



Black Holes: Devils in Disguise

02 Novembre 2016

It's Halloween this week and the streets are filled with all kinds of frightful characters, from ghastly ghouls to bloodsucking vampires. But we all know these are just our friends and neighbours dressed in costumes and fake blood. Monsters don't really exist ... or do they?

While they're not hiding in your closet or under your bed, monsters do exist in space.

Black holes are the boogymen of the Universe. They lurk in the dark, waiting for unsuspecting planets and stars to stray too close. And when they do, they become the black hole's dinner!

This sounds pretty wicked, so you might be surprised to learn that we're talking about black holes this week because many have just been spotted wearing shining halos!

Actually, halos are very common in space. Every galaxy is surrounded by a so-called halo made of old stars and a mysterious, invisible material called dark matter. The interesting thing about these newly discovered halos is that they are glowing.

Scientists spotted them while studying a special group of galaxies called quasars. Quasars (pronounced 'kway-zars') are galaxies with feeding black holes in their centres.

As black holes feast, huge jets of energy are created. To find out how, read "Space Can Be A Blast".

These powerful jets shoot out from the black holes and set the invisible halo alight. When this happens, our telescopes can see the gas as a glowing halo around the galaxy.

In the past, we've found that 1 in every 10 quasars has a halo. But now, after looking at the sky using a more powerful telescope, we found that all the quasars we looked at had halos! The picture above is a mosaic showing 18 of the observed quasars, each surrounded by a glowing halo.

So, the next question we need to answer is: do all quasars have halos or were we just looking at an especially angelic bunch?

▲ **COOL FACT!**

These halos extend up to 300 000 light-years away from the centres of the quasars. That's three times longer than our entire galaxy!