

NASA shutting down space telescope, infrared eyes to cosmos

January 29 2020, by Marcia Dunn



This composite image made available by NASA shows a neutron star, center, left behind by the explosion from the original star's death in the constellation Taurus, observed on Earth as the supernova of A.D. 1054. This image uses data from three of NASA's observatories: the Chandra X-ray image is shown in blue, the Hubble Space Telescope optical image is in red and yellow, and the Spitzer Space Telescope's infrared image is in purple. After nearly two decades in Earth orbit, scanning the universe with infrared eyes, ground controllers plan to put the faltering Spitzer Space Telescope into permanent hibernation on Thursday, Jan. 29, 2020. (X-Ray: NASA/CXC/J.Hester (ASU); Optical: NASA/ESA/J.Hester & A.Loll (ASU); Infrared: NASA/JPL-Caltech/R.Gehrz (Univ. Minn.) via AP)

NASA is pulling the plug on one of its great observatories—the Spitzer Space Telescope—after 16 years of scanning the universe with infrared eyes.

The end comes Thursday when ground controllers put the aging spacecraft into permanent hibernation.

For years, Spitzer peered through dusty clouds at untold stars and galaxies, uncovered a huge, nearly invisible ring around Saturn, and helped discover seven Earth-size planets around a nearby star.

Spitzer's last observation was expected Wednesday. Altogether, Spitzer observed 800,000 celestial targets and churned out more than 36 million raw images as part of the \$1.4 billion mission.

An estimated 4,000 scientists around the world took part in the observations and published nearly 9,000 studies, according to NASA.

"You have to be proud ... when you look back and say, 'Look at the team that's operating Spitzer, look at the team that's contributing to having all of this great science,' " said project manager Joseph Hunt.

Designed to last just 2.5 years to five years, the [telescope](#) got increasingly difficult to operate as it drifted farther behind Earth, NASA said. It currently trails Earth by 165 million miles (265 million kilometers), while orbiting the sun.



This image made available by NASA shows an active stellar nursery containing thousands of young stars and developing protostars, near the sword of the constellation Orion, captured by the Spitzer Space Telescope. (NASA/JPL-Caltech/T. Megeath (University of Toledo, Ohio) via AP)

Spitzer will continue to fall even farther behind Earth, posing no threat to another spacecraft or anything else, officials said.

"Although it would be great to be able to operate all of our telescopes forever, this is not possible," NASA's astrophysics director Paul Hertz said in an email.

NASA originally planned to decommission Spitzer a few years ago, but put off its demise as the James Webb Space Telescope, a vastly more elaborate infrared observatory, kept getting delayed.

Webb's launch is now off until at least early next year. This week, the Government Accountability Office warned of further delays because of [technical challenges](#).

