

Astronomy[®]

THE WORLD'S BEST-SELLING ASTRONOMY MAGAZINE // APRIL 2025

SPECIAL ISSUE

EARTH AS A PLANET

WHERE WE ARE, WHERE WE'VE BEEN,
AND WHERE WE GO FROM HERE

**BONUS
ONLINE
CONTENT
CODE p. 3**

SNAPSHOT

A PARTING GLANCE

A now-retired mission's final data release contains many treasures.

Despite completing its mission and burning up in the atmosphere last November, NASA's Near-Earth Object Wide-Field Infrared Survey Explorer (or NEOWISE) still has a lot to offer. Its final data release totaled more than 26 million infrared images, including this vista of the California Nebula (NGC 1499). Stars, colored blue and cyan, dominate at wavelengths of 3.4 and 4.6 micrometers. The light at 12 micrometers comes from dust, colored green, while red depicts warm gas glowing at 22 micrometers.

Located in the constellation Perseus, the California Nebula spans 100 light-years. The nebula itself appears bright green with a mix of orange, while the red at center is gas near the young, hot star Menkib (Xi [ξ] Persei). This star puts out 300,000 times more energy than our Sun. Its fast-moving stellar winds create a bow shock as they crash into interstellar material, creating the pileup of heated gas seen left of the star.

—SAMANTHA HILL



NASA/JPL-CALTECH/SPAC. BOTTOM FROM LEFT: CHINA MANNED SPACE AGENCY; NASA, ESA, CSA, STSCL, CHRIS WILLOTT (NRC-CANADA), LAMIYA MOWLA (WELLESLEY COLLEGE), KARTHEIK IYER (COLUMBIA); NASA/APL



HOT BYTES



LONG WALK
Chinese astronauts Cai Xuzhe and Song Lingdong, of the three-person Shenzhou 19 mission to the Tiangong space station, completed a world-record-breaking spacewalk lasting 9 hours 6 minutes on Dec. 16/17.



FIREFLY GLOW
The Firefly Sparkle Galaxy appears as a long, curved streak due to gravitational lensing. Data from JWST show it is the earliest known Milky Way-sized galaxy that is still forming, 600 million years after the Big Bang.



SKIMMING BY
On Dec. 24, the Parker Solar Probe made its closest pass of the Sun yet, flying by at a distance of 3.8 million miles (6.1 million km) and reaching speeds up to 430,000 mph (692,000 km/h).