

Admire the majestic image of the 'Southern Pinwheel' galaxy

A precious new image captured by the Dark Energy Camera (DECam) system reveals a dramatic astronomical scene.

A precious new image taken by the Dark Energy Camera (DECam) reveals a stunning astronomical sight: the Southern Pinwheel Galaxy, also known as the 'Southern Pinwheel' galaxy, Messier 83 or M83, a stunning galaxy, and one of the closest and brightest spiral galaxies in the sky. The Southern Pinwheel Galaxy is bright enough to be seen with binoculars, but this image from the 4-meter Víctor M. Blanco Telescope shows the stunning detail that can be detected with such a powerful instrument.



' This image shows the clearly defined spiral arms of Messier 83, filled with pink clouds of hydrogen gas where new stars are forming ,' explains NOIRLab from the US National Science Foundation, which released the image. ' Interspersed among the pink regions are bright blue clusters of hot, young stars whose ultraviolet radiation has blown away the surrounding gas. At the galaxy's core, a yellow central bulge consists of older stars and a weak bar connects the spiral arms through the center, channeling gas from the outer regions towards the core. The high sensitivity of the DECam system captures Messier 83's extended halo and the myriad of more distant galaxies in the background .'

Messier 83 is a barred spiral galaxy, approximately 15 million light-years distant, with an isoptic diameter of 36.24 kiloparsecs (118,000 light-years) in the boundary of the constellations Hydra and Centauri. The galaxy is famous for having been photographed by the Hubble Space Telescope in the past, clearly showing its large size

and distinctive spiral shape. The Southern Pinwheel Galaxy is named to avoid confusion with Pinwheel, another spiral galaxy with a similar name due to its similar shape, but located in a different region of the sky — 110 million light-years away in the constellation Ursa Major.

The Southern Pinwheel is particularly conspicuous despite not being very large, measuring around 50,000 light years across. That's about half the width of the Milky Way. However, the galaxy is bright because it is a busy place for star formation, with many new stars being born and glowing brightly in the pink streaks seen in the image.

In addition to new stars being born, this is also a region where old stars are dying. The galaxy has seen six observed supernova explosions in the past century. There is also evidence of hundreds of thousands of supernova remnants, ghostly structures left over from previous explosions. Astronomers study these bubble-shaped structures to learn more about the stars that once lived there before they ended their lives and exploded, releasing material into the surrounding space.

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