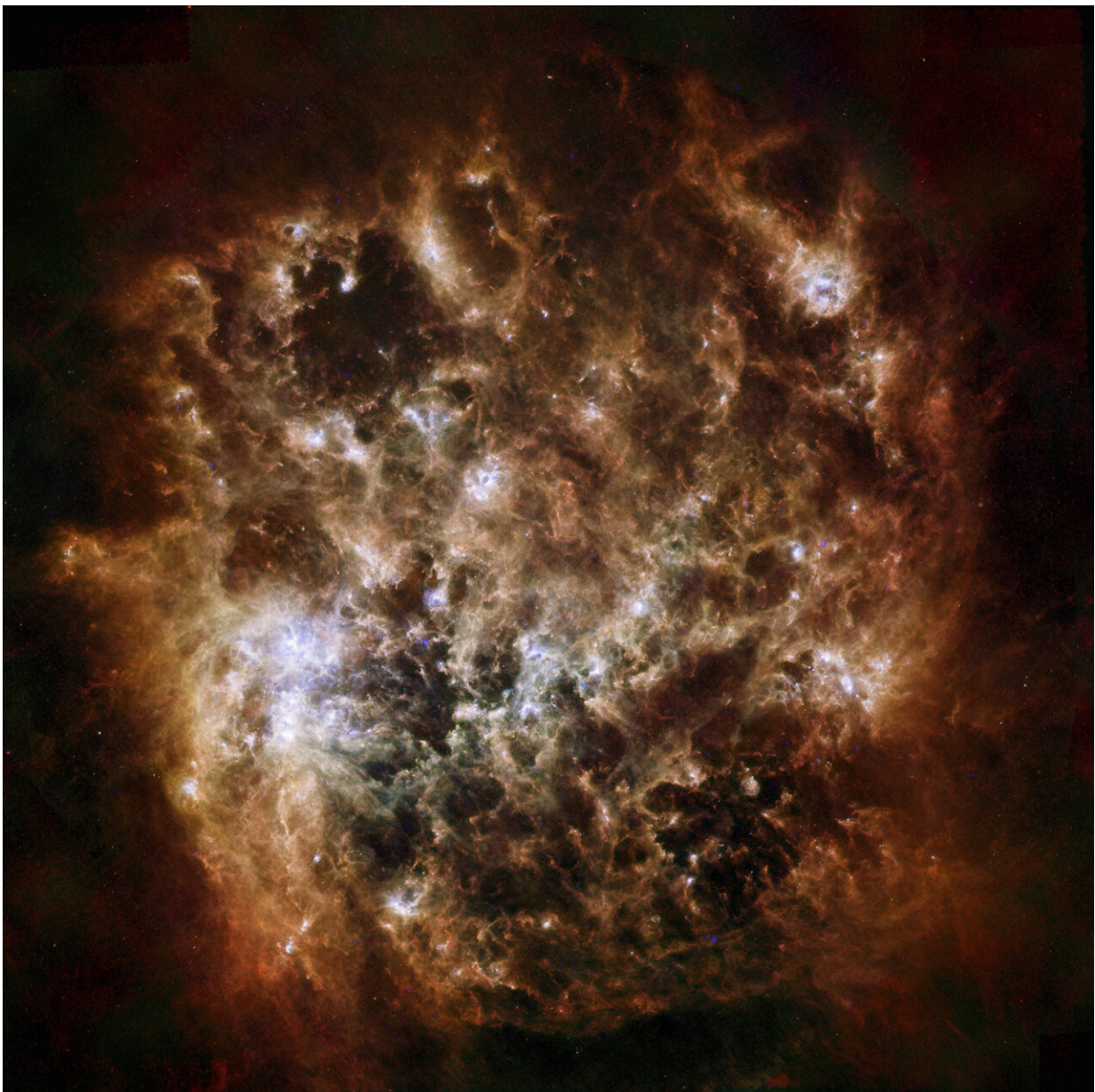
It had been costing NASA about \$12 million a year lately to keep Spitzer going. Hertz said with "no guarantee" Spitzer would last until Webb's launch, the decision was made to shut it down now.



This image made available by NASA shows fledgling stars hidden in the gas and clouds of the Orion nebula, captured by infrared observations from the Spitzer Space Telescope and the European Space Agency's Herschel mission. In several hundred thousand years, some of the forming stars will accrete enough material to trigger nuclear fusion at their cores. (ESA/NASA/JPL-Caltech/N. Billot (IRAM) via AP)



This image made available by NASA shows the Whirlpool galaxy, which is actually a pair of galaxies Messier 51 and NGC 5194/5195, approximately 23 million light-years away from Earth. This image shows a view in visible light, from the Kitt Peak National Observatory telescope as part of the Spitzer Infrared Nearby Galaxies Survey (SINGS) project. (NASA/JPL-Caltech via AP)

