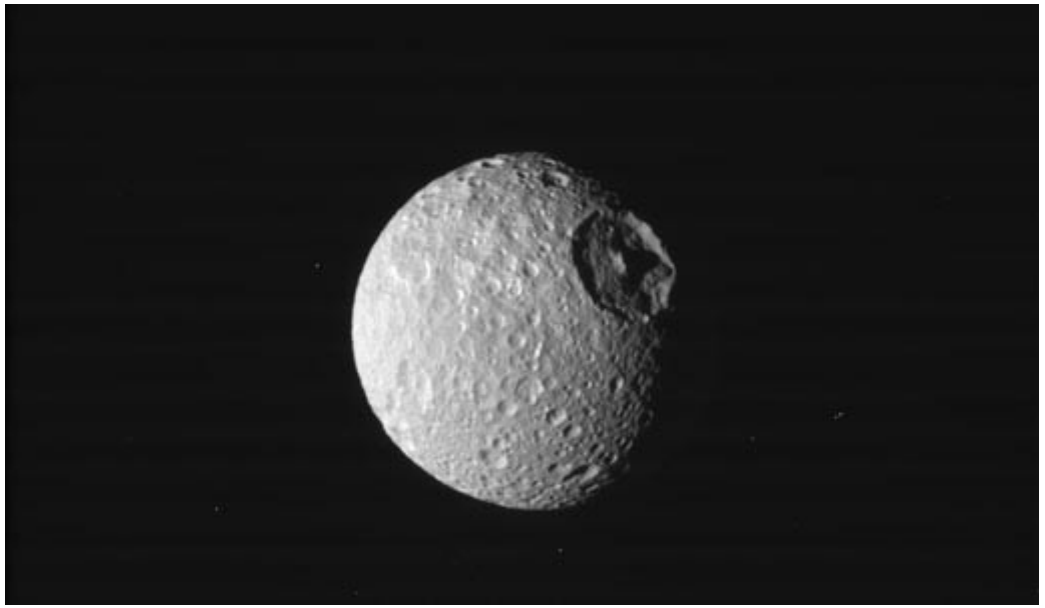
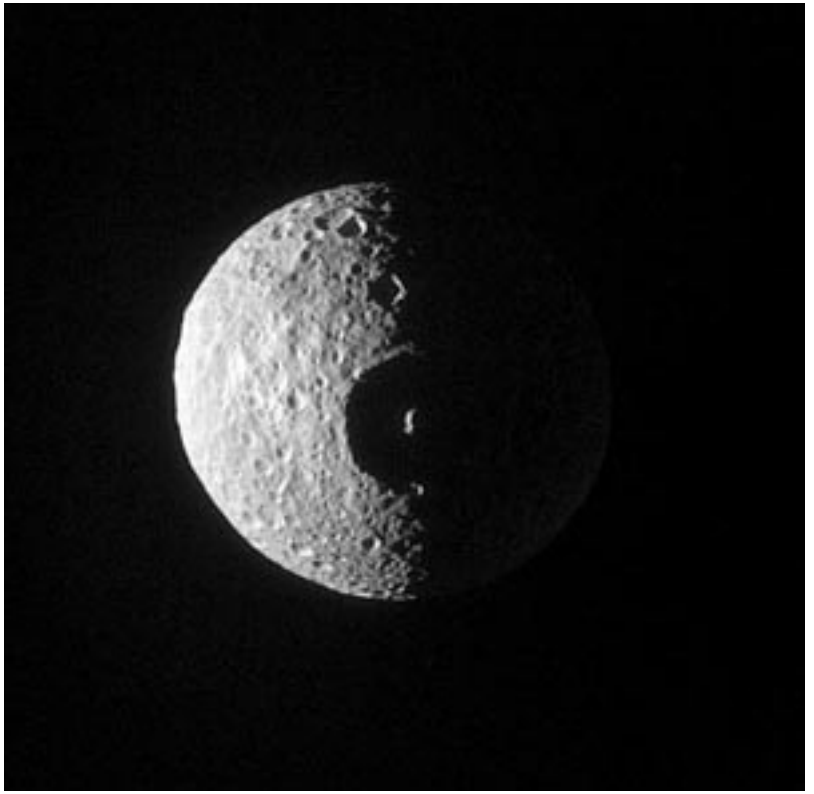
SAS Honors Seminar 256: Extraterrestrial Life

