



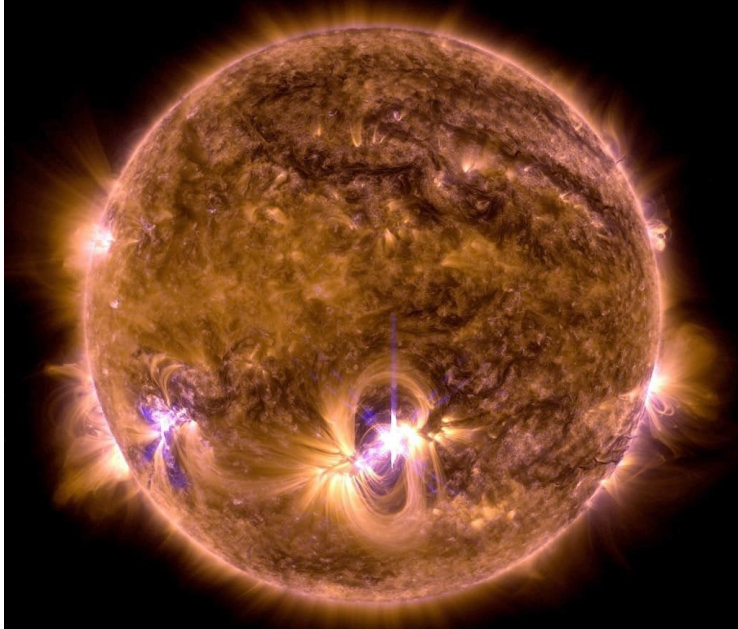
NGC 6397 – a variety of stars, young and old, in a close-up view with optical light from NASA's Hubble Space Telescope. This globular cluster is one of the closest ones to Earth.

1



Terzan 5 – a variety of stars, young and old, in optical light from Hubble and X-rays from NASA's Chandra X-ray Observatory. This globular cluster resides near the center of our galaxy, and is moving towards us at about the speed of a car on a highway.

2



Our **Sun**, a main sequence star – shown here emitting a solar flare in ultraviolet light from NASA's Solar Dynamics Observatory. The Sun may seem fairly calm when viewed with optical light, but, using other kinds of light, we can learn how active it is.

3



2MASS J17554042+6551277 – a bright star, in infrared light from NASA's James Webb Space Telescope (JWST), during the observatory's preliminary alignment testing. The symmetric spikes of light are characteristic of JWST images of bright objects.

4



NGC 1300 – a barred spiral galaxy, in infrared light from ESO's Very Large Telescope. This galaxy is 65 million light years away, which means the light we see from it now was emitted when the dinosaurs roamed the Earth!

5



Cartwheel Galaxy – a ring galaxy, in X-ray light from Chandra and infrared light from JWST. Its unusual shape stems from its history as a merger between two galaxies, one smaller one which punched through a larger one.

6



NGC 3982 – a classic spiral galaxy, in optical light from Hubble. This galaxy is similar to our own Milky Way in structure, though it's only about a third in size.

7



M106 – a highly active spiral galaxy, in X-rays from Chandra, radio waves from the NRAO's Very Large Array (VLA), optical data from Hubble, and infrared light from NASA's Spitzer Space Telescope. This galaxy has two extra spiral arms, which only can be seen in X-ray and radio.

8



The **Jewel Box** – an open star cluster, in optical and infrared light from ESO's La Silla Observatory. Named for its vivid variety of star colors, this cluster contains some of the brightest stars in our galaxy.

9



Young stars in the **Orion Nebula**, one of the closest star-forming regions to Earth – in X-rays from Chandra and infrared light from JWST. The Orion Nebula can be seen as a fuzzy patch by the naked eye, even in only moderately dark areas.

10



NGC 1850, a collection of fairly young stars – in X-rays from Chandra, optical light from Hubble, and infrared light from Spitzer. A double cluster, it consists of two groups of stars, one relatively older group, and one smaller younger cluster of massive blue stars.

11



N79 – a giant star-forming region, in X-rays from Chandra and infrared light from JWST. This nebula is not in the Milky Way, but lives in the Large Magellanic Cloud, our dwarf galaxy neighbor.

12



Stephan's Quintet – a group of galaxies dancing to the tune of each other's gravities, in X-rays from Chandra and infrared light from JWST and Spitzer. Though called a quintet, only four of the galaxies are actually in a group, interacting with each other. The galaxy on the left is far in the foreground, and happens to be positioned nearby in the sky.

13



NGC 7469 – a spiral galaxy, in optical and infrared light from Hubble and infrared data from JWST, with X-rays from Chandra highlighting its central supermassive black hole. The diffraction spikes (the six-pointed star pattern) are caused by the extreme infrared brightness of the galaxy's center.

14



Arp 220 – a galaxy merger, in X-rays from Chandra and optical and infrared light from Hubble. This is the result of two Milky Way-sized galaxies that have collided, and continue to come together to form one larger galaxy.

