



With the eyes (and the
hands, and sometimes the brain)
of an astronaut

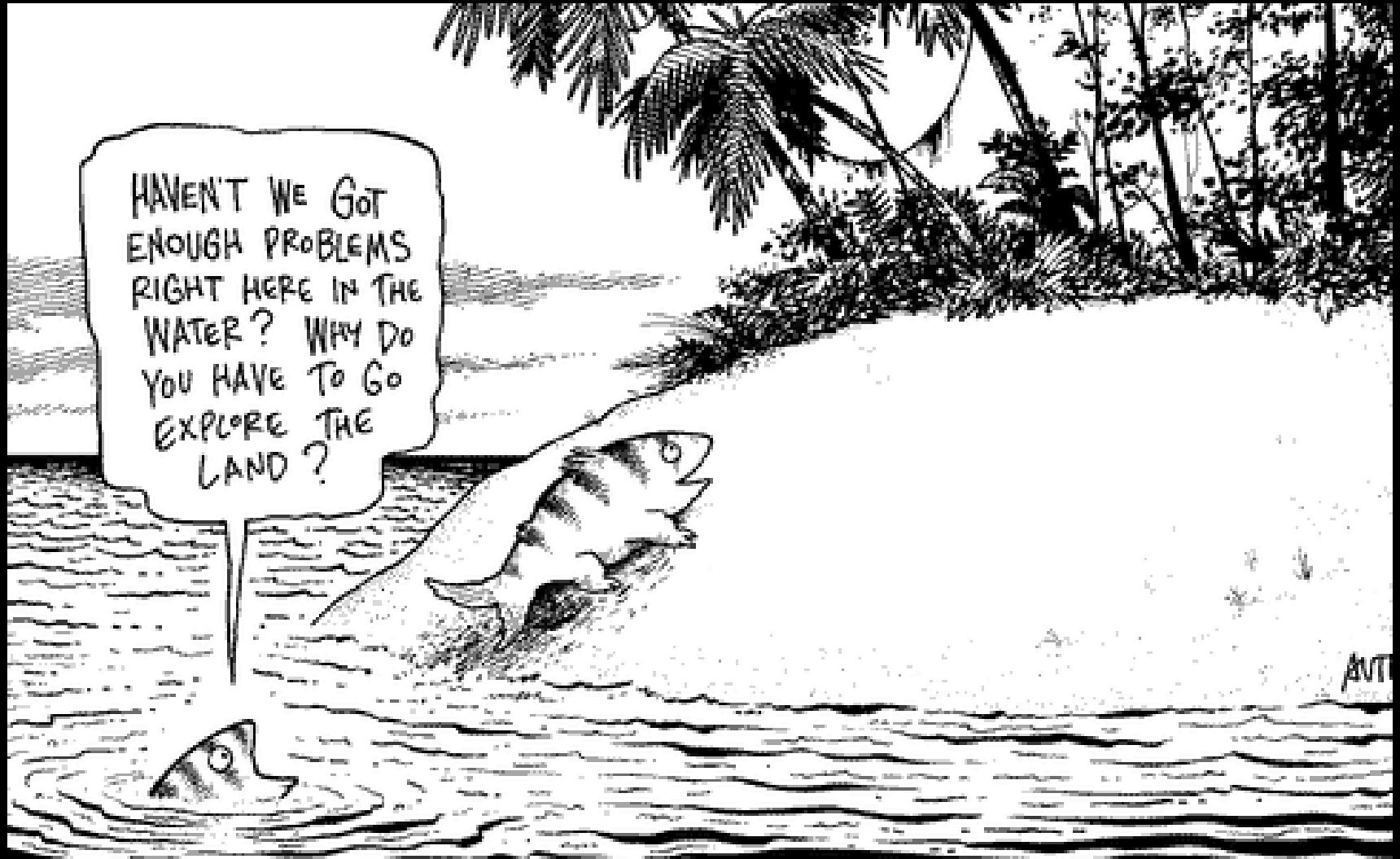
Claude Nicollier

Humans in Outer Space
Conference
Vienna, October 12th, 2007

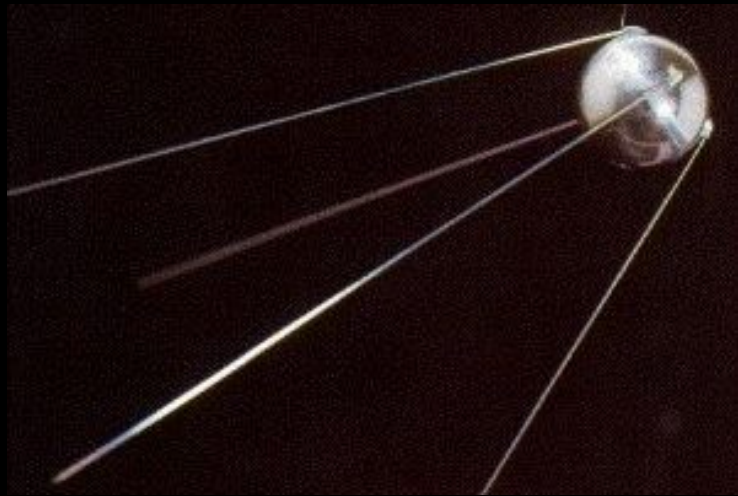
Outline

- Why?
- Earth below, sky above
- The future

Human spaceflight - a major step in the evolution of life in this corner of the Galaxy?



