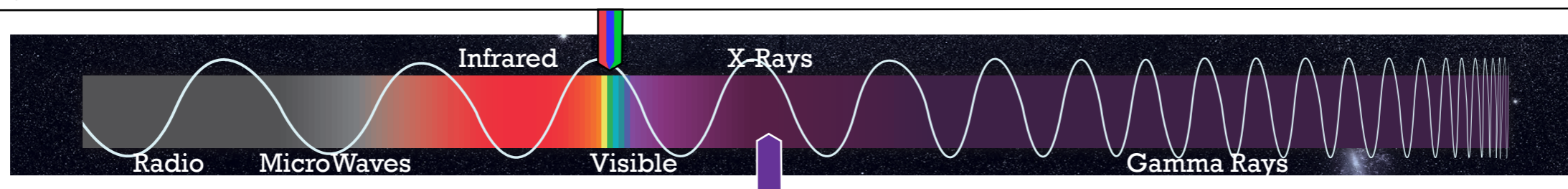


Crab Nebula and its Pulsar



Outside: The NASA/ESA Hubble Space Telescope observed the Crab Nebula, a supernova remnant, named SN 1054, located 6500 light-years from Earth, in optical wavelengths. SN 1054 was first observed on 4 July 1054 and remained visible for around two years. The event was recorded in contemporary Chinese astronomy, and references to it are also found in a later (13th-century) Japanese document, and in a document from the Arab world. *Credit: NASA, ESA and Allison Loll/Jeff Hester (Arizona State University). Acknowledgement: Davide De Martin (ESA/Hubble).*

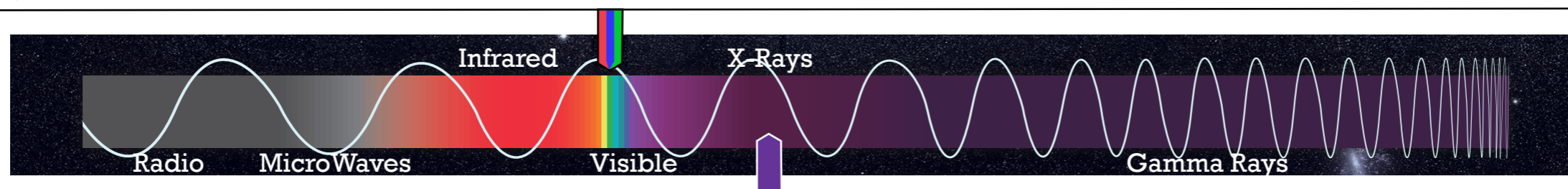


Inside: In the Crab Nebula, a rapidly rotating neutron star, or pulsar (white dot near the centre), powers the dramatic activity seen in X-rays by Chandra. The neutron star, like a lighthouse, ejects twin beams of radiation that appear to pulse 30 times a second due to the pulsar's rotation. A neutron star is the crushed ultra-dense core of the exploded massive star. *Credit: NASA/CXC.*

