

The Morning Star

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→ Our Guides

→ Teams Leaders went underground!

→ Ignacy Łukasiewicz

foto: Kamil Jurczyszyn

**Schedule of 16th International Olympiad
on Astronomy and Astrophysics, Poland**

Day 7 → 16th August 2023 Wednesday

Students

| | |
|-------------|--|
| 07.00—08.00 | Breakfast |
| 08.15—09.15 | Transfer to the Planetarium (group 1) |
| 09.00—10.00 | Transfer to the Planetarium (group 2) |
| 09.45—10.45 | Transfer to the Planetarium (group 3) |
| 10.30—11.30 | Transfer to the Planetarium (group 4) |
| 11.15—12.15 | Transfer to the Planetarium (group 5) |
| 09.30—14.30 | Planetarium round |
| 12.00—16.00 | Lunch (each group has lunch after their round) |
| 16.30—19.15 | Visiting the Planetarium exhibitions |
| 19.30—20.30 | Transfer to the hotel |
| 20.30—21.30 | Dinner |

Team Leaders

| | |
|-------------|------------------------------|
| 08.00—09.00 | Breakfast |
| 09.00—13.00 | IBM |
| 13.00—14.00 | Lunch |
| 14.00—20.00 | Moderation |
| 20.00—21.00 | Dinner |
| 21.00—00.00 | Night observation/moderation |



The weather forecast

Wednesday, Aug 16th 2023

Wind

SW

3-5 km/h

Lowest temperature (morning)

17-19C / 53,6-59F

Highest temperature (afternoon)

30-32C / 86-89,6F

Sunrise **05:34**

Sunset **20:02**



Students

Campfire and The Stars

Hotel "Villa Verde" in Zawiercie is a perfect place to rest from performing the tasks and to get to know each other a little better. Nothing brings people from different parts of the world closer together than a common meeting by the fire, singing and dancing. Although... some sky lovers didn't want to miss the perfect viewing conditions on Monday. Everyone will remember this evening not only because of the marshmallows toasted on the campfire, but also because of the weather, which was really great, at least in the first part of the Olympiad.



Our Guides

You are familiar with them because you, dear Participants, have already spend a lot of time with them. Those are 50 young people aged between 18 and 28, who decided to spend part of their holidays in an unusual way and become guides for the participants of the 16th International Olympiad on Astronomy and Astrophysics. It's a big responsibility. Thanks to them, you get to know our country, local customs, and also ... the way to the nearest store. Our guides come from all over Poland. They were selected from a group of volunteers who had put themselves forward for this role to the Silesian Planetarium. We have chosen them very carefully - among them you can meet astronomy enthusiasts, participants of our national Olympiad on Astronomy, but also people studying foreign languages and culture. They have one amazing thing in common - they like other people and without hesitation - they are always ready to help you.



Teams Leaders went underground!

When the students at the International Congress Center in Katowice were solving data analysis tasks, Team Leaders visited the historic Guido coal mine in Zabrze. They were greeted by the traditional mining brass band. During the tour, you can see not only excavations and corridors. There are also underground stables for horses (these animals were once used to work in the mine), the chapel of St. Barbara, which was built 170 meters below the surface of the earth, or mining machines. For many years, mining was one of the most important industries in Silesia. For over two decades, the region has undergone many changes - towards modern technologies and knowledge-based economy. However, mining remains an important element of the region's tradition and culture. Students will visit this place on Friday.



Ignacy Łukasiewicz (1822–1882)

Łukasiewicz was a pharmacist, oil industry specialist and social activist. His virtues were recognized by the Pope himself, who bestowed upon him the dignity of chamberlain.

Ignacy Łukasiewicz was born into an impoverished noble family in Zaduszniki, currently in the Podkarpackie province. When he was eight, the Łukasiewicz family moved to Rzeszów. A few years later Łukasiewicz became an assistant pharmacist. To take it, he had to learn how to read prescriptions and formulas. He also had to master pharmaceutical chemistry and the analysis of simple chemical compounds. This knowledge and experience with laboratory equipment came in very handy in the following years of his life.

Already when he was working as a pharmacist's assistant, Ignacy began to get involved in politics. Poland was then under the partition and young Łukasiewicz, like many others, wanted to change this state of affairs. He did not manage to hide his subversive activities for long because he was arrested on a charge of organizing an uprising in the region of Rzeszów. Ignacy was firstly imprisoned in Rzeszów and then transferred to Lviv. After two years, he was released but lived under police supervision.

After Lviv, Łukasiewicz spent two years in Krakow at the Jagiellonian University where he first heard about the use of crude oil in pharmacy.

For his final semester, Ignacy transferred to the University of Vienna and wrote his master's thesis there. Having passed his exams, Łukasiewicz returned to Lviv, to the pharmacy where he used to work - an important task was waiting for him there. His boss bought several barrels of crude oil and assigned the newly graduated pharmacist a mission to check whether and how to use it in pharmacy.

Refining oil, Łukasiewicz obtained a light, yellow substance that resembled some expensive foreign substance - Oleum petrae album, which was used mainly for skin diseases. However, Łukasiewicz decided to use oil for purposes other than medicine. He continued his experiments by heating the raw material in boilers at 200°C, without air. After several different reactions, he managed to separate kerosene, the properties of which astonished him. Łukasiewicz created the first cylindrical kerosene lamp, and the first examples of it lit up the pharmacy's interior, where he worked.



The beginning of the world oil industry is considered to be July 31, 1853. That evening, a nurse named Bronisz rushed into the pharmacy. He came from the General Hospital, where an urgent surgical operation had to take place. The kerosene lamps were used for the first time in history during surgical operation. It went well. The management of the hospital, replaced the lighting with kerosene lamps and ordered a supply of 500 kg of kerosene. Seeing the potential in oil, Łukasiewicz moved to the place where its deposits were located, i.e. Gorlice. There, in the back-room of a pharmacy that he leased, he conducted further distillation experiments. He also built wells and other refineries. His fame, as well as his fortune, grew. He received prestigious orders, i.e. to provide large quantities of kerosene to light the entire Vienna railway station.

Łukasiewicz had a social spirit. He introduced a modern system of workers' insurance. All his employees received free treatment and medicines, and even an allowance paid out in case of illness. He gave out low-interest loans and supported rural youth who wanted to study. He used his own money to build roads, the quality of which - as it seems - was better than that of other roads in the Austrian partition. He also financed the establishment of orchards.

He created refineries and founded a company in the shape of later oil companies. He became the father of a new industry. Thanks to his attitude towards others, he was called "father Łukasiewicz" - always a good-natured, modest man who always felt humbled when receiving an award or a distinction.

dr Tomasz Rożek

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