Anniversaries



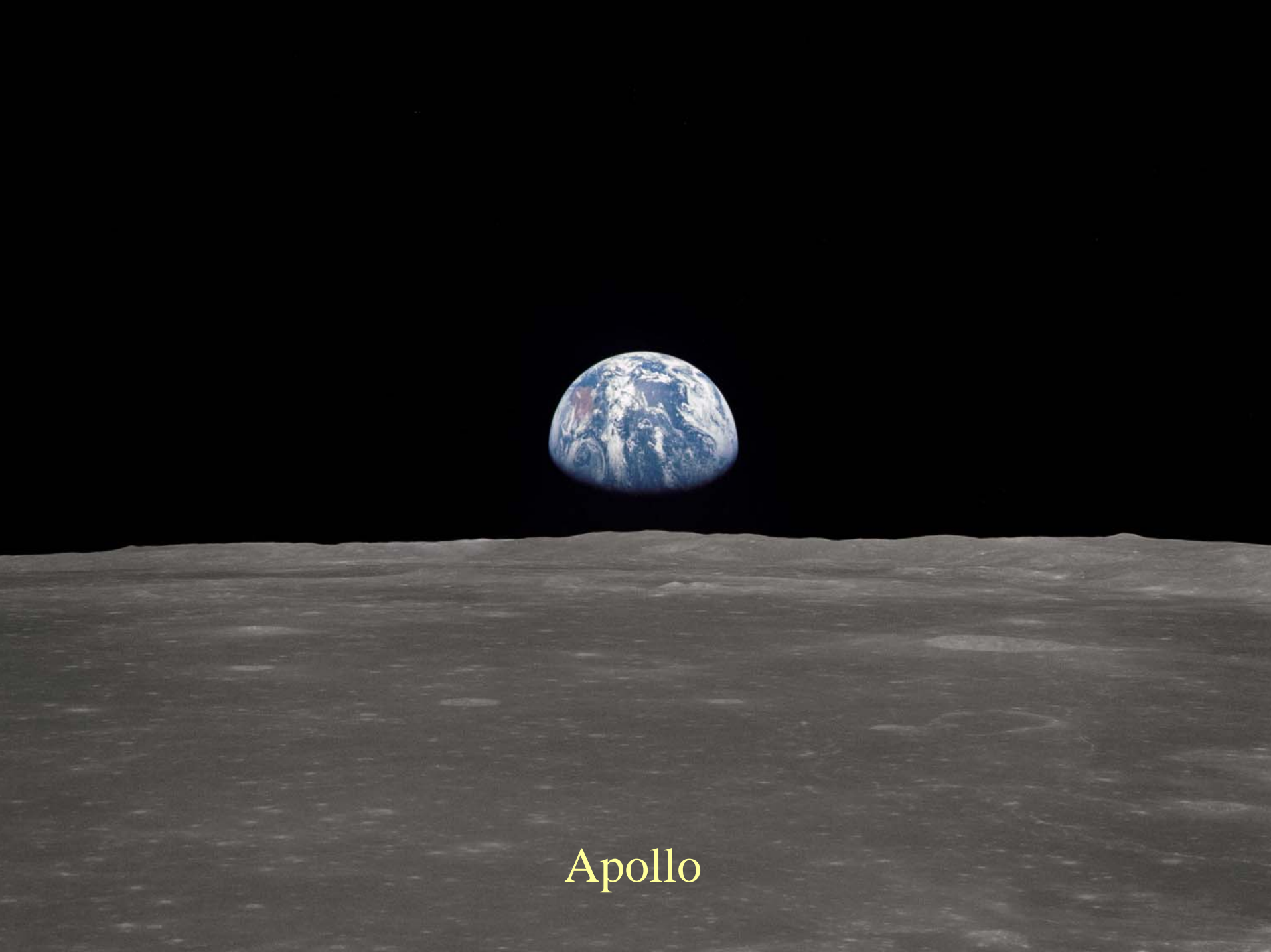
50 years Sputnik 1



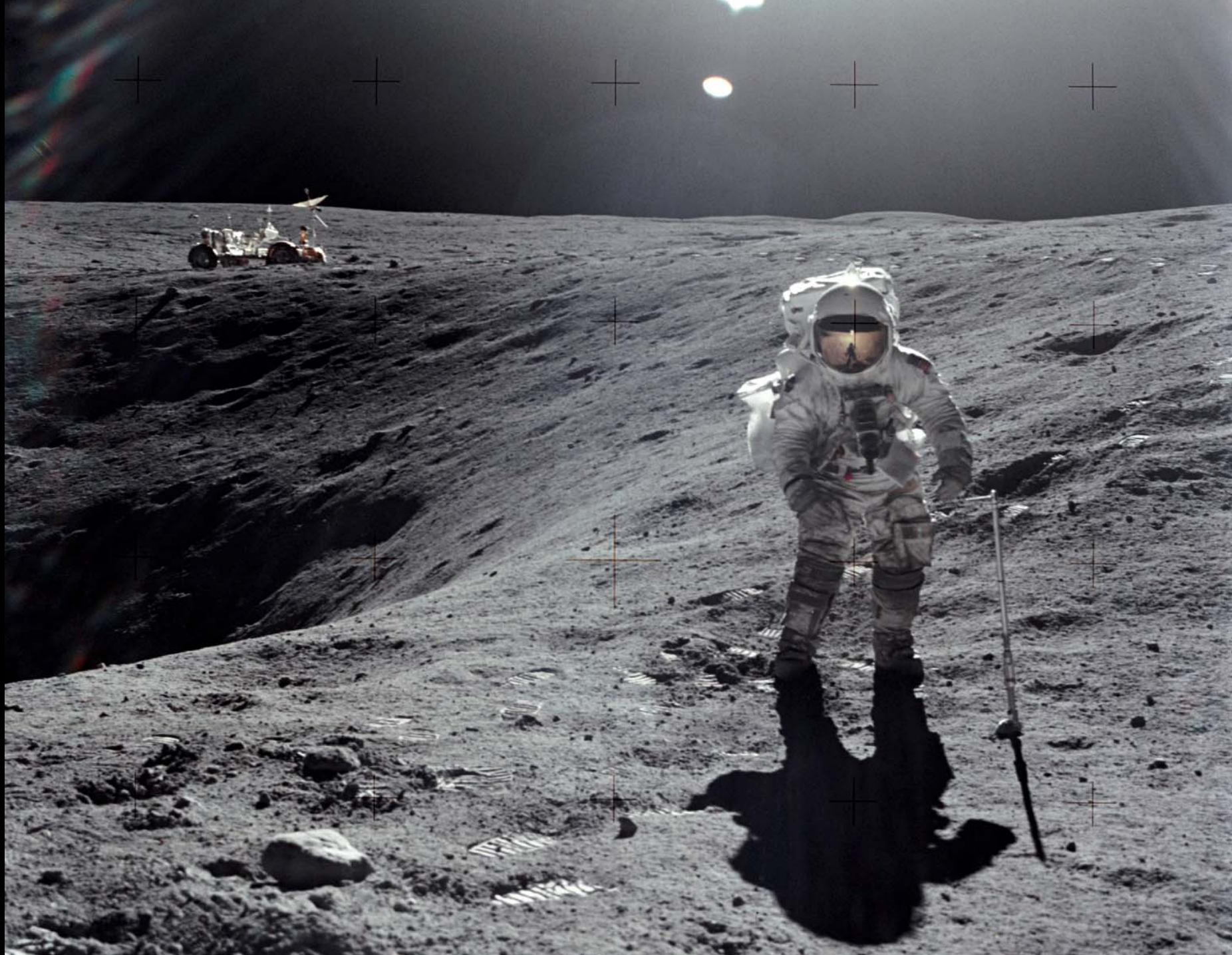
Yuri Gagarin

April 12th, 1961

A highly respected hero, forever...

