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SEMINARIO DEL GIOVEDÌ' CETEMPS

“THE OZONE HOLE STORY: A MODEL FOR ADDRESSING CLIMATE CHANGE?”

Prof. William H. Brune
Pennsylvania State University (USA)

Giovedì 16 Aprile 2015
h. 14:30, Aula 1.6, 1° piano, Coppito I

Dipartimento di Scienze Fisiche e Chimiche, Coppito, L'Aquila

Abstract: *At a time when there is still debate among the public and politicians about the link between climate change and the greenhouse gases expelled into the atmosphere by the activities of human beings, in this seminar we look back to an argument from another era. In many ways, today's controversy over the causes of climate change and what to do about it are reminiscent of the debate over the link between chlorofluorocarbons (CFCs) and the thinning of the ozone layer over 30 years ago, when the vast majority of scientists were on one side, and industry and lobbyists were on the other. This stalemate was finally resolved only after the discovery of the ozone hole over Antarctica and the irrefutable evidence linking the ozone hole to CFCs. Only then did the major manufacturers of CFCs begin to get on board. In the end, an international agreement was signed to control CFC production, substitutes for the compounds were found and marketed by manufacturers, and the ozone hole stopped growing and it now shows signs of repairing itself, if slowly. This collaboration has been hailed as a landmark. But was that the whole story?*

Biography: *William H. Brune is a distinguished professor at Pennsylvania State University, USA. In 1978, Brune received a Ph.D. in physics from Johns Hopkins University for his research on ultraviolet observations of comets, hot stars, and the diffuse galactic background. For the next ten years, he was a Research Associate at Harvard University, where he studied the chemistry that causes stratospheric ozone loss, developing unique aircraft instruments to observe reactive halogens in the Antarctic vortex. He joined the faculty of the Pennsylvania State University in 1988, where he was the Head of the Department of Meteorology for the past 15 years. Since 1988, he has been studying the fast chemistry in the lower atmosphere, introducing state-of-the-art instruments for aircraft observations of the atmosphere's primary reactive gases and, recently, he proposed the concept of potential aerosol mass, which can be defined as the maximum aerosol mass that the oxidation of precursor gases produces.*