## October 23, 2020 MSE 2101 topics

- Was water on the surface permanently or intermittently?
- Recent water flows? The changing nature of gullies
- Why was Mars so much wetter in the past?
- Where did all that CO<sub>2</sub> go?
  - What keeps our own atmosphere safe again?
- So why did water disappear?
- And why did the planet "rust up"?
- Viking experiments
- Methane in the atmosphere: organic or inorganic sources?
- The story of ALH84001
  - how do we know it is from Mars?
  - how do we know how old it is?
  - how do we know how long it spent in space?
  - how do we know how long it rested in Antarctica?
- The claim for Martian life from ALH84001
  - layered structure of carbonate grains
  - polycyclic aromatic hydrocarbons
  - magnetite grains
  - rod-shaped structures similar to bacteria (only much smaller)