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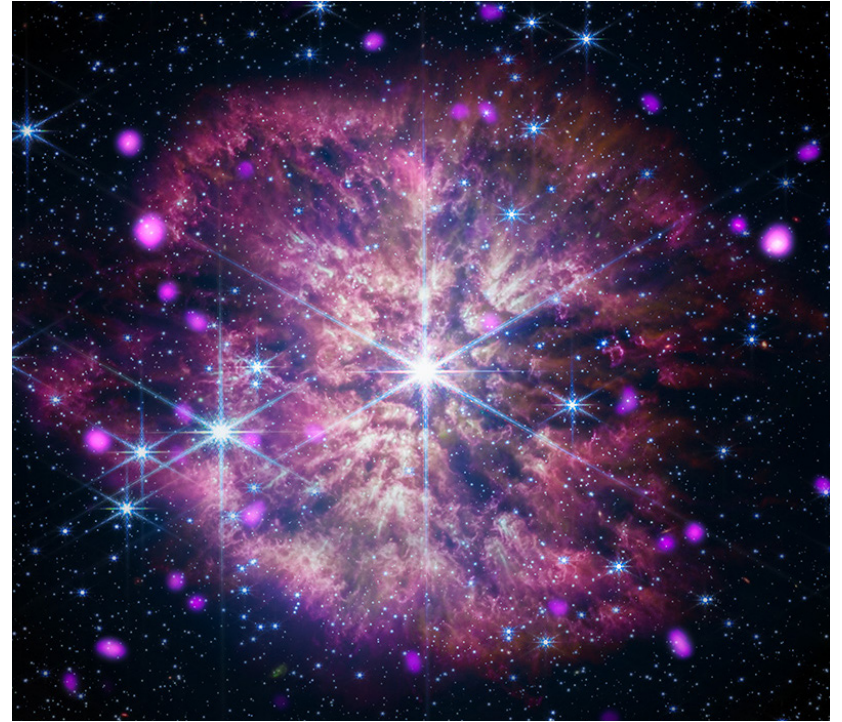
Centaurus A – a galaxy with an active central supermassive black hole, in X-rays from Chandra and NASA's Imaging X-ray Polarimetry Explorer (IXPE), as well as optical light from the ESO/MPG 2.2m telescope in Chile. Its jets span thousands of light years; unseen in this image, but visible in radio waves, the jets extend over a million light years!

16



IC 348 – a star-forming region in the Milky Way, in X-rays from Chandra and infrared light from JWST. The wispy structures of gas and dust glow by reflecting the light of the stars scattered within.

17



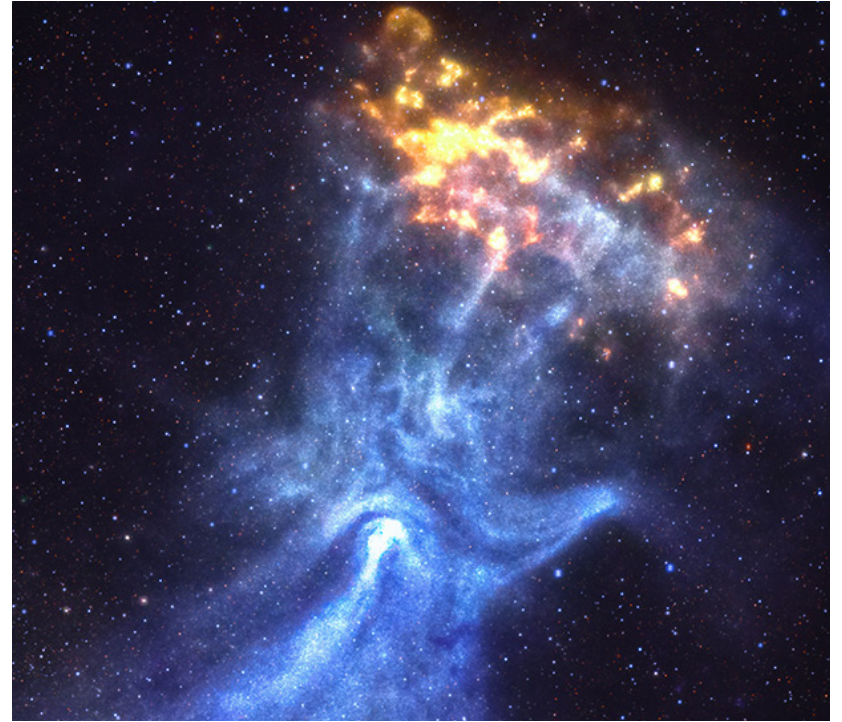
WR 124, a Wolf-Rayet star – super hot, massive, and extremely bright, in X-rays from Chandra and infrared light from ESA's Herschel and NASA's WISE, JWST, and Spitzer telescopes. This is a star in the last stages of its life, spewing out material as it approaches a supernova explosion.

