Probing the Statistical Relationship Between Binary Black Hole Mergers and Active Galactic Nuclei Hosts AMANDA BECK, YASMEEN ASALI, Columbia University, EVE CULLY, Durham University, ZSUZSA MARKA, Columbia University, COLUMBIA EXPERIMENTAL GRAVITY GROUP TEAM — Since 2015, LIGO/Virgo has detected many Binary Black Hole merger Gravitational Wave signals. Identifying the origins of these is key to discover more about these mergers. Rare host galaxies, like AGN, present a favorable environment for these events due to the possible dynamical interactions in their accretion disks. In this project we will probe the statistical relationship between BBH mergers and AGN hosts by analyzing the overlap in localization, as outlined in Bartos et. al. 2017. To do that, we developed a python-based framework that can get the volume overlap between AGN catalogs and LIGO/Virgo 90

Amanda Beck
Columbia University