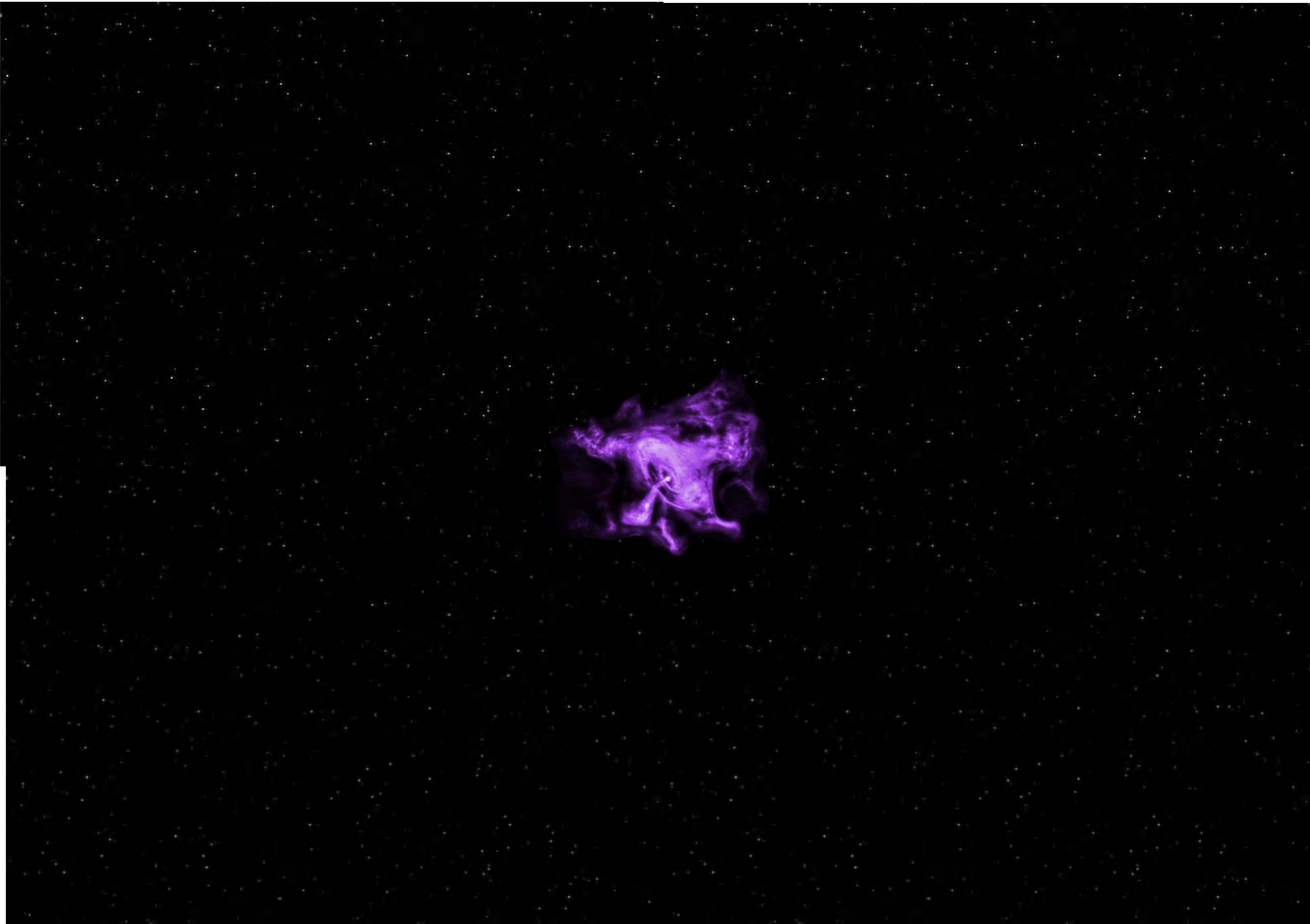
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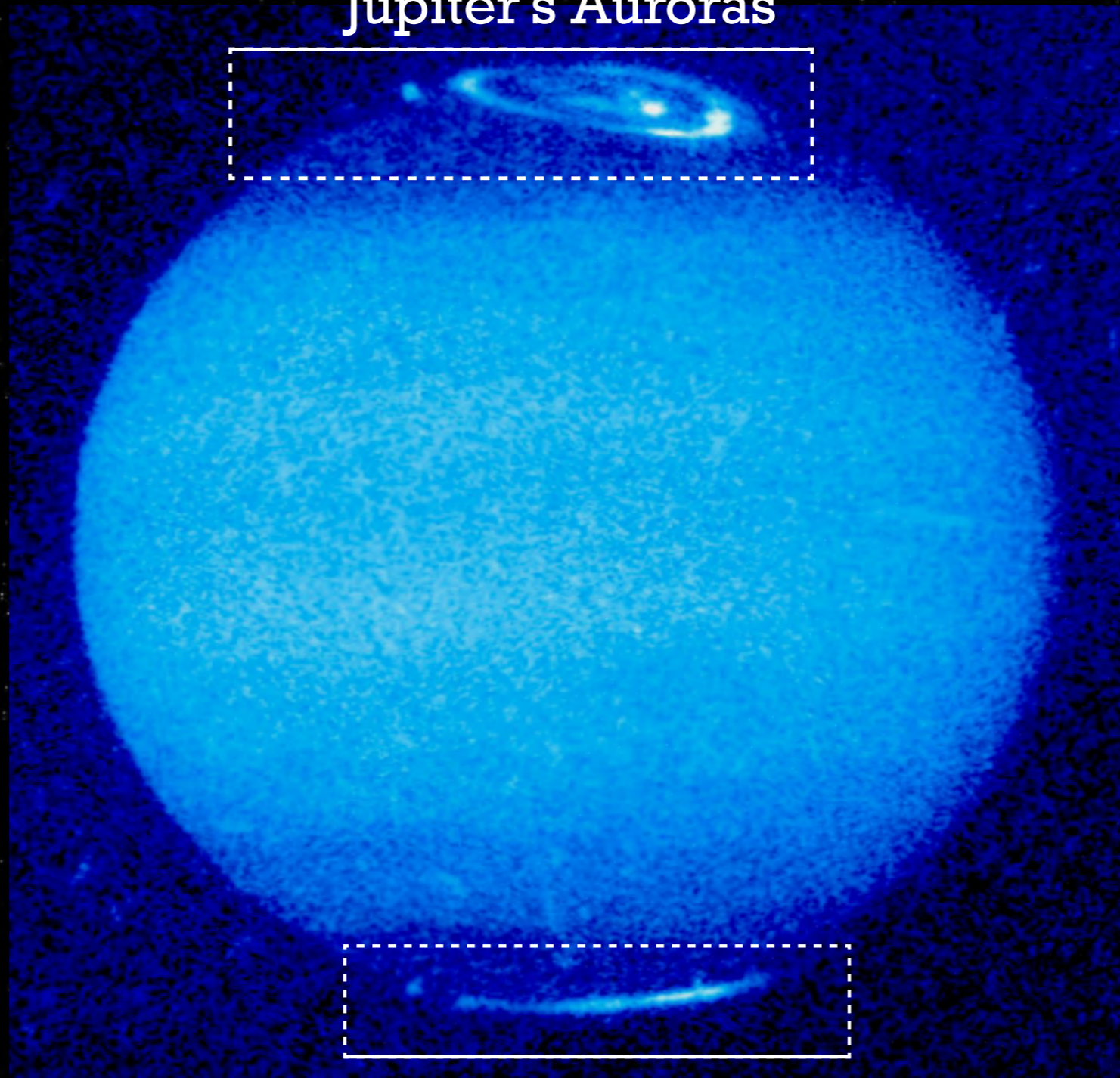
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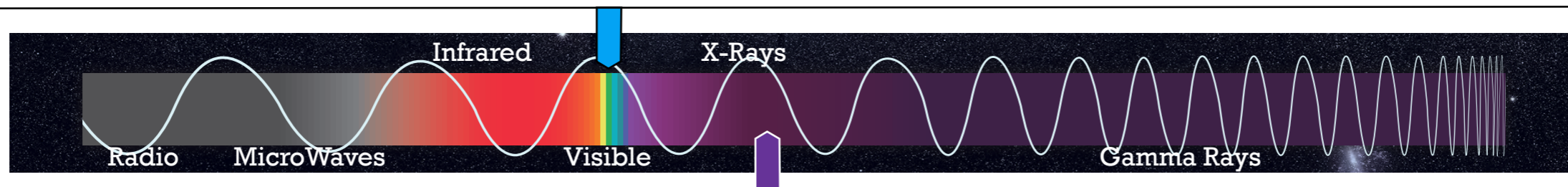
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Jupiter's Auroras

