

Abstract Submitted
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Quantum Monte Carlo calculations on the 1-dimensional electron gas¹ ROBERT LEE, N.D. DRUMMOND, Cavendish Laboratory, Cambridge — I will present quantum Monte Carlo (QMC) calculations on the 1-dimensional electron gas. In particular, we have computed the ground state energy, momentum density, pair-correlation function and static structure factor of electrons in 1d for different electron-electron interactions. By fitting to the resulting correlation functions, we find the Luttinger model parameters for the system and compare with experiments on a number of quasi-1d systems.

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