

# Hubble spots a cluster of emission nebulae within the Large Magellanic Cloud

August 20 2024, by Claire Andreoli

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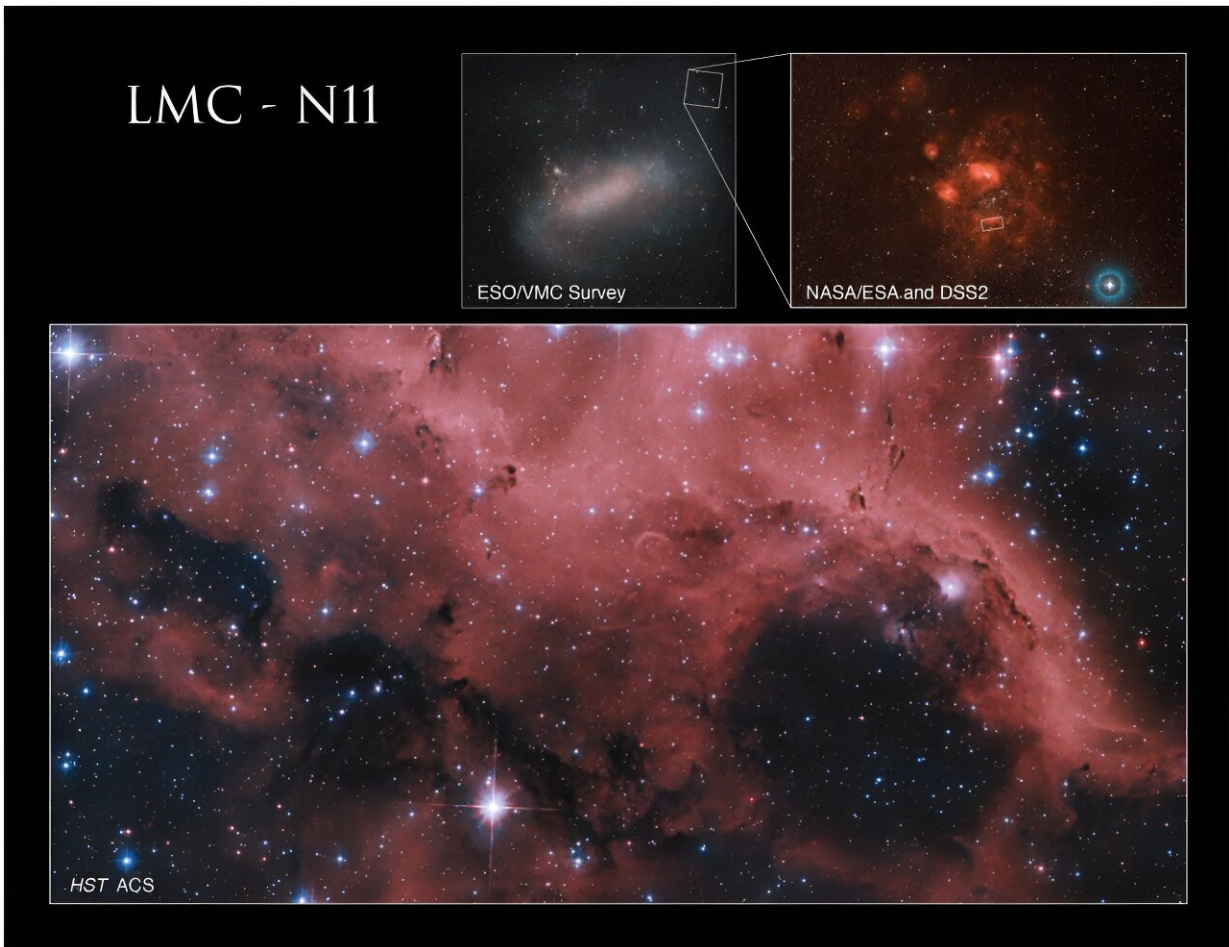
This Hubble image shows a complex cluster of emission nebulae, nestled within the Large Magellanic Cloud. Credit: NASA, ESA, and J. M. Apellaniz (Centro de Astrobiología (CSIC/INTA Inst. Nac. de Tec. Aero.); Image Processing: Gladys Kober (NASA/Catholic University of America)

A bubbling region of stars both old and new lies some 160,000 light-years away in the constellation Dorado. This complex cluster of emission nebulae is known as N11, and was discovered by American astronomer and NASA astronaut Karl Gordon Henize in 1956.

NASA's Hubble Space Telescope brings a new image of the cluster in the Large Magellanic Cloud (LMC), a nearby dwarf galaxy orbiting the Milky Way.

About 1,000 light-years across, N11's sprawling [filaments](#) weave stellar matter in and out of each other like sparkling candy floss. These cotton-spun clouds of gas are ionized by a burgeoning host of young and [massive stars](#), giving the complex a cherry-pink appearance.

Throughout N11, colossal cavities burst from the fog. These [bubbles](#) formed as a result of the vigorous emergence and death of stars contained in the nebulae. Their stellar winds and supernovae carved the surrounding area into shells of gas and dust.



This inset image shows where N11 is located within the Large Magellanic Cloud. Credit: NASA, ESA, J. M. Apellaniz (Centro de Astrobiología (CSIC/INTA Inst. Nac. de Tec. Aero.), ESO VMC Survey, and DSS2; Image Processing: Gladys Kober (NASA/Catholic University of America)

N11's stellar activity caught the attention of many astronomers, as it is one of the largest and most energetic regions in the LMC. To investigate the distribution of stars in N11, scientists used Hubble's Advanced Camera for Surveys, taking advantage of its sensitivity and excellent wide-field resolution.

The cluster houses a wide array of stars for Hubble to examine, including one area that has stopped forming stars, and another that continues to form them. Hubble's unique capabilities allowed astronomers to comprehensively study the diversity of stars in the N11 complex, and map the differences between each region.

Provided by NASA

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