Space Physics

- Orbital speed
  - $v = \dfrac{2\pi r}{T}$ where r is the average radius of the orbit and T is the orbital period
- Light-year = $9.5 \times 10^{15} \, m$
- Diameter of milky way ~100 000 light-years
- $Hubble \; constant = \dfrac{speed \; of \; galaxy \; moving \; away \; from \; Earth}{Distance \; from \; Earth} = {\sim}2.2 \times 10^{-18} \, per \; second$
  - $H_o = \dfrac{v}{d}$
- Age of Universe
  - $\dfrac{d}{v} = \dfrac{1}{H_o}$