24th Austrian Young Physicists' Tournament 2022

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COVID-19 Measures

We follow the COVID-19 measures of the Montan University Leoben during the competitions and would like to emphasize that the wearing of an FFP2 mask is obligatory in closed rooms. Further you should keep a maximum distance from one another. In case you are encountering flu-like symptoms we would ask you to check yourself for COVID and in case of a positive outcome inform the organizers as soon as possible.

Dear participants of the 24st AYPT

It is a pleasure for me to once again be part in the organization of the 21st anniversary of the AYPT and I want to welcome all of you who made it here this year. Every year many teams from Austria and from abroad gather in Leoben to compete. However, preparation has already started several months ago, and I am sure it was a long road for every one of you to come here. But now the time has come to show your work and we are all excited to see you present your ideas. So, go ahead, enjoy the competition and never stop working on your dreams!



Dr. Gerhard Haas

Head of the Local Organizing Committee

As a company in the technology and industrial sector, we urgently need well-trained employees in the fields of mathematics, IT, natural

sciences and technology.

We have to start getting our youngsters interested in such subjects early on, introducing them and, ideally, inspiring them.

The AYPT is a good opportunity to bring the fascination of natural sciences closer to young people.



Dr. Friedrich Santner

CEO Anton Paar GmbH

Recognising and promoting talent at an early stage is an important task in our society. As a high-tech company, we engage in a wide range of commitments in the fields of mathematics, IT, natural sciences and technology because the talented young people of today are our potential for the future. The International Young Physicists' Tournament offers a suitable framework for young people and is a



good example of this. This investment in young people benefits us as well as Austria as a technology and research location.

Dr. Sabine Herlitschka

Chairman of the Board at Infineon Technologies Austria AG

Teams participating in the 24st AYPT 2022

Austrian Teams

- Admont
- AHS Theodor Kramer
- BRG APP Innsbruck 1
- BRG APP Innsbruck 2
- BG/BRG Villach 1
- BG/BRG Villach 2
- SchülerInnen Forschungszentrum

Foreign Teams

- Georgia
- GYPT
- Hungary
- Iran
- Slovak YPT
- Slovenia 1
- Slovenia 2

Official Schedule for the AYPT 2022

Note: This schedule may be subject to change. A representative from each team should check for the latest information each morning at the information desk.

Thursday, April 7th 2022

Arrival:

Participants are accommodated at Hotel¹

05.30 pm:

Meeting at the reception desk

06.00 pm:

Opening ceremony:

• Drawing of lots at Montanuniversität

¹ Hotel Kongress Leoben, Hauptplatz 1, 8700 Leoben; Phone: +43 3842 468 00

• Presentation of Intellectual Outputs 2&3 of Erasmus+ Project DIBALI

afterwards:

Dinner at Hotel and Presentation of Intellectual Output 1 of *Erasmus+Project DIBALI*

After Dinner (08.00 pm approx.):

Meeting of Teamleaders with Organizing Committee, at Hotel

Friday, April 8th 2022

08.30 am:

Jury Briefing

09.00 am:

First Selective Fight

01.00 pm:

Lunch at Hotel Kongress

02.30 pm:

Second Selective Fight

06.30 pm:

meet at the reception to walk to the BG/BRG Neu (in case you don't know the way)

07.00 pm (approx.):

Barbecue party in the court of BG/BRG Neu

Saturday, April 9th 2022

09.00 am:

Third Selective Fight

01.00 pm (approx.):

Lunch at Hotel

02.00 pm:

Finals

afterwards:

Winner's ceremony, closing ceremony

afterwards:

Departure

If not stated otherwise, all activities take place at the Montanuniversität Leoben.

Photo & Video Policy throughout the AYPT

This policy should clarify under which circumstances photography and video recordings are authorized during the course of the Austrian Young Physicists tournament (short AYPT). This policy is also to be followed by jurors and chairs as well as team leaders.

The general public (including participants, visitors, supervisors and members of the jury, etc.) is not permitted to take photos and videos during the stages of the tournament. Only officials and members of the organization committee have the permission for filming and photography during a stage.

Personal photos and videos may be taken at the tournament (excluding the stages) as long as (i) they are only used for personal non-commercial purpose; (ii) they are not in conflict with European and Austrian law (see §78 Urheberrechtsgesetz/Austrian copyright law).

