

DAE Diamond Jubilee Celebration

Science Outreach Program at IOP

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To celebrate the Diamond Jubilee year of the Department of Atomic Energy (DAE), Government of India, a one-day long Science Outreach Program was organized by the Institute of Physics (IOP), Bhubaneswar on 1st February, 2015. The goal of the program was to provide the opportunity to the bright young minds of the Bhubaneswar city to interact with well known scientists. Nearly 250 students (mostly between IX-XII standards) from 20 schools, 50 science undergraduate students from 5 colleges, 25 school students from IOPB adjacent areas and IOP colony took part in the day long program. One teacher from each school/college also accompanied the students.

The program began with the welcome addresses by Professor Sudhakar Panda, Director of the Institute of Physics, Bhubaneswar and Professor V. Chandrasekhar, Director of NISER, Bhubaneswar. There were three science lectures during the course of the day covering topics in nuclear power, LED, and particle physics.

The first speaker was Mr. Swapnesh Kumar Malhotra, Head, Public Awareness Division of the DAE. He spoke about “Nuclear power – the need, the public perceptions, and the realities”. The students could have a good overview on nuclear power production and proper nuclear waste-disposal. The speaker also addressed general issues on public perceptions and misunderstandings of nuclear energy. The talk was followed by a discussion session focussed on this lecture.

The second lecture was by Professor Parlapalli V. Satyam from the Institute of Physics, Bhubaneswar. He spoke about the white LED (Light Emitting Diode), that was the subject of the Nobel Prize in Physics, 2014. He illustrated the basic physics surrounding the working of a LED, its applications in illuminations and emphasized on its low power consumption. The speaker also gave some live demonstrations such as the single slit experiments showing diffraction of light as part of his lecture. This talk was also followed by a discussion session.

The third lecture was based on the fundamental particles of the Nature by Professor Palash Baran Pal from Saha Institute of Nuclear Physics, Kolkata. He motivated students to explore the mysterious world of particle physics by introducing the concept of elementary constituents and how compound objects can be made from them. He then spoke about studying the properties of such elementary particles through particle-collider experiments. He ended the talk by introducing the India-based Neutrino Observatory (INO) project and encouraged the students to take part in this exciting project. All the three talks were well received by the students and they interacted enthusiastically with the speakers after each presentation. After the last talk, there was an open discussion session where the students could ask their doubts in any language to all the three speakers and the scientists of the institute. Apart from the three talks, there

were posters set up by doctoral scholars of IOP and they were also present to explain their research work to the students in a simplified fashion and to clarify their doubts.

A well organized science kit was given to each participating student. It contained a bar magnet (50 mm), magnetic compass (20 mm), a convex lens (focal length 15 cm), astronomy 3D Mars cards, exercise book with periodic table etc. Inside the science kit bag, there were instruction manuals on how to make best use of the materials provided as well as information brochures on DAE, IOP, NISER etc. Each participant was also provided with breakfast and lunch during the day and a participation certificate was given to the each student at the end of the program.

There was also a strong contingent from the local media present during the program and a press conference was held at the end where the media persons got the opportunity to interact with the speakers. The program got a wide coverage on several local newspapers the next day and the Doordarshan Oriya also telecast an edited version of the program on 15th and 17th February, 2015.

Overall there was a huge positive response from the participants. Many of the students (even some parents and teachers) expressed their gratitude over phone or via e-mail, and told that they benefitted hugely by getting this chance to listen to and interact with scientists involved in cutting edge research in various frontier disciplines, an opportunity that they do not get on a daily basis.

The whole program was funded by the DAE and the faculty, research scholars, and administrative staff from IOP all played their part to make this program a success.

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