



**GOVERNMENT OF MANIPUR
MODERN COLLEGE
(NAAC Accredited Institution)
Porompat, Imphal East – 795005, India
Established : 1963**

EXTENSION LECTURE PROGRAMME

As a part of the celebration for 100 years of General Relativity, Modern College, Imphal organized an Extension Lecture under the College Extension Lecture Programme on the 18th January, 2016 at 11:00 am at the Multipurpose Hall of the College.

Dr. Subharthi Ray, Associate Profesor, Astrophysics and Cosmology Research Unit, School of Mathematics, Statistics and Computer Sciences, University of KwaZulu – Natal, Westville Campus, Durban, South Africa delivered the Extension Lecture on the topic: “ Neutron Stars – the Astrophysical Laboratory for Matter in Extreme States”.

When a normal star burns up its fuel, it cannot stand its own gravitational pressure and collapses to a denser state of matter. Depending on their initial masses, they either collapse to a white dwarf, a neutron star or a black hole. With the aid of modern observations, both from the ground based or space based telescopes, in a wide range of frequencies, thousands of pulsars have been discovered, which are most likely neutron stars. These neutron stars are wonderful laboratories for the study of matter in the extreme states. There is a rich interplay between the strong forces and the gravitational forces. Additionally they host a lot of other exotic features, like strong magnetic fields, extremely fast rotational velocities, etc., and can be one of the main sources producing gravitational waves. The future major thrust area of astrophysics research is setting up and detection of gravitational waves. The detection and analysis of the gravity waves will further enrich our knowledge of these compact stars. The speaker gave an overview of neutron stars covering some aspects of theory and observation.

The Lecture was well attended by the Faculty Members, students of the College and also of other colleges. Some Research Scholars and Faculty members of Manipur University also attended the Extension Lecture.



Photo 1. Dignitaries on the dais.



Photo 2. Dr. Subharthi Ray delivering the Extension Lecture.



Photo 3. Group Photo of the Resource Person with some Faculty Members.