10/27/2011

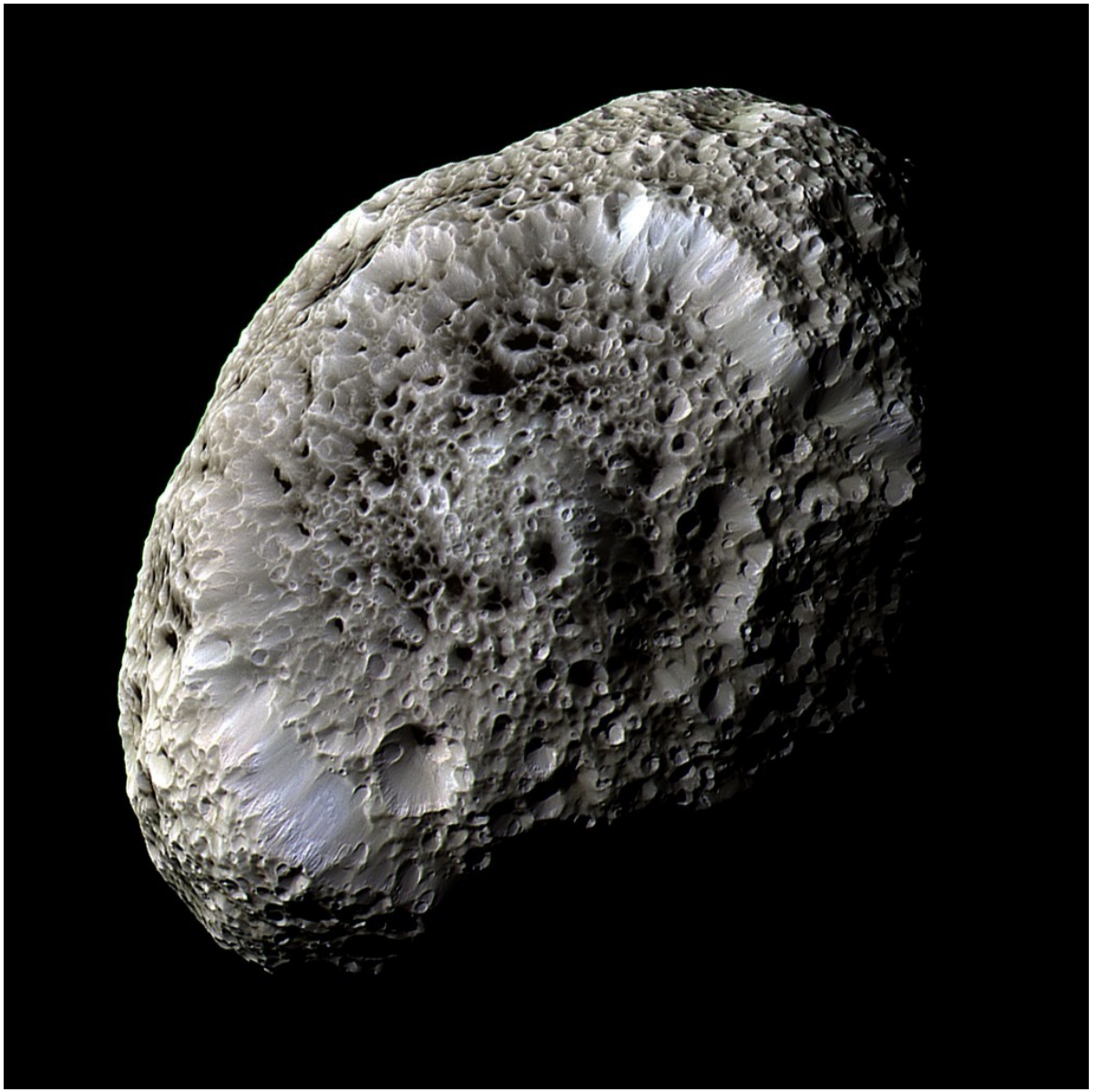
Mimas (a.k.a. the “Death Star”)





