

Dependence on T and p

$$dG = -SdT + Vdp$$

Changes in a state function like $G(T,p)$ are given by

$$dG = \left(\frac{\partial G}{\partial T} \right)_p dT + \left(\frac{\partial G}{\partial p} \right)_T dp$$

So $\left(\frac{\partial G}{\partial T} \right)_p = -S$ and $\left(\frac{\partial G}{\partial p} \right)_T = V$