Notwithstanding the foregoing, the AYPT organization committee reserves the right to prohibit any filming or photography during the tournament for any reason.

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 Organizing Committee for the AYPT is selected by the Executive Committee 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

III. The participants of the AYPT

1. The Austrian teams

Any team composed of students enrolled in Austrian secondary schools is eligible for participation.

2. Foreign teams

The Organizing Committee may invite any number of foreign teams. Thos e 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 three 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 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. Team Leader

The team is accompanied by a team leader.

IV. The Jury

The Jury is nominated and organized by the Organizing Committee. The Jury consists of at least five members. 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 the same team more than twice.

V. The agenda of the AYPT

The AYPT is carried out in a period determined by the Organizing Committee. All teams participate in the Selective PFs. Selective PFs are carried out according to a special schedule determined by the Organizing Committee 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.

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 subsequent Stages of the PF, the teams change their roles according to the schemes:

Three teams PF

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

Four teams PF

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

VII. The Stage regulations

The performance order in the Stage of a PF:	Reserved time in minutes
The Opponent challenges the Reporter for the pro-	oblem
Preparation of the Reporter	
Presentation of the report	
Questions of the Opponent to the Reporter	
and answers of the Reporter	
Preparation of the Opponent	
The Opponent takes the floor, maximum 4 min.	
and discussion between the Reporter and the Opp	oonent
The Opponent summarizes the discussion	
Questions of the Reviewer to the Reporter	
and the Opponent and answers to the questions.	
Preparation of the Reviewer	
The Reviewer takes the floor	
Concluding remarks of the Reporter	
Questions of the Jury	

In the Final PF the procedure of challenge is omitted.

The official language of the AYPT is 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. During the Final PF any team member can take the floor only once.

IX. The rules of problem-challenge and rejection

1. Preparation

Prior to the Tournament, each single participant prepares a report on one of the problems and publicly announces their choice during the opening ceremony. Thereby, the problem is assigned to the individual participant for the course of the Tournament. In the following, the chosen problem will be referred to as the participant's assigned problem. Within a team, no two team members may have the same assigned problem.

2. Selective PF

The Opponent may challenge the Reporter on any of the problems assigned to a member of the Reporter team that the Reporter team has not presented before. The team member whose assigned problem is challenged has to accept the challenge andact as Reporter in this stage.

If possible, the Opponent must challenge a problem which has not already been presented in the same PF.

3. Final PF

In the Final PF, teams choose which of their three assigned problems they wish to present again. All problems presented in the Final PF have to be different. In case teams choose the same problem, priority of selecting problems for the Final is determined by the TSP (see section XI), in case of equality by lot.

All teams hand in a prioritization of their assigned problems before they leave the fight room at the end of the last Selective PF. After the results of the Selective PFs are known, the choice of the teams participating in the Final is published 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 for the Reporter, 2.0 for the Opponent, 1.0 for the Reviewer and then transformed into points.

In the Final, grading is done in secret. Jurors write down their grades on the grading sheets, sign them, and give them to the Final's Fight Assistants. The Chair asks the jurors of the highest and lowest grades to justify and explain their grades. This is done without mentioning the actual grade. The results are kept secret until they are officially announced during the award ceremony. After the announcement, all grading sheets and the detailed results are published online so that anyone can check the result.

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.

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 which team won more Selective PFs, in case of equality by lot.

The order of presentation in the Final is determined by position by entering the final: the higher the *position*, the higher the number in the scheme of section VI.

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 Organizing Committee 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 Executive Committee of the association and may be changed only by the Executive Committee.

