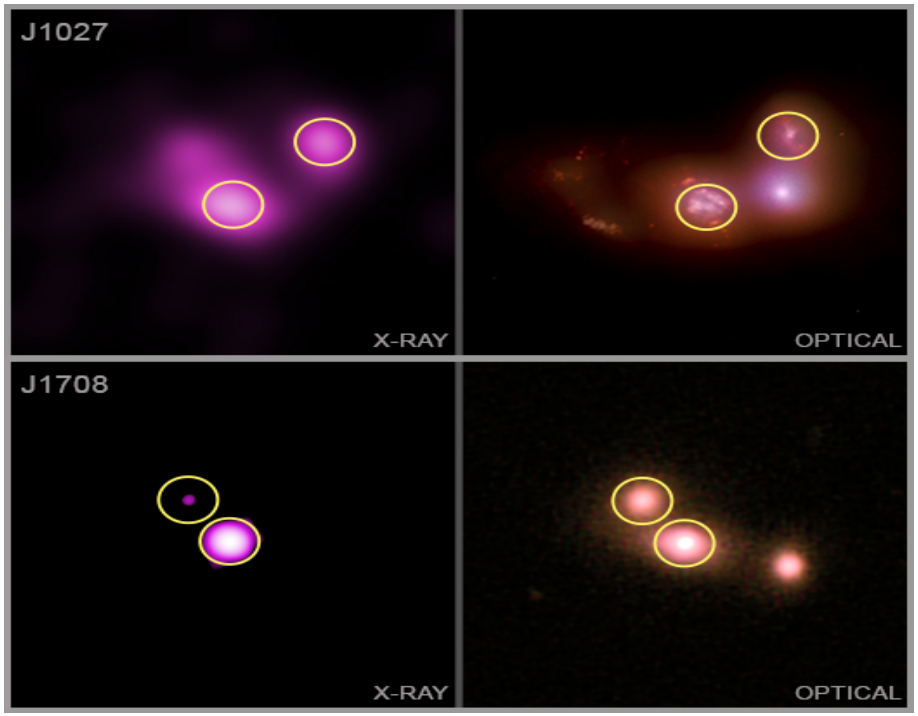
Chandra Science Highlight

Galaxies Hit Single, Doubles, and a Triple (Growing Black Holes)



Caption: This pair of objects comes from a study of seven triple galaxy mergers. By using Chandra and other telescopes, astronomers determined what happened to the supermassive black holes at the centers of the galaxies after the collision of three galaxies. The results show a range of outcomes: a single growing supermassive black hole, four doubles, a triple, and one system where no black holes are rapidly pulling in matter. Two of the doubles are shown here in X-rays (Chandra) and optical light (SDSS and Hubble).

- A new study looked at triple galaxy mergers to learn what happens to their supermassive black holes.
- The results find a single, four doubles, and a triple growing giant black hole in six of the seven mergers.
- A team used several telescopes including Chandra, plus specially-developed software to identify these growing black holes.
- This helps astronomers better understand what role mergers play in how galaxies and their giant black holes grow.

Distance Estimate: About 890 million light years (J1027) and 960 million light years (J1708)

Credits: X-ray: NASA/CXC/Univ. of Michigan/A. Foord et al; Optical: SDSS & NASA/STScI

Instrument: ACIS

References: Foord, A. et al., 2021, ApJ, accepted, arXiv:2012.00761
Foord, A. et al., 2021, ApJ, accepted, arXiv: 2012.00769

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