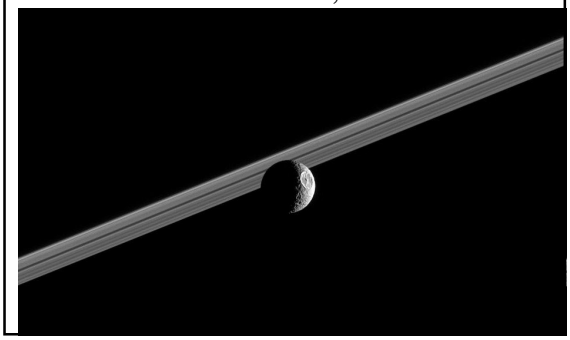
Astronomy Review

…and final thoughts

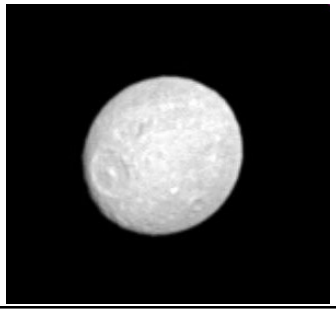
Agenda

- Multimedia needs? DVD/TV player, powerpoint? Anything else?
- Observation—Wednesday, 6pm outside Pell, dress warmly
- Would you have registered for this class if were MWF?
- Anyone have questions about projects?
- Get me everything to be graded (obviously!)
- Latest from Cassini probe
- Review
- Final Thoughts
- Review game

Saturn's Moon, Mimas



Not that round



Review

Ch.9 – Formation of the Solar System

- What features of system to be explained by any good theory?
- What is the theory?
- What physical principles dictate features of system (rotation, flat disk, two types of planets, etc)
- What observational evidence supports theory?
- How do we explain the exceptions (Earth's moon, Triton, Uranus, etc)?
- How do we know age of things? How does radiometric dating work?
- Extrasolar planet detection?

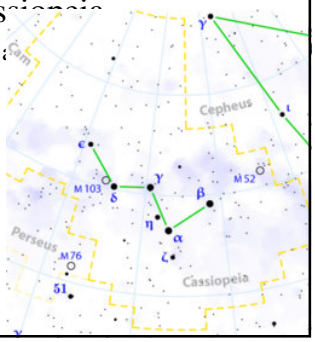
Ch. 10—Planetary Geology

- Variety of features of the terrestrial surfaces
- Layering of planets…by density, by rigidity
- The role of heat in the "life" of a terrestrial planet
  - Source of heat (accretion, differentiation, radioactivity)
  - Methods of cooling off (conduction, convection, eruptions)
- Role of magnetic field…(source of, etc)
- Shaping of planetary surfaces (volcanism,cratering,tectonics,erosion)

COTDs

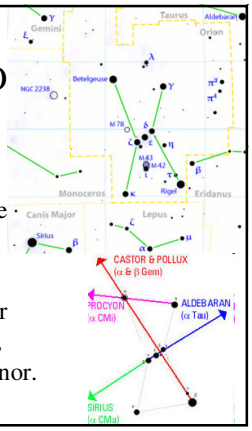
Constellation of the Day: Cas

- 5 bright stars making a
- Near NCP

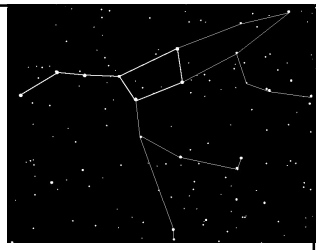


COTD: O

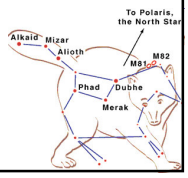
- A Winter Constellation
- Brightest stars: Betelguese (alpha; shoulder), Rigel (be
- Distinctive belt..three stars row
- The hunter stands by river Eridanus accomp. by dogs, Canis Major and Canis Minor.
- The Great Orion Nebula



COTD: Ursa Major

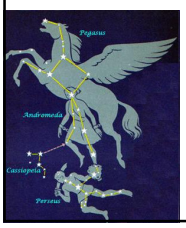


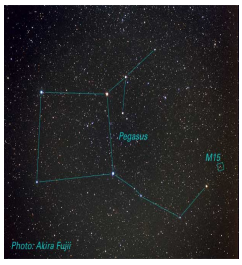
- The Great Bear
- Home of Big Dipper
- Circumpolar for northern latitudes
- Outer bowl edge points up to Polaris
- Slaves advised to "follow the drinking gourd" to freedom



- Resembles grazing horse
- Contains Great Square of Pegasus (asterism)

COTD: Pegasus





Final Thoughts

Astronomy/Astrophysics/Cosmology

- Fascinating, extreme stuff out there
- We've come a long way…lots of precision measurements, detailed answers
- Has worked best when people defy the accepted
- This stuff is understandable by all
- Brings together all the natural sciences (bio, chem, phys)
- Better perspective on our place in the Universe?

Science

- Process of investigating nature through experiment/observation, conjecture, and continued refinement of both
- Not perfect nor free from our prejudices, but collectively it achieves much
- Cannot answer every question out there, nor purports to do so

Hopes for the future…

- Keep learning: go to talks, read scientific books/articles, and ask questions
- Science becomes the domain of all…just like music, art, etc