



Physical Research Laboratory, Ahmedabad

SPECIAL COLLOQUIUM - 13 – 14

Speaker: Prof. Jos Lelieveld

Director, Max Planck Institute for Chemistry, Mainz, Germany.

Title: The self-cleansing mechanism of the atmosphere

Abstract

Thousands of megatons of natural and anthropogenic gases are emitted and subsequently removed from the atmosphere every year. Photochemical reactions oxidize the gases to products which can more easily be removed by precipitation and dry deposition to the Earth's surface. This mechanism prevents gases from reaching toxic levels or driving the climate into hothouse conditions. Human-induced pollution emissions can strongly affect the oxidation processes on a global scale. However, compensating mechanisms have prevented large global changes in the atmospheric cleaning capacity. Nevertheless, regional shifts have occurred, and especially the tropical atmosphere appears to be sensitive to anthropogenic perturbations. Recently it was discovered that trace gas emissions from tropical forests can buffer the atmospheric oxidation capacity, which is currently under debate. These aspects will be discussed in the colloquium.

The Speaker

Prof. Jos Lelieveld graduated from the Leiden University, Netherlands and obtained his Ph.D. from the Faculty of Physics and Astronomy at Utrecht University under the supervision of Nobel Laureate Prof. Paul Crutzen. He worked at the Stockholm University and the University of California, San Diego, and became a Professor at Wageningen University and at Utrecht University. Prof. Lelieveld was appointed Director at the Max Planck Institute for Chemistry in Mainz in 2000. Since January 2008, he is also a Professor at the Cyprus Institute and leads the Atmospheric and Climate Modeling group of the Energy, Environment and Water Research Centre. His research interests include atmospheric multiphase chemistry, ozone, aerosols and climate, the atmospheric cleaning mechanism (radical chemistry), and global atmospheric change. He has 275 peer reviewed publications to his credit. He is also associate editor of several journals, member of international committees and societies, and has received international distinctions.

Tuesday: 07 May, 2013, 16:00 hrs.

K.R. Ramanathan Auditorium, PRL

Tea at 15:30 hrs

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