

Meet Indian Physicists

S. N. Bose: An Eclectic Personality (1894 – 1974)

Satyendra Nath Bose is famously known for laying the foundation for the Bose-Einstein statistics and the theory of Bose-Einstein Condensate. The “Boson” particle was so named by Paul Dirac, an English theoretical physicist, to commemorate the contribution of Bose in developing, with Einstein, the Bose-Einstein statistics— which theorizes the characteristics of elementary particles. The story of exchange of letters between Bose and Einstein are legendary and the exchange of ideas between them led the world to have a better understanding of quantum statistics.

Bose hailed from Kolkata and did his B.Sc. and M.Sc. in Mathematics and applied Mathematics respectively. He combined teaching and research and made remarkable advances in areas of statistical mechanics, quantum statistics, x-ray diffraction and electromagnetic waves. He did not pursue doctoral studies but instead continued to work in diverse fields like organic and inorganic chemistry, mineralogy, biology and soil science. Bose was also a great science communicator. He was one of those rare individuals who was equally passionate about philosophy, archeology, the fine arts, literature and languages. He had a flair for languages and promoted the study of science in one’s mother tongue or native language. He was extremely fond of instrumental music and had mastered the art of playing the *Esraj* (Indian Harp). Above all, Bose was known for his simple and humble nature.



Source: Wikimedia Commons



Reflections

IPhO 2015 NEWSLETTER



Reflections, the official newsletter of IPhO 2015 will be your companion during the event.

This inaugural issue briefly introduces you to the organisers, the host country, and the participating countries/teams. Take a peek inside and find out what lies in store in the upcoming issues!

Dear participants of the International Physics Olympiad 2015
This year the IPhO takes place in India. It is a great honor to be guest of this great country. India is great in almost all aspects: size, population, history and above all in science. Especially in physics Indian scientists have made important contributions. Just to name a few: Raman (Nobel Prize in 1930 for the scattering of light), Chandrasekhar (Nobel Prize in 1983 for his theories of the evolution of stars) and Bose known for the statistics named after him and used by Einstein to predict the so called Bose-Einstein condensation.

The Physics Olympiad takes place in Mumbai, the capital of the state Maharashtra, being one of the most populous areas in the world with an estimated population of about 20 million. Mumbai is the financial and commercial capital of India and is home of important scientific centers of which several are sponsors of the Olympiad.

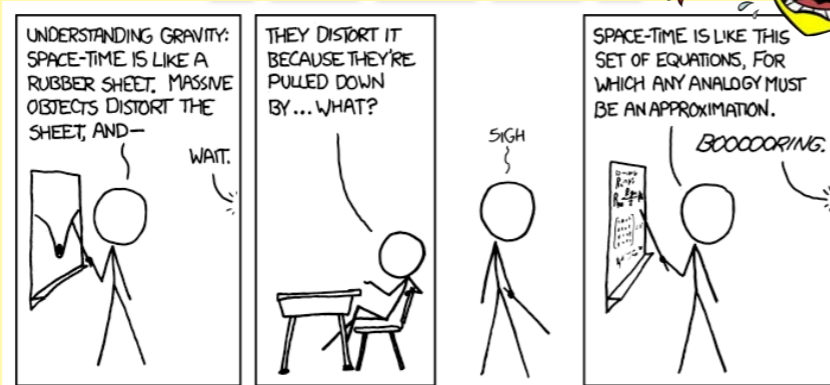
No doubt the expectations of the contestants are high. You have been selected by the national organizations of your countries and belong therefore to the top of the world. That is true for each and everyone of you. But like in every competition only a few can be winners. Fortunately that is not the only aim of the IPhO. Just the fact that you are here and that you can meet peers from all over the world with the same fascination for physics, is as important.

I wish you all a splendid time in India and success in the International Physics Olympiad.



Hans Jordens
President IPhO

COMEDY CENTRE



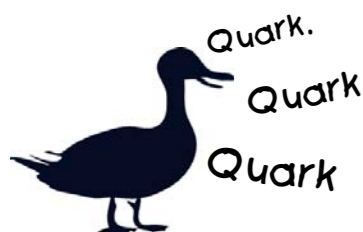
<https://xkcd.com/895/>

* HAPPY *
* BIRTHDAY *



Oleksandr Shumaiev
Ukraine

What did the Ducks say in his graduate physics class?