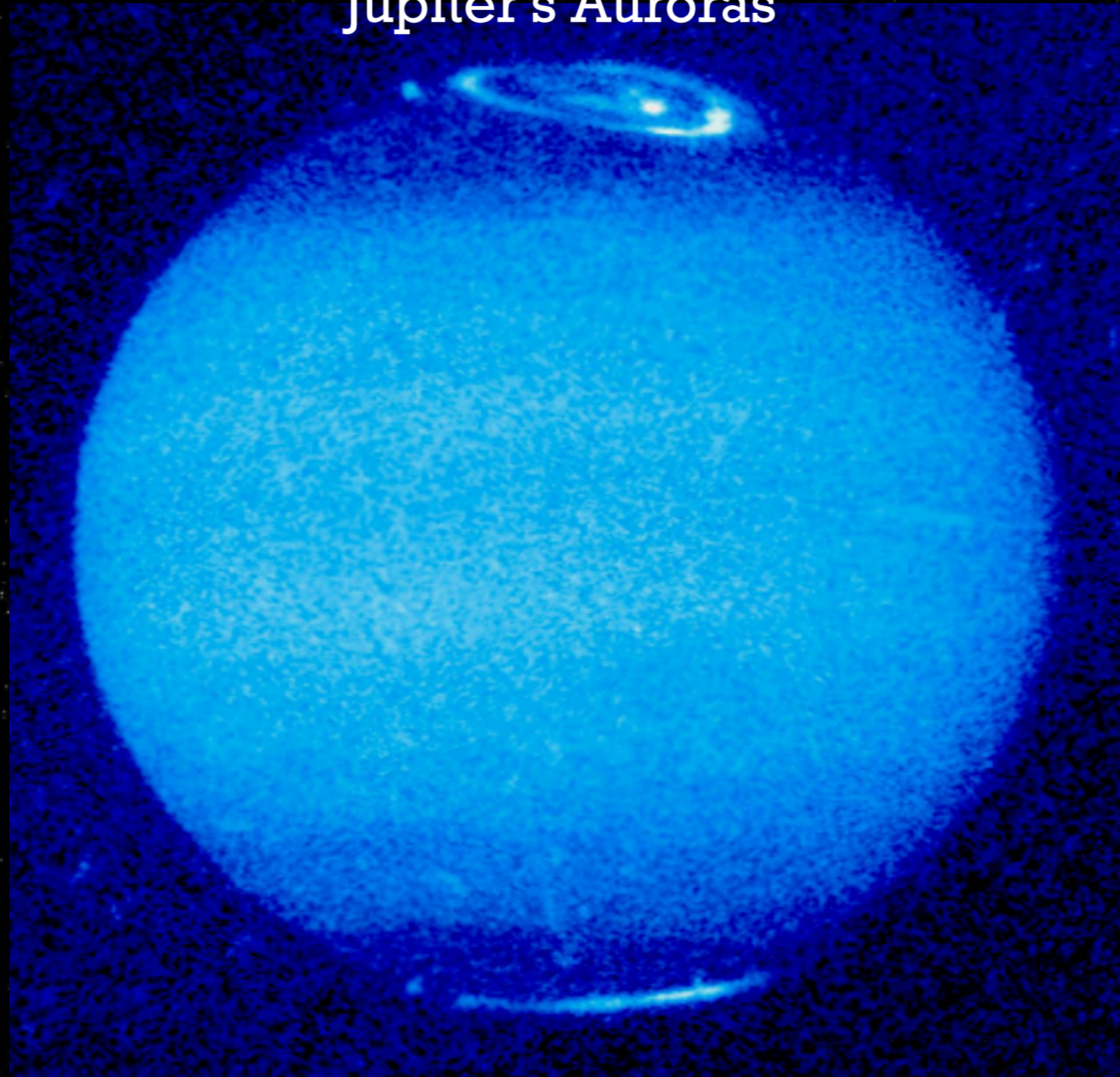


Outside: Jupiter boasts some of the most powerful auroras in the solar system. Compared to the Earth's auroras, they can be a few hundred times more powerful and brighter. In 1996, the Hubble telescope allowed to observe in the UV filter how the auroral emissions change in brightness and structure as Jupiter rotates. *Credit: John T. Clarke and Gilda E. Ballester (University of Michigan), John Trauger and Robin Evans (Jet Propulsion Laboratory), and NASA/ESA.*

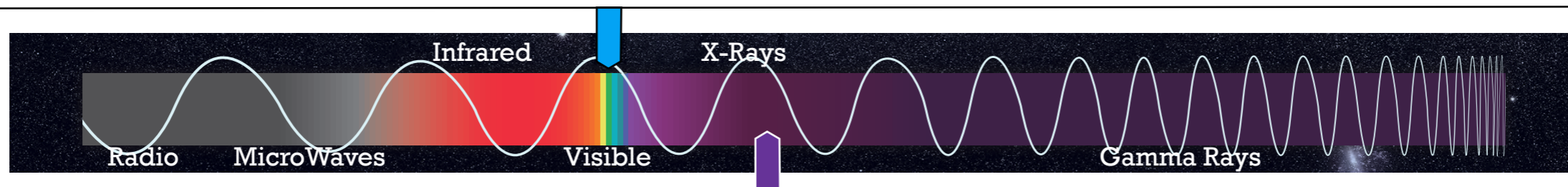


Inside: Solar storms are triggering X-ray auroras on Jupiter that are about eight times brighter than normal. These images from Chandra Observatory shows Jupiter's auroras over a large area of the planet after a giant solar storm arrived at the planet in 2011. *Credit: NASA/CXC/SwRI/R. Gladstone et al.*

