

PISCES NEWSLETTER: INAUGURAL ISSUE

Pacific International Space Center for Exploration Systems * Hilo, Hawaii

JULY, 2013

VOL 1 ISSUE 1



Pacific International
Space Center for
Exploration Systems



Rob Kelso, Former NASA Space Shuttle Flight Director & NASA Outstanding Leadership Medalist

Rob Kelso worked for NASA for 38 years at the Johnson Space Center in Houston, Texas.

During the late 80's and 90's, Rob served as a Shuttle Flight Director in NASA's famed Mission Control Center while directing 25 Space Shuttle missions.

His role as Flight Director was the same as that of Gene Kranz (Failure is Not an Option) in the movie "Apollo 13" starring Tom Hanks.

During the missions, Rob often used the NASA and Air Force tracking/communications ground stations in Hawaii to monitor the Shuttle and communicate with the astronauts.

He has a Bachelor's degree in Physics and an MBA in Public Management.

MESSAGE FROM THE EXECUTIVE DIRECTOR

Aloha from our PISCES Ohana (family)!

Let me take this opportunity to express my personal appreciation and mahalo (thank you) to the many people in the State who have been so instrumental in helping PISCES establish a new beginning this year. I have been overwhelmed by the support and welcoming of the ho'aloaloha (friendly) people of Hawai'i.

We are delighted to introduce our inaugural newsletter, a monthly publication that will update you on the many exciting projects underway within PISCES, and spotlight some of our terrific staff along the way.

Barely four months have passed since we began hiring our PISCES staff. Yet, so much has already been accomplished in such a short period of time.

We look forward to sharing our journey with you as we look to advance aerospace within this beautiful State. Mahalo!



Rob Kelso, New PISCES Executive Director

PISCES

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NASA TO HELP PISCES WITH HAWAII PROJECTS

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Space shuttle Atlantis lifting off at NASA's Kennedy Space Center in Florida, July 2011 ~ photo courtesy NASA KSC

ABOUT US

PISCES is a Hawaii State Government Aerospace Agency located in beautiful Hilo, Hawaii.



The research and education/training center is part of the State Department of Business, Economic Development, and Tourism (DBEDT), and conducts environmentally safe field demonstrations to test and validate innovative space technologies on the lower slopes of Mauna Kea under the jurisdiction of the Hawaii State Department of Land and Natural Resources (DLNR).

Scientists say there's no other place on earth that has soil more similar to the surface of asteroids, the Moon, and Mars, than on Hawaii's tallest volcano.

NASA KENNEDY SPACE CENTER AND PISCES SIGN SPACE ACT AGREEMENT

Hawaii's aerospace industry is getting major support from NASA's Kennedy Space Center (KSC) after signing a fully reimbursable Space Act Agreement with the Pacific International Space Center for Exploration Systems (PISCES).

The agreement, which took effect in April, allows NASA to collaborate with PISCES on space projects that will make it possible to live on the Moon, Mars and beyond.

KSC will provide technical support of PISCES projects that involve developing advanced human robotic systems and other technologies required for space exploration beyond low-Earth orbit when such support is not available from commercial sources.

Projects may include assistance with building space habitats, turning Martian dirt into oxygen, water, and other resources needed to sustain life in outer space, and developing a satellite communications system that would connect PISCES with other partner sites.

NASA will also provide technical support to HI-SEAS, (the Hawaii Space Exploration Analog and Simulation program). HI-SEAS is currently conducting a 4-month mission on Mauna Loa. A six-member crew is locked in a remote, dome-shaped Martian base as part of a mock simulation of life on Mars. The crew's mission is to learn how to cook on the red planet.

The Space Act with KSC is for five years. Under this agreement, PISCES will reimburse NASA for the costs associated with the technical assistance it receives.

FIVE STUDENTS HIRED FOR PISCES INTERNSHIPS

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FUN SPACE FACT

QUESTION: Do you get shorter, taller, or stay the same height in outer space?

ANSWER: TALLER!

NASA scientists say you can grow up to **3%** taller if you spend a few months in microgravity.



~photo courtesy NASA
(Istockphoto/S.Kaulitzki)

So if you're 5'3", you could grow nearly two inches (1.89 inches to be exact). Researchers aren't sure why the spines of astronauts living aboard the International Space Station elongate. They've launched a Spinal Ultrasound investigation to find out. Meanwhile, to those wishing they could be taller, don't book that flight to space just yet. NASA says the growth is temporary. You return to your normal height when you're back on Earth.

PAID INTERNSHIPS MARK PISCES'S COMMITMENT TO EDUCATE LOCAL STUDENTS INTERESTED IN SPACE CAREERS

PISCES kicked off its 2013 Summer Intern Program, hiring five former and current University of Hawaii at Hilo students on May 31st.

We are very excited to have Melissa Adams, Sayaalii Baker, Kevin Edwards, Krystal Schlechter, and Nicolas Turner join us, and are pleased to offer them hands-on experience with two of PISCES' projects.

Adams, Baker, Edwards, and Turner are working with Christian Andersen, PISCES Test Operations Manager, on a site characterization project. It involves assembling a database that will help future analog site users find the perfect site on Hawaii Island for their project.

Schlechter is teaming up with John Hamilton, PISCES Test Logistic/EPO Manager, to gather data for NASA's Lunar Atmosphere and Dust Environmental Explorer Mission that will depart for the Moon on August 12th. NASA will use the data to help quantify possible dangers associated with living on the Moon.

Mahalo to our interns for all their hard work, and welcome aboard the PISCES journey!



Clockwise: Melissa Adams, Sayaalii Baker, Kevin Edwards, Nicolas Turner, & Krystal Schlechter

PISCES STAFF

Rob Kelso
Executive Director

Polly Roth
Executive Assistant

Christian Andersen
Manager, Test Operations

John Hamilton
Manager, Test Logistics/EPO

Mari-Ela David Chock
Public Information Officer

PISCES SIGNS SIX MOU'S

MEMORANDA OF UNDERSTANDINGS ARE THE FIRST IN FIVE YEARS

The new partnerships signal growing global interest in Hawaii aerospace.

Under the MOU's, the following six agencies will collaborate with PISCES on space exploration projects:

- International Space Exploration Research Institute (ISERI), Hanyang University, Korea
- Center for Rapid Automated Fabrication Technologies (CRAFT), University of Southern California
- International Society for Terrain-Vehicle Systems (ISTVS), New Hampshire
- Russ Ogi, Hawaii 3D Printing and Design Expert
- Hawaii TechWorks, East Hawaii Community Development Corporation
- Australian Centre for Space Engineering Research (ACSER), University of South Wales

More MOU's are underway, and we will feature one per newsletter, beginning with ISERI in next month's issue.

MOU: a formal, written agreement that defines the roles and responsibilities of each party with respect to the program/project they are working on together.

WHY IMPORTANT: MOU's allow PISCES to form partnerships with the public and private sector, thereby giving access to expertise and technical support from space agencies around the world. Such access is vital to the success of PISCES' projects, and the expansion of Hawaii's economy and aerospace industry.



PISCES MISSION

To serve as a world-class research and education/training center enabling both aerospace agencies and private enterprise from around our planet to develop, test, and validate pioneering technologies in Hawaii that can advance robotic and human missions to space, as well as enhance the quality of life on Earth.

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