Statistical Physics Homework 5

1. Calculate the heat capaticy at constant volume, C_V, of the non-interacting Fermi gas for low temperatures.

2. Calculate the low-temperature entropy of the interacting electron gas in the jellium model up to first order in the interaction. That is, in the Hartree–Fock approximation.

3. Calculate the heat capaticy at constant volume, C_V, of the interacting electron gas in the jellium model up to first order in the interaction.

Submission: at the beginning of the practice class on 30 Nov.