

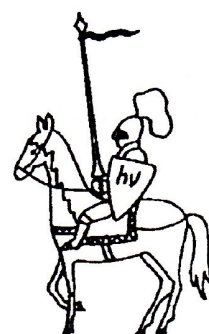
Daily Physics



10th International Young Physicists' Tournament



3
4. 6. 1997



The end of space brings the hope

Some people in Cheb decided to experience an extraordinary Sunday evening among stars in the space. It means that they listened to a talk of Jiří Grygar, well-known Czech scientist. The general topic of this evening was confrontation of world disasters and the Bible. For example Cocal event caused by recently known phenomena. Likewise in Sodoma and Gomora it should let us know a moral mission rather than a scientific.

It was very curious to hear that Johannes Kepler determined the rise of the world on Sunday April 27 3877 BC or Isaac Newton determined that it happened 4000 BC / +/- 20 years/. Johannes Kepler counted this according to ages in the Bible. These ridiculous dates are the arguments that science is really developing. It is the reason why people can't find their faith on the knowledge of Physics - it would be really risky business.

But this evening was also about events which will come /maybe/. Our Earth can be destroyed by foreign matters. The statistics say that every 50 million years something falls on the Earth. In 1991 there was found a

hole after such a foreign matter in Mexican bay. This hole is 65 million years old - so according to the statistics for 15 million something that should have fallen on the Earth, hasn't fallen. It is a little bit scary, isn't it?

However the most important fact is that according to the contemporary scientific theory of explaining the rise of the world space we can expect in several milliard years the end of the world.

But it is very long time and as Mr. Grygar says, it is possible that people will invent the way how to survive it. This idea is very important, because it would mean, that people couldn't use their knowledge to destroy but to preserve their lives.

As you see the evening, I'm talking about wasteful suggestions to think about the world, because it's wonderful to notice that people can be nothing, but also everything if they want and if they use their energy and skill in way that is the right.

Anna Doubková



SEMIFINALS FIGHT

ROOMS AND GROUPS

Room	A	B	C
Reporter	ODESSA	GEORGIA	BELARUSSIA
Opponent	POLAND	PRAGUE	LVOV
Reviewer	HUNGARY	EKATERINBURG	MOSCOW

THE PROBLEMS FOR THE SEMIFINALS

Group I	2	3	4	6	8	11	13	14	15	16
Group II	1	2	3	4	7	8	10	11	12	16
Group III	2	3	5	8	10	12	13	15	16	17

PRELIMINARY SCHEDULE FOR JURY MEMBERS

Jury for Room A:

Valentin Lobyshev (chairman), Rudolf Lehn, Vladimir Affanasyev, Petr Kužel, Igor Varaksa, George Laskhishvili, Ivan Štoll

Jury for Room B:

Pavel Victor (chairman), Wolfgang Bürger, Sven Ljungfelt, Jozef Brestenský, Alexander Galchinsky, Zoya Savilova, Tatyana Korneyeva, Leonid Markovich

Jury for Room C:

Tengiz Bibilashvili (chairman), Evgeny Yunosov, Zinovy Uritsky, Valery Koleboshin, Andrzej Nadolny, Lajos Skrapits, Štefan Zajac, Elena Skvartsova

All participants of the semifinals fights are kindly requested to be in the appropriate rooms at 3:00 PM.

Up to date detail information and changes

Wednesday 4th June

8³⁰ - 12⁰⁰ Conference - leaders of the delegation
- member of the International Committee
- guests from the Czech Republic

8⁰⁰-13⁰⁰ Trip to Karlovy Vary - leders of the teams
- members of the teams
- czech guides of the teams
- guests

Departure by buses from Gymnázium Cheb

16⁰⁰ - 21⁰⁰ Sauna (only for women)

Thursday 5th June

Afternoon Departure of the Swedish team

14³⁰ - 15³⁰ Lecture of Mr Josip Kleczek "The Man and the Universe"

15³⁰ - 16³⁰ Physicists' Show (attractive experiments)

17⁰⁰ - 18³⁰ Evaluation

20⁰⁰ - 22⁰⁰ Barbecue for students (out side the school)

20⁰⁰ - 20¹⁵ German presentation of the next year International Young Physicists'
Tournament for guests, leaders, jury, ...

20⁰⁰ - ??^{??} Party for guests, leaders, jury, ...

