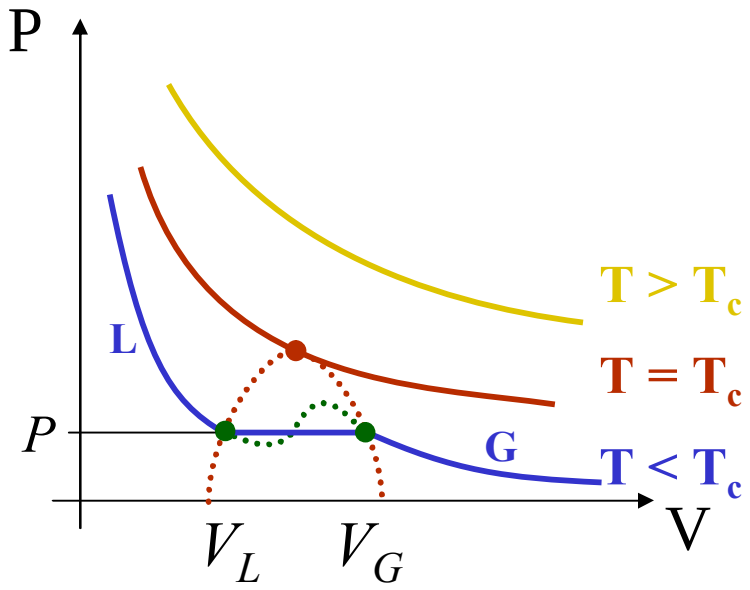
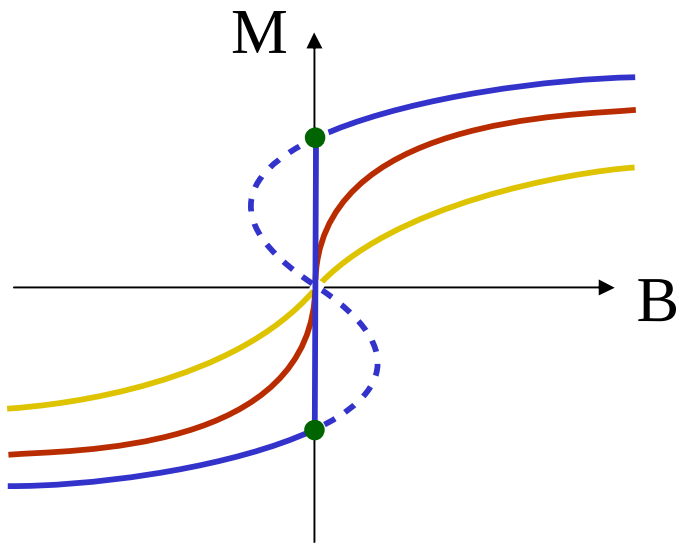
Universal features of phase transition

- Comparison of Liquid-Gaz and para-ferromagnetic transtions:
  - –different origin of phase transitions…
  - – but similar behavior

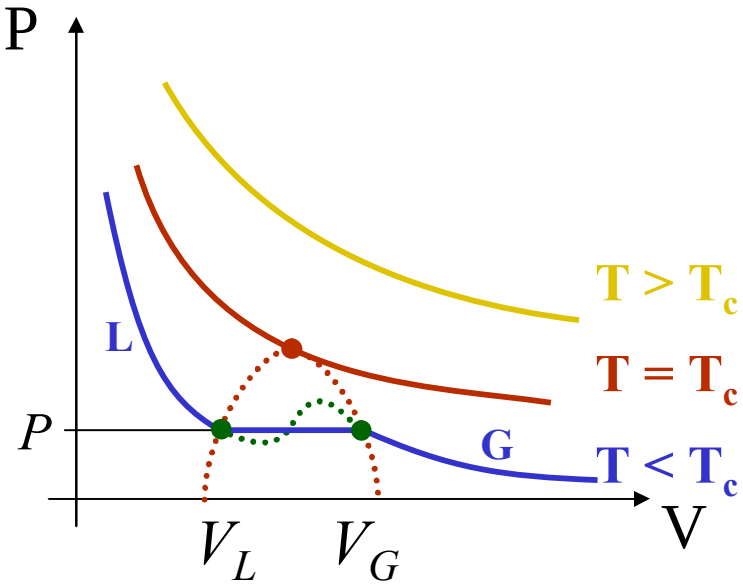
  - Liquid-Gaz: (P,V,T)
  - Para-ferromagnetic: (B,M,T)
  - **isotherm** :