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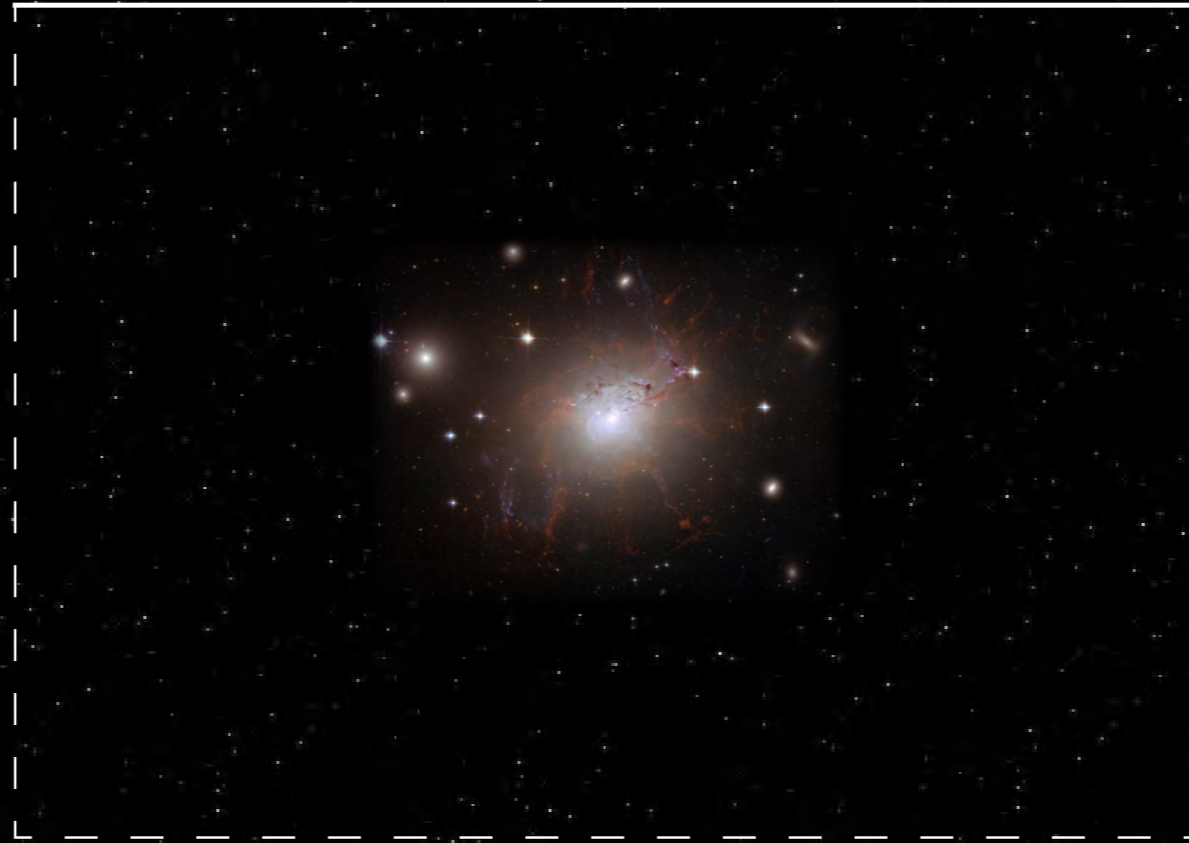
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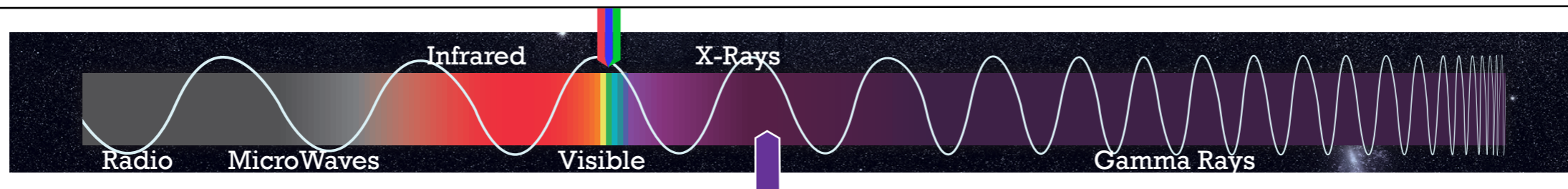
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Perseus Cluster



