



**RZESZÓW UNIVERSITY  
OF TECHNOLOGY**



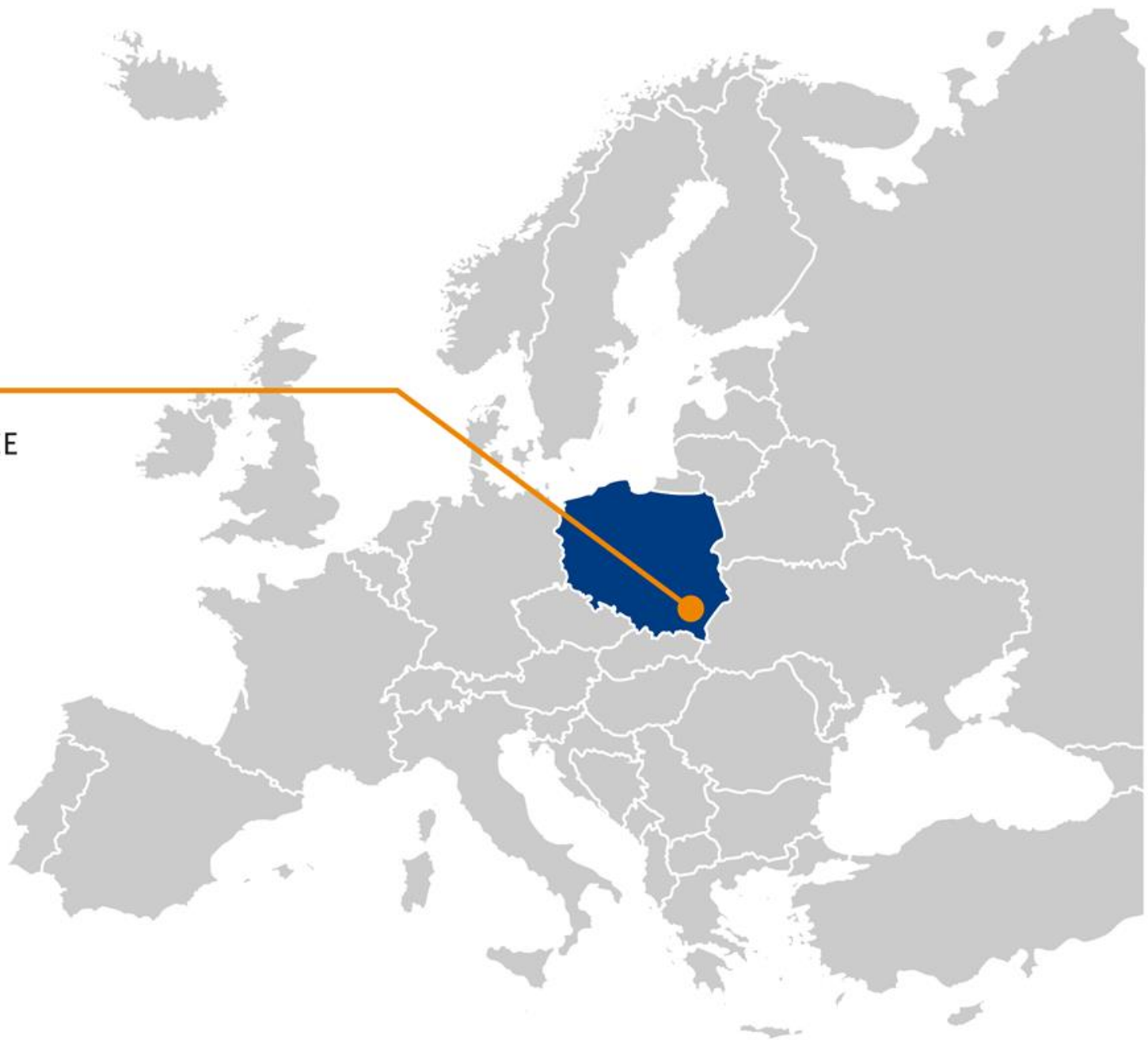
**WE BUILD THE FUTURE!**

[prz.edu.pl/en](http://prz.edu.pl/en)

