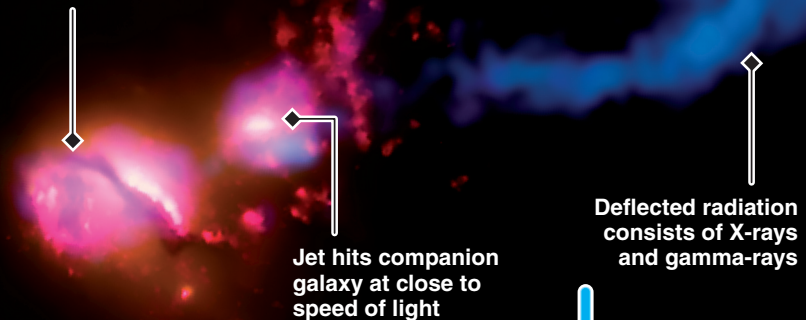


Black hole blasts nearby galaxy

A “supermassive” black hole at the centre of a “death star galaxy” 1.4 billion light-years from Earth, is spurting out a deadly jet of high-energy particles and magnetic radiation. The jet is capable of obliterating any possible life in a companion galaxy that has swung into its path

Black hole at centre of galaxy
in system 3C321



1 Giant star:
Nuclear fusion in core converts hydrogen to helium and energy – heat and light

2 Red giant:
Hydrogen exhausted. Helium converted to heavier elements, eventually forming massive iron core

3 Supernova: In a period of a few seconds core collapses in on itself, generating vast shock wave of energy

Material from nearby stars is accelerated to near speed of light...

...creating massive jet of high-energy particles

Accretion disk

4 Black hole:
Extremely dense stellar core forms gravitational fields so strong that nothing can escape

Event horizon
Point at which nothing can escape

Singularity
Theoretical region of infinite density and pressure