

**AMENDED CONTESTED CASE HEARING TESTIMONY OF
NELSON HO**

WITNESS FOR PETITIONER LEINA'ALA SLEIGHTHOLM

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The proposed Thirty Meter Telescope (TMT) should be built. It will be a magnificent scientific instrument. But it should not be built on Mauna Kea. One key reason is because land use mismanagement—and the unseemly politics behind it—has persisted since the beginning of the 1968 UH lease. Those practices must not be allowed to continue. It is this chronic mismanagement and unseemly politics that created the controversy, and continue to fuel widespread community opposition to TMT and the other telescope projects waiting in line behind it (such as the Canada-France-Hawai'i Telescope's so-called “upgrade” to replace it with a new \$100 million High Dynamic Range 10-meter telescope).

My name is Nelson Ho. I began to publicly voice these community concerns in May 1995 when I was asked by Sierra Club members to investigate old telescope construction debris that had blown into the Ice Age Natural Area Reserve and elsewhere on the upper slopes, including debris encroaching on the shrines and other cultural sites that ring the summit. I soon joined with Mililani Trask of Ka Lahui Hawai'i to address the mismanagement created by then Institute for Astronomy Director Don Hall and Department of Land and Natural Resources officials and staff, mismanagement protected politically by powerful political figures, including U.S. Senator Daniel Inouye, several governors and Board of Land and Natural Resources Chair Larry Mehau.

Because of my public involvement, University of Hawaii President Kenneth Mortimer asked me to serve on his Mauna Kea Advisory Committee (1998-2000). That committee, led by UH-Hilo professors Drs. Larry Kimura and Pila Wilson, declined to endorse a deeply flawed initial version of a UH Master Plan for observatory expansion. The University's consultants later completed their own version of what became the UH 2000 Mauna Kea Master Plan, a document roundly criticized by Native Hawaiians and other islanders. From 2003 through 2011, Sierra Club was part of a legal hui that brought a federal lawsuit funded by the Office of Hawaiian Affairs which ultimately compelled NASA to complete the first federal EIS ever conducted on Mauna Kea, after decades of the observatories ignoring the federal law requiring such studies. During this period, I also wrote a number of editorials for various Hawai'i newspapers in an effort to educate the astronomers and the public on these chronic mismanagement issues, and contributed numerous historical documents to the State Auditor when the legislature asked her to look into the mismanagement of Mauna Kea in 1998.

In addition to my Mauna Kea activities, I was a lecturer for Environmental Studies courses at the Hawaii Community College for four years and later served under Mayor Harry Kim as Deputy Director for the Department of Environmental Management from 2004 to 2008.

Why have I been a critic of the mismanagement of Mauna Kea for twenty-one plus years? And why should decision makers at UH, DLNR, the University of California, Caltech and TMT's various partners seriously consider what I have to say? Outlined here are some of the reasons that I hope they will finally pay attention to.

UH-DLNR Collusion to Support Astronomy

UH and DLNR have a long record of breaking agreements, including UH limits on the number of telescopes they would build and promised biological and cultural studies, thus failing both the people and the land they agreed to care for. In 1998, the State Auditor Ms. Marion Higa found the following problems with UH-DLNR oversight of Mauna Kea:

"Over thirty years have passed since construction of the first telescope on Mauna Kea. During this period, little was done to protect its natural resources. The university, as the leaseholder, should have provided sufficient protection to the natural resources and controlled public access and use. These requirements have not been adequately met. The Department of Land and Natural Resources, in its role as landlord, should have overseen the university's activities and enforced permit conditions and regulations in protecting the State's interests. Neither state agency has been proactive in maintaining the conservation district. The University has failed in the management of these lands."

The Auditor's list of specific violations of law and other transgressions by both agencies went on and on.

“Significant, Adverse, and Substantial Impacts”

The federal lawsuit by OHA and the Mauna Kea Legal Hui against UC-Caltech-NASA Outrigger Project compelled a federal Environmental Impact Study that concluded that "the cumulative impact of the past, present and reasonably foreseeable astronomy developments have resulted in significant, adverse and substantial impacts to the cultural and natural resources of Mauna Kea." (NASA Federal Environmental Impact Statement (EIS) and OHA v. Sean O'Keefe, Civil. No. 02-00227 July 15, 2003.) Here was another official recognition of the damage done by all those years of UH and DLNR mismanagement.