## UNIVERSITY LOCATION

### RZESZÓW

IT IS THE CAPITAL OF THE PODKARPACKIE PROVINCE  
SITUATED IN THE SOUTH-EAST OF POLAND







**WE ARE** A EUROPEAN LEADER IN TERMS OF STUDENT NUMBERS

**WE OFFER** WORKPLACES IN OVER 26 THOUSAND ENTERPRISES

**WE STAND OUT** AS ONE OF THE SAFEST CITIES IN THE COUNTRY

**WE GUARANTEE** THE LOWER RANGE OF LIVING COSTS AND INEXPENSIVE SERVICES

**WE BOAST** NUMEROUS TOURIST ATTRACTIONS AND HIGHLY DEVELOPED INFRASTRUCTURE





# UNIVERSITY IN THE PAST

1951

**NIGHT  
SCHOOL**

54 STUDENTS

1974

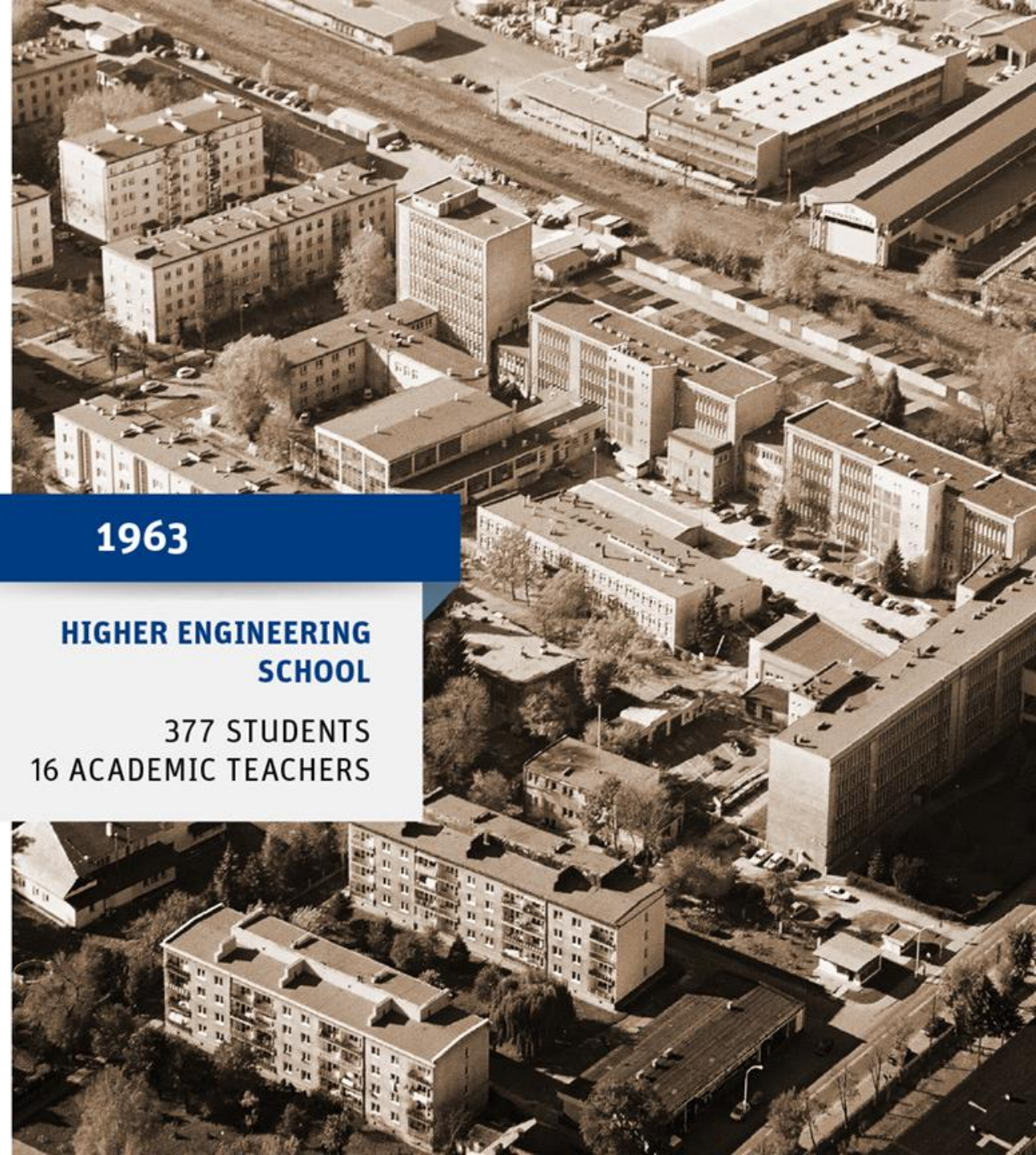
**RZESZÓW UNIVERSITY  
OF TECHNOLOGY**

4016 STUDENTS  
258 ACADEMIC TEACHERS

1963

**HIGHER ENGINEERING  
SCHOOL**

377 STUDENTS  
16 ACADEMIC TEACHERS





## UNIVERSITY TODAY

- OVER **70** YEAR-LONG HISTORY
- 7** FACULTIES
- 39** COURSES OF STUDY
- OVER **100 000** GRADUATES
- OVER **11 500** STUDENTS
- APPROXIMATELY **1 600** EMPLOYEES
- OVER **1 100** TRAINED PILOTS
- OVER **60** STUDENTS' SCIENTIFIC CIRCLES AND ORGANISATIONS





# FACULTIES

**FACULTY OF  
CIVIL AND ENVIRONMENTAL ENGINEERING,  
AND ARCHITECTURE**



**FACULTY OF  
MECHANICAL  
ENGINEERING  
AND AERONAUTICS**



