

The 2nd International Olympiad on Astronomy and Astrophysics (IOAA) as a Forum in Promoting Astronomy

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Abstract

The 2nd IOAA is briefly described. The event is particularly important to popularize astronomy among youngsters and to enhance the development of international contacts among different countries. It is expected through the event like IOAA more bright high school students will be eager to study astronomy in university level to become the next generation astronomers.

I. Introduction

The International Olympiad on Astronomy and Astrophysics (IOAA) was established in Thailand, February 2006 by founding countries: Thailand, Indonesia, Iran, China-Hongkong, and Poland. The main goal of this founding is to promote the growing interest in Astronomy and related subjects, especially through the general education of young people, and enhancing the development of international contacts among different countries in promoting Astronomy and Astrophysics in schools. Particularly, this event must be suitable to popularize Astronomy among youngsters and to attract bright high school students to study Astronomy in universities. The organization is run by an international committee whose members are from participating countries (IOAA.info, 2007).

The 1st IOAA was successfully held in Chiang Mai, Thailand from November 30 to December 9, 2007 where 21 countries participated with 87 student contestants. This event is particularly special and important for Thai people since it was dedicated to commemorate His Majesty the King's 80th Birthday and H.R.H. Princess Galyani Vadhana's 84th Birthday in 2007.

II. The 2nd IOAA in Indonesia

The 2nd IOAA will be held in Bandung, Indonesia from August 19 to 28, 2008. These dates are chosen as it is within the period of dry season in Indonesia. Therefore, good clear nights are highly probable during observational rounds. Institut Teknologi Bandung in cooperation with Provincial Government of West Java is assigned by Ministry of National Education of Republic of Indonesia to organize the event. The team participating in the 2nd IOAA is expected to consist of five high school students or those who graduate from high school in 2008, accompanied by two team leaders capable in solving problems in Astronomy and Astrophysics. For this event no registration fee is required except for observers or family members who wish to accompany the students. The accommodation for students is separated from those of team leaders and observers.

There will be two rounds in the competition: theoretical round and practical round. The theoretical round consists of short and long problems, and the practical round consists of observation and data analysis. Students will work entirely using computers for theoretical round, and for observational round naked-eye observation

or using astronomical instruments may be conducted. In case sophisticated instruments are used in the observational round, a short introduction to the instrument will be given. All prospective problem sets is prepared by host country, in this case Indonesian astronomers, and will be discussed and approved by the International Board. We plan to broadcast the competition through internet so that people all over the world can watch the competition processes.

Some excursions for students and team leaders will be organized during the competition. In addition, various cultural events will also be performed to introduce the culture of the host country. Hence, the friendship spirit of this Olympiad is kept preciously.

III. Impact to Society and School

Although some astronomical traditions (apparition of constellation, the use of lunar calendar, etc.) were found over the centuries in Indonesia, it is considered that modern Astronomy in this country officially developed after the establishment of the Bosscha Observatory in 1923. Despite its long history, we still have common situation like other developing countries, where astronomy is not put in substantial priority in development program of the country. This can be seen in the curriculum of high school education where astronomy is not taught as a compulsory subject, but only a small topic in the physics and geography subjects. Moreover, it is taught by teachers who have less astronomical knowledge. This situation makes high school students who are interested in astronomy lack of basic concept. Accordingly, this may

discourage them, and they will eventually leave astronomy.

It is expected that the event like 2nd IOAA will stimulate young high school students to study astronomy in a proper way, so they will have opportunities to compete in an international level. In order to be able to participate in the IOAA, students who wish to become team members of Indonesian National Team have to compete from the very first stage, i.e., the selection in regency/city level (around 10,000 students) before proceeding to the provincial level (around 1,700 students). The best students from each province are eligible to compete in the National Astronomy Olympiad. The total number is around 100 students, out of which 5 students will be selected to become members of the Indonesian National Team after severe training (Wiramihardja & Kunjaya, 2005).

The tight competition to become national team members will create fair competitive condition among students, school, provinces, and hopefully will stimulate society to become more attracted and pay more attention to astronomy.

It is expected through the event like IOAA more bright high school students will not be only fond of astronomy, but more than that, they are eager to study astronomy in university level to be the next generation astronomers.

References

- IOAA.info, 2007, <http://ioaa.info/ioaa2007/>
Wiramihardja, S. D., & Kunjaya, C., 2005, Proceedings of The 9th APRIM, p.311-313