



Climate Change Seminar Series

Title: What measurements of atmospheric CO₂ and O₂ tell us about how the world is changing

Talk Abstract: To effectively confront climate change, it is important to measure what is actually happening to our global environment. In this talk, I will report on results from measurements of carbon dioxide and oxygen in the atmosphere. Historically, CO₂ measurements provided the first direct evidence that the burning of fossils was contributing to the buildup of CO₂. Measurements today continue to inform our understanding of widespread changes in the functioning of land and ocean ecosystems. Among these are losses of dissolved oxygen in the ocean interior and a surprisingly rapid increase in photosynthesis and accumulation of land biomass.

Monday, October 18th

11:30am-12:30pm EST

[Registration required](#)

11:25-11:30pm Login

11:30-12:10pm Presentation

12:10-12:30pm Q&A

Dr. Ralph Keeling's work centers on long-term measurements of the major constituents in air. He has been on the faculty at the Scripps Institution of Oceanography, UC San Diego, since 1993. He was the first to demonstrate that the O₂ content of air is decreasing due to the burning of fossil-fuels and has directed a program to track this decrease since 1989. Since 2005 he has also directed the Scripps CO₂ program which sustains the iconic record of carbon dioxide at Mauna Loa and other sites, begun by his father, Charles D. Keeling. He is engaged in ongoing research to refine estimates of sources and sinks of carbon dioxide using atmospheric measurements. Keeling has received the Rosenstiel Award in marine and atmospheric chemistry, the Humboldt Research Award, and is a Union Fellow of the American Geophysical Union.