**FACULTY OF  
CHEMISTRY**



**FACULTY OF  
ELECTRICAL  
AND COMPUTER  
ENGINEERING**



**FACULTY OF  
MATHEMATICS  
AND APPLIED  
PHYSICS**



**FACULTY OF  
MECHANICS  
AND TECHNOLOGY**



**FACULTY OF  
MANAGEMENT**





## Aviation Training Centre in Jasionka







## Gliding Training Centre in Bezmiechowa







# Rzeszow University of Technology - Advanced Technologies Center status

## Involvement in R & D



Member of Association of Businessmen of Polish Aviation Industry “**Aviation Valley**”, which gathers aircraft sector companies from south eastern Poland

Since 2003 Leader of the Centre of Advanced Technology **AERONET**- “**Aviation Valley**”, which gathers 12 Polish universities and research institutions from all country

### Goal:

- Transfer of knowledge to industry
- Generating research programs, which are significant to aircraft industry

**Association of Businessmen of Polish Aviation Industry „Aviation Valley”**





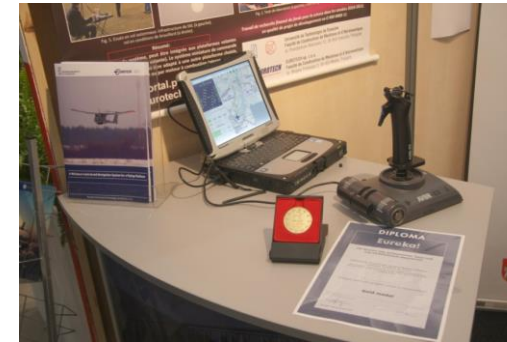
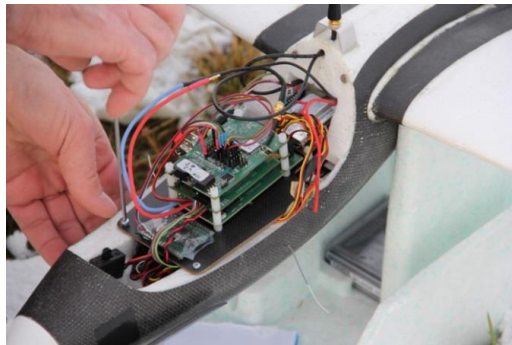
# Department of Avionics and Control Systems



First digital autopilot in Poland

The first UAV c.s. in Poland

Probably the first in the world...