The Political Underbelly of Mauna Kea Telescope Development

One misconception (often enunciated by astronomers) is that previous mismanagement was not intentional. The historical record shows that UH and DLNR officials promoted astronomy over environmental and cultural concerns with the support of—and under pressure from—powerful political operatives and economic interests. The key governmental players include:

- U.S. Senator Daniel Inouye
- Every Hawai‘i governor, including John Burns, George Ariyoshi, Ben Cayetano and Neil Abercrombie.
- Larry Meheu, Chair of the Board of Land and Natural Resources
- All the other BLNR Chairs, including William Aila and Suzanne Case
- Donald Hall, Institute for Astronomy Director and his predecessor John Jeffries
- All the heads of DLNR’s Office of Conservation and Coastal Lands, including Roger Evans and Sam Lemmo

The key private sector players include:

- Local companies contracted to build the telescopes and astronomy-related infrastructure, including Isemoto Contracting Company, Goodfellow Brothers Construction Company, Hawaiian Telcom and Hawaiian Electric and Light Company.
- Group 70 International, planning consultants who did all the design work for Hale Pohaku IfA facilities, the 1984 Mauna Kea EIS and the UH 2000 Master Plan, among others.

- Construction unions, including local ILW 142 for whom OMKM cultural advisor Wally Ishibashi served for two decades as a business agent

Community Opposition from Day One

Second, there is a common misperception (especially among California astronomers) that no Hawaiians or other islanders expressed concern about the development that was going on in the early days of astronomy—a view that flies in the face of historical facts. The people of Hawai`i have actively opposed more development of telescopes on Mauna Kea since the lease was first issued in 1968. In the 70's and 80's, islanders marched at the State Capitol to show they did not want astronomy to take over the mountain. Those concerned were not at that time labeled “cultural practitioners,” “activists” or even “Native Hawaiians,” but instead usually spoke out as hunters, hikers, and skiers. Former Big Island Mayor Herbert Matayoshi (1974-1984) publically opposed adding more telescopes to Mauna Kea. (*Star Advertiser* 7-14-11) In fact, he was the first person to call the growing cluster of telescopes visible from Hilo “pimples” marring the mountain.

Sierra Club Responds

As an organization, Sierra Club has spoken out against land mismanagement on the summit since the early 1970's. My mentors were Mae and Bill Mull, who were concerned about the “urbanization” of the summit and potential restrictions on public access. Mrs. Mull and her environmental supporters had joined forces with hunters to push back on rancher Larry Mehau's actions as Chair of the DLNR. She and others eventually generated so much opposition to the second phase of telescope construction in 1970's (NASA IRTF, CFHT, and UKIRT) that then IfA Director John Jeffries believed that the permits would be denied

by the BLNR. Larry Mehau, powerfully connected, made it clear that he supported the telescopes, which quickly dampened the opposition out of fear of crossing him. (1987 videotaped interviews conducted for the 20th anniversary of IfA, later provided to the State Auditor's office).

Meanwhile, entomologists Dr. Wayne Gagne and Dr. Fred Stone and Dr. Frank Howarth were concerned about the Wekiu bug and the summit ecosystems that were not being studied, let alone being protected from increasing human intrusions.

During the 1980s Mrs. Mull had asked me several times to get involved with the mountain's protection, but I had already committed my time to protecting Hawai'i Volcanoes National Park from industrial impacts of a proposed geothermal energy development upwind of the park in the sensitive and intact Wao Kele O Puna rainforest. It was a few years after that battle that I joined the fight to protect Mauna Kea. Hawaiian elders Mrs. Leina'ala Apiki McCord and Mrs. Pele Hanoa expressed their concerns to me about the "hewa" or grave harms that were being done by the industrialization of the summit. Mrs. Hanoa, in particular, told me in 1995 that she wanted the use of unlined cesspools by the observatories to be stopped. This was soon after I began publicizing the neglect of the Institute for Astronomy in policing the construction activities and allowing construction debris to be strewn all over the summit region by the high winds.

In the two decades since then, Sierra Club members were among the hundreds who voiced opposition to further observatory development, including at myriad hearings—on the proposed 90-telescope MMA Millimeter Array, the 6 Keck Outrigger telescopes, the Pan-STARRS Air Force telescope, and the TMT.

