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The Universe is growing hierarchically, meaning smaller things come together to form bigger things. And that applies to galaxies too. Once two galaxies meet, interact, and ultimately coalesce marvelous and scary things happen. Both the morphology and the contents of the galaxies change, lots of stars are formed, and potentially the supermassive black hole at the center of the system is awoken! Put one and one together and you should get two. If active galactic nuclei, that is actively accreting black holes, are triggered (read awoken) by violent galactic mergers, then we can expect that looking at a large number of galaxies, active galaxies (lets call them AGN) should reside in denser environments. For the first time we can use a huge near-infrared dataset to address this question. And guess what...this is actually true. In collaboration with Matt Jarvis of the university of Hertfordshire, we found out that AGN (as seen in the X-rays, mid-infrared, and radio) are indeed found in denser environments, showing more close companions than, say, non-active galaxies. The additional multi-wavelength information allows us to probe different "flavors" of AGN and thus relate AGN at different evolutionary phases with their environment properties. Results coming soon in a scientific journal near you!



