

Astronomy 138 Exam 3 LG list. New thing: you are allowed a 3x5 index card for planetary data

Grand tour of planets section: describe general orbit size, shape, inclination. Describe mass, obliquity, rotation. Describe basic composition and internal structure (layers, composition, density, special things like liquid or solid or metallic hydrogen).

Ch 8, Moon & Mercury

- Describe surface features and relate to Moon & Mercury's formation
- Describe the spin-orbit couplings of Moon & Mercury and understand why
- Relate crater counting to surface age
- Describe evidence for past volcanism
- Summarize the giant impact theory for the moon

Ch 9, Venus

- Venus's atmosphere composition and pressure
- Surface geology compared to earth (Aphrodite Terra, Ishtar Terra, Maxwell Montes)
- Evidence of ongoing volcanism
- Describe runaway greenhouse effect on Venus and contrast with Earth

Ch 10, Mars

- Surface geological features (Valles Marineris, Tharsis, Olympus Mons, Hellas, Syrtis Major)
- Martian history, geological and atmospheric
- Evidence for flowing water and possible ocean
- Phobos and Deimos

Ch 11, Jupiter

- Atmosphere features (belts, zones, storms, great red spot)
- Magnetosphere
- Tidal heating of Io
- Structures of 4 main moons

Ch 12, Saturn

- Atmosphere and internal structure contrasted with Jupiter
- Saturn's internal heat source
- Saturn's ring system, basic Keplerian operation and composition and structure
- Define Roche limit and relate the Roche limit to ring formation
- Titan, basics of what Huygens (the NASA probe) discovered
- Satellite system, regular vs. irregular.

Ch 13, Uranus and Neptune

- Discovery stories
- The tilt of magnetic fields relative to spin axis
- Ring systems
- Regular and irregular moons. Neptune is strange in this regard.