# Euclid Space Telescope Transmits Largest Images of the Universe Yet



The Euclid space telescope, developed by the European Space Agency (ESA), has transmitted the largest and most detailed images of the universe ever captured from space. Launched in July 2023, the telescope aims to create a 3D map of the universe by observing two billion galaxies, seeking to shed light on dark energy and dark matter—two enigmatic components believed to constitute 95% of the universe.

The latest data, released after just 24 hours of observations, includes images of various celestial phenomena: Messier 78, a nearby stellar nursery 1,300 light-years from Earth; the Abell 2764 and Abell 2390 galaxy clusters, the latter located 2.7 billion light-years away; the Dorado galaxy group; and the spiral galaxy NGC 6744. These images were captured using Euclid’s two instruments: a visible light camera (VIS) and the Near Infrared Spectrometer and Photometer (NISP).

According to Dr. Michelle Collins from the University of Surrey, the potential of the Euclid telescope is vast, with the ability to reveal millions of new objects daily. The visualization of dark matter through gravitational lensing effects, seen in the images of Abell 2390, exemplifies the telescope’s capabilities.

Supported by the ESA and various international institutions, the mission's findings have been documented in a series of papers published on the arXiv portal. These include discoveries of new dwarf galaxies, star clusters, and free-floating planets, suggesting significant contributions to our understanding of the cosmos and the fundamental forces shaping it. Dr. Valeria Pettorino, Euclid project scientist at the ESA, emphasized that these initial images are just a glimpse of what the telescope will achieve over its six-year mission.