INDIVIDUAL COMPETITION

I N D I V I D U A L C O M P E T I T I O N			
	Name	Team	Points
1	Adam Glogowski	Poland	7.40
2	Janos Asboth	Hungary	7.20
3	Libor Inovecky	Czech-Prague	5.00
4	Denis Murakhovskiy	Ukraine-Odessa	5.00
5	Yaroslav Lutsyshyn	Ukraine-Lvov	4.20
6	Per Norlin	Sweden	3.60
7	Pavel Merkoul	Russia-Ekat	3.40
8	Peter Svrcek	Slovakia	3.40
9	Victor Issaev	Russia-Ekat	3.20
10	Alexander Aivazov	Georgia	3.00
11	Igor Vasilkovski	Georgia	2.80
12	Imre Balcut	Hungary	2.60
13	Elisaveta Ovdeenko	Ukraine-Odessa	2.60
14	Markus Kapp	Germany	2.40
15	Igor Vorokhaev	Ukraine-Odessa	2.40
16	Sergei Zukovskiy	Belarus	2.35
17	Petr Chaloupka	Czech-Prague	2.20
18	Anatoly Dymarsky	Russia-Moscow	2.00
19	Hynek Nemec	Czech-Prague	2.00
20	Hendrik Hoeth	Germany	1.80
21	Iuri Oskuzian	Georgia	1.80
22	Nikolai Sambelashvil	Georgia	1.60
23	Sergo Sindariani	Georgia	1.60
24	Alexander Licholap	Belarus	1.60
25	Maxym Morus	Ukraine-Lvov	1.20
26	Andriy Haidys	Ukraine-Lvov	1.20
27	Dmitry Melnikov	Russia-Moscow	1.20
28	Maciej Borowka	Poland	1.20
29	Thomas Schmidt	Germany	1.20
30	Adam Zawadowski	Hungary	1.00
31	Leonid Volkov	Russia-Ural	0.80
32	Alexander Gedranovic	Belarus	0.80
33	Grigoriy Zavorothny	Ukraine-Odessa	0.80
34	Oleh Farenjuk	Ukraine-Lvov	0.80
35	Thomas Preusser	Germany	0.60
36	Evgeniy Kim	Uzbekistan	0.60
37	Alexei Starovoitov	Belarus	0.60
38	Pavel Shlapak	Belarus	0.60
39	Vadim Sedelnikov	Russia-Ural	0.60
40	Igor Ivanov	Uzbekistan	0.50
41	Ali Mohammad	Sweden	0.40
42	Kirill Belokurov	Ukraine-Odessa	0.40
43	Sergei Fotine	Russia-Ekat	0.40
44	Jirka Plsek	Czech-Opava	0.20
45	Jan Trojak	Slovakia	0.20

TEAM COMPETITION

T E A M C O M P E T I T I O N

Team	Place	Total		Fight 1		Fight 2		Fight 3	
		SP	R	SP	R	SP	R		
Ukraine-Odessa	1	860	12.0	296	5.0	285	4.0	279	3.0
Georgia	2	843	12.0	264	4.0	294	5.0	285	3.0
Belarus	3	809	12.0	262	4.0	284	4.0	262	4.0
Ukraine-Lvov	4	807	12.0	244	3.0	273	4.0	290	5.0
Czech-Prague	5	824	11.0	281	4.0	256	3.0	287	4.0
Poland	6	819	11.0	257	3.0	269	3.0	293	5.0
Hungary	7	846	10.0	279	3.0	282	4.0	285	3.0
Russia-Ekat	8	806	10.0	253	3.0	267	3.0	286	4.0
Russia-Moscow	9	756	10.0	247	3.0	264	3.0	245	4.0
Germany	10	785	9.0	260	4.0	261	3.0	264	2.0
Slovakia	11	780	8.0	284	3.0	254	2.0	243	3.0
Russia-Ural	12	755	7.0	242	2.0	257	3.0	257	2.0
Uzbekistan	13	714	5.0	249	3.0	234	1.0	231	1.0
Sweden	14	705	5.0	222	1.0	257	2.0	226	2.0
Czech-Opava	15	656	3.0	233	1.0	219	1.0	203	1.0

Exhibition of simple educational equipment for teaching physics in occasion of the 10th International Physicists' Tournament

On the 3th floor, room no. A408 from 10:00 to 17:00 on Thursday you can see practical demonstration of 42 simple educational equipments for showing physical phenomena.

