

INST 154

Apollo at 50

Discussion Questions

Session 21: Apollo 15: Lunar Rover

1. The Lunar Rover was originally designed to make it possible for Apollo missions to reach more geologically interesting terrain without compromising safety. The key idea was to make it possible to land far enough away from that terrain to find a reliably flat area, but close enough to drive there. But the Lunar Rover had many other benefits as well. List all of the other benefits. I can think of at least five, and you can probably think of even more.
2. The “J missions” (Apollo 15, 16 and 17) stretched the capabilities of the Apollo system pretty far, from about 8 hours of moonwalks per mission to more than 20. But of course with some redesign it could be stretched even further. Identify all the things that would have needed to change for the total moonwalk time to be extended by another factor of 2.5, to 50 hours. Could this have been done safely, in a way that could still be launched on a single Saturn V?