Hidden Universe | Gallery Explorer

A WISE Sky

On the morning of December 14th, 2009, NASA launched its latest infrared telescope, the Wide-field Infrared Survey Explorer. This satellite, also known as WISE, is on a mission to map the entire sky in infrared light.

Its four detectors cover wavelengths from 3 and a half to 22 microns and can see asteroids, comets, stars, and dust clouds.

Seen in multiple passes as it scanned across the sky, WISE captured the comet Siding-Spring in motion through the solar system. This image sequence span about 8 hours, showing the comet's dramatic, cold dust tail.

The star-forming region NGC 3603 glows around the young, bright cluster at its core. The light from these massive stars sculpt out the surrounding environment, producing the dramatic structures we see.

Looking beyond the Milky Way we see our neighboring Andromeda Galaxy. At the shorter wavelengths WISE catches the light from stars, while the longer wavelengths reveal dust. Together we get the complete picture of this spiral galaxy and its prominent dust ring.

Some galaxies distant are virtually impossible to see in visible light because they fall behind dark dust clouds in our own Milky Way. These two, known as Maffei 1 and 2, are easy marks for WISE, however, since the obscuring dust becomes more transparent in the infrared.

The WISE view of the Fornax Cluster shows a population of galaxies about 50 million light years away. Most of them are dust-free ellipticals glowing blue only from the light of their stars. One exception is NGC 1365 whose dusty spiral arms stand out vividly.

Throughout the coming year WISE will continue surveying the infrared universe, complementing the science of other infrared missions like the Spitzer Space Telescope.