

November 22, 2019  
MSE 2101 topics

- Exploration of Mars: the Mariners and the Vikings
- Martian atmosphere; seasons and winds
- Martian landscape; north and south
- Olympus Mons, Valles Marineris
- Water on Mars
  - orbital evidence: dry riverbeds, impact craters
  - spectroscopy: hydrated minerals
  - rovers: hematite, opaline minerals, hydrated sulfates
- 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”?