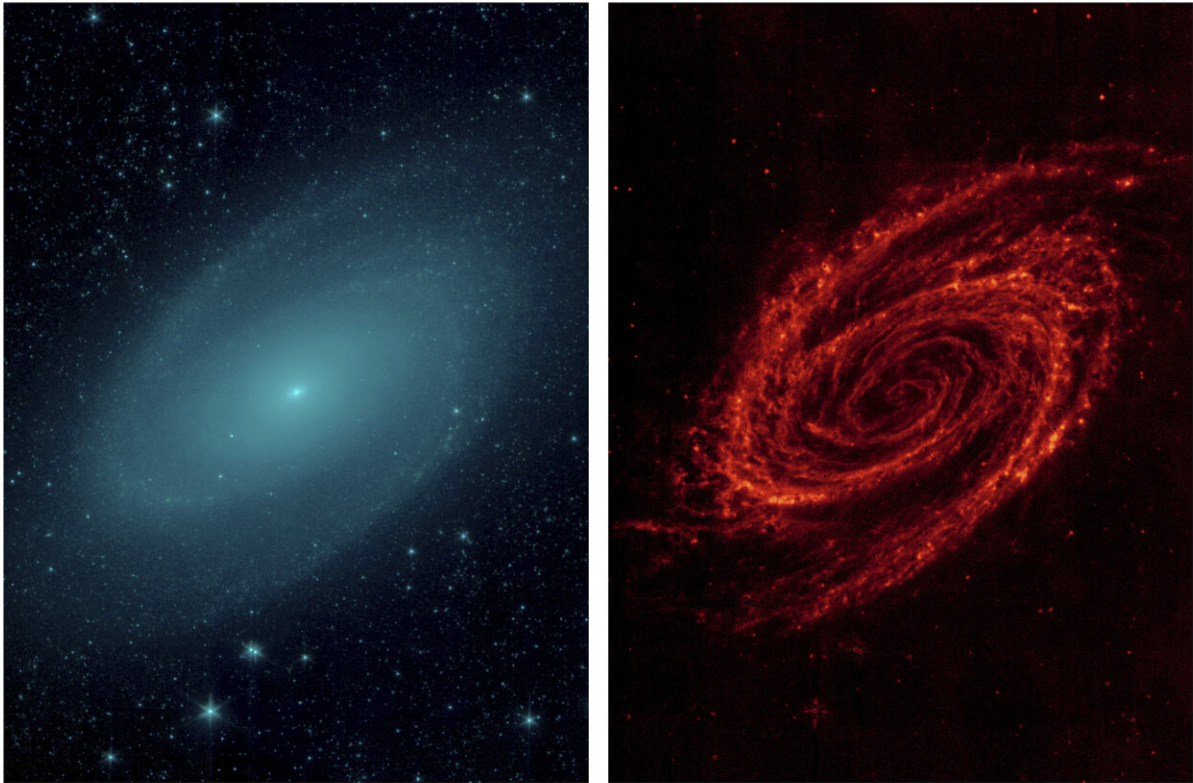


This composite image made available by NASA shows the Large Magellanic Cloud galaxy in infrared light as seen by the Herschel Space Observatory, a European Space Agency-led mission, and NASA's Spitzer Space Telescope. In the instruments' combined data, this nearby dwarf galaxy has giant ripples of dust spanning tens or hundreds of light-years. (ESA/NASA/JPL-Caltech/STScI via AP)



This image made available by NASA shows infrared data from the Spitzer Space Telescope and Wide-field Infrared Survey Explorer (WISE) in an area known as the W3 and W5 star-forming regions within the Milky Way Galaxy. The stringy, seaweed-like filaments are the blown out remnants of a star that exploded in a supernova. The billowy clouds seen in pink are sites of massive star formation. Clusters of massive stars can be seen lighting up the clouds, and a bubble carved

