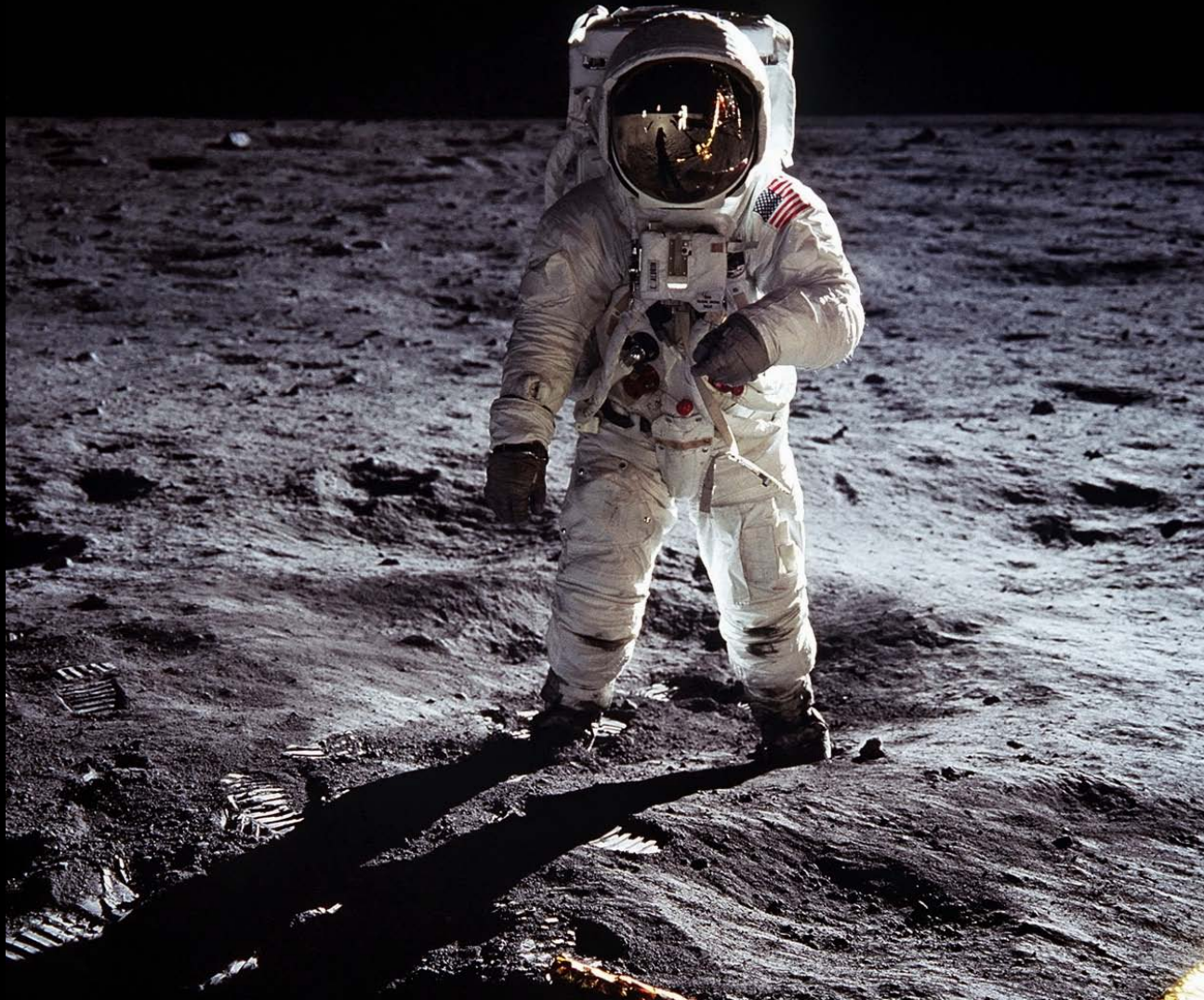


MOONWALKING

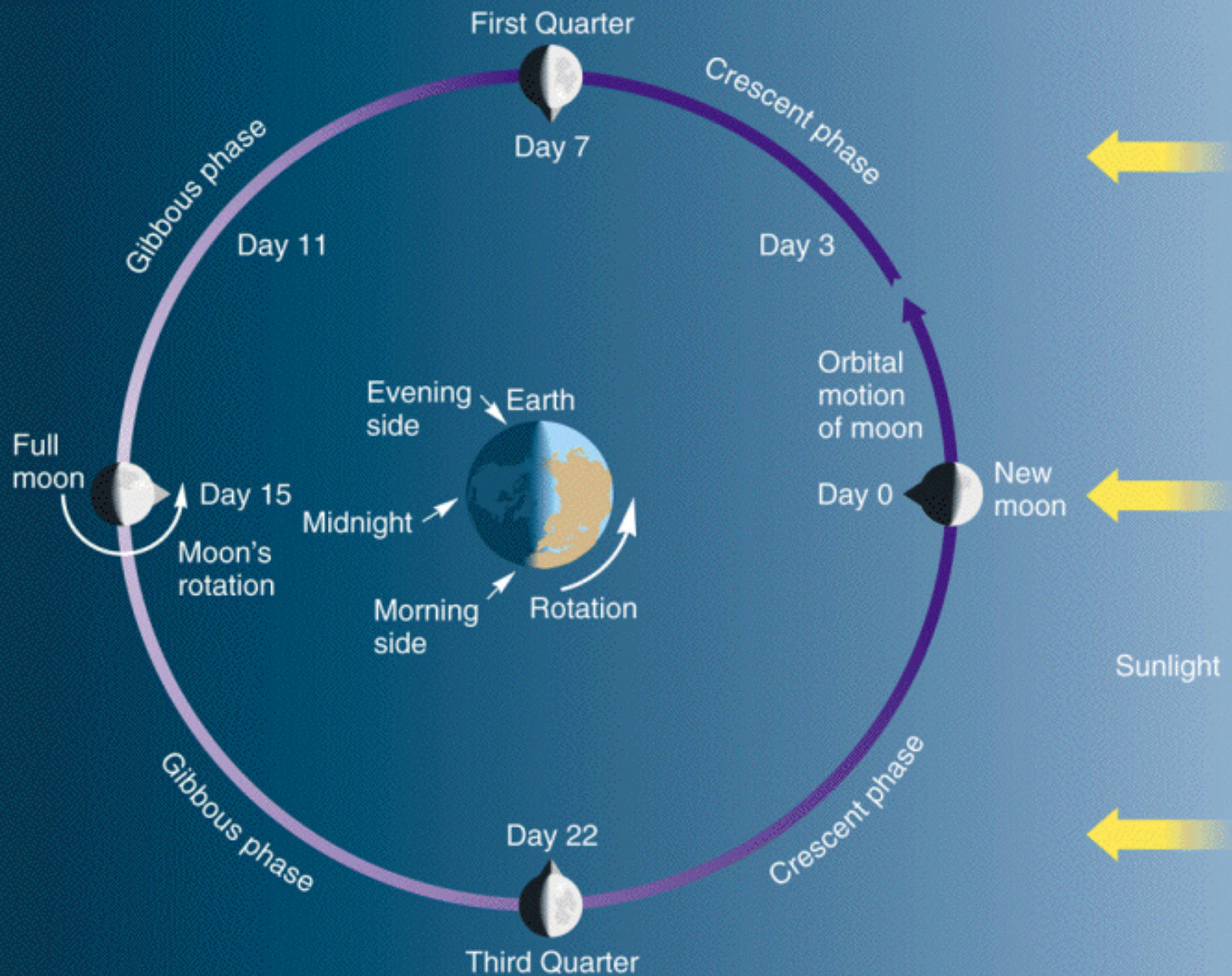
Dr. Philip Blanco - Grossmont College



Q: What would Earth be like without the Moon?