In 2007 I was invited by member of the Mauna Kea Legal Hui to attend an informal private discussion with, I was among those interviewed by Dr. Peter Adler, consultant to the Gordon Moore Foundation who had been tasked to find out if the hundreds of millions of dollars Mr. Moore had “invested” in TMT was in jeopardy. I reviewed in detail the long history of the conflict and the many environmental and cultural issues involved. Much of that was included in his 2007 report to the foundation, including his candid observation of the controversy ahead. Much of what Dr. Adler wrote—which was more or less ignored by Mr. Moore—has come true. (“Assessment of Risks for Siting the Thirty Meter Telescope on Mauna Kea,” October 26, 2007.)

Around that same time I was invited by the Mauna Kea Legal Hui to attend a three-hour private discussion with three key members of the TMT Board of Directors: Dr. Henry Yang, Chancellor of UC Santa Barbara and Chair of TMT’s Board; Dr. Jean-Lou Chameau, then President of California Institute of Technology; and Dr. Michael Bolte, Director of University of California Observatories. Also in attendance were Kealoha Pisciotta, Paul Neves, Clarence Ku Ching, other original Mauna Kea Legal Hui petitioners, and a few others long involved with the opposition. This the meeting was held in the office of then Chancellor Rose Tseng. We enunciated many of the same concerns raised in Dr. Adler’s later report, and were sorely disappointed that these TMT Board members did not heed our warnings or take more seriously Dr. Adler honest appraisal.

The opponents in this room—and the many thousands who support them—are only the latest people engaged in this struggle to protect Mauna Kea, a struggle against chronic mismanagement and Hawai‘i’s unseemly land use politics.

The Costs of Chronic Mismanagement

Despite the pleas for Kapu Aloha from the Protectors of Mauna Kea, is everybody blind to the growing community enmity surrounding the construction of yet another gigantic industrial facility on the mountain?

ENMITY IS A WORD I USE ON PURPOSE. ENMITY- the state of or feeling of being actively opposed or hostile to someone or something. Synonyms: hostility, animosity, antagonism, acrimony, bitterness, rancor, resentment, ill feeling. Does this sound familiar? Are you an astronomer or administrator who wonders why the state Supreme Court ruled against the DLNR and why there were feelings of enmity when you saw the gauntlet of Protectors gathered at Hale Pohaku in 2015?

Why should a “pure science” proposal for the next technological leap of humankind to peer deep into space be opposed? Pursuing the answer to that question would be misleading. The question should be “What structural changes must be made in the decision making and management of the Mountain, that would make this enmity disappear?”

The use and manipulation of Hawaiian Kingdom lands and “statehood” land management policies has been orchestrated carefully to achieve maximum astronomical facility build out and will include facilities well beyond the TMT and the 2033 time frame.

The Judicial System Has Been the Only Governmental Agency That Has Done the Right Thing for Mauna Kea

The courts are the last resort that the Protectors of Mauna Kea have relied on. Public sentiment can be bought and manipulated by those that

hold the public purse. We see that on a national scale and we see that with the public relations budgets of TMT and the UH.

The courts have now ruled five times for civil rights of Hawaiians and cultural practitioners. They have ruled against the political cronyism that past State decision makers have catered to.

1. The federal court forced the first federal EIS for a Mauna Kea Telescope proposal. This was the first acknowledgment that "the cumulative impact of the past, present and reasonably foreseeable astronomy developments have resulted in significant, adverse and substantial impacts to the cultural and natural resources of Mauna Kea."
2. The State Supreme Court in December, 2015 made its ruling that the first TMT CCH was invalid, causing this hearing process to begin.
3. Judge Ronald Ibarra ruled that the Civil Rights of the Protectors was violated by the Draconian measures passed by the BLNR over protest actions at Hale Pohaku.
4. The "Defense of Necessity" was accepted by Judge Barbara Tanabe and the arrests surrounding the protests at Hale Pohaku in 2015 were thrown out.
5. Judge Nakamura's December 15, 2016 ruling that the consent for the sublease was invalidated.

Management Tokenism and Directing the Blame on the Public

Floral and faunal inventories and monitoring promised since the mid-eighties have never been funded, even in good economic times. The "OMKM Environment Committee" was NEVER convened to review the TMT EIS, and has never convened before or since the sham CMP was approved by the BLNR, and challenged in court. (I know of active

members who have served this committee since 2000, offering vocal constructive criticism, and I have observed that recommendations made by this committee are ignored by the OMKM and BLNR.) The EM committee, like the MKMB is a convenient cover for the University to claim community involvement, but community participants used to be ridiculed and silenced when they show up at the public meetings to speak.