Outside: This Hubble Space Telescope image of galaxy NGC 1275 reveals the fine, thread-like filamentary structures in the gas surrounding the galaxy. At a distance of 230 million light-years, NGC 1275 is one of the closest giant elliptical galaxies and lies at the centre of the Perseus cluster of galaxies. *Credit: NASA, ESA, and the Hubble Heritage (STScI/AURA)- ESA/Hubble Collaboration.*

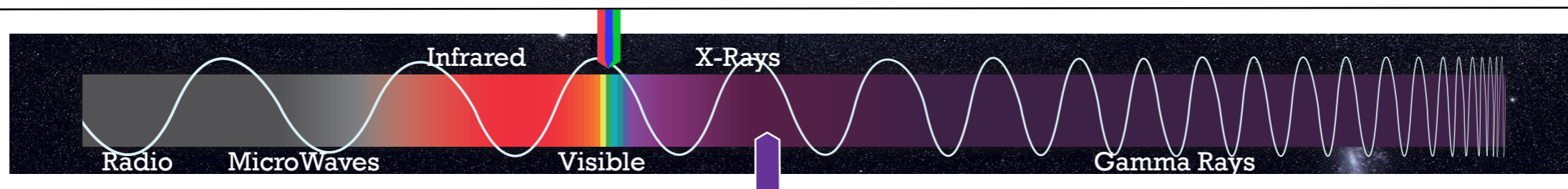


Inside: The Perseus cluster (Abell 426) is a cluster of galaxies in the constellation Perseus. It is one of the most massive objects in the known universe, containing thousands of galaxies immersed in a vast cloud of multimillion-degree gas, only see in X-rays. This image combines data equivalent to more than 17 days worth of observing time taken of the cluster over a decade with Chandra observatory. *Credit: NASA/CXC.*

