

Hubble captures spectacular image of open cluster NGC 6530

December 19 2022



Credit: ESA/Hubble & NASA, O. De Marco; Acknowledgment: M.H. Özşarac

A portion of the open cluster NGC 6530 appears as a roiling wall of smoke studded with stars in this image from the NASA/ESA Hubble Space Telescope. NGC 6530 is a collection of several thousand stars lying around 4,350 light-years from Earth in the constellation Sagittarius. The cluster is set within the larger Lagoon Nebula, a gigantic interstellar cloud of gas and dust.

Hubble has previously imaged the Lagoon Nebula several times, including images released in [2010](#) and [2011](#). It is the nebula that gives this image its distinctly smoky appearance; clouds of interstellar gas and dust stretch from one side of the image to the other.

Astronomers investigated NGC 6530 using Hubble's Advanced Camera for Surveys and Wide Field Planetary Camera 2. They scoured the region in the hope of finding new examples of proplyds, a particular class of illuminated protoplanetary disks surrounding newborn stars. The vast majority of known proplyds are found in only one region, the nearby Orion Nebula. This makes understanding their origin and lifetimes in other astronomical environments challenging.

Hubble's ability to observe at near-[infrared wavelengths](#)—particularly with Wide Field Camera 3—have made it an indispensable tool for understanding star birth and the origin of exoplanetary systems. The new NASA/ESA/CSA James Webb Space Telescope's unprecedented observational capabilities at infrared wavelengths will complement Hubble observations by allowing [astronomers](#) to peer through the dusty envelopes around newly born [stars](#) and investigate the faintest, earliest stages of star birth.

Provided by NASA's Goddard Space Flight Center

Citation: Hubble captures spectacular image of open cluster NGC 6530 (2022, December 19)
retrieved 26 April 2024 from

<https://phys.org/news/2022-12-hubble-captures-spectacular-image-cluster.html>

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