There has been no honest consultations with impacted Hawaiians, of any value, from the decision makers. When does real consultation with Hawaiians begin? DLNR and the UH can't just continue to use agreeable Hawaiians who are already in alignment with UH perspectives.

The Way Forward

Until there is regime change in the substance for which decisions are made for the mountain, the UH and DLNR should agree to a MORATORIUM on all development, including the TMT proposal, until the reorganization is completed.

Substantial, Significant and Adverse Environmental and Cultural Impacts have to be Completely Mitigated before UH and TMT DESIRES are Allowed

Stringent state EIS law requirements for legitimate ALTERNATIVE ANALYSES TO THE PROPOSED ACTION should be enforced in this critically significant and already impacted cultural and natural resource landscape.

This was not done in the first TMT EIS. It should be done in the NEXT draft EIS. That one shall describe in a separate and distinct section alternatives which could attain the objectives of the action, regardless of cost, in sufficient detail to explain why they were rejected. The section shall include a rigorous exploration of the environmental impacts of all such alternative actions.

There should be FULL AND FAIR DISCLOSURES OF ALTERNATIVES related to different designs or details of the proposed action which would present different environmental and cultural impacts, INCLUDING NO ACTION.

The Current Master Lease Needs To Be Renegotiated With The Protectors At The Table

The current Mauna Kea Summit lease expires Dec. 31, 2033. There is also a lease on 71 acres of non exclusive easement s4697 for access road which also expires Dec. 31, 2033. The Hale Pohaku lease s5529 expires in 2041.

There is a need to rebalance the land management priorities of Mauna a Wakea. The cultural and natural resource protection has been neglected for the benefits of attracting cutting edge astronomy research on Mauna Kea.

There has been a willful neglect in looking at the question of carrying capacity, constraints on human activity and ultimate build out of the summit. With the temptation of another 65 year lease coming to the rescue, there is no need for an adequate planning horizon for the restoration of these natural and cultural resources while finding an acceptable level of astronomy activity, if any.

The TMT is the Trojan horse that will allow significant industrialization to continue indefinitely on the summit. That Trojan horse could stymie all calls for major constraints on how future telescope developers can operate, contaminate, control and desecrate.

The 1968 Lease did not foresee a lot of the changes that the UH has made. The 65 year lease seriously underestimated the cultural and natural resource damage to the summit by the industrial nature of modern telescope facilities. Lastly, proper oversight and management was lacking by DLNR and the UH which resulted in insufficient mitigation and restraint on UH desires. ION.

Unfortunately, this telescope proposal is caught up in the unacknowledged racism that pervades the political history of Hawaii since the overthrow of the Hawaiian Kingdom in 1893. The University of Hawaii, with its lofty goals and objectives, has been tainted with this racism even though it has been a beneficiary of that behavior and its accompanying political cronyism.

The very fact that no cultural practitioner can raise the issue of original ownership of the Crown Lands that make up Mauna Kea is racist. In this proceeding, it has been labeled “political” and therefore off limits. Such a ruling makes this proceeding more manageable, I concede. The unfortunate consequence, however, will be to introduce a fatal flaw in the very foundation of the final decision, and ultimately this decision making process will not stand the test of time.

The Industrial nature of modern astronomy facilities fails to conform to 8 criteria destroys culturally sensitive sacred landscapes and endangers

vulnerable environment. The DLNR has failed to control the commercial activities on the summit and at Hale Pohaku. Who gets the money and where is the fee money going? How much was collected each year since its inception in 1995?

The regulatory tangle that DLNR and the UH system are in, is permanently and fatally flawed. Who monitors activities, lease conditions, permit compliance and construction activities? OMKM is merely an advisory group to the UHH Chancellor.

There is an unacceptable pattern of practice allowed where the Hawaii taxpayer is being cheated by the UH system to pay for all the legal costs defending the TMT corporation and all the foreign countries that use the summit landscape and public lands at lower elevation for their facilities. The public should not have to bear these costs.

The “weaponization of space” is real and it needs facilities on the ground to dominate. There must be real prohibitions and transparency regarding the use of summit facilities for military and defense purposes.

Potential toxic cleanups - no testing has been done to examine the soil beneath the septic tanks and their leachate fields. When was each cesspools placed in service and when was each one closed? What has 50 years of chemical and biosolids waste dumping done to the land beneath the facilities?

Not much has changed with the management structure of the mountain since 1998. A major shift has happened with those who no longer find that mismanagement acceptable.