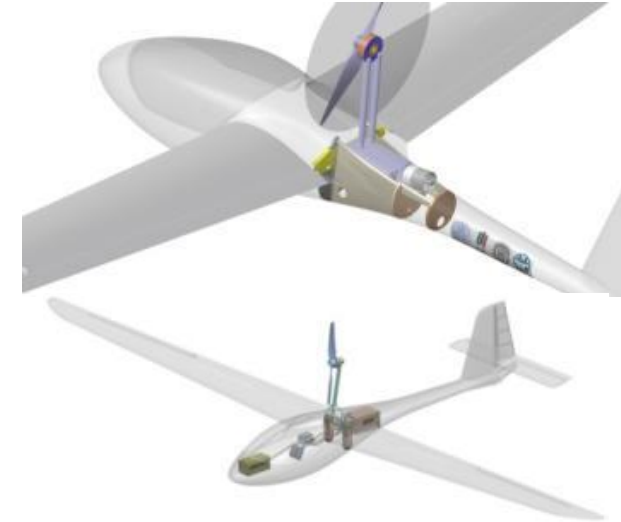
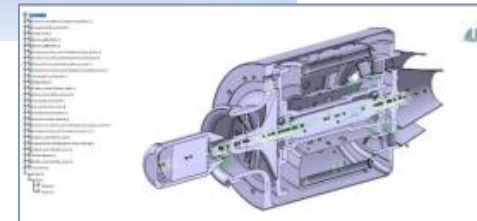
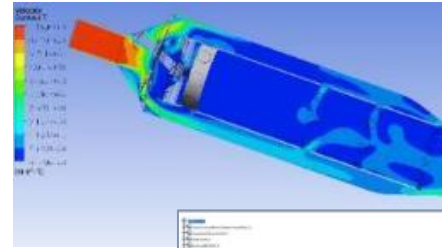
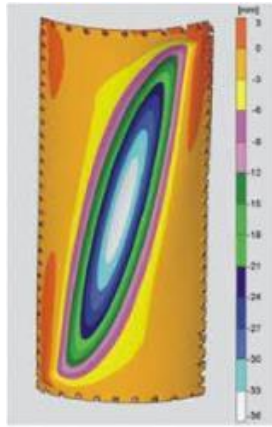
Aeronautical Control and Navigation Systems, Aeronautical Measurement Systems, Unmanned Aerial Systems, Stratospheric Systems

Space Systems  
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## Department of Aerospace Engineering



Aerodynamics, Wind Tunnel, Aircraft Structures and Strength Analysis, Aviation Propulsion Systems, Unmanned Aerial Systems, Hybrid Propulsion in Aviation





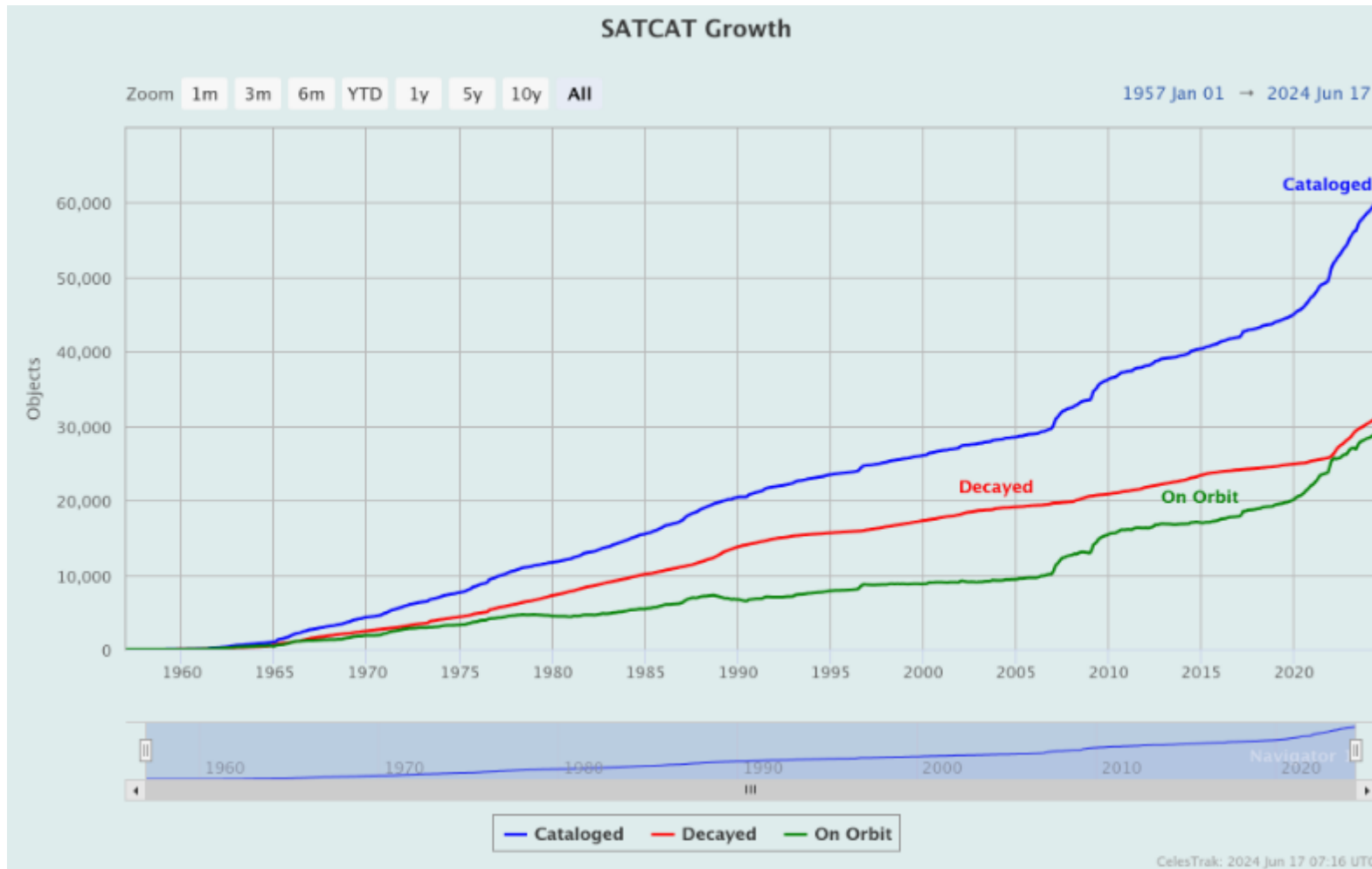
Several other research in different areas  
(robotics, cybersecurity, RFID sensors, image processing....)

