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RAF Analog Space Mission - First analog mission on mining heaps

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For ten days, a post-mining heap from the coal mine in Bytom was transformed into an analog space base. This place became a hub of scientific activity as young researchers from the Scientific Club of Geophysics at the University of Warsaw embarked on an innovative 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 essential scientific research.

The mission team comprised three students: Natalia Godlewska, Co-leader of the project, Mission Commander; Norbert Nieścior, Geolab Officer; and Piotr Lorek, Biolab Officer. These “astronauts” spent ten days living and working in a specially designed analog space base on the heap. The mission’s primary objective was to conduct various scientific studies, including geophysical, geological, psychological, and astrobiological research.

The central phase of the project involved setting up a mobile base composed of a camper (serving as the living quarters) and a delivery van (serving as the scientific laboratory), connected by an airlock. This setup, located on approximately 30 square meters, provided a controlled environment simulating Martian conditions. The participants followed strict protocols, leaving the base only in space suits to maintain the illusion of being on Mars.

Analog space bases are terrestrial simulations of space conditions—in this case, Martian conditions. Analog astronauts strive to live and operate under space-like rules and constraints. The base allowed the team to experience and adapt to the challenges of life on Mars.

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