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Electron Transport and Tunneling in Single Walled Carbon Nanotube Devices TRAVIS DIRKS, NADYA MASON, Department of Physics, University of Illinois at Urbana-Champaign — Carbon nanotubes remain a fertile ground for the exploration of interacting one-dimensional (1D) physics and Tomonaga-Luttinger liquid theory. Much is still unknown about the factors that influence the transport and tunneling properties of interacting 1D systems such as nanotubes. We report on experiments that use techniques such as multiple contacts on long nanotubes and tunable tunnel barriers to determine how the manifestations of electron-electron interactions, such as the zero-bias anomaly, depend on the length and defect strength in nanotubes.

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