PH3521701 现代原子物理 **2017-05-21**

Lecture summary

05/21

- Bose-Einstein Statistics
- Bose-Einstein Condensate
  - Transition temperature Tc
  - Density distribution in coordinate space and momentum space
  - s-wave scattering length
  - Feshbach resonance

Homework (due on Tuesday 5/28)

1. Consider a cloud of Bose gas confined in a 3D box with rigid walls, calculate:
   1) The density of states
   2) Derive the formula for the number of particles in the condensate state as a function of temperature T.
   3) The transition temperature