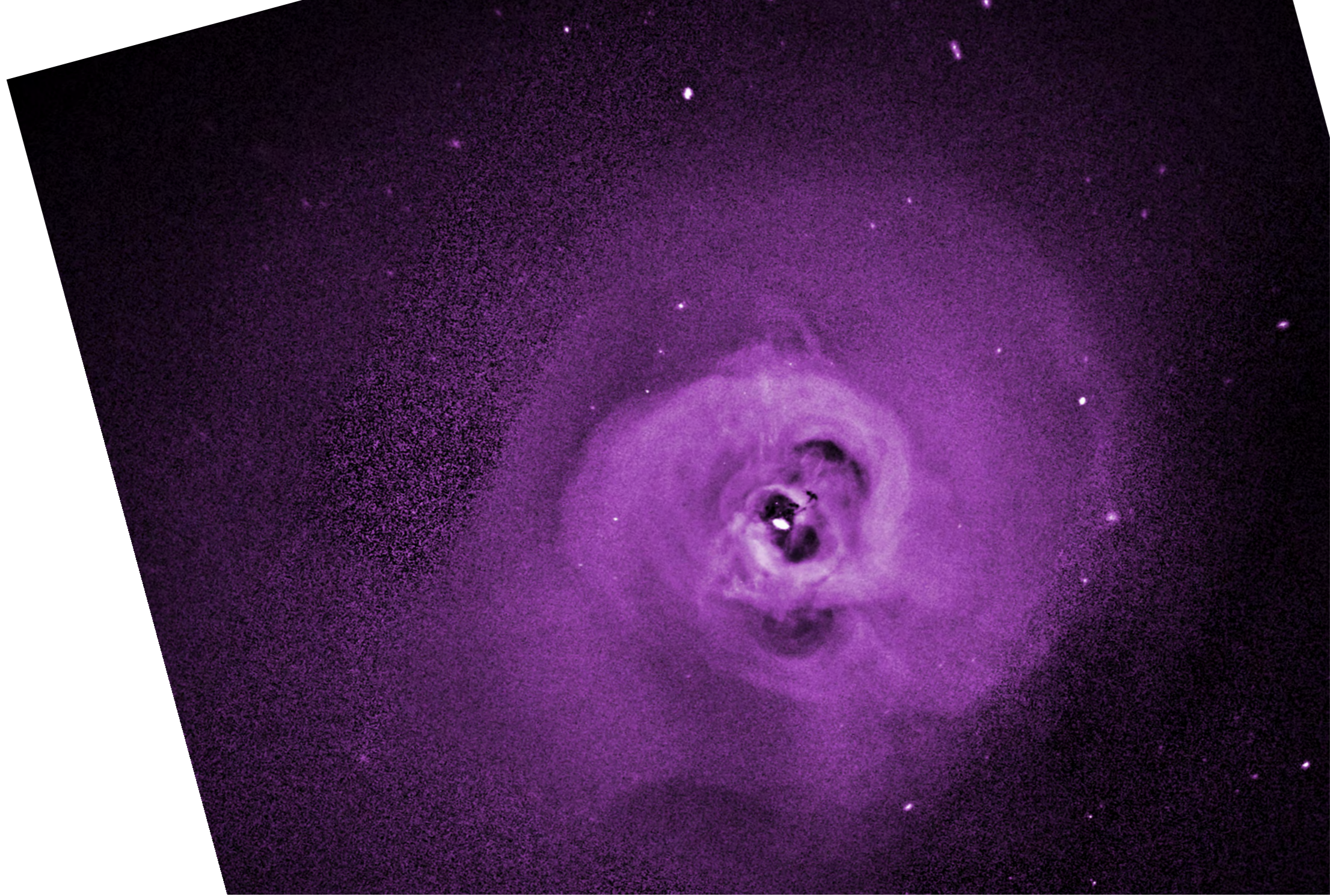
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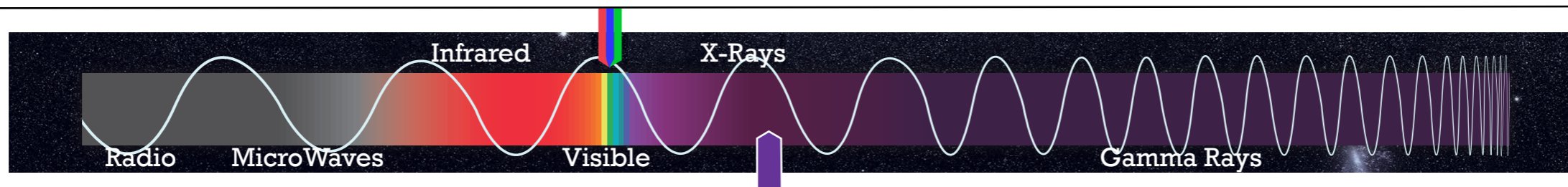


