

First Light Far Off, if Ever

Posted September 29th, 2008 in [Featured](#), [Hawaii Island](#) by Alan McNarie



Telescopes on Hold for Mauna Kea Management Plan

The Mauna Kea site may be torpedoed by a long history of broken rules and bad feelings.

“First light,” for astronomers, usually means the moment that a newly-built telescope first points its lenses and electronics toward the heavens. But a giant new telescope that may be coming to the summit of Mauna Kea could give the term a whole new meaning. The Thirty-Meter-Telescope, or TMT, could peer back over billions of light years to the literal dawn of dawns, when the light of stars first began shining from the universe’s first galaxies.

The telescope could reveal other wonders as well. Today, for instance, astronomers can discover planets circling other stars by watching for a slight wobble of the stars caused by the gravitational tug of the circling planets. But the TMT may be able to see the planets themselves.

The scientific consortium that wants to build the TMT has narrowed the possible sites for the telescope to Cerro Amazones, Chile, and to Mauna Kea on the island of Hawai‘i. The group recently opened an office in Hilo to begin work on an environmental impact statement for putting the telescope on Mauna Kea. It has already prepared a similar document for the Chilean site.

But the Mauna Kea site may be torpedoed by a long history of broken rules and bad feelings.

“Tell the world that 40 years of mismanagement have unfortunately poisoned the well, so the TMT should not be allowed on the mountain,” says Nelson Ho of the Sierra Club’s local chapter. “They should walk away. The problems are still there.”

As the result of a recent court case, [the Board of Land and Natural Resources](#), which leases much of the mountain’s summit to the [University of Hawaii’s Institute for Astronomy](#) for a dollar a year, must adopt a new comprehensive management plan before UHIFA can allow any more telescopes on the mountain.

The university is in the process of creating that plan. Its contractor held three public meetings around the island of Hawai‘i last May, and is planning more for sometime this fall. Ironically, however, the litigants who demanded the plan say that they aren’t participating in the process of drawing it up, because they’re still involved in litigation and because, they claim, the university can’t legally do the plan.

The court case dealt with another proposed mountaintop project, which would have surrounded the two existing Keck Telescopes — currently the world’s largest — with eight smaller, networked “outrigger” scopes. When the BLNR approved the outrigger scopes, a coalition including the Sierra Club, Mauna Kea Anaina Hou and the Royal Order of Kamehameha I appealed the land board ruling to the Third Circuit Court. Judge Glenn S. Hara ruled that the land board was required by law to adopt a new comprehensive management plan for the mountain before it could allow any further construction there.



But the land board says it doesn't have the funding to do a comprehensive plan. The University does – it gets royalties from other universities, corporations and foreign governments for the telescopes already on the mountain. But the activists who sued over the Outrigger scopes maintain that the land board can't delegate the job.

“The tragedy here is that DLNR seems to think that they can release their authority,” believes Kealoha Pisciotta of Mauna Kea Anaina Hou.

The issue of who should write the plan came up at a May meeting of the governing board of the [Office of Mauna Kea Management](#) (OMKM), which was established by the university in response to earlier criticism by local residents about mismanagement. At that meeting, [Dawn Chang](#), who is overseeing the writing of the new plan, responded that other agencies and entities managed other DLNR lands, and had been made responsible for writing their own management plans. Board secretary Ron Terry agreed with Chang, and added, “If we waited for DLNR to prepare a comprehensive management plan, we would not get one. So if you do not care if the resources are managed, then you can hold out for that argument. If you care, we have to be proactive.”

But Ho and Pisciotta point to a case called *Ka Pa'akai O Ka Aina v. Land Use Commission*, in which the court found that the state's Land Use Commission (and, by implication, other state agencies) could not accept a private developer's resource management plan in place of doing its own.

We're quite sure that they're incorrect in their interpretation and we're willing to take it to court,” says Ho.

In the case of Mauna Kea, maintains Pisciotta, the university is the developer — and the university's record as a manager of the mountain's resources is dismal.

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The master plan

The university did approve a Master Plan for the summit area in 1985. But opponents say that plan has been repeatedly violated since then, and that the summit today already holds more telescopes and larger telescopes than the maximum called for in 1985 plan. That plan called for a maximum of 13 telescopes and prescribed the size of their domes. The activists point out that there are more than 13 telescope structures up there already – including arrays that include multiple dishes, and they say that some of the structures are larger than those that the plan allowed.



The destruction of summit cinder cones to make way for the telescopes was viewed as sacrilege by many Native Hawaiians, who view the mountaintop as sacred. Some Native Hawaiian religious practitioners — including Pisciotta, who is both native Hawaiian and a former telescope technician — have complained that telescope personnel interfered with their religious practices and desecrated shrines

on the mountain. And the summit cinder cones are the only known habitat for a tiny insect called the wekiu bug, which is a candidate for the endangered species list. Early biological surveys indicated that wekiu populations plummeted after some of the telescopes were built in their habitat.

An EIS done by [NASA](#), the sponsoring agency for the Keck Outrigger project, found that while the impacts of the Outriggers would generally be small, the cumulative impact of all the telescopes on the mountain's cultural and natural resources had been, and would continue to be "substantial and adverse." Stephanie Nagata, the Mauna Kea Management Office's acting director, says that those early surveys were not "systematic," and that more recent surveys have shown that the bug's range is "much larger than was known from those earlier surveys."

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Nagata says that characterization is "casting aspersions on those people who have given of their time to do what is right for the mountain." Many of the citizens on OMKM's board and its two advisory boards, she says, have been serving without pay for years. Since the OMKM was established in 2000, she points out, it has established a ranger program and informational program on the mountain, began surveys of the mountaintop's cultural and biological resources even before Judge Hara's ruling.

Pisciotta and Ho both think that if the DLNR doesn't have the budget to do a survey, it should charge more than a dollar a year to lease the mountaintop.

"Even if Stephanie Nagata is correct," responds Pisciotta, "Why would we want the university to do it, given the two auditors' reports that gave a fairly dismal report of mismanagement on the mountain, given the NASA EIS, which essentially said the cumulative impact of astronomy development on the mountain for 30 years was adverse significant and substantial, and given that there's no legal justification for giving conservation districts over to the university, and all their bad history, and given that we won a case where the court specifically instructed the DLNR on what to do..."

Pisciotta and Ho both think that if the DLNR doesn't have the budget to do a survey, it should charge more than a dollar a year to lease the mountaintop. They note that the university is guaranteed a quota of observation time on all of the mountain's telescopes, and doesn't necessarily use it. They suggest that that spare viewing time — worth thousands of dollars an hour, given the immense cost of constructing and running the giant scopes — should be auctioned off to help fund a land board management plan.

The University appealed Judge Hara's ruling, but withdrew its appeal after the federal government pulled funding for the outriggers. The plaintiffs have asked for attorney's fees; a ruling on that motion probably won't be delivered until next year.