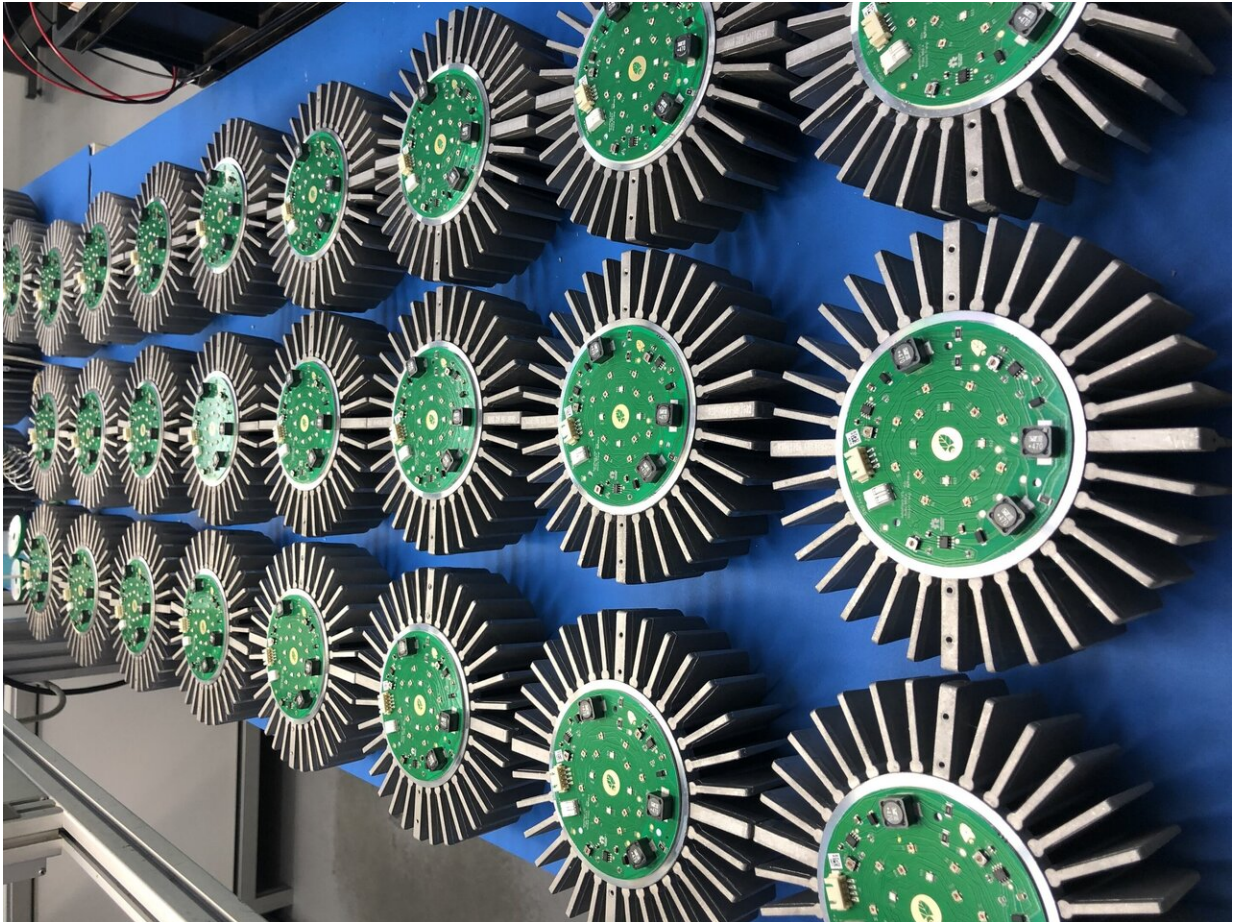


AstroPlant green light

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Credit: Axtron BV

The latest prototype of the AstroPlant citizen science project has gotten the green light for production. AstroPlant is a desktop greenhouse that allows people to collect data on potential crops to grow in space.

The lights, heatsinks and extension shields imaged above are some of the components that future space farmers will need to build their own kits.

Just as agriculture revolutionized [human settlements](#) on Earth, it will also be a game changer in space. Crews on long missions to and on the Moon will need to be as self-sufficient and sustainable as possible so growing food is crucial.

But first we need more information on what to grow.

Enter the AstroPlant initiative. It was born at the annual Border Sessions technology conference in 2016 asking home-gardeners, schools, urban farmers and other enthusiasts to nourish seeds selected by ESA's Micro-Ecological Life Support System Alternative (Melissa) team.

Melissa has been working for over 27 years to create ecosystems for astronauts. They are fine tuning how microorganisms, chemicals, catalysts, algae and plants interact to process waste and deliver unending supplies of oxygen, water and food.

Since 2016, participants across Europe brainstormed prototypes and aspects such as hardware design, [user interface](#) and business development of the project. A crowd-funding campaign was also launched to finance some kits for interested participants.

Their feedback culminated in the latest round of testing for version six hardware that is now going into production.

The initiative hopes eventually to have AstroPlant kits set up in [secondary schools](#) as part of its educational goals.

Classroom resources developed by the ESA Education Office on AstroCrops, AstroFood, and AstroFarmers are already available, with

more materials focusing on modern production techniques like hydroponics currently in development.

Provided by European Space Agency

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