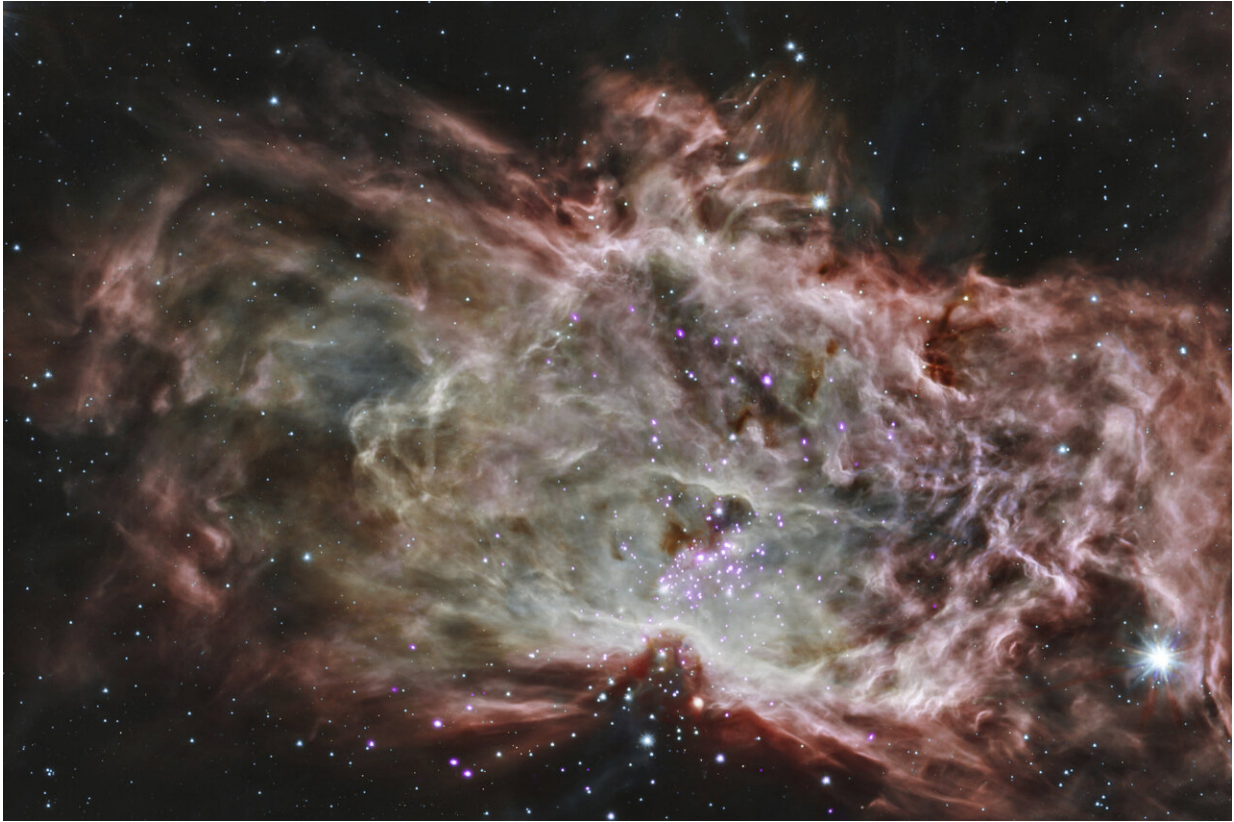
out from massive stars is seen near the bottom. (NASA/JPL-Caltech/University of Wisconsin via AP)



This combination of photos made available by NASA shows the spiral galaxy Messier 81 (M81) viewed in two different types of infrared wavelengths showing the the light from the stars in the galaxy, left, and the distribution of dust particles without starlight, captured by the Spitzer Space Telescope. The dust particles are composed of silicates (chemically similar to beach sand), carbonaceous grains and polycyclic aromatic hydrocarbons and trace the gas distribution in the galaxy. (NASA/JPL-Caltech via AP)



