Object:
Perseus A Galaxy • NGC 1275

Distance from Earth:
331 million light-years

Size:
150,000 light-years across

Telescopes:
Chandra X-ray Observatory, Hubble Space Telescope, National Radio Astronomy Observatory’s Very Large Array

Lights:
X-ray (violet), radio (pink), and visible light (red, green, blue)

Description:
Perseus A is home to an active supermassive black hole—one that is consuming and spewing massive amounts of matter at the galaxy’s center. Astronomers combine images taken by different types of telescopes to reveal the dynamics of these supermassive black holes. Large, violet shells depicting high-energy X-ray radiation surround pink lobes from the low-energy radio ranges in this image showing the internal violence at the heart of Perseus A.

Credit:
X-ray: NASA/CXC/IoA/A.Fabian; Radio: NRAO/VLA/G. Taylor; Optical: NASA/ESA/Hubble Heritage (STScI/AURA) & Univ. of Cambridge/IoA/A. Fabian