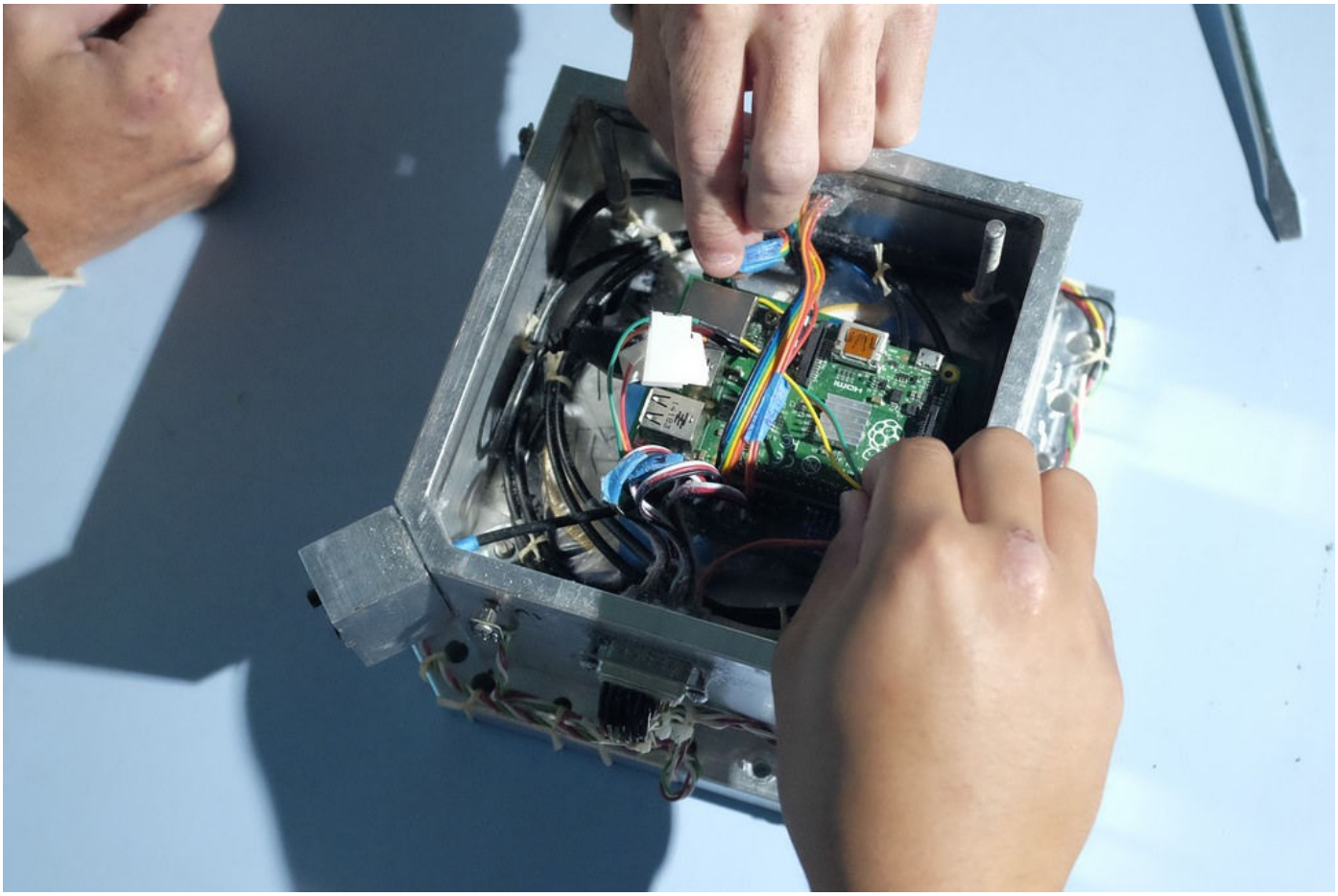
https://www.manoanow.org/kaleo/news/uh-community-college-students-collaborate-for-space-mission/article_b927e082-1e07-11e5-9432-6767e7b8301a.html

# UH community college students collaborate for space mission

Hendricks Hicks, Staff Writer
Jul 3, 2015



Courtesy of UH System

University of Hawai'i Community College (CC) students collaborated to send a probe into space funded by a $500,000 grant awarded under the NASA Space Grant Competitive Opportunity for Partnerships with Community Colleges and Technical Schools.

Students from UH's Honolulu, Kapi'olani, Kaua'i and Windward campuses participated in Project Imua, which is designed to refine the individual expertises of each college. Honolulu CC designed the probe's electronic circuitry for power distribution, with telemetry systems designed and fabricated by Kapi'olani CC. Windward CC combined all of the individual components into a single module and performed static tests. Windward CC and Kauai CC were jointly tasked with building the probe's mechanical housing.

Project Imua is supported by the Hawai'i Space Grant Consortium (HSGC) at Mānoa, which provides assistance through the Hawai'i Space Flight Lab (HSFL).

Students will receive $200,000 in stipends to cover time spent on the project and travel expenses to Wallops Flight Facility in Virginia and between islands. The remainder of the grant is used for tools, supplies and other lab expenses.

**Project Imua**

Project Imua (PI) intends to provide students with essential skills to work in the aerospace industry by requiring a hands-on approach for the design, fabrication and testing of a small scientific payload for space flight.

"Since Project Imua is affiliated with [HSGC], student applicants must meet the same requirements as those on Space Grant fellowships," said Joseph Ciotti, project manager for PI, in an email. "Students must be a UHCC undergraduate student enrolled at one of the four Project Imua campuses. They must be U.S. citizens. This year's team consists of 16 students from the four campuses. Approximately five are female students. The majority of students are in pre-engineering and physics programs, although this is not a requirement."

**Looking ahead**

During Project Imua's two-year period, close to 100 scholarships will be given to undergraduates at the four campuses. The students will be trained with hands-on experience in the design, construction, and testing involved with building small payloads.  Students will also participate in regular teleconferences with RockSat-X coordinators to simulate the same procedures required of NASA contractors, providing students experience with aerospace engineering protocols.

A select number of these students will attend the launches for their completed payloads. The launch is scheduled for August 11 at NASA's Wallops Flight Facility in Virginia aboard a Terrier-Improved Malemute rocket.

"[On June 20], seven members from our team [departed] for Wallops Flight Facility in Virginia for a week-long environmental testing series on our payload. It'll undergo high-[gravity] force and spin testing to insure that the payload can withstand the enormous stresses during liftoff and recovery for the launch scheduled in mid-August," Ciotti said.

**Experiment Objectives**

Students are working with a few main objectives, according to Ciotti.

The payload of the probe has three instruments:

•A UV spectrometer to measure solar ultraviolet radiation above the Earth's atmosphere. The data is transmitted and stored onboard.

•An array of four photo sensor for determining the payload orientation at its peak while the UV spectrometer is recording its data.

•An accelerometer that was designed and built by Project Imua.

The probe will have an 11-minute flight and splashdown in the Atlantic Ocean, where it will be recovered.

Tags Rotatingbelt Nasa Space Community College