

Preface

The Asian Physics Olympiad (abbreviated to APhO) is currently the premier physics competition held annually for Asian pre-university or senior high school students. It is modeled after the International Physics Olympiad (IPhO), and demands a similar level of intellectual capability from the participants. The only difference between APhO and IPhO is that each participating country can send eight students at most to compete in APhO instead of five in IPhO. The age of the participants should not exceed twenty on June 30th of the year of the competition.

The idea of creating the Asian Physics Olympiad was first proposed in August 1995 by Dr. Waldemar Gorzkowski, then the President of International Physics Olympiads who regrettably passed away in 2007 during the 38th IPhO held in Isfahhan, Iran. The proposal aimed to promote the quality of science education and attract students to study physics that was much needed in increasing science manpower for developing the new century information economy in Asia region. Technically, APhO was proposed to be held two months before IPhO and it would act as a warm-up competition for the worldwide IPhO. The idea of APhO was welcomed by many Asian countries. Unfortunately, the implement of the proposal was deferred by the Asian financial crisis happened in 1997 through 1998. In 1999, Professor Yohanes Surya with full support from Indonesia government announced to inaugurate the First APhO during the 30th IPhO in Italy. Right after this announcement, Chinese Taipei declared to host the Second APhO in 2001 and was soon followed by Singapore as the host of the Third APhO in 2002 and Thailand as the host of the Fourth APhO in 2003. In the ensuing years, the Fifth to the Ninth APhO were organized smoothly in turn by Vietnam, Indonesia (twice), Kazakhstan, China, and Mongolia from 2004 to 2008, respectively. The number of participating countries has grown from original ten to around twenty. The effect of APhO is very fruitful and conspicuous. The statistical grade data of the past eight years of the global competition of IPhO shows that close to one half of gold medals were won by the students from APhO participating countries.

I am pleased to see the publication of the collection of the APhO problems

and solutions. These problems were deliberately formulated by each of the organizing countries. Normally, it had to group together about a dozen of physics professors to form an academic committee and took about one to two years to accomplish the demanding task. Reading and comprehending these problems and solutions can greatly help readers in understanding physics laws deeper and strengthening their analytical and reasoning capability in solving problems. This book is filled with many good wishes and efforts devoted to nourishing our new generations.

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