

Momentum Distribution and Effective Mass of Jellium and Simple Metals

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I will present results of Quantum Monte Carlo calculations of the simplest spectral properties of metals: momentum distribution and effective mass. Since QMC calculations are limited to rather small system sizes, extrapolation to the thermodynamic limit remains one of the major obstacles. I will discuss strategies how to improve convergency in certain cases and compare theoretical results for the momentum distribution to experimental measurements on crystalline sodium.