

Probing quiescent black holes with tidal disruption events

Supermassive black holes (SMBHs) reside at the heart of most galaxies, with the most direct evidence of these massive objects arising from the detection of an Active Galactic Nuclei (AGN). However, for quiescent BHs in which accretion occurs at a much lower rate, it is more difficult to probe the nature of these sources using similar techniques as those used for AGN. However, tidal disruption events (TDEs), which are luminous accretion powered flares that occur when a star wanders too close and is ripped apart by the tidal forces of a BH, can be used to probe the nature of these objects and provide new ways to test our understanding of various aspects of accretion physics. Due to their multi-wavelength properties, wide-field optical transient surveys such as ASAS-SN and ZTF as well as UV and X-ray satellites have allowed us to identify a number of TDE candidates. Here I will present recent work in which we study the demographics and host properties of these sources in multiple wavelengths to better understand the diversity in their observational properties. In addition, I will highlight ways in which these events are observationally similar and different from those of AGN, which can aid us in classifying transients as TDEs in future surveys such as LSST or eROSITA.