

# Full Minutes from the 2021 Lithuania International Physics Olympiad

*Included below are only discussions that involve IPhO President moderated discussions; the discussions on the specifics of the exam questions are not recorded, only the results of the final votes to accept the exam questions.*

## 18 July Experimental Discussion

President Rajdeep Singh addressed the IB with some concerns about the experimental exam, considering the question: what happens if the equipment doesn't arrive? Three countries had this happen, with the arrival of the experimental kits unlikely.

Organizers propose to have a remote control, where the student communicates with a remote volunteer and tells them what they would do if they had the equipment. The experience has been that a remote scenario has only a small interaction difference: they move connectors by pointing with a mouse, instead of moving a wire. The volunteer would only be doing a very simple task, such as move switch from 1 to 2; plug 9 volts into port 1.

Discussion moderated by President Rajdeep ensued. Various comments, not necessarily in order, included:

1. President Rajdeep suggested that an additional 1/2 hour for those students might be in order.
2. Spain: Leon suggests not counting the experiment in this circumstance, and just judge the student on the theory. It is not possible to measure the students' situation differently. Still, trust the academic committee and the advisory committee to arrive at the best solution.
3. Poland: Jan stated that it ought be okay if students can talk to volunteers. We should accept any special cases before the exam, not after. The grading expectations and exceptions should be made clear now. There is no way to treat them with equal footing.
4. Australia: Alix stated that we ought to be as flexible as possible for the students. Conditions are different for all the competitors. Some sitting papers very late in the evening? Some might even be stuck in lock down? Some will need to wake very early.
5. Nobody from Tajikistan spoke when invited; apparently the Tajikistan leaders were not present in the room
6. Egypt: Mohamed stated that the experiment should be included, though concerned. Will accept some extra time.
7. Mexico: Rodrigo stated that the experiment should be taken into account, but hope not very strict. But it should be taken into account. What about translation challenges?

8. Latvia: Slava stated that we ought make our best effort, grade the work with the same criteria, and understand that the situations are different. Objects that the countries weigh in on whether they participate; with a general query on how to keep this fair.
9. Romania: Adrian stated that the rules need to be the same for all contestants, with no special situations.

**A vote was taken on allowing 15 extra minutes for these special case students. 72 in favor, 22 against, 7 abstain.**

The experimental questions were discussed.

Experiment Question One accepted with 105 for, 4 against, and 1 abstain

Experiment Question Two accepted with 102 for, 4 against, and 3 abstain

The discussion ended at 11:50 AM CDT

## 20 July Theoretical Discussion

The theoretical questions were discussed.

Theory one passed with in 128 favor, 0 against, 0 abstain

Theory two passed with in 119 favor, 1 against, 2 abstain

The ability to vote was questioned, so a revote was taken

Theory two passed again with in 105 favor, 1 against, 2 abstain

Theory three passed with in 109 favor, 5 against, 2 abstain

## 22 July International Board meeting to set cut-offs

Started at 11:04 CDT

There was a short presentation about how to enter marks during moderations, and how to resolve disputes.

IPhO President Rajdeep stated that there were 147 participants at IB meeting, establishing quorum.

Jan Mostowski, Rui Travasso, Anatoli Slabazianiuk would serve as the panel of three for appeals of moderation. The instruction for appeals is to send an email with appeals to all three members of the panel, with copies to the local board.

President Rajdeep then outlined the cutoff criteria for medals. There were 368 examinees. The top 8% rounds to student 30; top 25% rounds to student 92; top 50% rounds to student 184; top 67% rounds to student 247. Their scores were 33.32, 23.45, 14.50, and 9.15. This sets the medal cut-offs.

**The proposed cutoffs were approved with a vote of 96 for, and 2 against.**

## 23 July International Board General Meeting

start at 11:30 CDT

There are five items on the agenda:

1. Introduction
2. Belarus presentation
3. Proposals
4. Sponsorship
5. Results

**Belarus:** Anatoli Slabadzian gave a video presentation with images of Belarus and extended a welcome speech to attend IPhO next year. More information soon.

### **Proposals:**

Swiss proposal to modify section 3.

Proposal: variant 1

Each participating country shall send a delegation, normally consisting of five students (contestants) and two accompanying persons (delegation leaders) at most. The contestants shall be students of general or technical secondary schools i.e. schools which cannot be considered technical colleges. Students who have finished their school examinations can be members of the team as long as they have not commenced their university studies. The age of the contestants should not exceed twenty years on June 30th of the year of the competition.

Proposal: variant 2

Each participating country shall send a delegation, normally consisting of five students (contestants) and two accompanying persons (delegation leaders) at most. The contestants should not have commenced their university studies, and their age in years should not exceed 20 on June 30th. If an educational institution cannot be clearly classified as a high school, a student

is considered to be eligible if less than half of his/her lectures (in average for the last two years) have been on topics related either to physics or mathematics.

Lionel Philippoz spoke about the Swiss proposal and the need to facilitate students who have a gap year, and two possible modifications to the section.

President Rajdeep shared the details from the advisory committee's assessment.

