

# Transient Phenomena and Physical Processes Around Supermassive Black Holes

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## Tidal Disruption Events in AGN

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Tidal Disruption Events (TDEs) in Active Galactic Nuclei (AGN) exhibit distinct observational signatures compared to those in quiescent galaxies, attributed to the denser disruption environments within the accretion disk. Additionally, detecting these events poses challenges due to the luminous background emissions from AGNs. Consequently, TDEs in AGNs have been historically overlooked, with AGNs often excluded from TDE surveys. In this talk, I will demonstrate that the rate of TDEs in AGNs can be orders of magnitude higher than in quiescent galaxies, driven by star-disk interactions. This increased frequency of TDEs in AGNs may significantly contribute to AGN activities. I will argue for the importance of including AGNs in future TDE surveys, emphasizing their potential to unveil critical insights into galactic dynamics and evolution.

**Primary author:** WANG, Yihan (University of Nevada, Las Vegas)

**Co-authors:** Prof. ZHANG, Bing (University of Nevada, Las Vegas); Prof. LIN, Douglas (University of California, Santa Cruz); Prof. ZHU, Zhaohuan (University of Nevada, Las Vegas)

**Presenter:** WANG, Yihan (University of Nevada, Las Vegas)

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