

भौतिकशास्त्र विभाग,

लोकमान्य टिळक भवन,

विद्यानगरी, सांताक्रुझ (पूर्व),

मुंबई - ४०० ०९८ (भारत).

दूरध्वनी : २६५२ ६२५०, २६५३ ३०५१,

२६५४ ३३५८

विस्तारीत क्र. ३५८

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Notice

Ph.D. Viva Voce Examination of Mr. Prashant R. Singh, through Video Conferencing, is scheduled on 30/04/2021, Friday at 11.30 A.M.

Research Guide: Dr. Pradip Sarawade

Department of Physics, University of Mumbai

Title of the Thesis: Study for modelling and simulation of convective processes in atmosphere.

The present thesis tried to analyze black carbon (BC) vertical transport during the active convection period of monsoon over South Asia. The thesis further tried to understand its interaction with weather and climate parameters using case studies. BC is known as the second-largest radiative forcing agent that contributes to the climate and weather of the earth. This thesis on convection and vertical transport of black carbon (BC) uses Weather Research and Forecasting model coupled with Chemistry (WRF-Chem) and various observational data from ground stations, satellites for study. Work from this thesis first time identified the presence of a consistent and significant BC layer at the mid-troposphere during monsoon over South Asia. The mid-troposphere is the place where most of the cloud forms, this layer can potentially affect cloud formation and monsoon over India by direct and indirect effect. Further, this work identifies BC transports mechanism from the source of emission to the free troposphere and upper troposphere during active convection events. Using various real-time events, such as biomass burning (over Norther India and Myanmar) and flood (Kedarnath and west Nepal 2013) events, the thesis presents the effect of BC on weather parameters, cloud thermodynamics and cloud microphysics.

Note: All the interested faculty members, research scholars, staff, and students are invited to attend the open viva voce examination through video conferencing.

Google meet Link for Open defence VIVA: meet.google.com/spb-viwp-vci

Dr. Pradip Sarawade
Research Guide

Dr. Anuradha Misra
Professor and Head