conductivity have been interpreted so that extrinsic mechanisms have a strong dependence on the increase in temperature while the anomalous hall conductivity reaches a steady state value.

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