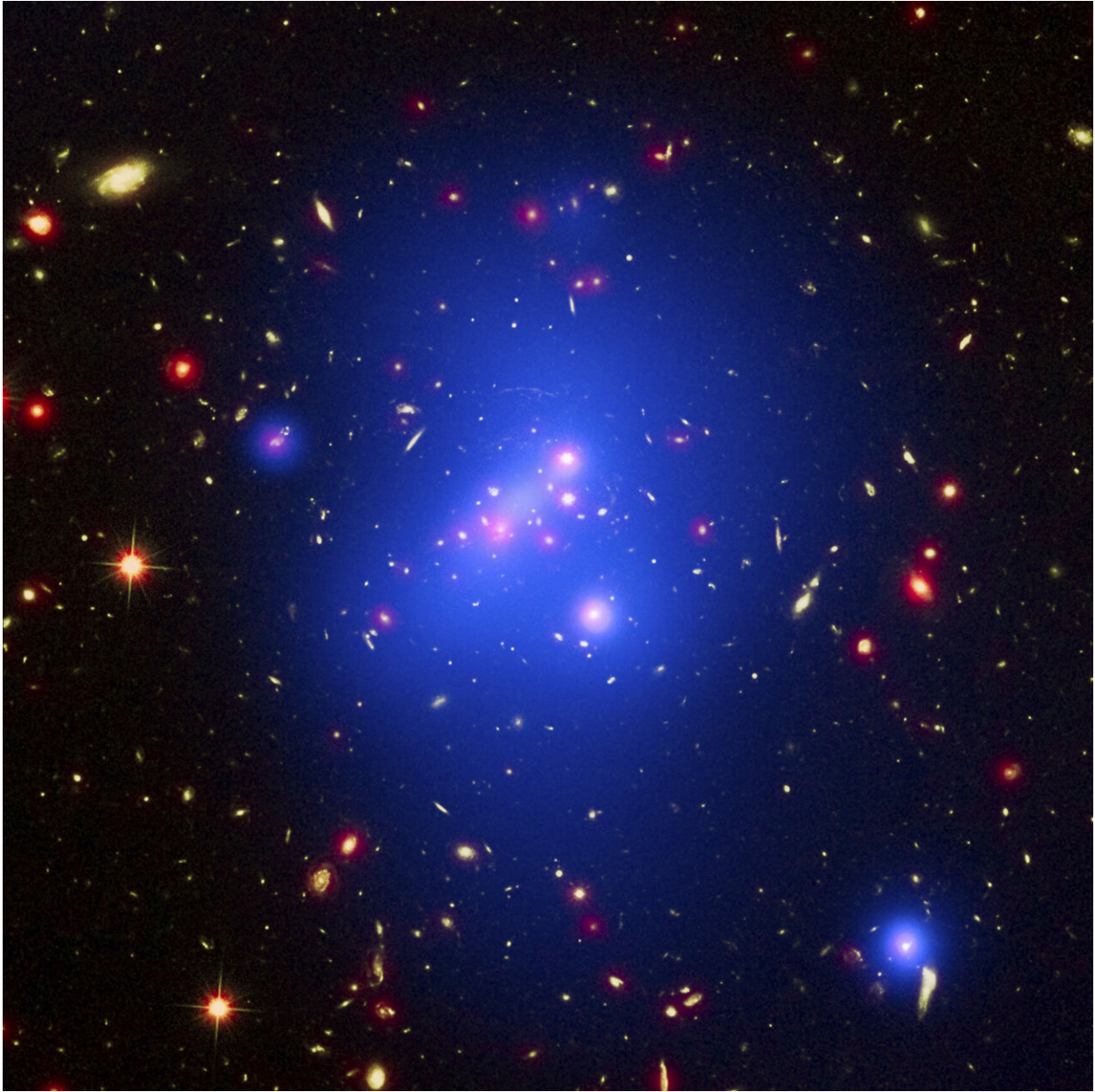
This image made available by NASA shows the Perseus Molecular Cloud, a collection of gas and dust over 500 light-years across, hosting an abundance of young stars, captured by the Spitzer Space Telescope. (NASA/JPL-Caltech via AP)



