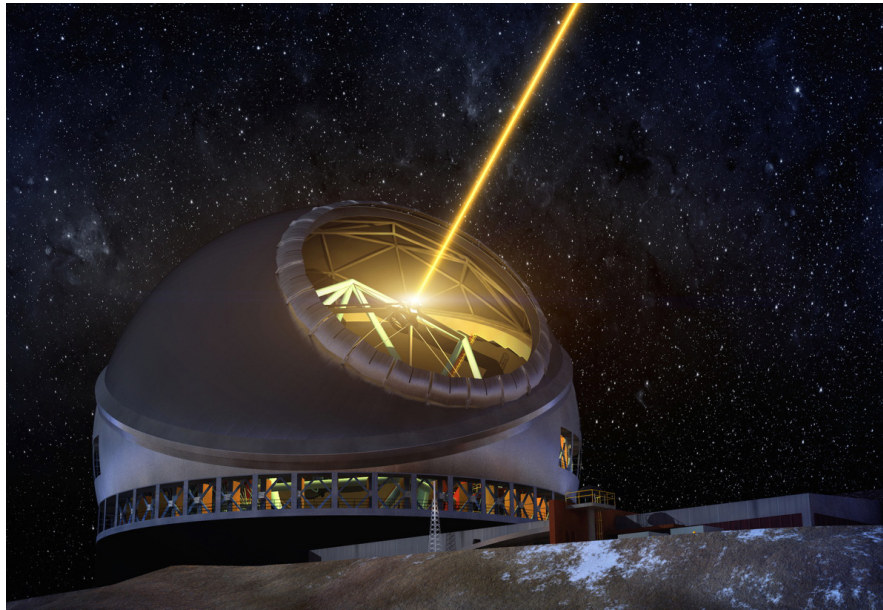




The TMT Controversy

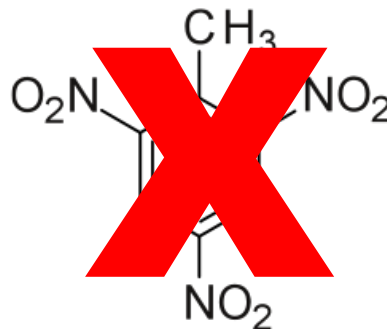
Presentation by Dan Birchall, GradCertSc '10, for SAO AstroFest 2015



TMT=Thirty Meter Telescope

(or TMT International Observatory)

No relation to ninja turtles, high explosives, or Floyd Mayweather



Recent News

- “Groundbreaking” last October
- Grading & grubbing equipment “delivered” in March.
- April blockade
- May recommendations
- June blockade and closure
- July reopening
- August reopening

How did we get here?



The nexus of the crisis

- Growth of astronomy
- Environmental awareness
- Culture, identity, and self-determination
- Opposition since 1970s
- Opposition bigger each time
- No meaningful reconciliation efforts to date

Governor David Ige

“In many ways, we have failed the mountain. Whether you see it from a cultural perspective or from a natural resource perspective, we have not done right by a very special place and we must act immediately to change that.”

<http://governor.hawaii.gov/newsroom/news-release-governor-david-ige-announces-major-changes-in-the-stewardship-of-mauna-kea/>

Governor's Recommendations

- State-level Mauna Kea Cultural Council
- Universities in TMT should admit Native Hawaiians to STEM, give scholarships
- UH should:
 - Be responsible for stewardship, restart EIS, do a cultural impact assessment
 - Commit to develop no more new sites, decommission 25%+ before TMT opens
 - Create rules to limit/control non-cultural access, require cultural training
 - Reduce requested lease extension, return 10,000+ unused acres to DLNR.
 - Ensure full use of scheduled telescope time
 - Revisit the issue of sublease payments from existing facilities.

Some of these points may be viewed as inconsequential by people on various sides.

Sticking Points



Culture/Spirituality

Practitioners: Maunakea is sacred, and building permanent structures on the summit is desecration. It is home to several of our deities, culturally important views, burial sites, and more.

Researchers: The TMT site was chosen for its lack of culturally significant historical sites, and to minimize impacts on cultural and spiritual activities. It's not perfect, but we tried.

Sovereignty

Activists: 1887 “bayonet constitution,” 1893 overthrow, 1898 annexation and 1959 statehood plebiscite *all* legally questionable.

Resulting “state of Hawaii,” government and courts are illegitimate.

