

# Rules of Procedure for Problem Selection

## A. Preamble

This document describes the procedure which is followed to select the set of physics problems for the International Young Physicists' Tournament (IYPT). The rules are defined and maintained by the IYPT Executive Committee (EC). The current version of this document is made available to the member of the IYPT International Organization Committee (IOC).

## B. Problem Selection Committee

The Problem Selection Committee (PSC) is a subcommittee of the EC. It is chaired by an EC member and consists of at least two additional committee members. The additional committee members are selected by the chair of the PSC.

The PSC's task is to organize the problem selection procedure with the goal to come up with a set of viable problems from different contributors and different areas of physics for the next IYPT.

The members of the PSC are bound by confidentiality.

## C. Selection Procedure

### C.1. Call for Problems

New problem suggestions are submitted via an online form on the IYPT website ([www.iypt.org](http://www.iypt.org)).

Anyone is eligible to submit problem suggestions. In addition to a title and a short description of the problem, information about the author (name, email address, etc.), the area of physics and relevant sources have to be provided. If the submission is on behalf of an International Member Organisation (IMO) this has to be selected from the list of IMOs during the submission.

Each IMO is required to submit at least three problem suggestions. IMOs failing to do so will be excluded from participating in the problem selection process (see below).

The PSC sets a deadline (no later than three months before the start of the upcoming IYPT) for problem suggestions and communicates this to all IOC members at least four weeks prior to the deadline. IMOs with currently less than three problem submissions will also receive a reminder.

Problems submitted after the deadline will be considered for the IYPT in the following year.

### C.2. Preselection of Problems

The PSC collects all problem submissions received in time. It discards submissions that are unsuited as IYPT problems for objective reasons (e.g. repeats of former IYPT problems, dangerous or clearly unfeasible problems, etc.).

The remaining suggestions and promising unselected submissions from past years are discussed within the PSC with the goal to come up with a preselection of 50 to 60 problems. The preselection should be balanced with respect to areas of physics. The feasibility of preselected problems should be verified by the PSC, the authors or by additional experts.

The PSC may change the wording of a problem description if this improves the clarity of the description or the quality of the problem.

### **C.3. IOC Feedback**

EC members and eligible IOC members are sent a document containing the relevant information (including decisions made by the PSC) of all submitted problems no later than four weeks before the IYPT.

They are invited to give their feedback on the preselected problems. The feedback includes rating each preselected problem and adding comments (e.g. concerns about feasibility or too trivial problems).

### **C.4. Tentative Problem Set**

Taking into account the feedback the PSC prepares a tentative problem set. Problems are selected based on their average rating, diversity of areas of physics, experimental and theoretical challenges, etc.

In addition to the tentative problem set the PSC also prepares a list of possible substitutes.

The tentative problem set and the list of substitutes are sent to the IOC members no later than one week before the start of the IYPT. IOC members with serious concerns about the tentative problem set are expected to contact the chair of the PSC well before the start of IOC meeting.

### **C.5. Final Problem Set**

The final problem set is selected by the eligible IOC members during the IOC meeting as described in this section.

The chair of the PSC reports on the problem selection process. He then presents the tentative problem set. Eligible IOC members may ask clarifying questions on problems in the tentative problem set.

The eligible IOC members are asked to vote on the tentative problem set as it is. If the set passes the vote, it will be the final problem set.

If the tentative problem set does not pass the vote, eligible IOC members may put forward motions to modify or replace problems in the tentative problem set and then vote again on the modified tentative problem set. If the set passes the vote, it will be the final problem set.

If the tentative problem set still does not pass the vote, the problems in the set and (if required) the possible substitutes and (if still required) the remaining problems are discussed and voted on one by one. Problems that pass the vote will be added to the final problem set until the required number of problems has been reached.

The final set of problems can be only published directly by the IYPT.

## **D. Report**

The chair of the PSC writes a report about the problem selection process. It should at least cover the following items:

- problem submissions (number of submissions, spread of contributors and areas)
- description of preselection process
- summary of IOC feedback (especially problem rating)
- description of selection process for tentative problem set
- analysis of quality of selected problems (based on performance during IYPT, e.g. number of challenges and rejections)

The report is submitted to the EC.