Physical Research Laboratory
Ahmedabad

Space & Atmospheric Sciences Division

Division Seminar

Title: **"Photochemical age of an urban air mass: A study using measurements of volatile organic compounds (VOCs)"**

Speaker**: Nidhi Tripathi**

Date: **06 May 2019**

Venue: **Ground Floor Lecture Hall**

Time: **16:00 hrs**

Highlight of the talk:

VOCs are ubiquitous trace constitutes of the Earth's atmosphere. Despite their low concentrations, VOCs impact the Earth's climate and air quality.VOCs control the oxidative capacity of the atmosphere due to fast reactivity with hydroxyl (OH) radicals and lead to the formation of secondary compounds such as ozone, oxygenated-VOCs (OVOCs) and SOA. VOCs are emitted from both natural and anthropogenic sources. The contributions of different primary and secondary sources to ambient OVOCs are highly variable due to complex emission and atmospheric processes. In the atmosphere, fresh emissions are subject to mixing with different air masses and complex photochemical processes leading to change in concentration and composition of trace gases. The "photochemical age" has been used as a reference to investigate the evolution and transformation of an air mass on the exposure to OH radicals. A pair of VOCs emitted from similar source but with different removal rates can be used to calculate the photochemical age of an air mass. The role of different primary and secondary sources of OVOCs such as acetone and acetaldehyde measured at the Delhi during winter season has been investigated.

All interested are welcome.