"Life would be tragic if it weren't funny"

Stephen Hawking

Attention Leaders, Observers and Visitors

Please feel free to write to us. Share your experiences and photographs at reflections.ipho2015@gmail.com

We hope to capture some of your reflections as well!

Editorial Team: Sugra Chunawala, Pooja Sharma, Disha Gupta, Devashree Prabhu, Manoj Nair and Adithi Muralidhar

aamchi Mumbai

Mumbai, the financial capital of the country, is like a slice from India’s gigantic diversity cake. This metropolis is a great place to catch some glimpses of the vibrant mélange of Indian cultures. Residents of Mumbai hail from all over India, speak multiple languages, belong to different faiths and add their local cultural flavour to make this city their own “aamchi Mumbai” (“Our Mumbai” in Marathi, the regional language of the state of Maharashtra).

Today@IPhO

Opening Ceremony at TIFR, Colaba, 1600 hrs



Weather Forecast

Temperature

Max: 33°C / 91.4°F

Min: 28°C / 82.4°F

One or two spells of rain or shower would occur

Source: Regional Meteorological Centre, Mumbai

From the Editor's Desk

Reflection as you know is a concept introduced in science in the early school years. It is the change in direction of a wavefront at an interface between two different media such that the wavefront returns into the medium from which it originated. Reflection also happens to be a term used to describe a state of careful thought. We thought it an apt name for this year's newsletter as we hope to capture the "reflected" thoughts from all of you during the course of this week and keep you abreast with the latest news of IPHO 2015! *Reflections* will be released every day during IPHO 2015. In each issue, you will find a section on:

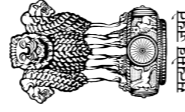
- Today @ IPHO - what you can look forward to during the day
- Rendezvous with IPHO participants
- Meet Indian Physicists
- Glimpses of IPHO 2015

Jokes, games, brain teasers, puzzles and much more *Reflections* hopes to resonate with your excitement and anticipation, friendships and healthy rivalries, and offer you a platform to express yourself! You might see us running around taking pictures and interviewing your friends, feel free to pose for us and speak to us! We look forward to meeting all of you!

Best Wishes,
Editorial Team, *Reflections*



The International Physics Olympiad (IPHO) is supported by the Government of India through its Department of Atomic Energy (DAE), Department of Science and Technology (DST) and the Ministry of Human Resources Development (MHRD).



