[tex55]**Phase coexistence of ammonia**

The vapor pressure curve of solid NH_3 (sublimation curve) is found to satisfy the relation $\ln p = 23.03 - 3754/T$ and the vapor pressure curve of liquid NH_3 the relation $\ln p = 19.49 - 3063/T$, where p is measured in units of mm Hg and T in Kelvin.

Consider $n = 1$mol of this substance. Assume that the densities of the solid and liquid phases are much larger than the density of the gas phase. Treat the NH_3 vapor as an ideal gas.

(a) Find the pressure p_0 and the temperature T_0 at the triple point.

(b) Find the latent heat $L_0^{(lg)}$ (in units of Joule) of the liquid-gas transition at the triple point.

(c) If the latent heat of the solid-gas transition (at the triple point) is $L_0^{(sg)} = 3.143 \times 10^4$J what is the latent heat $L_0^{(sl)}$ of the solid-liquid transition?