

JUNE 2023

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CARINA NEBULA: NGC 3324: THE COSMIC CLIFFS

Data from Chandra of the "Cosmic Cliffs" (pink) reveal over a dozen individual X-ray sources. These are mostly stars located in the outer region of a star cluster in the Carina Nebula with ages between 1 and 2 million years old, which is very young in stellar terms. Young stars are much brighter in X-rays than old stars, making X-ray studies an ideal way to distinguish stars in the Carina Nebula from the many stars of different ages from the galaxy along our line of sight to the nebula. The diffuse X-ray emission likely comes from hot gas from the three hottest, most massive stars located in the star cluster that are outside the field of view of the Webb image.

Credit: X-ray: NASA/CXC/Univ. Observ. Munich/T. Preibisch et al.; IR: NASA/ESA/CSA/STScl