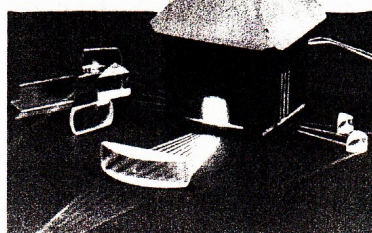
This equipment is developed, produced and distributed by the Czech firm ARIANE SCHOLA.

Equipment is created with the use of suggestions of many Czech teachers, under the recommendation of UNESCO or are based on ideas of employees of ARIANE SCHOLA.

The most succesful equipment:

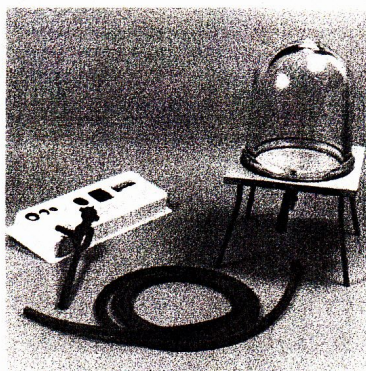
Of the year 1996

Eclipse of the Sun
demonstration by daylight



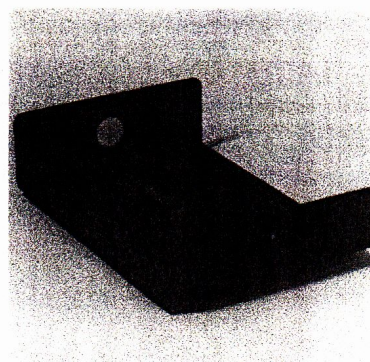
Of the year 1995

Vacuum set
creation of vacuum
- based on using of water pump



Of the year 1994:

Light refraction and reflection
demonstration by daylight



All equipment is for demonstration of physical phenomena by students themselves.
Prices of 34 items range from 69 to 500 Kč, only the price of three items is higher than 1000 Kč. You can buy some items right on place.

Karlovy Vary - Carlsbad

Karlovy Vary lies in Western region of the Czech Republic in the valley of the River Teplá, 1,247 feet above sea level. The climate is typical for this altitude, with average temperatures of 53,8 degrees Fahrenheit in May, 59,9 degrees Fahrenheit in June, 61,1 degrees in August and 55,4 degrees Fahrenheit in September.

Karlovy Vary springs originated towards the end of the Tertiary period. The name Vary is recorded from the beginning of the 13th century. The now world-famed spa first became celebrated thanks to the Czech King and Holy Roman Emperor Charles IV. Legend has it that once, on one of his frequent visits to Loket Castle, Charles went hunting a stag; when pursued the animal turned at bay and threw a hound into one of the hot springs. Charles IV. is also said to have bathed his wounded leg in the spring which is now on the present-day Market Place.

The only definitely established fact is that Vary was raised to the status of a town during the rule of Charles IV. In the year 1358 he built here a hunting lodge, on the site of which the tower on Castle Hill was later built. Karlovy Vary will therefore be celebrating its six-hundredth anniversary in 1958.

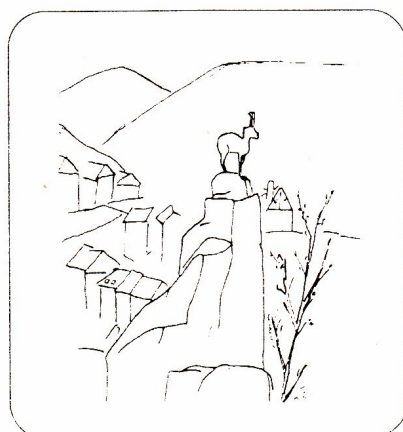
The springs which provide the basis for the treatment given in Karlovy Vary are alkaline-saline-muratic, with a substantial concentration of sulphuric acid chlorine

ions. About 616 gallons of mineral water a minute spout out from the depths of the earth, bringing to the surface each hour nearly a ton of dissolved mineral salts.

Visitors are treated line Karlovy Vary all the year round. Baths and drinking the waters are the main methods prescribed for gastric diseases, affections following stomach operations, especially conditions following resection, metabolic disorders, particularly diabetes, gout and obesity etc.

The town has a theatre, a symphony orchestra and in addition to the three cinemas there is an open-air cinema with accommodation for an audience of 3,500. There are facilities for all kinds of sport, including golf and riding. Ten years ago the social and cultural life was enriched by a further annual event, which has now acquired international importance. This is the International Film Festival, which has been held regularly since 1948. Leading film workers from all over the world meet here every July to view the most outstanding films of the year, to get to know each other and discuss their work.

