

3D galaxies -- coming straight on for you

June 29 2011, By Tammy Plotner

As we've recently learned, the ATLAS3D project was able to study 260 individual galaxies and do some very amazing things. By imaging in both red and blue shift, astronomers were able to take stellar measurements and give us a clear picture of galaxy rotation. But looking at a computer generated image gives a picture just like you reading the text in this article – no dimension. By superimposing the velocity of the stars over the plane of the image, a new breakthrough in simulation can be made. And it's coming straight on for you...

We understand images of grand spirals and their sweeping arms. We marvel at photos of dust-lanes in those far off distant island universes. Even the motley elliptical galaxy gives us a sense of shape. But what would happen if we could take a different angle at what we see? How would galaxy mergers affect rotation? When [galaxies](#) collide, it sparks new starbirth... But how would it look?

“Young galaxies seem to have lots of gas that hasn't yet been turned into burning stars — and they spin fast, so they look like the poster-child galaxy with spiral arms and dust lanes.” says the ATLAS team. “By telling us how fast stars in a galaxy rotate around their galaxy's centre, the ATLAS3D result changes our understanding of galaxies and how they evolve over time.”

By studying these new images and techniques, [astronomers](#) will be able to tell us more about galaxies that have survived a crash and lived to spin. It could very well be that mergers of this type don't affect orderly rotation and overall symmetry. The ATLAS3D team has already

prepared computer simulations and performed more telescope observations to test this idea. And it's coming straight on... Straight on for you.

Source: [Universe Today](#)

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