This composite image made available by NASA shows the cluster NGC 2024, which is found in the center of the Flame Nebula about 1,400 light years from Earth. Stars are often born in clusters or groups, in giant clouds of gas and dust. Data was collected by the Chandra X-ray Observatory and Spitzer Space Telescope. (X-ray: NASA/CXC/PSU/K.Getman, E.Feigelson, M.Kuhn & the MYStIX team; Infrared:NASA/JPL-Caltech via AP)



This image made available by NASA shows the runaway star Kappa Cassiopeiae, or HD 2905, center, and its bow shock formed when the magnetic fields and wind of particles flowing off the star collide with the diffuse, and usually invisible, gas and dust that fill the space between stars as it travels. It was captured by the Spitzer Space Telescope. The wave is about 4 light-years ahead of Kappa Cassiopeiae, about the same distance that Earth is from Proxima Centauri, the nearest star beyond the sun. (NASA/JPL-Caltech via AP)



This composite image made available by NASA shows the extremely massive young galaxy cluster IDCS J1426.5+3508 captured by the Chandra X-ray Observatory, the Hubble Space Telescope and the Spitzer Space Telescope. This rare galaxy cluster, which is located 10 billion light-years from Earth, is almost as massive as 500 trillion suns. (NASA/CXC/Univ of Missouri/M.Brodwin et al; NASA/STScI; JPL/CalTech via AP)



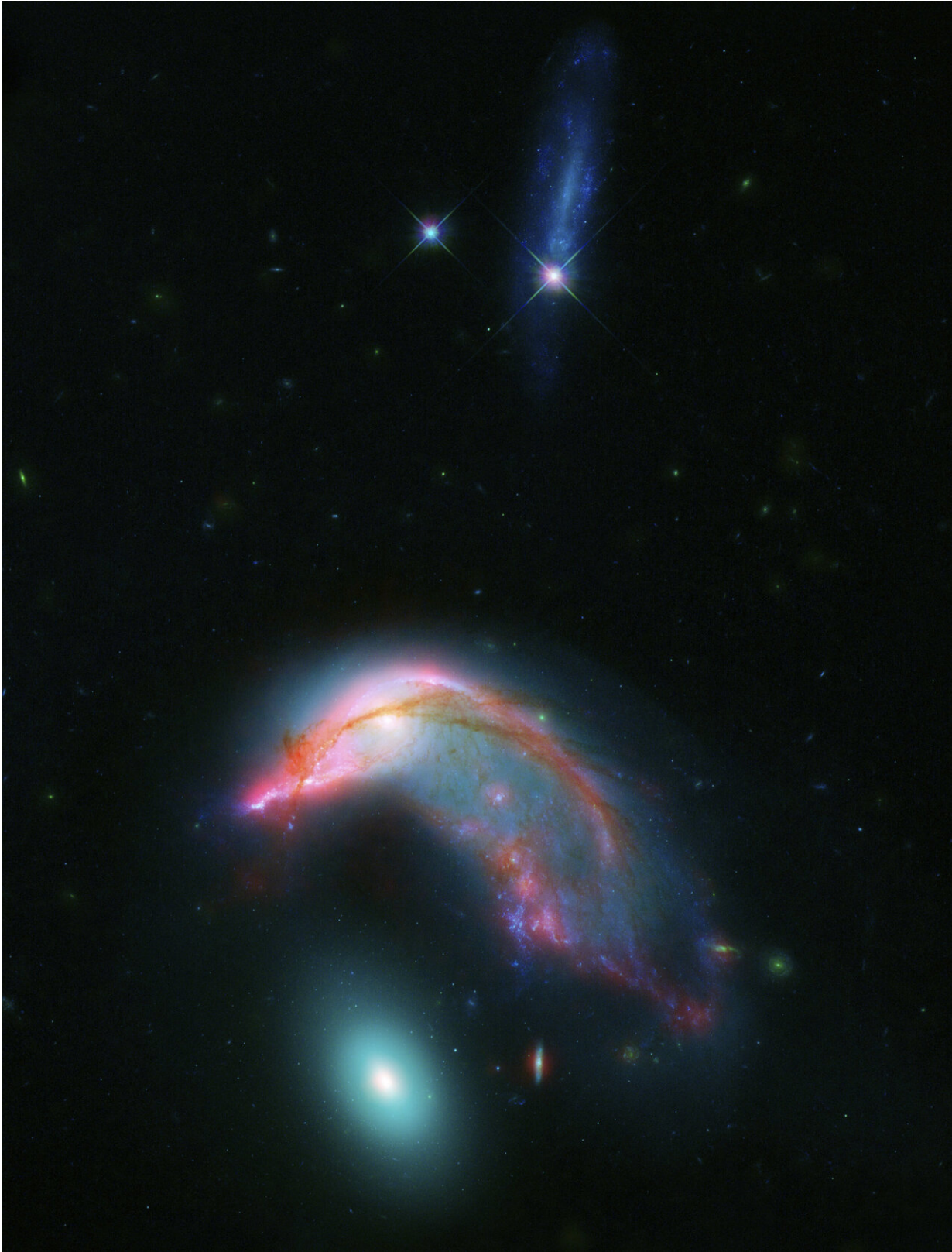
This composite image made available by NASA shows the spider part of "The Spider and the Fly" nebulae, IC 417, where many stars are formed, captured in infrared by the Spitzer Space Telescope and the Two Micron All Sky Survey (2MASS). Located in the constellation Auriga, it is about 10,000 light-years away from Earth in the outer part of the Milky Way, almost exactly in the opposite direction from the galactic center. (NASA/JPL-Caltech via AP)