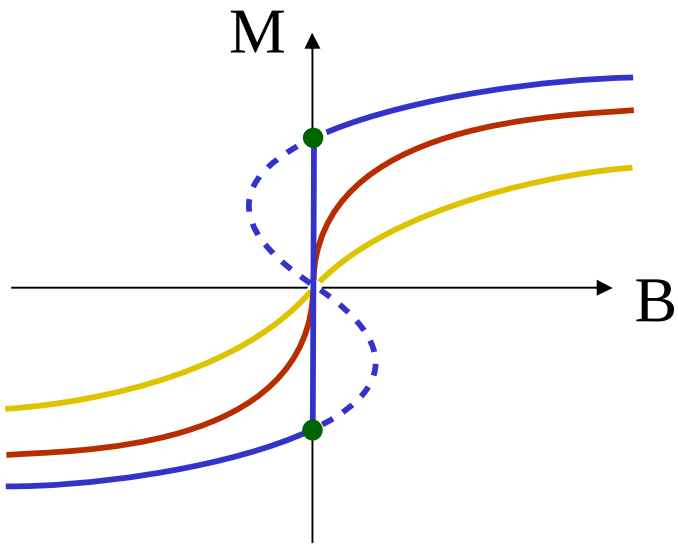


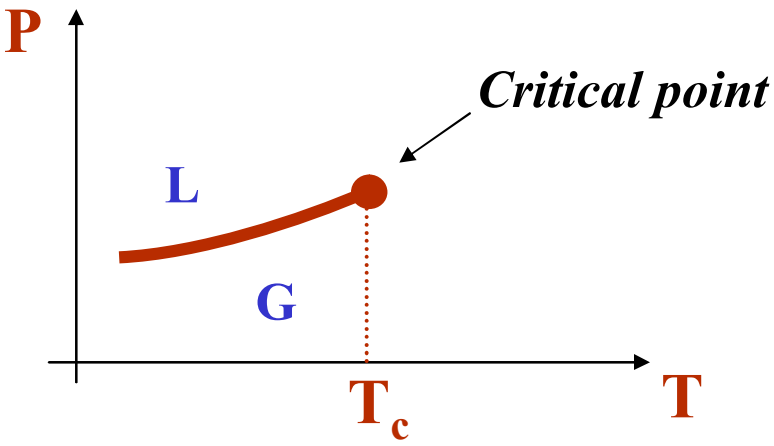


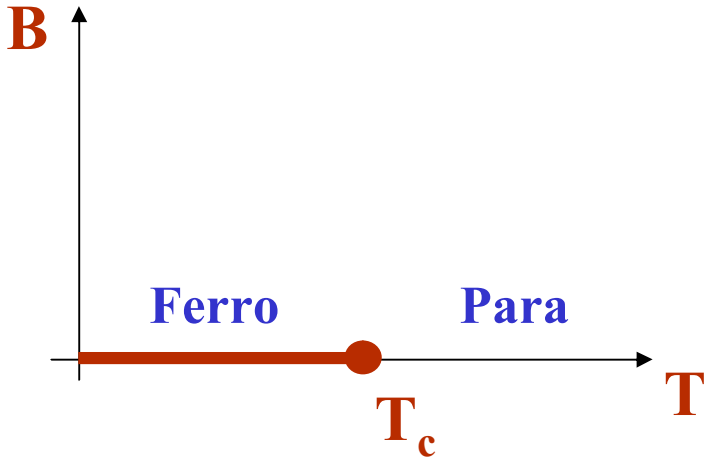
Universal features of phase transition

- Comparison of Liquid-Gaz and para-ferromagnetic transtions:



