



Report of the National Seminar on ‘Recent Development in Plasma Physics’

A one day National Seminar on ‘Recent Developments in Plasma Physics’ was organized by the Centre for Plasma Studies in collaboration with the Department of Instrumentation Science, Jadavpur University and Advanced Centre for Nonlinear and Complex Phenomena (ACNCP). It was held on Monday, the 27th February, 2017 at the Seminar Room, Department of Instrumentation Science, Jadavpur University (Main Campus).

The *Inaugural Session* commenced at 10-30 A. M. Professor S. Konar, Dean of Science, Jadavpur University chaired the *Inaugural Session*. Professor R. Bhar, Secretary, ACNCP welcomed the guests, speakers and students who were present. Professor R. Roychaudhury discussed the theme of the seminar.

After a brief tea break, the first technical Session I started at 11-30 A. M. The Session was chaired by Professor Basudev Ghosh. In the first lecture, Professor Manoranjan Khan of the ‘*Centre for Plasma Studies*’ presented a “*Review of research activities of Centre for Plasma Studies*”. He nicely described all the research activities carried out at the Centre from the time of its inception to the present times. He highlighted the contributions of stalwarts like Late Professors B. Chakraborty and M. R. Gupta. In the second lecture, Professor Dimitri Batani from the ‘*University of Bordeaux, France*’ delivered a talk titled

“*Overview of the PETAL + Project: Developing the diagnostics for the LMJ/PETAL LASER FACILITY*”. Professor Batani gave a detailed account of the LMJ/PETAL facility located near Bordeaux at CEA-CESTA (France). In his talk he also presented the status of the project as well as the new perspective in High-Energy-Density Physics opened up by the LMJ/PETAL laser facility. The third and final speaker of this session was Mm. K. Jakubowska also from the ‘*University of Bordeaux, France*’. She spoke on “*Generation of high-pressures by short-pulse low-energy laser irradiation*.” She explained the necessity of the study of High Energy Density (HED) states of matter in an emerging field of physics and commented that experiments on “matter in extreme condition” using laser-driven shocks was getting a lot of attention from the scientific community. She explained the experiments that had been carried out by her group and drew conclusions from there. This Session concluded at 12-50 P. M.

After a forty minute ‘lunch break’, the Session II commenced at 1-30 P. M. This Session was chaired by Professor Dimitri Batani. The first speaker of this Session was Professor Amar P. Mishra from the Department of Mathematics, Visva-Bharati University, Shantiniketan, West Bengal. He delivered a talk entitled “*Landau Damping Due to Multi-plasmon and Group Velocity Resonances*”. The second speaker of

this Session was Dr. Subhansu Ghosh from the 'Bose Institute, Kolkata'. He spoke on "*Black Hole Accretion in Magnetohydrodynamical Paradigm: from X-ray Binaries to AGNs*". This Session was over at 2-30 P. M.

The third and final Session III commenced at 2-30 P. M. and was chaired by Professor B. Dasgupta. This Session was devoted to presentation of research papers by young scholars. In this Session, Aniruddha Mitra of 'Centre for Plasma Studies, Jadavpur University' read his paper entitled '*Lights on Dark Matter: Dynamics and Consequences*'. Asheh Paul of the 'Department of Mathematics, Jadavpur University' presented his paper titled '*Dust ion acoustic solitary structures in presence of nonthermally distributed electrons and positrons*'. Pankaj K. Shaw of the 'Saha

Institute of Nuclear Physics, Kolkata' read his research paper titled '*Investigation of coherent modes and their role in intermittent oscillations using empirical mode decomposition*'. The other collaborators of Pankaj Kumar Shaw were S. Ghosh, D. Saha, M. S. Janaki and A. N. S. Iyengar (all from the Saha Institute of Nuclear Physics, Kolkata).

The seminar was well-attended and there was free interaction between the speakers and the audience. After a formal *Valedictory Session* and tea, the Seminar ended a little after 4-30 P.M.

(A few photograph are in the back inside cover)

Reported by
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Report of the International Seminar on 'Cosmology, Relativity and Gravity Waves'

The Asiatic Society, Kolkata organized a two-day international seminar on '*Cosmology, Relativity and Gravity Waves*' on 15th- 16th February, 2017 at Vidyasagar Hall of the Society in its own premises in Park Street.

On Wednesday, the 15th February, the '*Inaugural Session*' commenced at 11-00 A. M. and continued till 11-45 A. M. The session started with an opening song by the staff members of the Asiatic Society. The '*Welcome Address*' was delivered by Dr. Satyabrata Chakrabarti, the General Secretary of the Society. Professor Rajkumar Roychoudhury, the Co-ordinator of the Seminar talked about the theme of the programme. Professor Isha Mahammad, President of the Asiatic Society delivered the '*Presidential Address*'. Dr. Sujit Kumar Das, the Treasure of the Asiatic Society gave the *Vote of Thanks*.

After a brief tea break, the 'Plenary lecture' was delivered by Professor Naresh Dadhich of the Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune. He gave a very interesting lecture titled '*Why Einstein (Had I been born in 1844!)? : Relativity for Everyone*'. In his lecture, he said that by probing the general concept of universality and invoking simple common sense arguments, one could arrive at Einstein's theories of relativity without use of any mathematics and physics. The lecture was from 12 hours to 1-00 P. M. This session was chaired by Professor Rajkumar Roychoudhury. From 1-00 P. M. to 2-00 P. M., Professor S. Suskov of the Kazan Federal University of Russia delivered an invited talk, the title of his lecture being '*Horndeski Cosmology*'. He spoke about the history and perspective and presented a systematic analysis of homogeneous and
