

CLIMATE CHANGE ABOVE THE CLOUDS

Speaker

Prof. Yi Huang

McGill University, Canada

Abstract

Climate change is not confined to Earth's surface. The upper atmosphere is also undergoing profound changes that influence weather, climate, and life on the ground, making it increasingly important to monitor and understand this evolving environment. A new satellite mission, High-altitude Aerosols, Water Vapour and Clouds (HAWC), is being developed to observe the key climate variables reflected in its name, with a particular focus on the sparsely observed stratosphere. By combining novel limb- and nadir-viewing instruments, HAWC will provide unprecedented spatial resolution and measurement precision, enabling new insights into processes that shape the upper atmosphere and its role in the climate system. In this talk, I will present several of the scientific questions motivating the HAWC mission, including stratospheric moistening, pollution, and their radiative impacts.

Biography

Dr. Yi Huang is a Professor and Chair of the Department of Atmospheric and Oceanic Sciences at McGill University, Canada. He received his B.S. from Peking University and Ph.D. from Princeton University and was a Climate and Global Change Postdoctoral Fellow at Harvard University before joining the faculty at McGill. His research is focused on atmospheric radiation. He is a Science Lead of Canadian satellite mission, High-altitude Aerosols, Water vapour and Clouds (HAWC), and is the Principal Investigator of GHG-Montreal, a collaborative project integrating ground-based, airborne, and remote sensing instrumentations to measure carbon dioxide and methane at the city scale across the Greater Montreal area.



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