## Space safety – cooperation with POLSA





## The space around the Earth is becoming increasingly crowded



All tracked > 45000

Tracked and identified objects ~29000

Active objects > 10 000

Space debris > 18 500

Tracked and not identified objects > 16 000

Objects larger than 1 cm – over 1 million

Objects larger than 1 mm – over 100 million





## Chosen dangers

**Collisions with satellites and space stations** – Even small fragments can damage or destroy operational satellites, while larger debris poses a risk to the International Space Station (ISS) and future crewed missions.

**Falling debris** – Most space debris burns up in the atmosphere, but larger fragments can fall to Earth, posing a potential hazard to people and infrastructure



English Section  
**Society**



# SpaceX Falcon 9 debris found in four locations across Poland - more could follow

🕒 24.02.2025 16:35

The debris from SpaceX's Falcon 9 rocket, which recently lit up the skies over Poland, has sparked significant interest not only among the Polish public but also worldwide.



## Most Popular News /

- 1 Moscow's relentless war on Ukraine: analysis
- 2 Polish far-right MEP Grzegorz Braun outlines presidential campaign platform
- 3 Europe must take responsibility for its security, says Poland's parliamentary Speaker
- 4 "With European support, Ukraine can fight on its own for the rest of this year," says Sikorski on CNN

## **POLSA Space Debris Observatory at the Academic Gliding Center of Rzeszów University of Technology**



**Sensor in Bezmiechowa – part of larger system**



- The Optical Fence system (Cillium Engineering Sp. z o.o.)
- determining the positions using the optical triangulation method.
  - Objects in LEO/HLEO orbits
  - The data is obtained through simultaneous observations from multiple locations.

The European set is located in:

- Station A** – Truszczyń (Poland)
- Stations C, D** – Bezmiechowa (Poland)
- Station B** – Kryoneri (Greece)

The Australian set is located in:

- Station A** – Rubyvale
- Stations C, D** – Siding Spring
- Station B** – Mount Stromlo



The African set is located in:

- Station A** – Tsumeb (Namibia)
- Stations C, D** – Tivoli (Namibia)
- Station B** – Cederberg (South Africa)

## The observatory:

**Element of larger system**

**Increases the level of space security**

**Research in the area of space observation**

**Education – the use of data by students**







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**THANK YOU FOR YOUR ATTENTION**



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