November 25, 2019 MSE 2101 topics

- Life on Mars?
- Viking experiments
 - carbon assimilation
 - gas exchange
 - labeled release
 - gas chromatography and mass spectroscopy
- 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)
- The claim against Martian life from ALH84001