- Nothing to stabilize and slow down Earth's rotation, i.e. days would be very short! (+ high winds over entire Earth)
- No tides to “stir up” marine life, nor encourage adaptations, intelligence?
- No moonlight for nocturnal animals to see, navigate (use stars instead?)
- Less poetry, music, *romance*?
- No “stepping stone” for human space exploration? (Mars is ~200 times further away)



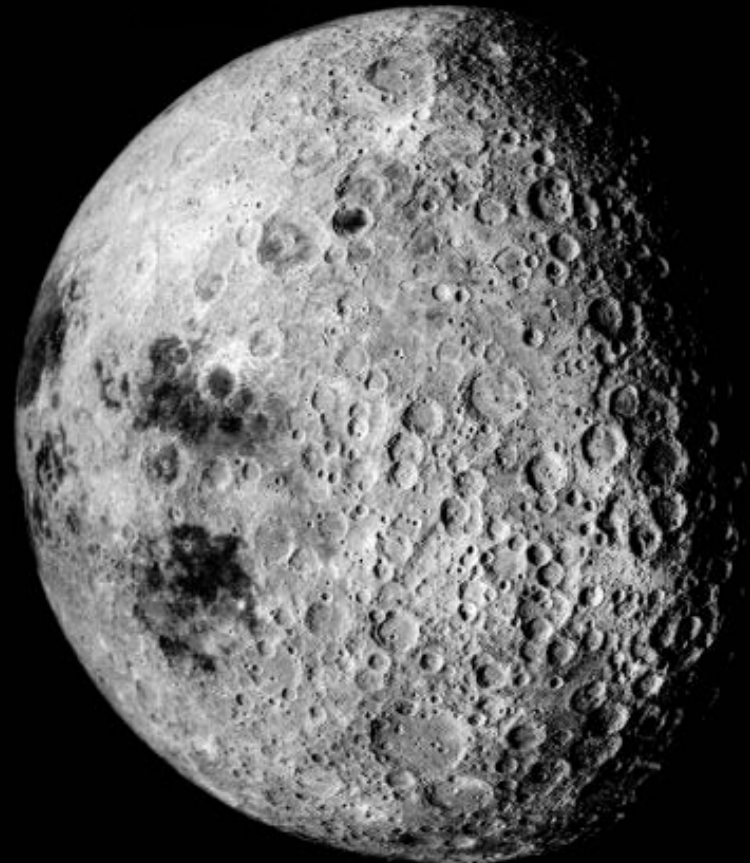


Near side and far (“back”) side of Moon

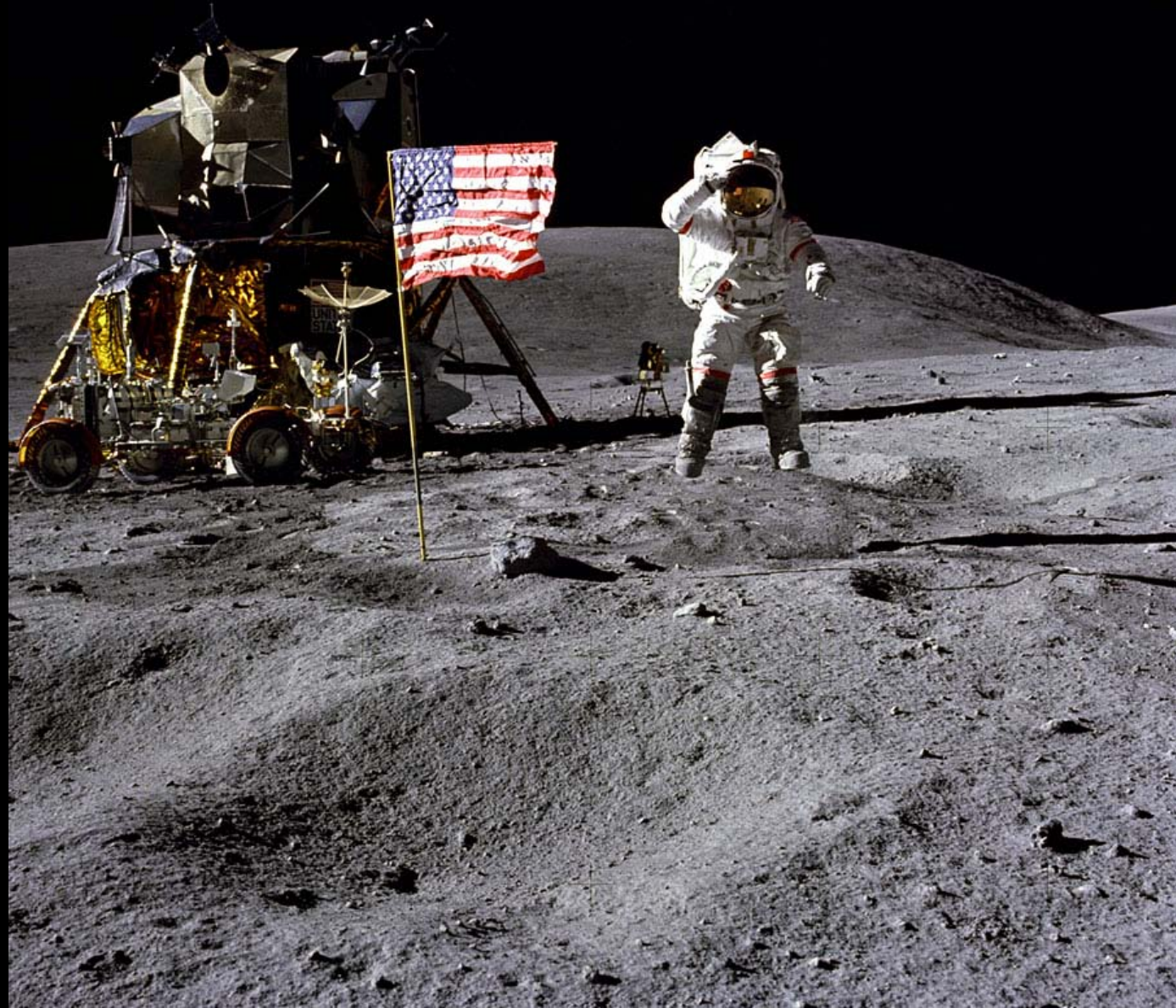
Near side Full Moon from Earth



Far side from Apollo 16. (First imaged by Soviet *Luna 1* probe)



