

# Thermal Physics

## Chemical potential

**Problem 1.-** Consider that at sea level the  $O_2$  in the atmosphere contains 99.500% of molecular mass  $m=32u$  and 0.500%  $m=34u$

Using the expression of the chemical potential for an ideal gas and considering each gas independently, calculate the fraction of heavy oxygen in the atmosphere at the height of  $h=14,000m$  assuming a constant temperature of  $270K$ .