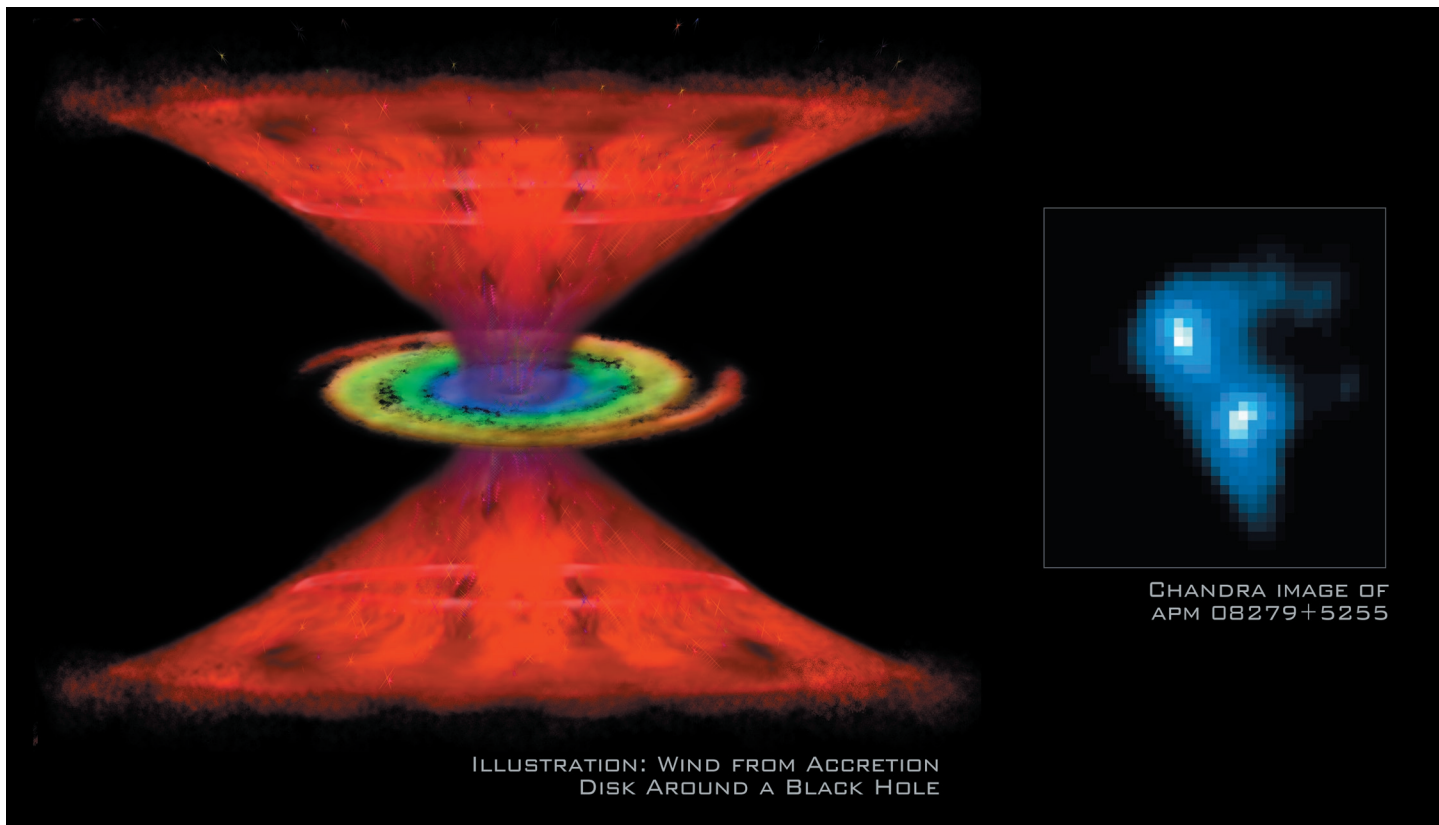




Chandra X-Ray Observatory Center

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APM 08279+5255: A quasar about 12 billion light years from Earth.

Credit: Illustration: CXC/M.Weiss; X-ray: NASA/CXC/PSU/G.Chartas

Chandra observations reveal evidence of high-speed winds blowing gas away from the supermassive black hole that powers this quasar. As gas swirls in a disk toward the black hole, it is heated to millions of degrees Celsius and produces intense X-radiation. The pressure of the X-rays pushes matter away from the inner part of the disk in much the same way as pressure from a garden hose pushes dirt off a driveway. The double image of APM 08279 is caused by the bending of its light by an intervening galaxy, an effect called gravitational lensing. This effect also magnifies the quasar's light by 100 fold, allowing for a detailed study of its properties even though it is 12 billion light years from Earth.

Scale: The two images of the quasar are 0.4 arc seconds apart.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory