

Big Island Weekly

The perfect spot - or not?

By Hadley Catalano

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The summit of Mauna Kea has been selected as one of two preferred sites to house a \$1 billion Thirty Meter Telescope (TMT), one of the most advanced telescopes ever built.

Selection was based on four years of research of five possible locations by developer TMT Observatory Corp., a nonprofit organization consisting of the University of California, California Institute of Technology and the Association of Canadian Universities for Research in Astronomy.

While the second site at Cerro Armazones, a mountain in the Atacama Desert in the north of Chile, is also under review, the developer, in conjunction with proposing agency University of Hawai`i-Hilo, has begun the first stage of the Mauna Kea project by holding public scoping meetings around the island as part of the Environmental Impact Statement (EIS) preparation notice and environmental assessment. (Separate meetings will be held in the near future for the Mauna Kea Science Reserve Comprehensive Management Plan [CMP].)

"We are trying to make it as easy as we can for the public to provide comment and possible mitigation for this project," explained Sandra Dawson, EIS manager and site master planner. "We are committed to working with the Hawaiian community and to a new paradigm of development in Hawai`i that is founded on integrating culture, science, sustainability and education on the project."

Dawson explained that an EIS is mandatory for a project on state land with a potential for environmental effects. The \$1 billion telescope would be funded by private organizations, prepared in accord with State of Hawai`i Chapter 343 requirements and follow the state historic preservation process.

"We are committed to doing things the pono way," Dawson said. "We are seeking out anything that we might be able to do to lessen the impact. We want to honor the mountain and the culture. We want to be good neighbors. We are really looking for ideas. For instance, there are 36 acres for the TMT but we don't need 36 acres. Where should it be located? Where is the best place? With this project, we are investing in the community and in the education on this island."

The site currently staked out for the telescope is referred to as Area E in the Mauna Kea Science Reserve Master Plan. It is 500 feet below the summit on the "northern plateau" within the western portion, with an elevation range from 13,100 to 13,300 feet. Area E is located half a mile northwest of the nine existing optical/infrared telescopes at the summit. The entire area is designated as part of the State of Hawai`i Conservation District resource subzone.

The telescope proposed for Mauna Kea would be the most capable astronomical observatory in the world, according to the TMT Corp. The primary mirror, comprised of 492 mirrors, is the "eye" of the telescope. It would be 30 meters in diameter. The secondary mirror would sit above the first and direct the light to the tertiary mirror that sits in the middle of the primary and direct light from distant stars into different instruments for analysis. When the telescope is completed in the latter part of the next decade, it will enable scientists to study the universe with unprecedented clarity, helping to answer complex and compelling astronomical questions, according to Anneila Sargent, professor of astronomy at Caltech.

"Mauna Kea is a special place, and through astronomy, which is a voyage of discovery, it has the ability to bring people into physical science," she said. She told a crowd of about 20 at Kealakehe Elementary School last Thursday that the telescope will have the ability to collect nine times more light than the largest telescopes today and will produce images 10 times sharper than current space telescopes such as the Hubble Space Telescope and surpass even the two 10-meter Keck telescopes on Mauna Kea.

"It will have a sophisticated adaptive optics system that corrects for the blurring of the earth's atmosphere and allow the telescope to make exquisite images of the sky," she said. "It will have a suite of powerful instruments that enable astrophysical investigation of objects throughout the universe. It will have the sensitivity and spatial resolution to revolutionize the study of planets orbiting other stars. It will be able to take direct images of extrasolar planets and analyze the composition of ESP atmospheres."

Following the procedural and scientific explanations of the TMT, the meeting's facilitators, David Tarnas and David Ka`apu, opened the meeting up for public comment.

Previously, residents had the opportunity to ask questions and read informational boards pertaining to the potential significant impacts and possible mitigation measures. TMT offered possible mitigation as siting the project in Area E due to lesser environmental impacts; 200 feet from any historical or cultural resources; siting the project away from cinder cones and pu`us, known to be Wekiu bug habitat; and habitat preservation and restoration.

A handful of residents spoke at the third meeting in Kona, echoing similar sentiments of residents attending the previous Hawi and Waimea meetings. Questions were raised regarding being culturally sensitive to Mauna Kea, the influence of any military applications and the use and removal of waste and wastewater.

"People also have been giving us positive feedback, such as the economic and educational impact," said Dawson, who stressed there is no military involvement with the TMT project.

Richard Ha, a tomato and banana farmer from Pepeekeo, said he attended the meeting to represent himself and his workers. He thought the TMT would be a positive educational influence as well as provide better jobs.

"Banana farming doesn't make a lot of money," he said. "The TMT will give my workers' children opportunities."

Marni Herkes also spoke in favor of the telescope, noting that she supports the science community as part of the Hawai`i Island community.

"It's important to have this kind of science and these kinds of scientists to increase the intellectual atmosphere for our community," she said.

However, Herkes noted that the university needs "better planning and no more mismanaging," and that the Hilo school needs to "clean up the old observatories."

Others who spoke during the evening were primarily in favor of the cutting-edge science and educational opportunities that the TMT would provide the community. Jim Monk noted that the state shouldn't blink at a billion-dollar project, as it will bring "jobs, people and long-term scientific impact."

A number of people mentioned concerns such as the effect on the mountain's ecosystem caused by undue stress, the mishandling of the summit by the UH system and the poor return on the state's investment. Others questioned the cultural and traditional practices and significance of Mauna Kea and the possible effects the telescope's construction may cause.

Clarence "Ku" Kauakahi mentioned his ambivalence about the outward appearance of the telescope, saying the dome would be much larger than the domes currently on the summit and would create an eyesore from his home in Waimea.

Kauakahi said he feels that UH Hilo's \$1-a-year rent is outlandish and it is not unfair to ask the telescope project "to figure out a fair market value and pay for it," and that Hawai`i should gain from the revenue generated by the project.

The EIS is an ongoing process. Following the six scoping meetings that will take place on Hawai`i Island and a seventh on O`ahu, the information, comments and questions will be evaluated and answered in the Draft EIS to be published next spring. Afterward, another public comment period will be set up before a second evaluation and refinement of the draft incorporating those additional comments or concerns. The Final EIS will seek the approval of Gov. Linda Lingle. If and when it is approved, the final version will be published.

In an effort to make the public scoping easier for all to voice their concerns, TMT Corp. is offering a number of ways the public can get involved. Individuals can record an oral comment, fill in a comment form or speak at local meetings.

The next public meeting will be Oct. 15 at Pahoia High School cafeteria and Oct. 16 in Honolulu at the Blaisdell Center Pikake Room. Both meetings run from 5-8 p.m.

Other outlets for comment include making a statement online [atwww.tmt-hawaiieis.org](http://www.tmt-hawaiieis.org), leave a message on the toll-free hotline, 1-866-284-1716, or mail a written comment to: University of Hawaii-Hilo, Office of the Chancellor, 200 W. Kawili St. Hilo, HI 96720

For more information about the telescope, visit the <http://www.tmt.org>. For information on the CMP for Mauna Kea, visit <http://www.maunakeacmp.com>