



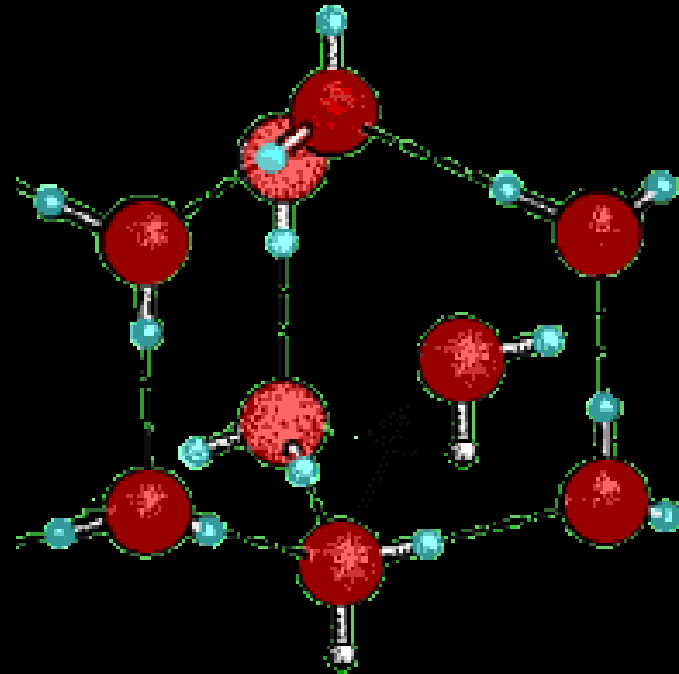
IQ

- The most important component of life on Earth is the presence of:
- A. CO₂ in the atmosphere
- B. liquid water
- C. plate tectonics
- D. the Taos Hum



IQ

- The correct answer is **B**.
- The most significant determinant of life on our rocky (terrestrial) planet is the presence of liquid water, the “universal solvent.”





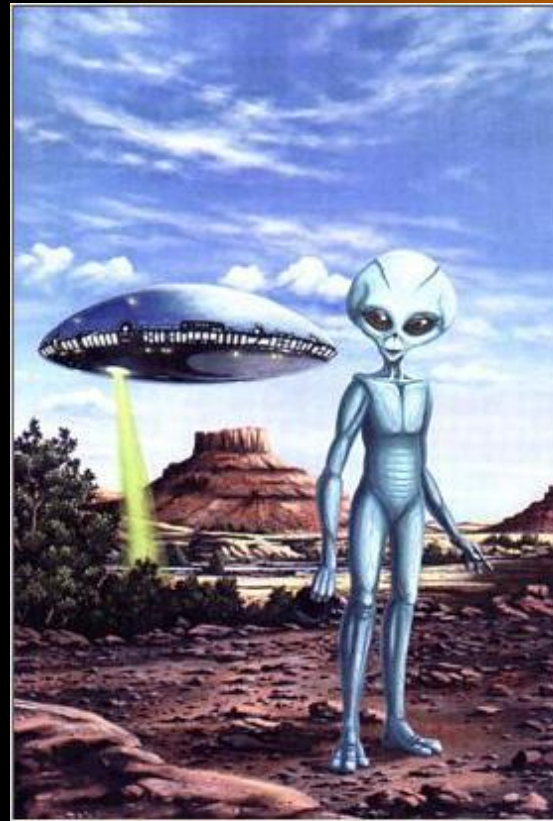
IQ

- The Earth is totally “resurfaced” by plate tectonic motion approximately every 100 million years.
- True
- False



IQ

- True. Tectonic motion separated Pangea into the current configuration of continents in about 200 million years.
- Life first appeared on Earth about two billion years ago.
- Therefore, the surface of Earth has been “recycled” about 10 times since the emergence of the first life.



IQ

- The present atmosphere of Earth is virtually identical to the atmospheres of Venus and Mars.