Accepted by email, 2016-08-24

SCORESHEET

stage: fight (round no.):

reporter:

Start from 1 and add/subtract

REPORTER

room:

opponent:

problem no.:

Juror's name & signature:

reviewer:

REPORT	JRT							DISCUSSION WITH OPPONENT	ONENT	ANSWERS TO JURY,
c	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	relevant	reporter's conduct at the	OPPONENT, and
	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic	algaineal/scalage	discussion	NEVILWEN 3 GOESTIONS
-	some	some	some	some	review of sources, cited	partly	partly clear	U too few	poor	concise and correct or
2	fair	fair	fair	not well fitting	some own input	average	average	some	some aspects fine	0 — no questions asked
m	7000	7000	well performed,	deviations	a como interectina reculto	some aspects	some parts	many	poog	
4	nong	goog	sufficient number	ufficient number qualitatively analysed	t some mitelesting results	above average	well done	+ data/theory	some aspects	-1some mconfect,
5	detailed	quite detailed,	+ results explained	+ theory limits	considerable experimental	interesting	overall clear,	convincingly supported		inconciusive or too long
اا	demonstrative	correct	errors analysed	explained, conclusive	<u>or</u> theoretical	solution	demonstrative			-2 deeply incorrect or show
) 	deep and comprehensible, detailed, complex,	detailed, complex,	+ reproducible,	+ reproducible, well fitting, deviations	considerable experimental	greater extent	+ complex concepts well	3 — proved deep	overall efficient	deep misconceptions
,	shows physical insight completely testable convincing analysis analysed, conclusive	completely testable	convincing analysis	analysed, conclusive	and theoretical	than expected	communicated	allucio segundo		

	(H;
Start from 1 and add/subtract + = = = = = = = = = = = = = = =	OPPOSITION (SPEECH
OPPONENT Start from 1 + + + +	QUESTIONS ASKED

NOTES:

QUESTIONS ASKED 0 too few, mostly irrelevant 1 relevant, aimed at resolving 1 unclear points in the report 2 _ + short, apt and clear, well	OPPOSITION (SPEECH) understanding of presentation 0 almost nothing 1 some main points main points	relevant topics addressed no or irrelevant few some	own opinions presented too few some	<u> </u>
prioritized, all time used	all relevant points	many	many correct	
NOTES:	4 practically all points	practically all	+ improvement suggestions	

time management

prioritisation

reasonable

some

fair

reasonable

poor

no

all time used

very good

suggestions

efficient

fair

SCI	DISCUSSION WITH REPORTER	REPORTER			ANSWERS TO JURY and
	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	REVIEWER'S QUESTIONS
	almost no	too few	poor	no	0 —— concise and conject of
إيا	few	some	some aspects fine	some	tomoni omos
	some	some correct	good	reasonable	-1 —— inconclusive or too long
	boog	many correct	some aspects efficient	fair	
	new crucial point(s)	+ improvement suggestions	overall efficient	very good	 deeply incorrect or show deep misconceptions

Ctart from 1 and land of	† *									
# + add/subj	+I +I									
~	REVIEW OF REPORT	E		REVIEW OF OPPOSITION	SITION		DISCUSSION ANALYSIS	YSIS	MISSED POINTS	MISSED POINTS ANSWERS TO JURY
	report evaluation & understanding	pros & cons p	prioritisation	speech evaluation	pros & cons	prioritisation	discussion c evaluation	orrect own opinions		QUESTIONS concise and correct or
relevant, meant to clarify unclear points 0	poor/wrong	irrelevant	no	0 poor/wrong	irrelevant	no	0 almost no	too few	-1 irrelevant 	0 no questions asked
H	partial	partially relevant	some	1 too short/long	too short/long partially relevant	some	too short/long	some	0 none	some incorrect,
t short ant and clear well prioritized	poo8	mostly adequate	reasonable	2 informative, apt	mative, apt mostly adequate reasonable	reasonable	relevant parts	many		inconclusive or too long
33	detailed,	fully adequate	good	condensed & accurate	fully adequate	pood	2 — accurate, conclusive	fully adequate	constructive -2	deeply incorrect or show — deep misconceptions

NOTES:

IYPT - March 2019

Problems for the AYPT 2022

Note: According to the regulations of the AYPT the problems for the AYPT are the same as for the IYPT. These problems, which have been formulated by the IOC, are used in the AYPT in accordance with article 2 of the IYPT regulations.



1. Invent Yourself

Create a non-invasive device that determines the direction of fluid flow inside an opaque pipe. Optimise your device so that you can measure the smallest flow possible.

2. Rayleigh Disk

A disk suspended vertically by a thin thread is placed in an acoustic field. This device can be used to measure the intensity of sound by turning about the axis of the thread. Investigate the accuracy of such a device.

