



Astronomy Center of Hawai'i



# **Journey Through the Universe 2015**

## **Family Science Day Speakers at 'Imiloa**

### **March 1, 2015**

#### **“A Day in the life of an Astronomer”**

*Scott Fisher, Ph.D., University of Oregon*

**10:00 am**

In this informal talk, which is filled with great pictures and videos, Dr. Fisher will portray “A Day in the Life of an Astronomer” and share some of the most recent discoveries in the realm of astronomy, including discoveries made right here on Hawaii island! He will also talk about how he plans to connect Hilo-town and the Big Island to schools and universities in Oregon through a robotic telescope that can be controlled from anywhere. By building an “astro-bridge” between Hawaii and Oregon, Dr. Fisher hopes to give students in both states a way to study astronomy using both small and large telescopes. Finally, there will be a rousing game of “Stump the Astronomer!” where Dr. Fisher will field questions from the audience.

#### **“Living in a Crowded Universe”**

*Brian Day, Solar System Exploration Research Virtual Institute (SSERVI)*

**11:00 am**

Not long ago, we thought of space as being empty. We seriously wondered if ours was the only solar system. The thought that life might exist elsewhere in the universe was largely relegated to science fiction. Now, NASA's Kepler mission and the observatories on Mauna Kea have shown us that the galaxy is full of solar systems. Within our own solar system, worlds that were once thought to be completely unsuitable for life are now looking far more hospitable. We now have direct evidence that the building blocks of life are being made all around us in space and are raining down on us all of the time. Even the Moon is showing a new face; it is no longer the completely arid, utterly airless, geologically dead world we once thought it to be. Another aspect of living in a crowded universe is the swarm of Near Earth Objects, asteroids and comets, that threaten the Earth. We will look at tools that allow students and the general public to explore the crowded universe and perhaps even save the Earth.

#### **“Moon RIDERS - a joint project between PISCES and Hawaii High School for a mission to the surface of the Moon”**

*Rob Kelso, PISCES*

**12:00 pm**

PISCES is leading a technology experiment in the “removal of dust” to be flown to the surface of the moon within the next 18 months. The experiment involves the NASA Kennedy Space Center and two Hawaii high schools. This briefing will cover the experiment, the science of lunar dust, and what the Hawaii high schools are doing in becoming the world's first high schools to have an experiment on the surface of the moon.

#### **“Colliding Galaxies: A Recipe for Growing Supermassive Black Holes”**

*Vivian U, TMT*

**1:00 pm**

Supermassive black holes are ubiquitous in all massive galaxies, but how did they grow to the size they are today? In this talk, I will discuss merging galaxies as a way of growing these supermassive black holes, and how astronomers use the large 10-meter Keck Telescopes to probe the fuel that feeds these powerful, hungry monsters.

#### **“Black Holes - Monsters in the Universe”**

*Guenther Hasinger, UH Institute for Astronomy*

**2:00 pm**

Black holes first made their appearance to astronomers as the remnants of dead stars. But it is now becoming clear that they play crucial roles in the formation, evolution and interactions of many galaxies, including our own Milky Way and the very earliest galaxies in the Universe. After abandoning a promising career as a rock musician, Guenther obtained his PhD in X-ray astronomy at the Ludwig-Maximilian University in Munich. He subsequently held professorships at Potsdam and Munich as well as the directorship of the High-Energy Group at the Max-Planck Institute for Extraterrestrial Physics. He has been director of the Institute for Astronomy at the University of Hawaii since 2011.