



**'IMILOA**  
Astronomy Center of Hawai'i

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## **How Do You Change a Heavy Instrument on an 8 Meter Large Telescope?**

**Hilo, Hawai'i** – *Robotic Devices for Multiple Functions in Subaru Telescope* is the topic at the next Maunakea Skies talk on Saturday, January 15, at 7:00pm at 'Imiloa Astronomy Center. Join Dr. Tomonori Usuda, Associate Director of Subaru Telescope, as he discusses how technicians change instruments using two robotic devices installed at the Subaru Telescope.

When taking photographs we change lenses such as a zoom lens, micro lens, or a prime lens due to different purposes to get the best possible images. The Subaru Telescope has the same function: there are various cameras (instruments) that can be exchanged varying on the different functions and purposes to get the best astronomical images and results. "Subaru telescope is located atop of Maunakea where air is thin and our brains do not work well due to less oxygen. Exchanging heavy instruments and optics can be difficult and dangerous in this environment," says Dr. Usuda, "Using the robotic devices assist Subaru crews to work efficiently and safely in the high altitude." He will discuss the technical details on how the telescope is engineered to accommodate these various instruments.

Dr. Usuda received his PhD in Astronomy from the University of Tokyo in 1997. He moved to Hawai'i Island in February 1998. He was appointed the chief of the telescope engineering division in 2002 and was named Associate Director of Subaru in 2006. His major area of research is infrared astronomy, studying the formation of stars and planets. Dr. Usuda has also designed and built a number of infrared instruments for the study of star and planet formation.

Before Dr. Usuda's presentation, Maunakea Skies host Shawn Laatsch, 'Imiloa planetarium manager, will provide observational highlights of the winter night-time skies over Hawai'i, pointing out prominent constellations and stars one can see during this time of year.

The monthly Maunakea Skies planetarium presentations are held on the third Saturday of each month. Presented in 'Imiloa Astronomy Center's 120-seat planetarium, admission is \$5 for 'Imiloa members and \$8 for non-members. Pre-purchase tickets at the 'Imiloa front desk or by phone at (808) 969-9704; Visa and MasterCard accepted.

'Imiloa Astronomy Center of Hawai'i is located at 600 'Imiloa Place in Hilo, off Komohana and Nowelo Streets at the UH-Hilo Science and Technology Park. For more information, go to [www.imiloahawaii.org](http://www.imiloahawaii.org), or call (808) 969-9703.

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