Nanohmics to Test Hyperspectral Imager on ISS

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Nanohmics Inc., in collaboration with the University of Maryland and the NASA Langley Research Center, will send a prototype compact hyperspectral imager to the International Space Station (ISS) where it will be tested for calibration. The launch will take place in 2021.

The device is considerably smaller and lighter than existing spectral imaging satellites. The prototype, developed by Nanohmics and the University of Maryland, images over the visible range of the electromagnetic spectrum. Incident light reaching each pixel on the microchip is scattered into wavelength-dependent patterns, where special algorithms are applied to calculate the spectrum through computational spectroscopy. The hyperspectral imager was successfully flown and tested using a quadcopter.

The prototype will be positioned on the MISSE Flight Facility portion of the ISS in 2021 where it can be used to observe atmospheric conditions at Earth's "limb," the visual edge of Earth as seen from space. Observations of the limb are done by atmospheric scientists to provide insight into the structure of the atmosphere, including variation of concentrations of trace gases with altitude among other data used for climate change assessments.

A benefit of deploying the imager to the ISS is that the device can be returned to Earth for full re-calibration and inspection, which can accelerate design improvements and reduce the company's time to commercialization.

Read the original article on Photonics Media.