

Space is the vast expanse beyond Earth's atmosphere that has long attracted humanity and inspired a sense of mystery and wonder. Since ancient times, people have observed stars, planets, and the movement of celestial bodies, trying to understand the structure of the Universe and their place within it. Astronomical observations formed the basis of calendars, navigation, and early scientific views of the world. Over time, this knowledge led to the development of astronomy, physics, and mathematics, and later to the emergence of astronautics.

The Universe consists of billions of galaxies, each containing an enormous number of star systems. Our galaxy, the Milky Way, includes the Solar System, at the center of which is the Sun—the main source of light and energy for Earth. Planets, their moons, asteroids, comets, and other celestial bodies revolve around it. Each planet has unique characteristics such as composition, temperature, and atmosphere. Earth is the only known planet that supports life, which makes it a subject of special scientific interest.

The exploration of space became possible thanks to the rapid development of technology in the twentieth and twenty-first centuries. The launch of artificial satellites made it possible to observe Earth from space, improve communication, navigation, and weather forecasting. Human spaceflight became one of the most important milestones in human history, proving that people can survive and work in conditions of weightlessness. Orbital space stations allow scientists to conduct long-term experiments, study physical processes, and examine the effects of space on the human body.

Particular interest among scientists is focused on black holes, neutron stars, dark matter, and dark energy—mysterious phenomena that remain poorly understood. Space exploration helps us better understand the origin of the Universe, the laws of physics, and the possible paths for the development of life. In addition, space technologies are widely used in everyday life, from medicine to transportation. Thus, space remains one of the most fascinating and promising fields of scientific research, opening new horizons for humanity.