This composite image made available by NASA shows the galaxy NGC 4258, also known as M106, about 23 million light-years away from Earth. Two extra spiral arms glow in X-ray, optical, and radio light. These anomalous arms are not aligned with the plane of the galaxy. The data was captured by the NASA's Chandra X-ray Observatory, the National Science Foundation's Karl Jansky Very Large Array, the Hubble Space Telescope and the Spitzer Space Telescope. (NASA/CXC/JPL-Caltech/STScI/NSF/NRAO/VLA via AP)



This image made available by NASA shows the Cat's Paw Nebula inside the Milky Way Galaxy located in the constellation Scorpius, captured by NASA's Spitzer Space Telescope. Its distance from Earth is estimated to be between 1.3 kiloparsecs (about 4,200 light years) to 1.7 kiloparsecs (about 5,500 light years). The bright, cloudlike band running left to right across the image shows the presence of gas and dust that can collapse to form new stars. The black filaments running through the nebula are particularly dense regions of gas and dust. The entire star-forming region is thought to be between 24 and 27 parsecs (80-90 light years) across. (NASA/JPL-Caltech via AP)



This image made available by NASA shows the interacting galaxies, NGC 2336, center, and NGC 2937, bottom, known collectively as Arp 142, as their mutual gravitational attraction slowly pulls them closer together. Data from NASA's Spitzer and Hubble space telescopes were combined to show light that spans the visible and infrared parts of the spectrum. The blue streak at the top of the image is an unrelated background galaxy that is farther away than Arp 142. (NASA-ESA/STScI/AURA/JPL-Caltech via AP)

Launched in 2003, Spitzer was the last of NASA's four so-called great observatories. With its infrared instruments, it was able to sense heat coming off [celestial objects](#) like [night vision goggles](#), said Suzanne Dodd, a former project manager who now oversees NASA's Deep Space Network at the Jet Propulsion Laboratory in Pasadena, California.

By seeing through dust, "we're lifting the cosmic veil on the universe," Dodd said.

Still sending back breathtaking pictures, the Hubble Space Telescope rocketed into orbit in 1990 to observe the cosmos in visible and ultraviolet light; it will celebrate its 30th anniversary in April.

The Compton Gamma Ray Observatory was launched in 1991, but because of equipment failure was destroyed in a fiery re-entry in 2000. The Chandra X-Ray Observatory is still working since its 1999 launch.

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