The floor was then opened for comments:

1. Matthew Verdon, Australia- spoke against the motion: our students complete high school in December, so this interferes with their ability to sit ipho if they go straight to university. I am against it, as this is a competition among high school students. These changes shift focus on high school to "not university". There are real intellectual and social changes that happen once a student graduates from high school; don't want to Verification of a student's status is difficult to do, so how does one "prove" a student is not in university? It is much easier to verify that they are in high school.
2. Jaan Kalda, Estonia- clarified that the language in variant 2 about identifying high school, university, and the intermediate school. Spoke in support of variant 1, as this helps promote physics amongst the young, even if not a high school student.
3. Jan Mostowski, Poland- spoke against the proposal. The IPhO is for high school students. It is a well defined structure. University is not well defined. Proposal opens a gray area; hard to sort out.
4. Shahid Qamar, Pakistan- spoke against the proposal. Present formulation is very clear; any change creates confusion.
5. The IPhO Secretary clarified that this requires at least 100 voters, and at least 100 in favor.
6. A check of the quorum revealed that 102 leaders were present.

**Variant 1: The vote was 20 in favor, 80 opposed, 1 abstain. The proposal fails**

**Variant 2: The vote was 12 in favor, 89 opposed, 1 abstain. The proposal fails**

President Rajdeep then presented five suggestions from Bosnia and Herzegovina

On 1.0 (Theory and Experiment Problems), President Rajdeep shared the comments from the advisory board.

1. No additional comments from the floor for 1.1, 1.2, 1.3

On 2.0 (Data Sharing), President Rajdeep shared the comments from the advisory board.

1. Jaan Kalda spoke that the data could be provided, with the names stripped from the data. Point distribution helps students to quantify the difficult level of a problem.

Digesting the problems into the database can be done. Fully support. Several individuals added to the online chat in support of Jaan's statement.

2. Matthew Verdon- he has some data, from when he served as secretary. The question is purpose, what is goal, and what might be unintended consequences of misuse of data. We need to be mindful of this, and make sure that feedback is a constructive process.
3. President Rajdeep suggested that Jaan Kalda connect him with individuals who are currently digesting historical data.
4. Mihkel Kree of Estonia of PhysProb.com already does this some, and would welcome the chance to expand with data from IPhO.

On 3.0 (Alumni), President Rajdeep shared the comments from the advisory board.

1. Juan Leon (Spain)- stated that the proposal is too diffuse; cannot be accepted as stated, but we need to implement some of this for the future.

On 4.0 (Public relations and outreach), President Rajdeep shared the comments from the advisory board.

2. There were no additional comments

On 5.1, 5.2 (Livestreaming and awards ceremony), President Rajdeep shared the comments from the advisory board.

3. There were no additional comments

As these items were not well-formed as action items, no vote was held.

### **IPhO Sponsorship:**

President Rajdeep outlined a possible long term engagement with an undisclosed company. \$30,000 USD per year, for two years initially, to explore how to continue in future, if IPhO cancelled, rolls over to new year, but no sponsorship when IPhO is not held. There is a need to explore where the money would be housed; this might need to be creating IPhO foundation, or it might be possible to house at a university associated with the secretariat, so some host society. Perhaps, provide directly to the Host Nation (but company prefers a central, stable location). This could be used in participation of teams in need of financial support. The IPhO president will need to write a report, and sign a contract on behalf of the international board.

The floor was opened up for discussion.

1. Jan Mostowski- This is a nice idea, but is a small sum of money relative to the cost of running an ipho.
2. Jaan Kalda- Thanks for the initiative; good to support financially poor countries.

3. Barbara R (Slovenia)- Thanks for the initiative. Hopefully more companie, this is a good seed start. A foundation
4. Lasse Franti- I thought there was a foundation in the Netherlands registered? It was clarified that this never actually happened. Which company? It will be announced after the vote.
5. Lithuania Chairman Jevgenij thinks this is great, supporting participation is great!
6. Anson Cheung- Concern about accepting sponsorship not knowing the company, before accepting the money. Query on how binding this is?
7. Lambe Bar (Macedonia) In favor of monetary support, hopes that we can approve, trusts the president.

**The secretary clarified that it will take 75 in favor to accept. The vote results were 82 in favor, 5 against, 16 abstain, so the motion passed.**

After the vote it was announced that the company is Huawei; Rajdeep is given consent to push this further.

#### **Results:**

There was a quick scroll through the results updated after the moderation

**Vote to approve results: 104 confirm, 0 don't confirm, 2 abstain. The vote to approve the results passes.**

The final tallies were

Golds: 45  
Silvers: 61  
Bronze: 94  
HM: 62

Special awards were given to  
Best experiment: Kyungmin Kim  
Best Theory: Kyungmin Kim & Zhihan Zhang  
Best total: Kyungmin Kim  
Best Female Participant: Antonia-Alma Ghita

Final Statement from Rajdeep: All is completed, and thanks to Lithuania from International Board

Jan Mostowski- As elder statesperson, thanks to excellent job for Lithuania Organizers.

End at 1:46 pm CDT