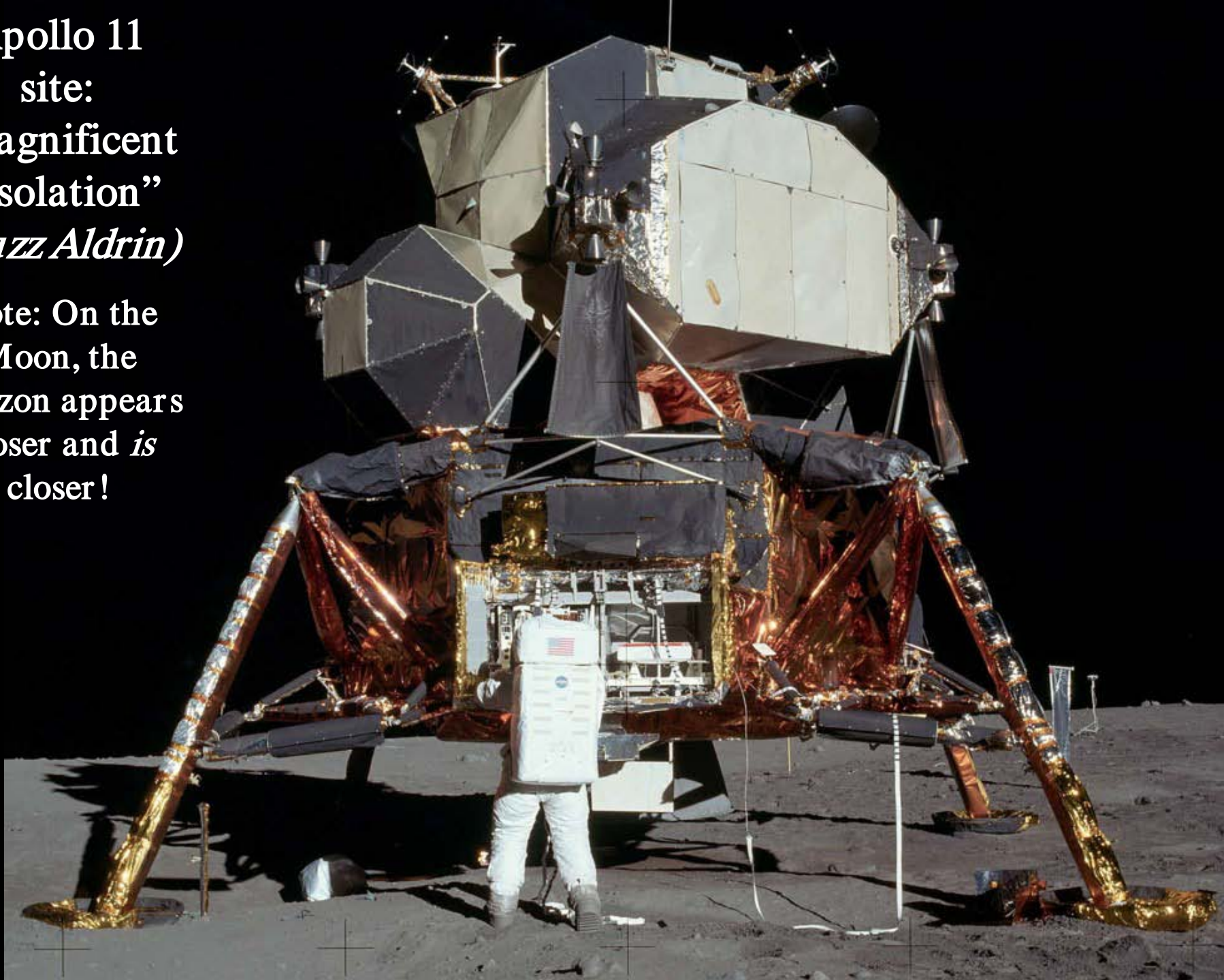
How high can you jump?



Cdr. John Young,
Apollo 16 (April 1972)

