S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES
Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR

Department of Astrophysics and High Energy Physics

06th January,2023 **11.30 AM** **ONLINE/ FERMION**

SPEAKER

Dr. Anjasha Gangopadhyay,
Assistant Professor
Hiroshima Astrophysical Science Center
Hiroshima University, Japan

TITLE OF THE TALK

INVESTIGATION ON A GROUP OF SUPERNOVAE WITH DIMINISHING HYDROGEN ENVELOPE

ABSTRACT

I will present long term observational studies of a group of stripped envelope and interacting supernovae with a continuum of outer envelope. We have studied few representative members of these subclasses and estimated the physical parameters associated with the explosions. Light curve modelling helped estimating the Ni-56 mass, ejecta mass and energies of these supernovae while spectral modelling helped to constrain the spectral parameters like elemental abundances and velocities. Interacting supernovae helped to estimate the circumstellar material mass, radius and geometry. Along with very early flash ionized signatures, the late time spectral evolution were probed to study metallicity and geometry. Currently, big telescopes with larger diameters will help to see whether stripped envelope supernovae can become interacting on a longer time scale.

HOST FACULTY

Dr. Ramkrishna Das

Associate Professor : ASTROPHYSICS AND HIGH ENERGY PHYSICS

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