



Help! I'm Trapped!

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Imagine being trapped in an enormous spider web that's much larger than the Milky Way. What's even scarier is that at the center of this web is a black hole. This is the haunting reality being faced by a newly-discovered group of galaxies!

An Enormous Web and A Lurking Monster

With the help of the European Southern Observatory's Very Large Telescope (VLT), astronomers have found six galaxies lying around a supermassive [black hole](#) when the Universe was less than a billion years old.

The galaxies are all lying in a cosmic "spider's web" of gas extending to over 300 times the size of the Milky Way.

This is the first time such a close grouping of galaxies has been seen so soon after the [Big Bang](#). This discovery is helping us to better understand how really big black holes, known as

supermassive black holes, formed and grew to their enormous sizes so quickly.

A Surprising Growth Spurt

The very first black holes are believed to have formed when the Universe's first stars collapsed and died. This also means they must have grown very fast.

But, astronomers have struggled to explain how large amounts of black hole "food" could have been around in the early Universe to feed these giant monsters.

The new-found spider web structure and the galaxies within it likely contained enough gas to grow to its supermassive size. Astronomers also think the mysterious [dark matter](#) was another source of food in the giant spider web to help the black hole grow.

Image credit: ESO/L. Calçada

COOL FACT

Our own Milky Way galaxy also hosts a supermassive black hole at its center. But don't worry, it's not close to us! In fact, it's 26,000 light-years away from our Solar System. It's also believed to be over 4 million times more massive than our Sun!

This Space Scoop is based on a Press Release from [ESO](#).
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