

## **RAF – ANALOG SPACE MISSION**

Natalia Godlewska <sup>\*1</sup>, Mikołaj Zawadzki<sup>1</sup>, Norbert Nieścior <sup>1</sup>, Filip Kaczorowski <sup>1</sup>

<sup>1</sup> *Faculty of Physics, University of Warsaw, ul. Pasteura 5, 02-093 Warsaw*

\*Corresponding author: n.godlewska2@student.uw.edu.pl

---

**Keywords:** space mission; geophysics; planetology

For ten days, a post-mining heap from the coal mine in Bytom was transformed into an analog space base. This site became a hub of scientific activity as young researchers from the Scientific Club of Geophysics at the University of Warsaw embarked on a project to simulate Martian conditions. The mission, named RAF-Analog Space Mission, aimed to replicate space conditions, test behaviors and principles applicable in outer space, and conduct key scientific research.

The mission team consisted of three students: Natalia Godlewska, an astronomy student and co-leader; Norbert Nieścior, a physics student; and Piotr Lorek, a student of biotechnology and medical chemistry. These astronauts spent ten days living and working in a specially designed analog space base. The mission's main objective was to carry out geophysical, geological, psychological, and astrobiological studies.

The core of the project involved setting up a mobile base made of a camper (for living quarters) and a delivery van (as the scientific lab), connected by an airlock. This setup, covering 30 square meters, provided a controlled environment mimicking Martian conditions. Participants followed strict protocols, leaving the base only in space suits to maintain the illusion of being on Mars.

Analog space bases simulate extraterrestrial conditions on Earth, helping astronauts adapt to space-like challenges. The base allowed the team to explore and adjust to the realities of living on Mars.