

# ASTROPHYSICS

---

Just a few decades ago, the word astronomy was a general term that described the science of the planets, moons, Sun and stars, and all other heavenly bodies. In other words, astronomy meant the study of anything beyond Earth. Although still an applicable term, modern astronomy, like most other sciences, has been divided and subdivided into many specialties. Disciplines that study the planets include planetary geology and planetary atmospheres. The study of the particles and fields in space is divided into magnetospheric physics, ionospheric physics, and cosmic and heliospheric physics. The Sun has its own solar physics discipline. The origin and evolution of the universe is the subject of cosmology.

Generally, objects beyond our solar system are handled in the field of astrophysics. These include stars, the interstellar medium, other objects in our Milky Way Galaxy, and galaxies beyond our own.

NASA defines astrophysics as the investigation of astronomical bodies by remote sensing from Earth or its vicinity. Because the targets of the astrophysicist are generally beyond human reach even with our fastest rockets, astrophysicists concentrate solely on what the electro-

magnetic spectrum can tell them about the universe. NASA's astrophysics program has three goals: to understand the origin and fate of the universe; to describe the fundamental laws of physics; and to discover the nature and evolution of galaxies, stars, and the solar system. The investigations of astrophysicists are carried out by instruments aboard free-flying satellites, sounding rockets that penetrate into space for brief periods, high-flying aircraft and high-altitude balloons, and Space Shuttle missions.