My priorities as AST DD: reducing GHG emissions

Whose job is it to combat Climate Change?

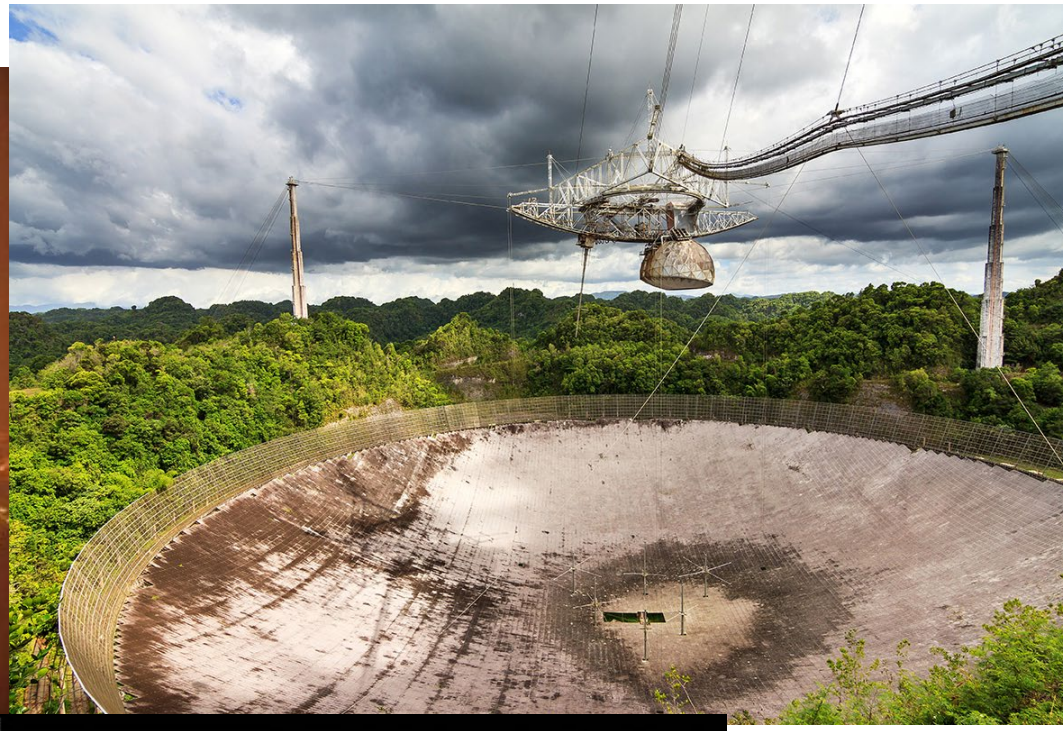
Astronomy is **contributing** to climate change

Nature Astronomy 2022

Jürgen Knödlseder ✉, Sylvie Brau-Nogué, Mickael Coriat, Philippe Garnier, Annie Hughes, Pierrick Martin and Luigi Tibaldo

Astronomy facilities / missions contribute 2 million metric tons of carbon emissions per year, 36 tons per year for each astronomer.

Astronomy is **affected** by climate change



Wildfires are threatening Observatories. Domes need to remain closed to protect mirrors from smoke damage.

Astronomers can **help solve** climate change

Our view of Earth from space changes how **we see ourselves**. The images we see instill awe. Awe triggers empathy and a recognition of the interconnectedness of all creatures.

"If somebody had said before the flight, ‘Are you going to get carried away looking at the Earth from the moon?’ I would have said, ‘No, no way.’ But yet when I first looked back at the Earth, standing on the moon, I cried."

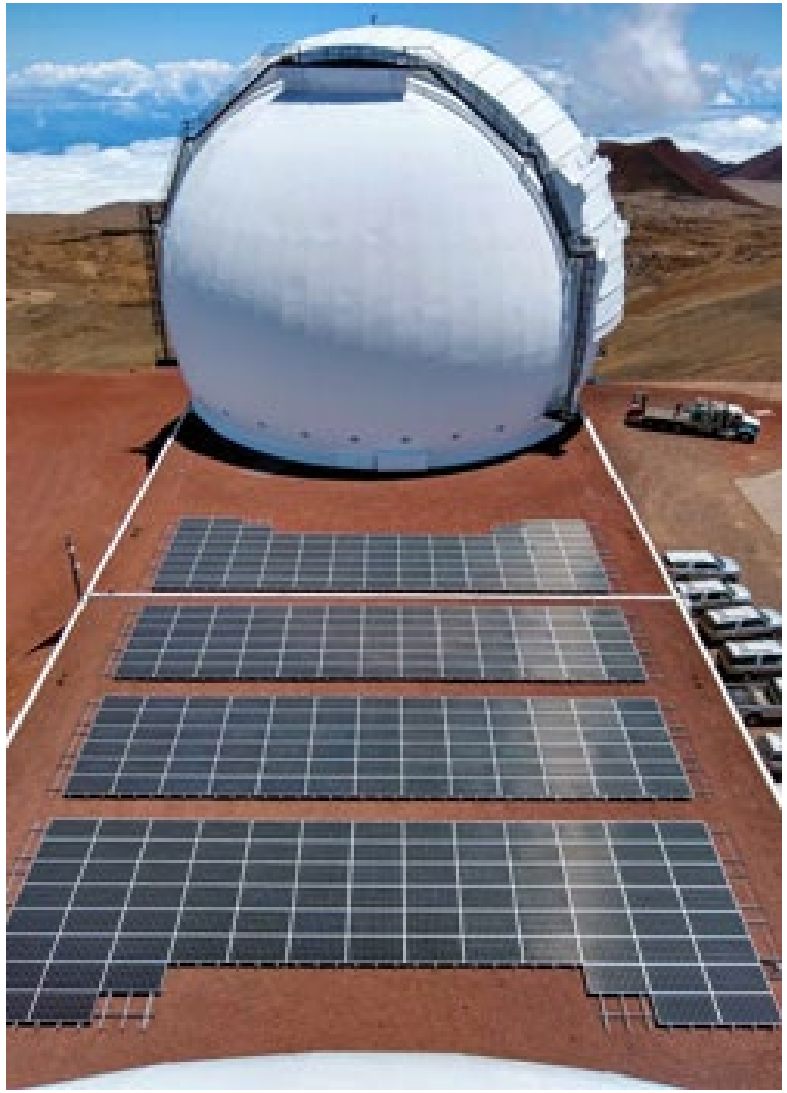
- Alan Shepard (Apollo 14)

ASTRONOMERS FOR PLANET EARTH

Share this incredible perspective! More than 300,000 students in Astro101 classes each year.

Astronomers can help solve climate change and we are stepping up!

Keck Observatory photovoltaic panels



Gemini-S Observatory photovoltaic panels

Astro2020 guidance: Reduce carbon emissions associated with our research.

- Planning to make at least one observatory completely carbon neutral in next 2 years.
- Working to reduce the GHG emissions of all NOIRLab facilities by ~50% in the next few years.
- Requiring new section on climate impact for major facility reviews.

- Working with all facility directors to get estimates of energy use, carbon emissions, and possible renewable power.

Inger Jorgensen: plans for carbon-neutral power source for Gemini-S (funds committed for this project and hoping to extend to all of Cerro Pachon).