

The Regulations of the Austrian Young Physicists' Tournament

I. Austrian Young Physicists' Tournament

The Austrian Young Physicists' Tournament (AYPT) is a competition among teams of secondary school students in their ability to solve complicated scientific problems, to present solutions to these problems in a convincing form and to defend them in scientific discussions, called Physics Fights (PF). It is carried out by the association “AYPT – Forschungsforum junger Physiker” according to the articles of association, appendix A. The Austrian Organizing Committee (AOC) for the AYPT is selected by the Executive Committee (ECO) of the association.

II. The problems of the AYPT

The problems of the AYPT will be the same as for the IYPT (International Young Physicists' Tournament), in accordance with article II. of the Regulations of the International Young Physicists' Tournament. The Executive Committee, however, may exclude some of the IYPT problems. The decision about chosen and excluded problems has to be made public not later than on the 15th of December. If no choice is made public until December 15th all IYPT problems will be used for the AYPT.

III. The participants of the AYPT

1. *The Austrian teams*

Any Austrian secondary high school may send one (or more) team(s) to the AYPT.

2. *Foreign teams*

The AOC may invite any number of foreign teams. Those teams compete in the same way as the others but they are not taken into account when compiling the Austrian National Team (see Section XIV).

3. *The membership of the teams*

The AYPT team is composed of five secondary school students. The secondary school graduates could participate in the AYPT in the year of their graduation. The participation of university students is not allowed. The AOC may allow participation of teams of four or three students. The composition of the team cannot be changed during the Tournament. The team is headed by a captain who is the official representative of the team during the PF.

4. The team is accompanied by a team leader.

IV. The Jury

The Jury is nominated and organized by the AOC. Team leaders may be included in the Jury. The team leaders cannot be members of the Jury in the PF where their teams participate and should not, if possible, grade any one team more than twice. Moreover team leaders should (if possible) not be chairman of the Jury.

V. The agenda of the AYPT

The agenda of the AYPT is to set up an Austrian National Team which will be sent to the International Young Physicists' Tournament (IYPT).

The AYPT is carried out in a period determined by the AOC.

All teams participate in the Selective PFs. Selective PFs are carried out according to a special schedule determined by the AOC according to the number of participating teams, following the rule that, if possible, no team meets another team more than twice. This schedule should be known before numbers are ascribed to the teams by lot. The best teams participate in the Final PF.

VI. The Physics Fight regulations

Three or four teams participate in a PF, depending on the total number of teams. In the course of a PF the members of a team communicate only with each other.

Before the beginning of a PF, the Jury and the teams are introduced by the chairman and the captains, respectively.

The PF is carried out in three (or four) Stages. In each Stage, a team plays one of the three (four) roles: Reporter, Opponent, Reviewer (Observer). In the following Stages of the PF, the teams change their roles according to the scheme:

Three teams PF

Team	Stage	1	2	3
1		Rep	Rev	Opp
2		Opp	Rep	Rev
3		Rev	Opp	Rep

Four teams PF

Team	Stage	1	2	3	4
1		Rep	Obs	Rev	Opp
2		Opp	Rep	Obs	Rev
3		Rev	Opp	Rep	Obs
4		Obs	Rev	Opp	Rep

Every PF is attended by at least one so-called "Fight Assistant" (FA).
The tasks of the FA are:

- The FA handles the PF clock and helps the chairman of the Jury to take care that the specified times are not exceeded.
- In case of technical problems the FA helps the teams with presentation devices provided by the organizers such as TV sets, VHS video recorders, video beamers, ...
- The FA writes down all jury grades to a special grading form and takes care that all jury members sign that form to confirm correctness.
- If possible the FA calculates the result of the PF using a computer program and announces the result as soon as all jury members have confirmed and signed the grading

form.

- The FA assists the chairman of the Jury in taking care that all teams follow the regulations of the tournament.

VII. The Stage regulations

The performance order in the Stage of a PF: Reserved time in minutes

The Opponent challenges the Reporter for the problem	1
The Reporter accepts or rejects the challenge	1
Preparation of the Reporter	5
Presentation of the report	12
Questions of the Opponent to the Reporter and answers of the Reporter	2
Preparation of the Opponent	3
The Opponent takes the floor, maximum 5 min. and discussion between the Reporter and the Opponent.....	15
Questions of the Reviewer to the Reporter and the Opponent and answers to the questions	3
Preparation of the Reviewer	2
The Reviewer takes the floor	3
Concluding remarks of the Reporter	2
Questions of the Jury	5

In the Final PF the procedure of challenge is omitted.