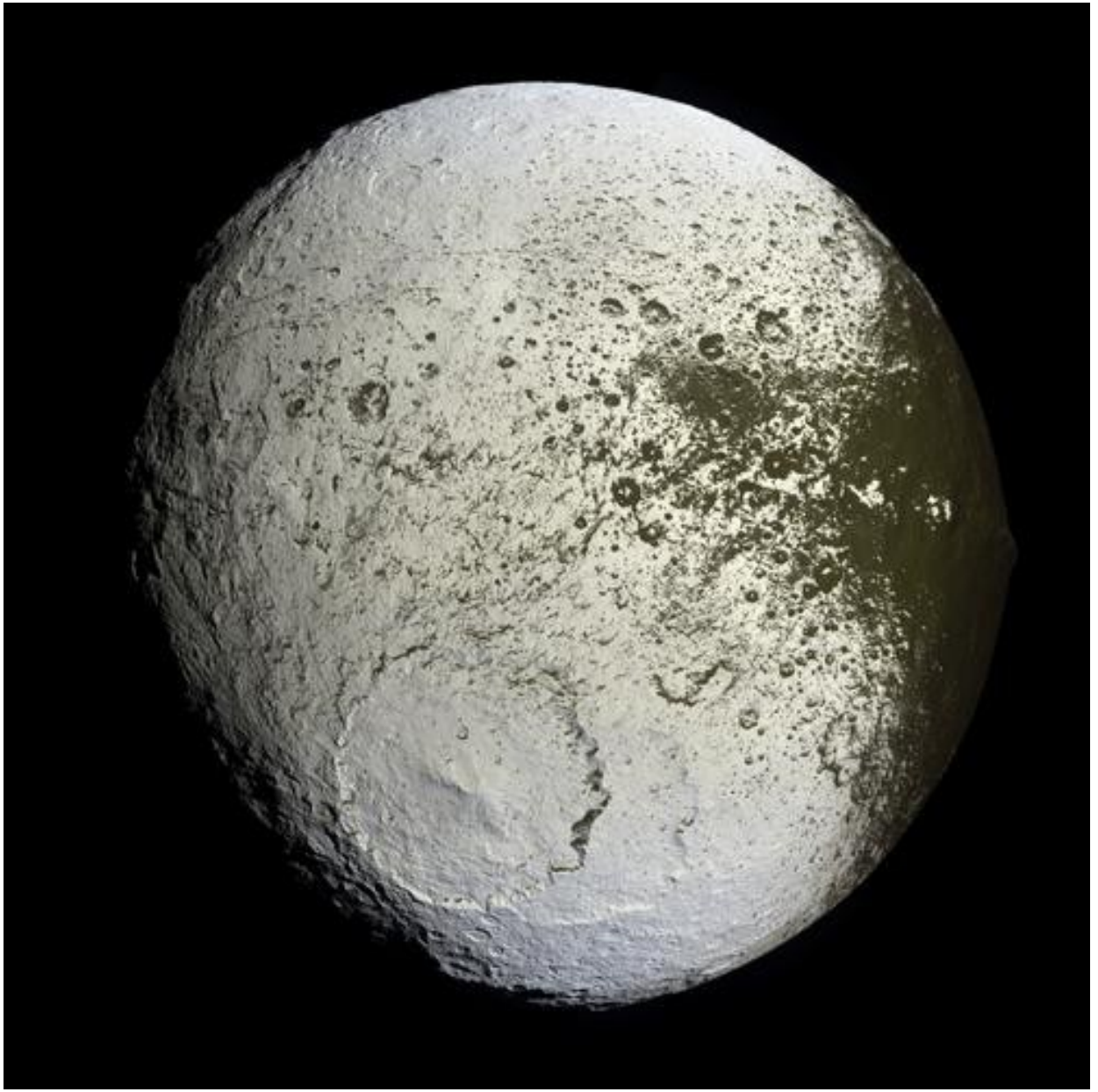
NASA/*Cassini* (http://saturn.jpl.nasa.gov/)