3. Ring on the Rod

A washer on a vertical steel rod may start spinning instead of simply sliding down. Study the motion of the washer and investigate what determines the terminal velocity.

4. Unsinkable Disk

A metal disk with a hole at its centre sinks in a container filled with water. When a vertical water jet hits the centre of the disc, it may float on the water surface. Explain this phenomenon and investigate the relevant parameters.

5. Bimetallic Oscillator

A simple electric oscillator can be made using a bimetallic contact-breaker. Investigate the relevant parameters that affect the frequency of such an oscillator.

6. Tennis Ball Tower

Build a tower by stacking tennis balls using three balls per layer and a single ball on top. Investigate the structural limits and the stability of such a tower. How does the situation change when more than three balls per each layer and a suitable number of balls on the top layer are used?

7. Three-Sided Dice

To land a coin on its side is often associated with the idea of a rare occurrence. What should be the physical and geometrical characteristics of a cylindrical dice so that it has the same probability to land on its side and one of its faces?

8. Equipotential Lines

Place two electrodes into water, supply a safe voltage and use a voltmeter to determine electric potential at various locations. Investigate how the measured equipotential lines deviate from your expectations for different conditions and liquids.

9. Water Spiral

If a stream of liquid is launched through a small hole, then under certain conditions it twists into a spiral. Explain this phenomenon and investigate the conditions under which the spiral will twist.

10. Droplet Explosion

When a drop of a water mixture (e.g. water-alcohol) is deposited on the surface of a hydrophobic liquid (e.g. vegetable oil), the resulting drop may sometimes fragment into smaller droplets. Investigate the parameters that affect the fragmentation and the size of the final droplets.

11. Balls on an Elastic Band

Connect two metal balls with an elastic band, then twist the elastic band and put the balls on a table. The balls will begin to spin in one direction, then in the other. Explain this phenomenon and investigate how the behaviour of such a "pendulum" depends on the relevant parameters.

12. Strange Motion

Sprinkle small floating particles on the surface of water in a bowl. Bring a strong magnet above and near to the water surface. Explain any observed motion of the particles.

13. Candle Powered Turbine

A paper spiral suspended above a candle starts to rotate. Optimise the setup for maximum torque.

14. Ball on Membrane

When dropping a metal ball on a rubber membrane stretched over a plastic cup, a sound can be heard. Explain the origin of this sound and explore how its characteristics depend on relevant parameters.

15. Boycott Effect

If particles are suspended in a liquid that has a lower density than the particles, the particles will settle to the bottom of the container. The rate of settling can be affected by tilting the container that holds the liquid. Explain this phenomenon and investigate the effect of relevant parameters.

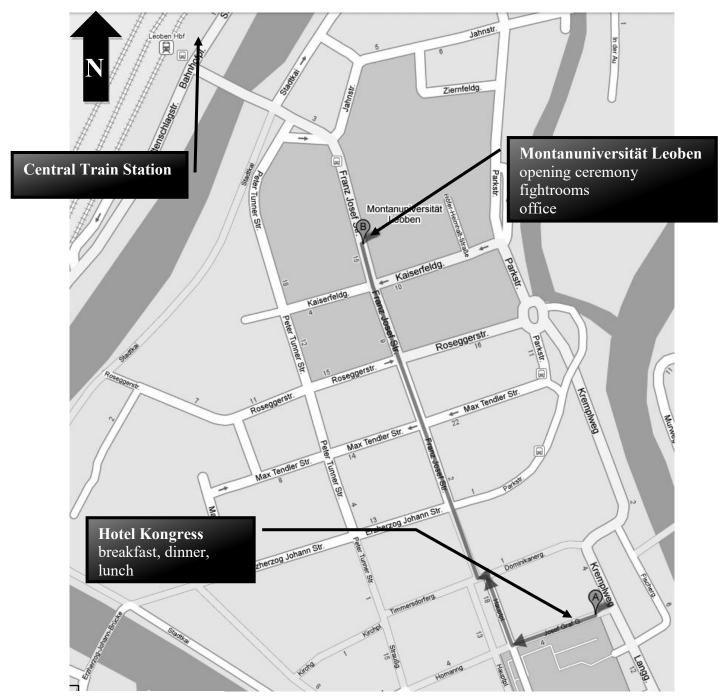
16. Saving Honey

When rotating a rod coated with a viscous liquid (e.g. honey), under certain conditions the liquid will stop draining. Investigate this phenomenon.