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The official language of the AYPT is English. During a PF every communication between the competing teams as well as between the teams and the Jury has to be made in English.

VIII. The teams performance in the Stages

The Reporter presents the essence of the solution to the problem, attracting the attention of the audience to the main physical ideas and conclusions.

The Opponent puts questions to the Reporter and criticizes the report, pointing to possible inaccuracy and errors in the understanding of the problem and in the solution. The Opponent analyses the advantages and drawbacks of both the solution and the presentation of the Reporter. The discussion of the Opponent should not become a presentation of his/her own solution. In the discussion, the solution presented by the Reporter is discussed.

The Reviewer presents a short estimation of the presentations of Reporter and Opponent.

The Observer does not participate actively in the PF.

During one PF only one member of a team takes the floor as Reporter, Opponent or Reviewer; other members of the team are allowed to make brief remarks or to help with the presentation technically. No member of a team may take the floor more than twice during one Selective PF or, as Reporter, more than three times in total during the whole tournament. During the Final PF any team member can take the floor only once.

IX. The rules of problem-challenge and rejection

1. All problems presented in the same PF must be different.

2. Selective PF

The Opponent may challenge the Reporter on any problem with the exception for a problem that:

- a) was rejected by the Reporter earlier;
- b) was presented by the Reporter earlier;
- c) was opposed by the Opponent earlier;
- d) was presented by the Opponent earlier.

If there are less than five problems left to challenge, the bans d), c), b), a) are successively removed, in that order.

During the Selective PFs the Reporter may reject the challenge of five different problems in total without penalty. For every subsequent rejection the coefficient of the Reporter (see section X) is decreased by 0.2. This reduction continues to apply during the following Selective PFs.

The AOC decides how many Selective PFs are held. If more than 2 Selective Fights will be held, the AOC may decide that the following rules apply to one of the Selective Fights (Note: This decision has to be made public before the start of the tournament):

- The procedure of challenge is omitted. All teams may choose the problem they want to present. The only exception is that a team may not present a problem, which they presented earlier in the Selective Fights.
- In case teams of one group choose the same problem, priority is given to the team with the higher TSP (see section XI).
- Teams must choose their problems for the last Selective Fight as soon as possible after the results of the preceding Selective Fight are official. The choice must be made public immediately.
- The problem which a team presents in this PF may not be presented again in the Final PF by the same team.

3. Final PF

As soon as possible after the announcement of the results of the Selective PFs the teams participating in the Final choose their problems. In case teams choose the same problem, priority is given according to the order of presentation in the Final (see section XII). The choice should be made public immediately.

X. The grading

After each stage the Jury grades the teams, taking into account all presentations of the members of the team, questions and answers to the questions, and participation in the discussion. Each Jury member shows integer marks from 1 to 10. The mean of the highest and the lowest marks is counted as one mark which is then added to the remaining marks. This sum is used to calculate the mean mark for the team. The mean marks are multiplied by various coefficients: 3.0 or less (see section IX) for the Reporter, 2.0 for the Opponent, 1.0 for the Reviewer and then transformed into points.

XI. The resulting parameters

1. For a team in the PF

The sum of points (*SP*) is the sum of mean marks, multiplied by the corresponding coefficients and rounded to one decimal.

2. For a team in the Tournament

The total sum of points (*TSP*) equals the sum of *SP* of the team in all Selective PFs. The highest *TSP*, denoted as *HTSP*, serves as reference (see section XIII).

XII. The Final

The three teams having the highest *TSP* in the Selective PFs participate in the Final. In case teams have equal *TSP*, their participation in the Final is decided by the most balanced teamwork during the Selective PFs, in case of equality by lot. The order of presentation in the Final is also determined by the *TSP*, in case of equality by the most balanced teamwork, in case of continued equality by lot: the higher the *TSP*, the lower the number in the scheme of section IV.

XIII. The final team ranking of the AYPT

The winner of the Final obtains the 1st place. If two or three teams have the same *SP* result in the final, the winner is nominated according to the highest *TSP*. The other two teams participating in the Final share the 2nd place. For teams not participating in the Final, the AOC decides, according to the *TSP* obtained, which teams will share the 3rd place.


XIV. Compiling the Austrian National Team

After the end of the AYPT the decision about the composition of the Austrian national team is made according to the procedure outlined in appendix A of the articles of association.

XV. The status of the regulations of the AYPT

The regulations are established by the ECO and may be changed only by the ECO.

Vienna, December 16th 2006



Leopold Mathelitsch
(President)



Gerhard Haas
(Secretary General)