

Formation of AGN in dusty galaxies

Most dusty galaxies are at the high state of star formation activity, however the state of the embedded supermassive black holes (SMBH) in these galaxies, if exist, are usually unclear due to limited observational information obscured by dust. With sensitive X-ray telescopes, on the other hand, it has been proposed that the formation history of AGN can be revealed via line diagnostics by next generation X-ray spectroscopy devices. Based on the templates of theoretical X-ray line profiles from AGN with different assumed formation histories and compiled radio + IR + submillimeter data of dusty galaxies, the project is to study how SMBH grow in dusty galaxies, which may have just experienced a major merger episode.