Host Organisation



Homi Bhabha Centre For Science Education, TIFR

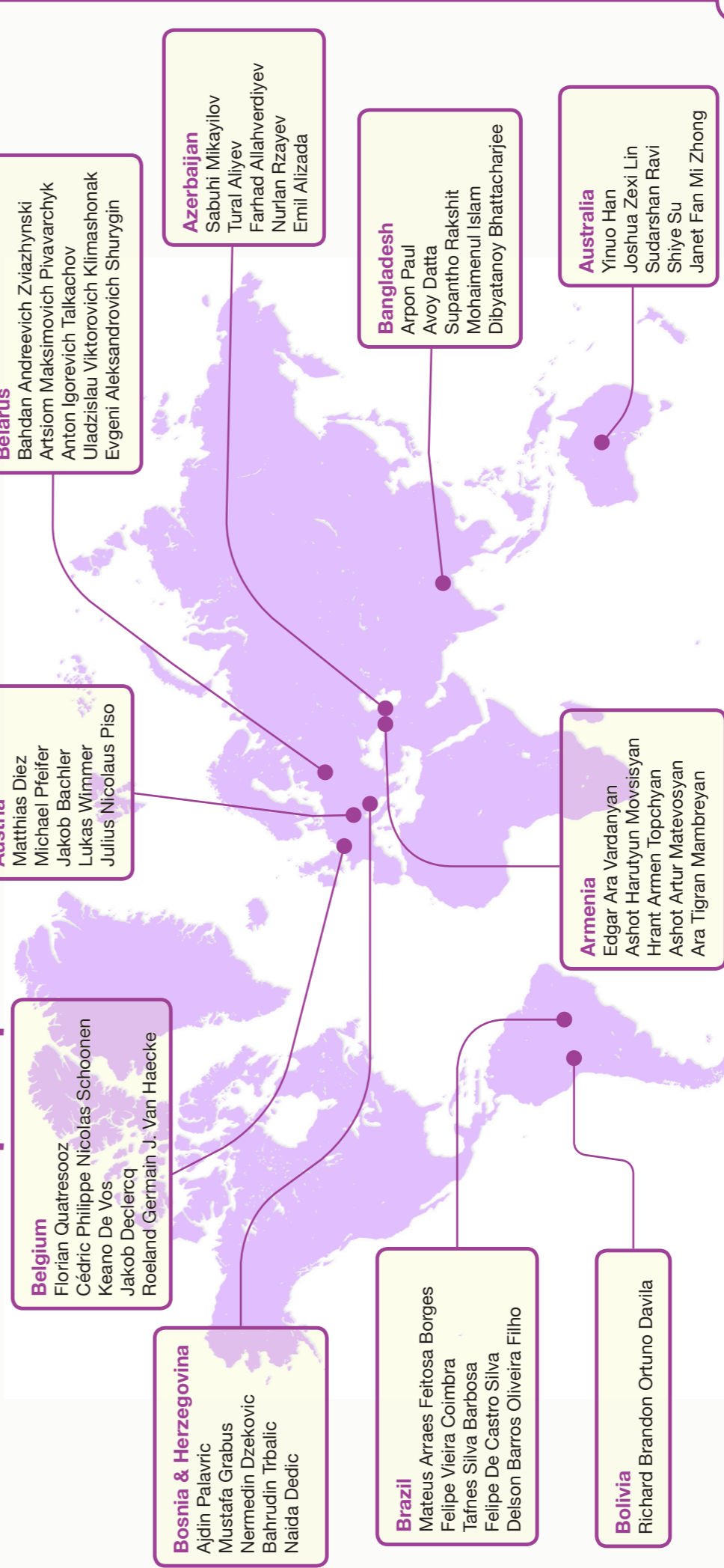
The host institution for IPHO 2015 is the Homi Bhabha Centre for Science Education (HBCSE), a national centre of the Tata Institute of Fundamental Research (TIFR), Mumbai. TIFR is an autonomous institution under the umbrella of the DAE, as well as a Deemed University. The broad goals of HBCSE are to promote equity and quality in science and mathematics education for students and teachers from primary school to undergraduate level, and to encourage the growth of scientific literacy in the country. Research and development at HBCSE is informed by contemporary scholarship in cognitive, social, historical and philosophical aspects of science education.

HBCSE also happens to be the nodal centre of the country for Olympiad programmes in mathematics and sciences including astronomy. Apart from this, the National Initiative on Undergraduate Science (NIUS), a major initiative of HBCSE works on promoting undergraduate research. The centre is also involved in teacher training and teacher professional development, science popularisation and makes contributions at the state and national level with regard to policy, curriculum and material development.

HBCSE welcomes everyone to IPHO 2015.



Rendezvous with IPHO participants



This year, 83 countries/teams from all over the world have registered for IPHO. This includes 385 student participants, 160 leaders, 80 observers and 19 visitors. Each issue will feature student participants from 9 -10 countries/teams.

Welcome address by Jayashree Ramadas, Centre Director, HBCSE

A hearty welcome on behalf of the Homi Bhabha Centre for Science Education, TIFR, to all of you for this 46th IPHO. We at HBCSE, along with teachers, students and other science lovers from around the country have been preparing for the past year and a half for your coming, and we are delighted that the moment is finally here!

A large and complex event like this Physics Olympiad, happening at different places around the mega city of Mumbai, can be understood only through glimpses and 'Reflections'. Do share with us through this newsletter your experiences of IPHO 2015. I wish you all a pleasant and memorable visit.