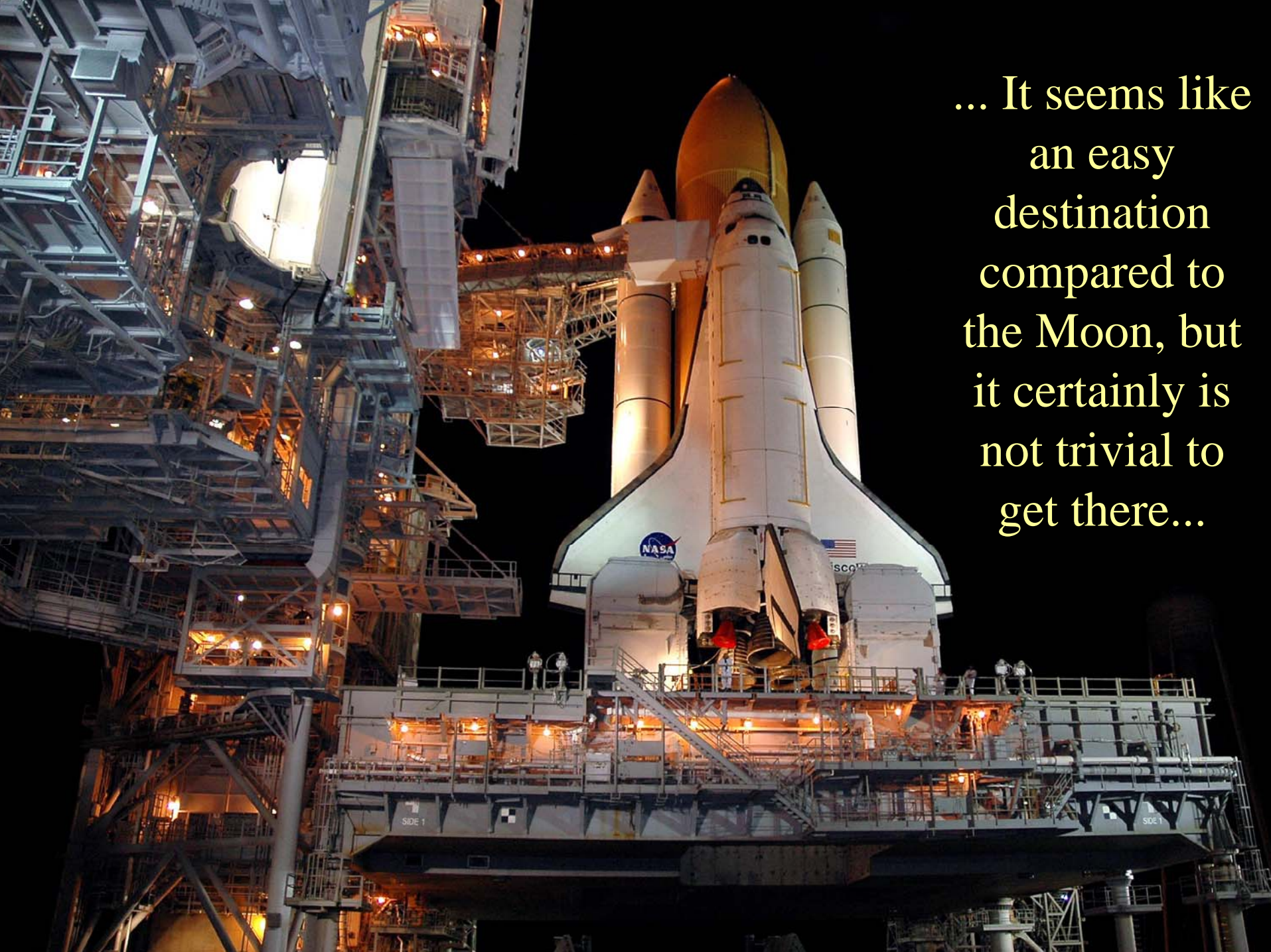


Apollo





... and then back to the LEO, but always with a purpose...



... It seems like
an easy
destination
compared to
the Moon, but
it certainly is
not trivial to
get there...

We have many questions about the Earth, including its changing climate, about life, our origin, and our future...



A lot of work done in Earth orbit addresses these questions



Thomas Reiter (ESA-Germany)



