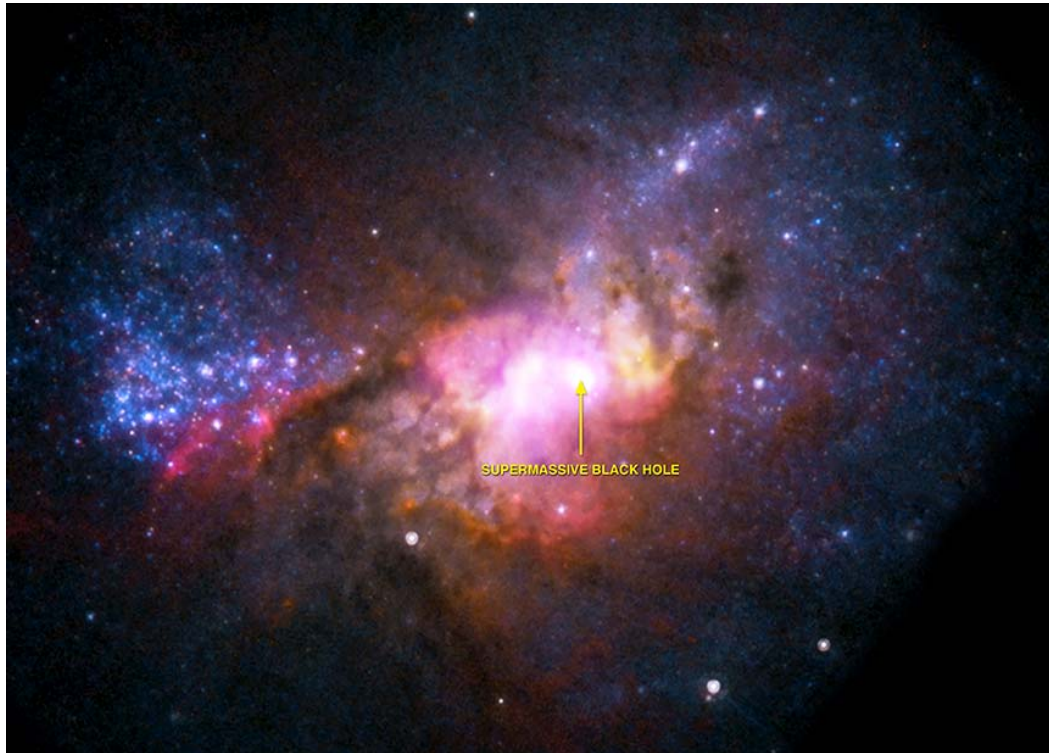




# Chandra Science Highlight

## Henize 2-10: A Dwarf Starburst Galaxy with a Supermassive Black Hole



Chandra X-ray Observatory ACIS image

Scale: Image is 25 arcsec across

Distance Estimate: 30 million light years.

Credit: X-ray (NASA/CXC/Virginia/A.Reines et al); Radio (NRAO/AUI/NSF);  
Optical (NASA STScI)

Optical data from the Hubble Space Telescope is shown in red, green and blue, Chandra X-ray data in purple, and radio data from the National Radio Astronomy Observatory's Very Large Array in yellow. A Compact X-ray source at the center of the galaxy coincides with a radio source.

- The spatial coincidence and relative fluxes of the compact radio and X-rays sources indicate that Henize 2-10 harbors an actively accreting central black hole with a mass of approximately one million solar masses.
- The nearby dwarf galaxy, simultaneously hosting a massive black hole and an extreme burst of star formation, is analogous in many ways to galaxies in the infant Universe during the early stages of black hole growth and galaxy mass assembly.
- The lack of a substantial spheroidal component in Henize 2-10 indicates that supermassive black hole growth may precede the build-up of galaxy spheroids.

References: A. Reines et al. Nature 470, 66-68  
(9 January 2011) also arXiv:1101.1309