

B9.00001: Climate Concerns: Asking the Right Questions

Invited Speaker: **Richard Lindzen**

Preview Abstract <http://absimage.aps.org/image/MAR13/MWS_MAR13-2012-030214.pdf "No abstract available." as of 3/15/13>

When I inquired as to when an abstract was due, I was told that there was no need for abstracts for invited lectures. By that time, it was too late to submit an abstract. What follows is what I had intended to submit.

Abstract

Given the complexity of the earth's climate system, it is clearly improper to consider concern over climate change to be a settled 'yes-no' question. To be sure, there are aspects that are almost universally accepted: climate is always changing on virtually all time scales; the atmosphere contains gases and other substances (like clouds) that absorb and emit in the infrared; the structure of the troposphere is largely determined by the interaction of radiation, dynamics and the thermodynamics of water. There is also widespread acceptance that the earth has warmed slightly since the end of the Little Ice Age (which largely coincided with the beginning of industrialization). None of this leads convincingly to the commonly promoted concern over the rising levels of carbon dioxide in the atmosphere. What then are the relevant questions. Within the simplistic quasi-one-dimensional commonly applied to climate studies, the main question is what is the sensitivity of the climate to the radiative forcing produced by increasing CO₂. Beyond this, there is the question of how any of the resulting warming relates to various phenomena commonly claimed to be due to warming: more extreme weather, diminished summer sea ice in the arctic, etc. Finally, there is the almost never addressed question of whether the simplistic quasi-one-dimensional picture of climate is relevant to actual climate change, and if it is, to what extent. We will briefly review the current state of each of these questions, but it is unquestionably true that none of them fit into the category of settled science.