The Cone Nebula is the part of the star-forming region NGC 2264, about 2500 light-years away. Its pillar shape is a perfect example of the simplest of all the shapes that can develop in a giant cloud of cold molecular gas and dust, where new stars are born. The dust obscures the starlight, but reveals the shape of the gas clouds that feed them, as seen in this 3.6- and 8-metre image taken with the VLT's two large Ritchey-Chrétien telescopes (UT2 and UT4). This image was taken using the ESO 80/260 telescope on the La Silla Observatory in Chile.

Credit: ESO

The magnificent central black hole at the centre of our Milky Way galaxy is known as Sgr A*. This image is the first one to resolve its shadow, as predicted by the general theory of relativity, with a size of 1.5 microarcseconds. It was captured by the Event Horizon Telescope, an international team of astronomers who linked eight radio telescopes around the world to create a virtual telescope with a 13,000-kilometre aperture. This image shows the outer rim of the shadow, and suggests that Sgr A* is a naked black hole without any gas or dust surrounding it. It is the most direct evidence yet that the centre of our galaxy is indeed a supermassive black hole.

Credit: EHT Collaboration

The ESO Supernova is a bright, supernova-like object that was discovered in late 2022 in the star-forming region of the Milky Way's central black hole. It is the most luminous event ever observed in the centre of our galaxy and is a major breakthrough in understanding how black holes form and evolve. The ESO Supernova is a key target for telescopes around the world and is currently the subject of intense study by astronomers worldwide.

Credit: ESO, ALMA (ESO/NAOJ/NRAO)/A. Schröder, VLA (NRAO)/Y. Baganoff, L. Touboul

Two telescopes in which ESO is a partner, the European Extremely Large Telescope (E-ELT) and the Atacama Large Millimeter/submillimeter Array (ALMA), are part of the European Extremely Large Telescope (EELT) project. The E-ELT, the world's largest optical telescope, will be located in the Atacama Desert in Chile. The ALMA is a radio telescope array that consists of 66 antennas, each equipped with a 12-metre dish, distributed over a 30-kilometre-long baseline. Together, they form the world's largest and most powerful radio telescope.

Credit: ESO, ALMA (ESO/NAOJ/NRAO)/A. Schröder, VLA (NRAO)/Y. Baganoff, L. Touboul

The ESO Supernova Visitors' Centre is a state-of-the-art facility located in the historic town of Garching, near Munich, Germany. It is the first and only visitors' centre dedicated to the study of supernovae and the ESO Supernova Project. The Centre includes a permanent exhibition, a multimedia presentation, and a hands-on area where visitors can learn about the science behind this fascinating phenomenon.

Credit: ESO/S. Otarola

This is the site of the Atacama Large Millimeter/submillimeter Array (ALMA), which is located in the Atacama Desert. ALMA consists of 66 antennas, each equipped with a 12-metre dish, distributed over a 30-kilometre-long baseline. Together, they form the world's largest and most powerful radio telescope. ALMA is used to study a wide range of astronomical phenomena, from the formation of stars and planets to the evolution of galaxies and the early universe.

Credit: ESO/M. Kornmesser

The ESO Supernova Visitors' Centre is located in Garching, Germany, and is open to the public. It is the first and only visitors' centre dedicated to the study of supernovae and the ESO Supernova Project. The Centre includes a permanent exhibition, a multimedia presentation, and a hands-on area where visitors can learn about the science behind this fascinating phenomenon.

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Credit: ESO/S. Otarola
Peering through the dust.
The ELT’s construction site on Cerro Armazones
Full Moon turns red

August 2023
Wispy dark clouds