

December 4, 2019
MSE 2101 topics

- Off to the moons around gas giants!
- Sizes, orbits, compositions of jovian moons
- Synchronous rotation and tidal forces
 - tidal locking of the Moon: 4cm/year, 1s/50,000 years
- Tidal heating as the dominant source of energy
- Io
- Europa:
 - spectroscopy from Earth
 - Voyager
 - Galileo orbiter
- Water on Europa
 - lack of impact craters
 - zig-zaggy (a.k.a. chaotic) terrain
 - magnetic field
 - future prospects: altimetry and radio wave reflections
 - just how much water might there be?
- Life on Europa
 - building blocks? liquid? energy?
 - energy for the origin and energy for ongoing life support
- Ganymede, Callisto and other moons