

- Eddington luminosity
- Try it yourself:
  - How does central temperature scale with M, R and L for a purely radiative star? *Hint*: assume  $T_c = A T^b$ , and approximate  $\partial T/\partial r = -T_c/R$ .
  - How does central temperature scale with M and R for a star in hydrostatic equilibrium, assuming the ideal gas equation of state?
  - Combine the two above results and derive how L scales with M and R.
- Consequence: M-L relationship depends on transport (rather than production)!
- Another consequence: there is maximum mass for stars!
- Convection
  - origin of convection
  - efficient transport of energy, efficient mixing
- The model of convection
  - what happens to a blob of gas under small radial displacement?
  - dynamical timescale vs. heat exchange timescale?
  - criterion for convection
- Ledoux and Schwarzschild criteria