Hyperion (a.k.a. the “sponge”)



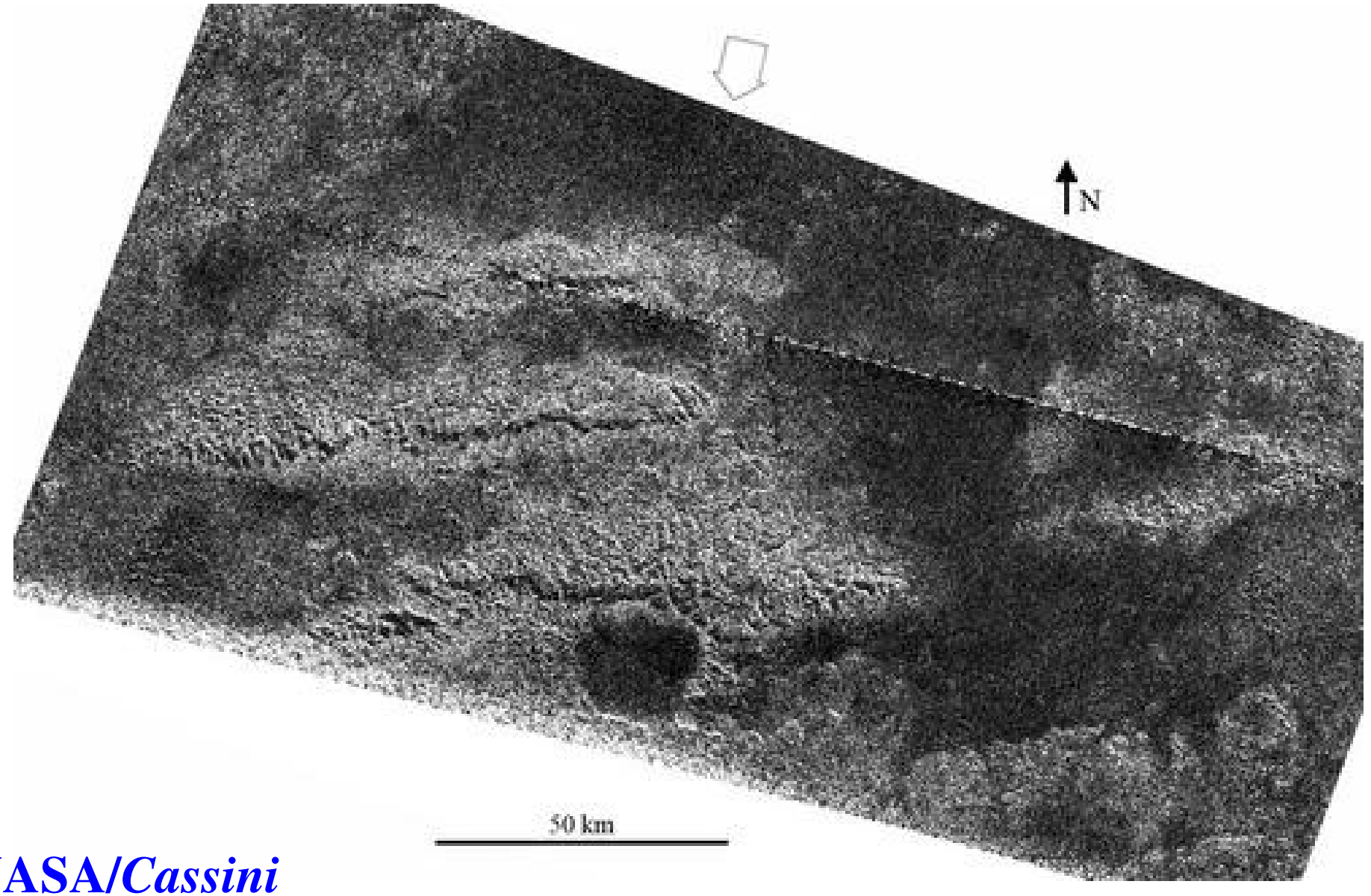
NASA/*Cassini*

Iapetus (a.k.a. “two-face”)