EURECA & TSS

STS-46
July 1992

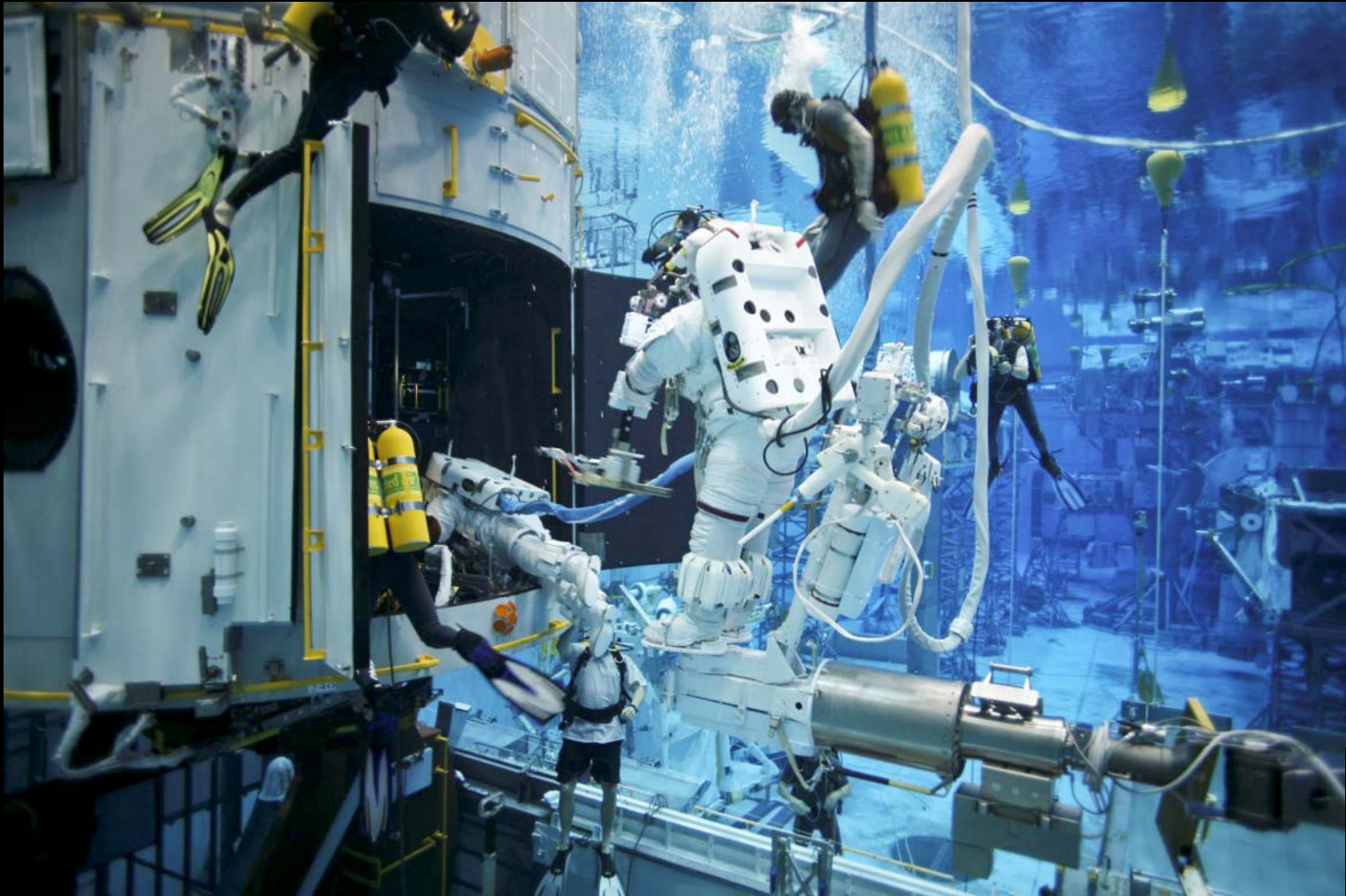




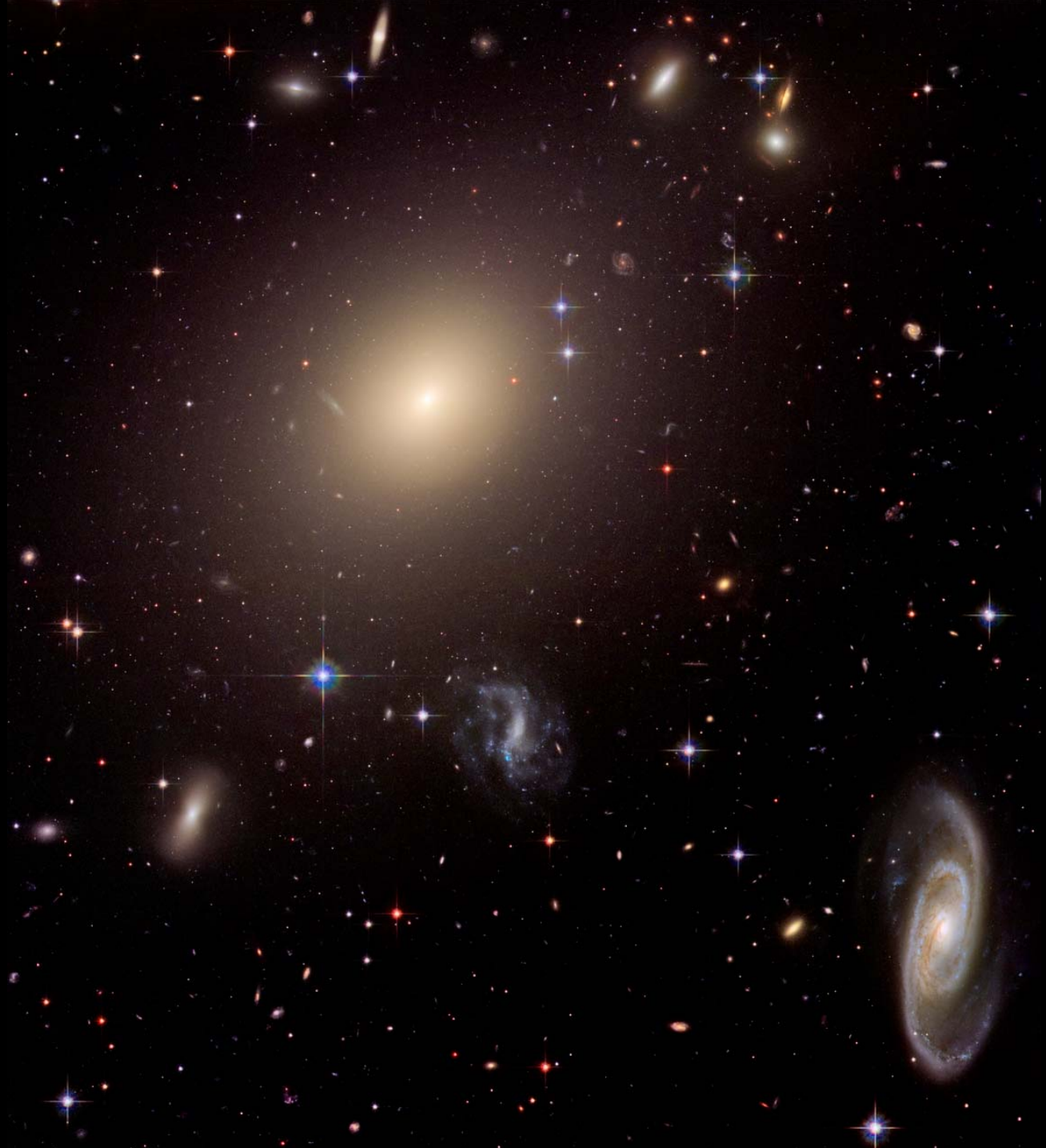
First visit to Hubble in December 1993 (STS-61)



**... third
visit six
years later
(STS-103)**



... and another one to go (STS-125, September 2008)



