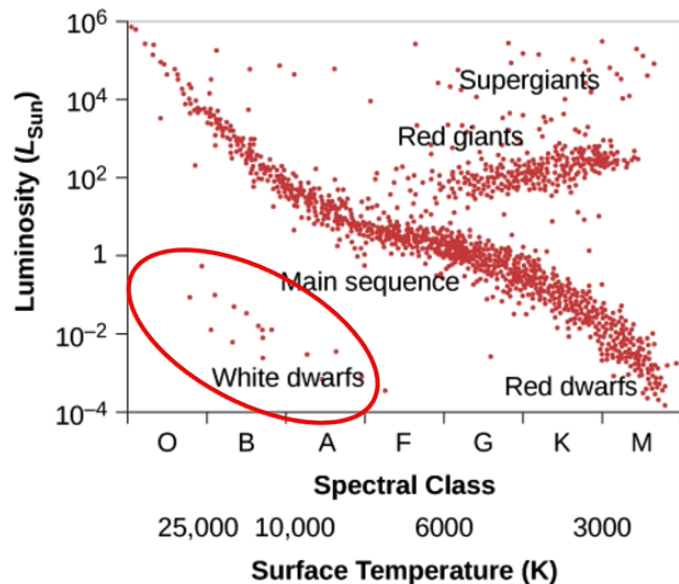


1 Small stars not big enough to fuse heavier elements

Fusion provides outward force to balance Gravity pulling in

## Hydrostatic Equilibrium

Core compresses into a **white dwarf**



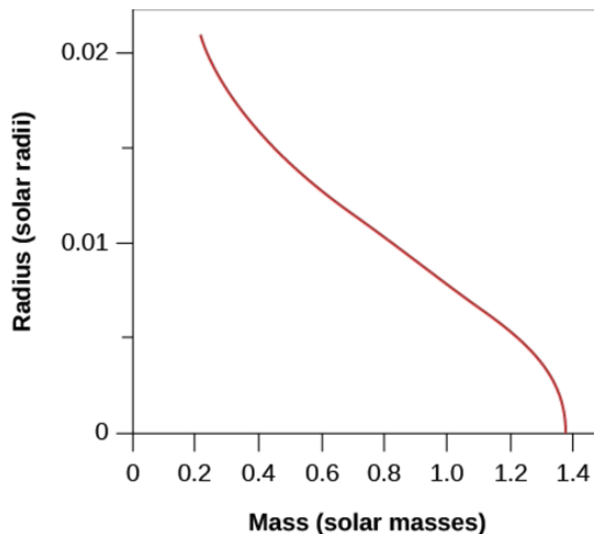
# Fate of Low Mass Stars

Very Dense - Mass of Sun in the size of Earth

No Fusion - Needs outward pressure!

**Degenerate Gas:** From Quantum Mechanics - Electrons can't be at the same place at the same time in the same state

Electrons inherently provide outward pressure if you try to compress them too much!



More massive the White Dwarf, the smaller they get (more dense)

Beyond a certain mass (1.4 Solar Masses - **Chandrasekhar limit**) the star can't support itself