17. Invisibility

Lenticular lenses can be used to distort light and make objects disappear. Investigate how changing the properties of the lens and the geometry of the object affect the extent to which the object can be detected.

Leoben City Map



http://maps.google.at

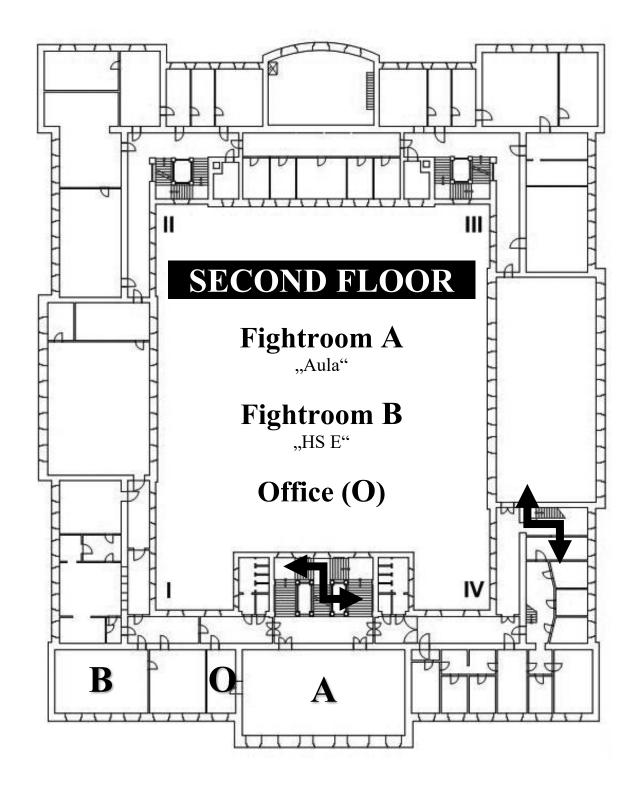
Fight Locations

This section will provide you with details of the locations of the fight rooms within the university building(s). Please keep in mind that in Austria floors are labelled starting from zero. So the ground floor (German: "Erdgeschoß", "EG") is the "0th" floor. The 1st floor is the one *above* the ground floor.

First Floor



Second Floor



Third Floor



Basic Information about Austria

This section summarizes the most important general information about Austria. It is intended to help our guests from abroad. For any further information please contact one of the organizers (wearing yellow badges).

Currency

The official currency in Austria is **Euro**, abbreviated **EUR** or ϵ . 1 Euro = 100 Cent (abbr. "ct") There are 8 different coins: 1 ct, 2 ct, 5 ct, 10 ct, 20 ct, 50 ct, 1ϵ , 2ϵ There are 7 different bank notes: 5ϵ , 10ϵ , 20ϵ , 30ϵ , 300ϵ

Electricity

Electric power plugs are operated at 230 Volt AC with a frequency of 50 Hertz. Power outlets are compatible with type F and type C plugs.

Tap Water

The tap water in Austria is of good quality and safe to drink.

Emergency Phone Numbers

There are several emergency phone numbers available. All these numbers can be dialed from any phone free of charge and without any prefix.

- 122 Fire Brigade
- 133 Police
- 144 Ambulance
- 112 Universal European Emergency Number

Remember to call these numbers only in case of a serious emergency.

Organizers' Phone Numbers

In case you got lost or otherwise need assistance you can contact the organizers through one of the following phone numbers:

+43 676 7019116 Gerhard Haas +43 664 4260809 Julian Ronacher

(Note: Use the numbers above when dialing from a mobile phone. On hardwired phones within Austria dial "0" instead of "+43".)

Addresses and Locations

The hotel and the university are within 5-10 minutes walking distance. A map of the city center is provided within this booklet. In case you get lost you can use the following addresses to ask for your way.

