



Board of Regents <bor@hawaii.edu>

Re: Management of Maunakea and the Maunakea Science Reserve Testimony

J Pollard <myriadjoy-public@yahoo.com>

Fri, Apr 24, 2015 at 1:46 PM

Reply-To: J Pollard <myriadjoy-public@yahoo.com>

To: "bor@hawaii.edu" <bor@hawaii.edu>

Aloha,

My name is Joy Pollard, and I support the TMT and the University of Hawaii's management of Maunakea.

I graduated from Castle High School in Kaneohe, I am an alumni of the University of Hawai'i at Hilo, and I work for an observatory. I moved to Hawai'i with my parents in 1990 when I was 15. After 20+ years in the islands I am a Kama'aina, Hawai'i is my home. If it were not for astronomy and the observatories, I would not be able to afford to live in Hawai'i; I would have to leave my home, and move away from my ohana. Hawai'i needs astronomy and the economic impact that facilities like the TMT bring. I am not a scientist, I am part of the 85% of regular folks who work at (good paying jobs) supporting astronomy, and it is something that I can be proud of.

Maunakea is a very special place; anyone who has ever been to the summit can't help but know this. Its beauty, serenity, and power are undeniable. Maunakea was here, reaching towards the heavens, long before anyone came to these islands, and will remain long after the last human has left. I think we can all agree that Maunakea is special, even sacred; something that we who work on the mauna, appreciate every day we are up there.

The problem, as I see it, is not science vs culture. It is culture vs culture, the culture of "western" science as it has been forced onto the Hawaiian people. This has to stop, we all need to work on being more inclusive and try to understand each other's perspectives. I think that the TMT attempted to do this from the start, they did what they thought was the right thing to do, (7 years with public comment that resulted in establishing the THINK fund among others), but it is not enough. Not enough because there are still so many who can't see that there is anything different this time around.

There are legitimate concerns that need to, and can be, addressed if we approach this with an open heart and mind. But there is also a lot of misinformation that only serves to confuse things. For example, there are 12 working telescopes at the summit and one in need of repair; and yet so many repeat the misconception that there are only 4. Come up to Maunakea at twilight and (weather permitting) you will see them all opening up and moving, it is an awesome sight. This is just one example, I've included more at the end of my testimony. (<https://www.youtube.com/watch?v=8Pw313y2K9s> for a video of Maunakea at night)

My personal feeling is that we can't stop advancements because of all the wrongs that have

been done in the past for fear that they will be perpetuated. We just have to do better, and I think that we can. Stopping the TMT, not renewing the lease for the current telescopes, is a step backwards in our journey into the future. We can do this, we can make it right, make it pono; and we can build the telescope with understanding and respect for the 'aina and all the peoples of Hawai'i, for the benefit of all the peoples of the world.

As a University, it is UH's kuleana to see this through and that the interests of all are served; that the mauna is cared for and respected in an environmentally responsible way, with sensitivity towards all who revere it; to carefully shepherd the building of this telescope, and cultivate the science of astronomy on the best place in the world for it.

The mistakes of the past should not predicate the choices for the future. To deny the building of this telescope denies all of humanity the access to a greater understanding of the universe and our place in it.

Mahalo,
Joy

PS I would like to address some other misconceptions:

The observatories do not sell time on their telescopes. The \$1 a second often quoted is the operational cost which covers everything, i.e. electricity, human resources, equipment and supplies, just to name a few. Observatories do not make money, but the money they spend to keep operational is a benefit to the communities they are in.

<http://www.civilbeat.com/2015/04/mauna-kea-telescopes-the-business-of-astronomy-is-not-an-easy-one/>

There are no telescopes on the true summit of Maunakea. The actual summit is free of buildings of any kind. <http://beyondhonorulu.com/wp-content/uploads/2011/10/Mauna-Kea.jpg>

It is extremely dry at the summit, there is very little precipitation and what little there is usually evaporates into the air. This is one of the reasons why Maunakea is the "gold standard" for astronomical observing. The hydrological studies that have been done state that there is no danger to our aquifers, but even so, there is very little drainage that occurs from the elevation at which the telescopes sit. http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Hawaii/2010s/2014-04-08-HA-FEA-5B-Humuula-Saddle-Region-Hydrologic-Evaluation-and-Exploratory-Drilling-Project.pdf

There are currently 12 observatories on Maunakea (the W.M. Keck Observatory has two telescopes). 11 telescopes, an antenna, and an 8 antenna array. All give observation time to the University of Hawai'i as part of the lease agreement. The first telescope ever built on Maunakea was decommissioned to make room for the Gemini Observatory. CSO is scheduled to be decommissioned between 2016 & 2018, long before TMT is completed.

<http://www.hawaiitribune-herald.com/news/local-news/talks-works-early-decommission-telescopes>

The telescopes have a real world impact on all of our lives, not just for astronomy. The

technology that we develop can be used in ways that we won't know until they happen.

<https://youtu.be/bHi1cbXcm9s>

Space is an excellent place to do astronomy from, but it is prohibitively expensive to do. You can not easily maintain and fix space based observatories, this is not a problem shared by ground based telescopes. Maunakea, a shield volcano in the middle of the pacific ocean, is the next best place to being in outer space. <http://www.welivemana.com/articles/native-hawaiian-astrophysicists-mana'o-thirty-meter-telescope>

The observatories preferentially hire from within the Big Island community, not the mainland. Local hires are more likely to stay on the island rather than move away. A large number of observatory staff members grew up in Hawai'i. There has been a major push from the observatories to increase those numbers by fostering STEM education and outreach with such programs as; Onizuka Day, Astro Day, Journey Through the Universe, Akamai Workforce initiative, Huiiana Summer internships, the THINK fund, and others.

<http://www.hawaiicommunityfoundation.org/THINKFund>

Here are just a few of the voices that support TMT

<http://www.gopetition.com/petitions/wesupporttmt/signatures.html>

UH Maunakea Managment

<http://www.hawaii.edu/news/2015/04/15/stewardship-by-uh-to-protect-maunakea-for-future-generations/>

Economic Impact of Astronomy on Hawaii

http://www.uhero.hawaii.edu/assets/UHERO_Astronomy_Final.pdf

More on Maunakea and TMT

<http://www.maunakeaandtmt.org>