

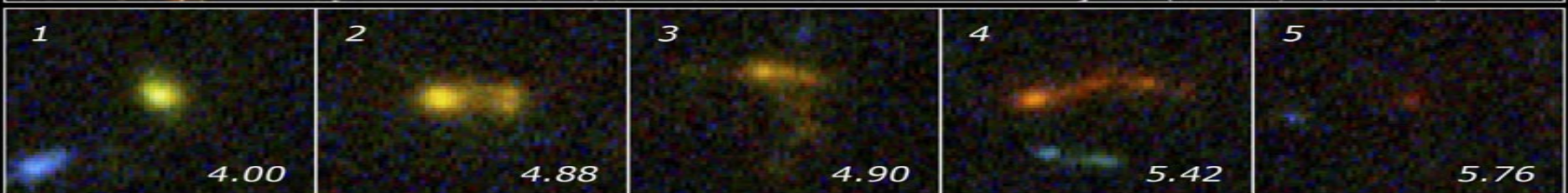
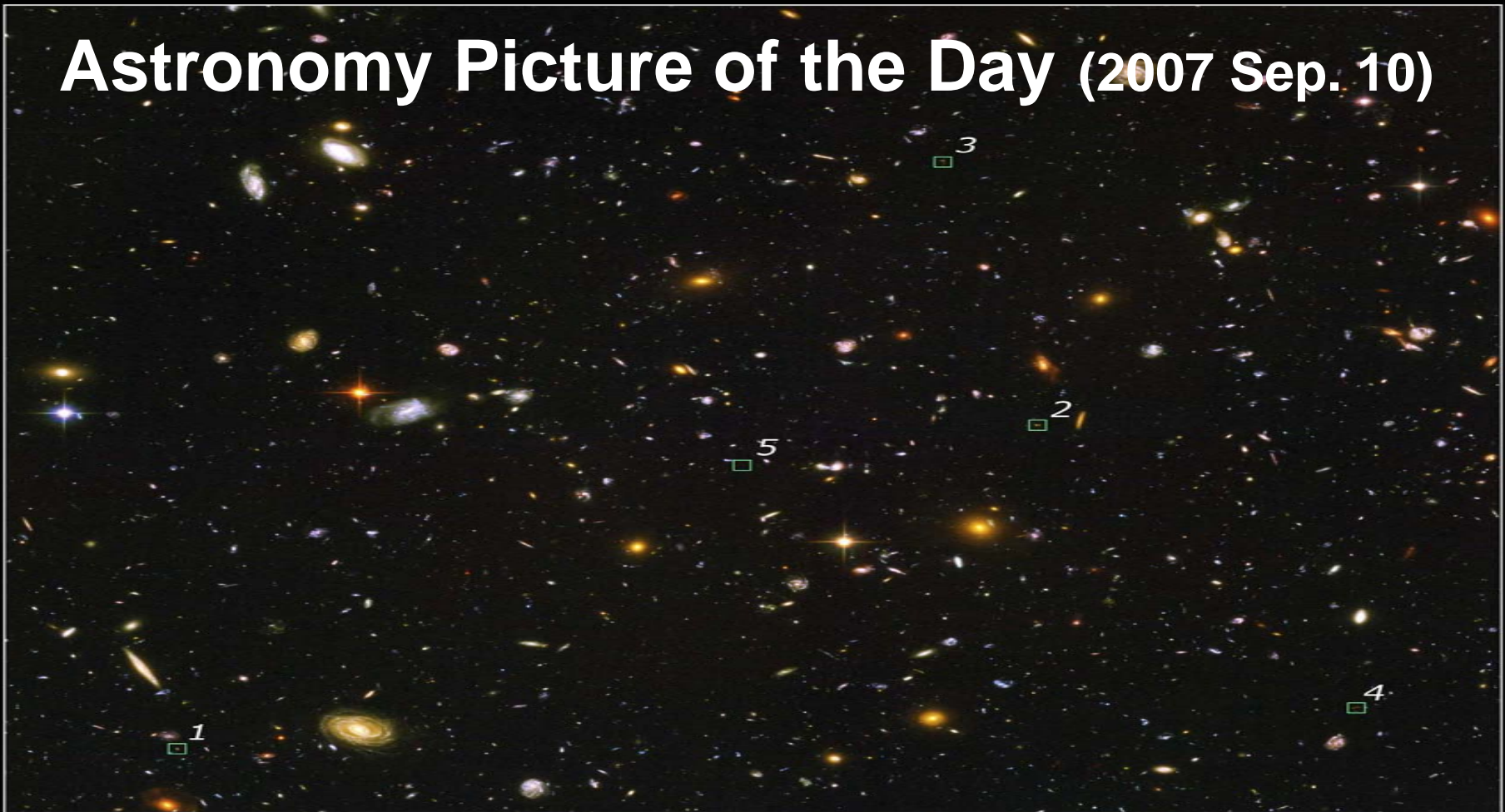
ASTR 111 – 003

Fall 2007

Lecture 02 Sep. 10, 2007

Highlights of the Universe

Astronomy Picture of the Day (2007 Sep. 10)



Galaxy Building Blocks in the Hubble Ultra Deep Field
Hubble Space Telescope • ACS/WFC

Astronomy Picture of the Day (2007 Sep. 2)



Advanced Question

Chap. 1, Q37 in P18

Suppose your telescope can give you a clear view of objects and features that subtend angles of at least 2 arcsec. What is the diameter in kilometers of the smallest craters you can see on the Moon?

Advanced Question

Chap. 1, Q37 in P18

Answer:

Using small angle formula: $D = \alpha d / 206,265$

$$\alpha = 2 \text{ arcsec}$$

$$d = 384,400 \text{ km}$$

→

$$D = 3.7 \text{ km}$$

This is the linear resolution of the telescope at the distance. The size of the smallest craters that can be seen is about 3.7 km