

Catching a GLIMPSE of the Milky Way

Welcome home! This is our Milky Way galaxy as you've never seen it before, courtesy of NASA's Spitzer Space Telescope and the Galactic Legacy Mid-Plane Survey Extraordinaire, or GLIMPSE360 project. Ten years in the making, this is the clearest infrared panorama of our galactic home ever made.

When we look around the sky in visible light we see stars in every direction, but it turns out some directions are more interesting than others. Most of the stars we can easily see are less than 1000 light years away.

But the Milky Way is over 100,000 light years across! If we could fly into intergalactic space and view it from the outside we would see it's mostly a flat disk, like a stellar pancake. From our vantage point in the disk you can see that most of the galaxy falls within a thin strip.

That's why the GLIMPSE360 panorama, which covers only 3% of the sky, captures over half of all the stars in the galaxy's disk, and over 90% of the regions where stars are forming!

In this panorama we see stars shining brightest at the shorter infrared wavelengths, rendered in blue, while dust clouds light up at longer wavelengths, seen in red. Moreover, infrared light can penetrate the dusty smog that fills our galaxy, letting us see wonders that are hidden in visible light.

Take the time to explore the GLIMPSE360 panorama and you can find countless regions of star formation both small and large, dusty bubbles blown into interstellar space, and distant galaxies obscured behind the disk of our own galaxy.

The GLIMPSE data have already helped astronomers create the most precise map of the large bar of stars running through our galaxy's center, as shown in this artist's concept, and is helping to determine the location and extent of its spiral arms.

Moreover, this data will provide a roadmap for astronomers using the upcoming James Webb Space Telescope which will be able to make more detailed infrared observations, but can not map out large areas like Spitzer.

You're seeing the result of over 2.5 million snapshots Spitzer obtained during 172 days worth of observing time spread out over a decade. This rendering represents the first time the entire dataset has been carefully stitched into a single image that beautifully captures everything from the brilliant core of the Milky Way to its faintest outer edge. Anyone, even astronomers, can explore the data using online digital viewers that let you zoom in and out to take it in at every scale.