Excellent hotels, the largest of which is Grand Hotel Pupp, and sanatoria are open all the year. All patients and visitors to Karlovy Vary receive the very best care and attention, whether they are citizens of the Czech Republic or guests from other countries.



Interview with RNDr. Jiří Grygar, Csc.

Mr. Grygar, how do you like to being here?

I am not in Cheb for the first time now, I was here, 2 years ago, when the national Olympiad of physicists was here. I have also had some lectures for the public here.

I have read your book "The windows opened to Space" and I liked that it was written in such an attractive way that it engaged even readers, who are not so interested in astronomy. Are you now preparing something like this?

"Two months ago, my book - Space, what is it? - appeared. It is an attempt at relating Cosmology by popular and intelligible form. The Cosmology is very difficult and it requires the combination of physics and astronomy. This attempt is bold, because there are no formulas. In addition to this, we - with doctor Zdeněk Pokorný made the 1st Czech multimedia CD disk of astronomy. This disk's name is The Astro 2001 - wonderful Space. It's aimed mainly at beginners-interested in astronomy. It is completely Czech and you can buy it in shops with computers."

So you have had good experience with computers in the society?

"I think that it is wonderful. I have waited for it whole my life. Of course it has some negative accompanying phenomena. With this, I mean for example such the "maniac" children. I think that when these children will grow out of it. Myself I can't imagine my life without computers."

What have you ever attracted so much to astronomy?

"I have always liked this: It is applied

which has a disadvantage, because it is not possible to do any experiments. We are able, only through the mediation of electromagnetic interaction - the radiance - to know much about the stars and the planets. We know even more than we know about the Earth. It is probably caused by this fact: there are more cosmic objects, so you can use a method of comparison. We have much better knowledge with such a method."

I would like to know, what is your subjective opinion on the possibility of the existence of another life in Space?

"I answer this question always in this way: on Monday, on Wednesday and on Friday I believe it exists, on Tuesday, on Thursday and on Saturday. I think that it does not exist. On Sunday I pray someone to find out how it is in reality."

Recently, what has pleased you the most?

"I must say, truthfully, that the participation of Czech teams in physics competitions is one of the things, that pleases me the most. For such a short existence, the Czech Republic has always had in the International Olympiads a very good result. We have a lot of problems - here are not places for assertion. but in spite of that enough young people want to devote their time to this work. And that is our big hope for the future."

How would you advise the students - how to learn physics?

"I think that motivation is the most important at all. Everything else submits to this. For example, when I started to be interested in maths, I had one clear weakness - I was not good at physics. So I bought some books with mathematical exercises and I

learned it for all of my holidays. So I overcame my weakness in this way. This horrible work was simply necessary.

I was not good at languages either - so I started to attend many courses. I knew that I would need it. I was fortunately relatively

good at physics. I bought some books for the universities. Human must follow his dream in an active form and he must not be satisfied only with that, which is taught at school.

Thank you

*Petra Pivničková
Lenka Hájková*

Weather forecast for 4th June 1997

It will be partly cloudy and rainy in some places on Wednesday. There will be some fog in the morning.

The overnight temperature will be from 7 to

11 degrees Celsius. The temperature during the day will be from 19 to 23 degrees Celsius. The wind will be very weakly and variably. The level of air pollution will be low.

The Devil's tower

A long time ago, Marie Martínková with her daughter lived in Cheb, in the house "By two princes". The girl was very beautiful and her mother spoiled her much. Her name was Rosalia and she thought that everyone has to wait on her, like her mother. She became always more not easy to please.

In every parties in the town, Rosalia had new dress, always more beautiful than all other girls. There were the most noble young men around herself all the time. But Rosalia liked none of them. She was waiting for a prince, who would come from far countries and who would be richer and more beautiful than all the others.

It was the carnival. The youth was dancing in masks in the hall "By the Sun".

Some of them came in iron clothes of knights of that age, others in the eastern

splendour, others in the funny clothes. Rosalia was there as well. She wore a beautiful red dress. Her face was covered with a gold veil. Her steps were like the summer breeze. A foreign man with a black mask was beside her. He wore a nice suit, red gloves, red cap of the velvet. He had a golden snake round his waist.

The midnight was quietly coming. The music was slowly ending. Only Rosalia and the stranger were dancing on. Suddenly they started to dance to the doors, further to the corridor, downstairs and outside into the dark streets.

The others heard Rosalia's laughter by far. Everyone was amazed. Suddenly they heard an outcry and saw a woman in a black dress running behind the dancing pair....

(to be continued)