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Interlayer Cooperon correction to angular-dependent magnetoresistance in layered metals MALCOLM KENNETT, Simon Fraser University, ROSS MCKENZIE, University of Queensland — Studies of angle-dependent magnetoresistance oscillations (AMRO) in the interlayer conductivity of layered metals have generally considered semi-classical electron transport. We consider a quantum correction to the semi-classical conductivity that arises from what can be described as an interlayer Cooperon. This depends on both the disorder potential within a layer and the correlations of the disorder potential between layers. We compare our results with existing experimental data on organic charge transfer salts that is not explained within the standard semi-classical transport picture. In particular, our results may be relevant for weak localization-like effects that have been seen when the applied magnetic field is close to parallel to the conducting layers.

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