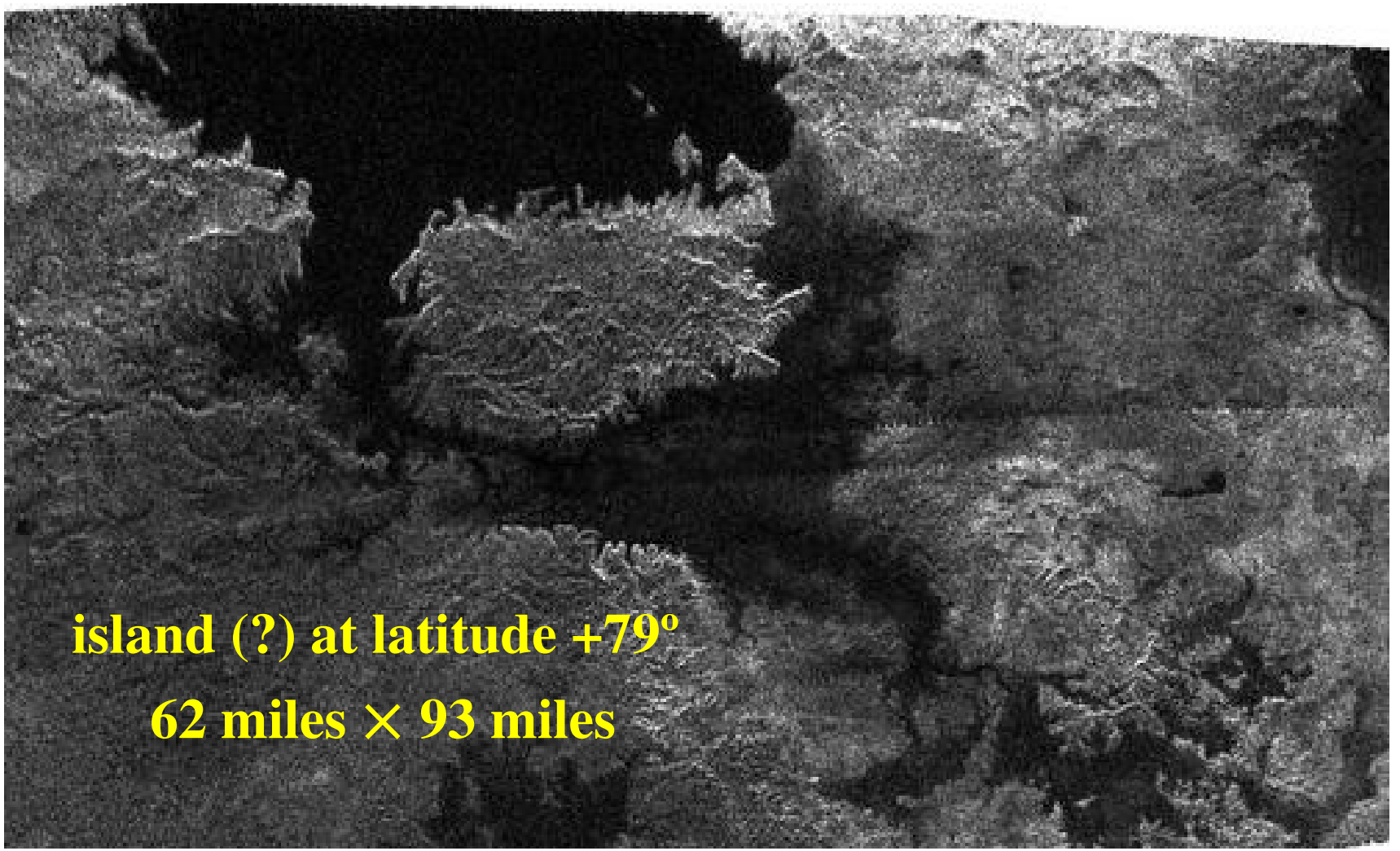
NASA/*Cassini*

Titan: tectonics



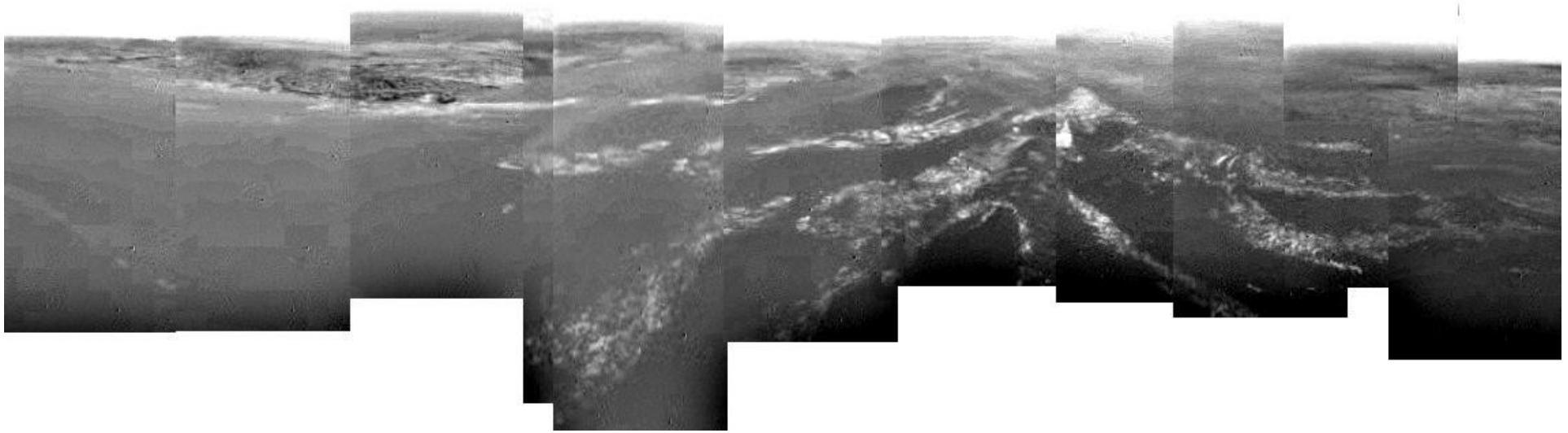
NASA/*Cassini*

Titan: lakefront property



NASA/*Cassini*

Titan: descent of *Huygens*

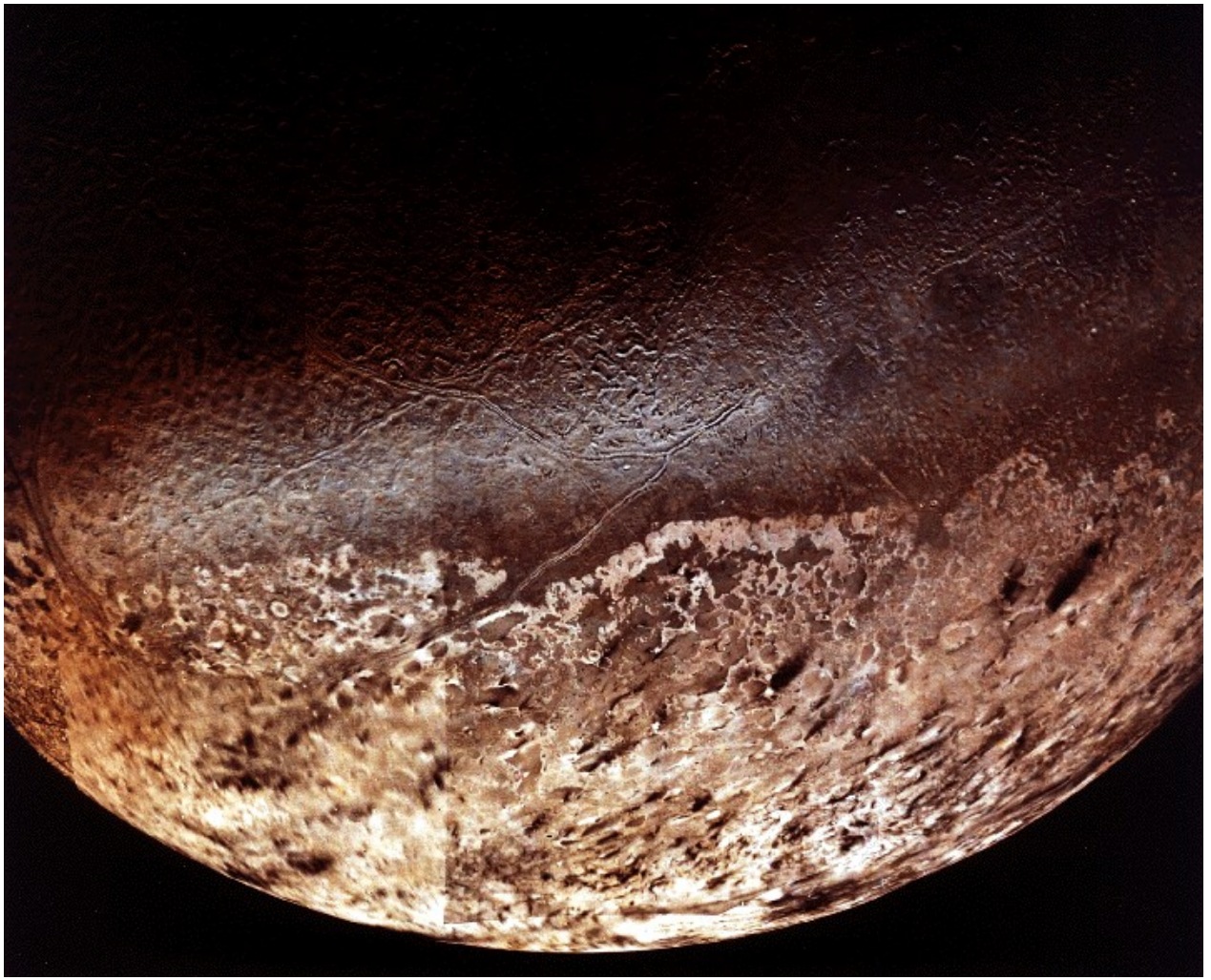


360 degree panorama taken at ~8 km altitude

as *Huygens* moved towards its touchdown

NASA/*Cassini*

Triton: geologically active!



Voyager 2 images show black streaks indicative of geyser activity

NASA/JPL

Reading for Tuesday (11/1)

Bennett & Shostak 11.2 – reread pp 379-384 only, as background for rest of discussion

Sagan et al. (1993) – use *Galileo* observations to find evidence "strongly suggestive of life on Earth"

Arnold (2008) – review of attempts to detect the "Vegetation Red Edge" in Earth's spectrum

Cheat sheet for latter two articles available on website.

Reading for Thursday (11/3)

Bennett & Shostak 6.4 – background on impacts and mass extinctions

Alvarez et al. (1980) – original article proposing impact explanation for extinction of dinosaurs

Cheat sheet for Alvarez et al. available on website.

Due Friday (11/4)

Mid-term project (submit by email).

If you have questions, email is best (my responses may be slow Friday, Monday– no office hours!– and Wednesday).

Due Tuesday after next (11/8)

Response paper #7:
Assuming that NASA only has enough money to fund one astrobiological mission (i.e., a search for evidence of life) in the next ten years, should this mission focus on Mars, Europa, or Titan?
Explain and justify your views.