## September 18, 2020 MSE 2101 topics

- Putting it all together: the age of Earth
  - o zirconium silicate crystals
  - Moon rocks
  - meteorites
- Life in "Hell"?
  - atmosphere and oceans?
  - heavy bombardment → sterilizing impacts
  - o using craters to get rough ages in the solar system
- What drives geology on Earth (and other worlds)?
  - The sources of internal heat: collisions, gravity, radioactivity
- Plate tectonics
  - Wegener's model of continental drifts
  - Seafloor spreading
  - Differences in seafloor and continental plates
  - Subduction, spreading, faults and hot spots
- Atmosphere longevity
  - solar wind stripping
  - impacts and collisions
  - thermal escape
- The source of magnetic field revisited
  - electrically conducting fluid/gas
  - o convection in such a layer
  - o moderately rapid rotation