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Corrections to scaling near the quantum Hall transition FERDINAND EVERS, HIDEAKI OBUSE, SOUMYA BERA, Institute of Nanotechnology, Karlsruhe Institute of Technology, ILYA GRUZBERG, James Franck Institute, University of Chicago — Corrections to scaling near critical points are important to understand, because they superimpose and often obscure the true asymptotics of critical scaling laws. This is true, in particular, for studies near the quantum Hall transition where recent numerical work by Slevin and Ohtsuki (Phys. Rev. B **80**, 041304 (2009)) reports a very small value for the leading irrelevant scaling index $|y| \approx 0.17$. We here report a numerical study of two-point conductances and two-terminal conductances at the integer quantum Hall transition within the Chalker-Coddington network. The scaling of these observables will be analyzed in the two-dimensional and the quasi-onedimensional geometries. We confirm the relation between the conductance exponents X_q and the anomalous dimensions Δ_q known from the multifractal wavefunction analysis: $X_q = 2\Delta_q$. For a consistent picure it is essential to carefully account for corrections to scaling due to subleading power laws and irrelevant scaling operators.

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