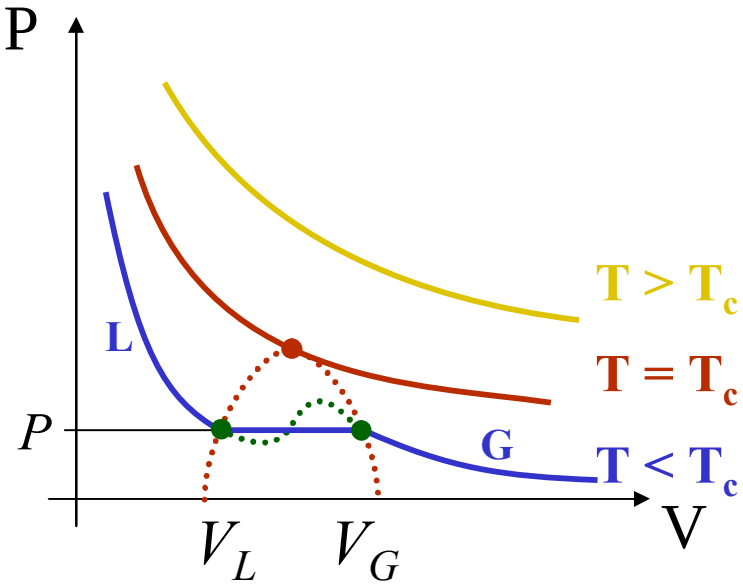


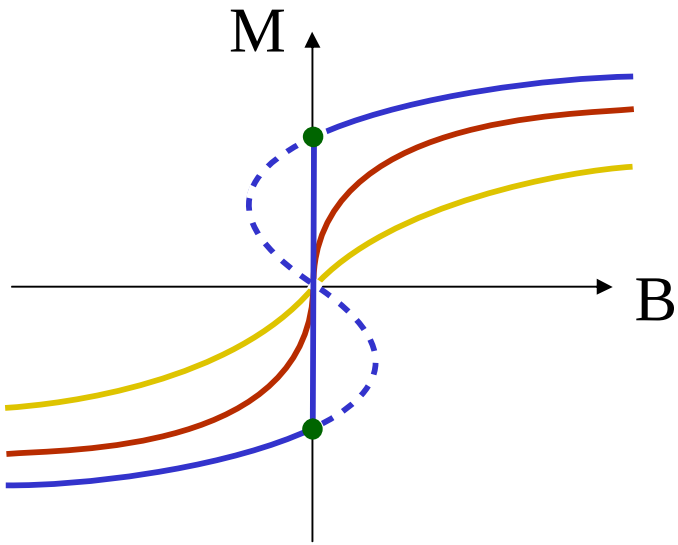


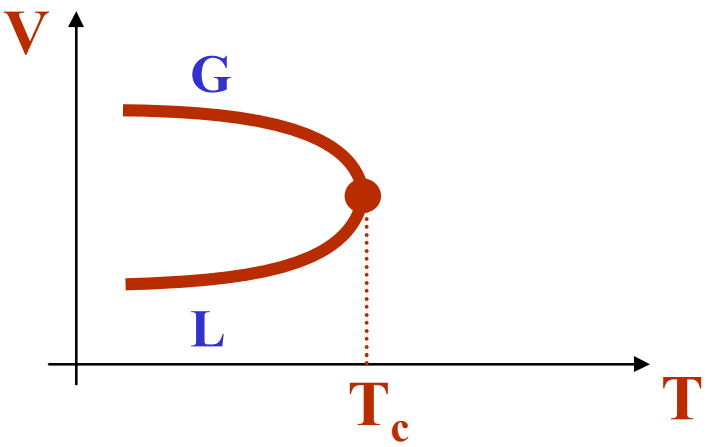


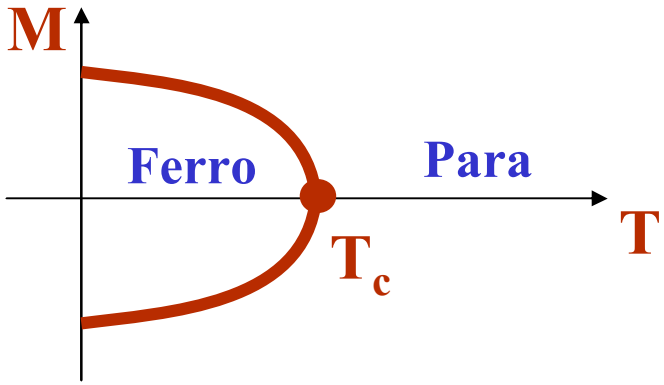
Universal features of phase transition

- Comparison of Liquid-Gaz and para-ferromagnetic transtions:









Universal features of phase transition

- Comparison of Liquid-Gaz and para-ferromagnetic transtions:
  - **susceptibility**

Gaz / Liquid

compressibility

$$\chi = \kappa_T = -\frac{1}{V}\cdot\left(\frac{\partial V}{\partial P}\right)_T$$

Para-ferromagnetic

magnetic susceptibility

$$\chi_m = \mu_o \cdot \left(\frac{\partial M}{\partial B}\right)_T$$