Hotel

The address of your hotel is: Hotel Kongress Leoben (Phone: +43 3842 46800) Hauptplatz 1, 8700 Leoben

University

The competition takes place at the University of Leoben. Montanuniversität Leoben Franz-Josef-Straße 18, 8700 Leoben

Europagymnasium Leoben

The barbecue party takes place in the court of " Europagymnasium Leoben " High School. BG/BRG Leoben Neu Moserhofstraße 7a 8700 Leoben

Information on Law for the Protection of the Youth

Each federal state in Austria has its own law for the protection of the youth. The city of Leoben is located in the state of Styria. The following section will sum up briefly the most important aspects of the relevant law for the protection of the youth of the state of Styria. The organizing committee takes no responsibility for participants violating this law.

In Austria you must be older than 18 years to be considered a legal adult. People who are younger are restricted by the law as stated below.

Alcohol

In Styria it is illegal to buy and/or consume alcoholic beverages if you are below the age of 16. For buying/consuming beverages with more than 14 percent (of volume) of alcohol you must be over the age of 18.

Tobacco

For buying/consuming cigarettes or other tobacco products you must be over the age of 16.

Night Time

Children and adolescents below the age of 14 are not allowed to be out on the streets without supervision by an authorised adult between 09.00pm and 05.00am.

Between the age of 14 and the age of 16 the respective time is 11.00pm to 05.00am. Between the age of 16 and the age of 18 it is from 02.00am to 05.00am.

The Association AYPT – Forschungsforum junger Physiker

The history of the AYPT dates back to the year 1999 when the first tournament took place. In 2002 the legal association AYPT – Forschungsforum junger Physiker has been founded (originally named "AYPT – Österreichisches Turnier junger Physiker") to organize further AYPTs, to represent Austria in the IYPT and to promote the goals behind the AYPT and IYPT. Detailed information about the association AYPT – Forschungsforum junger Physiker can be obtained on the official website http://www.aypt.at/ which is available in German and English language.

Membership

If you would like to support the association in realizing further AYPTs and promoting the cause of AYPT and IYPT then please consider becoming a member of the association. An application form is provided within this booklet. Just cut it out, fill it out and hand it to one of the organizers. Further forms can be obtained from the organizers or from the website www.aypt.at. For legal reasons the application form is provided in German language only. Non-German speakers can contact the organizers for help in filling out the form if necessary.

There are two different types of membership:

- ordinary membership
- extraordinary membership

Ordinary members have to pay an annual membership fee of (at least) 10 Euro. Donations in terms of (voluntary) higher fees are always welcome.

Extraordinary members only support the goals of the association ideational and do not have to pay a minimum fee but donations are welcome from them as well.

Extraordinary members are, in contrast to ordinary members, not entitled to vote in the general assembly. Details can be found in the Articles of Association, available on the website www.aypt.at.

p.A. Physics Education Fakultät für Physik Universität Wien Porzellangasse 4, 1090 Wien

Antrag auf Mitgliedschaft

Ich stelle Antrag dem Verein "AYPT – Forschung	ısforum junger Physiker" als
ordentliches Mitglied *) außerordentliches Mitglied *) *) zutreffendes bitte ankreuzen	(jährlicher Mitgliedsbeitrag: 10 Euro) (jährlicher Mitgliedsbeitrag: Freie Spende)
beizutreten.	
Persönliche Daten: Frau Herr	
Titel:	
Vorname(n):	
Nachname:	
Adresse: Straße und Hausnummer:	
Postleitzahl: Ort:	
Sonstiges: Email Adresse:	
Telefonnummer (optional):	
Faxnummer (optional):	
Ich bestätige, dass ich das vorliegende Formular vollstän mich damit einverstanden, dass meine Angaben elektronis Veröffentlichung der Angaben (ausgenommen Name) im ausdrücklichen, jederzeit widerrufbaren Wunsch statt. Weitergegeben. Ich erkläre mich mit den Statuten des Vereins einverstande	sch gespeichert und verwaltet werden. Eine Mitgliederverzeichnis findet nur auf meinen Keinesfalls werden meine Daten an Dritte
Ort, Datum:	Jnterschrift:

Sponsors and Supporters

The association AYPT - Forschungsforum junger Physiker thanks all its sponsors and supporters. Without their support it would not be possible to execute the AYPT.





Faculty of Physics





Co-funded by the Erasmus+ Programme of the European Union



















