

18th Asian Physics Olympiad in Yakutsk, Sakha Republic, Russia

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Fig. 1: Leaders and students at the opening ceremony of the Asian Physics Olympiad in Yakutsk, Russia.

Widely regarded as the coldest city¹ on the planet, Yakutsk hosted the 18th Asian Physics Olympiad. Yakutsk is also responsible for a fifth of the world's production of diamonds. The Olympiad is organized jointly by the Ministry of Education and Science of the Republic of Sakha (Yakutia), the Ministry of Education and Science of the Russian Federation, the Moscow Institute of Physics and Technology Government of the Republic of Sakha (Yakutia), M.K. Ammosov North-Eastern Federal University in Yakutsk, the Sakha Junior Academy of Sciences of the Republic of Sakha (Yakutia) and the Lyceum and Internat in Yakutia.

For the competition, the students sat for two five-hour grueling examinations. The first examination tested their theoretical Knowledge and mastery of physics, with questions ranging from vortices in superfluid to super-massive black holes to space debris. An equally intensive second round examination focused on their mastery of experimental skills. For the latter experiment, students investigated various properties of photonic crystal.

In his speech at the opening ceremony, the President of the International Board for the APhO, Leong-Chuan Kwek, encouraged all the participants to established good network and contacts through the Olympiad. "Some of your friends in this competition will become great scientists, great entrepreneurs or even great politicians," he added. He then urged all participants to be creative in their problem solving skills.

The leaders, comprising principally of University professors, officials and teachers from the Ministry of Education from various countries and regions, were deeply impressed with the organization of the Olympiad, including the high standard of the questions set for both the theory and experimental examinations.

Exposure to the local culture of the host country is another equally important aspect of the Olympiad. The students and the leaders were exposed to a myriad of activities ranging from a visit to the excellent Mammoth museum and permafrost museum to various sports and outdoor activities. The first day of the event also coincided with the May 1 parade in Yakutsk.

¹ City with a population more than 100 thousand people.



Fig. 2: Students working hard on their experimental problems at the Olympiad: The experimental problem was an interesting question on photonic crystal.



Fig. 3: The leaders and students witnessed the impressive May 1 parade in Yakutsk.

At the end of the competition, a total of 18 gold medals, 13 silver medals, 25 Bronze and 34 honorable mentions were given out to the participants. Yaozheng Zhu from China received the four top prizes: the Absolute winner Award, the Best Performance in Theoretical Examination, the Best Performance in Experiment Examination. Other winners include: Vasily Yugov from Russia (Best Performance in Experimental Examination), Zhirui Yao from China (The Most Creative Task Solution) and Apurba De from United Arab Emirates (President Book Prize). The Association of Asia Pacific Physical Societies gave away two prizes (one for the best boy and another for the best girl award).

The Association of Asia Pacific Physical Societies (AAPPS) awards were given to **Yaozheng Zhu** from China (Male) and **Anca Dragulescu** from Romania (Female).

Unlike other Asian Physics Olympiads, the organizers in Yakutsk this year had very little time to prepare for the event. However, despite the relatively short time, the organizers have done an excellent job. Many leaders and the students enjoyed their Yakutsk experience thoroughly and they also felt that the entire Olympiad was extremely well organized.



Vitaly Shevchenko is one of the co-Chairmen for the 18th Physics Olympiad. He has been a leader for the Russian team in several past Asian Physics Olympiads. Vitaly is currently working at the laboratory for the advanced studies of membrane proteins and center for talented children training. He is also working on biophysics at the Forschungszentrum Jülich in Germany.