

November 20, 2015
MSE 2101 topics

- Why was Mars so much wetter in the past?
(see Wednesday's handout for details)
- Life on Mars
 - Viking experiments
(1) carbon assimilation, (2) gas exchange, (3) label release,
(4) gas chromatography and mass spectroscopy
 - Methane in the atmosphere
 - Martian meteorites
- 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