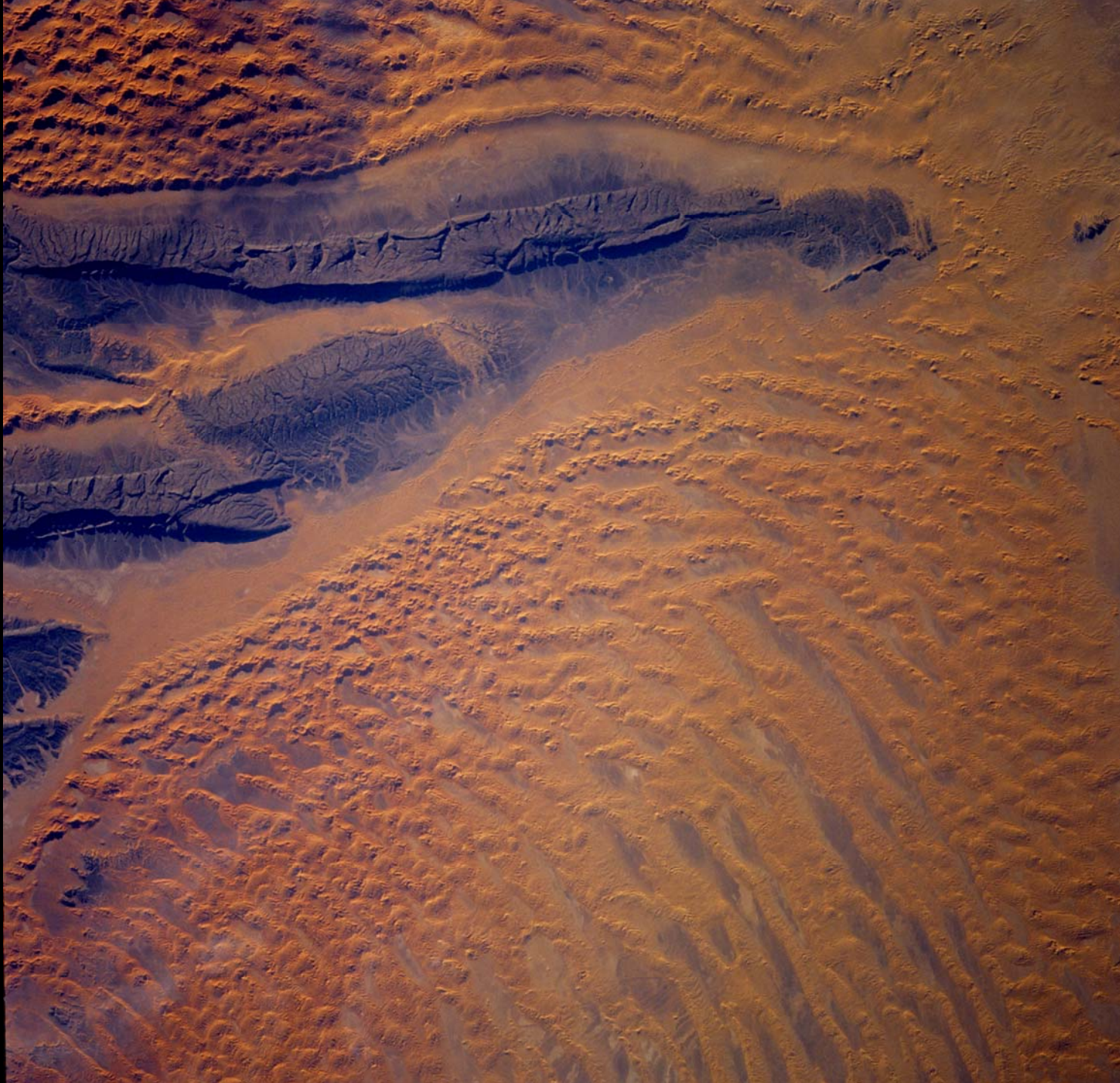
Earth below, sky above



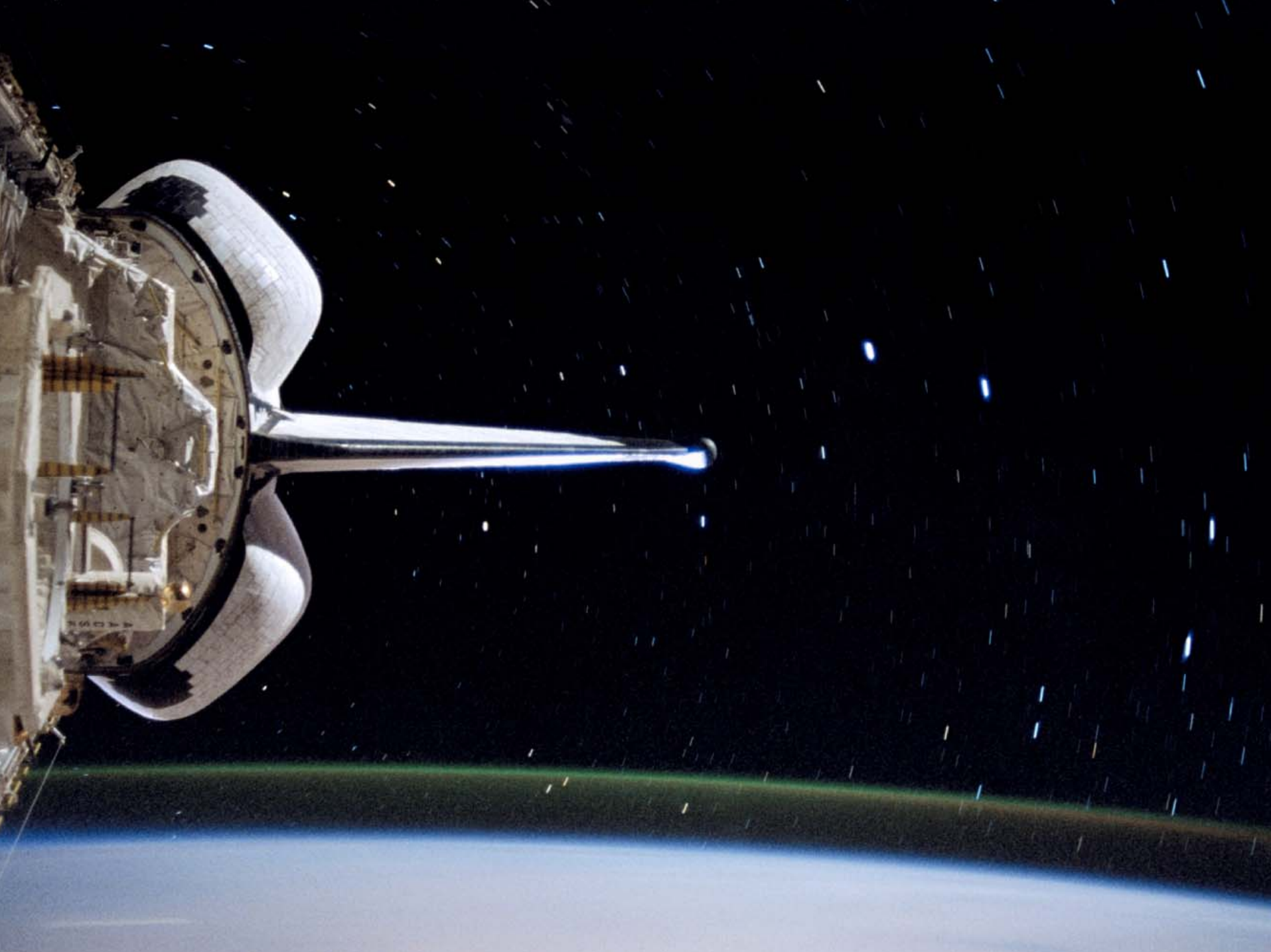














The future



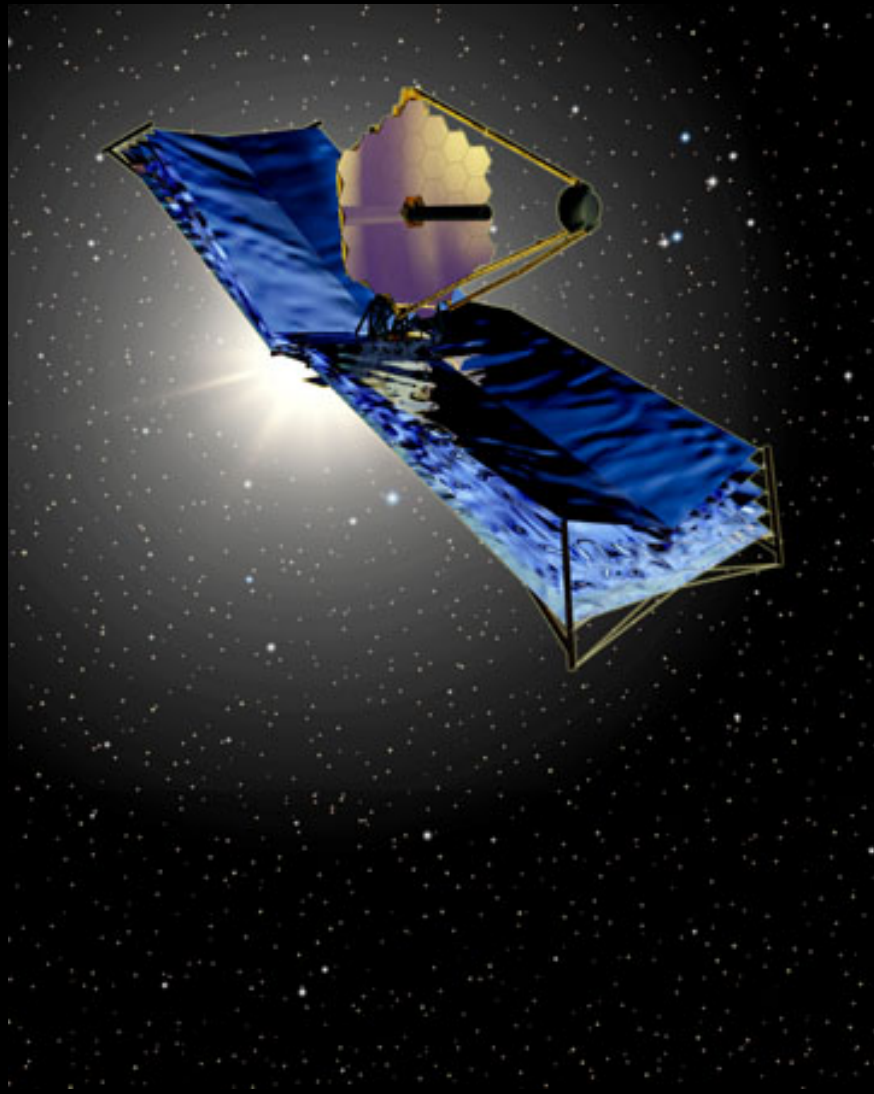
Orion - ISS



Orion - Moon



Orion - NEO



Orion for maintenance/repair/improvements of JWST?