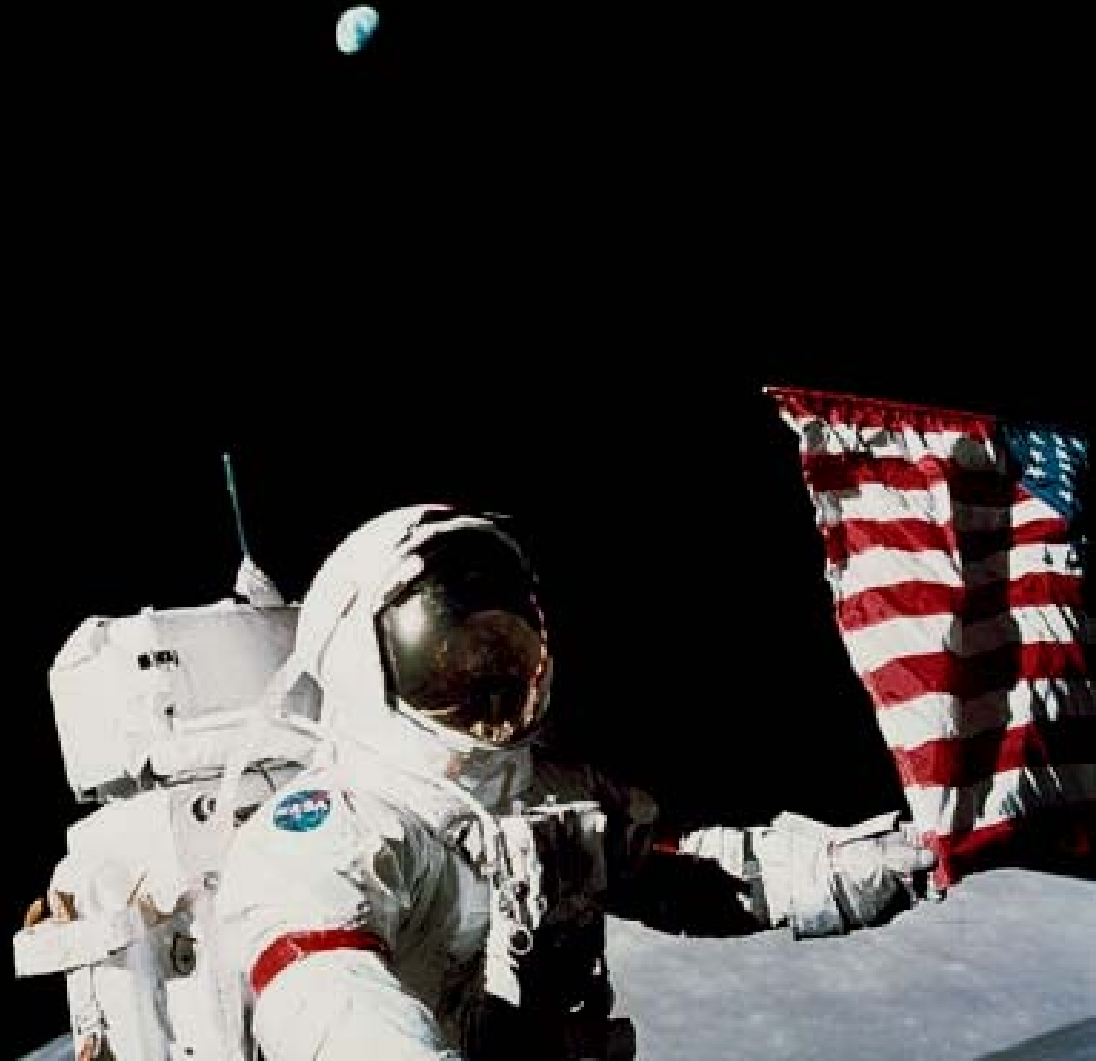
Apollo 11
site:
“magnificent
desolation”
(*Buzz Aldrin*)

Note: On the
Moon, the
horizon appears
closer and *is*
closer!



Earth from Moon - a “pale blue dot” (Carl Sagan)

- Earth “hangs” in sky.
 - Changes phase over 1 lunar month.
 - Sun rises every lunar month
- ⇒ 14 days of sunlight
(surface +100°C except for “shadow” regions)
- ⇒ 14 days of darkness:
(surface at -200 °C)
- Sun shines like a “giant spotlight”, sharp shadows (no diffusing atmosphere).



Group Activity: Lunar Crash Landing!



Lunar Crash Landing: Recovered Items List

- 1. Box of Matches**
- 2. Two 50kg oxygen tanks**
- 3. Magnetic compass**
- 4. Food concentrate**
- 5. Self-igniting signal flare**
- 6. Solar FM radio transmitter**
- 7. Nylon rope, 30 meters**



- 8. Constellation chart**
- 9. Portable heat radiator**
- 10. 100 liters of water**
- 11. First Aid Kit**
- 12. Inflating life raft**
- 13. Helium tank & 600 balloons**
- 14. Fire extinguishers**





Apollo 17: Time to go home

Eugene Cernan
- note dark lunar
dust

Spend a day with your grand-child...2100?



Lunar Olympics 2276?