18



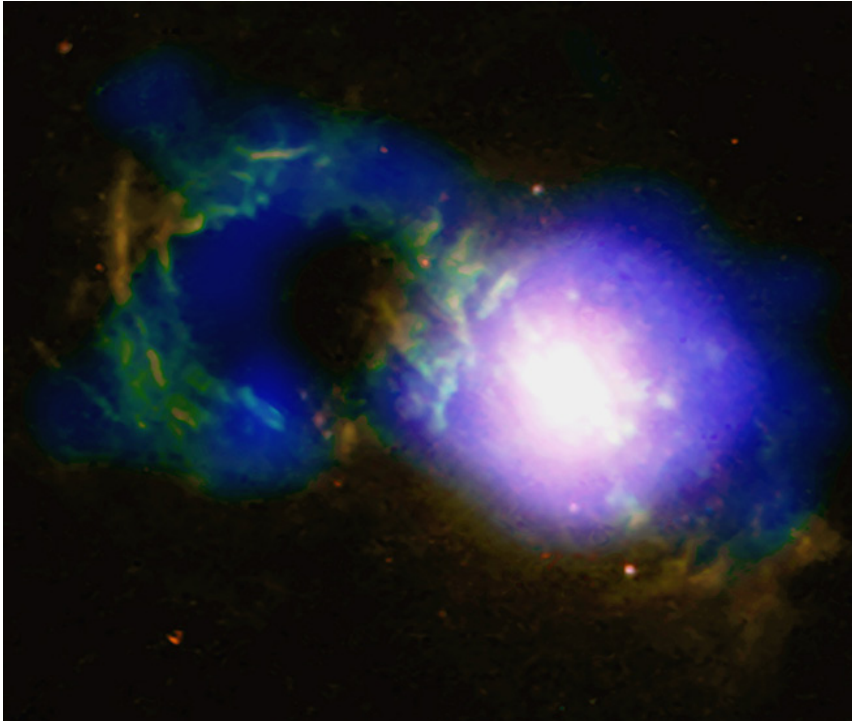
L1527 – a protostar in the earliest stage of star-formation, in infrared light from JWST. A protostellar disk feeds material into the star, some of which is jettisoned out in the hourglass shape seen here.

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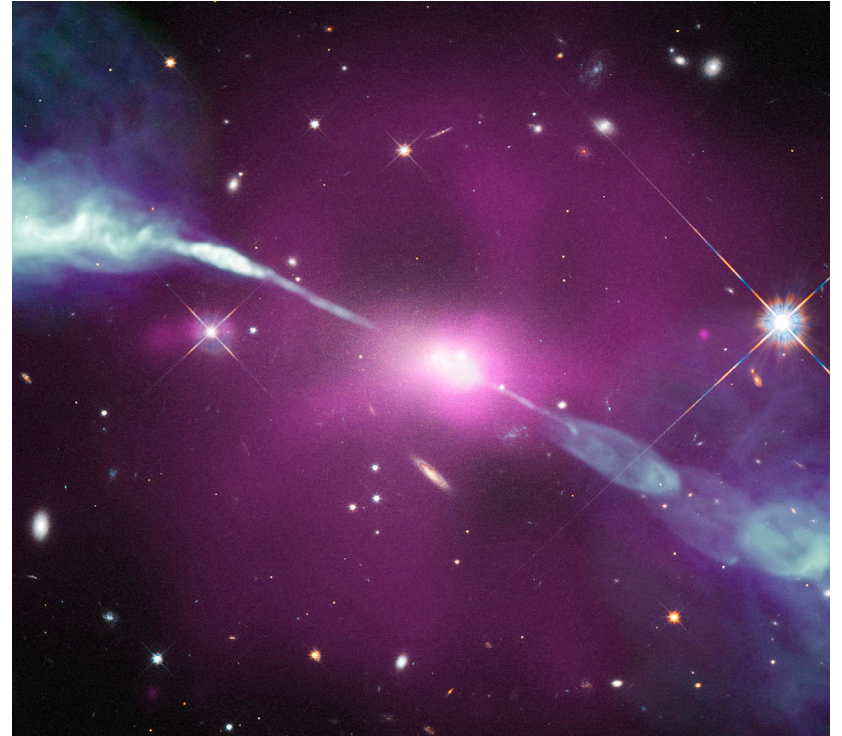
MSH 15-52 – a dead star and its surroundings, which resemble a human hand to some, in X-rays from Chandra, with background stars in infrared light from the Dark Energy Camera on the Blanco telescope. The cloud is created by a pulsar – a neutron star spinning rapidly, pulling dust and gas along in its wake and jettisoning some of it back out into space.

20



Teacup Galaxy – a galaxy with an active central supermassive black hole, in X-rays from Chandra and optical light from Hubble. The “handle” of the teacup is formed by eruptions from the central black hole.

21



Hercules A – a galaxy with an active central supermassive black hole, in X-rays from Chandra, optical light from Hubble, and radio waves from VLA. If we only used the kind of light our eyes can see, we would only see the small, whitish, oval; the other wavelengths allow us to see all that’s happening in this active galaxy.

22



Abell 1689 – a galaxy cluster, in X-rays from Chandra and optical light from Hubble. Almost every object in this image is a galaxy, most of which are bound to each other by gravity and surrounded by hundred-million-degree gas.

23



SMACS 0723 – a galaxy cluster, in X-rays from Chandra and infrared from JWST. Almost every object in this image is a galaxy. Some are part of the cluster. Light from others in the background is distorted – “lensed” – on its path to reach us by the cluster’s gravity.

24