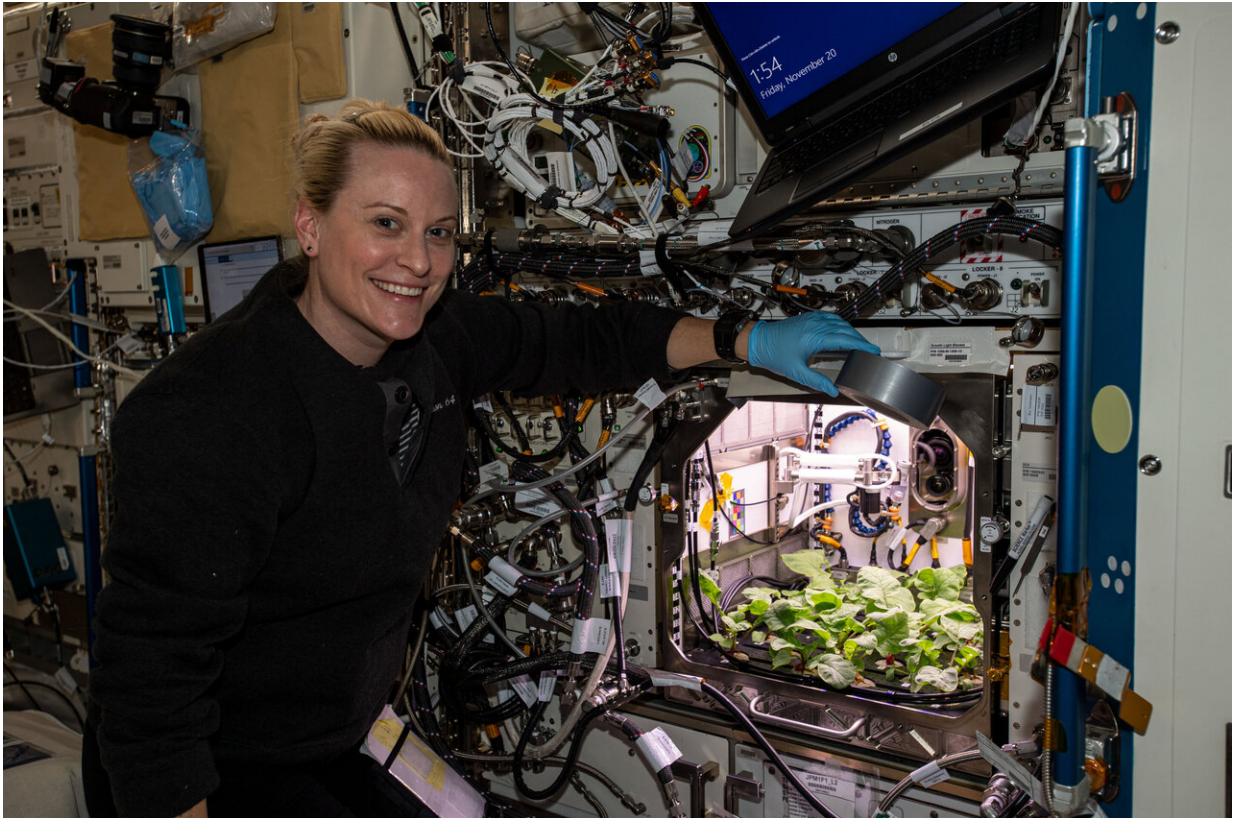


Image: Rad dishes in space

December 1 2020



Credit: ESA/NASA

NASA astronaut Kate Rubins poses next to a thriving radish crop growing inside the Advanced Plant Habitat in the International Space Station.

Located in Europe's Columbus module, the NASA experiment is the

latest in the study of [plants](#) growing in microgravity.

With plans to visit the Moon and Mars, future astronauts will need a regular, fresh source of food as they take on these missions farther away from home. In addition to providing much-needed vitamins and minerals, growing plants in [space](#) contributes to sustainability and adds homey touch to exploration.

Growing plants in the microgravity conditions of the International Space Station has allowed researchers to fine tune the approach: European research showed [plants respond best to red and blue light](#), giving the Columbus module [a disco feel](#).

Because plants no longer have gravity to root them to soil, the seeds are grown in 'pillows' that help evenly distribute fertilizer and water to the roots.

Radishes were chosen because it is a model plant; they have a short cultivation period and are genetically similar to the plant most frequently studied in space, Arabidopsis. Radishes are also edible and nutritious, with this batch ready for harvest any day now. Samples will be sent back to Earth for study.

The Advanced Plant Habitat is a self-contained growth chamber requiring very little intervention from astronauts. It is equipped with LED lights, [porous clay](#), over 180 sensors and cameras regulated by researchers at NASA's Kennedy Space Center in Florida, U.S.. From there, [plant growth](#) is monitored and conditions adjusted as necessary to better distribute water and fertilizer and control moisture and temperature levels.

The next ESA astronaut to launch to the Station is Thomas Pesquet for mission Alpha. Slated to arrive in Spring 2021, perhaps Thomas will get

to try another batch of [space-grown greens](#).

Provided by European Space Agency

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