A futuristic Mars lander with a white and black design, featuring a 'USA' logo and a 'NASA' logo, stands on a red, rocky planet. Several astronauts in white suits are visible near the lander. The background shows a vast, hazy landscape with large, dark, layered rock formations under a hazy orange sky.

... Human Spaceflight
serving Science,
Research, Exploration,
Adventure...

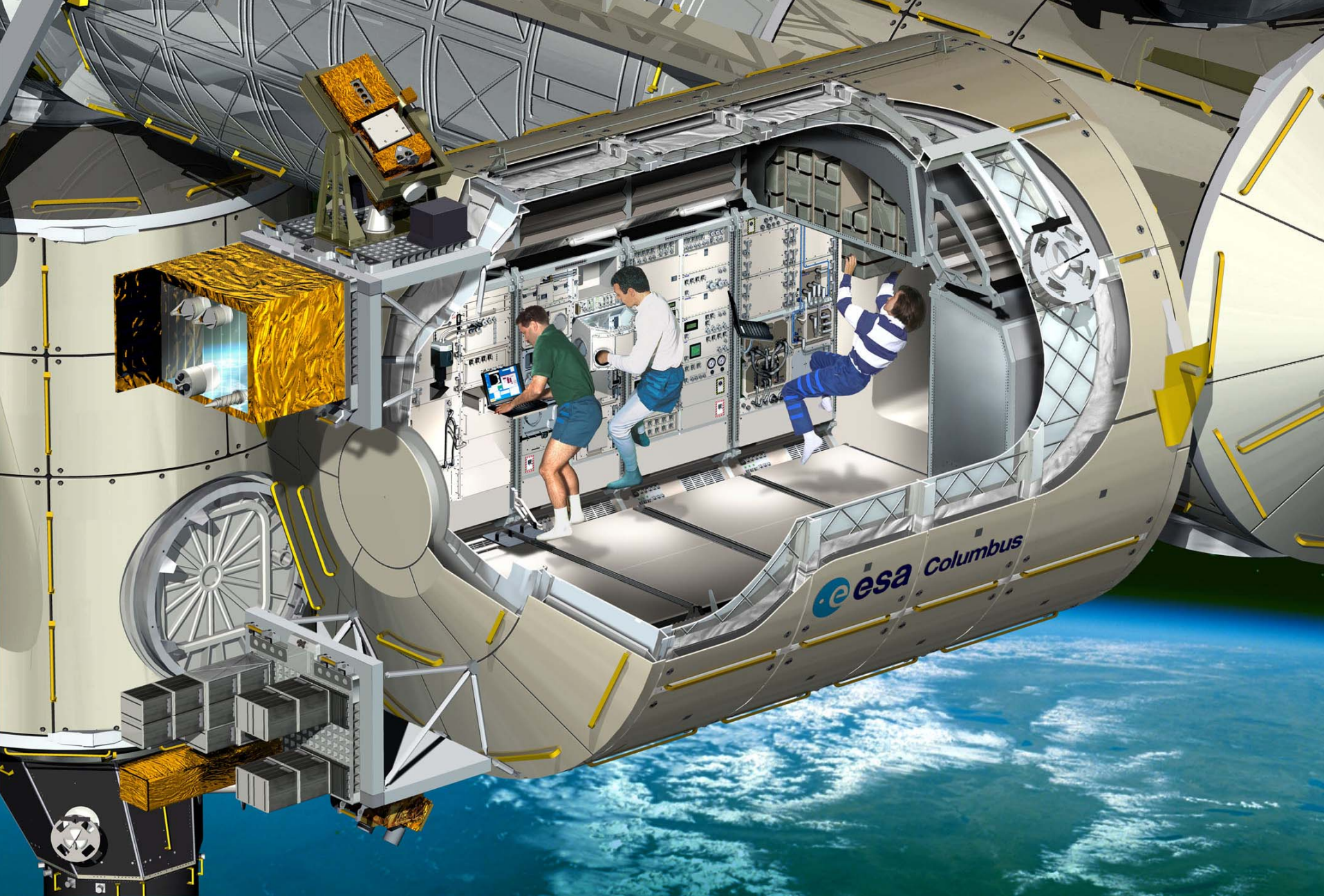


... also an exercise in discipline and rigor, enhancing human awareness, and bringing people together

... and carrying
dreams and emotions
that we have had
since a very long
time...







Columbus (ESA)