The Impact of Climate Change on Astronomical Observations

23/09/2021 at 02:00 PM CET - Faustine Cantalloube (LAM)

Abstract:

As stated by the latest IPCC sixth assessment report (August 2021), the on-going climate crisis due to human activities is already having non-negligible consequences on our society. Because of the consequential greenhouse gases emitted in the Earth's atmosphere, mainly due to fossil fuels burning, the global surface temperature has increased by 1.1 degree Celsius since the pre-industrial era (1850-1900). This rise in temperature results in the increase in frequency and intensity of extreme events such tornadoes, heat waves, droughts, flooding and wildfires, as witnessed all over the globe the last few years. In this context, astronomers who explore notions of habitability, study the atmospheres of other planets, and peer into the universe have a unique perspective on the fragility of ecosystems on Earth and can therefore advocate for the protection of Earth's climate. Another angle is to see how the climate crisis is affecting our profession, which is mainly based on observations. During this seminar, I will review examples of concrete impacts of climate change on observational astronomy with ground-based telescopes.

Notes:

- Open Letter we wrote with the Astronomers for Planet Earth collective, that might interest some people: https://astronomersforplanet.earth/open-letter.
- Note that I added more links on the slides.
- Note also that there is a sustainability working group at LAM (such a committee is now mandated by CNRS) that anyone can join upon demand, there is a dedicated tab on the LAM intranet. They can also contact me or Arthur Vigan if interested to join.