ASTR 792
T/R 9:30 - 10:45 AM
Due October 31

Week #11

Draine 19.1

By approximating the sum by an integral, evaluate the partition function for a rigid rotor,

$$Z_{rot} = \sum_{J=0}^{\infty} (2J + 1) \, e^{-B_0 J(J+1)/kT_{ex}}$$

in the high temperature limit $kT_{ex}/B_0 \gg 1$