Every single person in this room has ancestors whose lives, memories, hopes, dreams and mistakes are imprinted in our bodies, our dreams, our memories and our mistakes. Every single person in this room wants a happy peaceful life for themselves and future generations. Every single person in this room wants to be connected to others, to the world, the universe and wants to have a purpose and a meaning to their daily activities, to feel that their lives matter, to learn and to experience joy.

Every single person in this room is made of stardust. Stars make their own light mostly by burning hydrogen and in their lives and deaths make things like carbon, oxygen and iron. The telescopes on Maunakea have taught us about black holes that weight more than a million suns put together, about the BH in our own galaxy, about galaxies from the universe was young, about near-Earth asteroids that we might want to keep an eye on not to end up like the dinosaurs.

One recurring theme that I gathered from those protesting TMT was that nature, our planet is in crisis, that we must take immediate action to solve this crisis and that TMT will compound the problem. Most scientists, from astronomers to climate scientists, agree with the crisis-assessment. This is why much work has been done to make TMT a sustainable observatory. Observatories already on Maunakea are actively lowering their energy footprint on and off the mountain. However what I also want to emphasize is that the response to the climate crisis needs to be based on a thorough and accurate technical understanding of how nature works, and what our impact is. TMT will help with this, because they will fund and set educational initiatives in STEM fields. University of Hawaii has a central and crucial role to play. They need to be at the forefront connecting the observatories with the young and young at heart people of Hawaii who wish to expand their knowledge, to take their place as citizens of the world, and help make the world better for future generations.

Hawaiians are not anti-science, and astronomy has certainly been part of their history. What I am hearing here is the anger, sadness and fury of a marginalized people. The history of the islands, the violence of taking those lands to profit a small number of individuals should motivate everyone to seek to understand and change this. In order to work, the response to this crisis needs to be based on a thorough and accurate technical understanding of how nature works. If you are worried about the environmental impact those telescopes have then study it, ask questions and listen to the answers, if they are not clear ask again, if they are not clear ask again, ask until you are convinced one way or the other. Discuss them, not in 3min speached but in long arduous meeting at the end of which everyone at the table understand what is going on.
Demand knowledge, demand facts and logic to assess the impact of institutions, land-use proposals to see if those are indeed good for you, your kids and the world. The Earth is tiny and we are all connected, we cannot go on using our private conversation with our own Gods. Morality is not a dogma, is a pragmatic way of being, leaving and providing for future generations. Moral actions, speech and thinking should not be arbitrarily sat by humans living thousands of years ago, but by the future we want from our children.

This is why I and others in this room advocate learning astronomy. Not just because we have burning questions about how the universe formed, how our galaxy will bump into Andromeda some time from now, or are there other planets with life out there like our own, and what’s that storm on Uranus. Astronomy involves dreaming and being able to make stories from data. With a telescope you can receive the picture your star-grandmother send to you a billion years ago and you can use it to tell her story. Then you test your story, you let someone else test it and see if they find the same thing. Astronomy is about failing a lot and wanting to learn and dream and understand and fail again and try again.

So if your goal is to heal the Earth, and if you want to make a more equitable society, a true democracy where all decide how to allocate resources, it is essential to be scientifically knowledgeable. It turns out that part of the reason we humans evolved and did not get squashed by big pre-historic bullies is because more than we hit each other over the head and occasionally kill each other’s young, we mostly worked together, we empathized with each other’s pain and shared in each other’s dance of joy.

So, I came here today to urge you to use this pretty fantastic moment when we are actually all concerned about the world and our future, and are talking, astronomy, environment, and fairness. We should use this moment of focused attention to figure out how to better educate our kids and give them the tools they need to thrive in balance and respect of other beings and their environment, and we should all always pay attention and investigate what we believe and why we believe it. UH you are an institution of Hawaii and the world, you’ve got students and instructors from Norway, Romania, France and Chile. Take your place in the world.

I will end with the words of a 15 year old who got shot in the head because as a woman she was not supposed to want education:

“I think that the best way to solve problems and to fight is through dialogue, is through peaceful way, but for me the best way to fight against terrorism and extremism is just simple thing: educate the next generation.”
- BBC interview, 2013

3) “I would tell him that shoot me but first listen to me. And I would tell him that education is my right and education is the right of your daughter and son as well. And I’m speaking up for them. I’m speaking up for peace.”

Malala Yousafzai (}