Astronomers: Yes, bad things have happened in the past, *but*:

- a) Get over it,
- b) You’re all thoroughly Americanized, *or*
- c) Several groups each claim to be the “real” Hawaiian government.

Telescopes

Astronomers: TMT is the last new site developed.

Some will be removed, and other facilities will be reused for new ones.

Nowhere equals Maunakea.

Kalakaua and Liliuokalani supported astronomy.

Some opponents: Enough telescopes already; TMT should not be built.

Other opponents: Too many already; some should be removed.

Still others: *All* should be removed.

Environment

Environmentalists and others:

Poor stewardship
1970-2000

At least one mercury spill
Groundwater?

Unique ecosystems and bugs.

Scientists:

Management plans in place since 2000

Better stewardship being implemented

Mercury spill was small, indoors.

Hydrologists say groundwater is partitioned.

Entomologists say bugs are doing fine

80% of traffic is tourists.

Money

Astronomers:

Our pursuits are non-profit
and for the good of all

And they create jobs

It's reasonable to pay hardly
any lease rent –

Our currency is observing
time.

Others:

\$1/year (Hawaiian programs
get \$0.20) for 11,000 acres
seems a bit low.

Cost of Yale and Swinburne
getting Keck time was
published, so there's an
“exchange rate.”

Rent needs to go up.

Jobs

Astronomers:

We have lots of good jobs

We need people to fill them

We want to hire locally

Kids should study lots of STEM

Labor:

Jobs are dropping in numbers

Pay often trails inflation

Some absolute-dollar pay cuts

No engineering major in Hilo

Locals mostly in bottom-rung technician jobs

Paranoia

C.A.V.E. People:

TMT uses AO, which was created at MIT Lincoln Labs, which works for the military

Clearly TMT is a military project

China is part of TMT, so TMT gives military secrets to China!

Sane People:

You're posting on the Internet, using packet-switching, also co-invented at Lincoln Labs.

Your device probably has Wi-Fi, which came from an Australian programmer in radio astronomy.

Quick, make a tin foil hat!

Ways Forward



Building on the Governor's ideas

- Decommission facilities that are underutilized, or that are old and can't easily be reused
- Reduce length of the requested lease extension, and look at lease rent being paid by existing facilities
- Go beyond the Governor's proposed "Maunakea Cultural Council," to a Hawaiian cultural council of elders *not* under or subject to the University or State, with ownership and authority over Maunakea (and ideally other crown lands)

Thinking outside the ~~box~~ dome?

The two groups with the most riding on this are on one hand astronomers, and on the other a mix of cultural, spiritual and sovereignty activists.

If those two groups side together (against all odds), environmentalists and labor would fall in line.

Elusive goal, since few on either side want to be seen as supportive of the other side.

Hawaii State Supreme Court

Hawaii State Supreme Court picked up a lingering legal appeal over state agencies' rulings in favor of TMT, and will consider it later this month.

If it rules in TMT's favor, opponents will almost certainly try to appeal that decision to somewhere else.

Prophecies



2016?: Finding common ground

Once protesters realize that they can't win in the courts against something that fastidiously follows all laws:

- Work on mitigating real or perceived impacts
- Make it *less bad* or even *more good* for themselves

Several people in the astronomy community are ready and willing to talk about this whenever they ask.

2018: Master lease renewal

- Current lease expires 2033; decommissioning would need to begin in 2030.
- Crazy to spend USD 1.5 billion on a telescope that will only be used 2025-2030
- University will surely spare no efforts to ensure master lease is renewed for, say, 30 years
- They'll definitely have to pay fair lease rents

2025: TMT on Maunakea

- TMT has brought many Hawaiians and their allies together in some ways
- Still considerable infighting and badmouthing between competing sovereignty movements
- Self-determination, or challenging legitimacy of courts, government or state, requires consensus and a unified front
- Highly unlikely to happen in time to stop TMT

2???: Hawaiian self-determination

- Surprised?
- Astronomers don't watch world affairs - I do
- 1970-present – 12 observatories built
- 1970-present – 50+ places around the world have seen independence, autonomy, self-rule, home rule, or the end of military occupation.
- When Hawaiians *finally* agree on a model for self-determination, they'll probably get it.

2???: Hawaiian support for astronomy

So what if a Hawaiian cultural council, self-determined Hawaiian government, or *whatever*, gets ownership and control of Maunakea?

- Don't worry!
- Organizations and governments need money
- Population needs decent jobs
- There are a lot of worse ways to get those
- If Hawaiians feel it benefits them – support it