Centarus A Galaxy

ATHENA



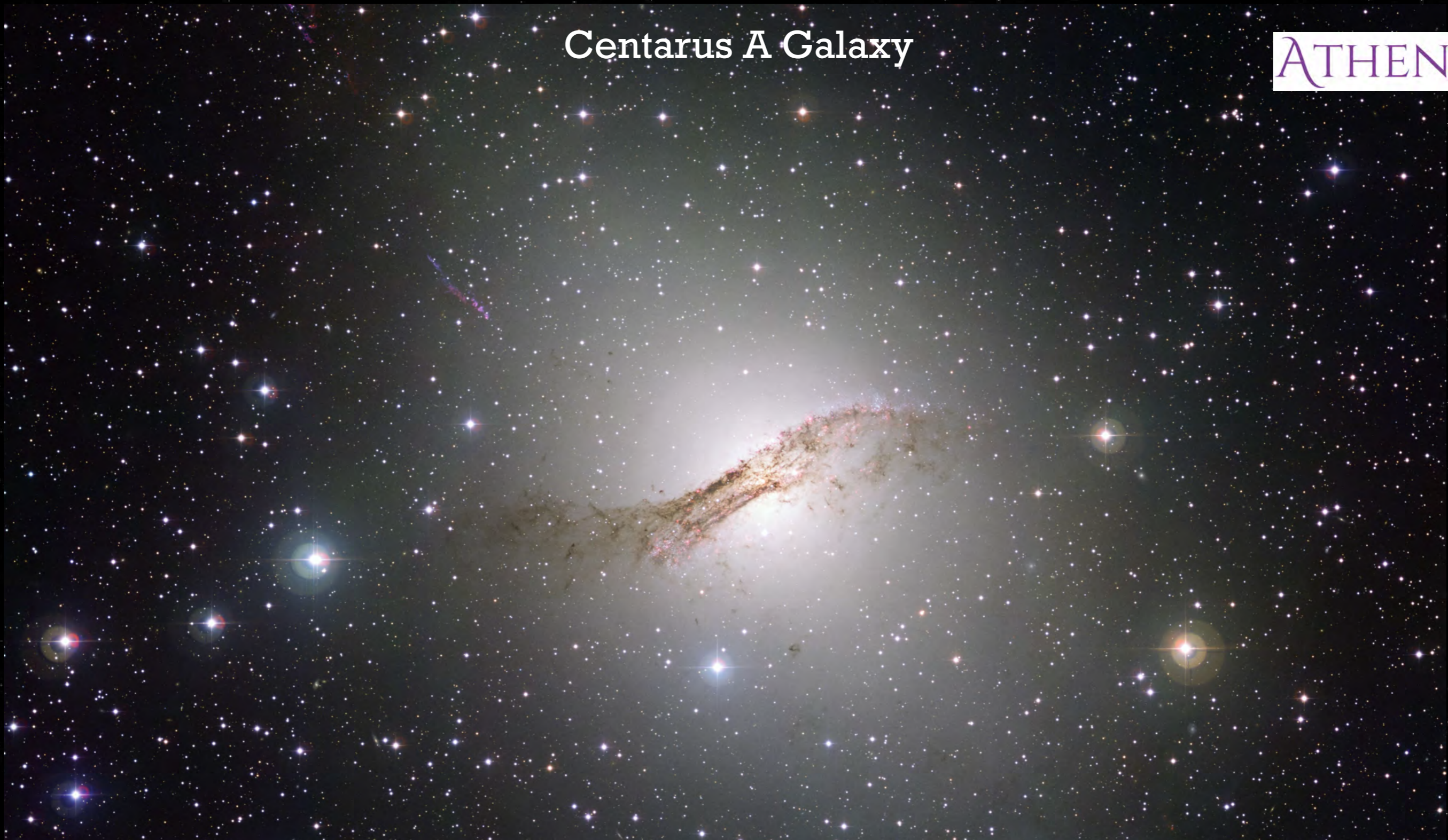
Outside: Centaurus A or NGC 5128 is one of the closest radio galaxies to Earth at a distance of 10–16 million light-years. This image was taken with a wide field imager attached to the ESO 2.2-metre telescope at the La Silla Observatory in Chile, with a total exposure time of more than 50 hours. *Credit: European Southern Observatory (ESO).*



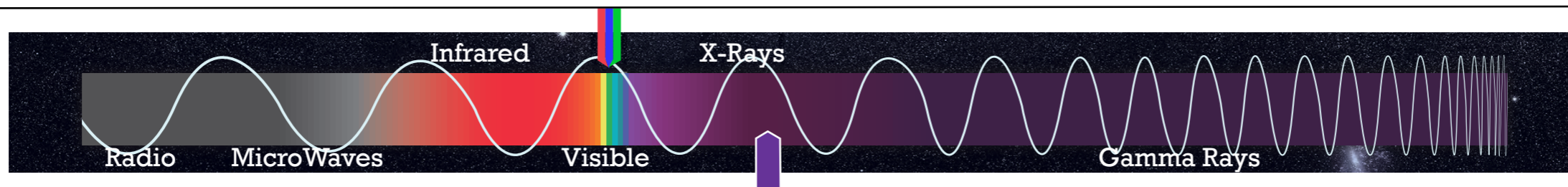
Inside: Centaurus A harbours an active galactic nucleus, which has been extensively studied by professional astronomers. The gargantuan jet blasting away from a central supermassive black hole is seen in this image from Chandra observatory. *Credit: NASA/CXC/UA/J.Irwin et al.*

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