



# **TMT INTERNATIONAL OBSERVATORY**

Media Contact:  
Gordon K. Squires  
P: 626-395-1619 E: [squires@tmt.org](mailto:squires@tmt.org)

## **On-Site Construction Begins on the Thirty Meter Telescope in Hawaii; Watch Worldwide by Webcast**

Hilo, Hawaii (October 3, 2014) - On October 7, 2014, a groundbreaking and blessing ceremony for the next-generation Thirty Meter Telescope (TMT) will launch a multi-national \$1.4 billion project near the summit of Mauna Kea, Hawaii.

Although access to the TMT construction site will be limited due to the area's sensitive environment and harsh physical conditions, the ceremony will be fully accessible via a live-stream webcast.

George Takei, noted actor, director and author, known for his role in the television series Star Trek, will present pre-recorded science segments during the live webcast. Dr. Robert Hurt, researcher, science podcaster and lecturer, will host the webcast, available at [tmt.org/buildingTMT](http://tmt.org/buildingTMT).

## **Next-Generation Discoveries from a Next-Generation Observatory**

"This is an exciting moment as we begin construction of TMT. Its giant mirror, nearly 100 feet across, promises the highest definition views of planets orbiting nearby stars and the first stars and galaxies in the distant universe," said Edward Stone, Executive Director, TMT International Observatory.

The TMT International Observatory (TIO) is an international partnership with members comprised of the California Institute of Technology, the National Astronomical Observatories of the Chinese Academy of Sciences, the National Institutes of Natural Sciences in Japan, and the University of California. India recently received approval from the Union Cabinet of India to join the TMT project this fall, and Canada is aiming to join as a member in spring 2015.

Initial activities in Hawaii include site preparation and grading, and offsite work has begun in earnest as well. In China, partners are designing the telescope's fully articulated main science steering mirror system and developing the laser guide star system. Japan has produced over sixty special zero thermal-expansion glass mirror blanks for the main mirror and is designing the telescope structure in detail. Fabricating the mirror support system is ongoing in India. The adaptive optics facility is in final design and the enclosure is ready for construction in Canada. The mirror control system is in final design in California.

"With profound respect for the culture, environment, and values, and thanks to the people of Hawaii, we appreciate the opportunity to build this revolutionary facility for expanding our understanding of the universe," said TIO Board Chair Henry Yang. "This is a remarkable partnership among institutions in five nations, in cooperation with the University of Hawaii, to

achieve a shared, visionary goal. We are grateful for the hard work and outstanding support of so many, including the Gordon and Betty Moore Foundation, over the past decade to reach this important and meaningful milestone.”

### **Traditional Hawaiian Groundbreaking and Blessing Ceremony**

Henry Yang, TIO Board Chair and Chancellor of the University of California Santa Barbara, will deliver the October 7 groundbreaking and blessing program’s opening remarks followed by Hawaii Governor Neil Abercrombie and Hawaii County Mayor William Kenoi. A traditional Hawaiian ceremony will conclude the program.

“TMT has made a commitment to the people of Hawaii to work within a plan created by the Office of Mauna Kea Management for responsible development on Mauna Kea,” said Sandra Dawson, TMT’s Manager of Hawaii Community Affairs. “Respect for the community and Mauna Kea is the cornerstone of our continuing stewardship.”

### **Webcast Viewing of the Ceremony**

The webcast will begin at 11:15 a.m. HST on October 7, 2014. Visit [TMT.org/buildingTMT](http://TMT.org/buildingTMT) to watch the ceremony live stream, explore event information, connect via social media, and view the multimedia archive of the event afterwards. Viewers worldwide may send greetings to TMT (@TMTHawaii) via the hashtag #buildingTMT .

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### **About TMT:**

The Thirty Meter Telescope Project has been developed as a collaboration among Caltech, University of California (UC), the Association of Canadian Universities for Research in Astronomy (ACURA), and the national institutes of Japan, China, and India with the goal to design, develop, construct, and operate a thirty-meter class telescope and observatory on Mauna Kea in cooperation with the University of Hawaii (TMT Project). The TMT International Observatory LLC (TIO) was established in May 2014 to carry out the construction and operation phases of the TMT Project. The current Members of TIO are Caltech, UC, the National Institutes of Natural Sciences of Japan, and the National Astronomical Observatories of the Chinese Academy of Sciences; ACURA, the Indian Institute of Astrophysics, and the Association of Universities for Research in Astronomy (AURA) are TIO Associates. Major funding has been provided by the Gordon & Betty Moore Foundation.

For more information, visit [tmt.org](http://tmt.org) , [facebook.com/TMTHawaii](https://facebook.com/TMTHawaii) or follow @TMTHawaii.

### **About the Gordon and Betty Moore Foundation:**

The Gordon and Betty Moore Foundation believes in bold ideas that create enduring impact in the areas of science, environmental conservation, and patient care. Intel co-founder Gordon and his wife Betty established the foundation to create positive change around the world and at home in the San Francisco Bay Area. Science looks for opportunities to transform—or even create—entire fields by investing in early-stage research, emerging fields, and top research scientists. Environmental conservation efforts promote sustainability, protect critical ecological systems,

and align conservation needs with human development. Patient care focuses on eliminating preventable harms and unnecessary healthcare costs through meaningful engagement of patients and their families in a supportive, redesigned healthcare system. Visit us at [Moore.org](https://moore.org) or follow @MooreScientific.