

Climate Modeling: Its History and Prediction of Future Climate Change

Climate modeling has developed over the last 50 years to become a very useful tool for research and prediction of future changes in our global environment. The most recent Intergovernmental Panel on Climate Change Assessment Report (IPCC Assessment) has convinced most climate scientists that humankind is changing Earth's climate and that significant global warming is already taking place.

Some scientists are skeptical of the IPCC view and think the observed changes result from natural climate variability or other causes. A brief review of recently observed 20th Century climate change will be presented and compared with climate model simulations. These computer simulations are extended into the 21st Century and beyond. Computer simulations and animations of present climate and future climate change will be shown using low and high carbon emission scenarios. There will be a discussion of the scientific uncertainties and societal impacts along with an analysis of policy options including possible geoengineering of the climate system. The issue of environmental justice will also be addressed.

Dr. Washington has had Presidential Appointments under the Carter, Reagan, Clinton, and Bush, Jr. Administrations. He has over 150 publications and co-authored with Claire Parkinson a book considered a standard reference on climate modeling. Dr. Washington has many awards. In November 2010, he was awarded the National Medal of Science by President Obama, the Nation's highest science award. The citation for this award is for his development and use of global climate models to understand climate and explain the role of human activities and natural processes in the Earth's climate system and for his work to support a diverse science and engineering workforce.



Dr. Warren M. Washington

September 13, 2016
2:00 p.m.

Pearl Young Theater