- T
- F



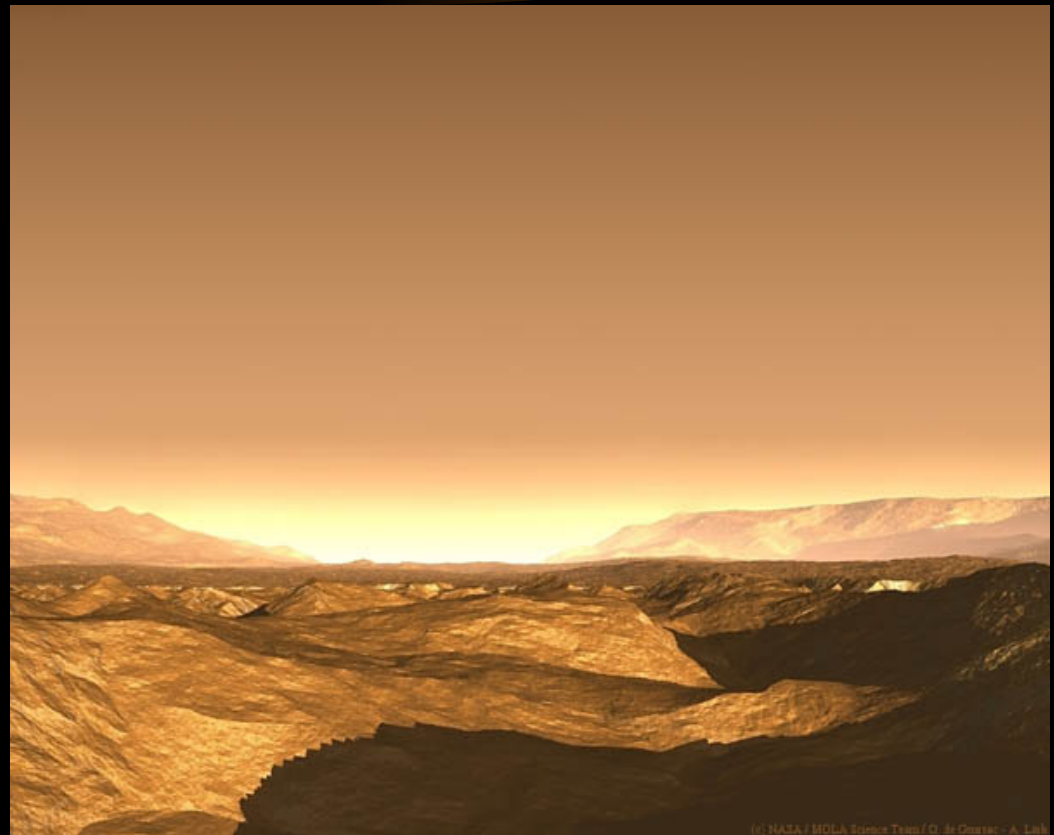
Venus in UV

HST · WFPC2

PR95-16 · ST ScI OPO · March 21, 1995
L. Esposito (U.CO), NASA

IQ

- F. False, false, false!
Couldn't be more false!
- The Earth's atmosphere has evolved to become oxygen-rich! That's one excellent reason why we're here!



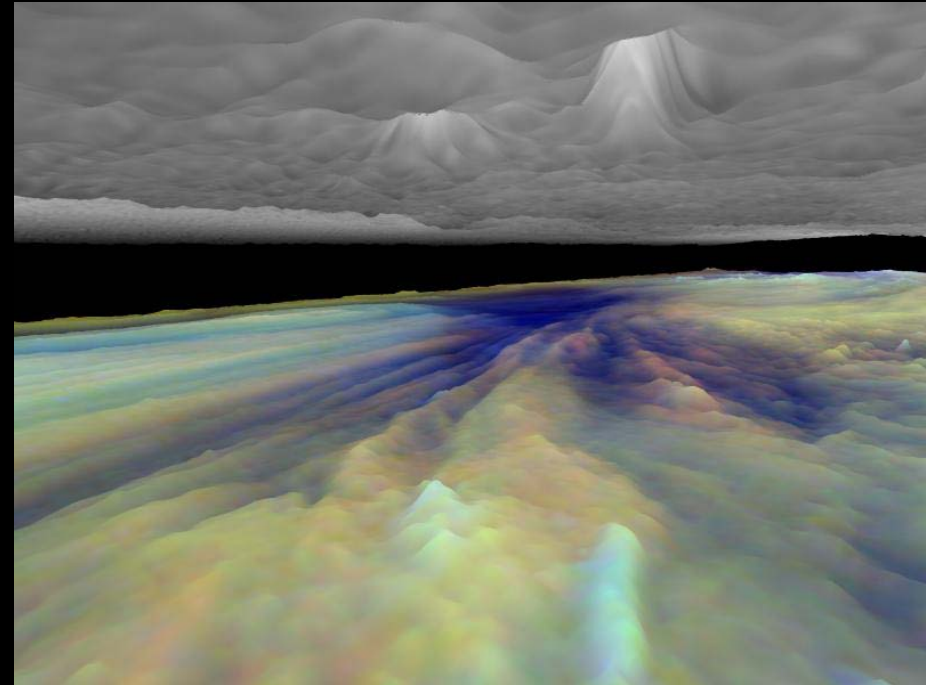
IQ

- The terrestrial planets are rocky, because they are close to the sun, warmer, and therefore the gases constituting the Jovian planets “boiled away.”
- T
- F



