Physical Research Laboratory
Ahmedabad
Area Seminar

(Space & Atmospheric Sciences Division)

Title: **"Global surface ozone observations and analyses–Insights from the WMO Global Atmosphere Watch Programme and the Tropospheric Ozone Assessment Report"**

Speaker: **Martin Schultz**
Forschungszentrum Jülich, Germany

Date: **02 November 2015**

Venue: **Ground Floor Lecture Hall**

Time: **1130 hrs**

Highlight of the talk:

Ozone is an atmospheric trace gas which is important to mankind in several regards: first, it is a harmful air pollutant affecting health and ecosystems, second, it acts as greenhouse gas and is the second or third most important radiative forcing agent, and, third, in the stratosphere it protects the life on Earth from harmful UV radiation. Due to anthropogenic activities and possibly climate change, the concentrations of ozone in the lower atmosphere have changed considerably from pre-industrial times to present. Nowadays, measured ozone concentrations near the surface are almost twice as large as when ozone was first measured reliably in the 1950s or 1960s. In the troposphere, ozone is formed through chemical reactions of multiple precursors, and because of the large variability of emissions of such precursors, ozone concentrations also vary substantially even on regional scales. The World Meteorological Organisation coordinates the Global Atmosphere Watch Programme to establish reliable, long-term measurements of trace gases and other atmospheric constituents around the globe. Together with data from various regional contributing networks, the

surface ozone observations collected in GAW allow for a reasonable assessment of tropospheric ozone changes, although many world regions are still severely under-sampled. In the Tropospheric Ozone Assessment activity, a large group of international researchers attempts to analyze and synthesize all available information on tropospheric ozone and evaluate recent ozone changes. In Jülich, these activities are supported through building up the world's largest collection of surface ozone data. These data are stored in a relational database and made available for research use through a comfortable web interface. The presentation will give an introduction to tropospheric ozone, the current measurement network, its global distribution, and the status of the TOAR database.

All interested are welcome.