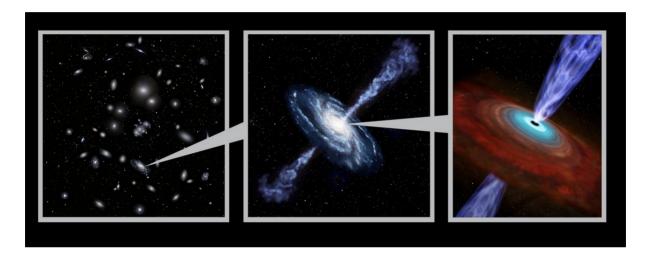


## **Sharing Our Cosmic Vision**

Oct. 25, 2013



The night sky is enormous, and filled with billions of strange and exotic objects. Due to the sheer number, exploring these cosmic wonders is a task much too big for one person alone, so astronomers must work together. They need a lot of clever people, and some extremely powerful telescopes to look at some of the most distant objects in our Universe.

This often means that countries have to put their heads and their money together to fund this cutting edge technology and share the time using them. This way, together, they can carry out bold projects, such as surveys that require hundreds of hours of observations over the entire night sky. When they've collected the results of their observations the teams can then share their findings online.

Thanks to the Virtual Observatory, the vast amount of information collected during astronomical surveys doesn't go to waste — astronomers or members of the public from all over the world can access it through the internet! One team looked at the environment in which a black hole can be found at the centre of a galaxy.

The astronomers used the Virtual Observatory to access data on 10,000 centres (also called 'nuclei') of active galaxies, known as 'Active Galactic Nuclei' or AGN.

Using this data astronomers found that "fatter", bigger black holes tend to be found where galaxies are more closely packed together. Galaxies that are closer together have more chance of crashing into each other, triggering the growth of a black hole. Plus, black holes that already exist at the centres of merging galaxies can come together to become even bigger black holes.



You can contribute to scientific research yourself! Projects like <u>Galaxy</u> <u>Zoo</u> allow kids like you to explore the countless objects in our night sky, without needing access to a professional telescope. Try out one of these <u>cool projects</u>! Who knows, you may discover something out-of-this-world!

This Space Scoop is based on a Press Release from  ${\hbox{\scriptsize NAOJ}}.$  NAOJ













This website was produced by funding from the European Community's Horizon 2020 Programme under grant agreement no 638653