Pacific International Space Center for Exploration Systems
PISCES
NEWSLETTER
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Economic Development

Environmental Assessment Begins for Proposed Spaceport in East Hawaii

The proposed facility would be similar to Rocket Lab's small vehicle launch site located on the Mahia Peninsula of northern New Zealand (shown above).

Alaska Aerospace Corp. is proposing the construction of a small vehicle launch facility in East Hawaii to send small satellites into space. Called the Pacific Spaceport Complex Hawaii (PSCH), the facility would consist of two launchpads, roughly 20' x 20' and 20' x 60', on 12 acres of W.H. Shipman land in Kea'au.

The Hawaii Dept. of Business, Economic Development and Tourism (DBEDT) has contracted an Environmental Assessment (EA) to determine the potential impacts of such a facility on the local environment, provide recommendations and receive public feedback. Alaska Aerospace and W.H. Shipman are awaiting the results of the EA to make any formal agreements that would set the project in motion.

If constructed, PSCH would facilitate the launch of small satellites (e.g. nano and cubesats) for communication, navigation and imaging systems. According to Alaska Aerospace CEO Craig Campbell, private companies like Rocket Lab and Vector Space Systems could launch rockets 40 to 50 feet in height into low-Earth orbit from the site. The facility would support the launch of solid and liquid fuel rockets one to two times per month.

Located between Ha'ena Beach and Papa'i Bay, the site was selected for its proximity to the coast, access roads and infrastructure (airport and sea port), as well as its isolation from populated areas. Hawaii's overall geographic location is advantageous for equatorial launches due to its proximity to the equator.

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Message from the Program Director

Aloha Kakou,

It's a new year and a time of change, challenges and opportunities. Last month, we participated in several informational meetings discussing the details and benefits of the proposed Pacific Spaceport Complex Hawaii (PSCH). Together with Alaska Aerospace, W.H. Shipman, Hawaii Island Economic Development Board (HIEDB), Hawaii Spaceflight Lab and the Office of Aerospace Development, we met with County Council members, local lawmakers and members of the Keaukaha and Panaewa Neighborhood Association boards.

From these meetings, we learned that reactions to the project vary widely depending on the point of view. Business and educational groups generally feel very positive about the possible benefits of the project to the community.

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Connect with Us!

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Outreach & Education

PISCES Celebrates 19th Annual Onizuka Science Day at UH Hilo

More than four-hundred and fifty students, teachers and parents turned out for University of Hawaii at Hilo's 19th annual Onizuka Science Day on Jan. 29. The annual STEM event remembers the legacy of Hawaii's first astronaut, Ellison S. Onizuka, by providing grade school students with unique college and career ideas, and exposure to various disciplines in the sciences.

PISCES was one of many local organizations supporting science and education that attended the event. Organization staff volunteered to provide hands-on activities, demonstrations and exhibits spanning aerospace and astronomy to geology and robotics.

Proof of the event's value in the community, Eisha Tyler—a Waiakea High School graduate who was originally inspired by the event many years ago—gave the keynote speech as an electrical engineer for NASA's Jet Propulsion Laboratory. Tyler shared his exciting work with planetary rovers and satellites, and details on NASA's past and future Mars exploration missions.

Workforce Development

Intern Kye Harford: IMUA Science!

Kye Harford is a UH Hilo Geology grad who interned with PISCES beginning in September 2018 as a Material Science assistant technician. Here he recounts his experience and what he learned during five months of researching Hawaii's volcanic basalt.

The main objective during my internship was to help research ISRU (in-situ resource utilization) basalt sintering technology which is critical for future lunar and Mars exploration. The goal was to find the ideal sample, grain size and sintering temperature to create a solid, durable brick using only Hawaiian basalt. I examined samples from all around the island which varied in chemical composition. In order to better understand what was occurring in the heated basalt during sintering, I had to research published papers on individual mineral behavior under varying conditions. Even so, it was difficult to grasp their behavioral pattern at high temperatures. I never thought minerals in rocks could behave so strangely and unexpectedly.

This internship helped me build exceptional skills including mineral analysis using an x-ray diffractometer, operating a kiln and using analysis software. I am grateful that I had the opportunity to be a part of the PISCES team and hope to see this technology advance. IMUA SCIENCE!

Pacific Spaceport Complex-Hawaii

FAST FACTS

A proposed small satellite launch facility in East Hawai'i

LOCATION

W.H. Shipman land - Kea'au, Hawai'i
Plot: 12 acres
Project type: Commercial

Size comparison of the proposed launch site (left) with Prince Kuhio Plaza in Hilo (right).

FACILITY

Two launch pads - 20' x 20' and 20' x 60'
Rocket size: Up to 60 feet tall

PAYLOADS

Small satellites (e.g. nano and cubesats)

1-2 Launches per month

Spaceport EA continued...

Together with Alaska Aerospace, W.H. Shipman, Hawaii Island Economic Development Board (HIEDB), Hawaii Spaceflight Lab and the Office of Aerospace Development, PISCES has been participating in meetings to discuss the project with local lawmakers and community members.

Since the project was announced, public reactions on Hawaii Island have varied. Those who support the project note the potential for high-paying employment opportunities, benefits to the local economy, and the possibility of new education tracks at local colleges and universities. Others express concern for the potential safety and environmental impacts of a launch site, as well as the cultural implications and concerns voiced by Native Hawaiians who object to further development on Hawaii Island.

As part of the EA requirements, PSCH partners will hold a public informational meeting about the project on Wednesday, Feb. 6., at the Naniloa Resort in Hilo. Attendees will have the opportunity to ask questions and submit written comments for consideration. More information about this meeting and the project is available online at www.pscheaproject.com.

Message from the Director continued . . .

These include the potential for well-paying jobs, associated manufacturing and assembly, test and validation facilities, and the possibility for expansion in related technology educational tracks at University of schools. At the other end of the spectrum, there is a deep discontent among community members living closest to the proposed site. Some of their objections are based on experiences with other projects that have been built on Hawaii Island. The comments and objections made during the most recent meeting were deep in emotion. Many expressed opposition and anger.

The challenge for any project is to find a way to balance the needs of a diverse population—comprised of many disparate communities—in a way that best serves the needs of the whole.

An Environmental Assessment (EA) for the project is currently under way and should continue to its conclusion. The recommendations of the EA should be followed and the concerns of the community addressed.

A website with detailed information about the project is accepting comments and questions at www.pscheaproject.com. I encourage everyone to visit the site and learn about the project, ask questions and share their thoughts.

In addition, there will be a public informational meeting on the project in East Hawaii on Wednesday, Feb. 6, where input from the public will be accepted. See the website for details about this meeting.

On a final note, University of Hawaii at Hilo hosted its annual Onizuka Science Day to continue the legacy of Hawaii's first astronaut, Ellison S. Onizuka. PISCES attended this community event as in years past, talking with kids, students and adults alike. It was encouraging and rewarding to see so many young faces with a fascination for the sciences.

A hui hou,

R. Romo

Rodrigo Romo, PISCES Program Director

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