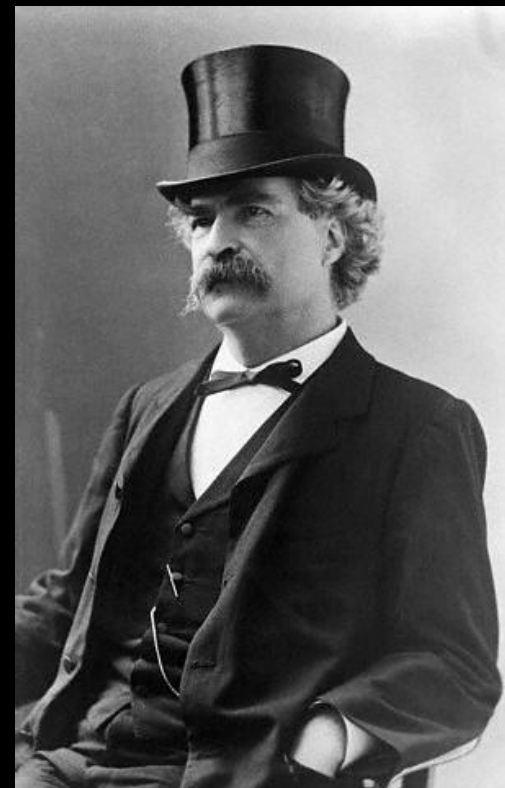
IQ

- T. The statement is true. The vast majority of the gases (hydrogen, helium, and others) that constitute the Jovian planets has evaporated from the terrestrial planets because of the Sun's heat.



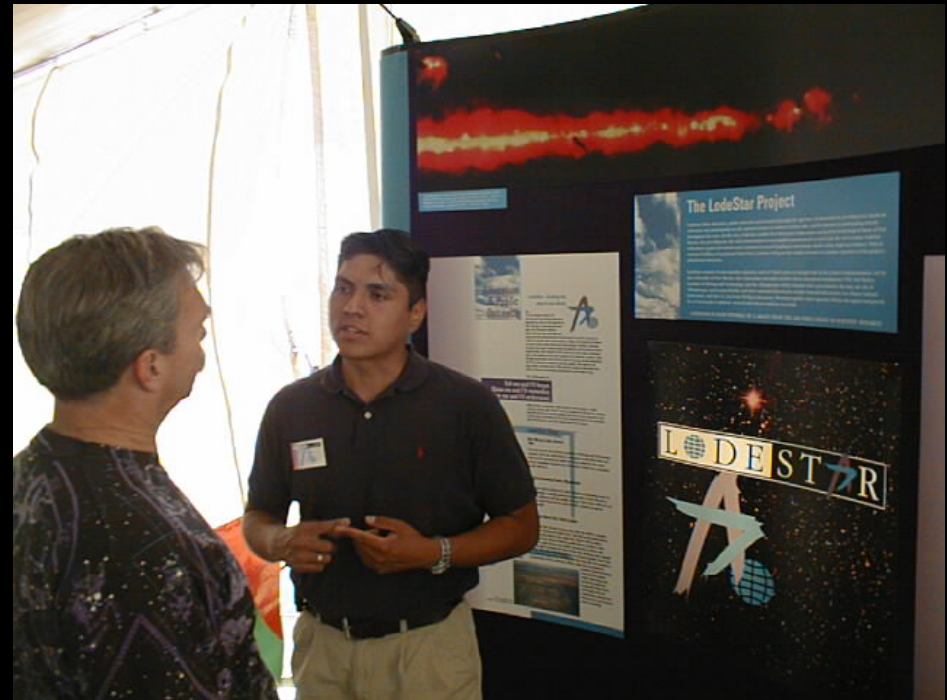
IQ

- The requirement for complex life on Earth (e.g. us!) is:
 - A. Liquid water
 - B. Plate tectonics
 - C. “Correct” size of the Earth
 - D. “Correct” distance from the sun



IQ

- The answer is all of these ... and more!



- The Milky Way - detail. (with apologies to Gary Larson)

